No. mutations = 49,018

Relative contribution

0.3

0.2

0.1

0.0

Point mutation type

C>A

C>G

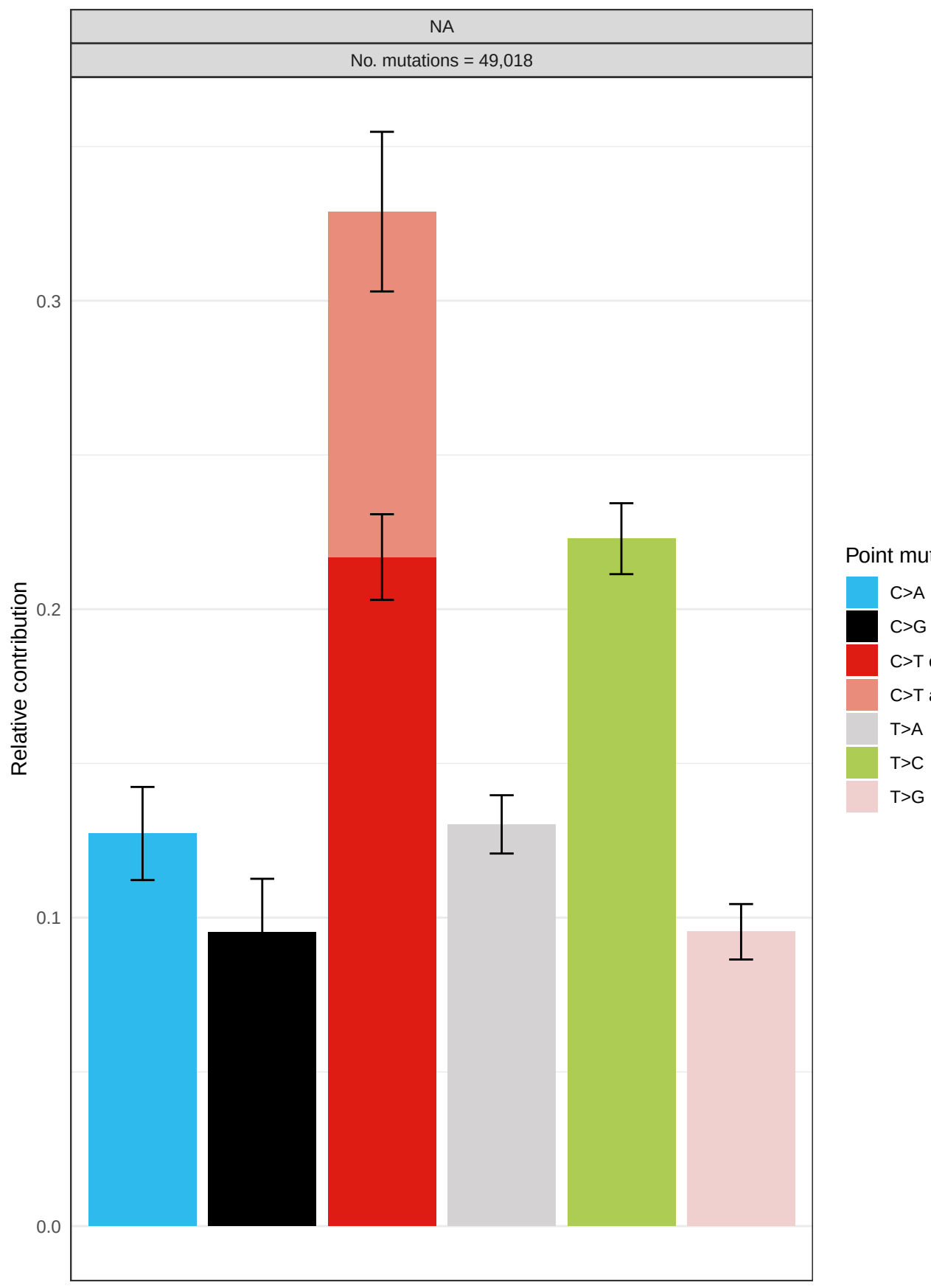
C>T other

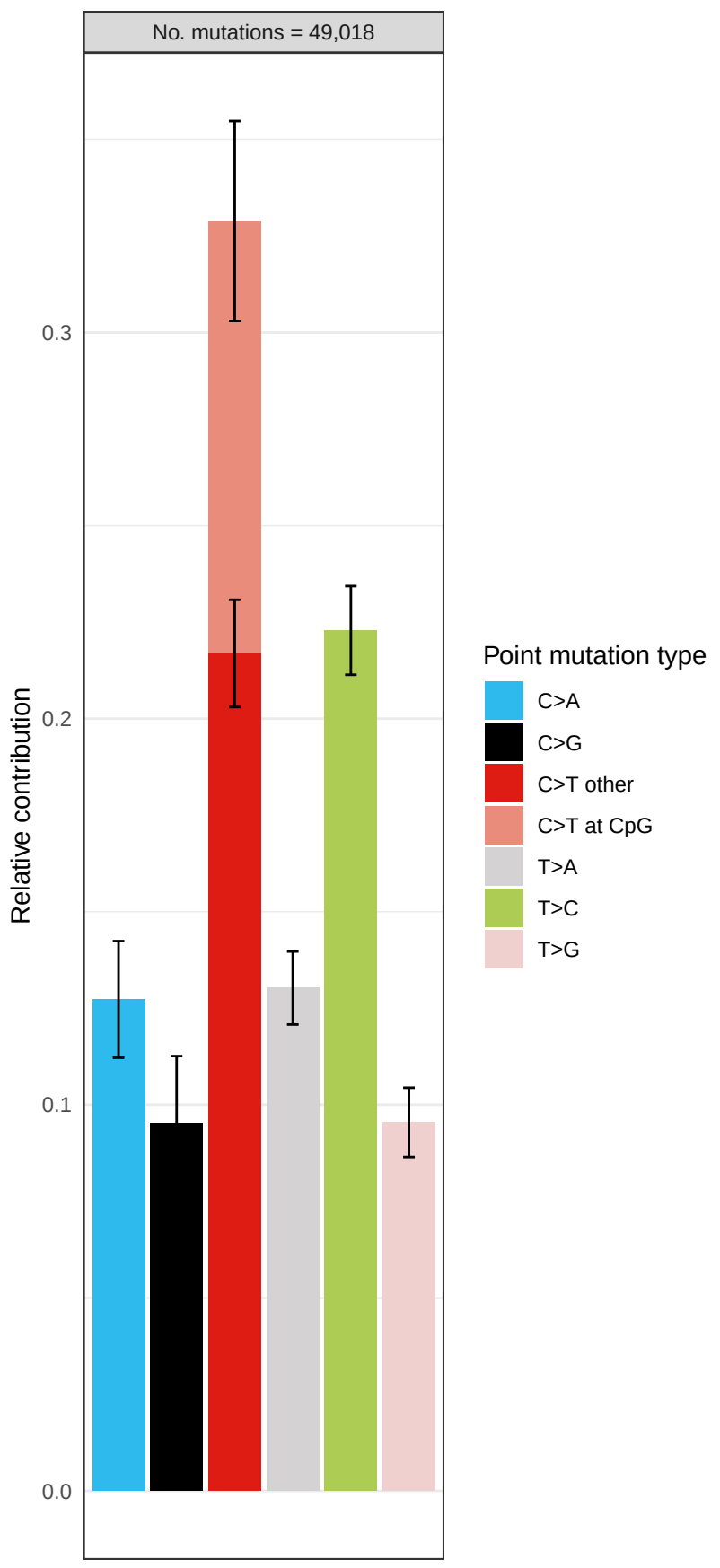
C>T at CpG

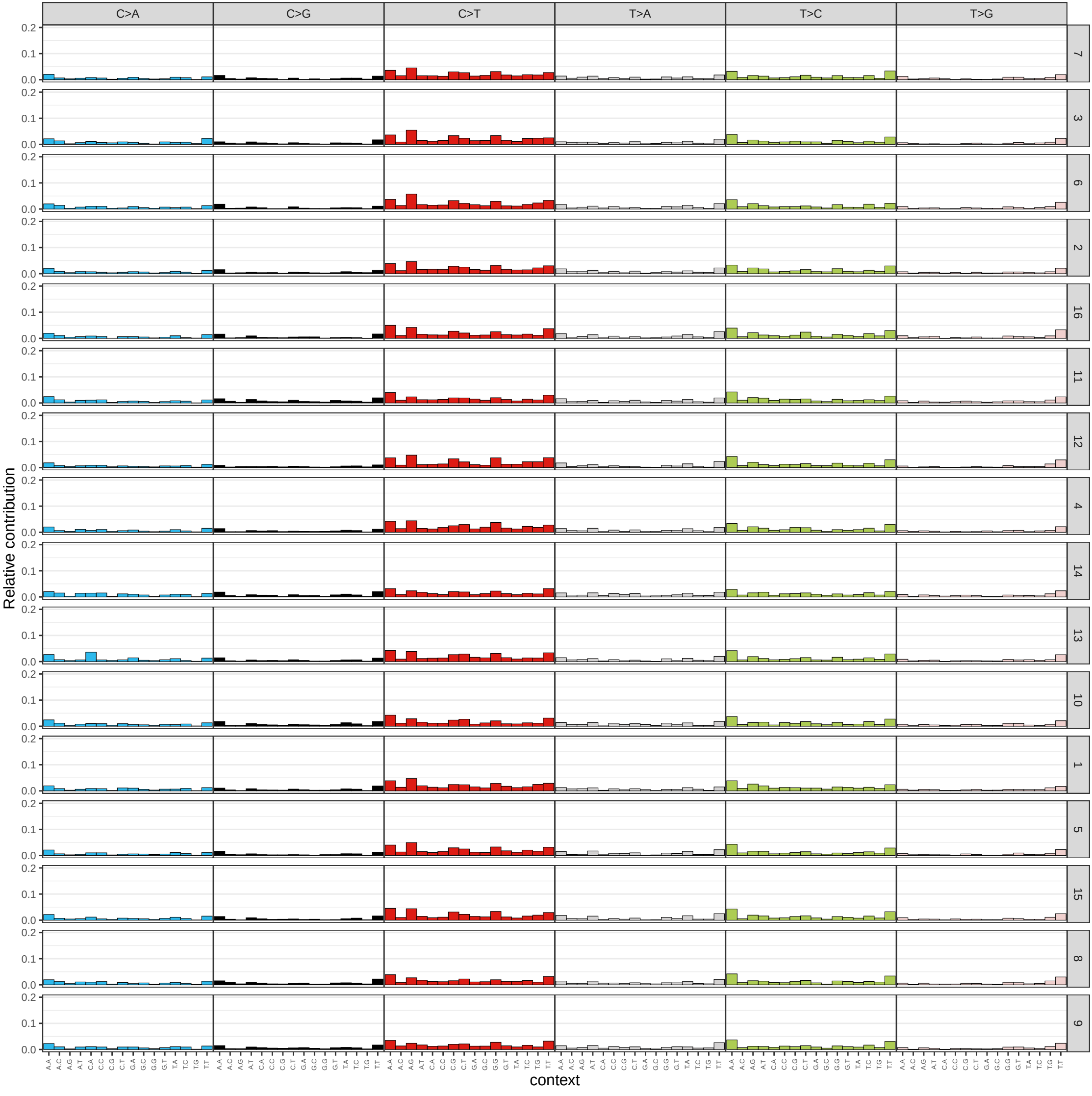
T>A

T>C

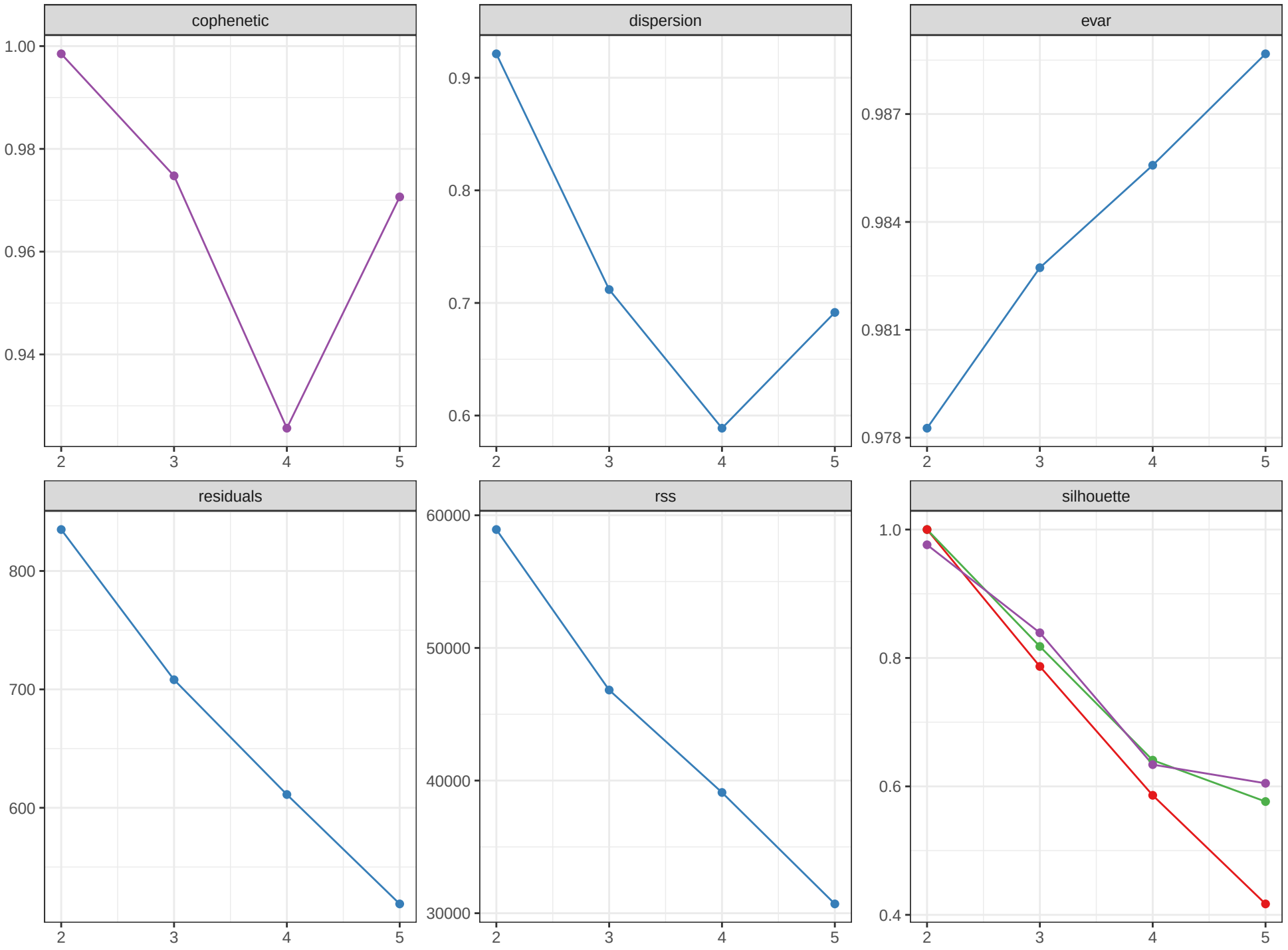
T>G

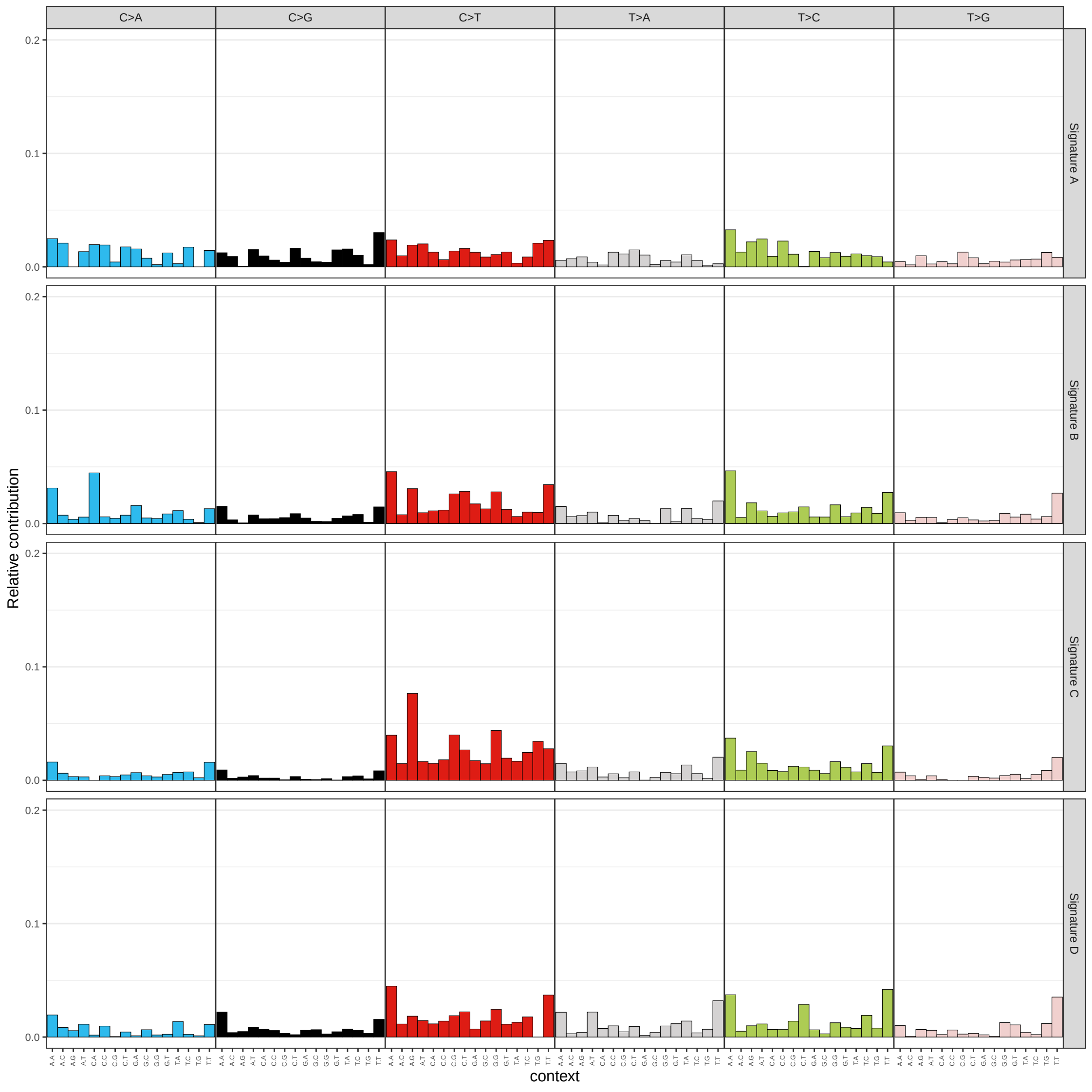

NA
No. mutations = 49,018
Relative contribution
0.3
0.2
0.1
0.0
Point mutation type
C>A
C>G
C>T other
C>T at CpG
T>A
T>C
T>G

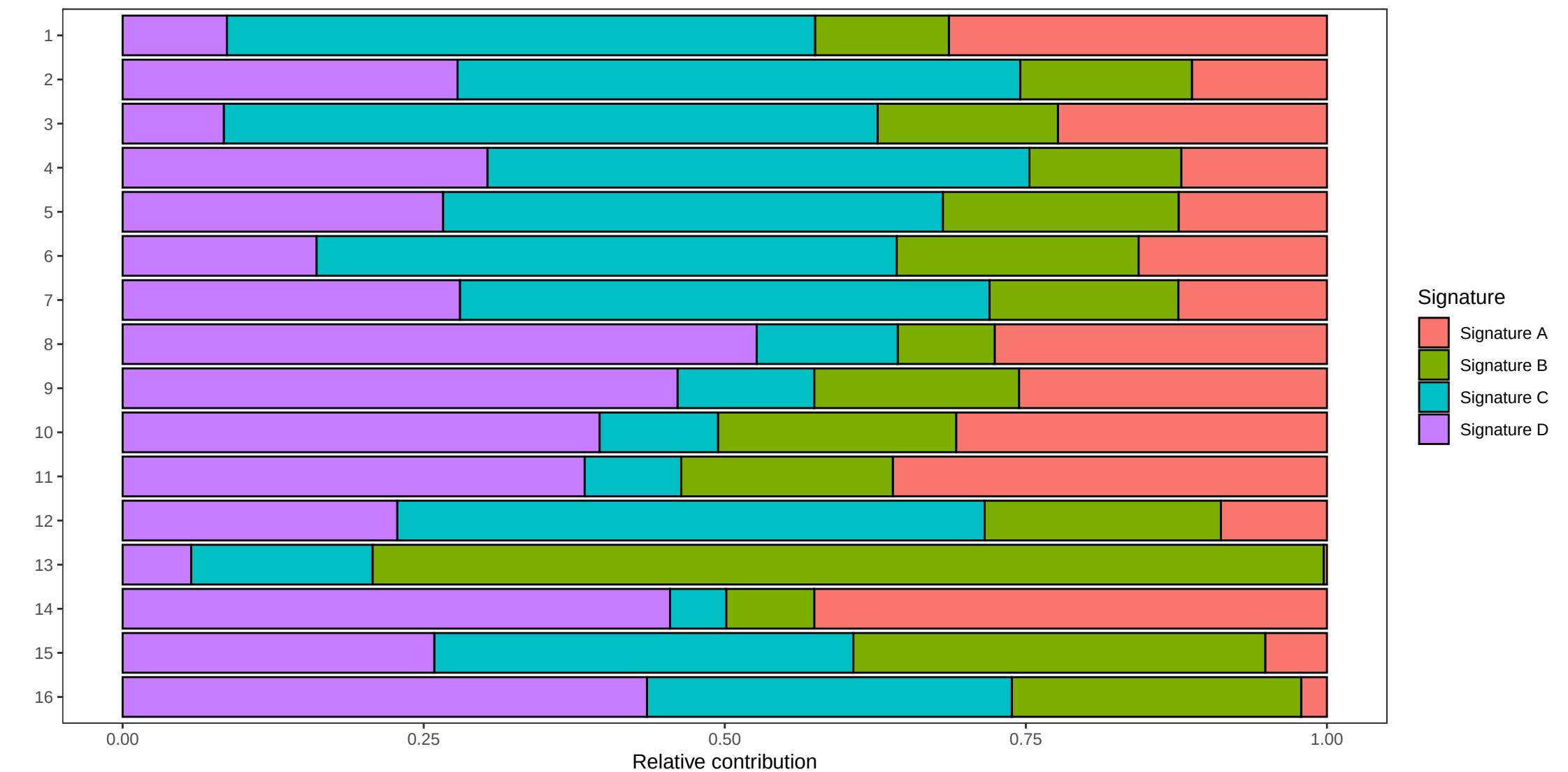

No. mutations = 49,018
Relative contribution
0.3
0.2
0.1
0.0
Point mutation type
C>A
C>G
C>T other
C>T at CpG
T>A
T>C
T>G

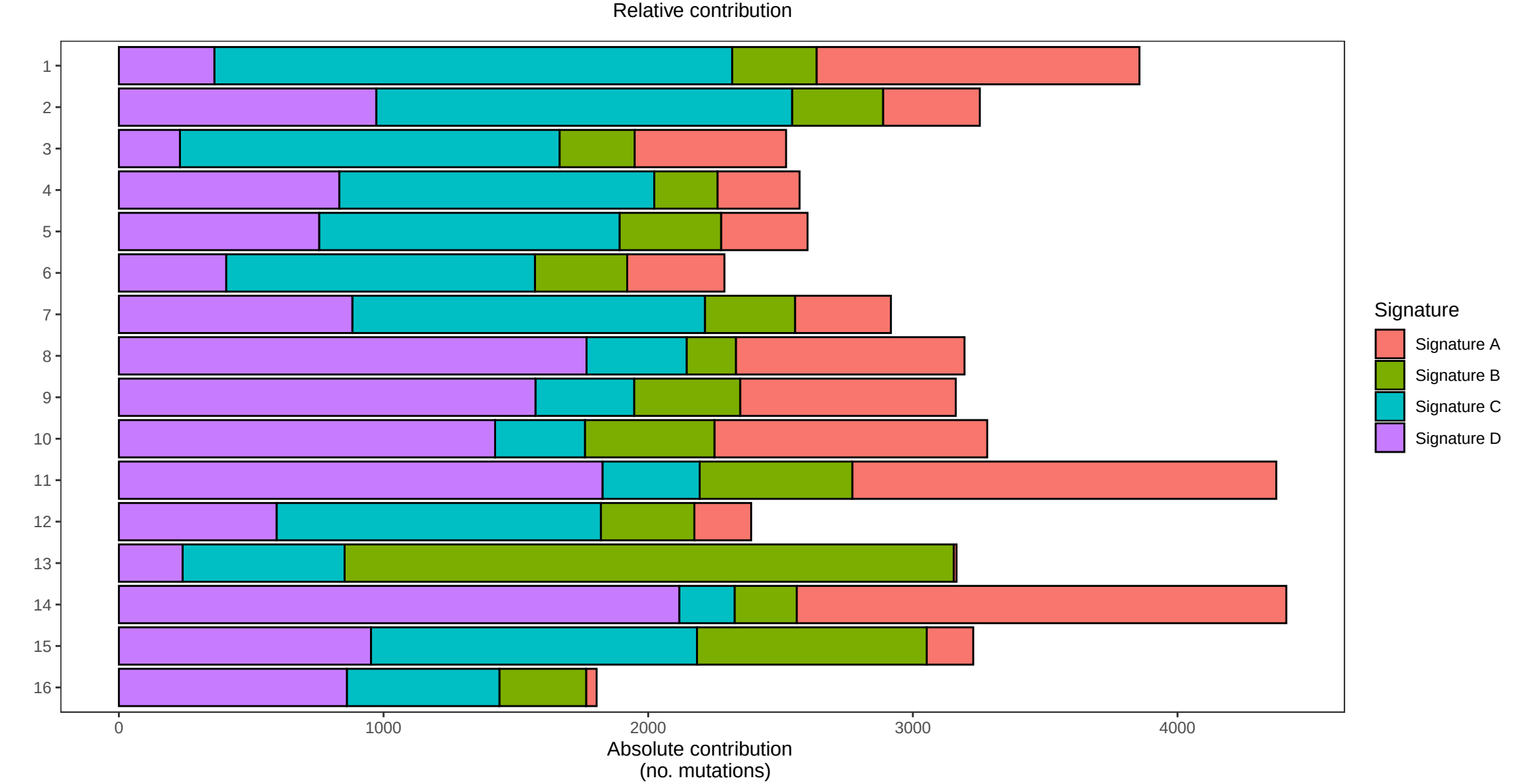

C>A
C>G
C>T
T>A
T>C
T>G
7
3
6
2
16
11
12
4
14
13
10
1
5
15
8
9
0.0
0.1
0.2
Relative contribution
A.A A.C A.G A.T C.A C.C C.G C.T G.A G.C G.G G.T T.A T.C T.G T.T
context

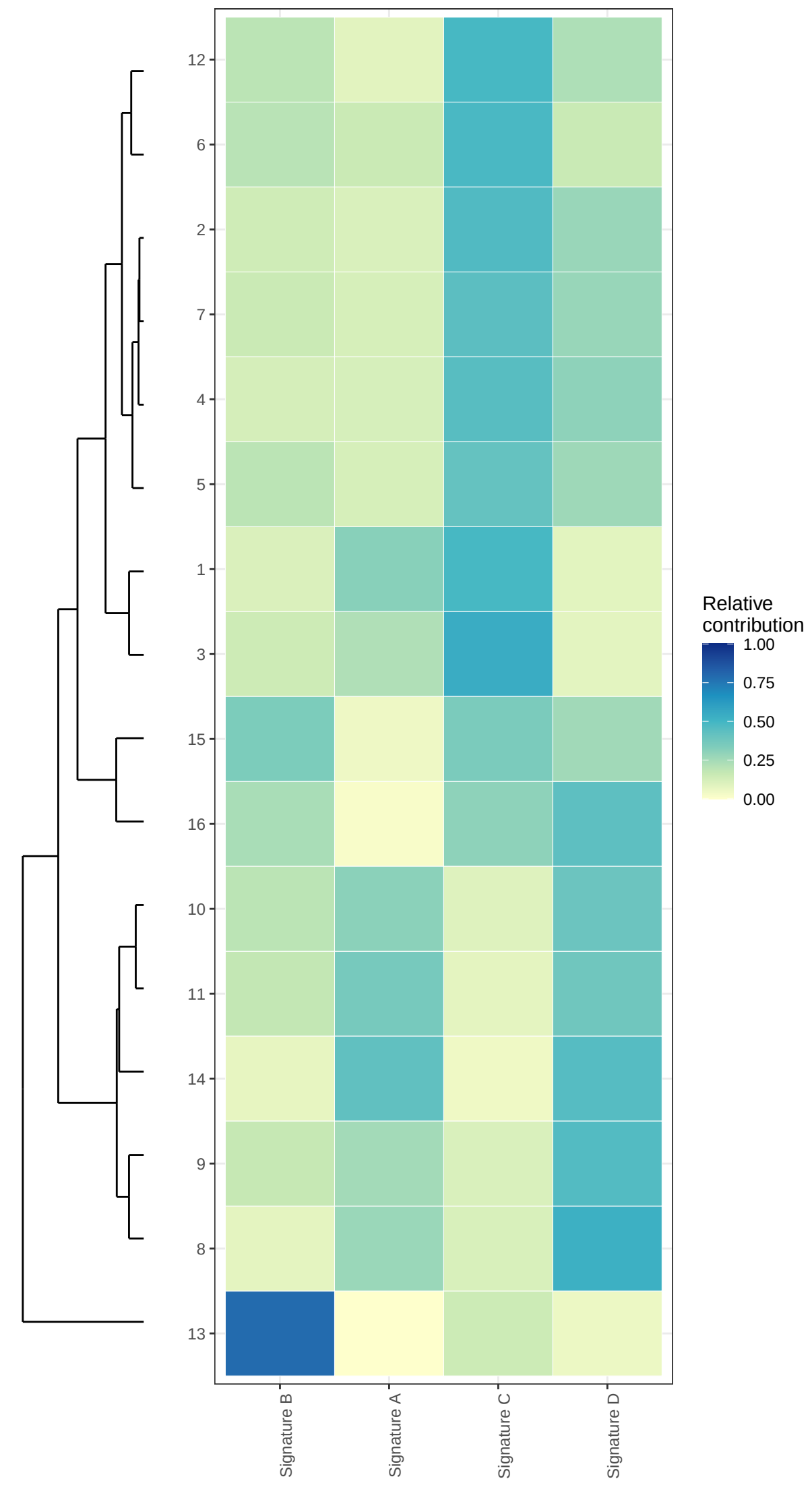
NMF rank survey

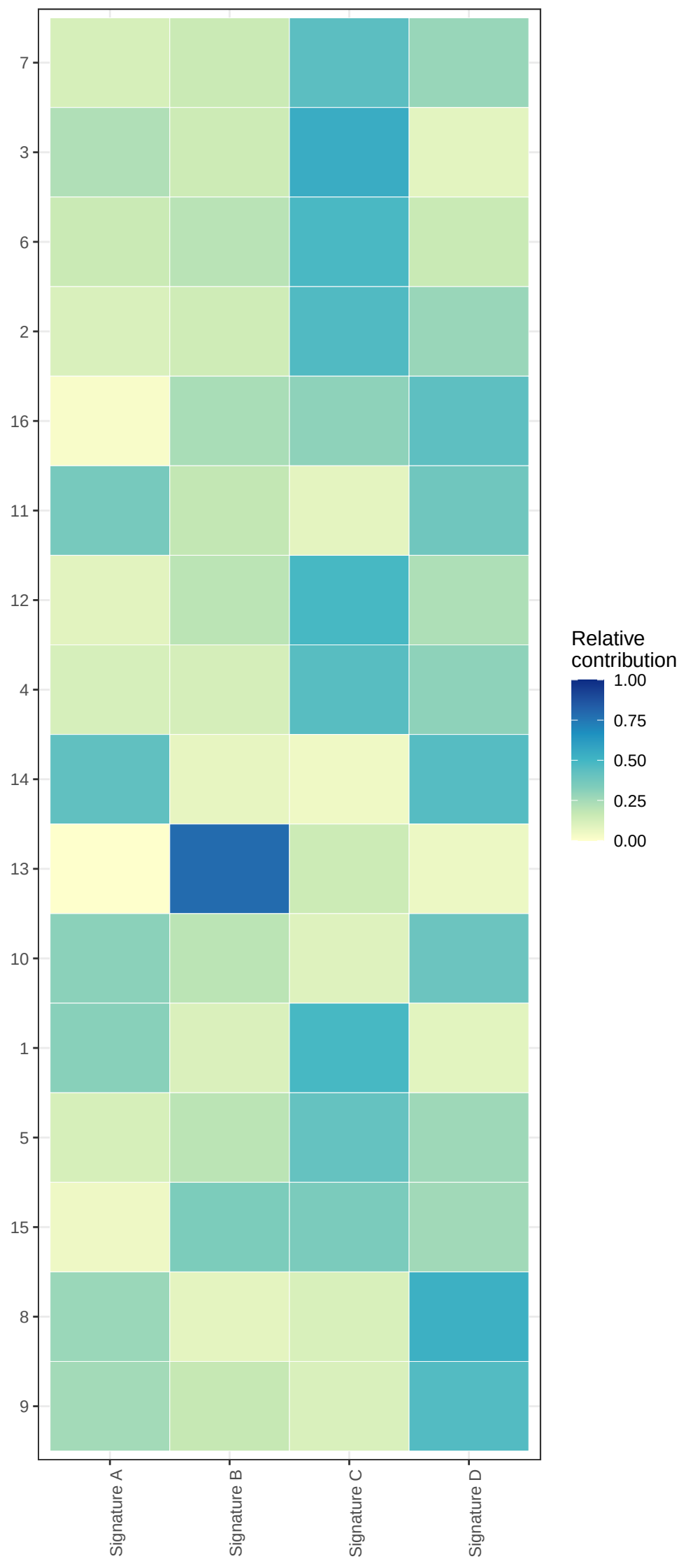



C>A
C>G
C>T
T>A
T>C
T>G
Signature A
Signature B
Signature C
Signature D
0.0
0.1
0.2
Relative contribution
A.A A.C A.G A.T C.A C.C C.G C.T G.A G.C G.G G.T T.A T.C T.G T.T
context

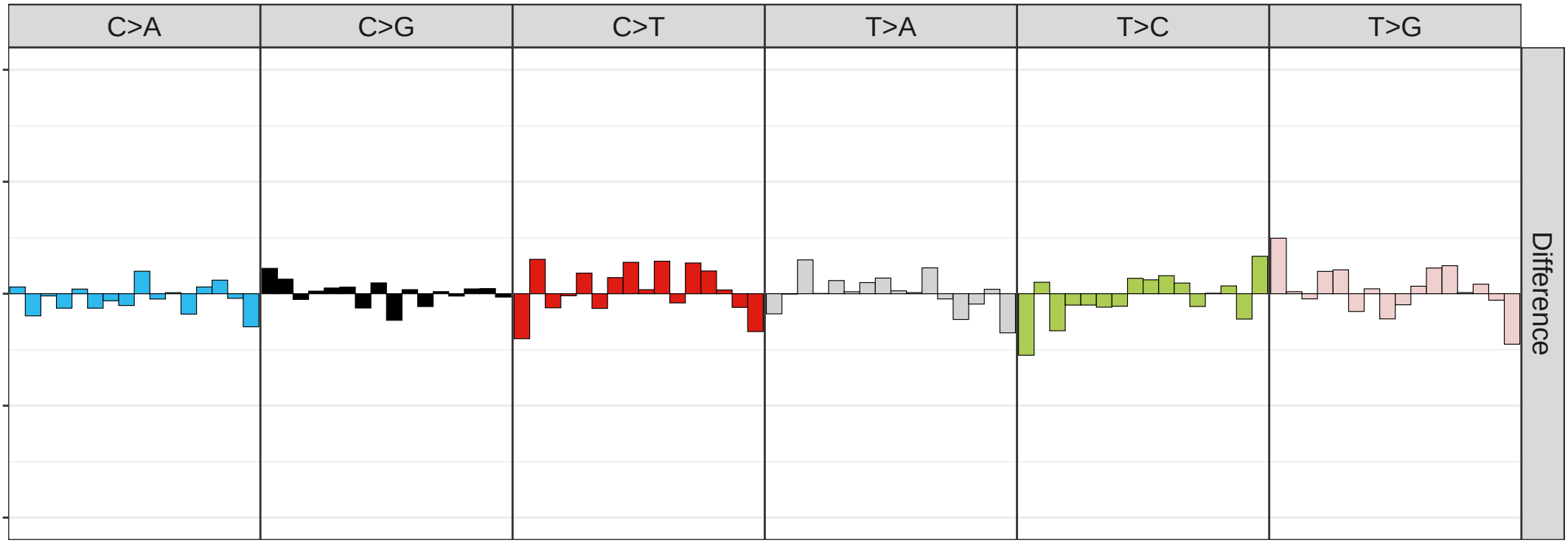

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0.00
0.25
0.50
0.75
1.00
Relative contribution
Signature
Signature A
Signature B
Signature C
Signature D

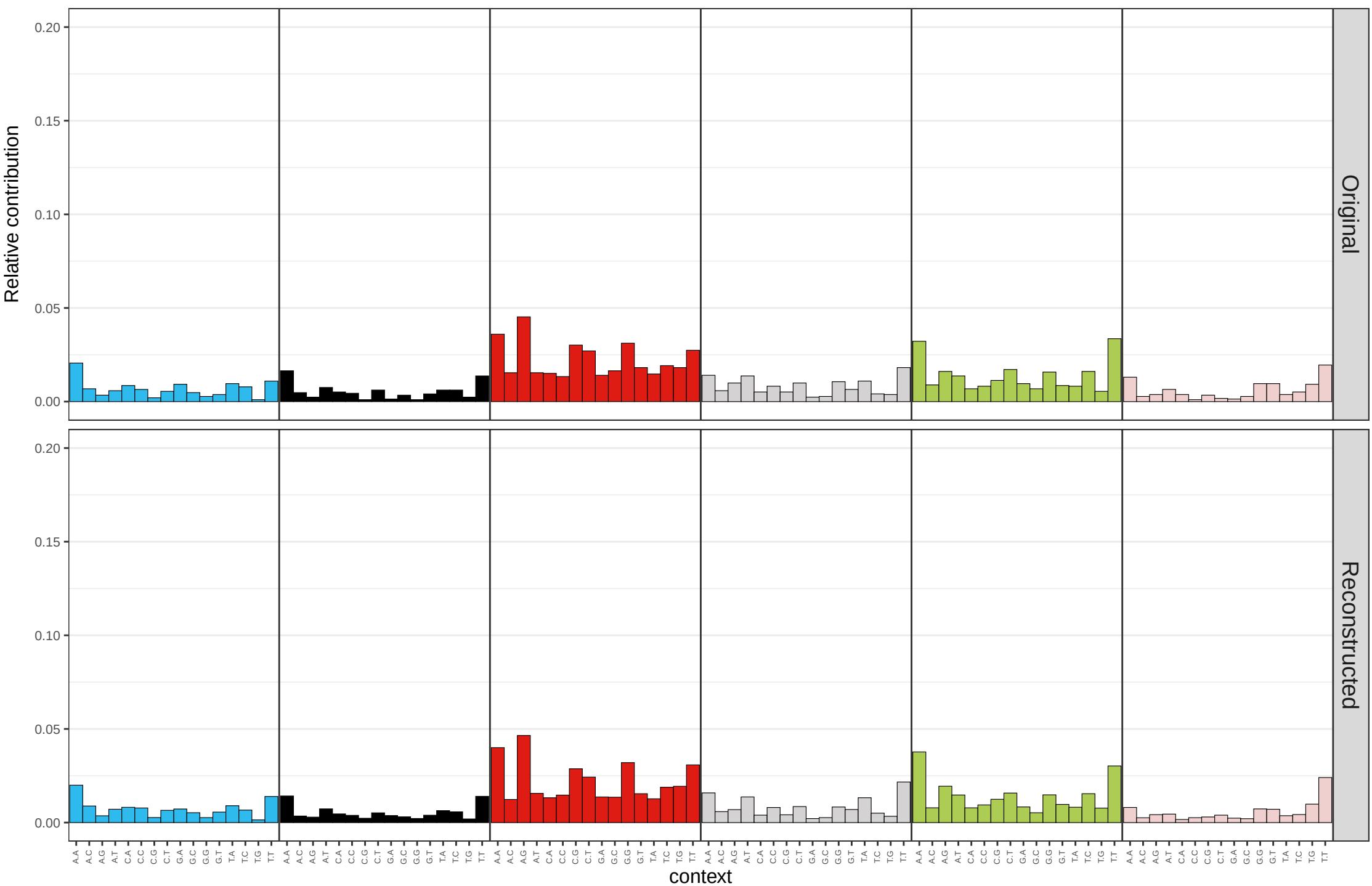

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0
1000
2000
3000
4000
Absolute contribution
(no. mutations)
Signature
Signature A
Signature B
Signature C
Signature D

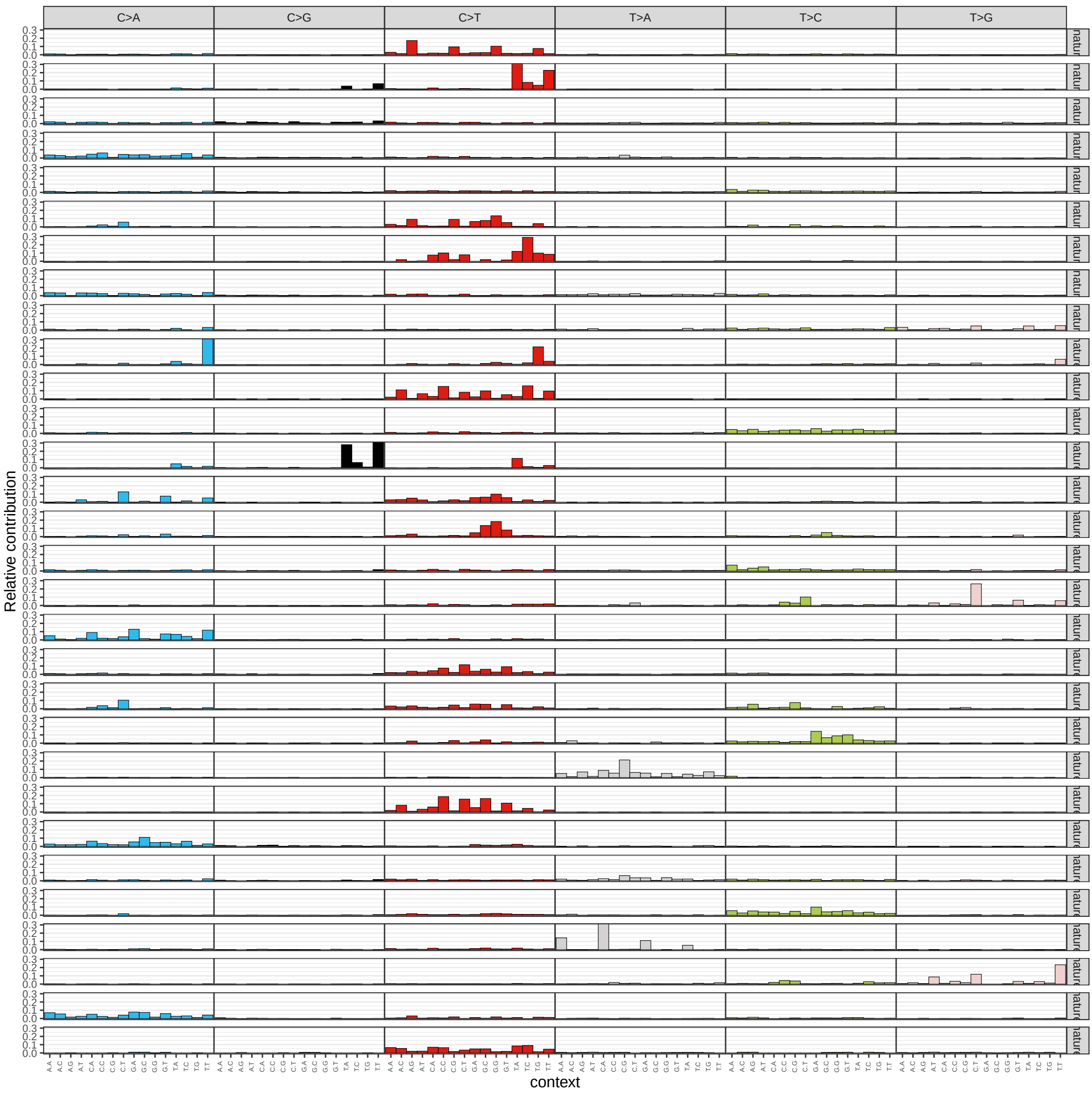

12
6
2
7
4
5
1
3
15
16
10
11
14
9
8
13
Signature B
Signature A
Signature C
Signature D
Relative contribution
1.00
0.75
0.50
0.25
0.00


7
3
6
2
16
11
12
4
14
13
10
1
5
15
8
9
Signature A
Signature B
Signature C
Signature D
Relative contribution
1.00
0.75
0.50
0.25
0.00

RSS = 3.1e−04; Cosine similarity = 0.991






C>A
C>G
C>T
T>A
T>C
T>G
Relative contribution
0.3
0.2
0.1
0.0
context
A.A
A.C
A.G
A.T
C.A
C.C
C.G
C.T
G.A
G.C
G.G
G.T
T.A
T.C
T.G
T.T

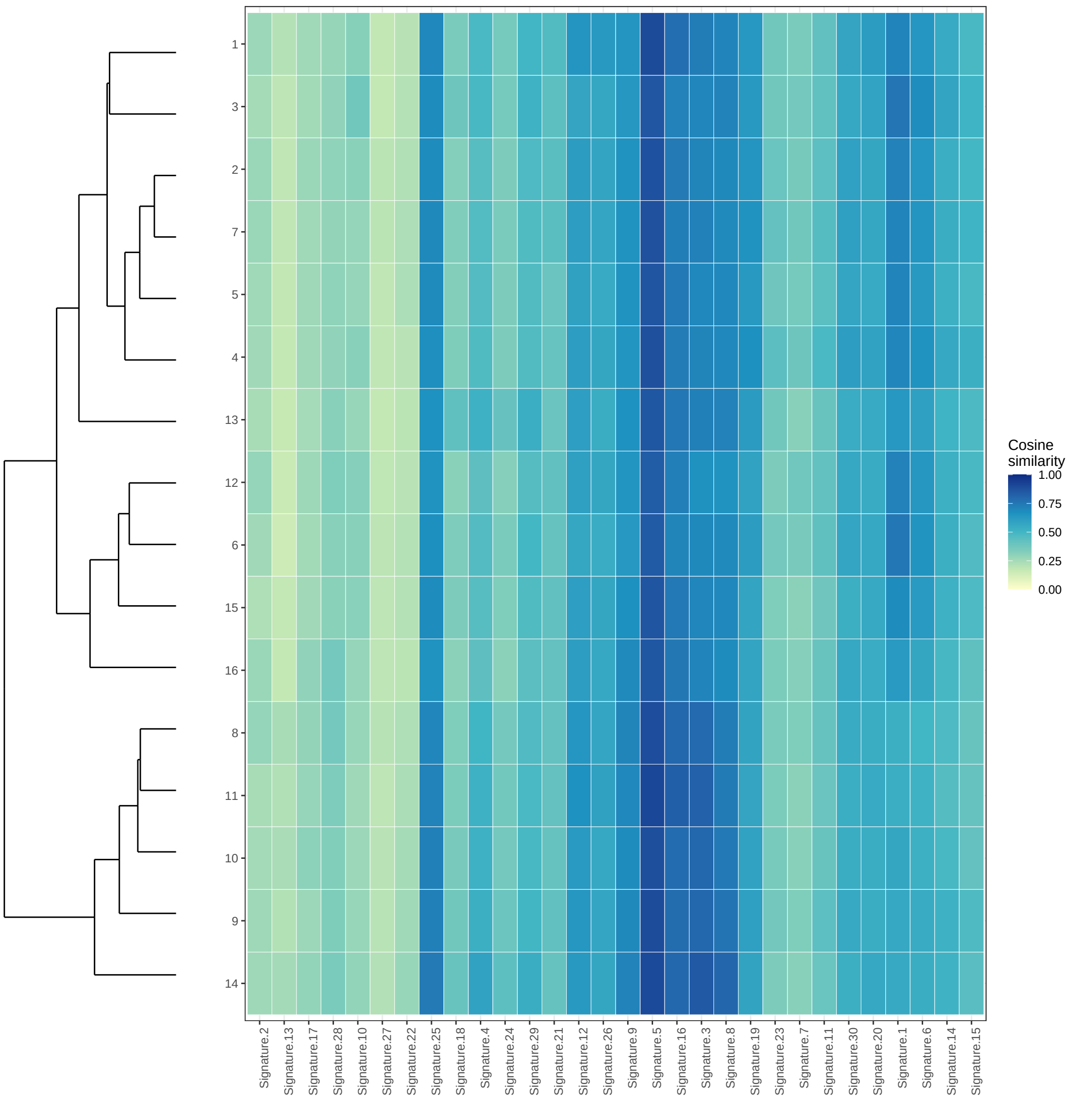
Cluster Dendrogram

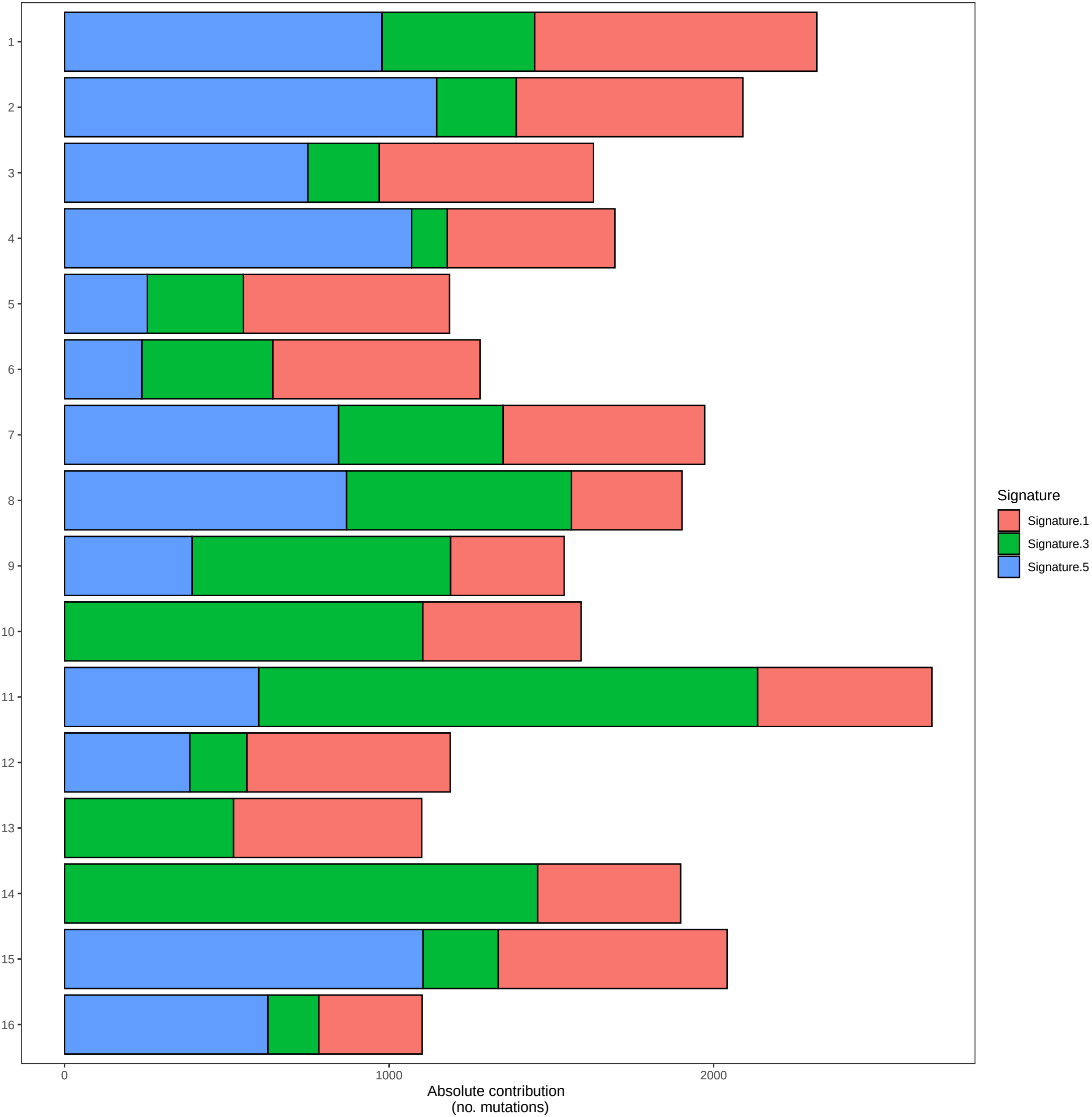
hclust (*, "average")
dist

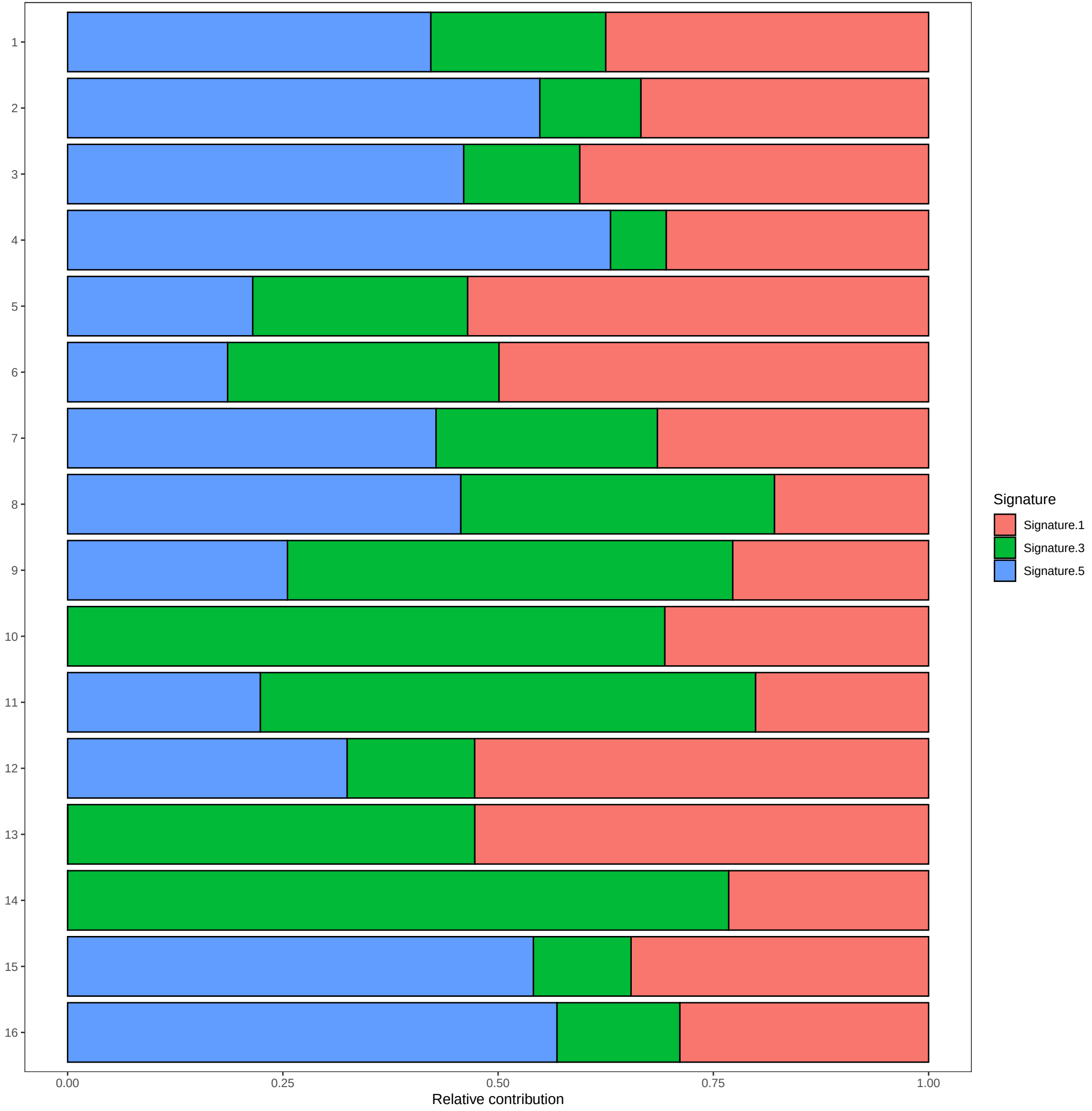
Height

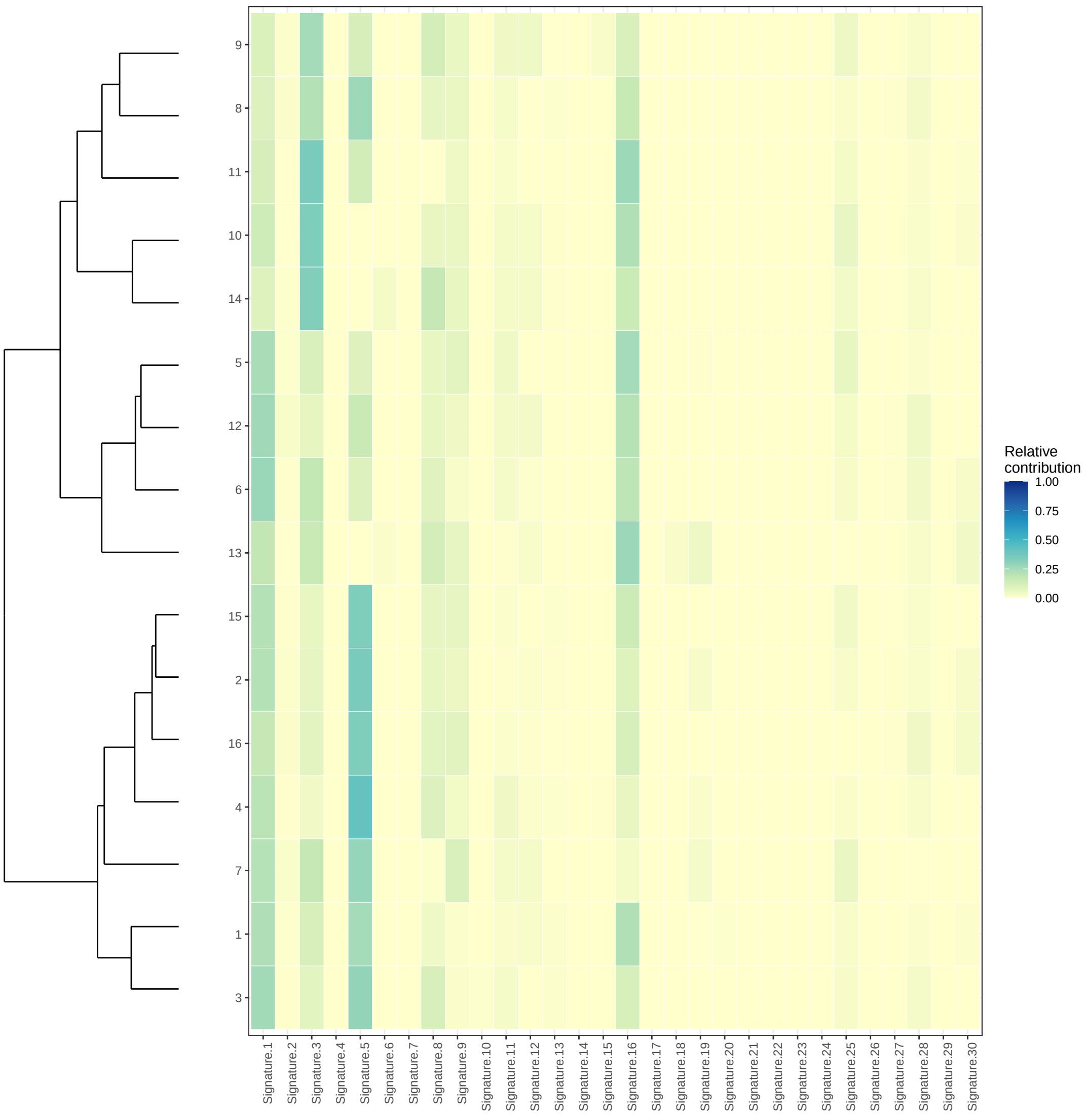
0.0
0.2
0.4
0.6
0.8

Signature.2
Signature.13
Signature.17
Signature.28
Signature.10
Signature.27
Signature.22
Signature.25
Signature.18
Signature.4
Signature.24
Signature.29
Signature.21
Signature.12
Signature.26
Signature.9
Signature.5
Signature.16
Signature.3
Signature.8
Signature.19
Signature.23
Signature.7
Signature.11
Signature.30
Signature.20
Signature.1
Signature.6
Signature.14
Signature.15


1
3
2
7
5
4
13
12
6
15
16
8
11
10
9
14
Signature.2
Signature.13
Signature.17
Signature.28
Signature.10
Signature.27
Signature.22
Signature.25
Signature.18
Signature.4
Signature.24
Signature.29
Signature.21
Signature.12
Signature.26
Signature.9
Signature.5
Signature.16
Signature.3
Signature.8
Signature.19
Signature.23
Signature.7
Signature.11
Signature.30
Signature.20
Signature.1
Signature.6
Signature.14
Signature.15
Cosine similarity
1.00
0.75
0.50
0.25
0.00


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0
1000
2000
Absolute contribution
(no. mutations)
Signature
Signature.1
Signature.3
Signature.5


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0.00
0.25
0.50
0.75
1.00
Relative contribution
Signature
Signature.1
Signature.3
Signature.5


9
8
11
10
14
5
12
6
13
15
2
16
4
7
1
3
Signature.1
Signature.2
Signature.3
Signature.4
Signature.5
Signature.6
Signature.7
Signature.8
Signature.9
Signature.10
Signature.11
Signature.12
Signature.13
Signature.14
Signature.15
Signature.16
Signature.17
Signature.18
Signature.19
Signature.20
Signature.21
Signature.22
Signature.23
Signature.24
Signature.25
Signature.26
Signature.27
Signature.28
Signature.29
Signature.30
Relative contribution
1.00
0.75
0.50
0.25
0.00

RSS = 1.86e−03; Cosine similarity = 0.945

C>A C>G C>T T>A T>C T>G

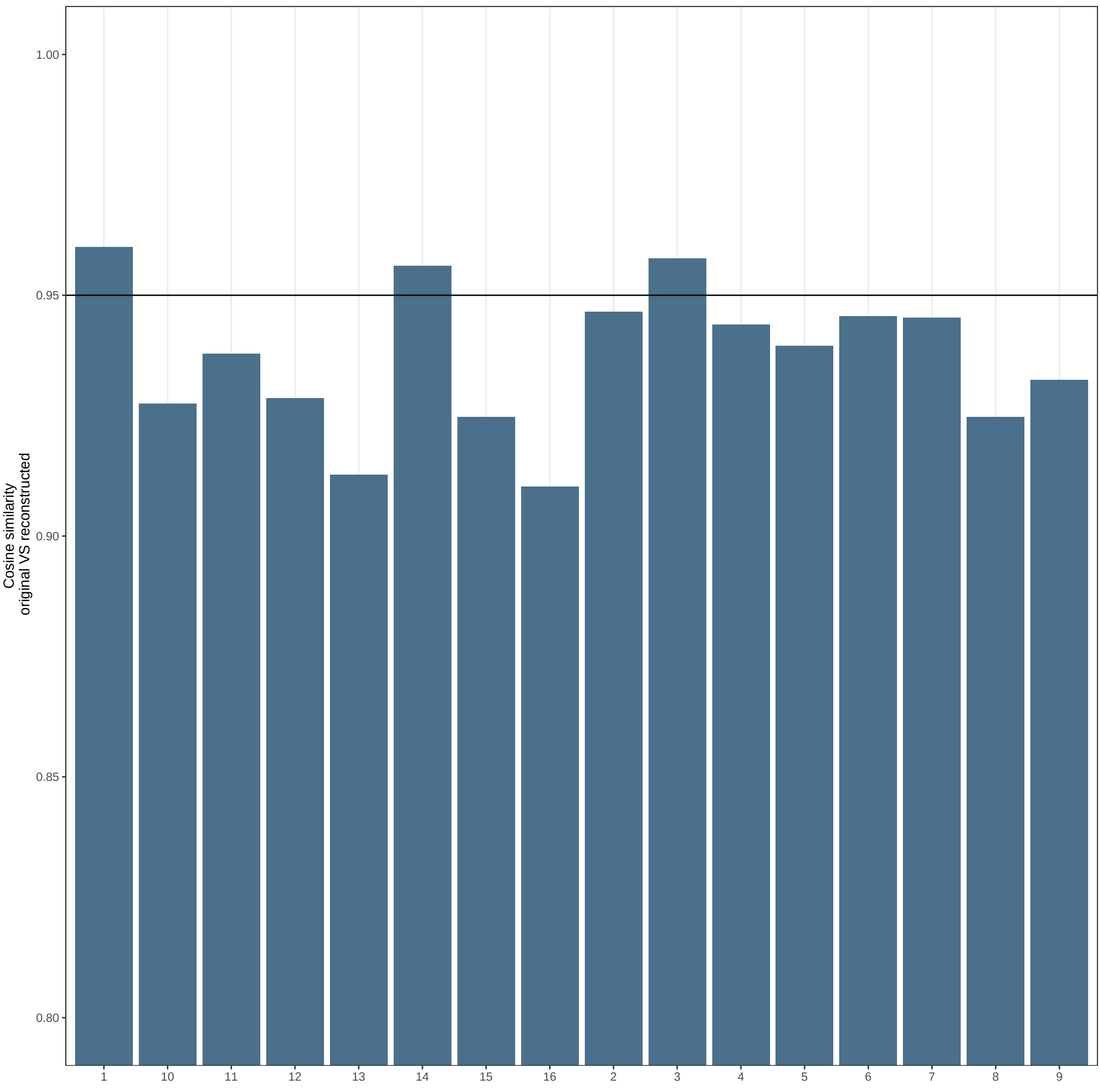
Difference

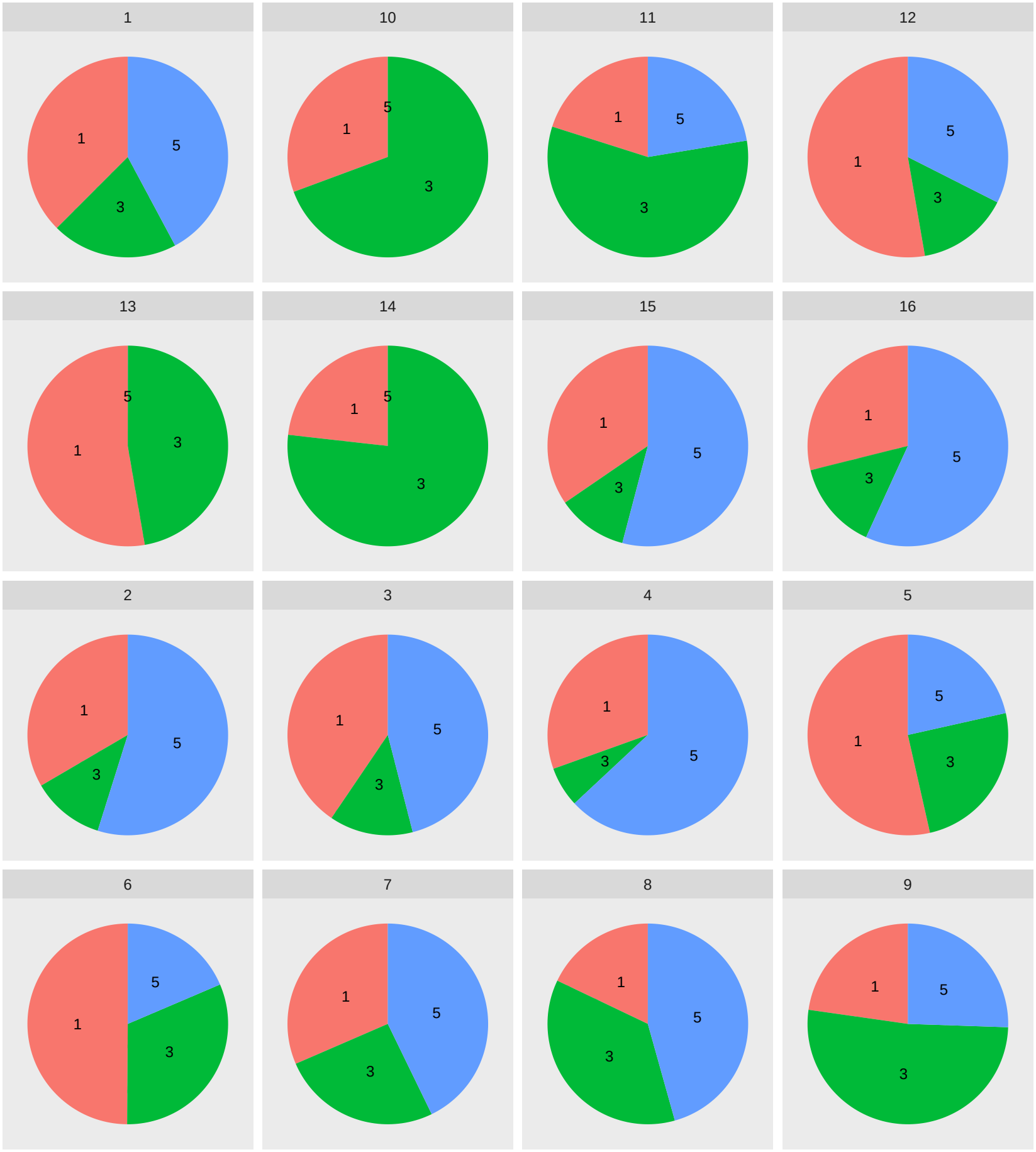
Original

Reconstructed

Relative contribution

context


Cosine similarity
original VS reconstructed
1.00
0.95
0.90
0.85
0.80
1
10
11
12
13
14
15
16
2
3
4
5
6
7
8
9


1
1
5
3
10
1
5
3
11
1
5
3
12
1
5
3
13
1
5
3
14
1
5
3
15
1
5
3
16
1
5
3
2
1
5
3
3
1
5
3
4
1
5
3
5
1
5
3
6
1
5
3
7
1
5
3
8
1
5
3
9
1
5
3
Samples
Signatures (Cosmic_v2,March 2015)
Sig.1
Sig.3
Sig.5