

QUERY	1	10	20	30	40																																									
UniRef90_A8HW56	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	K	P	Y	F	L	E	A	Y	R	P	I						
UniRef90_G6CWA0	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	S	G	N	L	F	E	D	A	Y	R	P	I	V													
UniRef90_UPI00044089BF	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	S	V	E	G	L	S	G	N	L	F	E	V	F	L	K	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_F4PC08	D	I	Q	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	L	T	S	G	N	L	F	E	V	F	L	K	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_W5A7K4	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	A	G	N	L	F	E	D	A	F	L	R	P	Y	F	L	E	A	Y	R	P	L					
UniRef90_Q5KA71	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	S	G	N	L	F	E	D	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_M5WTB9	D	V	K	Y	G	N	R	I	H	V	L	P	I	V	D	D	S	V	E	G	G	V	N	L	F	E	D	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_H2KU37	E	V	G	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	K	P	Y	F	V	E	A	Y	R	P	V						
UniRef90_I1H9V8	D	A	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	A	Y	L	K	P	Y	F	L	D	A	Y	R	P	V					
UniRef90_M8CGS3	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	A	Y	L	K	P	Y	F	L	E	A	Y	R	P	L					
UniRef90_K4E072	N	V	P	Y	G	N	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	A	Y	L	K	P	Y	F	K	S	H	R	P	V						
UniRef90_U5FPL0	N	L	Q	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	A	Y	L	K	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_B4GB87	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_T114A1	E	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	F	L	K	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_U6JJ3	D	I	K	Y	G	H	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	D	A	Y	L	K	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_E4XE81	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_F6VLN4	D	V	K	Y	G	V	K	I	H	V	L	P	I	D	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_A0A024JL07	D	V	K	Y	G	A	N	R	I	S	V	L	P	I	S	D	T	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_A0A059A132	D	V	K	Y	G	K	R	I	H	V	L	P	I	V	D	D	T	E	G	I	T	G	N	L	F	E	D	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_K8YS88	D	V	P	Y	G	K	R	I	H	V	L	P	I	L	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_B8C373	D	I	P	F	G	K	R	I	H	V	L	P	I	M	E	D	T	V	E	R	I	S	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_A0A023B919	D	A	P	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_M2NF42	D	I	K	Y	A	K	R	I	H	V	L	P	I	A	V	L	P	M	A	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V	
UniRef90_F1LCZ2	D	I	S	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_F2DSA2	E	V	P	Y	G	K	R	I	H	V	L	P	I	F	D	D	S	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_I719J2	D	V	P	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_V4T1Y7	D	V	N	A	T	K	M	H	I	V	L	P	I	L	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_E5SR09	D	L	K	Y	G	T	R	I	H	V	L	P	I	L	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_R4XE58	D	V	A	Y	A	T	R	I	H	V	L	P	I	E	A	V	L	P	M	A	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V
UniRef90_R7QAA8	D	I	Q	Y	G	K	R	I	H	V	L	P	I	F	S	E	D	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_J9HQJ1	D	V	P	N	G	N	R	I	H	V	L	P	I	I	D	D	T	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_UP10002C3E45F	N	V	P	Y	A	T	K	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	T	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_U6GIG7	D	C	P	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	I	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_D8S303	D	V	K	Y	A	K	R	I	H	V	L	P	I	L	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_G7KP28	D	V	E	Y	G	K	R	I	H	V	L	P	I	V	K	D	T	V	E	S	V	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_Q98S05	D	L	K	F	G	K	R	I	H	V	L	P	I	F	K	D	S	V	E	G	I	G	N	L	F	E	D	Y	F	L	E	A	Y	R	P	V										
UniRef90_K4AJ6	D	A	R	Y	G	A	V	H	I	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_A0A058ZIT9	I	E	Y	A	T	K	V	H	I	V	L	P	I	E	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_G0U679	D	V	P	L	G	L	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_UP10004413C20	D	I	E	Y	G	K	R	I	H	V	L	P	I	M	A	R	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_V2X1M7	D	I	M	E	A	K	R	I	H	V	L	P	I	V	K	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_A9BKG5	D	L	K	F	G	K	R	I	H	V	L	P	I	F	E	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_F2HHQ2	D	L	K	F	G	K	R	I	H	V	L	P	I	F	E	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_Q4Y788	E	I	P	Y	G	K	R	I	H	V	L	P	I	V	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_K7LTM9	D	V	K	Y	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_UP10002036ECE	D	V	P	N	G	T	R	V	Q	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_D8M4H7	D	N	L	P	N	G	E	K	I	S	V	L	P	I	F	D	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V				
UniRef90_UP10002C3E6F3	D	I	P	N	A	Q	A	I	H	V	L	P	I	P	F	E	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V				
UniRef90_I11708	D	V	P	N	A	R	V	I	H	V	L	P	I	P	F	E	D	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V				
UniRef90_UP100021A3F39	D	Q	Y	G	K	R	I	H	V	L	P	I	S	M	E	E	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_K3YKV0	D	V	P	N	G	T	R	V	Q	V	L	P	I	F	A	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_B0EE56	D	V	P	N	G	T	R	V	Q	V	L	P	I	S	I	N	S	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V					
UniRef90_W5CIZ4	D	A	K	F	G	K	R	I	H	V	L	P	I	D	D	T	V	E	G	I	T	G	N	L	F	E	V	Y	L	R	P	Y	F	L	E	A	Y	R	P	V						
UniRef90_A0E0B8	D	V	P	T	L	T	K	V	H	V	L	P	I	D</																																

QUERY UniRef90_A8HW56 UniRef90_G6CWA0 UniRef90_UPI00044089BF UniRef90_F4PC08 UniRef90_W5A7K4 UniRef90_Q5KA71 UniRef90_M5WTB9 UniRef90_H2KU37 UniRef90_I1H9V8 UniRef90_M8CGS3 UniRef90_K4E072 UniRef90_U5FPL0 UniRef90_B4GB87 UniRef90_T1I4A1 UniRef90_U6IJJ3 UniRef90_E4XE81 UniRef90_F6VLN4 UniRef90_A0A024JL07 UniRef90_A0A059A132 UniRef90_K8YS88 UniRef90_B8C373 UniRef90_A0A023B919 UniRef90_M2NF42 UniRef90_F1LCZ2 UniRef90_F2DSA2 UniRef90_I719J2 UniRef90_V4T1Y7 UniRef90_E5SR09 UniRef90_R4XE58 UniRef90_R7QAA8 UniRef90_J9HQJ1 UniRef90_UP10002C3E45F UniRef90_U6GIG7 UniRef90_D8S303 UniRef90_G7KP28 UniRef90_Q98S05 UniRef90_K4AJI6 UniRef90_A0A058ZIT9 UniRef90_GOU679 UniRef90_UP10004413C20 UniRef90_V2X1M7 UniRef90_A9BKG5 UniRef90_F2HHQ2 UniRef90_Q4Y788 UniRef90_K7LTM9 UniRef90_UP10002036ECE UniRef90_D8M4H7 UniRef90_UP10002C3E6F3 UniRef90_I11708 UniRef90_UP100021A3F39 UniRef90_K3YKV0 UniRef90_B0EE56 UniRef90_W5CZ4 UniRef90_A0E0B8 UniRef90_W5QBQ0 UniRef90_Q6Z562 UniRef90_M5WC73 UniRef90_F0VIV4 UniRef90_J3MSZ2 UniRef90_X6N1F UniRef90_K7UEH4 UniRef90_W5A7R1 UniRef90_W4YUC0 UniRef90_W7TW67 UniRef90_V2WYV8 UniRef90_D8LF27 UniRef90_L1JQW0 UniRef90_UP10002658F99 UniRef90_G5AD95 UniRef90_V6LKC2 UniRef90_UP10003F05AD0 UniRef90_V9EDE8 UniRef90_A2EP65 UniRef90_Q5CD24 UniRef90_A0EEE7 UniRef90_B8C2N8 UniRef90_D7G4L0 UniRef90_K0QZZ8 UniRef90_UP10003C19D42 UniRef90_B7G1T3 UniRef90_H9MGU0 UniRef90_R7W2U1 UniRef90_W8PD33 UniRef90_T1FY33 UniRef90_S7WA70 UniRef90_U6GRA2 UniRef90_A8BUY7 UniRef90_B9QEB6 UniRef90_R1F027 UniRef90_Q8SSJ5 UniRef90_I3EK81

50 60 70 80

R K G D [] F [L V] R G G M R A [V E] F K [V V] E T D P S P Y C [I V] A P D T [V I] H C [E] G
 R K G D T F [L A R G G M R S [V E] F K [V V] E T D P A E Y C [I V] A P D T [E I] F C [E E G
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 R K G D I F T A K G A M R T [V E] F K [V V] D C [D P E P Y C [I V] V S P D T [V I] H Y E G G
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 R K G D H F T V R G G M R Q [V E] F K [V V] E I D P A E Y A [I V] V S Q D T [V I] H S E G G
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 H K G D G F S V N A A M R N [V E] F K [V V] E I D P S P S C [I V] V S P D T [V I] H C [E E G
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 K K G D Y F T V R G G F K A [V E] F K [V V] I E V E P G E Y C [I V] V A P D T [V I] F H E G G
 R K G D L F [L V R G G M R S [V E] F K [V V] V D T E P G E Y C [I V] H T P K T E I F C [E E G
 R K G D L F S V T G A M R T [V E] F K [V V] I E T D P S P Y C [I V] V A P E T [M V] H C [D D G
 R K G D L F T C R G G M R Q [V E] F K [V V] C T E V D P G E Y G [I V] V S S E T [I I] H C [E E G
 R K G D T F V I R A A M R A [V E] F K [V V] E T D P E E F C [I V] V A P D T [V I] H C [E E G
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 K K G D H F F L V R G G M R T [V E] F K [V V] D V D P A P Y A L [V V] N D T [V I] H C [E E G
 R K N D L F L V R G G F R P [V E] F Q V V G V D P G E F C [I V] V A P D T [V I] F C [E E G
 R K G D L F L V R G A M R A [V E] F K [V V] E I D P G E Y C [Y I] V S A D T [E I] F C [E E G
 R E G D F F P V R G G M R T [L Y] F K [V I] E T D P H K Y C [L V] V A P D T K I F C [E E G
 K K G D V F N I K S G S N N T F D [F D] F R V I E I D P V D Y C [I V] V G P D T [I I] F C [E E G
 R K G D L F L V R G G M R S [V D] F K [V V] V D I K P A E Y C [I V] V A N D T E I F C [E E G
 R K G D L F L V R A A M R A [V E] F K [V V] D C E P A P Y C [I I] V N E S T E I F C [E E G
 S K G D T F I C H R V M L S V E [F K] V V E I D P G D T C V V G P D T [V I] H C [E E G
 R K G G T F L V R G G M R I [V E] F K [V V] G K L A T D P R E Y C [I V] V A Q D T [S]
 H K N D I F V V R G S M R P [V E] F R V I D T G P A E F C [I V] V A D D T [E I] H Y E
 K K N D K F I V N G P S G P [I Q F Q V I E I D P V D Y C [I V] V G P D T [I I] Y C [E E G
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 R K G D L F L V R A A M R A [V E] F K [V V] D C E P A P Y C [I I] V N E S T E I F C [E E G
 S K G D T F I C H R V M L S V E [F K] V V E I D P G D T C V V G P D T [V I] H C [E E G
 R K G D L F L V R G G M R A [V E] F K [V V] E T D P D P E F C [I V] V A Q D T [S]
 K L G D T F I V R E A M H P [V E] F K [V V] D M E P G T E C [V V] C P E T E I Y C [D G
 T Q G D C I Q C H G G M R T [V E] F K [V V] D M E P G T E C [V V] C P E T E I Y C [D G
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 K K G D Y F I C R G G F K A [V E] F K [V V] I I A T E P G E I G I V G P T T T L F T E G
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 R K G D L F L V R G G F R P [V E] F K [V V] K A S N T V P R M F C S L P R D
 K K G D R F L V R G L M H A [V E] F R V I E D T D P A D E C [I V] V A R D T E V F Y D
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 H V G E V F P V Y N Q E M T V D F K V M Q D D E E W G I V A P E T V V Y T E G G
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 S L G A I Y V V R N G G K K I E F K V M K I T S E E H G V T D E Q T A V F C E G
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 H E G D R I R V R H G A Q V V E L V V A T E P E R C V V A P S T E L
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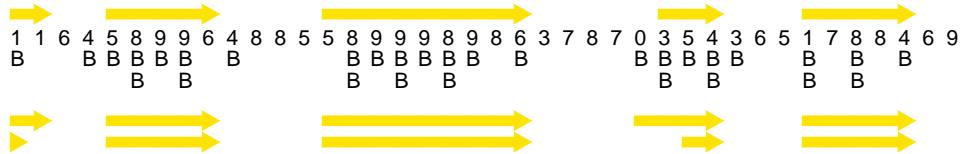
Sequence logo showing the conservation of amino acids at each position of the protein sequence. The x-axis indicates positions 1, 10, 20, 30, and 40. The y-axis lists UniProt entries. Positions 1, 10, 20, and 30 are highly conserved, while position 40 shows significant variation.

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

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