

# Figure S2

	10	20	30	40	50	60	70	80	90	100
<b>H1</b>	--M----	TS- QVRQNFHQDC	EAAINRQINL	ELYASYVYLS	M--AYYFDRD	DQALHNFAKF	FKNQSH <del>EE</del> RE	HAEKLMKVQN	QRGGRIFLQD	VKKPEKDEWG
<b>H2</b>	--M----	TS- QVRQNFHQDC	EAAINRQINL	ELYASYVYLS	M--AYYFDRD	DQALHNFAKF	FKNQSH <del>EE</del> RE	HAEKLLTVQN	QRGGRIFLQD	VKKPEKDEWG
<i>D. rerio</i> 4	--M----	SS- QVRQNFEEAC	EAAVNRQINM	ELYASYVYLS	M--SYFDRD	DQALHNFAKF	FRHQSH <del>EE</del> RE	HAEKLMKFQN	QRGGRIFLQD	VKKPEKDEWG
<i>T. bernacchii</i> H	--M----	ES- QVRQNFHKDC	EAAINRQINL	ELYASYSYLS	M--AYYFDRD	DVALPGFAHF	FKQSE <del>EE</del> RE	HAEKLLKFQN	QRGGRIFLQD	VKKPDRDEWG
<i>T. newnesi</i> H	--M----	ES- QVRQNFHKDC	EAAINRQINL	ELYASYSYLS	M--AYYFDRD	DVALPGFAHF	FKHQSE <del>EE</del> RE	HAEKLMKQQN	QRGGRIFLQD	VKKPDRDEWG
<i>D. labrax</i> H	--M----	SS- QVRQNFHQDC	EAAINRQINL	ELYASYVYLS	M--AYYFDRD	DQALHNFAKF	FRNQSH <del>EE</del> RE	HAEKLMKVQN	QRGGRIFLQD	IRKPERDEWG
<i>S. maximus</i> H	--M----	SS- QVRQNFHQDC	EAAINRQINL	ELYASYVYLS	M--GYFDRD	DQALHNFAKF	FRNQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IRKPERDEWG
<i>P. crocea</i> H	--M----	SS- QVRQNFHQDC	EAAVNRQINL	ELYASYVYLS	M--AYYFDRD	DQALHNFAKF	FRNQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IRKPERDEWG
<i>S. salar</i> H	--M----	TS- QVRQNFHQDC	EAAINRQINL	ELYASYVYLS	M--AYYFDRD	DQALHNFAKF	FKNQSH <del>EE</del> RE	HAEKLMKVQN	QRGGRIFLQD	VKKPEKDEWG
<i>X. tropicalis</i> 3	--M----	TS- QVRQNYHQDC	EAAINRQINL	ELYASYVYLS	M--AYYFDRD	DVALKNFAKF	FLHQSH <del>EE</del> RE	HAEKLMKQVN	QRGGRIFLQD	VKKPDRDEWA
<i>H. sapiens</i> H	--MTTAS	TS- QVRQNYHQDS	EAAINRQINL	ELYASYVYLS	M--SYFDRD	DVALKNFAKY	FLHQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IKKPDCDDWE
<i>M. musculus</i> H	--MTTAS	PS- QVRQNYHQDA	EAAINRQINL	ELYASYVYLS	M--SCYFDRD	DVALKNFAKY	FLHQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IKKPDRDDWE
<i>R. norvegicus</i> H	--MTTAS	PS- QVRQNYHQDS	EAAINRQINL	ELYASYVYLS	M--SCYFDRD	DVALKNFAKY	FLHQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IKKPDRDDWE
<i>B. taurus</i> H	--MTTAS	PS- QVRQNYHQDS	EAAINRQINL	ELYASYVYLS	M--SYFDRD	DVALKNFAKY	FLHQSH <del>EE</del> RE	HAERLMKLQN	QRGGRIFLQD	IKKPDRDDWE
<i>E. caballus</i> H	--MTTAF	PS- QVRQNYHQDS	EAAINRQINL	ELHASVYVLS	M--SFYFDRD	DVALKNFAKY	FLHQSH <del>EE</del> RE	HAEKLMKLQN	QRGGRIFLQD	IKKPDQDDWE
<b>M1</b>	--M----	ES- QIRQNYHHDC	EAAINRMINM	EMFASYTYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<b>M2</b>	MKM----	KS- QVRQNYHDDC	EVAINRMINM	EMFASYTYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<b>M3</b>	MKI----	ES- QIRQNYHDDC	EVAINRMINM	EMFASYTYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLSFQN	KRGGRIILLQD	ITKPERDEWG
<i>D. rerio</i> 1	--M----	ETS- QIRQNYARDS	EAAINKMINL	ELYAGTYTYS	M--AHYFKRD	DVALPGFAKF	FKKNSE <del>EE</del> ERE	HAEKFMEFQN	KRGGRIILLQD	IKKPDRDVWG
<i>D. rerio</i> 2	--M----	DS- QVRQNYDRDC	EALINKMINL	ELYAGTYTYS	MATAFYFDRD	DVALPGFAKF	FKKNSE <del>EE</del> ERE	HAEKFMEFQN	KRGGRIILLQD	IKKPERDEWD
<i>D. rerio</i> 3	--M----	ETC- QIRQNYSDC	EALINKMINL	ELYAGTYTYS	M--AHYFKRD	DVALPGFAKF	FKNNSE <del>EE</del> ERE	HAEKFMEFQN	KRGGRIILLQD	IKKPGRDVWD
<i>D. rerio</i> 5	--M----	ETS- QVRQNYARDS	EAAINKMINL	ELYAGTYTYS	MASAHYFKRD	DVALPGFAKF	FKKNSE <del>EE</del> ERE	HAEKFMEFQN	KRGGRIILLQD	IKKPDRDVWG
<i>T. bernacchii</i> M (spl)	--M----	DS- QVRQNYHRDC	EAAVNRMINM	ELFASYSYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLTFQN	SRGGRIILLQD	IKKPERDEWG
<i>T. bernacchii</i> M (liv)	--M----	DS- QVRQNYHRDC	EAAVNRMINM	ELFASYSYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLTFQN	SRGGRIILLQD	IKKPERDEWG
<i>T. newnesi</i> M	--M----	DS- QVRQNYHRDC	EAAVNRMINM	ELFASYSYTS	M--AFYFDRD	DVALPGFAHF	FKENS <del>DE</del> ERE	HADKLLTFQN	SRGGRIILLQD	IKKPERDEWG
<i>S. maximum</i> M	--M----	ES- QVRQNYNRDC	EAAVNRMVNM	ELFASYTYTS	M--AFYFDRD	DVALPGFSHF	FKENSE <del>EE</del> ERE	HADKLLSFQN	NRGGRIILLQD	VKKPEKDEWG
<i>P. crocea</i> M	--M----	ES- QVRQNYHRDC	EAAINRMVNM	ELFASYTYTS	M--AFYFDRD	DVALPGFSHF	FKENS <del>DE</del> ERE	HAQKLLSFQN	KRGGRIILLQD	VKKPERDEWG
<i>S. ocellatus</i> M	--M----	ES- QVRQNYHRDC	EAAINRMVNM	ELFASYTYTS	M--AFYFDRD	DVALPGFSHF	FKENS <del>DE</del> ERE	HAQKLLSFQN	KRGGRIILLQD	VKKPERDEWG
<i>O. mykiss</i> H1	--M----	ES- QIRQNYHHDC	EAAINRMINL	EMFASYTYTS	M--AFYFDRD	DVALRGFAHF	FKENS <del>DE</del> ERE	HAEKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<i>O. mykiss</i> H2	--M----	ES- QIRQNYHHDC	EAAINRMINL	EMFASYTYTS	M--AFYFDRD	DVALSGFAHF	FKENS <del>DE</del> ERE	HADKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<i>O. mykiss</i> H3	--M----	ES- QIRQNYHHDC	EAAINRMINL	EMFASYTYTS	M--AFYFDRD	DVALRGFAHF	FKENS <del>DE</del> ERE	HADKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<i>S. salar</i> M	--M----	ES- QIRQNYHHDC	ERAINRMINM	EMFASYTYTS	M--AFYFDRD	DVALPGFAHF	FKENSE <del>EE</del> ERE	HADKLLSFQN	KRGGRIILLQD	IKKPERDEWG
<i>X. tropicalis</i> 1	--M----	IS- QVRQNYSHDC	EAAVNRMINM	EMFASYTYLS	M--SHYFDRD	DVALHHVAEF	FKEQSK <del>EE</del> ERE	CAEKLMKCQN	KRGGRIILLQD	IKKPERDEWG
<i>X. tropicalis</i> 2	MSA----	QS- QIRQNYHEES	EAGINRIANL	ELQTSYVYLS	L--GYFDRD	DVALSKFSKY	YRELSEKKRD	HAEDLLKFQN	KRGGRIILLQD	IKKPDADDEWG
<i>X. tropicalis</i> 4	--M----	QS- QVRQNFNSDC	EAAINRMVNM	ELYASYVYLS	M--SYFDRD	DVALHHVAKF	FKEQSH <del>EE</del> ERE	HAEKFLKYQN	KRGGRIILLQD	IKKPERDEWG
<i>H. sapiens</i> L	--M----	SS- QIRQNYSTDV	EAAVNSLVNL	YLQASYTYLS	L--GFYFDRD	DVALEGVSHF	FRELAE <del>EE</del> KRE	GYERLLKMQN	QRGGRIILLQD	IKKPAEDEWG
<i>M. musculus</i> L	--M----	TS- QIRQNYSTEV	EAAVNRVLNL	HLRASVYTYLS	L--SHYFDRD	DVALEGVGHF	FRELAE <del>EE</del> KRE	GAERLLEFQN	DRGGRIILLQD	VQKPSQDEWG
<i>R. norvegicus</i> L	--M----	TS- QIRQNYSTEV	EAAVNRVLNL	HLRASVYTYLS	L--GFFDRD	DVALEGVGHF	FRELAE <del>EE</del> KRE	GAERLLKLN	ERGGRIILLQD	VQKPSQDEWG
<i>B. taurus</i> L	--M----	SS- QIRQNYSTEV	EAAVNRVLNL	QLRASVYTYLS	L--GFYFDRD	DVALEGVGHF	FRELAE <del>EE</del> KRE	GAERLLKLN	QRGGRIILLQD	VQKPSQDEWG
<i>E. caballus</i> L	--M----	SS- QIRQNYSTEV	EAAVNRVLNL	YLRASVYTYLS	L--GFYFDRD	DVALEGVGHF	FRELAE <del>EE</del> KRE	GAERLLKMQN	QRGGRIILLQD	LQKPSQDEWG
<i>P. marinus</i>	--M----	TS- QVRQNYAQDV	EAAINRQINM	ELSASYVYLS	M--AYYFDRD	DVALNNFFKF	FKEQSH <del>EE</del> ERE	HAEKLMAYQN	KRGGRIILLQD	VKKPERDEWG

(continued)

	110	120	130	140	150	160	170	180	190	
<b>H1</b>	SGVEALESSL	QLEKSVNQSL	LDLHKVCSEH	NDPHMCDFIE	THYLDEQVKS	IKELGDWVTN	LRRMGA----	----PQNGMA	EYLFDKHTLG	KEST--
<b>H2</b>	SGVEALESAL	QLEKIVNQSL	LDLHKVCSEH	NDPHLCDFIE	THYLDEQVKS	IKELGDWVTN	LRRMGA----	----PQNGMA	EYLFDKHTLG	KEST--
<i>D. rerio</i> 4	SGVEALECAL	QLEKSVNHSL	LELHKLASQH	NDPHMCDFIE	THYLDEQVKS	IKELGDHVTN	LRRMGA----	----PQNGMA	EYMFDKLTGL	KESS--
<i>T. bernacchii</i> H	SGLDALECAL	QLEKSNVQSL	LDLHKVCSEH	NDPHMCDFLE	THYLDEQVKS	IKELGDWVTN	LRLRGA----	----PQNGMA	EYLFDKHTLG	K-----
<i>T. newnesi</i> H	SGLDALECAL	QLEKSNVQSL	LDLHKVCSEH	NDPHMCDFLE	THYLDEQVKS	IKELGDWVTN	LRLRGA----	----PQNGMA	EYLFDKHTLG	K-----
<i>D. labrax</i> H	SGIEALECAL	QLEKSVNQSL	LDMHKLCSDH	NDPHLCDFIE	THYLDEQVKS	IKELADWVTN	LRRMGA----	----PQNGMA	EYLFDKHTLG	KESS--
<i>S. maximus</i> H	SGVRLNVAL	QLEKSVNQSL	LDLHKLCSH	NDPHMCDFIE	THYLDEQVKS	IKELADWVTN	LRRMGA----	----PKDGM	EYLFDKHTLG	KESS--
<i>P. crocea</i> H	SGIEALECAL	QLEKSVNQSL	LDMHKLCSDH	NDPHMCDFIE	THYLDEQVKS	IKELADWVTN	LRRMGA----	----PQNGMA	EYLFDKHTLG	KESS--
<i>S. salar</i> H	SGVEALESSL	QLEKSVNQSL	LDLHKVCSEH	NDPHMCDFIE	THYLDEQVKS	IKELGDWVTN	LRRMGA----	----PQNGMA	EYLFDKHTLG	KEST--
<i>X. tropicalis</i> 3	NGLEALECSSL	QLEKSVNQSL	LELHKLSTDH	NDPHLCDFLE	SHYLDEQVKS	MKELGDHITN	LRRMGA----	----PSNGMA	EYLFDKHTLG	EHHD--
<i>H. sapiens</i> H	SGLNAMECAL	HLEKSNVQSL	LELHKLATDK	NDPHLCDFIE	THYLNEQVKA	IKELGDHVTN	LRRMGA----	----PESGLA	EYLFDKHTLG	DSDNES
<i>M. musculus</i> H	SGLNAMECAL	HLEKSNVQSL	LELHKLATDK	NDPHLCDFIE	TYLSEQVKS	IKELGDHVTN	LRRMGA----	----PEAGMA	EYLFDKHTLG	HGDES-
<i>R. norvegicus</i> H	SGLNAMRCAL	HLEKSNVQSL	LELHKLATDK	NDPHLCDFIE	THYLNEQVKS	IKELGDHVTN	LRRMGA----	----PESGMA	EYLFDKHTLG	HGDES-
<i>B. taurus</i> H	NGLTAMECAL	CLERSVNQSL	LELHKLATEK	NDPHLCDFIE	THYLNEQVEA	IKELGDHITN	LRRMGA----	----PGSGMA	EYLFDKHTLG	HSES--
<i>E. caballus</i> H	NGLKAMECAL	HLEKSNVESL	LELHKLATDK	NDPHLCDFLE	THYLNEQVKA	IKELGDHVTN	LRRMGA----	----PESGMA	EYLFDKHTLG	ECDES-
<b>M1</b>	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASDK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<b>M2</b>	NGVEAMQCAL	QLEKSNVQAL	LDLHKIALDK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<b>M3</b>	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASDK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLR	GQS---
<i>D. rerio</i> 1	NGLIAMQCAL	QLEKSNVQAL	LDLHKLATEM	GDPHLCDFLE	THYLDEQVEA	IKKLGDHITN	LSKMDA----	----GNNRMA	EYLFDKQTL-	-DS---
<i>D. rerio</i> 2	NGLTAMQCAL	QLEKSNVQAL	LDLHKVASQK	GDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSKMDA----	----GNNRMA	EYLFDKHTL-	-DS---
<i>D. rerio</i> 3	NGLTAMQCAL	QLEKSNVQAL	LDLHKVASQK	GDPHLCDFLE	SHYLNEQVEA	IKKLGDHITN	LSKMDA----	----GNNRMA	EYLFDKHTL-	-DS---
<i>D. rerio</i> 5	NGLIAMQCAL	QLEKSNVQAL	LDLHKLATEM	GDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSKMDA----	----GNNRMA	EYLFDKHTL-	-DS---
<i>T. bernacchii</i> M (spl)	NGVDVMQCAL	QLEKSNVQAL	LDLHKIASGK	VDPHLCDFLE	THYLNEQVES	IKKLGDFITN	LSRMDA----	----VKNKMA	EYLFDKHTMG	GKN---
<i>T. bernacchii</i> M (liv)	SGLDALQSSL	QLEKSNVQAL	LDLHKIASDH	TDPHLCDFLE	THYLNEQVES	IKKLGDFITN	LSRMDA----	----VKNKMA	EYLFDKHTMG	GKN---
<i>T. newnesi</i> M	SGLDALQSSL	QLEKSNVQAL	LDLHKIASDH	TDPHLCDFLE	THYLNEQVES	IKKLGDFITN	LSRMDA----	----VKNKMA	EYLFDKHTMG	GKN---
<i>S. maximus</i> M	SGLEAMQCAL	QLEKSNVQAL	LDLHKLASDH	VDPHLCDFLE	THYLNEQVEA	IKKLGDIYSN	LTRMDA----	----KNNKMA	EYLFDKHSLG	GKS---
<i>P. crocea</i> M	SGLEAMQCAL	QLEKSNVQAL	LDLHKLASEH	VDPHLCDFLE	SHYLNEQVEA	IKKLGDIYSN	LTRMDA----	----HTNKMA	EYLFDKHTLG	GKS---
<i>S. ocellatus</i> M	SGLEAMQCAL	QLEKSNVQAL	LDLHKLASEH	VDPHLCDFLE	THYLNEQVEA	IKKLGDIYSN	LSRMDA----	----NTNKMA	EYLFDKHSLG	GKS---
<i>O. mykiss</i> H1	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASGK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<i>O. mykiss</i> H2	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASGK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<i>O. mykiss</i> H3	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASGK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<i>S. salar</i> M	NGLEAMQCAL	QLEKSNVQAL	LDLHKIASDK	VDPHLCDFLE	THYLNEQVEA	IKKLGDHITN	LSRMDA----	----VKNKMA	EYLFDKHTLG	GQS---
<i>X. tropicalis</i> 1	STLDAMQCAL	DLEKSNVQAL	LDLHNLATER	KDPHICDFLE	SEHLDEEVK	MKFGDHITN	LKRLGV----	----PQNGMG	EYLFDKHSLG	-----
<i>X. tropicalis</i> 2	NGTKAMEVAL	NLEKSNVQAL	LDLHKIATDH	ADPHMCDYLE	SEFLEEVIKI	IKKLGDHITN	LKRVKA----	----AEDGGM	EYLFDKHTLG	DSD---
<i>X. tropicalis</i> 4	NTLEAMQCAL	QLEKSNVQAL	LDLHKIASDK	TDPHLCDFLE	SHYLNEQVEA	IKKLGDHITN	LKRLGV----	----PQNGMG	EYLFDKHTLG	ESS---
<i>H. sapiens</i> L	KTPDAMKAAM	ALEKSNVQAL	LDLHALGSAR	TDPHLCDFLE	THFLDEEVKL	IKKMGDHITN	LHRLGG----	----PEAGLG	EYLFERLTLK	HD----
<i>M. musculus</i> L	KTPDAMEAAL	AMEKSNVQAL	LDLHALGSAR	TDPHLCDFLE	SHYLDKEVKL	IKKMGDHITN	LRRVAGPQPA	QTGAPQGSGLG	EYLFERLTLK	HD----
<i>R. norvegicus</i> L	KTPDAMEAAL	AMEKSNVQAL	LDLHALGSAR	TDPHLCDFLE	SHFLDKEVKL	IKKMGDHITN	LRRVAGPQPA	QTGVAQASLG	EYLFERLTLK	HD----
<i>B. taurus</i> L	KTPDAMEAAL	LVEKSNVQAL	LDLHGLASAR	GDPHICDFLE	NHFLDEEVKL	IKKMGDHITN	LRLRAG----	----PQAGLG	EYLFERLTLK	HD----
<i>E. caballus</i> L	TTLDAMKAAL	VLEKSNVQAL	LDLHALGSAQ	ADPHLCDFLE	SHFLDEEVKL	IKKMGDHITN	IQLRVG----	----SQAGLG	EYLFERLTLK	HD----
<i>P. marinus</i>	SGLEAVQCAL	QLEKSNVQAL	LDLHALGSAQ	NDPQLCDFLE	SHYLEEVEA	IKKLGDFVTN	LKRLGA----	----SQSGMG	EYLFDKHTLG	SSS---