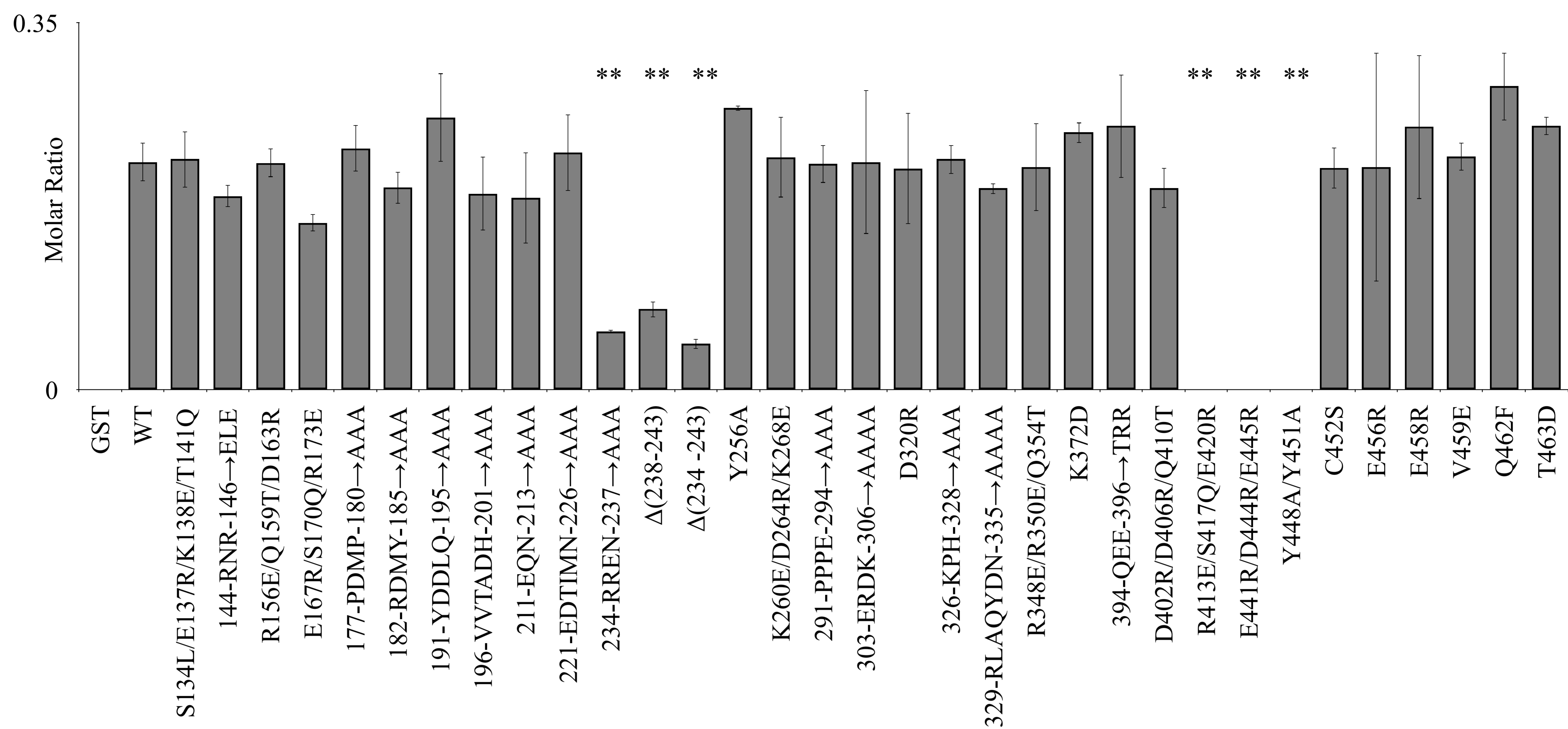
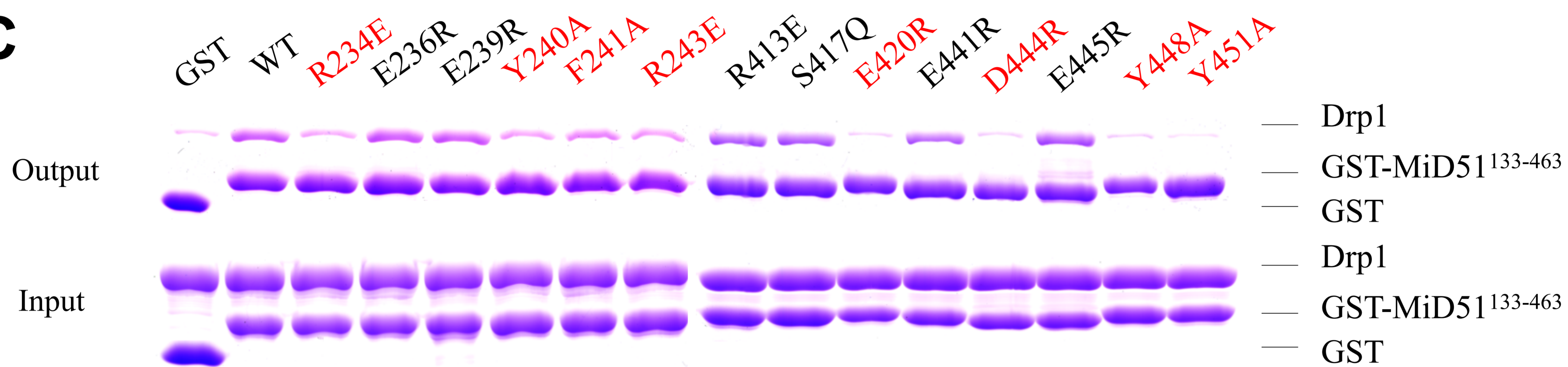
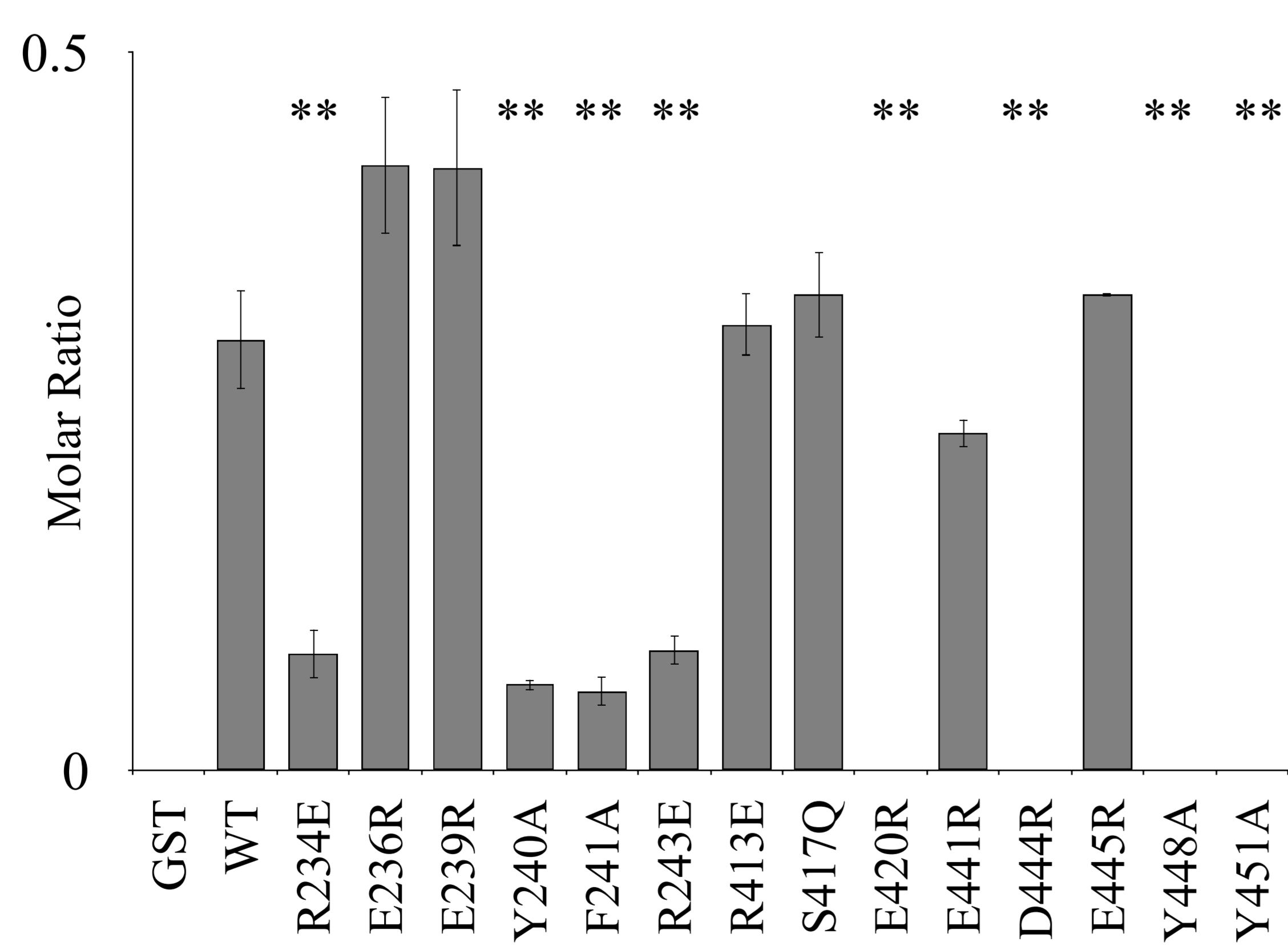
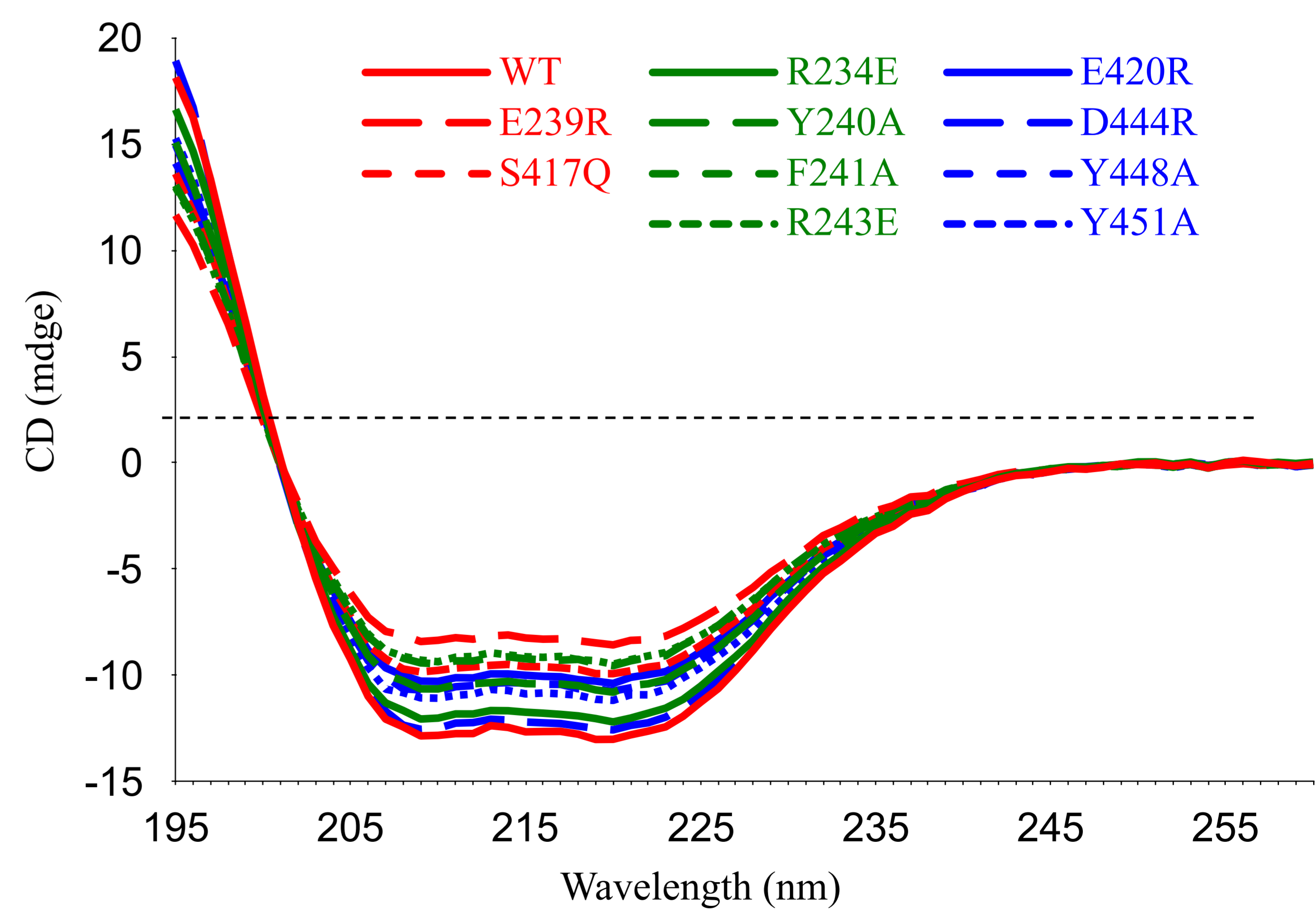


B**C****D****E**

F

MiD51	Human	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Chimpanzee	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Monkey	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Cattle	1	MAGS-GERKS	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Pig	1	MAGA-GERKS	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Camel	1	MAGA-GERKS	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHAG	GKR	SWEE	PNWMGS
	Dog	1	MAGS-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Rat	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Mouse	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Chicken	1	MAGA-GPRKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPSS	PTRLNQS	GKR	SWEE	PNWLGS
	Frog	1	MAGA-GERKG	KKDDN	GIGTA	IDFVLSNARL	VLGVGGAAML	GIATLAVKRM	YDRAIS	SAPTS	PTRLSHS	GKR	SWEE	PNWMGS
	Zebrafish	1	MAGVNGDRKG	KKDDN	GLGTA	IDFVLSNAKL	VLGVGGAAML	GIATLAVKRM	YDRALS	SAPSS	PTKADPS	GRR	SWEE	PSWLGS
	MiD49	Human	1	MAEFSQKRK	RRSDEGLGSM	VDFLANARL	VLGVGGAAVL	GIATLAVKRF	IDRATS	SPRD	--EDDTKAD	--	SWKEL	----
		Chimpanzee	1	MAEFSQKRK	RRSDEGLGSM	VDFLANARL	VLGVGGAAVL	GIATLAVKRF	IDRATS	SPRD	--EDDTKAD	--	SWKEL	----
		Cattle	1	MAEFSQNRK	RRDGEVLGGA	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	SPRD	--EDDTKGD	PCLED	SWQDL	----
		Camel	1	MAELSQNRK	RRDGEVLGGA	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	SRD	--EDDVKGDA	TCLED	SWKEL	----
Dog		1	MAEFSQKRK	QRD-EVLGST	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	SPRD	--EDDAKGD	TRLED	SWKEL	----	
Cat		1	MAEFSQKRGR	QRD-EVLGST	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	SPRD	--EDDAKGD	TCLED	SWKEL	----	
Squirrel		1	MAEFSQKRK	RRDGEGLGSV	VDFLANARL	VLGVGGAAVL	GIATLAVKRF	IDRATS	SPRD	--EDDTKGD	--	SWKEL	----	
Mouse		1	MAEFSQQRK	QSGSEGLGSV	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	SPD	--EDDTKGD	--	SWKEL	----	
Rat		1	MAEFSQQRK	QHGGSEGLGSV	VDFLANARL	VLGVGGAAVL	GIATLAVKRL	IDRATS	NPRD	--EDDTKGD	--	SWKEL	----	
Frog		1	MAELQIRKKE	KKSGDGIGTM	VDFLANARL	VLGVGGAAML	GIATLAVKRL	IDRATS	PPSD	-KEAEKAEQ	--	KSIEE	SWKEA	
Zebrafish	1	MYYS-GKRRG	--EDGIAAV	IDFLSNARL	VLGVGGAAVL	GIATLAVKRL	IERAGR	PPDE	--EPDKKMTD	--	SWBEL	SLVSA		

MiD51	Human	80	P-RLNDRMK	TGLSRSLQTL	PTDSSTFDTD	TFCPPRPKPV	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Chimpanzee	80	P-RLNDRMK	TGLSRSLQTL	STDSSAFDTD	TFCPPRPKPV	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Monkey	80	P-RLNDRMK	TGLSRSLQTL	PTDSSTFDTD	TFCPPRPKPM	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Cattle	80	P-RLNKDMK	AGLSRSLQAL	PTGSSAFDTD	TFCPPRPKPL	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Pig	80	P-RLNKDMK	TGLSRSLQTL	PTGSSAFDTD	TFCPPRPKPL	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Camel	80	P-RLNKDMK	TGLSRSLQTL	PTDPTAFDTD	TFCPPRPKPL	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Dog	80	P-RLNKDMK	TGLSRSLQTL	PTDSSAFDAD	TFCPPRPKPL	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Rat	80	P-RLNDRMK	TGLSRSLQTL	PTDSSAFDTD	TFCPPRPKPL	ARRGQVDLKK	SRLR--MSL	QEKLLSYRNN	RAAIPAGEQA
	Mouse	80	P-RLNKDMK	AGLSRSLQTL	PTDSSAFDTD	TFCPPRPKPL	ARRGQVDLKK	SRLR--MSL	QEKLLSYRNN	RAAIPAGEQA
	Chicken	80	SSRLLSQDMK	TNLSRSLQTL	PTESSATDTD	FFRPTKPKPS	AKRSQVELKK	SRLR--LSL	QEKLFAYYRR	KVAIPTDEQA
	Frog	80	P-RLNDRMK	TGLSRSLQTL	PTDSSTFDTD	TFCPPRPKPV	ARKGQVDLKK	SRLR--MSL	QEKLLTYRNN	RAAIPAGEQA
	Zebrafish	81	SPRTTNHDMK	QNVSRSLQTL	PTSSSSFKPD	SLHRGLARG-	GRPAKAELQR	ARLR--LSL	QEHLDWAFHE	RVTIPSEEQS
MiD49	Human	72	S--LLKATPH	LQPRPPAAL	SQPVLPLAPS	SSAPEGPAET	DPEVTPQLSS	PAPL--CLTL	QERLLAFERD	RVTIPAAQVA
	Chimpanzee	72	S--LLKATPH	LQPRPPAAL	SQPVLPLVPS	SSAPEGPAET	DPEVTPQLSS	PAPL--CLTL	QERLLAFERD	RVTIPAAQVA
	Cattle	78	S--LLKATPR	LQSRPPAAL	SQPVPPAPPS	LSAPEGPADT	GPQTSPLISS	PAPPL-CLTF	QEKLLAFEQD	HVTVPGAHVS
	Camel	78	S--LLKATPH	LQPRPPAAL	SQPTPLPAPS	PSTPAGPAGA	DAPGAPRISS	PAPP--CLTF	QEKLLAFEQD	HVTIPVAHVA
	Dog	77	N--LLTATPR	QQPRPPAAL	SQPVSPPDPS	PAAPGPTDT	GPEMSLQLSS	PAPL--CLTF	QEKLLAFEQT	HVTIPAAHVA
	Cat	77	T--LLKTPR	LQPRTPAAL	SQPASLPAPL	PSAPEGPSDT	EPQPLPQSS	PAPL--CLTF	QEKLLVFERD	HVTIPEAHVA
	Squirrel	72	S--LLKSTPH	LQPRPPAAP	SQPVLPLIPS	PSAPEEPAET	DLQVTPQLSS	PAPL--CLTL	QERLLAFERD	RVTIPAAQVA
	Mouse	72	S--LLRATSP	QKPQPPAAF	SQPLATGSPS	PSVPVEPTPI	HSPTTPKFST	IAPL--CLTF	QERLLAFERK	HVITPEAHVT
	Rat	72	S--LLRATSH	PKPQSPAAF	SQPKSPVSPS	PSAPVGPPTPT	HSQTPPKLSS	VAPL--CLTF	QEKLLAFERN	HVIVPEAHVT
	Frog	75	V--LKKASPT	LRRKEDLEHH	CAPLSLPDPS	QKMPPEATGTS	QVKASDEIK-	KIPI--CFTL	QERLLNYHHTH	HASVPEVQME
Zebrafish	80	SPKLLHKGIE	GVVMKQIAAA	TKKAELSQPI	PMPSEPRQC	DADPPFPQRR	KRMDLCVLT	ADRLQQYR	RVCLSAAEVC	

MiD51	Human	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Chimpanzee	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Monkey	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVAADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Cattle	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Pig	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCVPGEDTIM	NVPGFFLVRR
	Camel	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLCDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Dog	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Rat	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NIPGFFLVRR
	Mouse	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Chicken	157	LAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLMLEQNLW	SCIPGEETIM	NIPGFFLVRR
	Frog	156	RAKQAAVDIC	AELRSFLRAK	IPDMPLRDMY	LSGSLYDDLQ	VVTADHIQLI	VPLVLEQNLW	SCIPGEDTIM	NVPGFFLVRR
	Zebrafish	157	VARRAALDIC	AELRVFLHAK	IPDMPLREMY	LSGSLYDDLQ	VVTADHAQLM	VPLHLEKNLW	SSIPGEDTIM	NIPGFFSLVRR
MiD49	Human	148	LAKQLAGDIA	LELQAYFRSK	FPELPFGAFV	PGGPLYDGLQ	AGAADHVRLL	VPLVLEPGLW	SLVPGVDTVA	RDPRCWAARR
	Chimpanzee	148	LAKQLAGDIA	LELQAYFRSK	FPELPFGAFV	PGGPLYDGLQ	AGAADHVRLL	VPLVLEPGLW	SLVPGVDTVA	RDPRCWAARR
	Cattle	155	LAKQLAGDIA	LELQAYLRNK	FPELPFGALV	PGGPLYEGGLQ	VGAADPVRLL	VPLALEPGLW	SLVAGSDTVA	QDPRCWAARR
	Camel	154	LAKQLAGDVA	LELQAYLRNK	FPELPFGAVV	PGGPLYDGLQ	AGAADPVRLL	VPLALEPGLW	SLVLTGDTVA	RDPRCWAARR
	Dog	153	LAKQLAGDIG	LELQAYLRNK	FPELPFGALV	PGGPLYDGLQ	AGAARVHLL	VPLVLEAGLW	SLVPGADTVA	RDPRCWAARR
	Cat	153	LAKQLAGDIA	LELQAYLRNK	FPELPFGALV	PGGPLYDGLQ	GGAASRVLL	VPLVLEAGLW	GLVPGVDTVA	RDPRCWAARR
	Squirrel	148	LAKQLAGDIA	LELQAYFRSK	FPELPFGVIV	PGGPLYDGLQ	AGAADHVRLL	VPLVLEPSLW	SLVPGVDTVA	RDPRCWAARR
	Mouse	148	LAKQLAGDIA	LELQAYLRNK	FPELPFGALV	PGGPLYDGLQ	AGTAEHVRLL	VPLELEPGLW	SLVPGVDTVA	REPRCWAARR
	Rat	148	LAKQLAGDIG	LELQAYLRNK	FPELPFGVIV	PGGPLYEGGLQ	AGTAEHVRLL	VPLELEPGLW	SLVPGMDTVA	REPRCWAARR
	Frog	155	EAKQLVLDIK	KELQEFLLHAK	HPEMPFLALH	LGGSFGNRLP	MSCLDHACLI	MPLVLEPDW	CVIPGQKTIIL	SDPNFCMVRR
Zebrafish	155	VAKQRALDIA	TELQAFLLHAK	HPEMPFLGDMT	LAGSLYDDLQ	VVTADHACLI	VPLQLESSLW	TPIAGEDTFL	GHPEQYCMVRR	



		$\alpha 5$			$\alpha 6$			$\alpha 7$		$\beta 5$	$\beta 6$		$\beta 7$
MiD51	Human	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLF	
	Chimpanzee	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLF	
	Monkey	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLF	
	Cattle	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLV	
	Pig	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLV	
	Camel	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLI	
	Dog	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLI	
	Rat	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLV	
	Mouse	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLV	
	Chicken	237	ENPEYFPRGS	SYWDRCVVGG	YLSPKVAEAT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YDPERRLF	
	Frog	236	ENPEYFPRGS	SYWDRCVVGG	YLSPKTVADT	FEKVVAGSIN	WPAIGSLLDY	VIRPAPPPEA	LTLEVQ	---	---	YERDKHLF	
	Zebrafish	237	ENLEYFPRGS	SYWDRCVVGG	YLSPKSVLEV	FEKLVAGSIN	WPAIGSLLDY	VIRPVVPSSET	LTLEVQ	---	---	YETDRRLY	
MiD49	Human	228	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALAASVN	WPAIGSLLGC	LIRPSMASEE	LLLEVQ	---	---	HERLELTV	
	Chimpanzee	228	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALAASVN	WPAIGSLLGC	LIRPSMASEE	LLLEVQ	---	---	HERLELTV	
	Cattle	235	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALTASVT	WPAIGSLLGC	LIRPCVASDE	LLLEVQ	---	---	HECLELTV	
	Camel	234	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALTASVN	WPAIGSLLGC	LIRPVSASEE	LLLEVQ	---	---	HERLELTV	
	Dog	233	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALASCVN	WPAIGSLLGC	LIRPSVAEE	LLLEVQ	---	---	HERLELTV	
	Cat	233	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALASSVN	WPAIGSLLGC	LIRPSVAEE	LLLDVQ	---	---	HERLELTV	
	Squirrel	228	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LHKALAASVN	WPAIGSLLGC	LILENVASEE	LLLEVR	---	---	HERLELTV	
	Mouse	228	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALSASVN	WPAIGSLLGC	LIWPDVASEE	LLLVQ	---	---	HECLEFTL	
	Rat	228	TQLEFCPRGS	SPWDRFLVGG	YLSRVLLEL	LRKALSASVN	WPAIGSLLGC	LIWPDVASEE	LLLVQ	---	---	HECLEFTL	
	Frog	235	IDLENTSRGS	SPWDRFLVGA	YLSRRTMVQS	LHKTIVGSIN	WPAIGTVLDC	TIKPDITSDE	IKLEVQ	---	---	HPNGHMI I	
	Zebrafish	235	ENLEYFPRGR	SYWDRHLLGA	YLSRRLVCEQ	LSKAVMESMN	WPSITGTLEC	EVVRVVLGSP	IKLEIQGLTQ	SSHDS	SGERFY		

		$\beta 7$	$\beta 8$	$\alpha 8$	$\beta 9$	$\alpha 9$	$\alpha 10$		$\alpha 11$	
MiD51	Human	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Chimpanzee	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Monkey	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPS	DGHLTASQILT
	Cattle	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAVCKSTPA	DGHLTASQILT
	Pig	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Camel	310	IDFILPSVTLG	D-TVLVARPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	LGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Dog	310	IDFILPSVTLG	D-TVLVARPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Rat	310	IDFILPSVTLG	D-TVLVARPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Mouse	310	IDFILPSVTLG	D-TVLVARPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Chicken	311	IDFILPSLTIG	D-IVLVAKPH	RLAQN--DNL	WRSLRPAET	ARLRALDQCD	SGCRCLCLKI	FKAVCKLNPA	DGHLTASQILT
	Frog	310	IDFILPSVTLG	D-TVLVAKPH	RLAQY--DNL	WRSLRPAET	ARLRALDQAD	SGCRSLCLKI	LKAIACKSTPA	DGHLTASQILT
	Zebrafish	311	VDFLPLLVM	DGVSLIAKPH	RLAAERHENL	WRQSERVAET	AKLRALDQED	AGCRSVCCLKI	LKAVCKLNPA	DARLNASQILT
MiD49	Human	302	AVLVAVPGVD	ADDRLLLAWP	LEGLA--GNL	WLQDLYPVEA	ARLRALDHD	AGTRRRLLLL	LCAVCRGCSA	DGQLGRGHLT
	Chimpanzee	302	AVLVAVPGVD	ADDRLLLAWP	LEGLA--GNL	WLQDLYPVEA	ARLRALDHD	AGTRRRLLLL	LCAVCRGCSA	DGQLGRGHLT
	Cattle	309	AVLLAVAGAQ	DGD-LLLAWP	LEGLA--GNL	WLQDWYPAEA	ARLRALDEQD	AGTRRRLLLL	LCAVCRSHPA	DWRLLGRDRLA
	Camel	308	AVLLAVTGAQ	AGDRLLLAWP	LEGLA--GNL	WLQDLYPAEA	ARLRALDAGD	TGTRRRLLLL	LCGVCRGHSV	DWRLLGRSHLT
	Dog	307	AVLLVAVGAG	PEDPVLAWP	LEGLA--GNL	WLQDLYPAEA	ARLRALDARD	AGTRRRLLRL	LCGVCRRHPS	DWRLLDRRHLT
	Cat	307	AVLLAVTGAQ	AEDRLLLAWP	LEGLA--GNL	WLQDLYPAEA	ARLRALDARD	AGTRRRLLRL	LCGVCRGHPA	DGRLLDRCHLT
	Squirrel	302	AVLVAVPGAE	ADDHLLLAWP	LEGLA--GNL	WLQDLYPVEA	ARLRALDQSD	AGTRRRLLLL	LCAVCRGCPA	DGQLGRAHLT
	Mouse	302	AVLMVVPAS	TDDRLLLAWP	LEGLA--SNL	WLQDLYPVET	ARLRALDQD	AGTRRRLLLL	LCGICRGHPA	DWRLLGWSHLT
	Rat	302	AVLMVVPAS	TDDRLLLAWP	LEGLA--SNL	WLQDLYPVET	ARLRALDQD	AGTRRRLLLL	LCGVCRGHPV	DWRLLGWSHLT
	Frog	309	RILEMA--VI	KDADLLAHCC	ATAPA--ENL	WQRSFYKKEV	SRLQELDSSD	SGIRLKLQI	LKGTICRDCPS	DCHLNSTHLR
	Zebrafish	309	ITVLPVTRLG	Q-MTLMAQRE	ITGSF--DYV	WYQSLSYSET	ARLAALDQAD	SGARRKCLKT	LKAVCRNCPA	DWRLLNGSHIS

		$\alpha 11$	$\alpha 12$	$\alpha 13$	$\alpha 14$					
MiD51	Human	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Chimpanzee	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Monkey	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Cattle	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SHLEAGVLP	VLNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Pig	387	SVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Camel	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Dog	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Rat	387	NVILHLSQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPHEIDEL	GYTLYCSLSE	PEVLLQT---
	Mouse	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPQEIDEL	GYTLYCSLSE	PEVLLQT---
	Chicken	388	NVILHLSQEE	SNWSQDVLAD	RFLQALRGLI	RYLEAGVLP	ALNPKVNLFS	EITPEEIDEL	GYTLYSSLSE	PEVLLQT---
	Frog	387	NVILHLAQEE	ADWSPDMLAD	RFLQALRGLI	SYLEAGVLP	ALNPKVNLFA	EITPEEIDEL	GYTLYCSLSE	PEVLLQT---
	Zebrafish	391	NAIILLSEQE	GDWTQEALAD	RFMQLLRALV	GHLEAGRMP	TLNLKVNLC	EITPQEIDEL	GYTLYCALSD	PESLLRTV--
MiD49	Human	380	QVVLRLGEDN	VDWTEALGE	RFLQALELLI	GSLEQASLPC	HFNPSVNLFS	SIREEEIDDI	GYALYSGLOE	PEGLL----
	Chimpanzee	380	QVVLRLGEDN	VDWTEALGE	RFLQALELLI	GSLEQASLPC	HFNPSVNLFS	SIREEEIDDI	GYALYSGLOE	PEGLL----
	Cattle	386	QVVLRLGEQE	ADWAEALGE	RFLQALELLI	SSLERASLPS	HFNPSVNLFD	GIREEEIDDL	GYALYHGLQA	PEGLL----
	Camel	386	QVVLRLGEEE	ADWAEALGE	RFLQALELLI	GSLEQASLPC	HFNPSVNLFD	GIREEEVEDL	GYALYCGLOA	PEGLLWGGVG
	Dog	385	QVVLRLGEHE	ADWAEALGA	RFLQALEALV	DSLERASLPC	QLNPSVNLFG	SIRDEEIDAL	GFALFCGLQA	PEWLL----
	Cat	386	QVVLRLGEEE	VDWAEALGE	RFLQALESLI	DSLERASLPC	HFNPSVNLFS	GIREEEIDDI	GYALYSGLOA	PECLL----
	Squirrel	380	QVVLRLGEDN	VDWTEALGE	RFLQALELLI	GSLEQASLPC	HFNPSVNLFS	SIREEEIDDL	GYALYSGLOE	PEGLL----
	Mouse	380	QVVLRLGEEE	VAWTEALGE	RFLQALEFLV	GSLEQASLPC	HFNPSVNLFG	NFREEEIDDI	GYVLYSGLOV	PESLF----
	Rat	380	QVILRLGEEE	VAWTEALGE	RFLQALEFLV	GSLEQASLPC	HFNPSVNLFG	SFREEEIDDI	GYVLYSGLOV	PESLF----
	Frog	385	HILLHLSTES	SDWTETALAD	RFLQVLEELI	GYLDKGF	YFNPKVNLFS	SILKAEIDDEL	GYGLYQVFSE	PDVLLKRER-
	Zebrafish	392	NVVLHMLSEKE	TDWSEAFSN	RFLQALTELI	GYLETVGLPS	YFKANVNLFQ	GETEDDIDEM	GYMLYCAVTE	PEILLI----

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