

SBS3

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 CCGT GCA GCC GGC GTT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CCGT GCA GCC GGC GTT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CGC CCGT GCA GCC GGC GTT 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

SBS4

C > A

C > G

$$C > T$$

T > A

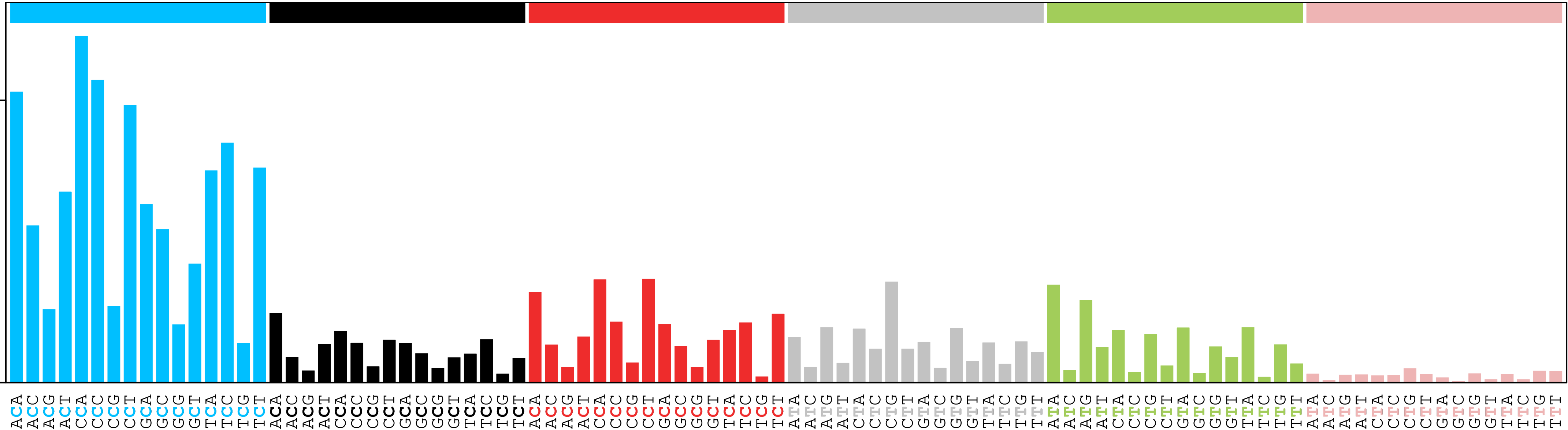
$T > C$

$T > G$

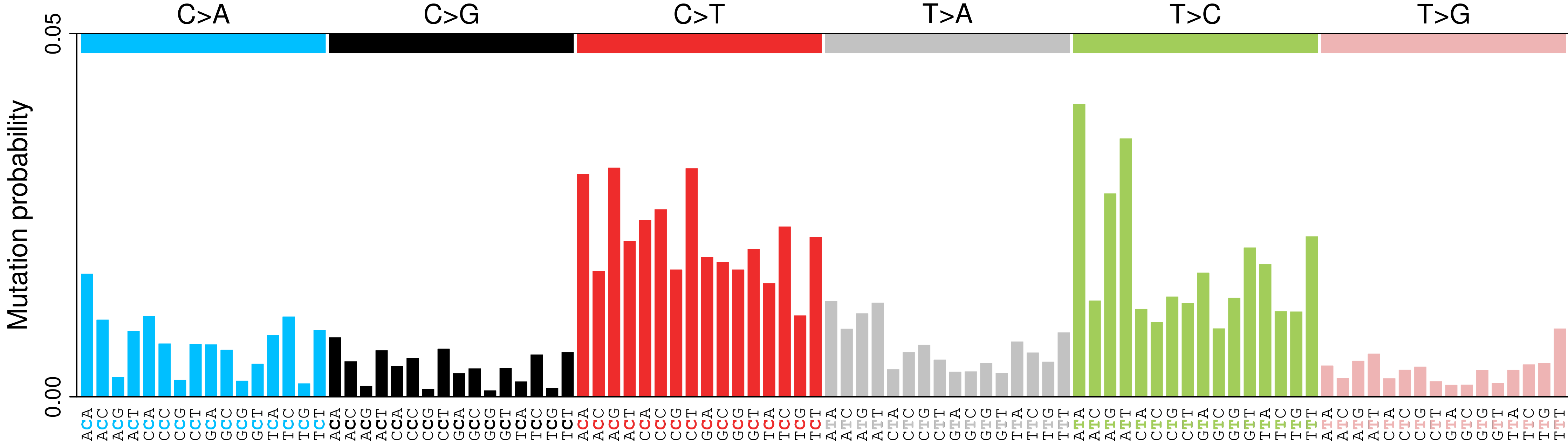
Mutation probability

0.05

0.00



SBS5



SBS7c

C > A

C > G

$C > T$

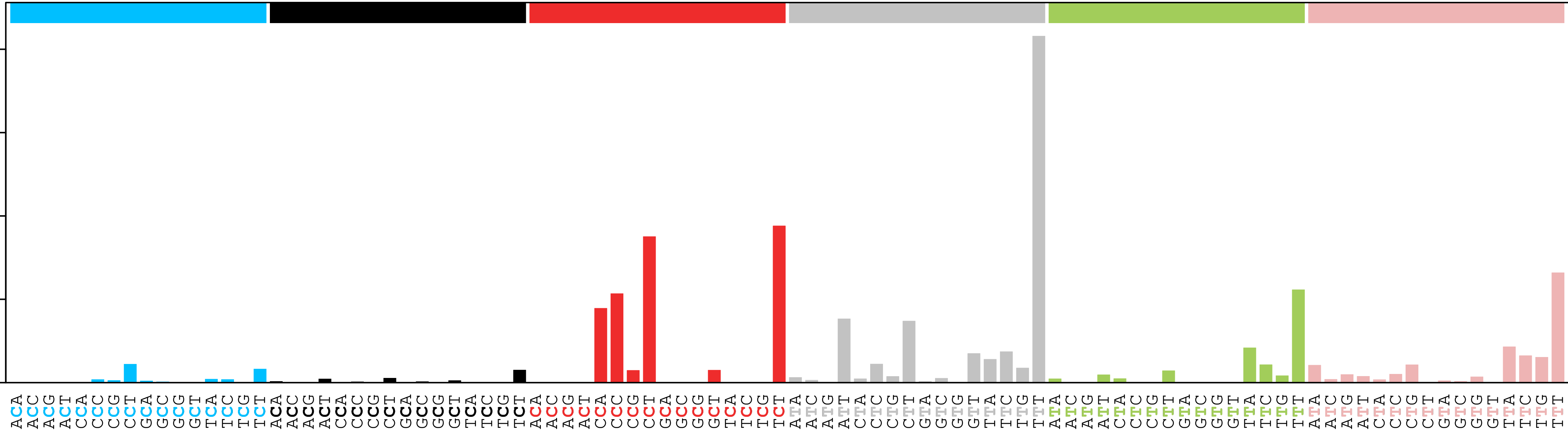
T > A

$$T > C$$

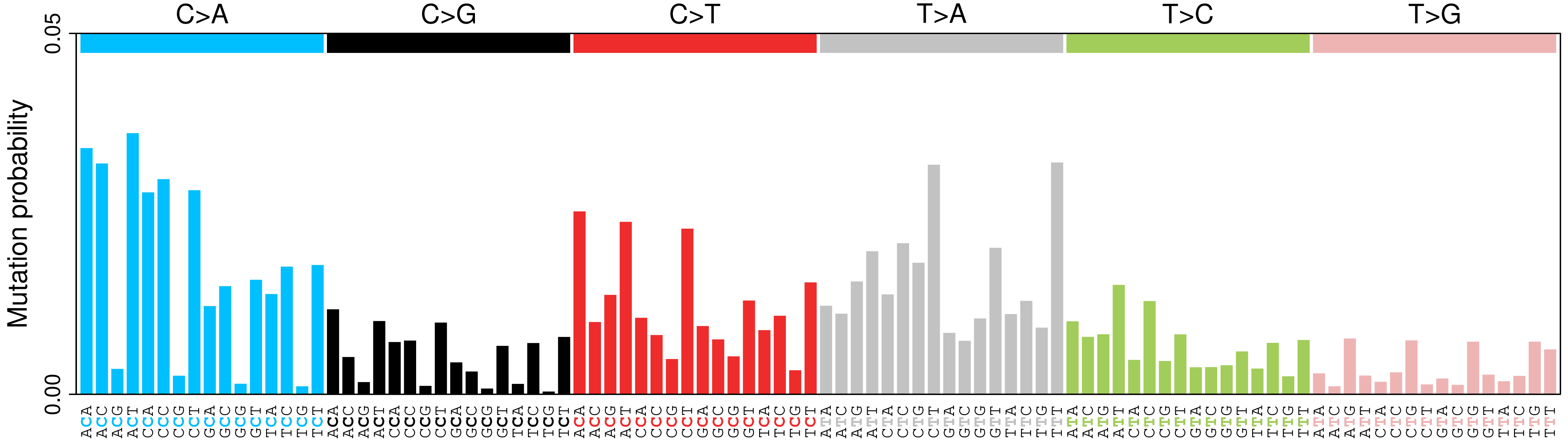
T > G

Mutation probability

0.00 0.05 0.10 0.15 0.20



SBS8



SBS9

C > A

C > G

$$C > T$$

T > A

$T > C$

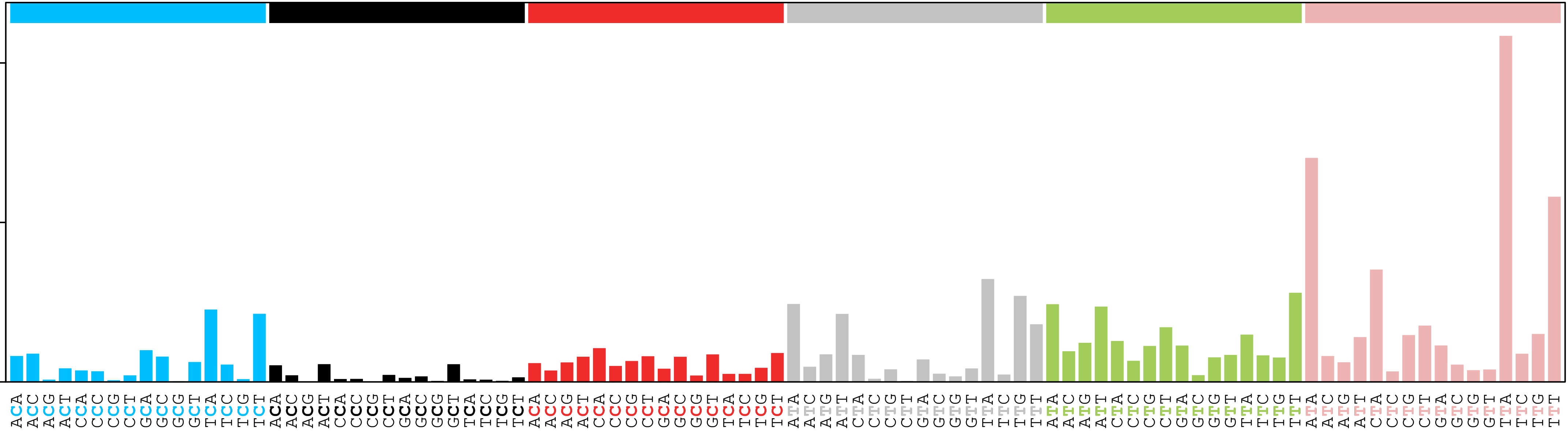
T>G

Mutation probability

0.10

0.05

0.00



SBS10a

C > A

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

၆

0.2

0.1

O

[illegible]

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

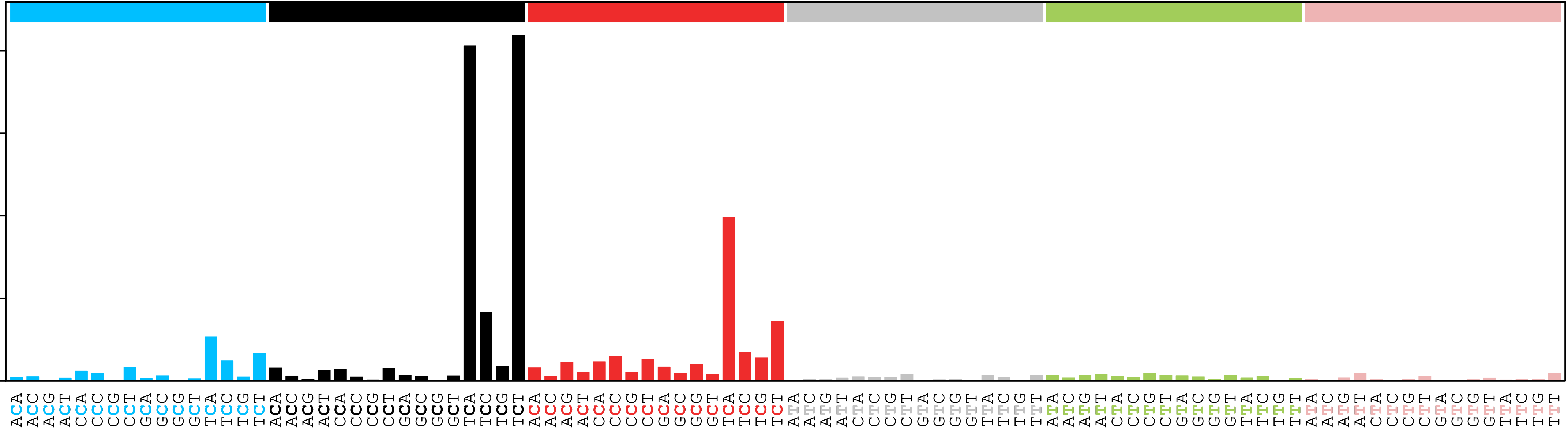
T>A

T>C

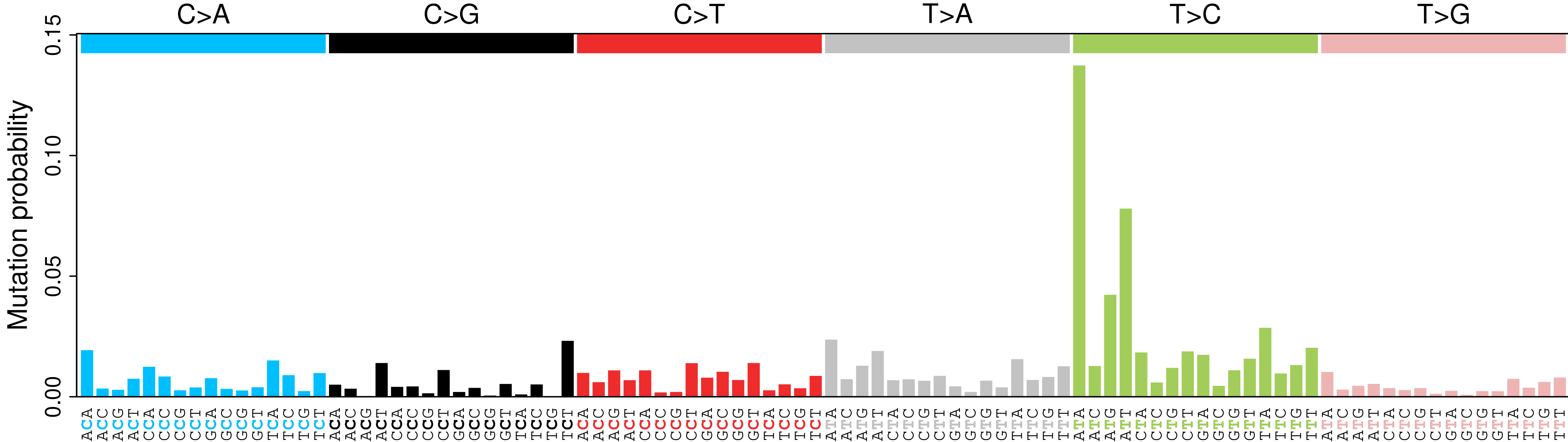
T>G

Mutation probability

0.20
0.15
0.10
0.05
0.00



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



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

SBS19

C > A

C > G

$C > T$

T > A

$T > C$

T>G

Mutation probability

0.2

0.1

0

[illegible]

SBS20



SBS22

$C > A$

C > G

$C > T$

T > A

$T > C$

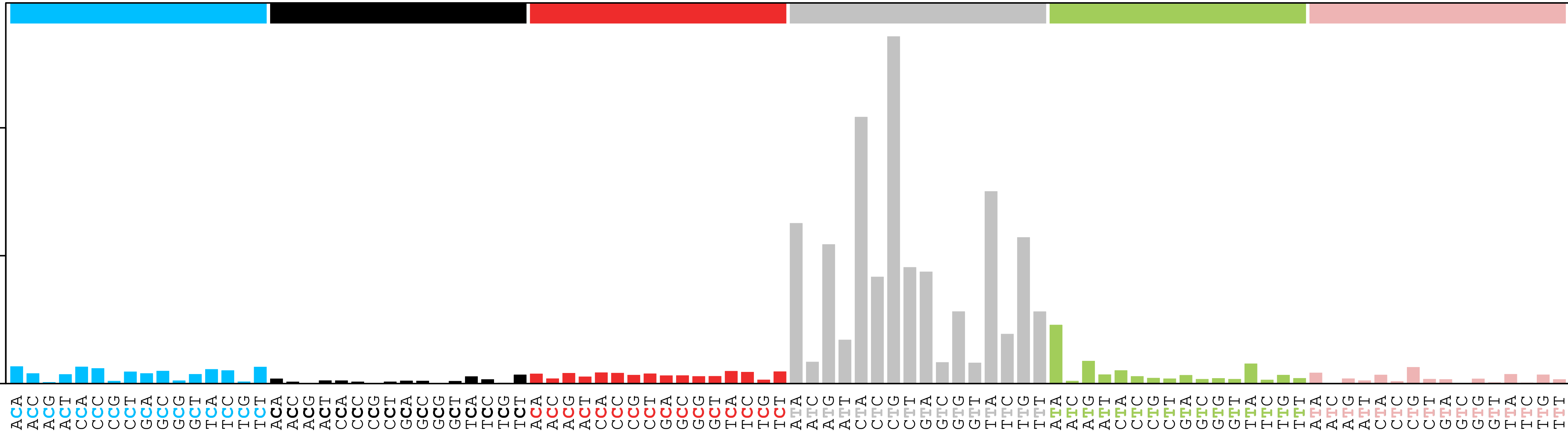
T>G

Mutation probability

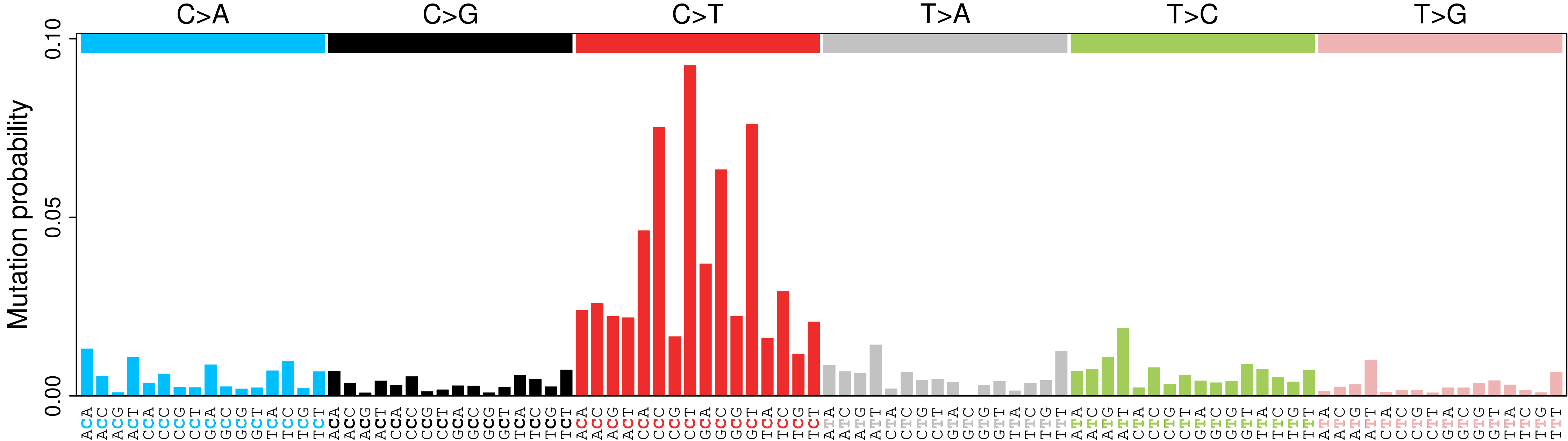
0.10

O

0.00



SBS23



SBS24



SBS28



SBS33

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.2
0.1
0.0



SBS35



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 GCA GCC GGT GCT TCA TCC TCG TCT ATA ATC ATG ATT CTA CTC CTG CTT GCA GCC GGT GCT TCA TCC TCG TCT

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

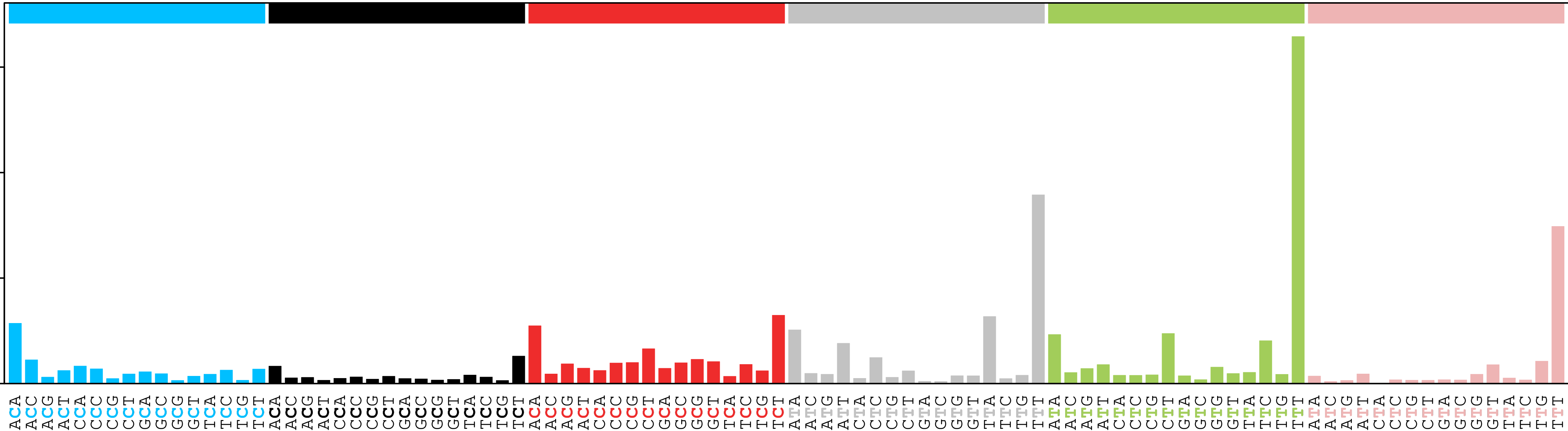
Mutation probability

0.15

0.10

0.0

0.0



SBS84

$C > A$

C > G

$C > T$

T>A

$T > C$

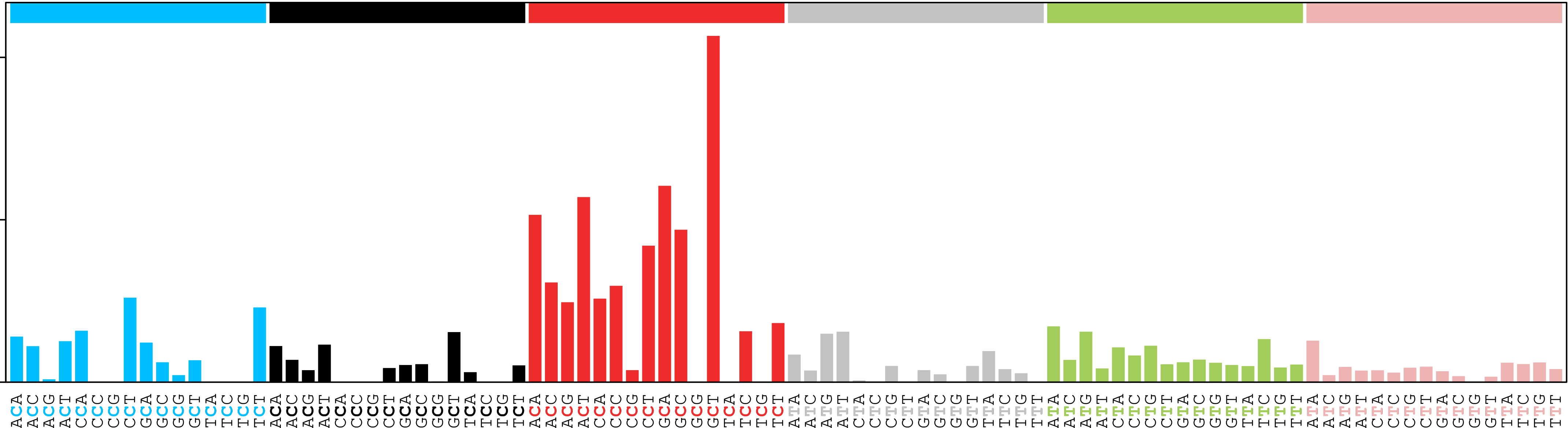
T>G

Mutation probability

0.10

0.05

0.0



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

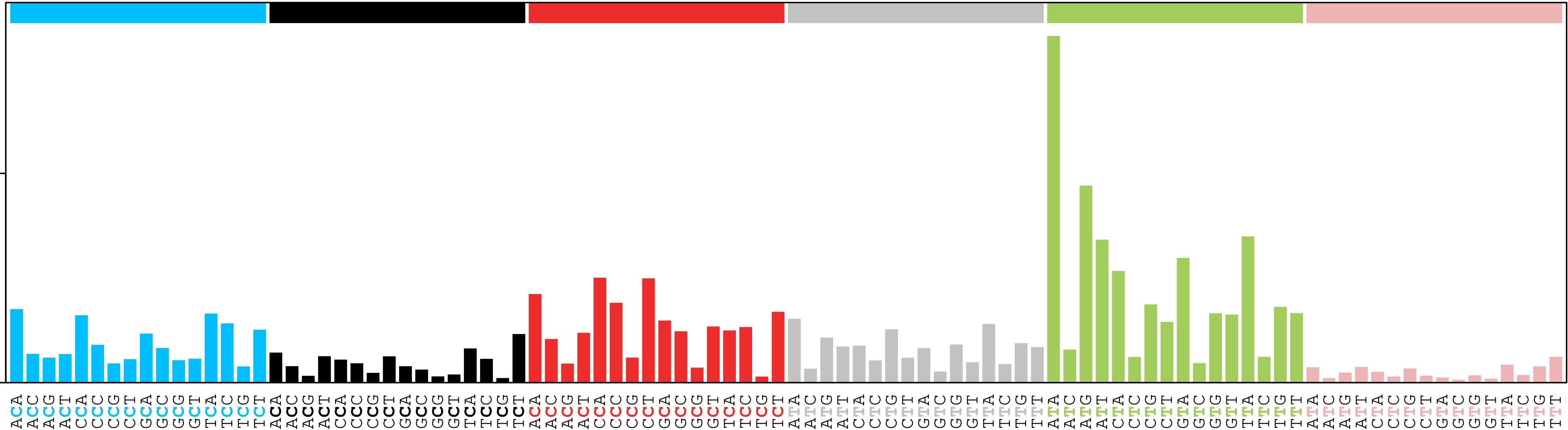
$$T > C$$

T>G

Mutation probability

0.05

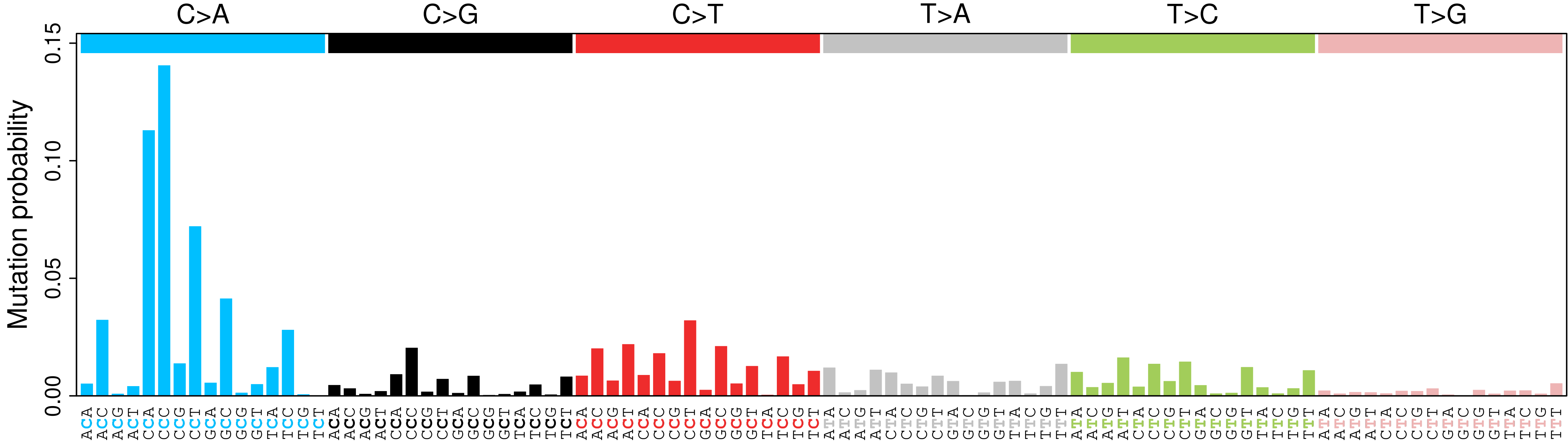
0.00



SBS93



SBS94



SBS95

C>A

C>G

C>T

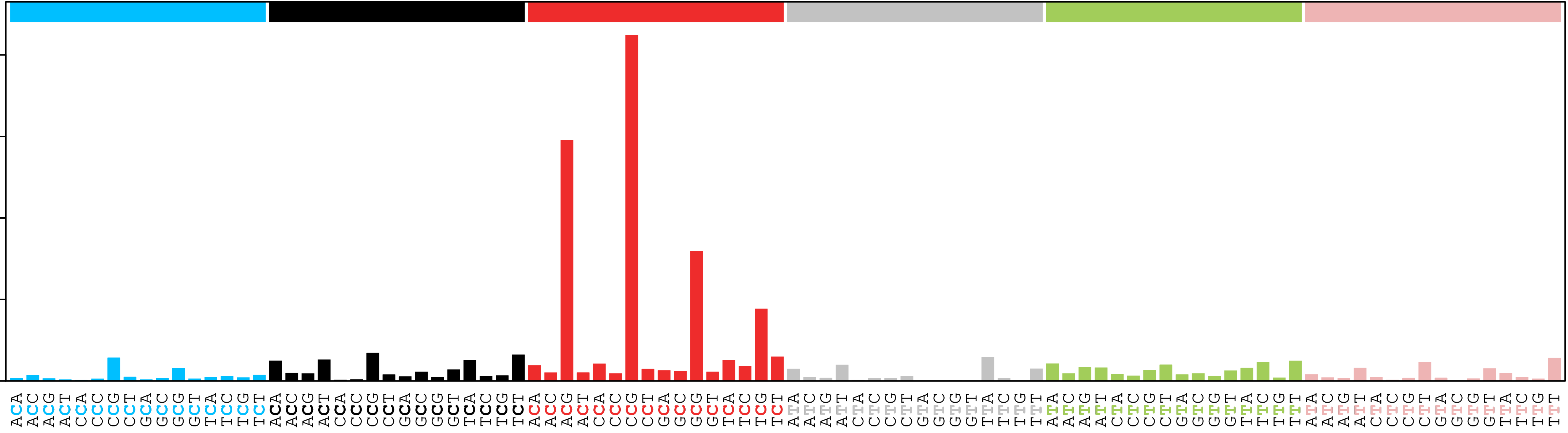
T>A

T>C

T>G

Mutation probability

0.20
0.15
0.10
0.05
0.00



SBS97

C > A

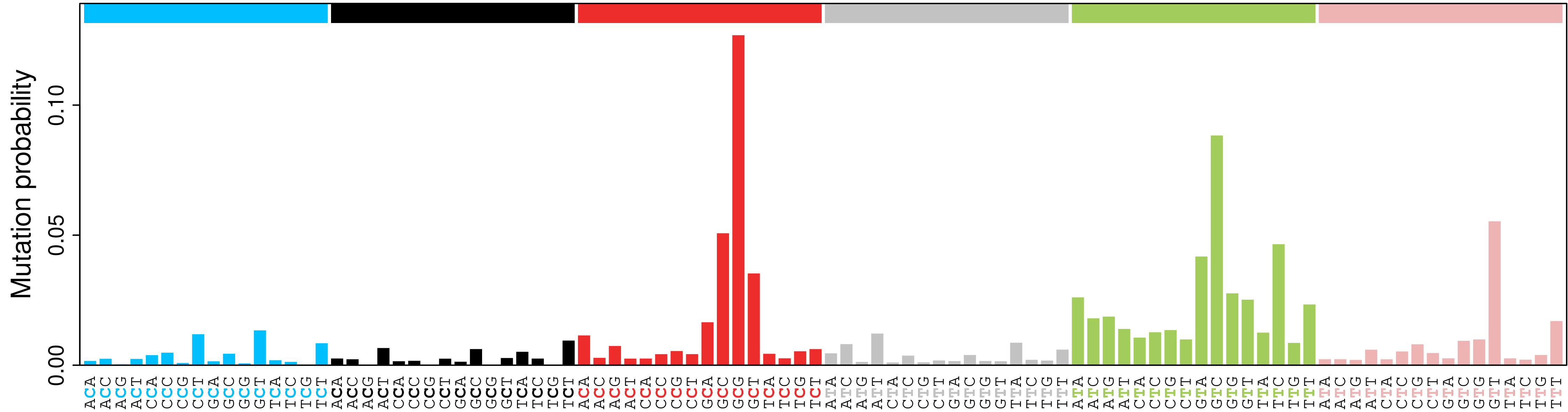
C > G

$C > T$

T > A

$T > C$

T>G



SBS98



SBS99

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCT CCA 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

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



SBS105



SBS107

$C > A$

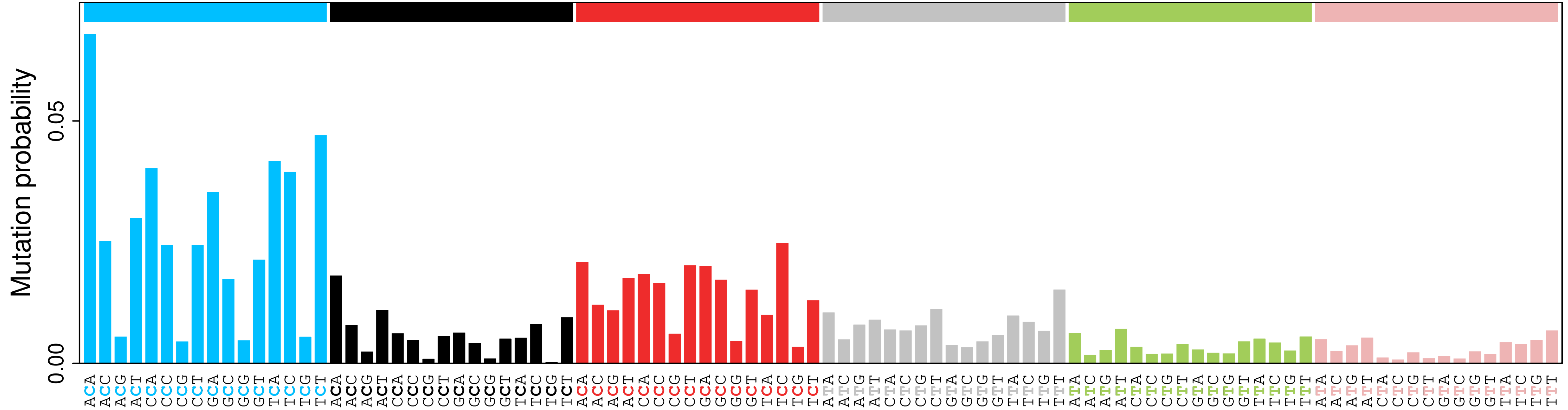
C > G

$C > T$

T > A

$$T > C$$

T > G



SBS108

C > A

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.15

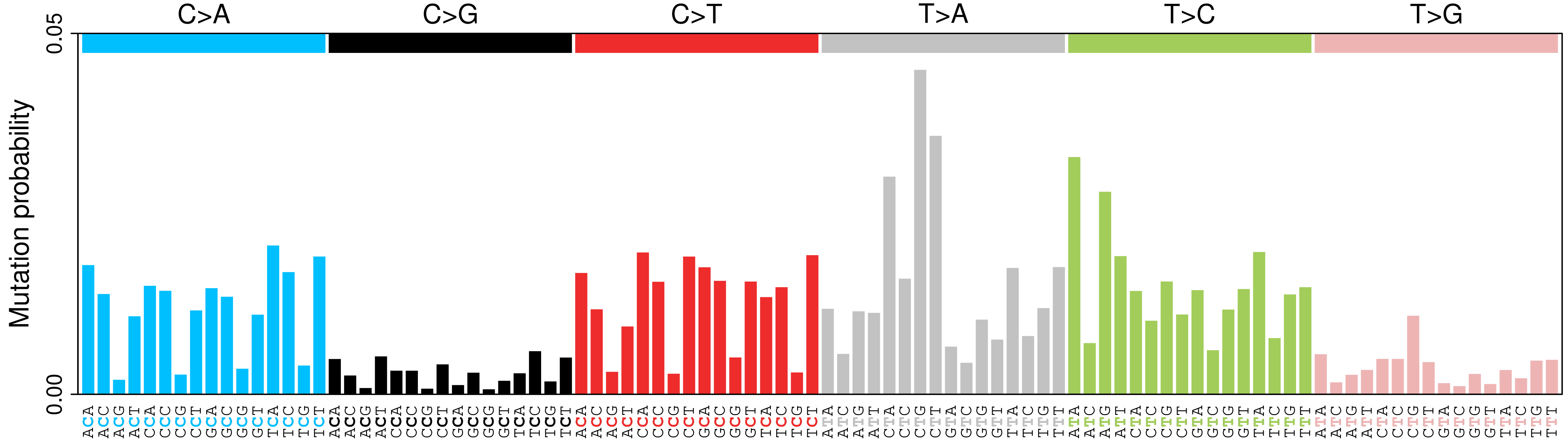
0.1

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U

[illegible]

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

SBS112

$C > A$

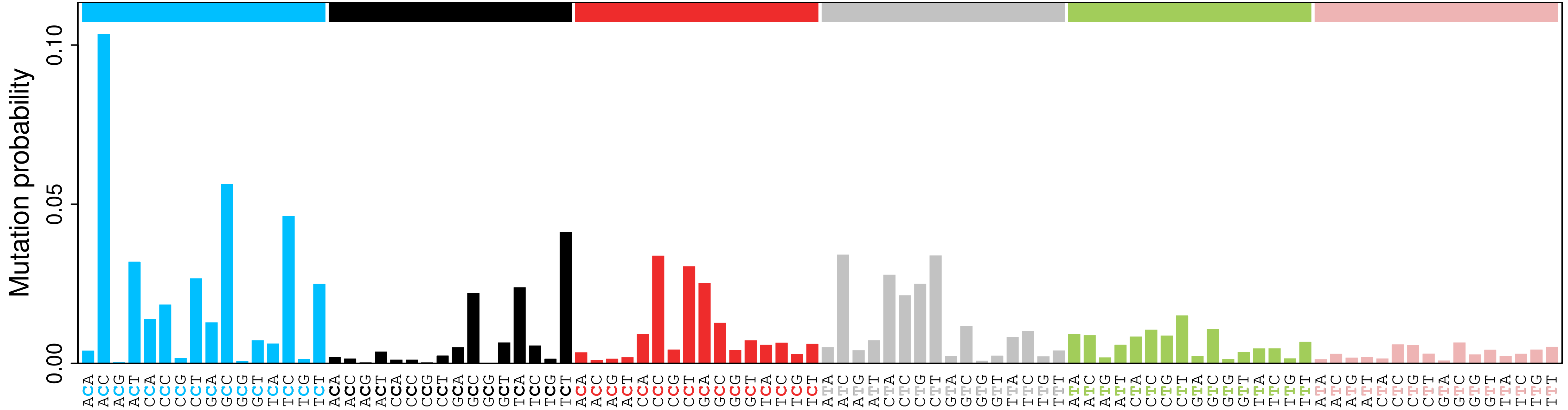
C > G

C>T

T > A

$T > C$

T>G



SBS113

C > A

C > G

$C > T$

T > A

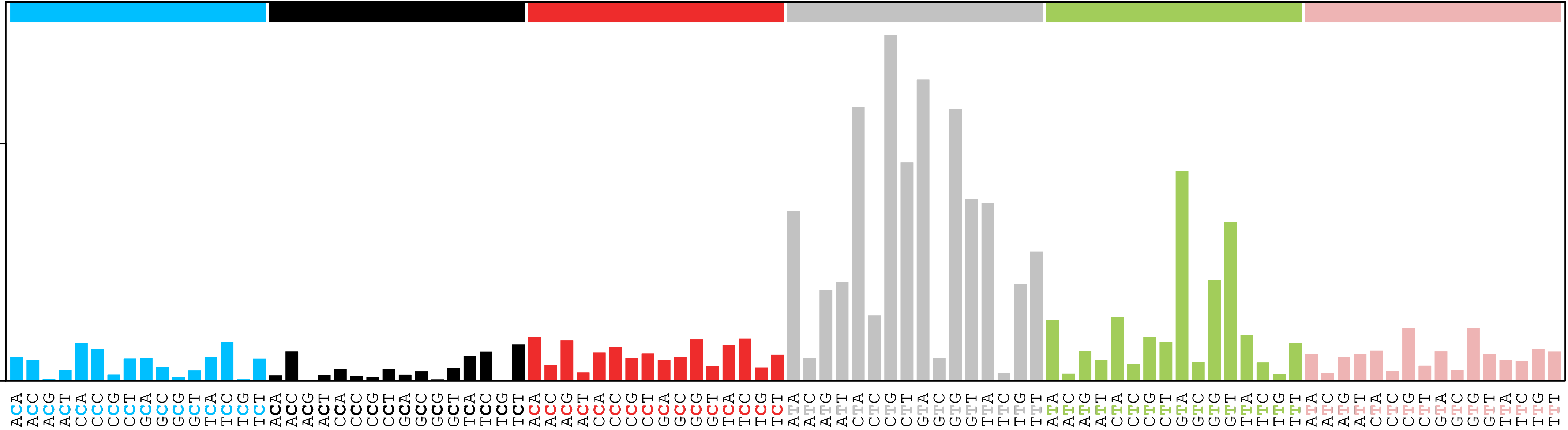
$T > C$

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

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

SBS116



SBS117

$C > A$

C > G

$C > T$

T > A

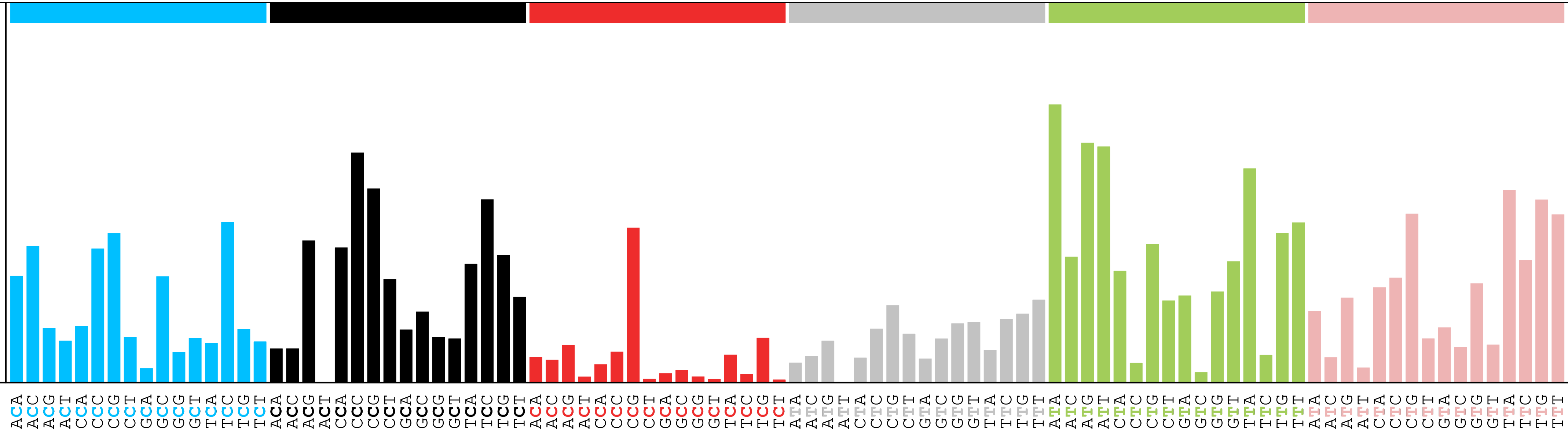
$T > C$

T>G

0.05

Mutation probability

0.00



SBS118

C>A

C>G

C>T

T>A

T>C

T>G

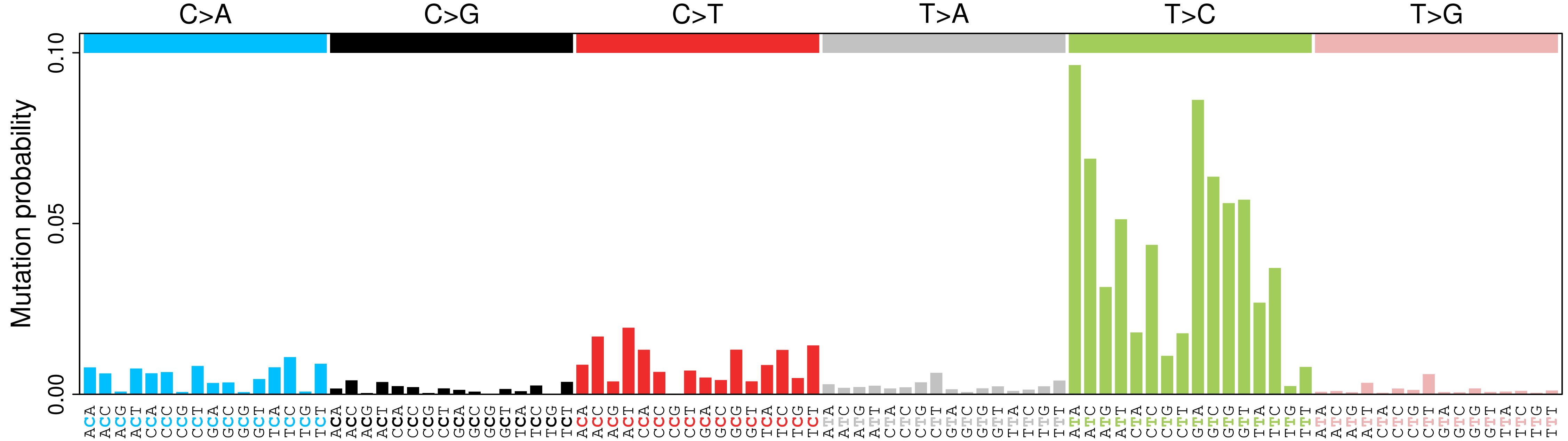
Mutation probability

0.05

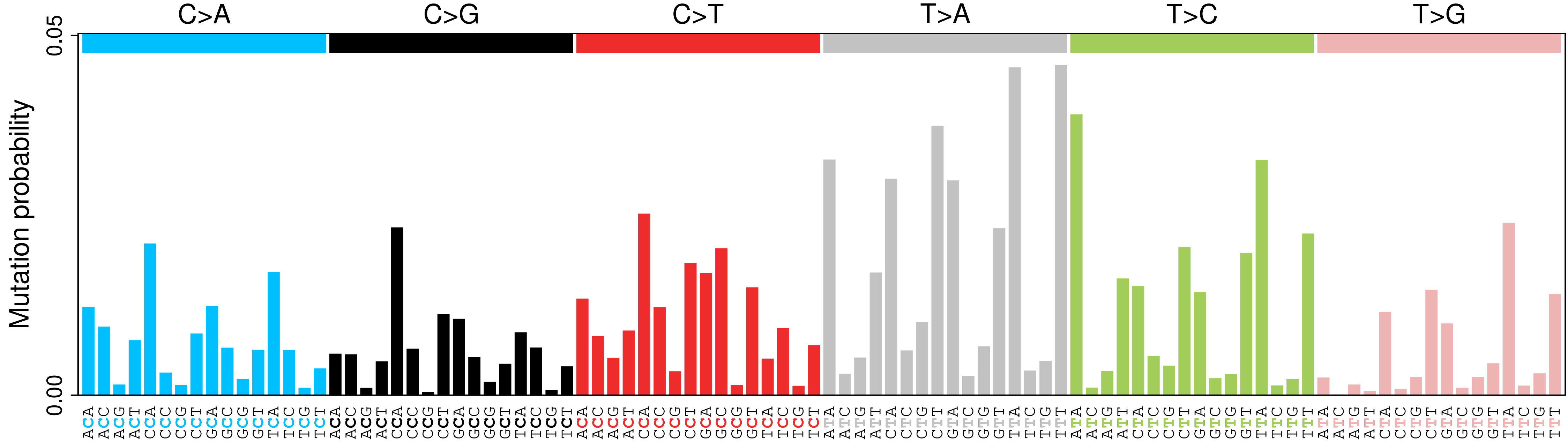
0.00

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 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

SBS119



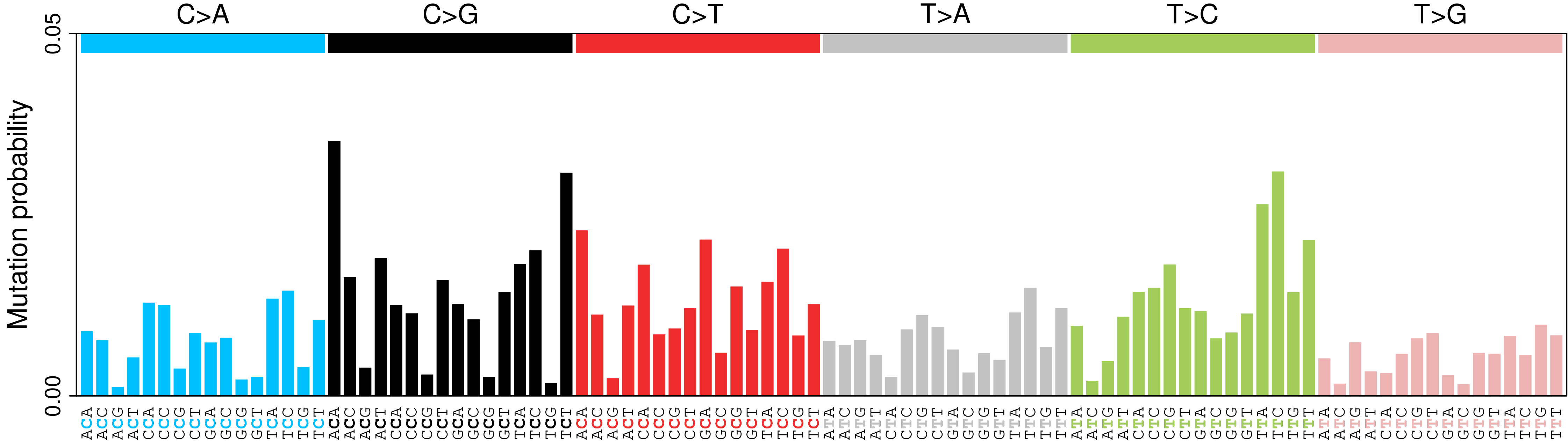
SBS124



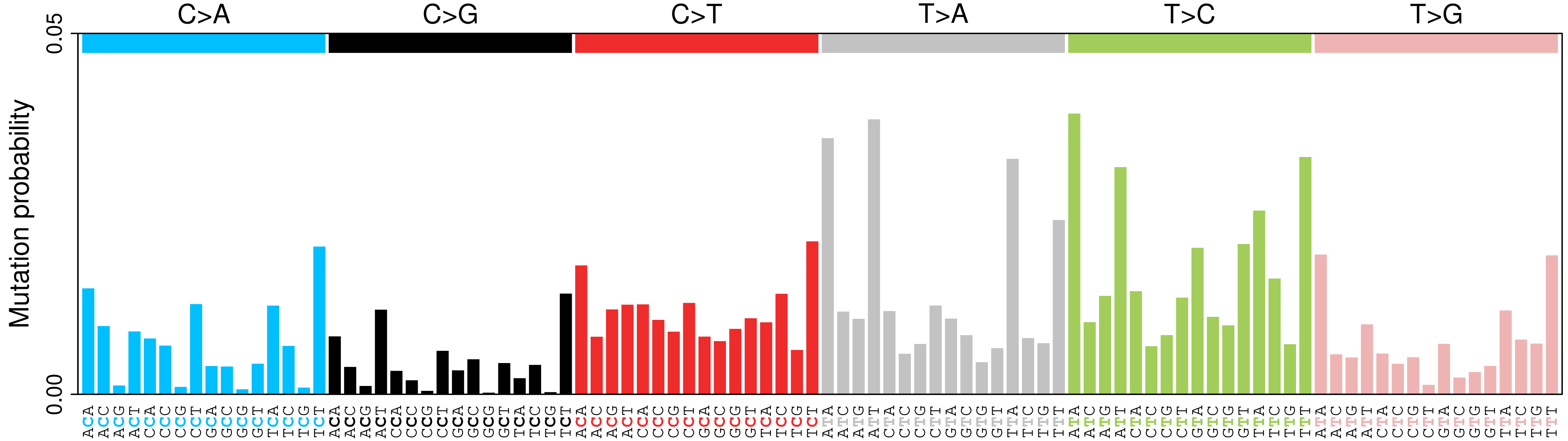
SBS125



SBS126



SBS127



SBS131

$C > A$

C > G

$C > T$

T > A

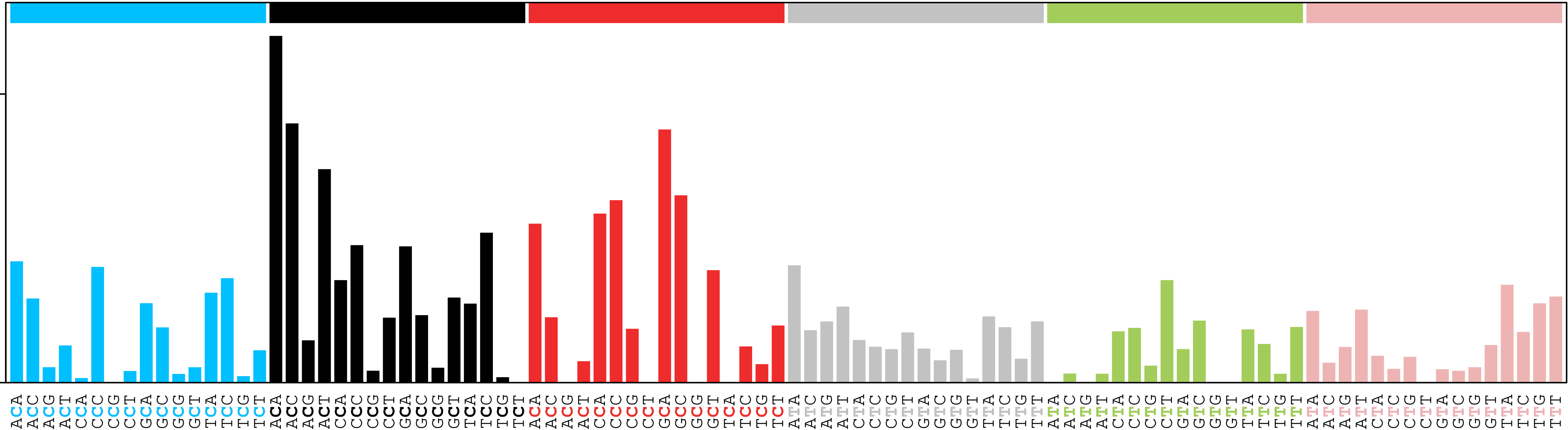
$$T > C$$

T>G

Mutation probability

0.05

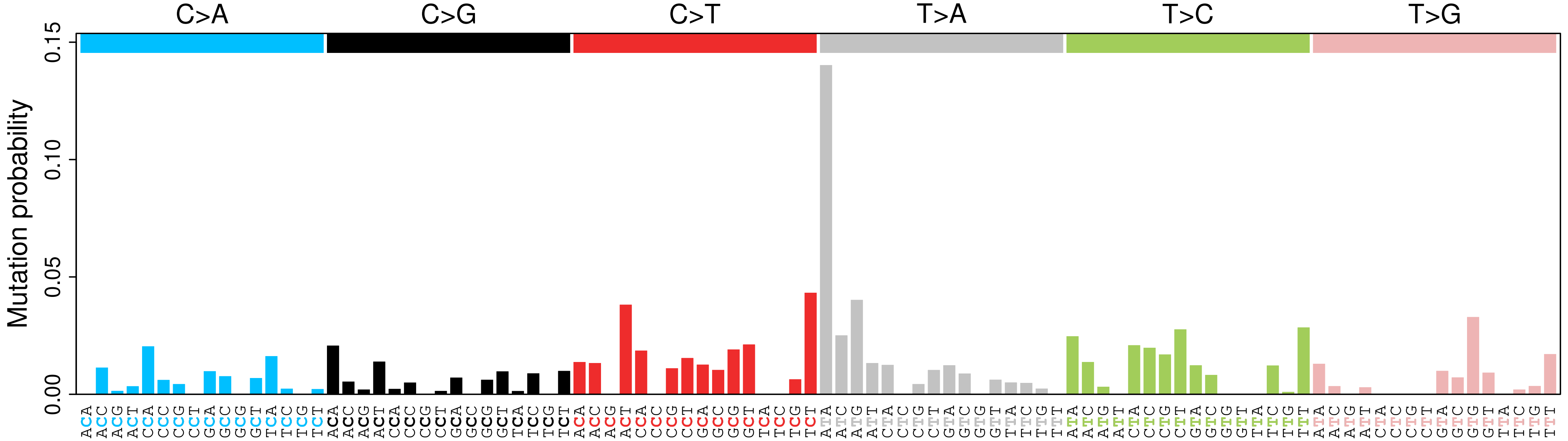
0.00



SBS132



SBS135



SBS136

$C > A$

C > G

$C > T$

T > A

$T > C$

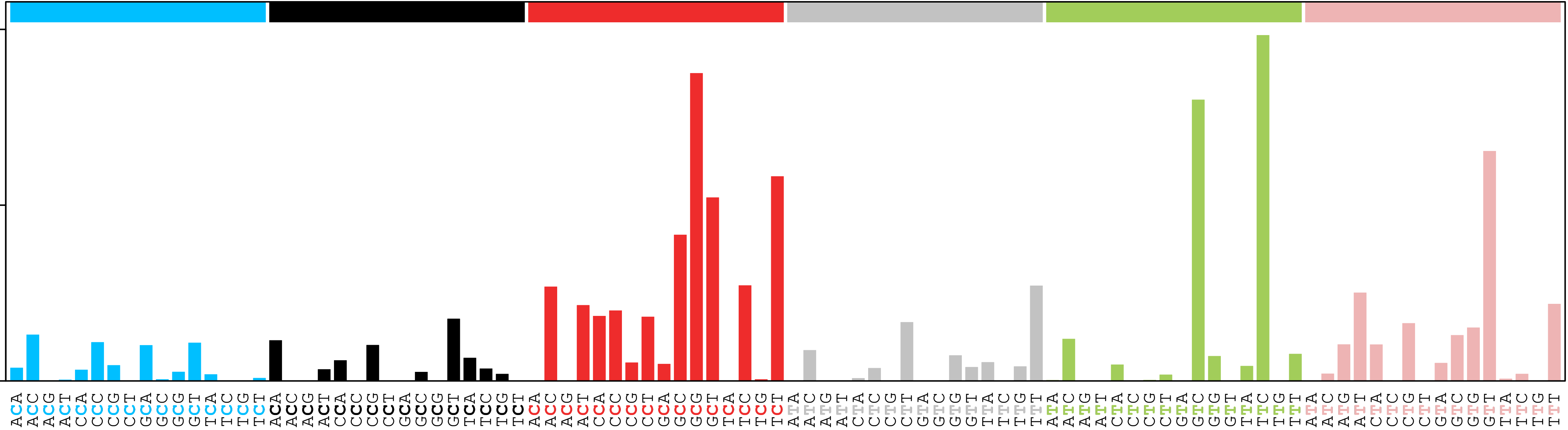
T>G

Mutation probability

0.10

0.05

0.00



SBS137

C > A

C > G

$C > T$

T > A

$$T > C$$

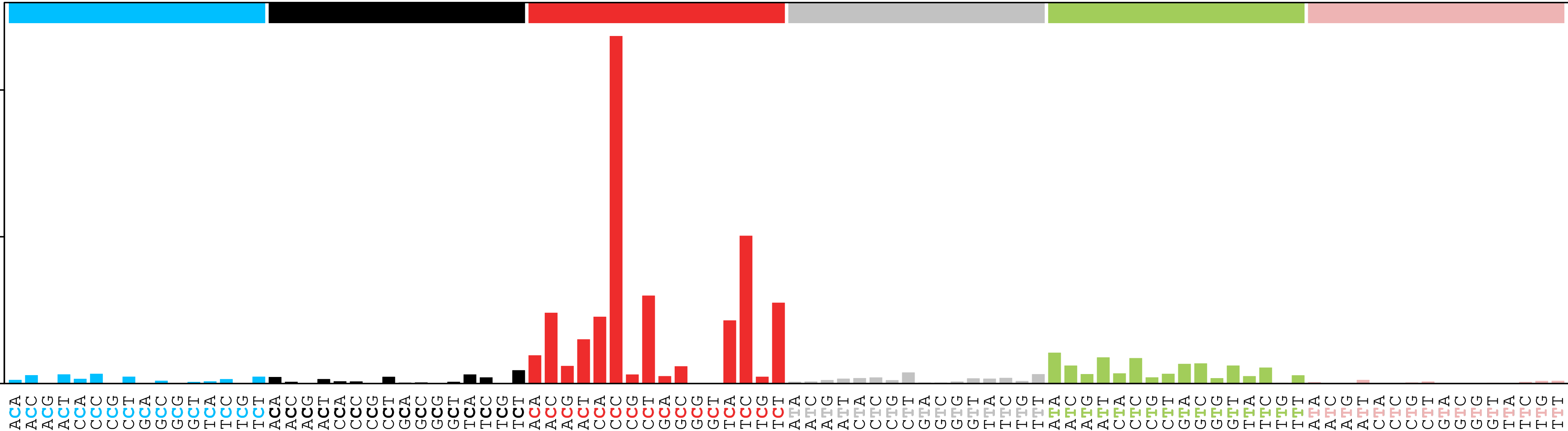
T>G

Mutation probability

0.2

o

0.0



SBS141

$C > A$

C > G

C>T

T > A

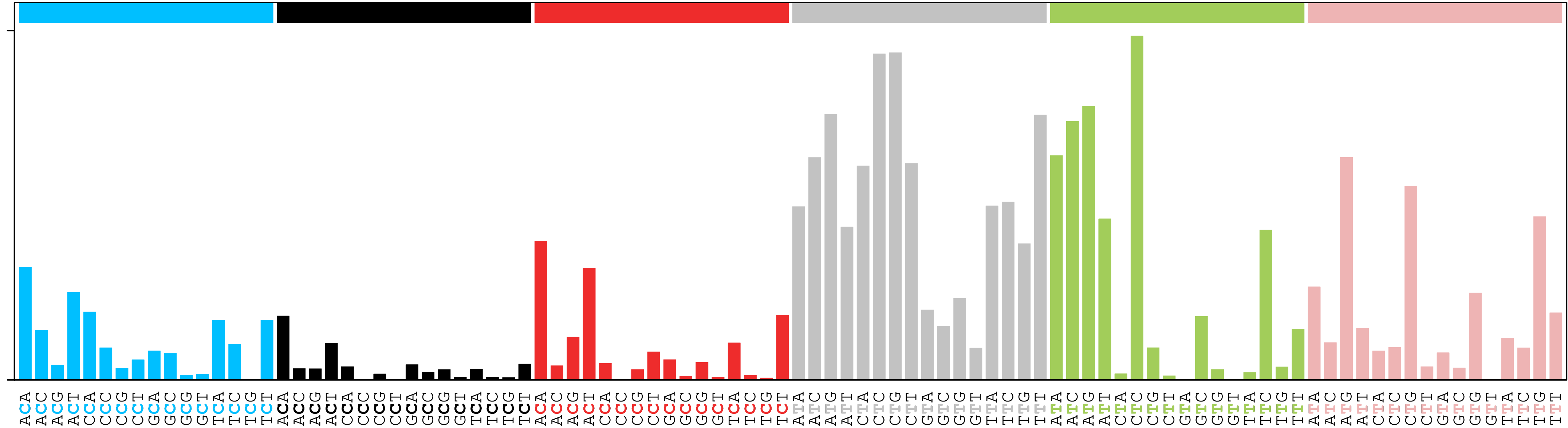
$T > C$

T>G

0.05

Mutation probability

0.00



SBS142

C>A

C>G

C>T

T>A

T>C

T>G

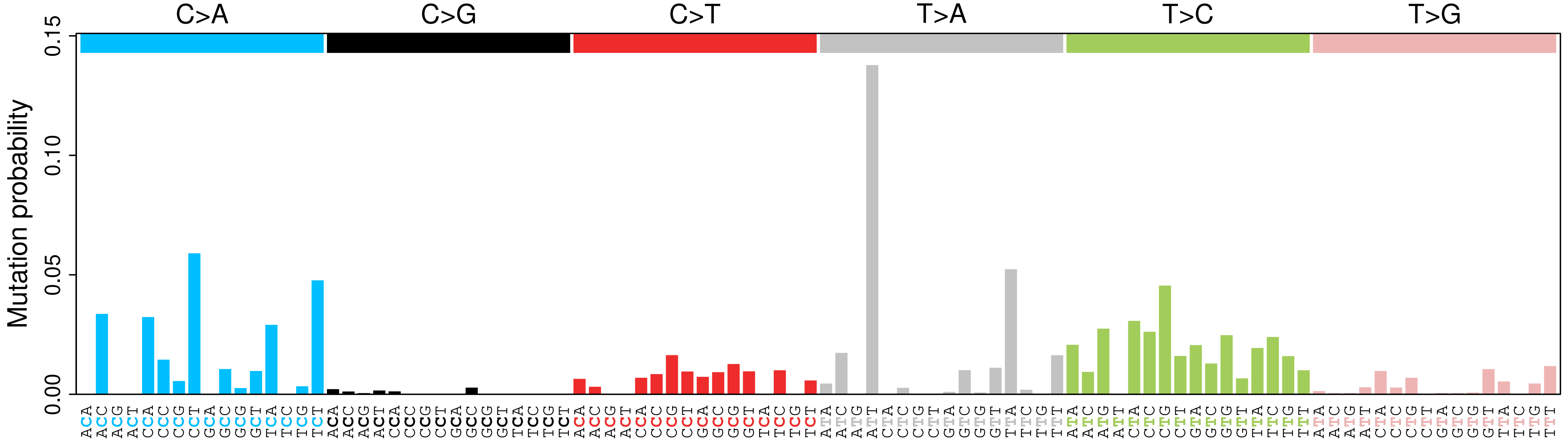
Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGG GGT TCA TCC TCG TCT TTA TAC TAT TAA TGA TGC TGT 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 TTA TAC TAT TAA TGA TGC TGT TTT

SBS143



SBS144

C > A

C > G

$C > T$

T > A

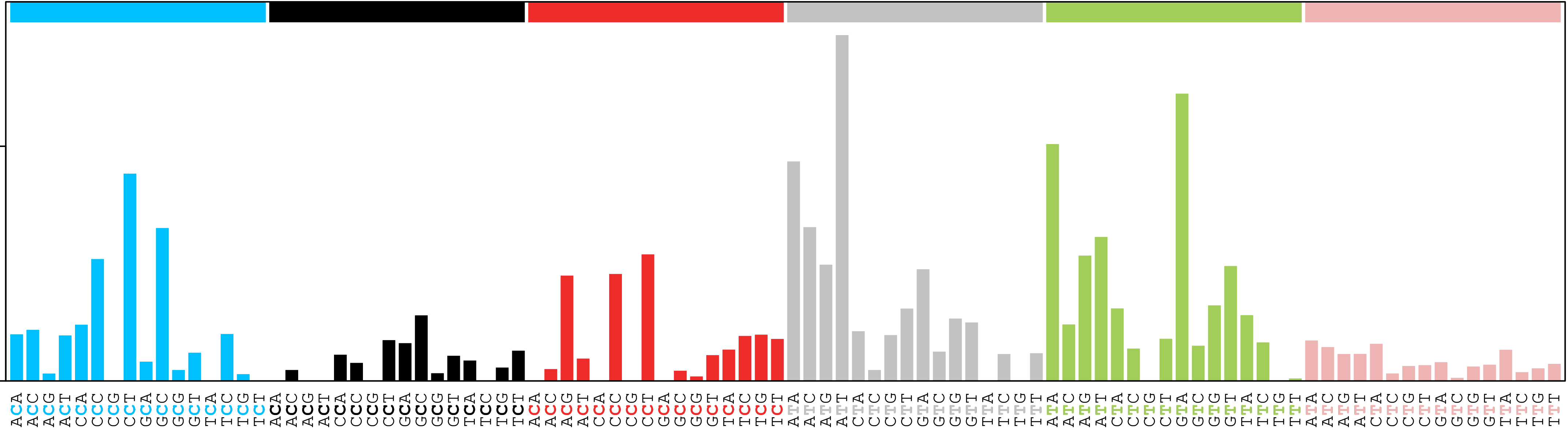
$T > C$

T>G

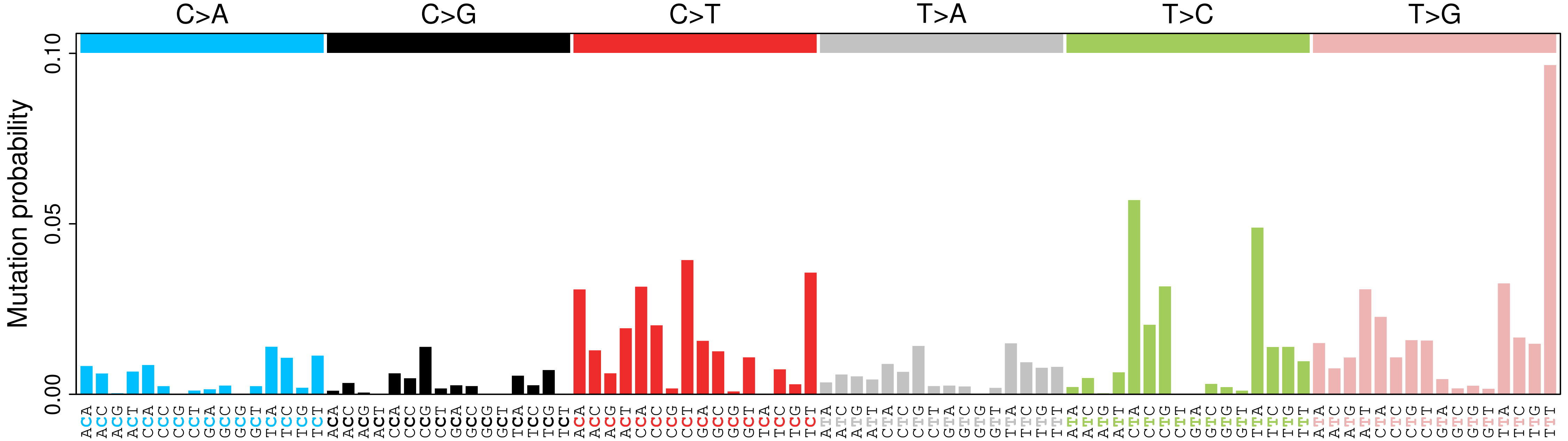
Mutation probability

0.05

0.00.



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

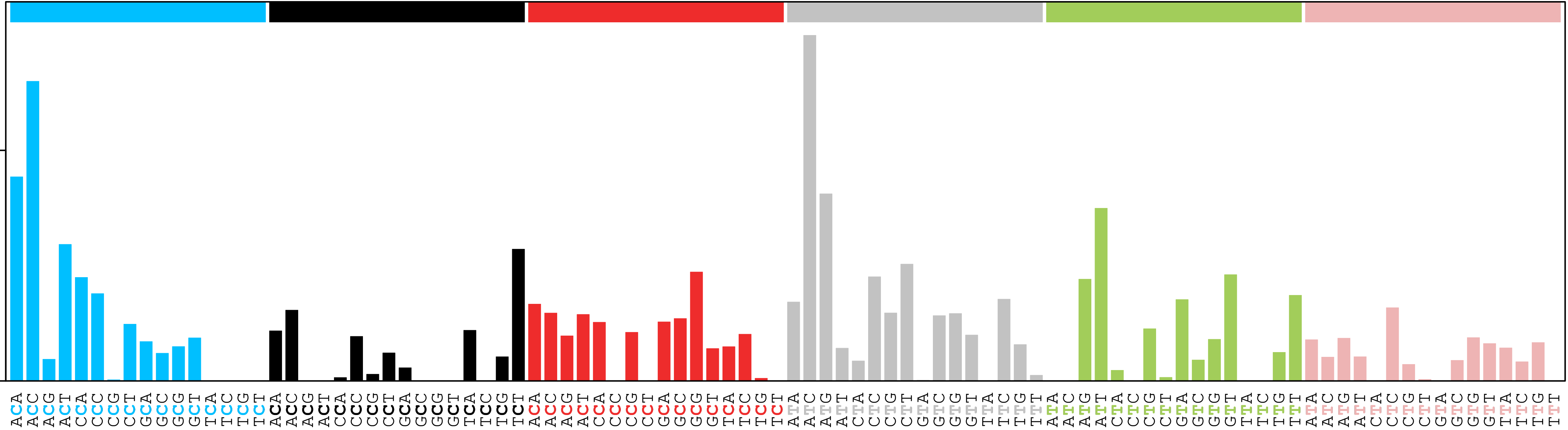
$T > C$

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

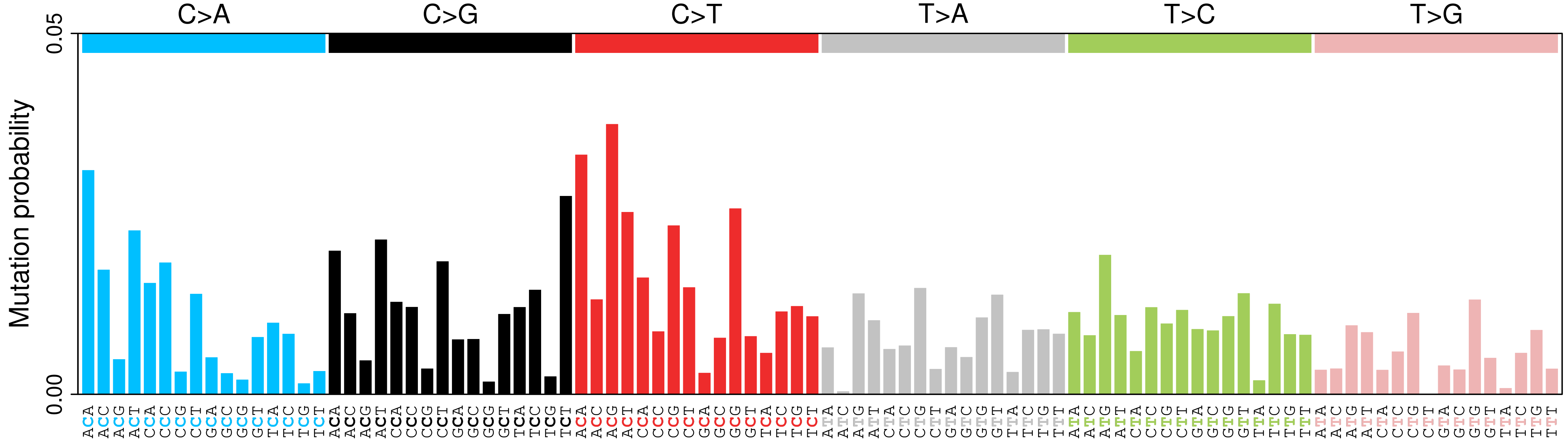
0.00

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

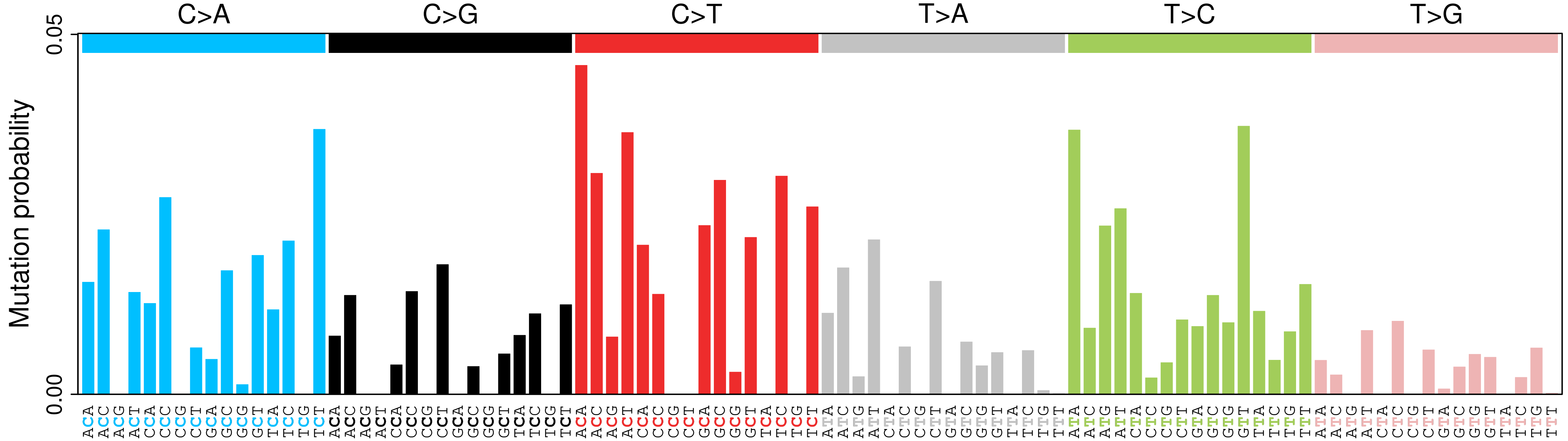
SBS154



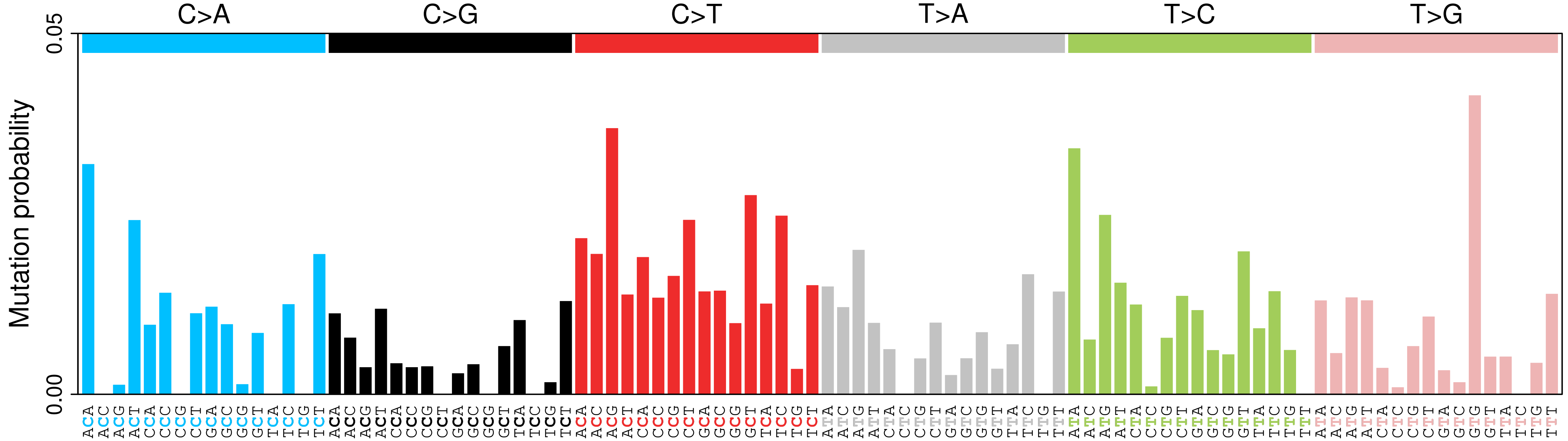
SBS157



SBS159



SBS160



SBS161

$C > A$

C > G

$C > T$

T > A

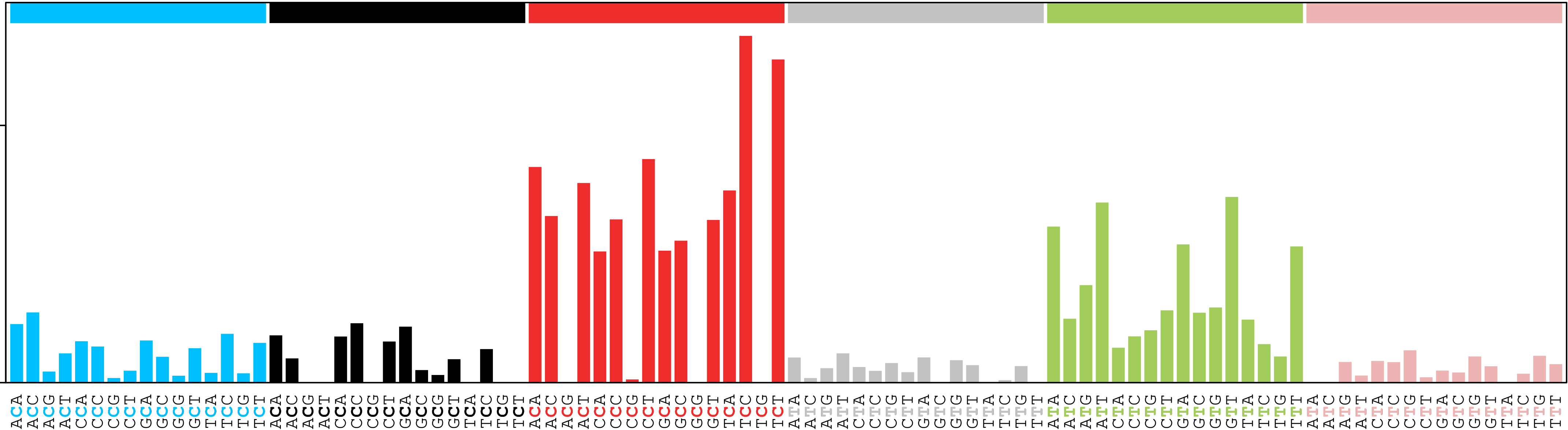
$T > C$

$T > G$

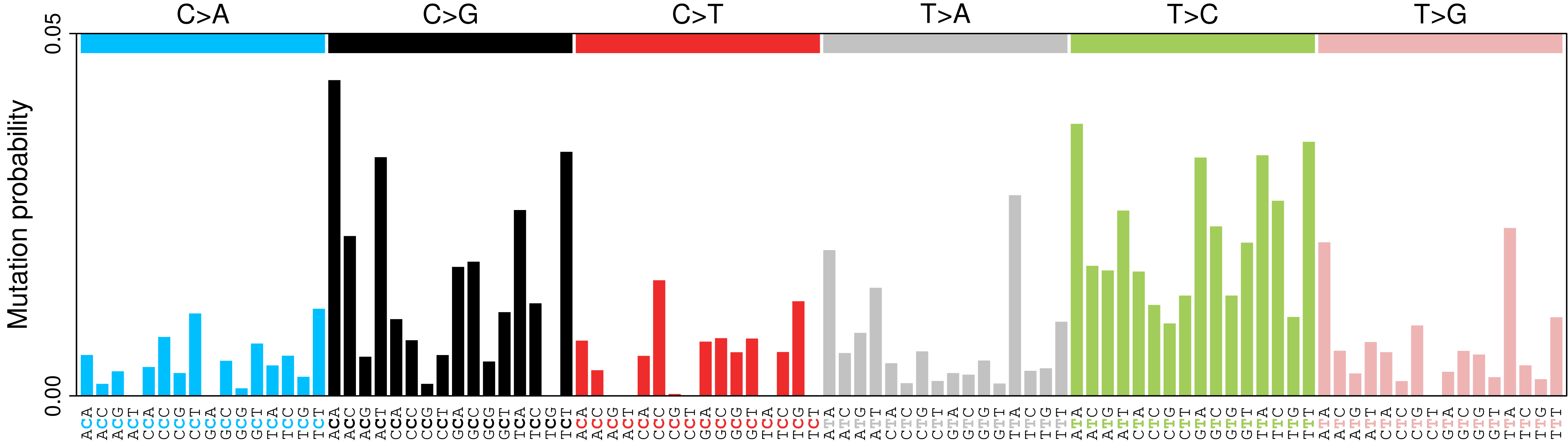
Mutation probability

0.05

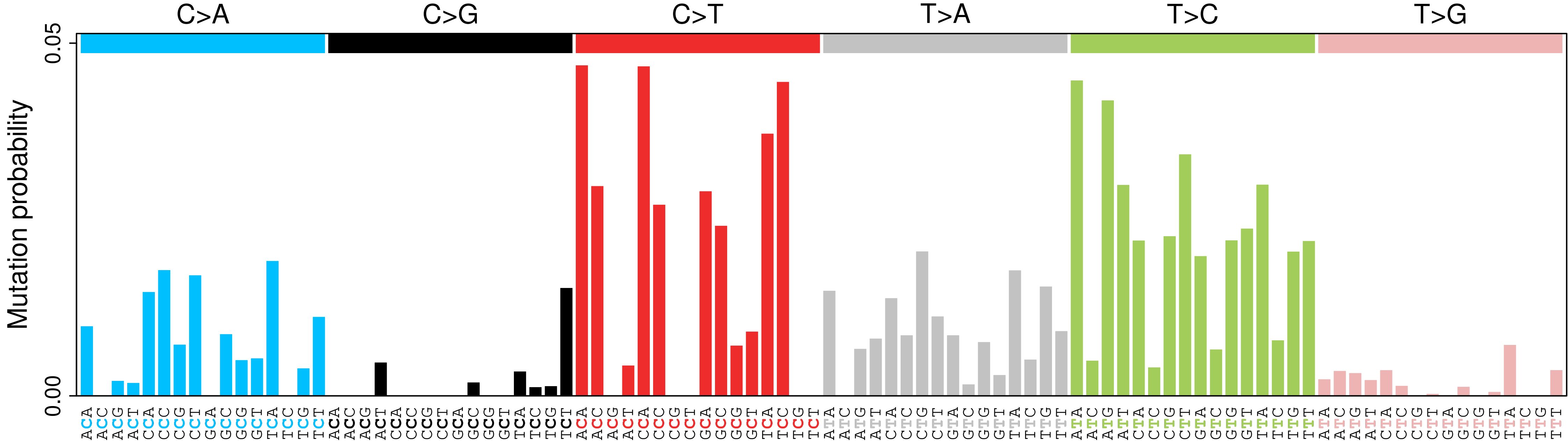
0.00



SBS163



SBS164



SBS166

C > A

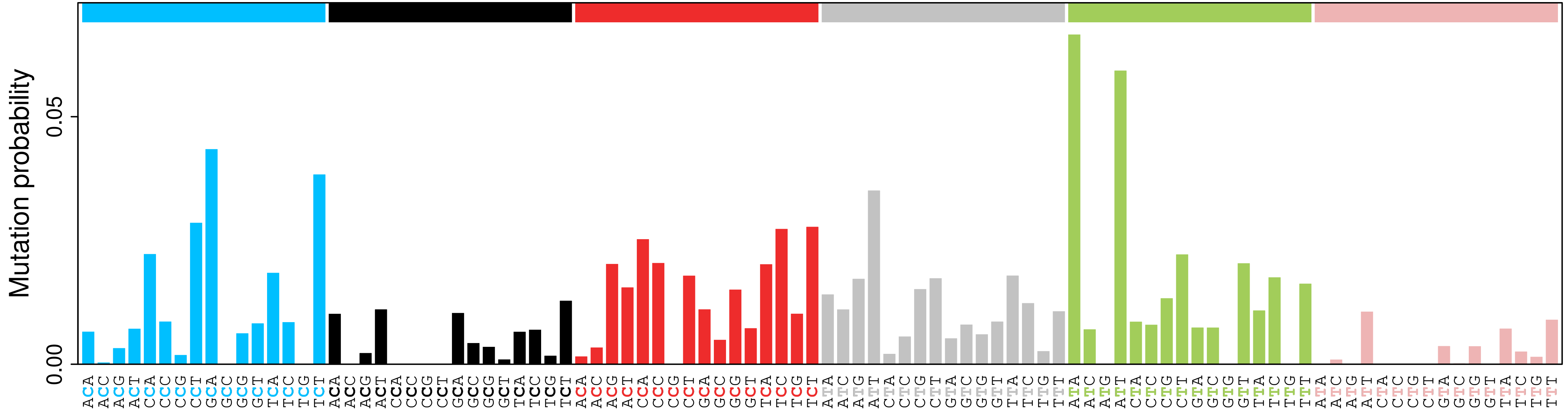
C > G

$C > T$

T > A

$$T > C$$

$T > G$



SBS167

C > A

C > G

$C > T$

T > A

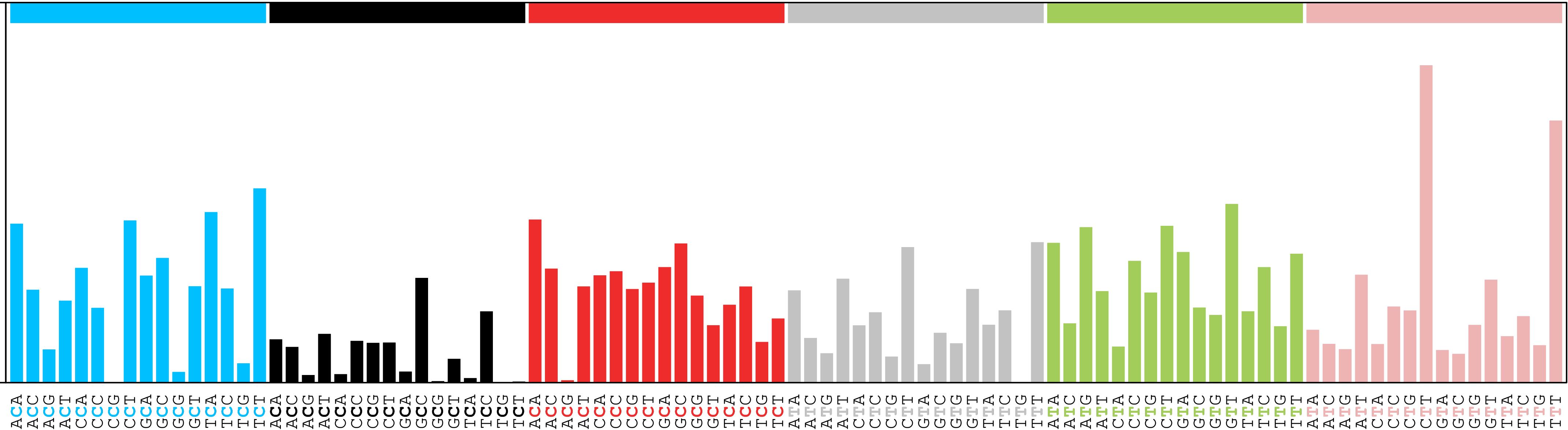
$T > C$

T>G

0.05

Mutation probability

0.00



SBS169

