

Figure S3

SUN1	G68D	G76A	S79G	R94H	V197M	A203V	A325T	G338S	W377C	A718V	V846I
Homo sapiens	LGDG E AV	ADSG T SS	GTSS A VS	TKQ R RST	RKD V LTA	AHP A APG	HLDA A HTA	RLP G RAG	SAL W LAV	EAG A SGI	DFAV V YL
Pongo abelii	LGDG E AV	ADSG T SS	GTSS A VS	AKQ H RSA	RKD V LTA	AHP V VPG	HLDA A HTA	RPP G RAG	SAL W LAV	EAG A SGI	DFAV V YL
Mus musculus	SGDS S QAI	SHIS T SR	STSR A TP	VKQ R RSA	RTD A LTA	AHS A IHG	HLE I HTA	QPH R VAG	SVL W LAV	QAG T SGI	DFAV V YL
Cavia porcellus	SGDS S QAM	THSC A SS	CASS T AS	VKQ R RST	RTD M LTA	AAP A AHG	HLE T HTA	KLH R VVG	SVL W LAI	EAG T SGI	DFAV V YL
Monodelphis domestica	SDDG Q VE	THSY T RN	YTR N TAY	SKQ H RNT	RKD V LTA	AYS T SHV	HLE T YTT	RSK R VAR	SFL W LAI	SLG T SGI	DFSV V YL
Taeniopygia guttata	SDDG Q SD	DSIH D SS	HDSS Y AG	VKQ R RS	RKE V LTA	AYS A SPV	LLY A PRL	RSD G MAC	SLL W LAI	NAG T SGI	NFAV V YL
Gallus gallus	KPDS A RN	DLL H DSS	HDSS Y AG	VKQ R KSI	RKE V LTA	AYS A SSV	QLE I HHT	RAK R VAR	SLL W LAI	NAG T SGI	KFSV V YL
Xenopus tropicalis	ADNS S ATS	ICAG T LS	GTL S KCS	MQO H NSS	RND A LTA	ALS A SYS	HHE M RTT	WAR G VTG	SFL W LAI	TGA T DGI	DFAV V YL
Danio rerio	YDNG E TE	EVAG N HS	GNH S VGS	TTTT S SS	GNE K ETS	SYS V PYS	HME M NTE	RML T VLW	SIL W FAV	TAE A AGM	RFSV V YL

SUN2	M50T	A56P	V146G	V378I	E438D	V449L	R620C
Homo sapiens	SSNM K RRL	LSP A PQL	YSD V DQQ	KKI V RAS	VAE E VGL	IQA V RDD	ARI R PPTA
Pongo abelii	SSNM K RRL	LSP A PQL	YSD A DQQ	KKI V RAS	VAE E VGL	FQA V RDD	ARI R PPTA
Mus musculus	SSNM K HLL	LSP A PQL	YAD I EQH	KKI V QAS	VAE E VGL	IQA A RAD	ARI R PPTA
Cavia porcellus	SSNM K HLL	LSP V PQL	YAD I EQH	KKI V QAS	VEE E VGL	IQA V REE	ARI R PPTA
Monodelphis domestica	SGSM K RRL	LSP A PHL	NLGM D QP	KKI I QAF	LCPL V GS	IGH A THA	ALI R PPTA
Taeniopygia guttata	SSST K RRL	LSP T PST	HYYS G QS	GKMA Q AS	MGKH V KG	LKT V RAD	GII R PPTA
Gallus gallus	KSIN K QS	LSR A SDT	GWL V SQK	RKLS A ES	VDA Q VKE	KMML F GD	MKI Y PPTA
Xenopus tropicalis	RRKV T TLL	LKH A PTP	MAD V QQQ	QKM H NMF	LSQ Q VET	IQQ V RDG	SPI H PPTA
Danio rerio	SRNS S SRA	ASS V SLI	HYE Q PIK	LMR D IEL	LHST Q DL	VDA L EAH	YPA V ITH