

Supplementary Material 5 - BLAST search result for D2140 scat sequence

BLASTN 2.2.32+

Reference: Zheng Zhang, Scott Schwartz, Lukas Wagner, and Webb Miller (2000), "A greedy algorithm for aligning DNA sequences", J Comput Biol 2000; 7(1-2):203-14.

Reference for database indexing: Aleksandr Morgulis, George Coulouris, Yan Raytselis, Thomas L. Madden, Richa Agarwala, Alejandro A. Schaffer (2008), "Database Indexing for Production MegaBLAST Searches", Bioinformatics 24:1757-1764.

RID: UDRJX1BE01N

Database: Nucleotide collection (nt)

31,070,346 sequences; 100,143,135,861 total letters

Query= D2140_contig_Nepal

Length=227

Sequences producing significant alignments:		Score (Bits)	E Value
gb KJ776749.1	Canis lupus familiaris haplotype CSWB D-loop, ...	420	6e-114
gb KP665928.1	Canis lupus familiaris isolate 23 D-loop, comp...	420	6e-114
gb KP665927.1	Canis lupus familiaris isolate 22 D-loop, comp...	420	6e-114
gb KP665926.1	Canis lupus familiaris isolate 21 D-loop, comp...	420	6e-114
gb KP665925.1	Canis lupus familiaris isolate 20 D-loop, comp...	420	6e-114
gb KM061588.1	Canis lupus familiaris isolate Cf_ws3 mitochon...	420	6e-114
gb KM061584.1	Canis lupus familiaris isolate Cf_uno mitochon...	420	6e-114
gb KM061577.1	Canis lupus familiaris isolate Cf_tdz5 mitoch...	420	6e-114
gb KM061575.1	Canis lupus familiaris isolate Cf_tdz19 mitoch...	420	6e-114
gb KM061570.1	Canis lupus familiaris isolate Cf_tdz13 mitoch...	420	6e-114
gb KM061563.1	Canis lupus familiaris isolate Cf_stp79 mitoch...	420	6e-114
gb KM061559.1	Canis lupus familiaris isolate Cf_stp65 mitoch...	420	6e-114
gb KM061549.1	Canis lupus familiaris isolate Cf_psy4 mitoch...	420	6e-114
gb KM061532.1	Canis lupus familiaris isolate Cf_pl25 mitoch...	420	6e-114
gb KM061530.1	Canis lupus familiaris isolate Cf_pl16 mitoch...	420	6e-114
gb KM061509.1	Canis lupus familiaris isolate Cf_L56 mitochon...	420	6e-114
gb KM061499.1	Canis lupus familiaris isolate Kos_9 mitochond...	420	6e-114
gb KM061487.1	Canis lupus familiaris isolate Cf_jam7 mitoch...	420	6e-114
gb KM061482.1	Canis lupus familiaris isolate Cf_jam10 mitoch...	420	6e-114
gb KM061479.1	Canis lupus familiaris isolate Cf_cau6 mitoch...	420	6e-114
gb KJ139084.1	Canis lupus familiaris isolate 1477_ON1 D-loop...	420	6e-114
gb KC540940.1	Canis lupus familiaris haplotype Dog_D14 contr...	420	6e-114
gb KC540917.1	Canis lupus haplotype Wolf_W1 control region, ...	420	6e-114
gb KM201268.1	Canis lupus familiaris haplotype Be73/19 D-loo...	420	6e-114
gb KJ934230.1	Canis lupus familiaris haplotype H8 D-loop, pa...	420	6e-114
gb KJ934225.1	Canis lupus familiaris haplotype H3 D-loop, pa...	420	6e-114

gb KJ522809.1	Canis lupus familiaris mitochondrion, complete...	420	6e-114
gb KJ637070.1	Canis lupus familiaris haplotype Be22_1 mitoch...	420	6e-114
gb KJ637068.1	Canis lupus familiaris haplotype Be19_9 mitoch...	420	6e-114
gb KJ637067.1	Canis lupus familiaris haplotype Be19_8 mitoch...	420	6e-114
gb KJ637065.1	Canis lupus familiaris haplotype Be19_6 mitoch...	420	6e-114
gb KJ637064.1	Canis lupus familiaris haplotype Be19_5 mitoch...	420	6e-114
gb KJ637063.1	Canis lupus familiaris haplotype Be19_4 mitoch...	420	6e-114
gb KJ637062.1	Canis lupus familiaris haplotype Be19_3 mitoch...	420	6e-114
gb KJ637061.1	Canis lupus familiaris haplotype Be19_2 mitoch...	420	6e-114
gb KJ637060.1	Canis lupus familiaris haplotype Be19_14 mitoc...	420	6e-114
gb KJ637058.1	Canis lupus familiaris haplotype Be19_13/15 mi...	420	6e-114
gb KJ637056.1	Canis lupus familiaris haplotype Be19_12 mitoc...	420	6e-114
gb KJ637055.1	Canis lupus familiaris haplotype Be19_10/11 mi...	420	6e-114
gb KJ637054.1	Canis lupus familiaris haplotype Be19_10 mitoc...	420	6e-114
gb KJ637053.1	Canis lupus familiaris haplotype Be19_1 mitoch...	420	6e-114
gb KF002337.1	Canis lupus familiaris isolate Y22 mitochondri...	420	6e-114
gb KF002336.1	Canis lupus familiaris isolate Y20 mitochondri...	420	6e-114
gb KF002306.1	Canis lupus familiaris isolate m705 mitochondr...	420	6e-114
gb KF002291.1	Canis lupus familiaris isolate L8 mitochondrio...	420	6e-114
gb KF002273.1	Canis lupus familiaris isolate H64 mitochondri...	420	6e-114
gb KF002268.1	Canis lupus familiaris isolate H51 mitochondri...	420	6e-114
gb KF002266.1	Canis lupus familiaris isolate H44 mitochondri...	420	6e-114
gb KF002263.1	Canis lupus familiaris isolate H3 mitochondrio...	420	6e-114
gb KF002262.1	Canis lupus familiaris isolate H22 mitochondri...	420	6e-114
gb KJ472767.1	Canis lupus familiaris mitochondrion, complete...	420	6e-114
gb KF857179.1	Canis lupus mitochondrion, complete genome	420	6e-114
gb KF757308.1	Canis lupus familiaris isolate PQ11 D-loop, pa...	420	6e-114
gb HQ261490.1	Canis lupus familiaris haplotype A15 control r...	420	6e-114
gb HQ452429.1	Canis lupus familiaris haplotype A189 control ...	420	6e-114
gb KC985190.1	Canis lupus familiaris D-loop, partial sequenc...	420	6e-114
gb JX173682.1	Canis lupus familiaris isolate CAN1 D-loop, pa...	420	6e-114
gb JN182095.1	Canis lupus familiaris isolate greyhound3 cyto...	420	6e-114
gb JN182116.1	Canis lupus familiaris isolate husky3 cytochro...	420	6e-114
emb HE687017.1	Canis lupus familiaris mitochondrial partial ...	420	6e-114
gb HQ452468.1	Canis lupus familiaris haplotype A171 control ...	420	6e-114
gb HQ452422.1	Canis lupus familiaris haplotype A175 control ...	420	6e-114
gb JF342891.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342882.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342858.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342857.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342835.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342833.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342827.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342820.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
gb JF342814.1	Canis lupus familiaris haplotype HV1 A169* mit...	420	6e-114
gb JF342808.1	Canis lupus familiaris haplotype HV1 A11 mitoc...	420	6e-114
dbj AB605594.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605582.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605581.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605575.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605570.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605568.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605558.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114

dbj AB605516.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
dbj AB605492.1	Canis lupus familiaris mitochondrial gene for...	420	6e-114
gb HQ452457.1	Canis lupus familiaris haplotype A226 control ...	420	6e-114
dbj AB622564.1	Canis lupus familiaris DNA, hypervariable reg...	420	6e-114
dbj AB622563.1	Canis lupus familiaris DNA, hypervariable reg...	420	6e-114
dbj AB622562.1	Canis lupus familiaris DNA, hypervariable reg...	420	6e-114
dbj AB622561.1	Canis lupus familiaris DNA, hypervariable reg...	420	6e-114
gb HQ997560.1	Canis lupus familiaris isolate 231 D-loop, par...	420	6e-114
gb HQ997531.1	Canis lupus familiaris isolate 201 D-loop, par...	420	6e-114
gb HQ997493.1	Canis lupus familiaris isolate 121 D-loop, par...	420	6e-114
gb HQ997454.1	Canis lupus familiaris isolate 052 D-loop, par...	420	6e-114
gb HQ997424.1	Canis lupus familiaris isolate 004 D-loop, par...	420	6e-114
gb HM560932.1	Canis lupus familiaris haplotype Be61 D-loop, ...	420	6e-114
gb HQ845274.1	Canis lupus familiaris isolate K_38 breed Dwar...	420	6e-114
gb HQ845266.1	Canis lupus familiaris isolate K_30 breed Chih...	420	6e-114
gb HQ644192.1	Canis lupus familiaris isolate 87G ATP synthas...	420	6e-114
gb HQ644148.1	Canis lupus familiaris isolate h21M ATP syntha...	420	6e-114
gb HM561541.1	Canis lupus familiaris isolate K9_18 breed Fox...	420	6e-114
gb HM561539.1	Canis lupus familiaris isolate K9_16 breed Sou...	420	6e-114
gb AF531667.2	Canis familiaris isolate A14 control region, p...	420	6e-114
gb HM560892.1	Canis lupus familiaris haplotype Be21 D-loop, ...	416	7e-113

ALIGNMENTS

>gb|KJ776749.1| Canis lupus familiaris haplotype CSWB D-loop, partial sequence;
mitochondrial
Length=398

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Minus

Query	1	TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA	60
Sbjct	277	TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA	218
Query	61	TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC	120
Sbjct	217	TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC	158
Query	121	TTACATAGGACATATTAACCTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG	180
Sbjct	157	TTACATAGGACATATTAACCTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG	98
Query	181	CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC	227
Sbjct	97	CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC	51

>gb|KP665928.1| Canis lupus familiaris isolate 23 D-loop, complete sequence;
mitochondrial
Length=1270

Score = 420 bits (227), Expect = 6e-114

Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 20   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 80  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 140 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181  CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200  CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KP665927.1| Canis lupus familiaris isolate 22 D-loop, complete sequence;
 mitochondrial
 Length=1270

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 20   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 80  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 140 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181  CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200  CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KP665926.1| Canis lupus familiaris isolate 21 D-loop, complete sequence;
 mitochondrial
 Length=1270

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|KP665925.1| Canis lupus familiaris isolate 20 D-loop, complete sequence;
mitochondrial
Length=1270

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|KM061588.1| Canis lupus familiaris isolate Cf_ws3 mitochondrion, complete genome
Length=16710

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

```

```

Query 61      TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540    TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121     TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 15600    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659

Query 181     CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061584.1| Canis lupus familiaris isolate Cf_uno mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480    TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540    TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 15600    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061577.1| Canis lupus familiaris isolate Cf_tdz5 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480    TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|

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Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061575.1| Canis lupus familiaris isolate Cf_tdz19 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061570.1| Canis lupus familiaris isolate Cf_tdz13 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180

```

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|||||
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061563.1| Canis lupus familiaris isolate Cf_stp79 mitochondrion, complete genome
 Length=16730

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||||
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061559.1| Canis lupus familiaris isolate Cf_stp65 mitochondrion, complete genome
 Length=16730

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||||
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659

```



```

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061549.1| Canis lupus familiaris isolate Cf_psy4 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

```

```

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

```

```

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 15600 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

```

```

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061532.1| Canis lupus familiaris isolate Cf_pl25 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

```

```

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

```

```

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 15600 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

```

```

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061530.1| Canis lupus familiaris isolate Cf_pl16 mitochondrion, complete genome

Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KM061509.1| Canis lupus familiaris isolate Cf_L56 mitochondrion, complete genome

Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KM061499.1| Canis lupus familiaris isolate Kos_9 mitochondrion, complete

genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061487.1| Canis lupus familiaris isolate Cf_jam7 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KM061482.1| Canis lupus familiaris isolate Cf_jam10 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KM061479.1| Canis lupus familiaris isolate Cf_cau6 mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KJ139084.1| Canis lupus familiaris isolate 1477_ON1 D-loop, partial sequence; mitochondrial
gb|KJ139085.1| Canis lupus familiaris isolate 1737_ON4 D-loop, partial sequence; mitochondrial
gb|KJ139086.1| Canis lupus familiaris isolate 1739_ON3 D-loop, partial sequence; mitochondrial
Length=582

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||
Sbjct 140 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KC540940.1| Canis lupus familiaris haplotype Dog_D14 control region, partial sequence; mitochondrial
 Length=536

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||
Sbjct 140 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KC540917.1| Canis lupus haplotype Wolf_W1 control region, partial sequence; mitochondrial
 gb|KC540933.1| Canis lupus familiaris haplotype Dog_D6 control region, partial sequence; mitochondrial
 Length=536

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 20  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 80  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KM201268.1| Canis lupus familiaris haplotype Be73/19 D-loop sequence; mitochondrial
 Length=1070

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 20  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 80  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|KJ934230.1| Canis lupus familiaris haplotype H8 D-loop, partial sequence;
 mitochondrial
 Length=650

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|KJ934225.1| *Canis lupus familiaris* haplotype H3 D-loop, partial sequence;
mitochondrial
Length=650

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|KJ522809.1| *Canis lupus familiaris* mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

```

```

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KJ637070.1| Canis lupus familiaris haplotype Be22_1 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KJ637068.1| Canis lupus familiaris haplotype Be19_9 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

```



```

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
          |
          |
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |
          |
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
          |
          |

```

>gb|KJ637067.1| Canis lupus familiaris haplotype Bel9_8 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
        |
        |
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
        |
        |
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
        |
        |
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
        |
        |
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
          |
          |
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |
          |
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
          |
          |

```

>gb|KJ637065.1| Canis lupus familiaris haplotype Bel9_6 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
        |
        |
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
        |
        |
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
        |
        |
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
        |
        |
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
          |

```

```
Sbjct 15600 TTACATAGGACATATTAAGGCTTAATCACCATGCCTCGAGAAAC 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KJ637064.1| Canis lupus familiaris haplotype Be19_5 mitochondrion, partial genome

Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGGCTTAATCACCATGCCTCGAGAAAC 180
|
Sbjct 15600 TTACATAGGACATATTAAGGCTTAATCACCATGCCTCGAGAAAC 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KJ637063.1| Canis lupus familiaris haplotype Be19_4 mitochondrion, partial genome

Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGGCTTAATCACCATGCCTCGAGAAAC 180
|
Sbjct 15600 TTACATAGGACATATTAAGGCTTAATCACCATGCCTCGAGAAAC 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
```

Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KJ637062.1| Canis lupus familiaris haplotype Bel9_3 mitochondrion, partial genome
Length=16529

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 15479 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15538
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15539 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15598
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15599 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15658
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15659 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15705

>gb|KJ637061.1| Canis lupus familiaris haplotype Bel9_2 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KJ637060.1| Canis lupus familiaris haplotype Be19_14 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KJ637058.1| Canis lupus familiaris haplotype Be19_13/15 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KJ637056.1| Canis lupus familiaris haplotype Be19_12 mitochondrion, partial genome

Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCCTCCCCTA 60
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KJ637055.1| Canis lupus familiaris haplotype Bel9_10/11 mitochondrion, partial genome

Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCCTCCCCTA 60
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|KJ637054.1| Canis lupus familiaris haplotype Bel9_10 mitochondrion, partial genome

Length=16530

Score = 420 bits (227), Expect = 6e-114

Identities = 227/227 (100%), Gaps = 0/227 (0%)

Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KJ637053.1| *Canis lupus familiaris* haplotype Bel9_1 mitochondrion, partial genome
Length=16530

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
            |
Sbjct 15480   TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
            |
Sbjct 15540   TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
            |
Sbjct 15600   TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
            |
Sbjct 15660   CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|KF002337.1| *Canis lupus familiaris* isolate Y22 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60

```

```

|||||
Sbjct 7456 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575

Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 180
|||||
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 7635

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002336.1| Canis lupus familiaris isolate Y20 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 7456 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575

Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 180
|||||
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 7635

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002306.1| Canis lupus familiaris isolate m705 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 7456 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||

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```

Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 7635
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002291.1| Canis lupus familiaris isolate L8 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCTTCTCCCCTCCCCTA 60
|
Sbjct 7456 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCTTCTCCCCTCCCCTA 7515
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 7635
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002273.1| Canis lupus familiaris isolate H64 mitochondrion, partial genome
gb|KF002289.1| Canis lupus familiaris isolate L43 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCTTCTCCCCTCCCCTA 60
|
Sbjct 7456 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCTTCTCCCCTCCCCTA 7515
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|

```



```

Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 7635

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

```

>gb|KF002268.1| Canis lupus familiaris isolate H51 mitochondrion, partial genome
gb|KF002277.1| Canis lupus familiaris isolate H85 mitochondrion, partial genome
gb|KF002288.1| Canis lupus familiaris isolate L36 mitochondrion, partial genome
gb|KF002297.1| Canis lupus familiaris isolate m432 mitochondrion, partial genome
gb|KF002313.1| Canis lupus familiaris isolate m752 mitochondrion, partial genome
gb|KF002326.1| Canis lupus familiaris isolate R41 mitochondrion, partial genome
gb|KF002327.1| Canis lupus familiaris isolate R42 mitochondrion, partial genome

```

Length=8018

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 7456 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575

Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 7635

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

```

>gb|KF002266.1| Canis lupus familiaris isolate H44 mitochondrion, partial genome
gb|KF002279.1| Canis lupus familiaris isolate H94 mitochondrion, partial genome
gb|KF002285.1| Canis lupus familiaris isolate L22 mitochondrion, partial genome
gb|KF002316.1| Canis lupus familiaris isolate Ny78 mitochondrion, partial genome

```

Length=8018

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 7456 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||

```

```

Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 7635
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002263.1| Canis lupus familiaris isolate H3 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 7456 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 7635
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682

```

>gb|KF002262.1| Canis lupus familiaris isolate H22 mitochondrion, partial genome
Length=8018

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 7456 TTGAATCACCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 7515
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 7516 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 7575
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 7576 TTACATAGGACATATTAACCTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 7635

```

```
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 7636 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 7682
```

>gb|KJ472767.1| Canis lupus familiaris mitochondrion, complete genome
Length=16730

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
```

```
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
```

```
Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 15600 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
```

```
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KF857179.1| Canis lupus mitochondrion, complete genome
Length=16729

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
```

```
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
```

```
Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 15600 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
```

```
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
```

>gb|KF757308.1| Canis lupus familiaris isolate PQ11 D-loop, partial sequence; mitochondrial
 Length=582

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|HQ261490.1| Canis lupus familiaris haplotype A15 control region, partial sequence; mitochondrial
 Length=610

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||
Sbjct 48 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 107

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||
Sbjct 108 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 167

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||
Sbjct 168 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 227

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||
Sbjct 228 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 274
    
```

>gb|HQ452429.1| Canis lupus familiaris haplotype A189 control region, partial sequence; mitochondrial

Length=582

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

>gb|KC985190.1| Canis lupus familiaris D-loop, partial sequence; mitochondrial
Length=418

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Minus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 279 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 220
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 219 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 160
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 159 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 100
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 99 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 53

>gb|JX173682.1| Canis lupus familiaris isolate CAN1 D-loop, partial sequence;
mitochondrial
Length=413

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)

Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |
Sbjct 76 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 135

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |
Sbjct 136 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 195

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |
Sbjct 196 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 255

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |
Sbjct 256 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 302
    
```

>gb|JN182095.1| Canis lupus familiaris isolate greyhound3 cytochrome b gene, partial cds; tRNA-Thr and tRNA-Pro genes, complete sequence; and D-loop, partial sequence; mitochondrial
gb|JN182129.1| Canis lupus x Canis lupus familiaris isolate phyl cytochrome b gene, partial cds; tRNA-Thr and tRNA-Pro genes, complete sequence; and D-loop, partial sequence; mitochondrial
Length=1433

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |
Sbjct 204 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 263

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |
Sbjct 264 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 323

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |
Sbjct 324 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 383

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |
Sbjct 384 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 430
    
```

>gb|JN182116.1| Canis lupus familiaris isolate husky3 cytochrome b gene, partial cds; tRNA-Thr and tRNA-Pro genes, complete sequence; and D-loop, partial sequence; mitochondrial
Length=1373

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 204 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 263

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 264 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 323

Query 121 TTACATAGGACATATTA ACTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 180
|
Sbjct 324 TTACATAGGACATATTA ACTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 383

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 384 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 430

>emb|HE687017.1| Canis lupus familiaris mitochondrial partial D-loop, breed: Bucovina Shepherd Dog
Length=840

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 227 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 286

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 287 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 346

Query 121 TTACATAGGACATATTA ACTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 180
|
Sbjct 347 TTACATAGGACATATTA ACTCAATCTCATAATTCACTGATCTATCAACAGTAATCGAATG 406

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 407 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 453

>gb|HQ452468.1| Canis lupus familiaris haplotype A171 control region, partial sequence; mitochondrial
Length=582

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|HQ452422.1| Canis lupus familiaris haplotype A175 control region, partial sequence; mitochondrial
Length=582

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

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>gb|JF342891.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome
Length=16736

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

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Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|

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Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
    
```

>gb|JF342882.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome
 Length=16736

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706
    
```

>gb|JF342858.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome
 Length=16736

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

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Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
    
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|||||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||||
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

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>gb|JF342857.1| Canis lupus familiaris haplotype HV1 A11 mitochondrion, partial genome
gb|JF342865.1| Canis lupus familiaris haplotype HV1 A11 mitochondrion, partial genome
gb|JF342877.1| Canis lupus familiaris haplotype HV1 A11 mitochondrion, partial genome
Length=16736

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||||
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||||
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 15659
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||||
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|JF342835.1| Canis lupus familiaris haplotype HV1 A11 mitochondrion, partial genome
Length=16735

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||||
Sbjct 15479 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15538

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Query 61      TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
|
|
Sbjct 15539    TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15598

Query 121     TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
|
|
Sbjct 15599    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15658

Query 181     CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
|
|
Sbjct 15659    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15705

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>gb|JF342833.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome

Length=16737

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
|
|
Sbjct 15480    TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
|
|
Sbjct 15540    TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
|
|
Sbjct 15600    TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
|
|
Sbjct 15660    CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|JF342827.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome

Length=16736

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1      TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
|
|
Sbjct 15480    TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61     TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
|
|
Sbjct 15540    TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

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```

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|JF342820.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome
Length=16736

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 15600 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

```

>gb|JF342814.1| Canis lupus familiaris haplotype HV1 A169* mitochondrion, partial genome
Length=16736

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 60
|
Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|

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Sbjct 15600 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
 |||

Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>gb|JF342808.1| Canis lupus familiaris haplotype HV1 All mitochondrion, partial genome
 Length=16736

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
 |||

Sbjct 15480 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 15539

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
 |||

Sbjct 15540 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 15599

Query 121 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 180
 |||

Sbjct 15600 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 15659

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
 |||

Sbjct 15660 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 15706

>dbj|AB605594.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf106
 Length=710

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
 |||

Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
 |||

Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205

Query 121 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 180
 |||

Sbjct 206 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 265

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227

Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

>dbj|AB605582.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf94 Length=710

Score = 420 bits (227), Expect = 6e-114 Identities = 227/227 (100%), Gaps = 0/227 (0%) Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

>dbj|AB605581.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf93 Length=710

Score = 420 bits (227), Expect = 6e-114 Identities = 227/227 (100%), Gaps = 0/227 (0%) Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

>dbj|AB605575.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf87

Length=710

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312
```

>dbj|AB605570.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf82

Length=710

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312
```

>dbj|AB605568.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf80

Length=710

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

>dbj|AB605558.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf70

Length=710

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
Sbjct 206 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

>dbj|AB605516.1| Canis lupus familiaris mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf28

Length=710

Score = 420 bits (227), Expect = 6e-114

Identities = 227/227 (100%), Gaps = 0/227 (0%)

Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||||||
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||||||
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||||||
Sbjct 206 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||||||
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

```

>dbj|AB605492.1| *Canis lupus familiaris* mitochondrial gene for tRNA-Pro, D-loop, complete and partial sequence, isolate: Cf04
 Length=710

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |||||||
Sbjct 86 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 145

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |||||||
Sbjct 146 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 205

Query 121 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |||||||
Sbjct 206 TTACATAGGACATATTAACTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 265

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |||||||
Sbjct 266 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 312

```

>gb|HQ452457.1| *Canis lupus familiaris* haplotype A226 control region, partial sequence; mitochondrial
 gb|KJ139135.1| *Canis lupus familiaris* isolate 1810_MIN3 D-loop, partial sequence; mitochondrial
 gb|KJ139136.1| *Canis lupus familiaris* isolate 1707_CAL3 D-loop, partial sequence; mitochondrial
 Length=582

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>dbj|AB622564.1| Canis lupus familiaris DNA, hypervariable region 1 (control region),
 partial sequence, haplotype: NVLU052
 Length=660

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
      |
Sbjct 25 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 84

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
      |
Sbjct 85 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 144

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
      |
Sbjct 145 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 204

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
      |
Sbjct 205 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 251

```

>dbj|AB622563.1| Canis lupus familiaris DNA, hypervariable region 1 (control region),
 partial sequence, haplotype: NVLU051
 Length=660

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 25 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 84

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 85 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 144

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 145 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 204

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 205 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 251

```

>dbj|AB622562.1| Canis lupus familiaris DNA, hypervariable region 1 (control region), partial sequence, haplotype: NVLU050
Length=660

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 25 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 84

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 85 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 144

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 145 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 204

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 205 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 251

```

>dbj|AB622561.1| Canis lupus familiaris DNA, hypervariable region 1 (control region), partial sequence, haplotype: NVLU049
Length=660

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|

```

```
Sbjct 25 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 84
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 85 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 144
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 145 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 204
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 205 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 251
```

>gb|HQ997560.1| Canis lupus familiaris isolate 231 D-loop, partial sequence;
mitochondrial
Length=673

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTATCTATCAACAGTAATCGAATG 199
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
```

>gb|HQ997531.1| Canis lupus familiaris isolate 201 D-loop, partial sequence;
mitochondrial
Length=673

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
```

```

Sbjct 80  |||
TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|HQ997493.1| Canis lupus familiaris isolate 121 D-loop, partial sequence;
mitochondrial
Length=673

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||
Sbjct 20  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||
Sbjct 80  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
|||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
    
```

>gb|HQ997454.1| Canis lupus familiaris isolate 052 D-loop, partial sequence;
mitochondrial
gb|HQ997468.1| Canis lupus familiaris isolate 087 D-loop, partial sequence;
mitochondrial
Length=672

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|||
Sbjct 20  TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61  TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|||
    
```

```

Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAAC 246

```

>gb|HQ997424.1| Canis lupus familiaris isolate 004 D-loop, partial sequence; mitochondrial

gb|HQ997592.1| Canis lupus familiaris isolate 442 D-loop, partial sequence; mitochondrial

Length=673

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139
Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
|
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAAC 227
|
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAAC 246

```

>gb|HM560932.1| Canis lupus familiaris haplotype Be61 D-loop, partial sequence; mitochondrial

Length=1070

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
|
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
|
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

```

```

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
          |
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |
          |
          |
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|HQ845274.1| Canis lupus familiaris isolate K_38 breed Dwarf Schnauzer control region, partial sequence; mitochondrial
Length=1272

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 60
        |
        |
        |
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
        |
        |
        |
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
          |
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 199

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |
          |
          |
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

>gb|HQ845266.1| Canis lupus familiaris isolate K_30 breed Chihuahua control region, partial sequence; mitochondrial
Length=1248

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 60
        |
        |
        |
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
        |
        |
        |
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |
          |
          |

```

```
Sbjct 140 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 199
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246
```

>gb|HQ644192.1| Canis lupus familiaris isolate 87G ATP synthase F0 subunit 6 (ATP6), cytochrome c oxidase subunit III (COX3), and NADH dehydrogenase subunit 4 (ND4) genes, partial cds; tRNA-His, tRNA-Ser, and tRNA-Leu genes, complete sequence; NADH dehydrogenase subunit 5 (ND5) gene, partial cds; and D-loop, partial sequence; mitochondrial
Length=3228

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCTCCCCTA 60
          |||
Sbjct 2610 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCTCCCCTA 2669

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 2670 TGTACGTCGTGCATTAATGGTTTGCCCATGCATATAAGCATGTACATAATATTATATCC 2729

Query 121 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 2730 TTACATAGGACATATTA ACTCAATCTCATAATTC ACTGATCTATCAACAGTAATCGAATG 2789

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 2790 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 2836
```

>gb|HQ644148.1| Canis lupus familiaris isolate h21M ATP synthase F0 subunit 6 (ATP6), cytochrome c oxidase subunit III (COX3), and NADH dehydrogenase subunit 4 (ND4) genes, partial cds; tRNA-His, tRNA-Ser, and tRNA-Leu genes, complete sequence; NADH dehydrogenase subunit 5 (ND5) gene, partial cds; and D-loop, partial sequence; mitochondrial
Length=3228

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```
Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCTCCCCTA 60
          |||
Sbjct 2609 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCTCCCCTA 2668

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCATGCATATAAGCATGTACATAATATTATATCC 120
```



```

Sbjct 2669 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 2728
          |||
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 2729 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 2788
          |||
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 2789 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 2835
          |||
    
```

>gb|HM561541.1| Canis lupus familiaris isolate K9_18 breed Fox Terrier control region, partial sequence; mitochondrial
 Length=1591

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 117 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 176
          |||
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 177 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 236
          |||
Query 121 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 180
          |||
Sbjct 237 TTACATAGGACATATTAACCTCAATCTCATAATTCACCTGATCTATCAACAGTAATCGAATG 296
          |||
Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 297 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 343
          |||
    
```

>gb|HM561539.1| Canis lupus familiaris isolate K9_16 breed South African Boerboele control region, partial sequence; mitochondrial
 Length=1591

Score = 420 bits (227), Expect = 6e-114
 Identities = 227/227 (100%), Gaps = 0/227 (0%)
 Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 117 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 176
          |||
Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 177 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 236
          |||
    
```

```

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |||
Sbjct 237 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 296

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 297 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 343

```

>gb|AF531667.2| *Canis familiaris* isolate A14 control region, partial sequence
Length=609

Score = 420 bits (227), Expect = 6e-114
Identities = 227/227 (100%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 47 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 106

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 107 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 166

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |||
Sbjct 167 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 226

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 227 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 273

```

>gb|HM560892.1| *Canis lupus familiaris* haplotype Be21 D-loop, partial sequence;
mitochondrial
Length=1070

Score = 416 bits (225), Expect = 7e-113
Identities = 226/227 (99%), Gaps = 0/227 (0%)
Strand=Plus/Plus

```

Query 1 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 60
          |||
Sbjct 20 TTGAATCACCCCTACTGTGCTATGTCAGTATCTCCAGGTAAACCCCTTCTCCCCTCCCCTA 79

Query 61 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 120
          |||
Sbjct 80 TGTACGTCGTGCATTAATGGTTTGCCCCATGCATATAAGCATGTACATAATATTATATCC 139

Query 121 TTACATAGGACATATTAAGTCAATCTCATAATTCAGTCTATCAACAGTAATCGAATG 180
          |||
Sbjct 140 TTACATAGGACATATTAAGTCAATCTCATAATTCAYTGATCTATCAACAGTAATCGAATG 199

```

```

Query 181 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 227
          |||
Sbjct 200 CATATCACTTAGTCCAATAAGGGCTTAATCACCATGCCTCGAGAAAC 246

```

Database: Nucleotide collection (nt)

Posted date: Jul 5, 2015 11:00 AM

Number of letters in database: 1,358,888,053

Number of sequences in database: 31,070,346

```

Lambda      K      H
    1.33    0.621  1.12

```

Gapped

```

Lambda      K      H
    1.28    0.460  0.850

```

Matrix: blastn matrix:1 -2

Gap Penalties: Existence: 0, Extension: 0

Number of Sequences: 31070346

Number of Hits to DB: 1316254

Number of extensions: 589

Number of successful extensions: 589

Number of sequences better than 10: 494

Number of HSP's better than 10 without gapping: 0

Number of HSP's gapped: 494

Number of HSP's successfully gapped: 494

Length of query: 227

Length of database: 100143135861

Length adjustment: 32

Effective length of query: 195

Effective length of database: 99148884789

Effective search space: 19334032533855

Effective search space used: 19334032533855

A: 0

X1: 13 (25.0 bits)

X2: 32 (59.1 bits)

X3: 54 (99.7 bits)

S1: 13 (25.1 bits)

S2: 22 (41.7 bits)