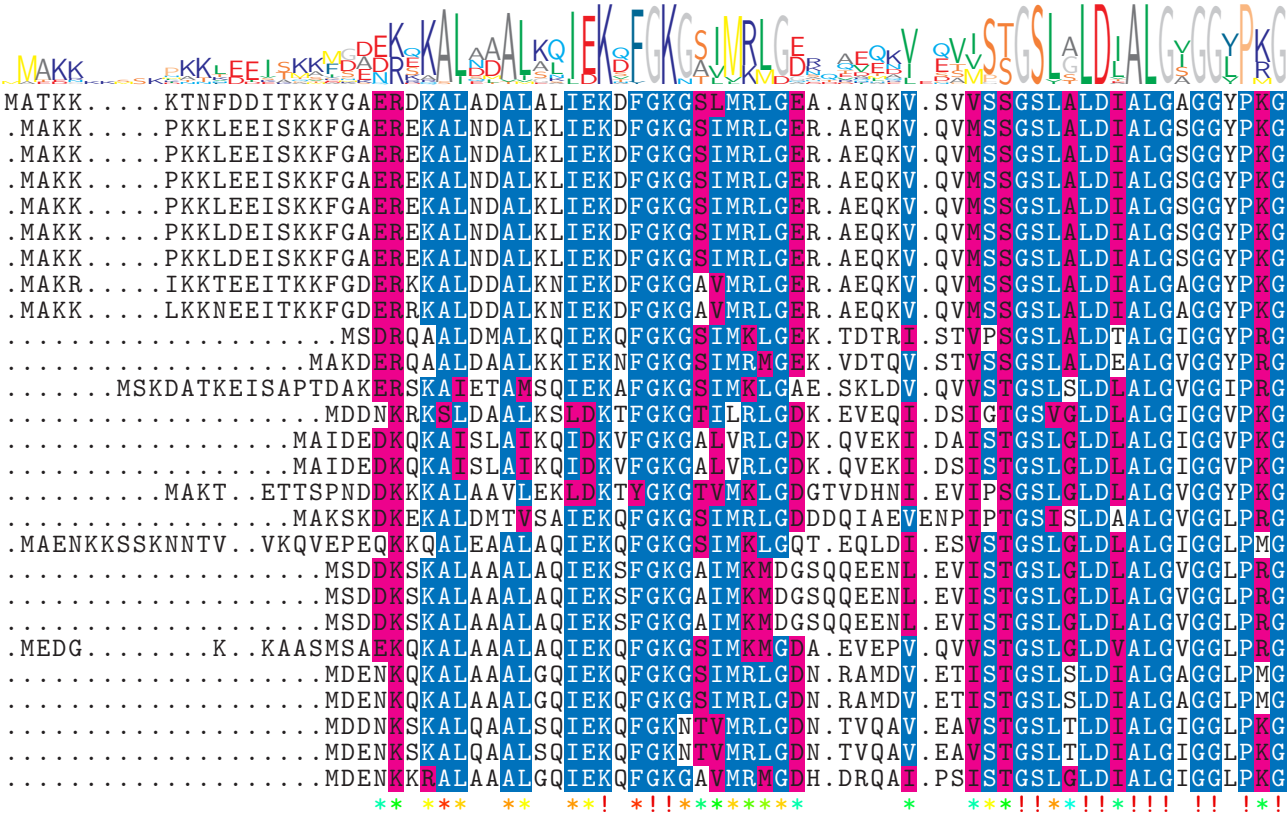


logo

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 378050 FRD00 RS22085 WP 141199797.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



73
72
72
72
72
72
72
72
72
57
59
71
58
60
60
67
62
75
59
59
59
67
58
58
58
58

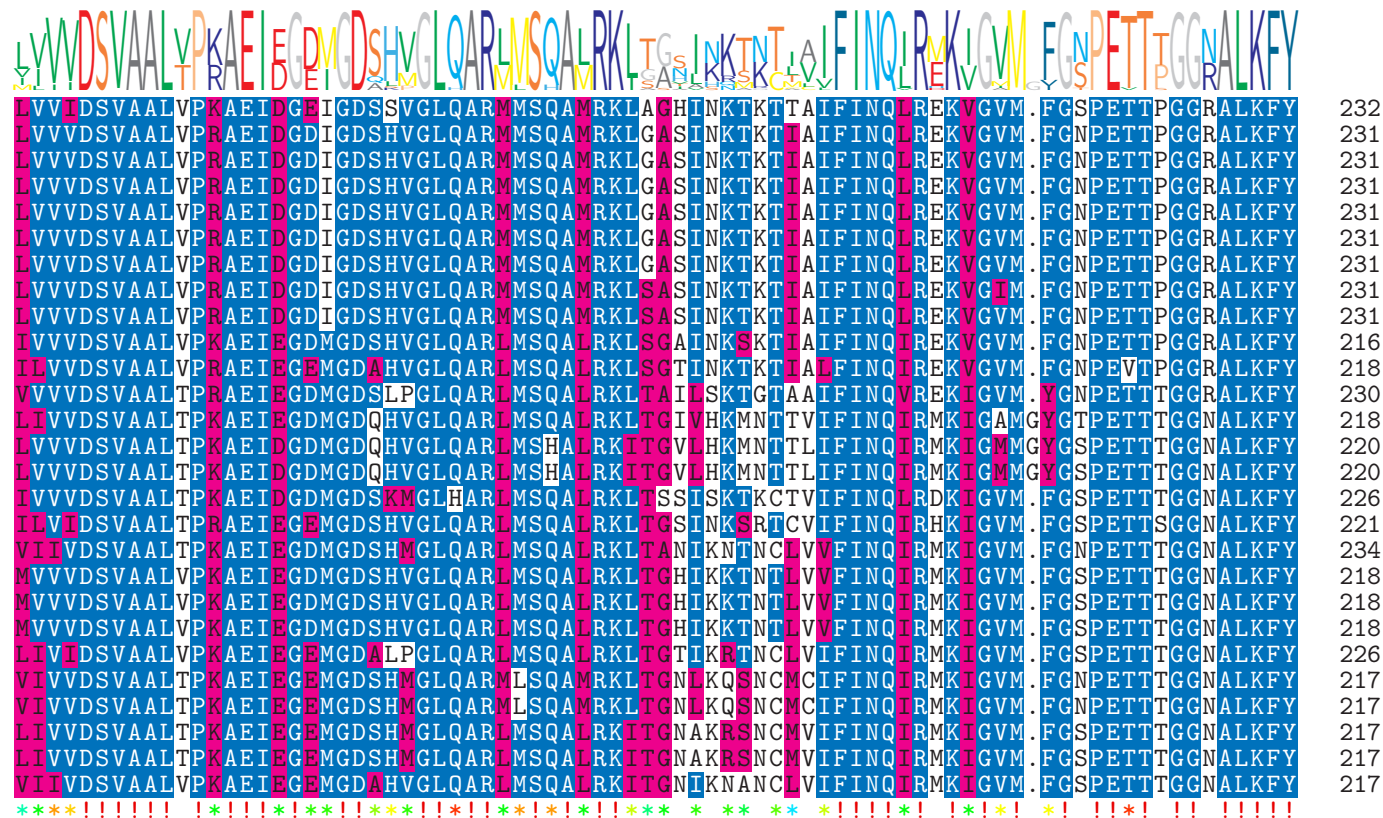
logo

NTDB id 600 KW2 RS01765 WP 011675413.1	RIVEIYGP	ESSGKTT	VALHAVA	AAVQKEGGIAAFIDAENALDPEYAKALGVNIDELL	LSQPDYGEQGLQIAEKLIT	SGAVD	153
NTDB id 269 KZH43 RS08665 WP 001085462.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 228 SPD RS09265 WP 001085462.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 194 SPR RS08825 WP 001085462.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 159 SP RS09750 WP 001085462.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 499 SM12261 RS08315 WP 078228268.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 527 SMSK321 RS11065 WP 001085454.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LSQPD	152
NTDB id 408 SMU RS09530 WP 002262392.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKDGGA	AFIDA	EAHALDPAYAAALGVNIDELL	152
NTDB id 453 Spy49 1753c ACI62003.1	RIVEIYGP	ESSGKTT	VALHAVA	AQAQKEGGIAAFIDA	EAHALDPAYAAALGVNIDELL	LAQPD	152
NTDB id 115 BSU 16940 NP 389576.2	RIVEIYGP	ESSGKTT	VALHAVA	AEVQ	QGGQA	AFIDA	137
NTDB id 625 LCA RS02525 WP 011374196.1	RIVEIYGP	ESSGKTT	VALHAVA	AEVQ	QGGTA	YIDAENAMDPKYATALGVNID	139
NTDB id 1313 DR RS12030 WP 010888966.1	RITEIYGP	ESSGKTT	LALAI	VAQAQKAGGTCA	FIDA	EAHALDPVYARALGVNTDELL	151
NTDB id 1245 Cj1673c YP 002345041.1	RIVEIYGP	ESSGKTT	TLHI	IAECQKAGGVC	AFIDA	EAHALDVKYAKNLGVNTD	138
NTDB id 1214 NCTC11637 00359 SQJ03206.1	RIVEIYGP	ESSGKTT	LSLHI	IAECQKNGGVC	AFIDA	EAHALDVHYAKRLGVD	140
NTDB id 1211 C694 RS00795 WP 000963128.1	RIVEIYGP	ESSGKTT	LSLHI	IAECQKNGGVC	AFIDA	EAHALDVHYAKRLGVD	140
NTDB id 1334 RAOC RS04870 WP 004918236.1	RIVEIYGP	ESSGKTT	TLHAI	IAEAQKVGTA	AFIDA	EAHAFDMHYAEKLGINLEEL	147
NTDB id 378050 FRD00 RS22085 WP 141199797.1	RIVEIYGP	ESSGKTT	TLHAI	IASAQKQGGVA	AFVDA	EAHALDVQYAKALGVD	142
NTDB id 1389 A4U84 RS07560 WP 021112712.1	RIVEIYGP	ESSGKTT	TLSLI	IAQAQKGNKTC	AFIDA	EAHALDPVYARNLGVNTDELL	155
NTDB id 1130 NGFG RS03960 WP 003688695.1	RIVEIFGP	ESSGKTT	LCLEA	VAQCQKNGGVC	AFVDA	EAHAFDPVYARKLGVKVEELYLSQPD	139
NTDB id 1124 NGFG RS03960 WP 003688695.1	RIVEIFGP	ESSGKTT	LCLEA	VAQCQKNGGVC	AFVDA	EAHAFDPVYARKLGVKVEELYLSQPD	139
NTDB id 1123 OK783 RS03845 WP 003688695.1	RIVEIFGP	ESSGKTT	LCLEA	VAQCQKNGGVC	AFVDA	EAHAFDPVYARKLGVKVEELYLSQPD	139
NTDB id 1427 RS RS02760 WP 011000510.1	RIVEIYGP	ESSGKTT	TLQV	VAEMQKLG	GTCA	FIDA	147
NTDB id 1165 A1552VC RS01565 WP 000344154.1	RIVEIFGP	ESSGKTT	LTLEL	IAAAQREGKTC	AFIDA	EAHALDPVYAKKLGVNIDELL	138
NTDB id 1142 GTF74 RS11550 WP 000344154.1	RIVEIFGP	ESSGKTT	LTLEL	IAAAQREGKTC	AFIDA	EAHALDPVYAKKLGVNIDELL	138
NTDB id 1022 ACIAD RS06390 WP 004925639.1	RIVEIYGP	ESSGKTT	MTLQAI	IAQCQKAGGTCA	FIDA	EAHALDPQYARKLGVD	138
NTDB id 1074 ABD1 RS10195 WP 000344167.1	RIVEIYGP	ESSGKTT	MTLQAI	IAQCQKSGGTCA	FIDA	EAHALDPQYARKLGVD	138
NTDB id 1205 PSJM300 05545 AFN77183.1	RIVEIYGP	ESSGKTT	LTLSV	IAAAQRMGSTC	AFVDA	EAHALDPDYAGKLGVNVD	138
consensus	!***!***!!	!***!!	!***!!	!***!!	!***!!	!***!!	!***!!

```

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 378050 FRD00 RS22085 WP 141199797.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

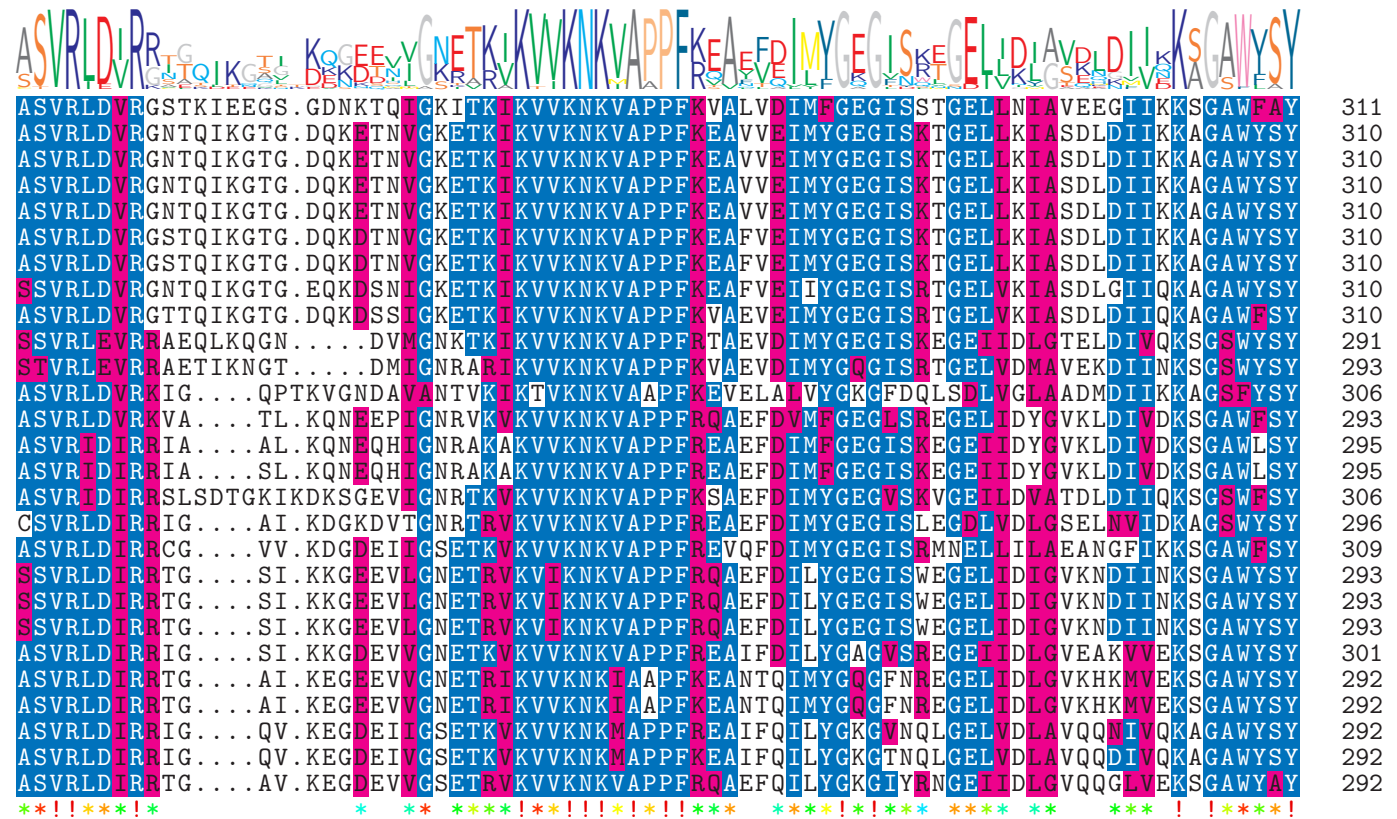
```



```

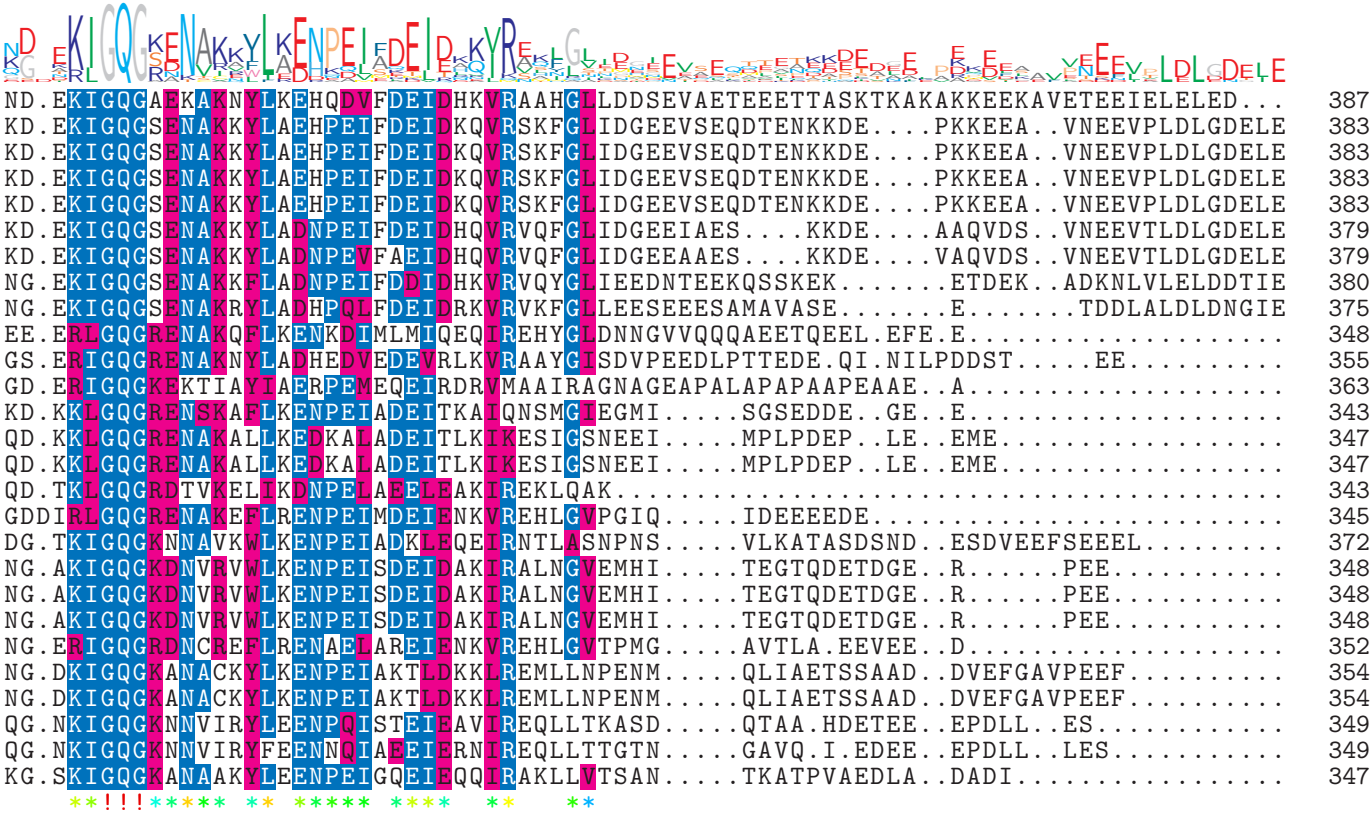
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 378050 FRD00 RS22085 WP 141199797.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 408 SMU RS09530 WP 002262392.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 115 BSU 16940 NP 389576.2
NTDB id 625 LCA RS02525 WP 011374196.1
NTDB id 1313 DR RS12030 WP 010888966.1
NTDB id 1245 Cj1673c YP 002345041.1
NTDB id 1214 NCTC11637 00359 SQJ03206.1
NTDB id 1211 C694 RS00795 WP 000963128.1
NTDB id 1334 RAOC RS04870 WP 004918236.1
NTDB id 378050 FRD00 RS22085 WP 141199797.1
NTDB id 1389 A4U84 RS07560 WP 021112712.1
NTDB id 1130 NGFG RS03960 WP 003688695.1
NTDB id 1124 NGFG RS03960 WP 003688695.1
NTDB id 1123 OK783 RS03845 WP 003688695.1
NTDB id 1427 RS RS02760 WP 011000510.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	.....	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEIEE	388
NTDB id 228 SPD RS09265 WP 001085462.1	IEIEE	388
NTDB id 194 SPR RS08825 WP 001085462.1	IEIEE	388
NTDB id 159 SP RS09750 WP 001085462.1	IEIEE	388
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEIEE	384
NTDB id 527 SMSK321 RS11065 WP 001085454.1	IEIEE	384
NTDB id 408 SMU RS09530 WP 002262392.1	LED..	383
NTDB id 453 Spy49 1753c ACI62003.1	IED..	378
NTDB id 115 BSU 16940 NP 389576.2	.....	348
NTDB id 625 LCA RS02525 WP 011374196.1	.....	355
NTDB id 1313 DR RS12030 WP 010888966.1	.....	363
NTDB id 1245 Cj1673c YP 002345041.1	.....	343
NTDB id 1214 NCTC11637 00359 SQJ03206.1	.....	347
NTDB id 1211 C694 RS00795 WP 000963128.1	.....	347
NTDB id 1334 RAOC RS04870 WP 004918236.1	.....	343
NTDB id 378050 FRD00 RS22085 WP 141199797.1	.....	345
NTDB id 1389 A4U84 RS07560 WP 021112712.1	.....	372
NTDB id 1130 NGFG RS03960 WP 003688695.1	.....	348
NTDB id 1124 NGFG RS03960 WP 003688695.1	.....	348
NTDB id 1123 OK783 RS03845 WP 003688695.1	.....	348
NTDB id 1427 RS RS02760 WP 011000510.1	.....	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	.....	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	.....	354
NTDB id 1022 ACIAD RS06390 WP 004925639.1	.....	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	.....	349
NTDB id 1205 PSJM300 05545 AFN77183.1	.....	347

consensus

 non conserved
 similar
 ≥ 50% conserved