

SBS1

C > A

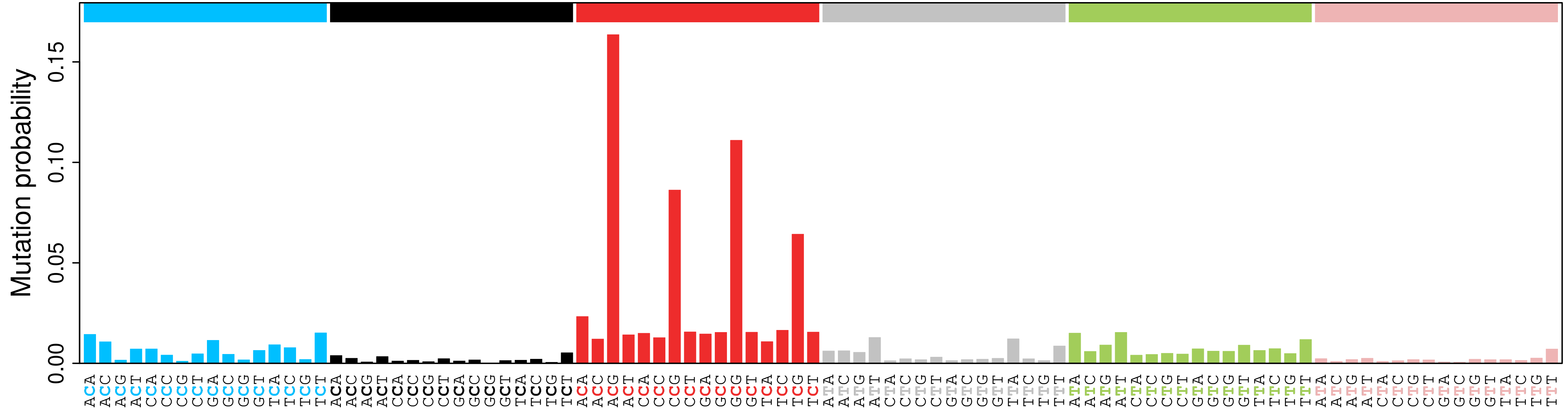
C > G

$C > T$

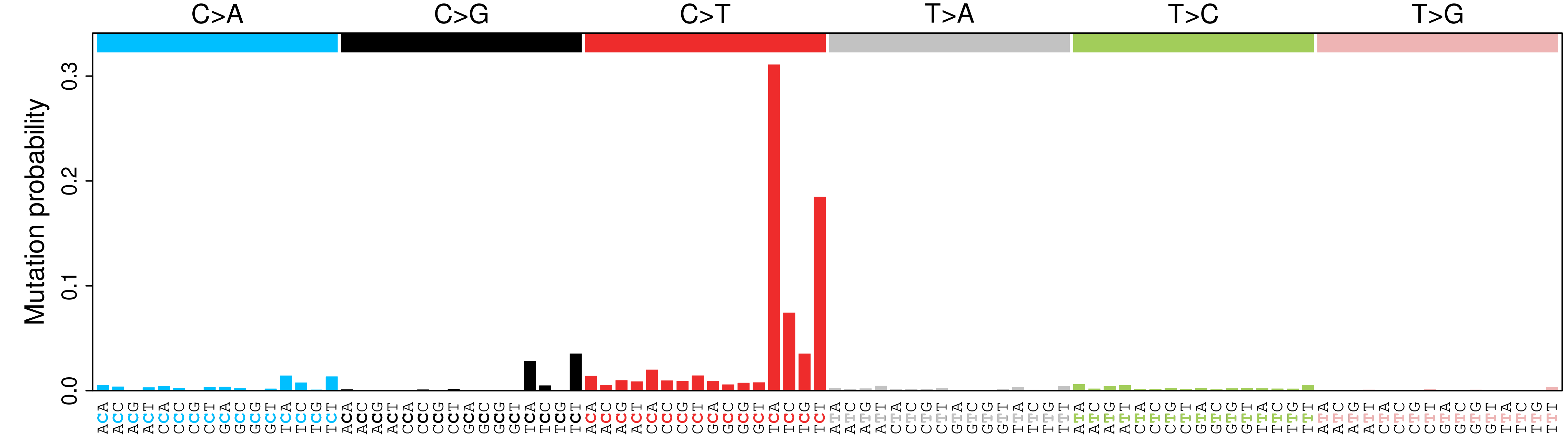
T > A

$T > C$

T>G



SBS2



SBS3

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.05

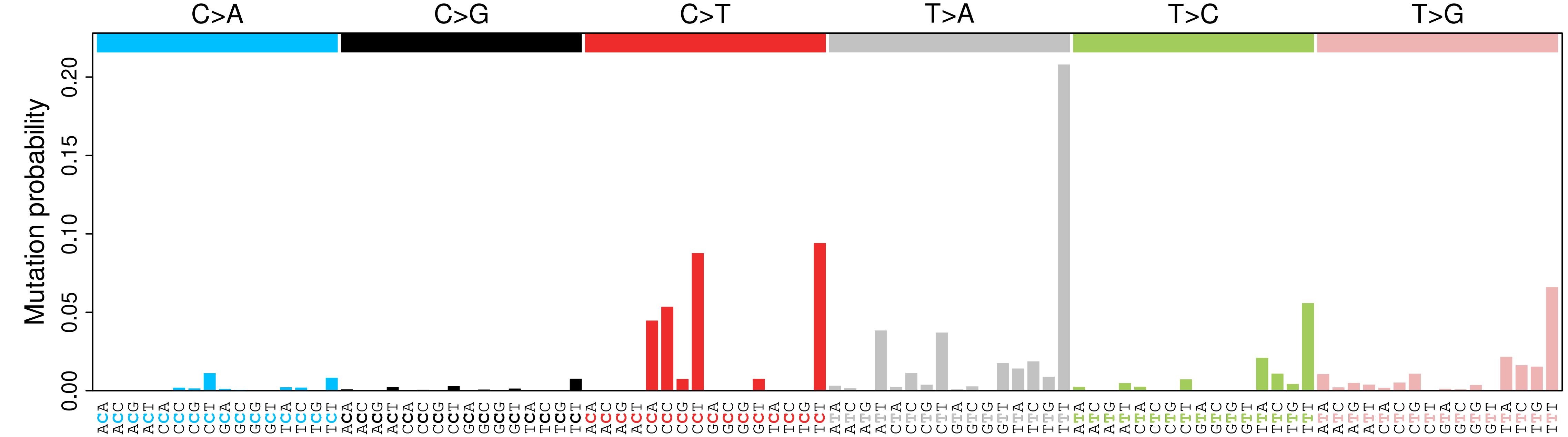
0.00

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 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

SBS5



SBS7c



SBS8

$C > A$

C > G

$C > T$

T > A

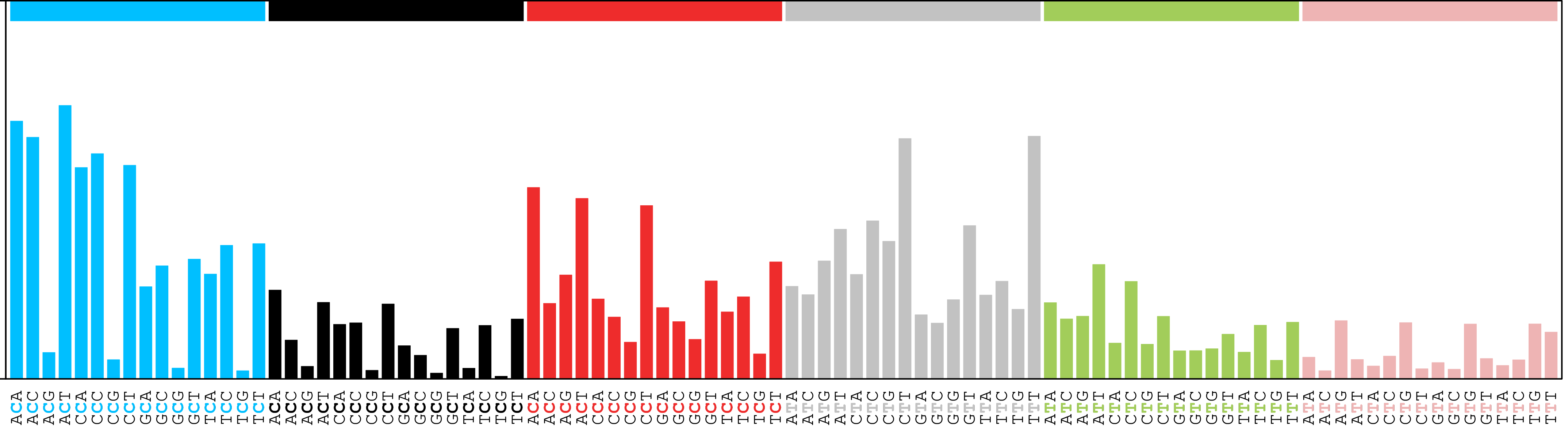
$$T > C$$

T>G

0.05

Mutation probability

0.00



SBS9

$C > A$

C > G

$C > T$

T > A

$$T > C$$

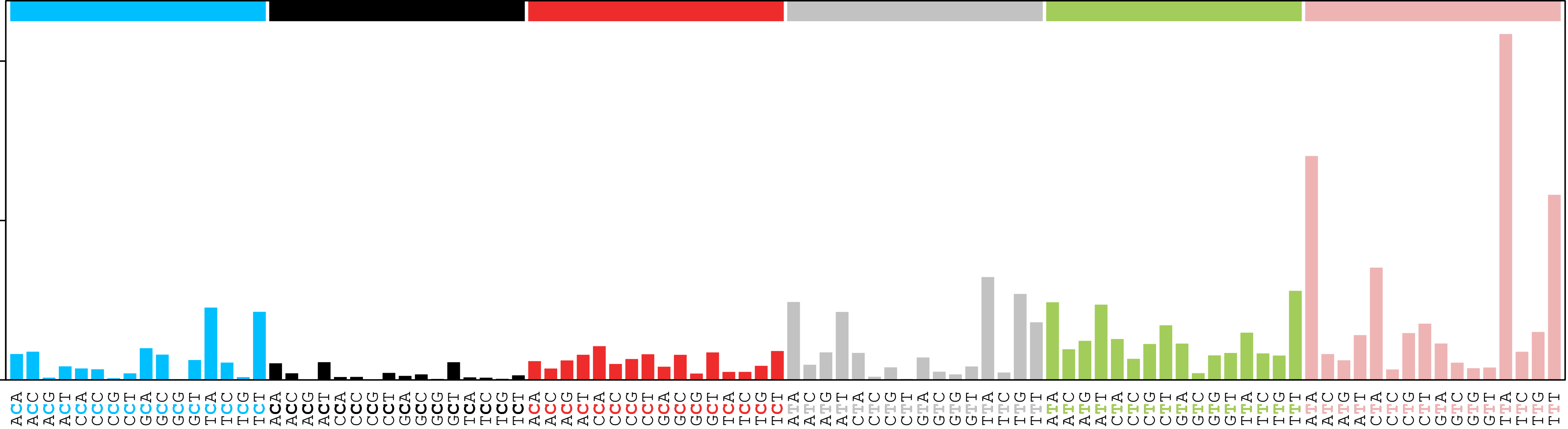
T>G

Mutation probability

0.10

0.05

0.00



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

SBS11

$C > A$

C > G

$C > T$

T > A

$T > C$

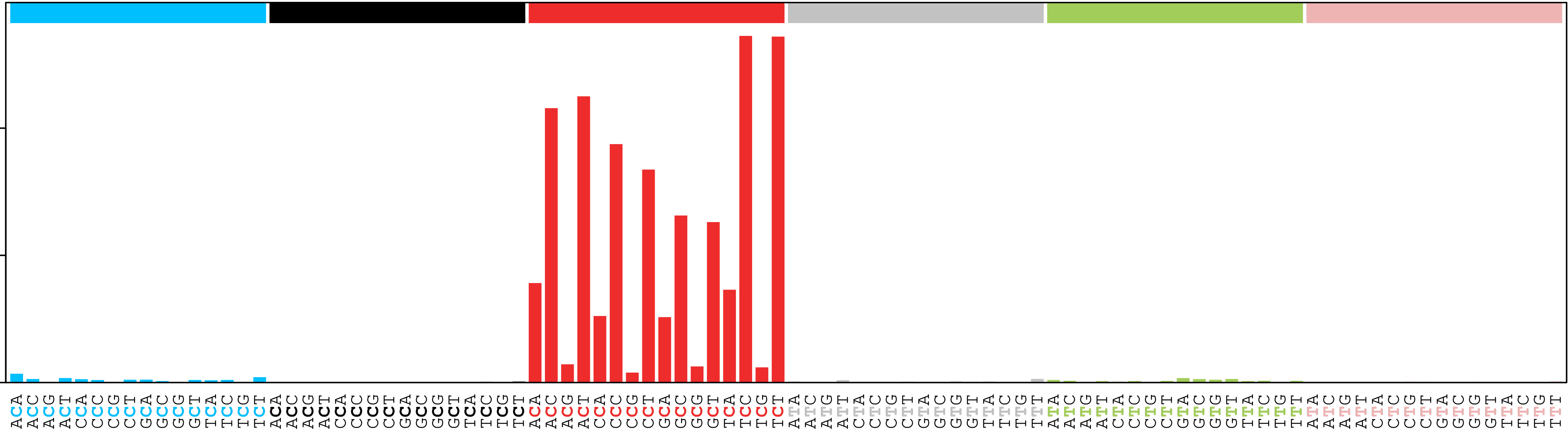
T>G

Mutation probability

0.10

0.05

0.00



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

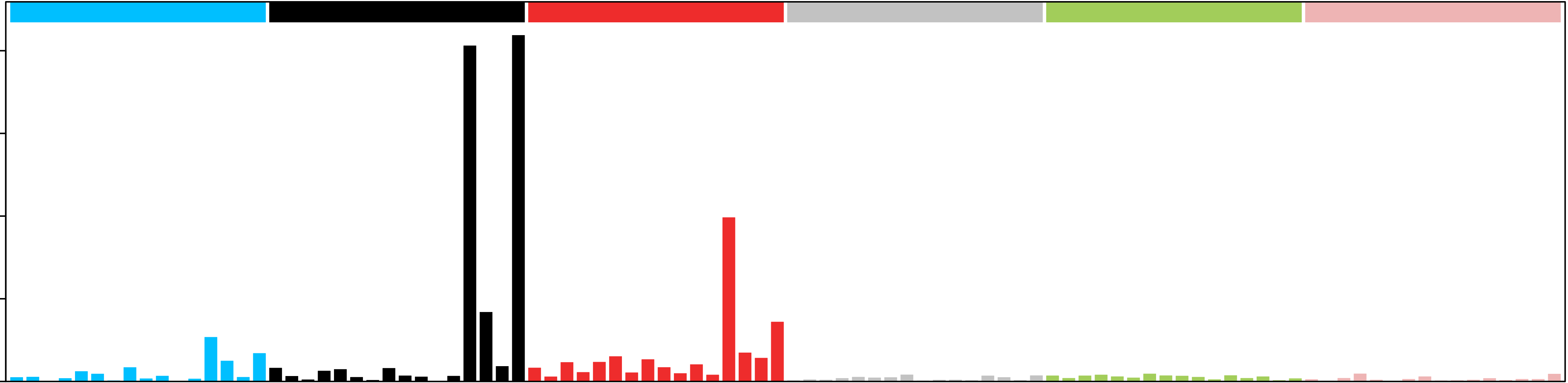
T>C

T>G

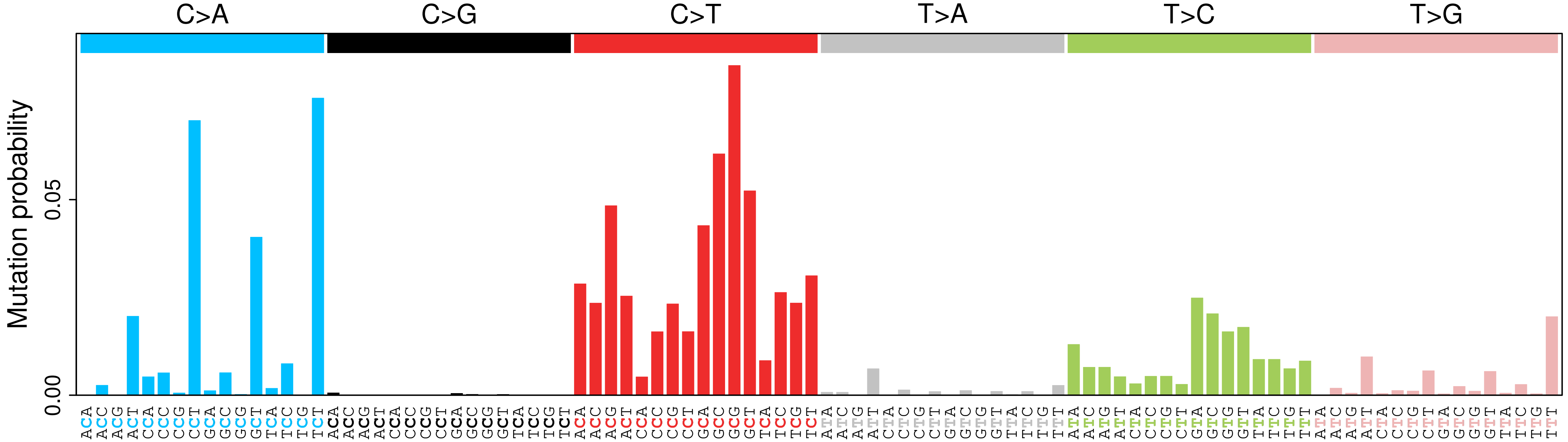
Mutation probability

0.20
0.15
0.10
0.05
0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC 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 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

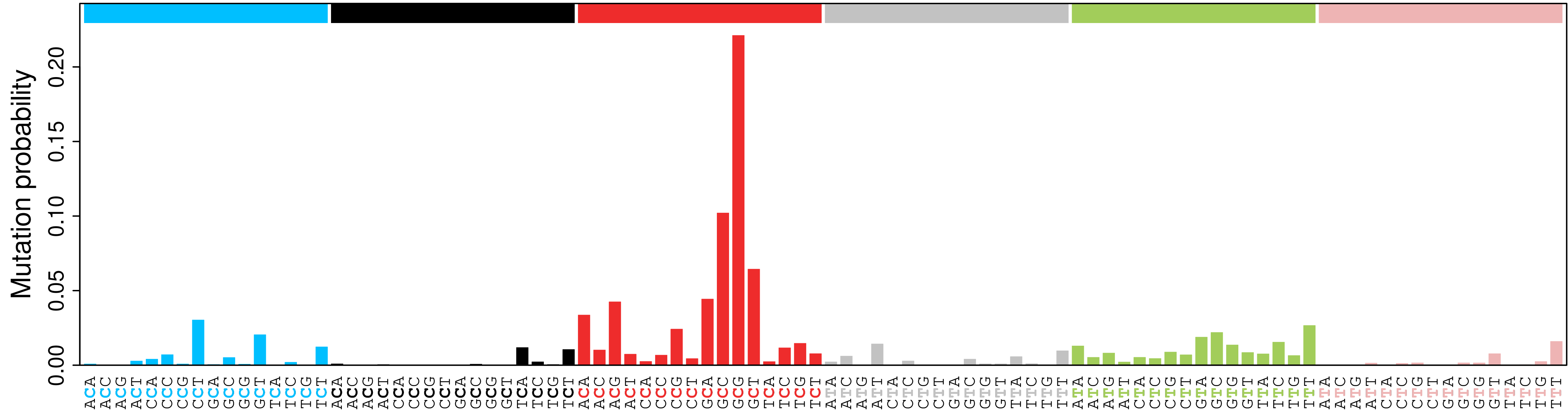
C > G

$C > T$

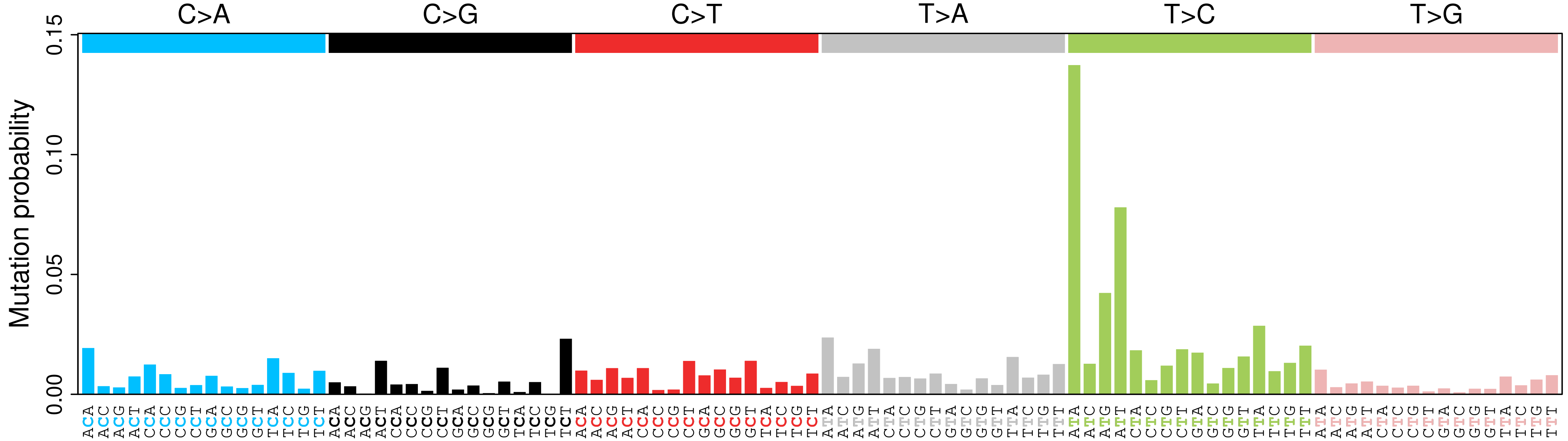
T > A

$T > C$

T>G



SBS16



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

SBS20



SBS23



SBS24



SBS26

C > A

C > G

$C > T$

T > A

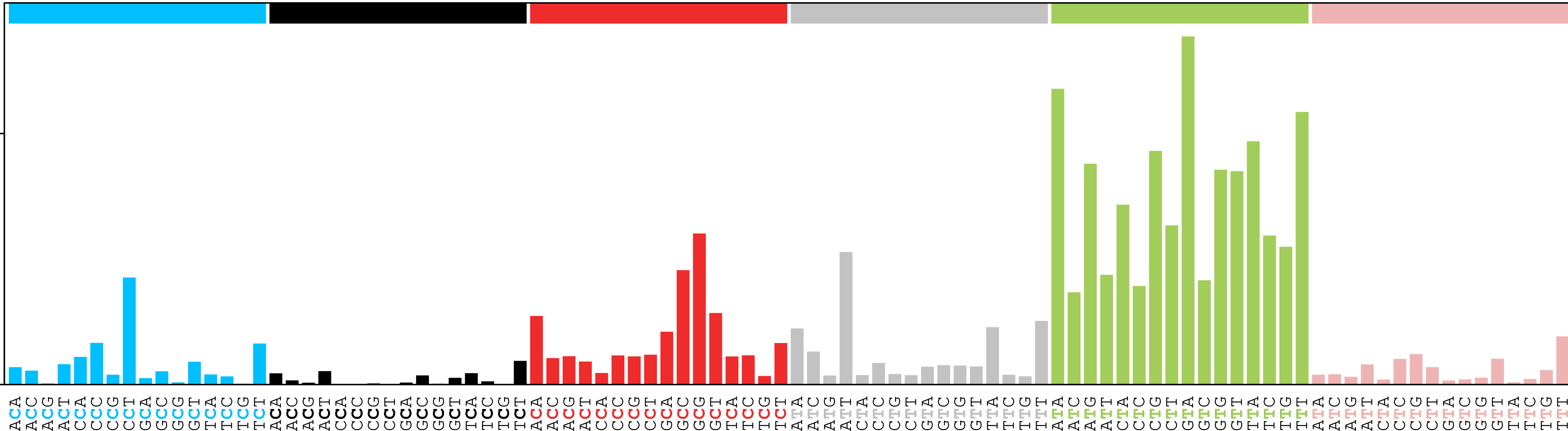
$$T > C$$

$T > G$

Mutation probability

0.05

0.00



SBS28



SBS30

C > A

C > G

$C > T$

T > A

$T > C$

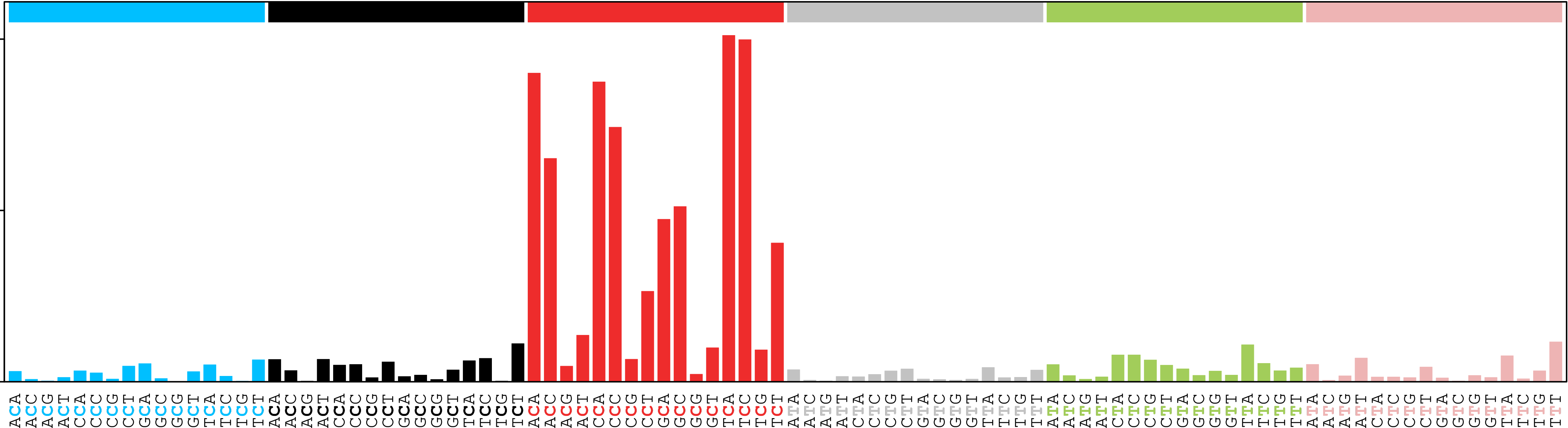
T>G

Mutation probability

0.10

0.05

0.00



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

SBS33

C>A

C>G

C>T

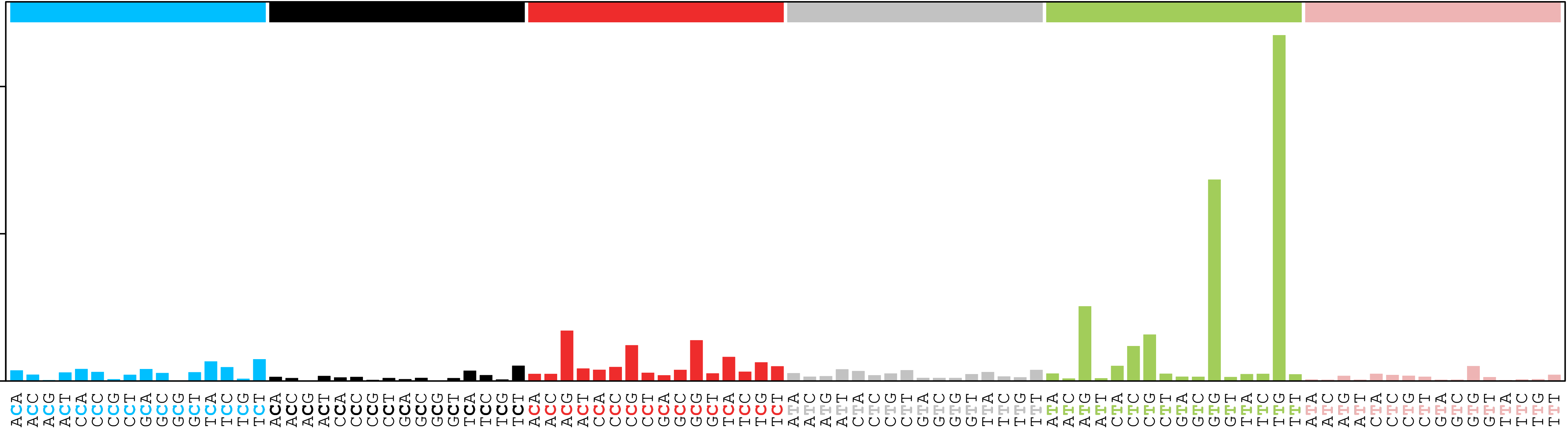
T>A

T>C

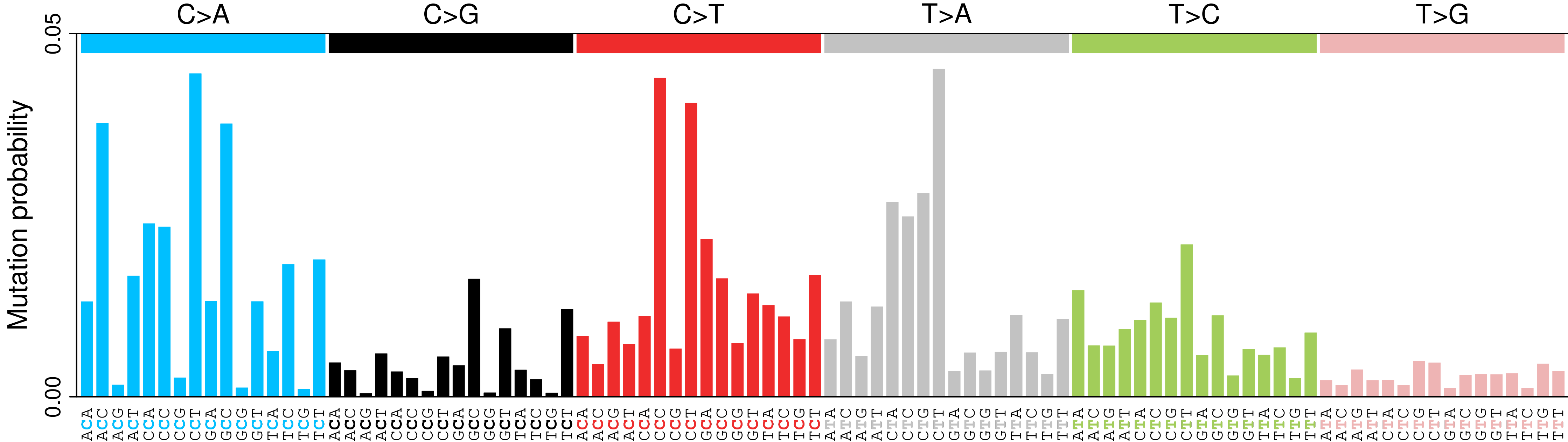
T>G

Mutation probability

0.2
0.1
0.0



SBS35



SBS38

$C > A$

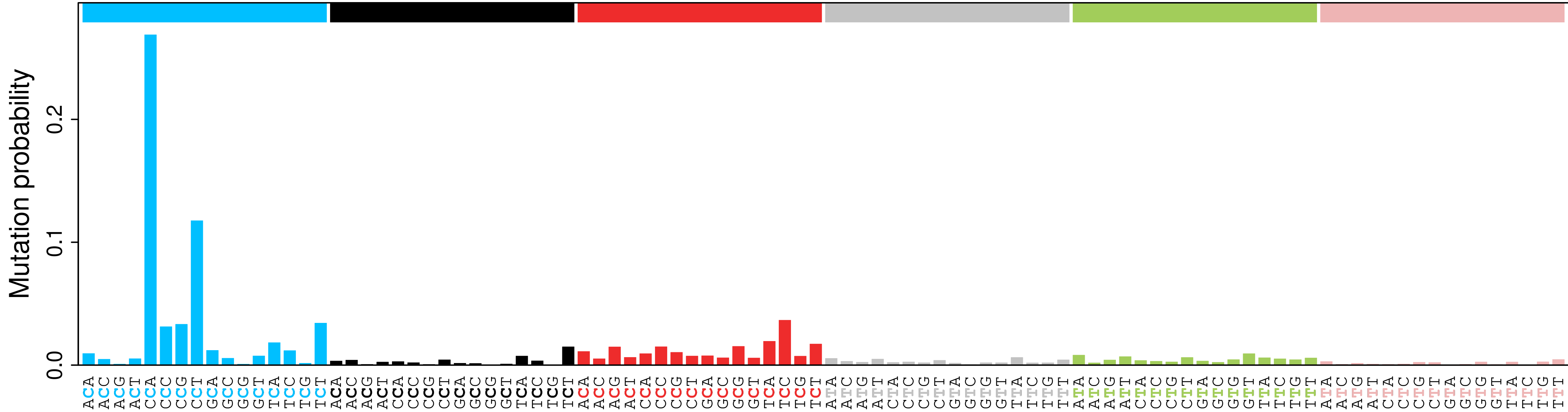
C > G

$C > T$

T > A

$$T > C$$

T > G



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

SBS90

C > A

C > G

$C > T$

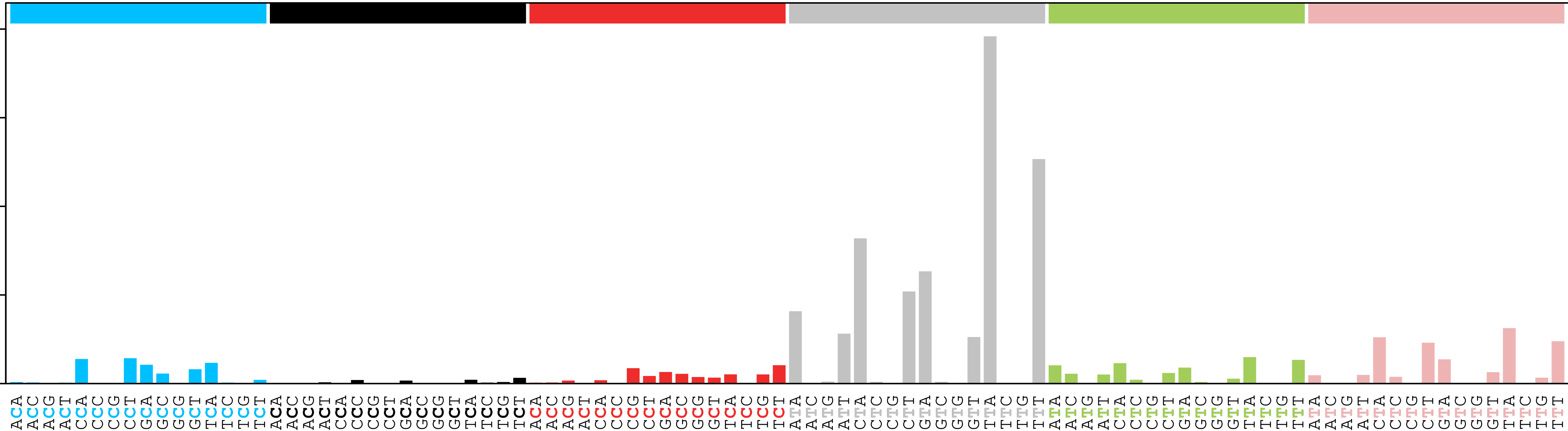
T > A

$T > C$

T>G

Mutation probability

0.00 0.05 0.10 0.15 0.20



SBS92

C > A

C > G

$C > T$

T > A

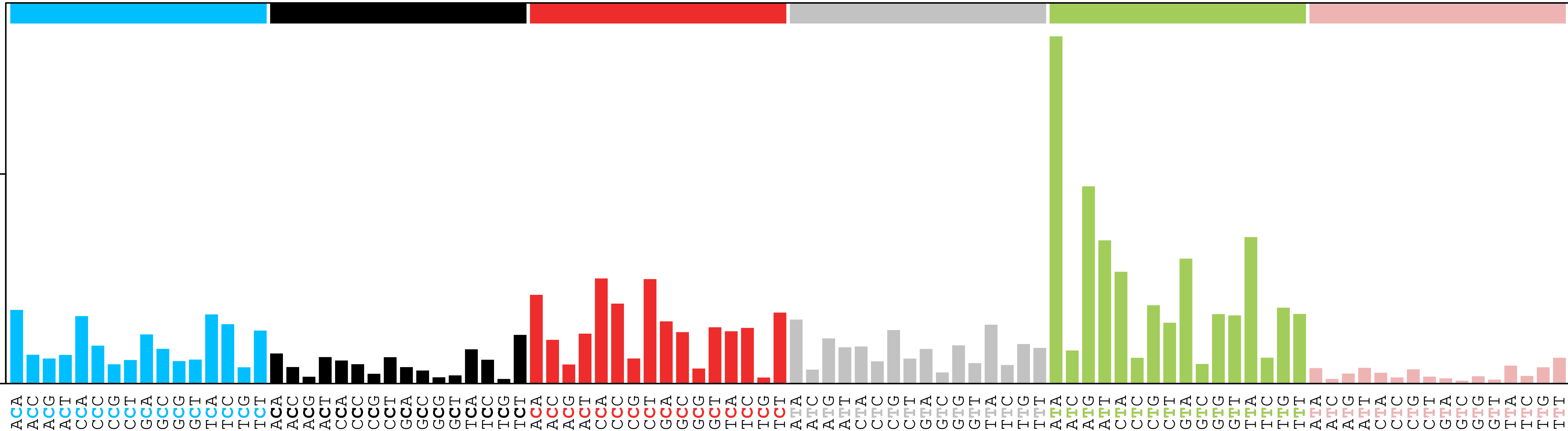
$$T > C$$

T>G

Mutation probability

0.05

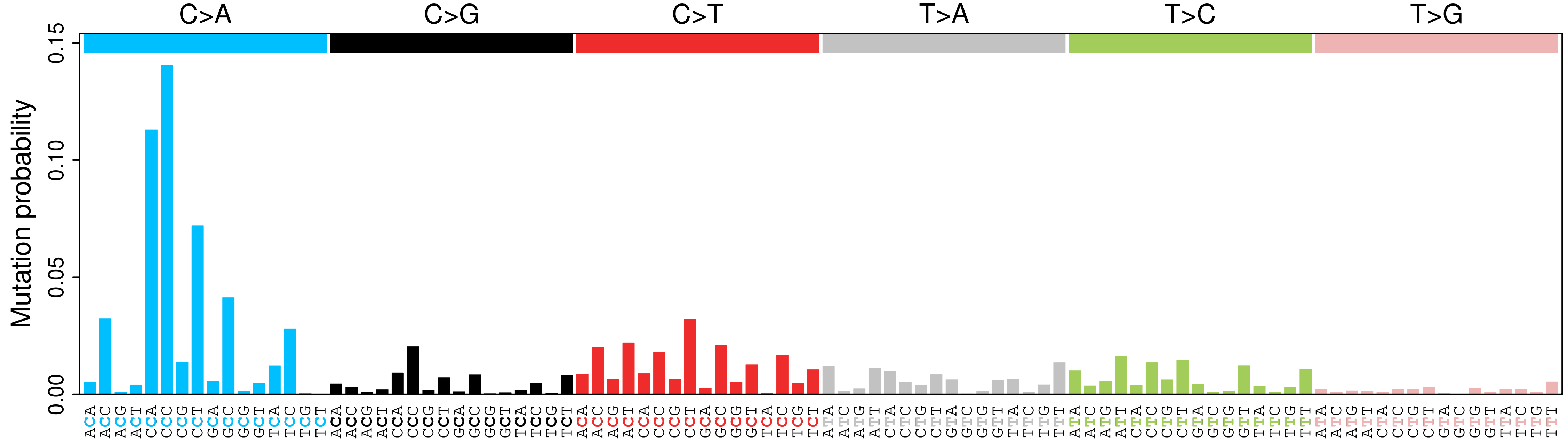
0.00



SBS93



SBS94



SBS98



SBS99

C>A

C>G

C>T

T>A

T>C

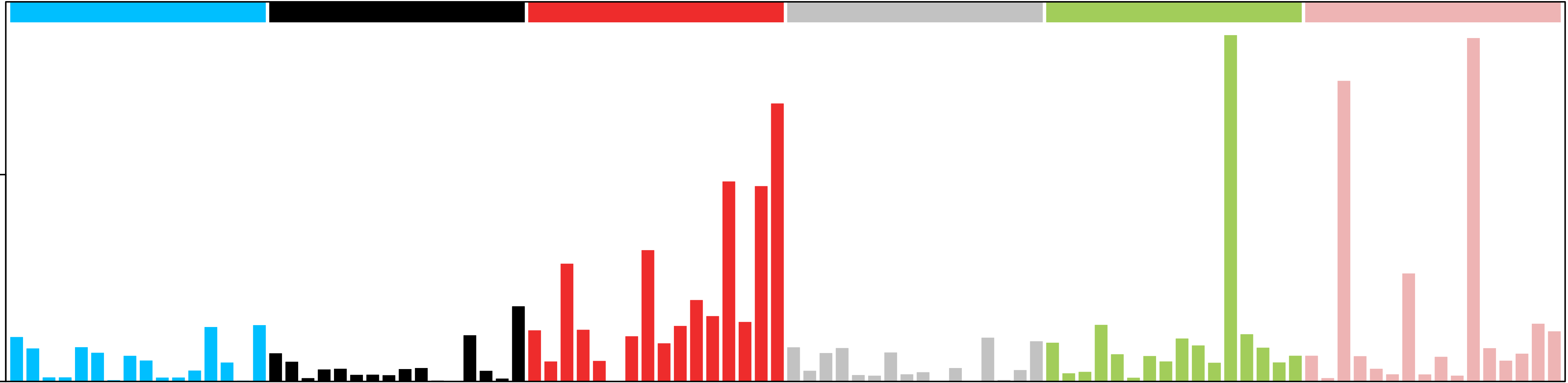
T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT GTT 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



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

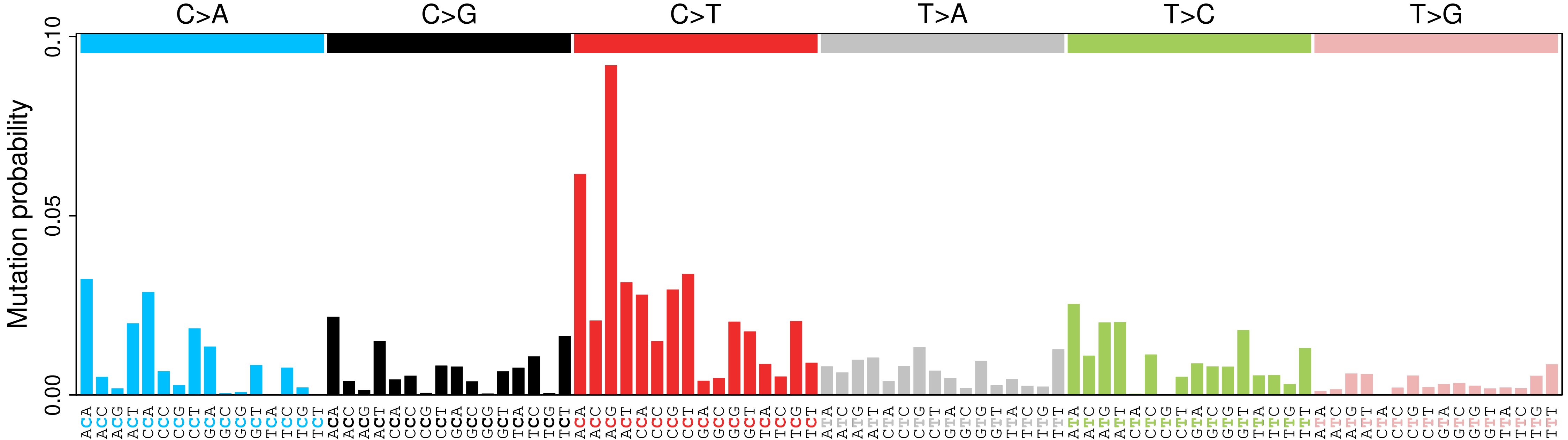
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0.00

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SBS103



SBS105



SBS107

C > A

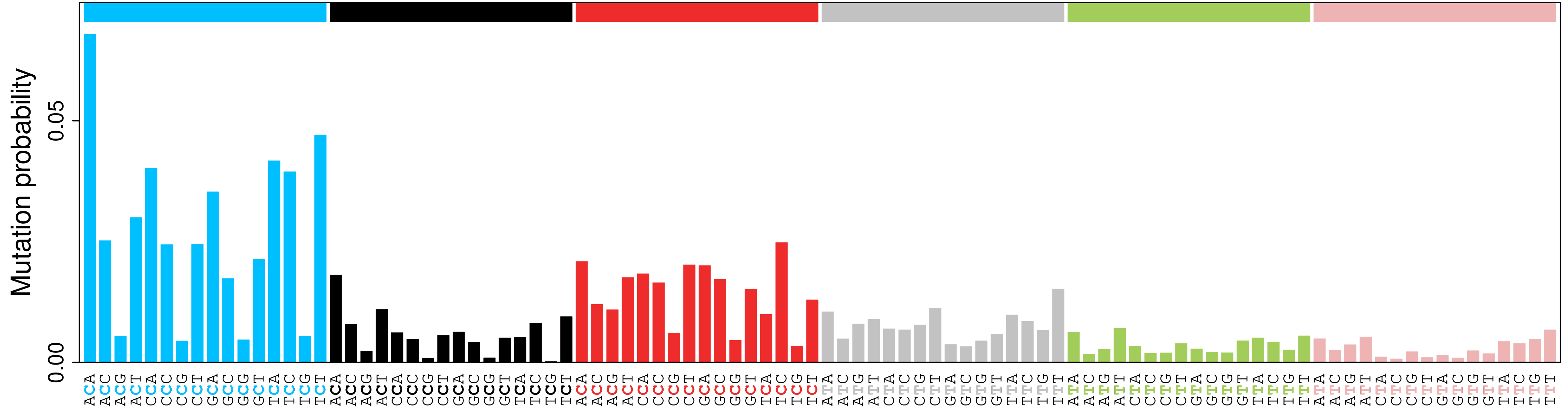
C > G

$C > T$

T > A

$$T > C$$

T > G



SBS108

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.15

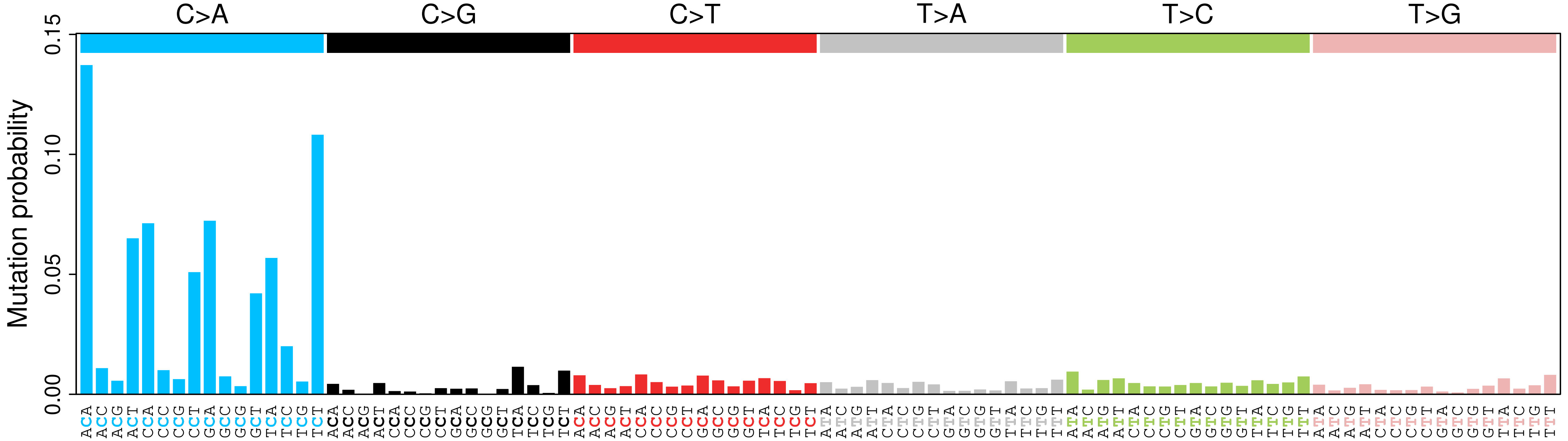
0.10

0.05

0.00

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SBS109



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

SBS113

C > A

C > G

$C > T$

T > A

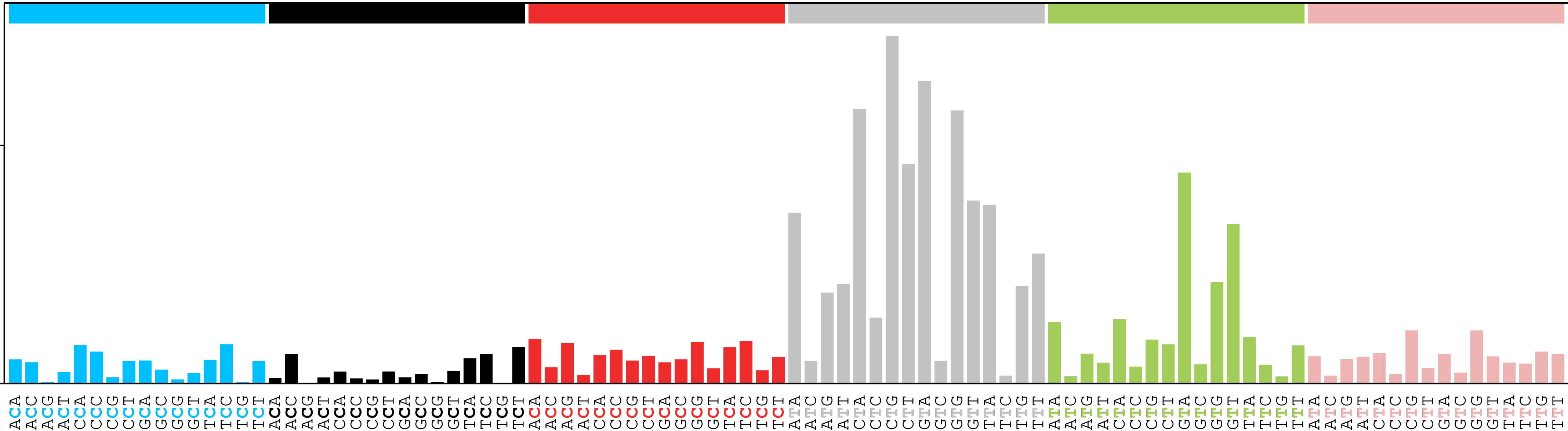
$$T > C$$

$T > G$

Mutation probability

0.05

0.00



SBS115

$C > A$

C > G

$C > T$

T > A

$$T > C$$

T>G

Mutation probability

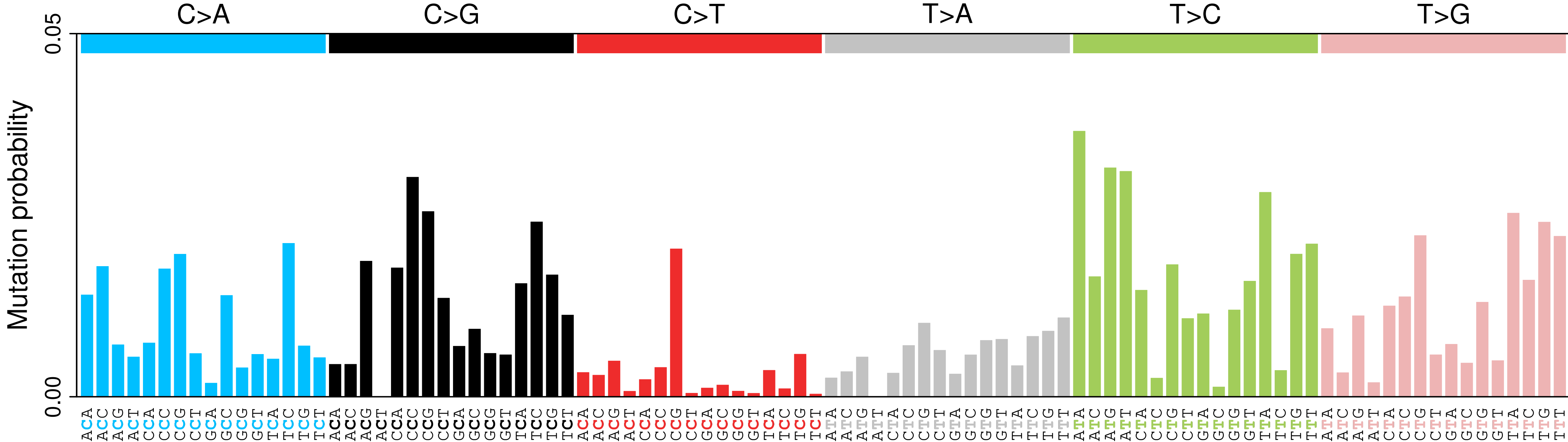
0.00 0.05 0.10 0.15 0.20

[illegible]

SBS116



SBS117



SBS118

C>A

C>G

C>T

T>A

T>C

T>G

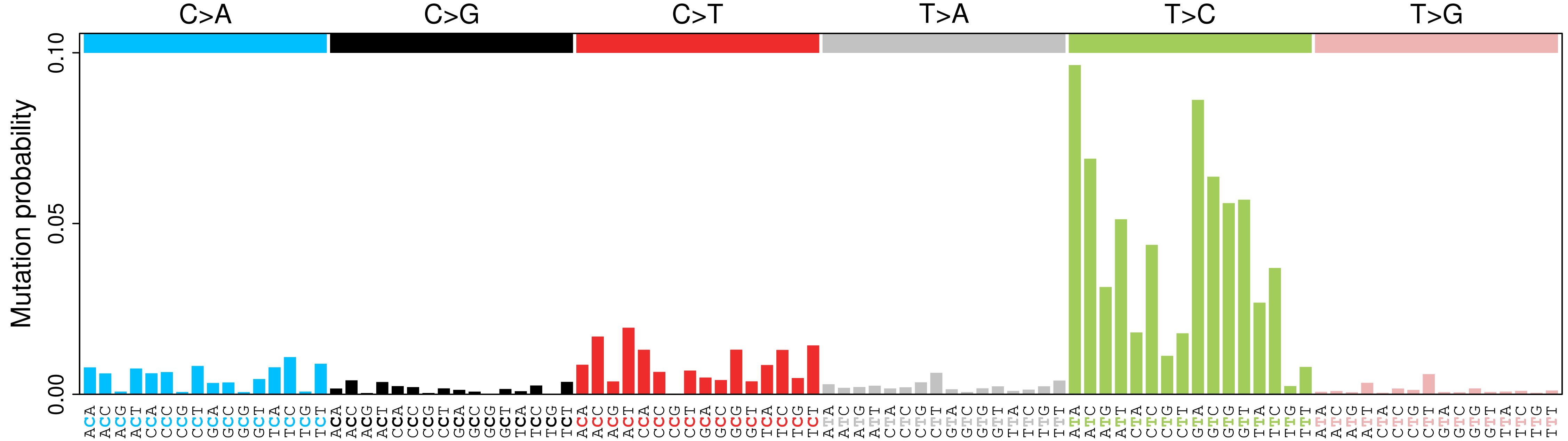
Mutation probability

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



SBS121

C > A

C > G

$C > T$

T > A

$T > C$

T>G

Mutation probability

0.15

0.10

0.0

0

[illegible]

SBS122

C > A

C > G

$$C > T$$

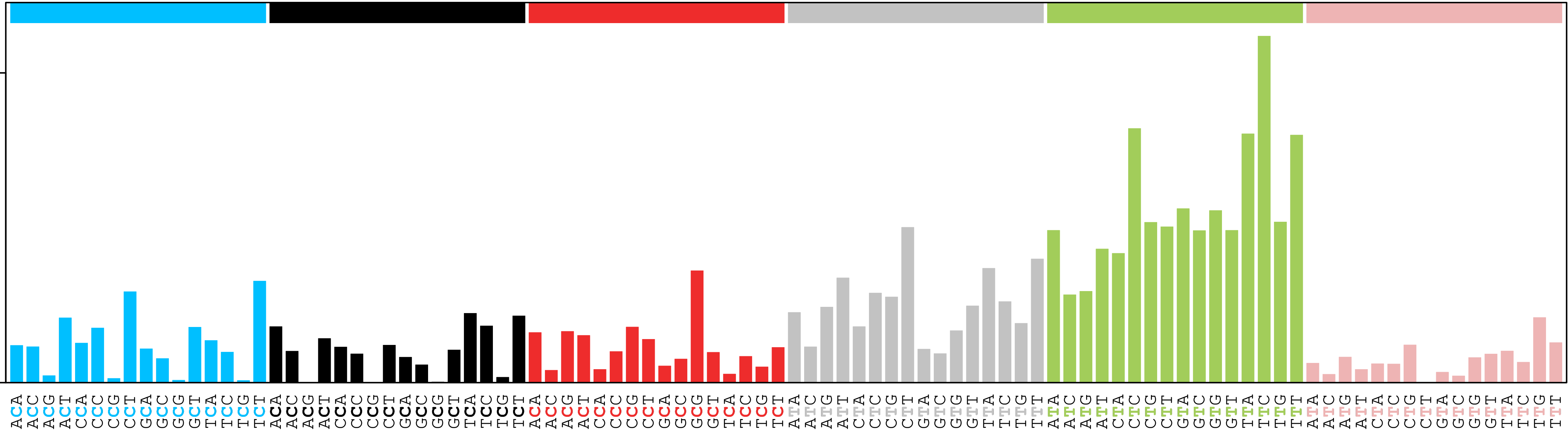
$T > A$

$T > C$

$T > G$

0.05

0.00



SBS123

C > A

C > G

$C > T$

T > A

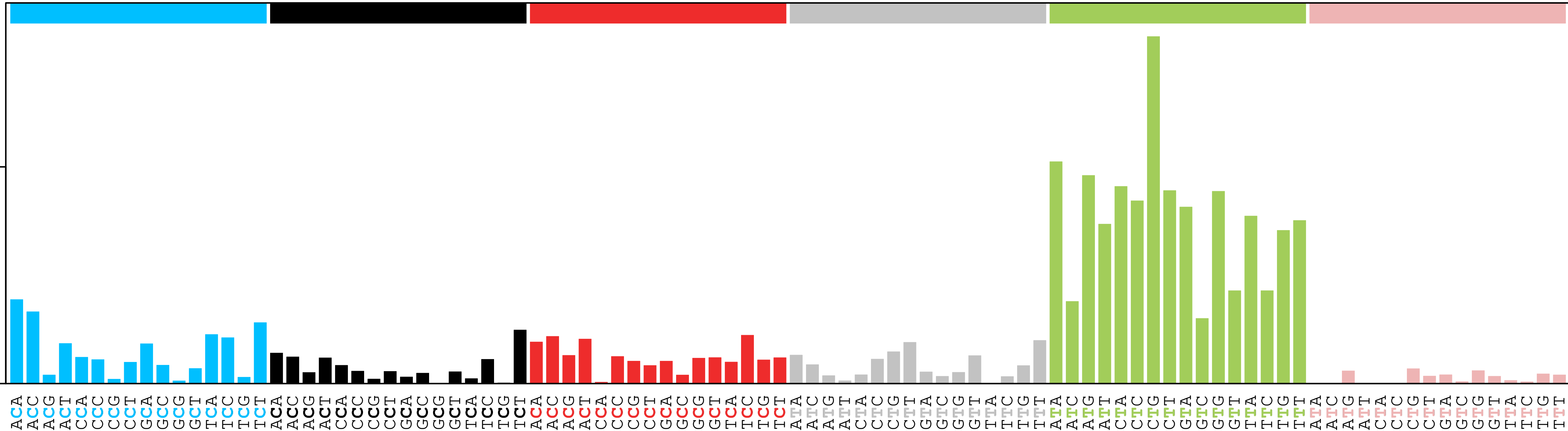
$$T > C$$

T > G

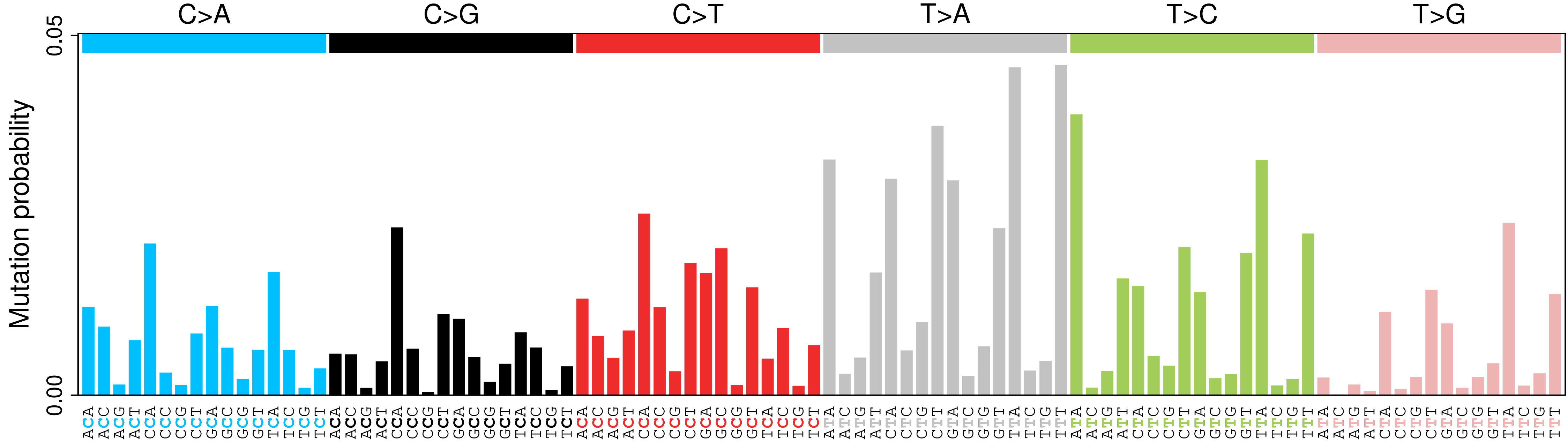
Mutation probability

0.05

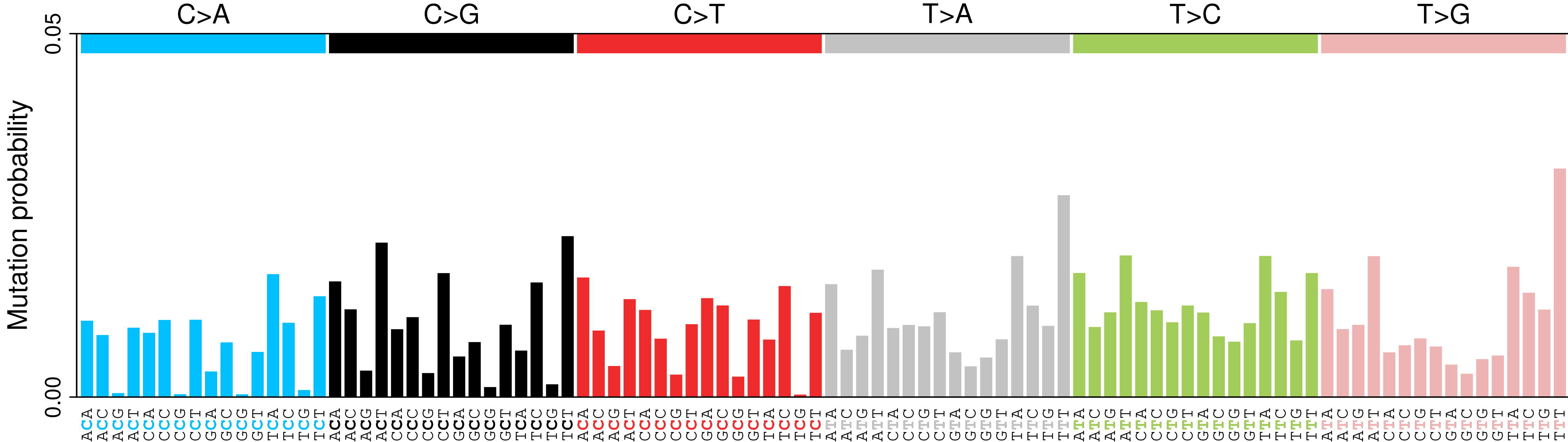
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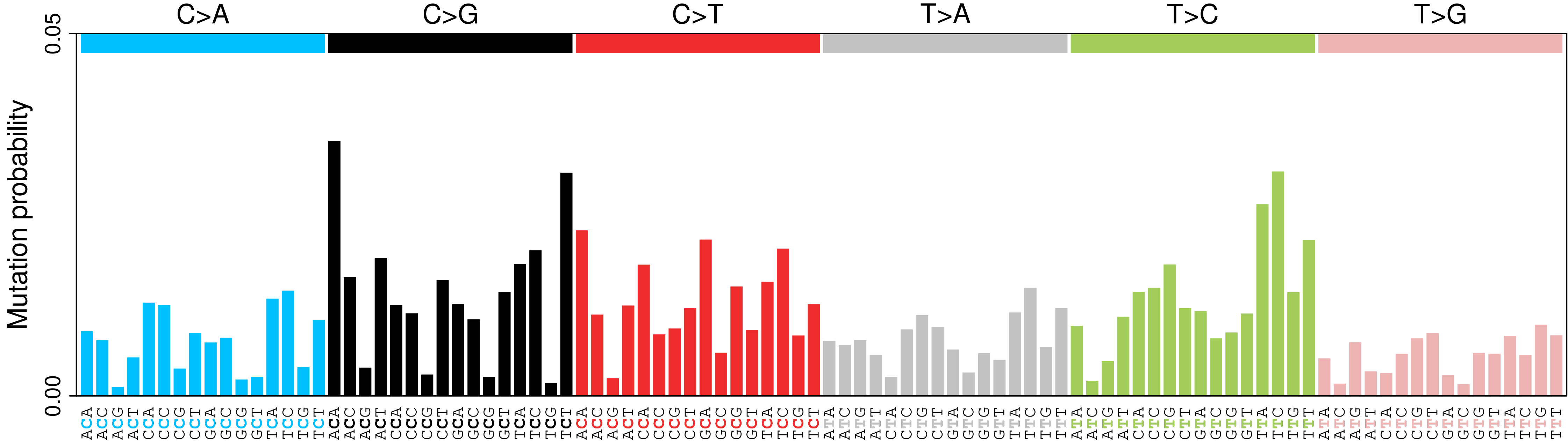
SBS124



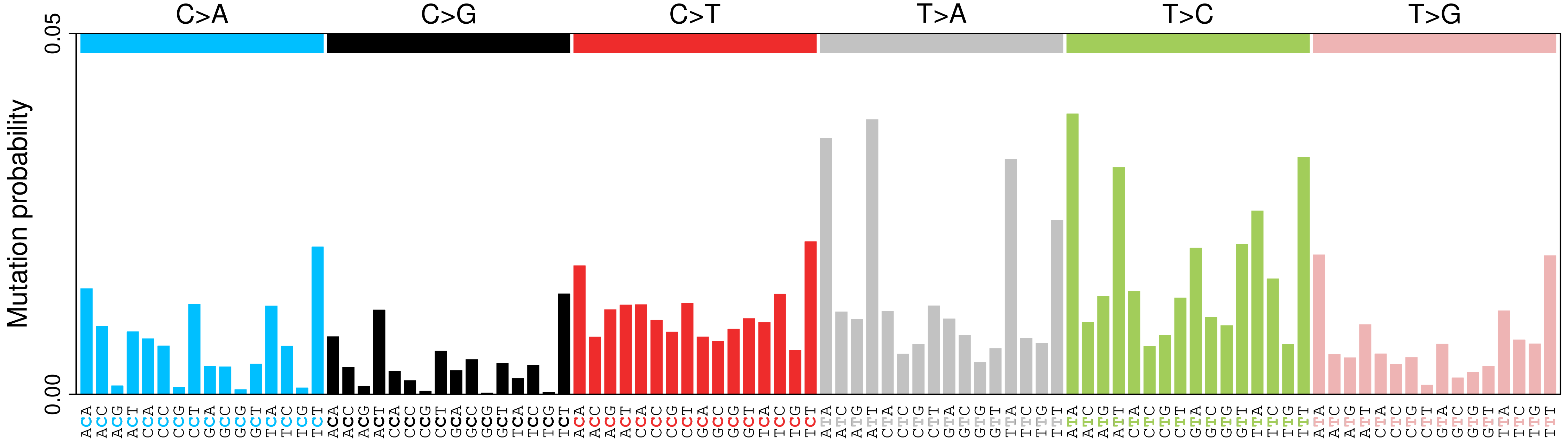
SBS125



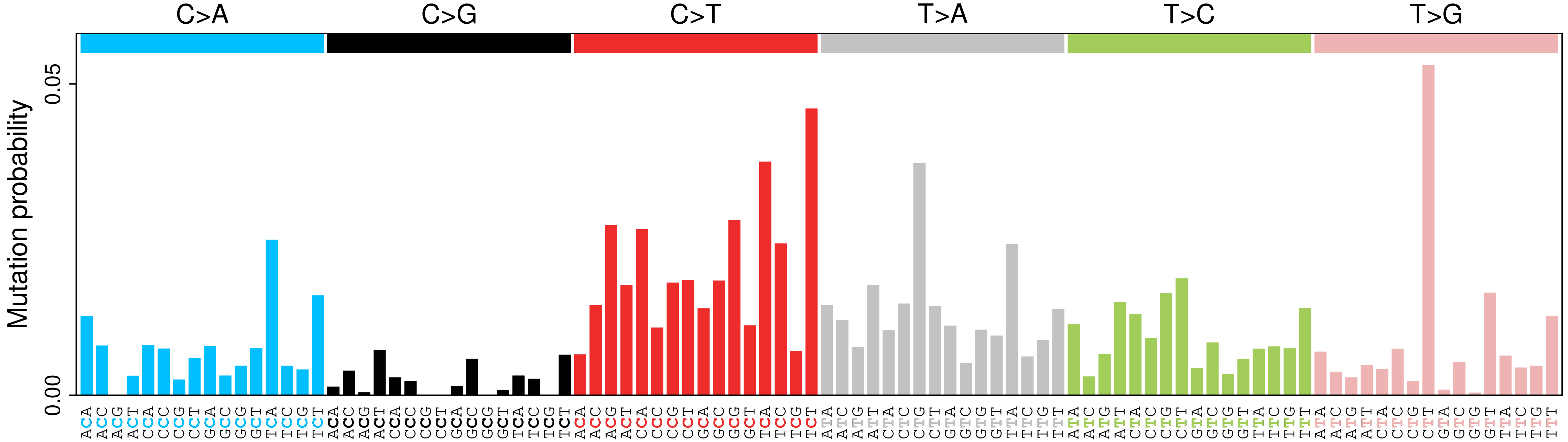
SBS126



SBS127



SBS130



SBS131

$C > A$

C > G

$C > T$

T > A

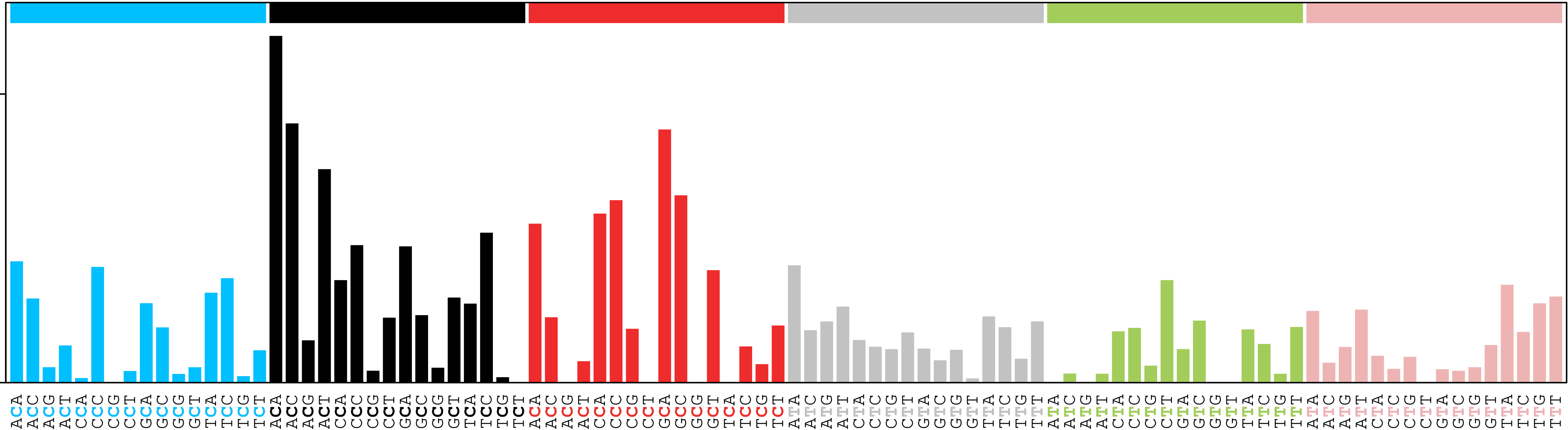
$$T > C$$

T>G

Mutation probability

0.05

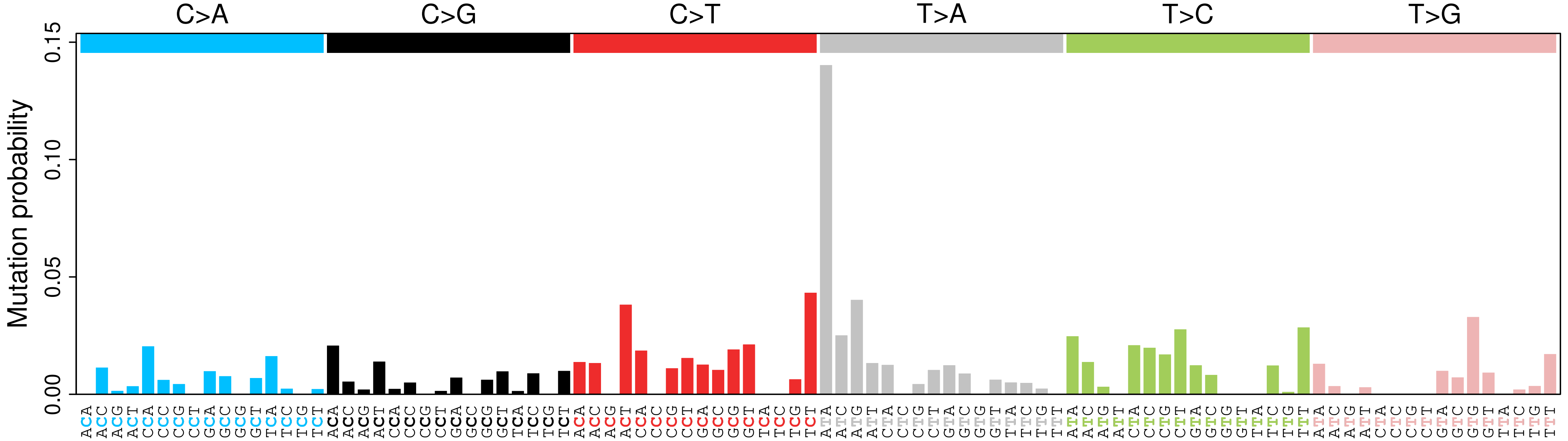
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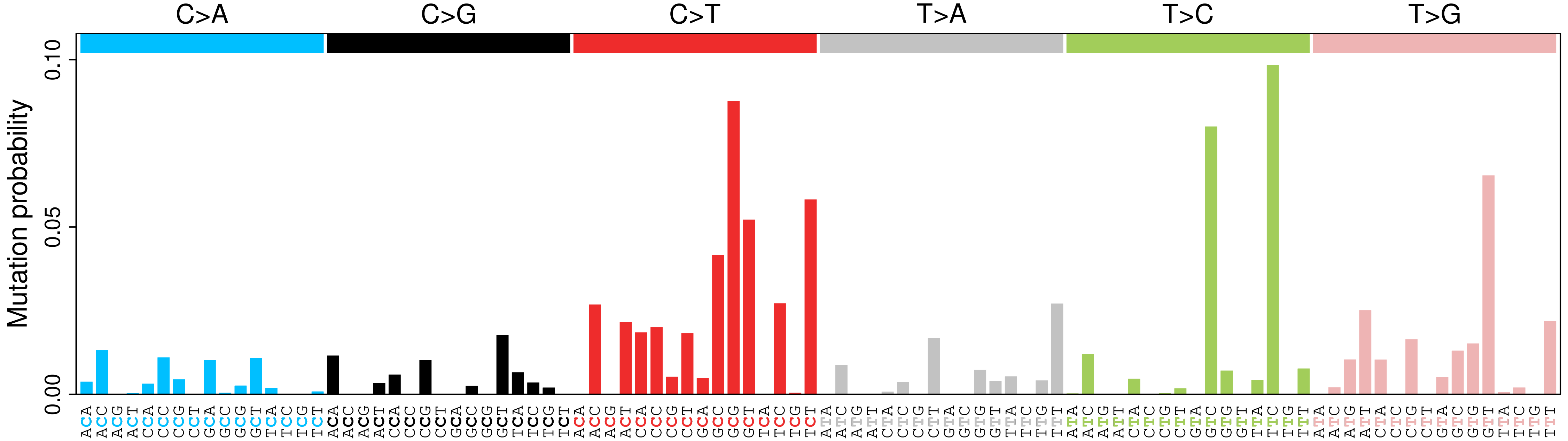
SBS132



SBS135



SBS136



SBS137

C > A

C > G

$C > T$

T > A

$$T > C$$

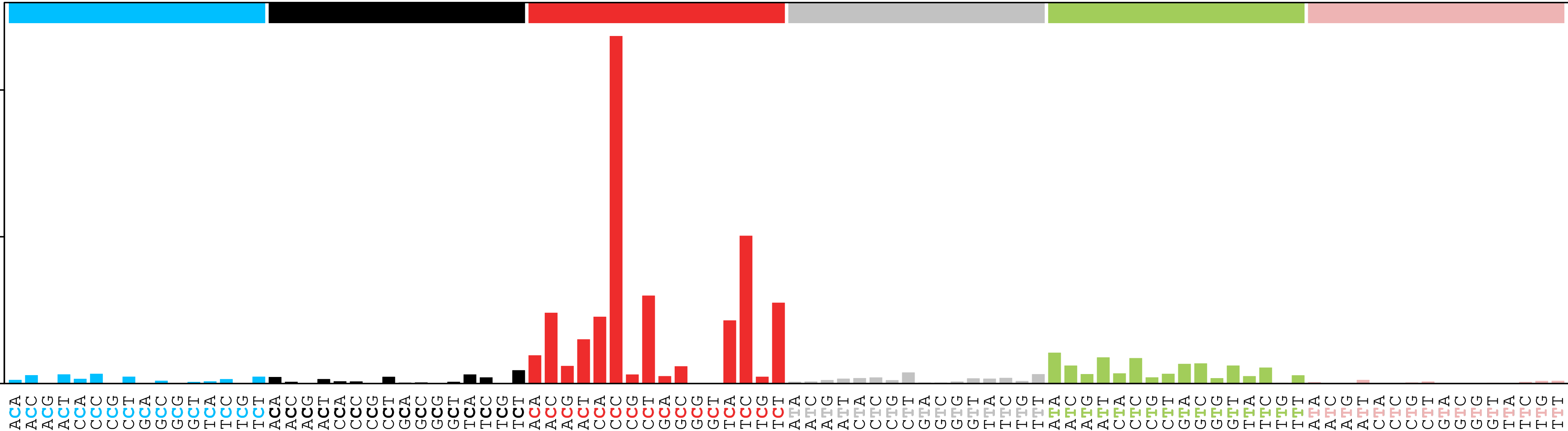
T>G

Mutation probability

0.2

o

0.0



SBS140

C > A

C > G

$C > T$

T > A

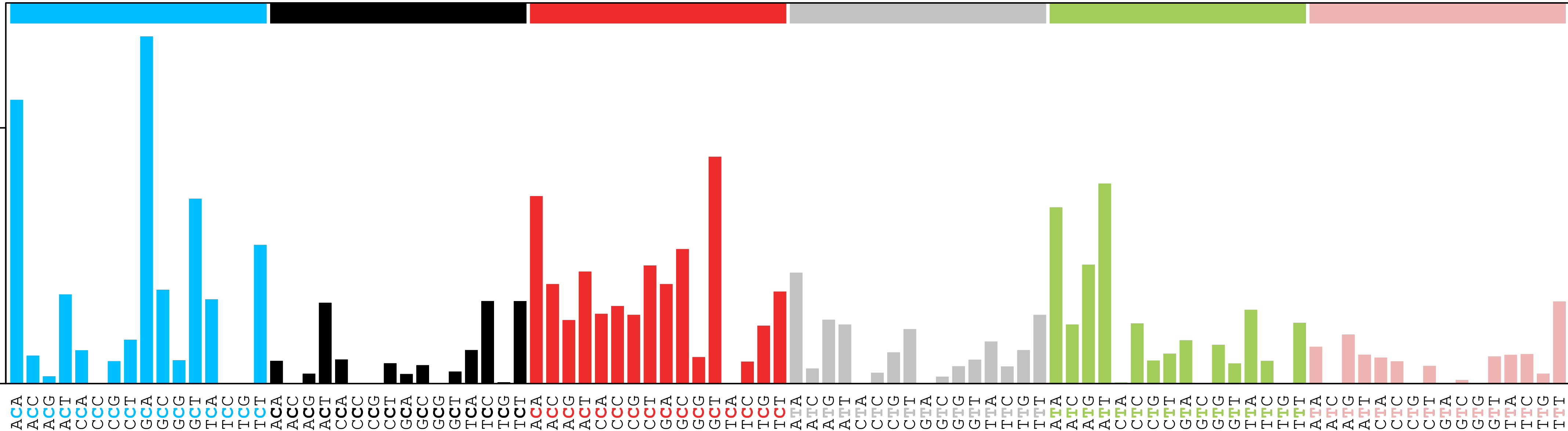
$T > C$

T>G

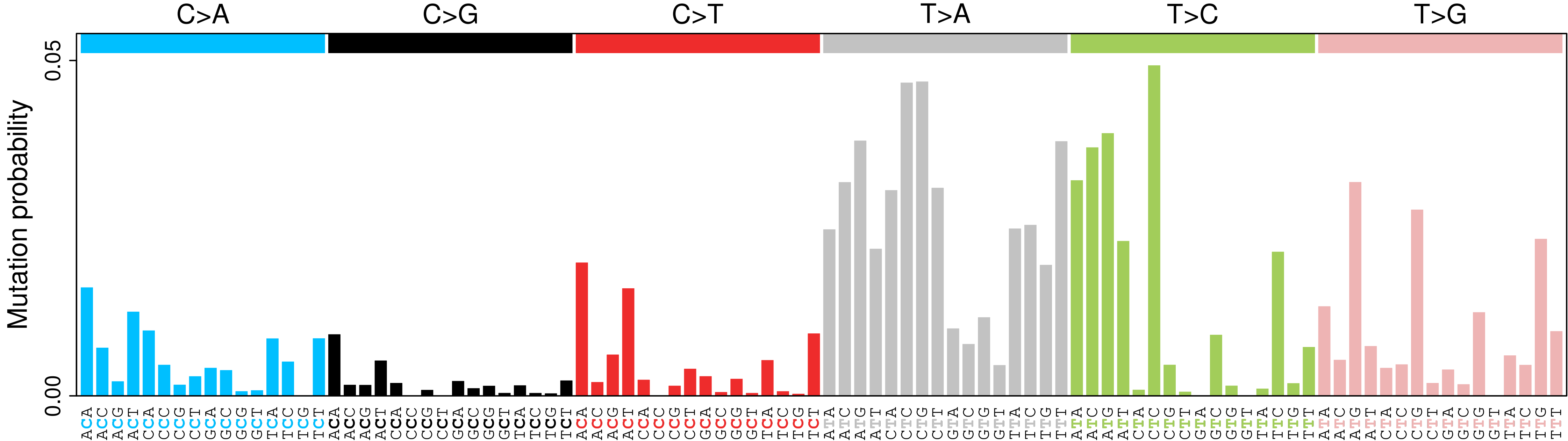
Mutation probability

0.05

0.00



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 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

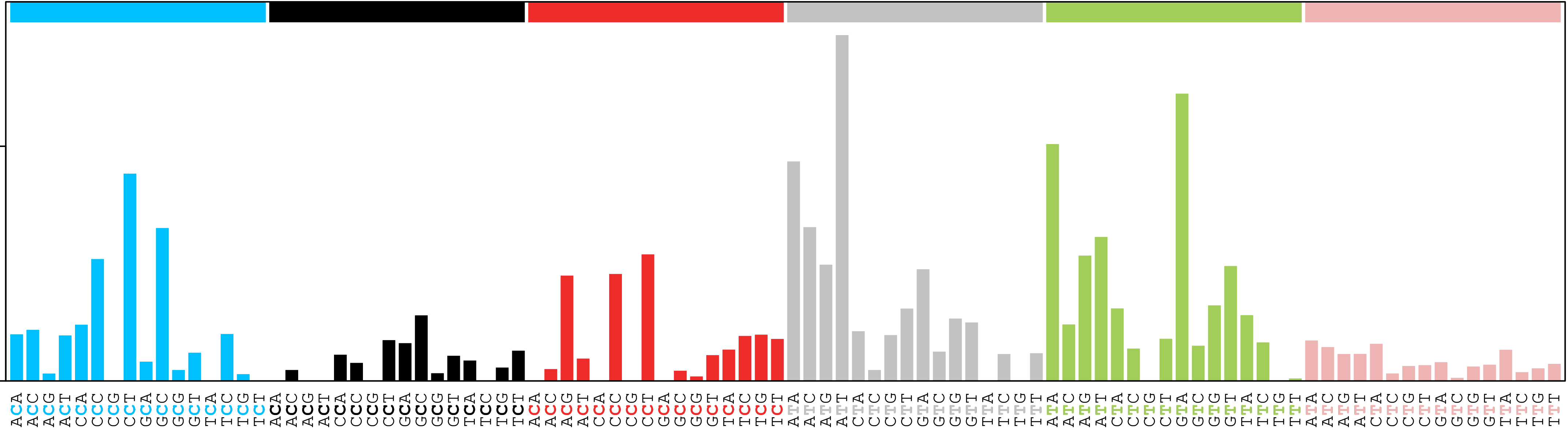
$T > C$

T>G

Mutation probability

0.05

0.00.



SBS145

$C > A$

C > G

$C > T$

T>A

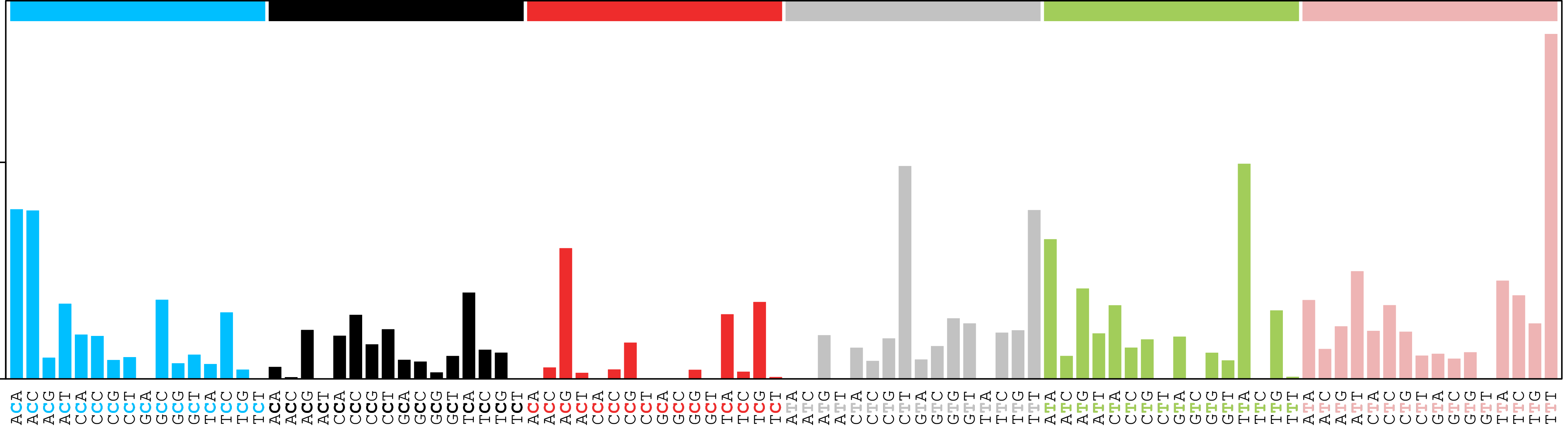
$$T > C$$

$T > G$

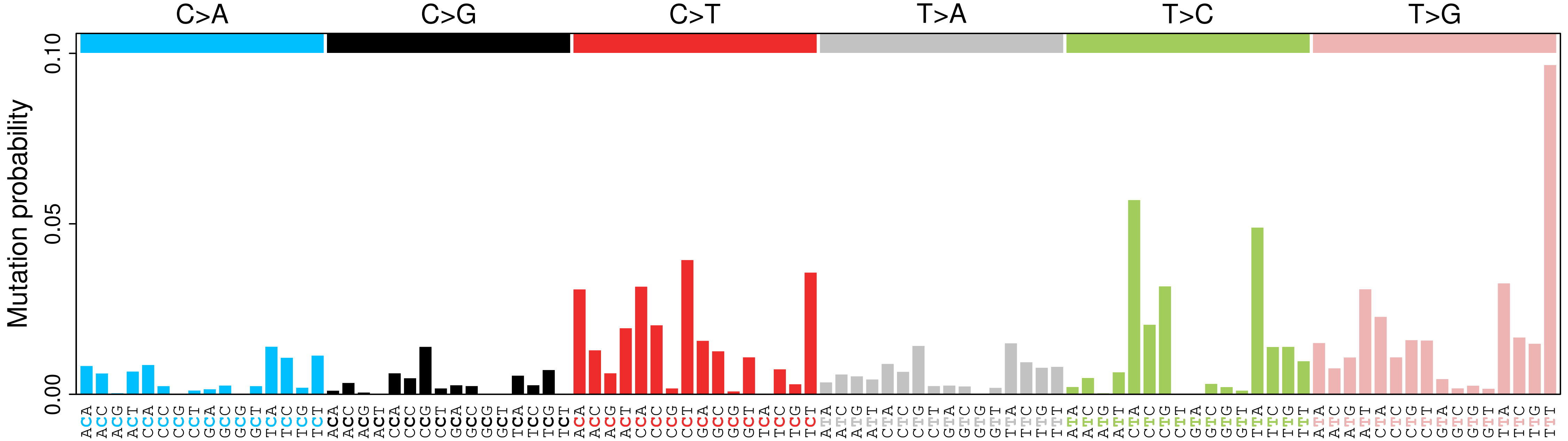
Mutation probability

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

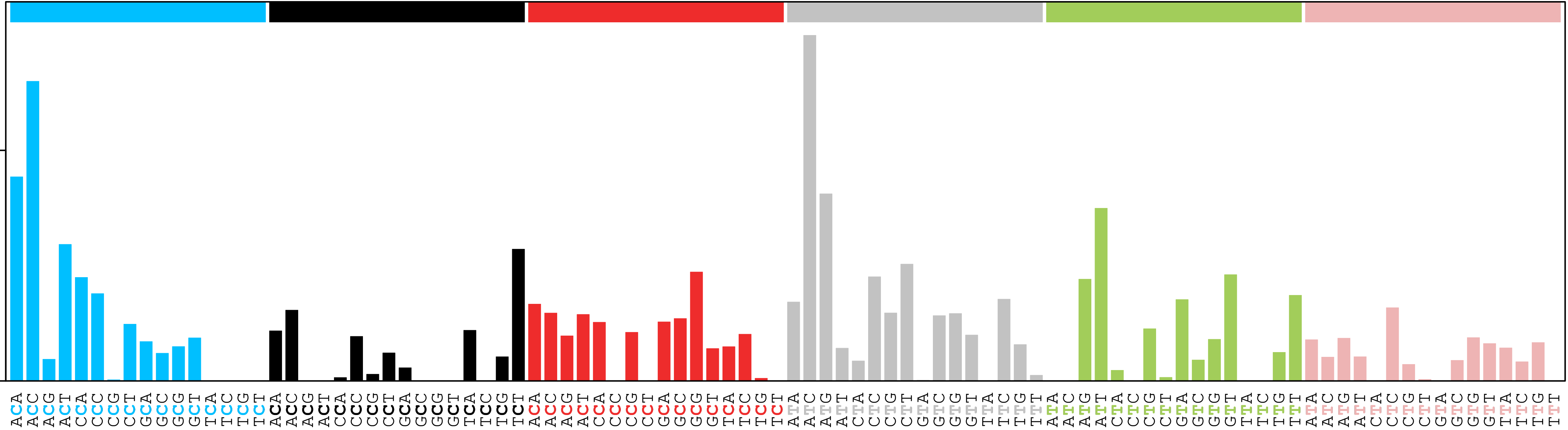
$T > C$

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

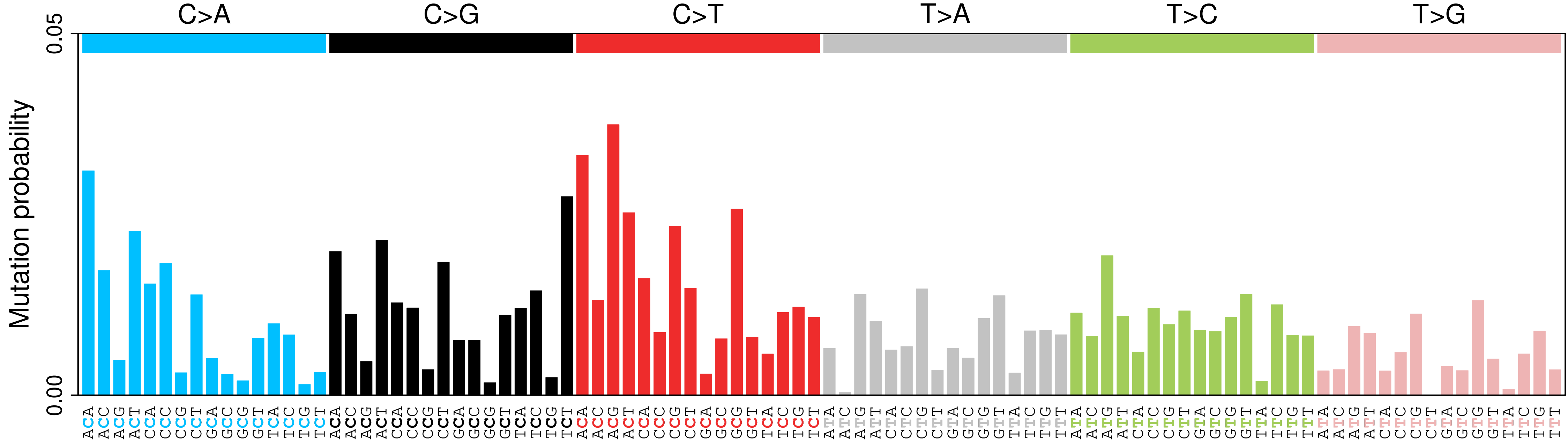
0.00

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



SBS158

C > A

C > G

$C > T$

T > A

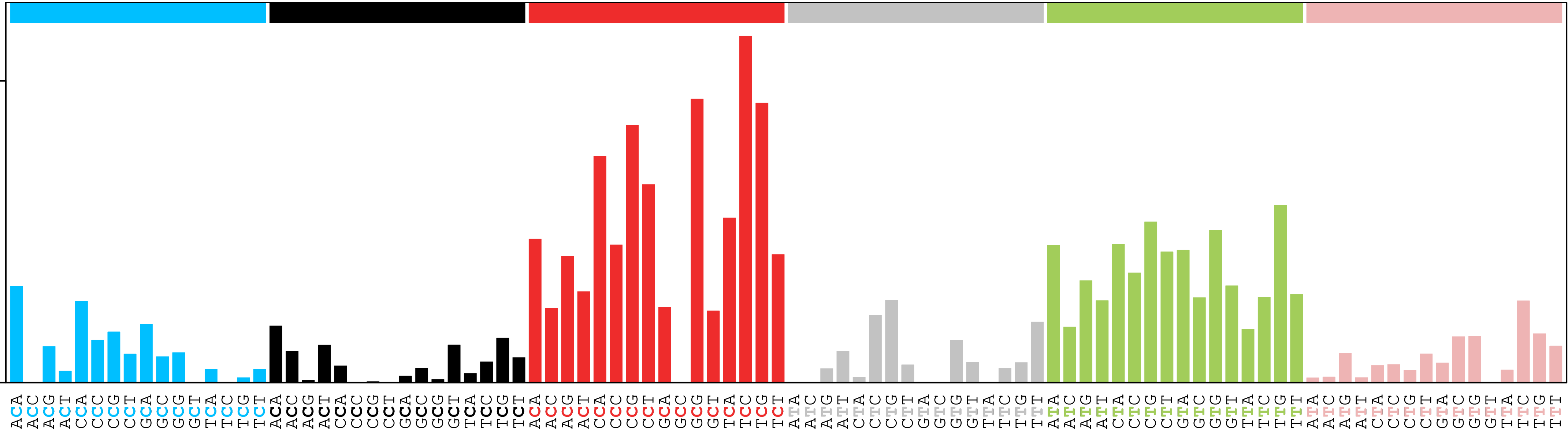
$T > C$

T>G

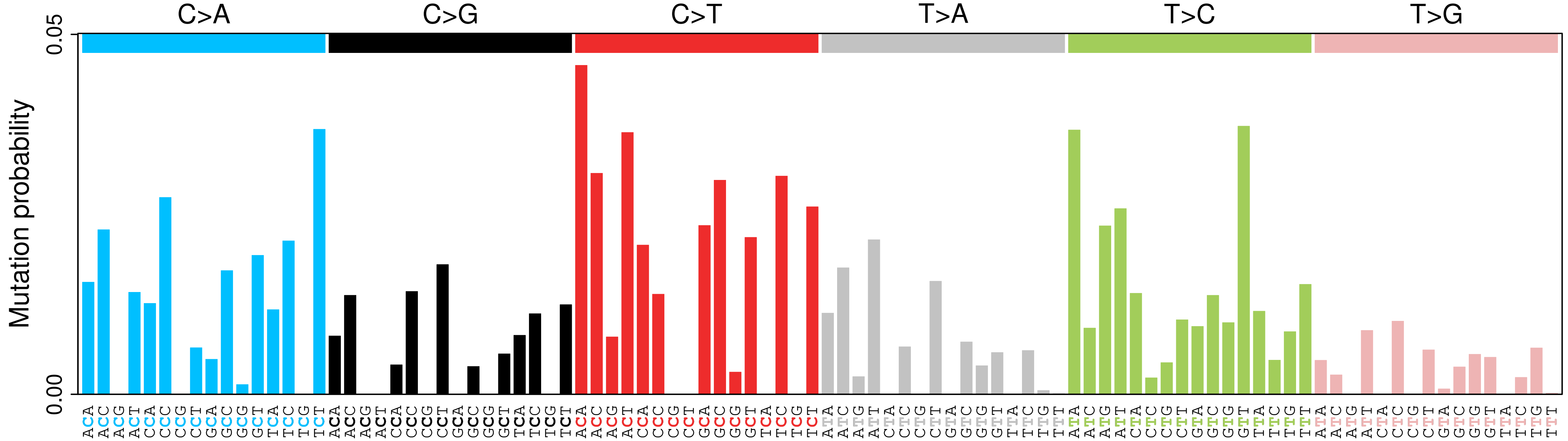
Mutation probability

0.05

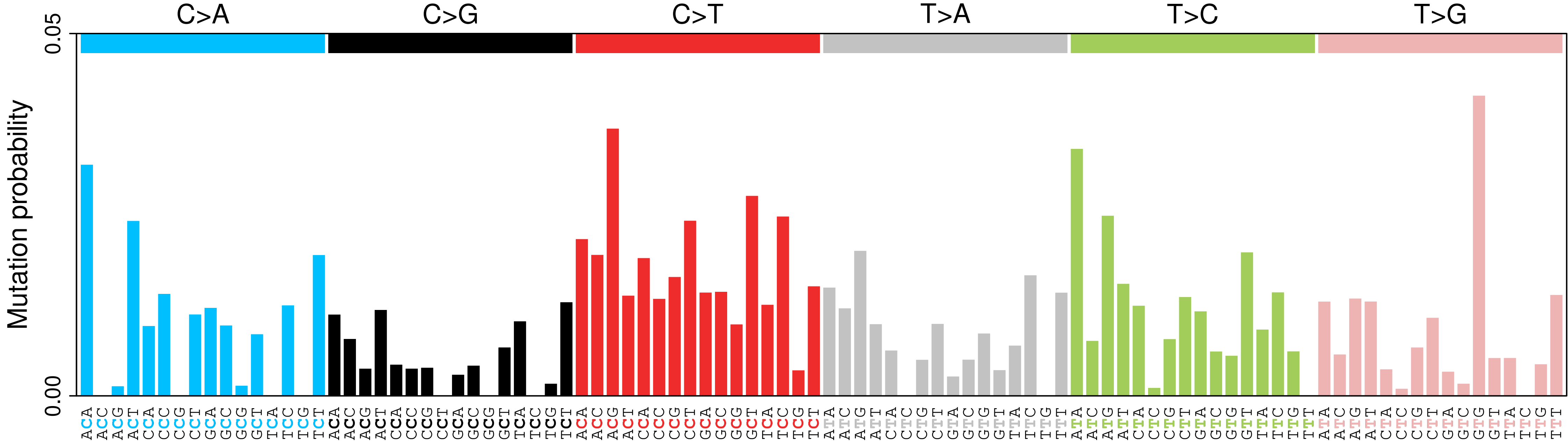
0.00



SBS159



SBS160



SBS161

C>A

C>G

C>T

T>A

T>C

T>G

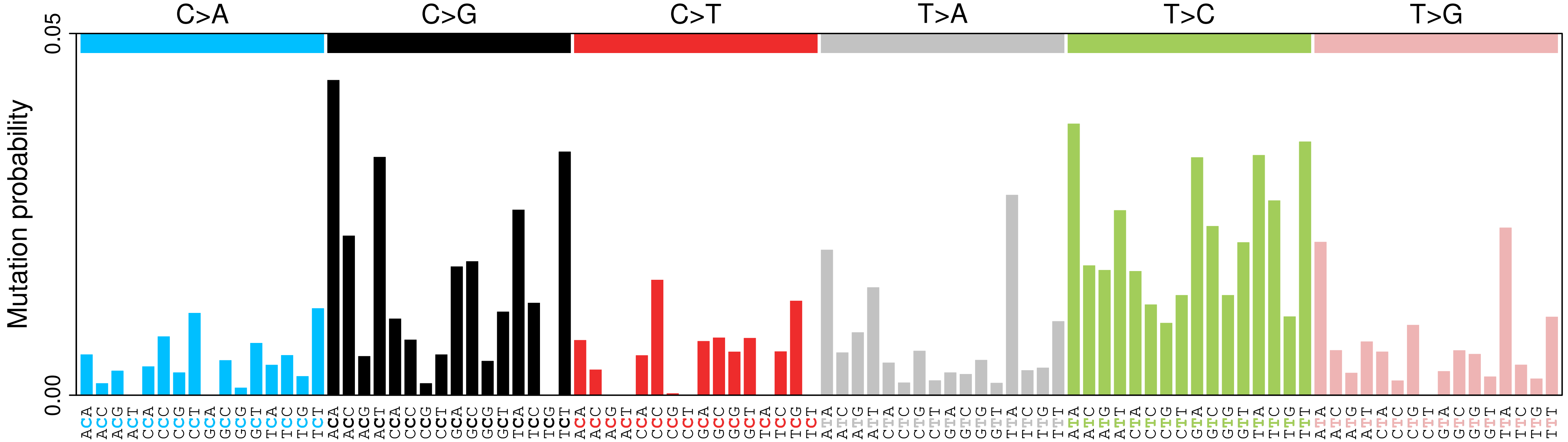
Mutation probability

0.05

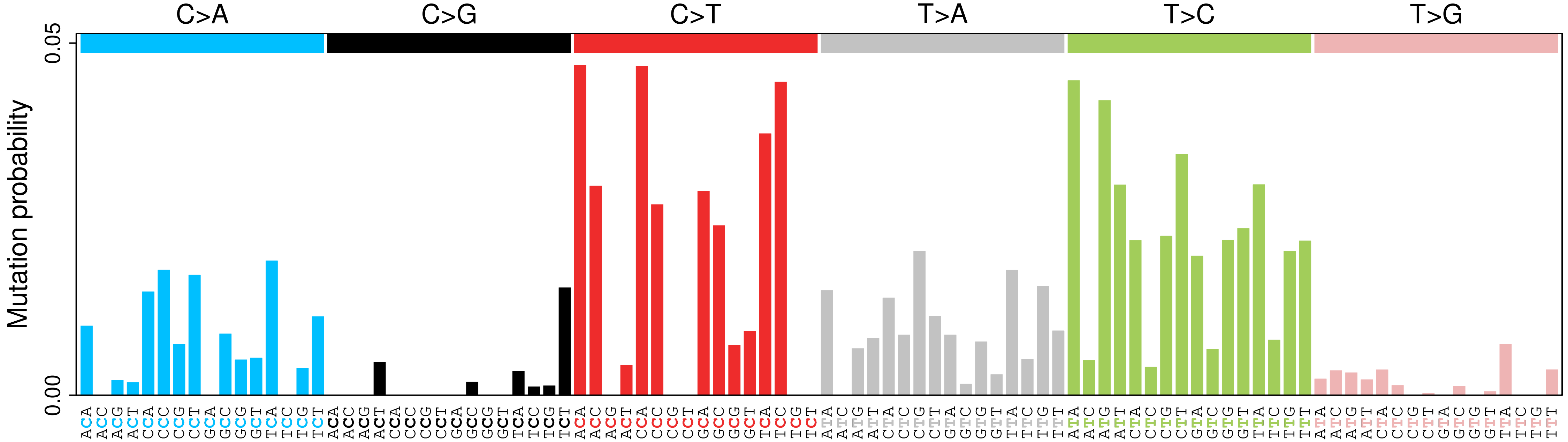
0.00

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

SBS163



SBS164



SBS166

C > A

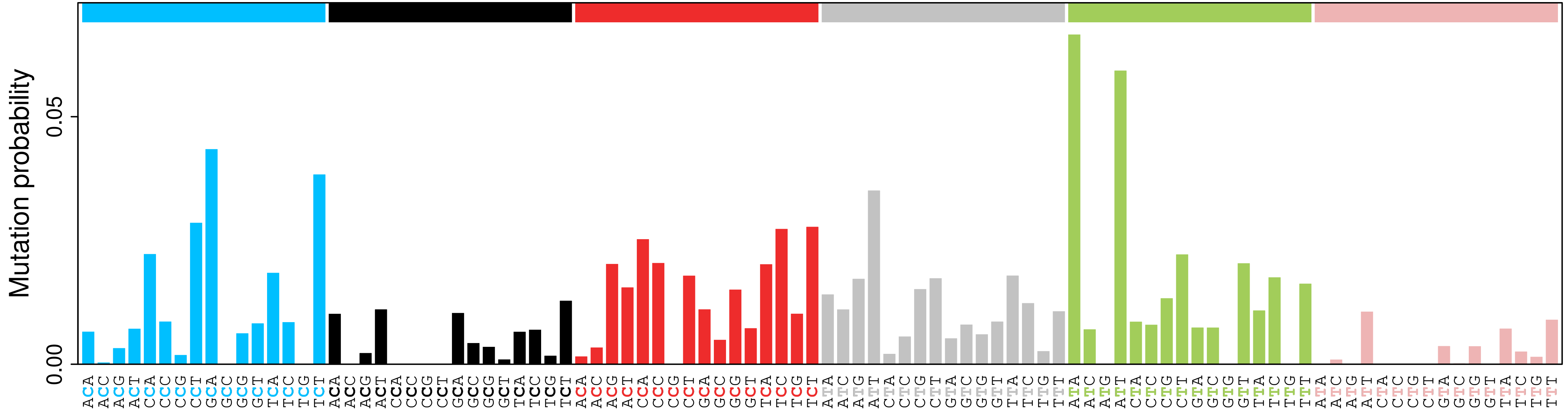
C > G

$C > T$

T > A

$T > C$

T>G



SBS167

$C > A$

C > G

$C > T$

T > A

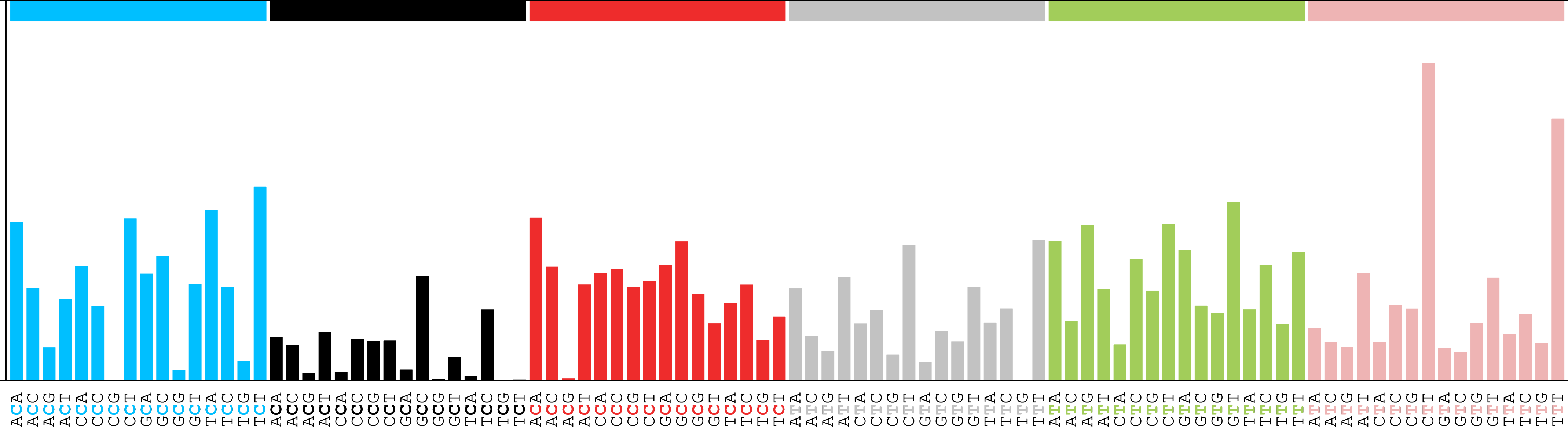
$$T > C$$

T>G

0.05

Mutation probability

0.00



SBS168

C > A

C > G

$C > T$

T > A

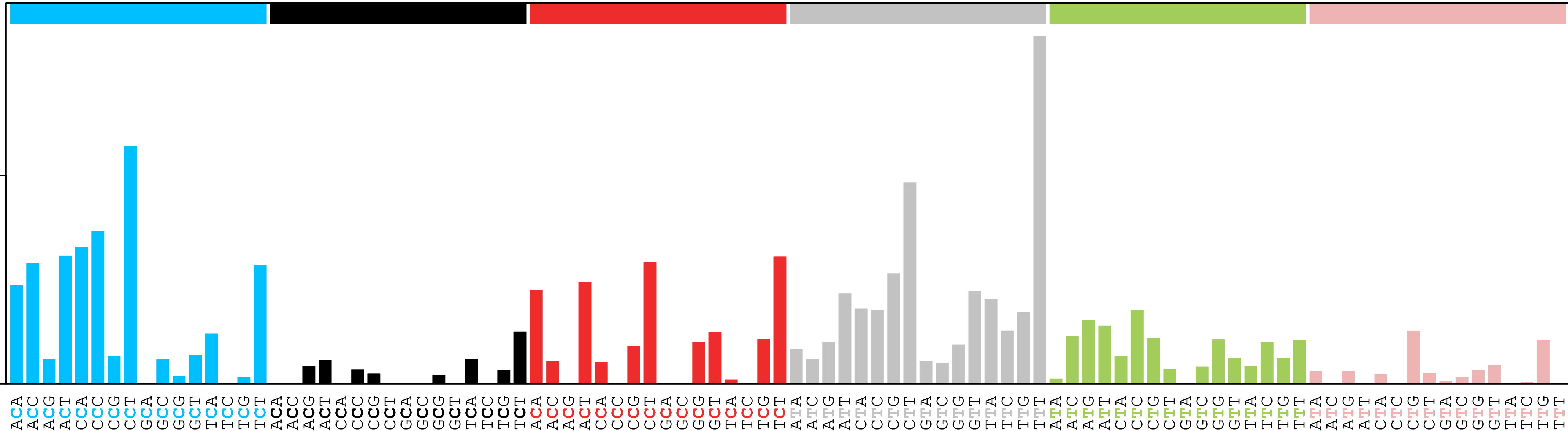
$T > C$

T>G

Mutation probability

0.05

0.00



SBS169

C > A

C > G

$$C > T$$

$T > A$

$T > C$

$T > G$

Mutation probability

0.10

0.05

0.00

