

Dataset S2. Alignments of C-terminal DnaJ domains (A) and NDK domains (B) underlying phylogenetic inferences in Fig. S1.

A

	1	64					
Hs-DnajA1	TYYDVLGVKP	NATOEEELKKA	YRKLAALKYHP	DKNPNEG---	-EKFQOISQA	YEVLSDAKKR	ELYD
Bt-DnajA1	TYYDVLGVKP	NATOEEELKKA	YRKLAALKYHP	DKNPNEG---	-EKFQOISQA	YEVLSDAKKR	ELYD
Mm-DnajA1	TYYDVLGVKP	NATOEEELKKA	YRKLAALKYHP	DKNPNEG---	-EKFQOISQA	YEVLADSKKR	ELYD
Gg-DnajA1	TYYDVLGVSP	NASAEELKKA	YRKLAALKYHP	DKNHNEG---	-EKFQOISQA	YEVLSDPKKR	DLYD
Dr-DnajA1	GFYDMLGVKP	SASPEELKKA	YRKLAALKYHP	DKNPTEG---	-EKFQOISQA	YEVLSDAKKR	EVDY
Hs-DnajA2	KLYDILGVPP	GASENELKKA	YRKLAKEYHP	DKNPNAG---	-DKFKEISFA	YEVLSNPEKR	ELYD
Bt-DnajA2	KLYDILGVPP	GASENELKKA	YRKLAKEYHP	DKNPNAG---	-DKFKEISFA	YEVLSNPEKR	ELYD
Mm-DnajA2	KLYDILGVPP	GASENELKKA	YRKLAKEYHP	DKNPNAG---	-DKFKEISFA	YEVLSNPEKR	ELYD
Gg-DnajA2	KLYDILGVPP	GASDNELKKA	YRKLAKEYHP	DKNPNAG---	-DKFKEISFA	YEVLSNPEKR	ELYD
Dr-DnajA2	KLYDILGVSP	SASENELKKA	YRKLAKEYHP	DKNPNAG---	-DKFKEISFA	YEVLTNPEKR	DMDY
Hs-DnajB1	DYYOTLGLAR	GASDDEIKRA	YRROALRYHP	DKNKEPG--A	EEFKKEIAEA	YDVLSDPRKR	EIFD
Bt-DnajB1	DYYOTLGLAR	GASDDEIKRA	YRROALRYHP	DKNKEPG--A	EEFKKEIAEA	YDVLSDPRKR	EIFD
Mm-DnajB1	DYYOTLGLAR	GASDDEIKRA	YRROALRYHP	DKNKEPG--A	EEFKKEIAEA	YDVLSDPRKR	EIFD
Dr-DnajB1	DYYSVLGIQK	GASDDEIKKA	YRKQALKYHP	DKNKSAG--A	EEFKKEIAEA	YDVLSDPKKK	DIYD
Hs-DnajB4	DYYCILGIEK	GASDEDIKKA	YRKQALKFHP	DKNKSPQ--A	EEFKKEVAEA	YEVLSDPKKR	EIYD
Bt-DnajB4	DYYCILGIEK	GASDEDIKKA	YRKQALKFHP	DKNKSPQ--A	EEFKKEVAEA	YEVLSDPKKR	EIYD
Mm-DnajB4	DYYHILGIDK	GATDEDVKKA	YRKQALKFHP	DKNKSPQ--A	EEFKKEVAEA	YEVLSDPKKR	EIYD
Gg-DnajB4	DYYSVLGIQK	GASEEDIKKA	YRKQALKWHP	DKNKSAG--A	EEFKKEIAEA	YEVLSDPKKR	DIYD
Dr-DnajB4	DYYKILGITK	GASDDDIKKA	YRKQALKWHP	DKNKAAN--A	EEFKKEVAEA	YEVLSDPKKR	EIYD
Hs-DnajB5	DYYKILGIPS	GANEDEIKKA	YRKMALKYHP	DKNKEPN--A	EEFKKEIAEA	YDVLSDPKKR	GLYD
Bt-DnajB5	DYYKILGIPS	GANEDEIKKA	YRKMALKYHP	DKNKEPN--A	EEFKKEIAEA	YDVLSDPKKR	GLYD
Mm-DnajB5	DYYKILGIPS	GANEDEIKKA	YRKMALKYHP	DKNKEPN--A	EEFKKEIAEA	YDVLSDPKKR	SLYD
Gg-DnajB5	DYYKILGIQS	GANEDEIKKA	YRKMALKYHP	DKNKDPN--A	EEFKKEIAEA	YDVLSDPKKR	AVYD
Dr-DnajB5	DYYKILGIPS	GSNEDIKKA	YRKMALKFHP	DKNKDPN--A	EEFKKEIAEA	YDVLSDPKKR	VIYD
Hs-DnajB11	DFYKILGVPR	SASIKDIKKA	YRKLAALOLHP	DRNPDDP--Q	OEKFQDLGAA	YEVLSDSEKR	KOYD
Bt-DnajB11	DFYKILGVPR	SASIKDIKKA	YRKLAALOLHP	DRNPDDP--R	OEKFQDLGAA	YEVLSDSEKR	KOYD
Mm-DnajB11	DFYKILGVPR	SASIKDIKKA	YRKLAALOLHP	DRNPDDP--R	OEKFQDLGAA	YEVLSDSEKR	KOYD
Gg-DnajB11	DFYKILGVSR	GASVVDIKKA	YRKLAALOLHP	DRNPDDP--R	OEKFQDLGAA	YEVLSDSEKR	KOYD
Dr-DnajB11	DFYKILGVSR	SASVKDIKKA	YRKLAALOLHP	DRNPDDP--NA	OEKFQDLGAA	YEVLSDSEKR	KOYD
Hs-DnajB13	DYYSVLGITR	NSEDAQIKQA	YRRLALKHLP	LKSNEPS--S	AEIFRQIAEA	YDVLSDPMKR	GIYD
Bt-DnajB13	DYYSVLOITR	NSEDAQIKNA	YRKLALKHLP	LRSIEPG--A	VETFRQIAEA	YDVLSDPVKR	GIYD
Mm-DnajB13	DYYAVLQVTR	NSEDAQIKKA	YRKLALKHLP	LKSSEPG--A	PEIFRQIAEA	YDVLSDPVKR	GIYD
Gg-DnajB13	DYYAVLELGR	NATDADIKKA	YRLLALENHP	OKCKEPL--A	OERFRLLAEA	YDVLSDPVRR	GIYD
Dr-DnajB13	DYYAILEINR	NAIDADIKKA	YRRLALKHHP	RSNSHAR--A	AERFNLLAEA	FDVLSDPRKK	ATYD
Ta-DnajB1/4/5	DYYOILGVQH	NATDDEIKKA	YRKMALKYHP	DKNKDKN--A	EEIFKDVAEA	YEVLSDKEKR	GIYD
Ta-DnajB11	DFYKILGVDR	DATLKQVKKA	YRKLAIKYHP	DKNKDDP--KA	ODKFQDINAA	YEVLSDKEKR	KTYD
Ta-DnajB13	DYYKILQITO	NVKSQDIKKA	YRKFALKYHP	DRNTAID--A	VDKFKEVSEA	YDVLNGIRR	AIYD
Nv-DnajB1/4/5-a	NYYAILGVPR	NASDDDIIKKA	YRROLIFHP	DKNKNSG--A	EEFKKEISEA	YKVLTDPQR	DIFD
Nv-DnajB1/4/5-b	DYYAVLNVDK	AASADDIKKA	YRKQALKYHP	DKNKSPG--A	EEFKKEISEA	YEVLSDPKKK	EIYD
Nv-DnajB1/4/5-c	NYYDILGVKK	DASDQELKKA	YKKOAFKYHP	DKNKDPG--A	EEFKKEIAEA	YEVLSDPOKR	EIFD
Nv-DnajB1/4/5-d	NYYEVLGVER	NATTDDIRRA	YRRLALKYHP	DKNAGTE--A	-ENFKEVSEA	YEVLCDPQOR	ERFD
Nv-DnajB11	DFYAILGVPR	DASKNOIKRA	YRKLMAMKHP	DKNKDDP--KA	OEKFHDIGAA	YEVLADDDQR	KIYD
Nv-DnajB13	DYYDILGLTR	SATDADIKKE	YRKLSLKYHP	DKNQEPS--A	EVKFRQAAEA	YDVLSDPKKR	AIYN

B

	1	80
Csp-NDK	ERTFLAVKPD	GVORALV-----
Ssp-NDK	ERTFIAIKPD	GVQRGLV-----
An-NDK	ERTFLAVKPD	GVQRGLV-----
Te-NDK	ERTFLAIKPD	GVQRGLV-----
Hs-Nme1	ERTFIAIKPD	GVQRGLV-----
Mm-Nme1	ERTFIAIKPD	GVQRGLV-----
Bt-Nme1	ERTFIAIKPD	GVQRGLM-----
Md-Nme1	ERTFIAIKPD	GVQRGLI-----
Hs-Nme2	ERTFIAIKPD	GVQRGLV-----
Mm-Nme2	ERTFIAIKPD	GVQRGLV-----
Bt-Nme2	ERTFIAIKPD	GVQRGLV-----
Md-Nme2	ERTFIAIKPD	GVQRGLV-----
Gg-Nme2	ERTFIAIKPD	GVQRGLV-----
Xt-Nme2	ERTFIAIKPD	GVQRGLM-----
Hs-Nme3	ERTFLAVKPD	GVQRRLV-----
Mm-Nme3	ERTFLAVKPD	GVQRRLV-----
Xt-Nme3	ERTFLAIKPD	GYQRRLI-----
Dr-Nme3	ERTFLAVKPD	GVQRRLV-----
Tn-Nme3	ERTFLAIKPD	GVQRKLV-----
Hs-Nme4	ERTLVAVKPD	GVQRRLV-----
Mm-Nme4	ERTLVAVKPD	GVQRRLV-----
Gg-Nme4	EOTLVVLVKPD	AVQRRLV-----
Xt-Nme4	ERTLIAVKPD	GVORKLV-----
Dr-Nme4	ERTLVAVKPD	GVQRRLI-----
Tn-Nme4	ERTLIVVKPD	GVQRRLV-----
Hs-Nme5	EKTЛАIИKPD	IVDKE-----
Mm-Nme5	EKTЛАIИKPD	VVDKE-----
Gg-Nme5	EKTЛАIИKPD	VVAKE-----
Xt-Nme5	ERTLAIKPD	VLHKA-----
Dr-Nme5	ERTLAIKPD	AIHKT-----
Tn-Nme5	QOTLAIKPD	VIHIA-----
Hs-Nme6	-LTLAIKPD	AVAHPPLIL-----
Mm-Nme6	-LTLAIKPD	AVAHPPLIL-----
Gg-Nme6	-LTLALLKPD	AVAHPPLV-----
Xt-Nme6	-LTLAIKPD	AVANPVIS-----
Dr-Nme6	-LTLAVIKPD	AMAHPLIL-----
Tn-Nme6	-LTLAVIKPD	AVAHPLML-----
Hs-Nme7A	EKTЛАIИKPD	AISKA-----
Mm-Nme7A	EKTЛАIИKPD	AVSKA-----
Xt-Nme7A	EKTЛАIИKPD	AVTKM-----
Dr-Nme7A	ERTLAMIKPD	AVSKV-----
Hs-Nme8B	EKTЛАIИLRP	LFFHERK-----
Mm-Nme8B	OTTLAIILHPD	ICEEEK-----
Gg-Nme8B	EKTЛАIИRPC	VLRERR-----
Xt-Nme8B	EKTЛАIИRPD	ILKDKK-----
Dr-Nme8B	ERTLALVRPD	AAREN-----
Tn-Nme8B	ERTLAIIRPD	VARERS-----
Hs-Nme9	-CTLAIИKPD	AVAHGKT-----
Mm-Nme9	-TЛGИИKPD	AVAHGKA-----
Bt-Nme9	-TЛAIИKPD	AVVHGKT-----
Ta-Nme1	ERTYIMVKPD	GVDRGLV-----
Ta-Nme5	OCTLAIИKPN	AVRKE-----
Ta-Nme6	OATLAIFPKD	IMLHPSRV-----
Ta-Nme7A	ERTYAMIKPD	AFSKLIGILQL-----
Ta-Nme8B	ORTLALIRPE	TDSESK-----
Nv-Nme2-a	ERTFIMVKPD	GVQRGLV-----
Nv-Nme2-b	ERTFLMIKPD	AVSRGLI-----
Nv-Nme5	ERTLAIKPD	AVHKS-----
Nv-Nme6	QTLAIILKPD	LMLHPVRT-----
Nv-Nme7A	EKTЛАMIKPD	AVGCL-----
Nv-Nme8B	ORTLAIIRPD	ALRSRR-----

Csp-NDK	PVVAMVWEG-	---KGVVASA	RKIIGATNPL	NS---	EPGTI	RGDYGVDIG-	RNIIHGSDAV	ETAOREIALW	FOPAE
Ssp-NDK	PVVAMVWEG-	---KGVIAAA	RKLIGATNPL	DA---	EPGTI	RGDFGIDIG-	RNLVHGSDDGP	ETAOREIALW	FOESE
Am-NDK	PVVAMVWEG-	---KGVVAAA	RKIIGATNPL	GS---	EPGTI	RGDFGIDIG-	RNIIHGSDAV	ETAOREISLW	FKSEE
Te-NDK	PVVAMVWEG-	---RGVIANA	RKLIGATNPL	NA---	EPGTL	RGDFADVVG-	RNVIGHGSDSP	ENAEREINLW	FOTOE
Hs-Nme1	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	ESAEEKEIGLW	FHPEE
Mm-Nme1	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	KSAEKEISLW	FQPEE
Bt-Nme1	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	ESAEEKEIALW	FHPEE
Md-Nme1	PVVAMVWEG-	---LNVVKTG	RMMVGETNPA	DS---	KPGTV	RGDFCIQSG-	RNIIHGSDSV	ESAEEKEIGLW	FHPNE
Hs-Nme2	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	KSAEKEISLW	FQPEE
Mm-Nme2	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	ESAEEKEIHLW	FKPEE
Bt-Nme2	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	KSAEKEINLW	FKPEE
Md-Nme2	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	KSAEKEISLW	FKPEE
Gg-Nme2	PVVAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	ESAOKEISLW	FKPAE
Xt-Nme2	PVLAMVWEG-	---LNVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCIQVG-	RNIIHGSDSV	ESANKEIALW	FEDKE
Hs-Nme3	PVVAMVWOG-	---LDVVRTS	RALIGATNPA	DA---	PPGTI	RGDFCIEVG-	KNLIGHGSDSV	ESARREIALW	FRADE
Mm-Nme3	PVVAMVWOG-	---LDVVHAS	RALIGATDPG	DA---	MPGTI	RGDFCMEVG-	KNLIGHGSDSV	ESAHREIALW	FREAE
Xt-Nme3	PVVAMVWOG-	---LDVVKTA	RLMIGETNPA	HS---	LPGTI	RGDFCVDDG-	RNVIGHGSDSR	ESAOREIALW	FQPDE
Dr-Nme3	PIVAMVWOG-	---LDVVKTA	RKMLGETNPA	DS---	LPGTI	RGDYCVEVG-	RNVIGHGSDSV	ESAAREISLW	FEDHE
Tn-Nme3	PVVAMVWOG-	---DGVVKTA	RKMLGETNPA	DS---	LPGTI	RGDSCVDDG-	RNVIGHGSDSV	ESAOKEIYLW	FRPHE
Hs-Nme4	PVVAMVWEG-	---YNVVRAS	RAMIGHTDSA	EA---	APGTI	RGDFSVHIS-	RNVIIHASDSV	EGAOREIQLW	FOSSE
Mm-Nme4	PVVAMVWEG-	---PNVVHIS	RAMIGHTDST	EA---	APGTI	RGDFSVHIS-	RNVIIHASDSV	DGAOREIELW	FOSSE
Gg-Nme4	PLVAMVWEG-	---YNNVRST	RAMVGDITDS	QA---	AAGTI	RGDLSMHVS-	RNVVHASDSV	ETALREIGFW	FORDE
Xt-Nme4	PVVAMVWEG-	---HNVVRTS	RAMVGDITDSS	QA---	KPGTI	RGDFSVHIS-	RNVIIHASDSV	EVAEREISLW	FHSGE
Dr-Nme4	PIVAMVWEG-	---HNVVKTS	RMMVGDITDPA	AA---	APGTI	RGDFSVHIS-	RNVVHASDSV	EGAOREISLW	FHRSE
Tn-Nme4	PVVVMAWEG-	---HOVIQSS	RNMVGQTNPA	EA---	OAGTV	RGDFSLHVS-	RNVVHASDSP	EGALRELOWL	FRGQE
Hs-Nme5	PLVAMILAR-	---HKAISYW	LELLGPNNSL	VAKETHPDSDL	RAIYGTDDL-	RNALHGSNDF	AAAEREIRFM	F-PE-	
Mm-Nme5	PLVAMILAR-	---HKAISYW	KELMGPNSNL	VAKETHPDSDL	RAIYGTDEL-	RNALHGSNDF	AAASEREIRFM	F-PA-	
Gg-Nme5	PSVAMILAR-	---HRAVSYW	KELLGPNSNI	KARMTHPHSL	RAIYGTDDL-	RNGLHGSLSL	SSAEREIRFM	F-PE-	
Xt-Nme5	PIIAMTLAR-	---YNAISYW	KELIGPTNSL	KAKETHPESL	RAIYGTDDL-	RNALHGSYCF	TSAAEREIRFM	F-PEA	
Dr-Nme5	PVVALALAR-	---DQAIATW	KAIMGPVSSI	KARETHPDCL	RAFGTCDL-	RNAVHGSETF	SAAEREIRFM	F-PHS	
Tn-Nme5	PIIAMVLSR-	---DDAIISYW	KDLIGPSNSV	IAKETHPDSDL	RAKYGTSEI-	ONALHGSESL	PASVREIKFM	F-PNT	
Hs-Nme6	PIRAYILAH-	---KDAIOLW	RTLMGPTRVF	RARHVAPDSI	RGSFGLTDT-	RNTTHGSDSV	VSASREIAAF	F-PD-	
Mm-Nme6	PIRAYILAH-	---KDAIOLW	RTLMGPTRVF	RARYIAPDSI	RGSLGLTDT-	RNTTHGSDSV	VSASREIAAF	F-PD-	
Gg-Nme6	PMWAYILAH-	---ENAIISLW	RSLMGPTKVF	RARNCPDPSI	RGAYGLTDT-	RNTTHGSDSP	ASASREIAFF	F-PE-	
Xt-Nme6	PMQAYILAH-	---EDAVOLW	RNLMGPTKVF	RARIIVAPGTW	RGDLGLTDT-	RNTTHGSDSV	ESACREITFF	F-PEF	
Dr-Nme6	QMRAYILAR-	---EDAIITHW	RTMMGPTKVF	RARFSSPETL	RGKYGLTDT-	RNTTHGSDSI	ESAKREISFF	F-PE-	
Tn-Nme6	PMRAYILAR-	---EDAIRHW	RELMGPTKVF	RARTHVPASI	RAQFGLTDT-	RNTTHGSDSV	ESAOREICFF	F-PE-	
Hs-Nme7A	PIIAMEILR-	---DDAICEW	KRLLGPANS	VARTIDASESI	RALFGTDGI-	RNAAHGPDTS	ASAAREMELF	F-PS-	
Mm-Nme7A	PVIAMEILR-	---DDAICEW	KRLLGPANS	LSRTDAPGSI	RALFGTDGV-	RNAAHGPDTF	ASAAREMELF	F-PS-	
Xt-Nme7A	PIVAMEVVG-	---DEAVSSW	RKLLGPTNSS	IARSELPOSI	RARFGTDGT-	KNAAHGSDSI	ASAARELEFF	F-PS-	
Dr-Nme7A	PVIAMELMG-	---DEAVSTW	RKVLGPTDSG	VAOEAAHSL	RGOFGTDGT-	KNAGHGSDSL	ASAARELEYF	F-PS-	
Hs-Nme8B	PSLALVLLR-	---DNGLOYW	KOLLGPRTVE	EAIEYFPESL	CAOFAMDSL	VNQLYGSDSL	ETAEREIQHF	F-P--	
Mm-Nme8B	HSYVLALRR-	---ENGVEYW	KTLIGPKTIE	EAYASHPOS	CVOFAMGSNF	TNQFYGSSSK	AAAEEKEIAHF	F-PPO	
Gg-Nme8B	PTLVLALTR-	---QNAIQHW	RDLLGPKTIE	EAK-KVPLNSL	RAKYAIDNIA	INOLHGSSSV	NDAOKELEFF	F-POE	
Xt-Nme8B	PVLALALVK-	---DHAVDHW	RNMLGPASLR	QALSEAPDSL	RAOFAPNDSI	INOLHGSSSIP	EEAKKELNFF	F-P--	
Dr-Nme8B	LVLALALVK-	---EGAVEHW	RNILGPKDPI	KAKNEOPDSL	RAOFSVENSS	INOLHGSSSS	EEAEKEISFF	F-PPE	
Tn-Nme8B	PVLALALALAR-	---KEAVCHW	RNMLGPDSVN	KAKEEDPESL	RAOFAVGSSAS	INOLHGSASH	EEAEREIRFF	F-PPO	
Hs-Nme9	PSHLLILTRT	EGFEDVVTW	RTVMGPRDPN	VARREOPESL	RAQYGTTEMP-	FNAVHGSRDR	EDADRELLALL	F-PS-	
Mm-Nme9	PSHLLILTKT	EGTEDVVTW	RTFLGPCDPN	VARREHPESL	RAQYGTTEMP-	FNAVHGSRDR	EDANRELLALL	F-PSF	
Bt-Nme9	PSHLLILART	EGTEDVVTW	RTLMGPCDPH	VARREOPDSL	RAQYGTTEMP-	FNAVHGSWDS	EDARRELLALL	F-PG-	
Ta-Nme1	PVACMVWEG-	---KDVKKTG	RMLGETDPL	KS---	LPGTI	RGDYAIIDLG	RNVCHGSDSV	ESANKEIKLW	FNEDF
Ta-Nme5	PIVAYILAK-	---NNAIEDW	RNSMGPNSM	NARIAAPESL	RAKYGIDEM	RNGFHGSDDGP	LTAEREIRFF	F---	
Ta-Nme6	PATIAILVG-	---NNAITHW	RDLIGPSRSH	RARSSHPTSI	RAIYGLTDT	RNAVHGSDSV	ESAAREIOFF	F-PE-	
Ta-Nme7A	PVLGMELMR-	---SNAIKRW	RELLGPTNSS	KARQEAPNSI	RARYGTDGT	ONACHGSDST	DSAAREIEFI	F-PT-	
Ta-Nme8B	PLVALALAK-	---ODSVDAW	RDMIGPPDVN	LAKELAPSSL	RARYSSDD-	VNVVHGSENH	ESAEKEIALW	F-PER	
Nv-Nme2-a	PVVAMVWEG-	---AGVVKTG	RVMLGETNPA	DS---	KPGTI	RGDFCVHIG-	RNIIHGSDST	DSANKEIALW	FSPKE
Nv-Nme2-b	PVCAMVWEG-	---LGVVKTA	RVMLGETDPA	KS---	LPGTI	RGDFSIHIG	RNIIHGSDAV	ETAKEEIALW	FKDDE
Nv-Nme5	PIMALVLR-	---ENAIISYW	ROLIGPTNTO	KARDQAPESL	RAIYGTDSI	RNALHGSDDGT	VSADKEIHFF	F-PDS	
Nv-Nme6	PMTAMILGR-	---ENAIITHW	RKLMGPTHAY	KARSIAPKSI	RALYGISDT	RNATHGSDSD	ESARKEIEFF	F-PEF	
Nv-Nme7A	PVVAFLKKG-	---PGAVDSW	RKVLGPTDS	TARNOAPLSV	RAKFGTDTN-	KNAAHGSDST	ESAEREVSFF	F-DKR	
Nv-Nme8B	PMMALCLAR-	---EDAIEGW	RGMLGPKEVE	KAKDEAPESL	RAQFQVEDSP	INPLHGSDTA	ENAEKEIQKF	F-PM-	