

Alignment: C:\Users\meetol\Dropbox\CA\_projects\_Martti\Beta CAs\Parasites, for Susanna\decreased3.aln  
Seaview [blocks=10 fontsize=8 A4] on Fri Nov 18 12:41:18 2022

[illegible]



XP_019763455.1	----	----	MDKLLKGI	M	KYRS	TV	K	DTM	VQ	QFVKVK	----	D	----	NPTPKA	VFFTCIDSRM	LPTRFTQTNV
XP_030749737.1	----	----	MDKLLKGI	M	KYRS	TV	R	DTM	VK	QFLKVK	----	D	----	NPTPKA	VFFTCIDSRM	LPTRFTQTNV
KAF7270051.1	----	----	----	M	QYRA	TV	R	DTM	VQ	QFLKVK	----	D	----	NPTPKA	VFFTCIDSRM	LPTRFTQTNV
XP_031343879.1	----	----	MDRILRGV	M	KYRH	ID	K	AKM	LQ	QFLOVR	----	D	----	TPTPKA	VFFTCIDSRM	LPTRFTDMNI
XP_044743527.1	----	----	----	M	KYRH	LD	L	KTM	VQ	QFEQVR	----	D	----	NPIPKA	VFFTCIDSRM	IPTRFTEINV
XP_028319432.1	----	----	MDRILRGI	M	KYRQ	LD	R	KTM	VE	QFKQVK	----	N	----	NPTPKA	VFFTCIDSRM	IPTRFTEINV
XP_026466152.1	----	----	MDRILKGI	M	KYRE	VT	K	KTM	VK	QFECVK	----	D	----	HPTPKA	VFFTCIDSRM	IPTRFTEINV
XP_022913687.1	----	----	MDRILRGV	M	KYRN	VG	K	EMM	LK	QFQEVV	----	D	----	NPTPKA	VFFTCIDSRM	IPTRFTQTNV
KAF5298473.1	----	----	MDRILRGI	M	KYRN	TD	K	VKM	VQ	QFLOVR	----	D	----	NPTPKA	VFFTCIDSRM	IPTRFTEINV
VEN57246.1	----	----	MDKILKGI	M	KYRA	NK	R	EIM	VK	QFLEVK	----	D	----	NPKPKA	VFFSCIDSRM	IPTRFTQMN
XP_045472083.1	----	----	MNRILRGI	M	KYRE	IK	K	ERM	VQ	QFLKVK	----	D	----	NPMPKA	VFFTCIDSRM	IPTRFTQTNV
XP_017768645.1	----	----	MDRILKGI	M	KYRQ	LG	K	KTM	VE	QFKQVK	----	D	----	NPIPKA	VFFTCIDSRM	IPTRFTEINV
CAH1369701.1	----	----	MDRILRGI	M	KYRS	VK	K	EQM	VK	QFVQVK	----	D	----	NPTPKA	VFFTCIDSRM	IPTRFTQTNV
XP_028136465.1	----	----	MDKLLKGI	I	KYRG	TA	R	DEM	VK	QFLQVR	----	D	----	HPTPKA	VFFTCIDSRM	IPTRFTQTEV
XP_023014099.1	----	----	MDKLLKGI	M	KYRS	NI	K	ENM	VK	QFVQVK	----	D	----	NPKPKA	VFFTCIDSRM	IPTRFTQTNV
XP_019875064.1	----	----	MDKLLKGI	M	KYRE	VI	K	DKM	VQ	QFVQVK	----	D	----	NPTPKA	VFFTCIDSRM	IPTRFTQTNV
CAH0557060.1	----	----	MDKLLKGI	M	KYRS	TK	K	NKM	VE	MFKRVR	----	D	----	NPVPPA	VFFTCIDSRM	IPTRFTQTNV
XP_037924690.1	----	----	MERILRGI	M	KYRN	SS	R	IQM	VK	EFQYVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_043863257.1	----	----	----	M	CSRA	HD	A	KIR	RE	GGDTFK	----	C	----	KNKPKA	VFFTCIDSRM	IPTRYTDTNV
XP_039965629.1	----	----	MERILRGI	M	KYRN	TT	R	EQM	VK	EFQKVR	----	D	----	HPEPKA	VFFTCIDSRM	IPTRYTDTNV
XP_001989827.1	----	----	MDRILRGV	M	KYRN	TT	R	EQM	VK	EFQKVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRYTDTNV
XP_037896985.1	----	----	MERILRGI	M	KYRN	TT	R	EQM	VK	EFQKVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRYTDTNV
XP_046805044.1	----	----	MERILRGI	M	KYRN	TT	R	EQM	VR	EFQKVR	----	D	----	HPEPKA	VFFTCIDSRM	IPTRYTDTNV
KAG5681791.1	----	----	MERILRGI	M	KYRN	TT	R	AAV	VK	EFQKVR	----	D	----	NPQPKA	VFFTCIDSRM	IPTRYTDTNV
XP_031629647.1	----	----	MDRIIRGI	M	KYRH	TT	R	EQM	VQ	EFIKVK	----	N	----	DPHPKA	VFFTCIDSRM	IPTRFTEINV
KAG4077403.1	----	----	MERILRGI	M	KYRH	TT	R	EQM	VK	EFQKVR	----	D	----	NPQPKA	VFFTCIDSRM	IPTRFTEINV
XP_039430644.1	----	----	MDRILRGV	M	KYRN	TT	R	EQM	VK	EFQKVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRYTDTNV
XP_040221405.1	----	----	MERILRGV	M	KYRH	TT	R	EQM	VQ	EFQKVR	----	D	----	NPQPKA	VFFTCIDSRM	IPTRFTEINV
CAA9998239.1	----	----	MSMCLSLI	M	IH	----	----	----	----	KLFNKV	----	F	----	DKHPKA	VFFTCIDSRM	IPSRFTQTNV
KAF6203636.1	----	----	MDRLFRGI	M	KYRN	TE	R	EGM	VA	QFEKVK	----	N	----	NPVPPA	VFFTCIDSRM	IPSRFTQTNV
KAG6800307.1	----	----	MDKILKGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	CPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_014230599.1	----	----	MDRIIRGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	NPQPKA	VFFTCIDSRM	IPTRFTEINV
KAH0947068.1	----	----	MDKILKGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_043590797.1	----	----	MDRIIRGI	M	KYRN	CH	K	KEL	VK	QFQKVK	----	D	----	HPDPKA	VFFTCIDSRM	IPTRFTEINV
XP_034949379.1	----	----	MDRIIRGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_012275169.1	----	----	MDRILKGV	M	KYRK	CH	K	EGM	VK	QFQKVK	----	L	----	HLEPKA	VFFTCIDSRM	IPTRFTEINV
XP_043464528.1	----	----	MDRILRGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_014220045.1	----	----	MDRILKGV	M	KYRK	CH	R	DVM	VK	QFQKVK	----	D	----	HPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_011160605.3	----	----	AVMDRILKGI	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_046741789.1	----	----	MDRILKGV	M	KYRK	CH	R	EGM	VK	QFQKVK	----	D	----	HPEPKA	VFFTCIDSRM	IPTRFTEINV
VVC24333.1	----	----	MDRIFRGI	M	KYRK	TH	R	KKM	VE	QFVHVK	----	N	----	HPEPKA	VFFTCIDSRM	IPTRFTEINV
KAF0770685.1	----	----	MDRIFRGI	M	KYRK	TH	R	VEV	VE	QFVHVK	----	N	----	RPEPKA	VFFTCIDSRM	LPARFTEINV
XP_015365968.1	----	----	MDRIFRGI	M	KYRK	TH	R	VKM	VE	QFVHVK	----	N	----	RPEPKA	VFFTCIDSRM	LPARFTEINV
XP_029341681.1	----	----	MDRIFRGI	M	KYRK	TH	R	GKM	VE	QFVHVK	----	N	----	HPEPKA	VFFTCIDSRM	LPARFTEINV
XP_026292519.1	----	----	----	M	TFH	----	----	RM	VC	NHGKRS	----	M	----	PCQPKA	VFFTCIDSRM	IPTRFTEINV
XP_034238427.1	----	----	MDKILKGI	M	KYRV	TD	R	KTM	VE	QFKQVA	----	N	----	NPAPKA	VFFTCIDSRM	IPTRFTEINV
XP_024081347.1	----	----	MDRLFRGI	M	KYRG	TD	R	LYM	LE	QFARVR	----	D	----	HPVPPA	VFFTCIDSRM	IPTRFTKTNV
XP_014283188.1	----	----	MDRILRGI	I	KYRN	TD	K	HIM	LD	QFVQVK	----	N	----	NPTPKA	VFFTCIDSRM	IPTRFTKTNV
RZF32743.1	----	----	MDRILRGV	M	KYRH	TD	R	KTM	VE	QFVQVK	----	N	----	NPVPPA	VFFTCIDSRM	IPTRFTKTNV
CAB3380083.1	----	----	MDRIIRGI	I	KYHH	HT	R	LGM	VE	QFKRVR	----	D	----	NPAPKA	VFFTCIDSRM	IPTRFTKTNV
XP_046989067.1	----	----	MDRILRGI	M	KYRA	TD	R	KTM	VE	QFQKVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
GFG38476.1	----	----	MDRILRGI	M	KYRK	TD	R	KKM	VE	QFEVVR	----	N	----	RPEPKA	VFFTCIDSRM	IPTRFTEINV
CAD7446618.1	----	----	MDKILKGV	M	KYRH	TD	R	KTM	VA	QFERVR	----	D	----	HPEPKA	VFFTCIDSRM	IPTRFTEINV
KAG8226740.1	LWATLFRCDN	GGAKLPPIST	MDRIIRGI	M	KYRK	TG	R	KTM	VQ	QFEQVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_046392794.1	----	----	MDRILRGI	M	KYRV	TD	R	KTM	VE	QFVKVR	----	D	----	NPEPKA	VFFTCIDSRM	IPTRFTEINV
XP_046459477.1	----	----	MDKILKGI	L	KYRK	TY	R	TEM	VE	QFKQVA	----	D	----	RPEPKA	VFFTCIDSRM	LPTRFTQTDV
XP_043227363.1	----	----	MDKILKGI	L	KYRH	TF	R	PGM	VE	QFQKVK	----	D	----	NPVPPA	VFFTCIDSRM	LPTRFTQTNV
XP_018006429.1	----	----	MGIDKILQGV	M	KYRK	TC	R	DGM	VQ	QFKVVR	----	N	----	DPHPKA	VFFTCIDSRM	LPTRFTQTNV
AWH57222.1	----	----	MGMSRILGV	M	KYRK	NY	R	AGM	VK	QFEVVR	----	D	----	DPHPKA	VFFTCIDSRM	LPTRFTQTNV
XP_042865604.1	----	----	MGMSRILQGI	M	KYRE	SY	R	AGM	VK	QFEVVR	----	D	----	DPHPKA	VFFTCIDSRM	LPTRFTQTNV
XP_045119740.1	----	----	MGMTIRILQGI	M	KYRN	TY	R	ERM	VK	QFEVVR	----	D	----	DPHPKA	VFFTCIDSRM	LPTRFTQTNV
XP_045613573.1	----	----	MGMRILQGV	M	KYRH	TK	R	EGM	VK	QFEVVR	----	D	----	DPHPKA	VFFTCIDSRM	LPTRFTQTNV
XP_021963432.1	----	----	MGMDRILKGI	M	KYRK	TV	R	SNL	VQ	EFQKVR	----	D	----	HPEPKA	VFFTCIDSRM	LPTRFTQTHV
CAG7730563.1	FWP	VYGVAEVT	TEMFRILHGV	M	KYRE	AI	R	QGM	VQ	EFQKVR	----	D	----	HPDPKA	VFFTCIDSRM	LPTRFTQTHV



KAH8855123.1	GE	LFIKRN	GNFVCCENT	L	---	NHSN	ENYVTPGFLE	LTILRCITD	III	CGHSDC	RAMNLLNNLG	KCMHEQQYPY
KAH9593836.1	GE	LFIERN	GNFICCNSS	L	---	EHFN	KNCVTPGFLE	LTILRCRIND	III	CGHSDC	RAMNLLNNLG	KCKVERSHPY
VDP71164.1	GE	LLILRNA	GNFAPEHGE	---	---	---	GSNTVLSTLE	LGCLHGKVKD	VVI	CGHSDC	KAMHLLCSIG	SKVTD
TPP65121.1	GE	LYIVRNA	GNFAPEDGAP	---	---	---	AAGTVLSTLE	LGCLRGSVKD	VII	CGHSDC	KAMHLLRSIG	PELDN
KAA0189413.1	GE	LYVVRNA	GNFVPENGAG	---	---	---	EAGTILSTLE	LGCLRGSVKD	III	CGHSDC	KAMHLLQSGF	SEEN
KAF7258038.1	GO	LYIVRNA	GNFVPOANSS	---	---	D	KECNVLTGLE	LACIRNKVND	IVI	CGHSDC	KAMHLLNSMG	PSIMN
KAG5442206.1	GR	MFTIRNA	GNFVPCGEPH	S	---	E	SSCTVLGTLD	LACIRGKANE	LIV	CGHSDC	KAMHLLNSIG	PSLVR
XP_030837801.1	GE	LLIIRNP	GNFVPHSCKC	E	---	PSEGEAP	FPSGELAGLQ	LAIQKMAIPD	VIV	CGHTDC	RAGEALRHLP	VSRPTGQ
XP_041482585.1	GE	LLIIRNP	GNFVPHSCKC	E	---	SSAESTAPA	FPSGEMAGLQ	LAIQKMAIPD	VIV	CGHTDC	RAGEALRNLP	VSRPTGH
KRZ73557.1	GD	AYMVKNP	GNMIPCTYTC	A	KL	QONA	ASLSALASIE	LACLMKNVKD	IVV	CGHSDC	SAMNLLRSME	QCBAE
OUC42378.1	GD	AYMVKNP	GNMIPCTYTC	A	KL	QONA	AGLSALASIE	LACLMKNVKD	IVV	CGHSDC	SAMNLLHSMK	QCBAE
CDW52968.1	GD	AYTVRNP	GNLIPFCFPG	G	SVANLL	IFLYGTQPS	AITEATASLQ	LACCESKVPE	VIV	CGHSDC	KAMKLLWSLR	NEKHE
KHJ46144.1	GD	AYTVRNP	GNLIPFCFPG	G	---	TKQAG	AIAEATASLQ	LACCESKVPE	VIV	CGHSDC	KAMKLLWLLR	TEKHQ
VZI00627.1	GD	LYTVRNA	GNFIPHAQEF	A	---	DRKL	PISNEPGALE	LACCRSGVKD	III	CGHSDC	KAMNLLMKVG	EDSAIN
XP_014681778.1	GD	MYVIRNS	GNLVPHSDHC	G	---	EDLWK	HPSCEAALD	LCCVRSNVGN	VIV	TGHSDC	KAMNALLYDVV	STVAA
VDM45293.1	GD	MYVIRNG	GNMIPSATHF	G	---	ACGDEM	LVATEPAALD	LTLKQGGKHH	AIV	CGHSNC	KAMNALLYQMH	LHPKK
KAF8385568.1	GD	IFVVRNA	GNLIPDACNY	G	---	HYSEV	SCITTEPAALE	LAVKRGGVGH	VIV	CGHSDC	KAMNMLFLGH	ACPSN
PIO76965.1	GD	MFVVRNA	GNMIPDAPHY	G	---	TSSEI	SITTEPAALE	LAVTRGGIRH	IIV	CGHSDC	KAMNLLHSLH	QCPKN
VDL66086.1	GD	MFVVRNA	GNMIPDAPRY	G	---	VSSEI	SVTTEPAALE	LAVKRGGIRH	IVV	CGHSDC	KAMNLLHSLH	QCCTN
CAD6194288.1	GD	MFVVRNA	GNMIPDAPNY	G	---	FSSEV	SVTTEPAALE	LAVKRGGIRH	IVV	CGHSDC	KAMNLLHSLH	QCPKN
XP_045095542.1	GD	MFVVRNA	GNMIPDAPNY	G	---	SYSEV	SINTEPAALE	LAVKRGGIRH	VVV	CGHSDC	KAMNTLYQLH	QCPTK
EGT43056.1	GD	MFVVRNA	GNMIPDAPNY	G	---	AFSEV	SVNTEPAALE	LAVKRGGIRH	IVV	CGHSDC	KAMNTLYGLH	QCPKN
CAB3400100.1	GD	MFVVRNA	GNMIPDAPNY	G	---	RFSEV	SVNTEPAALE	LAVKRGGIRH	VVV	CGHSDC	KAMNTLYGLH	QCPKN
KAF7639475.1	GD	LFVVRNS	ANMVPPLARNF	G	---	GTASEV	SVTTEPAALE	LAIKRGNVCO	VLV	CGHSDC	KAMNTLYQLY	NGH-A
CAD5226593.1	GO	MFVVRNS	GNMIPHAQNY	G	---	GSSEYV	SITTEPAALE	LAVKRGINHH	VLV	MGHSDC	KAMNMLHNLIC	QCPOH
XP_024510735.1	GD	MFVVRNS	GNMIPHSRSE	G	---	NVGEV	SVNTEPAALE	LAVTRGKINH	VIV	CGHSDC	KAMNTLYGLH	TGNVK
VDN24694.1	GD	MYVVRNP	GSMIPRAENY	G	---	SCGCET	SLSTEAGGLE	LTVKRGGIKH	VII	CGHSNC	KAMNTLYNLH	KNPKK
KAH7730640.1	GD	MFVVRNS	GNMVPHAQNY	G	---	ISGYEV	SVTTEPAALE	LAVKRGGIKH	VIV	CGHSDC	KAMNTLYNLH	TCTSA
TMS38138.1	GD	MFVVRNS	GNMVPHAQNY	G	---	PSGFEV	SVTTEPAALE	LAVKRGGIKH	VIV	CGHADC	KAMNTLYNLH	QCPKH
XP_013290959.1	GD	MFVVRNS	GNMIPHANNY	EGMYRD	---	VSGPAGFEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHSDC	KAMNTLYNIH	TCPON
RCN50005.1	GD	MFVVRNS	GNMIPHANNY	G	---	PAGYEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHSDC	KAMNTLYNIH	ECPTT
KJH42542.1	GD	MFVVRNS	GNMIPHANNY	G	---	PTGYEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHSDC	KAMNTLYNIH	CKPKS
VDM64099.1	GD	MFVVRNS	GNMIPHANNY	G	---	AYVGSSEYEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHSDC	KAMNTLYNIH	RSPKS
VDO63723.1	GD	MFVVRNS	GNMVPHAHY	GLIHGIWLAC	---	VFLGPAGYEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHSDC	KAMNTLYNLH	CKPKT
VDO44040.1	GD	MFVVRNS	GNMVPAAHY	G	---	PSGYEV	SVTTEPAALE	LAVKRGHINH	VIV	CGHADC	KAMNTLYNLH	KNPKC
CAD6198090.1	GD	MFIVRNS	GNMIPHAQNY	G	---	PAGFEV	SVTTEPAALE	LAVKRGGIKH	VIV	CGHSDC	KAMNTLYNLH	TCPGA
KAF8373880.1	GD	MFVVRNS	GNMIPHANNY	G	---	PVGYEV	SVTTEPAALE	LAVKRGGIKH	VIV	CGHSDC	KAMNTLYNLH	CCPKS
XP_002632400.2	GD	MFVVRNS	GNMIPHANNY	G	---	PSGYEV	SVTTEPAALE	LAVKRGGIKH	VIV	CGHSDC	KAMNTLYNLH	CCPKS
RDD39080.1	GE	SFIVRNA	GNIVPHSKLI	Y	---	ER	WTPAEAAALE	LACVRNOVSS	VVV	CGHSDC	KAMDGLHSIG	GTAPS
XP_001632619.1	GD	MFVVRNA	GNLIPPHAKLY	G	---	DV	GSCELAALQ	MAIQEGKVEN	VVV	CGHSNC	KGMTFLLSHD	SR
XP_020895242.1	GO	MFVVRNV	GNLFPHARLE	G	---	SOV	ASSAEPAALE	LAVINYGKIH	VAV	CGHSDC	KAMHALYDTA	SSSST
XP_027059688.1	GD	MFIMRNA	GNVVPHNQLE	G	---	ENQO	SPLSEAAALE	LAIIS-TGVKD	ITV	CGHSDC	KAMDCLYHMH	NTTDKKK
XP_029213515.2	GD	MFIVRNA	GNMMPHSQLE	G	---	ESCS	SALSRAALE	LAVA-TGVEH	IAV	CGHSDC	KAMACLHQSS	STA
GFO16554.1	GE	VFCIRNP	GNMVPHYCEA	E	---	A-E	GISAEGGALE	LGCIMNDIGN	VVV	CGHSDC	KAVNSLYAQR	NCHWRIQ
RUS89945.1	GE	IFIIRNP	GNMVPFFDPA	G	---	Q-H	TLSEAEGGLE	LGCIMNGIGD	VVV	CGHSDC	KAVNSLYTOR	YDHAM
GFR80859.1	GE	VFVVRNP	GNMVPPLDPS	V	---	B-D	NASAEEGGLE	LGCIMNGIGD	VVV	CGHSNC	KAVNSLYSOR	HVCHBAQ
XP_005106142.1	GE	TFYVQNA	GNMVPHFQSI	K	---	S-G	QMSTEGGALE	LGCLSKGIRS	VVV	CGHSDC	KAVHALYDMR	SYCDHT
CAG5118574.1	GE	TFYVRNA	GNMIPHHEDY	L	---	A-G	YISSEGGGLE	LGCIVNEIRN	VVI	CGHSDC	RALYALYDMR	KECDHK
XP_013069769.1	GO	IYFLRNA	GNMVPHFDDY	K	---	E-G	RISSEGGGLE	LGCVTNQVKN	VVV	IGHSDC	RAAQALFEIR	HNCNHE
XP_013069770.1	GE	IYFLRNA	GNMVPHFDDY	K	---	S-G	KISSEGGGLE	LGCITNKIRN	VVV	CGHSDC	KAAQALFEIR	HSNDHQ
KAH9514813.1	GE	IYFLRNA	GNMVPHFDDY	K	---	S-G	KISSEGGGLE	LGCIRNKIRN	VVV	CGHSDC	KAAQALFEIR	DTCDHH
XP_033638319.1	GD	MFILRNA	GNLVPFRANYS	E	---	GEPT	QLSCEVVALE	ITCNRSKVEH	VVI	CGHSDC	QALYAAYSHY	TEEETS
XP_022095223.1	GD	MFLLRNA	GNVIPQANYT	Q	---	GEYT	QSSCEVVALE	ITCNRSKVEH	VVV	CGHSDC	QALYAAYSHY	TERE-GK
XP_038051194.1	GD	MFILRNA	GNVIPRANYS	E	---	GEPT	HVSCEVVALE	ITCNRSKVEH	VVV	CGHSDC	QALYAAYSHY	TEKE-TK
ACO15530.1	GD	AFTVRNA	GNLVPKSGLV	H	---	GL-V	NPAPPEAGLE	LGCVLNSIKN	VIV	CGHSDC	KAMTAVHSLK	DSNGWSE
XP_040566914.1	GD	VFTVRNP	GNLVPKSGLV	A	---	NS-R	NPAPPEAGLE	LGCVLNSIKN	V-V	CGHSDC	KAMTALQSPG	DSKGCE
VDP33652.1	GD	LYLVKNP	SNMVPAMRGN	D	---	VN-Q	AAVAAVAALQ	MTTVLGGIRD	IIV	FGHGC	SAISAMYQLF	KENKP
PAA53847.1	GD	MYVMRNA	GNMAPPDELG	R	---	---	GATAAGVE	LGCIHNDIKD	VII	CGHSDC	KAMALLWLRK	DTIDT
RNA13068.1	GE	ILITRNP	GNLVPNYNVL	P	---	A-K	TSRPEAAALE	LACLHDHVD	VIV	AGHADC	KAMNLVHDNR	QDLFKPA
CAF0715750.1	GE	ILITRNP	GNLVPNYNVL	P	---	P-N	TSRPEAAALE	LACLHDNIDT	VAI	AGHADC	KAMNLVHDNR	HQIFKSP
CAF0950609.1	GT	FFLIRSP	GNFIPKYESL	D	---	T-S	VASGTPAALE	LACVNNNANT	IVV	IGHSDC	KPLNMLFDMK	DNLEEH
CAF1119542.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NEIKS
CAF1301217.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	DDLKS
CAF3941029.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NDLQS
CAF0867361.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NEIS
UJR16523.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NEIS
CAF1340180.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NEIS
CAF1025683.1	GO	LFIVRNP	GNLVPNNHCF	R	---	NN-V	TVGGECAALE	LACSINKVQV	IVV	IGHSDC	KAMNLLYSIR	NEIS
ALS04255.1	GD	MFIVRNA	GNMVPHSSKV	S	---	D-N	LVGSECAALE	LACSRRNVPM	IVV	FGHSDC	KAMNLLYSIR	NEIS
XP_023329171.1	GD	MFIVRNA	GNMVPHSSKV	S	---	D-N	LVGSECAALE	LACSRRNVPM	IVV	FGHSDC	KAMNLLYSIR	NEIS
KAH3870454.1	GD	NYIVRNA	GNFVPPDDSL	E	---	B-S	AVATEPAVLE	LACVINTVKH	VVV	CGHSDC	KAINLLYSIR	SNPDQD
XP_045201158.1	GD	NYMVKNA	GNFVPPDDSL	K	---	Q-I	NTTTAAGALD	LTCVRQKIRH	VVV	AGHSDC	KAMLLYDLR	TDPKTON
XP_009053308.1	GD	HFVVRNP	GNMIPDADTL	N	---	Q-I	NTTTAAGALD	LTCVRQKIRH	VVV	AGHSDC	KAMLLYDLR	TDPKTON
XP_033096127.1	GD	HFVVRNP	GNMIPDADTL	N	---	T-D	TVSTEGGALE	FCCVQKNVKH	VIV	CGHSDC	KTVSMLEYEC	VAEEF
XP_013785798.1	GD	HFVVRNP	GNMIPDADTL	N	---	L-S	DVSEGAALD	MACNVVVKVD	VVV	IGHSDC	KAMNLLYSIR	SCTKHDK
GAU97340.1	GE	MFIVRNA	GNLIPHHKYY	G	---	M-D	FFSNPEAAME	LACVLTGVRH	VVI	CGHSDC	KAMNRLYKMH	EEETL
OQV24824.1	GE	MFIVRNA	GNLIPHHKYY	G	---	KE-A	TITTEPGALE	LACVINTVQD	IIV	CGHSDC	KAMNLLQSLK	AENTPED
CAD5123161.1	GD	MFIIIRNA	GNFIPKGECA	E	---	ND-A	TITTEPGALE	LACVINAVQD	IIV	CGHSDC	KAMNLLQSLK	EDKSCV
ELT97609.1	GD	MYLVRNA	GNLVPCHETL	S	---	S	STEGGALE	LGCVINKIRH	VIV	CGHSDC	KAMHALYGMR	DIINE
XP_009013880.1	GD	MYLVRNA	GNLVPCHETL	S	---	Y-D	AVSTTEPALE	LGCVMNEIPN	VLV	CGHSDC	KAMNALLYGMR	DOTQI
KAI0233246.1	GD	MYLVRNA	GNLVPCHETL	S	---	F-D	SVTTEPAALE	LGCVINKIRH	VLV	CGHSDC	KAMNALLYGMR	DOTQI
XP_029642194.1	GD	MYLVRNA	GNLVPCHETL	S	---	N-D	EVSTTEPALE	LGCVTNIRH	VVV	CGHSDC	KAMTALFEIR	DKAEE
NP_001171747.1	GD	AYIVRNA	GNLFPFDDAI	T	---	F-N	SVTAEAGALE	VACVLNNVRH	IFV	CGHSDC	KAMSLFLSLK	NOCHT
CAH1781438.1	GD	MFVVRNA	GNMVPHSDFC	S	---	G-D	SLNTEPAALE	LACIKNDINH	VIV	CGHSDC	KAMNLLYSIR	NEISH
XP_013382323.1	GD	NYLVRNA	GNLVPHSHKGL	G	---	Y-D	HITTEPGALE	LACIHNPIRH	VIV	CGHSDC	KAINLLLNMR	DKKAL
XP_033759917.1	GD	NFVVRSA	GNLIPHACNE	S	---	W-H	NATTEPGALE	LGCVMGDIRH	VVV	CGHSDC	KAMNLLYSIR	NELDH
XP_041373453.1	GE	TFVVRNA	GNLIPHAKIS	S	---	Y-E	SATTEPGALE	LGCIVNGVKH	VVV	CGHSDC	KAMNLLYSIR	NEVDN
XP_046548515.1	GD	NFFIRNA	GNLIPNAKHF	S	---	Y-E	SVTTEPGALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_047034441.1	GD	MFVVRNA	GNLIPHSHHF	K	---	Y-E	SVTTEPGALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
CAB3245311.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_011549456.2	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_045761472.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_046968321.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_026323335.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_045529909.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
RVE42816.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
KAF9415294.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H
XP_018897307.1	GD	MFVVRNA	GNLIPHSHHF	K	---	D-E	MTSCEPAALE	LGCIVNNIRH	VVV	CGHSDC	KAMNLLYSIR	HDMCN-H

XP_019763455.1	GD	MFIIIRNA	GNLVPHSQH	R	---	---	D	E	QDTNEPAALE	LGCVMNDIRH	IIV	CGHSDC	KAINLLYKLR	DPEFA	----
XP_030749737.1	GD	MFIIIRNA	GNLVPHSHCF	P	---	---	D	E	QNSNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLYKLR	DPEFA	----
KAF7270051.1	GD	MFIVRNA	GNMVPHSQFF	P	---	---	D	E	QHSNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLYKLR	DPEFA	----
XP_031343879.1	GD	MLIVRNP	GNVIPNSQHF	C	---	---	D	E	LTTNEPTALE	LGCIVNIRH	VIV	CGHSDC	KAVNELYKLO	DREFG	----
XP_044743527.1	GD	MFVVRNA	GNLIPHSQHF	M	---	---	D	E	LTTNEPAALE	LGCIIINDIRH	IIV	CGHSDC	KAMNLLYKLR	DQEFA	----
XP_018319432.1	GD	MFIVRNA	GNVIPHSHHF	L	---	---	D	E	ITSNEPAALE	LGCVINDIRH	IIV	CGHSDC	KAINLLYQLO	DTNFS	----
XP_026466152.1	GD	MFVVRNA	GNLVPHSQHF	L	---	---	D	E	YISAEPAALE	LGCVMNDIRH	IIV	CGHSDC	KAMNLLYKLO	DNAFA	----
XP_022913687.1	GD	MFVVRNA	GNLIPHSQHF	M	---	---	D	E	LTTNEPAALE	LGCIVNDIRH	IIV	CGHSDC	KAMNLLHKLO	DAEFA	----
KAF5298473.1	GD	MFVVRNA	GNVIPHSQHF	L	---	---	D	E	LTTNEPAALE	LGCVINDIRH	VIV	CGHSDC	KAINLLYKLO	DSEFS	----
VEN57246.1	GD	MFIVRNA	GNIIPHSQHF	L	---	---	D	E	ITMNEPAALE	LGCVMNDIRH	IVV	CGHSDC	KAINLLHKLO	DRDFS	----
XP_045472083.1	GD	MFVVRNA	GNIIPHSQHF	E	---	---	D	E	LTSNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLYKMQ	DSKFA	----
XP_017768645.1	GD	MFVVRNA	GNIIPHSQHF	M	---	---	D	E	LTTNEPAALE	LGCVNDIKH	IIV	CGHSDC	KAMNLLFKLO	DSEFA	----
CAH1369701.1	GD	MFVVRNA	GNIVPHSQHF	F	---	---	D	E	LTTNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLHKLO	DGEFA	----
XP_028136465.1	GD	MFVVRNA	GNVIPHSQHF	V	---	---	D	E	LTSNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLYKLO	DSEFA	----
XP_023014099.1	GD	MFIVRNA	GNIIPHSQHF	L	---	---	D	E	LTTNEPAALE	LGCVNDIRH	IIV	CGHSDC	KAMNLLYKLO	NVDF	----
XP_019875064.1	GD	MFIVRNA	GNIIPHSQHF	M	---	---	D	E	LTTNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAINLLYKLO	DSEFA	----
CAH0557060.1	GD	MFIIIRNA	GNIIPHSQHF	M	---	---	D	E	LTTNEPAALE	LGCVNDVRH	IIV	CGHSDC	KAINLLYKLO	DSDF	----
XP_037924690.1	GD	MFVVRNA	GNVIPSHHF	V	---	---	D	E	FFSCEPAALE	LGCVNDIRH	IIV	CGHSDC	KAMNLLYKLR	DPEFA	----
XP_043863257.1	GD	MFVVRNA	GNIIPHAQHF	Q	---	---	D	E	YFSCEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLYQLR	DPDFA	----
XP_039965629.1	GD	MFVVRNA	GNVIPHAQHF	Q	---	---	D	E	YFSCEPAALE	LGCVNDIRH	IIV	CGHSDC	KAMNLLYKLO	DEEYS	----
XP_001989827.1	GD	MFVVRNA	GNIIPHAHFF	H	---	---	D	E	YFSCEPAALE	LGCVNDIRH	IIV	CGHSDC	KAMNLLYKLR	DPEFA	----
XP_037896985.1	GD	MFVVRNA	GNIIPHAHFF	Q	---	---	D	E	HFSCEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLYMLR	DPDFA	----
XP_046805044.1	GD	MFVVRNA	GNIIPHAQHF	Q	---	---	D	E	HYSCEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLYQLR	DPEFA	----
KAG5681791.1	GD	MFVVRNA	GNLVPHSHFF	Q	---	---	D	E	YFSCEPAALE	LGCVVNIRH	VIV	CGHSDC	KAMNLLHKLO	CTQFA	----
XP_031629647.1	GD	MFVVRNA	GNLVPHAQHF	Q	---	---	D	E	YFSCEPAALE	LGCVVNIRH	III	CGHSDC	KAMNLLYSLR	DKEKA	----
KAG4077403.1	GD	MFVVRNA	GNIIPHAQHF	Q	---	---	D	E	YFSCEPAALE	LGCVVNIRH	IIV	CGHSDC	KAMNLLYSLR	DPELA	----
XP_039430644.1	GD	MFVVRNA	GNIIPHAHFF	Q	---	---	D	E	YFSCEPAALE	LGCVVNIKH	IIV	CGHSDC	KAMNLLYQLR	DPEFA	----
XP_040221405.1	GD	MFVVRNA	GNLVPHAHFF	Q	---	---	D	E	YFSCEPAALE	LGCVVNIKH	IIV	CGHSDC	KAMNLLYKLR	DPEFA	----
CAA9998239.1	GD	MFIVRNA	GNIIPSHHF	M	---	---	G	E	VTMNEPAALE	LGCVVNDIRH	III	CGHSDC	KAMNLLYKLR	DSTFS	----
KAF6203636.1	GD	MFIVRNA	GNVIPSHHF	N	---	---	D	E	VTMNEPAALE	LGCVVNDIRH	III	CGHSDC	KAMNLLYKLR	DQFS	----
KAG6800307.1	GD	MFVVRNA	GNIIPHSQHF	E	---	---	D	E	LAMCEPAALE	LVCLMNEIKH	IIV	CGHSDC	KAMNLLYSLR	EEELA	----
XP_014230599.1	GD	MFVVRNA	GNIVPHSHHF	M	---	---	D	E	LTMCEPAALE	LGCVVNDIRH	III	CGHSDC	KAMNLLYALR	DQEFA	----
KAH0947068.1	GD	MFVVRNP	GNIIPHPHF	V	---	---	D	E	YTTCEPAALE	LSCVVNAIRH	VIV	CGHSDC	KAMNLLYTLR	DEELA	----
XP_043590797.1	GD	MFVVRNA	GNIIPHSQHF	V	---	---	D	E	LTMCEPAALE	LGCVINNMKH	IIV	CGHSDC	KAMNLLYALR	DEEFA	----
XP_034949379.1	GD	MFVVRNA	GNVIPHSQHF	I	---	---	D	E	LTMCEPAALE	LGCVINIRH	IIV	CGHSDC	KAMNLLYALR	DEEFA	----
XP_012275169.1	GD	MFVVRNA	GNIIPHSQHF	A	---	---	D	E	LTMCEPAALE	LGCVVNIKH	IIV	CGHSDC	KAMNLLYALR	DQFS	----
XP_043464528.1	GD	MFVVRNA	GNIVPHSQHF	L	---	---	D	E	LTMCEPAALE	LGCVVNDIRH	VIV	CGHSDC	KAMNLLYALR	DEEFS	----
XP_014220045.1	GD	MFVVRNA	GNIVPHSHHF	D	---	---	D	E	LTMCEPAALE	LGCIVNDIRH	VIV	CGHSDC	KAMNLLYALR	DEEFA	----
XP_011160605.3	GD	MFVVRNP	GNVVPHSQHF	V	---	---	D	E	FTMCEPAALE	LGCVNDIKH	VIV	CGHSDC	KAMNLLYALR	DEEFA	----
XP_046741789.1	GD	MFVVRNA	GNVVPHSQHF	S	---	---	D	E	LTMCEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLYALR	DEEFA	----
VVC24333.1	GD	MFIVRNA	GNIIPHSQHF	L	---	---	D	E	YTTCEPAALE	LGCVNDIRH	VIV	CGHSDC	KAMNLLHLR	DTEFA	----
KAF0770685.1	GD	MFIVRNA	GNIIPHSQHF	Q	---	---	D	E	YTTCEPAALE	LGCIHNDVRH	VIV	CGHSDC	KAMNLLYLLR	DTEYG	----
XP_015365968.1	GD	MFIVRNA	GNLVPHSRHF	Q	---	---	D	E	YTSCEPAALE	LGCVHNDVRH	VIV	CGHSDC	KAMNLLHLR	ETEYS	----
XP_029341681.1	GD	MFIVRNA	GNIIPHSQHF	P	---	---	D	E	YTSCEPAALE	LGCVHNDIRH	VIV	CGHSDC	KAMNLLHLR	DTEYG	----
XP_026292519.1	GD	MFVVRNA	GNIIPHCGHF	L	---	---	D	E	YHTNEPAALE	LGCIVNDIRH	IIV	CGHSDC	KAMNLLYALR	DAEMS	----
XP_034238427.1	GD	MFVVRNA	GNVIPCHGHF	L	---	---	D	E	YHTNEPAALE	LGCIIINDIRH	IIV	CGHSDC	KAMNLLYALR	DAEMS	----
XP_024081347.1	GD	MFVVRNA	GNIIPHAHFF	R	---	---	D	E	ITTNEPAALE	LGCIVNDIRH	IIV	CGHSDC	KAMNLLYKLR	DEEFS	----
XP_014283188.1	GD	MFVVRNA	GNIIPHSQHF	L	---	---	D	E	YTTNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLYKLR	DENFA	----
RZF32743.1	GD	MFVVRNA	GNIIPHSQHF	L	---	---	D	E	YTTNEPAALE	LGCVVNDIRH	IIV	CGHSDC	KAMNLLHKLR	DEKFA	----
CAB3380083.1	GD	MFVVRNA	GNIIPHSQHF	V	---	---	N	E	AFTTEPAALE	LGCIVNDIKH	VIV	CGHSDC	KAMNLLHSLO	DEEYA	----
XP_046989067.1	GD	MFVVRNA	GNVIPHSQHF	P	---	---	E	E	VTTTEPAALE	LGCVNDIRH	VIV	CGHSDC	KAMNLLHRLR	CEEFS	----
GFG38476.1	GD	MFVVRNA	GNVIPHSQHF	L	---	---	D	E	ATMNEPAALE	LGCIVNDIRH	VIV	CGHSDC	KAMNLLYSLO	CQEFS	----
CAD7446618.1	GD	MFVVRNA	GNIIPHSQHF	Q	---	---	D	E	KTTEPAALE	LGCIIINDIKH	IIV	CGHSDC	KAMNLLHALR	DEEFS	----
KAG8226740.1	GD	MFIVRNA	GNVIPHSQHF	V	---	---	N	E	MTTTEPAALE	LGCIVNDIKH	IIV	CGHSDC	KAMNLLHALR	DEEFS	----
XP_046392794.1	GD	MFVVRNA	GNIIPHSQHF	I	---	---	N	E	MTTTEPAALE	LGCIVNDIRH	IIV	CGHSDC	KAMNLLHDLR	NEEFS	----
XP_046459477.1	GD	MFIVRNA	GNLVPHSKLY	G	---	---	I	D	SATTEPAALE	LGCIVNNVKH	MVV	CGHSDC	KAMNLLYSFK	KGLET	----
XP_043227363.1	GD	MFIVRNA	GNLVPHAKLY	D	---	---	T	E	IVSTTEPAALE	LGCIVNGIKH	VII	CGHSDC	KAMNLLYDLR	DPALA	----
XP_018006429.1	GD	MFIVRNA	GNLVPHAMLC	G	---	---	G	E	EITTEPAALE	LGCVINGIKH	VIV	CGHSDC	KAMNMLHLR	NSDMS	----
AWH57222.1	GD	MFIVRNA	GNLVPHANLC	G	---	---	H	E	EITTEPAALE	LGCVINGIRH	VIV	CGHSDC	KAMNMLHLMR	NSDRT	----
XP_042865604.1	GD	MFIVRNA	GNLVPHANLC	G	---	---	H	E	EITTEPAALE	LGCVINGIRH	VIV	CGHSDC	KAMNMLHLR	NTDRL	----
XP_045119740.1	GD	MFIVRNA	GNLVPHANLC	G	---	---	H	E	EITTEPAALE	LGCVINGIKH	VIV	CGHSDC	KAMNMLHMMR	NSDRT	----
XP_045613573.1	GD	MFIVRNA	GNLVPHANLC	G	---	---	H	E	EITTEPAALE	LGCVINGIKH	VIV	CGHSDC	KAMNMLHMMR	NSDRT	----
XP_021963432.1	GD	MFIVRNA	GNIIPHSKFF	A	---	---	T	E	NTSTTEPAALE	LGCIIINEIKH	VIV	CGHSDC	KAMNLLYDLG	TDKEMS	----
CAG7730563.1	GD	MFIVRNA	GNLVPHSKFF	V	---	---	A	E	NTTTEPAALE	LGCVINIKQH	VVV	CGHSDC	KAMNLLYTLK	DEALT	----



KAH8855123.1	LSHHYHQSNS	IDKEVNKLKS	SPLKWIWEN	GC-K	TLQNF	HLKSN	---	ILSFT	SSLSHS-NCP	KLELDNLNVR	HLTEIDLLSQ
KAH9593836.1	LAHHEHQPID	VQIENNKITS	SPLKWIWEN	GC-K	TLQNF	NTKSG	---	ILSFK	SSSIHS-KCP	TLELDLNSAK	HLTEVDLLSQ
VDP71164.1	---	GQLVEKQM	SPLQKWVAGQ	GI-K	CWKKW	QSKTN	---	AVRFP	AFKEE---QL	ILNMRSDLIK	NLEPVDIISQ
TPP65121.1	---	KKLDEQKI	SPLQKWISQN	GV-K	CWKKW	HAKTN	---	TVQFS	TLE-D---HL	TLNMRSDAMR	NLEPVDVLSQ
KAA0189413.1	---	HKSDKNSA	SPLQKWWSQN	GI-K	GWKKW	RAKSD	---	SIEFP	AMK-D---HL	TLNMHADQVK	NLEPVDVLSQ
KAF7258038.1	---	DKLOTTQM	TPLQQAACKN	GM-E	GFRKY	ERKPN	---	LLEFP	VNDMLT-LKT	PLRLKLTSLK	DLSDVDRLSQ
KAG5442206.1	---	GELPVSQM	SPIEKWVALN	GL-A	SYRKH	TLTSD	---	VHLFP	VYDPOV-RKS	NFNKLKLSLK	DFEEDCRLSQ
XP_030837801.1	---	TGSGSQHSM	DLMMNWLRAY	GS-P	ALEKY	ERHME	---	NPAEEV	TYEGGGRKGA	KLSAVIDENG	KLSTKTDRLAQ
XP_041482585.1	---	AGSGSQHSL	DLTNNWLHSY	GS-P	ALEKY	EQHME	---	KPGEEV	EFEGGGRKGA	KFSAIIDEN	KLSTKTDKLAQ
KRZ73557.1	---	WKPD	KPLKSWLQIH	GS-P	SVQKY	NCLMK	---	GOQVF	QFIPEY-PLL	QFSAKIDPFS	KLANADKLSQ
OUC42378.1	---	WKPD	KPLKSWLQIH	GS-P	SVQKY	NYLLK	---	GOQVL	QFIPEY-PFL	QFSAKIDPSG	KLNTNADKLSQ
CDW52968.1	---	WDSR	MPLNAWLMLQ	GR-A	TLEKY	EQMEE	---	TDGSI	SFLNKW-QSL	SFEASIDR-K	KWNELDQLSQ
KHJ46144.1	---	WDLH	KPLSSWLMLQ	GK-A	TLEKY	EEMEE	---	THGSI	SFLNKW-QNL	SFEASIDR-K	KLNELDQLSQ
VZI00627.1	---	LTRY	SPLERWVVMQ	GK-S	SLEAF	LRSDA	---	LTI	TFDLGSDFR	PMNATVDAER	RFSBVDRLSQ
XP_014681778.1	---	GERE	GPLHTYLRSY	AV-P	TIMKM	QQLLR	---	PNMEGPI	EFVSVTPR-HR	SFRAFIDPEH	ELSEMDKLSQ
VDM45293.1	---	FDES	SPLHHWVRKH	GY-V	SLHKL	EQRLL	---	EGASCRL	VFANDR-HQ	SFKALIDPEN	ELDVEDKLSQ
KAF8385568.1	---	FDHA	SPMDHWLRKH	GH-R	TMKKL	NERLY	---	KGPOPL	QFDESVPASQ	SFEAIDDPD	RLKAEDKLSQ
PIO76965.1	---	FDMD	SPMDHWVRN	GF-R	SMKRL	NERLH	---	KGAKIM	KFETDIAPSQ	NFEAIDPFD	KLPVEDKLSQ
VDL66086.1	---	FDAS	SPMDHWVRN	GY-R	SVKRL	TERLH	---	KGGTPL	KFESSVAPSQ	NFEAIDVPD	LLEVEDKLSQ
CAD6194288.1	---	FDVS	SPMDQWVRN	GY-Q	SIKKL	NERLH	---	KGAAMK	TFNCMSPNQ	SFEAIDPMD	RLPVEDKLSQ
XP_045095542.1	---	FDVS	SPMDQWLRN	GF-E	SMKKL	NERLH	---	IGPKTM	KFESEVAPSQ	SFEAIDPME	KWSAEDKLSQ
EGT43056.1	---	FDTV	SPMDHWVRN	GF-A	SVKRL	NERLH	---	LGPSNM	SFESEVSPSQ	SFEAIDPMD	RLPVEDKLSQ
CAB3400100.1	---	FDVE	SPMDHWVRN	GF-K	SVQRL	NERLH	---	KGPSLM	KFESEVSPSQ	SFEAIDPFE	KLTVEDKLSQ
KAF7639475.1	---	FDPE	SPMDHWLRN	GH-L	SIQKL	EKLIK	---	EKSSKKL	EFASENG-LM	KFKAKIDPEN	KYGVEDKLSQ
CAD5226593.1	---	FDQT	SPVDHWLRKN	GF-R	SHIKL	TQMLKAE	---	ENCDDPARRI	HFAABEPELL	NFHAQIDPDR	KFGVEDWLSQ
XP_024510735.1	---	FSEK	SPMDRWLRN	GY-H	SLKKL	EMREN	---	DGNVPL	KFANDQ-KF	FYAYIDKEN	KLNIEDKLSQ
VDN24694.1	---	FDAN	SPLDLWIREH	GF-L	SLKKL	EERLA	---	SKTAKPL	KYSTPDG-AF	SFEAIDPEN	KFDVEDKLSQ
KAH7730640.1	---	FDPE	SPMDHWLRKH	GY-S	SIRKL	EELKRTD	---	STGAKPI	EFVANSPLL	RFHVIDEER	RFNVEDRLSQ
TMS38138.1	---	FDBA	SPMDHWLRH	GF-T	SVQKL	ENRLK	---	SEPEKPL	VFLSDFP-YF	KFEAVIDPQN	EFNTEDKLSQ
XP_013290959.1	---	FDPQ	SPMDHWLRH	GF-T	SIKKL	EERLA	---	DKNLKPL	KFVSDNP-AH	SFEAMIDEED	KWSVEDKLSQ
RCN50005.1	---	FDPQ	SPMDHWLRH	GF-A	SLKKL	EERLA	---	DKTAKPI	KFVSDNP-SF	SFEAVIDPE	KWGVEDKLSQ
KJH42542.1	---	FDPQ	SPMDHWLRH	GF-T	SIKKL	BEHLT	---	DESAKAL	KFSTGNS-NF	SFEAIDQEN	KWGVEDKLSQ
VDM64099.1	---	FDPQ	SPMDHWLRH	GF-T	SLKKL	EGRLV	---	DKSDKPL	QFISDNP-VF	NFEAIDYED	KWGVEDKLSQ
VDO63723.1	---	FDPQ	SPMDHWLRH	GF-T	SLKKL	EERLA	---	DKTAAPL	KFVSDNP-VF	NFEAIDKEK	KLNVEDKLSQ
VDO44040.1	---	FDPQ	SPMDHWLRH	GY-E	SLQKL	EERLA	---	NTAKPL	TFVSEVP-GY	TFEAIDPEN	KWGVEDKLSQ
CAD6198090.1	---	FDPQ	SPMDHWLRH	GF-H	SLRRL	EERLK	---	AEKKTPL	EFVVDNP-LF	SFSAIDEED	KLNVEDKLSQ
KAF8373880.1	---	FDPE	SPMDHWLRH	GY-N	SLRKL	EKRLA	---	DDKAGPL	EFVSSNP-LF	SFSAIDABG	KWNVEDRLSQ
XP_002632400.2	---	FDPE	SPMDHWLRH	GF-N	SIKKL	EKRLA	---	DKKAGPI	EFVSDNP-LF	SFQAIDPEN	KLNVEDKLSQ
RDD39080.1	---	ES	SEVLDWIYRF	AS-Q	TYTKW	EKTLVD	---	RSNSDQPL	HLEFNE-NGL	KFEAKIN--O	NLIPKDKLSQ
XP_001632619.1	---	TD	NHYIPWLKKT	GA-S	SLTRF	EKVDMSQ	---	EGGVKL	LFEDAT-GGE	PMEVTIDEN	KLDSVDKLSQ
XP_020895242.1	---	DNS	SMIASWITTH	GS-S	SLTKL	DRLVBD	---	NK	VFNDI-ESE	KFEAVID--E	KLPIQDKLSQ
XP_027059688.1	---	QDSET	SWVSGWLRRY	AO-S	SLTKF	EKLGF	---	P	IDGSSK-EKD	NLEIMFDKEK	DLSDVDKLSQ
XP_029213515.2	---	NAA	SWVSLWLKRY	AO-A	SLTKY	EQLEVQG	---	QREGTVS	VGSGSK-DLE	TLEIMFDQEK	MLPAVDKLSQ
GFO16554.1	---	ERTMD	SPLKSWLSLH	GL-Q	TVQKF	TKLFSSEEDQ	---	RSARETILG	GKGFNF-GR	EFVCNVDPN	KFLNEDKLSQ
RUS89945.1	---	LQEPN	SPLKSWLSAH	GL-R	TVHKF	NELFSEEEQ	---	RSVKGETILG	GFKLNF-GLD	SFVCHVDPEN	KFPIDKLSQ
GFR80859.1	---	DQHTVD	SPLKTWLSAH	GL-R	TVQKF	TKLFSSEEQ	---	LSVEGKKILG	GFKLNF-GKE	EFVCAVDPN	DFSIDKLSQ
XP_005106142.1	---	KYHPD	SPLKSWVAFH	GK-N	TVKKF	SDSQNTS	---	TGPN	TFTFSG-GVK	EKKAIIDSEN	QFVQDKLSQ
CAG5118574.1	---	LYHQK	SPLKTWVALN	GR-R	TANKF	SQLFPEVKKR	---	NNFVDPV	IFDVNL-GQG	HVKALIDPEN	DFCIQDKLSQ
XP_013069769.1	---	QYIHT	SPMKTWVALH	GA-K	TIEQF	CNIYNDKDP	---	EDTYFMKQPM	NFTVNL-NGK	DIQITILDPN	KFNIKDKFSM
XP_013069770.1	---	HFLLD	SPLRTWVALH	GS-R	TVEKF	SKIYSENL	---	NDSYHLKEPL	HFTVNL-TGQ	DVDAIDDPN	QFISQDKLSQ
KAH9514813.1	---	KYLLE	SPLKTWVALH	GS-K	TVVNF	SKIYHEDDSL	---	PNSYHLKQPL	HFTVNL-NGQ	DIDAIIDPEN	QFCIEDKFSQ
XP_032638319.1	---	APLKRVS	ELIHGWCRTH	GVEA	SLNKV	QDTSN-R	---	TSKGAAP	KFNIGSTPQ	--EVPIDPN	EMALLDKLSQ
XP_022095223.1	---	KPITQVS	QLIHQWLSRTH	GVEA	SLNKI	QDLSA-K	---	TPEGGTM	TFDVGAQPLE	AYFQDFDIAE	KFLNEDKLSQ
XP_038051194.1	---	KPLKRVS	QVIHQWCRTH	GVEA	SLNKL	QDLSA-R	---	TPSEGVM	TFDVGAQPLE	AYFQDFDSTD	EKSLDKLSQ
ACO15530.1	---	EELLQ	SPLKAWLYKH	GM-D	SLNKL	NDKLT	---	S-PESSL	TFMKDT--QH	EFEANMD--N	KLLESDQLSQ
XP_040566914.1	---	FDVMQ	SPLKAWLQRN	GM-V	SFKRF	CEMKK	---	MKGEDSL	IFMKNT--KH	EFEAID--S	QLDEADQLSQ
VDP33652.1	---	LDHS	SPVDLWLRGN	AA-S	SWERF	QKFMN	---	NROPL	HYMOTS-DQL	SIEVHIDVER	MLDEKDTLSQ
PAA53847.1	---	QRP	DALSEWVKRY	GR-S	SLKHY	LAERD	---	AQPM	KFSRPI-EGQ	SISAHIDPNK	RYQPHDQLSQ
RNA13068.1	---	KSEKE	SLKSWLMAN	SA-P	TIKKY	SEFEK	---	NSFKKTS	SFSIVD--GQ	KFEAYIDPEN	EYGNNDKFSM
CAF0715750.1	---	TTEKE	SVLKSWMAN	SV-P	TIHKY	FYEYK	---	GDFKKPA	KFSITN--GR	TFEAYIDPEN	AYPNNDKFSM
CAF0950609.1	---	ESNNP	SALKKWLILN	GK-D	SVVKY	KEFEK	---	SGFNKCL	TFSEGE--PN	QFDAYIDPN	QFSPQDKFTM
CAF1119542.1	---	PSK	GPLEDWLRFH	GR-G	TIEQF	KKLES-S	---	SGFDRKL	VFAGAQHSD	DFEAYIDPN	EFKSDKLSQ
CAF1301217.1	---	PSK	GPLEDWLRVH	GR-G	TIEQF	KKLES-T	---	TCFERKL	IFAGAQHYED	DFEAYIDPN	QFKPSDKFSQ
CAF3941029.1	---	PSK	GPLEDWLRVH	GR-G	TVEQF	KKLEM-S	---	TGFDRKL	KFAGAQHYED	DFEAYIDPN	QFKPSDKFSQ
CAF0867361.1	---	PSK	NPLDQWLKVH	AK-G	TVEQF	KKLES-S	---	SGFKRKL	VFASAQHHED	DFEAYIDPN	EYKPSDKLSQ
UJR16523.1	---	PSK	NPLEQWLKTH	AK-G	TVEQF	QKLEL-S	---	GDYRQKL	VFASAQHHED	DFEAYIDPN	EFKSSDKLSQ
CAF1340180.1	---	PSS	NPLEKWLKVH	AR-G	TVEQF	KKLES-S	---	GDYTKKL	IFSSAQHHED	DFEAYIDPN	EFKHSDKLSQ
CAF1025683.1	---	PSN	TPLEQWLKVH	AG-G	TVEQF	KKLES-S	---	GDYKCKL	IFASAQHHED	DFEAYIDPN	EFKHSDKLSQ
ALS04255.1	---	SAAAR	GPLSAWITQH	GA-S	TMHEF	EKIER	---	ALFRRPI	LLHAED-PNN	KFPAYVDVDE	KYNINDKISM
XP_023329171.1	---	SAVAF	GHLSSWIKQH	GS-S	TMVEF	DKIER	---	AQFRPPI	LLHAED-PNE	KFPAYVDVDE	KYNINDKISM
KAH3870454.1	---	KTG	SPLLEWLKKN	GW-R	TIEKF	QYLKE-E	---	NSFTGPV	PFMQES-ENT	KFKTIDPQ	QFNIVDKLSQ
XP_045201158.1	---	PSG	SPLLEWLKKN	GK-R	TIDKF	QHLKE-E	---	NGFIGPV	PYIQEK-EDK	KFEIYIDPN	NFNIMVDKLSQ
XP_009053308.1	---	SKSPT	TPLEMWLKLH	GR-N	TLKAF	NOLQE-H	---	NNFMGPL	KFDIEN--YK	SFEAYIDPEN	KFSIVDKFSQ
XP_033096127.1	---	DDEVPD	SPVSRFLNQV	GM-A	TIEKF	BAVRK	---	CEPGAL	KFKSEV-PSL	SFRAFIDPEK	QLSLTDKLSQ
XP_013785798.1	---	MELK	GSLHGWLCOH	GI-A	SLDRF	IELEK	---	NNFKNPL	QFFEKN-TSK	KFRAFIDPEN	KFSHVDKLSQ
GAU97340.1	---	TDFAH	SPLRSWLMRY	GG-D	SWVQF	EKMLO	---	SKKNRL	VFMEG--NH	AYEAVIDAKN	EFNMDKFSQ
OQV24824.1	---	KNFHD	SPLRSWVMRY	GG-D	SYTHF	ETMLR	---	AEKNRL	VFKEG--NH	AHEAVIDPN	QFSIADKFSQ
CAD5123161.1	---	PKKE	SPLTSWIQKC	GK-P	TLKKF	GELEK-S	---	DGRGPI	SFSEE--LK	PFTAKID--T	SFSTVDRLSM
ELT97609.1	---	KEG	TPLTLWLKKH	GH-S	SVKRY	NELLN-S	---	PDGIGPL	EFKI---PGK	TLFAYIDPNK	KLSEVDKLSQ
XP_009013880.1	---	HEG	TPLQIWLKRH	GA-R	TIVKY	KELLQ-V	---	GGVGPI	KFOAET-PEK	VFRDAYIDPN	KFLPVDKLSQ
KAI0233246.1	---	VGG	PPLASWIKKH	GL-A	SVKKY	RQLEA-A	---	GGVGPI	TFEAEN-TSK	RFTAFIDRN	QFAPVDKFSQ
XP_029642194.1	---	HSG	TPLQMWLKKY	GV-A	SVRKF	QDQDS	---	KFVGPL	TFOGRF-PKH	NFOVNIDPN	KFPVEDKLSQ
NP_001171747.1	---	DKDK	NPFAAWLAKF	GK-A	SINAF	KEVER	---	GSKSPL	KFTGET-SQL	NFEAIDPDD	KFVEDKLSQ
CAH1781438.1	---	ENKDG	TPLENWVKKH	GL-S	SVMKF	FQLENLG	---	DKSGGPI	IFQGAS-PKH	TFEAIDPQN	EYSILDKLSQ
XP_013382323.1	---	HDE	DALQWLRRH	GS-S	SVQKF	EQWEK-M	---	KGREPI	TFOAET-PRH	NIEALIDPN	NFGIVDKFSQ
XP_033759917.1	---	KEG	KPLQWLKRRH	GI-A	SLEKF	KLLTP-E	---	NEYKGPV	PYQT---AR	KFNFAIDPEN	RFLNADKLSQ
XP_041373453.1	---	AACSH	SPLRAWLOKH	GA-P	TVKKF	AKLSP-E	---	NNFSGPL	IFQGET-EEN	SFAAYIDPEN	NFSLPDKLSQ
XP_046548515.1	---	QVG	TPLQMWLKKH	GO-P	TVSKF	EKLEA-G	---	NNYSGPL	TFOGET-EKS	NFDAYIDPN	KFSMADKFSQ
XP_047034441.1	---	ITEKRRL	SPLTSFMCYS	AK-S	SLDKF	LKMN	---	GDFTKPV	KFTAET-PHR	KFVAYIDPN	KFCIEDKLSQ
CAB3245311.1	---	SIEQRRL	SPLKSWLATH	AT-T	SLEKF	LSMK	---	GDFSCKPM	LFTAET-PQR	KFVAYIDPN	KFCIEDKLSQ
XP_011549456.2	---	NIEQRRI	SPLKSWLCNH	AK-T	SLDKF	LAMN	---	GDFKKPM	IFTAET-EQR	KFVAYIDPN	KFCIEDKLSQ
XP_045761472.1	---	SLEQRRI	SPLKSWLCSH	GK-S	SLDKF	LDIG	---	GDFEKPI	LFTAET-PQR	KFVAYIDPN	KFCIEDKLSQ
XP_046968321.1	---	SIEQRRI	SPLKSWLCTH	GK-S	SLDKF	LDVK	---	GNFDKPI	VFSAT-PQR	KFVAYIDPN	NFCIEDKLSQ
XP_026323335.1	---	SKEQRRI	SPLKSWLCNH	GE-S	SLRKF	LAMN	---	GDFSCKPM	LFSAT-PHR	KFVAYIDPN	TFCIEDKLSQ
XP_045529909.1	---	NVEQRRI	SPLKSWLCNH	AK-S	SLKKF	LEMK	---	GDFNCKPM	LFSAT-PQR	KFVAYIDPN	KFCIEDKLSQ
RVE42816.1	---	NKEQRRI	SPLKSWLCTH	GO-S	SLEKF	LEMN	---	GDFTKPM	LFTAET-PQR	KFVAYIDPN	QFCIEDKLSQ
KAF9415294.1	---	SIEQRRL	SPLKSWLCNH	AH-T	SLKKF	LEMN	---	NDFTKPM	LFTAET-PQR	KFVAYIDPN	KFCIEDKLSQ
XP_018897307.1	---	SKEQRRI	SPLRAWLCTH	AM-S	SLEKY	QQLQV	---	AGFHTPL	IFQGET-PLR	KFVAYIDPN	KFSVEDKLSQ

XP_019763455.1	-----	---	SKENRRL	SPLRSWLCTH	AC-S	SIDTF	NELEK	----	----	HNYDKPL	LFOGET-PLR	KFAAYIDPEK	KFSIEDRLSQ
XP_030749737.1	-----	---	SKENRRL	SPLRSWMCTH	AQ-S	SIDKF	EESTP	----	----	NDFNKPL	LFOGET-PLR	KFVAYIDPDK	KFSIEDRLSQ
KAF7270051.1	-----	---	SKDNRRRL	SPLRSWCAH	AQ-T	SIEKF	EDLLA	----	----	DDFNKPL	LFOGET-PLR	KFAAYIDPEK	KFNIEDRLSQ
XP_031343879.1	-----	---	SPENRKL	FPVRSYLCTH	AL-P	SLEKF	QOFQL	----	----	TDYQKPL	LFOAET-PMK	HFVAHIDPDN	KFAFEDKLSQ
XP_044743527.1	-----	---	SLTNRRRI	SPLKAWLCTH	AQ-S	SLDKF	QQLKL	----	----	SDYKMPL	IFQAET-PMR	KFVAYIDPDD	KFSIEDKLSQ
XP_018319432.1	-----	---	SQVNRRK	SPIRAWLCAH	AW-S	SLEKF	QQLLEL	----	----	TDYSMPL	IFQAET-PQR	KFVAYIDPEN	KLALEDKLSQ
XP_026466152.1	-----	---	SQDNRRRI	SPLRAWLCSH	AQ-S	SLDKF	QQLAL	----	----	SDYKTPL	IFTAET-PLR	KFVAYIDPED	KFSVEDKLSQ
XP_022913687.1	-----	---	SLRNRRRI	SPLRAWLCTH	AL-S	SLEKF	QQLQL	----	----	TDFAKPL	LFOAET-PMR	KFVAYIDHNN	KFAIEDKLSQ
KAF5298473.1	-----	---	SLKNRRRL	SPLRSWLCTH	AL-P	SLEKF	QQLLEV	----	----	TDYQKPL	IFQAET-PMR	KFVAYIDPDN	EFALDKLSQ
VEN57246.1	-----	---	SQDNRRK	SPLRAWLCAH	AL-S	SLEKF	QQLSM	----	----	TDYSMPL	LFOAET-PMR	KFVAYIDPDN	KFNIEDKLSQ
XP_045472083.1	-----	---	SQENRRRL	SPLRAWLSSH	AC-T	SLEKF	QQLLEI	----	----	GDFTNPL	IFQAET-PMR	KFVAYIDPDN	QFTLEDKLSQ
XP_017768645.1	-----	---	SQENRRRL	SPLRSWLCTH	AL-S	SLEKF	QQLLEI	----	----	TDYSKPL	LFOGET-PLR	KFVAYIDPEN	KFALEDKLSQ
CAH1369701.1	-----	---	SQDNRRRI	SPLRAWLCTH	AL-T	SLEKF	QQLLEV	----	----	TDFGKPL	IFQAET-PLR	KFVAYIDPEN	RFALEDKLSQ
XP_028136465.1	-----	---	SQENRRRI	SPLRAWLCTH	AL-S	SLEKF	QQLLEV	----	----	SDYSKPL	IFQAET-PMR	KFVAYIDPEN	KFAIEDKLSQ
XP_023014099.1	-----	---	SKDNRRRL	SPLRAWLCTH	AL-S	SLEKF	QQLLEV	----	----	TDYSKPL	IFQAET-PLR	KFVAYIDPEN	KFNIEDKLSQ
XP_019875064.1	-----	---	SQDNRRRI	SPLRAWLCSH	AL-S	SLEKF	QQLQV	----	----	TDYSKPL	IFQAET-PLR	KFVAYIDPDN	QFSIEDKLSQ
CAH0557060.1	-----	---	SQVNRRRI	SPLRAWLCTH	AL-S	SLEKF	QQLLEI	----	----	TDYNNKPL	IFQAET-PLR	KFVAYIDPEN	KFNIEDKLSQ
XP_037924690.1	-----	---	SLDNRRRL	SPLRSWLCTH	AQ-S	SLDRF	QKWVA	----	----	GGMKDPL	IFSSET-PLR	KFVAYIDPEN	KFALEDKLSQ
XP_043863257.1	-----	---	SKLNRRRL	SPLRSWMCTH	AN-S	SLEKF	QEWDR	----	----	AGMKDPL	IFSSET-PLR	RFVAYIDEEQ	KFAVEDKLSQ
XP_039965629.1	-----	---	SQLNRRRL	SPLRSWMWTH	AS-S	SLDRF	KAWKK	----	----	EGMQGPL	IFSSET-PLR	RFVAYIDPEN	KFALEDKLSQ
XP_001989827.1	-----	---	SKLNRRRL	SPLRSWLCTH	AN-T	SLDRF	QEWDR	----	----	AGMKDAL	VFSSET-PLR	RFVAYIDQDD	KFAIEDKLSQ
XP_037896985.1	-----	---	SKNNRRRL	SSLRSWLCTH	AT-T	SLEKF	LEWGE	----	----	KGMRDPL	IFYSES-GLR	RFVAYIDPDN	QFAIEDKLSQ
XP_046805044.1	-----	---	SKNRNRRL	SPLRAWLCTH	AS-T	SLEKF	EEWVE	----	----	KGMSDPL	LFSSET-PLR	RFVAYIDPEN	KFAIEDKLSQ
KAG5681791.1	-----	---	SRKNRRRL	SPLRSWLATH	AS-T	SLDRF	QYLSE	----	----	HGFDKPL	MFTAET-PLR	KFVAYIDPDN	KFAIEDKLSQ
XP_031629647.1	-----	---	SADQRRRI	SPLKAWLCAH	ATDS	SLDRF	LKWQE	----	----	AGMKDPL	IFSSET-PLR	KFIAYIDTEN	KFGIEDKLSQ
KAG4077403.1	-----	---	SLDNRRRI	SPLKAWLCEH	AN-S	SLDRF	LEWKNN	----	----	NGMKDPL	LFSSET-PLR	KFVAYIDPDN	KFAVEDKLSQ
XP_039430644.1	-----	---	SRKNRRRL	SPLKAWLCEH	AD-T	SLEKF	QNLQE	----	----	TGLDKPI	IFSSET-PLR	KFVAYIDPEN	QFAIEDKLSQ
XP_040221405.1	-----	---	SLDNRRRI	SPLRAWLCEH	AN-T	SLAKF	QNLKE	----	----	IGLDKPL	IFSSET-PLR	KFVAYIDPEN	NFAIEDKLSQ
CAA9998239.1	-----	---	SKTNRRQL	SPLRAWLCNH	AH-T	SLEKY	HQLEI	----	----	CGTNRPL	MFSSEL-PLK	KFAAYIDPEK	KWSVEDRLSQ
KAF6203636.1	-----	---	SKTNRRQL	SPLRAWLCNH	AH-S	SLDKF	QNLLEI	----	----	CGTTRPL	MFQSEM-PLK	KFVAYIDPEK	RWSVEDRLSQ
KAG6800307.1	-----	---	SKVNRRRI	SPLKAWLCAH	AS-N	SLTRF	QQLLEI	----	----	SDFRDPI	LFOGET-SLR	KFVAYIDPED	KFGVEDKLSQ
XP_014230599.1	-----	---	SQKNRRRI	SPLRAWLCAH	AS-N	SLEKF	QQLRV	----	----	SGYEEPL	IFRAET-PMR	KIVAYIDPEN	RFAVEDKLSQ
KAH0947068.1	-----	---	SQTNRRRM	SPLRAWLYAH	GS-S	SLAKF	QHLEI	----	----	CGFHQPI	VFOAET-SVR	KFVAYIDPEN	KLAVEDKLSQ
XP_043590797.1	-----	---	SKVNRRRI	SPLRAWLCAH	AR-N	SLAKF	QQLLEI	----	----	AGFHPEPI	LFOAET-PLR	KFVAYIDSDN	KFAIEDKLSQ
XP_034949379.1	-----	---	SKINRRRI	SPLRAWLCAH	AD-S	SLRKF	LQLKK	----	----	TSFREPI	IFQAET-PMR	KFVAYIDPDD	KFAIEDKLSQ
XP_012275169.1	-----	---	SKNNRRRI	SPLRAWLCAH	AS-S	SLAKF	QQLQE	----	----	KGFQEPET	LFOAET-PLR	KFVAYIDPEN	KYVVEDKLSQ
XP_043464528.1	-----	---	SQNNRRRI	SPLRAWLCAH	GS-S	SLAKY	QQLLEV	----	----	TGFREPI	VFOAET-PLR	KFIAYIDPEN	KFVIQDKLSQ
XP_014220045.1	-----	---	SQANRRRL	SPLRAWLCAH	GT-S	SLAKF	QQLLEI	----	----	TNFKEPL	MFOAET-PMR	RFVAYIDPEN	KFAVEDKLSQ
XP_011160605.3	-----	---	SQTNRRRL	SPLRAWLCAH	AS-N	SLAKF	QHLEI	----	----	TGFREPI	LFOAET-PMR	KFVAYIDPED	KFAIEDKLSQ
XP_046741789.1	-----	---	SQANRRRI	SPLRAWLCAH	AS-S	SLAKF	QQLLEI	----	----	TGFHEPI	IFQAET-PLR	RFVAYIDPED	KFAIEDKLSQ
VVC24333.1	-----	---	SIDNRRRL	SPLRSWLCTH	GI-S	SLDKY	MQLEA	----	----	AGFDTPL	VFOAET-PLR	KIIAYIDPEN	KFSVTDKLSQ
KAF0770685.1	-----	---	SIINRRRM	SPLRSWLCTH	AM-S	SLEKY	QLEEE	----	----	SGFNTPL	IFQAET-PLR	RISAYIDLGN	KFSVTDKLSQ
XP_015365968.1	-----	---	NIANRRRM	SPLRSWLCSH	AM-S	SLEKY	QQLLEV	----	----	AGFHAPL	IFQAET-PLR	RISAYIDPDD	KLSVTDKLSQ
XP_029341681.1	-----	---	STVNRRK	SPLRAWLCSH	AM-S	SLEKY	QQLLEA	----	----	AGFGTPL	VFOAET-PLR	RISAYIDPED	KLSVTDKLSQ
XP_026292519.1	-----	---	SQTNRRRL	SPLRSWLCTH	AH-S	SLEKF	QQLAL	----	----	TGYHSPL	IFQAET-PMR	KFVAYIDPDD	KFAIPDKLSQ
XP_034238427.1	-----	---	SQKNRRRL	SPLRSWLCTH	AH-S	SLEKF	QQLAL	----	----	TGYQHPL	IFQAET-PMR	KFVAYIDPDD	KFAIPDKLSQ
XP_024081347.1	-----	---	SKDNRRRI	SPLRSWLCTH	AY-S	SLEKF	QQLLEI	----	----	SGYKDPL	IFQSET-PLR	KFVAYIDHNN	RFSTEDKLSQ
XP_014283188.1	-----	---	SKDNRRRI	SPLRSWLCTH	AS-S	SLEKF	HQLEA	----	----	GGYHNPL	IFQSET-VLR	KIVAYIDPED	DFCIEDKLSQ
RZF32743.1	-----	---	SKDNRRRI	SPLRAWLCTH	AQ-S	SLDKF	QQLLEI	----	----	AGYHTPL	IFQSET-PMR	KFIAYIDPDD	RFSIEDKLSQ
CAB3380083.1	-----	---	SVDNRRK	SPLRAWLCRH	AD-T	SLEKF	QQLKS	----	----	TNFTPEPL	TFOAET-PMR	KFVAYIDPDN	KFSIEDKLSQ
XP_046989067.1	-----	---	SRDNRLI	SPLRAWLIAH	AN-A	SLKKF	EKLET	----	----	GGFHQPL	LFOAET-PMR	KFVAYIDPDN	KFSIEDKLSQ
GFG38476.1	-----	---	SQTNRRRI	SPLRAWLSAH	AS-S	SLAKF	QQLLEV	----	----	SGYQKPL	IFQAET-PMR	KFVAYIDPED	KFSVADKLSQ
CAD7446618.1	-----	---	SQENRRK	SPLRAWLCAH	AS-S	SLEKF	TQLEA	----	----	SGYHTPL	IFQAET-PMR	KFAAYIDPDD	KFAITDKLSQ
KAG8226740.1	-----	---	SVENRRR	SPLRAWLCTH	AH-S	SLTKY	QQLLEI	----	----	SGFGTPM	LFOAET-PMR	KFVAYIDPEN	RFSVTDKLSQ
XP_046392794.1	-----	---	SVENRRR	SPLRAWLCTH	AQ-S	SLTKF	QQLQK	----	----	TGYSSPM	LFOAET-PMR	KFVAYIDPEN	RFSVTDKLSQ
XP_046459477.1	-----	---	NMRTLER	SPLKAWLHRH	GS-I	SLTKF	ERLEV	----	----	HGFQOPL	TTFMEG-PFR	QFVAYIDPDN	KFSITDKLSQ
XP_043227363.1	-----	---	TPEKLHM	SPLSAWVCRH	GS-G	SLTKL	QQLKV	----	----	SDFKAPL	VFEGEL-PMR	RFVAYIDPEN	QFSITDKLSQ
XP_018006429.1	-----	---	TREIVKQ	SPLKAWLVRH	GH-D	SLIKY	AQLEI	----	----	NDFKQPL	VFOGET-PLR	RFVAYIDPDD	QFSPEDKLSQ
AWH57222.1	-----	---	SQEIIRK	SPLKAWLVRH	GH-S	SIKAY	AQLEV	----	----	ADFQAPL	IFQAGT-PMR	RFVAYIDPED	KFNEDDKLSQ
XP_042865604.1	-----	---	HHEIIRM	SPLKAWLVRH	GS-S	SLAKF	AQLEV	----	----	ANFQAPL	IFQGET-PMR	RFVAYIDPDN	HFNEDDKLSQ
XP_045119740.1	-----	---	LQEMCLK	SPLKAWLVRH	GH-S	SIVKF	AQLEV	----	----	SDFQAPL	VFOAET-PMR	RFVAYIDPDN	RFSVEDKLSQ
XP_045613573.1	-----	---	LQEVLLK	SPLKAWLMRH	GH-S	SAGKF	AQLEI	----	----	SNFQAPL	VFOAET-PMR	RFVAYIDPDN	RFSVEDKLSQ
XP_021963432.1	-----	---	TIENQVK	SPLRGWLCNH	GS-D	SYDKF	KQLET	----	----	RGFKMPL	LFTAET-PMK	QFVAYIDPKN	KFSVQEDKLSQ
CAG7730563.1	-----	---	CPVSQKR	SALTGWLCNH	GL-S	SLEKL	VTLQE	----	----	NGFDQPL	LFEGET-PLR	KFVAYIDPEN	KFTIEDKLSQ





XP_019763455.1	INTLQ	QLON	IASYGFLKRR	LEFNQLHIHA	LWFDIYTGEI	YYFSRGAK	--	RFVIIDESNF	EKLTEE	VVI	YYS	----	----	
XP_030749737.1	INTLQ	QLON	IASYGFLRKK	LEKHQLHIHA	LWFDIYTGEI	YYFSRRHK	--	RFVIDEENF	AKLFEE	VIV	YYS	----	----	
KAF7270051.1	INTLQ	QLON	IASYGFLKKK	LENHQLHIHA	LWFDIYTGEI	YYFSRRHK	--	RFVIDEEHF	DKLPKE	VIV	YYS	----	----	
XP_031343879.1	IHTLQ	QVON	IASYGFLKRR	LETDQIHIHA	MWFDIYTGEI	YYFSRQAK	--	RFVVIDENNF	DRLVGE	VER	YHM	----	----	
XP_044743527.1	INTLQ	QLON	ISSYGFLKRR	LEQYDLHIHA	LWFDIYTGEI	YYFSRRAK	--	QFVQINEHNY	NVLLQE	IQT	YYS	----	----	
XP_018319432.1	INALQ	QLON	IASYGFLKSR	LEKHQLHIHA	LWFDIYTGEI	YYFSRQAK	--	QFVIINEDNI	ETLMDE	VEN	YYM	----	----	
XP_026466152.1	VNTLQ	QLON	IASYGFLRKR	LEKHDHLHIHA	LWFDIYTGEI	YYFSRQAK	--	TFVLIDETSF	NYLMKE	VCK	YYS	----	----	
XP_022913687.1	VNTLQ	QLON	IASYGFLKRR	LETNELHIHA	LWFDIYTGEI	YYFSRAAK	--	TFVCINEESI	DKILKE	VEE	YYT	----	----	
KAF5298473.1	INTLQ	QLON	IASYGFLKRR	LETHQLLHA	LWFDIYTGEI	YYFSRQAK	--	RFIIIDEKNF	DKLLME	VEK	YYM	----	----	
VEN57246.1	INTLQ	QLON	IASYGFLKRR	LEKHQLHIHA	VWFDIYTGDI	YYFSRAAK	--	RFVVDDESNI	ERLMDE	VRR	YYS	----	----	
XP_045472083.1	INTLQ	QLON	IASYGFLKRR	LETHQLHIHA	LWFDIYTGEI	YYFSRGAK	--	KFVVIDEAGNI	EKLLDE	VDN	YYS	----	----	
XP_017768645.1	INTLQ	QLON	IASYGFLKRR	LEKHQLHIHA	LWFDIYTGEI	YYFSRGSK	--	TFVLIDEHNI	DALVGE	VKK	YYS	----	----	
CAH1369701.1	INTLQ	QLON	IASYGFLKRR	LEKHQLHIHA	LWFDIYTGEI	YYFSRGAK	--	RFVVVDEDNI	DKLMGE	VGK	YYS	----	----	
XP_028136465.1	INTLQ	QLON	IASYGFLKRR	LEKHELHIHA	LWFDIYTGDI	YYFSRGAK	--	RFVLIDEDNV	DKLLQE	VKK	YYS	----	----	
XP_023014099.1	INTLQ	QLON	IASYGFLKRR	LEKHELHIHA	LWFDIYTGEI	YYFSRAAK	--	KFVIIDENN	DKLLSE	VER	YYS	----	----	
XP_019875064.1	INTLQ	QLON	IASYGFLKRR	LEKHQLHIHA	LWFDIYTGDI	YYFSRAAK	--	KFVIIDENN	EKLFL	VNK	YYS	----	----	
CAH0557060.1	INTLQ	QLON	IASYGFLKRR	LEKHQLHIHA	LWFDIYTGEI	YYFSRAAK	--	KFVVIDEENV	EKLLNE	VNT	YYS	----	----	
XP_037924690.1	INTLQ	QLSN	VASYGFLKRR	LESHDLHIHA	LWFDIYTGEI	YYFSRGAK	--	QFVHVDESTV	GKLLQE	VNR	YYS	----	----	
XP_043863257.1	INTLQ	QMSN	IASYGFLKTR	LESHNLHIHA	LWFDIYTGDI	YYFSRGAK	--	RFVAVDESSV	DOLSAE	VRR	FYS	----	----	
XP_039965629.1	INTLQ	QLSN	VASYGFLKPR	LESHDLHIHA	LWFDIYTGDV	YYFSRGAK	--	RFIIVDESTV	GKLFEE	VRR	YYS	----	----	
XP_001989827.1	INTLQ	QMSN	VASYGFLKSR	LESHNLHIHA	LWFDIYTGEI	YYFSRGAK	--	RFIIVDESSV	EQLSAE	VRR	FYS	----	----	
XP_037896985.1	INTLQ	QVSN	IASYGFLKPR	LESHDLHIHA	LWFDIYTGDI	YYFSRGSK	--	RFVVDDEQSV	EKLTEE	VKR	YYS	----	----	
XP_046805044.1	INTLE	QMSN	IASYGFLKRR	LESHDLHIHA	LWFDIYTGDI	YYFSRGAK	--	RFIIVDEDTV	DKLTSE	VRR	FYS	----	----	
KAG5681791.1	INTLQ	QLON	IASYGFLKRR	LEQFDLHIHA	LWFDIYTGEI	YYFSRQMK	--	RFVIISEETI	DKISED	VKK	YYS	----	----	
XP_031629647.1	INTLE	QLSN	VASYGFLKRR	LETHDLHIHA	LWFDIYTGDI	YYFSRGQK	--	RFVEVNEENS	QQIIEE	VNR	FYS	----	----	
KAG4077403.1	INTLE	QLSN	VASYGFLKRR	LETHDLHIHA	LWFDIYTGDI	YYFSRGSK	--	CFVAVDESSV	DRLLDE	VAK	LDETK	----	----	
XP_039430644.1	VNTLQ	QIEN	IASYGFLKRR	LESHDLHIHA	LWFDIYTGEI	YYFSRNSK	--	RFIIVDETTI	ERLLKE	VNR	FYS	----	----	
XP_040221405.1	VNTLQ	QIEN	VASYGFLKRR	LESHDLHIHA	LWFDIYTGEI	YFFSRNSK	--	RFIAIDESSI	DRLLDE	VRT	----	----	----	
CAA9998239.1	VNTLE	QLAN	VASYNFLKRR	LESHQLHVHA	LWFDIYTGEI	YYFSRQNK	--	RFVEINEFTV	DSLDE	VSR	YYS	----	----	
KAF6203636.1	VNTLE	QLAN	VASYNFLRRR	LESHQLHVHA	LWFDIYTGEI	YYFSRQNK	--	RFVEINEATV	DKLSEE	VNR	DGN	GE	GSNS	AFPLV
KAG6800307.1	INTLQ	QLON	IASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YYFSRANK	--	KFVEINESTE	RYLLTE	IKK	YYS	----	----	
XP_014230599.1	VNTLQ	QLON	IASYGFLKRR	LETHDLHIHA	IWFDIYTGEI	YYFSRAHK	--	RFVEINELNE	TPILKE	IKT	YYS	----	----	
KAH0947068.1	INTLQ	QLON	IASYGFLKRR	LEKHDLHVHA	LWFDIYTGEI	YYFSRASK	--	RFVEINELTE	SHLLKE	IMT	YYS	----	----	
XP_043590797.1	INTLQ	QLON	VASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YYFSRANK	--	RFVEINESTE	ASLLAE	IKK	YYS	----	----	
XP_034949379.1	INTLQ	QLON	IASYGFLKRR	LEQHDHLHIHA	LWFDIYTGEI	YYFSRGNK	--	RFIEINELTE	SQLLKE	ILK	YYS	----	----	
XP_012275169.1	INTLQ	QLON	VASYGFLKRR	LERHELHIHA	LWFDIYTGEI	YYFSRANK	--	RFIEINERTE	ASLLEE	IKK	YYS	----	----	
XP_043464528.1	INTLQ	QLON	VASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YYFSRANK	--	RFIEVNERTE	KLLKE	IKK	YYT	----	----	
XP_014220045.1	INTLQ	QLON	VASYGFLKRR	LEKHDLHVHA	LWFDIYTGEI	YYFSRAGK	--	RFVEINEMTE	TPLLKE	IKK	YYS	----	----	
XP_011160605.3	INTLQ	QLON	IASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YYFSRANK	--	RFVEINELTE	TPLLKE	IKQ	YYS	----	----	
XP_046741789.1	INTLQ	QLON	VASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YYFSRANK	--	RFIEINELTE	TPLLRE	IKK	YYS	----	----	
VVC24333.1	VNTLQ	QLON	IASYGFLRKR	LESHDLHIHA	LWFDIYTGEI	YYFSRQKK	--	KFVEINEMNV	EKLVEE	VSK	YYC	----	----	
KAF0770685.1	INTLQ	QIQN	IASYDFLKRR	LETYDLHIHA	LWFDIYTGEI	HYFSRQSK	--	QFVEINEKNV	DRLVEE	VSK	YYC	----	----	
XP_015365968.1	VNTLQ	QIQN	IASYDFLKRR	LEAYDLHIHA	LWFDIYTGEI	HYFSRQNK	--	QFVEINEKNV	NRLVEE	VSK	YYC	----	----	
XP_029341681.1	VNTLQ	QIQN	IASYDFLKRR	LETYDLHIHA	LWFDIYTGDV	HYFSRQSK	--	QFVEINEKNV	DGLVEE	VSK	YYC	----	----	
XP_026292519.1	VHCLQ	QMQN	IASYDFLKPR	LEKHELHIHA	LWFDIYSGDI	YYFSRGEK	--	RFVEINDSTI	DPLLKE	VKR	YYS	----	----	
XP_034238427.1	VHCLQ	QMQN	IASYDFLKSR	LEKHELHIHA	LWFDIYSGDI	YYFSRGEK	--	RFIEINENTI	DPLLKE	VKR	YYS	----	----	
XP_024081347.1	INCLQ	QLAN	IASYGFLKRR	LEKYELHIHA	LWFDIYTGEI	FYFSRQNK	--	RFVEINEDTV	DKLSLE	Q	----	----	----	
XP_014283188.1	VNCLQ	QMAN	IASYGFLKRR	LERHDLHIHA	LWFDIYTGNI	YYFSRQNK	--	RFIDINEETV	DMLSHE	VKK	YYS	----	----	
RZF32743.1	VNCLQ	QVON	IASYGFLKRR	LETHQLHIHA	LWFDIYSGDI	FFFSRQNK	--	RFIEINENTV	EKLDE	VNR	YYS	----	----	
CAB3380083.1	INCLQ	QIQN	VASYGFLKRR	LETHDLHLHA	LWFDIYTGDV	YYFSRQKK	--	RFVEINDLTA	RPILKE	IRR	YYS	----	----	
XP_046989067.1	VNCLQ	QLON	IASYGFLKRR	LETHQLHIHA	LWFDIYTGEI	YYFSRQNK	--	RFVEINEHTV	MGLIKE	VNR	YYS	----	----	
GFG38476.1	VNCLQ	QLON	IASYGFLKRR	LETHELHIHA	LWFDIYTGEI	YYFSRQNK	--	RFIDINEGTF	SMLEKE	VLK	YYS	----	----	
CAD7446618.1	INCLQ	QLON	IASYGFLKRR	LERHDLHIHA	LWFDIYTGEI	YFFSRQSK	--	RFVEINETTI	KQLLLE	VKT	YYS	----	----	
KAG8226740.1	VNCLQ	QLON	IASYGFLKRR	LETHSLHIHA	LWFDIYTGEI	FYFSRQKK	--	QFVEINEETS	PTLLKE	IKR	YYS	----	----	
XP_046392794.1	VNCLQ	QLON	IASYGFLKRR	LETHQLHIHA	IWFDIYTGEI	FYFSRQKK	--	RFVEINEETY	NLLKE	ILR	YYS	----	----	
XP_046459477.1	LNTLQ	QLQH	IASYSFQISA	INSGRVHLHA	LWFDIYTGEI	YVFSRQKK	--	RFVEISEETS	DYLLDE	IRE	YFV	----	----	
XP_043227363.1	VNTLQ	QLON	VSSYGMLKRG	LTRGEIHIHA	LWFDIYTGNI	HYFSRQKK	--	RFVDLNETTL	PQISEE	VRT	YYS	SGR	----	
XP_018006429.1	VNCLQ	QLON	IASYNFMRDG	LAKGRVYLHA	FWFDIYSGDI	HYFSRQKK	--	TFVPMNETTI	DTLMDE	VHK	YYS	----	----	
AWH57222.1	VNTLQ	QLON	IASYNFMRDG	LVRGRVYIHA	LWFDIYTGEI	YYFSRQKK	--	KFVDVSENNI	ERLLDE	AKQ	YYS	----	----	
XP_042865604.1	VNTLQ	QLON	IASYNFMREG	LSRGKVYIHA	LWFDIYTGEI	YYFSRQKK	--	MFVDVNEGNI	EKLLKE	VVK	YYT	----	----	
XP_045119740.1	VNTLQ	QLON	IASYNFMREG	LLRNRVYIHA	LWFDIYTGEI	YYFSRQKK	--	MFVDINETNI	EKLLDE	VLK	YYT	----	----	
XP_045613573.1	VNTLQ	QLON	IASYNFMREG	LSRGKVYIHA	LWFDIYTGEI	YYFSRQKK	--	MFVDVNESNM	EKLEEE	VFK	YYT	----	----	
XP_021963432.1	VNCLQ	QLON	IASYGFLREG	LASGRIFIHA	LWFDIYTGEI	YYFSRQKK	--	EFVDINETTF	PKLLEE	VSE	FYYH	----	----	
CAG7730563.1	VNCLQ	QLON	IASYGFMRDI	LMQCKTFIHA	MWFDIYTGEI	YYFSRQKK	--	QFVEINEENY	YGLLEE	VMT	YYSQYD	----	----	





XP_019763455.1	-----	-----	-----	-----	--	-----	--
XP_030749737.1	-----	-----	-----	-----	--	-----	--
KAF7270051.1	-----	-----	-----	-----	--	-----	--
XP_031343879.1	-----	-----	-----	-----	--	-----	--
XP_044743527.1	-----	-----	-----	-----	--	-----	--
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KAF5298473.1	-----	-----	-----	-----	--	-----	--
VEN57246.1	-----	-----	-----	-----	--	-----	--
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KAF6203636.1	-----	RSVLS	S	-----	--	-----	--
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GFG38476.1	-----	-----	-----	-----	--	-----	--
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XP_042865604.1	-----	-----	-----	-----	--	-----	--
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XP_045613573.1	-----	-----	-----	-----	--	-----	--
XP_021963432.1	-----	-----	-----	-----	--	-----	--
CAG7730563.1	-----	-----	-----	-----	--	-----	--