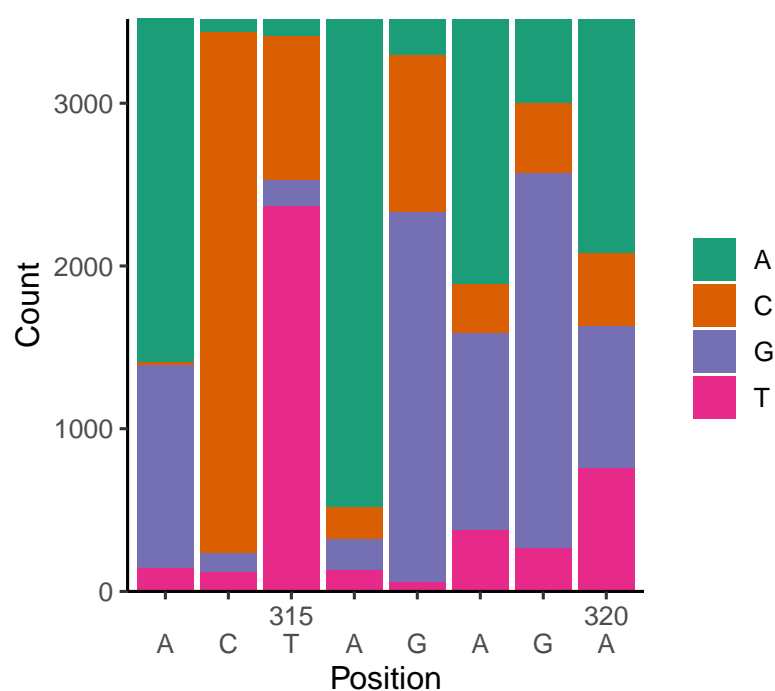
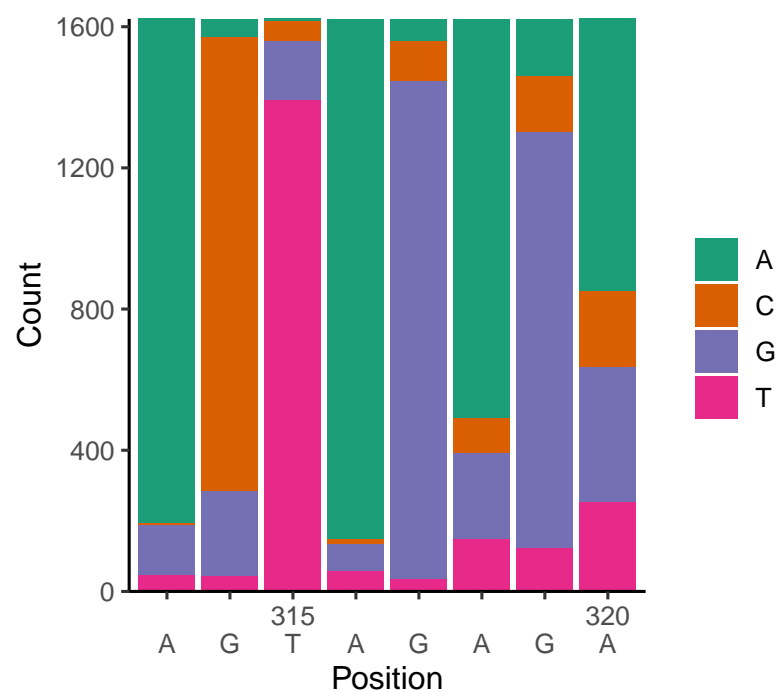


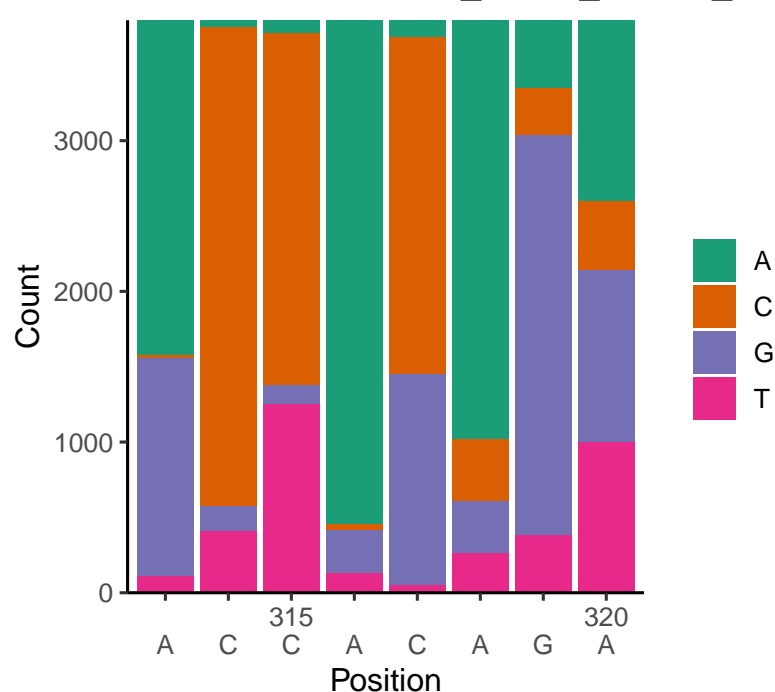
Gene IGHV3-16*01_A51T_T78C_A119C



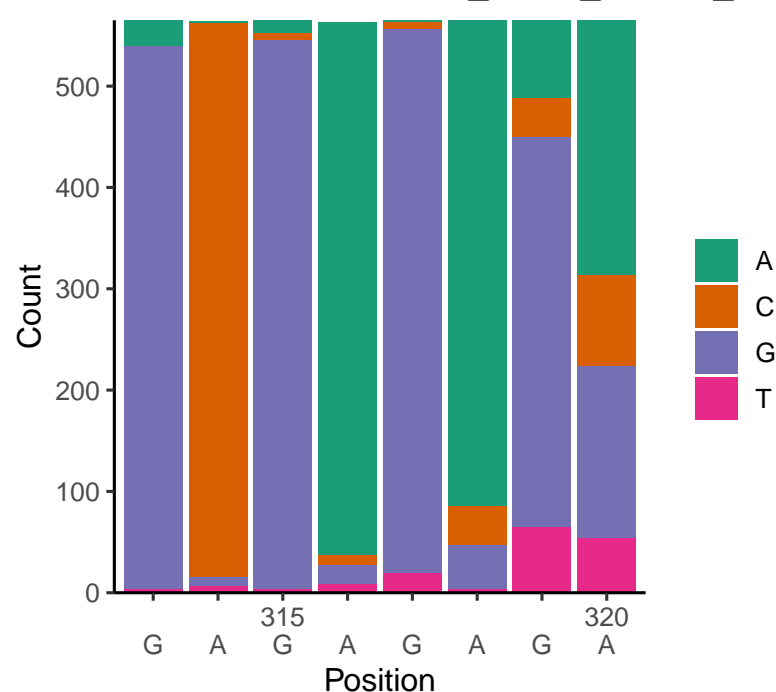
Gene IGHV3-134*01_G87C_A256T_A256T



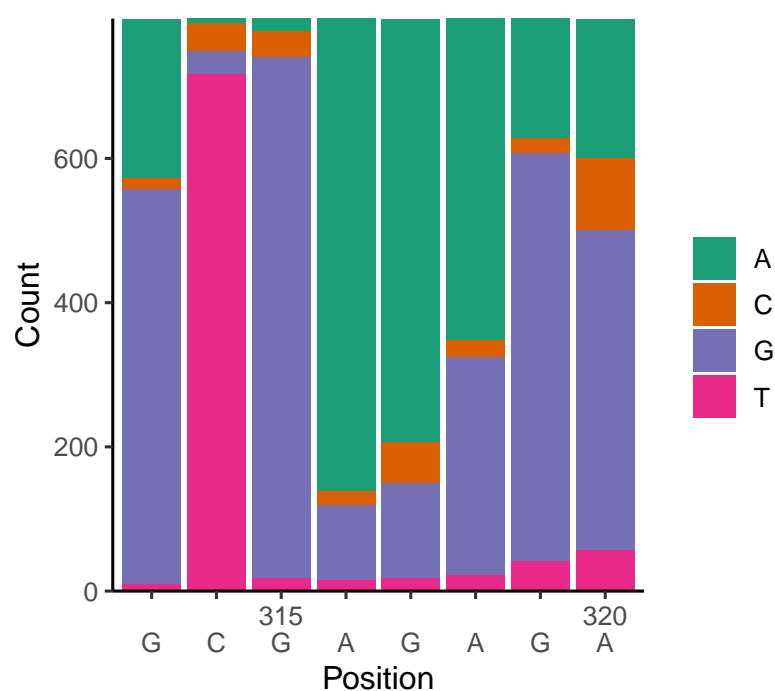
Gene IGHV3-30*01_G48C_T110C_A151C



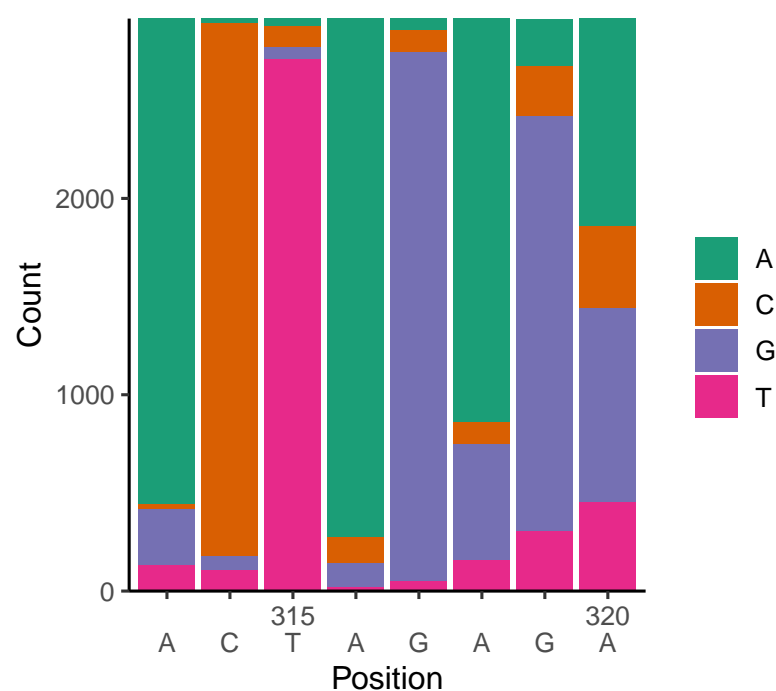
Gene IGHV1-138*01_T86C_C233T_G243C



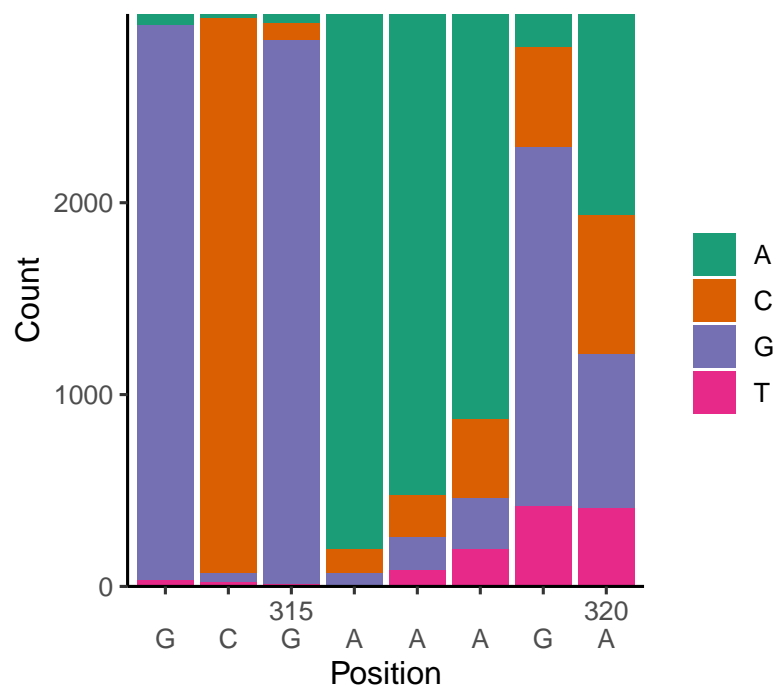
Gene IGHV3-54*02_T78C_T111C_A284C



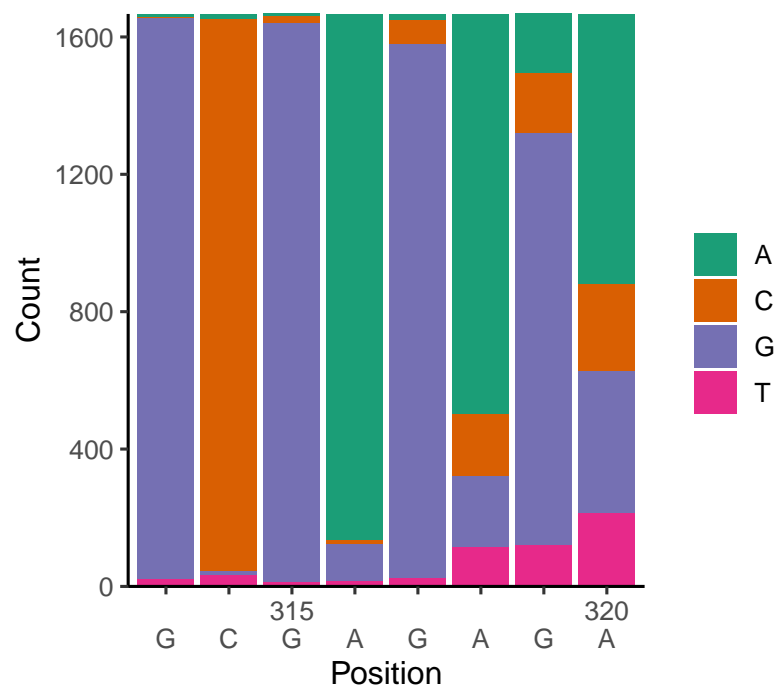
Gene IGHV3-100*01_G3C_A132G_C193C



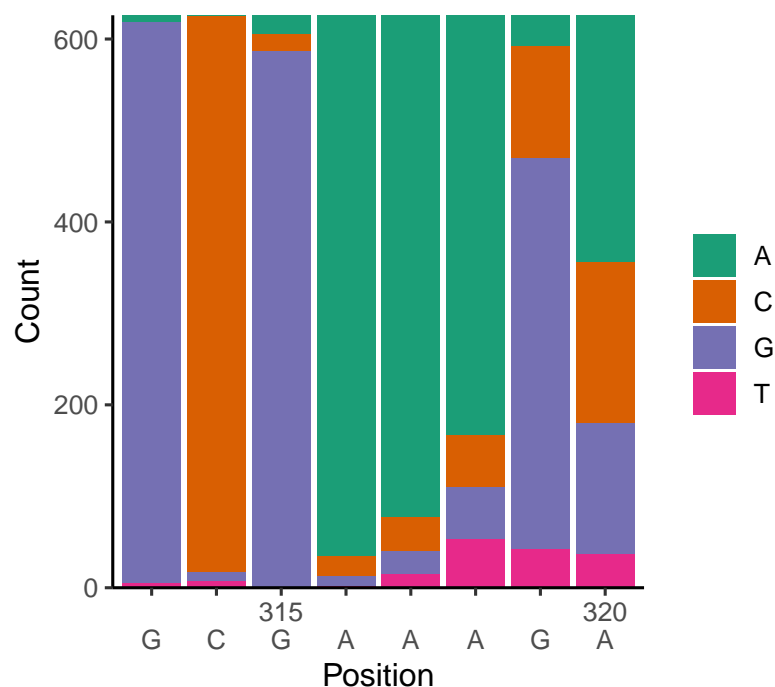
Gene IGHV3-103*01_G51A_A170G



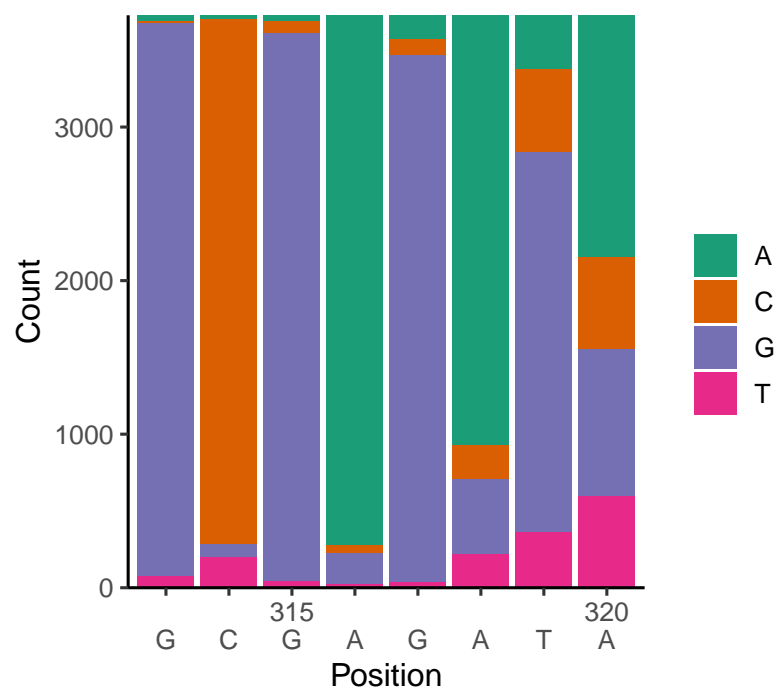
Gene IGHV4-73*01_C93T_T112C_G147



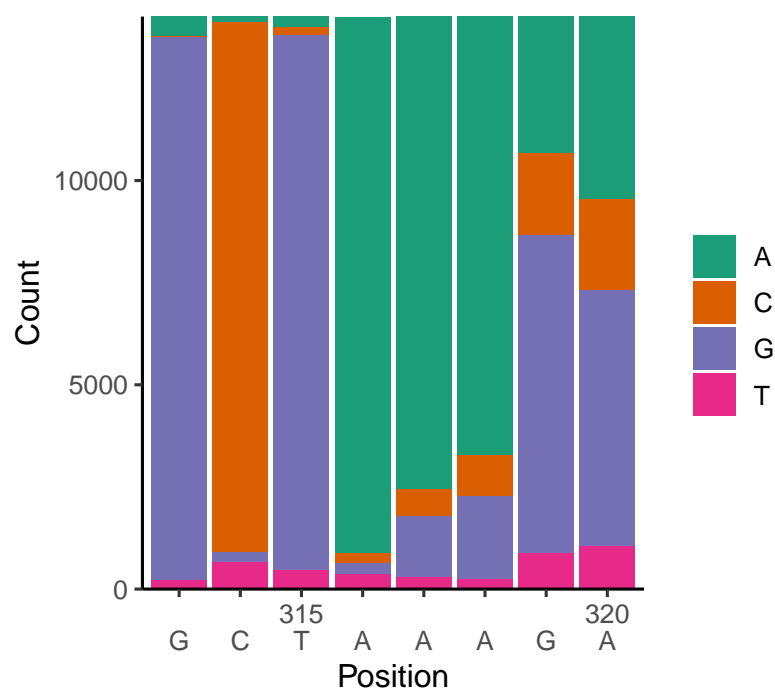
Gene IGHV3-103*01_G51A_A170G_A29



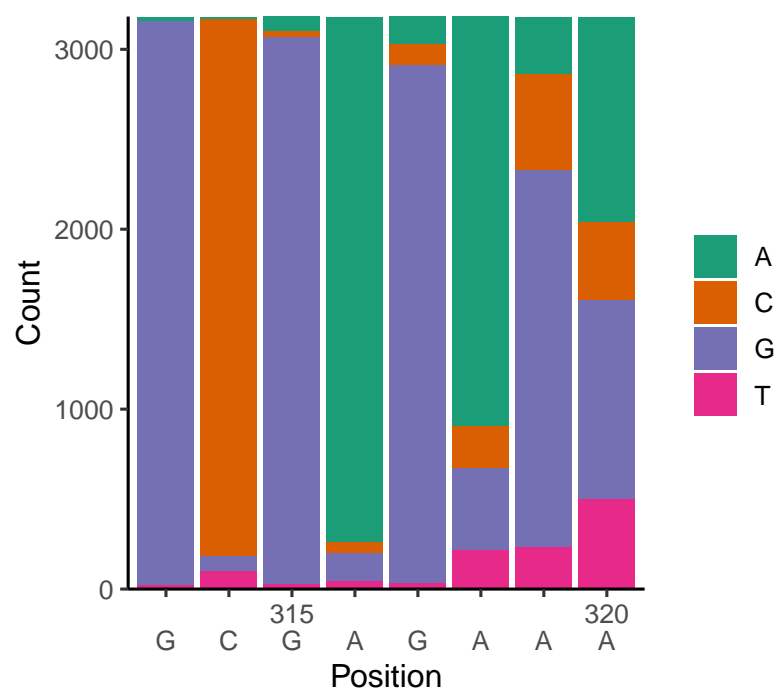
Gene IGHV4-80*01_G70A_T189G_T190G



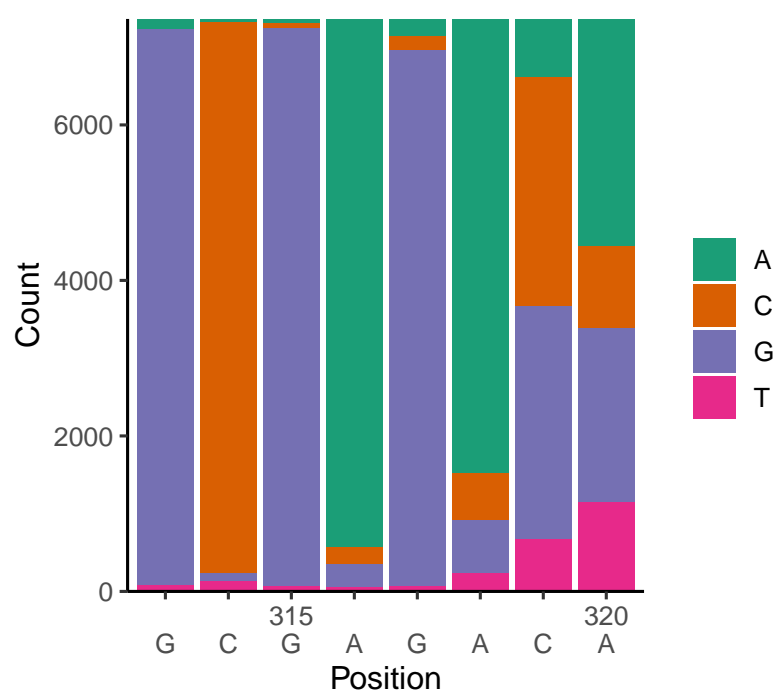
Gene IGHV3S42*01_C38T_A39C_A40C



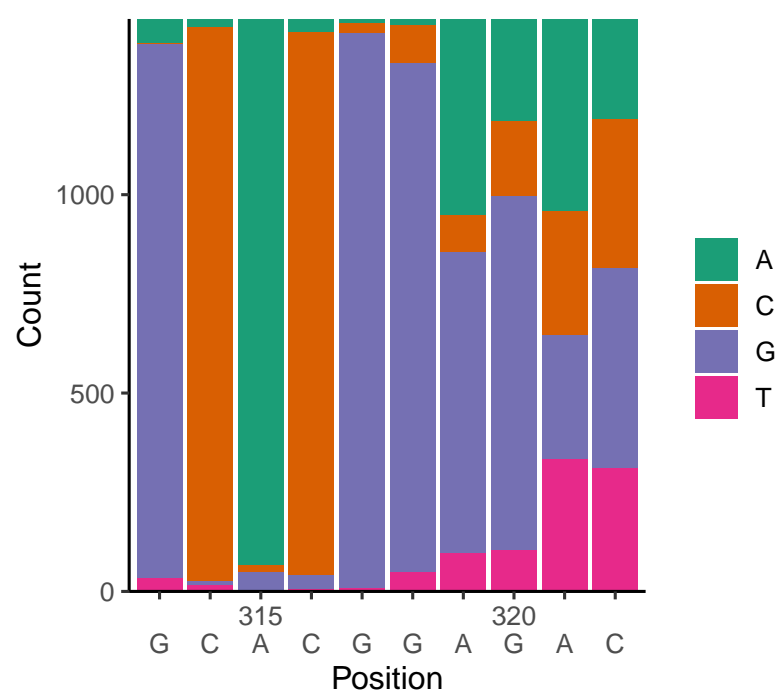
Gene IGHV4-57*02_C87T_G199T_C207



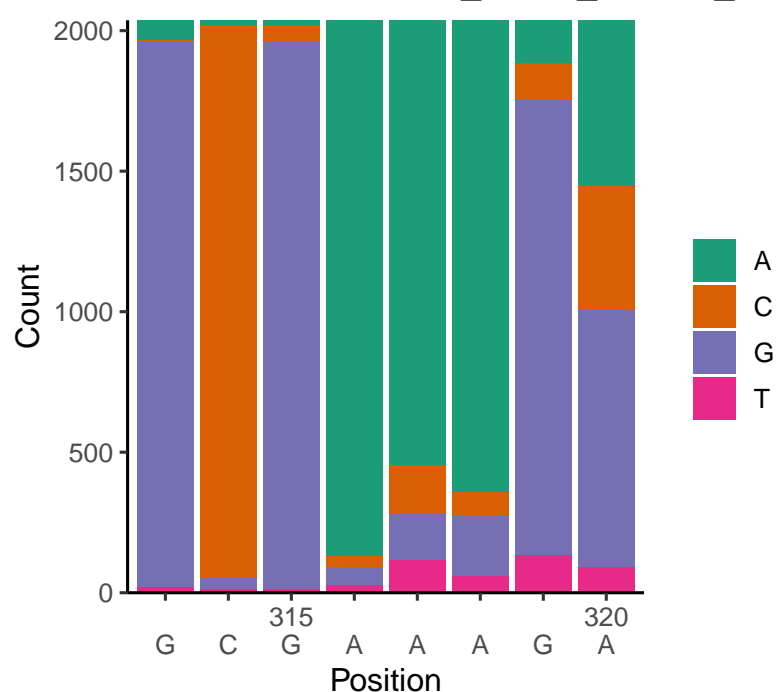
Gene IGHV4-122*01_T87C_A100G_C16



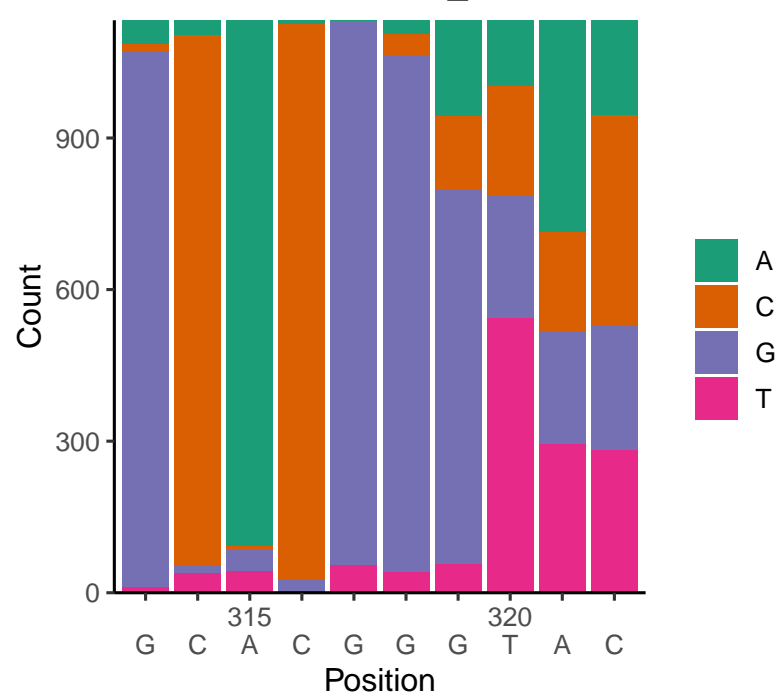
Gene IGHV2-10*01_C6G_A23G_G112C



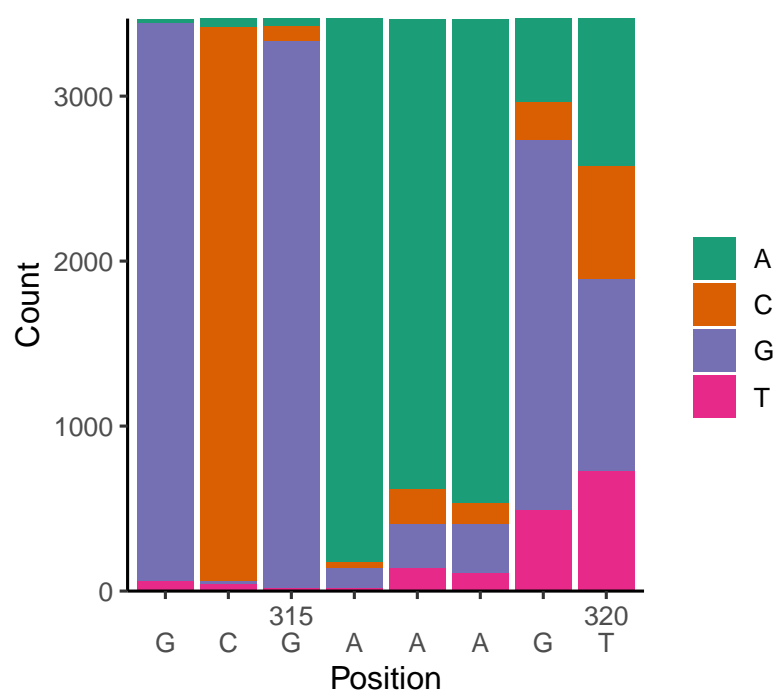
Gene IGHV5-20*02_A59G_A141G_C31



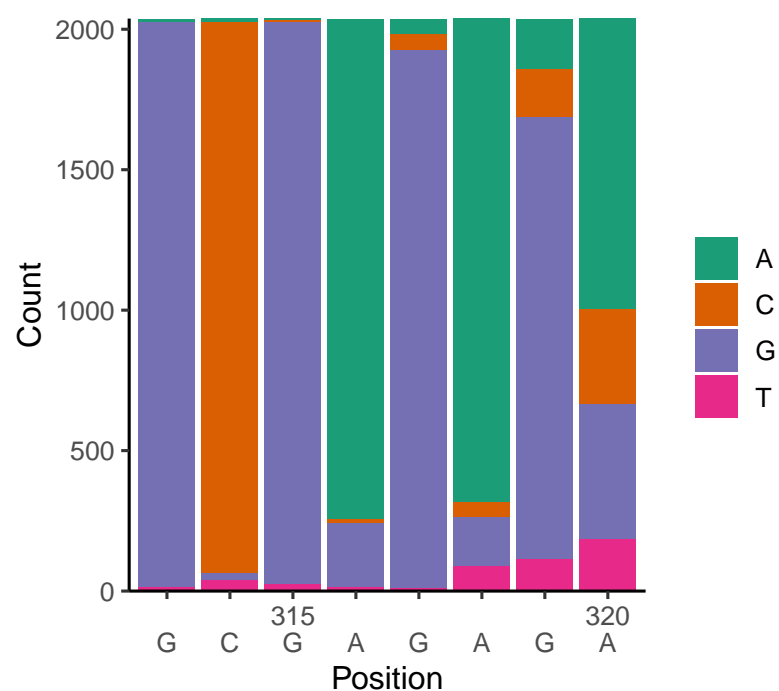
Gene IGHV2-95*01_A48G



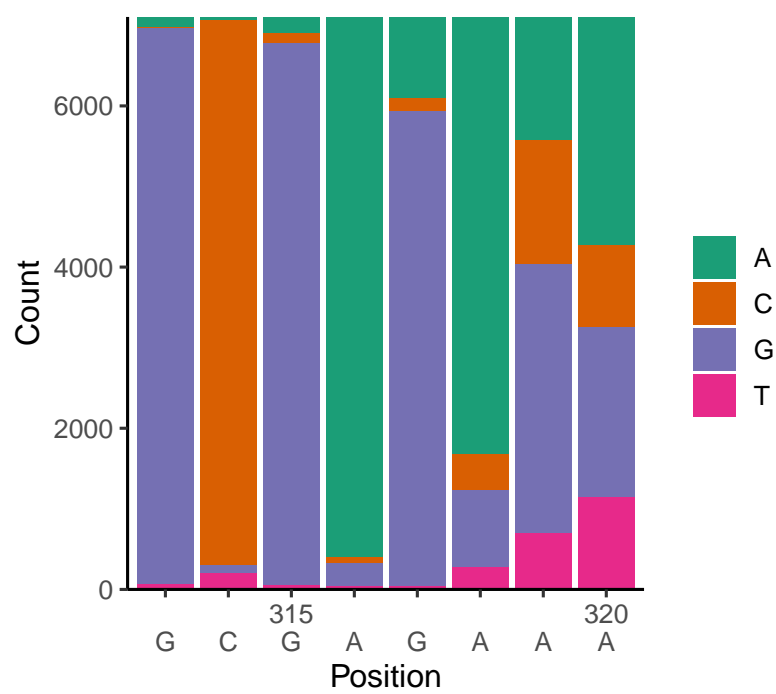
Gene IGHV5-43*01_A109T_G110A_G11



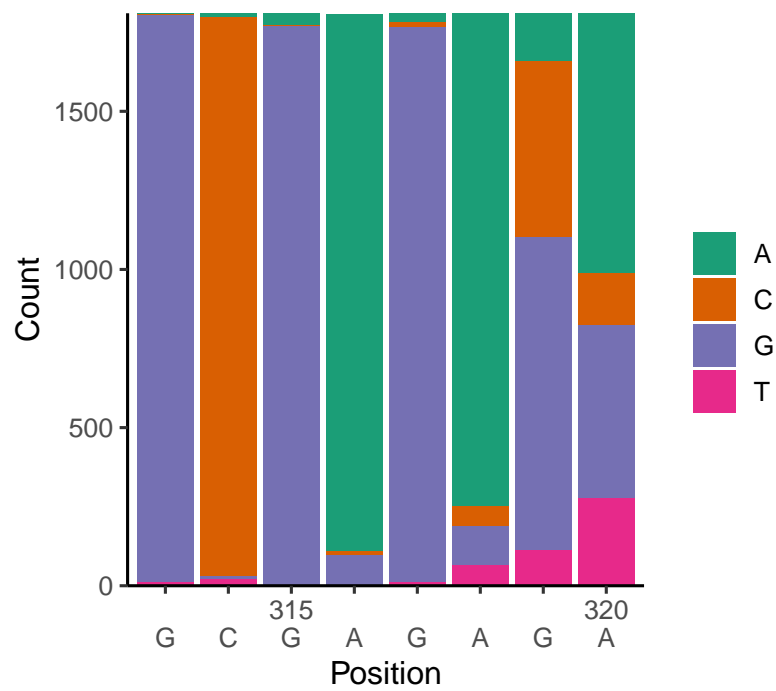
Gene IGHV3-59*01_T21C_C69T_T78C



Gene IGHV4-165*02_C133A_C135A_G240A



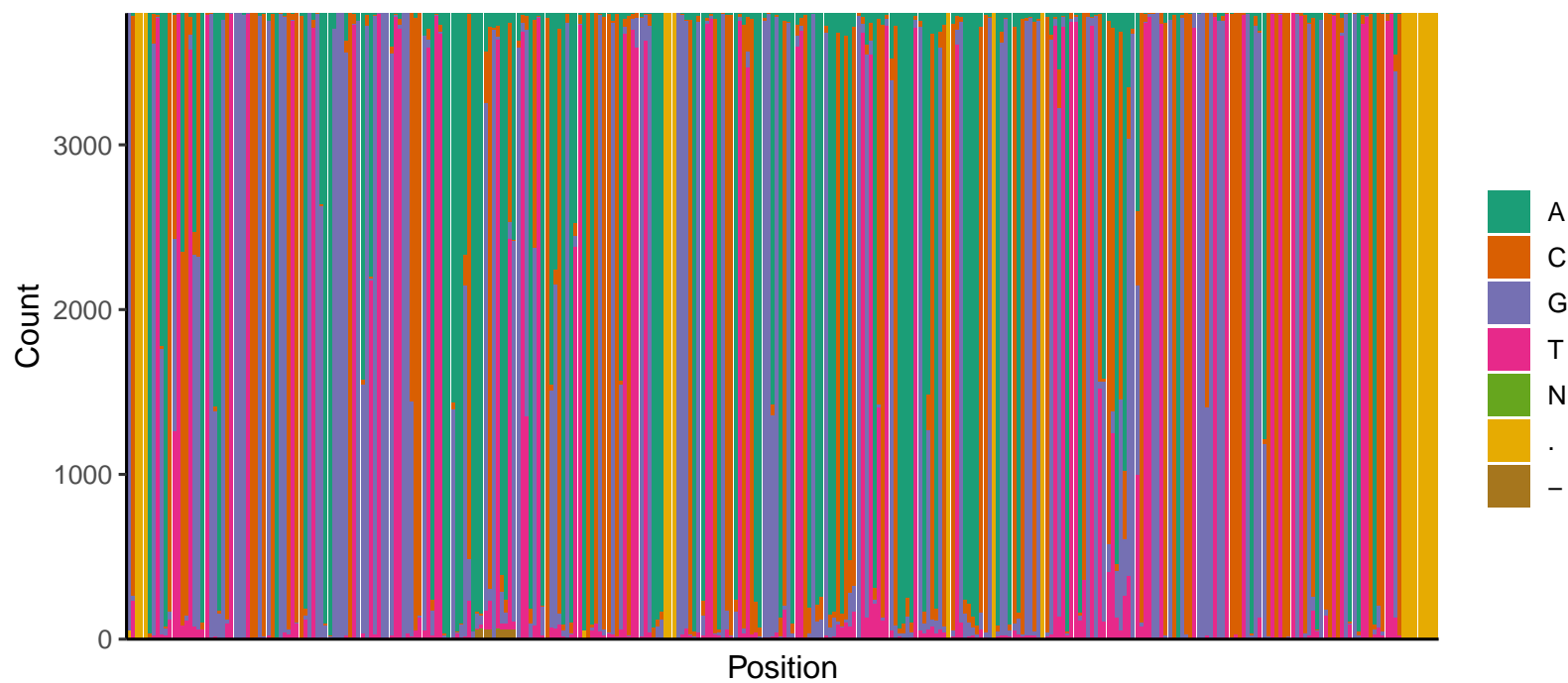
Gene IGHV4S13*01_T85A_G267A_G289A



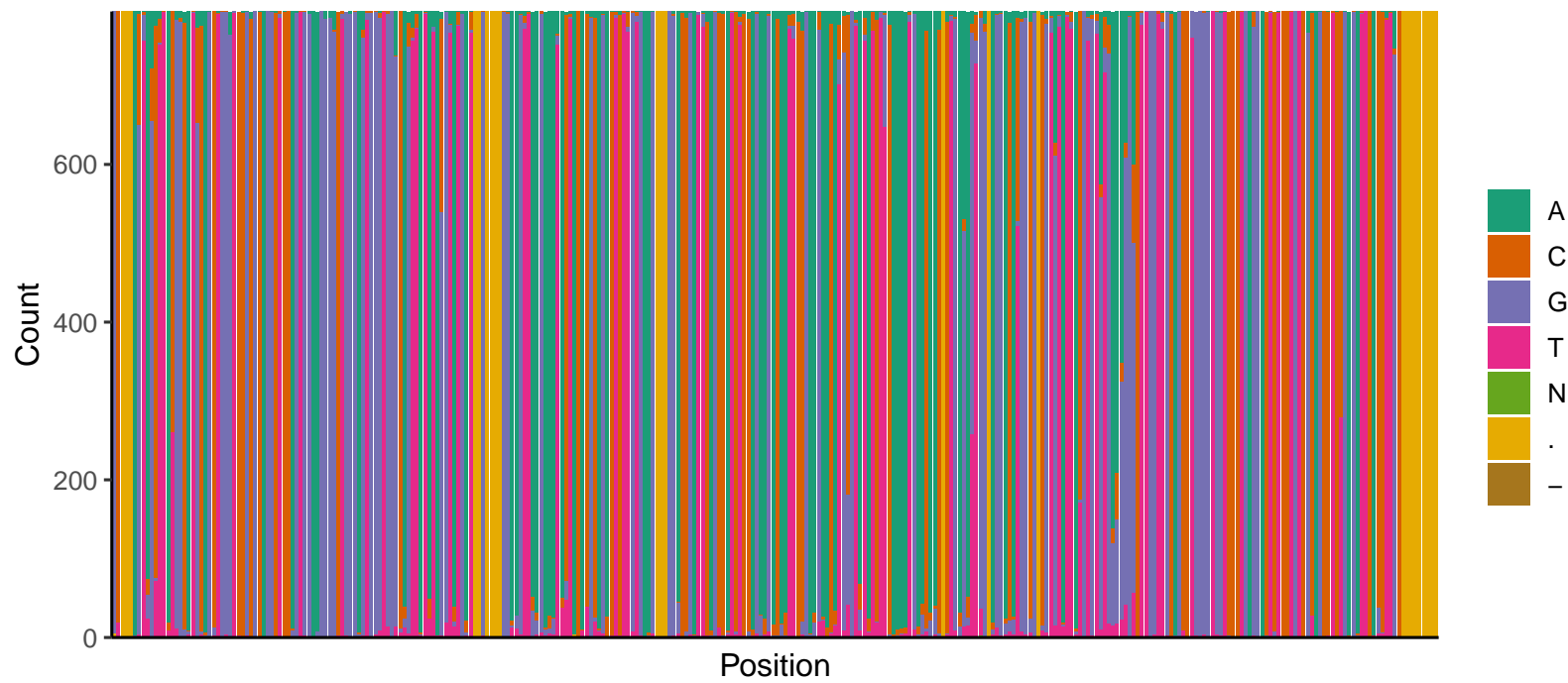
Gene IGHV3-16*01_A51T_T78C_A119G_C264T



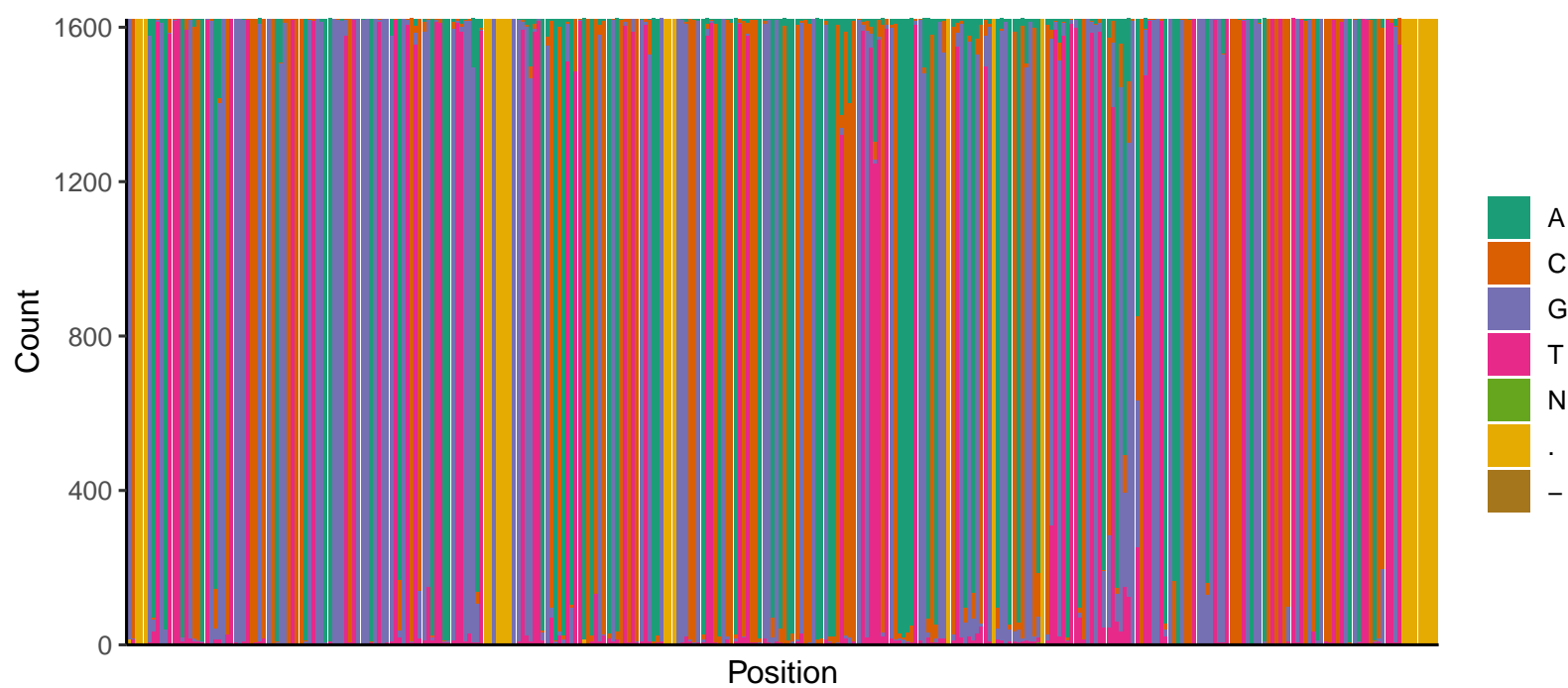
Gene IGHV3-30*01_G48C_T110C_A152T_G174C_G181A_G207A



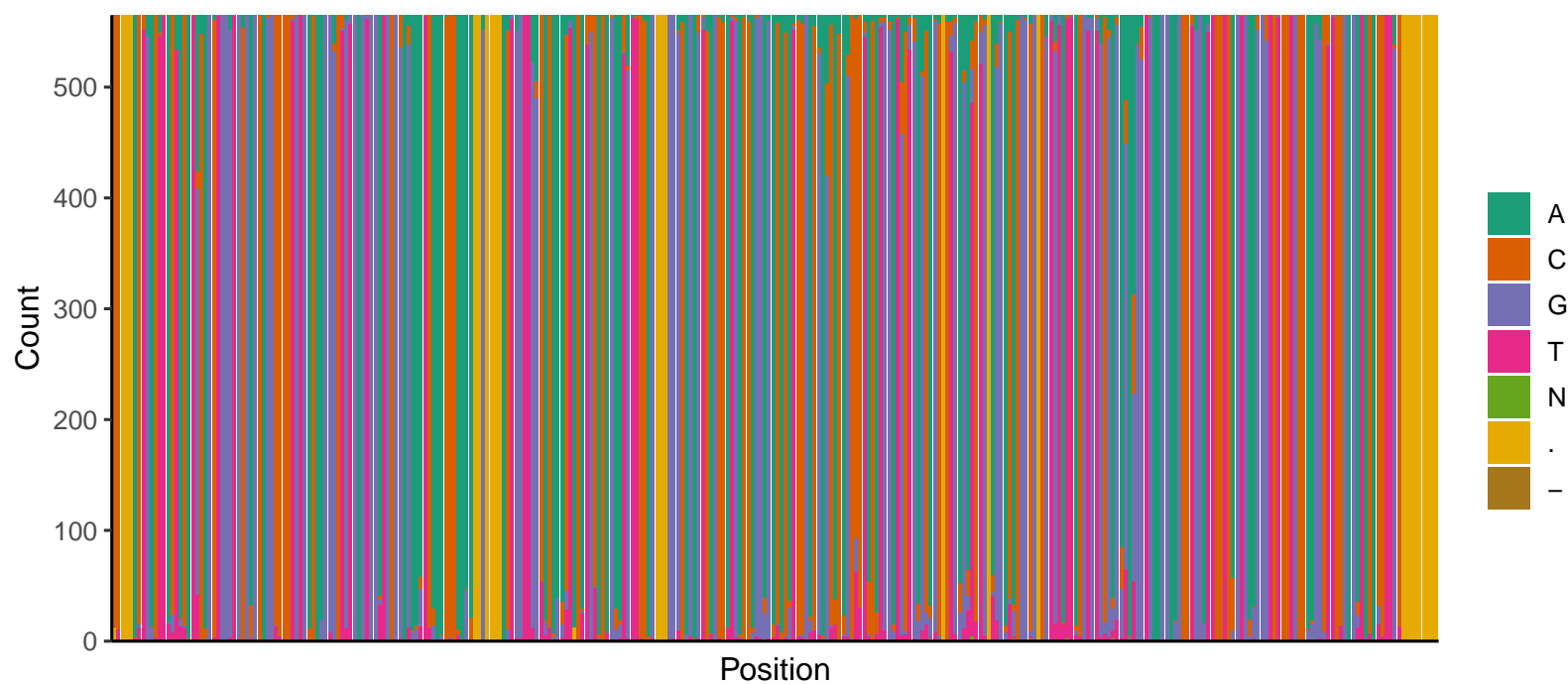
Gene IGHV3-54*02_T78C_T111C_A284G_T286G_C296T



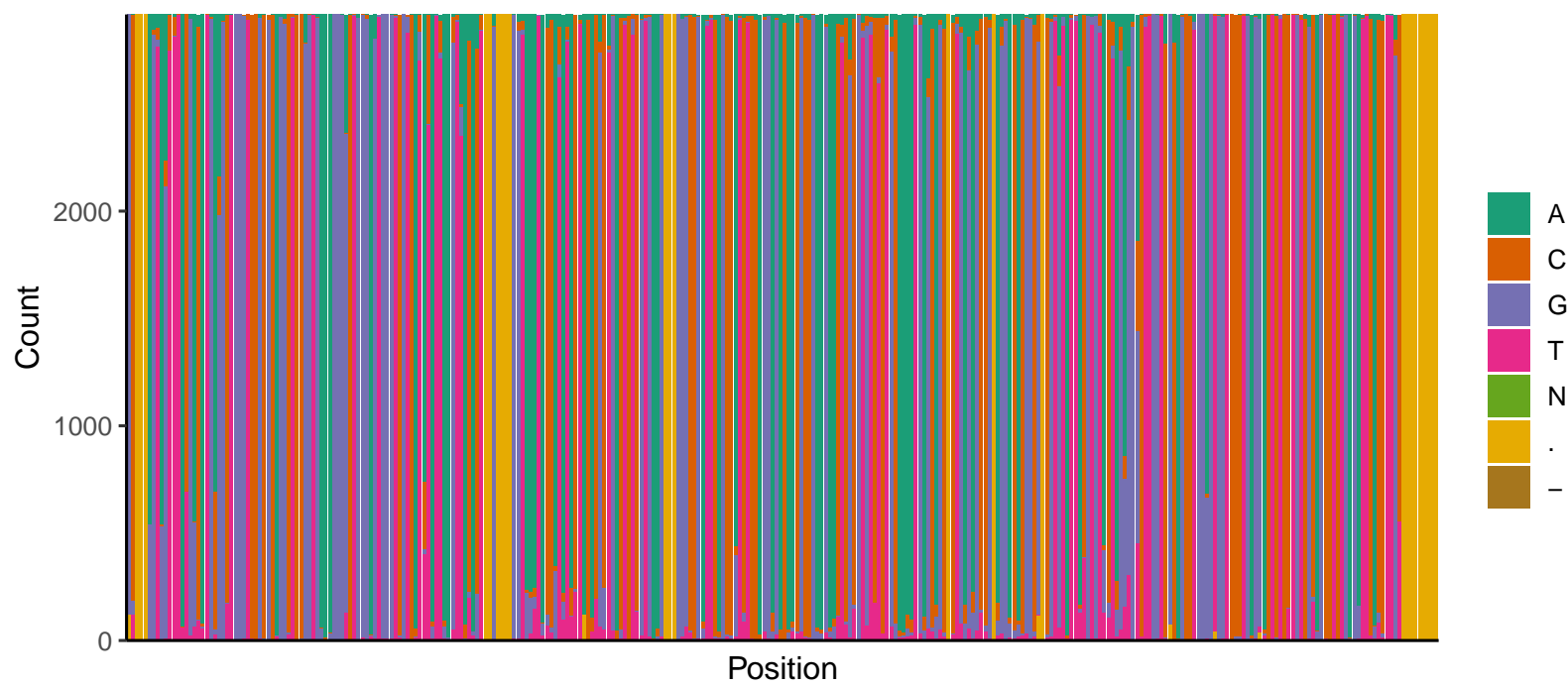
Gene IGHV3-134*01_G87C_A256T_A258C_A263T_T301G



Gene IGHV1-138*01_T86C_C233T_G249C



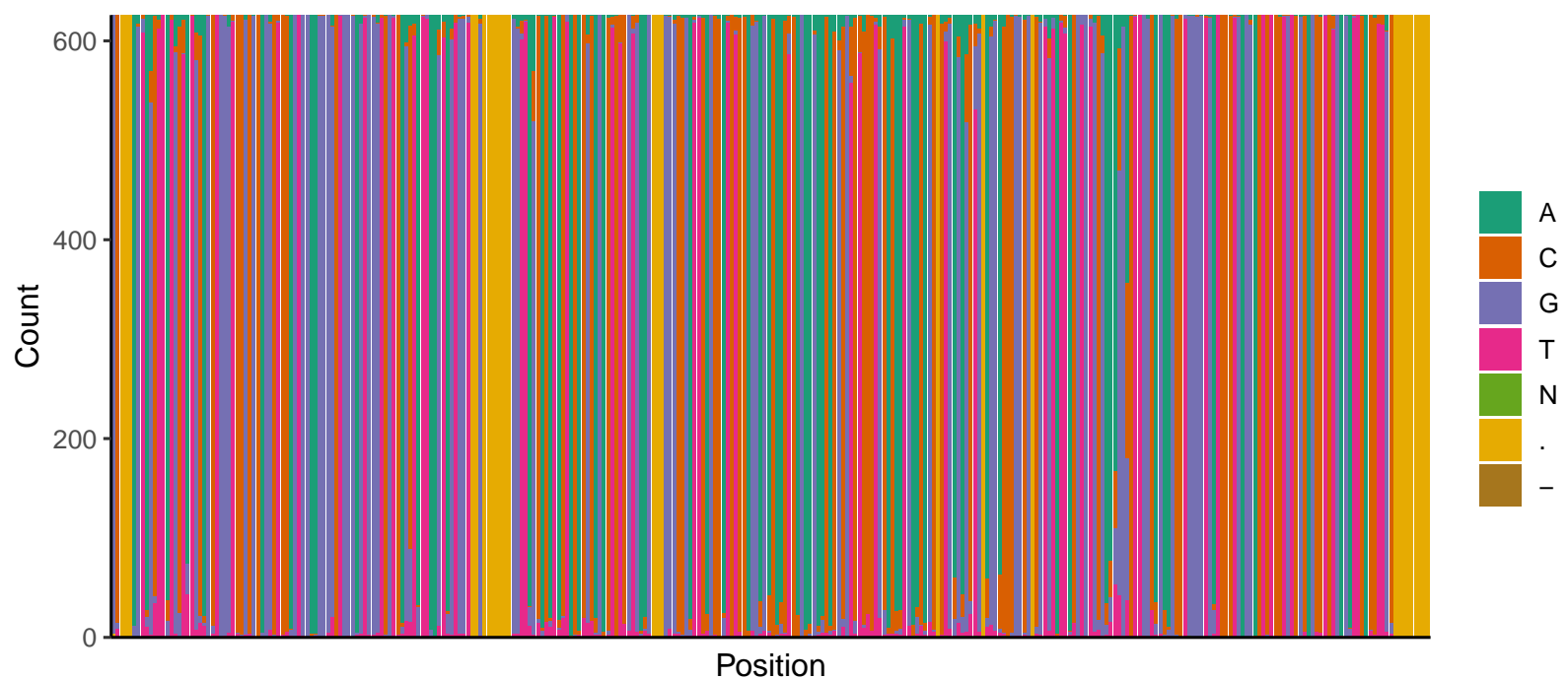
Gene IGHV3-100*01_G3C_A132G_C194T



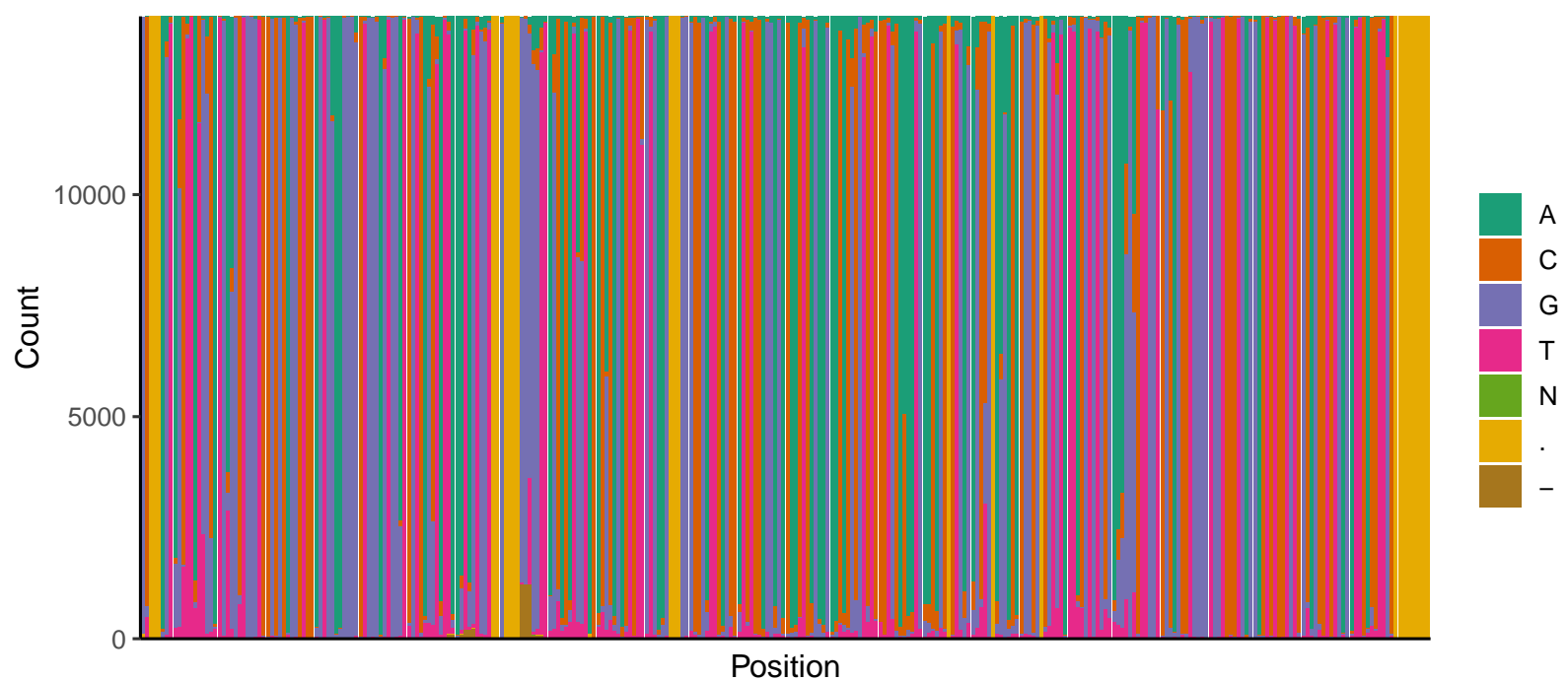
Gene IGHV3-103*01_G51A_A170G



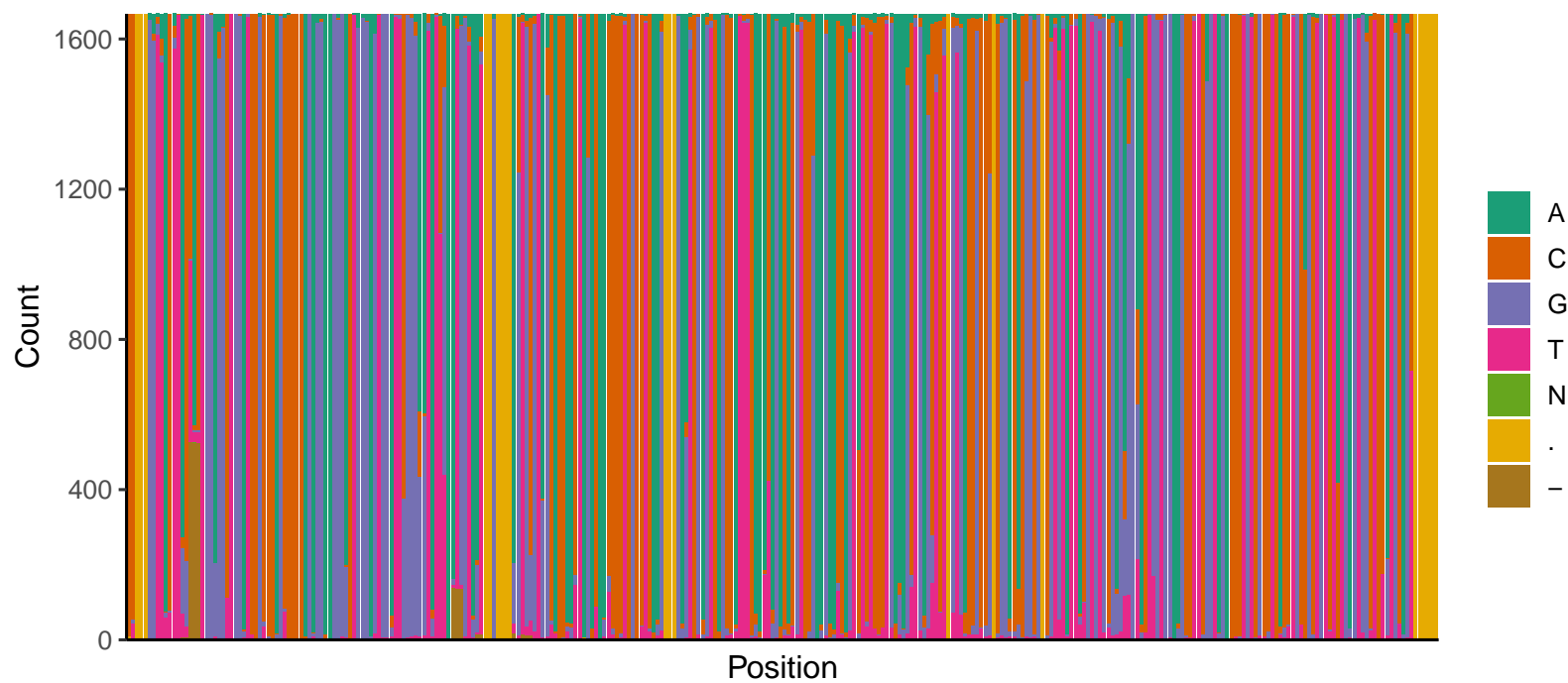
Gene IGHV3-103*01_G51A_A170G_A295C



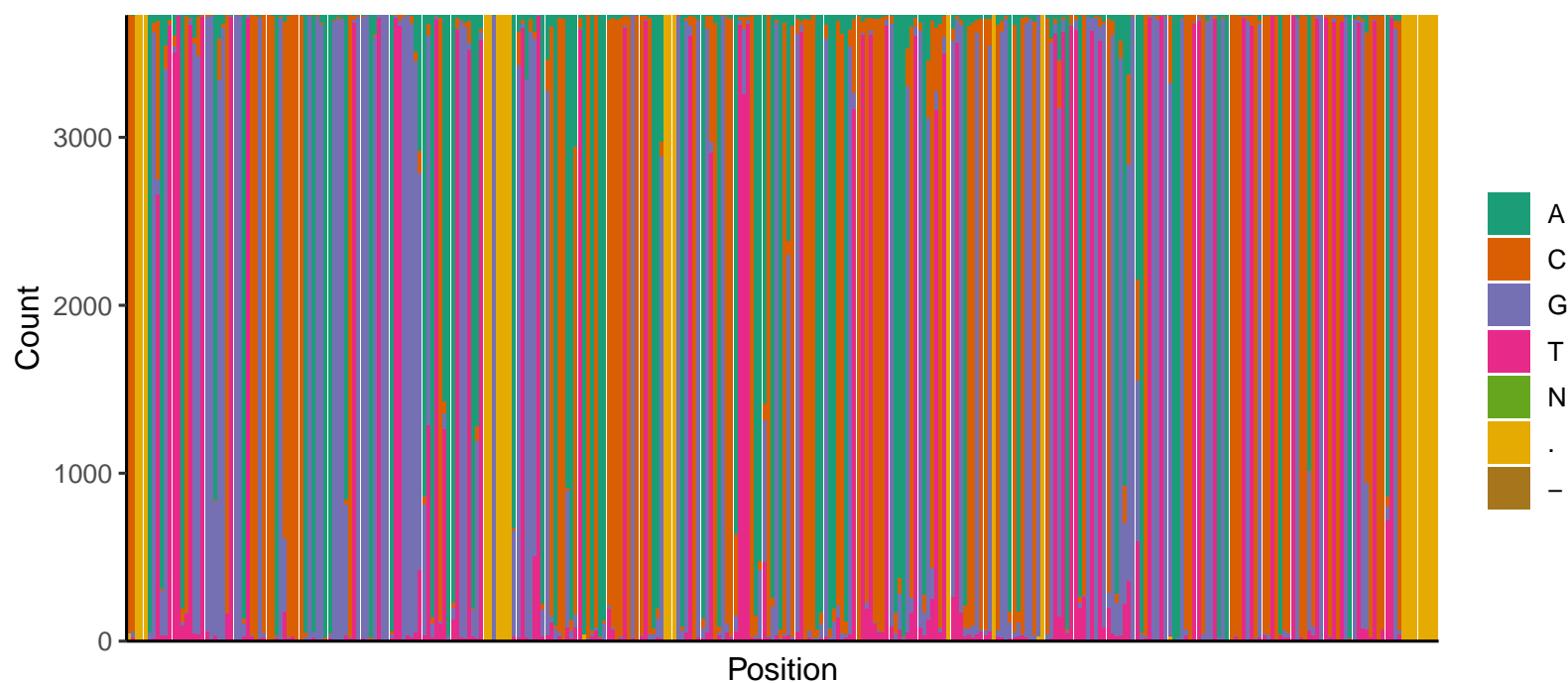
Gene IGHV3S42*01_C38T_A39C_A40C_C111T_T112G_G114C_A118T_T120C_A133C



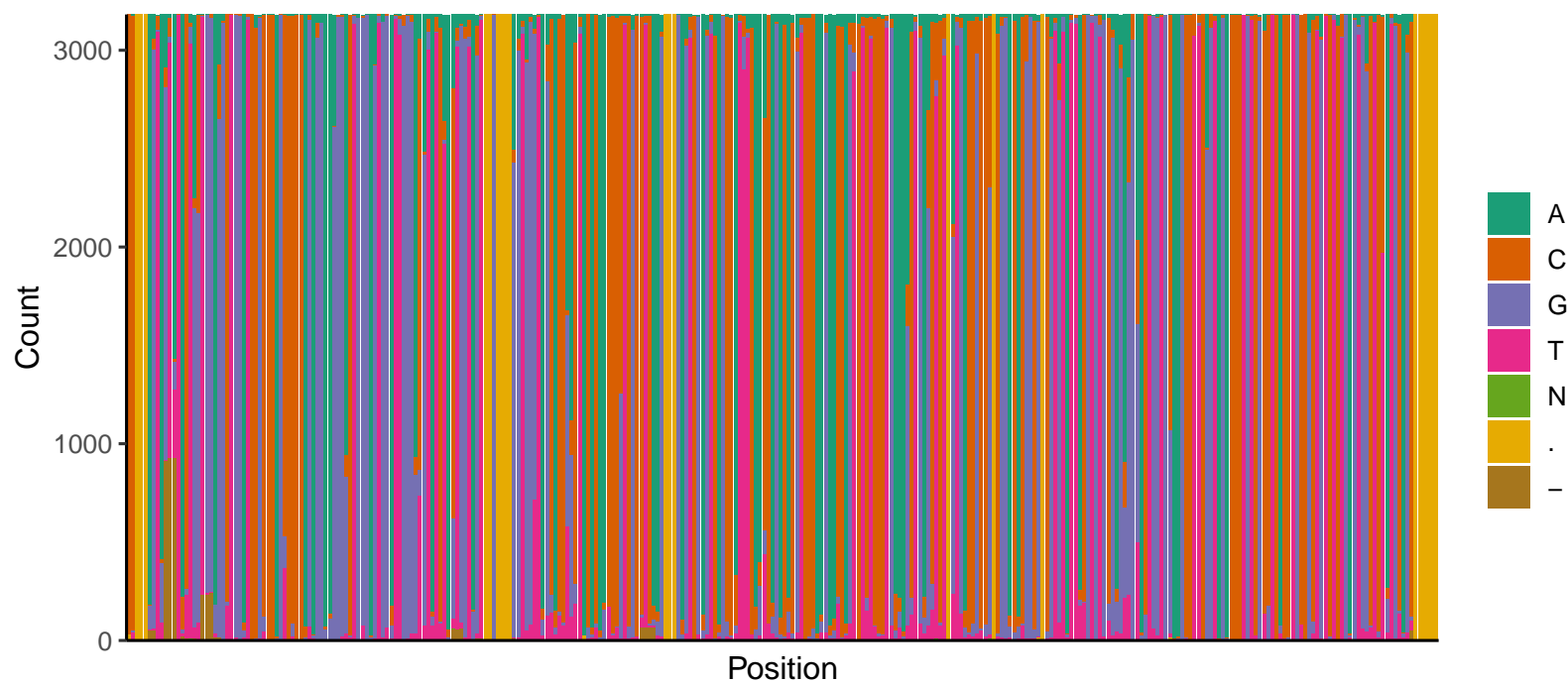
Gene IGHV4-73*01_C93T_T112C_G147A_T163A_C168T_T169G



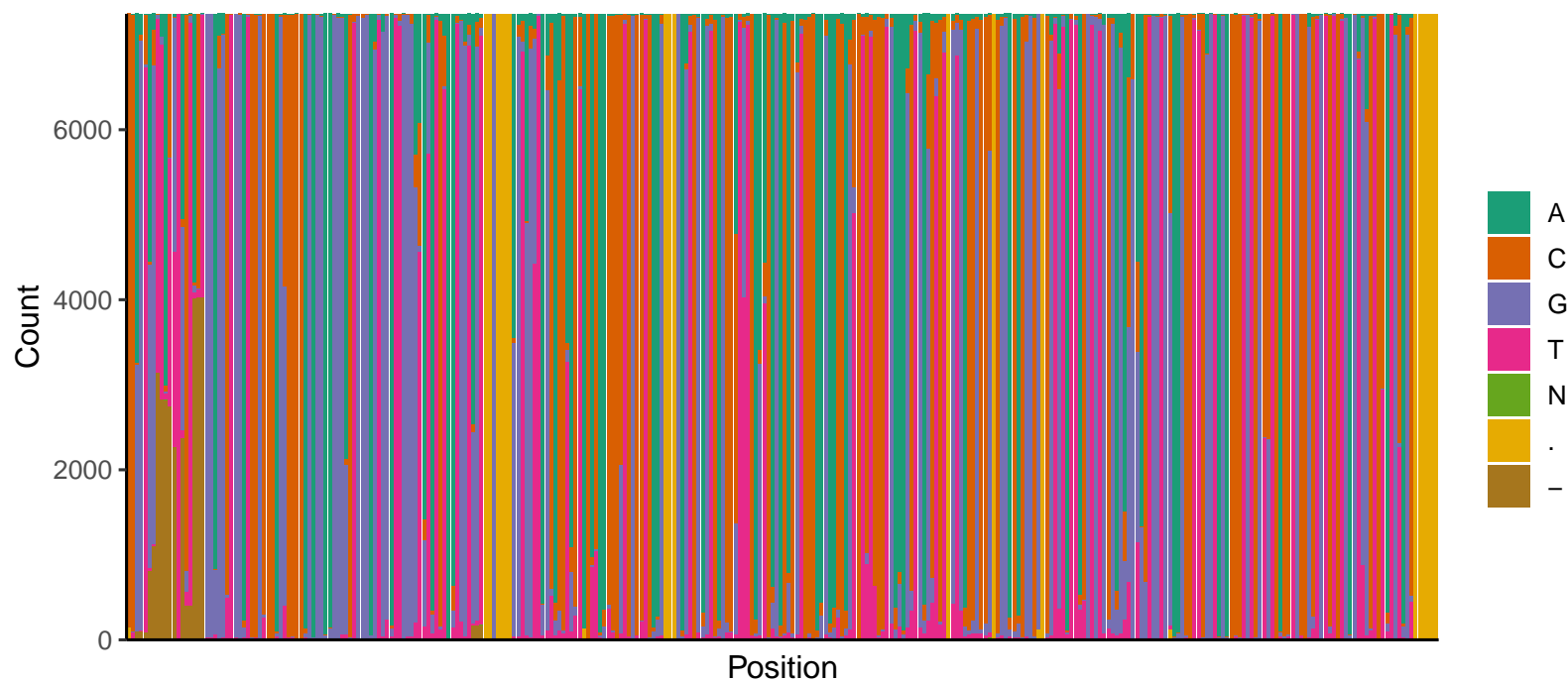
Gene IGHV4-80*01_G70A_T189G_T196A



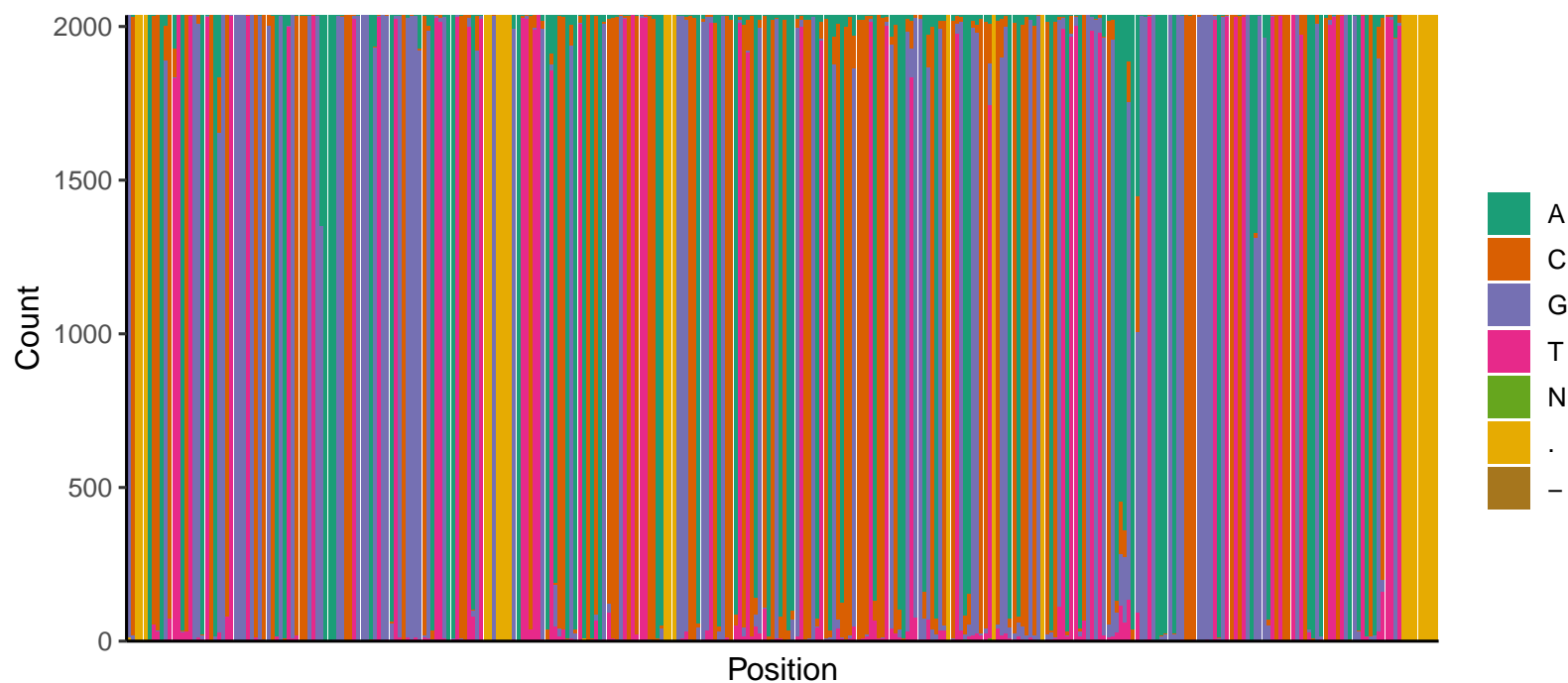
Gene IGHV4-57*02_C87T_G199T_C207G_A239C_T255C_G270A_G280A



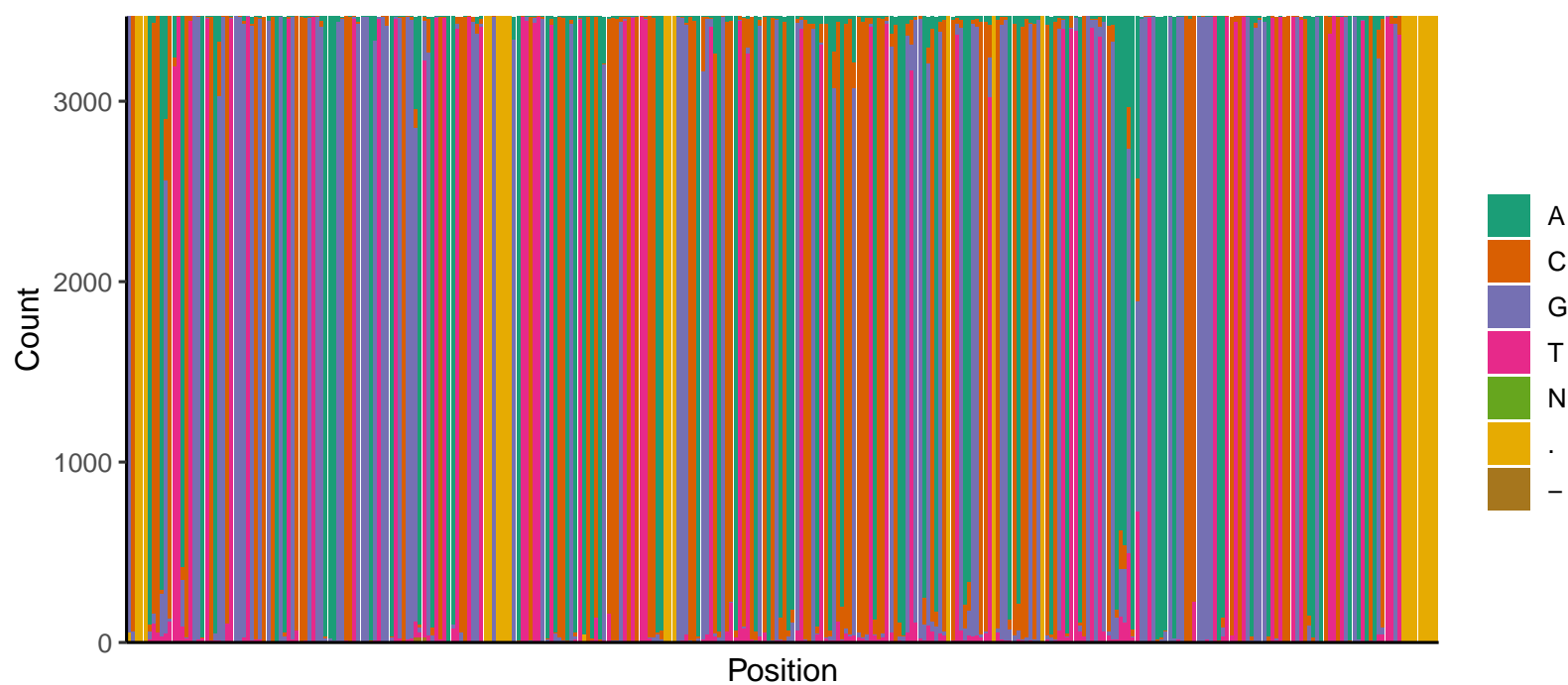
Gene IGHV4-122*01_T87C_A100G_C165T_G239T



Gene IGHV5-20*02_A59G_A141G_C312T



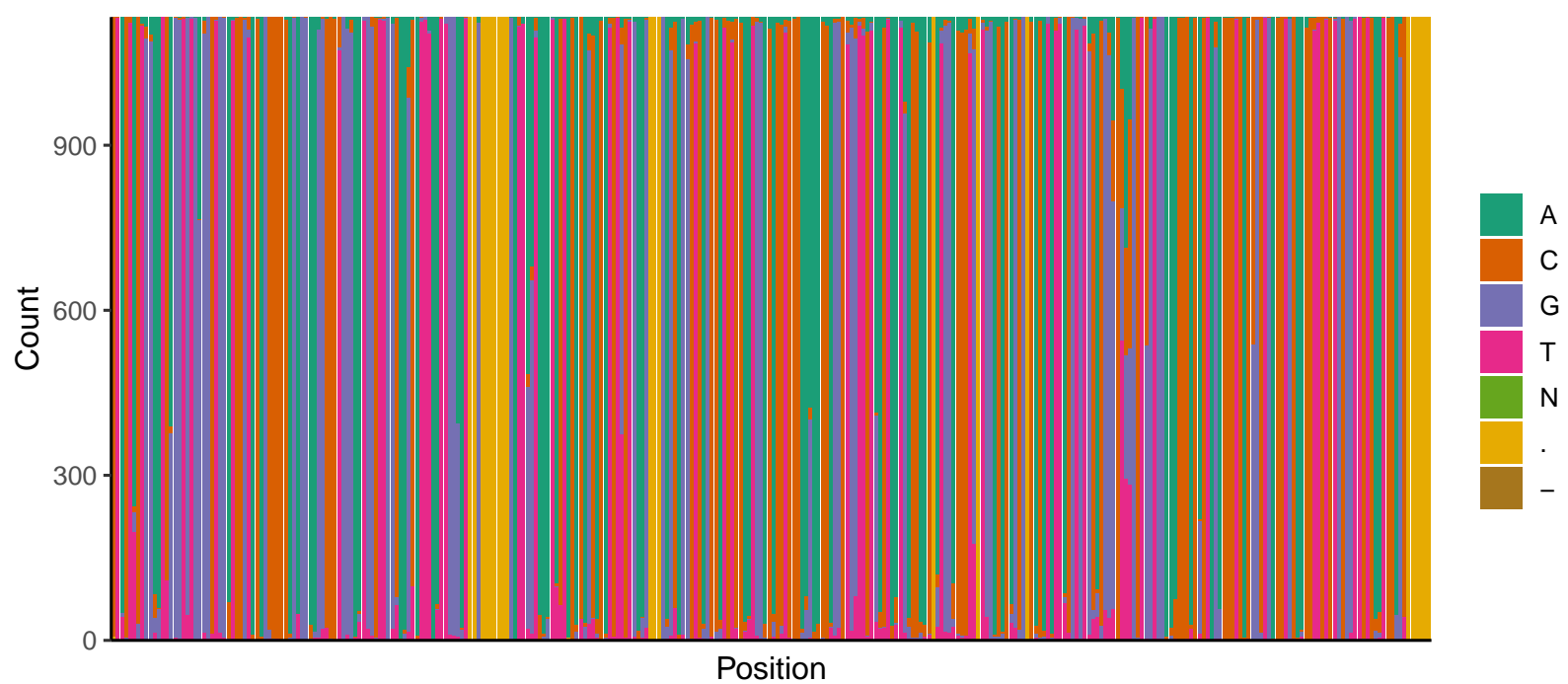
Gene IGHV5-43*01_A109T_G110A_G164T_C165G_A203G_C225G_T231C_A259G



Gene IGHV2-10*01_C6G_A23G_G112C_G118A_A119G_G121T_G141A_G164T_C205



Gene IGHV2-95*01_A48G



Gene IGHV3-59*01_T21C_C69T_T78C_T112A_C130G_C163G_A172T_G175A_G176C



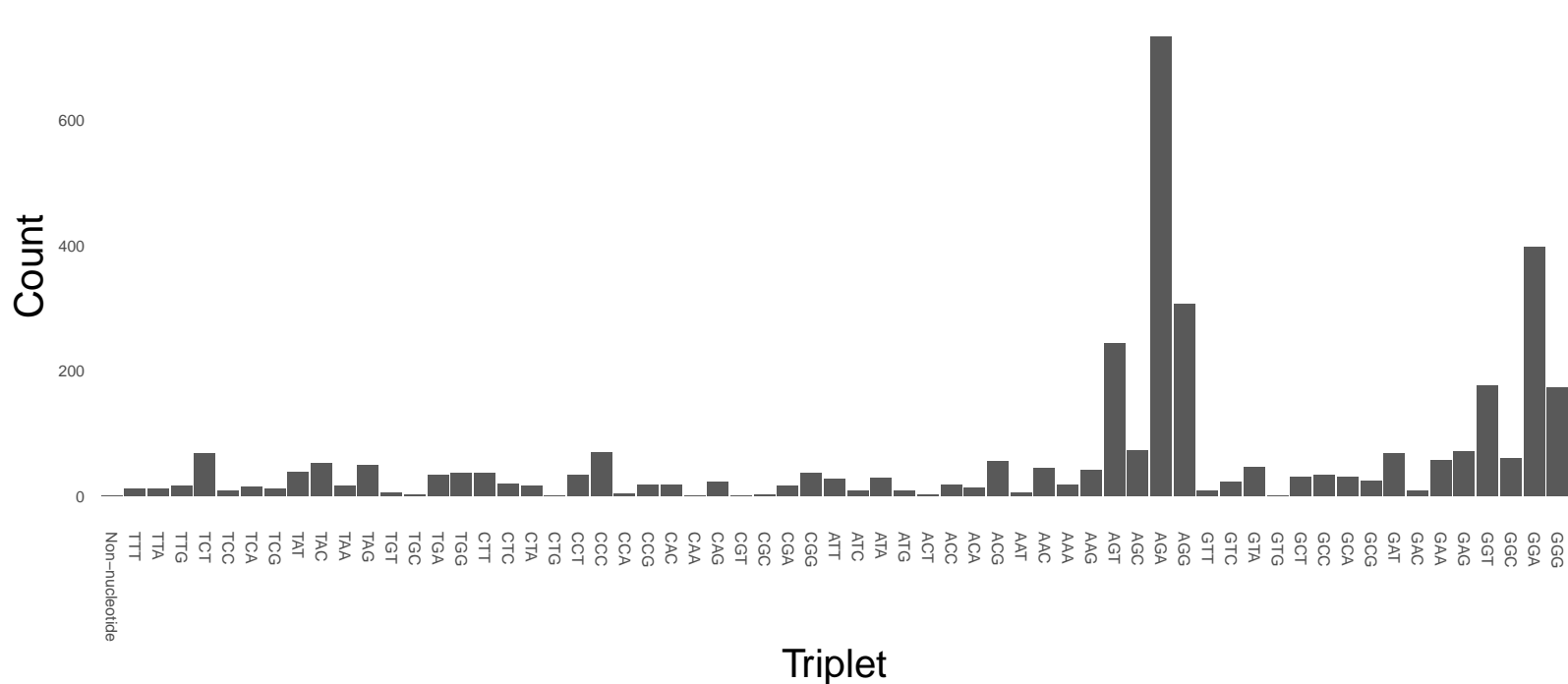
Gene IGHV4-165*02_C133A_C135A_G240A



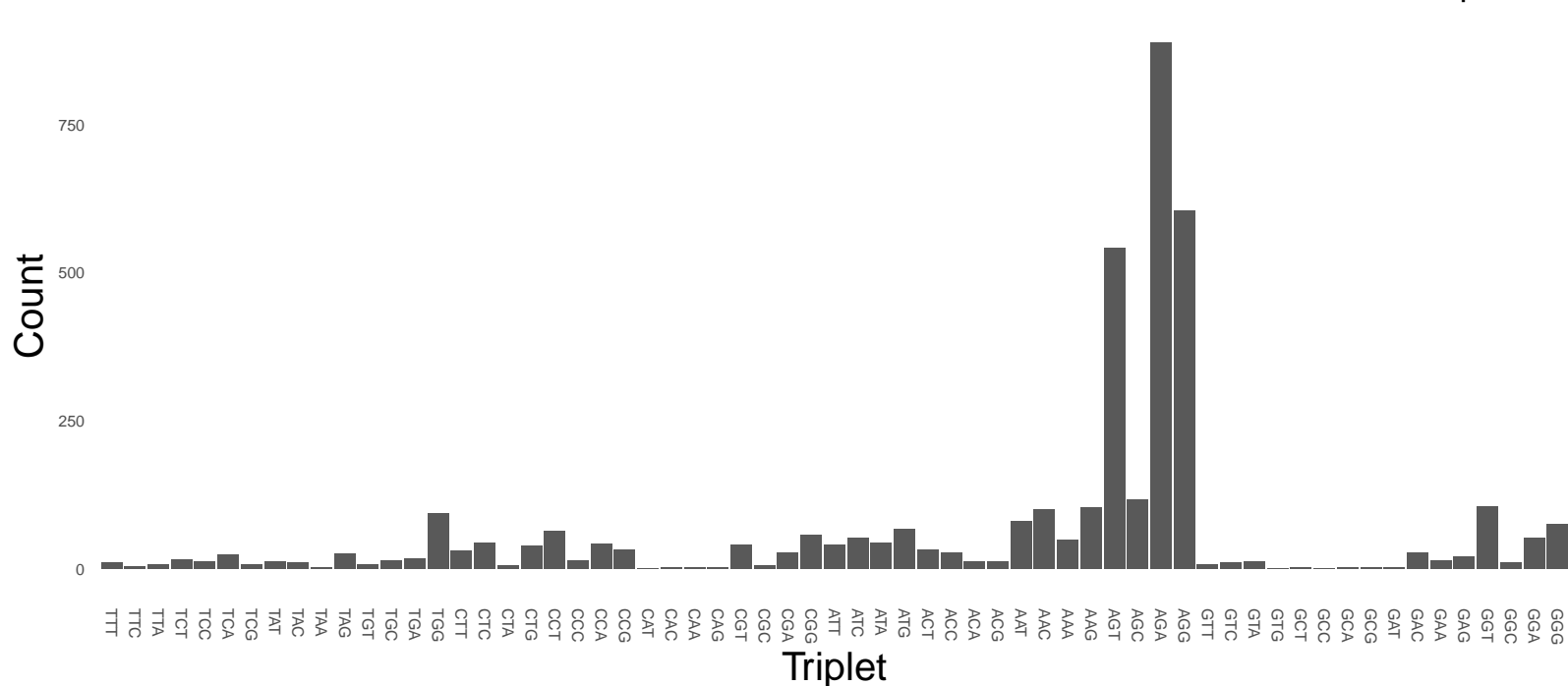
Gene IGHV4S13*01_T85A_G267A_G289A



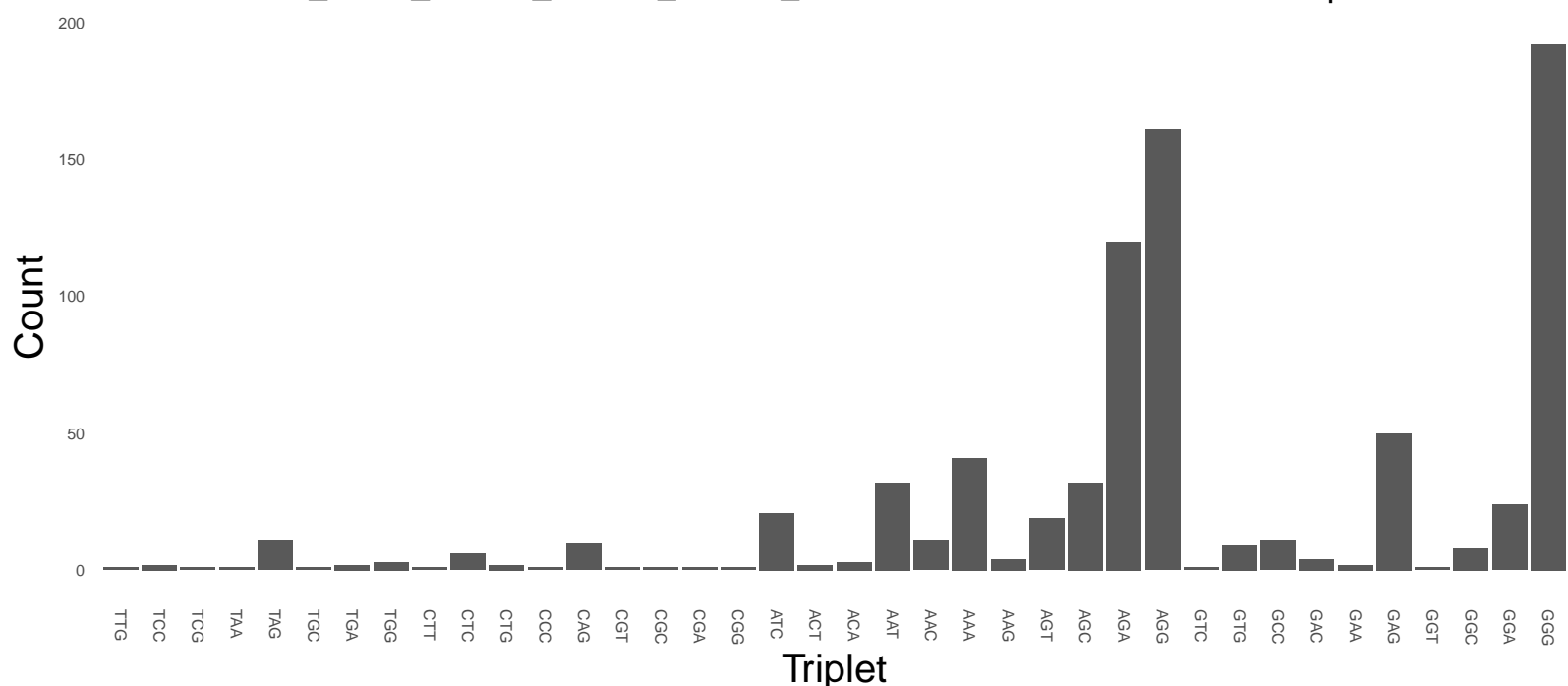
IGHV3-16*01_A51T_T78C_A119G_C264T- Final 3 nucleotides as a triplet



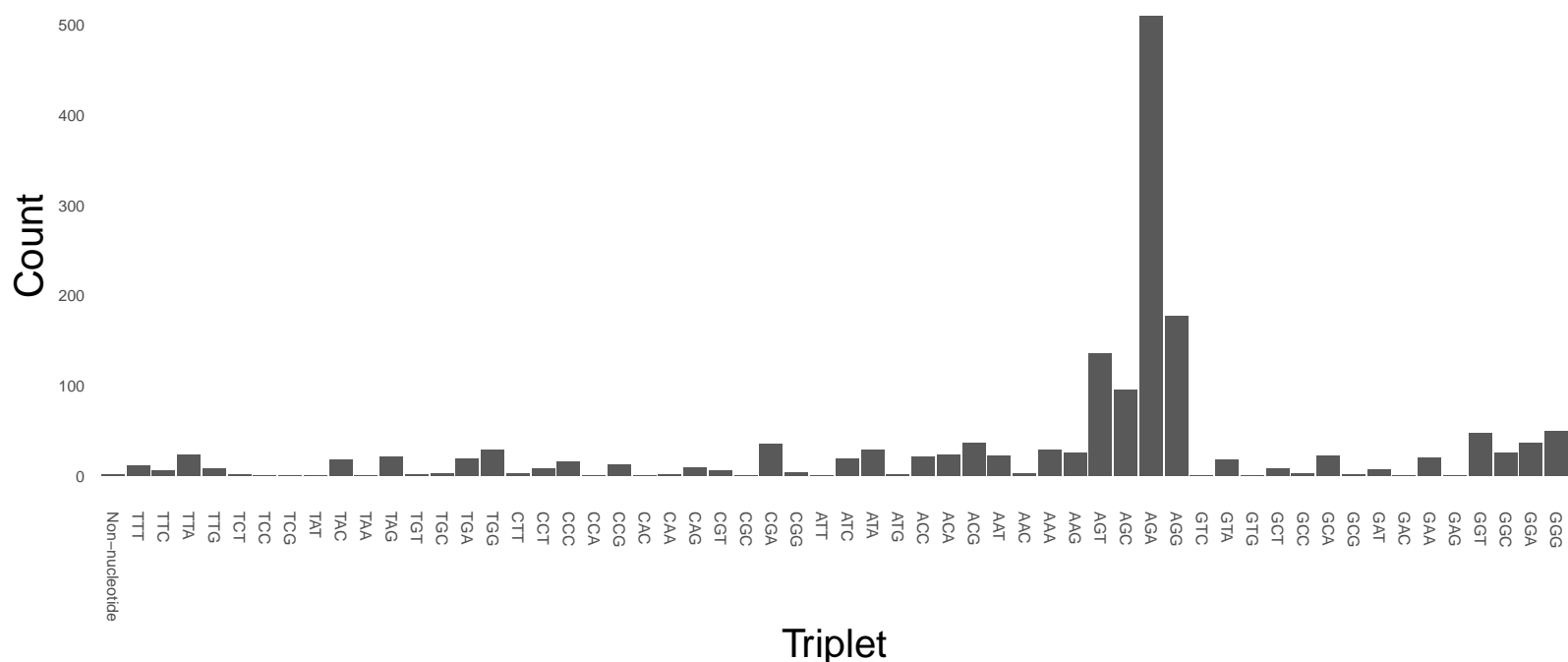
IGHV3-30*01_G48C_T110C_A152T_G174C_G181A_G207A- Final 3 nucleotides as a triplet



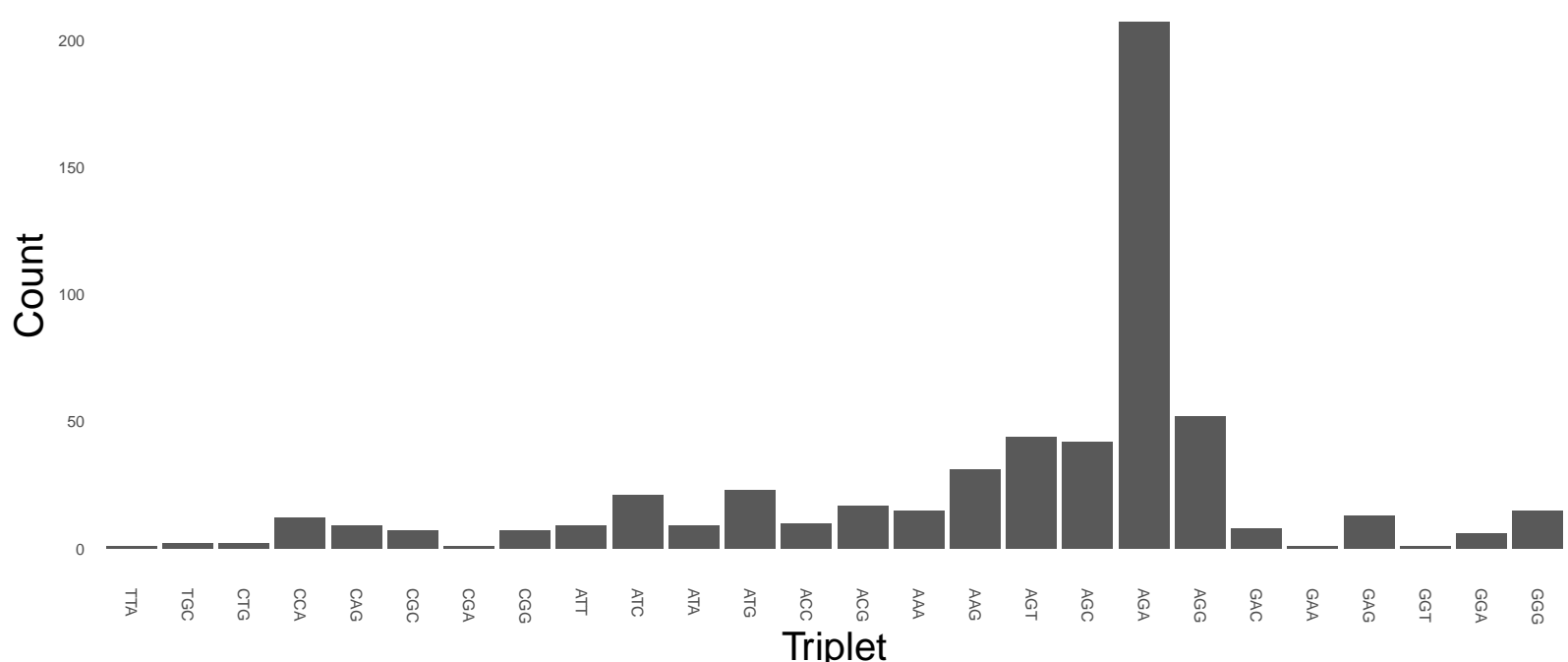
IGHV3-54*02_T78C_T111C_A284G_T286G_C296T- Final 3 nucleotides as a triplet



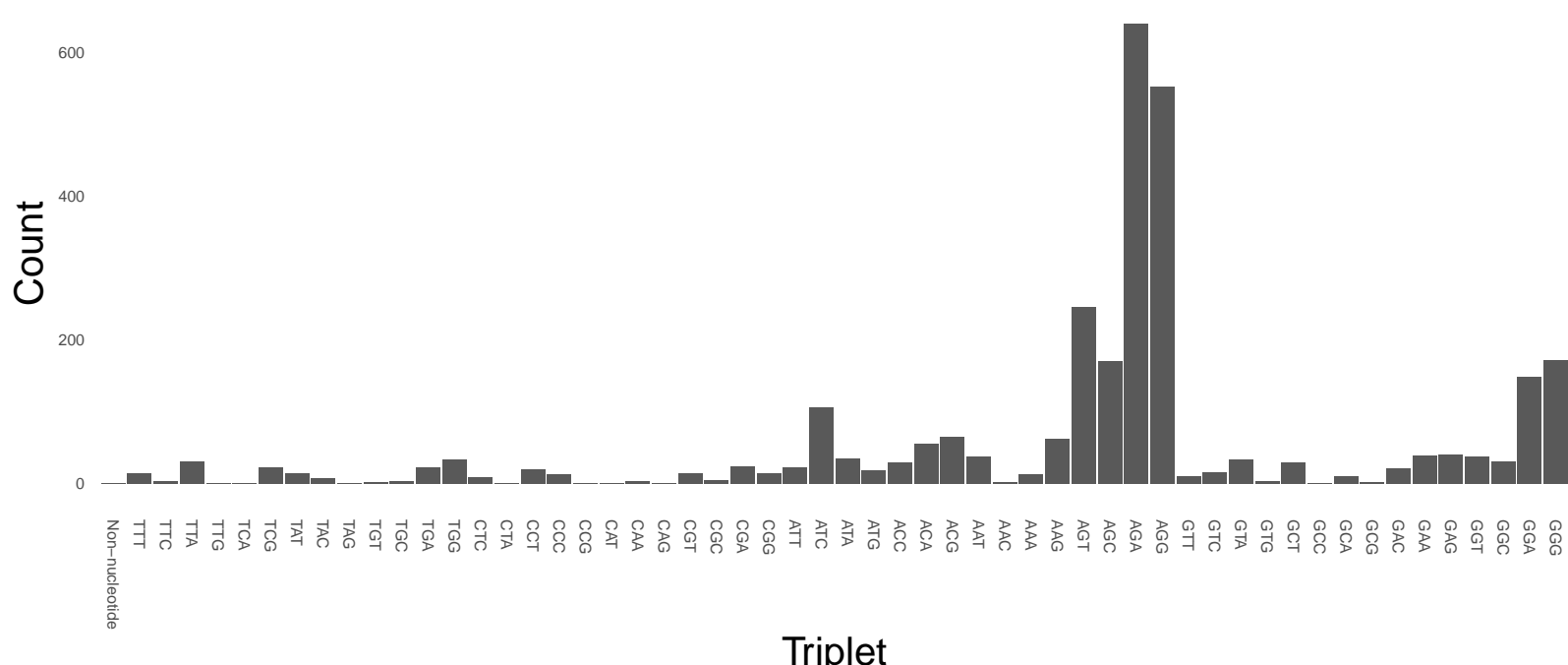
IGHV3-134*01_G87C_A256T_A258C_A263T_T301G- Final 3 nucleotides as a triplet



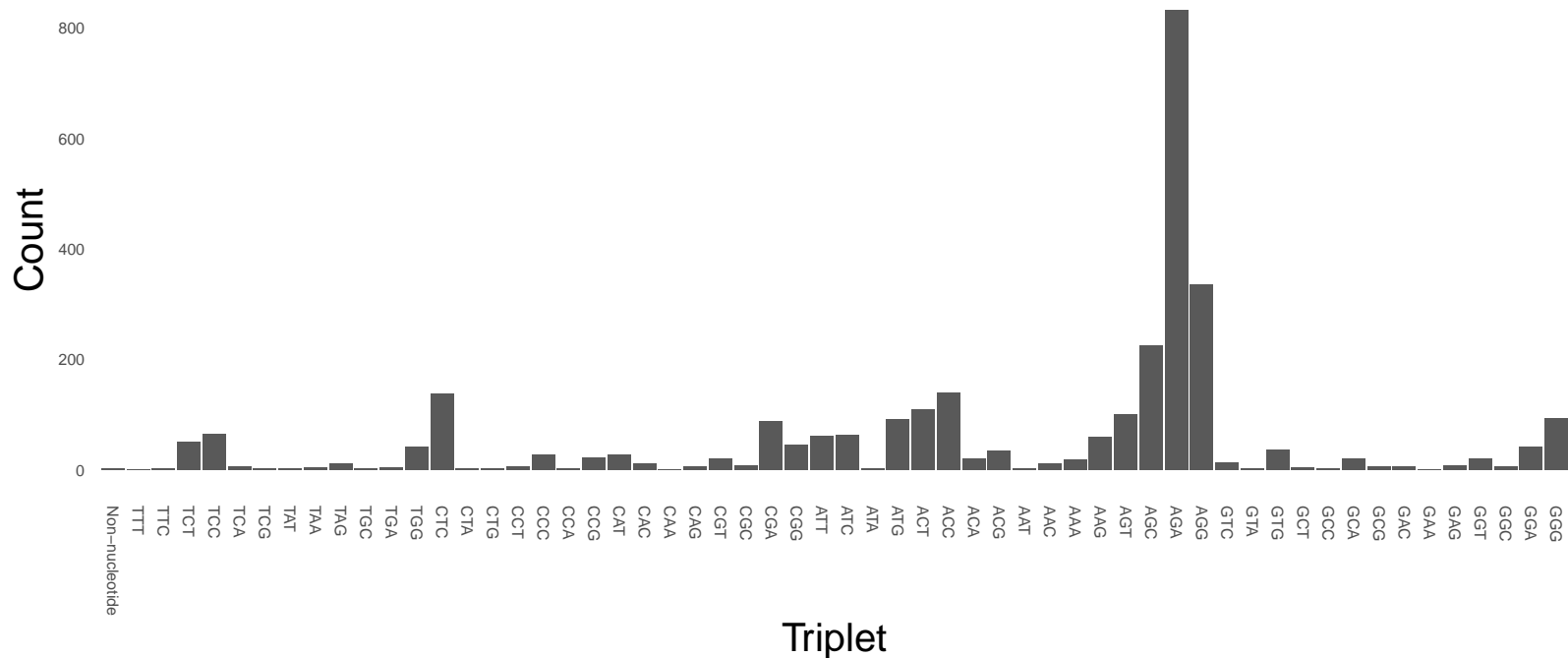
IGHV1-138*01_T86C_C233T_G249C- Final 3 nucleotides as a triplet



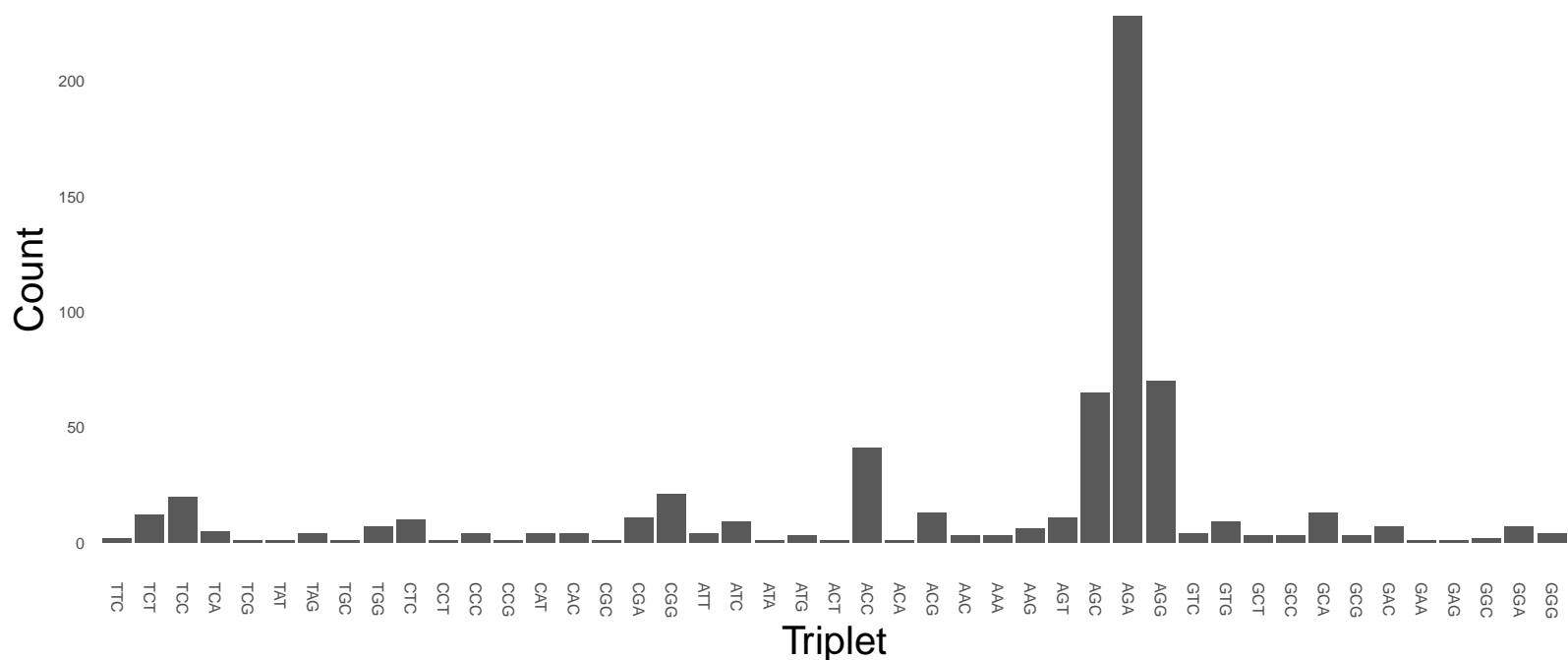
IGHV3-100*01_G3C_A132G_C194T- Final 3 nucleotides as a triplet



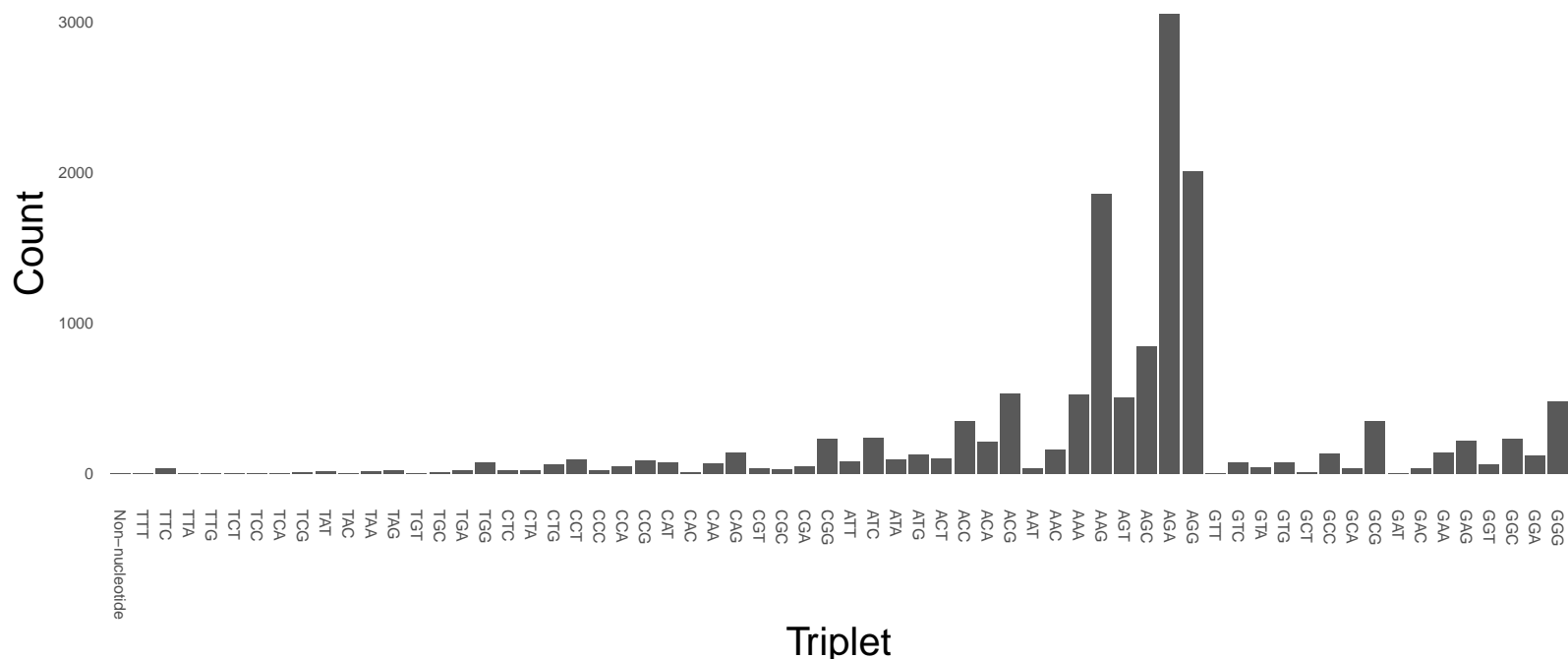
IGHV3-103*01_G51A_A170G- Final 3 nucleotides as a triplet



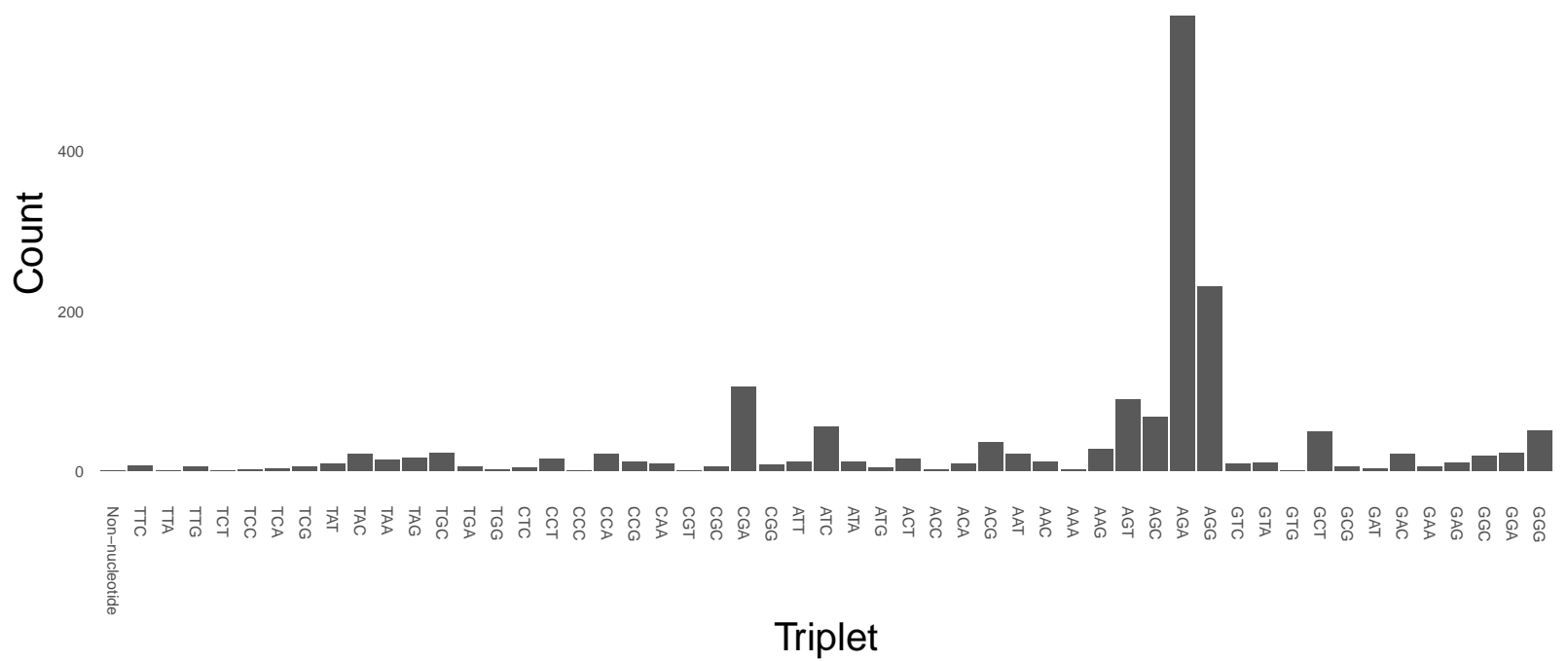
IGHV3-103*01_G51A_A170G_A295C- Final 3 nucleotides as a triplet



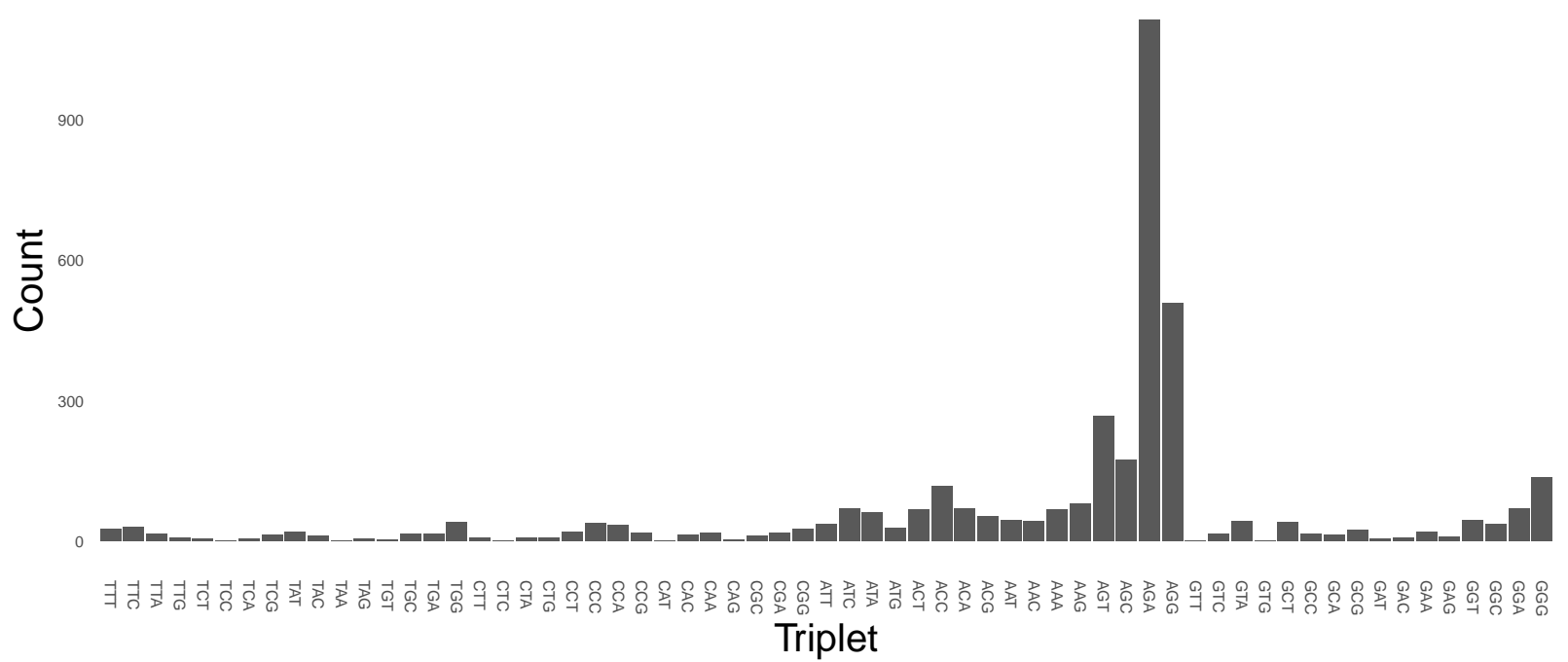
IGHV3S42*01_C38T_A39C_A40C_C111T_T112G_G114C_A118T_T120C_A133G_C210T- Final 3 nucleotides as a triplet



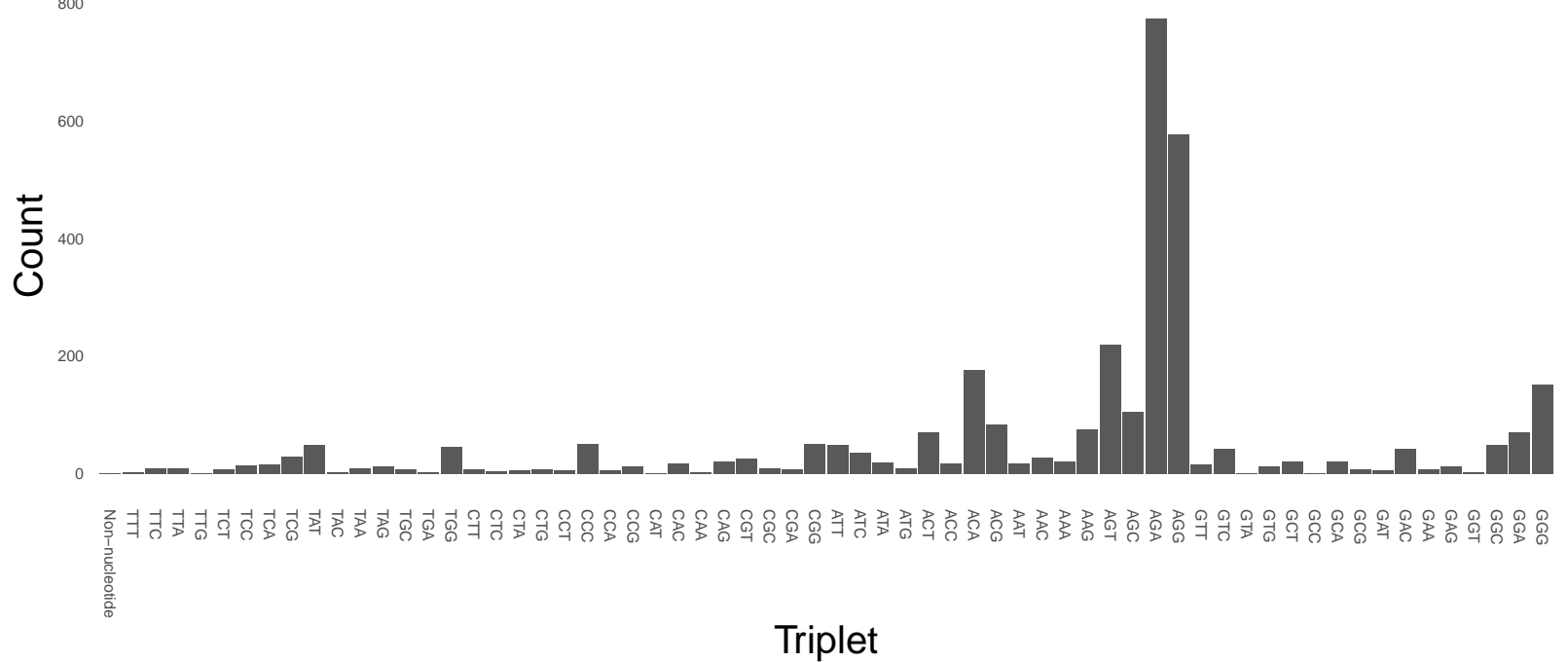
IGHV4-73*01_C93T_T112C_G147A_T163A_C168T_T169G- Final 3 nucleotides as a triplet



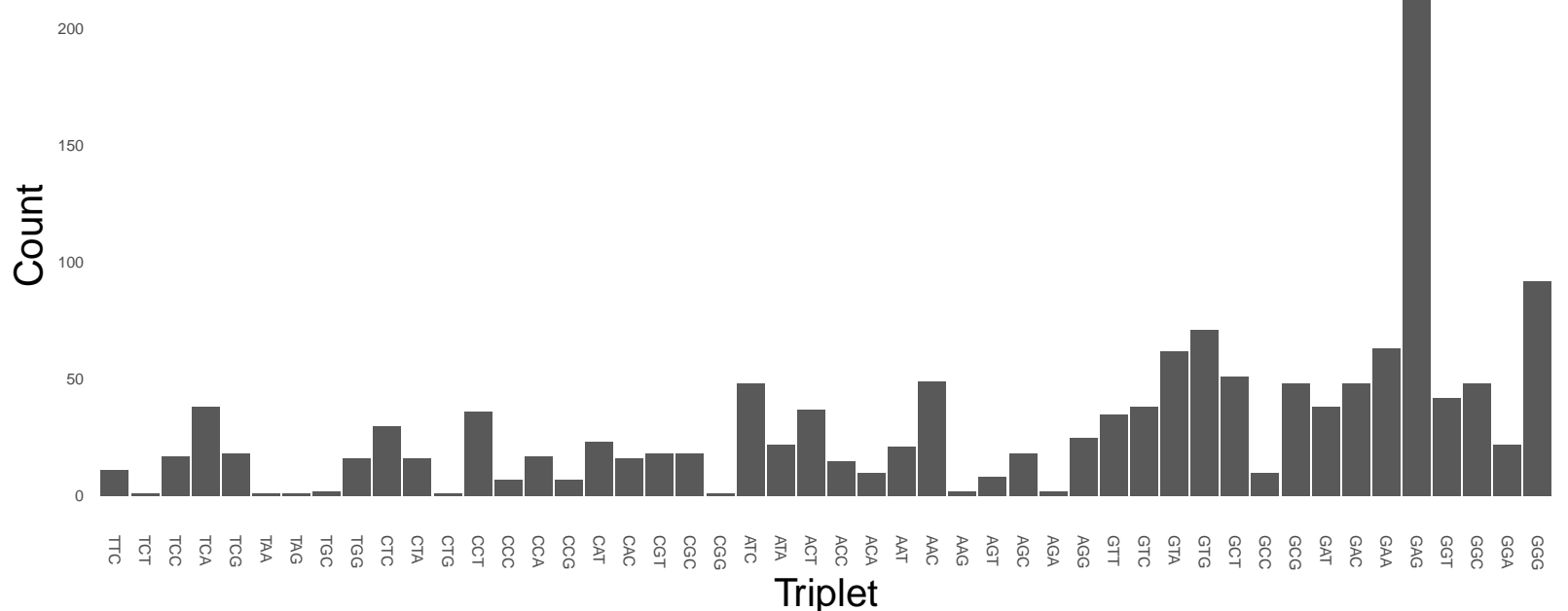
IGHV4-80*01_G70A_T189G_T196A- Final 3 nucleotides as a triplet



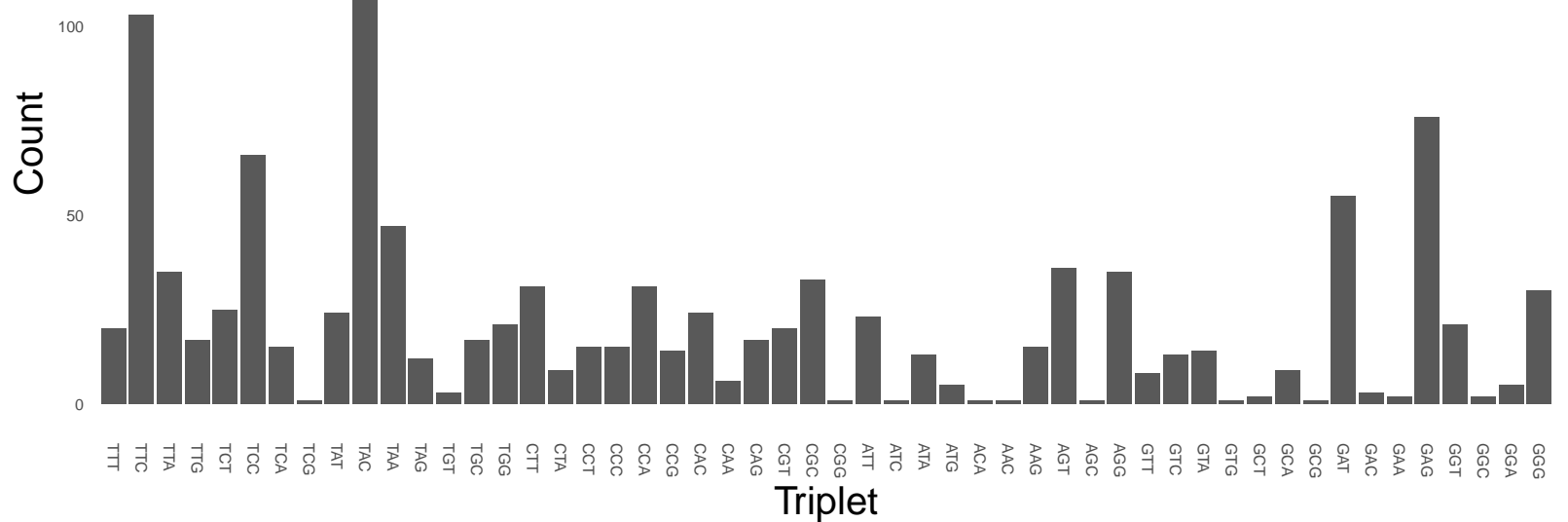
IGHV4-57*02_C87T_G199T_C207G_A239C_T255C_G270A_G280A- Final 3 nucleotides as a triplet



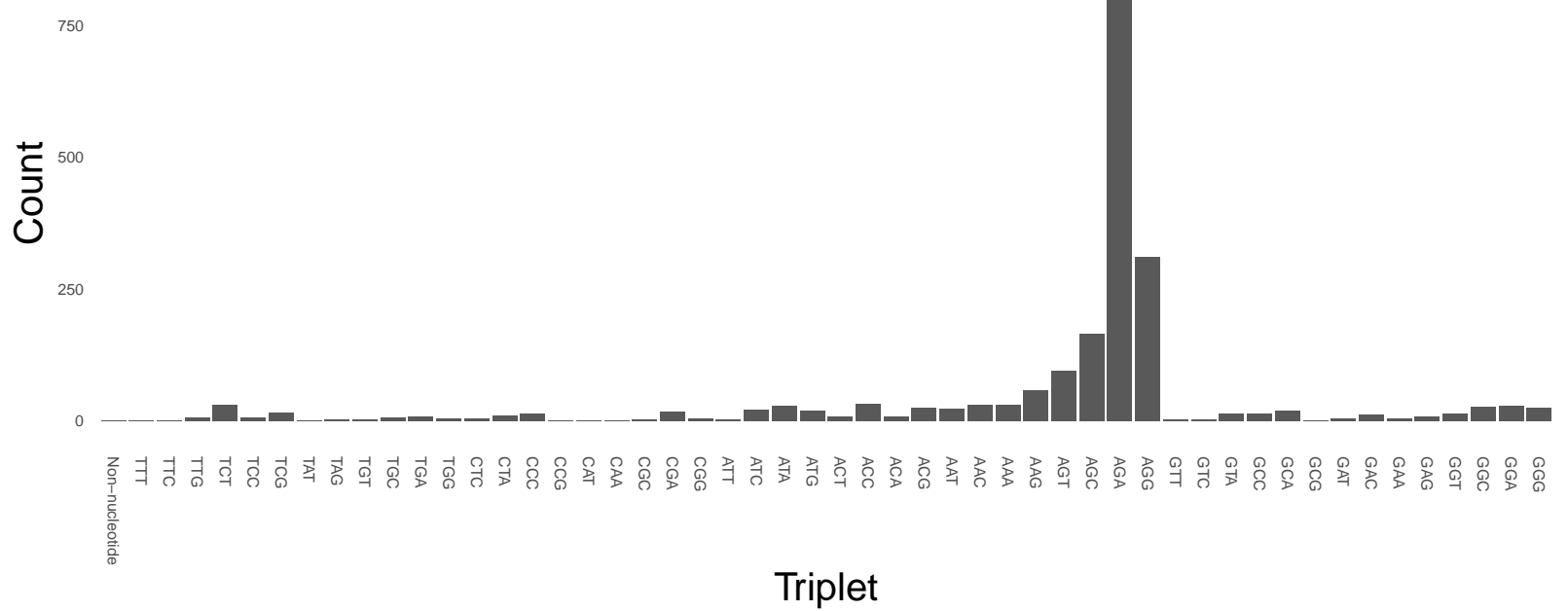
IGHV2-10*01_C6G_A23G_G112C_G118A_A119G_G121T_G141A_G164T_C205A_G210T- Final



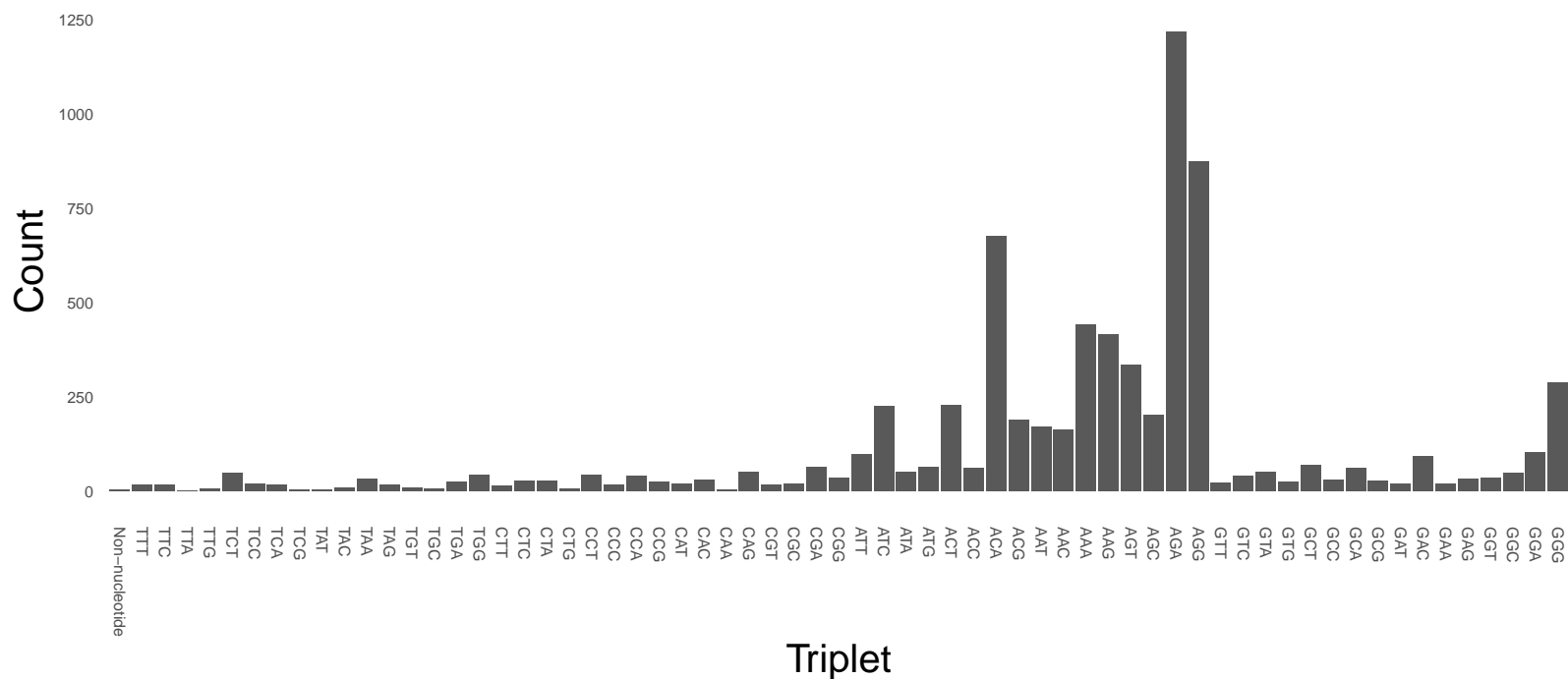
IGHV2-95*01_A48G- Final 3 nucleotides as a triplet



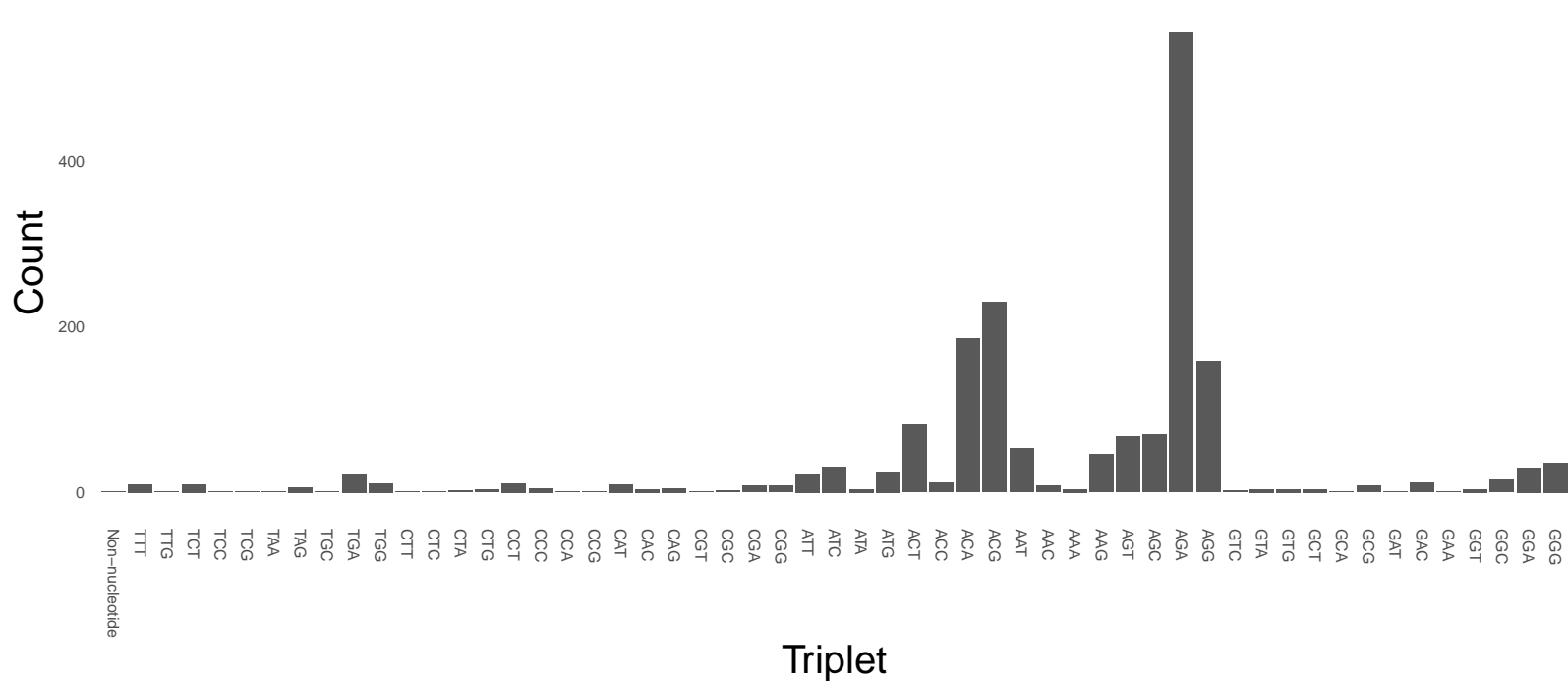
IGHV3-59*01_T21C_C69T_T78C_T112A_C130G_C163G_A172T_G175A_G176C_A204T- Final



IGHV4-165*02_C133A_C135A_G240A- Final 3 nucleotides as a triplet

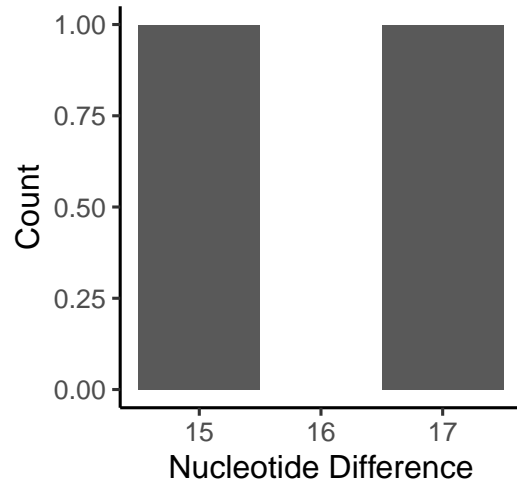


IGHV4S13*01_T85A_G267A_G289A- Final 3 nucleotides as a triplet



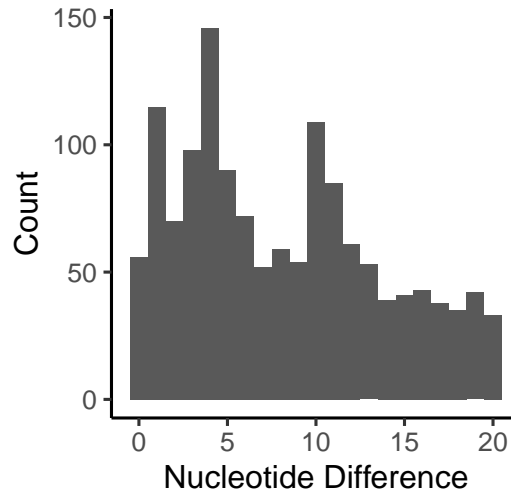
IGHV3S3*01

142 sequences assigned
No exact matches.



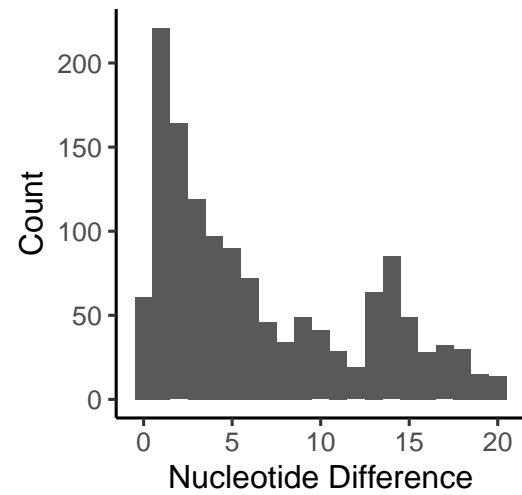
IGHV4S13*01_T85A_G26

1810 sequences assigned
56 (3.1%) exact matches, in which:
54 unique CDR3
4 unique J



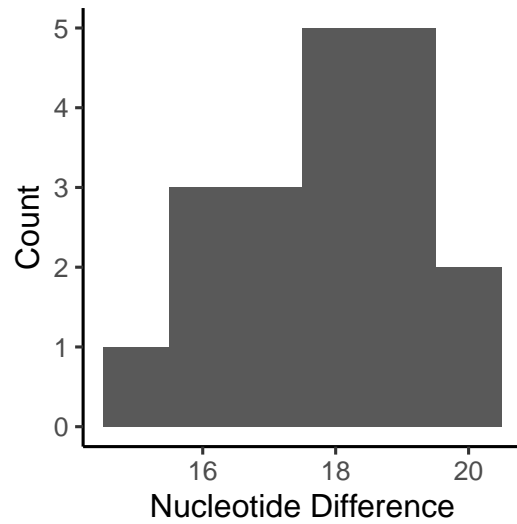
IGHV2-10*01_C6G_A230

1443 sequences assigned
61 (4.2%) exact matches, in which:
49 unique CDR3
4 unique J



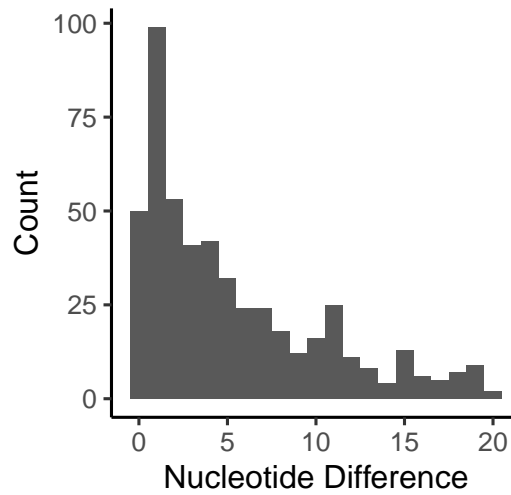
IGHV3S41*01

112 sequences assigned
No exact matches.



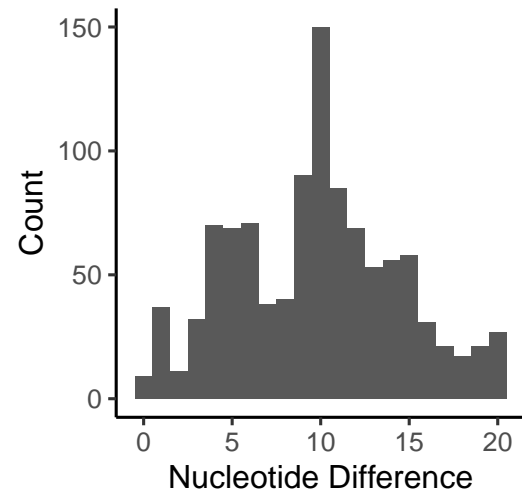
IGHV1-138*01_T86C_C26

565 sequences assigned
50 (8.8%) exact matches, in which:
38 unique CDR3
5 unique J



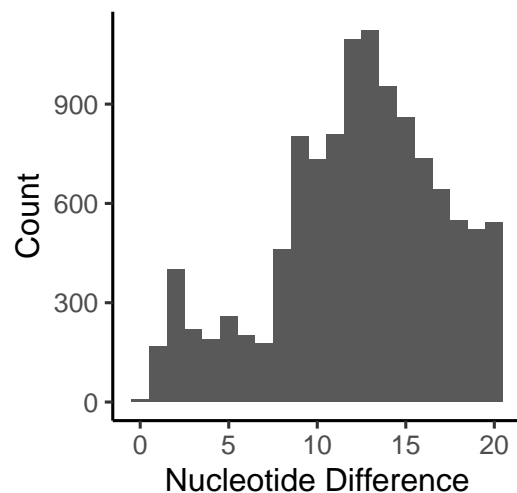
IGHV2-95*01_A48G

1133 sequences assigned
9 (0.8%) exact matches, in which:
8 unique CDR3
2 unique J



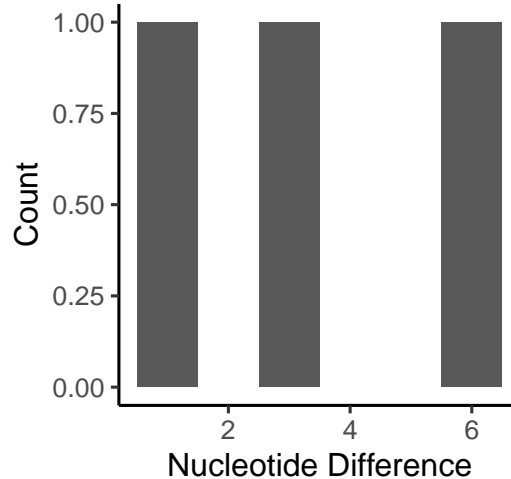
IGHV3S42*01_C38T_A39

14014 sequences assigned
8 (0.1%) exact matches, in which:
8 unique CDR3
4 unique J



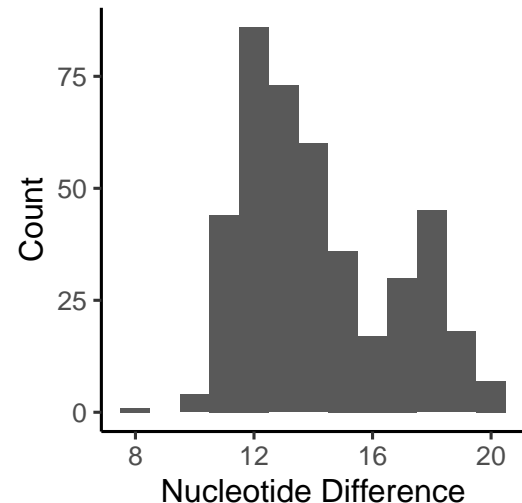
IGHV1-156*01

186 sequences assigned
No exact matches.



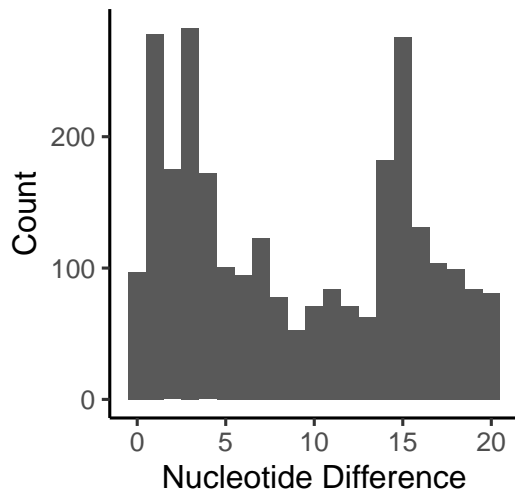
IGHV2-152*01

559 sequences assigned
No exact matches.



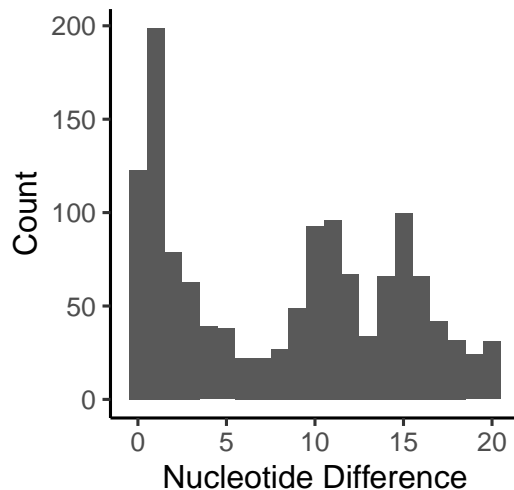
IGHV3-16*01_A51T_T78

3518 sequences assigned
97 (2.8%) exact matches, in which:
79 unique CDR3
5 unique J



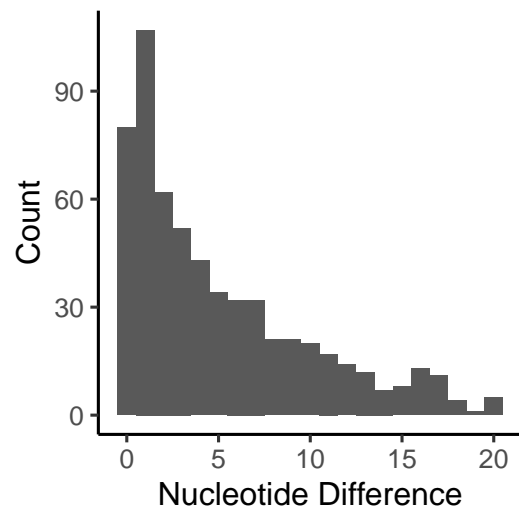
IGHV3-59*01_T21C_C69

2038 sequences assigned
123 (6%) exact matches, in which:
99 unique CDR3
3 unique J



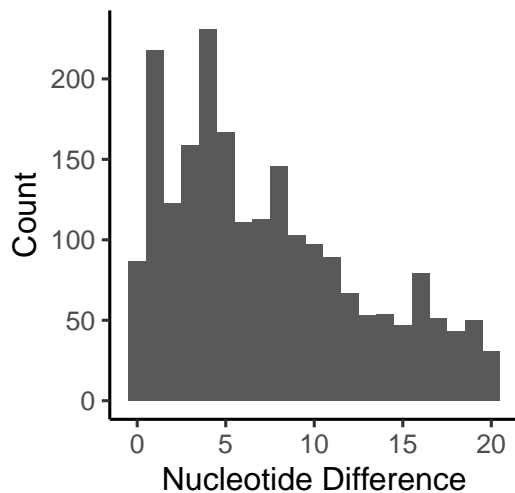
IGHV3-103*01_G51A_A1

626 sequences assigned
80 (12.8%) exact matches, in which:
74 unique CDR3
3 unique J



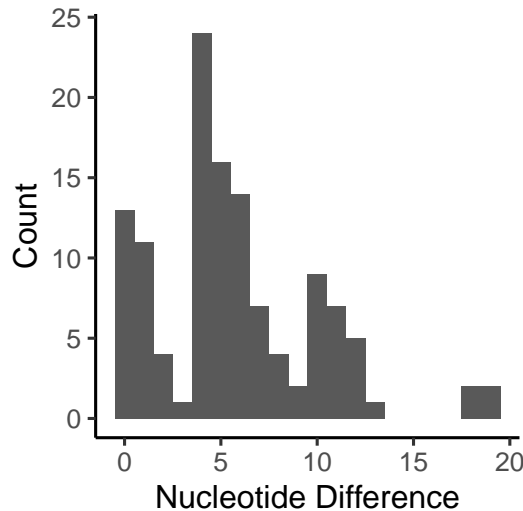
IGHV3-30*01_G48C_T11

3799 sequences assigned
87 (2.3%) exact matches, in which:
70 unique CDR3
3 unique J



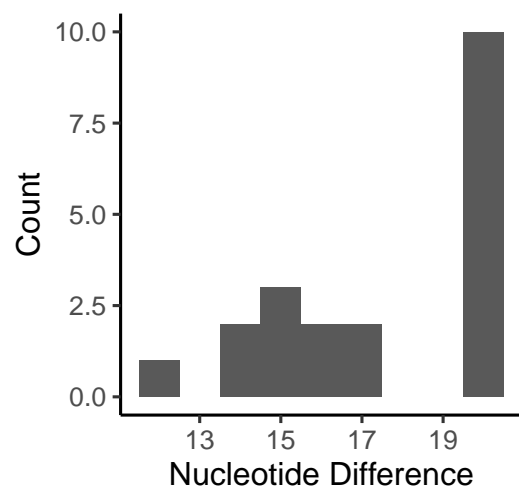
IGHV3-100*01_G3C_A13

2916 sequences assigned
13 (0.4%) exact matches, in which:
13 unique CDR3
3 unique J



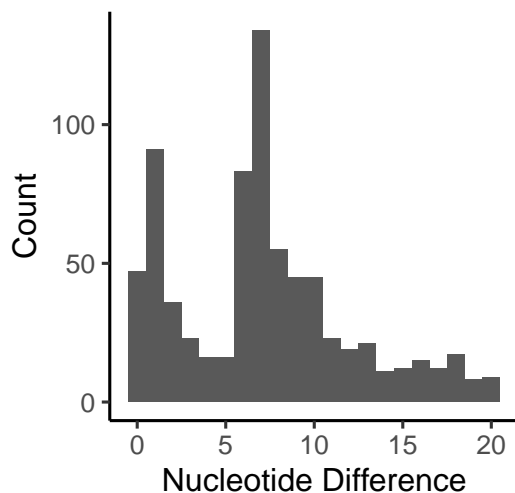
IGHV3-108*01

200 sequences assigned
No exact matches.



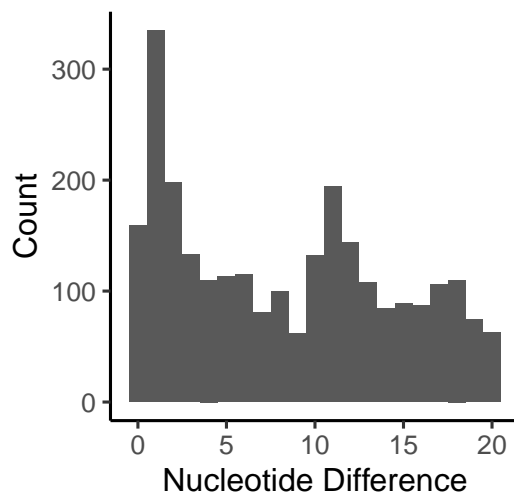
IGHV3-54*02_T78C_T11

794 sequences assigned
47 (5.9%) exact matches, in which:
40 unique CDR3
3 unique J



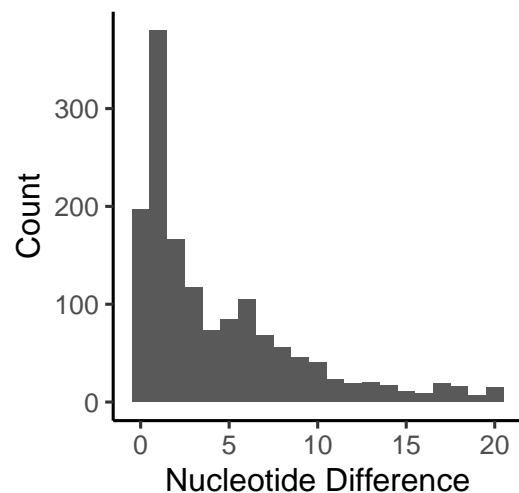
IGHV3-103*01_G51A_A1

2984 sequences assigned
159 (5.3%) exact matches, in which:
129 unique CDR3
3 unique J



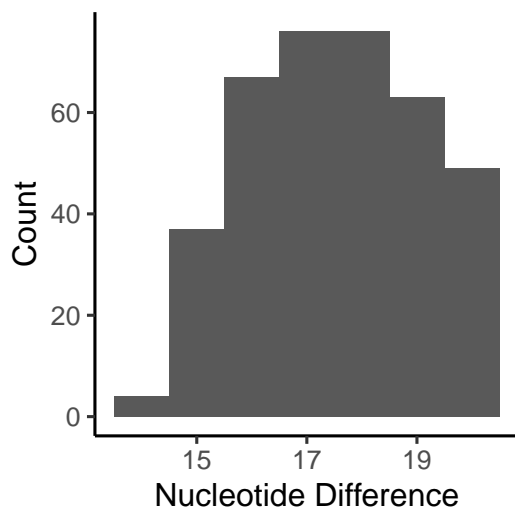
IGHV3-134*01_G87C_A2

1622 sequences assigned
197 (12.1%) exact matches, in which:
167 unique CDR3
4 unique J



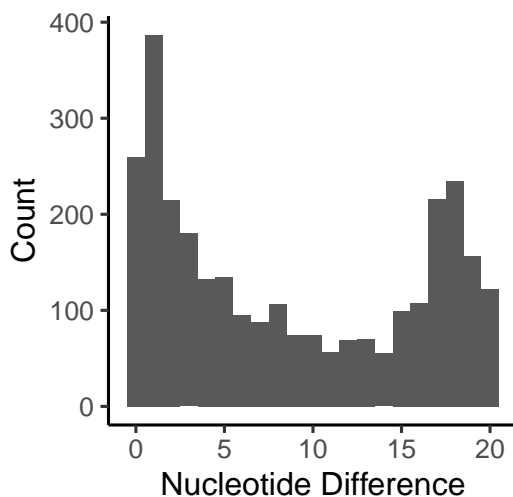
IGHV3-137*01

1216 sequences assigned
No exact matches.



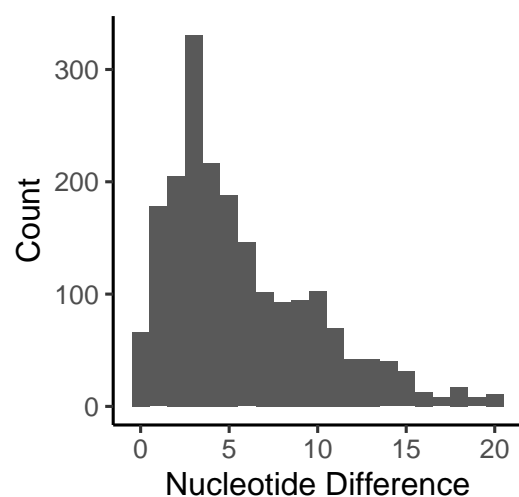
IGHV4-80*01_G70A_T18

3728 sequences assigned
260 (7%) exact matches, in which:
225 unique CDR3
3 unique J



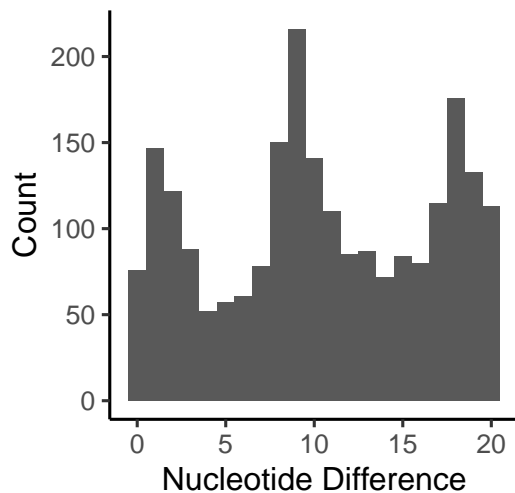
IGHV5-20*02_A59G_A14

2037 sequences assigned
66 (3.2%) exact matches, in which:
53 unique CDR3
5 unique J



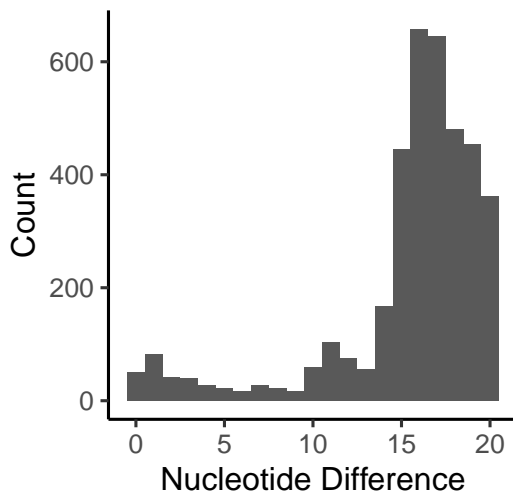
IGHV4-57*02_C87T_G19

3182 sequences assigned
76 (2.4%) exact matches, in which:
72 unique CDR3
4 unique J



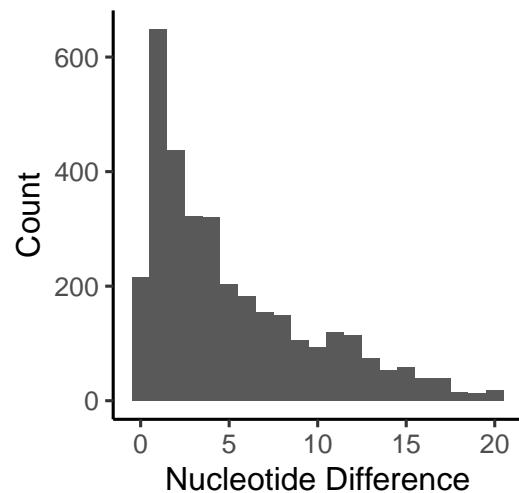
IGHV4-122*01_T87C_A1

7363 sequences assigned
50 (0.7%) exact matches, in which:
46 unique CDR3
3 unique J



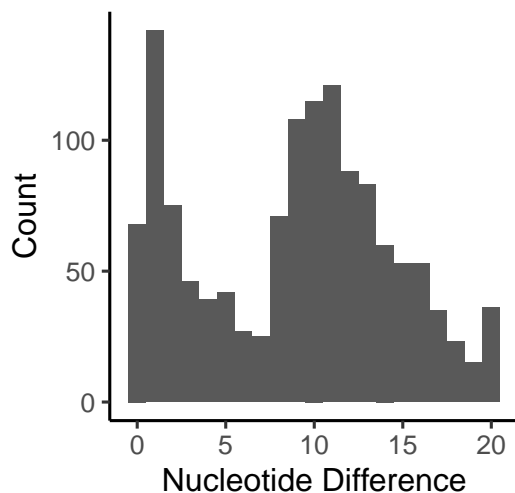
IGHV5-43*01_A109T_G1

3470 sequences assigned
215 (6.2%) exact matches, in which:
171 unique CDR3
5 unique J



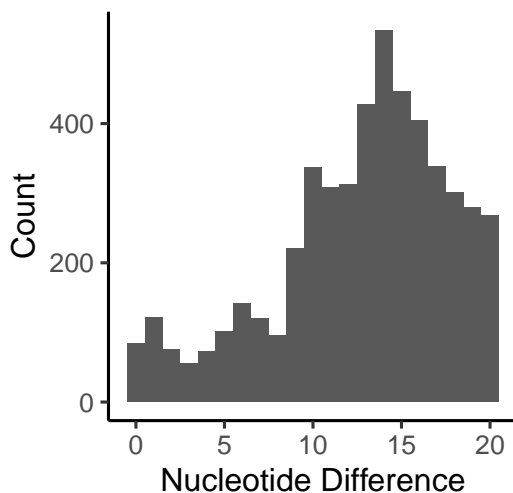
IGHV4-73*01_C93T_T11

1667 sequences assigned
68 (4.1%) exact matches, in which:
65 unique CDR3
5 unique J



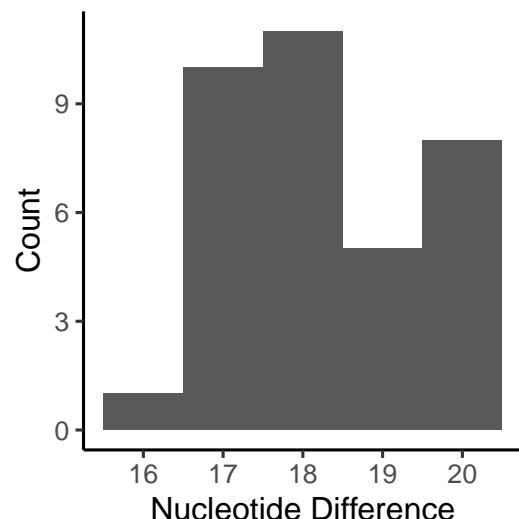
IGHV4-165*02_C133A_C

7104 sequences assigned
84 (1.2%) exact matches, in which:
71 unique CDR3
3 unique J

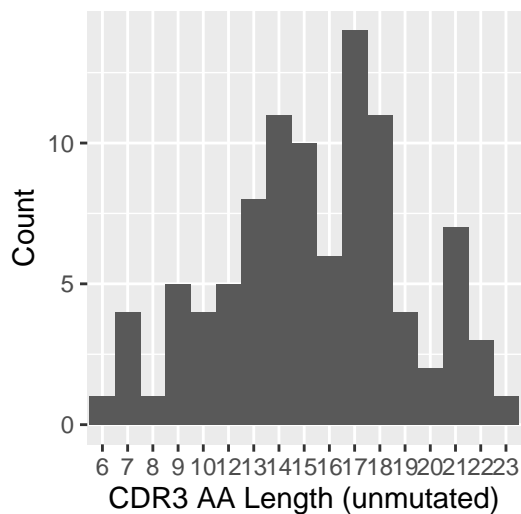


IGHV7-94*01

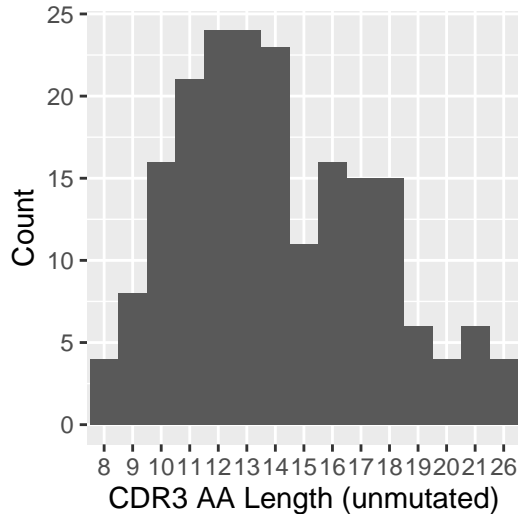
67 sequences assigned
No exact matches.



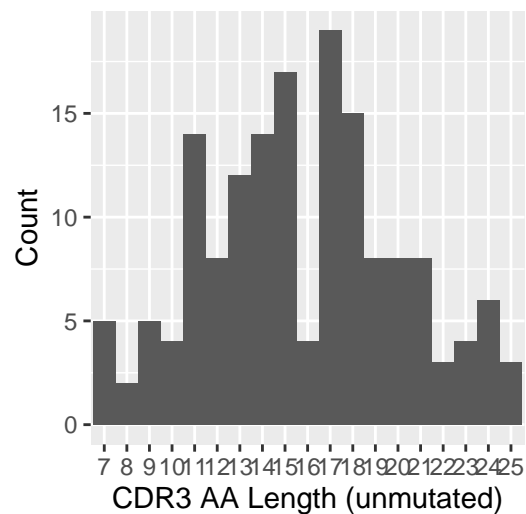
IGHV3-16*01_A51T_T78C_



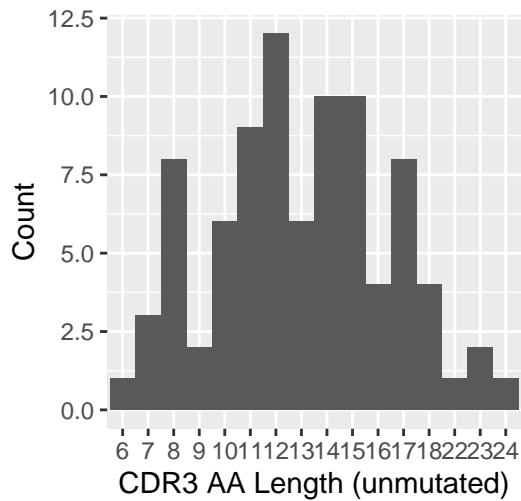
IGHV3-134*01_G87C_A256



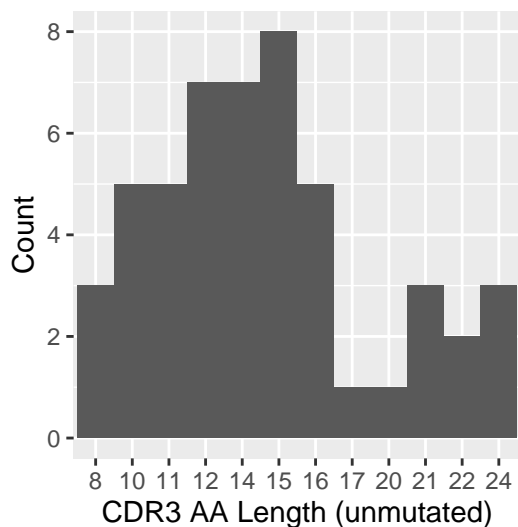
IGHV3-103*01_G51A_A1700



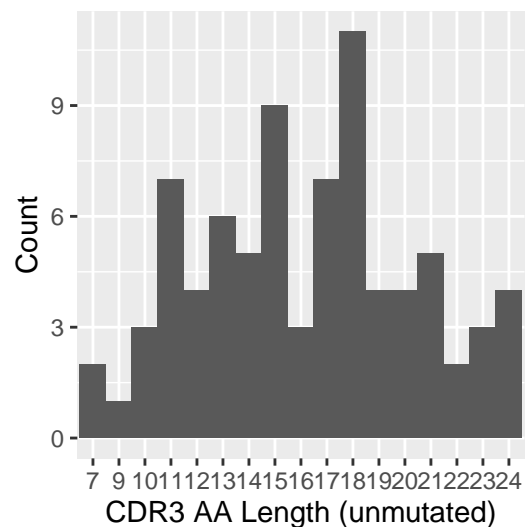
IGHV3-30*01_G48C_T1100



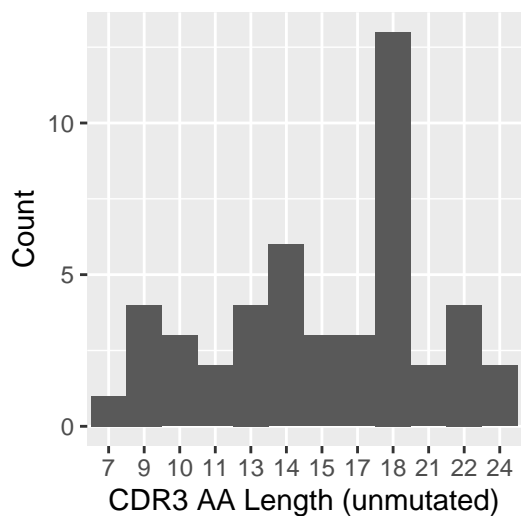
IGHV1-138*01_T86C_C233T



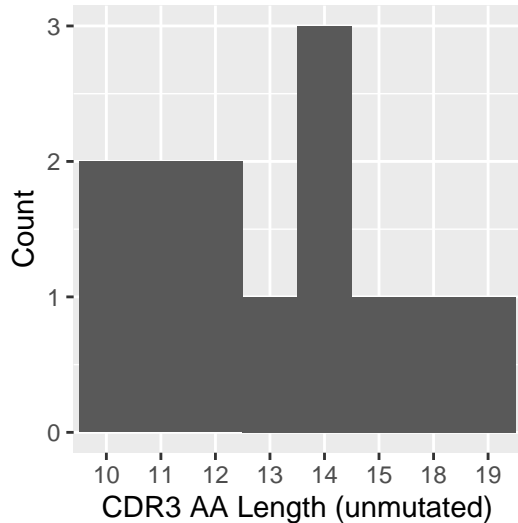
IGHV3-103*01_G51A_A1700



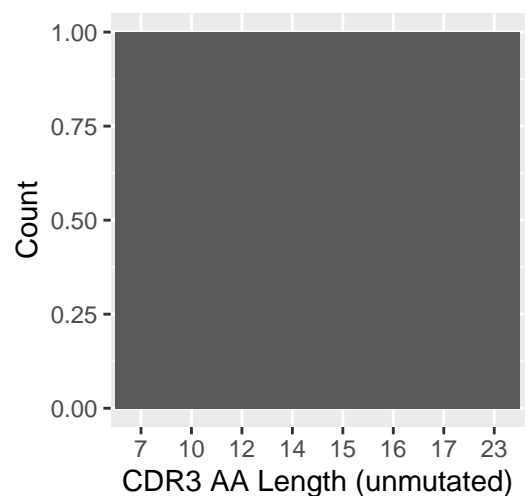
IGHV3-54*02_T78C_T111C_



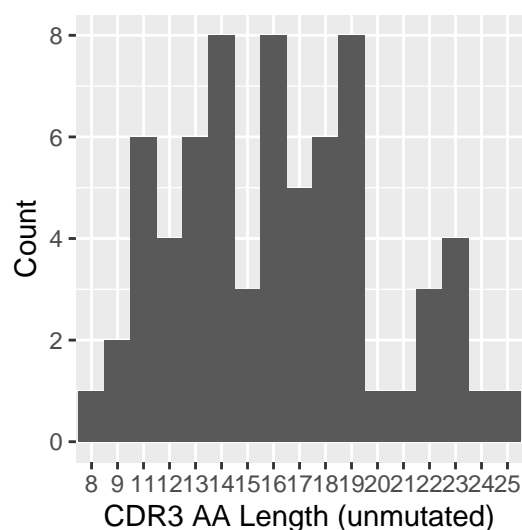
IGHV3-100*01_G3C_A132G_



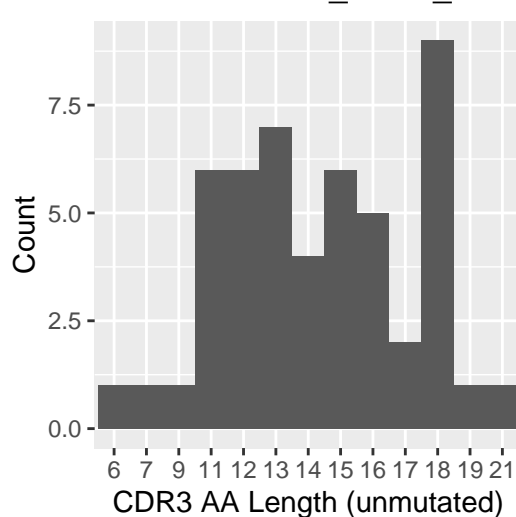
IGHV3S42*01_C38T_A39C_



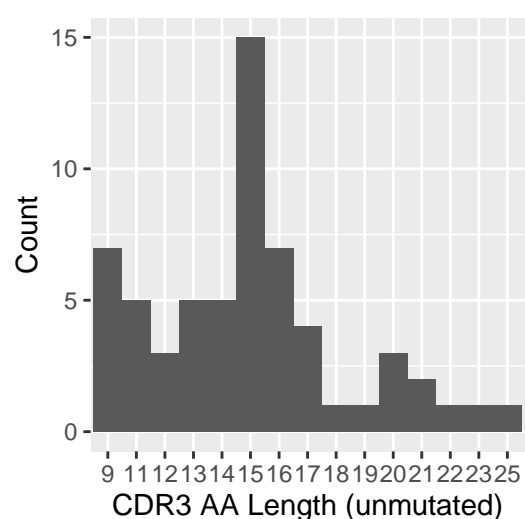
IGHV4-73*01_C93T_T112C_



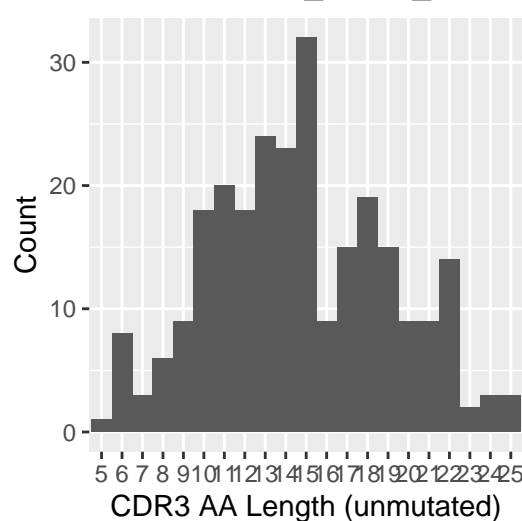
IGHV4-122*01_T87C_A100



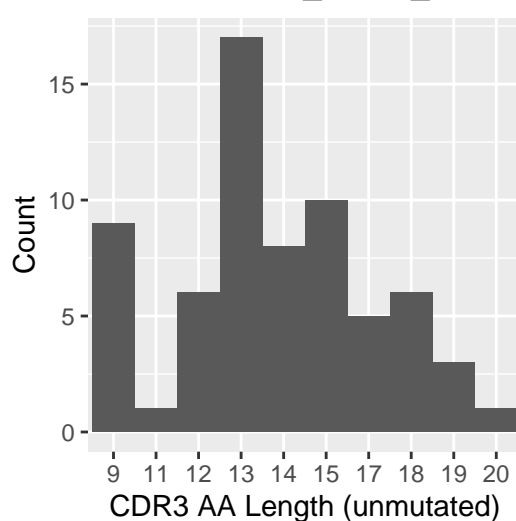
IGHV2-10*01_C6G_A23G_C



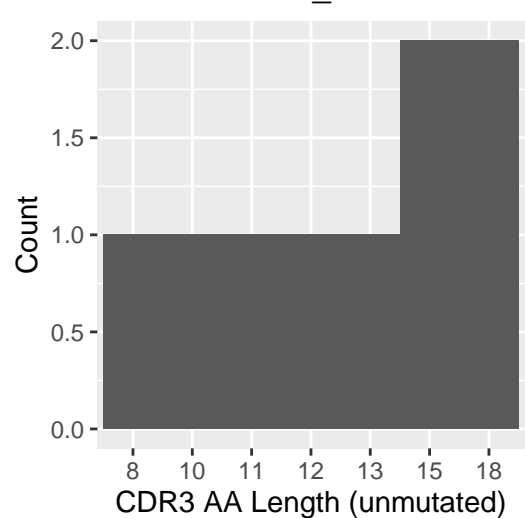
IGHV4-80*01_G70A_T189G



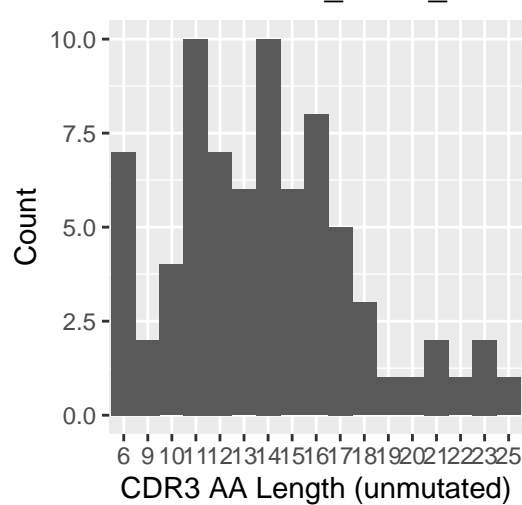
IGHV5-20*02_A59G_A141G



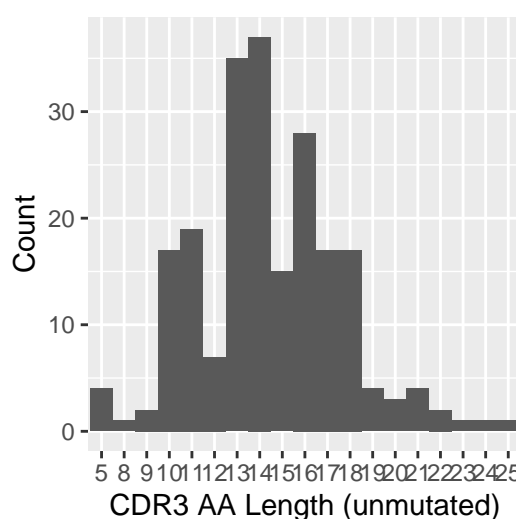
IGHV2-95*01_A48G



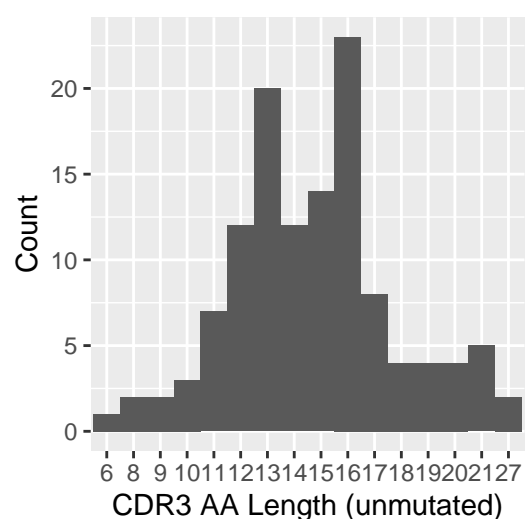
IGHV4-57*02_C87T_G199



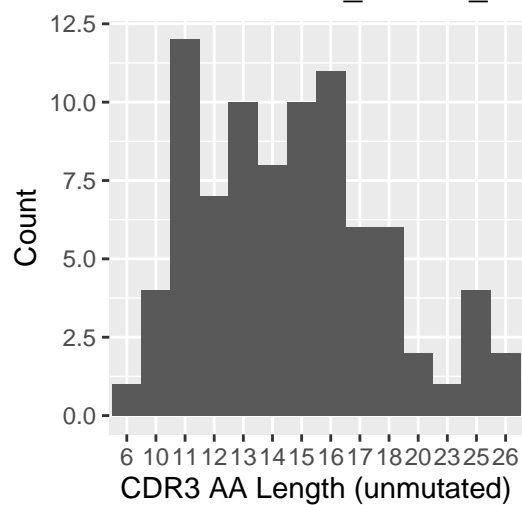
IGHV5-43*01_A109T_G110



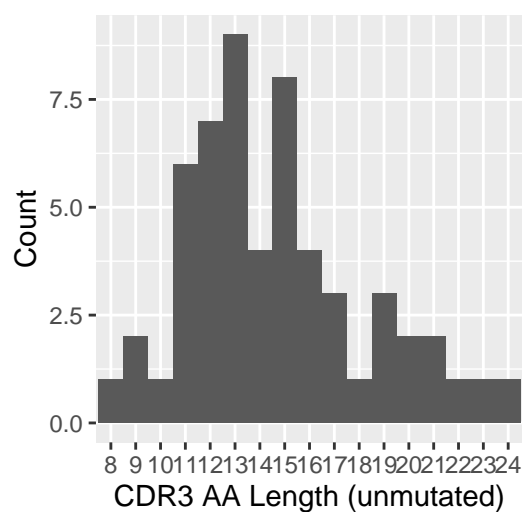
IGHV3-59*01_T21C_C69T_T

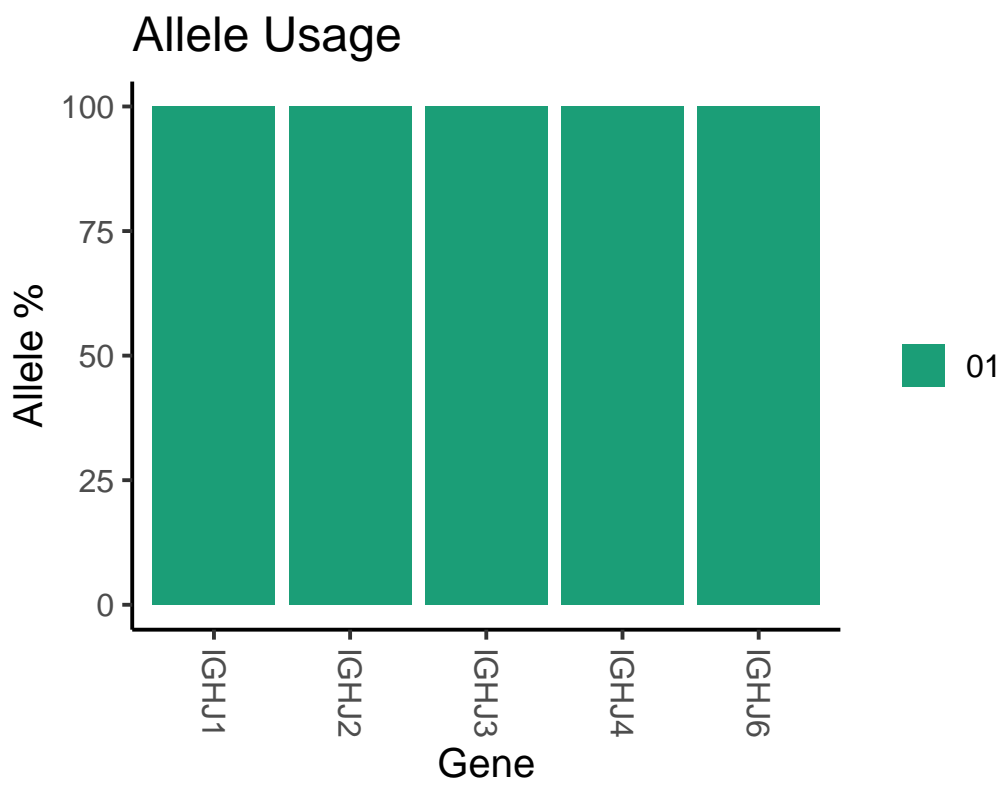


IGHV4-165*02_C133A_C135A_G240A



IGHV4S13*01_T85A_G267A_G289A





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.