

logo

NTDB id 1028 TT RS08215 WP 011173991.1	MSVLTIGDKRLGAALLDAGLLTDEELQRALERHREVGGS LAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPKVK	80
NTDB id 1306 DR RS10060 WP 027479822.1	.MALSIGDRRLGAILLDQGYLGDNLDLQRALERHSEVGGRLADVLIDSGMVGEKRIARAIEEALGIPLVNLAVQPDPAAL	79
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1	.....	0
NTDB id 1410 SGL RS13950 WP 010873519.1	.....	0
NTDB id 1355 HI 0298 AAC21962.1	.....	0
NTDB id 1366 NTHI RS01950 WP 011271972.1	.....	0
NTDB id 1384 A4U84 RS08525 WP 010787006.1	.....	0
NTDB id 1468 ASU2 RS05090 WP 014991734.1	.....	0
NTDB id 93824 AM277 RS00110 WP 004145935.1	.....	0
NTDB id 1436 BW25113 RS00530 WP 001025145.1	.....	0
NTDB id 1168 A1552VC RS11070 WP 000957200.1	.....	0
NTDB id 1401 DSB67 RS12665 WP 010643259.1	.....	0
NTDB id 1293 VP RS12240 WP 005479695.1	.....	0
NTDB id 1110 NGFG RS09235 WP 003689817.1	.....	0
NTDB id 1251 GC085 RS07725 WP 011946523.1	.....	0
NTDB id 1018 ACIAD RS01685 WP 004920473.1	.....	0
NTDB id 1058 ABD1 RS01615 WP 001274986.1	.....	0
consensus		

logo

NTDB id 1028 TT RS08215 WP 011173991.1	ALLPAEKAKELKAIPFALDEEAGVVRVAFNLNPLDTLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPP..P	158
NTDB id 1306 DR RS10060 WP 027479822.1	RSIRPQTALNLQAFPFALE..GDRLRVALVDPLSSFSIETLEDDSGFDIEPYQALREEVMWAIATHYPELGLEIVVPSGA	157
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1	.....	0
NTDB id 1410 SGL RS13950 WP 010873519.1	.....	0
NTDB id 1355 HI 0298 AAC21962.1	.....	0
NTDB id 1366 NTHI RS01950 WP 011271972.1	.....	0
NTDB id 1384 A4U84 RS08525 WP 010787006.1	.....	0
NTDB id 1468 ASU2 RS05090 WP 014991734.1	.....	0
NTDB id 93824 AM277 RS00110 WP 004145935.1	.....	0
NTDB id 1436 BW25113 RS00530 WP 001025145.1	.....	0
NTDB id 1168 A1552VC RS11070 WP 000957200.1	.....	0
NTDB id 1401 DSB67 RS12665 WP 010643259.1	.....	0
NTDB id 1293 VP RS12240 WP 005479695.1	.....	0
NTDB id 1110 NGFG RS09235 WP 003689817.1	.....	0
NTDB id 1251 GC085 RS07725 WP 011946523.1	.....	0
NTDB id 1018 ACIAD RS01685 WP 004920473.1	.....	0
NTDB id 1058 ABD1 RS01615 WP 001274986.1	.....	0
consensus		

logo

NTDB id 1028	TT RS08215 WP 011173991.1	SGEGQKDKLKGELLQKGWISREALEEALVEQEKTGDLLGRILV.RKGLPEEALYRALAEQKGLEFLESTEGIVPDPSAA	237
NTDB id 1306	DR RS10060 WP 027479822.1	SDAGRTGGKLGRLITHGYITDAQLQVALDAQQTGEALGATLISQRAITEDQLYEVLAEQEGTTFLPNPSGFGHPGEEVL	237
NTDB id 1227	CJJ81176 RS07050 WP 011812800.1	.....	0
NTDB id 1410	SGL RS13950 WP 010873519.1	.....	0
NTDB id 1355	HI 0298 AAC21962.1	.....	0
NTDB id 1366	NTHI RS01950 WP 011271972.1	.....	0
NTDB id 1384	A4U84 RS08525 WP 010787006.1	.....	0
NTDB id 1468	ASU2 RS05090 WP 014991734.1	.....	0
NTDB id 93824	AM277 RS00110 WP 004145935.1	.....	0
NTDB id 1436	BW25113 RS00530 WP 001025145.1	.....	0
NTDB id 1168	A1552VC RS11070 WP 000957200.1	.....	0
NTDB id 1401	DSB67 RS12665 WP 010643259.1	.....	0
NTDB id 1293	VP RS12240 WP 005479695.1	.....	0
NTDB id 1110	NGFG RS09235 WP 003689817.1	.....	0
NTDB id 1251	GCO85 RS07725 WP 011946523.1	.....	0
NTDB id 1018	ACIAD RS01685 WP 004920473.1	.....	0
NTDB id 1058	ABD1 RS01615 WP 001274986.1	.....	0
consensus			

logo

NTDB id 1028	TT RS08215 WP 011173991.1	LLLLRSDALRYGAVPIGFQNGEVEVVLSDPRHKEAVAQLLNRPARFYALPQAWHEELFRRAYPQKNRLGEVLVQEGKLSR	317
NTDB id 1306	DR RS10060 WP 027479822.1	GSMLRADALRLLAVPVDETEQGVTVLTSDPRKRPDIDALIGRPVQLMLTRPRDIERLIEQFYPQRGRGLGEQLVQEGTSLR	317
NTDB id 1227	CJJ81176 RS07050 WP 011812800.1	.....	0
NTDB id 1410	SGL RS13950 WP 010873519.1	MTS	3
NTDB id 1355	HI 0298 AAC21962.1	.....	0
NTDB id 1366	NTHI RS01950 WP 011271972.1	.....	0
NTDB id 1384	A4U84 RS08525 WP 010787006.1	.....	0
NTDB id 1468	ASU2 RS05090 WP 014991734.1	.....	0
NTDB id 93824	AM277 RS00110 WP 004145935.1	.....	0
NTDB id 1436	BW25113 RS00530 WP 001025145.1	.....	0
NTDB id 1168	A1552VC RS11070 WP 000957200.1	.....	0
NTDB id 1401	DSB67 RS12665 WP 010643259.1	.....	0
NTDB id 1293	VP RS12240 WP 005479695.1	.....	0
NTDB id 1110	NGFG RS09235 WP 003689817.1	.....	0
NTDB id 1251	GCO85 RS07725 WP 011946523.1	.....	0
NTDB id 1018	ACIAD RS01685 WP 004920473.1	.....	0
NTDB id 1058	ABD1 RS01615 WP 001274986.1	.....	0
consensus			

logo

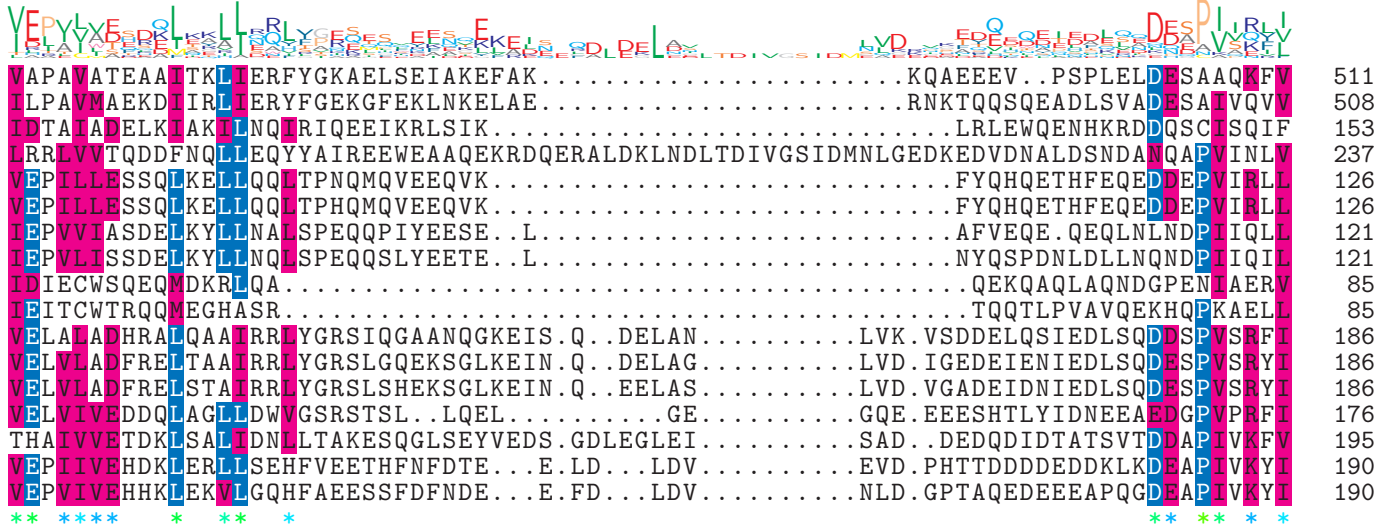
NTDB id 1028	TT RS08215 WP 011173991.1	EALKEALEVQKGLPRAKPLGEIIVELGLARPEDVEEALQKQRRGGGRLEDTVQS..GKLR.PEALQAQ.....V	384
NTDB id 1306	DR RS10060 WP 027479822.1	DQLREALQVQAREGKVKPLGEVITELGFASPDEVDSDALQKQNVGGGRLEDTVQS..GKLS.PEMLARS.....L	384
NTDB id 1227	CJJ81176 RS07050 WP 011812800.1	ME.....SRMDKIFQAYIDN...EISLDEICTKFNITSWDFFKKL	37
NTDB id 1410	SGL RS13950 WP 010873519.1	SSSSKKSRVAVALRNYFSPFGNKIVAGGHVDAEQLRQALVQVKKTGRSPPEELKAVTGREISS.PELTRQYKKN..QLFE..L	79
NTDB id 1355	HI 0298 AAC21962.1	MTSY.....ALLH.TQRVTAK.....N	16
NTDB id 1366	NTHI RS01950 WP 011271972.1	MTSY.....ALLH.TQRVTAQ.....N	16
NTDB id 1384	A4U84 RS08525 WP 010787006.1	MSQY.....T.....ICEQQ.....T	11
NTDB id 1468	ASU2 RS05090 WP 014991734.1	MQY.....S.....VCDMN.....S	10
NTDB id 93824	AM277 RS00110 WP 004145935.1	.....	0
NTDB id 1436	BW25113 RS00530 WP 001025145.1	.....	0
NTDB id 1168	A1552VC RS11070 WP 000957200.1	MLTNLVAIRQAELISATQEQAQVVTVQVSASGTSVPEALLLEL..SIFH.AQEITEQ.....L	53
NTDB id 1401	DSB67 RS12665 WP 010643259.1	MLTNLSTVIRQAGILTFSSQEESSLLEQVKASGISMPEALLSS..GFFQ.SHEITEH.....L	53
NTDB id 1293	VP RS12240 WP 005479695.1	MHSNLSTIRQKGLLTFSQEESSLIEQVKASGISMPEALLSS..GFFT.SSELAEH.....L	53
NTDB id 1110	NGFG RS09235 WP 003689817.1	MSVGLLRILVQNQVVVTEQAHEHY.NESQAGKEVLPMIFSD..GVIS.PKSLAAL.....I	52
NTDB id 1251	GCO85 RS07725 WP 011946523.1	MALATEEYRLQGIGQLIVLEKLLDKTKAIELHLKAAAAEKISLLQYIVKN..KILS.AEQIALT.....A	61
NTDB id 1018	ACIAD RS01685 WP 004920473.1	MSAFTTPPKFSGFIRRIVEEGYVNAQNMQQALEKAKKFKQDVPYILIDN..FSIS.PLTIAEI.....I	61
NTDB id 1058	ABD1 RS01615 WP 001274986.1	MSALHTSPKFTGFFRRIVEEKHVSAAATMQTALDAAKRAKQDTVAYLIEE..VHLS.PSLIAET.....I	61
consensus		*.....*	

logo

NTDB id 1028	TT RS08215 WP 011173991.1	ATQLGYPYVDPEEDPP....DPGAPLLLPEDLCRYGVFPHRLEG...NRIIVILMKDPRNIALLDVRLALKRKGLNVE	456
NTDB id 1306	DR RS10060 WP 027479822.1	AAQLGYEFLDPIQNPP....DPKVALMIPEATARRVVVVRQLQG...NSLVVAMKDPRNVFALDDLKLITG....KE	451
NTDB id 1227	CJJ81176 RS07050 WP 011812800.1	ANFCNLHFVDLDE.....DNDFIYEGIPFSLILKFKFLLIKNND...GFMIRSKPCSLELLEQVKTF..MIC..EK	102
NTDB id 1410	SGL RS13950 WP 010873519.1	KVLVGVDSVDPEVAPIATQQMAELIGRFFPLDTCRRFKFLPLAQQEGDPPSVLVAMVDPDNLAAQDELNRILRVKG..FE	157
NTDB id 1355	HI 0298 AAC21962.1	GEVF.....T...ISP....DLWERNQQQSSLLRLRYFALPLKEEN...NRLWLGVDLSLSNISACETIAF...ITG..KP	75
NTDB id 1366	NTHI RS01950 WP 011271972.1	GEIF.....T...ISP....DLWERNQQQSSLLRLRYFALPLKEEN...NRLWLGVDLSLSNISACETIAF...ITG..KP	75
NTDB id 1384	A4U84 RS08525 WP 010787006.1	ERIF.....D...ISP....SRWQKNCEEKQLLLRYLAVPVQETE...HKLWLAVDDENNITACEIFAF...MTH..KQ	70
NTDB id 1468	ASU2 RS05090 WP 014991734.1	QQVF.....D...ISE....SLWQKNCDEKHILLRYLATPIQEND...DTLWLATDDMNNLSACEIFAF...IAH..KT	69
NTDB id 93824	AM277 RS00110 WP 004145935.1	MKTEQLIPLCRRYHAMLHHSDE...QTISIADVNTPPAELMEARF...ATQ..KR	48
NTDB id 1436	BW25113 RS00530 WP 001025145.1	MNIPQLTALCLRYHGVLLDASE...EVVHVAVVDAPSHELLDALHF...ATT..KR	48
NTDB id 1168	A1552VC RS11070 WP 000957200.1	SHIFGLPETDLSTRYDY....ANLCQQLGLRELITRYDALPLAKQG...NLILLAVSDPTLLQAEEFEFRF...ATG..LQ	120
NTDB id 1401	DSB67 RS12665 WP 010643259.1	SSVFGLSCTSLNQYEY....ASLCQTLGLRDLITRHNALPLNRTS...STLILAVADPTNLQAEDDFRF...ATG..LQ	120
NTDB id 1293	VP RS12240 WP 005479695.1	SSIFGLSQPELSQYEY....ASLCQQLGLRELITRHNALPLHRTS...STLILLAVADPTNQQAEDDFRF...ATG..LQ	120
NTDB id 1110	NGFG RS09235 WP 003689817.1	ARVFSYSILDLRHYPY....HRVLMGVLTEEQMVVHCVPVFRRG...DKVFFAVSDPTQMPQIQKTVS...AAG..IA	119
NTDB id 1251	GCO85 RS07725 WP 011946523.1	AQNFGVPMLDINCIDV....GTIPVNLVNEKLIKRRHAMVPLFSRG...TNLYLATDPSKQASLKEITQF...HTG..LN	128
NTDB id 1018	ACIAD RS01685 WP 004920473.1	SLEFGEPLLDLGVFDP....ALFLKDKIDEKLIKQYRIMPLVHRG...HVLVYVATSNPTNTEAMDAIRF...NSK..LK	128
NTDB id 1058	ABD1 RS01615 WP 001274986.1	SAEFAEYPFDLDVYDT....SQIPKDLVDQKLIKLRHILPLIQRG...QILYVATSNPSNIBATDAIRF...NSK..LL	128
consensus		*.....*	

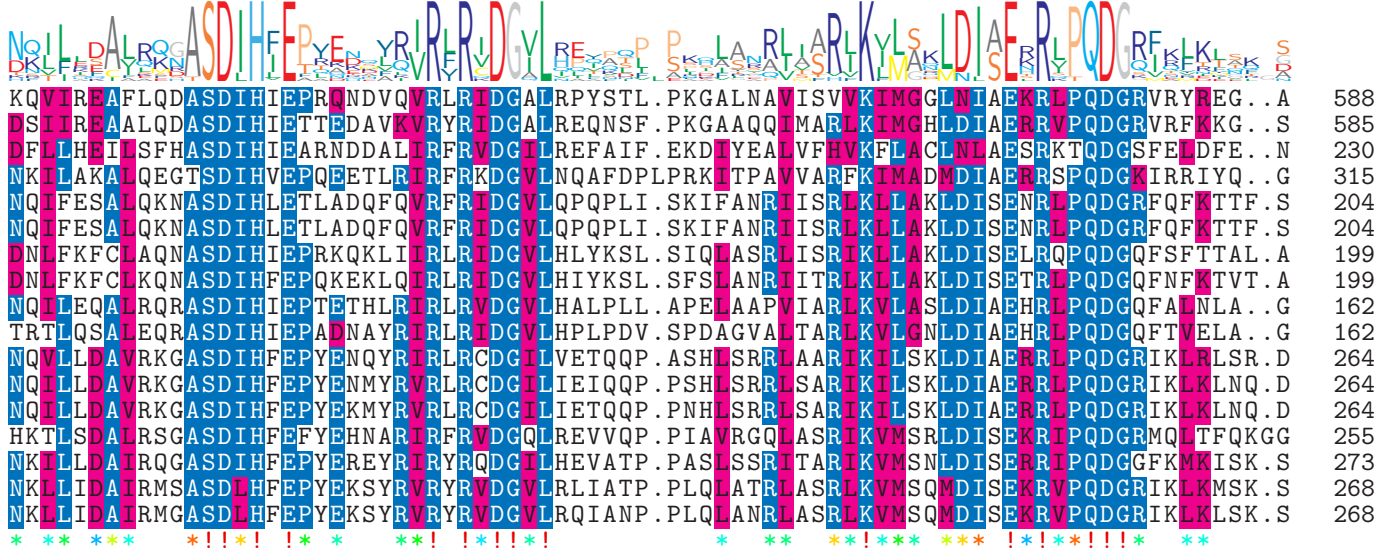
logo

NTDB	id	1028	TT	RS08215	WP	011173991.1
NTDB	id	1306	DR	RS10060	WP	027479822.1
NTDB	id	1227	CJJ81176	RS07050	WP	011812800.1
NTDB	id	1410	SGL	RS13950	WP	010873519.1
NTDB	id	1355	HI	0298	AAC21962.1	
NTDB	id	1366	NTHI	RS01950	WP	011271972.1
NTDB	id	1384	A4U84	RS08525	WP	010787006.1
NTDB	id	1468	ASU2	RS05090	WP	014991734.1
NTDB	id	93824	AM277	RS00110	WP	004145935.1
NTDB	id	1436	BW25113	RS00530	WP	001025145.1
NTDB	id	1168	A1552VC	RS11070	WP	000957200.1
NTDB	id	1401	DSB67	RS12665	WP	010643259.1
NTDB	id	1293	VP	RS12240	WP	005479695.1
NTDB	id	1110	NGFG	RS09235	WP	003689817.1
NTDB	id	1251	GC085	RS07725	WP	011946523.1
NTDB	id	1018	ACIAD	RS01685	WP	004920473.1
NTDB	id	1058	ABD1	RS01615	WP	001274986.1
consensus						



logo

NTDB	id	1028	TT	RS08215	WP	011173991.1
NTDB	id	1306	DR	RS10060	WP	027479822.1
NTDB	id	1227	CJJ81176	RS07050	WP	011812800.1
NTDB	id	1410	SGL	RS13950	WP	010873519.1
NTDB	id	1355	HI	0298	AAC21962.1	
NTDB	id	1366	NTHI	RS01950	WP	011271972.1
NTDB	id	1384	A4U84	RS08525	WP	010787006.1
NTDB	id	1468	ASU2	RS05090	WP	014991734.1
NTDB	id	93824	AM277	RS00110	WP	004145935.1
NTDB	id	1436	BW25113	RS00530	WP	001025145.1
NTDB	id	1168	A1552VC	RS11070	WP	000957200.1
NTDB	id	1401	DSB67	RS12665	WP	010643259.1
NTDB	id	1293	VP	RS12240	WP	005479695.1
NTDB	id	1110	NGFG	RS09235	WP	003689817.1
NTDB	id	1251	GC085	RS07725	WP	011946523.1
NTDB	id	1018	ACIAD	RS01685	WP	004920473.1
NTDB	id	1058	ABD1	RS01615	WP	001274986.1
consensus						

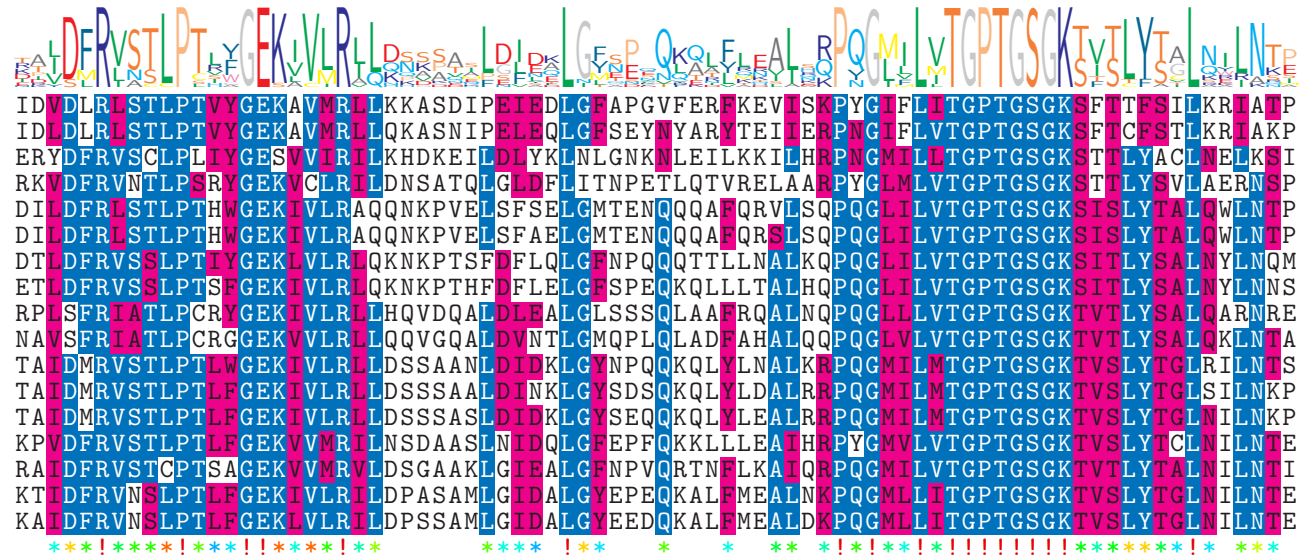


```

NTDB id 1028 TT RS08215 WP 011173991.1
NTDB id 1306 DR RS10060 WP 027479822.1
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1
NTDB id 1410 SGL RS13950 WP 010873519.1
NTDB id 1355 HI 0298 AAC21962.1
NTDB id 1366 NTHI RS01950 WP 011271972.1
NTDB id 1384 A4U84 RS08525 WP 010787006.1
NTDB id 1468 ASU2 RS05090 WP 014991734.1
NTDB id 93824 AM277 RS00110 WP 004145935.1
NTDB id 1436 BW25113 RS00530 WP 001025145.1
NTDB id 1168 A1552VC RS11070 WP 000957200.1
NTDB id 1401 DSB67 RS12665 WP 010643259.1
NTDB id 1293 VP RS12240 WP 005479695.1
NTDB id 1110 NGFG RS09235 WP 003689817.1
NTDB id 1251 GCO85 RS07725 WP 011946523.1
NTDB id 1018 ACIAD RS01685 WP 004920473.1
NTDB id 1058 ABD1 RS01615 WP 001274986.1

```

consensus



668
665
310
395
284
284
279
279
242
242
344
344
344
335
353
348
348

```
NTDB id 1028 TT RS08215 WP 011173991.1
NTDB id 1306 DR RS10060 WP 027479822.1
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1
NTDB id 1410 SGL RS13950 WP 010873519.1
NTDB id 1355 HI 0298 AAC21962.1
NTDB id 1366 NTHI RS01950 WP 011271972.1
NTDB id 1384 A4U84 RS08525 WP 010787006.1
NTDB id 1468 ASU2 RS05090 WP 014991734.1
NTDB id 93824 AM277 RS00110 WP 004145935.1
NTDB id 1436 BW25113 RS00530 WP 001025145.1
NTDB id 1168 A1552VC RS11070 WP 000957200.1
NTDB id 1401 DSB67 RS12665 WP 010643259.1
NTDB id 1293 VP RS12240 WP 005479695.1
NTDB id 1110 NGFG RS09235 WP 003689817.1
NTDB id 1251 GCO85 RS07725 WP 011946523.1
NTDB id 1018 ACIAD RS01685 WP 004920473.1
NTDB id 1058 ABD1 RS01615 WP 001274986.1
```

consensus



748
745
390
475
364
364
359
359
322
322
424
424
424
415
433
428
428

```
NTDB id 1028 TT RS08215 WP 011173991.1
NTDB id 1306 DR RS10060 WP 027479822.1
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1
NTDB id 1410 SGL RS13950 WP 010873519.1
NTDB id 1355 HI 0298 AAC21962.1
NTDB id 1366 NTHI RS01950 WP 011271972.1
NTDB id 1384 A4U84 RS08525 WP 010787006.1
NTDB id 1468 ASU2 RS05090 WP 014991734.1
NTDB id 93824 AM277 RS00110 WP 004145935.1
NTDB id 1436 BW25113 RS00530 WP 001025145.1
NTDB id 1168 A1552VC RS11070 WP 000957200.1
NTDB id 1401 DSB67 RS12665 WP 010643259.1
NTDB id 1293 VP RS12240 WP 005479695.1
NTDB id 1110 NGFG RS09235 WP 003689817.1
NTDB id 1251 GCO85 RS07725 WP 011946523.1
NTDB id 1018 ACIAD RS01685 WP 004920473.1
NTDB id 1058 ABD1 RS01615 WP 001274986.1
```

[illegible]

```
NTDB id 1028 TT RS08215 WP 011173991.1
NTDB id 1306 DR RS10060 WP 027479822.1
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1
NTDB id 1410 SGL RS13950 WP 010873519.1
NTDB id 1355 HI 0298 AAC21962.1
NTDB id 1366 NTHI RS01950 WP 011271972.1
NTDB id 1384 A4U84 RS08525 WP 010787006.1
NTDB id 1468 ASU2 RS05090 WP 014991734.1
NTDB id 93824 AM277 RS00110 WP 004145935.1
NTDB id 1436 BW25113 RS00530 WP 001025145.1
NTDB id 1168 A1552VC RS11070 WP 000957200.1
NTDB id 1401 DSB67 RS12665 WP 010643259.1
NTDB id 1293 VP RS12240 WP 005479695.1
NTDB id 1110 NGFG RS09235 WP 003689817.1
NTDB id 1251 GCO85 RS07725 WP 011946523.1
NTDB id 1018 ACIAD RS01685 WP 00492473.1
NTDB id 1058 ABD1 RS01615 WP 001274986.1
```

Sequence	Position
GMCCE..RCGGTGYKGRYAIHELVLVDDERTHATVAGKSATETKEIAR.RKGMKTLREDGLYKALQGITTLEEVLARTIE	1
GTGCP..RCGGTGYKGRMGIIHELMVMDDSLRRTIGAGRPAAETRDVALGESGRSLRQDGIKALQGLTTLEEVLA	2
PKGCE..RCHHSFFGRELIAECLEINEDLACATRENQDKTILMELAK.KYGFQTMFEQGLKKAKEGLTSLDELLRV	3
GNLCQ..KCSGSGYKGRGVGYEVMRNSERIAELINQGATTDRIDKCAV.EEGMTLLAYSINLVQEGYTTLEEVERV	4
..LANSCDCH.QGYRGRIGVYQFLHWQQN.....DY.....QTDFFKNLRASGLEKVSQGITDEKEIERVLGK	5
..LINSCDCH.QGYRGRIGVYQFLHWQQN.....GY.....QTDFFENLRSEGLEKVSQGITDEKEIERVLGK	6
..GCD..ECY.QGYRGRIGVYQCLSRITAK.....KFDKQTA.YLDFSSLRESAKQKIEQGLTNETEVDRLVGY	7
..GCD..NCY.HGYKGRGTGIYQLLAKQGK.....FFEKSTA.YLDYDNLRASAEQKLAANITTVDEVKRVLGD	8
AAGCE..HCY.HGYVGRLLALFEVLPVTPGIRQGITVQGLNAIETESLAR.AAGMMTLFESGCCATEQGLTSL	9
APGCV..HCY.HGFYGRITALFEVLPITPVIRQLISANTDVESLETHAR.QAGMRTLFEQGLVCLAEQGLT	10
AAGCN..ECT.GGYSGRGVGIYEVMAFNTELAELMQRASIHQIERLAK.ANGMQTLQESGLEKREGITSF	11
PDGCN..ECT.HGYSGRGTGIYEVMKFDESSEALIKGASVHELEKLAI.ANGMQTLQMSGIEKLGKQGIT	12
PDGCN..ECT.HGYSGRGTGIYEVMRFDESSEALIKGASVHELEKLAI.ANGMSTLQMSGIEKLGKQGIT	13
AVGCD..RCRGQGYKGRAGVYEVMPISEEMQVRVIMNNGTEVGILDVAY.KEGMVDLRRAGILKIMQGITS	14
AVGCE..QCT.SGYRGRVGLFEVLPMTKEIGQLIMSGGNSLDILKLAQ.SEGMLTIFQSGIEKVKEGIT	15
PVGCH..DCR.EGYKGRVGIYEVMKITPEISKIIMEDGNALEIAATAE.TLGFNNLRRSGLKKVMQGVTS	16
PVGCL..ECR.EGYKGRVGIYEVMKVTPETISKIIMEDGNALEIAAAAE.KLGFNNLRRSGLKKVMQGVTS	17

logo

NTDB id 1028 TT RS08215 WP 011173991.1	.....	889
NTDB id 1306 DR RS10060 WP 027479822.1	.....	887
NTDB id 1227 CJJ81176 RS07050 WP 011812800.1	.....	519
NTDB id 1410 SGL RS13950 WP 010873519.1	DTGLESEMRAKRKSALTTCRTCAAELQQEWLDCPYCMTSRFS	672
NTDB id 1355 HI 0298 AAC21962.1	NL.....	464
NTDB id 1366 NTHI RS01950 WP 011271972.1	NS.....	464
NTDB id 1384 A4U84 RS08525 WP 010787006.1	E.....	461
NTDB id 1468 ASU2 RS05090 WP 014991734.1	G.....	461
NTDB id 93824 AM277 RS00110 WP 004145935.1	PHGD.....	461
NTDB id 1436 BW25113 RS00530 WP 001025145.1	PHGE.....	461
NTDB id 1168 A1552VC RS11070 WP 000957200.1	.....	562
NTDB id 1401 DSB67 RS12665 WP 010643259.1	.....	561
NTDB id 1293 VP RS12240 WP 005479695.1	.....	561
NTDB id 1110 NGFG RS09235 WP 003689817.1	.....	558
NTDB id 1251 GC085 RS07725 WP 011946523.1	.....	574
NTDB id 1018 ACIAD RS01685 WP 004920473.1	.....	570
NTDB id 1058 ABD1 RS01615 WP 001274986.1	.....	570
consensus		

-  non conserved
-  similar
-  ≥ 50% conserved