

logo

|                 |                                |   |    |
|-----------------|--------------------------------|---|----|
|                 |                                | MSXLRIGDRRLGAALLDAGLLTDEELQRALERHREVGGS LAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPVKV | 0  |
| NTDB id 1410    | SGL RS13950 WP 010873519.1     | MSVLTIGDKRLGAALLDAGLLTDEELQRALERHREVGGS LAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPVKV | 80 |
| NTDB id 1028    | TT RS08215 WP 011173991.1      | .MALSIGDRRLGAILLDQGYLGDNDLQRALERHSEVGGRLADVLIDSGMVGEKRIARAIEEALGIPLVNLLAVQPDPAAL  | 79 |
| NTDB id 1306    | DR RS10060 WP 027479822.1      | .....   | 0  |
| NTDB id 1110    | NGFG RS09235 WP 003689817.1    | .....   | 0  |
| NTDB id 1168    | A1552VC RS11070 WP 000957200.1 | .....   | 0  |
| NTDB id 1293    | VP RS12240 WP 005479695.1      | .....   | 0  |
| NTDB id 1401    | DSB67 RS12665 WP 010643259.1   | .....   | 0  |
| NTDB id 1251    | GCO85 RS07725 WP 011946523.1   | .....   | 0  |
| NTDB id 1082311 | ACK2VH RS05460 WP 003107297.1  | .....   | 0  |
| NTDB id 1058    | ABD1 RS01615 WP 001274986.1    | .....   | 0  |
| NTDB id 1018    | ACIAD RS01685 WP 004920473.1   | .....   | 0  |
| consensus       |                                | .....   | 0  |

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|-----------------|--------------------------------|---|-----|
|                 |                                | RSLPAEKAKELKAIPFALDEEAGVVRVAFNLPLDLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPP..P   | 0   |
| NTDB id 1410    | SGL RS13950 WP 010873519.1     | ALLPAEKAKELKAIPFALDEEAGVVRVAFNLPLDLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPP..P   | 158 |
| NTDB id 1028    | TT RS08215 WP 011173991.1      | RSIRPQTALNLQAFPFALE..GDRLRVALVDPLSSFSIETLEDDSGFDIEPYQALREEVMWAIATHYPELGLLEIVVPSGA | 157 |
| NTDB id 1306    | DR RS10060 WP 027479822.1      | .....   | 0   |
| NTDB id 1110    | NGFG RS09235 WP 003689817.1    | .....   | 0   |
| NTDB id 1168    | A1552VC RS11070 WP 000957200.1 | .....   | 0   |
| NTDB id 1293    | VP RS12240 WP 005479695.1      | .....   | 0   |
| NTDB id 1401    | DSB67 RS12665 WP 010643259.1   | .....   | 0   |
| NTDB id 1251    | GCO85 RS07725 WP 011946523.1   | .....   | 0   |
| NTDB id 1082311 | ACK2VH RS05460 WP 003107297.1  | .....   | 0   |
| NTDB id 1058    | ABD1 RS01615 WP 001274986.1    | .....   | 0   |
| NTDB id 1018    | ACIAD RS01685 WP 004920473.1   | .....   | 0   |
| consensus       |                                | .....   | 0   |

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|-----------------|--------------------------------|--|-----|
|                 |                                | SGEGQKDLKLGELLQKQWISREALEEALVEQEKTGDLLGRILV.RKGLPEEALYRALAEQKGLFLESTEGIVPDPSAA | 0   |
| NTDB id 1410    | SGL RS13950 WP 010873519.1     | SDAGRTGGKLGRLITHGYITDAQLQVALDAQQTGEALGATLISQRAITEDQLYEVLAEQEGTTFLPNPSGPHGEEVL  | 237 |
| NTDB id 1028    | TT RS08215 WP 011173991.1      | .....  | 237 |
| NTDB id 1306    | DR RS10060 WP 027479822.1      | .....  | 0   |
| NTDB id 1110    | NGFG RS09235 WP 003689817.1    | .....  | 0   |
| NTDB id 1168    | A1552VC RS11070 WP 000957200.1 | .....  | 0   |
| NTDB id 1293    | VP RS12240 WP 005479695.1      | .....  | 0   |
| NTDB id 1401    | DSB67 RS12665 WP 010643259.1   | .....  | 0   |
| NTDB id 1251    | GCO85 RS07725 WP 011946523.1   | .....  | 0   |
| NTDB id 1082311 | ACK2VH RS05460 WP 003107297.1  | .....  | 0   |
| NTDB id 1058    | ABD1 RS01615 WP 001274986.1    | .....  | 0   |
| NTDB id 1018    | ACIAD RS01685 WP 004920473.1   | .....  | 0   |
| consensus       |                                | .....  | 0   |

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 NTDB id 1028 TT RS08215 WP 011173991.1  
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 NTDB id 1058 ABD1 RS01615 WP 001274986.1  
 NTDB id 1018 ACIAD RS01685 WP 004920473.1

.....MTS  
 LLLLRSDALRYGAVPIGFQNGEVEVVLSDPRHKEAVAQLLNRPARFYALALPQAWEEFRRAYPQKNRLGEVLVQEGKLSR  
 GSMLRADALRLLAVPVDETEQGVTVLTS DPRKRKPDIDALIGRPVQLMLTRPRDIERLIEQFYPPQRGRLGEQLVQEGTLSR

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317  
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SSSSKKSRAVALRNYFSPFGNKLIVAGCHVDAEQLRQALVQVKKTGRSLPEELKAVTGRELSPELIRQYKKNQLFELKVLVY  
 EALKEALEVQKGLPRAKPLGETLVELGLARPEDVEEALQKQRGGRIEDTLVQ..SGKIRPEALQA.....VATQL  
 DQLREALQVQAREGKVKPLGEVITELGFASPEVDSALQKQNVGGRIEDTLVQ..SGKLSPEMLARS.....LAAQL  
 .....MSVGLLRILVQNVVTVQAEHYNE.SQAGKEVLPMLFS..DGVISPKSLAAL.....IARVF  
 .....MLTNLVAILRQAEILSATQEAVVTQVSASGTSVPEALIE..LSIFHAQELTEQ.....LSSHIF  
 .....MHSNLSLIRKGLLTFSSQEESSLIEQVKASGISMPEALLS..SGFFTSSSLAEH.....LSSIF  
 .....MLTNLSTVLRQAGILTFSSQEESSLIEQVKASGISMPEALLS..SGFFQSHELTEH.....LSSVF  
 .....MALATEEYRLQGITQLLVLEKLLDKTKAIELHKLAAAEKISLLQYIVK..NKILSAEQIALT.....AAQNF  
 .....MNDSTPLSGLAKQLVLNELLDEKTARQAQVQAARNKQSLVSHLVQ..AKLVQSRAIVEV.....AAEQF  
 .....MSALHTSPKFTGFFRRLVVEEKHVSAAATMQTALDAAKRAKQDVTVAYLIE..EVHLSPSLLAET.....TSAEF  
 .....MSAFTTPPKFSGFIRRLVVEEGYVNAQNMQQALEKAKKFKQDTPVPLID..NFSISPLTIAEI.....ISLEF

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388  
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 NTDB id 1306 DR RS10060 WP 027479822.1  
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 NTDB id 1018 ACIAD RS01685 WP 004920473.1

GVDSVDPEVAPIATQMAELIGRFFPLDTCRRFKFLPLAQQEGDPPSVLVAMVDPDNLAAQDELNRILRVKG..FELRRL  
 GYPYVDPEEDPPD....PGAPLLLPEDLCRRYGVFPHRLEG...NRLVLLMKDPRNIALDDVRLALKRKLNYEVAPA  
 GYFELDPIQNPPD....PKVALMPEATARRVVPVRLQG...NSLVVAMKDPNRNVFALDDLKLITG.....KETLPA  
 SYSILDLRHYPRH....RVLMLGVLTEEQMVEFHCVVFRRG...DKVFFAVSDPTQMPQIQKTVSAAG.....IAVELV  
 GIPETDLRSYDYA....NLCCQLGLRELITRYDALPIAKQG...NLLAVSDPTLLQAEFFRFATG.....LQVELA  
 GLSQPELSQYEYA....SLCQQLGLRELITRHNAALPLHRT...STLLAVADPTNQAEDDFRFATG.....LQVELV  
 GLSCTSLNQYEYA....SLCQTLGLRDLITRHNAALPLNRTS...STLILAVADPTNLQAEDDFRFATG.....LQVELV  
 GVPMLDINCIDVG....TIPVNLVNEKLIKRRHAMVPLFSRG...TNLYLATDPSKQASIKIIFHTG.....LNTHAI  
 GIAYCDLNSLDRE....SIPKDVISERLVRQHRVPLWKRG...NKLFIGLSDPTNHQAVTDIIFSTG.....LTTEAL  
 AEPYFDLDVYDTS....QIPKDLVDQKLILKHRILPLIQRG...QILYVATSNPSNIEAIDAIRFNSK.....LLVEPV  
 GEPLDLGVFDPA....LFLDKKIDKELIKYRIMPLVHRG...HVLVYVATSNPTNIEAMDIAIRFNSK.....LKVEPI

161  
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455  
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|   |                                     |     |
|---|-------------------------------------|-----|
| NTDB id 1410 SGL RS13950 WP 010873519.1       | EMRAKRKSALTCRTCAAELQQEWLDCPYCMTSRFS | 672 |
| NTDB id 1028 TT RS08215 WP 011173991.1        | .....                               | 889 |
| NTDB id 1306 DR RS10060 WP 027479822.1        | .....                               | 887 |
| NTDB id 1110 NGFG RS09235 WP 003689817.1      | .....                               | 558 |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1   | .....                               | 562 |
| NTDB id 1293 VP RS12240 WP 005479695.1        | .....                               | 561 |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1     | .....                               | 561 |
| NTDB id 1251 GC085 RS07725 WP 011946523.1     | .....                               | 574 |
| NTDB id 1082311 ACK2VH RS05460 WP 003107297.1 | .....                               | 566 |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1      | .....                               | 570 |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1     | .....                               | 570 |
| consensus                                     |                                     |     |

-  non conserved
-  similar
-   $\geq 50\%$  conserved