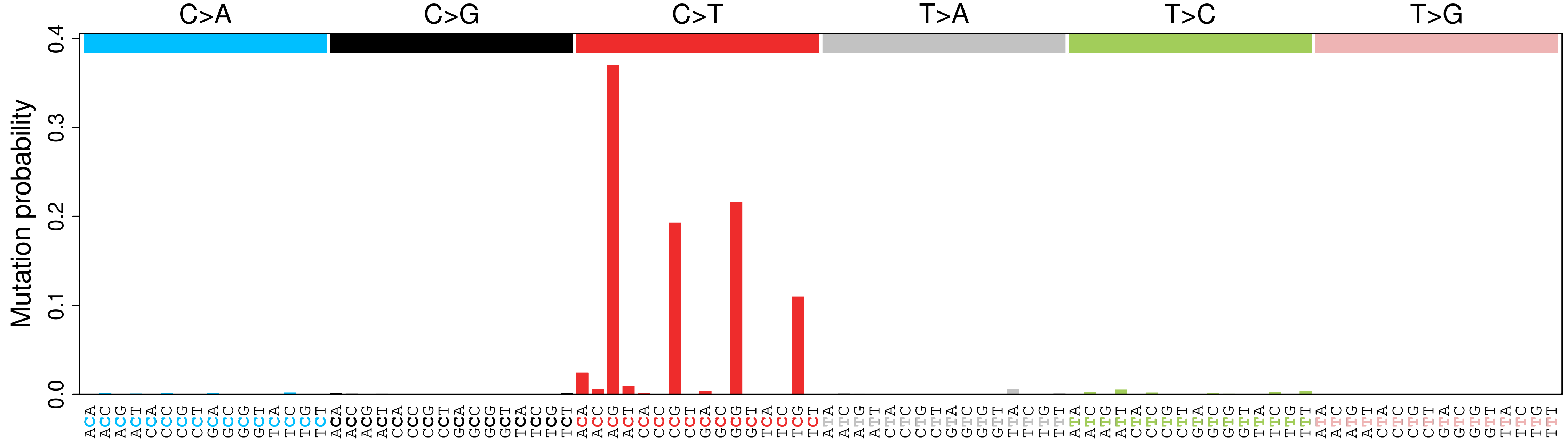


SBS1



SBS3



SBS4

C > A

C > G

$$C > T$$

T > A

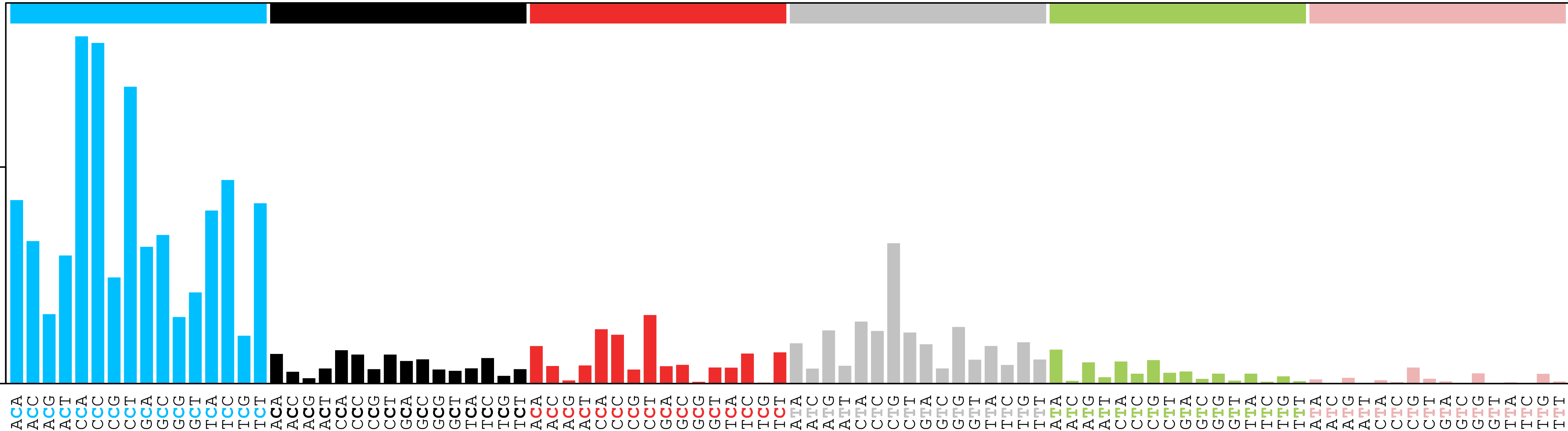
$$T > C$$

T > G

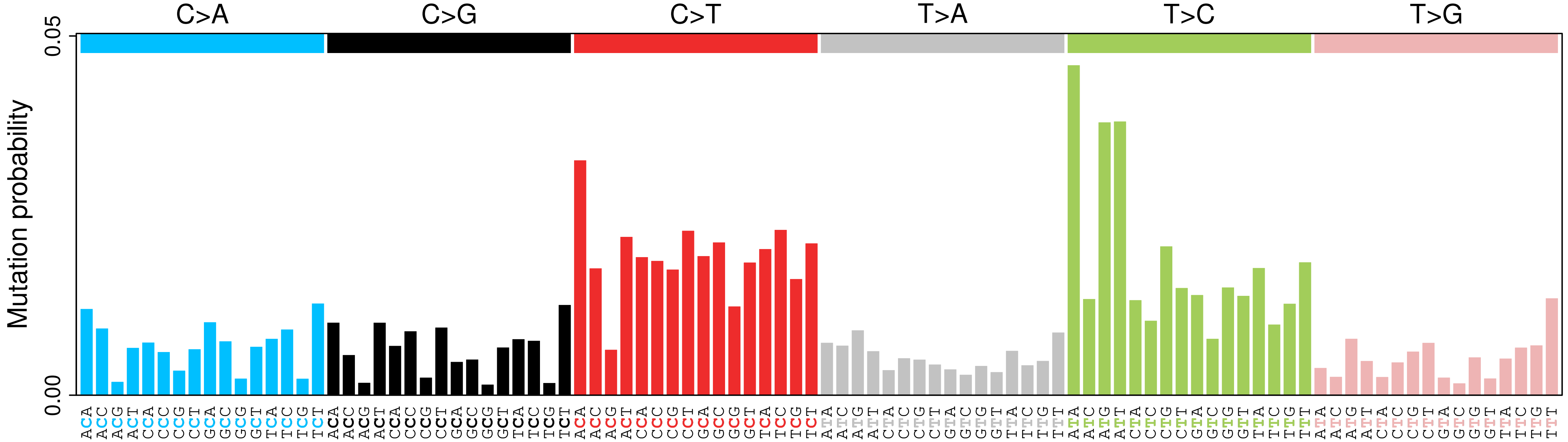
Mutation probability

0.05

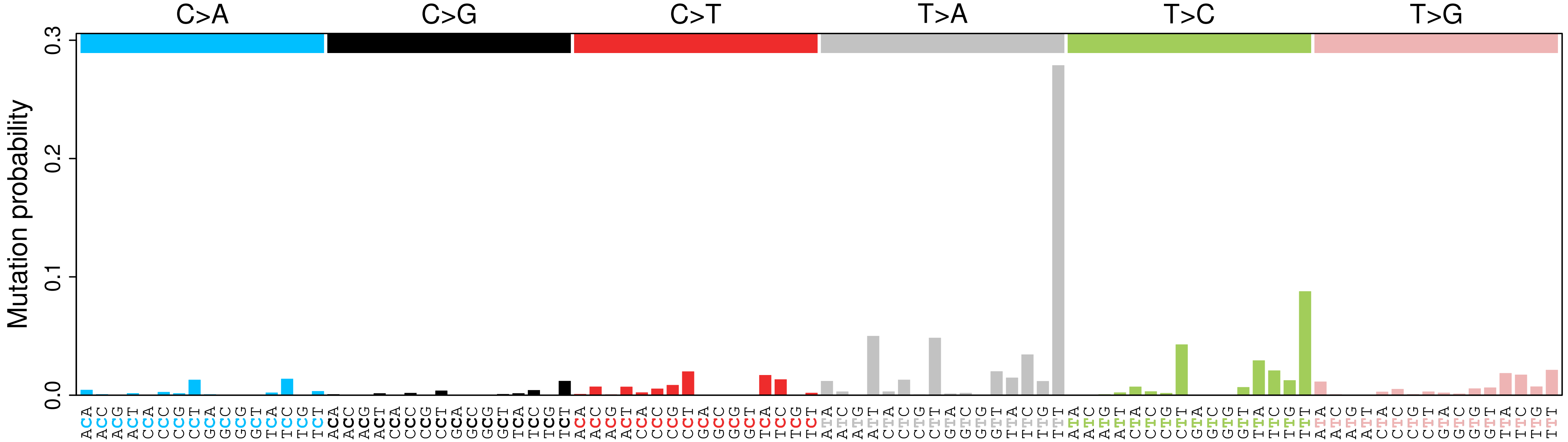
0.00



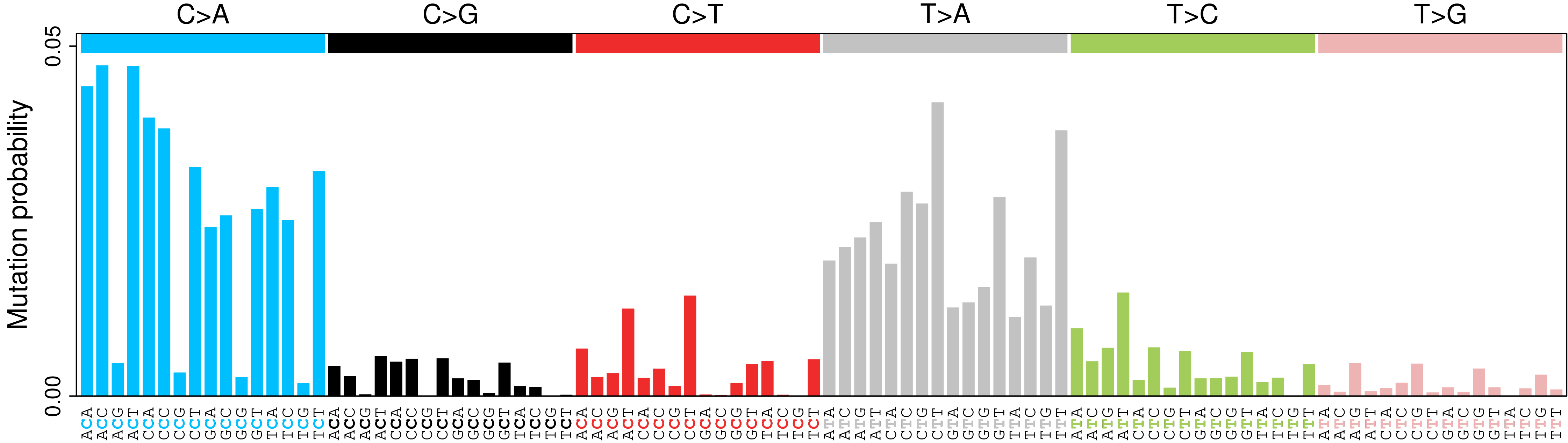
SBS5



SBS7c



SBS8



SBS9

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS10a

C>A

C>G

C>T

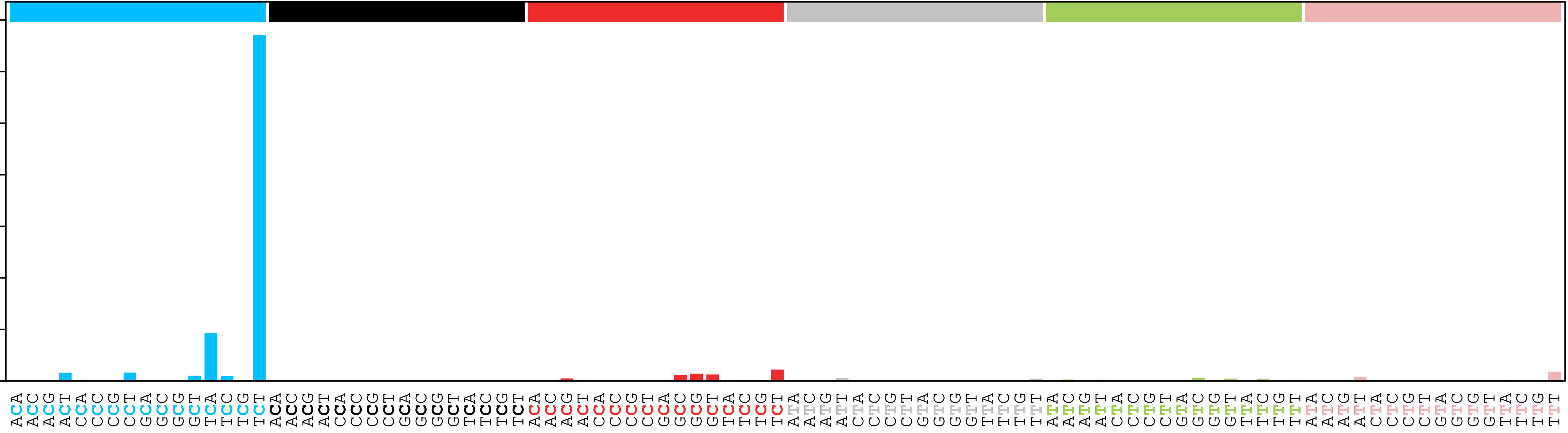
T>A

T>C

T>G

Mutation probability

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0



SBS10b



SBS12

C>A

C>G

C>T

T>A

T>C

T>G

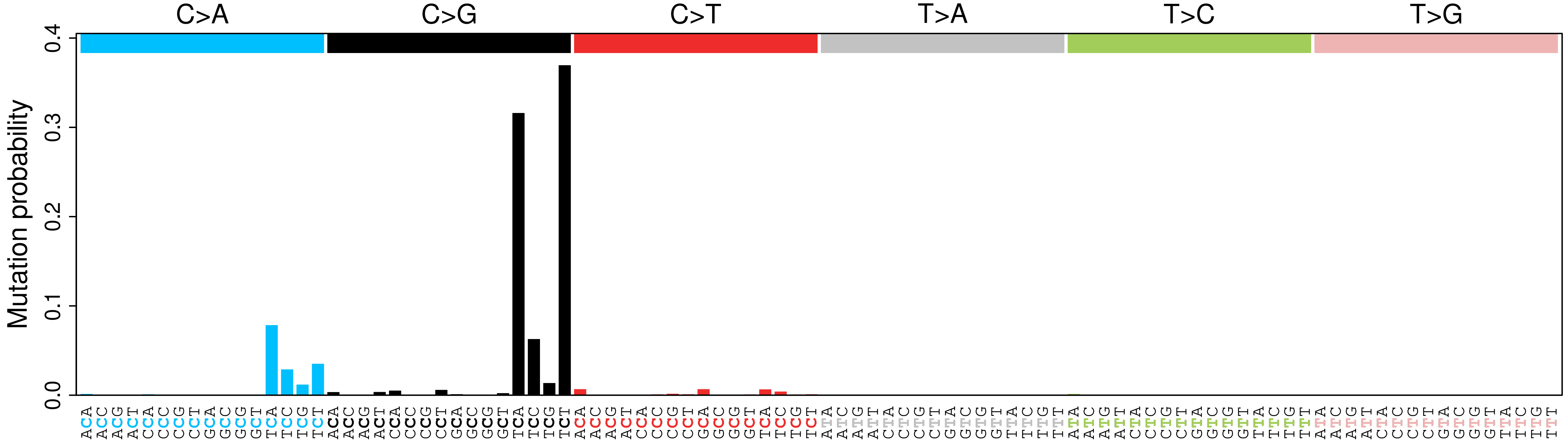
Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS13



SBS14

$C > A$

C > G

$$C > T$$

T > A

$T > C$

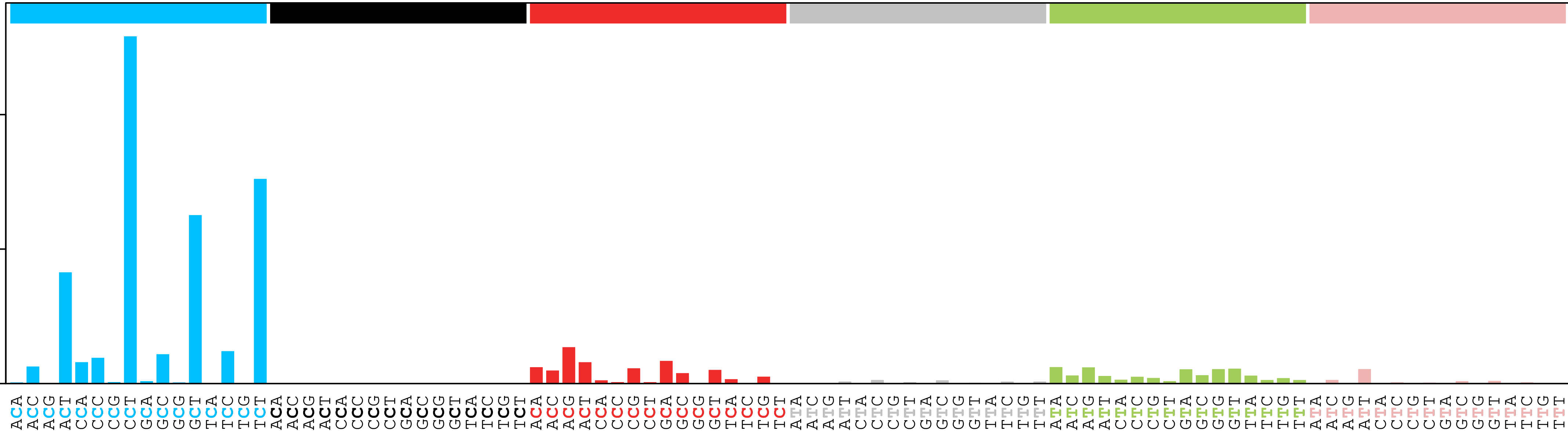
T>G

Mutation probability

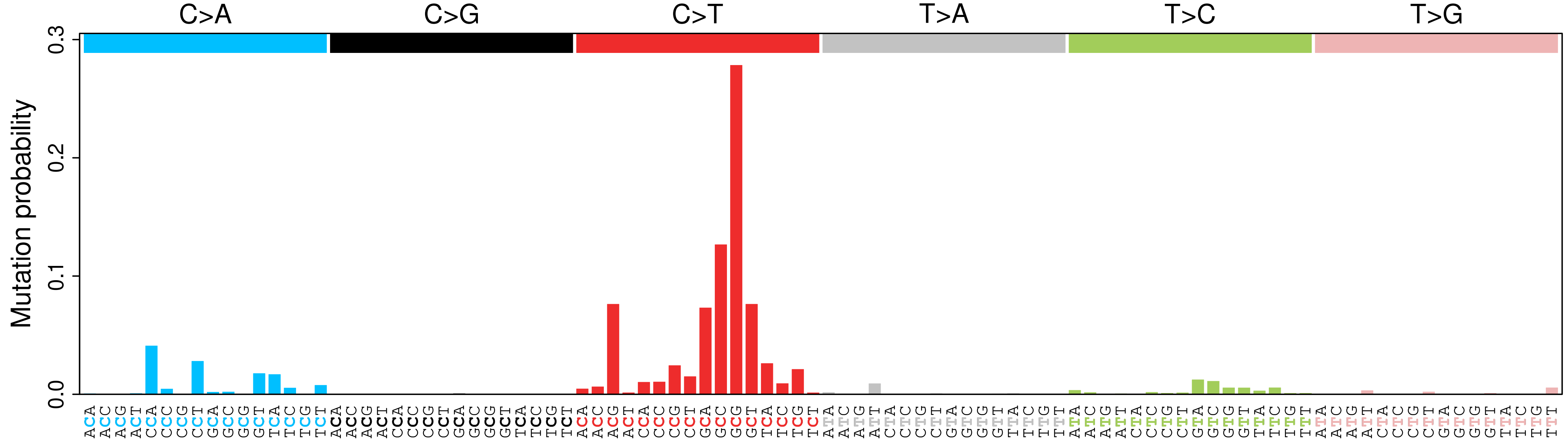
0.2

0.1

0



SBS15



SBS16

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.2

0.

0

[illegible]

SBS17a

C>A

C>G

C>T

T>A

T>C

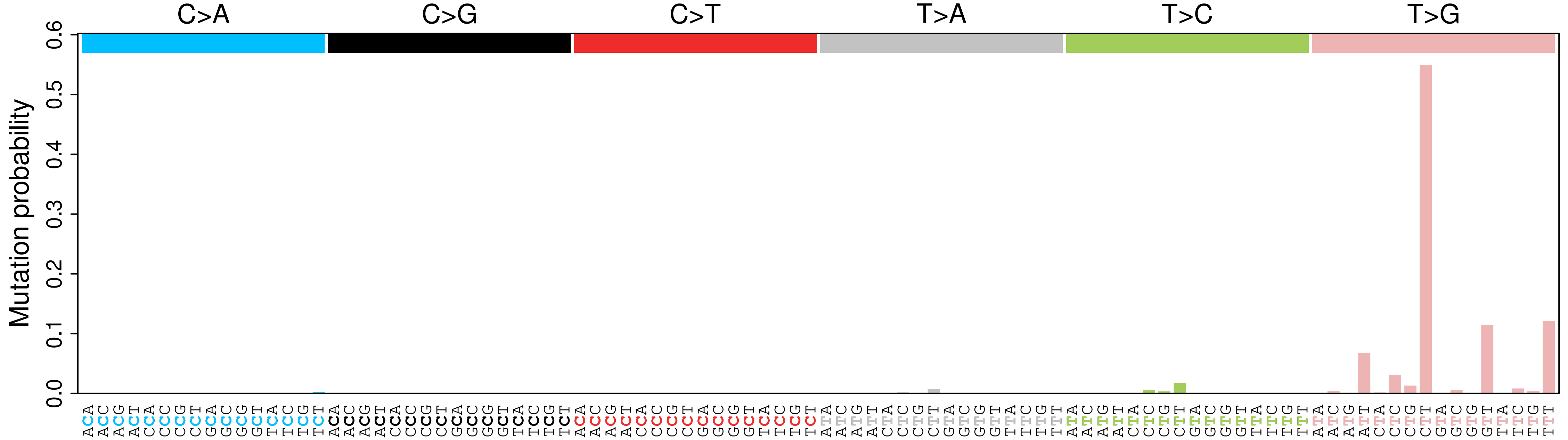
T>G

Mutation probability

0.4
0.3
0.2
0.1
0.0

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS17b



SBS18

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.10
0.05
0.00



SBS21

$C > A$

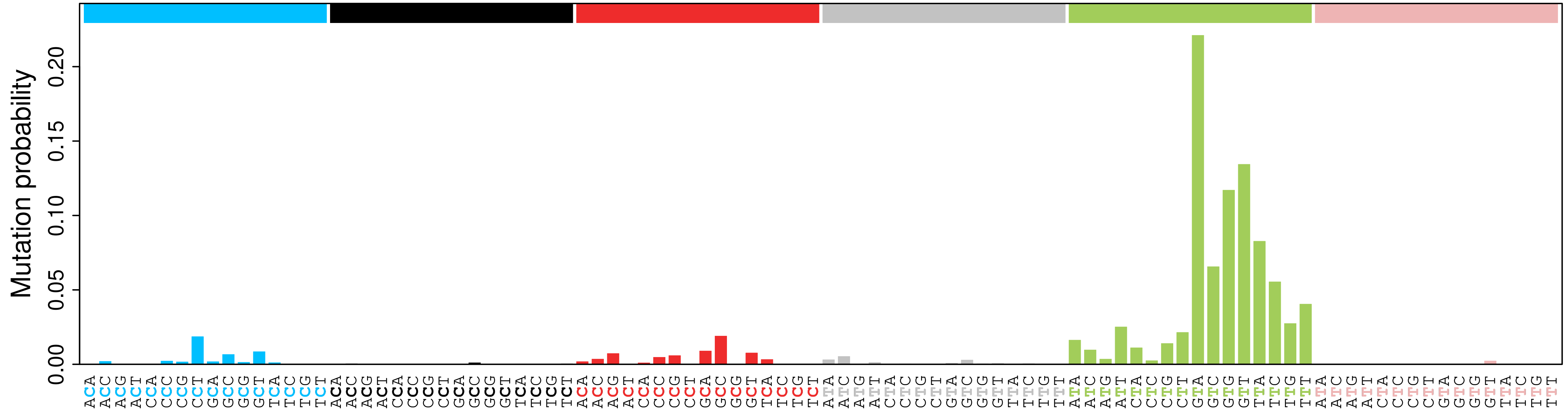
C > G

$$C > T$$

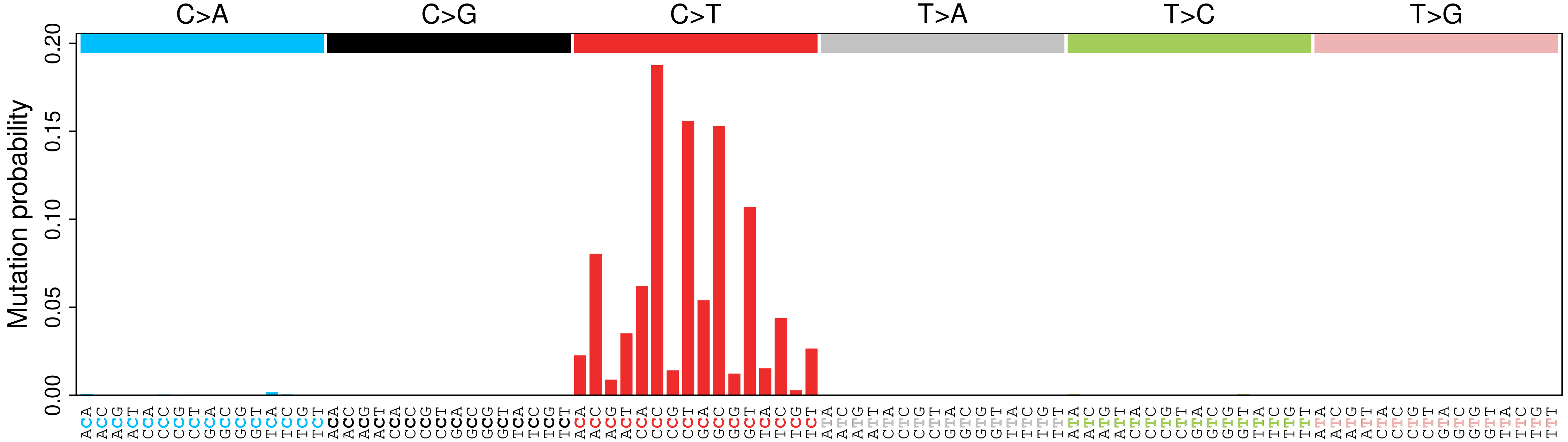
T > A

T>C

T>G



SBS23



SBS24

$C > A$

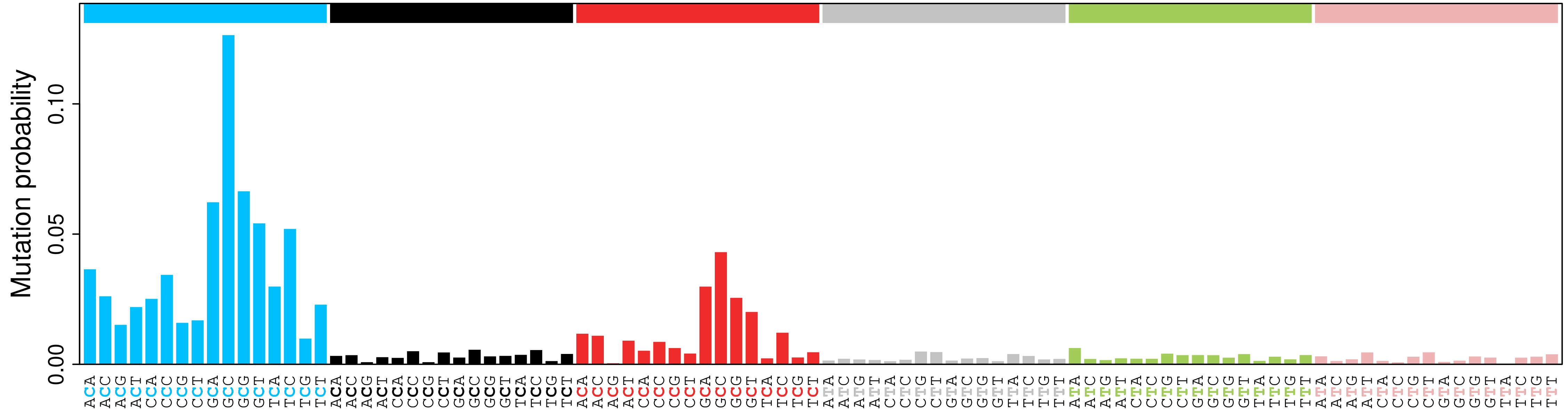
C > G

$$C > T$$

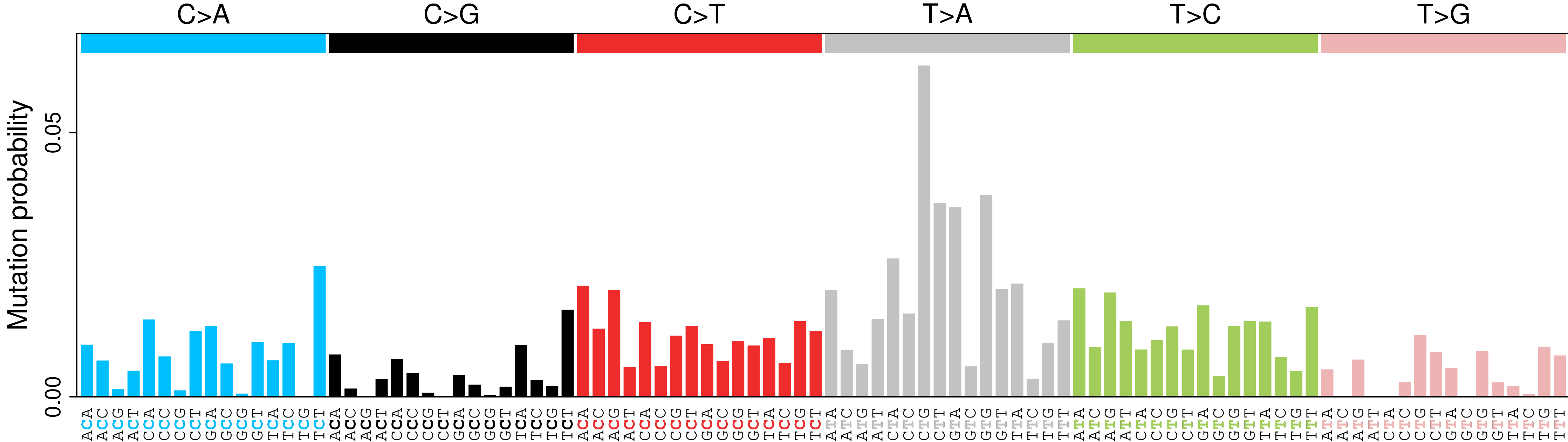
T > A

$$T > C$$

$T > G$



SBS25



SBS28

C>A

C>G

C>T

T>A

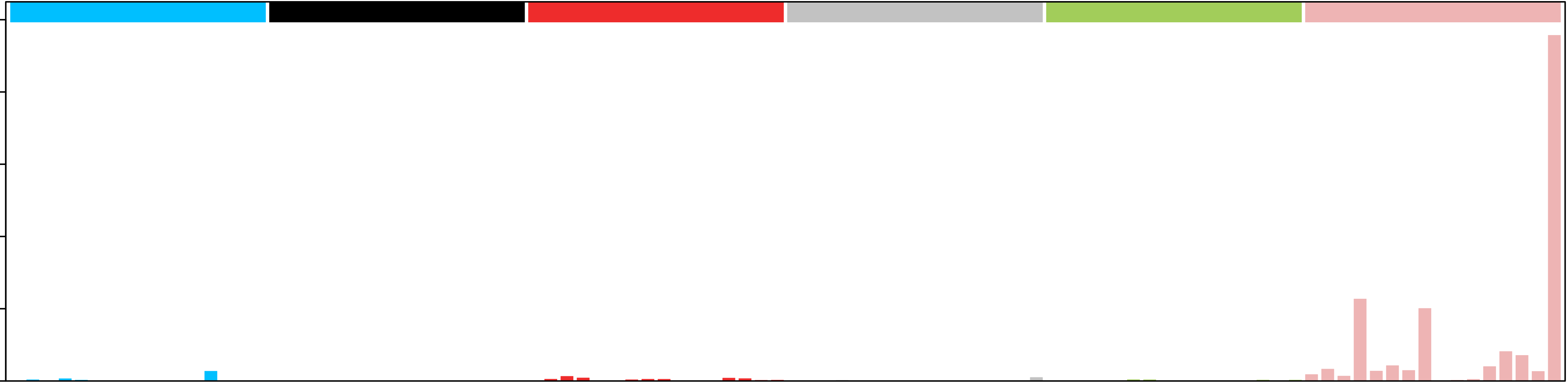
T>C

T>G

Mutation probability

0.5
0.4
0.3
0.2
0.1
0.0

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT TTA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT



SBS31

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.15
0.10
0.05
0.00

ACA ACC ACG ACT CCA CCC CCG CCT CCA GCA GCC GCG GGT GCA GGC GGG GGT GCA GGC GGG GGT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GGC GGG GGT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CCG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CCG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS34

$C > A$

C > G

$$C > T$$

T > A

$$T > C$$

T>G

Mutation probability

3.

 \circ

0.1

[illegible]

SBS35

$C > A$

C > G

$$C > T$$

T > A

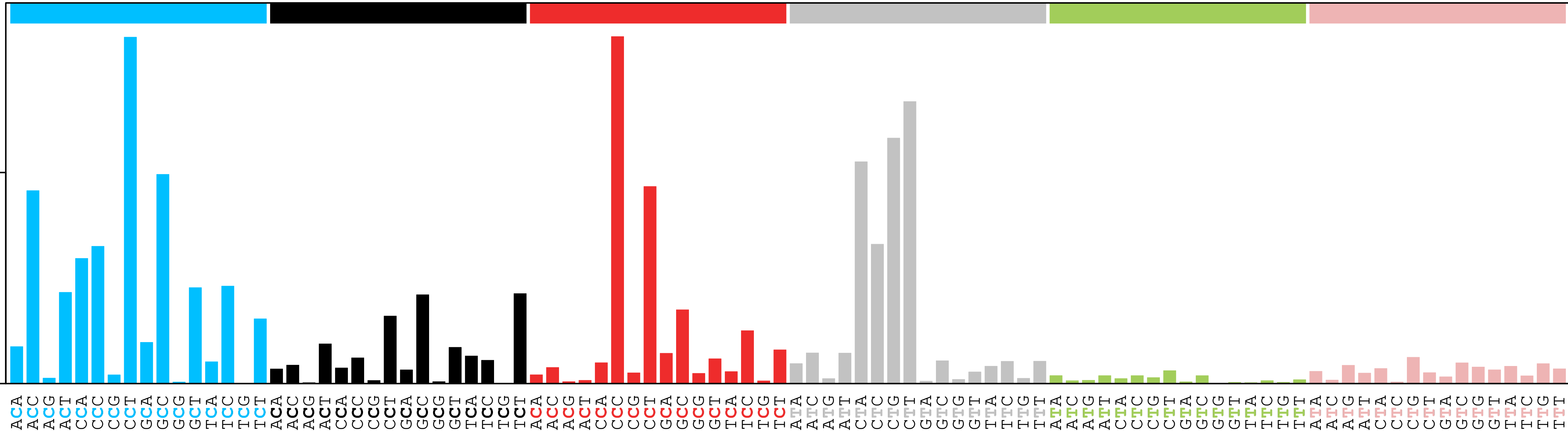
$T > C$

T>G

Mutation probability

0.05

0.00



SBS37

$C > A$

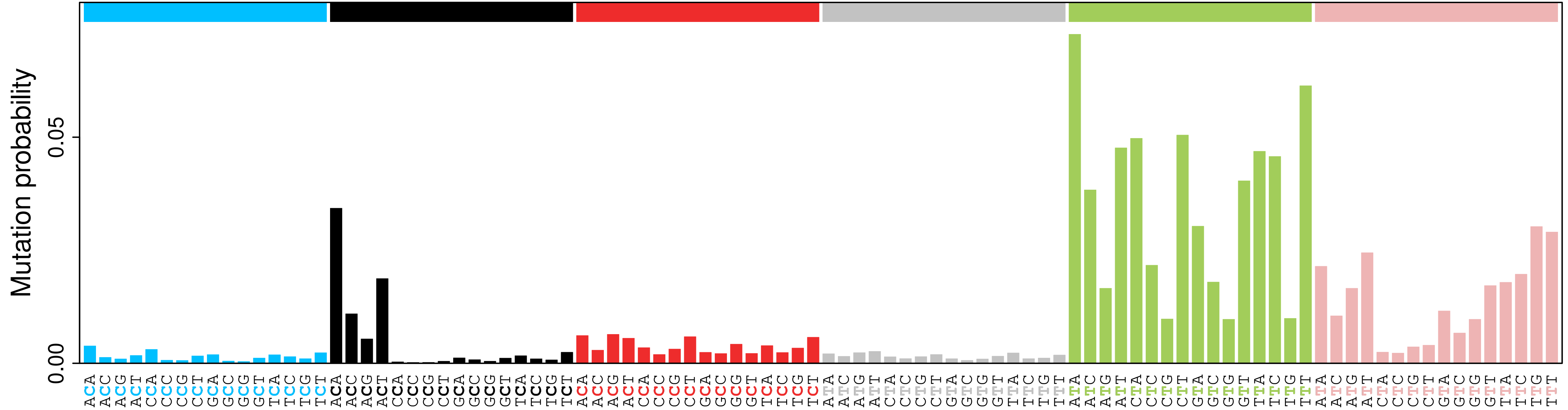
C > G

$$C > T$$

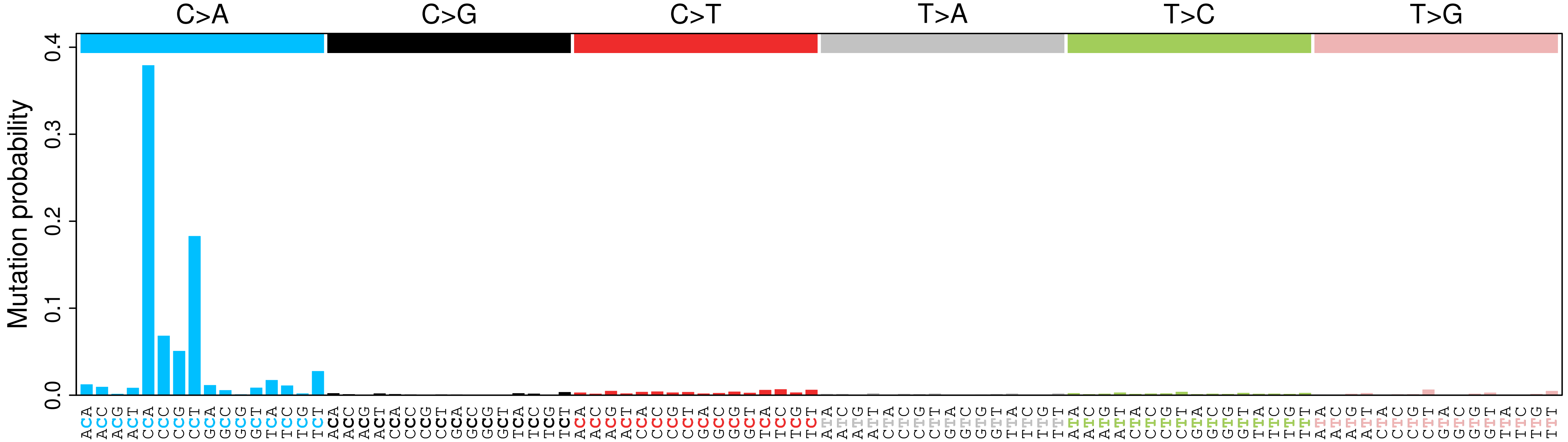
T > A

$T > C$

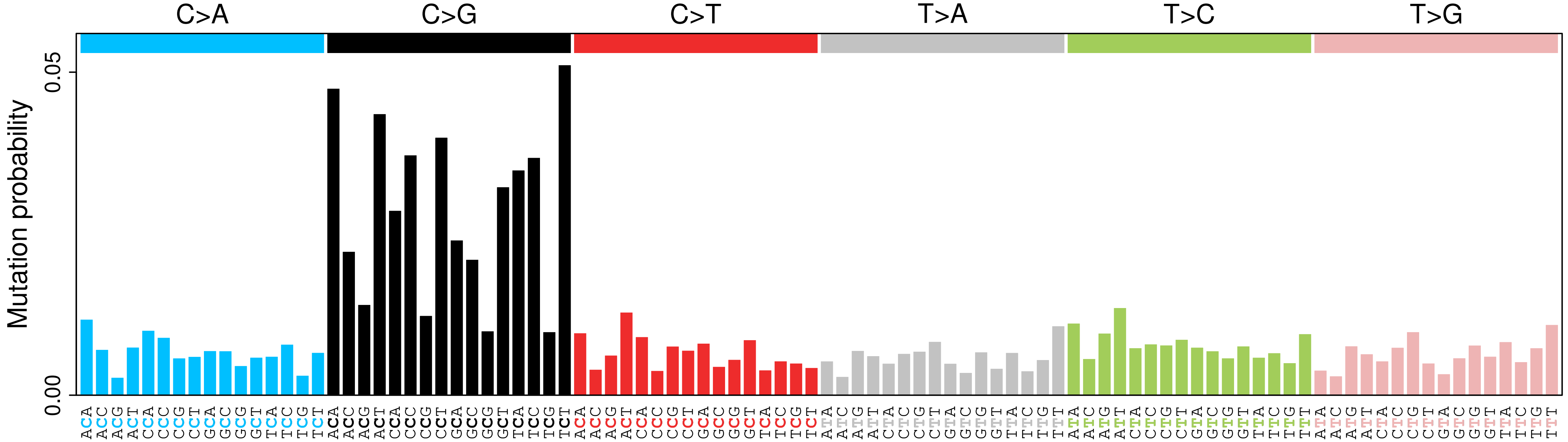
T>G



SBS38



SBS39



SBS40a



SBS40b

C>A

C>G

C>T

T>A

T>C

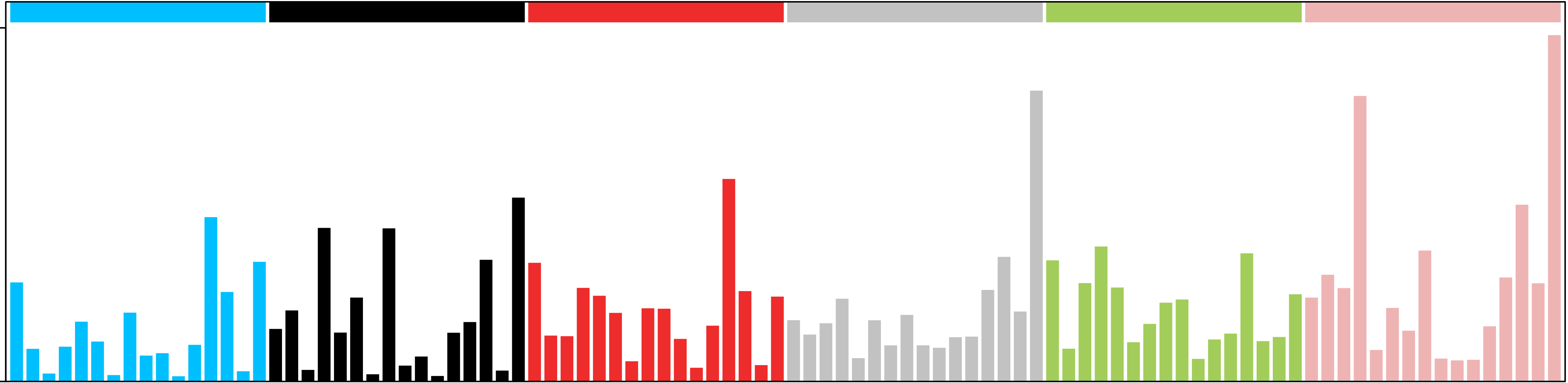
T>G

Mutation probability

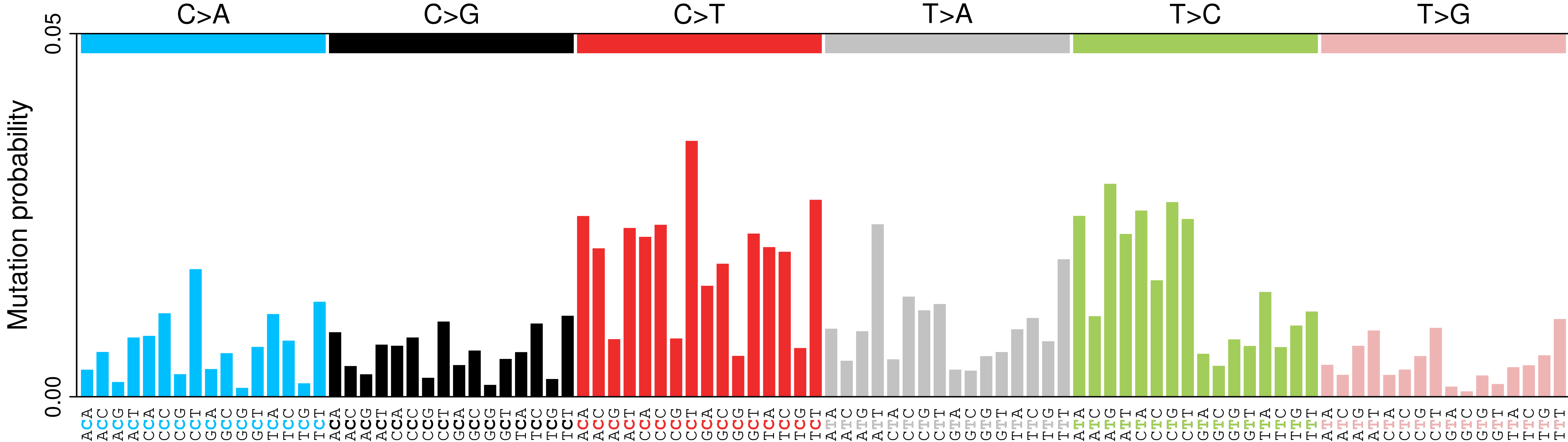
0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT



SBS40c



SBS41

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CGC CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CCT GCA GCC GGT GTC TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS43

C > A

C > G

$C > T$

T > A

$$T > C$$

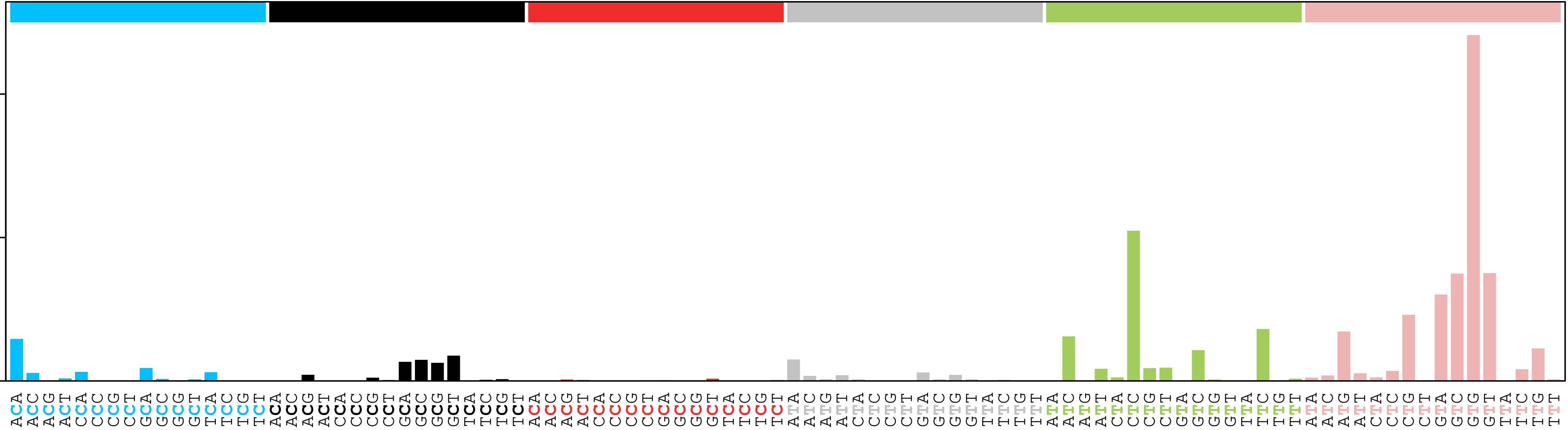
$T > G$

Mutation probability

0.2

 \circ

0



SBS44



SBS45

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

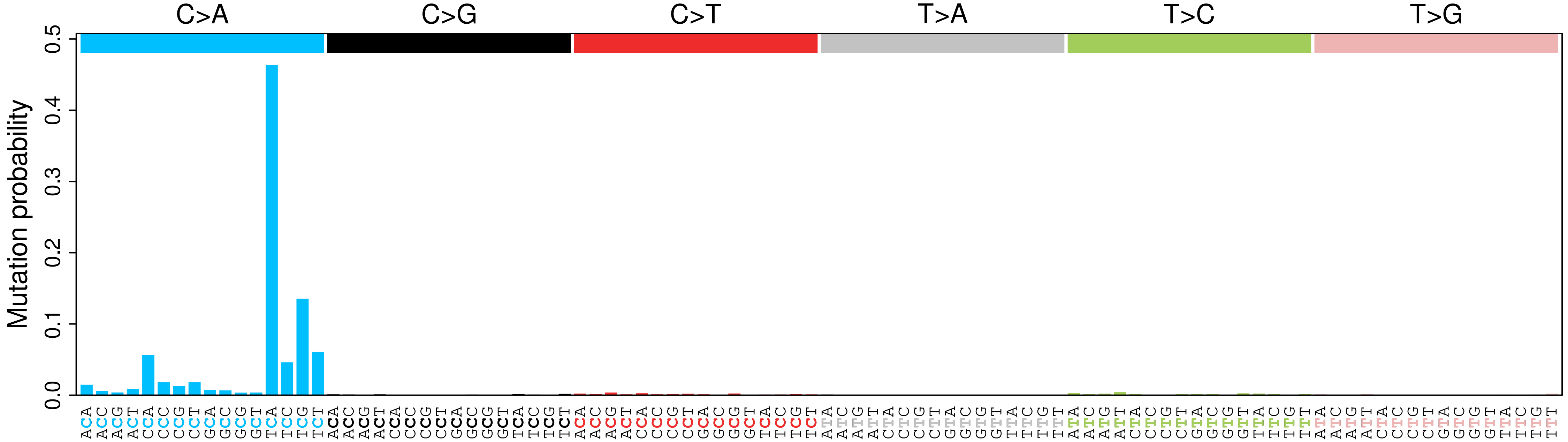
0.2
0.1
0.0

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS51



SBS52



SBS54

$C > A$

C > G

$$C > T$$

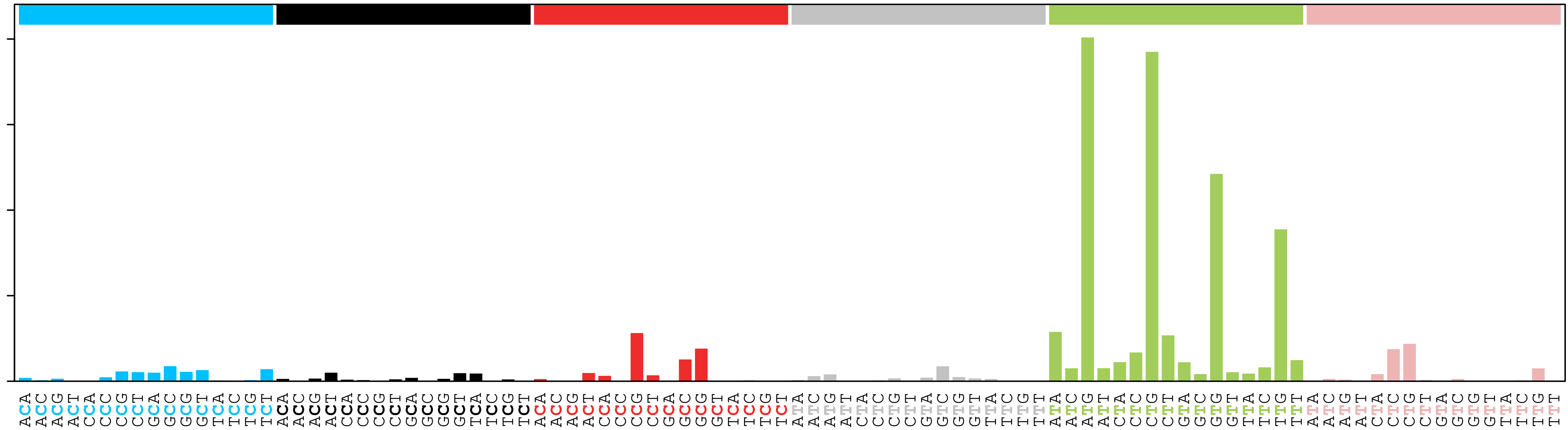
T > A

$T > C$

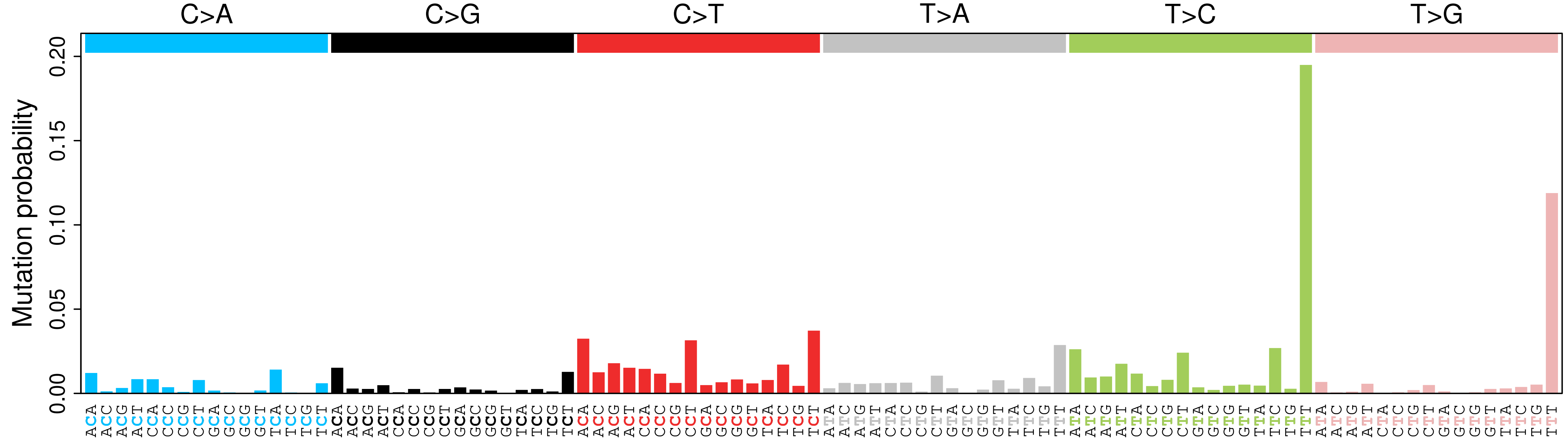
T>G

Mutation probability

0.00 0.05 0.10 0.15 0.20



SBS57



SBS58

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.15
0.10
0.05
0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS85

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

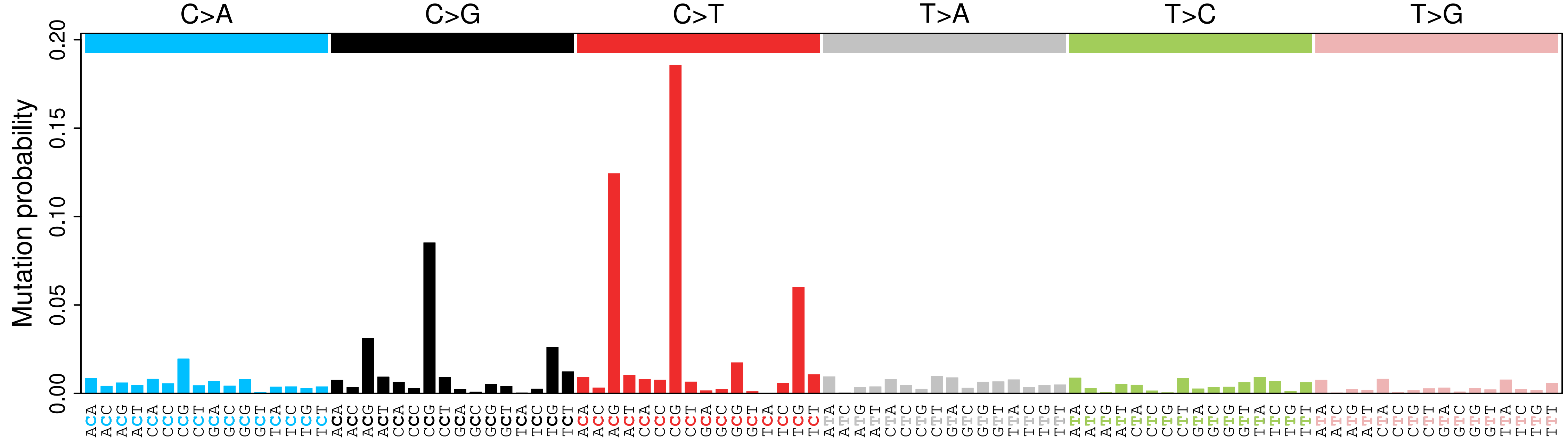
0.10

0.05

0.00

AACGTCAGCGGTATCTTCTTAAACGAACAACCACTCCCGTGCCTCATCTCTTAACAGTACCCTGGTGCTATCATTATAGATACTCTCTA GTGGTTATCTGTTATATAGATACTCTCTA

SBS87



SBS88

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.15

0.10

0.05

0.00

[illegible]

SBS91

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.3

0.2

0

AACGATCCCGTAACTAGCAACTCCGGCAGGCCGTTCCTTACCATTAGTTAATACTGTAAGTAACTGCCTGAAGTATTTTAAAATAATACTCATGTTGTTTAA

SBS92

C>A

C>G

C>T

T>A

T>C

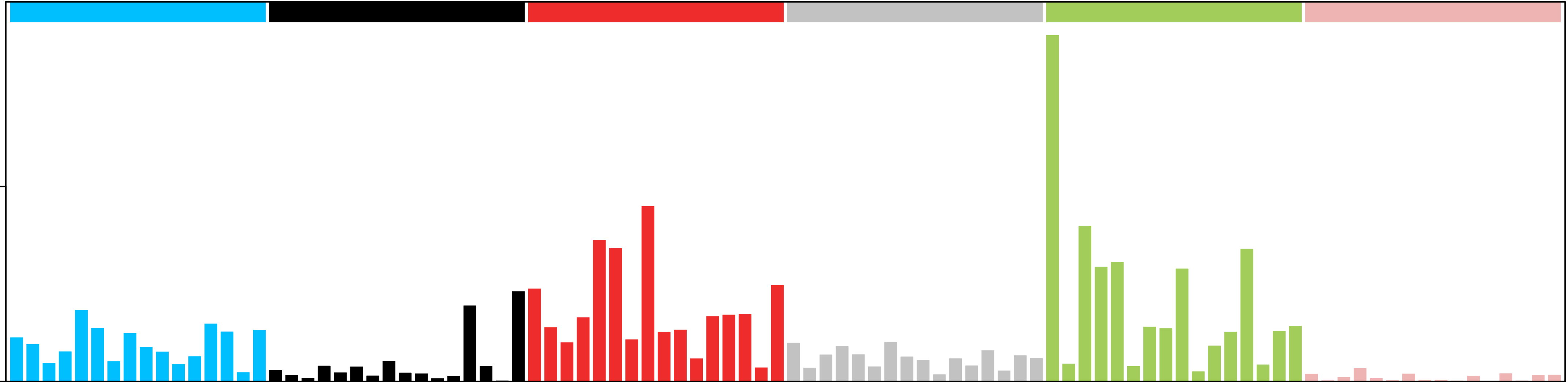
T>G

Mutation probability

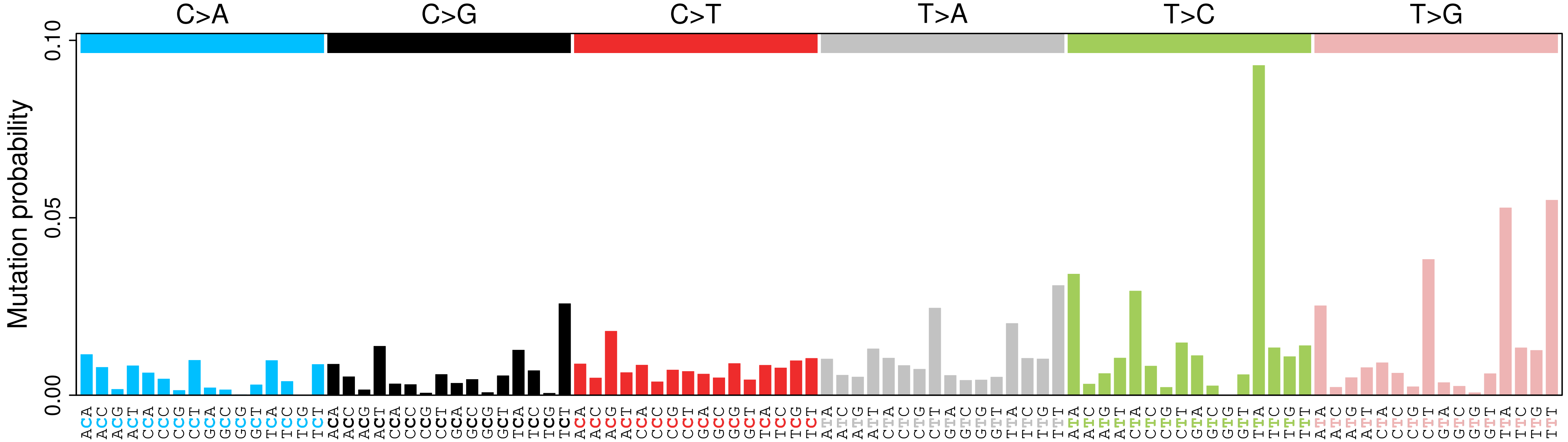
0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC GTT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTC GTT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT



SBS93



SBS94

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGG GGT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGG GGT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGG GGT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS95

$C > A$

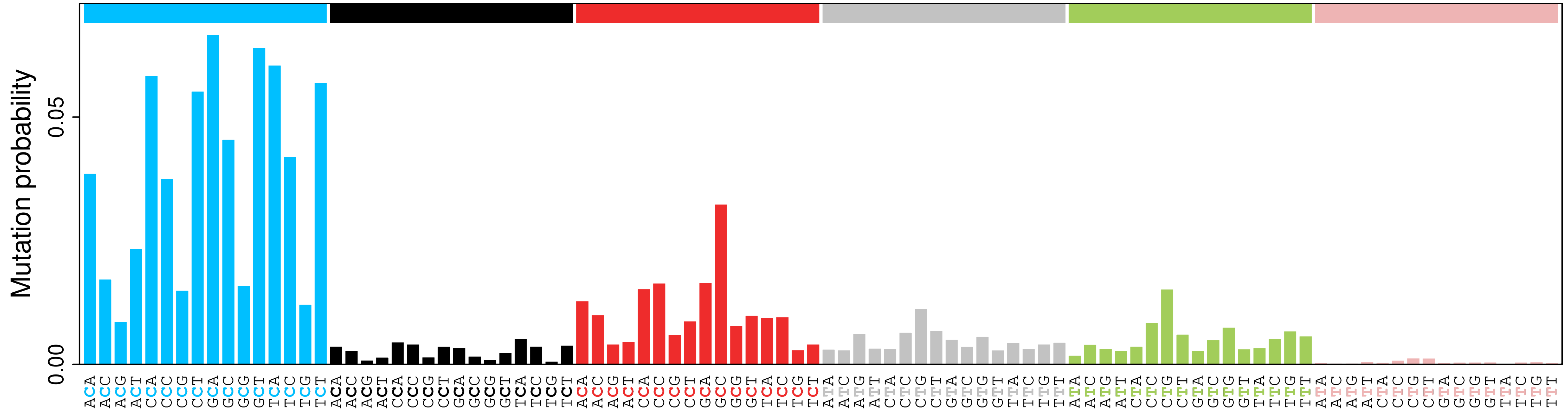
C > G

$$C > T$$

T > A

$T > C$

T>G



SBS96

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS97



SBS99

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

