

BLAST Basic Local Alignment Search Tool

Job Title: BorrprimerS

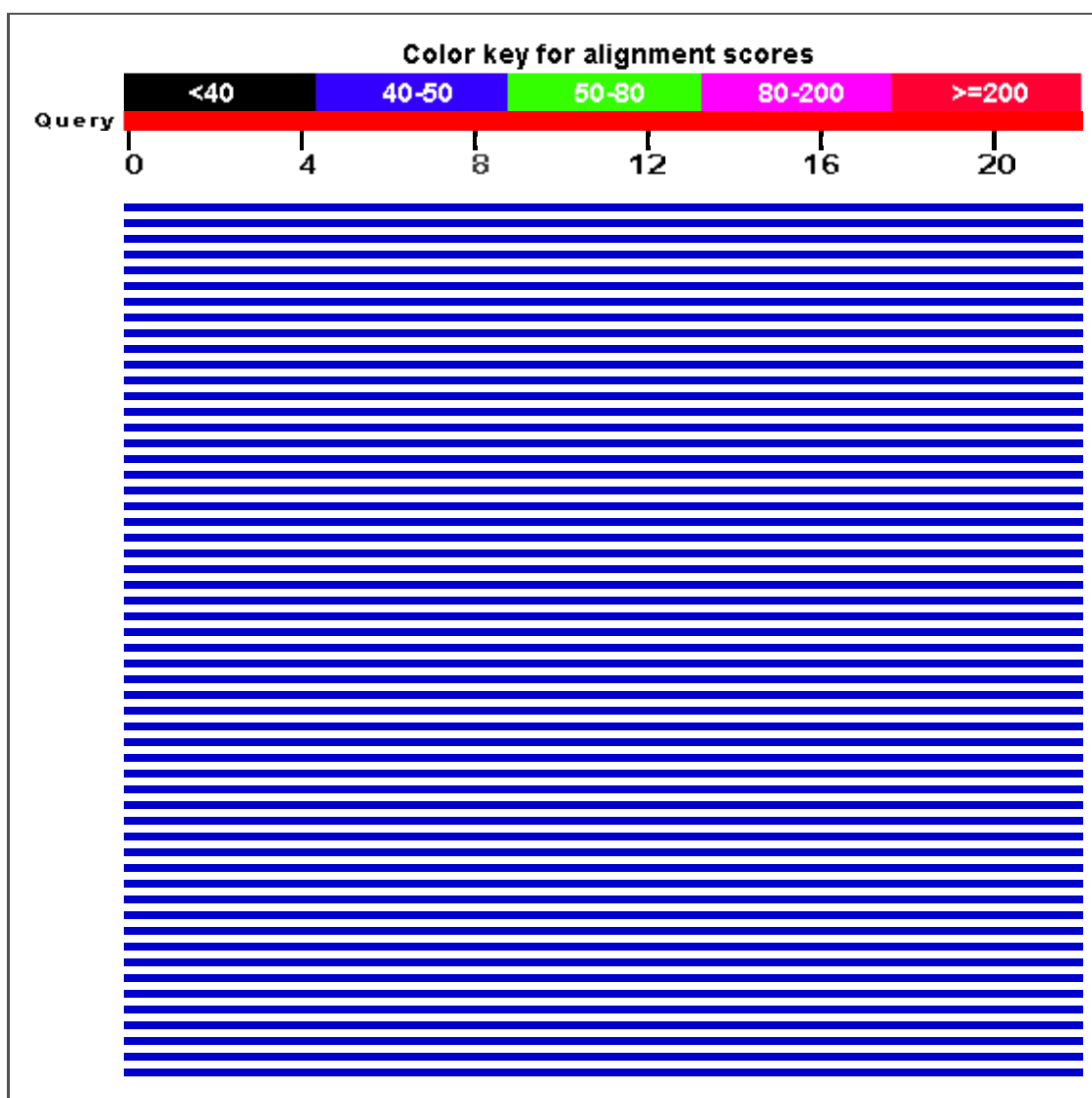
- Your search parameters were adjusted to search for a short input sequence.

BLASTN 2.2.17 (Aug-26-2007)

Reference: Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", *Nucleic Acids Res.* 25:3389-3402. RID: PMMGB3MU012 **Database:** All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences) 6,196,379 sequences; 22,410,130,487 total letters

Query= BorrprimerS Length=22

Distribution of 101 Blast Hits on the Query Sequence



[Distance tree of results](#) **NEW**Legend for links to other resources: [U](#) UniGene [E](#) GEO [G](#) Gene [S](#) Structure [M](#) M**Sequences producing significant alignments:**

(Click headers to sort columns)

EU273221.1	Uncultured bacterium clone TH_a13 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EU240885.1	Borrelia sp. BR 2007 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EU240883.1	Borrelia theileri 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EU132845.1	Uncultured bacterium clone FFCH14064 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF141021.1	Borrelia sp. BR 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
D89900.1	Borrelia garinii gene for 16S rRNA, partial sequence, strain: Bernie	44.1	44.1	100%	0.005	100%
AM746257.1	Uncultured bacterium partial 16S rRNA gene, clone JML_H12	44.1	44.1	100%	0.005	100%
EU025065.1	Borrelia burgdorferi isolate MI-1 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025064.1	Borrelia burgdorferi isolate SCW-60 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025063.1	Borrelia burgdorferi isolate SCW-59 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025062.1	Borrelia burgdorferi isolate SCW-58 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025061.1	Borrelia burgdorferi isolate SCW-57 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025060.1	Borrelia burgdorferi isolate SCW-54 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025059.1	Borrelia burgdorferi isolate SCW-61 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025058.1	Borrelia burgdorferi isolate SCW-48 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025057.1	Borrelia burgdorferi isolate SCW-47 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025056.1	Borrelia burgdorferi isolate SCW-44 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025055.1	Borrelia burgdorferi isolate SCW-43 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025054.1	Borrelia burgdorferi isolate SCW-12 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025053.1	Borrelia burgdorferi isolate SCW-9 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025052.1	Borrelia burgdorferi isolate SCW-6 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025051.1	Borrelia burgdorferi isolate SCW-4 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025050.1	Borrelia burgdorferi isolate SCW-2 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025049.1	Borrelia burgdorferi isolate SI-18 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025048.1	Borrelia burgdorferi isolate SI-17 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025047.1	Borrelia burgdorferi isolate SI-16 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%

EU025046.1	Borrelia burgdorferi isolate SI-19 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025045.1	Borrelia burgdorferi isolate SI-14 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025044.1	Borrelia burgdorferi isolate SCSC-6 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025043.1	Borrelia burgdorferi isolate SCSC-5 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025042.1	Borrelia burgdorferi isolate SCSC-3 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025041.1	Borrelia burgdorferi isolate SCSC-2 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025040.1	Borrelia burgdorferi isolate SCI-1 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025039.1	Borrelia burgdorferi isolate SCGT-17 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025038.1	Borrelia burgdorferi isolate SCGT-16 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025037.1	Borrelia burgdorferi isolate SCGT-7 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025036.1	Borrelia burgdorferi isolate SCGT-4 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025035.1	Borrelia burgdorferi isolate SCCH-30 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025034.1	Borrelia burgdorferi isolate SCCH-28 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025033.1	Borrelia burgdorferi isolate SCCH-25 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025032.1	Borrelia burgdorferi isolate SCCH-24 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025031.1	Borrelia burgdorferi isolate SCCH-31 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025030.1	Borrelia burgdorferi isolate BUL-8 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU025029.1	Borrelia burgdorferi isolate BUL-3 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
AB305505.1	Uncultured bacterium gene for 16S rRNA, partial sequence, clone: p763_b_4.34	44.1	44.1	100%	0.005	100%
EU014810.1	Borrelia burgdorferi isolate SCW-3 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014809.1	Borrelia burgdorferi isolate SCw-62 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014808.1	Borrelia burgdorferi isolate SCW-53 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014807.1	Borrelia burgdorferi isolate SCW-25 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014806.1	Borrelia burgdorferi isolate SI-15 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014805.1	Borrelia burgdorferi isolate SCI-1 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014804.1	Borrelia burgdorferi isolate SCCH-19 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014803.1	Borrelia burgdorferi isolate SCCH-13 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014802.1	Borrelia burgdorferi isolate SCCH-9 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014801.1	Borrelia burgdorferi isolate SCCH-3 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014800.1	Borrelia burgdorferi isolate BUL-10 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%

EU014799.1	Borrelia burgdorferi isolate BUL-6 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014798.1	Borrelia burgdorferi isolate BUL-5 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014797.1	Borrelia burgdorferi isolate BUL-4 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EU014796.1	Borrelia burgdorferi isolate BUL-1 16S ribosomal RNA (rrs) gene, partial sequence	44.1	44.1	100%	0.005	100%
EF665487.1	Uncultured proteobacterium clone GASP-MB2W3_E06 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF641295.1	Borrelia hermsii strain LPO 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ981010.1	Uncultured bacterium clone layman_l22 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ981000.1	Uncultured bacterium clone layman_j22 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF541175.1	Borrelia afzelii strain Nov1105 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF541174.1	Borrelia afzelii strain Nov11506 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ676372.1	Uncultured candidate division TM6 bacterium clone MVP-110 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ676349.1	Uncultured candidate division TM6 bacterium clone MVP-50 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF507535.1	Borrelia lonestari clone pBLS1082 16S ribosomal RNA gene, partial sequence; hypothetical protein genes, complete cds; and putative proline dipeptidase gene, partial cds	44.1	44.1	100%	0.005	100%
EF523250.1	Borrelia hermsii strain CC1 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF515541.1	Uncultured bacterium clone 29h07 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF488992.1	Borrelia sp. 57Nsk 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF488991.1	Borrelia garinii strain Nov9906 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF488990.1	Borrelia garinii strain Nov7006 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF488989.1	Borrelia garinii strain Nov14506 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF509402.1	Uncultured bacterium clone P7D1-446 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ463373.1	Borrelia garinii strain 05-F35P 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
EF018807.1	Uncultured bacterium clone Amb_16S_1277 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ803342.1	Uncultured bacterium clone RL311_aam24c07 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
AM182231.1	Borrelia spielmanii partial 16S rRNA gene, strain PJes	44.1	44.1	100%	0.005	100%
AM182230.1	Borrelia spielmanii partial 16S rRNA gene, strain PANz	44.1	44.1	100%	0.005	100%
AM182229.1	Borrelia spielmanii partial 16S rRNA gene, strain PMai	44.1	44.1	100%	0.005	100%
AM182228.1	Borrelia spielmanii partial 16S rRNA gene, strain PMew	44.1	44.1	100%	0.005	100%
AM182227.1	Borrelia spielmanii partial 16S rRNA gene, strain PHap	44.1	44.1	100%	0.005	100%

AM182226.1	<i>Borrelia spielmanii</i> partial 16S rRNA gene, strain PSigII	44.1	44.1	100%	0.005	100%
AM418456.1	<i>Borrelia</i> sp. Ir-3519 partial 16S rRNA gene, isolate Ir-3519	44.1	44.1	100%	0.005	100%
AM418454.1	<i>Borrelia</i> sp. Ir-4721 partial 16S rRNA gene, isolate Ir-4721	44.1	44.1	100%	0.005	100%
AM418453.1	<i>Borrelia garinii</i> partial 16S rRNA gene, isolate Ir-2200	44.1	44.1	100%	0.005	100%
DQ872186.1	<i>Borrelia theileri</i> 16S ribosomal RNA (<i>rrs</i>) gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ833491.1	Uncultured bacterium clone 35-52 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ855530.1	<i>Borrelia hermsii</i> isolate MAT 16S ribosomal RNA gene, complete sequence	44.1	44.1	100%	0.005	100%
DQ855529.1	<i>Borrelia hermsii</i> isolate LAK-5 16S ribosomal RNA gene, complete sequence	44.1	44.1	100%	0.005	100%
DQ855528.1	<i>Borrelia hermsii</i> isolate LAK-4 16S ribosomal RNA gene, complete sequence	44.1	44.1	100%	0.005	100%
DQ855527.1	<i>Borrelia hermsii</i> isolate LAK-3 16S ribosomal RNA gene, complete sequence	44.1	44.1	100%	0.005	100%
CP000395.1	<i>Borrelia afzelii</i> PKo, complete genome	44.1	80.3	100%	0.005	100%
DQ379485.1	<i>Borrelia lusitaniae</i> strain RB-La1N1 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ379484.1	<i>Borrelia lusitaniae</i> strain RB-Pm2N6 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ650329.1	<i>Borrelia afzelii</i> strain DB19N7-04 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ650328.1	<i>Borrelia garinii</i> strain DB18N6-04 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%
DQ650327.1	<i>Borrelia miyamotoi</i> strain DB15F6-04 16S ribosomal RNA gene, partial sequence	44.1	44.1	100%	0.005	100%

Alignments

>gb|EU273221.1| Uncultured bacterium clone TH_a13 16S ribosomal RNA gene, partial sequence
Length=700

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 246 TCACACTGGAACTGAGATACGG 267

>gb|EU240885.1| Borrelia sp. BR 2007 16S ribosomal RNA gene, partial sequence
Length=809

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 84 TCACACTGGAACTGAGATACGG 105

>gb|EU240883.1| Borrelia theileri 16S ribosomal RNA gene, partial sequence
Length=545

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 16 TCACACTGGAACTGAGATACGG 37

>gb|EU132845.1| Uncultured bacterium clone FFCH14064 16S ribosomal RNA gene, partial sequence
Length=1398

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 314 TCACACTGGAACTGAGATACGG 335

>gb|EF141021.1| Borrelia sp. BR 16S ribosomal RNA gene, partial sequence
Length=1100

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 151 TCACACTGGAACTGAGATACGG 172

>dbj|D89900.1| Borrelia garinii gene for 16S rRNA, partial sequence, strain: Bernie
Length=1130

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAACTGAGATACGG 22
|||
Sbjct 272 TCACACTGGAACTGAGATACGG 293

>emb|AM746257.1| Uncultured bacterium partial 16S rRNA gene, clone JML_H12
Length=829

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 299 TCACACTGGAAGTGGAGATACGG 320

>gb|EU025065.1| Borrelia burgdorferi isolate MI-1 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025064.1| Borrelia burgdorferi isolate SCW-60 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025063.1| Borrelia burgdorferi isolate SCW-59 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025062.1| Borrelia burgdorferi isolate SCW-58 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025061.1| Borrelia burgdorferi isolate SCW-57 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025060.1| Borrelia burgdorferi isolate SCW-54 16S ribosomal RNA (rrs) gene,
 partial sequence
 Length=1362

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||

Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025059.1| Borrelia burgdorferi isolate SCW-61 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025058.1| Borrelia burgdorferi isolate SCW-48 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025057.1| Borrelia burgdorferi isolate SCW-47 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025056.1| Borrelia burgdorferi isolate SCW-44 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025055.1| Borrelia burgdorferi isolate SCW-43 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025054.1| Borrelia burgdorferi isolate SCW-12 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

>gb|EU025053.1| Borrelia burgdorferi isolate SCW-9 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

>gb|EU025046.1| Borrelia burgdorferi isolate SI-19 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025045.1| Borrelia burgdorferi isolate SI-14 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025044.1| Borrelia burgdorferi isolate SCSC-6 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025043.1| Borrelia burgdorferi isolate SCSC-5 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025042.1| Borrelia burgdorferi isolate SCSC-3 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025041.1| Borrelia burgdorferi isolate SCSC-2 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025040.1| Borrelia burgdorferi isolate SCI-1 16S ribosomal RNA (rrs) gene,
partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005

Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025039.1| *Borrelia burgdorferi* isolate SCGT-17 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025038.1| *Borrelia burgdorferi* isolate SCGT-16 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025037.1| *Borrelia burgdorferi* isolate SCGT-7 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025036.1| *Borrelia burgdorferi* isolate SCGT-4 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025035.1| *Borrelia burgdorferi* isolate SCCH-30 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025034.1| *Borrelia burgdorferi* isolate SCCH-28 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025033.1| *Borrelia burgdorferi* isolate SCCH-25 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025032.1| *Borrelia burgdorferi* isolate SCCH-24 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025031.1| *Borrelia burgdorferi* isolate SCCH-31 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025030.1| *Borrelia burgdorferi* isolate BUL-8 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU025029.1| *Borrelia burgdorferi* isolate BUL-3 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>dbj|AB305505.1| Uncultured bacterium gene for 16S rRNA, partial sequence, clone: p763_b_4.34
Length=915

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 309 TCACACTGGAAGTGGAGATACGG 330
```

>gb|EU014810.1| *Borrelia burgdorferi* isolate SCW-3 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)

Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014809.1** | *Borrelia burgdorferi* isolate SCw-62 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014808.1** | *Borrelia burgdorferi* isolate SCW-53 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014807.1** | *Borrelia burgdorferi* isolate SCW-25 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014806.1** | *Borrelia burgdorferi* isolate SI-15 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014805.1** | *Borrelia burgdorferi* isolate SCI-1 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>**gb|EU014804.1** | *Borrelia burgdorferi* isolate SCCH-19 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1   TCACACTGGAAGTGGAGATACGG  22
          |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG  237

```

>gb|EU014803.1| *Borrelia burgdorferi* isolate SCCH-13 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014802.1| *Borrelia burgdorferi* isolate SCCH-9 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014801.1| *Borrelia burgdorferi* isolate SCCH-3 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014800.1| *Borrelia burgdorferi* isolate BUL-10 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014799.1| *Borrelia burgdorferi* isolate BUL-6 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014798.1| *Borrelia burgdorferi* isolate BUL-5 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237
```

>gb|EU014797.1| *Borrelia burgdorferi* isolate BUL-4 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

```

>**gb|EU014796.1**| *Borrelia burgdorferi* isolate BUL-1 16S ribosomal RNA (rrs) gene, partial sequence
Length=1362

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 216 TCACACTGGAAGTGGAGATACGG 237

```

>**gb|EF665487.1**| Uncultured proteobacterium clone GASP-MB2W3_E06 16S ribosomal RNA gene, partial sequence
Length=829

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 226 TCACACTGGAAGTGGAGATACGG 247

```

>**gb|EF641295.1**| *Borrelia hermsii* strain LPO 16S ribosomal RNA gene, partial sequen
Length=1257

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 241 TCACACTGGAAGTGGAGATACGG 262

```

>**gb|DQ981010.1**| Uncultured bacterium clone layman_l22 16S ribosomal RNA gene, partial sequence
Length=783

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 284 TCACACTGGAAGTGGAGATACGG 305

```

>**gb|DQ981000.1**| Uncultured bacterium clone layman_j22 16S ribosomal RNA gene, partial sequence
Length=923

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 263 TCACACTGGAAGTGGAGATACGG 284

```

>**gb|EF541175.1**| *Borrelia afzelii* strain Nov1105 16S ribosomal RNA gene, partial sequence
Length=1294

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```

Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 241 TCACACTGGAAGTGGAGATACGG 262

```

>**gb|EF541174.1**| *Borrelia afzelii* strain Nov11506 16S ribosomal RNA gene, partial sequence

Length=1294

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 241 TCACACTGGAAGTGGAGATACGG 262

>**gb|DQ676372.1**| Uncultured candidate division TM6 bacterium clone MVP-110 16S ribosomal RNA gene, partial sequence
Length=1444

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 271 TCACACTGGAAGTGGAGATACGG 292

>**gb|DQ676349.1**| Uncultured candidate division TM6 bacterium clone MVP-50 16S ribosomal RNA gene, partial sequence
Length=1434

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 258 TCACACTGGAAGTGGAGATACGG 279

>**gb|EF507535.1**| *Borrelia lonestari* clone pBLS1082 16S ribosomal RNA gene, partial sequence; hypothetical protein genes, complete cds; and putative proline dipeptidase gene, partial cds
Length=3500

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Minus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 370 TCACACTGGAAGTGGAGATACGG 349

>**gb|EF523250.1**| *Borrelia hermsii* strain CC1 16S ribosomal RNA gene, partial sequen
Length=1239

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 253 TCACACTGGAAGTGGAGATACGG 274

>**gb|EF515541.1**| Uncultured bacterium clone 29h07 16S ribosomal RNA gene, partial sequence
Length=1307

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 201 TCACACTGGAAGTGGAGATACGG 222

>**gb|EF488992.1**| *Borrelia* sp. 57Nsk 16S ribosomal RNA gene, partial sequence
Length=1293

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||

Sbjct 239 TCACACTGGAAGTGGAGATACGG 260

>**gb|EF488991.1**| *Borrelia garinii* strain Nov9906 16S ribosomal RNA gene, partial sequence
Length=1292

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 239 TCACACTGGAAGTGGAGATACGG 260

>**gb|EF488990.1**| *Borrelia garinii* strain Nov7006 16S ribosomal RNA gene, partial sequence
Length=1292

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 239 TCACACTGGAAGTGGAGATACGG 260

>**gb|EF488989.1**| *Borrelia garinii* strain Nov14506 16S ribosomal RNA gene, partial sequence
Length=1292

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 239 TCACACTGGAAGTGGAGATACGG 260

>**gb|EF509402.1**| Uncultured bacterium clone P7D1-446 16S ribosomal RNA gene, partial sequence
Length=1507

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 298 TCACACTGGAAGTGGAGATACGG 319

>**gb|DQ463373.1**| *Borrelia garinii* strain 05-F35P 16S ribosomal RNA gene, partial sequence
Length=388

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 103 TCACACTGGAAGTGGAGATACGG 124

>**gb|EF018807.1**| Uncultured bacterium clone Amb_16S_1277 16S ribosomal RNA gene, partial sequence
Length=1381

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 291 TCACACTGGAAGTGGAGATACGG 312

>**gb|DQ803342.1**| Uncultured bacterium clone RL311_aam24c07 16S ribosomal RNA gene, partial sequence
Length=1396

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 298 TCACACTGGAAGTGGAGATACGG 319

>**emb|AM182231.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PJes
 Length=1389

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 230 TCACACTGGAAGTGGAGATACGG 251

>**emb|AM182230.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PAnz
 Length=1389

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 230 TCACACTGGAAGTGGAGATACGG 251

>**emb|AM182229.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PMai
 Length=1411

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 229 TCACACTGGAAGTGGAGATACGG 250

>**emb|AM182228.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PMew
 Length=1409

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 229 TCACACTGGAAGTGGAGATACGG 250

>**emb|AM182227.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PHap
 Length=1412

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 229 TCACACTGGAAGTGGAGATACGG 250

>**emb|AM182226.1** | *Borrelia spielmanii* partial 16S rRNA gene, strain PSigII
 Length=1389

Score = 44.1 bits (22), Expect = 0.005
 Identities = 22/22 (100%), Gaps = 0/22 (0%)
 Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
 |||
 Sbjct 229 TCACACTGGAAGTGGAGATACGG 250

>**emb|AM418456.1** | *Borrelia* sp. Ir-3519 partial 16S rRNA gene, isolate Ir-3519
 Length=1420

Score = 44.1 bits (22), Expect = 0.005

Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 201 TCACACTGGAAGTGGAGATACGG 222
```

>emb|AM418454.1| *Borrelia* sp. Ir-4721 partial 16S rRNA gene, isolate Ir-4721
Length=1481

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 262 TCACACTGGAAGTGGAGATACGG 283
```

>emb|AM418453.1| *Borrelia garinii* partial 16S rRNA gene, isolate Ir-2200
Length=1478

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 259 TCACACTGGAAGTGGAGATACGG 280
```

>gb|DQ872186.1| *Borrelia theileri* 16S ribosomal RNA (rrs) gene, partial sequence
Length=1183

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 199 TCACACTGGAAGTGGAGATACGG 220
```

>gb|DQ833491.1| Uncultured bacterium clone 35-52 16S ribosomal RNA gene, partial
sequence
Length=1521

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 311 TCACACTGGAAGTGGAGATACGG 332
```

>gb|DQ855530.1| *Borrelia hermsii* isolate MAT 16S ribosomal RNA gene, complete
sequence
Length=1273

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 210 TCACACTGGAAGTGGAGATACGG 231
```

>gb|DQ855529.1| *Borrelia hermsii* isolate LAK-5 16S ribosomal RNA gene, complete
sequence
Length=1273

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

```
Query 1 TCACACTGGAAGTGGAGATACGG 22
      |||
Sbjct 210 TCACACTGGAAGTGGAGATACGG 231
```

>gb|DQ855528.1| *Borrelia hermsii* isolate LAK-4 16S ribosomal RNA gene, complete
sequence

Length=1273


Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 210 TCACACTGGAAGTGGAGATACGG 231

>gb|DQ855527.1| Borrelia hermsii isolate LAK-3 16S ribosomal RNA gene, complete sequence
Length=1273

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 210 TCACACTGGAAGTGGAGATACGG 231

>gb|CP000395.1|  Borrelia afzelii PKo, complete genome
Length=905394

Sort alignments for this s
E value Score Percent :
Query start position Su

Features in this part of subject sequence:
rRNA-16S ribosomal RNA

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Minus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 449662 TCACACTGGAAGTGGAGATACGG 449641

Features flanking this part of subject sequence:
735 bp at 5' side: hypothetical protein
691 bp at 3' side: rRNA-16S ribosomal RNA

Score = 36.2 bits (18), Expect = 1.1
Identities = 18/18 (100%), Gaps = 0/18 (0%)
Strand=Plus/Minus

Query 1 TCACACTGGAAGTGGAGAT 18
|||
Sbjct 447741 TCACACTGGAAGTGGAGAT 447724

>gb|DQ379485.1| Borrelia lusitaniae strain RB-LalN1 16S ribosomal RNA gene, partial sequence
Length=470

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 254 TCACACTGGAAGTGGAGATACGG 275

>gb|DQ379484.1| Borrelia lusitaniae strain RB-Pm2N6 16S ribosomal RNA gene, partial sequence
Length=468

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 254 TCACACTGGAAGTGGAGATACGG 275

>gb|DQ650329.1| Borrelia afzelii strain DB19N7-04 16S ribosomal RNA gene, partial sequence

Length=423

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 258 TCACACTGGAAGTGGAGATACGG 279

>gb|DQ650328.1| Borrelia garinii strain DB18N6-04 16S ribosomal RNA gene, partial sequence
Length=430

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 264 TCACACTGGAAGTGGAGATACGG 285

>gb|DQ650327.1| Borrelia miyamotoi strain DB15F6-04 16S ribosomal RNA gene, partial sequence
Length=423

Score = 44.1 bits (22), Expect = 0.005
Identities = 22/22 (100%), Gaps = 0/22 (0%)
Strand=Plus/Plus

Query 1 TCACACTGGAAGTGGAGATACGG 22
|||
Sbjct 258 TCACACTGGAAGTGGAGATACGG 279

Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences)

Posted date: Dec 19, 2007 5:48 PM

Number of letters in database: 935,294,007

Number of sequences in database: 6,196,379

Lambda K H
1.37 0.711 1.31

Gapped
Lambda K H
1.37 0.711 1.31

Matrix: blastn matrix:1 -3

Gap Penalties: Existence: 5, Extension: 2

Number of Sequences: 6196379

Number of Hits to DB: 8891836

Number of extensions: 3494946

Number of successful extensions: 58625

Number of sequences better than 1000: 14972

Number of HSP's better than 1000 without gapping: 0

Number of HSP's gapped: 58624

Number of HSP's successfully gapped: 15066

Length of query: 22

Length of database: 22410130487

Length adjustment: 18

Effective length of query: 4

Effective length of database: 22298595665

Effective search space: 89194382660

Effective search space used: 89194382660

A: 0

X1: 11 (21.8 bits)

X2: 15 (29.7 bits)

X3: 25 (49.6 bits)

S1: 11 (22.3 bits)

S2: 14 (28.2 bits)