IPA® Summary of Analysis

Analysis Name: Parental 6hr
Analysis Creation Date: 2011-01-13
IPA version: 8.8 (Release Date: 2010-11-13)
Content version: 3205 (Release Date: 2010-10-27)

Analysis settings

View

Reference set: Ingenuity Knowledge Base (Genes Only)
Relationship to include: Direct and Indirect
Includes Endogenous Chemicals
Optional Analyses: My Pathways My List

Filter Summary:
Consider only relationships where
(confidence = Experimentally Observed) AND
(data sources = Argonaute 2 OR BIND OR BIOGRID OR Cognia OR DIP OR Ingenuity Expert Findings OR Ingenuity ExpertAssist Findings OR INTACT OR Interactome studies OR MINT OR MIPS OR TarBase)

Top Networks

ID	Associated Network Functions	Score
1	Gene Expression, Cellular Assembly and Organization, Cellular Compromise	42
2	Cellular Assembly and Organization, Endocrine System Development and Function, Lipid Metabolism	33
3	Protein Synthesis, Gene Expression, Connective Tissue Disorders	31
4	Cancer, Organ Morphology, Reproductive System Development and Function	27
5	Cell-mediated Immune Response, Cellular Development, Cellular Function and Maintenance	22

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Top Bio Functions

Diseases and Disorders

Name	p-value	# Molecules
Cancer	8.83E-07 - 3.09E-02	61
Inflammatory Response	1.69E-04 - 3.04E-02	15
Connective Tissue Disorders	6.47E-04 - 2.85E-02	4
Inflammatory Disease	6.47E-04 - 2.94E-02	7
Skeletal and Muscular Disorders	6.47E-04 - 2.94E-02	9

Molecular and Cellular Functions

Name	p-value	# Molecules
Gene Expression	9.95E-07 - 2.94E-02	50
Protein Synthesis	9.95E-07 - 2.29E-02	43
Cell Death	5.04E-05 - 3.08E-02	62
Cellular Growth and Proliferation	1.53E-04 - 2.94E-02	72
Antigen Presentation	1.69E-04 - 2.08E-02	10

Physiological System Development and Function

Name	p-value	# Molecules
Embryonic Development	5.04E-05 - 2.94E-02	23
Hematological System Development and Function	1.69E-04 - 2.94E-02	32
Immune Cell Trafficking	1.69E-04 - 2.94E-02	13
Tissue Development	1.69E-04 - 2.94E-02	12
Connective Tissue Development and Function	6.47E-04 - 2.94E-02	14

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Top Canonical Pathways

Name	p-value	Ratio
Aminoacyl-tRNA Biosynthesis	3.29E-04	5/84 (0.06)
ERK/MAPK Signaling	4.17E-04	10/204 (0.049)
Cell Cycle: G2/M DNA Damage Checkpoint Regulation	4.59E-04	5/49 (0.102)
Semaphorin Signaling in Neurons	9.99E-04	5/52 (0.096)
RhoA Signaling	1.05E-03	7/110 (0.064)

Top Molecules

Fold Change up-regulated

Molecules	Exp. Value	Exp. Chart
S100A10	↑3.675	
AHNAK*	↑3.454	
NUCB1*	↑3.101	
MAN2C1	↑2.813	
COTL1	↑2.733	
C10orf27	↑2.684	
COL4A1	↑2.684	
PRKAR2A*	↑2.677	

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SIGLEC11	↑2.612	
PCDHGA12	↑2.611	

Fold Change down-regulated

Molecules	Exp. Value	Exp. Chart
MDM2	↓7.678	
CYP17A1	↓3.451	
MAPK3*	↓3.287	
DLG3*	↓3.059	
EIF4EBP1	↓2.591	
RCAN1Δ	↓2.477	
MAPK1	↓2.343	
ANK3*	↓2.228	
FLII*	↓2.128	
NDRG1	↓2.072	

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Top My Lists

Name	p-value	Ratio
GTL16 resistance	2.55E-03	4/44 (0.091)
Coritcal Cortistatin neurons top 100 probes	1.91E-02	4/89 (0.045)
Motor neurons top 100 probes	7.69E-02	3/84 (0.036)
Cortical CCK neurons top 100 probes	8.79E-02	3/91 (0.033)
AP burst genes (Zhang)	9.47E-02	7/271 (0.026)

Top My Pathways

Name	p-value	Ratio
cAMP-neurotroph-dend remodel (D)	1.18E-03	6/112 (0.054)
ERK/MAPK EKS 10.03.08	2.54E-03	8/242 (0.033)
Dendritic Remodeling_AR	4.39E-02	5/171 (0.029)
cAMP pathway TL 08.20.08	5.54E-02	9/392 (0.023)
Axonal Transport_AR	1.09E-01	3/119 (0.025)

Top Tox Lists

Name	p-value	Ratio
Cell Cycle: G2/M DNA Damage Checkpoint Regulation	1.7E-03	4/35 (0.114)
Mechanism of Gene Regulation by Peroxisome Proliferators via PPARα	1.34E-02	5/95 (0.053)
Cardiac Necrosis/Cell Death	5.99E-02	5/142 (0.035)
Cardiac Hypertrophy	7.34E-02	7/246 (0.028)
PPARα/RXRα Activation	9.84E-02	5/165 (0.03)

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Top Tox Functions

Assays: Clinical Chemistry and Hematology

Name	p-value	# Molecules
Increased Levels of Albumin	1.48E-02 - 1.48E-02	1
Increased Levels of LDH	1.26E-01 - 1.26E-01	1

Cardiotoxicity

Name	p-value	# Molecules
Cardiac Damage	4.37E-02 - 1.76E-01	3
Cardiac Necrosis/Cell Death	7.18E-02 - 2.38E-01	5
Cardiac Hypertrophy	1.12E-01 - 5.00E-01	7
Heart Failure	2.28E-01 - 3.40E-01	4
Pulmonary Hypertension	3.51E-01 - 3.51E-01	1

Hepatotoxicity

Name	p-value	# Molecules
Hepatocellular Carcinoma	1.07E-01 - 1.07E-01	6
Liver Fibrosis	1.12E-01 - 1.12E-01	1
Liver Hyperbilirubinemia	1.12E-01 - 1.12E-01	1
Liver Hyperplasia/Hyperproliferation	1.26E-01 - 1.26E-01	1
Liver Cholestasis	2.23E-01 - 2.23E-01	2

Nephrotoxicity

Name	p-value	# Molecules
Kidney Failure	2.94E-02 - 5.26E-01	3
Renal Transformation	5.79E-02 - 5.79E-02	1
Renal Hypertrophy	1.12E-01 - 1.12E-01	1

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Renal Inflammation	1.76E-01 - 1.76E-01	1
Renal Nephritis	2.12E-01 - 2.12E-01	1

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