

SBS1

C > A

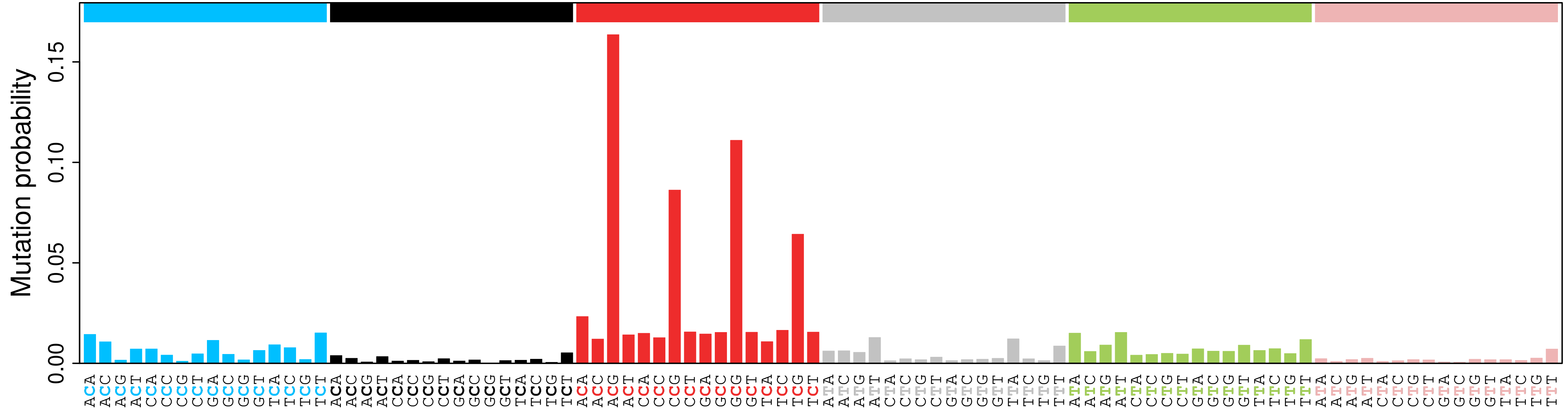
C > G

$C > T$

T > A

$T > C$

T>G



SBS3

$C > A$

C > G

$C > T$

T > A

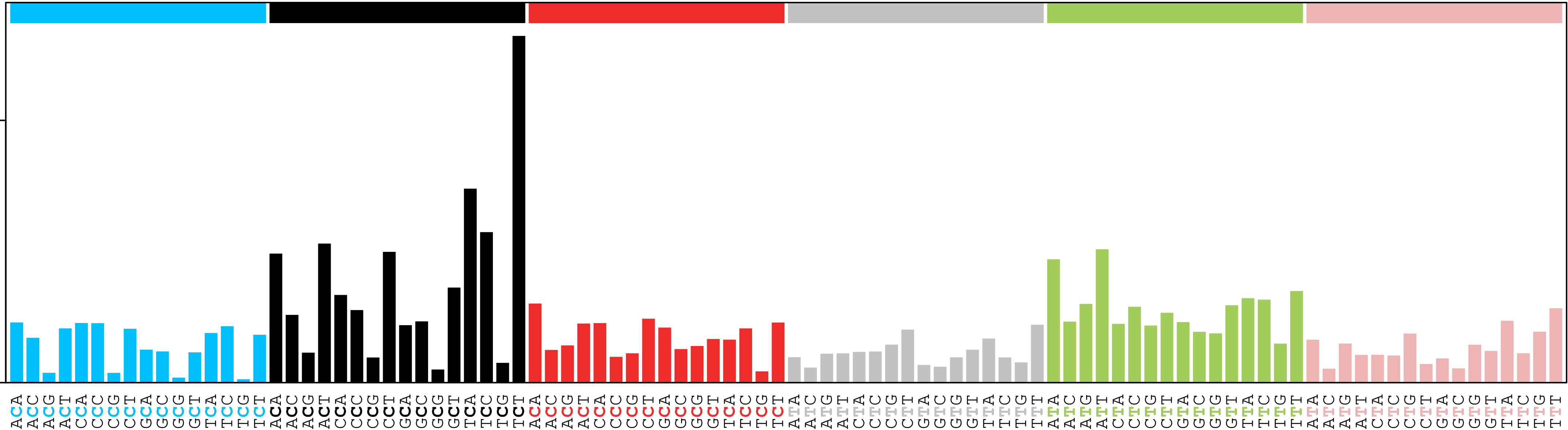
$$T > C$$

T>G

Mutation probability

0.05

0.00



SBS4

$C > A$

C > G

$C > T$

T > A

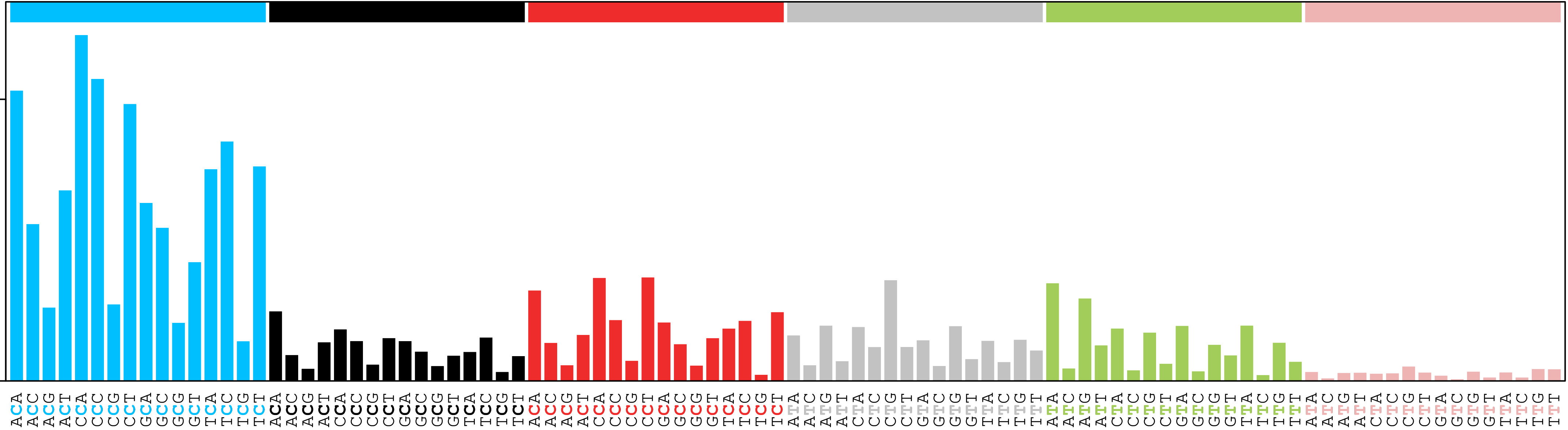
$T > C$

T>G

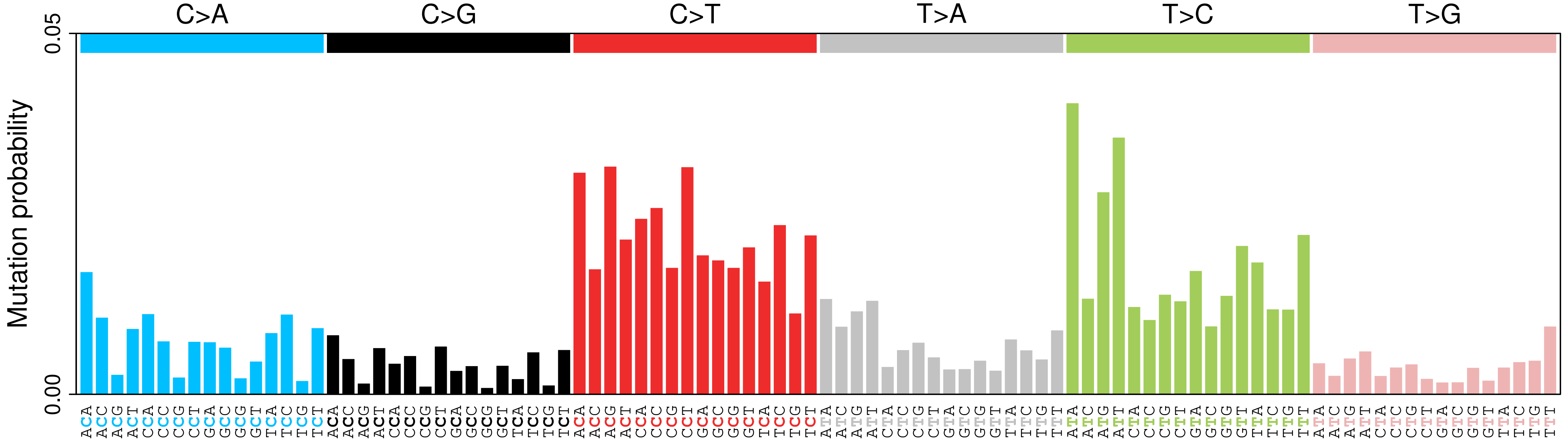
Mutation probability

0.05

0.00



SBS5



SBS6

C > A

C > G

$C > T$

T > A

$T > C$

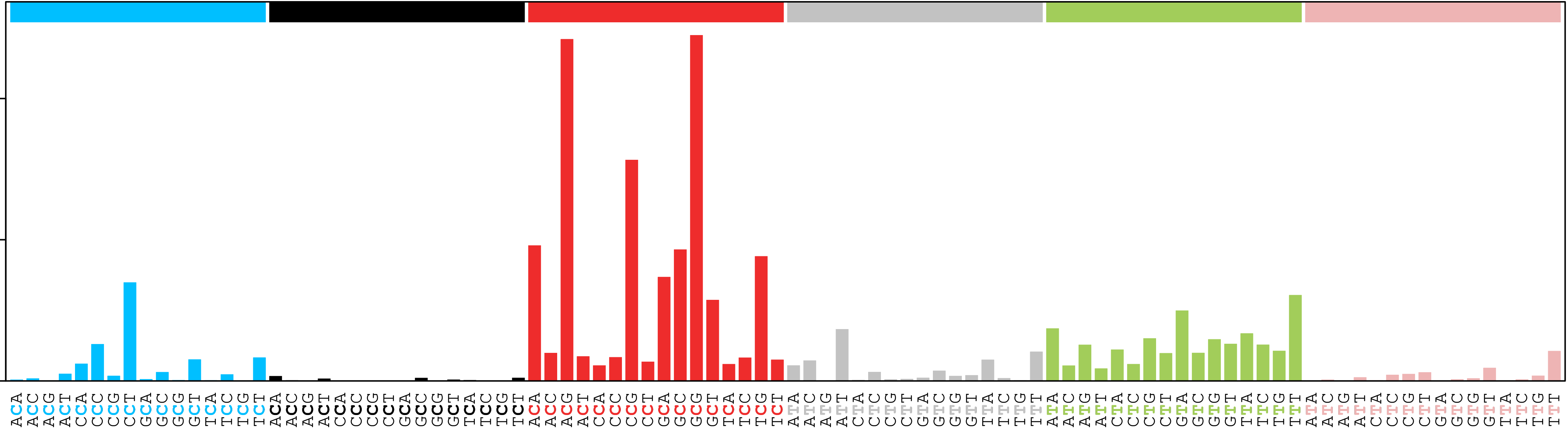
T>G

Mutation probability

0.10

50.0

0.00



SBS7c

C>A

C>G

C>T

T>A

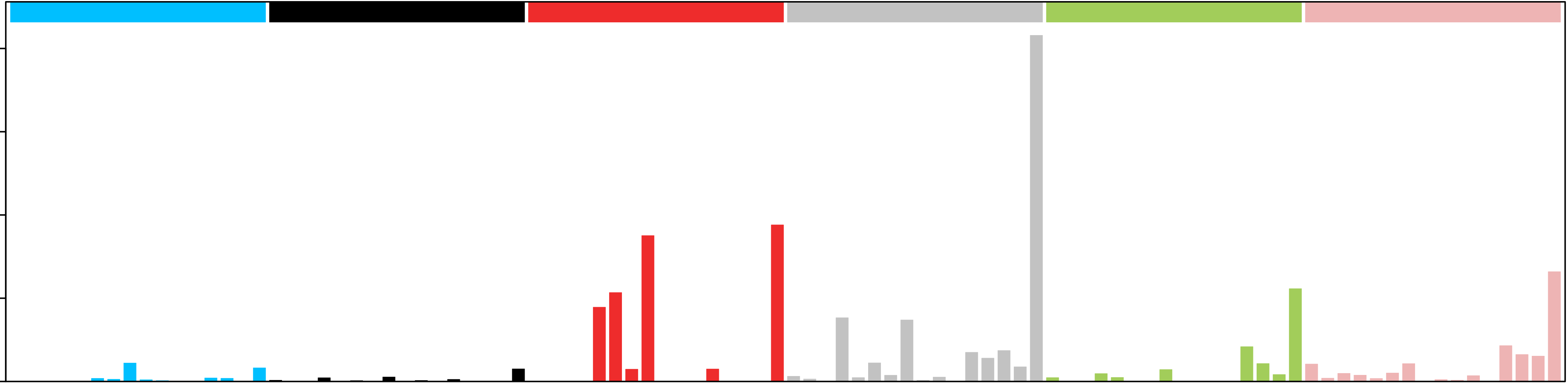
T>C

T>G

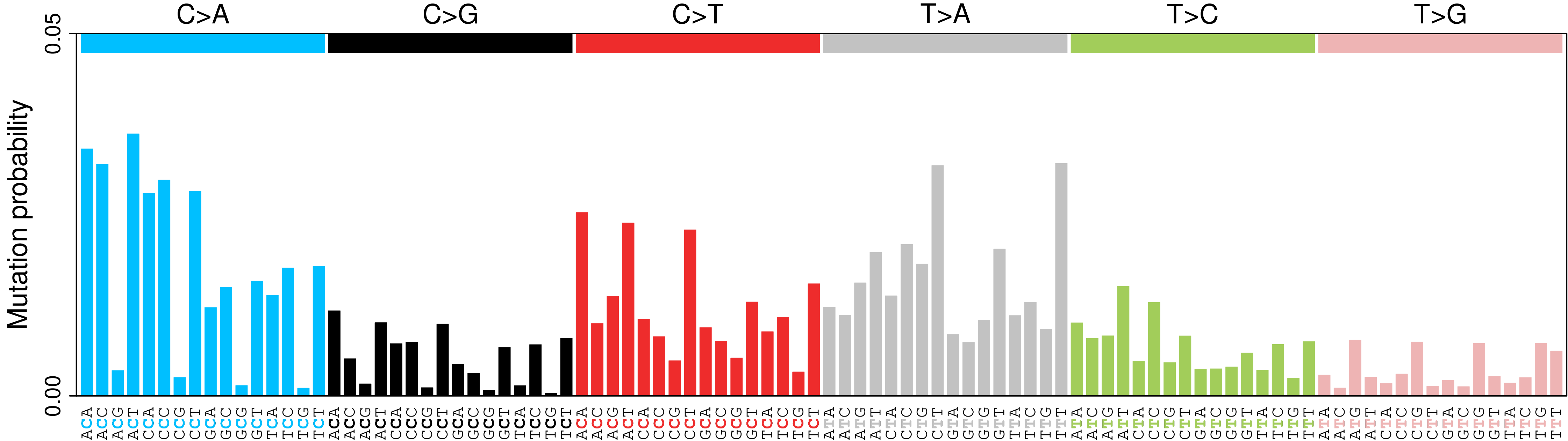
Mutation probability

0.00 0.05 0.10 0.15 0.20

ACA ACC AGC AAT CCA CCC CCG CCT CTA 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



SBS8



SBS9

C > A

C > G

$$C > T$$

T > A

$T > C$

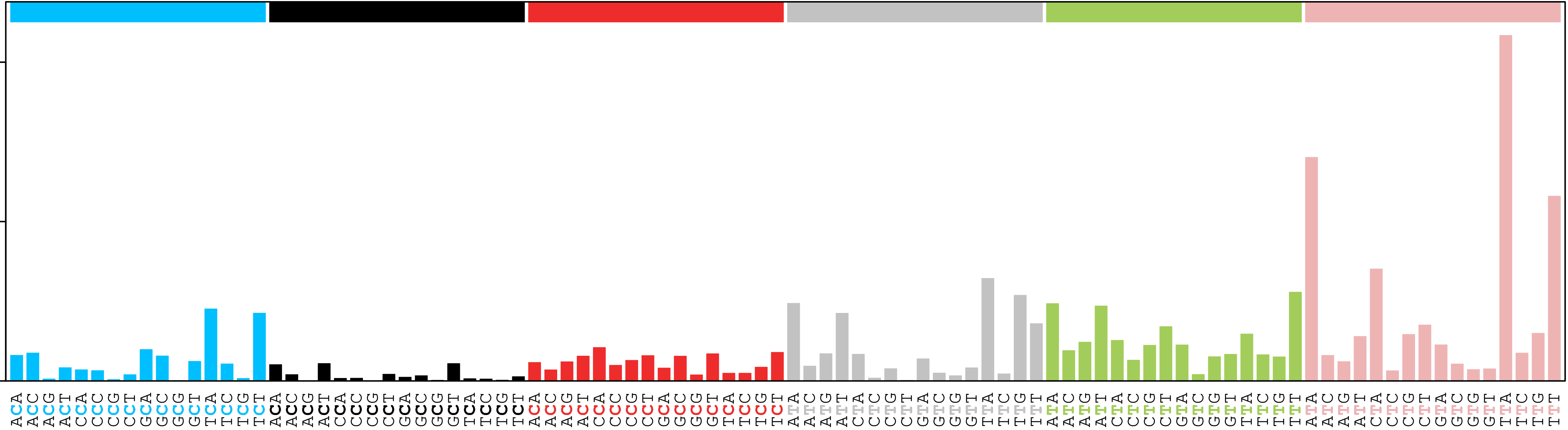
T>G

Mutation probability

0.10

50

0.00



SBS10a

C > A

C > G

$C > T$

T > A

$T > C$

T>G

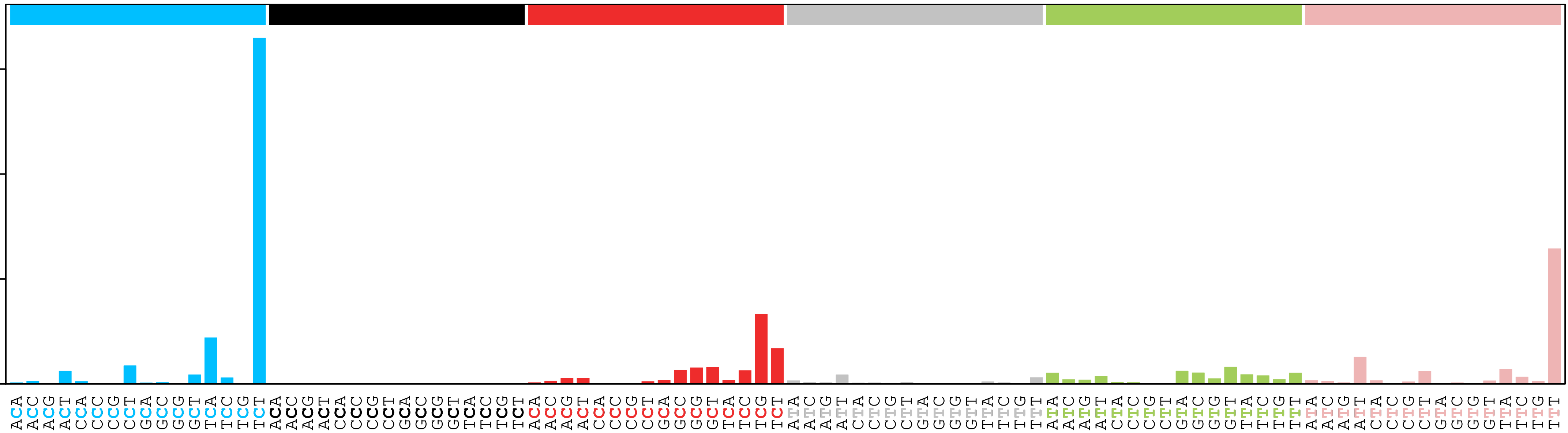
Mutation probability

၈

2.

7

0.



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

C>A

C>G

C>T

T>A

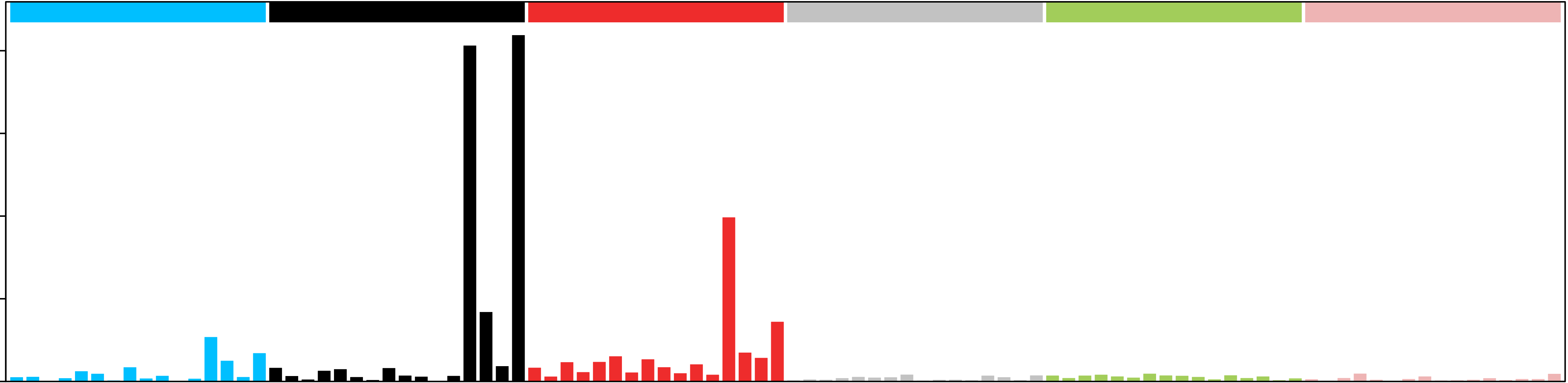
T>C

T>G

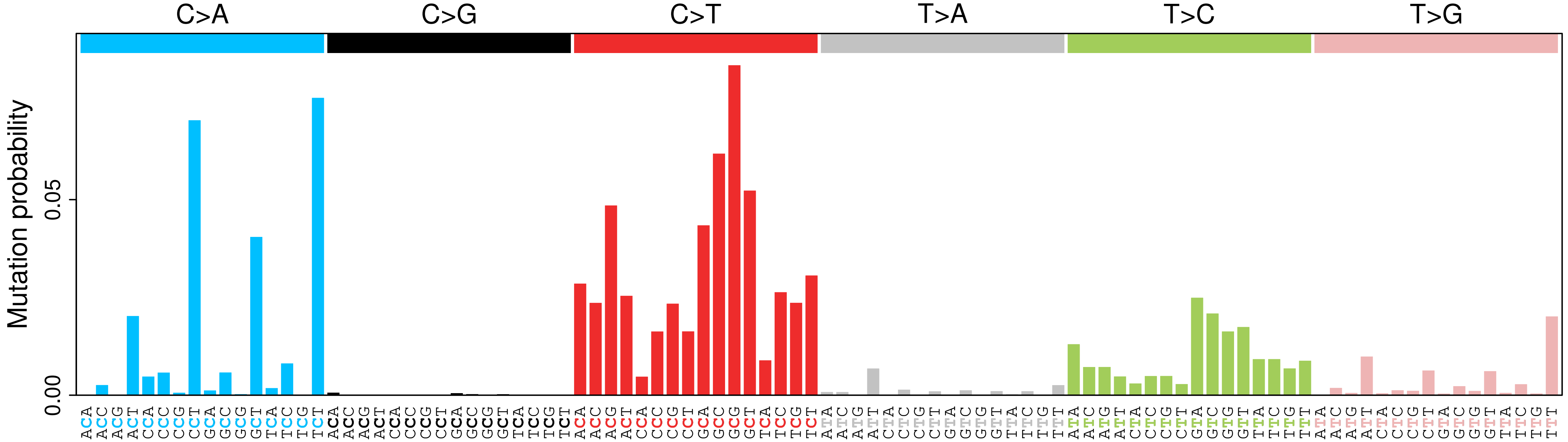
Mutation probability

0.20
0.15
0.10
0.05
0.00

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



SBS14



SBS15

C > A

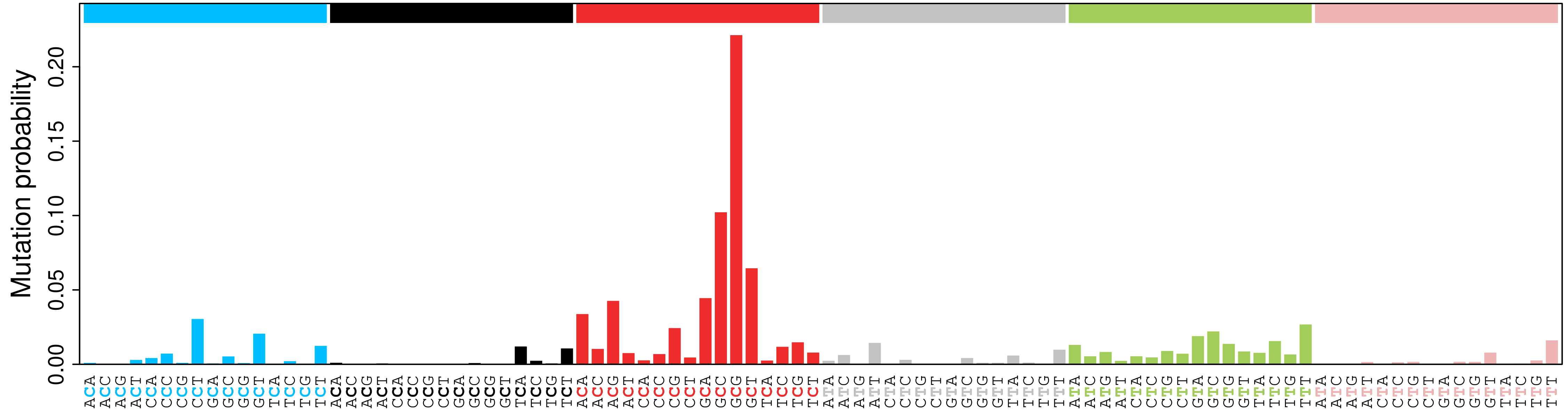
C > G

$C > T$

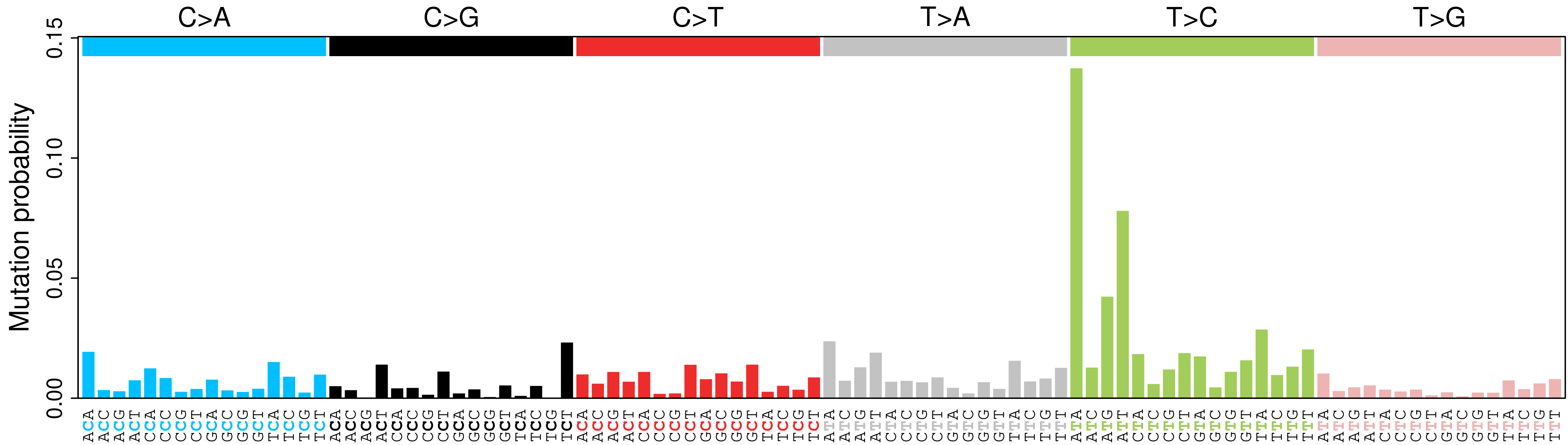
T > A

$T > C$

T>G



SBS16



SBS17

C>A

C>G

C>T

T>A

T>C

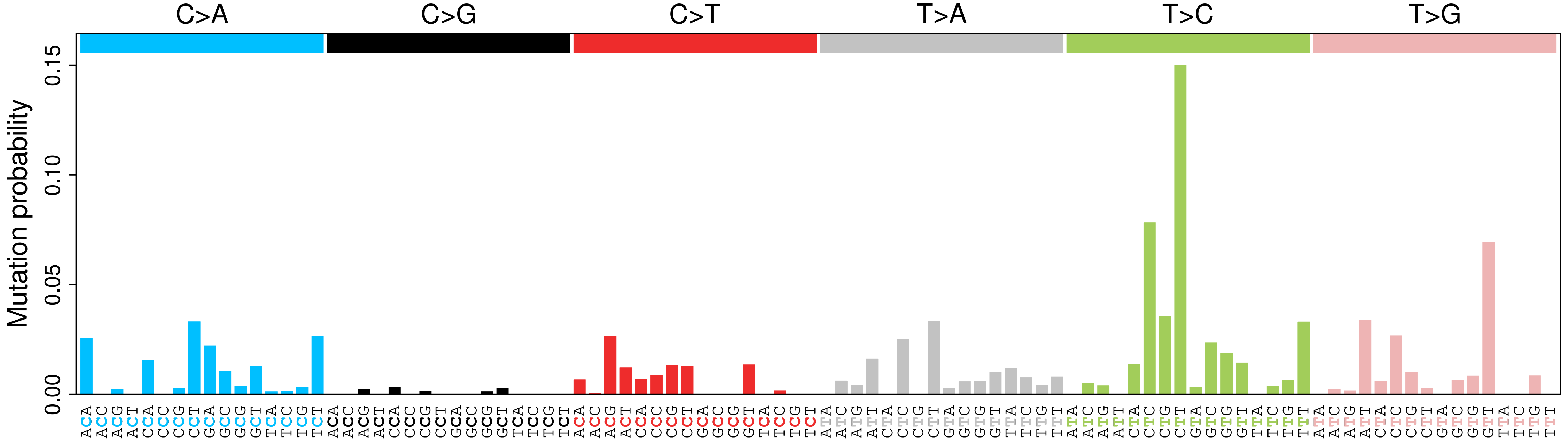
T>G

Mutation probability

0.20
0.15
0.10
0.05
0.00



SBS17a



SBS18

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.10

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

SBS20



SBS22

$C > A$

C > G

$C > T$

T > A

$T > C$

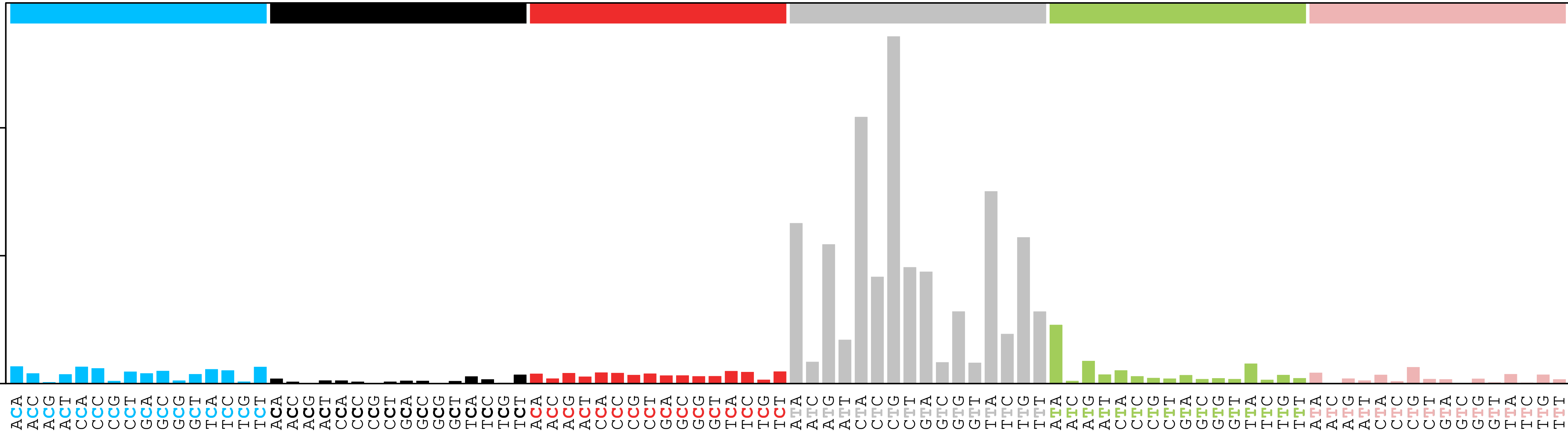
$T > G$

Mutation probability

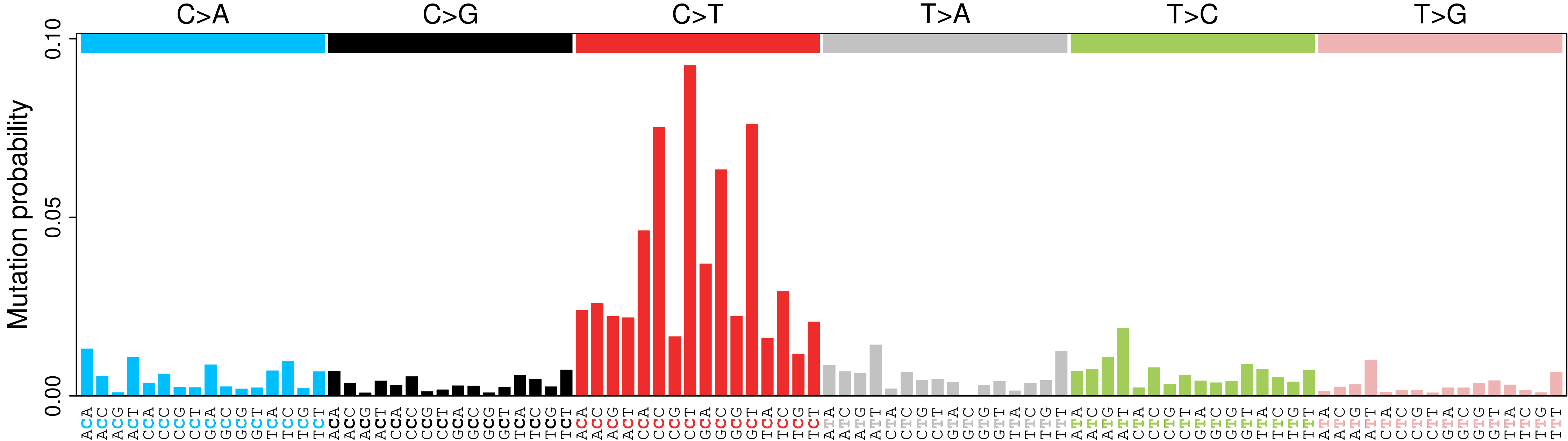
0.10

0

0.00



SBS23



SBS24



SBS28



SBS30

C > A

C > G

$C > T$

T > A

$T > C$

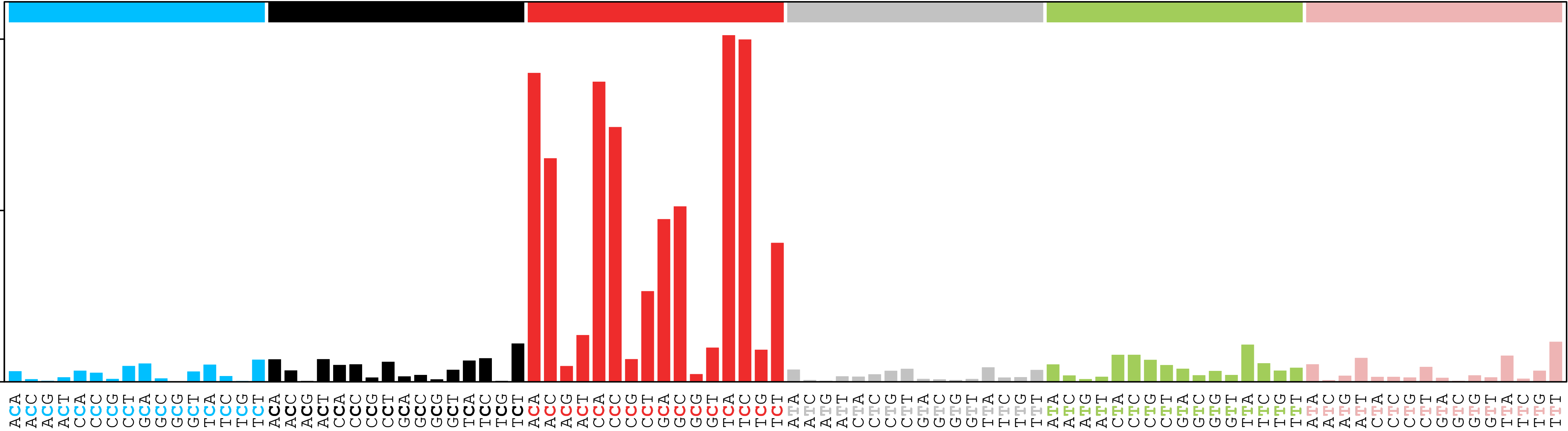
T>G

Mutation probability

0.10

50.0

0.00



SBS33

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.2
0.1
0.0



SBS35



SBS38

C > A

C > G

$C > T$

T > A

$$T > C$$

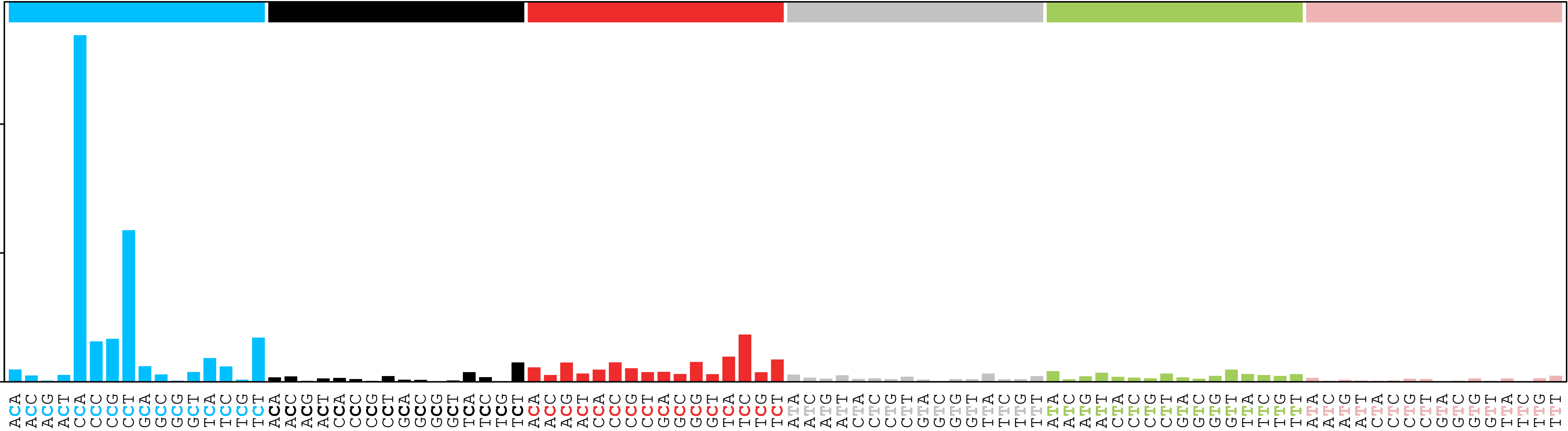
T > G

Mutation probability

0.2

0.1

0.0



SBS44

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 CTT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CTT 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

SBS53

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

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 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 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

SBS57

C>A

C>G

C>T

T>A

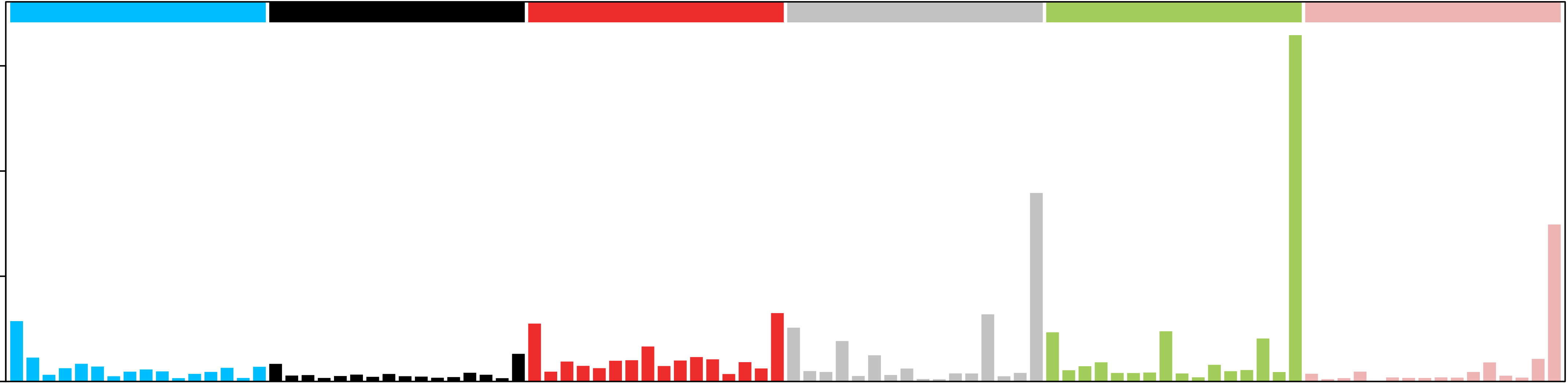
T>C

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



SBS84

C > A

C > G

$C > T$

T > A

$$T > C$$

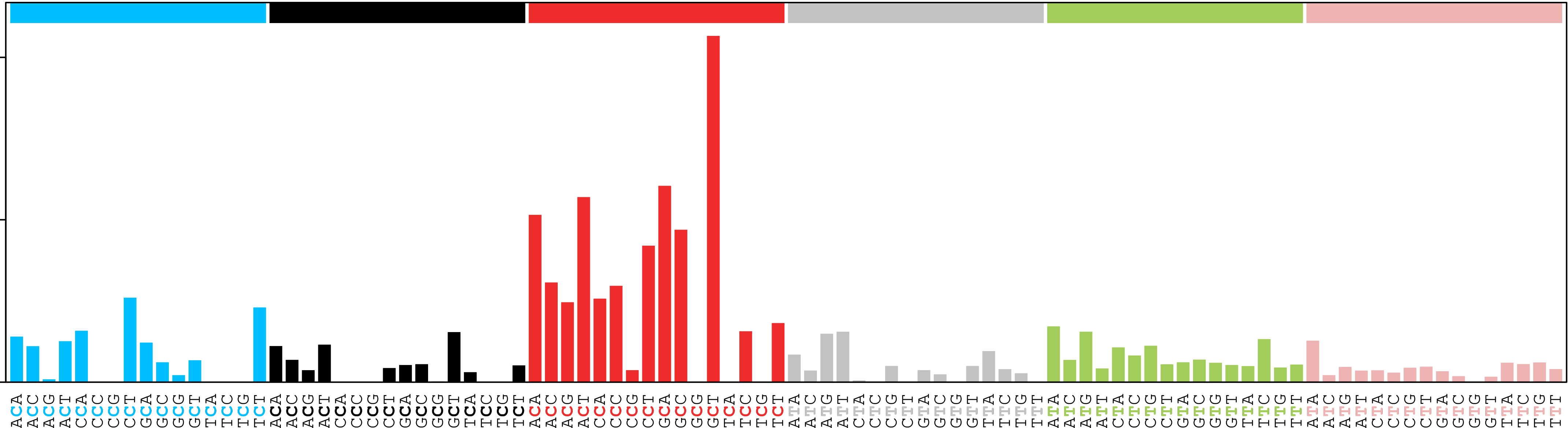
$T > G$

Mutation probability

0.10

0.05

0.0



SBS88

C>A

C>G

C>T

T>A

T>C

T>G

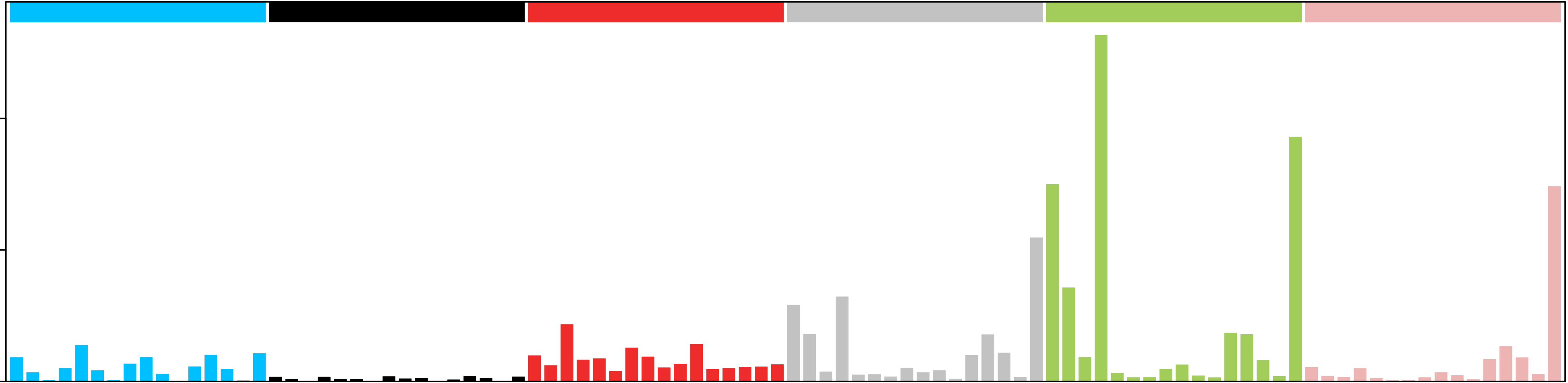
Mutation probability

0.10

0.05

0.00

ACA ACC AGC 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



SBS90

C > A

C > G

$C > T$

T > A

$T > C$

T>G

Mutation probability

0.00 0.05 0.10 0.15 0.20



SBS92

C > A

C > G

$C > T$

T > A

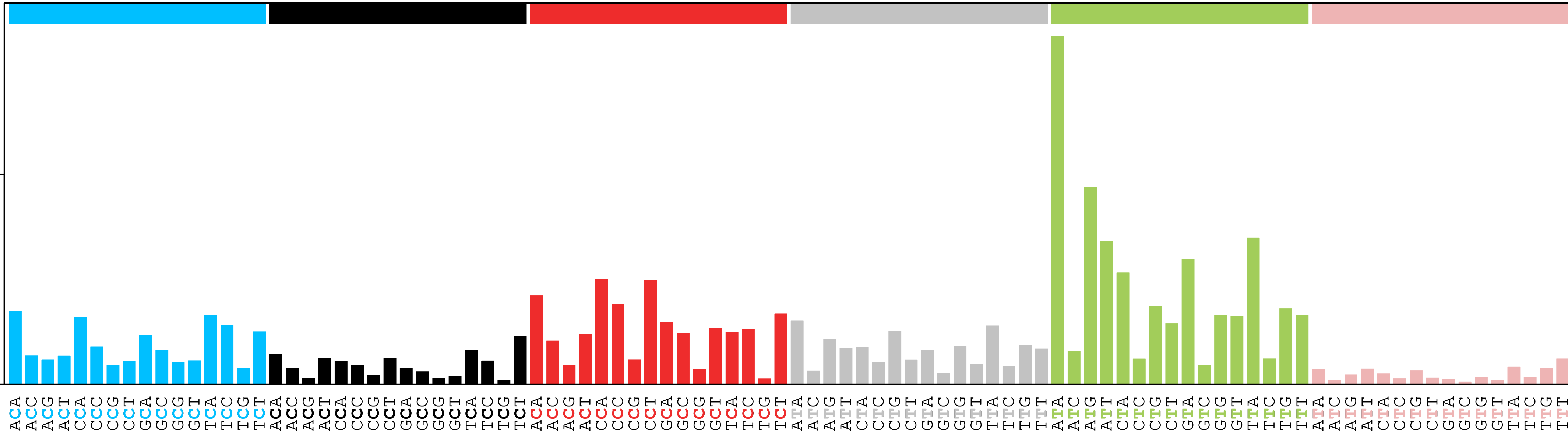
$T > C$

T>G

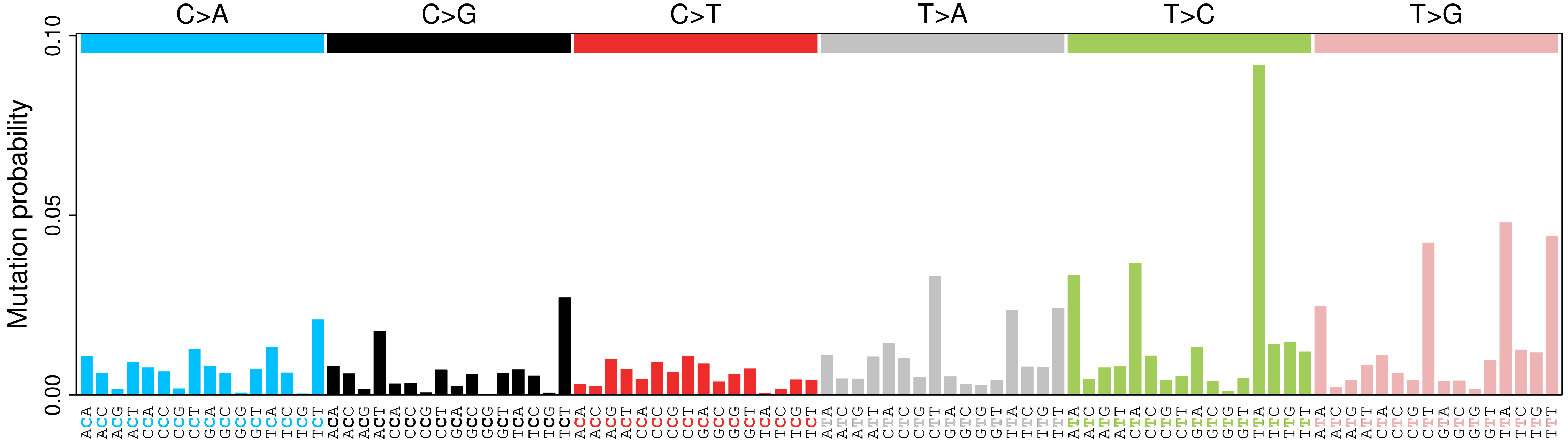
Mutation probability

0.05

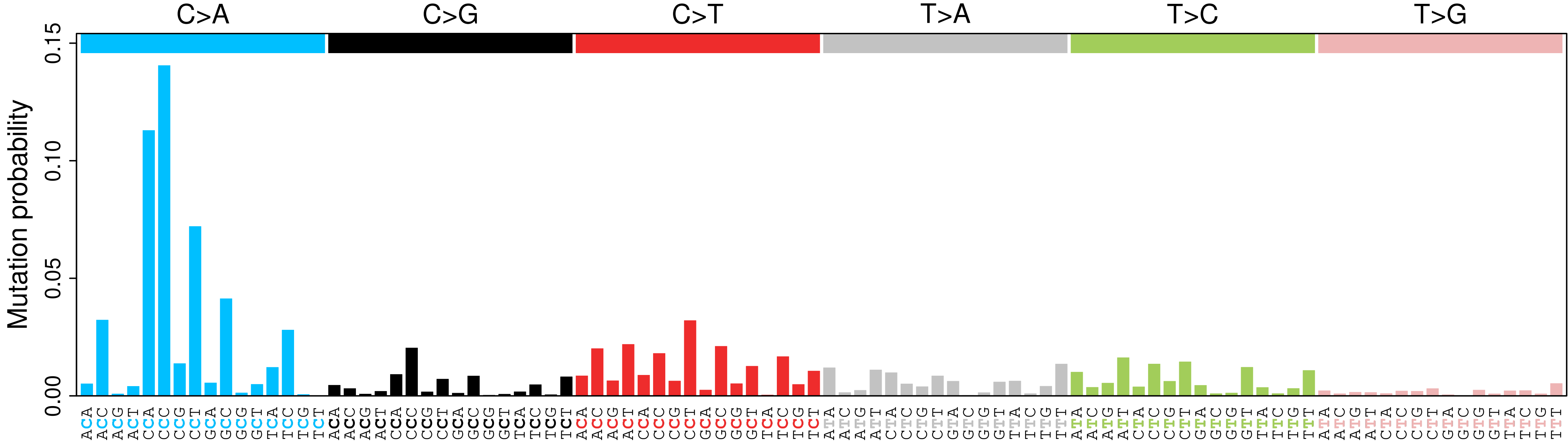
0.00



SBS93



SBS94



SBS95

C>A

C>G

C>T

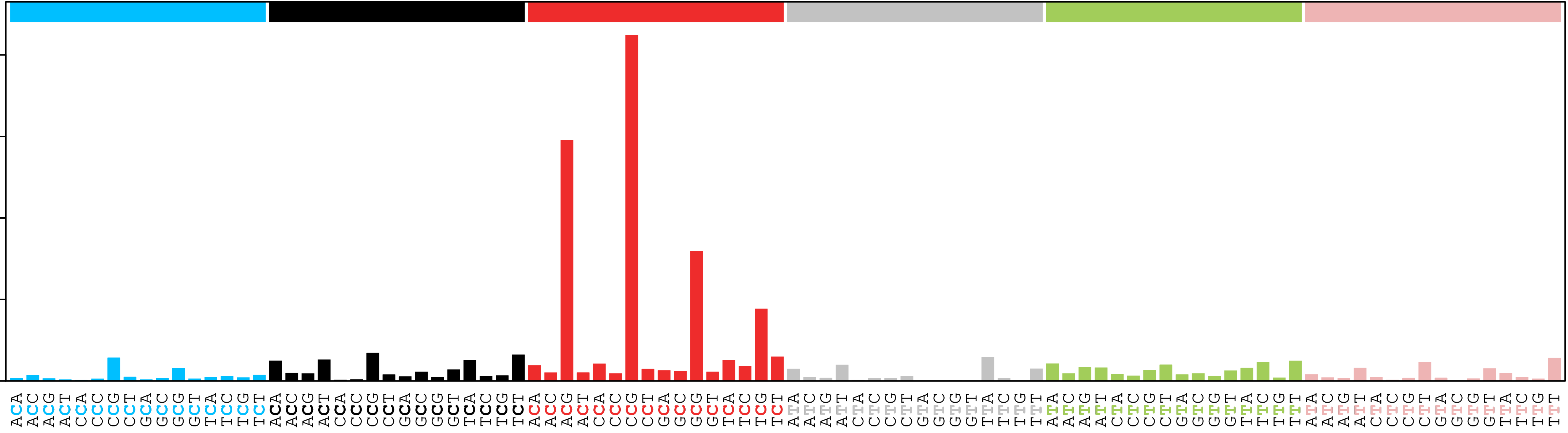
T>A

T>C

T>G

Mutation probability

0.20
0.15
0.10
0.05
0.00



SBS97

C > A

C > G

$C > T$

T > A

$$T > C$$

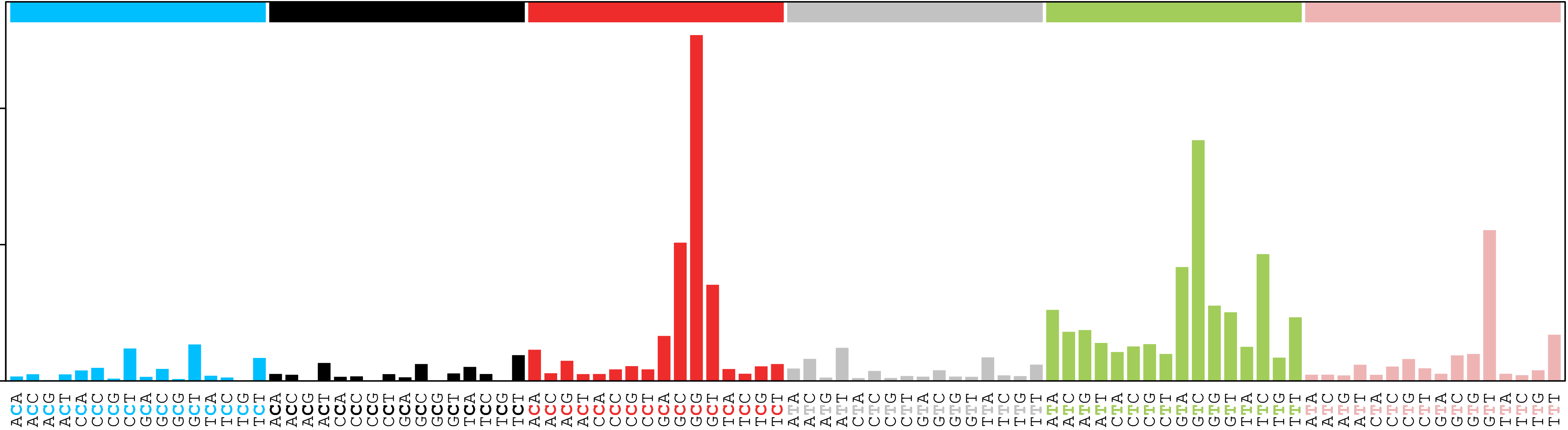
T > G

Mutation probability

0.10

0.05

0.0



SBS99

C > A

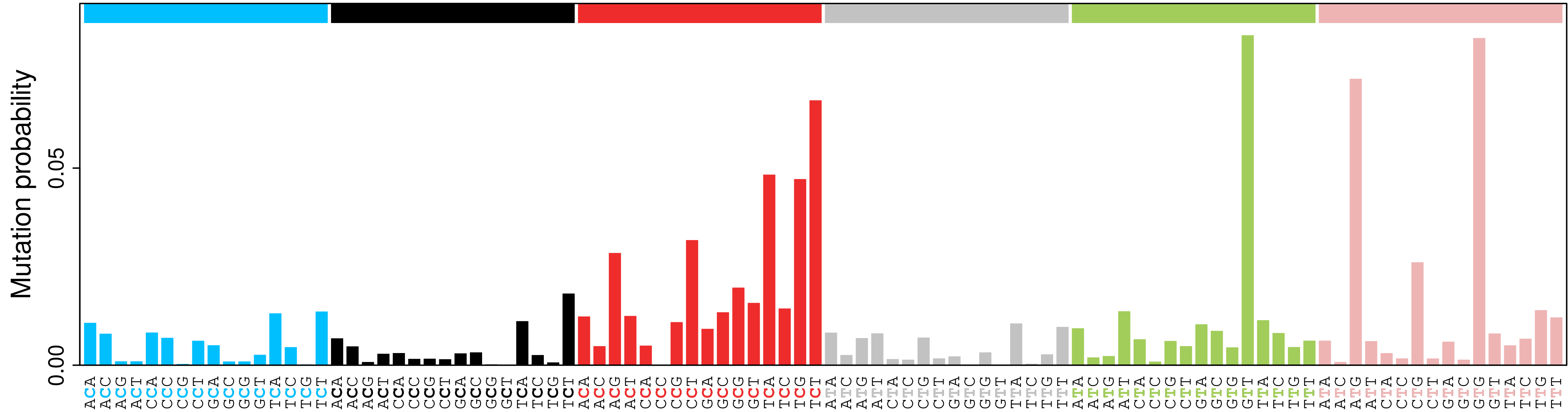
C > G

$C > T$

T > A

$T > C$

T>G



SBS101

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 CTC TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CTC GCA GCC GCG GGT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CTC GCA GCC GCG 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

SBS102

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 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



SBS103



SBS104

$C > A$

C > G

$C > T$

T > A

$$T > C$$

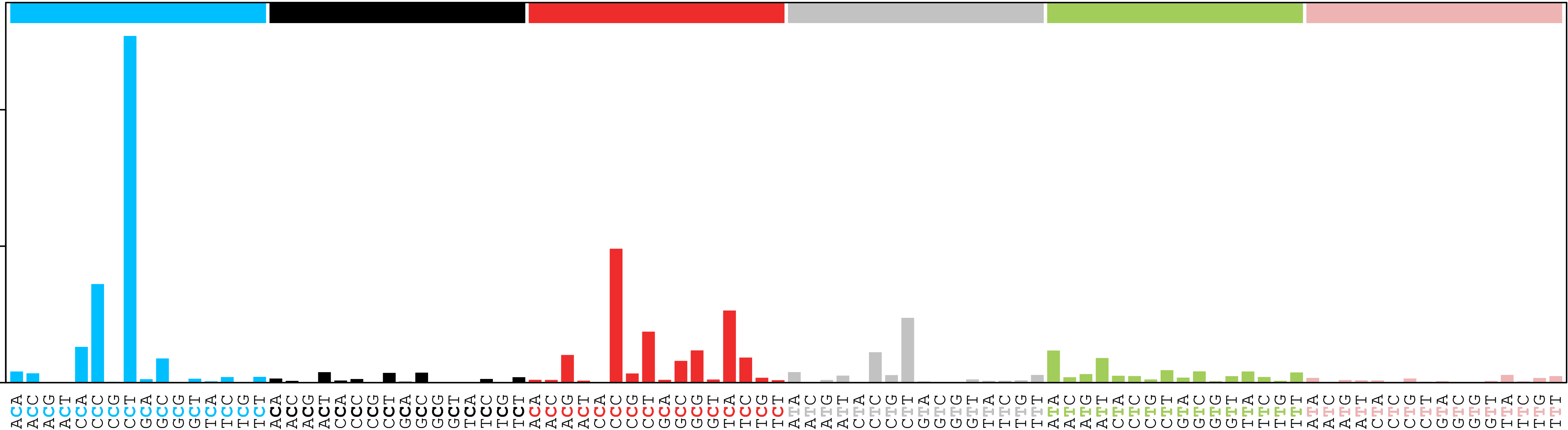
T>G

Mutation probability

0.2

0.1

0.0



SBS105



SBS108

C>A

C>G

C>T

T>A

T>C

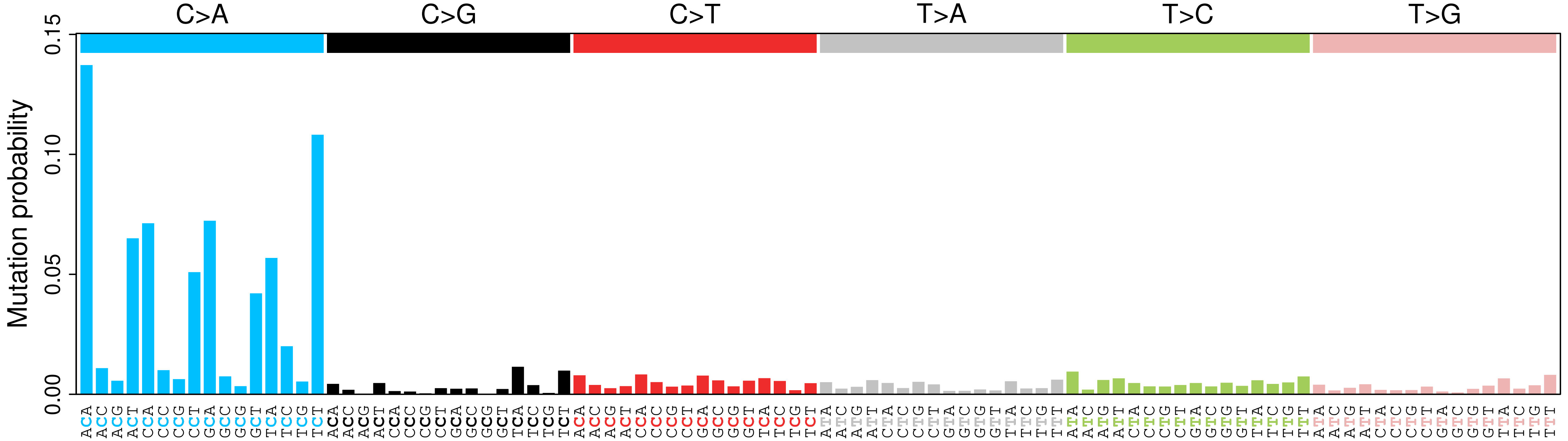
T>G

Mutation probability

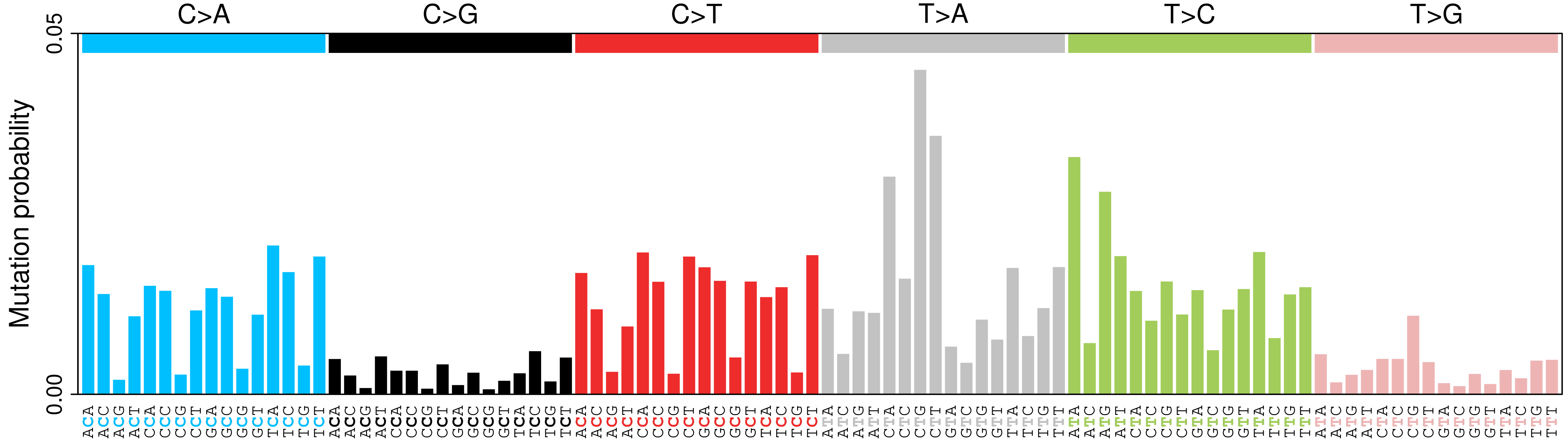
0.15
0.10
0.05
0.00

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

SBS109



SBS110



SBS111

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

SBS113

C > A

C > G

$C > T$

T > A

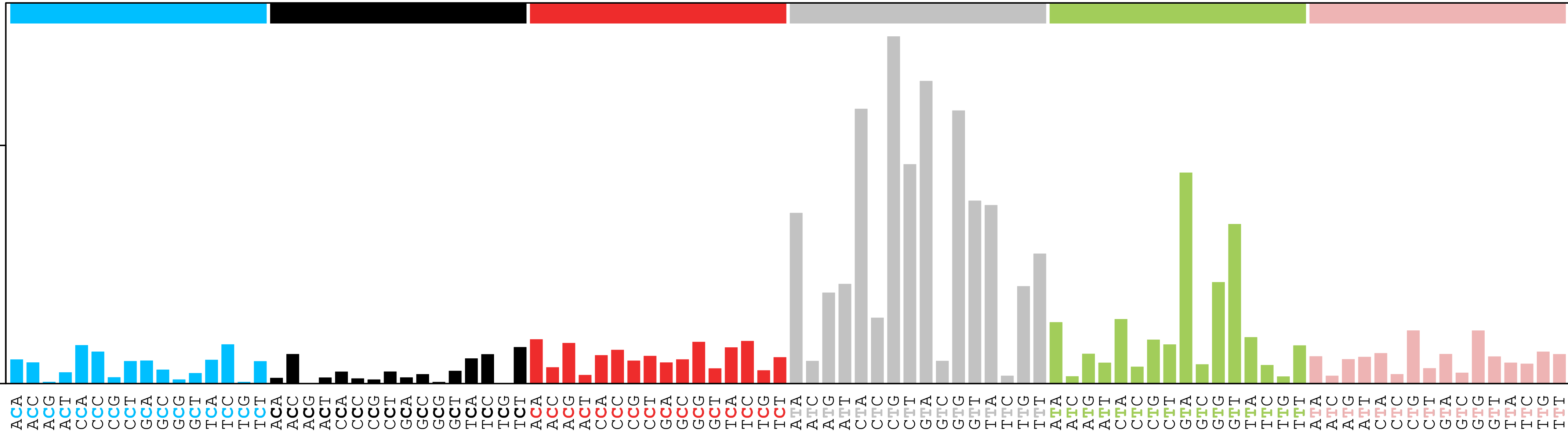
$$T > C$$

T>G

Mutation probability

0.05

0.00



SBS114

C > A

C > G

$$C > T$$

T > A

$T > C$

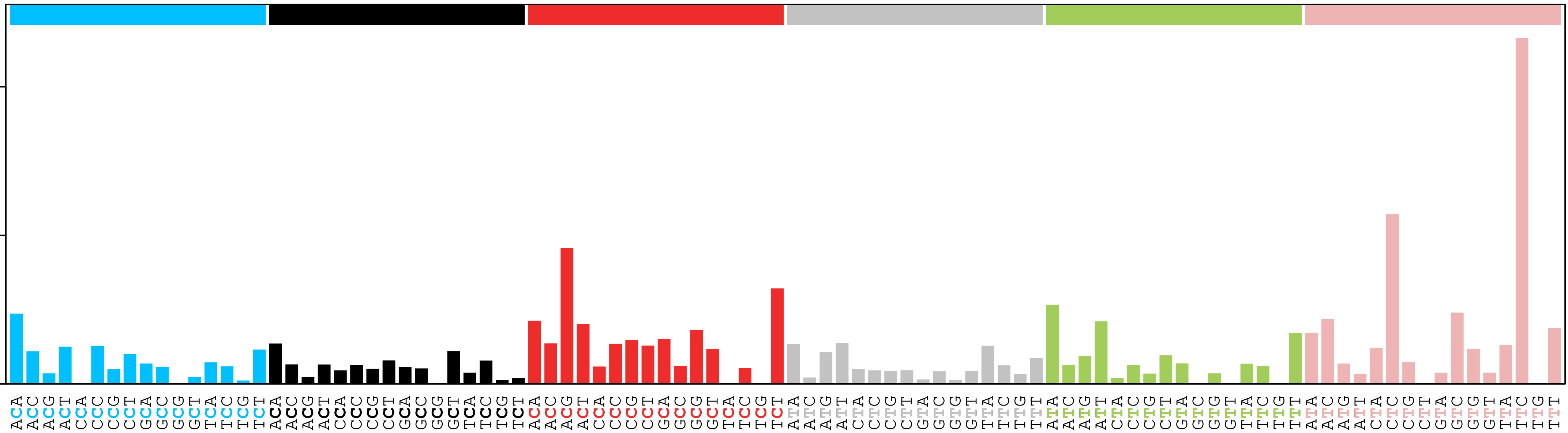
T>G

Mutation probability

0.10

0.05

0.00



SBS115

$C > A$

C > G

$C > T$

T > A

$$T > C$$

T>G

Mutation probability

0.00 0.05 0.10 0.15 0.20

[illegible]

SBS116



SBS117

$C > A$

C > G

$C > T$

T > A

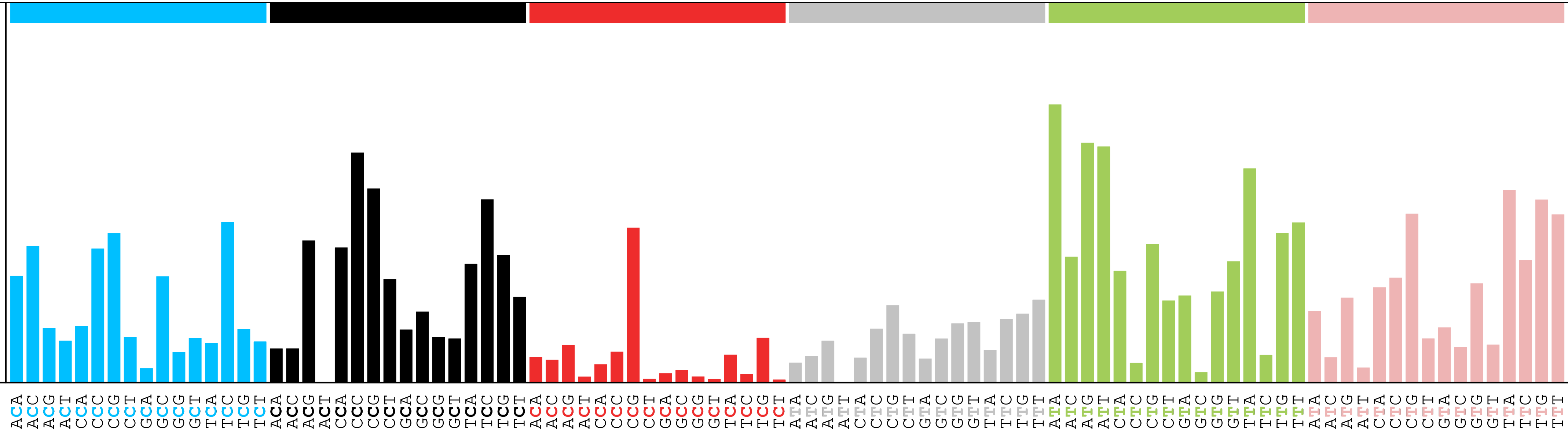
$T > C$

T>G

0.05

Mutation probability

0.00



SBS121

C > A

C > G

$C > T$

T > A

$T > C$

T>G

Mutation probability

0.15

0.1

0

0.00

[illegible]

SBS123

$C > A$

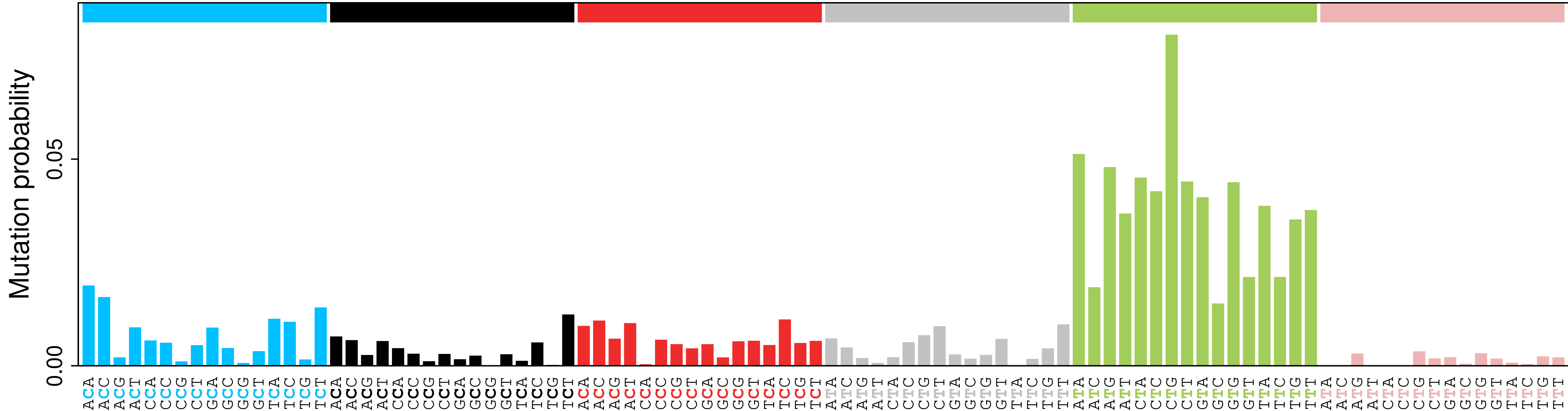
C > G

$C > T$

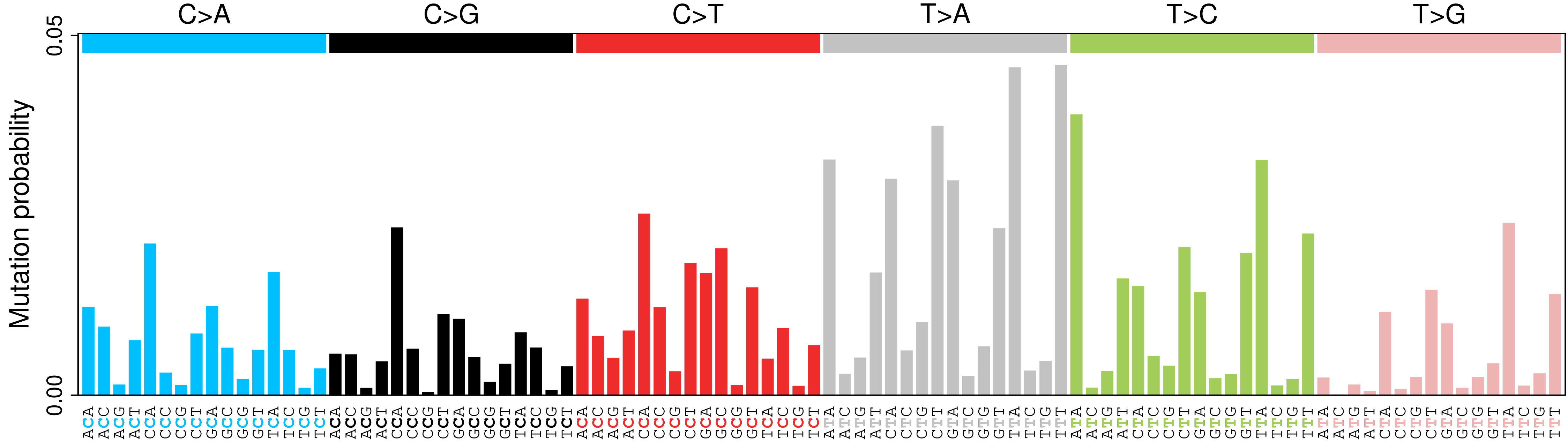
T > A

$T > C$

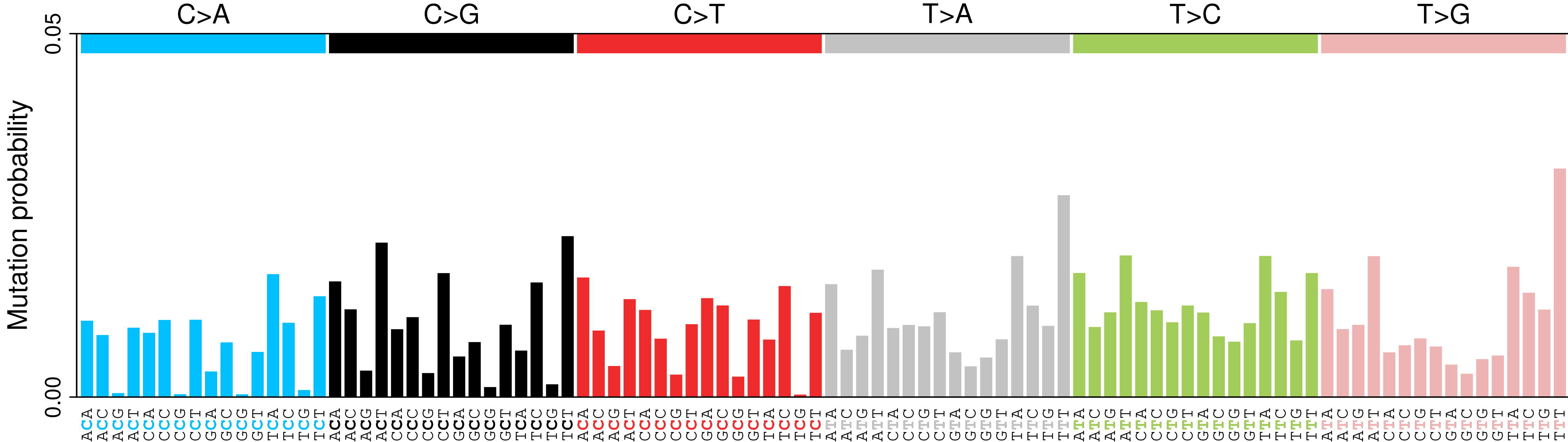
T>G



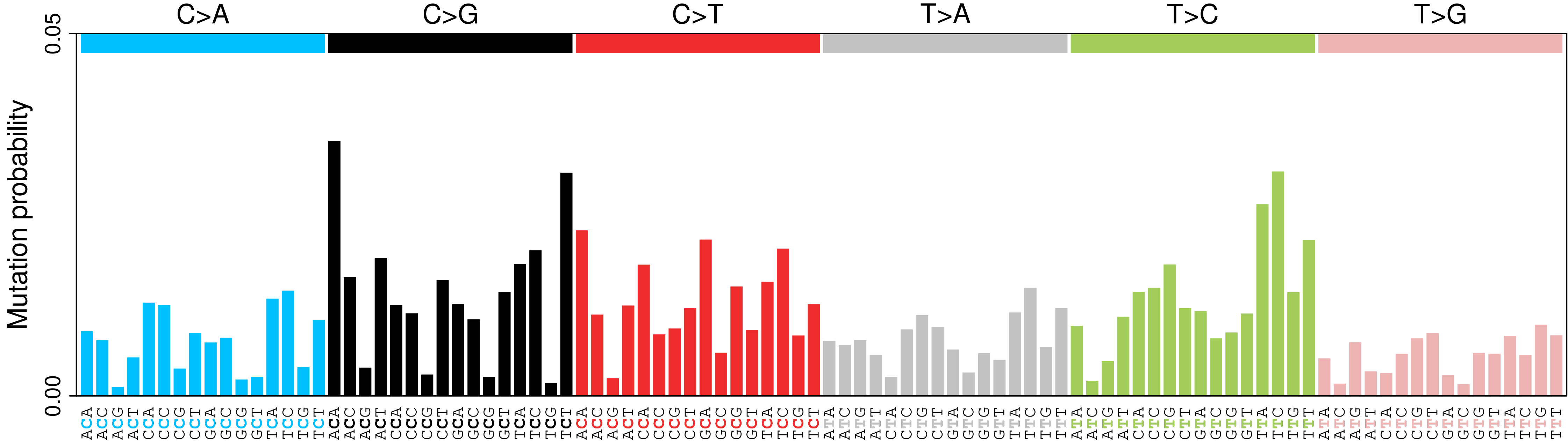
SBS124



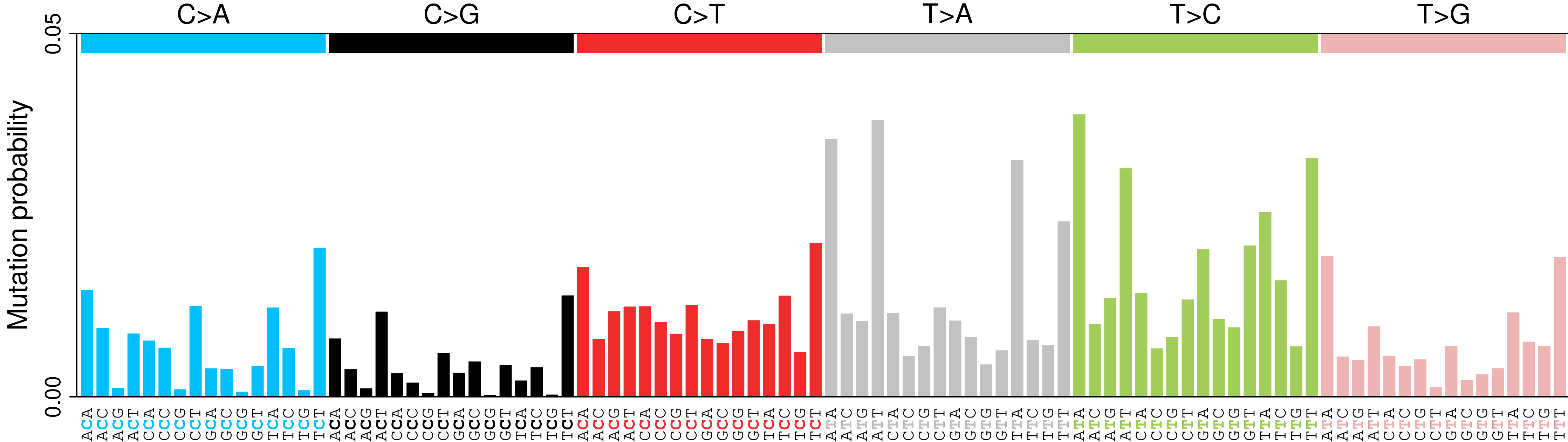
SBS125



SBS126



SBS127



SBS128

$C > A$

C > G

C>T

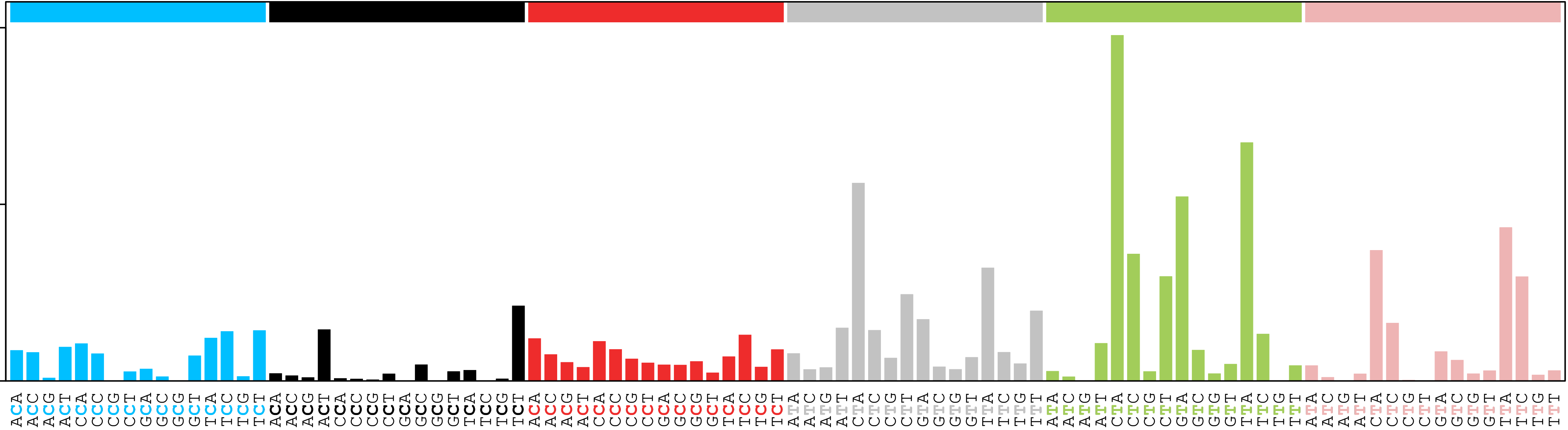
T > A

$$T > C$$

T>G

0.10

0.00



SBS130

C > A

C > G

$$C > T$$

T > A

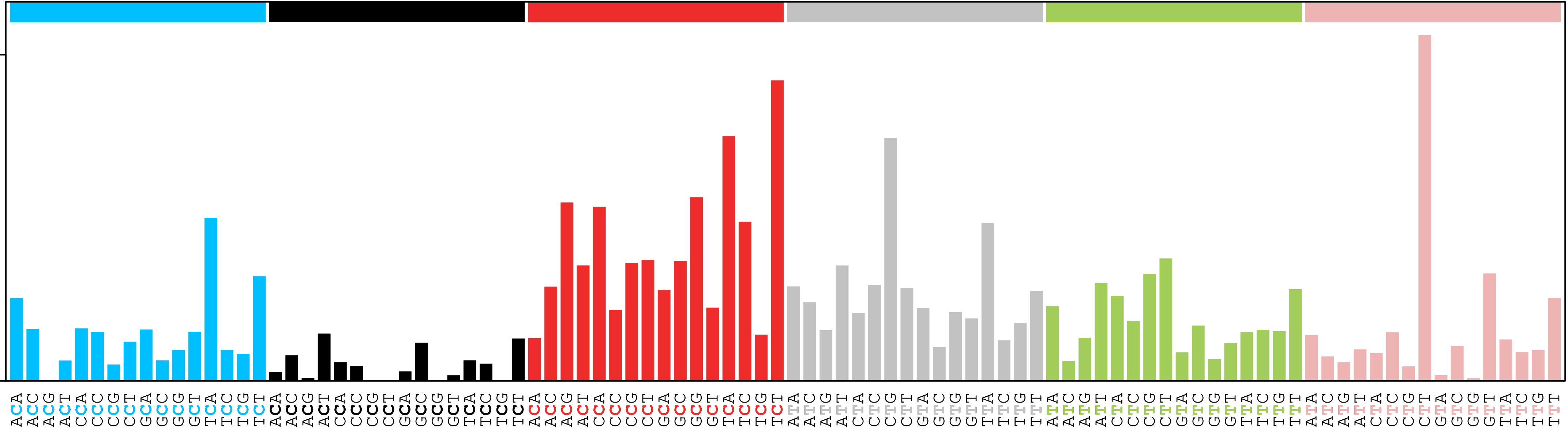
$T > C$

$T > G$

Mutation probability

0.05

0.00



SBS132

$C > A$

C > G

$C > T$

T > A

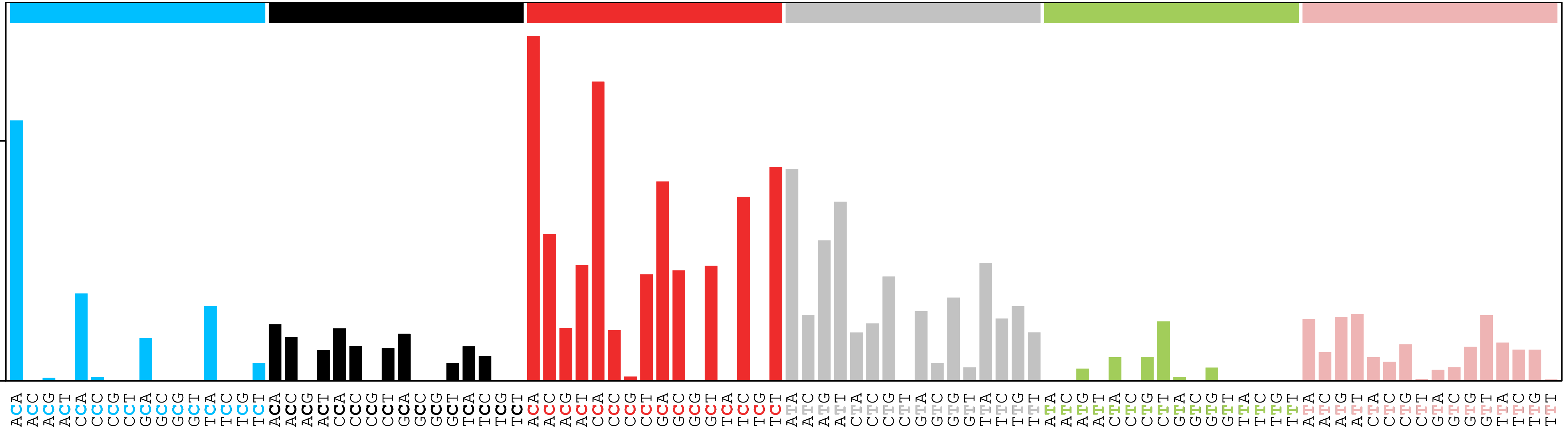
$$T > C$$

$T > G$

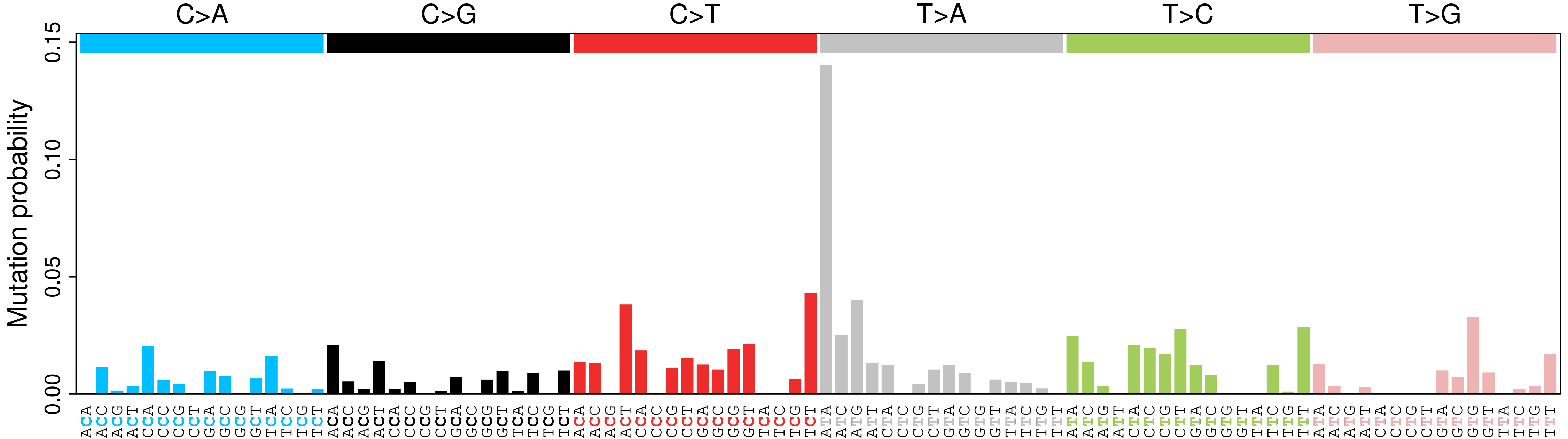
Mutation probability

0.05

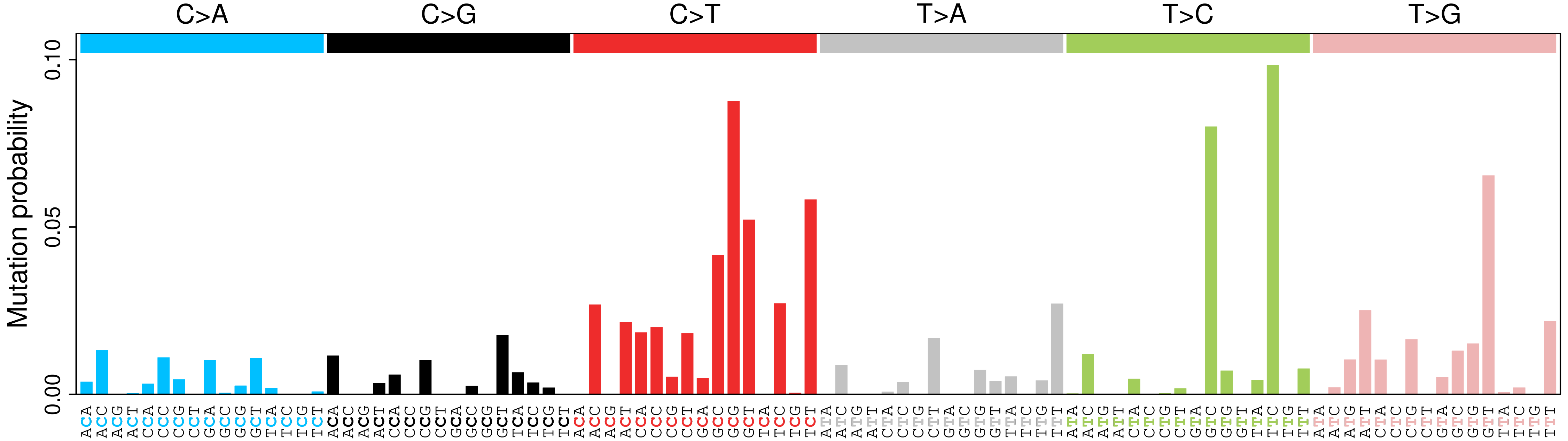
0.00



SBS135



SBS136



SBS137

C > A

C > G

$$C > T$$

T > A

$T > C$

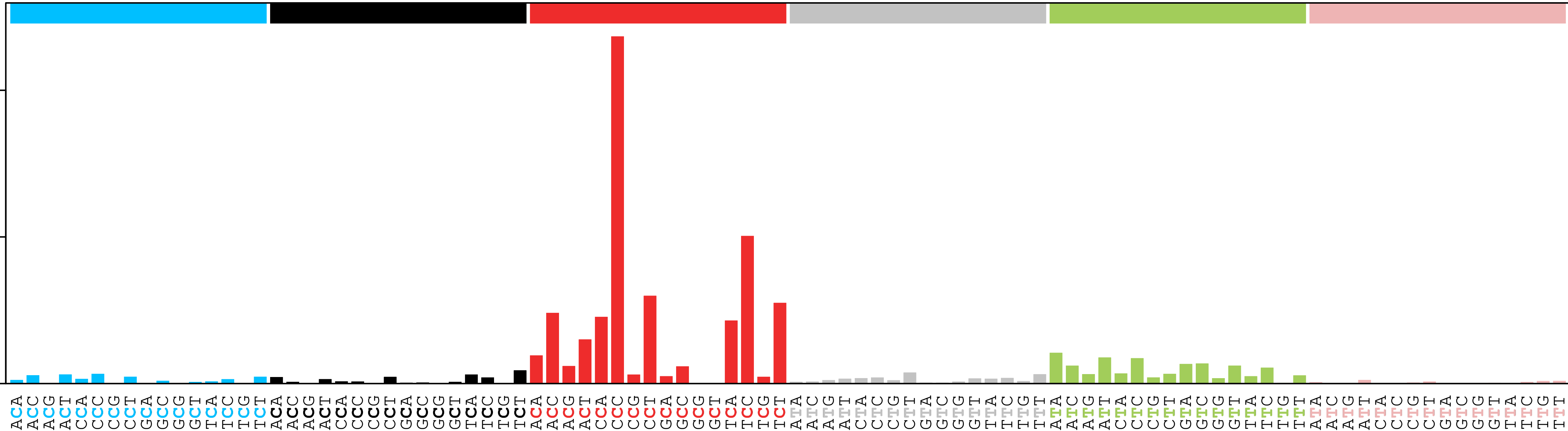
$T > G$

Mutation probability

0.2

 \circ

0.



SBS140

C > A

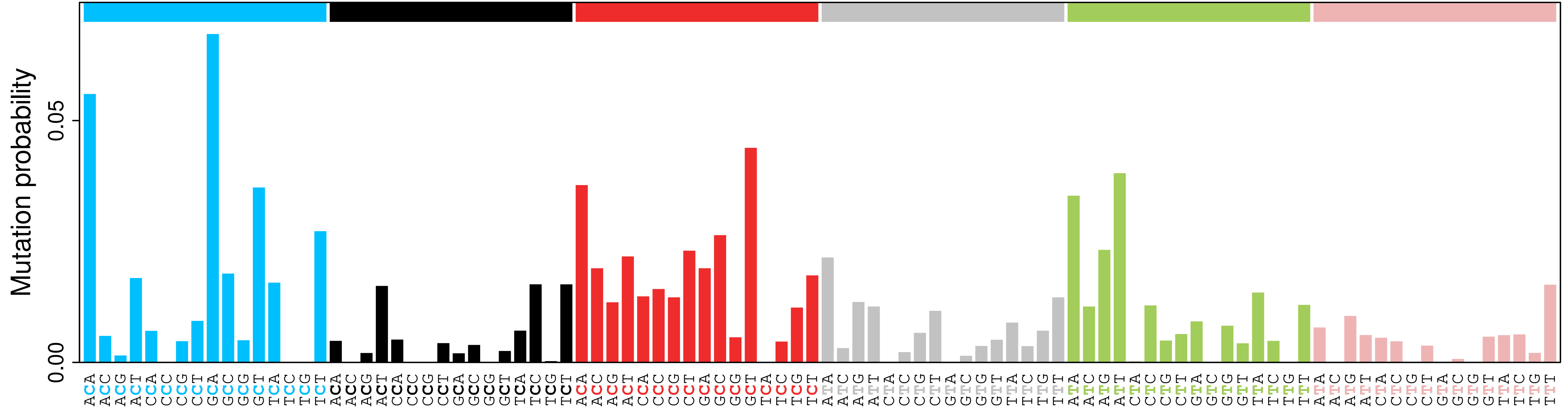
C > G

$C > T$

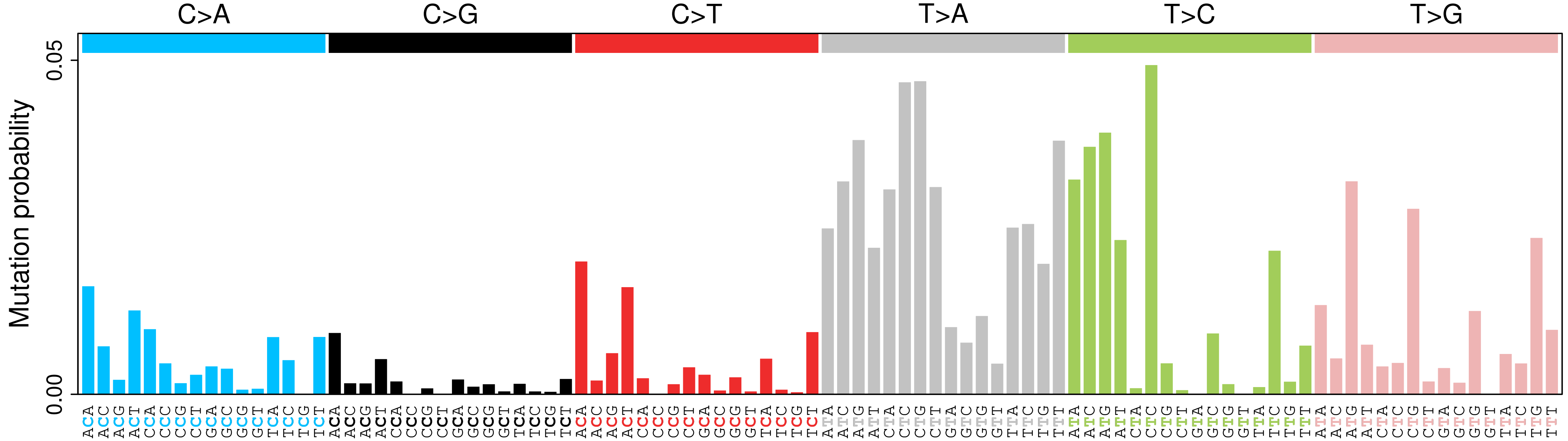
T > A

$T > C$

T>G



SBS141



SBS142

C>A

C>G

C>T

T>A

T>C

T>G

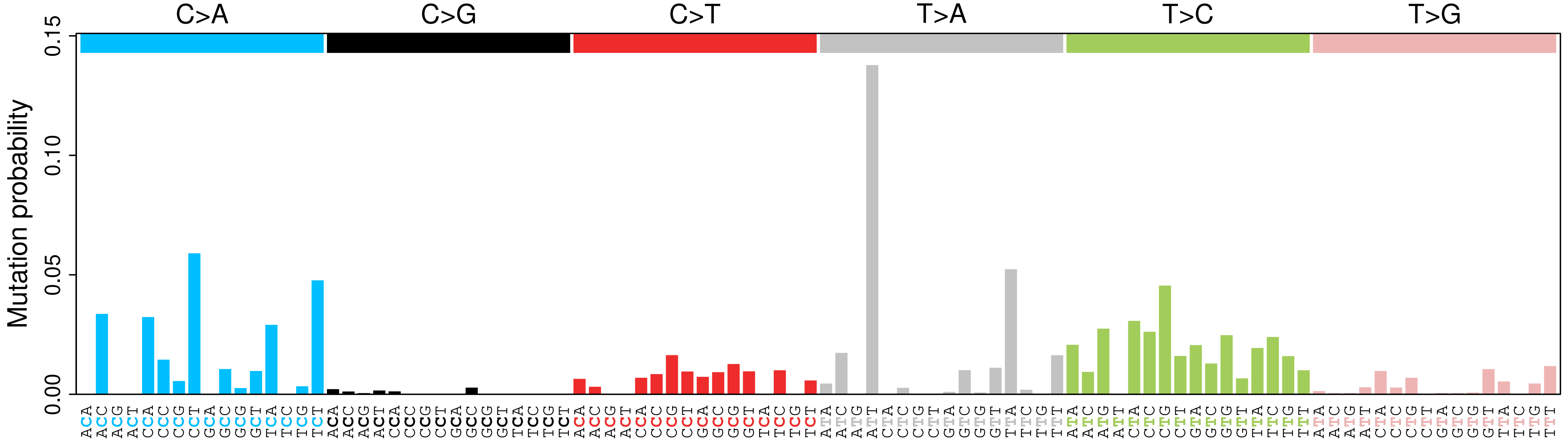
Mutation probability

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 TCA TCG TGT TTT ATA ATC ATG ATT CTA CTC CTG CTT GTA TCA TCG TGT TTT

SBS143



SBS144

C > A

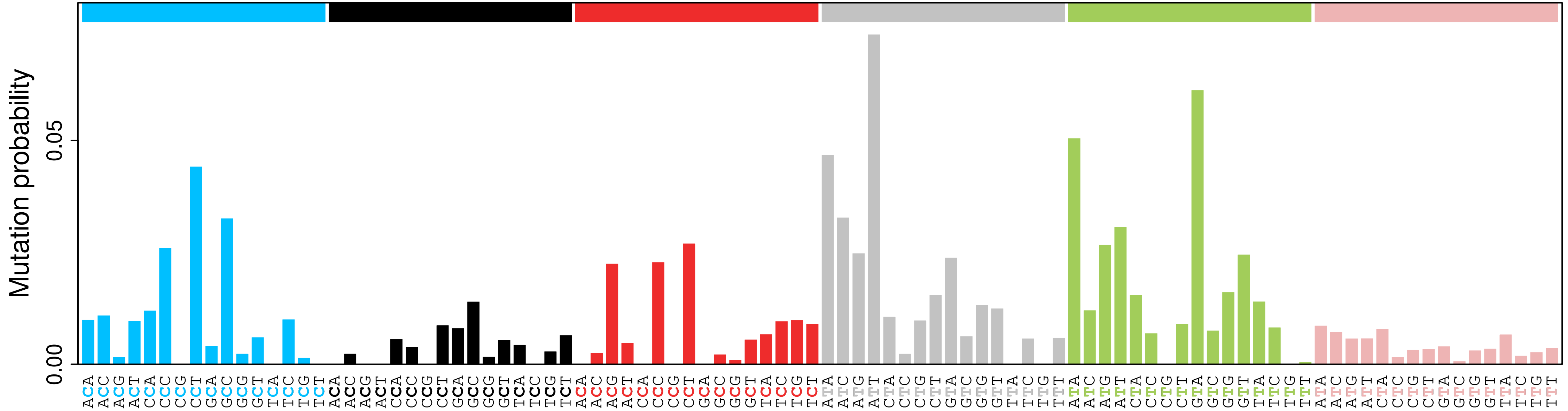
C > G

$C > T$

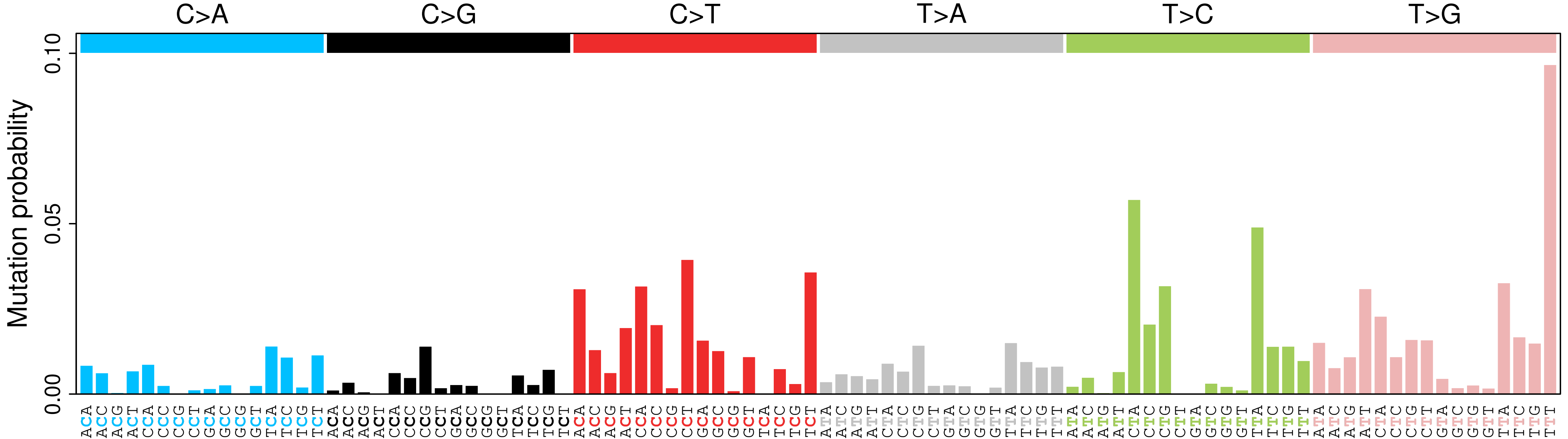
T > A

$T > C$

T>G



SBS147



SBS148

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.10
0.05
0.00



SBS149

C > A

C > G

$C > T$

T > A

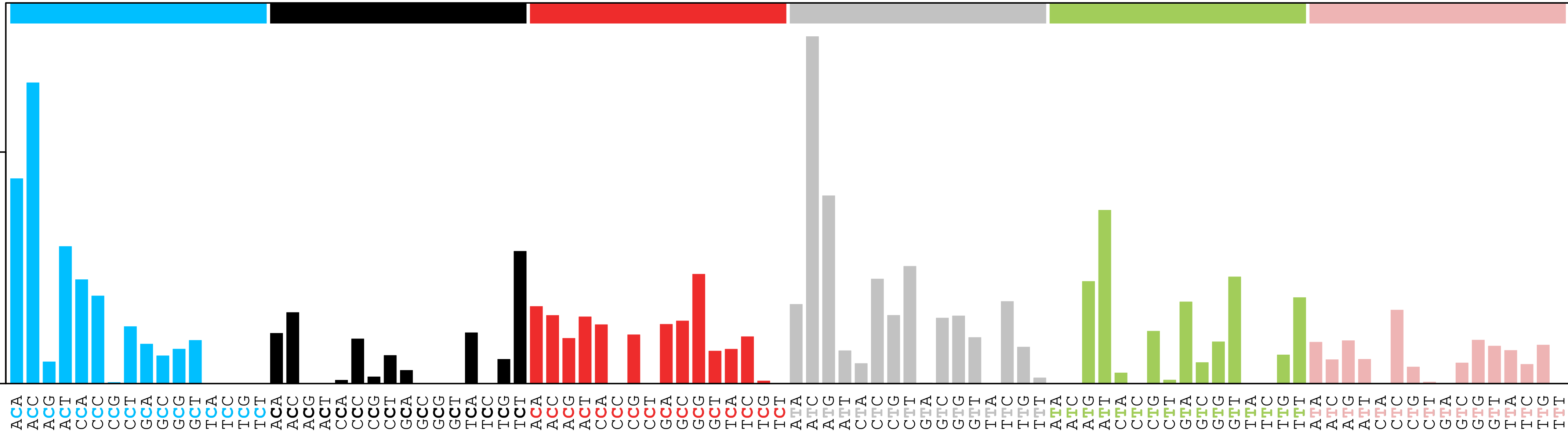
$T > C$

T>G

Mutation probability

0.05

0.00



SBS153

C>A

C>G

C>T

T>A

T>C

T>G

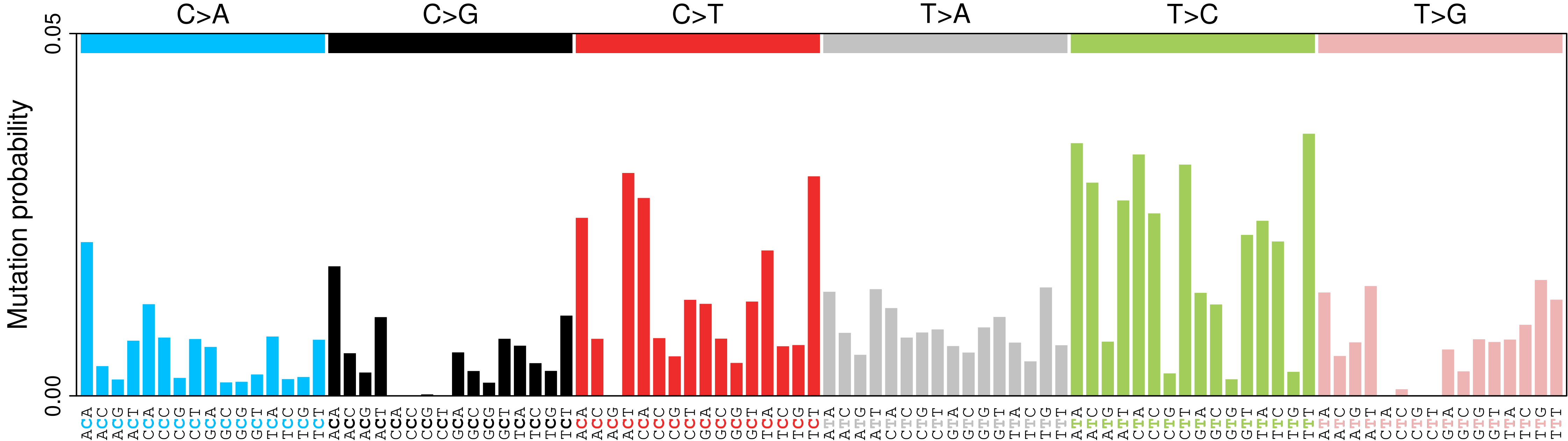
Mutation probability

0.05

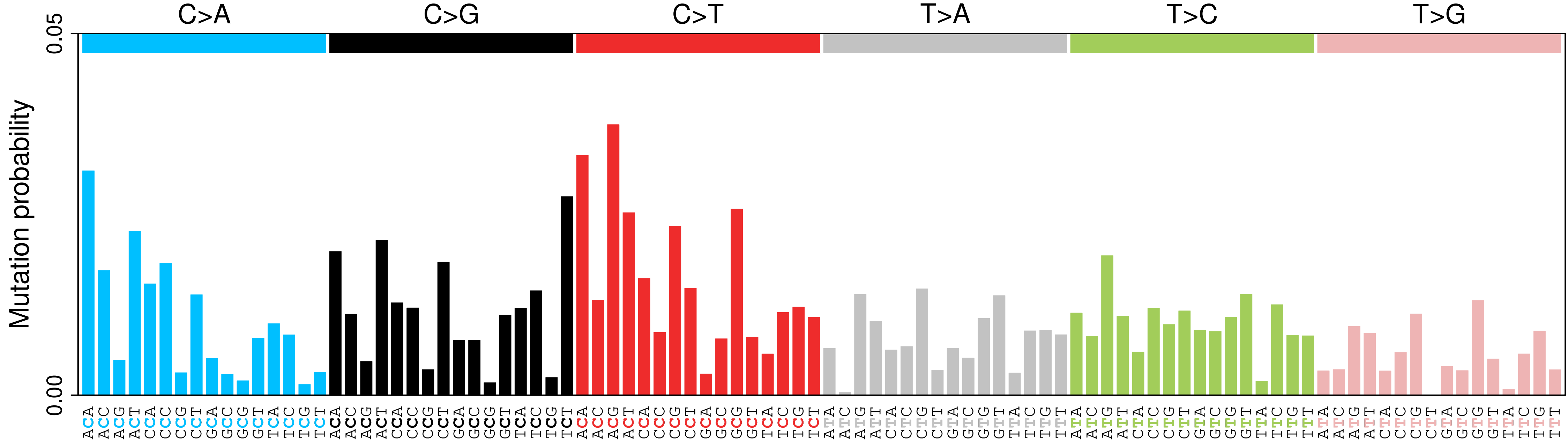
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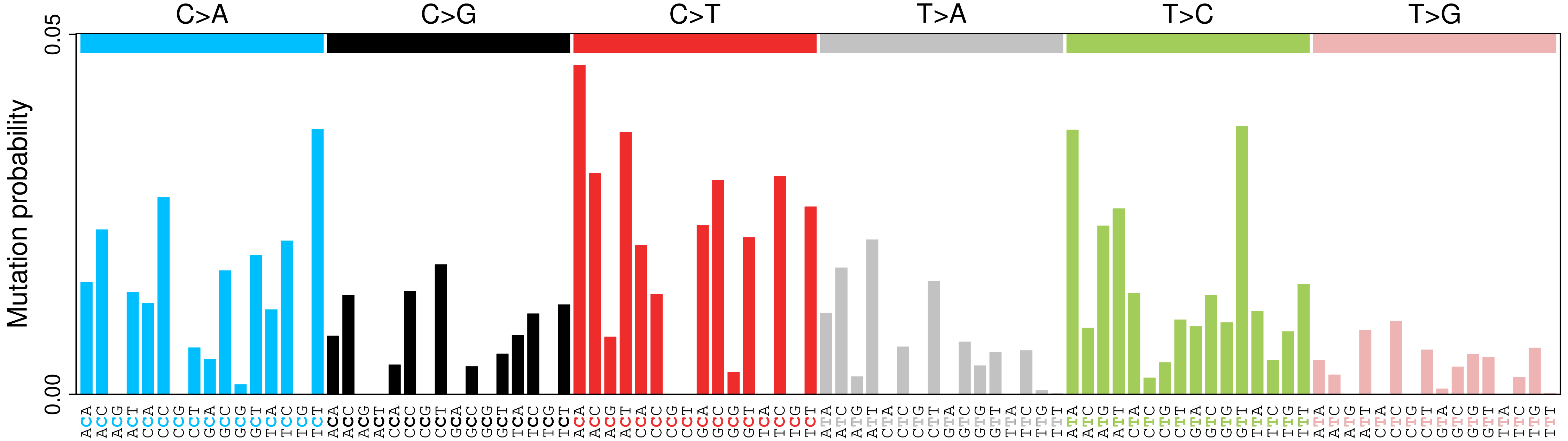
SBS154



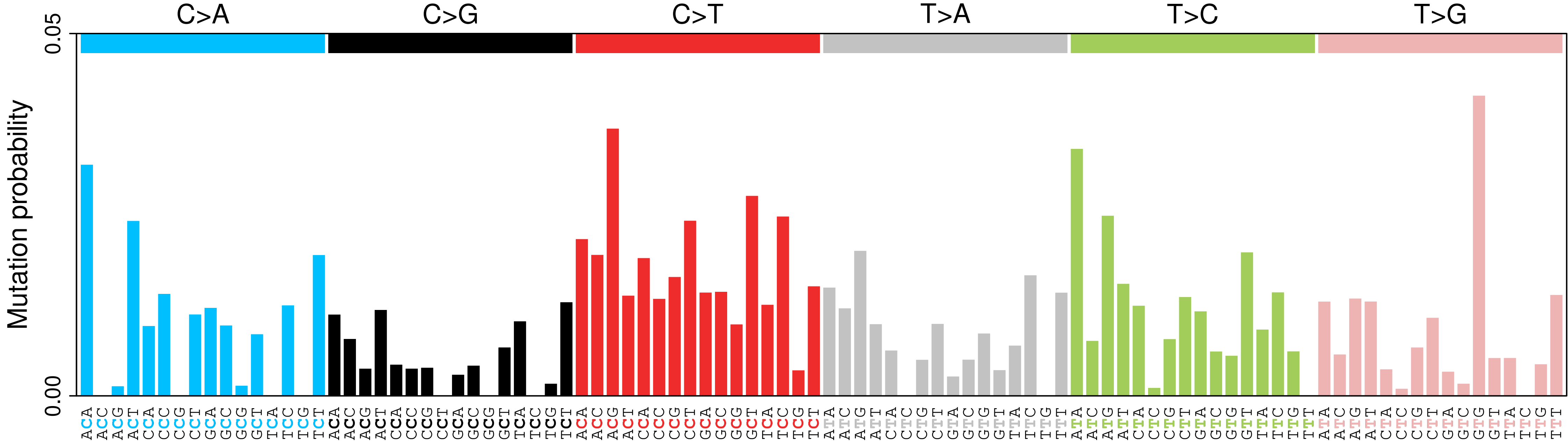
SBS157



SBS159



SBS160



SBS161

C>A

C>G

C>T

T>A

T>C

T>G

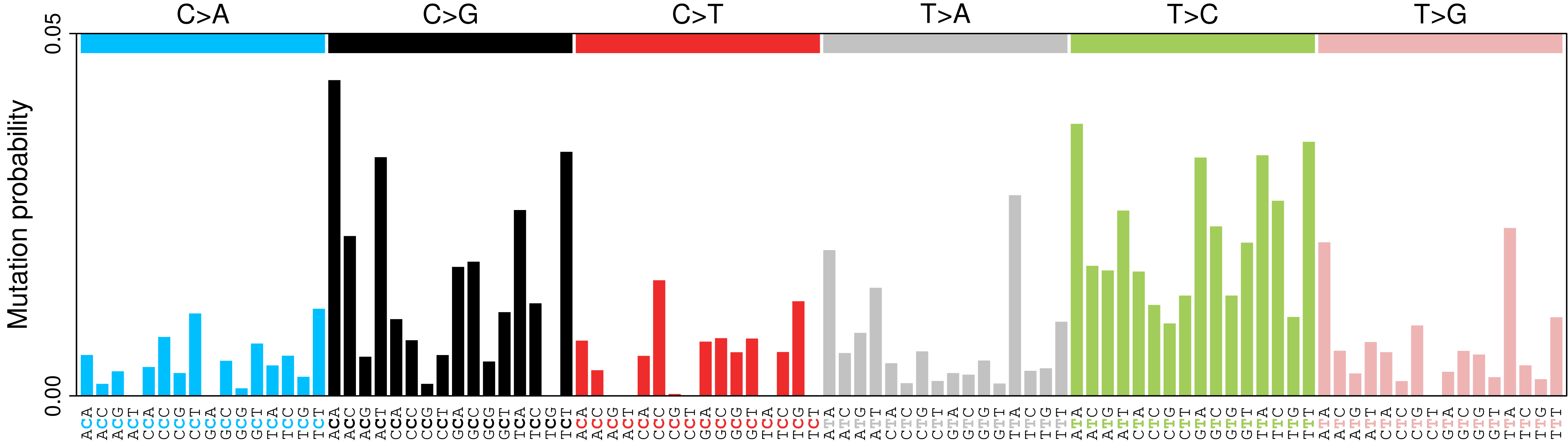
Mutation probability

0.05

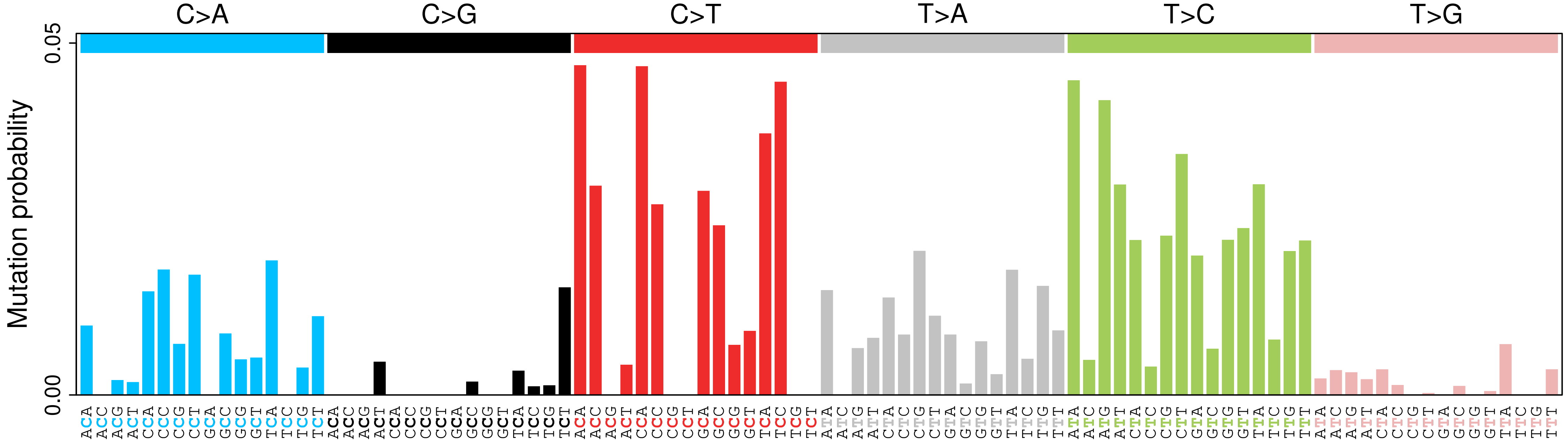
0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT TCA 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

SBS163



SBS164



SBS165

$C > A$

C > G

$C > T$

T > A

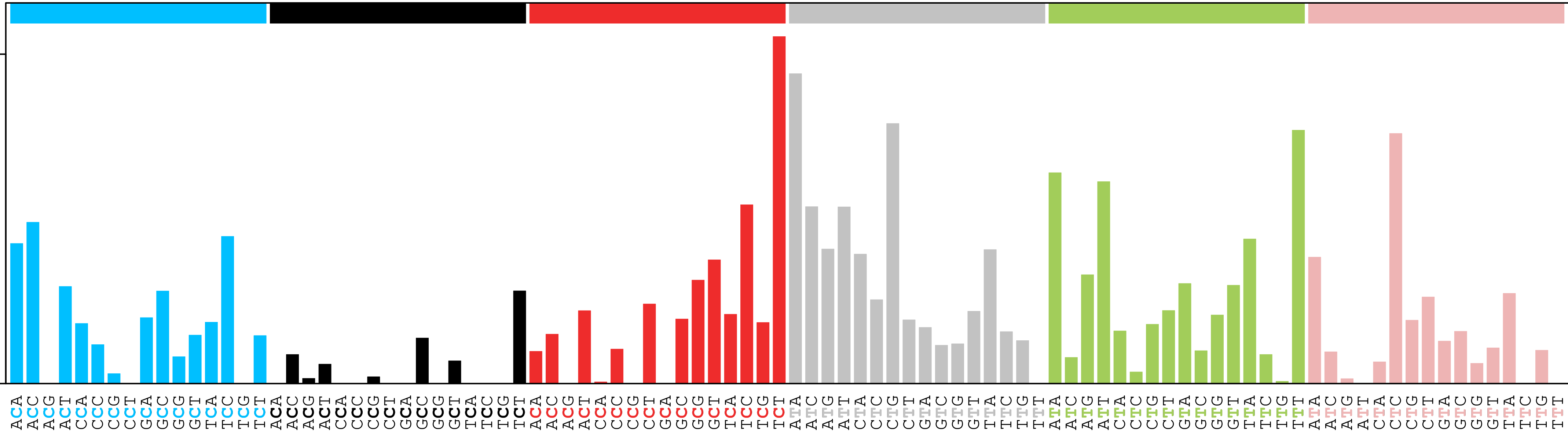
$T > C$

$T > G$

Mutation probability

0.05

0.00



SBS166

C > A

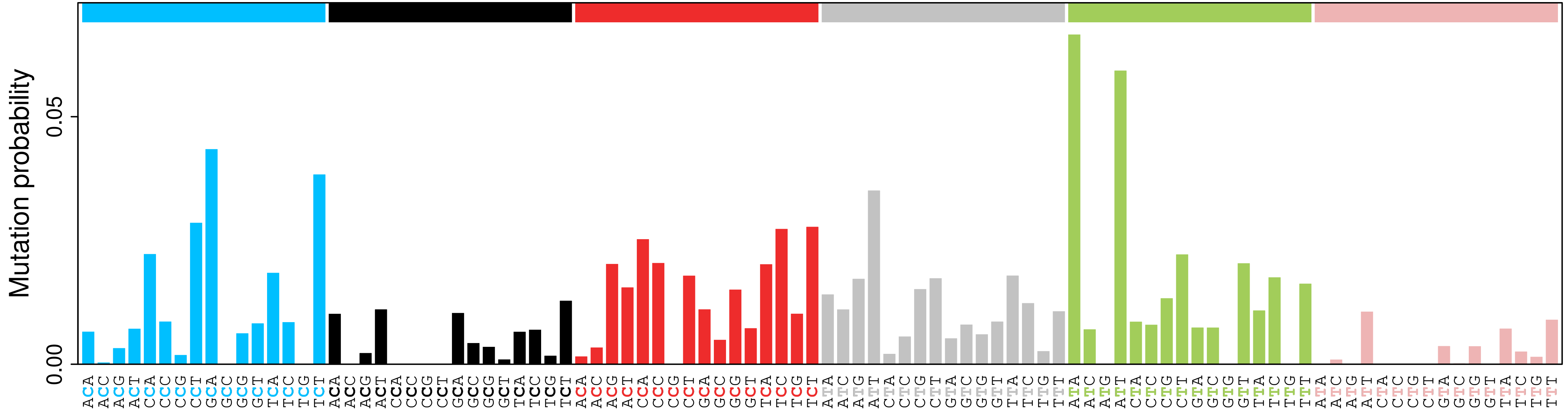
C > G

$C > T$

T > A

$T > C$

T>G



SBS167

$C > A$

C > G

$C > T$

T > A

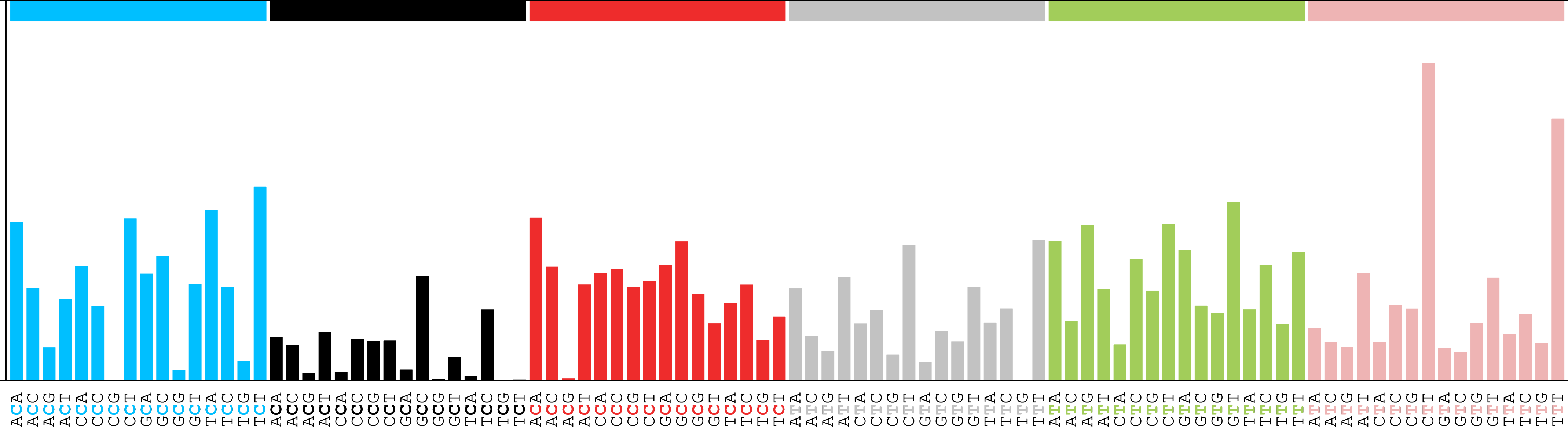
$$T > C$$

T>G

0.05

Mutation probability

0.00



SBS168

C > A

C > G

$C > T$

T > A

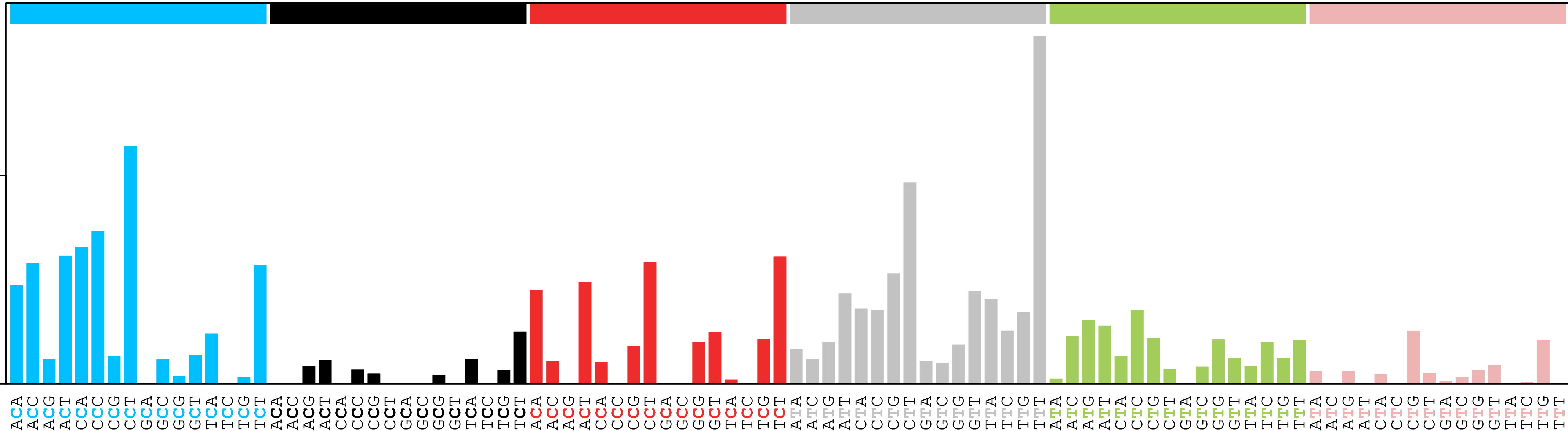
$T > C$

T>G

Mutation probability

0.05

0.00



SBS169

