

	60	70	80	90	100	110	120	130
<i>H. sapiens</i>	HNMKAFLEDEL	KAENIKKFLYNFTQI	-----	PHLAGTEQNFQIAKQIQSQWK	EF	GLDSVELAHYDVLLSYPNKTHPNYISIIINE	-----	DGN
<i>S. scrofa</i>	NVKKAFLEDEL	KAENIKKFLYNFTRI	-----	PHLAGTEQNFQIAKQIQSQWK	EF	GLDSVELAHYDVLLSYPNKTRPNYISIIIDE	-----	DGN
<i>M. musculus</i>	GMKKEFLHEL	KAENIKKFLYNFTRT	-----	PHLAGTQNNFELAKQIHQDQWK	EF	GLDLVELSHYDVLLSYPNKTHPNYISIIINE	-----	DGN
<i>R. norvegicus</i>	GMKKAFLQEL	KAENIKKFLYNFTRT	-----	PHLAGTQHNFELAKQIHAQWK	EF	GLDLVELSDYDVLLSYPNKTHPNYISIIINE	-----	DGN
<i>D. rerio</i>	SFLRDFMDEM	HAENIKKHHLRKFTEL	-----	PHLAGTQONLNLAEQIRNEWM	EF	GLDSVELVPYDVLLSYPNKTHPNYISIVDQ	-----	LGN
<i>C. briggsae</i>	TDAKTIQDNI	KSENIKKYLRIFTQE	-----	PHIAGTDANKKVAYAIASAWT	EA	GLEDEVHTLPYEVLLSYPDFENPNVSVVIONS	-----	AGK
<i>A. thaliana</i>	HYHELFI	ISTSFSDNASVALNLHTL	TRR	PHVAGTVANAEAAEYVRSVFT	SS	ALKSHVVAYQVSLTYPVHRSLVLTPTDS	-----	-----
<i>M. grisea</i>	ETERTLVDSF	DNSSIAEWSYYYSSG	-----	MRLAG--SNRSQAEWTROMWQ	DA	GLE-VQIAEYWITYTEPSESSLRLRRPDG	-----	-----
<i>A. nidulans</i>	ELQTLLEGTP	SAARAREWSKYYS	TSG	PHLTG--KNLSQALWTKERWE	EF	GIADTKIATYDVYLNYPDLHRLALYQGGN	-----	-----
<i>N. crassa</i>	HLRQLLDTP	SSKKAEEWQRYT	TAG	PHLAG--KNYSQALWTKKEWE	EF	GVQSHIVDYEVYINYPVDHRLALLNKEDKKNDS	SSSD	NW
<i>G. zeae</i>	DQETILVNAF	DNSSIDEWSDYYGHQ	-----	NKLAG--QGKEAAQWTADRWT	ES	GFE-SHLAEYHVFLRYPVSSSLHVT	SANG	-----
NLD2	SIRWKLVS	EM--KAENIKSFLRS	FTKL	PHLAGTEQNFLLAKKIQTQWK	KF	GLDSAKLVHYDVLLSYPNETNANYISIVDE	-----	HET
NLDL	EILETVMGQI	DAHRIREN	RELSRE	PHLASSPRDELVQLLLQRWKDPE	---	GLDSAKLVHYDVLLSYPNETNANYISIVDE	-----	HET
Sgap	-----APD	I--PLANVKAHLTQ	LS	TAAANNNGNRAHGRPGYKASVDYVKA	LD	AA-SGLDSAEAXTYEVLLSFP	SQEQPNVVD	I
AAP	ATVTAWLPQV	DASQITGT	ISSLESF	TNRFYTTTSGAQASDWIAS	EWQ	ALG--Y-TTTLQOFTSG	-----	-----
Tfr1	RKLSEKLD	ST--DFTSTIKLL	NENSYV	PREAGSOKDENLALYVENEFR	EF	KLSKVWRDQHFVKIQVKDSAQNSVI	I	V
Tfr2	AMFLQFLGEG	--RLED	TIR---	QTSLR-----ERVAGSAGMAALTQD	IRAALS--	RQ--KLDHVWTDTHYVGLQFP	DP	PAHPNTLHWVDE
	140	150	160	170	180	190	200	210
<i>H. sapiens</i>	E-IFNTSLF	EPPPP---	PGYENVSD-	IVPPFSAFSPQGMPEGDLVYVNYARTED	FFKLERDMKINCSGKIV	IARYGKVF	FRGNKVKNAQLAGAKG	VILYSDP
<i>S. scrofa</i>	E-IFNTSLF	EPPPP---	PGYENVSD-	VVPPFSAFSPQGMPEGDLVYVNYARTED	FFKLERDMKINCSGKIL	IARYGKIF	FRGNKVKNAQLAGAKGI	IILYSDP
<i>M. musculus</i>	E-IFKTSLS	EQPP---	PGYENISD-	VVPPYSAFSPQGTPEQDLVYVNYARTED	FFKLEREMKISCSGKIV	IARYGKVF	FRGNMVKNVQLAGAKGM	IILYSDP
<i>R. norvegicus</i>	E-IFKTSLS	LAELSP---	PGYENISD-	VVPPYSAFSPQGTPEQDLVYVNYARTED	FFKLERVMKINCSGKIV	IARYGQV	FRGNKVKNAQLAGAKGI	IILYSDP
<i>D. rerio</i>	E-IFKTSLS	LAEPVP---	EGYEDVAD-	IVPPYSAFSAKQPEDELVYVNYARTED	FFKLERELGINCTGKIL	IARYGKIF	FRGNKVKNAVLAGAKGI	IILFSDP
<i>C. briggsae</i>	E-IFRSKGV	SPVIIPDEQSG--	KY-AGHQWL	AYGGNGTVSADVVYINRGNANDFK	NLK-LMGVDVKGKIALMRYGHG	FRGDKVYKAQ	QAGAILFSDT	-----
<i>A. thaliana</i>	--AKPITFL	LEQEKLGDN	PYAN--	VMPTFHGYAKSGNVSGPVVYANYGR	VEDFVRLKKDMGVNVSGAVVI	ARYGQIYR	GDIVKNAYEAGAVGV	VIYTDK
<i>M. grisea</i>	--SSHVAQL	REDV-LEGDEQ	TANPD-EKIAFH	ALSGSGNVSAEYIYVGRGTRGDY	KRLV-DLGVDLKGI	IALAQYGGTNR	GVKIKNAQENGMVGT	VLYTDP
<i>A. nidulans</i>	-ISYEASL	EEDV-LEEDST	SGLPD-RVPTFH	GYASAGNVTSASFVFNFGTYAD	FEDLV-NANVSLSGKIAIAKYGR	VFRGLKVKRAQELGMVGV	VLYDDP	-----
<i>N. crassa</i>	QVSFEATL	EEDI-LDEDP	STSLPD-RVPV	FHGYASAGNVTA	PVVYVNYGTYQDFEDLL-KANVSL	AGKIAIARYGLIFRGLKVKRAQELGMIGVI	I	IFTDP
<i>G. zeae</i>	-TTSEINIK	EDV-LPEDDV	TNRTEISQ	TFLAYAPGGNASAEYVYAGRGS	IDDFDRLV-ELGVEVKGKIALIKY	GGLFRGLKVKNAQDHGAIGAVI	FIDP	-----
NLD2	E-IFKTSY	LEPPP---	DGYENVTN-	IVPPYNAFSAQGMPEGDLVYVNYARTED	FFKLEREMGINCTGKIV	IARYGKIF	FRGNKVKNAMLAGAIGI	IILYSDP
NLDL	E-IFKTSY	LEPPP---	DGEQGGPD-	VVQPYAAYAPS	GTPOGLLVYANRGA	EEDFKELO	TQ-GIKLEGTIALTRYGGV	GRGAKAVNAAKHGVAGV
Sgap	I-IHSCHRT	EENV---	TG	-----	-----	-----	-----	-----
AAP	-----	-----	-----	-----	-----	-----	-----	-----
Tfr1	L-VY---	LVENP---	GG	-----	YVAYS	KAATVTGKLVHANFGTKKDF	FEDLY---	TPVNGS
Tfr2	V-GEQLP	LEDP	-----	D-VYCP	YSAI---	GNVTGELVYAHYGR	PEDLO	DL-RARGVDPVGRLLLV
	220	230						

	240	250	260	270	280	290	300	310
<i>H. sapiens</i>	ADY----	FAPGVKSYPDGWNLPGGGVQ	RGNIILNLN---	GAGDPLTPGY	PANEYAYRRG-----	I	A	EAVGLPSIPVHP
<i>S. scrofa</i>	ADY----	FAPGVQSYPDGWNLPGGGVQ	RGNIILNLN---	GAGDPLTPGY	PANEYAYRLQ-----	I	A	EAVGLPRIPVHP
<i>M. musculus</i>	ADY----	FVPGVKSYPDGWNLPGGGVQ	RGNVLNLN---	GAGDPLTPGY	PANEHAYRHE-----	L	T	EAVGLPSIPVHP
<i>R. norvegicus</i>	ADY----	FVPGVKSYPDGWNLPGGGVQ	RGNVLNLN---	GAGDPLTPGY	PANEYAYRHE-----	F	T	EAVGLPSIPVHP
<i>D. rerio</i>	ADY----	W	A	E	D	V	E	P
<i>C. briggsae</i>	SDVAQ--	D	G	V	D	S	E	H
<i>A. thaliana</i>	R	D	Y	G	-----	G	D	E
<i>M. grisea</i>	L	E	D	G	Q	V	T	E
<i>A. nidulans</i>	Q	T	D	G	E	T	E	N
<i>N. crassa</i>	G	E	D	G	E	M	T	E
<i>G. zeae</i>	G	D	D	G	N	M	T	A
NLD2	ADY----	F	A	P	E	V	Q	P
NLDL	AD	I	N	D	G	-----	L	S
Sgap	-----	-----	-----	-----	-----	-----	-----	-----
Aap	-----	-----	-----	-----	-----	-----	-----	-----
Tfr1	T	K	F	-----	P	I	V	N
TFR2	A	D	F	-----	S	Q	D	P
	320	330	340	350	360	370	380	390
<i>H. sapiens</i>	---	S	S	W	R	G	S	-----
<i>S. scrofa</i>	---	D	S	W	K	G	S	-----
<i>M. musculus</i>	---	S	S	W	K	G	G	-----
<i>R. norvegicus</i>	---	S	S	W	K	G	G	-----
<i>D. rerio</i>	---	S	W	K	G	A	-----	
<i>C. briggsae</i>	---	W	Q	G	F	V	G	-----
<i>A. thaliana</i>	---	-----	V	Y	P	V	G	P
<i>M. grisea</i>	A	N	R	S	S	W	V	G
<i>A. nidulans</i>	F	N	E	-----	A	W	Q	G
<i>N. crassa</i>	F	N	K	-----	W	T	A	R
<i>G. zeae</i>	V	N	R	T	A	W	V	G
NLD2	---	K	S	W	K	G	A	-----
NLDL	---	A	T	W	Q	G	A	-----
Sgap	-----	-----	-----	-----	-----	-----	-----	-----
AAP	-----	-----	-----	-----	-----	-----	-----	-----
Tfr1	---	W	K	T	D	S	T	-----
TFR2	---	E	-----	W	Q	G	S	-----



	560	570	580	590	600	610	620				
<i>H. sapiens</i>	-YELVEKFYDPMFKYHL	-TVAQVRGGMVFELANSIVLPFDCRDYA	-VVLRYADKIYSISMK	----	HPQE	-----	-----				
<i>S. scrofa</i>	-YELVEKFYDPTFKYHL	-AVAQVRGGIVFELANSVVRPFDCRDYA	-VVLRYADKLYNISMN	----	HPQE	-----	-----				
<i>M. musculus</i>	-YELVVKFYDPTFKYHL	-TVAQVRRAMVFELANSIVLPFDCQSYA	-VALKKYADTIYNISMK	----	HPQE	-----	-----				
<i>R. norvegicus</i>	-YELVEKFYDPTFKYHL	-TVAQVRGAMVFELANSIVLPFDCQSYA	-VALKKHAETIYNISMN	----	HPQE	-----	-----				
<i>D. rerio</i>	-YEIVERFYDPRFRRL	-AVARVRGGLIFSLADSAVLPDCVEYA	-TSLSTYANSIHQLAKK	----	HPEA	-----	-----				
<i>C. briggsae</i>	-FTNIHLMDETDLAVHR	-AIGQYWAELAKTFADDEVVLPMTTNLAS	-VMIKSYLPQLKASISGI	----	NVSRIDFESI	-----	-----				
<i>A. thaliana</i>	-FTWMEKFGDPMFQRHV	-AMASVLGLVALRLADEEIIIPFNYSYA	-LELKKSAEDLENEKLG	----	HNID	-----	-----				
<i>M. grisea</i>	-YDWMANYADPGFQVHK	-AMGQVWVTLMLYHLADDPPIPFDLNAA	-TTLRALFQDLQDDMAEL	----	FPTVTDLD	-----	-----				
<i>A. nidulans</i>	-FDWMQRFGDPDWLYHE	-ACAKIWALAAAKLAETPVLFFNATDYS	-LGLLEYVDRIRPAADNL	----	PNGL	-----	-----				
<i>N. crassa</i>	-FYWMKKYGDPGFVYHR	-TMAQIFGLLIAELAHLPVLAFAESYA	-TALDGYVTQVEDKLNVAHLHPKKE	----	EEVDISTLTEQVISELRGNHYNSSSSSSTAI	-----	-----				
<i>G. zeae</i>	-YHWMSTLGDPGFHSV	-SQGQYLSLLGYHLATDEILPFDTQNYA	-KELRAYEDLVEFTEG	----	KDADLD	-----	-----				
NLD2	-FELVEKFYDPTFKKQL	-SVAQLRGALVYELVDSKIIPFNIQDYA	-EALKNYAASLYNLSKK	----	HDQQ	-----	-----				
NLDL	-FDYVDKFLDPPGFSSHQ	-AVARTAGSVILRLSDSFFLPLKVS	-DYS-ETLRSF	----	LQAAQQD	----	LGAL				
1XJO	T	----	ALDRNSDAAAHAIWTLSSGTGEPT	----	-----	-----	-----				
1RTQ	TGSHAKKFTQLGLAYAI	-EMGSATGDTPTPGNQ	----	-----	-----	-----	-----				
Tfr1	-YKELIERIPELNKVAR	-AAAEVAGQFVIKLTHTHVELNLDYEEYN	-SQLLSFVRDLN	----	Q	----	YRAD				
Tfr2	-YENLHKVLQGRPLPAVAQVAQLAGQLLIRLSH	-DRLLPLDFGRYGDVVLRHIGNNLNEFS	----	----	GD	-----	-----				
		630	640	650		660	670	680	690		
<i>H. sapiens</i>	-----	MKTYSVSFDSLFS	SAVKNFTEIASKF	SERLODF	-----	DKS	----	NP	IVLRMMNDQLMFLERAFIDPLGLPDR	-PFYRHVIYAPS	
<i>S. scrofa</i>	-----	MKAYSVSFDSLFS	SAVKNFTEIASNF	SERVQDL	-----	DKN	----	NP	ILLRIMNDQLMFLERAFIVPLGLPDR	-AFYRHVIYAPS	
<i>M. musculus</i>	-----	MEAYMISFDSLFS	SAVNNFTDVASKFN	QRLQEL	-----	DKS	----	NP	ILLRIMNDQLMYLERAFIDPLGLPGR	-PFYRHIIYAPS	
<i>R. norvegicus</i>	-----	MKAYMISFDSLFS	SAVNNFTDVASKFN	QRLQDL	-----	DKS	----	NP	ILLRILNDQLMYLERAFIDPLGLPGR	-PFYRHIIYAPS	
<i>D. rerio</i>	-----	MQQYVVSFDSLFS	SAENFTVAARDFH	QRLDQL	-----	DSS	----	NALAVRMVNDQLMYLERAFIDPLGLPGR	-PFYRHIIYAPS		
<i>C. briggsae</i>	-----	RTQYALLSKSSQD	LLVMSKKFQETM	QFT	-----	FHSFSQNPY	----	DAKHVNAVNERLISTERC	FINPRGVSKHNPSARHVLF	SVS	
<i>A. thaliana</i>	-----	VSTLIKSIEDL	STAAKHISLEK	----	-----	EAIK	----	GALKVRELNDRLMMAERAL	TRDRDGLSER	-PWYKHLIYGPS	
<i>M. grisea</i>	-----	LSPLSNAIAAF	ESAAEQIDALATQ	ALSHNDT	-----	VL	----	LGVIN	SKYRDFNRYASQGALPGR	-LTYNNVVSAPG	
<i>A. nidulans</i>	-----	TFDFGPLYE	AISRLQKTAIEF	DAYAADLTSQ	TEELPWYLWKKVR	--LFFLIHEVNTKYKNI	ERQFLY	QOGLDGR	-SWFKHVVFAPG		
<i>N. crassa</i>	TSSTSKATVKA	FRDSFKRLHDAVDKLT	TEKAARLDAAE	DLRSQAREHIPWYHWHQKIK	--LGYQIRKVN	TKYKNIERSFLFSQGLDGR	-PWFKHVVFAPG				
<i>G. zeae</i>	-----	LEELDKAIET	FKKADEVKALEERARES	DDE	-----	DLKKVVNHKYRDF	QRFISQDGLPNR	-DFYKHVVNAPG			
NLD2	-----	LTDHGVSFDSLFS	SAVKNFSEASDF	HKRLIQV	-----	DLN	----	NP	IARMMNDQLMLLERAFIDPLGLPGK	-LFYRHIIYAPS	
NLDL	-----	LEQHSISLGPL	VTAVEKFEAEAAALGQR	ISTL	-----	QKGSDF	PLQVRMLNDQLMLLERTFLN	PRAFPEE	-RYYSHVLWAPS		
Sgap	-----	-----	-----	-----	-----	-----	-----	-----	-----		
AAP	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Tfr1	-----	IKEMGLSLQWLY	SARGDFFRATSRL	TDFGNA	-----	EKT	----	DRFVMKKLND	RVMRVEYHFLSPYVSPKE	-SPFRHVFWSG	
Tfr2	-----	LKARGLTLQWVY	SARGDYIRAAEKL	RQEIYSS	-----	EER	----	DERLTRMYN	VRI	MRVEFYFLSQYVSPAD	-SPFRHIFMGRG

	700	710	720	730	740	750
<i>H. sapiens</i>	SHNKYA	GESFPGIYDALFDIESKVDPSKAW	GEVKRQIYVAAFTVQAAAETLSEVA			
<i>S. scrofa</i>	SHNKYM	GESFPGIYDALFDIENKVDPSKAW	GEVKRQISIAAFTVQAAAETLREVA			
<i>M. musculus</i>	SHNKYA	GESFPGIYDALFDISSKVNASKAW	SEVKRQISIAAFTVQAAAETLMEVA			
<i>R. norvegicus</i>	SHNKYA	GESFPGIYDALFDINNVDTSKAW	REVKRQISIAAFTVQAAAETLREVD			
<i>D. rerio</i>	SHNKYA	GESFPGIYDALFDIENAAEPENAW	NEVKRQISIAAFTVNAAAETLKPVVSETKTS			
<i>C. briggsae</i>	DSDSYS	NSLMAGIQNAIHSYETS	PSKKNLREIINOISTVQYSVICVVN	TLRDVI		
<i>A. thaliana</i>	KYDDYG	SKSFPGVDDAIDNAKKL-NTKASW	ENVQHQIWRVSRRAIRHASLVKLGELI			
<i>M. grisea</i>	LDNGYG	ASVFPVAGDSLQGD	R-ELADEWIVKSANAVLRAAEILTV			
<i>A. nidulans</i>	LWTGYA	GATYPGIVESLE	AGDV-ANAAKWQYIVIERVKAATELLQ			
<i>N. crassa</i>	LWTGYS	GAVFPGLVESID	ARDW-SNAERWVDIEACIKNAARKL			
<i>G. zeae</i>	LDTGYA	AVTFPGITEGVLYAD	KGNF-TLAQEWVGKTARGIVLAAKILKT			
NLD2	SHNKYA	GESFPGIYDAIFDIENKANSRLAW	KEVKKHIISIAAFTIQAAAETLKEVL			
NLDL	HGLR	SHIPGLSNACSRARDTASGSEAW	AEVQRQLSIVVTALEGAAATLRPVADL			
1XJO						
1RTQ						
TfR1	SH	TLPALLENL-KLRKQNGAFNE	TLFRNQLALATWTIQGAANALS	SGDVWDIDNEF		
TfR2	DHTLGALLDHLRLLRSNSSGTPGATSSTGFOESR		FRRLALLTWTIQGAANALS	SGDVWNIDNN		