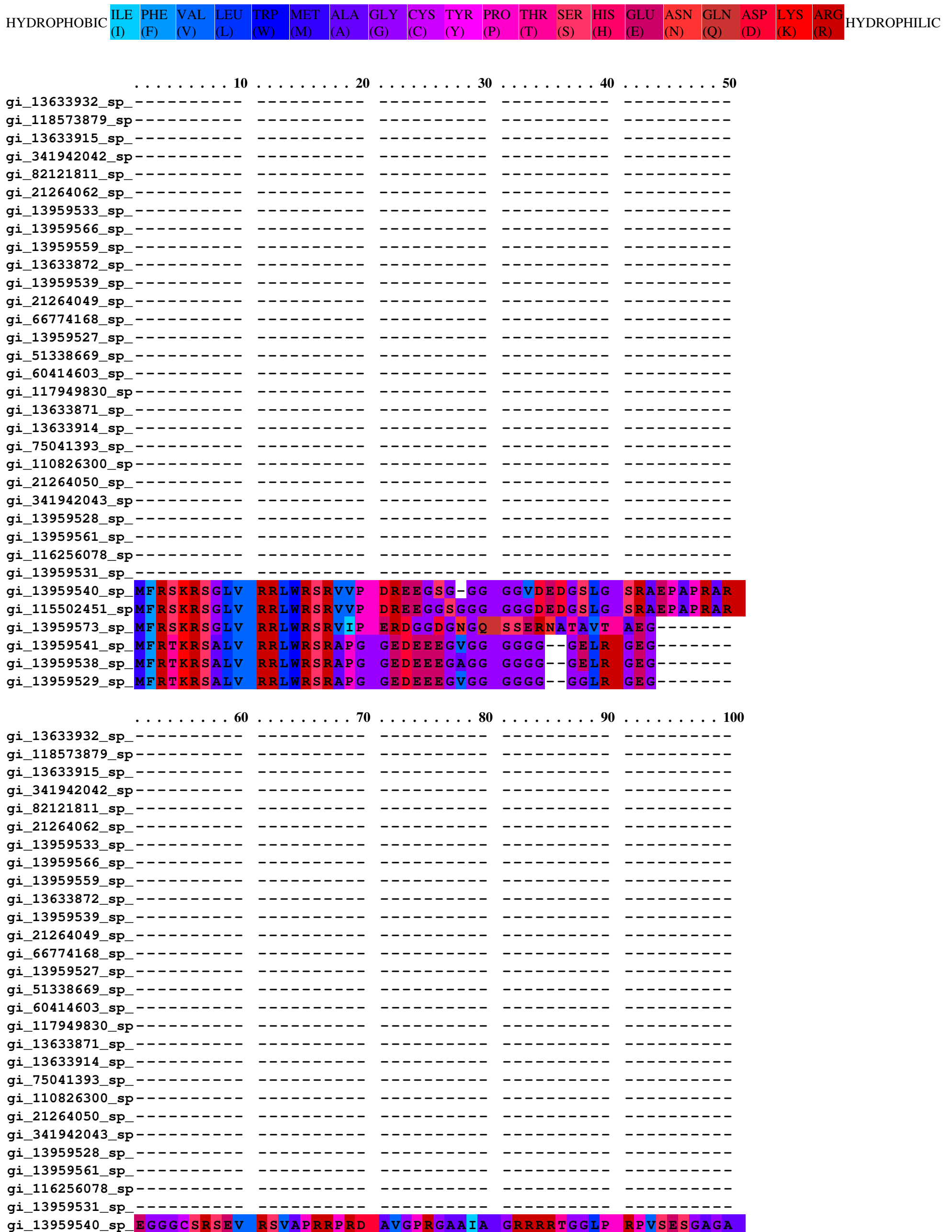


Results colour-coded for hydrophobicity

The current colourscheme of the alignment is for **hydrophobicity**.

The hydrophobicity scale used is from Eisenberg *et al* (1984) [Abstract](#)
The colour assignments **from hydrophobic to hydrophilic** are:



gi_115502451_sp	EGGGCGRSEV	RPVAPRRPRD	AVGQRGAQGA	GRRRRAGGPP	RPMSEPGAGA
gi_13959573_sp	-----	-----	-----	-----	-----
gi_13959541_sp	-----	-----	-----	-----	-----
gi_13959538_sp	-----	-----	-----	-----	-----
gi_13959529_sp	-----	-----	-----	-----	-----
	..... 110..... 120..... 130..... 140..... 150				
gi_13633932_sp	-----	-----	M	N	VTSLFS
gi_118573879_sp	-----	-----	M	N	VTSLFS
gi_13633915_sp	-----	-----	M	N	VTSLFS
gi_341942042_sp	-----	-----	M	N	VTSLFS
gi_82121811_sp	-----	-----	M	TS	MASLFS
gi_21264062_sp	-----	-----	M	TS	MSSLFS
gi_13959533_sp	-----	-----	M	TS	MASLFS
gi_13959566_sp	-----	-----	M	TS	MASLFS
gi_13959559_sp	-----	-----	M	TS	MASLFS
gi_13633872_sp	-----	-----	M	N	VTSLFS
gi_13959539_sp	-----	MHST	TP	ISSLFS	-----
gi_21264049_sp	-----	M	N	VTSLFS	-----
gi_66774168_sp	-----	MHPS	TP	ISSLFS	-----
gi_13959527_sp	-----	MHPS	TP	ISSLFS	-----
gi_51338669_sp	-----	-----	-----	MSSILP	-----
gi_60414603_sp	-----	-----	-----	MSSILP	-----
gi_117949830_sp	-----	-----	-----	MSSILP	-----
gi_13633871_sp	-----	-----	-----	MSSILP	-----
gi_13633914_sp	-----	-----	-----	MSSILP	-----
gi_75041393_sp	-----	-----	-----	MSSILP	-----
gi_110826300_sp	-----	-----	-----	MSSILP	-----
gi_21264050_sp	-----	-----	-----	MSSILP	-----
gi_341942043_sp	-----	MDNMSITN	TP	TPTSND	-----
gi_13959528_sp	-----	MDNMSITN	TP	TPTSND	-----
gi_13959561_sp	-----	MDNMSITN	TP	TPTSND	-----
gi_116256078_sp	-----	MDNMSITN	TP	TPTSND	-----
gi_13959531_sp	-----	MDNMSITN	TP	TPTSND	-----
gi_13959540_sp	GGSPLDVAEP	GGPGWLPESD	CETVTCCLFS	ERDAAGAPRD	SGDPQARQSP
gi_115502451_sp	GSSLLDVAEP	GGPGWLPESD	CETVTCCLFS	ERDAAGAPRD	ASDPLAGAAL
gi_13959573_sp	-----	QRM	AQPRRAQEGE	GRPVRCCLFA	ERPGPELPPP
gi_13959541_sp	-----	ATD	GRAYGAGGGG	AGRAGCCLGK	AVRGAK
gi_13959538_sp	-----	ATD	SRAHGAGGGG	PGRAGCCLGK	AVRGAK
gi_13959529_sp	-----	ATD	GRAYGAGGGG	AGRAGCCLGK	AVRGAK
	..... 160..... 170..... 180..... 190..... 200				
gi_13633932_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_118573879_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13633915_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_341942042_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_82121811_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_21264062_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13959533_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13959566_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13959559_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13633872_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_13959539_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDS
gi_21264049_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDA
gi_66774168_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDS
gi_13959527_sp	FT	SPAVKRLLGW	KQ	-----	GDEE EKWAEKAVDS
gi_51338669_sp	FT	PPIVKRLLGW	KK	-----	GEQNGQE EKWCEKAVKS
gi_60414603_sp	FT	PPIVKRLLGW	KK	-----	GEQNGQE EKWCEKAVKS
gi_117949830_sp	FT	PPVVKRLLGW	KKSAGGSG	G	AGGGEQNGQE EKWCEKAVKS
gi_13633871_sp	FT	PPVVKRLLGW	KKSAGGSG	G	AGGGEQNGQE EKWCEKAVKS
gi_13633914_sp	FT	PPVVKRLLGW	KKSAGGSG	G	AGGGEQNGQE EKWCEKAVKS
gi_75041393_sp	FT	PPVVKRLLGW	KKSAGGSG	G	AGGGEQNGQE EKWCEKAVKS
gi_110826300_sp	FT	PPVVKRLLGW	KKSAGGSG	G	AGGGEQNGQE EKWCEKAVKS
gi_21264050_sp	FT	PPVVKRLLGW	KKSASGSSGA	GGGGEQNGQE	EKWCEKAVKS
gi_341942043_sp	AC	LSIVHSLMCH	RQ	-----	GGES ETFAKRAIES
gi_13959528_sp	AC	LSIVHSLMCH	RQ	-----	GGES ETFAKRAIES
gi_13959561_sp	AC	LSIVHSLMCH	RQ	-----	GGES ETFAKRAIES
gi_116256078_sp	AC	LSIVHSLMCH	RQ	-----	GGES ETFAKRAIES
gi_13959531_sp	AC	LSIVHSLMCH	RQ	-----	GGES ETFAKRAIES
gi_13959540_sp	EPEEGGGPRS	REARSRLLLL	-----	-----	EQELKTVTYS
gi_115502451_sp	EP--AGGGRS	REARSRLLLL	-----	-----	EQELKTVTYS
gi_13959573_sp	AS	PPGPGGGGEAR	SR	-----	LVLL ERELKAVTYA
gi_13959541_sp	GH	HHPHPPTSGA	GA	-----	AGGA EADLKALTHS
gi_13959538_sp	GH	HHPHPPPAAGA	GA	-----	AGGA EADLKALTHS
gi_13959529_sp	GH	HHPHPPPSSGA	GA	-----	AGGA EADLKALTHS

	.....	210	.....	220	.....	230	.....	240	.....	250
gi_13633932_sp	LVKKLKKKKG	AMEELEKALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_118573879_sp	LVKKLKKKKG	AMEELEKALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_13633915_sp	LVKKLKKKKG	AMEELEKALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_341942042_sp	LVKKLKKKKG	AMEELEKALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_82121811_sp	LVKKLKKKKG	AMEELEKALS	SPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_21264062_sp	LVKKLKKKKG	AMEDLEKALS	SPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_13959533_sp	LVKKLKKKKG	AMEELEKALS	SPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_13959566_sp	LVKKLKKKKG	AMEELEKALS	SPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_13959559_sp	LVKKLKKKKG	AMEELEKALS	SPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_13633872_sp	LVKKLKKKKG	AMEELEKALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_13959539_sp	LVKKLKKKKG	AMDELERALS	CPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_21264049_sp	LVKKLKKKKG	AMEELERALS	CPG	QPSNCV	TIP	-----	-----	-----	-----	-----
gi_66774168_sp	LVKKLKKKKG	AMDELERALS	CPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_13959527_sp	LVKKLKKKKG	AMDELERALS	CPG	QPSKCV	TIP	-----	-----	-----	-----	-----
gi_51338669_sp	LVKKLKK-TG	QLDELEKAIT	TQN	VNTKCI	TIP	-----	-----	-----	-----	-----
gi_60414603_sp	LVKKLKK-TG	QLDELEKAIT	TQN	INTKCI	TIP	-----	-----	-----	-----	-----
gi_117949830_sp	LVKKLKK-TG	RLDELEKAIT	TQN	CNTKCV	TIP	STCSEIW	GLSTANTVDQ	-----	-----	-----
gi_13633871_sp	LVKKLKK-TG	RLDELEKAIT	TQN	CNTKCV	TIP	STCSEIW	GLSTANTVDQ	-----	-----	-----
gi_13633914_sp	LVKKLKK-TG	RLDELEKAIT	TQN	CNTKCV	TIP	STCSEIW	GLSTPNTIDQ	-----	-----	-----
gi_75041393_sp	LVKKLKK-TG	RLDELEKAIT	TQN	CNTKCV	TIP	STCSEIW	GLSTPNTIDQ	-----	-----	-----
gi_110826300_sp	LVKKLKK-TG	RLDELEKAIT	TQN	CNTKCV	TIP	STCSEIW	GLSTPNTIDQ	-----	-----	-----
gi_21264050_sp	LVKKLKK-TG	QLDELEKAIT	TQN	RNTKCV	TIP	SNCSEIW	GLSTPNTIEQ	-----	-----	-----
gi_341942043_sp	LVKKLKEKKD	ELDSLITAIT	TNGAHPSKCV	TIQ	-----	-----	-----	-----	-----	-----
gi_13959528_sp	LVKKLKEKKD	ELDSLITAIT	TNGAHPSKCV	TIQ	-----	-----	-----	-----	-----	-----
gi_13959561_sp	LVKKLKEKKD	ELDSLITAIT	TNGAHPSKCV	TIQ	-----	-----	-----	-----	-----	-----
gi_116256078_sp	LVKKLKEKKD	ELDSLITAIT	TNGAHPSKCV	TIQ	-----	-----	-----	-----	-----	-----
gi_13959531_sp	LVKKLKEKKD	ELDSLITAIT	TNGAHPSKCV	TIQ	-----	-----	-----	-----	-----	-----
gi_13959540_sp	LLKRLKE--R	SLDTLLEAVE	SRGGVPGGCV	LVP	-----	-----	-----	-----	-----	-----
gi_115502451_sp	LLKRLKE--R	SLDTLLEAVE	SRGGVPGGCV	LVP	-----	-----	-----	-----	-----	-----
gi_13959573_sp	LLKRLKE--R	SLHSLLOAVE	SRGGTPGGCV	LVA	-----	-----	-----	-----	-----	-----
gi_13959541_sp	VLKKLKE--R	QLELLLOAVE	SRGGTRTACL	LVP	-----	-----	-----	-----	-----	-----
gi_13959538_sp	VLKKLKE--R	QLELLLOAVE	SRGGTRTACL	LVP	-----	-----	-----	-----	-----	-----
gi_13959529_sp	VLKKLKE--R	QLELLLOAVE	SRGGTRTACL	LVP	-----	-----	-----	-----	-----	-----

	.....	260	.....	270	.....	280	.....	290	.....	300
gi_13633932_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_118573879_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13633915_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_341942042_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_82121811_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_21264062_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13959533_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13959566_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13959559_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13633872_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13959539_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_21264049_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_66774168_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13959527_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_51338669_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_60414603_sp	-----	RS	LDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_117949830_sp	WDTTGLYSFS	EQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13633871_sp	WDTTGLYSFS	EQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_13633914_sp	WDTTGLYSFS	EQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_75041393_sp	WDTTGLYSFS	EQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_110826300_sp	WDTTGLYSFS	EQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_21264050_sp	WDTSGLYSYP	DQ	TRSLDGRL	-----	-----	QVS	HRKGL	PH	-----	-----
gi_341942043_sp	-----	RT	LDGRL	-----	-----	QVA	GRKGF	PH	-----	-----
gi_13959528_sp	-----	RT	LDGRL	-----	-----	QVA	GRKGF	PH	-----	-----
gi_13959561_sp	-----	RT	LDGRL	-----	-----	QVA	GRKGF	PH	-----	-----
gi_116256078_sp	-----	RT	LDGRL	-----	-----	QVA	GRKGF	PH	-----	-----
gi_13959531_sp	-----	RT	LDGRL	-----	-----	QVA	GRKGF	PH	-----	-----
gi_13959540_sp	-----	RADL	-----	-----	-----	RL	GGQPAP	PQ	-----	-----
gi_115502451_sp	-----	RADL	-----	-----	-----	RL	GGQPAP	PQ	-----	-----
gi_13959573_sp	-----	RGEL	-----	-----	-----	RL	GAAARRPP	PH	-----	-----
gi_13959541_sp	-----	GR	LDL	CR	LP	GP	GAPASAQ	P	-----	-----
gi_13959538_sp	-----	GR	LDL	CR	LP	GP	GAPAGA	QPAQPPSSYS	-----	-----
gi_13959529_sp	-----	GR	LDL	CR	LP	GP	GAPASAQ	P	-----	-----

	.....	310	.....	320	.....	330	.....	340	.....	350
gi_13633932_sp	VIYCRVWR	WPD	LQSHHEL	KPLECCE	FP	FGSKQKEVCI	NPYHYKRVES	-----	-----	-----
gi_118573879_sp	VIYCRVWR	WPD	LQSHHEL	KPLECCE	FP	FGSKQKEVCI	NPYHYKRVES	-----	-----	-----
gi_13633915_sp	VIYCRVWR	WPD	LQSHHEL	KPLECCE	FP	FGSKQKEVCI	NPYHYKRVES	-----	-----	-----

gi_341942042_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLECCE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_82121811_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLDICE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_21264062_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLEVCE	-YP	FGSKQKEVCI	NPYHYKRVES
gi_13959533_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLDICE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_13959566_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLDICE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_13959559_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLDICE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_13633872_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLECCE	-FP	FGSKQKEVCI	NPYHYKRVES
gi_13959539_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLECCE	-FP	FGSKQKEVCI	NPYHYRRVET
gi_21264049_sp	--	VIYCRVWR	WPD	LQSHHEL	KALECCE	-FP	FGSKQKDVC	NPYHYKRVDS
gi_66774168_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLECCE	-FP	FGSKQKEVCI	NPYHYRRVET
gi_13959527_sp	--	VIYCRVWR	WPD	LQSHHEL	KPLECCE	-FP	FGSKQKEVCI	NPYHYRRVET
gi_51338669_sp	--	VIYCRLWR	WPD	LHSHHEL	RAMELCE	-FA	FNMKKDEV	NPYHYQRVET
gi_60414603_sp	--	VIYCRLWR	WPD	LHSHHEL	RAMEMCE	-YA	FNMKKDEV	NPYHYQRVET
gi_117949830_sp	--	VIYCRLWR	WPD	LHSHHEL	KAIENCE	-YA	FNLKKDEV	NPYHYQRVET
gi_13633871_sp	--	VIYCRLWR	WPD	LHSHHEL	KAIENCE	-YA	FSLKKDEV	NPYHYQRVET
gi_13633914_sp	--	VIYCRLWR	WPD	LHSHHEL	KAIENCE	-YA	FNLKKDEV	NPYHYQRVET
gi_75041393_sp	--	VIYCRLWR	WPD	LHSHHEL	KAIENCE	-YA	FNLKEDEV	NPYHYQRVET
gi_110826300_sp	--	VIYCRLWR	WPD	LHSHHEL	KAIENCE	-YA	FNLKKDEV	NPYHYQRVET
gi_21264050_sp	--	VIYCRLWR	WPD	LHSHHEL	RAIETCE	-YA	FNLKKDEV	NPYHYQRVET
gi_341942043_sp	--	VIYARLWR	WPD	LH-KNEL	KHVKYCQ	-YA	FDLKCDSVC	NPYHYERVVS
gi_13959528_sp	--	VIYARLWR	WPD	LH-KNEL	KHVKYCQ	-YA	FDLKCDSVC	NPYHYERVVS
gi_13959561_sp	--	VIYARLWR	WPD	LH-KNEL	KHVKYCQ	-YA	FDLKCDSVC	NPYHYERVVS
gi_116256078_sp	--	VIYARLWR	WPD	LH-KNEL	KHVKYCQ	-YA	FDLKCDSVC	NPYHYERVVS
gi_13959531_sp	--	VIYARLWR	WPD	LH-KNEL	KHVKYCQ	-YA	FDLKCDSVC	NPYHYERVVS
gi_13959540_sp	--	LLLGRLFR	WPD	LQHAVEL	KPLCGCHSFT		AAADGPTVCC	NPYHFSRLCG
gi_115502451_sp	--	LLLGRLFR	WPD	LQHAVEL	KPLCGCHSFA		AAADGPTVCC	NPYHFSRLCG
gi_13959573_sp	--	LLLGKLF	WPD	LQHPAEL	KALCECQ	-SF	GAADGPTVCC	NPYHFSRLCG
gi_13959541_sp	--	LLLCKVFR	WPD	LRHSSEV	KRLCCCE	-SY	GKINPELVCC	NPHHLSRLCE
gi_13959538_sp	LP	LLLCKVFR	WPD	LRHSSEV	KRLCCCE	-SY	GKINPELVCC	NPHHLSRLCE
gi_13959529_sp	--	LLLCKVFR	WPD	LRHSSEV	KRLCCCE	-SY	GKINPELVCC	NPHHLSRLCE

	360	370	380	390	400
gi_13633932_sp	PVLPPVLVPR	HSEYNPQHSL	LAQFRNL	G	QNEPHMPHN
gi_118573879_sp	PVLPPVLVPR	HSEYNPQHSL	LAQFRNL	G	QNEPHMPLN
gi_13633915_sp	PVLPPVLVPR	HSEYNPQHSL	LAQFRNL	G	QNEPHMPLN
gi_341942042_sp	PVLPPVLVPR	HSEYNPQHSL	LAQFRNL	G	QNEPHMPLN
gi_82121811_sp	PVLPPVLVPR	HSEFNPQHSL	LVQFRNL	S	HNEPHMPHN
gi_21264062_sp	PVLPPVLVPR	HSEFNPQHSL	LVQFRNL	S	HNEPHMPLN
gi_13959533_sp	PVLPPVLVPR	HNEFNPQHSL	LVQFRNL	S	HNEPHMPQN
gi_13959566_sp	PVLPPVLVPR	HNEFNPQHSL	LVQFRNL	S	HNEPHMPQN
gi_13959559_sp	PVLPPVLVPR	HNEFNPQHSL	LVQFRNL	S	HNEPHMPQN
gi_13633872_sp	PVLPPVLVPR	HSEYNPQHSL	LAQFRNL	G	QNEPHMPLN
gi_13959539_sp	PVLPPVLVPR	HSEYNPQLSL	LAKFRSA	S	LHSEPLMPHN
gi_21264049_sp	PVLPPVLVPR	NSEFNAKLSM	LPRFRNP	L	HQTEPPMPQN
gi_66774168_sp	PVLPPVLVPR	HSEYNPQLSL	LAKFRSA	S	LHSEPLMPHN
gi_13959527_sp	PVLPPVLVPR	HSEYNPQLSL	LAKFRSA	S	LHSEPLMPHN
gi_51338669_sp	PVLPPVLVPR	HTEIPAEFPP	LDDY		SHSIPEN
gi_60414603_sp	PVLPPVLVPR	HTEIPAEFPP	LDDY		SHSIPEN
gi_117949830_sp	PVLPPVLVPR	HTEILTELPP	LDDY		THSIPEN
gi_13633871_sp	PVLPPVLVPR	HTEILTELPP	LDDY		THSIPEN
gi_13633914_sp	PVLPPVLVPR	HTEILTELPP	LDDY		THSIPEN
gi_75041393_sp	PVLPPVLVPR	HTEILTELPP	LDDY		THSIPEN
gi_110826300_sp	PVLPPVLVPR	HTEILTELPP	LDDY		THSIPEN
gi_21264050_sp	PVLPPVLVPR	HTEILTELPP	LDDY		TNSIPEN
gi_341942043_sp	PGIDLSGLTL	QSN-APSMLV	KDEYVHDFEG	QPSLPTEGHS	IQTIQHPPSN
gi_13959528_sp	PGIDLSGLTL	QSNAPPSMLV	KDEYVHDFEG	QPSLPTEGHS	IQTIQHPPSN
gi_13959561_sp	PGIDLSGLTL	QSNAPSSMMV	KDEYVHDFEG	QPSLSTEGHS	IQTIQHPPSN
gi_116256078_sp	PGIDLSGLTL	QSNAPPSMLV	KDEYVHDFEG	QPSLSTEGHS	IQTIQHPPSN
gi_13959531_sp	PGIDLSGLTL	QSNAPSGMLV	KDEYVHDFEG	QPSLATEGHS	IQTIQHPPSN
gi_13959540_sp	PESPP---PP	YSRLSPP---			DQYKP
gi_115502451_sp	PESPP---PP	YSRLSPR---			DEYKP
gi_13959573_sp	PESPP---PP	YSRLSPN---			DEQKP
gi_13959541_sp	LESPP---PP	YSRYPMD---			FLKPT
gi_13959538_sp	LESPP---PP	YSRYPMD---			FLKPT
gi_13959529_sp	LESPP---PP	YSRYPMD---			FLKPT

	410	420	430	440	450
gi_13633932_sp	ATFPDSFQQP	NSHPFPHSPN	SSYP	NSPGSSSSSTY	PHSPAS
gi_118573879_sp	ATFPDSFQQP	NSHPFPHSPN	SSYP	NSPGSSSSSTY	PHSPTS
gi_13633915_sp	ATFPDSFQQP	NSHPFPHSPN	SSYP	NSPGSSSSSTY	PHSPTS
gi_341942042_sp	ATFPDSFQQP	NSHPFPHSPN	SSYP	NSPGSSSSSTY	PHSPTS
gi_82121811_sp	ATFPDSFQQP	NSTPFISPN	SPYP	PSPA--SSTY	PSSPAS
gi_21264062_sp	ATFPESEFQQH	SGGSSFPISP	NSPY	PPSPASSSGTY	PNSPAS
gi_13959533_sp	ATFPDSFHQP	NSTPFPLSPN	SPYP	PSPA--SSTY	PNSPAS
gi_13959566_sp	ATFPDSFHQP	NNTPFPLSPN	SPYP	PSPA--SSTY	PNSPAS

gi_13959559_sp	ATFPD	SF	HQ	P	NNAP	F	P	L	S	P	N	-----	SPYP	P	S	P	A	--	S	S	T	Y	P	N	S	P	A	S	-----																									
gi_13633872_sp	ATFPD	SF	Q	Q	P	H	S	H	P	F	A	Q	Y	P	N	-----	SSYP	N	S	P	G	S	S	S	S	T	Y	P	H	S	P	T	S	-----																				
gi_13959539_sp	ATYPD	SF	Q	Q	P	P	C	S	A	L	P	P	S	P	S	-----	H	A	F	S	Q	S	P	C	--	T	A	S	Y	P	H	S	P	G	S	-----																		
gi_21264049_sp	ATFPD	SF	P	Q	Q	P	A	N	A	L	P	F	T	P	N	S	P	T	N	S	Y	P	S	S	P	N	S	G	T	G	S	T	A	T	F	P	H	S	P	S	-----													
gi_66774168_sp	ATYPD	SF	Q	Q	S	L	C	P	A	P	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----														
gi_13959527_sp	ATYPD	SF	Q	Q	S	L	G	P	A	P	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----														
gi_51338669_sp	TNFP	A	G	I	-EP	Q	S	N	I	-P	E	T	T	P	P	-----	P	G	Y	L	S	E	D	G	--	E	T	S	D	H	Q	M	N	H	S	-----	-----	-----	-----	-----														
gi_60414603_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	L	S	E	D	G	--	E	T	S	D	H	Q	M	N	P	S	-----	-----	-----	-----	-----													
gi_117949830_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	T	S	D	Q	Q	L	N	Q	S	-----	-----	-----	-----	-----													
gi_13633871_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	T	S	D	Q	Q	L	N	Q	S	-----	-----	-----	-----	-----													
gi_13633914_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	T	S	D	Q	Q	L	N	Q	S	-----	-----	-----	-----	-----													
gi_75041393_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	T	S	D	Q	Q	L	N	Q	S	-----	-----	-----	-----	-----													
gi_110826300_sp	TNFP	A	G	I	-EP	Q	S	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	T	S	D	Q	Q	L	N	Q	S	-----	-----	-----	-----	-----													
gi_21264050_sp	TNFP	T	G	I	-EP	P	N	N	Y	I	P	E	T	T	P	P	-----	P	G	Y	I	S	E	D	G	--	E	A	S	D	Q	Q	M	N	Q	S	-----	-----	-----	-----	-----													
gi_341942043_sp	R	A	S	T	E	T	Y	S	A	P	A	L	L	A	P	A	E	S	N	A	T	S	T	T	N	F	P	N	I	P	V	A	S	T	S	Q	P	A	S	I	L	A	G	S	H	S	E	G	L	L				
gi_13959528_sp	R	A	S	T	E	T	Y	S	A	P	A	L	L	A	P	S	E	S	N	A	T	S	T	T	N	F	P	N	I	P	V	A	S	T	S	Q	P	A	S	I	L	A	G	S	H	S	E	G	L	L				
gi_13959561_sp	R	A	S	T	E	T	Y	S	T	P	A	L	L	A	P	S	E	S	N	A	T	S	T	A	N	F	P	N	I	P	V	A	S	T	S	Q	P	A	S	I	L	G	G	S	H	S	E	G	L	L				
gi_116256078_sp	R	A	S	T	E	T	Y	S	T	P	A	L	L	A	P	S	E	S	N	A	T	S	T	T	N	F	P	N	I	P	V	A	S	T	S	Q	P	A	S	I	L	A	G	S	H	S	E	G	L	L				
gi_13959531_sp	R	A	S	T	E	T	Y	S	T	P	A	L	L	A	P	S	E	S	N	A	T	S	T	T	N	F	P	N	I	P	V	A	S	T	S	Q	P	A	S	I	L	A	G	S	H	S	E	G	L	L				
gi_13959540_sp	L	D	L	S	D	S	T	L	S	Y	T	E	T	E	A	T	N	S	L	-	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
gi_115502451_sp	L	D	L	S	D	S	T	L	S	Y	T	E	T	E	A	T	N	S	L	-	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
gi_13959573_sp	L	D	L	S	D	S	T	L	S	Y	T	E	T	E	A	T	N	S	P	-	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
gi_13959541_sp	A	G	C	P	D	A	V	P	S	S	A	E	T	G	G	T	N	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
gi_13959538_sp	A	D	C	P	D	A	V	P	S	S	A	E	T	G	G	T	N	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
gi_13959529_sp	A	D	C	P	D	A	V	P	S	S	A	D	E	T	G	G	T	N	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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	460	470	480	490	500
gi_13633932_sp	SDPGSPF	QMPADTPPPA	YLPPEDQMT	DTSQPMDT	NMMAPGIHP
gi_118573879_sp	SDPGSPF	QMPADTPPPA	YLPPEDPMTQ	DGSQPMDT	NMMAPSLPS
gi_13633915_sp	SDPGSPF	QMPADTPPPA	YLPPEDPMTQ	DGSQPMDT	NMMAPPLPS
gi_341942042_sp	SDPGSPF	QMPADTPPPA	YLPPEDPMAQ	DGSQPMDT	NMMAPPLPA
gi_82121811_sp	SGPSSPF	QLPADTPPPA	YMPPDDQMGQ	DNSQSMDTS	NTMIPQIMP
gi_21264062_sp	SGPSSPF	QLPADTPPPA	YMPPDEQMGQ	DGSQSMETG	SSLAPQ---
gi_13959533_sp	SGPGSPF	QLPADTPPPA	YMPPDDQMGQ	DNSQPMDT	NNMIPQIMP
gi_13959566_sp	SGPGSPF	QLPADTPPPA	YMPPDDQMGQ	DNSQPMDT	NNMIPQIMP
gi_13959559_sp	SGPGSPF	QLPADTPPPA	YMPPDDQMAP	DNSQPMDT	SNMIPQTMP
gi_13633872_sp	SDPGSPF	QMPADTPPPA	YLPPEDPMAQ	DGSQPMDTNM	TNMTAPTLP
gi_13959539_sp	PSEPESPY	QHSVDTPPLP	YHATEASETQ	SG-QPVDA	TADRHHVVL
gi_21264049_sp	SDPGSPF	QMP-ETPPA	YMPPEEPMTQ	DCPQPMDTN	LLAPNPLE
gi_66774168_sp	PSSPG	HVFPQSPCPT	SYPHSPGSPS	ESDSPYQH	
gi_13959527_sp	PSSPG	HVFPQSPCPT	SYQSPGSPS	ESDSPYQH	
gi_51338669_sp	MDAGSPN	LSPNPMSPA	HNN		
gi_60414603_sp	MDAGSPN	LSPNPMSPA	HNN		
gi_117949830_sp	MDTGSPA	ELSPTTLSPV	NHS		
gi_13633871_sp	MDTGSPA	ELSPTTLSPV	NHS		
gi_13633914_sp	MDTGSPA	ELSPTTLSPV	NHS		
gi_75041393_sp	MDTGSPA	ELSPTTLSPV	NHS		
gi_110826300_sp	MDTGSPA	ELSPTTLSPV	NHS		
gi_21264050_sp	MDTGSPA	ELSPSTLSPV	NHG		
gi_341942043_sp	QIASGPQPGQ	QQNGFTAQPA	TYHHNSTTTW	TGSRTAPYTP	NLPHHQNGHL
gi_13959528_sp	QIASGPQPGQ	QQNGFTAQPA	TYHHNSTTTW	TGSRTAPYTP	NLPHHQNGHL
gi_13959561_sp	QIASGPQPGQ	QQNGFTGQPA	TYHHNSTTTW	TGSRTAPYTP	NLPHHQNGHL
gi_116256078_sp	QIASGPQPGQ	QQNGFTGQPA	TYHHNSTTTW	TGGRTAPYTP	NLPHHQNGHL
gi_13959531_sp	QIASGPQPGQ	QQNGFTGQPA	TYHHNSTTTW	TGSRTAPYPP	NLPHHQNGHL
gi_13959540_sp	ITAPG	EFSDASMS			
gi_115502451_sp	ITAPG	EFSDASMS			
gi_13959573_sp	NVTPG	EFSDASTS			
gi_13959541_sp	YLAPG	GLSDSQLL			
gi_13959538_sp	YLAPG	GLSDSQLL			
gi_13959529_sp	YLAPG	GLSDSQLL			

	510	520	530	540	550	
gi_13633932_sp	D	IHR	GDVQA	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_118573879_sp	E	INR	GDVQA	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_13633915_sp	E	INR	GDVQA	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_341942042_sp	E	ISR	GDVQA	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_82121811_sp	N	IST	RDVQP	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_21264062_sp	N	MPR	GDVQP	VEY	QEP SHWCSIV	YYELNNRVGE
gi_13959533_sp	S	ISS	RDVQP	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_13959566_sp	S	ISS	RDVQP	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_13959559_sp	S	ISS	RDVQP	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_13633872_sp	E	INR	GDVQA	VAY	EEPKEHWCSIV	YYELNNRVGE
gi_13959539_sp	S	IPN	GDFRP	VCY	EEPQHWCSVA	YYELNNRVGE
gi_21264049_sp	I	SNR	TDVHP	VAY	QEPKEHWCSIV	YYELNNRVGE
gi_66774168_sp			SDFRP	VCY	EEPQHWCSVA	YYELNNRVGE

gi_13959527_sp	-----	-----	SDFRP--	VCY	EEPLHWCSVA	YYELNNRVGE
gi_51338669_sp	-----	-----	LDLQP--	VTY	CEPAFWCSIS	YYELNQRVGE
gi_60414603_sp	-----	-----	LDLQP--	VTY	CEPAFWCSIS	YYELNQRVGE
gi_117949830_sp	-----	-----	LDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_13633871_sp	-----	-----	LDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_13633914_sp	-----	-----	LDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_75041393_sp	-----	-----	LDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_110826300_sp	-----	-----	LDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_21264050_sp	-----	-----	MDLQP--	VTY	SEPAFWCSIA	YYELNQRVGE
gi_341942043_sp	QHHPMP	PHP	GHYWPV	HNE	LAFQPPISNH	PAPEYWC
gi_13959528_sp	QHHPMP	PHP	GHYWPV	HNE	LAFQPPISNH	PAPEYWC
gi_13959561_sp	QHHPMP	PHP	GHYWPV	HNE	LAFQPPISNH	PAPEYWC
gi_116256078_sp	QHHPMP	PHP	GHYWPV	HNE	LAFQPPISNH	PAPEYWC
gi_13959531_sp	QHHPMP	PHP	GHYWPV	HNE	LAFQPPISNH	PAPEYWC
gi_13959540_sp	-----	-----	-----	PDA	TKPSHWCSVA	YWEHRTRVGR
gi_115502451_sp	-----	-----	-----	PDA	TKPSHWCSVA	YWEHRTRVGR
gi_13959573_sp	-----	-----	-----	PDA	VKRSHWCNVA	YWEHRTRVGR
gi_13959541_sp	-----	-----	-----	LEP	GDRSHWCVVA	YWEKTRVGR
gi_13959538_sp	-----	-----	-----	LEP	GDRSHWCVVA	YWEKTRVGR
gi_13959529_sp	-----	-----	-----	LEP	GDRSHWCVVA	YWEKTRVGR

	.....	560.	.....	570.	.....	580.	.....	590.	.....	600
gi_13633932_sp	AFHASST--	S	ILVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_118573879_sp	AFHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13633915_sp	AFHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_341942042_sp	AFHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_82121811_sp	AFHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_21264062_sp	AYHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13959533_sp	AFHASST--	S	VLVDG	GFTDPA	NNKSR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13959566_sp	AFHASST--	S	VLVDG	GFTDPS	NNKSR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13959559_sp	AFHASST--	S	VLVDG	GFTDPS	NNKSR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13633872_sp	RFHASST--	S	VLVDG	GFTDPS	NNKNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13959539_sp	TFQASSR--	S	VLIDG	GFTDPS	NNRNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_21264049_sp	AFLASST--	S	VLVDG	GFTDPS	NNRNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_66774168_sp	TFQASSR--	S	VLIDG	GFTDPS	NNRNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_13959527_sp	TFQASSR--	S	VLIDG	GFTDPS	NNRNR	FCLGL	LSNVNR	NSTI	ENTRR	HIGKG
gi_51338669_sp	TFHASQP--	S	MTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NAAV	ELTRR	HIGRG
gi_60414603_sp	TFHASQP--	S	MTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NAAV	ELTRR	HIGRG
gi_117949830_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_13633871_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_13633914_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_75041393_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_110826300_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_21264050_sp	TFHASQP--	S	LTVDG	GFTDPS	NS-ERF	CLGL	LSNVNR	NATV	EMTRR	HIGRG
gi_341942043_sp	TFKVPSSCPV	VTVDG	GYVDPS	GG-DRF	CLGQ	LSNVHR	TEAI	ERARL	HIGKG	
gi_13959528_sp	TFKVPSSCPI	VTVDG	GYVDPS	GG-DRF	CLGQ	LSNVHR	TEAI	ERARL	HIGKG	
gi_13959561_sp	TFKVPSSCPI	VTVDG	GYVDPS	GG-DRF	CLGQ	LSNVHR	TEAI	ERARL	HIGKG	
gi_116256078_sp	TFKVPSSCPI	VTVDG	GYVDPS	GG-DRF	CLGQ	LSNVHR	TEAI	ERARL	HIGKG	
gi_13959531_sp	TFKVPSSCPI	VTVDG	GYVDPS	GG-DRF	CLGQ	LSNVHR	TEAI	ERARL	HIGKG	
gi_13959540_sp	LYAVY----	D	QAVSIF	YDLP	QG-SGF	CLGQ	LNLEQR	SESV	RRTRSK	IGFG
gi_115502451_sp	LYAVY----	D	QAVSIF	YDLP	QG-SGF	CLGQ	LNLEQR	SESV	RRTRSK	IGFG
gi_13959573_sp	LYTVY----	E	QSVSIF	YDLP	QG-NGF	CLGQ	LNLENR	SETV	RRTRSK	IGYG
gi_13959541_sp	LYCVQ----	E	PSLDIF	YDLP	QG-NGF	CLGQ	LNSDNK	SQLV	QKVRSK	IGCG
gi_13959538_sp	LYCVQ----	E	PSLDIF	YDLP	QG-NGF	CLGQ	LNSDNK	SQLV	QKVRSK	IGCG
gi_13959529_sp	LYCVQ----	E	PSLDIF	YDLP	QG-NGF	CLGQ	LNSDNK	SQLV	QKVRSK	IGCG

	.....	610.	.....	620.	.....	630.	.....	640.	.....	650
gi_13633932_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_118573879_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_13633915_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_341942042_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_82121811_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_21264062_sp	VHLYYVG-GE	VYAEC	LSDTS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_13959533_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNF	HHGFHPT-TV	CKIPSS	CCLK		
gi_13959566_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNF	HHGFHPT-TV	CKIPSS	CCLK		
gi_13959559_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNF	HHGFHPT-TV	CKIPSS	CCLK		
gi_13633872_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSG	CCLK		
gi_13959539_sp	VHLYYVG-GE	VYAEC	VSDSS	IFVQS	SRNCNY	QHGFHPA-TV	CKIPSG	CCLK		
gi_21264049_sp	VHLYYVG-GE	VYAEC	LSDSS	IFVQS	SRNCNY	HHGFHPT-TV	CKIPSR	CCLK		
gi_66774168_sp	VHLYYVG-GE	VYAEC	VSDSS	IFVQS	SRNCNY	QHGFHPA-TV	CKIPSG	CCLK		
gi_13959527_sp	VHLYYVG-GE	VYAEC	VSDSS	IFVQS	SRNCNY	QHGFHPA-TV	CKIPSG	CCLK		
gi_51338669_sp	VRLYYIG-GE	VFAEC	LSDSA	IFVQS	SPNCNQ	RYGWHPA-TV	CKIPPG	CCLK		
gi_60414603_sp	VRLYYIG-GE	VFAEC	LSDSA	IFVQS	SPNCNQ	RYGWHPA-TV	CKIPPG	CCLK		
gi_117949830_sp	VRLYYIG-GE	VFAEC	LSDSA	IFVQS	SPNCNQ	RYGWHPA-TV	CKIPPG	CCLK		
gi_13633871_sp	VRLYYIG-GE	VFAEC	LSDSA	IFVQS	SPNCNQ	RYGWHPA-TV	CKIPPG	CCLK		

gi_13633914_sp	VRLYYIG-GE	VFAECLSDSA	IFVQSPNCNQ	RYGWHPA-TV	CKIPPGCNLK
gi_75041393_sp	VRLYYIG-GE	VFAECLSDSA	IFVQSPNCNQ	RYGWHPA-TV	CKIPPGCNLK
gi_110826300_sp	VRLYYIG-GE	VFAECLSDSA	IFVQSPNCNQ	RYGWHPA-TV	CKIPPGCNLK
gi_21264050_sp	VRLYYIG-GE	VFAECLSDSA	IFVQSPNCNQ	RYGWHPA-TV	CKIPPGCNLK
gi_341942043_sp	VQLECKGEGD	VWVRCLSDHA	VFVQSYYLDR	EAGRAPGDAV	HKIYPSAYIK
gi_13959528_sp	VQLECKGEGD	VWVRCLSDHA	VFVQSYYLDR	EAGRAPGDAV	HKIYPSAYIK
gi_13959561_sp	VQLECKGEGD	VWVRCLSDHA	VFVQSYYLDR	EAGRAPGDAV	HKIYPSAYIK
gi_116256078_sp	VQLECKGEGD	VWVRCLSDHA	VFVQSYYLDR	EAGRAPGDAV	HKIYPSAYIK
gi_13959531_sp	VQLECKGEGD	VWVRCLSDHA	VFVQSYYLDR	EAGRAPGDAV	HKIYPSAYIK
gi_13959540_sp	ILLSKEP-DG	VWAYNRGEHP	IFVNSPTLDA	PGG-RAL-VV	RKVPPGYSIK
gi_115502451_sp	ILLSKEP-DG	VWAYNRGEHP	IFVNSPTLDA	PGG-RAL-VV	RKVPPGYSIK
gi_13959573_sp	ILLSKEP-DG	VWAYNRSEHP	IFVNSPTLDI	PNC-RTL-IV	RKVMPGYSIK
gi_13959541_sp	IQLTREV-DG	VWVYNRSSYP	IFIKSATLDN	PDS-RTL-LV	HKVFPGFSSIK
gi_13959538_sp	IQLTREV-DG	VWVYNRSSYP	IFIKSATLDN	PDS-RTL-LV	HKVFPGFSSIK
gi_13959529_sp	IQLTREV-DG	VWVYNRSSYP	IFIKSATLDN	PDS-RTL-LV	HKVFPGFSSIK

	..... 660..... 670..... 680..... 690..... 700	
gi_13633932_sp	IFNNQEFAQL	----LAQSVN HGFET-----
gi_118573879_sp	IFNNQEFAQL	----LAQSVN HGFET-----
gi_13633915_sp	IFNNQEFAQL	----LAQSVN HGFET-----
gi_341942042_sp	IFNNQEFAQL	----LAQSVN HGFET-----
gi_82121811_sp	IFNNQEFAQL	----LAQSVN HGFEA-----
gi_21264062_sp	IFNNQEFAQL	----LAQSVN HGFEA-----
gi_13959533_sp	IFNNQEFAQL	----LAQSVN HGFEA-----
gi_13959566_sp	IFNNQEFAQL	----LAQSVN HGFEA-----
gi_13959559_sp	IFNNQEFAQL	----LAQSVN HGFEA-----
gi_13633872_sp	IFNNQEFAQL	----LAQSVN HGFET-----
gi_13959539_sp	VFNNQLFAQL	----LAQSVH HGFEV-----
gi_21264049_sp	IFNNQEFAEL	----LAQSVN HGFEA-----
gi_66774168_sp	VFNNQLFAQL	----LAQSVH HGFEV-----
gi_13959527_sp	VFNNQLFAQL	LAQLLAQSVH HGFEV-----
gi_51338669_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_60414603_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_117949830_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_13633871_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_13633914_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_75041393_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_110826300_sp	IFNNQGF AAL	----LAQSVN QGFEA-----
gi_21264050_sp	IFNNQEFAAL	----LAQSVN QGFEA-----
gi_341942043_sp	VFDLRQCHRQ	----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
gi_13959528_sp	VFDLRQCHRQ	----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
gi_13959561_sp	VFDLRQCHRQ	----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
gi_116256078_sp	VFDLRQCHRQ	----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
gi_13959531_sp	VFDLRQCHRQ	----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
gi_13959540_sp	VFD FERSGLL	----QHADAA HG-----
gi_115502451_sp	VF-DFERSGL	----QHAPEP DA-----
gi_13959573_sp	VFDYEKSCLL	----QHTAEL DY-----
gi_13959541_sp	AFDYEKAYSL	----QRPNDH EF-----
gi_13959538_sp	AFDYEKAYSL	----QRPNDH EF-----
gi_13959529_sp	AFDYEKAYSL	----QRPNDH EF-----

	..... 710..... 720..... 730..... 740..... 750	
gi_13633932_sp	-----V	YELTKMCTLR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_118573879_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13633915_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_341942042_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_82121811_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_21264062_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEVHLHGP
gi_13959533_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13959566_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13959559_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13633872_sp	-----E	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13959539_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_21264049_sp	-----V	YELTKMCTIR MSFVKGWGAK YHRQDVTSTP CWIEIHLHGP
gi_66774168_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_13959527_sp	-----V	YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
gi_51338669_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_60414603_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_117949830_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_13633871_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_13633914_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_75041393_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_110826300_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_21264050_sp	-----V	YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
gi_341942043_sp	SLSAAAGIGV	DDLRLRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA

gi_13959528_sp	SLSAAAGIGV	DDLRRLCILR	MSFVKGWGPD	YPRQSIKETP	CWIEIHLHRA
gi_13959561_sp	SLSAAAGIGV	DDLRRLCILR	MSFVKGWGPD	YPRQSIKETP	CWIEIHLHRA
gi_116256078_sp	SLSAAAGIGV	DDLRRLCILR	MSFVKGWGPD	YPRQSIKETP	CWIEIHLHRA
gi_13959531_sp	SLSAAAGIGV	DDLRRLCILR	MSFVKGWGPD	YPRQSIKETP	CWIEIHLHRA
gi_13959540_sp	-----P	---YDPHSVR	ISFAKGWGPC	YSRQFITSCP	CWLEILLNNH
gi_115502451_sp	-----A	DGPYDPNSVR	ISFAKGWGPC	YSRQFITSCP	CWLEILLNNP
gi_13959573_sp	-----A	DGPYDPNSVR	ISFAKGWGPC	YSRQFITSCP	CWLEILLSNN
gi_13959541_sp	-----M	QQPWTGFTVQ	ISFVKGWGQC	YTRQFIFSSCP	CWLEVIFNSR
gi_13959538_sp	-----M	QQPWTGFTVQ	ISFVKGWGQC	YTRQFIFSSCP	CWLEVIFNSR
gi_13959529_sp	-----M	QQPWTGFTVQ	ISFVKGWGQC	YTRQFIFSSCP	CWLEVIFNSR

		760	770
gi_13633932_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_118573879_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_13633915_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_341942042_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_82121811_sp	LQWLDKVL	TQ	MGSPLNPISSVS
gi_21264062_sp	LQWLDKVL	TQ	MGSPLNPISSVS
gi_13959533_sp	LQWLDKVL	TQ	MGSPLNPISSVS
gi_13959566_sp	LQWLDKVL	TQ	MGSPLNPISSVS
gi_13959559_sp	LQWLDKVL	TQ	MGSPLNPISSVS
gi_13633872_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_13959539_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_21264049_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_66774168_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_13959527_sp	LQWLDKVL	TQ	MGSPHNPISSVS
gi_51338669_sp	LQWLDKVL	TQ	MGSPSIRCSSVS
gi_60414603_sp	LQWLDKVL	TQ	MGSPSIRCSSVS
gi_117949830_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_13633871_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_13633914_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_75041393_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_110826300_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_21264050_sp	LQWLDKVL	TQ	MGSPSVRCSSMS
gi_341942043_sp	LQLLDEV	LHT	MPPIA-DP-QP
gi_13959528_sp	LQLLDEV	LHT	MPPIA-DP-QP
gi_13959561_sp	LQLLDEV	LHT	MPPIA-DP-QP
gi_116256078_sp	LQLLDEV	LHT	MPPIA-DP-QP
gi_13959531_sp	LQLLDEV	LHT	MPPIA-DP-QP
gi_13959540_sp	R-----		
gi_115502451_sp	R-----		
gi_13959573_sp	R-----		
gi_13959541_sp	-----		
gi_13959538_sp	-----		
gi_13959529_sp	-----		