

QUERY	1	10	20	30	40
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UniRef90_D2B7M9	L V G G T P Y Y V G T S R R C C S I V G F S V T T K G S T T P G F F V T A G H C C G R T G A T S				
UniRef90_D2ASM8	I V G G N P F Y L G S S R R C C S I V G F S V T T K G S T T P G F F V T A G H C C G T V G T S				
UniRef90_Q55353	L V G G D A Y Y M G G A R C C S V G F S V T T Q G S T T P G F F A T A G H C C G T V G T S				
UniRef90_J1ZN62	I A G G D A Y W G S G A R C C S L G F N V V T K G G K P Y F F L T A G H C C T S A M R N S				
UniRef90_S3ZUR9	I A G G D G V Y D A S G Y C C S L G F N V V D D G N P Y F F L T A G H C C T N E S A D E				
UniRef90_X0MRZ3	I A G G D A I Y W G S A R C C S L G F N V V V K D G Q Y F F L T A G H C C G N A V K E				
UniRef90_D7C828	L L S G D P L I Y S S N G R C C S A G F N V H I G T S Y Y I L T A G H C C T N G A Y P N				
UniRef90_D6A4N7	L R G G E A Y Y I N N G R C C S I G F A V T T K G T Q Q G Y A T A G H C C G R A G A S				
UniRef90_UPI000349B0E8	I V G G D P Y S T G G R C C S I G F A T T E G F A T A G H C C G P E I G K S				
UniRef90_UPI00047B9AE8	A G G E A I Y T D G G R C C S I G F N V K K G S D Y Y F F L T A G H C C T A I G K S				
UniRef90_UPI000377F96A	I L S G G Q A I Y G G G R C C S L G F N V R S G S T Y Y F F L T A G H C C T N S S Q T T				
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UniRef90_N4VHA7	V L G G D A Y Y L I N A G R C C S V G F S V V T T G F V T A G H C C G S V I G N S				
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UniRef90_UPI00046CAEC4	I R G G E A I Y W T S Q Y R C C S V G F S S T H T Y G G F T A G H C C G G T G E P				
UniRef90_UPI00036F88C1	V R G G				

QUERY UniRef90_L1KXA0 UniRef90_UPI0002F1D78E UniRef90_Q095L8 UniRef90_UPI00046425FD UniRef90_P52321 UniRef90_UPI000419DAB9 UniRef90_D2B7M9 UniRef90_D2ASM8 UniRef90_Q55353 UniRef90_J1ZN62 UniRef90_S3ZUR9 UniRef90_X0MRZ3 UniRef90_D7C828 UniRef90_D6A4N7 UniRef90_UPI000349B0E8 UniRef90_UPI00047B9AE8 UniRef90_UPI000377F96A UniRef90_E9UNN2 UniRef90_UPI00034C3776 UniRef90_D7C826 UniRef90_UPI0003A007B6 UniRef90_UPI00037D9826 UniRef90_Q0V2B5 UniRef90_N4VHA7 UniRef90_UPI00038104F9 UniRef90_UPI0003448E0E UniRef90_D7B3J5 UniRef90_UPI0003811155 UniRef90_G2GHI3 UniRef90_UPI00036C60EE UniRef90_UPI00035C5C52 UniRef90_UPI000365D338 UniRef90_A0ADD6 UniRef90_V6JGG6 UniRef90_UPI00035FE661 UniRef90_UPI0003A1B1D5 UniRef90_W5VZ68 UniRef90_E2PXA9 UniRef90_G2NT11 UniRef90_U2AE12 UniRef90_K6ULM6 UniRef90_W7SH20 UniRef90_UPI00046CAEC4 UniRef90_UPI00036F88C1 UniRef90_W0C3U2 UniRef90_M2QNMM2 UniRef90_R4T4P6 UniRef90_A9WLX2 UniRef90_V6L294 UniRef90_UPI00035FA49D UniRef90_G5D8X5 UniRef90_UPI0003GOPZ17 UniRef90_H1G4E9 UniRef90_S6HSL8 UniRef90_W0DZT6 UniRef90_Q3AEC4 UniRef90_A5EL92 UniRef90_UPI00037194C4 UniRef90_L0D703 UniRef90_UPI00036FE523 UniRef90_Q2LXP4 UniRef90_B7IER5 UniRef90_Q39ZY9 UniRef90_R5RBT0 UniRef90_S9S7Y6 UniRef90_A6CGY1 UniRef90_UPI00046AC25C UniRef90_E4PQK0 UniRef90_UPI00034A3200 UniRef90_B9LZ44 UniRef90_O05942 UniRef90_UPI000376D066 UniRef90_V4LKG6 UniRef90_B5YER0 UniRef90_D2R1V9 UniRef90_B6JB72 UniRef90_W6M3H0 UniRef90_A6VUA4 UniRef90_UPI000377332A UniRef90_W0DPU1 UniRef90_Q10YR7 UniRef90_E6YIG3 UniRef90_D7DLL8 UniRef90_D6Z209 UniRef90_X2HAE5 UniRef90_W4UZW9 UniRef90_UPI0002624F75 UniRef90_I0I0U5 UniRef90_UPI000362EEA4 UniRef90_B5YHA4 UniRef90_Q5YNH2

QUERY	I	T	T	A	G	N	A	F	V	90	Q	A	V	Q	R	S	G	S	T	T	100	L	R	S	G	S	V	T	G	L	110	N	A	T	V	N	Y	G	S	S	120			
UniRef90_L1KXA0	I	T	T	A	G	N	A	F	V	G	M	K	V	Q	R	S	G	S	T	T	G	L	R	S	G	S	V	T	G	L	N	A	T	V	N	Y	G	S	S					
UniRef90_UPI0002F1D78E	V	A	G	G	A	E	A	P	V	G	S	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	J	R	N	N	A	T	S	V	N	Y	A	P	Q	G		
UniRef90_Q095L8	I	V	T	G	S	A	Q	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	E	Q	A	L	D	A	T	S	V	N	Y	G	P	E	Q	G	
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UniRef90_P52321	I	V	T	Q	A	G	T	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	E	Q	A	L	D	A	T	S	V	N	Y	G	P	E	Q	G	
UniRef90_UPI000419DAB9	I	V	A	G	S	T	E	A	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	Q	K	R	N	A	S	I	T	Y	G	P	E	Q	G	
UniRef90_D2B7M9	V	A	G	S	T	E	A	A	V	G	A	S	V	C	R	S	G	S	T	T	D	W	H	C	G	T	V	Q	Q	K	R	N	A	S	I	T	Y	G	P	E	Q	G		
UniRef90_D2ASM8	V	R	G	S	T	E	A	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	Q	K	R	N	A	S	I	T	Y	G	P	E	Q	G		
UniRef90_Q55353	I	V	S	G	S	T	E	A	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	Q	K	R	N	A	S	I	T	Y	G	P	E	Q	G	
UniRef90_J1ZN62	I	T	E	A	D	D	P	I	V	G	Q	H	V	E	R	S	G	S	T	T	H	L	R	E	G	D	V	L	A	V	D	A	T	A	N	Y	G	Q	E	G				
UniRef90_S3ZUR9	I	T	S	D	A	A	D	P	Y	I	G	Q	H	V	E	R	S	G	S	T	T	G	L	H	D	G	Q	V	L	N	L	D	A	S	V	N	Y	G	Q	E	G			
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UniRef90_D6A4N7	V	T	G	S	T	E	A	P	V	G	S	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	Q	A	L	N	D	A	S	V	N	Y	G	P	E	G		
UniRef90_UPI000349B0E8	V	A	G	S	E	E	A	P	E	G	S	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	Q	Q	A	L	N	D	A	S	V	N	Y	G	P	E	G		
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UniRef90_UPI00034C3776	V	S	G	S	S	V	A	P	I	G	S	S	V	C	R	S	G	S	T	T	G	W	R	C	G	T	V	Q	A	R	G	Q	T	V	T	Y	G	P	E	G				
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UniRef90_UPI00037D9826	I	T	T	G	A	N	A	T	V	G	M	S	V	C	R	S	G	S	T	T	G	I	H	S	G	T	V	T	G	L	N	A	T	S	V	N	Y	G	S	N	G			
UniRef90_Q0V2B5	I	S	G	S	T	A	A	A	T	V	G	A	S	V	C	R	S	G	S	T	T	G	V	F	C	G	T	V	R	A	L	G	A	T	S	V	N	Y	A	E	G			
UniRef90_N4VHA7	V	S	G	S	T	A	A	S	V	G	A	S	V	C	R	S	G	S	T	T	G	V	Y	C	G	T	V	G	A	L	G	A	T	S	V	N	Y	A	P	E	G			
UniRef90_UPI00038104F9	I	V	R	A	A	E	A	T	V	G	Q	V	F	R	M	G	S	T	T	G	L	A	D	G	Q	V	L	G	L	D	A	T	S	V	N	Y	G	P	E	G				
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UniRef90_D7B3J5	V	S	G	S	S	Q	A	P	E	G	S	A	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	E	A	R	G	Q	T	S	V	Y	G	S	G	G				
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UniRef90_UPI00036C60EE	I	T	G	P	D	E	A	T	V	G	L	T	V	F	R	M	G	S	T	T	G	L	S	D	G	Q	V	T	T	G	L	N	A	T	S	V	N	Y	G	P	E	G		
UniRef90_UPI00035C5C52	V	Q	G	S	Q	E	S	A	V	G	A	S	V	C	R	S	G	S	T	T	G	W	H	C	G	T	V	G	A	K	N	Q	T	S	V	Y	S	P	E	G				
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UniRef90_A0ADD6	I	T	T	G	L	G	E	P	A	V	G	Q	R	V	F	R	S	G	S	T	S	G	L	R	D	G	R	V	T	A	L	D	A	T	S	V	N	Y	A	P	E	G		
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UniRef90_UPI00035FE661	I	S	S	A	G	N	A	T	V	G	Q	S	I	S	K	S	G	S	T	T	S	R	L	T	S	G	E	V	Q	R	L	D	A	T	S	V	N	Y	A	P	E	G		
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UniRef90_E2PXA9	I	T	T	G	V	A	H	A	R	V	G	M	S	V	T	R	R	G	S	T	G	V	A	R	S	T	V	T	G	V	G	L	T	S	V	N	Y	G	S	R	G			
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UniRef90_K6ULM6	V	K	G	S	T	E	A	A	V	G	A	A	V	C	K	S	G	S	T	T	K	W	H	C	C	G	T	V	E	Q	A	K	N	A	T	S	V	N	Y	S	P	N	D	
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UniRef90_UPI00046CAEC4	V	H	D	G	T	E	A	P	V	G	A	D	I	C	R	S	G	S	T	T	N	W	Q	C	C	G	Q	V	Q	G	K	N	E	S	V	N	Y	P	E	Q	G			
UniRef90_UPI00036F88C1	I	T	T	G	A	A	Q	P	S	V	G	A	V	C	R	S	G	S	T	T	G	V	H	C	C	G	T	V	V	S	V	N	D	T	I	S	Y	P	E	Q	G			
UniRef90_W0C3U2	V	K	G	S	V	E	A	P	V	G	A	A	L	C	K	S	G	R	T	T	G	Y	K	C	C	G	T	V	R	A	K	N	V	S	V	R	V	G	F	D	R			
UniRef90_M2QNM2	I	L	R	A	G	I	P	Q	V	G	Q	T	V	C	K	S	G	M	T	T	K	K	T	C	G	K	V	L	G	L	N	Q	T	S	V	N	Y	G	K	D	K			
UniRef90_R4T4P6	I	T	T	G	S	S	K	A	P	V	G	T	T	L	C	K	S	G	A	G	N	T	T	G	W	T	C	G	T	A	Y	N	A	T	S	V	N	Y	G	S	T			
UniRef90_A9WLX2	V	T	G	S	T	E	S	A	V	G	G	T	S	C	K	S	G	R	T	T	Q	W	T	C	G	T	V	K	A	K	N	V	S	V	N	Y	G	S	G	T	D			
UniRef90_V6L294	I	V	H	V	G	Q	Q	V	Y	I	T	P	E	T	G	I	N	S	G	T	L	T	G	L	N	A	T	S	V	N	Y	G	P	D	G	G	P	D	G					
UniRef90_UPI00035FA49D	L	V	K	G	S	D	K	L	E	V	G	A	T	V	C	K	S	G	S	T	P	K	T	G	Y	R	T	G	G	V	S	A	L	G	R	E	I	N	Y	G	P	K	R	G
UniRef90_G5D8X5	V	R	G	S	I	E	A	P	V	G	A	T	V	C	K	S	G	S	T	T	P	K	T	G	Y	R	T	G	G	V	S	A	L	G	R	E	I	N	Y	G	P	K	R	G
UniRef90_G0PZ17	V	R	G	S	I	E	A	P	V	G	A	T	V	C	K	S	G	S	T	T	P	K	T	G	Y	R	T	G	G	V	S	A	L	G	R	E	I	N	Y	G	P	K	R	G
UniRef90_H1G4E9	L	G	D	S	E	S	L	R	V	G	E	W	V	L	A																													

QUERY	I	V	Y	G	M	I	Q	T	N	V	C	A	Q	P	G	D	S	G	G	S	L	F	A	G	S	T	A	L	G	L	T	S	G	G	S	G	N	C	R	T	S	
UniRef90_L1KXA0	I	V	N	G	L	I	Q	T	D	V	C	A	E	P	G	D	S	G	G	S	L	F	A	G	S	T	A	L	G	L	T	S	G	G	S	G	D	C	T	S		
UniRef90_UPI0002F1D78E	T	V	T	S	G	V	T	R	T	N	V	C	A	E	P	G	D	S	G	G	S	F	I	S	G	S	Q	A	Q	G	M	T	S	G	G	S	G	D	C	T	S	
UniRef90_Q095L8	S	V	T	G	L	V	R	T	T	N	V	C	A	E	P	G	D	S	G	G	P	W	L	S	G	S	Q	A	Q	G	M	T	S	G	G	S	G	D	C	T	S	
UniRef90_UPI00046425FD	A	V	D	G	L	T	R	T	T	V	C	A	E	P	G	D	S	G	G	P	Y	V	A	G	A	Q	A	Q	G	V	T	S	G	G	S	G	D	C	T	S		
UniRef90_P52321	I	V	N	G	L	I	Q	T	T	V	C	A	E	P	G	D	S	G	G	A	L	F	A	G	D	T	A	L	G	L	T	S	G	G	S	G	D	C	T	S		
UniRef90_UPI000419DAB9	S	V	Y	G	L	T	R	T	N	A	C	A	E	P	G	D	S	G	G	S	W	L	A	G	T	Q	A	Q	G	V	T	S	G	G	S	G	D	C	T	S		
UniRef90_D2B7M9	T	V	F	E	L	V	R	T	N	V	C	A	E	P	G	D	S	G	G	S	F	I	S	I	D	Q	A	Q	G	V	T	S	G	G	S	G	D	C	T	S		
UniRef90_D2ASM8	T	V	S	G	L	T	R	T	S	A	C	A	Q	P	G	D	S	G	G	S	F	I	S	G	S	Q	A	Q	G	T	S	G	G	S	G	D	C	T	S			
UniRef90_Q55353	T	I	T	G	V	T	R	T	S	V	C	A	E	P	G	D	S	G	G	S	Y	I	S	G	S	Q	A	Q	G	V	T	S	G	G	S	G	D	C	T	S		
UniRef90_J1ZN62	T	V	D	G	L	I	Q	T	S	I	C	A	E	A	G	D	S	G	G	A	L	F	D	D	E	T	A	L	G	L	T	S	G	G	R	G	D	C	A	T	S	
UniRef90_S3ZUR9	P	V	Y	G	L	I	E	T	D	V	C	A	E	P	G	D	S	G	G	A	L	F	A	G	D	T	A	L	G	L	T	S	G	G	T	G	D	C	A	S		
UniRef90_X0MRZ3	T	V	N	G	L	I	Q	T	D	V	C	A	E	P	G	D	S	G	G	A	L	F	D	G	E	S	A	L	G	L	T	S	G	G	S	G	D	C	A	S		
UniRef90_D7C828	V	V	Y	Q	M	I	R	T	N	V	C	A	E	P	G	D	S	G	G	P	L	F	S	G	N	T	A	L	G	L	T	S	G	G	S	G	N	C	Q	T	S	
UniRef90_D6A4N7	T	I	T	G	V	T	R	T	S	V	C	A	E	P	G	D	S	G	G	S	Y	I	S	G	S	Q	A	Q	G	V	T	S	G	G	S	G	N	C	C	S	S	
UniRef90_UPI000349B0E8	T	V	N	G	L	T	Q	T	D	V	C	A	E	P	G	D	S	G	G	S	W	L	S	G	D	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	S	S	
UniRef90_UPI00047B9AE8	S	V	S	G	L	I	Q	T	T	V	C	A	E	P	G	D	S	G	G	S	L	F	A	G	D	K	A	L	G	L	T	S	G	G	S	G	D	C	T	S		
UniRef90_UPI000377F96A	S	V	S	G	L	I	Q	T	N	V	C	A	E	P	G	D	S	G	G	S	L	F	S	G	S	T	A	L	G	L	T	S	G	G	S	G	D	C	T	S		
UniRef90_E9UNN2	R	V	S	G	L	I	R	T	N	V	C	A	E	P	G	D	S	G	G	A	L	Y	D	G	T	K	A	L	G	L	T	S	G	G	S	G	D	C	T	S		
UniRef90_UPI00034C3776	T	I	Y	N	M	T	R	T	S	A	C	A	E	P	G	D	S	G	G	S	F	I	S	G	T	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	S	W	
UniRef90_D7C826	T	V	S	G	L	I	Q	T	D	V	C	A	E	P	G	D	S	G	G	P	L	F	A	Q	N	V	A	L	G	V	T	S	G	G	T	G	D	C	C	T	S	
UniRef90_UPI0003A007B6	V	V	Y	G	L	I	Q	T	N	V	C	A	E	P	G	D	S	G	G	P	L	Y	A	G	D	K	V	I	G	L	T	S	G	G	S	G	D	C	C	S	T	
UniRef90_UPI00037D9826	V	V	Y	G	M	I	Q	T	N	V	C	A	E	P	G	D	S	G	G	P	L	Y	S	G	S	K	A	V	G	L	T	S	G	G	S	G	D	C	C	S	S	
UniRef90_Q0V2B5	R	V	T	G	L	T	Q	T	N	V	C	A	E	P	G	D	S	G	G	S	F	Y	S	G	S	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	A	S	
UniRef90_N4VHA7	R	V	T	G	L	T	R	T	S	V	C	A	E	P	G	D	S	G	G	S	F	Y	S	G	A	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	A	S	
UniRef90_UPI00038104F9	T	V	T	G	L	I	Q	T	N	V	C	A	E	P	G	D	S	G	G	P	L	F	T	D	G	L	A	V	G	L	T	S	G	G	S	G	D	C	T	V		
UniRef90_UPI0003448E0E	H	V	H	G	L	T	R	T	T	A	C	A	E	P	G	D	S	G	G	S	W	L	A	G	T	E	A	Q	G	V	T	S	G	G	S	G	D	C	C	T	S	
UniRef90_D7B3J5	T	V	Q	D	L	T	R	T	D	V	C	A	E	P	G	D	S	G	G	S	F	I	A	G	S	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	T	S	
UniRef90_UPI0003811155	T	V	K	G	M	I	R	T	N	V	C	A	E	P	G	D	S	G	G	P	L	Y	D	G	S	K	A	L	G	L	T	S	G	G	S	G	D	C	C	S	S	
UniRef90_G2GHI3	I	V	S	G	L	I	Q	T	T	V	C	A	E	P	G	D	S	G	G	S	L	Y	S	N	G	T	A	Y	G	L	T	S	G	G	S	G	D	C	C	T	S	
UniRef90_UPI00036C60EE	T	V	T	G	L	I	Q	T	N	V	C	A	E	P	G	D	S	G	G	S	L	Y	F	T	E	G	A	L	G	L	T	S	G	G	S	G	D	C	C	T	S	
UniRef90_UPI00035C5C52	A	V	N	G	L	T	R	T	N	V	C	A	E	P	G	D	S	G	G	S	W	L	S	G	N	Q	A	Q	G	V	T	S	G	G	S	G	D	C	C	S	S	
UniRef90_UPI000365D338	A	V	S	G	L	I	Q	T	T	V	C	A	E	P	G	D	S	G	G	P	L	F	A	Q	G	L	A	L	G	V	T	S	G	G	S	G	D	C	K	A	S	
UniRef90_A0ADD6	T	V	T	G	L	I	E	T	D	V	C	A	E	P	G	D	S	G	G	P	M	F	S	E	G	L	A	L	G	V	T	S	G	G	S	G	D	C	C	A	K	S
UniRef90_V6JGG6	S	V	S	G	L	I	D	T	N	V	C	A	E	P	G	D	S	G	G	A	L	F	D	G	D	A	A	I	G	L	T	S	G	G	S	G	D	C	C	S	S	
UniRef90_UPI00035FE661	S	V	H	Q	L	I	Q	T	N	A	L	V	N	S	G	G	C	G	G	L	F	S	G	S	V	G	L	G	L	T	S	G	G	K						G		
UniRef90_UPI0003A1B1D5	V	V	E	G	L	I	G	T	D	I	C	S	Q	K	G	D	S	G	G	P	L	F	A	G	N	T	A	L	G	M	T	S	G	G	V	I	L	C	P	T		
UniRef90_W5VZ68	V	V	R	G	L	I	E	A	R	V	H	C	E	G	G	D	S	G	G	A	L	F	D	G	G	T	A	L	G	T	V	S	G	G	D	S	S					
UniRef90_E2PXA9	I	V	S	G	L	I	R	S	D	V	C	A	E	P	G	D	S	G	G	P	L	H	S	G	P	L	A	V	G	T	V	S	G	G	T	G	D	C	A	T		
UniRef90_G2NTI1	A	V	Y	E	M	T	K	T	S	V	C	A	E	P	G	D	S	G	G	S	F	I	S	G	D	Q	A	Q	G	V	T	S	G	G	W	G	N	C	C	S	G	
UniRef90_U2AE12	T	V	S	G	L	A	R	G	S	A	C	A	E	P	G	D	S	G	G	S	V	V	S	G	D	Q	A	Q	G	V	T	S	G	R	V	K	D	C	C	S	N	
UniRef90_K6ULM6	P	I	K	G	L	T	E	T	D	V	C	A	E	P	G	D	S	G	G	P	W	M	A	G	D	Q	A	Q	G	V	T	S	G	N	A	T	S	F	K			
UniRef90_W7SH20	T	V	T	G	L	T	R	T	N	V	C	A	E	P	G	D	S	G	G	A	W	I	S	G	N	A	Q	G	V	T	S	G	G	S	G	D	C	T	H			
UniRef90_UPI00046CAEC4	T	V	G	Q	L	T	R	T	S	T	C	A	E	P	G	D	S	G	G	A	F	I	S	G	N	S	A	Q	G	Q	T	S	G	G	Q	T	G	C	P	G		
UniRef90_UPI00036F88C1	T	V	Y	G	L	F	R	A	T	L	C	V	I	E	P	G	D	S	G	A	S	A	Y	S	G	G	T	A	L	G	L	V	S	G	S	P						
UniRef90_W0C3U2	Y	T	G	M	T	E	T	N	V	C	T	G	R	G	D	S	G	G	A	W	L	T	D	G	Q	A	Q	G	V	T	S	G	A	E	D	N	C	A	S			
UniRef90_M2QNM2	Q	V	I	G	T	I	A	T	D	I	P	I	G	S	G	D	S	G	G	P	L	F	Y	G	G	V	G	Y	G	V	L	S	G	G	N	S	Q					
UniRef90_R4T4P6	V	T	T	G	L	A	K	S	T	V	C	T	E	G	G	D	S	G	G	A	Y	I	A	G	N	T	A	Q	G	M	T	S	G	G	P	A	D	G	A	T		
UniRef90_A9WLX2	R	V	N	G	L	V	Q	Y	N	A	C	V	E	G	G	D	S	G	G	A	L	S	G	T	Q	A	Q	G	L	T	S	G	G	Q	G	Y	S	Q	G			
UniRef90_V6L294	I	V	Y	G	L	I	Q	T	N	L	C	L	P	F	S	A	R	G	G	T	P	L	F	G	N	Q	A	L	G	I	A	S	S	G	S	G	S	C	P	S		
UniRef90_UPI00035FA49D	H	I	E	N	L	I	Q	T	D	A	S	I	N	P	G	N	S	G	G	P	L	L	D	Q	G	R	V	I	G	I	N	T	A	I	I	G	D			A		
UniRef90_G5D8X5	A	V	Y	G	M	T	E	S	N	A	C	S	G	P	G	D	S	G	G	P	W	I	L	D	G	Q	A	Q	G	I	Q	S	G	N	Q	G	S	S	A			
UniRef90_G0PZ17	V	V	T	G	L	A	T	S	S	V	C	T	E	P	G	D	S	G	G	A	Y	I	S	G	N	Q	A	Q	G	M	T	S	G	G	P	T	N	C	T	G		
UniRef90_H1G4E9	S	Y	V	P	F	I	Q	T	D	V	A	I	N	P	G	N	S	G	G	P	L	F	N	D	G	E	V	V	G	I	N	S	Q	I	S	R	T	G	G	F		
UniRef90_S6HSL8	T	Y	V	P	F	I	Q	T	D	V	A	I	N	P	G	N	S	G	G	P	L	F	N	D	G	E	V	V	G	I	N	S	Q	I	S	R	T	G	G	F		

QUERY	G	G	T	T	F	Y	Q	P	V	T	E	A	L	S	A	Y	G	A	T	V	L
UniRef90_L1KXA0	G	G	E	T	F	F	Q	P	V	T	E	A	L	S	V	Y	G	A	E	I	L
UniRef90_UPI0002F1D78E	G	G	T	T	F	F	H	P	V	N	P	A	L	Q	A	Y	G	L	T	L	V
UniRef90_Q095L8	G	G	Q	T	Y	F	Q	P	V	Q	P	V	L	S	A	Y	G	L	T	L	
UniRef90_UPI00046425FD	G	G	T	T	F	F	Q	P	V	N	P	I	L	S	E	Y	G				
UniRef90_P52321	G	G	T	T	F	F	Q	P	V	P	E	A	L	A	A	Y	G	A	E	I	L
UniRef90_UPI000419DAB9	G	G	T	F	Y	F	Q	P	I	N	A	A	L	S	A	L	G	I	Q	L	L
UniRef90_D2B7M9	G	G	I	T	Y	F	Q	P	I	G	E	I	L	T	T	Y	G	L	S	L	V
UniRef90_D2ASM8	G	G	T	T	Y	H	Q	P	V	N	E	P	L	S	V	Y	G	L	T	L	
UniRef90_Q55353	G	G	T	T	Y	H	Q	P	I	N	P	L	L	S	A	Y	G	L	D	L	V
UniRef90_J1ZN62	D	G	Q	S	Y	Y	Q	P	V	R	E	A	L	K	D	T	G	A	H	V	
UniRef90_S3ZUR9	G	G	T	T	Y	F	Q	P	V	T	E	P	L	A	V	Y	G	V	S	I	
UniRef90_X0MRZ3	G	G	E	T	F	F	Q	P	V	P	A	A	L	Q	A	Y	G	A	Q	I	
UniRef90_D7C828	G	G	V	T	Y	Y	Q	P	V	V	E	A	L	N	N	H	G	A	A	I	
UniRef90_D6A4N7	G	G	T	T	Y	F	Q	P	I	N	P	L	L	Q	T	Y	G	L	T	L	
UniRef90_UPI000349B0E8	G	G	T	T	F	F	Q	P	I	N	P	L	L	E	T	Y	G	A	T	L	L
UniRef90_UPI00047B9AE8	G	G	E	T	F	F	Q	P	V	G	P	A	L	E	A	F	G	A	E	L	
UniRef90_UPI000377F96A	G	G	T	T	Y	F	Q	P	V	T	E	A	L	S	R	Y	G	V	S	V	
UniRef90_E9UNN2	G	G	T	T	F	F	Q	P	V	R	E	A	V	N	A	Y	G	V	T	V	
UniRef90_UPI00034C3776	G	G	T	T	F	Y	Q	P	E	V	N	P	M	L	N	S	W	N	L	R	L
UniRef90_D7C826	G	G	V	T	F	F	Q	P	V	T	K	A	L	T	A	L	G	V	S	L	
UniRef90_UPI0003A007B6	G	G	T	T	Y	Y	Q	P	I	Q	E	V	L	S	A	Y	G	L	S	V	
UniRef90_UPI00037D9826	G	G	T	T	F	F	Q	P	V	T	E	A	L	S	A	Y	G	V	T	L	
UniRef90_Q0V2B5	G	G	V	T	Y	F	Q	P	V	N	E	I	L	S	A	Y	G	L	T	L	V
UniRef90_N4VHA7	G	G	T	T	Y	F	Q	P	V	N	E	I	L	S	T	Y	G	L	T	L	V
UniRef90_UPI00038104F9	G	G	E	T	F	F	Q	P	V	T	T	A	L	E	A	V	G	A	T	L	
UniRef90_UPI0003448E0E	G	G	T	T	Y	F	Q	P	L	N	P	I	L	E	R	W	N	L	T	L	L
UniRef90_D7B3J5	G	G	T	T	Y	Y	Q	P	V	T	P	L	L	S	S	W	G	L	S	L	V
UniRef90_UPI0003811155	G	G	T	T	F	Y	Q	P	V	T	E	A	L	S	G	R	Y	N	V	S	I
UniRef90_G2GHI3	G	G	T	T	F	F	Q	P	V	T	E	A	L	S	A	Y	G	V	S	I	F
UniRef90_UPI00036C60EE	G	G	E	T	F	F	Q	P	V	T	T	A	L	A	A	V	G	A	Q	L	
UniRef90_UPI00035C5C52	G	G	T	T	Y	F	Q	P	V	N	P	I	L	Q	T	Y	S	L	R	L	V
UniRef90_UPI000365D338	G	G	I	T	F	F	Q	P	V	T	T	A	M	A	T	L	G	V	S	L	
UniRef90_A0ADD6	G	G	T	T	F	F	Q	P	L	P	D	A	M	A	S	L	G	V	R	L	L
UniRef90_V6JGG6	G	G	E	T	F	F	Q	P	V	P	A	A	L	S	A	E	G	A	T	L	
UniRef90_UPI00035FE661	G	G	S	S	Y	F	Q	P	V	G	E	A	L	S	A	Y	G	V	A	L	
UniRef90_UPI0003A1B1D5	A	S	W	S	F	Y	Q	P	I	G	E	V	L	D	E	Y	G	V	E	L	
UniRef90_W5VZ68		T	T	Y	F	Q	P	V	G	P	A	L	S	A	Y	G	V	T	L		
UniRef90_E2PXA9	G	G	V	T	Y	F	Q	P	V	A	P	A	L	A	R	L	G	V	T	V	
UniRef90_G2NT11	G	G	E	T	W	Y	Q	P	I	N	E	I	L	S	V	Y	G	L	R	L	
UniRef90_U2AE12	G	G	S	F	V	Y	Q	P	V	N	P	I	L	S	A	Y	G	L	S	L	V
UniRef90_K6ULM6	D	G	K	T	H	F	Q	P	I	N	P	I	L	K	K	Y	G	L	T	L	
UniRef90_W7SH20	G	G	T	T	Y	F	S	P													
UniRef90_UPI00046CAEC4	S	G	P	I	W	F	S	T	L	S	G	A	L	N	L	A	G	A	T	L	
UniRef90_UPI00036F88C1	G	G	T	A	F	Y	Q	P	V	V	P	V	L	A	A	Y	G	L	S	I	L
UniRef90_W0C3U2	T	R	K	T	W	F	Q	P	L	N	P	I	L	S	K	Y	G	L	T	L	L
UniRef90_M2QNM2		V	S	F	Y	Q	P	L	R	T	V	L	T	A	Y	G	A	T	L		
UniRef90_R4T4P6	P	G	S	Y	S	Y	Q	P	V	V	D	A	A	N	K	Y	G	V	T	L	
UniRef90_A9WLX2	P	G	V	A	Y	Y	Q	P	V	N	P	A	L	S	A	Y	G	M	T	L	V
UniRef90_V6L294	G	G	T	S	F	F	Q	P	L	N	E	V	L	S	S	L	G	L	A	L	
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UniRef90_G5D8X5	G	R	K	S	W	F	D	P	L	N	S	I	L	G	E	Y	G	L	V	L	
UniRef90_G0PZ17	G	G	S	S	Y	F	Q	P	L	D	D	T	L	A	H	Y	G	L	T	L	
UniRef90_H1G4E9	M	G	L	S	F	A	I	P	I	E	V	A	M	D	V	V	G				
UniRef90_S6HSL8	M	G	L	S	F	A	I	P	I	N	V	A	M	N							
UniRef90_W0DZT6	M	G	L	S	F	A	I	P	I	D	V	A	M	D							
UniRef90_Q3AEC4	E	G	M	G	F	A	I	P	I	D	E	A									
UniRef90_A5EL92	A	G	I	G	F	A	V	P	V	D	K	V									
UniRef90_UPI00037194C4	M	G	V	S	F	A	I	P	I	E	L	A	M	D							
UniRef90_L0D703	Q	G	I	G	F	A	L	P	I	D	D	V									
UniRef90_UPI00036FE523	M	G	I	S	F	A	I	P	I	D	E	A	M	R							
UniRef90_Q2LXP4	Q	G	I	G	F	A	I	P	V	N	M	A	K	N	I	L					
UniRef90_B7IER5	M	N	I	G	F	A	I	P	I	N	T	A									
UniRef90_Q39ZY9	Q	G	I	G	F	A	I	P	V	N	A	A									
UniRef90_R5RBT0	M	G	I	G	F	A	V	P	V	N											
UniRef90_S9S7Y6	I	G	I	G	F	A	I	P	S	S	L	A	M								
UniRef90_A6CGY1	A	G	I	G	Y	A	V	P	V	D	L	I									
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UniRef90_E4PQK0	M	G	V	S	F	A	I	P	I	D	D	A	M	N	V	F					
UniRef90_UPI00034A3200	A	G	I	G	F	A	I	P	V	D	E	V									
UniRef90_B9LZ44	Q	G	I	G	F	A	I	P	V	N	M	A									
UniRef90_O05942	I	G	I	G	F	A	I	P	S	N	T	A									
UniRef90_UPI000376D066		V	T	Y	F	F	P	I	G	A	A	L	S	G	T	G	T	T	L		
UniRef90_V4LKG6	S	G	I	G	F	A	V	P	V	D	T	V									
UniRef90_B5YER0	Q	G	I	G	F	A	I	P	I	N	K	A									
UniRef90_D2R1V9	Q	G	I	G	F	A	I	P	I	D	E	A	L	E							
UniRef90_B6JB72	I	G	I	G	F	A	V	P	S	N	T	V									
UniRef90_W6M3H0	Q	G	V	S	F	A	I	P	I	D	V	A	M	E							
UniRef90_A6VUA4	M	G	V	S	F	A	I	P	S	K	V	A	M	S							
UniRef90_UPI000377332A	I	G	L	S	F	A	I	P	A	S	L	A									
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UniRef90_Q10YR7	M	G	I	G	F	A	I	P	I	N	K	A									
UniRef90_E6YIG3	I	G	I	G	F	A	I	P	S	D	M	A	L	S	V	I	N				
UniRef90_D7DLL8	M	G	I	G	F	A	I	P	A	T	L	A									
UniRef90_D6Z209	A	G	I	G	F	A															
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UniRef90_I0I0U5	A	G	V	G	F	A	V	P	V	D	T										
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UniRef90_Q1QEG2			T	G	F
UniRef90_B2TJK3			L	G	S
UniRef90_UPI000362C670			L	G	S
UniRef90_A4A5L4			T	G	S
UniRef90_W0E1D3			T	G	S
UniRef90_D3KZU1			T	G	S
UniRef90_UPI00037DF6B8			R	N	S
UniRef90_UPI0002626F64			S	L	G
UniRef90_UPI0003B73C84			S	L	G
UniRef90_B9KB74			S	L	G
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UniRef90_B8DPH8			G	G	D
UniRef90_N6XE86			D	N	Q
UniRef90_B6BUJ8			T	G	S
UniRef90_Q115C2			T	G	S
UniRef90_UPI00035FD6A1			S	L	G
UniRef90_Q47ET5			G	F	I
UniRef90_UPI0003B3F16E			L	G	S
UniRef90_UPI00034D82F2			L	G	S
UniRef90_Y0KG44			S	L	G
UniRef90_T1BJE2			F	I	R
UniRef90_X5JPV3			L	G	S
UniRef90_F2I748			S	E	G
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UniRef90_F6AEX5			S	L	G
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UniRef90_E0QJL1			G	D	S
UniRef90_UPI00037E1439			G	D	Q
UniRef90_UPI00047DD2EE			M	G	T
UniRef90_B4WLG5			T	G	S
UniRef90_F4MLF2			G	F	I
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UniRef90_Q0YSA0			L	G	S
UniRef90_K9U388			L	G	S
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UniRef90_UPI0003693CB5			S	L	G
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UniRef90_UPI0003B4C572			S	L	G
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UniRef90_I3ZAG7			T	G	P
UniRef90_G2LEM8			S	L	G
UniRef90_F4GNI3			S	L	G
UniRef90_W4LKB2			G	S	G
UniRef90_A8MKH6			V	G	T
UniRef90_A0A031LQN6			G	S	A
UniRef90_UPI000479016A			G	S	G
UniRef90_UPI00047D92E9			S	L	G
UniRef90_F8N9R7			L	G	S
UniRef90_V4Y3S4			I	G	S
UniRef90_B2A3L3			T	G	S
UniRef90_UPI00036AD117			L	G	S
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UniRef90_UPI00034CF819			T	G	S
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UniRef90_F2NPD9			T	G	S
UniRef90_A0A024KA98			V	G	T

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UniRef90_Q1QEG2	L	K	V	T	T	L	N	D	R	T	E	V	D	A	T	L	V	G	A	M	I	K	S	D	E	R	S	D	T	K	V	L
UniRef90_B2TJK3	I	V	K	V	T	L	A	N	G	K	T	V	P	A	R	V	L	G	S	A	M	I	K	S	D	E	R	S	D	T	K	V
UniRef90_UPI000362C670	L	Q	V	T	A	L	A	N	G	K	T	V	P	A	R	V	L	G	S	A	M	I	K	S	D	E	R	S	D	T	K	V
UniRef90_A4A5L4	M	Q	V	T	A	L	A	N	G	K	T	V	P	A	R	V	L	G	S	A	M	I	K	S	D	E	R	S	D	T	K	V
UniRef90_W0E1D3	A	Y	V	T	R	L	S	N	Q	R	T	Y	A	A	R	L	V	G	V	S	P	E	H	D	I	A	V	L	R	L	I	A
UniRef90_D3KZU1	I	T	V	T	S	L	A	D	G	R	Q	L	D	A	K	I	V	G	K	D	P	Q	S	D	V	A	L	L	K	I	D	A
UniRef90_UPI00037DF6B8	V	V	V	H	L	S	D	R	R	E	F	V	D	A	E	I	V	G	S	V	I	K	I	E	G	K	D	M	P	L	A	K
UniRef90_UPI0002626F64	I	T	V	T	Q	L	Y	D	G	R	E	L	P	A	T	L	V	G	S	V	I	K	I	E	G	K	D	M	P	L	A	K
UniRef90_UPI0003B73C84	I	T	V	T	R	L	S	D	R	S	E	L	V	A	K	L	V	G	A	D	P	R	T	D	V	A	L	L	K	I	P	G
UniRef90_B9KB74	I	T	V	T	L	L	D	R	R	E	F	V	D	A	E	I	V	G	A	V	I	K	I	E	G	K	D	M	P	L	A	K
UniRef90_Q46PM8	I	T	V	T	K	L	T	D	R	R	E	F	P	Q	T	D	V	A	V	I	R	I	K	A	T	D	K	K	F	P	Y	L
UniRef90_S8FE09	I	S	V	R	L	N	D	D	R	E	F	K	G	R	V	I	G	V	S	P	E	H	D	I	A	V	L	R	L	I	A	T
UniRef90_E8UF11	I	E	V	A	L	Y	D	G	R	K	F	P	D	T	D	L	A	V	I	K	I	E	V	P	D	L	V	L	P	L	A	K
UniRef90_Q2LU68	A	I	V	K	L	S	D	G	R	D	S	R	A	A	L	V	G	A	S	P	S	H	D	I	A	V	L	L	K	I	A	I
UniRef90_U5T453	I	I	V	R	L	N	D	R	R	Q	M	T	A	E	L	V	G	A	D	P	R	A	D	L	A	L	L	K	V	I	G	F
UniRef90_W5TSB1	A	Q	L	G	T	F	Q	K	S	V	L	G	N	Q	D	Y	S	I	V	S	I	D	P	G	A	R	D	R	N	L	V	R
UniRef90_B8DPH8	I	R	V	N	L	Q	G	A	S	G	K	S	N	S	Y	V	A	N	V	I	G	T	D	E	E	T	D	L	A	L	L	K
UniRef90_N6XE86	I	L	V	R	L	A	D	K	R	E	Y	S	A	E	V	L	G	A	D	A	R	S	D	V	A	L	L	R	I	D	A	S
UniRef90_B6BUJ8	V	I	V	K	L	N	D	K	R	E	F	K	A	E	V	L	G	I	D	K	R	T	D	V	A	V	L	L	K	I	K	A
UniRef90_Q115C2	V	K	V	T	L	K	D	G	R	V	F	D	G	T	D	I	A	I	I	K	I	E	A	T	D	L	P	E	L	A	K	N
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[illegible]

[illegible]

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UniRef90_UPI000362C670	Q G I G F A I P V S I A
UniRef90_A4A5L4	A G I G F A I P V N T V
UniRef90_W0E1D3	A G I G F A V P V D T I
UniRef90_D3KZU1	Q G I G F A I P V N M A
UniRef90_UPI00037DF6B8	M G L S F A V P I E M V
UniRef90_UPI0002626F64	Q G I G F A V P I N M A L R
UniRef90_UPI0003B73C84	M G L S F A I P M E V A L D
UniRef90_B9KB74	V N L G F A I P I N T V
UniRef90_Q46PM8	Q G L S F A I P I N V A
UniRef90_S8FE09	A G Y G F A I P V V T D L K Q Y G
UniRef90_E8UF11	L G I G F A T P A D T A L N I L N
UniRef90_Q2LU68	A G I G F A V P V D T V
UniRef90_U5T453	Q G I S F A I P I E L A M D
UniRef90_W5TSB1	V C I I F A Q P V N Q V L S D
UniRef90_B8DPH8	Q G I G F A I P S N M A
UniRef90_N6XE86	M G L S F A I P I D L A M D
UniRef90_B6BUJ8	M G L S F A I P I D V A I N
UniRef90_Q115C2	Q G L G F A I P I E T A
UniRef90_UPI00035FD6A1	Q G I G F A I P S D L A T S
UniRef90_Q47ET5	Q G L S F A I P I E V A M N
UniRef90_UPI0003B3F16E	Q G I G F A I P I N M V K A E L
UniRef90_UPI00034D82F2	Q G L G F A I P I N T A
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UniRef90_A6T0K8	Q G L S F A I P I D A A M R
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UniRef90_D9TPJ1	E G M G F A I P I N E A
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UniRef90_UPI0003B4C572	Q G I G F S I P I D T V
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UniRef90_J6UG10	V	K	F	I	S	L	S	D	G	R	E	F	E	A	E	L	V	L	K	D	A	R	S	D	V	A	V	V	R	L	K	E	A	T	E	K	F	P	T	I	A	K		
UniRef90_S5ZVP4	L	E	V	F	I	S	L	S	D	G	R	E	F	E	A	E	L	V	L	K	D	A	R	S	D	V	A	V	V	R	L	K	E	A	T	E	K	F	P	T	I	A	K	
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UniRef90_D8U240	I	K	V	T	A	L	R	D	G	R	E	F	L	A	Q	V	I	G	A	D	T	V	S	D	V	A	V	V	Q	V	S	A	N	N	L	P	T	V	I	Q				
UniRef90_B1ZVS4	I	K	V	T	A	L	R	D	G	R	E	F	L	A	Q	V	I	G	A	D	T	V	S	D	V	A	V	V	Q	V	S	A	N	N	L	P	T	V	I	Q				
UniRef90_W7BEA2	L	E	V	F	I	S	L	S	D	G	R	E	F	E	A	E	L	V	L	K	D	A	R	S	D	V	A	V	V	Q	V	S	A	N	N	L	P	T	V	I	Q			
UniRef90_A0A024Q4L6	V	D	I	Q	V	A	L	R	D	G	R	E	F	L	A	Q	V	I	G	A	D	T	V	S	D	V	A	V	V	Q	V	S	A	N	N	L	P	T	V	I	Q			
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UniRef90_Q2YAV7	L	E	V	F	I	S	L	S	D	G	R	E	F	E	A	E	L	V	L	K	D	A	R	S	D	V	A	V	V	Q	V	S	A	N	N	L	P	T	V	I	Q			
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UniRef90_UPI00035E94F1	V	Y	V	T	T	N	N	N	E	E	Y	P	S	T	D	L	A	L	I	K	V	N	D	A	G	K	E	L	P	S	E	N	L	P	V	I	Q	L	S	D	E	Q	V	A
UniRef90_B7K801	V	T	V	T	T	N	N	N	E	E	Y	P	S	T	D	L	A	L	I	K	V	N	D	A	G	K	E	L	P	S	E	N	L	P	V	I	Q	L	S	D	E	Q	V	A
UniRef90_W7UM14	H	R	I	E	T	M	D	G	R	F	Y	D	A	K	I	V	G	G	R	D	A	K	T	D	I	A	V	I	K	V	N	A	N	K	G	L	K	P	T	A	K			
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UniRef90_J6UG10	L	G	D	S
UniRef90_S5ZVP4	L	G	D	S
UniRef90_UPI000470EC6F	L	G	D	S
UniRef90_V5V6X4	L	G	D	S
UniRef90_UPI00030BCDBB	L	A	D	S
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UniRef90_B1ZVS4	F	A	D	S
UniRef90_W7BEA2	F	G	N	S
UniRef90_A0A024Q4L6	L	G	T	S
UniRef90_A0A024Q219	L	I	G	D
UniRef90_Q2YAV7	F	G	Y	S
UniRef90_B4CY15	L	A	D	S
UniRef90_D9RXP1	L	G	D	S
UniRef90_UPI00035E94F1	F	G	N	S
UniRef90_B7K801	V	L	G	N
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UniRef90_UPI000475894B	I	A	G	N
UniRef90_UPI0003FB9712	I	A	G	N
UniRef90_K9PUK6	V	G	H	S
UniRef90_UPI0003603EC7	F	S	D	S
UniRef90_H0AEC3	L	A	E	S
UniRef90_UPI000365B69C	F	G	P	S
UniRef90_UPI0003705E7B	Y	G	N	S
UniRef90_UPI00029AD69D	L	L	G	D
UniRef90_A0A022H110	L	L	G	D
UniRef90_UPI000426BE0F	F	G	D	S
UniRef90_B3ES14	L	A	D	S
UniRef90_R1ISL6	L	L	G	D
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UniRef90_S6G81	F	A	S	N
UniRef90_C3XNK4	L	G	D	S
UniRef90_UPI0002E11052	R	D	S	D
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UniRef90_C4ZLS1	R	G	H	S
UniRef90_M5T0C9	L	G	S	S
UniRef90_E6WUA7	F	G	D	A
UniRef90_UPI00010HMZ8	L	L	G	S
UniRef90_K7ZGF0	L	I	A	D
UniRef90_UPI0003811484	M	G	D	S
UniRef90_QOAXS6	F	G	E	S
UniRef90_UPI0003FEC379	F	G	N	S
UniRef90_K8ZPN5	L	A	D	S
UniRef90_K7AFF3	W	G	N	S
UniRef90_UPI000471AAF4	F	G	N	S
UniRef90_F9ZDZ3	L	L	G	D
UniRef90_UPI000375AA3E	L	L	G	N
UniRef90_C6J7D1	L	L	G	N
UniRef90_UPI0003B54D75	I	L	G	N
UniRef90_UPI0003737664	L	I	E	S
UniRef90_S6G140	L	L	G	D
UniRef90_Q1ILF1	L	L	G	D
UniRef90_GOV3R1	L	G	D	S
UniRef90_UPI0003673E03	F	G	N	S
UniRef90_UPI00036A346E	L	L	G	D
UniRef90_UPI0004734B95	F	G	N	P
UniRef90_Q1PW98	L	L	G	N
UniRef90_R9XG63	I	L	G	S
UniRef90_R5YE64	L	L	G	D
UniRef90_UPI0001E304D4	L	A	Q	P
UniRef90_F3KZK6	F	G	D	S
UniRef90_UPI00047D0A91	L	L	G	E
UniRef90_S0ES60	L	A	D	D
UniRef90_Q0A612	F	G	D	S
UniRef90_C3KW97	F	A	D	A
UniRef90_B9QYM5	V	P	G	E
UniRef90_UPI0003670C09	I	L	G	D
UniRef90_K5D551	W	G	D	S
UniRef90_S6CFL5	F	G	S	S
UniRef90_UPI00047DB3C7	L	L	G	D
UniRef90_N0AZB7	L	L	G	D
UniRef90_B1C943	L	L	G	D
UniRef90_K0W8Z9	F	G	D	S
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UniRef90_UPI00036EC82E	V	A	N	S
UniRef90_UPI00047029A8	L	G	E	S
UniRef90_UPI000479AC3	L	A	D	S
UniRef90_Q1YNG8	F	G	D	S
UniRef90_UPI000363B852	L	L	G	D
UniRef90_UPI000479CB3B	L	L	A	D
UniRef90_I1XFA3	F	G	D	S
UniRef90_F0REQ1	V	G	D	W
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UniRef90_UPI000410CFE7	L	L	G	N
UniRef90_A0L512	L	L	G	N
UniRef90_J5GG80	F	G	D	S
UniRef90_UPI000288C64D	F	G	D	S
UniRef90_UPI00028998C8	F	A	D	S
UniRef90_UPI000477B042	F	A	D	S

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UniRef90_S5ZVP4	I	I	K	N	M	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	D	T	G	R	K	M	I	V	G	I	N	T	A	I	I	S	G	S				
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UniRef90_V5V6X4	K	R	V	S	D	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	N	A	G	K	V	I	V	G	I	N	T	A	I	I	S	G	S				
UniRef90_UPI00030BCDBB	A	Y	E	D	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	N	A	D	G	A	L	V	V	G	I	N	T	A	I	I	S	G	S				
UniRef90_D8U240	P	I	Q	D	V	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	S	D	A	G	R	L	I	V	G	I	N	T	A	I	I	S	G	S				
UniRef90_B1ZVS4	D	Y	E	D	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	S	D	A	G	R	L	I	V	G	I	N	T	A	I	I	S	G	S				
UniRef90_W7BEA2	W	E	A	E	V	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	N	E	A	G	Q	V	I	V	G	I	N	S	M	K	I	A	S	T	E	N	V	
UniRef90_A0A024Q4L6	W	V	T	E	V	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	N	A	A	G	Q	V	I	V	G	I	N	S	M	K	I	A	S	R	Q	N	A	V
UniRef90_A0A024Q219	A	Y	E	D	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	N	A	A	G	Q	V	I	V	G	I	N	S	M	K	I	A	S	R	Q	N	A	V
UniRef90_Q2YAV7	T	F	E	N	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	D	S	A	G	N	L	V	V	G	I	N	T	A	I	I	S	R	T	G	G	S	
UniRef90_B4CY15	L	M	D	D	I	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	S	A	G	E	V	I	V	G	I	N	T	A	I	I	S	R	T	G	G	S		
UniRef90_D9RXP1	V	F	M	K	D	L	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	S	S	G	E	V	I	V	G	I	N	T	A	I	I	S	R	T	G	G	S	
UniRef90_UPI00035E94F1	Q	V	G	S	F	I	Q	S	D	V	A	V	N	P	G	N	S	G	G	A	P	L	L	V	N	A	G	E	V	I	V	G	I	N	T	M	I	Y	S	S	T	G	N	Y	A	
UniRef90_B7K801	K	R	L	Q	F	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	A	P	L	L	V	D	N	G	K	V	I	V	G	I	N	T	A	I	I	S	R	T	G	G	S		
UniRef90_W7UMI4	F	E	M	D	Q	I	Q	T	N	A	E	I	S	P	G	N	S	G	G	A	P	L	L	V	N	M	G	Q	V	I	V	G	I	N	T	A	I	I	S	R	T	G	G	S		
UniRef90_D0J017</																																														

UniRef90_UPI000370898A Q G I | G F A I | P I D T A
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UniRef90_S5ZVP4 A G V | G F A V | P V N T A
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UniRef90_B1ZVS4 Q G I | G F A I | P S N L A
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UniRef90_A0A024Q219 Q G I | G F A I | P A N L A
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UniRef90_B4CYI5 Q G I | C F A I | A S N T A
UniRef90_D9RXP1 Q G I | G F A I | P I N T A
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UniRef90_A0A023Y0R5 M G I | S F A I | P I D L A M G A
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UniRef90_K9PUK6 Q G L | G F A I | P I K T V
UniRef90_UPI0003603EC7 H G I | G F A I | P V D L A
UniRef90_H0AEC3 Q G V | G F A I | P S N T V
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UniRef90_UPI00029AD69D T G Y | S F A V | P V S I V
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UniRef90_M5T0C9 Q Q I | A F A I | P I D Q V L D
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UniRef90_UPI0003811484 V G I | G F A I | P S N M V
UniRef90_Q0AXS6 Q G I | G F A I | S I N T A
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UniRef90_UPI000479CB3B E G L | G F A I | P I N I V
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UniRef90_J9HDI2	F	A	N	S	D	S	K	L	V	N	T	G	D	S	V	F	A	M	G	N	P	L	G	V	T	S	G	I	V	S	A	S	A	L	E	R	T	T	D	T
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UniRef90_T2KNR0	F	G	D	S	D	Q	A	K	L	G	E	W	V	L	A	V	I	G	N	P	L	G	V	T	S	G	I	V	S	A	S	A	L	S	R	S				

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UniRef90_U2NST0	S	T	S	V	Y	I	Q	T	D	A	A	I	N	P	G	N	S	S	G	G	A	P	L	L	N	N	K	G	E	V	I	G	I	N	S	A	K	I	A	S	G	V		
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UniRef90_B0BQM7	Y	E	S	Y	I	Q	T	D	A	A	V	N	Q	G	N	S	S	G	G	A	P	L	L	N	N	G	E	L	V	G	I	N	T	A	I	S	P	S	G	G	N			
UniRef90_I4B4P6	S	R					Q	T	D	A	S	I	N	P	G	N	S	S	G	G	A	P	L	L	N	N	R	G	E	V	I	G	I	N	M	I	L	Y	S	Q	S	G	S	
UniRef90_K2ED44			V	D	F	I	Q	T	D	A	A	I	N	P	G	N	S	S	G	G	A	P	L	L	V	N	N	G	E	V	I	G	I	N	T	A	I	A	G			R	A	
UniRef90_Q1I185	K	I	D	E	A	I	Q	T	D	A	A	I	N	P	G	N	S	S	G	G	A	P	L	L	S	R	G	E	V	I	G	I	N	I	A	S	N	G	A	A	Q	S		
UniRef90_UPI00036E1C25	H	H	Q	L	T	F	R	H			C	T	A	S	G	D	S	G	A	P	V	L	S	G	T	A	A	V	G	L	H	S	A	G	S	T	T	A	C	A	A			
UniRef90_A6FEX1	N	L	E	N	F	I	Q	T	D	A	A	I	N	S	G	N	S	S	G	A	L	L	N	R	G	E	L	V	G	I	N	T	A	A	T	L	G	N	G	G	N			
UniRef90_L01PB9	T	V	I	D	A	V	Q	T	D	A	S	I	N	H	G	N	S	S	G	G	A	P	L	L	N	D	S	E	V	I	G	I	N	S	A	S	S	L	S	D	S	A		
UniRef90_UPI000474AB38	F	Q	N	F	I	Q	T	D	A	S	I	N	P	G	N	S	S	G	G	A	L	V	N	N	R	G	E	L	V	G	I	N	T	M	I			F	T	T	G	T	S	
UniRef90_U5GFA9	T	I	G	G	G	I	Q	T	D	A	A	I	N	P	G	N	S	S	G	G	A	P	L	L	S	K	G	N	L	V	G	I	N	T	A	I	I	F	T	T	G	T	S	
UniRef90_G2DDT7	A	F	E	N	F	I	Q	T	D	A	A	I	N	P	G	N	S	S	G	G	A	L	V	N	A	G	E	L	V	G	I	N	T	A	I	I	S	R	S	G	G	S		
UniRef90_T2KNR0	S	N	Q	S	F	I	Q	T	D	A	A	V	N	P	G	N	S	S	G	G	A	L	V	N	N	G	E	L	V	G	I	N	T	A	I	I	S	S	Q	T	G	S		
UniRef90_A1STR1	S	Y	E	N	F	I	Q	T	D	A	S	I	N	P	G	N	S	S	G	G	A	L	V	N	N	G	E	L	V	G	I													

UniRef90_B9MS98 E G M G F A I P I N Y V 170

UniRef90_UPI0002895E94 E G L G F A I P S N D V

UniRef90_U2NST0 E G I G F S I P I N S V K E K I G A

UniRef90_B6WT36 Q G I G F A I P S N M A

UniRef90_W0P512 I G I G F A I P G N I V

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UniRef90_B0BQM7 A G I A F A I P S N M A N S

UniRef90_I4B4P6 V G I G F A I P I N H A

UniRef90_K2ED44 Q G I G F A I P V N I A

UniRef90_Q1I185 A G I G F A V P I N A A K A V L N

UniRef90_UPI00036E1C25 G G V G Y A Q P L A T V L P A H G

UniRef90_A6FEX1 V G I G F A I P A N M A N N

UniRef90_L0IPB9 S G L G F A I P V N E V

UniRef90_UPI000474AB38 V G I G F A I P S N E V M Q Q L

UniRef90_U5GFA9 A G V G F A I P S S T V L K

UniRef90_G2DDT7 H G I G F A I P F E L A

UniRef90_T2KNR0 I G Y S F A V P S N I A

UniRef90_A1STR1 I G I G F A I P I N M A

UniRef90_Q2JRA1 Q G V G F A I P I N R A M E

UniRef90_V9XLM8 V G L G F A I P I D D V

UniRef90_D7AE78 I G I G F S M A S N V V L R K Y G E T

UniRef90_A0A059ISV0 Q G I G F A I P S N T A L K A I N

UniRef90_D7CMZ3 E G L G F A I P V N E I

UniRef90_K9ST73 Q G L G F S I P I E T A

UniRef90_UPI000469B0C6 I G I G F A I P S N M A M N

UniRef90_K7Y606 A G I G F A I P I N R V

UniRef90_UPI00030F545B E G I G F A I P S N E V

UniRef90_B0U719 H G I G F A I P A S M V

UniRef90_C6Q0Q6 E G I G F A V P I N I V

UniRef90_UPI00047E97C9 I G I G F S M A S N V V L K E Y G E T

UniRef90_A1B6T5 I G I G F A V P S N M A V A

UniRef90_UPI00036C3FDB Q G L G F A I P S N N I V Q

UniRef90_UPI00047ECDD7 E G I G F A I P I D D A M

UniRef90_T0LH60 Q G I G F A I P I N T A

UniRef90_F4LV51 E A I G F S I P I N M A

UniRef90_G2TII5 E G I G F S I P I N S A

UniRef90_U4TJX1 T G I G F A I P

UniRef90_U4WKW8 Q L G F A I G I D S I

UniRef90_Q01D93 S G V G F A L P S D M V

UniRef90_W3A8I4 E G I G F A I P I N S A L

UniRef90_I4Z053 A G L G F A I P V D V V

UniRef90_U2C2Z5 V G Y S F A V P S N I A

UniRef90_C3ANL5 E G I G F A I P I N V A

UniRef90_V6T7S4 E G L G L S I P I N Y A

UniRef90_M7Y2F3 N G Y A F A I P V K K V M D D L

UniRef90_UPI00046369EC V G I A F A I P

UniRef90_E3GMJ8 E G L G F A I P I N D V

UniRef90_A2BU50 A G L S F A I P I N K A

UniRef90_W5VZ17 I G I G F A I P I D F A

UniRef90_E6U6A0 E G L G F S I P I R T A

UniRef90_UPI00037FD14C Q G I G F A I P T S T V

UniRef90_B5Y422 A G I G F A I P I D T V

UniRef90_UPI0002D9A2A3 E G L G F A I P S N D V

UniRef90_U1KUU6 V G I G F A I P S N

UniRef90_R2R7F5 E G I G F A I P S N D V V N V I N

UniRef90_U7G287 Q G I G F A T P A S E V M S D L

UniRef90_N1W475 V G I G F T I P I N E A

UniRef90_Q5LSY9 V G L G F A V T S N I V

UniRef90_Q4PK20 M G I S F T I P I N Y A

UniRef90_Q0G6X7 N G I G F A I P S N L V A S

UniRef90_U7JZD4 I G L G F A I P S N F V M R

UniRef90_A0A033UZ49 E G M A F A I P S N D A

UniRef90_V7ENV2 I G I G F S M A S N V V

UniRef90_UPI00045EB756 V G I A F A I P S E T V

UniRef90_A3Z5C4 A G L S F A I P I N L A

UniRef90_UPI0003A69C39 I G I G F A I P S S A A

UniRef90_M1LWK2 M G I S L S I P I D E A M R

UniRef90_UPI0004694F25 V G I G F A V P S D L V

UniRef90_W9VDK1 V G L G F A I P S N R A R G A L

UniRef90_UPI000362AD95 T G Y G F A I P V N

UniRef90_G4L4N0 E G M G F A I P S N D V

UniRef90_I4CAD6 G I G F A I P S N

UniRef90_R7IZ71 V G I G S F A I P

UniRef90_UPI00037AE69F V G I S F A L P V D R A

UniRef90_UPI0003B5074E V G I G F A M P I D T I

UniRef90_B9L492 V G I G F A V P S N T V

UniRef90_A1SA69 N G I G F A I P A N

UniRef90_D4KMH4 E G L G Y A I P I N T A

UniRef90_G9WQP8 E G M G Y S I P S S A A

UniRef90_B3T285 Q G I G F A I N I D D A

UniRef90_UPI00037A7764 Q G I S F A I P A E I A M R

UniRef90_E8TAG0 V G V G F A I P S D Q A

UniRef90_T0CBZ2 E G L G F A I P I N T A

UniRef90_F4X495 G I S F A I P I D Y A

UniRef90_UPI00047077F8 E G L G F A I P I N V A

UniRef90_Q11QR7 T G Y G F S V P V D I V L I K Y G V

UniRef90_L0DBC4 Q G I G L A I P S S M A

UniRef90_X4QR59 I G L G F A I P

UniRef90_UPI0003796C28 G G L S F A I P A N I A

UniRef90_R5R4F3 E G M G Y A I P V S T A

UniRef90_L7VP06 E G L G F A I P I N T A M E

	1	10	20	30	40
UniRef90_R7GMJ7		WYGSQ	VSSG	AGSG	VGIMSSDGYI
UniRef90_H0F3X7					CAHVVS
UniRef90_I0KIL4					GAAD
UniRef90_L0V182					ADDD
UniRef90_R7Z9T0					EDAGK
UniRef90_I4CDS4					QGAQK
UniRef90_UPI000412D35B					AGKE
UniRef90_UPI0002F48E65		GARGG	TGSG	FIFT	PDGYL
UniRef90_Q3SNF7					TNSH
UniRef90_H6Q5H0					VVH
UniRef90_F4LQ35					VVH
UniRef90_Q0S3Y0					VVH
UniRef90_UPI0003A4768A		GDQGS	TGSG	VVID	DGDGYI
UniRef90_UPI0002E817BB					VVH
UniRef90_M3CWI9					VVH
UniRef90_UPI000369B530					VVH
UniRef90_UPI0003604419					VVH
UniRef90_J2KAG8					VVH
UniRef90_G7LSB0					VVH
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UniRef90_R5ECH7					VVH
UniRef90_D1CAA3					VVH
UniRef90_A3K0L8					VVH
UniRef90_A6EAU5					VVH
UniRef90_R9MAT6					VVH
UniRef90_G2H002					VVH
UniRef90_R6D9W7					VVH
UniRef90_D9TMH5					VVH
UniRef90_B6JFF2					VVH
UniRef90_V2XYL4					VVH
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UniRef90_R5KSF6					VVH
UniRef90_UPI0003774653					VVH
UniRef90_A0A011W1B0					VVH
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UniRef90_R7F0K7					VVH
UniRef90_K2DGK7					VVH
UniRef90_F3B817					VVH
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UniRef90_M4XL9					VVH
UniRef90_U2SF88					VVH
UniRef90_W7T1N5					VVH
UniRef90_T0USH0					VVH
UniRef90_C5EVJ8					VVH
UniRef90_H6R7A0					VVH
UniRef90_U1LCT7					VVH
UniRef90_UPI00034AE69A					VVH
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UniRef90_Q1D4B9					VVH
UniRef90_F2F359					VVH
UniRef90_G8LXU2					VVH
UniRef90_G8PN75					VVH
UniRef90_UPI000467681A					VVH
UniRef90_UPI0004250114					VVH
UniRef90_UPI00037B7DCA					VVH
UniRef90_B8EN34					VVH
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UniRef90_L0DKN4					VVH
UniRef90_UPI00036DA434					VVH
UniRef90_S7W4F1					VVH
UniRef90_UPI000365A271					VVH
UniRef9					

	50	60	70	80
UniRef90_R7GMJ7	I K V T T S D N K T Y D A T L V G	T Y S D N D L I A V L K I N A T N L K P A T		
UniRef90_H0F3X7	I K V T L K D G R R V K A E F D V G	K V V G A D D T D L A L A V L K I N A T N L K P A T		
UniRef90_I0KIL4	I V Q V T L A D G R T V K A E F D V G	S G S R D D T D L A L A V L K I N A T N L K P A T		
UniRef90_L0V182	I H E V T L H D G Q K Y P K T D L A	V I K I Q A E K L P		
UniRef90_R7Z9T0	I L E V T M A D G T R D V W T D L A	V I S I S S K N V K T V A T F G N S D V L		
UniRef90_I4CD54	K K V Q A R L V G R D V V S D L A	V I S I S S K N V K P F A Q M Q		
UniRef90_UPI000412D35B	I R V T L A D G G R F P G S D L A	V L R I G S P E L P H V E L G D S G R L T		
UniRef90_UPI0002F48E65	D A V S A R I K G T D S D N D L A	V I A V Q K A D I P E D T L S E I K I A Q		
UniRef90_Q3SNF7	A Q I T T K D G R R F P G T D I A	V L Q I K R G N		
UniRef90_H6Q3H0	I S K I Q L N D G R E F F A K L I G	K D D Q T D L A L V Q I P A K D L T E V I		
UniRef90_F4LQ35	I S V K L N D G R S F S G K L V G	A D E R K D I A L V S F E T K D G D I A V A V		
UniRef90_Q0S3Y0	A P D G G K I Q V I F S D G T K A	E A Q I V G T D L A V L K V S A D N L T V A E		
UniRef90_UPI0003A4768A	T Q I G S F D R S S L G G L D W S	V I D L N D S G L D R P T V R G A N G S T V T		
UniRef90_UPI0002E817BB	V A I R F A S G E A V R A E I V G T	A P N Y D L A V L R I R S A R K L P S L A		
UniRef90_M3CWI9	V M V T L A D G T E L D A E V L G	T D I W T D L A V L K V P G E S I E T V A E		
UniRef90_UPI000369B530	N S V V F N D G K Q V P A N L V G	R D P K T D L A V L K V D N V D N L T V A I		
UniRef90_UPI0003604419	I Y V T V Q G Y D E P D L D L A	A L K I S G D K D F P		
UniRef90_J2KAG8	I K V T F F D G L E A V A T I T G	V Q P E N D L A V L Q A Q K I P D D L I P A T		
UniRef90_G7LSB0	I Q V R L N D G R K Y D A K V I G	K D P R S D V A L V Q L Q N F N L T A I R		
UniRef90_D3QDY1	Q T I Q G K V V G K Y D K W S D I	A V I K A E A P K D A L T P I D I G D S S N L		
UniRef90_K0YQW3	I A I T T A S G E I F E A E V V G	T D P T T D L A V L R P I D P P K N L Q M A K		
UniRef90_UPI00036CCE2D	R A V K L S Q G S D F V Q Q D L A	K K V N A S K A L P W		
UniRef90_H5WS24	L K V T F S D G L E S D A V V I N T	Q P E H D L A V L Q A K T L P D D L Q A A T		
UniRef90_R5ECH7	L K V Q L S D G R E F D A K L V G	K D A H T D L A L L K L K E F K N L T Q I D		
UniRef90_D1CAA3	L R V S L P D G R S F P A D V V G	T D P Q T D L A V L K I D G E D L P T A P		
UniRef90_A3KOL8	I M I E F F E G F D L P A T L V G	T D P N T D L A V L K V E A D E P L K Y V N		
UniRef90_A6EAU5	I E V I L S D R R K V V A K V I G	K D P N T D L A L I K V E E T G L P I V K T		
UniRef90_R9MAT6	I V K V T F Y N G D A Y D A E I G	G D E D Y D I A V I K V E A E N L Q P V T		
UniRef90_G2H002	I Q V Q L S D G R R Y P R T D I A	L L K L K D F N		
UniRef90_R6D9W7	A L V A L Y N G D R Y E A E L V G	F S S T E D L A L L K A V N A S G R P T A P		
UniRef90_D9TMH5	A K V K T Y D G K E Y N G T V I G	K G E D I D V A L I N V P E L A G K T P V		
UniRef90_B6JFF2	V E V T T D D G K T Y K A K V I G	S D K R T D L A L I K V E G S D F P		
UniRef90_V2XYL4	V R V I L H D N R A L P A S L V G	F D A V E D L A V L K V E A E G L I P A E		
UniRef90_E6JA76	I D V I F P D G S R D P A T D L A	V L K V E D		
UniRef90_UPI0001E2C2E2	I I V S L E D G R N I D G T T G	V W A D P I L L D L A V V K I N A T G L Q A I P		
UniRef90_R5KSF6	I E V T T Y D G K V Y K A A V L A	K M G K N K D L A L L K I E P K Q K L K T I S		
UniRef90_UPI0003774653	I K V T L N E G R R D P S T D L A	V L K V E A N N L P		
UniRef90_A0A011W1B0	I S V G N E N Q D E L T Y T A E N	V G K D T Q T D L A V L K I E K N D L V K A E		
UniRef90_G7Z164	I A V T L H D G T R L P A K L V G	S D A P T D L A L L K V E S D K P L A		
UniRef90_D3FQE7	I E V S L A D G T R V P A E L L G	S D S V I T D L A V L E I D S E N I D T V A E		
UniRef90_R7F0K7	L K V V E T N E G S D T Y S	D V A V L S V I D Q S K V I S V A E I G S S E D L		
UniRef90_K2DGK7	Y S V V L K D G T S Y	D V E S I N L D E S D L A I L Q I A A R N L P A V Q		
UniRef90_F3B817	L T V S F I D N E S V E G R D V A	I V A V P L S K I K S E T L I E E I S I A T		
UniRef90_UPI000463CBD4	I K V S A K V V G K D P Y S D V A	L V K I D A K D L P A A V		
UniRef90_F9UEK6	I R V T L K D R R S F R A R R L G	S D G A S D I A I L E I P P V D V R P L K		
UniRef90_A9F190	I E V Q L S D E R A F E A T V V G	R D P T D L D V A L L K L G A G S S L R		
UniRef90_W3AF33	I V K V T L A D E T E L D A E V L G	T D V W T D L A V L K V D S S I S T		
UniRef90_M4XLf9	I V I A L Q N G A I S T N V K L V G	D D S L T D L A V L K I E G E N L P T I P		
UniRef90_U2SF88	I Q V Q L A D G R S D P L T D V A	I L Q L E L P K G A K A L P V		
UniRef90_W7T1N5	D P S A T V V F A D G T K T D G K I	V G R D P T D L A V V K V A V T N P T V I Q		
UniRef90_T0USH0	L E I M L S D G S K I T G D L V G	K D T Y S D L A V V K V S S D K I S T V A E		
UniRef90_C5EVJ8	L K V A F I D K G T D A E T D L A	V I S V P L G Q I K T D T R S K I S I A K		
UniRef90_H6R7A0	P E L G F T F V R A N L G G Q D Y S	V I K L N D R A V D Q P S V R G A N G T L T		
UniRef90_U1LCT7	I I V L L P D G R Q Y S D T Q L I	G F D T T D L A L L K I P A E N L P V I P		
UniRef90_UPI00034AE69A	I R I R L H Q N R D Y P A S V G T A	P A Y D L A L R A E A V P A D L E P M R		

[illegible]

	130	140	150	160
UniRef90_R7GMJ7	D D S S V I	Q T D A A A V S	P G N S S G G G L F	N G N D L V I G I V N A K S S S D T N S
UniRef90_H0F3X7	T Y E S F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_I0KIL4	Y Q N F F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_L0V182	D F E D F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R7Z9T0	W Q Q E D V L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_I4CDS4	T M M G M I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI000412D35B	M I P D V I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0002F48E65	S S S G L I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_Q3SNF7	Y E D F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_H6Q3H0	L E N F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_F4LQ35	N I S D F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_Q0S3Y0	S V I D A V	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0003A4768A	G S S R A V	R S T A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0002E817BB	E I S N A V	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_M3CWI9	W Q S E V L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI000369B530	T V I D G I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0003604419	E Y K H L L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_J2KAG8	E L G N L I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_D7LSB0	N Y E N F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_G3QDY1	V L S K A F	Q V D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_K0YQW3	V V T N A I	Q V D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI00036CCE2D	Q I E G L L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_H5WS24	S L S N L I	Q F D A A A A N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R5ECH7	N I E N F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_D1CAA3	F L F N V I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_A3KOL8	T Y D D Y I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_A6EAU5	S I E S F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R9MAT6	V P F N M I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_G2H002	Y E N F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R6D9W7	R V M T L L	Q T T A A A L S	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_D9TMH5	V Y K G V Y	Q I L D A A I S	P G S S G G G P L L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_B6JFF2	P Y D D F I	Q I L D A A I S	P G S S G G G P L L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_V2XYL4	T K M T L I	Q T S A A A V N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_E6JA76	V V I D A I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0001E2C2E2	Y M E D L I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R5KSF6	P V E S F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI0003774653	I T M K V F	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_A0A011W1B0	P Y D E Y L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_G7ZI64	W H A E Y L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_D3FQE7	T S A G Y I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_R7F0K7	V Y E S V I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_K2DGK7	F K G K L I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_F3B817	Y E D F I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_UPI000463CBD4	R L G E L I	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_F9UEK6	N L D G F L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_A9F190	W Q A E V L	Q T D A A A I N	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_W3AF33	G R Q N F I	Q T D V S I	P G N S S G G G A L	I N D A G N L V V G I I N T A I S F N P G G S
UniRef90_M4XLF9	P F D D F I	Q T D A A A I N	P G N S S G G G A L	I N

		170	180
UniRef90_R7GMJ7	E G L	G F A I	P S N T A L K
UniRef90_H0F3X7	M G I	G F A T	P I
UniRef90_I0KIL4	M G L	G L A I	P S N L A
UniRef90_L0VI82	I G I	G F A I	P
UniRef90_R7Z9T0	E G L	G F S I	P I N S A I
UniRef90_I4CDS4	V G I	G L A V	P I N R A
UniRef90_UPI000412D35B	Q A I	C F A I	A I D T A
UniRef90_UPI0002F48E65	E G M	G Y A I	P I S R A
UniRef90_Q3SNF7	I G I	G F A V	P I N M A
UniRef90_H6Q5H0	V G I	G F A I	P S N I V
UniRef90_F4LQ35	Q G L	G F A I	P I N N V K K A
UniRef90_Q0S3Y0	V G L	G F A I	P I D D V
UniRef90_UPI0003A4768A	D C T		E A N L A L A Q Y G G T
UniRef90_UPI0002E817BB	A G I	G F A I	P V D I V
UniRef90_M3CW19	E G I	G L A I	P I N T A I
UniRef90_UPI000369B530	S G L	G F A I	P V N E V
UniRef90_UPI0003604419	Q G I	G F A I	P F N A V L E N L
UniRef90_J2KAG8	I G I	G F A V	P I E N A A S A A G
UniRef90_G7LSB0	I G I	G F A I	P S N M V
UniRef90_D3QDY1	E G M	A F A I	P I N D A
UniRef90_K0YQW3	I G L	G F A I	P I D L A
UniRef90_UPI00036CCE2D	E G I	G F A I	P G D R V L A W Y
UniRef90_H5WS24	I G I	G F A V	P I E N A A A G A G L
UniRef90_R5ECH7	I G I	G F A I	P A N M V
UniRef90_D1CAA3	G G I	G F A L	A I S T V
UniRef90_A3K0L8	I G I	G F S M	A S N V V
UniRef90_A6EAU5	E G Y	G F A I	P V N L A
UniRef90_R9MAT6	G G L	G F A I	P I N D V
UniRef90_G2H002	I G I	G F A I	P S N M I
UniRef90_R6D9W7	E G L	G F A V	P S S R V V S V I N
UniRef90_D9TMH5	G V I	G F S I	P I N Q V L
UniRef90_B6JFF2	V G I	A F S I	P S A T V
UniRef90_V2XYL4	E G L	G F A I	P S R R V
UniRef90_E6JA76	I G L	G F A I	P V N D V
UniRef90_UPI0001E2C2E2	E G I	G F A V	P I N I A I
UniRef90_R5KSF6	I G L	G F A I	P V N E A
UniRef90_UPI0003774653	A G Y	S F A I	P V N I V
UniRef90_A0A011W1B0	E G L	G F A I	P I D D A L
UniRef90_G7Z164	V G I	G F A I	P S S L A
UniRef90_D3FQE7	E G I	G F A I	P T S V A L
UniRef90_R7F0K7	E G M	G F A I	P I E T A V S
UniRef90_K2DGK7	D N I	S F A I	P I N T
UniRef90_F3B817	E G I	G Y A I	P L S D I
UniRef90_UPI000463CBD4	G G I	G F A V	P S N M A
UniRef90_F9UEK6	V G I	G F A V	P S N R A
UniRef90_A9FI90	G I	S F A L	P I D E V L E I L
UniRef90_W3AF33	E G I	G L A I	P I N S A I
UniRef90_M4XLF9	E G L	N F A I	P I N L A
UniRef90_U2SF88	I	G F A V	P S N L V K S L L
UniRef90_W7T1N5	I G L	G F A I	P I D F A
UniRef90_T0USH0	E G M	G F A I	P S N D V
UniRef90_C5EVJ8	E G I	G Y A I	P I S K A
UniRef90_H6R7A0	A N I	A L A I	P I R I L A D I N
UniRef90_U1LCT7	Q G I	S F A I	P Y D L A L D
UniRef90_UPI00034AE69A	A G V	G F A I	P V N V V K S L L
UniRef90_D6U0C5	N G I	S Y A I	P A S V V Q S A
UniRef90_R6Z9T0	E G M	G F A I	P I N D T I D I Y
UniRef90_R8F554	E G I	G F A I	P I
UniRef90_T1ACM8	I G I	G F A I	P V N L A
UniRef90_X1N482	Q G L	G F A V	P S N T I L R E
UniRef90_Q46SQ5	L G I	G F A V	T I E S A G V S I
UniRef90_G2I056	I G I	G F A I	P S D T V
UniRef90_Q1D4B9	Q G I	G F A V	P S N L V
UniRef90_F2F359	E G L	G F A I	P I N S A I
UniRef90_G8LXU2	E G L	G F A I	P V N K A
UniRef90_G8PN75	V G I	A F A I	P A Q T A
UniRef90_UPI000467681A	M G L	S F S I	P I D I A M S
UniRef90_UPI0004250114	I G L	G F A I	P I N E A I
UniRef90_UPI00037B7DCA	E G M	G F A I	P S N D V V S
UniRef90_B8EN34	V G I	G F A I	P S E T A
UniRef90_S9SZC1	E N M	G F A I	P S D T V
UniRef90_C5VSS5	T S	V F N	P I D T V L K Q L N V N L V
UniRef90_UPI000289E7DD	E G I	G F A I	P S Q T V T S
UniRef90_L0DKN4	E G V	G F S I	P M N L A
UniRef90_UPI00036DA434	V G I	G F A I	P
UniRef90_S7W4F1	Q		
UniRef90_UPI000365A271	I G I	G F S M	P V V D Q L R E F G
UniRef90_R5FFX1	E G M	G F A I	P I S K A Q D I L N
UniRef90_UPI0004661BB8	E G M	G Y A I	P I S K A
UniRef90_UPI00036AE081	I G L	G F A I	P V N V A R R A
UniRef90_J3AM77	Q G L	C F A V	A S N T A
UniRef90_UPI0001DD0EE6	V G V	G F A I	P A D T A
UniRef90_Q1GJZ6	N G I	G F A I	P A N L V
UniRef90_UPI0003B5737C	V G L	G F A I	P
UniRef90_E3I0Y0	V G I	A F A I	P T S T A
UniRef90_UPI00047EF055	I	G F S L	P I G T V L
UniRef90_R5HCU6	E G M	G Y A I	P I S T A
UniRef90_UPI000365CC2B	I G L	N F A I	P S N E A
UniRef90_W0FP86	D N I	G F A I	P M N S V
UniRef90_A0A011P5X2	E G L	N F A I	P I N L A
UniRef90_B2UQA8	A G I	G F A I	P S N L V M H S F
UniRef90_A0A034UB59	I G L	G F A I	P V D Q A

	1	10	20	30	40
UniRef90_G7GRB1			G S G F V I	D A K G Y I	L T N N H V V S M A A N
UniRef90_UPI0003B63673			S L G S G F V I	D P T G Y I	L T N N H V I E G A D E
UniRef90_R7M5B9			S T G S G F V D	D K N A Y I	L M T N Y H V I D G A D A
UniRef90_R5YCF6			S C G T G I I I K T	D N E L L M V T	N N H V I A N N E S
UniRef90_F4XF13			G T G V V M T	Q D G Y I T	N A H V V A D M R R
UniRef90_W4N7L8			G S G A I V S	D K G Y I V	T N N H V I S G A Q Q
UniRef90_K8E8Z4				V L D A T L	G R V V T N A H V V S G D A Q K
UniRef90_Q0FHM2			S L G S G V I L	S D D G I V	V S N Y H V V G Q A T D
UniRef90_UPI0003FA4874			I G T G F F I	D D Q G D I	A T N N H V V N G Q T T
UniRef90_Q03DA9			S E G S G V I S	G D T A Y I	V T N N H V V S G S S T
UniRef90_F3ZYE1				D G Y I	L T N N H V V E G A D S
UniRef90_R6VLK4				D G Y L	L T N N H V V E G A D T
UniRef90_UPI00036749C3			G G Q G Q P Q T Q E T E S Q G S G I I I	G K N D S M	V T N N H V V E G A D T
UniRef90_UPI0001A62391			S T G S G F I V	D H L G H V	V T N A H V V G Y R G D
UniRef90_I2GJL8				D G Y I	I T N N H V V A G A T K
UniRef90_R6Z973			S A G S G I I S	D T E L L V	T N N H V I A N A E
UniRef90_A0A059E684			S L G S G F F I	S K N G Y I	V T N N H V V D G A T A
UniRef90_UPI000374E0A9			V G S G F I V	S K N G L I	L T N F H V I E G A D E
UniRef90_J9HWF7			I G T G V K D	D K S A Y L	V T N N H V V E G A A K
UniRef90_A4EJH6			D R G P G E G T R R S L G S G F V I	S Q D G F I	V T N N H V I E G A D E
UniRef90_UPI0003B78169			L G S G F V I	S A D G F I	V T N N H V I D G A D E
UniRef90_R5GC03				I A T N N	H V V S D A T S
UniRef90_E4NEC5			G S S E S G T G T G F V F	D T E G H I	L T N N H V V A N G G K
UniRef90_UPI0003705CE2	I Q A G L R I T T E D R S C	T S A F S G V Q K D	N D N F Y V	L T A G H C	T E N V I G D
UniRef90_UPI0003316C0B	P L F G H N A P V T	S G S G F L V S	D N G L I V	T N A H V V	S T S N S
UniRef90_UPI00042998AF			L G S G F I I S	P D G Y I	L T G A Q V V A G A S Q
UniRef90_E0IB11			S L G S G F L Y	N D H G D L	M T N G H V V V G A N K
UniRef90_B3FNL6					
UniRef90_UPI0004081BAB			T G S G F V Y N	K S G D I I	T N A H V I K D A D V
UniRef90_UPI000467A647			L G S G V I M S	K E G Y I	V T N Y H V I K D A Q Q
UniRef90_R7ANV4	P F S G T Q K S K T	S G T G I I V G	K N D T I	V T N A H V V D G T D N	
UniRef90_N1ZMK2	T S Q T S T	S E G S G V I S	G N T A Y I	V T N N H V I S G A N K	
UniRef90_UPI00036CA871			S S G S G I I V	D T E L L I	A T N N H V V S G A D S
UniRef90_I5CFP2			T L G S G F I I	S P D G Y I	L T D A Q V V A G A T Q
UniRef90_A4T6T7			G S G V I L	S S D G L I	L T N N H V V A A A A Q
UniRef90_D6GTM2			V G T G I I V	D K N G Y I	L T N Y H V V E G A K N
UniRef90_D0L8U8			T G S G F V I S	P Q G Y I	L T N N H V I S M A A T
UniRef90_E0RW79			G S G I I V	G Q N D S I	A T N Y H V I E G A D S
UniRef90_U3AH27			L G S G F V I S	A D G Y V	V T N N H V I E G A D E
UniRef90_W5XV83			S E G S G S I I	S P D G Y V	L T N N H V V S G G S T
UniRef90_A0A011V0R1			G S G I I L	S T D G Y I	V S N A H V I D K A N G
UniRef90_R7MJS0					
UniRef90_UPI000381E334			V S G Q G T E S G T	G A G F V Y	D K Q G H I L T N N H V V S A G G E
UniRef90_UPI0002EB9A1D			G V I V K I	E G I P G F I	T N N H V I S G A A S
UniRef90_U5WQP8			G S G V I L	S D G L I	L T N N H V V A A A A K
UniRef90_UPI00040A74F9			G S G F I V	S D D G Y I	M T N N H V V V G G G T
UniRef90_A9M652			S L G S G F I I	D A K G Y I	V T N N H V I A D A D E
UniRef90_W8A0L7			G S G V I L	S D G L I	L T N N H V V S G A A K
UniRef90_E0THS6			G S G F F I	N D R G H I	V T N N H V I D G A D E
UniRef90_V4LJX5			G Q T S L G S G V L	V S D S G L L	L T N R H V I A G A D R
UniRef90_UPI00037F3E9B			T G S G F F L	D S N G L L	I T N N H V V E G A T S
UniRef90_UPI00029A8613			T G S G F I I	T P D G F A	V T N S H V V E G G R T
UniRef90_V6JU15			T L G S G V V Y	D D K G H I	V T N A H V V R S E K T
UniRef90_UPI0003B47D79					
UniRef90_A9T7W1			T A G S G F I I	Q S D G T I	L T N A H V V A T D G S
UniRef90_U1ZDB7			G F V L R E	D G F I L	T N N H V V A D G G D
UniRef90_R7FCP9			V G T G I I M S	E D G Y I	V T N A H V I Y D G E A
UniRef90_C9A6A9			S E G S G V I	D G D D A Y	V T N N H V V E G Q D G
UniRef90_L1MIY2			G S G S I I	S D D G N I	L T N N H V V S A A Q Q
UniRef90_A9W9C7			T G T G F V	W D A A G H	V T N N H V V E G G G S
UniRef90_UPI000370CD86			G S G V I	D G K Y A Y	V T N T H V V A D A K E
UniRef90_E0NIN4			I F G T Q A I T	G T G S G V I	S K D G Y I L T N S H V I R I G E N
UniRef90_G0UFB7				S E G S G V I	N N N T A Y I V T N N H V V S D S N A
UniRef90_W4VL35				I D G N R A	F I V T N H H V I Q G G D Q
UniRef90_UPI00036BE467			S E G S G V I	Y K K D A Y	I V T N T H V I A G A E Q
UniRef90_UPI00016A62DA			G F I V S A	D G M I L T	S A H V V D Q A T D
UniRef90_K2CL28			A G S G L I I	N S D G T I	L T N N H V V K D S S S
UniRef90_D4JBS3				N N T L Y V	M T N Y H V V E G A K E
UniRef90_UPI00035EAB6F			S E G S G A I	D G K F A Y	V V T N N H V V E G A E K
UniRef90_D5WLZ9			T G S G F I I S	P A G L I	L T T A H V V D Q A D Q
UniRef90_D0YTN5			G S G A I I	D S S G H I	L T N N H V V A A A A D
UniRef90_B8H180			V G S G F A I	A E G G L I	L T N S H V V Q G A N R
UniRef90_UPI000380B35D			S Q G S G I I	I G K N D T I	V T N N H V V E G A D T
UniRef90_I0K7P2			T G S G F V I	S T D G Y L	V T N N H V V A G A E T
UniRef90_A8LG40			I F V G N G	L G S G V V Y	R A D G V I V T N E H V V R S A A D
UniRef90_UPI000363F933			S E G S G V V D	G S T A Y I	V T N N H V V S G S S A
UniRef90_Q5FSP1			A G S G F I	V D P S G I	I V T N R H V V G G A D K
UniRef90_UPI00047CEC6F			L G S G V I	I D A A G Y	V L T N N H V I N N A D K
UniRef90_V4JKE4			L G S G V I	M S D G Y I	L T N Y H V I N S A D Q
UniRef90_UPI000474AC5E			S E G S G V V S	G N D A Y I	V T N N H V V S G S S A
UniRef90_F0GI02			G F I V S A	D G M I L T	S A H V V D E A T D
UniRef90_UPI000414F31E				I D G E Q A	F V V T N N Q H V I E G A S E
UniRef90_A0A031JPE0			R L S A G S G V I	V D A A R G	L V T N A H V V K D G L V
UniRef90_UPI000366304F			G S G F I I	D A S G Y I	V T N H H V I E G A D A
UniRef90_K5BEQ5			G S G I V W	S S D G L I	L T N H H V I S A A A E
UniRef90_A1SF22				I I L S	S D G E I L T N N H V V E D N G S
UniRef90_UPI00037BD2CD			I G S G F V V S	A D G Y V I	T N D H V V E G A D T
UniRef90_UPI000371757A			S L G S G V I V	Q Q G Y V	L T N N H V I A N A D D
UniRef90_A9WJJ4			L P P G H P P V S P D G L V	I G Q G S G F L	F D T Q G H I V T N H H V V A G A T N
UniRef90_K0J7Q3				V I G S G F L Y	N S R G D I M T N A H V I K D A I S
UniRef90_UPI00035EFB08				I G S G I V Y	D D R G H I V T N A H V V G A G R T
UniRef90_UPI00036C20C9					

[illegible]

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UniRef90_R7M5B9 I L G K S D T A L K V G E D A D T F V I G S N A M G V T T K G I I S A G K D R R E S T T T D E D Q
UniRef90_R5YCF6 L G D S D T A L K V G E P A I A I G N A M G V T T K G I I S A V N R R E S T T T D E D Q
UniRef90_F4XF13 F G D S D Q L R Q G D M V V A I G N Y R T S L T T Q G I I V S A L N R R T P V T V T D D N
UniRef90_W4N7L8 F A N S D D K L A V G E A V M A I G N P L G L Y T D N G I I S A L N R T P V T V T D D N
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UniRef90_Q0FHM2 L R D S D T V E V G E L V L A I G N P F G V T T S G I I V S G L A R S S T G T A T P E R N
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UniRef90_Q03DA9 K V I G E T A L A I G S P L G S E Y A T S L I G I I S A K K R R T V E T T T E N
UniRef90_F3ZYE1 L G D S S K T Q T G E I V V A I G N P L G V T T M G V I V S A T D R T L T S S I N S S D R
UniRef90_R6VLK4 I G D S D S L K V G E Q V V A I G N A L G V T T T G V I V S A L V N R T L T S S I N S S D R
UniRef90_UPI00036749C3 L G E S S K L R V G Q I A I A V I G N P L G V T T T G V I V S A L V G R S L R S I N S S G R
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UniRef90_I2GJL8 F A D S K Q T Q V G Q I A I A I G N A P Y G F T A G V I V S A L G R T L R S E S S G R
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UniRef90_W5XV83 F G D S S L Q V G Q E V V A V G S P L G V T S G I I V S A V N R P V R A S Q G G
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UniRef90_G0UFB7 E A G Q S V L A I G S P L G S D Y A T S V T E G I I S A T K R Q V D S G N S L
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UniRef90_V4JKE4 M N D N L I P R I G D V V L A I G N P L N L T Q G I I S A T G K Q T L E S
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UniRef90_UPI00035EFB08 F G D S A P I V G Q I V L A M G S P L G V T Q G I I V S A T G R T V T A G T D G
UniRef90_UPI00036C20C9 V G D S T I A I G A P F G L S N T V T T G I I S A K N R P V A S G D G N

UniRef90_G7GRB1	A	V	I	D	A	I	Q	T	D	A	A	I	N	P	G	N	S	G	G	P	L	V	N	D	G	A	E	V	V	V	G	V	N	T	A	G	V	P	G	G	S					
UniRef90_UPI0003B63673	S	Y	D	D	F	E	I	Q	T	D	A	A	I	N	P	R	G	N	S	G	G	P	L	F	N	D	N	G	E	V	V	G	V	I	N	T	A	G	I	S	P	T	G	G	S	
UniRef90_R7M5B9	Y	Y	M	K	V	L	Q	I	D	A	A	I	V	N	P	R	G	N	S	G	G	P	L	F	C	D	N	D	G	E	V	V	G	V	I	N	T	S	L	K	I	V	Q	N	E	V
UniRef90_R5YCF6	T	G	E	K	L	I	Q	T	D	A	A	I	N	P	P	G	N	S	G	G	P	L	V	N	N	G	E	V	V	V	G	V	I	N	T	S	S	K	L	A	S	T	T	V		
UniRef90_F4XF13	I	L	M	D	L	I	Q	T	S	A	P	I	N	N	F	G	N	S	G	G	P	L	I	D	H	G	E	V	V	V	G	V	I	N	T	T	I	K	S	D	S	T	T	V		
UniRef90_W4N7L8	V	V	T	N	A	V	Q	I	D	A	A	I	N	P	P	G	N	S	G	G	P	L	T	F	N	A	G	Q	V	V	V	G	V	I	N	T	A	S	S	S	S	T	A	G	S	
UniRef90_K8E8Z4	R	S	V	E	F	F	Q	T	D	A	C	I	N	P	P	G	N	S	G	G	P	L	V	N	E	S	E	V	V	V	G	V	I	N	T	A	A	I	R	Q	D	A	D			
UniRef90_Q0QHm2	A	R	G	Y	F	I	Q	T	D	A	P	I	N	P	P	G	N	S	G	G	P	L	I	D	N	G	E	V	V	V	G	V	I	N	T	S	I	T	R	S	G	G	S			
UniRef90_UPI0003FA4874	L	M	S	G	L	V	Q	T	D	A	A	L	N	P	P	G	N	S	G	G	P	L	I	N	S	A	G	Q	V	V	V	G	V	I	N	T	A	I	S	P	V	E	G	S		
UniRef90_Q03DA9	G	Q	N	N	V	I	Q	T	D	A	A	I	N	N	A	G	N	S	G	G	P	L	I	N	A	S	A	G	Q	V	V	V	G	V	I	N	T	S	S	G	S	D	S	T	T	V
UniRef90_F3ZYIE	R	T	M	K	M	L	Q	T	D	A	A	I	N	P	P	G	N	S	G	G	P	L	I	N	A	N	G	T	V	V	V	G	V	I	N	T	L	S	Y	G	A	I	S	A		
UniRef90_R6VLK4	T	Q	D	S	Y	I	Q	T	D	A	A	I	N	P	P	G	N	S	G	G	P	L	L	V	N	N	G	E	V	V	V	G	V	I	N	T	A	K	L	A	S	T	E	V		
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UniRef90_UPI0001A62391	K	Y					Q	T	D	A	I	I	T	F	G	N	S	G	G	P	L	V				N	L	Y	G	E	V	I	G	V	N	A	M	V	A	G						
UniRef90_I2GJL8	L	I	D	D	V	I	Q	T	D	A	A	L	N	P	P	G	N	S	G	G	P	L	V	S	N	G	D	V	I	G	V	N	T	A				V	I	L	P	A				
UniRef90_R6Z973	V	T	K	N	L	I	Q	V	I	D	A	S	I	N	P	P	G	N	S	G	P	L	L	D	N	G	K	L	I	G	I	N	E	A	K	M	A	S	T	E	V					
UniRef90_A0A059E684	P	Y	T	D	F	L	Q	I	D	A	S	I	N	N	R	G	N	S	G	G	P	L	T	F	D	N	G	N	V	I	G	V	N	T	A	I	S	P	T	G	G	S				

UniRef90_G7GRB1	I	G	L	G	F	A	I	P	L	N	Q	A	L							
UniRef90_UPI0003B63673	V	G	L	G	F	S	V	P	S	N	L	A	E	S						
UniRef90_R7M5B9	E	G	M	G	F	A	I	P	I	S	E	D	A	L	N					
UniRef90_R5YCF6	E	G	M	G	Y	A	I	P	I	S	D	V								
UniRef90_F4XF13	E	G	L	G	F	A	I	P	M	A	R	V								
UniRef90_W4N7L8	I	G	L	G	F	A	I	P	S	N	L	V								
UniRef90_K8E8Z4	I	G	L	G	F	A	I	P	I	N	T	V								
UniRef90_Q0FHM2	N	G	L	G	F	A	I	P												
UniRef90_UPI0003FA4874	V	G	L	G	F	A	V	P	I	D										
UniRef90_Q03DA9	E	G	M	G	F	A	I	P	S	N	E	V								
UniRef90_F3ZYE1	E	G	L	G	F	A	I	P	I	D	E	A								
UniRef90_R6VLK4	E	G	M	G	Y	A	I	P	I	S	R	V								
UniRef90_UPI00036749C3	Q	A	I	C	F	A	T	A	I	D	T	A								
UniRef90_UPI0001A62391	T	G	V	G	F	A	I	P	V	D	Q	V								
UniRef90_I2GJL8	Q	G	I	C	F	A	V	S	S	N	L	A								
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UniRef90_A4EJH6	I	G	L	G	F	A														
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	130	140	150	160																																							
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UniRef90_G5GJF3	C S D E K G L V R G Q K V V A I G S P L G V S D G I I S G F R Q F E D A T G S D A			
UniRef90_D2S7D3	F A D S D D V Q V G D L A V A I G A S P L G V S D G I I S A T G R A V E I G L A G T			
UniRef90_E1Z2B1	G R S A N L R V G E W V V A I G S P N S V T A G I V S C V D R A V E I G L A G T			
UniRef90_UPI0003B49C15	F G D S D K V N G E D T V A I G A P L G V T N S I S D G I V S S L N R S I Q I S S S E			
UniRef90_UPI00047A0A4E	F G D S G K V A E G D A V T A K G N A G G V A H G K V T A L D Q A V I S D G S S E			
UniRef90_L5LS17	V G K S S D L R A G E F V V A L G S P F T V T A G I V S T T Q R G G E I G L I E D			
UniRef90_W9AXJ9	G L G P D P A F G D V A C K L G R T T G Y S C G I V T W G P			
UniRef90_J2KNQ5	V A P V T A P Y V G M E V Q K S G R T T G V T K G K V T A I A L T I A T D Y A G			
UniRef90_C5VTE8	G V S S A K L K D T V V K V G A I S G Y T T G T V E A V N A T I H Y S S G Q			
UniRef90_W7S203	V K M D G H L V R G Q K I V A I G S P L G L F N S I S D G I V S A G F R D I R K			
UniRef90_F4A845	G V A N G E L K S T V H K V G R T T E K T L G K V L S I N A V M E I D Q G			
UniRef90_U2RSD1	D S G T G D L R A G D T V Y A I G N P L G V S S G I V S A T Q R D V I P A P N G Y			
UniRef90_MOMDH2	D Q A A I G T E V V A I G N P Y G V T S G L V S G V N R S I E V K E S H			
UniRef90_Q5MDG68	L A D T A A K P G N T V Y V I G H P M T H S Y I T N K G A K A M G L G			
UniRef90_Q2W6L3	F A D I V N P Q P G R A A I V M G F P L A L T T E G I V V S G I D R S M P T S G G F			
UniRef90_U1PKG9	I G G T A Y P Q P G V A A I G N P L G L T T G G V S G I I G E K G E L F F R R			
UniRef90_UPI00037D1E45	D A P S A S F T R F D F I C G L G F R S G L S C G P F D S I L G E K G E L F F R R			
UniRef90_G8TI68	I R K S G T D L G E P L F I L G F P R E E I V Y N E I G Y M S A K T G Y N			
UniRef90_U1LQC4	F A S S D D V R V G D T A I A I G A P L G V T D G I V S A V D G L R I A Q E D			
UniRef90_UPI0003318E32	L G R S A D V R V Q G E F V V A M G S P F T I T S G I V S S A Q R P A D L G L P Q			
UniRef90_B0MTA3	L D V G T S V F A L G Y P M S V T D G L I S S K T G Y Q G D K			
UniRef90_D6Z981	G L S R E L P P P Q S W V C K L G R T T G W A C G P L V			
UniRef90_UPI00038103BB	E F F D I D P P P G S R V Y A I G T P H D L G F T I V E G T Y N G L L S G			
UniRef90_F7E3Y8	I P G A S E Y C T G M D V L W G Y A F G E S C G P S A T S G V L S S V I S I G			
UniRef90_C3BV13	V K G K V S P T I G A S V R K Q G R T T G L T H G T I T G L R T S S I D Y G G			

UniRef90_Q1DAL0 G D F D Y M Q M D A S I N P G N S G G P V L D L H G V A V A N A V N V A G 130 140 150 160
UniRef90_B5GIJ3 T L Y G M M E T N N C A L G G D S G G P A L N G T T A L G L L S G G T S D T S G
UniRef90_F8DAY4 S F P D V V Q T D A A L N P G N S G G P L V D
UniRef90_B9QE96 T C L L C V Q I T T P M S A G G D S G S P A L K D G R V V G V A F Q G F D N A
UniRef90_J9SNF3 R I E G V V R S D V N L Y P G F S G S P V V V G D R L V G M V N A Y Y G C L G P
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UniRef90_D5C1R8 S P V A A F T G G V L P Q G G D S G S P F Y A N A T I R G H V I A G N G T
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UniRef90_G3MYZ2 P I K G E V N S D A A I N P G N S G G P L L S R G R L I G V N M A I S P S G A S
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UniRef90_W5XSF6 T T Y K A I Q T D A S L N P G N S G G A L I N N G E I V G I N S A S S D A G S
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UniRef90_D2S7D6 I S L P V I Q T D A A I N P G N S G G P L I N G G Q I I G I N V A I A S A S S
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UniRef90_M3D0K6
UniRef90_UPI0002557EB9
UniRef90_UPI000378F511
UniRef90_UPI0003766BD1
UniRef90_L7CIA2 D F D Q L L Q V D G G I H P G N S G G P V L T N G E L I G V A V A K V R N T N
UniRef90_M0LWH7 T I P D A V Q T D A A V N P G N S G G P L M D D S R V V G V I N S G G G E N I A
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UniRef90_R7MKQ4 C V E M I Q Y T A P T S H G S G G A L L N M G E V I G I S T A G I D S G Q
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UniRef90_B8ZSW5 V E A S V I Y S L S A G S G S P G F V K N V A V G I L M S S P E G D
UniRef90_E4U1P4 E V E Y I Q F D A A I N P G N S G G P L L N E S E V I G V N T F I I Q N S
UniRef90_UPI0003788F40 L I D N V I Q H T A P L N P G N S G G A L L D
UniRef90_Q04RB4 L Y R K A I R V N A N I I P G Y S G G P A I Q S G K V A G I A F Q I S Q S Q
UniRef90_UPI00036583C8 T T D N I V R S G D C V E G G D S G G P V Y S D G S V V G V A N A G T S P L I G
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UniRef90_H0QZX8 S Q I C V I E G D S G S P V V V G D R L I G M V N A Y
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UniRef90_K9TE16 L V Y T N I T R S G M S G G P L F D N G E L I G I H G Q S
UniRef90_UPI00036EFF2E T I E D V I Q T D A A L N P G N S G G A L A S A G R V V G V N T A V A G
UniRef90_G4HHN9 V
UniRef90_UPI000375220D F R A S R E D G G V V V G G D S G G P M Y A E A Y A R G M I D G G S N R R S C
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UniRef90_V4TSW1 T E L L G L Q I D A A I N S G N S G G P A F N D G K C V G I A F Q S L K H E D V

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 UniRef90_F8DAY4
 UniRef90_B9QE96 Q N I G Y I V P T T V I K H F
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 UniRef90_I4EM64 V T V P Y A V L N R V A Q A L
 UniRef90_UPI000472C0B3 E S L G Y M V P
 UniRef90_A8HNV3 D N I G Y I I P
 UniRef90_B1MDV4
 UniRef90_D5C1R8 T I A N Q I E N V R S L L R V E V
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 UniRef90_G3MYZ2 A G I S F A I P S D R I
 UniRef90_K0RXP8 A G I G F S I P V D T V
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 UniRef90_A0A059B6Z4 S G V S F A V P V D L I
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 UniRef90_D7KSF0 I G Y I I P T P V I S H F
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 UniRef90_K0IL74 I R T S K V K G I V E N L K S Y G
 UniRef90_J3EZW9 D N I G F A I
 UniRef90_A0PXL2 S G I G F A I A S N E V
 UniRef90_M0CTQ1
 UniRef90_W5XSF6
 UniRef90_A0A023NP36 E N L N Y A L P I D F V L K A
 UniRef90_M3A517 V G L G F A I P V N D V K A D L
 UniRef90_A4GIG6 A G V N F A V S I D S V L L A W
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 UniRef90_L5LS17 A G I S F A I P S D R I
 UniRef90_W9AXJ9 T C I V K Y V P L H T
 UniRef90_J2KNQ5 T K T T Y A N T M Q A V L K Q L
 UniRef90_C5VTE8 N S F S N Y S D I N L I L K I F K V S L I
 UniRef90_W7S203
 UniRef90_F4A845 Y T I C N T M S N V L T A L N L K L V
 UniRef90_U2RSD1 M Y L A V P I D P I L T A
 UniRef90_M0MDH2 F A I S A A
 UniRef90_Q5VWG68 N G E G L A V P L R Q I
 UniRef90_Q2W6L3 S R T S A T P V E D
 UniRef90_U1PKG9
 UniRef90_UPI00037D1E45 A T K S L N Q P I L S K M R Q Y N L K L
 UniRef90_G8Tl68 V G V V F A V T S K N I F R S L
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 UniRef90_B0MTA3 Q N V G Y A I K V S
 UniRef90_D6Z981
 UniRef90_UPI00038103BB I G F L V P S V F A L R L L
 UniRef90_F7E3Y8 G A T N F S I P V E E A L Q R Y K L
 UniRef90_C3BV13 T F A N L F S D V E A A L G I S L F
 UniRef90_U2A4R5 S G V G F S V P I N H A
 UniRef90_M3D0K6 I G F S I P L
 UniRef90_UPI0002557EB9 N G V A Y A I P I T Q V
 UniRef90_UPI000378F511
 UniRef90_UPI0003766BD1
 UniRef90_L7CIA2 I G F A I P R R V L Q E L
 UniRef90_M0LWH7 F A I S A A
 UniRef90_UPI00038905A1 G I S F A I P S D
 UniRef90_UPI00047B6B16
 UniRef90_M0ABN4
 UniRef90_D8SHY1 E N I G Y V I P T P V I E H F
 UniRef90_M5DJG9 Y G L A N P I A A V L A A L D V T
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 UniRef90_A0A024JZV3
 UniRef90_UPI0004737045 E G L N F A I
 UniRef90_R7MKQ4
 UniRef90_UPI000463D014 G G Q G F A I P I D K A K S I A G
 UniRef90_B8ZSW5 D H T T Y F V P M P L L E K R G L Q
 UniRef90_E4U1P4 N N L G F A L P L K E A L E Q F
 UniRef90_UPI0003788F40
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 UniRef90_UPI00036583C8 D C V M V F T D I T T I R E A Y G
 UniRef90_UPI0003753EBB D E I G I A Q N V N F A I R A
 UniRef90_D7MWM9 I G Y V I P
 UniRef90_W9QUV4
 UniRef90_H0QZX8
 UniRef90_Q2PYC7 G H T Y M L P L N P I L T K L G V E L V
 UniRef90_K9TE16 E G Q N I Y N P
 UniRef90_UPI00036EFF2E I G L G L A I P I N
 UniRef90_G4HHN9
 UniRef90_UPI000375220D G S T S Y G I P M V D I L S N W D A R I
 UniRef90_G4KWH2 M Y L A V A I D P V L S A
 UniRef90_G7GK58
 UniRef90_UPI000419F2A4 E P R G Y A I P A D R A L E
 UniRef90_I7BJK3
 UniRef90_V4TSW1 E N I G Y V I P

lupas_21
 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm

50 60 70 80
 I T V G L P D G R D L P A R I V G R D P G T D I A V L R V D A D G L T A A
 V K L K K T V L A I G T E C D I A M L T V N D D E F W E G V S P V E F G N L P T

[illegible]

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

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

The diagram illustrates the merge sort algorithm. It shows an array [6, 2, 6, 8, 8, 8, 7, 0] being split into [6, 2, 6, 8] and [8, 8, 7, 0]. These are further split into [6, 2], [6, 8], [8, 7], and [8, 0]. The final step shows the arrays being merged back into sorted order: [2, 6, 6, 8] and [0, 7, 8, 8].