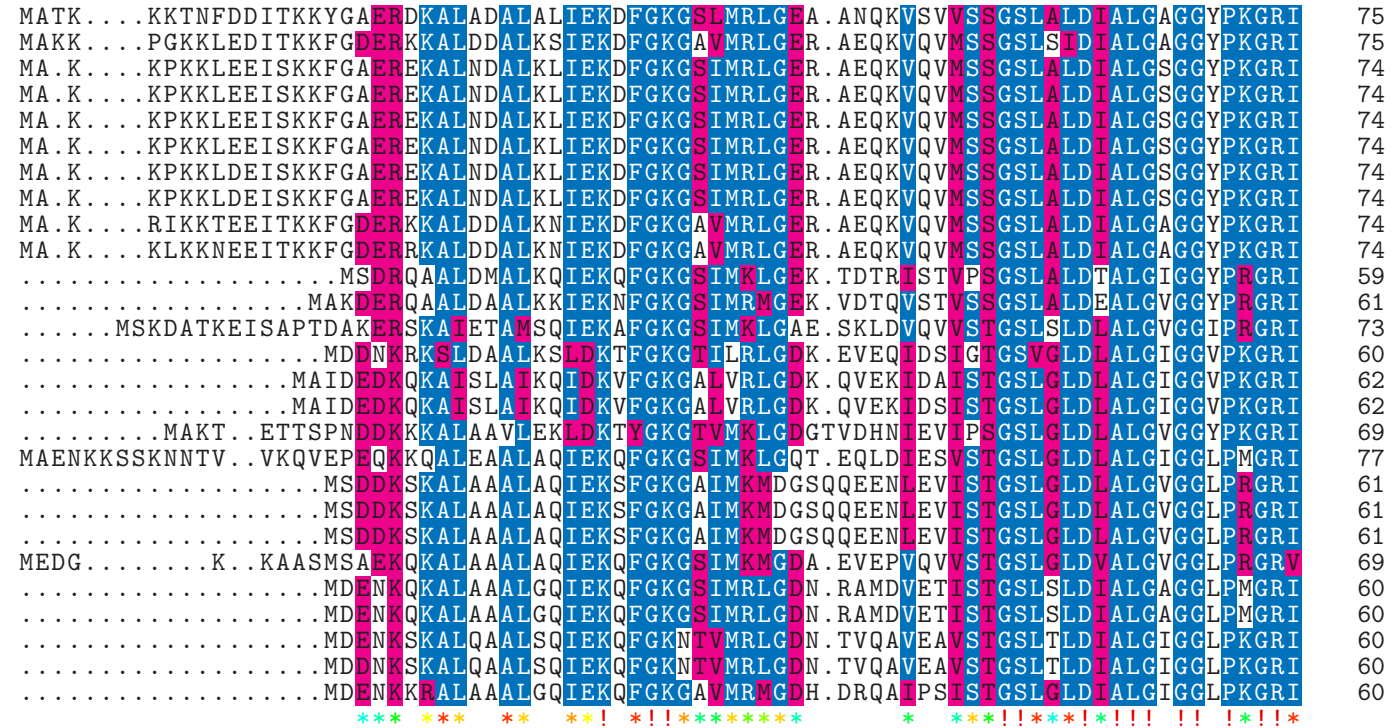


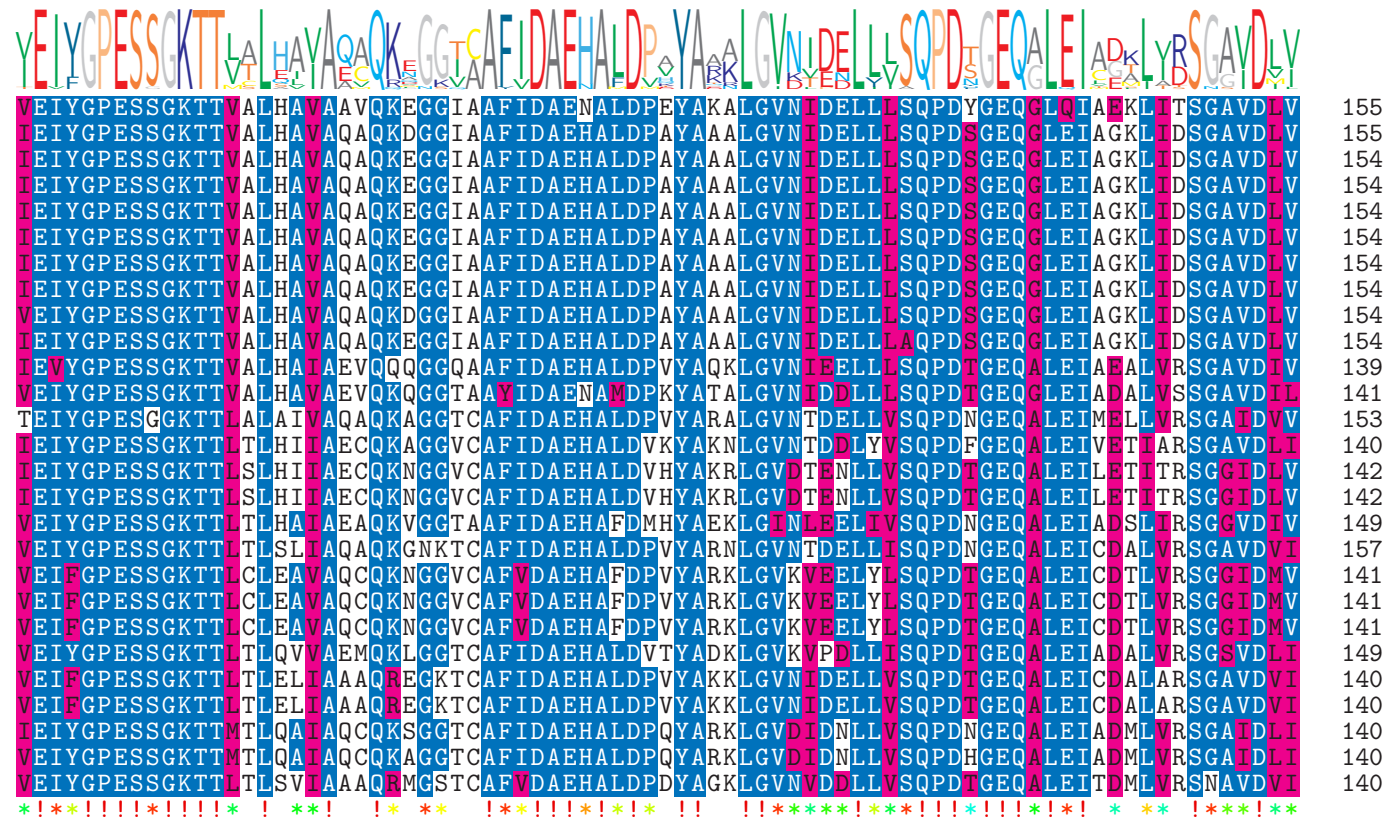
```

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 256903 CV091 RS00480 WP 004195473.1
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 RA0C RS04870 WP 004918236.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



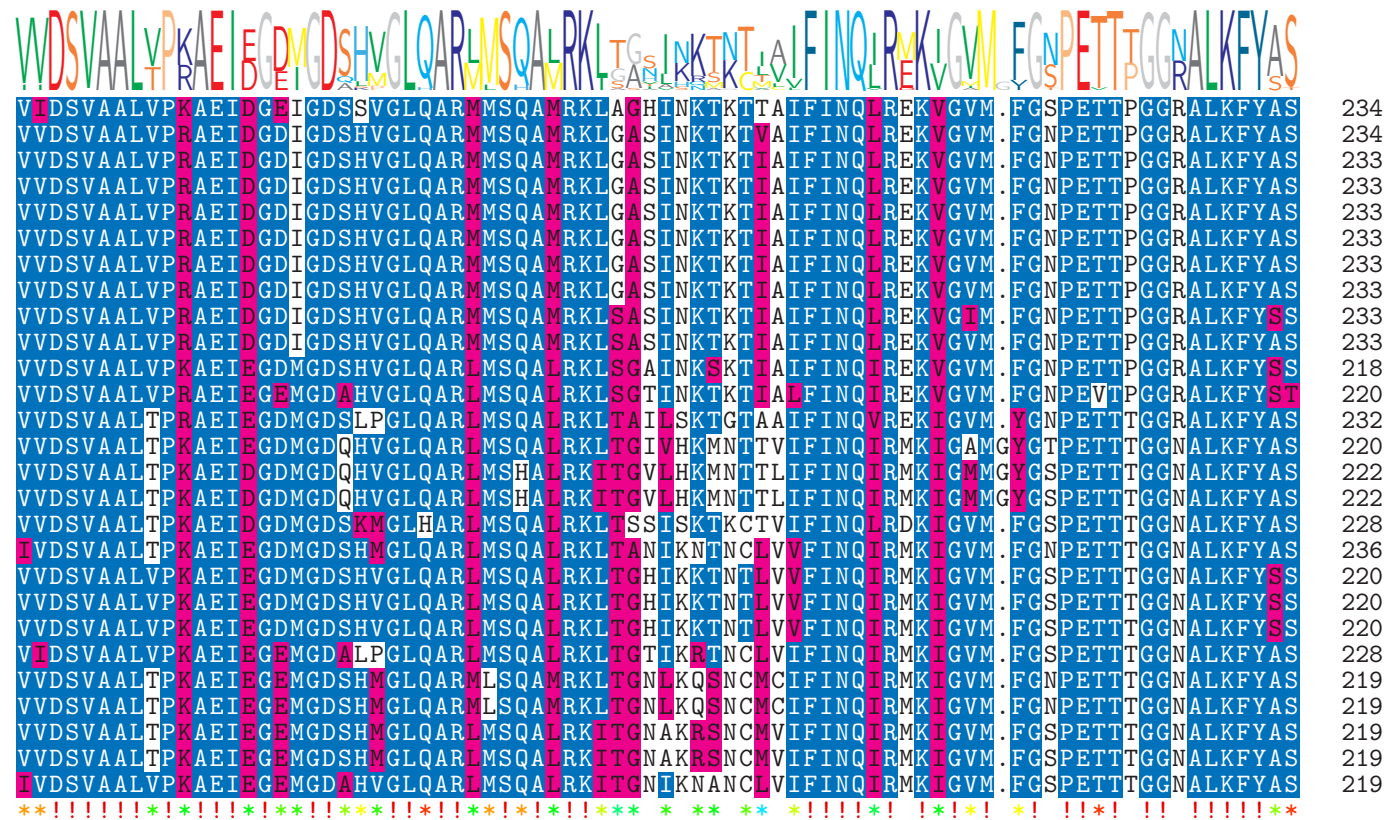
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 256903 CV091 RS00480 WP 004195473.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 527 SMSK321 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 RA0C RS04870 WP 004918236.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



```

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 256903 CV091 RS00480 WP 004195473.1
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 RA0C RS04870 WP 004918236.1
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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus

```



logo

NTDB id 600 KW2 RS01765 WP 011675413.1	VRLDVRG	STKIEEGS	.GDNKTQ	IGKITK	IKVVKNKVAPPF	KVALV	DIMF	GEGIS	STGEL	INTAVE	EETIKK	SGAW	FAYND	313				
NTDB id 256903 CV091 RS00480 WP 004195473.1	VRMDVRG	NTQIKGTG	.DKKDQN	VGKETK	VKIKVNKVAPPF	KEVVV	EIMY	GEGIS	RTGEL	IEIGSN	LGIQK	KAGAW	YSYNG	313				
NTDB id 269 KZH43 RS08665 WP 001085462.1	VRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 228 SPD RS09265 WP 001085462.1	VRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 194 SPR RS08825 WP 001085462.1	VRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 159 SP RS09750 WP 001085462.1	VRLDVRG	NTQIKGTG	.DQKETN	VGKETK	IKVVKNKVAPPF	KEAVV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 499 SM12261 RS08315 WP 078228268.1	VRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 527 SMSK321 RS11065 WP 001085454.1	VRLDVRG	STQIKGTG	.DQKDTN	VGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	KTGEL	LKIASDL	DIKK	KAGAW	YSYKD	312				
NTDB id 408 SMU RS09530 WP 002262392.1	VRLDVRG	NTQIKGTG	.EQKDSN	IGKETK	IKVVKNKVAPPF	KEAFV	EIMY	GEGIS	RTGEL	VKIASDL	GIIQK	KAGAW	YSYNG	312				
NTDB id 453 Spy49 1753c ACI62003.1	VRLDVRG	TTQIKGTG	.DQKDSS	IGKETK	IKVVKNKVAPPF	KVAEV	EIMY	GEGIS	RTGEL	VKIASDL	DIIQK	KAGAW	FSYNG	312				
NTDB id 115 BSU 16940 NP 389576.2	VRLEVR	RAEQLKQGN		DVMGN	KTKIKVVKNKVAPPF	RTAEV	DIMY	GEGIS	KEGEI	IDLGT	ELDIV	QKSG	SWSYEE	293				
NTDB id 625 LCA RS02525 WP 011374196.1	VRLEVR	RAETIKNGT		DMIGN	RAIKVVKNKVAPPF	KVAEV	DIMY	GEGIS	RTGEL	VDMAVE	KDIINK	SGSW	YSYGS	295				
NTDB id 1313 DR RS12030 WP 010888966.1	VRLDVR	KIGQ....	PTKVG	NDAV	ANTVK	IKTVKNKVA	APFKE	VELAL	VYGKG	FDQLS	DLVGL	AADM	DIKK	AGSFYSYGD	308			
NTDB id 1245 Cj1673c YP 002345041.1	VRLDVR	KKVAT....	L.KQNE	EP	IGNRV	KVKKVVKNKVAPPF	RQAEF	DVMF	GEGLS	REGEL	IDYG	VKLD	IVDK	SGAWFSYKD	295			
NTDB id 1214 NCTC11637 00359 SQJ03206.1	VRIDIR	RIAA....	L.KQNE	QH	IGNRA	KAKVVKNKVAPPF	REA	EFDIM	FGE	GISKE	GEI	IDYG	VKLD	IVDK	SGAWLSYQD	297		
NTDB id 1211 C694 RS00795 WP 000963128.1	VRIDIR	RIAS....	L.KQNE	QH	IGNRA	KAKVVKNKVAPPF	REA	EFDIM	FGE	GISKE	GEI	IDYG	VKLD	IVDK	SGAWLSYQD	297		
NTDB id 1334 RAOC RS04870 WP 004918236.1	VRIDIR	RRSLSD	TGKIKDKS	GEV	IGNR	TKVKKVVKNKVAPPF	KSA	EFDIM	YGEG	VSKVGE	ILDV	ATDL	DIIQ	KSGSWFSYQD	308			
NTDB id 1389 A4U84 RS07560 WP 021112712.1	VRLDIR	RCGV....	V.KDG	DEI	IGSE	TKVKKVVKNKVAPPF	REV	QFDIM	YGEGIS	RMNELL	ILAE	ANGF	IKK	SGAWFSYDG	311			
NTDB id 1130 NGFG RS03960 WP 003688695.1	VRLDIR	RTGS....	I.KKG	EEV	LGNE	TRVKVIKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKN	DIINK	SGAWSYNG	295			
NTDB id 1124 NGFG RS03960 WP 003688695.1	VRLDIR	RTGS....	I.KKG	EEV	LGNE	TRVKVIKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKN	DIINK	SGAWSYNG	295			
NTDB id 1123 OK783 RS03845 WP 003688695.1	VRLDIR	RTGS....	I.KKG	EEV	LGNE	TRVKVIKNKVAPPF	RQAEF	DILY	GEGIS	WEGEL	IDIG	VKN	DIINK	SGAWSYNG	295			
NTDB id 1427 RS RS02760 WP 011000510.1	VRLDIR	RRIGS....	I.KKG	DEV	VGN	ETKVKKVVKNKVAPPF	REA	IFDILY	GAGV	SREGE	IIDL	GV	EAKV	VEKSGAWSYNG	303			
NTDB id 1165 A1552VC RS01565 WP 000344154.1	VRLDIR	RTGA....	I.KEG	EEV	VGN	ETRIKVVKNK	IA	APFKE	ANTQIM	YGQGF	NREG	ELID	LG	VKHK	MVEKSGAWSYNG	294		
NTDB id 1142 GTF74 RS11550 WP 000344154.1	VRLDIR	RTGA....	I.KEG	EEV	VGN	ETRIKVVKNK	IA	APFKE	ANTQIM	YGQGF	NREG	ELID	LG	VKHK	MVEKSGAWSYNG	294		
NTDB id 1074 ABD1 RS10195 WP 000344167.1	VRLDIR	RRIGQ....	V.KEG	DEI	VGSE	TKVKKVVKNK	MAPPF	KEA	IFQILY	GKGTN	QLGEL	VDL	AV	QDIV	QK	KAGAWSYQG	294	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	VRLDIR	RRIGQ....	V.KEG	DEI	IGSE	TKVKKVVKNK	MAPPF	KEA	IFQILY	GKGTN	QLGEL	VDL	AV	QDIV	QK	KAGAWSYQG	294	
NTDB id 1205 PSJM300 05545 AFN77183.1	VRLDIR	RTGA....	V.KEG	DEV	VGS	ETRVKVVKNKVAPPF	RQAEF	QILY	GKGIY	RNGE	IIDL	LG	VQ	QGLV	EK	SGAWYAYKG	294	
consensus	!!	****	!	*	*	*	*	*****	!!!!!!	!!!!!!	!!!!	*****	*****	!!	****	!	!!!!!!	!

logo

NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 256903 CV091 RS00480 WP 004195473.1
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 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 1074 ABD1 RS10195 WP 000344167.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1205 PSJM300 05545 AFN77183.1
consensus



logo

NTDB id 600 KW2 RS01765 WP 011675413.1 .. 387
NTDB id 256903 CV091 RS00480 WP 004195473.1 .. 383
NTDB id 269 KZH43 RS08665 WP 001085462.1 EE 388
NTDB id 228 SPD RS09265 WP 001085462.1 EE 388
NTDB id 194 SPR RS08825 WP 001085462.1 EE 388
NTDB id 159 SP RS09750 WP 001085462.1 EE 388
NTDB id 499 SM12261 RS08315 WP 078228268.1 EE 384
NTDB id 527 SMSK321 RS11065 WP 001085454.1 EE 384
NTDB id 408 SMU RS09530 WP 002262392.1 .. 383
NTDB id 453 Spy49 1753c ACI62003.1 .. 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 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 1074 ABD1 RS10195 WP 000344167.1 .. 349
NTDB id 1022 ACIAD RS06390 WP 004925639.1 .. 349
NTDB id 1205 PSJM300 05545 AFN77183.1 .. 347
consensus

EE

 non conserved
 similar
 ≥ 50% conserved