

Supplemental alignments of RAG1 sequences over the WW-like motif.

The query sequence was from the Coelecanth:

1
VIHPTHFCHTC**W**TVIRKWISDPNSQ**EMGVL**ADRVV**GWLP**HSLF
CKICDTGNRAVK 55

Bolded letters above are the residues specifically addressed in the accompanying manuscript. In the alignments vertical red lines precede the conserved Ws and the central residue of the hydrophobic core.

Dots are identity to the query sequence.

Genebank accession numbers for each sequence are listed on the left.

This file is bookmarked to divide it into taxonomic groups: Mammals, Reptiles1, Reptiles2, Turtles, Crocodiles, Amphibians, Lizards, Birds, And Fish.

MAMMALS Alignments

Query	1	VIHPHFCHCTC	WT	VIRK	WISD	PN	SQEM	GL	ADRV	VVGL	WLP	PHSL	FKIC	CDT	GNRA	VK	55							
AAP76417	138	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	APS	D	...	H	AR	GL	191		
AAP76411	139	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	191			
AAP76412	5	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	57			
EAW68118	170	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	N	AR	GL	222			
XP 521888	170	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	N	AR	GL	222			
NP 000439	170	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	N	AR	GL	222			
XP 001488008	169	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	221			
AAH37344	170	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	N	AR	GL	222			
AAP76418	139	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	VR	GL	191			
AAP76419	10	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	VR	GL	62			
XP 001084631	170	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNVT	E	H	...	TPS	D	...	N	AR	GL	222		
AAP76421	139	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	HSAR	GL	191				
AAP76408	140	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	191			
P34088	169	...	E	...	N	...	S	IMHRKF	GAPC	-	VYF	PPRNATME	H	...	APS	D	...	Y	AR	GL	221			
AAP76407	109	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	N	...	H	AR	GL	162		
AAP76431	114	...	Q	...	QN	...	G	IMHRKF	SAP	-	R	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	166		
AAQ63083	143	...	E	...	N	...	S	IMYRKF	SAPC	-	VYF	PPRNAIME	H	...	TPS	D	...	L	AH	GL	195			
AAP76410	133	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	R	...	TSS	D	...	H	AR	GL	186			
AAP76426	137	...	E	...	QN	...	S	IMHRKF	SSPC	-	VYF	PPRNATME	H	...	TPS	D	...	HAAC	GL	189				
AAP76414	138	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	APS	D	...	H	AR	GL	191		
AAQ76435	129	...	E	...	QN	...	S	IMHRKF	SAPC	-	VYF	QRNATME	H	...	TPS	D	...	H	AR	GL	181			
AAQ63058	131	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	LN	AH	GL	184		
AAP76427	135	...	E	...	QN	...	S	IMHRKF	SAP	-	R	VYF	PPRNATME	H	...	TPS	D	...	H	AR	GL	187		
AAQ63084	138	...	E	...	N	...	S	IMYRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	V	L	AHQGL	190			
XP 001508375	292	T	...	Q	...	N	...	S	I	HRKF	NAPC	-	VYF	PPRNATMA	Q	...	T	DL	HP	T	CQKL	345		
AAQ63087	142	...	E	...	N	...	S	IMYRKF	SAPC	-	KVYF	PPRNATME	H	...	TPS	D	...	L	AH	GL	194			
AAQ63075	128	...	E	...	N	...	S	IMYRKF	SAPC	-	VYF	PPRNATME	H	...	TAS	D	...	LP	S	HQGL	180			
AAQ63080	140	...	E	...	N	...	S	IMYRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	L	VH	GL	192			
AAP76422	134	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	H	VR	GL	186			
AAQ63086	142	...	E	...	N	...	S	IMYRKF	-	APC	-	VYF	PPRNATME	H	...	TPS	D	...	L	AHQGL	193			
AAP76415	111	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNAIME	H	...	APS	D	...	H	AR	GL	164		
O867B5	170	...	E	...	N	...	S	FMHRKF	STPC	-	VYF	SPRNAAME	H	...	T	N	...	D	HTAR	GL	222			
ABS32179	135	T	...	Q	...	N	...	S	I	HRKF	NAPC	-	VYF	PPRNATMA	Q	...	T	DL	HP	T	PROKL	188		
AAQ63088	141	...	E	...	N	...	S	IMYRKF	SAPC	-	KVYF	PPRNATME	Y	...	APS	D	...	L	AH	GL	193			
AAP76420	134	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	HSLL	GL	186				
AAQ63074	136	...	E	...	N	...	S	IMYRKF	SAPC	-	VYF	PPRNATME	H	...	TAS	D	...	LP	S	HQGL	188			
AAK19233	130	...	E	...	N	...	S	FMHRKF	SAPC	-	VYF	CPKSVTME	H	...	TPS	D	...	HAAR	GL	222				
ABI74735	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74702	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	HAAR	GL	203		
ABI74737	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74738	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
AAP76413	134	...	E	...	N	...	S	IMHRKF	RAPC	-	VYF	PPRNATME	H	...	APS	D	...	HAAR	GL	186				
AAQ63081	141	...	E	...	S	...	S	IMYRKF	SAPC	-	VYF	PPRNVTTE	H	...	TPS	D	...	L	AH	GL	193			
ABI74720	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
AAQ63076	134	...	E	...	S	...	G	MYRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	LP	AH	GL	186			
AAQ63067	133	...	E	...	N	...	S	IMHRKF	SAH	...	-	VYF	PPRNVT	E	H	...	TPS	D	...	F	AH	GL	185	
AAP76429	138	...	E	...	QN	...	S	IMHRKF	SAP	-	-	VYF	PPRNATME	R	...	TPS	D	...	HAAR	GL	191			
AAP76416	138	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	APS	D	...	H	AR	GL	49			
AAP76398	126	T	...	E	...	N	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	H	...	TPS	D	...	LN	AH	GL	179		
AAV88340	136	...	E	...	N	...	S	IMHRKF	SAH	...	-	VYF	PPRNVT	E	H	...	TPS	D	...	F	AH	GL	188	
AAQ63068	134	...	E	...	N	...	S	IMHRKF	SAH	...	-	VYF	PPRNVT	E	H	...	TPS	D	...	F	AH	GL	186	
ABI74722	149	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
AAP76424	134	...	E	...	QN	...	S	IMHRKF	SAPC	-	VYF	PPRNATME	X	...	TPS	N	...	H	AHQGL	186				
ABI74732	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74707	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74734	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74705	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74733	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74723	149	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	201		
ABI74719	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
AAV88326	136	...	E	...	N	...	S	IMHRKF	SAH	...	-	VYF	PPRNVT	E	H	...	TPS	D	...	F	AH	GL	188	
ABI74724	149	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	201		
ABI74710	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74725	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	APS	D	...	QAAR	GL	203		
ABI74726	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	APS	D	...	QAAR	GL	203		
AAQ63077	137	...	E	...	N	...	S	IMYRKF	SAPC	-	AYF	PPRNATME	H	...	TPS	N	...	LP	AH	GL	189			
ABI74731	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74713	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74712	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	TPS	D	...	QAAR	GL	203		
ABI74716	151	...	Q	...	N	...	S	IMYGRF	N	SP	-	Y	VYF	PPRNATIE	H	...	APS	D	...	QAAR	GL	203		
AAP76438	133	T	...	E	...	QN	...	S	IMHRKF	SAP	-	H	GYF	PRKET	E	H	...	TPS	D	...	H	AR	GL	186
ABI74715	151	...	Q	...																				

ABI74717	151	...	Q...	N.	NIMYGRF	NSP-Y	VYFPRNATXE	H.	TPS.D.	RAAR	GL.	203	
ABI74736	151	...	Q...	N.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	TPS.DV.	QAARGGL.		203	
XP 001365035	293	...	Q...	N.	NIMYGRF	NSP-H	VYFPRNATIE	H.	TPS.D.	QAARWGL.		245	
AA851657	174	...	Q...	N.	NIMYGRF	NSP-H	VYFPRNATIE	H.	TPS.D.	QAARWGL.		326	
AA588339	132	...	E...	N.	SIMHRKF	SAH.	VYFPRSVT	E.	TPS.D.	F.AH	GL.	184	
AA588328	136	...	E...	YN.	SIMHRKF	SAH.	VYFPRNVT	E.	TPS.D.	F.AH	GL.	188	
ABI74700	151	...	K...	N.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	MPS.D.	QAARQGL.		203	
AA41962	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
ABB48313	139	...	E...	N.	RILYRKF	SAPC-VH	VYFPRNATME	H.	TPS.D.	H.AROGL.		191	
ABI74729	151	...	Q...	N.	NIMYGRF	NSP-H	VYFPRNATIE	H.	MPS.D.	QAAR	GL.	203	
AA76403	133	...	E...	N.	IIMYRKF	SAPC-VH	VYFPRNATME	H.	TAS.D.	LPNHQGL.		185	
AA588332	133	...	E...	N.	SIMHRKF	SAH.	VYFPRNVT	E.	Q.	TPS.D.	FAAH	GL.	185
AA588329	136	V...	E...	N.	SIMHRKF	SAH.	VYFPRNVT	E.	H.	TPS.D.	F.AR	GL.	188
ABB48312	139	...	E...	N.	RILYRKF	SAP-R	VYFPRNAIME	H.	TPS.D.	H.AROGL.		191	
AA063082	141	...	E...	N.	IIMYRKF	SAPC-VH	VYFPRNATME	H.	TPS.D.	L.AHPGL.		193	
AA588342	136	...	E...	N.	SIMHRKF	SAH.RI	VYFPRKVT	E.	H.	TPS.D.	F.AH	GL.	188
ABX71992	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
AA76436	137	...	E...	QN.	SIMHRKF	GTP-R	GYFQRNVTME	H.	TPS.D.	H.AR	GL.	189	
ABI74701	151	...	Q...	N.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	MPS.D.	QAARQGL.		203	
ABI74740	151	...	Q...	N.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	TPS.D.	QAARGL.		203	
P15919	169	...	E...	D.	SIMHRKF	SSH.	VYFPRKVT	E.	H.	TPS.D.	F.AH	GL.	221
AA588327	136	...	E...	YN.	SIMHRKF	SVH.	VYFPRNVT	E.	H.	TPS.D.	F.AH	GL.	188
AA76432	125	...	Q...	QN.	GIMHRKF	SAP-R	VYFPRNATME	H.	TPS.D.	H.AR	GL.	177	
NP 033045	169	...	E...	D.	SIMHRKF	SSH.	VYFPRKVT	E.	H.	TPS.D.	F.AH	GL.	221
AA76404	139	...	E...	N.	IIMYRKF	SAP-R	VYFPRNATIE	H.	TPS.D.	L.AH	GL.	191	
ABI74730	151	...	Q...	N.	NIMYGRF	NSL-Y	VYFPRNATIE	H.	TPS.D.	QAAR	GL.	203	
AA41960	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41958	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
ABI74709	151	...	Q...	N.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	TPS.D.	QAARWGL.		203	
ABI74727	151	...	Q...	N.	MYGRF	NSP-Y	VYFPRNATIE	H.	APS.DV.	QAAR	GL.	203	
AA063078	132	...	E...	N.	SIMYRKF	SAPC-VH	VYFPRKATIE	H.	TPS.D.	LPHTHGL.		184	
AA063061	138	...	E...	N.	SIMHRKF	SAH.	VYFPRNVT	E.	H.	TPS.DV.	F.AHPGL.		190
AA12378	12	...	E...	N.	SIMHRKF	SAPC-VH	VYFPRNATME	H.	TPS.D.	H.AROGL.		64	
AA12390	12	...	E...	N.	SIMHRKF	SAPC-VH	VYFPRNATME	H.	TPS.D.	H.AHQGL.		64	
ABS32177	66	...	Q...	N.	S.MYARF	NAPC-VH	VYFPRNASIE	H.	TPS.D.	QAAR	GL.	118	
ABX72002	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
ABX71993	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
ABX71997	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
AA41959	128	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	180	
AA41963	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
ABB48310	139	...	E...	K.	SIMYRKF	SAP-R	VYFPRNATME	H.	TPS.D.	H.AHQGR.		191	
AA76437	136	...	E...	QN.	SIMHRKF	SAP-H	GYFQRKET	E.	H.	PS.D.	HAAR	GL.	188
ABI74706	151	...	Q...	YN.	NIMYGRF	NSP-Y	VYFPRNATIE	H.	TPS.D.	QAAR	GL.	203	
ABX72018	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
AA41961	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	LXAH	GL.	192	
AA41991	142	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	194	
AA42034	138	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	190	
AA42017	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA063073	133	...	E...	N.	LIMH.KF	SAHC-VH	VYFPRVVT	E.	H.	TPS.DV.	L.AH	GL.	185
AA42024	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41956	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	Y.	TPS.D.	L.AHQGL.		192	
AA42029	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41976	146	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	198	
AA41975	146	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	198	
AA42031	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	
AA42032	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	
AA41973	137	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	189	
AA42016	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA42019	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA42025	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41990	142	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	194	
AA42005	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	
AA42006	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41994	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA097258	89	...	Q...	N.	RIMHRRF	SAPC-VH	VYFPRNTTME	H.	PS.D.	HSTR	GL.	141	
ABX72017	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
AA41966	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41970	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA42014	133	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	185	
AA41977	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41981	141	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	193	
ABS32180	137	...	E...	N.	SIMHRKF	HAP-	IYFPRNATIE	HA	TPS.D.	HAAR		186	
AA41969	137	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	189	
AA41984	141	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	193	
AA41993	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	
AA41995	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41954	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	Y.	TPS.D.	L.AHQGL.		192	
AA42011	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
AA41985	134	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	186	
AA42033	140	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	192	
XP 230375	169	...	E...	N.	SIMHRKFGSAH.	VH	VYFPRNVT	E.	H.	TPS.D.	F.AH	GL.	221
AA41967	107	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	159	
AA42000	133	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	185	
AA41992	127	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	179	
AA42018	133	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	185	
AA41986	134	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	186	
AA41998	133	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	185	
AA057543	6	V...	E...	N.	RIMH.KF	GAPC-VH	VYFPRNATIE	H.	APS.D.	Y.AR	GL.	58	
ABX72013	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
ABX72009	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
ABX72005	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
AA588338	132	...	E...	N.	SIMHRKF	SAHG-VH	VYFPRNVT	E.	H.	TPS.D.	FAAH	GL.	184
ABX72010	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
ABX72004	137	...	E...	QN.	SIMHRKF	SAP-	IYFPRNATME	R.	TPS.D.	HAAR	GL.	190	
ABX71996	137	...	E...	QN.	SIMHRKF	SXP-	IYFPRNATIE	R.	TPS.D.	HAAR	GL.	190	
AA41987	133	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	185	
AA588317	135	...	E...	N.	IIMYRKF	SAHC-VH	VYFPRITT	E.	H.	TPS.D.	L.AROGL.		187
AA41957	127	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPA.D.	L.AH	GL.	179	
AA591502	89	...	E...	N.	RIMHRRF	SAPC-VH	VYFPRNTTME	H.	PS.D.	HSTR	GL.	141	
AA097257	89	...	E...	N.	RIMHRRF	SAPC-VH	VYFPRNTTME	H.	PS.D.	HSTR	GL.	141	
AA41989	54	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	106	
AA41997	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	
AA41968	139	...	E...	N.	SIMYRKF	SAPC-KV	VYFPRNATME	H.	TPS.D.	L.AH	GL.	191	

AAQ97249	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ97246	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ97247	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AA419555	113	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	H.TPS.D..L.AH.GL	165
AAQ97248	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
ABI74703	151	...	Q...N	NIMYGRF	HSP-Y.VYFPRNTATLE	H.TPS.D..QAAL.GL	203
AAQ97254	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ63064	138	...	E...N	SIMYRKF	SAH...VYFPRNVT.E	H.TPS.N..F.AHPGL	190
AA42036	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
AA88330	128	...	E...N	SIMYRKF	SAH...VYFPRNVT.E	H.TPS.N..F.AHPGL	180
AAQ97255	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AA42037	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
AA476405	138	...	E...N	SIMYRKF	SAPC-VYFPRNTTME	...TPS.D..L.AH.GL	190
AAQ97245	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ63056	138	...	E..QN	RIMYRKF	GAPC-VYFPRNTTME	N.TPS.D..HRAH.GL	190
AA41988	141	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	193
AAT28181	88	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	140
AAQ97262	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAT28182	88	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	140
AAT28175	88	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	140
ABI74704	151	...	Q...N	NIMYGRF	HSP-Y.VYFPRNTATLE	H.TPS.D..QAARXGL	203
AA488344	136	...	E...H	SIMYRKF	SAH-ROVCFPRNVT.E	H.TPS.D..F.AH.GL	188
AAQ63062	132	...	E...NX	SIMHRKF	SAH...VYFPRNVT.E	H.TPS.D..F.AX.GL	184
AA488324	134	...	E...N	SIMHRKF	SAH...VYCPNVT.E	H.TPS.N..F.AH.EL	186
AA41972	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
ABI74739	151	V..	Q...N	NIMYGRF	HSPC-VYFPRNTTME	H.TPS.D..QAAL.GL	203
AAT28179	88	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	140
AA488341	136	...	E...N	SIMHRKF	SAH...X.VYFSRNVT.E	H.TPS.D..F.AHPGL	188
ABS32175	139	...	Q..YN	N.MYGRF	NNPC-VYFPRNTAITE	H.TPS.D..QAAR.GL	191
AAP12381	12	...	E...N	RILYRKF	SAP-R.VYFPRNTTME	H.TPS.D..H.AROGL	174
AA42010	126	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	168
AAP12385	12	...	E...N	SIMYRKF	RAPC-VYFPRNTTME	H.TPS.D..YAAH.XL	64
AAQ97261	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTRQGL	141
AA488323	131	...	E...N	SIMHRKF	SAH...VYCPNVT.E	H.TPS.D..F.AH.EL	183
AAQ97251	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AA488318	136	...	E...N	V.MYRKF	SAHC-VYFPRNTTME	H.TPS.D..L.AROGL	188
AAP76397	131	T..	E...N	RIMYRKF	SA-R.VYFPRNTTME	H.TPS.D..LSAHOGL	184
AAQ97264	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ97265	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	R...PS.D..YSTRQGL	141
AAQ63066	133	V..	E...N	SIMHRKF	SAH...VYFPRNVT.E	H.TPS.N..F.AH.GL	185
ABX72021	137	...	E..QN	SIMHRKF	SAP...VYFPRNTTME	R.TPS.D..HAAR.GL	190
AAQ97263	89	...	E...N	GIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAP76434	113	...	E..QN	SIMHRKF	SGP-RDIIHFQRNVTME	H.TAS.D..H.AH.GL	165
AAQ97256	89	V..	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..HSTR.GL	141
AAQ63069	64	...	E...N	I.MYRKF	SAHC-VYFPRNTTME	H.TPS.D..L.AROGL	116
ABX72028	137	...	E..QN	SIMHRKF	SAP...VYFPRNTTME	R.TPS.D..HAAR.GL	190
AA41971	140	...	E...N	XIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
AA42001	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
AA41999	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	192
AA476430	138	...	E..QN	SIMHRKF	SAP...VYFPRNTTME	R.TPS.D..HAAR.GL	191
AA41983	116	...	E...N	SIMYRKF	XAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	168
AA42008	71	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	123
AA488345	136	...	E...N	SIMHRKF	SAH..F.VYFPRNVT.E	R.TPS.D..L.AH.GP	188
AAQ97259	89	...	X...N	RTMHRRF	SAPC-VYFPRNTTME	H...SS.D..HSTR.GL	141
AA41965	140	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...XTPS.D..L.AH.GL	192
AAQ63065	118	V..	E...N	SIMHRKF	SAH...VYFPRNVT.E	H.TPS.N..F.AHWGL	170
AAP76399	128	...	E...N	LMHRKF	SAHC-VYFPRNVT.E	H.TPS.DV.L.AH.GL	180
AAP76401	137	...	E...D	SIMHRKF	SSH...VYFPRKVT.E	H.TPS.D..F.AH.GL	189
AAP12372	7	...	E...N	SFMHRKF	SAPC-VYSPRNATME	H.TPS.D..AARQGL	59
AA42035	139	...	E...N	SIMYRKF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	191
AAP76439	1	...	E..QN	SIMHRKF	SAP-H.VYFORKET.E	H.TPS.D..H.AH.GL	51
AAP76402	133	...	E...N	AIMYRKF	SAPC-VYFPRNTTME	H.TAS.D..LPNHQ.L	185
AA42030	132	...	E...N	SIMXRF	SAPC-KVYFPRNTTME	...TPS.D..L.AH.GL	184
AAP12377	12	...	E...N	SFMHRKF	SAPC-VYSPRSETME	H.TPS.D..HAAR.GL	64
AA41979	141	...	E...N	SIMYRKF	SAPC-KVYFPRNATME	...TPS.D..L.AH.GL	193
AA41978	141	...	E...N	SIMYRKF	SAPC-KVYFPRNATME	...TPS.D..L.AH.GL	193
AAQ63071	88	...	E...S	IIMY.KF	SAHC-VYFPRNAT.E	H.XTS.D..L.AROGL	140
AA488336	131	...	E..RN	SIMHRKF	SAH...VYFPRNVT.E	H.TPS.D..F.AH.GL	183
ABI74711	151	...	Q...I	IIMYGRF	NSP-Y.VYFPRNTATIE	H.TQS.D..QAAR.GL	203
AAP12379	12	...	E...N	NIMHRKF	SAPC-VYFPRNTTME	H.TPS.D..H---KGL	61
AAP76400	135	...	E...N	SIMHRKF	SAH..F.VYFPRNTATXE	H.TPS.D..LNAH.GL	187
AAP12374	9	...	E...N	SFMHRKF	SAPC-VYSPRNATME	SS.TPS.D..H.AH.GL	61
AAQ63060	136	...	E...N	SIMHRKFGSAH	...VYCPNVT.E	X.TP..D..F.AH.GL	188
AA488322	132	...	E...N	SIMHRKF	SAH...VYCPNVT.E	H.TPS.D..F.AH.GL	184
ABS32176	131	...	Q...S	NIMYGRF	NAPC-IHFPRKAAIE	R.TPD.DS.QAAR.GL	183
AAP76428	84	...	E..QN	SIMHRKF	GAP-R.VYFPRNATME	R.TPS.D..HAAR.GL	137
AA41964	140	...	E...N	SIMYRKF	SDPC-KVYFPRNATME	...TXS.D..L.AHXGL	192
AA488320	136	...	IE..N	SIMHRKFGSAH	...VYCPNVT.E	H.TPS.D..F.AH.GL	188
AA488331	133	V..	E...N	SIMYRKF	SAH...VYFPRNVT.E	H.TPS.N..F.AHPVL	185
ABI74728	151	...	Q...N	NIMYGRF	NSP-Y.VYFPRNATIE	H.TPS.D..QAA	198
AAQ97260	89	...	E...N	RIMHRRF	SAPC-VYFPRNTTME	H...PS.D..H5	135
AA488325	136	...	E...N	SIMHRKF	SAH...VYCPRNMT.E	H.TPS.D..FAVH.GL	188
AA488321	133	...	E...N	GIMHRKF	SAH...VYCPRNVTXE	H.TPS.D..F.AHQGL	185
AA488333	135	...	E...N	SIMHRKF	GAH...VYFPRNVT.E	Q.TXS.D..FAAH.GL	187
XP 540538	170	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	222	
ABB48287	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
AAP12384	12	...	E...S	SIMHRKL	RAP-H.VYFPR.AATE	H.TPS.N..H.TP.GL	64
AA488337	131	...	E..G	SIMHRKF	SAHG-VYLPRTVTAE	H.TPS.D..FAAH.GL	183
AAP12373	12	...	E...N	IFMHRRF	SAPC-VYSPRNATME	SS.TTP.D..HIAH.GL	64
2111205A	99	...	E...N	SIMHRKFGSAH	...VYCPNVT.E	H.TPS.D..F.AH.GL	151
ABB48285	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48281	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48283	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48297	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48291	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48299	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48286	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48289	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48304	139	V...D..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48295	139	V...N..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	
ABB48309	139	V...D..K	K.MYRRF	SAPRG-VCFPRKAAPE	...TPS.DL.RAARQGL	191	
AAP12376	1	...	..N	SFMHRKF	STPC-VYSPRNATME	H.T.N.D..HIAH.GL	48
ABB48292	139	V...D..K	K.MYRRF	SAPRG-VCFPRKAAPE	...APS.DL.RAARQGL	191	

AAQ57533	1	...	I.	RIMHRKF	SAP-H	VYFPRNAT	E	H	TPS	D	H	AH	L	48
ABB48293	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
ABB48308	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
ABB48296	139	V...	N...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
ABB48301	139	V...	D...K.	K	MYRRF	STPRG-V	CFPRKAAPE	...	TPS	DL	RAARQGL			191
ABB48305	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
ABB48280	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
ABB48303	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	RAARQGL			191
AAQ57531	1	N.	S.	MHRKF	SAPC-	AYFPRNATME	H	TPS	D	H	PR	GL		45
ABB48306	139	V...	D...K.	K	MYRRF	SAPRG-V	CFPRKAAPE	...	APS	DL	CAARQGL			191
ABB48307	139	V...	D...K.	K	MYRRY	SAPRG-V	CFPRKAAPE	...	TPS	DL	RAARQGL			191
ABW06513	1	N.	S.	FMRHKKF	STPC-	IYSPRNATME	H	TPN	D	Y	AH	GL		46
ABW06512	1	N.	S.	MHRKF	STPC-	IYSPRNATME	H	T	N	D	H	AR	GL	46
ABW06502	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	H	TPS	D	Y	AH	GL		46
AAQ57532	2	N.	S.	MHRKF	SAPC-	IYSPRNATME	H	TPS	D	H	TR	GL		45
AAQ57535	1	...	N.	S.	ILHRKFRS	PC-	IYSPRNATME	H	TPS	D	HSARQGL			48
AAF12386	1	N.	S.	MHRKF	SAP-	IYSPRNATME	H	TPS	D	HAARQGL				44
AAQ57536	1	...	N.	S.	IMHRKFRS	PC-	IYSPRNATME	H	TPS	DX	HAR	L		48
AAF12388	1	N.	S.	MHRKF	CAP-	IYSPRNATME	H	TPS	D	HAVR	GL			44
AAQ57534	1	N.	S.	MHRKF	SAPC-	IYSPRNATME	H	TSS	D	HASS	GL			44
AAF12383	2	N.	S.	MHRKF	SAPC-	IYSPRNATME	H	TPS	D	HAAR	GL			45
AAQ57548	1	N.	S.	MHRKF	SAP-	IYSPRNATME	H	TPS	D	H	AHXGL			44
ABW06501	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	H	TPS	D	AAH	GL			45
ABW06503	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	H	TSS	D	AAH	GL			44
AAQ57541	1	N.	S.	IMHRKF	GAP-R	IYSPRNATME	R	TPS	D	QMAH	GL			45
ABW06514	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	H	TPS	D	HAAR	GL			45
AAQ57537	1	N.	S.	MHRKFRS	PC-	IYSPRNATME	H	TPS	D	HNAR	GL			44
ABW06505	1	N.	S.	LMHRKF	SAPC-	IYSPRNATME	H	TPS	D	AAH	GL			44
ABW06506	1	S.	S.	FMRHKKF	STPC-	IYSPRNATME	H	TPS	D	H	AH	GL		46
AAQ57538	1	N.	S.	IMHRKF	SAPC-	IYSPRNATME	H	TPS	D	H	AH	GL		44
AAF12387	1	N.	S.	IMHRKF	CAP-	IYSPRNATME	H	IPS	D	QAVR	GL			44
AAQ57545	1	N.	S.	IMHRKF	HVPC-	IYSPRNATME	H	TPS	D	HAAR	GL			45
AAQ57542	1	N.	S.	IMHRKF	GAP-R	IYSPRNATME	H	TPS	D	QVARQGL				44
AAF12382	1	N.	S.	IMHRKF	SAPC-	IYSPRNATME	H	TPS	D	RAARQGL				44
AAF12389	1	N.	S.	IMHRKF	HAP-	IYSPRNATME	HA	TPS	D	HAAR	GL			43
ABW06508	1	N.	S.	FMRHRRF	SAPC-	IYSPRNATME	SS	TPP	D	H	ARQGL			46
AAQ57549	1	N.	S.	IMHRKF	GTCP-	IYSPRNATME	H	TPS	D	H	VH	GL		41
AAF12371	2	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	H	TPS	D	AAH	GL			45
ABW06511	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	SS	TPS	D	H	ARQGL			46
ABW06504	1	N.	S.	FMRHRRF	SALC-	IYSPRNATME	H	TPP	D	AAH	GL			44
ABW06507	1	N.	S.	FMRHRRF	SAPC-	IYSPRNATME	SS	TPP	D	H	ARQGL			46
AAQ57530	1	N.	S.	IMHRKL	SAP-H	IYSPRNATME	H	TPS	NV	X	TL	GL		44
AAQ57544	2	N.	S.	MHRKF	SAP-R	IYSPRNATME	Q	AAAS	D	Y	AH	RL		45
ABW06509	1	N.	S.	FMRHRRF	SAPC-	IYSPRNATME	SS	TPP	D	H	AR	GL		45
AAQ57547	2	N.	S.	IMY	KVGRAPC-	IYSPRNATME	H	TPS	DV	QAAR	GL			45
AAQ57540	1	N.	S.	GIMHRKLG	SAPGG-AYFPRHAT	E	S	TPS	D	HPAH	GL			44
ABW06510	1	N.	S.	FMRHKKF	SAPC-	IYSPRNATME	SS	TPS	GV	H	ARQGL			43
AAQ57546	1	N.	S.	RLMYRKL	HGPC-DVTF	SRHATME	H	TPA	D	QAARL	GL			45
AAQ57539	1	N.	S.	RRF	SAP-	IYSPRNATME	H	TAS	D	QSAARQGL				38
AAF12375	1	N.	S.	PC-	IYSPRNATME	H	TPS	D	H	AR	GL			32

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluded environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped
Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

REPTILES 1 Alignments

Query	1	VIHPTHFCHTC	WTVIRK	WISDP	NSOEM	GVLADR	VVGV	WLP	PHSLF	CKICD	TGNRAV	K	55
AAW21733	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.K...	.PN	.TV	.Y	.ARSG..	178
AAW21734	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.SN	.TV	.Y	.AR.G..	178
AAW21737	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.Y	.AR.G..	178
AAW21735	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PD	.TV	.Y	.AR.G..	178
AAW21739	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.AR.G..	178
AAW21745	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.QS...	.S	.TV	.Y	.AH.G..	178
AAW21736	125	T....R...N	.SI	.HRKF	.NTPC-	.VYF	PRNSTIME	.KS...	.PN	.TV	.Y	.AR.G..	178
AAW21742	122	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.AR.G..	175
AAW21741	122	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.AR.G..	175
AAW21743	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.AR.G..	178
AAW21746	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.QS...	.PS	.TV	.C	.AH.G..	178
AAW21744	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.QS...	.PS	.TV	.Y	.IAH.G..	178
AAW21747	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.QS...	.PS	.TV	.C	.AH.G..	178
AAW21728	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	178
AAW21729	125	T....R...N	.SI	.HRKF	.NTPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.C	.AP.G..	178
AAW21748	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.QS...	.PS	.TV...	.AQ	.GI..	178
AAV97817	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.C	.ARCG..	178
AAW21730	125	T....R...N	.SI	.HRKF	.NTPC-	.VYF	PRNSTME	.KS...	.SN	.TV	.C	.AP.G..	178
AAW21740	125	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.ARCG..	178
AAW21738	125	T....R...N	.SI	.HRKF	.NGPC-	.VYF	PRNSTMD	.KS...	.PD	.TV	.Y	.AR.G..	178
AAW21731	125	T....R...N	.SI	.HRKF	.NTPC-	.VYF	ARNNAME	.K...	.PN	.TV	.C	.AHHG..	178
AAW21732	125	T....R..YN	.SI	.QRKF	.NAPC-	.VYF	PRNSTMD	.KS...	.PN	.TV	.Y	.AR.G..	178
AAW21749	125	T....R...N	.SI	.HRKF	.TAPC-	.VYF	PRNSTME	.QS...	.PS	.TV...	.AH	.GI..	178
AAW21750	126	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNNTME	.ES...	.PN	.TV	.F	.AQ.GI..	178
ABF81767	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81772	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81773	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81766	78	T....R...N	.SI	.HRKF	.NAP-R	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81732	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81746	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81744	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81757	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81737	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81736	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81758	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81764	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81768	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.S	.APHG..	131
ABF81771	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81770	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	131
ABF81753	76	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	129
ABF81763	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.KS...	.PN	.TV	.R	.APHG..	130
ABF81762	78	T....R...N	.SI	.HRKF	.NAPC-	.VYF	PRNSTME	.K.R	.PN	.TV	.R	.APHG..	130

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluded environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda	K	H
0.328	0.139	0.522

Gapped Lambda	K	H
0.267	0.0594	0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

REPTILES 2 Alignments

Query 1 VIHPTHFCHTCWTVIRKWI~~SD~~PNSQEM~~GV~~LADRVV~~GW~~LPHSLFCKICDTGNRAVK 55
AAV90754 140 T.....N..SI.HRKF.NAPC-.VVFPRNSTMK.Q....N.EV.G.AH.G.. 193

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped

Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

TURTLES Alignments

Query	1	VIHPTHFCHTC	WTVIRKWISDPNSOEMGVLADRVVG	WLPHSLFKICKDTGNRAVK	55
AAW21733	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.K...PN.TV.Y.ARSG..	178
AAW21734	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..SN.TV.Y.AR.G..	178
AAW21737	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.Y.AR.G..	178
AAW21735	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PD.TV.Y.AR.G..	178
AAW21739	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.AR.G..	178
AAW21745	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.QS...S.TV.Y.AH.G..	178
AAW21736	125	T....R...N..	.SI.HRKF.NTPC-.VYFPRNSIME.	.KS..PN.TV.Y.AR.G..	178
AAW21742	122	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.AR.G..	175
AAW21741	122	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.AR.G..	175
AAW21743	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.AR.G..	178
AAW21746	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.QS..PS.TV.C.AH.G..	178
AAW21744	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.QS..PS.TV.YIAH.G..	178
AAW21747	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.QS..PS.TV.C.AH.G..	178
AAW21728	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	178
AAW21729	125	T....R...N..	.SI.HRKF.NTPC-.VYFPRNSTME.	.KS..SN.TV.C.AP.G..	178
AAW21748	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.QS..PS.TV...AQ.GI.	178
AAV97817	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.C.ARCG..	178
AAW21730	125	T....R...N..	.SI.HRKF.NTPC-.VYFPRNSTME.	.KS..SN.TV.C.AP.G..	178
AAW21740	125	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.ARCG..	178
AAW21738	125	T....R...N..	.SI.HRKF.NGPC-.VYFPRNSTMD.	.KS..PD.TV.Y.AR.G..	178
AAW21731	125	T....R...N..	.SI.HRKF.NTPC-.VYFARNNAME.	.K...PN.TV.C.AHHG..	178
AAW21732	125	T....R...YN.	.SI.ORKF.NAPC-.VYFPRNSTMD.	.KS..PN.TV.Y.AR.G..	178
AAW21749	125	T....R...N..	.SI.HRKF.TAPC-.VYFPRNSTME.	.QS..PS.TV...AH.GI.	178
AAW21750	126	....R...N..	.SI.HRKF.NAPC-.VYFPRNNTME.	.ES..PN.TV.F.AQ.GI.	178
ABF81767	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81772	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81773	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81766	78	T....R...N..	.SI.HRKF.NAP-R.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81732	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81746	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81744	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81757	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81737	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81736	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81758	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81764	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81768	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.S.APHG..	131
ABF81771	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81770	78	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	131
ABF81753	76	T....R...N..	.SI.HRKF.NAPC-.VYFPRNSTME.	.KS..PN.TV.R.APHG..	129

ABF81763	78	T....R...N..	SI.HRKF.NAPC-.VYFPRNSTME	.KS..PN.TV.R.APHG.	130
ABF81762	78	T....R...N..	SI.HRKF.NAPC-.VYFPRNSTME	.K.R.PN.TV.R.APHG.	130

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF exclu
environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda	K	H	
0.328	0.139	0.522	

Gapped

Lambda	K	H	
0.267	0.0594	0.140	

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

CROCODILIANS Alignments

Query	1	VIHPTHFCHTCWTVIRKWISDPNSQEMGVLADR VVE WLPHSLFCKICDTGNRAVK	55
AAD34951	140	T...R...N...SI.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.H.SC.GI.	193
AAD34950	140	T...R...N...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SC.GI.	193
ABY59708	1	...R...N...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59709	1	...R...N...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59705	1	...R...N...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59710	1	...R.QN...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59714	1	...R.QN...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59711	1	...R.QN...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59713	1	...R.QN...SI.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	52
ABY59712	1	...R.QN...SI.QRKF.SSP-Y.VYFPRNSA.E.Q...PN.DV.H.SCQGI.	52
AAP20631	1	.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.H.SC.GI.	40
AAP20626	1	.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SC.GI.	40
AAP20623	1	.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	40
AAP20625	1	.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	40
AAP20624	1	.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	40
AAP20621	1	.QRKF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	40
AAP20629	1	.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	40
AAP20627	1	.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	40
AAP20630	1	.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	40
AAP20628	1	.QRKF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	40
AAN15778	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.H.SC.GI.	37
AAN15777	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.H.SC.GI.	37
AAN15769	1	KF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SC.GI.	37
AAN15768	1	KF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SC.GI.	37
AAN15766	1	KF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	37
AAN15776	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	37
AAN15767	1	KF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	37
AAN15770	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	37
AAN15773	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	37
AAN15763	1	KF.SSP-Y.VYFPRNSAME.Q...PN.DV.H.SCQGI.	37
AAN15771	1	KF.SSP-Y.VYFPRNSTME.Q...PN.DV.L.SC.GI.	37

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped
Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

AMPHIBIANS Alignments

Query	1	VIHPHFCHTCTWTVIRKWISDPNSQEMGVLADRVLGWLPHSLFCKICDTGNRAVK	55
ABS32184	147	T.....N..SI.HQKF.NAPC-.VYFPRNDT.E.Q...VT.SV.TSVR.G..	200
ABS32186	136	T....R...N..SI.NQKFNNAPC-.VYFPRNDA.E.Q...VT.SV.TSFQ.GI.	189
ABS32185	131	T....R...N..SI.NQKFNNAPC-.VYFPRNDA.E.Q...VT.SV.TSVR.GI.	184
ABS32183	131	T.....N..SI.NQKF.NAPC-.VYFPRNGA.E.Q...V.SV.TSVR.GI.	184
CAC20851	204	TV...S...N..AI.KORF.STPC-.VYFPRNGA.E.Q...AN.GV.RSAKHSL.	257
ABS32182	140	....R...N..SIVHQKF.NSF-.VYFPRNKA.E.K..CST.DV.SSS	187
Q91829	169	T....Q...N..IMNQKF.NI-.S.VYFPHNQA.E.T...AN.YV.HSS	217
ABS00342	83	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...SA.NV.HSS	131
ABS00336	144	T....R...N..IMN.KF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	192
ABS32181	138	TV...S...N..SI.KORF.NTPC-.VYFPRKGT.E.KS..AD.G..HXVK.G..	191
ABS00332	139	T....R...N..LMNQKF.NNP-.VYFPHNQTA.E.K...AE.DV.RST	187
ABS00349	163	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00352	163	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00354	83	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
ABS00353	163	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00345	83	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
ABS00359	122	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	170
ABS00358	122	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	170
ABS00355	83	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
ABS00347	163	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00356	163	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00357	163	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00348	163	T....R...N..IMNQKF.HNA-.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00335	65	T....R...N..LMNQKF.H-.S.VYFPHNQA.E.T...SA.NV.HSS	113
ABS00344	83	T....R...N..IVNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
BAF99790	115	T....R...N..IMHQKF.NT-.S.VYFPRNT.E.KS..SM.DV.NNSR	164
ABS00346	83	T....Q...N..IMNQKF.HI-.S.VYFPHNQA.E.T...AA.YV.HSS	131
ABS00350	163	T....R...N..IMNQKF.RNA-.VYFPHNQA.E.T...AA.NV.HSS	211
ABS00343	83	T....R...N..LMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
ABS00341	83	T....R...N..LMNQKF.H-.S.VYFPHNQA.E.T...AA.NV.HSS	131
BAF99787	106	T....R...N..IMHQKF.NT-.S.VYFPRNK.E.KS..ST.DV.NNS	154
BAF99781	132	T....R...N..IMHQKF.NT-.N.VYFPRNK.E.KS..ST.DV.SNS	180
ABS00351	163	T....R...N..IMNQKF.H-.S.VYFPHNQA.E.T...LAA.NV.HSS	211
BAF99783	99	T....R...N..IMHQKF.NT-.S.VYFPRNK.E.KS..ST.DV.NNS	147
BAF99785	127	T....R...N..IMHQKF.NT-.N.VYFPRNK.E.KS..ST.DV.XNS	175
BAF99779	116	T....R...N..IMHQKF.NT-.N.VYFPRNK.E.KS..ST.DV.SNS	164
BAF99789	127	T....R...N..IMHQKF.NT-.N.VYFPRNK.E.KS..ST.DV.SNS	175
BAF99791	127	T....R...N..IMHQKF.NT-.S.VYFPRNK.E.K...ST.ET.NNS	175
BAF99782	114	T....R...N..IMHQKF.NT-.S.VYFPRNK.E.KS..XT.DV.NNS	162
BAF99788	134	T....X...N..IMHQKF.NT-.N.VYFPRNK.E.KS..ST.DV.SNS	182

ABS00339	65	T....R...N..	..LMNQRF.H-.S.VYFPHNOA.E	T...AA.NV.HSS	113
ABS00340	83	T....G...N..	..IMNQKF.H-.S.VYFPHNOA.E	T...AA.NV.XSS	131
BAF99786	68	T....R...N..	..IMHQKF.NS-.S.VYFPRNKA.E	KS..ST.D..NNS	116
ABS00337	65	T....Q...N..	..I.NQKF.HNA-.VYFPHNOA.E	TH..DA.NV.HSS	113
BAF99780	68	T....R...N..	..IMHQKF.NT-.N.VYFPRNK..E	KS..ST.DV.SNS	116
BAF99784	114	T....R...N..	..IMHQKF.NT-.S.VYFPRNK..E	KS.XXT.DV.NNS	162
ABS00331	134	T..S....N..	..SIVNQKF.H-.S.VYFPHNKT.E	M...DA.NV.RST	182
ABS00338	147	....R...N..	..IMNQKFRHI-.S.VYFPHNKA.E	TL..AS.YA.HSS	194
BAF99792	130	T....R...N..	..IMHQKFRNT-.S.VYFPHNK..E	XS.LTP.EV.NNS	178
ABR18629	1		HRKFNNSP-.VYFPRNNA.E	K..CAT.DV.NSS	34
ABR18628	1		HRKFNNS-.S.VYFPRNNA.E	K..CST.DV.NSSKRG.	39
ABR18623	1		HRKFNNS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18614	1		HRKFNNS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18631	1		HRKFNNS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18613	1		HQKF.NT-.S.VYFPRNNA.E	K..CVS.DV.NSS	34
ABR18619	1		HRKFNNS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18617	1		HQKF.NS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18663	1		HQKF.NS-.S.VYFPRNNA.E	K..CST.DV.NSS.	35
ABR18626	1		HQKF.NS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18643	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18648	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS.	35
ABR18637	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18630	1		HQKF.NNS-.S.VYFPRNNA.E	R...ST.DV.SSS	34
ABR18652	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18611	1		HQKF.NNS-.S.VYFPRNNA.E	K..CST.D..NNS	34
ABR18610	1		HQKF.NNS-.S.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18638	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18659	1		HQKF.NSF-.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18658	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18621	1		HRKFNNS-.S.VYFPRNNA.E	K...YT.DV.NSS	34
ABR18625	1		HQKF.NNS-.S.VYFPRNNA.E	K..CST.DV.SSS	34
ABR18627	1		HQKF.NNS-.S.VYFPRNNA.E	K..CSK.DV.NSS	34
ABR18608	1		HQKF.NSF-.VYFPRNNA.E	K..CSP.DV.NAS	34
ABR18641	1		HQKF.NNS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18649	1		HQKF.NSF-.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18655	1		HQKF.NNS-.S.VYFPRNNA.E	K..CSK.DV.SSS	34
ABR18667	1		HQKF.HSF-.VYFPRNNA.E	K..CST.DV.NSS	34
ABR18616	1		HQKF.NNS-.S.VYFPRNNAKE	K..CST.D..NNS	34
ABR18615	1		HRKFNNS-.N.VYFPRNNA.D	KA.CST.DV.NSS	34
ABR18635	1		HQKF.NNS-.S.VYFPRNNA.E	KS.CSE.DV.NSS	34
ABR18664	1		F.NS-.S.VYFPRNNA.E	K..CST.DV.NSS	31
ABR18653	1		HQKF.NS-.S.VYFPRNNA.E	K..CSK.NV.	31
ABR18651	1		HHKF.NS-.S.VYFPRNNA.E	KA.CSK.DV.SSS	34
ABR18660	1		HQKF.NNS-.S.VYFPRNNA.A	KR.CSA.DV.NSS	34
ABR18609	1		.S.VYFPRNNA.E	K..CST.DV.NSS	27
ABR18622	2		.S.VYFPRNNA.E	K..CST.DV.NSS	28
ABR18647	1		NNS.S.VYFPRNNA.E	K..CSK.DV.SSS	30
ABR18612	3		.S.VYFPRNNA.E	K..CST.DV.NSS	29
ABR18646	1		.S.VYFPRNNA.E	K..CSK.DV.SSS.	28
ABR18650	2		.S.VYFPRNNA.E	K..CSK.DV.SSS	28
ABR18656	2		.S.VYFPRNNA.E	K..CSK.DV.SSS	28
ABR18618	1		.VYFPRNNA.E	T..CST.DV.NSS	25
ABR18639	2		.S.VYFPRNNA.D	K..CSK.DV.SSS	28
ABR18624	1		S.VYFPRNNA.E	K..CAT.DF.NSS	26
ABR18645	1		.VYFPRNNA.E	KA.CSK.DV.SSS	25
ABR18665	1		S.VYFPRNNA.E	KL.CST.DV.NLS	26

ABR18666	1	FPRNNA.E.K..CST.DV.NSS	22
ABR18634	1	YFPRNDA.E.KR.CPT.DV.NSS	23
ABR18636	1	FPRNNA.A.K..CSA.DV.NSS	22
ABR18657	1	NNA.E.K..CSK.DV.SSS	19
ABR18620	1	NNA.E.K..CVP.DV.NSS	19

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped

Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

LIZARDS Alignments

Query	1	VIHPTHFCHTCWTVIRK	WISDPNSOEMGVLADR	VVGWLP	PHSLFCKICDTGNRAVK	55
AAV90760	140	T....N...N..N..	ORKF.NSP.-.	VYFPRKGTME.H...	SS.DV.G.SF.G..	193
AAV90759	140	T....N...N..N..	ORKF.NSP.-.	VYFPRKGTME.H...	SS.DV.G.SFHGI..	193
AAV90802	136	T....N...N..S..	ORKF.NAPC.-.	VYFPRKGTME.H...	MS.D..G.SSHG..	189
AAV90787	142	T....N...N..N..	VORKF.NSPC.-.	VYFPRNGTME.H...	SS.DV.S.SFHG..	195
AAV90765	140	T....N...N..N..	ORKF.NSP.-.	VYFPRKGTME.H...	S.DV.G.SF.G..	193
AAV90793	140	T....N...N..N..	VORKF.NSPCE.-.	YFPRNGTME.H...	SS.EV.G.SF.G..	193
AAV90781	141	T....N...N..N..	VORKF.NSPC.-.	VYFPRNGTME.H...	SS.DV.N.SF.G..	194
AAV90758	140	T....N...N..N..	ORKF.NTP.-K	VYFPRKGTME.H...	SS.DV.G.SF.GI..	193
AAV90788	141	T....N...N..N..	VORKF.NSPC.-.	VYLPRNGTME.H...	SS.DV.G.SF.G..	194
AAV90796	140	T....N...N..N..	ORKF.NAP-YD	VYFPRNGTME.H...	SS.EV.G.SFHG..	193
AAV90783	141	T....N...N..S..	VORKF.NSPC.-.	VYFPRNGTME.R...	S.DV.G.SF.G..	194
AAV90761	140	T....N...N..N..	ORKF.NSL.-.	VYFPRKGTME.H...	SS.DV.G.SF.G..	193
AAV90821	129	T....Q...N..R..	VORKF.NAP.-.	VYFPRKGTME.H...	SS.DV.G.SS.G..	182
AAV90795	140	T....N...N..N..	ORKF.NSPC.-.	VYFPRNGT.E.H..	A.N.EV.G.SF.G..	193
AAV90818	141	....N...N..N..	ORKF.NDPC.-.	VYFPRKGT.E.H..	SS.DV.G.SS.G..	193
AAV90785	141	T....N...N..N..	VORKS.HSPC.-.	VYFPRNGTME.H...	SN.DV.G.SF.G..	194
AAV90754	140	T....N...N..S..	HRKF.NAPC.-.	VYFPRNSTMK.Q...	N.EV.G.AH.G..	193
AAV90804	139	T....N...N..N..	K..ORKF.SAPC.-.	VYFPRKGTME.H...	RS.DV.G.SSHG..	192
AAV90780	141	T....N...N..N..	MVORKF.NSPC.-.	VYFPRNGMME.H...	SS.DV.S.SF.G..	194
AAV90819	141	....N...N..N..	ORKF.NDPC.-.	VYFPRKGT.E.H..	SS.DV.G.SS.G..	193
AAV90817	134	....N...N..N..	ORKF.NDPC.-.	VYFPRKGT.E.H..	SS.DV.G.SS.G..	186
AAV90782	141	T....Q...N..N..	VORKV.NSPC.-.	VYFPRNGAME.H...	SS.DV.S.SF.G..	194
AAV90822	140	T....N...N..N..	K.VORKF.NAPC.-.	VYFPRKGTME.H...	SS.DV.G.PS.G..	193
AAV90803	136	T....N...N..S..	ORKF.SVPC.-.	VYFPRKGTME.H...	TR.DV.G.SS.GI..	189
AAV90813	132	T....N...N..N..	ORKF.HVPC.-.	VYFPRKDPME.H...	SS.DV.S.SS.G..	185
AAV90805	139	T....N...N..N..	K..ORKF.SGPC.-.	VYFPRKGTME.H...	MS.DV.G.SS.GM..	192
AAV90823	134	T....N...N..N..	H..ORKF.NAPC.-.	VYFPROGTME.H...	SM.DV.G.SA.GI..	187
AAV90808	140	T....N...N..N..	ORKF.NVPC.-.	VYFPRKGP.E.H..	SC.DV.G.SS.G..	193
AAV90801	136	T....N...N..S..	ORKF.NAPC.-.	VYFPRKGTMEGH...	MN.DV.G.SSHGI..	189
AAV90797	119	T....N...N..N..	MORKF.NSPC.-.	VYFPRNDA.E.H..	G.N.EV.G.SF.GI..	172
AAV90816	140	T....N...N..N..	ORKF.NVPC-DV	VYFPRKDP.E.H..	SS.DV.G.SSHG..	193
AAV90786	140	T....N...N..N..	VORKF.NSLC.-.	VYFPRNDTME.H...	AN.DV.S.SFHG..	193
AAV90800	130	....N...N..S..	ORKF.NAPC.-.	VYFPRKGT.E.H...	MS.DV.G.SSCGI..	182
AAV90814	138	T....N...N..N..	ORKF.YVP-R.	VYFPRKDPME.H...	SS.DV.G.SS.G..	191
AAV90764	140	T....N...N..RN.	ORKF.NSP.-.	VYFPRKEAME.Q...	SS.DV.G.SF.G..	193
ABR28259	18	T....N...N..N..	VORKF.NSPCE.-.	YFPRNGTME.H...	PS.DV.G.SF.G..	71
ABU43519	130	T....N...N..S..	ORKF.NVPC.-.	VYFPRKGTME.H...	MN.DF.G.SSHGI..	183
ABU43527	130	T....N...N..N..	ORKF.NAPC.-.	VYFPRKGTME.H...	MS.DV.G.SSHGL..	183
ABR28256	18	T....N...N..N..	VORKF.NSPCE.-.	YFPRNGTME.H...	PS.EV.G.SFHG..	71
ABR28246	18	T....N...N..N..	VORKF.NSPCE.-.	YFPRNGTME.H...	PS.EV.G.SF.G..	71

ABU43532	130	T...N...N	.S..QRKF.NAPC-.VYFPRKGTME	.H...MS.D..G.SSHG..	183
AAV90766	140	T...N...N	.N..QRKF.NSS.E.-YFPRKGTKE	.H...SS.DV.G.SF.G..	193
ABR28285	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.G.SF.G..	71
AAV90807	140	T...N...N	.NFVQ.KF.NVPC-.VYFPRKGP.E	.H...SS.EV.G.LSHG..	193
AAV90794	140	T...N...N	.D..QRKF.HSPC-.VSFPRNGA.E	.H..T.N.EV.G.SFHG..	193
AAV90820	140	TV...N...N	.DF.QRKF.NAPC-.VYFSRKSTME	.H...SS.DV.G.SP.G..	193
ABR28245	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.G.SF.G..	71
AAV90806	114	T...N...N	.RK..QRKF.SVPC-.VYFPRKGTME	.H...AS.DV.G.SS.GM.	167
AAV90815	138	TM...N...N	.N..QRKF.SVPC-.YFPRKDP.E	.Q...PN.DV.G.SS.G..	191
ABR28270	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.G.SFHG..	71
ABR28255	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTIE	.H...PS.EV.G.SF.G..	71
ABU43538	130	T...N...N	.S..QRKF.NTPC-.VYFPRKGTME	.H...MS.DV.G.SSHGI.	183
ABR28275	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.G.AF.G..	71
ABR28282	18	T...N...D	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.G.SF.G..	71
ABR28247	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...PS.EV.A.SF.G..	71
ABR28264	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...XS.EV.G.SF.G..	71
ABU43516	130	T...N...N	.S..QRKF.NNAPC-.VYFPRKGTME	.H...MN.DV.G.SSHGI.	183
ABR28258	18	T...N...N	.N.VQRKF.NSPCE.-YFPRSGTME	.H...PS.EV.G.SF.G..	71
ABU43524	130	T...N...N	.S..QRKF.NAPC-.VYFPRNGTME	.H...MS.NV.G.SSHGL.	183
ABU43518	127	T...N...N	.S..QRKF.NAPC-.VYFPRKGTME	.H...MN.DV.G.SSHGI.	180
ABR28262	18	T...N...N	.N.VHRKF.NSPCE.C-FPRNGTME	.H...PS.EV.G.SF.G..	71
ABS52665	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHG..	183
AAV90784	141	T...N...N	.N.VQRKF.SSPYG-.VSFPRNSTME	.R...SS.D..GSSF.G..	194
ABS52659	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABI78912	129	T...N...N	.NF.QRKF.RNVPC-.VYFPRKGTME	.H...SS.EV.G.SS.G..	182
ABR28249	18	T...N...N	.N.VQRKF.HSPCE.-YFPRNGTME	.H...SS.EV.G.SF.G..	71
ABS52653	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHG..	183
ABS52649	130	T...N...N	.S..QRKF.NVPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52668	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52663	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52658	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABU43514	133	T...N...YN	.K..QRKF.SVPC-.VYFPRKGTME	.H...AS.DV.G.SS.GM.	186
ABU43536	113	T...N...N	.S..QRKF.NAPC-.VYFPRKGTME	.H...MR.DV.G.SSHGI.	166
ABR28248	18	T...N...N	.N.AQRKF.NSPCE.-YLPRNGTME	.H...PS.EV.G.SFHG..	71
ABS52666	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52657	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52662	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABR28266	18	T...IN...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...AS.EV.G.SF.G..	71
ABS52667	129	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	182
ABR28277	18	TT...N...N	.N..QRKF.NSPCE.-YFPRNGTME	.H...SS.EV.G.SF.G..	71
ABU43509	133	T...N...N	.K..QRKF.NAPC-.VYFPRKGTME	.H...MS.DV.G.SS.GM.	186
ABR28263	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGT.E	.H...LPS.EV.G.SF.G..	71
AAV90809	139	T.Y...N...N	.N..QRKF.SAPC-.VYLPRKGR.E	.H...SS.EV.S.SS.G..	192
ABR28244	18	T...N...N	.N.VQRKF.NSPCE.-YFPRNGTMA	.H...AS.EV.G.SF.G..	71
ABR28250	18	TT...N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...SS.EV.G.SF.G..	71
ABR28278	18	TT.....N	.N..QRKF.NSPCE.-YFPRNGTME	.H...SS.EV.G.SF.G..	71
ABR28241	18	T...N...N	.K.VQRKF.NAPC-.VYFPRKGTME	.H...PS.AV.G.SS.G..	71
ABU43546	127	T...N...N	.NF.QRKF.RNVPC-.VYFPRKGTME	.H...SS.EV.G.SS.G..	180
ABS52654	107	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	160
ABS52650	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABR28260	18	T...N...N	.N.VQKGF.NSPCE.-YFPRNGTME	.H...PS.EV.G.SF.G..	71
ABU43531	130	T...N...N	.N..QRKF.NVPC-.VYFPRKGTME	.H...MS.DX.G.SSHG..	183
ABS52652	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABS52656	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183
ABR28280	18	T...N...S	.NAVQRKF.SSPCE.-YFPRNGTME	.H...PS.DV.G.SF.G..	71
ABS52651	130	T...N...N	.S..QRKF.NIPC-.VYFPRKGTME	.H...TS.DV.G.SSHGI.	183

ABS52669	130	T...N...N..S..QRKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	183
ABS52655	130	T...N...N..S..QRKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	183
ABU43515	131	...N...N..S..QRKF.NAPC-.VYFPRKGTME.H...MS.DV.G.SSHGI.	183
AAV90763	142	...N...N..RN.VQRKF.NAP-.VYFPRKDTMK.Q...SS.DV.G.SF.GI.	193
ABU43542	130	T...N...N..S..QRKF.NIPC-.VYFPRKGTMK.H...TS.DV.G.SSHGI.	183
ABK59296	88	T...IN...N..N.VQRKF.SFPCE.-YFPRNGTME.H...SS.EV.GPSF.G..	141
ABU43523	120	...N...N..S..QRKF.NTPC-.VYFPRKGTME.H...KS.DV.G.SSHGI.	172
ABR28271	18	T...N...N..N.VQRKF.NSLCD.-YFPRNGTME.H...SR.EV.G.SFHG..	71
AAV90777	140	T...K...Q...VO.KL.NSPC-.LFFPRKGP.E.H...SS.DV.G.SLHG..	193
ABK59293	88	T...IN...N..N.VQRKF.SFPCE.-YFPRNGTME.H...SS.EV.G.SF.G..	141
ABU43534	130	T...N...N..S..QRKF.NAPC-.VYFPRKGTME.H...VS.DV.G.SSHGI.	183
ABU43521	130	T...N...N..S.V.RKF.NAPC-.VYFPRKGTME.H...VS.DV.G.SSHGI.	183
ABU43537	130	T...IN...N..S..QRKF.SAPC-.VYFPRKGTME.H...MS.DV.G.SSHGI.	183
ABK59291	88	T...IN...N..N.VQRKF.NFPCE.-YFPRNGT.E.H...SS.EV.G.SF.G..	141
ABR28268	18	T...N...N..N.VQRKFGSSPCE.-YFPRNGT.E.H...SS.EV.G.SF.G..	71
AAV90778	140	T...K...Q...A.Q.KL.NSPC-.IFFSRNGP.E.H...SS.DV.G.SSHG..	193
ABR28273	18	T...IN...N..N.VQRKF.NLPCG.-YFPRNGT.E.H...SS.EV.G.SFHG..	71
ABK59284	89	T...IN...N..N.VQRKF.NLPCG.-YFPRNGT.E.H...SS.EV.G.SF.G..	142
AAV90756	134	T.Y.N...N..RN..QRKF.NSP.-VYFPRKSTKE...PN.DV.A.SFHG..	187
ABU43512	133	T...N...N..K..QRKF.SAPC-.VYFPRKGTME.X...MS.DV.G.SSHGM.	186
ABR28272	18	T...I...N..N.VQRKF.NSPCE.-SFPRNGTME.H...PS.EV.G.SF.G..	71
ABK59288	89	T...IN...N..N.VQRKF.NLPCG.-YFPRNGT.E.H...SS.EV.G.SFHG..	142
ABU43507	131	...N...N..S..QRKF.NAPC-.VYFPRKGT.E.H...MS.DV.G.SSCGI.	183
ABU41687	130	T...N...N..S..QRKF.NVPC-.VYFPRKGTME.H...IS.DV.G.SSHGI.	183
ABR28242	18	T...N...N..N.VQRKF.NSPCE.-YFPR.GTME.H...SR.EV.GPSFHG..	71
ABU43545	130	T...N...N..S.VQRKF.SVPC-.VYFPRKGTME.H...TC.EV.G.SSHGI.	183
ABS52672	130	T.Y.N...N..S..QRKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	183
ABI78885	123	T...K...N..NF..QRKF.NIP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABK59295	88	T...IN...N..N.VQRKF.SFPCE.-YFPRNGTME.H...SS.EV.GPSF.G..	141
ABS52664	130	T...N...N..S..QRKF.NIPC-.VYFPRKGTXE.H...TS.DV.G.SSHGI.	183
ABS52671	130	T.Y.N...N..S..QRKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	183
ABK59282	88	T...IN...N..N.VQRKF.NFP.E.-YFPRNGAME.H...SS.EV.G.SF.G..	141
ABK59285	88	T...IN...N..N.VQRKF.NLPCG.-YFPRNGT.E.H...SS.EV.G.SF.G..	141
ABI78880	120	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	173
ABK59315	89	T...IN...N..N.VQRKF.NFPCE.-YFPRNGTME.H...AS.EV.S.SF.G..	142
ABR28265	18	T...IN...N..N.VQRKF.NFPCE.-YFPRNGTME.Q...SS.V.G.SF.G..	71
ABB84907	53	T...N...N..S..QRKF.NAPC-.VYFPRKGTME.H...NS.DV.G.SS.GI.	106
ABU43511	116	T...N...N..K..QRKF.SAPC-.VYFPRKGTME.R...MS.DV.G.SPHGR.	169
ABS52661	130	T...N...N..S..QRKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSPGI.	183
ABR28284	18	T...IN...N..N.VQRKF.NFOCE.-YFPRNGTME.H...SS.EV.G.SF.G..	71
ABU41702	115	T...N...N..RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SS.GI.	168
ABI78917	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABU43526	130	T...N...N..S..KRKF.NAPC-.VYFPRKGTME.H...MS.D.G.SSHGF.	183
ABK59316	84	T...IN...N..N.VQRKFXNSPC.-XYFPRNGTME.H...AS.EV.G.SF.G..	137
AAT36580	134	T.Y.N...N..RN..QRKF.NSP.-VYFPRKSTLE...PN.DV.A.SF.G..	187
ABI78870	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
AAT36587	134	T.Y.N...N..RNI.QRKS.NSP.-VYFPRKSTME...PS.DV.A.SFHG..	187
AAT36586	134	T.Y.N...N..RNI.QRKS.NSP.-VYFPRKSTME...PS.DV.A.SFHG..	187
ABI78907	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABI78882	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABI78887	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABU41695	130	T...N...N..RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SS.GI.	183
ABU41706	121	T...N...N..RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	174
ABI78924	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176
ABI78898	123	T...K...N..NF..QRKF.NVP.-VYFPRNSPME.H...SG.EV.G.SAHG..	176
ABI78909	123	T...K...N..NF..QRKF.NVP.-VYFPRNGPME.H...SG.EV.G.SAHG..	176

ABR28243	18	T...N...N	.N.VQRKF.NSPCE.-YFPRHGTME	.H...SG.EV.A.SFHG..	71
ABK59292	88	T...IN...N	.N.VQRKF.SFPC.-YFPRNGPME	.H...SS.EV.G.SF.G..	141
ABU43517	130	T...N...N	.XS..QRKF.NAPC.-VYFPRKGTME	.H...MN.DV.G.SSHGI.	183
ABU43544	130	T...N...N	.S..QRKF.SVPC.-VYFPRKGTME	.H...TR.DV.G.SSHGI.	183
ABS52647	121	T.....N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	174
ABR28283	18	T...N...N	.N.VQRKF.NSPCE.-HFPRNGTME	.HR..PS.EV.G.SF.G..	71
ABS52646	130	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...AS.EV.G.SSHGI.	183
ABK59273	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGT.E	.H...SS.EV.G.SF.G..	141
ABU41707	121	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	174
ABU41696	130	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	183
ABK59274	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGT.E	.H...SS.EV.G.SF.G..	141
ABU43508	130	...N...N	.S..QRKF.NAP.-VYFPRKGT.E	.H...MS.DV.G.SSCGI.	182
ABI78888	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78875	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...TG.EV.G.SV.G..	176
ABI78873	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78901	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABK59301	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	142
ABI78866	122	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	175
ABI78921	124	T...N...N	.NF.Q.KF.NVPC.-VYFPRKGP.E	.H...PS.EV.G.LSCG..	177
ABI78925	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABR28269	18	T...IN...N	.N.VQRKF.NFPC.-YFPRNGTAE	.H...SS.EV.G.SF.G..	71
ABI78918	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78858	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78897	108	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	161
ABI78889	91	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	144
ABI78859	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78884	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78862	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.ST.G..	176
ABI78876	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.ST.G..	176
AAV90768	137	...K...Q	...VQ.KL.NSPC.-FFPRKSL.E	.H...PS.DV.GASFHG..	189
AAV59310	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	142
AAV90770	140	T...K...Q	...VQ.KL.NSPC.-IFFSRKCP.E	.H...SS.DV.G.SS.G..	193
ABK59313	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	142
ABK59309	87	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	140
AAV90776	140	T...K...H	.I.LQ.KL.NSPC.-IFFPRKGS.E	.H...SS.DV.G.SSQG..	193
ABB84908	53	T...N...N	.S..QRKF.NAPC.-VYFPRKGTME	.H...NS.EV.G.SSHGI.	106
ABU41700	130	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	183
ABK59304	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTXE	.H...SS.EV.G.SF.G..	142
ABI78902	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABI78863	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABR28281	18	T...N...S	.N.VQRKF.NSPCE.-YFPRNGTME	.HS..PS.EV.G.SFCG..	71
ABK59300	86	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	139
ABK59314	88	T...IN...N	.N.VQRKF.NXPCE.-YFPRNGTXE	.H...SS.EV.G.SF.G..	141
ABI78881	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
AAT36591	134	T.Y.N...N	.RNM.QRKF.NSP-N.VYFPRKSTME	...PS.NV.A.SFHG..	187
ABU41698	115	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	168
ABK59302	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE	.H...SS.EV.G.SF.G..	141
ABU41701	130	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	183
ABU41699	112	T...N...N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	165
ABI78911	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SN.EV.GISA.G..	176
ABR28251	18	T.T.N...N	.N.VQRKF.NSPCE.-YFPRNGTME	.H...SS.EV.G.SFCG..	71
AAV90762	140	T...N...N	.RN.VQRKF.NAP.-VYFPRKDTT	.Q...SS.DV.S.SF.GI.	193
ABU43510	133	T...N...N	.K..QRKF.SAXC.-VYFPRKGTME	.H...GS.DV.G.SS.GM.	186
ABI78867	123	T...K...N	.NF.QRKF.NVP.-VYFPRNGPME	.H...SG.EV.G.SA.G..	176
ABU43522	2	T...N...N	.S..QRKF.NAPC.-VYFPRKGTME	.H...MN.DV.G.SSHGI.	55
ABU41690	130	T.....N	.RS..QRKF.NVPC.-VYFPRKGTME	.Q...TS.DV.G.SSHGI.	183

ABU41709	118	T.....N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	171
ABK59303	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTKE.H...SS.EV.G.SF.G..	142
ABU43539	118	T...N...N	.I..QRKF.NIPC-.VYFPRKGTKE.H...TS.DV.G.SSHGI.	171
ABU43530	130	T...T...H..	X..QRKF.NAPC-.VYFPRKGTME.H...MS.D..G.SSHGI.	183
ABK59306	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTXE.H...SS.EV.G.SF.G..	141
ABU41705	121	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	174
ABU43528	130	T...N...N	RS..QRKF.NAPC-.VYFPRKGTME.H...MS.DV.G.SSSGL.	183
AAT36592	100	T.Y..N...N	RNM.QRKF.NSP-N.VYFPRKSTME....PS.NV.A.SFHG..	153
ABI78894	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	176
ABU41704	130	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	183
ABI78856	91	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	144
ABU43529	130	T...N...N	.C..QRKF.NAPC-.LYFPRKGAME.H...MS.DV.G.SSNGL.	183
ABM05464	110	T.Y..N...N	RN..QRKF.NSP.-.VYFPRKSTME....PS.DV.A.SF.G..	163
ABI78891	121	T...K...N	.NF.QRKF.NVP.-.YFPRNGPME.H...SG.EV.G.SA.G..	174
ABI78877	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...XSG.EV.G.ST.G..	176
ABU41697	119	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SS.GI.	172
AAV90769	125	T...K...H...	VO.KL.NSPC-.AFFRRAP.E.H...ASS.DV.G.SS.GM.	178
ABK59311	88	T...IN...N	.NIVQRKF.NLPCE.-YFPRNGTTE.H...SS.EV.G.SF.G..	141
ABK59271	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE.H...SS.EV.G.SF.G..	141
ABI78883	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	176
ABR28276	18	T.Q..N...N	.N.VQRKF.NFPCE.-SFPRNGAME.H...SS.EV.G.SFHG..	71
ABI78910	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.XA.G..	176
ABK59307	88	T...IN...N	.NIVQRKF.NLPCE.-YFPRNGTTE.H...SS.EV.G.SF.G..	141
ABR28261	18	T...N...S	.NAVQRKF.NSPHE.-YFPRNGAME.H...PS.EV.G.SF.G..	71
ABI78930	108	T...K...N	.NF.QRKF.NVP.-.VYFPRNGLME.H..TSG..V.G.LA.G..	161
ABU41691	113	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	166
ABB84887	53	T.....N	.SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59286	88	T...IN...N	.N.VQRKF.NLXCG.-YFPRNGT.E.H...SS.EV.G.SF.G..	141
ABI78908	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABM05465	102	T.Y..N...N	RN..QRKF.NSP.-.VYFPRKSTME....PS.DV.A.SF.G..	155
ABU41710	116	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	169
ABM05448	110	T.Y..N...N	RN..QRKF.NSP.-.VYFPRKSTME....PS.DV.A.SFHG..	163
ABS52648	130	T...N...N	.S..Q.KF.NVPC-.AYFPRKGAME.H...TS.NV.G.SSHGI.	183
ABK59279	88	T...IN...N	.S.VQRKF.NFPPE.-YFPRNGAME.H...SS.EV.G.SF.G..	141
ABU41703	130	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	183
ABU41688	130	T...N...N	RS..QRKF.NVP.-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	183
ABI78893	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.E...SA.G..	176
ABK59275	88	T...IN...N	.N.VQRKF.NLPCE.-FFPRNGT.E.H...SS.EV.G.SF.G..	141
ABI78886	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABU41689	130	T...N...N	RS..QRKF.NVP.-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	183
AAT36582	134	T.Y..N...N	RN..QRKF.NSP.-.VYFPRKSTLE....PN.YV.A.SF.G..	187
ABS52670	124	T.Y..N...N	.S..QXKF.NIPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	177
ABI78927	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LAHG..	176
ABU41708	130	T...N...N	RS..QRKF.NVPC-.VYFPRKGTME.Q...TS.DV.G.SSHGI.	183
ABU41692	122	T...N...N	RS..QRKF.NVPC-.VYFPRKGTMD.Q...AS.DV.G.SSHGI.	175
ABK59305	89	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTXE.H...SS.EV.G.SF.G..	142
ABK59281	88	T...IN...N	.N.VQRKF.NFP.-.KYFPRNGAME.H...SS.EV.G.SFXG..	141
ABK59278	88	T...IN...N	.X.VQRKF.NFPPE.-YFPRNGTME.H...SS.EV.G.SF.G..	141
ABI78874	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABK59294	88	T.X.IN...N	.N.VQRKF.SFPCE.-YFPRNGTME.H...SS.EV.G.SF.G..	141
ABI78923	123	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABB84890	53	T.....S	.SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
AAV90771	125	T...K...Q...	VO.KL.NSPC.-IFFSRKCP.E.H...S.DV.G.SS.G..	178
ABK59270	88	T...IN...N	.N.VQRKF.NLPCE.-YFPRNGTTE.H...SS.EV.G.SF.G..	141
ABI78860	94	T...K...N	.NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	147
AAT36584	134	T.Y..N...N	RN..QRKS.NSP.-.VHFPRKSTME....PS.DV.A.SFHG..	187

ABI78931	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...SG.EV.G.XA.G..	176
ABU43540	130	T...N...S..R..ORKF.SVPC-.VYFPRKGTME.Y...TS.EV.G.SS.GI.	183
ABK59280	88	T...IN...N..B.VORKF.NFPXE.-YFPRNGAME.H...SS.EV.G.SF.G..	141
ABR28267	18	T...N...N..N.VORKFGSSPCE.-YFPRNGT.E.H...SN..V.G.SFCG..	71
ABI78900	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...SG.EV.C.SA.G..	176
ABI78903	118	T...N...XN..HF.Q.KF.NVPC-.VYFPRKGP.E.H...SN.EV.G.LT.G..	171
ABM05453	110	T.Y.N...N..RN..ORKF.NSP.-.VYFPRKSTME...PS.NV.A.SFHG..	163
ABK59298	88	T...IN...N..N.VORKF.SFPCE.-YFPRNGTME.H...XSS.XV.GPSF.G..	141
AAT36585	134	T.Y.N...N..RN..ORKS.NSP.-.VHFPRKSTME...PS.DV.A.SFHG..	187
ABM05449	110	T.Y.N...N..RN..ORKF.NSP.-.VYFPRKSTME...PS.DV.A.SFHG..	163
ABI78892	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...XSG.EV.G.SA.G..	176
ABU43525	130	T...N...N..R..ORKF.NAPC-.LYFPRKGMQ.H...MS.DV.G.SSNGL.	183
ABU43513	133	T...N...N..RK..ORKF.SVPC-.VYFPRKGTME.H...AS.DV.G.SS.GM.	186
ABU43533	130	T...N...N..S..KRKF.NAPC-.VYFPRKXTME.Y...VS.DV.G.SSHGI.	183
ABK59289	88	T...IN...N..N.VORKF.NFPCE.-YFPRNGT.E.H...SS.EV.G.SFLG..	141
ABM05468	107	T.Y.N...N..RN..ORKF.NS-.S.VYFPRKSTME...PS.DV.A.SFHG..	160
ABI78919	123	T...K...N..NF.ORKF.NVX.-.VYFPRNGPME.H...SG.EV.G.SA.G..	176
ABR28257	18	T...IN...K..N.VORKFNNSPCE.-YFPRNGTME.H...AN.EV.G.SFHGX.	71
ABB84899	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...AS.DV.G.SSHGL.	106
ABK59277	88	T...IN...N..S.VORKF.NFPXE.-YFPRNGAME.H...SS.XV.G.SF.G..	141
AAV90755	134	T.Y.N...N..RN..ORKS.NS-QS.VYFPRKSTME...PS.DV.S.SF.G..	187
ABM05467	107	T.Y.N...N..RN..ORKF.NS-.S.VYFPRKSTME...PS.DV.A.SFHG..	160
ABK59272	89	T...IN...X..N.VORKF.NLPCE.-YFPRNGTXE.H...SS.EV.G.SF.G..	142
ABI78878	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABI78896	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPIE.H...SG.EV.G.LA.G..	176
ABR28279	18	T...IN...N..N.VORKF.NLPCE.-YFPRNGTTE...SS.EV.G.SF.G..	71
ABB84866	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...AS.DV.G.SPHGI.	106
ABM05470	110	T.Y.N...N..RD..ORKF.NSP.-.VYFPRKSTME...PS.DV.A.SFHGI.	163
ABI78915	123	T...K...N..KF.ORKF.NVP.-.YFPRNGSME.H...SG.EV.G.SA.G..	176
AAV90773	129	T...K...Q...VQ.KL.NSPC-.FSPRQGPAE.H...SS.DV.G.SS.G..	182
ABB84877	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59287	88	...IN...N..N.VORKF.NLPCG.-YFPRNGT.E.H...SS.EV.G.SFXG..	140
ABM05471	107	T.Y.N...N..RN..ORKF.NS-.S.VYFPRKSTME...PS.DV.A.SFHG..	160
ABB84892	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59299	88	T...IN...N..N.VORKF.NXPCE.-YFPXNGTXE.H...SS.EV.G.SF.G..	141
ABI78916	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	176
ABI78928	105	T...N...N..RF.ORKF.NA-.S..YFPRRGP.E.H...SS.EV...SSHG..	158
ABB84901	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...AS.DV.G.SSHGL.	106
ABB84876	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84898	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABI78895	123	T...K...N..NF.ORKF.NVP.-.VYFARNGPME.H...SG.EV.G.SA.G..	176
ABI78879	82	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	135
ABU41694	113	T...N...N..RS..ORKF.NVPC-.VYFPRKGTMX.Q...AS.DV.G.SSHGI.	166
ABI78861	123	T...K...N..NF.ORKF.NVP.-.VYFPRNGPME.HX..SG.EV.G.SA.G..	176
ABB84894	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84900	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...AS.DV.G.SSHGL.	106
ABM05447	110	T.Y.N...N..RN..ORKF.NSP.-.VHFPRKSTME...PS.DV.A.SFHG..	163
ABK59290	88	T...IN...N..N.VORKF.NFPCE.-YFPRNGT.E.H...SS.EVXG.SF.G..	141
ABI78922	123	T...N...XN..HF.Q.KF.NVPC-.VYFPRKGP.E.H...SN.EV.G.LT.G..	176
ABU43535	130	T...KX...N..S..ORKF.NAPC-.VYIIPRKGTME.H...MS.DV.G.SS.GI.	182
ABM05466	107	T.Y.N...N..RN..ORKF.NS-.S.VYFPRKSTME...PS.DV.A.SFHG..	160
ABB84891	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84893	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84902	53	T.....S..SF.ORKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59308	88	T...IN...N..NXVORKF.NLPCE.-YFPRNGTTE.H...SS.EV.G.SF.G..	141
AAT36583	134	T.Y..N...N..RN..ORKF.NSP.-.VYFPRKSTLE...PN.DV.X.SFHG..	187

ABI78899	123	T...K...N..NF.QRKF.NVP.-.VYFPRNGXME.H...SG.EV.C.SA.G..	176
ABB84875	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59318	88	T...IN...N..N.VQRKF.NFP.E.-.YFPSNGTME.H...SS.EV.G.SFHG..	141
ABM05462	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.V...PS.DV.A.SFHGI.	163
ABM05474	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME...PS.DV.A.SFHG..	163
ABI78871	123	T...K...N..NF.Q.KF.NVP.-.VYFPRNGPKE.H...SG.EV.G.SA.G..	176
ABB84889	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84882	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABK59283	88	T...IN...N..N.VQRKF.NLPCE.-.YFPXNGTAE.H...SS.EV.G.SF.G..	141
AAT36581	134	T.Y..N...N.RN..QRKF.NSP.-KVYFPRKSTLE...PN.YV.A.SF.G..	187
ABB84883	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
AAT36594	134	T.Y..N...K..RN..QRKF.NSP-N.VYFPRKSTME...PS.NV.A.SFCG..	187
ABB84895	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABB84886	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106
ABU41693	130	T...N...N..RS..QRKF.NVPC-.VYFPRKGTMD.H...AS.DX.G.SSHGI.	183
ABB84888	53	T.....S..SF.QRKF.NVPC-.VYFPRKGT.E.Q...TS.DV.G.SSHGI.	106
ABM05460	110	T.Y..N...N.RD..QRKF.NSP-N.VYFPRKSTME...PS.DV.A.SFHGI.	163
ABB84872	53	T.....S..SF.Q.KF.NVPC-.VYFPRKGTME.H...AS.DV.G.SSHGI.	106
ABM05446	110	T.Y..N...N.RN..QRKF.NSP.-.VHFPRKSTME...PS.DV.A.SFHG..	163
ABM05463	110	T.Y..N...N.RD..QRKF.NSP.-.YFPRKSTME...PS.DV.A.SFHGI.	163
AAT36593	134	T.Y..N...K..RN..QRKF.NSP-N.VYFPRKSTME...SS.NV.A.SFCG..	187
ABI78857	123	T...K...N..NF.QRKF.NVP.-.VYFPRNGPKE.H...SG.EV.G.LA.G..	176
ABM05477	110	T...N...N..RN..QRKS.NSP.-.VYFPRKSSME...PS.DV.A.SFHG..	163
ABM05475	103	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME...PS.DV.A.SFHG..	156
ABK59276	88	T...IN...N..N.VQRKF.NFX.E.-.YFPRNGAME.H...SS.EV.G.SF.GX.	141
AAV90772	140	T...K...Q..RA.VQ.KL.NSPC-.IFFPRQGP.E.H...S.DV.G.SSHG..	193
AAV90798	140	T...N...N..NA.Q.KF.NGP-Y.SCFPKKGTME.C...SS.S.TPSFHG..	193
ABI78906	123	T...K...N..NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
ABB84906	53	T.....N..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.E.SSNGI.	106
ABM05451	110	T.Y..N...N.RN..QRKF.NSP.-.VYFPRKSTKE...PS.DV.A.SFHG..	163
AAT36597	134	T.Y..N...N..RN..QRKS.NSP-N.VYFPRKSTXE...PN.NV.A.SF.G..	187
ABR28274	18	T...IN...S..N.VQRKF.NFPCE.-.YFPRNGAME.K...ST.EV.G.SFXG..	71
ABI78868	124	...K...N..NF.QRKF.NVP.-.VYFPRNGPME.H...AD.EV.G.LA.G..	176
ABU43520	130	T.....N..S.V.RRF.NAPC-.IYFPRKGTME.H...MSXD.V.G.SSHGI.	183
ABS52660	87	T...N.X.S..N..QRKF.NIPC-.VYFPRKGAME.H...TS.DV.G.SSHGI.	140
AAT36595	134	T.Y..N...N..RN..QRKS.NSP-N.VYFPRKSTTE...PN.NV.A.SF.G..	187
AAT36596	134	T.Y..N...N..RN..QRKS.NSP-N.VYFPRKSTAE...PN.NV.A.SF.G..	187
ABK59269	89	T...IN...X..N.VQRKF.NLPCE.-.YFPRNGTXE.H...SS.EX.G.SF.G..	142
ABM05479	110	T...N...N..RN..QRKS.NSP.-.VYFPRKSSME...PS.DV.A.SFHG..	163
AAV90757	134	T.Y..N...N..RN..QRKF.NSP.-.VY.PMKNTME...PS.D..A.SFCG..	187
ABI78869	123	T...K...N..NF.QRKF.NVP.-.VYFPRKYPME.H...SG.EV.G.LA.G..	176
ABU43543	130	T...N...N..S.VQRKF.SVPC-.VYFPRKGTME.H...TR.DX.G.SSCGI.	183
ABM05478	110	T...N...N..RN..QRKS.NSP.-.VYFPRKSSME...PS.DV.A.SFHG..	163
ABB84879	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.Y...TS.DV.G.SSHGI.	106
ABK59297	88	T...IN...N..N.VQRKF.SFXCE.-.YFPRNGTXE.H...SS.XV.GPSF.G..	141
ABB84878	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.Y...TS.DV.G.SSHGI.	106
ABB84880	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.Y...TS.DV.G.SSHGI.	106
ABB84896	53	T.....S..SF.QRKF.NVPC-.VYFSRKGTE.H...TS.DV.G.SSHGI.	106
ABB84868	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTME.Q...AS.DV.G.SPQGI.	106
AAT36598	116	T.Y..N...N..RN..QRKS.NSP-N.VYFPRKSTTE...PN.NV.A.SFHG..	169
ABI78914	123	T...K...N..KF.QXKF.NVP.-.YFPRNGSME.H...SG.EV.G.SA.G..	176
ABI78926	121	T...K...N..NFVQRKF.NVP.-.VYFPRNDPRE.H...SG.EV.G.LA.G..	174
ABI78864	55	T...XK...N..NF.QRKF.NVP.-.VYFPRNGPME.H...SG.EV.G.ST.G..	108
ABB84874	53	T.....S..SF.QRKF.NVPC-.VYFPRKGTMK.H...TS.DV.G.SSHGI.	106
ABI78865	93	T...K...N..NF.Q.KF.NVP.-.VYFPRNGPME.H...SG.EV.G.SA.G..	146
ABB84903	54	.....S..SF.QRKF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI.	106

AAV90799	140	T...N..EN..N..O.KF.NAPC-.SYF.KKGAME.H...SV.NV.IPSFYG..	193
ABK59312	88	T...IN...N..N.VQRKF.NLPCE.-YFPRNGTTE.H...SX.XX.G.SF.G..	141
ABB84869	53	T.....S..SF.QRKFTSVPC-.VYFPRKGTME.H...SS.DV.G.SSHGI..	106
ABB84871	53	T.....S..SF.QRKFNVPCL.SYFPRKGTME.H...TS.DV.G.SSHGI..	106
ABM05476	80	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PS.DV.A.SFHG..	133
AAV90767	140	T...K...Q...VE.KL.NSP-Y.IFFPRKSPME.QL..SS.EV.G.SP.G..	193
AAV90779	125	T...K...A..A.VQ.KL.NSPC-.IFFPRKDP.E.Q...R.DV.G.SSHG..	178
AAV90774	140	T...K...Q...VQ.KLNNSPC-..FFPMKGP.E.H..A.S.VV.G.SSHG..	193
ABB84873	53	T.Y.....S..SF.Q.KF.NVPC-.VYFPRKGTME.H...TS.DV.G.SSHGI..	106
ABM05473	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PS.DV.A.SFCGI..	163
ABB84904	53	T.....S..SF.QRKFNVPCL.VYFPRKGTME.H...TS.DV.G.SSHGI..	106
ABR28254	18	T...I...N..N.VQRKF.NSPGE.-FFPMNGSME.H...AS.XV.A.SF.G..	71
ABD49423	117	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	170
ABK59317	88	T...IN...N..N.VQRKF.NFP-X.XYFPSNGXME.X...SS.EV.G.SFHG..	141
ABD49422	117	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	170
ABI78929	123	T...K...N..NF.QRKFXNVP-.VYFPRNGAME.H..TSG.EV.G.LACG..	176
ABM05452	110	T.Y..N...N.RN..QRKF.NFP.-.VYFPRKSTMK.....PS.NV.A.SFHG..	163
ABR28252	18	T.R.IN...N..N.VQRKF.NFPCE.-HFPRNGPME.Q...AS..V.G.SFHG..	71
ABI78872	123	T...K...N..IF.Q.KF.NVP-X.VYFPRNGPKE.H...SG.EV.G.SA.G..	176
ABD49430	121	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	174
ABD49429	121	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	174
AAT36588	128	T.Y..N...N.RN..QGKS.NSP-N.VYFPRKSTIE.....PS.NV.T.SF.G..	181
ABI78905	123	T...K...QN..NF.HRKFNVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	175
ABB84905	53	T.....S..SF.QRKFNVPCL.VYFPRKGTME.....TS.DV.G.SSHGI..	106
AAT36590	122	T.Y..N...N.RN..QGKS.NSP-N.VYFPRKSTIE.....PS.NV.T.SF.G..	175
AAT36602	134	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSITE.....PN.NV.T.SFHG..	187
AAT36589	134	T.Y..N...N.RN..QGKS.NSP-N.VYFPRKSTIE.....PS.NV.T.SF.G..	187
ABD49414	121	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	174
ABR28253	18	T...IN..RN..N.VQRKF.NFPCE.-HFPRYGPME.Q...SS.EV.G.SFHG..	71
ABD49426	121	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	174
ABD49428	121	T...K...Q...VQ.KLNNSPC-..FFPRKSL.E.H...PN.DV.GASFHG..	174
ABB84897	53	T.....S..SF.QRKFNVPCL.VYFPRKGTME.H...TS.DV.G.SSHGI..	106
AAT36601	134	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSITE.....PN.NV.T.SFHGI..	187
ABB84870	53	T.....S..SF.QRKFNAPC-.VYFPRKDTMQ.N...TS.DV.G.SSHGI..	106
ABD49420	121	T...K...Q...I.VQ.KLNNSPC-..FFPRKSL.E.H...PS.DV.GASFHG..	174
ABI78920	123	T...K...N..NF.QRKFNVPCL.VYF.RKGPQE.S...SN.EV.G.SALG..	176
ABB84867	53	T.....S..SF.QRKFNVPCL.VYFPRKGTRE.H...AS.DV.G.SPHGI..	106
ABB84865	54	T.....S..SF.QRKFNVPCL.VYFPRKGIME.H...AR.DV.G.SSHGI..	106
AAV90775	140	T...K...Q...A.Q.KL.NSPC-.FFPRKGL.E.N...S.DV.G.SSHG..	193
ABD49415	121	T...K...Q...I.VQ.KLNNSPC-..FFPRKSP.E.H...PN.DV..ASF.G..	174
AAT36603	134	T.Y..N...N.RN..QMKS.NSP-N.VYFPRKSTTE.....PN.NV.A.SF.G..	187
ABD49427	121	T...K...Q...VQ.KLNNSPC-..FFQRKSP.E.H...SS.DV.G.SL.G..	174
ABD36599	134	T.Y..N...N.RN..QMKS.NSP-N.VYFPRKSTTE.....PN.NV.A.SF.G..	187
ABI78904	123	T...K...QN..NF.XRKFNVP.-.VYFPRNGPME.H...SG.EV.G.LA.G..	176
AAT36600	134	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSITE.....PN.NV.T.SLHGI..	187
ABM05458	94	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PS.DV.A.SFHG..	147
ABD49416	121	T...K...Q...VQ.KLNNSPC-..LFPRKSL.E.H...PS.DV.ASFHG..	174
ABD49418	121	T.V...K...Q...VQ.KLNNFPC-..FFPRKSL.E.H...PS.DV.GSSFHG..	174
ABO28363	110	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSTAE.....PN.NV.A.SF.G..	163
ABD49417	121	T...K...Q...VQ.KLNNFPC-..FFPKSL.E.H...PS.DV.GASFHG..	174
ABO28362	110	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSTAE.....PN.NV.A.SF.G..	163
ABO28360	110	T.Y..N...N.RN..QRKS.NSP-N.VYFPRKSTAE.....PN.NV.A.SF.G..	163
ABB84885	53	T.....S..RCF.QRKFNVPCL.VYFPRKGTME.H...TS.DV.G.SSYGI..	106
AAV90791	139	T...N...N..N..QRKV.NAP-H.ALLOQKDT.E.H...SS.DV.GISFCGI..	192
ABM05444	110	T.Y..N...N.RN..XRKF.NSP.-.VHFXRKSXME.....PS.DV.A.SFHG..	163
ABU44956	118	T...K...Q...VQ.KLNNSPC-..FFSRKSP.E.N...SS.DV.GASLHG..	171

ABD49425	121	TV...K...Q	...VQ.KLNNFPC--	FFPRKSL.E	H...PS.DV.GASFHGM.	174
ABD49424	121	TV...K...Q	...VQ.KLNNFPC--	FFPRKSL.E	H...PS.DV.GASFHGM.	174
ABD49421	121	T...K...Q	...VQ.KLNNSPC--	FLPRKSP.E	H...XS.DV.ASFHG..	174
ABO28361	105	T.Y..N...N	RN..QRKS.NSP-N.V	YFPRKSTAE	...PN.NV.A.SF.G..	158
ABD49433	121	T...K...Q	...VQ.KLNNSPC--	FLPRKSP.E	H...PS.DV..ASFHG..	174
AAT36607	114	T.Y..N...N	RN..RKFCRSP.-V	CFPSKSTMD	...SS.D..A.SFHG..	167
ABO28359	105	T.Y..N...N	RN..QRKS.NSP-N.V	YFPRKSTAE	...PN.NV.A.SF.G..	158
ABU44957	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASIHG..	171
ABO28358	100	T.Y..N...N	RN..QRKS.NSP-N.V	YFPRKSTAE	...PN.NV.A.SF.G..	153
ABU44947	116	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	169
AAT36609	134	T.Y..N...N	RN..RKFCRSP.-V	CFPSKSTMD	...SS.D..A.SFHG..	187
ABD49432	121	T...K...Q	...VQ.KLNNXC--	FLPRKSP.E	H...PS.DV..ASF.G..	174
ABU44885	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44953	116	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	169
AAV90789	139	T.....N	.K..QRKV.NAP-H.A	AHL.EKDP.E	Q...TS.D.V.SF.G..	192
ABU44949	116	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	169
ABU44951	116	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	169
ABU44883	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44903	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44919	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44904	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44908	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44921	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44959	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLHG..	171
ABU44881	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44879	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44960	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...PS.DV.GASLHG..	171
ABU44920	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44878	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44946	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44955	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLHG..	171
AAV90792	139	TT.....N	.K..QRKV.NAP-H.A	AHL.EKDP.E	H...TS.DV.V.SF.G..	192
ABU44906	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44942	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44884	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABD49419	121	T...K...Q	...VQ.KLNNFPC--	FFPKKSL.Q	H...PS.DV.GASFHG..	174
ABU44888	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44899	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44891	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44913	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44890	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44915	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44897	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44892	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44905	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44916	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44896	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44935	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44950	102	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	155
ABU44898	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44929	118	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABM05469	76	T.Y..X...XN	RD..QRKF.NSP.-V	YFPRKSTME	...PX.DV.A.SF.GI.	129
ABU44925	95	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	148
ABU44962	118	T...K...Q	...VQ.KLNNSPC--	LFSRKSP.E	N...SS.DV.GASLHG..	171
ABU44900	118	T...K...Q	...XQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	171
ABU44927	108	T...K...Q	...VQ.KLNNSPC--	FFSRKSP.E	N...SS.DV.GASLQG..	161

ABU44952	86	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	139
ABU44880	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.XASLQG..	171
AAV90790	136	T...IY...P...N..QRK..NAP-HKVPLPGRDA.E.H...SI.DV.G.SSHG..	189
ABU44914	118	T...K...Q...VQ.KLNNSPC--..XFSRKSP.E.N...SI.DV.GASLQG..	171
ABU44902	118	T...K...Q...XQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	171
ABU44893	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GAXLQG..	171
ABM05459	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PS.DV.	155
ABU44938	85	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	138
ABM05456	110	T.Y..N...N.RN..QRKF.NSP.-.VYFPRKSTME.....PS.NV.	155
ABU44886	85	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	138
ABU44918	77	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	130
ABU44944	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	171
ABU44930	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.NV.GASLQG..	171
ABU44928	76	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLQG..	129
ABU44961	118	T...K...Q...VQ.KLNNSPC--..FFSXKSP.E.N...SS.DV.GASL.G..	171
ABU44963	114	T...K...Q...VQ.KLNNSPC-.TFYPRKSPIE.H...SS.DV.GASLCG..	167
ABU44945	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.XV.GASLQG..	171
ABU44934	118	T...K...Q...VQ.KLNNSPC--..FFSRKSP.E.N...SS.GV.GASLQG..	171
ABU44958	103	T...K...Q...AVQ.KLNNSPC--..FFSRKSP.E.N...SS.DV.GASLHG..	156
ABM05457	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PS.DV.	155
AAT36606	134	T.Y..N...N.XD..HRKFCRSP.-.VCFPNKSIMD.....SS.H..A.SFHG..	187
AAT36605	134	T.Y..N...N.RD..RKFCRSP.-.VCFPSKSIMD.....SS.H..A.SFHG..	187
ABM05445	110	T.Y..N...N.RN..QRKF.NSP.-.VHFPRKSTME.....PS.DV.	155
AAT36604	134	T.Y..N...N.RD..RKFCRSP.-.VCFPSKSIMD.....SS.H..A.SFHG..	187
ABK59319	85	T..IN...N..N.VORKFN---QGKKYFPRNGSME.H.P.SS.EGWGXS.F.G..	136
ABM05461	110	T.Y..N...N.RN..Q.KT.NSP.-.VYFPRKSTME.....PS.DV.	155
ABM05454	110	T.Y..N...N.RN..QRKF.NFP.-.VYFPRKSTMK.....PS.NV.	155
ABM05472	110	T.Y..N...N.RD..QRKF.NSP.-.VYFPRKSTME.....PX.XV.	155
ABI78913	121	T...IK...N..NF.HTKF.NDP.-.VYFPRIPIHXH...SG.EX.X.LPHKM.	174
ABI78890	123	T...K.X.N..NF.QRXXXNVP.-.VYFPRNGPME.HX..	162

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF exclu
environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped
Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

ABF22642	134	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSMME	Q...SN.DV.H.TS.G..	187
AAP03687	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAR16358	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16403	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18131	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16339	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83904	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18114	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16368	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83900	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.AR.G..	188
AAL18136	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABA29174	90	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HATS.G..	143
AAR16405	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PS.DV.H.TR.G..	188
AAR16362	135	T....K...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16396	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABF22623	135	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.HATS.G..	188
AAR16351	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.AR.G..	188
ABN80933	136	....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.SS.G..	188
AAZ20250	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18115	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16401	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18133	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16341	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.HPTR.G..	188
AAR16359	135	T....Q...N	.I.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABD24383	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP03663	135	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	188
AAR16385	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16370	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16346	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	H...SN.DV.C.TS.G..	188
AAQ76054	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABC84850	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAR16348	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18113	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSAME	Q...PN.DV.H.TROG..	188
AAL18099	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18152	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83908	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	H...PN.DV.H.PR.G..	188
ABF22618	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.AS.GI.	188
AAL18102	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP03654	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HNTS.G..	188
ABC84849	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAL18107	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.GI.	188
AAP03666	135	T....R...N	.SI.HRKF.NAPC-.VYFPRNSXME	Q...PN.DV.H.TS.G..	188
ABD24380	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83910	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...QN.DV.H.TS.G..	188
AAR16391	133	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.GI.	186
AAL18117	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18157	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABN50162	92	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TT.G..	145
AAP03658	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSAME	Q...PD.DV.H.SS.G..	188
AAL18126	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.SR.GI.	188
ABF01030	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABF01031	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABF01034	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABF01028	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16376	135	T....Q...N	.SI.HRKF.NTRC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABN50182	92	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	145
AAP83919	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TROG..	188
AAL18098	136	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	189
AAZ93924	92	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	145
ABN80932	136	....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAR16375	135	T....Q...N	.SI.HRKF.NTRC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16367	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.H.TR.G..	188
AAR16356	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.H.TR.G..	188
ABN50152	92	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PG.DV.H.TS.G..	145
AAP03656	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HNTS.G..	188
AAL18132	133	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.GI.	186
ABF22626	135	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.HAASOG..	188
ABF22628	135	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.HAASOG..	188
ABN50155	92	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.H.TSOGI.	145
ABN80967	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAR16387	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAP83892	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TROG..	188
ABF01035	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABN80973	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAR16412	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.H.TR.G..	188
ABF01027	135	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18129	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAL18141	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABD24386	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.HPTR.G..	188
ABN80970	135	T....Q...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABB77692	134	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TROG..	187
ABN50144	92	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	145
ABA29175	90	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.GF.	143
ABN80949	135	T....Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.PV.H.TR.G..	188
AAP03661	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HITS.G..	188
ABN80946	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABQ65642	91	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...SN.DV.H.TX.G..	144
AAL18124	133	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TK.G..	186
AAR16365	135	T....Q...N	.SI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.HPTR.G..	188
ABN80945	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80976	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.R.TS.G..	188
ABN50167	90	T....R...N	.SI.HRKF.NTPC-.VYFPRNSAME	Q...PD.DV.H.SS.G..	143
ABF22646	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.R.TS.G..	188
ABN80969	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80968	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80923	135	T....Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80953	135	T....Q...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAQ76055	131	T....Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	184
ABN80942	135	T....Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80920	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN50189	92	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PD.DV.H.TS.GI.	145
ABN80948	135	T....Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.AR.G..	188
ABN80947	135	T....Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188

ABN80917	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN50166	92	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PD	DV	H	TS	G	..	145	
AAP83891	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	GI	..	188	
AAD34958	134	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	IS	G	..	187	
ABN80955	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80915	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80918	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80935	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80959	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80930	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80916	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABD24379	135	T	...	Q	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	HPTR	G	..	188		
AAP03683	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PD	DV	Y	TS	G	..	188	
AAP03655	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	HNTSQG	..	188		
ABC84851	135	T	...	R	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	TS	G	..	188	
ABC84848	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	TSQG	..	188		
ABF22634	135	T	...	R	..	N	..	SI	HRKF	NAPC	-	VYFPRNSTME	Q	...	PN	DV	H	HAPS	G	..	188	
ABN80954	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABF01037	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
ABF22629	135	T	...	R	..	N	..	SI	HRKF	NAPC	-	VYFPRNST	E	Q	...	PN	DV	H	HATS	G	..	188
ABF22631	135	T	...	R	..	N	..	SI	HRKF	NAPC	-	VYFPRNST	E	Q	...	PN	DV	H	HATS	G	..	188
AAQ76048	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
AAQ76057	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
ABN80924	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABN80939	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
ABF01036	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
ABF01038	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
ABF01022	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	K	...	PN	DV	H	TR	G	..	188	
ABF22638	135	T	...	R	..	N	..	SI	HRKF	NAPC	-	VYFPRNSTME	Q	...	PN	DV	QATS	G	..	188		
AAL18108	135	T	...	Q	..	N	..	SI	HRKF	NNLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
ABN50160	92	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMC	Q	...	PN	DV	H	TS	G	..	145	
AAK20246	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	SN	DV	H	TR	G	..	188	
AAQ76063	135	T	...	Q	..	N	..	SI	HSKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
ABN80964	135	T	...	Q	..	N	..	I	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TR	G	..	188	
AA16361	135	T	...	Q	..	N	..	SI	HRKF	NNLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
ABQ65662	89	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	TR	G	..	142	
AA16395	135	T	...	R	..	N	..	SI	NRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
AAQ76072	136	T	...	Q	..	N	..	SI	HRKF	NL	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	189	
AA16347	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	Q	TR	G	..	188	
AAK93938	92	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PD	DV	H	HPTS	G	..	145	
ABC84847	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TS	G	..	188	
ABN50170	92	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	R	...	PD	DV	H	TS	G	..	145	
ABN80958	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABQ65656	91	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	SS	G	..	144	
ABN80913	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	PS	G	..	188	
AA18355	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TK	G	..	188	
AA18353	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TR	G	..	188	
ABN50186	92	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PD	DV	Y	TS	G	..	145	
ABC71317	135	T	...	R	..	N	..	SI	NRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
AA18351	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TK	G	..	188	
AA16354	155	T	...	Q	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	208	
ABN80950	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
AAL18130	135	T	...	Q	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	N	TR	G	..	188	
ABN50156	92	T	...	R	..	N	..	SI	MHRKF	NAPC	-	VYFPRNSAMD	Q	...	PN	DV	H	TS	GL	..	145	
AA16379	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TROG	..	188		
ABN80965	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABF22616	135	T	...	Q	..	N	..	SI	HRKF	NIP-G	-	VYFPRNSTME	Q	...	PN	DV	H	AS	G	..	188	
AAL18139	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	GI	..	188	
AA18354	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TK	G	..	188	
ABN80963	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
AA120256	135	TV	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	G	..	188	
AAL18095	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	HATR	G	..	188	
ABN80938	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABN80936	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
AA18348	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	DV	H	STKOG	..	188		
ABN80971	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABN80957	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABN80972	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABB77691	134	T	...	X	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TR	GI	..	187	
AA16411	135	T	...	Q	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	R	SR	G	..	188	
ABN80919	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABQ65646	91	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	TS	G	..	144	
ABC84844	135	T	...	R	..	N	..	SI	HRKF	NNLC	-	VYFPRNSTME	Q	...	PN	DV	H	TS	G	..	188	
ABN80929	135	T	...	Q	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	AV	H	TS	G	..	188	
ABQ65675	89	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	TS	G	..	142	
ABQ65652	91	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	TS	G	..	144	
AAD34960	135	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TSQG	..	188		
ABA29184	90	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TSQG	..	143		
ABA29186	90	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TSQG	..	143		
ABQ65667	91	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTME	Q	...	PN	VV	H	TS	G	..	144	
ABC84842	135	T	...	R	..	N	..	SI	HRKF	NNLC	-	VYFPRNSTME	H	...	PN	DV	H	TS	GI	..	188	
AA16398	135	T	...	R	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PN	DV	H	TX	G	..	188	
AA16350	135	T	...	Q	..	N	..	SI	HRKF	NTLC	-	VYFPRNSTME	Q	...	PK	DV	H	TR	G	..	188	
ABF22622	135	T	...	R	..	N	..	SI	HRKF	NAPC	-	VYFPRNSTME	Q	...	PN	XV	H	HATS	G	..	188	
ABA29180	90	T	...	R	..	N	..	SI	HRKF	NTPC	-	VYFPRNSTMD	Q	...	PN	DV	H	TSQG	..	143		
ABN80937	135	T	...																			

AAR16373	136	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
AAP03686	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.EV.HITS.G . .	188
AAD34954	140	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q TN.VV.H.TS.G . .	193
AAH50158	92	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PD.DV.H.TS.G . .	145
ABN83899	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.XV.H.TR.G . .	188
ABC84833	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TSQG . .	188
ABF22620	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.HAMS.G . .	188
AAR16404	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
ABF22633	135	T R . . . N .	.SI.HRKF.NAPC-.VYFPRNST.E	Q PN.DV.HATSQG . .	188
ABA29187	90	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTMD	Q PN.DV.H.TSQG . .	143
ABF01029	135	T Q . . . N .	.I.HSKF.NTPC-.VYFPRNSTME	Q PN.DV.HATR.G . .	188
ABQ65650	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	144
ABD24387	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
ABQ65659	89	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
AAZ29192	90	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTMD	Q PN.DV.H.TSQG . .	143
AAS18350	135	T R . . . N .	.SI.QRKF.NTPC-.VYFPRNSTME	Q PN.DV.HSTROG . .	188
ABC84846	135	T R . . . N .	.SI.HRKF.NNLC-.VYFPRNSTME	Q PN.DV.H.TS.G . .	188
ABN80921	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.H.TK.G . .	188
AAN46465	140	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q TN.VV.H.TS.G . .	193
ABN80925	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.H.TK.G . .	188
ABQ65678	89	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
AAP83923	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNNPIV	Q PN.DV.H.TR.G . .	188
ABQ65666	89	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
AAP03652	135	T R . . . K .	.SI.HRKF.NTPC-.VYFPRNSMME	Q PN.DV.H.TS.G . .	188
ABN80926	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
ABN80962	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.HATR.G . .	188
ABQ65647	89	T R . . . N .	.SIMHRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
ABQ65665	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.GI . .	144
CAE53135	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAP03673	135	T R . . . N .	.SI.HRKF.NTSC-.VYFPRNSTME	Q PN.DV.H.TSQG . .	188
ABQ65669	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	144
AAS18340	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
AAN46464	140	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q TN.VV.H.TS.G . .	193
AAV32565	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.H.TG . .	188
ABQ65654	89	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
ABF22619	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PG.DV.H.AS.GT . .	188
ABQ65676	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	144
AAL18145	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PS.DV.H.TRXG . .	188
ABQ65649	79	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.H.TS.G . .	132
ABC84837	135	T R . . . N .	.SI.HRKF.NNLC-.VYFPRNSTME	Q PN.DV.H.TS.G . .	188
NP_001026359	168	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q AN.EV.H.PS.G . .	221
AAL18104	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	H SN.DV.R.TS.G . .	188
ABN80922	135	T Q . . . N .	.SI.HRKF.STPC-.VYFPRNSTME	Q PN.AV.H.TS.G . .	188
ABF22621	135	T R . . . N .	.SI.HRKF.NAPC-.VYFPRNSTME	Q PN.DV.HATS.G . .	188
AAL18154	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.EV.N.TR.G . .	188
AAV32559	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.DV.H.TG . .	188
AAL18118	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.HITROG . .	188
ABN80927	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
AAR16384	135	T R . . . N .	.SI.HRKF.NVPC-.VYFPRNSMME	Q PK.DV.H.TS.G . .	188
ABQ65651	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	144
ABN80951	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
ABN80944	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
CAE53140	135	T Q . . . N .	.SI.HRKF.NAPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAR16416	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR . .	188
ABN80928	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
ABN80934	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
AAQ76081	135	T Q . . . N .	.SI.HSKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
ABF22630	135	TV R . . . N .	.SI.HRKF.NAPC-.VYFPRNST.E	Q PN.DV.HATS.G . .	188
AAQ76062	135	T Q . . . N .	.SI.HSKF.NTPC-.VYFPRNSTME	Q PN.DV.HXTR.G . .	188
ABQ65663	89	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.G . .	142
AAR16388	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.N.TROG . .	188
CAE53134	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAR16349	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TT.G . .	188
CAE53116	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53114	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAL18138	135	T R . . . N .	.SI.HRKF.NNLC-.VYFPRNSTME	Q PN.DV.H.TS.GI . .	188
CAH23276	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53126	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53118	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53137	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53121	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53115	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAL18109	135	TT R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
ABN50191	92	T R . . . N .	.SI.HRKF.NTSC-.VYFPRNSTME	Q PN.DV.H.TSQG . .	145
ABQ65644	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PG.DV.H.AS.GT . .	144
CAE53130	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAR16413	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
ABN80940	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TX.G . .	188
CAE53129	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
CAE53127	135	T Q . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TR.G . .	188
AAQ76083	135	T Q . . . N .	.SI.HSKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
AAR16399	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PK.DV.H.TS.G . .	188
AAL18140	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PK.DV.H.TS.G . .	188
ABN80961	135	T Q . . . N .	.SI.HRKF.STPC-.VYFPRNSTME	Q PN.AV.H.TS.G . .	188
AAP03682	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	R N.DV.HNTS.G . .	188
ABC84845	135	T R . . . N .	.SI.HRKF.NNLC-.VYFPRNSTME	Q PN.EV.H.TS.G . .	188
ABC84838	135	T R . . . N .	.SI.HRKF.NNLC-.VYFPRNSTME	Q PN.DV.H.TS.GI . .	188
ABN80960	135	T Q . . . N .	.I.HRKF.NTPC-.VYFPRNSTME	Q PN.AV.H.TK.G . .	188
ABQ65670	91	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.VV.H.TS.GI . .	144
ABN50161	92	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q PN.DL.HITS.G . .	145
ABF01032	135	T Q . . . N .	.SI.HSKF.NTPC-.VYFPRNSTME	Q PN.DV.HXSR.G . .	188
ABF22632	135	T Q . . . N .	.SI.HRKF.NAPC-.VYFPRNST.E	Q PN.DV.HAXS.G . .	188
AAR16371	135	T Q . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.R.TR.G . .	188
ABC71316	135	T R . . . N .	.SI.QRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
AAL18092	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNST.E	Q PN.DV.H.TROG . .	188
AAD34956	140	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q AN.EV.H.PS.G . .	193
AAS18343	135	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSTME	Q AN.DV.H.TK.G . .	188
ABN50146	92	T R . . . N .	.SI.HRKF.NTPC-.VYFPRNSAME	Q PD.DV.HATS.G . .	145
AAQ76069	135	T Q . . . N .	.SI.HSKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TR.G . .	188
AAL18143	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.R.TS.G . .	188
AAL18146	135	T R . . . N .	.SI.HRKY.NTLC-.VYFPRNSTME	Q PN.DV.H.TS.G . .	188
AAR16360	135	T R . . . N .	.SI.HRKF.NTLC-.VYFPRNSTME	Q PN.DV.H.TRXGI . .	188
AAL18137	135	T R . . . N .	.SI.HRKY.NTLC-.VYFPRNSTME	Q PN.DV.H.TS.G . .	188

ABN50172	92	T...R...R	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.H.TSWG..	145
CAE53117	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABN80914	135	T...X...N	.SILHRKF.NTPC-.VYFPRNSTME	Q...PK.DV.H.TS.G..	188
ABN50168	92	TV...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	145
ABO65658	77	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	130
CAE53138	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAR16372	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.Q.TR.G..	188
AAP03678	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...QN.DV.HNTS.G..	188
AAO76067	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABO65677	89	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TSQG..	142
AAN46474	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAN46477	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAR16397	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.EV.H.TS.G..	188
AAO76080	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAN46475	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAN46469	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
ABO65657	91	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	144
ABN80941	134	T...Q...N	.SI.HRKF.STPC-.VYFPRNSTME	Q...PN.AV.H.TS.G..	187
AAP03676	135	T...R...N	.SI.HRKF.YTPC-.VYFPRNSTME	Q...PN.DV.HITS.G..	188
AAN46471	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAO76065	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAN46473	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
ABN80943	135	T...Q...N	.SI.HRKF.NTAC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAO76078	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83905	135	TV...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HNTR.G..	188
AAR16343	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.GI..	188
AAO76077	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAN46476	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
ABF01033	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAN46467	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAN46472	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAP03669	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.R.TS..	188
AAL18120	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PK.DV.H.TK.G..	188
ABF22641	135	T...Q...N	.SIIHRKF.NTAC-.VYFPRNSTME	Q...SN.DV.H.ASQG..	188
AAR16415	135	T...R...N	.SI.HRKY.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAD34964	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TRGG..	188
AAR16344	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	X...PK.DV.H.TR.G..	188
ABN80952	134	T...Q...N	.SI.HRKF.STPC-.VYFPRNSTME	Q...PN.AV.H.TS.G..	187
AAP83917	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAN46470	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
AAO76075	135	T...Q...X	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAL18096	133	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG.G..	186
AAV32574	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAN46468	140	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.H.PSQGI..	193
CAE53113	135	T...R...N	.SI.HRKF.STPC-.VYFPRNSTME	Q...PN.DV.H.PS.G..	188
AAR16394	138	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.GA..	191
AAL18153	134	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	187
ABN80956	135	T...Q...N	.SI.HRKF.NTAC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAP03677	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.R.TS.G..	188
ABO65655	74	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	127
CAE53123	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.H.TS.G..	188
AAL18116	135	T...L...N	.RSIHRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.AR.G..	188
AAV32568	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAO76049	121	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	174
AAP83901	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.EV.H.TT.G..	188
AAV32573	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAR16417	135	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.SR.G..	188
ABF01024	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAV93930	92	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...D.DV.Y.TS.G..	145
AAV32566	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAV32567	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAV32570	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
ABD24378	135	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAO76052	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.GI..	188
AAO76050	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAO76061	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...SN.DV.H.TR.G..	188
AAV32558	135	T...Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
CAE53132	135	T...R...N	.SILHRKF.NTPC-.VYFPRNSTME	Q...PK.DV.H.TS.G..	188
AAV32562	135	T...Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
ABF01040	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	K...PN.DV.H.TRKG..	188
AAV32560	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAP83912	136	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.R.TR.G..	189
AAR16363	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PK.DV.HITR.G..	188
AAL18127	135	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABO65672	89	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PK.VV.H.TS.G..	142
AAL18147	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...XPN.GV.H.TROG..	188
AAV32555	135	T...Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAL18128	135	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16340	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TK.G..	188
ABO65664	76	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	129
AAR16386	135	T...Q...N	.RSI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABN50184	92	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS..	145
ABF22640	131	T.X...R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.HATS.G..	184
AAV32556	135	T...Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAL18121	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.R.TS.G..	188
AAR16345	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.X.TR.G..	188
ABN50141	92	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TSQG..	145
AAV32571	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAR16381	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.HVTR.G..	188
ABA01046	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.NV.HATR.G..	188
AAP83907	135	T...Q...N	.SI.HSKF.NTPC-.VYFPRNSTME	Q...PN.DV.Y.TR.G..	188
AAP83916	135	T...IR...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TT.G..	188
AAR16389	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TQ.G..	188
ABA01047	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.NV.HATR.G..	188
AAV32582	135	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
ABO65653	89	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	142
AAV32557	135	T...Q...N	.I.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TG..	188
AAL18151	130	T...R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TT.G..	183
AAL18097	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TK.G..	188
ABA29190	90	T...R...N	.SIIHRKF.NTPC-.VYFPRNSTME	Q...RN.DV.H.TSQG..	143
ABC84843	135	T...R...N	.XI.HRKF.NTPC-.VYFPRNSTME	Q...PN.DV.H.TS.GI..	188
CAE53133	135	T...Q...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.AV.HATR.G..	188
AAO76059	135	T...Q...N	.SI.HSKY.NTPC-.VYFPRNSTME	H...PN.DV.H.TR.G..	188

AAR16392	135	T....Q...N..SI.HGKF.NTLC-.VYFPRNSAME	Q...PN.DV.H.AR.G..	188
AAR16369	135	T....Q...N.RSI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAPO3674	135	T....R...N..SI.HRKF.NTPC-.VYFPRNSMME	Q...PN.DV.HITS.G..	188
ABA29189	90	T....R...N..I.HRKF.NTPC-.VYFPRNSTMD	Q...QN.DV.H.TSQG..	143
AAV32580	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.H.TG...G..	188
AAR16338	135	T....R...N..SI.HRKF.NNLC-.VYFPRNSTME	Q...PN.DV.R.TS.G..	188
ABA29188	90	T....R...N..I.HRKF.NTPC-.VYFPRNSTMD	Q...QN.DV.H.TSQG..	143
ABA01036	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAP83898	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.XR.G..	188
AAPO3667	135	T....Q...N..SI.HRKF.NTPC-.VYFPRNSMME	K...QN.DV.HMNTS.G..	188
AAV32561	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.H.TG...G..	188
AAV32578	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.H.TG...G..	188
ABA01035	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAL18119	135	T....Q...N.RSI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.HPTR.G..	188
ABA01038	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
ABA01037	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
ABA01039	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAV32579	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.H.TG...G..	188
AAS18345	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.TK.G..	188
ABO65674	91	T....R...N..SI.HTKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	144
AAPO3675	135	T....R...N..SI.HRKF.NTPC-.VYFPRNSTME	E...PN.NV.HITS.G..	188
ABN80975	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.TK.G..	188
AAS18344	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.TK.G..	188
AAS18346	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.TK.G..	188
AAQ76056	134	T....Q...N..SI.HSKY.NTPC-.VYFPRNSTME	Q...PN.DV.HATR.G..	187
ABO65661	91	T....R...N..SISHRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	144
AAL18156	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTMQ	Q...PN.DV.H.TK.G..	188
AAS18347	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.TK.G..	188
ABA01042	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAQ76071	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.DV.HATR.G..	188
ABC84836	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.EV.H.T.G..	188
ABC84839	135	T....R...N..SI.HRKY.NNLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAPO3688	135	T....R...N..GX.HRKF.NTPC-.VYFPRNSTME	K...PN.DV.HITS.G..	188
AAP83913	135	T....R...N.XSI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16408	135	T....R...N..SI.HRKY.NNLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAL18112	135	T....R...N..SI.HRKF.NTLC-.VYFPRNST.E	Q...PN.DV.H.TT.G..	188
AAR16378	136	...Q...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.EV.N.TR.G..	188
AAV32564	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	R...PN.DV.H.TG...G..	188
AAR16377	135	T....Q...N.RSI.HRKF.NTLC-.VYFPRNSTME	K...PN.DV.HPTR.G..	188
AAV32049	135	TV...R...N..SI.QRKF.NNLC-.VYFPRNSTME	Q...PN.DV.HNTR.G..	188
AAV32058	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.HISRGG..	188
ABF22627	135	T....R...N..SI.HRKF.NAP-X.VYFPRNSTME	Q...PB.DV.HAAS.G..	188
AAL18094	135	T....Q...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.C.TK.G..	188
AAQ76074	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTMQ	Q...PN.DV.H.TR.G..	188
ABA01030	135	T....R...N..SI.QRKF.STPC-.VYFPRNSTMK	Q...PN.SV.H.TS.G..	188
AAQ76082	135	T....Q...N..SI.HNKF.NTLC-.VYFPRNSTMQ	Q...PN.DV.H.TR.G..	188
AAL18134	135	T....Q...N..SI.HGKF.NTLC-.VYFPRNSAME	Q...SN.DV.H.AR.G..	188
AAV32048	135	TV...R...N..SI.QRKF.NNLC-.VYFPRNSTME	Q...PN.DV.HNTR.G..	188
ABA01044	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAL18155	134	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.NV.H.TR.G..	187
CAE53124	135	T....Q...N..SI.HRKF.NTAC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABA01050	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAL18149	135	T....Q...N..SI.HSKF.NTPC-.VYFPRNSTME	X...PN.DV.H.TRXG..	188
AAQ76068	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TK.G..	188
AAR16393	136	...Q...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.EV.N.TR.G..	188
ABA01032	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAQ76058	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTMX	Q...PN.DV.H.TR.G..	188
ABA01040	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAS18356	135	T....R...N..SI.HRKF.NNPC-.VYFPRNSTMD	Q...PN.DV.H.TX...G..	188
ABF01023	135	T....IQ...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAQ76064	135	T....Q...N..SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAR16380	135	TV...R...N..SI.HRKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	188
AAQ76073	135	T....Q...N..SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABF22648	135	T....R...N..SI.HRKF.NIP-Y.VYFPRNSTME	Q...PN.NV.H.TSQG..	188
AAPO3653	133	T....R...N..SI.HRKF.NTPC-.VYFPRNST.E	Q...PK.VV.H.TS.G..	186
ABR26565	135	T....R...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.R.TT.G..	188
CAE53125	135	T....Q...N..SI.HRKF.NTAC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
ABF01039	135	T....Q...N..SI.HSKF.NTPC-.VYFPRNSTME	X...PN.DV.H.TRXG..	188
ABA01028	135	T....R...N..SI.QRKF.STPC-.VYFPRNSTMK	Q...PN.SV.H.TS.G..	188
ABO65648	89	T....R...N..SI.HRKF.NTPC-.VYFPRNST.E	Q...PK.VV.H.TS.G..	142
ABA01033	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAV32563	135	T....Q...N..I.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.HATR.G..	188
ABN50188	92	T....R...N..GX.HRKF.NTPC-.VYFPRNSTME	K...PN.DV.HITS.G..	145
AAR16352	135	T....R...YN..SI.HRKF.NTLC-.VYFPRNSTME	H...SN.DV.R.TS.G..	188
ABC84834	135	T....R...N..SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TSQG..	188
AAL18125	135	T....Q...N..SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.AR.G..	188
AAD34965	134	TV...R...N..SI.HRKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	187
ABA01029	135	T....R...N..SI.QRKF.STPC-.VYFPRNSTMK	Q...PN.SV.H.TS.G..	188
ABO65645	91	T....R...N..SI.HRKF.NAPC-.VYFPRNST.E	Q...PN.DV.HAXSXG..	144
ABA01019	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	K...SN.DV.H.TSHG..	188
ABF01026	135	T....Q...N..SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAP83906	135	T....Q...N..SI.HGKF.NTLC-.VYFPRNSTME	Q...PN.DV.L.AR.G..	188
ABA01015	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	K...SN.DV.H.TSHG..	188
ABA01049	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HAXS.G..	188
ABA01043	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.V.HATS.G..	188
AAQ76076	135	T....Q...N..SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAQ76051	135	T....Q...N..SI.HSKF.NTLC-.VYFPRNSTMD	Q...PN.DV.H.SRQG..	188
AAV32572	135	T....Q...N..SI.HRKFNDTPC-.VYFPRNST.E	Q...PN.DV.H.TG...G..	188
AAR16410	135	T....R...N..SI.QRKF.NTLC-.VYFPRNST.E	Q...PN.GV.H.TSQG..	188
AAR16342	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.DV.HATT.G..	188
AAR16364	132	T....R...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.T.G..	184
AAL18100	135	T....Q...N..SI.HRKF.NTLC-.VYFPRNSTAKE	Q...SN.DV.H.IR.G..	188
ABA01031	135	T....R...N..SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
AAV32577	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.NV.H.TG...G..	188
AAV32575	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTME	Q...PN.NV.H.TG...G..	188
AAV32569	135	T....R...N..SI.HRKFNDTPC-.VYFPRNSTMD	Q...PN.DV.H.TG...G..	188
CAE53128	135	T....Q...N..SI.HRKF.XXPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAR16366	135	T....Q...N.RSI.HRKF.NTLC-.VYFPRNSTME	Q...PK.DV.HPTR.G..	188
ABN50176	92	TX...R...N..SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.R.TS.G..	145
ABC84840	135	T....R...N..SI.HRKY.NNLC-.VYFPRNSTME	Q...PN.DV.H.TI.G..	188
AAL18106	135	T....Q...N..SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.NV.H.TRXG..	208
ABN50178	92	T....R...N..SI.HRKF.NTPC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	145
AAD34952	140	T....R...N..SI.HRKF.NALC-.VYFPRNSTME	Q...PN.AV.HPTC.G..	193

AAL18158	135	T....Q...N	RSI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.C.TR.G..	188
AAR16383	134	T....R...N	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.IR.G..	187
AAQ76053	134	T....Q...N	.SI.HSKY.NTPC-.VYFPRNSTME	Q...PN.DV.HATR.XG..	187
ADD34957	140	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...AN.DV.HAPS.GL.	193
ABN50190	92	TV...R...N	.SI.HRKF.NAPC-.VYFPRNSAME	Q...PD.DV.RATS.G..	145
ABQ65668	89	T....R...N	.SI.HRKF.NTPC-.VYFPRYSTIE	Q...PN.VV.H.TS.G..	142
ABA01048	135	T....R...X	.SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.VV.HATR.G..	188
ABA01013	135	T....R...N	.SI.HRKF.STPC-.VYFPRSSSTMK	K...PN.NV.H.TSHG..	188
ABA01014	135	T....R...N	.SI.HRKF.STPC-.VYFPRSSSTMK	K...PN.NV.H.TSHG..	188
AAD34963	135	T....R...QN	.SI.HRKF.NTLC-.VYFPRNSTMK	Q...PN.DV.H.TS.G..	188
AAN46466	140	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...AN.DV.HAPS.GL.	193
AAP83896	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q..APN.DV.R.TR.G..	188
ABA01041	135	T....R...N	.SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATI.G..	188
AAL18110	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTMK	Q...PN.DV.RIAA.G..	188
ABQ65641	91	TV...R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.VV.H.TS.G..	144
AAV32581	135	T....R...N	.SI.HRKFNDTLC-.VYFPRNSTME	Q...PN.DV.H.SG..	188
AAK20255	134	T....Q...N	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.MR.G..	187
AAL18135	135	T....R...XN	.SI.HRKF.NTPC-.VYFPRNSM.E	Q...PD.DV.H.TS.G..	188
ABA01017	135	T....R...N	.SI.HRKF.STPC-.VYFPRSSSTMK	K...PN.YV.H.TSHG..	188
AAR16382	135	T....Q...N	RSI.HRKF.NTLC-.VYFPRNSTME	Q...PK.DV.HPTRQG..	188
AAP83894	135	T....R...N	.SI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.--.G.	186
ABA01018	135	T....R...N	.SI.HRKF.ITPC-.VYFPRSSSTMK	K...SN.DV.H.TSHG..	188
ABA01026	135	T....R...N	.SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.SV.HGTS.G..	188
AAQ76070	135	T....Q...N	.SI.HSKY.NTLC-.VYFPRNSTME	X...PN.DV.H.TR.G..	188
AAQ3681	135	T....R...N	.GI.HRKF.NTP-.VYFPRNS.IE	Q...PN.DV.HITSQG..	188
AAP83918	135	T....Q...N	.SI.HSKF.NTLC-.VYFPRNSTME	Q...PN.HV.H.PR.G..	188
ABN80931	135	T....Q...N	.SIXHRKF.STPC-.VYFPRNSTME	Q...PN.AV.H.TS.GX.	188
ABA01045	135	T....R...N	.SIXHRKF.STPC-.VYFPRNSTMK	Q...PN.NV.HATS.G..	188
ABA01011	136	T....R...N	.SI.HRKF.STPC-.VYFPRNGTMK	Q...PS.DV.RSTS.G..	188
AAQ76060	135	T....Q...N	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR..	188
ABN50145	92	T....R...N	.GI.HRKF.NTP-.VYFPRNS.IE	Q...PN.DV.HITSQG..	145
ABA01016	135	T....R...N	.SI.HRKF.STPC-.VYFPRSSSTMK	K...PN.YV.H.TSHG..	188
AAS18352	135	T....R...N	.SI.HRKF.NTPC-.VYFPRXSTMD	Q...AN.DV.H.TKXG..	188
AAR16407	135	T....Q...K	RSI.HRKF.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
AAS18342	135	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTMD	Q...PN.DVXH.TK.GX.	188
ABA01023	135	T....R...N	.SI.QRKF.STPC-.VYFPRNSTIK	Q...PN.SV.HATS.G..	188
ABA01027	135	T..S.R...N	.SI.QRKF.STPC-.VYFPRNSTMK	Q...PN.SV.H.TS.G..	188
ABA01022	135	T....R...N	.SI..RKF.STPC-.VYFPRISTMK	K...N.DV.H.TSHG..	188
AAV32576	135	T....R...N	.SI.HRKFNTPC-.VYFPRNSTME	Q...PN.NV.H.TXGT..	188
ABA01012	135	T....R...N	.SI.HRKF.STP-.VYFPRNSTMK	Q...AN.DV.RAAS.G..	188
ABA01021	135	T....R...N	.SI.HRKF.STPC-.VYFPRISTMK	K...N.NV.H.TSHG..	188
AAR16406	135	T....R...N	.SI.HRKF.NVLC-.VYFPRSSSTME	Q..FPN.DV.HITRQG..	188
ABA01024	135	T....R...N	.SI.HRKF.STPC-.VYFPRNSTMK	Q...PN.SV.HGTS.G..	188
AAL18122	135	T....Q...RN	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.TR.G..	188
ABN50149	92	T....R...N	.CI.HRKF.NTPC-.LYFPRNSTME	Q..Q..PN.DVHRH.T.G..	145
ABA01025	135	T....R...N	.SI.HRKF.STPC-.VYFPRNSIMK	Q...PN.SV.HGTS.GL.	188
ABA01034	135	T....R...N	.SI.HRKF.STPC-.VYFPRNSTMK	Q.X..PN.NV.HPTR.GX.	188
ABA29173	90	T....R...N	RSI.HRKF.NTPC-.VYFPRNSTME	Q...AN.DV.RGTS.G..	143
ABN50187	92	T....R...N	.SI.HRKFRTSC-.VYFPRNSTME	Q...PN.DV.H.TS.R..	145
ADD34961	145	T....Q...N	.SI.HRKF.STP-.VYFPRNSTME	Q...SN.NV.HATS.G..	188
AAR16409	135	T....R...N	.SIMHRKF.NTLC-.VYFPRNSTME	Q...PN.AV.H.IT.R..	188
AAQ76079	134	T....Q...N	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.L.TRKG..	187
ABN50088	92	T....Q...N	.SI.HRKF.STP-.VYFPRNSTME	Q...SN.NV.HATS.G..	145
ADD34953	140	T....R...N	.SI.HGKF.NALC-.VYFPRNSTAME	Q...PN.AV.R.AR.G..	193
ABA01020	135	T....R...N	.SI.HRKF.STPC-.VYFPRSSSTMK	K...PN.YX.H.TSHG..	188
AAL18123	135	T....Q...N	RSI.HRKF.NTLC-.VYFPRNSTME	Q...K.NV.HPTR.G..	188
ABF22645	135	TT...R...N	.SI.HRKF.NIPC-.VYFPRNSTME	Q...PK.DV.C.TS.RL.	188
AAQ93931	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.AS.G..	155
CAE53136	135	T....Q...N	.SI.HRKLXXPC-.VYFPRNSTME	Q...PN.AV.H.TR.G..	188
AAQ76066	134	T....Q...N	.SI.HSKY.NTLC-.VYFPRNSTME	Q...PN.DV.H.IRGG..	187
AAK93936	102	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	155
AAK93939	102	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PN.DV.H.TS.G..	155
AAK93932	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93925	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93934	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93928	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93940	102	T....R...N	.SI.HRKF.NAPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93937	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.H.TS.G..	155
AAK93926	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...PD.DV.HATS.G..	155
AAK93933	102	T....R...N	.SI.HRKF.NTPC-.VYFPRNSTME	Q...D.DV.H.TS.G..	155
ABS81428	107	T....R...N	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.C.TRQG..	160
AAP83922	135	T....R...N	RSI.HRKF.NTLC-.VYFPRNSTKE	Q...PN.DV.H.TR.GD.	188
ABF22647	131	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TRQG..	184
ABF22644	134	T....Q...N	.SI..RKF.NTA-.VYFPRNSTME	Q..GPD.GV.H.TQQG..	187
ABS81427	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TRQG..	160
ABF22643	134	T....Q...N	.SI..SKF.HTA-.VYFPRNSTME	Q..APN.DV.H.AQQG..	187
ABA19433	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19434	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19438	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19436	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19416	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19417	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19439	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	RR..PN.DV.H.TCQG..	160
ABA19443	108	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TRQG..	160
ABA19444	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PD.DV.H.TC.G..	160
AAK93935	102	T....R...N	.SI.HRKFNTPC-.VYFPRNSTME	Q...PD.DV.R.TS.G..	155
ABA19420	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19429	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19418	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19430	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19415	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19425	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19432	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19419	108	T....R...D	.NI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19435	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..N.DV.H.TCQG..	160
ABA19440	107	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.HITCQG..	160
ABA19442	108	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19423	108	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19441	107	T....R...D	.SI.YRKF.NTP-YKVCFSRNSTKE	RR..PN.DV.H.TCQG..	160
ABA19414	107	T....Q...D	.GI.HRKF.NTP-YKVCFSRNSTKE	QR..SN.DV.H.TCQG..	160
ABA19428	108	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TCQG..	160
ABA19427	108	T....R...D	.SI.HRKF.NTP-YKVCFSRNSTKE	QR..PN.DV.H.TWQG..	160
ABS81425	107	T....R...D	.SI.HRKF.NA-YKVCFSRNSTKE	QR..PN.EV.H.TRQR..	160

ABA19431	108	....R...D..	SI.HRKF.NTP-YKVCFSRNSMKE	.QC..PN.DV.H.TCQG..	160
ABA19421	108	....R...D..	SI.HRKF.NTP-YKVCFSRNSMKE	.QR..PN.DV.H.TCQG..	160
ABA19426	108	....R...D..	NI.HRKF.NTP-YKVCFSR.STKE	.QR..PN.DV.H.TCQG..	160
ABA19437	107	T....R...D..	SI.HRKF.NTP-YKVCFSRNSMKE	.RR..PN.DV.H.TCQG..	160
ABS81426	107	T....R...D..	SI.HREC.NTP-YKVCFSRNSMKE	.RR..PN.DV.H.THQG..	160

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda K H
0.328 0.139 0.522

Gapped

Lambda K H
0.267 0.0594 0.140

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)

RAY-FINNED FISH Alignments

Query	1	VIIHPHFCHCTC	WTVIRK	WISDPNS	QEMGLADRVV	WLP	PHSLFKIC	CDT	----	G	----	50		
AAR03708	137	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LQ	.YP	-K	----	180	
ABG47788	124	..SR...R	..AMR	----	GGGICFSFRT	.PI	.K.	.SH	.LH	.YP	-K	----	167	
ABG47790	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.SH	.LH	.YP	-K	----	167	
ABG47796	124	..PM..R	.N	.AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LH	.YP	-K	----	167
ABG47743	122	..SM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	165	
ABG47767	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47721	124	..SM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47757	123	..PM..R	.N	.AMR	----	GGGICFSFRTM	.PI	.K.	.NSH	.LH	.YP	-K	----	166
ABG47722	124	..SM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47798	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.HP	-K	----	167	
ABG47715	124	..PM..R	.N	.AMR	----	GGGICFSFRTMIPV	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47775	124	..PM..R	.S	.AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-Q	----	167
ABG47732	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47741	124	..PM..R	.N	.AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LH	.YP	-K	----	167
ABG47799	124	..PM..R	..AMR	----	GGGICSFTRT	.PI	.K.	.NSH	.LH	.HP	-K	----	167	
ABG47785	124	..PR..R	..AMR	----	GGGICFSFRT	.PV	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47723	121	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	164	
ABG47744	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47700	124	..PM..R	.N	.AMR	----	GGGICFSFRTM	.PI	.K.	.NSH	.LH	.YP	-K	----	167
ABG47752	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47693	124	..PM..R	.N	.AMR	----	GGGICFSFRTMIP	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47706	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47710	124	..PR..R	..AIR	----	GGGICFSFRT	.PI	.K.	.TSH	.LH	.YP	-K	----	167	
ABG47716	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47746	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47699	124	..SR..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47738	124	..SM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NTH	.LH	.YP	-K	----	167	
ABG47719	124	..PM..R	.S	.AMR	----	GGGICFSFRTS	.PI	.K.	.NSH	.HH	.YP	-K	----	167
ABG47720	120	..PR..R	..AIR	----	GGGICFSFRT	.PI	.K.	.TSH	.LH	.YP	-K	----	163	
ABG47786	124	..SR..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47694	124	..PM..R	..AMR	----	GGGICFSFRTS	.PI	.K.	.NTH	.LH	.YP	-K	----	167	
ABG47697	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LQ	.HP	-K	----	167	
ABG47776	111	..PM..R	.S	.AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-Q	----	154
ABG47691	114	..PM..R	.N	.AMR	----	GGGICFSFRTM	.PI	.K.	.NSH	.ML	.YP	-K	----	157
ABG47789	124	..SM..R	..AMR	----	GGGICXFSRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47712	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NAH	.LH	.YP	-K	----	167	
ABG47784	124	..PM..R	..AMR	----	GGGICSFTRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47748	123	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LQ	.YP	-K	----	166	
ABG47782	124	..PR..R	..AIR	----	GGGICFSFRT	.PI	.K.	.TSH	.LH	.YP	-K	----	167	
ABG47711	124	..PM..R	.S	.AMR	----	GGGICSFTRTS	.PI	.K.	.NSH	.LH	.YP	-Q	----	167
ABG47770	124	..PR..R	..AIR	----	GGGICFSFRT	.PI	.K.	.TSH	.LH	.YP	-K	----	167	
ABG47772	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LQ	.YP	-K	----	167	
ABG47703	124	..PM..R	..AMR	----	GGGICFSFRTS	.PI	.K.	.NSQ	.LQ	.YP	-K	----	167	
ABK33045	124	..SR..R	.A	.AMR	----	GGGICFSFRTM	.PI	.K.	.NSH	.LH	.YP	-K	----	167
ABG47730	124	..PM..R	..AMR	----	GGGICFSFRTS	.PI	.K.	.NSQ	.LQ	.YP	-K	----	167	
ABG47704	124	..PR..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47762	124	..PM..R	.N	.AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.PH	.YP	-K	----	167
ABG47718	124	..PM..R	.S	.AMR	----	GGGICFSFRTS	.PI	.K.	.NSH	.HH	.YP	-K	----	167
ABG47734	124	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LY	.YP	-K	----	167	
ABG47725	105	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	148	
ABG47792	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LQ	.YP	-K	----	167	
ABG47777	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LL	.YP	-K	----	167	
ABG47769	122	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	170	
ABG47783	124	..SM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NAH	.LH	.YP	-K	----	167	
ABG47774	123	..PM..R	.N	.AMR	----	GGGICNFSRIM	.PI	.K.	.NSQ	.LH	.YP	-K	----	166
ABG47781	124	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LY	.YP	-K	----	167	
ABG47764	124	..PK..R	..AMR	----	GGGICFSFRTM	.PM	.K.	.TSH	.LQ	.YP	-K	----	167	
ABG47708	124	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47787	124	..PM..R	.N	.AMR	----	GGGICFSFRIMPT	.K.	.TSH	.VH	.YP	-Q	----	167	
ABG47735	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LY	.YP	-R	----	167	
ABG47765	123	T..SL..R	..AMR	----	GGGFCFSFRTS	.PV	.K.	.SH	.PL	.FP	-K	----	167	
ABG47707	124	..PM..R	..SMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LH	.YP	-K	----	167	
ABG47736	122	T..SM..R	..AMR	----	GGGFCFSFRT	.PV	.K.	.H	.LL	.FP	-K	----	171	
ABG47756	124	..PM..R	..SMR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	167	
ABG47709	124	..PM..R	..AMR	----	GGGICFSFRT	.PI	.K.	.NTH	.LH	.YP	-K	----	167	
ABG47771	124	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LY	.YP	-K	----	167	
ABG47751	120	..SM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.SH	.LY	.YP	-K	----	168	
ABG47698	123	..SM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NAH	.LH	.YP	-K	----	166	
ABG47759	91	..PR..R	..AIR	----	GGGICSFTRTM	.PI	.K.	.TSH	.LH	.YP	-K	----	134	
ABG47793	114	..PM..R	.A	.AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LH	.YP	-K	----	157
ABG47754	124	..PM..R	..AMR	----	GGGICFSFRT	.TI	.K.	.N	.H	.LH	.YP	-K	----	167
ABG47778	124	..PM..R	.A	.AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.LH	.YP	-K	----	167
ABG47742	124	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.N	.H	.LH	.YP	-K	----	167
ABG47740	101	..PM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LH	.YP	-K	----	144	
ABM46911	163	TV..SL..R	..AAMR	----	GGGFCFSFTRTQIPD	.K.	.TSN	.DL	.FP	-K	----	207		
ABG47753	124	..PM..R	.YN	.AMR	----	GGGICFSFRT	.PM	.K.	.NSQ	.LH	.YP	-K	----	167
ABG47749	124	..PM..R	..AIR	----	GGGICSFTRT	.PI	.K.	.NSH	.LY	.YP	-K	----	172	
ABG47763	123	T..AM..O	..AIR	----	GGGICSFTRTQ	.PV	.K.	.TSN	.LL	.YPIRKLH	----	172		
ABG47696	113	..PM..R	..AIR	----	GGGICFSFRT	.PI	.R.	.N	.H	.LH	.YP	-K	----	156
ABG47773	124	..PM..R	.FN	.AMR	----	GGGICFSFRT	.PI	.K.	.NSQ	.PH	.YP	-K	----	167
ABG47727	30	T..PM..R	.I	.AMR	----	GGGICFSFRT	.PV	.K.	.NTH	.LH	.YP	-K	----	74
ABG47692	124	..SM..R	..AIR	----	GGGICFSFRT	.PI	.R.	.NSH	.LY	.YP	-K	----	167	
ABG47726	31	T..PM..R	.I	.AMR	----	GGGICFSFRT	.PV	.K.	.NTH	.LL	.YP	-K	----	75
ABG47695	120	..SM..R	..AIR	----	GGGICFSFRT	.PI	.K.	.NSH	.LY	.YP	-K	----	163	
ABG47750	103	..PM..R	..AIR	----	GGGICFSFRT	.PX	.K.	.NSH	.LY	.YP	-K	----	151	
ABG47794	116	T..SM..O	..AIR	----	GGGFCFSFRT	.O	.R.	.TSQ	.LL	.YP	-K	----	165	
ABG47747	61	..PM..R	..AMR	----	GGGICSFTRT	.PI	.K.	.NSH	.LH	.YP	-K	----	104	

ABG47768	117	...PR...R	...AMR----	GGGICFSFSRT	.PV	.KS	.NSH	.LQ	.YP	----	K	----	160		
ABK33043	124	...LR...R	...AMR----	GGGICFSFSRT	.PI	.K	.NSH	.LH	.YP	----	K	----	167		
ABG47761	31	...PM...R	...AMR----	GGGICFSFSRT	.PI	.K	.NSH	.LY	.YP	----	K	----	74		
ABG47766	123	T...M...R	...AIR----	GGGICFSFSRT	.PV	.K	.NSH	.LL	.YP	----	K	----	167		
ABG47795	131	...PK...R	...AIR----	GGGICFSFSRT	.PV	.K	.NSH	.LH	.YP	----	K	----	174		
ABG47733	116	...SK...R	...AIR----	GGGICFSFSRT	.PI	.K	.NSH	.LY	.YP	----	K	----	159		
ABG47755	108	T...SM...R	.R	.ALR----	GGGICFSFSRT	.PV	.R	.NSH	.SX	.YPKIKIFK	----	----	157		
ABG47731	123	T...SM...R	...ALR----	GGGICFSFSRT	.PV	.R	.NSH	.SL	.YPKIKIFK	----	----	----	172		
ABG47705	105	...PK...R	...AIR----	GGGICFSFSRT	.PI	.K	.NSQ	.LY	.YP	----	K	----	148		
ABG47800	119	...PM...R	...IAMR----	GGGICFSFSRT	.PN	.S	.NSQ	.MH	.YP	----	Q	----	162		
ABG47780	61	...PM...R	...AIR----	GGGICFSFTRT	.PI	.K	.NSH	.LH	.YP	----	KRNILO	----	109		
ABM65103	163	TV..SL...R	...AAMR----	GGGFCSFTRTHIPD	.K	.TSH	.NL	.FP	----	----	----	----	207		
ABG47714	24	T...ST...R	...AIR----	GGGFCSFTRTQ	.PE	.R	..	.SH	.LL	.YP	----	KIKTFR	73		
AA83678	139	V..LS...R	...AAIR----	GGGFCSFSRT	.PE	.K	..	.SS	.HL	----	----	----	179		
ABG47779	130	...PM...R	.A	.AMR----	GGGICFSFSQT	.PI	.K	.NSQ	.LH	.YP	----	K	----	173	
ABG47791	31	T...SM...Q	...AXR----	GGGFCSFTRTN	.PX	.R	.NSN	.LL	.YPKIKLA	----	----	----	80		
AA116495	163	TV..SL...R	...AAMR----	GGGFCSFTRTQIPD	.K	.TTH	.NL	.FP	----	----	----	----	207		
CAG03454	161	V..LF...R	...MTAIR----	GGGVCSFSRI	.PE	.K	..	.SH	.EL	.SP	----	----	203		
ABG47739	124	...LM...R	...TIR----	GGGICFSFSRT	.PI	.V	.NSR	.VH	.YP	----	K	----	167		
ABG47713	123	T...AM...L	...AIR----	GGGFCSFTRTQ	.PV	.K	.T	.N	.LL	.YPOIKKLO	----	----	172		
ABG47701	123	T...SM...R	.K	.AM	----	GGGICFSFSRT	.TPV	.R	.NTQ	.LL	.YP	----	K	167	
ABG47702	123	T...SM...R	.K	.AM	----	GGGICFSFSRT	.IPV	.R	.NSQ	.LL	.YP	----	K	167	
ABG47745	112	...PM...C	.N	.AIR	----	GGGICNFSRIM	.PL	.K	.N	.H	.LH	.YP	----	K	155
ABG47760	60	T...SM...R	...ALR----	GGGICFSFSRT	.PV	.R	.NSH	.SL	.YP	----	----	----	103		
NP 571464	163	TV..SL...R	...AAIR----	GGGFCSFTNT	.IPD	.K	.TSQ	.NL	.FP	----	----	----	207		
ABG47797	112	...PM...H	.N	.AIR	----	GGGICNFSRIM	.PV	.K	.NVQ	.LH	.YP	----	K	155	
ABG47717	87	...PM...R	...IAMR----	GGGICNFSRT	.PHGS	.NS	.MH	.YA	----	Q	----	----	130		
ABG47728	123	T...SL..PR	.S	.ALR	----	GGGFCSFSRT	.PV	.K	.T	.H	.LL	.FP	----	KRLILO	172
Q91187	169	.V..PF..QR	...LAMR----	GGGFCSFSRTH	.P	.R	.TTL	.LL	.TP	----	----	----	212		
ABD20561	173	V..LF...H	...MTAIR----	GGGVCSLSRT	.RA	.K	..	.SL	.EL	.SP	----	----	215		
ABG47724	3			GGGFCSFSRTQ	.PV	.K	..	.SH	.LL	.YP	----	----	K	30	
ABG47729	3					.PI	.K	.NSH	.LY	.YP	----	----	K	19	

Query	51	NRAVK	55
AA03708	181	RH	182
ABG47788	168	RHTL	171
ABG47790	168	RH	169
ABG47796	168	R	169
ABG47743	166	R	169
ABG47767	168	RHTL	171
ABG47721	168	R	171
ABG47757	167	RHTL	170
ABG47722	168	R	171
ABG47798	168	RH	169
ABG47715	168	RHTL	171
ABG47775	168	R	169
ABG47732	168	R	169
ABG47741	168	RH	169
ABG47799	168	RH	169
ABG47785	168	RH	169
ABG47723	165	RH	166
ABG47744	168	R	171
ABG47700	168	RHTL	171
ABG47752	168	RH	169
ABG47693	168	RHTL	171
ABG47706	168	RH	169
ABG47710	168	RH	169
ABG47716	168	RH	169
ABG47746	168	RH	169
ABG47699	168	RH	169
ABG47738	168	RH	169
ABG47719	168	RH	169
ABG47720	164	RH	165
ABG47786	168	RH	169
ABG47694	168	RH	169
ABG47697	168	RH	169
ABG47776	155	R	156
ABG47691	158	RH	159
ABG47789	168	RH	169
ABG47712	168	RHTI	171
ABG47784	168	RH	169
ABG47748	167	RH	168
ABG47782	168	RH	169
ABG47711	168	R	169
ABG47770	168	RH	169
ABG47772	168	RH	169
ABG47703	168	RH	169
ABK33045	168	RH	169
ABG47730	168	RH	169
ABG47704	168	RH	169
ABG47762	168	RH	169
ABG47718	168	RH	169
ABG47734	168	RH	169
ABG47725	149	RH	150
ABG47792	168	RH	169
ABG47777	168	R	169
ABG47769	171	R	175
ABG47783	168	RH	169
ABG47774	167	RH	168
ABG47781	168	RH	169
ABG47764	168	R	169
ABG47708	168	RH	169
ABG47787	168	RHKL	171
ABG47735	168	RH	169
ABG47765	168	R	168
ABG47707	168	RH	169
ABG47736	172	R	176
ABG47756	168	RQ	169
ABG47709	168	RH	169
ABG47771	168	RH	169
ABG47751	169	R	173
ABG47698	167	RH	168
ABG47759	135	RH	136

ABG47793	158	RH	159
ABG47754	168	RH	169
ABG47778	168	RH	169
ABG47742	168	RH	169
ABG47740	145	RH	146
ABG47753	168	R.	169
ABG47749	173	R.GR.	177
ABG47763	173	R.GR.	177
ABG47696	157	RH	158
ABG47773	168	R.TL	171
ABG47727	75	RH	76
ABG47692	168	RH	169
ABG47726	76	RH	77
ABG47695	164	RH	165
ABG47750	152	R.GR.	156
ABG47794	166	R.GR.	170
ABG47747	105	RH	106
ABG47768	161	RH	162
ABK33043	168	R.	169
ABG47761	75	RHTI	78
ABG47795	175	R	175
ABG47733	160	RHKL	163
ABG47755	158	R.GR.	162
ABG47731	173	Q.GR.	177
ABG47705	149	RHKL	152
ABG47800	163	RH	164
ABG47780	110	R.GR.	114
ABG47714	74	R.GR.	78
ABG47779	174	KH	175
ABG47791	81	R.GR.	85
ABG47739	168	RH	169
ABG47713	173	R.GR.	177
ABG47717	131	RH	132
ABG47728	173	R.GR.	177
ABG47729	20	RHKL	23

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Posted date: Jan 24, 2008 5:51 PM

Number of letters in database: 2,024,981,677

Number of sequences in database: 5,872,341

Lambda	K	H	
0.328	0.139	0.522	

Gapped

Lambda	K	H	
0.267	0.0594	0.140	

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Number of Sequences: 5872341

Number of Hits to DB: 31550355

Number of extensions: 1618417

Number of successful extensions: 3976

Number of sequences better than 100: 3

Number of HSP's better than 100 without gapping: 0

Number of HSP's gapped: 3975

Number of HSP's successfully gapped: 3

Length of query: 55

Length of database: 2024981677

Length adjustment: 28

Effective length of query: 27

Effective length of database: 1860556129

Effective search space: 50235015483

Effective search space used: 50235015483

T: 11

A: 40

X1: 15 (7.1 bits)

X2: 38 (14.6 bits)

X3: 64 (24.7 bits)

S1: 40 (19.5 bits)

S2: 65 (29.1 bits)