

Efficient enrichment of glycopeptides using metal-organic frameworks by hydrophilic interaction chromatography

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Table S1 Molecular masses and proposed oligosaccharide composition of the glycopeptides from human IgG after enrichment by LCD-MOFs. N# denotes the N-linked glycosylation site.

Peak number	Observed m/z	Glycan composition	Amino acid sequence
I1	2399.2	[Hex]3[HexNAc]3[Fuc]1	EEQFN#STFR
I2	2431.0	[Hex]3[HexNAc]3[Fuc]1	EEQYN#STYR
I3	2456.2	[Hex]3[HexNAc]4	EEQFN#STFR
I4	2488.2	[Hex]3[HexNAc]4	EEQYN#STYR
I5	2561.2	[Hex]4[HexNAc]3[Fuc]1	EEQFN#STFR
I6	2602.3	[Hex]3[HexNAc]4[Fuc]1	EEQFN#STFR
I7	2618.2	[Hex]4[HexNAc]4	EEQFN#STFR
I8	2634.0	[Hex]3[HexNAc]4[Fuc]1	EEQYN#STYR
I9	2764.3	[Hex]4[HexNAc]4[Fuc]1	EEQFN#STFR
I10	2780.3	[Hex]5[HexNAc]4	EEQFN#STFR
I11	2796.4	[Hex]4[HexNAc]4[Fuc]1	EEQYN#STYR
I12	2805.3	[Hex]3[HexNAc]5[Fuc]1	EEQFN#STFR
I13	2821.3	[Hex]4[HexNAc]5	EEQFN#STFR
I14	2837.4	[Hex]3[HexNAc]5[Fuc]1	EEQYN#STYR
I15	2853.2	[Hex]4[HexNAc]5	EEQYN#STYR
I16	2926.4	[Hex]5[HexNAc]4[Fuc]1	EEQFN#STFR
I17	2958.4	[Hex]5[HexNAc]4[Fuc]1	EEQYN#STYR
I18	2967.4	[Hex]4[HexNAc]5[Fuc]1	EEQFN#STFR
I19	3000.3	[Hex]4[HexNAc]5[Fuc]1	EEQYN#STYR
I20	3130.5	[Hex]5[HexNAc]5[Fuc]1	EEQFN#STFR

Table S2 N-Glycosylation sites identified from 3 g of the five-glycoprotein mixture with LCD-MOFs

Protein name	Site	Modified Sequence
Bovin Fetuin-A	N99	R.RPTGEVYDIEIDTLETTCHVLDPTPLAN*CSVR.Q
Bovin Fetuin-A	N176	R.VVHAVEVALATFNAESN*GSYLQLVEISR.A
Bovin Fetuin-A	N156	R.KLCPDCPLLAPLN*DSR.V
Bovin Fetuin-B	N271	R.GEN*ATVNQRPANPSK.T
Bovin Fetuin-B	N137	R.IFYLPAYN*CTLR.P
Chick Ovalbumin	N293	K.YN*LTSVLMAMGITDVFSSSANLSGISSAESLK.I
Chick Ovalbumin	N312	K.YNLTSVLMAMGITDVFSSSAN*LSGISSAESLK.I
Human Serotransferrin	N432	K.CGLVPVLAENYN*K.S
Human Serotransferrin	N630	R.QQQHLFGSN*VTDCSGNFCLFR.S
Human IgG 1	N180	K.TKPREEQYN*STYR.V
Human IgG 2	N176	R.EEQFN*STFR.V
Human IgG3	N227	R.EEQYN*STFR.V
Human IgG 4	N177	R.EEQFN*STYR.V
Human α 1-acid glycoprotein 1	N56	K.WFYIASAFRNEEYN*K.S
Human α 1-acid glycoprotein 1	N72	R.NEEYNKSVQEIQATFFYFTPN*KTEDTIFLR.E
Human α 1-acid glycoprotein 1	N93	R.QDQCIYN*TTYLNVQR.E
Human α 1-acid glycoprotein 2	N93	R.QNQCFYN*SSYLNVQR.E

Table s2 List of identified glycoproteins and unique N-glycosylation sites from 33 µg mouse liver captured by LCD-MOF

No	IPI Accession	Swiss-Prot	Protein Name	Glycosites	Sequence
1	IPI00111908.8	Q8C196	Cps1 Carbamoyl-phosphate synthase [ammonia], mitochondrial	N324	R.GQNQPVLN*ITNR.Q
2	IPI00653158.1		Acaa2 Acetyl-Coenzyme A acyltransferase 2 (Mitochondrial 3-oxoacyl-Coenzyme A thiolase), isoform CRA_k	N249	K.DGTVTAGN*ASGVSDGAGAVIIASEDAVK.K
3	IPI00119063.2	Q91ZX7	Lrp1 Prolow-density lipoprotein receptor-related protein 1	N3789 N1512 N2128 N4076 N3954 N730 N2621 N4365	K.LTSCATN*ASM#CGDEAR.C K.WTGHN*VTVVQR.T K.DN*ATDSVPLR.T R.LN*GTDPIVAADSK.R R.GVTHLN*ISGLK.M R.IETILLN*GTDR.K R.DGSCIGN*SSR.C K.QTGDVTCN*CTDGR.V
4	IPI00462072.3	P17182	Eno1;Gm5506 Alpha-enolase	N70	K.GVSQAVEHIN*K.T
5	IPI00139788.2	Q921I1	Trf Serotransferrin	N513	K.N*STLCDLCIGPLK.C
6	IPI00121190.1	Q01279	Egfr Epidermal growth factor receptor	N352 N568 N603 N528	K.DTLSIN*ATNIK.H R.EFVENSECIQCHPECLPQAM#N*ITCTGR.G K.TCPAGIMGEN*NTLVWK.Y R.DCVSCQN*VSR.G
7	IPI00604969.3		Ttn titin isoform N2-A	N27342	K.NFVLTAVN*NTFYTRYEPTSR.L
8	IPI00131830.1	P07759	Serpina3k Serine protease inhibitor A3K	N185 N270	K.NLINDYVSN*QTQGM#IK.E K.YTGN*ASALLILPDQGR.M
9	IPI00381178.3	Q63880-1	Es31 Isoform 1 of Liver carboxylesterase 31	N311 N317	K.KNVN*ISYTVNDSFFPQRPQK.L K.NVNISYTVN*DSFFPQRPQK.L

10	IPI00138084.2	P55264-2	Adk Isoform Short of Adenosine kinase	N131	R.KAADAHVDAHYEQNEQPTGTCAACITGG N*R.S
11	IPI00123342.4	Q9JKR6	Hyou1 Hypoxia up-regulated protein 1	N596 N931 N862 N830 N869	K.EN*GTDAVQEEEESPAEGSK.D R.AEPPLN*ASAGDQEEK.V K.VIN*DTWAWK.N R.LSALDNLLN*HSSIFLK.G K.N*ATLAEQAK.L
12	IPI00123223.2	P28665	Mug1 Murinoglobulin-1	N993 N1142 N294	K.YLN*ETQQLTQK.I R.N*ASFVYTK.A R.EVNSQLDNNGCSTQEVN*ITELQSK.K
13	IPI00323357.3	P63017	Hspa8 Heat shock cognate 71 kDa protein	N584	K.N*QTAEKEEFEHQK.E
14	IPI00129526.1	P08113	Hsp90b1 Endoplasmin	N62	R.EEEAIQLDGLN*ASQIR.E
15	IPI00624663.3	Q61838	Pzp Uncharacterized protein	N568 N881	K.VN*LSFPSAQSLPASDTHLK.V K.SLGEVN*FTATAEALQSPELCGNK.L
16	IPI00321190.1	Q61207	Psap Sulfated glycoprotein 1	N459 N80 N214	K.N*STKEEILAALEK.G K.DN*ATQEEILHYLEK.T K.TN*SSFIQGFVDHVK.E
17	IPI00230690.1	Q91ZU6-1	Dst Isoform 2 of Dystonin	N2802	K.EGVLMSPEEGGEEERDLEPPFN*GSATESL NM#GK.S
18	IPI00138342.3	P23953	Es1 Liver carboxylesterase N	N79 N377 N274	K.N*ATSYPPMCSDAGWAK.I R.FHSELN*ISESM#IPAVIEK.Y K.NIQAVNEIATLSQCN*DTSSAAM#VQCLR.Q
19	IPI00466069.3	P58252	Eef2 Elongation factor 2	N827	R.SNTGGQAFPQCVFDHWQILPGDPFDN*SSRP SQVVAETR.K
20	IPI00153143.1	Q8R084	Ugt2b1 UDP glucuronosyltransferase 2 family, polypeptide B1	N96	K.WVGN*WTYELK.K

21	IPI00321617.1	P34914-1	Ephx2 Isoform 1 of Epoxide hydrolase 2	N436	K.ATEIGGILVNTPEDPN*LSK.I
				N85	K.ACGANLPEN*FSISQIFSQAMAAR.S
22	IPI00553798.2		Ahnak AHNAK nucleoprotein isoform 1	N3965	K.LNLGVDPM#SIKHTQIN*MSPMK.F
23	IPI00119203.4	P50544	Acadvl Very long-chain specific acyl-CoA dehydrogenase, mitochondrial	N307	K.M#GIKASN*TSEVYFDGVKVPSENVLGEVG DGFK.V
24	IPI00620362.4	Q8R081	Hnrnp1 Heterogeneous nuclear ribonucleoprotein L	N286	K.NDQDTWDYTNPN*LSGQGDPGSNPNKR.Q
25	IPI00409148.2	Q61646	Hp Haptoglobin	N148	K.NLFLN*HSETASAK.D
				N182	K.VVLHPN*HSVVDIGLIK.L
26	IPI00128399.3		AU018778 Putative uncharacterized protein	N79	K.N*ATTYPPM#CSQDAAR.G
27	IPI00111286.1	Q9CYA0	Creld2 Cysteine-rich with EGF-like domain protein 2	N188	R.N*ETHSICSACDESCK.T
28	IPI00551206.2		C4a;C4b sex-limited protein	N224	R.FSDGLESN*R.S
				N1321	K.ALN*VTLSSM#GR.N
				N1384	K.N*TTCQDLQIEVK.V
29	IPI00111013.1	P18242	Ctsd Cathepsin D	N261	K.YYHGELSYLN*VTR.K
30	IPI00387289.3	Q8VCT4	Ces3 Carboxylesterase 3	N79	K.N*TTSYPPMCSQDAVGGQVLSELFTR.K
31	IPI00230084.5	Q9DBF1-1	Aldh7a1 Isoform 1 of Alpha-aminoadipic semialdehyde dehydrogenase	N56	R.EDNEGVYN*GSWGGR.G
32	IPI00874675.2		Dst 829 kDa protein	N4449	R.VSKEGANN*VSCLNDK.V
33	IPI00469218.1	P11438	Lamp1 Putative uncharacterized protein	N160	K.N*VTVVLR.D
				N253	R.AFNISPN*DTSSGSCGINLVTLK.V
				N98	R.GYLLTLN*FTK.N
34	IPI00279079.1	Q8K0E8	Fgb Fibrinogen beta chain	N384	K.GTAGNALM#DGASQLVGEN*R.T
35	IPI00113869.1	P18572-2	Bsg Isoform 2 of Basigin	N44	K.TQLTCSLN*SSGVDIVGHR.W
36	IPI00230008.2	Q0VAV2	Exph5 Exophilin-5	N1791	R.HFSEN*TSIDNALSQLSLEDGSPNSGYNRRF K.S
37	IPI00720238.2		Neb Nebulin	N4682	K.N*M#THANQKALVMDM#SDTLK.K

38	IPI00421190.5		Stag2 cohesin subunit SA-2	N1174	K.GGGN*GSKGKEAPGK.K
39	IPI00622850.2		Myo5c myosin VC	N154	R.N*QSIIVSGESGAGK.T
40	IPI00349296.6	Q0VGY8-1	Tanc1 Isoform 1 of Protein TANC1	N1546	R.N*SSTKIQVSSQNPPPSPM#PGR.V
41	IPI00720238.2		Neb Nebulin	N6634	R.NQEN*ISSVLYSDSFR.K
42	IPI00928536.1		Gm1305 Uncharacterized protein	N283	R.LREGSRVN*LSLTSLGNVISALADLAM#GK.K
				N226	K.IRMTASTNM#N*ASSSR.S
43	IPI00662244.2		Agl amylo-1,6-glucosidase, 4-alpha-glucanotransferase	N1236	R.NMKDEGFN*ITAGIDEETGFVYGGNR.F
				N801	R.NTKPYKKDENSINGMPN*MTVELR.E
44	IPI00480490.3	Q5HZI1-1	Mtus1 Isoform 1 of Microtubule-associated tumor suppressor 1 homolog	N564	K.AEIPIN*KTHK.Q
45	IPI00462140.1	Q6IFZ6	Krt77 Keratin, type II cytoskeletal 1b	N206	K.WELLQQVN*TSTR.T
46	IPI00154043.1		Ces6 MCG23407	N275	K.TVAN*LSGCEATDSEALIHCLR.A
47	IPI00120832.1	P04939	Mup3 Major urinary protein 3	N66	R.AFVEN*ITVLENSLVFK.F
48	IPI00117379.3	O08997	Atox1 Copper transport protein ATOX1	N56	K.VCIDSEHSSDTLLATLN*K.T
49	IPI00118447.1	P42669	Pura Transcriptional activator protein Pur-alpha	N95	R.FLKIAEVGAGGN*KSR.L
50	IPI00109108.2	P46978	Stt3a Putative uncharacterized protein	N596	R.TILVDNNTWN*NTHISR.V
51	IPI00856568.1	O88492-2	Plin4 Isoform 2 of Perilipin-4	N845	K.AMNAAGM#VGTTVTDKTNLTLVN*K.S
52	IPI00113302.1	Q9ESF1-1	Otof Isoform 1 of Otoferlin	N432	R.MN*TSLMANVK.K
53	IPI00222648.3	Q8BL06-1	Usp54 Isoform 1 of Inactive ubiquitin carboxyl-terminal hydrolase 54	N437	K.QAPRN*ASK.S
54	IPI00125829.3	Q924N4-1	Slc12a6 Isoform 1 of Solute carrier family 12 member 6	N1096	K.LNEVIVN*K.S
55	IPI00381303.5	O09159	Man2b1 Lysosomal alpha-mannosidase	N367	K.AN*LTWTVK.E
				N497	R.ELN*ISICPVSQTSER.F
				N767	R.DDYRPTWTLN*QTEPVAGNYYPVNTR.I
56	IPI00874660.2		Srgap3 GAP3	N977	R.SSSSSSSGVGSPA VTPTEKM#FPN*SSSDKSG TM#.-

57	IPI00670741.3	Q3UHK8	Tnrc6a Trinucleotide repeat-containing gene 6A protein	N252	R.N*ITVM#ASGNTGGEKDGLR.N
58	IPI00127472.2	P98203-3	Arvcf Isoform 3 of Armadillo repeat protein deleted in velo-cardio-facial syndrome homolog	N530	R.N*VSSDGAEAR.R
59	IPI00620780.1	Q4KWH5-1	Plch1 Isoform 1 of 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase eta-1	N963	K.KPNAPLPDGSFPN*FTGKCMQQPK.L
60	IPI00123194.1	P28653	Bgn Biglycan	N271	R.M#IEN*GSLSFPLTLR.E
61	IPI00108535.1	P31809-1	Ceacam1 Isoform Long of Carcinoembryonic antigen-related cell adhesion molecule 1	N375	R.M#TLSQN*NSILR.I
62	IPI00344641.6		Cecr2 cat eye syndrome chromosome region, candidate 2 homolog	N226 N920	R.NPVSVN*R.S R.ELN*DSM#K.T
63	IPI00466652.2	P31651	Slc6a12 Solute carrier family 6 (Neurotransmitter transporter, betaine/GABA), member 12	N197	R.GVSSSEN*FTSPVMEFWER.R
64	IPI00345676.5	A2AJK6-1	Chd7 Isoform 1 of Chromodomain-helicase-DNA-binding protein 7	N1215	K.N*FTFLSKGGGQANVPNLLNTM#M#ELR.K
65	IPI00463909.3	Q7TMY8-1	Huwe1 E3 ubiquitin-protein ligase HUWE1	N2683 N2688	K.ELEQGN*SSKSN*K.S K.ELEQGN*SSKSN*K.S
66	IPI00853932.1	Q8BPN8-1	Dmxl2 Isoform 1 of DmX-like protein 2	N2472	K.TANVCAYMMIN*KSLSNADGSPFAVPIRSSF SVQVQR.F
67	IPI00622912.3		Ryr1 ryanodine receptor 1, skeletal muscle	N3953	K.DVIEEQGKRN*FSK.A
68	IPI00131330.9		Usp32 ubiquitin specific protease 32	N455	R.ISNNLGYMN*TTEEK.Y
69	IPI00113824.1	Q05793	Hspg2 Basement membrane-specific heparan sulfate proteoglycan core protein	N89 N3098	R.ALVN*FTR.S R.SLTQGSLIVGNLAPVN*GTSQGK.F
70	IPI00378224.2	Q6P6J9	Txndc15 Thioredoxin domain-containing protein 15	N277	K.IFIFN*QTGIEAK.K
71	IPI00761436.3	D3Z3U8	Muc4 mucin-4	N3003	R.TIGQSTNSILNEFQHM#NDTLNQYPPSIN*CSS

						KIQAYK.G
				N3014		R.TIGQSTNSILNEFQHM#N*DTLNQYPPSIN*CS SKIQAYK.G
				N311		K.LSPVSTLIN*SSQKM#STLPQNQHTESM#DTS R.Q
72	IPI00111885.1	Q9CZ13	Uqcrc1 Cytochrome b-c1 complex subunit 1, mitochondrial	N153		K.VVELLADIVQN*SSLEDSQIEK.E
73	IPI00882349.1	E0CXA0	Hdgf Uncharacterized protein	N166		K.N*STPSEPDSGQGPPEEEEEEEEEAAKEEAE AQGVR.D
74	IPI00849953.1		Dnahc10 dynein, axonemal, heavy chain 10	N1251		K.LM#GLGAKSVAEM#EEITTN*LTK.L
75	IPI00310059.1	O70570	Pigr Polymeric immunoglobulin receptor	N170		K.TN*QSCSELVIDSTEK.V
76	IPI00874741.1	P01901	H2-K1 H-2 class I histocompatibility antigen, K-B alpha chain	N197		K.NGN*ATLLR.T
				N107		R.TLLGYYN*QSK.G
77	IPI00469384.4	Q69ZJ7-1	C030046E11Rik Isoform 1 of Protein RIC1 homolog	N281		R.LM#AFGCASGCVQVYTIDN*TTGAMLLSHK. L
78	IPI00855162.2	Q3V0H8	4932431P20Rik Putative uncharacterized protein	N2190		K.M#N*RSLLIKEAELSM#EEK.R
79	IPI00114692.6	A2AKY4	Zfp804a Zinc finger protein 804A	N374		K.SNPNIIEKNPTVPNDRTSAQM#TTEEN*ITIND VTK.M
80	IPI00115599.6	P50172	Hsd11b1 Corticosteroid 11-beta-dehydrogenase isozyme 1	N162		K.QSN*GSIAVISSLAGK.M
81	IPI00122557.2	Q8VCU1-1	Gm4738 liver carboxylesterase 31-like isoform 1	N311		K.NVN*ISYIVN*DSFFPQRPEK.L
				N317		K.NVN*ISYIVN*DSFFPQRPEK.L
82	IPI00134691.3	Q63886	Ugt1a1;Ugt1a2 UDP-glucuronosyltransferase 1-1	N89		K.EN*VTATLVELGR.T
83	IPI00187353.1	Q8R2E9	Ero1lb ERO1-like protein beta	N140		K.LGAIN*STLSNESK.E
				N145		K.LGAIN*STLSN*ESK.E
84	IPI00121378.2	Q61490	Alcam CD166 antigen	N480		K.IISPEEN*VTLTCTAENQLER.T
85	IPI00331680.8	P97328	Khk Ketoheokinase	N105		R.GVDVSQVTWQSQGDTPCSCCIVNNSN*GSR. T

86	IPI00130010.4	P06909	Cfh complement factor H	N694	K.IQCVDGN*WTTLPVCIEEER.T
87	IPI00320420.3	Q06890	Clu Clusterin	N327	R.QELN*DSLQVAER.L
88	IPI00407144.1	Q60575-2	Kif1b Isoform 2 of Kinesin-like protein KIF1B	N1193	K.LNTM#N*KTTLGQSMSK.Y
89	IPI00400016.1	P02468	Lamc1 Laminin subunit gamma-1	N1159	K.MAAAN*VSITQPESTGEPNN*M#TLLAEEAR. R
				N1173	K.MAAAN*VSITQPESTGEPNN*M#TLLAEEAR. R
90	IPI00320204.4		2210023G05Rik hypothetical protein LOC72361	N476	K.LN*LTEEEK.L
				N100	R.DGTSQPAICPQN*VTMNMEGLK.E
91	IPI00113539.2	P11276	Fn1 Fibronectin	N1006	K.LDAPTNLQFVN*ETDR.T
92	IPI00112616.2	P41234	Abca2 ATP-binding cassette sub-family A member 2	N14	-.M#GFLHQLQLLLWKN*VTLK.R
93	IPI00830749.1		Col6a3 Type VI collagen alpha 3 subunit	N1948	R.QLINALQIN*NTAVGHALVLPAR.R
94	IPI00119809.1	Q07797	Lgals3bp Galectin-3-binding protein	N543	K.APIPTALDTN*SSK.T
				N69	R.ALGYEN*ATQALGR.A
95	IPI00129348.1		Pcdhb1 protocadherin beta 1	N257	R.LVYRAQVPENSDN*GSLVVVVTATDLDEGT NK.Q
96	IPI00112032.2	Q9CZ42-1	Carkd carbohydrate kinase domain-containing protein precursor	N258	K.LSQALGN*ITVVQK.G
97	IPI00556781.1	Q8K1M6-3	Dnm1l Isoform 3 of Dynamin-1-like protein	N149	R.WN*GTTPEQGGDGIGGGASPVK.D
98	IPI00134344.6		Spnb3 Putative uncharacterized protein	N634	R.AAHGGAILGNALAN*ASDVR.E
99	IPI00136169.1	Q8CCS6-1	Pabpn1 Isoform 1 of Polyadenylate-binding protein 2	N144	K.ELQNEVEKQM#N*M#SPPPGNAGPVIM#SLE EK.M
100	IPI00280250.5	O89032-1	Sh3pxd2a Isoform 1 of SH3 and PX domain-containing protein 2A	N414	K.LDGNN*K.S
101	IPI00271262.7	P28666	Cpamd8 Murinoglobulin-2	N294	K.LDNNGCSTQEVN*ITELQSK.K
102	IPI00127447.3	O35114	Scarb2 Lysosome membrane protein 2	N105	K.ANIQFGEN*GTTISAVTNK.A

103	IPI00458583.3	Q8VEK3	Hnrnpu Heterogeneous nuclear ribonucleoprotein U	N249	K.TSLDWWTDTDCNMIN*GTDGDSFHPLISK.D
				N56	R.LQAALDNEAGGRPAMEPGN*GSLDLGGDA AGR.S
104	IPI00467600.3	Q8R4U0	Stab2 Stabilin-2	N626	R.SMANQIITFN*ISSK.G
105	IPI00125514.1	Q9WUZ9	Entpd5 Ectonucleoside triphosphate diphosphohydrolase 5	N231	R.GYLTSFEMFN*STFK.L
106	IPI00330961.7		Prdm2 retinoblastoma protein-binding zinc finger protein	N1510	R.M#N*ASTSDLESKR.A
107	IPI00122043.4	Q9JJN2	Zfx4 Zinc finger homeobox protein 4	N698	K.FPN*SSGFPNPSPDAISSTESR.D
108	IPI00122341.3	Q61527-2	ErbB4 receptor tyrosine-protein kinase erbB-4 precursor	N138	R.KDGNFGLQELGLKN*LTEILNGGVYVDQNK. F
109	IPI00114613.3	Q7TT50	Cdc42bpb Serine/threonine-protein kinase MRCK beta	N28	-.ADCSPQDLGEM#PLQSRHPSNPSPPGSPN*SS NSPTSHK.T
110	IPI00378788.4		D5ErtD577e hypothetical protein LOC320549	N250	K.NTSPIMN*LTR.D
111	IPI00464194.2	Q69ZL1-1	Fgd6 Isoform 1 of FYVE, RhoGEF and PH domain-containing protein 6	N338	K.HVDTPGESTEEPGNNSN*GSSCLEDYCLK.N
112	IPI00354163.6	Q5DTW7-1	2810474O19Rik Isoform 1 of Uncharacterized protein C12orf35 homolog	N179	K.VQLPM#QNSENN*MSTKNK.F
113	IPI00410905.3		Kcnma1 Large conductance Ca ²⁺ -activated potassium channel DEC variant 10	N76	R.NPRN*ATSPISHVSSSK.K
114	IPI00943428.1		Zfp804b zinc finger protein 804B	N630	R.HSTCTNRWSSMN*RSSEDVTRPHAR.L
115	IPI00123915.2	Q9WTV7	Rlim E3 ubiquitin-protein ligase RLIM	N21	R.RCIPCTSN*ESLWR.D
116	IPI00125778.4	Q9WVA4	Tagln2 Transgelin-2	N106	R.YGIN*TTDIFQTVDLWEGK.N
117	IPI00138061.1	Q64735-1	Cr11 Isoform 1 of Complement regulatory protein Crry	N170	R.IN*YTCNQGYR.L
118	IPI00947579.1		Myh15 myosin, heavy polypeptide 15	N168	R.AFQDM#LRNGEN*QSIVFTGESGSGKTVNTK .L
119	IPI00857319.1		Zfp644 MKIAA1221 protein	N1014	K.RTGN*GTPVK.R
120	IPI00134585.1	P16406	Enpep Glutamyl aminopeptidase	N189	K.GWLN*GSLVGFYK.T

121	IPI00515713.7		Pkd111 polycystin-1L1	N390	R.IM#ANRLVSTASALVNAN*VSFECR.L
122	IPI00409947.1	Q925T6-4	Grip1 Isoform 4 of Glutamate receptor-interacting protein 1	N191	R.AM#PAEHN*LSM#TSGSMITAELE.L
123	IPI00621027.2	Q02788	Col6a2 Collagen alpha-2(VI) chain	N155	R.GTFTDCALAN*MTQQIR.Q
124	IPI00221426.3	Q8BFR4	Gns N-acetylglucosamine-6-sulfatase	N271	K.TPM#TN*SSIR.F
125	IPI00460063.2	Q9CQF9	Pcyox1 Prenylcysteine oxidase	N196	R.LLN*QTLR.E
				N323	K.MSN*ITFR.N
126	IPI00348586.3	Q8BS35-1	Tmem195 Isoform 1 of Alkylglycerol monooxygenase	N9	R.SPGAQDN*VSVSQGM#R.A
127	IPI00667973.3	Q6A065-1	Cep170 Isoform 1 of Centrosomal protein of 170 kDa	N372	R.SN*VSPSGHTSSM#SKVK.S
128	IPI00466371.2	Q3V3R4	Itga1 Integrin alpha-1	N100	K.LDLPVN*TSIPNVTEIK.E
				N882	K.DSCSNQN*ITCR.V
129	IPI00229599.2	Q8CH77-1	Nav1 Isoform 1 of Neuron navigator 1	N286	K.CSQQHM#N*FTSVIGDTVERGSR.E
130	IPI00119870.2	Q61301-1	Ctnna2 Isoform 1 of Catenin alpha-2	N165	K.N*ATNEQDLANR.F
131	IPI00117831.2	Q61147	Cp Ceruloplasmin	N138	K.EYEGAVYPDND*TTDFQR.A
132	IPI00420658.3	Q148W0	Atp8b1 Probable phospholipid-transporting ATPase IC	N570	R.N*SSAVSAAM#FK.N
133	IPI00121627.3	Q8VBZ3	Clptm1 Cleft lip and palate transmembrane protein 1 homolog	N295	K.DYYPIN*ESLASLPLR.V
134	IPI00330146.6	Q5F2E7-1	Nufip2 Isoform 1 of Nuclear fragile X mental retardation-interacting protein 2	N347	K.EDSWTLFKPPPVPVDN*SSAKIVPK.I
135	IPI00265219.4	Q5SSE9-1	Abca13 Isoform 1 of ATP-binding cassette sub-family A member 13	N2429	K.LSDLFSDVN*SSFPLR.S
136	IPI00116414.2	Q99L88-1	Sntb1 Isoform 1 of Beta-1-syntrophin	N64	K.VLVNLS DALVLSCEE GAAA YNGIGAATN*GSFCR.G
137	IPI00223045.2	Q8BMK0	Ccdc21 Coiled-coil domain-containing protein 21	N574	R.YHPDSYLTEL M#APQN*LTSEMSPVDFK.R
138	IPI00272501.4	Q99NH0-2	Ankrd17 ankyrin repeat domain-containing protein 17 isoform b	N231	R.M#RAESTANAGQSDN*R.S
139	IPI00173158.1	Q9DBU0	Tm9sf1 Transmembrane 9 superfamily member 1	N178	R.IIFAN*VSVR.D
140	IPI00117630.4	P11881-7	Itp1 Isoform 7 of Inositol 1,4,5-trisphosphate receptor type 1	N2463	R.VETGEN*CTSPAPK.E

141	IPI00341196.3	A2A6A1	Gpatch8 G patch domain-containing protein 8	N268	K.GGSFTSVQITN*TTGLSQAPGLASQGISFGIK NNLGPPLQK.L
142	IPI00128154.1	P06797	Ctsl Cathepsin L1	N221	R.AEFAVAN*DTGFVDIPQQEK.A
143	IPI00670741.3	Q3UHK8	Tnrc6a Trinucleotide repeat-containing gene 6A protein	N665	R.NYDGIN*LSHKDIEM#R.K
144	IPI00114162.3	Q05816	Fabp5 Fatty acid-binding protein, epidermal	N124	K.DGKMIVECVM#NN*ATCTRVEK.V
145	IPI00274979.1	Q9ER47	Kcnh7 Potassium voltage-gated channel subfamily H member 7	N348	K.N*TSPPSSDK.T
146	IPI00119478.1	Q9JHJ0	Tmod3 Tropomodulin-3	N254	R.SNDPVAVAFADM#LKVN*KTLK.S
147	IPI00122272.1	Q61508-1	Ecm1 Isoform Long of Extracellular matrix protein 1	N535	R.NVALVAGDTGN*ATGLGEQGPTR.G
148	IPI00222548.5	P47915	Rpl29;Gm13841;Gm8210 60S ribosomal protein L29	N11	K.SKNHTTHN*QSR.K
149	IPI00131143.1	Q9Z2G6-1	Sel1l Isoform 1 of Protein sel-1 homolog 1	N604	R.EATIVGEN*ETYPR.A
150	IPI00356852.3		Zfp648 Uncharacterized protein	N445	K.KGGN*STKGPMEGPK.Q
151	IPI00223928.4	Q8C0R0-1	Usp37 Isoform 1 of Ubiquitin carboxyl-terminal hydrolase 37	N405	K.NN*LSLAVNFSYRK.L
152	IPI00116310.7	P0C6F1	Dnahc2 Uncharacterized protein	N2353	K.SSGTGGVIMTSHRSN*K.T
153	IPI00129646.4	Q01965	Ly9 T-lymphocyte surface antigen Ly-9	N120	R.LKVSEGDGYSLYM#SN*LTK.S
154	IPI00114833.1	P56695	Wfs1 Wolframin	N663	R.SEGM#KVYN*STLTWQQYGFLCGPRAWK.E
155	IPI00672924.2		Ctnbp2 Ctnbp2 protein	N29	R.TN*SSSSSNR.K
156	IPI00762484.2	Q4VA61	Dscaml1 Down syndrome cell adhesion molecule-like 1	N614	R.QVVFEN*GTLK.L
157	IPI00343249.6	B2RR83	Ythdc2 Probable ATP-dependent RNA helicase YTHDC2	N464	R.DVHVLPYPM#GAVLAAKVVAWN*ESNTNV DR.I
158	IPI00339885.2	Q04857	Col6a1 Collagen alpha-1(VI) chain	N801	K.N*ITAQICIDK.K
159	IPI00407541.2	P42703-2	Lifr Isoform 2 of Leukemia inhibitory factor receptor	N385	R.IEGLTN*ETYSR.L
160	IPI00469945.3	Q69ZB0-2	Lrrcc1 Isoform 2 of Leucine-rich repeat and coiled-coil domain-containing protein 1	N394	K.VDKN*FSDNSTYSR.S
161	IPI00115762.1	P11627	L1cam Neural cell adhesion molecule L1	N824	K.GPEPQVTIGYSGEDYPQVSPELITIFN*SST VLVR.W

162	IPI00468189.6	Q6S5J6-1	Krit1 Isoform 1 of Krev interaction trapped protein 1	N441	R.SVELKHGNN*TTAQQIM#EGMRLSQETQR.Y
163	IPI00317356.10	P52430	Pon1 Serum paraoxonase/arylesterase 1	N253	K.HAN*WTLTPLK.V
164	IPI00830223.1		Tpm1 tropomyosin alpha-1 chain isoform 10	N193	R.N*LSAVDAEATERLK.R
165	IPI00136002.1	Q91Z31-2	Ptpb2 Isoform 2 of Polypyrimidine tract-binding protein 2	N31	R.GSDELLSGSVLSSPNSN*M#SGM#VVTANGN *DSK.K
				N42	R.GSDELLSGSVLSSPNSN*M#SGM#VVTANGN *DSK.K
166	IPI00918392.1		Depdc5 Protein	N735	R.TVTLDVDVNN*R.T
167	IPI00675799.5	A6H584	Gm7455 Collagen alpha-5(VI) chain	N292	R.DLQNFLEN*VTSSVDVK.D
168	IPI00111960.2	P70699	Gaa Lysosomal alpha-glucosidase	N140	R.LEN*LSSTESGYTATLTR.T
169	IPI00122973.1	P13597-1	Icam1 Isoform 1 of Intercellular adhesion molecule 1	N47	R.EAFLPQGGSVQVN*CSSSCK.E
170	IPI00116921.1	Q61009	Scarb1 Scavenger receptor class B member 1	N310	R.FTAPDTLFAN*GSVYPPNEGFCPCR.E
171	IPI00970764.1		Nbeal1 neurobeachin like 1	N1406	K.N*LSNVNEFNAK.L
172	IPI00112614.2	P41233	Abca1 ATP-binding cassette sub-family A member 1	N98	R.YPTPGEAPGVVGNFN*K.S
173	IPI00224073.3	Q8C165	Pm20d1 Probable carboxypeptidase PM20D1	N443	R.HYAN*ITNGMYR.F
174	IPI00120245.1	P43406	Itgav Integrin alpha-V	N615	R.TAADATGLQPILNQFTPAN*VSR.Q
175	IPI00119871.3	Q02357-2	Ank1 Ank1 protein	N1825	K.DLN*GSRAARLFSTAADAAPDSGSR.R
176	IPI00125681.4	Q6PD26	Pigs GPI transamidase component PIG-S	N370	K.IYN*ASELPVR.V
177	IPI00742433.1	Q8VDM6-2	Hnrnpul1 Isoform 2 of Heterogeneous nuclear ribonucleoprotein U-like protein 1	N173	R.NYNGRN*NSNNDR.N
178	IPI00131648.4	P82976	Gbx1 Homeobox protein GBX-1	N378	R.IKAGN*VSSR.S
179	IPI00399663.1	Q6RT24	Cenpe Centromere-associated protein E	N2147	R.ITAM#IN*ESTEFEER.S
180	IPI00125538.8	Q80TY5	Vps13b Vacuolar protein sorting-associated protein 13B	N3171	K.LEVNQISGELTPLPN*K.S
181	IPI00115992.1		Gm4963 Uncharacterized protein	N14	-.ADEGAAPSGGGKTN*R.T
182	IPI00117935.2	Q61194-2	Pik3c2a Isoform 2 of Phosphatidylinositol-4-phosphate 3-kinase C2 domain-containing subunit alpha	N6	M.AQISN*NSEFK.Q

183	IPI00975027.1		Hnf4a HNF4alpha11	N24	-.MSDRGQGFLQITSDTSPSEGANLN*SSNSLGV SALCAICGDR.A
184	IPI00226357.2		E230019M04Rik Putative uncharacterized protein	N204	K.AEMSKAELN*GTK.V
185	IPI00320605.3	P11835	Itgb2 Integrin beta-2	N51	K.LN*FTGPGEPDSL.R.C
186	IPI00620986.3	P40645-1	Sox6 Isoform 1 of Transcription factor SOX-6	N299	R.CNSLGM#NN*MSSLK.G
187	IPI00132595.4	O35600	Abca4 Retinal-specific ATP-binding cassette transporter	N1932	R.VM#SGGN*KTDILK.L
188	IPI00348717.6		BC005561 cDNA sequence BC005561	N1252	K.GN*LSNGNSGSNSKAVKENDK.E
189	IPI00187290.1	Q9CZW6	Rnf146 RING finger protein 146	N16	R.VN*VSMTGGGAVSRDTGSR.D
190	IPI00118500.1	Q9D3V5-2	Fsip1 Isoform 2 of Fibrous sheath-interacting protein 1	N160	R.EEVGSN*STHGEQGSNLKNVMDIK.V
191	IPI00223384.5	Q80ZA4-1	Pkhd111 Isoform 1 of Fibrocystin-L	N2358	K.LN*ATGAR.G
192	IPI00667268.3		Ttc17 Tetratricopeptide repeat domain 17	N743	R.CM#QFYFPFLYN*ATSSVCGGTVVEESN*GSD EVEK.S
193	IPI00667268.3		Ttc17 Tetratricopeptide repeat domain 17	N758	R.CM#QFYFPFLYN*ATSSVCGGTVVEESN*GSD EVEK.S
194	IPI00223579.5	Q8C033-1	Arhgef10 Isoform 1 of Rho guanine nucleotide exchange factor 10	N688	R.QSM#VAHSEHSN*R.S
195	IPI00665988.3		Fam184a hypothetical protein LOC75906	N234	K.AEGLHRM#EVEALN*NTVKELR.L
196	IPI00226509.2		Zfp300 zinc finger protein 300	N643	K.ENKELKMEN*LS.-
197	IPI00223178.3	Q3UP23	Tmem26 Transmembrane protein 26	N102	R.M#AQN*FSRR.G
198	IPI00169485.3		Rab11fip1 rab11 family-interacting protein 1	N221	K.EEEVTGPGPLEEN*ESSRVQPRFDCQNETPV EGAR.G
199	IPI00331143.6	O88509-1	Dnmt3b Isoform 1 of DNA (cytosine-5)-methyltransferase 3B	N428	K.GCSLCRDELNGKN*NTVESAMR.E
200	IPI00122184.1	P58682	Tlr8 Toll-like receptor 8	N111	K.QQHPNENKNGM#N*ITEGALLSLR.N
201	IPI00406741.6	P27546-4	Mtap4 Isoform 4 of Microtubule-associated protein 4	N692	K.RN*TTPTGAAPPAGM#TSTR.V
202	IPI00121004.1	Q9JJ26	Mefv Pryn	N501	R.M#RILSGN*RTEEQTPLVESNPPEGER.S
203	IPI00322492.3		Ewsr1 Ewing sarcoma breakpoint region 1	N297	R.QDHPSSMGVYGQESGGFSGPGEN*R.S

204	IPI00136967.2	P23819-1	Gria2 Isoform 1 of Glutamate receptor 2	N510	K.LEM#IN*ITYNIR.K
205	IPI00757144.2	Q66JQ7	Casc5 Cancer susceptibility candidate 5	N922	K.N*KSITFPENDK.S
206	IPI00469307.2	P55302	Lrpap1 Alpha-2-macroglobulin receptor-associated protein	N271	R.VIDLWDLAQSAN*FTEK.E
207	IPI00128363.1	Q8VHJ5	Mark1 Serine/threonine-protein kinase MARK1	N304	R.AMSGGSYVN*NSPSATSKKR.D
208	IPI00119033.1	Q60625	Icam5 Intercellular adhesion molecule 5	N124	R.GHANTAACEYEGGHSGM#AGAVSLTSN*N* SSLGLNLAGPPAR.W
209	IPI00475164.2	Q8BX22-1	Sall4 Isoform 1 of Sal-like protein 4	N28	K.AMGDPVALKEGN*GSM#PM#SVGTQSGDLK .S
210	IPI00405742.6		Plxnb2 plexin B2	N530	K.SCVAITDAFPQN*M#SR.R
211	IPI00114958.1	O08677-1	King1 Isoform HMW of Kininogen-1	N82	K.EGN*CSAQSGLAWQDCDFK.D
212	IPI00265371.3	Q3V132	Slc25a31 ADP/ATP translocase 4	N3	-.MSN*ESSKK.Q
213	IPI00468179.3		Zmynd8 Protein kinase C binding protein 1	N1079	K.DSSN*STLDLGSR.E
214	IPI00329839.7	Q810A7-1	Ddx42 Isoform 1 of ATP-dependent RNA helicase DDX42	N158	K.GNGGGIGERSNNGSATNNVGQAGISPYTVP ASSIN*GSNNFGPIN*K.T
215	IPI00329839.7	Q810A7-1	Ddx42 Isoform 1 of ATP-dependent RNA helicase DDX42	N167	K.GNGGGIGERSNNGSATNNVGQAGISPYTVP ASSIN*GSNNFGPIN*K.T
216	IPI00320916.2	Q99MV1	Tdrd1 Tudor domain-containing protein 1	N1047	K.SKEPTVN*SSPK.T
217	IPI00918363.1		C6 Complement component 6	N324	K.VLN*FTMK.A
218	IPI00115607.3	Q99JY0	Hadhb Trifunctional enzyme subunit beta, mitochondrial	N297	K.NLDLMM#KRMN*R.S
219	IPI00119012.1	Q61271	Acvr1b Activin receptor type-1B	N115	K.M#N*ITEDLVEPAM#YRK.T
220	IPI00620823.2	Q99KY4-2	Gak Isoform 2 of Cyclin-G-associated kinase	N758	K.FEEKEPETGLDN*TSPK.E
221	IPI00124666.1	Q9WUH7	Sema4g Semaphorin-4G	N386	R.GYN*SSQDLPSLVLDFVK.L
222	IPI00127770.3	Q9R0L9	Cd164 Sialomucin core protein 24	N98	K.TYCANEPLSN*CSQVN*R.T
				N103	K.TYCANEPLSN*CSQVN*R.T
223	IPI00130630.1	O35409	Folh1 Glutamate carboxypeptidase 2	N663	K.ALEFNN*QTGALHPTR.T
224	IPI00135659.2	Q63912	Omg oligodendrocyte-myelin glycoprotein	N392	R.GMPNN*FSEMPRQSTTLNLR.E

225	IPI00469208.3	Q6A058	Armcx2 Armadillo repeat-containing X-linked protein 2	N606	K.EKALMAM#NN*LSENYENQGR.L
226	IPI00109656.2	Q99K28-2	Arfgap2 Isoform 2 of ADP-ribosylation factor GTPase-activating protein 2	N87	R.CM#QVGGNAN*ATAFFRQHGCMA#ANDANT KYTSR.A
227	IPI00136925.2	P01592	Igj Immunoglobulin J chain	N70	R.EN*ISDPTSPLR.R
228	IPI00227349.1	Q8BZ60	Ston2 Stonin-2	N555	R.QSKGTTSSVSSN*QSR.R
229	IPI00974842.1		Gm10456;Nhsl2 NHS-like protein 2	N102	R.EN*ATATAHSR.S
230	IPI00338209.2	Q9Z2A9-1	Ggt5 Isoform 1 of Gamma-glutamyltransferase 5	N204	R.QLFFN*GTETLR.S
231	IPI00125861.2	Q811D0-3	Dlg1 Isoform 3 of Disks large homolog 1	N220	R.YSSESAN*STVHQDADSTEQESQDKNK.Y
232	IPI00664551.2	Q9WVB4	Slit3 Slit homolog 3 protein	N1183	K.LGQFADPAIDSIQN*K.S
233	IPI00130238.5	Q9Z1K7	Apc2 Uncharacterized protein	N494	R.RYAGMTLTN*LTFGDVANK.A
234	IPI00395054.1	Q8VI24-2	Satb2 Isoform 2 of DNA-binding protein SATB2	N385	R.SM#NPN*VSM#VSSASSPSSSR.T
235	IPI00132600.1	O35604	Npc1 Niemann-Pick C1 protein	N1064	R.LIASN*ITETMR.S
236	IPI00108041.1	P70302	Stim1 Stromal interaction molecule 1	N171	R.LAVTN*TTMTGTVLK.M
237	IPI00850998.2		Gm3029 similar to Predicted gene, EG545013 isoform 1	N209	R.LGAGEVERAEM#GSQQEKASSACIN*K.S
238	IPI00844764.1	Q8CDP0-1	Agbl3 Isoform 1 of Cytosolic carboxypeptidase 3	N373	R.VHPGETN*SSWIM#KGFLDYILGDSSDAR.L
239	IPI00828820.1		M6pr ORF 2 protein	N84	R.EASN*HSSGAGLVQINK.S
240	IPI00153528.1		Vmn1r233 Vomeronasal receptor V1RF5	N152	K.LN*TTSENSYKAR.M
241	IPI00785324.1	Q3UZ39-3	Lrrfip1 Isoform 3 of Leucine-rich repeat flightless-interacting protein 1	N268	R.DEKPIQAEAQASPGAPIN*QSGHQDTTGPGS TDAQR.T
242	IPI00408491.4	Q5QNQ9	Col27a1 Collagen alpha-1(XXVII) chain	N1160	R.GLPGPN*GSLGPLGM#NGKAGDHAQGPSLG PDGK.Q
243	IPI00228044.1	Q923T9-2	Camk2g Isoform 2 of Calcium/calmodulin-dependent protein kinase type II subunit gamma	N184	K.N*NSQPKVGGDSK.K
244	IPI00380484.1	Q7TQE6	Tmem57 Macoilin	N324	K.N*ASGVVN*SSPR.S
				N330	K.N*ASGVVN*SSPR.S
245	IPI00474384.3		Grik1 glutamate receptor, ionotropic kainate 1 isoform a	N605	R.FTPYEWYNPHPCNPDSDVVENN*FTLLNSF

			precursor			WFGVGALM#R.Q
246	IPI00323964.4	P70298	Cux2 Homeobox protein cut-like 2	N619		K.NSPASVSIPN*GTASSSTSEDAIK.N
247	IPI00120674.2		Itgam Putative uncharacterized protein	N1202		K.KTSGN*STRAR.S
248	IPI00318215.1	Q9EPS3	Glce D-glucuronyl C5-epimerase	N394		K.GFLDN*ITISTTAHMAAFFAASDWLVR.N
249	IPI00124830.3	Q61735-2	Cd47 Isoform 2 of Leukocyte surface antigen CD47	N109		R.DAMVGN*YTCEVTELSR.E
250	IPI00113528.1	Q9ET30	Tm9sf3 Transmembrane 9 superfamily member 3	N172		R.IVDVN*LTSEGK.V
251	IPI00620362.4	Q8R081	Hnrnp1 Heterogeneous nuclear ribonucleoprotein L	N522		R.IHVVPSAPTKHPDDYNEGGGGGAAGSGGGG GGGHQDGAN*ETKLR.K
252	IPI00321477.1		Eng endoglin isoform 1	N135		R.VN*ITVLPSTSR.K
253	IPI00816884.1		Hnrnp3 heterogeneous nuclear ribonucleoprotein H3	N268		R.YIELFLN*STPGGGSGM#GGSGMGGYGR.D
254	IPI00474711.3	P70268-2	Pkn1 Isoform 2 of Serine/threonine-protein kinase N1	N159		K.QGAENM#IQTYSN*GSSKDR.K
255	IPI00346297.7		E030019B06Rik E030019B06Rik protein	N344		K.NKGADGVATPMQN*R.S
256	IPI00224644.1	Q99MR6-3	Srrt Isoform C of Serrate RNA effector molecule homolog	N602		R.LDN*ETGGEM#K.I
257	IPI00417158.1	P61406	Smg6 Telomerase-binding protein EST1A	N742		R.EQAN*DTANYGKARSWYLK.A
258	IPI00410733.3	Q6NY15-1	Tsga10 Isoform 1 of Testis-specific gene 10 protein	N200		K.AEN*NSLR.L
259	IPI00857278.1		Gpatch2 Putative uncharacterized protein	N130		K.DRSDSDQMLVANGGPSSN*LSSSVR.G
260	IPI00453948.1	Q6PCZ4	Magee1 Melanoma-associated antigen E1	N484		R.STGLGMITISNSN*KSDR.L
261	IPI00857855.1		Mup9 Major urinary protein 2	N171		R.ENIIDLSN*ASK.S
262	IPI00268218.5	Q8BMQ3-1	Bnc2 Isoform 1 of Zinc finger protein basonuclein-2	N608		K.DRNNRLM#PMHLRPNPN*ASHR.N
263	IPI00469208.3	Q6A058	Armxc2 Armadillo repeat-containing X-linked protein 2	N175		R.GQNEYN*ESLNNMAM#LAK.E
264	IPI00125266.1	Q9WV54	Asah1 Acid ceramidase	N258		R.SVLEN*TTSYEEAK.N
265	IPI00466187.5		Myo10 myosin X	N1433		R.VFFPN*SSSLTAM#LSHLSDK.F
266	IPI00109676.6	Q80TJ7-1	Phf8 Isoform 1 of Histone lysine demethylase PHF8	N966		K.QEALSGSLADHEYTARPNAFGMAQAN*RST TPM#APGVFLTQR.R
267	IPI00867833.1		Vmn2r6 vomeronasal receptor Vmn2r6	N20		K.DILPN*HTLGYQIFDNCFSTTK.A

268	IPI00421108.2	A2AKX3-1	Setx Isoform 1 of Probable helicase senataxin	N1540	R.VVEESVSDGCGLNNN*TSDAVHTVYSK.Q
269	IPI00224680.5	Q8C2K1-1	Def6 Isoform 1 of Differentially expressed in FDCP 6	N92	R.NM#QVNWHKVN*TSAQR.L
270	IPI00788495.2	P46686-2	Tulp2 Isoform 2 of Tubby-related protein 2	N381	K.TSNYLISLDPKDM#SRN*GSNFVGK.V
271	IPI00454005.2	Q7TN98-1	Cpeb4 Isoform 1 of Cytoplasmic polyadenylation element-binding protein 4	N604	K.EKGNSN*ESSSDGPNEEAKAK.E
272	IPI00880739.1		Plk3 Polo-like kinase 3 (Drosophila), isoform CRA_b	N10	-.FPAGPGPPAN*ASPR.S
273	IPI00660178.4	A2AHJ4-1	Brwd3 Isoform 1 of Bromodomain and WD repeat-containing protein 3	N1388	K.TVKDEASTLNN*GSM#KTAMDLVISK.W
274	IPI00857532.1		Lrrc51 Uncharacterized protein	N2	-.AN*GSKLQAAIPGPSEVSTLRPSVPCTACCMS YGK.E
275	IPI00223890.1	Q8C0P0-1	Mastl Isoform 1 of Microtubule-associated serine/threonine-protein kinase-like	N453	R.N*FHLVDSSPCQEIMQSKKN*CTEYEANK.E
276	IPI00330066.5	Q3UJB9-1	Edc4 Isoform 1 of Enhancer of mRNA-decapping protein 4	N1098	K.N*LTDIARAAADTLQGPM#QAAYR.E
277	IPI00319525.3	Q9ET01	Pygl Glycogen phosphorylase, liver form	N3	K.GN*ASVGN*SSENSLSIK.L
278	IPI00319525.3	Q9ET01	Pygl Glycogen phosphorylase, liver form	N8	K.GN*ASVGN*SSENSLSIK.L
279	IPI00676513.5	A3KGB4	Tbc1d8b TBC1 domain family member 8B	N987	R.M#N*QSQFIQFSK.T
280	IPI00753613.2		Ttl5 Uncharacterized protein	N19	R.NTHAPDTSNTIPM#FAAPN*LSSQLGNLQGE ASSGKSAR.Q
281	IPI00136928.3	Q9QZ82	Cyp11a1 Cholesterol side-chain cleavage enzyme, mitochondrial	N315	K.NIQAN*ITEM#LAGGVDTTSM#TLQWNLYE M#AHNLK.V
282	IPI00471437.1		Igh protein	N321	R.EDYN*STLR.V
283	IPI00322447.4	Q8R5M8-1	Cadm1 Isoform 1 of Cell adhesion molecule 1	N104	R.FQLLN*FSSSELK.V
284	IPI00667827.2		Cdh18 cadherin 18	N255	R.EHYSVVIQAKDMAGQVGGLSGSTTVN*ITLT DVNDNPPR.F
285	IPI00226926.3		Slco5a1 solute carrier organic anion transporter family, member 5A1	N48	K.SLPVLHSASCRQN*FSAGNADGK.L

286	IPI00653175.1		Acp2 Putative uncharacterized protein	N167	R.YEQLQN*ETR.Q
287	IPI00553387.6		Grm5 glutamate receptor, metabotropic 5 isoform a	N444	K.TN*FTGVSGDM#ILFDENGDSPGR.Y
288	IPI00126050.3	Q9WVJ3-1	Pgcp Isoform 1 of Plasma glutamate carboxypeptidase	N394	K.EVMNLLQPLN*VTK.V
289	IPI00417180.3		Ugt1a10 UDP glycosyltransferase 1 family, polypeptide A10	N71	K.SLN*CTVK.T
290	IPI00137459.6	B2RRE7	Otud4 OTU domain-containing protein 4	N879	K.RSLPLDASNGNNKPN*ESGSPK.F
291	IPI00315952.2		Senp7 sentrin-specific protease 7 isoform 2	N778	K.ENN*LTEDNPDLVAQR.R
292	IPI00606087.4	Q80YQ2-1	Med23 mediator of RNA polymerase II transcription subunit 23 isoform 2	N884	R.MIGNGYITEVLAGMPLTFCESN*TSYANCLL AIK.Y
293	IPI00312724.2	Q8R3C1-1	C87436 Isoform 1 of Uncharacterized protein C2orf42 homolog	N316	K.KDEVSGAQVN*SSLMPQDAVNSNLR.K
