

QUERY  
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UniRef90\_H2DX07  
UniRef90\_M8DIW7  
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|----|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | R | D | G | S | T | E | R | L | N | 10 | K | L | H | R | V | D | W | A | A | E | G | L | H | N | N | V | S | V | S | Q | V | E | M | R | S | H | H | I | Q | F | F |   |   |   |   |   |
| 2  | R | S | N | G | A | K | E | P | D | D  | L | L | K | K | I | V | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |   |
| 3  | R | S | N | G | A | K | E | P | D | D  | L | L | K | K | I | V | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |   |
| 4  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 5  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 6  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 7  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 8  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 9  | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 10 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 11 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 12 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 13 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 14 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 15 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 16 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 17 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 18 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 19 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
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| 21 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 22 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 23 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 24 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 25 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 26 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 27 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 28 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 29 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 30 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 31 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 32 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 33 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 34 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 35 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 36 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 37 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 38 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 39 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |
| 40 | R | N | G | S | Q | E | A | V | M | L  | D | L | K | K | I | H | R | V | T | W | A | A | E | G | L | D | N | N | V | S | V | S | Q | V | E | E | L | K | R | S | H | H | I | Q | F | F |

QUERY Y D G G I K T S E D I 50 60 70 80  
UniRef90\_W7Q7W2 Y D D G I K R T S E D I H H E T T I I K A A A D L I S S E E E Q E T P D D Y Q Q Y L A A A R R L L A S I I F F H H L L L L  
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UniRef90\_W9V2B0 Y E E G M K T T A D I Q A E T T I I K T A A A D L I S S E E E E A P D D Y Q Q Y M A A A R R L L A V I F F H H L L L L  
UniRef90\_UPI000476D5FF Y D D G I K T T A D I H H E T T I I K A A A D L I S S E E E E A P D D Y Q Q Y F L A A A R R L L A V I F F H H L L L L  
UniRef90\_UPI00037B2A79 Y D D G I K T T A D I H H E T T I I K A A A D L I S S E E E E A P D D Y Q Q Y L A A A R R L L A V I F F H H L L L L  
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UniRef90\_V6MIS3 Y D D G I K T T A D I H H E T T I I K A A A D L I S S E G T P D D Y Q Q Y L A A A R R L L A V I F F H H L L L L  
UniRef90\_E8UDV3 Y D D G I K T T Q D I Q E T T I I K A A A D L I S S E E T P D D Y A T L A A A R I A V I S N N L L L L  
UniRef90\_W1QB45 Y H G V T T T I E L D N L A A E T A A Y M T T I H H D D Y A T L A A A R I A V I S N N L L L L  
UniRef90\_E8Q741 Y N G I K T T S D I Q E T T I I K A A A D L I S S E K E E T P D D Y Q Q Y L A A A R R L L A V I F F H H L L L L  
UniRef90\_S3DKW5 Y D D G I T T T S E I H H E T T I I K A A A D L I S S E E N T P D D Y Q Q Y L A A A R R L L N I F F H H L L L L  
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UniRef90\_S8B8T6 Y Q G V T T T I E L D N L A A E T A A Y M T T V T H H D D Y A T L A A A R I A V S S N N L L L L  
UniRef90\_W2S541 Y Q G V T T T I E L D N L A A E T A A Y M T T V T H H D D Y A T L A A A R I A V S S N N L L L L  
UniRef90\_V2XDA1 Y Q G V T T T V E L D N L A A E T A A Y L T T K H H D D Y A V L A A A R I A I S S N L L L L L  
UniRef90\_UPI0002488297 F D D G I K T T S E I H H E T T I I K S A A A D L I S T D V P D D Y A Q Y L A A S R I A I S I F F H H L L L L  
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UniRef90\_L2F5Y8 Y N E I T T T K S I H H E T T I I K S A A A D L I S V T T H H D D Y Q Y L A A A R R L A I V S N N L L L L  
UniRef90\_N1PMJ4 Y H G V T T T I Q L D D L A A E T A A Y M T T V T H H D D Y A T L A A A R I A V S S N N L L L L  
UniRef90\_U9UPT3 Y Q G V S T T V E L D N L A S E T A A Y M T T K H H P D D Y A V L L A S R I A V S S N N L L L L  
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UniRef90\_U7PUJ4 Y G G V T T T V Q L D D L A A E T A A Y M T T V T H H P D D Y A V L L A A R I A V S S N N L L L L  
UniRef90\_Q8K9W3 Y N N I S T T V N I H H E T T I I K A A A D L I S E N T P D D Y Q Y M A A A R L A I V F H H L L L L  
UniRef90\_W6MTJ7 Y P G V T T T I E L D N L A A E T A A Y M T T I H H P D D Y A L L A A R I A V S S N N L L L L  
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UniRef90\_C1FEX6 Y K G V T T T S E L D E L A A E T A A A S M T S K H H P D D Y A Q L L A A R I A V S S N N L L L L  
UniRef90\_G8QZL7 Y E G V T T T S E L D S L A A E T A A A S M T T R H H P D D Y A Q L L A A R I A V S S N N L L L L  
UniRef90\_C3ZNF9 Y S G V T T T V E L D T L A A E T A A M T T V K H H P D D Y A T L L A A R I A I S S N N L L L L  
UniRef90\_H2ZNW0 Y E G V T T T V E L D T L A A E T A A H M T T T H H P D D Y A I L L A A R L A V S S N N L L L L  
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|                        | 170                                                                                   | 180                                             | 190 | 200 |
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| UniRef90_UPI0004745346 | Q A F Y M R V A M G L A L N E D I K S D R E A R A I E F Y N L L S S F D F M S S T S   |                                                 |     |     |
| UniRef90_A0A026VNR1    | Q Q M L M R V A V G I H E N D I E K A I E F Y N Y L L S S E R Y F F T H A S T         |                                                 |     |     |
| UniRef90_C5KD26        | Q H M I M R V A V G I H G D D D V D A I E T Y D L M S S T R V F F T H A T             |                                                 |     |     |
| UniRef90_A0A024JIP7    | Q H L L M R T A I G I H G E D I E K V V E T Y N L L M S S K K Y F F T H A S T         |                                                 |     |     |
| UniRef90_B6JGZ4        | Q A F F M R V A M G L A V Q R E I D R E A R A I E F Y N L L S S K F D F M A S T       |                                                 |     |     |
| UniRef90_E7A8M5        | Q H M F M A I A M F L A Q N E T S S D P N E K A L A F Y E V L S S R F F E V M C A T T |                                                 |     |     |
| UniRef90_UPI00046586BF | Q Q L F M G V A M F L A Q N E T K S T I R G Y W A K K Y N D V I S S K F E V M V A T T |                                                 |     |     |
| UniRef90_E3SPQ6        | Q Y M Y L F I A M T L F A D Y P A T Q R L D Y V R R Y Y N A I S S K H K I N I P       |                                                 |     |     |
| UniRef90_E9GDU6        | Q H L M M R V S V G I H G E D I D A A I E T Y N L L S S E K W F T H A S S             |                                                 |     |     |
| UniRef90_H3D2J8        | Q H M L M R V A V G I H Q A D M E A A I E T Y N L L S S E R W F T H A S T             |                                                 |     |     |
| UniRef90_F0YEY7        | Q H M I M R V A L G I H G D D D I A G A F E T Y E M M S S S Q K M F T H A T           |                                                 |     |     |
| UniRef90_R7S143        | Q H L L M R V A C G I H P N D I D R A L E S Y T L M S S Q R Y F T H G S               |                                                 |     |     |
| UniRef90_A9TAP9        | Q H M L M R V S V G I H K D N I D A V L K T Y H T M S S Q R W F T H A S S             |                                                 |     |     |
| UniRef90_D7FZT8        | Q H M L M R V A I G I H Q T D I D S A I E S Y D L M S S Q R L F T H A S T             |                                                 |     |     |
| UniRef90_UPI00037E0638 | Q A F Y M R V A M G L A L N E V N R E E S A I A F Y N V L S S F D F M S S T S         |                                                 |     |     |
| UniRef90_T1JRL3        | Q H M L M R V A V G I H G S D I E A L Q T Y D L L S S Q K W F T H A S T               |                                                 |     |     |
| UniRef90_UPI000402F5D1 | Q A F F M R V A M G L A I N E I D R E A K A I E F Y D L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_Q54Q71        | Q H M L M R V S I G I H G E D L E S A I N T Y K R L S S E K L F T H A T               |                                                 |     |     |
| UniRef90_M4QDM7        | Q Q M Y I M I A T T L F Q Q Y P K E T R L D Y V R R Y Y N A I S S K H K I N I P       |                                                 |     |     |
| UniRef90_D5JFA3        | Q Y A F M L I A M C L F Q Q E T G L A Q V T H I V D F Y N A I S S D R K L S L P T     |                                                 |     |     |
| UniRef90_H0A3A6        | Q A F F M R V A M G L A L N E I D R E E R A I E F Y D L I S S S F D F M C S T         |                                                 |     |     |
| UniRef90_Q8WRS8        | Q H M L M R V A I G I H G E D I D A A I E T Y N L L S S E R Y F T H A S T             |                                                 |     |     |
| UniRef90_D4G7N4        | Q F L Y I L V S A C L F S Y D P K D V R L I Y V K R F Y D A I S T F K I S L P T       |                                                 |     |     |
| UniRef90_D3UHR1        | Q H M F M A I A M F L A Q N E K D P N A Y A L Q F Y D V I S S K F E V I T A T         |                                                 |     |     |
| UniRef90_I3ZHG8        | Q H F F L R V A C G I A G T P H E A I E F Y N L L S S H D Y M P S S                   |                                                 |     |     |
| UniRef90_U2J8G8        | Q H L F M R V A I G I H G T D P A A I E T Y N L L M S S D K W F T H A T               |                                                 |     |     |
| UniRef90_H2KV41        | Q H M L M R A S V G I H K R D I D A A I E T Y N L L M S S E K W F T H A S             |                                                 |     |     |
| UniRef90_E5EQ12        | Q F L Y M L I G M C L H Q N E N P A K R L Q Y I K D F Y D A A S S Q F K I S L P T     |                                                 |     |     |
| UniRef90_UPI00036FB826 | Q W F F M R V A M G L A L R E V D R E A R A I E F Y E L L S S S F R F M A S T         |                                                 |     |     |
| UniRef90_H8MPH5        | Q D F F L R V A C G I S G D N A R E A I E L Y R L F S S L E Y L P S S                 |                                                 |     |     |
| UniRef90_F0NXD9        | Q H L F M R V A L G I H K Q D I K A A I E T Y N L L M S S E K W F T H A T             |                                                 |     |     |
| UniRef90_V4RMU0        | Q A F F M R V A M G L A V R E I D R E A R A I E F Y E L L S S S F D F M C S T         |                                                 |     |     |
| UniRef90_E1X1D8        | G Q M L M R V S V G I H M N D M K A A I E T Y N L L M S S E K Y F T H A S             |                                                 |     |     |
| UniRef90_G3EID0        | Q Y M L M R V S I G I H Q W D I D S V I E T Y K L L S S E K W F T H A S               |                                                 |     |     |
| UniRef90_UPI00018QH46  | Q F L Y I L V A A C L F S N Y P R E T R I D S V I E T Y K L L S S E K W F T H A S     |                                                 |     |     |
| UniRef90_K7UXK9        | Q H M L M R V S V G I H K E D L E S A I R T Y H L M S Q R W F T H A S                 |                                                 |     |     |
| UniRef90_I6XHF9        | Q F L Y M G I A M A L H Q S E K V N D R L E H V I N Y Y N A A S S L F K I S L P T     |                                                 |     |     |
| UniRef90_S6BWL3        | Q A F F M R V A M G L A I N E I D R E E R A I E F Y E L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_M1TUV9        | Q F M Y M L I A A T L F R D Y E G S R L E Y V R K Y Y N A I S S K H K I N I P         |                                                 |     |     |
| UniRef90_W5WZ29        | Q Y F F M R V A C G L A Q N V D E A I E F Y D L I S S H D Y L A S T                   |                                                 |     |     |
| UniRef90_K7YIW6        | Q V M Y M A I A M G L F S K W N R V E R M D M V T R F Y D Y A S T G K F S L P T       |                                                 |     |     |
| UniRef90_T0DP20        | G Q M L L R V S V G M H M N D M E A A I E T Y N L L M S S Q K Y F T H A T             |                                                 |     |     |
| UniRef90_X6PC66        | Q H M L M R V S L G I H L P D I D A A I E T Y N C L S S Q K W T I H A S               |                                                 |     |     |
| UniRef90_UPI00037B1004 | Q T F F M R V A M G L A I N E I D R E D R A I E F Y N L L S S N F D F M S S T         |                                                 |     |     |
| UniRef90_H8YVL8        | Q A F F M R V A M G L A I N E I D R E A R A I E F Y E L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_F5B3Y9        | Q F C Y M L N A A T T F H K Y P K A T R L N Y V K A Y D A I S S K H Y L N L P T       |                                                 |     |     |
| UniRef90_UPI0004632D11 | Q A F F M R V A M G L A I N E I D R E G R A I E F Y N L L S S S F D F M A S T         |                                                 |     |     |
| UniRef90_E2QDN3        | Q H I Y M L V G M C L F Q N W E D D T R M E M V K G F Y D V T S S T F K L S L P T     |                                                 |     |     |
| UniRef90_I1XJW3        | Q A F Y M R V A M G L A I N E I D R E A R A I E F Y N L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_A0A024KJN9    | Q A F F M R V A M G L A A R E I D R E A R A I E F Y D L L S S S F D F M A S T         |                                                 |     |     |
| UniRef90_K6GHD4        | Q I F F M R V A M G L A V E E I D N R E D R A I E F Y K L L S S S F D Y M S S T       |                                                 |     |     |
| UniRef90_UPI00037638A2 | Q V F F M R V A M G L A I N E V D R E T R A I E F Y N L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_B8KSN0        | Q I F F M R V A M G L A A R E I E A K N A R A I E F Y R L L S S S F D Y M S S T       |                                                 |     |     |
| UniRef90_F8IJA6        | Q E L F M G V S M H L A M K E K E K V A W A K R F Y D M L S S T L Q A T V A T         |                                                 |     |     |
| UniRef90_UPI000360DA65 | Q A F Y M R V A M G L A I N E V D R E A R A I E F Y N V L S S T F D F M S S T         |                                                 |     |     |
| UniRef90_D5K693        | Q Y M M M R V A I G I H G E D I D A A I E T Y N L L M S S N G Y F T H A S             |                                                 |     |     |
| UniRef90_UPI00046F5287 | Q E R F M T I A M H L A I P E G D K K V F Y A K K F Y D L L S S E L G V T V A T       |                                                 |     |     |
| UniRef90_UPI0003A62F5A | Q I F F M R V A M G L A I E E S D R N A R A I E F Y K L L S S S F D Y M A S T         |                                                 |     |     |
| UniRef90_Q4MZI8        | Q H M I M R V S A G I H C G D L E R T I Q T Y H L M S S Q R Y F T H A T               |                                                 |     |     |
| UniRef90_A0Q1D7        | Q E R F M V I A M H L A I P E G K N R V Y F A K K F Y D L M S S K L K M T V A T       |                                                 |     |     |
| UniRef90_UPI00037C5626 | Q A F Y M R V A M G L A I N E I D R E T R A I E F Y N V L S S T F D F M S S T         |                                                 |     |     |
| UniRef90_Q4A251        | Q H M L M R V A I G I H C P D V D A A I E T Y K L L S S A R V F T H A T               |                                                 |     |     |
| UniRef90_M4ZYZ1        | Q Y F F L R V A C G L V G N D R G E G D V T E A V K F Y D L M S S L A Y L P S S       |                                                 |     |     |
| UniRef90_UPI0003678A43 | Q I F F M R V A M G L S I N K E N K N E R A I E F Y N L L S S S F D Y M S S T         |                                                 |     |     |
| UniRef90_UPI000476ED6A | Q A F F L R V A M G I A L K E E N R E D R A I E F Y E L L S S S F R F M S S T         |                                                 |     |     |
| UniRef90_K0K6K3        | Q A F F M R V A M G L A L K R E D D R E A R A I E F Y E L L S S A F D F M C S T       |                                                 |     |     |
| UniRef90_T0MYD7        | Q E A F M G I A A F L A I A E K P S E R M R W A R Q F Y D V L S S N L Y I T M A T     |                                                 |     |     |
| UniRef90_D0KZH3        | Q A F F M R V A M G L A I N E I D R E T H A I E F Y K L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_W0TJK2        | Q A F F M R V A M G L A I N E I D R E G K A I E F Y H L L S S S F D F M S S T         |                                                 |     |     |
| UniRef90_Q47K18        | Q A F L M R V A M G V A L H E D D R N A R A I E F Y E L L S S S F D F M C S T         |                                                 |     |     |
| UniRef90_J5KSB1        | Q V F F M R V S M G L A I E E E N R E A R A I E F Y N L L S S S F D Y M S S T         |                                                 |     |     |
| UniRef90_UPI000479AE3F | Q Y F F M R V S C G L A V T V N E A I D F Y R L M A T H D Y M P S S S                 |                                                 |     |     |
| UniRef90_D2A2I2        | Q H M L M R V A V G I H G E D I D S A I E T Y N Y M S T E G Y F I H S                 |                                                 |     |     |
| UniRef90_V9LYW4        | Q Y A Y M L I A M C L H Q E E K Y D R I K H V V D F Y N A V S S H K L S L P T         |                                                 |     |     |
| UniRef90_D1BPH5        | Q E R F M A I A M H L A L V I E G K N K V K Y A K K F Y D L M S S Q L K M T T A T     |                                                 |     |     |
| UniRef90_Q2Y664        | Q A F F M R V A M G L A L R E I D R E A R A I E F Y H V L S S N F D F M S S T         |                                                 |     |     |
| UniRef90_K0CD67        | Q C F F M R V A M G L A I N E I D N R E E R A I E F Y N L L S S S F D Y M S S T       |                                                 |     |     |
| UniRef90_J9HVP5        | Q H M L M R V S I G I H K E D L E S A F E T Y D L M S S Q L W F T H A T               |                                                 |     |     |
| UniRef90_UPI00029B0823 | Q Y F W M R V A M G V A L Q E E S R E E R A I E F Y E M L S S S F R F T S A T         |                                                 |     |     |
| UniRef90_Q0A6U3        | Q A F F M R V A M G L A L Q R E V I E R E E R A I E F Y R L L S S S F D F M S S T     |                                                 |     |     |
| UniRef90_UPI00045E855D | Q A F F M R V A M G L A L R E I D R E A R A I E F Y D L L S S S F D F M A S T         |                                                 |     |     |
| UniRef90_F3KYF5        | Q V F F M R I A M G L A V R E D D K N A R A I E F Y Q L L S S S F D Y M S S T         |                                                 |     |     |
| UniRef90_UPI000362EA5F | Q A F F M R V A M G L A L R E I D D R E R A I E F Y E L L S S S F D F M C S T         |                                                 |     |     |
| UniRef90_UPI000364CD6D | Q A F F M R V S M G L A L R E I D R N A T A I E F Y E L L S S S F D F M C S T         |                                                 |     |     |
| UniRef90_E5DPX3        | Q M L Y M L V A M C L H Q D E K T D R L A K V K N F Y D V T S S L G K L S L P T       |                                                 |     |     |
| UniRef90_UPI00037867A4 | Q A F F M R V A M G L A L R E I D R E A R A I E F Y D L L S S S F D F M A S T         |                                                 |     |     |
| UniRef90_UPI00035C9E02 | Q V F F M R V A M G L A L Q E D D K N T R A I E F Y Q L L S S S F D Y M C S T         |                                                 |     |     |

|                        |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| UniRef90_L7MI28        | P | T | L | F | N | S | G | T | P | R | P | Q |
| UniRef90_L1JXU3        | P | T | L | F | N | S | G | T | P | H | P | Q |
| UniRef90_B4G7A7        | P | T | L | F | A | A | A | T | N | R | P | Q |
| UniRef90_UPI00037B5F4D | P | T | L | F | N | S | G | T | P | K | P | Q |
| UniRef90_E5E4J9        | P | I | M | A | G | V | R | T | P | T | R | Q |
| UniRef90_UPI0004745346 | P | T | L | F | N | S | G | T | Q | R | S | Q |
| UniRef90_A0A026WNR1    | P | T | L | F | N | A | C | T | N | N | Q | Q |
| UniRef90_C5KD26        | P | T | L | F | N | S | G | T | P | H | P | Q |
| UniRef90_A0A024JIP7    | P | T | L | F | N | A | G | T | L | R | P | Q |
| UniRef90_B6JGZ4        | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_E7A8M5        | P | T | L | A | N | A | R | T | P | N | H | Q |
| UniRef90_UPI00046586BF | P | T | L | S | N | A | R | T | T | R | H | Q |
| UniRef90_E3SPQ6        | P | I | M | A | G | V | R | T | P | L | R | Q |
| UniRef90_E9GDU6        | P | T | L | F | Y | A | A | T | P | R | P | Q |
| UniRef90_H3D2J8        | P | T | L | F | N | A | G | T | N | R | S | Q |
| UniRef90_F0YEY7        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_R7S143        | P | T | L | F | N | A | G | T | P | N | P | Q |
| UniRef90_A9TAP9        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_D7FZT8        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_UPI00037E0638 | P | T | L | F | N | A | G | T | R | R | S | Q |
| UniRef90_T1JRL3        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_UPI000402F5D1 | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_Q54Q71        | P | T | L | F | N | A | G | T | P | S | P | Q |
| UniRef90_M4QDM7        | P | V | M | A | G | V | R | T | P | L | R | Q |
| UniRef90_D5JFA3        | P | I | M | A | G | V | R | T | P | T | R | Q |
| UniRef90_H0A3A6        | P | T | L | F | N | S | G | T | R | H | S | Q |
| UniRef90_Q8WRS8        | P | T | M | F | A | A | A | T | C | R | P | Q |
| UniRef90_D4G7N4        | P | I | M | A | G | I | R | T | P | T | R | Q |
| UniRef90_D3UHR1        | P | T | L | A | N | A | R | T | P | R | H | Q |
| UniRef90_I3ZHG8        | P | T | L | F | N | S | G | T | K | H | P | Q |
| UniRef90_U2J8G8        | P | T | L | F | N | A | G | T | A | R | P | Q |
| UniRef90_H2KV41        | P | T | L | F | N | S | G | T | T | R | P | Q |
| UniRef90_E5EQ12        | P | I | L | A | G | V | R | T | P | T | R | Q |
| UniRef90_UPI00036FB826 | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_H8MPH5        | P | T | L | F | N | S | G | T | R | H | E | Q |
| UniRef90_F0NXD9        | P | T | L | F | N | S | G | T | P | K | P | Q |
| UniRef90_V4RMU0        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_E1X1D8        | P | T | L | F | N | S | G | T | S | K | P | Q |
| UniRef90_G3EID0        | P | T | L | F | N | S | G | T | C | H | P | Q |
| UniRef90_A0A018QH46    |   |   |   |   |   |   |   |   |   |   |   |   |
| UniRef90_K7UXK9        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_I6XHF9        | P | I | L | G | G | A | R | T | P | T | R | Q |
| UniRef90_S6BWL3        | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_M1TUV9        | P | V | M | A | G | V | R | T | A | L | R | Q |
| UniRef90_W5WZ29        | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_K7YIW6        | P | I | M | A | G | V | R | T | R | T | R | Q |
| UniRef90_T0DP20        | P | T | L | F | N | S | G | T | N | K | P | Q |
| UniRef90_X6PC66        | P | T | L | F | N | A | G | T | P | R | P | Q |
| UniRef90_UPI00037B1004 | P | T | L | F | N | S | G | T | V | H | S | Q |
| UniRef90_H8YVL8        | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_F5B3Y9        | P | N | I | A | G | V | R | T | K | T | R | Q |
| UniRef90_UPI0004632D11 | P | T | L | F | N | S | G | T | Q | R | P | Q |
| UniRef90_E2QDN3        | P | I | M | A | G | V | R | T | P | T | R | Q |
| UniRef90_I1XJW3        | P | T | L | F | N | A | G | T | L | R | P | Q |
| UniRef90_A0A024KJN9    | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_K6GHD4        | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_UPI00037638A2 | P | T | L | F | N | S | G | T | L | R | P | Q |
| UniRef90_B8KSN0        | P | T | L | F | N | A | G | T | L | R | P | Q |
| UniRef90_F8JA6         | P | T | L | S | N | A | R | K | P | F | H | Q |
| UniRef90_UPI000360DA65 | P | T | L | F | N | S | G | T | R | R | S | Q |
| UniRef90_D5K693        | P | T | L | F | S | A | A | T | P | K | A | Q |
| UniRef90_UPI00046F5287 | P | T | L | G | N | A | G | T | P | F | Y | Q |
| UniRef90_UPI0003A62F5A | P | T | L | F | N | A | G | T | L | R | P | Q |
| UniRef90_Q4MZI8        | P | T | L | F | N | A | G | T | R | H | P | Q |
| UniRef90_A0Q1D7        | P | T | L | G | N | A | G | T | P | F | Y | Q |
| UniRef90_UPI00037C5626 | P | T | L | F | N | S | G | T | L | H | S | Q |
| UniRef90_Q4A251        | P | T | M | Y | N | A | G | T | R | N | P | Q |
| UniRef90_M4ZYZ1        | P | T | L | F | N | S | G | T | T | H | S | Q |
| UniRef90_UPI0003678A43 | P | T | L | F | N | A | G | T | L | R | P | Q |
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|---|-----|-----|-----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|
| K | A   | G   | D   | Y   | L | K | L | E | Y | F | D | Y | A | G | A | N | Q | L | A | K | R | Y | L | V | Q | D | R | S | T | K | K | G | R | F | E | E | L   | P |   |   |   |   |   |   |
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| U | R   | I   | G   | A   | A | I | K | P | E | R | D | L | L | Q | F | F | T | Y | A | G | A | N | Q | L | A | K | R | Y | L | V | Q | D | R | S | T | K | K   | G | R | F | E | E | L | P |
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G K E K S L S R R E F A A L I E Q A T A G F V R L S L S E Y E E R V W L S R  
Q E R L E K L L Y D I H T E F P E K V F E K F S G F L  
R D G S R E P Y N A D R I N R A I E K A A V G L P D S M T M Q V A S E L E I T L  
V E N L C K E A L K G I N D D E N I Y T K T K L I N V L  
R N G G V A P F D P S F W I A I V E S V V A G L E S V S A A D L E E A V R N L  
Y K S D N Y S L D L L A K F N S F Y  
D R L K E A L E H I I  
R D G S R K E V H L H D I K A G I E T L C F N L N K V N A A V V A L N I M K G I  
R H G R Q E P V H F D K L T A T L K K L S Y R L D H C D P V L V A Q K V Y T G I  
R D G S K Q T V L D K I T S K L N R L S Y G L N K I D P A A I T I Q V V K T I  
R D G S L T S L D I T K I R S V V E W A C K S E H N V N P I I L E A G L T T R L  
R D G S S E A V S F D K I M T R I G R L C W G L E V D I S R I V A S I C S S V  
L I D A L N H I I  
R D S R Q R F F D T I E I Q P I L L T E I Q N D F D E Y S L N L L A H K F L S F R  
D K L L D A L N P I V  
R S G A R E K L D L L K I R T V L E N A M E D L N E I N I D E I M E D I E I N I  
Y S L A A L Q M K F E S F C  
K A T E G L T G L D K Q E F E T E A L  
R E G I V E T L N I E K I R E K L I R A C E G L D V N M V E L E S N I D S I Y  
K Q D P Y S Q D Q M S L L A E D A C Q T L E S V D P Q L I T E K A Q R N L  
R T E K F P I G D L L K S I Q N E F L E E Y S L N I N E K F Q S F L  
R N G S N A A L N V A K I R E V V E W A C A G K D V N P I A L E A G L T T R L  
I L V E L K E F P Q L D V E H L Y K R T Q E  
G E K K V L D H T W L M N I C H V A C K N L T S V S S I S I F N N T L K S L  
I E D V Y T V I R Q I T A A Y S E L D V E R Y T E R A I R A L  
R D Q R E T S V D I Q E I R K A L E W A C A G L D V S Y L E L E S H S T A  
E Y S L Q L L L A K F K S F Y  
D Q W K E R L E A W K T E F P M L D L D R I I H K I P N L G  
L D P V S L E K L E K Y H T Y  
L H Y V L E S I N Q A A K K Y D I D A T E I T K R I K E  
L R K L C N L A I E G I K D N D G T Y T E E K L K A I  
I H D V L V R V Q H D F P D Y A L T R L A E K F S A F C  
E E Y N L N L L A H K F L S F R  
H I D T T K Y K E L E K T W  
K N G Q S Q D F A P A K V K K I I D E I S E G L H I D T T K Y K E L E K T W  
L D S S K V V E K L V D F F  
D G A E E A L V I G Y L E K L K E K Y P H L D F D D Y E K I V Q G V  
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M K I K Q D F K E D V Y E L G S L Y T K F T S F A  
F D D E K I F K L M R K I Q E D F D A Y K L S F L Y S K F T S F A  
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|                        |   |   |   |   |   |   |   |   |   |   |   |   |
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| UniRef90_M1FMV6        | P | T | L | F | N | S | G | T | R | H | S | Q |
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R I K L K A H L E R Q S F Y E K I R Y L T Q E G L Y G S Y I L H Y S K A E I D  
A R T V T G E L S D S A Y R G A F A A G I E E G V E L D L D E R M A D Y D I E D  
Y E E A A E N R Q T E A P Y E N F H A L I E K E V Y S Q Q L T S Y S K N E I D  
Y D Q V G E N D V Y K V F P E Q L A R Y T E A G L Y H H C L T T K Y S E I L V  
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E I A T T E I D N T R N D R N L F N Y S G L D L L S S Q S R Y L I V R S D H Q H V L L E S P  
E L A K E I K P E R D F L F N Y S G L N L L S S R Y L I V R S D H Q H V L L E S P  
R L A S A I R S P E R D G L L D Y S G L M Q T L Y D R Y L L Q D H V N E R R I E L L P  
E A E G F L C P E R D K L F N Y S G L D L L A K S Y L I R T R A E S H Q L I E S V  
F L D S I I V Q K R D F N H D Y F G L K T L E A K S Y L I R T R A E S H Q L I E S V  
Q L Q Q A I D P E K D A L F N Y I G L F L L A D R Y L A R D D H D R N T L Y E L P  
E L A E A L V P A R D D E F Y M A V S T L T Q R Y F L E T L D D D P A E L P  
E L G A Y L K D E R D Y L F T Y S G L E L V K K R Y L M C H A H E V L E T P  
Q L G R A L R E A K R N Q M Q F T Y S G A Q T L Y D R Y F L H S N G Q K F E R P  
R Y A E F M K A E R D G L F T Y S G L D L L S R S R K N G V A L E T P  
D L G Q A T T P S C D E L F D Y I G L L T L A E R S Y L A T D F E A R T M E L P  
L L D S A I H S R D F D L Y S G L K T L Q K R Y L L K Y E N G N L I E S P  
Q A A T F I K E E R N D L N Y S G L D L L M K R Y L I R T K Y E N K P I E S P  
E A A L L L D D R R D E L F T Y A G L D L L K R Y L I R T K S H V L L E T P  
Q L A E Q I D A T R D Q I L F T Y I G L K T L D D R Y V T C D F D K T P L E L P  
L A A K S N S A L D L S Y G Y T T I L S L Q K R Y L L N Q Y E G R R L E T P  
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T A F S Y I D T E R N K L L T Y S S L D M L R R Y V I R T R H N G H I L L E S P  
S L E R I I N P E R D G L F T Y I G I V I T L A E R Y L A K S H A G H F I L E L P  
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Q L S K L I D P E R D F L F T Y T G L H T L A T R Y L A V D H H E K N T F E L P  
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L I Q Q Q T N Y E R D Y T Y D F F G F K T L E R S Y L L K H H G K I V E R P  
M L G Q Y I S E S D R N E L F T Y S G L E L L V K R Y L I Q N H D R E I I E E K P  
E A G S W I S E S D W L D Y D Y A G A V L L S S R Y L L P D Q N H D R E I I E E K P  
E L E G V I D P E K D K L F T Y I G V R T L A D R Y L A K S Y D G R V I Y E L P  
E L A Y L Q D D E R Q L F T Y S G L E L V A K R Y L L M R A H N H D I L E E T P  
E L A Q F I K K E N D R L F T Y S G L K M L A D R Y L L M R A H N H D I L E E T P  
L D A L I D P A G D D R F G Y F G L R T L Y S R Y L L R H P V T R Q Q V V E T P  
R L A A A L E P A H D E L F K Y I G V V T N K N R Y A L R D K N S E R G A P L E S P  
E L E Q E I V P E R D Q L F N Y I G L F L A D R Y L A R D H H Q G A P L E S P  
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A A A R F M A E E R N H L Y T Y A G L D L L S R Y V I H T H H G V A L E S P  
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V L A R A L D P A R D A L L G Y A A L A T L A D R Y L V R D P E T E R Q L L E R P  
S L S E V I E P A R D L K F T Y I G L R T L A D R Y L A R D H H E R L L Y E L P  
R L A G A L D P S R D D L L T Y T G A V T M N N R Y M I N D R D G H R L E V P  
I L E E N I D M K L D L D Y N Y F G Y Q T L K N G Y L I R G K I D N E K V A E R L  
E L E A Y I K P E R D F L F T Y I G L K Q L L D R Y V I R G L N D G E L L E L P  
E L L K H L D Y D R D D I F T Y S G L D L I K R Y L I T S Y D G R L L E K V  
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E L E A Y M D F S R D K I F T Y S G L D L V K R Y L I T N H K G D I L E K V  
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K I D S I I D Y S R D Y Y F T Y F G L I S L M K S Y L L V D K E I I E R P  
L A A E T F I Q P E R D R L L T Y S G L D L L R R Y T V I R N F V H H E Q L E S P  
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K I A K A L N A K G R D R N F D Y I G I D T L C N D R Y L L H V N E G T R I E L P  
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UniRef90\_X8K6S8 Q E M Y L G I A L H L A L K E T G E D R M T W V R K F Y D I M S L Q K V I S M A T  
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R G T V S S S E L S D K V Q L M L M V T D D L K W H D A A R N Y L L L W S V L  
E E N T T Q K I Q A S L I N T A V S M T T F E E S D W S Y V A A R R L L M M E A  
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H P E S S A T D W T N A M V L E S L S R I D E A N T Y W T F V A A R I Y L N D V  
Y D G C T T R E L V N Q A L I D A C V S R K D E A H S R M A G R V L I G Q I  
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H A G S D F A E L R G L A V E A A S M I A E D P Q Y S K L A A R I L L A L E I  
H T E D K A L H N S I F Y A L N N I D M G A P D W T F V A A N M K L Q Q M  
G Y S G P S L S Q H L R E A L G R V D E S E T Y W T D V A A R I L L A Q L  
Y A G I T T S Q L D D A A E T A I T M A T I H P D Y E K L A A R I A I S N L  
Y D G C T T L E L H K A M I D A C V E R E D H Q H L K M A G R L L I G T I  
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P E G V M E R E L T M Y I G E S L A A L T T Q H P D F S L A A R I L E V A E L  
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Y K G L A A R I A V S N L  
W L N C  
F D G M T D A L D E A V I Q V A L G N A K D D P A F D T I A S R I A V K K L  
C E D M S S F E M I T F V S E T A A S M M T I N P E Y G K L S A R I A I C H L  
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M S I R M E Q T T R Q T Q M Q D A L N R V S M S E P H W T Y K A A A L F A E D L  
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S I S L T P V E R R D T I V L N A K S L L D V D A D A R F F A A R I L L S Y I  
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Y D G I K T S D I Q E A L I S A A S K L T S A T M T D A S F V A A R L L L L D L  
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 U N I R E F 9 0 \_ U P I 0 0 0 4 1 4 4 9 B 4 L D A L V D E S A D D R F E Y F G L R T L Y D R Y L L R H P R S R L V L E R P  
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UniRef90\_A7KUZ9 Q E R L M M I A V T T M I N E P K A T R L A H I K E L Y W A L S N L Y A T A A T T  
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UniRef90\_S4W654 Q Y M F M R V A I G H Y G F A D V Q D A L A R V L E A T Y E A M S S Q Q S Y T A A T T  
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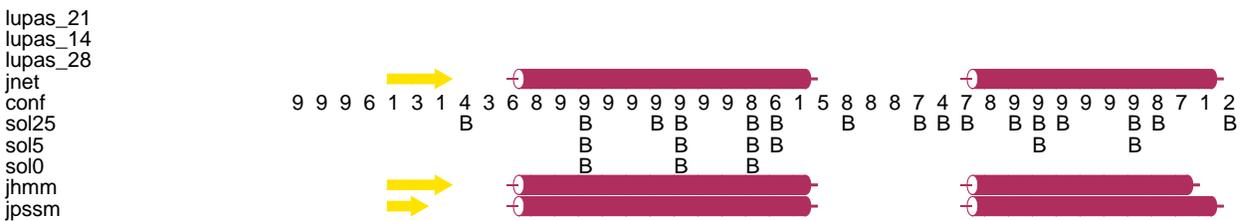
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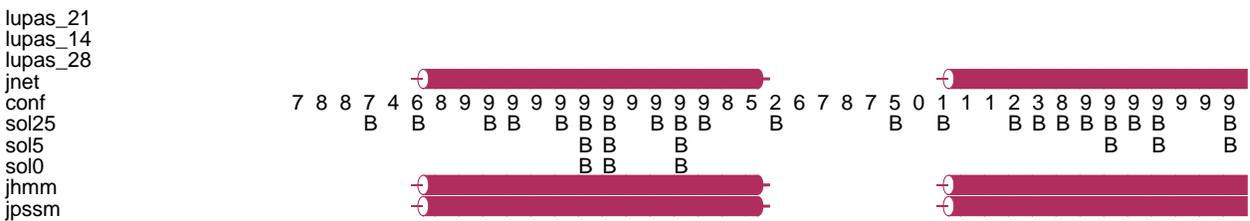
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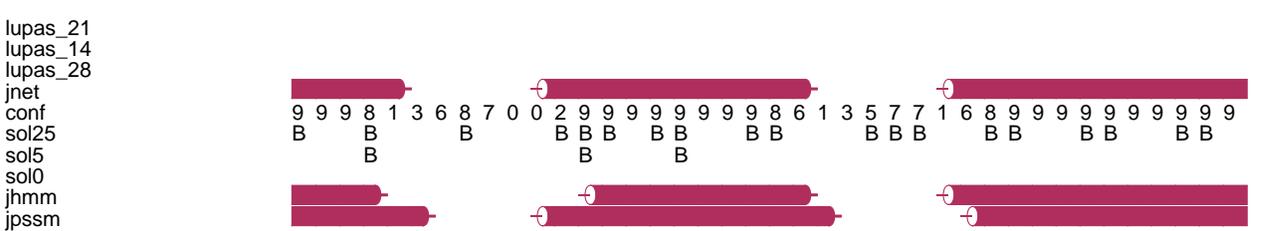
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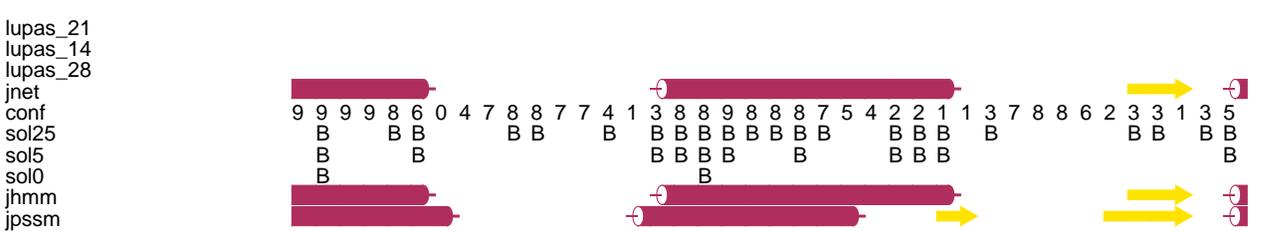
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210

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| UniRef90_E3EMN3        | P | T | F | L | N | L | G | K | A | Q | R |
| UniRef90_R2Q230        | P | S | F | L | N | A | G | R | K | R | R |
| UniRef90_S2E4Q4        | P | T | M | M | N | A | G | G | R | L | G |
| UniRef90_S5M863        | P | T | F | L | N | A | G | K |   |   |   |
| UniRef90_W6JA82        | P | T | F | L | N | C | G | K | Q | Q | R |
| UniRef90_UPI0003638402 | P | T | F | L | N | A | G | K | S | R | R |
| UniRef90_Q03E53        | P | S | F | L | N | A | G | R | K | H | R |
| UniRef90_V6M360        | P | T | F | L | N | A | G | K | S | R | R |
| UniRef90_E3CIR0        | P | T | F | L | N | A | G | K | K | R | R |
| UniRef90_C9XYX8        | P | T | F | L | N | G | G | K | Q | Q | R |

|          |                                                                                     |
|----------|-------------------------------------------------------------------------------------|
| lupas_21 |                                                                                     |
| lupas_14 |                                                                                     |
| lupas_28 |                                                                                     |
| jnet     |                                                                                     |
| conf     | 3 2 2 5 6 6 7 7 8 8 9 9                                                             |
| sol25    | B B B B B B B B                                                                     |
| sol5     | B B B B B                                                                           |
| sol0     |                                                                                     |
| jhmm     |  |
| jpssm    |                                                                                     |