

25580016.q
83550347.q
AKL00339.q
83601098.q **VAYSTFANLPADNDGALGSEATSNIS**
CDDADNS SKGKLSADTVAYSEQTETASLLDLYSCCGAMSTGLCLGFAFSGINLETRAVDINKYACACLKHNHPPYS QVRNEKTEDFLALIQQWDAICRKYYVHKNDITLEPSIDMLNDAVVNPRLPEDIFDVELLIECYGDPSENIGKNGLWFKVWRKGYPDSYDTWPIDG
15224182.p
15230209.p
15222081.p
30690042.p
15218207.p
15230108.p
15230129.p
15230130.p
83531073.q
AKL03247.q
22329101.p
15223160.p
15223161.p
15220786.p
15218591.p
AKL00169.q
AK070389.q
AKL01096.q
29970004.q
AKL01943.q
15221470.p
15222649.p
15240947.p
37460011.q
lir3_IRK
lias_TGFbR
2pbk Phk

	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790			
1800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
AK102832.q	IKKLRSGSGQGER	EFOAEVIIISRVH	HKNLVLSCVGCYCTI	GR	QRLLVYEVVPNTLEHHLH	GSGRPGLD	MERRPKIAVE	SAKG	LAYLHEDC	H	KIIHRDIKAANILLD	T	FPEPKVADPGLAKYQA									
AK110196.q	IKKLRPGSGQGER	EFAEVDIISRVH	HRNLVLSCVGCYCTI	HAD	RRLLVYEVFPNTLEHHLH	GSSRPGLD	NQFRIIMIAVG	SAKG	LAYLHEDC	R	KIIHRDIKAANILLD	T	KPEPKVADPGLAKIOPQ									
83603447.q	IKKLRTESKQCDR	EFAEVDIITRVH	HRNLVLSCVGCYCTI	SGN	DRLLVYEVFPNTLEHHLH	GDKWPGLD	WQORPKIAVG	SARG	LAYLHEDC	S	KIIHRDVKAISNILLD	G	FEPKVADPGLAKYQP									
83601468.q	IKKLRTESKQCDR	EFAEVDIITRVH	HRNLVLSCVGCYCTI	AGA	RRLLVYEVFPNTLEHHLH	GKGPGLD	WQORPKIAVG	SARG	LAYLHEDC	H	KIIHRDIKAANILLD	T	KPEPKVADPGLAKLTS									
25580016.q	VKQLRKSGSGQGER	EFAEVDIISRVH	HRHLVLSCVGCYCTI	AGA	QRLLVYEVFPNTLEHHLH	EKGLPVMK	WTTRLRIAVG	SAKG	LAYLHEEC	R	KIIHRDIKAANILLD	N	RIHRDIKSANILLDNNEFIVADPGLAKLTS									
83550347.q	VKQLRKSGSGQGER	EFAEVDIISRVH	HRHLVLSCVGCYCTI	AN	QRMLVYEVFPNTLEHHLH	RCGNGDRVLD	WSARTRIALG	SAKG	LAYLHEEC	H	KIIHRDIKAANILLD	T	KPEPKVADPGLAKLTS									
AK100339.q	VKOLRKSGSGQGER	EFAEVDIISRVH	HRHLVLSCVGCYCTI	AGSS	QRMLVYEVFPNTLEHHLH	SGQPRVPSRRFLQGQIN	SVRSNDLICCI	WVTE		H	KIIHRDIKAANILLD	A	YEAIVADPGLAKLTT									
83601098.q	VKOLRKSGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	AGS	QRMLVYEVFPNTLEHHLH	GKNLPMEFSTRLRIALG	AAKG	LAYLHEDC	H	KIIHRDIKAANILLD	C	DNFDAKVADPGLAKLTT										
15224182.p	VRSLKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	AGG	QRMLVYEVFPNTLEHHLH	GKSGVLD	WTTRLRIALG	SAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPKVADPGLAKLTS									
15230209.p	VRSLKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	IAGG	QRMLVYEVFPNTLEHHLH	GKSGVLD	WTTRLRIALG	SAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPKVADPGLAKLTS									
15222081.p	VRSLKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCS	NAGG	QRLLVYEVFPNTLEHHLH	GKSGTMD	WTTRLRIALG	SAKG	LAYLHEDC	H	KIIHRDIKAANILLD	S	FEPKVADPGLAKLTS									
30690042.p	VRSLKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCS	ISGG	QRLLVYEVFPNTLEHHLH	GKGRPVL	WTTRLRIALG	SARG	LAYLHEDC	H	KIIHRDIKAANILLD	S	FEPKVADPGLAKLTS									
15218207.p	IKOLRKSGSGQGER	EFAQEIOTSRVH	HRHLVLSCVGCYCTI	TGA	QRLLVYEVFPNTLEHHLH	EKERPVME	SIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAANILLD	S	FEPKVADPGLAKLTS									
15231018.p	VKOLRKSGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	DA	QRLLVYEVFPNTLEHHLH	GKGRPVM	MEWSIRKMKIAVG	LSYLHENC	L	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKIAS									
15230129.p	VKOLRKVGSGQAEK	EFAQAEVIIISQIRH	HRNLVLSCVGCYCTI	AGA	QRLLVYEVFPNTLEHHLH	GKGRPVM	MEWSIRKMKIAVG	SSKG	L	S	KIIHRDIKAISNILLD	I	D	KPEAKVADPGLAKIAL								
15230130.p	VKOLRKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCMAG	AGG	QRLLVYEVFPNNVLEHHLH	GKGRPVM	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKIAS									
83531073.q	VKOLRKVGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	SGG	QRLLVYEVFPNNVLEHHLH	GKGRPVM	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKIAS									
AK103247.q	VKOLRDGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	SGG	QRLLVYEVFPNNVLEHHLH	GKGRPVM	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKIAS									
22329101.p	VKOLRKIGSGYQGER	EFAQEVIDISRVH	HRHLVLSCVGCYCVNGD	CR	QRLLVYEVFPNTLEHHLH	ENGRGVSE	LEMIRLRIAIV	LEKVV	WRICKTVS	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKFSS									
15223160.p	VKOLRKVGSGQDR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	DS	ERLLIYEVFPNTLEHHLH	GKGRPVL	MEWSIRKMKIAVG	SAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKLTS									
15223161.p	VKOLRKVGSGQDR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	DS	ERLLIYEVFPNTLEHHLH	GKGRPVL	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKLTS									
15220786.p	VKOLRKIGSGQDR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	SD	ERLLIYEVFPNTLEHHLH	GKGRPVL	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKLTS									
15218591.p	IKOLRKSVAESYR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	SEQ	ERLLIYEVFPNTLEHHLH	GKGRPVL	MEWSIRKMKIAVG	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKLTS									
AK100169.q	VKOLRKAGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTIAAH	HH	HRMLIYEVFPNTLEHHLH	GRGMPVMD	WTTRLRIALC	AAKG	LAYLHEDC	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKLTS									
AK070389.p	VKOLRKVGSGQEK	EFAQEVIDISRVH	HRHLVLSCVGCYCTI	VEB	HRLLVYEVFSNTLEHHLH	GGGLPVMD	WTTRLRIALC	SARG	L	H	KIIHRDIKAISNILLD	S	FEPAKVADPGLAKFSS									
AK101096.q	VKLLRKGGGGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	SGD	QRLLVYEVFPNTLEHHLH	GMPVMT	WTTRVRAIAVG	SARG	LAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS											
29970004.q	VKOLRDGGSGQGER	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	SNN	QRLLVYEVFPNTLEHHLH	GRLLVYEVFPNTLEHHLH	AAAYLD	TRIRVKIISAG	AARG	IAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS										
AK101943.q	VKLLRKGGGGQGER	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	SDG	QRLLVYEVFPNTLEHHLH	GRLLVYEVFPNTLEHHLH	AAAYLD	TRIRVKIISAG	AARG	IAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS										
15221470.p	VKOLRKIGSGQDR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	SDG	QRLLVYEVFPNTLEHHLH	GRLLVYEVFPNTLEHHLH	AAAYLD	TRIRVKIISAG	AARG	IAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS										
15222649.p	VKOLRKIGSGQDR	EFAKAEVIIISRVH	HRHLVLSCVGCYCTI	VEB	HRLLVYEVFSNTLEHHLH	TPGLD	WTTRVRAIAVG	AARG	LAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS											
15240947.p	VKOLRKIGSGQDR	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	SEQ	HRLLVYEVFSNTLEHHLH	TPGLM	WTTRVRAIAVG	AARG	LAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS											
37460011.q	VKOLRKIGSGQDR	EFAQAEVIIISRVH	HRHLVLSCVGCYCTI	ED	HRLLVYEVFSNTLEHHLH	TPGLM	WTTRVRAIAVG	AARG	LAYLHEDC	H	KIIHRDIKSSNILLDNNEFIVADPGLAKLTS											
1ir3_IRK	RTVTEENASVLMKFGT	CHVVRLLGCVVS	KGQ	P	PLLVVMEAHCKDLNSYSLRSLRPEAE	NNPGRPPPTLQEMQIAAE	IAADG	MAYLNAAK	FVRDLAARNCMVAIF													
lias_TGFbR	VVIFS-SR	STPFRHIYTV	TM	PLDNKNDGNTW	OMLV	TYT	TYT	EGVGTQKAT	PLD	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT			
2phk_PhK	GGGSFSAEEV	ELREATLKEV	DLKTYETNT	FFF	FFF	FFF	FFF	EVKTLSEKETRKMR	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT	TYT			
	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990			
2000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
AK102832.q	TBQ	TAVSVRVIPTTC	YV	VMLAPYAAATGK	VNDRSPVFS	SE	YVMLLELTGKPPRMV	SHDGD	DTIVLVS	AA	PLVYRVEEEN	EEDVLP	PERENN	DAYDM	RLTACAAVRH	RSR	RMS	QIVR	GE			
AK110196.q	GDD	THVSTRVMGTFQ	YV	YLAPEYAAATGK	VNDRSDVFSP	VVLLLELTGKRPVIS	TEPFN	DETLVSN	AA	PLVYRVEEEN	YDD	LIDFKDAL	DA	DMRLLI	SCAAA	VRRH	ARS	RMS	QIVR	GE		
83603447.q	GNH	THVSTRIMGTFQ	YV	YLAPEYAAATGK	LTDKADVF	FAV	VVLLLELTGKRPVIS	SES	YNDSTLVG	AA	PLVYRVEEEN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS	ALR	SMVQVILKBLGQ		
83601468.q	GNH	THVSTRIMGTFQ	YV	YLAPEYAAATGK	LTDKADVF	FAV	VVLLLELTGKRPVIS	SES	YNDSTLVG	AA	PLVYRVEEEN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS	ALR	SMVQVILKBLGQ		
25580016.q	DNN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	DAGAADHPWPAS	FMDSDLIV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
83550347.q	ENV	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	SSYCADL	VLD	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
AK100339.q	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	ARVAC	PLVDT	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
83601098.q	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	ARVAC	PLVDT	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15224182.p	DNN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	ARVAC	PLVDT	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15230209.p	DNN	THVSTRIMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	ARVAC	PLVDT	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15222081.p	DNN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	ARVAC	PLVDT	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
30690042.p	DNY	THVSTRVMGTFQ	YV	YLAPEYASSCK	LSDKSDVFS	V	VMLLELTGKRPVIS	SCDM	MEDSLIV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15218207.p	DID	THVSTRIMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	TGEM	EDSLVD	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
152323160.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	SQFFADDSDIV	TDIVL	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15230129.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	NNVHD	PNLSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15230130.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	NNVY	YDDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
83531073.q	DNN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	SQYQ	YDDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
AK103247.q	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	LTEKSDVFSY	V	VMLLELTGKRPVIS	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
22329101.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	VTDKSDVFSY	V	VMLLELTGKRPVIS	DS	TDING	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15223160.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	VTDKSDVFSY	V	VMLLELTGKRPVIS	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15223161.p	DIN	THVSTRVMGTFQ	YV	YLAPEYASSCK	VTDKSDVFSY	V	VMLLELTGKRPVIS	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS		
15220786.p	ILDLL	THVSTRIMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS
15218591.p	DTAQASHL	THVSTRIMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS
AK100169.q	NDTH	THVSTRIMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS
AK070389.q	NDSV	THVSTRIMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS
AK101096.q	MDAV	THVSTRVMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLVYRVEEEN	APL	AMSEEMBCN	FDL	IVDPE	EDD	DENM	RM	BECAAAVRD	RS
AK101943.q	ADS	THVSTRVMGTFQ	YV	YLAPEYASSCK	TDQASHL	QFT	INSTPKLDD	IPDPMP	DE	YDPL	QEDSDV	AA	PLV									

