

**Proteins Highly Expressed in E11.5 NS Compared to P0 NS and E11.5 Diff NS**

Protein Name	Gene Symbol	UniProtKB/TrEMBL Accession Number	Genebank Accession Number	Number of Peptides	Sonar Expect Value	Mascot Mowse Score	Peptide Sequence
Voltage-dependent anion channel 2	Vdac2	Q99L98	BC003731	4		107	LTL.SALVDGK GFGFLVK LTFDITFPNTGK MCIPPSYADLGK
Neogenin	Neo1	P97798	Y09535	2		42	AAEREAGR DVVASLVSTR
Sodium-calcium exchanger	Slc8a1	O35157	AF004666	4	2.8x10-2		IWNETVSNLTMALGSSAPEILLSVIEVCGHNFTAGDLGPSR VGIIDDDIFEEDENFLVHLSNVR IFFEQGTQCLENCGTVALTIMRR LVALLVSHVDHITADTEAETGGNETTECTGSYYCK
Neurotrophic tyrosine kinase receptor	TrkC	Q6VNS1	AY336094	2	2.9x10-2		AGHSVIGMTR MDVSLCPAK
Seizure related gene 6	Sez6	Q7TSK2	BC053011	2	6.0x10-2		AVAKAPAASSALDAHAAIFLPLVAMVLLVGGVYR THPRPYNR
Adenylate cyclase, type IX	Adcy9	P51830	U30602	5		46	TFDNLK CFPQTORR DLEVEKALKER FDSMNL EEACLER AIEQFCQEKEMVNMNR DSFQASGYPGLELTLDDPTCKAK GTMGRPOEVHVLNLR
TGF-beta receptor type III	Tgfr3	O88393	BC070428	2	2.2x10-2		LLLLGAGESGK TTGIVETHFTFK
Guanine nucleotide-binding protein G(o), alpha subunit 1	Gnao1	P18872	M36777	2		77	ILLGAGESGK VLLGDPGVGK DKTIMWK
Guanine nucleotide-binding protein, alpha-12, alpha-13 subunit	Gna12/Gna13	P27600	M63659	1		65	
GTP-binding protein REM 1	Rem1	O35929	U91601	1		50	
Guanine nucleotide binding protein, beta 2, related sequence 1	Gnb2-rs1	Q5NCC6	AL645849	2		97	
Guanine nucleotide-binding protein beta subunit-like protein (RACK1)	Gnb2l1	Q9CSQ0	AK012242	3		93	DVLSVAFSSDNR IIVDELK DVLVAFSSDNR IIVDELKQEVISTSSK TRPVLLHAAADSEAQR IGPLPWLWAAR FDGAR AAAKSAJAR MPLNIISDYSVVVAVLALETAGNFQSSPVSEILR LQYVHVSIDTSSGVLHASPLTGEK ACPPCAPTCK GRLPDCCHECCAAGCTGPK KIHPPQVMSEFRGRQVY IITVPPFLAYGEEGDGK TLHQGDGLECMAMTIQILLK DSNYHLLMSVQESLER ELEDKFLQHGSLGFPK IAEAGANGPTTPEADKIFLER LGEVLLSR
Similar to interleukin 17 receptor E isoform 1	Il17re	Q6A251	BC078742	2	3.6x10-2		
Hypothetical protein C6B12.02c in chromosome 1	SPAC6B12.02c	O14207	Z98531	2		43	
Glycoprotein endo-alpha-1,2-mannosidase-like protein	Gm50	Q6P1J0	AAH65047	2	6.0x10-2		
Receptor tyrosine-protein kinase erbB-2	Erb2	Q6ZPE0	AK129487	2		30	
Alpha 3 catenin - Mus musculus adult male testis cDNA, RIKEN full-length enriched library	Cttna3	Q8CON3	AK030166	1		21	
FK506 binding protein 9	Fkbp9	Q8OZZ6	BC043129	1	1.3x10-2		
Coatamer epsilon subunit	Cope	O89079	NP_067513	1	9.0 x 10-2		
Mus musculus 10 days neonate olfactory brain cDNA, RIKEN full-length enriched library	Glud1	Q8C273	AK089152	4	1.0x10-6		
DNA-binding protein Ikaros	Znfn1a1	Q03267	L03547	4	5.5x10-13		
Enoyl-CoA hydratase, mitochondrial	Echs1	Q8BH95	AK040391	2	1.7x10-4		
Aldolase 1, A isoform	Aldoa	Q6NY00	BC066801	3	2.1x10-6		
Mus musculus ES cells cDNA, RIKEN full-length enriched library	2410129E14Rik/Tubb2	Q9CWF2/Q7TMM9	AK010786/BC055441	6	3.1x10-11		
Brix domain containing protein 1	Bxdc1	Q9JJ80	BC025093	1		47	
Sulfotransferase 1C1	Sult1c1	Q9D939	AY005469	2	9.8x10-3		
78 kDa glucose-regulated protein (Hsp70)	Hspa5 (Grp78)	P20029	M19351	4	6.4 x10-4		
Chaperonin containing TCP-1 theta subunit	Cct8	Q9WVS5	BAA81879	8	5.6x10-17		
T-complex protein 1, alpha subunit B	Cct1	P11983	M12899	3	2.7x10-3		

T-complex protein 1, beta subunit	Cct2	P80314	Z31553	8	7.0x10-9		YINENLIINTDELGR DAALMVTNDGATILK QVLLSAAEAAEVLIR GATQQILDEAER LSSFIGAIAIGDLVK LALVTGGEIASTFDHPELVK VQDDEVGDGTTSVTVLAAELLR ILKHGINCFINR AETAR LGFAGVVOEISFGTTK DVDFELIKVEGK GSNDMQYQHVIETLIGK AVTIFIR LMVELSK ENAPAIIFIDEIDAIATK EAVLEPLTHFELYK MNLSEEVLEDYVARPDK LIFSTITSK IQDEIPALSVSRPQTGLSFLGPEPEDEDLYSR ILLELLNQMDGFDQNVVVK LQQUELEFLEVQEEYIKDEQK ENAPAIIFIDEIDAIATK IQDEIPALSVSRPQTGLSFLGPEPEDEDLYSR MNLSEEVLEDYVARPDK GATELTHEDYMEGILEVQAK APSIIFIDELDAIGTK QTYFLPVIGLVDAEK EKAPSIIFIDELDAIGTK LAGPQLVQMFIDGAK VDILDALLR TTIMAVQFDGGVVLGADSR SGSAADTQAVADAVTYQLGFHSIELNEPPLVHTAASLFK QVLLGDQIPK LFQVEYIAEIAK AIGSASEGAQSSLQEVYHK ITSPLMEPSSIEK QVLQGMVIDEELLGDGHSYSPR TQNPMVVTGTSVLGK VNNSTMLGASGDYADFQYLK LFIGGLSFETTEESLR IDTIEITDR GGGNGFGPGGSNFR ITGEAFVQFASQELAEK DLAGSIIGK GGDLMAFYDR VVLGGKPKDR GSDFDCELR NTDEMVELR NLPLPPPPPPR IDEPLEGSSEDR SRNTDEMVELR LFQECPPHSTDR RPAADMEEEEQAFKR TDYNASVSVDPSSGPER GCTATLGNFAK GVVQDLQQAISK TPAGLQVLNDYLADK QETSLTSHDLFDIDPVVARSVYHLEDIVR LFLQFVTGSPR IDQYQGADAVGLEEK GYMDLMPFINK IFINLPR SEPTQALELTEDDIKEDGIVPLR MVGKVPVGSDFDFQPELSGAGSR LAVEALSSLDGDLGSR FCTGLTQIETLFK LEQGQAIDDLMPAQK LGFSEVELVQMVVDGK SMTEAEQQQLIDHFLFDKPVSPLLASGMAR GTGGVDTAAVGGVFDVSNADR VLTPELYAELR TDLNPNLQGGDDLDPNVYLSSR MPFNSNSHTQK QELLKANGEIK QELLKANGEIKHVSSLLAKMEK ANVGK ANVGKLLK CMIDQAHQEERPIR YNPENLATLER KGVAINMVTEEDKR
T-complex protein 1, epsilon subunit	Cct5	P80316	Z31555	5	1.8x10-10		
26S protease regulatory subunit 4	Psmc1	P62192	NP_032973.1	6	7x10-7		
26S protease regulatory subunit 6B	Psmc4	P54775	AB040869	4	3.5x10-5		
26S protease regulatory subunit 6A	Psmc3	O88685	AB040858	6	2.0x10-10		
Proteasome subunit beta type 6	Psmb6	Q60692	MMU13393	3	1.6x10-10		
Proteasome subunit alpha type 5	Psma5	Q92ZU1	AF019661	3	1.1x10-4		
Proteasome beta 4 subunit	Psmb4	Q91VV7	NP_032971	3	2.3x10-2		
Heterogeneous nuclear ribonucleoproteins A2/B1	Hnrpa2b1	O88569	AF073993	3	2.4x10-10		
Heterogeneous nuclear ribonucleoprotein F	Hnrpf	Q92ZX1	BC018185	1	4.1x10-2		
Heterogeneous nuclear ribonucleoprotein K (Hnrpk protein)	Hnrpk	Q5FWJ5	BC089328	11		486	
Ribosomal protein S2	Rps2	Q9DC49	AK004568	1		57	
Elongation factor 1-delta	Eef1d	P57776	BAB30841.1 or AAG17466	1	8.9x10-3		
Elongation factor 1-beta	Eef1b	O70251	BC039635	1	9.4x10-4		
Trip12 protein	Trip12	Q99KN5	NP_598736	2	3.0x10-2		
Thioredoxin-like protein 1	Txn1	Q8CDN6	AF052660	5	1.7x10-4		
Creatine kinase, B chain	Ckb	Q04447	M74149	9	4.2x10-19		
MKIAA4061 protein	B230396K10Rik	Q5DTQ5	AK220465	2		44	
Eukaryotic translation initiation factor 3, subunit 12	Eif3s12	Q58EU9	BC091749	4		44	
Eukaryotic initiation factor 4A- I and II	Eif4a1	P60843	MMEIF4AI	1		61	

Calreticulin	Calr	P14211	BC003453	4	133	FYALSAK LFPSGLDQK VHVIFNYK FYGDELEKDK GILTLK AVFFPSIVGR GYSFTTTAER EITALAPSTMK QEYDESGPSIVHR SYELPDGQVITIGNER VAPEEHPVLLTEAPLNPK TTGIVMDSGDGVTHTVPIEGYALPHAILR
Actin, cytoplasmic 2	Actg1	P63260	X13055	8	202	TIDDLKDLK IQLVEEELDR ALKDEEKMELEQIQLK LLLNNDNLLR KVDGQQTIIACIESHQFOAK IVEAAENEYQTAISENYQTMSDITTFK
Tropomyosin 3, gamma	Tpm3	Q8K0Z5	BC029186	3	84	GDLGIEPAEK NTGIICTGPASR GVVDSDELPLNISR ADLNINLGTIAK TLTLVDVTGIGMTK IDIIPNPQER ALLFIPR RAPDFLFENK
F-actin capping protein alpha-2 subunit	Capza2	P47754	U16741	3	35	
Pyruvate kinase, isozyme M2	Pkm2	P52480	D38379	2	84	
Heat shock protein HSP 90-beta	Hspcb	P11499	M36829	6	4.0x10-9	

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Cyclic nucleotide gated channel alpha 2	Cnga2	Q80XH6	BC048775	2		33	DGEGKGTKKK GPELQTVTTHQGDGK WSATPPTCK IPERGNMTCCLHSAK LYPEGLAGLAR LLFEGAGSNPGDK LIQELAK LEETLPVIR LPLLPHEVR LLNFPTIVER TTCSCSLAVQLSK ALSCPGQPSK KGAMDELERALSCPGQPSK CIVQVITPTSSR EGTRCIVQVITPTSSR
Selectin P	SELP	Q5TI45	AL022146	2		32	SGYLLPDTK IYFMAGSSR EAESSPFVER EGVKFDESEKTK LYDGLFK LPMILLEK QSGESIDITR NINLIVQK KGEIFELK LLSTDPVAAK GLEISGTFTR LOSSNIFTVAK AELNSDKKEKK DCPLNTEAASNK MEPLNNLQVAVK IQPGNPSFTLSLK QAGSISMDLQLTNK NVEGQDMLYQSLK LGTWLPR AYHMVCLDPDMEK AYHMVCLDPDMEKAPEGK GFSDFR HVRGILLYGPPGCGK QTTVIQDLK GKAAVLDLEK
ATPase, H+ transporting, V0 subunit D isoform 1	Atp6v0d1	Q921S5	BC011075	2		108	
Arsenical pump-driving ATPase	Asna1	O54984	AF039405	5		296	
Mothers against decapentaplegic homolog 9 (smad8/smad9)	Smad9	Q8JIW5	AF175408	2		42	
Down-regulated by Ctnnb1, a	Drcnbnb1a	Q6P9N1	BC060692	2		32	
Mus musculus adult male medulla oblongata cDNA, RIKEN full-length enriched library	Tra1	Q8CCY5	AK031918	4		133	
Damage-specific DNA binding protein 1	Ddb1	Q9WV39	AF159853	3		77	
Adaptor protein complex AP-1, beta 1 subunit	Ap1b1	Q5SVG4	AL645522	11		593	
Mus musculus 2 days neonate thymus cDNA, RIKEN full-length enriched library	5330429B09Rik	Q8C2C1	AK088897	1		22	
Chromodomain helicase-DNA-binding protein 4 (CHD-4)	Chd4	Q8BM83	AK034549	2		25	
N-ethylmaleimide sensitive fusion protein	Nsf	Q923C6	BC006627	2		38	
Early endosome antigen 1	Eea1	Q8BL66	AK046231	2		31	

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Veph-A, Veph-B protein (Il-6 superfamily) B-cell stimulating factor-3	Veph1	Q8K4P6	AB085187	1		35	RDRSLPR
Atp5b protein	Bsf3	Q9QZM3	AF176913	1		26	LGAETLPR
	Atp5b	Q8CI65	BC037127	12	3.7x10-28		TVLIMELINNVAK

						IMDPNIVGNEHYDVAR VLDSGAPIKIPVGPETLGR TIAMDGTEGLVR LDATTVLSR VVDLLAPYAK FLSOPFGVAEVFTGHMGK SLQDIILGMDLSEEDKLTVSR IMNVIGEPIDER LVPLKETIK GLAGTOPFGGSATGAR IPSAVGYOPTLATDMGTQER GLLLYGGPTGK QEVYTAWPVAGFPGGK IIVDELKQEVISTSSK DETNYGIPQR TIIMWK LLGPDAAINLADPDGALAK TPEELSAIK VLTEIASR GTVTDFPFGFDGR VIHDFNGIVEGLMAVHAITGQK VIISAFSADAPMFVVGYNHEK AAVPSASTSIVLELR LAMQEFMLPVGASSFR FYTEDGNWDLVGNNTPIFFIR VDFPQDLATLTGR VAVLGASGGIGQPLSLLK TIIPLISQCTPK IFGVTTLDIVR NAPAIIFIDEIDAIPK IVSOLLTMDGLK LDQLIYIPLPDEK NVFIIGATNRPDIIDPAIRPGR MTNGFSGADLTEICQR GVLFYGGPPCGK MDELQLFR GVVSDDLLPLNVSR TDDEVVQREEEAQLDGLNASQIR ESDDPMAYIHFTAEGEVTFK FAFOAEVNR ELISNASDALDKIR DDEVVDVGTVEEDLGK EEASDYLELDTIK DAGTIAGLNVLK TTPSYVAFTDTER INEPTAAAIAYGLDK NQVAMNPTNTVFDK INEPTAAAIAYGLDKK TSFFQALGITTK VLALSIVETEYTFPLAEK AFLADPSAFAAAAATAAPAAAAAPAK IIQLLDDYPK GTIELSDVQLIK NIEDVIAQGVK YVASYLALGNGNSSPSAK AIVAIENPADVSVISSR FTPGTFTNQIAAFR FAAATGATPIAGR SDGIYIINLK KSDGIYIINLK LLVVTDPK FTPGTFTNQIAAFREPR FLAAGTHLGGTNLDFQMEQYIYK AIVAIENPADVSVISSR SDGIYIINLK KSDGIYIINLK MHVMDVQGSTEASAIKDYVVK VEGFPTIYFAPSGDK RFDVSGYPTLK DLGLSESGEDVNAALDESGKK GRPFYNGPR VDATESDLAQQYGVK QFLLAEEAIDIPFGITNSGVFSK VLVGANFEEVAFDEKK YQLDKDGVVLFK HNQLPLVIEFTEQTAPK GSTAPVGGSFPTITPR LAAVDATVNVQLASR TGEAIVDAALSALR SDVLELTDENFESR 52 FLEQONK FADLSEAAANR
Spermatogenesis associated factor	Spata5	Q9CXZ7	AK011111	2	4.0x10-2	
Guanine nucleotide-binding protein beta subunit 2-like 1	Gnb21	P68040	BC046760	3	9.0x10-3	
Dynactin subunit 2	Dctn2	Q99KJ8	BC004613	1	1.3x10-3	
Annexin A5	Anxa5	P48036	U29396	3		166
Glyceraldehyde-3-phosphate dehydrogenase	Gapd	P16858	M32599	2	2.3x10-2	
Alpha enolase	Eno1	P17182	AAH03891.1	2		72
Catalase	Cat	P24270	M62897	1		66
Malate dehydrogenase 2, NAD	Mdh2	Q8R1P0	BC023482	4	1.4x10-6	
Transitional endoplasmic reticulum ATPase	Vcp	Q01853	Z14044	7	7.8x10-17	
Tumor rejection antigen gp96	Tra1	Q91V38	BC011439	7	9.3x10-14	
Heat shock cognate 71 kDa protein	Hspa8	P63017	U27129	5		153
Acidic ribosomal phosphoprotein P0	Arbp	Q5FWB6	BC089496	5	4.1x10-13	
60S acidic ribosomal protein P2	Rplp2	P99027	BC012413	2	2.4x10-5	
40S ribosomal protein SA	Rpsa	P14206	NP_035159.2	7	1.6x10-17	
Lamr1 protein	Lamr1	Q58E74	BC092041	4	1x10-13	
Protein disulfide-isomerase A4	Pdia4	P08003	AAA39907.1	5	1.4x10-11	
Protein disulfide-isomerase	P4hb	P09103	X06453	5	9.8x10-11	
Protein disulfide-isomerase A6	Pdia6	Q922R8	AK076558	3	5.8x10-16	
Protein disulfide-isomerase A3	Pdia3	P27773	M73329	1	2.5x10-3	
Vimentin	Vim	P20152	M24849	2		