

QUERY		50	60	70	80																																															
UniRef90_H2G0D5	L	N	L	P	S	G	E	M	G	R	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_C4LBX3	L	N	L	P	S	K	A	L	L	G	A	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_UPI0003664E02	F	N	L	P	S	K	A	A	F	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_Q1C1J6	L	N	L	P	S	K	R	S	G	G	R	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_UPI00037002F3	F	N	L	P	S	N	A	D	M	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_C5BC06	L	N	L	P	S	S	A	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_R8ATE7	L	N	L	P	S	S	A	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_B4F2M1	F	N	L	P	S	S	E	N	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L
UniRef90_U3BH7	L	N	L	P	S	S	S	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_E1SUK1	L	N	L	P	S	S	S	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_V9HDJ7	F	N	L	P	S	S	S	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_G2DT68	F	N	L	P	S	S	K	N	H	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_W0JZ13	M	N	V	P	S	S	D	R	M	G	R	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_UPI000395B8DC	L	N	L	P	S	S	K	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_P77919	M	N	V	P	S	S	K	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_UPI00030969E9	L	N	L	P	S	S	S	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_G4CI3	F	N	L	P	S	S	G	R	H	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_A6FE77	L	N	L	P	S	S	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_R7U7Q2	F	N	L	P	S	S	K	A	R	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L
UniRef90_A4BHB4	L	N	L	P	S	S	G	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_UPI0002DD6B95	F	N	L	P	S	S	A	V	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_UPI00040F95E2	L	N	L	P	S	S	G	N	R	P	N	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_R9PF66	L	N	L	P	S	S	R	R	Q	Q	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_C1D9A6	L	N	L	P	S	S	R	R	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_X2HED9	F	N	L	P	S	S	K	S	T	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L
UniRef90_V5FDP2	L	N	L	P	S	S	K	A	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_B1L384	M	N	V	P	S	S	K	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_D2TZX4	L	N	L	P	S	S	N	H	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_V4Y011	M	N	V	P	S	S	G	R	L	L	E	R	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_UPI0003B4ABC8	L	N	L	P	S	S	N	K	K	N	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L
UniRef90_W2CGJ2	N	N	L	K	S	S	K	M	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_M4U2H5	L	N	L	P	S	S	S	E	R	H	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_Q9HHN3	M	N	V	P	S	S	E	R	H	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_J7UB41	L	N	L	P	S	S	N	N	M	G	R	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_UPI0003B31261	F	N	L	P	S	S	Q	R	S	H	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_Q7P144	L	N	L	P	S	S	R	H	M	G	S	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L		
UniRef90_Q5V2T4	M	N	M	P	S	S	D	R	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_A2BJ23	M	N	V	P	S	S	R	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_D8J2L8	M	N	V	P	S	S	D	R	I	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L
UniRef90_A1RRV1	M	N	V	P	S	S	K	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_D3S167	M	N	V	P	S	S	K	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_F8NCS9	Y	N	L	P	S	S	K	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_R5NX11	Y	N	L	K	S	K	K	M	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L			
UniRef90_A1RZC6	M	N	V	P	S	S	R	K	L	L	G	H	K	D	I	I	K	V	E	N	T	V	R	L	L	S	S	A	D	Q	Q	A	N	Q	Q	L	L	A	L	F	A	P	Q	A	T	V	V	N	N	R	L	
UniRef90_A0RXJ6	L	N	V	P																																																

QUERY	I	D	N	Y	E	V	V	G	K	S	R	P	S	L	P
UniRef90_H2G0D5	I	E	D	F	F	E	V	E	K	L	Q	L	Q	L	P
UniRef90_C4LBX3	I	E	D	F	F	K	V	T	K	H	Q	L	L	L	P
UniRef90_UPI0003664E02	I	Q	E	F	F	K	V	E	K	R	K	L	C	L	P
UniRef90_Q1C1J6	I	D	N	Y	E	V	V	K	K	L	T	L	L	S	P
UniRef90_UPI00037002F3	I	R	N	Y	E	V	A	E	K	L	S	L	H	L	P
UniRef90_C5BC06	I	E	N	Y	S	V	V	R	K	M	V	P	S	L	P
UniRef90_R8ATE7	I	E	N	Y	Q	V	V	Q	K	R	H	L	E	L	P
UniRef90_B4F2M1	I	D	D	Y	Q	V	V	N	K	M	A	L	L	S	P
UniRef90_U3BHY7	I	E	D	Y	Q	V	V	N	K	L	T	L	T	L	P
UniRef90_E1SUK1	I	E	N	Y	E	V	V	R	K	L	Q	L	L	S	P
UniRef90_V9HDJ7	I	E	N	F	R	V	V	K	K	M	R	L	L	T	P
UniRef90_G2DT68	I	E	D	F	F	K	V	Q	K	M	L	L	E	L	P
UniRef90_W0JZ13	I	R	D	Y	D	V	V	E	K	R	Q	V	L	E	P
UniRef90_UPI000395B8DC	I	E	D	Y	Q	V	V	A	K	L	P	L	T	L	P
UniRef90_P77919	I	R	D	Y	K	V	V	E	K	F	K	V	E	V	P
UniRef90_UPI00030969E9	I	E	N	Y	T	V	V	K	K	L	A	L	T	L	P
UniRef90_G4CI3	I	E	Q	F	E	V	V	R	K	M	H	L	K	L	P
UniRef90_A6FE77	I	E	N	Y	E	V	S	K	K	L	K	L	A	L	P
UniRef90_R7U7Q2	I	D	D	Y	R	V	V	D	K	F	T	M	A	I	P
UniRef90_A4BHB4	I	E	D	Y	Q	V	R	K	K	F	P	L	T	L	P
UniRef90_UPI0002DD6B95	I	E	N	Y	E	V	V	A	K	L	P	L	T	L	P
UniRef90_UPI00040F95E2	I	N	E	F	D	V	V	K	K	F	Q	V	V	A	P
UniRef90_R9PF66	I	E	D	F	F	E	V	R	K	F	H	V	S	T	P
UniRef90_C1D9A6	I	R	N	F	E	V	V	E	K	H	K	L	E	L	P
UniRef90_X2HED9	I	E	N	F	R	V	V	R	K	R	T	L	L	T	P
UniRef90_V5FDP2	I	E	D	Y	R	V	V	K	K	L	E	L	E	L	P
UniRef90_B1L384	I	R	N	F	E	V	A	S	K	R	R	V	E	L	P
UniRef90_D2TZX4	I	K	D	Y	K	V	E	K	K	L	S	I	S	L	P
UniRef90_V4Y011	I	R	D	Y	E	V	V	H	K	T	R	V	Q	R	P
UniRef90_UPI0003B4ABC8	I	K	N	F	K	V	V	N	K	F	K	V	Q	L	P
UniRef90_W2CGJ2	I	R	D	Y	E	V	V	E	K	R	R	V	E	L	P
UniRef90_M4U2H5	I	K	D	Y	E	V	S	E	K	F	Q	L	T	L	P
UniRef90_Q9HHN3	V	R	D	Y	E	V	D	E	K	R	R	V	D	R	P
UniRef90_J7UB41	I	E	D	Y	Q	V	V	K	K	L	P	I	N	L	P
UniRef90_UPI0003B31261	I	E	N	F	E	V	V	A	K	H	K	L	T	L	P
UniRef90_Q7P144	I	D	N	F	E	V	V	K	K	H	K	L	T	L	P
UniRef90_Q5V2T4	I	R	D	Y	E	V	V	E	K	G	R	V	E	R	P
UniRef90_A2BJ23	I	H	D	Y	R	V	V	A	K	R	R	V	T	V	P
UniRef90_D8J2L8	V	R	E	Y	D	V	A	E	K	H	R	V	E	R	P
UniRef90_A1RRV1	I	E	D	F	R	V	V	R	K	F	K	V	T	P	P
UniRef90_D3S167	I	K	D	Y	K	I	V	K	K	F	K	V	T	P	P
UniRef90_F8NCS9	I	H	N	Y	G	V	V	E	K	K	R	V	E	T	P
UniRef90_R5NXI1	I	R	D	Y	E	V	V	E	K	K	E	V	F	L	P
UniRef90_A1RZC6	I	R	D	F	Q	V	A	S	K	R	R	V	E	P	P
UniRef90_A0RXJ6	I	R	D	Y	K	L	A	E	K	R	R	V	A	L	P
UniRef90_A0B8L2	V	R	D	Y	A	V	V	E	K	Y	A	V	D	L	P
UniRef90_O26938	V	R	D	Y	K	I	V	E	K	A	K	V	R	L	P
UniRef90_E1QQJ8	I	R	D	Y	E	V	V	S	K	F	K	V	A	I	P
UniRef90_R5ALI7	I	R	D	F	E	V	V	E	K	R	Q	V	E	L	P
UniRef90_C7NSA1	I	R	D	F	E	V	I	E	K	R	R	V	A	R	P
UniRef90_G2MJQ2	I	R	E	Y	E	V	I	E	K	K	R	V	E	R	P
UniRef90_B2RL77	I	R	D	Y	E	V	V	E	K	R	Q	V	E	V	P
UniRef90_A8MCA3	I	R	D	Y	S	V	I	K	K	F	Q	V	K	L	P
UniRef90_P96175	I	E	N	F	K	V	T	D	K	H	S	L	A	L	P
UniRef90_V4JG10	I	K	D	Y	A	V	V	E	K	R	P	V	L	V	P
UniRef90_U1N800	V	R	T	Y	D	V	I	E	K	K	R	V	E	R	P
UniRef90_C3JAD8	I	R	D	Y	K	V	V	E	K	K	S	V	E	L	P
UniRef90_G8UP03	I	R	D	Y	E	V	V	E	K	K	C	V	R	L	P
UniRef90_UPI00036B8FBC	I	R	E	Y	E	V	V	E	K	K	H	V	A	L	P
UniRef90_UPI00037DD921	I	E	N	F	E	V	V	R	K	K	L	A	I	L	P
UniRef90_Z4WRP6	I	R	D	Y	Q	V	V	E	K	R	K	T	L	L	P
UniRef90_X0TWE6	I	S	D	W	Q	V	K	E	K	R	R	V	S	L	P
UniRef90_U1P238	I	R	G	Y	D	V	V								
UniRef90_U1P238	I	R	G	Y	D	V	V								
UniRef90_F4KNB7	I	K	D	Y	E	V	V	D	K	R	T	L	H	L	P
UniRef90_UPI0003739542	V	R	D	F	N	V	V	E	K	R	N	L	R	L	P
UniRef90_G2LN78	I	D	E	Y	N	L	V	G	K	V	F	P	N	L	P
UniRef90_R5I064	I	R	D	F	E	V	V	E	K	K	V	L	T	L	P
UniRef90_F9D182	I	K	N	Y	E	V	V	E	K	K	T	V	E	T	P
UniRef90_E8LH68	I	K	D	Y	K	V	I	D	K	Y	N	L	R	L	P
UniRef90_E3GW18	I	R	D	Y	E	V	V	K	K	E	K	V	Q	L	P
UniRef90_A9D3H4	I	E	N	F	E	V	V	D	K	F	K	V	A	I	P
UniRef90_R7LDQ1	I	R	D	Y	E	V	A	E	K	K	C	V	T	L	P
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K N Y T S R K R L L G R K K D D V I K I D E E K H F T H E E L D W D L R L G Y V A D S T E V T V I V
Q N Y L S K K L L G R K K D D V I K I E N R R E L N H E E E L D Q L A L I A V A P K A S V I V N I N I N I V
M N V L S S K E I I G R K K D D I V K I E N R E L L E N H E E E L D Q L A L I A V A P K A S V I V N I N I N I V
N N L E S S A K I I G R K K D D I V K I S D R D L E V D E S T L N K R I A L I A A P H A K V L N I N I N I N I V
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T N V T S S R K M G R K K D D I V K I S D N R E L L K E E E V D R I A L I A A P H A K V L N I N I N I N I V
K N V K S S N K L G R K K D D I I K I D Q D Y E S I V N L D V L G Y I D D P D I T T V S I C V
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UniRef90_E7MLR5	M	N	I	D	G	V	K	T	G	L	V	I	D	H	I	K	A	G	K	S	M	E	I	Y	S	L	L	K	N	E	L	K	K	S	D	L	S	V	A	L	I		
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jnet
conf
sol25
sol5
sol0
jhmm
jpssm

