

Figure S3

NPC1L1

	226	232	242
Tibetan goat	PS---QAEGR	VIQPLNDEVV	
Goat	..---.....S	.....
Sheep	..---.....S	.....
Cattle	..---.....ST	.....
Pig	..---..A.S	.....G...	
Human	.G---..V.SG	.....EG.A	
Elephant	..---..P.NG	..L..S.I.	
Mouse	.G---..LADGMK	..DGKIT	
Opossum	.G---.VL.NGLE	..DV.TW	
Xenopus	SN---TEI.HG	.V.HYSRVW	
Zebrafish	D.E-TSEVPAGAF	AFAGQAL	
Lamprey	DGETAPQ.SQGM	RQF..TTF	
Stickleback	EGQ-TEGLPKGVI	.Y.GRAL	

NES

	897	907	917
Tibetan goat	QSLEEADKGS	IRHLEEEEIVE	
Goat	.....R	.....
Sheep	.....A.....R	.....L.	
Cattle	.....L.....D.		
Pig	R.P..EG.E.Q	YL.A..N..	
Human	R.P..V..E.Q	NL....NLG	
Dog	R...KENQEPV	SLV.D----	
Elephant	K.S..V..E.Q	YL...GNL.	
Mouse	E.PGGVE-D	QQCL.V..GP.	
Opossum	ENQ.IPE---	---.GKGAL.	
Chicken	EVHGDQQEEHG	DLQ.GNGDIQ	
Xenopus	EEQSNSETEDN	IGL.Q.CDL.	

PTPRJ

	137	143	148	170	182	187	283	288	292
Tibetan goat	DLKLGSR	RYTITL	----	AGNTDSLPG	---	GPATRGSKYR		TDSFNFTVNE	
Goat	.....Q	.....	----	S	.....	---	P	.....	L
Sheep	...M..H..V	..	----	.....	---	TP	.....	L	.....
Pig	...P.I..KV	..	----	N	.....	SQPLRS	GVP	GY	.....
Human	G..P.VQ.N	NP	----	.....	ERSRAG	--S	TAPVHDES		...S.LN.S.
Dog	G.IP.T.NKF	..	----	NS	.E.SSQSTT	.TDSV	.QSD		.G.L.LS..T
Elephant	V..P.TQ.WF	..	----	N	.ERS..E--	K.PQ	----	N	.R...L.A.V
Mouse	G..P.TNNSFAF		----	NG	.KRI.VT---	NLSQLH	.NS		.H.V.Q...K
Opossum	IWH..VCQA	.IY	----	SMVD	...AA-FD	.STSTH	.CN		GH..DQNS.V
Zebra finch	G.IP.TP.NF	.V		AETIGVTSVT	.KWGVDDS	.SDSYL	..		-----
Anole lizard	N.NP.TS..FRV			AENISNT	.VT.KWDRND	.DASNYT	.Q		SA.WSEFS.N
Chicken	G.IP.TL.SFKV			AEYVGVTSVN	.TWTVN	.T.LTAYT	..		SSIN.K.SDI
Turkey	G.MP.TL.SFKV			-----	-----	-----	-----		LSIN.E.SDI

PTPRZ1

	1134	1143	1149
Tibetan goat	QSSHAVSQAS	SGDTSLK	
Goat	.....F	.....
Sheep	.....F	.....
Cattle	.....F	.....
Pig	....T....F	.....
Dog	.V...LAPGGRR	PAT	
Elephant	.PT.....TF	...L..	
Mouse	.PT.TA....	...W..	
Opossum	.PL..T.P.F	...L..	
Zebra finch	.PL.VT.P..D	..L.R	
Anole lizard	.PL.VTTP.FD	..L..	
Turkey	.PL.VTTP.FD	..L..	
Xenopus	KQINTLPTT	SAN.S.T	

EDNRA

	120	129	138
Tibetan goat	ASLALGDLI	HVVIDL	PINV
Goat	.....Y	.....
Sheep	.....Y	.....
Cattle	.....Y	.....
Human	.....Y	.....
Dog	.....Y	.....
Elephant	.....Y	.....
Mouse	.....Y	.....
Opossum	.....Y	I..I	.....
Zebra finch	.....Y	I..I..I	.....
Anole lizard	...M....Y	II..I....	
Chicken	.....Y	I..I..I	.....
Turkey	.....Y	I..I..I	.....
Xenopus	.....Y	I..I..I	.....

FUT1

	145	151	158
Tibetan goat	ELHDWML	EEYAHVK	
Goat	.....S	.....
Sheep	.....S	.....L.	
Cattle	.....S	.....L.	
Pig	.....S	D...L.	
Human	Q.....S	...DLR	
Elephant	K.....S	...L.	
Mouse	V.....S	...S.LE	
Opossum	P.R...A	...QLG	

PASK

	1317	1327	1336
Tibetan goat	SDVHVNELLS	IQPGTHPQQM	
Goat	.....T	.....
Sheep	.....	.....
Cattle	.....	.....
Pig	....AH...R	L....R...L	
Human	.NA.I....V	RR.ASL..L	
Elephant	..A.IR....	...RPT...L	
Mouse	AEA.IHS.F	I..SV....L	