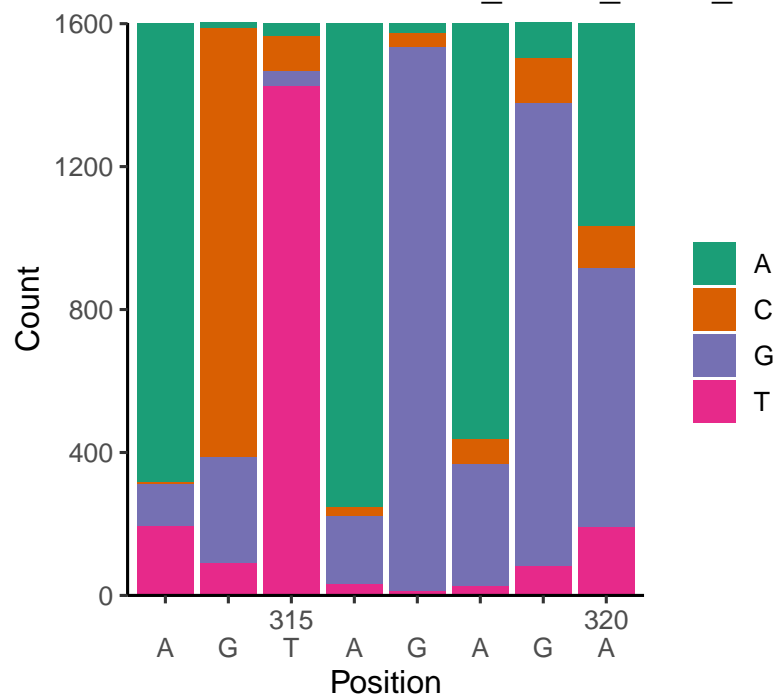
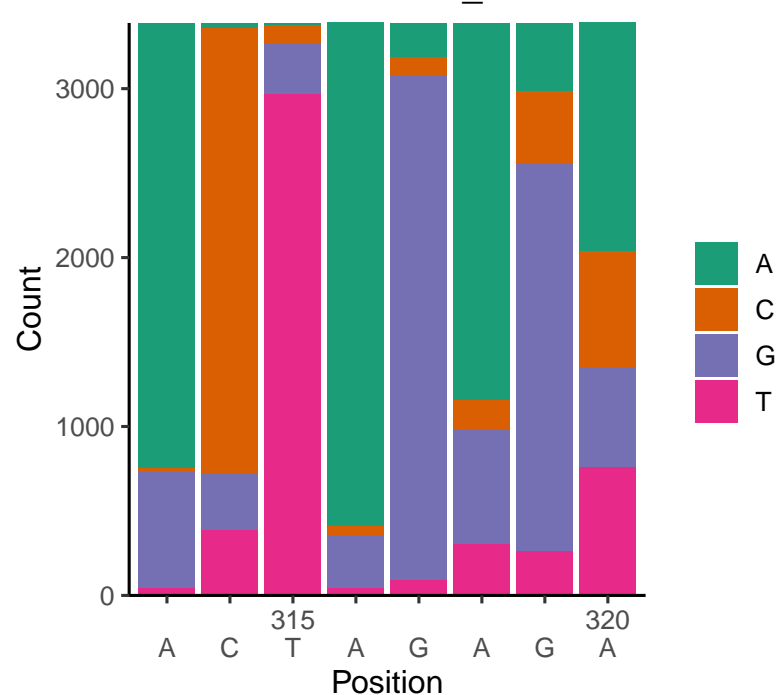


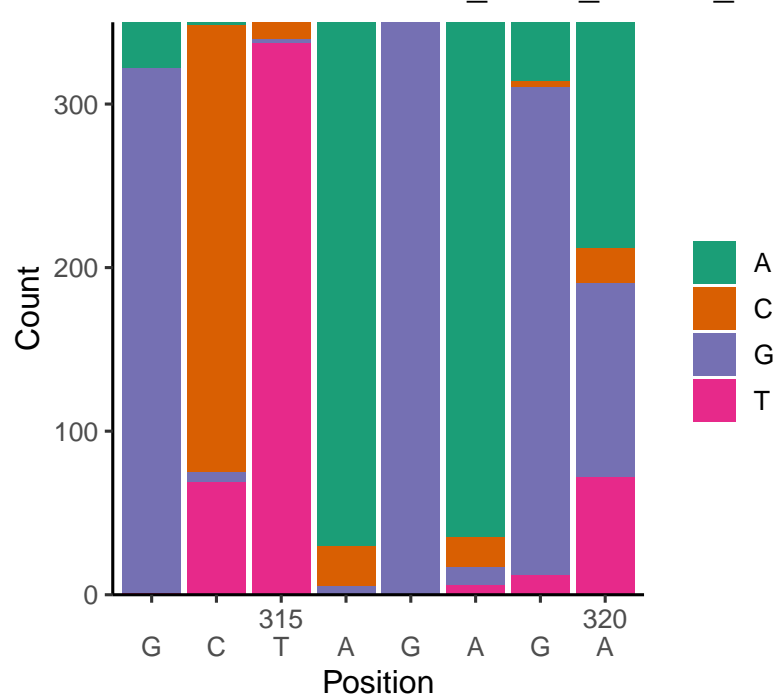
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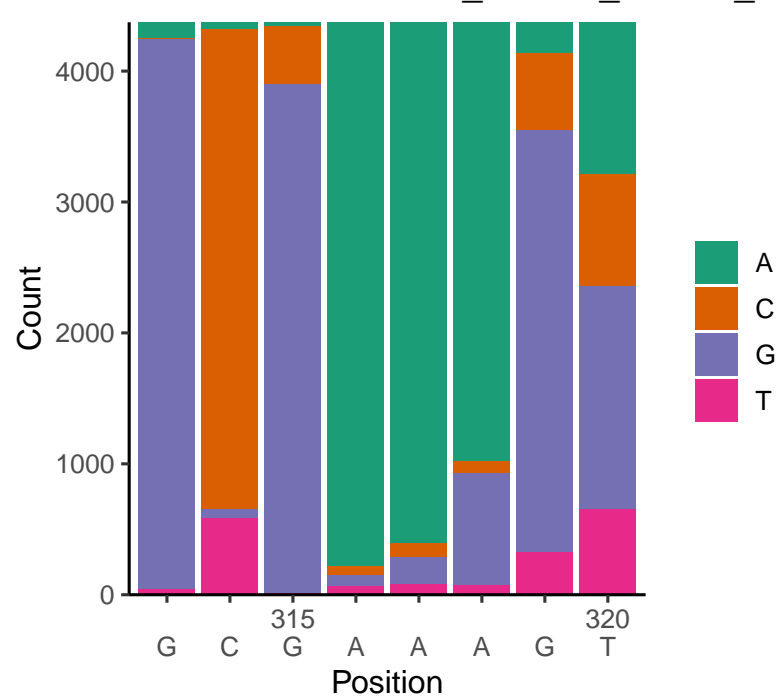
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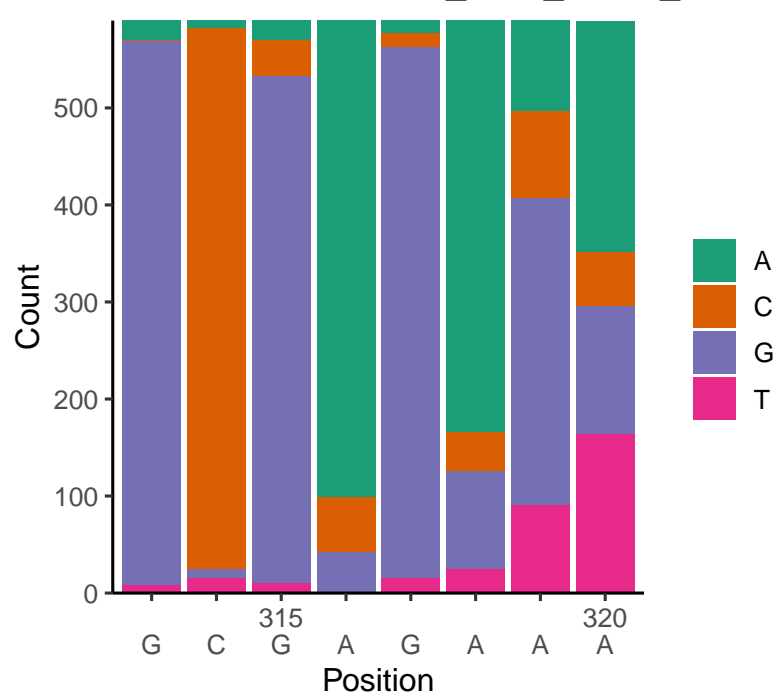
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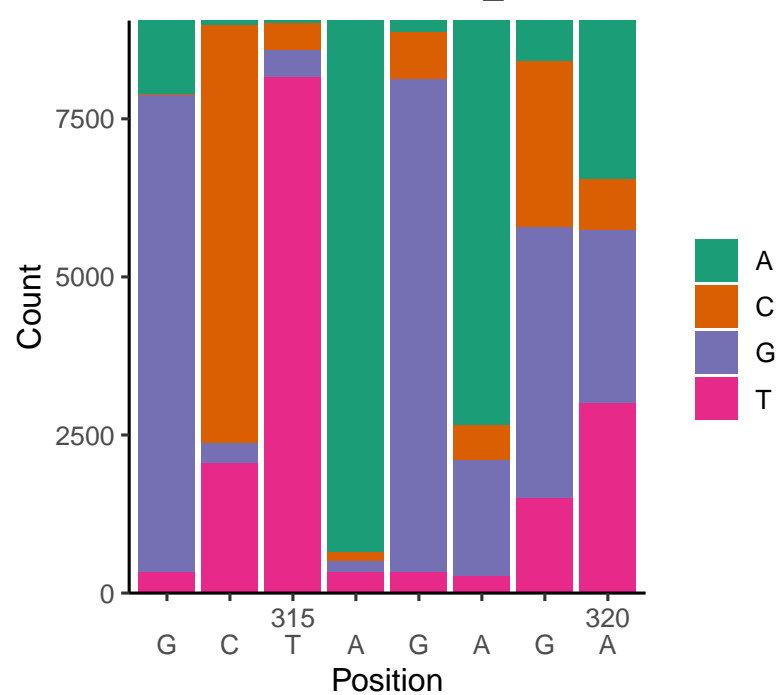
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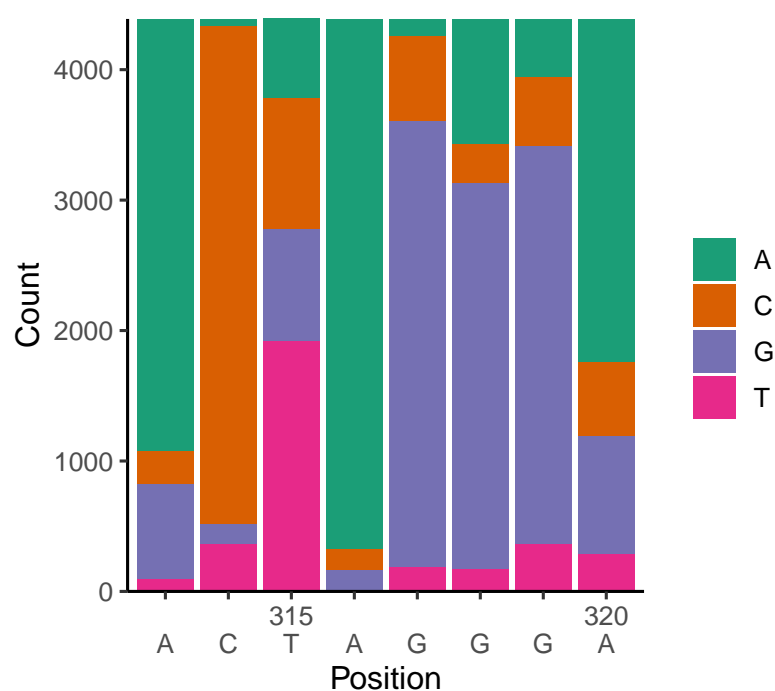
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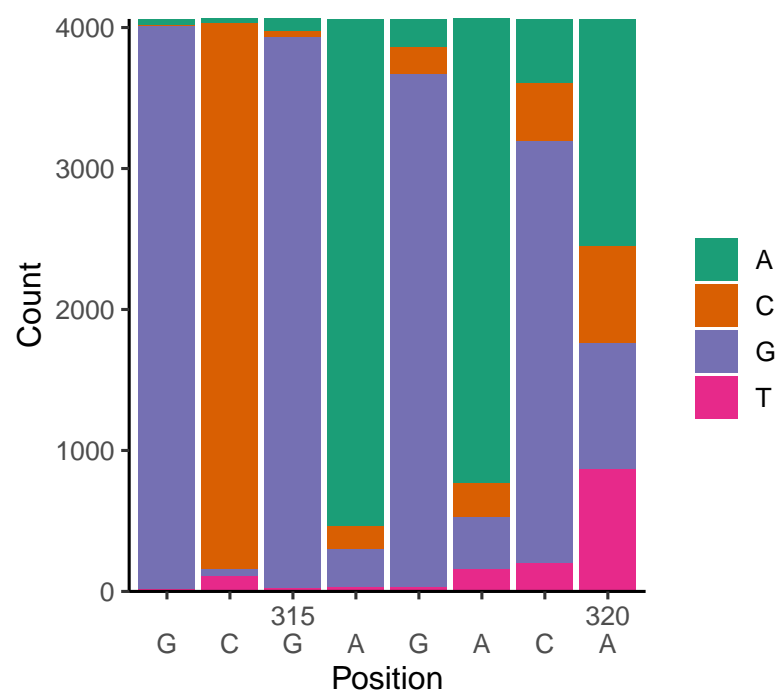
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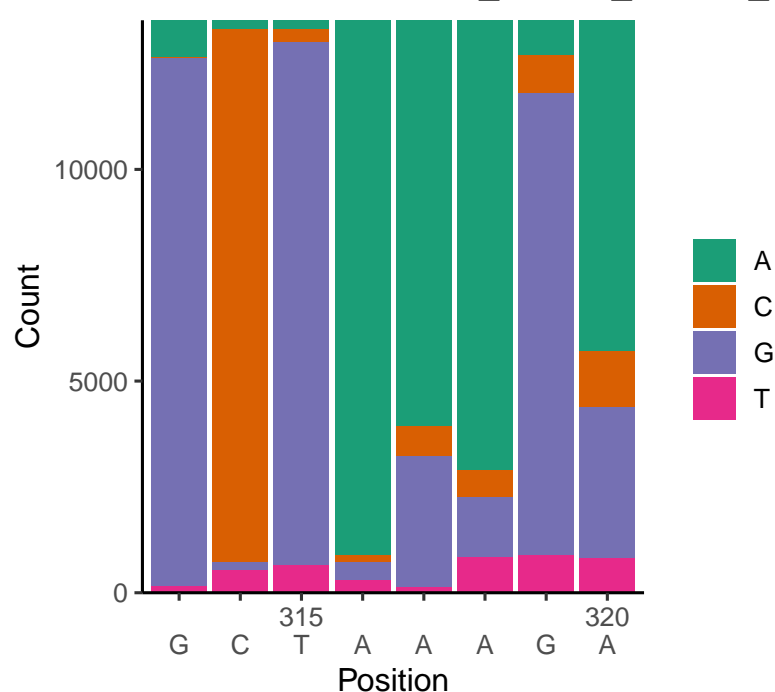
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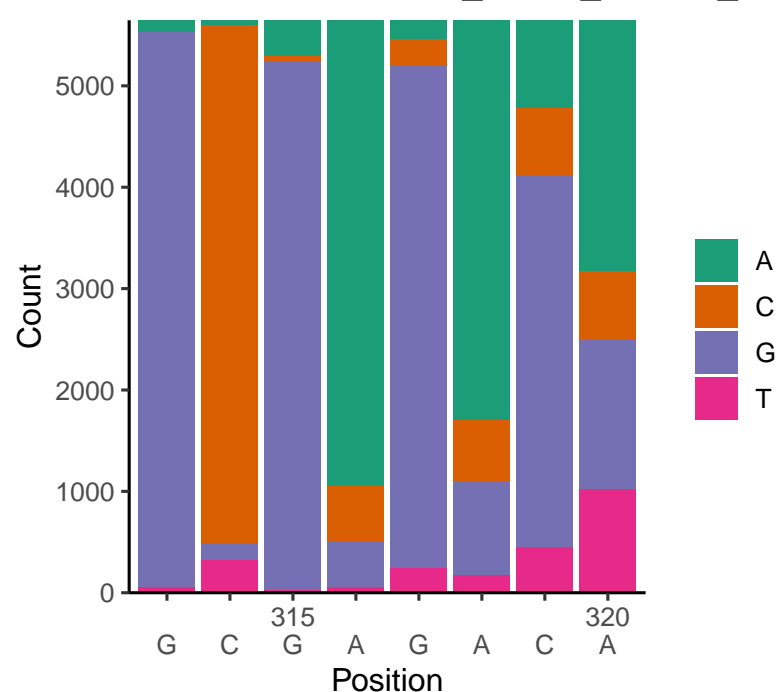
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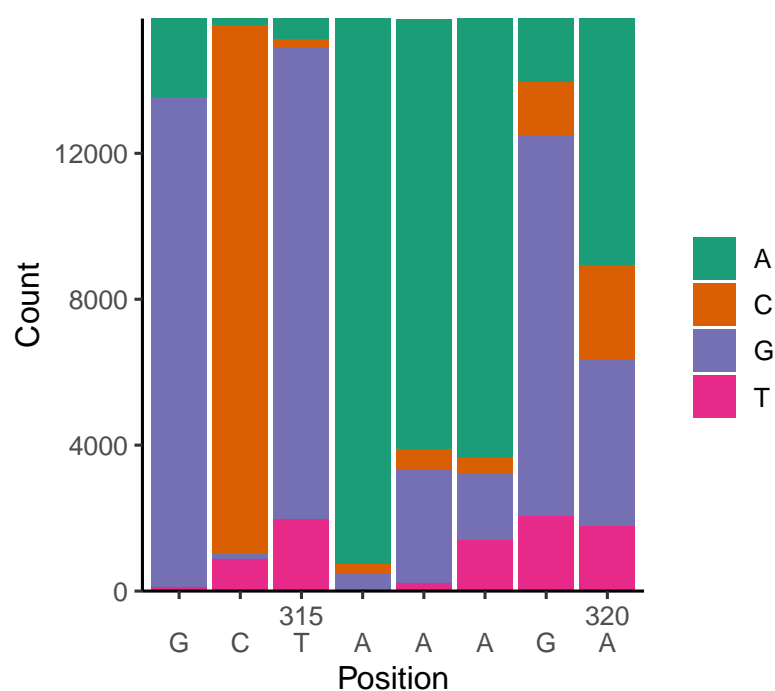
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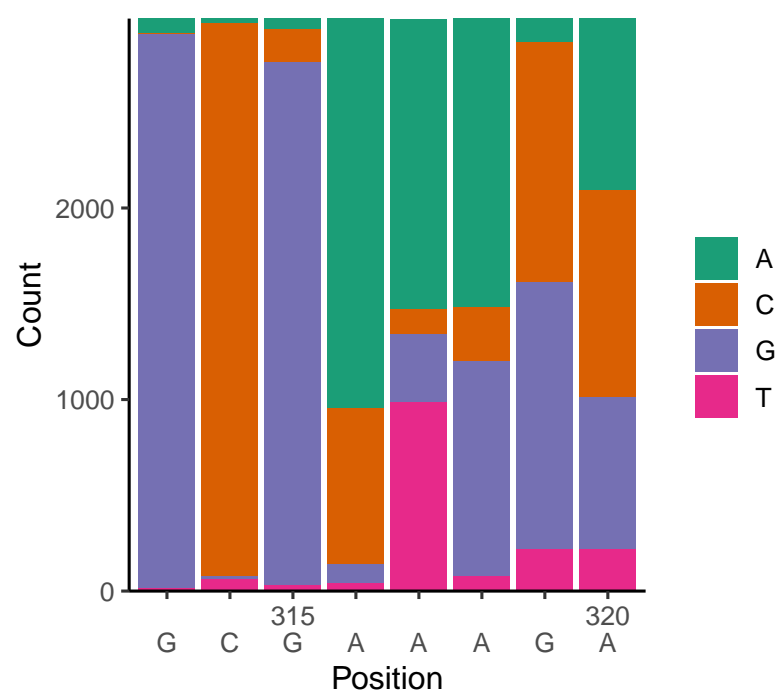
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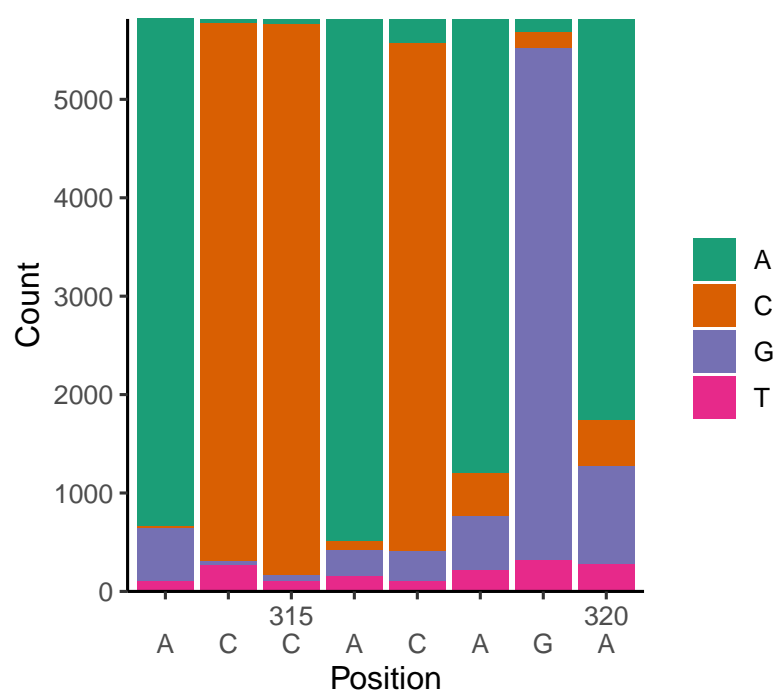
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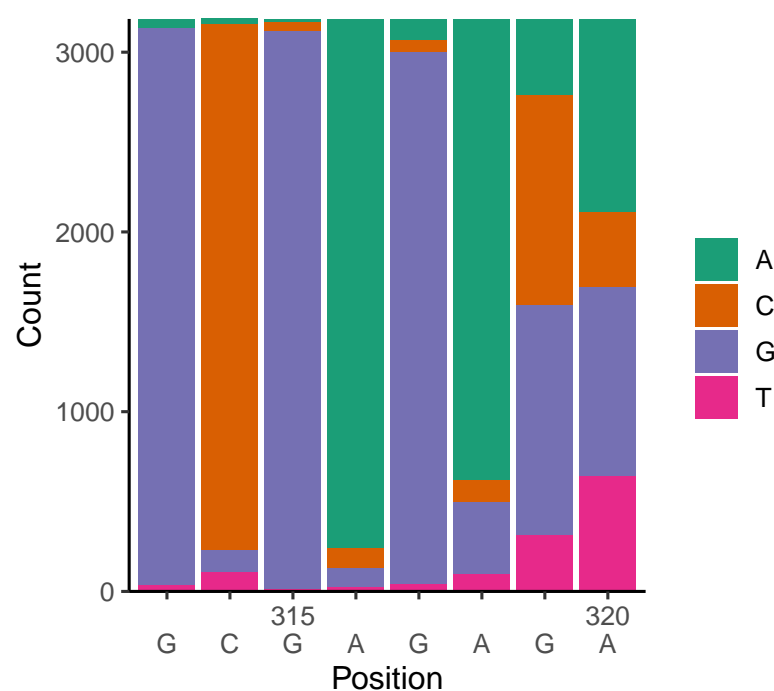
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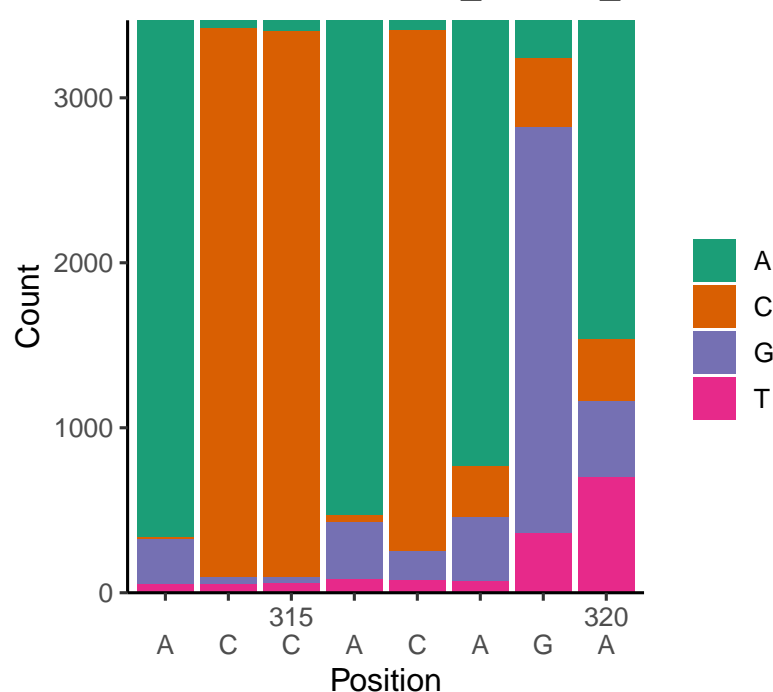
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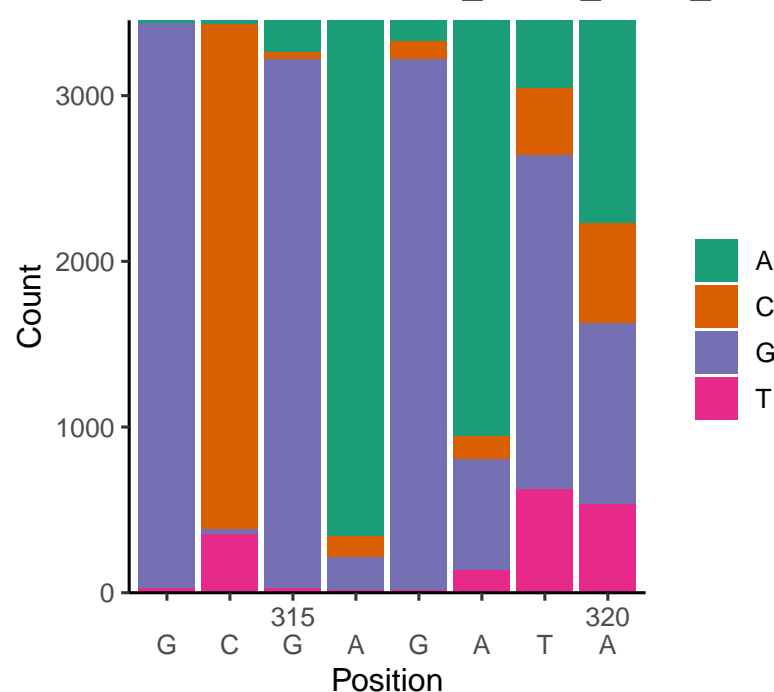
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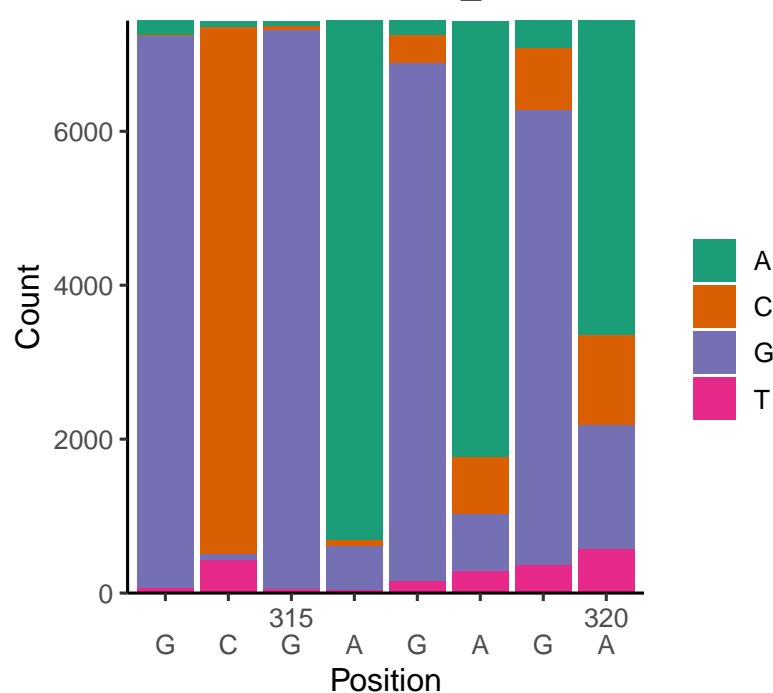
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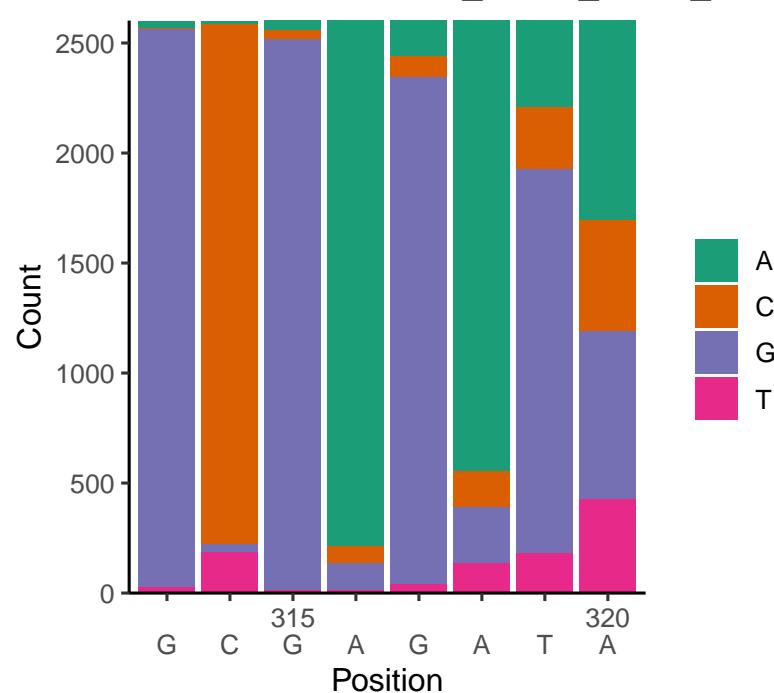
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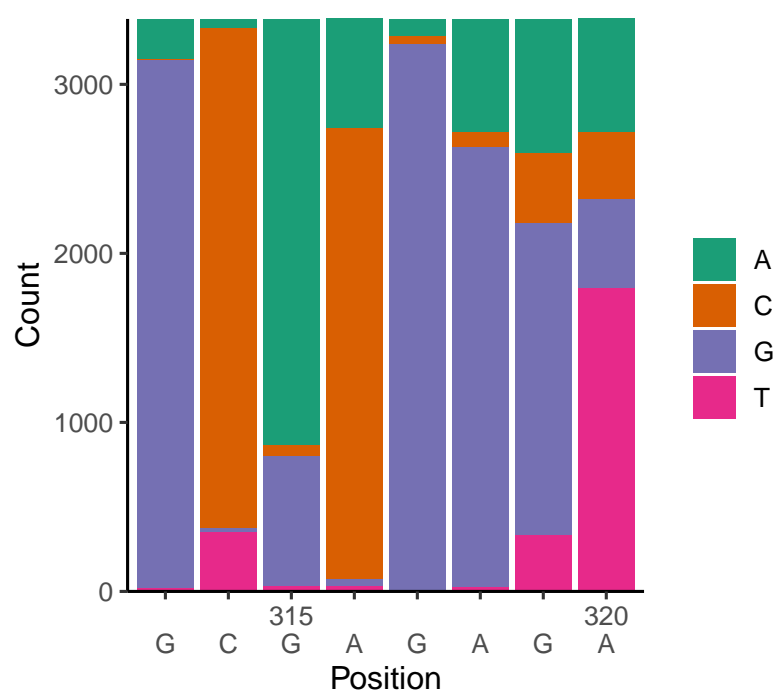
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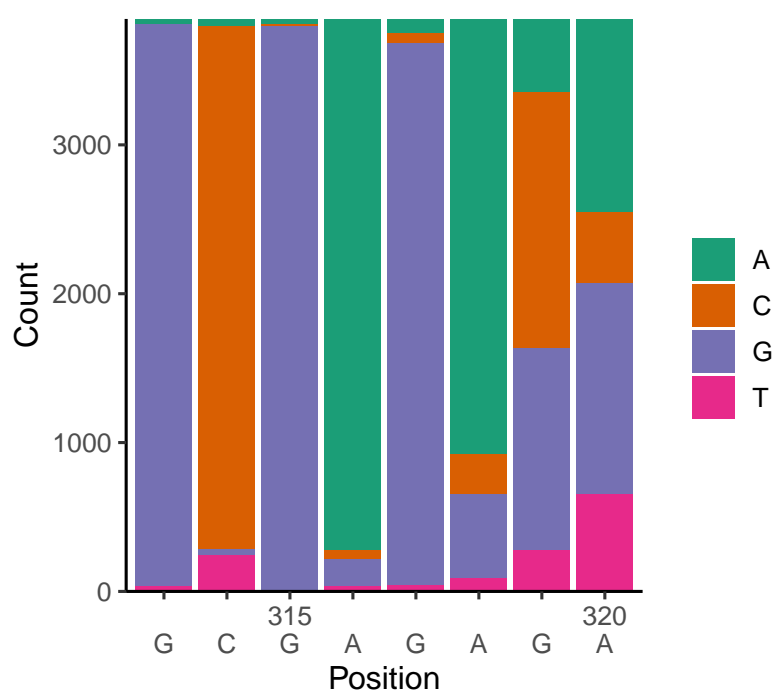
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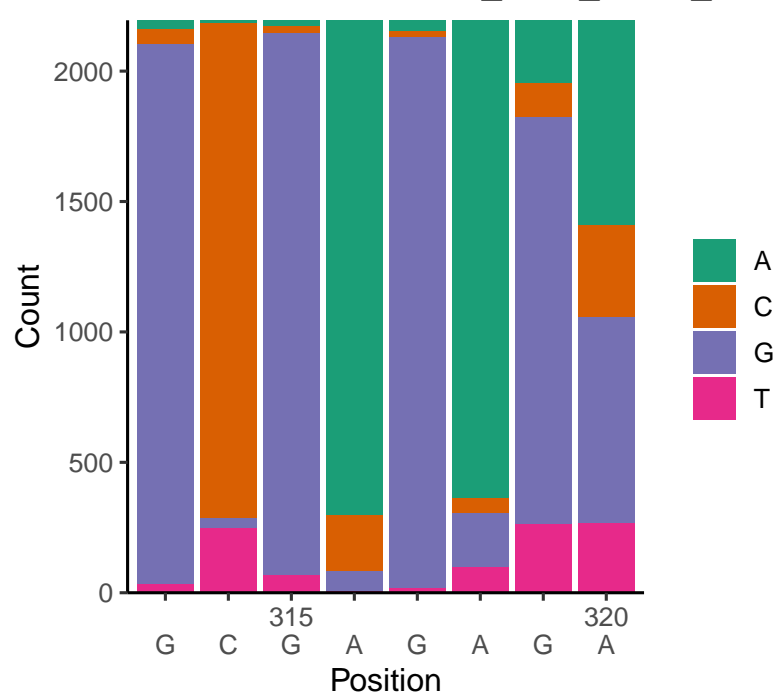
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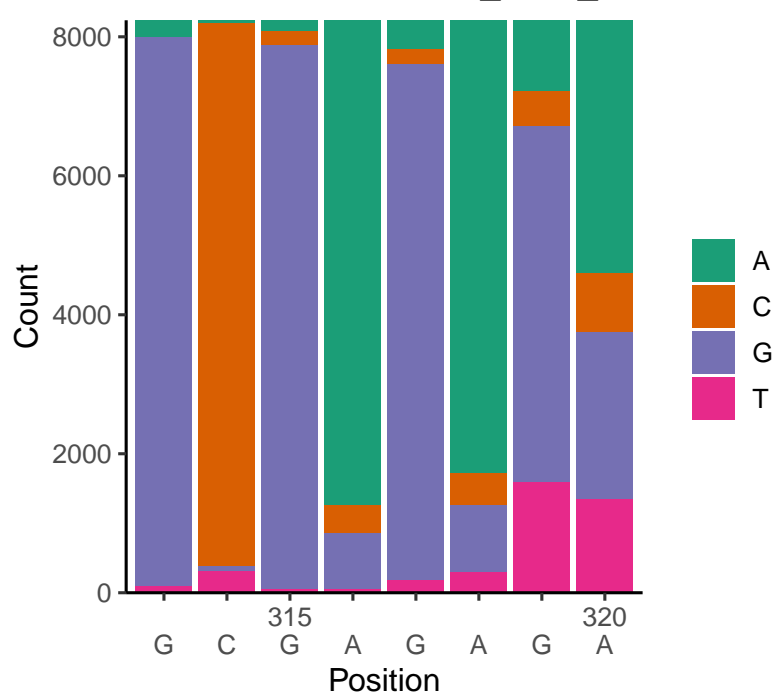
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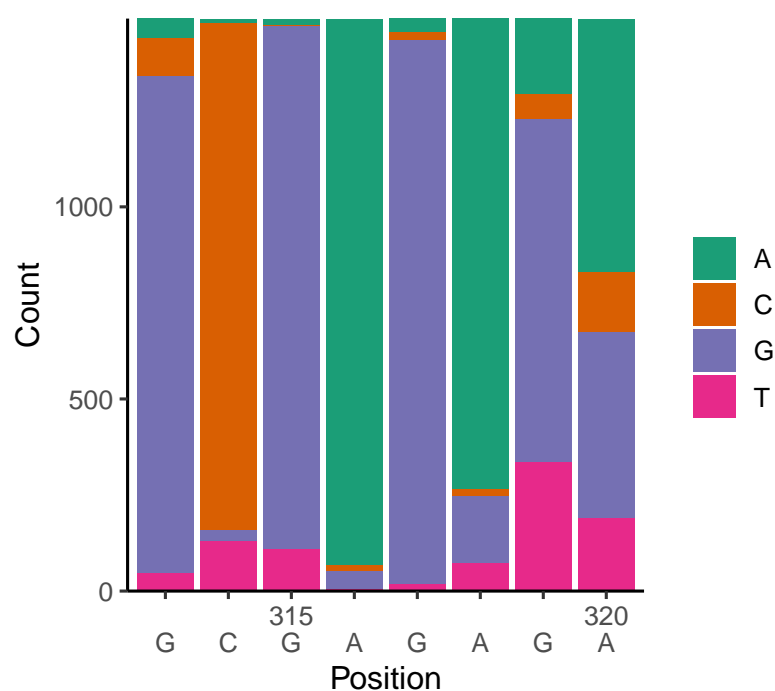
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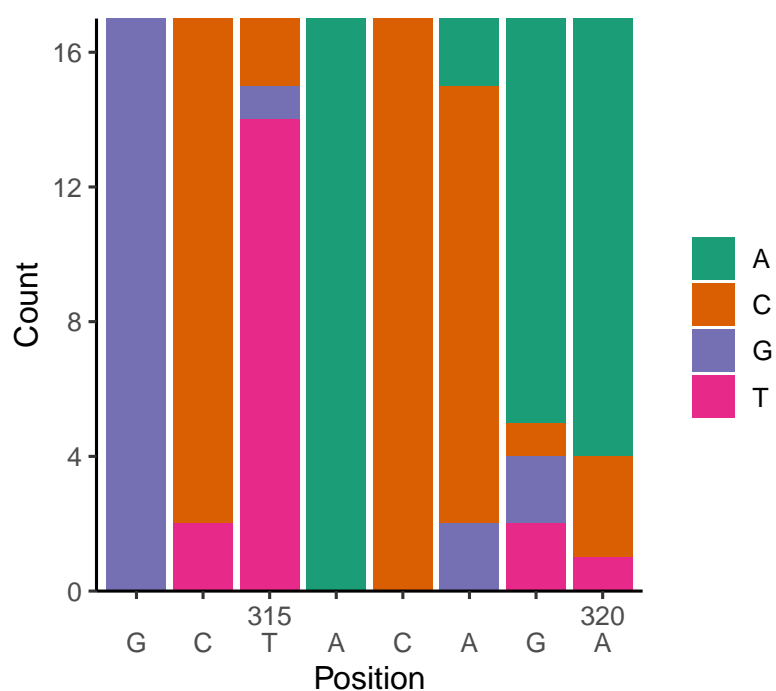
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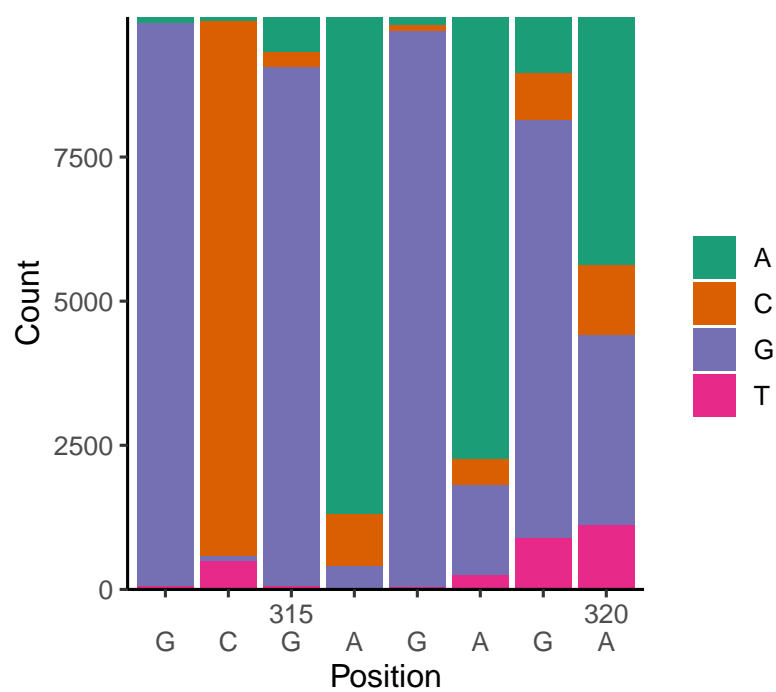
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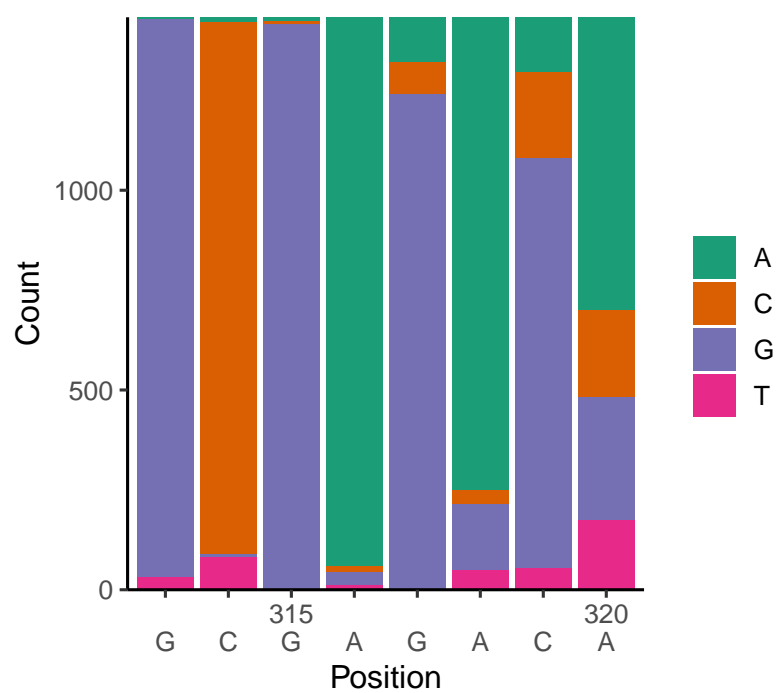
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Gene IGHV4S10*01_A48G_T112C



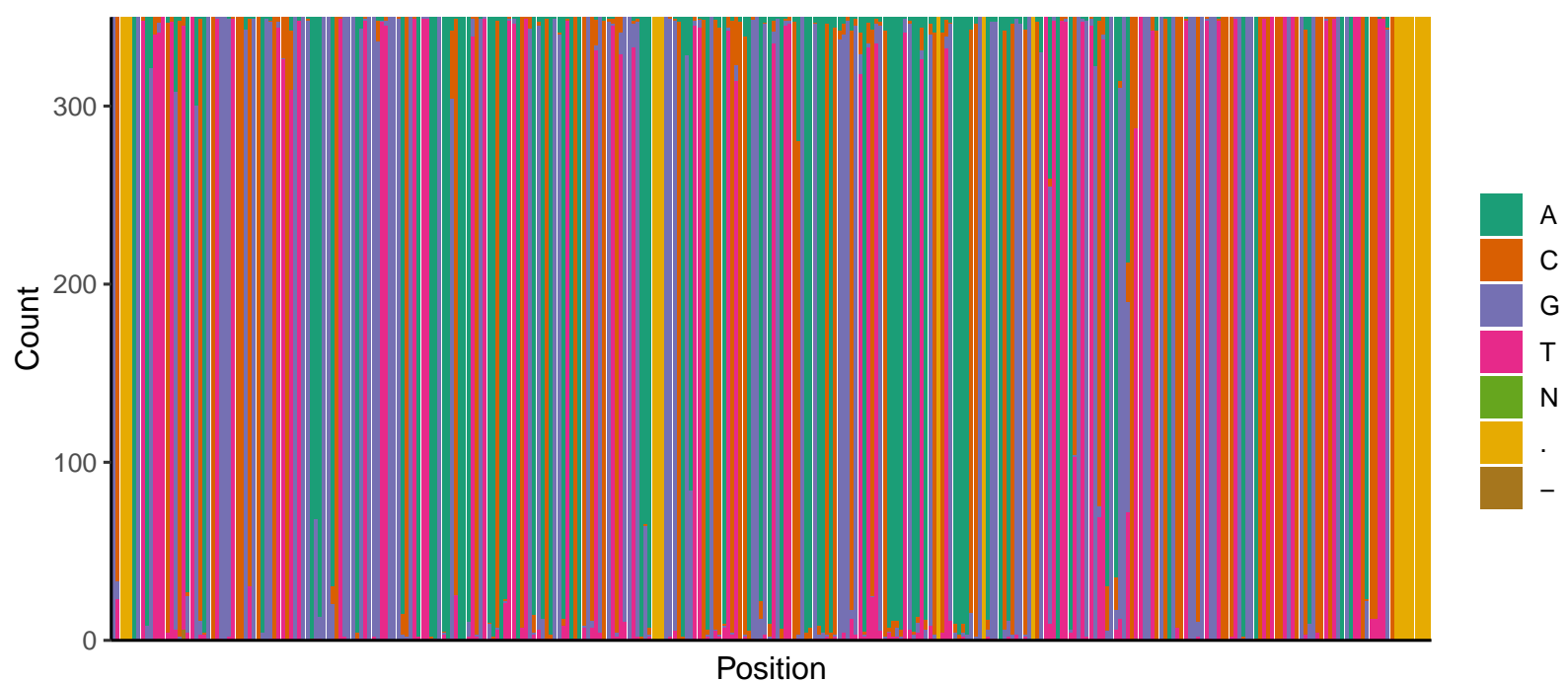
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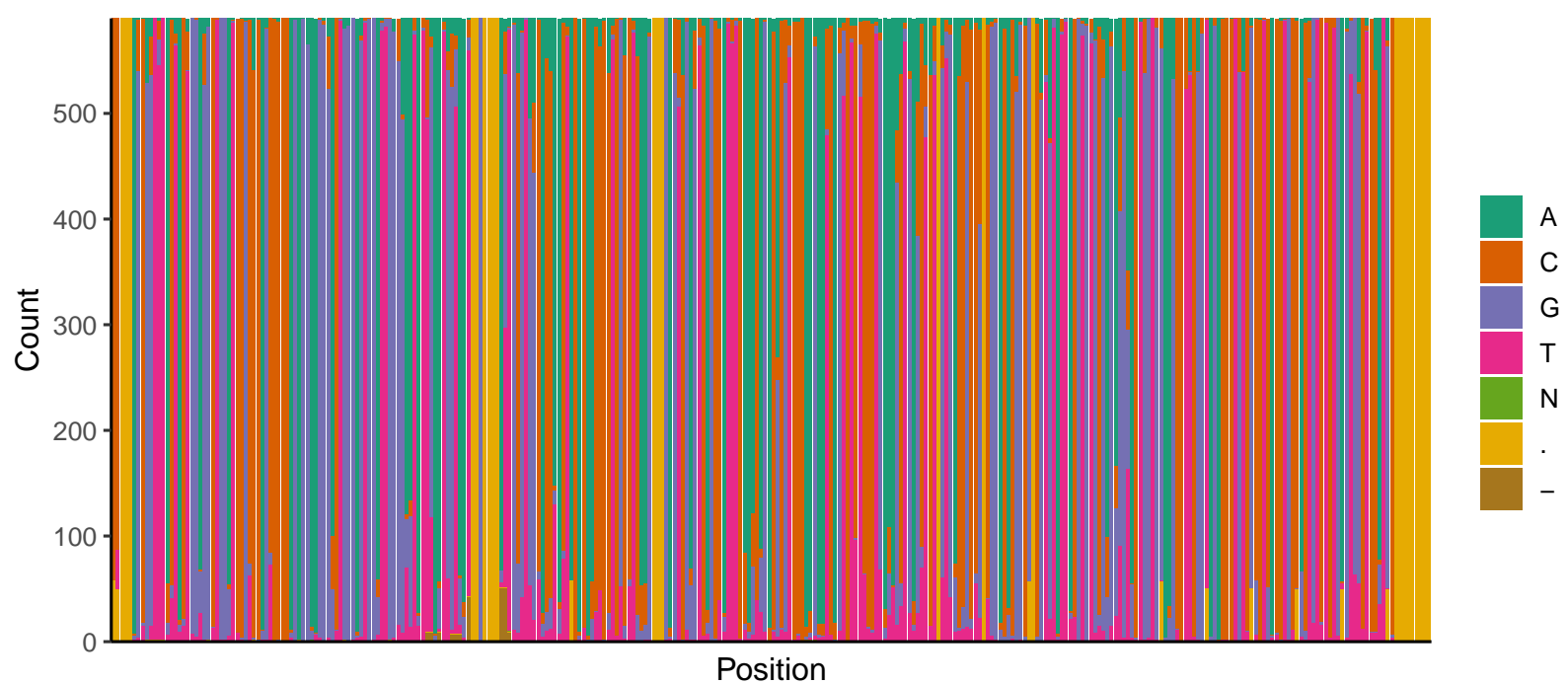
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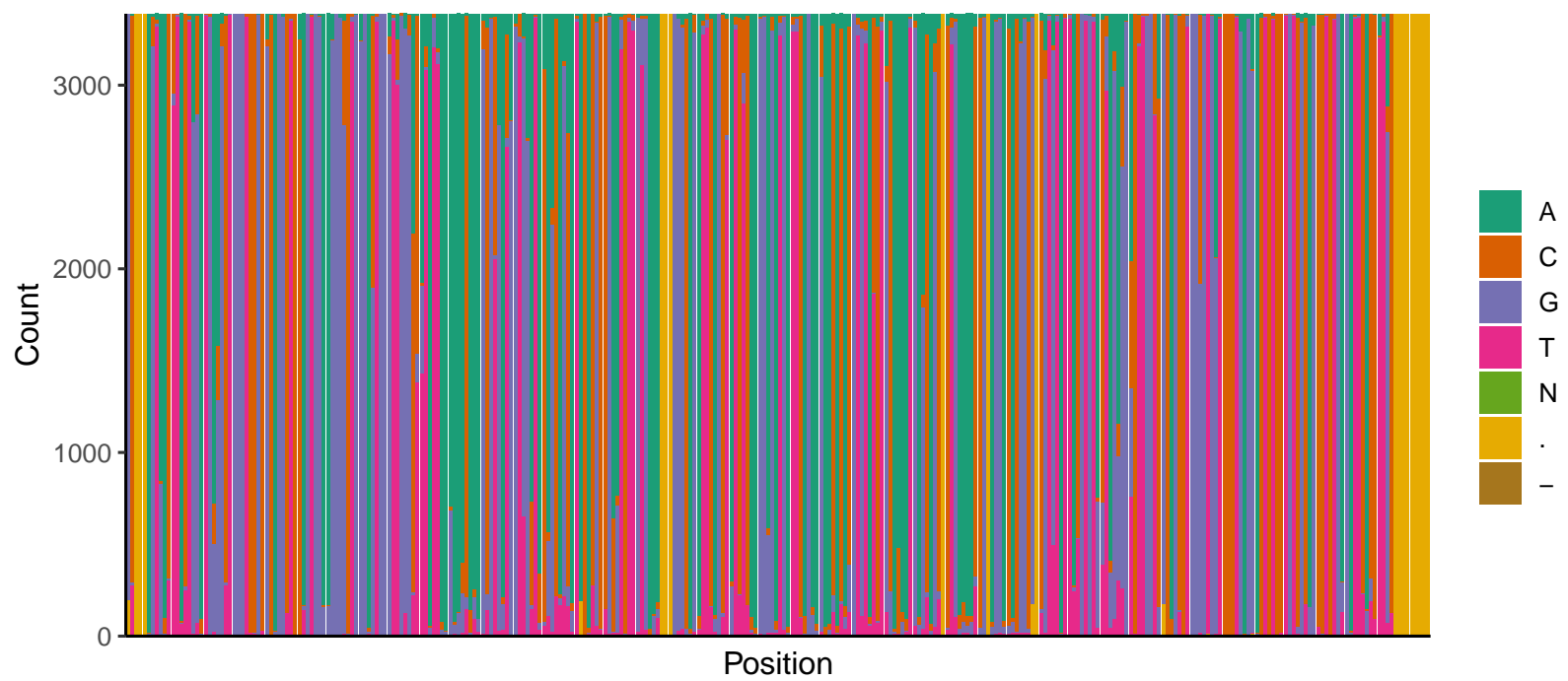
Gene IGHV3-186*02_C62T_C191A_A197G_C204T_A207G_A249C_C276T



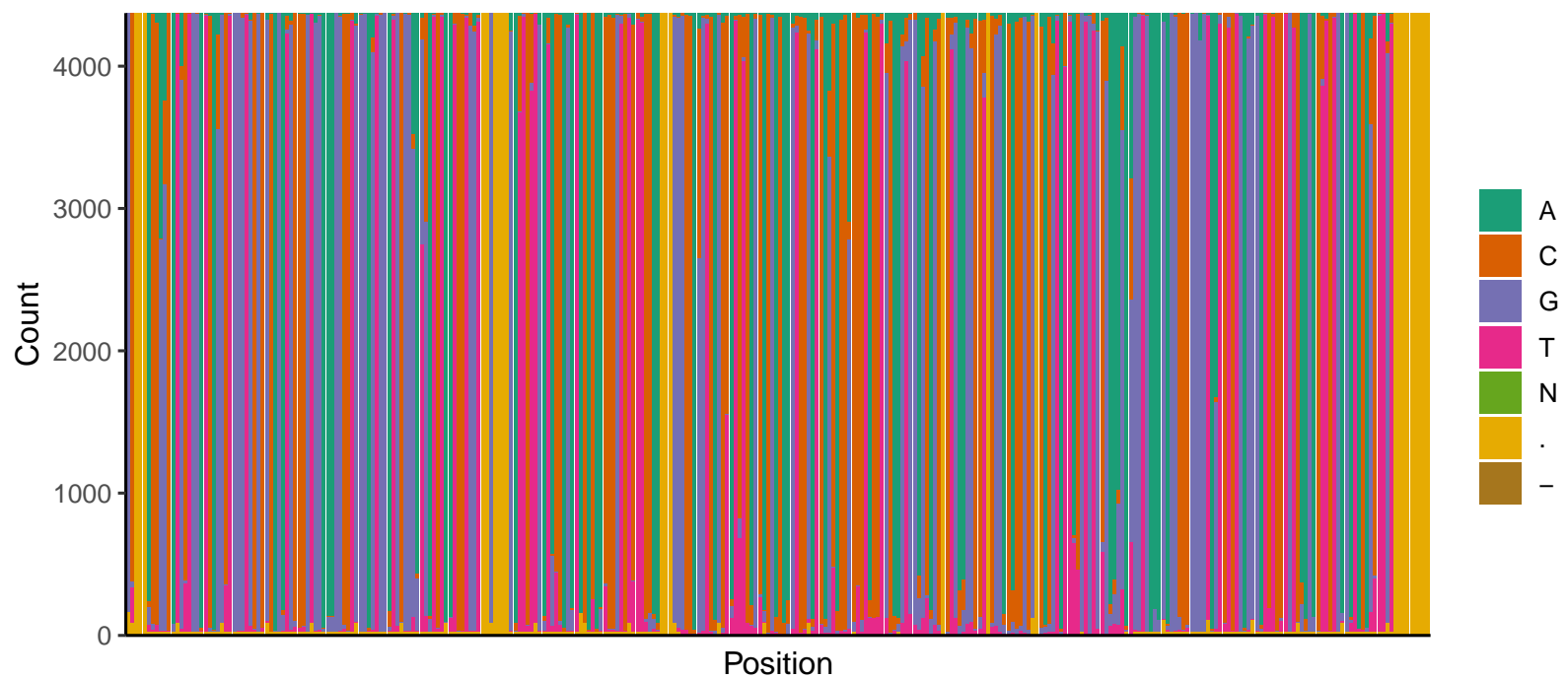
Gene IGHV4-81*01_C4G_G70A_A244G



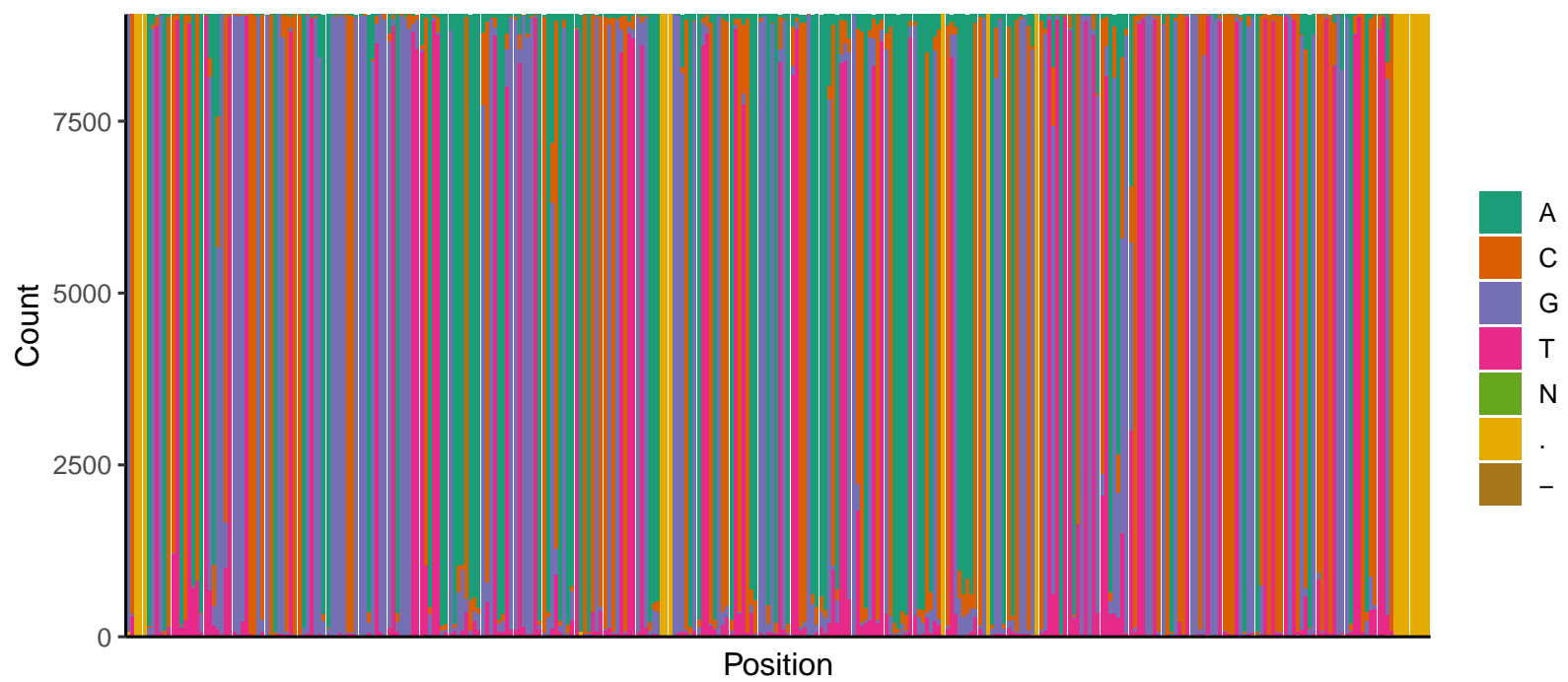
Gene IGHV3-16*01_A275G



Gene IGHV5-43*01_A106G_G164T_C165G_C225G_T231C_A259G



Gene IGHV3-116*02_T109C



Gene IGHV3-184*01_G106A_T109C_G275A



Gene IGHV3S42*01_T120C_A133G_G141A_A157G_T288G



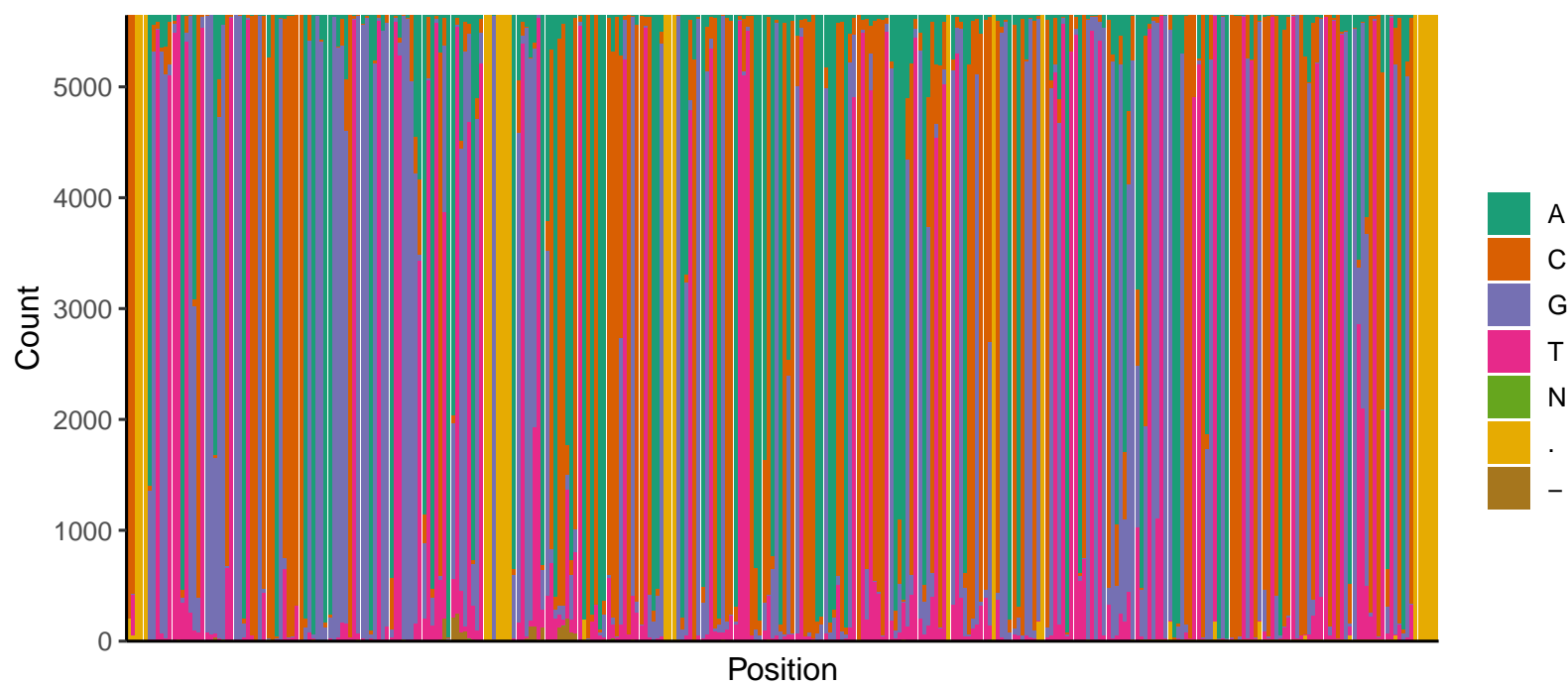
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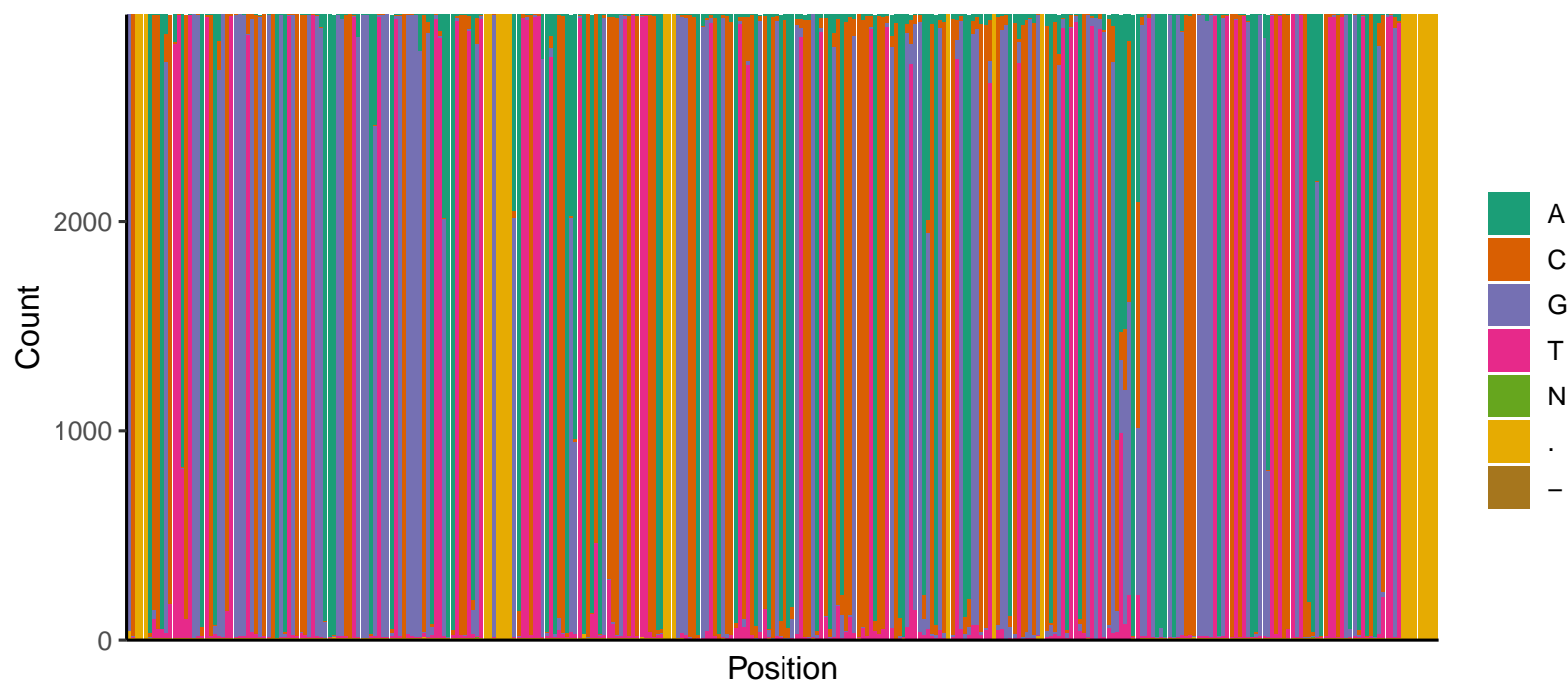
Gene IGHV4-65*01_A88G_T189G



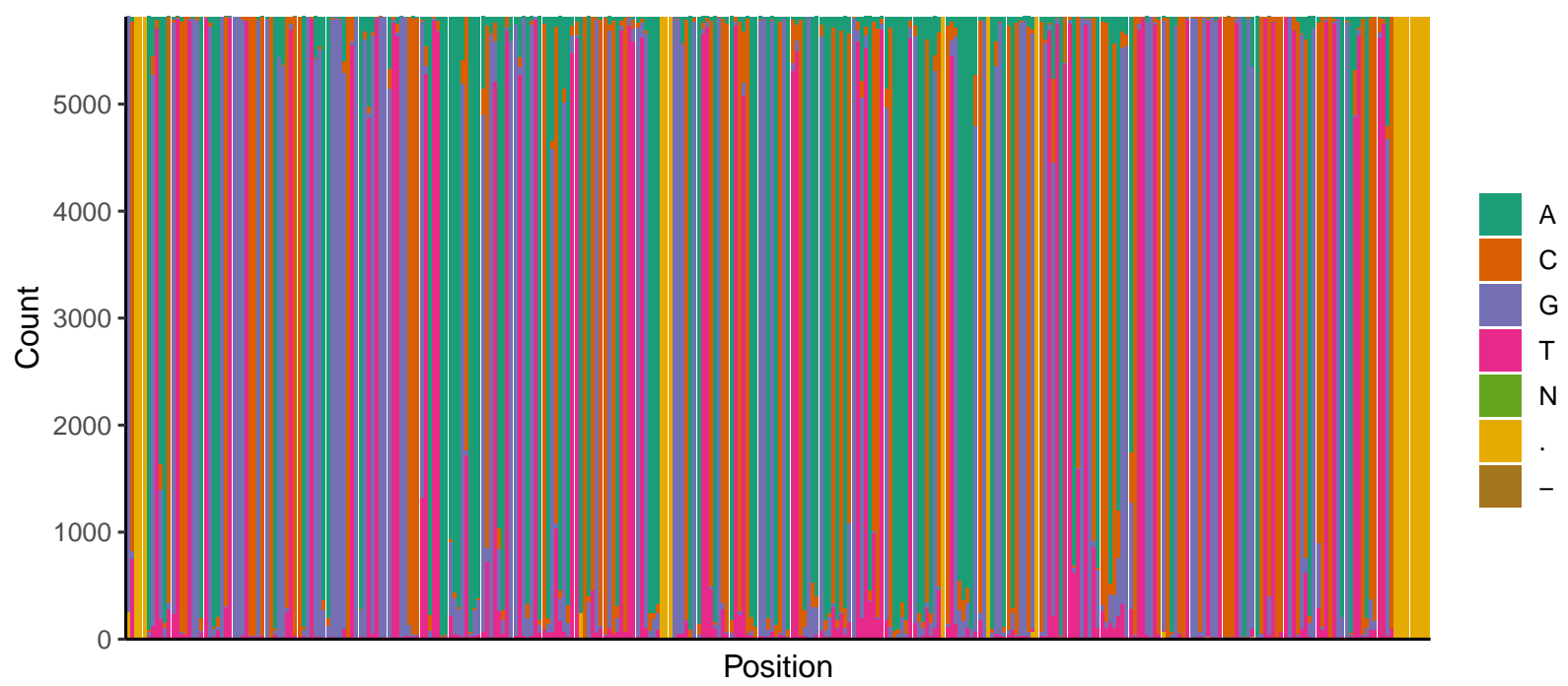
Gene IGHV4-76*01_C34G_G103A_A244G



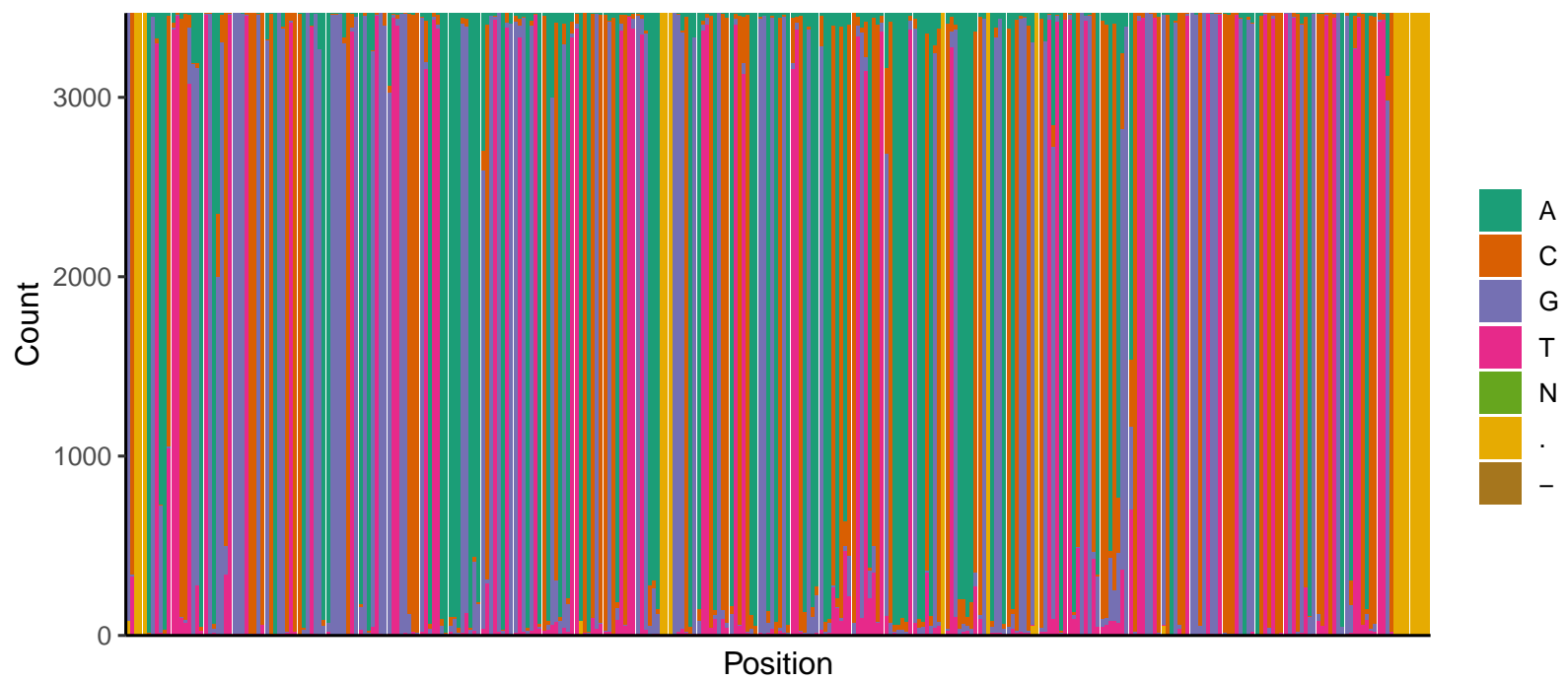
Gene IGHV5-20*02_A141G_A295T_C312T



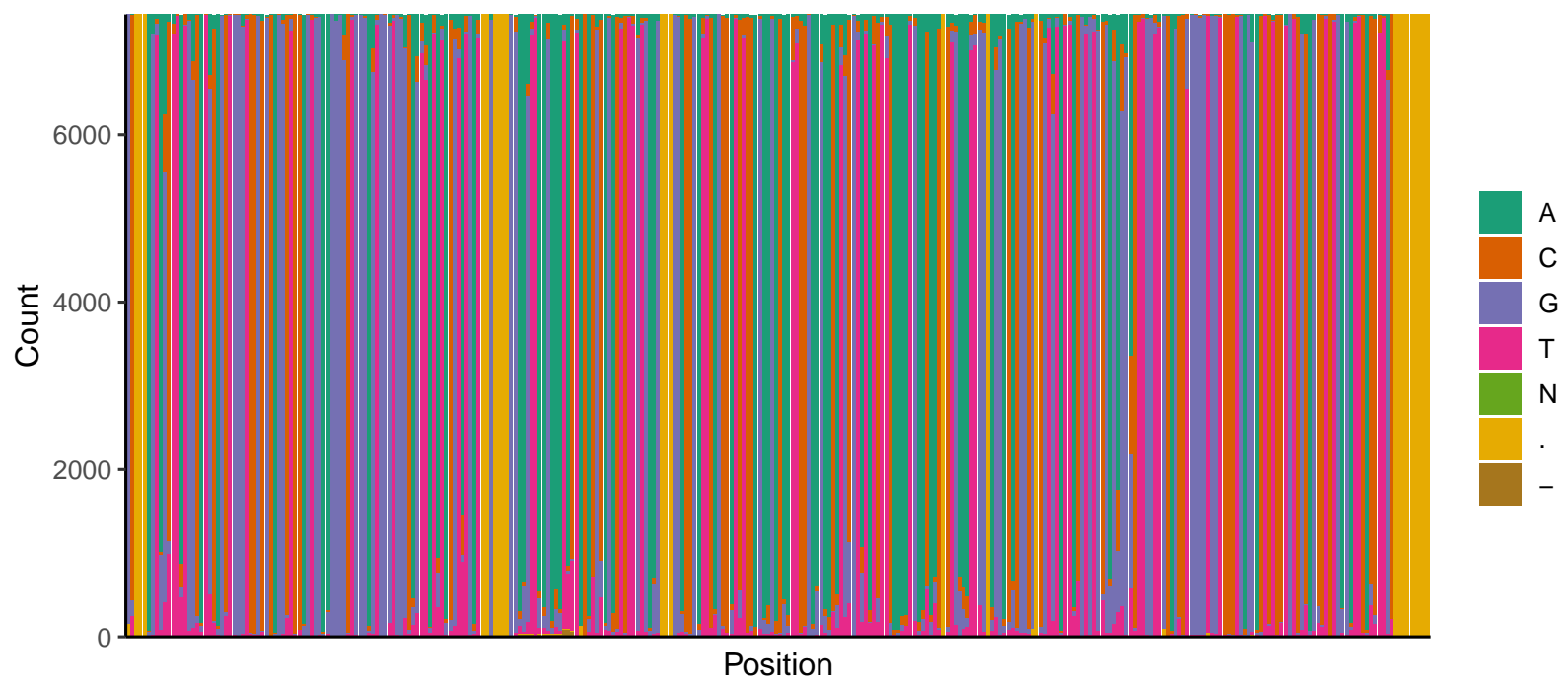
Gene IGHV3-30*01_G48C_G60A_T110C_A152T_G174C_G181A_G207A_C287G



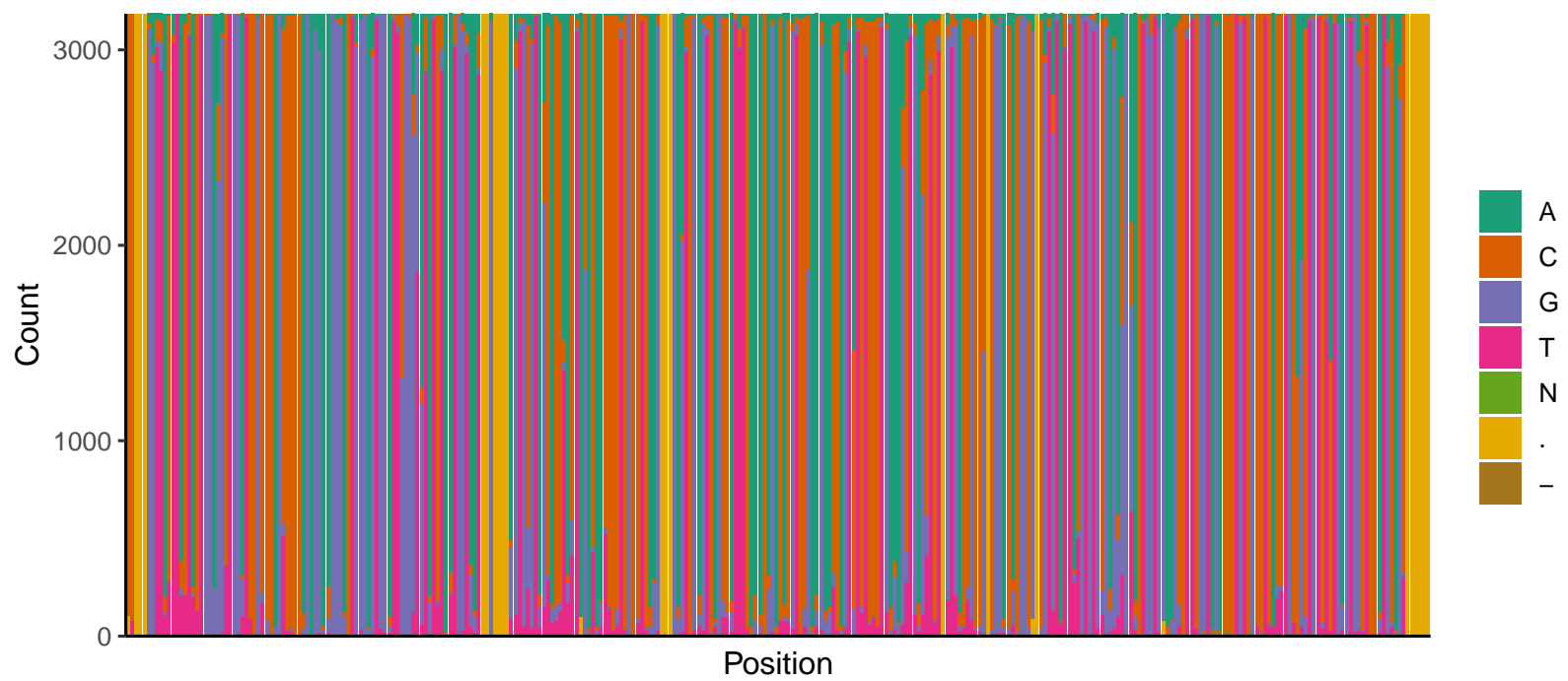
Gene IGHV3-30*02_C141G_C183T



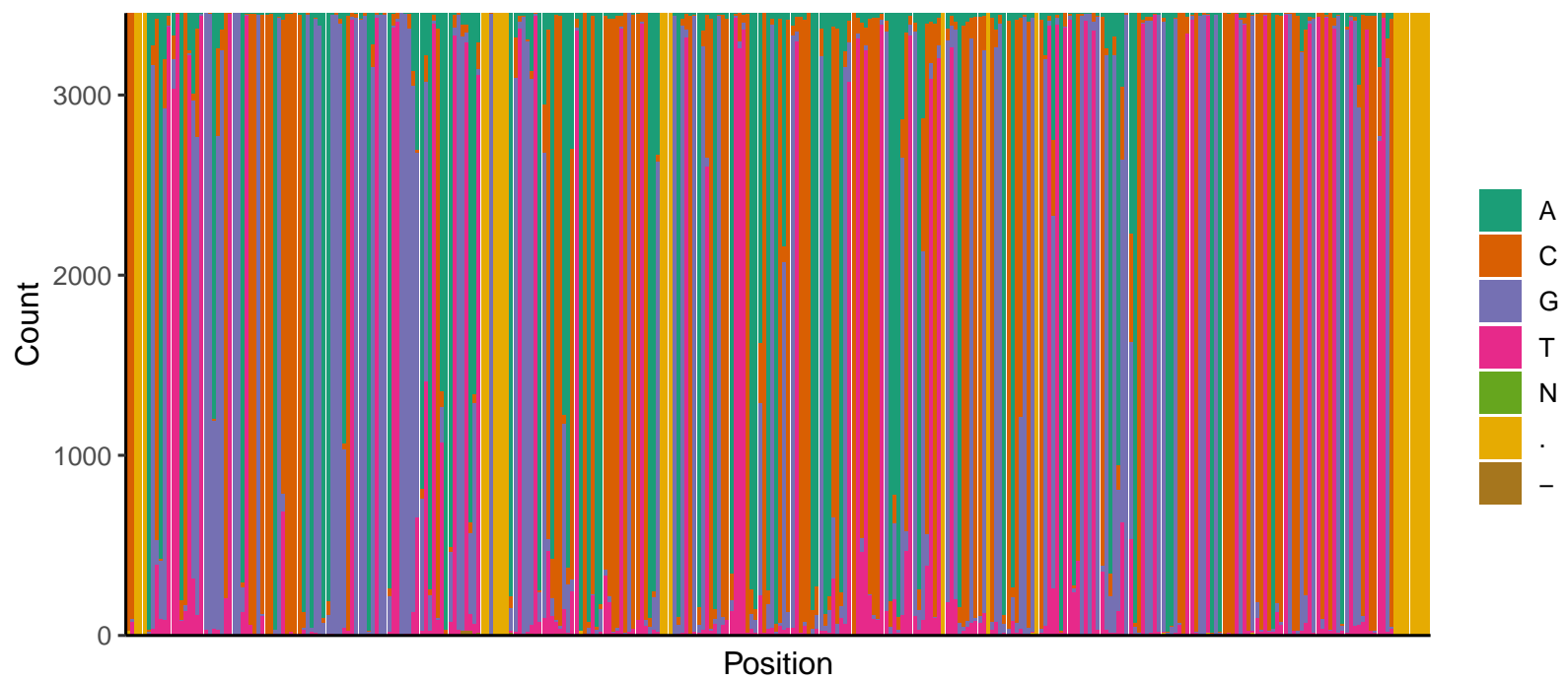
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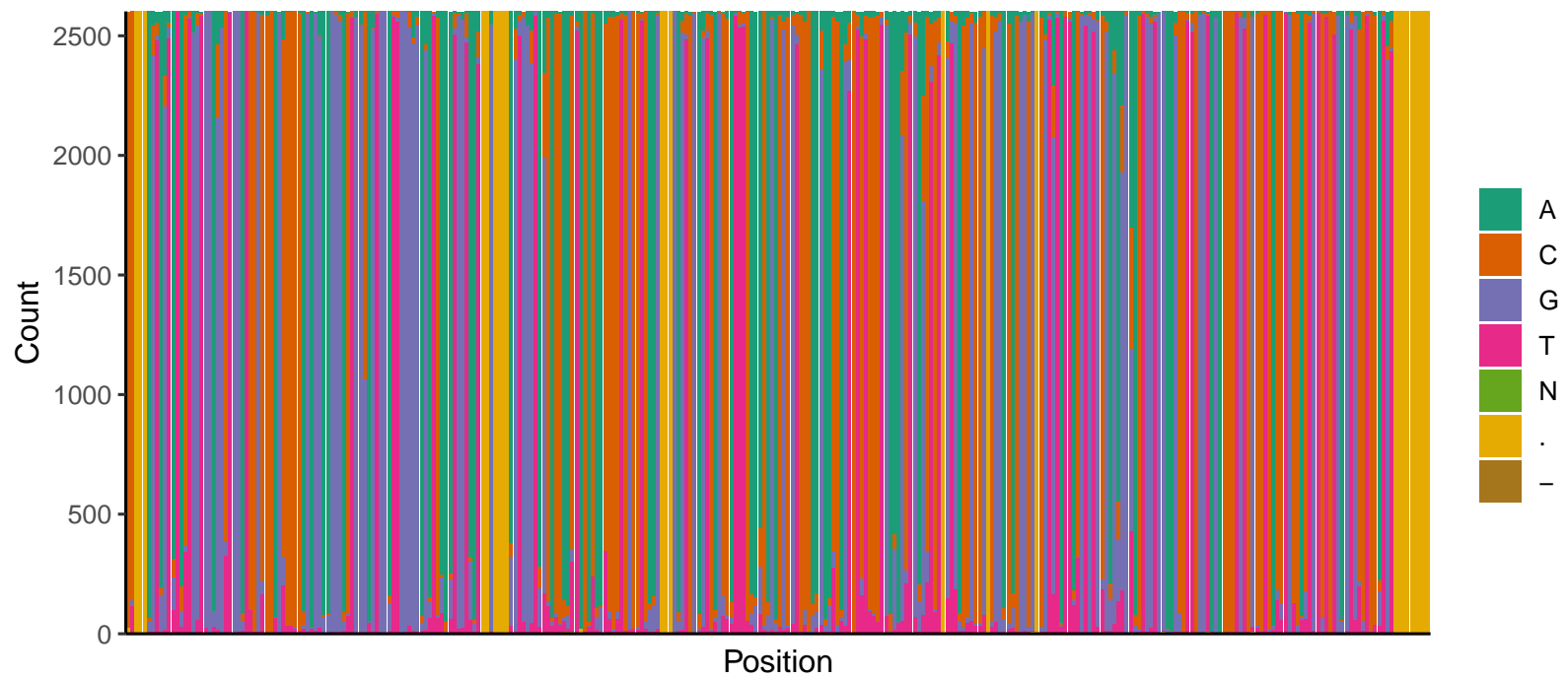
Gene IGHV4-73*01_G147A



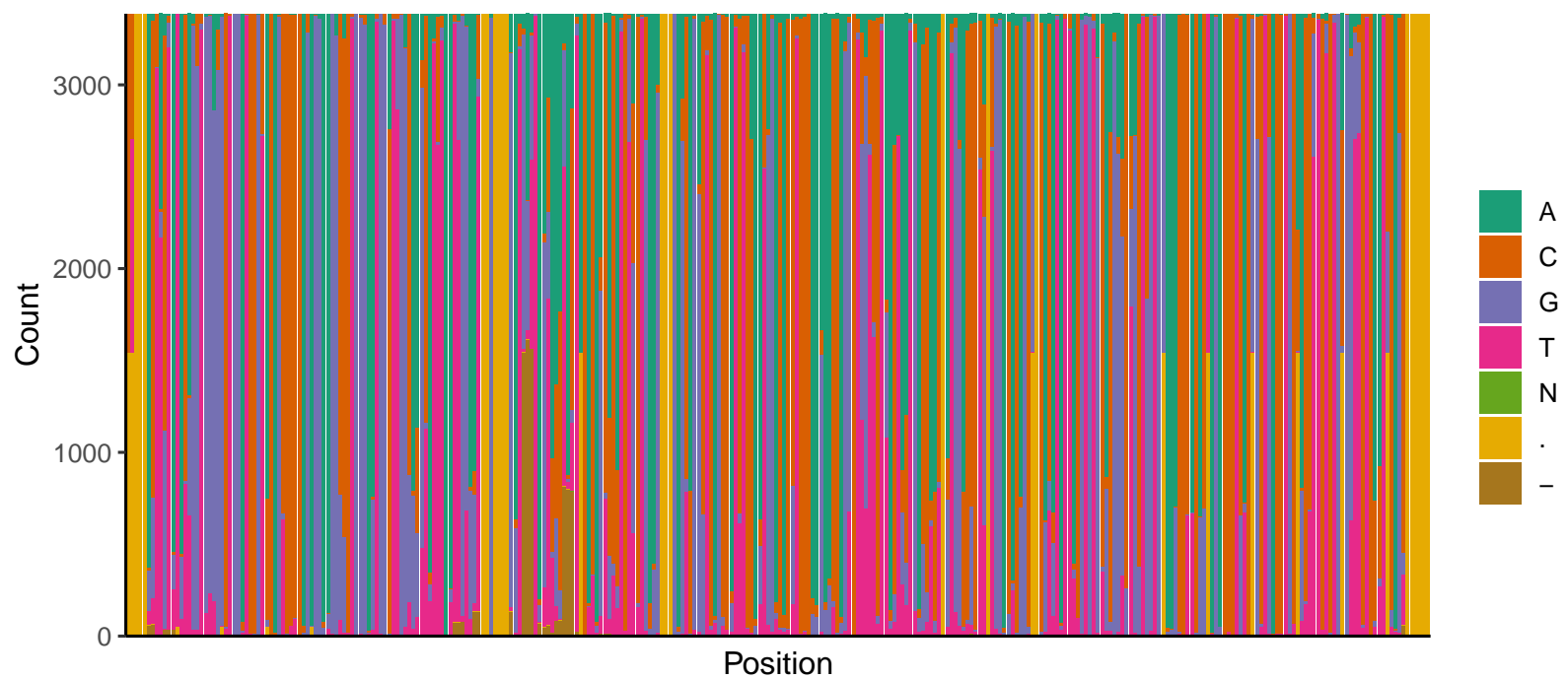
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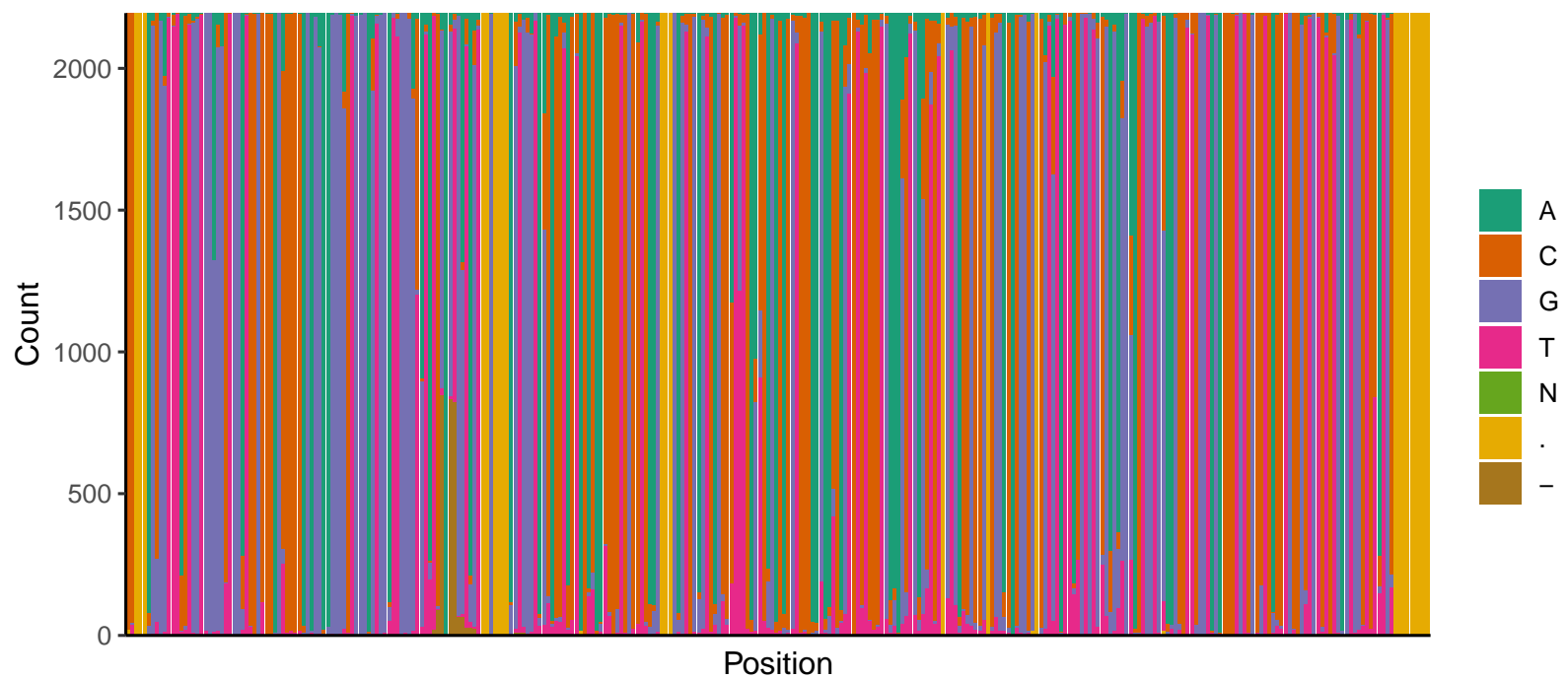
Gene IGHV4-80*01_G70A_C90T_T109A_G151C_T189G_T196A



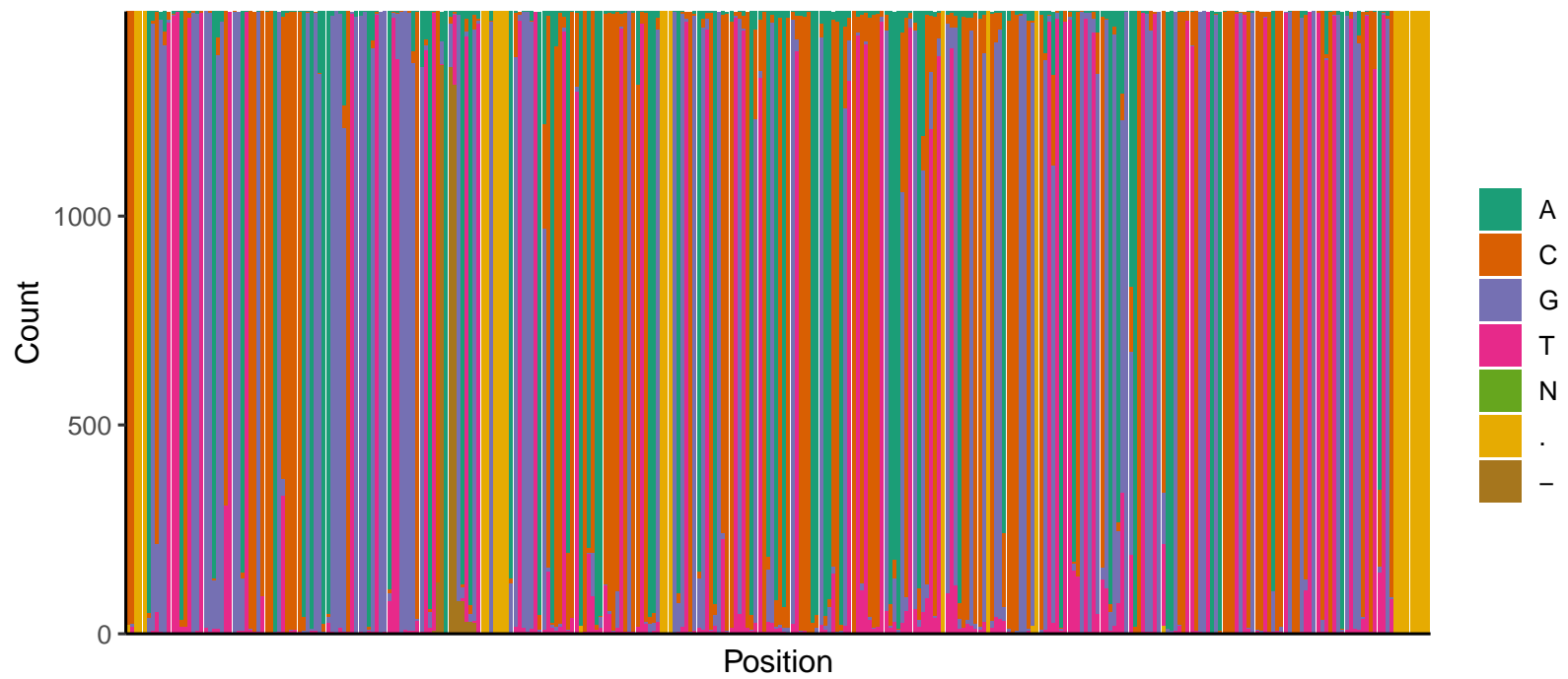
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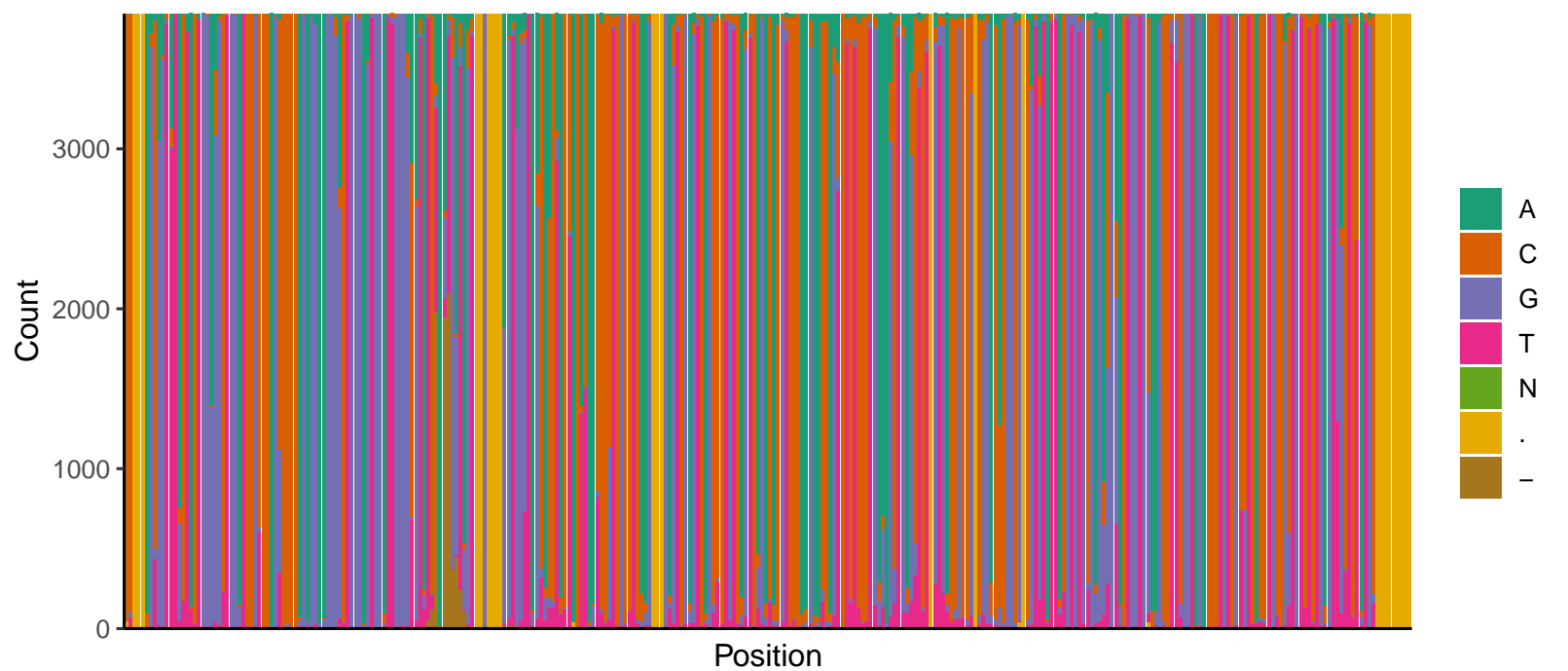
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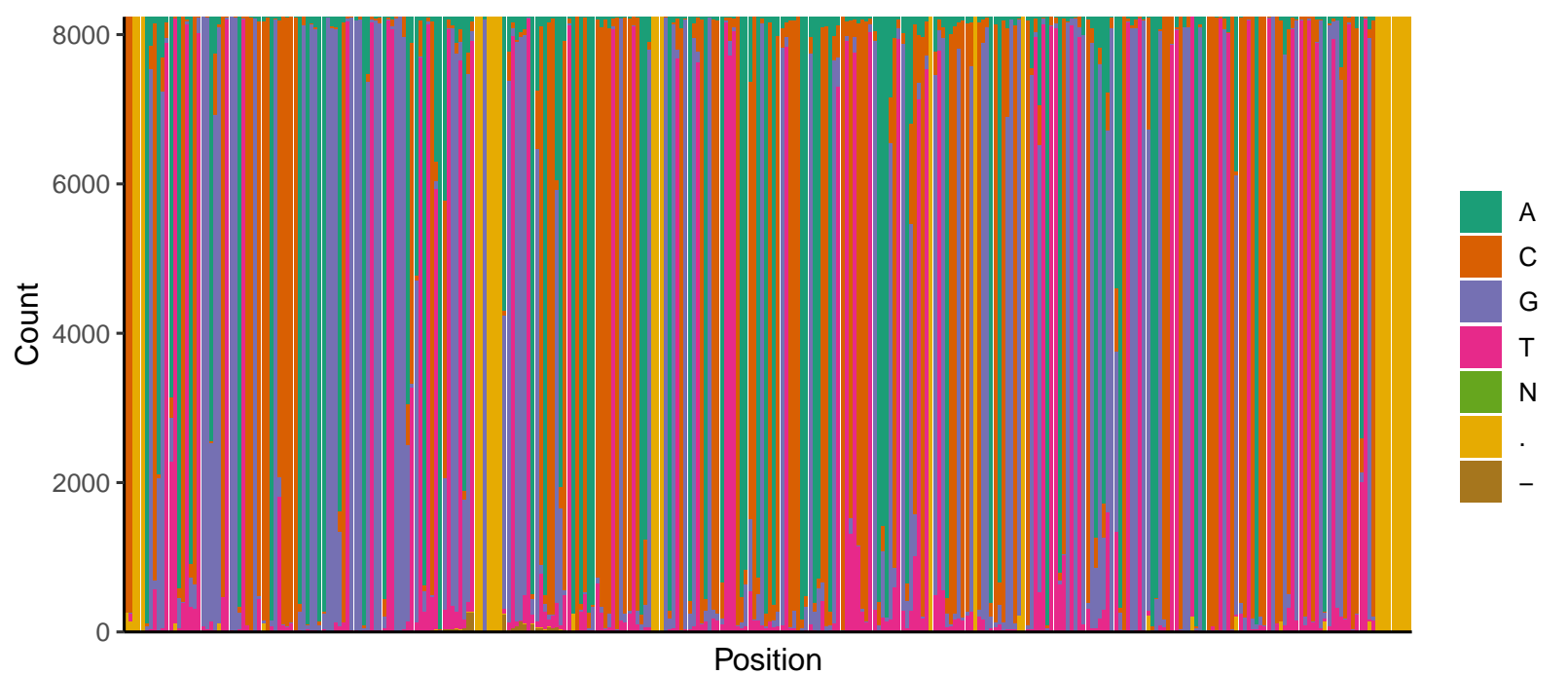
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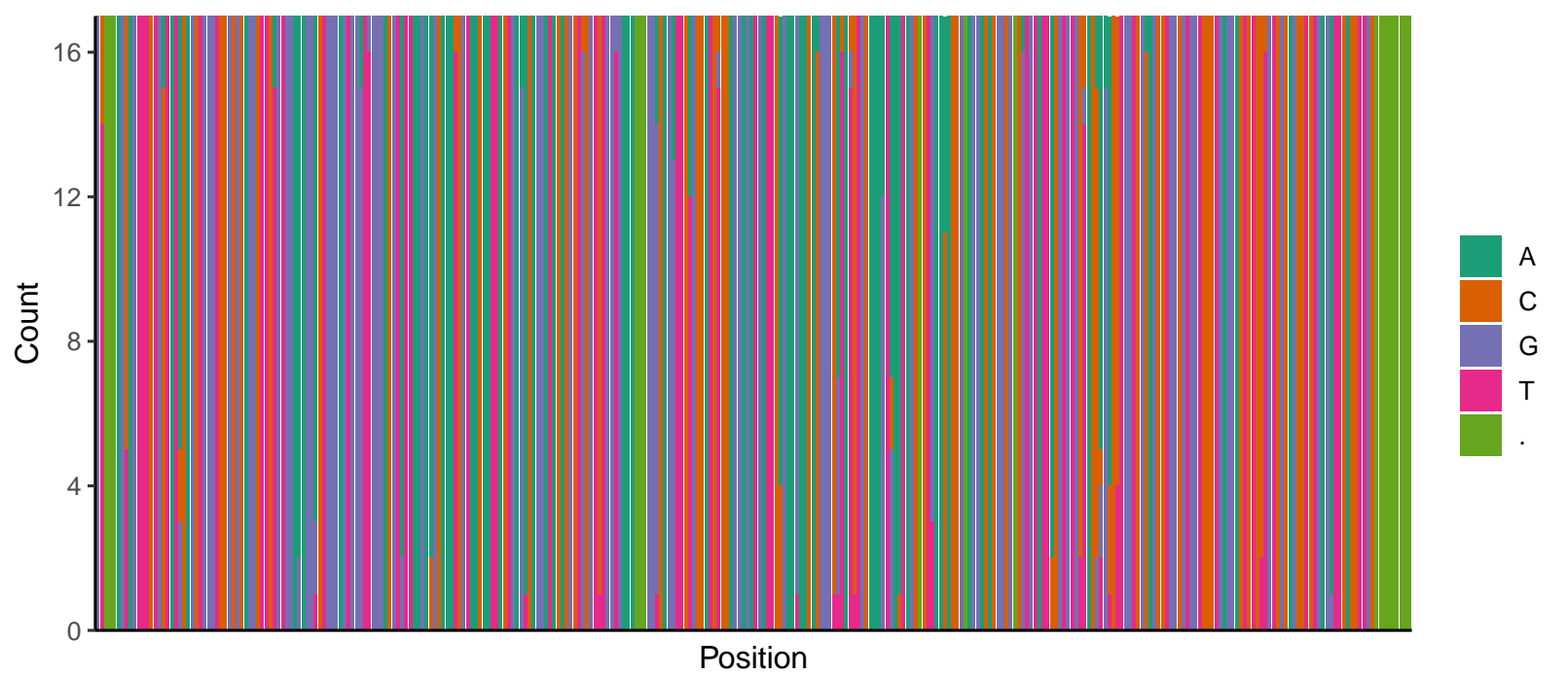
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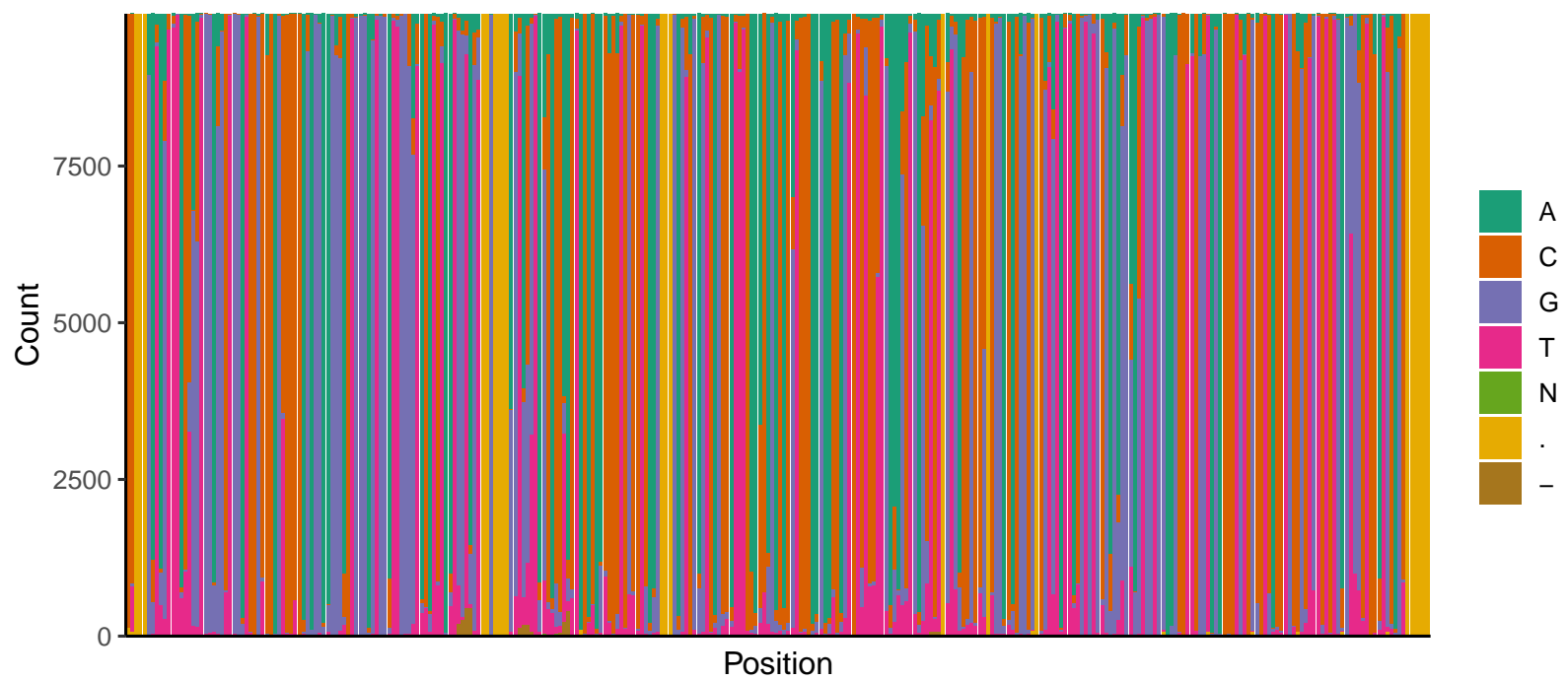
Gene IGHV4-173*01_C4G_G6A



Gene IGHV3-118*01_C34T_G225A_A249C_C276T_A313G_C315T



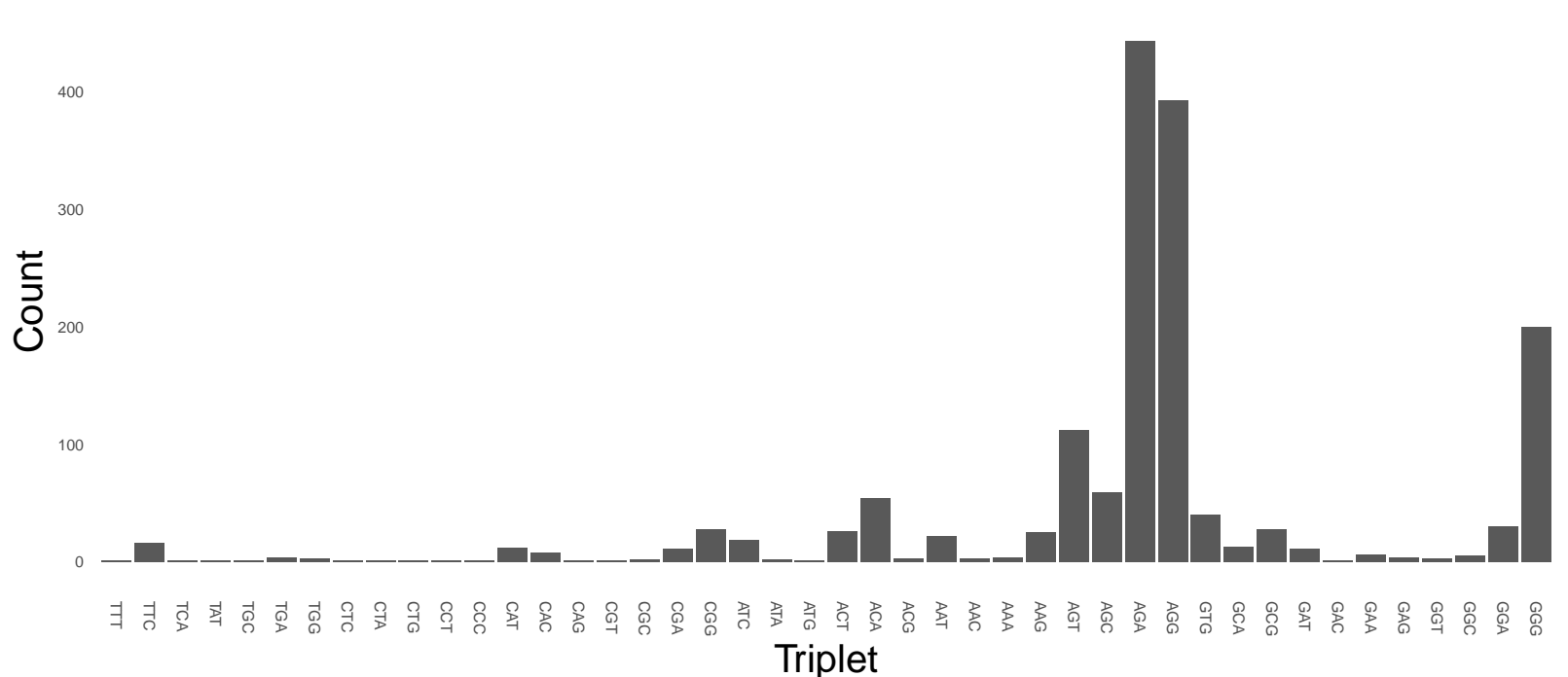
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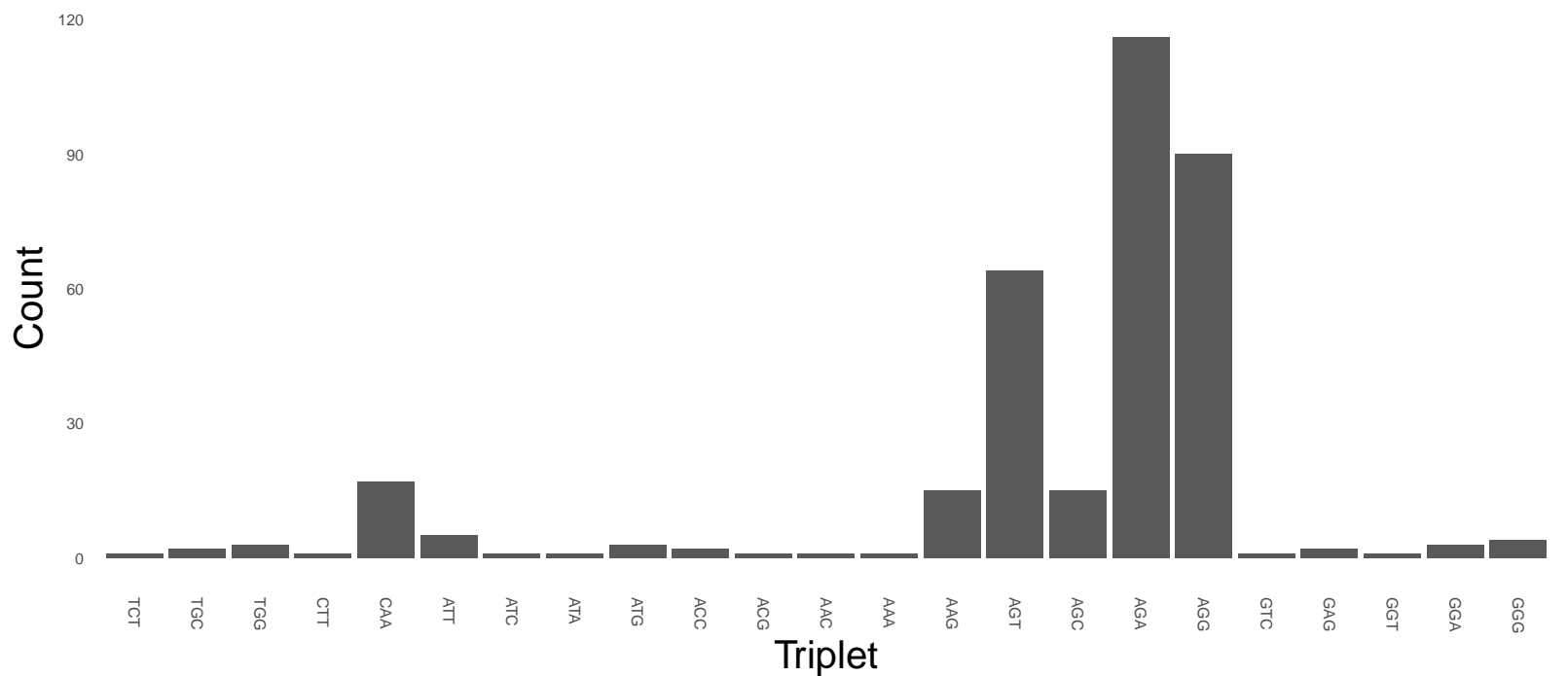
Gene IGHV3-110*01_C10T_G13C_C54T_T69C_G86C_T183C_G184A



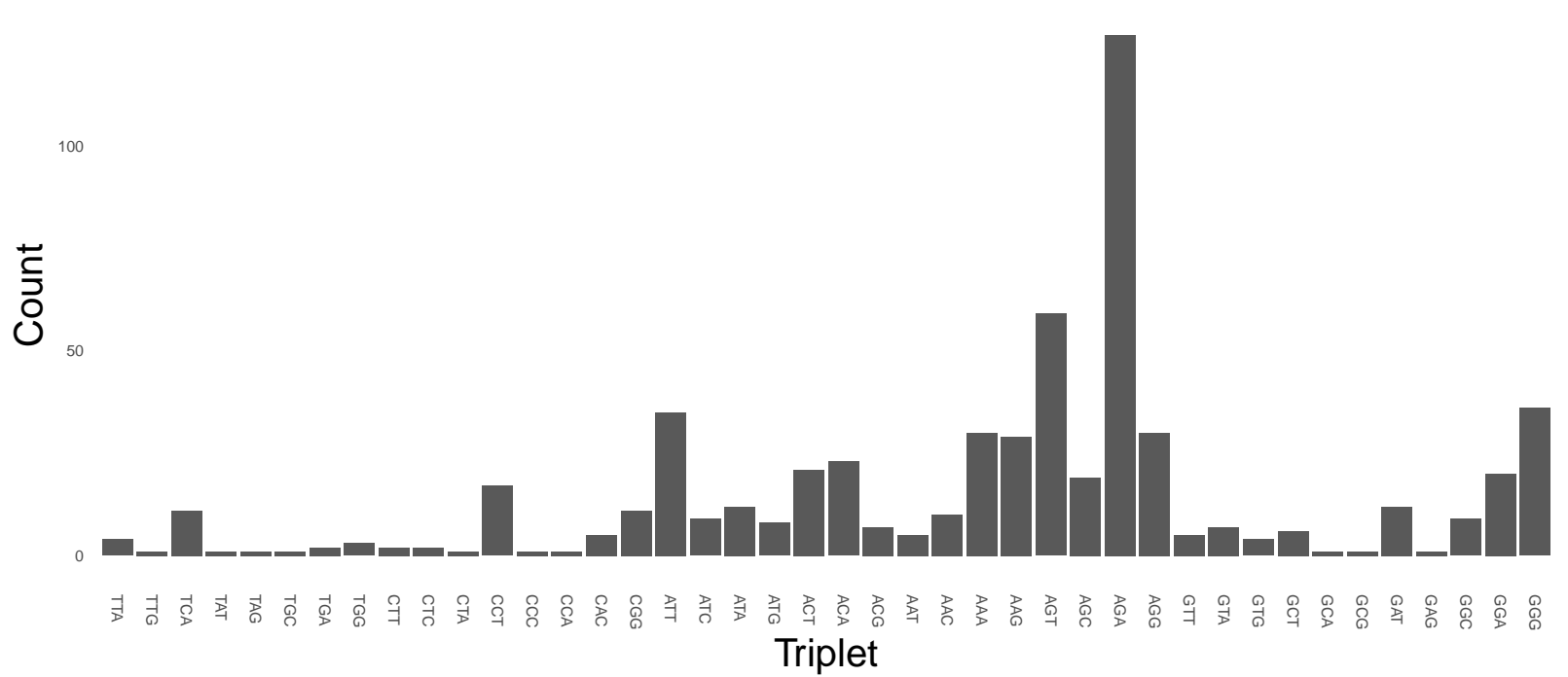
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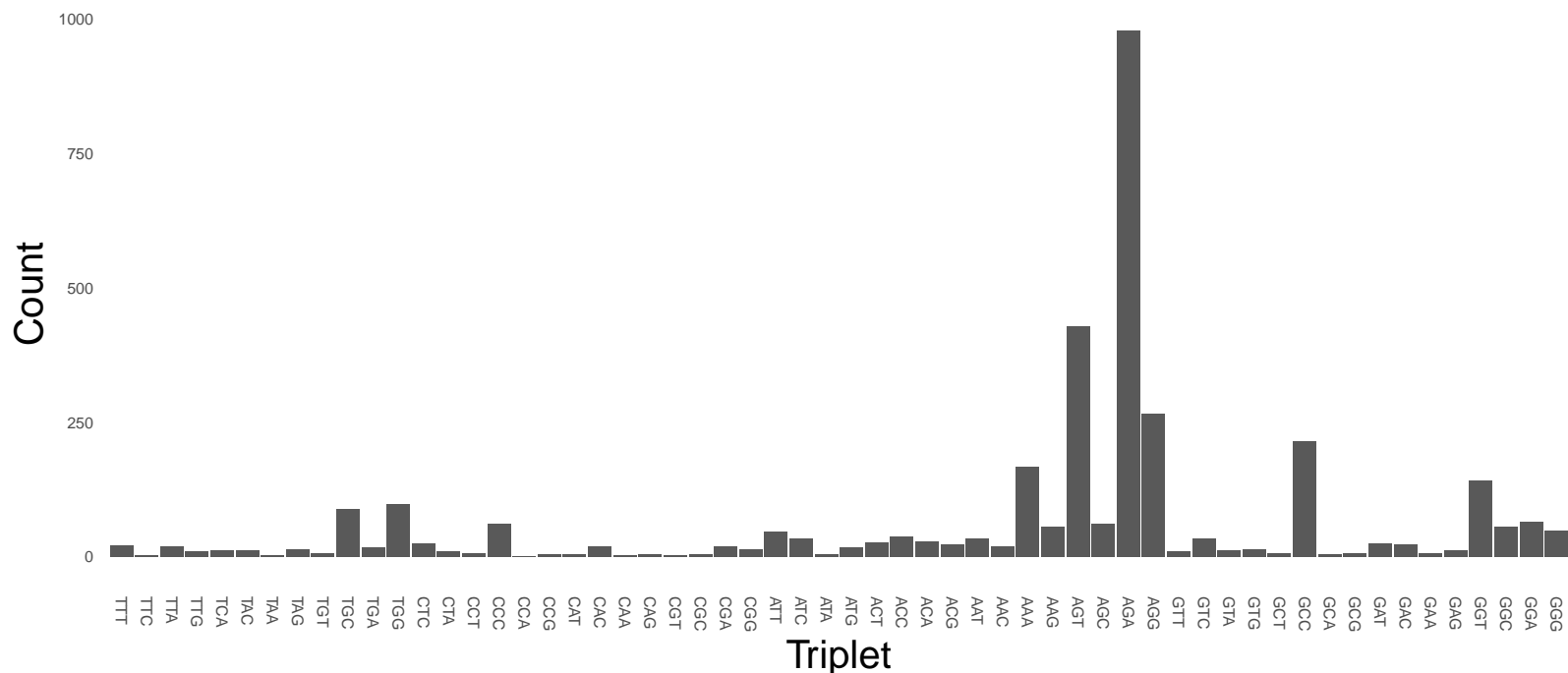
IGHV3-186*02_C62T_C191A_A197G_C204T_A207G_A249C_C276T- Final 3 nucleotides as a triplet



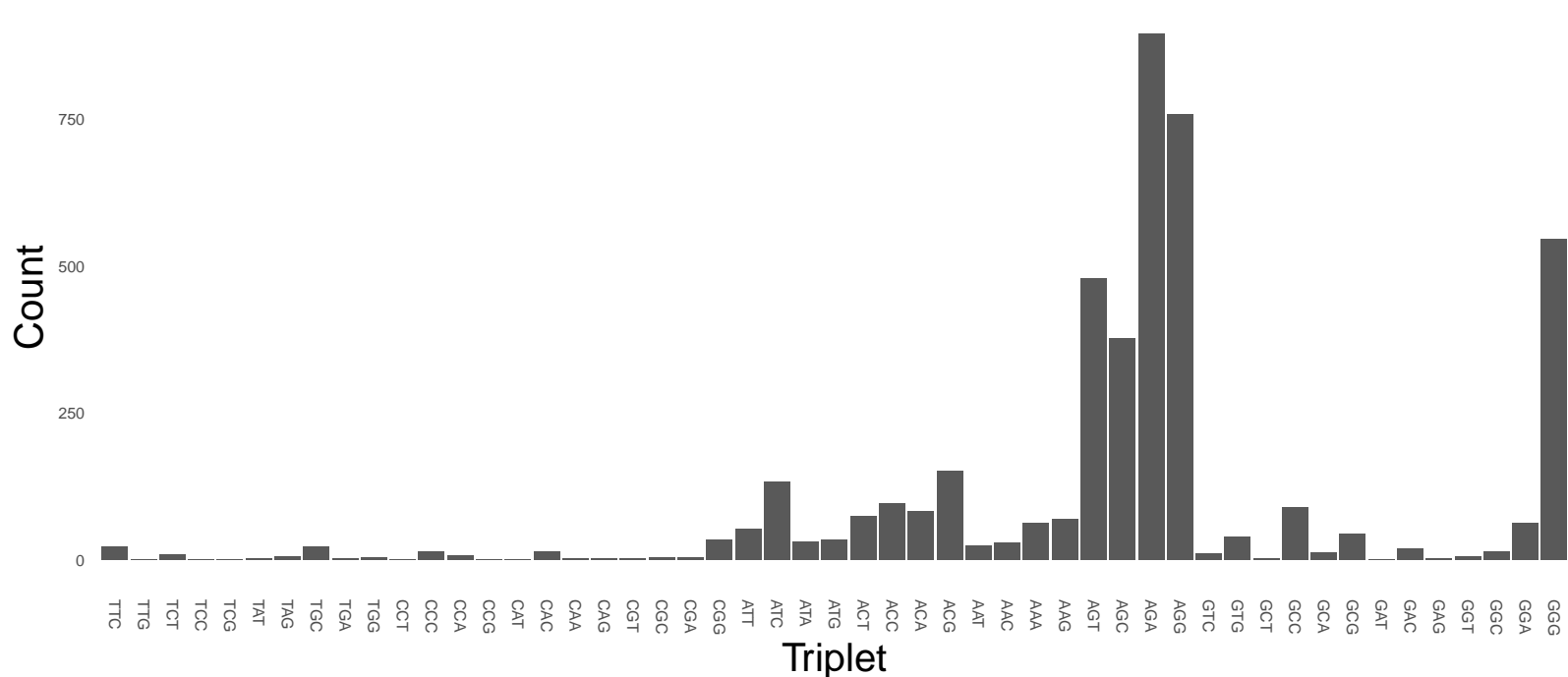
IGHV4-81*01_C4G_G70A_A244G- Final 3 nucleotides as a triplet



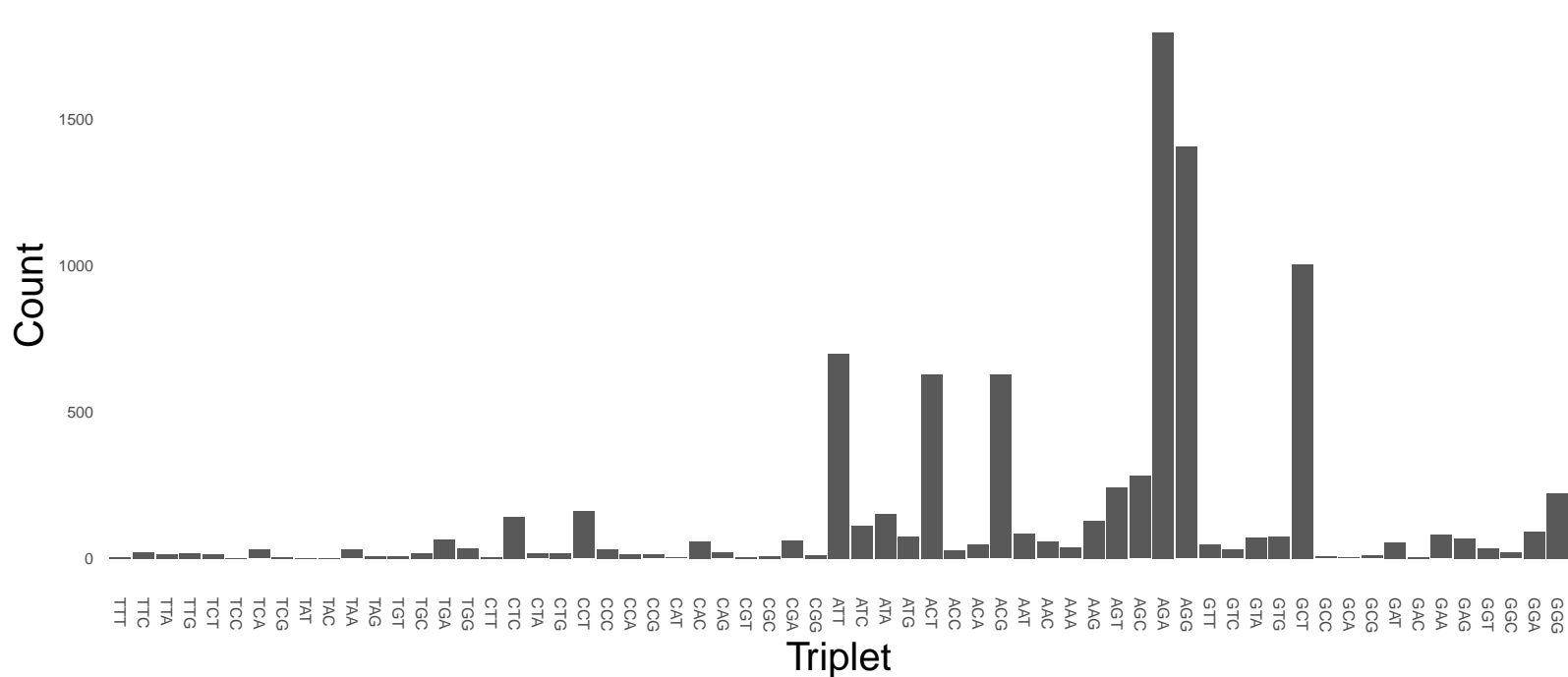
IGHV3-16*01_A275G- Final 3 nucleotides as a triplet



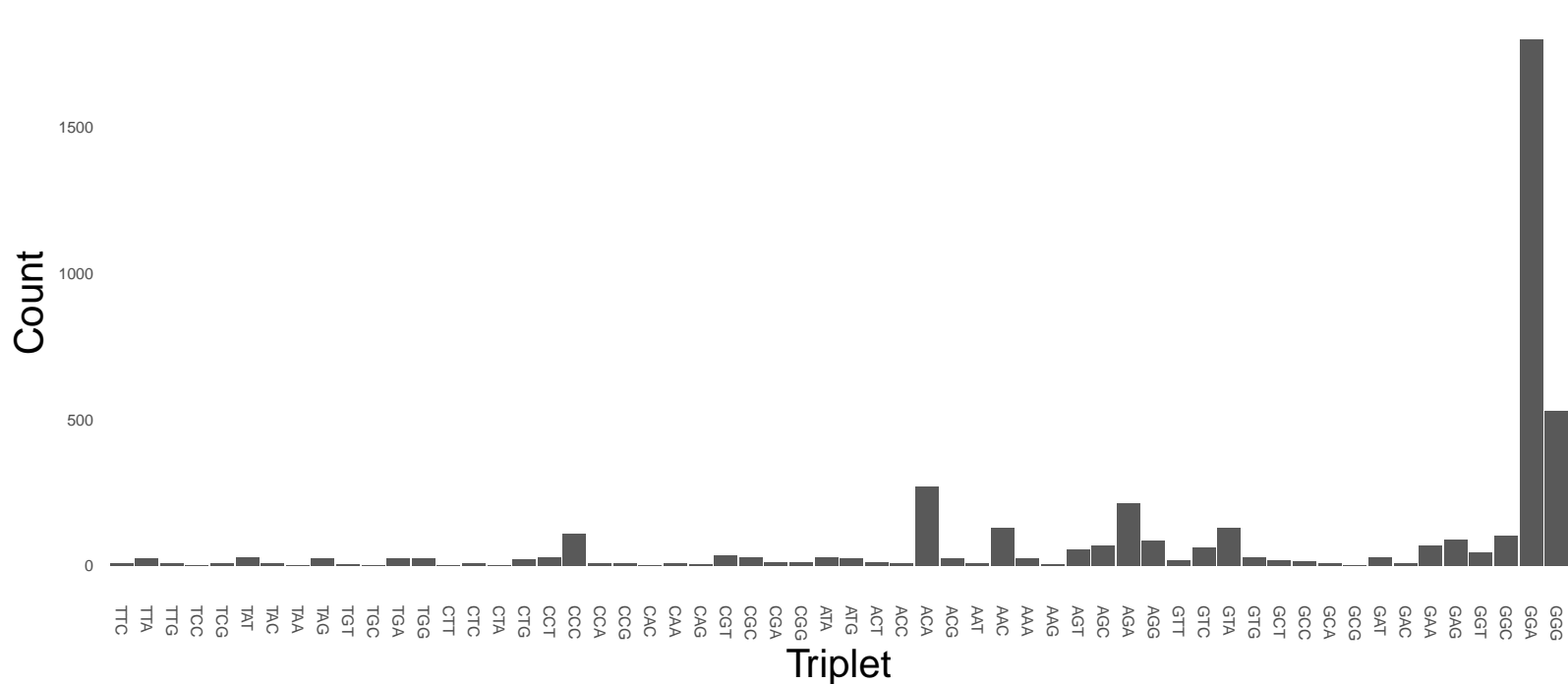
IGHV5-43*01_A106G_G164T_C165G_C225G_T231C_A259G- Final 3 nucleotides as a triplet



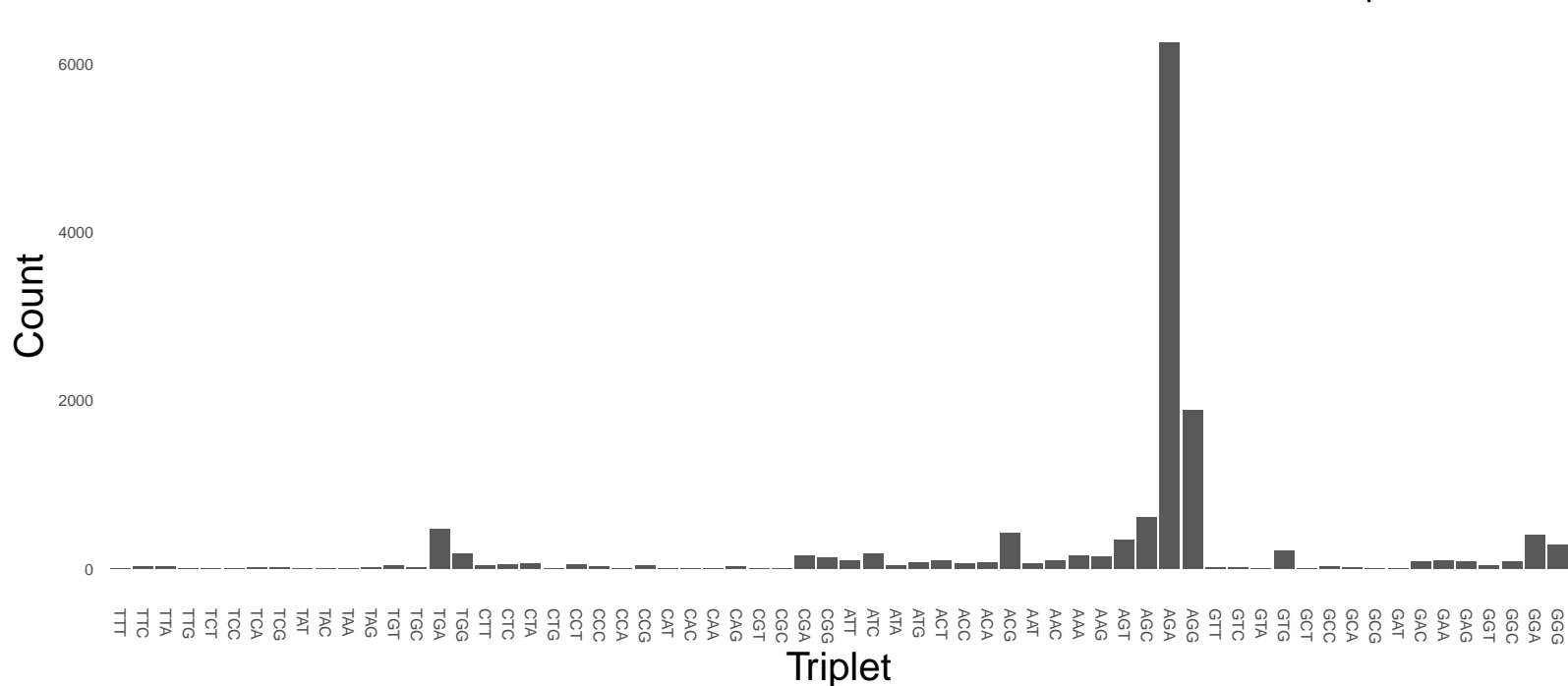
IGHV3-116*02_T109C- Final 3 nucleotides as a triplet



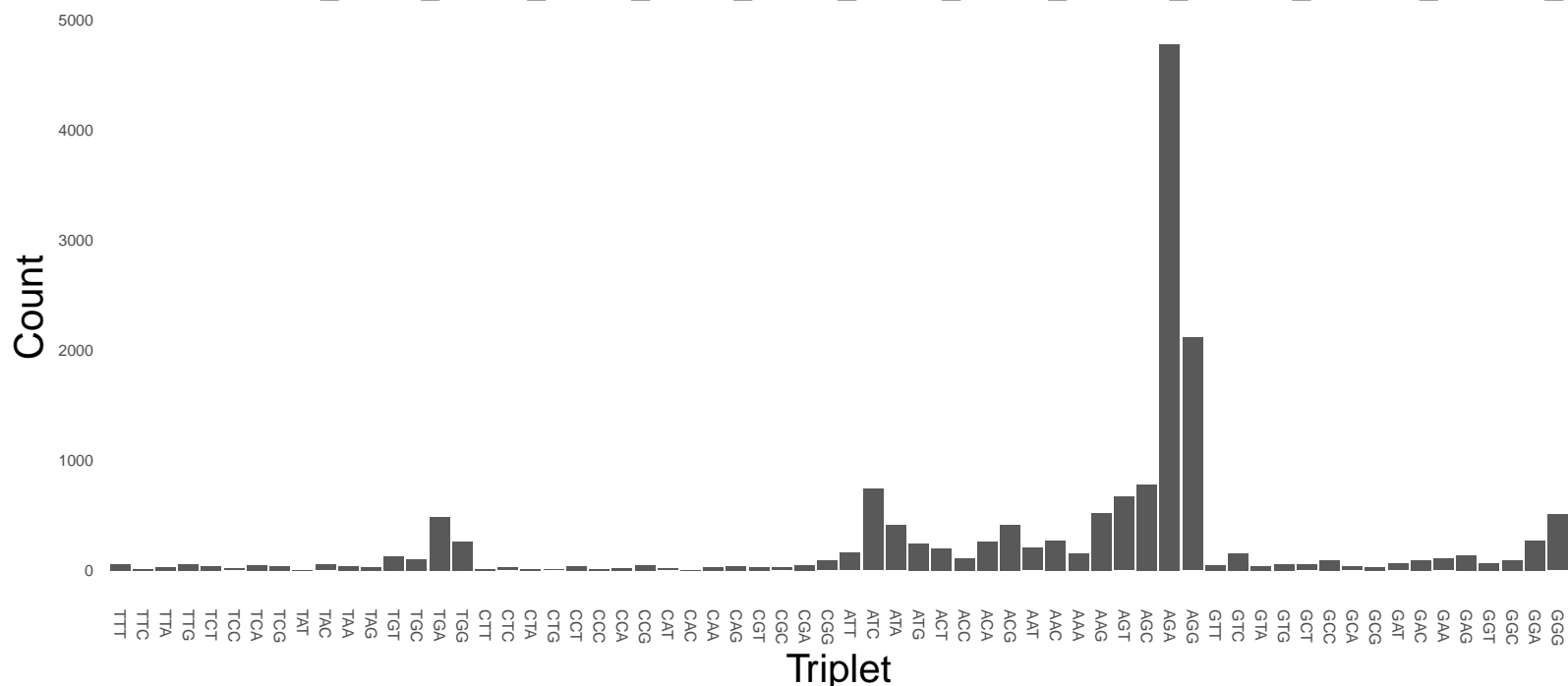
IGHV3-184*01_G106A_T109C_G275A- Final 3 nucleotides as a triplet



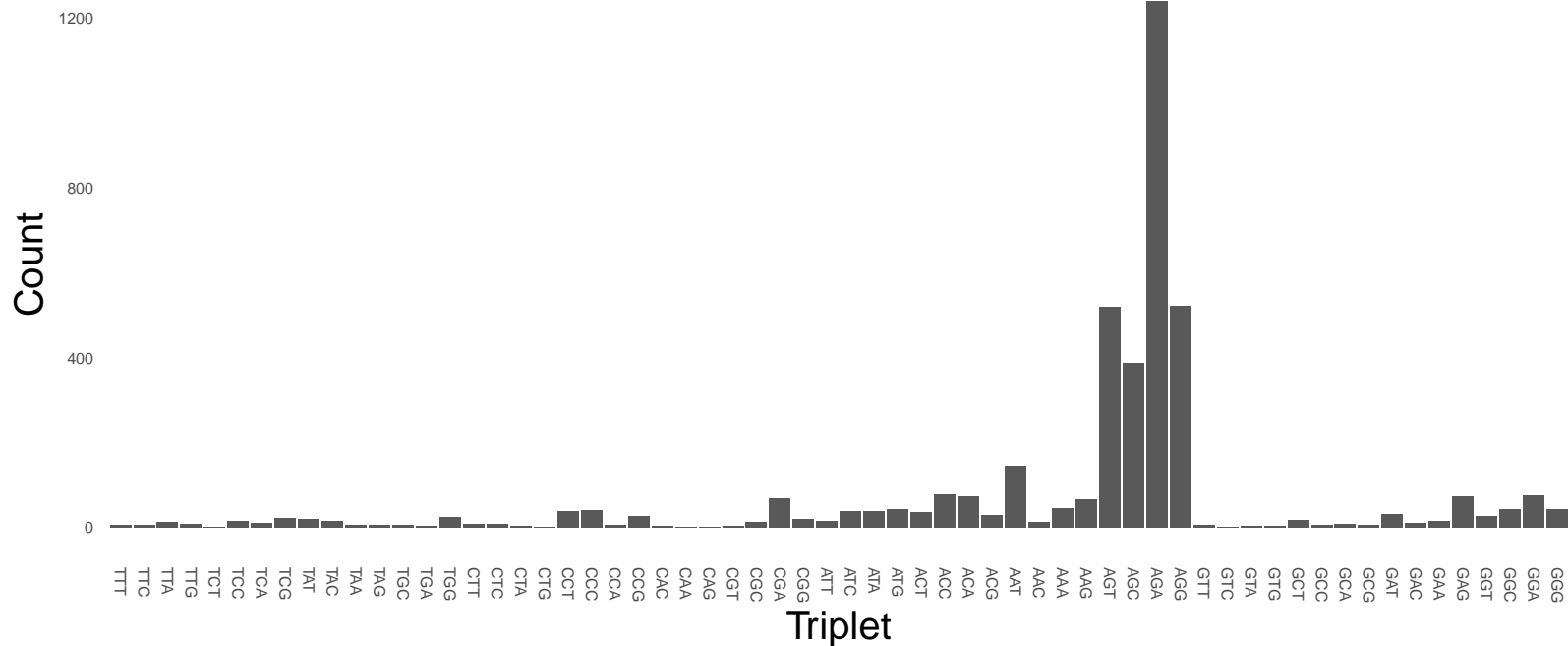
IGHV3S42*01_T120C_A133G_G141A_A157G_T288G- Final 3 nucleotides as a triplet



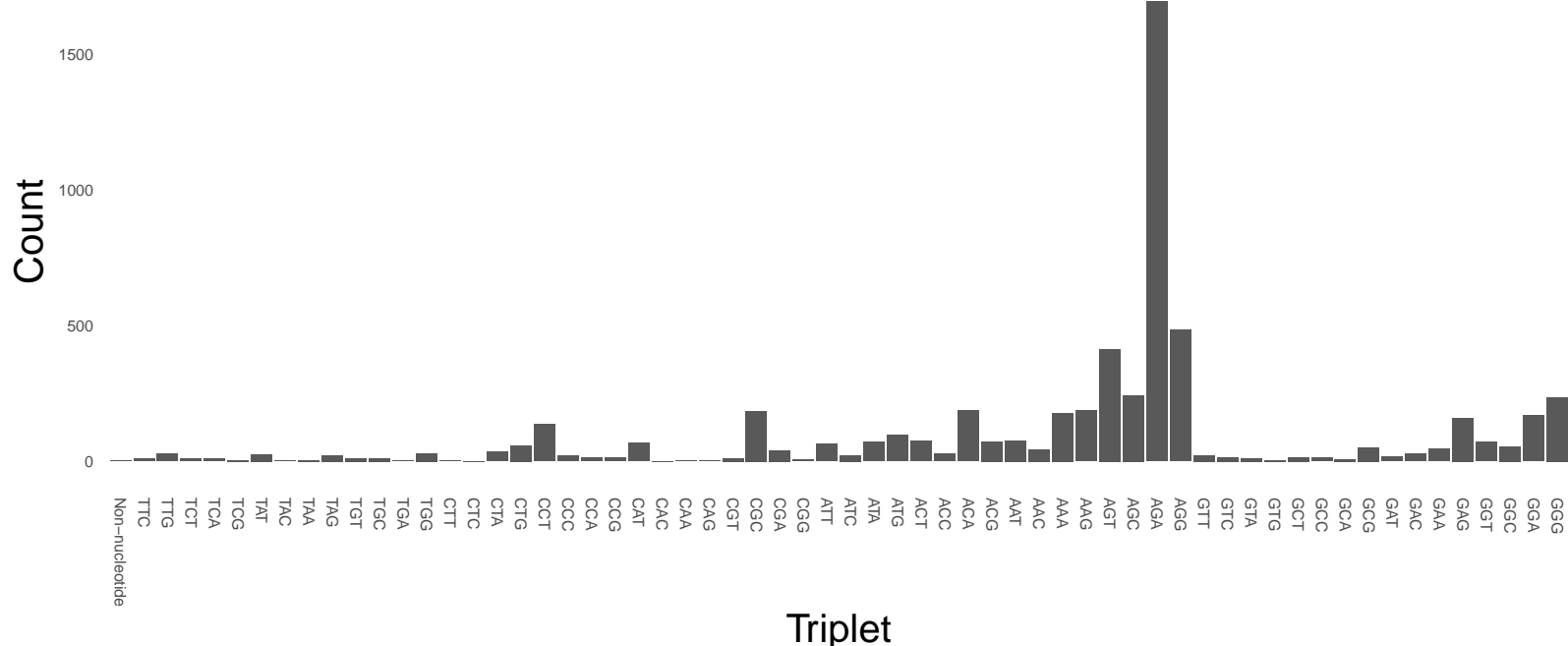
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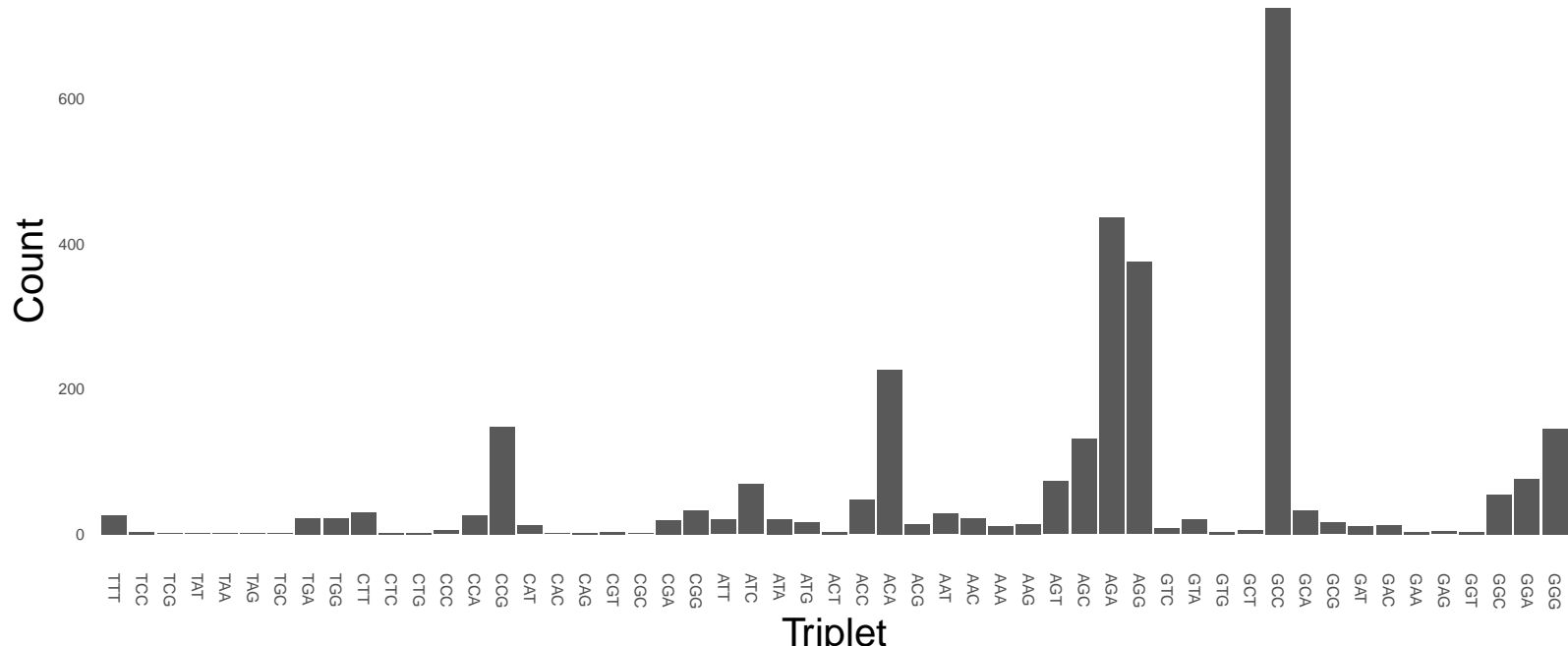
IGHV4-65*01_A88G_T189G- Final 3 nucleotides as a triplet



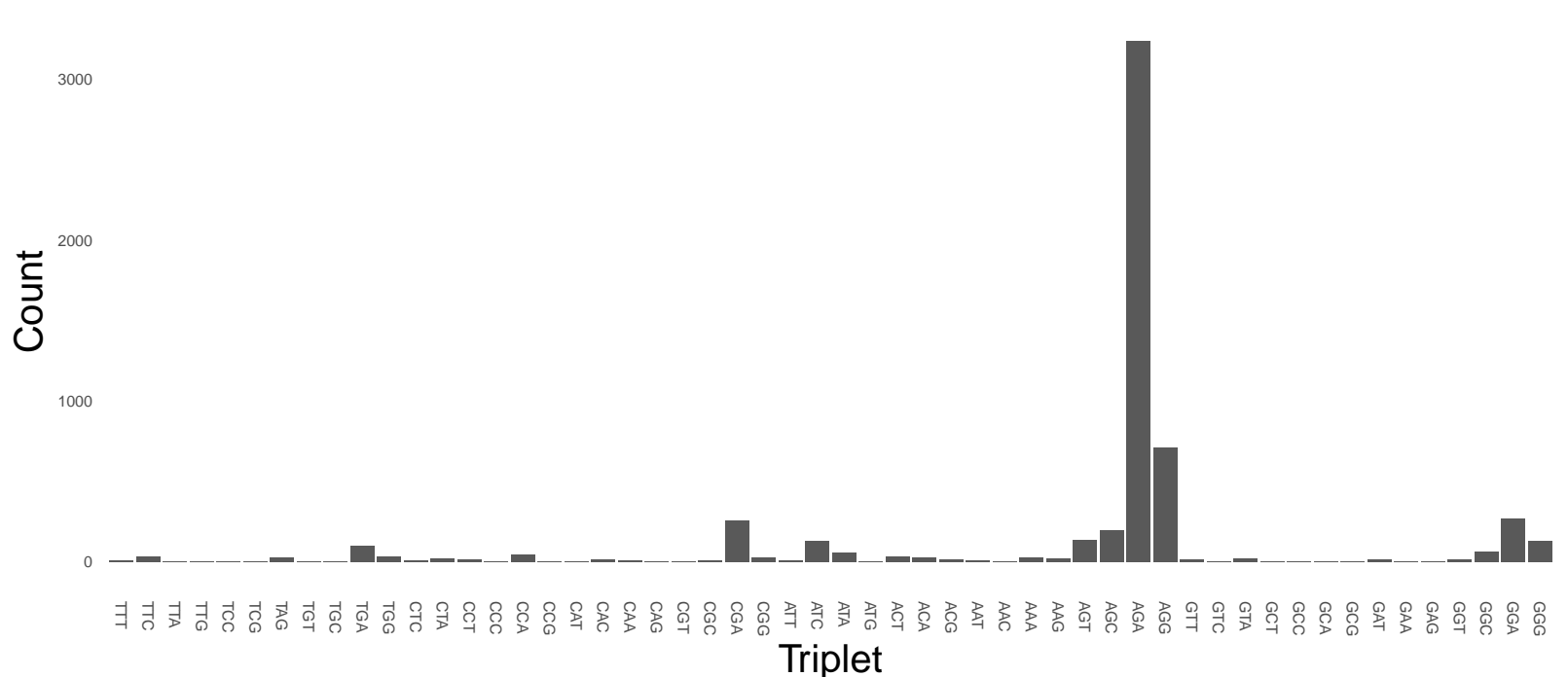
IGHV4-76*01_C34G_G103A_A244G- Final 3 nucleotides as a triplet



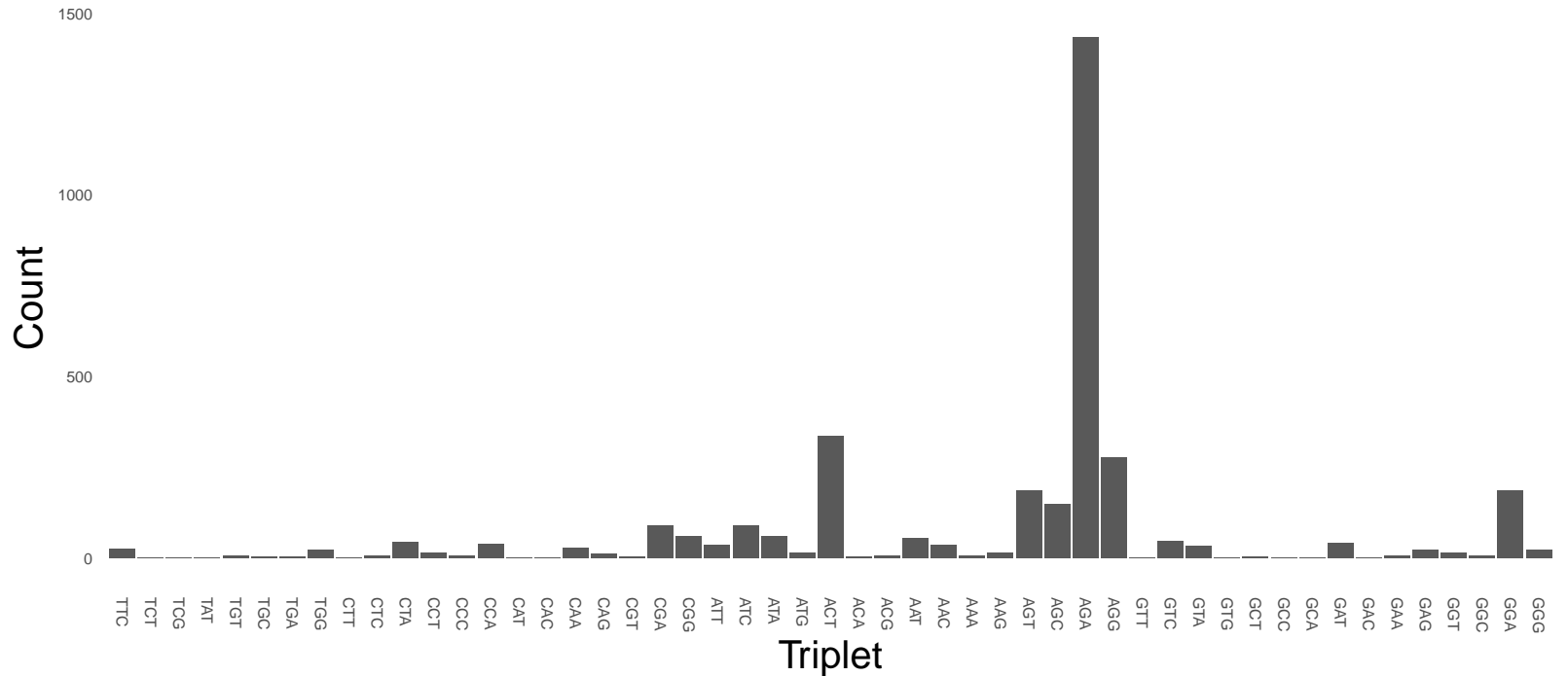
IGHV5-20*02_A141G_A295T_C312T- Final 3 nucleotides as a triplet



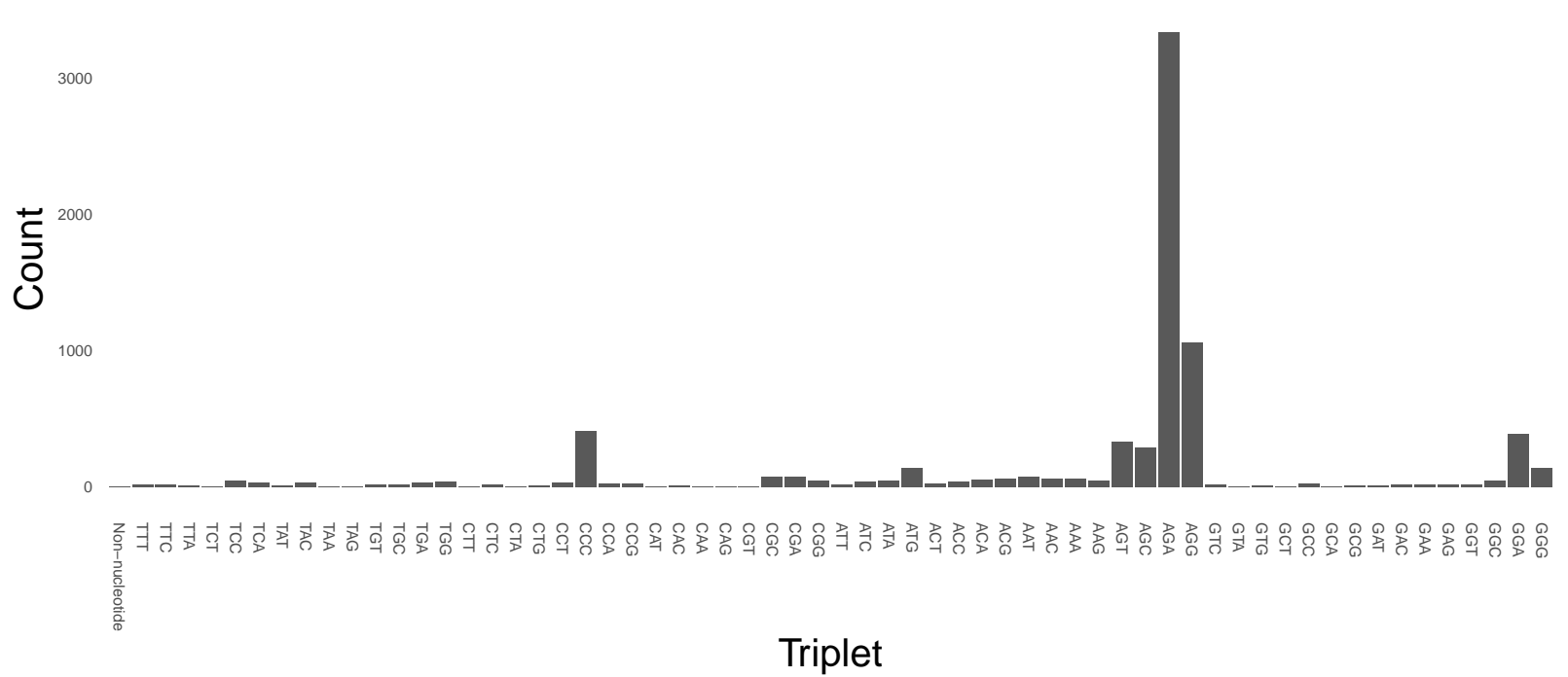
IGHV3-30*01_G48C_G60A_T110C_A152T_G174C_G181A_G207A_C287G- Final 3 nucleotides



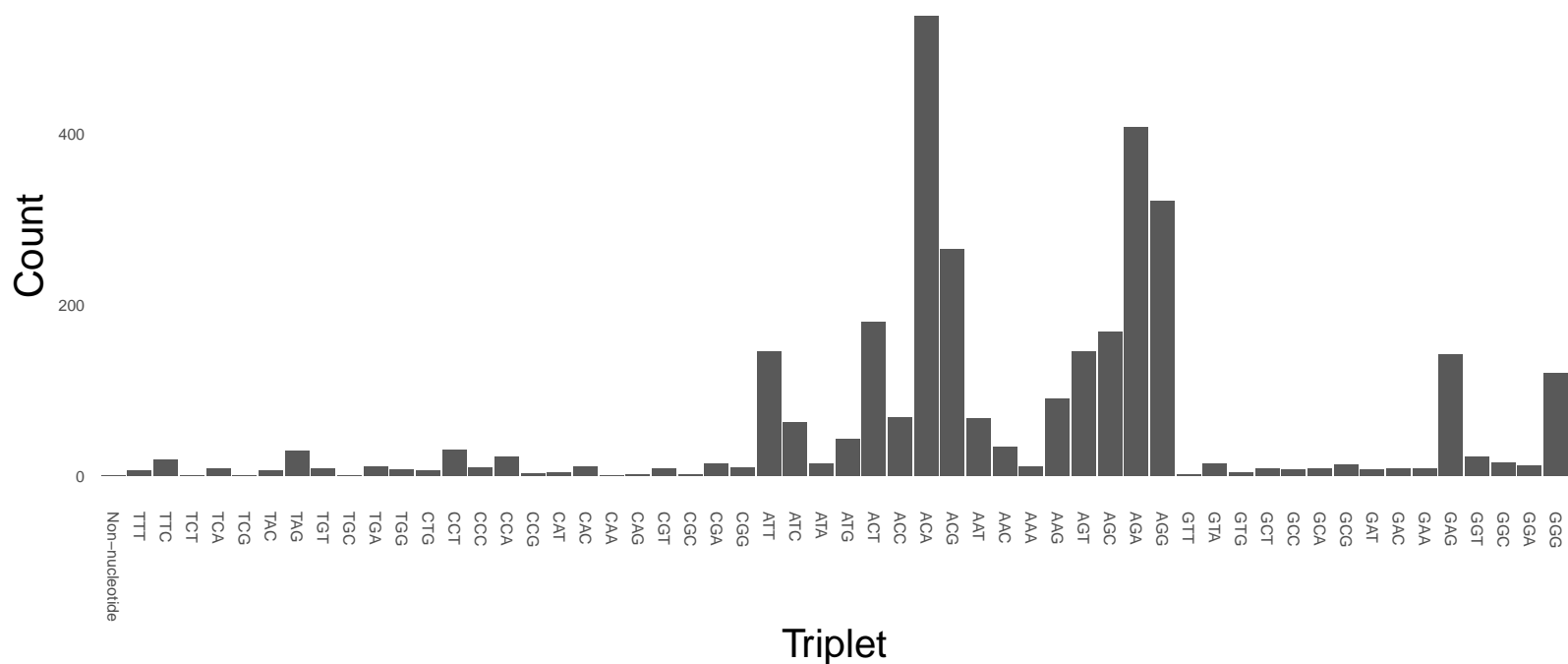
IGHV3-30*02_C141G_C183T- Final 3 nucleotides as a triplet



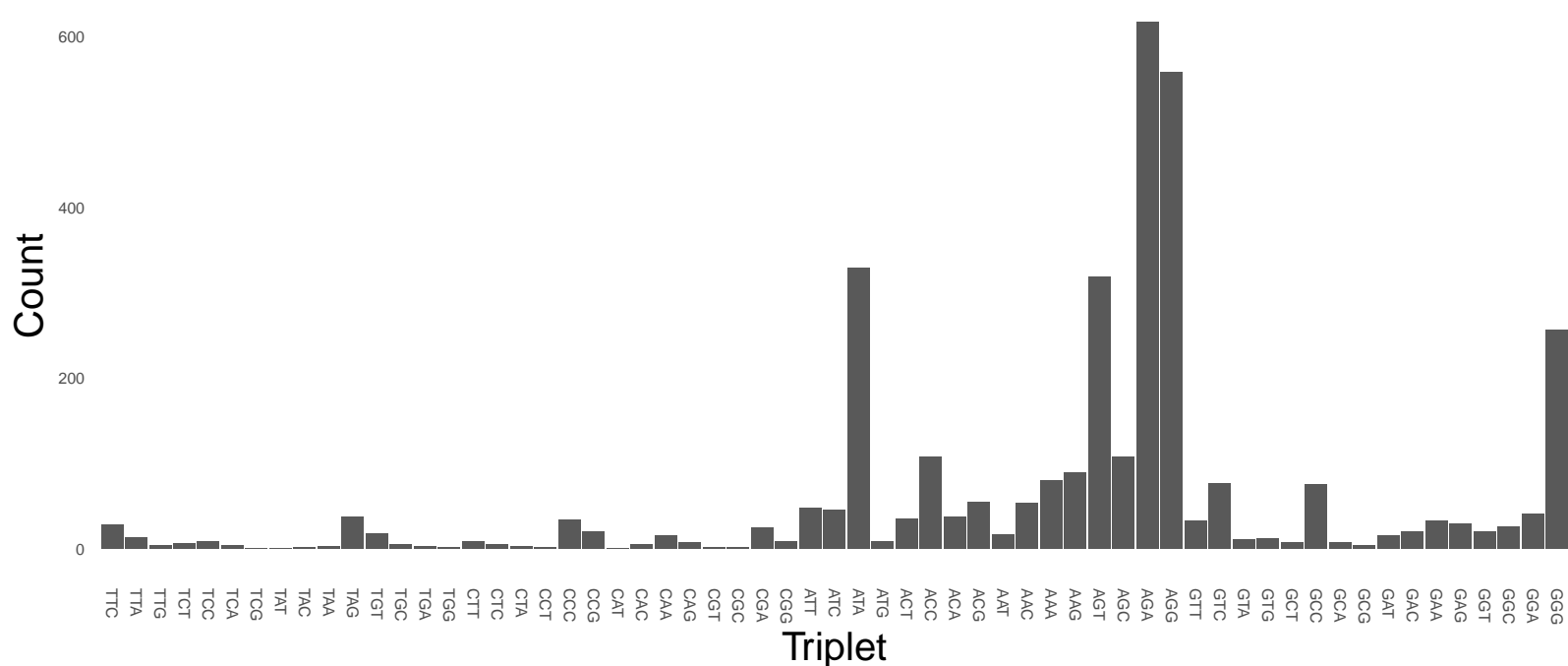
IGHV3-54*02_G170C- Final 3 nucleotides as a triplet



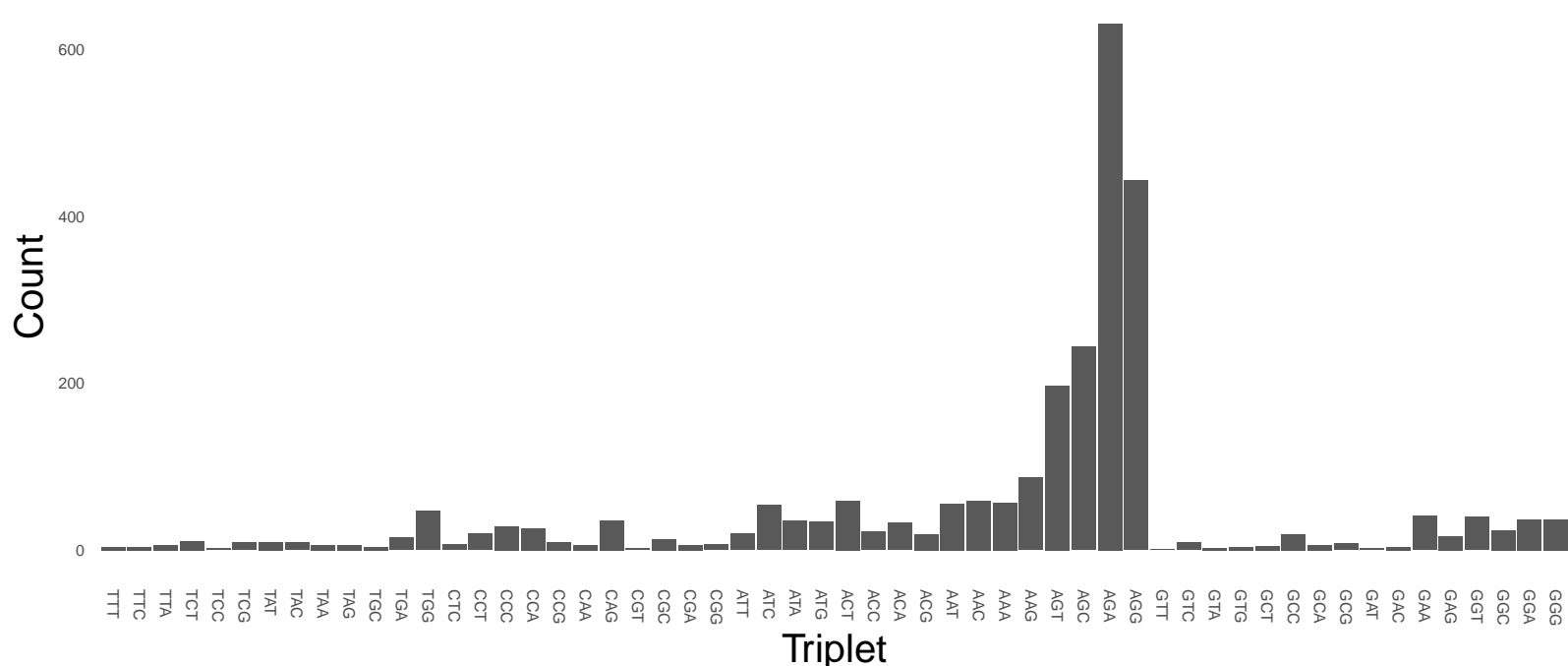
IGHV4-73*01_G147A- Final 3 nucleotides as a triplet



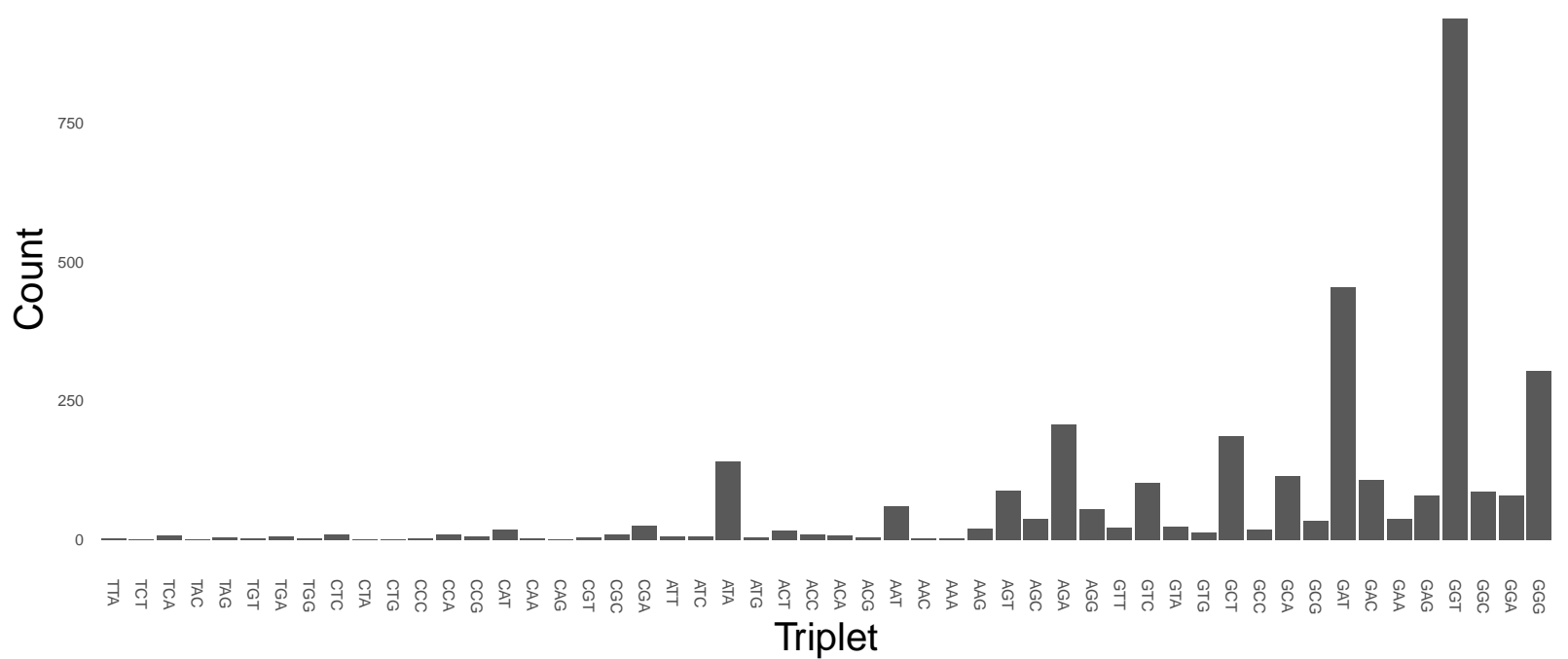
IGHV4-80*01_C83G_A88T_T105C_T189G_T196A_G297C- Final 3 nucleotides as a triplet



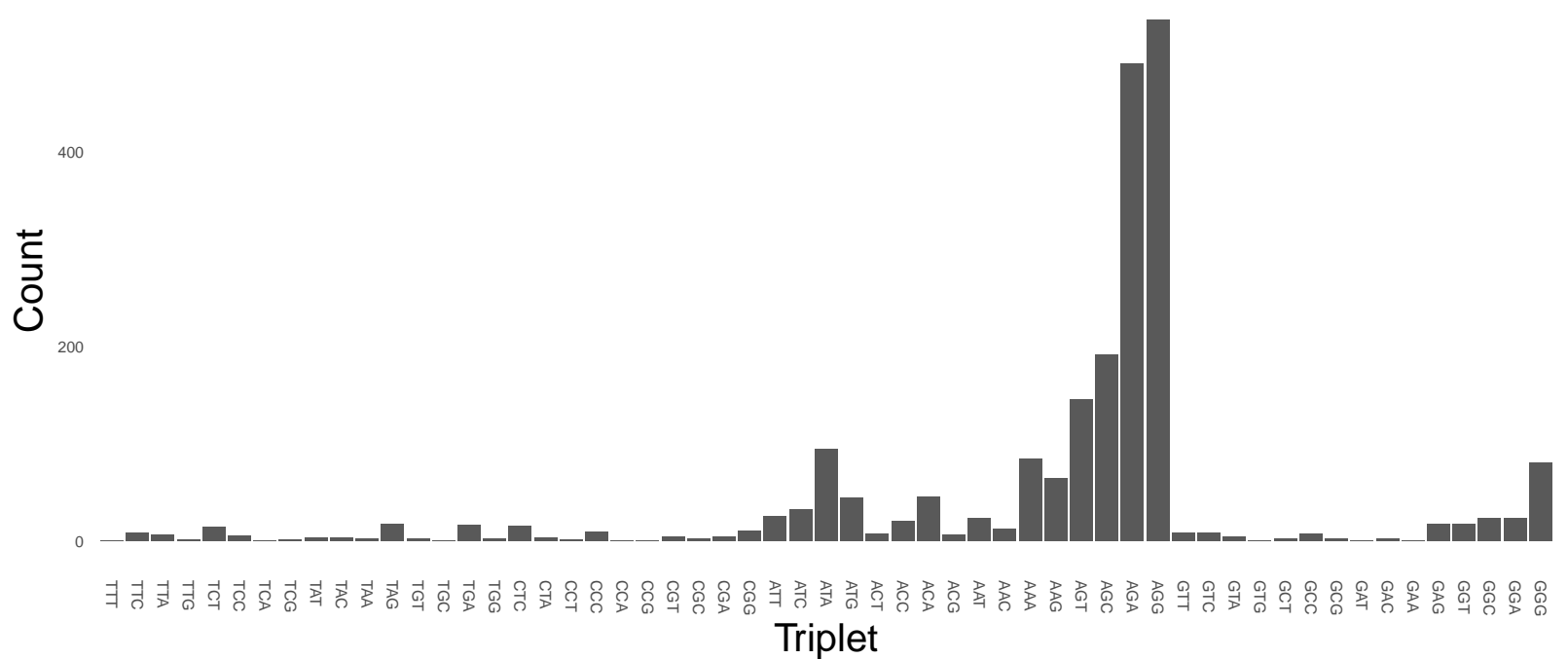
IGHV4-80*01_G70A_C90T_T109A_G151C_T189G_T196A- Final 3 nucleotides as a triplet



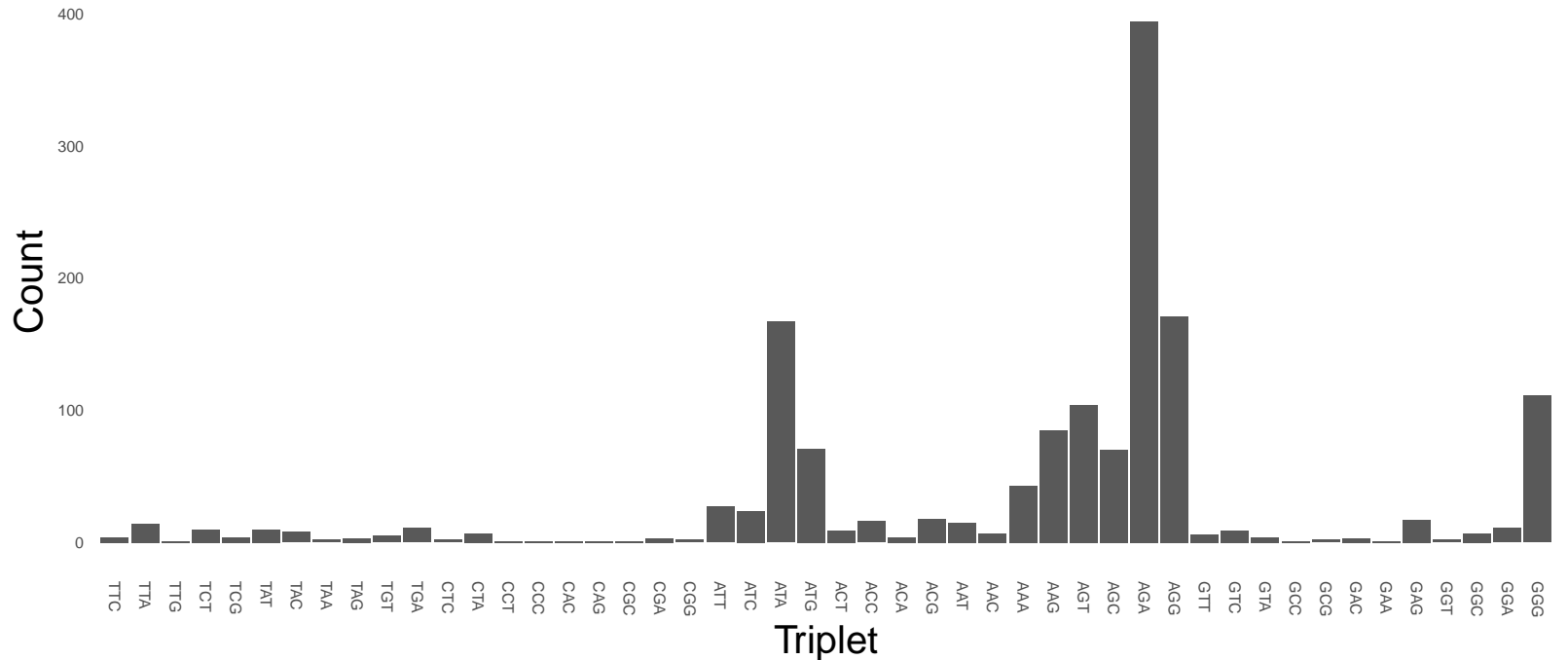
IGHV4-93*01_C297G- Final 3 nucleotides as a triplet



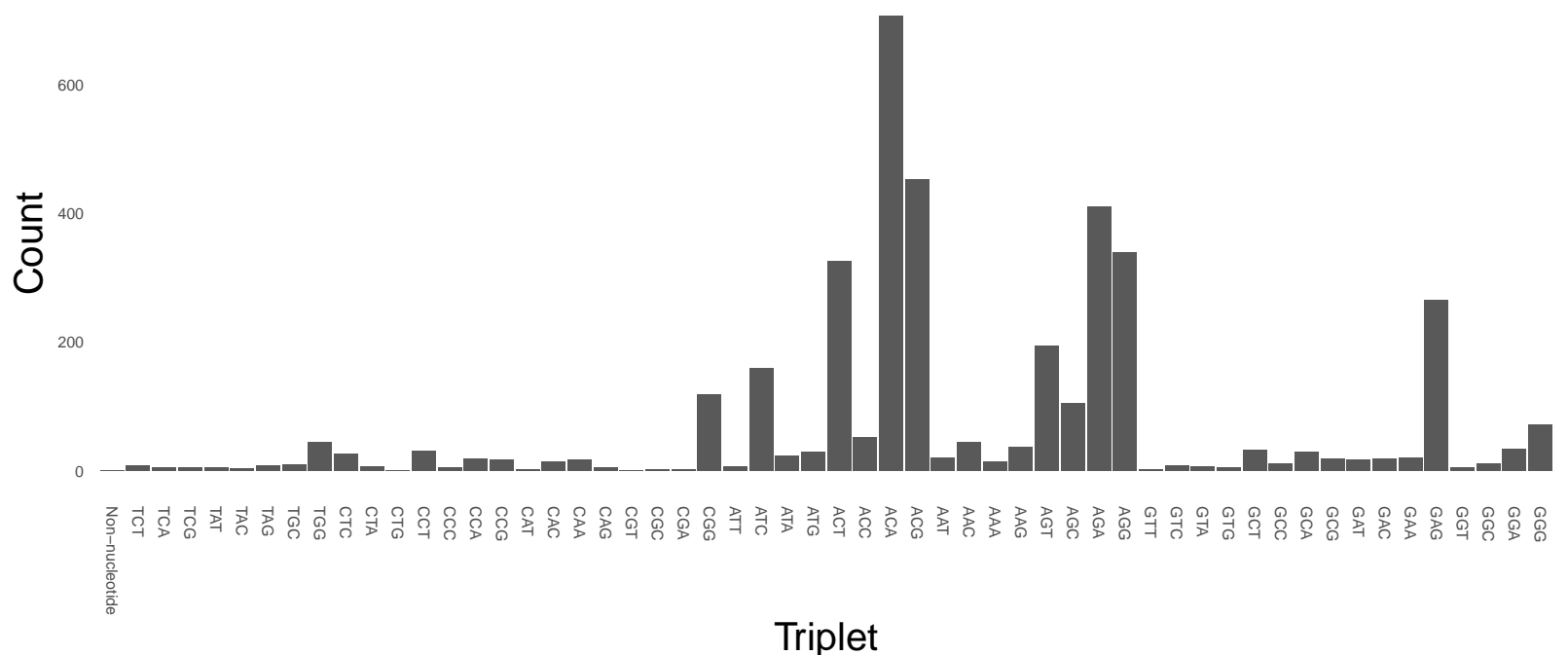
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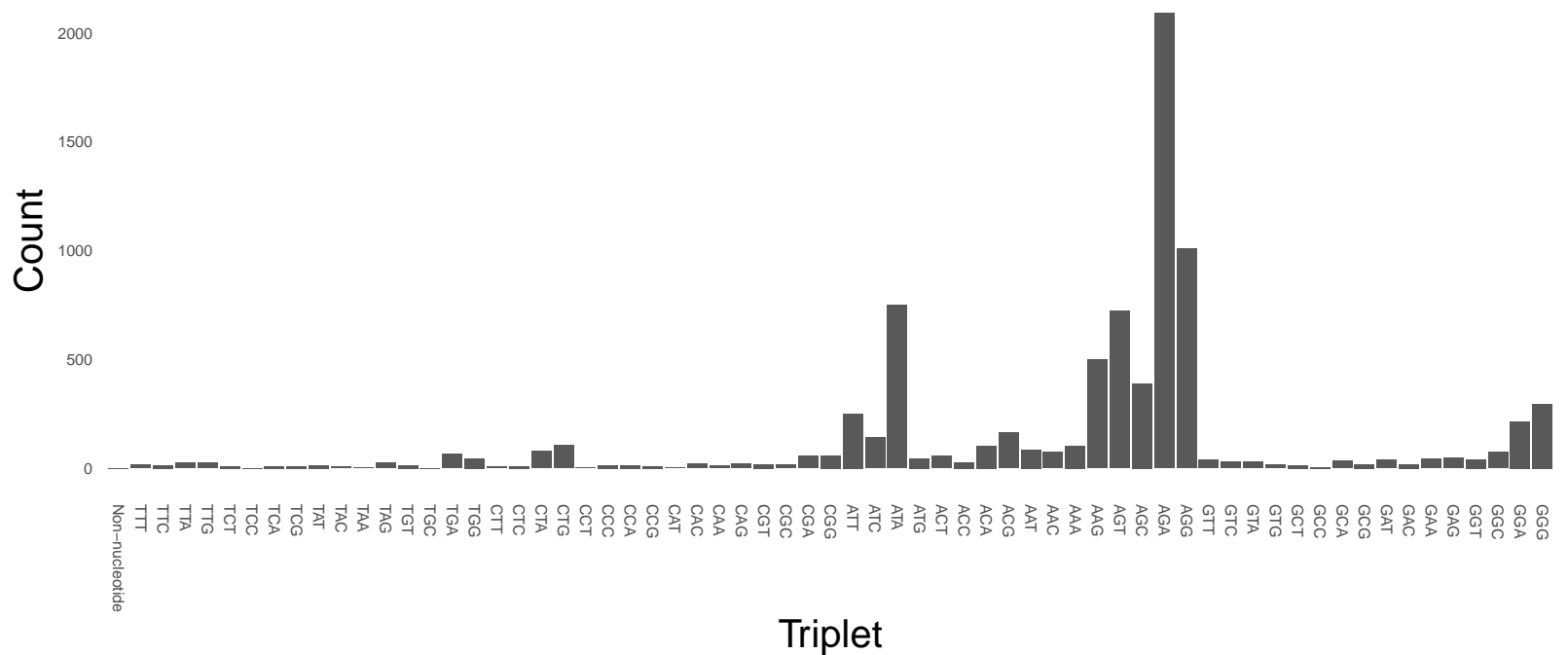
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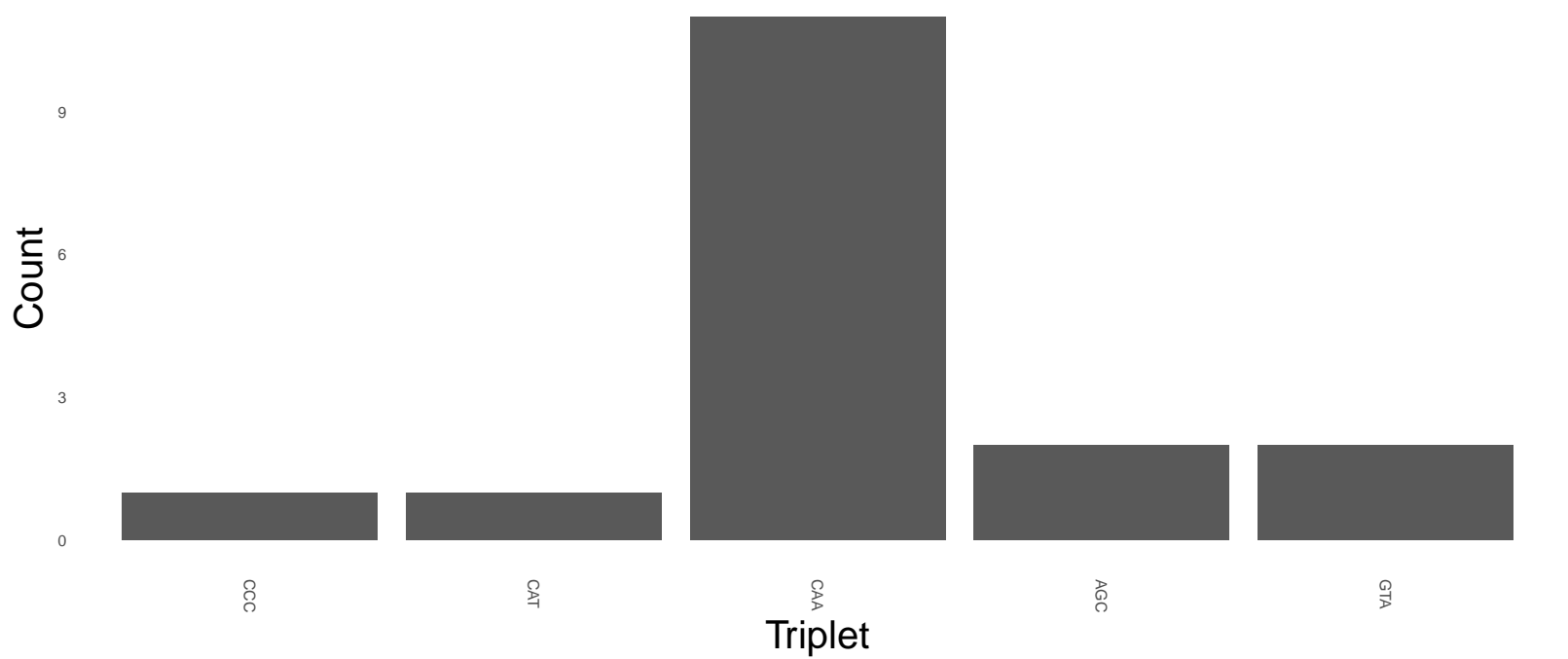
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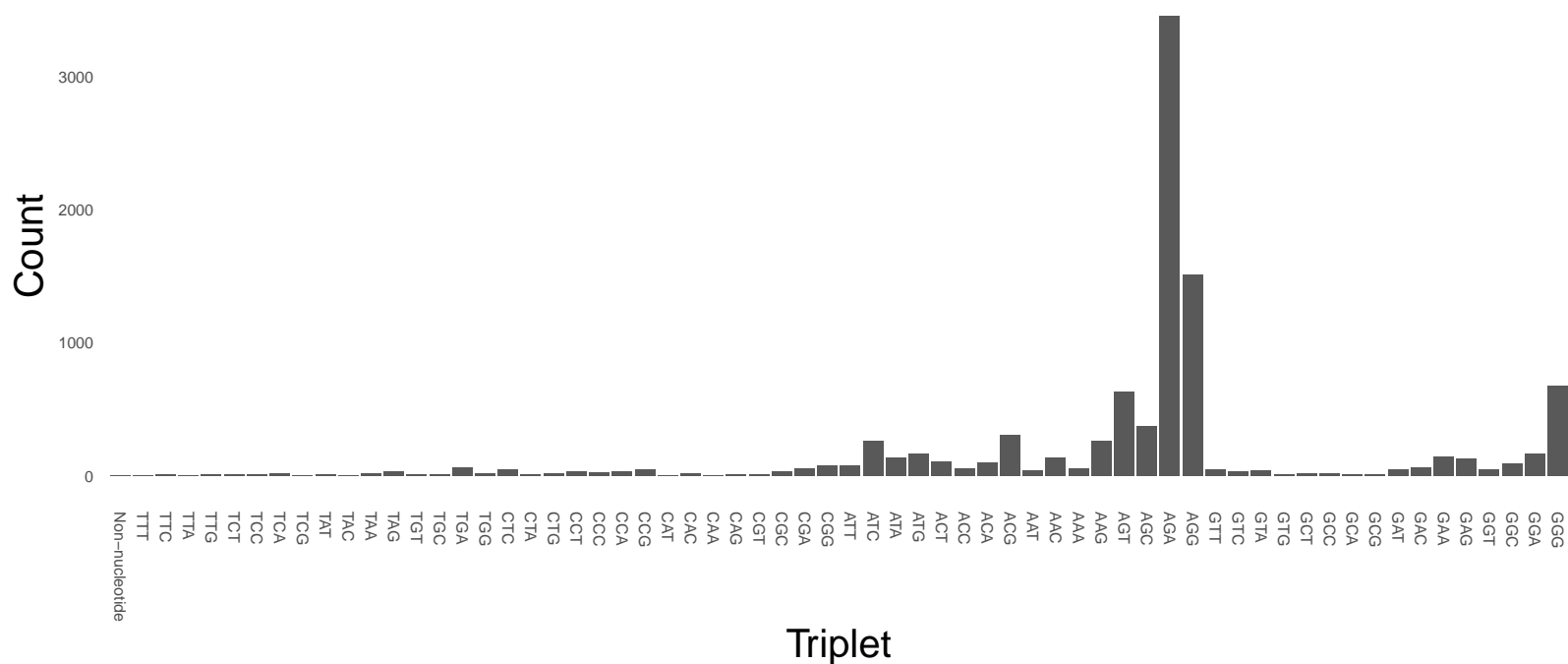
IGHV4-173*01_C4G_G6A- Final 3 nucleotides as a triplet



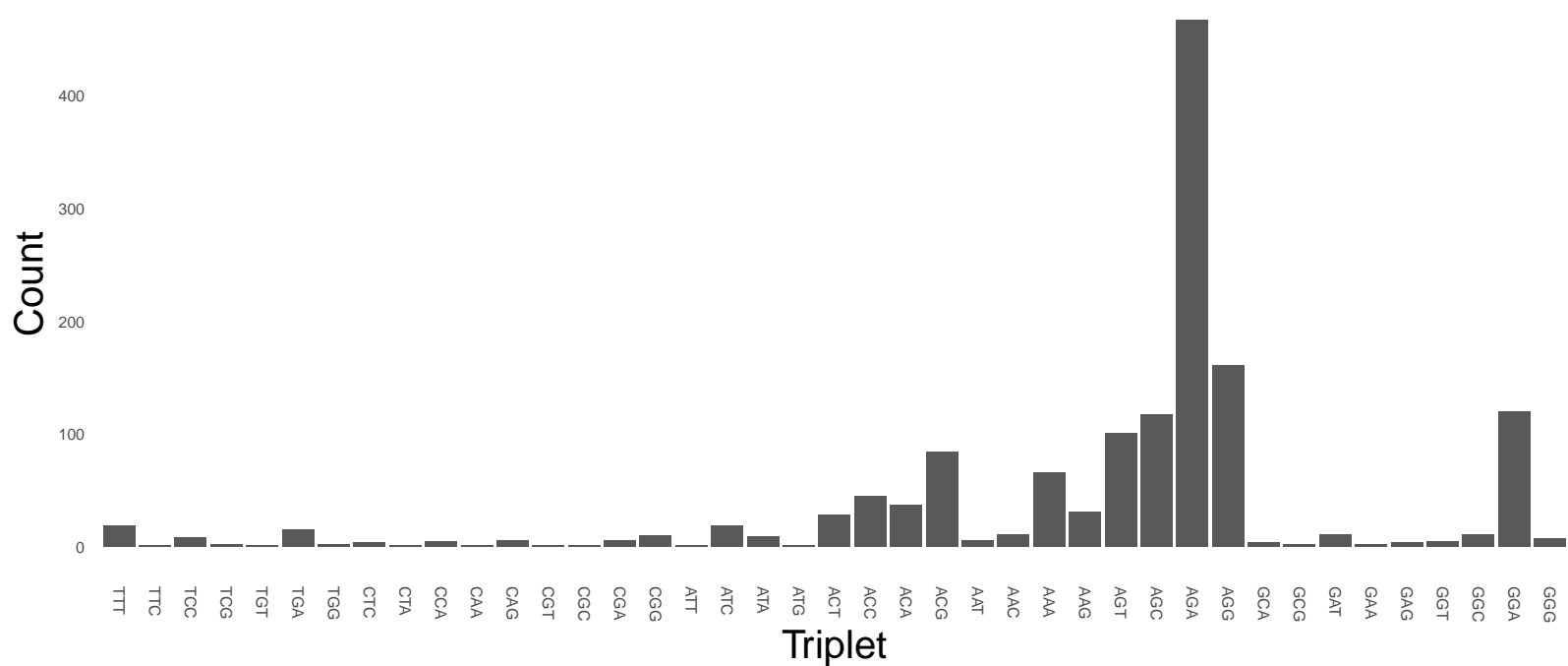
IGHV3-118*01_C34T_G225A_A249C_C276T_A313G_C315T- Final 3 nucleotides as a triplet



IGHV4S10*01_A48G_T112C– Final 3 nucleotides as a triplet

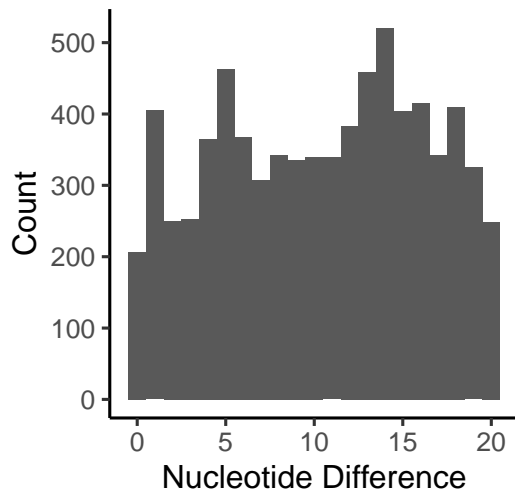


IGHV3-110*01_C10T_G13C_C54T_T69C_G86C_T183C_G184A– Final 3 nucleotides as a triplet



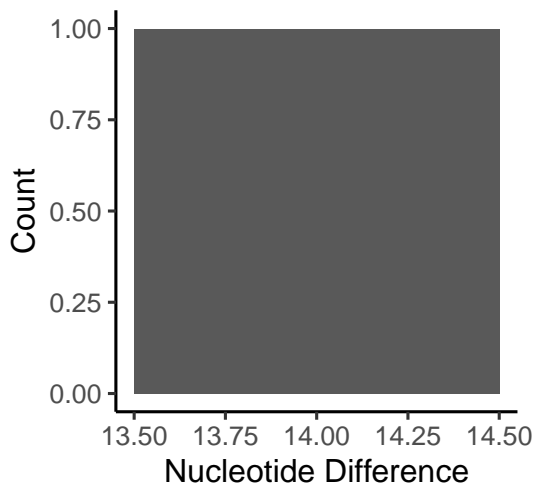
IGHV3S42*01_T120C_A1

13523 sequences assigned
207 (1.5%) exact matches, in which:
184 unique CDR3
4 unique J



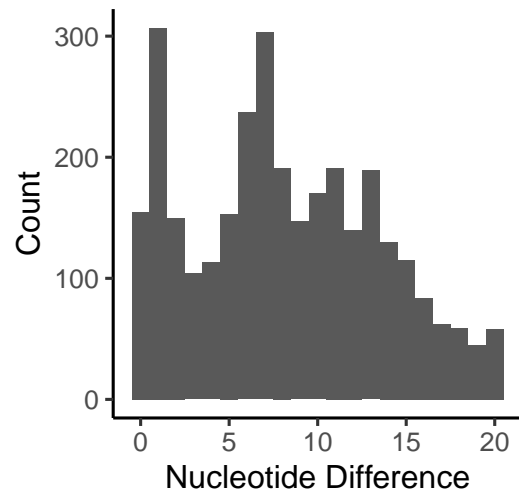
IGHV7S8*01

65 sequences assigned
No exact matches.



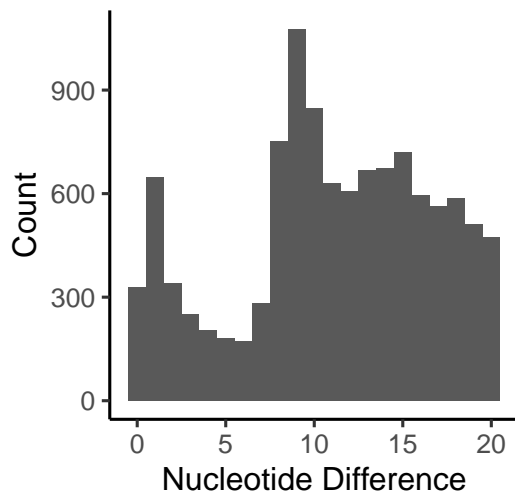
IGHV3-30*02_C141G_C

3470 sequences assigned
155 (4.5%) exact matches, in which:
132 unique CDR3
3 unique J



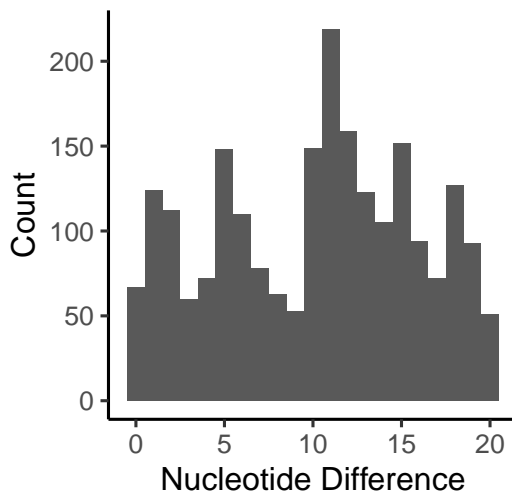
IGHV3S42*01_T19A_G24

15694 sequences assigned
329 (2.1%) exact matches, in which:
284 unique CDR3
4 unique J



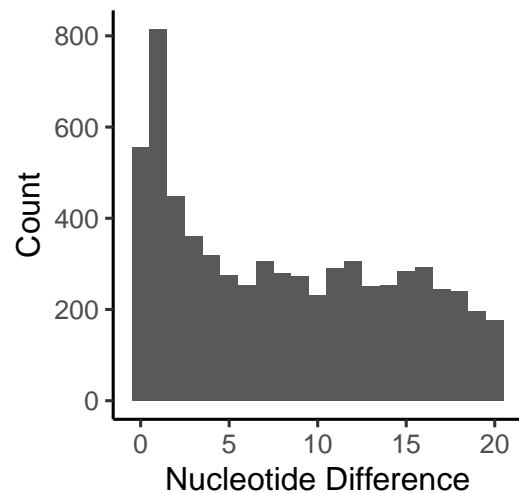
IGHV3-16*01_A275G

3389 sequences assigned
67 (2%) exact matches, in which:
58 unique CDR3
2 unique J



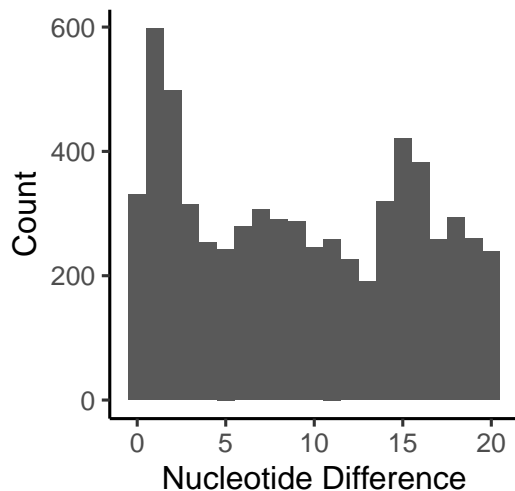
IGHV3-54*02_G170C

7439 sequences assigned
556 (7.5%) exact matches, in which:
495 unique CDR3
4 unique J



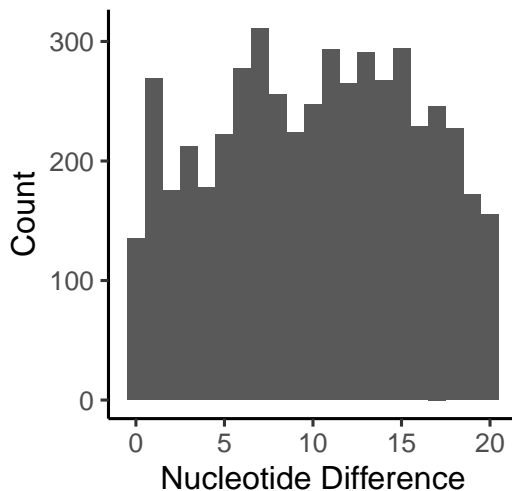
IGHV4S10*01_A48G_T11

9930 sequences assigned
330 (3.3%) exact matches, in which:
316 unique CDR3
4 unique J



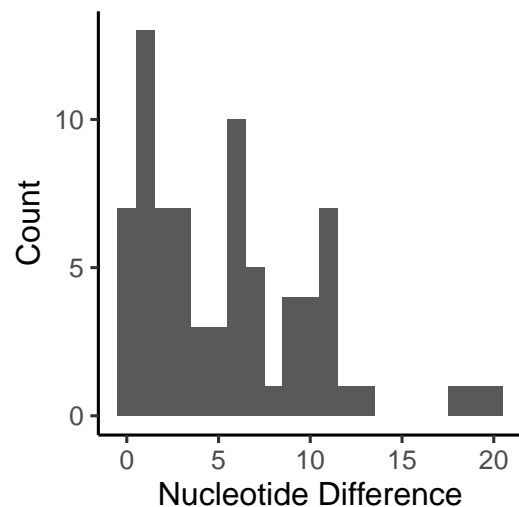
IGHV3-30*01_G48C_G61

5817 sequences assigned
135 (2.3%) exact matches, in which:
119 unique CDR3
2 unique J



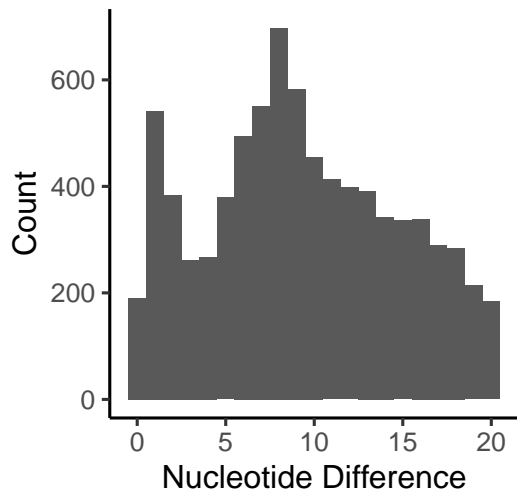
IGHV3-110*01_C10T_G1

1433 sequences assigned
7 (0.5%) exact matches, in which:
7 unique CDR3
2 unique J



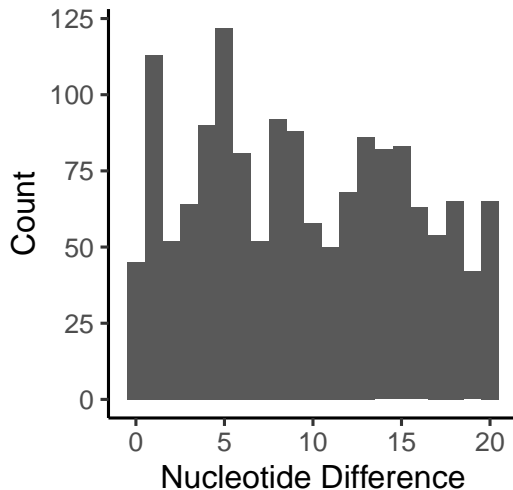
IGHV3-116*02_T109C

9054 sequences assigned
191 (2.1%) exact matches, in which:
166 unique CDR3
4 unique J



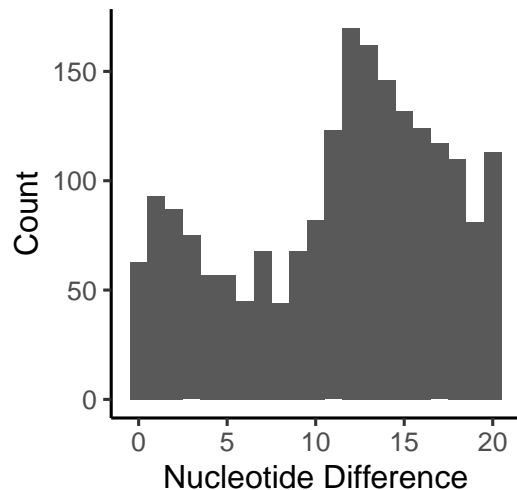
IGHV3-184*01_G106A_T

4389 sequences assigned
45 (1%) exact matches, in which:
37 unique CDR3
3 unique J



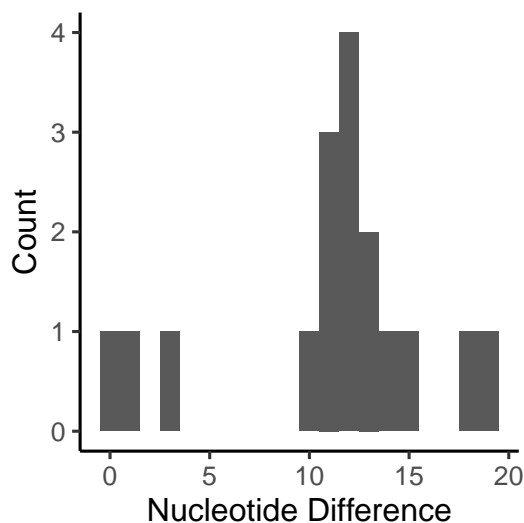
IGHV4-73*01_G147A

3185 sequences assigned
63 (2%) exact matches, in which:
59 unique CDR3
4 unique J



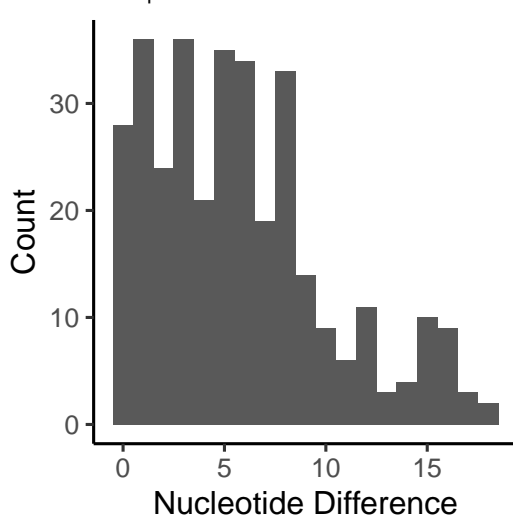
IGHV3-118*01_C34T_G22

17 sequences assigned
1 (5.9%) exact matches, in which:
1 unique CDR3
1 unique J



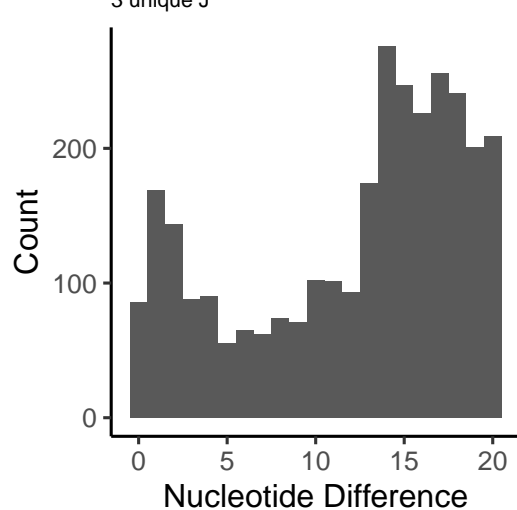
IGHV3-186*02_C62T_C19

350 sequences assigned
28 (8%) exact matches, in which:
26 unique CDR3
2 unique J



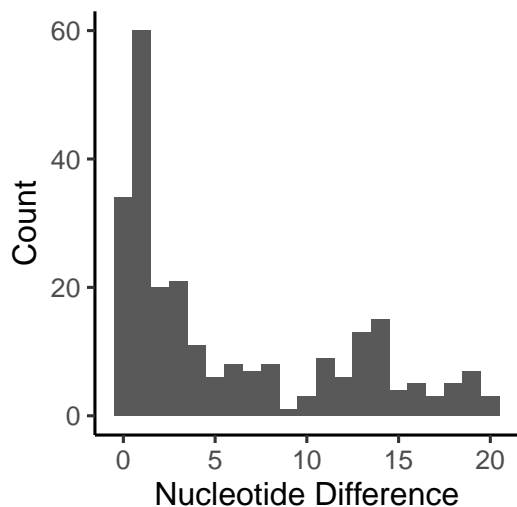
IGHV4-76*01_C34G_G1

5647 sequences assigned
86 (1.5%) exact matches, in which:
81 unique CDR3
3 unique J



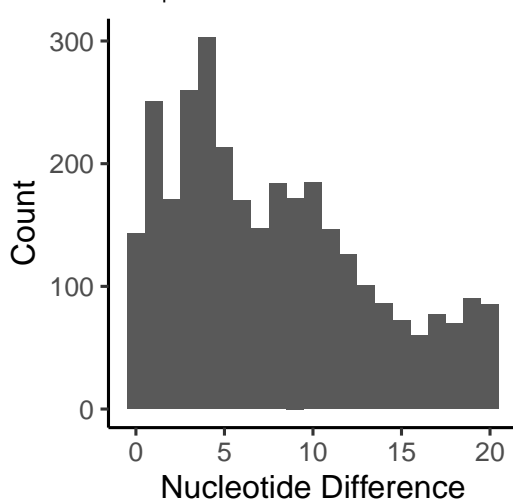
IGHV3-134*01_G32C_T3i

1602 sequences assigned
34 (2.1%) exact matches, in which:
30 unique CDR3
3 unique J



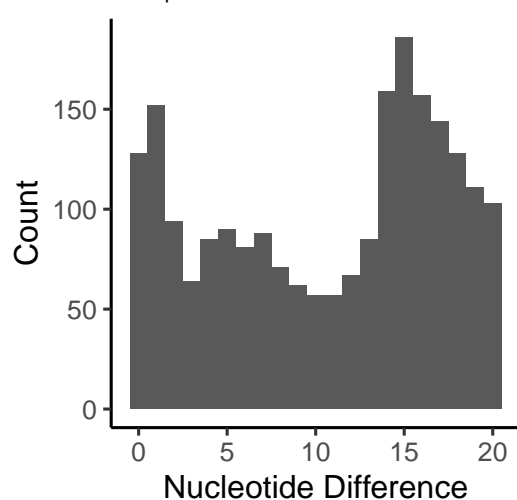
IGHV4-65*01_A88G_T18

4061 sequences assigned
143 (3.5%) exact matches, in which:
141 unique CDR3
4 unique J



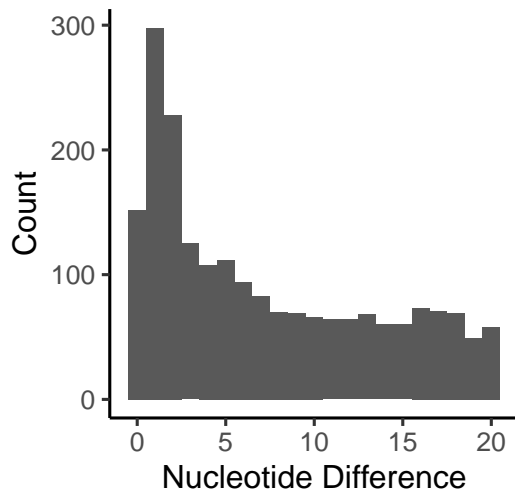
IGHV4-80*01_C83G_A88

3455 sequences assigned
128 (3.7%) exact matches, in which:
120 unique CDR3
4 unique J



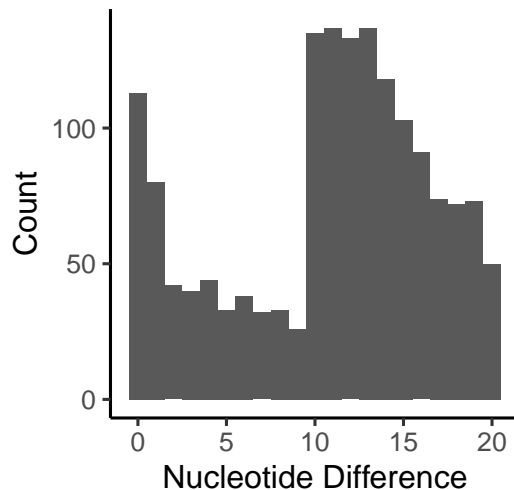
IGHV4-80*01_G70A_C90

2602 sequences assigned
152 (5.8%) exact matches, in which:
137 unique CDR3
4 unique J



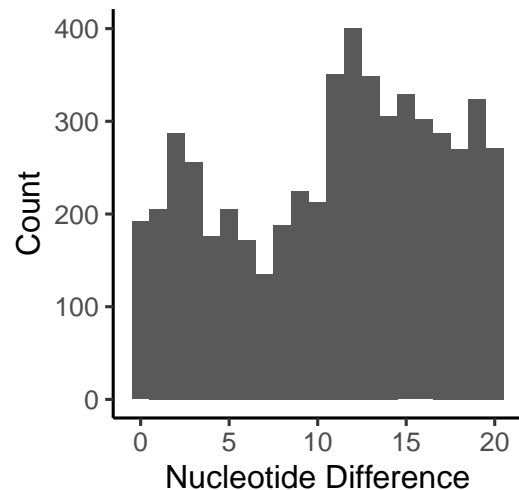
IGHV4-165*01_G4C_C87

2195 sequences assigned
113 (5.1%) exact matches, in which:
112 unique CDR3
4 unique J



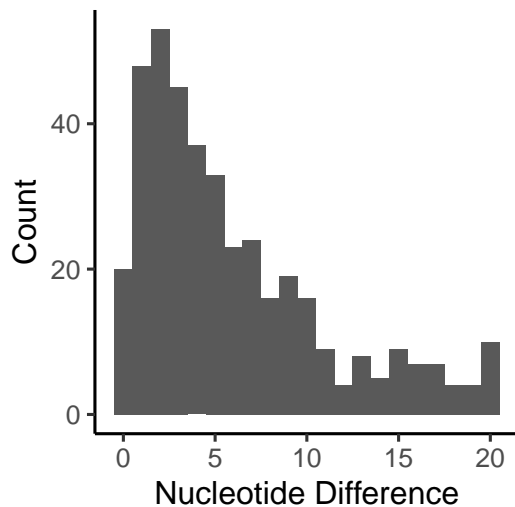
IGHV4-173*01_C4G_G60

8238 sequences assigned
192 (2.3%) exact matches, in which:
182 unique CDR3
4 unique J



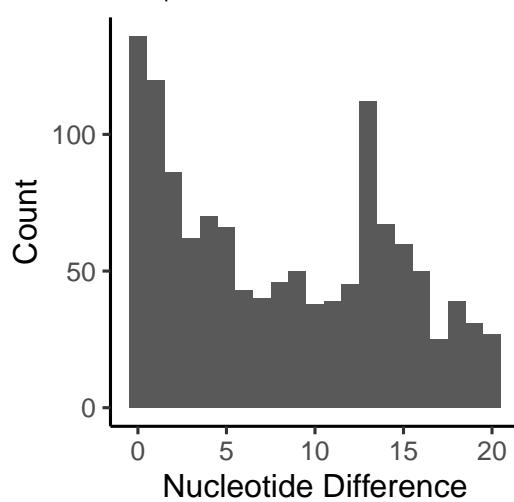
IGHV4-81*01_C4G_G70A

590 sequences assigned
20 (3.4%) exact matches, in which:
19 unique CDR3
4 unique J



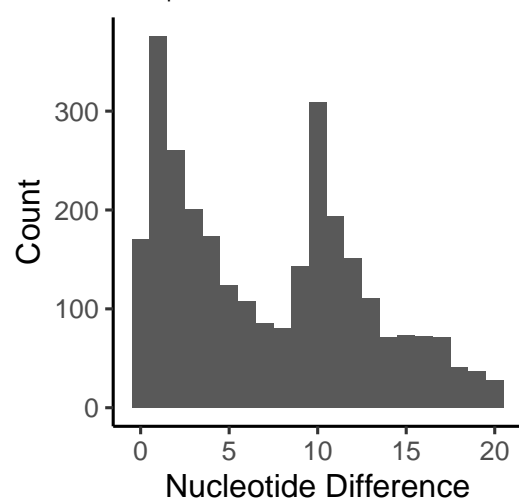
IGHV4-165*01_G4C_C87

1490 sequences assigned
136 (9.1%) exact matches, in which:
128 unique CDR3
4 unique J



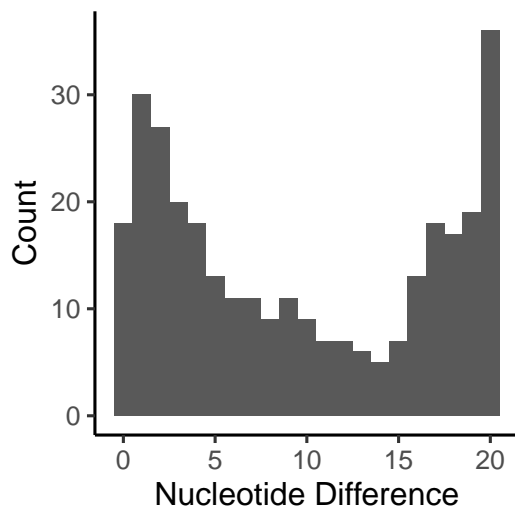
IGHV5-20*02_A141G_A20

2989 sequences assigned
170 (5.7%) exact matches, in which:
150 unique CDR3
4 unique J



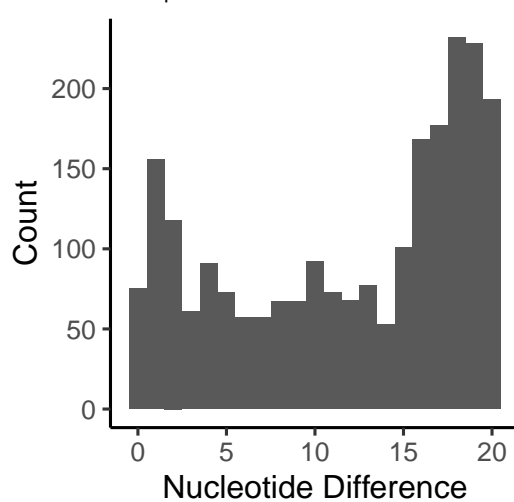
IGHV4-93*01_C297G

3387 sequences assigned
18 (0.5%) exact matches, in which:
18 unique CDR3
3 unique J



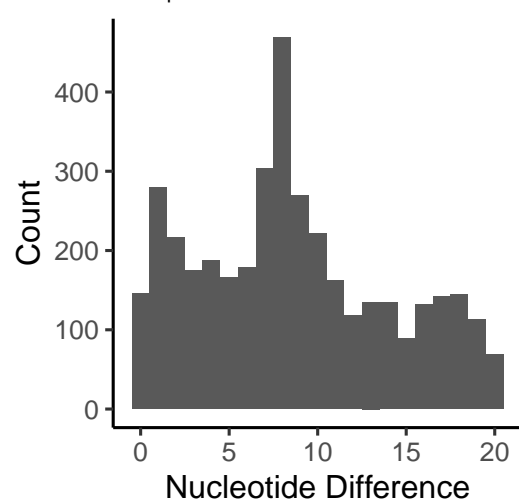
IGHV4-165*01_G4C_C87

3846 sequences assigned
75 (2%) exact matches, in which:
72 unique CDR3
4 unique J



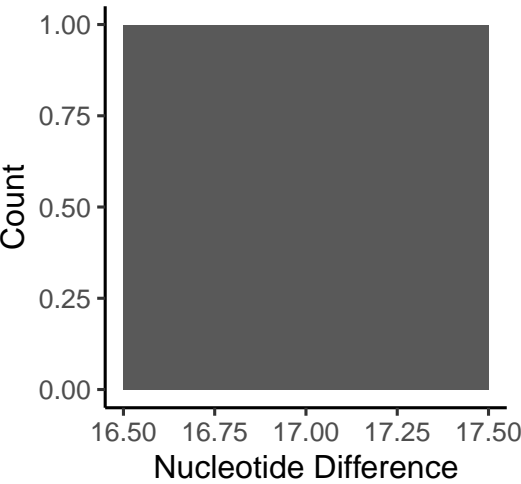
IGHV5-43*01_A106G_G

4373 sequences assigned
146 (3.3%) exact matches, in which:
117 unique CDR3
4 unique J

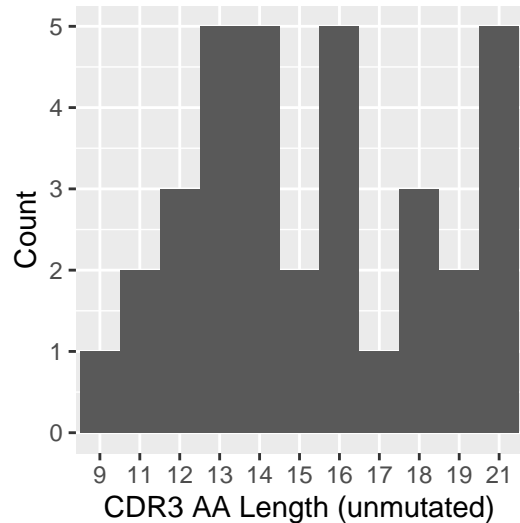


IGHV7-94*01

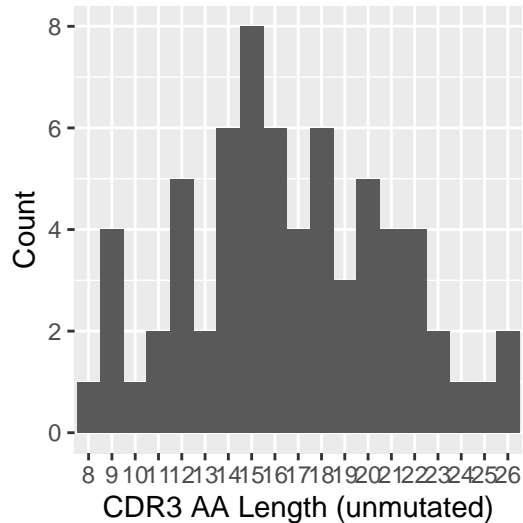
11 sequences assigned
No exact matches.



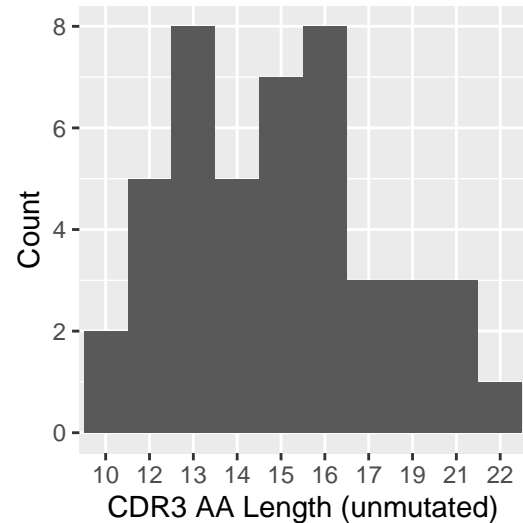
IGHV3-134*01_G32C_T38C_



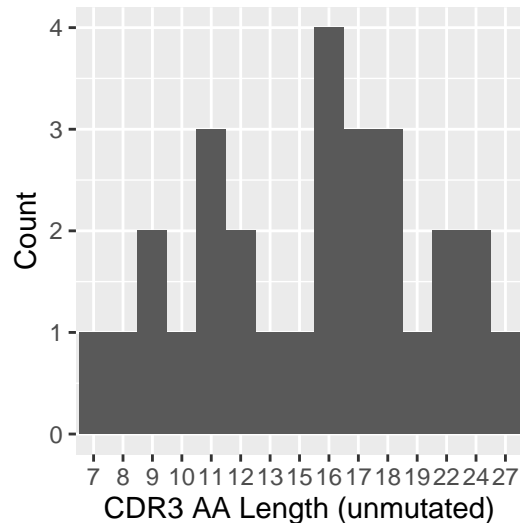
IGHV3-16*01_A275G



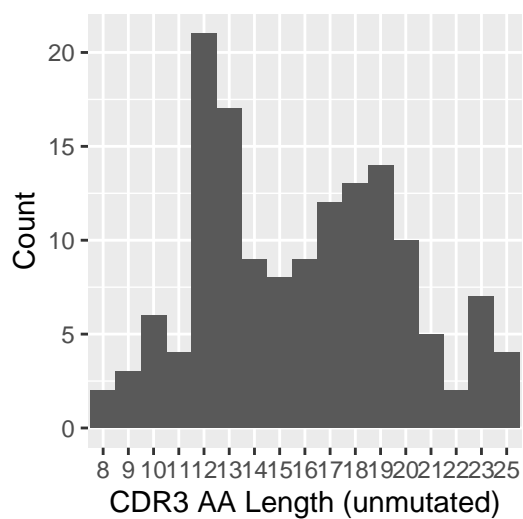
IGHV3-184*01_G106A_T109



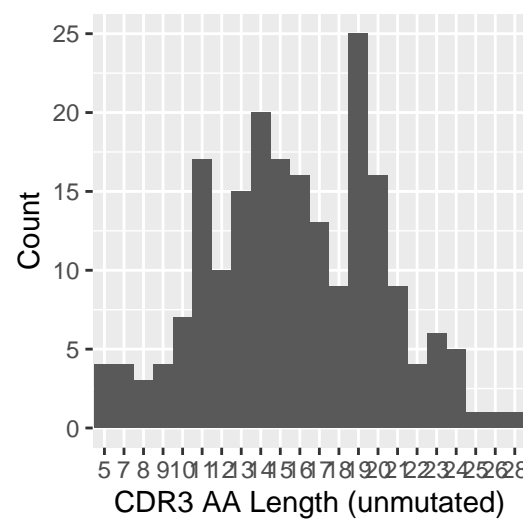
IGHV3-186*02_C62T_C191A



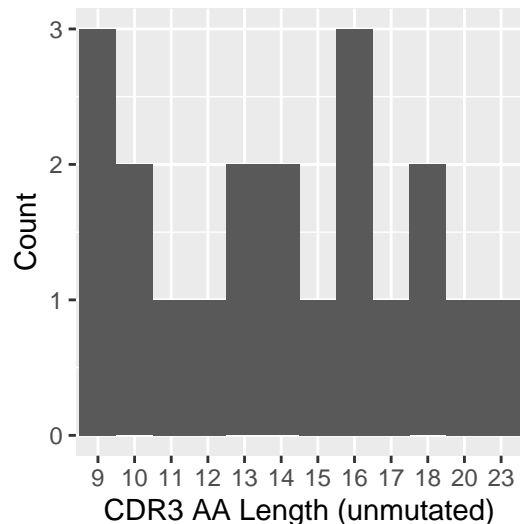
IGHV5-43*01_A106G_G164



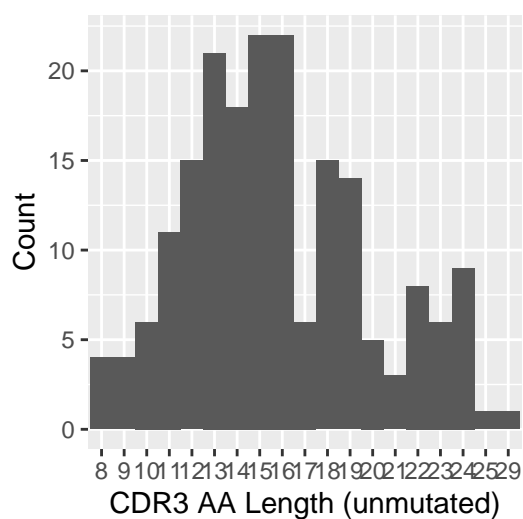
IGHV3S42*01_T120C_A133



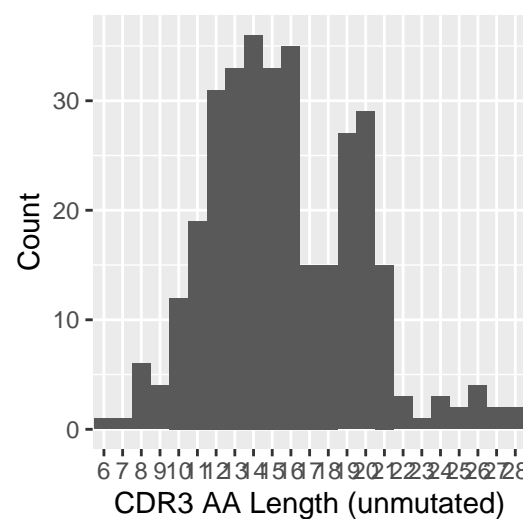
IGHV4-81*01_C4G_G70A_A:



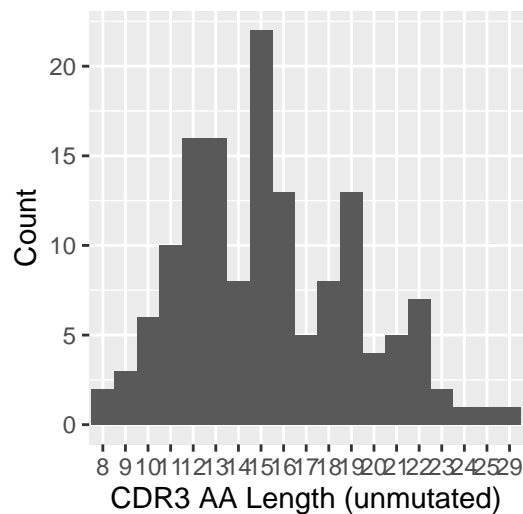
IGHV3-116*02_T109C



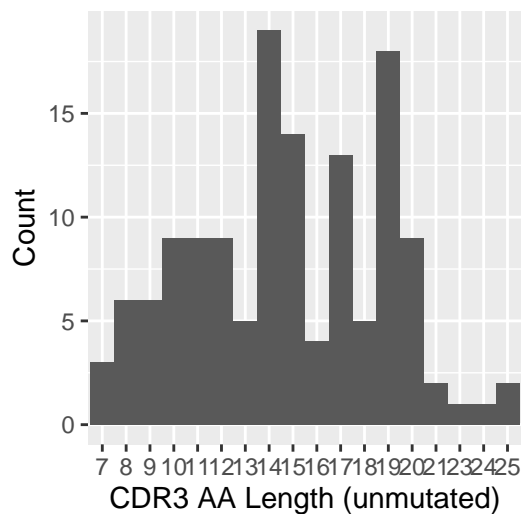
IGHV3S42*01_T19A_G24A_



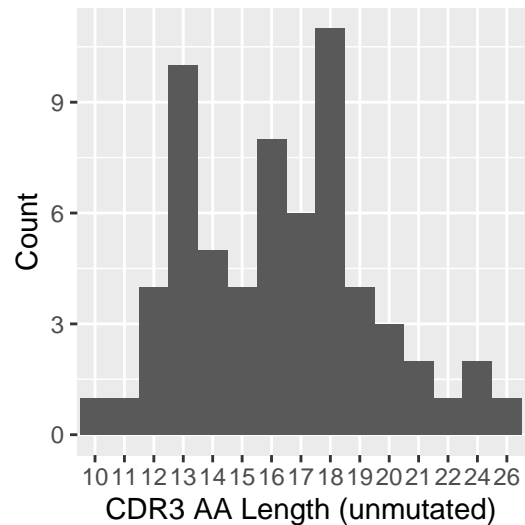
IGHV4-65*01_A88G_T189G



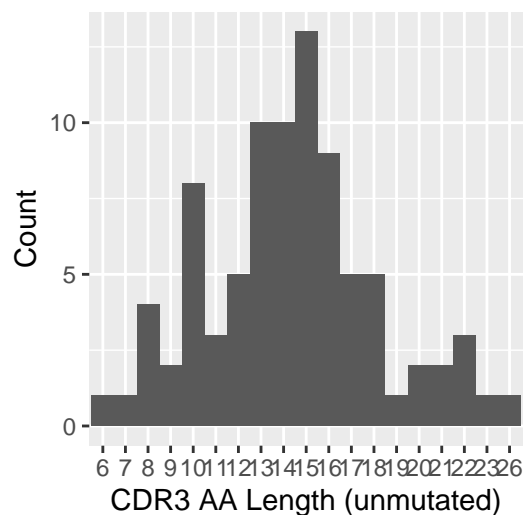
IGHV3-30*01_G48C_G60A_



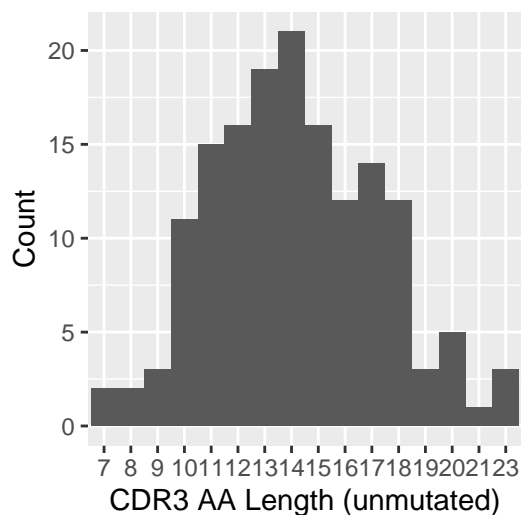
IGHV4-73*01_G147A



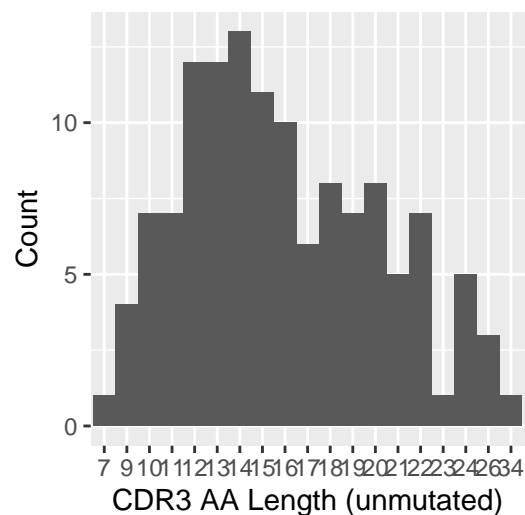
IGHV4-76*01_C34G_G103A



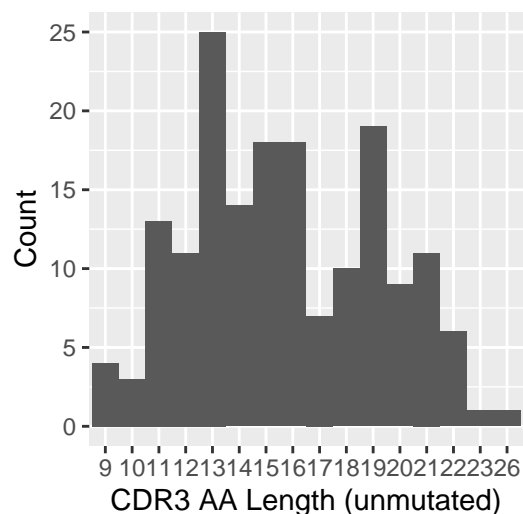
IGHV3-30*02_C141G_C183



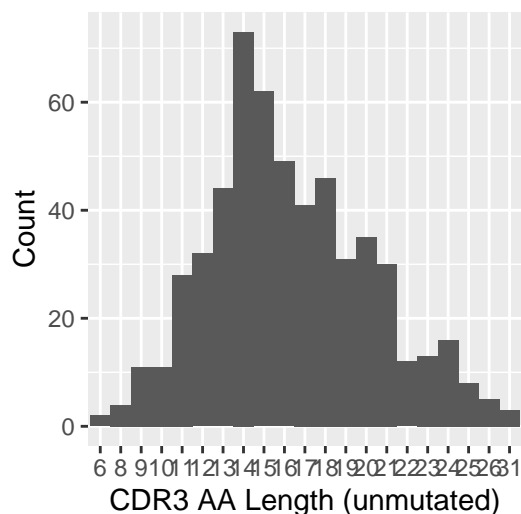
IGHV4-80*01_C83G_A88T_



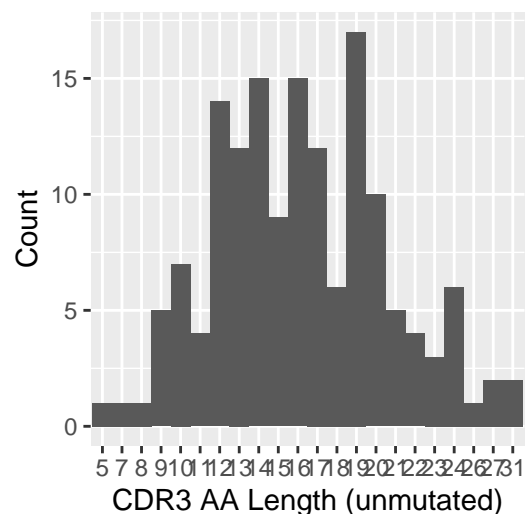
IGHV5-20*02_A141G_A295



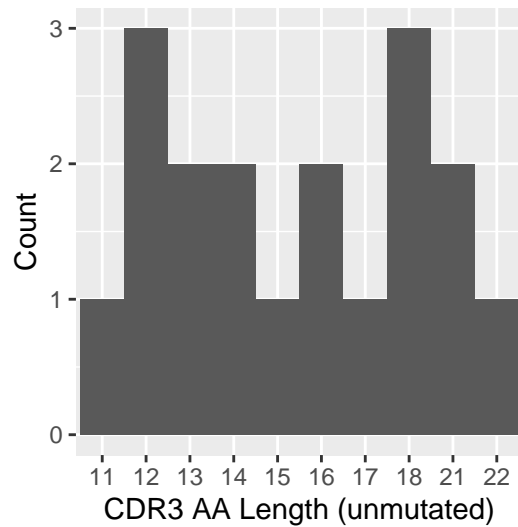
IGHV3-54*02_G170C



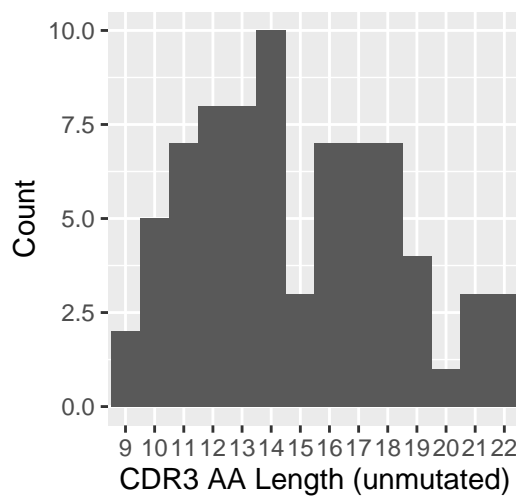
IGHV4-80*01_G70A_C90T_



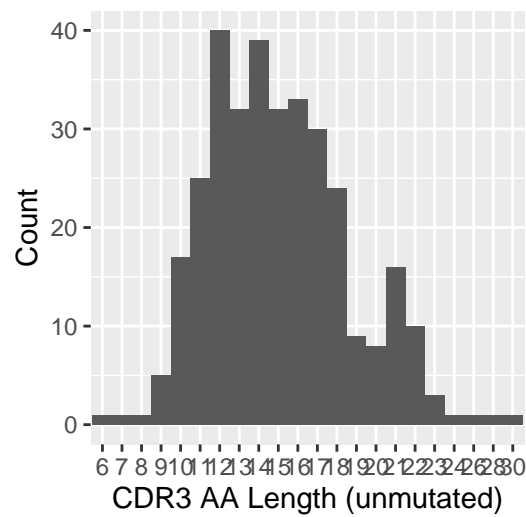
IGHV4-93*01_C297G



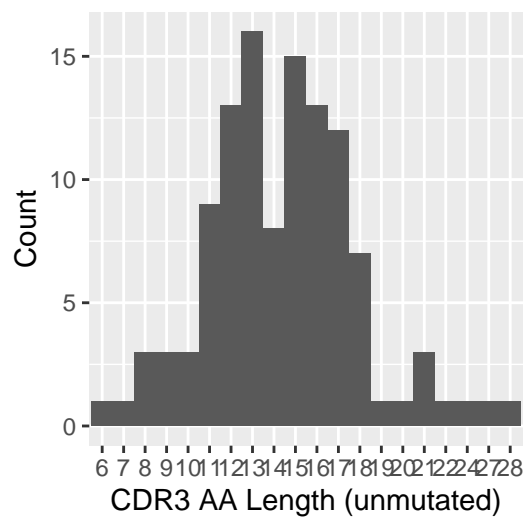
IGHV4-165*01_G4C_C87T



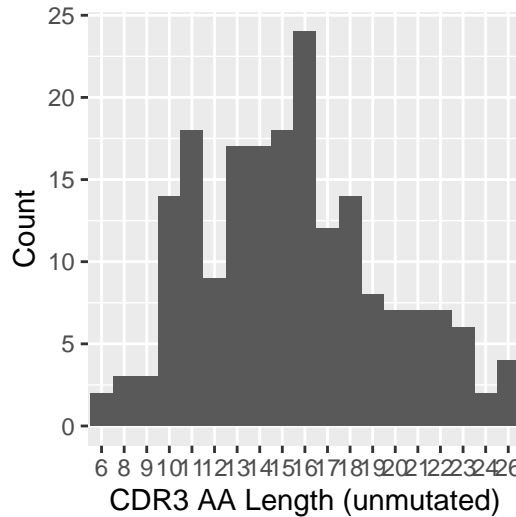
IGHV4S10*01_A48G_T112C



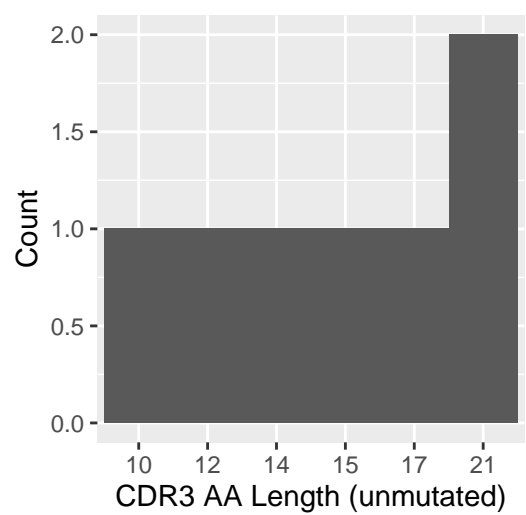
IGHV4-165*01_G4C_C87T_



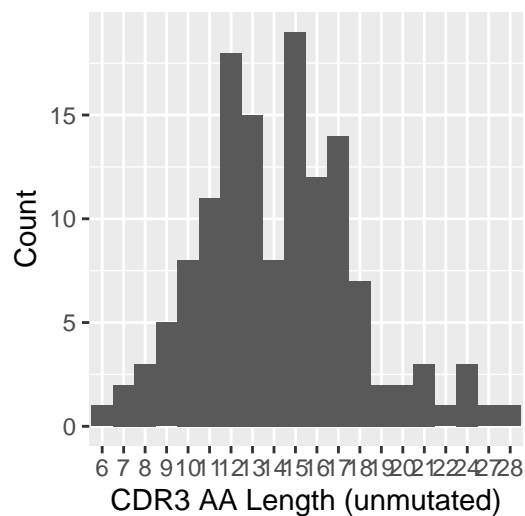
IGHV4-173*01_C4G_G6A



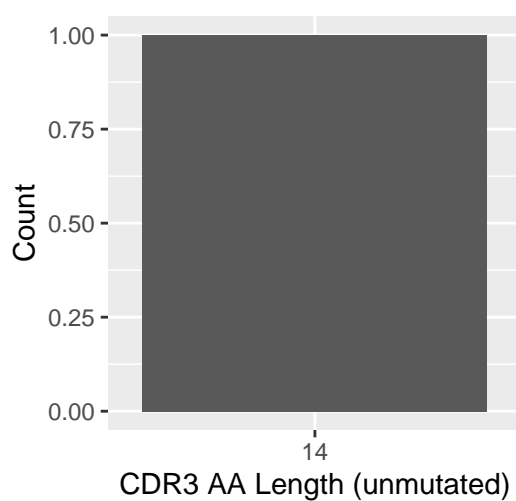
IGHV3-110*01_C10T_G13C

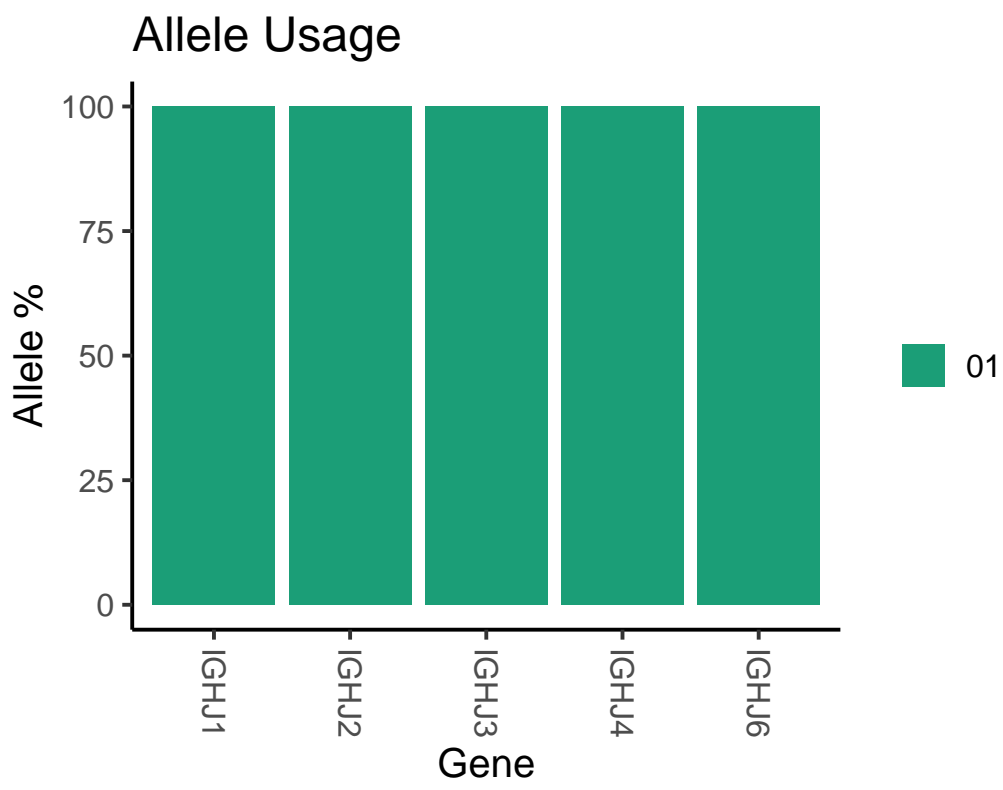


IGHV4-165*01_G4C_C87T_



IGHV3-118*01_C34T_G225A_A249C_C276T_A313G_C315P





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.