

Supplementary Figure 2

LRRN4 (NM_152611)

MRQTLPLLLL TVLRPSWADP PQEKVPLFRV TQQGPWGSSG SNATDSPCEG
LPAADATAALT LANRNLERLP GCLPRTLRS L DASHNLLRAL STSELGHLEQ
LQVLTLRHNR IAALRWGPGG PAGLHTLDLS YNQLAALLPC TGPALSSLRA
LALAGNPLRA LQPRAFACFP ALQLLNLSCT ALGRGAQGGI AEAAFAGEDG
APLVTLEVLD LSGTFLERVE SGWIRDLPKL TSLYLRKMPR LTTLEGDIFK
MTPNLQQLDC QDSPALASVA THIFQDTPHL QVLLFQNCNL SSFPPWTLDS
18mer
SQVLSINLFG NPLTCSCDLS WLLTDAKRTV LSRAADTMCA PAAGSSGPFS
ASLSLSQLPG VCQSDQSTTL GASHPPCFNR STYAQGTVA PSAAPATRPA
GDQQSVSKAP NVGSRTIAAW **PHSDAREGTA** **PSTTNS**VAGH SNSSVFPRAA
C+18mer
STTRTQHRGE HAPELVLEPD ISAASTPLAS KLLGPFPTSW DRSISSPQPG
QRTHATPQAP NPSLSEGEIP VLLLDYSEE EEGRKEEVGT PHQDVPCDYH
PCKHLQTPCA ELQRRWRCRC PGLSGEDTIP DPPRLQGVTE TTDTSALVHW
CAPNSVVHGY QIRYSAEGWA GNQSVVGVYIY ATARQHPLYG LSPGTTYRVC
VLAANRAGLS QPRSSGWRSP CAAFTTKPSF ALLLSGLCAA SGLLLASTVV
LSACLRRGQ TLGLQRCDTH **LVAYKNPAFD** **DYPLGLQTVS**
C+19mer

- * **C20orf75-A : TLEGDIFKMTPNLQQLDC (18mer)**
- * **C20orf75-B : C+AWPHSDAREGTAPSTTNS (19mer)**
- * **C20orf75-C : C+VAYKNPAFDYPLGLQTVS (20mer)**

Supplementary Figure 2 (continued)

1.UPK3B isofrom a (NM_030570).gnu
2.**UPK3B isofrom b (NM_182684).gnu**
3.UPK3B isofrom c (NM_182683).gnu

1:MGLPWGQPHLGLQMLLLALNCLRPSLSLGEWGSWMDASSQTQGAGGPAGVIGPWAPAPLR 60

1:-----MGLPW 5
1:-----MGLPW 5
.....

61:LGEAAPGTPTPVSVAHLLSPVATELVPTYTPQITAWDLEGKVTATTFSLEQPRCVFDGLAS 120
6:GQPHLGLQMLLLALNCLRPSLSLELVPTYTPQITAWDLEGKVTATTFSLEQPRCVFDGLAS 65
6:GQPHLGLQMLLLALNCLRPSLSLELVPTYTPQITAWDLEGKVTATTFSLEQPRCVFDGLAS 65
.....*

121:ASDTVWLVVAFSNASRGFQNPETLADIPASPQLLTDGHYMTLPLSPDQLPCGDPMAGSGG 180
66:ASDTVWLVVAF**SNASRGFQNPETLADI**PASPQLLTDGHYMTLPLSPDQLPC**CGDPMAGSGG** 125
66:ASDTVWLVVAFSNASRGFQNPETLADIPASPQLLTDGHYMTLPLSPDQLPCGDPMAGSGG 125

C+16mer

20mer

181:APVLRVGHHDHGCHQQPFCNAPLPGPGPYREDPRIHRHLARAAKWQHDRHYLHPLFSGRPP 240
126:**APVLRVGHHDHGCHQQPFCNAPLPGPGPYRVKFL****LLMDTRGSPRAETKWS**DPITLHQGKTPG 185
126:APVLRVGHHDHGCHQQPFCNAPLPGPGPYREDPRIHRHLARAAKWQHDRHYLHPLFSGRPP 185

C+18mer

241:TLGLLGSlyHALLQPVVAGGGPGAAADRLLHGQALHDPHPHTQRGRHTAGGLQAWPGPPP 300
186:SIDTWPGRRSgSMIVITSILSSLAGLLLLAFLAASTMRFSSLWWPE**EAPEQLRIGSFMGK** 245
186:TLGLLGSlyHALLQPVVAGGGPGAAADRLLHGQALHDPHPHTQRGRHTAGGLQAWPGPPP 245
.....*

C+18mer

301:QPQPLAWPLCMGLGEMGRRE----- 320
246:**RYMT**HHIPPSEAATLPVGCKPGLDPLPSLSP 276
246:QPQPLAWPLCMGLGEMGRRE----- 265
.....*

- * **UPK3B-A : C+SNASRGFQNPETLADI (17mer)**
- * **UPK3B-B : CGDPMAGSGGAPVLRVGHHDH (20mer)**

- * **UPK3Bb-A : C+KFL****LLMDTRGSPRAETKWS (19mer)**
- * **UPK3Bb-B : C+EAPEQLRIGSFMGKRYMT (19mer)**