

QUERY	1	10	20	30	40																																							
UniRef90_Q7ZT86	V	L	S	P	A	D	K	T	N	V	K	A	A	W	G	K	V	G	A	H	A	G	E	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	T	T	K			
UniRef90_UPI000334155E	M	L	T	A	E	E	R	T	L	I	V	E	S	M	W	S	K	A	S	S	H	R	D	E	S	I	G	G	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K	
UniRef90_P30892	M	L	T	A	E	D	K	K	L	I	V	E	S	Q	A	W	E	K	A	S	S	H	Q	E	D	F	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K	
UniRef90_P01965	V	L	T	A	A	D	K	A	S	N	V	K	A	A	W	G	K	V	G	G	Q	A	E	A	L	L	G	T	E	S	L	E	R	M	F	L	S	F	P	Q	T	K		
UniRef90_F6YMJ4	L	T	K	S	A	D	K	A	S	I	V	A	N	I	W	S	K	I	A	P	Q	A	E	A	L	L	G	T	E	S	L	E	R	M	F	L	S	F	P	Q	T	K		
UniRef90_UPI00042BD2B2	L	T	Q	A	E	K	A	A	S	I	V	A	I	W	S	K	I	A	A	Q	V	D	A	L	L	G	T	E	S	L	E	R	M	F	L	S	F	P	Q	T	K			
UniRef90_P13273	V	L	T	N	A	G	D	K	A	N	V	K	A	V	W	N	K	V	A	A	H	V	E	E	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K		
UniRef90_UPI000350E148	M	L	T	A	E	D	K	K	L	I	V	T	Q	L	W	E	K	I	A	G	H	Q	E	E	F	G	G	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K		
UniRef90_Q90ZA5	L	T	A	E	D	K	K	L	I	V	V	V	L	W	G	K	I	A	A	G	H	T	D	A	L	L	V	G	E	A	L	L	E	R	M	F	L	S	F	P	Q	S	R	
UniRef90_P10059	M	L	S	A	S	D	K	A	N	V	K	A	I	W	S	K	V	C	V	H	A	E	E	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	S	T	K		
UniRef90_B0M2T2	V	L	S	S	D	D	K	C	N	V	K	A	V	W	C	K	V	A	G	H	L	E	E	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K			
UniRef90_H3ABR1	M	L	S	S	A	N	D	K	T	L	I	V	S	S	T	W	N	K	V	A	A	N	A	E	D	I	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K	
UniRef90_P02104	F	T	A	E	E	K	T	L	I	N	G	L	W	S	K	V	I	A	N	V	E	E	V	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	S	T	K			
UniRef90_Q9PVL9	L	T	A	A	D	K	A	L	I	V	S	L	W	G	K	I	A	A	G	H	T	E	A	L	L	G	T	E	S	L	E	R	M	F	L	S	F	P	Q	S	T	K		
UniRef90_UPI0004442C09	L	T	K	S	E	R	A	L	I	V	S	A	M	W	A	K	I	A	S	T	K	M	E	E	I	G	T	E	S	L	L	E	R	M	F	L	S	F	P	Q	S	T	K	
UniRef90_F7GY95	L	T	K	T	E	R	T	L	I	V	S	M	W	A	K	I	A	S	T	Q	A	D	T	I	G	T	E	S	L	L	E	R	M	F	L	S	F	P	Q	S	T	K		
UniRef90_Q6H1L9	L	S	D	A	D	K	T	N	N	V	K	E	F	W	E	K	I	A	G	E	N	T	G	V	Y	A	G	E	A	L	L	E	R	T	F	S	S	F	P	S	T	T	K	
UniRef90_G3WE91	V	L	S	G	A	D	K	N	N	V	K	E	A	V	W	K	I	A	G	G	N	A	G	A	Y	A	G	E	A	L	L	E	R	T	F	S	S	F	P	S	T	T	K	
UniRef90_G3WEX2	W	T	A	E	E	K	Q	A	I	S	T	I	W	A	K	I	A	D	V	E	E	V	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	S	T	K				
UniRef90_P01983	V	L	S	A	N	D	K	S	N	V	R	G	V	F	G	K	I	A	S	A	H	A	D	D	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	Q	T	K		
UniRef90_G1LJX4	L	T	K	A	E	R	T	L	I	V	S	M	W	D	K	I	A	S	S	Q	A	D	A	I	G	T	Q	A	L	L	E	R	M	F	L	S	F	P	Q	T	K			
UniRef90_P02111	L	S	G	G	E	K	S	A	V	T	N	L	W	G	K	V	I	A	N	I	N	E	L	G	G	E	A	L	L	E	R	L	L	V	V	Y	P	Q	S	T	K			
UniRef90_P18989	L	T	A	E	K	T	A	V	T	T	L	W	S	G	K	V	I	A	N	V	E	E	V	G	G	E	A	L	L	E	R	L	L	V	V	Y	P	Q	S	T	K			
UniRef90_Q28932	L	S	A	E	E	K	G	H	I	N	A	I	W	S	K	V	S	I	V	D	Q	T	G	A	E	A	L	L	E	R	L	L	I	V	V	Y	P	Q	W	T	S			
UniRef90_P14523	V	L	T	G	E	D	K	K	H	I	Q	H	I	W	G	L	L	S	G	A	E	E	D	L	G	A	E	V	L	Y	R	M	F	Q	S	Y	P	T	K					
UniRef90_Q9GLX4	F	T	A	E	D	K	A	A	I	T	S	L	W	G	K	V	I	A	N	V	E	D	A	G	G	E	A	L	L	E	R	L	L	V	V	Y	P	Q	W	T	K			
UniRef90_Q8UV18	L	S	A	D	D	K	K	T	V	K	A	F	W	A	K	I	A	S	S	K	A	D	D	I	G	G	A	D	A	L	L	E	R	L	L	M	V	Y	P	Q	T	K		
UniRef90_V5N513	L	S	A	K	D	K	A	A	V	K	A	F	W	A	T	I	A	P	K	A	E	D	I	G	G	Q	A	L	L	E	R	M	L	T	V	Y	P	Q	T	K				
UniRef90_C3KGZ6	L	T	E	K	D	K	A	T	V	K	A	L	W	G	K	I	A	S	S	K	S	D	A	I	G	G	A	D	A	L	L	E	R	M	L	V	V	Y	P	Q	T	K		
UniRef90_Q8AYQ7	L	S	A	K	D	K	A	A	V	K	A	F	W	A	K	I	A	S	G	Q	A	D	A	I	G	S	D	A	L	L	E	R	M	L	V	V	Y	P	Q	T	K			
UniRef90_W5MM10	L	S	T	A	D	K	D	N	I	T	K	T	W	A	K	V	S	P	K	A	A	Q	I	G	A	E	A	F	L	L	E	R	L	L	I	V	F	P	Q	T	K			
UniRef90_UPI0003F134CF	V	L	T	S	E	A	E	R	T	L	I	V	R	A	L	W	N	K	M	G	S	D	N	V	G	V	Y	T	T	E	A	L	L	E	R	T	F	A	S	F	P	S	T	K
UniRef90_C1FXX6	L	T	K	A	E	R	T	L	I	V	S	M	W	G	K	I	A	A	S	Q	A	D	A	I	G	T	E	A	L	L	E	R	L	F	A	S	H	P	Q	T	K			
UniRef90_K7N5M5	L	S	D	K	D	K	A	A	V	K	L	W	S	K	I	A	S	K	S	S	D	A	I	G	N	D	A	L	L	E	R	M	I	V	V	Y	P	Q	T	K				
UniRef90_G1M487	F	T	A	E	E	K	A	A	V	T	S	L	W	A	R	V	I	A	N	V	E	L	V	G	G	E	V	L	L	E	R	L	L	V	V	Y	P	Q	W	T	K			
UniRef90_UPI000333C137	L	T	G	E	E	K	A	A	V	T	G	L	W	A	K	V	I	A	N	V	E	E	I	G	G	E	A	L	L	E	R	L	L	V	V	Y	P	Q	W	T	K			
UniRef90_UPI000333728	L	S	S	T	D	R	A	L	V	T	Q	A	L	W	K	K	L	G	S	N	V	G	I	V	A	T	E	A	L	L	E	R	T	F	Q	A	F	P	S	T	K			
UniRef90_UPI000395677D	W	T	A	E	E	K	Q	L	I	T	G	L	W	A	K	V	I	A	N	V	A	E	C	S	G	A	E	A	L	L	E	R	L	L	I	V	Y	P	Q	W	T	K		
UniRef90_UPI00038EA702	L	S	D	E	D	K	A	Y	L	R	F	A	W	R	K	F	E	P	T	W	G	Q	H	S	P	D	A	V	Y	R	M	F	L	S	F	P	S	T	K					
UniRef90_Q9CY10	L	S	D	E	D	K	A	Y	L	R	F	A	W	R	K	F	E	P	T	W	G	Q	H	S	P	D	A	V	Y	R	M	F	L	S	F	P	S	T	K					
UniRef90_W5LAT4	L	T	S	A	K	D	M	A	T	V	K	T	L	W	G	K	I	S	S	K	S	D	E	I	G	A	E	A	L	L	E	R	M	F	L	S	F	P	T	T	K			
UniRef90_S9XAF5	V	L	T	S	A	K	D	K	T	N	V	K	T	A	F	G	K	I	G	G	H	A	A	E	Y	G	A	E	A	L	L	E	R	M	F	L	S	F	P	T	T	K		
UniRef90_Q4S4F1	L	T	K	T	D	K	A	A	V	K	A	L	W	N	K	I	A	S	K	S	V	D	V	I	G	A	E	A	F	L	L	E	R	M	L	L	V	Y	P	Q	T	K		
UniRef90_UPI0003AF73FB	L	T	E	K	D	K	A	A	V	K	A	L	W	A	K	I	A	S	K	V	V	D	T	V	G	G	E	A	L	L	E	R	M	L	L	V	Y	P	Q	T	K			
UniRef90_UPI000329B181	L	S	G	K	D	K	A	A	V	R	N	F	W	A	K	V	I	A	P	K	S	A	E	I	G	G	E	A	L	L	E	R	M	L	T	A	Y	P	Q	T	K			
UniRef90_P41331	V	L	T	E	E	D	K	A	R	V	R	V	A	W	V	P	V	S	K	N	A	E	L	Y	G	A	E	A	L	L	E	R	L	F	A	A	H	P	T	T	K			
UniRef90_Q6GPP8	I	F	S	D	A	E	K	T	A	I	V	S	L	W	A	K	A	S	A	D	V	K	A	L	G	A	E	A	L	L	E	R	L	F	L	S	Y	P	Q	T	K			
UniRef90_UPI0004746CD9	L	S	A	E	K	K	A	A	V	K	D	L	W	A	K	I	A	S	P	K	A	D	E	I	G	G	E	A	L	L	E	R	L	F	E	V	F	P	Q	T	K			
UniRef90_Q38IV9	F	S	A	A	E	K	A	A	I	A	S	L	W	G	K	V	S	I	S	G	H	A	D	E	I	G	G	E	A	L	L	E	R	L	F	L	S	F	P	Q	T	K		
UniRef90_L8J2H0	M	L	T	A	Q	E	R	A	H	I	T	Q	V	W	D	L	I	A	G	H	E	A	P	F	G	A	E	L	L	E	R	R	M	F	L	S	F	P	T	T	K			
UniRef90_Q98SE6	L	T	A	K	D	K	Q	T	V	K	A	F	W	A	K	V	S	I	S	G	K	S	E	D	I	G	A	A	V	A	R	M	L	V	V	Y	P	Q	T	K				
UniRef90_P82316	F	S	D	A	E	R	D	A	L	A	A	I	W	G	K	I	A	H	I	D	E	I	G	P	Q	S	L	A	R	V	L	I	V	Y	P	Q	W	T	K					
UniRef90_Q63067	F	T	A	E	E	K	A	T	S	L	S	I	W	E	K	V	I	A	D	L	E	K	L	G	G	E	T	L	L	E	R	L	L	I	V	Y	P	Q	W	T	K			
UniRef90_B5X930	I	L	T	A	K	D	K	K	I	V	K	A	F	F	G	K	V	A	G	K	A	E	D	I																				

QUERY	T	Y	F	P	H	F	D	L	S	H	G	S	A	Q	V	K	G	H	G	K	K	V	A	D	A	L	T	N	A	V	K	S	L	V	D	N	L	S	N	A	L				
UniRef90_Q7ZT86	T	Y	F	P	H	F	D	L	S	H	G	S	A	Q	V	K	G	H	G	K	K	V	A	D	A	L	T	N	A	V	K	S	L	V	D	N	L	S	N	A	L				
UniRef90_UPI000334155E	T	Y	F	P	H	F	D	L	S	H	G	S	A	Q	V	K	R	S	H	G	K	K	V	V	A	A	L	V	S	G	E	A	V	K	S	L	M	D	N	L	S	N	A	L	
UniRef90_P30892	T	Y	F	P	H	F	D	L	S	P	G	S	A	D	Q	I	R	G	H	G	K	K	V	V	L	A	A	L	T	S	G	N	A	V	K	N	I	L	D	D	L	S	N	A	L
UniRef90_P01965	T	Y	F	P	H	F	N	L	S	H	G	S	A	D	Q	V	K	A	H	G	K	K	V	L	A	D	A	L	T	G	N	K	A	V	K	N	I	L	D	D	L	S	N	A	L
UniRef90_F6YMJ4	T	Y	F	P	H	F	D	L	S	P	G	S	A	D	Q	V	K	A	H	G	S	K	V	M	G	A	I	T	G	D	A	V	K	N	I	L	D	D	L	S	N	A	L		
UniRef90_UPI00042BD2B2	T	Y	F	P	H	F	D	L	S	Q	G	S	A	Q	L	R	H	D	H	G	K	K	V	L	T	A	I	G	E	A	V	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_P13273	T	Y	F	P	H	F	D	L	S	H	H	G	S	A	Q	I	R	T	H	G	K	K	V	L	T	A	L	T	G	E	A	V	K	N	I	L	D	D	L	S	N	A	L		
UniRef90_UPI000350E148	T	Y	F	P	H	F	D	L	S	H	P	G	S	A	Q	V	R	G	H	G	K	V	P	A	A	A	L	V	G	E	A	V	K	S	L	I	L	D	D	L	S	N	A	L	
UniRef90_Q90ZA5	T	Y	F	S	H	F	D	L	S	H	G	S	A	D	V	K	R	H	G	G	K	V	V	L	N	A	V	G	E	A	A	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_P10059	T	Y	F	P	H	F	D	L	T	H	G	S	A	Q	V	K	A	H	G	K	K	V	V	L	N	A	L	M	G	E	A	V	K	S	L	I	L	D	D	L	S	N	A	L	
UniRef90_B0M2T2	I	Y	F	P	H	F	D	L	S	H	G	S	A	Q	I	R	A	H	A	G	K	K	V	F	A	A	L	I	H	E	E	S	V	N	S	H	I	L	D	D	L	S	N	A	L
UniRef90_H3ABR1	I	Y	F	S	H	M	D	L	S	P	G	S	S	M	L	K	A	H	A	G	K	K	V	M	G	T	I	E	G	S	I	K	S	N	I	L	D	D	L	S	N	A	L		
UniRef90_P02104	R	F	F	D	S	F	G	N	I	M	G	N	P	R	V	K	A	H	G	K	K	V	V	L	T	A	F	G	E	S	I	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_Q9PVL9	T	Y	F	S	H	F	D	L	S	H	H	G	S	A	D	V	K	S	H	G	A	K	V	V	L	N	A	I	G	L	A	A	Q	N	H	I	V	D	D	L	S	N	A	L	
UniRef90_UPI0004442C09	T	Y	F	P	H	F	D	L	S	H	A	G	S	A	Q	L	R	A	H	G	A	K	V	V	A	A	L	T	G	D	A	V	K	N	I	L	D	D	L	S	N	A	L		
UniRef90_F7GY95	T	Y	F	P	H	F	D	L	S	H	G	S	A	Q	V	K	G	H	G	K	K	V	V	A	D	A	L	T	N	A	V	K	N	I	V	D	D	L	S	N	A	L			
UniRef90_Q6H1L9	T	Y	F	A	H	L	E	L	S	R	G	S	A	Q	V	R	A	H	G	K	K	V	A	D	A	L	T	L	A	V	A	N	H	M	I	L	D	D	L	S	N	A	L		
UniRef90_G3WE91	T	Y	F	P	H	F	D	L	S	P	G	S	A	Q	V	K	G	H	G	K	K	V	A	D	A	L	T	S	Q	A	V	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_G3WEX2	R	Y	F	S	N	F	G	N	I	E	G	N	P	R	V	R	N	H	G	K	K	V	L	T	S	F	G	E	A	V	K	N	I	L	D	D	L	S	N	A	L				
UniRef90_P01983	T	Y	F	P	H	F	D	L	S	H	R	G	S	A	Q	I	K	A	H	G	K	K	V	A	G	A	L	L	E	A	V	N	S	H	I	L	D	D	L	S	N	A	L		
UniRef90_G1LJX4	T	Y	F	P	H	F	D	L	S	H	P	G	S	P	H	L	H	M	H	G	A	K	V	V	A	A	L	T	G	D	A	V	K	S	L	I	L	D	D	L	S	N	A	L	
UniRef90_P02111	R	F	F	E	A	F	G	D	L	M	G	N	P	K	V	K	A	H	G	A	K	V	V	L	T	S	F	G	D	A	L	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_P18989	R	F	F	E	S	F	D	A	I	M	G	N	P	K	V	K	A	H	G	K	K	V	V	L	N	S	F	S	E	G	D	L	K	N	I	L	D	D	L	S	N	A	L		
UniRef90_Q28932	R	F	F	D	H	F	G	D	L	M	G	N	A	K	V	Q	G	H	G	A	K	V	L	T	S	F	G	D	A	V	K	N	I	L	D	D	L	S	N	A	L				
UniRef90_P14523	T	Y	F	P	H	F	D	V	T	Q	G	S	E	Q	I	R	G	H	G	K	K	F	M	A	A	L	T	S	G	E	A	V	K	N	I	L	D	D	L	S	N	A	L		
UniRef90_Q9GLX4	R	F	F	D	S	F	G	S	I	M	G	N	P	K	V	K	A	H	G	V	K	V	L	T	S	L	V	G	E	A	I	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_Q8UV18	T	Y	F	S	H	W	N	S	S	P	N	S	E	D	V	K	K	H	G	G	A	I	M	N	G	V	A	L	T	G	E	A	I	D	K	I	L	D	D	L	S	N	A	L	
UniRef90_V5N513	T	Y	F	S	H	W	N	F	S	L	G	S	E	Q	I	K	K	H	G	K	M	V	L	S	G	V	A	L	T	S	G	E	A	V	D	K	I	L	D	D	L	S	N	A	L
UniRef90_C3KGZ6	T	Y	F	T	H	W	S	D	S	P	N	S	A	P	V	K	N	H	G	K	N	V	M	S	G	V	A	L	A	V	S	K	I	L	D	D	L	S	N	A	L				
UniRef90_Q8AYQ7	T	Y	F	A	H	W	K	D	S	P	G	S	A	P	V	K	K	H	G	K	T	V	M	G	G	I	A	D	A	V	S	G	K	I	L	D	D	L	S	N	A	L			
UniRef90_W5MM10	I	Y	F	T	H	F	A	D	S	P	N	S	A	Q	V	K	A	H	G	A	K	V	M	G	A	I	A	Q	A	V	S	H	L	D	N	L	S	N	A	L					
UniRef90_UPI0003F134CF	T	Y	F	A	N	F	N	L	K	P	G	S	T	Q	I	K	D	H	G	K	K	V	A	V	A	L	T	Q	A	V	N	S	H	L	D	D	L	S	N	A	L				
UniRef90_C1FXX6	T	Y	F	P	H	F	E	L	R	A	G	S	A	Q	V	L	R	A	H	G	S	K	V	A	A	A	L	V	G	E	A	A	G	S	V	L	D	D	L	S	N	A	L		
UniRef90_K7N5M5	T	Y	F	A	H	W	P	D	S	P	G	S	P	H	V	K	A	H	G	K	T	V	M	G	G	I	A	L	A	V	S	K	I	L	D	D	L	S	N	A	L				
UniRef90_G1M487	R	F	F	D	S	F	G	N	I	M	G	N	P	K	V	K	A	H	G	K	K	V	V	L	T	S	F	G	N	A	V	K	H	M	I	L	D	D	L	S	N	A	L		
UniRef90_UPI000333C137	R	F	F	D	S	F	G	D	L	M	G	N	P	K	V	K	A	H	G	A	K	V	L	H	S	F	S	E	G	L	N	H	L	D	D	L	S	N	A	L					
UniRef90_UPI000333728	T	Y	F	P	H	F	D	L	S	P	G	S	S	Q	V	K	A	H	G	Q	K	V	A	N	A	L	T	L	A	N	H	L	D	D	L	S	N	A	L						
UniRef90_UPI000395677D	R	F	F	S	N	F	G	N	I	L	G	N	P	K	V	Q	A	H	G	K	K	V	V	L	T	S	F	G	E	A	I	K	N	I	L	D	D	L	S	N	A	L			
UniRef90_UPI00038EA702	T	Y	F	P	H	F	D	M	T	P	G	S	P	Q	I	Q	A	H	G	K	K	V	A	N	A	L	L	N	K	A	V	E	N	H	L	D	D	L	S	N	A	L			
UniRef90_Q9CY10	T	Y	F	P	H	F	D	V	S	H	G	S	A	Q	V	K	G	H	G	K	K	V	A	D	A	L	T	N	A	V	K	N	I	A	G	H	L	D	D	L	S	N	A	L	
UniRef90_W5LAT4	T	Y	F	A	H	W	D	V	S	H	G	S	A	P	V	K	K	H	G	K	T	I	V	M	G	A	L	V	G	E	A	V	S	K	I	L	D	D	L	S	N	A	L		
UniRef90_S9XAF5	T	Y	F	P	H	F	D	L	S	H	G	S	A	Q	V	K	A	H	G	K	K	V	M	G	D	A	L	T	T	A	A	D	H												

QUERY	90																				100										110										120									
UniRef90_Q7ZT86	S	A	L	S	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	A	H	L	P	A	E	F	T	P										
UniRef90_UPI000334155E	S	K	L	S	S	D	L	H	A	Y	N	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	C	H	L	G	K	E	D	F	T	P								
UniRef90_P30892	A	E	L	S	S	D	L	H	A	F	N	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	A	H	H	M	G	K	D	Y	S	P								
UniRef90_P01965	S	A	L	S	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	A	H	H	F	P	N	D	D	F	N	A								
UniRef90_F6YMJ4	S	K	L	S	E	L	H	A	Y	N	L	R	V	D	P	V	N	F	K	F	L	S	N	H	C	M	L	V	T	L	A	V	H	H	F	P	S	D	D	L	T	A								
UniRef90_UPI00042BD2B2	A	T	L	S	E	L	H	A	Y	I	L	R	V	D	P	V	N	F	K	L	L	S	N	H	C	L	L	C	S	V	A	A	H	F	P	S	D	F	T	P										
UniRef90_P13273	S	K	L	S	D	I	H	A	Q	T	L	R	V	D	P	V	N	F	K	F	L	L	N	H	C	F	L	V	V	V	A	I	H	H	Q	P	S	V	L	T	P									
UniRef90_UPI000350E148	S	E	L	S	S	D	L	H	A	Y	N	L	R	V	D	P	V	N	F	K	F	L	S	H	C	F	L	V	V	V	A	I	H	H	F	P	A	A	L	T	P									
UniRef90_Q90ZA5	S	K	L	S	D	L	H	A	Y	N	L	R	V	D	P	G	N	F	Q	L	L	S	H	C	L	Q	T	V	L	A	A	H	F	P	A	D	F	T	P											
UniRef90_P10059	L	K	L	S	D	L	H	A	Q	K	L	R	V	D	P	V	N	F	K	L	L	A	Q	C	F	L	V	V	V	A	I	H	H	F	P	A	A	L	T	P										
UniRef90_B0M2T2	C	R	L	S	E	L	H	A	H	S	L	R	V	D	P	V	N	F	K	F	L	A	Q	C	V	L	V	V	V	A	I	H	H	F	P	A	G	S	L	T	P									
UniRef90_H3ABR1	S	R	L	S	D	M	H	A	Y	N	F	M	V	D	P	V	N	F	K	L	L	S	Q	C	L	L	V	A	L	A	T	Q	L	M	A	D	F	T	P											
UniRef90_P02104	A	K	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	K	L	L	S	G	N	V	L	V	I	V	L	A	S	H	F	P	A	E	F	T	A										
UniRef90_Q9PVL9	S	K	L	S	D	L	H	A	Y	N	L	R	V	D	P	G	N	F	K	L	L	S	H	T	I	Q	V	V	L	A	N	H	F	P	A	E	F	T	A											
UniRef90_UPI000442C09	A	R	L	S	E	M	H	A	Y	I	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	A	T	H	F	P	A	D	F	T	A										
UniRef90_F7GY95	S	A	L	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	A	H	H	F	P	A	E	F	T	A										
UniRef90_Q6H1L9	S	S	L	S	D	L	H	A	H	K	L	K	V	D	P	I	N	F	K	Y	L	S	H	C	F	L	V	T	L	A	R	H	H	L	S	G	N	L	N	P										
UniRef90_G3WE91	S	K	L	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	C	H	L	S	K	D	L	T	P											
UniRef90_G3WEX2	D	K	L	S	E	L	H	S	D	K	L	H	V	D	P	Q	N	F	R	L	L	S	G	D	N	L	I	V	L	A	A	T	M	G	K	D	F	T	P											
UniRef90_P01983	S	K	L	S	D	L	H	A	Q	K	L	R	V	D	P	V	N	F	K	L	L	S	G	Q	C	F	L	V	V	V	A	V	H	H	F	P	S	L	L	T	P									
UniRef90_G1LJX4	A	K	L	S	E	L	H	A	Y	L	R	V	D	P	V	N	F	K	L	L	L	S	T	Q	C	F	Q	V	V	L	A	S	H	L	Q	G	E	F	T	V										
UniRef90_P02111	A	K	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	N	R	L	S	G	N	V	L	V	I	V	L	A	R	H	F	G	K	E	F	T	P										
UniRef90_P18989	A	K	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	R	L	L	S	G	N	V	L	V	C	V	L	A	H	H	F	G	K	E	F	T	P										
UniRef90_Q28932	A	K	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	R	L	L	S	G	N	I	L	V	I	C	L	A	E	H	F	G	K	D	F	T	P										
UniRef90_P14523	S	E	L	S	N	L	H	A	Y	N	L	R	V	D	P	V	N	F	K	F	L	S	Q	C	L	Q	V	A	L	A	A	R	L	G	K	E	Y	S	P											
UniRef90_Q9GLX4	D	Q	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	R	L	L	S	G	N	V	L	V	T	V	L	A	I	L	H	G	K	E	F	T	P										
UniRef90_Q8UV18	L	N	L	S	E	L	H	A	F	N	L	R	V	D	P	G	N	F	K	F	F	A	H	C	L	L	V	V	M	A	N	L	Y	P	K	D	F	T	P											
UniRef90_V5N513	L	N	L	S	Q	L	H	A	F	Q	L	R	V	D	P	A	N	F	K	I	L	S	H	N	L	L	V	V	L	A	L	L	F	P	A	D	F	T	P											
UniRef90_C3KGZ6	L	D	L	S	E	Q	H	A	F	T	L	R	V	D	P	A	N	F	K	I	L	S	H	C	L	L	V	V	L	A	I	M	F	P	K	E	F	T	P											
UniRef90_Q8AYQ7	L	N	L	S	E	L	H	A	F	T	L	R	V	D	P	T	N	F	K	I	L	S	H	N	I	L	V	V	M	A	I	M	F	P	Q	D	F	T	P											
UniRef90_W5MM10	S	K	L	S	E	L	H	A	Y	N	L	R	V	D	P	V	N	F	K	L	L	S	H	T	L	L	V	S	L	S	A	S	L	G	A	D	F	T	P											
UniRef90_UPI0003134CF	S	V	L	S	E	L	H	A	Y	K	L	R	V	D	P	V	N	F	Q	L	L	S	H	S	L	L	V	T	L	A	R	H	Y	P	G	D	F	T	P											
UniRef90_C1FXX6	A	R	L	S	E	L	H	A	Y	V	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	V	A	A	R	F	P	A	D	F	T	A											
UniRef90_K7N5M5	L	D	L	S	E	Q	H	A	Y	K	L	R	V	D	P	A	N	F	K	I	L	S	H	C	L	L	V	V	I	S	M	M	F	P	K	E	F	T	P											
UniRef90_G1M487	A	E	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	K	L	L	S	G	N	M	I	L	I	V	L	A	T	H	F	T	K	E	F	T	P										
UniRef90_UPI000333C137	A	K	L	S	E	L	H	C	D	K	L	H	V	D	P	E	N	F	R	L	L	S	G	N	M	I	V	I	A	L	A	H	H	F	G	A	E	F	T	P										
UniRef90_UPI0003333728	S	A	L	S	A	L	H	A	H	K	L	H	V	D	P	A	N	F	Q	L	L	S	H	C	L	L	V	T	L	A	R	H	Y	P	G	D	F	T	P											
UniRef90_UPI000395677D	A	Q	L	S	K	L	H	C	D	K	L	H	V	D	P	E	N	F	R	L	L	S	G	D	I	L	I	V	L	A	A	N	Y	G	K	D	F	T	P											
UniRef90_UPI00038EA702	S	D	L	S	D	L	H	A	Y	K	L	R	V	D	P	V	N	F	K	L	L	S	N	H	C	M	L	V	T	M	A	K	N	Y	P	A	D	F	T	P										
UniRef90_Q9CY10	S	A	L	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	L	A	S	H	H	F	P	A	D	F	T	P										
UniRef90_W5LAT4	S	Q	L	S	E	L	H	A	Y	K	L	R	V	D	P	A	N	F	K	L	L	S	H	N	I	L	V	V	V	G	M	M	F	P	G	D	F	T	P											
UniRef90_S9XAF5	S	A	L	S	D	L	H	A	H	K	L	R	V	D	P	V	N	F	K	L	L	S	H	C	L	L	V	T	V	A	A	H	H	F	P	G	D	F	T	P										
UniRef90_Q4S4F1	Q	K	L	S	E	V	H	A	F	D	L	K	V	D	P	A	N	F	K	I	L	S	G	Q	C	V	V	V	V	T	A	M	L	F	P	K	D	F	T	P										
UniRef90_UPI0003AF73FB	L	E	L	S	E	L	H	A	F	K	L	R	V	D	P	A	N	F	K	I	L	S	A	Q	S	F	M	V	V	I	A	T	M	F	P	K	D	F	T	P										
UniRef90_UPI000329B181	S	A	L	S	E	L	H	A	F	K	L	R	V	D	P	A	N	F	R	L	L	S	H	N	I	L	L	C	M	G	M	F	F	P	A	D	F	T	P											
UniRef90_P41331	S	K	L																																															

QUERY	V	H	A	S	L	D	K	F	L	A	S	V	S	T	V	L	T	S	K	Y	R		
UniRef90_Q7ZT86	V	H	A	A	F	D	K	F	L	S	A	V	S	A	T	V	L	T	S	E	K	Y	R
UniRef90_UPI000334155E	A	H	A	S	L	D	K	F	L	S	A	V	S	A	T	V	L	T	S	E	K	Y	R
UniRef90_P30892	V	H	A	A	F	D	K	F	L	S	A	V	S	A	T	V	L	T	A	G	K	Y	R
UniRef90_P01965	V	H	A	S	L	D	K	F	L	S	A	N	V	S	T	V	L	T	S	K	Y	R	
UniRef90_F6YMJ4	T	H	A	A	W	D	K	F	L	A	L	V	S	T	A	V	L	T	T	E	K	Y	R
UniRef90_UPI00042BD2B2	V	H	A	A	W	D	K	F	L	S	K	I	S	A	V	T	V	L	T	S	K	Y	R
UniRef90_P13273	V	H	V	S	L	D	K	F	L	S	A	V	G	T	V	L	T	T	S	K	Y	R	
UniRef90_UPI000350E148	V	H	A	S	L	D	K	F	M	C	A	V	G	A	V	L	T	T	A	K	Y	R	
UniRef90_Q90ZA5	A	Q	A	A	W	D	K	F	L	A	C	A	V	S	G	V	L	T	T	S	K	Y	R
UniRef90_P10059	V	H	A	S	L	D	K	F	L	C	A	V	G	L	V	L	T	T	A	K	Y	R	
UniRef90_B0M2T2	V	H	A	S	L	D	K	F	L	C	A	V	S	L	V	L	T	T	S	K	Y	R	
UniRef90_H3ABR1	A	Q	C	A	W	D	K	F	L	A	S	E	I	L	F	S	K	Y	R				
UniRef90_P02104	M	Q	A	A	W	Q	K	L	V	A	G	V	A	T	A	L	S	H	K	Y	R		
UniRef90_Q9PVL9	A	H	A	A	F	D	K	F	L	A	A	V	S	T	V	L	T	T	S	K	Y	R	
UniRef90_UPI0004442C09	A	H	E	A	W	D	K	F	M	S	L	V	S	S	V	L	T	T	E	K	Y	R	
UniRef90_F7GY95	V	H	A	S	L	D	K	F	L	S	A	V	S	T	V	L	T	T	S	K	Y	R	
UniRef90_Q6H1L9	V	H	A	S	L	D	K	F	L	S	I	V	S	S	V	L	T	T	S	K	Y	R	
UniRef90_G3WE91	A	H	A	S	M	D	K	F	F	A	S	V	A	T	V	L	T	T	S	K	Y	R	
UniRef90_G3WEX2	A	Q	A	A	W	Q	K	L	V	G	V	S	A	S	A	L	S	R	K	Y	R		
UniRef90_P01983	V	H	A	S	L	D	K	F	L	C	T	V	A	T	V	L	T	T	D	E	K	Y	R
UniRef90_G1LJX4	M	Q	A	A	W	D	K	F	L	T	G	V	A	V	V	L	T	T	E	K	Y	R	
UniRef90_P02111	V	Q	A	A	W	Q	K	L	V	S	G	V	A	H	A	L	G	H	K	Y	R		
UniRef90_P18989	V	Q	A	A	Y	Q	K	V	V	A	G	V	A	N	A	L	A	H	K	Y	R		
UniRef90_Q28932	V	Q	A	A	W	Q	K	L	V	A	G	V	A	T	A	L	A	H	K	Y	R		
UniRef90_P14523	V	H	S	A	V	D	K	F	M	A	A	V	A	A	V	L	A	E	K	Y	R		
UniRef90_Q9GLX4	V	Q	A	S	R	Q	K	M	V	A	G	V	A	S	A	L	G	S	E	K	Y	R	
UniRef90_Q8UUV18	V	H	L	A	M	D	K	F	L	A	A	V	A	R	A	L	S	E	K	Y	R		
UniRef90_V5N513	I	H	V	A	M	D	K	F	L	A	A	V	S	L	A	L	S	E	K	Y	R		
UniRef90_C3KGZ6	V	H	V	A	M	D	K	F	F	C	G	V	S	L	A	L	S	E	K	Y	R		
UniRef90_Q8AMY7	V	H	V	A	L	D	K	F															

	1	10	20	30	40																																					
UniRef90_G8DP13	L	S	A	K	D	K	S	L	V	R	G	L	W	A	K	A	E	G	R	V	L	D	I	G	G	E	A	L	G	R	M	L	V	S	Y	P	Q	T	K			
UniRef90_B5X681	M	L	T	D	H	E	K	E	L	I	V	K	I	W	D	K	M	I	P	V	A	S	D	I	G	A	E	C	L	L	R	M	M	T	T	F	P	G	T	K		
UniRef90_UPI0003334593	M	L	S	A	R	E	H	G	H	L	A	Q	V	W	D	L	I	A	G	H	E	A	P	F	G	A	E	L	L	R	L	L	E	T	V	Y	P	S	T	K		
UniRef90_UPI0002034AF2											K	S	T	W	R	N	V	V	P	K	P							W	P	G	L	L	I	V	Y	P	W	T	Q			
UniRef90_Q6F3D3	V	L	T	A	E	D	K	A	N	V	K	S	A	W	D	H	I	K	G	H	E	E	A	F	G	A	E	A	L	C	R	M	F	D	S	E	P	V	T	K		
UniRef90_Q90486	W	T	D	A	E	R	T	A	I	L	G	L	W	G	K	L			N	I	D	E	I	G	P	Q	A	L	S	R	L	C	L	I	V	Y	P	W	T	Q		
UniRef90_P56251	W	T	D	A	E	R	A	A	I	K	A	L	W	G	K	I			D	V	G	E	I	G	P	Q	A	L	S	R	L	L	I	V	Y	P	W	T	Q			
UniRef90_UPI00042C01C9	W	T	A	E	E	R	A	H	Y	I	T	A	T	W	D	K	L			N	V	E	E	I	G	S	E	S	L	A	R	L	L	I	V	Y	P	W	T	Q		
UniRef90_Q7T1B0	W	T	A	E	E	R	A	F	N	I	Q	D	I	F	S	K	L			N	Y	E	E	A	G	P	K	A	L	Q	R	A	L	L	I	V	Y	P	W	T	Q	
UniRef90_P06639	L	T	A	E	D	K	H	N	V	K	A	I	W	D	H	V	K	G	H	E	E	A	I	G	A	E	A	L	Y	R	M	F	C	C	M			P	T	T	R	
UniRef90_UPI0002740913	L	T	K	T	E	R	A	I	I	V	S	M	W	G	K	I	S	T	Q	A	D	T	I	G	T	E	T	L	E	R	L	F	I	T	Y	P	Q	T	K			
UniRef90_D6PVN3	W	T	D	F	E	R	S	T	I	Q	D	I	F	S	K	M			Q	Y	E	V	V	G	P	A	A	L	S	R	L	C	L	I	V	Y	P	W	T	Q		
UniRef90_L5KH54	V	L	S	A	S	D	T	A	A	V	R	A	L	W	K	K	I	G	N	N	V	G	V	Y	T	T	E	A	L	E	R	T	F	L	A	F	P	S	T	K		
UniRef90_G3PL38	W	T	E	F	E	R	A	T	I	K	D	I	F	S	K	I			D	Y	D	V	V	G	P	A	A	L	C	R	C	L	V	Y	P	W	T	Q				
UniRef90_UPI0003AFF6E3	V	W	T	D	F	E	R	A	T	I	Q	D	I	F	S	K	I			D	Y	A	V	V	G	Q	A	A	F	S	R	L	C	L	I	V	Y	P	W	T	Q	
UniRef90_O13164	W	T	D	X	E	R	A	A	I	T	S	L	W	G	K	I			D	V	G	E	I	G	P	Q	A	L	A	R	L	L	I	V	Y	P	W	T	Q			
UniRef90_G3WE01	M	F	S	A	E	E	Q	S	H	I	V	Q	I	W	N	Y	L	S	G	H	E	A	I	F	G	T	E	L	Q	R	L	F	T	V	Y	P	S	T	K			
UniRef90_UPI00046B0B98	L	T	N	T	E	R	T	I	K	S	M	W	G	K	L	S	T	Q	A	D	M	T	G	T	E	T	L	E	R	L	F	E	Q	S	Y	P	Q	T	K			
UniRef90_W5MLZ3	M	T	T	A	S	E	K	A	L	V	S	S	I	W	K	A	A	D	F	T	E	E	W	G	E	D	A	L	R	L	L	T	V	F	P	Q	T	K				
UniRef90_O13163	W	T	D	X	E	R	H	V	I	A	D	V	W	G	K	I			N	P	D	E	I	G	P	H	A	L	A	R	L	L	I	V	Y	P	W	T	Q			
UniRef90_P83272	W	S	D	K	E	R	A	V	I	S	I	F	A						G	L	D	Y	E	D	I	G	P	K	A	L	S	R	L	C	L	I	V	Y	P	W	T	Q
UniRef90_UPI0002B493D5											K	Q	L	I	T	G	L	G	K	V								P	A	D	R	L	P	L	D	P	E	V	S			
UniRef90_Q98UB8	W	T	D	F	E	R	S	T	I	Q	D	I	F	S	R	I	E	Y	D	V								P	A	A	L	A	R	C	L	V	Y	P	W	T	Q	
UniRef90_UPI0004419454	W	S	A	E	E	K	Q	L	I	T	A	L	W	N	K	V			D	L	A	E	I	G	A	A	T	L	A	K	M	L	V	M	F	P	W	T	Q			
UniRef90_Q8JIM9	W	T	E	Q	E	R	S	I	I	T	N	I	F	G	N	L			D	Y	E	D	V	G	S	K	A	L	S	R	C	L	I	V	Y	P	W	T	Q			
UniRef90_S7N030																																										
UniRef90_S9YCX3	V	L	A	A	E	D	R	A	A	V	R	A	L	W	R	K	L	G	S	N	V	H	V	Y	T	T	E	A	L	E	R	T	F	L	A	L	P	Q	T	K		
UniRef90_P07429	L	T	A	K	E	R	Q	L	I	T	G	T	W	S	K	I	C	A	K										T	L	G	K	Q	A	L							
UniRef90_UPI000328AF02																																										
UniRef90_H2LKN8	W	S	D	F	E	R	A	T	I	Q	D	I	F	S	K	I	D	K	D	V	E	I	G	P	Q	A	L	S	R	C	L	I	V	Y	P	W	T	Q				
UniRef90_P84611	W	T	D	E	E	R	A	T	I	Q	D	I	F	S	K	I			D	Y	E	E	I	G	P	Q	A	L	S	R	C	L	I	V	Y	P	W	T	Q			
UniRef90_C1BZ27	W	T	T	A	E	R	S	A	I	L	G	L	W	G	K				P	N	A	D	E	I	G	T	Q	A	F	I	R	C	L	V	F	P	W	T	Q			
UniRef90_C1BLE4	W	T	E	F	E	R	T	T	I	T	S	I	F	A	K	I			D	Y	D	K	V	G	P	K	A	L	S	R	L	L	I	V	Y	P	W	T	Q			
UniRef90_P10784	V	L	S	S	Q	D	K	A	N	V	K	A	V	W	E	H	I	K	G	H	E	E	V	Y	G	A	E	A	L	H	R	A	F	V	C	D	P	Q	T	Q		
UniRef90_Q1AGS7	W	T	A	T	E	R	T	H	I	E	A	I	W	S	K	I			D	I	D	V	C	G	P	L	A	L	Q	R	C	L	I	V	Y	P	W	T	Q			
UniRef90_P86919	F	N	P	H	E	K	Q	L	I	G	D	L	W	H	K	V			D	V	A	H	C	G	G	E	A	L	S	R	M	L	I	V	Y	P	W	K	R			
UniRef90_W5KM05	W	T	E	E	R	N	F	I	R	E	I	F	S	K	L				K	Y	E	D	V	G	P	K	S	L	C	R	A	L	I	V	Y	P	W	T	Q			
UniRef90_G5CUP5	W	S	D	A	E	R	A	A	I	T	S	W	W	E	K	I			D	V	N	E	I	G	P	Q	A	L	T	R	L	L	I	V	Y	P	W	T	Q			
UniRef90_P23741	W	T	E	T	E	R	A	T	I	E	T	V	Y	Q	K	L			H	L	D	E	V	G	R	E	A	L	T	R	L	F	I	V	Y	P	W	T	T			
UniRef90_K7F490	L	S	D	A	E	K	K	V	I	Q	E	T	W	S	R	V	Y	T	N	C	E	D	V	G	V	S	L	I	R	F	F	V	Q	F	P	S	A	K				
UniRef90_P23017	W	S	K	T	E	L	T	I	I	N	D	I	F	S	H	L			D	Y	D	D	I	G	P	K	A	L	S	R	C	L	I	V	Y	P	W	T	Q			
UniRef90_F6KMG8	W	T	D	K	E	R	A	T	I	Q	D	L	F	S	K	I			D	Y	D	A	V	G	Q	A	T	L	C	R	C	L	I	V	Y	P	W	T	Q			
UniRef90_S9YMZ9	L	T	K	A	E	R	T	I	V	S	M	W	G	K	I	A	T	Q	A	D	V	I	G	M	E	A	L	E	R	L	F	S	S	F	P	Q	T	K				
UniRef90_P07408	V	L	S	A	A	D	K	T	A	L	K	H	L	T	G	S	L	R	T	N	A	E	A	W	G	A	E	S	L	A	R	M	F	A	T	T	P	S	T	K		
UniRef90_UPI0002C64E9A																																										
UniRef90_K4FYM0	V	L	S	K	T	D	K	A	L	L	S	S	S	V	G	K	I	Q	A	Q	A	T						G	S	D	V	L	A	R	M	F	A	S	F			
UniRef90_K7FZS0																																										
UniRef90_Q91977	W	S	D	A	E	R	A	A	I	V	S	L	W	G	K	I	S	D	V	G	E	I	G	P	Q	A	L	S	R	C	L	I	V	Y	P	W	T	Q				
UniRef90_P14521	L	T	E	A	Q	R	G	A	I	V	N	L	W	G	H	L	S	P	D																							
UniRef90_P02015	L	T	G	E	D	K	A	N	V	K	A	V	W	D	H	V	K	G	H	E	D	A	F	G	H	E	A	L	G	R	M	F	T	G	I	E	Q	T	H			
UniRef90_B3EWR8	W	S	S	S	E	R	S	V	I	S	G	L	W	A	K	V			N	A	A	E	V	G	P	Q	A	L	A	R	L	L	V	L	Y	P	W	T	Q			
UniRef90_P02202	L	S	D	D	E	W	N	V	S	L	G	L	W	A	K	V	E	P	D	L	T	A	H	G	Q	E	V	I	I	R	L	F	Q	L	H	P	E	T	Q			
UniRef90_Q33CJ7	F	T	N	D	E	R	Q	Q	I	H	D	A	W	A	K	L			H	A	D	Q	V	G	G	E	A	L	G	R	L	L	I	V	N	P	W	T	R			
UniRef90_C1BYK4	W	T	A	A	E	R	K	A	I	A	S	V	W	G	S	I	S	A	D										V	A	R	L	L	I	V	Y	P	W	T	R		
UniRef90_Q6DEW1																																										
UniRef90_M3ZD90	L	S	D	K	D	K	S	R	V	K	A	L	W	A	K	A	E	G	K	A	G	E	L	G	G	E	A	L	G	R	M	L	V	A	Y	P	Q	T	K			
UniRef90_F6YXK6																																										
UniRef90_P02196	L	S	D	G	E	W	Q	L	V	L	K	V	W	G	K	V	E	G	D	L	P	G																				

UniRef90_G8DP13	T	Y	F	A	E	W	D	L	R	P	Q	R	S	T	K	Q	V	L	G	H	H	G	G	V	I	M	G	A	V	V	G	M	G	V	K	Y	I	V	T	L	T	E	A	M				
UniRef90_B5X681																																																
UniRef90_UPI0003334593	I	Y	F	A	H	L	S	A	S	P	L	R	S	T	R	M	L	R	S	H	G	G	K	K	M	L	T	S	A	F	A	G	V	A	S	Q	K	H	I	S	S	M	M	V	T	A	L	
UniRef90_UPI0002034AF2	R	F	F	A	S	F	G	N	I	S	L	R	S	T	P	R	V	L	R	S	H	G	G	K	K	V	L	T	S	A	F	A	G	V	A	S	Q	K	H	I	S	S	M	M	V	T	A	L
UniRef90_Q6F3D3	T	Y	F	A	G	G	K	D	I	S	E	S	S	Y	L	R	S	H	H	G	H	G	R	T	V	M	G	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y		
UniRef90_Q90486	R	Y	F	A	T	F	G	N	I	M	G	N	A	K	V	A	A	H	H	G	R	T	V	M	G	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y				
UniRef90_P56251	R	H	F	K	E	D	F	G	N	I	S	H	N	T	R	V	H	D	H	G	K	K	V	L	M	N	S	F	G	S	A	V	Q	K	N	M	D	N	I	H	I	K	N	T	Y			
UniRef90_UPI00042C01C9	K	F	F	K	E	D	F	G	N	I	L	S	H	N	T	R	V	H	D	H	G	K	K	V	L	M	N	S	F	G	S	A	V	Q	K	N	M	D	N	I	H	I	K	N	T	Y		
UniRef90_Q7T1B0	R	Y	F	G	S	F	G	N	L	Y	N	N	S	P	K	V	A	A	H	H	G	T	V	V	L	H	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y			
UniRef90_P06639	I	Y	F	P	A	K	D	L	S	E	R	S	S	Y	L	R	S	H	H	G	K	K	V	V	G	A	L	T	G	D	A	V	A	K	N	M	D	N	I	V	K	N	T	Y				
UniRef90_UPI0002740913	T	Y	F	P	H	F	D	L	H	A	G	S	A	Q	L	R	A	H	H	G	S	K	V	V	G	A	L	T	G	D	A	V	A	K	N	M	D	N	I	V	K	N	T	Y				
UniRef90_D6PVN3	R	Y	F	G	N	F	G	N	L	Y	G	N	T	P	L	I	A	K	H	H	G	T	T	I	V	L	H	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y		
UniRef90_L5KH54	T	Y	F	G	N	F	G	N	L	Y	G	N	T	P	L	I	A	K	H	H	G	T	T	I	V	L	H	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y		
UniRef90_G3PL38	R	Y	F	G	N	F	G	N	L	Y	G	N	T	P	L	I	A	K	H	H	G	T	T	I	V	L	H	G	L	T	E	R	A	V	A	K	N	M	D	N	I	V	K	N	T	Y		
UniRef90_UPI0003AFF6E3	R	Y	F	G	G	F	G	N	L	Y	M	N	N	P	R	V	A	A	H	H	G	K	T	V	I	M	E	G	A	L	E	K	A	V	S	K	I	D	N	I	V	K	N	T	Y			
UniRef90_Q13164	R	H	F	P	T	F	G	N	I	L	G	N	T	P	L	I	A	A	H	H	G	K	T	V	I	M	E	G	A	L	E	K	A	V	S	K	I	D	N	I	V	K	N	T	Y			
UniRef90_G3WE01	S	Y	F	P	S	T	L	I	P	G	L	E	L	T	Q	M	Q	N	H	G	E	Q	I																									

		90	100	110	120
UniRef90_G8DP13	S S L	S E L H A F T L	R V D P S N F K I L A H S I L T V M A M Y Y P K E F T A E		
UniRef90_B5X681	A P L	Q T L H A Y K L	R I D P C N F K I L L C H C I L L V T L A A H M G D E F T P V		
UniRef90_UPI0003334593	S R L	A D L H A F V L	R V D P A N F P R L L T Q C F Q V V L A S H L Q D E F T V E		
UniRef90_UPI0002034AF2	A K L	S E L H A F K L	H V D P E N F R R L L G D L L I I V L A S H F A R D F T P A		
UniRef90_Q6F3D3	D K L	S D T H A H E L	M V D P T N F P R L L G H N I L L V L G I H M P Q L L T C A		
UniRef90_Q90486	A A L	S V M H S E K L	H V D P D N F R R L L A D C I T V C A A M K F G Q A F N A D		
UniRef90_P56251	K Q L	S I K H S E K L	H V D P D N F R R L L G E I I T M C V G A K F G P A F T P E		
UniRef90_UPI00042C01C9	A E L	S K L H C D R L	H V D P E N F K R L L G S I L I V L A M H F G K E C T P A		
UniRef90_Q7T1B0	A E L	S V L H S E K L	H V D P D N F R R L L A D C L T I V I A S T M G A A F T A D		
UniRef90_P06639	S K L	S D K H A E E L	M V D P A N F P K L A H N I L V V L G I H L K P H F T Y S		
UniRef90_UPI0002740913	A K L	S E L H A Y T L	R V D P V N F K X X X X X X X X X X X X X X X X X X		
UniRef90_D6PVN3	A E L	S V L H S E K L	H V D P D N F R R L L S D C L T I V V A A Q M G K D F T G E		
UniRef90_L5KH54	S A L	S D L H S H K L	Q V D P V N F K V L S S H C L L V T L A R H Y P G K D F T P A		
UniRef90_G3PL38	A E L	S V L H S E K L	H V D P D N F K R L L S D C L T I V V A A R F Y G E A F T S A E		
UniRef90_UPI0003AFF6E3	L S L	S G L H A F T L	R V D P S N F K V L S S H N L L V V L A S T M F P G D D F T P E		
UniRef90_O13164	A N L	S K M H S E K L	H V D P D N F R R L L A E I T T I C L A A K F G P S F T P D		
UniRef90_G3WE01	S G L	A D L H A Y G L	R V E P T N F H F L I H C F Q V M L A A S H L Q S E Y T A E		
UniRef90_UPI00046B0B98	S K L	S E L H A Y T L	R V D P V N F K R L L S H C L L V V L A A H F P A D F T S A E		
UniRef90_W5MLZ3	S S L	S D L H A Y L L	R V D P V N F K R L L A H C I L V V L A N R L P A E F T P E		
UniRef90_O13163	A K L	S E L H S E K L	H V D P S N F T L L A D C L T I T L A A K F G P S F T P E		
UniRef90_P83272	T E L	S I L H S E T L	H V D P D N F K R L L A D C L T I V V A A K M G C A F T P D		
UniRef90_UPI0002B493D5	S Q L	S E L H C D R L	H V D P E N F R R L L G D I L V V V L A A H F G K D F T P D		
UniRef90_Q98UB8	A E L	S V L H S E K L	H V D P D N F K R L L A D C L T I V V A A Q L G K E F T G E		
UniRef90_UPI0004419454	A K L	S E L H C D K L	H V D P E N F K R L L G N V P I V L A G H F G K E F T P A		
UniRef90_Q8JIM9	A E L	S V L H S E K L	H V D P D N F K R L L A D C L T I V I A A K L G G S A F T P E		
UniRef90_S7N030	S K L	S E L H A Y T L	R V D P V N F K R L L I Q C F Q V V L A S H L Q D E F T V E		
UniRef90_S9YCX3	S A L	R V L H S H K L	R V D P V N F K R L L L G H C C L L V T L A Q T H Y P G D F T S S A		
UniRef90_P07429	A Q L	S K Y H S E T L	H V D P Y N F K R F C S C T I I S M A Q T L Q E D F T P E		
UniRef90_UPI000328AF02	S A L	S D L H A H K L	R V D P V N F K F L L G H C C L L V T L A C H L Q D D F T P A		
UniRef90_H2LKN8	T D L	S V L H S E K L	Q V D P D N F K R L L A D C L T I V V A A A Q M G P A F T C D		
UniRef90_P84611	A E L	S V L H S D K L	H V D P D N F R R L L A D C L T V V I A A K M G P A F T V D		
UniRef90_C1BZ27	A P L	S V M H S E K L	H V D P D N F R R L L A E C T T V C V A A K L G S F D A D		
UniRef90_C1BLE4	S E L	S H L H S E K L	H V D P D N F K L L A E C L I I V L A A E M G S A F T A E		
UniRef90_P10784	S K L	S D K H A H E L	M V D P G N F D I L A H H I L T T M A M F M P Q C L T S A		
UniRef90_Q1AGS7	A T L	S V L H S E K L	H V D P D N F R R L L C D C L T I V V A A G K F G P T L R P E		
UniRef90_P86919	A N L	S K L H C E K F	H V D P E N F K R L L G D I I I V L A A H Y P K D F L E		
UniRef90_W5KM05	A E L	S E L H S E K L	H V D P D N F K R L L A D C I T V V I A T K M R A G F T P P		
UniRef90_G5CUP5	T K L	S V K H S E K L	H V D P D N L R I F A Q I I S V C V A A K F G R Q F T P D		
UniRef90_P23741	H K L	S E K H F H E L	H V D P Q N F K L L S K C L I I V L A T K L G K Q L T P D		
UniRef90_K7F490	A L V	G K A H A L K H K V	E P V Y F K F F T G V M L E V I A E E Y A N D F T P E		
UniRef90_P23017	A E L	S T L H S E K L	H V D P D N F K R L L S D C I T I V L A A K L G K A F T A E		
UniRef90_F6KMG8	T D L	S T L H S E T L	H V D P D N F R L L S D C C L A I V L A A R M G K N F T P E		
UniRef90_S9YMZ9		G A R A L S L	P P F P P Q L L S H C C L L V T V A S H F P A D F T A D		
UniRef90_P07408	D P L	A V L H G T T L	C V D P H N F P L L T Q C C I L V T L A A H L T E L K P E		
UniRef90_UPI0002C64E9A	S A L	R R L H A H E L	R V D P T S F Q L L L G H C C L L V T L A R H F P G D F T V E		
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UniRef90_S4XEM3	R	D	T	F	N	R	G	N	Q	R	S	G	E	Q	K	A	L	A	G	S	I	A	A	F	A	T	M	L	V	T	E	K	P	D	Q	V	P	H	L					
UniRef90_I3N507	R	F	F	D	S	F	G	D	L	M	G	N	A	K	V	K	A	H	G	K	V	I	D	S	F	S	N	G	L	T	K	H	L	D	N	L	K	G	T	F				
UniRef90_UPI000478B2A8	R	D	L	F	N	R	G	N	Q	A	A	G	T	Q	K	Q	A	L	A	G	S	I	A	A	F	A	T	A	L	L	V	E	H	L	P	D	V	R	P	D	A	M		
UniRef90_C6L819	D	L	F	P	K	F	A	G	I	A	G	S	N	A	D	V	A	A	H	G	A	T	V	L	N	K	L	G	D	L	K	A	K	G	G	H	A	L	E	K				
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UniRef90_D1AB44	R	D	L	F	N	R	G	N	Q	A	S	G	E	Q	A	R	A	L	A	G	S	I	A	A	F	A	R	M	L	V	T	E	H	P	D	R	R	P	D	M				
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UniRef90_D5UDE2	D	G	L	F	N	R	G	N	Q	A	S	G	N	K	T	Q	R	L	J	A	L	A	G	S	I	A	H	F	A	Q	A	L	V	A	T	P	E	N	Q	L	P	E	R	L
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UniRef90_E6J667	R	D	T	F	N	R	G																																					

	90	100	110	120
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UniRef90_D5UDE2	L S R V A H K H A S L G L R A D Q Y G I V H E H L M W A I V D V L G D A V T P E			
UniRef90_UPI0003AF8497	L S L S E L H A F T L R V D P A N F			
UniRef90_E6J667	S R I G H K H V S L G I T P N Q Y Q V V H D H L F G A I V E V L G E A I T P E			
UniRef90_F6XB67	P L L T V K K C L C L R D A G F K I L L S H A I E V T L A V H F P D D F D A T			
UniRef90_B5H323	L S R I A H K H A S L G V L T R E Q Y T V V H T H L F A A I A D V L G E A V T E E			
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UniRef90_W5PMJ4	Q R L S R L R A C T L S F P P D Y F L S H C L L V T L A S H F P A D F T A D			
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UniRef90_W4XLX6	P I L R D L A R R H Y S V T R Q H F E G P K E V M S T T Q K R L I Q D T W			
UniRef90_W4XLX6	P I L R D L A R R H Y S V T R Q H F E G P K E V M S T T Q K R L I Q D T W			
UniRef90_W4XLX6	P I L R D L A R R H Y S V T R Q H F E G P K E V M S T T Q K R L I Q D T W			
UniRef90_W4XLX6	P I L R D L A R R H Y S V T R Q H F E G P K E V M S T T Q K R L I Q D T W			
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UniRef90_Q9NG75 D L A A W R R G W D S I V D I L E A G
UniRef90_Q9NG75 D L A A W R R G W D S I V D I L E A G
UniRef90_R7WQA6 I A A V W D H V Y W L M A A D L I R A E K
UniRef90_W7QB62 I A D A W S T L Y E E L A G L L I E
UniRef90_D9XN42 L E A A W Q R A Y S
UniRef90_V4A8E7 T V V A W N K A T N V M
UniRef90_A7RZB2 T S K A W E K I F S F M A D A M M R G C K

	1	10	20	30	40																																					
UniRef90_F6RIV9	L	S	G	P	E	Q	E	L	I	R	E	S	W	R	S	V	N	S	N	P	L	E	H	G	M	I	L	F	T	R	L	F	D	L	E	P	D	L	L			
UniRef90_B8CU80	M	L	S	E	K	H	I	S	I	V	K	S	T	I	P	L	L	E	S	A	G	T	A	I	T	E	H	F	Y	K	R	M	F	S	Q	N	P	E	L	L		
UniRef90_Q2LC33											K	Y	W	G	A	I	E	A	D	Y	A	G	H	G	G	E	V	L	T	R	L	F	K	E	H	P	D	T	L			
UniRef90_V4A611		F	T	E	T	Q	I	D	T	I	R	S	T	W	P	L	L	S	R	N	M	V	R	V	G	T	D	V	F	V	R	I	F	T	E	V	P	T	V	K		
UniRef90_K4GKC8																																										
UniRef90_S3B1Y0	M	L	S	Q	K	S	A	E	T	V	R	A	T	L	P	A	V	A	E	A	I	D	T	V	T	D	L	F	Y	R	R	L	F	A	A	H	P	E	L	E		
UniRef90_Q3KYN63		L	S	G	P	E	Q	E	L	I	R	E	S	W	Q	K	V	N	S	N	P	L	E	H	G	M	I	L	F	T	R	L	F	D	L	E	P	D	L	L		
UniRef90_Q90YJ2		L	S	E	K	D	K	G	L	I	R	E	S	W	E	S	L	G	N	K	V	P	H	G	T	V	L	F	T	R	L	F	D	L	E	P	D	L	L			
UniRef90_UPI00021A6F7D		L	T	N	K	E	K	R	I	I	R	E	T	W	G	L	R	A	N	S	V	K	V	G	V	D	I	M	S	Y	F	K	R	F	P	Q	S	H	H			
UniRef90_C1BLX7	M	L	S	K	Y	E	K	E	L	I	S	E	I	W	E	K	L	T	P	V	A	S	E	I	G	A	D	A	L	F	R	M	F	T	T	F	P	G	S	K		
UniRef90_Q9NPG2				E	P	E	L	I	R	Q	S	W	R	A	V	S	R	S	P	L	E	H	G	T	V	L	F	A	R	L	F	A	L	E	P	D	L	L				
UniRef90_A4AK68	M	L	S	N	Q	S	L	P	L	I	E	A	T	L	P	L	V	S	E	R	M	P	K	I	A	M	N	F	Y	S	R	M	F	T	A	H	P	E	L	F		
UniRef90_L1M9D6		L	S	D	A	H	A	E	V	I	R	A	T	L	P	L	V	G	S	R	I	N	D	I	T	P	V	F	Y	K	K	M	F	T	A	H	P	E	L	I		
UniRef90_V4HJT2		S	Q	R	Q	K	Q	L	V	Q	A	S	F	V	K	V	E	P	I	S	E	Q	A	A	D	I	F	Y	T	T	L	F	E	Y	D	P	S	L	K			
UniRef90_A6CH06	M	L	S	A	K	T	I	Q	I	V	K	E	I	T	P	T	V	A	A	N	A	E	T	V	T	R	V	F	Y	K	R	M	F	Q	E	N	P	E	V	Q		
UniRef90_M2APL6		M	T	P	E	Q	V	T	L	V	K	E	S	W	E	K	V	K	P	I	S	E	Q	A	E	L	F	Y	G	R	L	F	T	L	D	P	S	L	R			
UniRef90_C5D1W6		M	T	P	Q	N	I	A	L	V	K	A	T	V	P	A	L	Q	A	H	G	E	A	I	T	S	H	F	Y	R	I	M	F	E	S	H	P	E	V	K		
UniRef90_H5UE51	M	L	S	D	T	Q	L	A	T	I	A	A	T	L	P	A	V	E	G	S	L	A	E	I	T	P	R	F	Y	R	G	L	F	A	A	H	P	E	L	L		
UniRef90_P0C227		L	S	A	D	Q	K	A	A	I	K	S	S	W	A	A	F	A	A	D	I	T	G	N	G	S	N	V	L	V	Q	F	F	K	D	Y	P	G	D	Q		
UniRef90_I3ZP09																																										
UniRef90_A0A026VWVZ6		M	T	E	K	Q	K	R	L	V	Q	N	T	W	A	I	V	R	K	D	E	V	S	S	G	V	A	I	M	L	A	L	F	T	E	Y	P	E	Y	Q		
UniRef90_U2GJB1		L	T	P	E	N	E	E	I	V	K	A	T	L	P	L	V	G	G	A	I	E	D	I	A	P	V	F	Y	R	T	M	F	G	K	H	P	E	L	I		
UniRef90_B9RZD8		F	T	E	E	Q	E	A	L	V	V	K	S	W	N	S	M	K	N	A	G	E	L	G	V	K	F	F	L	K	I	F	E	I	A	P	S	A	K			
UniRef90_B2L5U3																																										
UniRef90_V4A5G6		L	T	E	K	D	K	E	L	V	K	S	S	W	A	K	F	E	G	D	V	I	A	D	G	A	H	I	Y	K	L	F	E	K	A	P	E	A	K			
UniRef90_K7A9V9	M	L	S	A	Q	T	I	A	T	V	K	S	T	I	P	L	L	E	S	A	G	V	A	I	T	D	H	F	Y	Q	R	M	F	R	L	N	P	E	L	K		
UniRef90_P21197		L	S	D	A	E	K	N	K	I	R	A	A	W	D	L	V	Y	K	D	Y	E	K	T	G	V	D	I	L	V	K	F	F	T	G	T	P	A	A	Q		
UniRef90_UPI00020E3B04																																										
UniRef90_F2L978		L	T	A	E	Q	M	A	R	V	K	A	T	A	P	V	L	A	A	H	G	S	T	I	T	R	H	F	Y	A	R	M	F	R	H	H	P	E	L	K		
UniRef90_UPI00042C6E8D																																										
UniRef90_F1YMN1	M	L	S	S	D	T	K	L	V	L	E	A	T	L	P	V	V	E	S	A	L	P	E	I	T	P	R	F	Y	D	R	M	F	T	A	R	P	E	L	L		
UniRef90_UPI00046EB1D4		M	L	S	Q	E	K	I	D	I	K	A	T	L	P	L	V	L	E	Q	H	G	K	T	I	T	T	V	F	Y	K	N	M	F	E	A	H	P	E	L	L	
UniRef90_W5XXL5		L	S	P	E	H	E	A	T	I	K	A	T	L	P	L	V	L	G	G	K	I	N	E	I	T	P	V	F	Y	K	K	M	F	T	A	H	P	E	L	L	
UniRef90_S3D2U5		L	T	K	S	Q	I	Q	T	I	K	A	T	V	P	L	A	Q	H	G	E	T	I	T	T	K	F	Y	A	D	L	V	A	H	P	E	L	K				
UniRef90_A9GV91	L	L	S	Q	R	T	I	E	L	V	Q	W	S	W	A	K	V	M	P	I	S	D	A	A	A	L	F	Y	E	R	L	F	T	L	E	P	S	V	R			
UniRef90_P39662	M	L	T	S	D	K	T	Q	E	L	V	K	A	T	A	P	V	L	A	E	D	H	G	Y	D	I	I	K	C	F	Y	Q	R	M	F	E	A	H	P	E	L	K
UniRef90_P56692		L	S	E	D	K	E	H	Y	I	K	G	V	W	K	D	V		D	H	K	Q	I	T	A	K	A	L	E	R	V	F	V	E	A	V	P	E	L	L		
UniRef90_UPI00034F873C		L	S	D	G	E	W	Q	L	V	L	N	V	W	G	K	V	E	G	D	L	S	G	H	G	Q	E	V	L	T	R	L	F	K	G	H	P	E	T	L		
UniRef90_UPI000380C57E	M	L	S	Q	K	T	I	D	I	V	K	S	T	A	P	L	L	E	T	H	G	V	D	I	T	T	Y	F	Y	K	T	M	F	E	A	H	P	E	L	L		
UniRef90_UPI00039A1310		M	L	S	P	A	S	T	A	V	V	R	A	T	L	P	A	V	R	A	H	S	T	E	I	T	G	E	F	Y	S	M	F	S	A	H	P	E	L	L		
UniRef90_A3WZM3		M	S	P	E	Q	K	A	L	V	R	E	T	W	Q	K	V	E	P	I	A	D	E	A	A	R	L	F	Y	D	R	L	F	E	I	D	V	T	A	R		
UniRef90_W7CWNW5	M	L	I	T	E	E	Q	K	Q	L	V	K	S	T	A	P	L	L	K	E	H	G	K	E	I	T	S	I	F	Y	K	K	M	F	E	A	H	P	E	L	L	
UniRef90_Z5XS53	M	L	S	A	Y	Q	K	Q	L	V	Q	N	S	F	K	K	V	A	P	I	A	D	D	A	A	L	F	Y	A	K	L	F	E	Y	D	P	K	L	K			
UniRef90_K9Q0C7																																										
UniRef90_H0SA38	M	L	T	A	D	E	I	G	H	V	R	S	S	F	D	M	V	F	A	R	A	T	E	M	T	T	T	F	Y	N	R	L	F	E	A	P	E	L	L			
UniRef90_M2QSV2		M	L	S	P	A	S	E	A	V	V	R	A	T	L	P	V	V	R	A	H	A	V	E	I	T	G	E	F	Y	S	S	M	F	T	A	H	P	E	L	L	
UniRef90_Q24520	V	F	T	E	E	Q	A	A	L	V	V	K	S	W	S	V	M	K	K	N	S	A	E	L	G	L	K	L	F	I	K	I	F	E	I	A	P	T	T	K		
UniRef90_W1SD74	M	L	N	Q	K	T	I	E	I	L	K	S	T	V	P	L	L	E	Q	H	G	E	T	I	T	T	R	F	Y	Q	L	M	F	A	N	H	P	E	L	L		
UniRef90_G0NQC9		L	S	D	R	Q	R	D	I	L	Q	K	T	F	T	S	I	E	Q	D	C	Y	R	N	G	L	K	I	F	V	R	L	F	A	E	Y	P	R	Y	K		
UniRef90_Q65M00	M	L	S	E	K	T	M	Q	I	V	K	S	T	A	P	V	L	K	E	K	G	T	E	I	T	T	C	F	Y	K	R	M	F	D	A	H	P	E	L	K		
UniRef90_F5LNG4	M	L	K	P	E	T	I	E	I	L	K	S	T	V	P	V	L	E	V	H	G	K	A	I	T	T	R	F	Y	E	K	L	F	E	S	H	P	E	L	L		
UniRef90_W7YHY6	M	L	T	S	K	T	I	E	I	L	K	S	T	V	P	V	L	E	V	H	G	Q	A	I	T	T	T	F	Y	Q	M	L	F	D	N	H	P	E	L	L		
UniRef90_D3G0B8	M	L	S	K	E	T	I	S	I	L	K	S	T	V	P	V	L	E	V	H	G	T	K	I	T	T	R	F	Y	Q	L	L	F	E	R	H	P	E	L	L		
UniRef90_V5YM44		L	S	D	R	Q	E	V	R	I	L	K	S	T	W	A	L	L	N	E	N	P	E	E	S	G	E	A	I	F	Y	T	F	L	E	R	H	P	E	H		
UniRef90_UPI00044398FC		W	T	E	E	E	R	D	I	I	R	G	V	W	E	K	V		D	I	D	E	I	G	E	E	L	W	A	L	I	V	Y	P	E	W	I	D				
UniRef90_Q2I296	M	T	P	A	Q	I	A	L	V	Q	Q	S	F	A	K	V	A	P	I	S	E	Q	A	A	S	L	F	Y	G	R	L	F	E	I	A	P	E	V	Q			
UniRef90_UPI00042C948C		L	T	R	A	E	R	T	I	I	V	S	M	W	S	K	I	S	T	Q	A	D	L	T	G	T	E	T	L	E	S			T	Q	V	P	T	I			
UniRef90_E5XR09																																										

	50	60	70	80
UniRef90_F6RIV9	R Q F S	P R D C	L A S	P E F L D H I R K V
UniRef90_B8CU80	H I F S	N L S H Q H S	G G Q V P A A L H I R K V	M L V I A A Y A K N I
UniRef90_Q2LC33	K L F P	K F K G I P Q N	S T L V P A A S H G A E M F	M Q K L L G E N L I
UniRef90_V4A611	E L F S	F N L V D V N	P T F R A S H G A E M F	M Q K L L G E N L I
UniRef90_K4GKC8	R Y F G	K F R F R A S D	P V D M E H A G A K M F	M Q K L L G E N L I
UniRef90_S3B1Y0	R H L F	N R G N Q A S S	G T Q R R A L A G S I	V A A F A T A L V T
UniRef90_Q3KN63	P L F Q	Y N L Q R Q F S	S P Q F L D H I R K V	M L V I D A A V T S
UniRef90_Q90YJ2	T L F S	Y S T N Q G D S	P E F L D H I R K V	M L V I D A A V T S
UniRef90_UPI00021A6F7D	R A F P	P F K D I P D N	K K F H A H C Q G I	M S T L N D A I D A
UniRef90_C1BLX7	T Y F A	S L N H R S	P H L L S H G K D I	V L A I A E G A R T
UniRef90_Q9NPG2	R Q F S	P E D C L S S	P E F L D H I R K V	M L V I D A A V T S
UniRef90_A4AK68	D G L F	S R S N Q K N G S	Q Q Q A L A G S I	A V F A T H L V R N
UniRef90_L1M9D6	A D L F	N R G N Q Q H G	D A K A L A G S I	A V F A S V L V R N
UniRef90_V4HJT2	S L F K	N	S M K S Q G K L	M A T L K V A V N S
UniRef90_A6CH06	A Y F N	Q A H Q H S G G	Q Q K A L A G A I	C A Y F L H I V D D
UniRef90_M2APL6	A L F K		G D M S E Q G K L	M S T I T L A V T S
UniRef90_C5D1W6	A F F N	E A H Q A A G S	Q M A R A L A G A V	L A Y A T H I D R L
UniRef90_H5UE51	D N L F	N R T H Q K S G E	Q P Q A L A G S I	A A F A R L Q L E P
UniRef90_P0C227	S Y F K	K F D E L K G D A	Q L A T H A S Q V	F G S L N N M I D S
UniRef90_I3ZP09				L T S F G E A V K N
UniRef90_A0A026VWZ6	K Q F K	P F D E L P K N	K R F Q A H S A S N	V L S A L S S V I H
UniRef90_U2GJB1	S D L F	N R G N Q R S G E	Q Q K A L A A S I	A T F A S M L V T P
UniRef90_B9RZD8	K L F T	F L R D S D Q N	P K L K P H A M S V	F V M T C A E A V Q
UniRef90_B2L5U3	T Y F P	S F D F H H N S	K Q I L S A H G K K	V V D A L N E A A N
UniRef90_V4A5G6	E K F G	F A K D S L E N K	Q F K A H V R K V	L D V F E S V V R E
UniRef90_K7A9V9	N L F N	M A N Q T N E N R	Q Q F A L F S A I	A A Y A K N I D N
UniRef90_P21197	A F F P	K F D D L K Q S S	D V R W H A E R I	I N A V N D A V K S
UniRef90_UPI00020E3B04				L T S F G A V K N
UniRef90_F2L978	N L F N	Q T H Q R A G S	G P E A L A R A V	Y A Y A A N I D N
UniRef90_UPI00042C6E8D				
UniRef90_F1YMN1	R D L F	N R T N Q A T G	Q Q V L A G A V	A A F A R L Q L E P
UniRef90_UPI00046EB1D4	N V F N	H V N Q A Q R G	Q Q T A L A N T V	L A A A K H I D N
UniRef90_W5XXL5	A D T F	N R G N Q K Q G E	Q Q K A L A A S I	A S F A S M L V D E
UniRef90_S3D2U5	N V F N	S T H Q A T G R	Q A R A L A G S I	L H A Y A S N I D D
UniRef90_A9GV91	P L F K	N	D I A E Q K K L	M Q T L S V A V D G
UniRef90_P39662	N V F N	M A H Q E Q G Q	Q Q Q A L A R A V	Y A Y A E N I E D D
UniRef90_P56992	R L F S	K L Q G L F S A	N D V Q Q H A D K V	Q R A L G E A I D D
UniRef90_UPI00034F873C	E K F D	K F D E M R G S E	D L K K H G S T V	L T A L G G L I D K
UniRef90_UPI000380C57E	N I F N	H A N Q S Q G R	Q Q T A L A N T V	Y A A A Q Y I D Q
UniRef90_UPI00039A1310	D L F N	Q G N Q A D G R	K L A L A A V V	G F A E S L T A G D
UniRef90_A3WZM3	Q L F K	T T D L T E Q R	K L F Q T L	M V V G G L D Y
UniRef90_W7CNW5	N Y F N	L T N Q E L G T	Q P L A L A N T V	Y L A A E N I E Q
UniRef90_Z5XS53	T L F K	S	D L R S Q G K K	M M T L G I A V K
UniRef90_K9Q0C7	P L F A	N T D V K E Q S	K K L L A S L	L V F V V E N L K K
UniRef90_H0SA38	S M F P		A D M D V L K R D F	I A T L A V L V G S
UniRef90_M2QSV2	D L F N	Q G N Q A D G R	K K L A L A S A V	V G F A E C L I T D
UniRef90_U024520	K M F S	F L R D S P Q N	K L K P H A M S V	F V M C C E S A V Q
UniRef90_W1SD74	N I F N	H A N Q K Q G R	Q Q K A L A G T V	Y A A A M Y I D N
UniRef90_G0NQC9	L I W P	Q F R A I P D S	V E L R R A S V Y L	K G L G K I E S
UniRef90_Q65M00	N I F N	M S R Q Q T G G	Q P K A L A F T V L	Q A A E N I D R
UniRef90_F5LNG4	N L F N	H G N Q K Q G R	Q Q T A L A N A V	Y A A A V H I D R
UniRef90_W7YHY6	N I F N	H V N Q R Q G K	Q Q A L A N T V	Y A A A V H I D N
UniRef90_D3G0B8	N L F N	H A N Q K H G R	Q Q T A L A N S V	Y A A A L H I D R
UniRef90_V5YM44	K R Y T	A F R N L K G T	P Q I R R H S G K I	M N I F N T A I C
UniRef90_UPI00044398FC	R Y F G	S F G D L F K N	P K L A L D G K V	L S A L D T A V K N
UniRef90_Q21Z96	P L F A	K	A D I R A D Q G K	K L M G T L A V V V G
UniRef90_UPI00042C948C	T W T E	G G R E G R N D	L E T G G Q G	
UniRef90_E5XR09	R D L F	N R G N Q A S G	D Q Q R A L A G S I	V A F A G L V L E G
UniRef90_UPI00037A7EB7	T N L F	N M S N Q A S G	E Q Q Q A L A S I	V A Y A A A N I Q N
UniRef90_V6Z811	R D L F	N R G N Q A A G E	Q P K A L A A S I	A A F A G M V L E G
UniRef90_D3P7W4	R A V F	N Q S H Q R N S	A Q P E A L A N A	I A Y A T N I D R
UniRef90_B				

		90	100	110	120																																							
UniRef90_F6RIV9	T	N	L	G	R	K	H	K	A	L	G	V	K	L	S	S	F	S	T	V	G	E	S	L	L	F	M	L	E	K	L	G	P	A	F	S	P	A						
UniRef90_B8CU80	E	R	I	A	H	K	H	A	T	S	F	N	I	Q	L	P	E	S	H	F	S	T	V	G	H	L	L	E	T	L	R	E	L	A	P	D	A	F	T	P	E			
UniRef90_Q2LC33	Q	P	L	A	T	T	H	A	N	K	H	K	I	A	L	P	E	N	F	R	L	I	T	E	V	L	V	K	V	M	A	E	K	A	G	L	D			T	A			
UniRef90_V4A611	M	V	L	G	A	R	H	A	T	N	K	S	G	F	K	P	E	N	F	K	F	Y	V	K	C	L	I	Q	V	W	E	L	E	L	G	E	F	I	L	E				
UniRef90_K4GKC8	E	Y	L	S	K	R	H	S	D	T	I	H	V	D	P	E	N	F	K	L	L	G	S	C	M	L	V	E	M	A	M	T	K	G			D	W	S	P	E			
UniRef90_S3B1Y0	S	R	I	A	H	K	H	A	S	L	G	I	A	P	D	S	Q	F	L	V	H	T	H	L	F	A	A	L	G	E	V	L	G	D	A	A	T	E	D					
UniRef90_Q3KN63	T	N	L	G	R	K	H	A	K	A	V	G	V	K	L	S	S	F	S	T	V	G	E	S	L	L	Y	M	L	E	Q	C	L	G	S	T	F	T	A	T				
UniRef90_Q90YJ2	L	N	L	G	R	K	H	A	Q	A	V	G	V	N	T	Q	S	F	A	L	V	G	E	S	L	L	Y	M	L	E	Q	S	L	G	P	A	Y	T	T	S				
UniRef90_UPI00021A6F7D	H	T	T	G	K	R	H	G	R	R	G	Q	G	R	Q	E	F	I			D	L	K	G	V	V	L	D	A	M	R	G	A	F	G	S	K	F	T	T	E			
UniRef90_C1BLX7	A	P	L	Q	T	L	H	A	Y	Q	L	R	I	D	P	I	N	F	K	V	V	F	Q	S	Y	L																		
UniRef90_Q9NPG2	A	S	L	G	R	K	H	A	R	A	V	G	V	K	L	S	S	F	S	T	V	G	E	S	L	L	Y	M	L	E	K	L	G	P	A	F	T	P	A					
UniRef90_A4AK68	S	R	I	A	H	K	H	V	S	L	G	I	Q	P	E	Q	Y	D	V	Y	K	L	F	E	A	I	A	D	E	L	G	S	D	V	I	T	T	A	E					
UniRef90_L1M9D6	A	R	I	G	H	K	H	V	S	L	G	I	T	K	D	Q	Y	Q	V	I	V	H	D	H	L	F	A	A	I	A	E	V	L	G	S	V	V	T	P	E				
UniRef90_V4HJT2	Q	K	L	A	E	R	H	V	N	Y	G	V	K	P	E	H	F	T	L	V	G	N	A	L	L	Y	T	L	K	K	G	L	G	S	D	W	N	S	E					
UniRef90_A6CH06	E	L	I	A	Q	K	H	C	S	L	G	I	Q	P	E	H	Y	P	L	V	G	K	H	L	L	A	A	I	K	E	V	M	G	D	D	G	A	T	D	E				
UniRef90_M2APL6	Q	A	L	G	R	K	H	A	V	E	Y	E	V	P	D	S	S	Y	A	T	V	G	E	A	L	I	W	T	L	G	Q	V	L	G	D	D	F	T	E	D				
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UniRef90_H5UE51	L	D	R	I	A	H	K	H	A	S	L	G	V	T	A	Q	Q	Y	A	V	V	H	E	H	L	F	A	A	I	V	D	V	L	G	A	A	V	T	P	E				
UniRef90_P0C227	G	L	L	C	K	N	A	S	D	H	I	P	V	R	Q	Q	Y	K	E	L	F	S	T	L	M	N	Y	M	Q	S	L	L	P	G	A	N	V	A	G	D				
UniRef90_I3ZP09	D	K	L	S	Q	L	H	S	D	K	L	H	V	D	P	Q	N	F	R	L	L	G	D	N	L	I	A	L	A	A	A	L	G	K	D	F	T	V	E					
UniRef90_A0A026WVZ6	L	S	L	A	D	R	H	K	A	R	G	Q	T	E	E	Q	Y	Q	N	I	V	K	K	V	M	A	N	L	F	P	S	V	L	G	R	Q	Y	T	P	E				
UniRef90_U2GJB1	S	R	I	G	H	K	H	V	S	L	G	I	T	E	A	Q	Y	Q	N	I	V	H	D	N	L	F	A	A	I	V	E	V	L	G	E	D	V	T	P	E				
UniRef90_B9RZD8	K	D	L	G	A	T	H	F	R	Y	G	V	V	D	E	H	F	E	V	T	K	F	A	L	L	E	T	I	K	E	A	V	P	E	M	W	S	P	D					
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UniRef90_V4A5G6	P	V	L	N	D	L	G	A	R	H	Y	G	V	D	P	L	K	Y	Y	E	I	L	G	S	C	I	M	Y	A	W	D	R	K	L	K			M	D	A	D			
UniRef90_K7A9V9	E	R	V	A	H	K	H	A	T	S	F	F	I	Q	P	E	H	Y	D	I	V	G	H	H	L	I	J	E	T	L	R	E	L	A	P	D	A	F	T	P	D			
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UniRef90_F2L978	S	R	I	A	N	K	H	V	S	L	G	I	S	V	R	P	E	H	Y	P	I	V	G	E	H	L	L	A	S	I	V	I	E	V	L	G	D	A	V	D	A	T	P	E
UniRef90_UPI00042C6E8D	A	L	V	G	K	A	H	A	L	K	H	K	V	E	P	V	I	Y	F	K	I	L	S	G	V	I	L	E	V	I	A	E	E	F	A	N	D	F	P	P	E			
UniRef90_F1YMN1	I	D	R	I	A	H	K	H	A	S	L	G	I	V	P	E	Q	Y	P	I	V	H	E	H	L	F	A	A	I	V	D	V	L	G	D	A	V	T	P	E				
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UniRef90_S3D2U5	E	L	I	C	K	H	A	A	S	L	Y	I	Q	P	E	S	Y	D	V	V	G	Y	H	L	L	K	A	M	K	E	V	L	G	D	A	A	T	P	E					
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UniRef90_W7CNW5	K	T	I	A	H	K	H	R	S	L	T	I	K	A	E	H	Y	P	I	V	G	E	Y	L	L	K	G	I	A	E	Y	L	G	D	A	A	T	P	E					
UniRef90_Z5XS53	E	Q	L	A	R	K	H	I	D	Y	G	V	S	V	D	Y	T	P	V	G	N	A	L	L	Y	T	L	K	T	G	L	G	D	D	F	T	P	E						
UniRef90_K9Q0C7	K	G	L	G	A	R	H	V	K	Y	G	A	L	P	E	H	Y	P	L	V	G	N	T	L	L	K	T	F	E	Q	Y	L	G	D	A	D	W	T	P	D				
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UniRef90_W1SD74	K	Q	I	A	H	K	H	R	S	L	G	I	K	P	D	H	Y	P	I	V	G	K	Y	L	L	A	I	K	D	V	L	G	D	A	A	T	D	D						
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UniRef90_W7YHY6	K	Q	I	S	E	K	H	R	A	L	N	I	Q	P	E	H	Y	P	I	V	G	E	N	L	L	A	A	M	K	Q	V	L	G	D	A	A	T	P	E					
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UniRef90_Q07WT8	M L D T A T V Q I L	K A T V P A L Q L Y	A N D I T S H F Y P L L F	A Q H P E V L	
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UniRef90_H7CXY0	M L D Q K T I D I I	K S T V P V L K S N	G L E I T K T F Y K N M F	E Q N P E V K	
UniRef90_J9E103	M L S T E T K S I L	S T V P V L E K H G	E A I T G R F Y H I L F	S E H P E L L	
UniRef90_UPI0002EA395B	M L S Q K T I D I I	K S T V P V L E K H	G V D I T K H F Y K R M F	T S N H P E L K	
UniRef90_B1HYZ6	M L K Q E T I Q I I	K A T V P V L E V H	G V E I T K T F Y K N M F	Q A H P E L L	
UniRef90_Q6CHJ2	M T R E D I N L T K	E L W A K L M N D P	E T L S S A A Y G T L F	C E Q F Y T N	
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UniRef90_I3CJ89	M L K A S D I Q L V	C R S W E K L S P N I	P E L G Q K F Y K N L F	T L D P S L K	
UniRef90_B8NAG7	L S P E Q I Q L I K	A T V P V L Q H G	T T I T V F Y N N M L T	A H P E L	
UniRef90_D6WV71	L T S R E V F L V Q	S S W D P I K K D L	T G Y G V Q L L F L F	K K Y P E E Q	
UniRef90_M1WCM2	L T A Q Q T A T V K	S T A P I V K Q Y G	Q T I T T F Y R N M L S	A H P E L K	
UniRef90_W2T026	L Q D S Q R Q I L I	D T F T K M E Q S P	I K T G L K I L V K M F	A E Y P Q Y K	
UniRef90_K7EMC7		A E R K A V Q A M W	R L Y A N C E D V G	V A L L V R F F V N F	P S A K
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UniRef90_H7F3M2	M L D E K T K Q T L	V K E T I P F L E A	K G T E I T S L F Y K N M L	A A S Y P D L R	
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UniRef90_Q0RFT4	M L S E R S A A V V	G A T A G V V A E H	A V E I T A A F Y P R V	F D A H P E L L	
UniRef90_UPI000248C5DB	M L N E Q T I R L I	Q S T V P L L E S K	G T E V T K R F Y E I L F	T E H P E L L	
UniRef90_UPI00036F3778		E H I R R T W R L A	R R H E A D I A R D F Y T L	L F T L A P E T R	
UniRef90_O97382	L S C V D V A N I Q	E S W S K V S G D L	K T T G S V V F Q R M I	N G H P E Y Q	
UniRef90_O97382	L S C V D V A N I Q	E S W S K V S G D L	K T T G S V V F Q R M I	N G H P E Y Q	
UniRef90_G2X8P2	L T Y K Q S V L V R	G S I P A L R E H	G E T I T S L F Y A N M L	R A H P E L	
UniRef90_Q17155		S D A K E N L R S S	F K I L A N D I E S S G	L Q L M K N L F T S	H P E D T L
UniRef90_H8H3G1	L L T D I E R A H I	R R T W R L V E Q A	A E T A T K I F Y D D L F	S A T H N P E Y R	
UniRef90_I1XK72	M L D S R T I E I V	K S T L P L L E N A	G V E V T D H F Y K R M F	K Q H P E L K	
UniRef90_B9CTU8	M L T E K E K S I V	K E T V P V L Q D	K G E I I T S H F Y K R M F	K Q H P E L K	
UniRef90_C1BGX1	L T A K D K S V A K	A F V G K I S G K A	D V V G A E A L G R M L	T A Y P Q T K	
UniRef90_G2TLI6	M L S Q K T I E I V	K S T V P V L K T	Q G T D I T T Y F Y K T M F	A A H P E L L	
UniRef90_C3K134	M L S K K Q K E L I	A E I W G R L T P V	A D D I G A D A L H R	M F A S Y P G T K	
UniRef90_R8BN99		M V R G T I P A L R E	H G E R I T T I F Y R N M L	R D H P D L N	
UniRef90_G4QHE2	M T I K Q S I V V Q	K S W Q K L K P I A	P Q A K I F Y E T L F E	M D H P S L K	
UniRef90_W4QGW9	M L S T K T I K I I	K S T A P I L A N K	G V D I T S H F Y E S M F	N D H P E L L	
UniRef90_A1CN79	L T P E Q I A I I K	A T V P V L K D H G	T N I T T V F Y K N M L	T E H P D L	
UniRef90_S2XKA8	M L T Q E E K G I L	I Q T V P L K E R G	T E T S N F Y N R M F N Q	H P E L	
UniRef90_L2TRW9		M I R A T L P A V G A	A I D D I T A L F Y R K M F	A A H P E L E	
UniRef90_UPI0003B49674	L S P A S E A V V K	E T A G V V A E I A	D D A T V L F Y R D M F	E A H P E L L	
UniRef90_Q6N314	M M T P Q A I A L V	Q Q S F A R L T P I	S D E T A T L F Y E R L F	A T A H P E L R	
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UniRef90_P49852	M L D N K T I E L I	K S T V P V L Q Q H	G E T I T G R F Y D R M F	Q D H P E L L	
UniRef90_W5WN66		M I R E S F A V V E P	C A D D V A K F F Y G M L F	S L A P T T R	
UniRef90_B2T8C8	M L S A E H R A I V	K A T V P L L E S G	G E A L T T H F Y D M L I	S E H P E V R	
UniRef90_H6R2Z7	L N A E H A E T I R	A T L V L G A H I D	E I T A F Y R R L F G N	H P E L I	
UniRef90_B8C6B7	L S P E D L S I V Q	T S W A K V V P I A	S V A A D L F Y T K L F E L	D P E L R	
UniRef90_E1X5F5	M L E S K T I E I I	K S T A P I L E E H	G V L L T K H F Y K K L F	E K N P E V M	
UniRef90_B7QBW9	M T S Q E K H I V R	D T W A I E K E V Q	T S G V A I F V V L F F	K F K P A Y Q	
UniRef90_C9P7Z2	M L N N H T I A I V	K S T I P L L E S A	G P A L T A H F Y Q R M F	T H N P E L K	
UniRef90_F4F1M8		D V S R L K R S W S	A V A A H G D Q V P L Y	F Y S T L F L T H P	Q T R
UniRef90_Q9Y0D5		T E G E R A S W A	V L M K D Y E H A G	V Q L D K F F K A N	P A A K
UniRef90_C7MRL2		E H I E N S W H L A	R P Y L D E I T Q Q F Y R L	L F T L A P S A R	
UniRef90_A3QIV0	L T S T Q I D I L V	Q T S F K Q V E P I	S E Q A A A V F Y D A L F	Q I D P N I R	
UniRef90_B0UBV3	L S D A T I L H L V	K A T V P A L Q H G	L A I T R R M Y E R M F	Q N P D I R	
UniRef90_E9IBK1	L T E K Q K R L V	Q N T W A I V R K D	E V S I G V A F F Y S Y F K	Q Y P E A Q	
UniRef90_Q5AX11	L S P E Q I Q L I K	A T V P V L Q E H	G T T I T K V F Y D N M L	T A H P E L K	
UniRef90_Q7NTW7	L T S Q Q I R L V Q	E S F A K V E P I A	D E A A K L F Y D K L F	E Y A P D L R	
UniRef90_G6EZ51	M L T E S Q K S L I	K A T V P V L R E H	G V A L T S H F Y Q R M L	T G N P E L K	
UniRef90_Q7S074	L T D A Q I S I L V	K S T A P V L K Q H	G E A I T T V F Y N D L I	T E N P S L K	
UniRef90_UPI0003776242	M T P A E V D M V K	T T F V Q I L P Q A	D E F G P K F Y E R L F	S L D P T L K	
UniRef90_K9SL27		E I L Q E S F N K V	K P Y A G E L G D R	F Y E N L F T M Y P	E A K
UniRef90_UPI000388D823				C R M F T E H P D T K	
UniRef90_V4C2N0	L T A A E K S L V	A E A W K N I S P K	K K D Y G V E L F M S L	F T A H P D A L	
UniRef90_V4BDN7		L V L E S W N I V Q	Q D D I S K V G V M F M S L	F E T H P D V Q	
UniRef90_C1DMB8	M L T E Q Q R A I V	K A T V P L L E T	G G E A L T S H F Y R I	M L A E H P E V R	
UniRef90_K4PYU2	F T E K D E A L V	K E S W D M K Q N I	P E Y S L R F F S I L L	E I A P A A K	
UniRef90_I6ZHS6	M L C A E K R A L I	K A T V P L L E S G	E A L T A H F Y R L M L	S E H P E V R	
UniRef90_J7RE58	M L S Q A T R D L V	K A T I P A L E E	R G A E I T R C F Y G M M L	T E H T E L L	
UniRef90_I2H241	M L S E E T R T I V	K A T V P A L E A	K G V E I T T T F Y K H M L	G E N S E L L	
UniRef90_A4INU4	L H P K T I E I V	K S T V P V L E K H	G E Q I T K R F Y E L M F	S N H P E L L	
UniRef90_A0A016U3Y1		Q R E L I R T S Y Q	S L E A E S T K N G L G L	F V R L F A E F P S Y K	
UniRef90_MOSSS5	F S E E Q E A L V	N S W N V M K Q H	A A D T A L S F F L K I F	E I A P S A T	
UniRef90_B0UPW9	M S P D Q I R L V	Q D S F E S V S P I	A A T A D L F Y D R L F	T I A P D L R	
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UniRef90_P80018	N	K	F	P	
UniRef90_R7URJ5	E	S	F	G	
UniRef90_Q0VR92	P	L	F		
UniRef90_AA0A58ZN65	P	L	F		
UniRef90_B2AAB3	N	Y			
UniRef90_V4LI57	H	L	F	K	
UniRef90_UPI0003632844	E	L	F	P	
UniRef90_UPI00037D16A9	D	F	F	P	
UniRef90_Q07WT8	P	Y			
UniRef90_Q96T46	T	Y	F	P	
UniRef90_Q127H5	P	F	F	N	
UniRef90_C7YIP2	D	Y			
UniRef90_UPI0002B443EC	K	M	F	P	
UniRef90_I7D426	D	L	F	P	
UniRef90_H7CXY0	P	L	F		
UniRef90_J9E103	N	L	F		
UniRef90_UPI00002EA395B	N	V	F		
UniRef90_B1HYZ6	N	L	F		
UniRef90_Q6CHJ2	L	M	A	S	
UniRef90_UPI000045E9D13	P	L	F	K	
UniRef90_I3CJ89	T	L	F	K	
UniRef90_B8NAG7	N	A	V	F	
UniRef90_D6VW71	Q	N	F		
UniRef90_M1WCM2	N	Y	F	S	
UniRef90_W2T026	Q	L	W	P	
UniRef90_K7EMC7	Q	Y	F	S	
UniRef90_UPI00047BCAEB	N	L	F		
UniRef90_UPI0002236516	D	L	F		
UniRef90_H8G3Q8	E	S	F		
UniRef90_E0VN13	N	L	F		
UniRef90_H7F3M2	N	L	F		
UniRef90_G8SE21	D	L	F	P	
UniRef90_AA0A222RFR4	K	M	F	P	
UniRef90_B3F9V4	S	Y	F	S	
UniRef90_L2FXZ3	N	V	F		
UniRef90_QQRFT4	N	L	F		
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UniRef90_UPI000036F3778	D	F	F	P	
UniRef90_O97382	Q	L	F		
UniRef90_O97382	Q	L	F		
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UniRef90_Q17155	G	Y	F		
UniRef90_H8H3G1	D	Q	F	P	
UniRef90_I1XK72	D	L	F		
UniRef90_B9CTU8	N	M	F		
UniRef90_C1BGX1	T	Y	F	S	
UniRef90_G2TLI6	N	L	F		
UniRef90_C3K134	T	Y	F	S	
UniRef90_R8BN99	N	Y			
UniRef90_G4QHE2	P	M	F	K	
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UniRef90_A1CN79	N	K	V	F	
UniRef90_S2XKA8	R	N	M	F	
UniRef90_L2TRW9	R	D	V	F	
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UniRef90_W5WN66	E	M	F	P	
UniRef90_B2T8C8	P	M	F		
UniRef90_H6R2Z7	R	D	L	F	
UniRef90_B8C6B7	P	L	F	P	
UniRef90_E1X5F5	P	Y			
UniRef90_B7QBW9	K	L	F		
UniRef90_C9P7Z2	D	I	F		
UniRef90_F4F1M8	Q	L	F	P	
UniRef90_Q9Y0D5	P	F	F	T	
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UniRef90_B0UBV3	D	L	F		
UniRef90_E9IBK1	K	E	F	K	
UniRef90_Q5AX11	T	V	F		
UniRef90_Q7NTW7	P	L	F	K	
UniRef90_G6EZ51	Q	V	F		
UniRef90_Q7S074	N	L	F		
UniRef90_UPI0003776242	E	M	F		
UniRef90_K9SL27	P	L	F	K	
UniRef90_UPI000388D823	S	Y	F	T	
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UniRef90_V4BDN7	D	V	F	M	
UniRef90_C1DMB8	P	L	F		
UniRef90_K4PYU2	N	M	F		
UniRef90_I6ZHS6	P	L	F		
UniRef90_J7RE58	N	I	F		
UniRef90_I2H241	D	V	F		
UniRef90_A4INU4	N	V	F		
UniRef90_AA0A16U3Y1	A	I	W	P	
UniRef90_MOSS55	Q	L	F	S	
UniRef90_B0UPW9	P	L	F	P	
UniRef90_E3HL11</					

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UniRef90_UPI0002FFFA2A	S	A	L	A
UniRef90_P80018	A	T	L	A
UniRef90_R7URJ5	H	D	L	G
UniRef90_Q0VR92	P	A	V	G
UniRef90_A0A058ZN65	Q	Q	L	A
UniRef90_B2AAB3	E	R	M	K
UniRef90_V4L157	R	V	I	K
UniRef90_UPI0003632844	Q	Q	L	G
UniRef90_UPI00037D16A9	H	E	L	G
UniRef90_Q07WT8	S	K	I	V
UniRef90_Q96T46	S	A	L	S
UniRef90_Q127H5	A	Q	I	N
UniRef90_C7YIP2	E	R	M	K
UniRef90_UPI0002B443EC	A	K	E	S
UniRef90_I7D426	G	Q	L	G
UniRef90_H7CXYO	N	R	I	G
UniRef90_J9E103	Q	R	I	A
UniRef90_UPI0002EA395B	P	H	L	I
UniRef90_B1HYZ6	P	M	L	I
UniRef90_Q6CHJ2	W	S	V	G
UniRef90_UPI00045E9D13	P	S	L	A
UniRef90_I3CJ89	A	R	L	G
UniRef90_B8NAG7	E	L	I	C
UniRef90_D6WV71	E	K	I	G
UniRef90_M1WCM2	E	R	I	A
UniRef90_W2T026	N	R	I	A
UniRef90_K7EMC7	A	L	V	G
UniRef90_UPI00047BCAEB	E	R	I	G
UniRef90_UPI0002236516	A	Q	L	S
UniRef90_H8G3Q8	E	R	V	A
UniRef90_E0VN13	K	E	L	G
UniRef90_H7F3M2	D	Y	I	Q
UniRef90_G8SE21	R	S	L	G
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UniRef90_UPI000248C5DB	K	Q	I	G
UniRef90_UPI00036F3778	H	Q	R	G
UniRef90_O97382	K	K	L	G
UniRef90_O97382	K	K	L	G
UniRef90_G2X8P2	E	R	M	C
UniRef90_Q17155	L	K	F	A
UniRef90_H8H3G1	T	A	M	G
UniRef90_I1XK72	G	E	L	V
UniRef90_B9CTU8	K	E	I	A
UniRef90_C1BGX1	E	Q	I	A
UniRef90_G2TLI6	A	R	T	S
UniRef90_C3K134	E	R	M	C
UniRef90_R8BN99	Q	K	L	G
UniRef90_G4QHE2	P	K	V	G
UniRef90_W4QGW9	E	L	I	C
UniRef90_A1CN79	P	I	L	K
UniRef90_S2XKA8	S	R	I	A
UniRef90_L2TRW9	Q	R	I	A
UniRef90_UPI0003B49674	P	R	L	A
UniRef90_Q6N314	P	I	L	K
UniRef90_UPI00047C30DC	K	Q	I	G
UniRef90_P49852	R	Q	L	G
UniRef90_W5WN66	S	Q	I	N
UniRef90_B2T8C8	S	R	I	G
UniRef90_H6R2Z7	Q	D	L	G
UniRef90_B8C6B7	S	L	I	A
UniRef90_E1X5F5	R	K	V	A
UniRef90_B7QBW9	E	R	I	A
UniRef90_C9P7Z2	Q	E	L	G
UniRef90_F4F1M8	V	K	L	S
UniRef90_Q9Y0D5	Q	Q	L	G
UniRef90_C7MRL2	P	Q	L	G
UniRef90_A3JVI0	E	R	I	A
UniRef90_B0UBV3	A	N	F	T
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UniRef90_Q5AX11	R	K	L	A
UniRef90_Q7NTW7	V	H	I	A
UniRef90_G6EZ51	A	R	I	A
UniRef90_Q7S074	E	A	L	A
UniRef90_UPI0003776242	K	G	L	G
UniRef90_K9SL27	N	P	L	G
UniRef90_UPI000388D823	G	L	I	R
UniRef90_V4C2N0	H	Q	L	G
UniRef90_V4BDN7	A	Q	I	V
UniRef90_C1DMB8	K	Y	L	G
UniRef90_K4PYU2	S	Q	I	G
UniRef90_I6ZHS6	G	H	V	R
UniRef90_J7RE58	P	Y	V	R
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UniRef90_B0UPW9	T	R	I	V
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UniRef90_V4LI57 I R A A W V S V Y D E L A D L M L E G
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UniRef90_UPI00037D16A9 V E R A W A E A Y T L V A R S M A E E Y R
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UniRef90_Q96T46
UniRef90_Q127H5 V L A A W G A A Y G Q L A D I L I
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UniRef90_E0VN13 L D D A W T H L F K I I E F V M V S
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UniRef90_Q7NTW7 L R A A W V D A F R L M A T V M
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UniRef90_UPI000377B994		M	T	N	K
UniRef90_D7I3E2	M	L	T	S	A
UniRef90_I0GDU5	M	L	T	S	A
UniRef90_L8MJ23	M	L	S	S	Q
UniRef90_V5QR23	I	F	T	E	E
UniRef90_W1RRL3	M	L	S	S	Q
UniRef90_M9LPM0	M	L	K	P	R
UniRef90_I7DWX5	L	S	E	Q	S
UniRef90_V5PPD6	M	L	S	A	A
UniRef90_UPI0003B74153					
UniRef90_I1H7V3	F	S	E	E	K
UniRef90_U6PE83	L	T	E	R	Q
UniRef90_E2MVZ8	L	T	P	E	Q
UniRef90_UPI0004654DE8	M	L	S	D	Q
UniRef90_Q4WC12	M	L	T	T	Q
UniRef90_UPI000463C9E2	M	L	T	P	D
UniRef90_L9PA49	M	L	S	T	E
UniRef90_W4Q2J8	L	S	A	E	T
UniRef90_H0G2Y0	L	S	A	E	T
UniRef90_Q99MQ7	L	S	E	D	E
UniRef90_UPI0004025F08	M	L	N	Q	E
UniRef90_G9NNS6	L	S	P	A	Q
UniRef90_A0A059ITZ4	L	T	A	R	E
UniRef90_UPI0002D96876	M	L	T	H	A
UniRef90_K9WGN6					
UniRef90_T0T531					
UniRef90_E3IE82	L	S	Q	K	T
UniRef90_U6PAP5	L	T	E	I	Q
UniRef90_UPI00034D7B38					
UniRef90_UPI0003835450					
UniRef90_V8PEV3					
UniRef90_UPI000465C560	L	S	E	Q	T
UniRef90_J3LIR2	F	T	E	E	Q
UniRef90_B0CEY8					
UniRef90_D8PFN9					
UniRef90_D7HWU5	M	L	S	T	A
UniRef90_Q6C8Y1	M	T	K	E	E
UniRef90_UPI00024838DF					
UniRef90_D8MIW2	L	T	L	R	H
UniRef90_UPI0003167A12	M	L	T	N	Y
UniRef90_D8QX12	M	L	T	S	A
UniRef90_J1EIJ3	M	L	T	D	S
UniRef90_C7FFV6					
UniRef90_I1XFU2					
UniRef90_UPI00039BD3CD					
UniRef90_F4NCQ6	M	L	S	V	K
UniRef90_V4R4D1	M	T	P	G	D
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UniRef90_UPI0003675E6A	M	T	T	E	Q
UniRef90_C2V4F0	M	T	D	E	K
UniRef90_E9G8S0					
UniRef90_UPI00034C0189	M	L	N	E	K
UniRef90_F2J1V1	M	T	P	E	Q
UniRef90_R7BX74	M	L	T	A	R
UniRef90_X6FR46	M	T	P	D	Q
UniRef90_U7QFR4					
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UniRef90_V6I8G9	L	L	G	N	D
UniRef90_A0A031GIZ9	M	L	T	Q	E
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UniRef90_UPI000371A6A8	M	T	P	T	Q
UniRef90_B9DQ58	M	L	T	E	Q
UniRef90_H2FTH5	M	L	D	A	R
UniRef90_A8LZ06					
UniRef90_R5Q9R1	M	L	T	P	H
UniRef90_B2U728	M	L	S	D	S
UniRef90_A6YH87	F	S	E	Q	Q
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UniRef90_UPI00034DE702	L	D	K	R	T
UniRef90_UPI000375C20D	L	S	A	N	T
UniRef90_B2VWF1	L	T	P	S	Q
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UniRef90_E0UK53					
UniRef90_UPI0002B43077	F	T	E	K	E
UniRef90_B2IF30	L	S	P	E	T
UniRef90_B6H973	L	T	S	G	Q
UniRef90_A5IPA8	M	L	T	E	Q
UniRef90_G1U1L8	L	S	D	A	E
UniRef90_K9VX73					
UniRef90_Q9UAG7	L	S	Q	Q	S
UniRef90_E9FXJ7	L	S	M	S	P
UniRef90_A5WD83	M	L	S	D	Q
UniRef90_N9VQK2	M	L	D	Q	Q

	50										60										70										80										
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UniRef90_D7I3E2	P	L	F	N	Q	A	N	Q	A	N	G	S	Q	P	R	A	L	A	N	G	V	L	M	Y	A	R	N		I	D	R	L	E	N	L	I	G	P	A		
UniRef90_I0GDU5	P	M	F	P					A	D	L	S	V	L	K	Q	D	F	I	S	K	L	A	M	L	V	G	S	I	D	P	T	T	G	L	I	G	G	A		
UniRef90_L8MJ23	P	L	F	N	Q	A	H	Q	A	S	G	D		Q	A	R	A	L	A	N	G	V	L	M	Y	A	R	H		I	D	Q	L	E	Q	L	G	P	L	V	
UniRef90_V5QR23	K	M	F	S	F	V	R	D	S	D	N	Q	K	L	K	G	H	A	M	S	V	F	V	M	T	Q	K	A	Q	L	R	K	A	G	K	V	T	F			
UniRef90_W1RRL3	N		V	F	N	M	T	H	Q	K	T	G	G	Q	P	A	L	F	N	A	I	A	A	Y	A	T	H		I	D	N	L	D	V	L	T	G	A	V		
UniRef90_M9LPM0	N	I	F	N	H	A	N	Q	R	Q	G	D	S	Q	Q	A	L	A	R	A	I		Y	A	A	A	N	I	D	R	L	E	D	I	M	S	V	V			
UniRef90_I7DWX5	A	R	F	N	Q	S	H	Q	Q	G	D	S	Q	H	A	L	A	R	A	I			Y	A	R	N		I	D	N	L	G	A	L	S	V	V				
UniRef90_V5PPD6	R	N	L	F	N	M	G	N	Q	A	S	G	A	Q	Q	Q	S	L	A	S	A	V	F	A	Y	A	N		I	D	N	A	A	A	L	G	P	V	L		
UniRef90_UPI0003B74153	A	M	F	P	V	S	M	A	T	Q	R	D	R	L	V	G	A	L	G	R	I	V	S	N				I	D	Q	L	D	E	V	I	T	A	F	I		
UniRef90_I1H7V3	E	L	F	P	F	L	R	N	S	D	A	N	P	K	L	K	T	H	A	V	S	V	F	I	M	T	Q	E	A	A	Q	L	R	K	R	E	T	T	L		
UniRef90_U6PE83	R	I	W	P	Q	F	R	G	I	P	D	S	S	E	L	R	R	H	A	S	V	Y	I	C	G	L	T	A	I	V	R	S	M	S	E	F	A	N	H		
UniRef90_E2MVZ8	A	D	T	F	N	R	G	N	Q	A	Q	G	A	Q	Q	K	A	L	A	S	V	A	T	F	A	A	T	L	V	D	P	Q	L	D	A	P	E	E	L		
UniRef90_UPI0004654DE8	N	I	F	N	M	A	N	Q	A	Q	G	S	G	E	Q	S	K	A	L	A	E	S	V	F	M	Y	A	S	Y	I	D	Q	L	D	Y	I	P	E	M	V	
UniRef90_Q4WC12	N	I	F	N	T	A	H	Q	A	T	G	E	Q	P	A	L	A	H	A	V	W	A	Y	A	S	N		I	D	Q	P	E	A	L	L	T	S	A	V		
UniRef90_UPI000463C9E2	P	F	F	N	Q	A	N	Q																																	

	90	100	110	120
UniRef90_D8FWM6	K G M G A R H V	Q Y G T L P E H Y P L V	G A S I L L K T F E S Y L G P D W T P	E
UniRef90_P68168	V K E G S D A R I H F	K T Y G V L N E H Y F E V M	R F A L L L K E T F K E S A Y L G P E M W T P	E
UniRef90_UPI000349F54F	K G L G A R I H F	K T Y G V L N E H Y F E V M	R F A L L L K E T F K E S A Y L G P E M W T P	E
UniRef90_UPI000377B994	K G I S T K H V	R S A L N L Q P E Q Y Y K I V G	G N H L L A S I A E V V L G E A A T P	E
UniRef90_I73I3E2	S Q I I N K H V	R S A L N L Q P E Q Y Y K I V G	G N H L L A S I A E V V L G E A A T P	E
UniRef90_I0GDU5	D I L G R N H V	Q K Y G A K A E H Y P M V	G E A L L L Q A S L R E V L G A E T T D	E
UniRef90_L8MJ23	S R I V A K H V	S L Q I L P E H Y P I V	G T C L L R A I R E V L G E E I T D	E
UniRef90_V5QR23	G E S S L K H H L	K Y G V V D E H F E V T	R F A L L L E T I K E A V P E M W S	P
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UniRef90_U6PE83	K R I A K A H V	K W N V H R G H V E H M	V D P V L E V V K E A C N D F D	E
UniRef90_E2MVZ8	L S R I G H K H I	S V G I K P E Q Y P I V	H K H L F D S I K E E L T P E V G	Q
UniRef90_UPI0004654DE8	K R I A H K H A	S L G V L P E H Y P I V	G K Y L L E S I K E Y L G L G N D	P
UniRef90_Q4WC12	S R I G H K H A	S L G V L P E H Y P I V	G Q H L L L V S I K D V L G P A A N	E
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UniRef90_H0G2Y0	E R I A H K H I	G Y H I L P E H Y P Y V	A E A L L L A A I Q D I L G D A A T	P
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UniRef90_S7X5W1	N I F F N M G N Q K T G K Q Q A L A M A	V L A Y A E H I E A N L E G V L L L P E L		
UniRef90_W9YS10	R N I F N S A H Q S T G T Q P A A L A H A	V L A Y A A H I I D D L L G V L L T S A V		
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UniRef90_U1L5L6	H I F F N M S N Q E S G R Q K A A L F E A	I A A Y A Q H I E N S I G A L K S A V		
UniRef90_R4LQ95	E L F P V H K M D A Q R A R L L T A V V T	V M Q S V I D D I D Q Y L		
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UniRef90_D9Y601	Q V F N M G H Q R A G F Q Q Q A L A G S	V L A Y A E N I E N L K P L L G A V		
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UniRef90_K6WGP8	P M F Q R D T R V Q A E M L R I A V V S	V L D H L E D A E W L T T N L		
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UniRef90_K9T8Q6	K	G	L	G	T	R	K	H	V	R	Q	Y	G	V	L	P	Q	D	H	Y	K	I	V	G	G	K	L	L	L	K	T	A	M	E	A	L	L	G	S	D	W	T	P	E				
UniRef90_K9FBG0	E	L	I	C	N	K	H	A		S	L	Y	I	Q	P	D	D	Y	K	I	V	V	G	K	L	L	L	L	K	T	A	M	E	A	L	L	G	S	A	L	T	P	E					
UniRef90_UPI0003789CAC	Q	P	V	I	D	R	I	V	H	K	H	G	L	K	P	A	H	Y	P	I	V	V	G	R	A	L	L	L	G	A	I	G	E	A	L	L	G	A	A	T	P	P	E					
UniRef90_K9T9X7	R	E	M	G	E	K	H	A	T	S	Y	G	A	K	R	A	D	H	Y	A	I	V	V	G	A	L	L	L	K	T	A	M	E	A	L	L	G	A	D	W	T	P	E					
UniRef90_UPI0002898BF1	N	H	I	G	H	K	H	A	T	S	L	D	N	V	L	P	E	H	Y	P	I	V	V	G	K	L	L	L	L	K	T	A	M	E	A	L	L	G	A	D	A	T	P	Q				
UniRef90_UPI00040E3AFA	K	Q	I	A	H	K	H	A	T	R	S	L	N	V	L	P	E	H	Y	P	I	V	V	G	N	L	L	L	L	L	E	A	M	R	E	V	L	G	E	A	S	L	E					
UniRef90_S7X5W1	H	R	I	G	H	K	H	V		S	L	S	L	E	I	R	T	P	E	H	Y	P	I	V	V	G	N	L	L	L	L	A	S	I	K	E	V	L	G	D	A	V	D	Q	P			
UniRef90_W9YS10	S	R	I	A	G	N	K	H	A		S	L	E	I	R	T	P	D	Q	Y	P	I	V	V	G	N	L	L	L	L	L	A	S	I	K	E	V	L	G	D	A	V	D	Q	P			
UniRef90_UPI0003B31C0B	E	R	V	A	E	K	H	A		R	A	L	D	V	R	K	A	E	H	Y	P	I	V	V	G	N	L	L	L	L	L	E	A	I	K	E	V	L	G	D	A	A	T	P	E			
UniRef90_D5D9L5	K	Q	I	A	H	K	H	A		R	S	L	D	G	V	K	A	E	H	Y	P	I	V	V	G	N	L	L	L	L	L	E	A	I	K	E	V	L	G	D	A	A	T	P	E			
UniRef90_A0A044U5A6	N	E	N	G	R	S	H	A	H	K	K	H	F	K	P	E	M	F	W	A	M	E	E	P	F	L	L	L	L	L	L	Y	S	V	K	L	I	L	G	E	R	Y	T	D	N	E		
UniRef90_U1L5L6	E	R	I	A	H	K	H	A		T	S	F	N	V	Q	P	E	M	Y	Q	I	V	V	G	A	L	L	L	L	L	L	L	E	T	A	L	R	E	L	T	G	E	L	F	T	A	E	
UniRef90_R4LQ95	H	E	L	G	R	D	H	A		R	K	F	R	V	D	A	E	H	Y	E	I	V	V	G	A	L	L	L	L	L	L	L	E	T	A	L	R	E	Q	V	A	G	A	Q	W	D	A	E
UniRef90_UPI000349F7EE	E	K	I	A	H	R	H	V		K	T	N	V	L	P	E	Q	Y	A	P	I	V	V	G	E	C	L	L	L	L	L	L	Q	A	L	K	E	V	L	G	D	D	A	T	E	E		
UniRef90_M3D9H8	E	R	I	S	Q	K	H	A		S	L	Y	I	Q	P	E	H	Y	A	D	I	V	V	G	E	N	L	L	L	L	L	L	R	A	F	G	N	V	L	G	D	A	F	T	P	A	E	
UniRef90_F1A2R8	P	A	V	I	K	Q	H	K	H	A		S	L	G	I	V	P	A	Q	Y	A	D	I	V	V	G																						

		130	140
UniRef90_G8WZT4	V E A A W V R A Y T T I S Q I M I		
UniRef90_K9T8Q6	L K Q A W I D A Y G S V T Q L M L E G		
UniRef90_K9FBG0	I L D A W G T A Y W Q L A D I L I G R E K		
UniRef90_UPI0003789CAC	L I A A W D E A Y W L L A		
UniRef90_K9T9X7	V K Q A W T D A Y E E I S Y L M L E G		
UniRef90_UPI0002898BF1	L L E A W T V A Y R E L A S L M S		
UniRef90_UPI00040E3AFA	V I Q A W A E A Y G I I A D		
UniRef90_S7X5W1	I L E A W E I A Y N Q L A D L M		
UniRef90_W9YS10	V L D A W A A A Y Q Q L A D		
UniRef90_UPI0003B31C0B	I L D A W G E A Y H A L A D I F I Q K		
UniRef90_D5D9L5	I M E A W K E A Y G A I A D V F I S		
UniRef90_A0A044U5A6	M Q S I Y K T V I V I I L S E L E K G		
UniRef90_U1L5L6	I E E A W T A A Y D F L A S V		
UniRef90_R4LQ95	Y D R A W A E A Y A M I T E K M		
UniRef90_UPI000349F7EE	V M T A W A E A Y K V L A D V		
UniRef90_M3D9H8	I Q D A W N S A Y W Q L A N L M I N R		
UniRef90_F1A2R8	I I G A W A E A Y G V I A K V		
UniRef90_D9Y601	L I D A W T A A Y T R L A D I L I		
UniRef90_F2Q9W6	L E E A W Q T A Y S H L		
UniRef90_U4T9S0	I I N A W T E A Y D E I A N V		
UniRef90_A0A059BHV9	M E G A W G A G Y D Q L A A A I		
UniRef90_R9TZZ3	V L G A W K K A Y D E I A K A		
UniRef90_G4ZN81	I I D A W K E A Y W F L A D L L I Q A		
UniRef90_F0SL04	L A A Q W K L A Y Q T I A Q I M		
UniRef90_P02240	L N S A W T I A Y D E L A I V I K K		
UniRef90_K6WAC1	V A A A W D E V Y W L F A L Q L A A		
UniRef90_UPI00037ADA48	H R A A W T E V F R A V A A T M I A G A R		
UniRef90_A5DQY8	F L Q A W A T A Y G N L A R L L I		
UniRef90_B6BLR1	V L D A W K E A Y F F L A H V L I E Q E K		
UniRef90_S8CU33	L K N A W T L A F D R L V A A I Q S		
UniRef90_Q0UPY5	V L D A W G A A Y W Q L A D I M I A K		
UniRef90_UPI00038C1CD5	M R A A W S Q L Y G L V V A A M S R G		
UniRef90_B3QH91	V E Q S W R K V Y A V I S A R M I		
UniRef90_D2SGR7	L E Q S W T D A Y G L V A Q V M V E A		
UniRef90_UPI0003C168BE	I Q I V W E K L L A A M A Q A L		
UniRef90_W5JM33	V E G I Y K L T I K F I I E T L V A G Y		
UniRef90_J3M8X1	M R G A W E E A Y D Q L A A A I K E E M K		
UniRef90_G7YFM1	V R R A W A H L M D Y I I G I L S E G		
UniRef90_E4NEB0	V E K S W L E A F T V I S Q A M I		
UniRef90_UPI0003B65E92	I L A A W G Q A F W F L A D I L K D R		
UniRef90_UPI0004226736	V A A A W D E V Y W L L A C R L I A A		
UniRef90_Q5YNI4	V D R A W D E G L A L I S D A M I		
UniRef90_UPI00037E95AB	I A A A W D E V Y W L F A		
UniRef90_UPI000368FE1D	T E A A W V R A Y T A I S Q T M I		
UniRef90_O81941	M K S A W S E A Y D E L A D A I		
UniRef90_S1STT9	L A T A W Q R A Y T A A A D V M V R A		
UniRef90_J3DHZ5	V L T A W G K A Y G V L A D V		
UniRef90_K6WGP8	M T A A W E E A L G A V A T I M L D G Y		
UniRef90_A9L475	V L E A W A Q A Y G F L A N		
UniRef90_Q49UL6	I I Q T W I K A Y G A I A D		
UniRef90_R7QRC5	I H N A W A E A Y G F L A S V		
UniRef90_C4USF5	V L D A W A K A Y G V L A D V		
UniRef90_S9RC72	F L E A W A I A Y G N L A K I L I D Y E R		
UniRef90_I0IMI4	M A E A W S E A Y N L A A S V M I E A		
UniRef90_UPI00037E05FB	F E Q A W S D V Y D L I A A K M I A G		
UniRef90_B6XEC5	V L D A W G R A Y G V L A D		
UniRef90_E9GAC8	T K E A W K K G L R A M N E A V T K R		
UniRef90_UPI00041ACC89	L A E A W E Q V L Y Q V A D A M K E		
UniRef90_V5YM54	E K A A W T K L L D I F F H V M		
UniRef90_X0NDY2	A E G A W V R A Y T A I S Q I M I		
UniRef90_UPI000350F47E	M K N A W S E A Y N Q L V A A I		
UniRef90_F4F348	Y D Q A W R D A Y A A I S E K M		
UniRef90_F7EB40	T R E A W S L L Y A N V V Q S M S R G		
UniRef90_K9PXW7	F S E A W A E A Y A T I T E I M		
UniRef90_D0MG72	L L Q A W K E A Y D F L A H L L S T K		
UniRef90_W8AB70	L A Q T W T G A Y Y A V A D I M I		
UniRef90_UPI0001CB9E5C			
UniRef90_U6DK15	A Q A A M K K A L E L F R N D I A A K Y K		
UniRef90_W6FFC8	A R D A W T K Y Y N K I A D G L F E K		
UniRef90_Q17153	I Q A W W K L I D V I C A V L K E		
UniRef90_B4EZV6	V L D A W G A A Y Q V L A D V		
UniRef90_D7C8Q7	T E G A W V R A Y T A I S Q I M I		
UniRef90_UPI000472B10D	V L A A W A K A Y G V L A D		
UniRef90_UPI00034D9014	L L A A W A E A Y G S L A		
UniRef90_Q2MCN9	L E E A F G A F L G T V A A A		
UniRef90_F4CEW2	L L K A W E Q A Y H E L A Q L M S		
UniRef90_P27199	L S N A W E V A Y N E L A A A L K K A F		
UniRef90_N8ZD56	L I Q A W K E A Y V Q L A D I L I K		
UniRef90_UPI0003592FCB	V E Q A W A D L F R Y I T H V M K E		
UniRef90_L8G042	V		
UniRef90_G8B6P8	F V E A W S I A Y G N L A A L L I E		
UniRef90_K5W0S2	L Y D A W Y A A Y W Q L A H I L G E L Y R		
UniRef90_UPI000345A7DE	V K Q A W V D A Y G A I T E L M		
UniRef90_E1SVJ2	V I E A W G K A Y G V L A		
UniRef90_I2GZK4	I I D A W T K A Y G E I A N V		
UniRef90_UPI000370BC5A	V E R A W A E A Y T T I A R V M Q E A		
UniRef90_UPI000364DB08	L A T A W T K A Y Q D V S A L M I A A		
UniRef90_K2KJK7			
UniRef90_UPI00022601B5	I M E A W A K A Y W F L A D V L I G R E K		
UniRef90_G6D627	N L A S W G K A V D F L Y K H I		
UniRef90_V5F7X6	I H		
UniRef90_M7BGH7	V R E A W T R L Y G A V V K A M S H G		

	1	10	20	30	40																																				
UniRef90_A9AW41	M	L	S	E	K	Q	K	E	A	V	K	A	T	V	P	V	L	K	E	N	G	V	A	L	T	D	Y	F	Y	K	R	M	L	N	N	H	P	E	L	K	
UniRef90_UPI000468745C	M	L	T	Q	E	E	I	Q	T	I	K	E	T	V	P	V	L	K	D	K	G	Q	T	I	T	S	I	F	Y	K	R	L	F	E	Q	H	P	E	L	K	
UniRef90_F6Q119	L	T	S	E	Q	V	V	L	L	R	S	S	W	Q	T	I	G	K	G	M	S	N	V	G	L	A	V	L	H	R	L	F	N	D	V	P	E	T	L		
UniRef90_UPI0003AFC9AC			A	D	H	D	L	V	L	K	Y	C	W	G	V	E	A	D	F	T	G	H	G	G	E	V	L	N	R	L	F	K	E	H	P	E	T	L			
UniRef90_UPI0004748B06	L	T	D	A	Q	V	N	G	V	L	Q	S	S	W	M	L	K	I	H	I	E	K	I	G	V	I	V	L	G	L	F	F	E	H	P	E	T	L			
UniRef90_G7Y313	F	S	S	E	Q	I	S	E	L	R	R	S	W	P	K	L	A	C	D	L	T	G	N	G	A	Q	V	F	L	Q	I	F	A	I	N	E	N	I	K		
UniRef90_UPI0003F0E673			L	L	R	E	S	F	E	L	V	I	E	R	A	P	N	L	T	H	R	F	Y	G	I	L	F	S	R	Y	P	Q	V	K							
UniRef90_A9FR29			T	S	E	D	A	A	L	I	V	R	S	M	E	A	V	A	P	F	A	D	K	V	V	S	Y	F	Y	A	T	L	F	L	H	N	P	E	L	R	
UniRef90_UPI0003611FF6	L	T	P	E	Q	R	K	L	I	T	A	T	V	P	I	L	A	E	H	G	I	A	I	T	T	L	F	Y	E	Q	L	L	E	A	N	P	E	L	R		
UniRef90_R7S788	F	T	E	N	Q	E	A	L	V	N	S	S	Y	E	S	F	K	Q	N	L	P	H	Y	S	V	L	F	Y	T	F	L	L	E	K	A	P	A	A	K		
UniRef90_UPI00032A7A04	L	T	P	G	Q	V	D	I	L	R	S	T	V	P	V	L	K	E	H	G	N	D	I	T	K	S	F	Y	E	T	L	L	A	E	V	P	D	L			
UniRef90_M2LXP8			K	D	L	L	R	L	S	W	G	V	L	S	D	D	M	E	G	T	G	L	M	L	M	A	N	L	F	N	M	S	P	E	S	R					
UniRef90_P25165	L	T	N	P	Q	K	A	A	I	R	S	S	W	S	K	F	M	D	N	G	V	S	N	G	Q	G	F	Y	M	D	L	F	K	A	H	N	P	E	T	L	
UniRef90_P41261			M	N	E	Q	Q	K	A	L	V	K	A	T	V	P	V	L	K	T	N	G	V	A	L	T	K	H	F	Y	Q	R	M	F	T	H	N	P	E	L	K
UniRef90_C4LFT3	M	L	S	A	A	S	R	P	Y	I	D	A	S	V	P	V	L	R	E	H	G	L	A	I	T	T	T	F	Y	R	N	M	F	A	A	H	P	E	L		
UniRef90_Q2PP42	F	T	E	S	Q	E	A	L	V	T	S	S	Y	E	T	F	K	Q	N	A	S	D	L	S	V	L	F	Y	T	F	L	L	E	K	A	P	G	A	K		
UniRef90_G6FNK7	M	V	S	Q	K	T	I	E	I	V	K	A	T	A	P	I	R	E	K	G	E	E	I	T	R	R	M	Y	E	I	T	F	A	E	R	P	D	Y	K		
UniRef90_V8D265			D	K	V	L	L	E	R	S	L	M	L	V	A	D	D	V	G	L	T	T	D	F	Y	D	R	L	F	A	E	Y	P	S	A	R					
UniRef90_B6BCU8	M	T	D	A	E	L	E	Q	L	R	E	S	S	K	L	K	D	E	A	V	R	D	P	A	F	F	Y	D	A	L	F	R	H	A	P	E	L	R			
UniRef90_W4HNC7	M	T	P	T	Q	K	S	L	V	V	G	S	F	A	R	A	Y	A	K	R	N	V	G	R	R	F	Y	L	E	L	F	A	R	A	P	E	L	R			
UniRef90_J2W0D0	L	R	A	E	T	I	A	L	V	K	A	S	V	P	A	L	V	A	H	G	P	A	I	T	S	N	M	Y	S	R	L	L	Q	D	P	H	I	R			
UniRef90_B1YFT0	M	L	T	P	S	A	I	L	I	K	S	T	V	P	V	L	A	E	H	G	S	H	S	I	T	R	V	F	Y	Q	R	L	F	E	N	H	P	E	M	K	
UniRef90_I3CEH7	L	S	T	D	V	K	A	I	V	K	S	S	A	P	L	L	R	E	Y	G	E	A	I	A	K	R	T	Y	E	I	L	F	E	K	Y	P	Q	V	K		
UniRef90_A0A024YR31			D	A	V	L	I	R	R	T	L	A	E	I	A	P	V	A	D	K	V	T	S	Y	F	Y	A	L	V	F	T	G	H	P	E	V	R				
UniRef90_L7FBF0			L	I	R	R	T	M	D	A	V	A	P	V	A	D	K	A	T	S	Y	F	Y	A	L	L	F	V	R	H	P	E	L	R							
UniRef90_G8YKA8	L	T	P	S	Q	V	D	F	I	L	K	A	S	V	P	V	L	E	K	D	G	V	K	I	T	S	L	M	Y	N	M	L	S	T	Y	D	E	V	K		
UniRef90_V4PJ00	M	T	P	A	Q	I	R	L	V	Q	A	S	H	A	E	V	V	T	L	G	A	T	A	A	E	V	F	Y	T	H	L	F	V	L	D	P	S	L	K		
UniRef90_C3Y097	L	T	Q	K	Q	K	F	L	L	K	S	W	K	G	V	A	R	Q	I	S	Q	C	G	K	T	M	L	L	R	L	F	K	D	D	P	Q	L	M			
UniRef90_E7FIH1	L	T	A	N	D	R	R	I	I	R	K	T	W	D	Q	A	K	K	D	G	D	V	P	Q	I	L	F	R	F	I	K	A	H	P	E	Y	Q				
UniRef90_I2GB73	M	T	I	Q	E	I	N	I	V	K	R	T	W	K	L	L	D	V	D	P	Q	L	G	D	V	F	Y	R	R	L	F	L	T	Y	P	S	V	R			
UniRef90_G7H6Y4			K	D	L	L	H	S	L	S	I	V	D	L	P	D	D	D	G	L	T	V	R	F	Y	D	L	L	F	E	R	Y	P	G	V	K					
UniRef90_T0QB18	L	S	L	D	T	I	R	L	V	K	A	T	A	P	V	G	E	H	G	Y	A	I	T	S	Q	M	Y	S	T	M	L	P	S	D	P	K	I	A			
UniRef90_A0A017T2A5			L	A	E	H	G	V	A	I	T	T	R	F	Y	Q	N	L	F	R	E	H	P	E	L	L															
UniRef90_A4CEG0	M	L	N	D	M	Q	L	Q	L	I	K	S	T	L	G	V	L	E	S	A	G	P	K	L	T	A	H	F	Y	Q	R	L	F	H	H	P	E	L	Q		
UniRef90_S4XN51			L	V	K	E	S	F	E	L	V	V	Q	R	D	H	E	F	P	R	L	V	Y	R	A	L	F	E	R	Y	P	Q	A	R							
UniRef90_W2F108			D	A	V	L	I	R	R	A	M	A	E	V	T	P	V	A	D	K	V	T	S	Y	F	Y	A	L	L	F	V	R	H	P	E	L	R				
UniRef90_S4N1V3	M	L	D	E	K	S	I	A	I	V	Q	S	T	P	L	L	R	E	N	G	V	A	L	T	S	Y	F	Y	N	R	M	L	T	N	H	P	E	L	Q		
UniRef90_UPI0003FE0E77	L	T	A	N	Q	I	E	L	V	K	A	T	V	P	V	L	R	E	N	G	V	A	L	T	S	Y	F	Y	N	R	M	L	T	N	H	P	E	L	K		
UniRef90_S6EPY1	M	L	S	N	Q	T	I	E	I	V	K	A	T	A	P	L	I	A	E	T	G	P	K	L	T	A	H	F	Y	D	R	M	F	T	H	N	P	E	L	K	
UniRef90_H2IDN8	M	L	T	Q	S	Q	L	A	I	V	K	Q	T	V	P	V	L	E	N	G	E	T	L	T	R	H	F	Y	A	R	M	F	T	R	E	N	P	E	V	Q	
UniRef90_Q0VMN1			D	P	Q	L	I	R	S	T	F	A	V	V	E	R	A	E	H	A	V	T	F	F	Y	S	H	L	F	W	N	N	P	G	V	R					
UniRef90_UPI0004660275			V	I	R	R	T	M	A	E	I	A	P	V	A	D	E	V	T	S	Y	F	Y	A	L	L	F	V	R	H	P	E	L	R							
UniRef90_S5UTU6	L	I	P	E	Q	I	K	V	V	R	S	T	I	P	A	L	E	K	H	G	L	E	I	T	T	L	F	Y	R	Q	L	L	N	K	H	P	E	L	K		
UniRef90_J9MVP5			E	T	V	A	L	V	R	S	T	F	R	A	V	A	S	F	P	G	G	P	G	A	F	Y	A	T	L	F	A	T	N	P	E	A	R				
UniRef90_C1BB95	M	L	D	Q	Q	T	I	A	T	I	K	S	T	I	P	L	A	E	T	G	P	A	L	T	A	H	F	Y	Q	R	M	F	H	D	S	P	E	L	K		
UniRef90_C6CNP4	L	T	S	E	Q	M	K	I	V	Q	S	T	I	P	A	L	E	Q	H	G	M	A	I	T	S	L	L	H	K	R	L	D	S	H	P	E	L	K			
UniRef90_A0A014N8A1	M	L	S	P	E	V	R	A	L	V	K	A	T	A	P	V	L	K	E	H	G	E	A	L	T	R	H	F	Y	T	R	M	L	G	N	P	E	L	R		
UniRef90_V9B7I3	L	S	P	E	T	M	A	L	V	K	A	T	A	P	A	L	Q	Q	H	G	V	D	I	T	T	R	M	Y	Q	R	L	F	V	D	P	E	I	K			
UniRef90_A0A013VH75	L	T	E	N	T	I	A	I	V	K	S	T	A	P	L	L	K	R	H	G	L	A	I	T	S	R	M	Y	E	R	L	F	V	N	A	E	V	K			
UniRef90_W9BRU3	F	S	A	E	E	Y	A	L	V	K	K	V	W	S	G	I	E	I	N	P	Q	F	H	G	N	A	C	L	R	S	F	C	E	I	Y	P	Q	Y	V		
UniRef90_E2AF92	L	I	L	S	H	E	R	S	I	R	K	T	W	D	Q	A	K	K	D	G	D	V	A	P	Q	V	L	Y	R	F	I	K	A	H	N	P	E	Y	Q		
UniRef90_E9FXJ8	M	N	Q	E	D	I	R	L	V	Q	A	S	V	P	L	E	E	H	A	E	T	L	T	R	L	F	Y	K	N	M	L	S	N	H	P	E	L	K			
UniRef90_H6L2T7	M	L	D	A	K	T	H	L	V	K	S	T	L	P	A	I	A	A	C	G	P	D	L	T	A	H	F	Y	S	Q	M	L	S	N	H	P	E	L	K		
UniRef90_H3RGL6			P	L	L	E	Q	Q	G	E	A	L	I	T	H	F	Y	Q	T	M	L	A	Q	H	P	E	L	V	R												
UniRef90_D2UE18	S	P	E	K	M	A	I	V	N	A	T	A	P	L	L	E	K	E	Q	A	M	A	I	T	M	S	F	Y	Y	S	M	K	D	V	Y	P	E	L			
UniRef90_H1W3W9			I	K	R	T	W	D	I	P	A	N	P	T	E	S	G	S	A	I	L	M	L	F	F	K	R	Y	P	S	N	L									
UniRef90_T1P825	M	T	P	E	H	I	Q	L	I	Q	S	T	V	P	V	L	R	E	H	G	V	A	L	T	R	Y	F	Y	A	R	M	L	K	Q	H	P	E	L	K		
UniRef90_N9BPJ6			L	S	P	E	T	V	A	I	V</																														

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E T F N M G H Q R S G A Q S A R A L L A G A V L A Y A E N I D N P S G V L L A P V I
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R Q F S S P E D L L S S P E F L D H I R K V M L V I D A A V T N V E D L E E Y L
K L F P K F V S I P G N A V A A H G A T V L K R L G E L I K A R G D H A A L L
D A F A R K F R Q L T R N D P A F Q A H G L R V L N V V D K I I R R I I Q D F L
I L F P F R D L L S Q N E V F R G H S R R F M Q A V G A V E N L E N L D T L F
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E L F P A A M D H Q R D R L F R A L L I A A K H V D D Q E F L T Q Y L
N V F S H S N K E R G L Q A E A L A R A V Y A Y A A N I E D L T P I L P V V
E L F S F L K D T S G S P K L Q S H A E K V F G L V H D S A I Q L R T K G E V A
N N V F N Q A N Q R N N H Q A A A L A S A L Y A Y A S H I D D L G V L S P A V
L K F G H L S T G R D N S K L R G H S I T L M Y A L K N F V D A L D D L K C V V
T P F K S L A Q L Q D N P K M K A Q S L V F C N G M S S F V D H L D D L V L V
N I F N Q G H Q N S G R Q Q E A L A M A V A A Y A E N I D D P S V L L P V V
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N L F S F L K D S D G N P N L K A H A A K V F E L V V D S A V Q L G A V I A D
R G F E T M Q H L D G G E A H K L A A A V Y A Y A T H I D R L E D L A M A V
A L F S S D I R P Q A R M L Q D A I V A V L D H L E D L A M A S L
Q L F R E D L E G Q G M K F M T T L G V I L A K L G D V S P H F
P L F P Q D L A T Q Q E L L N Q T L A T V V K E V H R L E V L S P A L
A L F N Q A N Q K S G S Q V Q A L L A G A I L G Y A Q N I D N L E A L V P V V
H I F N Q S N Q K N D R Q S Q L A T A V Y A A A Y I D N L E T L K P T L
P L F A K A P P N Q P H L L A R S I M A F C E N V D N L V F I A S D L
G M F P A A M D T Q R D R L L K A L L T A A E H I D H P E V L A P Y L
S L F P A A M D T Q R D R L L K A L L T A A E H I D N L V A Y L
P Y F N E T D Q K L L L Q P K I L A F A L L N Y A K N I E D L A P L Q
P M F R S D L A A Q G K K L L Q A L N F V A T Q L H Q P E R I L
A V F N S K D V L Y Q Q A L L D A H A A T V M E A L H E A I T Q L D D V M K I V
K M F K S F A N V P Q D A N G N F L A Q A Y T I L A G L N V V I Q S L S S Q E L A
P M F R E P M T T Q Y H K F V D M L S L I V S R I D R P E E V M S E I
P M F S R D T R Q Q A S M L R T A I V S V L D L D D L A S T A V
A L F N P T H Q V V R A R Q P A A L A D A V V A Y A N N D N L G A L T A A V
N V F N H A H Q R E G R Q Q A L A G A V Y A A A K H I D D L G A V L
H I F N M S N Q K S G R Q V A L E A I A A Y A K N I E N V A V L V N A V
R L F T R N S P G A Q G T M F E R A L M A V L D H L E D V L C E K L
G M F P P A M E V Q R D R L F G A L T R I V W M L D S P G G L A H Y L
S L F P A A M D T Q R D R L L R A L L T A A E H I D N T D V L V D Y L
A I F N M S H Q R N G A Q R E A L F N A L C A Y A A H I D H P A T L S T A V
Q V F N L G H Q R S G A Q R A S L A N A V L A Y A E N I E N P A V L L P A V
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A F F N P A H Q Q A G T Q Q R A L A G A I C A Y A Q H V D N P A A L A D A V
A L F P P A A M D V Q R D R L L K A L L T T A E H L D D T P V T H L E D L A Y L
P L F P A A M D V Q R D R L L K A L L T T A E H L D D T P V T H L E D L A Y L
N I F N T A H Q Q T G E P Q A A L A H A V W A Y A A N I E N P E A M K A A I
E F F P A A M D T Q R D R L V R A I G H V I D R L E A P E S V L P Y L
D I F N M S N Q R N G D Q R E A L F N A I C A Y A T H I E N P A L L P A V
N V F N T T H Q V T G E P Q A A L A H A V W A Y A S N I D N P A A L Q T T L
Q L F N Q G H Q Q S G Q Q Q A L A A V A Y A E H I D D P S V L L Q V V
A L F D M A A H E S G A Q P K R L A A A I L A F A Q N V D K L D A L K P A I
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K F F T Q E S K L H L S F D T R I T V K T M G Y L L L D F N K R P K Q L D R L V
K K F S K F A D V P Q S E N F L A Q A Y T I L A G L N V V I Q S L S S L A N Q L
N I F N L A N Q A L G Q Q K S L A L S V L A Y A K H I E Q P E V L L P A L
H V F N R A N Q R N G A Q R E A L F N A I C A Y G A N I D N L T A L R P A V
P Y F N A T H Q A S G D Q P F A L A N G V L M Y A K N I N R L E A L G P L V
Q K F S A F K D L P T N A R F R A H A S R I I K V F D E S I Q M L G H L E E T W
H I F N Q D H Q Q T G R Q P R A L A A A V L A Y A E H I E H P E K L A K A V
R S L F N H A N Q A N G K Q I N A L A G A I L A Y A S N I D N L G A L L P A V
S L F P E S M E F Q R A H L A R A F W Y L I E N L H R P D D I A E V F
G Y S G R T S A L K H N S K L Q N H G K I V H Q I G Q A V S E L D D F E A T L
A L F P K F R D I P G H P D V R D H G G K V M Q V L D D F I K G L D N G G D G A
Q E I F N S N P E S F D T E L E Y H A Q R V M S V L D Q A I H L I D S F F N L L
N I F N Q S H N E T G K P V J A L A M A V L A Y A E N I D D P S V L L P V I
A L F N P S H Q K V L P G E T R A L L A A V G A Y A A N I D N L G V L L T S A V
D V F N M S N Q R N G N Q R E A L F A A I C A Y A A N I D N L E A L L P A V
Q L F F R N K L R N D H D F T G H A S R F M Q A V G A A I D N I N N L G P L L
P M F Q S E R P V F E Y H F N E L I T T A V A K V H Q F N E V K P K L
A R F P A F S A L K G S A P F A L H A T R I V S V I S Q Y V G L L G N I Q T I F
N I F N L G N Q A G G Q Q Q A L A Q A V L A Y A Q N I E N P A A L A P V A
A M F P S I R H Q A V S F A G V L T M T V N N L D N L S A L E A Y L
V Y F N T T N Q K L L R Q P R I L I H T L I K V A E N I D N L Q E E F
K M F P S L K H Q A T H F A T V L R I T V T Q L E D L S Q L D D Y L
Y A V F N L G A N P H G T K A Q A Q F A L K V M Q F V D D C V K S L D M A A V R
D L F P A A L G L Q R D R L I K A I G Y T V E R L E E P D R L L P F L
G L F S F L K D T A G S P K L Q A H A E Q V F G L V R D S A A Q L R T K G E V V
A M F V L D T D G N V R G H M L S E A L D C V F D F L G P R A Y A P V L
T A Y N R N D E M V F S C A L I Q Y S Q A Y I A V I D E A I R S L E D P Q E G F
D M F P S D I R P Q Q R M A D A L L A V V R H L D S P D E I A E Y L
A Y F K R M G D V M A N S K L R G H S I T L M Y A L Q N F I D Q L D D L I C V V
N L F N Q S H H G E T G S Q S K A L A A I I A Y A R N I E N L G V L L A S R V
P M F Q H S N M E V I Q A K L Y E V I R V A V R F L D N V Q E L I P V L
E Y F G K F C D I P S N P E F Q K T K T V L E A V G K L V D N L D E L Q T A A
T G V Q P A A L A G S V L A Y A Q N I K D L S P L T P V V
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R L F N R D N Q M E T G E Q S R A L A S V A Y A V Q L I D P A S F D P V
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	90										100										110										120									
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UniRef90_J9HFZ7	M	P	V	Y	K	H	C		A	L	N	Q	V	K	P	E	H	Y	D	I	V	G	E	N	L	I	W	A	L	S	E	V	L	N	I	P	M	E	D	
UniRef90_F6Q119	L	F	L	G	K	V	H	V	K	R	S	I	P	R	K	Y	F	S	A	M	G	P	V	L	L	S	V	I	S	A	V	L	E	K	D	L	D	A		
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UniRef90_UPI0003F0E673	V	G	L	G	K	H	I	H	F	E	G	F	K	V	D	Y	F	S	T	Y	V	T	S	M	Q	T	V	W	A	L	T	G	A	H	H	E	Q			
UniRef90_A9FR29	A	K	H	V	D				Y	G	F	K	T	D	A	M	Y	P	S	W	V	A	D	A	L	I	S	A	M	A	E	V	J	A	E	W	S			
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UniRef90_R7S788	E	R	I	A	H	K	H	A	S	I	H	V	A	P	S	H	Y	A	V	V	G	K	H	L	D	A	I	T	Q	V	V	G	A	D	V	K	G			
UniRef90_UPI00032A7A04	A	T	L	G	A	H	V	Q	K	G	V	V	D	P	H	F	V	V	V	K	E	A	L	L	K	T	I	K	E	V	A	G	D	K	W	S	E			
UniRef90_M2LXP8	E	K	I	C	Q	K	H	A	S	L	Y	I	K	P	E	Q	Y	D	V	L	G	T	Y	L	R	A	M	G	D	V	L	G	S	A	L	T	P			
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UniRef90_G6FNK7	K	T	I	A	H	R	H	A	Q	T	R	T	L	P	E	Q	Y	N	P	L	I	G	E	K	L	L	Q	A	M	K	D	V	L	Q	D	A	A			
UniRef90_V8D265	G	A	L	G	R	R																																		

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UniRef90_A0A022T2V8	Q	F	V	V	D	F	Y	N	L	P	S	A	E	D	I	Q	R	A	L	R	V	S	T	V	N	I	E	V															

	90	100	110	120
UniRef90_A0A059KFW5	E R I	A A K H V	S L G I R	R E H Y A V V G R H L L A S I V I E V L G E E A T P A
UniRef90_F2Q9X5	R N V	G R I	K A A G M T	N D N I L M K P I L L L E L L D E V G C G D
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UniRef90_U1NCF7	T N L	G R I	H T R Q H G F D	P Q Y W I F Q D C T L Y H F R R A F T
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UniRef90_C5DYT1	N G L	A Q K H S R I	L G I E P H F E	L M G V A F L R T I Q D R F G V H C T V E
UniRef90_I7EH20	K H Q	G E R H R A I	R I T D A F H Y D G F I	Y S F T S A L A E T L G E P E W S E D
UniRef90_W1RUG2	A R M	V A R H V D T	R V K P E H Y P	K V A G A S L L A P A I R D V L G E E I T D E D
UniRef90_UPI0004638549	R D L	G R R H H G F	G V V A D H Y A P V	V A A S L L A T I A Y F S G P A W S E D
UniRef90_C3Y5G3	A W L	G L R H V N	Y H V R P H H I	P L I G P V I M N A L A D A A E D A W T E E
UniRef90_L1JET9	P A V	R Q F K H R	A L Q V K P E	Q Y G T V G K Y L L A S I L K E T L N P P E E
UniRef90_I2K374	R H V	G G T H R	Q V P G F K A E N F	M K I E Q P F L L E A A K T T L G E R Y T P N
UniRef90_G6CW33	M R L	G R D H R	K L G L L P A	Q Y T A F E T A L R E A L R V R A G A G W T V E
UniRef90_D6KG01	S K T	G A S H V	K F A G F K S T N F	L A I K E P F L L E A V R V R A G A G W T E N
UniRef90_UPI00035A19D6	T E L	G K R H V	S Y G V K E A D Y	Q A V K E C L L T V L E K Y A V I S A W S Q A
UniRef90_F5SZW9	R G V	G K R H R R L	P E F N F M I F S R A I	E E P F L L A V K E T L G D R Y S A N
UniRef90_K1Q9R1	R D L	G R R H Q R	F N V Q P H	Q F A L L K Q A L T Q V L A R R L G S G F T P A
UniRef90_UPI0002198090	S R I	V H K H A S	V G I K P G H Y	F T V V A R H L L G A I G E S V L G E A A T P E
UniRef90_UPI00035D54CA	D R L	V N A H N F R	P S V G L E Y F	Q P L Q E N I Y K Y L S E S A L I V A A D S N
UniRef90_Q14SM8	Q N I	G Q K H V	S L N I K P E	Q Y Q I V G R H I I A S I L S E V L G T G A S K E
UniRef90_G2Z488	I T L	S G H K H A R L	G V Q P S H F	V A M G E A L M W S F R K F G A F F T P E
UniRef90_UPI0003772E08	V P I	N H R H C	A L N L Q P A H Y	L P V H D H L M H V L G P K L G D A L T Q E
UniRef90_R1EGH0	M K L	G K R H S R	V L G I G S D H F	E L M G E V L I L T L Q E R F G T R F T Q E
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UniRef90_A3X749	Q Y L	G S I H R	K S G V I D P H F E	A A F E G A L V E A L R A R A G V R W T Q E P
UniRef90_R0I5I4	T Q L	G R D H R	K L G V R P A H F	A A F E G A L V E A L R A R A G V R W T Q E P
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UniRef90_K1QT48	T W L	G V R H V L	Y N V R P H I I	P L I G P V F M N V L S E A A G A M W T P E
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UniRef90_Q0IEH8	S R M	V A R H V	Q T G V K P E	H Y A P K V A A L L L P A I S I R E V L G A V T D A
UniRef90_B5X603	E R I	T T K H V	S L D I G V K P D	Q Y A I S V G A N L L I Q T F K S Q L L G V P A F T D A
UniRef90_A0A013WVRX3	V E L	A R R H V	S Y G V Q A D	Q Y A I S V G A N L L I Q T F K S Q L L G V P A F T D A
UniRef90_A0A013WVRX3	A M L	S Q F A K E H F	G V G S A Q F E N	R S M F P G F V A S V A A P P A G
UniRef90_N9Q7N5	T E L	A N N H K N R	G V T K D Q F N E	R T A L T N Y V S S N A P W G D N
UniRef90_W8S4A2	G A I	A R M V A R H T	G V K P E H Y P	K V A A A L L P A I R E V L G E E V T D A
UniRef90_P02210	A Q L	G R D H R K Y	G I E D A H Y	V A V G N S L I A A V E Q F P S T E W T D E E
UniRef90_S6CDG3	A T L	G P I H T K Q	G V T D L Q F A V	V K E A L K T I K E A V G D K W S E E
UniRef90_N1MFW6	E Y L	A G Q G R K H R A	V G V K S F S A V G E S	L L Y M L E K C L G P A F T P A
UniRef90_W8H2X1	I N L	N R V W A R Q G G	W R K T N D M A L T Q S V	F L D V M R N N V N N W T P E
UniRef90_A0A022T3A5	V K L	G K R H S R I	L G I K T L G F E V	M G K A F M T T L Q D R F G S F F T L E
UniRef90_K7LKG1	D N L	G R R H G	K L E V N G K F R T Y Y	W S T F L E C E S R D F G S F F T L E
UniRef90_L5JQP5	D K L	A K S H V N	L K I G L E F F G P L	Q Q N I H S F I E S A L G V G A G S D
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UniRef90_J6EHJ0	T K I	A V S H I P	R T I G S K E S Y N Q L	K G V I L L E V L T A A C S L D E E
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UniRef90_D6KG01 L E Q A W L R M L R F G V T A M V R G
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UniRef90_R1EGH0 V A G A W S E A V R F L A K V C I D K
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UniRef90_V5YMG1 T E T A W N D A F D Q M F G Y I L A K Y
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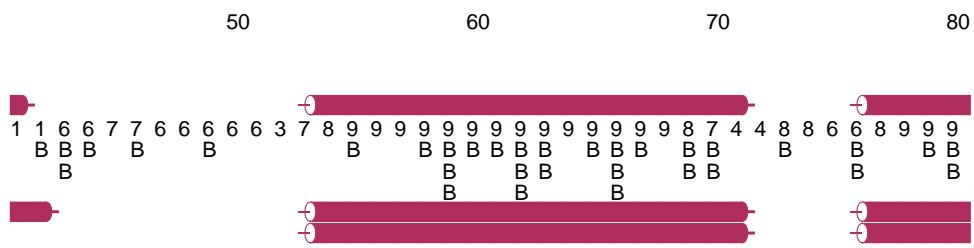


Figure 1: A horizontal bar chart showing the number of reads for each nucleotide (A, C, G, T) at each position (1-30) for four different sequencing runs. The x-axis represents the number of reads, ranging from 90 to 120. The y-axis represents the position. The bars are color-coded: A (blue), C (orange), G (green), and T (red). The chart shows that the number of reads for each nucleotide is relatively stable across positions, with some variation in the number of reads for each nucleotide at each position. The number of reads for each nucleotide is approximately 90-100 for A, 100-110 for C, 110-120 for G, and 120-130 for T.

