

Figure 1: A detailed sequence logo visualization of the 1000 Genomes Project data, showing the frequency of nucleotide variants across the genome. The x-axis represents the genomic position (1 to 40,000,000), and the y-axis represents the frequency of variants (0 to 100). The logo is color-coded by nucleotide: A (blue), C (green), G (red), and T (yellow). The background is white. The logo shows a high density of variants in the first 10,000,000 positions, with a significant peak around 10,000,000. The frequency of variants decreases as the genomic position increases, with a notable dip around 20,000,000 and a slight increase towards the end of the genome. The logo is a complex, multi-layered visualization that captures the intricate patterns of genetic variation across the human genome.

QUERY	50	60	70	80
UniRef90_P25405	V A T G I C R S D D H V V S G T L V T P L P V I A G H E A A G I V V E S I G E G V			
UniRef90_P80467	L A T A V C H T D D A Y T L S G A D P E G F P V I L G H E A A G I V V E S I G E G V			
UniRef90_D8RRY0	T H T A L C H T D D A Y T L S G Q D P E G F P C I L G H E A A G I V V E S I G E G V			
UniRef90_UPI0003F09E76	L A T G I C R T S D D H V I K G A M V S K F P V I L V G H E A T G I V V E S I G E G V			
UniRef90_Q6P7G1	L A T G I C R T S D D H A V S G E D L Q V K F P I I L G H E A V G I V V E S T G E G V			
UniRef90_F6X0I3	M A T G V C H T D D A F T L S G E D P A A F P V I L V G H E A V G I V V E S I G E G V			
UniRef90_G3VK23	L A T G I C R T D D N A I L T G G L H A K A F P V I L V G H E A V G I V V E S I G E G V			
UniRef90_M3XHH8	L A T G V C R T D A S S L K A G V K A N F P V I L V G H E A A G I V V E S I G E G V			
UniRef90_W6K5B3	K A T G I C H T D A F T L S G D D P E G F P A I L G H E A A G I V V E S I G E G V			
UniRef90_I3M7H4				
UniRef90_L5LC88	I A T A L C H S D A F Y T L H P K D F K A E L F P V I L G H E A A G I V V E S I G E G V			
UniRef90_Q4SYL2	V A T A L C H T D D V Y F W E A K G Q T P F P R I L G H E A A G I V V E S I G E G V			
UniRef90_F6I0F6	L F T S L C H T D D V Y F W E A K G Q T P F P R I L G H E A A G I V V E S I G E G V			
UniRef90_M4CHK7	H F T S L C H T D D V Y F W E A K G Q A P L F P R I L G H E A A G I V V E S I G E G V			
UniRef90_M0RQ97	K Y T S L C H T D D V Y F W E A K G Q A P L F P R I L G H E A A G I V V E S I G E G V			
UniRef90_R7QSQ6	L A T G V C H T D D A Y T L S G T D A P E G F P T V L G H E A A G I V V E S I G E G V			
UniRef90_G1QBN6	V A S G V C R S D D H V V I N G N I A T P F P M I L G H E A A G I V V E S I G E G V			
UniRef90_F1QP54	A A S G V C H S D D L Y D I A K M K A R P F P L V L G H E A A G I V V E S I G E G V			
UniRef90_UPI0004421D4B	V A T G I C R T D D H V W K G I F P N I Y P V I L G H E A A G I V V E S I G E G V			
UniRef90_S9PUU0	N W T A V C H T D A F T L S G V D P E G F P V V L G H E A A G I V V E S I G E G V			
UniRef90_G3AZ78	L N T G V C H T D A F T L S G V D P E G F P V I L G H E A A G I V V E S I G E G V			
UniRef90_H2US44	I A T S V C H T D S E Y L H Q I N K A P F P S V L G H E A A G I V V E S I G E G V			
UniRef90_A5V5H9	M A T G I C H T D A F T L S D G D S E G I F P S I L G H E A A G I V V E S I G E G V			
UniRef90_UPI000363C8EF	V A T G V C H T D A F T L S G E D P E I F P S I L G H E A A G I V V E S I G E G V			
UniRef90_UPI0003646AD3	I A T G V C H T D A F T L S G E D P E I F P S I L G H E A A G I V V E S I G E G V			
UniRef90_UPI00032B12C5	L S S G I C G T D T F T L S E G A D V P F P I L L G H E A A G I V V E S I G E G V			
UniRef90_S2KJE0	K A T S V C H T D T F T L S G A D P E G F P S V L G H E A A G I V V E S I G E G V			
UniRef90_F6YVG3	I S T G I C G T D N H V L S E G Q F S F P F P I I V L G H E A A G I V V E S I G E G V			
UniRef90_Q9BJ33	L A T G V C H T D A F T L S G A D P E G K F P V V L G H E A A G I V V E S I G E G V			
UniRef90_P44557	T H T G V C H T D A F T L S G S D P E G F P V V L G H E A A G I V V E S I G E G V			
UniRef90_K9TEA8	K A T G V C H T D A Y T L S G A D P E G F P A I L G H E A A G I V V E S I G E G V			
UniRef90_G8JSM1	T H T A L C H T D A Y T L S G V D P E I F P S I L G H E A A G I V V E S I G E G V			
UniRef90_H2ZYT8	I A T G V C R T D A S S L K A G V K A N F P V I L G H E A A G I V V E S I G E G V			
UniRef90_UPI000364247C	V A S G V C H T D A F T L S G D D P E G F P C I L G H E A A G I V V E S I G E G V			
UniRef90_K8EMY5	T D T A I C H T D A F T L S G D D P E G F P A V L G H E A A G I V V E S I G E G V			
UniRef90_B9KZ54	V A A G V C H S D L H Y I Q G D D L E T P L P A I L G H E A A G I V V E S I G E G V			
UniRef90_B1Y1Q1	K A T G I C H T D D Y Y T L S G A D P E I F P A I L G H E A A G I V V E S I G E G V			
UniRef90_D3B4F3	L S S G V C H T D A F T L S G D D P E G F P S I L G H E A A G I V V E S I G E G V			
UniRef90_Q5NZZ5	V A T G V C H T D A F T L S G D D P E I F P A I L G H E A A G I V V E S I G E G V			
UniRef90_UPI00038BDAA6	V A T G I C G T D D K S L D D K E L S Q F P I I M G H E A A G I V V E S I G E G V			
UniRef90_UPI000287AD07	V A T G V C H T D A F T L S G D D P E I F P S I L G H E A A G I V V E S I G E G V			
UniRef90_Q41241	I C T S L C H T D D T L W K E F P G C F P R I L G H E A A G I V V E S I G E G V			
UniRef90_G7E4I0	L Y T G L C H T D A Y T L S G D D P E Q F P S I L G H E A A G I V V E S I G E G V			
UniRef90_M5W9N2	V C T S L C R S D D T A W E S Q A I F P R I L G H E A A G I V V E S I G E G V			
UniRef90_Q0IA54	V A T G V C H T D A Y T L S G S D P E G F P V V L G H E A A G I V V E S I G E G V			
UniRef90_UPI0003F16FAC	L A T G I C H T D D H I L K G A M V S T F P V I L G H E A T D V V E S I G E G V			
UniRef90_F7ZCB3	K A T G L C H T D E F T R S G D D P E I F P A I L G H E A A G I V V E S I G E G V			
UniRef90_D1C8X5	V A S G L C H S D W H L V T G D L V N Y P I V A G H E A A G I V V E S I G E G V			
UniRef90_A0A017T6C6	K A T G V C H T D E F T R S G A D P E G F P C I L G H E A A G I V V E S I G E G V			
UniRef90_E0CQT3	I C T S L C H S D L T F W K K E D P A A C F P R I L G H E A A G I V V E S I G E G V			
UniRef90_D3FEY1	V A C G V C H T D M Y T A S G A D P S G Y P C V L G H E A A G I V V E S I G E G V			
UniRef90_Q17335	L Y T A V C H T D A Y T L S G D H D P E G F P V V L G H E A A G I V V E S I G E G V			
UniRef90_P45382	K A T G I C H T D E F T L S G A D P E G F P S I L G H E A A G I V V E S I G E G V			
UniRef90_X8J6S0	L H T D I C H T D E Y T R S G K D S E G F P V I L G H E A A G I V V E S I G E G V			
UniRef90_G7KS94	L Y T S I C H T D L S G W K G E C E P Q R P R I L G H E A A G I V V E S I G E G V			
UniRef90_UPI000440B222	L A A S I C L S D V H M Y K G K P K D G F P V V M G H E A A G I V V E S I G E G V			
UniRef90_J7I3K4	I A T G V C H T D S Y T L Q K G H D P E G F P V V L G H E A A G I V V E S I G E G V			
UniRef90_W9RN28	I C T S L C H S D V T F W K M D F P G V F P R I L G H E A A G I V V E S I G E G V			
UniRef90_V4V5D5	L C T S L C H S D V T F W R S T Q P M F P R I L G H E A A G I V V E S I G E G V			
UniRef90_X2D7U7	L F T S L C H T D D V Y F W E A K G Q T P F P R I L G H E A A G I V V E S I G E G V			
UniRef90_B9IN75	L C A S L C H T D T L Y A K G S L I L P L F P R V L G H E A A G I V V E S I G E G V			
UniRef90_G5E0W0	V A T G I C R S D D H V L S G A M S D K F P V I L G H E A A G I V V E S I G E G V			
UniRef90_I1QWS5	L C T S I C H T D D I T F W R M E G N H P S I L G H E A A G I V V E S I G E G V			
UniRef90_K0V0L6	Q A S G L C H S D L H V I A G E W D A P N P M I L G H E A A G I V V E S I G E G V			
UniRef90_A8QF76	L Y T A I C H T D A Y T L S G D D P E G F P C I L G H E A A G I V V E S I G E G V			
UniRef90_L2FIE1	Y Y T G V C H T D A Y T L S G K D P E G F P I V L G H E A A G I V V E S I G E G V			
UniRef90_U1HJ37	R A A G L C H T D L E V I D G S L R Y P L P M I L G H E A A G I V V E S I G E G V			
UniRef90_L7VYV4	A Y A G M C H S D E H A V T G D L P L G L P V I L G H E A A G I V V E S I G E G V			
UniRef90_B8H352	K A A G V C H S D L H F V E G S Y T H A L P A V L G H E A A G I V V E S I G E G V			
UniRef90_F6T873	L A T G I C H S D E H M I Q G M L V S S I P S I L G H E A A G I V V E S I G E G V			
UniRef90_UPI000360E6D1	A A A G V C H S D L H V K E G E W D A P A P L V M G H E A A G I V V E S I G E G V			
UniRef90_UPI00046DAC72	K Y T A L Y H T D V Y F W E A K G Q T P F P R I L G H E A A G I V V E S I G E G V			
UniRef90_UPI00034DA2CB	V A A G I C H T D L I V R D Q Y Y P V P L P A V L G H E A A G I V V E S I G E G V			
UniRef90_UPI000366A8B	D Y S G L C H S D L H M V K G H L P F R S P M V F G H E A A G I V V E S I G E G V			
UniRef90_D7PPK5	X X X X X C H T D V Y F W E A K G Q T P F P R I L G H E A A G I V V E S I G E G V			
UniRef90_A0A059AK92				
UniRef90_UPI000470436A	K A S G L C H T D L H F A N N T V F G V P M P A V F G H E A A G I V V E S I G E G V			
UniRef90_UPI0002626CD5	S N V G L C H T S D L T S L N G F T V P T D L P A V L G H E A A G I V V E S I G E G V			
UniRef90_V7AD63	L C A S I C H T S D L T S L N G F T P M C F P L A L G H E A A G I V V E S I G E G V			
UniRef90_U4Q1B9	R A A G L C H S D L S V I N G D R P R P M P M A L G H E A A G I V V E S I G E G V			
UniRef90_A1TFU1	E A T A G L C H S D E L I R T G D L P A P L L I G H E A A G I V V E S I G E G V			
UniRef90_UPI000333BD6C	I A T A V C H T D A Y T L S G A D P E G F P V I L G H E A A G I V V E S I G E G V			
UniRef90_C0D8B9	A A S G V C H T D E V A Q Q M I P V P L P A V L G H E A A G I V V E S I G E G V			
UniRef90_E3H426	L T C G V C Q T D D H Y V A G M I G V G D D F P Y L L G H E A A G I V V E S I G E G V			
UniRef90_W4LEY3	A A S G V C H S D L H Y V D G S Y T G S T P I V L G H E A A G I V V E S I G E G V			
UniRef90_H5WYV9	H A A G L C H S D D H Y K G G A Q M R F P V V L G H E A A G I V V E S I G E G V			
UniRef90_A4KJ27	T A C G V C H T D L T Y R E G I N D E Y F L L G H E A A G I V V E S I G E G V			
UniRef90_UPI0002C37805	I A T T L C H T D A H V I H P Q F E G X F P V I L G H E A A G I V V E S I G E G V			
UniRef90_C4X945	V A T G V C H T D A V M R D N P G V V P M P A I L G H E A A G I V V E S I G E G V			
UniRef90_UPI00036D72E8	T H A G L C H S D V H I A D N G D L E A R L P M V L G H E A A G I V V E S I G E G V			
UniRef90_S5SS19	Q S T G V C H T D L S Y R D G D I N D E Y P F L L G H E A A G I V V E S I G E G V			

QUERY	T	T	V	R	P	G	D	K	V	I	P	L	F	T	P	Q	C	G	K	C	S	R	V	C	K	H	P	E	G	N	F	C	L	K	N	D	L	S	M	A	T	R		
UniRef90_P25405	T	C	V	K	P	G	D	K	V	I	P	L	F	V	P	Q	C	G	K	C	S	R	V	C	K	H	P	E	G	N	F	C	L	K	N	D	L	S	M	A	T	R		
UniRef90_P80467	T	K	F	K	P	G	D	T	V	I	P	L	F	V	P	Q	C	G	K	C	S	R	V	C	K	H	P	E	G	N	F	C	L	K	N	D	L	S	M	A	T	R		
UniRef90_D8RRY0	T	D	V	K	P	G	D	H	V	I	P	C	Y	Q	A	E	C	C	K	Y	C	K	S	F	C	L	N	G	K	T	N	L	Q	K	V	R	P	A	T	G	K	R		
UniRef90_UPI0003F09E76	T	T	V	K	P	G	D	K	V	I	P	L	F	L	P	Q	C	G	K	C	N	A	C	C	K	H	P	E	G	N	L	V	K	S	D	V	T	G	R	V				
UniRef90_Q6P7G1	K	N	L	K	P	G	D	R	V	I	P	L	F	A	P	Q	C	G	K	C	M	C	C	K	H	P	E	G	N	L	Q	K	I	R	T	K	S	V						
UniRef90_F6X013	T	E	F	K	E	G	D	H	V	I	P	L	Y	T	P	Q	C	G	K	C	N	F	C	C	K	H	P	E	G	N	L	Q	K	I	R	T	K	S	V					
UniRef90_G3VK23	T	T	V	K	P	G	D	K	V	I	P	L	C	V	P	Q	C	G	K	C	S	A	C	L	N	P	S	N	F	Y	E	R	L	D	I	S	G	K	T					
UniRef90_M3XHH8	T	N	I	K	P	G	D	K	V	I	P	L	Y	T	P	Q	C	G	K	C	R	S	C	L	C	H	P	E	G	N	L	Q	E	K	T	E	S	T	M	W	A	T		
UniRef90_W6K5B3	T	S	V	V	P	G	D	H	V	I	P	L	Y	T	P	E	C	C	R	E	C	D	Y	C	L	H	P	E	G	N	L	Q	E	K	T	E	S	T	M	W	A	T		
UniRef90_I3M7H4						G	D	K	V	I	P	F	F	A	P	Q	C	G	K	C	K	C	K	F	C	L	S	P	L	T	N	L	Q	K	Y	M	N	F	E	T	P			
UniRef90_L5LC88	T	N	C	K	P	G	D	K	V	I	P	L	Y	M	P	Q	C	G	K	C	K	C	K	F	C	L	S	P	L	T	N	L	Q	A	K	L	S	P	L	V	Q	R		
UniRef90_Q4SYL2	T	K	F	Q	P	G	D	T	V	I	P	L	Y	T	P	Q	C	G	K	C	K	C	K	F	C	L	S	P	L	T	N	L	Q	A	K	L	R	L	T	D	R	G		
UniRef90_F6I0F6	T	D	L	Q	S	G	D	H	V	L	T	I	F	T	G	E	C	C	K	C	A	H	C	H	S	E	E	S	N	M	M	D	L	L	R	N	T	D	R	G				
UniRef90_M4CHK7	T	D	L	E	V	G	D	H	V	L	T	V	F	T	G	E	C	C	K	C	A	H	C	H	S	E	E	S	N	M	M	D	L	L	R	N	T	D	R	G				
UniRef90_M0RQ97	T	N	V	S	V	G	D	H	V	I	M	A	Y	V	P	E	C	C	G	Q	C	N	F	C	K	S	P	K	T	N	L	Q	K	I	R	T	T	Q	G	A	R			
UniRef90_R7QSQ6	T	A	V	K	P	G	D	K	V	I	P	L	F	T	P	Q	C	G	K	C	K	V	C	K	H	P	E	G	N	L	V	K	T	S	L	S	M	P	R					
UniRef90_G1QBN6	T	K	V	S	L	G	D	K	V	I	P	L	F	T	P	Q	C	G	K	C	E	R	O	C	K	S	P	K	T	N	L	T	K	N	W	E	K	T	Q	Q				
UniRef90_F1QP54	T	C	V	K	P	G	D	K	V	I	P	L	C	V	P	Q	C	G	K	C	G	C	C	Q	S	P	K	A	N	C	L	K	S	H	I	Y	P	F	Q					
UniRef90_UPI0004421D4B	T	N	V	R	P	G	D	H	V	I	L	L	Y	T	P	E	C	C	K	C	K	F	C	R	S	G	K	T	N	L	Q	S	K	I	R	E	T	Q	G	R				
UniRef90_S9PUU0	T	S	V	K	V	G	D	H	V	V	A	L	Y	T	P	E	C	C	K	C	K	F	C	R	S	G	K	T	N	L	Q	S	K	I	R	A	T	Q	G	R				
UniRef90_G3AZ78	G	K	F	S	P	G	D	K	V	I	P	L	F	L	P	Q	C	G	K	C	E	R	C	K	S	S	K	T	N	L	H	K	K	N	W	A	N	T	Q	M				
UniRef90_H2US44	T	S	V	V	P	G	D	H	V	I	P	L	Y	T	P	E	C	C	K	C	K	S	C	L	S	G	K	T	N	L	Q	T	A	A	I	R	A	T	Q	G	K			
UniRef90_A5V5H9	R	S	V	S	V	G	D	H	V	I	P	L	Y	T	P	E	C	C	K	C	K	C	K	F	C	L	S	G	K	T	N	L	Q	T	A	A	I	R	A	T	Q	G	K	
UniRef90_UPI000363C8EF	T	S	V	K	V	G	D	H	V	I	P	L	Y	T	P	E	C	C	G	E	C	K	F	C	T	S	G	K	T	N	L	Q	K	I	R	E	T	Q	G	K				
UniRef90_UPI0003646AD3	T	S	V	K	P	G	D	K	V	I	M	F	P	L	P	E	C	C	K	C	N	S	C	L	N	P	K	G	N	L	Q	L	K	G	D	V	L	S	P	T				
UniRef90_UPI00032B12C5	T	S	L	K	P	G	D	K	V	I	P	L	Y	T	A	E	C	C	G	Q	C	K	F	C	R	S	G	K	T	N	L	Q	S	V	R	A	T	Q	G	K				
UniRef90_S2KJE0	T	T	V	K	P	G	D	K	V	L	T	L	P	I	P	Q	C	G	K	C	S	C	C	L	S	P	K	G	N	F	F	K	S	P	H	D	P	P	T					
UniRef90_F6YVG3	T	G	F	Q	P	G	D	H	V	I	P	L	Y	T	P	Q	C	G	K	C	R	D	C	K	F	C	R	S	P	K	T	N	L	Q	K	I	R	V	S	Q	G	Q		
UniRef90_Q9BJ33	L	S	V	K	P	G	D	H	V	I	P	L	Y	T	A	E	C	C	G	E	C	F	C	R	S	G	K	T	N	L	Q	S	V	I	R	D	T	Q	G	K				
UniRef90_P44557	K	T	L	K	V	G	D	R	V	I	P	L	Y	T	P	E	C	C	R	Q	C	K	Y	C	L	S	N	K	T	N	L	Q	V	A	I	R	T	T	Q	G	K			
UniRef90_K9TEA8	T	N	V	K	V	G	D	H	V	I	P	L	Y	T	A	E	C	C	K	C	K	F	C	I	C	S	G	K	T	N	L	Q	G	S	V	I	R	T	T	Q	G	K		
UniRef90_G8JSM1	T	N	I	K	P	G	D	K	V	I	P	L	Y	T	P	K	C	C	G	K	C	R	S	L	C	P	K	T	N	L	Q	E	K	T	D	T	M	W	A	T				
UniRef90_H2ZYT8	K	T	L	K	P	G	D	H	V	I	P	L	Y	T	P	E	C	C	H	C	E	Y	C	A	S	P	K	T	N	L	Q	S	I	A	S	T	V	W	T					
UniRef90_UPI000364247C	T	S	V	D	V	G	D	H	V	I	P	L	Y	T	A	E	C	C	G	K	C	K	F	C	L	S	G	K	T	N	L	Q	A	V	A	R	E	T	Q	G	K			
UniRef90_K8EMY5	T	R	F	R	P	G	D	P	V	V	F	V	F	R	A	F	C	C	H	C	F	Y	C	L	N	G	R	P	A	L	Q	D	F	S	N	P	I	R	R	T				
UniRef90_B9KZ54	T	T	L	K	K	G	D	H	V	I	P	L	Y	T	P	E	C	C	R	Q	C	K	F	C	L	S	R	K	T	N	L	Q	L	I	T	R	G	T	Q	G	K			
UniRef90_B1Y1Q1	T	S	V	A	V	G	D	H	V	I	P	L	Y	T	P	E	C	C	R	E	C	K	F	C	K	S	G	K	T	N	L	Q	S	L	I	R	T	Q	G	K				
UniRef90_D3B4F3	T	S	L	E	V	G	D	H	V	I	P	L	Y	T	A	E	C	C	R	E	C	K	F	C	K	S	G	K	T	N	L	Q	S	A	V	I	R	A	T	Q	G	K		
UniRef90_Q5NZZ5	S	T	V	K	T	G	D	K	V	I	L	L	C	L	P	Q	C	G	K	C	N	T	C	C	L	T	S	K	N	N	M	E	E	I	R	L	T	Q	G	K				
UniRef90_UPI00038BDAA6	S	S	V	K	V	G	D	H	V	I	P	L	F	V	P	Q	C	G	K	C	Q	F	C	K	S	G	K	T	N	L	Q	S	S	I	R	L	T	Q	G	K				
UniRef90_UPI000287AD07	D	E	L	K	E	G	D	S	V	V	P	I	F	L	P	D	C	M	D	C	V	D	C	K	S	K	K	S	N	L	Q	S	K	F	P	I	Q	V	S	P				
UniRef90_Q41241	T	D	V	K	V	G	D	H	V	I	P	L	Y	T	A	E	C	C	G	K	C	K	F	C	K	S	G	K	T	N	L	Q	G	K	V	R	T	T	Q	G	K			
UniRef90_G7E410	T	E	F	T	E	G	D	H	V	L	T	V	F	T	G	E	C	C	G	K	C	R	Q	C	T	S	G	K	S	N	L	E	V	L	G	L	E	R	R	G				
UniRef90_M5W9N2	T	S	V	S	V	G	D	H	V	I	P	L	Y	T	P	E	C	C	G	R	C	R	F	C	L	S	G	K	T	N	L	Q	V	A	I	R	S	T	Q	G	R			
UniRef90_Q0IA54	S	P	L	K	P	G	D	K	V	I	P	L	F	T	P	Q	C	G	K	C	A	V	C	K	H	P	E	G	N	F	M	K	N	D	L	S	F	P	R					
UniRef90_UPI0003F16FAC	T	S	L	E	V	G	D	H	V	I	P	L	Y	T	P	Q	C	G	K	C	D	Y	C	L	N	P	K	T	N	L	Q	K	V	R	A	T	Q	G	Q					
UniRef90_F7ZCB3	T	A	V	K	P	G	D	H	V	I	L	T	F	P	S	C	C	R	E	C	R	W	C	S	S	G	L	T	M	L	D	L	G	A	G	I	L	Q	G					
UniRef90_D1C8X5	K	S	V	K	K	G	D	H	V	I	P	L	Y	T	P	E	C	C	R	Q	C	K	S	C	L	S	R	K	T	N	L	T	A	I	R	A	T	Q	G	Q				
UniRef90_A0A017T6C6	T	E	V	A	E	G	D	T	V	L	T	I	F	P	S	D	C	G	E	C	M	D	C	R	S	E	K	S	N	L	Q	S	K	F	P	F	E	S	P					
UniRef90_E0CQT3	T	L	V	R	P	G	D	H	V	V	T	L	F	S	P	Q	C	G	K	C	V	H	C	L	S	P	K	T	N	L	Q	M	K	I	R	E	Q	Q	N	K				
UniRef90_D3FEY1	T	G	F	A	P	G	D	H	V	V	P	L	Y	V	P	Q	C	K	C	E	Y	C	K	N	P	K	T	N	L	Q	K	I	R	I	S	Q	G	N						
UniRef90_Q17335	T	S	V	K	P	G	N	H	V	I	P	L	Y	T	P	E	C	C	A	S	C	L	S	G	K	T	N	L	Q	T	A	I	R	A	T	Q	G	Q						
UniRef90_P45382	T	G	V	K	P	G	D	H	V	I	P	L	Y	T	A	E	C	C	R	E	C	K	F	C	K	S	G	K	T	N	L	G	R	V	R	A	T	Q	G	Q				
UniRef90_X8J6S0	N	D	M	K	E	N	D	K	V	V	L	I	F	N	G	E	C	G	K	C	C																							

QUERY	130										140										150										160													
UniRef90_P25405	G	T	M	Q	D	G	T	S	R	F	T	C	R	G	K	S	P	L	H	H	F	L	G	T	S	T	F	S	Q	Y	T	V	V	D	E	I	S	V	A	K	I			
UniRef90_P80467	G	L	M	P	D	G	T	S	R	F	T	C	K	G	K	S	Q	V	L	H	H	F	L	M	G	T	S	T	F	T	S	E	Y	T	V	V	H	E	N	S	V	T	K	I
UniRef90_D8RRY0	G	V	M	A	D	G	Q	P	R	F	T	S	V	K	G	K	P	I	Y	H	F	M	G	T	S	T	F	T	S	E	Y	T	V	V	H	A	D	I	S	V	A	K	I	
UniRef90_UPI0003F09E76	G	V	L	A	D	G	T	T	R	F	T	C	K	G	K	Q	I	V	Y	H	F	L	M	N	T	S	T	F	T	S	E	Y	T	V	V	D	E	T	M	A	V	T	K	I
UniRef90_Q6P7G1	G	V	M	S	D	G	T	S	R	F	T	C	K	G	K	P	I	Y	H	F	L	M	N	T	S	T	F	T	S	E	Y	T	V	V	D	E	T	M	A	V	T	K	I	
UniRef90_F6X013	G	F	L	P	D	G	T	S	R	F	T	C	N	G	K	Q	M	V	Y	H	F	L	M	G	T	S	T	F	T	S	E	Y	T	V	V	A	D	I	S	L	A	K	V	
UniRef90_G3VK23	G	V	L	S	D	G	T	S	R	F	T	C	K	G	K	P	I	Y	H	F	L	M	S	T	S	T	F	T	S	E	Y	T	V	V	E	E	S	S	V	A	K	I		
UniRef90_M3XHH8	G	L	M	P	D	K	T	S	R	F	T	C	K	G	K	Q	L	I	F	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	S	D	I	C	T	A	K	I		
UniRef90_W6K5B3	G	L	M	P	D	G	T	S	R	F	T	C	I	D	G	K	P	L	I	L	H	F	M	G	C	S	T	F	S	N	Y	T	V	M	P	E	I	A	L	A	K	I		
UniRef90_I3M7H4	E	L	M	E	D	K	T	S	R	F	T	C	K	G	K	S	P	I	V	Y	H	F	M	G	I	S	T	F	S	Q	Y	T	V	V	S	D	T	N	L	A	K	I		
UniRef90_L5LC88	E	L	M	E	D	K	T	S	R	F	T	C	K	G	K	S	P	I	V	Y	H	F	M	G	I	S	T	F	S	Q	Y	T	V	V	S	D	T	N	L	A	K	I		
UniRef90_Q4SYL2	G	L	M	P	D	G	T	T	R	F	S	C	K	G	E	S	L	F	Y	H	F	M	G	C	S	T	F	S	E	Y	T	V	V	A	E	I	S	L	A	K	V			
UniRef90_F6IOF6	V	M	L	N	D	N	K	S	R	F	S	I	N	G	K	P	I	Y	H	F	L	V	G	T	S	T	F	S	E	Y	T	V	V	H	S	G	Q	L	V	T	K	I		
UniRef90_M4CHK7	G	M	I	H	D	G	E	S	R	F	S	S	N	G	K	P	I	Y	H	F	L	G	T	S	T	F	S	E	Y	T	V	V	H	S	G	Q	L	V	T	K	I			
UniRef90_M0RQ97	V	M	I	G	D	G	N	A	R	F	S	K	N	G	N	P	I	Y	H	F	L	G	T	S	T	F	S	E	Y	T	V	V	H	S	G	Q	L	V	T	K	I			
UniRef90_R7QSQ6	G	V	M	P	D	G	T	G	R	F	T	C	K	G	K	D	P	I	Y	H	F	L	M	G	T	S	T	F	A	E	Y	T	V	V	A	D	I	S	L	A	K	I		
UniRef90_G1QBN6	G	T	L	Q	D	G	T	T	R	F	T	C	K	G	K	S	I	N	H	F	L	G	T	S	T	F	T	S	E	Y	T	V	V	D	E	I	S	V	T	K	I			
UniRef90_F1QP54	G	V	L	A	D	G	T	S	R	F	T	C	K	N	Q	Q	V	I	H	H	F	L	G	T	S	T	F	T	S	E	Y	T	V	V	P	E	D	N	V	T	K	I		
UniRef90_UPI0004421D4B	N	L	M	P	D	E	T	S	R	F	T	C	K	R	G	K	Q	I	H	H	F	L	W	T	S	T	F	S	E	Y	T	V	V	M	P	E	A	S	I	V	R	I		
UniRef90_S9PUU0	G	L	L	P	D	G	T	S	R	F	S	I	D	G	K	P	L	L	H	F	M	G	C	S	T	F	S	Q	Y	T	V	V	A	D	I	S	L	A	A	V				
UniRef90_G3AZ78	G	V	M	P	D	G	T	S	R	F	T	C	K	G	K	S	L	L	H	F	M	G	C	S	T	F	S	Q	Y	T	V	V	A	D	I	S	L	A	K	I				
UniRef90_H2US44	G	V	L	A	D	G	T	S	R	I	S	C	M	G	Q	Q	V	Y	Q	F	L	G	V	S	T	F	S	Q	Y	T	V	V	P	D	T	S	L	A	K	I				
UniRef90_A5V5H9	G	L	M	P	D	G	T	S	R	F	S	Y	K	G	Q	P	I	F	H	F	L	M	G	C	S	T	F	S	N	F	T	V	L	P	E	I	A	L	A	K	I			
UniRef90_UPI000363C8EF	G	L	M	P	D	G	T	S	R	F	S	I	E	G	K	P	I	Y	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	P	E	I	I	A	L	T	K	I		
UniRef90_UPI0003646AD3	G	L	M	P	D	G	T	T	R	F	Y	K	D	G	Q	P	I	Y	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	L	P	E	I	I	A	L	A	K	I	
UniRef90_UPI00032B12C5	G	L	M	L	D	G	T	S	R	F	T	C	R	G	K	K	I	Y	N	L	Y	R	T	S	T	F	T	S	E	Y	T	V	V	H	E	I	A	V	A	K	I			
UniRef90_S2KJE0	G	V	M	P	D	G	T	S	R	F	T	C	N	G	K	Q	L	H	H	F	M	G	C	S	T	F	S	E	Y	T	V	V	L	P	E	I	V	S	L	A	K	V		
UniRef90_F6YVG3	G	L	M	L	D	G	T	S	R	F	T	C	R	G	R	K	I	Y	H	F	L	A	G	T	S	T	F	A	E	Y	S	T	V	V	S	E	I	S	L	A	K	I		
UniRef90_Q9BJ33	G	V	M	P	D	G	S	S	R	F	T	C	K	G	Q	T	V	Y	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	A	D	I	S	L	A	K	V			
UniRef90_P44557	G	L	M	P	D	G	T	T	R	F	S	Y	Q	G	Q	P	I	Y	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	A	E	I	S	L	A	K	I			
UniRef90_K9TEA8	G	V	M	P	D	G	T	S	R	F	S	L	N	G	E	K	I	H	H	F	L	M	G	T	S	T	F	A	N	F	T	V	V	L	P	E	I	I	A	V	A	K	I	
UniRef90_G8JSM1	G	L	M	P	D	G	T	S	R	F	K	N	K	G	E	V	I	H	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	A	D	V	S	V	A	K	I			
UniRef90_H2ZYT8	G	L	M	P	D	K	T	S	R	F	T	C	K	G	K	Q	L	I	F	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	S	D	I	C	T	A	K	I		
UniRef90_UPI000364247C	G	Y	M	P	D	G	T	R	R	F	S	K	N	G	Q	P	I	F	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	P	E	I	I	A	L	A	K	I		
UniRef90_K8EMY5	G	L	M	P	D	G	T	T	R	F	S	Y	Q	G	E	P	I	Y	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	P	E	I	I	A	L	A	K	I		
UniRef90_B9KZ54	G	R	M	F	D	G	T	T	R	F	H	R	N	G	T	D	V	H	H	V	L	G	V	S	C	T	F	A	E	Y	T	V	V	P	E	I	Q	G	L	L	S	I		
UniRef90_B1Y1Q1	G	L	M	P	D	A	T	S	R	F	S	L	D	G	Q	P	I	F	H	F	L	M	G	T	S	T	F	A	N	H	T	V	V	P	E	I	I	A	L	A	R	I		
UniRef90_D3B4F3	G	L	M	P	D	G	T	S	R	F	R	C	R	G	Q	T	V	Y	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	A	E	I	I	A	L	A	K	V		
UniRef90_Q5NZZ5	G	L	M	P	D	G	T	T	R	F	S	Y	N	G	Q	P	I	H	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	P	E	I	I	A	V	A	K	I		
UniRef90_UPI00038BDAA6	T	H	L	I	S	E	S	S	R	V	T	C	R	G	K	M	V	H	Q	Y	I	S	I	G	T	F	S	E	Y	T	V	I	K	E	I	S	V	A	K	I				
UniRef90_UPI000287AD07	G	L	M	P	D	G	T	S	R	F	S	S	G	G	K	T	L	F	H	F	L	M	G	T	S	T	F	S	E	Y	T	V	V	L	P	Q	I	S	V	A	K	I		
UniRef90_Q41241	L	L	H	R	N	D	T	S	R	F	S	A	A	G	E	T	L	H	H	F	L	Y	I	S	T	F	S	E	Y	T	V	V	D	V	N	V	N	T	K	I				
UniRef90_G7E410	G	V	M	P	D	G	T	S	R	F	K	C	K	G	K	E	I	F	H	F	L	M	G	C	S	T	F	S	E	Y	T	V	V	S	K	Y	S	V	V	A	I			
UniRef90_M5W9N2	V	M	H	C	D																																							

QUERY	170	180	190	200
UniRef90_P25405	D A A S P L E K V C L I L G C G F S T T G Y G S A V K V A K V T Q	G S T T T C A V F G G L		
UniRef90_P80467	N A S A P L D K V C L L L G C G F S T T G Y G A A L N T A K V E A G S	T T V A V F F G G L		
UniRef90_D8RRY0	N P E A P L D K V C L L L G C G F S T T G Y G A A L N T A K V E A G S	T T V A V F F G G L		
UniRef90_UPI0003F09E76	D D A A S P E K V C L I L G C G F S T T G Y G S A V R T A K V T P G S	T T C A V F F G G L		
UniRef90_Q6P7G1	D G G A S P L E N T C L L L G C G F S T T G Y G S A L N T A K V H P G S	T T C A V F F G G L		
UniRef90_F6X013	D E S A P L D K V C L L L G C G F S T T G Y G A A L N T A K V E P G S	T T C A V F F G G L		
UniRef90_G3VK23	D A A A P L E K V C L L F G C G A F S T T G Y G A A I N T A K V E P G S	T T C A V F F G G L		
UniRef90_M3XHH8	D P A A P L D K V C L L L G C G F S T T G Y G A A I N T A K V E P G S	T T C A V F F G G L		
UniRef90_W6K5B3	R P D A P F E K V C Y I L G C G V T T G V G A V F D A K V E P G S	N V V F F G G L		
UniRef90_I3M7H4	D D D A N L E R V C L I L G C G F S T S G Y G A A I N T A K V T P G S	T T C A V F F G G L		
UniRef90_L5LC88	D D D A N L E R V C L L L G C G F S T T G Y G A A I N T A K V T P G S	T T C A V F F G G L		
UniRef90_Q4SYL2	D H R A P L D K V C L L L G C G I T T T G Y G A A L N T A K V E A G S	T T C A V F F G G L		
UniRef90_F6I0F6	N P A A P L D K V C V L S C G I S T T G L G A T L N V A R P W K G S	S V A I F F G L		
UniRef90_M4CHK7	N P E A P L D K V C I L S C G I S T T G L G A T L N V A K P K K G S	T V A I F F G L		
UniRef90_M0RQ97	D K S A P L D K V C V L S C G I S T T G L G A T L N V A K P K K G S	T V A I F F G L		
UniRef90_R7QSQ6	R E D A P L D K V C L M A C G F T T T G L G A V R N N C K V E P G S	T T C A V F F G G L		
UniRef90_G1QBN6	D A A A P L D K V C L L L G C G F S T T G Y G S A I Q V A K V E P G S	T T C A V F F G G L		
UniRef90_F1QP54	H P D A P L D R V C L L L G C G F S T T G Y G A A V N T A K V E P G S	T T C A V F F G G L		
UniRef90_UPI0004421D4B	D N D A P L D K V C I F G C G F S T T G Y G A A I N S A K V E P G S	T T C A I F G G L		
UniRef90_S9PUU0	S H S A P L R S V C L L L G C G V T T T G F G A V T H S A K V E A G S	T V A V F G A		
UniRef90_G3AZ78	N P K A S F E K T C L L L G C G I T T T G Y G A A T I T G D V Q E A G S	D N V A V F G A		
UniRef90_H2US44	R N D A P L D K V F L L L G C G V S T T G Y G A A M N A K V E K D S A	C A V F F G L		
UniRef90_A5V5H9	R E D A P F Q T S C Y I L G C G V T T T G V G A V V N T A K V Q V G D S	N V V F F G L		
UniRef90_UPI000363C8EF	N K A A P L E K V C L L L G C G I T T T G L G A V L N T A K V E P D S	V V V F F G L		
UniRef90_UPI0003646AD3	N P E A P L D E V C L L L G C G V T T T S G M G A V M N T A K V E E G A	T V A V F F G L		
UniRef90_UPI00032B12C5	D A A A P L D K V C I M S C E V P T S F G A V F N T A K V E P G S	T C V V F F G L		
UniRef90_S2KJE0	S P Q A P L D K V C L L L G C G V T T T G L G A V L N T A K V E P G S	T V A V F F G L		
UniRef90_F6YVG3	D S A A P L D K V C V F S C G F S T T G Y G A A I N T A R V E T P G S	T C V V F F G L		
UniRef90_Q9BJ33	A E S A P L E K V C L L L G C G I T T T G Y G A A L N T A K V E S G S	T V A V F G L		
UniRef90_P44557	N P E A N H E Q V C L L L G C G V T T T G Y G A V H N T A K V Q E G S	D S V A V F G L		
UniRef90_K9TEA8	R D D A P L D K V C L L L G C G V T T T G L G A V I N T A K V E P G S	N V V F F G L		
UniRef90_G8JSM1	D E K A P L D K V C L L L G C G V T T T G Y G A A V K T A D V Q K G D	T V A V F G A		
UniRef90_H2ZYT8	D P A A P L D K V C L L L G C G I S T T G Y G A A I N T A K V E P G S	T C V V F F G L		
UniRef90_UPI000364247C	N P A A P L D K V C L L L G C G V T T T G I G A V L N T A K V E P G S	T V A V F F G L		
UniRef90_K8EMY5	N P E A P L E K A C L L L G C G V T T T G I G A V H N T A K V Q A G D	T V A I F G L		
UniRef90_B9KZ54	P P D I P L D R A A L V L G C G V T T T G V G A V L F A A G V R A G E	T V L V G C		
UniRef90_B1Y1Q1	R P D A P F D K V C Y I L G C G V T T T G L G A V I F T A K V E A G A	N V V F F G L		
UniRef90_D3B4F3	R K D A P L D K V C L L L G C G V T T T G Y G A V V N T A K V E E G A	T V A V F F G L		
UniRef90_Q5NZZ5	P K E A P L D K V C L L L G C G V T T T G L G A V L N T A K V E E A G	A T V A I F G L		
UniRef90_UPI00038BDAA6	D E A A H L E K A C L L L G C G F A T T G F G A A I N S A K V T P A G	S T C A V F F G L		
UniRef90_UPI000287AD07	N T K A P L E K V C L L L G C G I T T T G I G A V L N T A K V E A G A	M V V F F G L		
UniRef90_Q41241	D P E I P L N R A C L L L G C G V T T T G V G A A W K T A N V E P B	G S S V V I F G L		
UniRef90_G7E410	D K Q A N L Q K A C L L L G C G I T T T G F G A A T K T A N V Q K G D	N V A V F G A		
UniRef90_M5W9N2	S S V V P L E K V C L L L G C G V A A G L G A A W N V A D I E S N G S	S V V I F G L		
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UniRef90_D3FEY1	D P E A P L E G A A L F A C G L S T T G L G A A L R T A K V E P G S	T A V V F G A		
UniRef90_Q17335	N P E A P L E K V C L L L G C G I S T T G Y G A V L N T C K V E E G S	T V A V W G L		
UniRef90_P45382	R E D A P F D K I C Y I L G C G V T T T G L G A V I N T A K V E I G A	K A N V F F G L		
UniRef90_X8J6S0	S P K A P L E K V C L L L G C G I T T A W G A V T K L D G I E G S	S V A V F G C		
UniRef90_G7KS94	N D N L S L K K L T L L L G C G V S T T G L G A A W N N A N V H A G S	S V A I F F G L		
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UniRef90_W9RN28	D P T I P N R A C L L L G C G I S T T G V G A A W R S A D V E A G S	T V A I F F G L		
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UniRef90_X2D7U7	N P E A P L D K V C I V S C G I S T T G L G A T L N V A K P K K G S	S V A I F F G L		
UniRef90_B9IN75	D P S I D L P H A S F L S C G F S T T G F G S A W R E A N V E K G S	S V A V L G L		
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UniRef90_I1QWS5	D V E F P A M A C L L L G C G I S T T G V G A A W K V A V E P G S	S V A V F F G L		
UniRef90_K0V0L6	R D D A P F E P S S L I L G C A V T T T G V G A A I N T A K V R P S	D T V L V I G C		
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UniRef90_B8H352	R K D M P F D R A A L V L G C G V M T G V G A V M H T S N V R P G D	T V A V I G C		
UniRef90_F6T873	D A G A P V E R S C L I L G C G F S T T G F G A A I N S A K V S P G S	T C V V F F G L		
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UniRef90_UPI00046DAC72	D S T P L D K V C L L L G C G V S T T G L G A T L N V V K P K K G S	S V A V F G L		
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UniRef90_UPI0003666A8B	D N D L P L D K A A L V L S C G I P T G W G S A V N S A N V R P G D A	V A V I Y G I		
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UniRef90_UPI000470436A	P D S I P F P Q A C V L L G C G T V T T G A G A A I N T A A V R P G D	T V A V I G I		
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UniRef90_U4Q1B9	D R D L P F V E A A L F G C A V L T T G V G A V V N T A E I K A G S	T A V V I G L		
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UniRef90_UPI000333BD6C	D P A A P L D K V C L L L G C G I S T T G Y G A A V N T A K V E P G S	T C A I F F G L		
UniRef90_C0D8B9	D K D L E L L L G P L L G C G I Q T G A G A V L N R L K P V A G S	S L V V F G C		
UniRef90_E3H426	T A D I S P E Q Y A L L L G C G V T A G L G A V L N T G A L K R G E S	S V A V F G C		
UniRef90_W4LEY3	D S D I P L D H A A L M G C G A L T T G L G A A L R T S G L E A G Q S	S V A V F G C		
UniRef90_H5WYV9	G Q D L P F E I A A L V L G C G V P T G W G S A V Y A A G V R A G Q T	V V I Y G A		
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UniRef90_S5SS19	N P E A D P A A V G L L L G C G I M A G L G A A V N T G D I Q I G E	S V A V F G L		

QUERY	G	G	V	G	L	S	V	I	M	G	C	K	A	A	G	A	S	R	I	I	G	V	D	I	N	K	D	K	F	A	K	A	K	E	V	G	A	T	E	C			
UniRef90_P25405	G	G	V	G	L	S	A	V	M	G	C	K	A	A	G	A	S	R	I	I	G	V	D	I	N	K	D	K	F	P	A	K	A	K	E	M	G	A	T	E	C		
UniRef90_P80467	G	T	V	G	L	A	V	I	M	G	C	K	A	A	G	A	S	R	I	I	G	V	D	I	N	K	D	K	F	A	K	A	K	E	F	G	A	T	E	C			
UniRef90_D8RRY0	G	T	V	G	L	A	V	I	C	G	A	K	K	A	G	A	S	R	I	I	G	V	D	M	N	P	K	D	K	F	A	K	A	K	K	F	G	A	T	E	F		
UniRef90_UPI0003F09E76	G	G	V	G	L	S	V	I	M	G	C	K	S	A	G	A	S	R	I	I	G	V	D	I	N	K	D	K	F	E	K	A	M	S	V	L	G	A	T	E	C		
UniRef90_Q6P7G1	G	G	I	G	L	A	V	I	M	G	C	K	I	A	G	A	T	R	I	I	G	V	D	V	N	P	S	D	K	F	E	D	K	A	K	E	L	G	A	T	E	C	
UniRef90_F6X013	G	A	V	G	L	A	V	V	M	G	C	K	A	A	G	A	T	R	I	I	G	V	D	I	N	N	E	S	K	F	E	I	A	K	Q	F	L	G	A	T	E	C	
UniRef90_G3VK23	G	G	V	G	L	S	I	I	I	G	C	K	A	A	G	A	S	R	I	I	G	V	D	I	N	P	L	K	F	E	K	A	K	A	V	L	G	A	T	E	C		
UniRef90_M3XHH8	G	G	I	G	L	A	A	V	M	G	C	K	A	A	G	A	S	R	I	I	A	V	D	I	N	E	S	K	F	E	K	A	K	I	L	L	G	A	T	E	C		
UniRef90_W6K5B3	G	G	I	G	L	N	V	I	Q	G	A	K	M	V	I	G	A	N	K	I	I	A	V	D	I	N	E	S	K	F	E	L	A	K	Q	F	L	G	M	T	D	F	
UniRef90_I3M7H4	G	G	V	G	L	S	A	V	I	G	C	K	I	A	G	A	S	R	I	I	A	V	D	I	N	S	E	K	F	A	K	A	K	A	L	L	G	A	T	D	C		
UniRef90_L5LC88	G	G	V	G	L	S	A	L	I	G	C	K	V	A	G	A	S	R	I	I	A	V	D	I	N	S	E	K	F	A	K	A	K	A	L	L	G	A	T	D	C		
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UniRef90_F6I0F6	G	A	V	G	L	A	A	M																																			
UniRef90_M4CHK7	G	A	V	G	L	A	A	A	E	G	A	R	I	S	G	A	S	R	I	I	G	V	D	L	N	P	N	R	F	E	E	A	K	K	F	G	I	T	E	F			
UniRef90_M0RQ97	G	A	V	G	L	A	A	A	E	G	A	R	I	S	G	A	S	R	I	I	G	V	D	L	N	P	N	R	F	E	E	A	K	K	F	G	I	T	E	F			
UniRef90_R7QSQ6	G	G	V	G	L	S	A	I	Q	G	A	K	M	A	G	A	K	A	R	I	I	G	V	D	T	N	P	S	K	F	A	M	A	K	E	T	L	G	A	T	V	C	
UniRef90_G1QBN6	G	A	V	G	L	S	V	V	M	G	C	K	A	A	G	A	A	R	I	I	G	V	D	I	N	S	K	D	K	F	E	A	K	A	K	Q	L	L	G	A	T	E	F
UniRef90_F1QP54	G	A	V	G	L	A	A	V	M	G	C	K	A	A	G	A	S	R	I	I	G	V	D	I	N	S	K	D	K	F	E	I	G	K	T	F	L	G	A	T	E	F	
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UniRef90_S9PUU0	C	C	V	G	L	A	A	M	Q	G	A	V	A	S	G	A	S	R	I	I	A	V	D	I	N	S	K	E	E	A	F	A	K	K	F	G	A	T	E	F			
UniRef90_G3AZ78	C	C	V	G	L	S	V	V	Q	G	A	A	Q	R	K	C	G	K	I	I	V	V																					
UniRef90_H2US44	G	A	V	G	L	A	A	V	M	G	C	Q	A	A	G	A	R	I	I	G	V	D	I	N	P	D	K	F	D	K	A	K	M	L	L	G	A	T	E	C			
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UniRef90_S2KJE0	G	A	I	G	L	A	V	I	Q	G	A	V	M	A	K	A	A	R	I	I	G	V	D	V	N	P	D	K	F	D	L	A	R	Q	F	L	G	A	T	D	F		
UniRef90_F6YVG3	G	G	V	G	L	S	V	A	M	G	C	K	A	S	G	A	A	R	I	I	G	V	D	I	N	E	G	K	F	A	R	A	K	A	V	G	V	T	D	C			
UniRef90_Q9BJ33	G	A	V	G	L	A	V	I	M	G	A	K	V	A	G	A	S	R	I	I	G	V	D	I	N	P	D	K	A	E	I	L	A	K	Q	F	G	M	T	E	F		
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UniRef90_K9TEA8	G	G	I	G	L	N	V	I	Q	G	A	R	L	V	I	G	A	N	Q	I	I	G	I	D	L	N	P	A	K	R	D	L	A	E	K	F	G	M	T	H	F		
UniRef90_G8JSM1	G	T	V	G	L	S	V	V	Q	G	A	Q	S	R	G	A	S	K	I	I	V	V																					
UniRef90_H2ZYT8	G	G	I	G	L	A	A	V	M	G	C	K	A	A	G	A	S	R	I	I	A	V	D	I	N	E	G	K	F	E	N	E	G	K	A	K	I	L	G	A	T	E	C
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UniRef90_K8EMY5	G	A	I	G	L	A	V	I	Q	G	A	V	Q	A	K	A	K	R	I	I	L	V	L	D	T	N	P	D	K	F	E	L	A	K	E	M	G	A	T	D	F		
UniRef90_B9KZ54	G	G	V	G	L	N	V	V	Q	G	A	L	V	G	A	C	P	V	I	I	A	A	D	V	V	P	P	Q	K	L	E	W	A	R	Q	L	L	G	A	T	H	T	
UniRef90_B1Y1Q1	G	G	I	G	L	N	V	I	Q	G	A	R	M	V	I	G	A	D	K	I	I	G	V	D	L	N	P	A	R	E	A	M	A	R	Q	F	L	G	M	T	H	F	
UniRef90_D3B4F3	G	A	V	G	L	A	A	V	M	G	A	A	E	A	K	A	K	R	I	I	A	I	D	I	N	K	E	K	S	E	K	A	K	L	L	L	G	A	T	E	C		
UniRef90_Q5NZZ5	G	G	I	G	L	A	A	I	L	G	A	K	M	A	K	A	S	R	I	I	A	I	D	I	N	P	A	K	S	D	L	A	R	Q	L	L	G	A	T	D	I		
UniRef90_UPI00038BDAA6	G	G	V	G	L	S	V	I	I	G	C	K	T	A	G	A	A	R	I	I	A	V	D	T	N	K	D	K	F	A	K	A	K	T	V	L	L	G	A	T	E	C	
UniRef90_UPI000287AD07	G	G	V	G	L	G	A	L	Q	G	A	V	L	A	K	A	E	R	I	I	A	V	D	I	N	S	K	E	F	E	A	R	Q	Q	L	L	G	A	T	D	F		
UniRef90_Q41241	G	S	I	G	L	A	V	A	E	G	A	R	L	C	A	T	R	I	I	G	V	D	I	N	S	N	K	F	E	I	G	K	Q	L	G	I	T	E	F				
UniRef90_G7E410	C	C	V	G	L	A	V	M	Q	G	C	Q	D	R	G	A	A	R	I	I	A	V	D	T	N	S	G	K	K	E	W	A	T	K	F	G	A	T	E	F			
UniRef90_M5W9N2	G	T	V	G	L	S	V	A	Q	G	A	L	R	G	A	S	Q	I	I	G	V	D	T	N	P	E	K	G	E	N	A	K	A	F	G	I	T	A	F				
UniRef90_Q0IA54	G	G	I	G	L	A	V	I	I	G	A	V	Q	A	R	A	E	R	I	I	G	V	D	I	N	P	A	K	F	A	I	A	K	Q	L	L	G	A	T	E	C		
UniRef90_UPI0003F16FAC	G	G	V	G	L	C	V	I	M	G	C	K	A	A	G	A	A	R	I	I	G	V	D	I	N	K	N	K	F	A	K	A	K	E	L	L	G	A	T	E	C		
UniRef90_F7ZCB3	G	G	I	G	L	N	V	I	Q	G	L	R	L	A	G	A	D	Q	I	I	G	V	D	L	N	D	D	K	E	E	M	A	R	H	F	G	L	T	D	F			
UniRef90_D1C8X5	G	G	V	G	I	N	A	V	Q	G	A	A	V	K	G	A	A	K	V	I	A	V	D	L	V	D	F	K	L	E	M	A	E	M	G	A	T	H	T				
UniRef90_A0A017T6C6	G	G	I	G	L	N	V	V	Q	G	A	R	M	A	G	A	D	K	I	I	V	G	V	D	L	N	P	K	R	K	A	L	A	E	K	F	G	M	T	H	F		
UniRef90_E0CQT3	G	A	I	G	L	A	V	A	E	G	A	R	L	C	A	S	R	I	I	G	V	D	T	N	L	E	K	F	D	V	A	K	K	F	G	V	T	E	F				
UniRef90_D3FEY1	G	M	V	G	L	G	A	V	I	M	G	A	R	M	A	G	A	E	R	I	I	C	V																				
UniRef90_Q17335	G	A	V	G	L	A	V	I	M	G	A	K	A	A	G	A	K	K	I	I	V	G	I	D	L	I	E	S	K	F	E	S	A	K	F	F	G	A	T	E	C		
UniRef90_P45382	G	G	I	G	L	N	V	L	Q	G	L	R	L	A	G	A	D	M	I	I	G	V	D	L	N	D	D	K	K	P	M	A	E	H	F	G	M	T	H	F			
UniRef90_X8J6S0	C	C	I	G	L	G	C	I	N	A	A	R	I	K	A	G	R	I	I	A	V	D	T	N	P	K	K	E	A	W	A	K	F	G	M	T	E	F					
UniRef90_G7KS94	G	A	V	G	L	A	V	A	E	G	A	R	A	R	G	A	S	K	I	I	G	V	D																				

QUERY	V	N	P	Q	D	Y	K	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_P25405	V	N	S	P	L	D	F	K	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_P80467	I	V	S	P	L	D	F	K	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_D8RRY0	I	V	S	P	K	D	H	K	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_UPI0003F09E76	I	V	S	P	K	D	Y	T	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_Q6P7G1	I	V	S	P	K	D	Y	T	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_F6X0I3	F	N	P	K	E	S	K	V	S	A	D	E	A	I	V	A	L	E	M	T	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_G3VK23	I	V	S	P	K	E	S	K	V	S	A	D	E	A	I	V	A	L	E	M	T	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S
UniRef90_M3XHH8	I	V	S	P	K	E	S	K	V	S	A	D	E	A	I	V	A	L	E	M	T	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S
UniRef90_W6K5B3	I	V	S	P	K	K	V	D	N	L	V	E	A	I	V	A	L	E	M	T	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_I3M7H4	I	V	S	P	K	K	V	D	N	L	V	E	A	I	V	A	L	E	M	T	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_L5LC88	L	N	P	R	D	L	D	K	P	V	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_Q4SYL2	V	N	P	K	D	H	N	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_F6I0F6	V	N	P	K	D	H	N	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_M4CHK7	V	N	P	R	E	H	D	R	K	P	V	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S	
UniRef90_MORQ97	V	N	P	K	D	H	S	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_R7QSQ6	V	N	P	K	D	H	S	K	P	I	Q	E	V	L	T	F	E	M	S	N	G	G	V	D	F	S	F	F	E	V	I	G	R	L	D	T	M	V	T	A	L	S		
UniRef90_G1QBN6	I	V	S	P	E	D	F	K	K	P	I	H	E	V	L	T																												

290 300 310 320

QUERY C C Q E A Y G V S V I V G V P P D S Q N L S M N P M L L L S G R T W K G A I F G
UniRef90_P25405 S C H M D Y G T S I I V G L P P S A S N E I T F S P G L I F T G R T W K G S V F G
UniRef90_P80467 A C H K G W G V S V I V G V A A A G Q E I A T R P F Q L V T G R T W K G T A F G
UniRef90_D8RRY0 A C H R G W G T S V I I G V A A G A G Q E I S T R P F Q L V T G R V W K G T A F G
UniRef90_UPI0003F09E76 S C H L N Y G T S V V V G A P P S A K M L T Y D P M L L F T G R T W K G S V F G
UniRef90_Q6P7G1 S S H F A Y G T T V I V G V S A K E A T I T F D P M L L F T G R T L K G S V F G
UniRef90_F6X013 A A H K G W G V S V I I G V A A G R G Q E I S T R P F Y L V T G R T W K G T A F G
UniRef90_G3VK23 S C H N N Y G T S V L V G N P P S S T M L T Y D P K L L F T G R T W K G S I F G
UniRef90_M3XHH8 A S H S G W G V A V I I G V T A P G Q T I S T E P F C Y I F G R T M K G T L F
UniRef90_W6K5B3 C C H K G W G E S L I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_I3M7H4 S S D I F K F I H L P P Q P K G P Q K T S S C Q Q T S S C R L M I G S Q W S T
UniRef90_L5LC88 C T T I G W G S C T L I G V A I G D K G L T I S P V E I I M G R T L N G T S F G
UniRef90_Q4SYL2 A C H K G W G T S V I I G V A A A G Q E I S T R P F Q L V T G R T W K G T A F G
UniRef90_F6I0F6 C V H E G W G V A V L V G V P R Q D D A F R T K P M N F L N E R T L K G S F F G
UniRef90_M4CHK7 C V H D G W G V A V L V G V P R K D D M F M T K P M N L L N E R T L R G T F F G
UniRef90_M0RQ97 S C H K G W G E S C L I I G V A A G S G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_R7QSQ6 L A H
UniRef90_G1QBN6 A C S P A G G V C V I V G W I E V E E L S L A P L D I L L G R T L K G T Y F G
UniRef90_F1QP54 S S H L G H G T C V L V G A P P A R S Q L S F D P A F L L T G R K L V G C L I G
UniRef90_UPI0004421D4B F C H K G W G K L C V I I G V A A A G K T L A F R P F L V V T G R Q L L G S A F G
UniRef90_S9PUU0 A C H K G W G T S I I I G V A A A G R E I S T R P F Q L V T G R V W K G A F G
UniRef90_G3AZ78 S T R D A W G V C V I A G W T E T E E M N V L V E K L L M G R T L K G T Y F G
UniRef90_H2U544 A C H R G W G T S I I I G V A A E A G K E I S T R P F Q L V T G R N W R G S A F G
UniRef90_A5V5H9 C C H K G W G E S V I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_UPI000363C8EF C C H K G W G E S V V I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_UPI0003646AD3 S C H K G W G E S V V I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_UPI00032B12C5 S C N L S Y G V C V I V G A A P S N S K L S F D P M L L S G R I L K G G L L G
UniRef90_S2KJE0 C C H K G W G E S V I I G V A A G A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_F6YVG3 S C H L S Y G V C V I V G V A P F K A R L A F N P M L F L S G R T L K G G S L G
UniRef90_Q9BJ33 S C H K G W G T S V I I G V A A A G Q E I S T R P F Q L V T G R V W K G T A F G
UniRef90_P44557 S A H R G W G Q S I I I G V A A G A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_K9TEA8 C C H K G W G E S V I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_G8JSM1 A C H K G W G Q S I I I G V A A A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_H2ZYT8 A A V A W
UniRef90_UPI000364247C C T H M G W G V S T V I I G V A A G A G K E I C T R P F N L V V G R T W K G T A F G
UniRef90_K8EMY5 C C H K G W G Q S I I I G V A A G A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_B9KZ54 A T R K G G T T V I V G L T P M G T T V P L D P L D L R T E K T I K A T L Y G
UniRef90_B1Y1Q1 C T H K G W G R S L I I G V A E A G A E I S T R P F Q L V T G R K W E G S A F G
UniRef90_D3B4F3 C C H K G W G V S T I I G V A A G A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_Q5NZZ5 C C H K G W G E S T I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_UPI00038BDAA6 S C N K D H G V C V I V G A I A S R A Q L N I S S Q L F L S G R S L K G S V L G
UniRef90_UPI000287AD07 C C H K G W G E S I I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_Q41241 C C R K G W G K T V V G V D K P D A H L N L N S F E V L Q S Q K T L T G A L F G
UniRef90_G7E410 A C H K G W G V S T I I G V A A A G K E I S T R P F Q L V T G R R W Q S A F G
UniRef90_M5W9N2 A C C D G W G L T V T L G V P K V K P E V T A H Y G I F L T G R T L K G S L F G
UniRef90_Q0IA54 S C H K G W G E S T I I G V A A G A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_UPI0003F16FAC C C H E A Y G V S V I I G V P P D A Q D L G I N P M L L L T G R T W K G A I F G
UniRef90_F7ZCB3 A A H K G W G V S I I I G V A A P A G A E I S T R P F Q L V T G R V W R G T A F G
UniRef90_D1C8X5 A T R K A G R T V V V G L A P G V D R M D V P L D L V L M Q K E I V G S L Y G
UniRef90_A0A017T6C6 C C H R G W G T S V I I G V A A G A G Q E I S T R P F Q L V T G R V W K G S A F G
UniRef90_E0CQT3 S C R K G W G K I M V G V D K P G A M L N F S S V E M L H C G K S V M G S I Y G
UniRef90_D3FEY1 S A R M G W G L C T V A G V A G K E H L E V I P R W L I Q G R R I A G S S F G
UniRef90_Q17335 A A H K G W G V S C I I G V A A G A G Q E I A T R P F Q L V T G R T W K G T A F G
UniRef90_P45382 C T H R G W G Q S L I I G V A A P A G A E I S T R P F Q L V T G R V W K G T A F G
UniRef90_X8J6S0 A C H K G W G V S T I I G V A A G A G Q E I S T R P F Q L V T G R T W R G S A F G
UniRef90_G7KS94 S V H E G W G L T V L L G I H G S P K L L P I H P M E L F D G R R I E G S V F G
UniRef90_UPI000440B222 S C I K G W G V S V I A G W T D L Y D F S A R P I Q L I A G R T W K G T S Y L
UniRef90_J713K4 A C H K G W G E S V I I G V A A A G Q E I S T R P F Q L V T G R V W R G S A F G
UniRef90_W9RN28 C C R K G W G K T V V G V D K P G S Q V T L S A T D V L H S G K T L Q S S L F G
UniRef90_V4V5D5 S S R E G W G K T V I L G V E M H G S P I S L N S I E I L K G R S V C G T F F G
UniRef90_X2D7U7 C V H D G W G V A V L V G V P S K D D A F K T H P M N L L N E R T L K G T F F G
UniRef90_B9IN75 A T K P G K G E T F V V G A G T D L T V S I N F L P L L C G G T L K G S L F G
UniRef90_G5E0W0 S T H F G S G T S V I G L A P S T A T M T F D P M L L L T G R T L K G A I F G
UniRef90_I1QWS5 S T R N G W G T I L L G V S S N K A P I G I P S H E I L R G S V I G S L F G
UniRef90_K0V0L6 A L A R G G T A V V A G Q V A D G V K V T I D P F V M S D Q E L S L I G S N Y G
UniRef90_A8QF76 A A H K G W G V S C I I G V A A S G K E I S T R P F Q L V T G R T W K G S A F G
UniRef90_L2FIE1 A C H K G W G Q S I V I I G V A A A G Q E I S T R P F Q L V T G R V W R G C A F G
UniRef90_U1HJ37 A V R P G G E V I W L G K I D V T Q D V S F R W G A L M G E K R F R R S S Y G
UniRef90_L7VYV4 L T A K D G T L V V T G L A P M V E T D A Q M N L F M F M M N K E I K G T V F G
UniRef90_B8H352 M L R R G G T A N V I G M I P V G T K I E L H G V D F L G E R R I Q G S Y M G
UniRef90_F6T873 T S N P S Y G I S V L V G L P P P Q Q E L A F H P M L L L S G R T W K G C L F
UniRef90_UPI000360E6D1 M L G L G G A A V I V G L P P T G A K A S F E P L V L A E A D Q R I L G S N Y G
UniRef90_UPI00046DAC72 C V H D G W G V A V L V G V P S P D A I F M T K P I N V L L N E R T L K G T F F G
UniRef90_UPI00034DA2CB S L A T L G T T V I I G A P A L G T E V S L D V N T I L F E K K V T G L L L G
UniRef90_UPI0003666A8B T S K G G T I V I T S M G Q Y E D D T I Q L P G V Q L A L W G K R I Q G S L Y G
UniRef90_D7PPK5 C V H D G W G V A V L V G V P H K D A E F K T H P M N F L N E R T L K G T F F G
UniRef90_A0A059AK92 C V H D G W G I A V L V G V P S K D D V F K T H P M N L L N E R T L K G T F F G
UniRef90_UPI000470436A M T R V I G G A Y L I G H K P N S R I E I S V M E E F I A S Q R R I Q G S Y M M E
UniRef90_UPI0002626CD5 L V R P T G T A C L V G I A P D G A R L S I P A S D F F A E K R R I L G S Y M G
UniRef90_V7AD63 A T K M G T G K T V V V G I P A E P T V S L G M L S L L L G R T M K G S A F G
UniRef90_U4Q1B9 M T K R G G T T V T A G L P P P S A T L P V N I V Q L V A E E R T L K G S Y I G
UniRef90_A1TFU1 A N I R K G G A V V M T T M A D N Q P T L G M M M F T L F Q K R L L G S L Y G
UniRef90_UPI000333BD6C S V K F L G T A V V L G V T G D L T I N V Q A E L M G E G K S L I G I V E G
UniRef90_C0D8B9 A R D L A G R V V L V G V P E P G T T W D I P L D E V F G R G G S I K S A W Y G
UniRef90_E3H426 S L A I R G T A T I V G V L P T G S M I E F P W E A L R P E C R V Q T S R M G
UniRef90_W4LEY3 I D I V G K S G Q V T I T A V G N G S V D T H P G P L I G Y Q R R V Q G A I F G
UniRef90_H5WYV9 A R D L A G T V V L V G V P T D M R L D M P L V D F F S H G G A L K S S W Y G
UniRef90_A4KJ27 S I T V G W G V C T X I G V N V I G D N G L S V S A V E L I M G R T L N G T S F G
UniRef90_UPI0002C37805 A V K P L G T V A I V G F T G D I T L N V Q N D L M A E G K S L V G T I E G
UniRef90_C4X945 F D A I G K G G T V V L N K L T E Q N V Q L P G A I M T L F K K T V K G T L F G
UniRef90_UPI00036D72E8 S R D H A G R M V M V G V P N Q T D Q I E I P T I D F Y S R G S L K P A W Y G
UniRef90_S5SS19

QUERY	330	340	350	360
UniRef90_P25405	G F K S K D S V	P K L V A D F M A K K F S L	D P L I T H V L P F E K I	N E G F D
UniRef90_P80467	G W K S K D S V	P R L V S D F M Q K K F S L	D P L I T H T M P F F D K I	N E G F E
UniRef90_D8RRY0	G Y K S R S D V	P K L V D E Y L Q K E K V	D E Y I T H N F K L F D S I	N E A F E
UniRef90_UPI0003F09E76	G W K S R D D V	P K L V N D F L K K K F D L	D Q L I T H R L P F E K I	N E G F E
UniRef90_Q6P7G1	G W K S K S S V	P Q L V L D S M A K K F D L	E K L V T H R L P L D K I	N E G F D
UniRef90_F6X0I3	G Y K S V E G V	P K L V Q D Y L N K K L K V	D E F V T H T M P L C D I	N K A F D
UniRef90_G3VK23	G W K T R N D L	P K L V S D F M A K K F N L	D P L I T H V L P F N K I	K D G F D
UniRef90_M3XHH8	G G Y E L D T V	P K L I T D Y M K K I K L	E E F I T H T R P L D K I	N E A F E
UniRef90_W6K5B3	G A R G R T D V	P K I V D W Y M D G K I N I	D D L I T H T M P L D D I	N D A F E
UniRef90_I3M7H4	W K S V D S V	P K L V N D Y K N K K F D L	D A L V T H T L P F D K I	N E A F D
UniRef90_L5LC88	G F K G R D S I	P K L V T D Y K N K K F N L	D A L V T H T L P F D R I	N E A F E
UniRef90_Q4SYL2	G Y K S V E S V	P K L V E D Y M N K K L K V	D E F V T H T L P F F E K I	N E G F E
UniRef90_F6I0F6				
UniRef90_M4CHK7	N Y K P K T D I	P G V V E K Y M N K Q L E L	D K F I T H T V P F S K I	N E A F D
UniRef90_M0RQ97	N Y K P R T D I	P S V V D M Y M N K K E L E V	I T H R V P F S D I	N E A F D
UniRef90_R7QSQ6	G V K S R S Q L	P G M L D E Y M G D L K I	D E M I S K T Y P L K D I	N Q A F E
UniRef90_G1QBN6				
UniRef90_F1QP54	G W K S V E A V	P R L V Q D Y M S R K I L L	D E F V T H R L A L D Q I	N Q A F D
UniRef90_UPI0004421D4B	G W K L K D A L	P K L V S D Y M K N K F N T	D A L I S H V L P F E K I	S E G F E
UniRef90_S9PUU0	G V K G R S Q L	P G I V D D Y L Q G K L R V	D D F I T H S E N L D K I	N N A F D
UniRef90_G3AZ78	G V K G R S Q L	P G I V D D Y L Q G K L R V	D D F I T H R H S L D K I	N N A F E
UniRef90_H2US44	G L K S V R D V	P K L V D A Y M N K E L K L	D E F I T H R L P L D Q I	N E A F D
UniRef90_A5V5H9	G A K G R T D V	P K L V D M Y M T G K I E I	D P M I T H V M G L E E I	N T A F D
UniRef90_UPI000363C8EF	G V K G R S E L	P E Y V E R Y L K G K I K I	D E M V T N T L P L E E I	N E A F D
UniRef90_UPI0003646AD3	G V K G R S E L	P E I V E R Y M A G E F Q L	D D F I T H T M G L E E I	N E S F D
UniRef90_UPI00032B12C5	V Y K T R D C I	P Q L V T D Y L Q N K I N T	D P L I T H Q L P F E K I	N D A F E
UniRef90_S2KJEO	G V K G R S E L	P G Y V E R Y M N G E L K I	D E F I T H D M P F E Q I	N E A F E
UniRef90_F6YVG3	E W K T Q D C I	P K L V N D Y L H G K I N T	D P L I T H I L P F D K I	N K A M G
UniRef90_Q9BJ33	G W K S V E S V	P R L V G E Y Q A G K I K V	D E F I T H T F P L D K I	N Q S F Q
UniRef90_P44557	G V K G R S E L	P Q M V E D S M K G D I Q L	E F F V T H T M P L D K I	N Q S F E
UniRef90_K9TEA8	G A R G R R D V	P K I V D W Y M D G K I D I	D S L V S H V I P V N R I	N E A F D
UniRef90_G8JSM1	G I K G R S E M	G N L I S D Y F A G K L K V	D E F V T H T R P F S E I	N D G L T
UniRef90_H2ZYT8				
UniRef90_UPI000364247C	G V K G R S Q L	P G Y V D N Y M A G K I E L	D S L V T H T M P L E D I	N R A F D
UniRef90_K8EMY5	G V K G R S Q L	P A M V E Q A M R G K I Q L	D D F I T H T R P L F D Q I	N E A F D
UniRef90_B9KZ54	S A N L P R D I	P R L V E L Y R L G R L R L	D D F I T S R R L R L E E I	N D G F E
UniRef90_B1Y1Q1	G A R G R T D V	P K I V D W Y M D G K I N I	D D L I T H K L K L E E I	N R G F E
UniRef90_D3B4F3	G V K G R S Q L	P G I V D K Y M D G K I K V	D E F V T F N L P L S E I	N E A F H
UniRef90_Q5NZZ5	G V R G R T E L	P G Y V E K A Q R G E I P	D V F I T H H L P L E D I	N R A F E
UniRef90_UPI00038BDAA6	G W K T K D E I	P K L V S D Y M A K K F S L	D P L I T H T L A L N K V	N E A V Q
UniRef90_UPI000287AD07	G V K G R S Q L	P G Y V E M Y M N G E V K V	D E F V T S Y T M P L D E I	N R A F D
UniRef90_Q41241	G L K P K S D V	P L L V K R Y L D K E L Q L	N K F V T H E V N F E D I	N K A F D
UniRef90_G7E410	G V K G R S E M	G L I K N W L S G A L K V	D D Y V T H T V S L D D I	N K G F D
UniRef90_M5W9N2	G W K P K S H L	P S L V D M Y T K K E I Q V	D E Y I T H N L P F E D V	N K A F N
UniRef90_Q0IA54	G V R G R S Q L	P G Y V E R Y Q A G E I P	D S F I T H T M E L N D I	N R A F E
UniRef90_UPI0003F16FAC	G S K S T D S V	P K L V T D F M T K R F Q L	D S I T H V L P F E K I	N E G F D
UniRef90_F7ZCB3	G A K G R T D V	P K I V D W Y M D G K I E I	D P M I T H K L S L D E I	N H G F D
UniRef90_D1C8X5	N S N P R A D L	P R Y L E L Y R T G T L K V	D E L I T K T Y T L D Q I	N E G Y Q
UniRef90_A0A017T6C6	G A R G R T D V	P R I V D W Y M E K K I N I	D D L I T H T M P L D Q I	N H A L D
UniRef90_E0CQT3	G L K P K S H I	P V L L Q R L V D K E L N V	D N F I T H E M K F E D I	N K A F D
UniRef90_D3FEY1	G L K G R D D V	P A L I D R W M A G E L D V	D D F I T H R S L D D Q V	N E G F D
UniRef90_Q17335	G W K S V E S V	P R L V D D Y M N K K L I	D E F I T H R W N I D D I	N T A F D
UniRef90_P45382	G A R G R T D V	P Q I V D W Y M D G K I E I	D P M I T H T L S L D D I	N K G F D
UniRef90_X8J6S0	G V K G R T E L	P G I V E D Y L S G K M L V	D E Y V T H H R D L K E I	Q K G F E
UniRef90_G7KS94	G F K G K S Q L	P N L A T E C M K G A T K L	D N F I T H E L P F D E I	N Q A F N
UniRef90_UPI000440B222	I W R Y D D V	P K L V L D H M A G R I N L	D V F V T H N M N L D Q I	N E A I K
UniRef90_J713K4	G W K S R E S V	P K L V E S Y M A G Q L E V	D A F V T H N V A L E K I	N E A F D
UniRef90_W9RN28	G L K P K S D I	P V L L K R Y T D K E L E L	D K F V T H E I G F D D I	N K A F D
UniRef90_V4V5D5	G L K P K S D I	A T L A Q K Y L D K E L E L	D E F V T H E V S F H D I	N K A F D
UniRef90_X2D7U7	N Y K P K T D I	P G V V E Q Y M N K K L E V	D E K F T H T V P F S E I	N K A F D
UniRef90_B9IN75	G L K K K S H L	P L L L D K C K N K E F N L	D E L L T H Q V M L D D I	N K A F Q
UniRef90_G5E0W0	G W K S K D Y V	P K L V A D F M A K K F E L	D G L I T H	
UniRef90_I1QWS5	G I K P K N D I	P M L V A Q K Y L D K E L E L	E E F I T H E M G F E E I	N R A F E
UniRef90_K0V0L6	S S K A D V D F	P M L V E H Y M N N R I D L	D S L I T R V I D L E D I	N E G F D
UniRef90_A8QF76	G W K S V D D I	P K L V D E Y Q K G K I K L	D E F I T G Y Y D L T E M I	N T A F E
UniRef90_L2FIE1	G V K G R T Q L	P G L V Q D Y I K G D L K V	D E F I T H R K T L G E M	N E A F D
UniRef90_U1HJ37	G A R P R R D F	P L L A Q A Y L D G R L K L	D E L I T G R C S L D G I	N D G F E
UniRef90_L7VYV4	S T N P R A Q I	P N L L S M Y R E G E L K L	D E L I T R R Y P L E E I	N Q G Y V
UniRef90_B8H352	S N R F P V D M	P R L V D F Y M S G K L K L	D E L I S R R R K L E D V	N S A F D
UniRef90_F6T873				
UniRef90_UPI000360E6D1	S V R P S L D I	P A L V D R Y M D G Q L L	D P L I S G R R P L A E A	A E A F D
UniRef90_UPI00046DAC72	N Y K P R T D I	P S V V D M Y M N K V E	K F I T H R V P F S E I	N K A F D
UniRef90_UPI00034DA2CB	S S I P Q I F I	P Q L I E L Y K Q G K F P	F D K L V T K Y Y D L E D I	N Q A A E
UniRef90_UPI0003666A8B	G C N P A Y D I	P N L L S L Y K T G H V K	L D E L I T Q T Y S L E Q V	N Q G Y E
UniRef90_D7PPK5	N Y K P R T D I	P N V V E L Y M K K E L E V	E K F I T H S V P F S E I	N T A F D
UniRef90_A0A059AK92	N Y K P R T D I	P S V V E K Y M N K E L D V	E K F I T H S V P F S E I	N K A F D
UniRef90_UPI000470436A	S S N K H D I	P M Y A E L Y L Q G K L N L	D D L I S Q E I N S E I	N E A Y E
UniRef90_UPI0002626CD5	S G Q A R Q D I	G Q L A R L Y Q Q G R L L	D E M V T R V I P A D I	N E G F T
UniRef90_V7AD63	G L K V R S D I	A I V A N K C L K K E F P	L D E L S T H V V P L E D I	S K G F E
UniRef90_U4Q1B9	T C V P V R D I	P R F I A L Y R D G R L L	P V N R L L S A R L K L E D I	N E G F D
UniRef90_A1TFU1	E A N P R A D I	P R L L S L Y R E G K L L L	D E T V T H E Y K L A E V	N E G Y E
UniRef90_UPI000333BD6C				
UniRef90_C0D8B9	D S N P K L F I	P Q L I S Y Y K E G R F P	F D R L I H V Y D F N D I	N E A F H
UniRef90_E3H426	D T L P S R D F	P E F L N Q Y L L G R L D L	D G F I S E R I K L E D V	N D A F E
UniRef90_W4LEY3	S N R F R V D I	P R Y L E L Y R Q G R L K L	D E M V T R R R T L Q D I	N D A F R
UniRef90_H5WYV9	G C N P L Y D V	P R L L G L Y R S G D L K L	D E L I T R R Y R L E E V	N Q G Y E
UniRef90_A4KJ27	D C L P E S D F	P T L I D L Y L Q G R L P L	Q R F V S E R I G L E D V	E A F H
UniRef90_UPI0002C37805	D W K G I D S V	P K L A A D Y K N K K F D L	D A L A S H T L A F D K V	N E A F D
UniRef90_C4X945	D A V P A L F I	P L L V Q L Y K Q G K F P I	D K L I A R Y P L A D I	N Q A F A
UniRef90_UPI00036D72E8	D C N P T T D I	P K I L Q G M Y K S G D I K L	D E L I T K T Y T L E Q V	N E G Y D
UniRef90_S5SS19	D C L P E R D F	P A Y T Q L F E N G Q F P L	D K F V S E R I G L E D V	E A F E

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QUERY	L	L	R	S	G	E	S	I	R	T	I	L	T	F
UniRef90_P25405	L	L	R	A	G	K	S	I	R	S	V	L	L	F
UniRef90_P80467	L	M	H	A	G	K	S	I	R	S	V	L	K	F
UniRef90_D8RRY0	L	L	E	A	G	K	C	L	R	A	V	I	H	M
UniRef90_UPI0003F09E76	L	L	Y	S	G	Q	S	I	R	T	V	L	T	F
UniRef90_Q6P7G1	L	L	H	S	G	K	S	I	R	T	I	L		
UniRef90_F6X0I3	L	M	H	E	G	K	S	L	R	S	V	I	N	F
UniRef90_G3VK23	L	L	N	K	G	E	S	I	R	T	V	L	T	F
UniRef90_M3XHH8	L	M	Q	T	G	K	S	I	R	T	V	V	L	Y
UniRef90_W6K5B3	L	M	H	R	G	E	S	I	R	S	V	V	L	Y
UniRef90_I3M7H4	L	M	H	Q	G	K	S							
UniRef90_L5LC88	L	M	H	Q	G	K								
UniRef90_Q4SYL2	L	M	H	A	G	K								
UniRef90_F6I0F6														
UniRef90_M4CHK7	Y	M	S	K	G	E	C	I	R	C	I	I	D	M
UniRef90_M0RQ97	Y	M	L	K	G	E	S	L	R	C	L	I	S	M
UniRef90_R7QSQ6	D	M	H	S	G	K	N	L	R	G	V	V	L	F
UniRef90_G1QBN6														
UniRef90_F1QP54	L	I	V	S	G	K	S	I	R	T	V	I	E	M
UniRef90_UPI0004421D4B	L	L	L	S	G	K	S	I	R	C	I	L	L	F
UniRef90_S9PUU0	H	M	H	E	G	K	C	I	R	C	V	V	D	M
UniRef90_G3AZ78	D	M	H	N	G	D	C	I	R	A	V	L	E	L
UniRef90_H2US44	M	L	K	R	G	E	S	I	R	A	V	I	S	L
UniRef90_A5V5H9	L	M	H	Q	G	K	S	I	R	S	V	V	V	F
UniRef90_UPI000363C8EF	L	M	H	Q	G	K	A	I	R	S	V	I	V	Y
UniRef90_UPI0003646AD3	L	M	H	K	G	E	S	I	R	S	V	I	H	F
UniRef90_UPI00032B12C5	L	L	Q	H										
UniRef90_S2KJE0	L	L	H	A	G	K	S	I	R	S	V	L	H	Y
UniRef90_F6YVG3	L	L	R	G	G	K	S	V	R	C	V	L	L	F
UniRef90_Q9BJ33	L	M	H	D	G	E	S	I	R	S	V	I	H	F
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UniRef90_K9TEA8	L	M	H	A	G	E	G	I	R	T	V	V	T	F
UniRef90_G8JSM1	D	L	H	H	G	D	C	L	R	T	V	L	N	F
UniRef90_H2ZYT8														
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UniRef90_K8EMY5	L	L	H	A	G	K	S	I	R	T	V	L	S	Y
UniRef90_B9KZ54	A	M	L	A	G	S	V	A	R	S	I	V	V	F
UniRef90_B1Y1Q1	L	M	K	S	G	E	S	I	R	A	V	V	E	F
UniRef90_D3B4F3	L	M	H	E	G	K	S	V	R	S	V	L		
UniRef90_Q5NZZ5	L	M	H	E	G	Q	S	I	R	S	V	I	R	F
UniRef90_UPI00038BDAA6	L	M	K	N	G	Q	C	I	R	S	I	L		
UniRef90_UPI000287AD07	L	M	Q	E	G	K	S	I	R	S	V	I	L	F
UniRef90_Q41241	L	L	I	Q	G	K	S	L	R	C	V	I		
UniRef90_G7E4I0	Y	M	K	S	G	E	C	I	R	C	V			
UniRef90_M5W9N2	L	M	R	E	G	K	C	L	R	C	V	I	H	M
UniRef90_Q0IA54	L	M	H	A	G	E	S	I	R	T	V	V	H	F
UniRef90_UPI0003F16FAC	L	L	R	S	G	K	S	I	R	T	V	L	T	F
UniRef90_F7ZCB3	L	M	H	Q	G	K	S	I	R	A	V	V	E	F
UniRef90_D1C8X5	D	M	L	E	G	R	N	I	R	G	V	I	R	Y
UniRef90_A0A017T6C6	L	M	H	E	G	E	S	I	R	S	V	V	V	F
UniRef90_E0CQT3	L	L	A	K	G	K	S	I	R	C	V	M		
UniRef90_D3FEY1	L	M	H	A	Q	D	G	I	R	S	V	I	A	F
UniRef90_Q17335	V	L	H	K	G	E	S	L	R	S	V	L	A	F
UniRef90_P45382	L	M	H	A	G	E	S	I	R	S	V	V	L	Y
UniRef90_X8J6S0	D	M	H	Q	G	E	C	I	R	C	V	V	D	M
UniRef90_G7KS94	L	L	I	A	G	K	S	L	R	C	V	L	T	L
UniRef90_UPI000440B222	M	M	M	A	G	G	C	I	R	P	V	I		
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UniRef90_W9RN28	L	L	L	E	G	C	C	L	R	C	V	I		
UniRef90_V4V5D5	L	L	L	E	G	K	S	L	R	C	V	I		
UniRef90_X2D7U7	Y	M	L	K	G	E	G	I	R					
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UniRef90_K0V0L6	E	M	K	R	G	V	G	I	R	S	V	I	K	Y
UniRef90_A8QF76	M	L	R	S	G	D								
UniRef90_L2FIE1	T	M	K	Q	G	D	C	I	R	A	V	V	D	M
UniRef90_U1HJ37	A	L	R	R	G	R	S	I	R	T	V	V	E	F
UniRef90_L7VYV4	D	M	R	E	G	K	N	L	R	G	V	I	D	F
UniRef90_B8H352	E	L	K	R	G	E	L	A	R	S	V	I	V	F
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UniRef90_UPI00046DAC72	Y	M	V	K	E	E	G	L	R	C	I	I	S	M
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UniRef90_UPI000366A8B	D	L	D	A	H	K	N	I	R	G	V	I	V	
UniRef90_D7PPK5	X	X	X	X	X	X	I	R	C	I	I	R	M	
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UniRef90_UPI0002626CD5	A	M	K	S	G	D	V	T	R	I	V	V	D	L
UniRef90_V7AD63	I	L	K	D	P	N	C	V	K	V	V	I		
UniRef90_U4Q1B9	R	L	H	D	G	S	A	V	R	Q	V	I	E	F
UniRef90_A1TFU1	D	M	R	A	G	R	N	I	R	G	V	I		
UniRef90_UPI000333BD6C														
UniRef90_C0D8B9	A	S	H	S	G	K	V	I	K	A	L	L	K	M
UniRef90_E3H426	T	M	K	T	G	R	V	L	R	S	V	V	E	L
UniRef90_W4LEY3	A	M	K	A	G	E	V	A	R	S	V	L	L	F
UniRef90_H5WYV9	D	M	L	S	G	K	N	I	R	G	V	I		
UniRef90_A4KJ27	K	M	H	G	G	K	V	L	R	S	V	V		
UniRef90_UPI0002C37805	V	M	Y	Q	R	K								
UniRef90_C4X945	D	S	A	S	G	K	V	I	K	P	V	V	V	M
UniRef90_UPI00036D72E8	A	L	L	N	G	D	N	V	R	G	V	L		
UniRef90_S5SS19	T	M	K	R	G	D	V	L	R	S	V	V	I	F

	1		10		20		30		40																																
UniRef90_A4FEF0			Q	V	R	G	V	V	A	R	E	V	G	A	P	V	E	V	L	D	V	L	V	P	D	G	P	G	E	A	L	V	A	V							
UniRef90_O93331			V	I	N	C	K	A	A	I	A	W	G	P	K	Q	P	L	T	I	E	D	I	E	V	A	P	P	K	A	H	E	V	R	I	K	I				
UniRef90_U5L715				M	K	I	K	A	A	V	T	H	G	Q	G	E	N	F	K	I	E	E	E	V	E	L	A	E	P	K	A	N	E	V	R	I	K	I			
UniRef90_Q2KNL4	T	N	A	G	V	I	T	C	K	A	A	A	W	K	P	S	E	P	L	V	V	E	E	I	C	V	E	P	K	S	T	E	V	R	I	K	M				
UniRef90_K9B589				P	Q	T	V	K	G	V	I	A	R	S	K	G	A	P	V	E	L	T	D	I	V	I	P	D	P	G	P	G	E	V	V	V	D	V			
UniRef90_Q2Y8Z5				M	M	E	I	R	A	A	T	I	R	Q	K	G	G	P	F	R	I	E	N	L	I	L	P	D	P	P	G	P	D	E	V	L	V	R			
UniRef90_A4F184				M	T	E	V	R	G	V	V	A	A	G	K	G	K	P	V	E	V	V	T	I	N	V	P	D	P	G	P	G	E	A	V	V	R	V			
UniRef90_A0A059A110	T	T	Q	G	Q	V	I	T	C	K	A	A	V	A	W	E	A	N	K	P	L	V	I	E	D	V	Q	V	A	P	P	Q	A	G	E	V	R	V	K	I	
UniRef90_I1LP48			T	S	Q	V	I	S	C	K	A	A	I	C	W	G	A	G	K	P	V	T	V	E	E	I	Q	V	D	P	P	K	A	T	E	V	R	V	K	M	
UniRef90_E3NVP8																												P	G	A	G	E	V	L	V	R	L				
UniRef90_UPI000464418B					M	K	T	K	A	A	V	L	F	E	A	H	K	P	F	E	I	M	E	L	D	L	D	G	G	V	G	E	V	L	I	K	Y				
UniRef90_F1YL14						V	K	G	V	I	S	R	T	K	N	A	P	T	E	L	V	D	I	E	I	P	D	P	G	P	N	D	V	V	L	K	I				
UniRef90_S4Z9A9					M	K	T	K	G	A	L	I	W	D	L	N	E	P	W	V	I	D	E	I	E	I	G	D	P	R	P	G	E	V	T	V	R	L			
UniRef90_R9MBN4					M	K	I	K	A	A	L	V	Y	E	K	Q	G	P	F	V	I	E	E	L	E	L	D	E	P	K	E	G	E	I	L	V	K	V			
UniRef90_UPI00037A1F6D					T	M	K	A	A	V	L	H	E	A	K	T	P	L	M	I	E	E	V	L	V	A	K	P	G	A	R	E	V	L	I	R	T				
UniRef90_H3RSI6					M	K	M	K	A	A	V	V	R	Q	A	T	D	P	Y	K	F	E	E	V	E	L	A	E	P	K	N	D	E	V	L	V	R	I			
UniRef90_UPI0004673DC3					M	E	T	K	A	A	V	L	W	E	R	N	T	P	W	S	I	E	T	I	R	L	D	P	P	K	D	Q	E	V	L	V	E	L			
UniRef90_X0MNN95							M	R	A	A	V	Q	H	E	T	G	R	D	E	V	L	D	D	V	E	A	V	G	F	G	P	G	R	V	L	I	R	I			
UniRef90_F2A557					M	K	Q	A	Y	A	A	V	S	R	E	K	A	K	P	L	L	L	E	C	I	G	I	E	E	P	R	A	D	E	I	L	V	R	I		
UniRef90_UPI000370FB46	P	I	S	T	R	G	A	V	L	R	E	S	P	G	R	Y	E	V	V	D	I	L	E	L	D	D	P	R	Q	G	E	V	L	V	R	L					
UniRef90_UPI000469201A					M	K	I	K	A	A	V	V	E	T	Q	G	A	P	F	V	I	K	D	I	E	L	A	P	L	H	P	D	D	V	Q	V	H	M			
UniRef90_Q21GN3					M	R	S	T	K	A	L	V	S	D	G	N	G	A	F	D	V	K	Q	I	T	V	G	E	P	A	A	N	E	V	R	V	K	I			
UniRef90_I1K548							M	R	G	A	V	Y	W	E	P	N	K	P	L	T	I	E	E	F	N	M	P	R	P	K	A	G	E	V	L	I	K	T			
UniRef90_I2ABK9					M	K	T	T	A	A	V	L	W	E	V	G	Q	K	W	S	V	E	D	V	E	L	D	D	P	P	G	E	V	R	V	R	L				
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UniRef90_UPI0003701C7C					M	K	T	K	A	A	V	L	W	G	Q	H	E	K	W	Q	V	E	E	I	D	L	D	P	P	K	A	G	E	V	L	V	K	L			
UniRef90_F5Z1F4	M	V	K	T	K	G	A	L	V	L	W	E	F	N	K	P	W	S	V	E	E	I	E	I	G	E	P	G	P	K	D	E	V	K	I	Q	M				
UniRef90_D3DAK9	P	Q	E	V	R	A	V	V	A	H	A	Q	K	P	V	A	V	E	T	I	L	V	P	D	P	G	P	G	E	A	V	V	R	V							
UniRef90_W5X0T9					M	R	I	H	A	L	T	E	G	Q	G	K	D	F	Q	M	A	M	L	D	L	A	E	P	Q	A	D	E	V	L	I	K	I				
UniRef90_H5TK02					M	R	T	R	A	A	V	L	R	E	A	G	E	W	S	V	E	E	L	E	L	D	D	P	K	D	G	E	I	L	V	E	M				
UniRef90_K7MH10	S	T	P	Q	V	I	T	C	K	A	A	V	L	W	G	A	G	E	A	L	V	I	E	E	V	E	S	P	P	G	M	E	I	R	I	K	V				
UniRef90_B5H6U0							M	R	A	A	V	L	N	K	V	G	D	T	L	D	V	T	E	A	K	A	V	S	F	G	P	G	R	V	R	I	K	M			
UniRef90_S2YP63					M	L	V	K	S	A	V	V	N	A	V	G	K	D	Y	E	F	E	T	L	E	L	Q	D	M	Q	K	E	V	I	L	K	V				
UniRef90_X0RAV6	M	T	T	T	R	A	A	I	V	R	G	V	K	E	P	W	E	V	V	H	L	D	L	E	Q	E	P	K	E	R	E	V	L	I	R	L					
UniRef90_F1ZBJ6							M	K	A	A	V	L	E	Q	A	G	K	P	L	V	I	D	D	L	T	V	S	K	P	G	P	H	E	V	L	I	R	T			
UniRef90_UPI0001DD0F12								K	A	A	I	L	E	K	P	S	E	P	M	V	I	G	E	I	E	L	A	E	P	A	P	H	E	V	L	I	D	T			
UniRef90_V8D107					M	K	T	K	A	A	I	L	T	E	L	N	T	D	W	K	I	D	E	I	D	L	G	D	P	V	A	G	E	V	Q	V	R	L			
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UniRef90_W5TEA2	M	Q	V	R	G	A	V	I	R	K	S	P	G	D	L	E	V	V	D	L	E	L	D	D	D	P	R	P	A	G	E	D	L	Q	V	K	M				
UniRef90_UPI00035F20B9	I	Q	V	N	G	A	V	I	H	E	V	G	A	K	W	S	V	E	R	L	T	L	R	D	P	G	P	T	E	V	R	V	K	V							
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UniRef90_A0A052J2M5					M	K	I	T	A	A	V	L	E	E	I	G	R	P	L	N	V	C	E	I	D	L	A	E	P	R	H	E	V	L	I	R	V				
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UniRef90_Q938F2					M	K	T	K	A	A	V	L	R	G	V	G	Q	D	W	R	I	E	E	E	L	E	L	G	D	P	V	P	G	E	V	Q	V	R	L		
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UniRef90_C8P517					M	K	I	K	A	A	V	V	D	K	K	G	A	K	F	D	I	D	D	V	E	L	A	E	M	Q	P	D	D	L	Q	V	H	M			
UniRef90_W8QV26					M	E	I	Q	A	M	V	T	T	N	E	K	D	F	E	K	Q	T	L	L	L	D	D	D	P	K	A	D	E	V	L	K	I				
UniRef90_U5VNB1							M	R	A	V	L	R	E	A	G	R	P	T	A	V	E	E	L	A	L	R	R	I	G	D	H	E	V	R	V	R	L				
UniRef90_Q3S8D7					M	K	M	K	A	A	V	L	F	E	Q	G	Q	P	I	Q	I	E	E	V	E	L	D	G	P	G	E	G	E	V	L	I	E	V			
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UniRef90_UPI0003748853									R	A	A	V	L	H	A	V	G	K	E	L	D	L	D	D	V	T	T	V	E	P	G	P	D	Q	V	K	V	R	I		
UniRef90_UPI0002F86B76					M	Q	T	I	K	A	A	V	L	H	E	F	G	A	P	L	V	I	E	D	V	Q	L	A	P	P	G	T	G	E	V	E	V	T	L		
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UniRef90_O93331	K	N	L	K	P	G	D	K	V	I	P	L	N	F	V	P	Q	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P				
UniRef90_U5L715	K	T	I	E	P	G	D	K	V	I	P	L	N	F	V	P	Q	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P				
UniRef90_Q2KNL4	A	N	L	K	V	G	D	T	V	M	P	L	S	I	G	Q	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_K9B589	T	N	V	E	V	G	D	F	V	I	L	N	W	R	A	V	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_Q2Y8Z5	K	K	V	T	A	G	D	F	V	I	L	N	W	R	A	V	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_A4F184	H	D	I	A	P	G	D	F	V	V	L	N	W	R	A	V	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_A0A059A110	T	E	V	Q	P	G	D	H	V	I	P	C	Y	Q	A	E	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_I1LP48	R	N	L	K	E	G	D	V	V	I	P	T	Y	I	G	E	C	Q	E	C	N	C	V	S	G	K	T	N	L	C	L	T	Y	P	I	R	L	T				
UniRef90_E3NPV8	T	D	L	E	V	G	D	H	V	I	L	S	W	T	P	S	C	Q	K	C	E	Y	C	V	S	G	R	P	V	L	C	Q	L	A	N	E	T	A	Y	Q		
UniRef90_UPI000464418B	T	K	V	K	P	G	D	H	V	I	C	S	F	I	P	N	C	G	T	R	Y	C	S	T	G	R	P	N	L	C	D	M	G	A	T	L	E	Q				
UniRef90_F1YL14	T	H	V	E	V	G	D	Y	V	V	L	N	W	R	A	V	C	G	E	C	R	R	G	K	A	Q	Y	C	F	D	T	H	N	A	R	Q	P					
UniRef90_S4Z9A9	E	H	L	A	V	G	D	H	V	V	M	S	F	I	P	S	C	G	K	C	T	P	C	Q	T	G	H	R	N	L	C	D	L	G	M	G	L	S	G			
UniRef90_R9MBN4	T	E	F	K	V	G	D	R	V	G	F	S	F	S	S	C	G	K	C	E	E	C	L	D	G	H	P	Y	A	C	K	D	F	N	E	I	N	F	G			
UniRef90_UPI00037A1F6D	T	R	L	R	P	G	D	H	V	I	T	F	L	T	A	F	C	G	A	C	E	A	C	L	I	T	G	R	P	S	L	C	C	V	D	P	S	T	R	R	S	A
UniRef90_H3RS16	K	D	F	A	V	G	D	H	V	I	A	F	S	I	A	F	C	G	K	S	C	S	V	Q	G	R	P	Q	Y	C	E	K	F	N	E	I	N	F	G			
UniRef90_UPI0004673DC3	S	W	I	K	P	G	D	H	V	I	V	F	G	F	I	P	A	C	G	H	P	S	C	S	V	G	H	Q	N	L	C	D	L	G	A	K	I	Y	S	G		
UniRef90_X0MN95	T	G	L	K	A	G	D	R	V	L	M	C	W	L	P	A	C	G	S	C	P	S	C	K	R	G	Q	T	H	L	C	D	L	A	G	F	M	N	A	G	T	
UniRef90_F2A557	K	D	L	V	P	G	D	H	V	I	A	L	S	I	Y	A	C	G	K	C	E	K	C	S	G	T	P	F	Y	C	E	D	E	F	F	G	R	N	F	R		

[illegible]

	170	180	190	200
UniRef90_A4FEF0	D A G A D P A V A G L L I G C	G V S M A G I G A A V N T A K P V R R G D S T V A V F G C		
UniRef90_O93331	D D N A P L E A K V C L L I G C	G F S T G S Y G S T A V N R L K P V R R G D S T V A V F G C		
UniRef90_U5L715	D D N A P L E A K V C L L I G C	G I Q T G S Y G S T A V N R L K P V R R G D S T V A V F G C		
UniRef90_Q2KNL4	D P R I P L P H A S L L T G C	G F L T G Y G A P W R E S R V E T K G S T V A V F G C		
UniRef90_K9B589	D E S D P A V V G S L L I G C	G I M A G I G S A I N T A K P V R R G D S T V A V F G C		
UniRef90_Q2Y8Z5	P R E A P L E L L G P L I G C	G I Q T G A A V I N T A L K P V R R G D S T V A V F G C		
UniRef90_A4F184	D P S A R P A V A G L L I G C	G V M A G I G A A V N T A K P V R R G D S T V A V F G C		
UniRef90_A0A059A110	D P K A P L E K V C L L I G C	G V P T G L G A V W N T A K V E S G S T V A V F G C		
UniRef90_I1LP48	D P T I D P A H A S F I S C	G F S T G Y G A V W K E A K V E S G S T V A V F G C		
UniRef90_E3NPV8	R K D A P L A Q A A L V G C	G A V T T G I G A V T N T A K V E S G S T V A V F G C		
UniRef90_UPI000464418B	D D W L P L E T A V L V G C	G V P S G I W G T A T N A G D L R P G S T V A V F G C		
UniRef90_F1YL14	D E A A D P A V A C L L I G C	G V M A G L G A A M N T S G Q V L R P G S T V A V F G C		
UniRef90_S4Z9A9	D P A I D F D V A C L V G C	G V T T G Y G S A V R S A A V P G S T V A V F G C		
UniRef90_R9MBN4	P D D I D L G V V A P F G C	G I Q T G A G A V F H T N A P K F G S S I A V F G C		
UniRef90_UPI00037A1F6D	S R D M P L D R A A L L I G C	G A V I T G A G S I F N D S R V R A G E S T V A V F G C		
UniRef90_H3RS16	D E D V D L A M I A P F G C	G V Q T G A G S A V L N T L R P H V D E T V A V F G C		
UniRef90_UPI0004673DC3	D A P T P L D R A C L L I G C	G F I T G W G S A V Y T A H I K P G E T V V V F G C		
UniRef90_X0MN95	P D D V P Y E I A A L L I G C	G V T T G L G A A F N T A K V E K A G S S I A V F G C		
UniRef90_F2A557	A K D V P L E L T I G L L G C	G L Q T G A G A V L N C L K P K P G S S I A V F G C		
UniRef90_UPI000370FB46	D E D V P L E L L A C L L I G C	G V P T G W G A A V N T A G V R P G S T V I V F G C		
UniRef90_UPI000469201A	D D D L D L R Q L G P L I G C	G Y V T G S G T V L N T L K P K P G S T V I A V F G C		
UniRef90_Q21GN3	E T D I S F S A A S I V G C	G V M T G W G S V V N A A N V K A G S S I A V F G C		
UniRef90_I1K548	P D S L P Y T E S A L V G C	A V F T A Y G A M A H A A Q V R P G S S I A V F G C		
UniRef90_I2ABK9	D D D I P L E L A S L V G C	G V A T G F G A A V N R A Q V R P G S T V V V F G C		
UniRef90_K6VW10	A A D I P M S S A A L L I G C	G V L T G F G A A V N T G G V R V G D S T V A V F G C		
UniRef90_UPI0003701C7C	D A G I P L D K A A L V G C	G V T T G F G S A V R S G E V R A G D A V V V V G A		
UniRef90_F5Z1F4	D P A I P F E V A C L V G C	G V T T G Y G S A V R T A D I V R A G D D V A I V G V		
UniRef90_D3DAK9	S P A A K P Q V A G L L I G C	G V M A G I G A A V N T G G V R G R G D S S I A I F G S		
UniRef90_W5X0T9	P K N V D L A L L G P L I G C	G I Q T G S G T V L N T L R P P G S S I A I F G S		
UniRef90_H5TK02	D K D V P L E V A C L V A C	G V Q T G F G S A A T A G N V Q R G D T V V I A G V		
UniRef90_K7MH10	S P L A P L E K I C L L I G C	G V A A G L G A A W N V A D I V S K G S S I V I F G L		
UniRef90_B5H6U0	P D D L P Y D I A A L L I G C	G V T T G I G A A L N T A R I V S K G S S I V A V F G L		
UniRef90_S2YP63	D D N I D L R L V A P L I G C	G F L T G A G T V V N G L K P Q S G D S I A V F G T		
UniRef90_X0RAV6	D S S L P L D V A A L L I G C	G V P T G W G A A V Y A A S G V R A G D V V V I Y G S		
UniRef90_F1ZBJ6	N P D M P L D R A A V L G C	A V T T G A G T I F N A I K L T P G E S T V A V F G C		
UniRef90_UPI0001DD0F12	D K D M P F D R A A V L G C	A V T T G A G T I F N A I K L T P G E S T V A V F G C		
UniRef90_V8D107	E K D I P L D K A A L L I G C	G V S T G W G S A V D I A N T R P G D T V V V A G I		
UniRef90_C0RZG5	A D K A P M D R T C L L I G C	G I T T G Y G A V V V T A K K V E E G S S V A V F G A		
UniRef90_R4Z5Q7	P K E M P L T S A S L V G C	G V T T G V G A V I N R A K V S H H G E S A V V F G V		
UniRef90_W5TEA2	D K S I P L D K A C L I G C	A V S T G W G S A V N S A D V Q P P G D T V I V M G I		
UniRef90_UPI00035F20B9	D D D I P F D V A C L V G C	G V G T G W G A A V N A A G V R P R D T A L I V G V		
UniRef90_W9RQJ2	D H V T A P N R A C L L I G C	E V S T G V A A A W K K A N V A P G S T V A I F G L		
UniRef90_A0A052J2M5	D R E V P L E I A A L M G C	A V L T G A G A V F N T G A V A P G Q A A V V F G L		
UniRef90_X0QDT9	A P D V P P E I A A L T G C	A V L T G V G A V F N T N Q M K E A T G Q A A V V F G A		
UniRef90_Q938F2	E K D I P L E A A A L L I G C	G V A T G W G S A T A I G G T K V G D T V V V V G V		
UniRef90_J9S1F4	D D D T P L E H A S L V S C	G V T T G W G A V V N A G G A R P P G D A I A I Y G C		
UniRef90_C8P517	P K D L D L R K L G P L I G C	G Y V T G S G T V F N T L K P A P P G S T V A V F G T		
UniRef90_W8QV26	D K E T D L R Y L G P F G C	G L M T G S G T V L N S L A P A P P G S T V F V F G T		
UniRef90_U5WNB1	D R S L P L D H A A L L I G C	G V T T G V G A V L R T A A V R P G E S V L V F G C		
UniRef90_Q3S8D7	R K D V P L E V A A L F G C	A V V T G V G A V F N T A A L R P G Q S A A V V F G L		
UniRef90_D7PPJ6	N P A A P L D K V C V L S C	G I S T X X X X X I N V A K P P P K G S T V A I F G L		
UniRef90_I4EWQ4	P D D V D L T I A G P L I G C	G V Q T G A G T V L D V L R V P P		

	210										220										230										240													
UniRef90_A4FEF0	G	G	V	G	S	A	A	I	V	G	A	E	V	L	A	G	A	R	K	I	I	A	V	D	L	D	T	K	K	L	D	W	A	E	A	F	G	A	T	H	L			
UniRef90_O93331	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_U5L715	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_Q2KNL4	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_K9B589	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_Q2Y8Z5	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_A4F184	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_A0A059A110	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_I1LP48	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_E3NVP8	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_UPI000464418B	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_F1YL14	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_S4Z9A9	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_R9MBN4	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_UPI00037A1F6D	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_H3RS16	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E	K	A	K	E	L	G	A	T	D	V
UniRef90_UPI0004673DC3	G	G	V	G	L	S	G	V	I	M	A	G	K	V	I	G	A	R	K	H	I	I	G	V	D	T	I	H	D	S	K	F	L	E										

[illegible]

UniRef90_A4FEF0 A R D L A G T V V L V G V P T P E M T L D L P L I D V F A R G G A V K S S W Y G

UniRef90_O93331 A L R P L G T L A V I V G V T P E M E I N V H E E I M A E G K T M V G G T T L E G

UniRef90_U5L715 S T K V G L G E V L V L G V T G E K E K V E I S Y I P L M L G R S V K G T T L E G

UniRef90_Q2KNL4 G R D L A G T V V L V G V P T P E M E L V S V L L D V F M G R G K L K S S W Y G

UniRef90_K9B589 A L G I R G T C G I V G A P A L G T E V S F D V N G V M T T G K R L G L I E G

UniRef90_Q2Y8Z5 A R D L A G T V V L V G V P S P E M Q L E L P L I D V F A R G G A L R S S W Y G

UniRef90_A4F184 A R D L A G T V V L V G V P S P E M Q L E L P L I D V F A R G G A L R S S W Y G

UniRef90_A0A059A110 C C H K G W G T S V I V G V A A S G Q E I S T R P F Q L V T G R V W K G T A F G

UniRef90_I1LP48 A T K V G T G K T I A I G T G T E P I I P F G L T S I M Y G R T L K G S V F G

UniRef90_E3NVP8 A I R R G G T A V V V G Q V A D G V K I S I D P F V M S D Q E K R L I G S N Y G

UniRef90_UPI000464418B T A I I G K G G T V V I T D P A K L T V H V S G A D L T L N Q K T I K G S L F G

UniRef90_F1YL14 A R D L A G T V V L V G V P T P E M R L E M P L V D F F S H G S A L K S S W Y G

UniRef90_S4Z9A9 A L T A K G G V C C L T G M A S V L A N D V T L N L L S L L Q K S L Q G S I F G

UniRef90_R9MBN4 C V R F K G T A V V L G L T G D L T I N V Q E E L M G E A K S L V G V V E G

UniRef90_UPI00037A1F6D I L R R G G T A T I L G M L A P G G N V H L P G P S F L T G K K I Q G S L L L G

UniRef90_H3RSI6 S T C L N G K I V L L A P S G E V N F D F G K D V L M A Y R T V I G C C E G

UniRef90_UPI0004673DC3 M T A K R G R V V V T N I H P M A E R E I S V N L M L T L T E K Q I V G S L Y G

UniRef90_X0MNN95 A T R R G G T L C V V G A G A M D D T F Q V N M F E L F F D E K R I L P S L Y G

UniRef90_F2A557 C L G T P G T C G L V G S S A L G T E G T I D I G N F L F G R T L I G V V E G

UniRef90_UPI000370FB46 I R K A G T V V L T G L G S H R A T D V P L R L N D L V L M Q K S V K G S L F G

UniRef90_UPI000469201A A L C Q G G T S A T I A V T P N H I D L D T W N D L C V N D K K V V G V N M G

UniRef90_Q21GN3 L I R S A G T A V V Q V S G I E Q R I D F D C E L F E W D K I Y I N P L Y G

UniRef90_I1K548 S V K D G G K A V M I G L A Q A G S L G E V D I N R L V R R K I Q V I G S Y

UniRef90_I2ABK9 M L L T R K G G R A C V A P S V T N V D V L V D V L S Q K E I V G N V F G

UniRef90_K6VWIO M A R R G G T A V L V G A A P G V G I D E V F N N V V M A G K V V K G C L Y G

UniRef90_UPI0003701C7C L V I G K R G R V V V T A I G H P D E T S I T T S L I L T L Y E K Q L R G S L F G

UniRef90_F5Z1F4 M I L T A K G G T C V L T A M G D N Q V T L N L A M L T L L Q K N L Q G T I F G

UniRef90_D3DAK9 A R D L A G T V V L V G V P T P D M K A P E L P L L D Y F G R G L K S S W Y G

UniRef90_W5X0T9 A L R P L G T V A I V G V T G K V E F D V Q S E I M A E G K T L K G V I E G

UniRef90_H5TK02 A V R K A G T V V V T G I S P E K E E G V V N A N N L A M M Q K R I Q G A L Y G

UniRef90_K7MH10 L T G K G Q V I V T A M G P Y D Q V A T D L N L F L T L L Q K R V Q G A I F G

UniRef90_B5H6U0 A A R Q G G V V C L V G M G S V A D M P D I N M F E L V S S Q K K I L P S V Y G

UniRef90_S2YP63 I L S A Q G I A A P V A I V T P K T I D I N P F L D L V L Q N K T I K G G L M G

UniRef90_X0RAV6 I L G K V G S V V V A T R H T G E N Q L E M N T Q S L K G F Q Q R I Q O G V M F G

UniRef90_F1ZBJ6 A L R R G G T A T I L G M M P L T E R V G L S A M D L L S G K K L Q G A I M G

UniRef90_UPI0001DD0F12 S L R R G G T A V V L G M M P L D C K V G L G A M D L L G G K K L M G A I M G

UniRef90_V8D107 L T G K G Q V I V T A M G P Y D Q V A T D L N L F L T L L Q K R V Q G A I F G

UniRef90_C0RZG5 A C H K G W G Q S I I I G V A A A G Q E I S

UniRef90_R4Z5Q7 M L D F G G T V V M V G V P K M G A E A S F V V N T M Y N D K R S I T G C R Y G

UniRef90_W5TEA2 A I R K A G T V V V T A I G P H E A M G A P I S H E L T L S Q K R L Q G A L F G

UniRef90_UPI00035F20B9 A V R K R G T V A V A S I G Q N E P G I P I S P L E L V V Y A K Q L R G L F F G

UniRef90_W9RQJ2 C C K G G W T I M L G V D K P G S Q V T L P S Y N I L H H G K T L R A S L F G

UniRef90_A0A052J2M5 F T R R G G T I T A G L P N P K A V L N I S P L T L V A E E R S L R G S Y L G

UniRef90_X0QDT9 A V G T G G T V V A V G L G K V G A T F A V P I N P L V Q Q E K R I I G S L Y G

UniRef90_Q938F2 L T I T A K A G Q V V L T A M G D A T K N E V T L N L F L L Q K R V Q G A I F G

UniRef90_J9SIF4 F A L T R K G G K V V L V S T A D D M M E D P G S L L T F F Q K T V G T L F G

UniRef90_C8P517 A L A Q G G V L A A I A V T A Q H I D V N T W N D L C P A D R T I V G V N M G

UniRef90_W8QV26 C L R V K G T C A T V A V G K R D L T F N V T N D L M L N A L T L K G V I E G

UniRef90_U5VNB1 A T R R G G A V T L V G A G F T E S V T L P A L M L M A D G K K I R G S V Y G

UniRef90_Q3S8D7 C L A R G G T V I S S G L P D P T K T Y A Y N H A P L V S D E K S I R G S Y M G

UniRef90_D7PPJ6 C V H D G W G V A V L V G V P H K D A E F K T H P M N F L N E R T L X X X X X X

UniRef90_I4EWQ4 S L D S L G T C A Y V G T A A P G E L G G I P M L E A M T K G L T V R G V L Q G

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UniRef90_U3QZV2	L	G	T	G	V	C	H	T	D	M	V	I	R	D	Q	Y	F	P	T	P	L	P	A	V	L	G	H	E	G	A	G	V	V	E	R	A	I	V	G	A	T	V		
UniRef90_F0KF31	V	A	T	G	M	C	H	T	D	L	I	V	R	D	Q	Y	Y	P	V	P	L	P	A	V	L	G	H	E	G	S	G	I	V	E	A	I	V	G	P	N	V	V		
UniRef90_I3CYA0	G	V	S	G	I	C	H	S	Q	L	G	E	I	D	G	A	K	G	E	D	K	P	H	L	L	G	H	E	A	S	G	V	V	H	E	I	V	G	P	V	V			
UniRef90_UPI00029A45DE	A	A	S	G	L	C	H	S	D	E	L	L	T	G	D	L	Q	F	E	Y	P	I	V	V	G	G	H	E	G	A	G	V	V	T	K	V	G	E	G	V	V			
UniRef90_W8SQE8	E	A	V	A	I	C	H	S	D	L	S	Y	I	E	G	A	W	G	D	L	P	A	V	V	L	G	H	E	A	A	G	R	V	T	A	R	G	V	P	V	V			
UniRef90_UPI000466CEF9	V	A	T	G	V	C	H	T	D	M	V	V	R	D	Q	L	F	P	T	P	L	P	I	V	L	G	H	E	G	A	G	V	V	E	A	V	G	A	S	V	V			
UniRef90_Q3TXF7	V	A	T	G	L	C	H	T	D	L	F	T	K	A	S	L	P	H	A	L	G	P	A	V	L	G	H	E	G	A	G	I	V	V	D	V	G	S	R	V				
UniRef90_Q0ST78	E	A	T	G	V	C	H	T	D	V	L	S	Y	R	D	G	I	N	D	E	F	P	F	L	L	G	H	E	S	A	G	R	V	S	A	L	V	G	E	D	V			
UniRef90_UPI0003EBD25B	T	T	T	T	I	C	H	T	D	V	H	I	L	K	G	E	Y	P	V	A	A	G	L	T	V	L	G	H	E	P	V	G	I	I	E	K	L	G	S	V	V			
UniRef90_C7MEI0	A	A	A	G	V	C	H	S	D	L	S	L	S	D	G	T	M	R	V	P	V	P	A	V	L	G	H	E	G	A	G	T	V	L	A	V	G	E	G	V	V			
UniRef90_Q1H4W3	E	V	A	G	L	C	H	S	D	E	H	L	K	H	S	D	T	A	R	F	P	V	V	V	G	G	H	E	G	A	G	V	V	E	M	V	G	A	G	V	V			
UniRef90_UPI00037E57FC	A	A	A	G	V	C	H	S	D	L	S	L	S	D	G	T	M	R	V	P	V	P	A	V	L	G	H	E	G	A	G	T	V	L	A	V	G</							

	90	100	110	120
UniRef90_X0QZ19	A D L A V G D R V V I C W M P P C D R C P S C T S G A A H L L C L			S
UniRef90_G2IIZ8	T H V K P G D R V I M S F N R P C G R C P S C A A R A D R Q T Y C Y			N F V P E N W T
UniRef90_UPI000346826D	E G V A P G D R V L I A M N R P C G R C R M C A A R A D R Q A H L L C			D D A R L K A I M
UniRef90_B3Q2D5	E K V E V G D H V V M S F L P V C G R C S Y C A E G Q R A S L C C E			P G Y Q A N A A
UniRef90_Q1GLZ7	D G F N L G D D V I V T L R A C R H C S A C T S G Q P V V Y C			A T
UniRef90_K0F4W8	T D I A P G D F V I L N W R A V C G A C R A C T R R G K S W N C A A P L T A G Q R			
UniRef90_U3QZW2	T K V A P G D H V V L T Y A S C G I C A N C Q K G L Y G Y C L D L Y G R N F S			
UniRef90_F0KF31	K D L A I G D H V V L S Y G Y C G I E A V C G S G N P A Y C Q D F F G R N F G			
UniRef90_I3CYA0	R F V K P G D N V V L H W R K S Q G I E A V C A E G L Q N L C D N G A G L L T G			
UniRef90_UPI00029A45DE	T G I E E G D H V V L A F I P A C G V C P P C A E G L Q N L C D N G A G L L T G			
UniRef90_W8SQE8	T A L A E G D R V V L V T L I R S C G L C P S C E A T A G H P A H C S H M H P L N F G			
UniRef90_UPI000466CEF9	T T V A P G D H V V M T Y M S C G L C P S C E A T A G H P A H C S H M H P L N F G			
UniRef90_Q3T XF7				
UniRef90_Q0S728	N G V T P G D H V I L S Y R H C G D C D Q C R S A G P A Y C V D A H R L N S S			
UniRef90_UPI0003EBD25B				
UniRef90_C7MEI0	T H V E I G D Y V V L N W R A V C G E C R A C K K G V Q Q Y C F S T F N A S T P			
UniRef90_Q1H4W3	H G F K V G Q R V I A G A I T P C S G H S N A C L G I G A Q D G			
UniRef90_UPI00037E57FC	S H V A P G D G V V L N W A P S C G A C H H C G L G E V W L C L A D A I T G T G R			
UniRef90_D9WBK7	S H V R P G D H V I C S F I P V C G H C R W C S T G R T F A C L D Q S P D L V Q			
UniRef90_Q3M1T4				
UniRef90_UPI000369D172	D S V Q V G D H V V L S I V V S C G T C Y Q C Q L G N L S I C E V G S A M S P G			
UniRef90_B0KI2	Q N L A V G D H V V M T Y G Y C G R C L A C D A G Q A A Y C Q D F R N F S G A			
UniRef90_F2L599	D D P K P G D R V I Y Y Y V G C G R C R H C L R G E N L C E N P			
UniRef90_UPI000302816C	E N I S V G D R V S M S F L P R C G E C R E C R T D G K L P C S V G S K T N N D			
UniRef90_W5THY4	E G L A V G D H V L L N R A T C G D C E W C D A G Q S G L C S R T D R L I L G			
UniRef90_UPI00034A3CEB	P G L S P G Q R V V L N W E P A C R E C W H C R Q D E P H L C E H A L D G A R			
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UniRef90_UPI0004699640	T N L K K G D R V V P F P I S C G T C F F C T H E A S P A C C E N S N Y E H Y G			
UniRef90_D9T5M2	T T L A A G T P V V L N W A P A C R D C W H C R H G E P W L C A A N P N P S T P		</	

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UniRef90_W9WQN2 V G R L D G S K V F T T G R P I M S H F F G Q S S F A R H I L V S Q N G L V K V
UniRef90_S7ZSI3 G R G P E S P I S F P N G D P I R G Q F F G Q S S M A K L A I V S E A S V M K I
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UniRef90_X6L306 A R K M M G Q S P A G L F G Y S H L L G G Y A G G Q A E Y L R V P Y A D V G P I
L T R P D G T E V I Q S M H C G A F A E R V V V D Q S Q I V A V

		170	180	190	200																																					
UniRef90_X0QZ19	P	D	D	V	P	Y	E	I	A	A	L	I	G	C	G	V	T	T	G	I	G	A	A	L	N	T	A	R	V	E	P	G	S	S	V	V	V	I	G	L		
UniRef90_G2IIZ8	P	E	S	A	P	L	A	T	L	A	P	L	L	G	C	G	L	M	T	G	A	G	A	V	L	R	T	M	N	V	R	A	G	M	S	P	I	A	I	F	G	S
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UniRef90_B3Q2D5	T	K	D	I	D	L	A	T	A	A	L	F	S	C	C	A	V	M	T	G	V	G	A	V	M	N	T	C	G	V	R	P	G	S	R	S	V	A	V	I	G	L
UniRef90_Q1GL27	P	A	D	M	P	K	D	V	A	A	L	V	S	C	C	G	V	I	T	G	V	G	A	V	H	S	A	K	V	L	R	A	G	E	D	V	V	V	I	G	A	
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UniRef90_U3QZW2	R	K	D	V	P	I	E	L	M	G	P	L	G	C	C	G	I	A	T	G	A	G	A	V	I	N	A	L	K	P	G	A	G	S	I	A	V	F	G	A		
UniRef90_F0KF31	T	Q	D	V	P	L	E	L	L	G	P	L	G	C	C	G	I	Q	T	G	A	G	A	V	I	N	A	L	G	V	R	P	A	S	S	F	V	T	W	G	A	
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UniRef90_UPI00029A45DE	E	K	D	I	P	L	D	K	A	A	L	L	G	C	C	A	V	A	T	T	G	W	G	S	A	T	E	I	G	R	A	K	E	G	D	V	V	V	V	G	V	
UniRef90_W8SQE8	G	D	D	I	P	G	D	V	A	C	L	L	A	G	C	G	V	P	T	G	V	G	A	A	V	N	T	A	G	V	R	P	G	D	V	V	V	I	G	A		
UniRef90_UPI000466CEF9	S	K	N	A	P	L	E	L	L	G	P	L	G	C	C	G	I	Q	T	G	A	G	S	V	L	K	A	M	K	V	E	A	G	S	F	V	A	F	G	A		
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UniRef90_UPI0003EBD25B	D	A	A	A	P	L	E	K	V	C	L	L	G	C	C	G	F	T	G	Y	G	S	A	I	E	V	A	K	V	T	P	G	S	T	C	A	V	F	G	L		
UniRef90_C7MEI0	S	E	D	A	P	A	E	V	A	G	L	L	G	C	C	G	V	M	A	G	I	N	T	G	V	K	G	V	R	G	S	L	A	V	I	G	L					
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UniRef90_UPI00037E57FC	P	G	G	V	S	L	T	D	A	A	L	L	G	C	A	V	L	T	G	Y	G	A	V	H	H	A	A	R	V	R	A	G	E	S	V	V	V	F	G	V		
UniRef90_D9WBK7	D	K	D	V	P	F	G	V	A	A	L	L	S	C	C	V	P	T	G	W	G	A	A	V	R	V	A	D	V	R	P	G	D	V	V	V	V	G	C			
UniRef90_G3IMT4	D	G	A	S	P	L	E	K	V	C	L	I	G	C	C	F	S	T	G	Y	G	S	A	V	K	V	A	K	V	T	P	G	S	T	C	A	V	F	G	L		
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UniRef90_B0KI12	P	K	E	A	P	L	E	L	L	G	P	L	G	C	C	G	I	Q	T	G	A	G	A	V	I	N	S	L	R	V	T	P	G	S	A	F	A	A	F	G	C	
UniRef90_F2L599	P	D	N	I	P	F	E	Q	A	A	P	I	G	C	S	V	I	T	T	A	I	H	A	T	K	R	A	R	P	E	M	G	E	Y	V	A	V	V	G	V		
UniRef90_UPI000302816C	P	P	E	L	P	A	D	I	A	A	V	L	G	C	A	V	L	T	G	G	G	A	V	L	N	A	N	K	P	G	P	E	D	S	S	I	A	V	F	G	L	
UniRef90_W5THY4	D	P	D	L	D	L	A	L	A	P	A	F	G	C	C	V	L	T	G	A	G	T	V	L	T	N	M	R	P	A	P	G	D	S	I	A	V	F	G	V		
UniRef90_UPI00034A3CEB	P	D	G	V	D	P	A	V	A	A	V	L	G	C	A	V	L	T	G	W	G	A	V	N	N	S	A	Q	V	R	P	G	Q	S	A	V	V	L	G	L		
UniRef90_J2JG69	D	K	A	V	P	L	E	V	A	C	L	T	G	C	G	V	G	T	G	W	G	A	A	V	N	S	A	D	V	R	V	G	D	V	V	V	V	G	I			
UniRef90_UPI0002F4B515	I	P	D	G	L	T	D	D	Q	V	L	F	L	T	D	I	F	P	T	G	Y	M	A	A	E	N	C	H	I	K	P	G	D	I	V	A	V	W	G	C		
UniRef90_UPI00036A1780	D	P	G	L	P	E	I	A	L	F	G	C	A	V	M	T	G	V	G	A	V	V	N	T	A	R	V	Q	A	G	Q	S	A	V	V	F	G	L				
UniRef90_R2PE09	G	K	S	I	S	F	E	E	A	M	I	E	P	L	A	V	A	A	H	G	V	M	G	L	D	P	K	I	G	P	K	I	G	D	T	V	A	V	F	G	L	
UniRef90_D3EB84	E	S	C	E	L	E	D	E	A	L	L	F	L	S	D	V	L	P	T	A	Y	W	S	V	E	N	A	G	V	K	P	G	D	T	V	T	V	L	G	C		
UniRef90_I0JMU1	P	S	D	L	P	T	D	I	A	S	I	L	Q	E	P	M	G	N	A	V	H	T	V	L	N	G	D	V	A	G	K	S	V	A	I	I	G	C				
UniRef90_UPI00038027CF	D	A	A	D	D	E	L	A	A	P	V	G	C	G	V	Q	T	G	A	G	A	V	L	N	L	L	R	P	R	Y	G	D	S	V	V	V	F	G	A			
UniRef90_G0HD67	G	N	D	V	P	E	I	A	A	C	L	L	G	C	A	V	L	T	G	G	G	A	L	N	A	V	D	R	T	E	G	S	V	M	V	V	G	L				
UniRef90_V7BJ84	D	P	E	I	P	P	D	R	A	C	L	L	G	C	G	V	S	T	G	V	G	A	A	W	R	T	A	G	V	E	P	G	S	T	V	A	I	F	G	L		
UniRef90_W7Y0U1	H	P	Q	I	P	D	E	I	A	S	I	M	D	P	T	G	N	A	T	H	T	T	L	S	F	P	I	I	G	E	D	V	I	V	T	G	S					
UniRef90_UPI0003B72AA1	D	E	E	I	P	Y	D	I	A	A	L	V	G	C	A	V	T	T	G	F	G	A	I	V	N	D	A	A	V	R	P	G	A	S	V	A	V	I	G	V		
UniRef90_W8HM50	P	D	D	V	P	A	E	L	L	A	P	L	G	C	C	G	I	Q	T	G	A	G	A	V	M	R	S	L	N	C	R	P	G	S	A	L	L	I	A	G	A	
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UniRef90_UPI0003669E62	D	S	E	A	D	P	A	V	A	G	L	L	G	C	G	V	M	A	G	I	N	T	G	V	K	G	V	T	R	D	G	T	V	A	V	I	G	C				
UniRef90_UPI00041DA42B	P	D	Q	I	S	D	D	L	A	S	I	F	D	P	F	G	N	A	V	H	T	A	L	S	F	D	L	V	G	E	D	V	L	I	T	G	A					
UniRef90_Q7DMZ6	N	P	E	A	P	L	R	K	V	C	V	L	S	C	G	I	S	T	G	L	G	A	S	I	N	V	A	K	P	K	G	S	T	V	A	I	F	G	L			
UniRef90_I5BIP6	A	K	D	I	P	L	R	L	L	G	P	L	G	C	G	I	Q	T	G	A	G	T	V	M	N	V	L	R	A	E	P	G	S	A	I	A	V	F	G	S		
UniRef90_K0P9D3	P	S	D	I	P	L	E	L	L	G	P	L	G	C	C	F	Q	T	G	A	G	A	I	L	K	A	M	K	V	P	V	G	A	T	V	A	V	F	G	V		
UniRef90_V5SSDM9	I	P	D	Q	I	T	E	D	E	Q	V	L	M	C	P	D	I	M	S	T	G	F	S	G	A	E	R	G	V	Q	I	G	D	T	V	A	V	F	A	Q		
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UniRef90_A0A024PBA4	Q	Q	C	E	M	E	D	E	S	L	L	F	L	S	D	V	L	P	T	A	Y	W	S	V	E	N	A	G	V	K	Q	G	D	T	V	I	I	L	G	S		
UniRef90_UPI000478C5A6	D	E	S	L	P	L	D	V	A	A	L	L	S	C	C	V	I	Q	T	G	W	G	S	A	V	Y	T	S	G	V	P	G	E	T	V	V	V	L	G	V		
UniRef90_R4NID5	S	R	E	A	P	L	E	L	L	G	P	L	G	C	C	G	I	Q	T	G	A	G	A	V	I	N	S	L	K	V	T	P	G	S	F	A	A	F	G	C		
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UniRef90_C3DLP3	E	S	C	E	L	E	D	E	S	L	L	F	L	S	D	V	L	P	T	A	Y	W	S	V	I	N	A	G	V	K	P	G	D	T	V	I	V	L	G	C		
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UniRef90_B3Q2D5	G	G	G	G
UniRef90_Q1GL27	G	G	G	G
UniRef90_K0F4W8	A	G	V	G
UniRef90_U3QZW2	G	S	V	G
UniRef90_F0KF31	G	A	V	G
UniRef90_I3CYA0	G	G	V	G
UniRef90_UPI00029A45DE	G	G	I	G
UniRef90_W8SQE8	G	G	V	G
UniRef90_UPI000466CEF9	G	A	V	G
UniRef90_U3XTF7	G	G	I	G
UniRef90_Q0S728	G	S	V	G
UniRef90_UPI0003EBD25B	G	G	V	G
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UniRef90_UPI00037E57FC	G	G	V	G
UniRef90_D9WBK7	G	G	V	G
UniRef90_G3IMT4	G	G	V	G
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UniRef90_B0KI2	G	A	V	G
UniRef90_F2L599	G	A	V	G
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UniRef90_R2PE09	G	T	I	G
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UniRef90_W8HM50	G	S	V	G
UniRef90_UPI00041056F7	D	P	Q	P
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UniRef90_Q7DMZ6	G	A	V	G
UniRef90_I5BIP6	G	A	V	G
UniRef90_K0P9D3	G	A	V	G
UniRef90_V5SDM9	G	P	I	G
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UniRef90_UPI000467AC74	G	A	V	G
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UniRef90_W3RR91 M K A L A W H G V G D I R C E S V P D P A L Q D D R I I I K V

UniRef90_UPI0003B30DBD M K A I A A I A R E P H A D F T I E T I D I E T P R A G E V L V R I

UniRef90_E0WBC8 V R A A V A G D N G R D P F R M A S L E L E A P R P E E V L V R L

UniRef90_N6W4Z0 M K A A R W H N A R D I R V E E V E E P K A G S K G V K I K V

UniRef90_C5D554 T M K A L V Y R G K E Q Y G V E E R P K P Q V S P T D A V I K L

UniRef90_M2RSU8 M K A V T Y Q G K K R V K V K D V A D A K L K K D D I V R V

UniRef90_UPI00046EB997 K M K A A V L H E F G Q P L E I E E V D I T A G A G Q I V V K M

UniRef90_X0R378 M K I T A A V A V A P E R P F E L I S C D L D L A G G E V L I V R I

UniRef90_M4Z4Q3 M K A V T Y Q G F K D V K V K E V N D P K I K P D D I I V R L

UniRef90_M8E237 M K A A V L H S V G D I R Y E D I E I K P Y G D D E V K I K V

UniRef90_G7MBQ7 A S S K D I N T V A F I V E Q P G A E F R L A V I F N E P R D D E F L I E M

UniRef90_M2SIK9 T M R A A R F D T A A R S L T V M D V P V P R P Q P G E V R V R V

UniRef90_L7U6A6 T P S I P N T M K A L V K A Q P K E G L W L Q D R P V P G I S H N D V L I K I

UniRef90_I5B6S7 M K A F V Y Q G P K G S A L M D R P K P G I T A P D A I V K V

UniRef90_UPI0004766CD5 Q M K A A I L L E P G K I E L Q N R N I P I P A S N E V L I K V

UniRef90_W4Q5X0 P T T M R A A V V E K F G A P L V I K N V P V P T P G K D E V L I K V

UniRef90_L8H3J6 P T T M R A A V V E K F G A P L V I K N V P V P T P G K D E V L I K V

UniRef90_UPI0003B69A37 V Y A T S Q P L T M K T L D L A P P G P G E V L I A I

UniRef90_F4NIT0 M K A M V Y Y G K N D L R F E E R P K P I I I P T D A L I R L

UniRef90_B0RT65 A L C W N G V N D L R V E T V P D P V L N P R D V L I K V

UniRef90_UPI00047C4722 M R A A V L Y A E A Q P L V L E D L D R P E P R A G E L G V S I

UniRef90_C4L2U9 T E S T T P V M K A I Q K H T A G F G A K L V D V P V P T P G P G E V L I Q V

UniRef90_H5XUX7 M D Y M K A V V E H A N D D L R F E S V P R P Q I N P G D A I V R V

UniRef90_G3PSH5 V V L H A G D D L R V E N R P I P E P G P N E V L L Q M

UniRef90_UPI00047CDF2C M K A L V Y G G P G I E L K E I P V P V I E K S D A L V K I

UniRef90_A0A052J4G8 T M K A A V V R E F G K P L V I E D A P I P M P G P G Q I Q V A I

UniRef90_U1WRA1 M K A A V W Y G V K E V Q V S I E E P K V K P G T V K I K V

UniRef90_UPI000425057C M K A V T Y Q G V K N V V V K D V E A P K I K P D D V I V K L

UniRef90_W4QCHO K M K A A V L N K P L D I E I K E R D I T I D E H E I L V K V

UniRef90_B6J2S1 M K V L S K L K P A P G L W L H K A P T P K P G R D E V L I K I

UniRef90_UPI000463A9E6 M K A L T W H G K S D I R C E S V P D P K I H P R D A I I K V

UniRef90_A0A031FVP1 M K A M T Y R G P S K I R V D R K P D P V L H P N D A I V R V

UniRef90_UPI000252C8B4 M

UniRef90_T3IHx7 M K S V R F Y G I R D T R V E D V D V P K I L L E D D V I I K V

UniRef90_B0TYR8 M K A A K L K K E P G I W M I D D A P M P E Y G Y N D V I I K I

UniRef90_E8V5M4 M K A L V K A R A E R G L W I E D V P E P E M G I N D V K I R V

UniRef90_M2NH50 V L E K Q H H V K F E D R P V P K I Q P Y D V L A N V

UniRef90_U4J6R1 M K A A V F V E K G R I E V V D K R I P D V G P N D A I V R I

UniRef90_R6RKA9 M R M M D A I V K P S A A P G L E L R Q V P V P T P G P G E V L I K I

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UniRef90_H9UDV2 M K A M T Y R G P Y K I R V E E K P D P T I H P N D A I V R V

UniRef90_UPI000467FD96 M L A M E Y R G P R R V R A V Q K P M P H P Q D A I V K V

UniRef90_UPI0003FB77B9 P T T M K A V V A Y S P G D Y R L E E V P V P Q I G E G E I L V K V

UniRef90_UPI00037E75B6 M K A V R L L G P N D F T V E N I P V P E I S E G E I L L R M

UniRef90_C4V1J4 M K A A R I I E P E K P L V I S D V D T P E P K D S E V L V K V

UniRef90_V6AR00 M L A A V L H E A K K L V I D E I D T P Q P Q P G Q V K I R V

UniRef90_R4WS09 M R A L V K P N A G P G L E L R E V P E P E P G P G E V Q I R V

UniRef90_UPI0003B567BD M R A A I L Y G T G R P L S I E E L A A P Q P R A G E V G V E I

UniRef90_M7MMZ9 M K A A R L H A F H T P F A I E T V P D P E P G P G E D A I V R V

UniRef90_C8WUX0 M K A A T I K G P N K P L E I K E V P T P K P G P G E I L V R V

UniRef90_E1QT79 M K A L V W Q G V N R V G V E N V P D P E L Q P T D A I V R V

UniRef90_L0A559 T M Q A L V K K Y P K P G L W L D E V P V P E V G I N D V L I K V

UniRef90_B5EJ55 M K A L V K A R A E P G I W M E R V P V P E I G P N D V L I K V

UniRef90_A0A011V0N4 M T M K A V I F P G D K K V E V R E V P I P Q P G Q G E V L I R M

UniRef90_UPI000380364C M R G A V L E A I G R P I Q V Q D L E L D G P G H G E I L V R I

UniRef90_UPI0004764CDF M R G L V F W E T N K P L T I E E F N M P R K A G E I L I K T

UniRef90_V4UK05 A L T W H G K G D I R C E S V P D P K I E D R D V I V K V

UniRef90_UPI00041486E3 T M K A A V V R E F G K P L V I E D A P I P V G P G Q I L V K I

UniRef90_F6F4B5 K A A I L V R K Q N S P L I V D D I Q F P K Q L D G Q V L V K V

UniRef90_A2BSH4 M K A V T W Q G K K M E I R N V D D P K I A P T D A I I R I

UniRef90_V5XLA2 M K A V L R G E D V V Y E E R P V P E L A D D E V L I Q V

UniRef90_M5GGX3 M S K T M K A M T Y G E N D I R F E E R P V P T I I P T D A I V R V

UniRef90_G4CJR0 A A L T P C H G G A W E M A S A E L D A P R G D E V L I R I

UniRef90_T0J583 M K A I T Y Q G I R D I Q V D N V D D P K I K N D D I I K V

UniRef90_I9M5G2 M K A L V Y E P G R S W K D K P R P C I E K P T D T I V R L

UniRef90_W1N770 M K A A V V R E F G K P L S I E Q V P V P T P A P G Q I L V K F

UniRef90_D8J0S6 R I A R F D E P G K P F Q L D T V V P E V G P G Q I L I K V

UniRef90_UPI0003FC33F3 M K T M L A A Y L P G N S T V D L R E V A V P T P G I N Q V L I K M

UniRef90_UPI00029A3F9E M G T M R A E R F Y A D T K T V V L E D V P I P D P G G E G E V L V K V

UniRef90_P77360 T M W A L T K K K P E K G L W M E R V P V P V G P G E G E V L V K V

UniRef90_Z5XB16 M K A A V F L G K E S I E T R E I D I P T L K E N E I L I K V

UniRef90_R5U3C4 T M K A A V V K A F G Q P L V I E E V M V P A V E P G K I L V K I

UniRef90_R9MQU8 M L N A R A A V L L D A G A G D P R L T D V Q V R P P V G D E L L V E I

UniRef90_R9V176 V L N K P G D V T F E E R P K P T L D P H D V L V A I

UniRef90_L8FFG2 A L T W H G T H D V R V D N V D D P Q I N P R D A I L K I

UniRef90_C7YJC9 M K A M V I P E G R A V I R E V P E P E P G P G E V V V S V

UniRef90_UPI0003B3F217 K M N A I V A Y A P K D Y R Y E E V D T P K I N P E E I I V K V

UniRef90_D5WT05 A V L Y K K D D L R L E E Q R P V P P G D N D V Q I R V

UniRef90_B9DIG1 M K A A V V R E F G A P L V I E E V A V P P G R N G E I L V E V

UniRef90_B7QAN4 M K A A V F Y G K G D I R Y E E R E V K E P G F K E V M I H V

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UniRef90_G4HH19	Y	C	I	G	I	C	G	S	D	L	H	I	Y	Y	E	G	R	Y	V	Q	K	E	D	L	L	L	G	H	E	F	L	M	G	I	V	E	V	G	A	G	R	V	
UniRef90_K7RPA0	K	A	C	G	V	C	R	S	D	L	H	I	G	W	R	G	E	W	P	G	K	L	P	H	L	F	G	H	E	F	L	V	G	I	V	E	V	G	A	G	R	V	
UniRef90_UPI00036F0B8E	K	T	C	G	V	C	H	T	D	L	H	A	A	H	G	D	W	P	V	K	P	L	P	L	T	F	G	H	E	F	L	V	G	I	V	E	V	G	A	G	R	V	
UniRef90_UPI0003B56B02	T	L	A	A	I	C	G	S	D	L	H	I	Y	H	G	M	M	P	T	R	V	G	T	T	F	G	H	E	F	L	V	G	I	V	E	V	G	A	G	R	V		
UniRef90_K9QSB9	T	S	T	A	I	C	G	S	D	L	H	I	Y	G	G	Y	I	P	T	M	Q	G	D	I	L	G	H	E	F	M	G	E	I	V	E	V	G	A	G	R	V		
UniRef90_A0A037Z5N3	T	S	T	A	I	C	G	S	D	L	H	I	L	H	G	M	I	P	M	P	K	G	F	I	L	G	H	E	F	T	M	G	I	V	E	V	G	A	G	R	V		
UniRef90_Q2NQF0	S	A	V	G	V	C	H	T	D	L	H	I	F	D	G	M	T	W	P	K	L	T	P	M	V	F	G	H	E	F	M	G	I	V	E	V	G	A	G	R	V		
UniRef90_Q1J2J1	R	R	V	G	V	C	G	S	D	L	H	I	Y	Y	T	G	S	F	V	V	E	A	P	L	I	L	G	H	E	F	V	M	G	I	V	E	V	G	A	G	R	V	
UniRef90_UPI000376E673	T	S	T	A	I	C	G	S	D	L	H	I	Y	L	G	N	I	K	L	R	D	G	Y	I	V	G	H	E	F	P	M	G	I	V	E	V	G	A	G	R	V		
UniRef90_W3RR91	T	S	C	A	I	C	G	S	D	L	H	I	F	D	G	M	I	P	E	M	H	D	G	I	L	G	H	E	T	T	M	G	E	V	D	V	G	A	G	R	V		
UniRef90_UPI0003B30DBD	V	G	V	G	L	C	H	T	D	L	I	A	R	D	Q	F	I	P	I	P	L	P	A	V	L	L	G	H	E	F	G	A	G	I	V	E	V	G	A	G	R	V	
UniRef90_E0WBC8																																											
UniRef90_N6W4Z0	V	A	C	G	I	C	H	T	D	V	F	G	M	T	A	G		C	A	A	P	T	V	F	G	H	E	F	G	A	G	I	V	E	V	G	A	G	R	V			
UniRef90_C5D554	E	W	A	G	I	C	G	S	D	L	H	E	Y	A	A	G		P	I	F	V	P	I	M	G	H	E	F	S	G	R	V	E	V	G	A	G	R	V				
UniRef90_M2RSU8	S	K	T	T	I	C	G	S	D	L	H	I	L	H	G	D	V	P	T	V	P	R	I	L	G	H	E	F	G	L	G	T	V	E	V	G	A	G	R	V			
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UniRef90_X0R378	Q	A	S	G	V	C	H	T	D	L	H	A	I	E	G	D	W	P	V	K	P	P	F	I	P	G	H	E	F	G	V	G	L	I	T	A	V	G	A	G	R	V	
UniRef90_M4Z4Q3	E	A	C	G	I	C	H	T	D	L	A	V	K	L	G	H	I	P	V	P	L	P	K	V	L	G	H	E	F	G	A	G	I	V	E	V	G	A	G	R	V		
UniRef90_M8E237	T	S	T	A	I	C	G	S	D	L	H	I	L	H	G	M	I	P	M	P	E	D	F	I	L	G	H	E	F	P	M	G	I	V	E	V	G	A	G	R	V		
UniRef90_G7MBQ7	M	A	A	G	I	C	G	S	D	L	P	R	A	L	K	N	W	K	Y	P	V	P	A	I	L	G	H	E	F	S	G	Y	I	V	E	K	G	K	N	V			
UniRef90_L2SIK9	M	F	S	G	I	C	H	T	D	L	L	L	Q	G	A	D	V	Q	D	Y	P	A	I	F	G	H	E	F	G	A	G	I	V	R	S	I	G	K	N	V			
UniRef90_M7U6A6	K	A	C	G	I	C	L	S	D	A	H	L	L	D	G	S	D	V	Q	S	P	L	P	V	V	F	G	H	E	S	S	G	V	I	D	E	V	G	A	G	R	V	
UniRef90_I5B6S7	L	K	T	A	I	C	G	S	D	L	H	I	Y	N	W	D	K	W	V	P	L	P	M	H	I	G	H	E	F	V	G	K	I	V	A	V	G	A	G	R	V		
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UniRef90_W4Q5X0	Q	S	T	V	G	L	C	G	S	D	V	H	Y	Y	G	N	F	L	V	E	R	P	I	L	G	H	E	S	S	G	E	I	V	E	I	V	G	A	G	R	V		
UniRef90_L8H3J6	H	A	C	G	V	C	H	T	D	L	H	A	A	D	G	D	W	P	V	K	P	P	L	I	P	G	H	E	F	G	V	G	E	V	V	A	V	G	A	G	R	V	
UniRef90_UPI0003B69A37	E	A	A	G	L	C	H	S	D	L	S	V	V	N	A	D	R	P	R	L	P	M	A	L	G	H	E	F	V	A	R	V	E	T	A	G	P	A	G	R	V		
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UniRef90_B0RT65	G	L	S	T	T	C	G	S	D	L	H	F	I	D	G	Y	L	P	T	M	R	G	D	V	I	G	H	E	F	M	G	T	V	E	V	G	A	G	R	V			
UniRef90_UPI00047C4722	T	Y	S	S	L	C	H	S	D	L	S	V	V	D	G	T	R	V	R	P	L	P	M	A	L	G	H	E	F	A	V	G	R	I	V	T	V	G	A	G	R	V	
UniRef90_C4L2U9	K	A	T	S	I	C	G	T	D	V	H	I	Y	E	W	D	E	W	V	K	P	P	Y	V	F	G	H	E	F	S	G	E	V	V	A	L	G	E	G	T			
UniRef90_H5XUX7	T	T	S	T	I	C	G	S	D	I	H	I	K	H	H	G	M	G	V	K	P	G	N	I	L	G	H	E	F	V	G	I	V	E	Q	V	V	G	A	G	R	V	
UniRef90_G3PSH5	H	S	V	G	I	C	G	S	D	V	H	I	Y	W	Q	G	D	F	V	V	T	K	P	M	V	L	G	H	E	F	A	S	G	R	V	V	K	V	G	A	G	R	V
UniRef90_UPI00047CDF2C	I	K	T	T	I	C	G	T	D	L	G	L	L	H	G	K	T	P	S	C	K	P	T	T	L	G	H	E	F	G	V	G	I	V	E	V	G	A	G	R	V		
UniRef90_A0A052J4G8	Q	A	S	G	V	C	H	T	D	L	H	A	A	E	G	D	W	P	V	K	P	P	F	I	P	G	H	E	F	G	V	G	F	V	S	A	V	G	A	G	R	V	
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UniRef90_B6J2S1	K	K	T	A	I	C	G	T	D	L	H	I	Y	K	W	D	E	W	A	P	V	M	H	V	G	H	E	F	V	G	E	I	V	E	V	G	E	A	A	V			
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UniRef90_UPI000252C8B4	V	A	T	G	I	C	H	S	D	E	A	L	R	K	G	D	S	S	V	G	Y	P	V	I	L	G	H	E	F	G	A	G	I	V	E	K	V	G	N	Q	V		
UniRef90_T3IHX7	K	V	A	G	I	C	G	S	D	L	S	K	Y	S	K	T	G	V	H	M	V	G	E	I	L	G	H	E	F	S	G	E	V	A	Q	V	V	G	N	V			
UniRef90_B0TYR8	K	K	T	A	I	C	G	T	D	L	H	I	Y	N	W	D	K	W	S	P	V	P	M	I	T	G	H	E	F	A	G	E	V	V	A	K	V	G	N	V			
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UniRef90_M2NH50	K	F	T	G	I	C	G	S	D	V	H	Y	W	Q	G	H	F	V	V	K	D	P	M	V	L	G	H	E	S	S	G	I	E	A	V	G	D	K	V				
UniRef90_U4J6R1	T	T	T	T	I	C	G	T	D	I	H	I	L	K	G	E	Y	P	V	S	K	G	L	T	I	G	H	E	F	V	G	V	I	E	K	L	G	S	A	V			
UniRef90_R6RKA9	H	K	T	A	I	C	G	T	D	V	H	I	Y	D	W	N	E	W	S	K	P	M	V	I	L	G	H	E	F	V	G	E	I	A	E	L	G	A	V				
UniRef90_R9L6N3	E	Y	V	G	I	C	G	S	D	V	H	Y	Y	E	G	S	F	V	V	E	G	D	F	I	L	G	H	E	F	C	A	G	T	I	T	A	V	G	S	E	V		
UniRef90_H9UDV2	R	R	A	S	I	C	G	T	D	V	H	I	Y	K	W	D	E	W	S	Q	P	P	L	I	T	G	H	E	F	M	A	G	E	V	V	A	V	G	N	A	V		
UniRef90_UPI000467FD96	T	R	A	A	V	C	G	S	D	L	H	L	F	H	G	M	M	P	T	R	I	G	H	T	F	G	H	E	F	I	V	G	E	V	E	E	V	G	P	S	V		
UniRef90_UPI0003FB77B9	L	R	A	C	I	C	G	S	D	L	H	L	Y	N	G	N	I	P	T	R	V	G	S	T	F	G	H	E	F	V	F	G	E	V	V	E	I	G	N	D	V		
UniRef90_UPI00037E75B6	E	A	C	G	I	C	A	G	D	L	K	A	F	D	G	A	P	S	F	W	G	P	M	I	P	G	H	E	F	I	G	H	V	V	A	L	G	E	G	V			
UniRef90_C4V1J4	K	T	T	A	I	C	G	T	D	M	R	I	L	T	G	K	K	G	V	R	Y	P	S	T	I	G	H	E	F	C	G	V	I	E	K								

UniRef90_UPI00037AF696	T	N	L	R	K	G	D	R	V	V	V	P	F	P	F	A	C	G	H	C	H	F	C	N	M	D	G	Q	T	H	C	E	N	S	N	P	E	H	Y	G	
UniRef90_G4HH19	T	N	V	S	V	G	D	R	V	A	V	P	F	G	V	T	C	G	H	C	A	Y	C	N	K	S	G	R	N	V	L	C	P	D	V	V	F	M	A	T	P
UniRef90_K7RPA0	T	S	L	K	V	G	D	R	V	I	P	W	L	I	S	A	C	G	E	H	C	L	S	G	W	E	T	L	C	C	P	D	I	L	I	F	A	A	T		
UniRef90_UPI00036F0B8E	T	S	L	K	V	G	D	R	V	I	P	W	L	I	S	A	C	G	E	H	C	L	S	G	W	E	T	L	C	C	P	D	I	L	I	F	A	A	T		
UniRef90_UPI0003B56B02	E	R	L	K	V	G	D	R	V	M	V	P	F	N	V	I	S	C	G	S	Y	F	C	A	R	G	L	Y	S	N	C	H	N	V	N	P	N				
UniRef90_K9QSB9	N	T	L	K	V	G	D	R	V	V	V	P	S	V	I	S	C	G	R	C	H	Y	C	Q	H	D	M	W	S	L	C	D	N	S	N	P	N	G	W		
UniRef90_A0A037Z5N3	T	N	V	K	K	G	D	R	V	I	P	F	P	I	S	C	G	H	C	W	C	A	Y	C	H	D	L	W	S	Q	C	D	N	S	N	P	N	G	E	T	
UniRef90_Q2NQF0	T	G	V	A	P	G	D	R	H	V	C	L	F	A	S	C	G	V	C	A	L	C	A	A	D	H	P	A	Y	C	P	D	R	S	A	R	T	L	N	L	S
UniRef90_Q1J2J1	T	H	V	R	P	G	D	R	V	A	L	E	P	G	V	P	C	R	R	C	A	F	C	K	R	G	E	Y	N	L	C	P	D	M	T	F	M	A	T	P	
UniRef90_UPI000376E673	T	K	V	K	K	G	D	R	V	I	P	F	T	V	A	C	G	T	C	F	F	C	K	N	K	N	E	S	Q	C	C	D	N	A	N						
UniRef90_W3RR91	S	S	L	K	V	G	D	R	V	V	P	F	T	I	A	C	G	E	C	F	F	C	T	R	G	Y	Y	S	A	C	E	R	S	N	P	D	K	A	K		
UniRef90_UPI0003B30DBD	T	K	V	R	P	G	D	H	V	L	G	F	S	S	C	G	N	C	A	R	C	D	E	H	L	P	S	Y	C	C	R	D	F	P	R	L	N	Y	A		
UniRef90_E0WBC8	T	E	L	V	P	G	D	H	V	L	P	V	F	T	G	E	C	K	E	C	A	H	C	S	E	E	S	N	L	C	D	L	R	F	I	N	V	D	R		
UniRef90_N6W4Z0	S	R	L	A	P	G	D	P	V	L	S	F	D	S	C	G	N	C	S	A	C	R	A	G	M	P	A	A	C	D	D	H	F	M	A	N	F	S			
UniRef90_C5D554	T	K	V	K	V	G	D	P	V	V	V	E	P	I	L	R	C	G	E	C	P	A	C	K	K	G	K	Y	N	L	C	D	E	H	L	G	F	H	G	L	S
UniRef90_M2RSU8	H	A	F	Q	P	G	D	R	V	I	S	C	I	T	A	C	A	T	C	S	F	C	R	R	G	M	P	S	H	C	A	S	G	G	W	I	L	G	N		
UniRef90_UPI00046EB997	T	K	V	K	K	G	D	R	V	I	P	F	T	V	A	C	G	Q	C	Y	F	C	K	H	E	M	E	S	Q	C	C	D	H	A	N	D	A	K	D	T	
UniRef90_X0R378	H	H	V	K	E	G	D	R	V	I	P	W	L	I	S	A	C	G	H	C	T	H	C	L	G	G	W	E	T	L	C	E	S	Q	Q	N					
UniRef90_M4Z237	V	G	L	A	E	G	D	H	V	L	M	S	F	G	S	C	G	A	G	Y	C	Q	L	G																	

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UniRef90_M5GGX3 P P Y D G T L G R Y Y K V P E D L A Y P L
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UniRef90_UPI00041FDBB6 G V N Y D G G F A E Y C T V L E K Q V Y C L

	170	180	190	200																																											
UniRef90_UPI00037AF696	V	P	D	N	L	S	D	E	Q	V	L	F	L	F	L	T	D	I	L	F	P	T	G	W	A	A	I	D	W	A	N	L	R	K	G	E	V	V	V	F	G	C					
UniRef90_G4HH19	P	D	D	M	S	F	E	E	G	A	L	L	E	P						L	S	V	G	L	H	A	V	R	R	G	R	N	L	R	P	G	E	D	R	V	L	V	L	G	L		
UniRef90_K7RPA0	P	D	A	V	S	F	Q	E	A	A	G	M	G	C	R	F	M	T	T	A	V	Y	G	L	H	G	A	V	R	R	V	G	K	V	H	P	G	E	D	R	V	L	V	L	G	L	
UniRef90_UPI00036F0B8E	P	D	G	I	G	D	V	E	A	A	P	I	L	C	A	G	V	T	T	T	Y	K	A	L	K	V	A	N	V	K	P	G	E	W	V	A	I	V	F	G	L						
UniRef90_UPI0003B56B02	I	P	D	W	M	S	D	E	D	A	V	L	L	T	D	A	L	P	T	G	Y	F	G	A	Q	L	V	S	I	D	E	G	D	T	V	A	V	F	G	A							
UniRef90_K9QSB9	V	P	P	D	L	S	D	E	M	L	L	F	L	S	D	A	I	P	T	G	Y	M	G	A	E	L	C	D	I	Q	P	G	D	T	V	A	V	W	G	C							
UniRef90_A0A037Z5N3	V	P	E	E	L	E	D	E	Q	V	L	F	L	T	D	I	L	P	T	S	Y	W	A	V	E	N	G	G	V	K	L	N	D	S	T	V	V	V	L	G	C						
UniRef90_Q2NQF0	P	S	D	L	P	A	A	V	A	A	P	L	G	C	G	G	Q	T	G	A	G	T	V	L	N	R	L	R	P	E	P	G	S	S	V	L	V	L	G	A							
UniRef90_Q1J2J1	P	D	R	I	S	D	D	A	G	A	L	L	E	P				L	A	V	G	I	W	A	A	R	K	G	D	V	R	P	G	Q	S	S	V	A	V	F	G	A					
UniRef90_UPI000376E673	E	S	C	L	E	D	D	S	L	L	F	L	S	D	V	L	P	T	G	Y	W	S	V	K	N	A	G	I	K	K	G	D	S	V	V	V	L	G	C								
UniRef90_W3RR91	V	P	N	G	L	S	D	D	Q	V	L	F	L	S	D	I	F	P	T	G	Y	M	A	A	D	F	C	N	I	K	G	G	E	T	I	A	I	W	G	A							
UniRef90_UPI0003B30DBD	D	A	D	D	D	L	L	K	L	G	P	L	G	C	G	V	Q	T	G	A	G	G	V	M	R	S	L	A	C	P	A	G	S	T	I	A	I	F	G	G							
UniRef90_E0WBC8	D	P	E	A	P	L	D	K	V	C	L	L	S	C	G	I	S	T	G	L	G	A	T	L	N	V	A	K	P	K	K	G	M	T	V	A	I	F	G	L							
UniRef90_N6W4Z0	D	R	D	L	P	L	D	V	L	A	P	L	G	C	G	L	Q	T	G	A	G	T	V	V	S	L	S	I	K	E	D	K	S	L	V	I	T	G	A								
UniRef90_C5D554	P	E	G	L	S	F	E	Q	G	A	L	V	E	P	A			A	V	A	L	H	A	V	R	S	S	K	I	K	P	G	D	K	A	A	V	F	G	T							
UniRef90_M2RSU8	P	R	G	V	M	E	D	A	L	V	M	V	S	D	L	L	P	T	A	L	E	C	G	T	L	N	G	R	V	Q	P	G	T	S	V	A	V	I	G	A							
UniRef90_UPI00046EB997	E	D	A	E	M	E	D	E	K	L	L	F	L	S	D	I	L	P	T	A	W</																										

UniRef90_UPI00037AF696 G P V G I M A M K A A W I R G A S R V I G V D I L P Y R L E M A K K V A N V E I 210 220 230 240
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UniRef90_UPI0004622CDE	T M K A	L A W F G A G D	V R I V D A P	P P D V T P D D D I L V K V	
UniRef90_B1C9Z0		M K A A	L V L E D K E K	V V Y K D V P	K P E C P K D G I L L K I
UniRef90_F2HMK0		M K S V	Y F V E K N K	M Q V R E F P	K A Q L K E T D A I I K I
UniRef90_M9S1V3		M K A A	V V F H D I G	D I R L E D V A E	P R L Q P T D A I V R L
UniRef90_D3QGY2	P R K	M K V A	V L N E P Y	D I E I K E V N V	P E L G P H D V L V Q M
UniRef90_D5ZPG2					
UniRef90_UPI00036A7370		M K A A	L R W H G V K	K D L R L D E I E E	P A V R P G A V K I K V
UniRef90_H0RWE1	G Q T M K	M K A A	L V W H G K K	D I R C D T V T D	P E I N P R D A I I K V
UniRef90_W2SCS4		A L V W H G K K	D V R V D E V P	V P A I D P G D V I	C R V
UniRef90_F2LMM9		A L R W H G K H	D I R C D T V P	D P I E D G R A I I R I	
UniRef90_UPI000255F3D5	M S M	M K A A	V V E S F G K D	L T V K D L P	P I P E P G P G Q A L V K L
UniRef90_B9LV78		M Q A A	V L L E S F Q E	P L T V Q D V D R	P E P D P D G A V A E V
UniRef90_B0UP94		M K A A	L V W H G T Q	D I R C E T V P	D P P R I E D D R A I I R V
UniRef90_C0ZQ61		R A A V	I T E F G G D L	E V R E V P I	P E L E P G G A L V R I
UniRef90_U3P5N0		M K A A	V V T S F T A	P L E I Q Q R D I	P E P G T G E V L I R L
UniRef90_L8Y2L6		M K A A	V V W H G R E	D I R I E D K A L S	P L K D N E V T I R V
UniRef90_W2BUP3		M K A A	I F N G P G	D L N V K E V P	T P E A G P G E I V L R V
UniRef90_J2LCQ8		M R A A	L V I H A A	K D L R I E E R P	V I E A P G R G Q V E V A I

UniRef90_U6SW31	A	F	T	G	I	C	G	T	D	I	H	T	F	T	G	E	Y	K	S	K	T	P	V	V	L	G	H	E	F	S	G	I	V	I	V	V	P	D	V	80
UniRef90_V7HW72	A	Y	T	G	I	C	G	T	D	I	H	T	F	T	G	E	Y	A	A	R	T	P	V	V	L	G	H	E	F	S	G	I	V	I	V	V	P	D	V	
UniRef90_M7QOC6	T	A	T	A	I	C	G	S	D	L	H	L	Y	R	K	A	D	F	I	V	Q	E	P	M	V	I	G	H	E	F	S	G	M	V	V	A	G	D	S	
UniRef90_Q93X81	K	A	V	G	I	C	G	S	D	V	H	Y	Y	E	G	R	Y	V	V	E	K	P	L	I	L	G	H	E	F	S	G	M	V	V	A	G	D	S		
UniRef90_X0RAK5	Y	C	I	G	I	C	G	S	D	L	S	Q	L	D	G	H	I	A	P	R	L	P	V	V	L	G	H	E	F	S	G	M	V	V	A	G	D	S		
UniRef90_G2PFI2	A	A	C	G	I	C	G	S	D	L	S	Q	L	D	G	H	I	A	P	R	L	P	V	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_B3GGI5	I	K	T	T	I	C	G	T	D	L	G	L	L	K	G	K	N	P	E	I	E	F	G	R	I	L	G	H	E	F	S	G	M	V	V	A	G	D		
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UniRef90_R9N1T0	R	S	V	G	I	C	G	S	D	G	P	L	L	A	G	T	R	E	V	P	Y	P	L	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_F0X9Z8	N	Y	T	G	I	C	G	S	D	I	H	Y	V	E	G	H	Y	V	V	K	E	P	M	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_U3BZG5	E	K	T	T	I	C	G	S	D	L	H	I	L	R	N	N	V	A	T	F	K	P	T	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_R6AHS3	T	A	T	A	I	C	G	S	D	L	H	L	Y	R	G	K	I	P	V	K	H	G	D	V	F	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_C6Q2I5	K	W	C	G	I	C	G	S	D	L	H	E	Y	L	G	G	P	I	F	I	P	P	V	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_W0I565	K	A	C	G	V	C	G	T	D	L	N	E	Y	L	N	G	P	I	F	I	P	P	V	T	I	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_J2MQH4	M	L	S	S	V	C	G	S	D	L	H	L	L	G	G	Y	P	T	M	Q	G	D	I	L	G	H	E	F	S	G	M	V	V	A	G	D	S			
UniRef90_L7LDC2	D	A	T	T	I	C	G	T	D	L	H	L	L	K	G	D	V	P	A	V	T	P	R	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_A6WG83	S	L	T	T	T	C	G	S	D	L	H	F	I	D	G	Y	L	P	G	M	Q	P	D	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_UPI000477E62	T	L	T	T	I	C	G	S	D	I	H	I	K	H	G	A	V	P	R	A	V	P	T	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_W3WPM8	N	Y	T	G	I	C	G	S	D	V	H	Y	W	H	G	H	F	V	V	K	E	D	P	M	V	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_S6BYA8	V	R	A	C	V	C	G	S	D	L	W	W	F	R	G	I	S	K	R	E	P	N	T	L	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_S2WU86	G	A	N	T	V	C	G	T	D	G	R	L	R	G	E	K	T	A	G	L	G	I	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_K2BBL0	F	C	S	G	I	C	G	S	Q	I	G	E	I	D	G	G	P	D	K	F	L	P	H	L	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_X8C7I3	H	A	S	G	M	C	H	S	D	E	H	I	V	T	G	D	M	P	F	R	L	P	C	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_UPI0003B4CEE1	E	A	S	G	L	C	H	T	D	I	H	A	A	H	G	D	W	P	V	R	P	P	F	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_X1BC45	A	A	C	G	V	C	M	T	D	I	H	Y	I	D	H	G	V	P	T	K	P	P	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_G6XLFO	E	T	C	G	V	C	H	T	D	L	H	A	A	R	G	D	W	P	T	K	P	P	F	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_I4VT90	T	A	T	A	I	C	G	S	D	L	H	L	Y	R	G	K	I	P	A	M	K	G	D	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_P35497	K	A	T	G	I	C	G	S	D	I	H	Y	Y	R	G	K	Y	I	L	K	A	P	M	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_Q5WJ77	K	A	V	G	I	C	G	S	D	L	H	Y	Y	E	G	E	R	V	A	K	P	P	F	V	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_K8EB14	E	A	C	G	I	C	G	T	D	Y	H	I	L	E	G	F	L	S	P	Y	P	L	I	L	G	H	E	F	S	G	M	V	V	A	G	D				
UniRef90_UPI00035D5F61	R	L	S	T	T	C	G	S	D	I	H	L	L	T	G	H	I	P	F	M	E	G	D	V	I	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_UPI0002E66553	T	A	C	A	I	C	G	S	D	L	H	L	M	G	G	Y	V	P	T	M	K	G	D	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_W1HHP0	T	H	T	G	V	C	H	T	D	A	F	T	L	S	G	D	P	E	G	F	P	A	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_W4L783	K	A	S	G	M	C	G	S	D	L	K	M	Y	R	A	K	G	G	A	A	E	P	V	I	A	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_G7WVGK8	T	L	S	T	I	C	G	S	D	I	H	I	I	G	G	H	A	G	V	Q	P	P	H	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_X2HEL9	V	R	A	C	V	C	G	S	D	L	W	W	Y	R	G	I	S	T	C	E	P	E	R	I	V	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_F1Z833	Q	A	S	G	V	C	H	T	D	L	H	A	A	C	G	D	W	P	V	K	P	P	F	I	L	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_K2FI43	G	W	A	G	I	C	G	S	D	L	H	E	Y	E	E	G	P	V	F	V	P	P	L	T	M	G	H	E	F	S	G	M	V	V	A	G	D			
UniRef90_D2QDX3	T	R	S	C	I	C	G	S	D	L	H	L	Y	H	G	L	V	P	T	R	V	G	M	T	F	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_H1Z643	Q	F	A	G	I	C	G	S	D	L	H	E	Y	N	H	G	P	Q	L	I	P	M	D	T	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_I7BHA0	E	A	C	G	V	C	R	S	D	L	H	G	W	Q	G	D	W	G	T	E	P	G	Q	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_E1V3M3	A	A	S	G	V	C	H	T	D	L	H	A	A	R	G	D	W	P	V	K	P	P	F	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_R4KP99	R	A	A	G	I	A	T	D	V	K	M	A	L	L	G	G	L	P	K	N	L	P	T	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_B2TQR3	E	Y	V	G	I	C	G	S	D	L	H	Y	Y	E	G	D	Y	V	V	K	P	P	F	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_R6NBH8	M	A	A	G	I	C	G	T	D	I	H	I	Y	H	G	E	K	G	V	T	P	P	V	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
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UniRef90_B1C8U7	K	A	V	G	L	C	G	S	D	I	R	N	L	T	T	D	S	K	G	N	Y	P	F	V	Y	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_V4TN88	D	A	V	A	I	A	T	D	L	E	I	H	N	G	P	A	M	K	N	F	T	P	G	H	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_UPI0004235C42	L	R	S	C	I	C	G	S	D	L	H	L	Y	H	G	L	V	P	T	R	I	G	S	T	F	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_J2Z9P6	G	A	C	S	I	C	S	T	D	L	H	M	Y	H	G	S	F	A	V	D	F	P	V	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_M0L6J5	T	H	T	A	I	C	G	S	D	L	W	F	Y	R	G	E	E	H	E	P	S	P	V	G	H	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_F3A640	H	S	C	G	I	C	G	S	D	L	H	K	M	Q	T	K	W	K	Y	G	Y	P	A	V	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_UPI000360E07A	K	A	C	G	I	C	G	T	D	F	S	I	Y	T	G	K	Y	S	R	E	Y	P	L	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_C0C5T8	T	S	A	A	I	C	G	S	D	L	H	L	V	H	G	L	V	K	G	M	Y	G	Y	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_X1KHH7	R	A	C	S	I	C	G	T	D	I	K	V	Y	H	G	H	K	H	M	R	F	P	R	V	T	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_UPI000319A4C6	K	A	V	G	I	C	G	S	D	I	S	R	Y	N	K	L	G	P	Y	V	P	P	G	M	V	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_UPI00030BD241	T	A	S	A	I	C	G	T	D	L	H	F	V	R	G	T	F	S	G	M	K	P	T	I	L	L	G	H	E	F	S	G	M	V	V	A	G	D		
UniRef90_UPI0003607173	K	V	A	L	T	C	G	T	D	V	K	M	Y	M	R	G	Y	P	L	T	P	P	H	G	F	L	L	G	H	E	F	S	G	M	V	V	A	G	D	
UniRef90_M0MS16	E																																							

	90	100	110	120
UniRef90_U6SW31	K Y L K V G D R V T S E T T F T	C G E C K Y C L E K D Y N L C	S N R K G I G T Q	
UniRef90_V7HW72	T K F K P G D R V T S E T T F T	C G E C F F C R K N K E Y N L C	S N R K G I G T Q	
UniRef90_M7Q0C6	T A V R K P G D R V T S E T T F T	C G E C F F C R K N K E Y N L C	E S T N K S G Q G A	
UniRef90_Q93X81	K N L L P G D R V A L E P G I S	C W R E Q C K G G R Y N L C		
UniRef90_X0RAK5	K D V Q V G D R V A V E P G I P	C G K C E Y C K F G R Y N L C	P D V S F M A T P	
UniRef90_G2PF12	G H W K A G D R V V L G A G K A	C G T C P A C R K F G G G T N		
UniRef90_B3GGI5	K N F K I G D K V I L S C V S R	C G T C D N C Q K Q L Y A H C	R N D G G W M G	
UniRef90_U3R2D0	T R V K E G D R V V P W L Y S A	C G Y C H C L Q Q W E T L C	E K Q Q N T	
UniRef90_G7G0Q9	T S V K V G D R V V P W L Y S A	C G H C E F C L S A Y E P V		
UniRef90_R9N1T0	K G L K E G D R V T P C L V I G	C G D C D M C I E G E H V L C	D H L I E T	
UniRef90_F0X9Z8	K T L K V G D R V A L E P G Y P	C R H C P C L S G H Y N L C	P D M R F A A T P	
UniRef90_U3BZG5	H N F K V G D R V I L S C I T S	C G S C S M C Q K S N F G Q C	P L N G G W L L G N	
UniRef90_F6AHS3	T A V S K G D R V I V P F V I A	C G S C F F C D M N L H A A C	E T T N N G R G A	
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UniRef90_J2MQH4	T Q F S K G D R V T V S I L G	C G Q C H C Q R S D F S C	D N S N P N P S A	
UniRef90_L7LDC2	T T L K V G D R Q V I L S C V S A	C G K C I Y C K Q G V Y S C	C C A P E G A P S G I	
UniRef90_A6WG83	R S T A V G D R V V V S F I A	C G T C A Y C K R E M Y S L C	D T T N P N G A L	
UniRef90_UPI0004777E62	K K V K P G D R V A V N V E T F	C G C F F C R R G F V N N C	E N E N G G W A M	
UniRef90_W3WPM8	T T L Q K G D R V A L E P G Y P	C R R C E P C L A G K Y N L C	P E M R F A A T P	
UniRef90_S6BYA8	T D I K A G D F V V V P F T H G	C G H C A A C R A G F D G N C	L N M E G G G N A	
UniRef90_S2WU86	E G F E V G D R V L G V L P T V	C G Q C Y Y C R R G M E H L C	I D S K	
UniRef90_K2BBL0	T K V K K G D H V V M H W			R K
UniRef90_X8C7I3	S W L Q P G D H V V F S F M P S	C G R C P S C S T G H Q S L C	D L G A K I Y S G	
UniRef90_UPI0003B4CEE1	T V R R V G D R V A P W L G H A	C G A C V N C V D G R E N L C	E Q Q Q N T	
UniRef90_X1BC45	K D F K A G D R V L L P V F S C	C G Y C R Y C R L G R E N I	L N M	
UniRef90_G6XLF0	G D F K V G D R V V P W L Y S A	C G H C E H C L G G W E T L C	E K Q E D T	
UniRef90_I4VT90	T A V V Q R G D R V I P F V I A	C G Q C F F C A L E Q Y A C C	E T T N T V A G A	
UniRef90_P35497	T R V K V G D R V A E P G V P	S R Y S D E T K E G R Y N L C	P T H M F A A T P	
UniRef90_Q5WJ77	A D L N V G D H V V I E P G L P	C G E C S S C R V G H Y N L C	P K V L F L S S P	
UniRef90_K8EB14	E N W Q V G R V A V D P S V I G	C G E C Y Y C L S N Q S N M C	Q K W N A V	
UniRef90_UPI00035D5F61	R R R P G D R V V V A S F I G	C G R C W Y C R H D L G W N C	D N T N I N P G I	
UniRef90_UPI0002E66553	T A L K V G D R I V V P F T L C	C G A C R Q C Q W G N W S L C	E R T N P N G K M	
UniRef90_W1HHP0	T S L K P G D H V I P L Y T A E	C G C K F C K S G K T N L C	C A V R A T Q G K	
UniRef90_W4L783	S E A Q V G Q R V M D H H Y Y G	C G V C K H C R T G W S Q L C	V E	
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UniRef90_X2HEL9	T H V R N G D F V V P F T H G	C G H C A A C K A G F D G N C	Q N K E D E R N G	
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UniRef90_H1Z643	T H F K K G D R V V V E P L Y K	F N D S P F T T A G Q L Y N L C	G E N H L G	
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UniRef90_E1V3M3	Q H V K E G D R V V P W L Y S T	C G H C E H C L G G W E T L C	S E S Q Q N T	
UniRef90_R4KP99	T G L A P G Q R V A A Y P I A V	C G D C F Y C R R N R H N L C	E R	
UniRef90_B2TQR3	K D L K I G D R V A L E P G K T	C G H C E F C K T G R Y N L C	P D V	
UniRef90_R6NBH8	T T V R T G D H V T V D P N I Y	C G T C P Y C K A G K Q L N C	S N L	
UniRef90_UPI000248DF47	S K V E I G D R V T V E P I L A C	G T C L P C R Q G L N V C	S D E L G F H G L S	
UniRef90_B1C8U7	T G F E I G D R I F S P R P V P	C M E C E A C I D G R S E Q C	Q N I K E	
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UniRef90_UPI0004235C42	E K V K I L G D R V M V P F N V S	C G K C A F C R Q E L Y G N C	H E S N	
UniRef90_J2Z9P6	S E L E P G D R V A V N P A V P	C G A C S Y C K R G E T N L C	D N A T A I G G A	
UniRef90_M0L6J5	R H V P G D R V F A P F A I S	C G E C E F C R K G L H T S C	V N G G F W G P H	
UniRef90_F3A640	T K F N K G D R V V C V P F M P	C N E C E Y C K Q S L Y S M C	E N Y T M I G S H	
UniRef90_UPI000360E07A	R H L Q V G D R V T A D I N M S	C G I C F Y C S R G Q K L M C	P E F R Q L	
UniRef90_C0C5T8	K N L T K G D R V V I P F P V A	C G H C E F C N K G E F S Q C	D N S N	
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UniRef90_M0L6J5
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130 140 150 160

T L N R K G I S P P A A L F G Y S D L Y G G I G G Q A E Y V R V P K A N T G F P
P V D P D M K F F A T P V H G S L A N Q I V H P A D L C F K L
Y M I D G T Q A E F V R T C E D L Q V M A F H Y D G A W A E Y V L T D A T T L T A V
P D A E F G G Y T K N G G F A E Y I I A D P N Y V A H I
P I D G T L T G F W T A P A D F Y K L P E V V S L Q E G A L I E P L A V A
E I D G G Q A E Y V R I P Y A D N S L H L V
I L N K K Q I P S G A A L F G Y S H L Y G G M G G Q A E L V R V P K A N A G P F
G S G G G F A E Y T V F P E E F I H K I
T D I A Y G Q P A C G I I G Y S H A F G G Y A G S H A T Y I R V P F A D V L F A
G W Q Q P L L G Y P S G G I Y G Y T H F G G Y A G S H A E Y V R V P F G D V N C P
G C R I D G G Q A E Y C R I P F A D H G L T R P H D G T L T G F W A A P A D F Y K L P D H V S T Q E G A L V E P L A V A
G Y Q G E Y L R F T N A N W A L V K I P G Q P E D Y S I F G Y G I D G G L A E Y I R I P A E A L G V F
G I G I D S E T P K Y K W D N K I V N A G W L T T F N E Y A I V S E N R L T A I
M Q I Y D E T A R H H V K G I D L A L A C G I G S F A Y H T V V H E A S C V M I
V M L G N H I D G A Y A E Y T K A P A K D C Q H L
T L R S H I T P P A A L F G Y S H L Y G G V P G G Q S E L V R V P K A N V G P A
P I D P N D G V L M E Y I C H P A K F T Y K M P E G L S F E L A S L A E P L S V
G V T L N G A F A E Y V A V P A K N L Y R L
T Q T L W G A D P G G I F G Y S H A M G G F R G S H A E F V R V P F A D H T A I
Q A E Q F G Y A T A G L F G Y S H I T G G F P G G Q A E Y L R I P F A D V T H L
G L M P D G T T R F S Y N G E P I Y H Y M G T S T F S E Y T V C A E I S L A K V
G C V V Y G A T G H G G H A P Y M K V P A R T L V P L
T N R P N G P S L S G C Q A E F V R L P Y A S N Y M H K
G Y Q G E Y L R F T N A D W A L V K I P G Q P Q D Y S D A V L N S L L T L A
E D V D I Y D G F S F I G L H G D G G F T K Y A N V P E E N A Y L L
P E A T A V G G I F G Y S H T A G G Y D G G Q A E Y V R V P Y A N V G P V
F I G L A G D G G F A N Y V V E E Y M V H P M
G F I E E A Q G A F A E Q L H V P V A D H N L V I T L
G Y S V N G G F A E Y T L A Q A D Y V G K L
E F G L G H G A D G A F A E F V R L P G Q I V A I L
E F A T P P I D G I F Q E Y V A H D A S L C F K L
V A V G V N F D G G F A Q Y S V V P E G Q V Y R L
G G G G G F S E I T S V K E S M V H K L P D A M T Y E Q G A M V E P A A V A V
P E I G G F A E Y A A V S G R V L A K I
R N K G H R A N G F T T D G G F A E Y A V N N I N T L V H V
P E A T A V G G I F G Y S H T A G G Y D G G Q A E Y V R V P Y A N V G P V
G D R I I D G S F A E Y V R V P A S N V E K V
G G G G A Q A E K L R V P L A N G T L V R V P E R Y A
R F G G F A E Y S V I P E E N L L K I
D Y G E S G G L F G Y S K Y H G N Y A G G F A E Y V K A P A S Q V H K L
G Y H Y D G G F A E F M L I P E D A V H P I
T V I G S K K P G A Y A E Y T K L P A E N I T K L
G K E A G T A F Y G G P A A T G P F H G L Q A E K A R I P F A N I G L V
G A F S Q Y Q K I P A P N V F H I
G L N E A A P G A F A E E M H V P V A D H N A V Q L
T V L G A F Q P G A F A S R T K L P A A N V L P V
S G Y S I D G A Y A E Y A V A Q A Q Y V V R V
G Y A L G F E S S V P G A F A E Q I H V P E F N V A P I
A E A A G R G K G A S L F G Y T H V Y G A V P G G Q A E Y L R V P Q A H F G P I
G I I R S D G S T L S D G R A V R S Q F F Q S S F S R F S A V H E N C L V K C
P P Y D G T L A R Y Y K L P A D L A Y P L
K S G Q S Y G Y T I S G G F A E Y A V V R E E N I Y H L
A I G V G V N R Q G S F A E Y L V I P A F N A F K I
Y E M A F A A T P P Y D G T L A K Y A L P E D F C Y K L
F D P G G F A E Y V R L P R I N V E P I
G G Y S V N G S F G Q Y M L V D A T F A A R I
I F F A T P V G T F Q E Y V A H E A D L C F K L
V A L G V D I N G G F A E Y C V V P Y K Q L Y V F
R L T Y G H H L H G G F A E Y M L I P G I G V L K I
G Y Q G E F Y R A I N T D G A L V K I P G Q P S D Y S D D Q L A S L T A L A D V
G G S Q A G T A F F G G P R A N G G F H G L Q A E K A R I P Y A N I G L I
P V D G A F T E Y L K H P E D Y L F H I P D T L S Y E Q A T L N E P L S V
G Q A L F G Y E T A G I F G Y S H A M G G L R G S H A E Y V R V P F A D Y G A F
G G G G G F S E Y T V V D E H M V H K I
A D K V F G H T T A G L F G Y T H L T G G Y P G G Q A E Y L R V P F A D A T H I
Q D K L Y G K G F G G L F G Y T R F A G G F A G G Q A E Y V R A P F G D V N L L
A S K A F G H S T A G L F G Y S H L T G G Y P G G Q A E Y V R V P F A D C H I
G G Y S V D G S F G E Y M L V D A R F A A I I
H I G L G F M N Q A P G A F A E E V H I P N A D I N A V P L
A E K V F G H T T A G L F G Y T H L T G G Y P G G Q A E Y L R V P F A D K T H I
R K H Y G D N C E Q Y P Y L V G S F S E Y T Y V P S S R K V L V
S G Y S V D G A F A E Y A T A S A R F V V P V
E Y D D I Y D G F S F I G L H C D G G F A D F V N V P E S A V Y H L
L F G Y G Y D G G L A E Y I K I P N P A I G L F
M P M P H I Q G A F R E R L I A E A W Q C H K I

	170	180	190	200
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UniRef90_V7HW72	P E G V S F	K L A A M S E P L A S C V H A M Y Q K T S I F T L H	D D V V L I F G P	
UniRef90_M7Q0C6	V P D T L P D E K V L F L S D I L P T A V W Q A V K N A N I F V K	L S T C V H A W Q A V K N A N I F V K	G S S V A I F G A	
UniRef90_Q93X81	P E N V S L E E G A M C E P L S V G V H A C R R A N I K G P	E T N V L V I F G A		
UniRef90_X0RAK5	P D D V S Y E E G A L I E P L S V G F H A M K R R G R V Q R P	G D S I F I T G L		
UniRef90_G2PF12	P D S V P L E E H A A V L D A V S T P Y G A I D T A Q L R S	A E S I V G I W G L		
UniRef90_B3GGI5	P D E L N D D D A G V L L S D A L P T A H E I G I Q N G M V K	P G D T V A I V G A		
UniRef90_U3R2D0	P D K I G D F V E I A P I L C A G V T V Y K G I K E T D A K	P G E W V A I S G I		
UniRef90_G7G0Q9	P D G L S A V I Q A A P I L C A G I T T Y K G I K E T D A K	P G E W V A I S G I		
UniRef90_R9N1T0	Q D T T T Y D Q G A S V D P I A S A Y R T V K A S S I T S	K D V V V Y G P		
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UniRef90_U3BZG5	P E D I D V D S L V L L S D I F P T G Y E V G V L D G G V K	P G C S V A V I G C		
UniRef90_F6AHS3	I P D E L D D E R V L F L T D I L P T G Y Q A V I N G G V K	E S S V A I Y G A		
UniRef90_C6Q2I5	P D N M S Y E Q A A L I E P M A V A L H S I R I A N F K T	G D T A L V I L G S		
UniRef90_W0I565	P E S V S F E E G A L V E P L S V G V R A V K K A Q L M	P G D S V V I L G A		
UniRef90_J2MQH4	I P E G V S D E Q A V F V S D A V P T G Y F A A D N A I Q R	G D T V A V W G C		
UniRef90_L7LDC2	P E T V S P E Q G V I L S D I L P T G H E I G V Q Y G N V K	A G D V A V A V G A		
UniRef90_A6WG83	V P E G V D D V S A L F T S D A V P T G F M G A D F C D I T	P G D T V A V F G A		
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UniRef90_W3WPM8		V H I V R Q A V S P G Q S V V V M G A		
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UniRef90_S2WU86	K A P S H L S P V I E V A L A E P L G C V I N G A H N Y Q P	G I G D T V L I A G A		
UniRef90_K2BBL0	P K E I D F E T A A L L G C A V T T G F G I V N N N A K L K I	G E S V A V F G V		
UniRef90_X8C7I3	A K H Y R L D L A C L L G C G F V T G W A P R C T R P R C A	R R H R C R		
UniRef90_UPI0003B4CEE1	P N G V D P W D A A P L T C A G V T T Y K A L K K V A H V V	P A E T A V F G V		
UniRef90_X1BC45	P D L P L D E E S S I I A D A I S T P F H A V K N R A K V Q P	G D S V V V F G C		
UniRef90_G6XLFO	P E N I D P L I E T S P V L C A G L T V Y K G L K M T E A R	P G Q W V A V S G I		
UniRef90_I4VT90	V P G S L D D E R V L F L S D I L P T G Y Q A A E N A R I K	P G C S V A I F G A		
UniRef90_PC5497	P E G V S Y E E G A C V E P L S V G V H S N K L A G V R	F G T K V V V F G A		
UniRef90_Q5WJ77		G L Y T A Q K T S I Q P G S N I V I M G M		
UniRef90_K8EB14	P E N M N F E Q G A F V E P L S C V V Y A M R L N I R	F G D K V L F G A		
UniRef90_UPI00035D5F61	P P P E V D D M S A L F C S D S V T P T G W M G A D L G V R	P G D V V A V W G C		
UniRef90_UPI0002E66553	V P P E L S D E Q V L F L S D I F P T A Y M A A D H C D I	K G G E T I A V W G C		
UniRef90_W1HHP0	N P Q A P L D K A G V C L L G C G V T T G I G A V H N T A K	V K A G R D		
UniRef90_W4L783	P D E L S F E A G A A I S C G T G T A F G A L R R L K V S	A G R D T L A I F G Q		
UniRef90_G7WKG8	I P E G F T E E D M L F V I G D I L S T G Y F G C E Q V H I	V Q P G E S V L I L G A		
UniRef90_X2HEL9		D V M A T G Y H A A S A E V K P G D T V V V M G D		
UniRef90_F1Z833	P A N I S F Q Q I A P V L C A G V T V Y K G L K V I T K S	G D L V I S S G I		
UniRef90_K2FI43	P E S M T L Q D G A L V E P T A V A V Q A I K E A D M S	F G D T V A V F G V		
UniRef90_D2QDX3	I P D W M D H D D A V L T D V V P T G Y Q A A E M G G I	K K G D T V V F G A		
UniRef90_H1Z643	P T S M T F E Q G A M V E P A A V A V Y A V M Q S N I Q	K L G E T V F I S G A		
UniRef90_I7BHA0	P D G V S S V D M A G L G C R F M T S F H A L A H R A D I	G A G D W V A I H G C		
UniRef90_E1V3M3	P D N V G F I E I A P V L C A G V T V Y K G L K M T D T R	P G Q W V I S G I		
UniRef90_R4KP99	E P Q V S F E Q A A M A E P L S C C L A A R T A G V T T	G D V V L V I G A		
UniRef90_B2TQR3	P D N V S T M E G A L I E P L A V G F H A A M Q G N A K	A G Q I V V V M G A		
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UniRef90_UPI0004235C42	I P K W M D P D D A V L L T D V V P T G Y Q A A E M G G I	P G D T V V V F G A		
UniRef90_J2Z9P6	G D L P F R H A A L A E P L G C C I H A A D R S G D V	G Q G D S V A L I G A		
UniRef90_M0L6J5	D D E E T L E S L L P L T D V M A T G H H A A V S A D V	N A G D S A V V I G D		
UniRef90_F3A640	G D L E Y T K A S F I E P L A V V M H A V M G I D I	N L G D S V V V L G A		
UniRef90_UPI000360E07A	P P N L S F E V G A F V E P T S C A I H A A K A M Q V	A L G S T V A V I G D		
UniRef90_C0C5T8	V P D E L T D E Q V L F V I T D V L P T S Y W G T E I			

UniRef90_U6SW31	G	P	L	G	L	L	Q	C	Q	V	A	K	A	Q	G	A	F	V	I	L	A	I	T	K	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V		
UniRef90_V7HW72	G	P	M	G	L	L	S	Q	L	A	K	E	L	N	G	A	F	T	I	V	I	G	V	T	K	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V	
UniRef90_M7Q0C6	G	P	V	G	L	L	S	C	A	S	C	A	R	L	N	G	A	F	Q	I	F	I	V	T	K	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V	
UniRef90_Q93X81	G	P	I	G	L	V	S	V	L	S	A	R	A	F	G	A	A	R	I	V	I	V	D	V	L	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V	
UniRef90_X0RAK5	G	P	I	G	L	L	T	I	E	A	A	K	L	F	G	I	T	E	I	Y	A	S	D	V	L	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V	
UniRef90_G2PF12	G	G	L	G	T	H	L	V	Q	L	T	R	I	C	G	A	S	P	I	V	A	L	M	D	V	L	D	N	D	R	L	L	E	L	A	K	A	L	G	V	N	V	V
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	250	260	270	280
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A L Q N S E V K I L I D
A M T D F E T V
Q M T Q G H E G R I V L D L
Q V K Q Q K M I K G V V L F
Y S V N N K A V K S V I R
K Q M D S D S I K V
E L V S K E Q I K I I V
I A K A G E A I K I V L V
Y A R E R D A I K V V V
I F S S K N C I K T V L
R M E N N E G L K K V V
A M D E R E A V K V M V
M
I F D K K E C I K V I L
L A E T Q K G M K I L I T
A F D R R E G G
S H K S G N V I K N C I V F
A M S D F E T M
R I L K R E
D I L A G R V
A M
T F Q R K Q C I K C V L R
D M K D G T V I K P I I K F
A T K N G K V I K V V I
L M K D R S Q C K I L V N M
I M D S G Q S G K V I L D W
E V K A G K G I K T I I
L A R A Q D S L K V I I
E M H H G K D G R V V I D Y
T F R D K H C I K V V L D
Y S I N N K A V K A V V
V G L S G D A L R V I I N F
A F D K R
M L K S G E A L K V V L
A M D Q R T A I K S L L R
A F D R R E T G
R A R T D K S G K V I V
M F K H K T C V R A V I R
L L K E K N Q V K I L V
V F R D K Q C V K V V L
A F D R K E
T F R D K R C I K V V M
E M H H G K A G R V V I D Y
A M S D Y D T L
T F R D K K C I K V V L
A M Q D L S A I K P V I D
E V L S G K V L
T L V S D K T
S A T T G H G I K T A I V
V A D R N R S M K V I Q L A F

1 10 20 30 40

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UniRef90_UPI000365C4C7 M K A L V H D G R G Q I T L E D R P E P Q L Q P T D A I V R V

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UniRef90_UPI0003FF7695 M R A L Q Y S E P K K H K I V I E V P V P E L R E N D V L I K V

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UniRef90_U1RPB8 P P T M K A V F F A G P G Q L E L R D I P T P H A G E G E L V L K V

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UniRef90_Q65L05 M K T A S V K E P S V I S V S E T E N P S L E S G E I L V Q M

UniRef90_A9A4J7 M K A L V F H K A E P G L W L M D V P E P E Y G P G D V L I K V

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UniRef90_T1K314 T M K A M V Y Y G E N D L R F E E R P K P K I I P T D A I I R L

UniRef90_R7NMJ5 M R A V V F E R Y G E P A E V R D V A D P E P A E H G V V V R V

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UniRef90_D9XAU7 M K A A V V T P G T I S V E T V P D P T P G P L D V V V K P

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UniRef90_U5VT10 T M K A L A W F G A D D V R V I E A G P D I D N D V L L K V

UniRef90_D6WAB9 M K A V V F H G V G D I R L D E V S D P Q I Q S T D A I V R I

UniRef90_UPI000440CAC2 M R A A V L H A P G D V R V E E R P D P R I Q P T D A V I R L

UniRef90_I3IP21 M K A A R W Y G V K D I R V E E V A E P A T G P G D V K V

UniRef90_UPI00047A6659 M R A S V V T A F D R P M E I T E R P V P E V G P G E I L V R I

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UniRef90_D7CRW5 R M K A A T W T G T K S I E L S D V P K P T I T P A D A I V H I

UniRef90_L2NXY7

UniRef90_W9JD26

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UniRef90_UPI000381FE8B	D	A	V	A	T	C	G	A	T	D	L	E	V	I	L	Q	G	A	P	F	N	K	D	F	N	F	T	P	G	H	E	F	Y	M	G	V	I	E	L	G	70		
UniRef90_A9A206	K	S	E	G	V	C	H	S	D	L	H	E	L	W	E	G	G	V	G	V	K	Y	P	V	T	P	G	H	E	I	V	G	T	I	A	E	L	G	60				
UniRef90_B3D7S1	H	W	C	G	I	C	G	S	D	L	H	E	Y	V	A	G	P	V	F	I	P	Q	F	Q	I	P	G	H	E	F	S	G	T	I	A	E	L	G	50				
UniRef90_A4TEL4	V	T	S	G	V	C	H	T	D	L	H	A	A	H	G	D	W	P	V	V	K	P	F	I	P	G	H	E	G	Y	G	T	V	A	V	G	D	G	40				
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UniRef90_G7G3J9																																							20				
UniRef90_Q2S3J97	E	A	C	G	I	C	G	S	D	L	C	K	A	S	S	G	A	D	M	F	W	C	P	V	I	P	G	H	E	F	Y	G	R	V	A	E	M	G	P	G	A	10	
UniRef90_R5J671	A	Y	S	G	I	C	G	S	D	L	H	S	F	K	G	E	Y	A	I	K	T	P	V	T	L	G	H	E	F	Y	S	G	V	I	V	E	L	V	G	P	D	V	0
UniRef90_D4M311	D	A	V	A	I	C	A	T	D	L	E	I	I	K	G	G	L	P	F	N	K	G	F	T	P	G	H	E	F	Y	M	G	T	I	V	K	L	G	P	G	V		
UniRef90_I0R102	S	S	N	T	I	C	G	T	D	L	R	I	A	L	G	R	K	G	V	V	A	P	R	I	L	G	H	E	F	V	A	G	E	V	V	E	M	G	D	H			
UniRef90_A0A059A193																																											
UniRef90_Q591N4																																											
UniRef90_H3SLR2	E	W	C	G	I	C	G	S	D	L	H	E	Y	T	A	G	P	I	F	I	P	I	V	M	G	H	E	F	S	G	Q	V	V	E	V	A	V	G	R	D	V		
UniRef90_M0IQ80	N	H	V	G	I	C	G	S	D	L	H	Y	F	Q	G	E	Y	V	V	E	S	P	L	I	L	G	H	E	F	S	A	G	E	V	V	A	V	G	R	D	V		
UniRef90_E0CY14	I	A	T	C	V	C	H	T	D	L	N	A	T	M	H	K	K	K	A	L	F	P	V	V	L	G	H	E	C	A	G	E	V	V	A	V	G	P	G	V			
UniRef90_R9B9N3	I	A	T	G	V	C	H	T	D	L	H	A	M	D	P	G	D	W	I	L	K	P	F	I	P	G	H	E	G	V	G	K	V	V	E	I	G	A	G	I			
UniRef90_V4P4S1	A	A	C	G	V	C	H	T	D	L	H	A	A	N	G	D	W	P	P	Q	A	P	F	I	P	G	H	E	V	A	G	T	V	A	A	I	G	P	G	V			
UniRef90_D9WDS8	D	T	V	T	I	C	G	S	D	L	H	I	L	K	G	E	V	I	R	A	G																						

	90	100	110	120
UniRef90_UPI0002E5522B	T E L S I G D R V I V S C I S A C G K C D L C I G G L P S H C	L A A E G A S G L		
UniRef90_UPI000381FE8B	D D W A I V G D D R V T V E I H A G C G G R C R R A C K R E G M Y T S C L	L N Y G A N Y E G		
UniRef90_A9A206	S N V I T V G D D R V L V F P W M G C G G E C P A C K V G E N S C L	D A P K S M Y		
UniRef90_B3D7S1	T G F A I V G D R V T A D A C Q H C G G T C W Y C T H G L Y N I C C E	E N L J A F T		
UniRef90_A4TEL4	D D L S V G D M V G A W L W S S C G R C E Y C R T G W E T L C C E	Q Q R N		
UniRef90_UPI0004418522	K G L K V G D R V A L E P G A T C R S C D A C K A G R Y E L C C	P D M V F A A T P		
UniRef90_G7G3J9				
UniRef90_Q2SJ97	F N V K L G E K V I A E Q L V P C E R C R F C R S G K Y W M C E V H N I F G F Q			
UniRef90_R5J671	K N V K I G D R V T S E T T F E T C E E C I Y C A S K D Y N L C P S R K G I G T			
UniRef90_D4M311	D E Y K V G D R V A V E I H A G C D S C E R C R E G M Y T S C L	L N Y G Q N Y E G		
UniRef90_I0R102	V G Y E I V G D K V G M S P T Y S C G T C A E C S E K R S H C L C K N			
UniRef90_A0A059A193	E E L K E G D V V L P M F M G E C R E C A H C K S E D R T N L C L R Y P L S V N			
UniRef90_Q59IN4	T D L Q V G I H V L P M F M G E C R E C A H C K S E D R T N L C L R Y P L S V N			
UniRef90_H3SLR2	T K V Q A G D R V V V E P L Y A C G E C A C R Q G K Y N L C S T M G F L G L A			
UniRef90_MOIQ80	E H L S V G D R V A L E P G V P C G E C V R C R T G S Y N L C P E V V F M A T			
UniRef90_E0CY14	T N F K V G D K V I P F F A P C C K R C L C Y S P L T N L C G K L R N F K Y P			
UniRef90_R9B9N3	H H L K P G D V V I P W L Y S A C G H C D Y C Y A G W E T L C C			
UniRef90_V4P4S1	T G L K E G D R V G V A W H D A C G N C E Y C Q T G W E T L C C	E Q Q H N T		
UniRef90_D9WDS8	R G V R P G D R V L V S C I S A C G H C R F C R E R A Y G Q C C			
UniRef90_C2EJ53	E N I E V G E R V A V A P F I P C F E C Y C Q S G M F Q M C C	E N Y A M V G Q T		
UniRef90_F6W2S7	T H L K P G D R V A I E P G Y P L H N D D F F K K G R Y N L C S E V F F C A T P			
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UniRef90_D4M2X0	T K V K V G D R H V S G A L K P C C M K C D D C Q N G N F S L C K H Y S F I G S R			
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UniRef90_UPI000400F0D3	L G P E V G Q R V A L E P Q S T C D R C E Y C A R G R Y N L C P N V V F			
UniRef90_Q3IT13	S L G S V G D R V C V P F N L S D G T R Y C K Q G R A N L C C R			
UniRef90_D1APG0	K S I K K G D R V T A C P C F P C Y K C E F C C R Q G K F S K C T D L K			
UniRef90_UPI000346DBB5	T N V A V G D T V G A W L W S A C G H C H C R T G W E T L C C	E Q Q Q N		
UniRef90_UPI0003FF7695	D E F N I G E R V T V E I H A G C G Q C K R C R Q G M Y T S C L	L N Y G R		
UniRef90_B6H8J7	K D F Q L G E R V V A D N S E L C G T C F Y C C R R G D E L F C C E H F E A H G V T			
UniRef90_I0H8F5	T H I K P G D R V I P F N I S C G H C W M C R S G F A Q C C E T T Q V I T			
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MS MRA I C W N G V N E V A V A S V P E P R I S P H D A I V R V M
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MAA W L L G V N N L K I Q P F H L P P L G P R D V R V Q M
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MK S A V F V K S G Q M A I E A D I Q K P T I E A D D A V I R V
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[illegible]

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G F N E S V P G A F G E E I H A P W A D V N L S L L
A D R L L G D T T A A I F G Y S H A F G G F A G S H A E Y V R V P F A D G A F K
P D D G N L C R Y Y A H N A N F C Y K L P D N V T F E E G A L I E P L S V
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P T H G S L A N E V V H P A D L C F K L
V F G V H R D G G F R N H V L V P A A N A V K L
G V M P D G T S R F S I N G Q P L Y H F M G C S T F S E Y S V I A E I S A A K I
P W D G T L A K Y Y T V A A D Y C A K V
M G A A L F G Y T R L Y G A V P P P Y D G T L C R Y Y V L P E D F C V K L
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G Y Q A E Y V R Y T H A D W S L V K I P G Q P S D Y S E G M I K S F L A L A D V
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G Y H Y D G G F A E Y M V V P N S Q L F E L
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R E V A D G G M A E Y M R I P A T A I V K I
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G G F A E K V V V P A D T S L Y P I
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G F S T Q G C F A E Y V C L R D Q W A N I I
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P G M A G A A Y G F A G M G P Y Q G G Q A Q Y L R V P Y A D F N C L Q L P
G C R I D G G Q A E Y V R V P A D Q G L N R
A A Y G F A E M G P W E G G Q A E L L R V P F A D F N C L V L P
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P Y K K S I G E E V Q G G F R E Y V N V P E I S L I S A
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G C R I D G G Q A E Y V R V P H A D Q G L N R
F P G L T V D G G Y A E Y L K T S D R A L I P L
G P D A G T C F F G G P E L S G P I N G L Q A E K A R I P F A G V G L V
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P Y D G T L V K Y Y L S P E D F V Y K L A D H I S F E E G A V V E P L S V A V H
G A L G G W K A N V K D G T F A E Y V H V N E A D A N M A
K L Y G H H T A G F H G Y G T L T G G H P G G Q A Q F A H V L F A D V N L K V
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H Q T K L E G L P Y H G M G L S E Y L L V P T H C V F K Y
W S H G F Q S E Y I R F H Y A N W A L I K I P G Q P A D Y T
N A M Y G G R T A G M F G Y S H F T G G F A G G Q S E Y T R V P Y G D V N L L
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L A L G D L D G G Q A E Y V V V P S A D I T A I
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UniRef90_V4ZSH8	P	E	D	V
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UniRef90_D3P7D6	R	A	D	L
UniRef90_W4GZC1	D	P	S	A
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UniRef90_I2JUF5	P	D	T	V
UniRef90_M3EB06	V	P	E	G
UniRef90_R6CGJ6	A	D	T	L
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UniRef90_R6W7T5	I	A	E	S
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UniRef90_U2FCZ9	P	D	N	V
UniRef90_R1ID2E	D	L	P	A
UniRef90_C0DB15	Y	D	G	K
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UniRef90_U1MY62	D	D	E	A
UniRef90_E4WV90	M	P	D	A
UniRef90_K4RDG0	P	D	H	V
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UniRef90_C7DDN1	P	D	G	I
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UniRef90_UPI00035E5ED5	L	D	D	T
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UniRef90_M0C485	I	P	D	G
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UniRef90_UPI0004560F05	P	D	S	L
UniRef90_H5TNM6	P	E	G	D
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UniRef90_I2JUJ5	G	P	V	G	L	F	L	I	A	G	V	G	R	A	Y	G	A	M	K	V	I	V	D	R	V	Q	P	R	L	E	D	F	A	V	K	N	G	A	T	D	Y		
UniRef90_M3EB06	G	P	I	G	D	M	A	C	R	I	A	Q	V	K	G	A	G	R	V	F	G	V	D	L	V	P	E	R	L	R	R	A	K	A	R	G	V	E	T	F			
UniRef90_R6CGJ6	G	T	I	A	F	L	I	G	S	F	V	K	A	K	G	E	G	K	V	I	I	C	A	D	L	S	Q	N	K	L	D	Y	A	R	D	L	G	F	E	T			
UniRef90_G7VMM8	G	P	I	G	V	L	V	A	A	A	K	A	K	A	G	A	T	K	I	V	A	V	G	H	H	E	D	R	L	R	K	A	L	E	M	G	A	T	D	V			
UniRef90_V4ZJI0	G	A	V	G	L	C	G	V	L	A	A	R	L	L	G	A	E	R	I	V	A	V	G	H	H	E	D	R	L	R	L	A	E	T	F	G	A	T	E	T			
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UniRef90_G7CH02	G	P	I	G	L	C	M	T	A	Q	V	A	R	A	Y	G	A	T	D	I	V	M	T	S	D	L	D	P	H	R	R	R	L	A	H	R	F	G	A	T	T		
UniRef90_R6W7T5	G	P	T	G	I	C	T	L	L	C	V	M	L	K	A	P	E	K	I	I	M	C	E	V	D	P	E	R	I	T	F	V	K	E	H	Y	P	E	V	L			
UniRef90_UPI0004642E99	G	I	I	G	Q	L	M</																																				

	250	260	270	280
UniRef90_X1L7D5	I I N I T E V K E R I Q T I V K D N T F K G G A D V V F E C A G V P S A V P E G L D			
UniRef90_F3P441	V D G S M C D A D V P V D T I L L L T H S R G G V D K A I V S A N P G S T T S Q Q Q L E			
UniRef90_V4ZSH8	V N A R E T A D V P V K A I L L L T D S R G G V D V S V S A N P G I A E T C Q Q N S V A			
UniRef90_S4XHQ9	L S Y A E V D V Q E A L R E M T G G R G P D A C I D D A V G M E A D G V G L Q H			
UniRef90_K7G505	I I K K E T P K D V A C V V Q G L N C M P D I T V C S G A E A S I Q S G I Y			
UniRef90_X2M1V2	I N F D D E N D P A E K I I E Q T G H R G V D A V I D D A V G F E A			
UniRef90_UPI0002B4C0C6	V V S T D I Q D V D E D V I Q K A M K G E I D V T L C A G A V F E K T M S T A L K			
UniRef90_D3P7D6	L N S S R V S V P D A V R D E N D G L G P T V V I D D G A G V P A L L E E A C R			
UniRef90_W4GZC1	I D P T A S D T P I Q Q L L V E T T K W G V D Y T Y D C T G N T E V M R A A L E			
UniRef90_R1G8M7	V L N P Q V E K E G A E A I E K S E I A G A D V V L E C T G A E P C I Q A G V Y			
UniRef90_I2JUJ5	Y N S K S T E D L A K Y I N Q K W D G E S P T V A I D D A T G A P V C I R T A L Q			
UniRef90_M3EB06	D L F D D E K E L V E A I R D Q T D G R G P D A V I D D A V G T E A H G S A A A R			
UniRef90_R6CGJ6	I N T S E E A I A E G V K R I T G S E G A D V S F E V A V G S N A I F E N A I D K			
UniRef90_G7VMM8	I N P S Q V P D T I A A K N I I P G G A D A S F E V A G V Q P T F E Q A I D			
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UniRef90_D7CVS4	F C L A D G D P V A W L M Q E T E G R G A D V V F E A A W A D A S V Q Q A A E			
UniRef90_UPI0004686FB9	V N M A Q N A D Q L A A Y G A D K G H F D V L F E C S G A A Q A L T A A V P			
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UniRef90_M5WMI7	K	A	V	G	I	C	G	S	D	V	H	H	F	K	N	D	F	V	V	K	E	P	S	M	V	I	G	H	E	C	A	G	F	V	E	E	V	G	S	A	V	75		
UniRef90_F9X904	T	G	S	T	V	C	G	S	D	L	H	L	L	H	G	T	V	E	M	R	G	D	I	L	G	H	E	F	C	A	G	F	V	E	E	M	G	S	A	V	74			
UniRef90_S9Q229	K	A	T	G	I	C	G	S	D	V	H	Y	W	K	G	D	F	L	L	K	K	P	M	I	L	G	H	E	S	A	G	I	V	V	E	V	G	K	G	V	73			
UniRef90_W2BQ40	A	A	C	G	V	C	G	S	D	L	D	R	M	Y	K	K	G	P	H	K	L	P	L	I	T	G	H	E	S	F	S	A	V	V	E	E	V	G	E	G	V	72		
UniRef90_U4QGA0	A	A	G	G	I	C	G	S	D	L	H	Y	Y	Q	G	H	P	R	V	R	E	P	L	I	S	G	H	E	A	S	G	H	V	R	A	L	V	G	K	G	V	71		
UniRef90_R7YN5	K	N	T	A	L	C	G	S	E	L	H	V	F	R	G	H	Q	V	P	S	P	T	D	F	I	S	G	H	E	F	T	G	I	V	E	E	V	G	D	A	V	70		
UniRef90_UPI0003654B90	A	V	T	C	V	C	G	S	D	L	W	P	Y	R	G	A	E	P	T	D	A	P	H	P	M	G	H	E	Y	V	G	F	V	E	E	V	G	A	D	V	69			
UniRef90_C9AAH1	S	A	C	G	V	C	G	S	D	V	H	M	W	Q	W	A	G	T	G	E	S	D	F	I	M	G	H	E	F	C	A	G	F	V	E	T	D	A	G	D	68			
UniRef90_W0J0K7	K	S	T	G	I	C	A	S	D	I	K	C	Y	G	A	A	W	V	Q	A	P	V	I	P	G	H	E	F	G	V	E	V	T	D	A	G	D	67						
UniRef90_G8ZLU4	K	Y	S	G	V	C	H	T	D	L	H	A	W	K	G	D	W	P	V	K	L	P	L	V	G	H	E	F	G	A	G	V	V	A	K	G	K	D	V	66				
UniRef90_C9A5S3	K	A	V	G	L	C	G	S	D	L	R	N	L	L	T	D	S	K	A	R	Y	P	H	I	Y	G	H	E	I	V	G	E	I	V	E	I	D	E	N	V	65			
UniRef90_A9KN58	E	G	C	G	I	C	G	T	D	A	H	E	Y	K	R	D	P	F	S	L	I	P	V	V	L	G	H	E	G	T	G	E	I	V	K	M	G	K	N	V	64			
UniRef90_I7KH59	L	R	T	C	V	C	G	S	D	L	W	A	Y	R	G		L	E	E	Q	G	H	E	N	D	G	H	E	I	I														

	90	100	110	120
UniRef90_S9P9F1	R N L R V G D R V V I P S T I A C G S C S Y C R S G Y Y A Q C D V A N P H G K R			
UniRef90_U2TFS6	D E A L R V G Q R V A V I E P Q K R C H V C D Q C L A G R Y N L C C P H M E F Y A T P			
UniRef90_UPI00036BDE2D	P G L R V G Q T R V A V I E P Q K R V C H V C D Q C L A G R Y N L C C P H M E F Y A T P			
UniRef90_M4X0G4	S Q F K V G D R V L L S C I L S S C G K C D F C R R G M S S H C C R T G G W L L G			
UniRef90_R6FN37	E P V K L G D R I V A S P Y F I T C G E C C A C R A G R Y D L C C E N A Y I H L G T			
UniRef90_M5VMM7	K H L V P G D R V A L I E P G I N C K R C E L C C K Q G R Y N L C C P E M K F			
UniRef90_F9X904	T G L K K G D R V V A S F Q I A C R D C M Y C K K K L S S Q C E K T N S N T I E			
UniRef90_S9Q229	R S V K A G D H V A V E P G I L C R H C E F C R E G R Y N L C C P H M			
UniRef90_W2BQ40	T S V K A G D H V T V P P M L P C F K C G F C Q Q G H F S L C C E D Y D Y G S R			
UniRef90_U4QGA0	S G L A I G Q L V A V N P S Q P C S H C Q F C L K G Q P I H C C L D M R F M			
UniRef90_R7YNG5	K T V K K G D Q I V S P F T V S C G E F Y C K Q G F S S R C A K C L L			
UniRef90_UPI0003654B90	T S V R P G Q F V V G S F A T S D G T C A N C R N G F P S H C C L D R E F L S T C			
UniRef90_C9AAH1	S S F K I G D R V I F W A N L Y C G K C D M C Q K G Q H H L C C R E V I N G T N Y I			
UniRef90_W0JK07	G K L A I G D H A T S E Q I L V P S G G C K Y S R E G H Y W M D V I E H N I			
UniRef90_G8ZLU4	T N F E I G D L A G V K W N S S C M A C E Y C E L G H E S N C A K			
UniRef90_C9A5S3	T K Y Q R G Q M V I V Y P M A H C L R C E N C R N G K H E C C T E A E			
UniRef90_A9KN58	R L D S A G K S L Y V G D K V V S C M I F K D N P D I T M F D L N K Q N V G G A			
UniRef90_I7KH59	T T V K K G D F V I A P F T H G C G H C R A C L A G F D G V C C			
UniRef90_UPI00041FD48D	R S V R P G D W V I P F R Y S D G T C G Y C R K G L E T S C V N			
UniRef90_G0PZS4	T A V A P G D R V V I P F N V S C G H C Y M C G Q G L H S Q C E T T Q V R E R G			
UniRef90_H8X5X1	K H L K V G D R V A I E P G V P S R Y S D A Y K S G K Y E L C C P C M S F A A T P			
UniRef90_D1CGT9	T K H H V G E R V A L E P G V P C G T C R E C R A G R Y N L C C			
UniRef90_UPI0004702D2B	T R F K V G D R V V C V E L L T C G Q C Y Y C C R G R Y D Y C E N L R L K Y R S			
UniRef90_UPI00037272E3	K N V A I G D H V V P F C H C D N T C P D C Q A G V Q S A C R H G G F T L S G			
UniRef90_R2R733	K Y F K P G D R V A L S D P S Y G C G K C S W C Q Q G F P N F C I E R H G V A K G			
UniRef90_A1TES4	R Q L A V G D R V L S C I L S S C G S C R Y C R R T S Y G Q C			
UniRef90_C4GN64	K A L K V G D R V I A W L F Q S C G S C E Y C N T G R E T L C C R S V L N A			
UniRef90_I4BRA6	D P Q R V G Q R V A V E P Q H P C R R C P Q C K A G R Y N L C C P H M			
UniRef90_H7F8E4	T N V V V G D R V A G I L L P L C G K C E Y C Q S G E F S L C C D N Y R			
UniRef90_B2AIN0	R N L S V G D R V V I P S T I A C G Y C S Y C R A G Y Y A Q C C D N A N P H			
UniRef90_U1YGH2	E G L A V G D A V V E F A M V C G S C P P C R D G L Y N A C V K M G F I G I S			
UniRef90_UPI00034ACD4C	G W T E G D R V Q V I A A I P C G S C V E C S D G R F T V C S R			
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UniRef90_L8PF95	G D W T P G M R V A L Q A G Q S C G A C A D C M R R S P C P R P L T R G V D Y D			
UniRef90_UPI0004644F34	T R F K P G D I L V V V P C T T P D W M A P G V Q Q G V S N			
UniRef90_F5XHH6	H D V A V G D R V S G E G H I V C G T C R N C R A G R R Q M C I R T			
UniRef90_D3Q1X2	A D W A V G D R V Q V I A A I P C G Q C E I C K A G R M T V C P N			
UniRef90_G6YE00	T G L R T G D R V A V V P M R G C G H C E T C R R R D A R C C P E M V L I			
UniRef90_A5E6L7	K N L K K G D R V A I E P G V P S R Y S E A Y K S G K Y E I D P D M C F A			
UniRef90_C6J3Q4	K G I K P G D R V V A E G L M S C G S C S M C R Q S G R N L C C Q E Y D Q L			
UniRef90_UPI00046E5E33	Q D F R I G Q R V T V P V F C G C G S C R W C I S G N A Q V C P D Q T			
UniRef90_C5LLR1	T D L K V G D R V A L E P A V P C G H C E L C K S G E Y N L C C P E I K C I G A P			
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UniRef90_R7BL42	K K D S A G K D L H I G D K V V T C M I F K D N P D I T M F D L N K Q N V G G A			
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UniRef90_UPI0004296E38 R A A E L G I W P P G L G S P G A I A E Y M I V D A R H L V Q L
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UniRef90_I4BDM7 F H G L M S D G M A E Y T V V P T S M L H R L
UniRef90_H1XQZ9 I P G E S M Q G V Q A E Y I A V P A A Y V Y R R
UniRef90_D6B788 T G A A L F G Y T K L Y G Q V P G G Q A E Y L R V P F G N T L P V
UniRef90_D7WCW7 D K G A T L F G Y S R L Y G S L P G G Q A E Y L R V P H A D Y G P I
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UniRef90_S9P9F1 K P D E V T D E E A I L L S D I F P T G Y F G A D L A E I K P G D T V A V F G C
UniRef90_U2TFS6 P D N V S D E A A A L L E P L S V A I T T M R K A H I V S G S R V L I A G A
UniRef90_UPI00036BDE2D P D T L P L E A A A L A E P L L A V S L V A I T T M R K A H I V S G S R V L I A G A
UniRef90_M4X0G4 P A G V A E E A M V M L S D I L P T G F E C G V L N G R V Q P G G S V A I V G A
UniRef90_R6FN37 P D S V P N E L A V G V N C A F S Q V Y Y G L E R A S G L E A G E T N V L V M G A
UniRef90_M5WMI7 P D N V S L E E G A M C E P L S V G V H A C R R A S V G P E T N V L V M G A
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UniRef90_U2TFS6	G	P	I	G	I	L	C	A	L	T	S	A	R	A	F	A	G	A	E	V	I	V	A	S	D	V	P	V	S	E	R	R	L	E	R	A	L	A	Y	G	A	T	R	T	
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UniRef90_M4X0G4	G	P	V	G	L	A	A	L	L	T	A	Q	F	Y	S	P	A	K	I	I	M	I	D	L	D	D	N	R	L	L	A	V	A	R	R	F	G	A	S	E	C				
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UniRef90_M5VMM7	G	P	I	G	L	V	T	L	L	A	A	R	A	F	E	A	P	R	I	V	V	A	D	V	N	D	H	C	L	S	V	A	K	A	F	L	G	A	H	E	I				
UniRef90_F9X904	G	P	I	G	Q	M	A	A	D	F	A	W	I	N	G	A	S	R	V	I	V	I	D	C	Y	N	W	R	L	D	Y	V	K	Q	Q	Y	P	K	C	E	T				
UniRef90_S9Q229	G	A	V	G	L	L	L	M	A	V	A	K	A	Y	G	A	S	D	I	V	V	A	D	T	S	W	S	R	L	V	E	F	A	Q	K	Y	A	G	A	L	P				
UniRef90_W2BQ40	G	P	I	G	L	F	A	I	Q	W	A	R	L	M	G	A	S	E	V	V	S	I	D	V	T	S	A	K	E	A	L	P	L	A	L	E	A	G	A	D	K	A			
UniRef90_U4QG0	G	P	I	G	L	L	T	I	A	A	A	R	H	A	G	A	S	F	I	V	A	T	D	S	I	D	T	D	A	A	L	E	R	A	P	A	M	G	A	G	R	T			
UniRef90_R7YNG5	G	P	V	G	L	C	A	V	I	N	A	A	D	Y	K	P	K	H	I	F	A	V	A	D	S	V	E	S	R	L	E	L	A	K	A	F	G	A	T	D	I				
UniRef90_UPI0003654B90	G	A	V	G	L	C	A	V	I	A	A	R	E	K	G	A	S	E	R	I	I	A	M	S	R	H	E	P	R	Q	E	L	A	K	A	F	G	A	T	D	I				
UniRef90_C9AAH1	G	I	I	G	Q	L	I	G	E	L	A	K	K	A	G	A	S	Y	V	A	M	S	K	I	N	D	T	K	I	E	K	A	K	E	V	G	I	F	D	D					
UniRef90_W0J0K7	G	P	L	G	L	G	M	V	I	G	A	K	K	G	A	G	C	Y	V	V	A	L	D	L	K	D	L	K	D	L	A	V	A	K	K	T	G	A	D	V	V				
UniRef90_G8ZLU4	A	G	G	L	G	S	L	A	V	Q	Y	A	T	A	M	G	L	R	V	L	G	I	D	G	G	E	D	G	R	E	L	F	K	S	L	G	G	E	V	F					
UniRef90_C9A5S3	G	P	I	G	L	F	L	A	I	L	A	R	T	R	G	A	S	K	V	I	M	I	D	K	N	A	R	L	L	E	L	M	E	A	K	F	G	V	D	H	R				
UniRef90_A9KN58	G	P	I	G	L	I	C	I	A	V	L	R	T	M	G	L	E	N	I	V	A	V	D	G	E	A	K	R	L	E	F	A	K	E	M	G	A	Q	A	S					
UniRef90_I7KH59	G	A	V	G	L	S	A	I	I	A	A	K	L	R	G	A	K	Q	I	V	S	T	S	R	H	P	D	R	E	K	I	A	R	E	F	G	A	T	D	N					
UniRef90_UPI0																																													

UniRef90_S9P9F1 I N F E E E D P 250 T L V R L T G G 260 G V D R A I D A V G V D S M H A H H 270 280
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UniRef90_R9XA58 I D F T K S K D I V S A V R E A T A G G P H A V I N V S V S P A A M V I Q S V D
UniRef90_G7DHIO I D A V G T E P E T M A S K D S V I D R I K V A T F M G T D R P H V L R Q A I Q
UniRef90_UPI00041C64D8 V D A R A G D V A A A I R E I L T Q G G A H V A L E A L G V A E T A R G A L N
UniRef90_C5JRZ5 V N S K D S K Q A V D S L K M T D G G G F D A V I E A V G I P H T F H L C Q E
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UniRef90_A0A023D8D7 I N A E T Q D P G A E I R K R V G G A H G V L V T A V S L R A F S Q T M
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UniRef90_W5X41 Q T C K V D A I P G S Y D I V I E C T G Q V E V W E K S I D
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UniRef90_H0R123 I I D G S K V D V I E R V M E L T D G R G A D V I I T A T A A N V A Q E Q A I S
UniRef90_M3UYV9 L E S G S E T A Q Q I L L E L T G G R G A A A V F D F V G V D A T A Q T A V E
UniRef90_V4HCH6 V N S R E E P V A A I E A V T G G G A D V S M D A L G R A E T C Y R N S V D
UniRef90_D6XY62 I N P K T E D A V A K I H E L S G G G V D V A F E V T G I P A V L N Q C L H
UniRef90_M5ABW9 F N S K T E D S G A W V Q D K I G G A H A A V V T A V S Q I A F D Q A I G
UniRef90_D4L6F7 V N G S K E D V V A R C T E I G G R D N L G L V I E C S G A N I A L K Q A I E
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UniRef90_O13309 V D F L S S K D V V A D V L K A T N G G A H G V I N V S V S E R A M Q Q S V D
UniRef90_I6WWU3 V E E R G E G V S R V K E L T N G L G A H S V V E A V G T Q Q S M E Q A I G
UniRef90_UPI0004296E38 V M S D E H A A Q R V K E L T G G V G A Q A V F D F V G A E P T V A I A G A
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UniRef90_D7WCW7 E D G E D V I E K L E C D G R G S D S I V D A V G M E A H G S
UniRef90_I3Z135 D Y T D E G L S I Q E A L R D I T G G M G P D S C I A V G M E A H A A T T A G
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UniRef90_C5DHM6 V D F R K S K D V V A E I L E V T G G G A H G V V N V S V S E A I E S S T H
UniRef90_B5H7H1 V G A D E G P E A L V E D L T E G L G A D V V V E A V G V P E A F E Q C T R

	290	300	310	320
UniRef90_S9P9F1	A	V	R	P
UniRef90_U2TFS6	A	V	R	P
UniRef90_UPI00036BDE2D	A	V	R	P
UniRef90_M4X0G4	I	I	A	P
UniRef90_R6FN37	H	L	G	V
UniRef90_M5WMI7	A	T	G	S
UniRef90_F9X904	E	M	I	E
UniRef90_S9Q229	C	L	K	P
UniRef90_W2BQ40	V	M	A	R
UniRef90_U4QGA0	C	V	R	P
UniRef90_R7YNG5	I	L	R	P
UniRef90_UPI0003654B90	S	A	R	P
UniRef90_C9AAH1	A	A	R	P
UniRef90_W0J0K7	M	I	R	K
UniRef90_G8ZLU4	Y	V	R	P
UniRef90_C9A5S3	M	A	R	K
UniRef90_A9KN58	F	I	R	N
UniRef90_I7KH59	V	G	R	P
UniRef90_UPI00041FD48D	M	C	T	A
UniRef90_G0PZS4	A	A	H	T
UniRef90_H8X5X1	V	V	A	D
UniRef90_D1CGT9	C	L	R	P
UniRef90_UPI0004702D2B	V	T	R	K
UniRef90_UPI00037272E3	I	A	R	A
UniRef90_R2R733	I	A	G	K
UniRef90_A1TES4	L	V	R	P
UniRef90_C4GN64	C	V	R	A
UniRef90_I4BRA6	A	V	G	P
UniRef90_H7F8E4	V	T	K	K
UniRef90_B2AIN0	A	H	P	T
UniRef90_U1YGH2	A	L	K	A
UniRef90_UPI00034ACD4C	M	V	A	R
UniRef90_W9ASC6	L	V	R	P
UniRef90_L8PF95	L	L	G	A
UniRef90_UPI0004644F34	M	T	K	E
UniRef90_F5XHH6	N	M	H	H
UniRef90_D3Q1X2	T	A	A	R
UniRef90_G6YE00	A	V	R	L
UniRef90_A5E6L7	T	V	R	D
UniRef90_C6J3Q4	M	V	R	A
UniRef90_UPI00046E5E33	A	L	G	P
UniRef90_C5LLR1	A	T	Q	S
UniRef90_R9XA58	Y	V	R	P
UniRef90_G7DHI0	C	C	R	N
UniRef90_UPI00041C64D8	S	L	R	K
UniRef90_C5JRZ5	L	V	A	P
UniRef90_A0A011TRS4	N	M	V	M
UniRef90_S9WXY5	E	C	F	Q
UniRef90_UPI00023D8D7	C	Y	V	R
UniRef90_UPI00036AB4E7	L	V	R	P
UniRef90_R7BL42	F	I	R	N
UniRef90_W5X411	Y	V	R	P
UniRef90_F4B9F9	A	L	D	R
UniRef90_F9FGR9	S	V	K	F
UniRef90_R7BYI9	L	P	H	K
UniRef90_UPI000463467E	C	V	R	P
UniRef90_N9WYD4	Y	A	G	K
UniRef90_UPI0004724D08	L	L	K	P
UniRef90_D8GM68	I	A	K	G
UniRef90_UPI00035E7AFD	A	T	R	P
UniRef90_A0A016PKD6	Y	V	K	S
UniRef90_U2XP68	S	T	R	A
UniRef90_H2JAU9	I	S	R	K
UniRef90_UPI00037A190B	A	V	R	A
UniRef90_B8HLR4	C	A	R	P
UniRef90_UPI0002E8CEBB	N	M	N	H
UniRef90_R5AJT0	C	A	R	P
UniRef90_UPI00047E01F6	S	T	R	P
UniRef90_L2FNJ6	A	A	K	K
UniRef90_M2URA2	L	I	R	P
UniRef90_H0KAM4	V	A	R	V
UniRef90_UPI00031E64FA	I	L	T	R
UniRef90_H0R123	M	A	A	R
UniRef90_M3UYV9	A	V	A	P
UniRef90_V4HCH6	C	L	T	R
UniRef90_D6XY62	S	T	H	T
UniRef90_M5ABW9	S	V	R	A
UniRef90_D4L6F7	M	T	R	P
UniRef90_M0AAV8	D	H	E	R
UniRef90_Q9P6I8	E	C	L	N
UniRef90_O13309	Y	V	R	P
UniRef90_I6WUU3	A	C	R	P
UniRef90_UPI0004296E38	C	A	G	V
UniRef90_C1A1B2	A	V	R	P
UniRef90_I4BDM7	C	V	G	S
UniRef90_H1XQZ9	L	K	K	G
UniRef90_D6B788	A	M	R	L
UniRef90_D7WCC7	L	V	G	V
UniRef90_I3Z135	L	Y	D	S
UniRef90_M0H624	L	T	G	P
UniRef90_C5DHM6	Y	V	R	A
UniRef90_B5H7H1	M	V	R	P

	330	340	350	360																																						
UniRef90_S9P9F1	I	F	R	Y	T	D	T	W	P	T	G	I	H	L	V	S	S	G	Q	V	D	L	D	S	L	V	T	G	R	F	D	L	D	Q	V	E	A	A	L	E		
UniRef90_U2TFS6	T	K	A	E	F	H	E				A	V	D	H	I	A	A	G	R	I	D	V	L	S	L	V	S	A	R	F	L	D	Q	E	A	H	D	A	F	R		
UniRef90_UPI00036BDE2D	R	L	V	D	A	V	T	T	P	M	L	V	K	S	V	A	A	G	K	L	Q	P	E	Q	L	I	T	A	R	F	A	L	D	A	I	L	Q	A	F	R		
UniRef90_M4X0G4	L	P	E	Y	L	H	K	S	L	E	F	L	E	K	Y	Q	D	K	Y	P	F	K	E	F	S	E	R	K	F	S	L	D	E	I	G	E	A	L	Q			
UniRef90_R6FN37	I	F	R	Y	K	N	T	W	P	L	C	L	L	R	S	K	V	D	V	K	P	L	I	T	H	R	F	G	F	S	M	D	D	E	V	E	K	A	F	E		
UniRef90_M5WMI7	G	Q	A	P	H	Y	W	E	D	L	L	E	K	R	I	K	G	E	I	D	P	L	K	M	V	T	H	R	V	S	M	D	D	M	A	K	V	Y	Y			
UniRef90_F9X904	R				A	G	C	Y	D	Q	A	A	Y	L	V	S	S	G	L	V	K	L	R	P	L	I	T	H	K	Y	K	F	E	D	A	L	E	A	Y	K		
UniRef90_S9Q229	S	F	F	P	G	H	E	W	R	T	V	Q	K	L	H	S	G	D	L	K	W	E	F	M	I	T	H	E	L	G	L	D	E	A	V	A	E	T	I	K		
UniRef90_W2BQ40	S	Q	R	F	H	D	E	F	A	I	A	A	G	L	I	S	T	R	K	I	D	V	R	P	L	I	S	H	S	F	P	L	D	E	A	K	A	F	E			
UniRef90_U4QGA0	R	C	P	V	R	S	I	F	P	Q	A	L	K	K	L	A	E	K	Q	H	M	L	G	F	M	S	D	K	V	M	P	L	S	E	A	V	E	G	Y	D		
UniRef90_R7YNG5	P	A	P	V	R	R	Y	L	P	D	L	I	D	R	V	L	T	G	A	I	D	P	G	R	V	F	D	L	T	L	P	L	G	Q	V	A	E	G	Y	R		
UniRef90_UPI0003654B90	V	S	C	T	R	Q	E	F	E	E	T	I	D	L	I	A	S	G	M	I	D	P	T	K	Y	I	T	E	E	Y	P	L	E	K	L	Q	E	A	L	E		
UniRef90_C9AAH1	A	H	L	S	P	Y	T	Y	P	K	A	I	E	I	G	A	G	L	L	P	M	D	E	I	V	T	H	R	L	P	L	A	D	Y	Q	K	G	I	D			
UniRef90_W0J0K7	R	A	D	T	R	E	A	I	D	F	F	S	R	N	L	V	K	S	P	I	K	I																				
UniRef90_G8ZLU4	N				S	I	Q	V	E	K	A	F	H	L	V	S	D	Q	F	P	A	E	K	I	I	S	H	V	L	P	L	T	D	I	N	Q	A	I	E			
UniRef90_C9AAS3	T	L	R	D	Y	A	T	T	F	D	F	L	K	R	A	K	G	I	G	L	P	M	E	K	L	I	T	H	S	Y	P	L	E	Q	I	N	E	G	F	Q		
UniRef90_A9KN58	A	S	V	T	T	Y	D	K	E	L	L	K	A	V	L	D	G	K	I	N	P	G	K	V	F	T	K	T	Y	D	L	G	Q	I	N	E	A	Y	Q			
UniRef90_I7KH59	M	S	P	A	H	H	Y	I	A	A	T	M	P	A	V	L	S	D	G	E	I	N	P	G	M	V	Y	T	K	Q	Y	P	L	D	E	A	I	A	Y	D		
UniRef90_UPI00041FD48D	A	N	V	K	R	W	D	D	L	P	L	L	T	D	D	D	P	L	G	V	D	S	F	A	T	H	H	L	P	L	E	E	G	P	K	A	Y	E				
UniRef90_G0PZS4	G	Y	G	D	Y	A	T	A	I	P	D	L	I	E	K	Y	S	R	G	K	V	D	F	E	K	L	I	T	N	R	F	P	L	D	E	A	I	K	A	Y	D	
UniRef90_H8X5X1	T	F	R	Y	A	N	T	Y	P	D	A	I	E	L	I	R	A	G	K	I	R	P	E	E	I	I	T	G	H	Y	P	L	A	E	A	E	S	A	M	Q		
UniRef90_D1CGT9	T	S	S	Y	C	W	D	F	Q	R	G	I	D	L	V	S	S	G	R	I	D	L	K	S	L	I	T	H	H	F	P	L	D	E	V	Q	K	A	M	D		
UniRef90_UPI0004702D2B	M	A	P	V	R	R	Y	L	P	E	L	L	D	L	V	L	E	G	R	I	D	P	G	K	V	F	D	L	T	L	P	L	M	D	Q	V	A	E	A	Y	A	
UniRef90_UPI00037272E3	S	F	L	N	P	H	T	S	E	R	A	V	K	L	L	E	S	G	L	L	D	T	K	S	I	I	S	A	E	L	S	L	E	E	I	G	R	A	L	E		
UniRef90_R2R733	G	L	V	D	T	Y	S	T	P	T	L	V	D	L	V	A	A	H	R	L	D	T	S	A	L	V	T	H	R	Y	P	L	D	E	F	E	R	A	Y	H		
UniRef90_A1TES4	R	K	D	L	E	E	A	F	Q	F	G	A	E	G	L	V	V	P	K	V	Q	L	R																			
UniRef90_C4GN64	V	F	R	Y	T	D	T	W	P	A	A	I	H	L	V	A	S	G	A	V	D	L	D	G	M	V	T	G	R	Y	D	L	E	H	V	G	E	A	L	D		
UniRef90_I4BRA6	N	C	N	H	R	A	D	Y	P	R	L	V	E	L	V	R	T	G	A	V	D	P	A	A	P	F	V	T	R	R	E	P	M	T	S	A	I	E	K	Y	Q	
UniRef90_H7F8E4	A	L	G	Y	A	D	D	H	P	A	V	I	E	L	V	R	T	G	A	V	D	P	A	A	P	F	V	T	R	R	E	P	M	T	S	A	I	E	K	Y	Q	
UniRef90_B2AIN0	N	G	S	S	P	A	H	N	K	R	A	L	E	L	I	S	S	G	A	V	D	P	V	A	D	L	I	T	T	E	R	M	A	L	S	D	V	H	K	A	I	E
UniRef90_U1YGH2	G	L	V	D	T	Y	S	T	P	T	L	E	L	I	A	A	G	Q	L	D	T	S	T	L	I	T	H	R	F	G	L	D	E	F	E	T	A	Y	D			
UniRef90_UPI00034ACD4C	G				P	E	H	V	T	Q	L	I	R	L	A	A	G	R	L	D	L	A	P	S	I	T	D	H	I	P	L	A	E	A	D	A	V	T				
UniRef90_W9ASC6	A	P	G	G	T	V	R	M	E	K	L	L	N	M	I	K	Y	K	R	V	D	T	S	K	L	I	T	H	R	F	G	F	D	K	I	E	E	A	F	K		
UniRef90_L8PF95	M	F	E	T	W	N	A	M	G	A	M	L	Q	T	S	A	Q	L	R	E	D	T	G	S	I	I	T	R	R	I	P	A	A	D	W	E	S	G	F	A		
UniRef90_UPI0004644F34	N	G	S	S	P	A	H	N	E	A	E	L	R	L	I	A	S	G	A	V	N	V	A	D	L	I	T	H	R	L	P	L	D	R	A	I	E	A	F	D		
UniRef90_F5XHH6	F	F	H	Q	R	N	E	F	G	V	A	L	D	A	L	R	G	G	P	F	A	P	Q	A	L	I	T	D	R	I	D	L	S	P	V	P	Q	I	F	E		
UniRef90_D3Q1X2	G	Y	G	D	Y	A	T	S	I	K	I	L	E	K	Y	A	N	G	K	V	D	F	E	K	L	I	T	N	V	F	P	W	K	E	A	V	E	A	Y	D		
UniRef90_G6YE00	T	I	S	S					W	S	K	V	L	D	W	L	A	T	G	K	L	N	S	P	L	I	T	H	R	F	S	T	R	D	Y	E	K	A	F	Q		
UniRef90_A5E6L7	H	G	M	A	A	E	Y	P	E	L	V	D	L	V	I	Q	G	R	L	R	P	Q	D	L	V	T	T	V	I	G	L	D	E	A	P	A	A	M	E			
UniRef90_C6J3Q4	T	F	R	F	C	Y	T	Y	P	C	L	D	M	I	S	S	G	K	I	D	V	K	Q	L	I	T	H	R	Y	R	F	D	E	I	L	Q	A	F	E			
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UniRef90_C5LLR1	Q	T	P	V	Q	H	Y	L	P	K	L	L	Q	R	I	E	K	G	E	I	D	P	S	F	V	I	T	H	R	A	T	L	E	E	G	P	D	L	Y	K		
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UniRef90_G7DHI0	R	L	V	D	A	V	T	T	P	M	L	L	K	F	I	Q	A	G	R	L	D	T	S	K	L	I	T	H	R	F	S	F	K	E	E	E	A	Y	K			
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UniRef90_C5JRZ5	Q	C	P	C	Q	N	Y	F	D	R	V	L	E	A	L	R	S	G	K	I	N	P	E	W	M	I	T	H	K	K	V	K	F	D	E	L	P	D	A	Y		
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 K F D K K E D G
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UniRef90_F1YNI1			MRA	V	I	M	H	S	P	F	G	N	V	S	V	V	D	R	P	D	P	R	I	E	Q	P	T	D	A	V	I	R	L						
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UniRef90_F9X9G8			MKA	L	I		Y	D	A	F	D	V	S	V	K	E	V	P	D	A	T	V	R	P	T	D	A	V	I	R	I								
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UniRef90_UPI0003B61378			MKA	A	V		Y	E	G	P	R	N	V	A	V	E	E	K	P	D	P	K	I	H	P	C	D	A	I	L	V	K	I						
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UniRef90_I0UZX5							A	V	I	F	K	G	P	L	Q	V	A	L	E	Q	R	P	I	P	E	L	D	P	T	D	V	I	V	K	V				
UniRef90_B6HJM6			MRA	V	V	V	D	R	P	G	S		V	R	V	G	D	V	P	D	P	T	P	G	R	R	E	V	I	L	K	V							
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UniRef90_E4RNR8			MKA	V	V	V	P	Q	P	G		V	L	T	V	E	E	R	V	P	R	L	Q	E	D	G	V	L	V	R	N								
UniRef90_J0DFH2			MQA	A	I	L	N	E	K	K	Q		L	E	L	R	D	L	P	R	P	K	I	V	P	G	G	V	L	I	K	V							
UniRef90_A0A009HNZ3			MKT	T	I	L	F	V	E	A	G	K		V	E	A	R	E	A	P	K	P	V	I	K	A	D	D	V	L	L	R	V						
UniRef90_I6X3H0			M	H	C	Y	C	V	T	H	H	G	Q	P	L	E	D	V	I	K	E	T	P	Q	P	K	G	T	E	V	L	L	H	V					
UniRef90_U9TM83			MK	S	I	V	I	R	Q	P	N	E		L	V	I	E	E	R	P	I	P	Q	P	A	A	G	E	V	R	V	K	I						
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UniRef90_A3MVR8			MKA	L	V	K	A	K	S	E	P	G	I	W	L	E	D	V	P	V	P	D	I	G	P	D	D	V	L	I	K	V							
UniRef90_A8RA20			MRA	A	V	I	K	E	W	G	T	P	L	E	V	T	D	V	P	K	P	E	P	G	P	G	E	V	L	V	R	I							
UniRef90_O24284			MKA	C	V	L	E	R	P		Q	K	Y	S	I	Q	D	I	P	M	P	K	V	G	A	D	E	V	L	V	R	I							
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UniRef90_V5FR49			K	M	K	A	L	V	W	N	G	K	N	S	V	K	V	I	E	T	F	K	P	A	K	I	E	D	A	D	V	I	V	K	V				
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UniRef90_E4L674			MKA	A	V	V	R	D	T	D	G	Y	V	D	I	K	D	V	T	L	R	P	I	H	Q	G	E	A	L	I	V	K	V						
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UniRef90_H6RSD5			MKA	L	V	L	V	E	P	G	K	T		E	I	R	E	I	D	T	P	I	P	R	E	G	E	V	L	L	Q	V							
UniRef90_DOMCW3			M	L	A	G	R	L	N	V	R	T	R	E	F	T	V	K	E	V	P	K	T	P	G	P	G	E	V	L	I	K	V						
UniRef90_U2R5A7			MKA	T	V	L	Y	G	P	K	D	V	R	L	E	Q	V	P	D	P	K	I	E	P	T	D	A	I	L	I	R	V							
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UniRef90_S0EVK5																																							
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UniRef90_UPI000344EF99			MKA	L	Y	K	S	G	P	H	P	G	L	E	L	V	D	R	P	E	P	Q	P	G	T	G	E	V	K	I	R	V							
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UniRef90_K2LY03	S	A	A	A	A	P	S	K	K	N	I	G	V	F	T	N	P	K	H	D	L	W	I	N	E	A	P	D	E	L	K	E	Q	V	T	I	A	I	
UniRef90_G5CZC7			MQ	T	R	V	C	R	L	Y	G	Q	D	D	L	R	I	E	T	E	N	A	P	A	S	A	H	D	E	V	L	I	R	V					
UniRef90_Q2TY48			MK	G	K	I	A	V	M	N	Q	P	G	S		L	E	Y	Q	E	Y	E	V	P	A	P	A	P	G	A	V	V	K	V					
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UniRef90_G0VK06																																							
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UniRef90_X5L8B5	S	T	D	T																																			
UniRef90_G2EGB5			MRT	S	V	L	V		G	T	K	D	L	T	V	E	N	R	K	L	P	E	Y	A	S	D	E	V	L	V	K	I							
UniRef90_UPI00047B4282			MKA	I	V	C	E	N	P	N		D	L	K	M	I	E	M	A	K	P	T	L	K	R	G	E	A	L	V	A	I							
UniRef90_UPI00046CD852			MRA	A	V	I	E	E	L	A	R	P	L	V	V	R	D	V	P	D	S	C	P	A	D	G	A	I	V	R	V								

UniRef90_B9K5T6	R	F	V	G	I	C	G	T	D	L	H	E	Y	S	Y	G	P	A	G	H	D	E	Q	V	L	G	H	E	F	Y	G	V	V	E	A	I	V	G	E	P	V	
UniRef90_F1YN1I	A	A	T	C	V	C	G	S	D	L	W	P	Y	R	G	A	N	G	A	V	D	E	A	P	M	G	H	E	F	Y	G	V	V	E	A	I	V	G	E	P	V	
UniRef90_UPI00041B644C	S	A	T	C	V	C	G	S	D	L	W	H	Y	R	G	I	N	P	F	H	G	E	P	K	S	V	G	H	E	Y	C	G	V	V	E	A	I	V	G	E	P	V
UniRef90_C0W664	E	S	V	G	I	C	G	S	D	L	V	H	A	Y	G	D	F	I	V	K	M	L	P	M	I	L	G	H	E	A	S	G	T	I	V	A	I	V	G	E	P	V
UniRef90_F2JUQ8	H	A	C	G	V	C	H	T	D	L	H	A	Y	Q	H	G	D	W	P	V	K	M	L	I	P	G	H	E	G	A	G	E	I	V	A	I	V	G	N	A	V	
UniRef90_D1BAN7	T	S	T	N	I	C	G	S	D	L	H	M	Y	E	G	R	T	D	M	E	A	S	G	R	V	L	G	H	E	N	M	G	I	V	E	A	I	V	G	D	N	V
UniRef90_F9X9G8	K	F	T	G	I	C	G	S	D	V	H	Y	W	I	G	H	F	V	V	K	S	P	M	V	L	G	H	E	S	S	G	I	V	S	A	I	V	G	D	S	V	
UniRef90_A0A014P8F3	T	T	T	N	I	C	G	S	D	L	H	M	Y	E	G	R	T	S	F	E	K	G	R	I	F	G	H	E	N	L	G	Q	V	V	E	A	I	V	G	S	A	V
UniRef90_UPI0003B61378	T	A	A	G	A	C	H	S	D	A	F	V	Y	V	N	G	F	G	Y	P	L	P	M	T	L	G	H	E	G	T	G	I	V	D	K	L	V	G	A	G	V	
UniRef90_A1CV81	Q	Y	T	A	L	C	G	S	E	L	H	V	F	R	G	H	Q	P	S	G	S	E	F	V	M	G	H	E	F	T	G	E	V	T	A	L	V	G	C	H	V	
UniRef90_I0UZX5	G	A	C	G	I	C	G	T	D	L	H	I	A	D	G	H	F	P	T	P	S	Y	P	I	V	P	G	H	E	F	A	G	E	I	V	E	L	V	G	P	D	V
UniRef90_B6HJM6	A	F	V	G	L	C	G	S	D	I	H	E	Y	L	A	G	P	M	E	K	L	P	T	T	L	G	H	E	F	S	G	T	V	E	E	I	L	G	S	G	V	
UniRef90_UPI00036E9637	R	A	G	G	I	C	G	S	D	L	H	I	Y	H	G	T	S	P	V	T	P	P	R	V	L	G	H	E	F	V	G	E	V	V	E	I	L	G	S	R	K	V
UniRef90_E4RNR8	V	A	S	G	L	C	G	A	D	L	K	M	I	D	G	T	S	K	A	L	T	Y	P	R	V	L	G	H	E	I	T	G	I	V	E	E	I	V	S	E	T	
UniRef90_J0DFH2	V	R	A	C	V	C	G	S	D	L	W	S	Y	R	G	D	G	K	S	N	N	S	E	N	T	G	H	E	A	I	G	I	V	E	E	A	G	P	A	V		
UniRef90_A0A009HNZ3	K	A	A	G	L	C	H	T	D	L	H	L	W	E	G	D	R	G	L	A	K	P	P	L	T	L	G	H	E	I	T	G	Q	V	V	A	I	V	G	D	A	V
UniRef90_I6X3H0	K	L	A	G	I	C	G	S	D	S	H	L	Y	R	G	H	N	P	A	K	Y	P	R	V	I	S	G	H	E	F	F	G	I	V	D	A	I	V	G	E	G	V
UniRef90_U9TM83	K	V	T	G	I	C	G	S	D	V	H	Y	W	I	G	D	F	I	V	K	E	P	M	V	L	G	H	E	S	S	G	I	V	T	N	I	G</					

	90	100	110	120
UniRef90_B9K5T6	T S V V V G D R V S I Q P L V			M P R S G D
UniRef90_F1YNI1	R T V K V G D F V V G S F M A S	D N T C E I C A A G Y Q T S R C V N		
UniRef90_UPI00041B644C	T A V R P G Q D F V V G G F T A S	C N G K C P H C L S G V Q T A C C		
UniRef90_C0WJ664	D P G R I G Q R V S I E P Q R S	C R V C E Y C K R G E Y N L C C	P H I E F Y A T P	
UniRef90_F2JUQ8	S H L K A G D R V V P W L Y S A	C G H C V L S G K E S L C C	S Q Q N	
UniRef90_D1BAN7	D R I K V G D R V S L P F N I A	C G S C D H C V L Q G K T A F C	L R A N Q A	
UniRef90_F9X9G8	T S L K V G D R V A M E P G V P	C R R R V R C K E G K Y N L C C	P D M A F A A T P	
UniRef90_A0A014P8F3	R K L K V G T Y V V P F N I A	C G F C K Q C E R G L T N Y C	L T M Q P E P S A	
UniRef90_UPI0003B61378	T S V A V G D S V A V Y G P W G	C G T C Y Q C A Q G K E N Y C	E	
UniRef90_A1CV81	R R F R V G D R V V S P F T I C	C G K C F Y C R Q G Y S S R C	A L C L G	
UniRef90_I0UXZ5	R G F W I G D R V A V D P S L F	C G Y C D P C R S G R G N L C	A N W G A T G D T	
UniRef90_B6HJM6	T G F K V G D R V V V K P N L F	D G T C D S N C S L G I F N C	E R V A F	
UniRef90_UPI00036E9637	T G V K R G D R V A V E P I M Y	C G Q C Y F C R I G R P N V C	E R L E	
UniRef90_E4RNR8	K E F N K G D R V Q I A P G I V	C G E Y F C Q Q G I T N C	E R L E	
UniRef90_J0DFH2	T S V K P G D F V I A P F T H G	C G C H C A C R A G F D A D C	Q S H S D N F S S	
UniRef90_A0A009HNZ3	E S V K V G M R V S L V H P W I	G C E C N Y C K R G E E N L C	A K P Q Q L	
UniRef90_I6X3H0	T D K A I G Q R V S V D P V I S	C G C H C Y P C S V G K P N V C	T S L	
UniRef90_U9TM83	K I L K V G D Q V A I E P G I S	C Y I C H F C K N G Q Y N L C		
UniRef90_UPI00040F1AA4	T H V K P G D R V V I P F N I S	C G H C H M C E R K L F A Q C	E T T Q V R E Q G	
UniRef90_A0A023MKDF0	R N L S I G Q R V S G E H V I	G M K S R A S R G G R F H L D		
UniRef90_A3MVR8	S T L K K G D R V V P W M N Y W	C G R C E Y C L S G Y P H W C	P H A K Y T S V H	
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UniRef90_B0Y2Z8	K S I K T G D R V V A A F P I A	C G N C M N C K K K L L S S A C	E R T N S N S I	
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UniRef90_Q2TY48	S H L K A G D R V A M E P G V P	C R C C N Q C R S G A Y H L C		
UniRef90_U5VWE9	T T L K P G Q F V V G S F W A S	D N T C E I C R A G Y Q S G C	V H R	

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UniRef90_F1YNI1 V H P M G G I G T Q A E Y A R I P M A D G T L V
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