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UniRef90_R6U8G5	S K L H	P G E F I V E E G T V K L N E G T E S I E L T V S N T G D R P I V Q T G S S			
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50            60            70            80

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90            100            110            120

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QUERY	
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UniRef90_G8T6K2	A
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 10 M I P G E I I T P K G E | E L L N A G R S Q I R V S V A N T G D R P | Q I V G S S  
 20 M I P G E I K T A Q G F | T L L N E G R S T M S I L V A N T G D R P | Q I V G S S  
 30 M I P G E I R P Q T G D | E L L N A G R E T K V I T V A N T G D R P | Q I V G S S  
 40 M I P G E Y I L R K E E | K A N V G R N T V R V E V S N T G D R P | Q I V G S S  
 M I P G E I Q P A Q G G | L L N E G R K T V S L R V E N R G D R P | Q I V G S S  
 M I P G E Y F I K E E D | I C N E G R E I T T I V V T N K G D R P | Q I V G S S  
 M I P G E I I T P D G E | E L L N A G R Q T V R L Q V A N T G D R P | Q I V G S S  
 M I P G E V R F C S G H | V L N L H R R A L T L K V V N K A D R P | Q I V G S S  
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 M T P G E I L T E A G D | T L L N A G R A C C I T L V A N T G D R P | Q I V G S S  
 M K I G A I I P K D R E | T L L N E G K K T V T L L V K H T G D R P | Q I V G S S  
 G A L I I P G E G S | E L L F P N R K H I T L K V T N T G D R P | Q I V G S S  
 M I P G E I I L T A D G D | T L L N A E R E A V T L Q V A N T G D R P | Q I V G S S  
 M I P G E I I F P A E G D | E L L N A D R P K S T V S V A N S G D R P | Q I V G S S  
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 S G M I P G Q I I I L R K E D | I V C N K G K N T V S I E V K N E G D R P | Q I V G S S  
 M I P G E M Q I Q S G G | E L L N A G R P S V K I K V G N S G D R P | Q I V G S S  
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 V T P G E I I I L L P L P | G E I I T I I N Q G R E S V M L E V V S F C D R P | Q I V G S S  
 D N V I P G E I I K T E D R M | V I I I N A G R E A V V S L K V V T N K G D R P | Q I V G S S  
 P G A V V V C V K G P | V R L L N E G R R R V R L R V T V N K G D R P | Q I V G S S  
 K P G A V I A V K G E | I Q L N A N R K R R R Q L R V T V T N K G D R P | Q I V G S S  
 M I P G E I I R V A S G D | K L N E G R N K I K T V Q N T G D R P | Q I V G S S  
 D N K I P G E I V I F G G A | V L N H R G R K A I V L K V V I N T G D R P | Q I V G S S  
 M I P G E Y I L K E E K | I C N A Q H E S I V T L K V I N T G D R P | Q I V G S S  
 D N E I P G V I I F G D G N | R L N N P G R K A V V I L K V V N R G D R P | Q I V G S S  
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 G G Y V L V A L K E P | E I I L N V G R P R T K L T V A N S G D R P | Q I V G S S  
 I P G A F E I A A E G D | L V L N E G R T A I I Q L Q V T N L A D R P | Q I V G S S  
 M I P G E Y R T K E G T | I A I N E G R R Q I R L L V T N R G D R P | Q I V G S S  
 S D I T P G E I I I L P | A D K P V E I I N A D R E T T S V T V E N T G D R P | Q I V G S S  
 M I P G E F L L A D G E | I E L N A D R E G R P F Q V T N T G D R P | Q I V G S S  
 M P G A I I I A K K E R | V L I N E G R E R I R L R V T N D S D R P | Q I V G S S  
 M K P G E I I I C R D G D | E L N A G A S T L T L S V A N T G D R P | Q I V G S S  
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 M I P G E V I I C P D G D | E L N A D S P T T V L T V A N T G D R P | Q I V G S S  
 M R P G E Y I V L D S E | P I E C N A G R E A I E L E V T N T G D R P | Q I V G S S  
 M I P G E I I I T Q P G S | I E C N A G R K T I I T L S V A N T G D R P | Q I V G S S  
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 P G A L V V V K D V K | V T L N A N R K H I T L R R V T S R G D R P | Q I V G S S  
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UniRef90_UPI000367E9D2	H Y H F F E T N N A L   H F D R A A A R G F R   L D I   P A G T A   V R F E P P G Q S R T			
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UniRef90_UPI000400FCCE	H Y H F Y E V V N N A L   Q F D R E Q A Y G K R   L D I   P A G S S   V R F E P P G D K K E			
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UniRef90_G2R3C2	H Y H F H I E V N P Q L   E F D R L R A Y G F R   L D I   V A S G S S   V R F E P P G D T K T			
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 V D L V P Y A G A R K | V Y G H N D | L A N G E T | E A K K A A L | K K M E K N H F K N  
 I V L V P L M G R R Q | V Y G F N G L | I N G A L |  
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 H C H F F E | I | N R M M | M S F D R S E A F G M R L | N | I | A | A G T A | V | R F E | P | G E E K E  
 H F H F Y E | A | N P A L | L | D | F D R E A A R G M R L | D | I | P S G T A | V | R F E | P | G D Q K T  
 H Y H F F E | V | N P A L | L | D | F D R E K A R G Y R L | N | I | P A G T A | V | R F E | P | G Q G R D  
 H F H F F E | V | N K A L | E | F D R A Q T F G F R L | D | I | P A G T A | V | R F E | P | G Q S R E  
 H Y H F F E | T | N K A L | I | F | T | R E | I | T | L | G M R L | D | I | P A G T A | I | R F E | P | G D T T E  
 H Y H F | E | V | N P M L | S | F D R A K A Y G K R L | D | I | V | A | A G S A | V | R F E | P | G D V K S  
 H F H F E | F | A | N R E | L | L | F | D R H | R A W G M H | L | N | I | P A G L | A | V | R F E | P | G D S K E  
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 H Y H F F E | V | N R E L | C | F D R E A A L | G M R L | D | I | P S G N A | V | R F E | P | G E E K K  
 H F H F F E | A | N K Y | L | K | F D R K | L A Y G K R L | N | I | P A G G A | V | R F E | P | G E E K E  
 H Y H F Y E | V | N E A L | R | F | D | R | Q | A | L | G | F | R | L | N | I | P A G T A | V | R F E | P | G Q Q R E  
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 H F H F F E | V | N P A M | M | F | D | R | E | R | E | Q | A | W | G | M | H | L | D | I | P A G T G | V | R F E | P | G E T K Q  
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UniRef90\_C4LIA7  
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UniRef90Q9RYJ3	M I	P G E Y L L E	G G E E L N A G R P	V T T L T V A N T A D R P I Q V G S S	V T T L T V A N T A D R P I Q V G S S	
UniRef90B7V1T0	M I	P G E Y D I Q	P G D E L N A G R R	T L A L S V A N T G D R P I Q V G S S	T N G D R P I Q V G S S	
UniRef90G4U2F1	V P	G A I V V K D	S P L L E N E G R G	R V Q L K V T N N G D R P I Q V G S S	T N G D R P I Q V G S S	
UniRef90J0LPH2	M K	P G E Y I L Q	K G E K A N D K R	K R K T V V R V T V A N T G D R P I Q V G S S	T V A N T G D R P I Q V G S S	
UniRef90UPI00046226BC	M I	P G A V V V K	K S R S L N Q G R E	R L R V T V A N T G D R P I Q V G S S	T V A N T G D R P I Q V G S S	
UniRef90L9P944	M I	P G E Y I L L E	E G E G L N E G R A	T A T V V T N Q G D R P I Q V G S S	T N Q G D R P I Q V G S S	
UniRef90W6RW88	M I	P G E I I L I K	E G T I E Y N K G K	E A L K I E V V N I G D R P I Q V G S S	E A L K I E V V N I G D R P I Q V G S S	
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UniRef90R7YYX4	M Q	A G A V V V K	N G K I T L N A G R D	A I R I E V V G N T G D R P I Q V G S S	A I R I E V V G N T G D R P I Q V G S S	
UniRef90H8GNX5	M I	P G E I I T A T	G D I E L N A G R D	A I R I E V V G N T G D R P I Q V G S S	A I R I E V V G N T G D R P I Q V G S S	
UniRef90R6RGY8	M K	I G E V M P L	N E E I L N E G K	E C Y T I V I L V K N I G D R P I Q V G S S	V I L V K N I G D R P I Q V G S S	
UniRef90UPI00037960D7	M I	P G E I I L P L	D G E E L N A G R T	T C S V R V A N T G D R P I Q V G S S	T C S V R V A N T G D R P I Q V G S S	
UniRef90A3JS07	M I	P G E I I I T R	S G E V L N D G A	K P I T L V V T A N T G D R P I Q V G S S	K P I T L V V T A N T G D R P I Q V G S S	
UniRef90D3FSG4	M K	P G A F K I A	E G S E L N A G R D	T D L E L T V K N T G T R S I I Q V G S S	T D L E L T V K N T G T R S I I Q V G S S	
UniRef90Q0UAC9	P G	A V V V A V K	G E I K L N Q G R K	R I S L K V K V T K S M G D R P I Q V G S S	R I S L K V K V T K S M G D R P I Q V G S S	
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UniRef90Q28RJ8	M I	P G E V V M P A	D G T E L N A G A Q A	V T L I E V V S N T G D R P I Q V G S S	V T L I E V V S N T G D R P I Q V G S S	
UniRef90N1PU18	M P	G A V V V A V K	G T H N V D R R	R I I K L K V T S K G D R P I Q V G S S	R I I K L K V T S K G D R P I Q V G S S	
UniRef90Q0FZU3	M I	P G E I I I L T R	D G D V L N E G A P	P V L R I V E V S N A G D R P I Q V G S S	P V L R I V E V S N A G D R P I Q V G S S	
UniRef90E7RY02	M I	P G E I I I Q V Q	P G D E P L N T G A	R F H N A G D R P I Q V G S S	R F H N A G D R P I Q V G S S	
UniRef90UPI00036A337E	M T	P G E I I I L C	A D G E P L N T G A	R T L L V V H N A G D R P I Q V G S S	R T L L V V H N A G D R P I Q V G S S	
UniRef90G0SF25	P G	A V V V E P D V	V K L N E G R R	R V K L K V T N K G D R A I V Q V G S S	R V K L K V T N K G D R A I V Q V G S S	
UniRef90K1UV9	P G A M I L	R L R K E K I T	T P G R K R F H E I V K N N G G D R P I Q V G S S	T P G R K R F H E I V K N N G G D R P I Q V G S S		
UniRef90UPI0003B647CC	P G R	L V V G D A E L	V L N E G R R A V T L R V R N S N G D R P I Q V G S S	V L N E G R R A V T L R V R N S N G D R P I Q V G S S		
UniRef90UPI0003B51B2E	P G	E Y I L L A S A	D A T T L N A D R	V T L R D V T N M G D R C I V Q V G S S	V T L R D V T N M G D R C I V Q V G S S	
UniRef90H8MRU4	P G A V R A A E G	A L E N A G R K A	T V L R D V T N M G D R C I V Q V G S S	T V L R D V T N M G D R C I V Q V G S S		
UniRef90B1VHT1	U S G E Y F I	G D E P I I L N E G R E	T T T I I E V V T N T G D R P I Q V G S S	T T T I I E V V T N T G D R P I Q V G S S		
UniRef90W3X5C4	V P G E I I I P A	D A G R E E S P G R R	R A T R A L N T G D R P I Q V G S S	R A T R A L N T G D R P I Q V G S S		
UniRef90R2QGL2	M K P G E I I I V G	T E P Q C N L P G R K R	R I I R L Q V K N C D R P I Q V G S S	R I I R L Q V K N C D R P I Q V G S S		
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UniRef90F0NK13	P G A V V V A V K	G P V L N D E R	R N R C I L E V V T N T G D R P I Q V G S S	R N R C I L E V V T N T G D R P I Q V G S S		
UniRef90D5G9W6	M I P G E Y Q L A	S G D E A N I G R K	T V T V Q I D V V T N K G D R P I Q V G S S	T V T V Q I D V V T N K G D R P I Q V G S S		
UniRef90C9PRD8	M K P G E I I I P A	A G E E E L N A G R D	T V E L L D V V A N A G D R P I Q V G S S	T V E L L D V V A N A G D R P I Q V G S S		
UniRef90G8ALE6	P L R P G E I I A	A V A V G E E L N A G R E	T V T L T V V T N T G D R P I Q V G S S	T V T L T V V T N T G D R P I Q V G S S		
UniRef90V4QYN6	Y L P G E I I I S E	E G F E L N S S K E	S K N L I V S N I G D R P I Q V G S S	S K N L I V S N I G D R P I Q V G S S		
UniRef90UPI0002F9F82D	M I P G E I I I V A	P G E L V N A G L	E T K T L Q V A N T G D R P I Q V G S S	E T K T L Q V A N T G D R P I Q V G S S		
UniRef90B4D6T7	M I P G E I I I V A	P G E L V N A G L	E T K T L Q V A N T G D R P I Q V G S S	E T K T L Q V A N T G D R P I Q V G S S		
UniRef90U1EAT9	M K P G E I I I V K	R T E E V N S G L	D A T I L N V K N T G D R P I Q V G S S	D A T I L N V K N T G D R P I Q V G S S		
UniRef90L7WXQ7	M I P G E I I I R I	K N T D E I I N P N S P	E T V L E V V K N T G D R P I Q V G S S	E T V L E V V K N T G D R P I Q V G S S		
UniRef90UPI0003657A97	M I P G E M L I	E A G E S I N V G R E	S I T I L D V V A N T G D R P I Q V G S S	S I T I L D V V A N T G D R P I Q V G S S		
UniRef90M7XFN9	D E I P G V L V L	R K E P I R I N V G R E	S I T I L D V V A N T G D R P I Q V G S S	S I T I L D V V A N T G D R P I Q V G S S		
UniRef90UPI0003B33E52	M I P G E Y F I	Q E G S L V I N E G R E	E A V S I L E V T N R G D R P I Q V G S S	E A V S I L E V T N R G D R P I Q V G S S		
UniRef90TOPUR3	L I P M D G D V	V V L N A G R E	M R H R V T N L S D R P I Q V G S S	M R H R V T N L S D R P I Q V G S S		
UniRef90Q1MZ30	M I P G E I I I I P	A E G E V E N A G L	M R H R V T N L S D R P I Q V G S S	M R H R V T N L S D R P I Q V G S S		
UniRef90W4ETC4	M R P G E Y I L	V K E E I C N G S E	V T V S V T V A N T G D R P I Q V G S S	V T V S V T V A N T G D R P I Q V G S S		
UniRef90A8ESZ7	L T P G E Y I L	V D E G E I C N G S E	V T V S V T V A N T G D R P I Q V G S S	V T V S V T V A N T G D R P I Q V G S S		
UniRef90UPI000475874F	M I P G E I I I L L	A D E P Q A N V G R S	T I T I E N K G D R P I Q V G S S	T I T I E N K G D R P I Q V G S S		
UniRef90B0C793	M I P G E I I I L F	P E T G D E L N A G R A	T I T I E N K G D R P I Q V G S S	T I T I E N K G D R P I Q V G S S		
UniRef90Q0AC99	M I P G E I I I L P	E D G E T V K V A N T	G D R P I Q V G S S	G D R P I Q V G S S		
UniRef90R4V512	M I P G E I I I V I	T A A G E T L N A G R E	G D R P I Q V G S S	G D R P I Q V G S S		
UniRef90UPI00046660EF	M I P G E I I I I P	A E G E V L N E G K	G D R P I Q V G S S	G D R P I Q V G S S		
UniRef90A9AZE7	M Q P G E Y I L	I D Q E A A A N L G	R A T C E L L V A H T G D R P I Q V G S S	R A T C E L L V A H T G D R P I Q V G S S		
UniRef90W1N170	M I P G E Y I L Q	P Q D D Q L C E G P R	R L T L V A H A A N T G D R P I Q V G S S	R L T L V A H A A N T G D R P I Q V G S S		
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UniRef90H8L4U7	M I P G E I I I L L	V P G E E L N V G R Q	C R L S V A N T G D R P I Q V G S S	C R L S V A N T G D R P I Q V G S S		
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UniRef90B6HGM0	M P G A I I I S P	P G D G K V L N E G L	D T E L S V A N T G D R P I Q V G S S	D T E L S V A N T G D R P I Q V G S S		
UniRef90S2J5C3	P G A V I I I G V	G G P K D E L N P G R	R T Q L R V T N F G D R A I V Q V G S S	R T Q L R V T N F G D R A I V Q V G S S		
UniRef90AOA011P095	M I P G E M R I	E E G D D I L N A G R A	T R L S V A N T G D R P I Q V G S S	T R L S V A N T G D R P I Q V G S S		
UniRef90Q2SDQ2	M I P G E I I I I D	A L P G D D I L N A G L	T R L S V A N T G D R P I Q V G S S	T R L S V A N T G D R P I Q V G S S		
UniRef90A4RSK1	M I P G E Y K L	E E G E L S I N T G R P	T A T V V A N R G D R P I Q V G S S	T A T V V A N R G D R P I Q V G S S		
UniRef90UPI000346DEF8	I I P G E I I I I I	P Q E D V L N Q G R E	R I I R L V T N T G D R P I Q V G S S	R I I R L V T N T G D R P I Q V G S S		
UniRef90K5VUA4	M I P G E I I I I L	A E G G E L N Q G R E	R I I R L V T N T G D R P I Q V G S S	R I I R L V T N T G D R P I Q V G S S		
UniRef90A9BUC5	M I P G E I I I I L	T Q P G E L N A G R	P V Q T L T V V S N T G D R P I Q V G S S	P V Q T L T V V S N T G D R P I Q V G S S		
UniRef90UPI000464FAE4	M I P G E I I I I M	N V P E Y I N T G R K	T V V R N T G D R P I Q V G S S	T V V R N T G D R P I Q V G S S		
UniRef90R4JGC7	V P G A T V C	A E G G E L T N Q G R E	T V V R N T G D R P I Q V G S S	T V V R N T G D R P I Q V G S S		
UniRef90R1DEX6	M I P G E I I I I L	I K D E P I C E G R	L I E I V G V T N S G D R P I Q V G S S	L I E I V G V T N S G D R P I Q V G S S		
UniRef90F9DU25	M I P G E I I I I V	T Q D G F I C E G R	L I E I V G V T N S G D R P I Q V G S S	L I E I V G V T N S G D R P I Q V G S S		
UniRef90UPI0004706BF8	M I P G E I I I I P	V K D A V V L N Q G R E	R I I R L V T N T G D R P I Q V G S S	R I I R L V T N T G D R P I Q V G S S		
UniRef90B2AYG6	M I P G E I I I I G	G E V L T P E G E L I N K G R P	T L S V A N T G D R P I Q V G S S	T L S V A N T G D R P I Q V G S S		
UniRef90D8LB52	M I P G E I I I I G	G E V L T P E G E L I N K G R P	T L S V A N T G D R P I Q V G S S	T L S V A N T G D R P I Q V G S S		
UniRef90E6QCS0	UniRef90Q0FRM4	M I P G E I I I I V	I P A Q G E E L N V G R P	V A M Q V A N R G D R P I Q V G S S	V A M Q V A N R G D R P I Q V G S S	
UniRef90I3YK99	D E I V P G E I I I I M	N V P E Y I N T G R K	T V V R N T G D R P I Q V G S S	T V V R N T G D R P I Q V G S S		

		50	60	70	80
UniRef90_Q5FB24	H F H F F E	V N R F L S F D R E K A Y G K R L N I A S G T S V R F E P G E E K T			
UniRef90_U5H587	H Y H F S E V	N K A L K F D R S L A F F R R L D D I A A G T A V R F E P G D S K T			
UniRef90_R7S2H5	H Y H F V E T	N K A L S F D R G K A Y G K R L D D I A A G T A V R F E P G D V K T			
UniRef90_J5E237	H Y H F F E A	N R A L D F D R A A A Y G M H L D D I A A G T A V R F E P G D T R E			
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90                    100                    110                    120

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UniRef90_B7V1T0	V E L V E I I G G G R R V Y G F A G R V M G D L		
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UniRef90_W7QDA5	V T L V A Y A G K R K V Y G F R G E V M G G L		
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UniRef90_B0C793	V T L V P L V Q G Q R V F G F N G L V E G F L		
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UniRef90_W0A9G9	H Y H F A E E T   T   N P   A   L   L	D F D R G A A R G H   R   L   D   I   A A P G T A   V   R F E P P G Q Q T R E		
UniRef90_UPI0002379935	H Y H F Y E E A N S A   L   L	D F D R Y A A L   G M R   L   D   I   P P A G T A   V   R F E P P G Q Q T R E		
UniRef90_G5ZXG9	H Y H F Y E E T   T   N T A   L   L	F D R E A A R G M R   L   D   I   A A G T A   V   R F E P P G Q E R E		
UniRef90_L8JD38	H Y H F Y E   V   N E S L   L	D F K R E A T   L   G Y R   L   N   I   A A G T A   V   R F E P P G Q I   R T		
UniRef90_UPI00035CAC17	H F H F Y E   L   N E S L   L	E F D R D A A F G F R   L   N   I   P P A G A A   V   R F E P P G D K K E		
UniRef90_A9EEL0	H Y H F A E S   N P   A   L   L	A F D R T T A R G Y R   L   D   I   A A G T A   V   R F E P P G Q R R E		
UniRef90_C5AX31	H Y H F F E   V   N R A   L   L	D F D R A K A   L   G F R   L   D   I   P P A G T A   V   R F E P P G Q R K E		
UniRef90_K9SSX6	H F H F Y E   V   N D A   L   L	E F E R E I   A K G K R   L   N   I   P P A G T A   V   R F E P P G D Q K E		
UniRef90_Q1YXD7	H Y H F F E A N D A   L   L	D F D R I   L   T K G Y R   L   N   I   A A G T A   V   R F E P P G Q S R T		
UniRef90_UPI0003B43457	H F H F F E   V   N R F   L   L	A F S R Q A G   L   G K   H   L   N   I   P P S G T A   V   R F E P P G E E T E		
UniRef90_F4FG51	H F H F F E   A   N R Y   L   L	E F D R P A A F G K R   L   N   I   P P A T T S   I   R F E P P G D R K T		
UniRef90_X7GJR5	H F H F F E A N K A   L   L	G F D R A A A F G K R   L   N   I   T A T T A   I   R F E P P G D E   E		
UniRef90_U4UWW7	H Y H F Y E E T   T   N P   A   L   L	A F E R D A A A R G M R   L   D   I   A A G T A   V   R F E P P G Q Q T R P		
UniRef90_UPI0002F22BC6	H Y H F A E T   T   N G A   L   L	D F D R A A A R G M R   L   N   I   T S G T A   V   R F E P P G Q Q Q R T		
UniRef90_Q1YUB4	H Y H F Y E   V   N D A   L   L	I F E R E T T   L   G Y R   L   N   I   A S G T A   V   R F E P P G Q E R T		
UniRef90_A4GPJ6	H Y H F F E T   T   N E H   L   L	L V F D R E L   L   S Y G K R   L   N   I   P P S G T A   V   R F E P P G Q S K D		
UniRef90_A0A023XW76	H Y H F A E   V   N A A   L   L	V F D R S A A R G C   L   D   I   P P A G T A   V   R F E P P G Q S R E		
UniRef90_G1XDZ1	H Y H F   E   E T   T   N P   Q   L   L	S F D R   L   Q T Y G F R   L   D   I   P P A G T A   V   R F E P P G D T K T		
UniRef90_UPI0003611748	H F H F F E   V   N R A   M   L	M D F D R A A A F G M R   L   D   I   P P A G T A   V   R F E P P G Q T K E		
UniRef90_Q07398	H F H F F E   V   N Q S   L   L	Q F H   R E K A F G M R   L   D   I   P P A G T A   V   R F E P P G D A K E S		
UniRef90_UPI00047B665C	H F H F F E   V   N K M   L   L	N F D R E A A F G M R   L   N   I   A S G T A   V   R F E P P G E E K S		
UniRef90_UPI0003B49747	H Y H F F E T   T   N D S   L   L	H F D R A A A R G F R   L   N   I   P P A G T A   V   R F E P P G Q E R N E		
UniRef90_M8K8Y2	H F H F F E   V   N K Y   L   L	K F K R E E A Y A Y G Y R   L   D   I   A S G T A   V   R F E P P G S G E E K E		
UniRef90_G0GV57	H F H F F E A N K A   L   L	E F E R S K A F G K R   L   N   I   T A T T A   I   R F E P P G D A   T		
UniRef90_UPI0002557530	H Y H F F E A N D A   L   L	T F D R T A A R G M R   L   N   I   P P A G T A   V   R F E P P G Q S R Q		
UniRef90_UPI0002260395	H Y H F A E T   T   N P   A   L   L	K F D R D K A   L   G W R   L   D   V   P P S G G A   L   R F E P P G Q E R E		
UniRef90_G9ZWY5	H Y H F F E T   T   N P   A   L   L	S F D R A   L   A R G R   L   D   I   A A G T A   V   R F E P P G Q S R R		
UniRef90_UPI0003B70BBD	H Y H F A E T   T   N P   G   L   L	R F D R D A A R G M R   L   S   I   P P A G T A   V   R F E P P G Q S R E		
UniRef90_E8W0P2	H Y H F F E   V   N S A   L   L	S F D R Q K A   L   G M H   L   N   I   P P A G T S   V   R V E P P G G T R E		
UniRef90_A0A022LB88	H Y H F F E S   N R E   L   L	R F D R P A A Y G R   H   L   A   I   G A G   L   A   V   R F E P P G Q T R T		
UniRef90_W7HV03	H Y H F   E   E T   T   N P   Q   L   L	E F D R I   Q A Y G F R   L   D   I   P P A G T A   V   R F E P P G D S K T		
UniRef90_Q11VN4	H Y   F   E   E T   T   N A A   L   L	K F D R   V   G A   G   Y R   L   D   I   P P A G T A   V   R F E P P G E K K T		
UniRef90_F5SWH5	H Y H F Y E   V   N E A   L   L	F D R E Q A Y G F R   L   N   I   A A G T A   V   R F E P P G Q M R S		
UniRef90_UP100026272C4	H C H F F E   C   N A S   L   L	R F T T R E E A Y A Y G M R   L   N   I   P P A G T A   V   R F E P P G D T R D		
UniRef90_UP10003B3B8B8	H Y H F A E T   T   N A G   L   L	S F D R I   A A R G M R   L   N   I   A A G T A   V   R F E P P G Q S R D		
UniRef90_R4YUJ9	H Y H F Y E A   N   L   G   L   L	K F D R E P T K G F R   L   D   I   A A G T A   V   R F E P P G Q   V   R E		
UniRef90_UP100036808B1	H Y H F Y E T   T   N E   V   L   L	F D R G P T R G F R   L   N   I   P P A G T A   V   R F E P P G Q E R T		
UniRef90_M0D481	H F H F F E T   T   N A A   L   L	E F D R E A A A F G M R   L   N   I   P P A G T A   V   R F E P P G D E Q T		
UniRef90_UP10003B78CB9	H F H F A E   V   N P   K   L   L	E F D R D A A R G F R   L   D   I   P P A G T A   V   R F E P P G D A R T		
UniRef90_L1MEY0	H F H F A E T   T   N S A   L   L	D F D R D A A   L   G K R   L   D   I   P P A G T A   V   R F E P P G D A A T		
UniRef90_A7HHN0	H Y H F A E   V   N P   L   L   L	R F D F D R A R A Y G R   R   L   D   I   P P A G M A   V   R F E P P G E T R T		
UniRef90_C9K307	H F H F F E   V   N K A   L   L	D F D R D K A R G K R   L   D   I   I S G T A   V   R F E P P G V K K T		
UniRef90_B4RSX8	H Y H F Y E   V   N N A   L   L	K F D R D R E A T K G Y R   L   D   I   T S S T A   V   R F E P P G Q E R E		
UniRef90_V5UFM8	H F H F Y E   V   N D A   L   L	R F D R E S T R G F   L   N   I   A A G T A   V   R F E P P G Q Q R T		
UniRef90_F0STY8	H F H F F E A N K   H   L   L	N F D R G K T F G M R   L   N   I   P P S G T G   V   R F Q S K E   V   K E		
UniRef90_S9P899	H F H F   E   E T   N R E   L   L	V   F D R R K A Y G R   R   L   N   I   A A G T A   V   R F E R D E   V   E T		
UniRef90_J0HEPO	H F H F A E S   N A A   L   L	E F D R D A A W G Y R   L   G   V   P P A G T S   V   R F E P P G   I   P   R D		
UniRef90_A6TE41	H Y H F A E   V   N P   A   L   L	F D R D Q Q A A G Y R   L   N   I   P P A G T A   V   R F E P P G Q K R E		
UniRef90_UP10003810AA0	H Y H F A E   V   N P   A   L   L	G F D R D Q Q A A G Y R   L   N   I   A S G T A   V   R F E P P G Q K R E		
UniRef90_UP100047184CD	H F H F Y E   V   N R A   L   L	Q F E R E K T F G   L   H   L   N   I   P P A G T A   V   R F E P P G Q Q E R T		
UniRef90_UP1000422C0D4	H Y H F Y E   V   N E A   L   L	A F D R D Q A A W G T   R   L   N   I   P P S G T A   V   R F E P P G D A R T		
UniRef90_UP10003685BCA	H Y H F G E A N S A   L   L	E F D R D I   A   L   G M R   L   N   I   A A G T A   I   R F E P P G Q Q R E		
UniRef90_A0A024GD29	H Y H   L   E   C   N P   Y   L   L	E F D R D R   L   R M D R   L   R A Y G N   R   L   N   I   A S G T A   I   R F E P P G D E K T		
UniRef90_UP1000463A55F	H F H F F E   V   N R A   L   L	R F D R S A T F G M R   L   D   I   P P S G T A   V   R F E P P G E A Q E		
UniRef90_U216W4	H F H F A E A N A E   L   L	D F D R E A A A H G K R   L   D   I   P P A G T A   V   R L   E P P G D S R T		
UniRef90_K6V1Y9	H F H F Y E A N D A   L   L	Q F N R E A T K G Y R   L   N   I   A A G T A   V   R F E P P G Q S R S		
UniRef90_H0TW20	H Y H F A E A N A A   L   L	A F D R S A A V   G Y R   L   D   I   P P A G T A   V   R F E P P G Q S R D		
UniRef90_U4KGJ6	H Y H F Y E   V   N D A   L   L	F D R E P T K G F R   L   N   I   P P A G T A   T   R F E P P G Q S R T		
UniRef90_H2IB11	H Y H F F E T   T   N P   A   L   L	D F D R E K A K G M R   L   N   I   A A G T A   V   R F E P P G Q T R N		
UniRef90_U5W601	H Y H F A E S   N T A   L   L	D F D R E A A A W G H   R   L   A   V   P P A G T S   V   R F E P P G L   P   R D		
UniRef90_UP100036A658B	H Y H F A E T   T   N A G   L   L	K F D R T A A A Q Q M R   L   N   I   T S G T A   V   R F E P P G Q Q R T		
UniRef90_U3AK93	H F H F A E A   N   P   G   L   L	D F D R N A A A H G R   R   L   D   I   A S G T A   V   R F E P P G Q R R E		
UniRef90_M5PD35	H F H F A E A N R A   L   L	A F D R E A S   L   G M R   L   N   I   P S G T S   V   R F E P P G E E K T		
UniRef90_Y5NUC6	H F H F E A N E G   L   L	K F D R E K A Y G K   H   L   D   I   P A G A A   V   R F E P P G D E K K		
UniRef90_UP10002E11996	H Y H F A E T   T   N P   E   L   L	R F D R D R A R G Q R   L   D   I   A A G T A   V   R F E P P G Q T R T		
UniRef90_C6XQA5	H Y H F Y E A   N   P   F   L   L	T F D R E K A R G M R   L   D   I   M A G T A   V   R F E P P G Q A R D		
UniRef90_X8JFV3	H Y N F S E T   T   N R S   L   L	A F D R L   K   A   C   G R   R   L   D   I   P P A G T A   V   R F E P P G D   H   K Y		
UniRef90_UP100046EA9CD	H Y H F F E   V   N E A   L   L	S F D R E P T L   G Y R   L   N   I   V   P G T A   V   R F E P P G Q A R E		
UniRef90_UP10003B5BD3E	H Y H F Y E   V   N P   A   L   L	F D R E Q A L   G F R   L   N   I   A A G T A   V   R F E P P G Q D R E		
UniRef90_W7Z4J1	H F H F Y E   V   N E A   L   L	Q F N R E D S F G R   H   L   N   I   P P A G T A   V   R F E P P G D Q K E		
UniRef90_W8ESM1	H Y P F F E T   T   N A A   L   L	D F D R A A A R G F R   L   N   I   P P A G T A   V   R F E P P G E R K T		
UniRef90_Q03283	H Y H F Y E   V   N D A   L   L	K F E R E N T   L   G F R   L   N   I   P P A G M A   V   R F E P P G Q S R T		
UniRef90_C4RFZ1	H Y H F A E T   T   N P   G   L   L	F F D R D A A Y Q G R   R   L   D   I   P P A G T S   V   R F E P P G V S R R		
UniRef90_UP10002DFB764	H Y H F Y E A N D A   L   L	T F E R E L T   L   G F R   L   N   I   A A G T A   I   R F E P P G Q S R T		
UniRef90_V4XCB9	H V H F F E   V   N A A   L   L	A F D R E A A F G R   R   L   N   I   V   P A G T A   V   R F E P P G D E Q T		
UniRef90_S6CYG6	H Y H F Y E E V   N P   A   L   L	F D R E Q A K G W R   L   N   I   V   P S G G A   I   R F E P P G Q   I   R E		
UniRef90_W0J0V0	H F H F Y E   V   N R A   L   L	A F D R A A A R G Y R   L   D   I   P P A G T A   V   R F E A G D T K T		
UniRef90_U1YPY5	H F H F A E   V   N S A   L   L	S F D R Q A A R G F R   L   D   I   P P A G T A   V   R F E P P G D S R P		
UniRef90_P0CS23	H Y H F   E   E T   T   N P   A   L   L	F D R L   L   S Y G Y   H   L   D   I   P P A G T A   V   R F E P P G E K K T		
UniRef90_E0UK25	H Y H F F E   V   N F A   L   L	E F D R N K T R G M R   L   N   I   P P A G C   A   V   R F E P P G D   I   K A		
UniRef90_UP100037875FC	H F H F F E   V   N R G   L   L	R F E R E Q A F G M R   L   D   I   P P A G T A   V   R F E P P G E E K P		
UniRef90_W4Y6Z9	H Y H F   E   E A N K Y   L   L	T F D R L   A S   L   G M R   L   N   I   A S G T A   V   R F S P P G E T R D		
UniRef90_K4ZJ73	H F H F Y E   V   N E A   L   L	F D R N S G F G K   R   L   N   I   P P A G A A   V   R F E P P G D E K E		
UniRef90_X0RxD7	H Y H F Y E   V   N D A   L   L	S F D R E Q T R G F R   L   N   I   I S G T A   V   R F E P P G Q S R E		
UniRef90_A5GWV6	H F H F A E A N A A   L   L	R F D R E A A A R Q G F R   L   D   I   A A G T A   V   R F E P P G D E R Q		
UniRef90_UP10003763845	H Y H F F E   V   N R A   L   L	R F E R Q A A A R Q G M R   L   D   I   P P A G T A   V   R F E P P G E E K E		
UniRef90_S8EAN2	H Y H F   E   E V   N P   C   L   L	F D R R R S Y G M R   L   N   I   P P S G T A   T   R F E P P G E S K T		

90                    100                    110                    120

UniRef90_F7KFH5	V R L V E L G G R K I V Y G C N D L T R G E A D N R E A A M E K A A E K G
UniRef90_N1UXS5	V H L V E I G G N R E V Y G F Q N H V N G S L G E S V A A V Y T E A I G G S A G
UniRef90_UPI0003739D0D	V E L V A F S G E R K V Y G L N K T E G P L D
UniRef90_L7LF58	V T L V P F A G K S R V Y G F N G I V N G W A P V R D V Y R P R L E Q R G F K S
UniRef90_Q21P95	V E L V E V S G N K I I Y G F R G E I M G E L
UniRef90_W0A9G9	V A L I P Y A G T R T V T G F R G E V M G P L
UniRef90_UPI0002379935	V I L V P Y D G R R H I Y G F N M H I M G A L K D A
UniRef90_G5ZXG9	V Q L I P Y G G A H I V H G F N Q K I G G A I
UniRef90_L8JD38	V E L V S F G G T M S I Y G F Q G K V M G P L D A E
UniRef90_UPI00035CAC17	I Q L V A F T G E R R V Y G L N K T E G S L D R
UniRef90_A9EEL0	V P L I P F S G D R R I F G F N S A V M G D L
UniRef90_C5AX31	V T L V G F G G E R L T G L N L T Q G K L D T R A D A L A R A K A C G F K G
UniRef90_K9SSX6	I I I V P Y A G L R E V Y G F N A R V E G K L D
UniRef90_Q1YXD7	V E L V A F G G H R V Y G F Q G K V M G S L D K D E S S A A S A
UniRef90_UPI0003B43457	V E L V E M G G T R E V F G L N L T N G S I S H P E E L T E L A E S K G F K G
UniRef90_F4FG51	V Q L I P F G G L Q R V Y G F N G L V Q G W T G D R A E S L H N A R T R G F K
UniRef90_X7GJR5	V A L I A I G G K Q T V Y G F N N L V D G W A G D S P V A V K R A I E L G Y K N
UniRef90_U4UWW7	V G L I P I A G A Q R I F G F N G K I M G E L
UniRef90_UPI0002F22BC6	V E L V D Y A G S R T V Y G F R G D T Q G P L D
UniRef90_Q1YUB4	I E L V E Y G G S G H I Y G F Q G K V M G Q L E D G V Q A
UniRef90_A4GPJ6	V E L I E L G K K I Y G F N K K V M G K L E S G T D A
UniRef90_A0A023XW76	V S L I P F A G A R R I Y G F S G G V M G P L E S G T D A
UniRef90_G1XDZ1	V T L V E I S G N Q I I R G G N N I A S G K V G T P E T I L E R L S K G G F Q H
UniRef90_UPI0003611748	V T L V T T F G G S R F V G G L N G L G G D T E A K D V A L A K A R A A G F R G
UniRef90_Q07398	V E L V I P F S G E R K V Y G L N V T N G S V E
UniRef90_UPI00047B665C	V E L V E L G G K K E V Y G L N G L T Q G S T D I K E K S L K K A R E L G F K G
UniRef90_UPI0003B49747	I E L V A Y A G D R I V H G F Q G K V E G A L E
UniRef90_M8K8Y2	V S L V E I L G Y K R I R G L N L T D A Q I N A T E I S M E K A Q L K N F L N
UniRef90_G0GV57	V E L V I P F S G Q Q V Y G F N N L V D G W V D A P E D I L N N A I K H G F K S
UniRef90_UPI0002557530	V E L V D L A G E R R V F G A G R I M G D L
UniRef90_UPI0002260395	V T L V P F R G A R R A I G F R G D V M G E I D
UniRef90_G9ZWY5	V R L V E Y S G D R I V H G F R G E T E G K V
UniRef90_UPI0003B70BBD	I L L I P L A G A R V V Q G F R Q D I M G A L
UniRef90_E8W0P2	V E L V C E Y A G T G R L V G F S G L L N G S L P A R V E A V R R A I E R G F A G
UniRef90_A0A022LB88	V R L V D Y A G E R V C H G F S G L V D G P L D D R R E A L E R M H D G G F L S
UniRef90_W7HV03	V S L V E I G G N K V I R G G N S V A N G K L H S P D Q I V A T L A R L G F A H
UniRef90_Q11VN4	V Q V E V E I A G Q Q I V Y G G N S V A N G K L D G G I D D I P Q I K Q R M Q E K G F
UniRef90_F5SWH5	V E L V K L A G A Q T V Y G F A G K V M G A L
UniRef90_UPI00026272C4	V E L V E L G G N R E A L G L N R L V E G I L D T R Q A A L Q R
UniRef90_UPI0003B3B8B8	V S L V P Y G G L R R V F G F N G A I M G D L
UniRef90_R4YUJ9	V E L V E Y A G T K T I Y G F R G D I M G K L
UniRef90_UPI00036808B1	V E L V V A L D G K R E V Y G L R N L I D G K L D D A A A A V R E R Q G F G G
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UniRef90_H2IB11	I E L V E I D G T K T I Y G F R G E V M G K V
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UniRef90_A0QRF0	D	D D I R P G E I I V	G D Q P V E L F P G V E R I T L T V V N R N G D R D	V Q G S S	
UniRef90_C6D7R9	M	M I P G E Y R I T P	G D Q P V E L F P G V E R I T L T V V N R N G D R D	V Q G S S	
UniRef90_N1ZV19	M	M I P G E Y N L A K	E P V C Y N E G K E V V K V N V L N R G D R P P	V Q G S S	
UniRef90_B2IDT4	S	S T L P G E I I V T	M P G E V I V T M P G E I V M N A E A D V V R L S V A N T G D R P P	V Q G S S	
UniRef90_O00084	P	P G F V I E V L E	G E G E I E L L P N L P R T P I E V R N M G D R P P	V Q G S S	
UniRef90_D6A5H6	M	M V P G E I I L F A	D E P V A F N E G F E T S T L L T V V N T A D R P P	V Q G S S	
UniRef90_UPI00037FF7BA	M	M I P G E Y A H P D	G S H P L P N P G R P V T L R V V N T A D R P P	V Q G S S	
UniRef90_B0T7T0	M	M I P G E I I I V N	K G E G I E L L P N L P R T P I E V R N M G D R P P	V Q G S S	
UniRef90_F5YYV8	M	M I P G E W F I A D	D P V E I V M N A E A D V V R L S V A N T G D R P P	V Q G S S	
UniRef90_G8S4B5	M	M I P G E V L A G D G	D P V E I V M N A E A D V V R L S V A N T G D R P P	V Q G S S	
UniRef90_UPI00037FF7BA	M	M I P G E V L A G D G	D P V E I V M N A E A D V V R L S V A N T G D R P P	V Q G S S	

50            60            70            80

UniRef90_UPI00039B225E	H Y H F Y E   V N E S L   H F D R E P T R G F R   L N   P A G M A   I R F E P G Q R R T
UniRef90_G2FWQ7	H Y H F F E   V N R Y L   V F D R A L   V W G M R L   L N   P S G T A   V R F E P P G E S H T
UniRef90_UPI0002657E0E	H Y P F [ ] E A N P A L   I F D R A R S Y G M R L   L D   A A G G M S V R F E P P G D T K R
UniRef90_UPI0004688160	H F H F Y E   V N S F L   K F N R E E T   L G M H   L N   P A G T A   V R F E P P G D E K E
UniRef90_U7VA21	H F H F Y E A N C G   L E F D R E K T R G K R   L D   P S G T A   V R F E P P G D K K V
UniRef90_B7K907	H Y H F [ ] E   V N E D L   E F D R N K T R G M R   L N   P A G T A   V R F E P P G D [ ] K K
UniRef90_H0DGC4	H Y H F F E   V N R T L   D F R N R T E A Y G M R   L N   P A G T A   V R F E P P G D E K D
UniRef90_UPI00047BC728	H F H F F E   V N R T L   D F R N R T E A Y G M R   L N   P A G T A   V R F E P P G E E K P
UniRef90_UPI000468976D	H Y H F A E S N P A L   D F D R A A A R G M R   L D   A A G G T A   V R F E P P G Q R R E
UniRef90_F8J6C5	H Y H F F E   V A N S A L   E F D R A A A F G M H   L D   A A G G T A   V R F E P P G Q D K I
UniRef90_U0F2D4	H Y H F Y E   V N D A L   V F D R T P C   R G Y R   L N   P A G T A   T R F E P P G Q S R S
UniRef90_D1A9Q8	H Y H F A A A N P A L   E F D R K A A A W G R   L D   V P A G T A   V R F E P P G I [ ] T R E
UniRef90_V5XGZ9	H F H F F E   C   N R A L   E F D R R S A A F G M R   L D   P S G L   A V R F E P P G E T Q E
UniRef90_Q972V9	H F H F F E   V N K A L   K F D R E K A Y G M R   L S   P A G T A   V R F E P P G Q T K V
UniRef90_CSFFS7	H Y H F [ ] E T N P Q L   E F D R A Q A Y G F R   L D   P A G S S H   R F E P P G E S K T
UniRef90_C5BDC1	H F H F F E   V A N R A L   E F D R S A A Y G M R   L N   M A T T A I   R F E P P G D E [ ] E
UniRef90_L1IL47	H Y H F V E   V A N S R   L   E F D R G L   A Y G K R   L N   T A G T A   V R F E P P G E S K V
UniRef90_H0TXB0	H F H F F E   V N P A L   E F D R A A A F G L   H   L N   P S S T A T   T R F E P P G D E R E
UniRef90_D8PNPC8	H Y H F [ ] E T N S K L   N F D R A Q A Y G M R   L D   A S G T T   V R F E P P G D P R T
UniRef90_F4PG07	H Y H F Y E   V N N A L   Q F T R E D A Y G K R   L N   P S G A V R F E P P G D E K E
UniRef90UPI000473E2DE	H F H F Y E   V N Y G L   E F N R K E A F G Y H   L N   P A G T A   V R F E P P G D P K N
UniRef90_F0YG69	H Y H F [ ] E T N A A L   V F D R G E A Y G R R   L N   V P S G S S V R F E P P G E R K V
UniRef90UPI00030CE617	H F H F F E   V N R A L   E F D R T A A F G K R   L N   T A T T A I   R F E P P G D E [ ] E
UniRef90_A7IMY4	H Y H F Y E   T N P A L   A F E R E Q A R G M R   L D   A P G T A   V R F E P P G A S R E
UniRef90_K5TBX2	H Y H F A E   V A N R A L   S F D R E L   A Y G H   R   L A   I A A G M S I   R F E P P G Q T R E
UniRef90_P50044	H F H F F E   T N K   L   E F D R E K R Y G R   R   L D   A S G T S   V R F E P P G E S K T
UniRef90_K9RV82	H F H F Y E   V N R S L   L E F D R D Q A W G M R   L D   P A G T A   V R F E P P G D T K T
UniRef90_V8QQ82	H Y H F A E   T N A A L   V F D R N R A R G Y R   L N   V S G T A   I R F E P P G Q [ ] R T
UniRef90_G7E2S7	H Y H F [ ] E   V N K E L   S F D R A Q S F F R   L D   I A A G T A   V R F E P P G D S K T
UniRef90_K5Z046	H Y H F A E   T N A G L   V F E R A A A Q Q G K R   L D   A A G T A   I R F E P P G Q S R E
UniRef90_S5J1P3	H Y H F F E   V N K F L   D F D R D E A L   G F R   L N   P A G M A   V R F E P P G Q R R T
UniRef90_H0QJ40	H Y H F A E   A N P A L   D F D R S A A Y G R   R   L D   P A G T A   A R F E P P G D G K T
UniRef90_D4YZJ2	H Y H F A E   A N P A L   D F D R S A A Y G R   R   L D   P A G T A   V R F E P P G Q R R L
UniRef90_A0A022MAN2	H Y H F F E   V N R A L   R F D R E A A Y G M H   L D   P S G T A   V R F E P P G D T R E
UniRef90_B4WPG1	H F H F Y E   V N D A L   A F D R E Q T Q K M R   L N   T A G T A   V R F E P P G D E K E
UniRef90_F4F6T5	H Y H F A E   A N P A L   D F D R D I   A W G Q R   L A   V P A G T S   V R F E P P G V S R S
UniRef90_E1JTD7	H F H F Y E   V N E A L   R F D R E A A A L   G Q R   L D   I A A G T A   V R F E P P G Q R R T
UniRef90_W1SM24	H F H F E   V N E A L   Q F K R D E A A F G K R   L N   V P A G A A V R F E P P G D E K E
UniRef90_M1P8F6	H F H F A E   S N R A L   E F D R R T A   L   G H   R   L D   V P A G T A   R [ ] E P P G D H T T
UniRef90_F4G2H5	H F H F E   V N R S L   K F D R E K A F G T   R   L N   V P S G T S   V R F E P P G Q R R L
UniRef90_K3VU32	H F H F M E   T D P D   N F D R E K A Y G F H   L N   V P A G E F L   R F E P P N E P K S
UniRef90_X2H9I0	H Y H F Y E   T N P A L   E F F E R E Q T R G M R   L N   V P S G N A   V R F E P P G E S K T
UniRef90_Q733J5	H Y H F Y E   V N E A L   K F D R S V V I   G Q H   L N   V P A G T A   V R F E P P G D E K T
UniRef90_T1B1F1	H Y H F A E   T N P A L   A F D R A R A R G M R   L D   I A A G T A   V R F E P P G Q K R R
UniRef90_F1YND8	H F H F P A A N S A L   E F D R P A A H G Y   R   L D   V P A G T A   V R F E P P G D A K T
UniRef90_P0A4R2	H Y H F A E   A N N A L   V F D R E L   A T G Y R   L D   V P A G N A   V R F E P P G M R R T
UniRef90_E3IYD8	H Y H F A A A N P A L   D F D R A A A W G Y R   L A   V P A G T A   V R F E P P G I [ ] E R E
UniRef90_Q7N4Y8	H F H F F E   V N K A L   Q F N R A A A A F G K R   L N   T A T T A I   R F E P P G D E [ ] E
UniRef90UPI0003B31942	H Y H F E S N K F L   S F E R E Q T K G M R   L N   I A A G T A   V R F E P P G Q T R D
UniRef90_M0D2B0	H F H F F E   V N R A L   S F P R A E A F G M R   L D   V P A G T A   V R F E P P G D R K T
UniRef90_C9Y743	H Y H F A E   T N G A L   G F D R E V A Q Q G M R   L N   I A S G S A   V R F E P P G Q Q R T
UniRef90UPI00036282D1	H Y H F A E   T N N A L   E F D R E L A   L   G Y R   L N   P A G N A   I R F E P P G V R R T
UniRef90_S4XGX1	H Y H F F E   V N P A L   S F D R E A A A W G M H   L S   P S G L   A V R F E P P G D T R E
UniRef90_W7WVC2	H Y H F A E   T N A A L   G F D R D A A A K G M R   L D   I A A G T A   V R F E P P G Q Q R T
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UniRef90_H6N565	H V H F P Q A N P A L   D V   D R D Q A R G R   R   L D   P A G T A   V R F E P P G I [ ] E M T
UniRef90UPI0003B7A3FF	H Y H F F E   V N P A L   T F A R E S A R G M R   L D   P A G T A   V R F E P P G Q K R E
UniRef90_D6U4F3	H F H F Y E   V N S A L   Q F E R A T A Y G M R   L N   I A S G L   A V R F E P P G D E K V
UniRef90UPI00047B0D8A	H Y H F A E   T N G A L   R F D R V A A R G M R   L N   I A S G L   A V R F E P P G Q Q R T
UniRef90UPI000464E94A	H F H F F E   V N K A L   D F D R A S A F N M R   L D   P A G T A   V R F E P P G A S K E
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UniRef90UPI0002556393	H Y H F F E   V N P T L   L   F D R S K A   L   G K H   L D   T P G T A   I R F E P P G L K R T
UniRef90_Q55054	H Y H F Y E   A N E A L   Q F D R E K A R G K R   L D   P A G T A   I R F E P P G E T K T
UniRef90UPI00036DAE6A	H F H F A E   A N P G L   E F D R T A A H G F R   L D   V P A G T A   V R F E P P G D R K R
UniRef90_Q5YWR9	H V H F P Q A N A A L   D F D R A A A H G C   R   L D   P A G T A   V R F E P P G L A Q R
UniRef90_E9EC93	H Y H F F E   V T N A Q L   E F D R G R A Y G Y R   L D   I A A G T S   V R F E P P G D T K T S
UniRef90_I3TL00	H Y H F Y E   T N T G L   T F D R P A A A Y G M R   L D   V P A G S A   V R F E P P G Q T R S
UniRef90_V9X143	H F H F F E   V N R A L   L   F D R R T A Y G M H   L D   V P A G T A   V R F E P P G E E R S
UniRef90_F0Y0Q2	H Y P F [ ] E T N R A L   T F D R R A A A L   G M R   L D   V P S G S S   V R F E P P G D E K T
UniRef90_A0A024PC55	H Y P F E   V N P A L   Q F D R E A A A F G M R   L D   V P A G T A   V R F E P P G D E K E
UniRef90_B9BF93	H Y H F F E   V N P A L   K F D R A A A Y G F R   L D   I A S G T T   L R F E P P G D T R D
UniRef90_E4N1T0	H Y H F F E   V N P A L   R F D R D R T   L   G T   H   L N   V P A G T S   V R I [ ] E P P G G T R E E T
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UniRef90_B2G107	H F H F A E   A N R A L   D F D R R A T A G H   R   L D   V P A G T A   V R I [ ] E P P G D S T T
UniRef90UPI000477D45B	H F H F F E   V E A N T A L   R F E R A Q A L   G M R   L N   I A A G T A   V R F E P P G Q Q R T
UniRef90_L8GQX0	H Y H F S E   V N P Y L   Q F D R I   L   A Y G K R   L N   V P A G T A   V R F E P P G E T K S
UniRef90_C1FIE0	H F H F E   T N G L   L   S F D R A A S L   G R R   L N   V P A G T A   V R F E P P G E S K E
UniRef90_V5HHS8	H Y H F Y E   A N A N N A L   L   F P R E S T K G F R   L N   V P A G T A   T R F E P P G Q S R T
UniRef90UPI0003B5AA2E	H Y H F A E   T N P Q L   E F D R L   A A R G M R   L D   D S P A G T A   V R F E P P G D A R S
UniRef90_I1AY76	H A H F F E   V N P A L   Q F D R E A A A F G M R   L D   D R P S G G G E   R F D P G I [ ] E K Q
UniRef90_Q0BQ41	H Y H F A E   A N P L   Q F D R E A A A A R G Q R   L D   D R P S G G G E   R F D P G I [ ] E K Q
UniRef90_A0QRFO	Q S H F Y E   T N P A L   E F D R R A A A W G Y K   L D   I A S G G G V   R F E P P G I [ ] P V E
UniRef90_C6D7R9	H F H F F E   V N R A L   S F D R E A A A F G M R   L D   H   P A G T A   I R F E P P G E E K P
UniRef90_N1ZV19	H F H F Y E   A N R G L   Q F D R D K A W G K R   L D   P A G T A   I R F E P P G E K R T
UniRef90_B2IDT4	H Y H F Y E   V N A A L   Q F D R D A A R G R   L D   D I V A G T A   V R F E P P G Q T R E
UniRef90_O00084	H Y H F F E   T N E K L   C   F D R S K A Y G K R   L D   P S G T A   I R F E P P G V M K I
UniRef90_D6A5H6	H Y H F A A   V N P G L   E F D R K A A W G M R   L D   V   P A G T A   I R F E P P G I P V D
UniRef90UPI00037FF7BA	H Y H F A A   V N P G L   E F D R K A A W G M R   L D   V   P A G T A   I R F E P P G V E R D
UniRef90_B0TT70	H Y H F Y E   V N E F L   S F D R E P T   L   G F R   L D   P A G M A   V R F E P P G Q S R T
UniRef90_F5YYV8	H Y H F F E   V N K V   L   F D R R Q A L   G K R   L D   I A S G Q A   V R F E P R E A K D
UniRef90_G8S4B5	H F H F A E   V N T A L   E F D R A A A W G H   R   L A   V P A G T S   V R F E P C F D P G A A R E
UniRef90UPI0001745DDD	H F H F F E   V N T S L   H   F D R P A S L   G F R   L N   I A A G T A   V R F E P P G D T R E

90                    100                    110                    120

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UniRef90_UPI0002657E0E	V R L V E V G G L R K V F G G N G F C G G K L C D Q E R A M A M I R E R G F G N		
UniRef90_UPI0004688160	V E L V S F S G E Q R I Y G L N N R V N G S V Q K E R		
UniRef90_U7VA21	V K L I D F S G R R R V F G F N N K V E G Y L D		
UniRef90_B7K907	V Q L V P L A G T R E I Y G F N G K I N G Q L D S S V E		
UniRef90_H0DGC4	V E L V E Y G G N R R I F G F H G E V N N T V D E S R V V		
UniRef90_UPI00047BC728	V E L V T E L S G T K E S F G L N G I S N G S V S G K R		
UniRef90_UPI000468976D	V Q L V P V S G A R R I F G F N Q T V M G D L		
UniRef90_F8J6C5	V S L V E F G G N Q K L S G L N G L S D G L A N D P		
UniRef90_U0F2D4	V E L V E Y A G S Q H V Y G F Q G K V M G K L D		
UniRef90_D1A9Q8	V S L V P L A G N R V P L R S E S A G A L D D		
UniRef90_V5XGZ9	V S L V T C Y G G D R R V V I G Q N D V T N G R T D A D A A L M S D V R A R G F L		
UniRef90_Q972V9	V R L V R K I G G G R R V T G L N G L T E G S L E N K E E S I K R A K E R G F A		
UniRef90_CSFFS7	V Q L V E I G G H K V I K G G N F L A T G K V D R R E R I L H R I T E A G F L H		
UniRef90_C5BDC1	V S L V P F G G K R L L Y G F N N L L D G W A M G K E A V V E K A I K S G F K		
UniRef90_L1IL47	V S L V V A L G G N K V I R G G N N I V D G P Y S P S E E I V K R C A E K G F K H		
UniRef90_H0TXB0	V Q L V P Y G G K R A V Y G F N N L L V D G P T A D R N A A V A L A A Q R G F R		
UniRef90_D8PNPC8	V T L V C A L A G H R I I T G G N K L A T G V V D P S D R I M K G L L L R K F S H		
UniRef90_F4PG07	I E L I D Y G G K R E V Y G F N N K V D P L K R G N E		
UniRef90_UPI000473E2DE	V Q L V P F S G S Q H V Y G L N N K T N G P T		
UniRef90_F0YG69	V S L V D I A G A R V V R S G N L L T D G A A D R K D E V M A R V T A R G F G H		
UniRef90_UPI00030CE617	V S L V I P Y G G K Q T L Y G F N N L L V D G W A P D K T Q A I Q R A I E H G F K		
UniRef90_A7IMY4	V T L V P F G G K R E V F G F R G A V Q G K L		
UniRef90_K5TBX2	V E L V P F A G L R Q V Y G F R G D V M G S L D N		
UniRef90_P50044	V R L I Q F G G N Q R I F G F N D L N N G Q V N E		
UniRef90_K9RV82	V Q L V V A I G G K R E I Y G F N G Q V S G A L D A P K E V		
UniRef90_V8QQ82	V E L V V A L A G D R R V F G F T Q G I M G A L E		
UniRef90_G7E2S7	I T L V P L A G H R R I R G G S N L A D A S S A D R K T C L D A L V Q K G F R H		
UniRef90_K5Z046	V T L V P F R G A R K I Y G F R G L T M G S A E		
UniRef90_S5J1P3	V E L V T F A G K Q E V Y G F Q G A I M G K L L Q D R		
UniRef90_H0QJ40	V R L I R L A G S R E V Y G L S S N A V N G S L G V D R D G V D R		
UniRef90_D4YZJ2	V D L I P L R G G R T V I G F Q G K V M G A L D		
UniRef90_A0A022MAN2	V E L V A F G G T R R L V G F A A L V N G G L D T R R A A V R R A T E R G F		
UniRef90_B4WPG1	V E L V P Y G G T Q V Y G F N G K F D G A		
UniRef90_F4F6T5	V D L V P L A G A R I V P G L R G E C G G A L D A E		
UniRef90_E1JTD7	V T L V P Y A G D R L V Y G F G K I M G P V E E A R		
UniRef90_W1SM24	I E L V C F A G E R K V Y G F N N K T D G S V E S E		
UniRef90_M1P8F6	V R L I I P L G G D R K V H G F R D L V D G S L D D R S A V D V N L D E A		
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UniRef90_UPI00047EF5BB	H F H F Y E V N R S L E F N R K E S Y G K R L N I V A G T A V R F E P G Q Q V R Q		
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UniRef90_UPI000404611D	H V H F Y E V N A A L L D F D R P S S F G H L H P A G T A V R F E P G E E K P		
UniRef90_D3AN20	H F H F F E V N K I L L K F D R D E A F G F R L D I P S G T S V R F E P G E E K K		
UniRef90_UPI00035CF2AC	H Y H F Y E V N P G L L T F E R E K A R G Q R L D I A P G T A V R F E P G A T R		
UniRef90_J3P2Q9	H Y H F V E T N A Q L L E F D R A A A Y G F R L D I A A G T S V R F E P G D A R T		
UniRef90_B1MB84	H V H F P Q S N P A L L D F D R A A A H G H R L H P A G T A V R F E P G V A Q R		
UniRef90_Q49E28	H F H F Y E V N S A L L K F N R V I T R G F R L N I P S G T A I R F E P G Q Q F R T		
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90                    100                    110                    120

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UniRef90_UPI0004276479	V A L I P I A G A R R V V F G F N Q Q I M G E L
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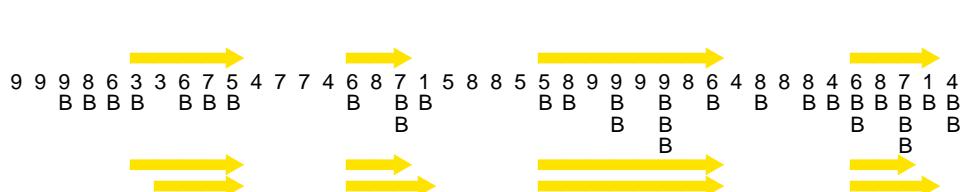
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 M G S S

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S M V P G Q V I P G D E P V S F N E G M P R R T V W V K N F A T R A I Q V G S S  
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UniRef90_S9QXM1	P L S F R G E C G A G	G F R S G A A R G R R L	D I P A G T A V R F E P G Q R R E	
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UniRef90_UP100036B3DCC	H H P F A E V N A E L	E F D R G S A R G L	H I V P A G T T V R F D P P G V E L E	
UniRef90_W4L531	H F H F F E A N K A L	V F P R R L A F G K H	N I V P A G T A V R F E P G D R K T	
UniRef90_M9U2S5	H Y H F A E V N D G L	E F P R M Q A W G R R L	N I V P A G S S V R F E P G I T E E	
UniRef90_D2FPD1	H F H F Y E A N A A L	D F E R E L A Y G K H	D I V P A G A A V V R F E P G D K K E	
UniRef90_TOP3X2	H F H F F E V N K A L	Q F D R A A A F G K R L	N I V T S T T A I I R F E P P G D E L E	
UniRef90_Z9JSU3	H L H L A D A N P A L	A M D R E A A T G F R L	D I V P S G T S V R F E P G A S R R	
UniRef90_V9GCE4	H F H F Y E C N P A L	Q F D R N G T Q G Y R L	D I V A S G L S T G L S R A Q R W R	
UniRef90_A6W683	H F H F F E V N P R L	R F D R A A A Y G R R A	D I V A D G D T V R F D P G Q T R E	
UniRef90_N8EPU0	H F H F F E V N R Y L	E F D R S K A F G L	D I V P A N T A V R	
UniRef90_F815J1	H F H F A E A N P A L	D F D R Q K A V G F R L	D I V P S G T A I R F E P G L T V T	
UniRef90_UP10002629479	H L H L P D V N A A T	T D R E A A A R G F R L	D I V P S G T S L R F E P G A S R Q	
UniRef90_D2B6G2	H F P L T E V N A A L	A F D R R E R A A G M R L	D I V P A G T A T A F P P G E T L E	
UniRef90_A8QBP4	H F P L H K V N R A L	E F P R E V A K G Y K L	D I V A A G T A I I R F E P P G V K K R	
UniRef90_UP100037F5624	H F H F F E V D P T L	A F D R A A T F G M R P	D I V I A A G T S I I R F E P P G A T R Q	
UniRef90_UP10001AEFD94	H F P L E E A N A A L	E F D R E A A R G H R L	D I V P A G T S E R F E P G T T R T	
UniRef90_K9AR06	H L H L P D V N D A L	S F D R R G A T F G R L	D I V P A G T S V R F E P G A S R T	
UniRef90_UP100047DAEBC	H F H F F E V N P R L	R F D R R R A Y G R R A	D I V I G A G E T I I R F D P P G A T V E	
UniRef90_D0D874	H T H F F K V N R A L	R F D R A S A Y G H R L	D I V P S G G G E R L L D P G V A K R	
UniRef90_UP100036C77F5	H Y H F A E V N P G L	K V N C E A A R M R R L	D I V I I A A G T S V R F E P G D E C C	
UniRef90_A4FFD3	H F P L E Q A N P A L	E M D R A A A A G Y R L	D I V P A G T S L E F P P G A A R T	
UniRef90_C5AXC4	H F H F F E A N K A L	E F D R E Q A F G K R L	D I V P A T T A L R F E P P G D E K E	
UniRef90_Q6JHP1	H F H F Y E A N S G Y E	E E K R K I T V G Y R L	D I V I R A G T A W R F E P G C T Y E	
UniRef90_UP100038316EF	H Y H F A E V N P G L	K W N C E A A K G R R L	D I V I I A A G T S V R F E P P G D E C C	
UniRef90_Q949A0	H V N P S L I F D R K R A	H G M R L	D I V I P A G A A T R F E P G E T R S	
UniRef90_W1WSS5	H F H F F E A N K A L	E F D R E K A Y G		
UniRef90_UP10003902BEE	N R G L S F D R E	Q A F G M R L	N I P A G T A V R F E P G E E K P	
UniRef90_Q2JRP2		M L D R A A S F G R R L	N I P S G Q Q A V R F E P G Q T Q R	
UniRef90_H0BLX7	H F H L A D V N D D L	L F D R S K T W G C	D I V A P G D S M R F S P A P S E A	
UniRef90_UP100036F9R89	H F H L A D V N R A L	A Y D R S K T W G C	D I V A P G D S M R F S P A P S D A	

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
jpssm

This figure displays a sequence alignment of UniRef90 proteins across the range of 90 to 120. The alignment is presented as a grid where each row represents a different protein sequence. The columns represent individual amino acids. Key residues are highlighted in yellow, red, or blue boxes to indicate conservation or specific evolutionary changes. The alignment shows a high degree of conservation in the first half (residues 90-110), with significant divergence and variation occurring in the second half (residues 110-120). Specific motifs and domains are visible, such as the GGRK motif at residue 100 and various signal peptides or domain markers.

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
ipssm

UniRef90\_S6WI52 A  
UniRef90\_A4XMB0  
UniRef90\_M5EDD0  
UniRef90\_V9XES7  
UniRef90\_J3EM08  
UniRef90\_J1RYH9  
UniRef90\_C8XK16  
UniRef90\_Q1RR39  
UniRef90\_UPI0002F3B9B7  
UniRef90\_UPI0002DEA8C3  
UniRef90\_D5UWJ5  
UniRef90\_K6X6W4  
UniRef90\_A7YWD5   
UniRef90\_M3T9M5  
UniRef90\_D5UJ87  
UniRef90\_UPI0001AEF2C6  
UniRef90\_B4V570  
UniRef90\_UPI0003731013  
UniRef90\_UPI00042B4BD3  
UniRef90\_UPI00036DC69E  
UniRef90\_UPI00035FC29B  
UniRef90\_A4FCP4  
UniRef90\_UPI000414AC5B   
UniRef90\_S9QXM1  
UniRef90\_D6Y5B8  
UniRef90\_UPI00036B3DCC  
UniRef90\_W4L531  
UniRef90\_M9U2S5  
UniRef90\_D2FPD1   
UniRef90\_T0P3X2 A  
UniRef90\_Z9JSU3  
UniRef90\_V9GCE4  
UniRef90\_A6W683  
UniRef90\_N8EPU0  
UniRef90\_F8I5J1  
UniRef90\_UPI0002629479  
UniRef90\_D2B6G2  
UniRef90\_A8QBP4  
UniRef90\_UPI00037F5624  
UniRef90\_UPI0001AEFD94  
UniRef90\_K9AR06  
UniRef90\_UPI00047DAEBC A D  
UniRef90\_D0D874  
UniRef90\_UPI00036C77F5  
UniRef90\_A4FFD3  
UniRef90\_C5AXC4  
UniRef90\_Q6JHP1  
UniRef90\_UPI00038316EF   
UniRef90\_Q949A0 E  
UniRef90\_W1WSS5  
UniRef90\_UPI0003902BEE  
UniRef90\_Q2JRP2  
UniRef90\_H0BLX7  
UniRef90\_UPI00036F9B89

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf 9 9  
sol25  
sol5  
solo  
jhmm  
jpssm