Table S4. Site specific analysis of S-sulfination in 293T cells.

Protein Accession	Protein Description	Modified Peptide (S-sulfinated sites in red)	Peptide Modification (* = Site undetermined)	Retention Time (min)	Intensity	Charge State	Drift Bin	Δppm	# Matched Products	Matched Products	SILAC sample
ACTBM_HUMAN	Putative beta-actin-like protein 3 OS=Homo sapiens GN=POTEKP PE=5 SV=1	CPEALFQPCFLGMESCGIHK	SulfinicAcid(9)	45.705	255	3	56.498	-1.8563	5	b3b10y5y10y11y15*	Heavy
ALBU_HUMAN	Serum albumin OS=Homo sapiens GN=ALB PE=1 SV=2	ETYGEMADCCAKQEPER	Carbamidomethyl+C(*); SulfinicAcid(*)	18.0066	27354	4	35.635	4.4253	3	b3y3y3°y5y13*	Light
ALBU_HUMAN	Serum albumin OS=Homo sapiens GN=ALB PE=1 SV=2	ADLAKYICENQDSISSK	SulfinicAcid(8)	36.4092	246	3	49.275	1.4167	4	b9y6y7y8	Heavy
CV024_HUMAN	Uncharacterized protein C22orf24 OS=Homo sapiens GN=C22orf24 PE=2 SV=1	CSINICQMTECISLASGCHQALR	Carbamidomethyl+C(6); SulfinicAcid(11);Sulfinic Acid(18)	42.3822	1948	4	46.026	-4.4539	2	b5b7b10*y9°y11°	Light
DDB1_HUMAN	DNA damage-binding protein 1 OS=Homo sapiens GN=DDB1 PE=1 SV=1	QGQGQLVTCSGAFKEGSLR	SulfinicAcid(9)	32.8811	42464	3	51.153	-2.0503	5	b3b4b4*y6°y15y16y19	Light
DX39B_HUMAN	Spliceosome RNA helicase DDX39B OS=Homo sapiens GN=DDX39B PE=1 SV=1	HFILDECDKMLEQLDMR	SulfinicAcid(7)	49.0835	257352	2	81.986	-1.6751	1	b3b6°y4°y9*y9°	Heavy
FGF7_HUMAN	Fibroblast growth factor 7 OS=Homo sapiens GN=FGF7 PE=1 SV=1	LFCRTQWYLR	SulfinicAcid(3)	33.914	667	2	53.157	-0.7916	1	b7°y5	Light
FHL1_HUMAN	Four and a half LIM domains protein 1 OS=Homo sapiens GN=FHL1 PE=1 SV=4	FTAVEDQYYCVDCYK	SulfinicAcid(10)	21.2156	433	3	40.062	-4.731	0	b8*y4°	Heavy
FLNB_HUMAN	Filamin-B OS=Homo sapiens GN=FLNB PE=1 SV=2	VDIQTEDLEDGTCK	SulfinicAcid(13)	40.6355	311	2	63.252	-0.655	1	b3b9*	Heavy
HNRPU_HUMAN	Heterogeneous nuclear ribonucleoprotein U OS=Homo sapiens GN=HNRNPU PE=1 SV=6	MKGNFTLPEVAECFDEITYVELQK	SulfinicAcid(13)	46.5209	654	4	52.063	-0.9849	4	b5*b7b7°y14y17y24	Light
IMDH2_HUMAN	Inosine-5'-monophosphate dehydrogenase 2 OS=Homo sapiens GN=IMPDH2 PE=1 SV=2	DIDFLKEEEHDCFLEEIMTK	SulfinicAcid(12)	43.5589	323	3	67.024	0.5516	2	b7y10	Heavy
LIS1_HUMAN	Platelet-activating factor acetylhydrolase IB subunit alpha OS=Homo sapiens GN=PAFAH1B1 PE=1 SV=2	MWEVQTGYCVK	SulfinicAcid(9)	11.2411	928	3	38.982	-1.321	2	y6y7	Light
MATR3_HUMAN	Matrin-3 OS=Homo sapiens GN=MATR3 PE=1 SV=2	EDAMAMVDHCLK	SulfinicAcid(10)	43.4323	220	2	49.906	-5.2857	3	b3b8y7°y12	Light
MATR3_HUMAN	Matrin-3 OS=Homo sapiens GN=MATR3 PE=1 SV=2	LCSLFYTNEEVAK	SulfinicAcid(2)	46.4561	739	2	58.414	-1.5255	3	b6b9*b11y7y9*	Heavy
NELF_HUMAN	Nasal embryonic luteinizing hormone-releasing hormone factor OS=Homo sapiens GN=NELF PE=1 SV=1	GLEAVACDTEGFVPPKVMLISSK	SulfinicAcid(7)	12.4882	565	3	54.705	-1.6282	1	b13y20°	Heavy
PEBP1_HUMAN	Phosphatidylethanolamine-binding protein 1 OS=Homo sapiens GN=PEBP1 PE=1 SV=3	APVAGTCYQAEWDDYVPK	SulfinicAcid(7)	39.2411	3655	2	77.827	0.9889	6	b14b16y2y3y4y18	Light
PPIA_HUMAN	Peptidyl-prolyl cis-trans isomerase A OS=Homo sapiens GN=PPIA PE=1 SV=2	KITIADCGQLE	SulfinicAcid(7)	31.7863	1100	2	47.111	-0.7452	1	b5°b9y1°y9*	Heavy
PPIE_HUMAN	Peptidyl-prolyl cis-trans isomerase E OS=Homo sapiens GN=PPIE PE=1 SV=1	IIPQFMCQGGDFTNHNGTGGK	SulfinicAcid(7)	30.6605	416	3	47.37	1.1164	2	b7b7*b19y7°y8*	Light
PPIE_HUMAN	Peptidyl-prolyl cis-trans isomerase E OS=Homo sapiens GN=PPIE PE=1 SV=1	VIIADCGEYV	SulfinicAcid(6)	21.2931	229	2	40.734	-1.1295	1	y7°y8	NoLabels
PSD10_HUMAN	26S proteasome non-ATPase regulatory subunit 10 OS=Homo sapiens GN=PSMD10 PE=1 SV=1	GAQVNAVNQNGCTPLHYAASK	SulfinicAcid(12)	51.6012	415	2	82.496	-1.6021	1	b13b14°	Heavy
RAB4A_HUMAN	Ras-related protein Rab-4A OS=Homo sapiens GN=RAB4A PE=1 SV=3	RAQAPNAQECGC	SulfinicAcid(10)	13.2248	338	2	47.703	1.4581	0	y8°y11°	Light
RAB7A_HUMAN	Ras-related protein Rab-7a OS=Homo sapiens GN=RAB7A PE=1 SV=1	GADCCVLVFDVTAPNTFK	SulfinicAcid(*)	43.5116	3934	2	73.534	0.0037	0	b9°b13°	Heavy
RAP1A_HUMAN	Ras-related protein Rap-1A OS=Homo sapiens GN=RAP1A PE=1 SV=1	QWCNCAFLESSAK	Carbamidomethyl+C(3); SulfinicAcid(3)	35.9676	1234	2	59.83	-2.3329	2	b6*b8*y4y10	Light
SACS_HUMAN	Sacsin OS=Homo sapiens GN=SACS PE=1 SV=2	ATEICFVFDPR	SulfinicAcid(5)	42.1101	273	2	52.874	-1.5018	1	y5y7°	Light
SMD2_HUMAN	Small nuclear ribonucleoprotein Sm D2 OS=Homo sapiens GN=SNRPD2 PE=1 SV=1	NNTQVLINCR	SulfinicAcid(9)	28.6994	395	2	45.191	4.5214	1	b4*y1	Heavy
SMD3_HUMAN	Small nuclear ribonucleoprotein Sm D3 OS=Homo sapiens GN=SNRPD3 PE=1 SV=1	LIEAEDNMNCQMSNITVTYR	SulfinicAcid(10)	29.3547	330	3	49.086	-2.3899	3	b6y3y6	Light
TPIS_HUMAN	Triosephosphate isomerase OS=Homo sapiens GN=TPI1 PE=1 SV=3	VPADTEVVCAPPTAYIDFAR	SulfinicAcid(9)	53.8833	2896	3	56.002	0.2305	8	b6b9y1y3y4y5°y7y8y8°y10°y20	Light
TPIS_HUMAN	Triosephosphate isomerase OS=Homo sapiens GN=TPI1 PE=1 SV=3	IAVAAQNCYK	SulfinicAcid(8)	16.0939	1744	2	44.338	1.401	3	y2y5y8	Light
VDAC2_HUMAN	Voltage-dependent anion-selective channel protein 2 OS=Homo sapiens GN=VDAC2 PE=1 SV=2	WCEYGLTFTEK	SulfinicAcid(2)	38.3029	1415	2	56.241	0.5208	4	b2b6y3y4	Light