

## **SUPPLEMENTARY INFORMATION**

### **Supplementary Figures**

#### **Figure S1: Multiple deduced amino acid alignment of $\alpha 1$ domains of SNC genes and XNC subfamilies.**

The alignment of *XNC* subfamilies and *SNC* genes with representative *X. laevis* and *S. tropicalis* class Ia was generated using ClustalX and manually adjusted with GeneDoc v2.5. Black shading indicates identical residues among all sequences. Gray shading indicates similar residues among most sequences. Dotted lines are used to depict the grouping of *SNC* genes into subfamilies and the gene name is illustrated next to the sequence.

#### **Figure S2: Multiple deduced amino acid alignment of $\alpha 2$ domains of SNC genes and XNC subfamilies.**

Deduced amino acid sequence alignment of *XNC* subfamilies and *SNC* genes with representative *X. laevis* and *S. tropicalis* class Ia is generated using ClustalX. Alignment is viewed and manually adjusted with GeneDoc v2.5. Shading is as described in Figure S1.

#### **Figure S3: Nucleotide alignment of $\alpha 1$ and $\alpha 2$ domains of SNC10 RACE-PCR Products.**

Alignment of SNC10 RACE-PCR products was generated using ClustalX and manually adjusted with GeneDoc v2.5 from cDNA made from a pool of 20 *S. tropicalis* larval thymuses and spleen. The sequence labeled ‘Genom’ represents the original SNC10 sequence that came from the genome sequencing project. Shading of the alignment is as described in Figure S1.

#### **Figure S4: Multiple deduced amino acid alignment of $\alpha 3$ domains of *X. laevis* and *S. tropicalis* class Ia, SNC genes and XNC subfamilies.**

Alignment of  $\alpha 3$  domains of *Xenopodinae* class Ia and class Ib sequences. Black triangles indicate putative  $\beta 2m$  interaction sites and black circles represent putative CD8 interaction sites, modified from (12).

**Fig. S1**

		*	20	*	40	*	60	*	80	*																												
Xla_XNC10	:	GSH	I	FQYSTTLVS-DPKQGLSKYSVVA	LNDLMLGTYN	SDT	LGPEPLTPSHSSF	-----	ELYDDIEELTKIIYLKE	SLDKMMMKLITSSLNKT-	: 87																											
Str_SNC10	:	GSH	I	LHYCITAVVSDPAYGLPQYSIV	GYVDNL	LLIGRYSQTRRPEFLIQSLR	-----	DLF	EHTEEELTRI	IHHKEDNADTMIMKVIL	SSLNKT- : 86																											
<b>SNC16.3</b>	Str_386297	:	GSHT	LHYDVTIVS-APTPGVPRYL	VSMYVDGQ	QYGRYNSDT	CHAEALYPS	-----	LGALSEHIEKQT	QYAQGYEMRQRRLKSLNGYL	NKT- : 85																											
<b>SNC16.2</b>	Str_386304	:	GSHT	LHYHVTIVS-APTPGVPRYL	VSMYVDGQ	QYGRYNSDI	RHAEALYPS	-----	LGALSEHIEKQT	QYAQGYEMRQRRLKFLNGYL	NKT- : 85																											
<b>SNC16.1</b>	Str_182059	:	GSHT	LHYDVTIVS-APTPGVPRYL	VSMYVDGQ	QYGRYNSDI	RHAEALYPS	-----	LRALSEHIERQT	QYAQGEHEMRQRHLNFKL	KGYLNTK- : 85																											
<b>SNC16.4</b>	Str_386302	:	GSHT	LLYHITIVS-APTTGVPOYSIMY	VDGQ	QYGRYNSDI	ROAETSIPS	-----	LREL	SKHIEKOTQVOEYEM	SQRHKLKFLIGFYNN	T- : 85																										
<b>SNC2.2</b>	Str_386185	:	GSH	SLQYRIALVS-VPGYDVPQYSV	VMMYIDGL	QYGRYNSDT	QCAQALAPS	-----	LNALSEHIE	ENQIKFAQEYEVRQRHRLNF	LMGFFNKT- : 85																											
<b>SNC2.14</b>	Str_386272	:	GSHT	LQYHISLVS-DPGYGPQFSV	VMMYIDGL	QYGRYNSDT	QCAQALAPS	-----	LNALSEHIE	ENQIKFAQEYEVRQRHRLNF	LMGFFNKT- : 85																											
Xla_XNC2	:	GSH	SLQYHIALVS-NRYGVQFSV	IMYVDGI	QYGRYNSDV	HMP	PRLLHT	-----	-ECSSEHIE	EKOTKYAQEYEVWQRHRLNF	LMGFFNKT- : 84																											
<b>SNC3</b>	Str_386192	:	-SHT	LQYHITLAS-VPIPGVQYSI	IAYVDNKQ	YGRYNSE	CEAEALLPS	-----	LGALTEH	HLKLOQFAKGYVILKQTL	NFLIEFFNTT- : 84																											
Xla_XNC3	:	-SHT	LQYHVSLVS-TPTPKVQYSI	IIVYVDGQ	QYGRYNSDI	HCAQALTPS	-----	LOALHDH	LEMOTNFAKAYEI	WOKHKLNFLIGYFNTT- : 84																												
<b>SNC1.2</b>	Str_386184	:	GSHT	LHYHITVVS-APTPGVQYSI	IMYVDGQ	QYGRYNSDI	ROAQSFSPS	-----	LNHLSEH	LEMOTKFAQTSE	VWQRHKLNFLMGVFNKT- : 85																											
<b>SNC1.14</b>	Str_386177	:	GSHT	LLYHITVVS-APTPGVQYSI	IMYVDGA	QYGRYNSDI	ROAQFFSPS	-----	LSPLS	DEHLEMOTRYAQA	FEVWQRHRLNFLMGVFNKT- : 85																											
Xla_XNC1	:	-SHT	LHFHITLAS-APIPGI	SQYAIIVYMDGQ	QYGRYNSDI	RRAQFYSAS	-----	LNPLS	SVYLDMOTKFAQT	FEVWQRHRLNFLMGVFNTT- : 84																												
<b>SNC4</b>	Str_386268	:	GSHT	LQYDVTLV	S-APTPGVQFSI	IIVYVDGQ	PYGRYNSDI	GRAEAFISI	SSLP-FSSL	LLTVSEHMQQQT	KLAQEYEIAHRQLDFLMGIFNMT- : 92																											
Xla_XNC4	:	-SHT	IYQITMTS-A	PTPGPQFSI	IIVYNDI	QYGRYNC	DIGRAEALI	PISSIP-FSSL	LMVSEHM	EHOTKVAQEYEIAHRQLH	FLMGVFNTT- : 91																											
<b>SNC13.4</b>	Str_386310	:	GSHT	LRFYITKL	-APYPGLPEYMH	MAYVDD	DLRFARYNNE	INRC	EFWIPA-----	LGTL	YERMTM	QKNYMHNFEISHNQTKLITDLYNKT- : 85																										
<b>SNC13.1</b>	Str_458818	:	GSHT	LKVYTTKL	-APYPGLPDY	MHMAYVDD	DLRYARYNNE	FNRC	EYWIPA-----	LST	LYERMTM	QKNYTHNFKI	SHNQTKLITDLYNKT- : 85																									
<b>SNC13.3</b>	Str_386203	:	GSHT	LKLYITKL	-APYPGLPDY	LHMAYVDD	DLRYARYNKE	INRC	EYWIPA-----	LGAKWE	PMTMQKNYMHNFEI	SHHQTKLITDLYNKT- : 85																										
<b>SNC13.2</b>	Str_182055	:	GSHT	LRFHVTKL	-APYPGF	PDYML	LAYVDD	DLRFARYNNE	NRCEFWIPA-----	LGALNER	ITKQKNYTHNFKI	SHHQTKLITDLYNKT- : 85																										
<b>SNC13.5</b>	Str_182058	:	GSHT	LQYHITR	-APSPGLPELIK	IGYVDG	IYARCT	SETHRC	EFLIPA-----	LET	VYERMTL	KECINYF	EFESOFERIQLTDIYNTT- : 85																									
<b>SNC6.1</b>	Str_178628	:	GSHT	LEYHIALVS-SPAPGV	PQSTI	TVYIDGL	KYGKDSET	RRARFL	TPS	LSS-----	LTB	HLDM	QT	KYAQRFEV	IQKHKAFL	TYGILNRT- : 85																						
<b>SNC6.2</b>	Str_178629	:	GSHT	LEYHIALVS-SPGP	GPQSTI	TAYIDGL	KYGKDSDT	SRARFL	TPS	LSS-----	LT	EHLD	DM	QT	KYAQRFEV	IQKHKAFL	TYGILNKT- : 85																					
Xla_XNC6	:	GSHT	LQYHIALVA-TPNPGC	ATSTI	TAYLDGL	EYGRYDS	NTRRGRFL	TPS	LSS-----	LT	EHLE	MQT	KYAQGF	EV	IQKHKAFL	TYGILNKT- : 85																						
<b>SNC12.</b>	Str_386267	:	GPHI	LOYRLLT	IS-TPTPGS	POCTI	TAYMDG	LN	YGRYDS	DTGHQALVPS	LSIP-----	SLA	EHRE	MQT	PHARGV	ELIQRDKIKF	FLMGFLNKT- : 87																					
<b>SNC9.14</b>	Str_374185	:	GSHT	IQYQ	QLT	I	MS-SPAPGV	PQYI	IINSYLDG	FMYSK	YNSDTR	TSIYYFPL	LLS-----	LTE	HVER	KT	KL	LGLEV	FQKHQTEFFMGYLNKT- : 85																			
Xla_XNC9	:	-SHT	IQYTTL	I	S-PTPGV	NHYT	NSAFLDG	FYRK	FD	SDT	CHVQY	FDPALNA-----	LTE	HVEKK	TT	KY	VRVLV	FQKTOM	EFLMGYLNKT- : 84																			
<b>SNC5</b>	Str_386246	:	GSHT	IHYI	YISMLS	-APAHEV	PQYSIV	VYADGL	PIGRYNSD	LHRAQFL	IPS	LN-----	LTE	HLE	LO	T	KFAQR	WQVYQERKMA	FLMGFLNRT- : 85																			
Xla_XNC5	:	SDVLLA	QFF	IPS	LN-----	-----	-----	-----	-----	-----	-----	-----	-----	FT	EHLE	LO	T	KFAQR	WQVYQERKMA	FLMGFLNKT- : 48																		
Xla_XNC11	:	GSHT	I	PRYSV	SMTS	-SPTOGL	I	HET	ITGHMN	DL	LEV	KYDS	DINSAC	MF	PSL	N-----	LS	DH	LE	LT	NFGQRW	VSQERKMT	FLMEFLNKT- : 85															
<b>SNC14</b>	Str_386241	:	GKEV	LEY	YMT	MTS	-API	PGI	STES	TAHV	DG	VQHGRY	TSET	GRAEPL	IP	LSM-----	LTE	HLD	DM	QT	HFARHW	KIYQDKKMA	FLMQFLNRT- : 85															
Xla_XNC8	:	GGH	FVQY	LIT	TR	I	FPTPGL	EMYSI	ILY	LD	DKI	CGKYS	SD	TRQAVL	ISLDG	LINILPQKV	LAVH	LEM	QT	KFAQE	LEITERDE	EFIMGFS	NKT- : 93															
<b>SNC7.1</b>	Str_386189	:	GSHT	IQDY	WAVSS	-TAYPG	I	QYSI	IAYV	VDDV	R	YGRYNSD	TR	RCESLI	QS-----	-----	PMV	FSEH	LDG	QT	NMA	QQTE	ITQKVLMN	IIDL	LNKT- : 85													
<b>SNC7.5</b>	Str_386294	:	GSHT	IQF	YVT	ISS	-AA	YPGLP	QYSI	IAYV	VDDV	QYGRYNSD	TR	RRCEPLI	QS-----	-----	LMV	FSEH	LEN	QT	KLA	QQTE	ITQKAF	MNL	ITD	LNKN- : 85												
<b>SNC7.2</b>	Str_386240	:	GSPT	IQY	YI	MLS	-TAYPG	LPQFSI	I	A	FV	DDV	R	YGRYNSD	TR	RAEPLI	QS-----	-----	LMV	FSE	QLES	LT	KL	FMT	TL	IMD	LNKT- : 85											
<b>SNC7.4</b>	Str_386244	:	-----	MLS	-TAYPG	LPQFSI	Y	VIAYV	VDDV	R	YGRYNSD	TR	RHAEPLI	QS-----	-----	LMV	LSEH	LDG	LNK	Q	AQ	LI	EITQK	ALMNF	IMDSSNKT- : 75													
<b>SNC7.3</b>	Str_386261	:	GSHT	I	KYY	I	MLS	-TAYPG	LPQFSI	Y	VIAYV	VDDV	R	YGRYNSD	TR	RHAEPLI	QS-----	-----	LMV	FSEH	SEGLN	KQ	AQ	LI	ETMQK	AI	MNF	IMDSSNMT- : 85										
Xla_XNC7	:	GSH	MI	QY	YV	MLS	-TSQ	SLGPQ	YSI	TAYV	VDDV	QYGRY	TS	DR	RC	PLFQS-----	-----	LMV	L	SKH	LDI	QT	KNAQD	TE	TEK	VLM	DEFIVD	R	LNKT- : 85									
<b>SNC15</b>	Str_386214	:	GSHT	I	QY	I	SMVS	-VAAP	GLP	OYSI	TA	FV	DDV	MIGR	YSSD	TR	DI	TF	V	PF	-----	PEI	L	SWH	VPR	KM	YAFH	EEE	KKG	I	EV	KMV	FSN	MT- : 85				
Str_UAA*01	:	GSH	SL	PR	YY	YT	GVS	-DRA	FG	LP	EFS	I	VG	V	DET	QIV	RY	SSD	NGRA	EPA	TQWMQ	-----	NEG	P	EY	WDR	QT	QNS	KG	T	PVY	KHN	V	VAM	DRFN	QI- : 87		
Str_UAA*02	:	GSH	SL	PR	YY	YT	AVS	-DRA	FG	LP	EFS	TG	YV	V	DET	QI	ERY	SSD	NGK	SEPA	QWMQ	-----	NEG	P	EY	YR	DR	EQ	TQ	I	LKG	NEAV	F	KHN	V	VAM	DRFN	QI- : 87
Xla_FF	:	GSH	SL	PR	YY	YT	AVS	-DRA	FG	LP	EFS	TG	YV	V	DDT	QI	ERY	SSD	TGR	DEPA	TQWMQ	-----	KEG	P	EY	WER	E	TQ	SK	GN	EAT	F	KHN	V	VAM	DRFN	QI- : 87	
Xla_JJ	:	GSH	SL	PR	YY	YT	GVS	-DRT	FG	LP	ECS	I	VG	V	DEA	QIV	RY	SSD	NQKF	EPAT	TQWMQ	-----	KEG	P	EY	WER	E	TQ	KA	G	DEA	WF	KHN	V	VAM	DRFN	QI- : 87	

gsh

g p

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**Fig. S2**

	*	20	*	40	*	60	*	80	*	
Str_386177	--GGDRDTIYQRKAACELRDDTSGGYQEIAFDGKEFLAYDKEKVVYIPSTQEAVMVSHLWNKHYS--STNSKMFMEIDCIQHMKMLPYISTDIEKK	: 95								
Xla_XNC1	---GNGHIHVYQRKSACELHDDTIGGYQDIAFDGKEFLVFDKDRAVYITSTQEAVMVSHLWNKRYD--STDSDKMFLEIDCIKHMKMLPYISNDIEKK	: 94								
Str_386184	--KSNGNIHIIYQRKCACELHDDTIGGYQEIAFDGKDFLVEDKEKVVYVPVTHEAVMVSHLWNKRYD--PTSSSKYMETDCIQHMEMYLPIISTDIEKK	: 95								
Str_386268	---DNGDTIYQTNAACELHDDTIGGYQEIAIDGKEILVYDKERVVFKPVTHEAVMMSHLWNERYD--STYTEIFMEIDCIEHMKMLPYISTDIEKK	: 94								
Xla_XNC4	---SNGDIHVYQTNNACELRDDTISGYQEIAFDGKELLVYDKERVTFPVTQEAVMVAQLWNKRYD--STYTKIFMEIDCIEHMKMLPYISTDILGKK	: 94								
Xla_XNC3	---GNGHIHVYQRKAACELNNDATIDGYQEIAFDGKELLVFDKERVVYVPATHVVMSQLWNKLYD--STNNKVFVEIDCIEHLKLYLPISVEMKK	: 94								
Str_386185	---GEWDTHIYQRKCACELHEDTIGGYEEIAFDGKEFFIFDKERVYVPVTQEAVMVSHLWNIRYD--PTDSKVYVENDCIENLKLILPIISTDIEKK	: 94								
Xla_XNC2	-SKGNEDIHIYQRKSACELHDDTIGGYQEIAFDGKEFFIFDKKRVMYLPVSQDAVMVSRLWNIRYD--ATDSKEYIENECEHLKLYLPISNDIEKK	: 96								
Str_386272	---G-EDIHVYQRKCACERHDDTVGDYQEIAFDGKELLVFDKERAEEYVPVTEEAEMWAHLWNHYE--SADSKVYVENDCIENLKLILPIISTDIEKK	: 93								
Str_386297	--RGKCNGNIYQRRLACELYEDTIGGYEEIAFDGQELIVYDKERVYVPVTQEAEMLSFIWNIRCG--PTDTKIMENDCIEHIKLYLPISDLERK	: 95								
Str_386304	--RGKCNGNIYQRRLACELYEDTIGGYEEIAFDGQELIVYDKERVYVPVTHEAEMLSFIWNICYG--PTDTKLYMENDCIEHIKLYLPISDLERK	: 95								
Str_182059	----GNGNIYQRRLACELYEDTIGGYEEIAFDGKEFFSFDKERVYVPVTQEAAMLSILYLNIRYD--PTDTKIMENDCIEHIKLYLPISDLERK	: 92								
Str_386302	---SDRDTHIYQSRLACELHDDTIGGYQEIAFDGKALLIEDKENVTVVPVTQEAEIVAQLNKHYD--STNTKLYMENDCIEHIKLYLPISDLERK	: 94								
Str_178628	--YNGDFHVYQRRFACELHEDTVSGYEEIAANGKEVMMFDKERVVYVPVTQEVLTMQQWNQHYND-AKINKIYMENECIHYMKMLPYISTDLERK	: 96								
Str_178629	--YVNGGFNIYQRKFACELHEDTVSGYEEIAANGKEVMMFDKVRVVYVPASQEALMTQQWNQHYNH-AKINKIYMENECIQHMKMLPYLSTDLERK	: 96								
Xla_XNC6	--NDKRVFHVYQRKFACQLHEDTVSGYEEIAYDGKEVMMFDKVRVVYVPATQEVLTMQQWNRHYDH-AKINKIYMENECIQHMKLYLPISVILERK	: 96								
Xla_XNC8	---DKGQFHVYQRRFVCELNEDGTSGYEEIALNGKEIIALDKEKVVYVPVMQEALVMMMDQLNKRYDH-AVDNMKMYMENECIQQIKLYLYIASDINRK	: 95								
Str_386267	----NGDFHVYQRKFACELHEDTVRGYEEIAFDGKEFISVDKERVYVPVTQEALGITELWNKRYD--LQDNKIYLENECIQHMKMLPYLSTDLERK	: 93								
Str_386203	--SGKDAIHVYQTKSACEMHEDGTITAYQEVAFDGKELIAYDYCTGFIPTTPEAQIVAQIWNKN--Y-AKIEKIFLEKFTNRILSKYLNALASDIEKL	: 94								
Str_458818	--SGKDAIHVYQTKSACEMHEDGTISAYQEVAFDGKELIAYDYQOMETFIPTTPEAQVVAQIWNED--Y-AKREKIYLNLCYRFSKYLNALASDIEKL	: 94								
Str_182055	--SGKDAIHVYQTKSACVMHEDGTISAYQEVAFNGKELIAYDYQOMGTFIPTTPEAQVAAQVNED--Y-AKIEKVLENFCTHRILSWYLPALASHIEKL	: 94								
Str_386310	--SGKDAIHVYQTKAACEMHEDGTITAYQEVAFDGKELIAYDYQETFIPTTPEAQTMQAQIWNEN--Y-VKLEKVLENYCTHRILSTYLPASDIEKL	: 94								
Str_182058	--SGNDAFHIYQMKGQVQHDDGTGIYQEVAFDSKELITYDKHTGFIPTSQEARIIVAQLWNKN--Y-AKVEKIYMENCCTPRILAFPPAASDIEKK	: 94								
Str_386189	--HD--INYVIQTKAACVLHEDTVDVYEEVALDGKELVVFDKERVEFVPATQAVLLAQWLNKQ-AF-AMEDKIFMENECTQHLLYLPYIKSYLDKK	: 93								
Str_386294	--YD--INYVFQTKAACVLHEDTVDVYKEVALDGKELIVEFDKERQEFPATQEAVILLAQLLNKQ-AN-AMEDKIFMENECTQHLLYLPYIKSYLDKK	: 93								
Str_386240	--YD--INYVFQIQAACVLHEDTVDVICKDTALDGKQLLVFDKERVEIVPVTQEAVILLAQWVNKQ-GY-AKKYKIMENECTQHLPSELPCKSYLDKK	: 93								
Str_386261	--YD--INYVFQIQAACVLHEDTVDVYKEELDGKQLIVEDKETVEFVPVTREAVILLAQWVNKQ-AF-AKKYKILMENRCTQHLLYLPYIKSYLDKK	: 93								
Str_386244	--YD--INHVFQTKAACVLHEDTVDVYKEELDGKQLIVEDKETMEIVPATGEAAVLAQWLNKQ-AY-PKKYKISMENECTQHLPPLYLLYIKSYLDKK	: 93								
Str_386300	----NHVYQTKAACVLHEDTVDVYQEVALDGKQLIVEDKDLVEFVPATQEAVLLTQLWTKHAN-AKKDKLFLENECTQHLLYIPYIKSYLDKK	: 91								
Xla_XNC7	--YDNRNNHVYQRKIVCIELHEHGTGVGFYEEVALDGKELIVEDKEVAYAPATQEAVLLMQLWTKHAD-AKSNLKFMENECTQQ-----	: 81								
Str_386246	--SDRGTIHIYQRKFSCLEEDGTIGGYQEFAFDGREVITEDRENEVFVPATQEAVTMLPRWNQYLGNAKGKMKYMECIEHIKLYLPIMMDIEKK	: 96								
Xla_XNC5	--SDKGAIHVYQRKFACELLEEDGTIGGYQEFAFDGKEVITEDRREVFSATQEAVIMLPQWNQYHGN-AKGKMKYMECIEHMKLYLPITADIQKK	: 96								
Xla_XNC11	--SDTGTIHVYQRRNACELHEDTVGGYVFFALDGEVITLDREKGVFVPEIQEAVTLIPEWSKDLCC-AMWNKMYMENDCISYIKLYLPILANNIEKK	: 96								
Str_374185	--DGDGDFHIFIQKIKYACELLEDSSI SGKEELALNAKTFITYNTENPEIYIPVVPAAALTAAQKWT--ELY-AKLEKDYMEHECVSHLKLILPKKDIIEKK	: 94								
Xla_XNC10	---GVEDVHVMQIKNGCSELDGSIRGNEELAFDAKDYITFDTANPEIYIPAVPGALIAVEKRK--ELY-SKLQRTYVENVCISQLKLHLPYIKNVIEKK	: 93								
Str_386214	--YGSADIHVYQKKFICELDDGSVGYYQEAAFDGESFATEDKEKGVFVPLTQKASDVIQOCANCDLY-AKSDKFYMEYCIHDLKLILPKIIMLDKK	: 96								
Str_386241	AGEGNHHHVHVYQRKYICELQDSGKVLGYHAFFVNGKEVIAEDPREREVFPIMPEAEELLIPSWN-KYLDLVDKHHKAYLKNVCIEHLKLYLSYMLPEIDRK	: 98								
Xla_FF	---G---THMVQWMYGCELGGDGSIRGYEQHVDGRFFALDTEWVYVPSVREAQLTTQKWNNSPEVNAPERKNYLNQNICIEGLKRYLSYQAEIERR	: 93								
Xla_JJ	---G---THSLQYMYGCELREDGSTRGYEQFGYDGRRELMAOLDTERWRYVPSMREAQLSTQKWNNSPEVNPERERNYLENICIPALKRYLGYQAEIERR	: 93								
Str_UAA*01	---G---THSLQYMYGCELREDGSTRGYEQDGYDGRFLALDTERWVYVPSMREAQLTTQKWNNSPEVNPERERNYLENICIEWLKRYLGYQAEIERR	: 93								
Str_UAA*02	---G---THIVQSMYMGCELREDGSTRGYEQDGYDGRFLALDTERWVYVPSMREAQLTTQKWNNSPEVNPERERNYLENICIEWLKRYLGYQAEIERR	: 93								

Q C dg y a lg 1 p ea wn 6 n C 1

**Fig. S3**

### alpha 1 domain

### **alpha 2 domain**

	*	20	*	40	*	60	*	80	*	
XNC8	:	VGPKVKVSSSESESgtklhcwaygfypRdvevkwi	kngrdeiyseesaeilpnPDGTyqi	RVSVEVTPEEGATYSCHVDHSSLEDRLVVF	:	91				
XNC3	:	VTPKVKVSSSESESgtklhcwvYGFypRdvevkwi	kngrdeiyseesaeilpnPDGTyqi	RVSVEVTPEEGATYSCHVSHSLEKTKVVPF	:	91				
XNC4	:	VPPNVKVSSSESESgtklhcwvYGFypRdvevkwi	kNETDEIYSEKSAEILPNPDGTyqi	RVSVEVTPEEGATYSCHVSHISLEDTLVAPF	:	91				
XNC1	:	VPPNVKISSSESESgtklhcwvYGFypRdvevkwi	kNGTDEIYSEESAEILPNPDGTyqi	RVSVEVTPEEGATYSCHVDHSSLLENPLVVPF	:	91				
XNC11	:	I KPNVKISSSESESgtklhcwvYGFypRdvevkwi	kNGRDEIYSEESAEILPNPDGTyqi	RVSVEVTPEEGATYSCHVDHSSLLENPLVVPL	:	91				
XNC7	:	-VPHVKISSSESESgtklhcrvYGFypRdvevkwi	kNERDEIYSEESAEILPDPDGTYQI	RVSVEVTPEEGATYSCHVDHSSLTIHMIPF	:	90				
XNC10	:	VPPKVKISSSGSESgtklhcwvYGFypRdvevkwi	KNVRDEIYSEESAEILPNPDGTyqi	RVSVEVTPEEGATFSCHVDHNSLENPLIVPF	:	91				
XNC2	:	VIPLKLKVSSSESESgVKLHCWVYGFypRdvevkwi	KNERDEIDSEEATQI	RVSVEVTPEEGATYSCHVDHSSLLENPLVFPF	:	91				
XNC6	:	VQPKVNISSSSESDGERILHCRVYGFypRdvevkwi	kNGRDEIYSEEATQI	RVSVEVTPEEGATYSCHVDHSSLLENPLVHF	:	91				
SNC12	:	VPPKVVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHIDHSSLLEKTLLVVF	:	91				
SNC13.4	:	VPPKVVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHIDHSSLLEKTLLVVF	:	91				
SNC10	:	VPPKVVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHTDHSSLLEKTLLVVF	:	91				
SNC13.2	:	VPPKVVKVSISSSEDSGAELHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHVEHSSLLEKTLLVVF	:	91				
SNC13.3	:	VPPKVVKVSISSSEDSGAELHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHIDHSSLLEKTLLVVF	:	91				
SNC13.1	:	VPPKVVKVSISSSEDSGAELHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	RVSVGVTPEGGATYSCHVDHSSLLENPLVVF	:	91				
XNC5	:	DKPNVKVSSSESDGGKLHCFVFGFypRdvdvmw	i knvkheihsdeasqilp	--DGTyqi	RVSVEVTPEEGATYSCHRVDHSSLLENPLVVF	:	89			
SNC1.1	:	VPPKVVKVSCSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLEKAITVVF	:	91			
SNC2.1	:	VRPKVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVRVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC7.1	:	-VPPVKLSSSESESgtelhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	90			
SNC7.5	:	KVPPVKLSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLEKTLLVVF	:	91			
SNC7.3	:	KMPPVKLSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC4	:	VSPNVQISSSSESESgttnlhcsygfgypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC1.2	:	VPPKVQISSSSESENGTELHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLEKAITVVF	:	91			
SNC7.4	:	KVPNVKLSGSESENGTELHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	--SVGVKPEGGATYSCHIDHSSLLEKAITVVF	:	89			
SNC7.2	:	P LPHVKLSGSSES--GtKlhcRvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	89			
SNC7.6	:	-VPPVKMSNSES--GtKlhcRvYGFypRdvvvkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLEKTLLVVF	:	88			
SNC16.4	:	VPPNVKVSNSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC16.2	:	VPPNVNISSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTLDKNSNYSClvdhssletpiivtf	:	91			
SNC3	:	VPPNVNISSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTLDKNSNYSClvdhssletpiivtf	:	91			
SNC16.3	:	VPPNVNISSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTLDKNSNYSClvdhnsletpiivtf	:	91			
SNC16.1	:	I IPPKVVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTLDKNSNYSClvdhssletpmivnf	:	91			
SNC2.2	:	VPPKVVKVSSSESESgtklhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC6.2	:	VCPKVVKVSSSESDGEQKLHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC13.5	:	VPPKVVKVSSSESDGEQKLHCRVYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLENPLVVF	:	91			
SNC15	:	VCPKVVKLISSLESdnntklhccvYGFpRevdkwi	kNGRDEIHSEEAQPI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLNDTLVVF	:	91			
SNC6.1	:	VHPEVKVSSSESVSGTklhcrvYGFypRdvdvkwi	kNERDEIYSEAAQI	LPNPDGTyqi	RVSVEVTPEGGATYSCHVDHSSLAKPLAVCF	:	91			
SNC5	:	VKPKVKVSISSSEDSGVELhcrvYGFypRdvevkwi	kNGRDEIHSEAAQI	LPNPDGTyqi	RVSVGVTPEGGATYSCHIDHSSLLEKAITVVF	:	91			
SNC14	:	VPPKVKTTSISRSdsgkrlcchvYGFpKvh	i kVmkngteevspeefkhilp	N	RPNPDGTyqi	RVSVGVTPEGGATYSCHVDHSSLNSTMVF	:	91		
laevis_JJ	:	VHPHVRIsdhsddateLRcqaygfypREi	DVKWVKNGRD	VHSEAAKEILPNPDGSYQLRVTAEITPSEGDSYACHVEHSSLKEKLIVWW	:	91				
laevis_FF	:	VHPHVRIsdhsadateLRcqaygfypREi	DVKWVKNGGD	DVHSEAAKEILPNPDGSYQLRVTAEITPNEGDSYACHVEHSSLNEKLIVWW	:	91				
trop_UAA*0	:	VRPHVVKISDHQSDDITELRcqaygfypREi	DVKWVRNGRD	DVHSDEAKEILPNPDGSYQLRVTAKVTPEGDSYACHVDHSSLEEKLIVWW	:	91				
trop_UAA*0	:	VRPHVVKISDRQSDGNTECQAYGFypREi	DVKWVRNGKD	DVHSEAAKEILPNPDGSYQLRVTAEVTPKEGDSYACHVDHSSLEEKLIVWW	:	91				

**Fig. S4**

**Table SI:** List of accession numbers for MHC class I sequences used in Figure 4

Sequence Name	Accession Number
<b><i>Xenopus laevis</i> (African clawed frog)</b>	
GG (class Ia - <i>g</i> haplotype)	AF185579
RR (class Ia - <i>r</i> haplotype)	AF185582
FF (class Ia - <i>f</i> haplotype)	AAF03402
JJ (class Ia - <i>j</i> haplotype)	AF185586
XNC1	M58019
XNC2	L20725
XNC3	L20726
XNC4	L20727
XNC5	L20728
XNC6	L20729
XNC7	L20730
XNC8	L20731
XNC9	L20732
XNC10	FJ589642
XNC11	FJ589643
<b><i>Xenopus laevis</i> x <i>Xenopus gilli</i> (hybrid clone)</b>	
LG-ac-1	AF185583
LG-ac-2	AF185585
LG-bd-1	AF185581
LG-bd-2	AF185584
<b><i>Homo sapiens</i> (human)</b>	
HLA-A2	Z30341
HLA-B	U11265
HLA-C	X58536
HLA-E	NM_005516
HLA-F	NM_001098479
HLA-G	NM_002127
HLA-H	U60319
hum_CD1a	NM_001763
hum_CD1b	NM_001764
hum_CD1c	CR457080
hum_CD1e	X14975
hum_CD1d	NM_001766
hum_MICA	AJ563426
hum_MR1	AJ249778
hum_FcRn	AF220542
<b><i>Pan troglodytes</i> (chimpanzee)</b>	
Patr-MICA/B	NM_001045494
<b><i>Pongo pygmaeus</i> (Bornean orangutan)</b>	
Popy-BAB	
<b><i>Macaca fascicularis</i> (crab-eating macaque)</b>	
Mafa_E1	U02976
Mafa_E2	U02977
<b><i>Macaca fascicularis</i> (cattle)</b>	
Bota-BL3-6	M21044
<b><i>Ovis aries</i> (sheep)</b>	
Ovar-E	M34676
<b><i>Macropus rufogriseus</i> (red-necked wallaby)</b>	
Maru-UA1	L04950
Maru-UB1	L04952
<b><i>Monodelphis domestica</i> (gray short-tailed opossum)</b>	
Modo-UA1	NM_001044223
Modo-UG	DQ138606
Modo-3	AF125540
<b><i>Mus musculus</i> (house mouse)</b>	
H2-K	X01815
mus_H-2Dd	U47326
mus_TL	D14027
mus_MR1	NM_008209
mus_H2-M3	U18797
mus_Qa-2	D90146
mus_Q4	M18837
mus_Q10k	X16426
mus_T23	Y00629
mus_CD1d	NM_007639
<b><i>Mus spretus</i> (western wild mouse)</b>	
musspp_H2-M3	L36072
<b><i>Rattus rattus</i> (black rat)</b>	
rat_FcRn	X14323
<b><i>Gallus gallus</i> (chicken)</b>	
ch_BF19	M84766
ch_BFw-02	AB178043
ch_RfpY	AF218783
ch_CD1.2	NM_001024582
ch_CD1.1	AY849319
<b><i>Coturnix japonica</i> (Japanese quail)</b>	
quail_QF41	
<b><i>Ameiva ameiva</i> (lizard)</b>	
Amam-LCI	M81094
<b><i>Rana pipiens</i> (northern leopard frog)</b>	
Rapi-R6	AF185587
Rapi-R9	AF185588
<b><i>Ambystoma mexicanum</i> (axolotl)</b>	

Amme\_Ia3 U83137  
Amme\_Ia4 U83138

***Latimeria chalumnae* (coelacanth)**

Lach\_UB1 U08034

***Cyprinus carpio* (common carp)**

Cyca-UA1\*01 X91015  
Cyca-UAW1 X91022  
Cyca-ZE AJ420957  
Cyca-NEW AB018581  
Cyca-ZA1 M37107  
Cyca-ZB1 L10420  
Cyca-ZC1 L10421

***Oncorhynchus mykiss* (rainbow trout)**

Onmy\_UAA L63541  
Onmy\_UBA AF091785  
Onmy-UCA AY523659  
Onmy-UDA AY523666  
Onmy-C32 U55380

***Carassius auratus* (goldfish)**

Caau-ZA1 L10418

***Danio rerio* (zebrafish)**

Dare-UAA01 Z46776  
Dare-UBA01 Z46777

***Takifugu rubripes* (Fugu rubripes)**

Furu-I2 AF001216

***Salmo salar* (Atlantic salmon)**

Sasa-UBA101 AF504019

***Ginglymostoma cirratum* (nurse shark)**

Gici\_UAA\*01 AF220063  
Gici-11 AF028557  
Gici-NC1 AF357923

***Heterodontus francisci* (horn shark)**

HeFr-19 AF028558  
HeFr-20 AF028559

***Triakis scyllium* (banded houndshark)**

Trsc-UAA\*101 AF034316  
Trsc-UBA\*201 AF034345