

Table S3: Expression evidence for *de novo* genes

Ensembl ID	mRNA / spliced EST	RNA-Seq [#]	Peptide
ENST00000273641	5	brain, 0.82	LWGRHHLK PRIDE: 8653
			MHYGRKQVSWIIFLK PRIDE: 9327
			MQILGSTLKLFR PRIDE: 8653
ENST00000308946	>10	breast, 23.69	ACLTLHRHPTPHCSTWGLPLR PRIDE: 8659
			CCLCLEQSPSWCHCLR PRIDE: 8653; 8663; 8670
			DSLMLFTRQAGHFVEGSK PRIDE: 8666
			GAQTGAGLSQEAEDVDVSR PRIDE: 8670
			GVSFLTFFHLHQSVPGLDR PRIDE: 8653; 8658
			MALRICVITYTPALPIGLCTR PRIDE: 8671
			MDVALRSPGR PRIDE: 8658
			VGVEQAISSCPEEVHGRHGLSME PRIDE: 8658
			IMWAR PRIDE: 8662
			VTDAPQGTLCGTGNR
ENST00000315302	>10	fat, 1.74	ACLGLPSECGSLVRAR PRIDE: 8668
			PGLPRPSPTCPWK PRIDE: 8653
			RDPSGSFR PRIDE: 8668
ENST00000318659	>10	brain, 1.33	EQAPRVSAPPGR PRIDE: 8665
			FLTNKWGGMLAWPPAAPAR PRIDE: 8665
			PQSSHLLPPVYPAPLPPPKDVPL PRIDE: 8665
			Q PRIDE: 288; 333
			RSPAALTPGLLRPLAK
ENST00000324987	2	breast, 0.53	MQICFLALWGGTMAVATSAETAL PRIDE: 8663
			RTSYASLK PRIDE: 10531; 8657
			SPWGLDNILAPRDVSNYK
ENST00000326341 [®]	3	liver, 2.36	EQSQKPCSNGGPAAGEGR PRIDE: 8663
			IGTGCSHTWDWR PRIDE: 8661; 8664
			MEQDWQPGEEVTPGPEPCSK PRIDE: 8663
			PCSNGGPAAGEGR PRIDE: 69; 73; 74; 75; 76; 8653; 8661; 8664; 8667
			PCSNGGPAAGEGRVLPSPCFPW PRIDE: 8663
			STCQAIIHK PRIDE: 8668; 8672
			WQGCTRPALLAPSLATLK
ENST00000327903	>10	testis, 8.20	KETTTEQALPPALLGIR PRIDE: 8658
			PEFLSRPSVQTEDAPSK PRIDE: 8653; 8663; 8669
ENST00000370523	0	breast, 9.17	AGGDASPCSWERLLCYGWSHC PRIDE: 8653
			EMSITHKEKENAHLKEILLFVNA PRIDE: 8531
			EAFSQPQPHSAPVCEG PRIDE: 8671
			KPADAQVSPEMSITHK PRIDE: 9328; 9342
			LLCYGWSHC
ENST00000370535	>10	brain, 0.76	FVDMEFLDQMILR PRIDE: 8662

			MPLEKFVDMFLDQMLR	PRIDE: 8670
ENST00000373170	>10	testis, 44.27	ISSTPPSGSR	PRIDE: 8653
ENST00000376812 [®]	1	brain, 2.53	GTHSCGPRESGGPDTCHLPCH	PRIDE: 8653; 8665
			LERCMVPESEWAPWQPQLPCEPK	PRIDE: 8661; 8664; 8670
			NPHSWGIAHGLR	PRIDE: 8670
			PHRESGLR	PRIDE: 8653
			RGTHSCGPRESGGPDTCHLPCH	PRIDE: 8653; 8665
			THSCGPR	PRIDE: 8653
ENST00000377006	3	testis, 0.56	APEGDGPLMADAGETLASGGPR	
			VEHTK	PRIDE: 8672
			SWLILASVCGVEKAIHAAAISCG	PRIDE: 8671
			SIAKYVL	PRIDE: 8659; 8667
			VEHTKSWLILASVCGVEK	
ENST00000377064	1	lymph, 3.78	AHAQTTNPYWADTNTR	PRIDE: 9299
			ILSGKSGGSAR	PRIDE: 8653
			KSQEEAAPPSPRQSR	PRIDE: 9331
			LRSSSSGNSLLR	PRIDE: 8653; 9333
			PLTTDWRLSGK	PRIDE: 8661; 8664
			RILSGKSGGSARAVSK	PRIDE: 8409
ENST00000391430	0	lymph, 1.97	MLNWLAQIQIAKSGR	PRIDE: 8659
ENST00000391812	>10	testis, 22.15	ASCRLGEEPPLPYCDQAYGEELS	PRIDE: 9335
			IR	PRIDE: 8666
			MTVLEAVLEIQAITGSR	PRIDE: 608
			TDTAWPGAPGVKQAR	
ENST00000397571	>10	heart, 2.48	LGRQIQPPWPLAHAR	PRIDE: 8665
ENST00000397608	3	heart, 2.30	AAAFHAAQGSSMPGAGMR	PRIDE: 3669; 3674; 8653
			EVSLDSR	PRIDE: 2674
			FCSLLAILASPNERALK	PRIDE: 8660; 8663; 8669
			LAPPRR	PRIDE: 8653
			MAMAHAGLCGWR	PRIDE: 8653
ENST00000399070	>10	heart, 4.87	AFSTCTDLIEHQK	PRIDE: 8658
			CDACGKAFSTCTDLIEHQK	PRIDE: 8665
			ECGKSFSR	PRIDE: 1805
			HQRIHTGK	PRIDE: 1831
			IHTGEKPY	PRIDE: 1789; 1828; 1830;
			IHTGKK	1831
			NPIPVINVAK	PRIDE: 2027
			PLVCTPTLFSTRDTVPEKNLMNA	PRIDE: 8660
			VDY	PRIDE: 8663
			PNPCDECGKSFSR	PRIDE: 8663; 8665; 8671
			PSVGFQILLINEFTLER	PRIDE: 8658
			PSVRAQILFCIR	PRIDE: 8658
			PYKCDACGKAFSTCTDLIEHQK	PRIDE: 9308
			QKIHTGEK	PRIDE: 76

ENST00000400385	4	testis, 1.32	SDLIKHQR	PRIDE: 1824
			DHQGSVEDTSLGGDAPADGVSPS	PRIDE: 146
			VPPLQGLGK	PRIDE: 8663
			LSTSSCASVSR	PRIDE: 8385; 8417
			PMHGSDFPFR	PRIDE: 9340
			PPSPAHSREVAS	PRIDE: 8538
			RASRLALQGPPGTILSLSSSSPC	PRIDE: 8665
			RSGGPR	
ENST00000400449	1	breast, 0.93	KGMEWPLSAWLESSSPAPCMPL	
			WR	PRIDE: 8661; 8664; 8669;
			LFSVHWQIWGPCSPCIVYPKGDS	8670
			EQSASK	PRIDE: 8663; 8669; 8670
			MPSQPHLSACSVESPGAAARLTQ	PRIDE: 8669
			R	PRIDE: 8653
			NSFWESRPSPCR	
			PLTAPSTK	PRIDE: 76
ENST00000400991	>10	brain, 2.93		
ENST00000408893	3	fat, 0.85	MGLCTLQPLGPPRK	PRIDE: 8671
			SSTSCGTWTASGLPSLGHLPRR	PRIDE: 8667
ENST00000408897	4	testis, 1.49	GSCPLLPGPSAWR	PRIDE: 8666
			MEGCAVR	PRIDE: 8653
			MEGCAVRRGSCPLLPGPSAWR	PRIDE: 9297; 9304; 9305;
				9306; 9334; 9335; 9336; 9337;
				9338
			SWCRASGLPNR	PRIDE: 9353
ENST00000408913	4	lymph, 17.49	AALPPPLGTCRPR	PRIDE: 1789
			DSLPPPLGSLTLGK	PRIDE: 2001; 9330
			DSLPPPLGSLTLGKSPK	PRIDE: 1789
			LASAFKHR	PRIDE: 10049
			MNTYTRSASFTRK	PRIDE: 1789
			NTYTRSASFTRK	PRIDE: 1789
			RAALPPPLGTCR	PRIDE: 8653
			RAALPPPLGTCRPR	PRIDE: 1789
			VSEGLRDSLPPPLGSLTLGK	PRIDE: 1789
			YLGRPSPR	PRIDE: 96
			YLGRPSPRR	PRIDE: 9333

[#]For each *de novo* gene, the highest RPKM score was shown with the corresponding tissue.

[@]Genes reported in previous study as human-specific *de novo* protein-coding genes.