

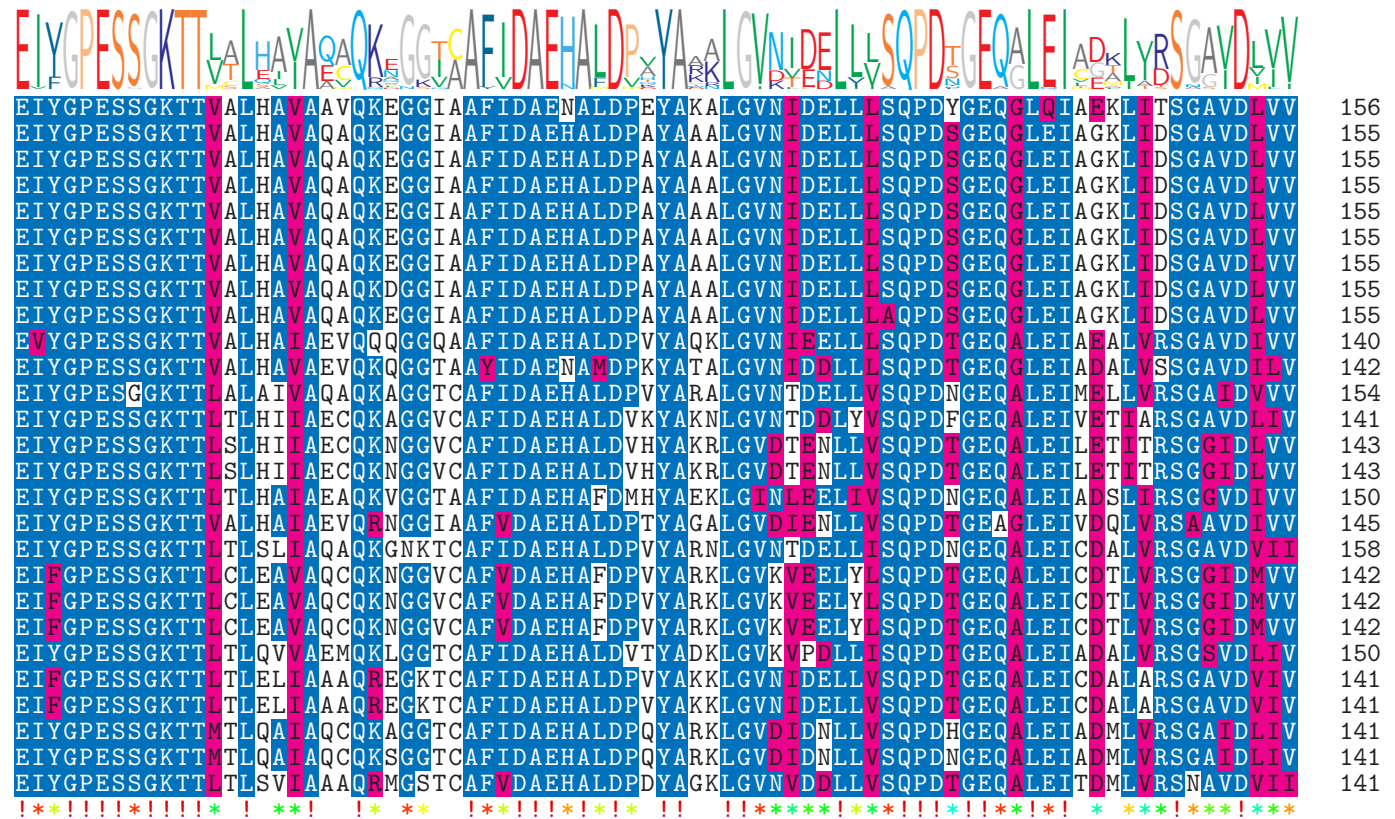
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| NTDB id 269 KZH43 RS08665 WP 001085462.1    | .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 228 SPD RS09265 WP 001085462.1      | .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 194 SPR RS08825 WP 001085462.1      | .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 159 SP RS09750 WP 001085462.1       | .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 499 SM12261 RS08315 WP 078228268.1  | .MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 527 SMSK321 RS11065 WP 001085454.1  | .MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIT  | 75 |
| NTDB id 408 SMU RS09530 WP 002262392.1      | .MAKR...IKKTEEITKKFGDERKKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIV  | 75 |
| NTDB id 453 Spy49 1753c ACI62003.1          | .MAKK...LKKNEEITKKFGDERRKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIT  | 75 |
| NTDB id 115 BSU 16940 NP 389576.2           | .....MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPRGRIT                | 60 |
| NTDB id 625 LCA RS02525 WP 011374196.1      | .....MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPRGRIV              | 62 |
| NTDB id 1313 DR RS12030 WP 010888966.1      | .MSK....DATKEISAPTDAKERSKATETAMSQIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGRIT  | 74 |
| NTDB id 1245 Cj1673c YP 002345041.1         | .....MDDNKRKSLDAALKSLDKTTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPKGRIT              | 61 |
| NTDB id 1211 C694 RS00795 WP 000963128.1    | .....MAIDEDKQKALSLAIAIKQIDKVFVGKGAIVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPKGRIT          | 63 |
| NTDB id 1214 NCTC11637 00359 SQJ03206.1     | .....MAIDEDKQKALSLAIAIKQIDKVFVGKGAIVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPKGRIT          | 63 |
| NTDB id 1334 RAOC RS04870 WP 004918236.1    | .....MAKTETTSPNDKKKALAAVLEKLDKTYGKGTVMKLGDTVDHNIIEVIPSGSLGLDLALGVGGYPKGRIV        | 70 |
| NTDB id 973452 WJM97 RS01010 WP 353931220.1 | .....MAANTADTGKQKALSMVLNQIERSFGKGAIMRLGDA.TRMRVETISTGALTLDLALG.GGLPKGRVI          | 65 |
| NTDB id 1389 A4U84 RS07560 WP 021112712.1   | .MAENKKSSKNNTVVVKQVEPEQKKQALEAALAQIEKQFGKGSIMKLGQT.EQLDIESVSTGSLGLDLALGIGGLPMGRIV | 78 |
| NTDB id 1130 NGFG RS03960 WP 003688695.1    | .....MSDDKSKALAAALAQIEKSFSGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV             | 62 |
| NTDB id 1124 NGFG RS03960 WP 003688695.1    | .....MSDDKSKALAAALAQIEKSFSGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV             | 62 |
| NTDB id 1123 OK783 RS03845 WP 003688695.1   | .....MSDDKSKALAAALAQIEKSFSGKGAIMKMDGSQQUEENLEVISTGSLGLDLALGVGGLPRGRIV             | 62 |
| NTDB id 1427 RS RS02760 WP 011000510.1      | .MEDG.....KKAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA.EVEPVQVVSTGSLGLDVALGVGGLPRGRVV     | 70 |
| NTDB id 1165 A1552VC RS01565 WP 000344154.1 | .....MDENKKKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV               | 61 |
| NTDB id 1142 GTF74 RS11550 WP 000344154.1   | .....MDENKKKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV               | 61 |
| NTDB id 1022 ACIAD RS06390 WP 004925639.1   | .....MDDNKKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV              | 61 |
| NTDB id 1074 ABD1 RS10195 WP 000344167.1    | .....MDENKKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV              | 61 |
| NTDB id 1205 PSJM300 05545 AFN77183.1       | .....MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSIISTGSLGLDIALGIGGLPKGRIV              | 61 |
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NTDB id 527 SMSK321 RS11065 WP 001085454.1
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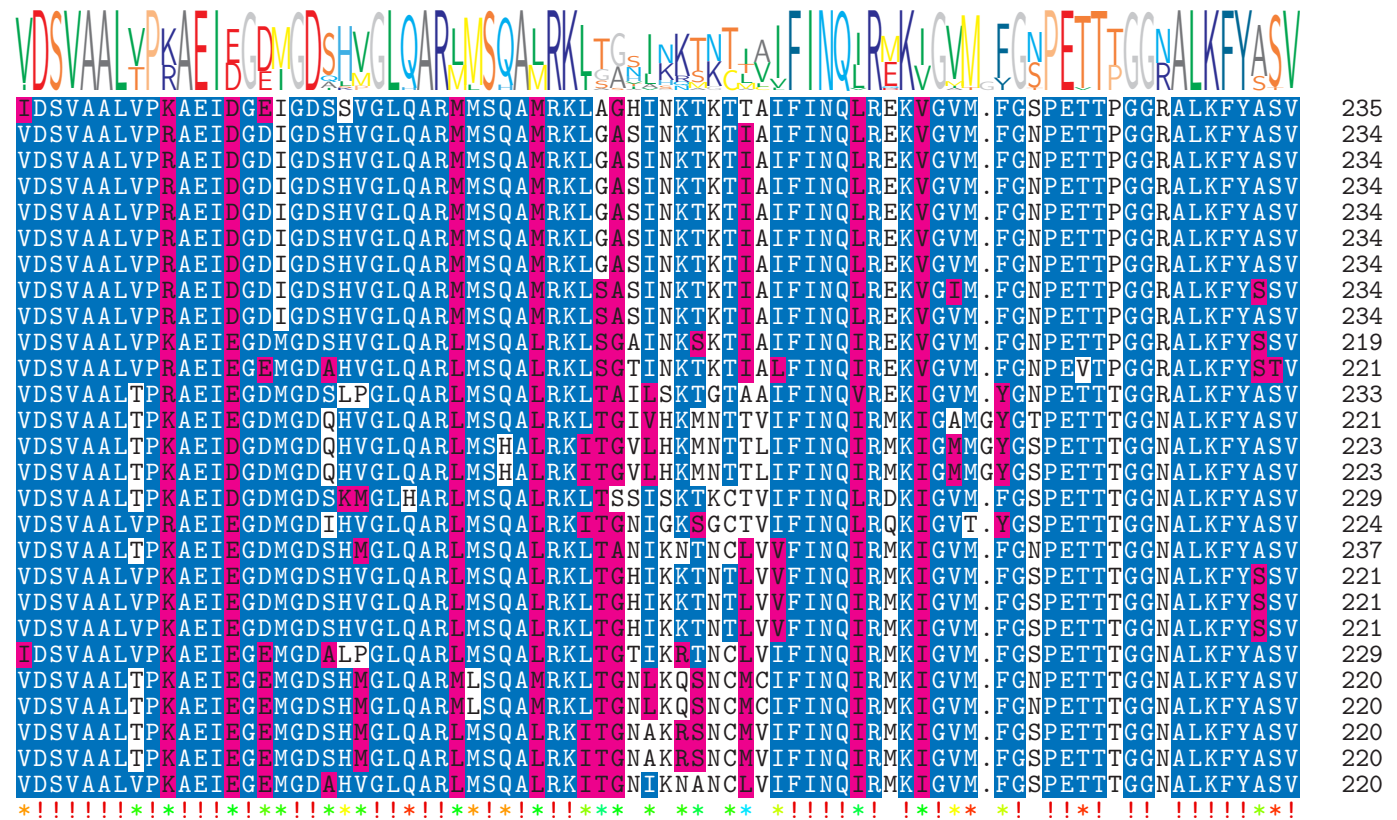
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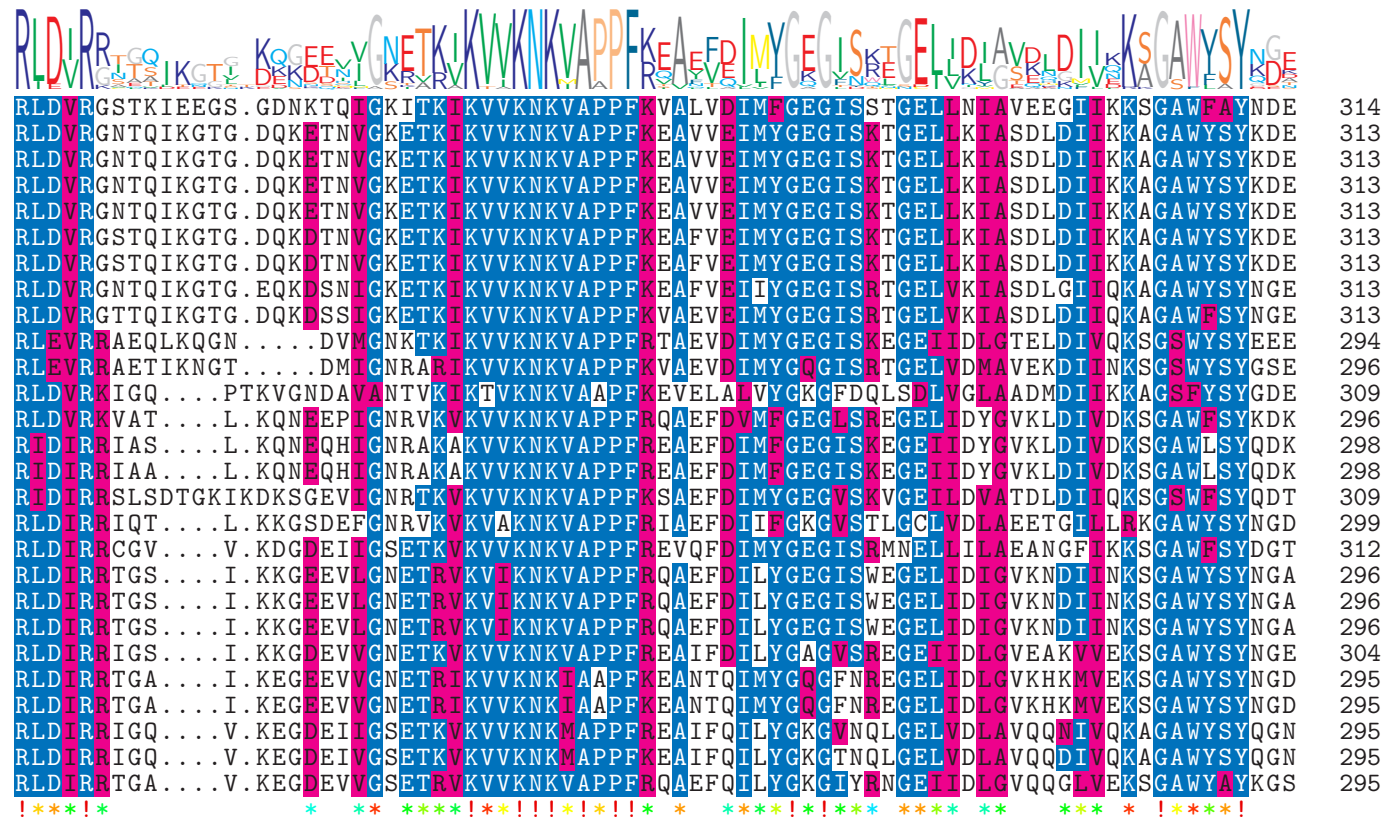
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NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1

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consensus

| Sequence                                                                                         | Score |
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| KIGGQAEKAKNYLKEHQDVFEIDHKVRAAHGLDDSEVAETEEETTASKTAKAKKKEEKAVETEEIELELED . . . . .                | 387   |
| KIGGQSENAKKYLAEHPEIFDEIDKQVRSKFLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIEIE              | 387   |
| KIGGQSENAKKYLAEHPEIFDEIDKQVRSKFLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIEIE              | 387   |
| KIGGQSENAKKYLAEHPEIFDEIDKQVRSKFLIDGEEVSEQDTENKKDE . . . PKKEEA . VNEEVPLDLGDELEIEIE              | 387   |
| KIGGQSENAKKYLAADNPFIIDEIDHQVRVQFGLIDGEEIAES . . . KKDE . . . AAQVDS . VNEEVPLDLGDELEIEIE         | 383   |
| KIGGQSENAKKYLAADNPFIIDEIDHQVRVQFGLIDGEEIAES . . . KKDE . . . VAQVDS . VNEEVPLDLGDELEIEIE         | 383   |
| KIGGQSENAKFLADNPFIIDIDHKVRVQYGLIEEDNTEEEKSSKEK . . . . . ETDEK . . . ADKNLVLELDDTIELED           | 383   |
| KIGGQSENAKRYLADHPQLFDEIDRKVRVKFGLLEESSEESAMAVASE . . . . . E . . . . . TDDLALDLNGIEIED           | 378   |
| RLGQGRENAKQFLKENKDIMLMIQEQUIREHYGLDNGVGVQQAETQEEL . EFE . E . . . . .                            | 348   |
| RIGGQGRENAKKNYLADHEDVEDEVRLKVRVQYGLSDVPEEDLPTTEDE . QI . NILPDDST . . . . . EE . . . . .         | 355   |
| RIGGQKEKTIAYIAERPMEQEIRDRVMAAIRAGNAGEAPALAPAPA . AP . EAA . . . . . EA . . . . .                 | 363   |
| KLGGQRENSKAFLEKNPEIADITKAIQNSMGIEMISGSSEDDE . . . . . GE . E . . . . .                           | 343   |
| KLGGQRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP . . . . . LE . EM . . . . . E . . . . .             | 347   |
| KLGGQRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP . . . . . LE . EM . . . . . E . . . . .             | 347   |
| KLGGQRDTVKELIKDNPELAEELEAKIREKLQAK . . . . .                                                     | 343   |
| NISGQRDNIAIKYLENSSEFTDKIQAQVLEKLDKGAUVSANSVKQTNEEDNE . EEEEE . . . . . EED . . . . .             | 358   |
| KIGGQKNNVAVKWLKENPEIADKLEQIRNTLITASNPNVSKATASDSNDES . DVEEFS . . . . . EEEL . . . . .            | 372   |
| KIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER . . . . . P . . . . . EE . . . . .            | 348   |
| KIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER . . . . . P . . . . . EE . . . . .            | 348   |
| KIGGQKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETGDGER . . . . . P . . . . . EE . . . . .            | 348   |
| RIGGQRDNCREFLRENAELAREIENKVRREHLGVTPMGAVTLA . EEVEED . . . . .                                   | 352   |
| KIGGQKANACKYLKENPEIAKTLDKKLREMLLNPNMQLIAETSSAADDV . EFGAVP . . . . . EEF . . . . .               | 354   |
| KIGGQKANACKYLKENPEIAKTLDKKLREMLLNPNMQLIAETSSAADDV . EFGAVP . . . . . EEF . . . . .               | 354   |
| KIGGQKNNVIRYLEENPQISTEIEIAVIREQLLTKASDQTAA . HDETEEEP . DLL . . . . . S . . . . .                | 349   |
| KIGGQKNNVIRYFEENNQIAEIEIERNIREQLLTTGTNGAVQ . I . EDEEEP . DLL . . . . . L . . . . . ES . . . . . | 349   |
| KIGGQKANAAYLEENPEIQQEIRAKLLVTSANTKATPVAEDLADA . DI . . . . .                                     | 347   |

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| NTDB id 194 SPR RS08825 WP 001085462.1      | E | 388 |
| NTDB id 159 SP RS09750 WP 001085462.1       | E | 388 |
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| consensus                                   |   |     |

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 ≥ 50% conserved