

SBS1



SBS2

$C > A$

C > G

$C > T$

T > A

$T > C$

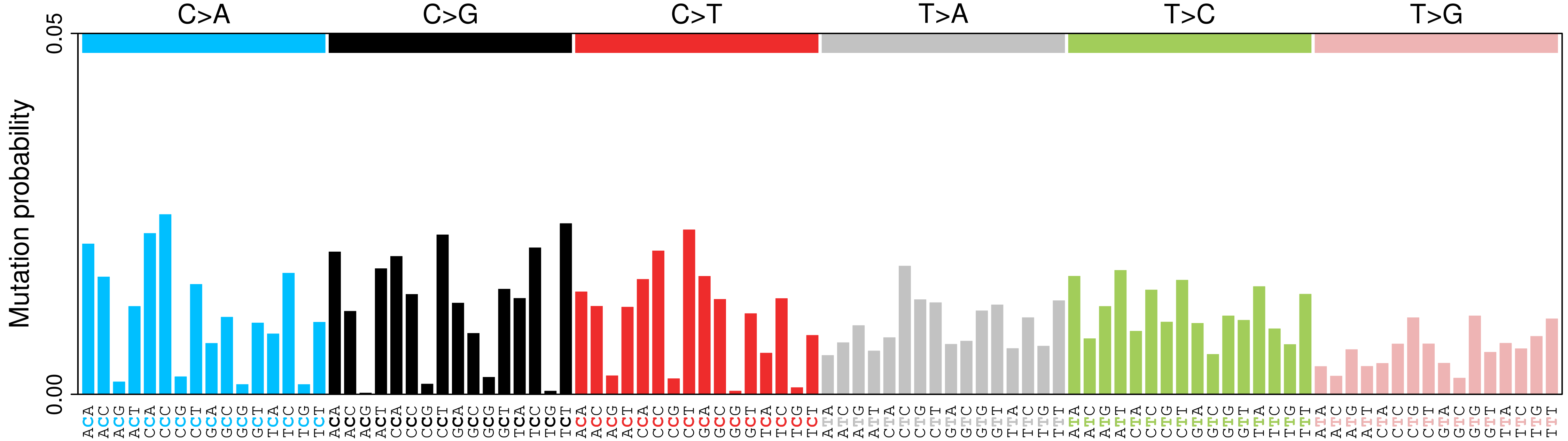
T>G

Mutation probability

0.0 0.1 0.2 0.3 0.4 0.5

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GCG GGT TCA TTC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GCG GGT TCA TTC TCG TCT ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GCG GGT TCA TTC 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

SBS3



SBS4

$C > A$

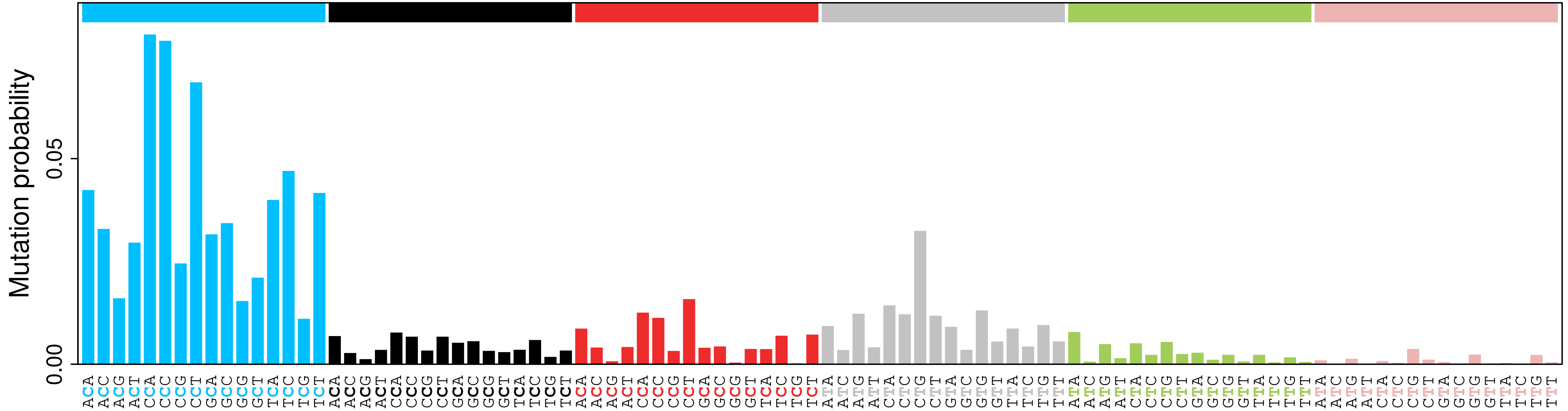
C > G

$$C > T$$

T > A

$T > C$

T>G



SBS5

$C > A$

C > G

$C > T$

T > A

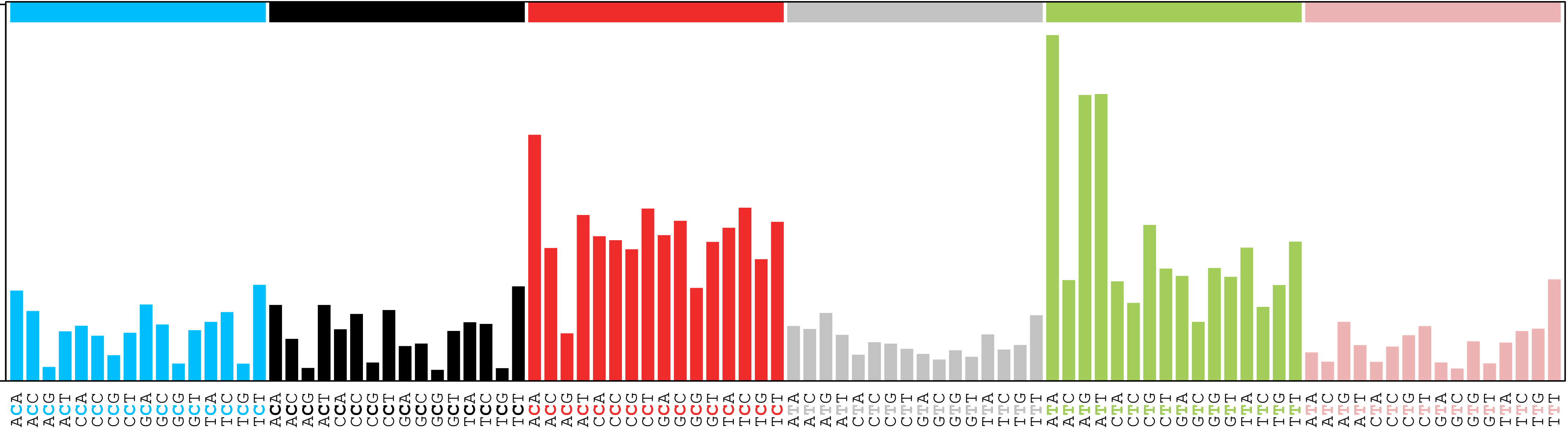
$T > C$

T>G

0.05

Mutation probability

0.00



SBS7c

$$C > A$$

C > G

$$C > T$$

T > A

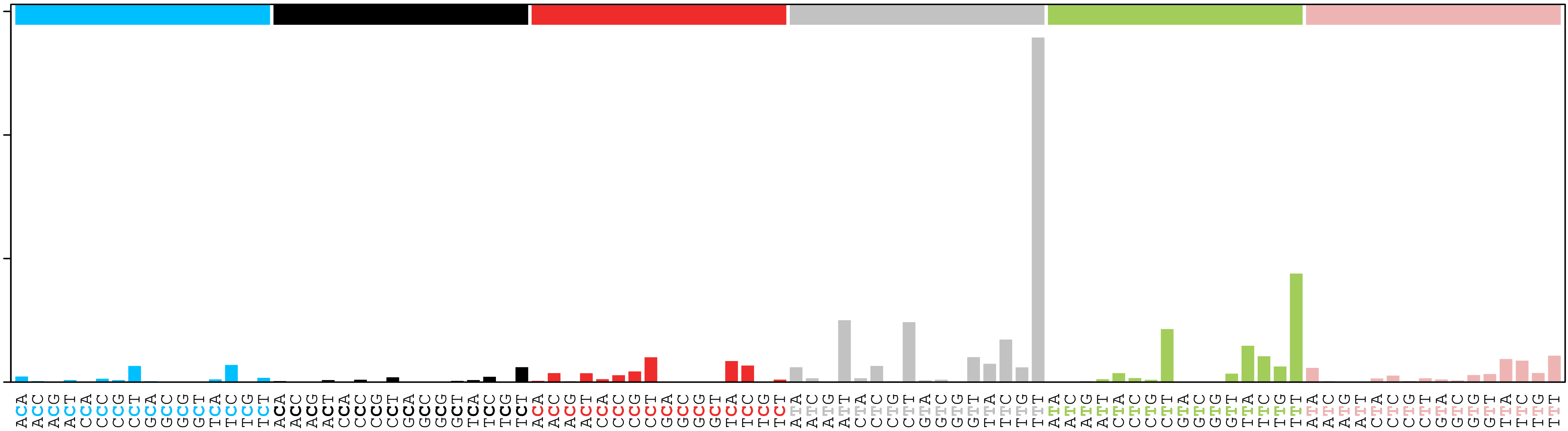
$T > C$

T>G

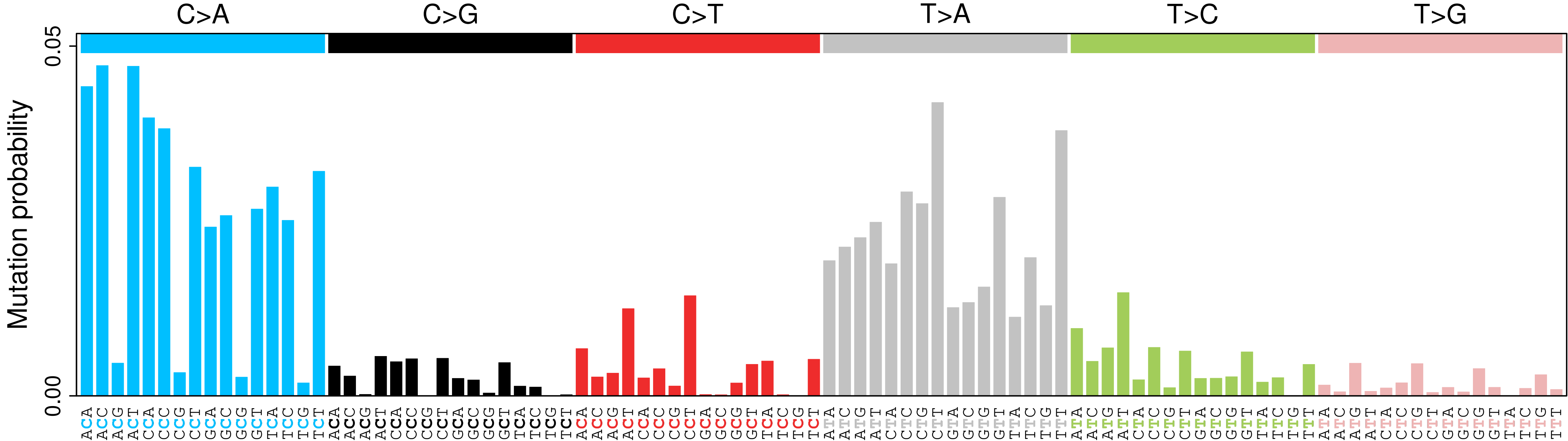
0.3

0.1

0.0



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 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 ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS10a

C>A

C>G

C>T

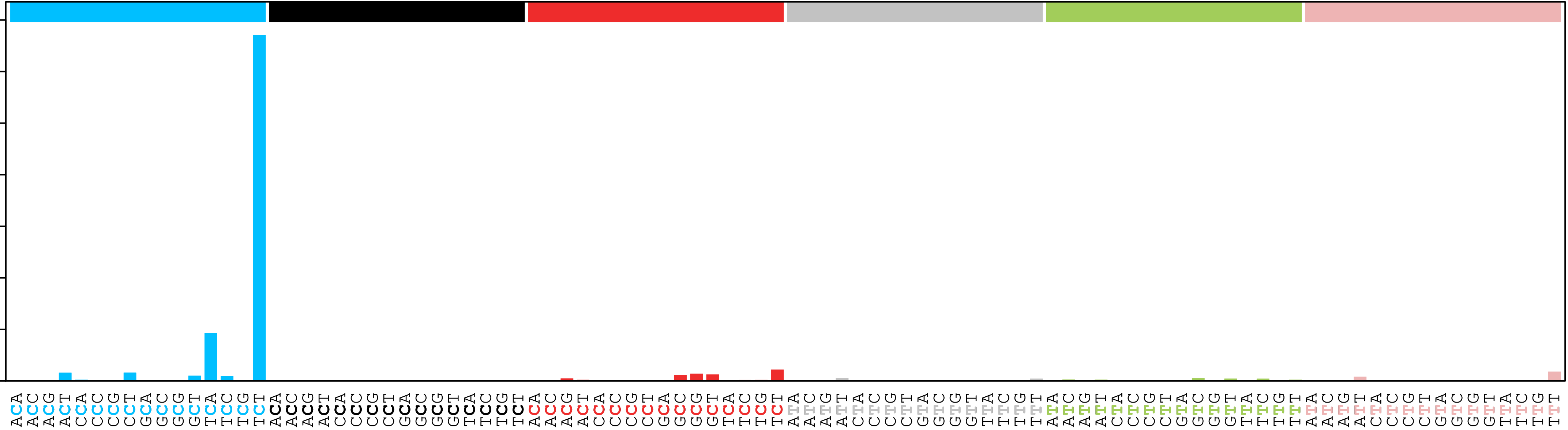
T>A

T>C

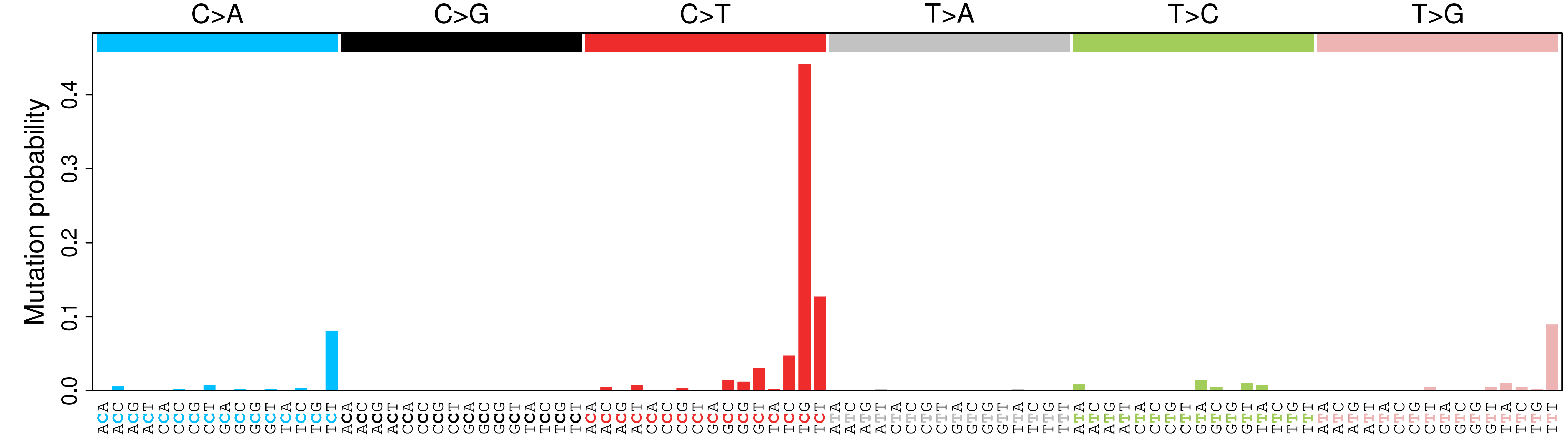
T>G

Mutation probability

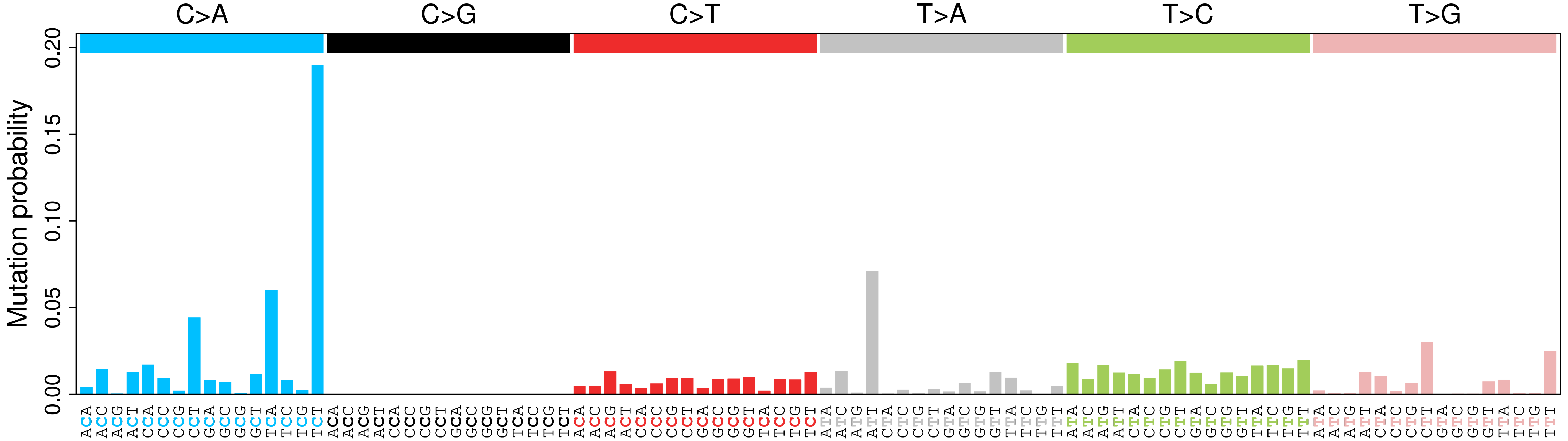
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0



SBS10b



SBS10c



SBS12

C>A

C>G

C>T

T>A

T>C

T>G

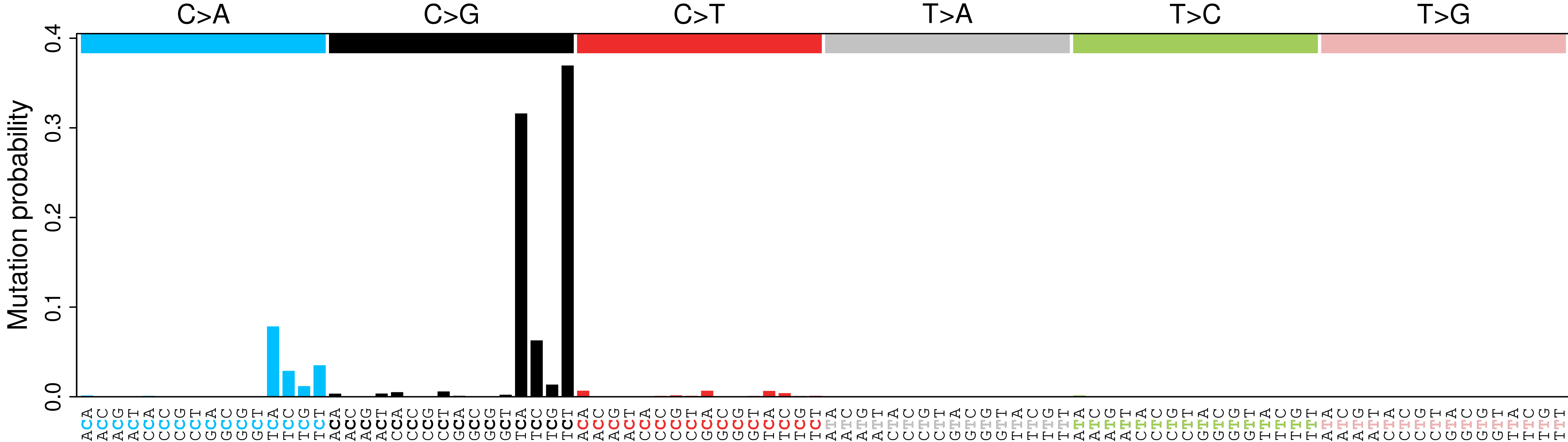
Mutation probability

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 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

$T > C$

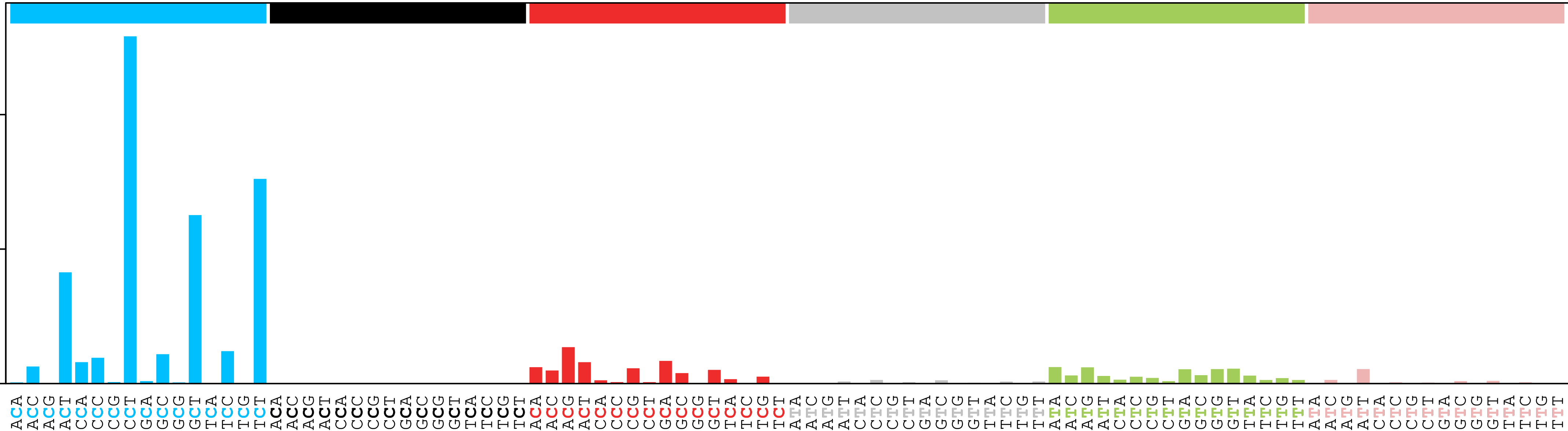
T>G

Mutation probability

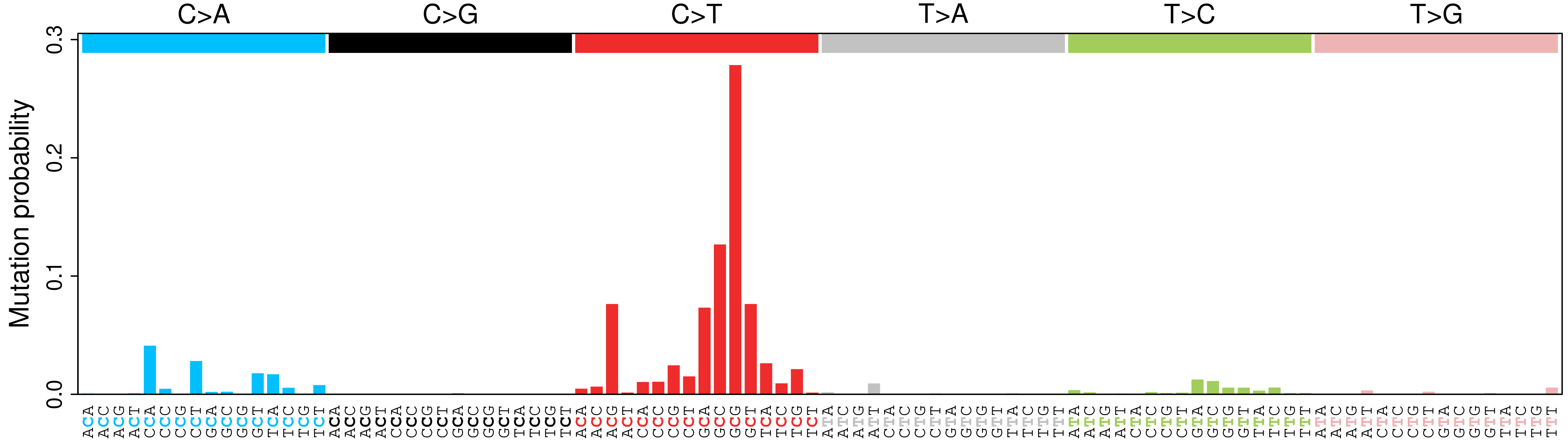
0.2

0.1

0



SBS15



SBS17a

C>A

C>G

C>T

T>A

T>C

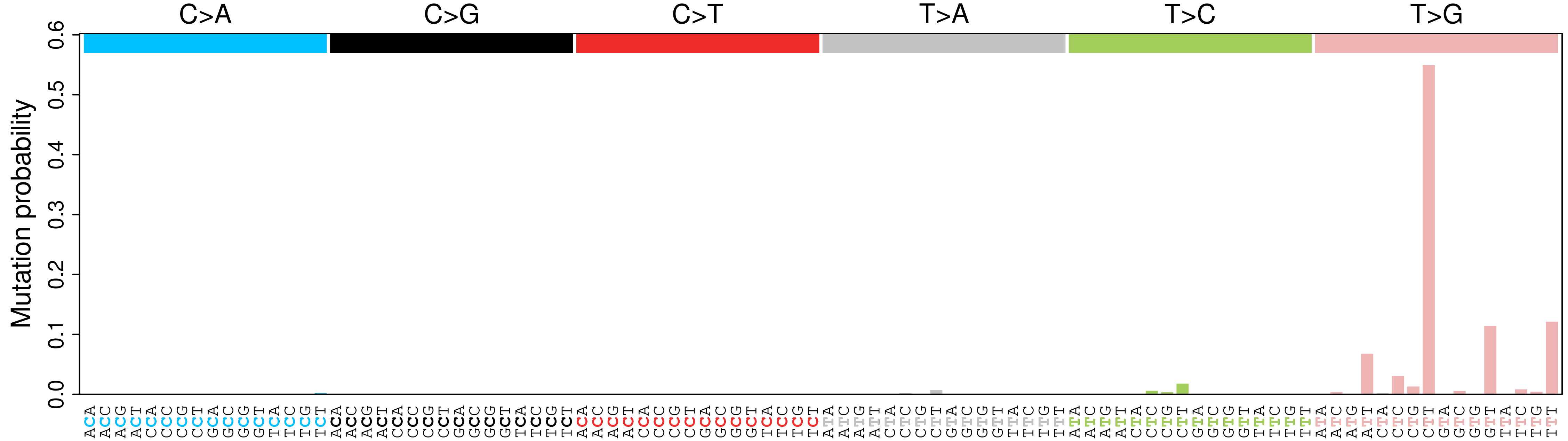
T>G

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



SBS22a

C>A

C>G

C>T

T>A

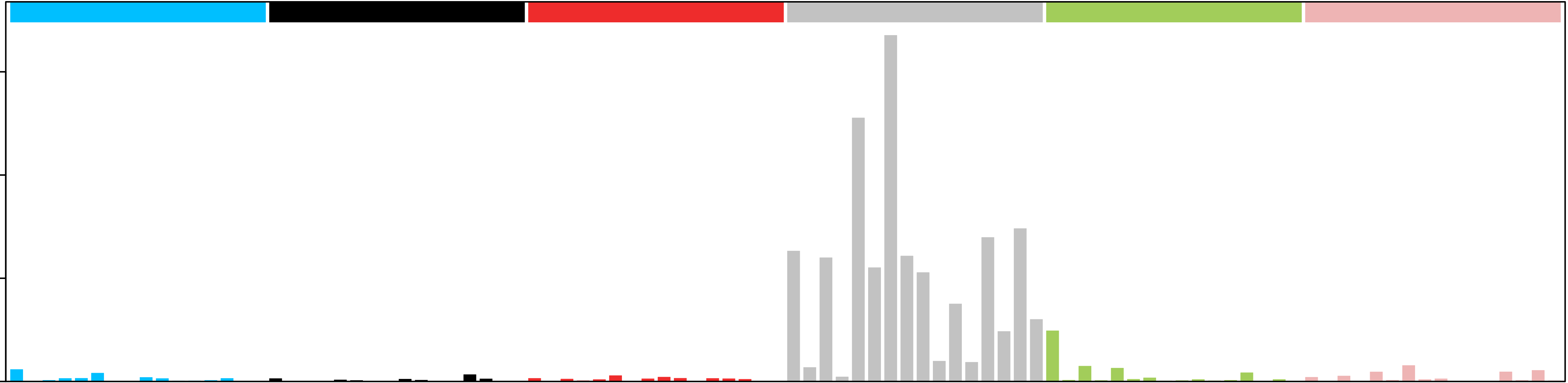
T>C

T>G

Mutation probability

0.00 0.05 0.10 0.15

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 GCA GCC GGT GTC TCA TCC TCG TCT



SBS22b

$$C > A$$

C > G

C>T

T > A

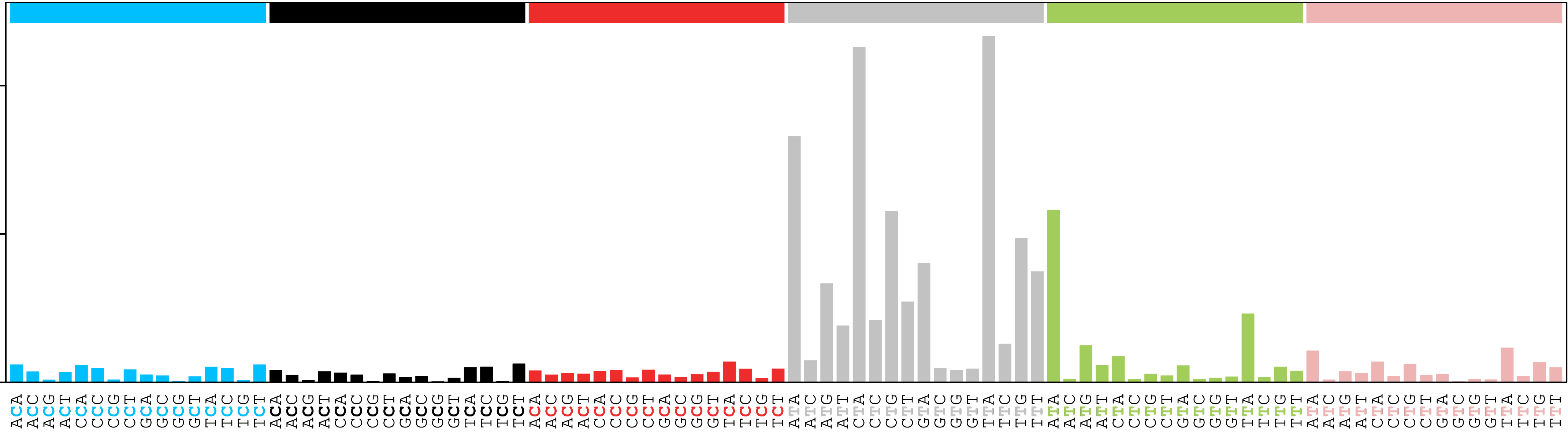
$$T > C$$

T > G

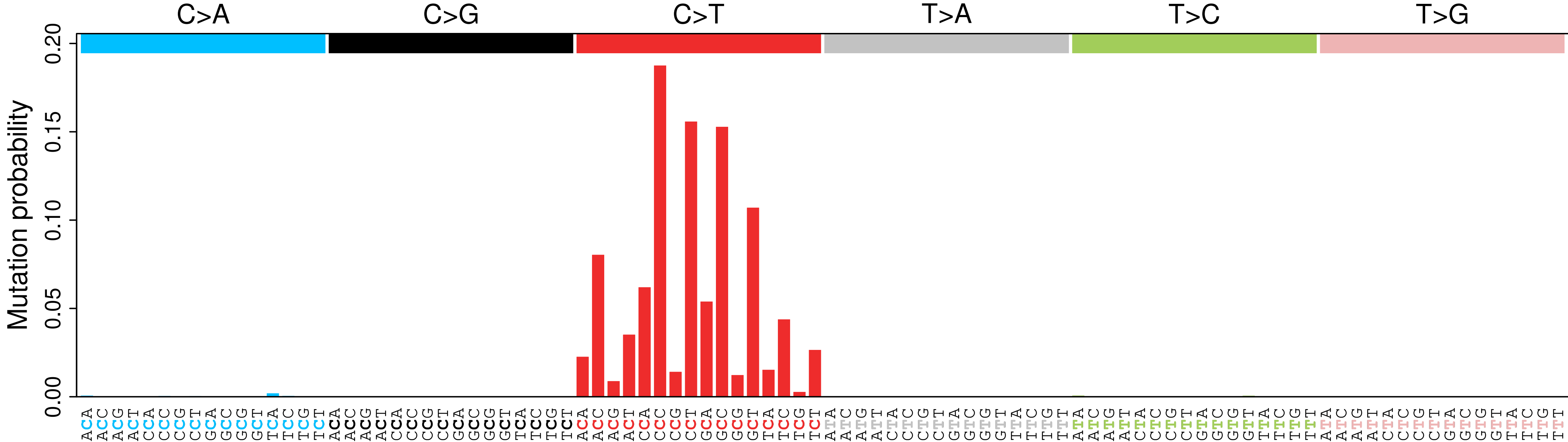
Mutation probability

0.10

0.00



SBS23



SBS25

C>A

C>G

C>T

T>A

T>C

T>G

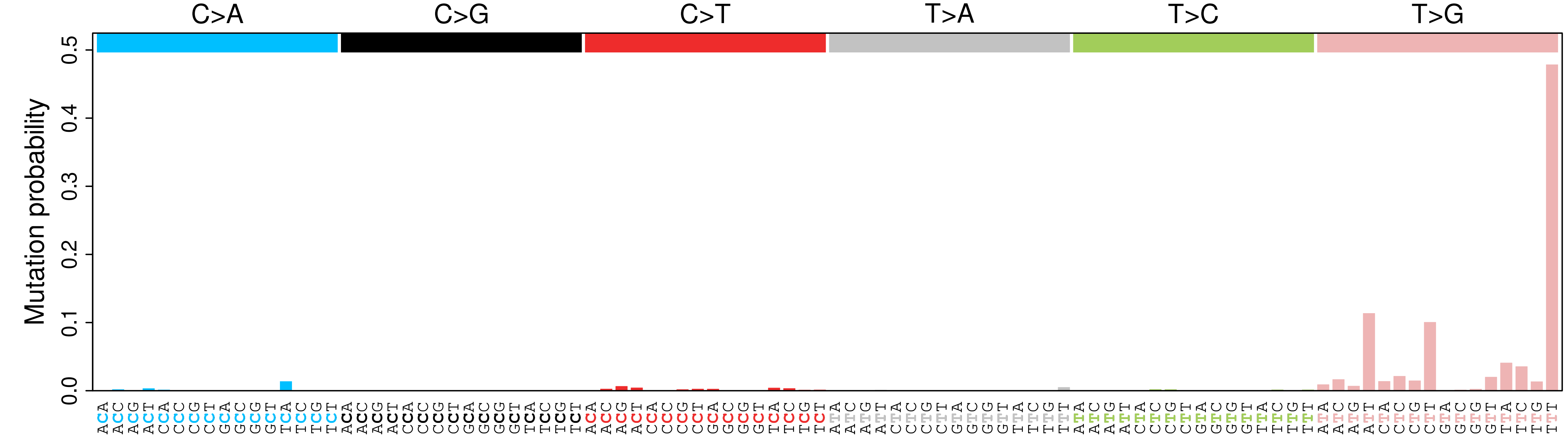
Mutation probability

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

SBS28



SBS31

$C > A$

C > G

$$C > T$$

T > A

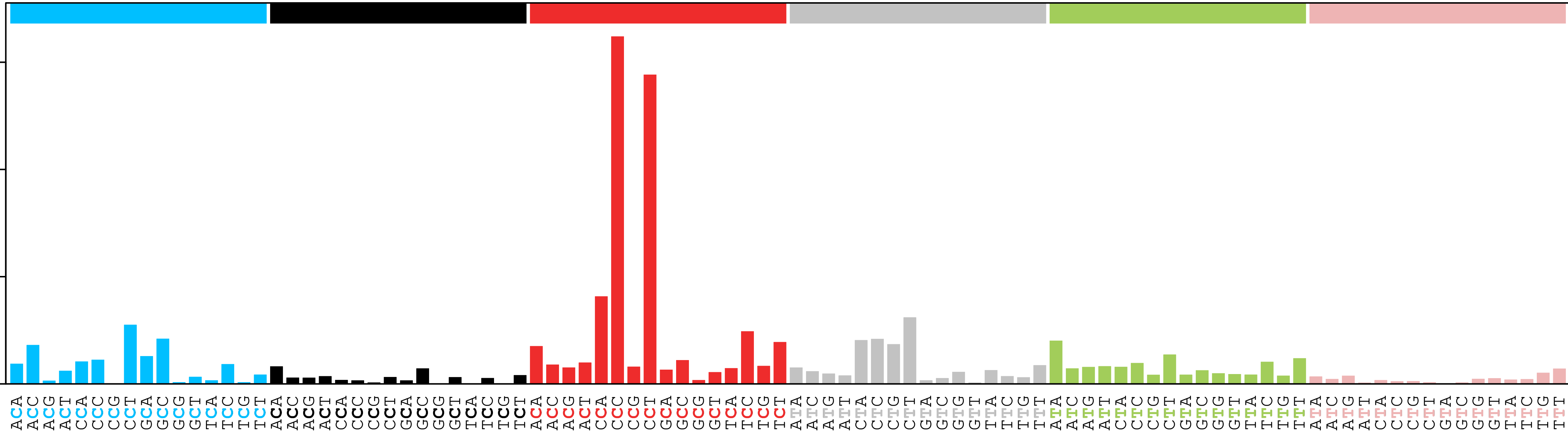
$T > C$

T>G

Mutation probability

0.00 0.05 0.10 0.15

0.00



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

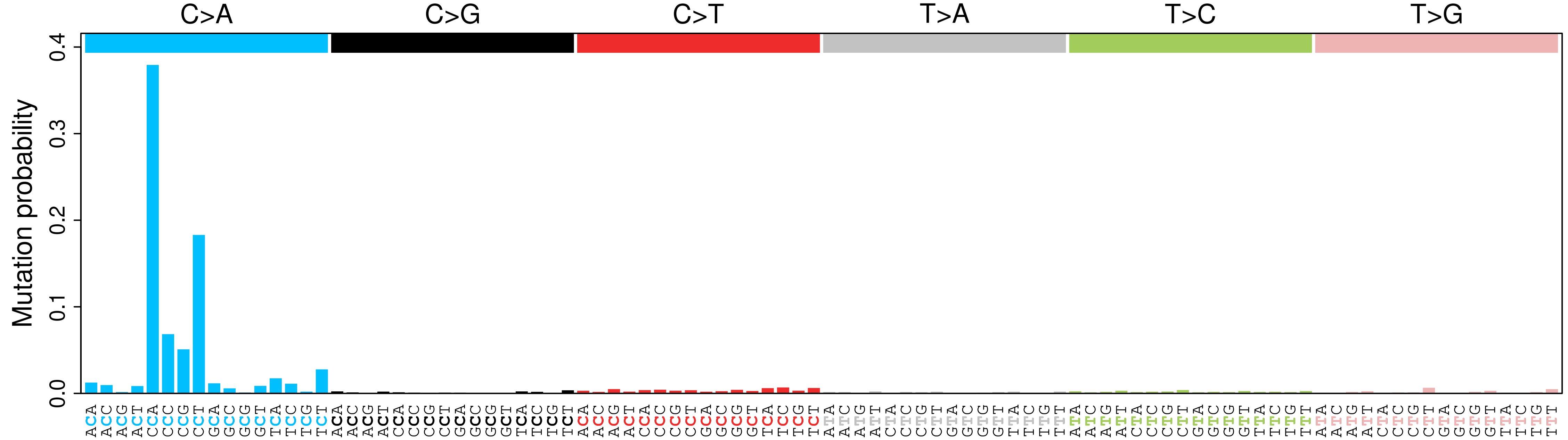
Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC 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 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 CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS38



SBS39

$C > A$

C > G

$$C > T$$

T > A

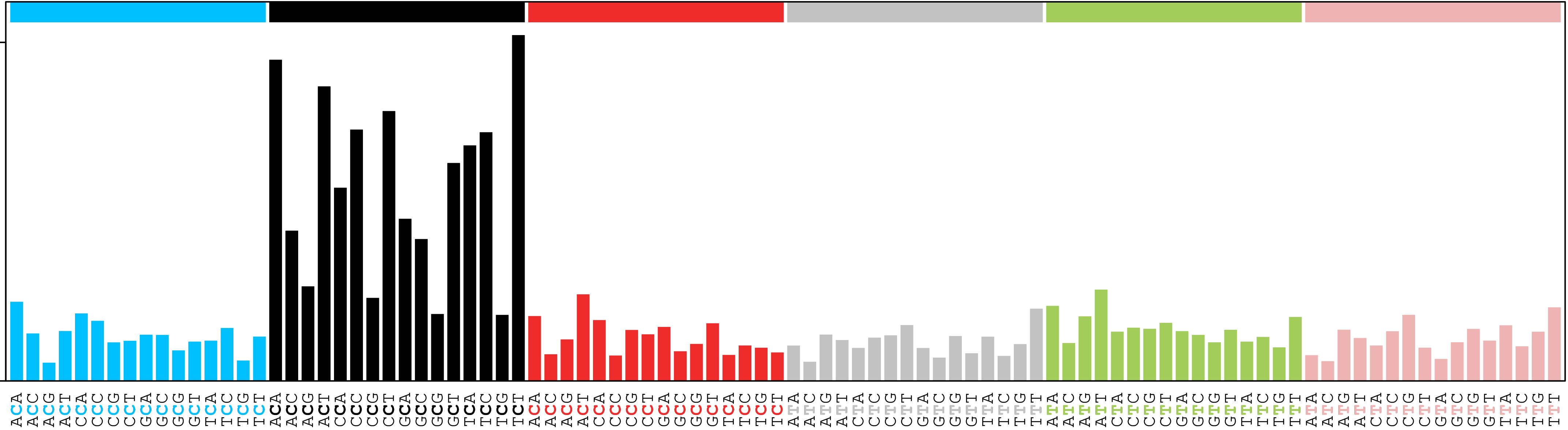
$$T > C$$

T>G

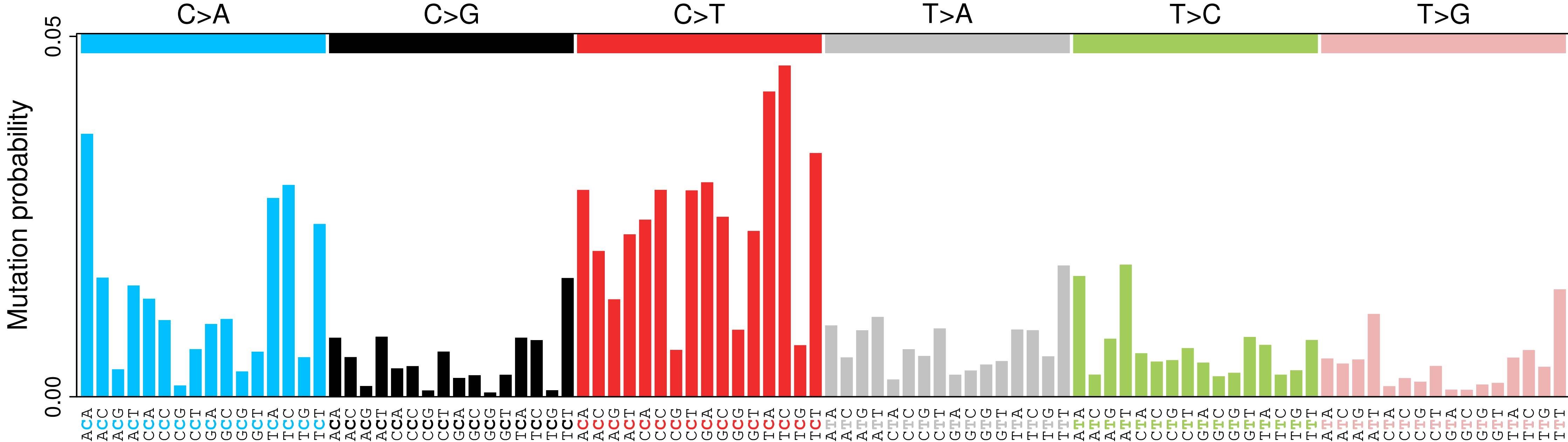
Mutation probability

0.05

0.00



SBS40a



SBS40b

C>A

C>G

C>T

T>A

T>C

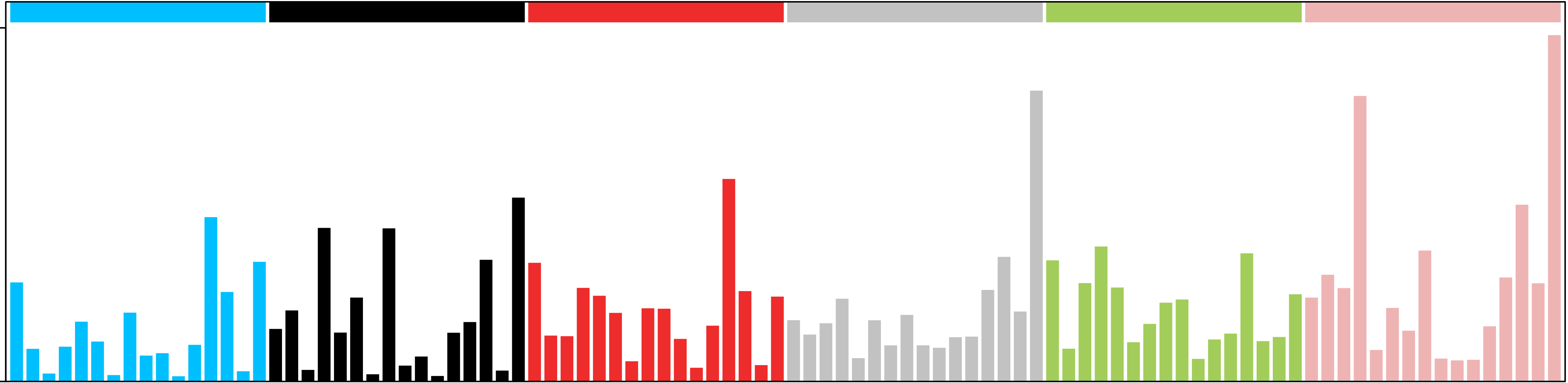
T>G

Mutation probability

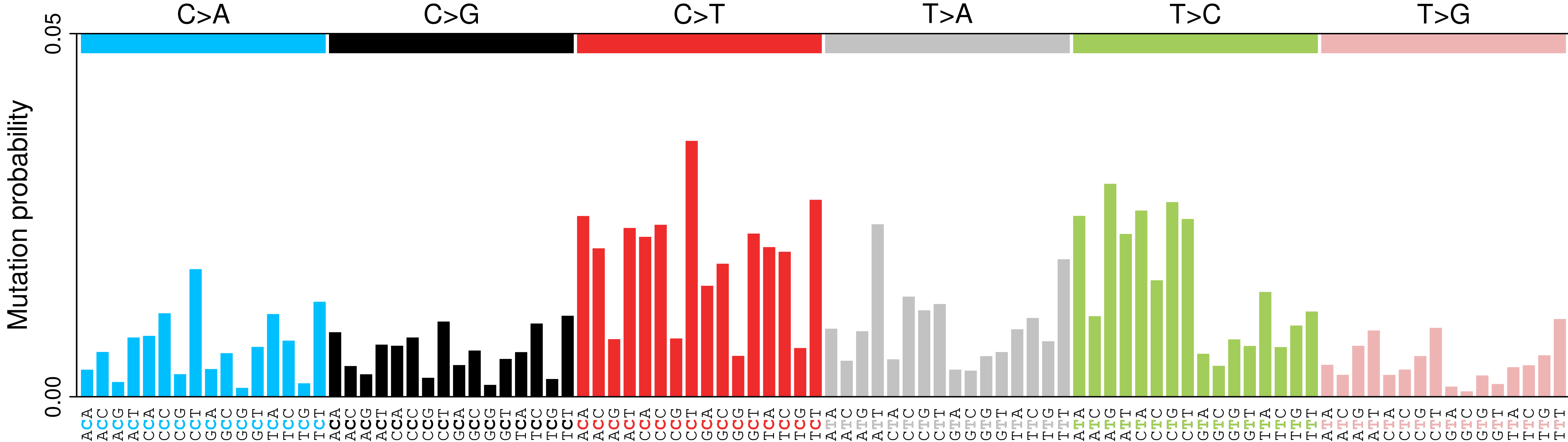
0.05

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 ATA ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT



SBS40c



SBS41

$C > A$

C > G

$$C > T$$

T > A

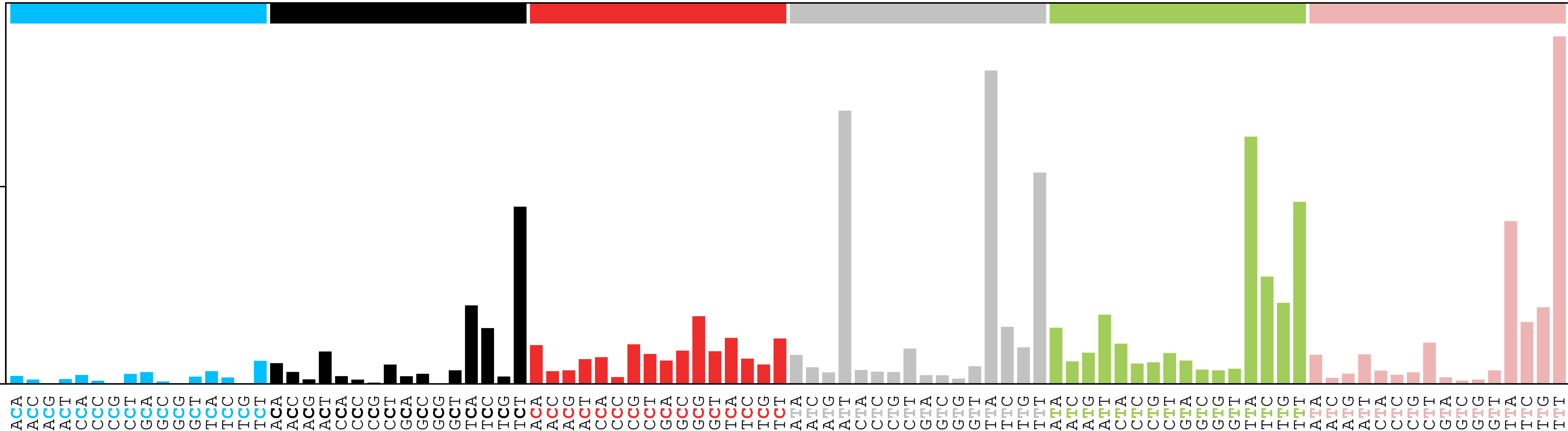
$T > C$

T>G

Mutation probability

0.05

0.00



SBS42

$C > A$

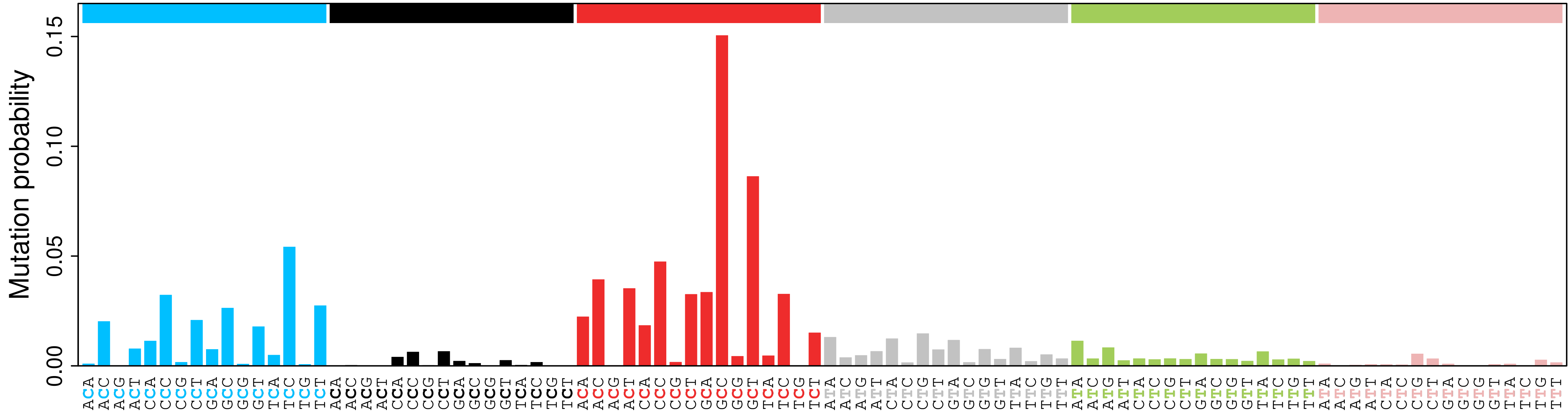
C > G

$$C > T$$

T > A

$T > C$

T>G



SBS43

$C > A$

C > G

$$C > T$$

T > A

$$T > C$$

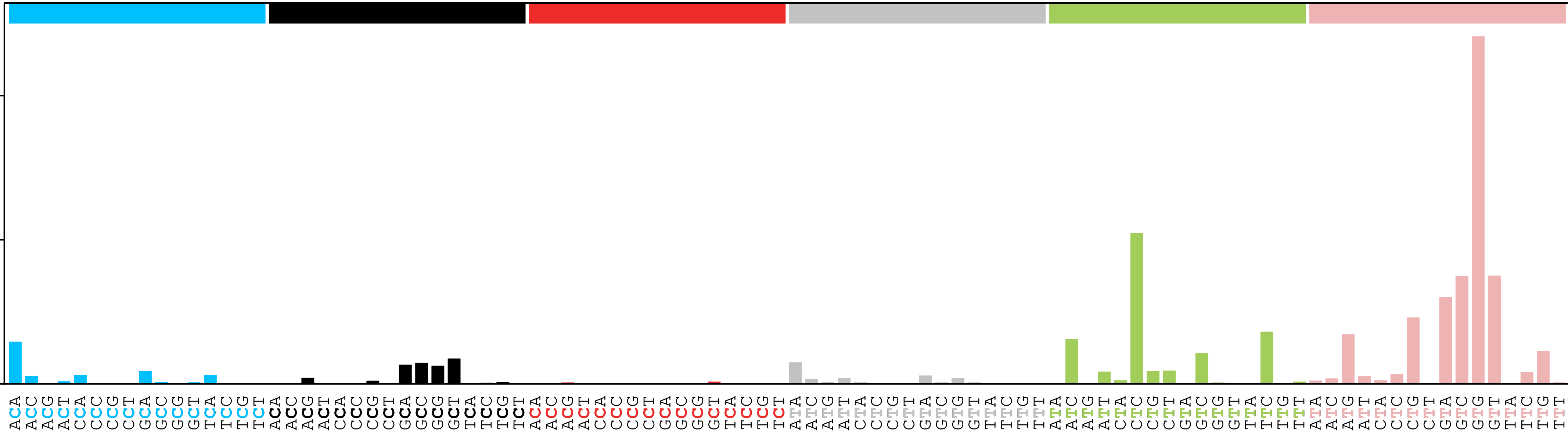
$T > G$

Mutation probability

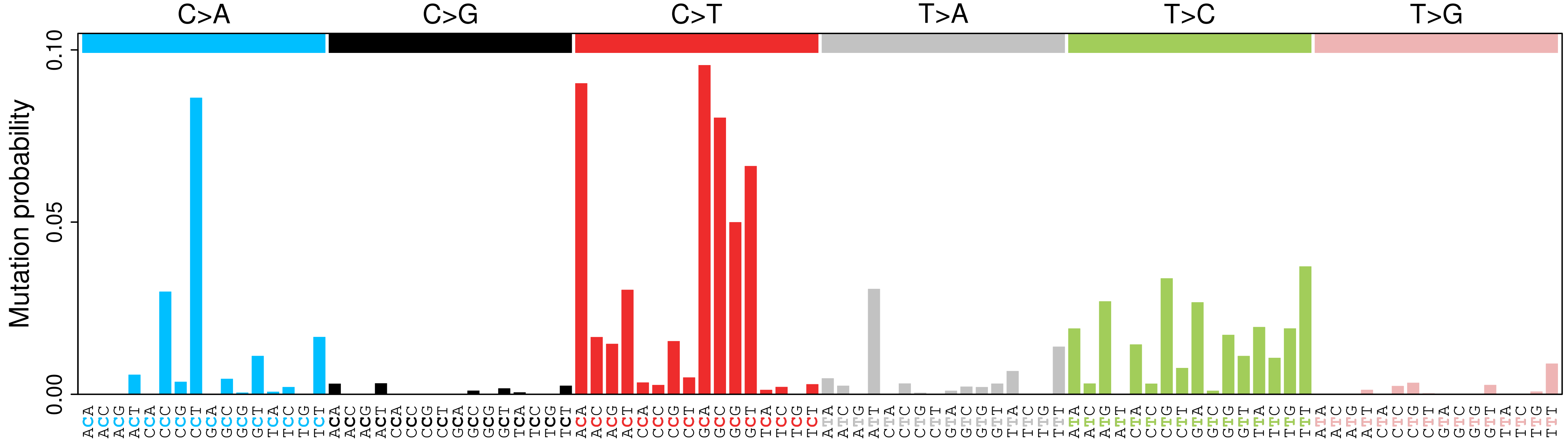
0.2

0

0.0



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 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

SBS46



SBS48

C > A

C > G

$$C > T$$

T > A

$T > C$

T>G

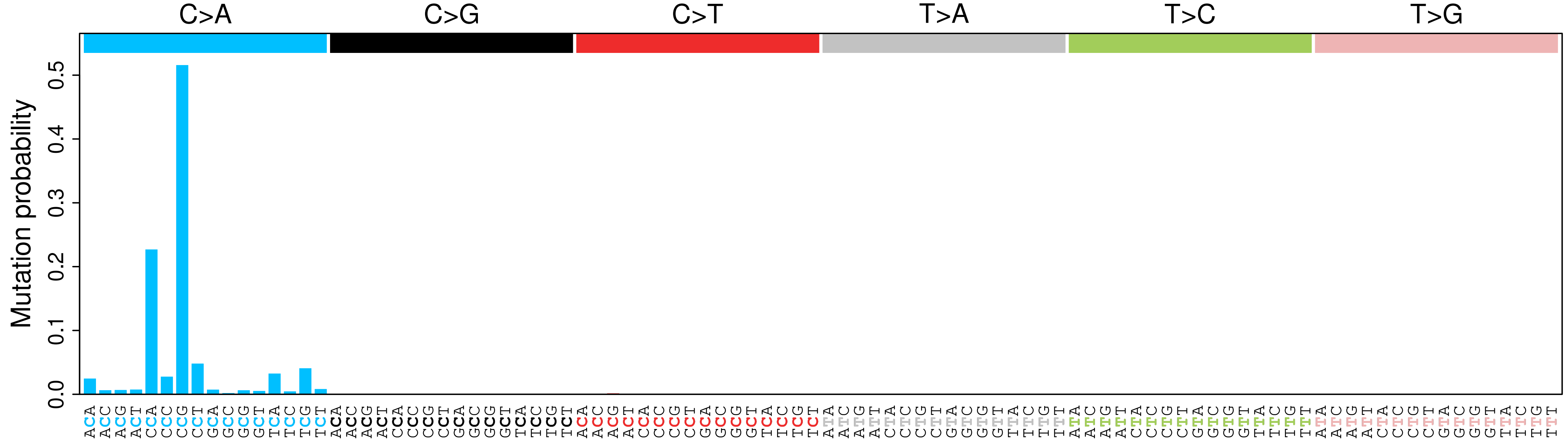
Mutation probability

9.0

0

[illegible]

SBS49



SBS50

$C > A$

C > G

$$C > T$$

T > A

$T > C$

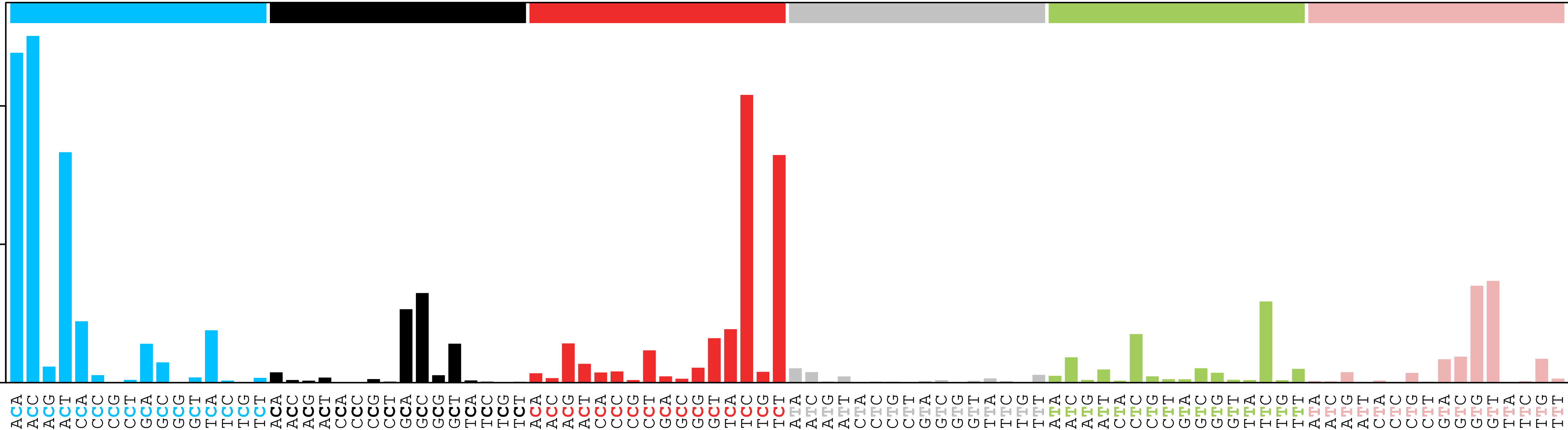
T>G

Mutation probability

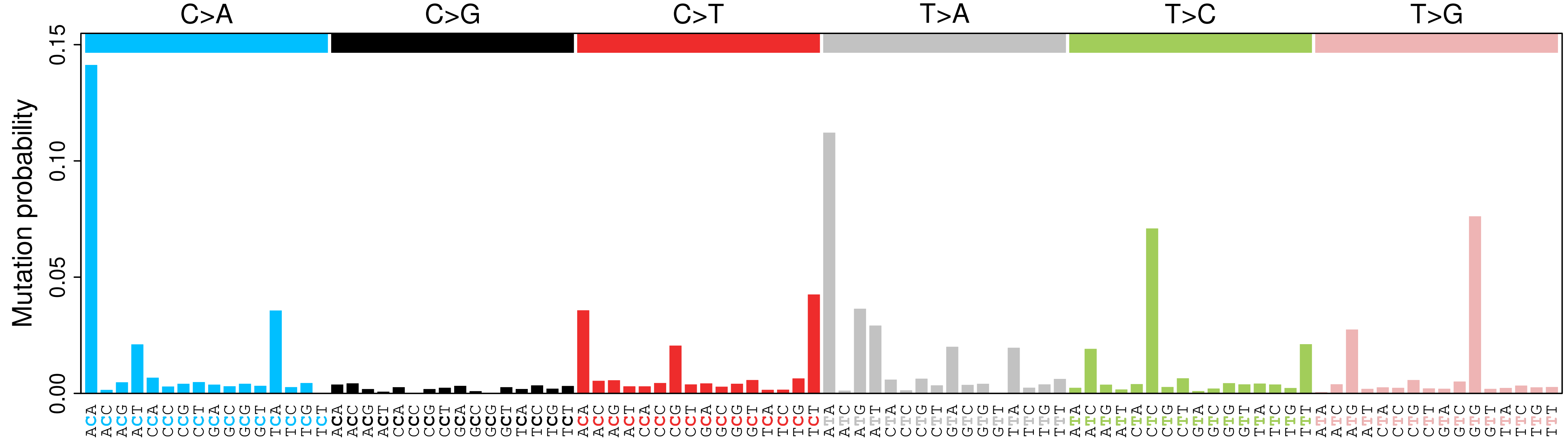
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50.

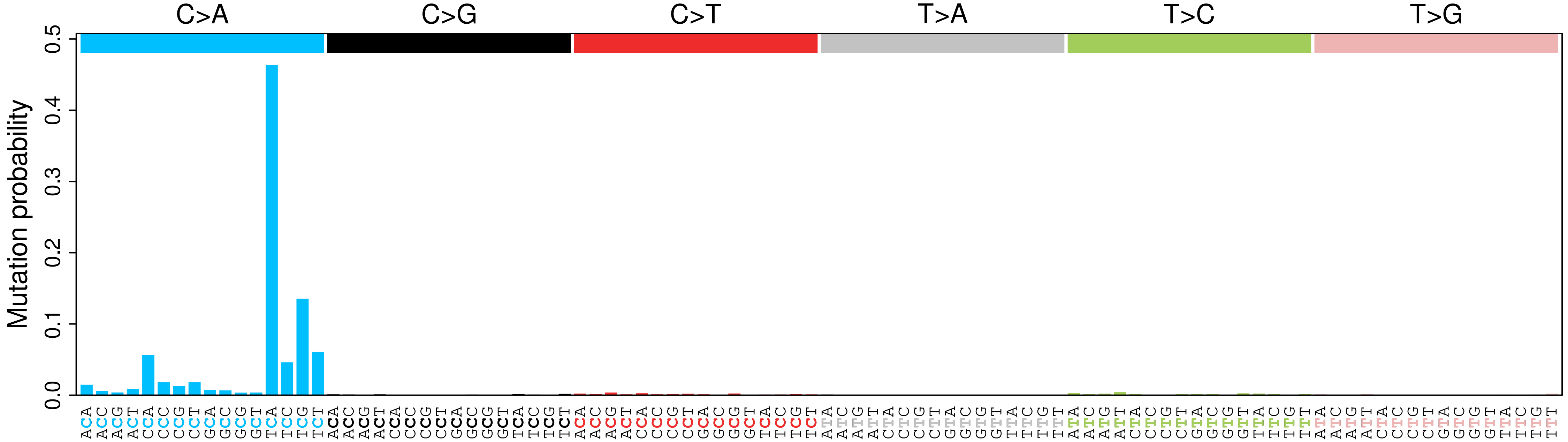
0.00



SBS51



SBS52



SBS54

$C > A$

C > G

$C > T$

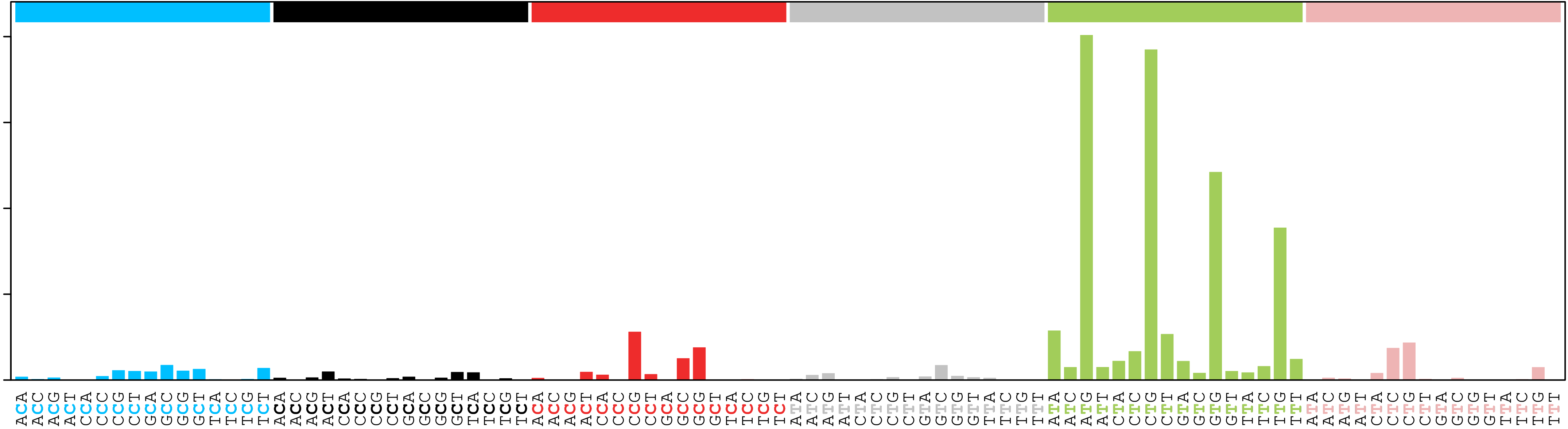
T > A

$T > C$

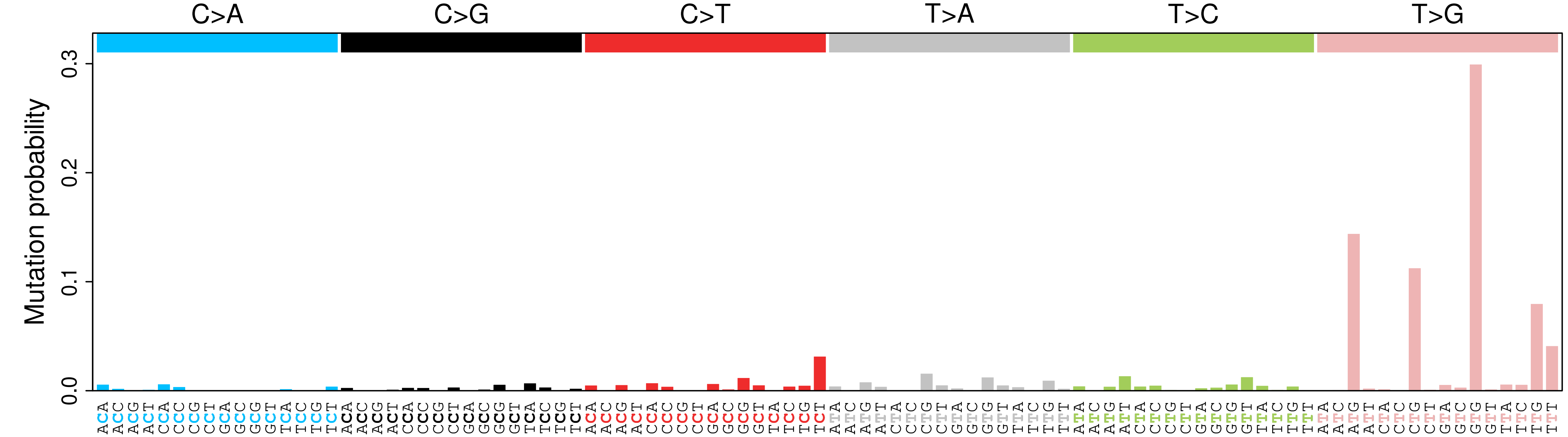
T>G

Mutation probability

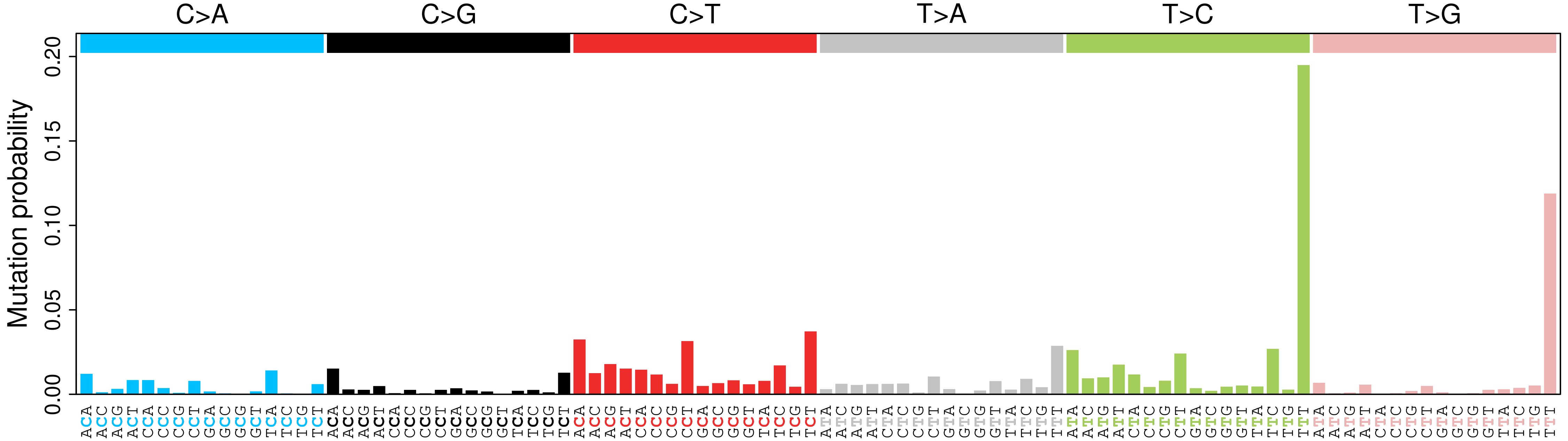
0.00 0.05 0.10 0.15 0.20



SBS55



SBS57



SBS58

$C > A$

C > G

$$C > T$$

T > A

$T > C$

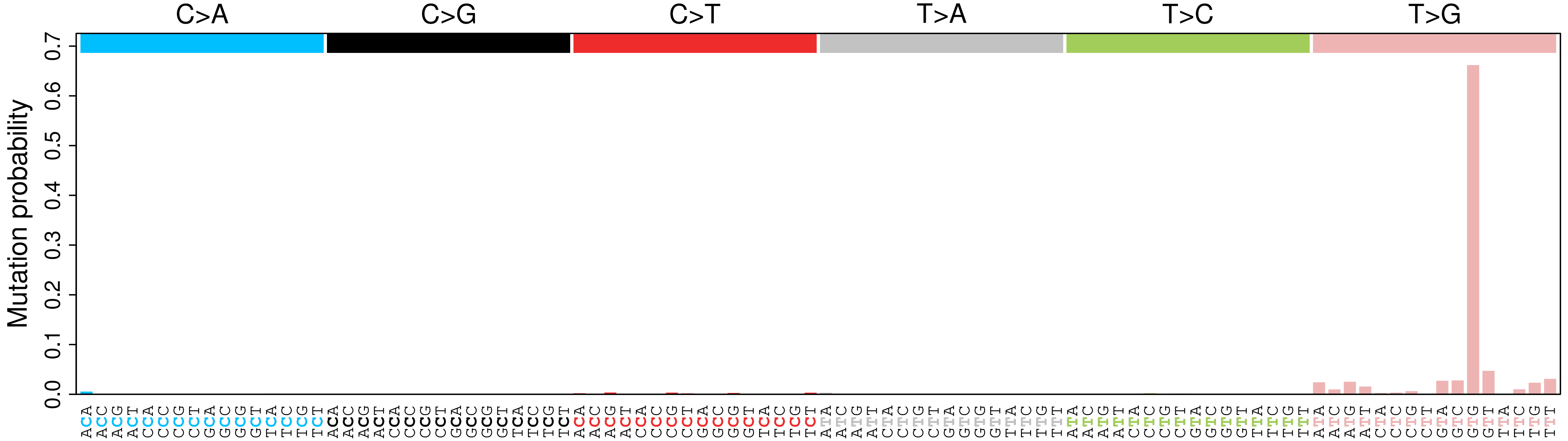
T>G

Mutation probability

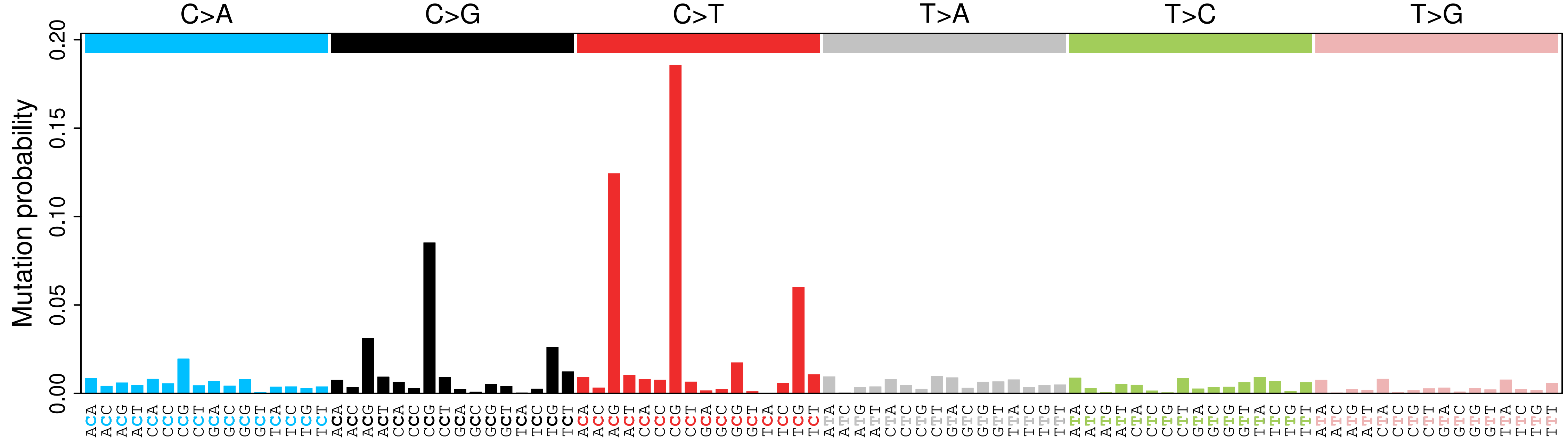
0.00 0.05 0.10 0.15

[illegible]

SBS60



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]

SBS89

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 ATC ATG ATT CTA CTC CTG CTT GTA GTC GTG GTT TTA TTC TTG TTT

SBS91

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.3

0.2

0

[illegible]

SBS92

C>A

C>G

C>T

T>A

T>C

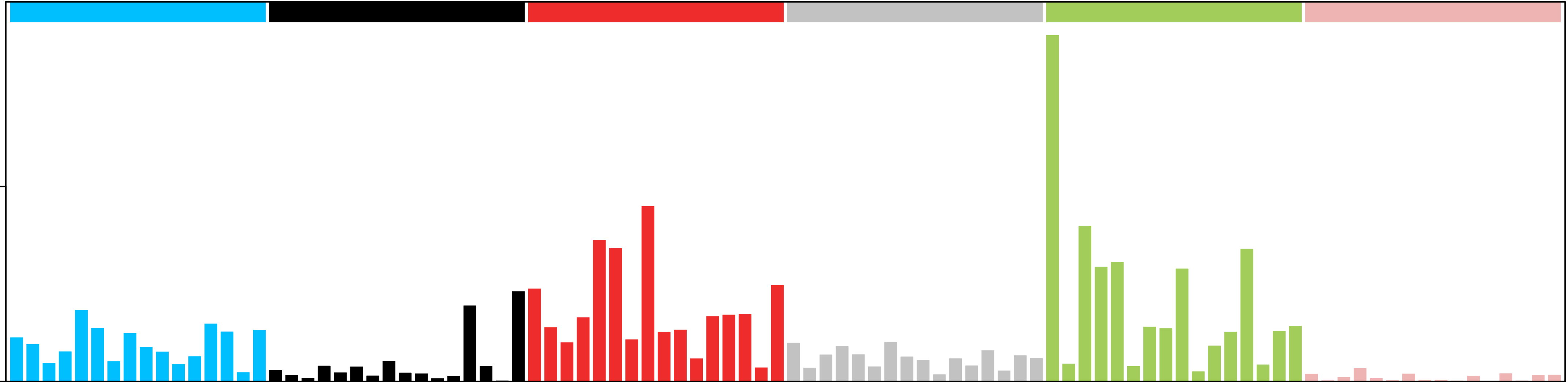
T>G

Mutation probability

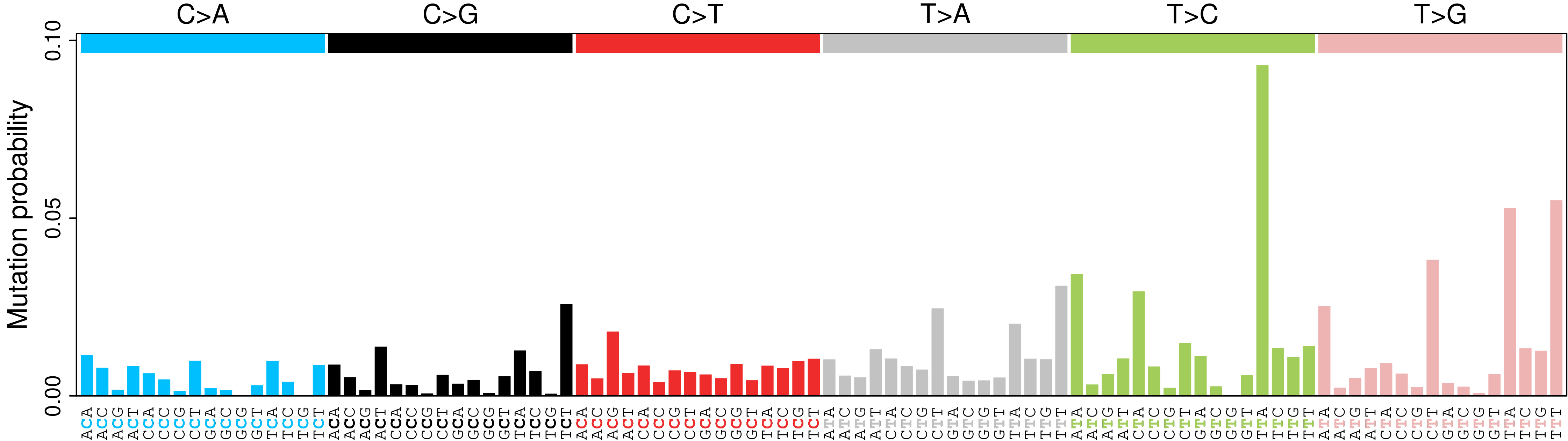
0.05

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

SBS96

C>A

C>G

C>T

T>A

T>C

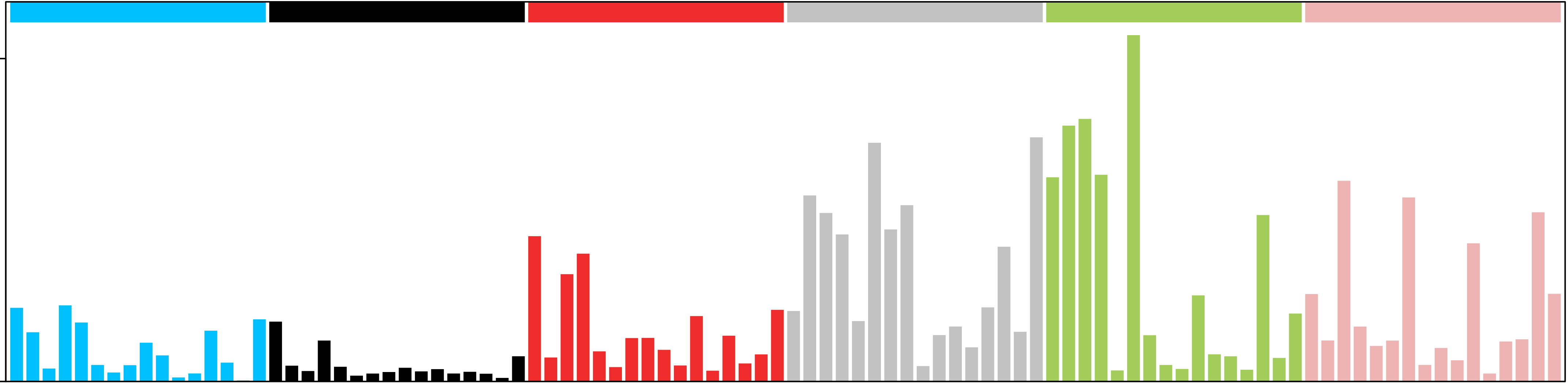
T>G

Mutation probability

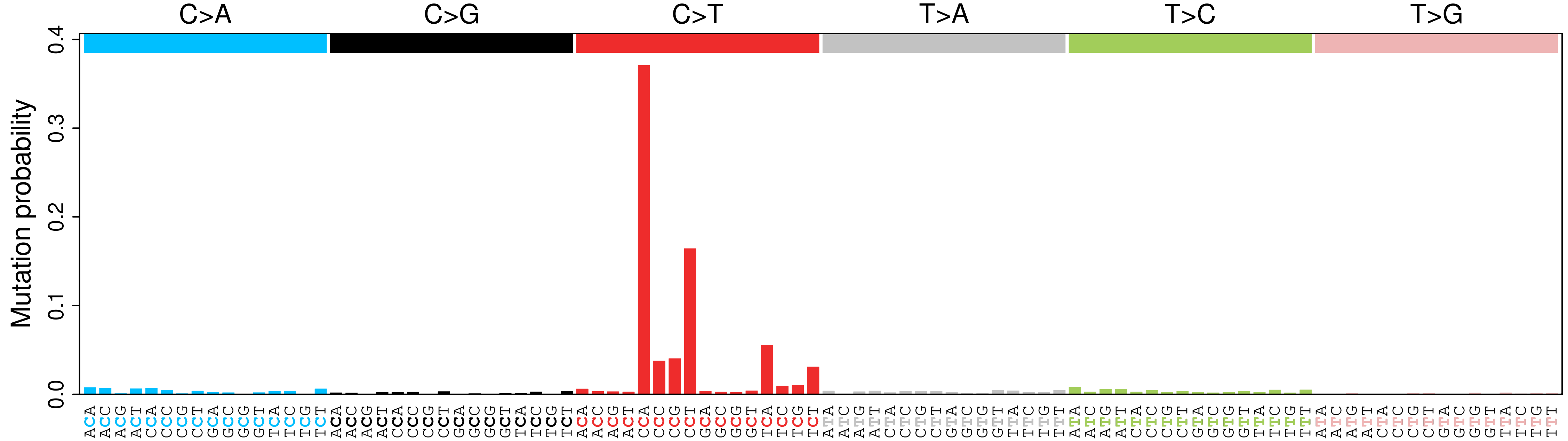
0.05

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

