## Supplementary Table 1. Preys in the arrayed set used in the MAPPIT screening experiment

gene ID	symbol	description
57228	LOC57228	small trans-membrane and glycosylated protein
11158	RABL2B	RAB, member of RAS oncogene family-like 2B
51083	GAL CZorf16	galanin
10842 2767	C7orf16 GNA11	chromosome 7 open reading frame 16 guanine nucleotide binding protein (G protein), alpha 11 (Gq class)
5997	RGS2	regulator of G-protein signalling 2, 24kDa
9545	RAB3D	RAB3D, member RAS oncogene family
1908	EDN3	endothelin 3
1154	CISH	cytokine inducible SH2-containing protein
1316	KLF6	Kruppel-like factor 6
8851 728	CDK5R1 C5AR1	cyclin-dependent kinase 5, regulatory subunit 1 (p35) complement component 5a receptor 1
2045	EPHA7	EPH receptor A7
27296	C20orf10	chromosome 20 open reading frame 10
5015	OTX2	orthodenticle homolog 2 (Drosophila)
136	ADORA2B	adenosine A2b receptor
3824	KLRD1	killer cell lectin-like receptor subfamily D, member 1
116442 26027	RAB39B	RAB39B, member RAS oncogene family
2258	ACOT11 FGF13	acyl-CoA thioesterase 11 fibroblast growth factor 13
117289	TAGAP	T-cell activation GTPase activating protein
161003	STOML3	stomatin (EPB72)-like 3
57019	CIAPIN1	cytokine induced apoptosis inhibitor 1
11171	STRAP	serine/threonine kinase receptor associated protein
56940	DUSP22	dual specificity phosphatase 22
2043 4693	EPHA4 NDP	EPH receptor A4 Norrie disease (pseudoglioma)
161253	REM2	RAS (RAD and GEM)-like GTP binding 2
121268	RHEBL1	Ras homolog enriched in brain like 1
932	MS4A3	membrane-spanning 4-domains, subfamily A, member 3 (hematopoietic cell-specific)
57045	TWSG1	twisted gastrulation homolog 1 (Drosophila)
51107	APH1A	anterior pharynx defective 1 homolog A (C. elegans)
81629	TSSK3	testis-specific serine kinase 3
4869 4792	NPM1 NFKBIA	nucleophosmin (nucleolar phosphoprotein B23, numatrin) nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
64112	MOAP1	modulator of apoptosis 1
8396	PIP5K2B	phosphatidylinositol-4-phosphate 5-kinase, type II, beta
2919	CXCL1	chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha)
9290	GPR55	G protein-coupled receptor 55
6256	RXRA	retinoid X receptor, alpha
5880 5868	RAC2 RAB5A	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) RAB5A, member RAS oncogene family
10231	DSCR1L1	Down syndrome critical region gene 1-like 1
8800	PEX11A	peroxisomal biogenesis factor 11A
54472	TOLLIP	toll interacting protein
3921	RPSA	ribosomal protein SA
54584	GNB1L	guanine nucleotide binding protein (G protein), beta polypeptide 1-like
9456 6277	HOMER1 S100A6	homer homolog 1 (Drosophila) S100 calcium binding protein A6
142913	CFLP1	cofilin pseudogene 1
29909	GPR171	G protein-coupled receptor 171
84904	C9orf100	chromosome 9 open reading frame 100
85004	RERG	RAS-like, estrogen-regulated, growth inhibitor
3146	HMGB1	high-mobility group box 1
113178 7532	SCAMP4 YWHAG	secretory carrier membrane protein 4 tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide
6251	RSU1	Ras suppressor protein 1
2669	GEM	GTP binding protein overexpressed in skeletal muscle
1676	DFFA	DNA fragmentation factor, 45kDa, alpha polypeptide
2771	GNAI2	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
4215	MAP3K3	mitogen-activated protein kinase kinase kinase 3
22858	ICK	intestinal cell (MAK-like) kinase
83937 84152	RASSF4 PPP1R1B	Ras association (RalGDS/AF-6) domain family 4 protein phosphatase 1, regulatory (inhibitor) subunit 1B (dopamine and cAMP regulated
	tein, DARPP-32)	protein priospriatase i, regulatory (initiibitor) subutilit ib (uopaniine and chivir regulated
969	CD69	CD69 molecule
8766	RAB11A	RAB11A, member RAS oncogene family
11158	RABL2B	RAB, member of RAS oncogene family-like 2B
2810	SFN	stratifin
3612	IMPA1	inositol(myo)-1(or 4)-monophosphatase 1

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2784
             GNB3
                            guanine nucleotide binding protein (G protein), beta polypeptide 3
4046
             LSP1
                            lymphocyte-specific protein 1
2771
             GNA<sub>12</sub>
                            guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
6352
             CCL5
                            chemokine (C-C motif) ligand 5
7305
             TYROBP
                            TYRO protein tyrosine kinase binding protein
1139
             CHRNA7
                            cholinergic receptor, nicotinic, alpha 7
             GPR65
                            G protein-coupled receptor 65
8477
54469
             ZFAND6
                            zinc finger, AN1-type domain 6
                            RAN, member RAS oncogene family
5901
             RAN
7879
             RAB7A
                            RAB7A, member RAS oncogene family
83871
             RAB34
                            RAB34, member RAS oncogene family
6456
                            SH3-domain GRB2-like 2
             SH3GL2
9649
             RALGPS1
                            Ral GEF with PH domain and SH3 binding motif 1
2783
             GNB<sub>2</sub>
                            guanine nucleotide binding protein (G protein), beta polypeptide 2
6347
             CCL2
                            chemokine (C-C motif) ligand 2
9607
             CARTPT
                            CART prepropeptide
2764
             GMFB
                            glia maturation factor, beta
                            TIMP metallopeptidase inhibitor 3 (Sorsby fundus dystrophy, pseudoinflammatory)
7078
             TIMP3
142679
             DUSP19
                            dual specificity phosphatase 19
57186
             C20orf74
                            chromosome 20 open reading frame 74
                            C-type lectin domain family 1, member A
51267
             CLEC1A
9111
             NMI
                            N-myc (and STAT) interactor
2357
             FPR1
                            formyl peptide receptor 1
                            CDC42 effector protein (Rho GTPase binding) 4
23580
             CDC42EP4
             CABYR
                            calcium binding tyrosine-(Y)-phosphorylation regulated (fibrousheathin 2)
26256
3628
             INPP1
                            inositol polyphosphate-1-phosphatase
3624
             INHBA
                            inhibin, beta A (activin A, activin AB alpha polypeptide)
                            ceroid-lipofuscinosis, neuronal 3, juvenile (Batten, Spielmeyer-Vogt disease)
1201
             CLN3
2558
             GABRA5
                            gamma-aminobutyric acid (GABA) A receptor, alpha 5
6464
             SHC1
                            SHC (Src homology 2 domain containing) transforming protein 1
26959
             HBP1
                            HMG-box transcription factor 1
10298
             PAK4
                            p21(CDKN1A)-activated kinase 4
7064
             THOP1
                            thimet oligopeptidase 1
64857
             PLEKHG2
                            pleckstrin homology domain containing, family G (with RhoGef domain) member 2
11261
             CHP
                            calcium binding protein P22
4793
             NFKBIB
                            nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta
2237
             FEN1
                            flap structure-specific endonuclease 1
124583
             CANT1
                            calcium activated nucleotidase 1
10494
                            serine/threonine kinase 25 (STE20 homolog, yeast)
             STK25
             TBC1D22A
25771
                            TBC1 domain family, member 22A
3190
             HNRPK
                            heterogeneous nuclear ribonucleoprotein K
7205
             TRIP6
                            thyroid hormone receptor interactor 6
23636
             NUP62
                            nucleoporin 62kDa
8829
             NRP1
                            neuropilin 1
             APBB1
322
                            amyloid beta (A4) precursor protein-binding, family B, member 1 (Fe65)
22937
             SCAP
                            SREBF chaperone
             C5orf13
9315
                            chromosome 5 open reading frame 13
81029
             WNT5B
                            wingless-type MMTV integration site family, member 5B
23061
             TBC1D9B
                            TBC1 domain family, member 9B (with GRAM domain)
                            tripartite motif-containing 13
10206
             TRIM13
25970
             SH2B1
                            SH2B adaptor protein 1
8878
             SQSTM1
                            sequestosome 1
4090
             SMAD5
                            SMAD family member 5
             TRIP6
7205
                            thyroid hormone receptor interactor 6
7464
             CORO2A
                            coronin, actin binding protein, 2A
55684
             C9orf86
                            chromosome 9 open reading frame 86
9744
             CENTB1
                            centaurin, beta 1
84976
             DISP1
                            dispatched homolog 1 (Drosophila)
338382
             RAB7B
                            RAB7B, member RAS oncogene family
51567
             TTRAP
                            TRAF and TNF receptor associated protein
             GNAS
                            GNAS complex locus
2778
59307
             SIGIRR
                            single immunoglobulin and toll-interleukin 1 receptor (TIR) domain
10587
             TXNRD2
                            thioredoxin reductase 2
30001
                            ERO1-like (S. cerevisiae)
             FRO1I
1816
             DRD5
                            dopamine receptor D5
64396
             GMCL1L
                            germ cell-less homolog 1 (Drosophila)-like
113878
             DTX2
                            deltex homolog 2 (Drosophila)
                            signal transducer and activator of transcription 3 (acute-phase response factor)
6774
             STAT3
9181
             ARHGEF2
                            rho/rac guanine nucleotide exchange factor (GEF) 2
             GNG12
                            guanine nucleotide binding protein (G protein), gamma 12
55970
55698
             FLJ10324
                            hypothetical protein FLJ10324
2778
             GNAS
                            GNAS complex locus
                            casein kinase 1, gamma 2
1455
             CSNK1G2
86
             ACTL6A
                            actin-like 6A
2665
             GDI2
                            GDP dissociation inhibitor 2
55357
             TBC1D2
                            TBC1 domain family, member 2
```

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SUFU
51684
                            suppressor of fused homolog (Drosophila)
10922
             FASTK
                            Fas-activated serine/threonine kinase
6850
             SYK
                            spleen tyrosine kinase
                            transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
7088
             TLE1
9862
             THRAP4
                            thyroid hormone receptor associated protein 4
9910
             RABGAP1L
                            RAB GTPase activating protein 1-like
2769
             GNA15
                            guanine nucleotide binding protein (G protein), alpha 15 (Gq class)
2150
             F2RL1
                            coagulation factor II (thrombin) receptor-like 1
             NMUR2
56923
                            neuromedin U receptor 2
                            plasminogen activator, urokinase
5328
             PLAU
55846
             ITFG2
                            integrin alpha FG-GAP repeat containing 2
7071
             KLF10
                            Kruppel-like factor 10
3059
             HCLS<sub>1</sub>
                            hematopoietic cell-specific Lyn substrate 1
3560
             II 2RB
                            interleukin 2 receptor, beta
56848
             SPHK2
                            sphingosine kinase 2
3688
             ITGB1
                            integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
6789
             STK4
                            serine/threonine kinase 4
                            centaurin, delta 3
64411
             CENTD3
51094
             ADIPOR1
                            adiponectin receptor 1
6376
             CX3CL1
                            chemokine (C-X3-C motif) ligand 1
2847
             MCHR1
                            melanin-concentrating hormone receptor 1
2266
             FGG
                            fibrinogen gamma chain
51776
             ZAK
                            sterile alpha motif and leucine zipper containing kinase AZK
             PCTK3
                            PCTAIRE protein kinase 3
5129
                            caspase recruitment domain family, member 9
64170
             CARD9
8031
             NCOA4
                            nuclear receptor coactivator 4
27242
             TNFRSF21
                            tumor necrosis factor receptor superfamily, member 21
9392
             TGFBRAP1
                            transforming growth factor, beta receptor associated protein 1
8821
             INPP4B
                            inositol polyphosphate-4-phosphatase, type II, 105kDa
929
             CD14
                            CD14 molecule
8877
             SPHK1
                            sphingosine kinase 1
                            coagulation factor II (thrombin) receptor
2149
             F2R
             VIPR2
7434
                            vasoactive intestinal peptide receptor 2
29760
             BLNK
27242
             TNFRSF21
                            tumor necrosis factor receptor superfamily, member 21
1136
             CHRNA3
                            cholinergic receptor, nicotinic, alpha 3
3959
             LGALS3BP
                            lectin, galactoside-binding, soluble, 3 binding protein
7064
             THOP1
                            thimet oligopeptidase 1
                            leucine-rich repeats and death domain containing
55367
             IRDD
55750
             AGK
                            acylglycerol kinase
2785
             GNG3
                            guanine nucleotide binding protein (G protein), gamma 3
3627
             CXCL10
                            chemokine (C-X-C motif) ligand 10
                            cytochrome c, somatic
54205
             CYCS
29967
             LRP12
                            low density lipoprotein-related protein 12
                            BCL2-interacting killer (apoptosis-inducing)
638
             BIK
             RAP2B
5912
                            RAP2B, member of RAS oncogene family
             BNIP3
                            BCL2/adenovirus E1B 19kDa interacting protein 3
664
27314
             RAB30
                            RAB30, member RAS oncogene family
11018
             TMED1
                            transmembrane emp24 protein transport domain containing 1
54602
             NDFIP2
                            Nedd4 family interacting protein 2
             HLA-DRB1
3123
                            major histocompatibility complex, class II, DR beta 1
9352
             TXNL1
                            thioredoxin-like 1
                            C-type lectin domain family 7, member A
64581
             CLEC7A
2768
                            guanine nucleotide binding protein (G protein) alpha 12
             GNA12
2921
             CXCL3
                            chemokine (C-X-C motif) ligand 3
51246
             SCOTIN
                            scotin
10728
             PTGES3
                            prostaglandin E synthase 3 (cytosolic)
5906
             RAP1A
                            RAP1A, member of RAS oncogene family
23509
             POFUT1
                            protein O-fucosyltransferase 1
8934
             RAB7L1
                            RAB7, member RAS oncogene family-like 1
             DIRAS3
                            DIRAS family, GTP-binding RAS-like 3
9077
4188
             MDFI
                            MyoD family inhibitor
26207
             PITPNC1
                            phosphatidylinositol transfer protein, cytoplasmic 1
             GDF15
                            growth differentiation factor 15
9518
             ARHGEF18
23370
                            rho/rac guanine nucleotide exchange factor (GEF) 18
10159
             ATP6AP2
                            ATPase, H+ transporting, lysosomal accessory protein 2
3630
             INS
                            insulin
4192
             MDK
                            midkine (neurite growth-promoting factor 2)
7070
             THY1
                            Thy-1 cell surface antigen
402
             ARL2
                            ADP-ribosylation factor-like 2
56681
             SAR1A
                            SAR1 gene homolog A (S. cerevisiae)
51560
             RAB6B
                            RAB6B, member RAS oncogene family
598
             BCL2L1
                            BCL2-like 1
1134
             CHRNA1
                            cholinergic receptor, nicotinic, alpha 1 (muscle)
             PPP2CA
5515
                            protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform
6373
             CXCL11
                            chemokine (C-X-C motif) ligand 11
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56033
             BARX1
                            BarH-like homeobox 1
1081
             CGA
                            glycoprotein hormones, alpha polypeptide
             RAMP1
10267
                            receptor (G protein-coupled) activity modifying protein 1
51617
             HMP19
                            HMP19 protein
             DEPDC1B
                            DEP domain containing 1B
55789
8835
             SOCS2
                            suppressor of cytokine signaling 2
57111
             RAB25
                            RAB25, member RAS oncogene family
27040
             LAT
                            linker for activation of T cells
5008
             OSM
                            oncostatin M
             PRDX4
10549
                            peroxiredoxin 4
5571
             PRKAG1
                            protein kinase, AMP-activated, gamma 1 non-catalytic subunit
                            S100 calcium binding protein A1
6271
             S100A1
55851
             PSENEN
                            presenilin enhancer 2 homolog (C. elegans)
1978
             FIF4FBP1
                            eukaryotic translation initiation factor 4E binding protein 1
3925
             STMN1
                            stathmin 1/oncoprotein 18
29100
             HSPC171
                            HSPC171 protein
51237
             MGC29506
                            hypothetical protein MGC29506
6717
             SRI
                            sorcin
8601
             RGS20
                            regulator of G-protein signalling 20
                            fibroblast growth factor binding protein 1
9982
             FGFBP1
             CDC42EP3
10602
                            CDC42 effector protein (Rho GTPase binding) 3
6503
             SLA
                            Src-like-adaptor
9454
             HOMER3
                            homer homolog 3 (Drosophila)
3159
             HMGA1
                            high mobility group AT-hook 1
             TNFRSF21
27242
                            tumor necrosis factor receptor superfamily, member 21
5612
             PRKRIR
                            protein-kinase, interferon-inducible double stranded RNA dependent inhibitor, repressor of (P58
repressor)
             RHOH
                            ras homolog gene family, member H
399
494150
             LOC494150
                            prohibitin pseudogene
1443
             CSH2
                            chorionic somatomammotropin hormone 2
975
             CD81
                            CD81 molecule
                            Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide
2205
             FCER1A
3612
             IMPA1
                            inositol(myo)-1(or 4)-monophosphatase 1
80318
             GKAP1
                            G kinase anchoring protein 1
2252
                            fibroblast growth factor 7 (keratinocyte growth factor)
             FGF7
8294
             HIST1H4I
                            histone cluster 1, H4i
10681
             GNB5
                            guanine nucleotide binding protein (G protein), beta 5
4118
             MAL
                            mal, T-cell differentiation protein
50861
             STMN3
                            stathmin-like 3
5881
             RAC3
                            ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3)
9367
             RAB9A
                            RAB9A, member RAS oncogene family
2885
             GRB2
                            growth factor receptor-bound protein 2
56937
             TMEPAI
                            transmembrane, prostate androgen induced RNA
3487
             IGFBP4
                            insulin-like growth factor binding protein 4
7416
             VDAC1
                            voltage-dependent anion channel 1
             S100A10
6281
                            S100 calcium binding protein A10
6282
             S100A11
                            S100 calcium binding protein A11
797
             CALCB
                            calcitonin-related polypeptide, beta
57708
             MIER1
                            mesoderm induction early response 1 homolog (Xenopus laevis)
                            CD160 molecule
11126
             CD160
581
             BAX
                            BCL2-associated X protein
22926
                            activating transcription factor 6
             ATF6
81609
             SNX27
                            sorting nexin family member 27
             GAP43
2596
                            growth associated protein 43
3001
             GZMA
                            granzyme A (granzyme 1, cytotoxic T-lymphocyte-associated serine esterase 3)
23564
                            dimethylarginine dimethylaminohydrolase 2
             DDAH2
                            mitogen-activated protein kinase 12
6300
             MAPK12
9047
             SH2D2A
                            SH2 domain protein 2A
4089
                            SMAD family member 4
             SMAD4
57658
             CALCOCO1
                            calcium binding and coiled-coil domain 1
55250
             STATIP1
                            signal transducer and activator of transcription 3 interacting protein 1
399979
             SNX19
                            sorting nexin 19
5925
             RB1
                            retinoblastoma 1 (including osteosarcoma)
             PRKCH
                            protein kinase C, eta
5583
5995
             RGR
                            retinal G protein coupled receptor
1390
             CREM
                            cAMP responsive element modulator
125058
             TBC1D16
                            TBC1 domain family, member 16
919
             CD247
                            CD247 molecule
3561
             IL2RG
                            interleukin 2 receptor, gamma (severe combined immunodeficiency)
115677
             NOSTRIN
                            nitric oxide synthase trafficker
59349
             KLHL12
                            kelch-like 12 (Drosophila)
             GPR56
9289
                            G protein-coupled receptor 56
9874
             TLK1
                            tousled-like kinase 1
2242
             FES
                            feline sarcoma oncogene
                            nucleotide-binding oligomerization domain containing 1
10392
             NOD1
2793
             GNGT2
                            guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2
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51022
             GLRX2
                            glutaredoxin 2
1382
             CRABP2
                            cellular retinoic acid binding protein 2
805
             CALM2
                            calmodulin 2 (phosphorylase kinase, delta)
5367
             PMCH
                            pro-melanin-concentrating hormone
9262
                            serine/threonine kinase 17b (apoptosis-inducing)
             STK17B
26086
             GPSM1
                            G-protein signalling modulator 1 (AGS3-like, C. elegans)
             LGALS3BP
3959
                            lectin, galactoside-binding, soluble, 3 binding protein
25791
             NGEF
                            neuronal guanine nucleotide exchange factor
6774
             STAT3
                            signal transducer and activator of transcription 3 (acute-phase response factor)
22899
             ARHGEF15
                            Rho guanine nucleotide exchange factor (GEF) 15
9510
             ADAMTS1
                            ADAM metallopeptidase with thrombospondin type 1 motif, 1
             CD79B
                            CD79b molecule, immunoglobulin-associated beta
974
8519
             IFITM1
                            interferon induced transmembrane protein 1 (9-27)
             CNIH4
                            cornichon homolog 4 (Drosophila)
29097
29108
             PYCARD
                            PYD and CARD domain containing
572
             BAD
                            BCL2-antagonist of cell death
5029
             P2RY2
                            purinergic receptor P2Y, G-protein coupled, 2
79816
             TLE6
                            transducin-like enhancer of split 6 (E(sp1) homolog, Drosophila)
5590
             PRKCZ
                            protein kinase C, zeta
6772
             STAT1
                            signal transducer and activator of transcription 1, 91kDa
3689
                            integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)
             ITGB2
             GABBR2
9568
                            gamma-aminobutyric acid (GABA) B receptor, 2
868
             CBLB
                            Cas-Br-M (murine) ecotropic retroviral transforming sequence b
6367
             CCL22
                            chemokine (C-C motif) ligand 22
6863
             TAC<sub>1</sub>
                            tachykinin, precursor 1 (substance K, substance P, neurokinin 1, neurokinin 2, neuromedin L,
neurokinin alpha, neuropeptide K, neuropeptide gamma)
4259
             MGST3
                            microsomal glutathione S-transferase 3
             RND2
8153
                            Rho family GTPase 2
8856
             NR1I2
                            nuclear receptor subfamily 1, group I, member 2
64840
             PORCN
                            porcupine homolog (Drosophila)
369
             ARAF
                            v-raf murine sarcoma 3611 viral oncogene homolog
             DVL3
                            dishevelled, dsh homolog 3 (Drosophila)
1857
84249
             PSD2
                            pleckstrin and Sec7 domain containing 2
27032
             ATP2C1
                            ATPase, Ca++ transporting, type 2C, member 1
23228
             PLCL2
                            phospholipase C-like 2
6357
             CCL13
                            chemokine (C-C motif) ligand 13
10581
             IFITM2
                            interferon induced transmembrane protein 2 (1-8D)
7164
             TPD52L1
                            tumor protein D52-like 1
3397
                            inhibitor of DNA binding 1, dominant negative helix-loop-helix protein
             ID1
             PPP1R1A
5502
                            protein phosphatase 1, regulatory (inhibitor) subunit 1A
1901
             EDG1
                            endothelial differentiation, sphingolipid G-protein-coupled receptor, 1
9618
             TRAF4
                            TNF receptor-associated factor 4
79735
             TBC1D17
                            TBC1 domain family, member 17
90134
             KCNH7
                            potassium voltage-gated channel, subfamily H (eag-related), member 7
                            ral guanine nucleotide dissociation stimulator-like 2
5863
             RGL2
57231
             SNX14
                            sorting nexin 14
             PSD4
23550
                            pleckstrin and Sec7 domain containing 4
2280
             FKBP1A
                            FK506 binding protein 1A, 12kDa
10410
             IFITM3
                            interferon induced transmembrane protein 3 (1-8U)
                            myelin protein zero-like 1
9019
             MPZL1
2872
             MKNK2
                            MAP kinase interacting serine/threonine kinase 2
8740
             TNFSF14
                            tumor necrosis factor (ligand) superfamily, member 14
             PPP2R5C
5527
                            protein phosphatase 2, regulatory subunit B', gamma isoform
             ACVR1B
91
                            activin A receptor, type IB
79902
             NUP85
                            nucleoporin 85kDa
2131
             EXT1
                            exostoses (multiple) 1
                            signal transducer and activator of transcription 5A
6776
             STAT5A
10902
             BRD8
                            bromodomain containing 8
5921
             RASA1
                            RAS p21 protein activator (GTPase activating protein) 1
414927
             MGC34796
                            SPR pseudogene
10815
             CPLX1
                            complexin 1
23589
             CARHSP1
                            calcium regulated heat stable protein 1, 24kDa
10912
             GADD45G
                            growth arrest and DNA-damage-inducible, gamma
9404
             LPXN
                            leupaxin
8883
             APPBP1
                            amyloid beta precursor protein binding protein 1
10432
             RBM14
                            RNA binding motif protein 14
64333
             ARHGAP9
                            Rho GTPase activating protein 9
11108
             PRDM4
                            PR domain containing 4
                            WW domain containing E3 ubiquitin protein ligase 1
11059
             WWP1
             ITGA5
                            integrin, alpha 5 (fibronectin receptor, alpha polypeptide)
3678
51738
             GHRL
                            ghrelin/obestatin preprohormone
             LGALS1
                            lectin, galactoside-binding, soluble, 1 (galectin 1)
3956
23568
             ARL2BP
                            ADP-ribosylation factor-like 2 binding protein
857
             CAV1
                            caveolin 1, caveolae protein, 22kDa
                            RAB6A, member RAS oncogene family
5870
             RAB6A
51523
             CXXC5
                            CXXC finger 5
```

```
5179
             PENK
                            proenkephalin
             DNASE1L3
1776
                            deoxyribonuclease I-like 3
53340
             SPA17
                            sperm autoantigenic protein 17
355
             FAS
                            Fas (TNF receptor superfamily, member 6)
5341
             PLEK
9052
             GPRC5A
                            G protein-coupled receptor, family C, group 5, member A
2555
             GABRA2
                            gamma-aminobutyric acid (GABA) A receptor, alpha 2
1848
             DUSP6
                            dual specificity phosphatase 6
             PSCD3
9265
                            pleckstrin homology, Sec7 and coiled-coil domains 3
6252
             RTN1
                            reticulon 1
3148
             HMGB2
                            high-mobility group box 2
9982
             FGFBP1
                            fibroblast growth factor binding protein 1
433
             ASGR2
                            asialoglycoprotein receptor 2
55784
             MCTP2
                            multiple C2 domains, transmembrane 2
2487
             FRZB
                            frizzled-related protein
10800
             CYSLTR1
                            cysteinyl leukotriene receptor 1
                            interleukin 8 receptor, alpha
             IL8RA
3577
23543
             RBM9
                            RNA binding motif protein 9
8861
             LDB1
                            LIM domain binding 1
9649
             RALGPS1
                            Ral GEF with PH domain and SH3 binding motif 1
3481
                            insulin-like growth factor 2 (somatomedin A)
             IGF2
             RCVRN
5957
                            recoverin
9554
             SEC22B
                            SEC22 vesicle trafficking protein homolog B (S. cerevisiae)
3692
             ITGB4BP
                            integrin beta 4 binding protein
58533
             SNX6
                            sorting nexin 6
53944
             CSNK1G1
                            casein kinase 1, gamma 1
55701
             FLJ10357
                            hypothetical protein FLJ10357
                            purinergic receptor P2Y, G-protein coupled, 14
9934
             P2RY14
79594
             C1orf166
                            chromosome 1 open reading frame 166
185
             AGTR1
                            angiotensin II receptor, type 1
2852
             GPR30
                            G protein-coupled receptor 30
5025
             P2RX4
                            purinergic receptor P2X, ligand-gated ion channel, 4
11333
             PDAP1
                            PDGFA associated protein 1
10124
             ARL4A
                            ADP-ribosylation factor-like 4A
1442
             CSH<sub>1</sub>
                            chorionic somatomammotropin hormone 1 (placental lactogen)
3002
             GZMB
                            granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1)
             XRCC6BP1
91419
                            XRCC6 binding protein 1
5366
             PMAIP1
                            phorbol-12-myristate-13-acetate-induced protein 1
                            pyrimidinergic receptor P2Y, G-protein coupled, 6
5031
             P2RY6
2840
             GPR17
                            G protein-coupled receptor 17
5771
             PTPN2
                            protein tyrosine phosphatase, non-receptor type 2
8935
             SKAP2
                            src kinase associated phosphoprotein 2
             SERPINB9
5272
                            serpin peptidase inhibitor, clade B (ovalbumin), member 9
79822
             ARHGAP28
                            Rho GTPase activating protein 28
27065
             D4S234E
                            DNA segment on chromosome 4 (unique) 234 expressed sequence
             ARL4D
                            ADP-ribosylation factor-like 4D
379
5874
             RAB27B
                            RAB27B, member RAS oncogene family
79139
             DERL1
                            Der1-like domain family, member 1
4869
             NPM1
                            nucleophosmin (nucleolar phosphoprotein B23, numatrin)
             PPAP2B
8613
                            phosphatidic acid phosphatase type 2B
2246
             FGF1
                            fibroblast growth factor 1 (acidic)
54518
             APBB1IP
                            amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein
2780
             GNAT2
                            guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 2
57007
             CXCR7
                            chemokine (C-X-C motif) receptor 7
55785
             FGD6
                            FYVE, RhoGEF and PH domain containing 6
                            Ras association (RalGDS/AF-6) domain family 8
11228
             RASSF8
                            RAB, member of RAS oncogene family-like 4
             RABL4
11020
5861
             RAB1A
                            RAB1A, member RAS oncogene family
51510
             CHMP5
                            chromatin modifying protein 5
114609
             TIRAP
                            toll-interleukin 1 receptor (TIR) domain containing adaptor protein
4869
             NPM1
                            nucleophosmin (nucleolar phosphoprotein B23, numatrin)
10253
             SPRY2
                            sprouty homolog 2 (Drosophila)
             SORBS3
                            sorbin and SH3 domain containing 3
10174
9455
             HOMER2
                            homer homolog 2 (Drosophila)
2781
             GNAZ
                            guanine nucleotide binding protein (G protein), alpha z polypeptide
945
             CD33
                            CD33 molecule
8863
             PER3
                            period homolog 3 (Drosophila)
                            PAK1 interacting protein 1
             PAK1IP1
55003
5998
             RGS3
                            regulator of G-protein signalling 3
             EFNA1
1942
                            ephrin-A1
51510
             CHMP5
                            chromatin modifying protein 5
                            proliferating cell nuclear antigen
5111
             PCNA
26228
             BRDG1
                            BCR downstream signaling 1
27063
             ANKRD1
                            ankyrin repeat domain 1 (cardiac muscle)
5745
             PTHR1
                            parathyroid hormone receptor 1
51562
             MBIP
                            MAP3K12 binding inhibitory protein 1
```

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23770
             FKBP8
                            FK506 binding protein 8, 38kDa
1819
             DRG2
                            developmentally regulated GTP binding protein 2
11197
             WIF1
                            WNT inhibitory factor 1
             RHOA
                            ras homolog gene family, member A
387
5999
                            regulator of G-protein signalling 4
             RGS4
                            DEAD (Asp-Glu-Ala-Asp) box polypeptide 54
79039
             DDX54
             HLA-DRB1
3123
                            major histocompatibility complex, class II, DR beta 1
378925
             RNF148
                            ring finger protein 148
             ESR2
                            estrogen receptor 2 (ER beta)
2100
219790
             PLEKHK1
                            pleckstrin homology domain containing, family K member 1
684
             BST2
                            bone marrow stromal cell antigen 2
8878
             SQSTM1
                            sequestosome 1
5603
             MAPK13
                            mitogen-activated protein kinase 13
                            protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1)
5573
             PRKAR1A
             ARHGAP29
9411
                            Rho GTPase activating protein 29
8533
             COPS3
                            COP9 constitutive photomorphogenic homolog subunit 3 (Arabidopsis)
2896
             GRN
                            granulin
             HNRPK
3190
                            heterogeneous nuclear ribonucleoprotein K
81033
             KCNH6
                            potassium voltage-gated channel, subfamily H (eag-related), member 6
10133
             OPTN
                            optineurin
             HSP90AA1
3320
                            heat shock protein 90kDa alpha (cytosolic), class A member 1
             PRKCH
5583
                            protein kinase C, eta
56882
             CDC42SE1
                            CDC42 small effector 1
             HIST1H4E
                            histone cluster 1, H4e
8367
             ROPN1B
                            ropporin, rhophilin associated protein 1B
152015
             ITGB3BP
23421
                            integrin beta 3 binding protein (beta3-endonexin)
9266
             PSCD2
                            pleckstrin homology, Sec7 and coiled-coil domains 2 (cytohesin-2)
             SH3BP5
                            SH3-domain binding protein 5 (BTK-associated)
9467
                            COP9 constitutive photomorphogenic homolog subunit 2 (Arabidopsis)
9318
             COPS2
4354
             MPP1
                            membrane protein, palmitoylated 1, 55kDa
2923
             PDIA3
                            protein disulfide isomerase family A, member 3
             PPP2R1A
5518
                            protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform
8829
             NRP1
                            neuropilin 1
6733
             SRPK2
                            SFRS protein kinase 2
             CTNNBIP1
                            catenin, beta interacting protein 1
56998
54205
             CYCS
                            cytochrome c, somatic
1979
             EIF4EBP2
                            eukaryotic translation initiation factor 4E binding protein 2
1381
             CRABP1
                            cellular retinoic acid binding protein 1
                            signal transducing adaptor molecule (SH3 domain and ITAM motif) 1
8027
             STAM
1909
             EDNRA
                            endothelin receptor type A
7041
             TGFB1I1
                            transforming growth factor beta 1 induced transcript 1
23624
             CBLC
                            Cas-Br-M (murine) ecotropic retroviral transforming sequence c
4145
             MATK
                            megakaryocyte-associated tyrosine kinase
53358
             SHC3
                            SHC (Src homology 2 domain containing) transforming protein 3
             ITPKB
                            inositol 1,4,5-trisphosphate 3-kinase B
3707
             TBC1D15
64786
                            TBC1 domain family, member 15
84278
             HIATL2
                            hippocampus abundant gene transcript-like 2
3159
             HMGA1
                            high mobility group AT-hook 1
4867
             NPHP1
                            nephronophthisis 1 (juvenile)
             SEDLP
                            spondyloepiphyseal dysplasia, late, pseudogene
10597
2004
             ELK3
                            ELK3, ETS-domain protein (SRF accessory protein 2)
221002
             RASGEF1A
                            RasGEF domain family, member 1A
                            chromosome X and Y open reading frame 3
8227
             CXYorf3
             CORO1C
23603
                            coronin, actin binding protein, 1C
23061
             TBC1D9B
                            TBC1 domain family, member 9B (with GRAM domain)
23683
             PRKD3
                            protein kinase D3
                            FERM, RhoGEF and pleckstrin domain protein 2 Rho-related BTB domain containing 1
9855
             FARP2
             RHOBTB1
9886
23085
             ERC1
                            ELKS/RAB6-interacting/CAST family member 1
2920
             CXCL2
                            chemokine (C-X-C motif) ligand 2
                            egl nine homolog 2 (C. elegans)
112398
             EGLN2
4627
             MYH9
                            myosin, heavy chain 9, non-muscle
                            bone morphogenetic protein 4
652
             BMP4
55081
             IFT57
                            intraflagellar transport 57 homolog (Chlamydomonas)
887
             CCKBR
                            cholecystokinin B receptor
207
             AKT1
                            v-akt murine thymoma viral oncogene homolog 1
8532
             CPZ
                            carboxypeptidase Z
                            nuclear receptor coactivator 4
8031
             NCOA4
                            eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange protein)
1936
             EEF1D
84986
             ARHGAP19
                            Rho GTPase activating protein 19
                            chemokine (C-X-C motif) ligand 11
6373
             CXCL11
             CALM1
                            calmodulin 1 (phosphorylase kinase, delta)
801
5802
             PTPRS
                            protein tyrosine phosphatase, receptor type, S
                            NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 13
51079
             NDUFA13
4286
             MITF
                            microphthalmia-associated transcription factor
28988
             DBNL
                            drebrin-like
```

```
835
             CASP2
                            caspase 2, apoptosis-related cysteine peptidase (neural precursor cell expressed,
developmentally down-regulated 2)
             CHRNA3
1136
                            cholinergic receptor, nicotinic, alpha 3
             CORO2A
7464
                            coronin, actin binding protein, 2A
7857
             SCG2
                            secretogranin II (chromogranin C)
9984
             THOC1
                            THO complex 1
2790
             GNG<sub>10</sub>
                            guanine nucleotide binding protein (G protein), gamma 10
6363
             CCL19
                            chemokine (C-C motif) ligand 19
                            chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)
6372
             CXCL6
966
             CD59
                            CD59 molecule, complement regulatory protein
2922
             GRP
                            gastrin-releasing peptide
             IKBKG
8517
                            inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
3275
             PRMT2
                            protein arginine methyltransferase 2
51463
             GPR89A
                            G protein-coupled receptor 89A
3459
             IFNGR1
                            interferon gamma receptor 1
2886
             GRB7
                            growth factor receptor-bound protein 7
113878
             DTX2
                            deltex homolog 2 (Drosophila)
             PPP2R1B
                            protein phosphatase 2 (formerly 2A), regulatory subunit A, beta isoform
5519
2786
             GNG4
                            guanine nucleotide binding protein (G protein), gamma 4
27130
             INVS
                            inversin
6374
                            chemokine (C-X-C motif) ligand 5
             CXCL5
                            chemokine (C-C motif) ligand 21
6366
             CCL21
55750
             AGK
                            acylglycerol kinase
57126
             CD177
                            CD177 molecule
5979
                            ret proto-oncogene (multiple endocrine neoplasia and medullary thyroid carcinoma 1,
             RET
Hirschsprung disease)
7535
             ZAP70
                            zeta-chain (TCR) associated protein kinase 70kDa
                            ribosomal protein S6 kinase, 90kDa, polypeptide 5
             RPS6KA5
9252
399694
             SHC4
                            SHC (Src homology 2 domain containing) family, member 4
5579
             PRKCB1
                            protein kinase C, beta 1
4900
             NRGN
                            neurogranin (protein kinase C substrate, RC3)
121504
             HIST4H4
                            histone cluster 4, H4
10010
             TANK
                            TRAF family member-associated NFKB activator
29108
             PYCARD
                            PYD and CARD domain containing
                            calmodulin 1 (phosphorylase kinase, delta)
801
             CALM1
7432
             VIP
                            vasoactive intestinal peptide
6001
             RGS10
                            regulator of G-protein signalling 10
8834
             TMEM11
                            transmembrane protein 11
55816
             DOK5
                            docking protein 5
114971
             PTPMT1
                            protein tyrosine phosphatase, mitochondrial 1
8817
             FGF18
                            fibroblast growth factor 18
2810
             SFN
                            stratifin
9098
             USP6
                            ubiquitin specific peptidase 6 (Tre-2 oncogene)
7105
             TSPAN6
                            tetraspanin 6
5173
             PDYN
                            prodynorphin
1316
                            Kruppel-like factor 6
             KLF6
             CALM3
808
                            calmodulin 3 (phosphorylase kinase, delta)
5998
             RGS3
                            regulator of G-protein signalling 3
11163
             NUDT4
                            nudix (nucleoside diphosphate linked moiety X)-type motif 4
28512
             NKIRAS1
                            NFKB inhibitor interacting Ras-like 1
8738
             CRADD
                            CASP2 and RIPK1 domain containing adaptor with death domain
11021
             RAB35
                            RAB35, member RAS oncogene family
26291
             FGF21
                            fibroblast growth factor 21
6014
             RIT2
                            Ras-like without CAAX 2
51715
             RAB23
                            RAB23, member RAS oncogene family
29883
             CNOT7
                            CCR4-NOT transcription complex, subunit 7
                            tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide
7531
             YWHAF
84727
             SPSB2
                            spIA/ryanodine receptor domain and SOCS box containing 2
805
             CALM2
                            calmodulin 2 (phosphorylase kinase, delta)
10874
             NMU
                            neuromedin Ü
92610
                            TRAF-interacting protein with a forkhead-associated domain
             TIFA
80117
             ARL14
                            ADP-ribosylation factor-like 14
5330
             PLCB2
                            phospholipase C, beta 2
2978
             GUCA1A
                            guanylate cyclase activator 1A (retina)
23682
             RAB38
                            RAB38, member RAS oncogene family
54734
             RAB39
                            RAB39, member RAS oncogene family
9363
             RAB33A
                            RAB33A, member RAS oncogene family
8741
             TNFSF13
                            tumor necrosis factor (ligand) superfamily, member 13
30818
             KCNIP3
                            Kv channel interacting protein 3, calsenilin
             APH1A
                            anterior pharynx defective 1 homolog A (C. elegans)
51107
4259
             MGST3
                            microsomal glutathione S-transferase 3
             RSP<sub>02</sub>
340419
                            R-spondin 2 homolog (Xenopus laevis)
5908
             RAP1B
                            RAP1B, member of RAS oncogene family
57403
             RAB22A
                            RAB22A, member RAS oncogene family
                            tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)
8764
             TNFRSF14
6004
             RGS16
                            regulator of G-protein signalling 16
```

```
5480
             PPIC
                            peptidylprolyl isomerase C (cyclophilin C)
1442
             CSH<sub>1</sub>
                            chorionic somatomammotropin hormone 1 (placental lactogen)
56616
             DIABLO
                            diablo homolog (Drosophila)
6398
             SECTM1
                            secreted and transmembrane 1
5567
             PRKACB
                            protein kinase, cAMP-dependent, catalytic, beta
4869
             NPM1
                            nucleophosmin (nucleolar phosphoprotein B23, numatrin)
9536
             PTGES
                            prostaglandin E synthase
1907
             EDN2
                            endothelin 2
                            ADP-ribosylation factor-like 8B
55207
             ARL8B
                            BH3 interacting domain death agonist
637
             BID
             ITGB1BP1
9270
                            integrin beta 1 binding protein 1
5872
             RAB13
                            RAB13, member RAS oncogene family
5862
             RAB2A
                            RAB2A, member RAS oncogene family
                            RAB4A, member RAS oncogene family
5867
             RAB4A
3068
             HDGF
                            hepatoma-derived growth factor (high-mobility group protein 1-like)
11248
             NXPH3
                            neurexophilin 3
84336
             TMEM101
                            transmembrane protein 101
51107
                            anterior pharynx defective 1 homolog A (C. elegans)
             APH1A
54581
             SCAND2
                            SCAN domain containing 2
90390
             THRAP6
                            thyroid hormone receptor associated protein 6
                            v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
3845
             KRAS
10219
             KLRG1
                            killer cell lectin-like receptor subfamily G, member 1
10890
             RAB10
                            RAB10, member RAS oncogene family
1398
                            v-crk sarcoma virus CT10 oncogene homolog (avian)
             CRK
1906
             EDN1
                            endothelin 1
5156
             PDGFRA
                            platelet-derived growth factor receptor, alpha polypeptide
9218
             VAPA
                            VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa
             UTP11L
                            UTP11-like, U3 small nucleolar ribonucleoprotein, (yeast)
51118
23176
             8/sep
                            septin 8
             HLA-DRB1
3123
                            major histocompatibility complex, class II, DR beta 1
                            chorionic gonadotropin, beta polypeptide 5
93659
             CGB5
             UBE2C
11065
                            ubiquitin-conjugating enzyme E2C
11315
             PARK7
                            Parkinson disease (autosomal recessive, early onset) 7
637
                            BH3 interacting domain death agonist
             BID
22859
             LPHN1
                            latrophilin 1
396
             ARHGDIA
                            Rho GDP dissociation inhibitor (GDI) alpha
3569
             IL6
                            interleukin 6 (interferon, beta 2)
5864
             RAB3A
                            RAB3A, member RAS oncogene family
                            linker for activation of T cells family, member 2
7462
             LAT2
7253
             TSHR
                            thyroid stimulating hormone receptor
79363
             C1orf89
                            chromosome 1 open reading frame 89
1072
             CFL1
                            cofilin 1 (non-muscle)
                            ADP-ribosylation factor 4
378
             ARF4
998
             CDC42
                            cell division cycle 42 (GTP binding protein, 25kDa)
3148
             HMGB2
                            high-mobility group box 2
64781
             CERK
                            ceramide kinase
                            RAB18, member RAS oncogene family
22931
             RAB18
2339
             FNTA
                            farnesyltransferase, CAAX box, alpha
80762
             NDFIP1
                            Nedd4 family interacting protein 1
390
             RND3
                            Rho family GTPase 3
                            cell death-inducing DFFA-like effector a
1149
             CIDEA
939
                            CD27 molecule
             CD27
                            dickkopf homolog 1 (Xenopus laevis)
22943
             DKK1
63898
                            SH2 domain containing 4A
             SH2D4A
958
             CD40
                            CD40 molecule, TNF receptor superfamily member 5
             PTPLA
9200
                            protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A
5995
             RGR
                            retinal G protein coupled receptor
                            phosducin-like
5082
             PDCL
961
                            CD47 molecule
             CD47
2213
             FCGR2B
                            Fc fragment of IgG, low affinity IIb, receptor (CD32)
3705
             ITPK1
                            inositol 1,3,4-triphosphate 5/6 kinase
1393
             CRHBP
                            corticotropin releasing hormone binding protein
7538
             ZFP36
                            zinc finger protein 36, C3H type, homolog (mouse)
             IFNAR2
                            interferon (alpha, beta and omega) receptor 2
3455
23551
             RASD2
                            RASD family, member 2
3488
             IGFBP5
                            insulin-like growth factor binding protein 5
836
             CASP3
                            caspase 3, apoptosis-related cysteine peptidase
             SDCBP2
27111
                            syndecan binding protein (syntenin) 2
3921
             RPSA
                            ribosomal protein SA
             GNAO1
                            guanine nucleotide binding protein (G protein), alpha activating activity polypeptide O
2775
351
             APP
                            amyloid beta (A4) precursor protein (peptidase nexin-II, Alzheimer disease)
11040
             PIM2
                            pim-2 oncogene
9743
             RICS
                            Rho GTPase-activating protein
55715
             DOK4
                            docking protein 4
54860
             MS4A12
                            membrane-spanning 4-domains, subfamily A, member 12
92369
             SPSB4
                            spIA/ryanodine receptor domain and SOCS box containing 4
```

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10966
             RAB40B
                            RAB40B, member RAS oncogene family
4615
             MYD88
                            myeloid differentiation primary response gene (88)
                            STIP1 homology and U-box containing protein 1
10273
             STUB1
                            palmitoyl-protein thioesterase 1 (ceroid-lipofuscinosis, neuronal 1, infantile)
5538
             PPT1
9255
             SCYE1
                            small inducible cytokine subfamily E, member 1 (endothelial monocyte-activating)
10399
             GNB2L1
                            guanine nucleotide binding protein (G protein), beta polypeptide 2-like 1
55344
             PLCXD1
                            phosphatidylinositol-specific phospholipase C, X domain containing 1
2874
             GPS2
                            G protein pathway suppressor 2
493861
                            EP300 interacting inhibitor of differentiation 3
             EID3
9019
             MPZL1
                            myelin protein zero-like 1
             SPSB1
80176
                            spIA/ryanodine receptor domain and SOCS box containing 1
81542
             TXNDC1
                            thioredoxin domain containing 1
896
             CCND3
                            cyclin D3
3084
             NRG1
                            neuregulin 1
840
             CASP7
                            caspase 7, apoptosis-related cysteine peptidase
114780
             PKD1L2
                            polycystic kidney disease 1-like 2
                            cytokine induced apoptosis inhibitor 1
57019
             CIAPIN1
             TACSTD2
                            tumor-associated calcium signal transducer 2
4070
10982
             MAPRE2
                            microtubule-associated protein, RP/EB family, member 2
             GPR146
115330
                            G protein-coupled receptor 146
             GPR87
53836
                            G protein-coupled receptor 87
51277
             RBJ
                            Ras-associated protein Rap1
51655
             RASD1
                            RAS, dexamethasone-induced 1
64210
             MMS19L
                            MMS19-like (MET18 homolog, S. cerevisiae)
             MS4A1
                            membrane-spanning 4-domains, subfamily A, member 1
931
6678
             SPARC
                            secreted protein, acidic, cysteine-rich (osteonectin)
9111
             NMI
                            N-myc (and STAT) interactor
2267
                            fibrinogen-like 1
             FGL1
4157
             MC1R
                            melanocortin 1 receptor (alpha melanocyte stimulating hormone receptor)
5308
             PITX2
                            paired-like homeodomain transcription factor 2
9402
             GRAP2
                            GRB2-related adaptor protein 2
             MAP2K6
5608
                            mitogen-activated protein kinase kinase 6
3553
             IL1B
                            interleukin 1, beta
54472
             TOLLIP
                            toll interacting protein
140461
                            ankyrin repeat and SOCS box-containing 8
             ASB8
51256
             TBC1D7
                            TBC1 domain family, member 7
11331
             PHB2
                            prohibitin 2
1019
             CDK4
                            cyclin-dependent kinase 4
                            cyclin-dependent kinase 5, regulatory subunit 1 (p35)
8851
             CDK5R1
8575
             PRKRA
                            protein kinase, interferon-inducible double stranded RNA dependent activator
140
             ADORA3
                            adenosine A3 receptor
246329
             STAC3
                            SH3 and cysteine rich domain 3
             GPBAR1
151306
                            G protein-coupled bile acid receptor 1
9901
             SRGAP3
                            SLIT-ROBO Rho GTPase activating protein 3
29079
                            mediator of RNA polymerase II transcription, subunit 4 homolog (S. cerevisiae)
             MED4
                            BCL2-associated athanogene
573
             BAG1
3162
             HMOX1
                            heme oxygenase (decycling) 1
140462
             ASB9
                            ankyrin repeat and SOCS box-containing 9
952
             CD38
                            CD38 molecule
                            v-crk sarcoma virus CT10 oncogene homolog (avian)
1398
             CRK
             CDK5R1
8851
                            cyclin-dependent kinase 5, regulatory subunit 1 (p35)
10783
                            NIMA (never in mitosis gene a)-related kinase 6
             NEK6
             MPPED1
758
                            metallophosphoesterase domain containing 1
             GPR3
2827
                            G protein-coupled receptor 3
                            prohibitin
5245
             PHB
11130
             ZWINT
                            ZW10 interactor
                            inositol(myo)-1(or 4)-monophosphatase 2
3613
             IMPA2
             SFRP2
                            secreted frizzled-related protein 2
6423
26084
             SGEF
                            Src homology 3 domain-containing guanine nucleotide exchange factor
27239
             GPR162
                            G protein-coupled receptor 162
             SPG21
51324
                            spastic paraplegia 21, maspardin (autosomal recessive, Mast syndrome)
10670
             RRAGA
                            Ras-related GTP binding A
308
             ANXA5
                            annexin A5
134
             ADORA1
                            adenosine A1 receptor
             GPR18
2841
                            G protein-coupled receptor 18
51665
             ASB1
                            ankyrin repeat and SOCS box-containing 1
1385
             CREB1
                            cAMP responsive element binding protein 1
                            par-3 partitioning defective 3 homolog (C. elegans)
56288
             PARD3
11070
             TMEM115
                            transmembrane protein 115
1641
                            doublecortex; lissencephaly, X-linked (doublecortin)
             DCX
3623
             INHA
                            inhibin alpha
             CNTFR
                            ciliary neurotrophic factor receptor
1271
10672
             GNA13
                            guanine nucleotide binding protein (G protein), alpha 13
                            mitogen-activated protein kinase-activated protein kinase 3
7867
             MAPKAPK3
             PPP1R12B
                            protein phosphatase 1, regulatory (inhibitor) subunit 12B
4660
148022
             TICAM1
                            toll-like receptor adaptor molecule 1
```

```
51704
             GPRC5B
                            G protein-coupled receptor, family C, group 5, member B
5329
             PLAUR
                            plasminogen activator, urokinase receptor
10663
             CXCR6
                            chemokine (C-X-C motif) receptor 6
158947
             ARMCX4
                            armadillo repeat containing, X-linked 4
914
                            CD2 molecule
             CD2
7472
             WNT2
                            wingless-type MMTV integration site family member 2
                            SH3-domain GRB2-like 1
6455
             SH3GL1
11033
             CENTA1
                            centaurin, alpha 1
                            5-hydroxytryptamine (serotonin) receptor 1D
3352
             HTR1D
60485
                            salvador homolog 1 (Drosophila)
             SAV1
             ADRBK2
157
                            adrenergic, beta, receptor kinase 2
5589
             PRKCSH
                            protein kinase C substrate 80K-H
11318
             ADMR
                            adrenomedullin receptor
                            casein kinase 1, alpha 1-like
122011
             CSNK1A1L
10140
             TOB1
                            transducer of ERBB2, 1
6879
             TAF7
                            TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 55kDa
7852
             CXCR4
                            chemokine (C-X-C motif) receptor 4
3579
             IL8RB
                            interleukin 8 receptor, beta
2833
             CXCR3
                            chemokine (C-X-C motif) receptor 3
2209
             FCGR1A
                            Fc fragment of IgG, high affinity Ia, receptor (CD64)
4690
             NCK1
                            NCK adaptor protein 1
9577
             BRE
                            brain and reproductive organ-expressed (TNFRSF1A modulator)
7040
             TGFB1
                            transforming growth factor, beta 1 (Camurati-Engelmann disease)
53637
             EDG8
                            endothelial differentiation, sphingolipid G-protein-coupled receptor, 8
             WSB2
                            WD repeat and SOCS box-containing 2
55884
                            hairy/enhancer-of-split related with YRPW motif 2
23493
             HEY2
1022
             CDK7
                            cyclin-dependent kinase 7 (MO15 homolog, Xenopus laevis, cdk-activating kinase)
                            wingless-type MMTV integration site family, member 7A
7476
             WNT7A
623
             BDKRB1
                            bradykinin receptor B1
5467
             PPARD
                            peroxisome proliferator-activated receptor delta
6752
             SSTR2
                            somatostatin receptor 2
1235
             CCR6
                            chemokine (C-C motif) receptor 6
187
             AGTRL1
                            angiotensin II receptor-like 1
23620
             NTSR2
                            neurotensin receptor 2
64121
             RRAGC
                            Ras-related GTP binding C
10900
             RPIP8
                            RaP2 interacting protein 8
93594
             WDR67
                            WD repeat domain 67
301
             ANXA1
                            annexin A1
27122
                            dickkopf homolog 3 (Xenopus laevis)
             DKK3
2898
             GRIK2
                            glutamate receptor, ionotropic, kainate 2
5984
             RFC4
                            replication factor C (activator 1) 4, 37kDa
11191
             PTENP1
                            phosphatase and tensin homolog (mutated in multiple advanced cancers 1), pseudogene 1
11321
             XAB1
                            XPA binding protein 1, GTPase
1848
             DUSP6
                            dual specificity phosphatase 6
1238
             CCBP2
                            chemokine binding protein 2
6751
             SSTR1
                            somatostatin receptor 1
                            LanC lantibiotic synthetase component C-like 1 (bacterial)
10314
             LANCL1
64798
             DEPDC6
                            DEP domain containing 6
2783
             GNB2
                            guanine nucleotide binding protein (G protein), beta polypeptide 2
             ANGPTL7
                            angiopoietin-like 7
10218
             PRKACB
5567
                            protein kinase, cAMP-dependent, catalytic, beta
2770
             GNAI1
                            guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1
1902
             EDG2
                            endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 2
             OPRL1
4987
                            opiate receptor-like 1
7913
             DEK
                            DEK oncogene (DNA binding)
2697
             GJA1
                            gap junction protein, alpha 1, 43kDa
                            neuropeptide Y receptor Y1
4886
             NPY1R
             TP53
7157
                            tumor protein p53 (Li-Fraumeni syndrome)
9265
             PSCD3
                            pleckstrin homology, Sec7 and coiled-coil domains 3
64798
             DEPDC6
                            DEP domain containing 6
59345
             GNB4
                            guanine nucleotide binding protein (G protein), beta polypeptide 4
1022
             CDK7
                            cyclin-dependent kinase 7 (MO15 homolog, Xenopus laevis, cdk-activating kinase)
9170
                            endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 4
             EDG4
             CX3CR1
                            chemokine (C-X3-C motif) receptor 1
1524
             MAPK11
5600
                            mitogen-activated protein kinase 11
54329
             GPR85
                            G protein-coupled receptor 85
2331
             FMOD
                            fibromodulin
5494
             PPM1A
                            protein phosphatase 1A (formerly 2C), magnesium-dependent, alpha isoform
             CDC42EP1
11135
                            CDC42 effector protein (Rho GTPase binding) 1
             DUSP4
                            dual specificity phosphatase 4
1846
10332
             CLEC4M
                            C-type lectin domain family 4, member M
                            guanine nucleotide binding protein (G protein), beta polypeptide 1
2782
             GNB1
5606
             MAP2K3
                            mitogen-activated protein kinase kinase 3
2358
             FPRL1
                            formyl peptide receptor-like 1
407
             ARR3
                            arrestin 3, retinal (X-arrestin)
7044
             LEFTY2
                            left-right determination factor 2
```

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92999
             ZBTB47
                            zinc finger and BTB domain containing 47
5029
             P2RY2
                            purinergic receptor P2Y, G-protein coupled, 2
                            protein kinase, cAMP-dependent, regulatory, type II, alpha
             PRKAR2A
5576
8877
             SPHK1
                            sphingosine kinase 1
2150
             F2RL1
                            coagulation factor II (thrombin) receptor-like 1
23596
             OPN3
                            opsin 3 (encephalopsin, panopsin)
168417
             ZNF679
                            zinc finger protein 679
1454
             CSNK1E
                            casein kinase 1, epsilon
5609
             MAP2K7
                            mitogen-activated protein kinase kinase 7
28988
             DBNL
                            drebrin-like
             TNFRSF10B
8795
                            tumor necrosis factor receptor superfamily, member 10b
5607
             MAP2K5
                            mitogen-activated protein kinase kinase 5
             CHN1
                            chimerin (chimaerin) 1
1123
                            GTPase activating protein (SH3 domain) binding protein 1
10146
             G3BP1
814
             CAMK4
                            calcium/calmodulin-dependent protein kinase IV
9093
             DNAJA3
                            DnaJ (Hsp40) homolog, subfamily A, member 3
23452
             ANGPTL2
                            angiopoietin-like 2
             ADORA2A
                            adenosine A2a receptor
135
51466
             EVL
                            Enah/Vasp-like
10298
             PAK4
                            p21(CDKN1A)-activated kinase 4
             PTPN1
                            protein tyrosine phosphatase, non-receptor type 1
5770
             GPRC5C
55890
                            G protein-coupled receptor, family C, group 5, member C
5664
             PSEN2
                            presenilin 2 (Alzheimer disease 4)
8882
             ZNF259
                            zinc finger protein 259
5914
                            retinoic acid receptor, alpha
             RARA
8797
             TNFRSF10A
                            tumor necrosis factor receptor superfamily, member 10a
115557
             GEFT
                            RAC/CDC42 exchange factor
             ECGF1
1890
                            endothelial cell growth factor 1 (platelet-derived)
8973
             CHRNA6
                            cholinergic receptor, nicotinic, alpha 6
9046
             DOK2
                            docking protein 2, 56kDa
408
             ARRB1
                            arrestin, beta 1
10494
                            serine/threonine kinase 25 (STE20 homolog, yeast)
             STK25
5163
             PDK1
                            pyruvate dehydrogenase kinase, isozyme 1
             TULP3
7289
                            tubby like protein 3
200576
             PIP5K3
                            phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinase, type III
5781
             PTPN11
                            protein tyrosine phosphatase, non-receptor type 11 (Noonan syndrome 1)
5663
             PSEN1
                            presenilin 1 (Alzheimer disease 3)
30001
             ERO1L
                            ERO1-like (S. cerevisiae)
             GARRR1
                            gamma-aminobutyric acid (GABA) A receptor, beta 1
2560
             DUSP10
11221
                            dual specificity phosphatase 10
             ENTPD2
                            ectonucleoside triphosphate diphosphohydrolase 2
954
655
             BMP7
                            bone morphogenetic protein 7 (osteogenic protein 1)
55437
             ALS2CR2
                            amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 2
86
             ACTL6A
                            actin-like 6A
11026
                            leukocyte immunoglobulin-like receptor, subfamily A (without TM domain), member 3
             LILRA3
             PPP2R2B
                            protein phosphatase 2 (formerly 2A), regulatory subunit B, beta isoform
5521
             ILK
                            integrin-linked kinase
3611
1128
             CHRM1
                            cholinergic receptor, muscarinic 1
23012
             STK38L
                            serine/threonine kinase 38 like
                            cholinergic receptor, nicotinic, alpha 5
1138
             CHRNA5
10487
             CAP1
                            CAP, adenylate cyclase-associated protein 1 (yeast)
2534
             FYN
                            FYN oncogene related to SRC, FGR, YES
2046
             EPHA8
                            EPH receptor A8
             ITPK1
3705
                            inositol 1,3,4-triphosphate 5/6 kinase
7424
             VEGFC
                            vascular endothelial growth factor C
                            3-phosphoinositide dependent protein kinase-1
5170
             PDPK1
             FGL2
10875
                            fibrinogen-like 2
             RAPGEF5
                            Rap guanine nucleotide exchange factor (GEF) 5
9771
2563
             GABRD
                            gamma-aminobutyric acid (GABA) A receptor, delta
2674
             GFRA1
                            GDNF family receptor alpha 1
2565
             GABRG1
                            gamma-aminobutyric acid (GABA) A receptor, gamma 1
10278
             EFS
                            embryonal Fyn-associated substrate
             PPARG
                            peroxisome proliferator-activated receptor gamma
5468
79858
                            NIMA (never in mitosis gene a)- related kinase 11
             NFK11
7296
             TXNRD1
                            thioredoxin reductase 1
1453
             CSNK1D
                            casein kinase 1, delta
27237
             ARHGEF16
                            Rho guanine exchange factor (GEF) 16
                            protein phosphatase 2 (formerly 2A), regulatory subunit B, gamma isoform
5522
             PPP2R2C
392
             ARHGAP1
                            Rho GTPase activating protein 1
83605
             CCM2
                            cerebral cavernous malformation 2
84675
             TRIM55
                            tripartite motif-containing 55
84929
             FIBCD1
                            fibrinogen C domain containing 1
10475
             TRIM38
                            tripartite motif-containing 38
634
             CEACAM1
                            carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein)
10486
             CAP2
                            CAP, adenylate cyclase-associated protein, 2 (yeast)
183
             AGT
                            angiotensinogen (serpin peptidase inhibitor, clade A, member 8)
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7186
             TRAF2
                            TNF receptor-associated factor 2
9051
             PSTPIP1
                            proline-serine-threonine phosphatase interacting protein 1
5601
             MAPK9
                            mitogen-activated protein kinase 9
             BMP7
655
                            bone morphogenetic protein 7 (osteogenic protein 1)
27180
             SIGLEC9
                            sialic acid binding Ig-like lectin 9
2664
                            GDP dissociation inhibitor 1
             GDI1
             TNFRSF1A
                            tumor necrosis factor receptor superfamily, member 1A
7132
164656
             TMPRSS6
                            transmembrane protease, serine 6
             SMAD1
4086
                            SMAD family member 1
9784
             SNX17
                            sorting nexin 17
             SRGAP1
57522
                            SLIT-ROBO Rho GTPase activating protein 1
6788
                            serine/threonine kinase 3 (STE20 homolog, yeast)
             STK3
842
             CASP9
                            caspase 9, apoptosis-related cysteine peptidase
10617
             STAMBP
                            STAM binding protein
8428
             STK24
                            serine/threonine kinase 24 (STE20 homolog, yeast)
3696
             ITGB8
                            integrin, beta 8
11006
             LILRB4
                            leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 4
920
             CD4
                            CD4 molecule
2516
             NR5A1
                            nuclear receptor subfamily 5, group A, member 1
11329
             STK38
                            serine/threonine kinase 38
             GABRB3
                            gamma-aminobutyric acid (GABA) A receptor, beta 3
2562
             ALDH1A2
                            aldehyde dehydrogenase 1 family, member A2
8854
2556
             GABRA3
                            gamma-aminobutyric acid (GABA) A receptor, alpha 3
816
             CAMK2B
                            calcium/calmodulin-dependent protein kinase (CaM kinase) II beta
6095
                            RAR-related orphan receptor A
             RORA
5153
             PDE1B
                            phosphodiesterase 1B, calmodulin-dependent
3454
             IFNAR1
                            interferon (alpha, beta and omega) receptor 1
                            protein kinase C, iota
5584
             PRKCI
4929
             NR4A2
                            nuclear receptor subfamily 4, group A, member 2
3680
             ITGA9
                            integrin, alpha 9
11216
             AKAP10
                            A kinase (PRKA) anchor protein 10
             ADRBK1
                            adrenergic, beta, receptor kinase 1
156
1856
             DVL2
                            dishevelled, dsh homolog 2 (Drosophila)
139135
             PASD1
                            PAS domain containing 1
4828
             NMB
                            neuromedin B
2444
             FRK
                            fyn-related kinase
10188
             TNK2
                            tyrosine kinase, non-receptor, 2
80778
             ZNF34
                            zinc finger protein 34
             TRAF3IP2
10758
                            TRAF3 interacting protein 2
51676
             ASB2
                            ankyrin repeat and SOCS box-containing 2
8945
             BTRC
                            beta-transducin repeat containing
29127
             RACGAP1
                            Rac GTPase activating protein 1
             DIP13B
55198
                            DIP13 beta
2982
             GUCY1A3
                            guanylate cyclase 1, soluble, alpha 3
3954
             LETM1
                            leucine zipper-EF-hand containing transmembrane protein 1
9146
                            hepatocyte growth factor-regulated tyrosine kinase substrate
             HGS
6003
             RGS13
                            regulator of G-protein signalling 13
3055
             HCK
                            hemopoietic cell kinase
23432
             GPR161
                            G protein-coupled receptor 161
                            FYVE, RhoGEF and PH domain containing 5
152273
             FGD5
10636
             RGS14
                            regulator of G-protein signalling 14
5905
             RANGAP1
                            Ran GTPase activating protein 1
9466
             IL27RA
                            interleukin 27 receptor, alpha
             SYDE1
                            synapse defective 1, Rho GTPase, homolog 1 (C. elegans)
85360
25780
             RASGRP3
                            RAS guanyl releasing protein 3 (calcium and DAG-regulated)
                            caspase recruitment domain family, member 14
79092
             CARD14
150094
             SNF1LK
                            SNF1-like kinase
             FLJ34077
404033
                            weakly similar to zinc finger protein 195
90
             ACVR1
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55789
             DEPDC1B
                            DEP domain containing 1B
                            neuroepithelial cell transforming gene 1
10276
             NET1
10133
             OPTN
                            optineurin
             GRK6
2870
                            G protein-coupled receptor kinase 6
64123
                            EGF, latrophilin and seven transmembrane domain containing 1
             FI TD1
10403
             KNTC2
                            kinetochore associated 2
7148
             TNXB
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166614
             DCAMKL2
                            doublecortin and CaM kinase-like 2
             DCBLD2
131566
                            discoidin, CUB and LCCL domain containing 2
7097
             TLR2
                            toll-like receptor 2
149111
             CNIH3
                            cornichon homolog 3 (Drosophila)
10818
             FRS2
                            fibroblast growth factor receptor substrate 2
             SIPA1L2
                            signal-induced proliferation-associated 1 like 2
57568
84976
             DISP1
                            dispatched homolog 1 (Drosophila)
5187
             PER1
                            period homolog 1 (Drosophila)
10990
             LII RB5
                            leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 5
6850
             SYK
                            spleen tyrosine kinase
```

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5894
             RAF1
                            v-raf-1 murine leukemia viral oncogene homolog 1
660
             BMX
                            BMX non-receptor tyrosine kinase
10044
             SH2D3C
                            SH2 domain containing 3C
64693
             CTAGE1
                            cutaneous T-cell lymphoma-associated antigen 1
22920
             KIFAP3
                            kinesin-associated protein 3
1164
             CKS2
                            CDC28 protein kinase regulatory subunit 2
                            Rho guanine nucleotide exchange factor (GEF) 5
7984
             ARHGEF5
10083
             USH1C
                            Usher syndrome 1C (autosomal recessive, severe)
9815
             GIT2
                            G protein-coupled receptor kinase interactor 2
9063
                            protein inhibitor of activated STAT, 2
             PIAS2
2896
             GRN
                            granulin
89941
             RHOT2
                            ras homolog gene family, member T2
10928
             RALBP1
                            ralA binding protein 1
                            solute carrier family 20 (phosphate transporter), member 1
6574
             SI C20A1
10446
             LRRN5
                            leucine rich repeat neuronal 5
6775
             STAT4
                            signal transducer and activator of transcription 4
                            TBC1 domain family, member 5
9779
             TBC1D5
9547
             CXCL14
                            chemokine (C-X-C motif) ligand 14
8685
             MARCO
                            macrophage receptor with collagenous structure
5152
             PDE9A
                            phosphodiesterase 9A
2557
             GABRA4
                            gamma-aminobutyric acid (GABA) A receptor, alpha 4
8324
             FZD7
                            frizzled homolog 7 (Drosophila)
5027
             P2RX7
                            purinergic receptor P2X, ligand-gated ion channel, 7
3718
                            Janus kinase 3 (a protein tyrosine kinase, leukocyte)
             JAK3
                            Rho guanine nucleotide exchange factor (GEF) 10
             ARHGEF10
9639
10767
             HBS1L
                            HBS1-like (S. cerevisiae)
5597
             MAPK6
                            mitogen-activated protein kinase 6
                            mitofusin 2
9927
             MFN2
5298
             PIK4CB
                            phosphatidylinositol 4-kinase, catalytic, beta polypeptide
10458
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                            BAI1-associated protein 2
7188
             TRAF5
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9567
                            GTP binding protein 1
150209
             AIFM3
                            apoptosis-inducing factor, mitochondrion-associated, 3
1997
             ELF1
                            E74-like factor 1 (ets domain transcription factor)
4599
                            myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
             MX1
85415
             RHPN2
                            rhophilin, Rho GTPase binding protein 2
1606
             DGKA
                            diacylglycerol kinase, alpha 80kDa
7088
             TLE1
                            transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
7356
             SCGB1A1
                            secretoglobin, family 1A, member 1 (uteroglobin)
808
             CALM3
                            calmodulin 3 (phosphorylase kinase, delta)
26578
             OSTF1
                            osteoclast stimulating factor 1
115761
             ARL11
                            ADP-ribosylation factor-like 11
             RHOA
                            ras homolog gene family, member A
387
6009
             RHEB
                            Ras homolog enriched in brain
1410
             CRYAB
                            crystallin, alpha B
113835
             ZNF257
                            zinc finger protein 257
             GP1BA
                            glycoprotein lb (platelet), alpha polypeptide
2811
51517
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7089
             TLE2
                            transducin-like enhancer of split 2 (E(sp1) homolog, Drosophila)
2059
             EPS8
                            epidermal growth factor receptor pathway substrate 8
5822
             PWP2
                            PWP2 periodic tryptophan protein homolog (yeast)
885
                            cholecystokinin
             CCK
                            ADP-ribosylation factor 3
377
             ARF3
28511
             NKIRAS2
                            NFKB inhibitor interacting Ras-like 2
22800
             RRAS2
                            related RAS viral (r-ras) oncogene homolog 2
                            regulator of G-protein signalling 1
5996
             RGS1
91584
             PLXNA4B
                            plexin A4, B
3932
             LCK
                            lymphocyte-specific protein tyrosine kinase
5777
             PTPN6
                            protein tyrosine phosphatase, non-receptor type 6
79798
             ARMC5
                            armadillo repeat containing 5
10512
             SEMA3C
                            sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C
9754
             STARD8
                            START domain containing 8
5979
             RET
                            ret proto-oncogene (multiple endocrine neoplasia and medullary thyroid carcinoma 1,
Hirschsprung disease)
             ARF5
                            ADP-ribosylation factor 5
381
127829
             ARL8A
                            ADP-ribosylation factor-like 8A
51128
             SAR1B
                            SAR1 gene homolog B (S. cerevisiae)
4049
                            lymphotoxin alpha (TNF superfamily, member 1)
             LTA
400
             ARL1
                            ADP-ribosylation factor-like 1
8837
             CFLAR
                            CASP8 and FADD-like apoptosis regulator
23786
             BCL2L13
                            BCL2-like 13 (apoptosis facilitator)
26060
             APPL
                            adaptor protein containing pH domain, PTB domain and leucine zipper motif 1
7409
             VAV1
                            vav 1 oncogene
             MAP3K6
9064
                            mitogen-activated protein kinase kinase kinase 6
                            microtubule associated serine/threonine kinase
22983
             MAST1
10025
             THRAP5
                            thyroid hormone receptor associated protein 5
```

```
3600
             IL15
                            interleukin 15
54769
             DIRAS2
                            DIRAS family, GTP-binding RAS-like 2
             RI N1
                            relaxin 1
6013
             ITGB3BP
23421
                            integrin beta 3 binding protein (beta3-endonexin)
334
             APLP2
                            amyloid beta (A4) precursor-like protein 2
8767
             RIPK2
                            receptor-interacting serine-threonine kinase 2
5598
             MAPK7
                            mitogen-activated protein kinase 7
204851
             HIPK1
                            homeodomain interacting protein kinase 1
5294
             PIK3CG
                            phosphoinositide-3-kinase, catalytic, gamma polypeptide
                            F-box and WD-40 domain protein 10
10517
             FBXW10
2257
             FGF12
                            fibroblast growth factor 12
5865
             RAB3B
                            RAB3B, member RAS oncogene family
578
             BAK1
                            BCL2-antagonist/killer 1
11075
             STMN2
                            stathmin-like 2
55684
             C9orf86
                            chromosome 9 open reading frame 86
64396
             GMCL1L
                            germ cell-less homolog 1 (Drosophila)-like
9943
             OXSR1
                            oxidative-stress responsive 1
329
             BIRC2
                            baculoviral IAP repeat-containing 2
2908
             NR3C1
                            nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)
84812
             PLCD4
                            phospholipase C, delta 4
58484
             NLRC4
                            NLR family, CARD domain containing 4
5158
             PDE6B
                            phosphodiesterase 6B, cGMP-specific, rod, beta (congenital stationary night blindness 3,
autosomal dominant)
6447
             SCG5
                            secretogranin V (7B2 protein)
                            RAB14, member RAS oncogene family
51552
             RAB14
2641
             GCG
                            glucagon
1827
             DSCR1
                            Down syndrome critical region gene 1
382
             ARF6
                            ADP-ribosylation factor 6
7205
             TRIP6
                            thyroid hormone receptor interactor 6
7052
             TGM2
                            transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase)
29110
             TBK1
                            TANK-binding kinase 1
115704
             EVI5L
                            ecotropic viral integration site 5-like
57679
             ALS2
                            amyotrophic lateral sclerosis 2 (juvenile)
             BUB1B
                            BUB1 budding uninhibited by benzimidazoles 1 homolog beta (yeast)
701
91662
             NLRP12
                            NLR family, pyrin domain containing 12
1649
             DDIT3
                            DNA-damage-inducible transcript 3
375
             ARF1
                            ADP-ribosylation factor 1
5879
             RAC1
                            ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
             RAB8A
4218
                            RAB8A, member RAS oncogene family
5744
             PTHLH
                            parathyroid hormone-like hormone
51130
             ASB3
                            ankyrin repeat and SOCS box-containing 3
373
             TRIM23
                            tripartite motif-containing 23
             JUP
                            junction plakoglobin
3728
119437
             CTAGEP
                            CTAGE family pseudogene
                            exostoses (multiple) 2
2132
             EXT2
             CHMP5
51510
                            chromatin modifying protein 5
                            ADP-ribosylation factor-like 6
84100
             ARL6
9308
             CD83
                            CD83 molecule
5504
             PPP1R2
                            protein phosphatase 1, regulatory (inhibitor) subunit 2
             FBXW11
23291
                            F-box and WD-40 domain protein 11
55296
             TBC1D19
                            TBC1 domain family, member 19
                            v-raf murine sarcoma 3611 viral oncogene homolog
369
             ARAF
9610
             RIN1
                            Ras and Rab interactor 1
9915
             ARNT2
                            aryl-hydrocarbon receptor nuclear translocator 2
9922
             IQSEC1
                            IQ motif and Sec7 domain 1
             RAPGEF4
11069
                            Rap guanine nucleotide exchange factor (GEF) 4
             MAP4K5
11183
                            mitogen-activated protein kinase kinase kinase kinase 5
8204
             NRIP1
                            nuclear receptor interacting protein 1
             PLCG2
                            phospholipase C, gamma 2 (phosphatidylinositol-specific)
5336
51347
             TAOK3
                            TAO kinase 3
             GNG5
                            guanine nucleotide binding protein (G protein), gamma 5
2787
8742
             TNFSF12
                            tumor necrosis factor (ligand) superfamily, member 12
             GPSM3
63940
                            G-protein signalling modulator 3 (AGS3-like, C. elegans)
                            v-ral simian leukemia viral oncogene homolog B (ras related; GTP binding protein)
             RALB
5899
9093
             DNAJA3
                            DnaJ (Hsp40) homolog, subfamily A, member 3
8764
             TNFRSF14
                            tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)
8440
             NCK2
                            NCK adaptor protein 2
                            endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 6
8698
             EDG6
5168
             ENPP2
                            ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)
             RASAL1
8437
                            RAS protein activator like 1 (GAP1 like)
6195
             RPS6KA1
                            ribosomal protein S6 kinase, 90kDa, polypeptide 1
118987
             PDZD8
                            PDZ domain containing 8
2791
             GNG11
                            guanine nucleotide binding protein (G protein), gamma 11
23362
             PSD3
                            pleckstrin and Sec7 domain containing 3
             CALML5
51806
                            calmodulin-like 5
326624
             RAB37
                            RAB37, member RAS oncogene family
```

```
9112
             MTA1
                            metastasis associated 1
7020
             TFAP2A
                            transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha)
10342
             TFG
                            TRK-fused gene
             FNBP4
23360
                            formin binding protein 4
5159
             PDGFRB
                            platelet-derived growth factor receptor, beta polypeptide
2260
             FGFR1
                            fibroblast growth factor receptor 1 (fms-related tyrosine kinase 2, Pfeiffer syndrome)
155370
             SBDSP
                            Shwachman-Bodian-Diamond syndrome pseudogene
2788
             GNG7
                            guanine nucleotide binding protein (G protein), gamma 7
                            microphthalmia-associated transcription factor
4286
             MITF
             RHOF
54509
                            ras homolog gene family, member F (in filopodia)
65997
             RASL11B
                            RAS-like, family 11, member B
             BSG
                            basigin (Ok blood group)
682
51562
             MBIP
                            MAP3K12 binding inhibitory protein 1
10681
             GNB5
                            guanine nucleotide binding protein (G protein), beta 5
6242
             RTKN
                            rhotekin
8473
             OGT
                            O-linked N-acetylglucosamine (GlcNAc) transferase (UDP-N-acetylglucosamine:polypeptide-N-
acetylglucosaminyl transferase)
3693
             ITGB5
                            integrin, beta 5
5585
             PKN1
                            protein kinase N1
10019
             SH2B3
                            SH2B adaptor protein 3
4852
             NPY
                            neuropeptide Y
2537
             IFI6
                            interferon, alpha-inducible protein 6
5368
             PNOC
                            prepronociceptin
                            C-type lectin domain family 1, member B
51266
             CLEC1B
             GNA<sub>12</sub>
                            guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
2771
9630
             GNA14
                            guanine nucleotide binding protein (G protein), alpha 14
1432
             MAPK14
                            mitogen-activated protein kinase 14
             PPP2R5D
                            protein phosphatase 2, regulatory subunit B', delta isoform
5528
9138
             ARHGEF1
                            Rho guanine nucleotide exchange factor (GEF) 1
9372
             ZFYVE9
                            zinc finger, FYVE domain containing 9
7075
             TIE1
                            tyrosine kinase with immunoglobulin-like and EGF-like domains 1
             PLA2G1B
5319
                            phospholipase A2, group IB (pancreas)
55890
             GPRC5C
                            G protein-coupled receptor, family C, group 5, member C
             NPPB
                            natriuretic peptide precursor B
4879
54360
             CYTL1
                            cytokine-like 1
57414
             RHBDD2
                            rhomboid domain containing 2
23647
             ARFIP2
                            ADP-ribosylation factor interacting protein 2 (arfaptin 2)
1459
             CSNK2A2
                            casein kinase 2, alpha prime polypeptide
             TBC1D20
                            TBC1 domain family, member 20
128637
5747
             PTK2
                            PTK2 protein tyrosine kinase 2
488
             ATP2A2
                            ATPase, Ca++ transporting, cardiac muscle, slow twitch 2
9033
             PKD2L1
                            polycystic kidney disease 2-like 1
9765
             ZFYVE16
                            zinc finger, FYVE domain containing 16
6232
             RPS27
                            ribosomal protein S27 (metallopanstimulin 1)
             MIF
                            macrophage migration inhibitory factor (glycosylation-inhibiting factor)
4282
             GPR157
80045
                            G protein-coupled receptor 157
219995
             MGC35295
                            hypothetical protein MGC35295
1392
             CRH
                            corticotropin releasing hormone
307
             ANXA4
                            annexin A4
             IL13RA1
                            interleukin 13 receptor, alpha 1
3597
9908
             G3BP2
                            GTPase activating protein (SH3 domain) binding protein 2
7791
             7YX
                            zvxin
3683
             ITGAL
                            integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha
polypeptide)
3687
             ITGAX
                            integrin, alpha X (complement component 3 receptor 4 subunit)
558
             AXL
                            AXL receptor tyrosine kinase
                            glucocorticoid receptor DNA binding factor 1
2909
             GRI F1
             ARHGAP17
55114
                            Rho GTPase activating protein 17
50852
             TRAT1
                            T cell receptor associated transmembrane adaptor 1
29121
             CLEC<sub>2</sub>D
                            C-type lectin domain family 2, member D
                            Fas (TNFRSF6)-associated via death domain
8772
             FADD
             MRGPRF
219928
                            MAS-related GPR, member F
6769
             STAC
                            SH3 and cysteine rich domain
3594
             IL12RB1
                            interleukin 12 receptor, beta 1
7297
             TYK2
                            tyrosine kinase 2
8500
             PPFIA1
                            protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin),
alpha 1
9373
             PLAA
                            phospholipase A2-activating protein
3845
             KRAS
                            v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
8365
             HIST1H4H
                            histone cluster 1, H4h
767
             CA8
                            carbonic anhydrase VIII
970
             CD70
                            CD70 molecule
9022
             CLIC3
                            chloride intracellular channel 3
8614
             STC2
                            stanniocalcin 2
409
             ARRB2
                            arrestin, beta 2
23616
             SH3BP1
                            SH3-domain binding protein 1
```

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80778
             ZNF34
                            zinc finger protein 34
23741
             EID1
                            EP300 interacting inhibitor of differentiation 1
284521
                            olfactory receptor, family 2, subfamily L, member 13
             OR2I 13
7048
             TGFBR2
                            transforming growth factor, beta receptor II (70/80kDa)
26716
             OR2H1
                            olfactory receptor, family 2, subfamily H, member 1
2774
             GNAL
                            guanine nucleotide binding protein (G protein), alpha activating activity polypeptide, olfactory type
7525
             YFS1
                            v-yes-1 Yamaguchi sarcoma viral oncogene homolog 1
             RABGAP1L
9910
                            RAB GTPase activating protein 1-like
             ARHGAP20
                            Rho GTPase activating protein 20
57569
             ADORA3
140
                            adenosine A3 receptor
27297
             RCP9
                            calcitonin gene-related peptide-receptor component protein
             CHRNB1
1140
                            cholinergic receptor, nicotinic, beta 1 (muscle)
27352
             RUTBC3
                            RUN and TBC1 domain containing 3
8743
             TNFSF10
                            tumor necrosis factor (ligand) superfamily, member 10
657
             BMPR1A
                            bone morphogenetic protein receptor, type IA
8738
             CRADD
                            CASP2 and RIPK1 domain containing adaptor with death domain
5562
             PRKAA1
                            protein kinase, AMP-activated, alpha 1 catalytic subunit
1133
             CHRM5
                            cholinergic receptor, muscarinic 5
6498
             SKIL
                            SKI-like oncogene
             GUCY1B3
2983
                            quanylate cyclase 1, soluble, beta 3
7090
             TLE3
                            transducin-like enhancer of split 3 (E(sp1) homolog, Drosophila)
2913
             GRM3
                            glutamate receptor, metabotropic 3
2564
             GABRE
                            gamma-aminobutyric acid (GABA) A receptor, epsilon
84106
             PRAM1
                            PML-RARA regulated adaptor molecule 1
             CAPN5
                            calpain 5
726
2865
             FFAR3
                            free fatty acid receptor 3
3937
             LCP2
                            lymphocyte cytosolic protein 2 (SH2 domain containing leukocyte protein of 76kDa)
1442
             CSH<sub>1</sub>
                            chorionic somatomammotropin hormone 1 (placental lactogen)
2776
             GNAQ
                            guanine nucleotide binding protein (G protein), q polypeptide
5562
             PRKAA1
                            protein kinase, AMP-activated, alpha 1 catalytic subunit
11213
             IRAK3
                            interleukin-1 receptor-associated kinase 3
                            zinc finger, DHHC-type containing 17
             ZDHHC17
23390
2905
             GRIN2C
                            glutamate receptor, ionotropic, N-methyl D-aspartate 2C
7301
             TYRO3
                            TYRO3 protein tyrosine kinase
83593
             RASSF5
                            Ras association (RalGDS/AF-6) domain family 5
10922
             FASTK
                            Fas-activated serine/threonine kinase
4869
             NPM1
                            nucleophosmin (nucleolar phosphoprotein B23, numatrin)
389
             RHOC
                            ras homolog gene family, member C
7189
             TRAF6
                            TNF receptor-associated factor 6
             MGC51025
353149
                            hypothetical protein MGC51025
5026
             P2RX5
                            purinergic receptor P2X, ligand-gated ion channel, 5
7554
             ZNF8
                            zinc finger protein 8
1272
             CNTN1
                            contactin 1
23560
             GTPBP4
                            GTP binding protein 4
             NFAM1
                            NFAT activating protein with ITAM motif 1
150372
                            diacylglycerol kinase, eta
RasGEF domain family, member 1C
160851
             DGKH
255426
             RASGEF1C
1363
             CPE
                            carboxypeptidase E
8326
             FZD9
                            frizzled homolog 9 (Drosophila)
3164
             NR4A1
                            nuclear receptor subfamily 4, group A, member 1
7179
             TPTE
                            transmembrane phosphatase with tensin homology
9450
             LY86
                            lymphocyte antigen 86
2742
             GLRA2
                            glycine receptor, alpha 2
2359
             FPRL2
                            formyl peptide receptor-like 2
23385
             NCSTN
                            nicastrin
             RHOBTB1
9886
                            Rho-related BTB domain containing 1
10566
             AKAP3
                            A kinase (PRKA) anchor protein 3
6009
             RHEB
                            Ras homolog enriched in brain
83871
             RAB34
                            RAB34, member RAS oncogene family
6714
             SRC
                            v-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
25928
             SOSTDC1
                            sclerostin domain containing 1
4916
             NTRK3
                            neurotrophic tyrosine kinase, receptor, type 3
             ASB17
                            ankyrin repeat and SOCS box-containing 17
127247
                            RAB28, member RAS oncogene family
             RAB28
9364
1809
             DPYSL3
                            dihydropyrimidinase-like 3
340307
             CTAGE6
                            CTAGE family, member 6
9712
             USP6NL
                            USP6 N-terminal like
91608
             RASL10B
                            RAS-like, family 10, member B
56674
             TMEM9B
                            TMEM9 domain family, member B
             PPAP2A
8611
                            phosphatidic acid phosphatase type 2A
55023
             PHIP
                            pleckstrin homology domain interacting protein
             TNFAIP6
7130
                            tumor necrosis factor, alpha-induced protein 6
11069
             RAPGEF4
                            Rap guanine nucleotide exchange factor (GEF) 4
91319
             DERL3
                            Der1-like domain family, member 3
6457
             SH3GL3
                            SH3-domain GRB2-like 3
```

wingless-type MMTV integration site family, member 4

54361

WNT4

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2781
             GNAZ
                            guanine nucleotide binding protein (G protein), alpha z polypeptide
257019
             FRMD3
                            FERM domain containing 3
             GPR37
                            G protein-coupled receptor 37 (endothelin receptor type B-like)
2861
             ТМЕМ9В
56674
                            TMEM9 domain family, member B
3146
             HMGB1
                            high-mobility group box 1
56896
             DPYSL5
                            dihydropyrimidinase-like 5
64283
             RGNFF
                            Rho-guanine nucleotide exchange factor
4724
             NDUFS4
                            NADH dehydrogenase (ubiquinone) Fe-S protein 4, 18kDa (NADH-coenzyme Q reductase)
             CEP57
9702
                            centrosomal protein 57kDa
             SOCS3
9021
                            suppressor of cytokine signaling 3
10316
             NMUR1
                            neuromedin U receptor 1
             MAP3K12
                            mitogen-activated protein kinase kinase kinase 12
7786
10580
             SORBS1
                            sorbin and SH3 domain containing 1
             PTPRE
5791
                            protein tyrosine phosphatase, receptor type, E
             PPP1R2P3
153743
                            protein phosphatase 1, regulatory (inhibitor) subunit 2 pseudogene 3
261734
             NPHP4
                            nephronophthisis 4
29883
             CNOT7
                            CCR4-NOT transcription complex, subunit 7
5746
             PTHR2
                            parathyroid hormone receptor 2
94
             ACVRL1
                            activin A receptor type II-like 1
1890
             ECGF1
                            endothelial cell growth factor 1 (platelet-derived)
9852
                            EPM2A (laforin) interacting protein 1
             EPM2AIP1
9989
             PPP4R1
                            protein phosphatase 4, regulatory subunit 1
51285
             RASL12
                            RAS-like, family 12
                            Rho guanine exchange factor (GEF) 16
             ARHGEF16
27237
             BMPR1B
                            bone morphogenetic protein receptor, type IB
658
4059
             BCAM
                            basal cell adhesion molecule (Lutheran blood group)
347694
             ECEL1P2
                            endothelin converting enzyme-like 1, pseudogene 2
                            phospholipase C, delta 1
5333
             PLCD1
4983
             OPHN1
                            oligophrenin 1
5023
             P2RX1
                            purinergic receptor P2X, ligand-gated ion channel, 1
154043
             CNKSR3
                            CNKSR family member 3
9213
                            xenotropic and polytropic retrovirus receptor
             XPR1
8874
             ARHGEF7
                            Rho guanine nucleotide exchange factor (GEF) 7
3667
             IRS1
                            insulin receptor substrate 1
51256
             TBC1D7
                            TBC1 domain family, member 7
51176
             LEF1
                            lymphoid enhancer-binding factor 1
59343
             SENP2
                            SUMO1/sentrin/SMT3 specific peptidase 2
51473
             DCDC2
                            doublecortin domain containing 2
             PKN2
5586
                            protein kinase N2
5871
             MAP4K2
                            mitogen-activated protein kinase kinase kinase kinase 2
27201
             GPR78
                            G protein-coupled receptor 78
122809
             SOCS4
                            suppressor of cytokine signaling 4
7474
             WNT5A
                            wingless-type MMTV integration site family, member 5A
23178
             PASK
                            PAS domain containing serine/threonine kinase
             TBC1D14
57533
                            TBC1 domain family, member 14
             CNIH2
                            cornichon homolog 2 (Drosophila)
254263
             ARHGDIG
                            Rho GDP dissociation inhibitor (GDI) gamma
398
286530
             P2RY8
                            purinergic receptor P2Y, G-protein coupled, 8
80824
             DUSP16
                            dual specificity phosphatase 16
8986
             RPS6KA4
                            ribosomal protein S6 kinase, 90kDa, polypeptide 4
117157
             SH2D1B
                            SH2 domain containing 1B
83605
                            cerebral cavernous malformation 2
             CCM<sub>2</sub>
3921
             RPSA
                            ribosomal protein SA
             TBC1D10C
374403
                            TBC1 domain family, member 10C
5915
             RARB
                            retinoic acid receptor, beta
10571
             SMA3
                            SMA3
             COLEC12
                            collectin sub-family member 12
81035
406
             ARNTL
                            aryl hydrocarbon receptor nuclear translocator-like
10316
             NMUR1
                            neuromedin U receptor 1
5972
             REN
7133
             TNFRSF1B
                            tumor necrosis factor receptor superfamily, member 1B
8036
             SHOC2
                            soc-2 suppressor of clear homolog (C. elegans)
208
             AKT2
                            v-akt murine thymoma viral oncogene homolog 2
978
                            cvtidine deaminase
             CDA
53829
                            purinergic receptor P2Y, G-protein coupled, 13
             P2RY13
1903
             EDG3
                            endothelial differentiation, sphingolipid G-protein-coupled receptor, 3
2078
             ERG
                            v-ets erythroblastosis virus E26 oncogene homolog (avian)
                            baculoviral IAP repeat-containing 3
330
             BIRC3
22808
             MRAS
                            muscle RAS oncogene homolog
5879
                            ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
             RAC1
3921
             RPSA
                            ribosomal protein SA
4088
             SMAD3
                            SMAD family member 3
10454
             MAP3K7IP1
                            mitogen-activated protein kinase kinase kinase 7 interacting protein 1
54620
             FBXL19
                            F-box and leucine-rich repeat protein 19
                            vascular endothelial growth factor A
7422
             VFGFA
57381
             RHOJ
                            ras homolog gene family, member J
```

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SMPD1
6609
                            sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)
405
             ARNT
                            aryl hydrocarbon receptor nuclear translocator
5469
             PPARBP
                            PPAR binding protein
2185
             PTK2B
                            PTK2B protein tyrosine kinase 2 beta
10288
             LILRB2
                            leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 2
             CD3E
                            CD3e molecule, epsilon (CD3-TCR complex)
916
23089
             PFG10
                            paternally expressed 10
10002
             NR2E3
                            nuclear receptor subfamily 2, group E, member 3
             NUP62
23636
                            nucleoporin 62kDa
29117
             BRD7
                            bromodomain containing 7
             RAMP3
10268
                            receptor (G protein-coupled) activity modifying protein 3
5891
                            renal tumor antigen
             RAGE
51098
             IFT52
                            intraflagellar transport 52 homolog (Chlamydomonas)
6344
             SCTR
                            secretin receptor
7421
             VDR
                            vitamin D (1,25- dihydroxyvitamin D3) receptor
1672
             DEFB1
                            defensin, beta 1
8626
             TP73L
                            tumor protein p73-like
114898
             C1QTNF2
                            C1q and tumor necrosis factor related protein 2
79602
             ADIPOR2
                            adiponectin receptor 2
27334
             P2RY10
                            purinergic receptor P2Y, G-protein coupled, 10
             ANGPTL1
9068
                            angiopoietin-like 1
51701
             NLK
                            nemo-like kinase
7301
             TYRO3
                            TYRO3 protein tyrosine kinase
                            GDNF family receptor alpha 2
             GFRA2
2675
9938
             ARHGAP25
                            Rho GTPase activating protein 25
10379
             ISGF3G
                            interferon-stimulated transcription factor 3, gamma 48kDa
8633
             UNC5C
                            unc-5 homolog C (C. elegans)
                            eaf-like module containing, mucin-like, hormone receptor-like 1
             EMR1
2015
64284
             RAB17
                            RAB17, member RAS oncogene family
1855
                            dishevelled, dsh homolog 1 (Drosophila)
             DVL<sub>1</sub>
8550
             MAPKAPK5
                            mitogen-activated protein kinase-activated protein kinase 5
             PRKCG
5582
                            protein kinase C, gamma
57506
             VISA
                            virus-induced signaling adapter
             NFKB1
4790
                            nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (p105)
                            RAS-like, family 10, member A
10633
             RASL10A
3082
             HGF
                            hepatocyte growth factor (hepapoietin A; scatter factor)
5724
             PTAFR
                            platelet-activating factor receptor
9437
             NCR1
                            natural cytotoxicity triggering receptor 1
374403
             TBC1D10C
                            TBC1 domain family, member 10C
1082
             CGB
                            chorionic gonadotropin, beta polypeptide
1936
             EEF1D
                            eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange protein)
7185
             TRAF1
                            TNF receptor-associated factor 1
26118
             WSB1
                            WD repeat and SOCS box-containing 1
6364
             CCL20
                            chemokine (C-C motif) ligand 20
8605
             PLA2G4C
                            phospholipase A2, group IVC (cytosolic, calcium-independent)
9180
             OSMR
                            oncostatin M receptor
             YWHAQ
10971
                            tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide
55423
             SIRPG
                            signal-regulatory protein gamma
22900
             CARD8
                            caspase recruitment domain family, member 8
             RP13-102H20.1
158763
                                     hypothetical protein FLJ30058
8490
             RGS5
                            regulator of G-protein signalling 5
57121
             GPR92
                            G protein-coupled receptor 92
             OR2C3
81472
                            olfactory receptor, family 2, subfamily C, member 3
29967
             LRP12
                            low density lipoprotein-related protein 12
121504
             HIST4H4
                            histone cluster 4, H4
26191
             PTPN22
                            protein tyrosine phosphatase, non-receptor type 22 (lymphoid)
3641
             INSL4
                            insulin-like 4 (placenta)
8915
             BCL10
                            B-cell CLL/lymphoma 10
25989
             ULK3
                            unc-51-like kinase 3 (C. elegans)
5602
             MAPK10
                            mitogen-activated protein kinase 10
             PTDSR
23210
                            phosphatidylserine receptor
140459
             ASB6
                            ankyrin repeat and SOCS box-containing 6
             MS4A6A
64231
                            membrane-spanning 4-domains, subfamily A, member 6A
             PLA2G4B
8681
                            phospholipase A2, group IVB (cytosolic)
                            purinergic receptor P2Y, G-protein coupled, 12
64805
             P2RY12
29034
             PRO0132
                            PRO0132 protein
10892
             MALT1
                            mucosa associated lymphoid tissue lymphoma translocation gene 1
                            SH2 domain protein 1A, Duncan's disease (lymphoproliferative syndrome)
4068
             SH2D1A
27306
             PGDS
                            prostaglandin D2 synthase, hematopoietic
                            chloride intracellular channel 1
1192
             CLIC1
5565
             PRKAB2
                            protein kinase, AMP-activated, beta 2 non-catalytic subunit
             LRRFIP2
9209
                            leucine rich repeat (in FLII) interacting protein 2
10617
             STAMBP
                            STAM binding protein
55635
             DEPDC1
                            DEP domain containing 1
30851
             TAX1BP3
                            Tax1 (human T-cell leukemia virus type I) binding protein 3
2773
             GNAI3
                            guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 3
```

```
898
             CCNE1
                            cyclin E1
8877
             SPHK1
                            sphingosine kinase 1
10301
             DLEU1
                            deleted in lymphocytic leukemia, 1
1081
             CGA
                            glycoprotein hormones, alpha polypeptide
2243
             FGA
                            fibrinogen alpha chain
7253
             TSHR
                            thyroid stimulating hormone receptor
                            tropomodulin 2 (neuronal)
29767
             TMOD2
23308
             ICOSLG
                            inducible T-cell co-stimulator ligand
             ZAP70
                            zeta-chain (TCR) associated protein kinase 70kDa
7535
6198
             RPS6KB1
                            ribosomal protein S6 kinase, 70kDa, polypeptide 1
56940
             DUSP22
                            dual specificity phosphatase 22
4982
             TNFRSF11B
                            tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)
3622
                            inhibitor of growth family, member 2
             ING<sub>2</sub>
             LOC497661
                            putative NFkB activating protein
497661
6356
             CCL11
                            chemokine (C-C motif) ligand 11
10875
             FGL2
                            fibrinogen-like 2
10261
             IGSF6
                            immunoglobulin superfamily, member 6
             RGS20
                            regulator of G-protein signalling 20
8601
11247
             NXPH4
                            neurexophilin 4
                            neuroepithelial cell transforming gene 1
10276
             NET1
6866
             TAC3
                            tachykinin 3 (neuromedin K, neurokinin beta)
                            RAB20, member RAS oncogene family
55647
             RAB20
51466
             EVL
                            Enah/Vasp-like
81285
             OR51E2
                            olfactory receptor, family 51, subfamily E, member 2
             DNAJA3
                            DnaJ (Hsp40) homolog, subfamily A, member 3
9093
400713
             LOC400713
                            zinc finger-like
10268
             RAMP3
                            receptor (G protein-coupled) activity modifying protein 3
             WISP2
                            WNT1 inducible signaling pathway protein 2
8839
10750
             GRAP
                            GRB2-related adaptor protein
307
             ANXA4
                            annexin A4
                            secreted frizzled-related protein 4
6424
             SFRP4
                            zinc finger, DHHC-type containing 13
             ZDHHC13
54503
10326
             SIRPB1
                            signal-regulatory protein beta 1
117581
             TWIST2
                            twist homolog 2 (Drosophila)
             CCND1
                            cyclin D1
595
23543
             RBM9
                            RNA binding motif protein 9
9765
             ZFYVE16
                            zinc finger, FYVE domain containing 16
137196
             CCDC26
                            coiled-coil domain containing 26
                            pleckstrin homology, Sec7 and coiled-coil domains 4
27128
             PSCD4
8839
             WISP2
                            WNT1 inducible signaling pathway protein 2
117194
             MRGPRX2
                            MAS-related GPR, member X2
3556
             IL1RAP
                            interleukin 1 receptor accessory protein
1808
             DPYSL2
                            dihydropyrimidinase-like 2
972
             CD74
                            CD74 molecule, major histocompatibility complex, class II invariant chain
4258
             MGST2
                            microsomal glutathione S-transferase 2
51129
             ANGPTL4
                            angiopoietin-like 4
347734
             SLC35B2
                            solute carrier family 35, member B2
9730
             VPRBP
                            Vpr (HIV-1) binding protein
6997
             TDGF1
                            teratocarcinoma-derived growth factor 1
             SH2D1B
117157
                            SH2 domain containing 1B
51762
             RAB8B
                            RAB8B, member RAS oncogene family
84932
                            RAB2B, member RAS oncogene family
             RAB2B
3123
             HLA-DRB1
                            major histocompatibility complex, class II, DR beta 1
                            advanced glycosylation end product-specific receptor
177
             AGER
5733
             PTGER3
                            prostaglandin E receptor 3 (subtype EP3)
                            RAB2B, member RAS oncogene family
84932
             RAB2B
1839
             HBEGF
                            heparin-binding EGF-like growth factor
7077
             TIMP2
                            TIMP metallopeptidase inhibitor 2
23403
             FBXO46
                            F-box protein 46
5520
             PPP2R2A
                            protein phosphatase 2 (formerly 2A), regulatory subunit B, alpha isoform
8368
             HIST1H4L
                            histone cluster 1, H4I
7252
             TSHB
                            thyroid stimulating hormone, beta
9241
             NOG
                            noggin
64407
                            regulator of G-protein signalling 18
             RGS18
2532
             DARC
                            Duffy blood group, chemokine receptor
53831
             GPR84
                            G protein-coupled receptor 84
2857
             GPR34
                            G protein-coupled receptor 34
4283
             CXCL9
                            chemokine (C-X-C motif) ligand 9
3821
             KLRC1
                            killer cell lectin-like receptor subfamily C, member 1
166824
             RASSF6
                            Ras association (RalGDS/AF-6) domain family 6
57485
             ATXN7L1
                            ataxin 7-like 1
                            testis-specific kinase 2
10420
             TESK2
6369
             CCL24
                            chemokine (C-C motif) ligand 24
64780
             MICAL1
                            microtubule associated monoxygenase, calponin and LIM domain containing 1
51338
             MS4A4A
                            membrane-spanning 4-domains, subfamily A, member 4
83661
             MS4A8B
                            membrane-spanning 4-domains, subfamily A, member 8B
```

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9173
             IL1RL1
                            interleukin 1 receptor-like 1
4055
             LTBR
                            lymphotoxin beta receptor (TNFR superfamily, member 3)
6777
             STAT5B
                            signal transducer and activator of transcription 5B
283
             ANG
                            angiogenin, ribonuclease, RNase A family, 5
834
             CASP1
                            caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
10253
             SPRY2
                            sprouty homolog 2 (Drosophila)
3805
             KIR2DI 4
                            killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4
             TNFRSF10D
8793
                            tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain
             DNMBP
23268
                            dynamin binding protein
                            signal transducer and activator of transcription 2, 113kDa
             STAT2
6773
1193
             CLIC2
                            chloride intracellular channel 2
83464
             APH1B
                            anterior pharynx defective 1 homolog B (C. elegans)
301
             ANXA1
                            annexin A1
                            protein disulfide isomerase family A, member 3
2923
             PDIA3
5295
             PIK3R1
                            phosphoinositide-3-kinase, regulatory subunit 1 (p85 alpha)
9113
             LATS1
                            LATS, large tumor suppressor, homolog 1 (Drosophila)
60401
             EDA2R
                            ectodysplasin A2 receptor
             WNT7B
                            wingless-type MMTV integration site family, member 7B
7477
26297
             SERGEF
                            secretion regulating guanine nucleotide exchange factor
3357
             HTR2B
                            5-hydroxytryptamine (serotonin) receptor 2B
8359
             HIST1H4A
                            histone cluster 1, H4a
2520
             GAST
                            gastrin
29992
             PILRA
                            paired immunoglobin-like type 2 receptor alpha
26269
             FBXO8
                            F-box protein 8
1880
                            Epstein-Barr virus induced gene 2 (lymphocyte-specific G protein-coupled receptor)
             EBI2
2719
             GPC3
                            glypican 3
388558
             ZNF808
                            zinc finger protein 808
                            RAB4B, member RAS oncogene family
53916
             RAB4B
3581
             IL9R
                            interleukin 9 receptor
1230
             CCR1
                            chemokine (C-C motif) receptor 1
11245
             GPR176
                            G protein-coupled receptor 176
2147
             F2
                            coagulation factor II (thrombin)
             DMPK
1760
                            dystrophia myotonica-protein kinase
2050
             EPHB4
                            EPH receptor B4
54210
             TREM1
                            triggering receptor expressed on myeloid cells 1
3082
             HGF
                            hepatocyte growth factor (hepapoietin A; scatter factor)
             RSP03
84870
                            R-spondin 3 homolog (Xenopus laevis)
166647
             GPR125
                            G protein-coupled receptor 125
             ANGPTL3
                            angiopoietin-like 3
27329
11163
             NUDT4
                            nudix (nucleoside diphosphate linked moiety X)-type motif 4
23786
             BCL2L13
                            BCL2-like 13 (apoptosis facilitator)
2873
             GPS1
                            G protein pathway suppressor 1
6242
             RTKN
                            rhotekin
28964
             GIT1
                            G protein-coupled receptor kinase interactor 1
8366
             HIST1H4B
                            histone cluster 1, H4b
                            prolactin
5617
             PRL
55600
                            intelectin 1 (galactofuranose binding)
             ITLN1
10673
             TNFSF13B
                            tumor necrosis factor (ligand) superfamily, member 13b
719
             C3AR1
                            complement component 3a receptor 1
             HRP1
                            HMG-box transcription factor 1
26959
259
             AMBP
                            alpha-1-microglobulin/bikunin precursor
2870
             GRK6
                            G protein-coupled receptor kinase 6
             MAPK8IP2
23542
                            mitogen-activated protein kinase 8 interacting protein 2
81844
             TRIM56
                            tripartite motif-containing 56
64780
             MICAL1
                            microtubule associated monoxygenase, calponin and LIM domain containing 1
58475
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                            membrane-spanning 4-domains, subfamily A, member 7
                            ficolin (collagen/fibrinogen domain containing) 1
2219
             FCN1
             SUCNR1
56670
                            succinate receptor 1
             DEPDC7
                            DEP domain containing 7
91614
55843
             ARHGAP15
                            Rho GTPase activating protein 15
162989
             DEDD2
                            death effector domain containing 2
197
             AHSG
                            alpha-2-HS-glycoprotein
2869
             GRK5
                            G protein-coupled receptor kinase 5
6907
             TBL1X
                            transducin (beta)-like 1X-linked
                            phosphodiesterase 6H, cGMP-specific, cone, gamma
5149
             PDE6H
6362
             CCL18
                            chemokine (C-C motif) ligand 18 (pulmonary and activation-regulated)
6846
             XCL2
                            chemokine (C motif) ligand 2
                            glial cell derived neurotrophic factor
2668
             GDNF
10748
             KLRA1
                            killer cell lectin-like receptor subfamily A, member 1
50836
             TAS2R8
                            taste receptor, type 2, member 8
4993
             OR2C1
                            olfactory receptor, family 2, subfamily C, member 1
             NR1I3
                            nuclear receptor subfamily 1, group I, member 3
9970
1142
             CHRNB3
                            cholinergic receptor, nicotinic, beta 3
3356
             HTR2A
                            5-hydroxytryptamine (serotonin) receptor 2A
                            RAS-like, family 10, member A
10633
             RASI 10A
414060
             TBC1D3C
                            TBC1 domain family, member 3C
```

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10252
             SPRY1
                            sprouty homolog 1, antagonist of FGF signaling (Drosophila)
5914
             RARA
                            retinoic acid receptor, alpha
2034
             EPAS1
                            endothelial PAS domain protein 1
767
             CA8
                            carbonic anhydrase VIII
4142
             MAS<sub>1</sub>
                            MAS1 oncogene
245802
             MS4A6E
                            membrane-spanning 4-domains, subfamily A, member 6E
2829
             XCR1
                            chemokine (C motif) receptor 1
             HTR1E
3354
                            5-hydroxytryptamine (serotonin) receptor 1E
                            purinergic receptor P2X, ligand-gated ion channel, 1
5023
             P2RX1
83550
             GPR101
                            G protein-coupled receptor 101
             PABPCP2
26979
                            poly(A) binding protein, cytoplasmic, pseudogene 2
10270
             AKAP8
                            A kinase (PRKA) anchor protein 8
4239
             MFAP4
                            microfibrillar-associated protein 4
             PHIP
55023
                            pleckstrin homology domain interacting protein
1673
             DEFB4
                            defensin, beta 4
54900
             LAX1
                            lymphocyte transmembrane adaptor 1
4908
             NTF3
                            neurotrophin 3
3952
             I FP
                            leptin (obesity homolog, mouse)
2838
             GPR15
                            G protein-coupled receptor 15
92
             ACVR2A
                            activin A receptor, type IIA
10142
             AKAP9
                            A kinase (PRKA) anchor protein (yotiao) 9
196
             AHR
                            aryl hydrocarbon receptor
55844
             PPP2R2D
                            protein phosphatase 2, regulatory subunit B, delta isoform
11035
             RIPK3
                            receptor-interacting serine-threonine kinase 3
154
             ADRB2
                            adrenergic, beta-2-, receptor, surface
8361
             HIST1H4F
                            histone cluster 1, H4f
3562
             IL3
                            interleukin 3 (colony-stimulating factor, multiple)
             KITLG
4254
                            KIT ligand
158800
             OTEX
                            paired-like homeobox protein OTEX
51554
             CCRL1
                            chemokine (C-C motif) receptor-like 1
8111
             GPR68
                            G protein-coupled receptor 68
             CNR<sub>2</sub>
                            cannabinoid receptor 2 (macrophage)
1269
             RAPGEF3
10411
                            Rap guanine nucleotide exchange factor (GEF) 3
5727
             PTCH1
                            patched homolog 1 (Drosophila)
57019
             CIAPIN1
                            cytokine induced apoptosis inhibitor 1
5739
             PTGIR
                            prostaglandin I2 (prostacyclin) receptor (IP)
6733
             SRPK2
                            SFRS protein kinase 2
796
             CALCA
                            calcitonin/calcitonin-related polypeptide, alpha
687
             KIF9
                            Kruppel-like factor 9
             TAS2R13
50838
                            taste receptor, type 2, member 13
7200
                            thyrotropin-releasing hormone
             TRH
9293
             GPR52
                            G protein-coupled receptor 52
                            cholinergic receptor, nicotinic, beta 3
1142
             CHRNB3
27299
             ADAMDEC1
                            ADAM-like, decysin 1
8874
             ARHGEF7
                            Rho guanine nucleotide exchange factor (GEF) 7
5792
             PTPRF
                            protein tyrosine phosphatase, receptor type, F
             P2RY11
                            purinergic receptor P2Y, G-protein coupled, 11
5032
1270
             CNTF
                            ciliary neurotrophic factor
6778
             STAT6
                            signal transducer and activator of transcription 6, interleukin-4 induced
8995
             TNFSF18
                            tumor necrosis factor (ligand) superfamily, member 18
54429
             TAS2R5
                            taste receptor, type 2, member 5
114131
             UCN3
                            urocortin 3 (stresscopin)
                            azurocidin 1 (cationic antimicrobial protein 37)
566
             AZU1
             SERPINB11
89778
                            serpin peptidase inhibitor, clade B (ovalbumin), member 11
5062
             PAK2
                            p21 (CDKN1A)-activated kinase 2
8809
             IL18R1
                            interleukin 18 receptor 1
                            A kinase (PRKA) anchor protein 13
11214
             AKAP13
10395
             DLC1
                            deleted in liver cancer 1
7128
             TNFAIP3
                            tumor necrosis factor, alpha-induced protein 3
55586
             MIOX
                            myo-inositol oxygenase
2549
             GAB1
                            GRB2-associated binding protein 1
9350
             CER1
                            cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis)
51471
             NAT8B
                            N-acetyltransferase 8B (gene/pseudogene)
50604
             IL20
                            interleukin 20
                            cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis)
9350
             CER1
56603
             CYP26B1
                            cytochrome P450, family 26, subfamily B, polypeptide 1
55507
             GPRC5D
                            G protein-coupled receptor, family C, group 5, member D
                            melanocortin 3 receptor
4159
             MC3R
2893
             GRIA4
                            glutamate receptor, ionotrophic, AMPA 4
472
                            ataxia telangiectasia mutated (includes complementation groups A, C and D)
             ATM
3084
             NRG1
                            neuregulin 1
767
             CA8
                            carbonic anhydrase VIII
2695
             GIP
                            gastric inhibitory polypeptide
             CER1
9350
                            cerberus 1, cysteine knot superfamily, homolog (Xenopus laevis)
10251
             SPRY3
                            sprouty homolog 3 (Drosophila)
5771
             PTPN2
                            protein tyrosine phosphatase, non-receptor type 2
```

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10803
             CCR9
                            chemokine (C-C motif) receptor 9
116511
             MAS1L
                            MAS1 oncogene-like
             PSD
                            pleckstrin and Sec7 domain containing
5662
             ARHGAP24
83478
                            Rho GTPase activating protein 24
9034
             CCRL2
                            chemokine (C-C motif) receptor-like 2
             MRGPRX3
                            MAS-related GPR, member X3
117195
             DUSP10
11221
                            dual specificity phosphatase 10
2832
             NPBWR2
                            neuropeptides B/W receptor 2
             NPBWR2
2832
                            neuropeptides B/W receptor 2
3558
             IL2
                            interleukin 2
2781
             GNAZ
                            guanine nucleotide binding protein (G protein), alpha z polypeptide
10135
             PBEF1
                            pre-B-cell colony enhancing factor 1
92
             ACVR2A
                            activin A receptor, type IIA
3516
             RBPSUH
                            recombining binding protein suppressor of hairless (Drosophila)
5792
             PTPRF
                            protein tyrosine phosphatase, receptor type, F
55357
             TBC1D2
                            TBC1 domain family, member 2
                            hypoxia inducible factor 3, alpha subunit
64344
             HIF3A
8605
             PLA2G4C
                            phospholipase A2, group IVC (cytosolic, calcium-independent)
84218
             TBC1D3
                            TBC1 domain family, member 3
2825
             GPR1
                            G protein-coupled receptor 1
                            angiotensin II receptor, type 1
185
             AGTR1
3676
             ITGA4
                            integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)
64170
             CARD9
                            caspase recruitment domain family, member 9
10936
             GPR75
                            G protein-coupled receptor 75
             ARHGAP26
                            Rho GTPase activating protein 26
23092
6375
             XCL1
                            chemokine (C motif) ligand 1
10160
             FARP1
                            FERM, RhoGEF (ARHGEF) and pleckstrin domain protein 1 (chondrocyte-derived)
140458
             ASB5
                            ankyrin repeat and SOCS box-containing 5
55423
             SIRPG
                            signal-regulatory protein gamma
54331
             GNG2
                            guanine nucleotide binding protein (G protein), gamma 2
780
             DDR1
                            discoidin domain receptor family, member 1
5337
             PLD1
                            phospholipase D1, phosphatidylcholine-specific
             ARHGAP5
394
                            Rho GTPase activating protein 5
2828
             GPR4
                            G protein-coupled receptor 4
10010
                            TRAF family member-associated NFKB activator
             TANK
8491
             MAP4K3
                            mitogen-activated protein kinase kinase kinase kinase 3
1809
             DPYSL3
                            dihydropyrimidinase-like 3
284802
             MGC72104
                            similar to FRG1 protein (FSHD region gene 1 protein)
             CDC42EP4
23580
                            CDC42 effector protein (Rho GTPase binding) 4
1233
             CCR4
                            chemokine (C-C motif) receptor 4
5580
             PRKCD
                            protein kinase C, delta
9824
             ARHGAP11A
                            Rho GTPase activating protein 11A
59067
                            interleukin 21
             IL21
9293
             GPR52
                            G protein-coupled receptor 52
5577
             PRKAR2B
                            protein kinase, cAMP-dependent, regulatory, type II, beta
2048
             EPHB2
                            EPH receptor B2
                            interleukin 7 receptor
3575
             IL7R
286
             ANK1
                            ankyrin 1, erythrocytic
9113
             LATS1
                            LATS, large tumor suppressor, homolog 1 (Drosophila)
                            coiled-coil domain containing 26
137196
             CCDC26
915
             CD3D
                            CD3d molecule, delta (CD3-TCR complex)
23643
                            lymphocyte antigen 96
             LY96
1278
             COL1A2
                            collagen, type I, alpha 2
11250
             GPR45
                            G protein-coupled receptor 45
3565
             IL4
                            interleukin 4
3593
             IL12B
                            interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2,
p40)
1133
             CHRM5
                            cholinergic receptor, muscarinic 5
             ANGPT1
                            angiopoietin 1
284
283
             ANG
                            angiogenin, ribonuclease, RNase A family, 5
112744
                            interleukin 17F
             IL17F
64759
             TNS3
                            tensin 3
2888
             GRB14
                            growth factor receptor-bound protein 14
                            WNT1 inducible signaling pathway protein 2
8839
             WISP2
             DEPDC5
9681
                            DEP domain containing 5
8294
             HIST1H4I
                            histone cluster 1, H4i
221938
             MMD2
                            monocyte to macrophage differentiation-associated 2
10888
             GPR83
                            G protein-coupled receptor 83
672
             BRCA1
                            breast cancer 1, early onset
3554
             IL1R1
                            interleukin 1 receptor, type I
6868
             ADAM17
                            ADAM metallopeptidase domain 17 (tumor necrosis factor, alpha, converting enzyme)
             THRAP5
10025
                            thyroid hormone receptor associated protein 5
3458
             IFNG
                            interferon, gamma
27197
             GPR82
                            G protein-coupled receptor 82
                            breast cancer anti-estrogen resistance 3
8412
             BCAR3
79822
             ARHGAP28
                            Rho GTPase activating protein 28
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57231
             SNX14
                            sorting nexin 14
59067
             IL21
                            interleukin 21
             GPR21
2844
                            G protein-coupled receptor 21
81876
             RAB1B
                            RAB1B, member RAS oncogene family
472
             ATM
                            ataxia telangiectasia mutated (includes complementation groups A, C and D)
             ARHGAP17
55114
                            Rho GTPase activating protein 17
3084
             NRG1
                            neuregulin 1
3925
             STMN1
                            stathmin 1/oncoprotein 18
                            CD40 ligand (TNF superfamily, member 5, hyper-lgM syndrome)
959
             CD40LG
10144
             FAM13A1
                            family with sequence similarity 13, member A1
659
             BMPR2
                            bone morphogenetic protein receptor, type II (serine/threonine kinase)
5187
                            period homolog 1 (Drosophila)
             PER1
6997
             TDGF1
                            teratocarcinoma-derived growth factor 1
9293
             GPR52
                            G protein-coupled receptor 52
84218
             TBC1D3
                            TBC1 domain family, member 3
83873
             GPR61
                            G protein-coupled receptor 61
4739
             NEDD9
                            neural precursor cell expressed, developmentally down-regulated 9
9639
             ARHGEF10
                            Rho guanine nucleotide exchange factor (GEF) 10
4035
             LRP1
                            low density lipoprotein-related protein 1 (alpha-2-macroglobulin receptor)
7145
             TNS1
                            tensin 1
127255
                            leucine rich repeat containing 44
             LRRC44
257019
             FRMD3
                            FERM domain containing 3
7484
             WNT9B
                            wingless-type MMTV integration site family, member 9B
2255
             FGF10
                            fibroblast growth factor 10
             PRKAA2
                            protein kinase, AMP-activated, alpha 2 catalytic subunit
5563
1902
             EDG2
                            endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 2
10922
             FASTK
                            Fas-activated serine/threonine kinase
                            interleukin 8
3576
             IL8
10044
             SH2D3C
                            SH2 domain containing 3C
9912
             KIAA0672
                            KIAA0672 gene product
440456
             LOC440456
                            similar to pleckstrin homology domain containing, family M (with RUN domain) member 1; adapter
protein 162
91419
             XRCC6BP1
                            XRCC6 binding protein 1
9546
             APBA3
                            amyloid beta (A4) precursor protein-binding, family A, member 3 (X11-like 2)
4922
             NTS
                            neurotensin
65125
             WNK1
                            WNK lysine deficient protein kinase 1
4651
             MYO10
                            myosin X
2797
             GNRH2
                            gonadotropin-releasing hormone 2
4846
                            nitric oxide synthase 3 (endothelial cell)
             NOS3
             GUCY1A3
2982
                            guanylate cyclase 1, soluble, alpha 3
25776
                            chibby homolog 1 (Drosophila)
             CBY1
9465
             AKAP7
                            A kinase (PRKA) anchor protein 7
             RAB28
9364
                            RAB28, member RAS oncogene family
9034
             CCRL2
                            chemokine (C-C motif) receptor-like 2
79444
                            baculoviral IAP repeat-containing 7 (livin)
             BIRC7
10981
             RAB32
                            RAB32, member RAS oncogene family
                            killer cell lectin-like receptor subfamily C, member 1
3821
             KLRC1
1455
             CSNK1G2
                            casein kinase 1, gamma 2
7248
             TSC1
                            tuberous sclerosis 1
             RAB17
64284
                            RAB17, member RAS oncogene family
221472
             FGD2
                            FYVE, RhoGEF and PH domain containing 2
56923
             NMUR2
                            neuromedin U receptor 2
54849
             FLJ20186
                            hypothetical protein FLJ20186
4828
             NMB
                            neuromedin B
1176
             AP3S1
                            adaptor-related protein complex 3, sigma 1 subunit
2207
             FCER1G
                            Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide
3597
             IL13RA1
                            interleukin 13 receptor, alpha 1
51009
             DERL2
                            Der1-like domain family, member 2
1837
             DTNA
                            dystrobrevin, alpha
8567
             MADD
                            MAP-kinase activating death domain
221472
                            FYVE, RhoGEF and PH domain containing 2
             FGD2
51463
             GPR89A
                            G protein-coupled receptor 89A
2846
             GPR23
                            G protein-coupled receptor 23
64232
             MS4A5
                            membrane-spanning 4-domains, subfamily A, member 5
                            sperm associated antigen 5
             SPAG5
10615
22861
             NLRP1
                            NLR family, pyrin domain containing 1
974
             CD79B
                            CD79b molecule, immunoglobulin-associated beta
11123
             DSCR1L2
                            Down syndrome critical region gene 1-like 2
56961
             SHD
                            Src homology 2 domain containing transforming protein D
1457
             CSNK2A1
                            casein kinase 2, alpha 1 polypeptide
5998
             RGS3
                            regulator of G-protein signalling 3
23263
                            MCF.2 cell line derived transforming sequence-like
             MCF2L
4855
             NOTCH4
                            Notch homolog 4 (Drosophila)
8200
             GDF5
                            growth differentiation factor 5 (cartilage-derived morphogenetic protein-1)
             CAPNS2
                            calpain, small subunit 2
84290
5598
             MAPK7
                            mitogen-activated protein kinase 7
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29984
             RHOD
                            ras homolog gene family, member D
6781
             STC1
                            stanniocalcin 1
            LFFTY1
                            left-right determination factor 1
10637
2274
             FHL2
                            four and a half LIM domains 2
924
             CD7
                            CD7 molecule
1910
             EDNRB
                            endothelin receptor type B
9126
             SMC3
                            structural maintenance of chromosomes 3
26166
             RGS22
                            regulator of G-protein signalling 22
                            protein tyrosine phosphatase, non-receptor type 11 (Noonan syndrome 1)
5781
             PTPN11
             PLCB1
23236
                            phospholipase C, beta 1 (phosphoinositide-specific)
1453
             CSNK1D
                            casein kinase 1, delta
             APLP2
                            amyloid beta (A4) precursor-like protein 2
334
9306
             SOCS6
                            suppressor of cytokine signaling 6
                            tumor necrosis factor (TNF superfamily, member 2)
7124
             TNF
640
             BLK
                            B lymphoid tyrosine kinase
930
             CD19
                            CD19 molecule
                            cAMP responsive element binding protein-like 1
1388
             CREBL1
83874
             TBC1D10A
                            TBC1 domain family, member 10A
2792
             GNGT1
                            guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1
4867
             NPHP1
                            nephronophthisis 1 (juvenile)
             SPHK1
8877
                            sphingosine kinase 1
4660
             PPP1R12B
                            protein phosphatase 1, regulatory (inhibitor) subunit 12B
27133
             KCNH5
                            potassium voltage-gated channel, subfamily H (eag-related), member 5
                            Rho family GTPase 1
27289
             RND1
             RARIF
                            RAB interacting factor
5877
162989
             DEDD2
                            death effector domain containing 2
10769
             PLK2
                            polo-like kinase 2 (Drosophila)
                            fibroblast growth factor (acidic) intracellular binding protein
             FIBP
9158
                            RAB3C, member RAS oncogene family
115827
             RAB3C
53347
             UBASH3A
                            ubiquitin associated and SH3 domain containing, A
                            leucine rich repeat containing 44
127255
             LRRC44
             SUMO1P1
                            SUMO1 pseudogene 1
391257
9844
             ELMO1
                            engulfment and cell motility 1
10458
             BAIAP2
                            BAI1-associated protein 2
                            protein phosphatase 5, catalytic subunit
             PPP5C
5536
57826
             RAP2C
                            RAP2C, member of RAS oncogene family
4915
             NTRK2
                            neurotrophic tyrosine kinase, receptor, type 2
3654
             IRAK1
                            interleukin-1 receptor-associated kinase 1
            HPGD
3248
                            hydroxyprostaglandin dehydrogenase 15-(NAD)
4869
             NPM1
                            nucleophosmin (nucleolar phosphoprotein B23, numatrin)
1813
             DRD2
                            dopamine receptor D2
26575
             RGS17
                            regulator of G-protein signalling 17
                            cofilin 1 (non-muscle)
1072
             CFL<sub>1</sub>
9138
             ARHGEF1
                            Rho guanine nucleotide exchange factor (GEF) 1
             CRSP6
                            cofactor required for Sp1 transcriptional activation, subunit 6, 77kDa
9440
30819
             KCNIP2
                            Kv channel interacting protein 2
                            leukotriene B4 receptor
1241
             LTB4R
51523
             CXXC5
                            CXXC finger 5
5296
             PIK3R2
                            phosphoinositide-3-kinase, regulatory subunit 2 (p85 beta)
4692
             NDN
                            necdin homolog (mouse)
537
             ATP6AP1
                            ATPase, H+ transporting, lysosomal accessory protein 1
6885
             MAP3K7
                            mitogen-activated protein kinase kinase kinase 7
             TCEB2
6923
                            transcription elongation factor B, 2
55336
             FBXL8
                            F-box and leucine-rich repeat protein 8
84261
             FBXW9
                            F box and WD 40 domain protein 9
54328
             GPR173
                            G protein-coupled receptor 173
                            receptor tyrosine kinase-like orphan receptor 1
4919
             ROR1
             RASGRF1
5923
                            Ras protein-specific guanine nucleotide-releasing factor 1
9182
             PAMCI
                            peptidylglycine alpha-amidating monooxygenase COOH-terminal interactor
356
             FASLG
                            Fas ligand (TNF superfamily, member 6)
3588
             IL10RB
                            interleukin 10 receptor, beta
51026
             GOLT1B
                            golgi transport 1 homolog B (S. cerevisiae)
10817
             FRS3
                            fibroblast growth factor receptor substrate 3
             ANXA5
                            annexin A5
308
10491
             CRTAP
                            cartilage associated protein
11031
             RAB31
                            RAB31, member RAS oncogene family
595
             CCND1
                            cyclin D1
6693
             SPN
                            sialophorin (leukosialin, CD43)
306
             ANXA3
                            annexin A3
             TRADD
8717
                            TNFRSF1A-associated via death domain
7423
             VEGFB
                            vascular endothelial growth factor B
10293
             TRAIP
                            TRAF interacting protein
1500
             CTNND1
                            catenin (cadherin-associated protein), delta 1
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