

The colour assignments have been adapted from the defaults in CLUSTALX (Thompson *et al.* 1997) Abstract :

	. . . . .	60	. . . . .	70	. . . . .	80	. . . . .	90	. . . . .	100
gi_13633932_sp_AV	DALVKKLK	KKKKGAMEEEL	KALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_118573879_sp_A	DALVKKLK	KKKKGAMEEEL	KALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13633915_sp_AV	DALVKKLK	KKKKGAMEEEL	KALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_341942042_sp_A	DALVKKLK	KKKKGAMEEEL	KALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13633872_sp_AV	DALVKKLK	KKKKGAMEEEL	KALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13959533_sp_AV	DALVKKLK	KKKKGAMEEEL	KALSSPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13959566_sp_AV	DALVKKLK	KKKKGAMEEEL	KALSSPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13959559_sp_AV	DALVKKLK	KKKKGAMEEEL	KALSSPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_82121811_sp_AV	DALVKKLK	KKKKGAMEEEL	KALSSPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_21264062_sp_AV	DALVKKLK	KKKKGAMEDLE	KALSSPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_21264049_sp_AV	DALVKKLK	KKKKGAMEEEL	RALS	CPGQPS	NCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13959539_sp_AV	DSL VKKLK	KKKKGAMDELE	RALS	CPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_66774168_sp_AV	DSL VKKLK	KKKKGAMDELE	RALS	CPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13959527_sp_AV	DSL VKKLK	KKKKGAMDELE	RALS	CPGQPS	KCVTIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_51338669_sp_AV	KSLVKKKL-	KKTGQLDELE	KAITTQN	VNT	KCITIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_60414603_sp_AV	KSLVKKKL-	KKTGQLDELE	KAITTQN	I NT	KCITIP	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_117949830_sp_A	VKSLVKKKL	KKTGR LDELE	KAITTQ NCNT	KCV TIPSTCS	EIWGLSTANT	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13633871_sp_AV	KSLVKKKL	KKTGR LDELE	KAITTQ NCNT	KCV TIPSTCS	EIWGLSTANT	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_13633914_sp_AV	KSLVKKKL	KKTGR LDELE	KAITTQ NCNT	KCV TIPSTCS	EIWGLSTPNT	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_75041393_sp_AV	KSLVKKKL	KKTGR LDELE	KAITTQ NCNT	KCV TIPSTCS	EIWGLSTPNT	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_110826300_sp_A	VKSLVKKKL	KKTGR LDELE	KAITTQ NCNT	KCV TIPSTCS	EIWGLSTPNT	- - -	- - - - -	- - - - -	- - - - -	- - - - -
gi_21264050_sp_A	VKSLVKKKL	KKTGQLDELE	KAITTQN RNT	KCV TIPS NCS	EIWGLSTPNT	- - -	- - - - -	- - - - -	- - - - -	- - - - -

	110	120	130	140	150
gi_13633932_sp	RS	LD	GR	LQ	VS
gi_118573879_sp	RS	LD	GR	LQ	VS
gi_13633915_sp	RS	LD	GR	LQ	VS
gi_341942042_sp	RS	LD	GR	LQ	VS
gi_13633872_sp	RS	LD	GR	LQ	VS
gi_13959533_sp	RS	LD	GR	LQ	VS
gi_13959566_sp	RS	LD	GR	LQ	VS
gi_13959559_sp	RS	LD	GR	LQ	VS
gi_82121811_sp	RS	LD	GR	LQ	VS
gi_21264062_sp	RS	LD	GR	LQ	VS
gi_21264049_sp	RS	LD	GR	LQ	VS
gi_13959539_sp	RS	LD	GR	LQ	VS
gi_66774168_sp	RS	LD	GR	LQ	VS
gi_13959527_sp	RS	LD	GR	LQ	VS
gi_51338669_sp	RS	LD	GR	LQ	VS
gi_60414603_sp	RS	LD	GR	LQ	VS

gi_117949830_sp	V	D	Q	W	D	T	T	G	L	Y	S	F	S	E	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
gi_13633871_sp	V	D	Q	W	D	T	T	G	L	Y	S	F	S	E	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
gi_13633914_sp	I	D	Q	W	D	T	T	G	L	Y	S	F	S	E	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
gi_75041393_sp	I	D	Q	W	D	T	T	G	L	Y	S	F	S	E	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
gi_110826300_sp	I	D	Q	W	D	T	T	G	L	Y	S	F	S	E	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
gi_21264050_sp	I	E	Q	W	D	T	S	G	L	Y	S	Y	P	D	Q	T	R	S	L	D	G	R	L	Q	V	S	H	R	K	G	L	P	H	V	I	Y	C	R	L	W	R	W	P	D	L	H	S	H	H	E				
										160.											170.											180.											190.											200
gi_13633932_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	H	S	L				
gi_118573879_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	H	S	L				
gi_13633915_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	H	S	L				
gi_341942042_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	H	S	L				
gi_13633872_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	H	S	L				
gi_13959533_sp	L	K	P	L	D	I	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	N	E	F	N	P	Q	H	S	L				
gi_13959566_sp	L	K	P	L	D	I	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	N	E	F	N	P	Q	H	S	L				
gi_13959559_sp	L	K	P	L	D	I	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	N	E	F	N	P	Q	H	S	L				
gi_82121811_sp	L	K	P	L	D	I	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	F	N	P	Q	H	S	L				
gi_21264062_sp	L	K	P	L	E	V	C	E	Y	P	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	K	R	V	E	S	P	V	L	P	P	V	L	V	P	R	H	S	E	F	N	P	Q	H	S	L				
gi_21264049_sp	L	K	A	L	E	C	C	E	F	F	F	G	S	K	Q	K	D	V	C	I	N	P	Y	H	Y	K	R	V	D	S	P	V	L	P	P	V	L	V	P	R	N	S	E	F	N	A	K	L	S	M				
gi_13959539_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	R	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	L	S	L				
gi_66774168_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	R	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	L	S	L				
gi_13959527_sp	L	K	P	L	E	C	C	E	F	F	F	G	S	K	Q	K	E	V	C	I	N	P	Y	H	Y	R	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	S	E	Y	N	P	Q	L	S	L				
gi_51338669_sp	L	R	A	M	E	L	C	E	F	A	F	F	N	M	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	P	A	E	F	P	P			
gi_60414603_sp	L	R	A	M	E	M	C	E	Y	A	F	F	N	M	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	P	A	E	F	P	P			
gi_117949830_sp	L	K	A	I	E	N	C	E	Y	A	F	F	N	L	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
gi_13633871_sp	L	K	A	I	E	N	C	E	Y	A	F	F	S	L	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
gi_13633914_sp	L	K	A	I	E	N	C	E	Y	A	F	F	N	L	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
gi_75041393_sp	L	K	A	I	E	N	C	E	Y	A	F	F	N	L	K	E	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
gi_110826300_sp	L	K	A	I	E	N	C	E	Y	A	F	F	N	L	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
gi_21264050_sp	L	R	A	I	E	T	C	E	Y	A	F	F	N	L	K	K	D	E	V	C	V	N	P	Y	H	Y	Q	R	V	E	T	P	V	L	P	P	V	L	V	P	R	H	T	E	I	L	T	E	L	P	P			
										210.											220.											230.											240.											250
gi_13633932_sp	L	A	Q	F	R	N	-	L	G	Q	N	E	P	H	M	P	H	N	A	T	F	P	D	S	F	Q	Q	-	P	-	N	S	H	P	F	-	P	H	S	P	N	S	S	Y	P	N	S	P	G	S				
gi_118573879_sp	L	A	Q	F	R	N	-	L	G	Q	N	E	P	H	M	P	L	N	A	T	F	P	D	S	F	Q	Q	-	P	-	N	S	H	P	F	-	P	H	S	P	N	S	S	Y	P	N	S	P	G	S				
gi_13633915_sp	L	A	Q	F	R	N	-	L	G	Q	N	E	P	H	M	P	L	N	A	T	F	P	D	S	F	Q	Q	-	P	-	N	S	H	P	F	-	P	H	S	P	N	S	S	Y	P	N	S	P	G	S				
gi_341942042_sp	L	A	Q	F	R	N	-	L	G	Q	N	E	P	H	M	P	L	N	A	T	F	P	D	S	F	Q	Q	-	P	-	N	S	H	P	F	-	P	H	S	P	N	S	S	Y	P	N	S	P	G	G				
gi_13633872_sp	L	A	Q	F	R	N	-	L	G	Q	N	E	P	H	M	P	L	N	A	T</																																		



gi_75041393_sp	- - - - -	IP-	- - - - -	- - - - -	ETPP	PGYI	ISED	GET	SDQQ	LNQS	SMD
gi_110826300_sp	- - - - -	IP-	- - - - -	- - - - -	ETPP	PGYI	ISED	GET	SDQQ	LNQS	SMD
gi_21264050_sp	- - - - -	IP-	- - - - -	- - - - -	ETPP	PGYI	ISED	GEA	SDQQ	MNQS	SMD
	. . . . .	310.	. . . . .	320.	. . . . .	330.	. . . . .	340.	. . . . .	350.	
gi_13633932_sp	- -	TNMMA	PAG	IHPD	IHRG	- D	VQAVAYE	EPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_118573879_sp	- -	TNMMA	PS	LPSE	INRG	- D	VQAVAYE	EPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_13633915_sp	- -	TNMMA	PAP	LPSE	INRG	- D	VQAVAYE	EPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_341942042_sp	- -	TNMMA	PAP	LPAEI	SRG	- D	VQAVAYE	EPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_13633872_sp	TNM	TNMTA	PAPT	LPAEI	NRG	- D	VQAVAYE	EPEK	HWC	SIVYYEL	NNRVGERFHA
gi_13959533_sp	T- -	SNNMI	PQ	IMPS	ISSR	- D	VQPVA	YEPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_13959566_sp	T- -	SNNMI	PQ	IMPS	ISSR	- D	VQPVA	YEPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_13959559_sp	T- -	SSNMI	PQ	TMPS	ISSR	- D	VQPVA	YEPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_82121811_sp	T- -	SNTMI	PQ	IMPNI	ISTR	- D	VQPVA	YEPEK	HWC	SIVYYEL	NNRVGEAFHA
gi_21264062_sp	T- -	GSSLAP	Q	NMPR	- - G	- D	VQPV	EYQE	EPS	HWC	SIVYYEL
gi_21264049_sp	- -	TNLLAP	N	LPLE	ISNR	TD	VHPV	AYQE	EPK	HWC	SIVYYEL
gi_13959539_sp	ATAD	RHVVL	S	IPNG	- - - -	D	FRPVC	YEPEQ		HWC	SVAYYEL
gi_66774168_sp	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	D	FRPVC	YEPEQ		HWC	SVAYYEL
gi_13959527_sp	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	D	FRPVC	YEPEL		HWC	SVAYYEL
gi_51338669_sp	AGSP-	NLSPN		PMSPA	HNNLD		LQPVT	TYCEPA		FWCS	ISYYEL
gi_60414603_sp	AGSP-	NLSPN		PMSPA	HNNLD		LQPVT	TYCEPA		FWCS	ISYYEL
gi_117949830_sp	TGSPA	EELSPT		TLSPV	NHSLD		LQPVT	TYSEPA		FWCS	IAYYEL
gi_13633871_sp	TGSPA	EELSPT		TLSPV	NHSLD		LQPVT	TYSEPA		FWCS	IAYYEL
gi_13633914_sp	TGSPA	EELSPT		TLSPV	NHSLD		LQPVT	TYSEPA		FWCS	IAYYEL
gi_75041393_sp	TGSPA	EELSPT		TLSPV	NHSLD		LQPVT	TYSEPA		FWCS	IAYYEL
gi_110826300_sp	TGSPA	EELSPT		TLSPV	NHSLD		LQPVT	TYSEPA		FWCS	IAYYEL
gi_21264050_sp	TGSPA	EELSPS		TLSPV	NHGMD		LQPVT	TYSEPA		FWCS	IAYYEL
	. . . . .	360.	. . . . .	370.	. . . . .	380.	. . . . .	390.	. . . . .	400.	
gi_13633932_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_118573879_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13633915_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_341942042_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13633872_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13959533_sp	SSTSILVDGF		TDPANNKS RF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13959566_sp	SSTSILVDGF		TDPSNNKS RF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13959559_sp	SSTSILVDGF		TDPSNNKS RF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_82121811_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_21264062_sp	SSTSILVDGF		TDPSNNKNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_21264049_sp	SSTSILVDGF		TDPSNNRNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13959539_sp	SSRSVLIDGF		TDPSNNRNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_66774168_sp	SSRSVLIDGF		TDPSNNRNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_13959527_sp	SSRSVLIDGF		TDPSNNRNRF		CLGLLSNVNR		NSTIENTRRH		IGKGVHLYYV		
gi_51338669_sp	SQPSMTVDGF		TDPSNSE- RF		CLGLLSNVNR		NAAVELTRRH		IGRGVRLLYYI		
gi_60414603_sp	SQPSMTVDGF		TDPSNSE- RF		CLGLLSNVNR						

					460					470					480					490					500			
gi_13633932_sp_	-	-	AQ	LLA	QS	VN	HG	GF	ET	VYE	LT	KM	CT	LR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_118573879_sp_	-	-	AQ	LLA	QS	VN	HG	GF	ET	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13633915_sp_	-	-	AQ	LLA	QS	VN	HG	GF	ET	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_341942042_sp_	-	-	AQ	LLA	QS	VN	HG	GF	ET	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13633872_sp_	-	-	AQ	LLA	QS	VN	HG	GF	ET	EYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13959533_sp_	-	-	AQ	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13959566_sp_	-	-	AQ	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13959559_sp_	-	-	AQ	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_82121811_sp_	-	-	AQ	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_21264062_sp_	-	-	AQ	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_21264049_sp_	-	-	AE	LLA	QS	VN	HG	GF	EA	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	KY	YH	RQ	DV	VT	ST	PC	W	
gi_13959539_sp_	-	-	AQ	LLA	QS	VH	HG	GF	EV	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_66774168_sp_	-	-	AQ	LLA	QS	VH	HG	GF	EV	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W	
gi_13959527_sp_Q	LL	AQ	LLA	QS	VH	HG	GF	EV	VYE	LT	KM	CT	IR	MS	FV	KG	GW	GA	EY	YH	RQ	DV	VT	ST	PC	W		
gi_51338669_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_60414603_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_117949830_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_13633871_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_13633914_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_75041393_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_110826300_sp_	-	-	AA	LLA	QS	VN	Q	G	FE	AVYQ	LT	RM	CT	IR	MS	FV	KG	GW	GA	EY	R	RQ	T	V	VT	ST	PC	W
gi_21264050_sp_	-	-	AA	LLA																								

	510										520										530									
gi_13633932_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_118573879_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_13633915_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_341942042_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_13633872_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_13959533_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	L	N	P	I	S	S	V	S
gi_13959566_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	L	N	P	I	S	S	V	S
gi_13959559_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	L	N	P	I	S	S	V	S
gi_82121811_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	L	N	P	I	S	S	V	S
gi_21264062_sp	I	E	V	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	L	N	P	I	S	S	V	S
gi_21264049_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_13959539_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_66774168_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_13959527_sp	I	E	I	H	L	H	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	H	N	P	I	S	S	V	S
gi_51338669_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	I	R	C	S	S	V	S
gi_60414603_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	I	R	C	S	S	V	S
gi_117949830_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S
gi_13633871_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S
gi_13633914_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S
gi_75041393_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S
gi_110826300_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S
gi_21264050_sp	I	E	L	H	L	N	G	P	L	Q	W	L	D	K	V	L	T	Q	M	G	S	P	S	V	R	C	S	S	M	S