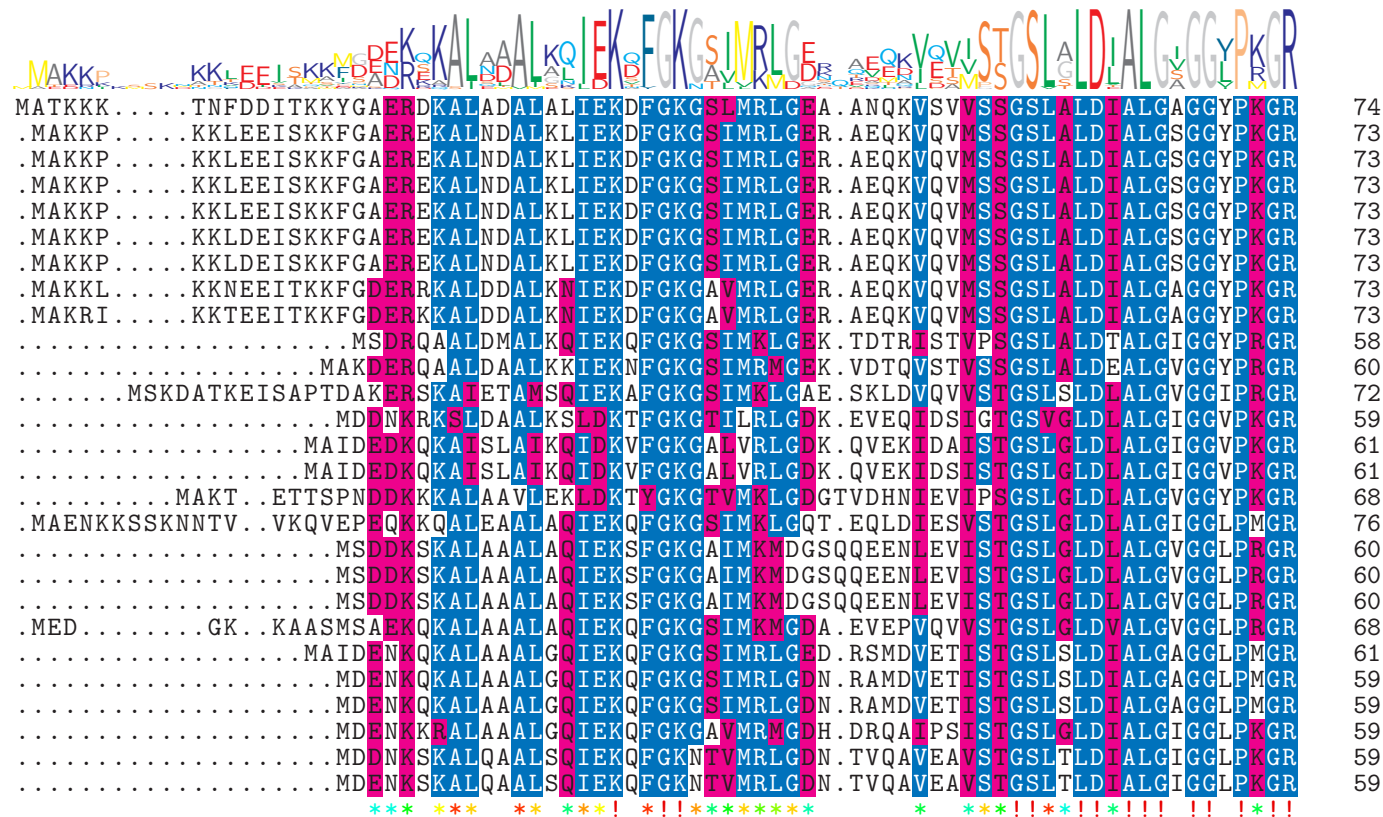


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consensus

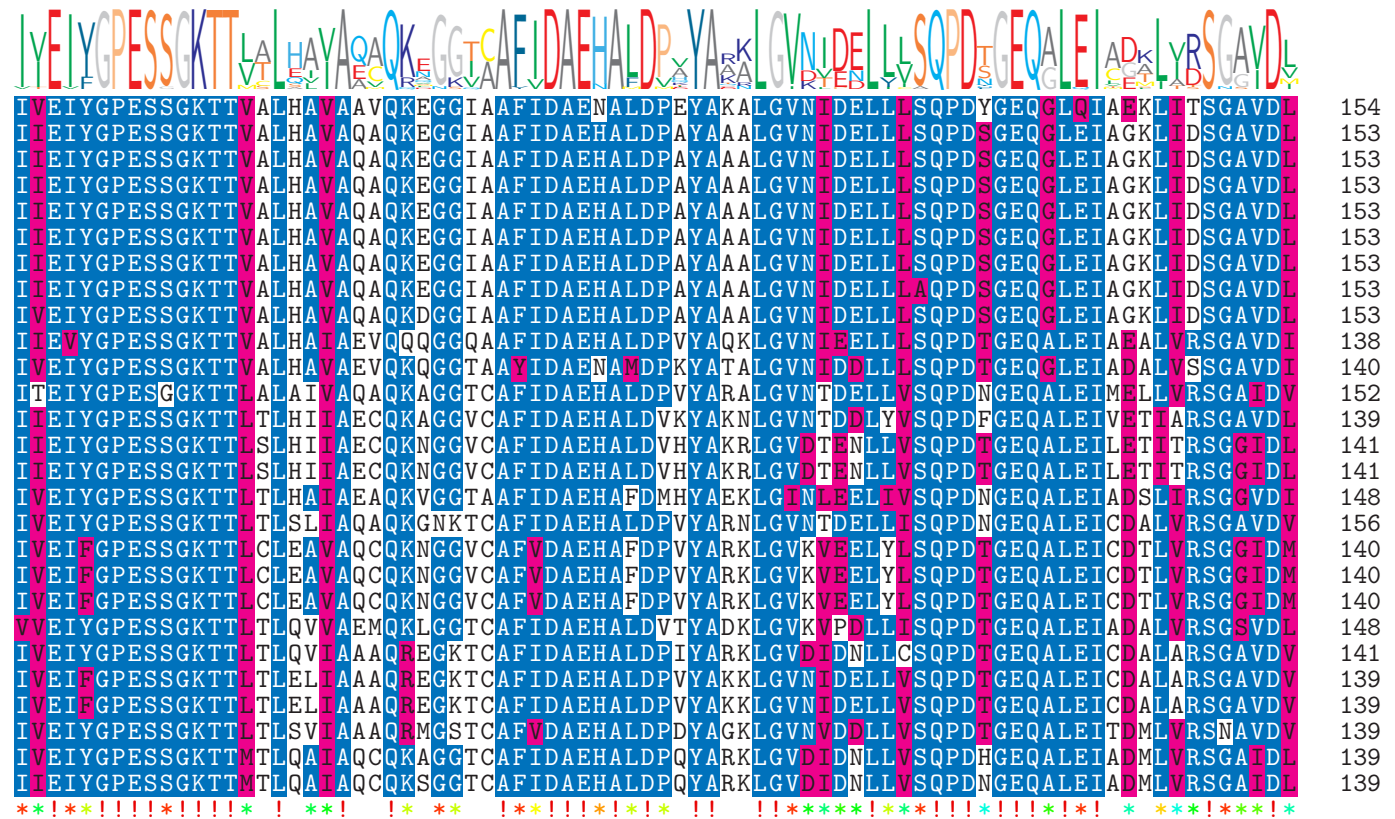
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consensus

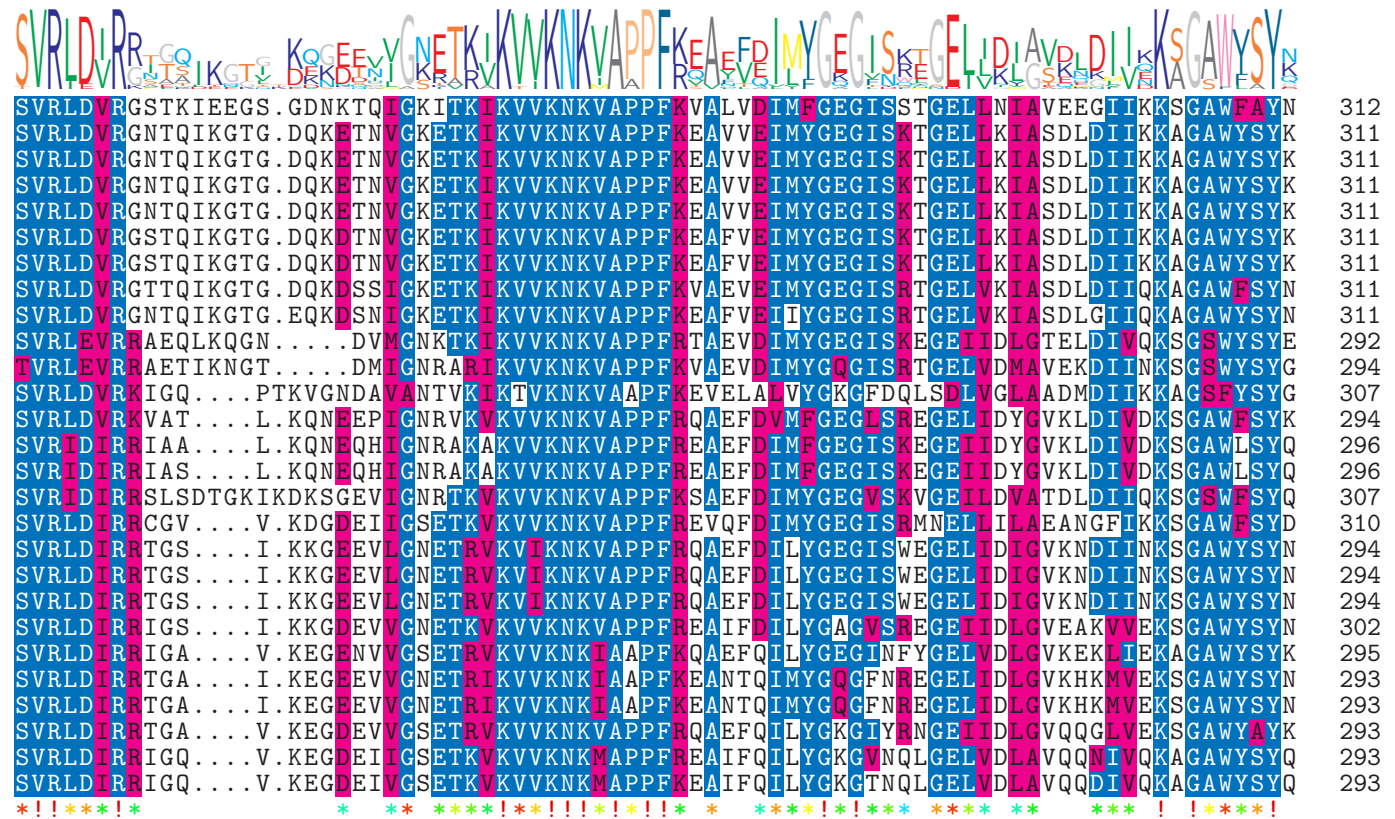
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NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

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|                                             |          |                    |                  |                     |                |                   |       |     |
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| NTDB id 600 KW2 RS01765 WP 011675413.1      | DEKIGQGA | EKAKNYLKEHQDV      | DEIDHKVRAAHG     | LDDSEVAETEEETT      | ASKTKAKAKKEE   | EKAVETEEIELELED   | ....  | 387 |
| NTDB id 269 KZH43 RS08665 WP 001085462.1    | DEKIGQGS | ENAKKYLAEHPEIF     | DEIDKQVRSKFGL    | IDGEEVSEQDTEN       | KKDE....PKKEEA | .VNEEVPLDLGDELEIE |       | 385 |
| NTDB id 228 SPD RS09265 WP 001085462.1      | DEKIGQGS | ENAKKYLAEHPEIF     | DEIDKQVRSKFGL    | IDGEEVSEQDTEN       | KKDE....PKKEEA | .VNEEVPLDLGDELEIE |       | 385 |
| NTDB id 194 SPR RS08825 WP 001085462.1      | DEKIGQGS | ENAKKYLAEHPEIF     | DEIDKQVRSKFGL    | IDGEEVSEQDTEN       | KKDE....PKKEEA | .VNEEVPLDLGDELEIE |       | 385 |
| NTDB id 159 SP RS09750 WP 001085462.1       | DEKIGQGS | ENAKKYLAEHPEIF     | DEIDKQVRSKFGL    | IDGEEVSEQDTEN       | KKDE....PKKEEA | .VNEEVPLDLGDELEIE |       | 385 |
| NTDB id 499 SM12261 RS08315 WP 078228268.1  | DEKIGQGS | ENAKKYLAADNPEIF    | DEIDHQVRVQFGL    | IDGEEIAES....KKDE   | ....AAQVDS     | .VNEEVTLDLGDELEIE |       | 381 |
| NTDB id 527 SMSK321 RS11065 WP 001085454.1  | DEKIGQGS | ENAKKYLAADNPEVFAE  | IDHQVRVQFGL      | IDGEEAAES....KKDE   | ....VAQVDS     | .VNEEVTLDLGDELEIE |       | 381 |
| NTDB id 453 Spy49 1753c ACI62003.1          | GEKIGQGS | ENAKRYLADHPQLF     | DEIDRKVRVKFGL    | LEESEEEESAMAVASE    | .....E.....    | TDDLALDLNNGIEIE   |       | 377 |
| NTDB id 408 SMU RS09530 WP 002262392.1      | GEKIGQGS | ENAKKFLADNPEIF     | DDIDHKVRVQYGL    | IEEDNTEEEKQSSKEK    | .....ETDEK     | .ADKNLVLELDDTIELE |       | 382 |
| NTDB id 115 BSU 16940 NP 389576.2           | EERLGGG  | RENAKQFLKENKDIMLMI | QEQIREHYGL       | DNNGVVQQAEETQEEL    | EFEE.....      | .....             |       | 348 |
| NTDB id 625 LCA RS02525 WP 011374196.1      | SERIGQG  | RENAKNYLADHEDVE    | DEVRLKVRVAAAYG   | ISDVPEEDLPTTEDE     | .QI.NILPDDST   | .....EE.....      |       | 355 |
| NTDB id 1313 DR RS12030 WP 010888966.1      | DERIGQG  | KEKTIAYIAERPEMEQE  | IRDRVMAAIRAGNAGE | APALAPAPAAPEAA      | ....EA.....    | .....             |       | 363 |
| NTDB id 1245 Cj1673c YP 002345041.1         | DKKLGGG  | RENSKAFLENPEIADE   | ITKAIQNSMG       | TEGM....ISGSEDDEG   | .....EE        | .....             |       | 343 |
| NTDB id 1214 NCTC11637 00359 SQJ03206.1     | DKKLGGG  | RENAKALLKEDKALADE  | ITLKIKESIGSNEE   | ....IMPLPDEPL       | .....EEME      | .....             |       | 347 |
| NTDB id 1211 C694 RS00795 WP 000963128.1    | DKKLGGG  | RENAKALLKEDKALADE  | ITLKIKESIGSNEE   | ....IMPLPDEPL       | .....EEME      | .....             |       | 347 |
| NTDB id 1334 RAOC RS04870 WP 004918236.1    | DTKLGGG  | RDITVKELIKDNPELA   | AELEAKIREKLQAK   | .....               | .....          | .....             |       | 343 |
| NTDB id 1389 A4U84 RS07560 WP 021112712.1   | GTKIGQG  | KNNAVKWLKENPEIAD   | KLEQEI RNTLAS    | SNPN....SVLKATASDSN | ...DES         | DVEEFSEEEL        | ..... | 372 |
| NTDB id 1130 NGFG RS03960 WP 003688695.1    | GAKIGQG  | KDNVRVWLKENPEIS    | DEIDAKIRALNGVEMH | ....ITEG.....T...   | QDET           | DGERPEE           | ..... | 348 |
| NTDB id 1124 NGFG RS03960 WP 003688695.1    | GAKIGQG  | KDNVRVWLKENPEIS    | DEIDAKIRALNGVEMH | ....ITEG.....T...   | QDET           | DGERPEE           | ..... | 348 |
| NTDB id 1123 OK783 RS03845 WP 003688695.1   | GAKIGQG  | KDNVRVWLKENPEIS    | DEIDAKIRALNGVEMH | ....ITEG.....T...   | QDET           | DGERPEE           | ..... | 348 |
| NTDB id 1427 RS RS02760 WP 011000510.1      | GERIGQG  | RDNCREFLRENAELARE  | EIENKVRHLGVTPM   | ....GAVTLAEVE       | ...ED.....     | .....             |       | 352 |
| NTDB id 57473 MWM20 RS18440 WP 000963143.1  | GEKIGQG  | KANATAWLKDNPETAKE  | EIEKKVRELLLSNP   | N....STPDFSV...D... | DSEG           | VAETNEDF          | ..... | 353 |
| NTDB id 1165 A1552VC RS01565 WP 000344154.1 | GDKIGQG  | KANACKYLLKENPEIA   | AKTLDKKLREMLLN   | PNEN....MQLIAETSSAA | ...DDVE        | FGAVPEEF          | ..... | 354 |
| NTDB id 1142 GTF74 RS11550 WP 000344154.1   | GDKIGQG  | KANACKYLLKENPEIA   | AKTLDKKLREMLLN   | PNEN....MQLIAETSSAA | ...DDVE        | FGAVPEEF          | ..... | 354 |
| NTDB id 1205 PSJM300 05545 AFN77183.1       | GSKIGQG  | KANAACKYLEENPEIG   | EIEQQIRAKLLV     | TSA....NTKATPVAEDL  | ...ADADI       | .....             |       | 347 |
| NTDB id 1022 ACIAD RS06390 WP 004925639.1   | GNKIGQG  | KNNVIRYLEENPQISTE  | IEAVIREQLLT      | TKAS....DQTAA       | .HDETE...EEP   | DLLES             | ..... | 349 |
| NTDB id 1074 ABD1 RS10195 WP 000344167.1    | GNKIGQG  | KNNVIRYFEENNQIAE   | EIERNIREQLLT     | TGT....NGAVQ        | .I.EDE...EEP   | DLLES             | ..... | 349 |
| consensus                                   | ***!!!   | *****              | **               | *****               | *****          | **                | *     |     |

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| NTDB id 228 SPD RS09265 WP 001085462.1      | IEE | 388 |
| NTDB id 194 SPR RS08825 WP 001085462.1      | IEE | 388 |
| NTDB id 159 SP RS09750 WP 001085462.1       | IEE | 388 |
| NTDB id 499 SM12261 RS08315 WP 078228268.1  | IEE | 384 |
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consensus

 non conserved  
 similar  
 ≥ 50% conserved