

SBS1

$C > A$

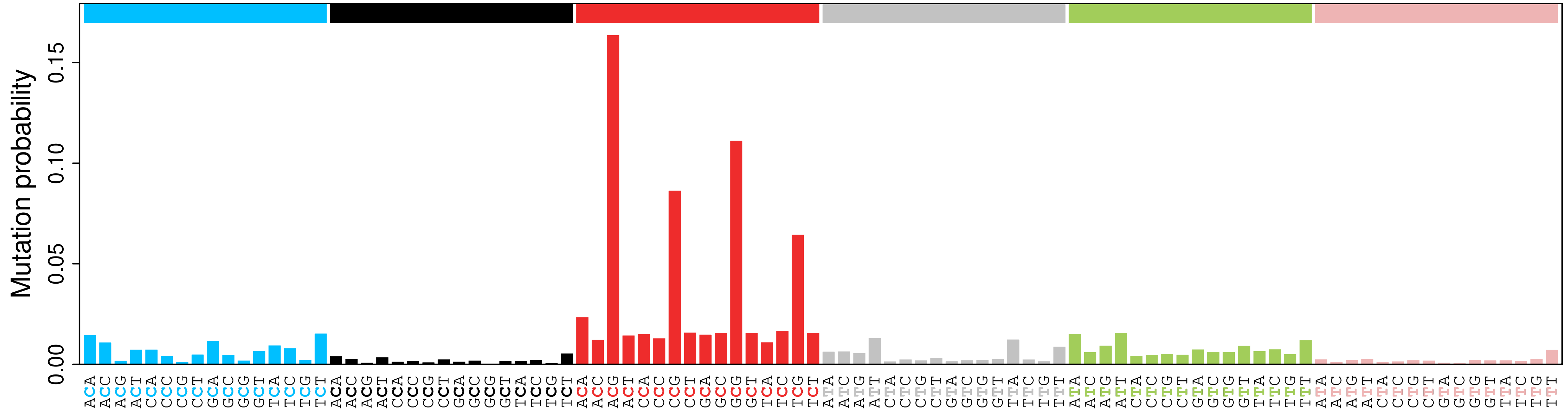
C > G

$$C > T$$

T > A

$T > C$

T>G



SBS3

C>A

C>G

C>T

T>A

T>C

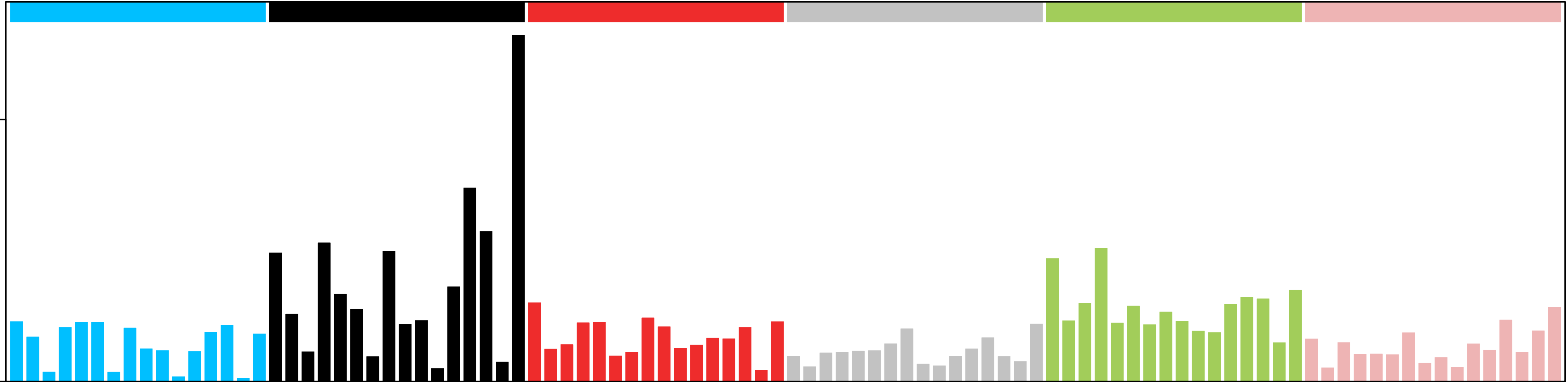
T>G

Mutation probability

0.05

0.00

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 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



SBS5

$C > A$

C > G

$C > T$

T>A

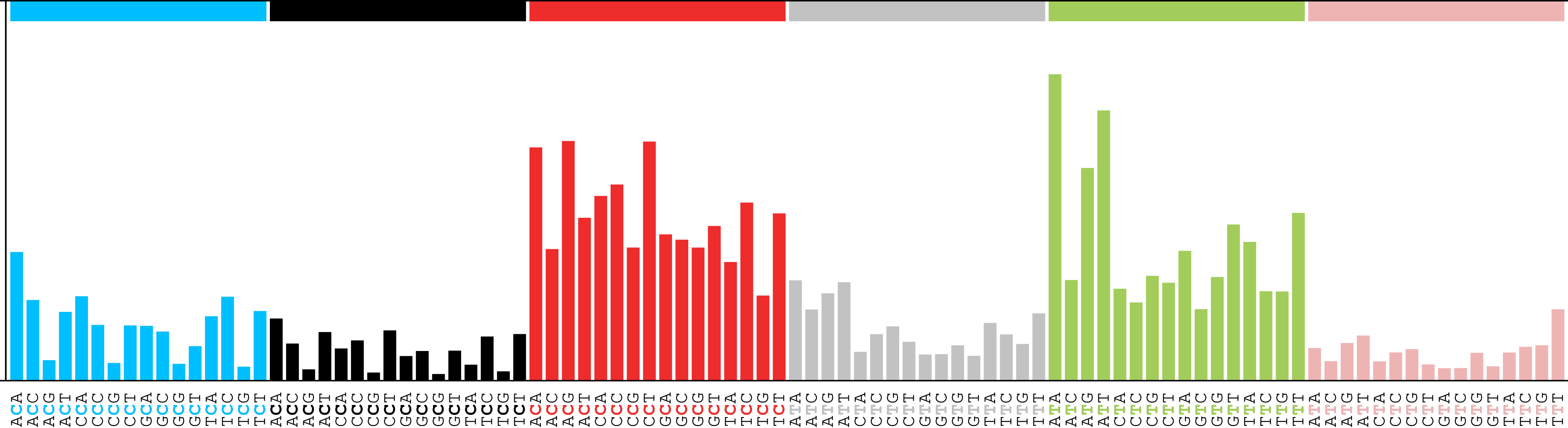
$$T > C$$

T>G

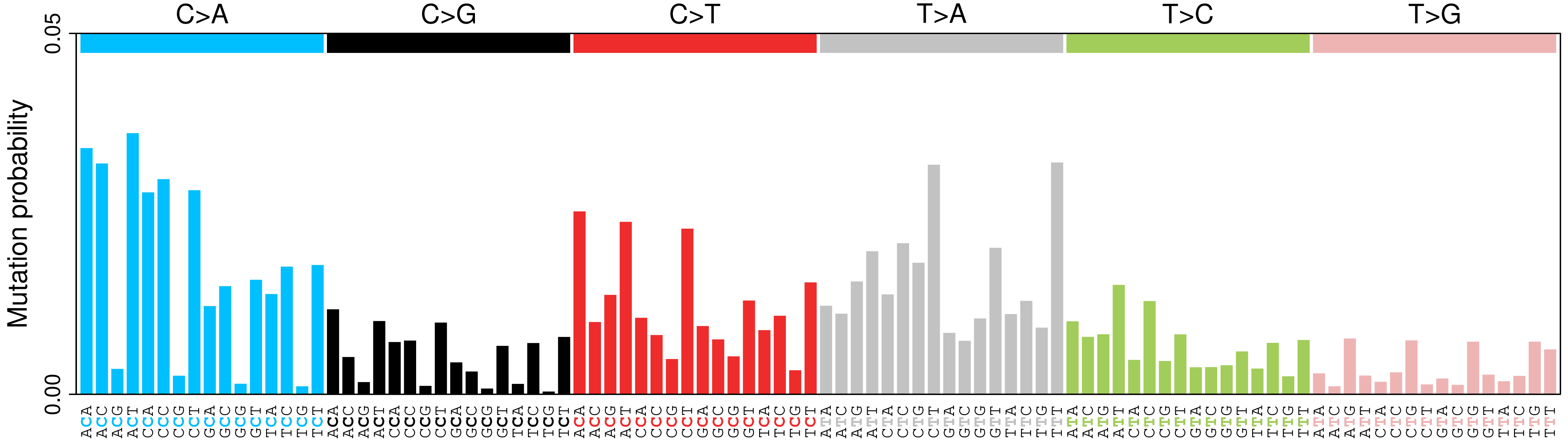
0.05

Mutation probability

0.00



SBS8



SBS9

C>A

C>G

C>T

T>A

T>C

T>G

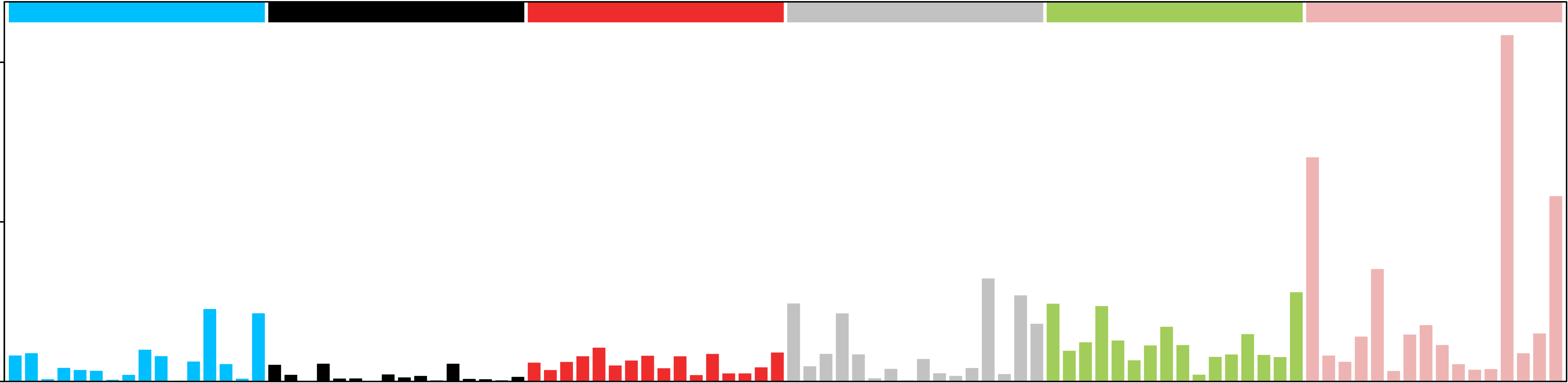
Mutation probability

0.10

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT 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 TTA ATC ATG ATT CTA CTC CTG CTT TTA ATC ATG ATT CTA CTC CTG CTT TTA ATC ATG ATT CTA CTC CTG CTT



SBS10d

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 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 GCA GCC GGT TTA TCC TTG TTT ATA ATC ATG ATT CTA CTC CTG CTT GCA GCC GGT TTA TCC TTG TTT

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

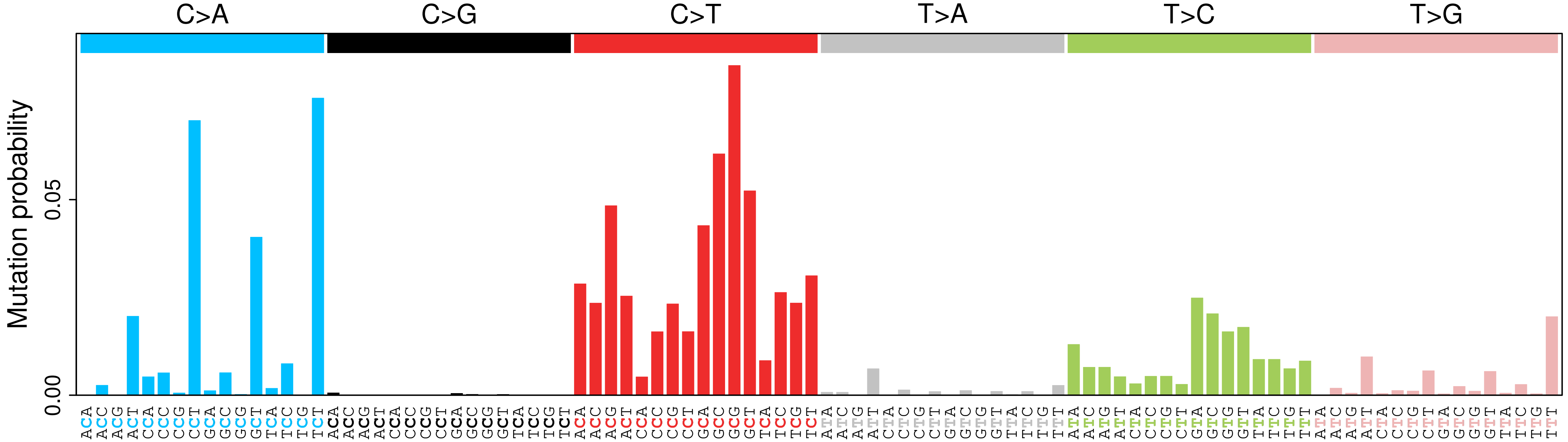
T>G

Mutation probability

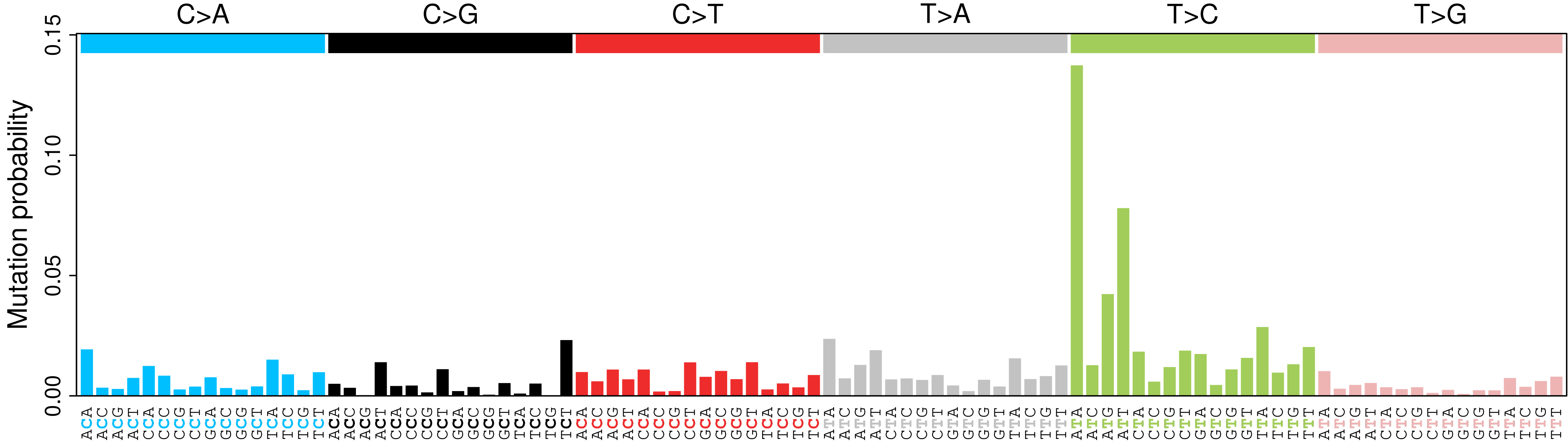
0.20
0.15
0.10
0.05
0.00

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SBS14



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

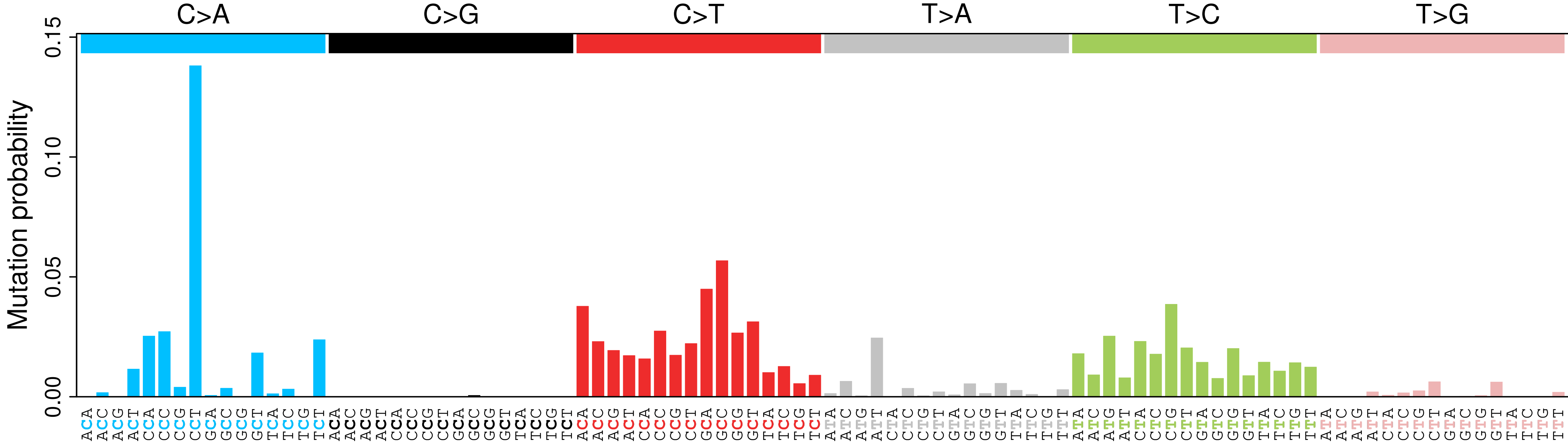
0.10

0.05

0.00

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SBS20



SBS23



SBS24



SBS26

$C > A$

C > G

$$C > T$$

T > A

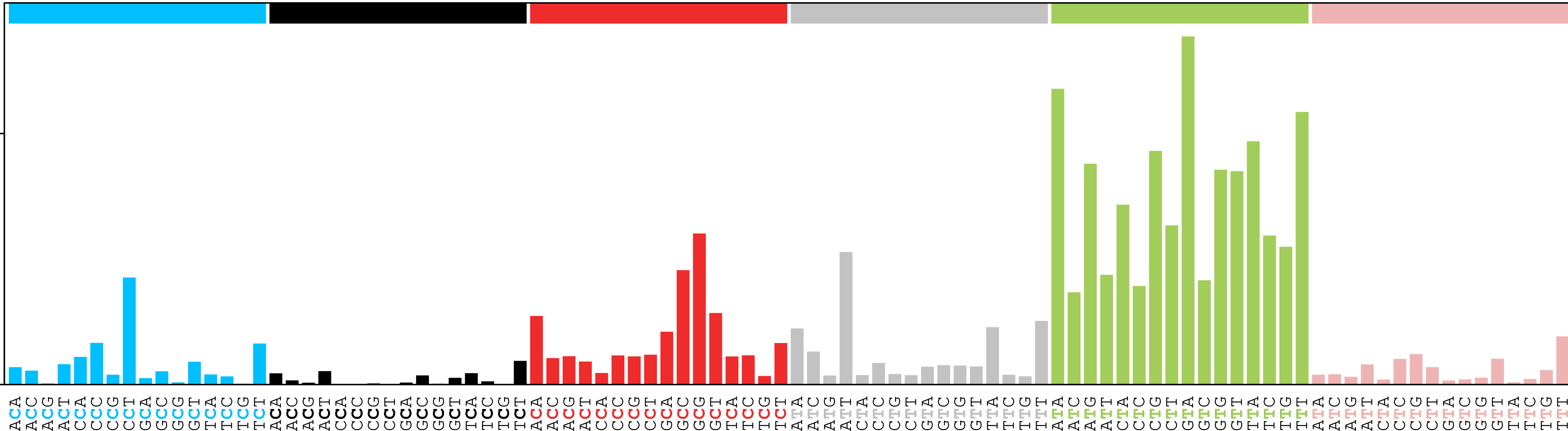
$T > C$

T>G

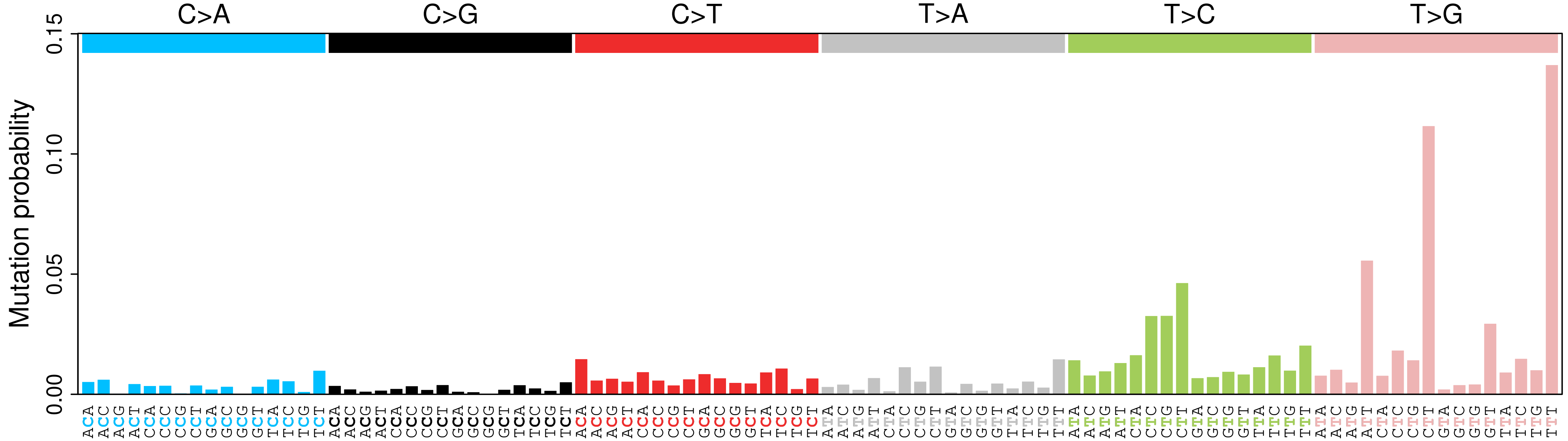
Mutation probability

0.05

0.00



SBS28



SBS31

$C > A$

C > G

$C > T$

T > A

$$T > C$$

T>G

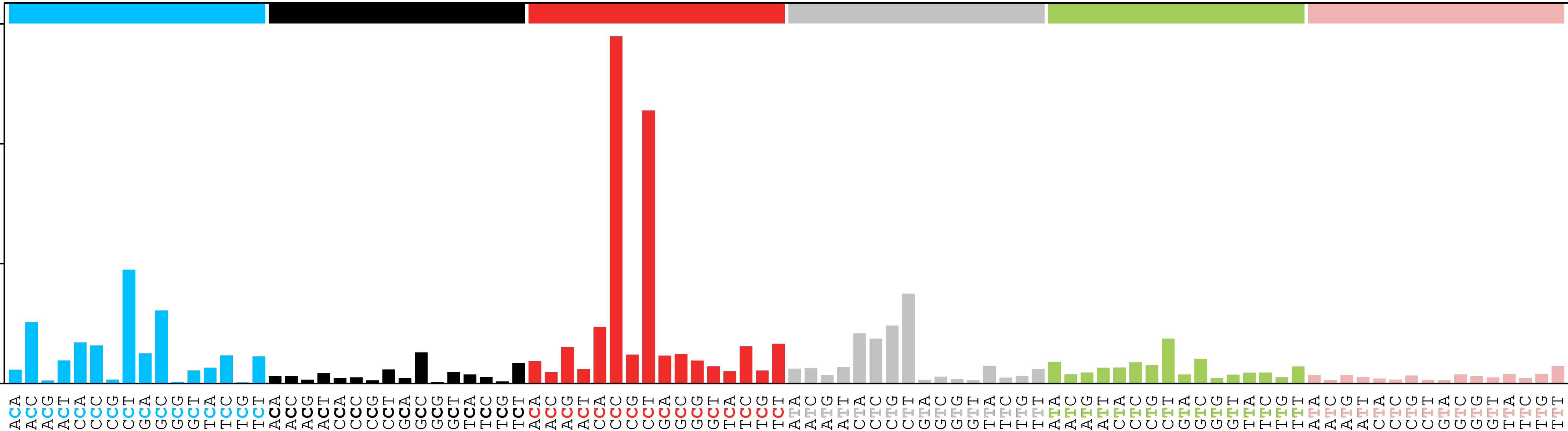
Mutation probability

15

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o

o



SBS32

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

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

$$T > C$$

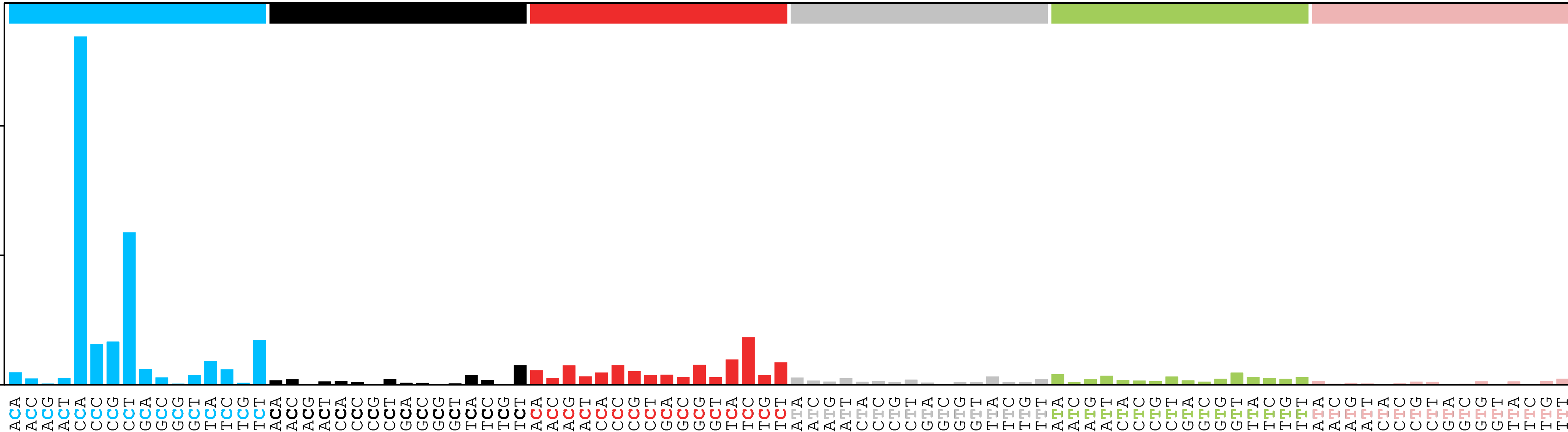
$T > G$

Mutation probability

0.2

0.1

0.0



SBS53

C > A

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.10

50

0

[illegible]

SBS87

$C > A$

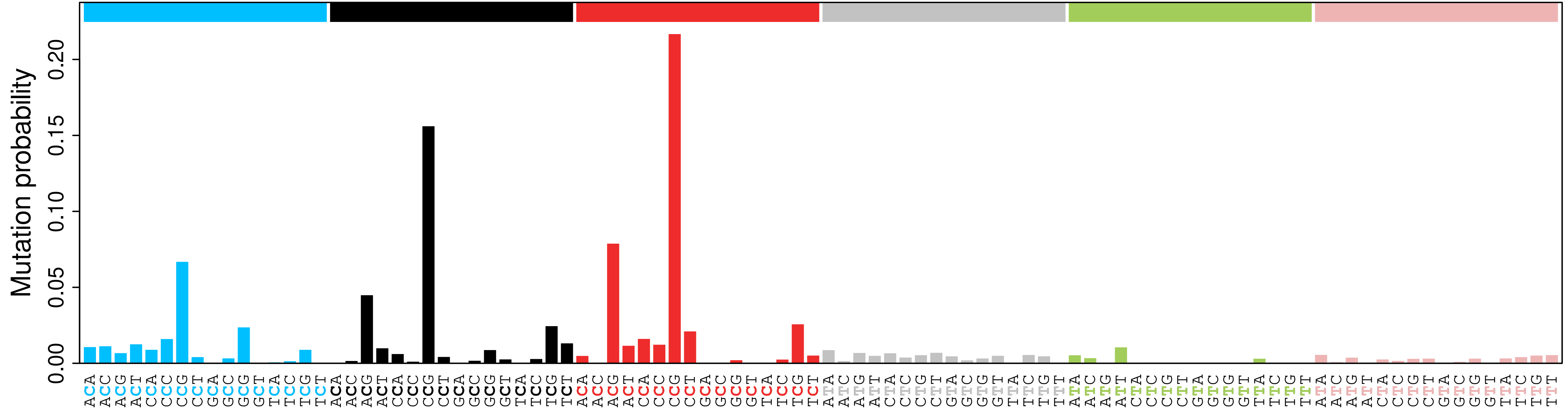
C > G

$$C > T$$

T > A

$$T > C$$

$T > G$



SBS88

C>A

C>G

C>T

T>A

T>C

T>G

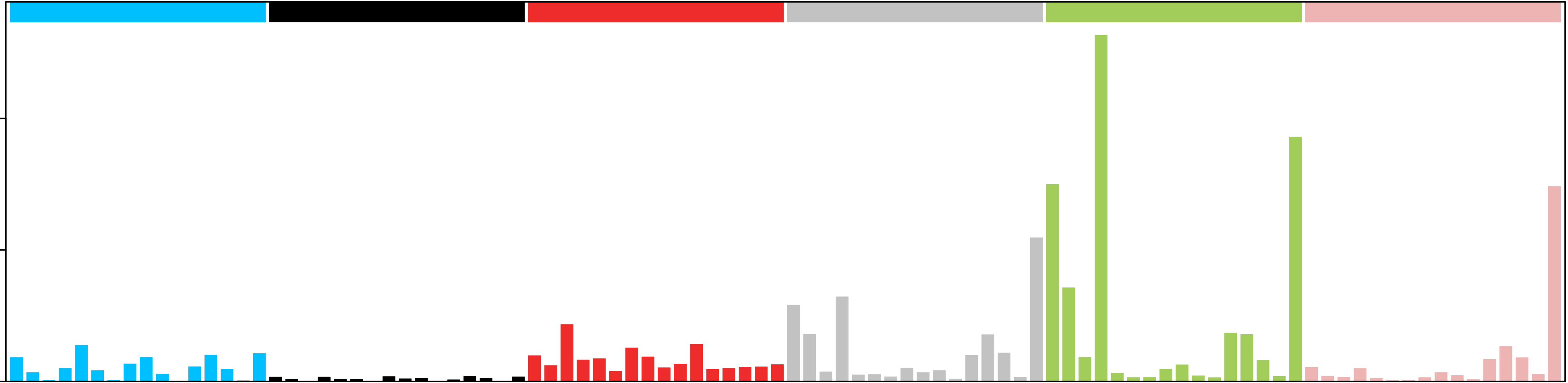
Mutation probability

0.10

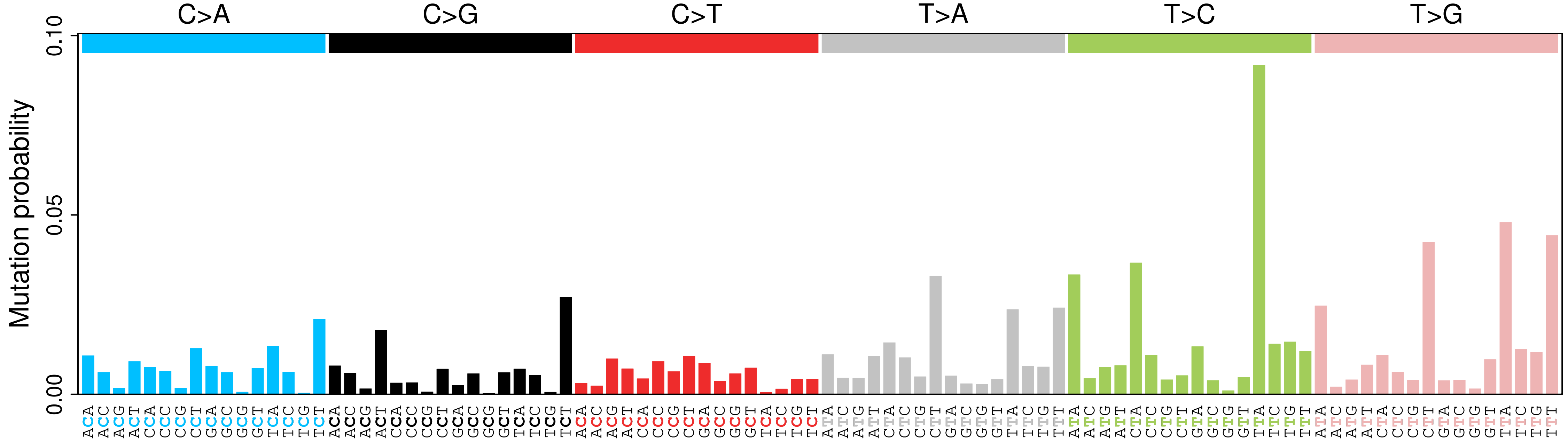
0.05

0.00

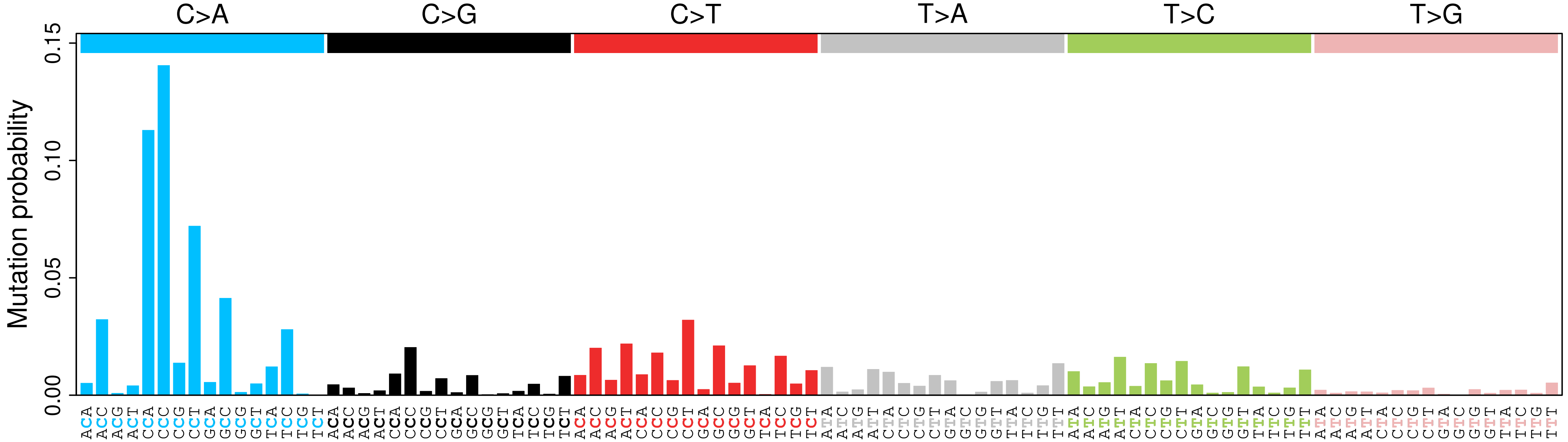
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SBS93



SBS94



SBS97

$$C > A$$

C > G

$C > T$

T > A

$$T > C$$

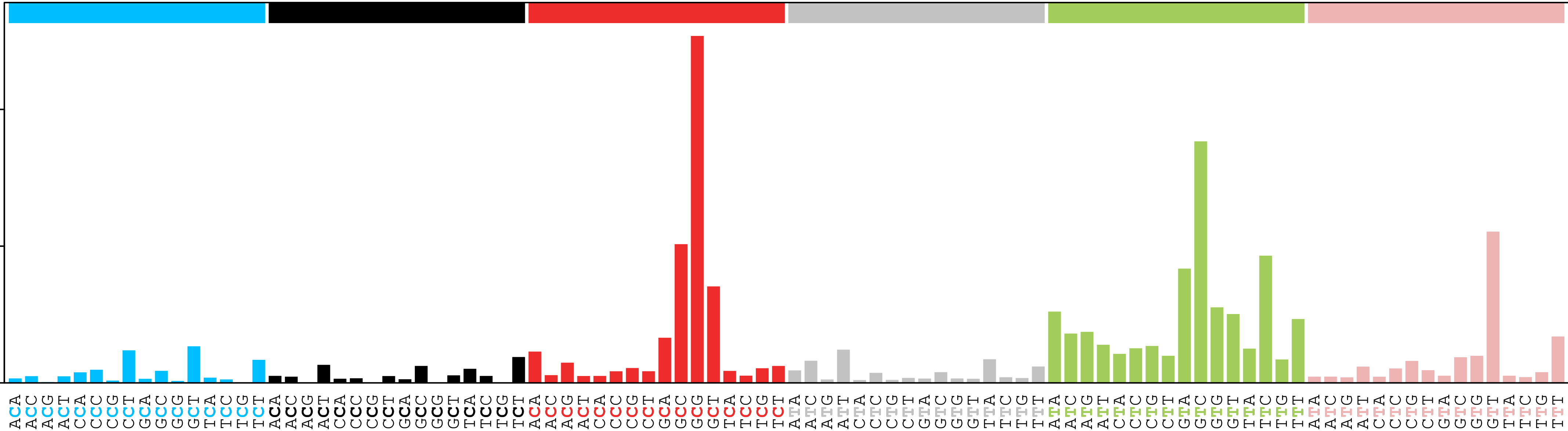
T>G

Mutation probability

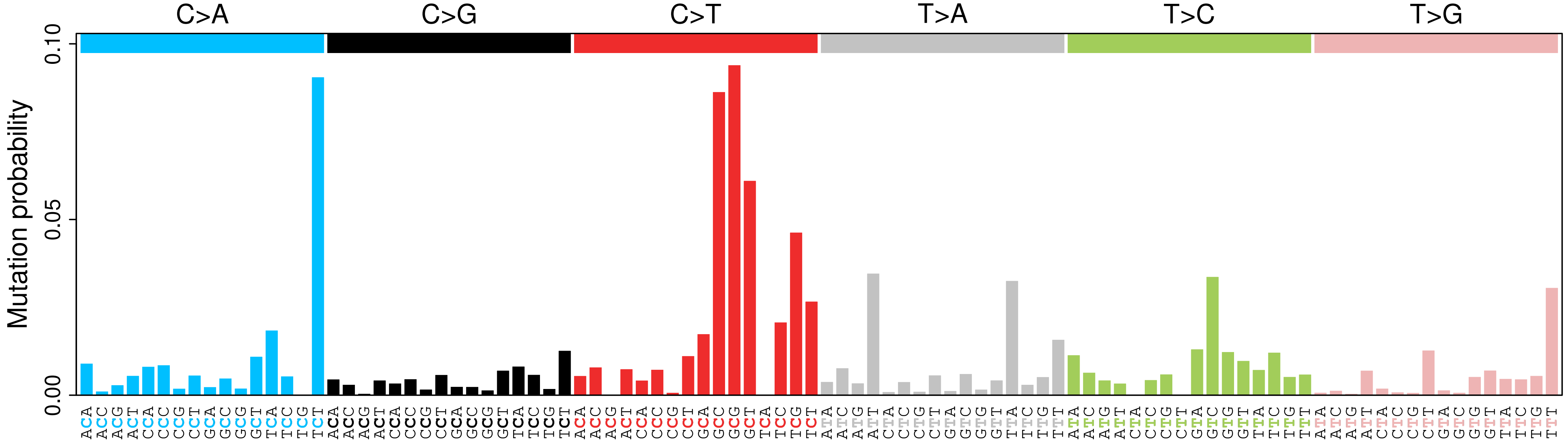
0.10

○

0.00



SBS98



SBS99

$C > A$

C > G

$$C > T$$

T > A

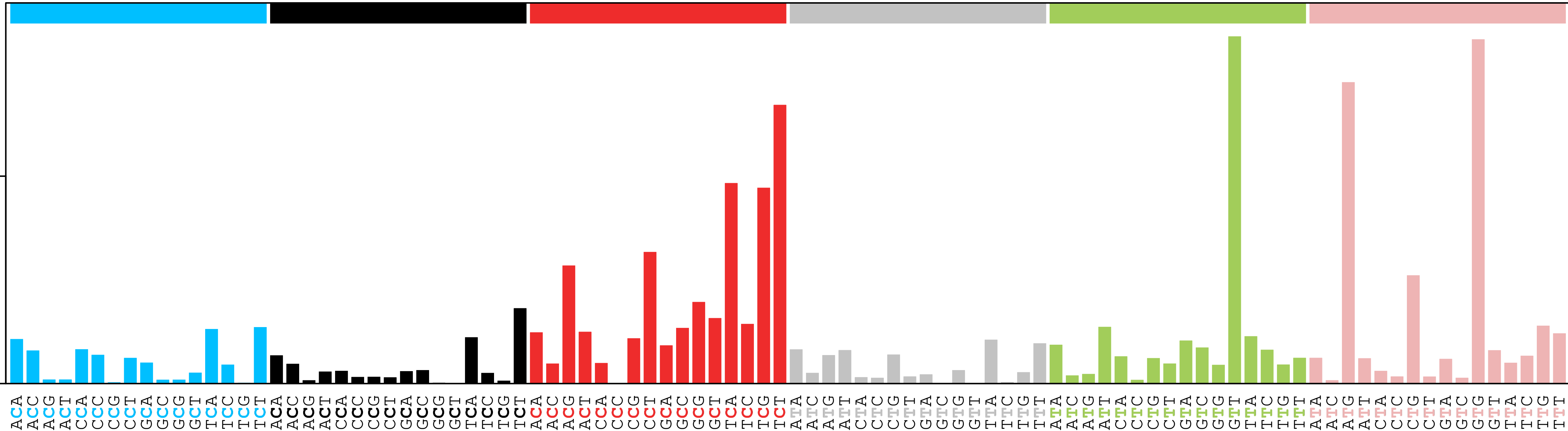
$$T > C$$

$T > G$

Mutation probability

0.05

0.00



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

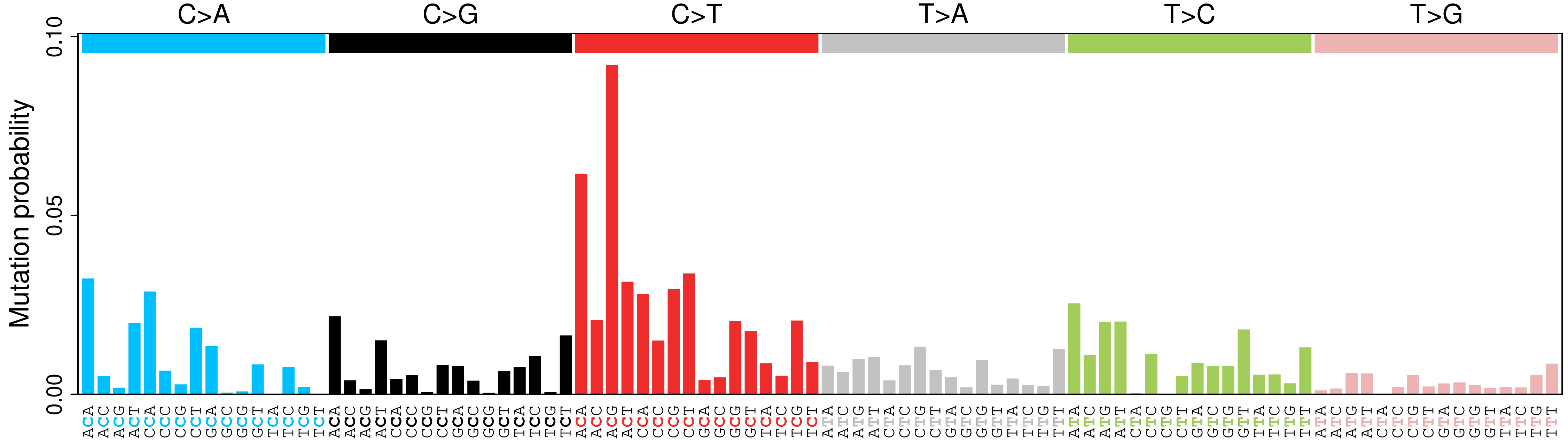
Mutation probability

0.05

0.00

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SBS103



SBS104

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.2

0.1

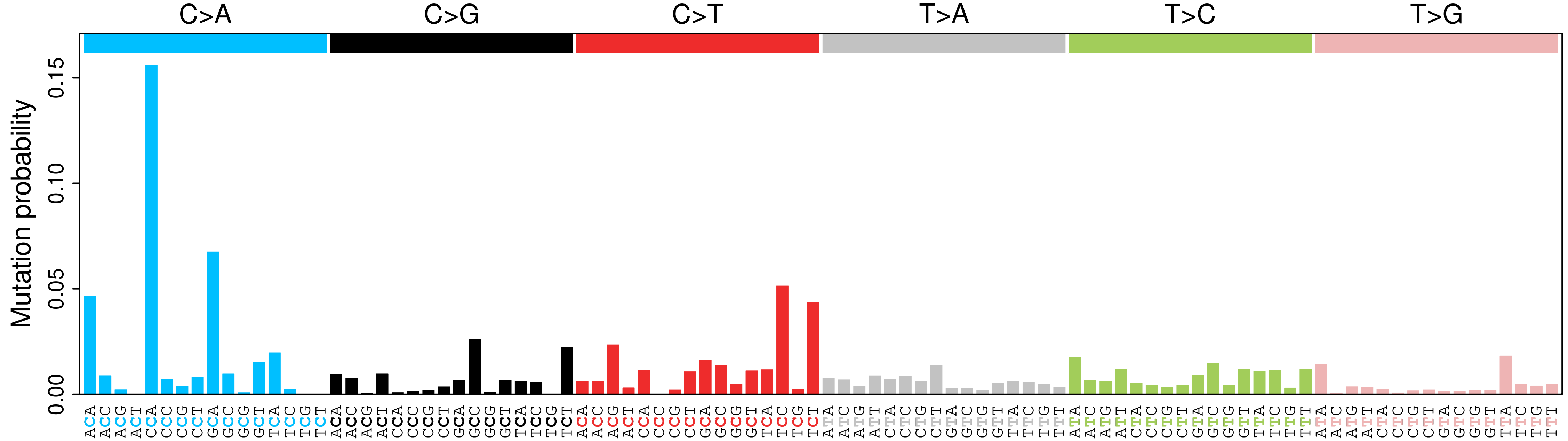
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SBS105



SBS106



SBS107

$C > A$

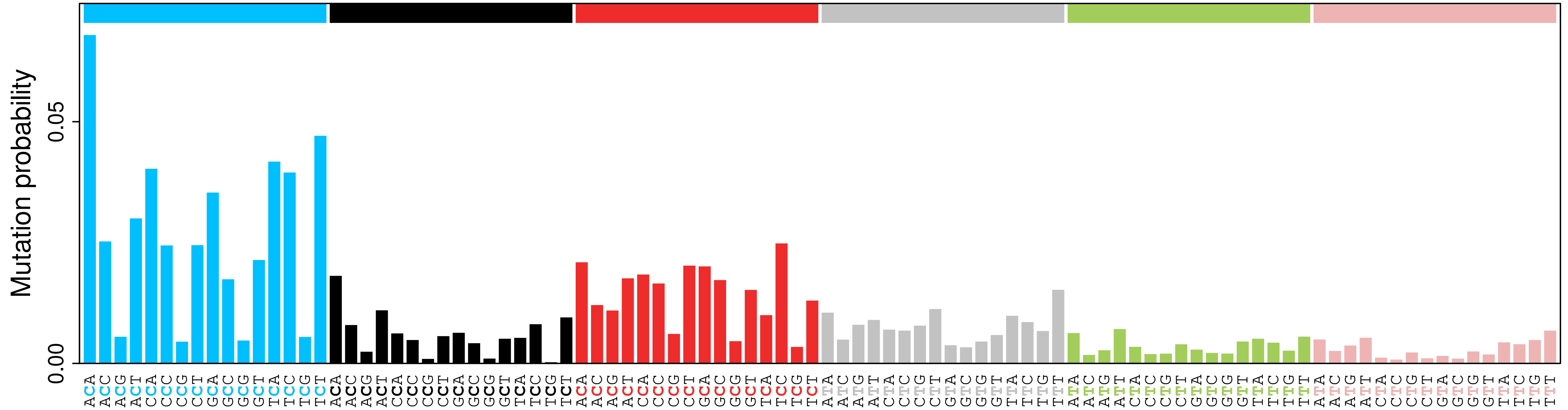
C > G

$$C > T$$

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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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

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

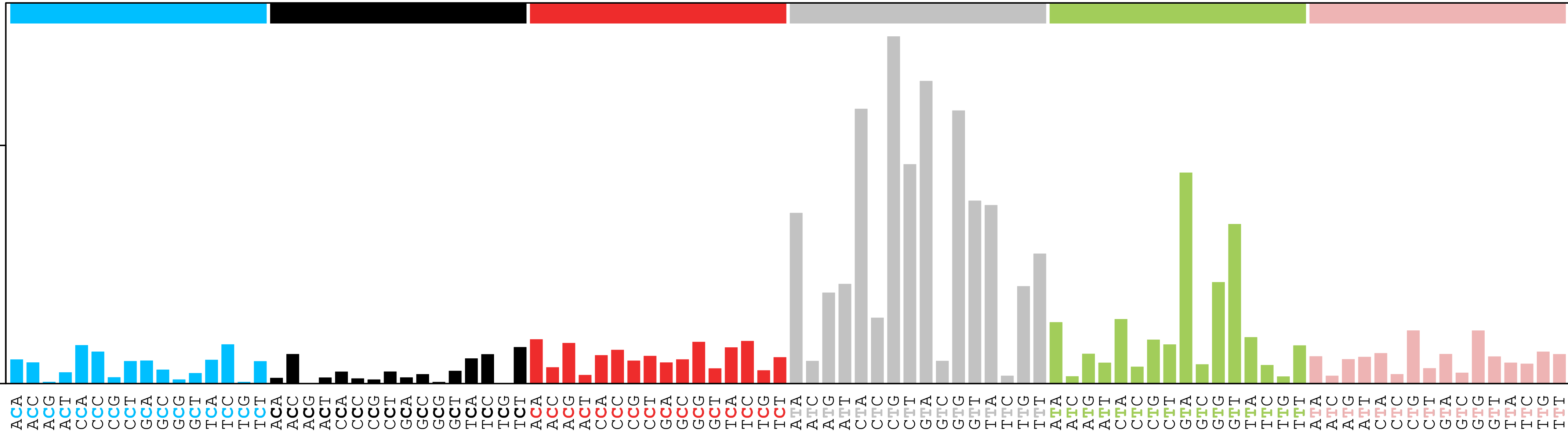
$T > C$

T>G

Mutation probability

0.05

0.00



SBS114

$C > A$

C > G

$$C > T$$

T > A

$T > C$

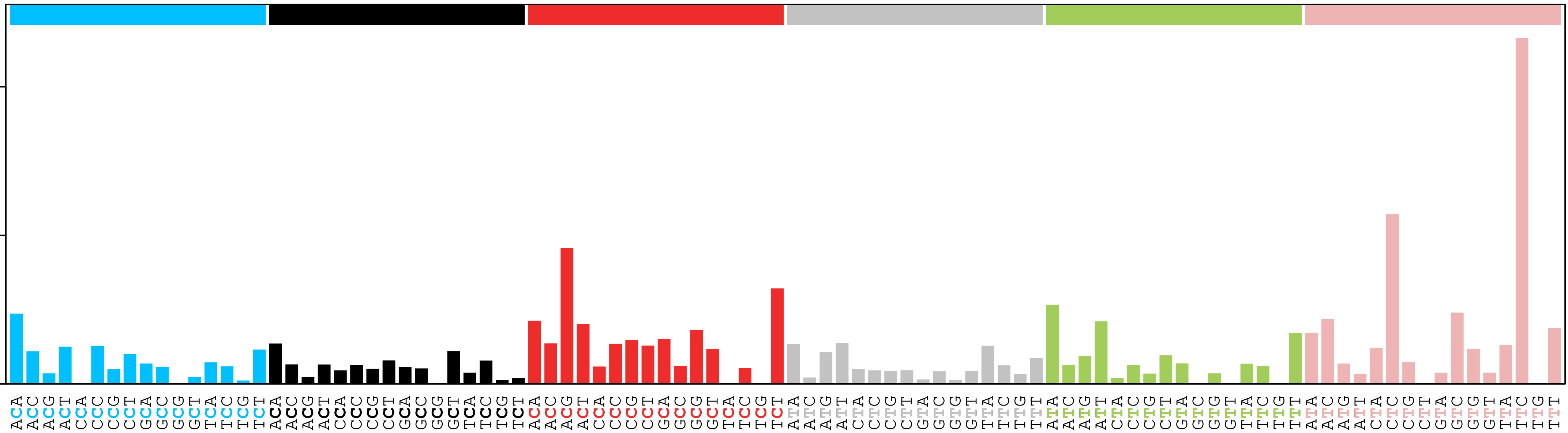
T>G

Mutation probability

0.10

0.05

0.00



SBS115

$C > A$

C > G

$C > T$

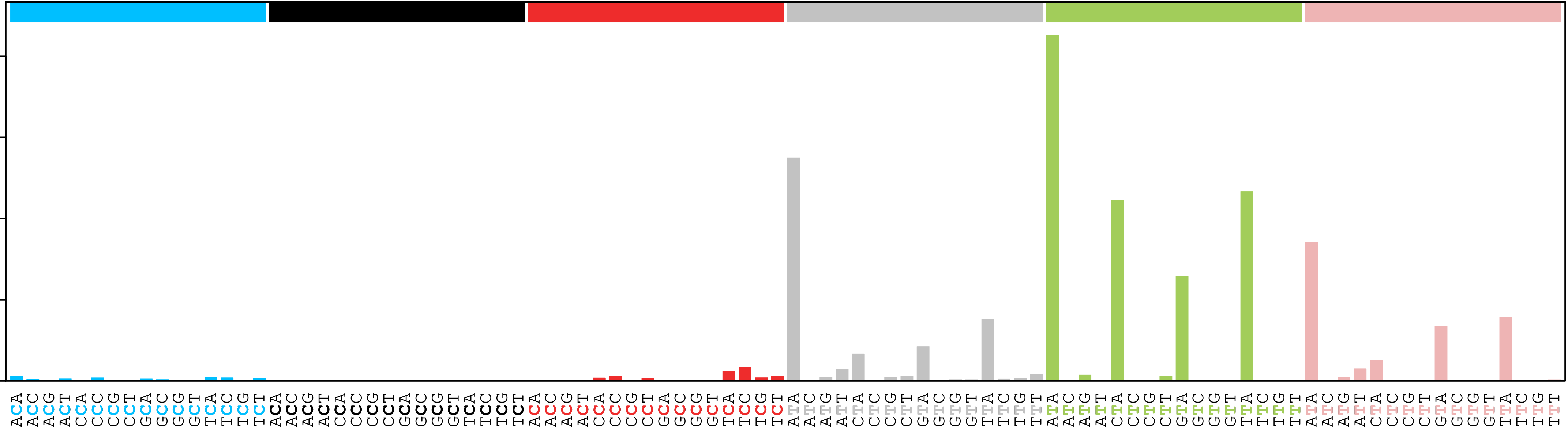
T > A

$T > C$

T>G

Mutation probability

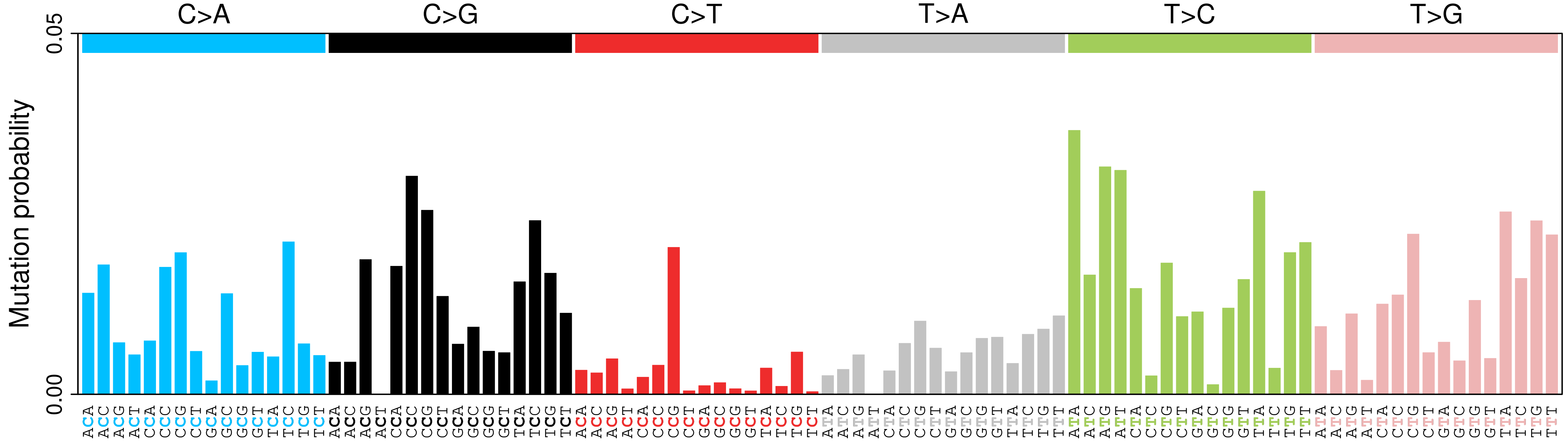
0.00 0.05 0.10 0.15 0.20



SBS116



SBS117



SBS118

C>A

C>G

C>T

T>A

T>C

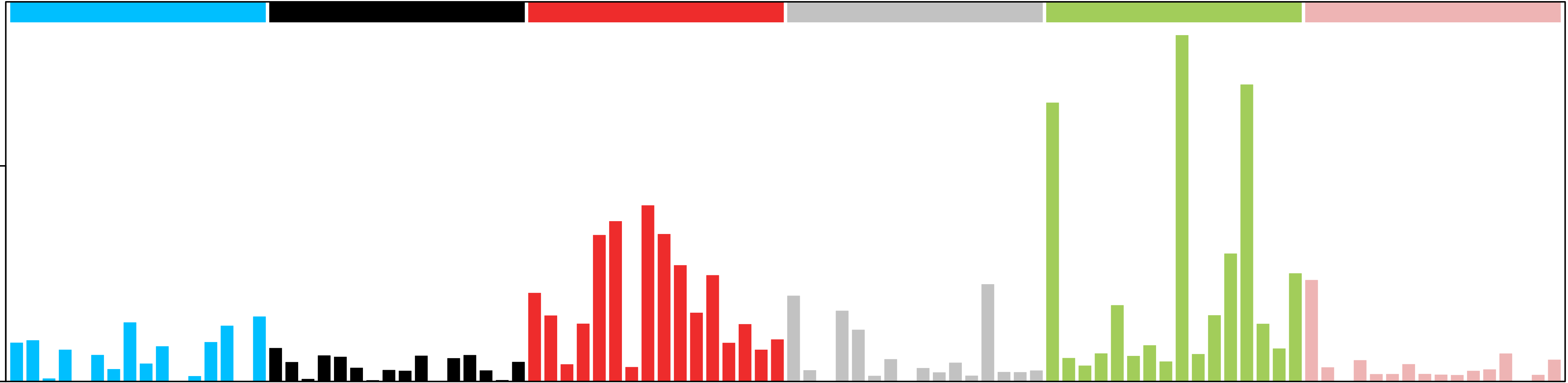
T>G

Mutation probability

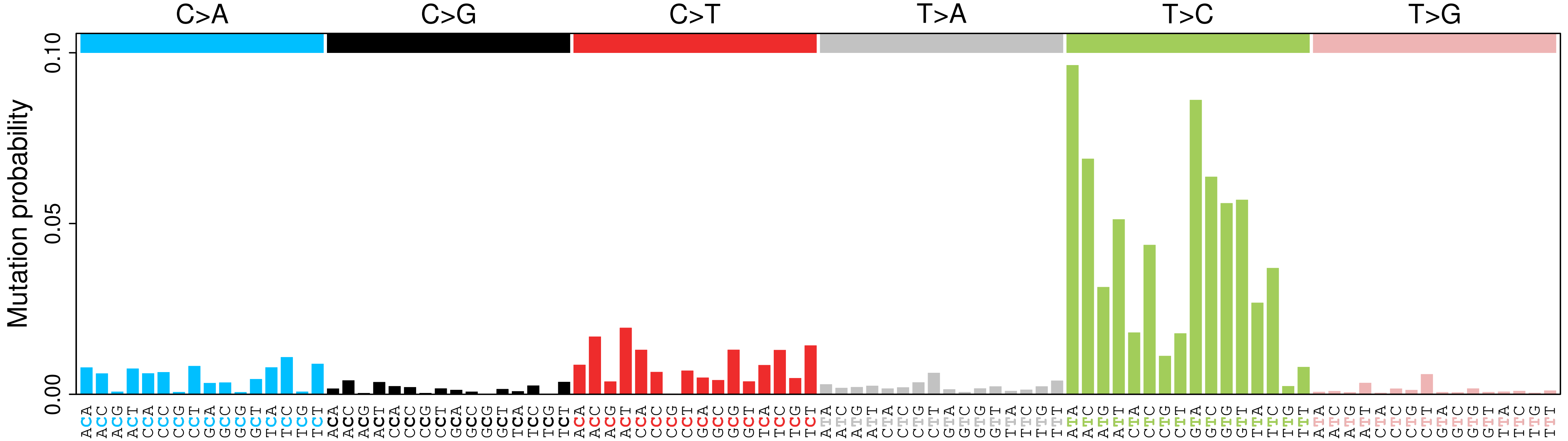
0.05

0.00

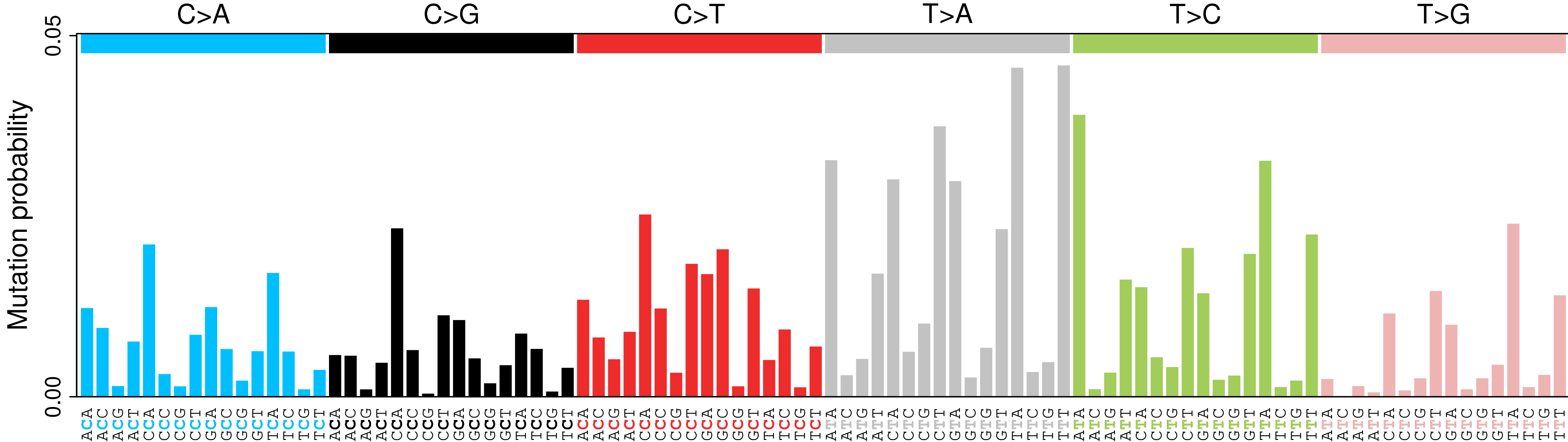
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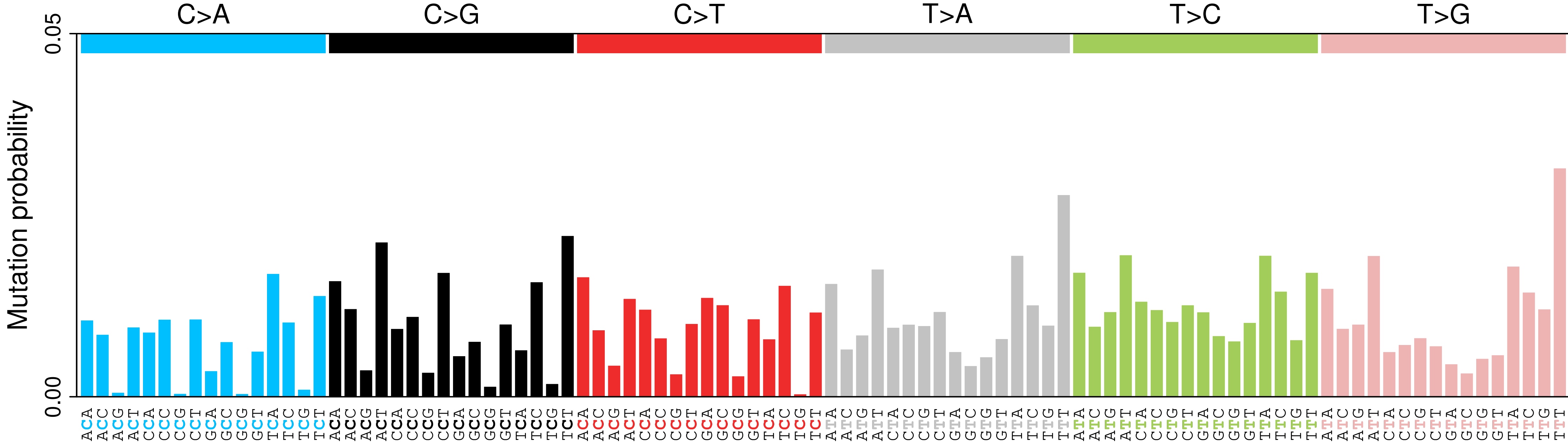
SBS119



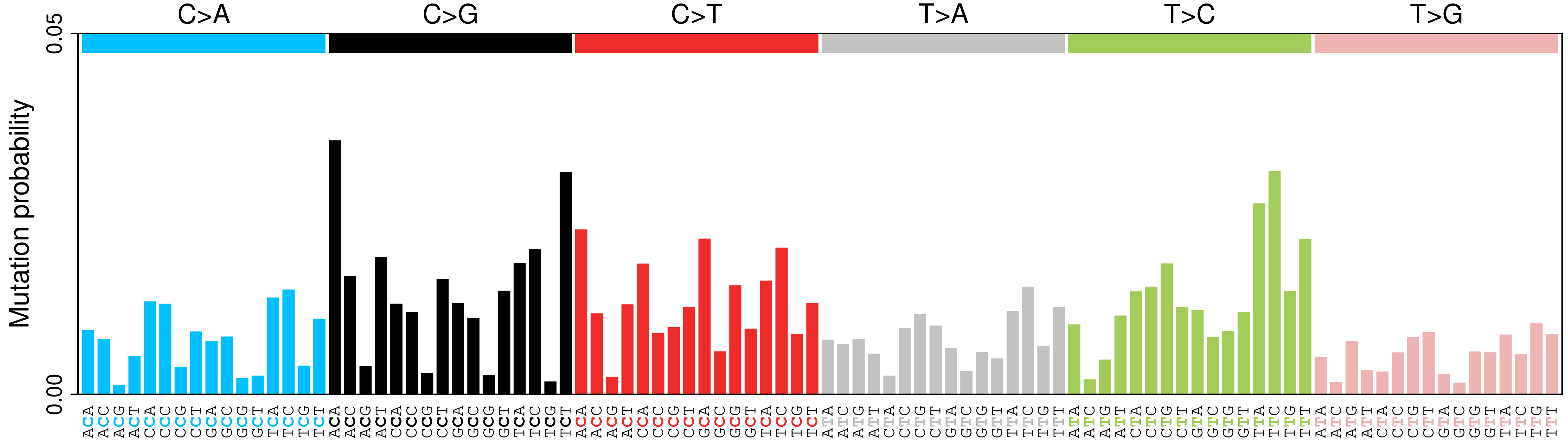
SBS124



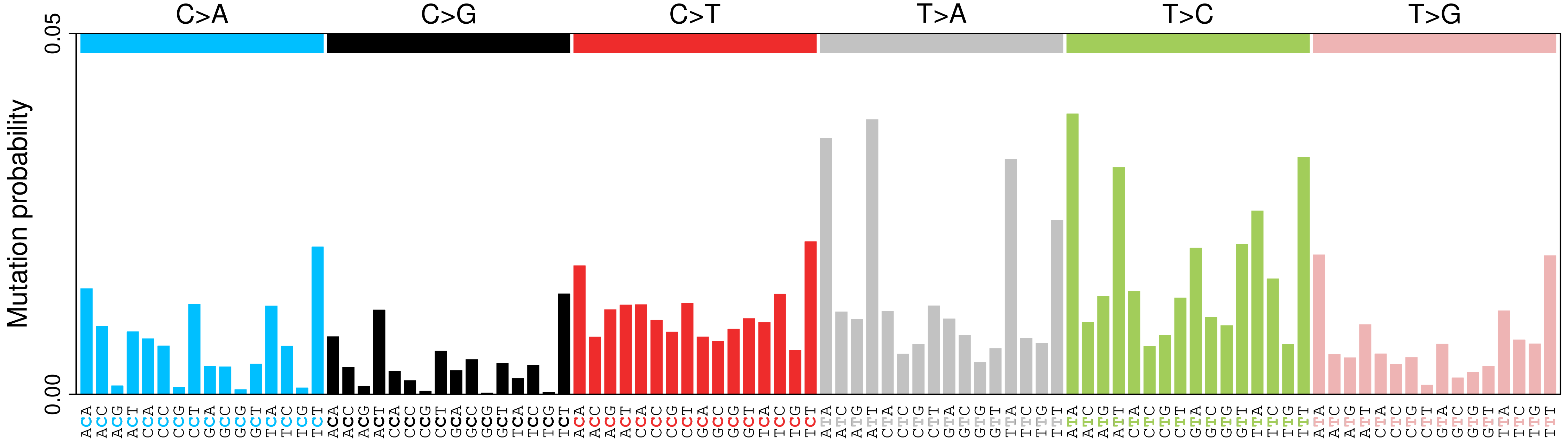
SBS125



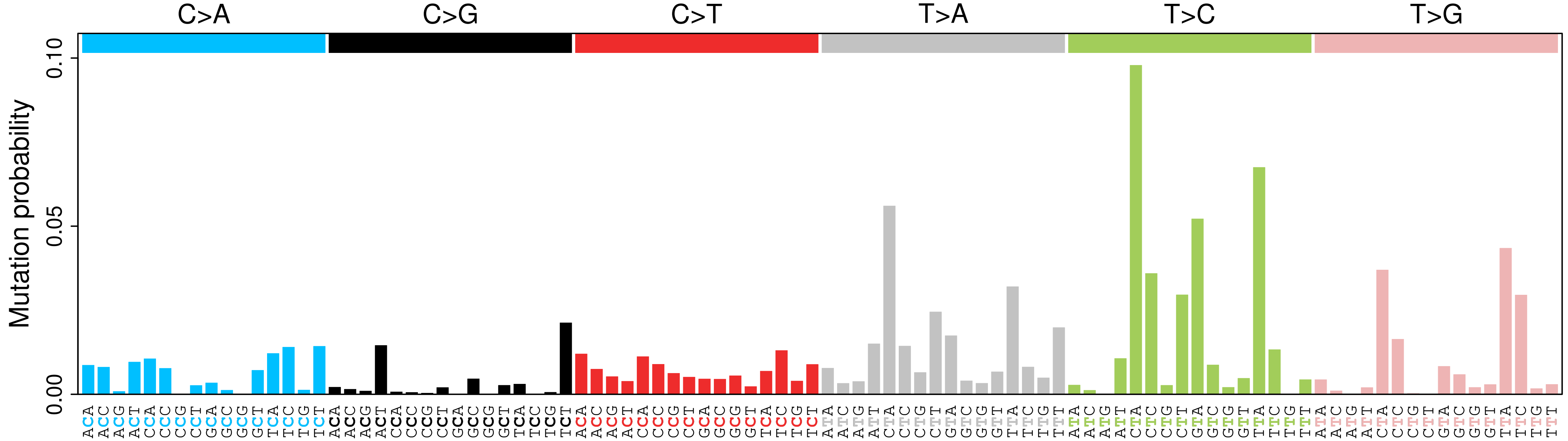
SBS126



SBS127



SBS128



SBS130

$C > A$

C > G

$$C > T$$

T > A

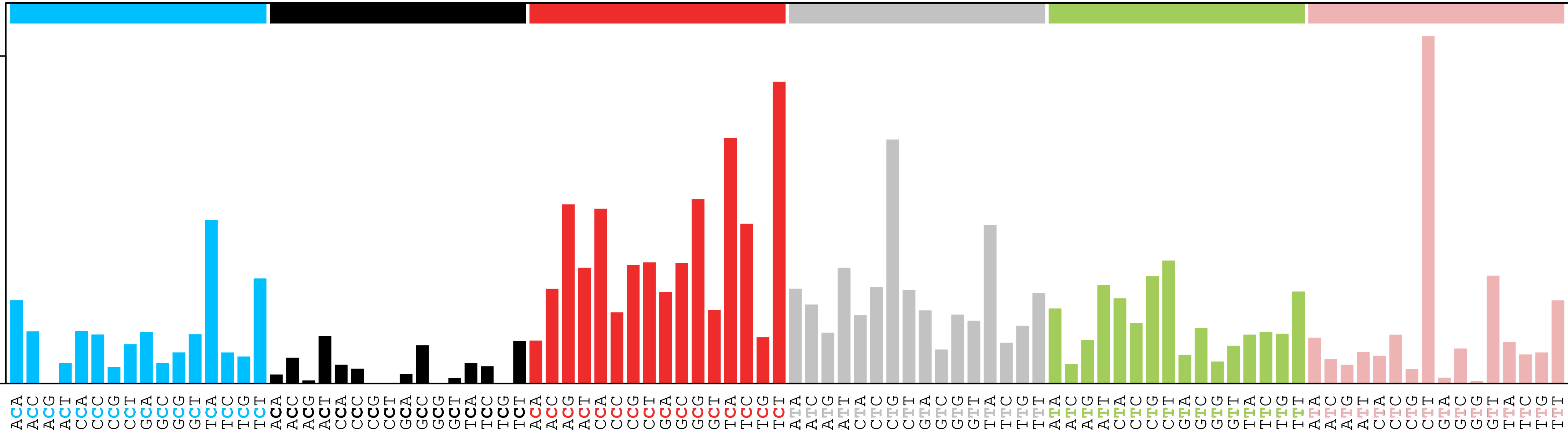
$$T > C$$

$T > G$

0.05

0.05

0.00



SBS131

$C > A$

C > G

$$C > T$$

T > A

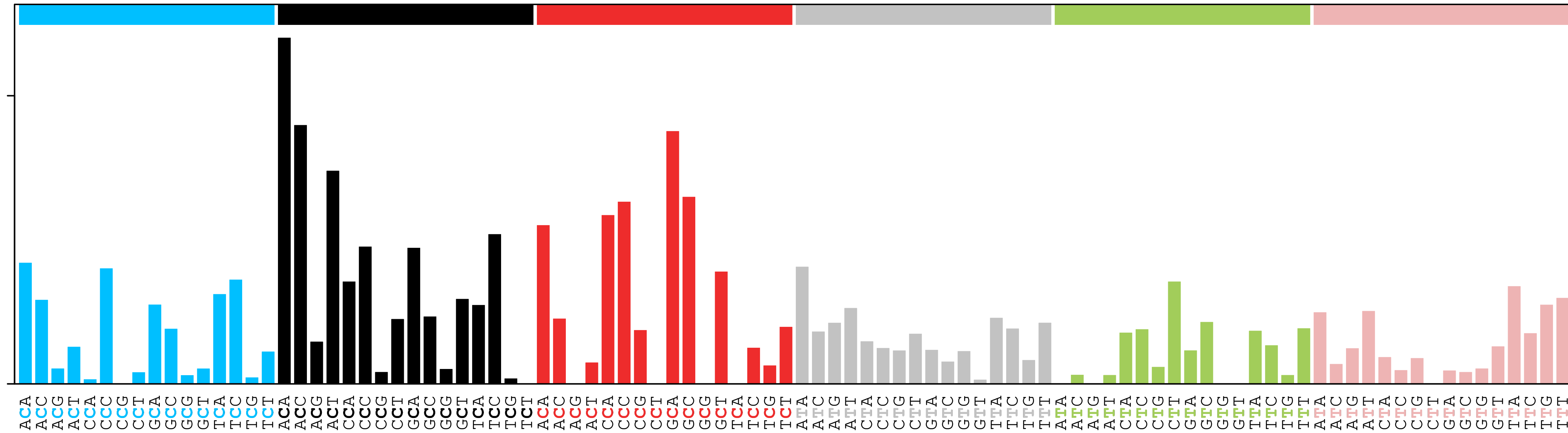
$T > C$

T>G

Mutation probability

0.05

0.00



SBS132

$C > A$

C > G

$$C > T$$

T > A

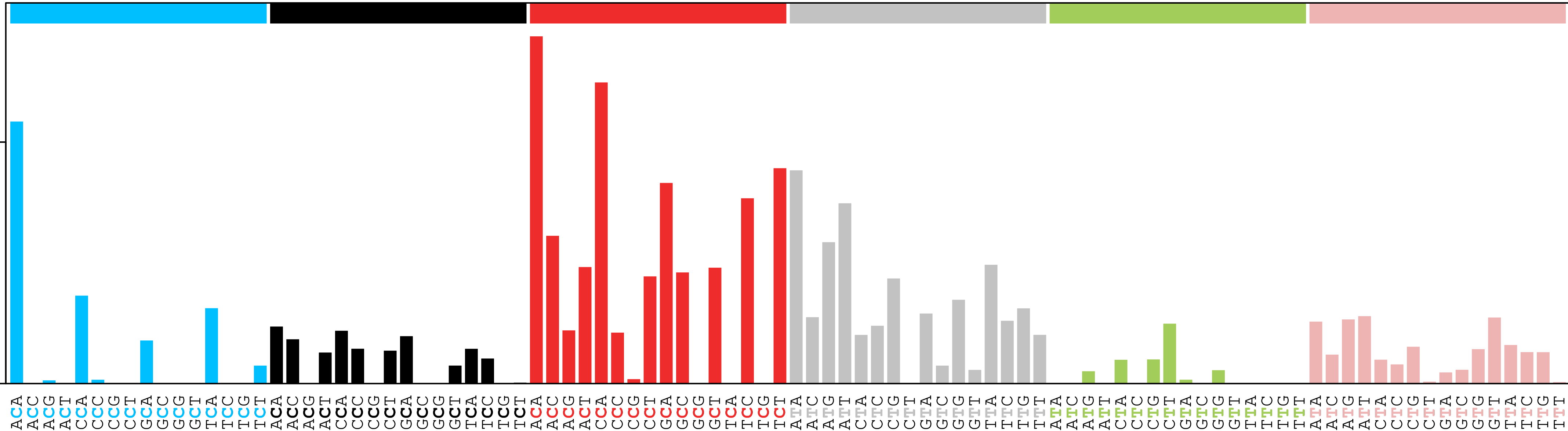
$T > C$

T>G

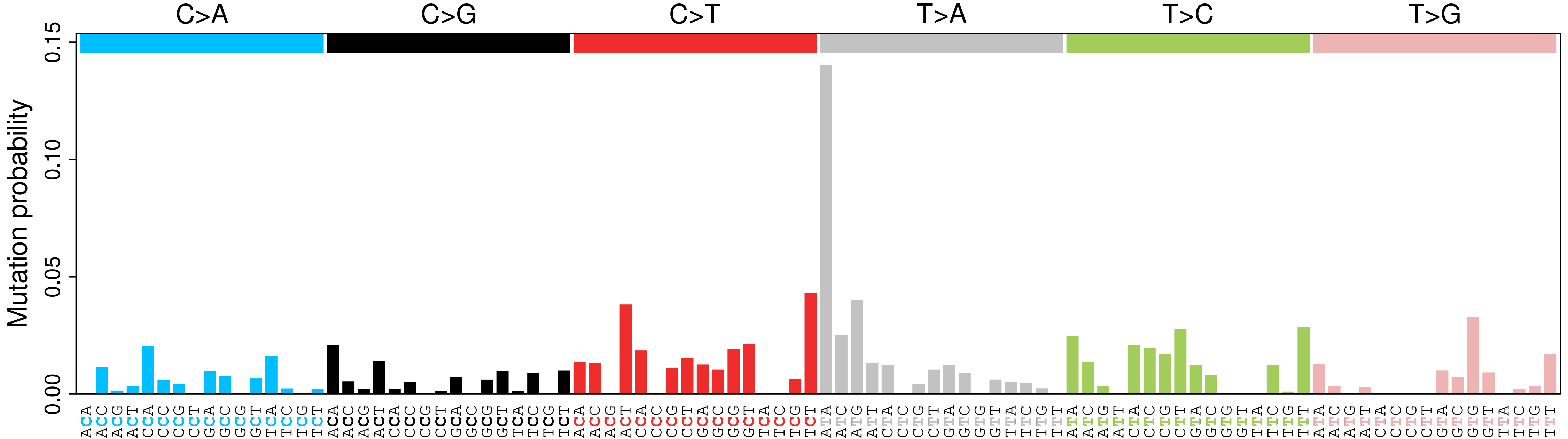
Mutation probability

0.05

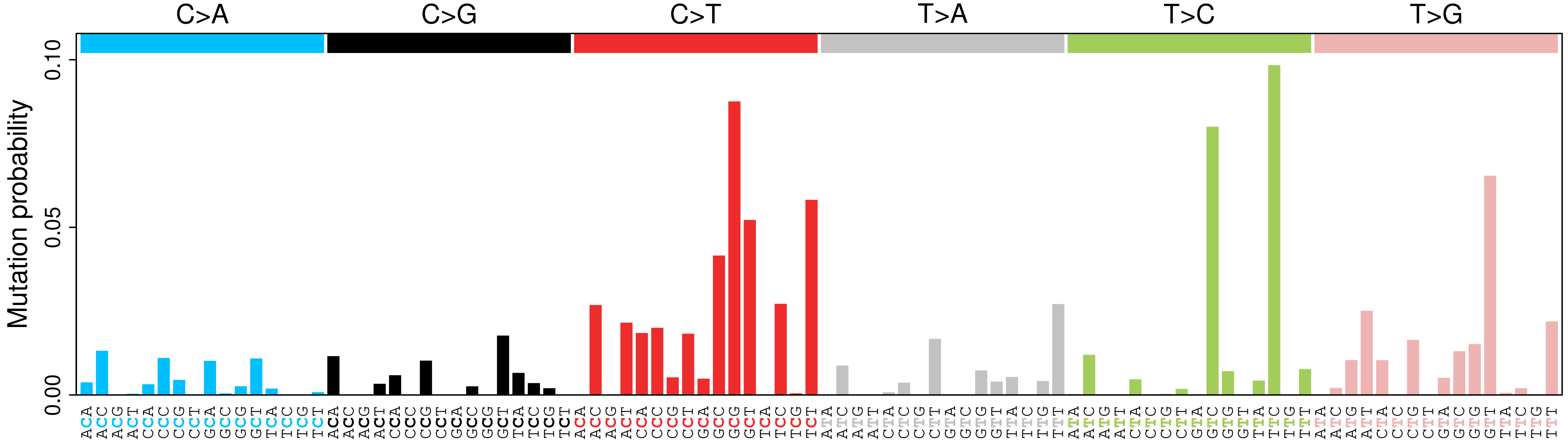
0.00



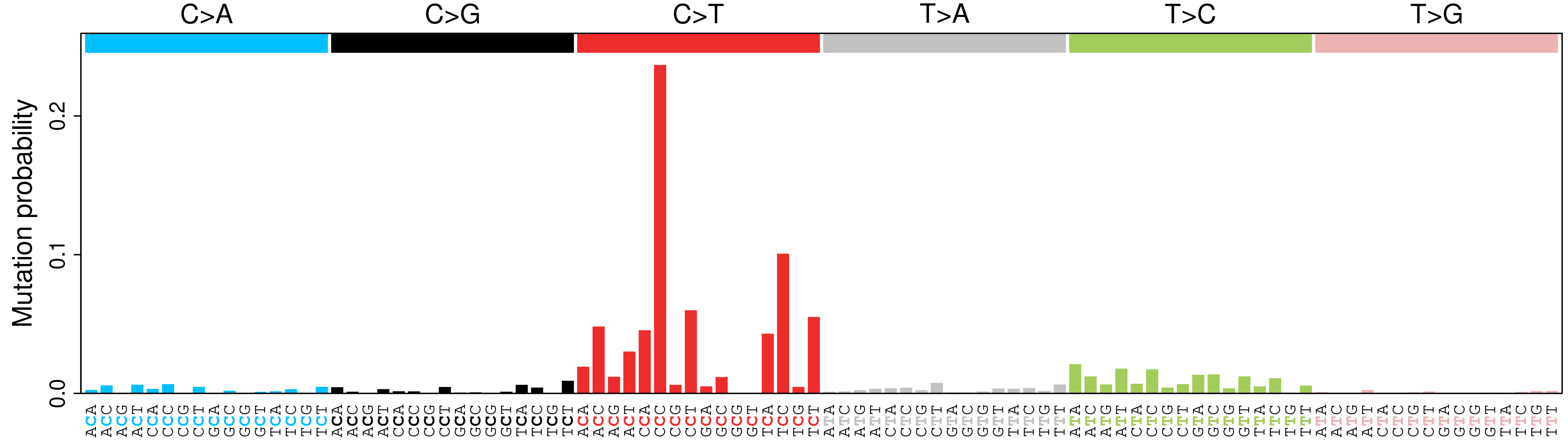
SBS135



SBS136



SBS137



SBS139

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

SBS140

C > A

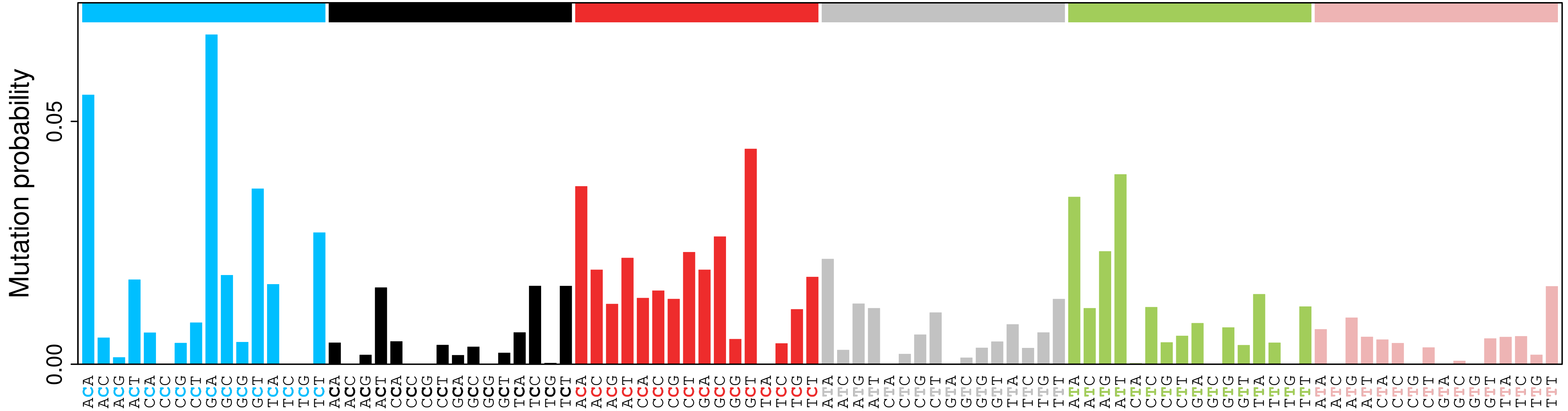
C > G

$$C > T$$

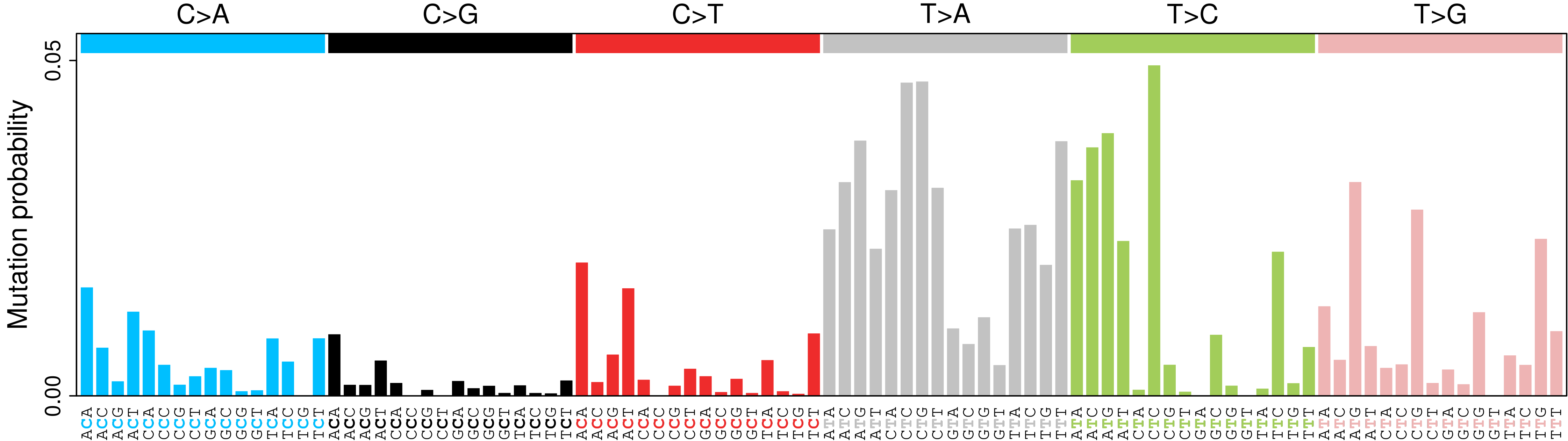
T > A

$$T > C$$

$T > G$



SBS141



SBS142

$C > A$

C > G

$C > T$

T > A

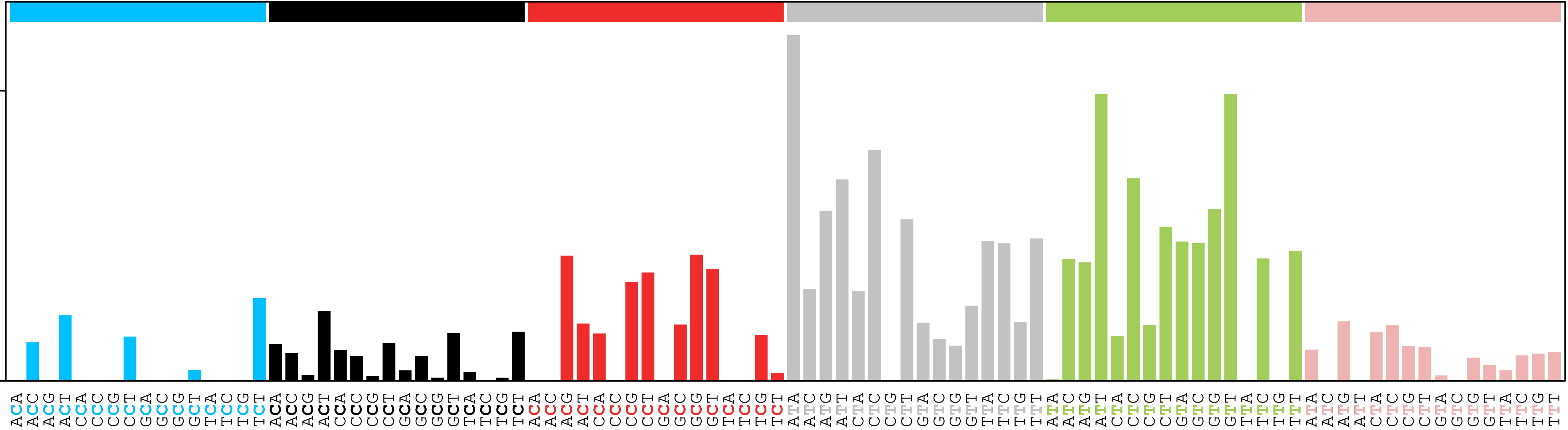
$T > C$

T>G

Mutation probability

0.05

0.00.



SBS143



SBS144

$C > A$

C > G

$$C > T$$

T > A

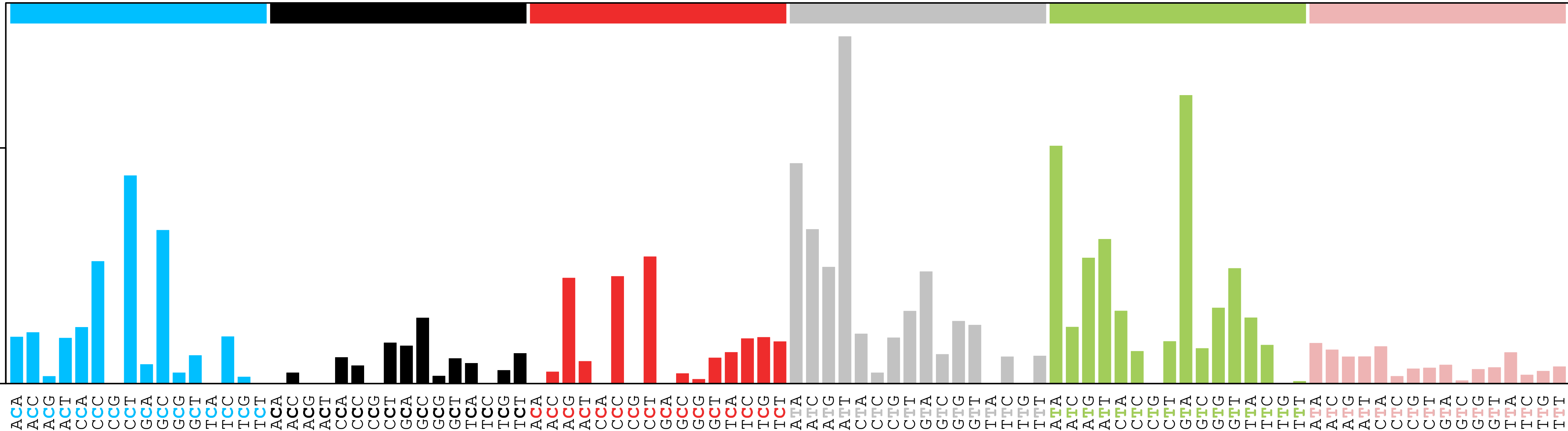
$T > C$

$T > G$

Mutation probability

0.05

0.00



SBS146

$C > A$

C > G

$$C > T$$

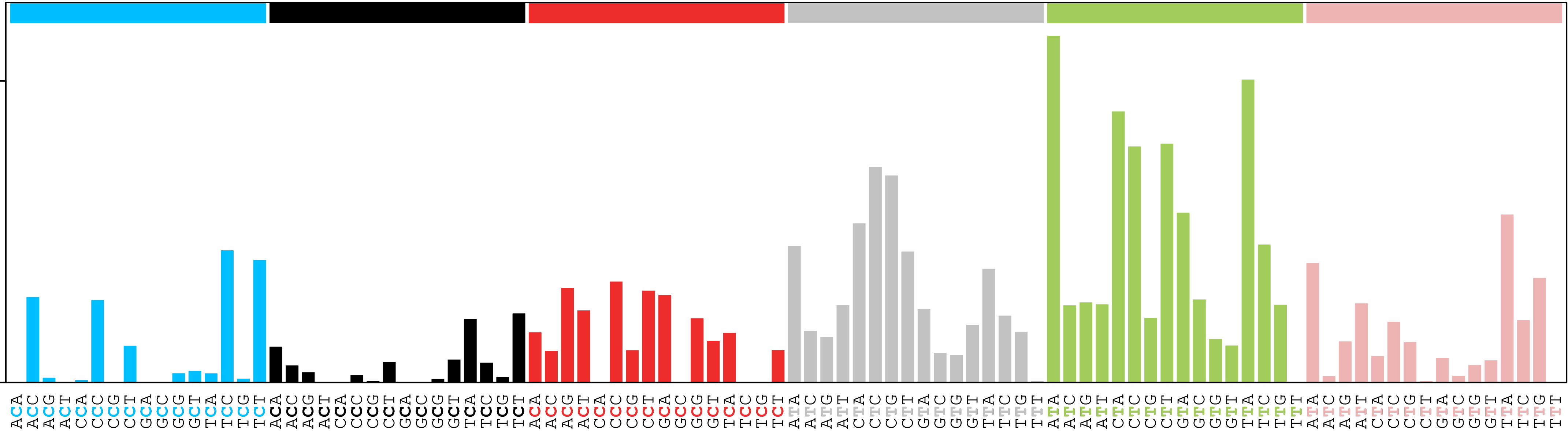
$T > A$

$T > C$

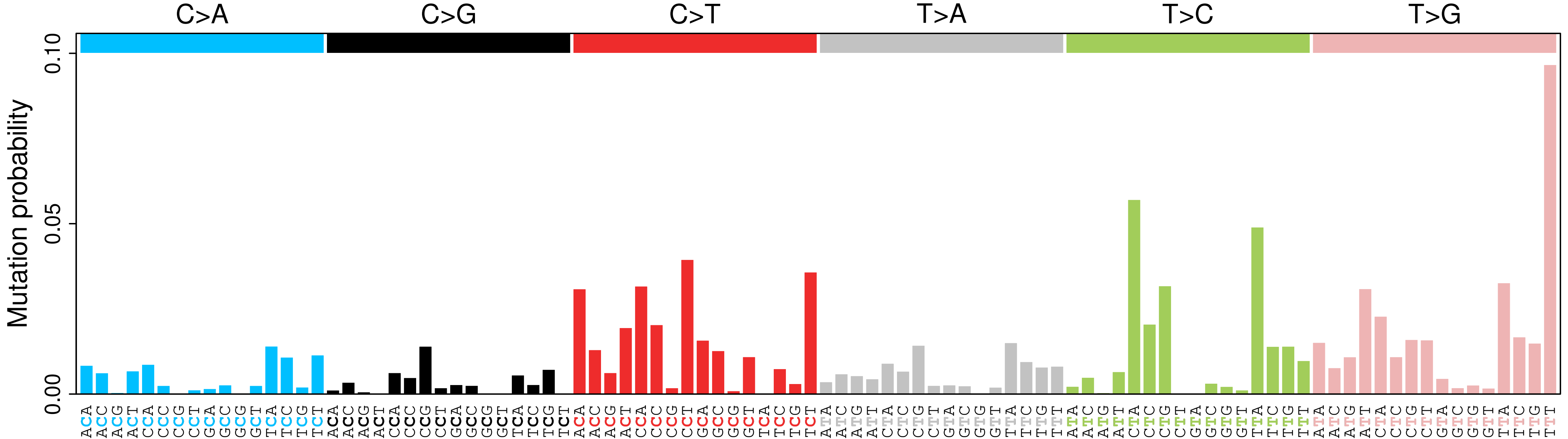
$T > G$

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



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 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

$C > A$

C > G

$$C > T$$

T > A

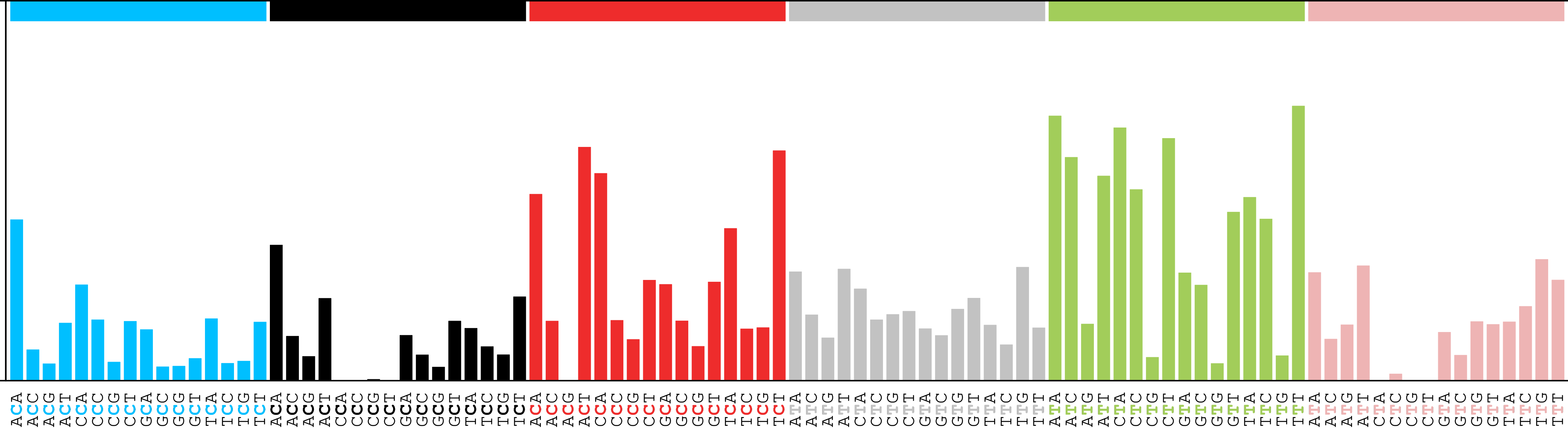
$T > C$

T>G

0.05

Mutation probability

0.00



SBS155

C > A

C > G

$$C > T$$

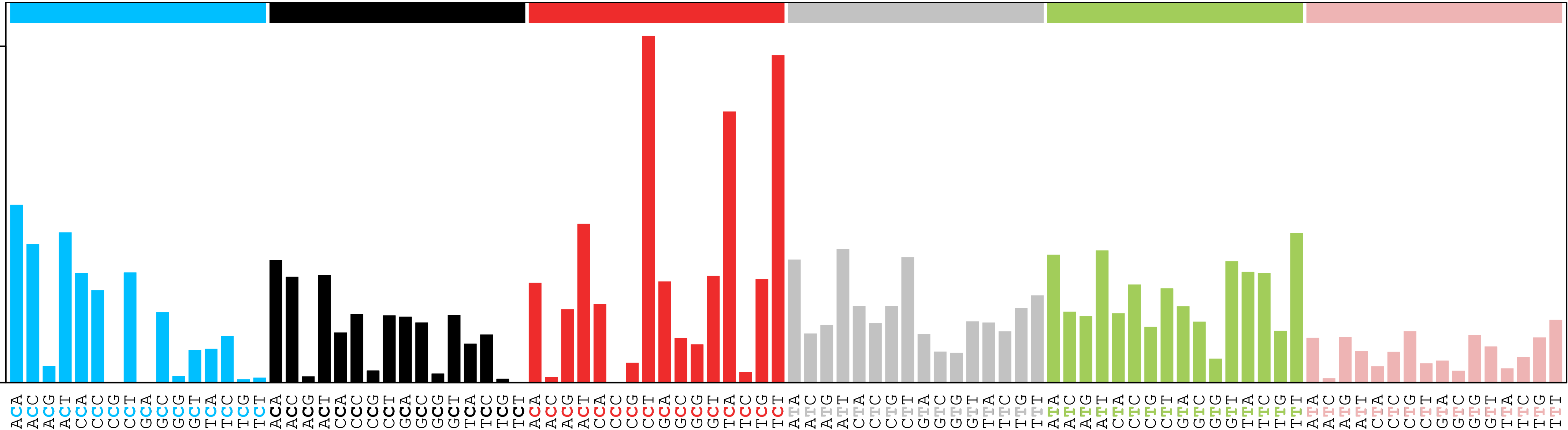
T > A

$$T > C$$

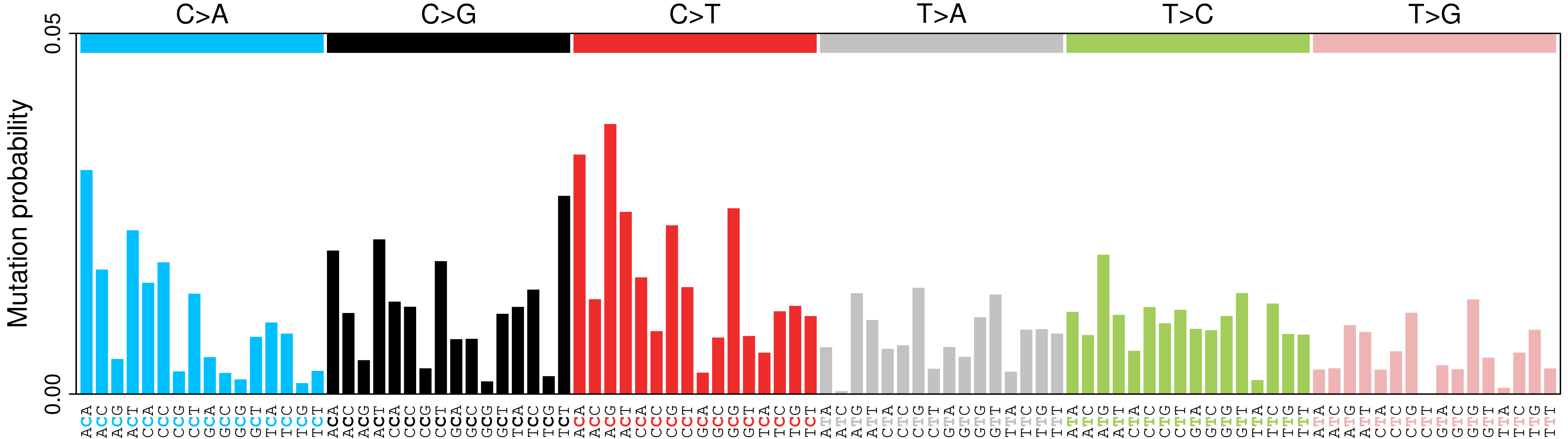
T>G

0.05

0.00



SBS157



SBS158

C > A

C > G

$$C > T$$

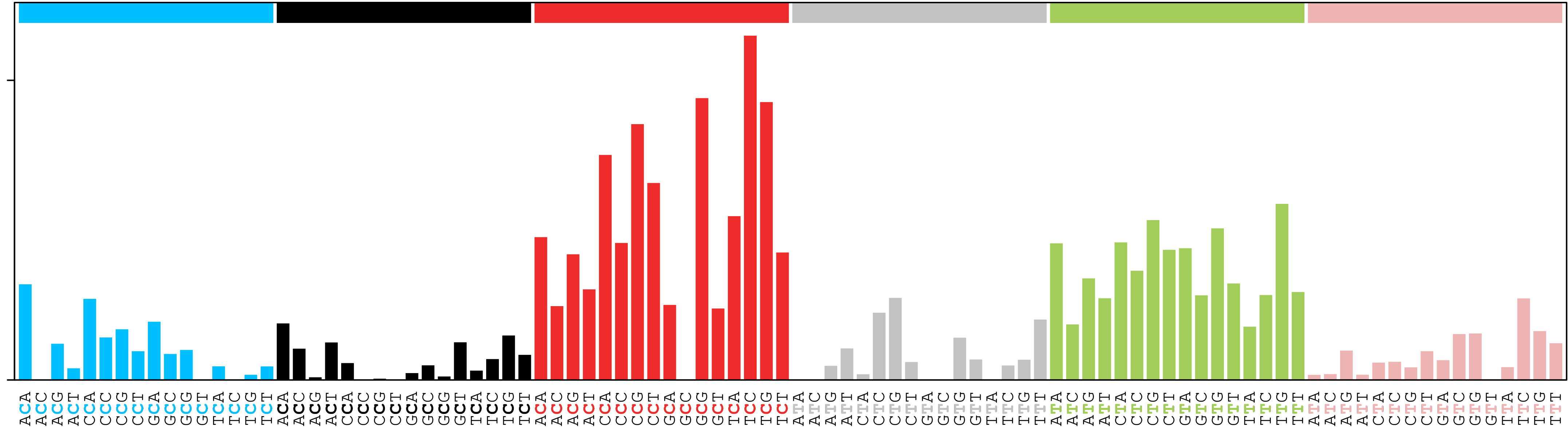
T > A

$T > C$

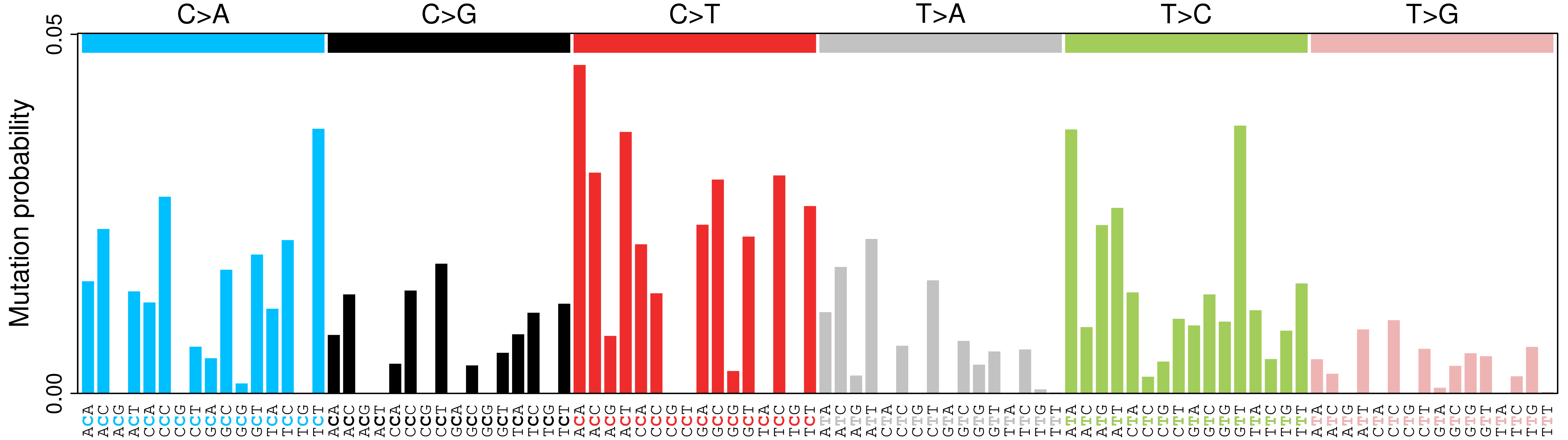
T>G

0.05

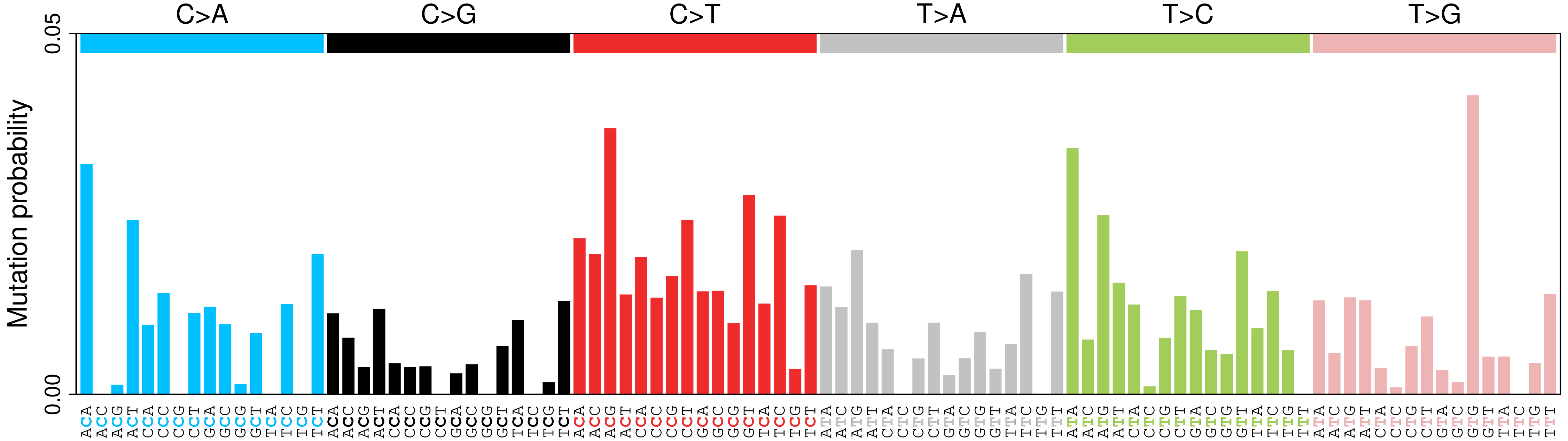
0.00



SBS159



SBS160



SBS161

$C > A$

C > G

$$C > T$$

T > A

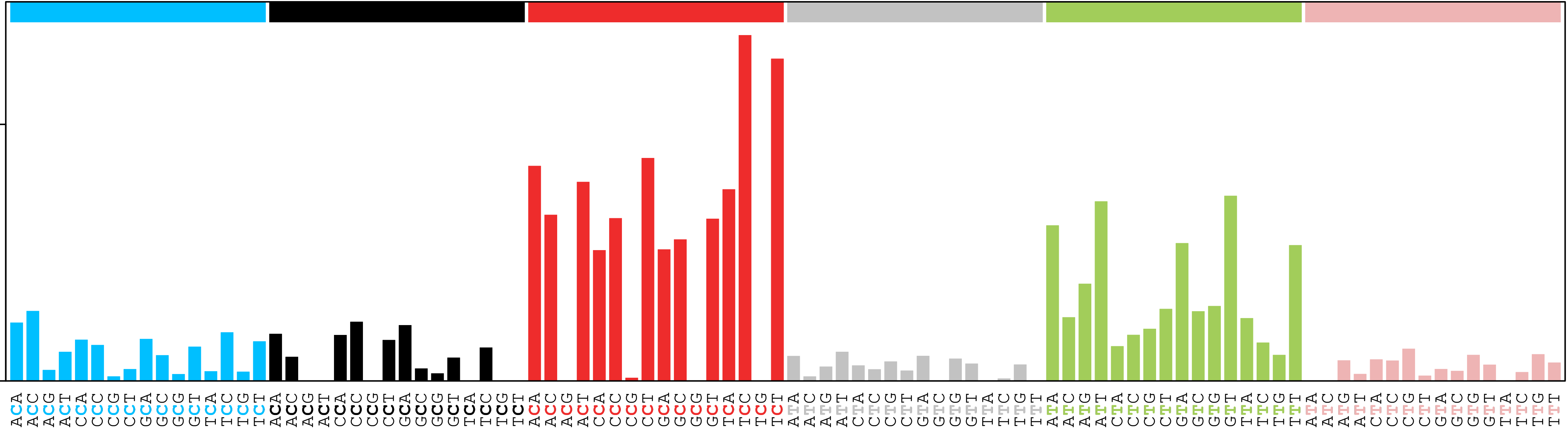
$T > C$

T>G

Mutation probability

0.05

0.00



SBS162

$C > A$

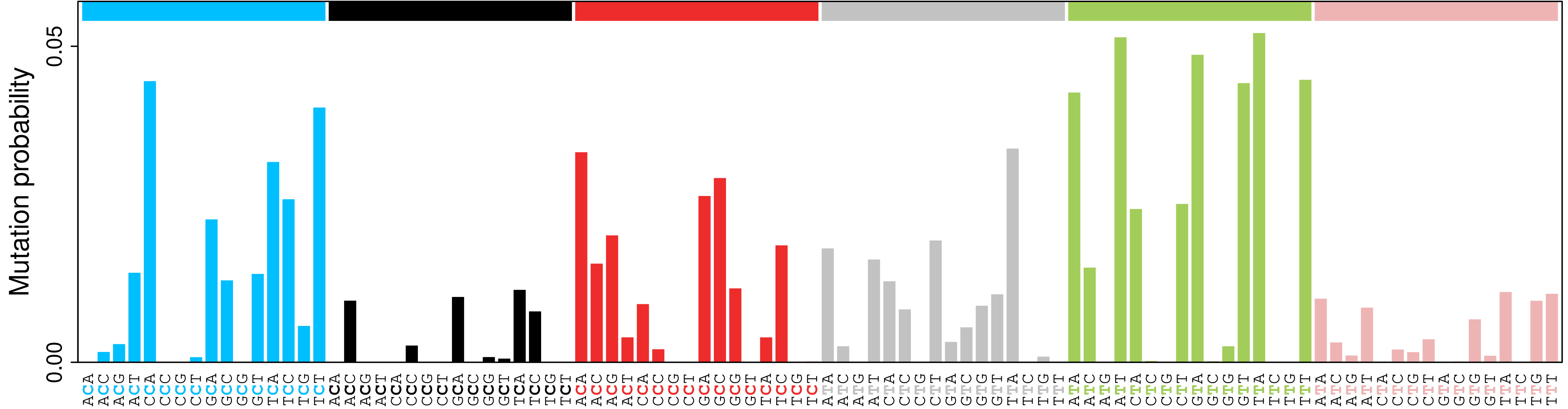
C>G

$C > T$

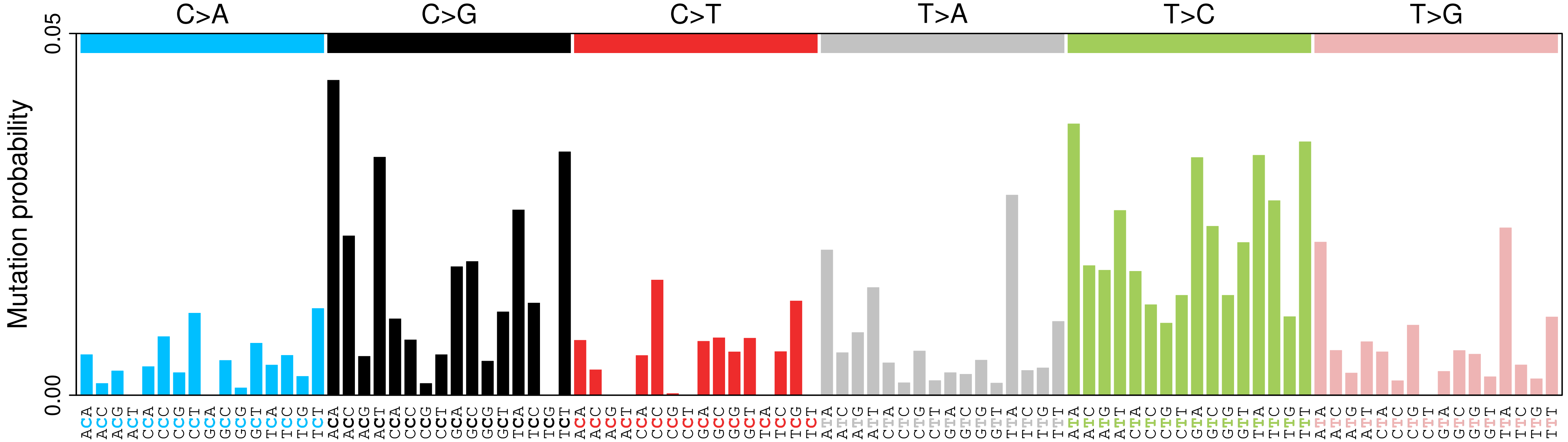
T>A

$$T > C$$

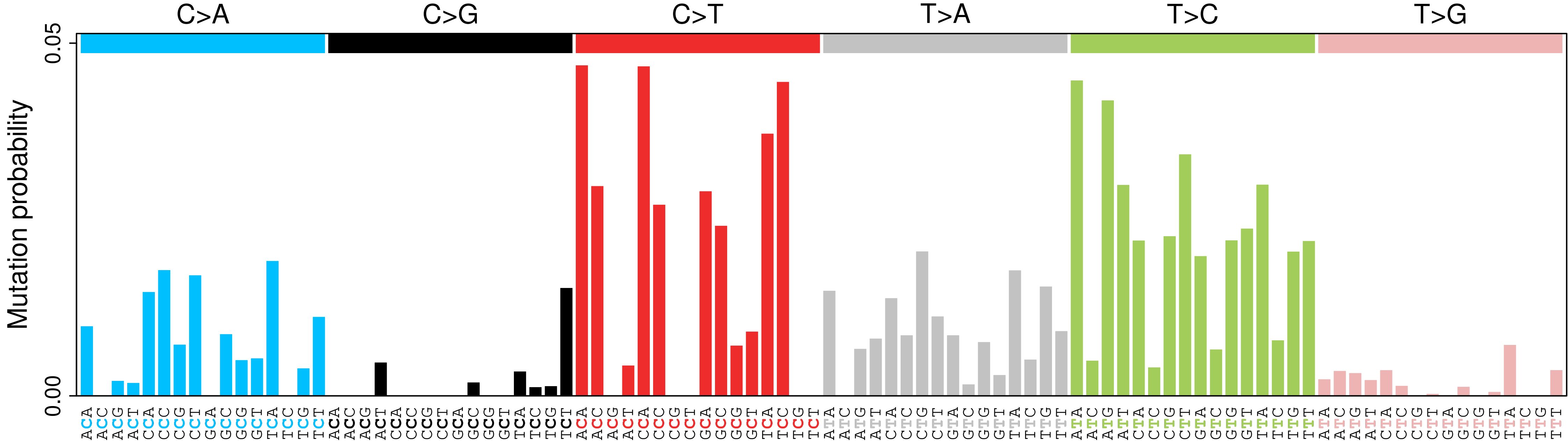
$T > G$



SBS163



SBS164



SBS166

$C > A$

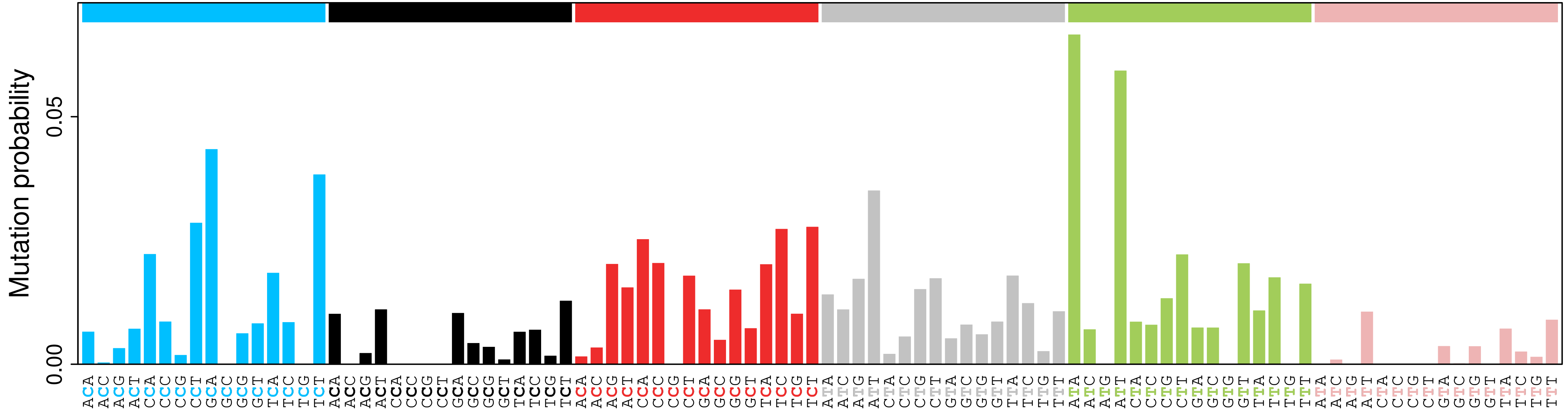
C > G

$$C > T$$

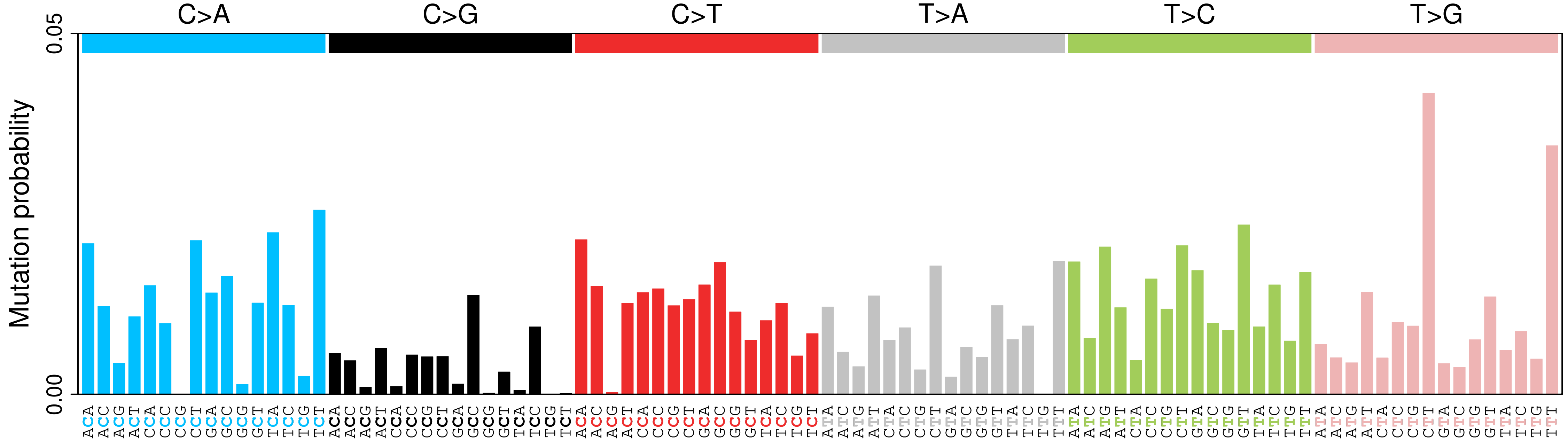
T > A

$T > C$

T>G



SBS167



SBS168

$C > A$

C > G

$C > T$

T>A

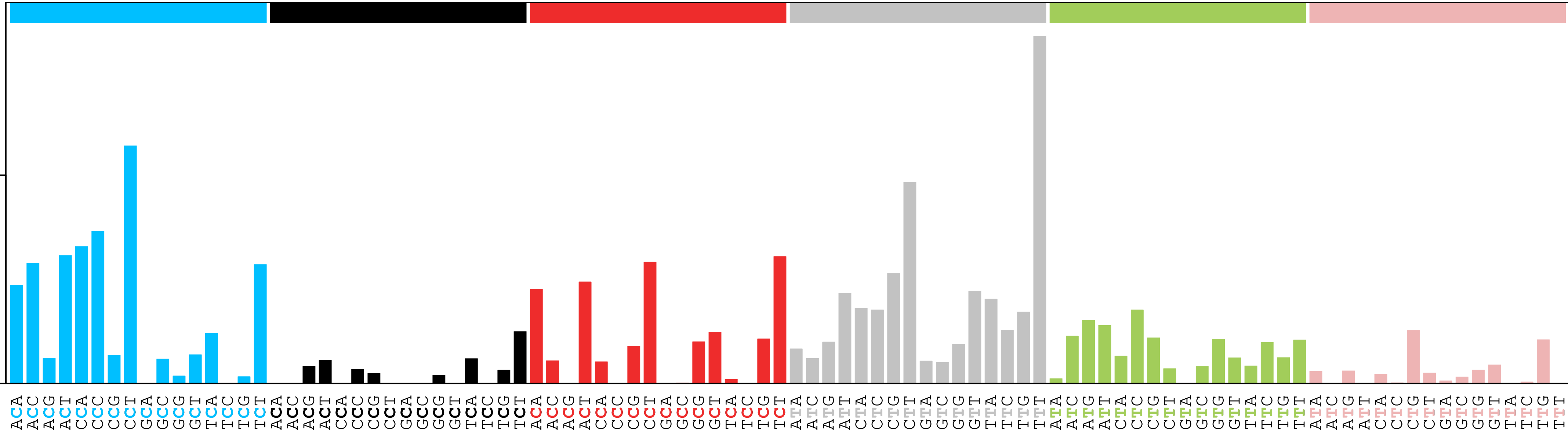
$$T > C$$

$T > G$

Mutation probability

0.05

0.00



SBS169

