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Supplementary Material

NMR Solution Structure and Function of the C-terminal Domain of Eukaryotic Polypeptide Release Factor eRF1

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Table S1 Impact of mutations of human eRF1 on the GTPase activity of eRF3 in its ternary complex with the ribosome. Activity of the wild type eRF1 is accepted as 100%.

	GTPase activity, %
eRF1 WT	100
Y331A	98 ± 2
H334A	98 ± 2
H356A	95 ± 4
F357A	100 ± 5
D359A	97 ± 8
G363A	98 ± 6
E365E	96 ± 7
H366A	97 ± 4
E370A	95 ± 6

Table S2 Differences in the experimental restraints used for the structural determination of the two

 conformers of the C-terminal domain of human eRF1 in solution.

	"Open" conformer	"Closed" conformer			
Total number of NOEs	1857	1852			
Number of long-range NOEs	497	490			
Number of RDCs	90	69			
NOEs different between the two conformers (NOE constrained interatomic distance shown in brackets, Å)	$\begin{array}{l} H\alpha^{354}-HN^{357}~(4.0)\\ H\alpha^{356}-HN^{358}~(5.0)\\ H\alpha^{355}-HN^{358}~(4.0)\\ HN^{359}-HN^{364}~(3.0)\\ HN^{334}-H\alpha^{368}~(3.5)\\ H\alpha^{357}-H\delta_2^{366}~(4.5) \end{array}$	$H\alpha^{354} - HN^{357} (4.5) H\alpha^{356} - HN^{358} (4.0) H\alpha^{355} - HN^{358} (not observed) HN^{359} - HN^{364} (not observed) HN^{334} - H\alpha^{368} (not observed) H\alpha^{357} - H\delta_2^{366} (not observed) $			

Fig. S1 A region of the ¹H,¹⁵N-HSQC spectrum of the C domain of human eRF1 illustrating the presence of two conformational states of the protein. The amide signals from residues which belong to the open conformation are marked with asterisks.



Fig. S2 Plot of the number and distribution of the NOEs verus the amino acid sequence that were used in the structure calculation of the open (A) and closed (B) conformers of the C domain of human eRF1. Each NOE is counted twice (for each residue in the NOE). NOEs are classified as: intra residue (black); sequential (blue, (i-j) = 1); medium range (red, (1 < i-j 4); long range (green, (i-j > 4)).



Fig. S3 NOE map of the mini-domain (residues 329-372) of human eRF1. The dots below the diagonal correspond to the NOEs between the protein backbone atoms (Ha and HN). The dots above the diagonal correspond to the observed NOEs between all protons. NOEs observed only in the open conformer are shown in green. NOEs different in intensity between the open and closed conformers are shown in red. The figure was generated using the program NMRest, written in-house.



Fig. S4 Representative NOEs in the open (A) and closed (B) conformers of the mini-domain of human eRF1. In the open conformer (A) the distance between K354 H α and F257NH is 3.3 Å whereas in the closed conformer (B), this distance is larger, 3.5 Å. as manifest in its smaller observed NOE. The distance between T358 NH and H356 H α and H β is also different in conformers A and B.



Fig. S5 A cylindrical ribbon representation of the backbone of the C domain of human eRF1. The variable radius/thickness of the cylinder is proportional to the dynamic properties (on the ps to ns time scale) of the protein residues and is proportional to the value of $(1-S^2)$; the minimal thickness corresponds to the value $S^2 = 1$, the maximum to $S^2 = 0.7$. The C-terminal tail (residues 414-437) is not shown.



Fig. S6 The order parameter, S^2 , calculated separately for the open and closed conformers of the Cdomain of human eRF1 using a model-free analysis with an assumption of fully asymmetric molecular motions and tensors. Blue dots represent the values for the open conformer and red dots for the closed conformer. Clearly the order parameters are very similar and the protein motions along the chain are similar for the open and closed conformers.



Fig. S7 The rate of peptidyl-tRNA hydrolysis in response to human eRF1, with mutations in the minidomain 329-372. The fraction of the ³⁵S-labelled tetrapeptide (MVHL) released as a function of time from termination complexes formed with UAA (A), UAG (B), UGA (C) stop codons by the wild type eRF1 (solid circles) or mutant forms of eRF1: His334 \rightarrow Ala (open circles), His366 \rightarrow Ala (solid triangles) and Glu370 \rightarrow Ala (open triangles) is shown. The background release of tetrapeptide in the absence of eRF1 has been subtracted in all graphs. A value of the fraction of peptide released equal to 1 corresponds to the maximum value found for wild type eRF1.



Fig. S8 Results of the gel filtration (A), and SDS-PAGE (8% acrylamide) gel (B) of the C domain of human eRF1.



Fig. S9 The stabilization of the loop (residues 358-363) by a network of hydrogen bonds. Residues 358 – 363 of the final 48 calculated structures (of both open and closed conformers) are shown. All structures were superimposed onto the atoms N, Ca, and C' of the residues 359-362 of the representative structure of the open conformer.



Fig. S10 Multiple sequence alignment of eukaryotic Class-1 polypeptide chain release factors eRF1. Highly and completely conserved residues of eRFs are highlighted in blue/green and red, respectively. The numbering above the sequence corresponds to that of human eRF1.

_	260	270	280	290	300	310	320	330	340
Homo sapiens 😒	YG <mark>GENG</mark> FNQJ	LIELSTEV.	L <mark>SNVKF IQ</mark> EKKL IG	YFDE I	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	EDTLKALE <mark>M</mark>	GAVE I LI <mark>VY</mark> ENLI	<mark>DIMRYVL</mark> HCQGT	<mark>EEEKILYL</mark> TP
Gallus gallus 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSTEV <mark>I</mark>	L <mark>S</mark> NVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	<mark>E</mark> DTLKALE <mark>M</mark>	GAVE I LI <mark>VY</mark> ENL <mark>I</mark>	<mark>DI</mark> M <mark>RYVL</mark> HCQGT	<mark>EEE</mark> K <mark>ILYL</mark> TP
Monodelphis domestica 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSTEV <mark>I</mark>	L <mark>S</mark> NVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	<mark>E</mark> DTLKALE <mark>M</mark>	GAVE ILI <mark>VY</mark> ENL <mark>I</mark>	<mark>DI</mark> MRYVLHCQGT	<mark>EEE</mark> K <mark>ILYL</mark> TP
Aedes aegypti 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIEL <mark>A</mark> AES <mark>I</mark>	LQNVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	EDTLKALE <mark>L</mark>	S <mark>SVETLICWENL</mark>	DIC <mark>RYVLKN</mark> HVS	ATSTTVLHL TP
Drosophila melanogaster 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIEL <mark>A</mark> AES <mark>I</mark>	LQNVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	EDTL <mark>R</mark> ALE <mark>L</mark>	S <mark>SVETLICWENL</mark>	<mark>d i c</mark> ryvlknhan	STSTTVLHL TP
Nasonia vitripennis 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIEL <mark>A</mark> AES <mark>I</mark>	L QNVKF I Q <mark>E</mark> KKL I G	RYFDE I	SQDTGK <mark>Y</mark> CFGVI	EDTL <mark>R</mark> ALE <mark>L</mark>	S <mark>SVETLICWENL</mark>	<mark>DICRYVLKN</mark> HTN	-NEEKVLHLTP
Bombyx mori 😒	NS <mark>GENG</mark> FNQJ	LIEL <mark>A</mark> AES <mark>I</mark>	LQNVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	DDTL <mark>R</mark> ALE <mark>L</mark>	S <mark>SVETLICWENL</mark>	<mark>d i c</mark> ryvlkshatn-	QETILHLTP
Nematostella vectensis 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIEL <mark>AS</mark> EV <mark>I</mark>	L <mark>A</mark> NVKF IQ <mark>E</mark> KKL IG	RYFDEI	SQDTGK <mark>Y</mark> CFGV.	ADTLKALE <mark>M</mark>	GAV <mark>DILIVW</mark> ENL <mark>I</mark>	DICRIVLRNHQT	<mark>DE</mark> DTVLHLNP
Strongylocentrotus purpuratus 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAEV <mark>.</mark>	L <mark>S</mark> NVKF I Q <mark>E</mark> KKL I G	YFDE I	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	EDTF KALE <mark>M</mark>	GAVE ILI <mark>VW</mark> ENL <mark>I</mark>	DV <mark>CRY</mark> A <mark>LKN</mark> HSS	<mark>DEE</mark> K <mark>ILHL</mark> NP
Caenorhabditis briggsae 🧕	YG <mark>G</mark> EN <mark>G</mark> FNQJ	AIEL <mark>A</mark> A <mark>D</mark> T	L <mark>A</mark> SVKFIQEKKLIG	FYFDEI	SQDTGK <mark>Y</mark> VFGVI	KDTLAALE <mark>M</mark>	GAVETLI <mark>CW</mark> ENL <mark>I</mark>	<mark>DIVRY</mark> K <mark>MKN</mark> SDG	<mark>EDILLNL</mark> RP
Monosiga brevicollis a <mark>S</mark>	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELST <mark>D</mark> V	L <mark>SNVKFIA</mark> EKKLIA:	SYFDE I	SQDTGK <mark>Y</mark> CFGV <mark>I</mark>	EDT <mark>M</mark> KALE <mark>M</mark>	GAVETL <mark>MVW</mark> ENL <mark>I</mark>	ETM <mark>RY</mark> E <mark>LKN</mark> PDG	QVE <mark>V</mark> KF <mark>L</mark> RP
Arabidopsis thaliana 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAE I	L <mark>ANVKF IQ</mark> EK <mark>R</mark> L IG	KYF <mark>E</mark> E I	SQDTGK <mark>Y</mark> VFGV <mark>I</mark>	EDTLNALES	GA <mark>I</mark> ETLI <mark>VW</mark> ENLI	<mark>D INRYV<mark>M</mark>KN</mark> SAT <mark>G</mark> -	<mark>E</mark> TV <mark>I</mark> K <mark>HL</mark> NK
Vitis vinifera 😒	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELS <mark>S</mark> EI	L <mark>SNVKFIQ</mark> EK <mark>R</mark> LIG	KYF <mark>E</mark> E I	SQDTGK <mark>Y</mark> VFGV <mark>I</mark>	DDTLKALE <mark>M</mark>	GAVETLI <mark>VW</mark> ENL <mark>I</mark>	DIS <mark>RYVLKN</mark> NIT <mark>G</mark> -	<mark>E</mark> IV <mark>I</mark> K <mark>HL</mark> NK
Dictyostelium discoideum 🗧	YG <mark>GD</mark> N <mark>G</mark> FNQJ	LIELS <mark>G</mark> EV <mark>I</mark>	L <mark>S</mark> SVKFIQ <mark>E</mark> KKLIS	D <mark>FFE</mark> I	AQDTGK <mark>Y</mark> CFG <mark>I</mark> .	ADTLKAL <mark>DL</mark>	SAAHTLI <mark>VWE</mark> SLI	ETI <mark>RYLLR</mark> LPTG	<mark>EE</mark> K <mark>VI</mark> FLNK
Aspergillus nidulans 😒	YG <mark>GEN</mark> GFNQJ	LIELSAET <mark>I</mark>	L <mark>SNVKFV</mark> QEKKLIG	KYF <mark>E</mark> E I	SQDTGKVC YGVI	EDTLKALE <mark>L</mark>	GACETLI <mark>VY</mark> ENL <mark>I</mark>	DVT <mark>RWVLKN</mark> SEG	NEVVVHTTK
Gibberella zeae 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELS <mark>S</mark> ET	LGNVKF IQ <mark>E</mark> KKL IG	KYF <mark>E</mark> E I	SQDTGKVCVSI	EDTLKALE <mark>L</mark>	GAVETLI <mark>VF</mark> ENL <mark>I</mark>	EITR <mark>WVLK</mark> DNNG	S <mark>E</mark> I <mark>ILH</mark> TTK
Podospora anserina 😒	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIEL <mark>AS</mark> ET	LGNVKF IQ <mark>E</mark> KKL IG	KYF <mark>E</mark> E I	SQDTGRIC YGVI	EDTLKALE <mark>L</mark>	GAVETLI <mark>VF</mark> ENL <mark>I</mark>	EVT <mark>RWVLK</mark> DSNG	
Candida albicans 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAET <mark>I</mark>	L <mark>ANVKFV</mark> Q <mark>E</mark> KKLLE.	AYF <mark>E</mark> E I	SQDTGKFCYGI	EDTLKAL <mark>DL</mark>	SCEK <mark>IIVY</mark> ENLI	NTI <mark>RY</mark> T <mark>LK</mark> DIEG	<mark>EE</mark> V <mark>V</mark> AHVNP
Pichia striptis 😒	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAET <mark>I</mark>	L <mark>ANVKF<mark>V</mark>Q<mark>E</mark>KKL<mark>L</mark>NI</mark>	EYFDEI	SQDSGKFCYGII	EDTLKAL <mark>DL</mark>	GACET <mark>VIVY</mark> ENLI	N <mark>IIRY</mark> T <mark>LK</mark> DVEG	VEVVAHANP
🚽 Saccharomyces cerevisiae 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAE A	<mark>lanvkyv</mark> q <mark>e</mark> kkl <mark>l</mark> e.	AYFDEI	SQDTGK <mark>F</mark> CYGII	DDTLKAL <mark>DL</mark>	GAVERLI <mark>VF</mark> ENL <mark>I</mark>	TI <mark>RY</mark> TF <mark>K</mark> DAEDN-	<mark>e</mark> v <mark>i</mark> kfae <mark>p</mark>
Yarrowia lipolytica 🗧	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELSAET <mark>I</mark>	LSNVKF <mark>V</mark> QEKKLLT(YFDE I	SMD <mark>SGKFC</mark> YGYI	DETLKAL <mark>DL</mark>	GACET <mark>VIVY</mark> ENLI	<mark>DIC</mark> RMT <mark>LKN</mark> NDG	<mark>EE</mark> T <mark>IVHI</mark> KK
Filobasidiella neoformans 😒	YG <mark>GENG</mark> FNQJ	LIEL <mark>A</mark> ADS	LANVKF <mark>V</mark> QEKKLIC	YFDEI	ALDTGK <mark>Y</mark> CFG <mark>I</mark> I	ND TLKALE <mark>M</mark>	GAVETLI <mark>VW</mark> ENL <mark>I</mark>	DMTRNTLRNAAG	<mark>EE</mark> I <mark>IV</mark> FST <mark>P</mark>
Cryptosporidium hominis 🗧	YG <mark>GD</mark> N <mark>G</mark> FNQJ	AIELS <mark>SDA</mark>	L ONVKF <mark>V</mark> OEKKLIT	KF F DE V	'AQDTGK <mark>YVY</mark> G <mark>I</mark> I	N <mark>ETLQALE</mark> M	GA <mark>I</mark> ELLI <mark>VW</mark> ENLI	ETK <mark>RMVVKN</mark> PST <mark>G</mark> -	<mark>E</mark> EK <mark>V</mark> F <mark>L</mark> NS
Plasmodium falciparum 😒	;YG <mark>GD</mark> N <mark>G</mark> FNQ3	LIELS <mark>SEA</mark>	L <mark>ONVKFIQE</mark> KKLIG	KFFEEI	AQDTGKVVYGI	DDTLKALE <mark>I</mark>	GAVELLI <mark>LY</mark> EGLI	<mark>DIIRLTTKN</mark> PVTN-	QTKT <mark>MHI</mark> S <mark>P</mark>
Theileria parva 🔿	YG <mark>GENG</mark> FCQI	LIELS <mark>S</mark> EC	L <mark>SNVKF I</mark> H <mark>E</mark> KKL IK	RFFDEI	AHDTGK <mark>Y</mark> VYGV	Y <mark>D T</mark> VNALEN	SMIEVLI IYEQLI	<mark>EIMR</mark> VLVKNPSTN-	T <mark>E</mark> S <mark>VL</mark> LLNH
Entamoeba dispar 😒	YG <mark>GMN</mark> GFNQJ	LIELSAET.	LR <mark>NVKF</mark> VA <mark>EK</mark> DLINS	5 <mark>F MD</mark> N I	KMDTGK <mark>F</mark> VFGV	C <mark>E</mark> TLKALE <mark>M</mark>	GAVERLI <mark>VW</mark> ENLI	PTI <mark>RIELK</mark> HPQTD-	<mark>E</mark> RK <mark>VLYL</mark> KK
Blepharisma japonicum 🧕	YG <mark>GENG</mark> F TQJ	LIELSA <mark>D</mark> T	L <mark>SNIKFIR</mark> EKKVMSI	KF F E E V	AQDTKKYCYGVI	ED TMKTL IM	GAVEV <mark>ILLF</mark> ENLI	NFT <mark>RYVLKN</mark> PTT <mark>G</mark> -	VEKTLYLTP
Loxodes striatus N	IYG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELS QVQ	LQ <mark>NVKF I</mark> K <mark>EKNL I</mark> T	KL <mark>FE</mark> EV	'AQNSITVCYGL'	TD T <mark>M</mark> KALE <mark>M</mark>	GAVETL <mark>VIW</mark> ENLI	FIW <mark>F</mark> K <mark>LKN</mark> PVTK-	<mark>E</mark> EST <mark>VVL</mark> SP
Didinium nasutum 😒	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LIELS <mark>SDA</mark>	LKS <mark>VKFI</mark> H <mark>EKK</mark> VIG	F FDEI	AKDTGK <mark>YVF</mark> G <mark>I</mark> I	KDTLEAMDM	S <mark>SVDILIIY</mark> ENL	YN <mark>RL ILR</mark> D ANDN-	- IVNE T <mark>LH</mark> KNK
Encephalitozoon cuniculi 🛛	IYG <mark>G</mark> ES <mark>G</mark> LNQJ	LIELCE <mark>D</mark> V	LKD <mark>VK</mark> LSK <mark>EKKIL</mark> Q	RF FNE I	NTESGRFCF TMI	R <mark>DT<mark>M</mark>QC<mark>LE</mark>M</mark>	GAVETLI <mark>VY</mark> EG		LS
Trypanosoma cruzi 🧕	HP <mark>GD</mark> V <mark>G</mark> LNQJ	A I DL <mark>AA</mark> DA	LTG <mark>VK</mark> L <mark>VQEKKLL</mark> C	S <mark>FFDQI</mark>	ACDTQMYCFGVI	ND T <mark>M</mark> KCLEA	GAVETLI <mark>VY</mark> EDL <mark>I</mark>	EMS <mark>RY</mark> T <mark>IVKNRGT</mark> F	<mark>EE</mark> E <mark>V</mark> TIRIM
Trichomonas vaginalis A 🖯	YG <mark>GE</mark> E <mark>GFNQ</mark> T	TK <mark>MAA</mark> PL	LAD <mark>VR</mark> LVREQELLC	LFDTI	GTN- <mark>G</mark> PCA <mark>FG</mark> I	K <mark>ETMMA</mark> YDS	GA <mark>IET</mark> MILWDELI	W <mark>WYR</mark> CT <mark>M</mark> EKDNG	<mark>D</mark> SE <mark>V</mark> EYYT-
Paramecium tetraurelia N	IYG <mark>GE<mark>Q</mark>GLNQJ</mark>	VOLSOES	LLE <mark>VKYI</mark> R <mark>EK</mark> NLVGO	D <mark>FFE</mark> NI	DK <mark>DTG</mark> LVV <mark>Y</mark> GV	C <mark>DTMRAVE</mark> S	TIKTLVCVDTL	QYL <mark>R</mark> LECQSKQ	- T <mark>e</mark> qka <mark>i</mark> kyvk
Tetrahymena thermophila 😒	YG <mark>GENG</mark> LNQJ	IEL <mark>A</mark> QES	L TNVKF <mark>V</mark> QEKN <mark>V I</mark> SI	FFDCI	AIDSGTVV <mark>YGV</mark>	OT <mark>M</mark> OLLLD	VIENILCFEEL	TTL <mark>R</mark> VTR <mark>KN</mark> KVT	<mark>E</mark> QITH <mark>I</mark> F <mark>I</mark> PP
Gillardia theta 😒	YG <mark>GE I</mark> GFNKJ	LIENS <mark>S</mark> SV	LD <mark>QLKCIK<mark>EKKII</mark>E:</mark>	S <mark>F</mark> FDEI	EK <mark>DTGK</mark> YV <mark>Y</mark> GCI	EETCN <mark>SL</mark> TN	GFLSK <mark>IILWENL</mark>	EIERMVYIDSFTN-	LE <mark>IV</mark> KFKK
Eschaneustila sp 😒	YG <mark>G</mark> EN <mark>G</mark> FNQJ	LITL <mark>AAD</mark> A	L <mark>ANVKFV</mark> AEKKLIS	K <mark>F F E</mark> E I	ALDTGMIVFGV	HD TMRALE Q	GALETLML YED II	DMMRYQLKHPVKG-	DTR <mark>VLYL</mark> TS
Holosticha sp. 😒	YG <mark>GENG</mark> LNE	LITL <mark>AAD</mark> A	l <mark>snvkfvae</mark> kkl <mark>v</mark> si	KF F E E I	ALDTGMIVFGV	DDT <mark>MR</mark> ALE <mark>M</mark>	GA <mark>IET</mark> MLLFEDLI	EVT <mark>RYV</mark> VKNPLK <mark>G</mark> -	STKT <mark>L</mark> L <mark>L</mark> NP
Uroleptus sp. 😒	YG <mark>GENG</mark> LNE	LITL <mark>AAD</mark> A	L TNVKFV TEKKLVS	KF F E E I	ALD <mark>SG</mark> MIVFGVI	EDSMRALE <mark>M</mark>	GALETLLMFEEL	<mark>D I TRYV I</mark> KNPAK <mark>G</mark> -	<mark>E</mark> TKT <mark>LYL</mark> NA
Oxytricha trifallax 😒	YG <mark>GENG</mark> LNE	ITL <mark>AAE</mark> A	<mark>l tnvkf</mark> va <mark>e</mark> kklvs	KF F E E I	ALDTGMIVFGV	DDTMKALEL	GAVETVLLFEEL	<mark>D INRYVLKN</mark> PVK <mark>G</mark> -	DTKT <mark>IYL</mark> NS
Tetmena pustulata 😒	YG <mark>GENG</mark> LNE	LITL <mark>A</mark> AEA	<mark>l tnvkfv</mark> a <mark>ekklv</mark> si	KF F EE I	ALDTGMIVFGV	DDT <mark>M</mark> KALE <mark>L</mark>	GAVETVLLFEEL	<mark>D I</mark> NG <mark>YVLKN</mark> PVK <mark>G</mark> -	<mark>E</mark> TKT <mark>IYL</mark> NS
Stylonychia lemnae 🗧	YG <mark>GENG</mark> LNE	TLSADA	L TNVKFV AEKKLVS	FFEOI	SLDTGMIVFGV	CDT <mark>M</mark> KALE <mark>L</mark>	GAVET <mark>ILLF</mark> EEL	TRYVIKNPVKG-	DTRTLFLNP
Stichotrichida sp. Alaska 🗧	YG <mark>GENG</mark> LNE	THSADA	L TNVKF <mark>V</mark> AEKKLVS	FFEEI	ALDTGMIVFGV	EDTMRALEL	GAVET ILLFEDL	TRFALKNPVKG-	DTKILYLNP
Euplotes aediculatus B 🗧	YG <mark>GENG</mark> FSOI	IS <mark>LAED</mark> A	L <mark>SNVKF</mark> VE <mark>EKNLI</mark> S	YFEOI	ALDTGMIVFGVI	EDTLHSLE I	GALDLLMCFENL	EINRYEIRDSAN	- DE IK <mark>I</mark> YNLNK

	350	360	370	380	390	400	410	420	430
Homo sapiens	EQE <mark>K</mark> -	D <mark>K</mark> S <mark>H</mark> FTDKETGQ	EH <mark>ELIE</mark> S-MP <mark>L</mark>	LE UF ANN YKRF	GATLE IVT	dksq <mark>egs</mark> qfvb	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RY <mark>RVDF</mark> QG <mark>M</mark> EYQGG <mark>D</mark>	D <mark>E</mark> FF <mark>D</mark> LDD
Gallus gallus	EQE <mark>K</mark> -	D <mark>K</mark> S <mark>H</mark> FTDKETGQ	EH <mark>ELIE</mark> S-MP <mark>L</mark>	LEWF ANNYKKF	GATLE IVT	dksq <mark>egs</mark> qfvf	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RY <mark>RVDF</mark> QG <mark>M</mark> EYQGG <mark>D</mark>	D <mark>E</mark> FF <mark>D</mark> LDDY
Monodelphis domestica	EQE <mark>K</mark> -	D <mark>K</mark> S <mark>H</mark> FTDKETGQ	EH <mark>ELIE</mark> S-MP <mark>L</mark>	LEWF ANNYKRF	GATLEIVT	dksq <mark>egs</mark> qfvf	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RY <mark>RVDF</mark> QG <mark>M</mark> EYCGG <mark>D</mark>	D <mark>E</mark> FF <mark>D</mark> LDD
Aedes aegypti	EQE <mark>K</mark> -	D <mark>KSH</mark> FTDKE <mark>SGV</mark>	E <mark>MELVE</mark> S-QP <mark>L</mark>	<mark>leulannyks</mark> f	GATLE I <mark>I</mark> T	dksq <mark>egsqf</mark> v <mark>f</mark>	<mark>(G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RYKVDFQS <mark>M</mark> QL <mark>DE</mark> LD	N <mark>D</mark> GF <mark>D</mark> LDD
Drosophila melanogaster	EQE <mark>K</mark> -	D <mark>KSH</mark> FTDKE <mark>SGV</mark>	E <mark>MELIE</mark> S-QP <mark>L</mark>	<mark>l</mark> eul ann yk mf	GATLE I I T	dksq <mark>egsqf</mark> v <mark>f</mark>	<mark>RG</mark> FG <mark>G</mark> IGG <mark>I</mark> LI	<mark>rykvdf</mark> os <mark>m</mark> ql <mark>de</mark> ld	N <mark>D</mark> GF <mark>D</mark> LDD
Nasonia vitripennis	EQE <mark>K</mark> -	D <mark>KTH</mark> FTDKE <mark>SGV</mark>	E <mark>lelve</mark> c-qp <mark>l</mark>	<mark>l</mark> eul ann yksf	GATLE I <mark>I</mark> T	dksq <mark>egsqf</mark> v <mark>f</mark>	<mark>RG</mark> FG <mark>G</mark> IGG <mark>I</mark> LI	<mark>rykvdf</mark> QS <mark>M</mark> QL <mark>EE</mark> VE	F <mark>D</mark> NF <mark>D</mark> YDD
Bombyx mori	EQE <mark>K</mark> -	D <mark>KSH</mark> FTDKE <mark>SGV</mark>	ELELVEC-QPL	<mark>l</mark> ewla <mark>nnyk</mark> sf	GATLE I I T	DKSQ <mark>EG</mark> SQFV <mark>F</mark>	<mark>{G</mark> FG <mark>G</mark> IGG <mark>L</mark> LI	RYKVDF OS <mark>M</mark> QLDDEE	ID-NLY <mark>DIDD</mark> Y
Nematostella vectensis	EQE <mark>K</mark> -	D <mark>KTH</mark> FIDS <mark>E</mark> SGV	E <mark>LELVD</mark> K-NP <mark>L</mark>	LE UL ANN Y K <mark>N</mark> F	GATLE I <mark>I</mark> T	DKSQ <mark>EG</mark> AQFCF	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RY <mark>RVDF</mark> QS <mark>M</mark> EY <mark>D</mark> GDF	×L−− <mark>E</mark> dY <mark>d</mark> d <mark>EE</mark> Y
Strongylocentrotus purpuratus	EQE <mark>K</mark> -	D <mark>KTY</mark> FIDK <mark>D</mark> TGV	E <mark>lelve</mark> s-ia <mark>l</mark>	LEWLANNYKS <mark>y</mark>	GATLE I <mark>I</mark> T	D <mark>RSQ<mark>EG</mark>SQF</mark> CF	(<mark>G</mark> FG <mark>G</mark> IGG <mark>L</mark> L)	RY <mark>RVDF</mark> QQ <mark>L</mark> DY <mark>DEDD</mark>	D <mark>D</mark> YG <mark>D</mark> Y <mark>DD</mark> Y
Caenorhabditis briggsae	DE <mark>E</mark> K-	D <mark>KT<mark>H</mark>FTDKE<mark>S</mark>GQ</mark>	DMEIIET-MPL	LEWF ANNYKTF	GAALEIVT	dksq <mark>egaqfv</mark> f	<mark>(G</mark> FG <mark>G</mark> IGG <mark>L</mark> L)	RY <mark>RVD</mark> LAH <mark>V</mark> DL <mark>EDE</mark> L	JDNI <mark>D</mark> L <mark>DD</mark> Y
Monosiga brevicollis a	DQET-	DAS <mark>HF</mark> Q <mark>DKD-G</mark> Q	DLETIDK-MQ <mark>L</mark>	LEW <mark>M</mark> ANHY <mark>R</mark> EF	GTVLE IVT	D <mark>RSQEGSQF</mark> C <mark>F</mark>	R <mark>G</mark> FG <mark>G</mark> IGG <mark>L</mark> LI	RY <mark>RVDF</mark> QA <mark>M</mark> EF <mark>DEDE</mark>	FADA <mark>D</mark> L <mark>DD</mark> Y
Arabidopsis thaliana	E <mark>QE</mark> A-J	NTEN <mark>F</mark> KVA <mark>DS</mark> DL	A <mark>LDV</mark> E <mark>E</mark> K-LS <mark>L</mark>	<mark>LEWLA</mark> NE Y <mark>R</mark> RF	GCALEFVT	N <mark>KSQ</mark> EG <mark>SQF</mark> C <mark>F</mark>	R <mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> LI	<mark>ry</mark> c <mark>ld</mark> mtafds <mark>ed</mark> g <mark>e</mark>	ALDDDS <mark>E</mark>
Vitis vinifera	E <mark>qe</mark> s-i	NQS <mark>HF</mark> R <mark>D</mark> TA <mark>T</mark> SA	ELEVQEK-MS <mark>L</mark>	<mark>LEWF A</mark> NE YKR <mark>F</mark>	GCTLEFVT	N <mark>KSQ</mark> EG <mark>SQF</mark> C <mark>F</mark>	<mark>kg</mark> fg <mark>g</mark> igg <mark>i</mark> li	<mark>ry</mark> c <mark>ld</mark> mrsfdevs <mark>dd</mark>	G <mark>E</mark> NY <mark>D</mark> DS <mark>D</mark> -
Dictyostelium discoideum	D <mark>Q</mark> N <mark>K</mark> -	<mark>d</mark> asv <mark>fkdke</mark> sgL	DY <mark>EIVE</mark> E-MP <mark>I</mark>	<mark>VEWFANNYKN</mark> F	GA <mark>SLEFVT</mark>	N <mark>KSQEG<mark>S</mark>QF</mark> C <mark>I</mark>	(<mark>G</mark> FG <mark>GL</mark> GG <mark>L</mark> L)	RYC <mark>VDF</mark> AQ <mark>L</mark> NDF <mark>D</mark> NF	'DEN <mark>E</mark> YD <mark>D</mark> SD
Aspergillus nidulans	A <mark>qe</mark> e-i	N <mark>K</mark> EF <mark>F</mark> LDK <mark>DTG</mark> A	E <mark>MEVVD</mark> Q-SSF	<mark>lewlaenykd</mark> f	GATLEFV <mark>S</mark>	DKSSEGNQFVP	(<mark>g</mark> fg <mark>gigai</mark> l)	<mark>rykv</mark> n <mark>f e</mark> q <mark>l</mark> ad ys <mark>de</mark>	DEFYDG <u>R</u> CTML
Gibberella zeae	O <mark>QE</mark> O <mark>S</mark>	N <mark>R</mark> DK <mark>F</mark> L <mark>DKETG</mark> Q	E <mark>MEIV</mark> SQ-ESF	LEW <mark>I</mark> AEHYKDF	GTTLEFV <mark>S</mark>	D <mark>R</mark> ST <mark>EG</mark> N <mark>QFV</mark> F	(<mark>G</mark> FG <mark>G</mark> IGG <mark>L</mark> L)	RYKV <mark>NFE</mark> QLADVSDD	DE YYDG <mark>E</mark> LTTI
Podospora anserina	O <mark>O</mark> DA <mark>A</mark>	N <mark>R</mark> DR <mark>FMDKETG</mark> Q	E <mark>MEVV</mark> SQ-ESF.	LEW <mark>I</mark> AEHYKDF	GTTLEFV <mark>S</mark>	D <mark>R</mark> ST <mark>EG</mark> NQFVF	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RYKV <mark>NF</mark> EQLNEVDDD	DEYYDD
Candida albicans	ELPD-	- <mark>K</mark> SWCL <mark>DK</mark> K <mark>TG</mark> T	E <mark>MEIV</mark> KE-ESF	LEWL AEN YKN <mark>Y</mark>	GA <mark>E</mark> LEFVT	DKS <mark>EGAQFV</mark> Q	2 <mark>6</mark> F6 <mark>6</mark> I6 <mark>AI</mark> L1	RYKV <mark>NFEQL</mark> ADESSE	DE YYDD <mark>D</mark> DD <mark>B</mark> F
Pichia striptis	DLAD-	- <mark>k</mark> swce <mark>dk</mark> k <mark>tg</mark> t	DMEII <mark>KE-ESF</mark>	LEWL AEN YKN <mark>Y</mark>	GANLEFVT	D <mark>RS</mark> S <mark>EGAQFV</mark> Q	2 <mark>6</mark> F6 <mark>6</mark> I6 <mark>AM</mark> L1	RYKV <mark>NFEQL</mark> VDESDD	DEYFDD <mark>D</mark> DDF1
Saccharomyces cerevisiae	EAKD-	– <mark>K</mark> SFAI <mark>DK</mark> A <mark>TG</mark> ––Q	EMDVVSE-EPL	<mark>I</mark> EWLAANYKNF	GATLEF IT	DKS <mark>EGAQFV</mark> I	T <mark>G</mark> FG <mark>G</mark> IG <mark>AM</mark> LI	RYKV <mark>NF</mark> EQLVDESED	EYY <mark>D</mark> ED <mark>E</mark> GS <mark>D</mark> Y
Yarrowia lipolytica	GTPT-	-EE <mark>Y</mark> LI <mark>DKE</mark> -GN	E <mark>LEVVD</mark> E-IP <mark>L</mark>	<mark>LEWLA</mark> EHYKDF	GAQLEFVT	D <mark>RS</mark> S <mark>EGAQFV</mark> Q	2 <mark>6</mark> F6 <mark>6</mark> I6 <mark>AL</mark> LI	RYKV <mark>NFEQL</mark> VEESDD	EYY <mark>D</mark> D
Filobasidiella neoformans	ADKD-	- <mark>R</mark> EK <mark>FMDK</mark> STGL	E <mark>ME</mark> QAAEPQP <mark>L</mark>	L <mark>EWF</mark> AEK <mark>YR</mark> EF	GATLEFVT	N <mark>KSQ</mark> EG <mark>S</mark> QFVF	(<mark>G</mark> FG <mark>G</mark> IGG <mark>L</mark> L)	RYKVDFND <mark>L</mark> GDLEDD	DD <mark>E</mark> FYGSD <mark>ED</mark> S
Cryptosporidium hominis	PT <mark>E</mark> QH	DESK <mark>FKD</mark> P <mark>ETG</mark> A	ELDVIE I-LPL	T <mark>EWL</mark> VNT <mark>Y</mark> QN <mark>Y</mark>	GAQLEFVT	N <mark>KSQ</mark> EGN <mark>QF</mark> Q <mark>I</mark>	(<mark>g</mark> fg <mark>f</mark> gg <mark>i</mark> l)	<mark>rykvdf</mark> odyavv <mark>ed d</mark>	LD <mark>E</mark> FI
Plasmodium falciparum	CD <mark>EK</mark> -	QESLY <mark>KE</mark> NN <mark>V</mark>	E <mark>LEVVE</mark> K-IS <mark>L</mark>	T <mark>DW</mark> VIG <mark>NYK</mark> KY	GASL <mark>D</mark> FVT	N <mark>KSQ</mark> EG <mark>AQF</mark> Q <mark>F</mark>	(<mark>g</mark> fg <mark>f</mark> gg <mark>m</mark> l)	<mark>ryk<mark>id</mark>lnlyde<mark>dve</mark>s</mark>	5DVELF
Theileria parva	EQER-	––DEANF <mark>KD</mark> NN–– <mark>V</mark>	DL <mark>EVLD</mark> K-IP <mark>L</mark>	IEWI IN <mark>ny</mark> hny	G <mark>STLD</mark> FVT	N <mark>KSQ</mark> EG <mark>S</mark> QFQS	6 <mark>6</mark> F6 <mark>6</mark> I66 <mark>I</mark> L1	RYK <mark>LE</mark> AGYETN <mark>DE</mark> NE	DDDDDSFM
Entamoeba dispar	ES <mark>E</mark> A <mark>a</mark>	ENGVIK <mark>D</mark> PETGV	DFC <mark>LVE</mark> S-ESF	VDWL <mark>S</mark> KHYKEF	GAHLEFVT	DKSQ <mark>EG<mark>A</mark>QFAP</mark>	(<mark>g</mark> fg <mark>g</mark> igg <mark>i</mark> l)	RYC <mark>L</mark> SM <mark>DEL</mark> DDNFNM	INE <mark>E</mark> FEH <mark>E</mark> E <mark>DD</mark> I
Blepharisma japonicum	E <mark>qe</mark> e-	––N <mark>H</mark> DNF M <mark>E</mark> NG––E	E <mark>LE</mark> ALE <mark>K-GPL</mark>	P <mark>EW</mark> IVD <mark>NY</mark> MK <mark>F</mark>	gaglef <mark>i</mark> t	D <mark>RSQ<mark>EGAQF</mark>VF</mark>	R <mark>G</mark> FG <mark>GL</mark> G <mark>A</mark> FLI	RYC <mark>VD</mark> MAH <mark>L</mark> NAG <mark>EEE</mark>	LD <mark>EE</mark> WD <mark>D</mark> DFM-
Loxodes striatus	Q <mark>Q</mark> AT-	<mark>ek</mark> n <mark>hf</mark> q <mark>d</mark> eanqc	E <mark>L</mark> NIVE <mark>R-FAL</mark>	T <mark>EWL</mark> ID <mark>NYK</mark> N <mark>Y</mark>	GARLEFVT	D <mark>R</mark> SQ <mark>EGSQF</mark> VH	(<mark>GFG<mark>G</mark>ICGFL)</mark>	RYE <mark>V</mark> N <mark>F</mark> EK <mark>M</mark> EFCEEE	GYL <mark>D</mark> PD <mark>E</mark> DFL-
Didinium nasutum	CPSG-	SK <mark>y</mark> knet <mark>tg</mark> V	EY <mark>EVLD</mark> N-IP <mark>L</mark>	T <mark>EW</mark> FMD <mark>NYK</mark> K <mark>Y</mark>	V <mark>SHLEIVT</mark>	dks <mark>egsqfl</mark> e	(<mark>G</mark> FG <mark>G</mark> IGG <mark>I</mark> L)	RYK <mark>MD</mark> T <mark>D</mark> FDDT <mark>E</mark> NNN	JEWN <mark>D</mark> DDFI
Encephalitozoon cuniculi			E <mark>L</mark> KDEELF	VD W <mark>I AENYKSF</mark>	GCILAFV <mark>S</mark>	<mark>dks</mark> a <mark>eg</mark> m <mark>QF</mark> If	E <mark>GFG<mark>GV</mark>GG<mark>I</mark>LI</mark>	RY <mark>RVD</mark> M <mark>E</mark> DHLDG <mark>D</mark> YS	SV <mark>DD</mark> EEIF
Trypanosoma cruzi	TD AN <mark>A</mark>	A <mark>K</mark> EN IHAH <mark>E</mark> A <mark>G</mark> K	TQNE <mark>IE</mark> E-ENF	VD WL ATNYQKF	GCTLELVT.	N <mark>RSQ</mark> EGT <mark>QFV</mark> F	R <mark>g</mark> fg <mark>g</mark> igg <mark>i</mark> li	<mark>ryk<mark>ld</mark>lma<mark>l</mark>rdv<mark>e</mark>kk</mark>	(DD <mark>DD</mark> ERIAANN
Trichomonas vaginalis A		E <mark>Y</mark> CL <mark>EK</mark> GDH <mark>LK</mark> S	EYHH <mark>L</mark> KE <mark>K</mark> IL <mark>L</mark>	T <mark>EW<mark>MA</mark>DH<mark>HK</mark>EK</mark>	GAKLEFVT	DKSP <mark>EGAQFI</mark> P	(<mark>G</mark> LS <mark>GIG<mark>AL</mark>L)</mark>	R <mark>F</mark> C <mark>M</mark> S <mark>FD</mark> VYKENTDD	DGF <mark>D</mark> SDFD <mark>DD</mark> F
Paramecium tetraurelia	G <mark>NE</mark> GY	<mark>E</mark> PGSLI <mark>E</mark> EKN <mark>G</mark>	EQF <mark>VI</mark> SV <mark>K</mark> EDL	VEHLSEK <mark>FK</mark> DY	<mark>G</mark> LDFQL <mark>I</mark> T	DH <mark>SVEG</mark> NQFMH	(<mark>GFS<mark>GL</mark>GGFL)</mark>	R <mark>FKID</mark> MDYLVQC <mark>ED</mark> W	JKD <mark>ED</mark> EDFI
Tetrahymena thermophila	NELN-	NPK <mark>HF</mark> K <mark>D</mark> G <mark>E</mark> HEL	EKIE <mark>VE</mark> NL'	T <mark>EWLA</mark> EH <mark>y</mark> SE <mark>F</mark>	GAEL Y <mark>F I</mark> T	DKSAEGC <mark>QF</mark> VI	(<mark>GFS<mark>G</mark>IGGFL)</mark>	RYKVDLEH <mark>I</mark> VNPNDE	YNY <mark>E</mark> EE <mark>E</mark> GFI-
Gillardia theta	I <mark>NE</mark> C-	D <mark>K</mark> TECL <mark>D</mark> ENPK	L <mark>V</mark> FSA <mark>K</mark> CN <mark>V</mark>	IDW <mark>V</mark> IENKNKC	ETQ <mark>I</mark> YI <mark>IT</mark>	D <mark>RT</mark> P <mark>EGAQFV</mark> F	(<mark>g</mark> fg <mark>g</mark> igg <mark>i</mark> l)	KF	
Eschaneustila sp	N <mark>QE</mark> K-	DSKF <mark>FQDAETG</mark> <mark>L</mark>	PF <mark>EVV</mark> SG-DP <mark>L</mark>	A <mark>ewl</mark> ch <mark>ny</mark> on <mark>y</mark>	gai <mark>v</mark> ef <mark>i</mark> t	DKSQ <mark>EG</mark> F <mark>QF</mark> TF	(<mark>g</mark> fg <mark>g</mark> iggfl)	<mark>rykie</mark> l <mark>e</mark> dgge <u>ca</u> ng	;GG <mark>DD</mark> FDPE <mark>ED</mark> F
Holosticha sp.	T <mark>QE</mark> K-I	NSK <mark>YF</mark> KDQ <mark>ET</mark> NT	d y <mark>dvm</mark> se-da <mark>l</mark> '	T <mark>EWL</mark> CH <mark>NF</mark> KNY	GAK <mark>IEF</mark> IT	dksq <mark>eg</mark> f <mark>qf</mark> vi	(<mark>g</mark> fg <mark>g</mark> iggfl)	<mark>ryk<mark>ie</mark>i<mark>e</mark>dhhg<mark>ed</mark>ga</mark>	AGG <mark>DD</mark> FDAET <mark>DF</mark>
Uroleptus sp.	V <mark>Q</mark> O <mark>K</mark> -	<mark>dsk<mark>yf</mark>kdas<mark>tg</mark>L</mark>	<mark>dldvi</mark> ae-ds <mark>l</mark> :	S <mark>ewi</mark> ch <mark>ny</mark> on <mark>y</mark>	GAT <mark>V</mark> EF <mark>I</mark> T	dksq <mark>eg</mark> f <mark>qf</mark> vf	(<mark>g</mark> fg <mark>g</mark> iggfl)	<mark>rykvd</mark> m <mark>e</mark> ehhnv <mark>e</mark> ga	lGG <mark>DD</mark> FDAET <mark>D</mark> F
Oxytricha trifallax	T <mark>O</mark> K-	DSK <mark>YF</mark> KD <mark>RETG</mark> M	DLD <mark>VV</mark> SE-DS <mark>L</mark>	A <mark>ewl</mark> ch <mark>ny</mark> on <mark>y</mark>	GAQ <mark>VEF</mark> IT	DKSQ <mark>EG</mark> F <mark>QF</mark> VF	(<mark>G</mark> FG <mark>G</mark> IGGFL)	<mark>RYKVD</mark> I <mark>E</mark> DHHG <mark>D</mark> LGA	lGG <mark>DD</mark> FDPDT <mark>D</mark> F
Tetmena pustulata	a <mark>q</mark> o <mark>k</mark> -	DQK <mark>YF</mark> KD <mark>RETG</mark> M	DLDVVSE-DS <mark>L</mark>	A <mark>EWL</mark> CH <mark>NY</mark> QN <mark>Y</mark>	GAQ <mark>VEF</mark> IT	DKSQ <mark>EG</mark> F <mark>QF</mark> VF	(<mark>GFG</mark> GI		
Stylonychia lemnae	T <mark>OO</mark> K-	DSK <mark>YF</mark> KDQA <mark>SG</mark> L	DMDVIAE-DQ <mark>L</mark>	A <mark>ewl</mark> ch <mark>ny</mark> on <mark>y</mark>	GAQ <mark>VEF</mark> IT	DKSQ <mark>EG</mark> Y <mark>QF</mark> VF	(<mark>G</mark> FG <mark>G</mark> IGGFL)	<mark>rykvd</mark> m <mark>e</mark> dalg <mark>d</mark> vg <mark>d</mark>	GG <mark>DD</mark> FDPDT <mark>D</mark> F
Stichotrichida sp. Alaska	T <mark>Q</mark> K-	DTK <mark>YF</mark> KDQA <mark>SG</mark> L	DMEIISE-DQ <mark>L</mark> .	A <mark>EWL</mark> CH <mark>NY</mark> QN <mark>Y</mark>	GAQ <mark>IEF</mark> IT	DKSQ <mark>EG</mark> F <mark>QF</mark> VI	(<mark>GFG</mark> GI		
Euplotes aediculatus B	EQE <mark>K</mark> -	<mark>d</mark> pk <mark>yf</mark> knek <mark>tg</mark> a	DL <mark>EII</mark> KS-GP <mark>L</mark>	S <mark>ewl</mark> ce <mark>ny</mark> sk <mark>f</mark>	GIK <mark>LEF</mark> IT	DKSQ <mark>EG</mark> F <mark>QFV</mark> I	I <mark>GFG<mark>G</mark>IGGFLI</mark>	R <mark>F KLE</mark> I <mark>E</mark> NND Y <mark>D</mark> H <mark>D E</mark>	IGG <mark>E</mark> EFNP <mark>DE</mark> I

Fig. S11 The Ramachandran map plot (ϕ and ψ torsion angles for the protein backbone) of all 24 conformers of the NMR families of solution structures of the closed (A) and open (B) conformers of the C-domain of human eRF1. Glycine residues are marked by triangles and all the other residues are shown as squares.

