

## 12S-16S

| Lineage    | Haplotype  | 111        | 1111111            |
|------------|------------|------------|--------------------|
|            | 2345556667 | 7888999001 | 2233666            |
|            | 4661373893 | 9144622384 | 2428124            |
|            | 2923111452 | 8201145924 | 0787096            |
| <b>I</b>   | <b>H1</b>  | CCTCGGTTGC | TGTAAAACCA ATATCCC |
| <b>II</b>  | <b>H2</b>  | ....A..... | ..C.-A..... C...T. |
|            | <b>H3</b>  | ...TA..... | ....-AG... G....T. |
| <b>III</b> | <b>H4</b>  | ..C.A...AT | C...--G.T. ....TTT |
|            | <b>H5</b>  | .T..A.C... | ....--G.... TT     |
| <b>IV</b>  | <b>H6</b>  | .T..A.C... | A...--G.... TT     |
|            | <b>H7</b>  | TT..A..C.. | ....--G..G ..TT    |
|            | <b>H8</b>  | TT..A.C... | ....--G..G ..TT    |
|            | <b>H9</b>  | ....A..C.. | ....G--G... .G..TT |
|            | <b>H10</b> | ....A..C.. | ....--G... .GC..TT |
|            | <b>H11</b> | ....A..C.. | ....--GT.. .GC..TT |
|            | <b>H12</b> | ....AA.C.. | ....--GT.. .GC..TT |

**A**

## ADA

|           |       |    |
|-----------|-------|----|
| Haplotype | 11133 | 33 |
|           | 00300 | 23 |
|           | 67918 | 17 |
| <b>A1</b> | GGCCC | GG |
| <b>A2</b> | ..... | A. |
| <b>A3</b> | ..... | AT |
| <b>A4</b> | ..G.T | A. |
| <b>A5</b> | --.T. | A. |

**B**

## TF

|           |     |
|-----------|-----|
| Haplotype | 11  |
|           | 225 |
|           | 083 |
| <b>T1</b> | ACT |
| <b>T2</b> | T.A |
| <b>T3</b> | TTA |

**C**

**Figure S1.** Genetic variation of 12S-16S (mtDNA) and ADA and TF (nDNA) genes in lions. (A) Haplotypes and variable sites for the 12S-16S mtDNA region surveyed in lions (total length 1,882 bp). Position 1 corresponds to position 1441 of the domestic cat (*Felis catus*) mtDNA genome (GenBank U20753). The "-" represents a gap and "." matches the nucleotide in the first sequence. Shading indicates a fixed difference in the mtDNA lineage. (B) Haplotypes and variable sites for the ADA gene segment surveyed in lions (total length 427 bp). (C) Haplotypes and variable sites for the TF gene segment surveyed in lions (total length 427 bp).