

BES promoter type

100 110 120 130 140 150 160 170 180 190

1 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTCATGCGAGGTGA- GGG

2 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

3 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

4 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

5 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCAGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

6 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

7 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

8 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

9 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

10 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGCCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

11 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGG

T. b. gambiense

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1 TTTATCCCGTGCACTACTGCTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCGGC

2 TTTATCCCGTGGTTCCTTTGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTCATGCGAAGAGCAGGGG-

3 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCGGC

4 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTTCATGCGACGGGAAGGGG-

5 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTTAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAGGTGAAGGGGC

6 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTAAGGGGGCTGGTGTGTTATTTTTTCATGCGACGGGAAGGGG-

7 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTTCATGCGACGGGAAGGGGT

8 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTTCATGCGACGGGAAGGGGT

9 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTTCATGCGACGGGAAGGGG-

10 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCAGC

11 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCGGT

12 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGATTTTTTCATGCGAAGTGAAGCGGC

13 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGGGC

14 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCGGC

15 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGGGGC

16 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCGGC

17 TTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCAGGCGAGGTGAAGGGGC

18 TTTATCCCGTGGTTCCTTTGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTTCATGCGAAGAGCAGGGG-

T. equiperdum

1 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAGGTGAAGGG

2 GCTTTATCCCGTGGCTCCTTTGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTGCATGCGAAGAGCAGGG

3 GCTTTATCCCGTGGCTCCTTTGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTGCATGCGAGGTGAAGGG

4 GCTTTATCCCGTGGTTCCTTTGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTGCATGCGAAGAGCAGGG

5 GCTTCATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGACGGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGTTTTGCATGCGAAGAGCAGGG

6 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCG

7 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAGGTGAAGGG

8 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAGGTGAAGGG

9 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCG

10 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTTAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAGGTGAAGGG

11 GCTTTATCCCGTGGCTCCTTCGTCCATTGAGGTTTCTCTCTGGGGCAGGCTGAGCGTATTTTAGAGGGCTGGTGTGTTGCTTTGCATGCGAAGTGAAGCG

BES promoter type

	300	310	320	330	340	350	360	370	380	390
1	ACATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	TGGGGG	--GAG--	GAATAACGCAGAGT	GC	TGAGTTG
2	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
3	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	TGTGGG	-GGGGG	GAATAACGCAGAGT	GC	TGAGTTG
4	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
5	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
6	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
7	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
8	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	TGTGGG	-GGGGG	GAATAACGCAGAGT	GC	TGAGTTG
9	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
10	ACATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
11	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	TGTGGG	-GGGGG	GAATAACGCAGAGT	GC	TGAGTTG

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1	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGAGGGGGGG	--AAAACGCAGAGT	GC	TGAGTTG	
2	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGTGGGTGGGGT	AATAACGCAGAGT	GC	TGAGTTG	
3	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGGGGGGGGG	--AATAACGCAGAGT	GC	TGAGTTG	
4	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	TGTGTGT	TGGGGG	AATAACGCAGAGT	GC	TGAGTTG
5	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	TGTGTGT	TGTGGG	AATAACGCAGAGT	GC	TGAGTTG
6	GTCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGACAGTGTGG	---GGGGGGGGG	GAGTACGC	GAGAGTAC	GC	TGAGTTG
7	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGGCCAAAGGA	--GGAGGGGGGG	--AGTAATGGAGAGT	GC	TGAGTTG	
8	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGGCCAAAGGA	--GGAGGGGGGG	--AGTAATGGAGAGT	GC	TGAGTTG	
9	ATCGTGT	GCGAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	--TGGGGGGGGG	--AATAACGC	CAAAGTGC	TGAGTTG	
10	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGTGGGGGGGG	--AATAACGCAGAGT	GC	TGAGTTG	
11	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGGCCAAAGGA	--GGAGGGGGGG	--AGTAATGGAGAGT	GC	TGAGTTG	
12	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGGCCCAAAGGA	--GGAGGGGGGG	--AGTAATGGAGAGT	GC	TGAGTTG	
13	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGTGGGTGGGGT	AATAACGCAGAGT	GC	TGAGTTG	
14	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAAGGA	--GGAGGGGGGG	--AGTAATGGAGAGT	GC	TGAGTTG	
15	ATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAAC	---GGTGGGGGGG	--AATAACGCAGAGT	GC	TGAGTTG	
16	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGTGGGTGGGGT	AATAACGCAGAGT	GC	TGAGCAGT	
17	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	CGTGTGT	TGGGGG	AATAACGCAGAGT	GC	TGAGTTG
18	ATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	GTGTGTA	AATGGCCCAAACCG	--TGTGGGTGGGGT	AATAACGCAGAGT	GC	TGAGTTG	

T. equiperdum

1	ACATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	TGGGGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
2	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGT	TGGGGT	AATAACGCAGAGT	GC	TGAGCAG
3	ATATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	--GGGGGGGGG	--AATAACGCAGAGT	GC	TGAGTTG	
4	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGT	TGGGGT	AATAACGCAGAGT	GC	TGAGTTG
5	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GGGGT	TGGGGG	GAATAACGCAGAGT	GC	TGAGTTG
6	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCATGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGGGGG	--AATAACGCAGAGT	GC	TGAGCAG	
7	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCATGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGGGGG	--AATAACGCAGAGT	GC	TGAGCAG	
8	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCATGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGGGGG	--AATAACGCAGAGT	GC	TGAGCAG	
9	ACATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGTGT	TGTGGG	GAATAACGCAGAGT	GC	TGAGTTG
10	ACATCGTGC	CGCAGGATGGCGAAGG	TTTGAAGCGTGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGTGT	TGTGGG	GAATAACGCAGAGT	GC	TGAGTTG
11	ACATCGTGC	CGCAGGATGGCGAAGG	CTTGAAGCATGTAGAGAGC	TTGTGTA	AATGGCCCAAACCG	GTGGGGGGG	--AATAACGCAGAGT	GC	TGAGCAG	

BES promoter type

400 410 420 430 440 450 460 470 480 490

1 TTTGATTGGCAAGTGCCCGGAGGGTAGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTGTACAAAAATA

2 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

3 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

4 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

5 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

6 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

7 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

8 TTTGATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTGTACAAAAATA

9 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

10 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

11 TTT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTCTACAAAAATA

T. b. brucei

1 TT-ATTGGCAAGTGCCCGGAGGGATGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCGCTCGGCAATCTGTACAAAA-TA

2 TT----GACAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-TA

3 TTGATTGGCAAGTGCCCGGAGGGATGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCGCTCGGCAATCTGTACAAAA-TA

4 TTGATTAGCATGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACTGTGGCTGTGCTCGGGAATCCGTACAAAATA-TA

5 TTGATTGGCAGGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA-TA

6 TTGATTGGCAAGTGCCCGGAGGGATGCTGAGCAGGAGGAAGGAGACAGTAAAATCGTCTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA-TA

7 TTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

8 TTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

9 TT-ATTGGCAAGTGCCCGGAGGGGTCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCTGTACAAAATA-TA

10 TTGATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCTGTACAAAATA-TA

11 TTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

12 TTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

13 TT----GACAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-TA

14 TTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

15 TTGATTGGCAAGTGCCCGGAGGGATGCTGAGCAGGAGGAAGCGAGATAGTAAAAT-TGGTGAGACGGTGGCTGCACTCGGAATCCGTACAAAATA

16 TT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGAAAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-TA

17 TT-ATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGATCGGGAATCTCTACAAAATA-TA

18 TT----GACAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-TA

T. equiperdum

1 TTTGATTGGCAAGTGCCCGGAGGGGTGCTGAGCAGGAGGAAGCGAGACAGTAAAATCGTCGTGAGACGGTGGCTGCACCTCGGGAATCCGTACAAAATA

2 TTT-ATTGGAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGAAAGTAAAATCGTCGTGAGACGGTGGCTGCACCTCGGGAATCCGTACAAAATA-T

3 TTTGATTGGCAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCTGTACAAAATA-T

4 TTTGA----CAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-T

5 TTTGATTGGCAAGTGCCCGGAGGGGTGCTGAGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-T

6 TTT-ATTGGAAGTGCCCGGAGGGGTGCTTGGGAGGAGGAAGCAAGAAAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-T

7 TTT-ATTGGAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGAAAGTAAAATCGTCGTGAGACGGTGGCTGTGCTAGGGAATCCGTACAAAATA-T

8 TTT-ATTGGAAGTGCCCGGAGGGGTGCTGGGGAGGAGGAAGCAAGAAAGTAAAATCGTCGTGAGACGGTGGCTGTGCTAGGGAATCCGTACAAAATA-T

9 TTTGATTGGCAGGTGCCCGGAGGGGTGCTGAGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGCACCTCGGAATCCGTACAAAATA-T

10 TTTGATTGGCAGGTGCCCGGAGGGGTGCTGAGGAGGAGGAAGCAAGACAGTAAAATCGTCGTGAGACGGTGGCTGCACCTCGGAATCCGTACAAAATA-T

11 TTT-ATTGGAAGTGCCCGGAGGGGTGCTTGGGAGGAGGAAGCAAGAAAGTAAAATCGTCGTGAGACGGTGGCTGTGCTCGGGAATCCGTACAAAATA-T

BES promoter type

	500	510	520	530	540	550	560	570	580	590												
<i>T. b. gambiense</i>	1	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	ACGAC	GAGATG	CTTC	AGGAGAG	CAGAAAA	TAA	CGACA	-AAC	CAATAC							
	2	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	3	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	4	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	5	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	6	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	7	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	8	CTGAA	TATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	9	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	10	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
	11	CTGAAA	ATTATT	TATGGTT	GATATAC	GTGGAA	CTACG	CAGGATG	ATGCT	GCATCG	CCAA	GATGCT	TC	GGAGAG	CAGAAAA	CAACGAC	CGGATA	AAACAC				
<i>T. b. brucei</i>	1	CTGAAA	ATTAT	TGATGGTT	GATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	2	CTGAAA	ATTAT	TGATGGTT	GATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
	3	CTGAAA	ATTAT	TGATGGTT	GATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	4	CTGAAA	ATTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	AAGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
	5	CTGAAA	ATTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	TATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
	6	CTGAAA	ATTAT	GGATGGTT	GATATAC	GTGG	GAACG	AC	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
	7	CTAAA	GTTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	8	CTAAA	GTTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	9	CTGAAA	ATTAT	TGATGGTT	GATATAC	GTGG	GAAC	TAC	G	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAAC	CG	ATCAACAC	
	10	CTGAA	TATTATT	TATGGTT	GATATAC	GTGG	GAAC	TAC	G	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAAC	CG	ATCAACAC	
	11	CTAAA	GTTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	12	CTAAA	GTTAT	TGATGGTT	GATATG	CGTGG	GAAC	TAC	G	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC		
	13	CTGAAA	ATTAT	TGATGGTT	GATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
	14	CTAAA	GTTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	CAACG	CAAA	-CAATAC			
	15	ATA	AAA	GTTAT	TGATGGTT	GATATG	CGGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	TAA	CGAAAA	GAACG	CAAA	-CAATAC		
	16	CTGAAA	ATTAT	TGATGGTT	GATATAC	GTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CG	ATCAACAC		
	17	CTGAAA	ATTAT	TGATGGTT	GATATAC	GTGG	GAAC	TAC	G	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CG	ATAAAACAC	
	18	CTGAAA	ATTAT	TGATGGTT	GATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACAC		
<i>T. equiperdum</i>	1	ACTAAA	A	GTTATT	GATG	GTTG	ATATG	CGGTG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	TAAG	TGCTT	TGGG	GAA	CG	AAAA	TAAC	CGAC	-AAACAATA
	2	ACTGAAA	A	TTATT	GAT	TGTT	GATAT	ACGTG	GGAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA
	3	ACTGAAA	A	TTATT	TATG	TGTT	GATAT	ACGTG	GGAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA
	4	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACA
	5	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAA	CAAG	CAAA	TAAC	CG	CAATCAACA
	6	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA
	7	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA
	8	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA
	9	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGGTG	GAACG	ACG	CAGGATG	ATGCT	TATCG	CAAG	TGCTT	CGGG	GAA	CG	AAAA	TAAC	GAA	-AAACAATA
	10	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGGTG	GAACG	ACG	CAGGATG	ATGCT	TATCG	CAAG	TGCTT	CGGG	GAA	CG	AAAA	TAAC	GAA	-AAACAATA
	11	ACTGAAA	A	TTATT	GATG	GTTG	ATATG	CGTGG	GAACG	ACG	CAGGATG	ATGCT	GCATCG	CAAG	TGCTT	CGGG	GAG	CA	AAAA	CAACG	CGGAT	CAACA

BES promoter type

600 610 620 630 642

T. b. gambiense

1 CGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 2 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 3 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 4 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 5 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 6 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 7 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 8 TGGTGAGTTGATACTATGAA--TCACGCGGGCGTTGCTGCTTC
 9 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 10 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 11 TGGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC

T. b. brucei

1 TGGTGAGTTGATACTATAAAAAT-CGCGTGGGCGTTTCTGCTTC
 2 TGGTGAGTTGATACTATAAAAAT-CGCGTGGGCTTTGCTGCTTC
 3 TGGTGAGTTGATACTATAAAAAT-CGCGTGGGCGTTTCTGCTTC
 4 TGGTGAGTTGATACTA--AAAAT-CACGTGGGCGTTGCTGCTTC
 5 TGGTGAGTTGATACTATAAAAAT-CACGCTGGGCGTTGCTGCTTC
 6 TGGTGAGTTGATACTATAAAGGC-CACATGGACGTTGCTGTTTC
 7 CGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 8 CGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 9 TGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 10 TGGTGAGTTGATACTAAGAA--CACGCGGGCGTTGCTGCTTC
 11 CGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 12 CGGTGAGTTGATACTATAAAAAT-CATGCGGGCGTTGCTGCTTC
 13 TGGTGAGTTGATACTATAAAAAT-CGCGTGGGCTTTGCTGCTTC
 14 CGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 15 TGGTGAGTTGATACTATAAAAAT-CGCGTGGGCGTTTCTGCTTC
 16 TGGTGAGTTATTACTATAAAGGC-CACGCGGGCGTTGCTGCTTC
 17 TGGTGAGTTGATACTATAAAAAT-CACGCGGGCGTTGCTGCTTC
 18 TGGTGAGTTGATACTATAAAAATTGCGTGGGCTTTGCTGCTTC

T. equiperdum

1 CCGTGAGTTGATACTATAAAAATCACGCGGGCGTTGCTGCTTC
 2 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC
 3 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC
 4 CTGGTGAGTTGATACTATAAAAATCGCGTGGGCTTTGCTGCTTC
 5 CTGGTGAGTTGATACTATAAAAATCGCGTGGGCTTTGCTGCTTC
 6 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC
 7 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC
 8 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC
 9 CTGGTGAGTTGATACTATAAAAATCACGCTGGGCGTTGCTGCTTC
 10 CTGGTGAGTTGATACTATAAAAATCACGCTGGGCGTTGCTGCTTC
 11 CTGGTGAGTTGATACTATAAAGGCCACGCGGGCGTTGCTGCTTC