

logo

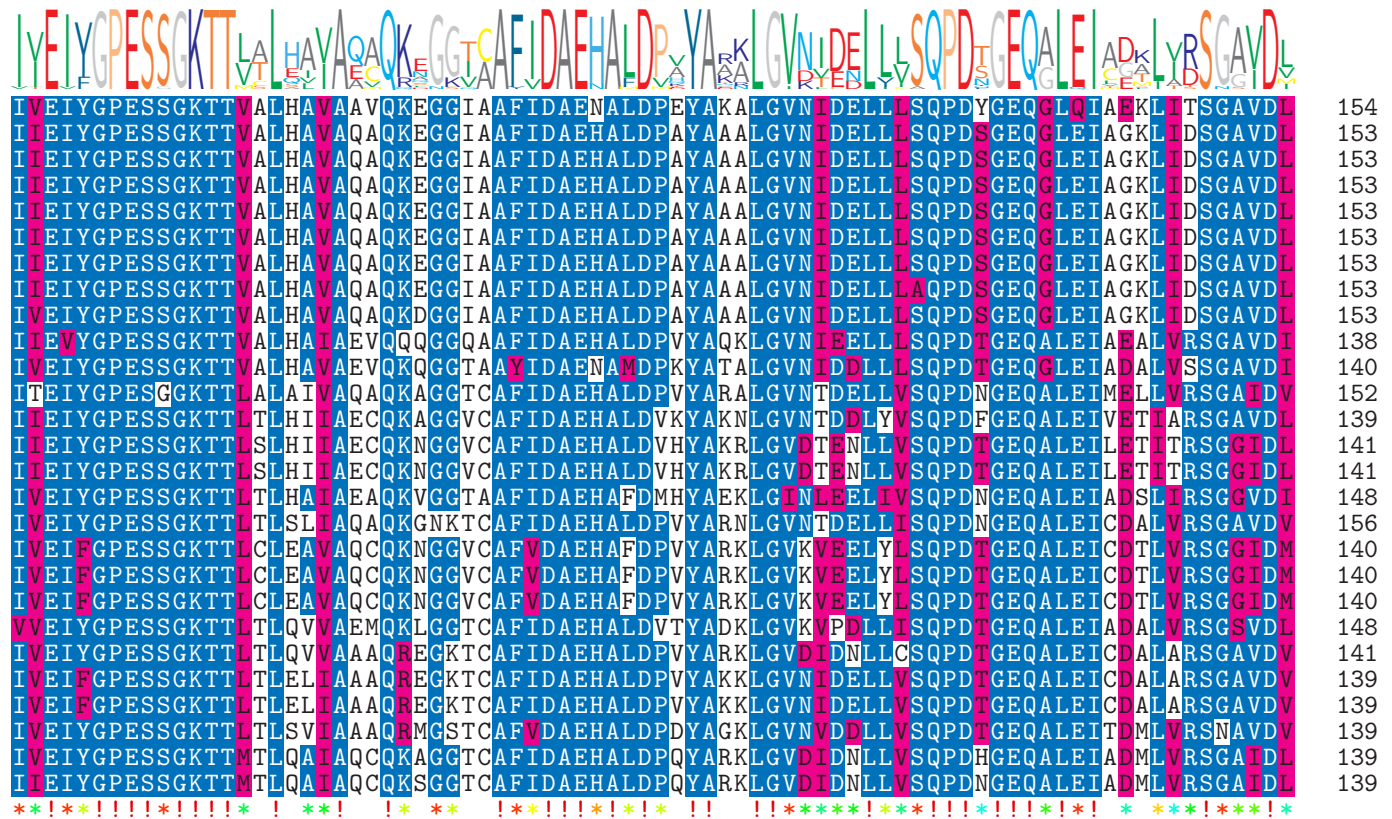
NTDB id 600 KW2 RS01765 WP 011675413.1
NTDB id 269 KZH43 RS08665 WP 001085462.1
NTDB id 228 SPD RS09265 WP 001085462.1
NTDB id 194 SPR RS08825 WP 001085462.1
NTDB id 159 SP RS09750 WP 001085462.1
NTDB id 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 347985 EKN58 RS05080 WP 015571667.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 347985 EKN58 RS05080 WP 015571667.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

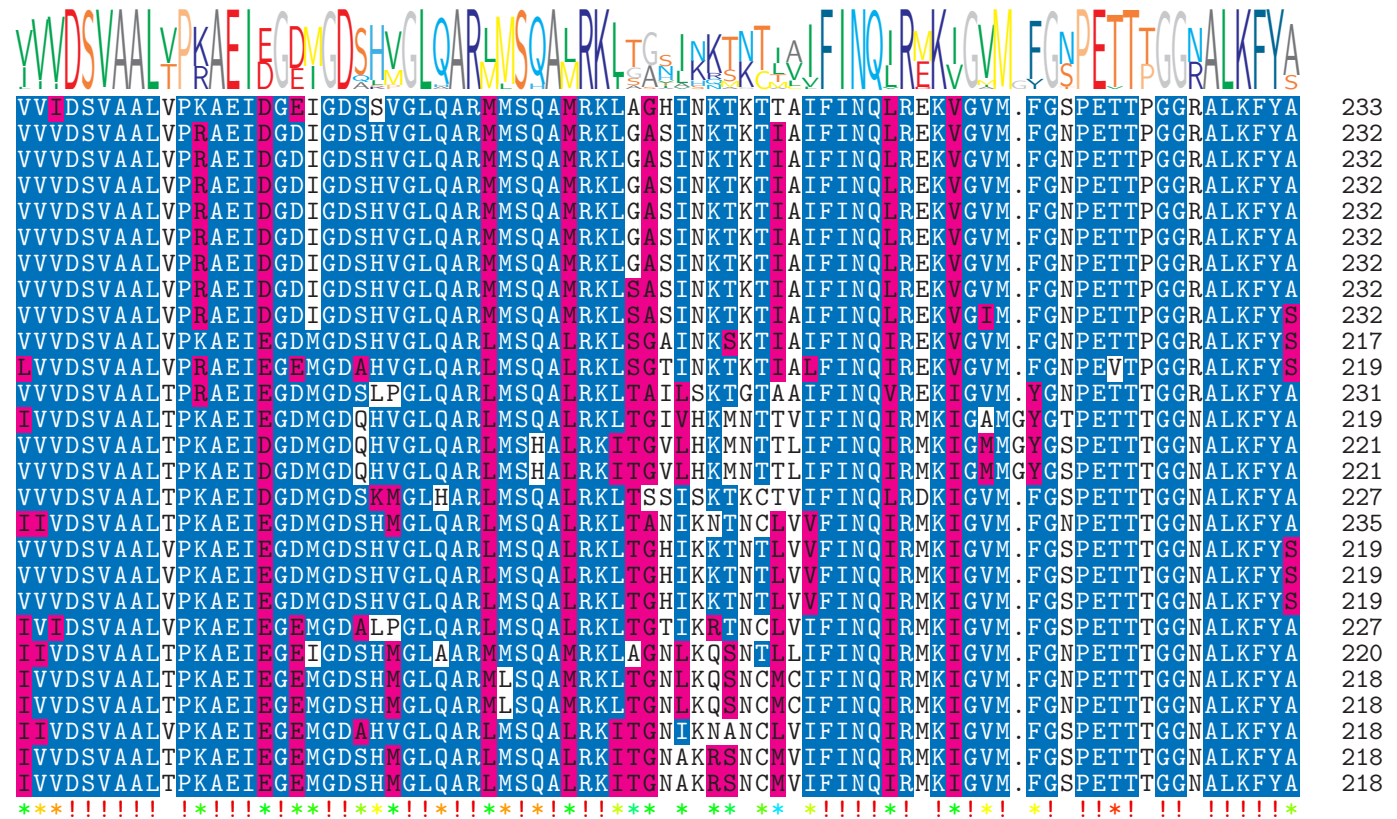
```



```

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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 347985 EKN58 RS05080 WP 015571667.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

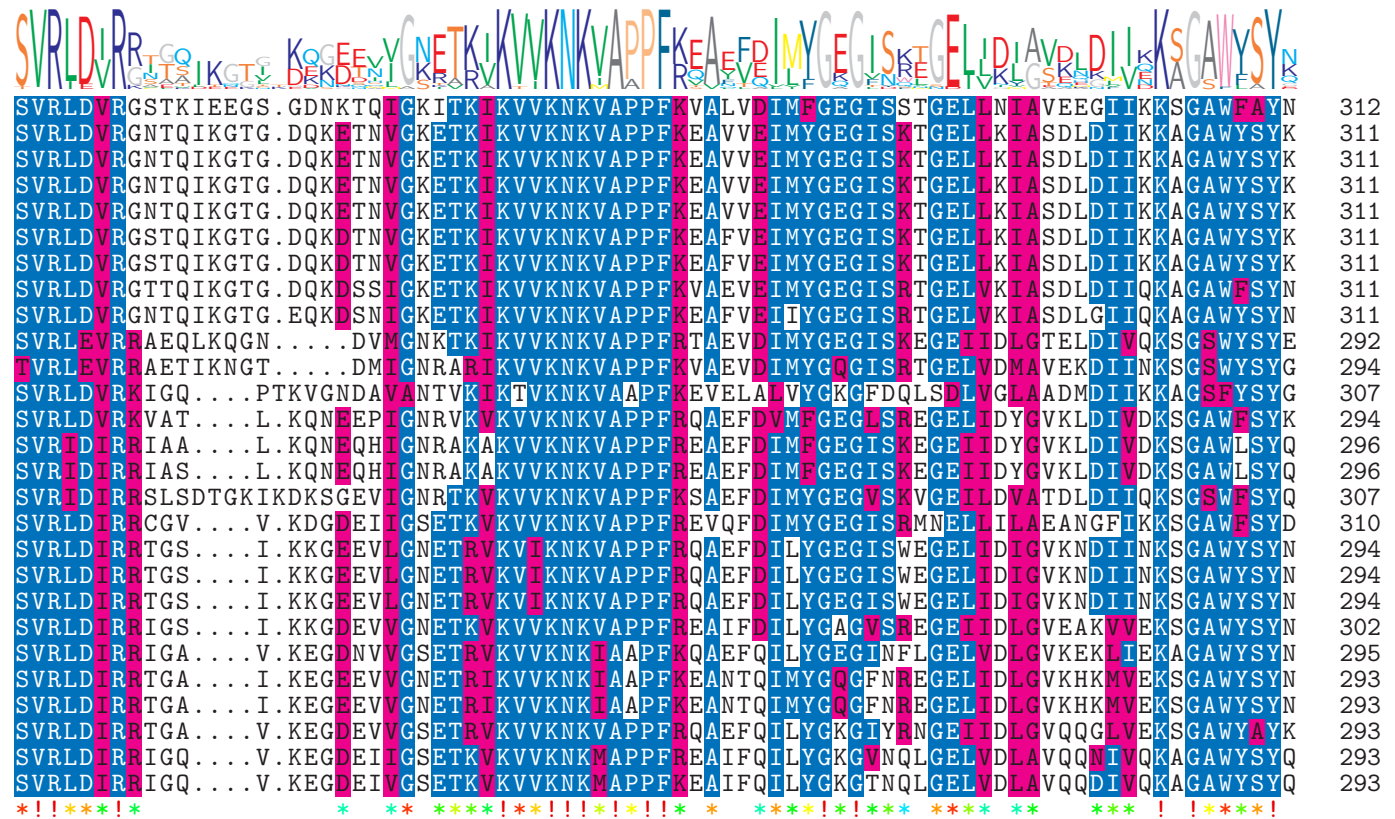
```



```

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 527 SMSK321 RS11065 WP 001085454.1
NTDB id 499 SM12261 RS08315 WP 078228268.1
NTDB id 453 Spy49 1753c ACI62003.1
NTDB id 408 SMU RS09530 WP 002262392.1
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 347985 EKN58 RS05080 WP 015571667.1
NTDB id 1165 A1552VC RS01565 WP 000344154.1
NTDB id 1142 GTF74 RS11550 WP 000344154.1
NTDB id 1205 PSJM300 05545 AFN77183.1
NTDB id 1022 ACIAD RS06390 WP 0004925639.1
NTDB id 1074 ABD1 RS10195 WP 000344167.1
consensus

```



logo

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	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385			
NTDB id 228 SPD RS09265 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385			
NTDB id 194 SPR RS08825 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385			
NTDB id 159 SP RS09750 WP 001085462.1	DEKIGQGS	ENAKKYLAEHPEIF	DEIDKQVRSKFGL	IDGEEVSEQDTENKKDE	PKKEEA	.VNEEVPLDLGDELEIE		385			
NTDB id 527 SMSK321 RS11065 WP 001085454.1	DEKIGQGS	ENAKKYLAADNPEVFAE	IDHQVRVQFGL	IDGEEAAE	SKKDE	VAQVDS	.VNEEVTLDLGDELEIE	381			
NTDB id 499 SM12261 RS08315 WP 078228268.1	DEKIGQGS	ENAKKYLAADNPEIF	DEIDHQVRVQFGL	IDGEEIAE	SKKDE	AAQVDS	.VNEEVTLDLGDELEIE	381			
NTDB id 453 Spy49 1753c ACI62003.1	GEKIGQGS	ENAKRYLADHPQLF	DEIDRKVRVKFGL	LEESEEEESAMAVASE	E	TDDLALDLN	GIEIE	377			
NTDB id 408 SMU RS09530 WP 002262392.1	GEKIGQGS	ENAKKFLADNPEIF	DDIDHKVRVQYGL	IEEDNTEEEKQSSKEK	ETDEK	..ADKNLVLELDDT	IELE	382			
NTDB id 115 BSU 16940 NP 389576.2	EERL	GQGRENAKQFLKENK	DIIMLIQE	IREHYGL	DNNGVVQQAEETQEEL	EFEE		348			
NTDB id 625 LCA RS02525 WP 011374196.1	SERIGQGS	ENAKNYLADHEDVE	DEVRLKVR	AAYGISD	VPEEDLPTTEDE	.QI.NILPDDST	EE	355			
NTDB id 1313 DR RS12030 WP 010888966.1	DERIGQGS	KEKTIA	YIAERPEMEQE	IRDRVMAAIRAGNAGE	APALAPAPAAPEAA	EA		363			
NTDB id 1245 Cj1673c YP 002345041.1	DKKL	GQGRENSKAF	LKENPEIA	DEITKAIQNSMG	TEGMI	SGSEDDE	GEE	343			
NTDB id 1214 NCTC11637 00359 SQJ03206.1	DKKL	GQGRENAKALLKED	KALADEITLK	IKESIGSNEEI	MPLPDEP	LEEME		347			
NTDB id 1211 C694 RS00795 WP 000963128.1	DKKL	GQGRENAKALLKED	KALADEITLK	IKESIGSNEEI	MPLPDEP	LEEME		347			
NTDB id 1334 RAOC RS04870 WP 004918236.1	DTKL	GQGRD	TVKELIKDNPELA	AELEAKIREKLQAK				343			
NTDB id 1389 A4U84 RS07560 WP 021112712.1	GTKIGQGS	KNNAVKWLKENPEIA	DKLEQEIRNTL	ASNPNS	VLKATASDSN	...DES	DVEEFSEEEL	372			
NTDB id 1130 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHI	TEG	T	QDET	DGERPEE	348		
NTDB id 1124 NGFG RS03960 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHI	TEG	T	QDET	DGERPEE	348		
NTDB id 1123 OK783 RS03845 WP 003688695.1	GAKIGQGS	KDNVRVWLKENPEIS	DEIDAKIRALNG	VEMHI	TEG	T	QDET	DGERPEE	348		
NTDB id 1427 RS RS02760 WP 011000510.1	GERIGQGS	RDNCREFLRENAEL	AREIENK	VREHLGV	TPMG	AVTL	AAEEVE	...ED	352		
NTDB id 347985 EKN58 RS05080 WP 015571667.1	GDKIGQGS	KANAISWLKENPAAAKE	EIEKKVRELL	LNNQDS	KPDFVVD	GAD	AEETNEDF		352		
NTDB id 1165 A1552VC RS01565 WP 000344154.1	GDKIGQGS	KANACKY	LKENPEIAKTLD	KKLREML	LNPNEM	QLIAETSSAA	...DDV	EF	GAVPEEF	354	
NTDB id 1142 GTF74 RS11550 WP 000344154.1	GDKIGQGS	KANACKY	LKENPEIAKTLD	KKLREML	LNPNEM	QLIAETSSAA	...DDV	EF	GAVPEEF	354	
NTDB id 1205 PSJM300 05545 AFN77183.1	GSKIGQGS	KANAACKYLEENPEIG	EIEQQIRAKLL	VTSAN	TKATPVAEDL	...ADADI				347	
NTDB id 1022 ACIAD RS06390 WP 004925639.1	GNKIGQGS	KNNVIRY	LEENPQISTEIE	AVIREQL	LT	KASD	QTAA	.HDETE	...EED	LLLES	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	GNKIGQGS	KNNVIRY	FEENNQIAEEI	ERNIREQL	LT	TGTN	GAVQ	.I.EDE	...EED	LLLES	349
consensus	***!!!	*****	**	*****	*****	**	**			*	

logo

NTDB id 600 KW2 RS01765 WP 011675413.1	...	387
NTDB id 269 KZH43 RS08665 WP 001085462.1	IEE	388
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 527 SMSK321 RS11065 WP 001085454.1	IEE	384
NTDB id 499 SM12261 RS08315 WP 078228268.1	IEE	384
NTDB id 453 Spy49 1753c ACI62003.1	D..	378
NTDB id 408 SMU RS09530 WP 002262392.1	D..	383
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 347985 EKN58 RS05080 WP 015571667.1	...	352
NTDB id 1165 A1552VC RS01565 WP 000344154.1	...	354
NTDB id 1142 GTF74 RS11550 WP 000344154.1	...	354
NTDB id 1205 PSJM300 05545 AFN77183.1	...	347
NTDB id 1022 ACIAD RS06390 WP 004925639.1	...	349
NTDB id 1074 ABD1 RS10195 WP 000344167.1	...	349

consensus

 non conserved
 similar
 ≥ 50% conserved