

**BLAST®**

**Basic Local Alignment Search Tool**

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**Protein Sequence (27 letters)**

**RID** [0V0XK1R5015](#) (Expires on 09-09 18:23 pm)

**Query ID** Icl|71609

**Description** None

**Molecule type** amino acid

**Query Length** 27

**Database Name** Microbial proteins

**Description** **Program**BLASTP 2.2.29+

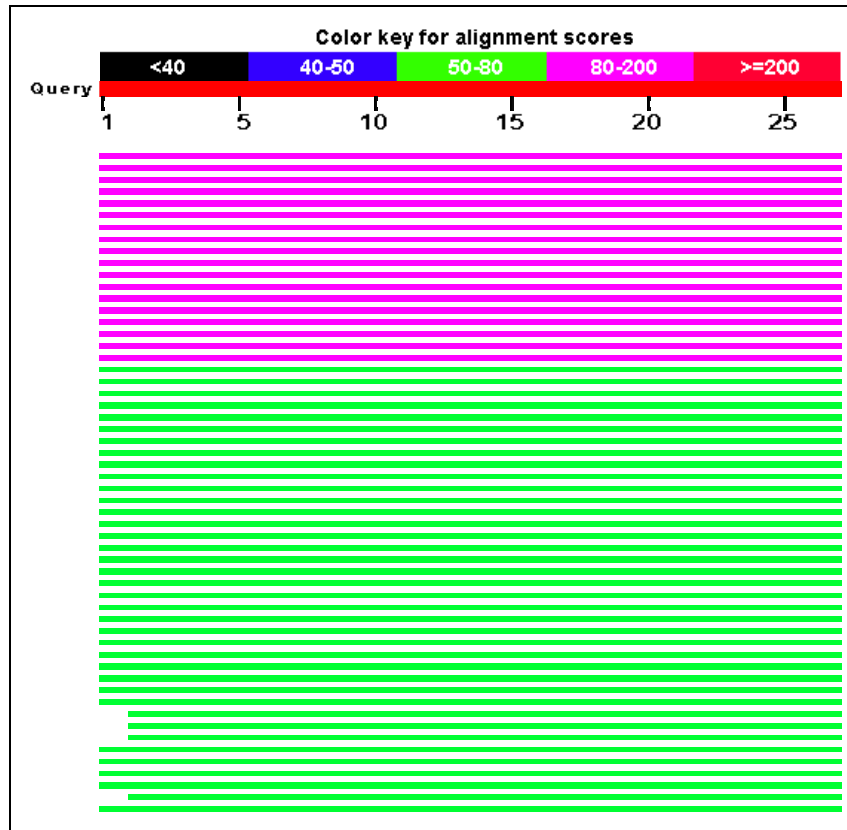
**New** DELTA-BLAST, a more sensitiv

**Graphic Summary**

Putative conserved domains have been detected, click on the image below for detailed results.



**Distribution of 100 Blast Hits on the Query Sequence**



**Descriptions**

Sequences producing significant alignments:

Description	Max score	Total score	Query cover	E value	Ident	Accession
thymidylate kinase Tmk [Mycobacterium tuberculosis UT0124]	90.1	90.1	100%	5e-20	100%	<a href="#">KBM28427.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	90.1	90.1	100%	3e-19	100%	<a href="#">AIH62975.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	90.1	90.1	100%	3e-19	100%	<a href="#">AIH98343.1</a>
thymidylate kinase [Mycobacterium bovis]	90.1	90.1	100%	3e-19	100%	<a href="#">WP_024459054.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	90.1	90.1	100%	4e-19	100%	<a href="#">AIH23782.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_003904223.1</a>
thymidylate kinase Tmk [Mycobacterium tuberculosis BTB11-133]	90.1	90.1	100%	4e-19	100%	<a href="#">KCQ37814.1</a>
thymidylate kinase Tmk [Mycobacterium tuberculosis BTB07-206]	90.1	90.1	100%	4e-19	100%	<a href="#">KCN91622.1</a>
thymidylate kinase Tmk [Mycobacterium tuberculosis M1520]	90.1	90.1	100%	4e-19	100%	<a href="#">KBA42335.1</a>
thymidylate kinase Tmk [Mycobacterium tuberculosis M1461]	90.1	90.1	100%	4e-19	100%	<a href="#">KBA29358.1</a>
thymidylate kinase Tmk [Mycobacterium tuberculosis M1417]	90.1	90.1	100%	4e-19	100%	<a href="#">KAZ51277.1</a>
MULTISPECIES: thymidylate kinase [Mycobacterium tuberculosis complex]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_003417036.1</a>
Putative thymidylate kinase Tmk (dTMP kinase) (thymidylic acid kinase) (TMPK) [Mycobacterium canettii]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_015294285.1</a>
Putative thymidylate kinase Tmk (dTMP kinase) (thymidylic acid kinase) (TMPK) [Mycobacterium canettii]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_015291311.1</a>
Putative thymidylate kinase Tmk (dTMP kinase) (thymidylic acid kinase) (TMPK) [Mycobacterium canettii]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_015303784.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_015456493.1</a>
thymidylate kinase [Mycobacterium canettii]	90.1	90.1	100%	4e-19	100%	<a href="#">WP_014001640.1</a>
thymidylate kinase [Mycobacterium tuberculosis]	87.6	87.6	100%	3e-18	96%	<a href="#">WP_024748275.1</a>
hypothetical protein [Mycobacterium avium]	64.3	64.3	100%	7e-11	74%	<a href="#">WP_023877133.1</a>
Thymidylate kinase [Mycobacterium marinum]	65.5	65.5	100%	1e-10	78%	<a href="#">WP_020727270.1</a>
Thymidylate kinase [Mycobacterium sp. 012931]	65.5	65.5	100%	1e-10	78%	<a href="#">WP_020788368.1</a>
thymidylate kinase Tmk [Mycobacterium liflandii]	65.5	65.5	100%	1e-10	78%	<a href="#">WP_015354855.1</a>
thymidylate kinase [Mycobacterium marinum]	65.5	65.5	100%	1e-10	78%	<a href="#">WP_012393166.1</a>
thymidylate kinase [Mycobacterium ulcerans]	65.5	65.5	100%	1e-10	78%	<a href="#">WP_011740536.1</a>
thymidylate kinase [Mycobacterium kansasii 732]	64.7	64.7	100%	2e-10	74%	<a href="#">EUA14516.1</a>
thymidylate kinase [Mycobacterium sp. TKK-01-0059]	64.3	64.3	100%	3e-10	74%	<a href="#">KEF99753.1</a>
thymidylate kinase [Mycobacterium avium subsp. hominissuis 3388]	64.3	64.3	100%	3e-10	74%	<a href="#">KDO94907.1</a>
thymidylate kinase [Mycobacterium avium]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_003874565.1</a>
thymidylate kinase [Mycobacterium avium]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_023864921.1</a>
thymidylate kinase [Mycobacterium avium]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_023883946.1</a>
thymidylate kinase [Mycobacterium avium subsp. hominissuis TH135]	64.3	64.3	100%	3e-10	74%	<a href="#">BAN32696.1</a>
thymidylate kinase [Mycobacterium indicus pranii]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_014942809.1</a>
thymidylate kinase [Mycobacterium intracellulare]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_009957361.1</a>
thymidylate kinase [Mycobacterium avium]	64.3	64.3	100%	3e-10	74%	<a href="#">WP_009978739.1</a>
thimidylate kinase [Mycobacterium avium subsp. paratuberculosis]	64.3	64.3	100%	3e-10	74%	<a href="#">AAL10206.1</a>
thymidylate kinase [Mycobacterium genavense]	61.7	61.7	100%	2e-09	74%	<a href="#">WP_025737680.1</a>

Description	Max score	Total score	Query cover	E value	Ident	Accession
thymidylate kinase [Segniliparus rotundus]	61.3	61.3	100%	3e-09	74%	<a href="#">WP_013139117.1</a>
thymidylate kinase [Mycobacterium gastris 'Wayne']	61.3	61.3	100%	3e-09	70%	<a href="#">ETW22207.1</a>
thymidylate kinase [Mycobacterium parascrofulaceum]	60.9	60.9	100%	4e-09	70%	<a href="#">WP_007168096.1</a>
thymidylate kinase [Mycobacterium kansasii]	60.4	60.4	100%	5e-09	70%	<a href="#">WP_023371563.1</a>
thymidylate kinase [Mycobacterium intracellulare MIN_061107_1834]	59.2	59.2	100%	1e-08	70%	<a href="#">ETZ31677.1</a>
thymidylate kinase [Mycobacterium intracellulare MIN_052511_1280]	59.2	59.2	100%	1e-08	70%	<a href="#">ETZ27386.1</a>
thymidylate kinase [Mycobacterium avium MAV_120809_2495]	59.2	59.2	100%	1e-08	70%	<a href="#">ETZ47660.1</a>
thymidylate kinase [Mycobacterium sp. H4Y]	59.2	59.2	100%	1e-08	70%	<a href="#">WP_008259770.1</a>
thymidylate kinase [Mycobacterium sp. MOTT36Y]	59.2	59.2	100%	1e-08	70%	<a href="#">WP_014712266.1</a>
thymidylate kinase [Mycobacterium intracellulare]	59.2	59.2	100%	1e-08	70%	<a href="#">WP_014385672.1</a>
thymidylate kinase [Mycobacterium intracellulare]	59.2	59.2	100%	1e-08	70%	<a href="#">WP_014380959.1</a>
thymidylate kinase [Mycobacterium tuberculosis TTK-01-0051]	59.2	59.2	96%	1e-08	73%	<a href="#">KBZ68881.1</a>
thymidylate kinase [Mycobacterium colombiense]	59.2	59.2	96%	1e-08	73%	<a href="#">WP_007773133.1</a>
thymidylate kinase [Mycobacterium yongonense]	57.5	57.5	96%	5e-08	69%	<a href="#">WP_020823379.1</a>
thymidylate kinase [Mycobacterium intracellulare]	55.8	55.8	100%	2e-07	67%	<a href="#">WP_014383184.1</a>
thymidylate kinase [Mycobacterium triplex]	54.1	54.1	100%	7e-07	67%	<a href="#">CDO87354.1</a>
thymidylate kinase [Gordonia otitidis]	52.4	52.4	100%	2e-06	67%	<a href="#">WP_007238888.1</a>
thymidylate kinase [Segniliparus rugosus]	52.0	52.0	100%	3e-06	70%	<a href="#">WP_007470136.1</a>
thymidylate kinase [Turicella otitidis]	51.5	51.5	96%	4e-06	65%	<a href="#">WP_004601034.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	4e-06	59%	<a href="#">WP_005117148.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	4e-06	59%	<a href="#">WP_005102107.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_025239600.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_005088442.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_005080864.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_005070201.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_005056276.1</a>
thymidylate kinase [Mycobacterium abscessus]	51.5	51.5	100%	5e-06	59%	<a href="#">WP_005111910.1</a>
thymidylate kinase [Rhodococcus sp. UNC23MFCrub1.1]	51.1	51.1	96%	6e-06	69%	<a href="#">WP_027506870.1</a>
MULTISPECIES: thymidylate kinase [Mycobacterium]	50.7	50.7	100%	9e-06	59%	<a href="#">WP_025088603.1</a>
thymidylate kinase [Gordonia sputii]	49.8	49.8	100%	2e-05	63%	<a href="#">WP_005208003.1</a>
thymidylate kinase [Mycobacterium abscessus]	49.0	49.0	100%	3e-05	59%	<a href="#">WP_016892938.1</a>
thymidylate kinase [Gordonia paraffinivorans]	48.6	48.6	100%	4e-05	63%	<a href="#">WP_006899672.1</a>
thymidylate kinase [Corynebacterium halotolerans]	48.1	48.1	100%	6e-05	59%	<a href="#">WP_015400173.1</a>
thymidylate kinase [Mycobacterium sp. JDM601]	47.7	47.7	100%	8e-05	59%	<a href="#">WP_013829916.1</a>
hypothetical protein [Gordonia kroppenstedtii]	47.7	47.7	81%	8e-05	62%	<a href="#">WP_018180987.1</a>
thymidylate kinase [Mycobacterium abscessus]	47.3	47.3	100%	1e-04	56%	<a href="#">WP_005077366.1</a>
thymidylate kinase [Mycobacterium leprae]	46.9	46.9	96%	1e-04	69%	<a href="#">WP_010907920.1</a>
thymidylate kinase [Gordonia effusa]	46.9	46.9	100%	1e-04	63%	<a href="#">WP_007315852.1</a>
thymidylate kinase [Gordonia polyisoprenivorans]	46.9	46.9	81%	1e-04	65%	<a href="#">WP_026919949.1</a>
thymidylate kinase [Gordonia polyisoprenivorans]	46.9	46.9	81%	1e-04	65%	<a href="#">WP_006370363.1</a>
thymidylate kinase [Dietzia cinnamea]	46.9	46.9	59%	1e-04	88%	<a href="#">WP_007630481.1</a>
thymidylate kinase [Tomitella biformata]	46.4	46.4	100%	2e-04	64%	<a href="#">WP_024793529.1</a>
thymidylate kinase [Gordonia terrae]	46.4	46.4	81%	2e-04	68%	<a href="#">WP_004023514.1</a>
thymidylate kinase [Mycobacterium xenopi 3993]	46.0	46.0	100%	2e-04	59%	<a href="#">EUA32800.1</a>
hypothetical protein [Corynebacterium capitovis]	46.0	46.0	96%	3e-04	57%	<a href="#">WP_018017662.1</a>
thymidylate kinase [Mycobacterium avium]	46.0	46.0	100%	3e-04	59%	<a href="#">WP_019737853.1</a>

Description	Max score	Total score	Query cover	E value	Ident	Accession
thymidylate kinase [Mycobacterium xenopi 4042]	46.0	46.0	100%	3e-04	59%	<a href="#">EUA06831.1</a>
thymidylate kinase [Mycobacterium xenopi]	46.0	46.0	100%	3e-04	59%	<a href="#">WP_003920064.1</a>
thymidylate kinase [Corynebacterium genitalium]	45.6	45.6	88%	4e-04	67%	<a href="#">WP_005286098.1</a>
hypothetical protein [Corynebacterium doosanense]	45.2	45.2	100%	5e-04	63%	<a href="#">WP_018021130.1</a>
thymidylate kinase [Corynebacterium tuberculostearicum]	45.2	45.2	100%	5e-04	59%	<a href="#">WP_005326584.1</a>
thymidylate kinase [Corynebacterium pseudogenitalium]	45.2	45.2	100%	5e-04	59%	<a href="#">WP_005322408.1</a>
thymidylate kinase [Rhodococcus pyridinivorans]	45.2	45.2	100%	5e-04	59%	<a href="#">WP_006550215.1</a>
hypothetical protein [Corynebacterium lubricantis]	44.8	44.8	92%	7e-04	62%	<a href="#">WP_018296139.1</a>
MULTISPECIES: thymidylate kinase [Corynebacterium]	44.8	44.8	100%	7e-04	59%	<a href="#">WP_023020774.1</a>
thymidylate kinase [Mycobacterium neoaurum]	44.8	44.8	100%	7e-04	59%	<a href="#">WP_030134849.1</a>
thymidylate kinase [Gordonia bronchialis]	44.8	44.8	92%	7e-04	60%	<a href="#">WP_012835337.1</a>
hypothetical protein [Smaragdicooccus niigatensis]	44.8	44.8	96%	7e-04	58%	<a href="#">WP_018163288.1</a>
thymidylate kinase [Gordonia solii]	44.3	44.3	85%	0.001	59%	<a href="#">WP_007617234.1</a>
thymidylate kinase [Corynebacterium urealyticum]	44.3	44.3	100%	0.001	56%	<a href="#">WP_015381340.1</a>
thymidylate kinase [Corynebacterium urealyticum]	44.3	44.3	100%	0.001	56%	<a href="#">WP_012359732.1</a>
thymidylate kinase [Mycobacterium aromaticivorans JS19b1]	43.9	43.9	100%	0.001	59%	<a href="#">KDE98580.1</a>
hypothetical protein [Corynebacterium pyruviciproducens]	43.5	43.5	100%	0.002	59%	<a href="#">WP_016458814.1</a>
thymidylate kinase [Dietzia sp. UCD-THP]	43.5	43.5	92%	0.002	67%	<a href="#">WP_017836632.1</a>

## Alignments

thymidylate kinase Tmk, partial [Mycobacterium tuberculosis UT0124]

Sequence ID: [gb|KBM28427.1](#) | Length: 90 | Number of Matches: 1

Range 1: 24 to 50

Score	Expect	Method	Identities	Positives	Gaps	Frame
90.1 bits(205)	5e-20()		27/27(100%)	27/27(100%)	0/27(0%)	

Features:

```
Query 1  ERSRGRAQRDPGRARDNYERDAELQQR 27
          ERSRGRAQRDPGRARDNYERDAELQQR
Sbjct 24  ERSRGRAQRDPGRARDNYERDAELQQR 50
```

thymidylate kinase, partial [Mycobacterium tuberculosis]

Sequence ID: [gb|AIH62975.1](#) | Length: 171 | Number of Matches: 1

Range 1: 105 to 131

Score	Expect	Method	Identities	Positives	Gaps	Frame
90.1 bits(205)	3e-19()		27/27(100%)	27/27(100%)	0/27(0%)	

Features:

```
Query 1  ERSRGRAQRDPGRARDNYERDAELQQR 27
          ERSRGRAQRDPGRARDNYERDAELQQR
Sbjct 105 ERSRGRAQRDPGRARDNYERDAELQQR 131
```

thymidylate kinase, partial [Mycobacterium tuberculosis]

Sequence ID: [gb|AIH98343.1](#) | Length: 175 | Number of Matches: 1

Range 1: 109 to 135

Score	Expect	Method	Identities	Positives	Gaps	Frame
90.1 bits(205)	3e-19()		27/27(100%)	27/27(100%)	0/27(0%)	

Features:

```
Query 1  ERSRGRAQRDPGRARDNYERDAELQQR 27
```

Sbjct 109 ERSRGRAQRDPGRARDNYERDAELQQR  
ERSRGRAQRDPGRARDNYERDAELQQR 135

thymidylate kinase, partial [Mycobacterium bovis]

Sequence ID: **ref|WP\_024459054.1** Length: 210 Number of Matches: 1

Range 1: 144 to 170

Score	Expect	Method	Identities	Positives	Gaps	Frame
90.1 bits(205)	3e-19()		27/27(100%)	27/27(100%)	0/27(0%)	

Features:

Query 1 ERSRGRAQRDPGRARDNYERDAELQQR 27  
ERSRGRAQRDPGRARDNYERDAELQQR  
Sbjct 144 ERSRGRAQRDPGRARDNYERDAELQQR 170

thymidylate kinase [Mycobacterium tuberculosis]

Sequence ID: **gb|AIH23782.1** Length: 214 Number of Matches: 1

Range 1: 148 to 174

Score	Expect	Method	Identities	Positives	Gaps	Frame
90.1 bits(205)	4e-19()		27/27(100%)	27/27(100%)	0/27(0%)	

Features:

Query 1 ERSRGRAQRDPGRARDNYERDAELQQR 27  
ERSRGRAQRDPGRARDNYERDAELQQR  
Sbjct 148 ERSRGRAQRDPGRARDNYERDAELQQR 174