

## A. TE associated motifs

MEME version 4.11.2

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.347 C 0.153 G 0.153 T 0.347

### TE\_MOTIF\_1

letter-probability matrix: alength= 4 w= 15 nsites= 50 E= 9.3e-266

0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	0.460000	0.540000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
1.000000	0.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000

MEME version 4.11.2

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.347 C 0.153 G 0.153 T 0.347

### TE\_MOTIF\_2

letter-probability matrix: alength= 4 w= 21 nsites= 50 E= 1.8e-173

0.140000	0.000000	0.680000	0.180000
0.160000	0.000000	0.000000	0.840000
0.980000	0.000000	0.020000	0.000000
0.980000	0.000000	0.000000	0.020000
1.000000	0.000000	0.000000	0.000000
0.000000	0.080000	0.000000	0.920000
0.180000	0.700000	0.000000	0.120000
0.020000	0.280000	0.000000	0.700000
0.000000	0.000000	0.000000	1.000000
0.020000	0.000000	0.040000	0.940000
0.000000	0.060000	0.020000	0.920000
0.800000	0.000000	0.000000	0.200000
1.000000	0.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000
0.820000	0.000000	0.140000	0.040000
0.160000	0.740000	0.020000	0.080000
0.120000	0.820000	0.000000	0.060000
0.040000	0.780000	0.000000	0.180000
0.000000	0.260000	0.000000	0.740000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000

MEME version 4.11.2

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.347 C 0.153 G 0.153 T 0.347

### TE\_MOTIF\_3

letter-probability matrix: alength= 4 w= 15 nsites= 50 E= 7.1e-172

0.980000	0.000000	0.020000	0.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
1.000000	0.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.200000	0.000000	0.760000	0.040000
0.000000	0.000000	1.000000	0.000000
0.840000	0.000000	0.000000	0.160000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000

## B. Gene associated motifs

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.320 C 0.180 G 0.180 T 0.320

### GENE\_MOTIF\_1

letter-probability matrix: alength= 4 w= 15 nsites= 50 E= 1.9e-108

0.040000	0.700000	0.060000	0.200000
0.020000	0.100000	0.160000	0.720000
0.020000	0.840000	0.060000	0.080000
0.100000	0.160000	0.020000	0.720000
0.000000	0.960000	0.040000	0.000000
0.060000	0.000000	0.000000	0.940000
0.020000	0.760000	0.020000	0.200000
0.000000	0.000000	0.000000	1.000000
0.000000	1.000000	0.000000	0.000000
0.040000	0.040000	0.000000	0.920000
0.020000	0.700000	0.160000	0.120000
0.000000	0.060000	0.080000	0.860000
0.000000	0.980000	0.000000	0.020000
0.000000	0.000000	0.020000	0.980000
0.000000	0.940000	0.060000	0.000000

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.320 C 0.180 G 0.180 T 0.320

**GENE\_MOTIF\_2**

letter-probability matrix: alength= 4 w= 11 nsites= 50 E= 9.6e-089

0.140000	0.000000	0.120000	0.740000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	1.000000	0.000000
1.000000	0.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000
0.880000	0.040000	0.060000	0.020000
0.620000	0.080000	0.060000	0.240000

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.320 C 0.180 G 0.180 T 0.320

**GENE\_MOTIF\_3**

letter-probability matrix: alength= 4 w= 15 nsites= 50 E= 9.2e-050

0.160000	0.200000	0.600000	0.040000
0.680000	0.000000	0.260000	0.060000
0.820000	0.060000	0.060000	0.060000
0.000000	0.000000	1.000000	0.000000
1.000000	0.000000	0.000000	0.000000
0.820000	0.160000	0.020000	0.000000
0.000000	0.000000	1.000000	0.000000
0.960000	0.000000	0.040000	0.000000
0.660000	0.100000	0.100000	0.140000
0.000000	0.000000	1.000000	0.000000
0.920000	0.000000	0.060000	0.020000
0.700000	0.080000	0.160000	0.060000
0.140000	0.060000	0.800000	0.000000
0.520000	0.160000	0.320000	0.000000
0.480000	0.180000	0.220000	0.120000

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.310 C 0.191 G 0.190 T 0.308

**GENE\_MOTIF\_4**

letter-probability matrix: alength= 4 w= 7 nsites= 56 E= 3.3e-009

1.000000	0.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	0.553571	0.446429
0.000000	1.000000	0.000000	0.000000

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.310 C 0.191 G 0.190 T 0.308

**GENE\_MOTIF\_5**

letter-probability matrix: alength= 4 w= 8 nsites= 37 E= 3.2e-005

1.000000	0.000000	0.000000	0.000000
1.000000	0.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	0.000000	1.000000
1.000000	0.000000	0.000000	0.000000
0.756757	0.000000	0.243243	0.000000

MEME version 4.11.4

ALPHABET= ACGT

strands: + -

Background letter frequencies (from unknown source):

A 0.310 C 0.191 G 0.190 T 0.308

**GENE\_MOTIF\_6**

letter-probability matrix: alength= 4 w= 7 nsites= 40 E= 2.9e-003

0.000000	1.000000	0.000000	0.000000
0.000000	1.000000	0.000000	0.000000
0.000000	0.000000	1.000000	0.000000
0.000000	0.000000	0.000000	1.000000
0.000000	0.000000	0.000000	1.000000
1.000000	0.000000	0.000000	0.000000
0.450000	0.550000	0.000000	0.000000