

SBS1

$C > A$

C > G

$$C > T$$

T > A

$T > C$

T>G

Mutation probability

0.00 0.05 0.10 0.15

0.00

SBS3

C>A

C>G

C>T

T>A

T>C

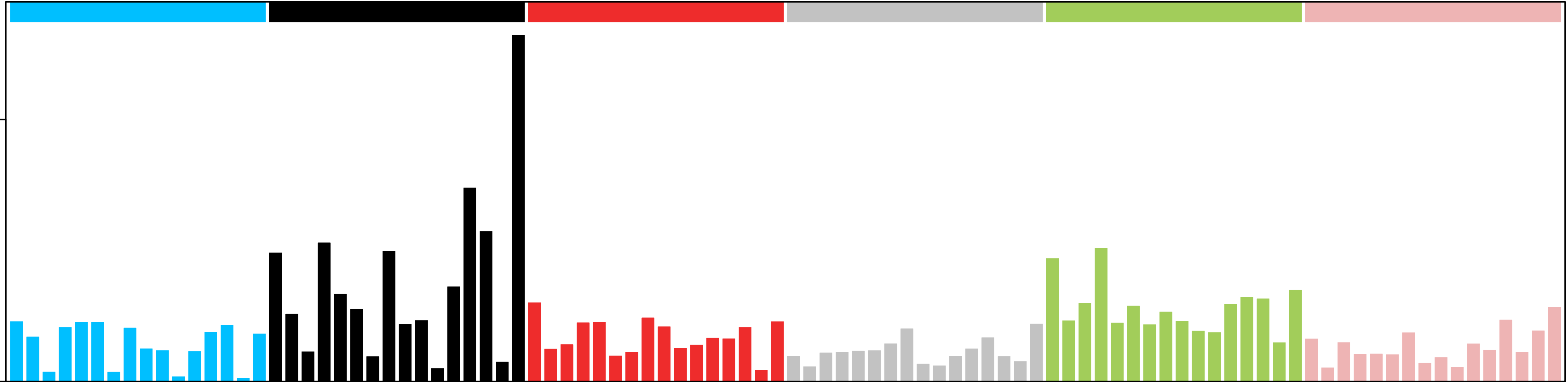
T>G

Mutation probability

0.05

0.00

ACA ACC ACG ACT CCA CCC CCG CCT GCA GCC GGT 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



SBS5



SBS6

$C > A$

C > G

$$C > T$$

T > A

$T > C$

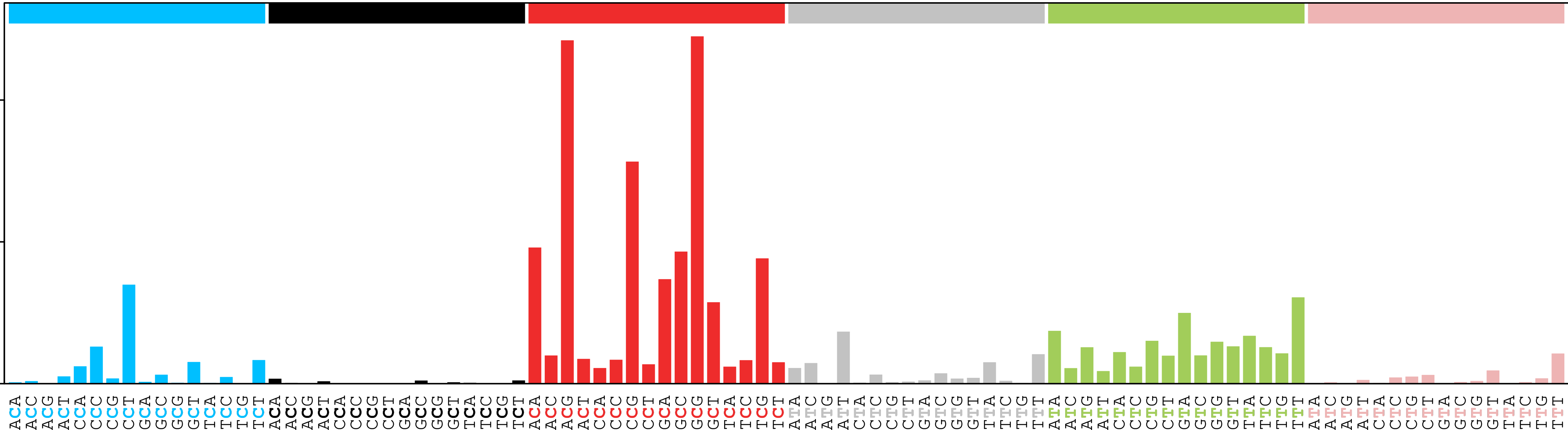
T>G

Mutation probability

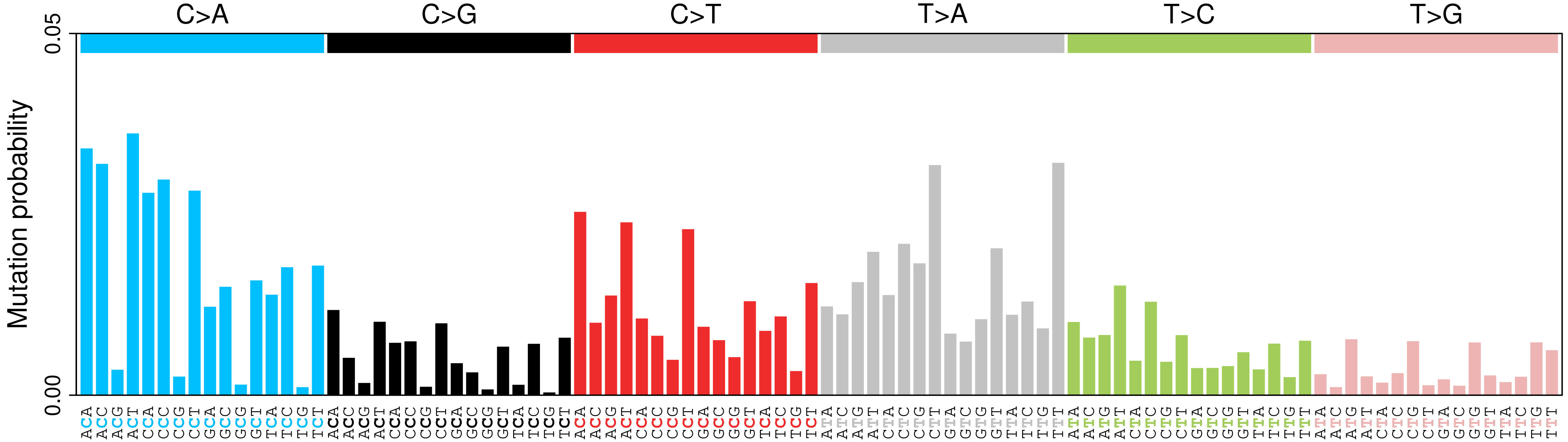
0.10

50.0

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

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 AGC AAT CCA CCC CCG CCT GCA GCC GGT GAT TCA TCC TCG TCT ACA ACC ACG ACT CCA CCC CCG CTT GCA GCC GGT GAT 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 GAT TCA TCC TCG TCT AAT ATC ATG ATT CTA CTC CTG CTT GCA GCC GGT GAT TCA TCC TCG TCT

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

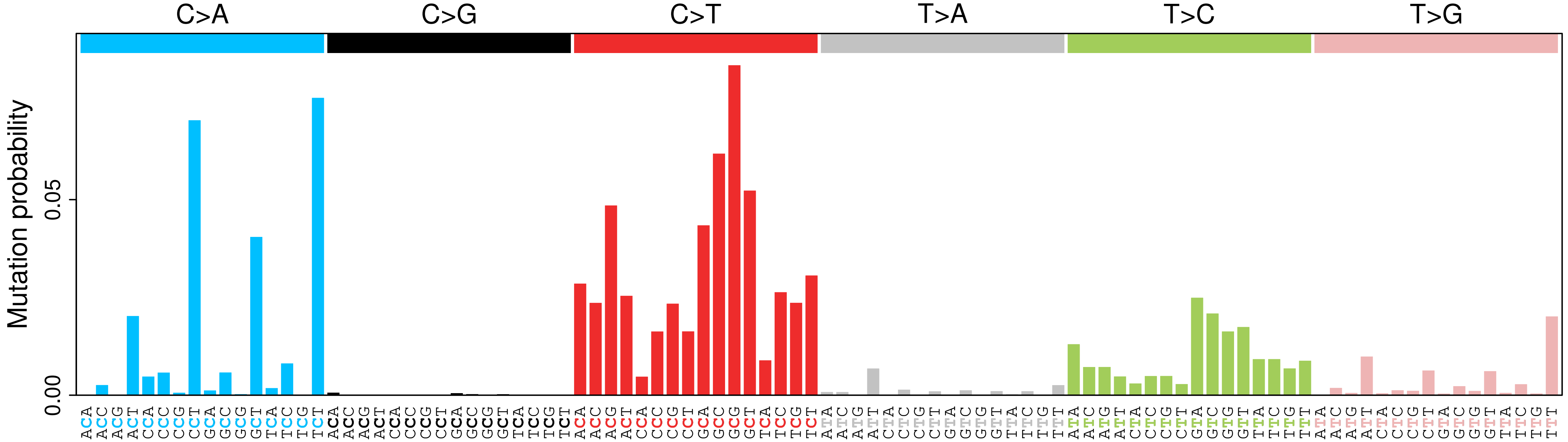
T>G

Mutation probability

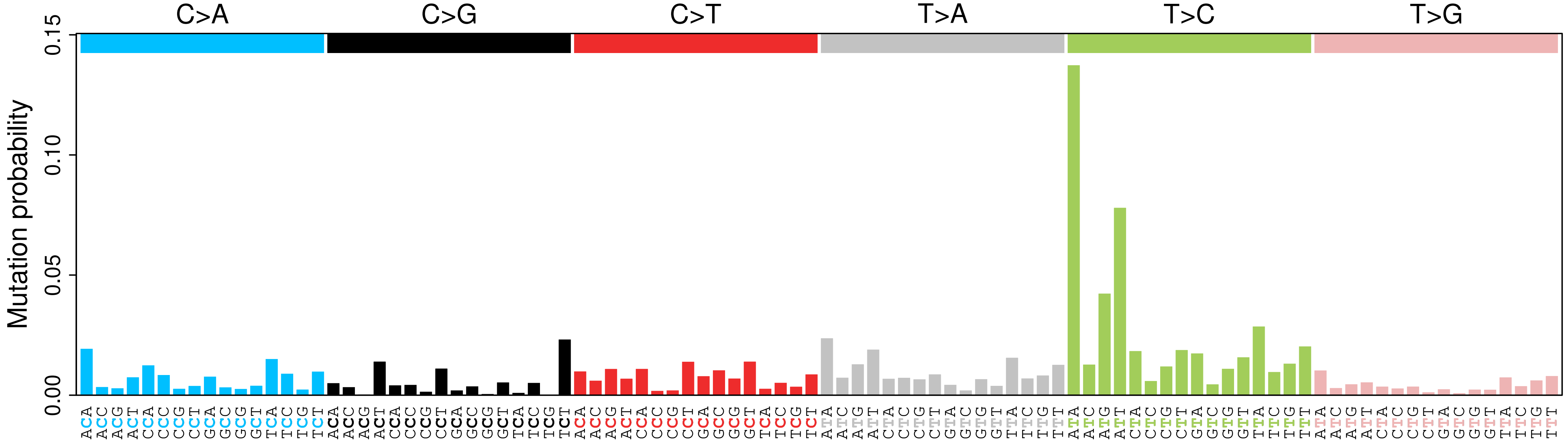
0.20
0.15
0.10
0.05
0.00

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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

$T > C$

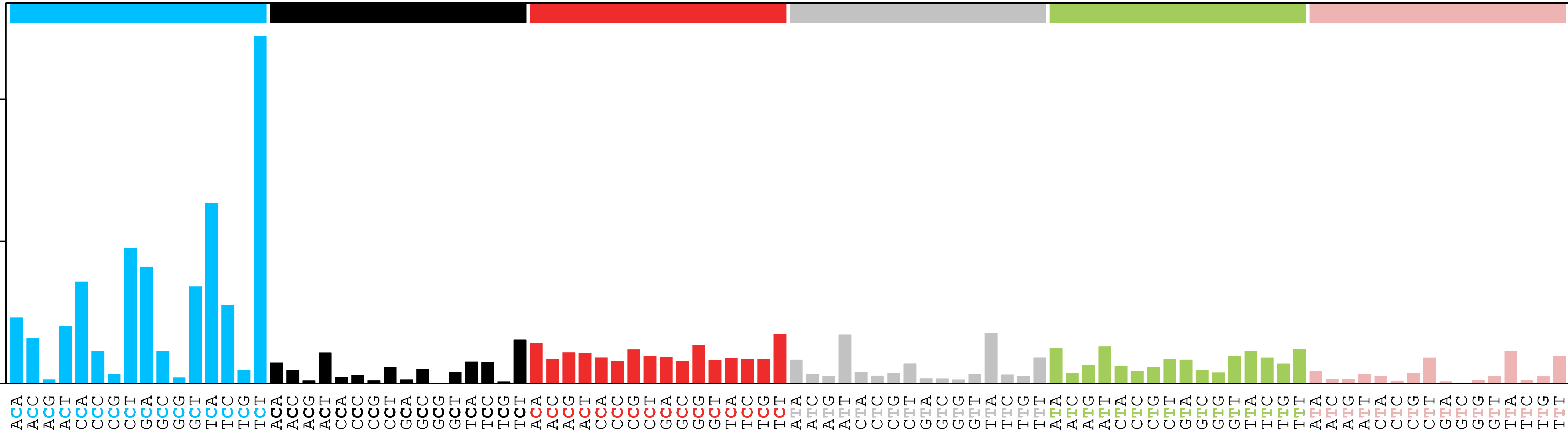
T>G

Mutation probability

0.10

0

0.00



SBS20



SBS22

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

SBS23



SBS24



SBS26

$C > A$

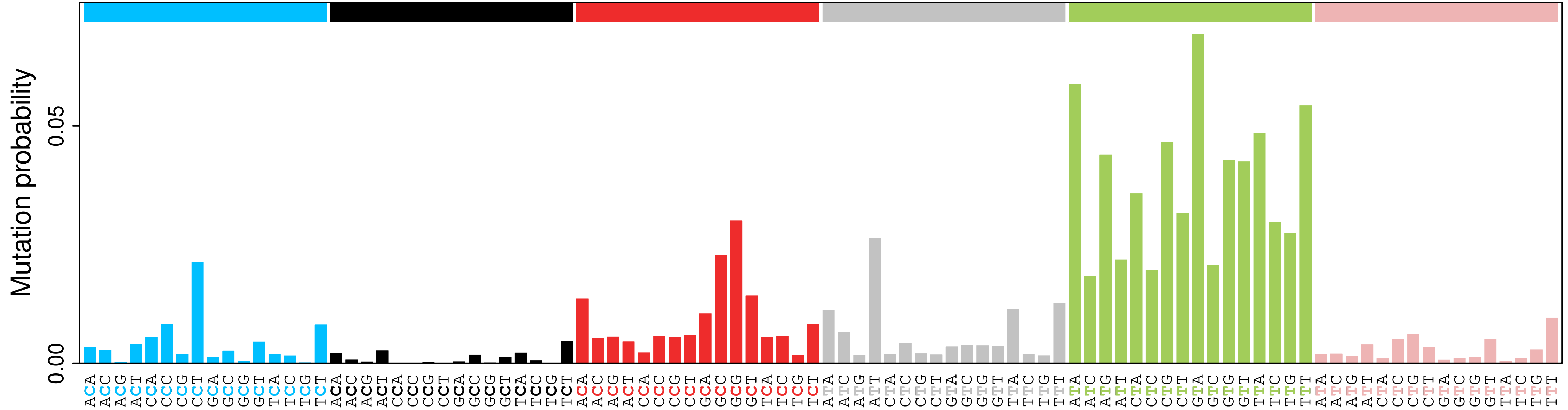
C > G

$$C > T$$

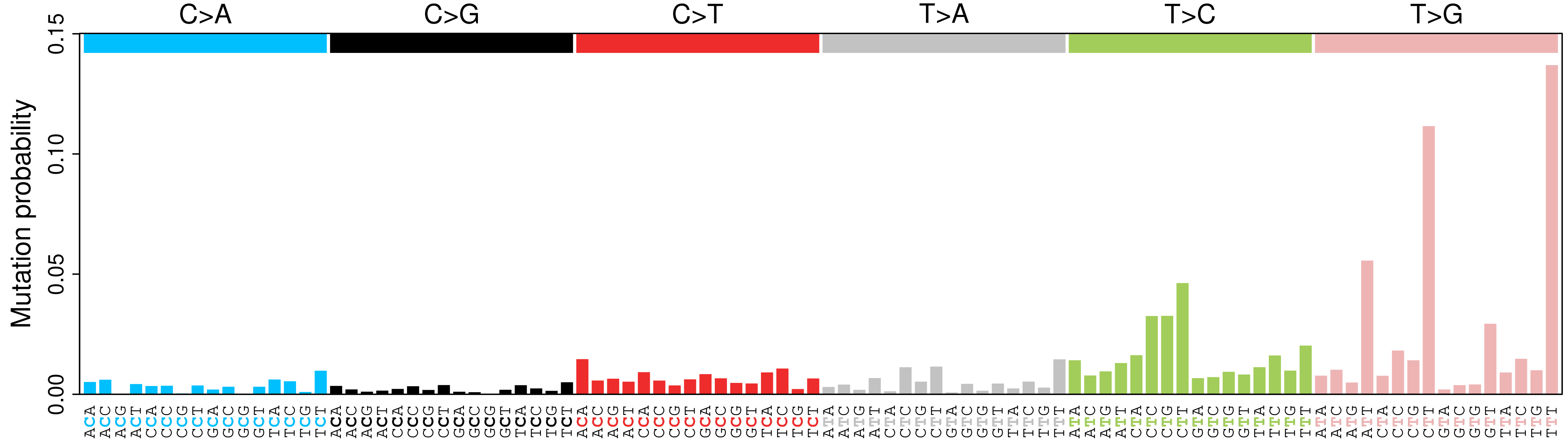
T > A

$$T > C$$

$T > G$



SBS28



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

$$T > C$$

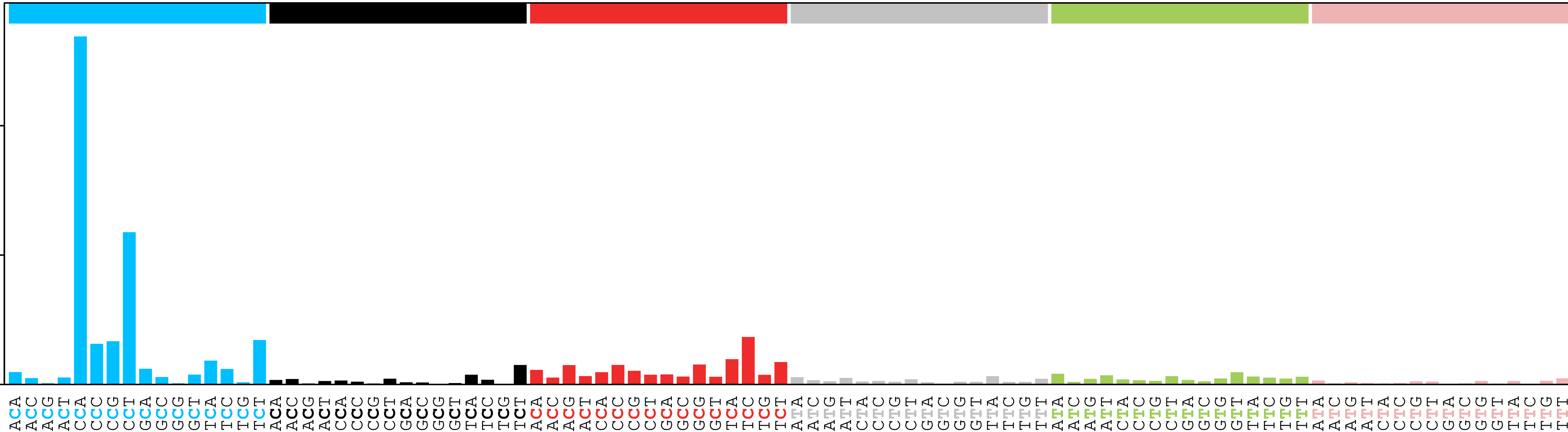
$T > G$

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 ATC 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 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

50

0

[illegible]

SBS84

$$C > A$$

C > G

$$C > T$$

T > A

$T > C$

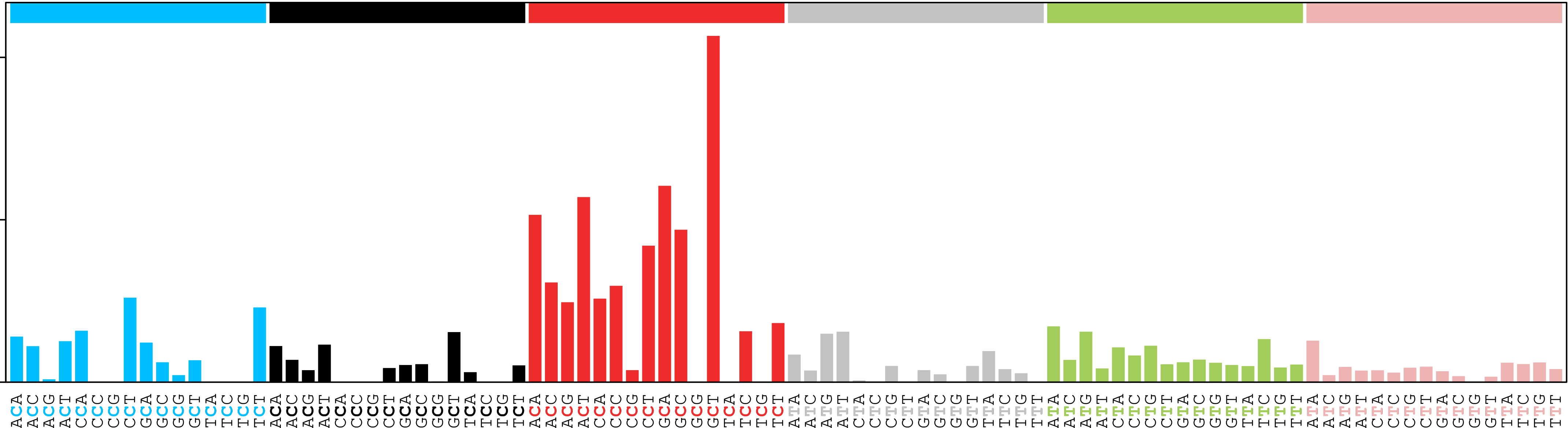
T>G

Mutation probability

0.10

0.05

0.0



SBS88

C>A

C>G

C>T

T>A

T>C

T>G

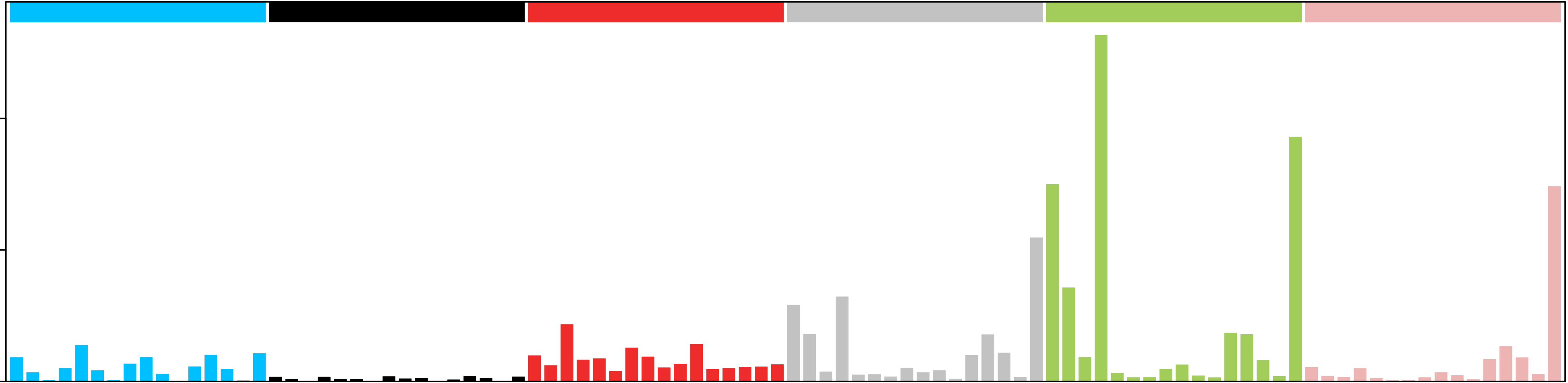
Mutation probability

0.10

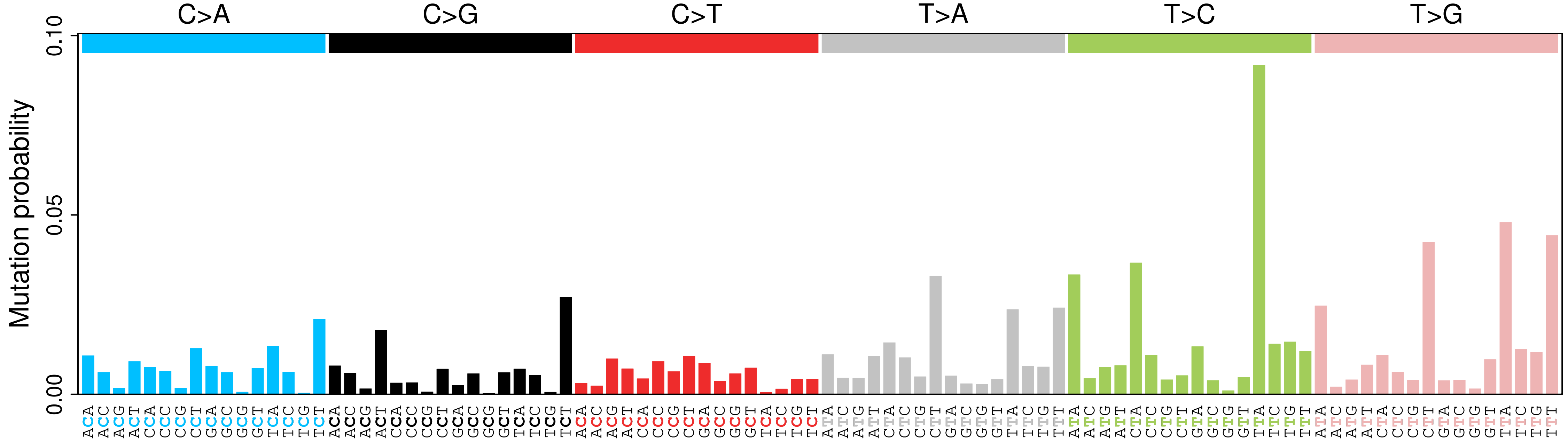
0.05

0.00

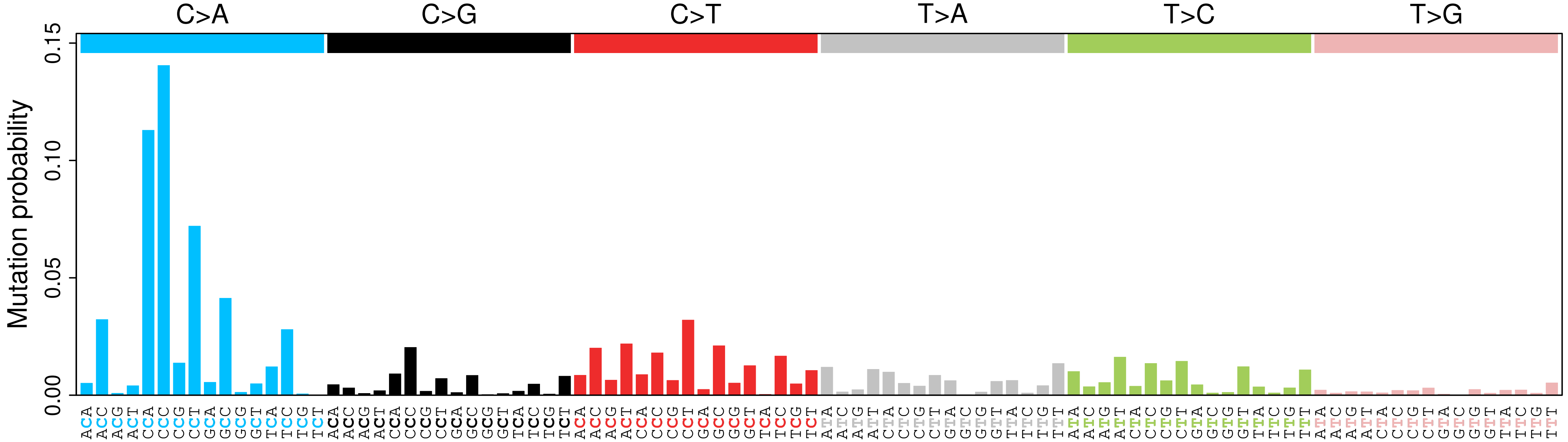
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SBS93



SBS94



SBS95

C>A

C>G

C>T

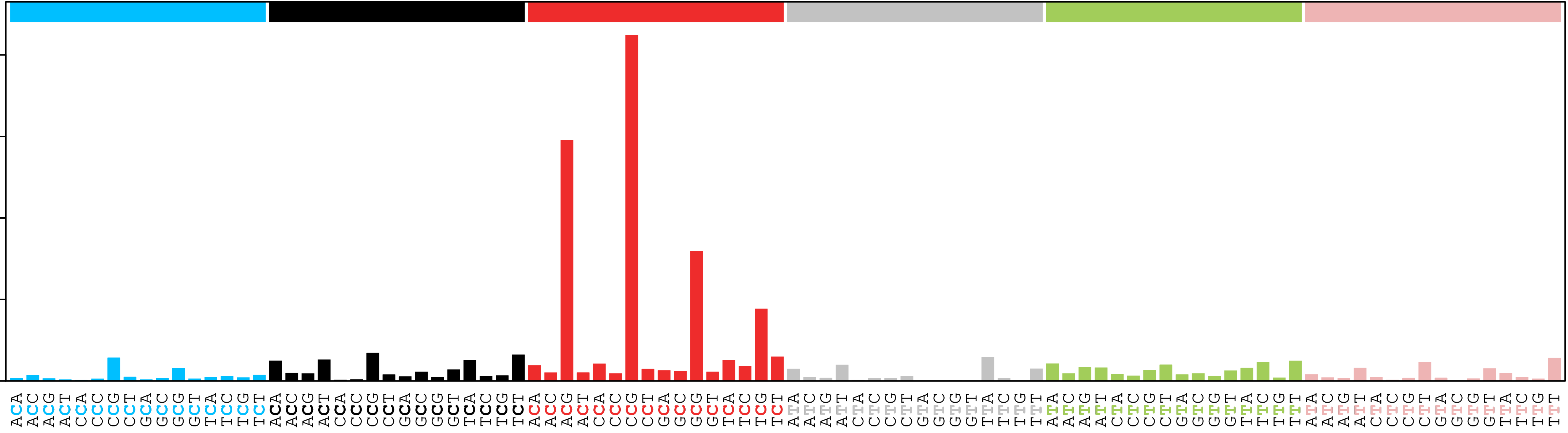
T>A

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

$$T > C$$

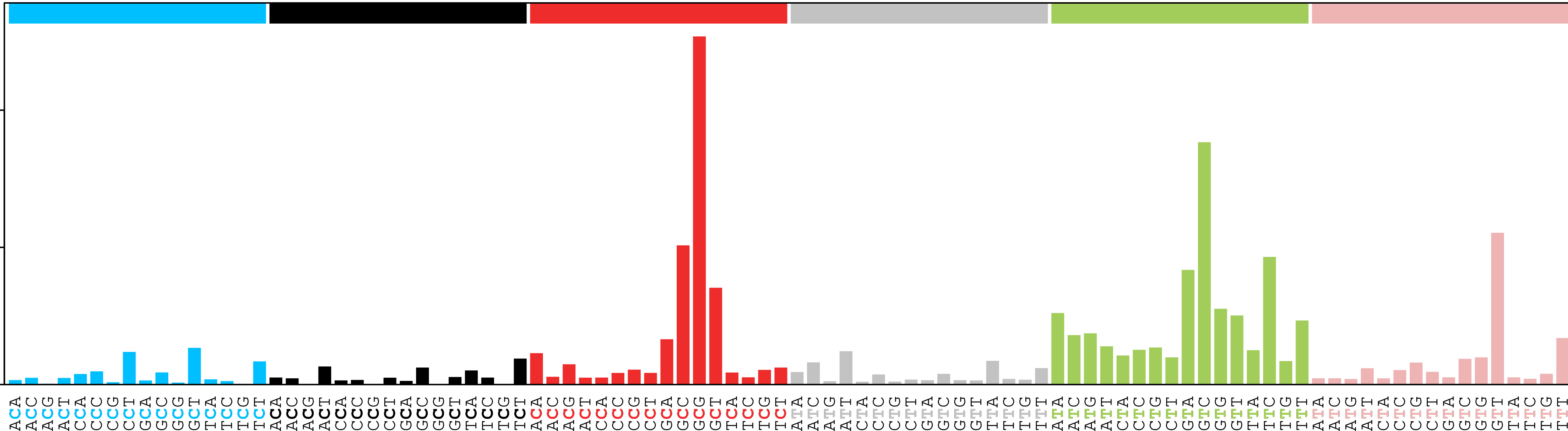
$T > G$

Mutation probability

0.10

50

0.00



SBS98



SBS99

$C > A$

C > G

$$C > T$$

T > A

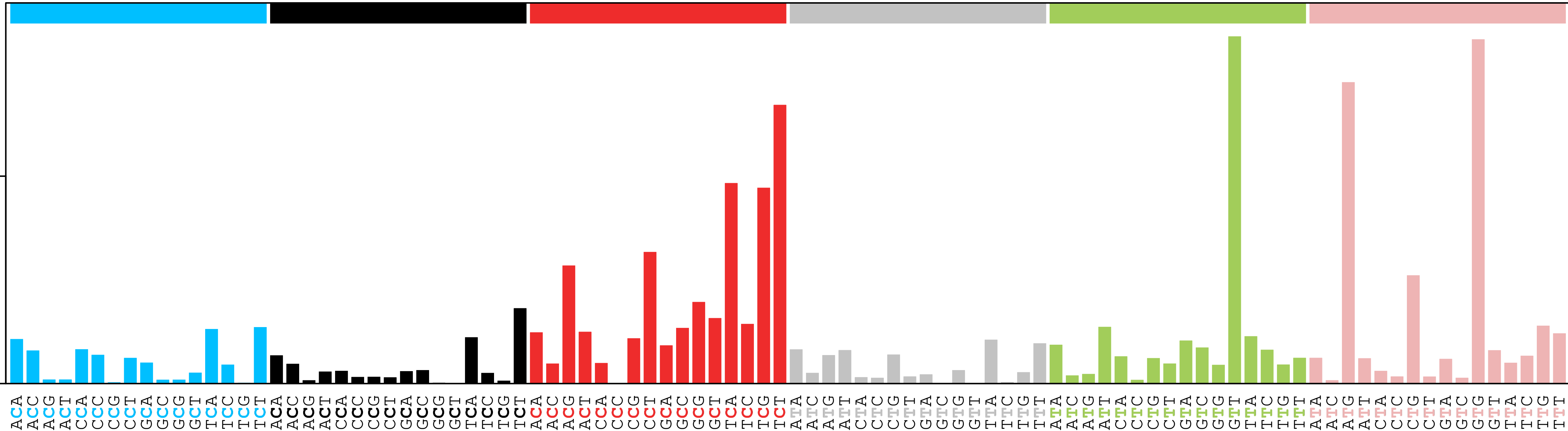
$T > C$

T>G

Mutation probability

0.05

0.00



SBS100

$$C > A$$

C > G

C>T

T > A

$$T > C$$

$T > G$

Mutation probability

0.10

0.05

0.00

[illegible]

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

SBS103



SBS104

C>A

C>G

C>T

T>A

T>C

T>G

Mutation probability

0.2

0.1

0.0

ACA ACC AGT ACA CCC CCG CCT GCA GCC GGT GCT TCA TCC TCG TCT ACA ACC AGT 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

SBS105



SBS107

$C > A$

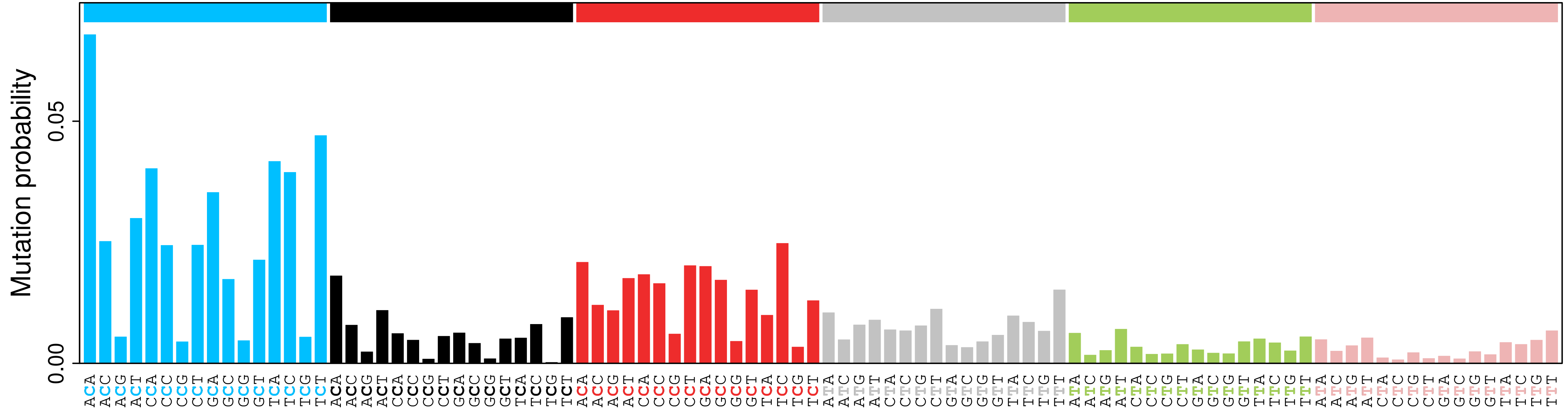
C > G

$$C > T$$

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

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

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

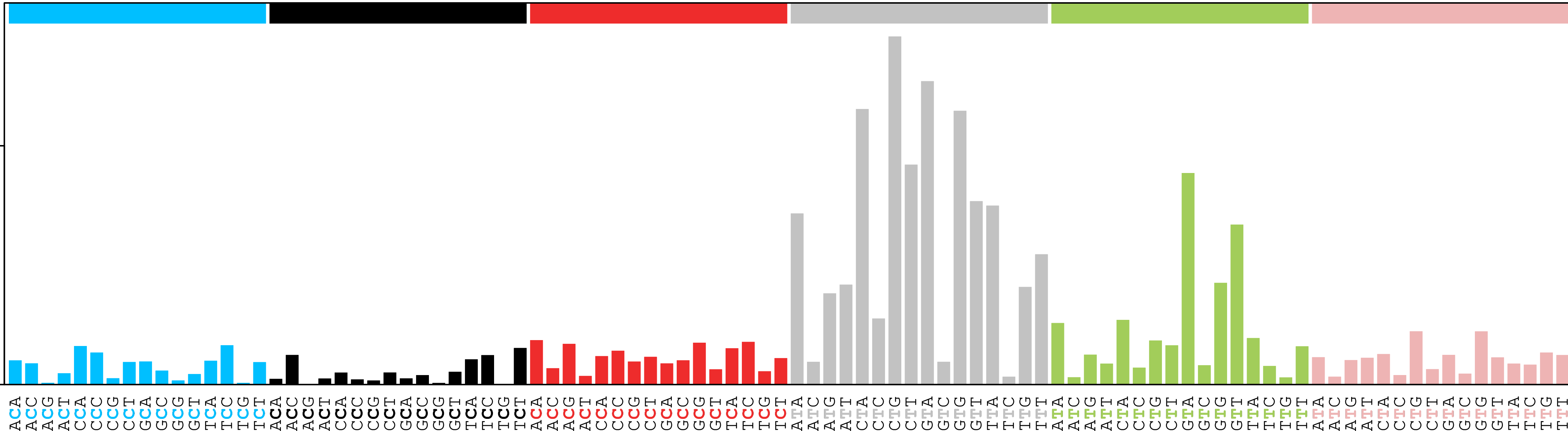
$T > C$

T>G

Mutation probability

0.05

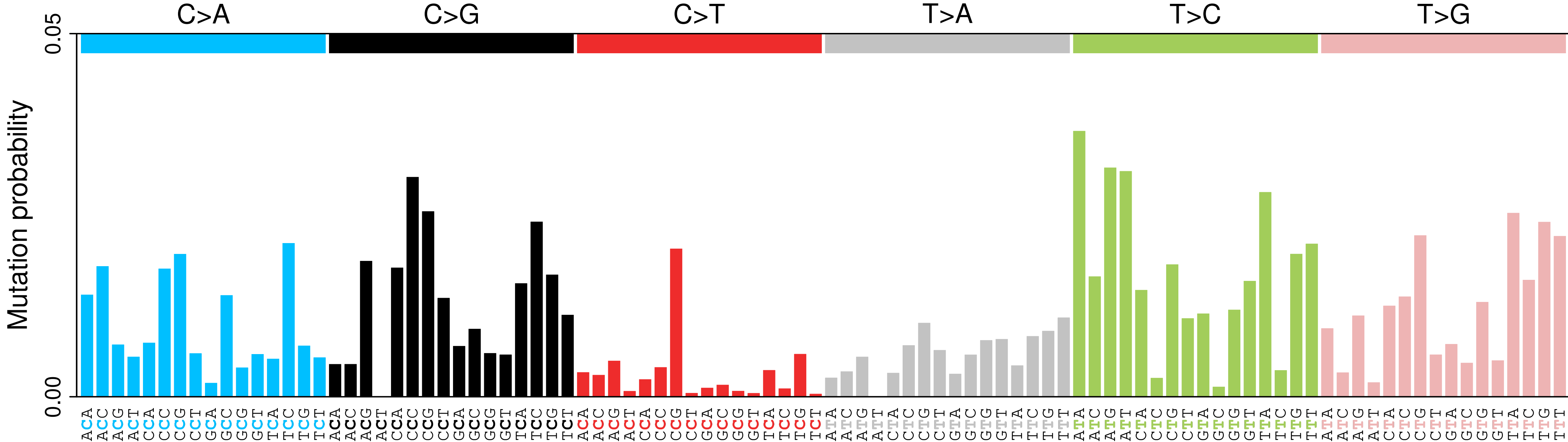
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SBS116



SBS117



SBS122

$C > A$

C>G

$C > T$

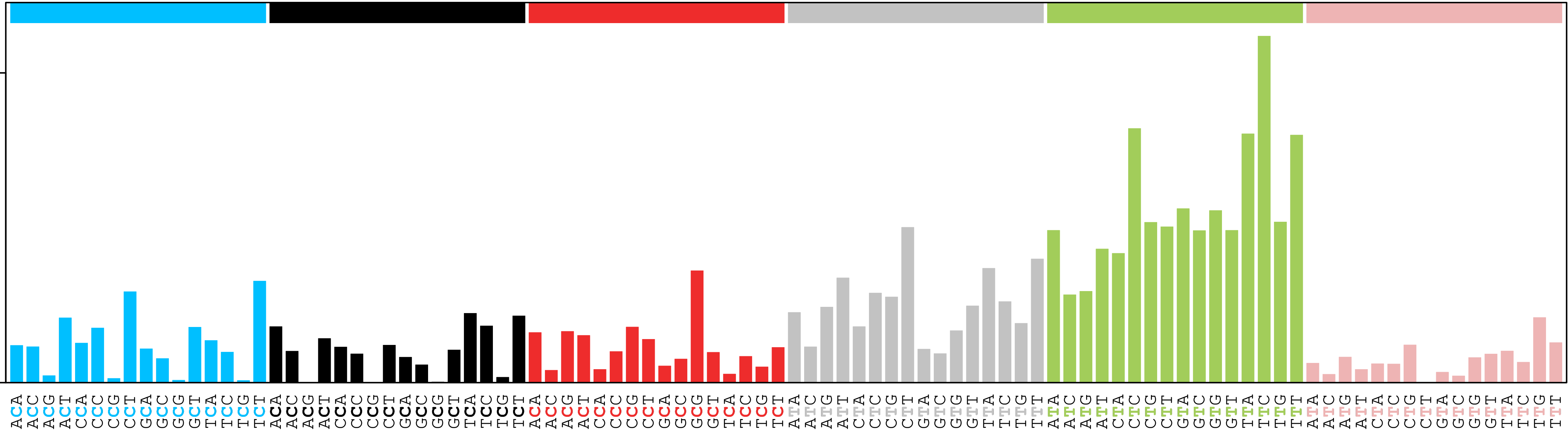
T>A

$$T > C$$

T>G

0.05

0.00



SBS123

C>A

C>G

C>T

T>A

T>C

T>G

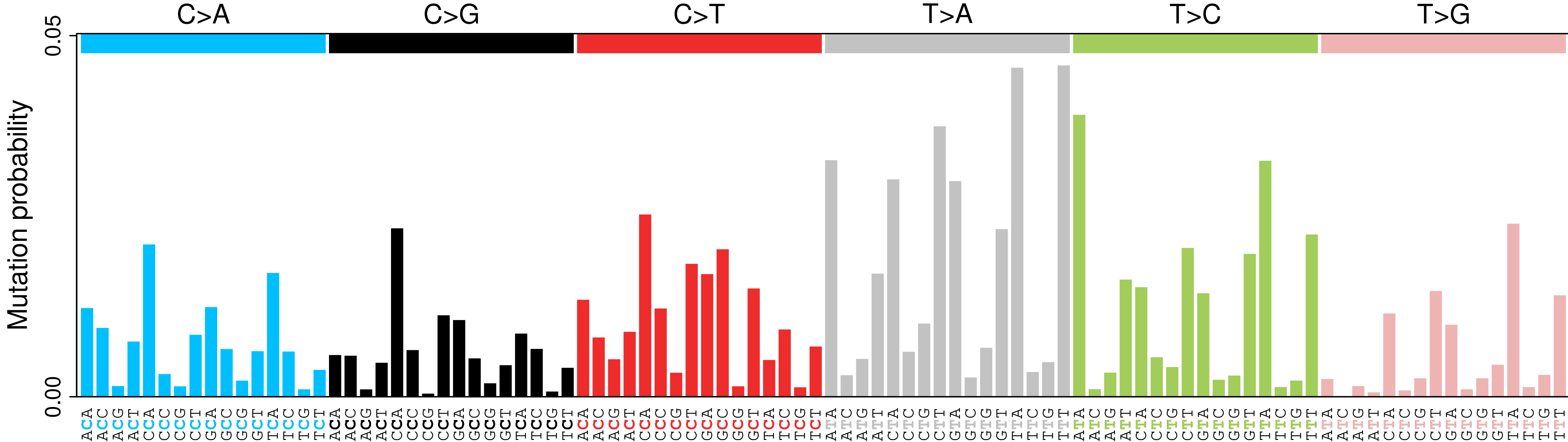
Mutation probability

0.05

0.00

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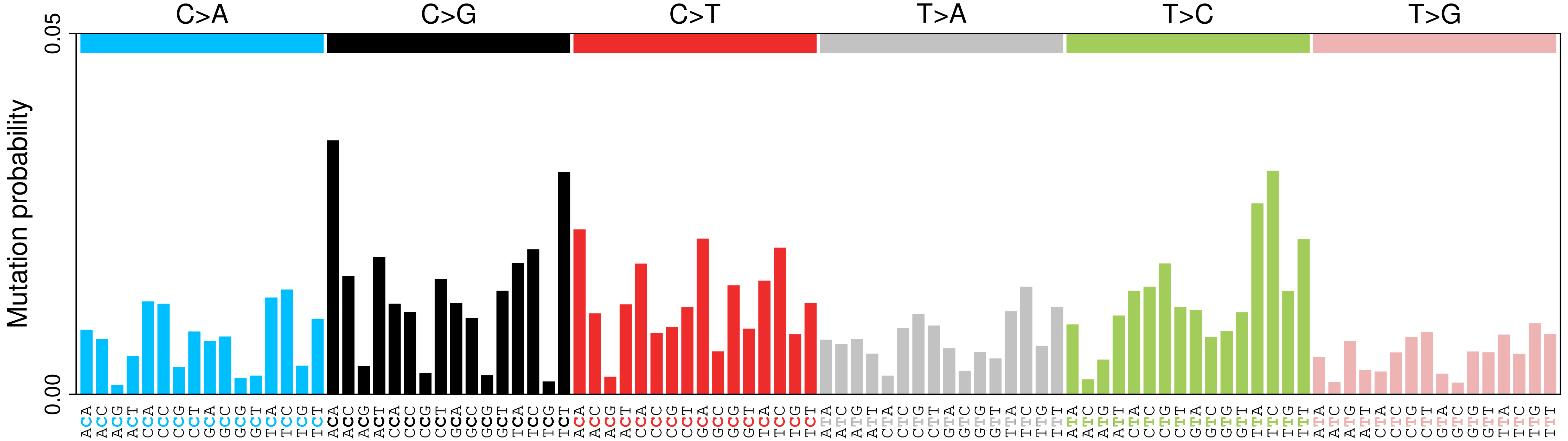
SBS124



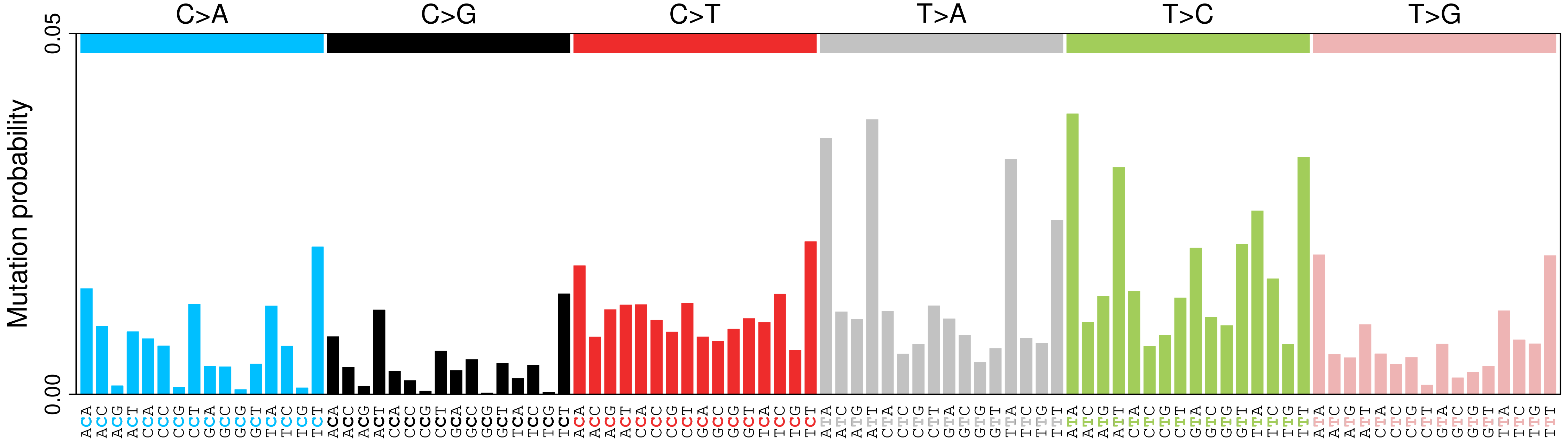
SBS125



SBS126



SBS127



SBS131

$C > A$

C>G

$C > T$

T>A

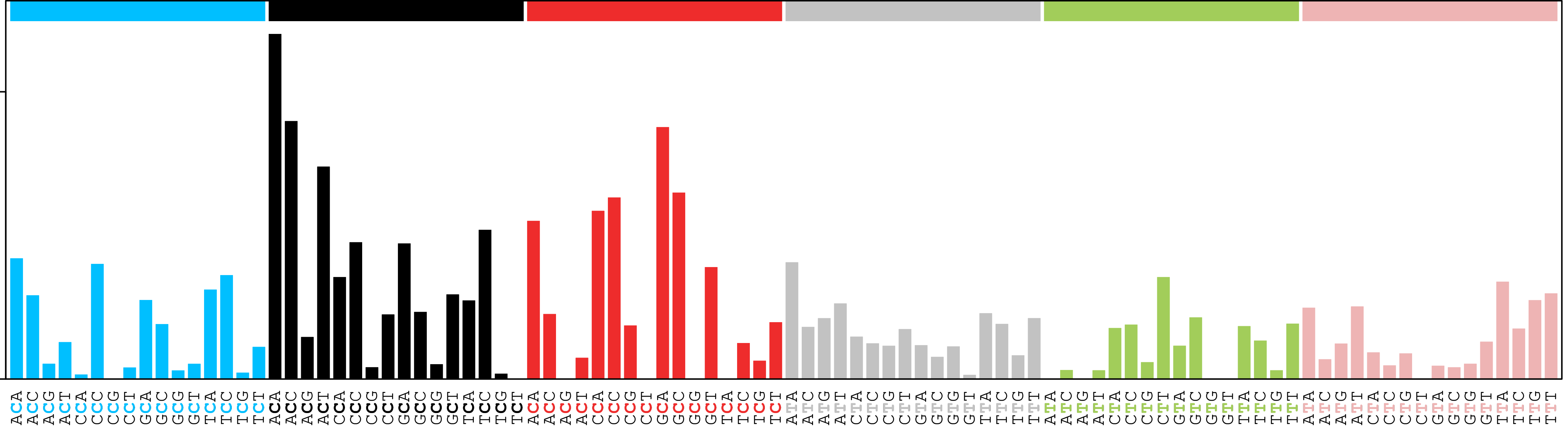
$$T > C$$

T>G

Mutation probability

0.05

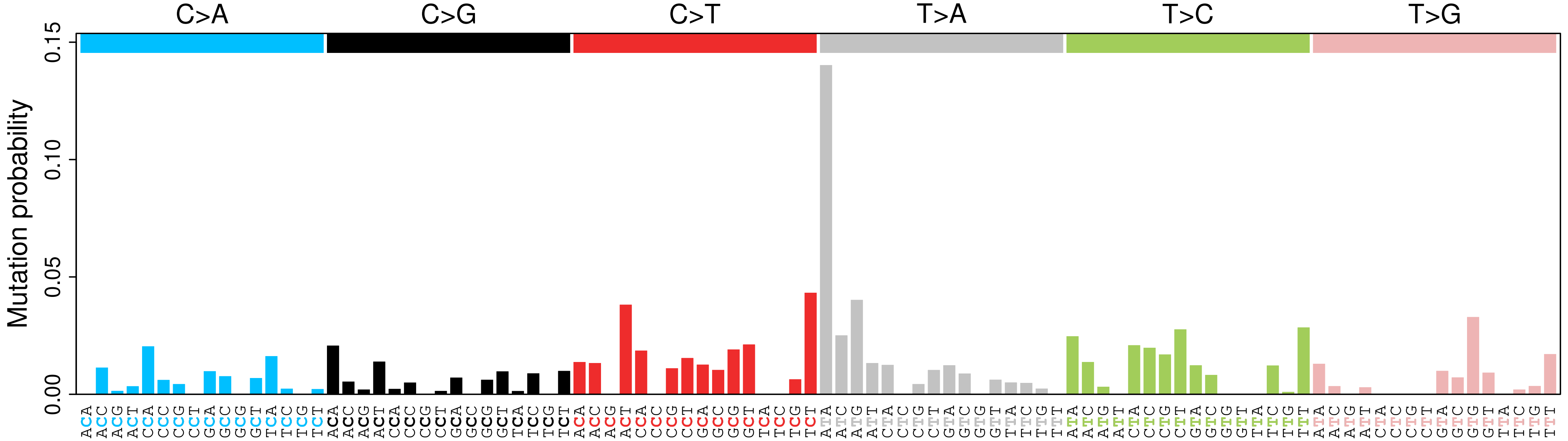
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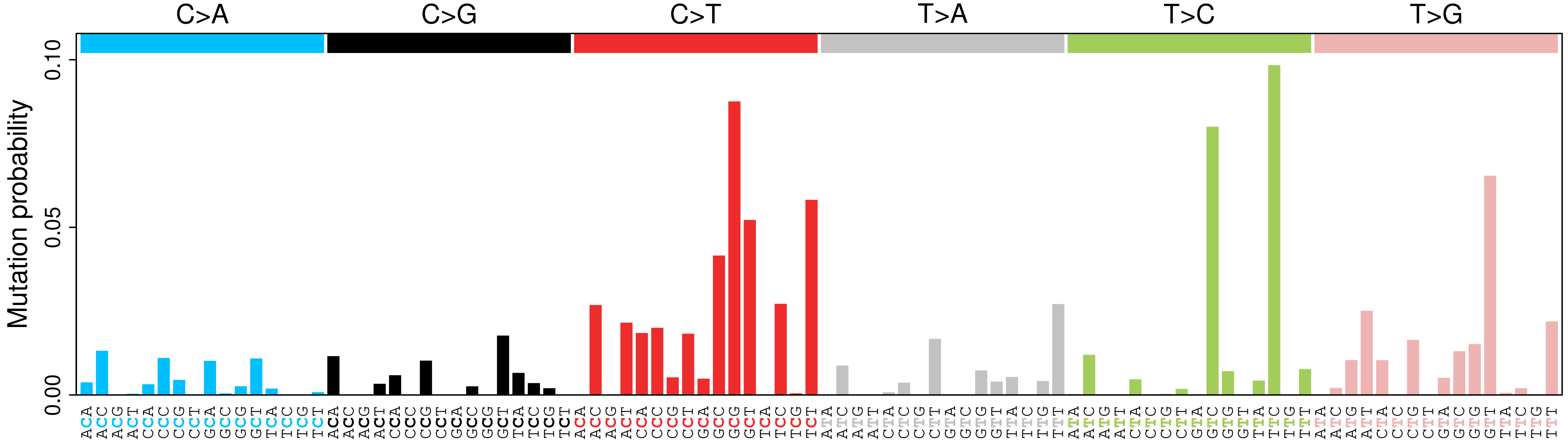
SBS132



SBS135



SBS136



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

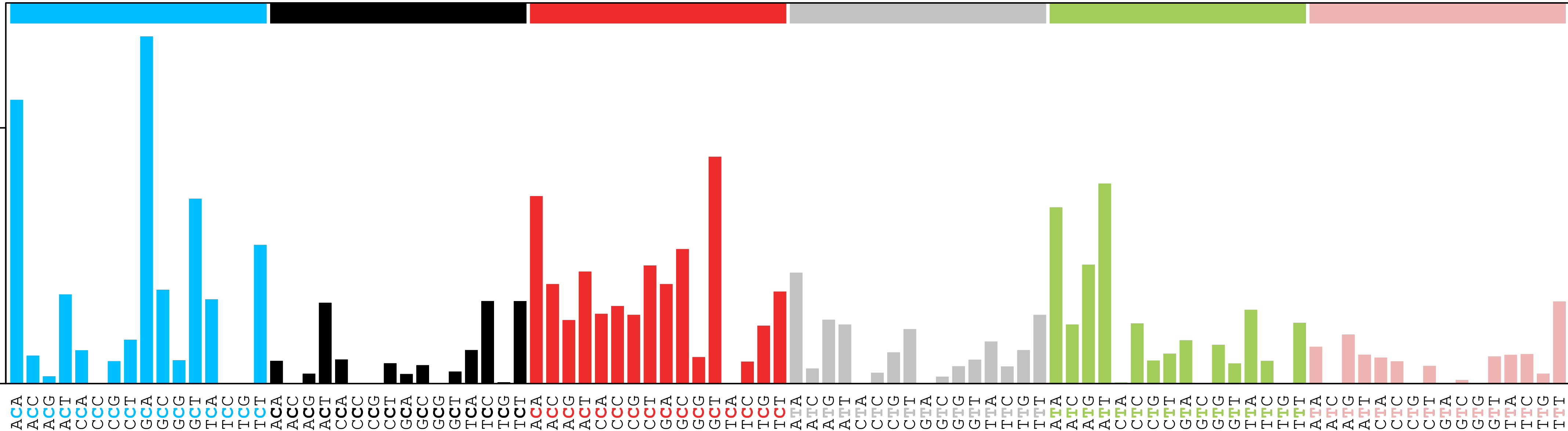
$T > C$

T>G

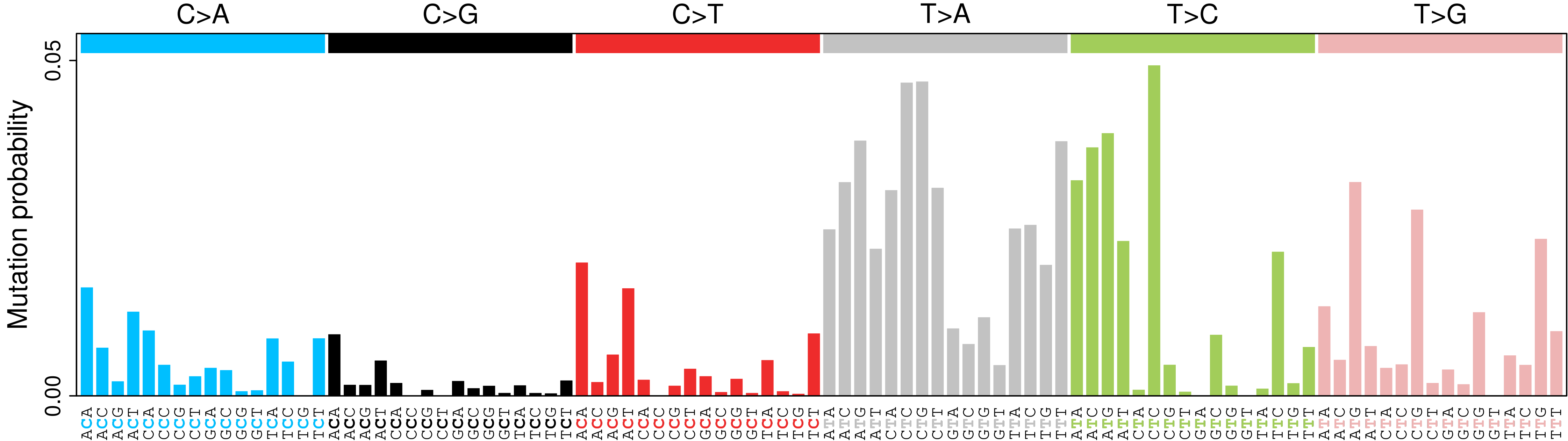
Mutation probability

0.05

0.00



SBS141



SBS143



SBS144

C > A

C > G

$$C > T$$

T > A

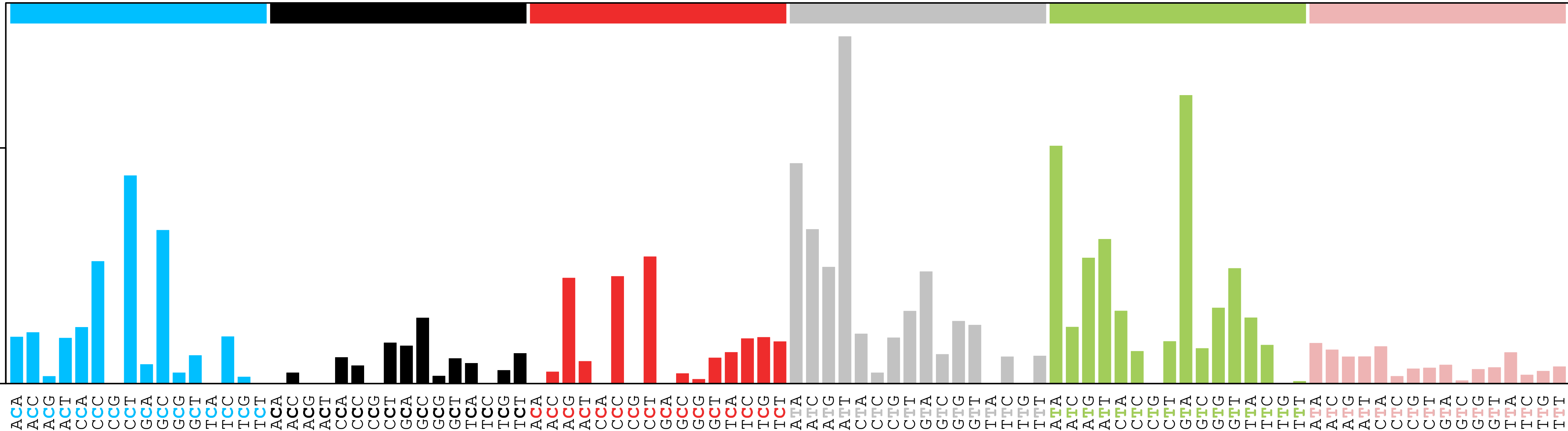
$T > C$

T>G

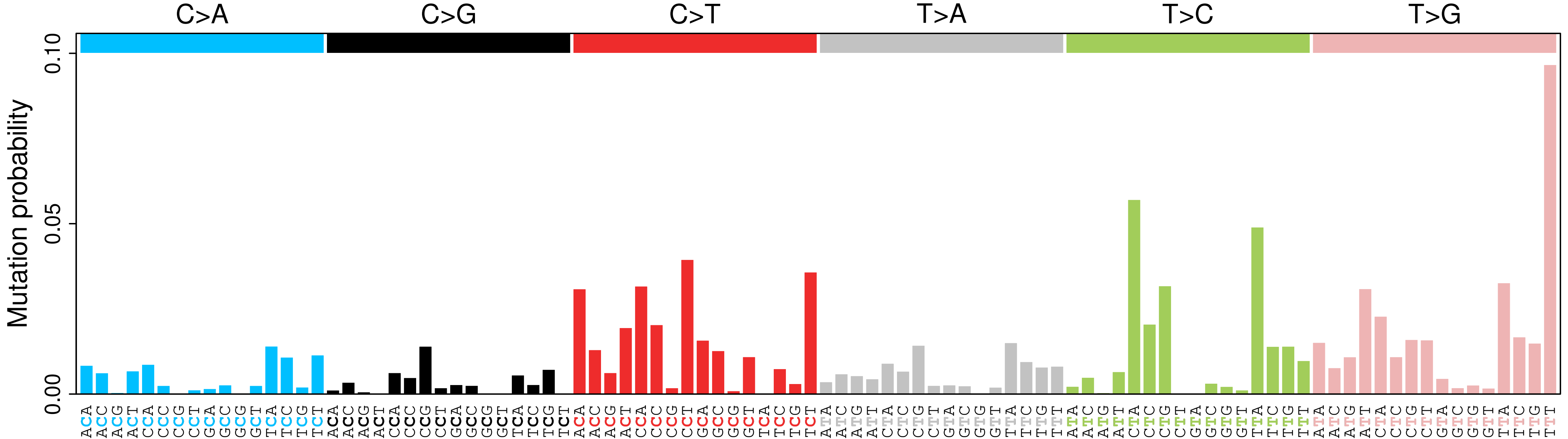
Mutation probability

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



SBS151

$$C > A$$

C > G

$$C > T$$

T > A

T>C

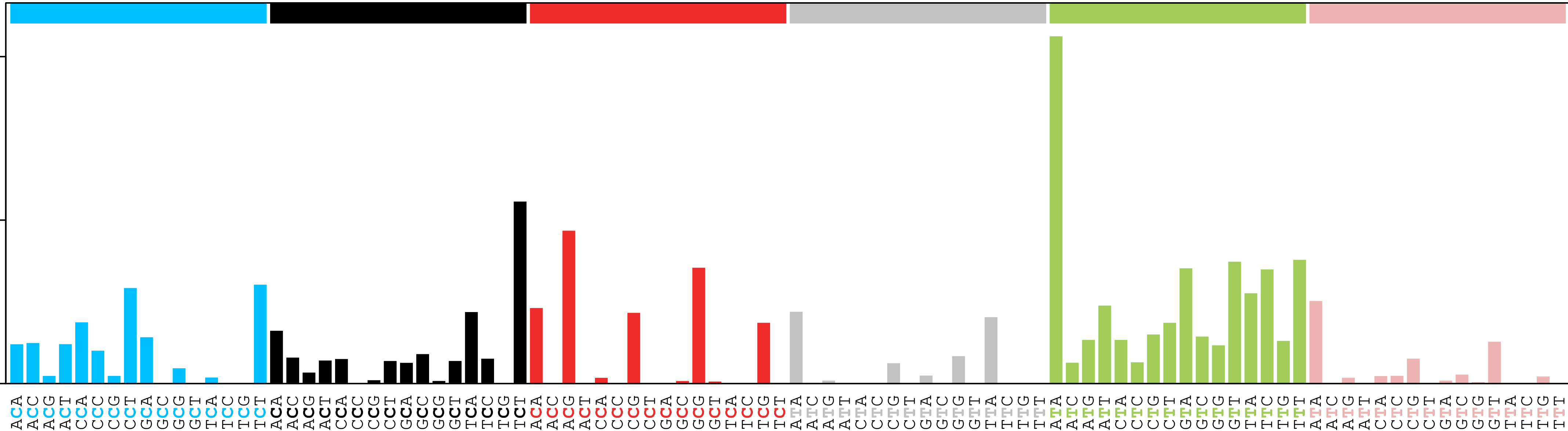
$T > G$

Mutation probability

0.10

0.05

0.0.



SBS153

C>A

C>G

C>T

T>A

T>C

T>G

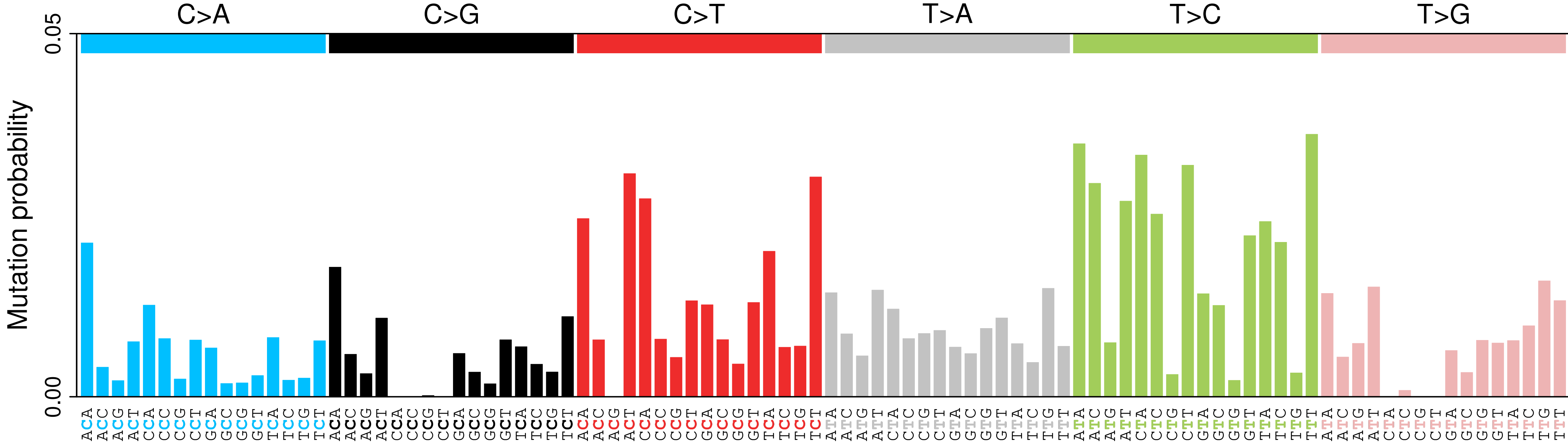
Mutation probability

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



SBS156

C>A

C>G

C>T

T>A

T>C

T>G

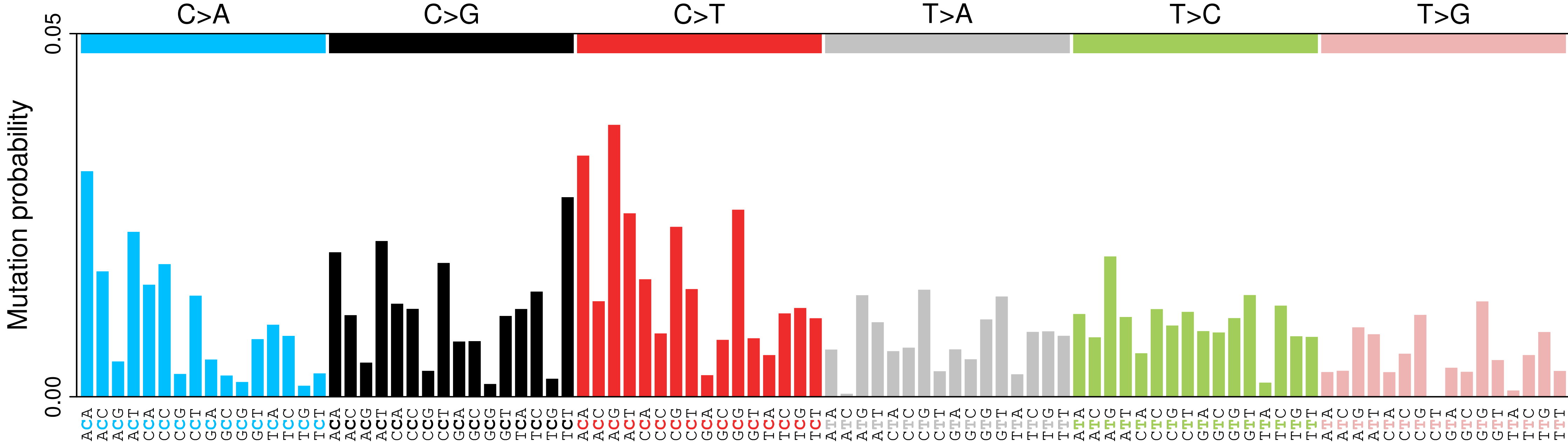
Mutation probability

0.05

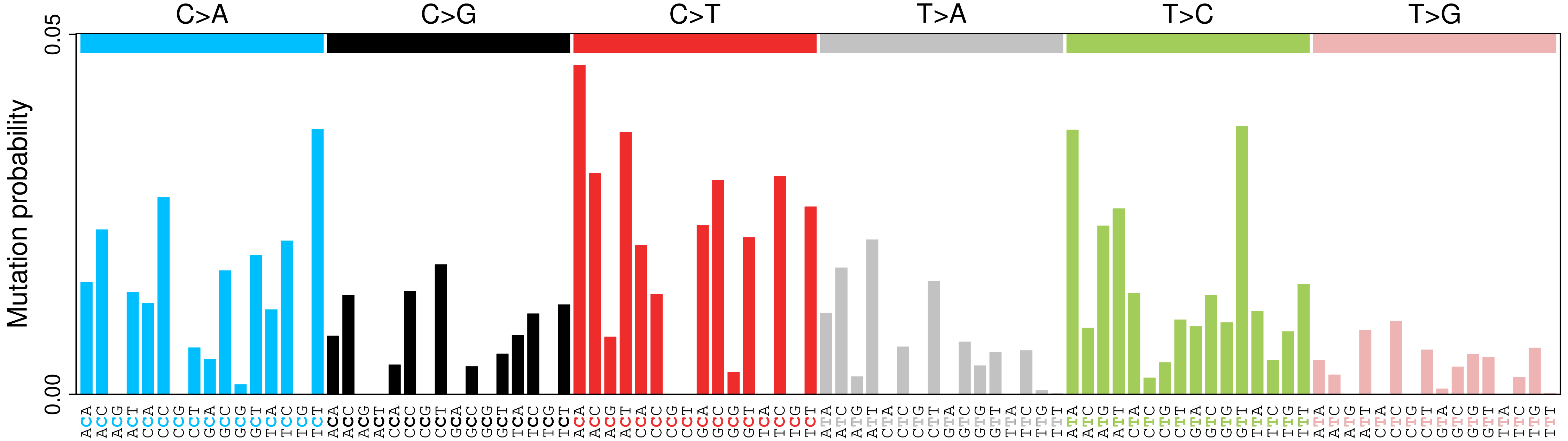
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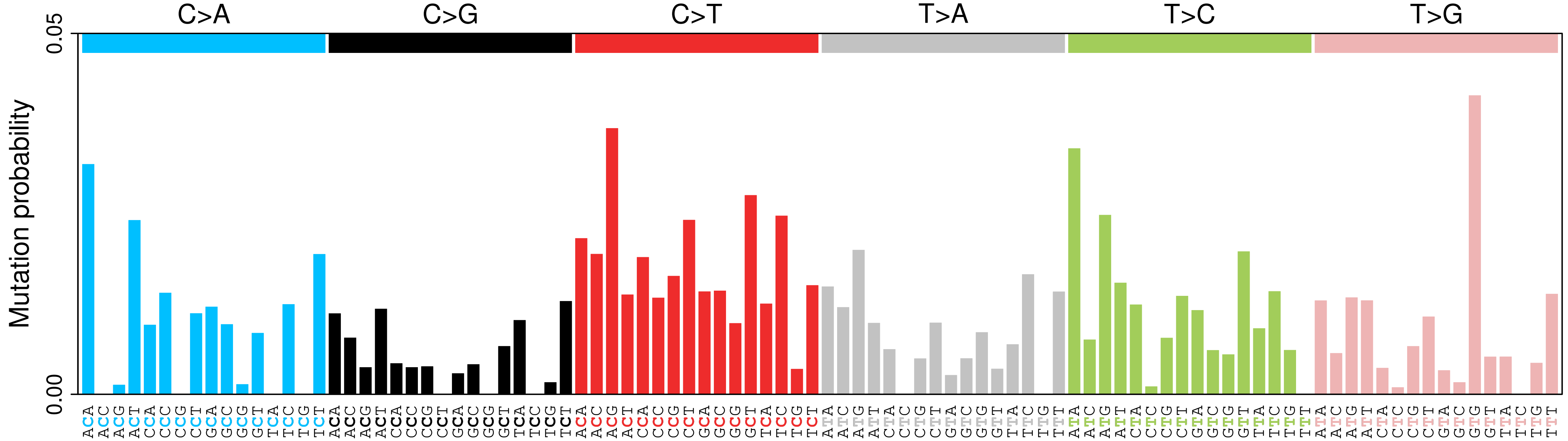
SBS157



SBS159



SBS160



SBS161

$C > A$

C > G

$$C > T$$

T > A

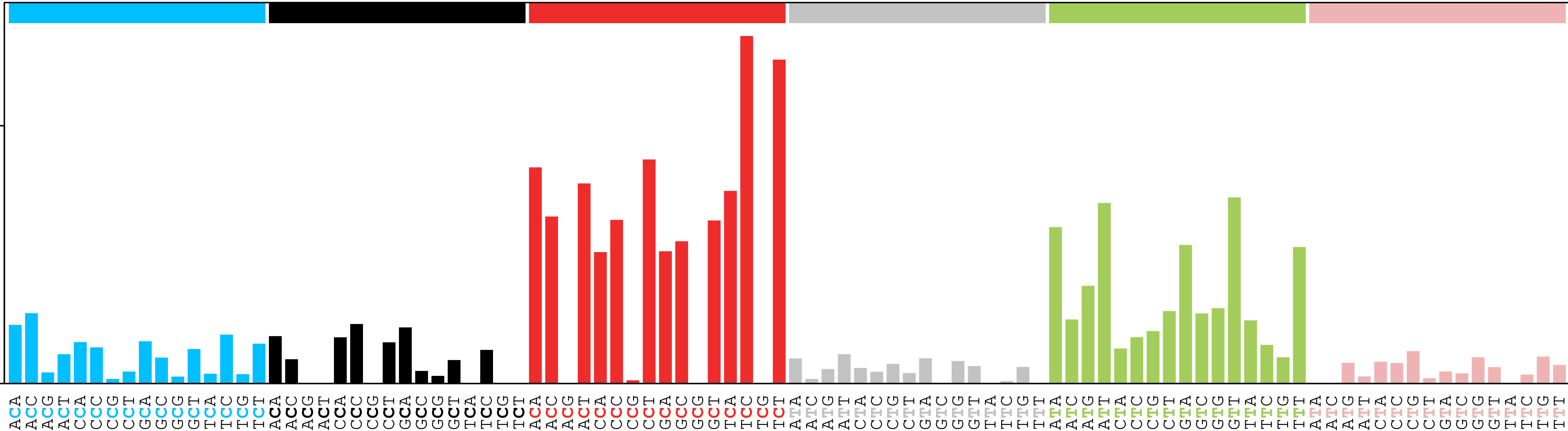
$T > C$

T>G

Mutation probability

0.05

0.00



SBS162

$C > A$

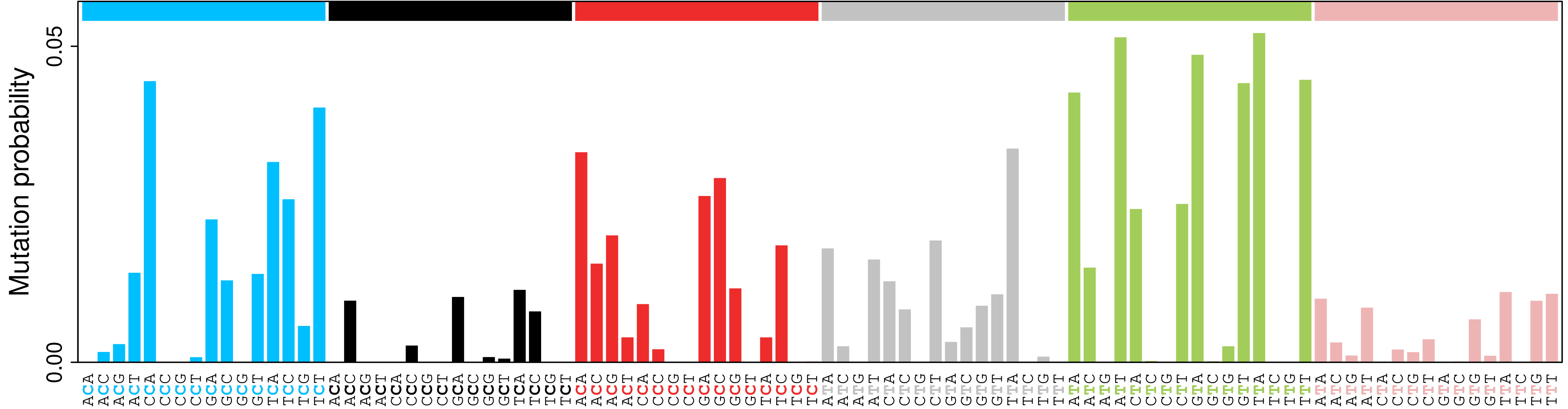
C > G

$C > T$

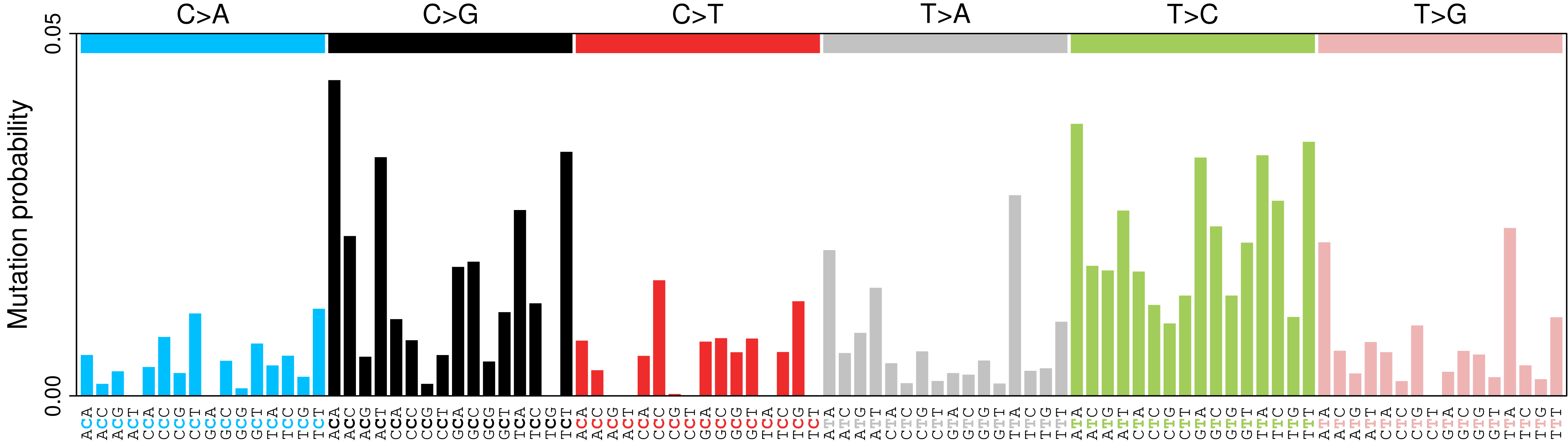
T>A

$$T > C$$

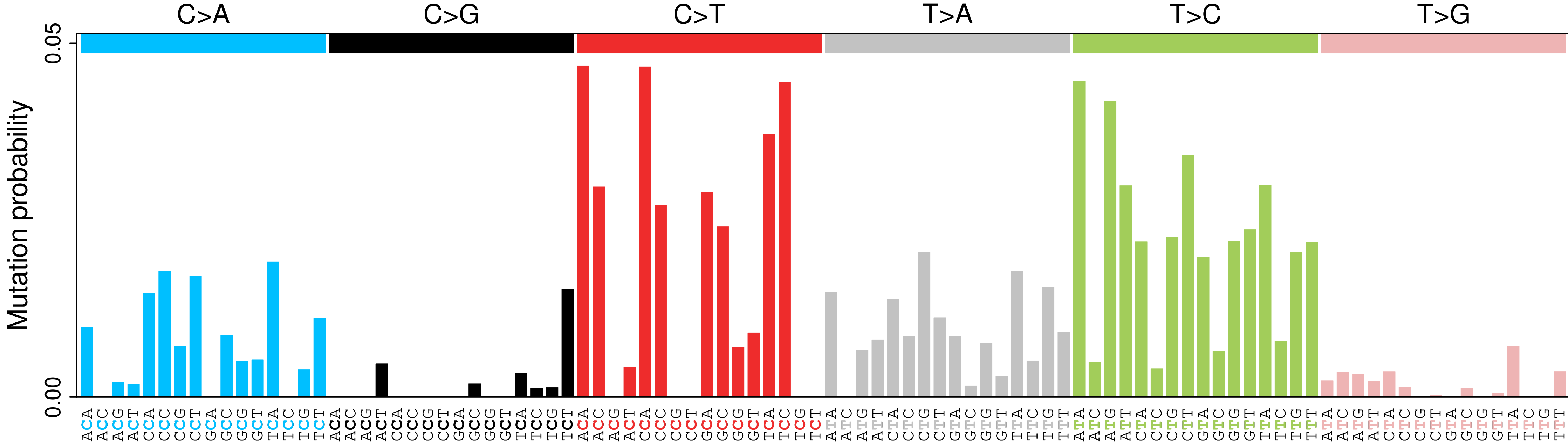
$T > G$



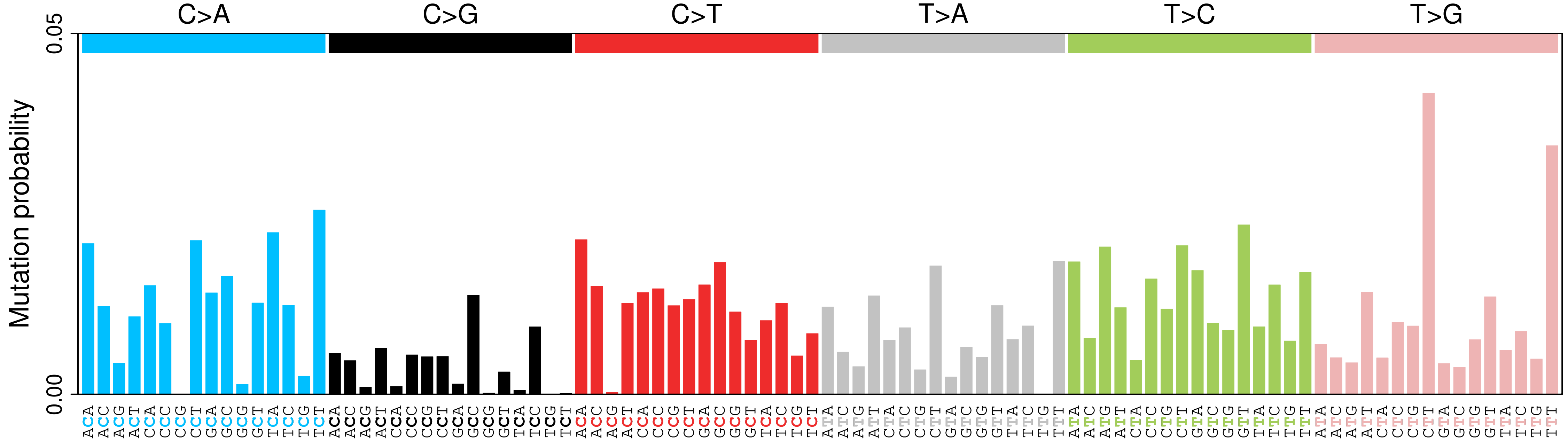
SBS163



SBS164



SBS167



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

0.00 0.05 0.10

0.00.

