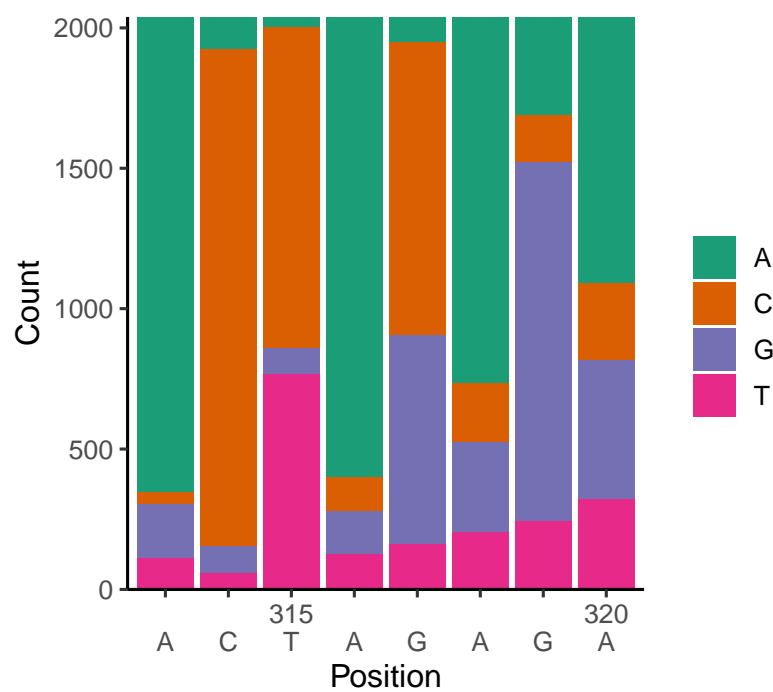
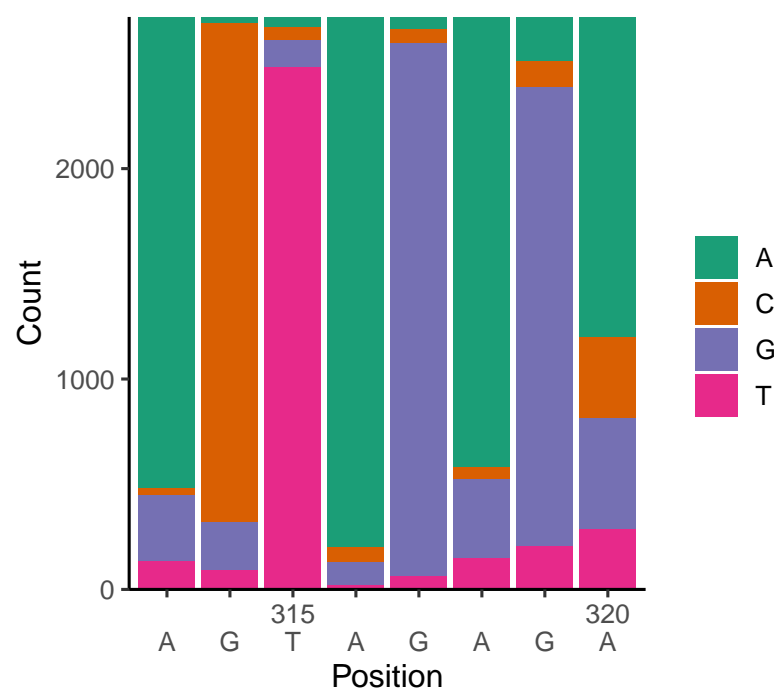


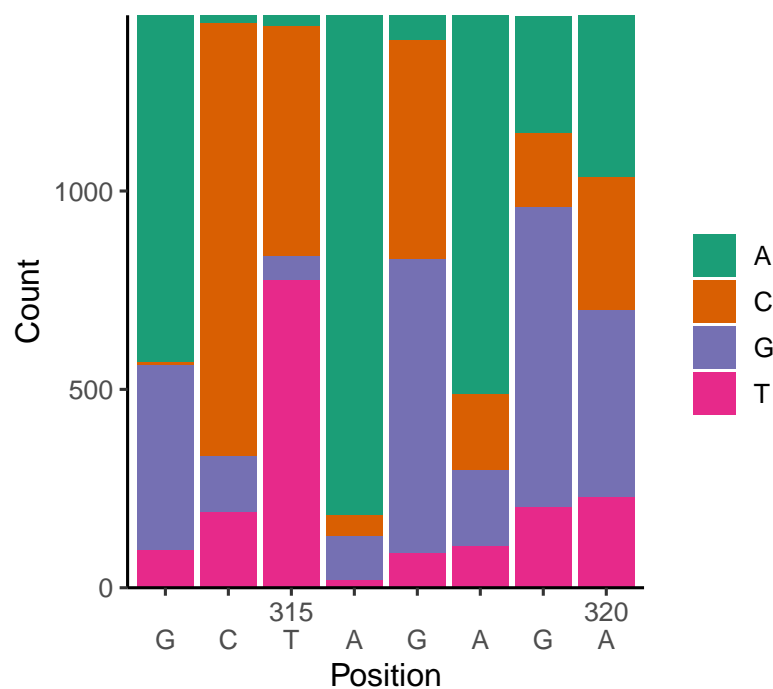
Gene IGHV3-16\*01\_A275G



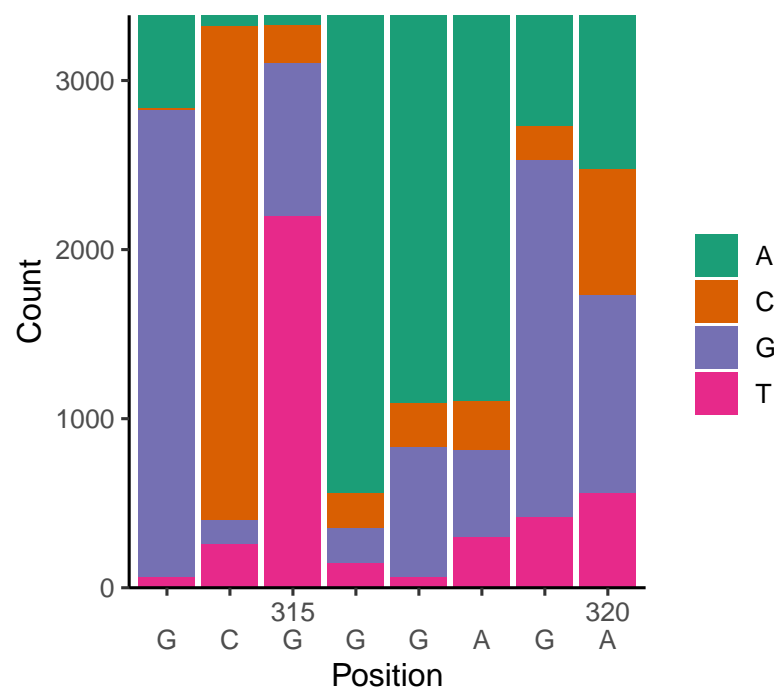
Gene IGHV3-134\*01\_G132A\_C163A\_G



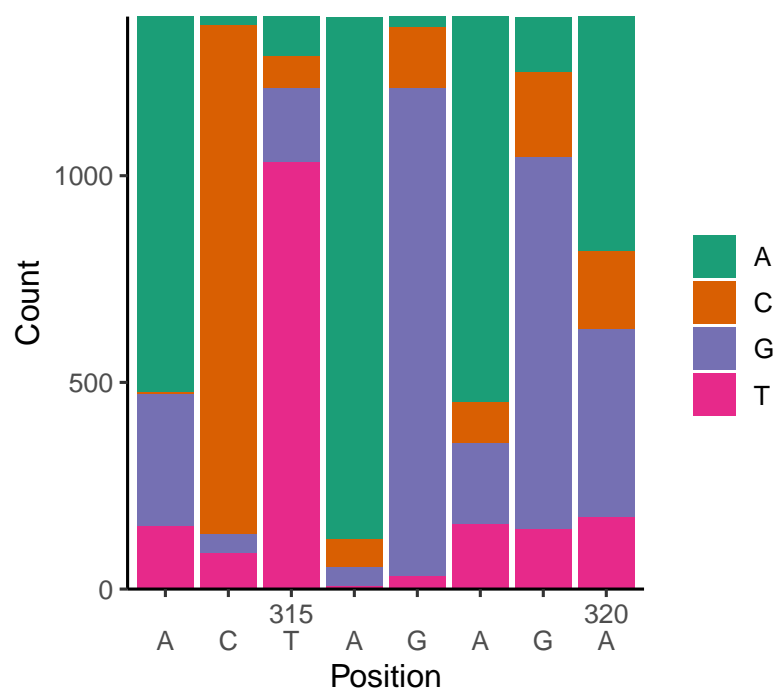
Gene IGHV3-38\*01\_C27A\_C38T\_A39C



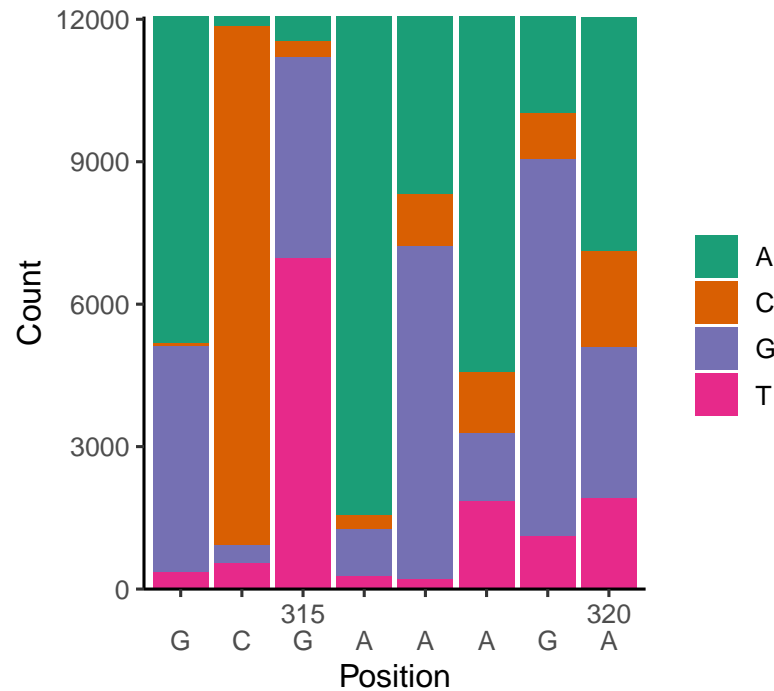
Gene IGHV3-28\*02\_C118T\_C176G\_A18



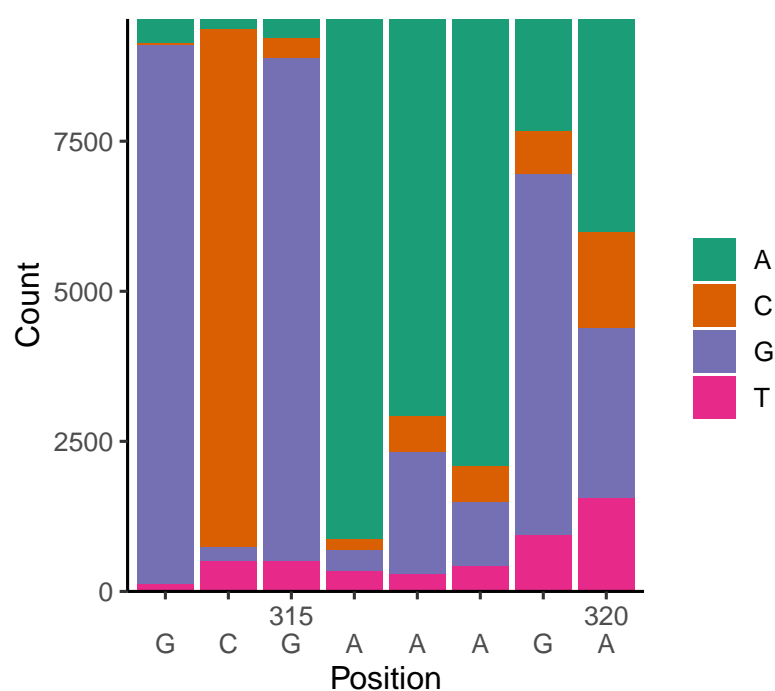
Gene IGHV3-100\*02\_C210T



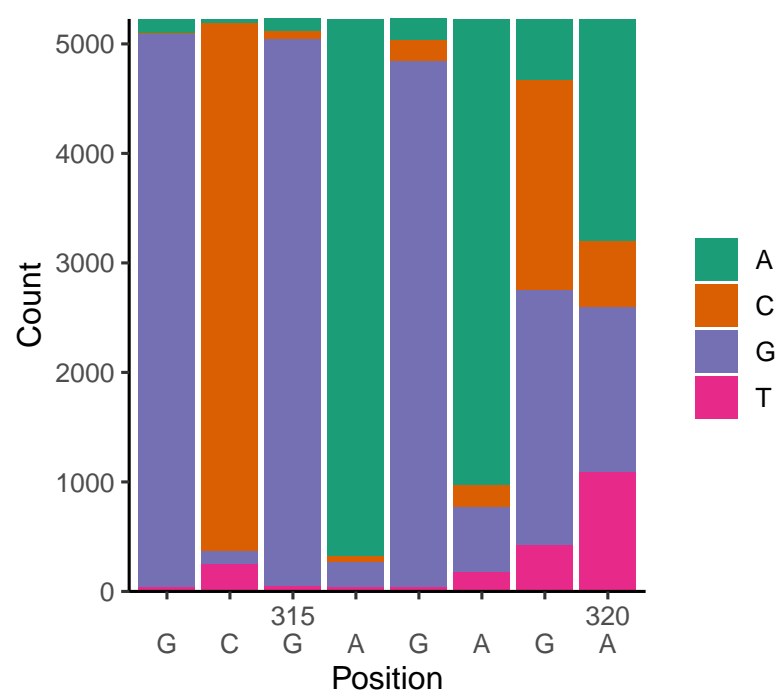
Gene IGHV3-103\*01\_G24A\_C27A\_C38



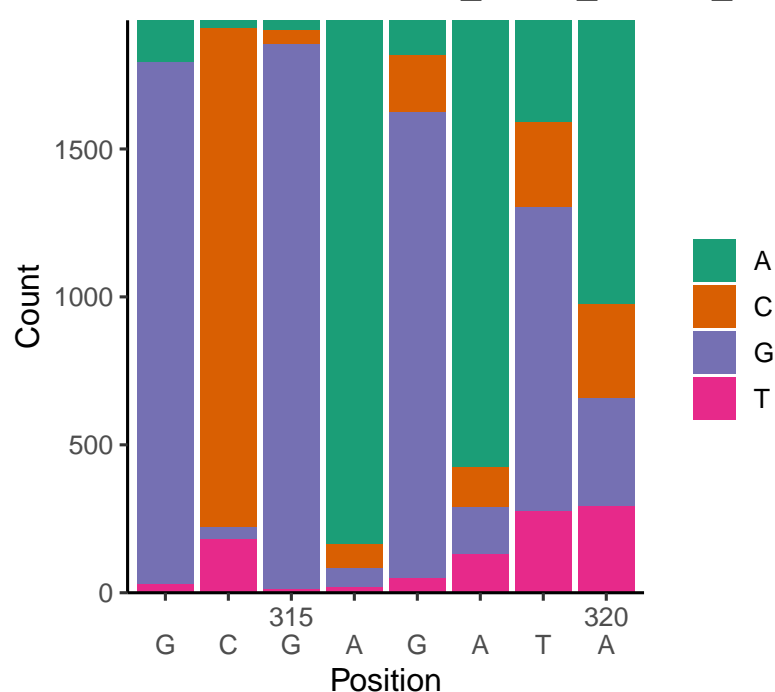
Gene IGHV3-103\*01\_G24A\_C27A\_C38



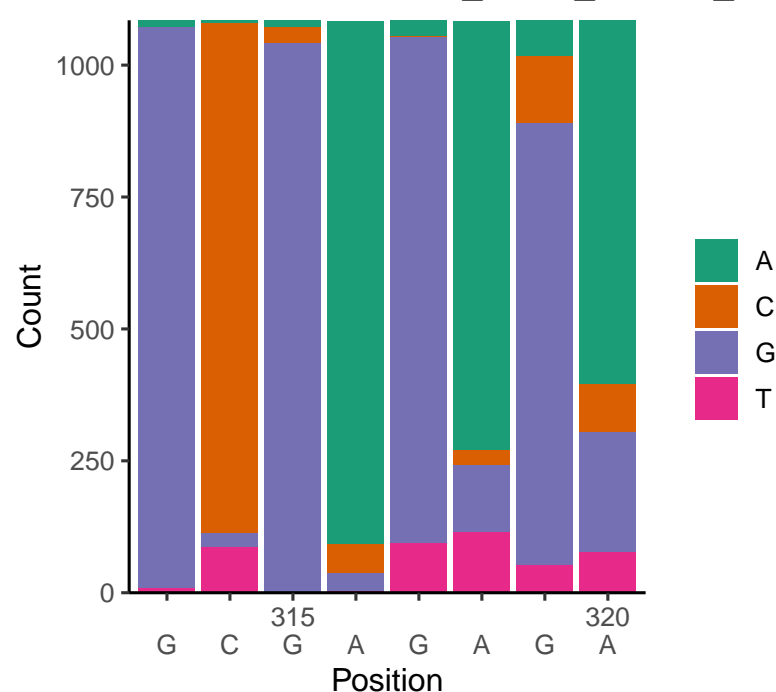
Gene IGHV4-160\*01\_A162G\_C163T\_G



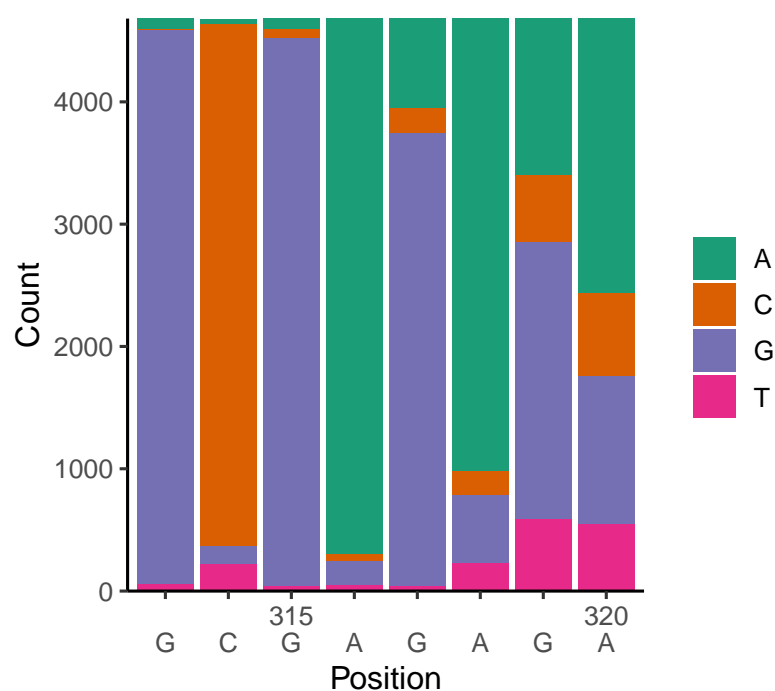
Gene IGHV4-80\*01\_G70A\_T189G\_T190



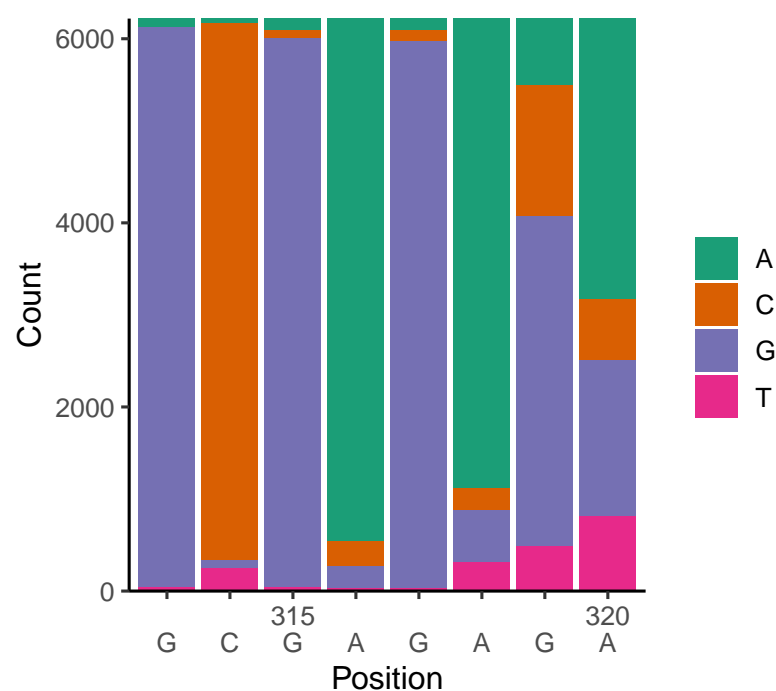
Gene IGHV4-73\*01\_C24T\_C133G\_G14



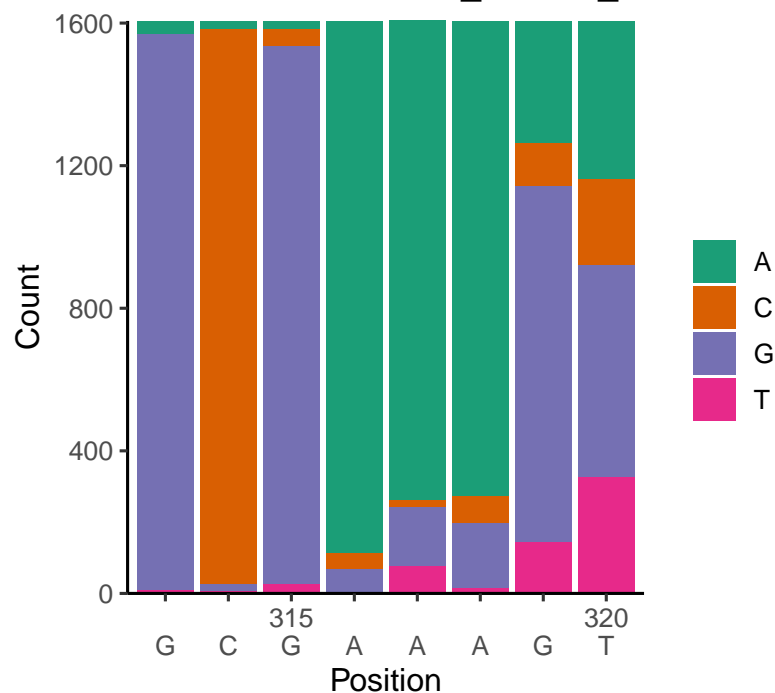
Gene IGHV4-160\*01\_A106G\_A109T\_G



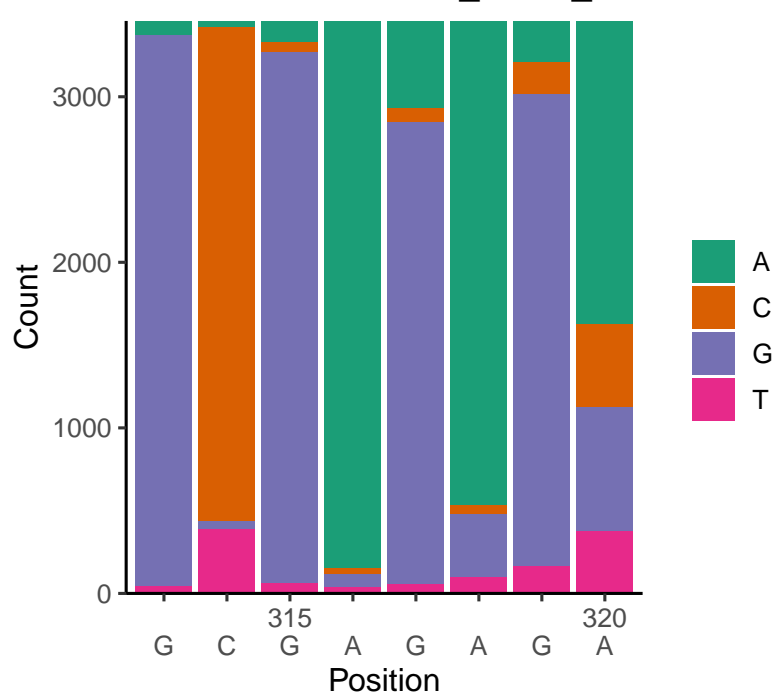
Gene IGHV4-127\*01\_C34G\_T82G\_A83



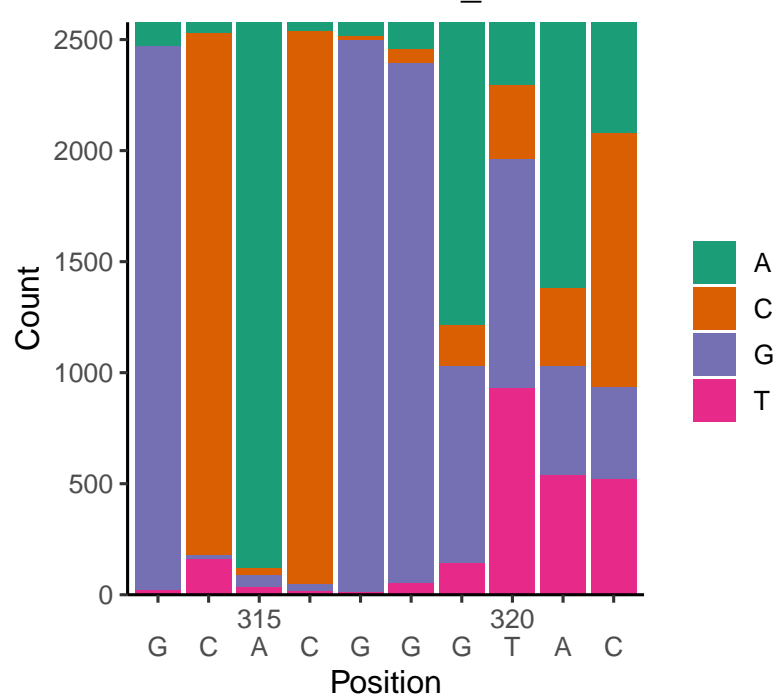
Gene IGHV5-43\*01\_A106G\_C297T



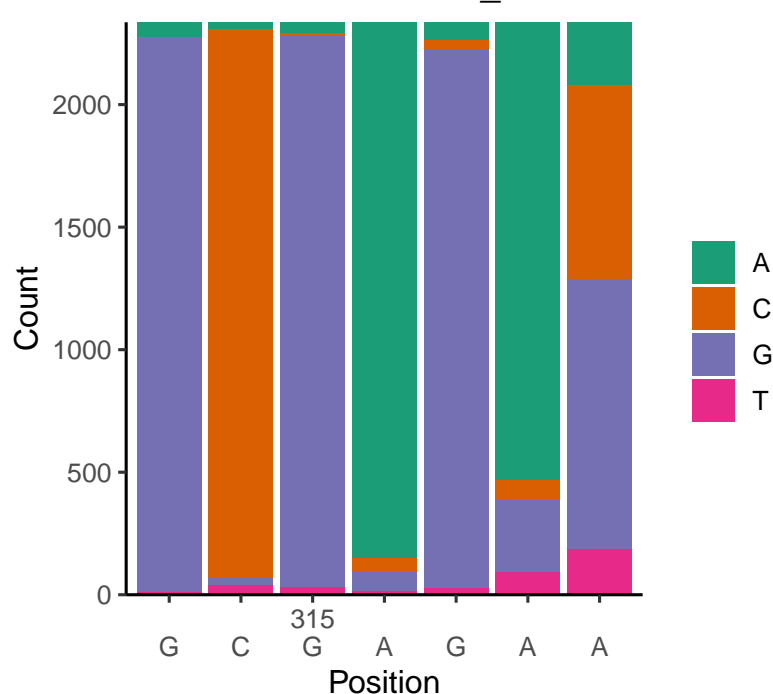
Gene IGHV3-59\*01\_T78C\_G274A



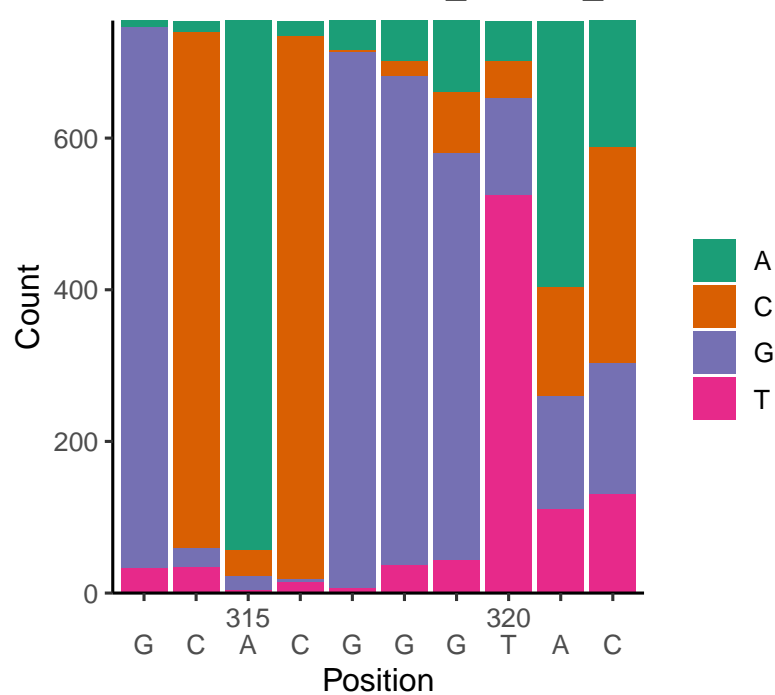
Gene IGHV2-95\*01\_G289T



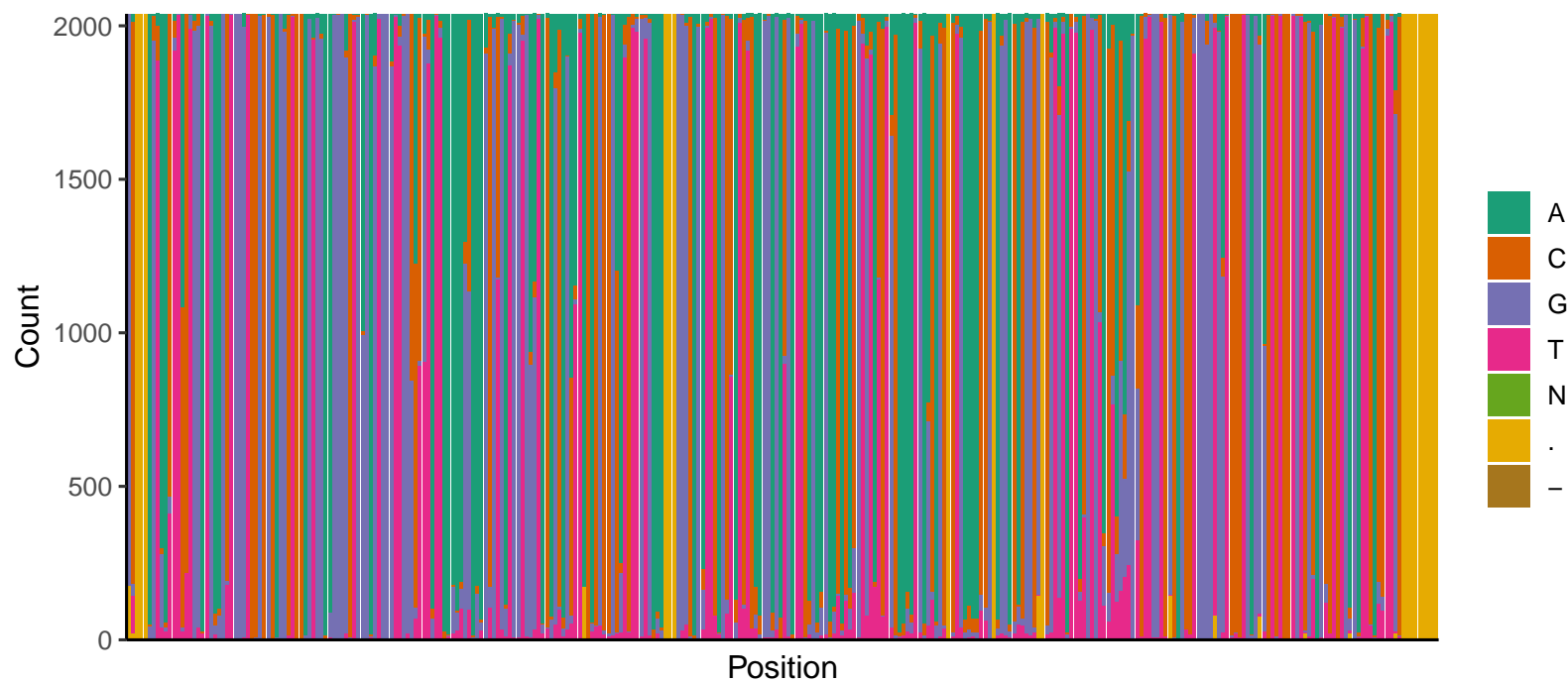
Gene IGHV4-169\*01\_C259T



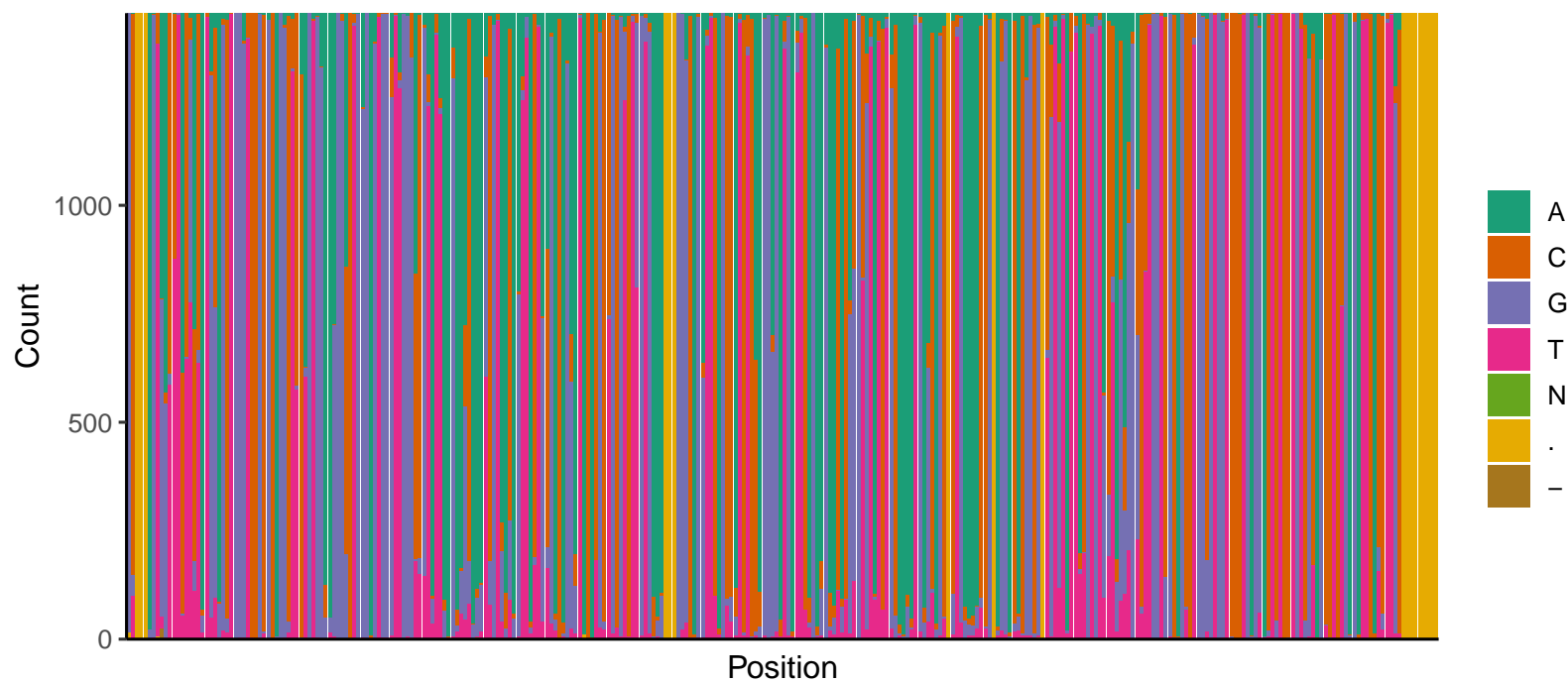
Gene IGHV2-95\*01\_A252G\_A267G



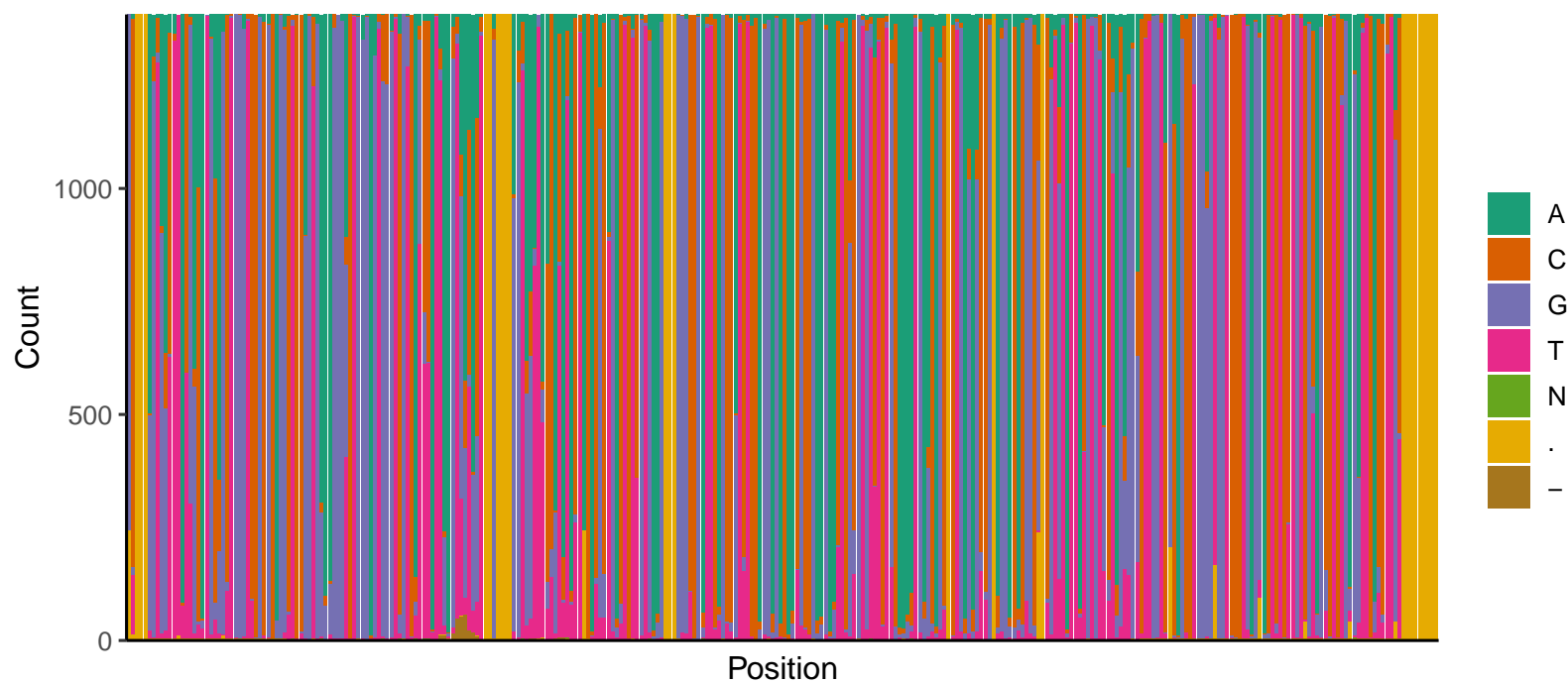
Gene IGHV3-16\*01\_A275G



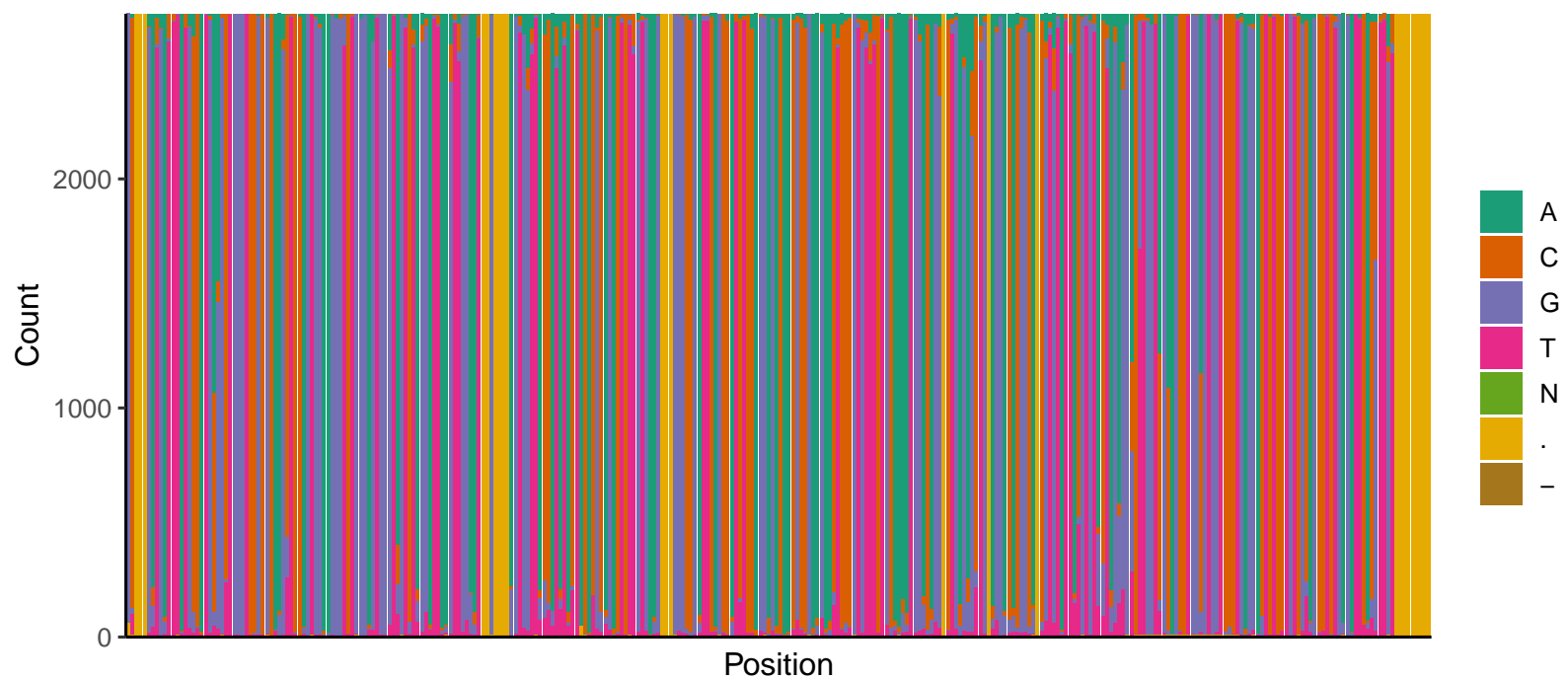
Gene IGHV3-38\*01\_C27A\_C38T\_A39C\_G48C\_T78C\_A192G



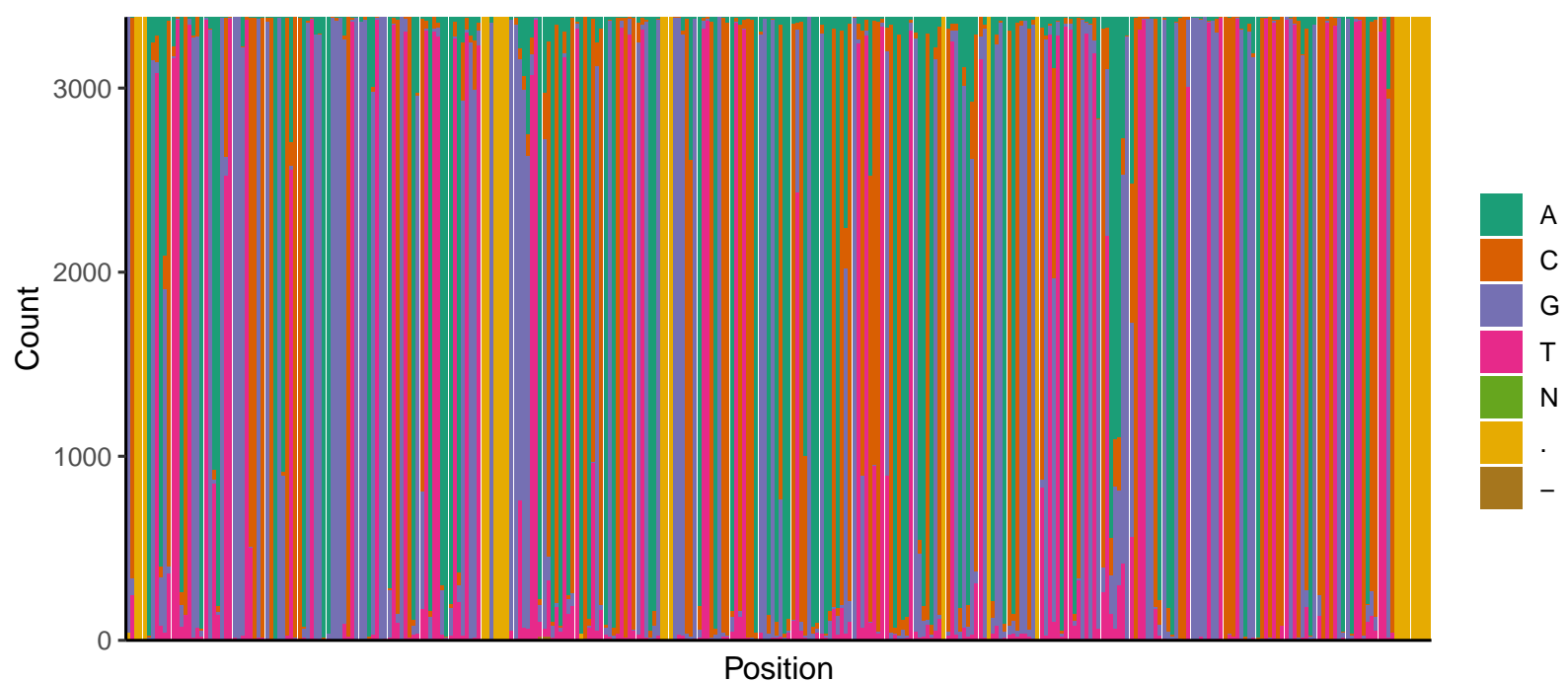
Gene IGHV3-100\*02\_C210T



Gene IGHV3-134\*01\_G132A\_C163A\_G175A\_G184A\_G191C\_C194T\_T198C\_C210T\_A



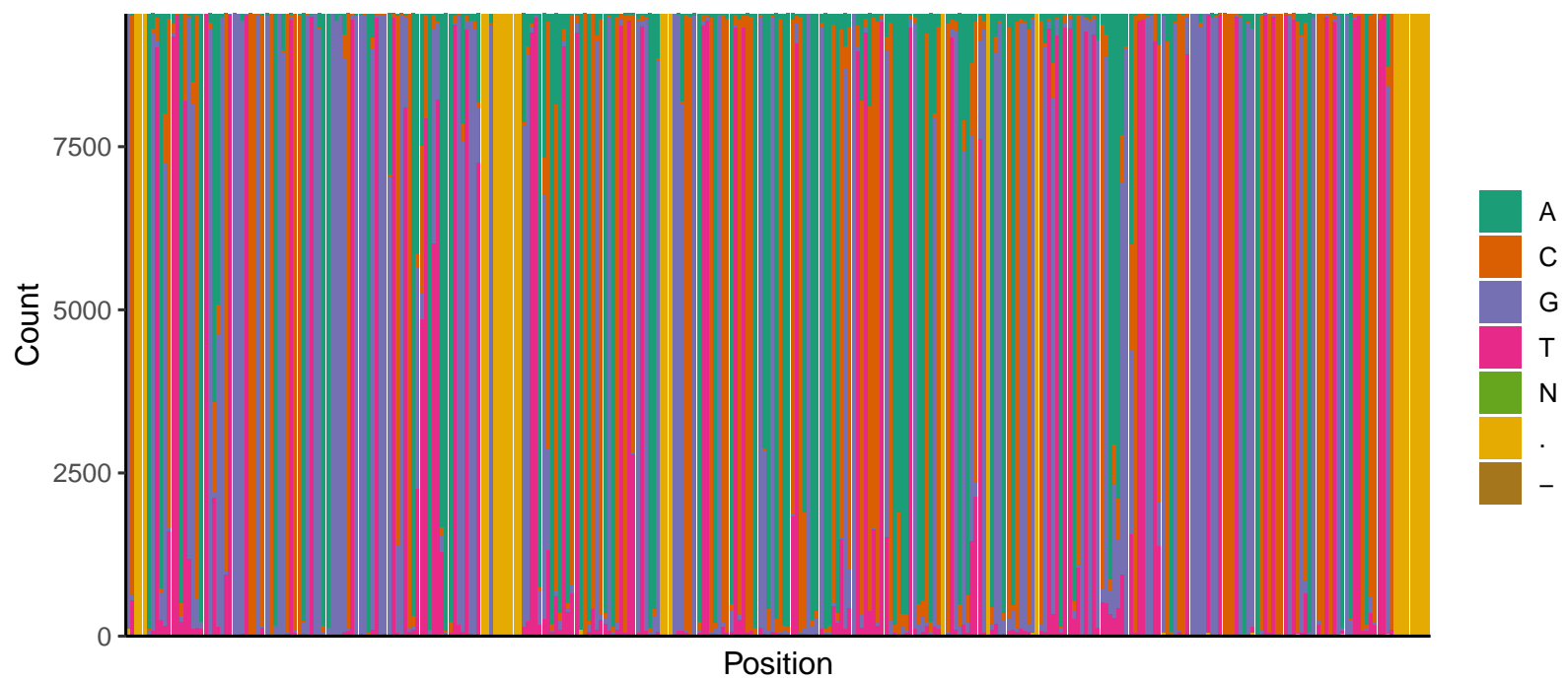
Gene IGHV3-28\*02\_C118T\_C176G\_A187G\_G274A\_G277A



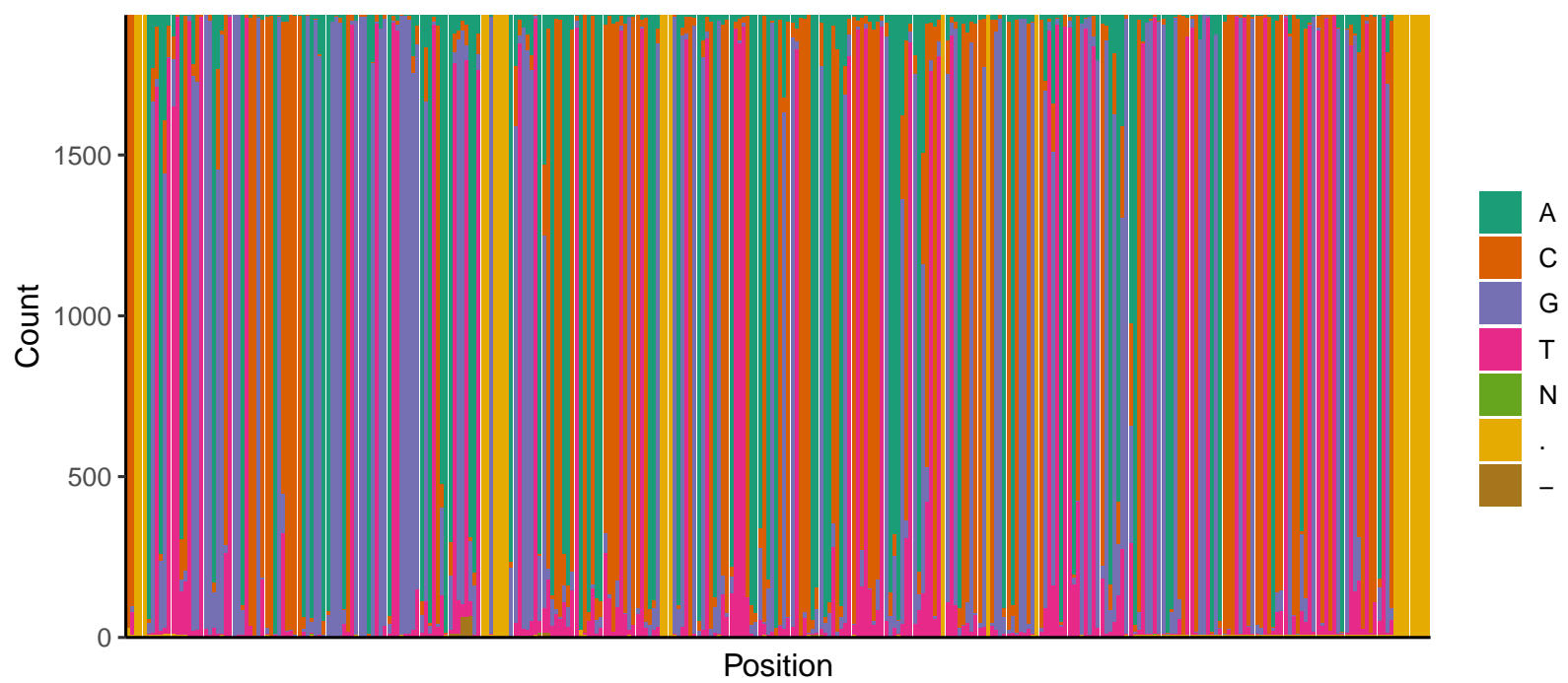
Gene IGHV3-103\*01\_G24A\_C27A\_C38T\_A39C\_A40C\_C113G\_T114C\_C118A\_A119G



Gene IGHV3-103\*01\_G24A\_C27A\_C38T\_A39C\_A40C\_C113G\_T114C\_C118A\_A119G\_



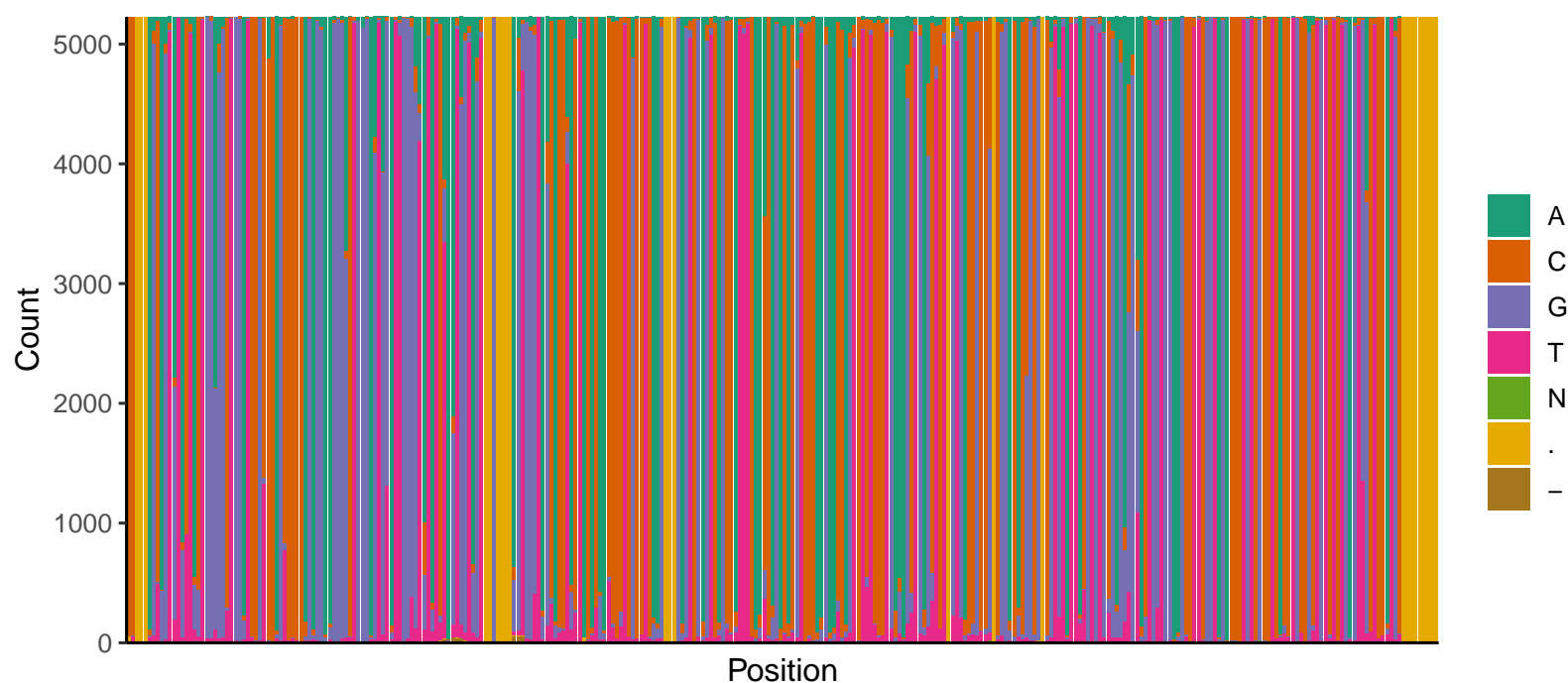
Gene IGHV4-80\*01\_G70A\_T189G\_T196A



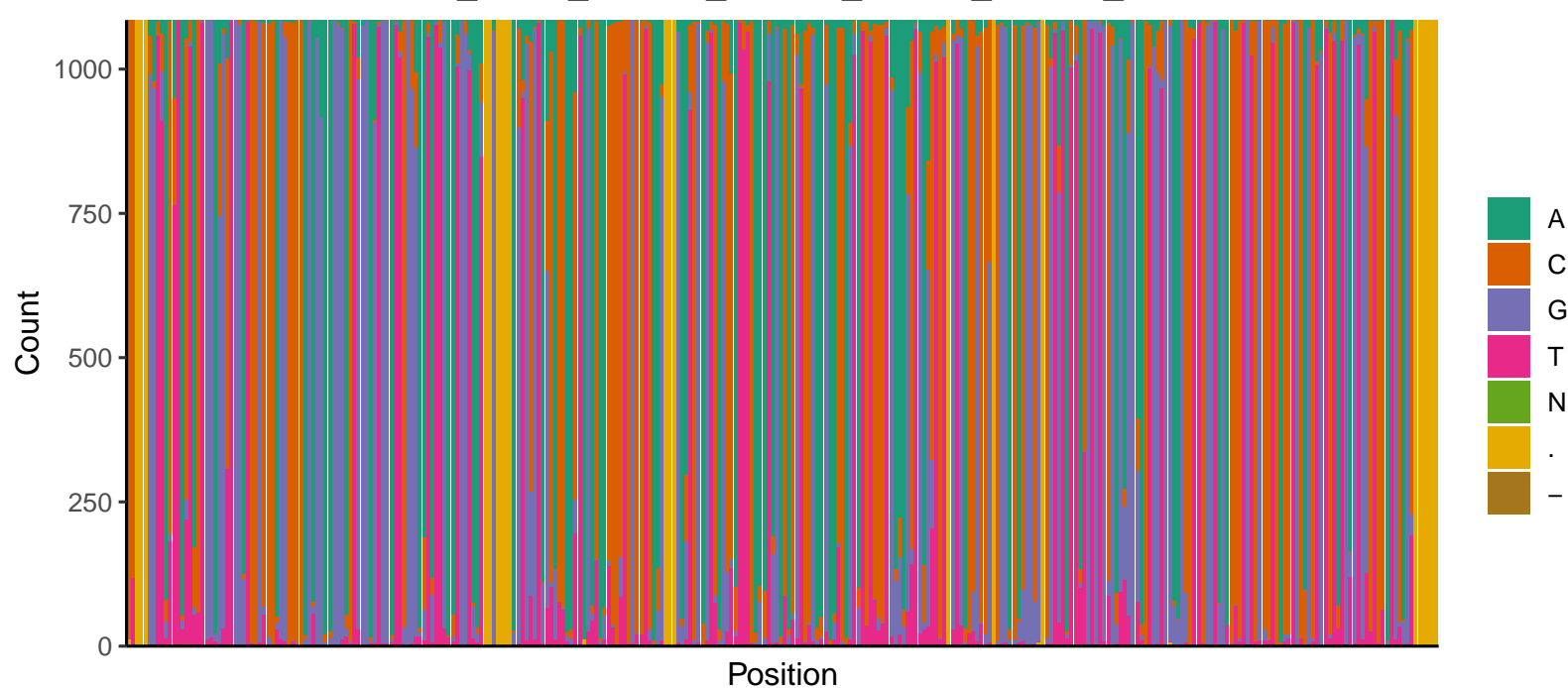
Gene IGHV4-160\*01\_A106G\_A109T\_G147A\_C290A



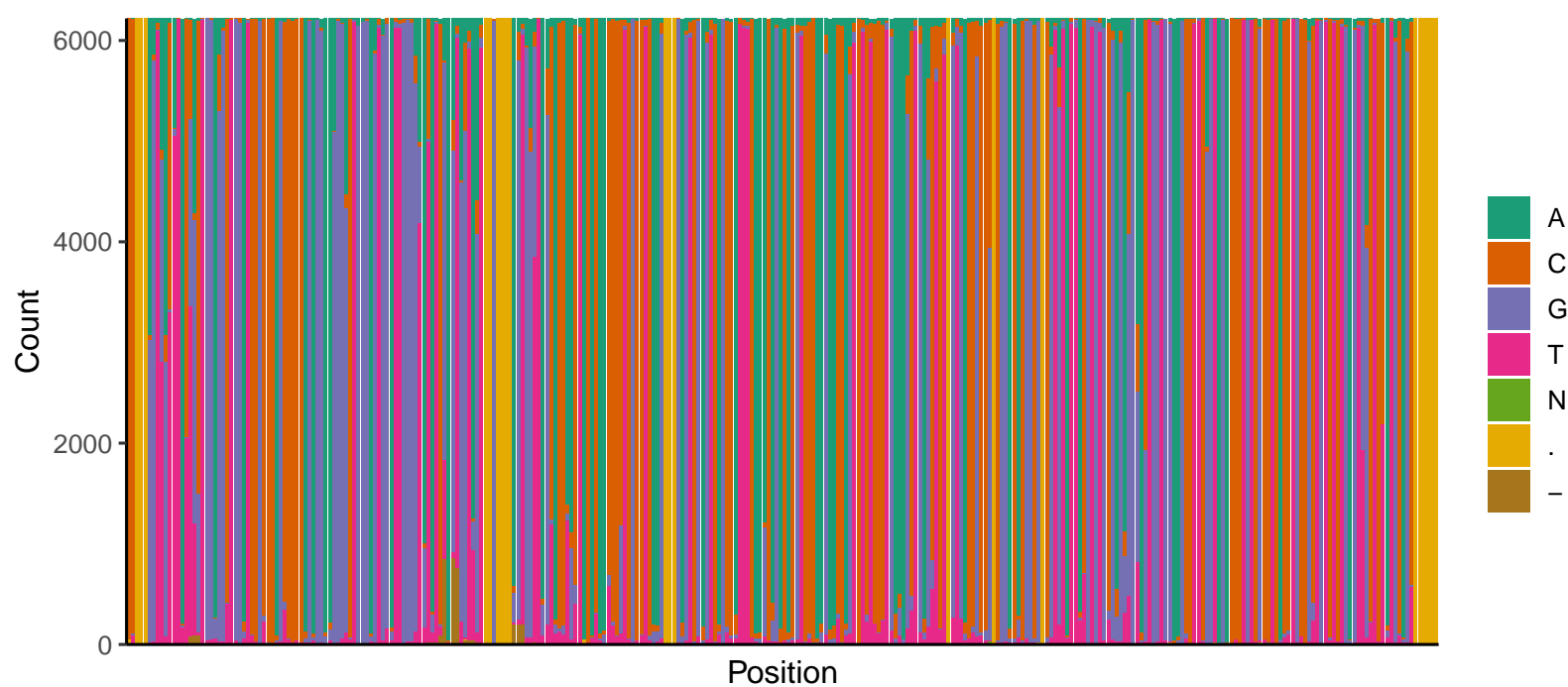
Gene IGHV4-160\*01\_A162G\_C163T\_G164A\_G184A\_G196T\_G297C



Gene IGHV4-73\*01\_C24T\_C133G\_G147A\_T163A\_C168T\_T169G



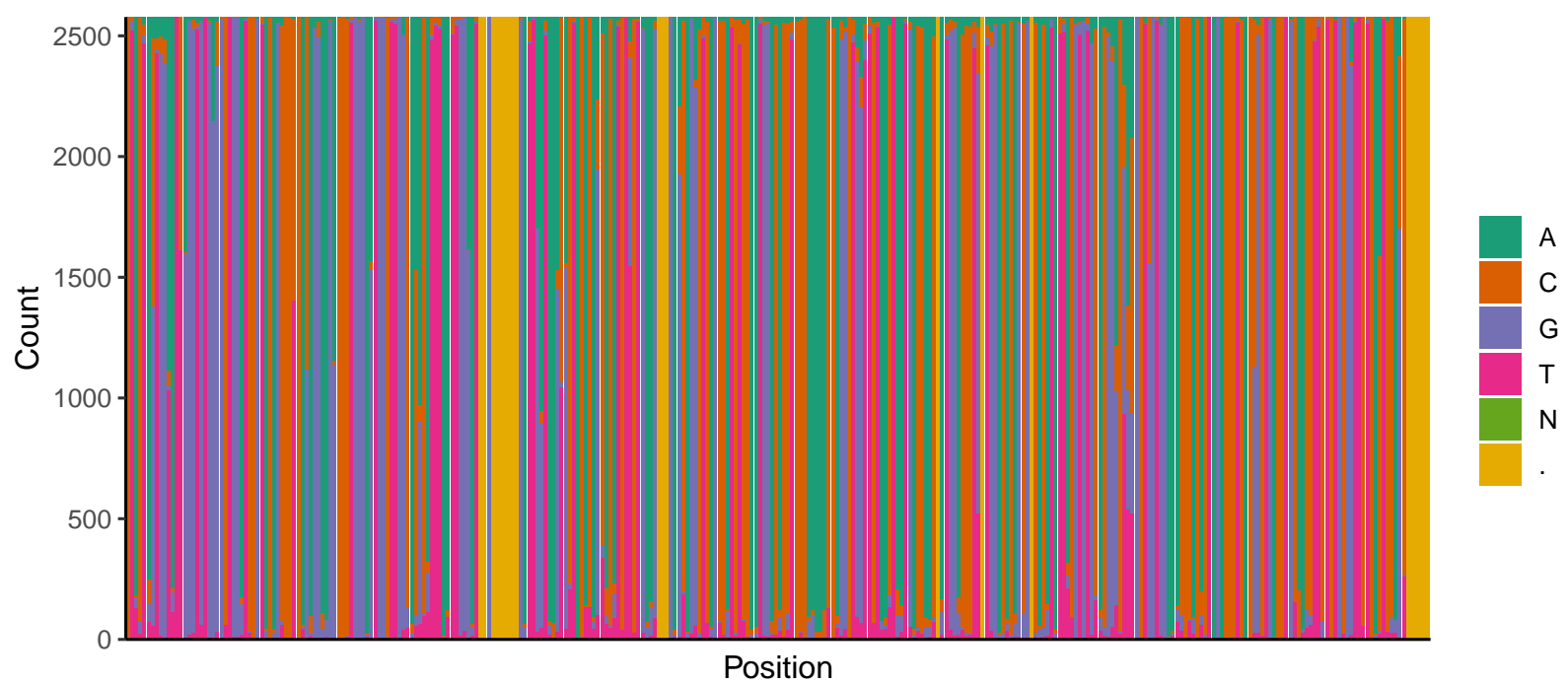
Gene IGHV4-127\*01\_C34G\_T82G\_A83G\_C87T\_A103G\_G106T\_G107A\_T108C\_T111C



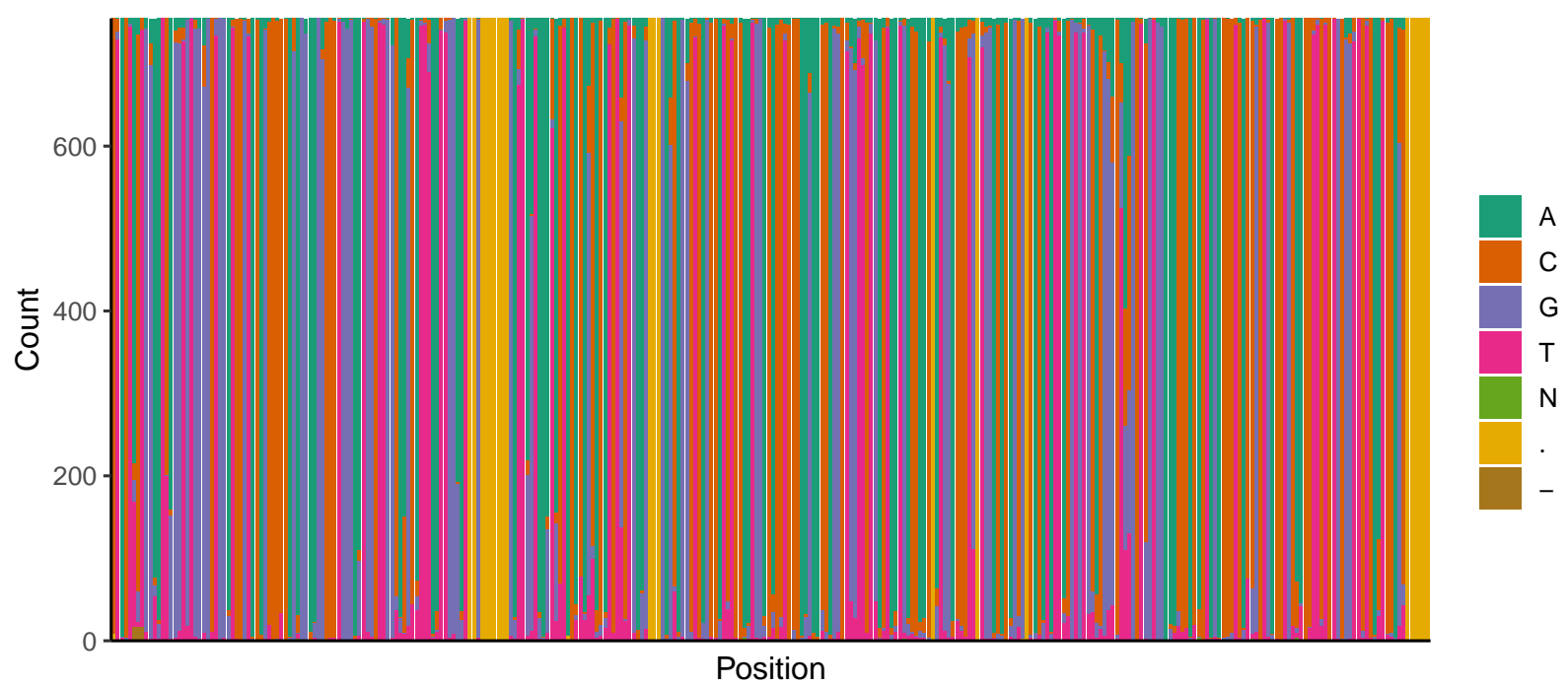
Gene IGHV5-43\*01\_A106G\_C297T



Gene IGHV2-95\*01\_G289T



Gene IGHV2-95\*01\_A252G\_A267G





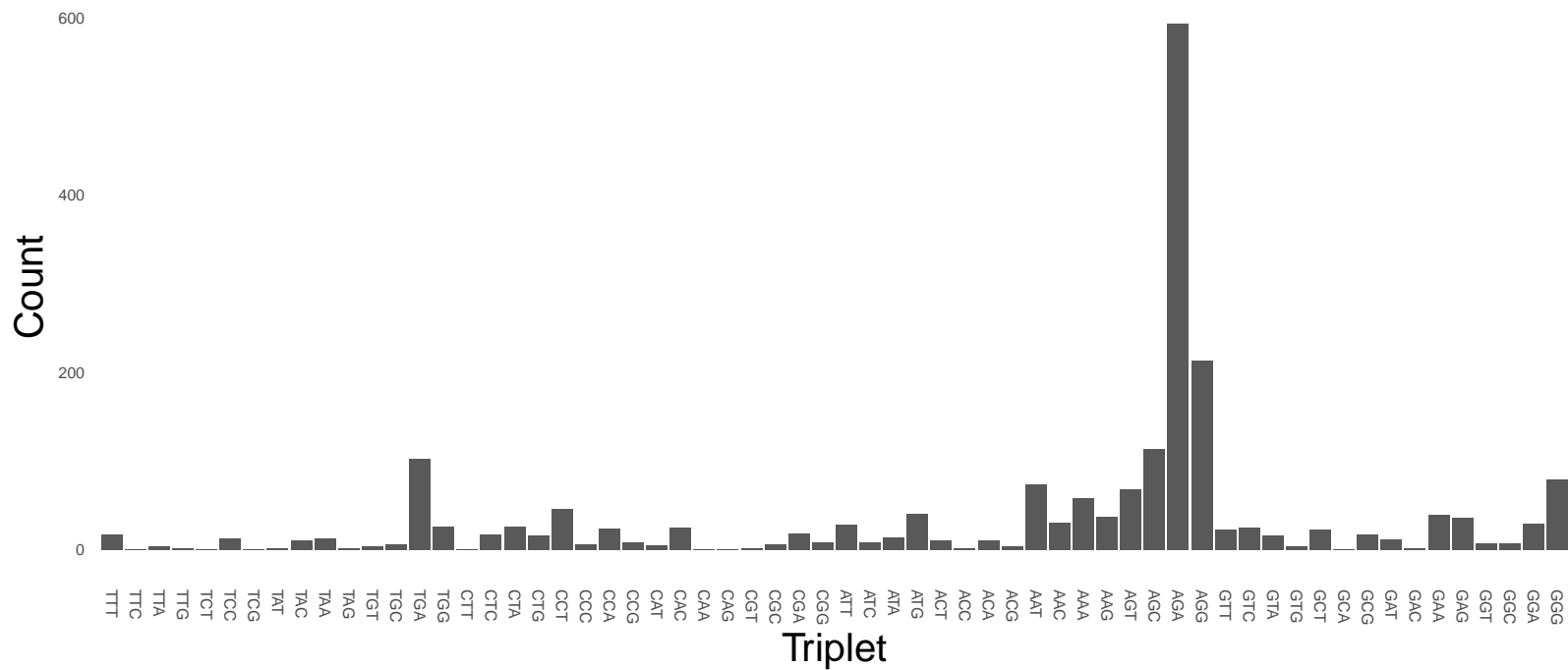
Gene IGHV3-59\*01\_T78C\_G274A



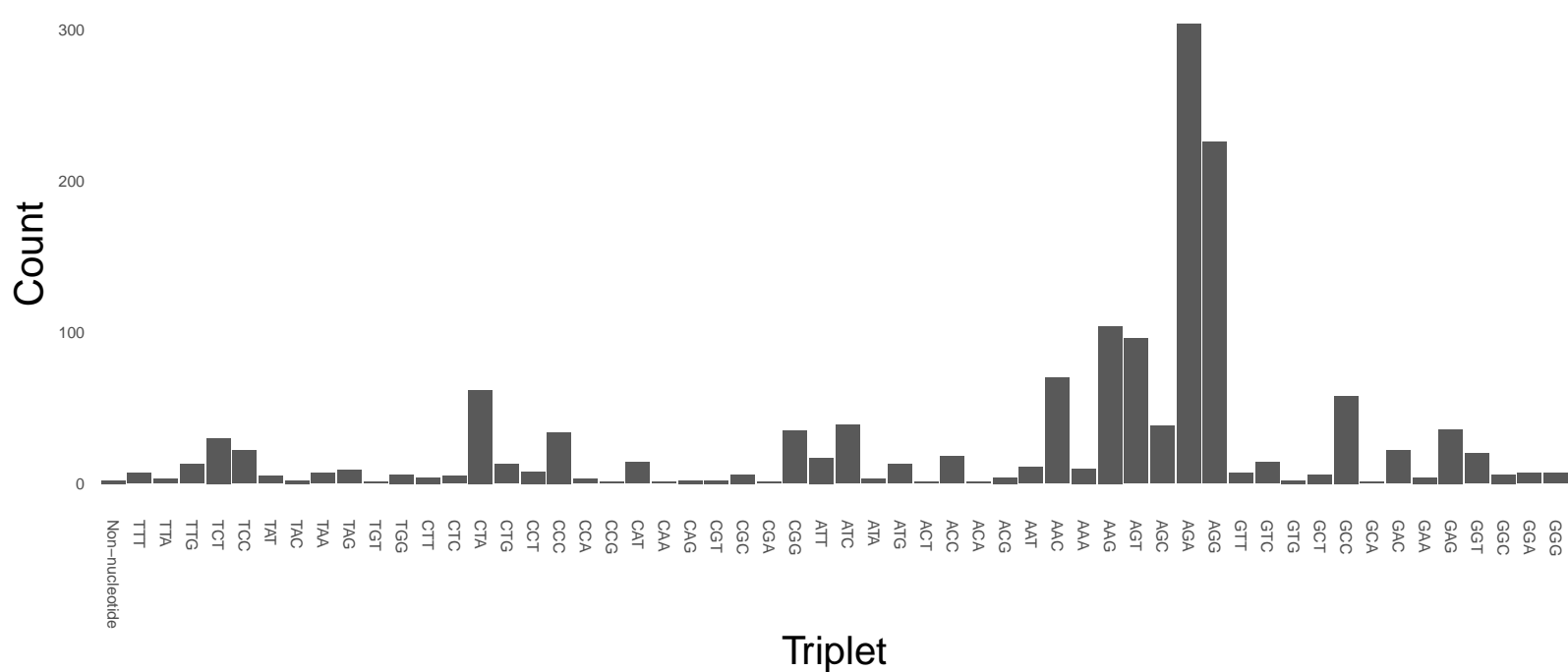
Gene IGHV4-169\*01\_C259T



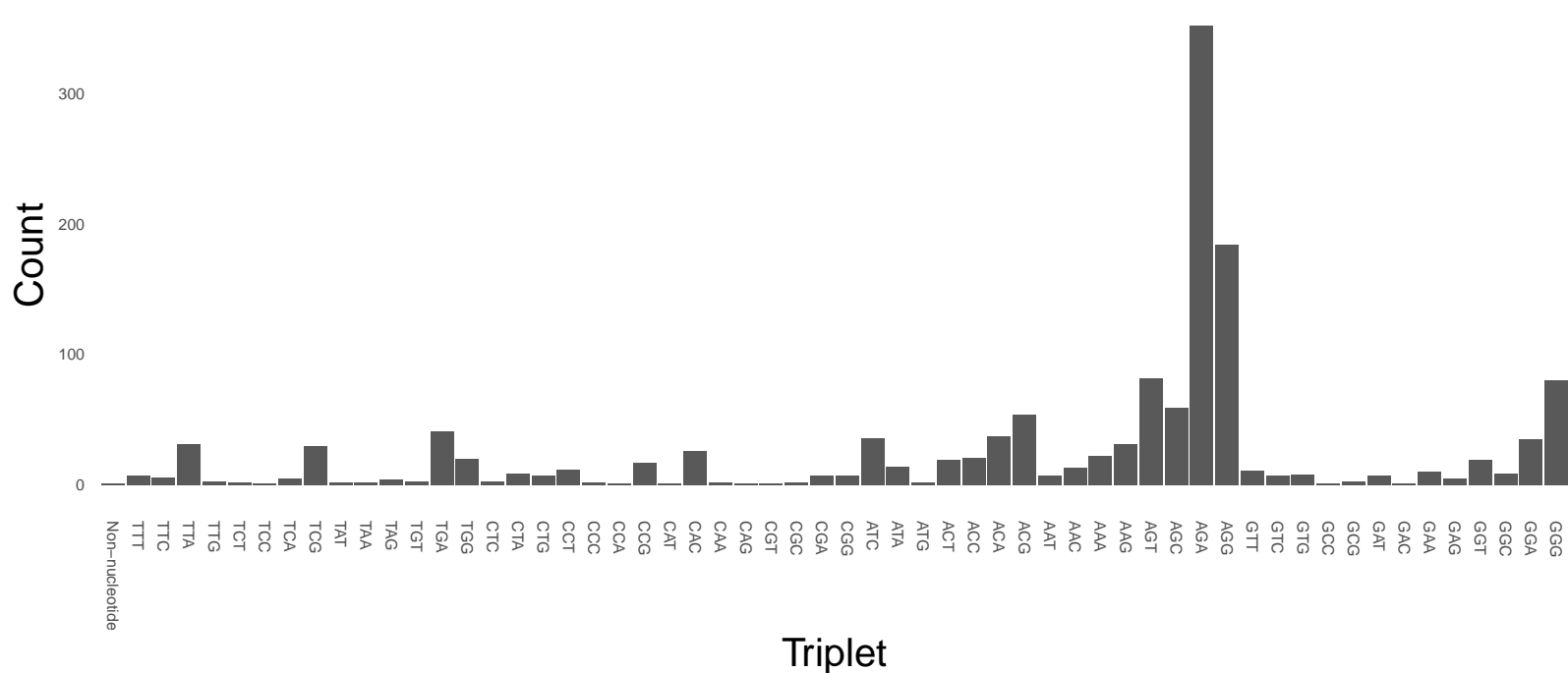
IGHV3-16\*01\_A275G- Final 3 nucleotides as a triplet



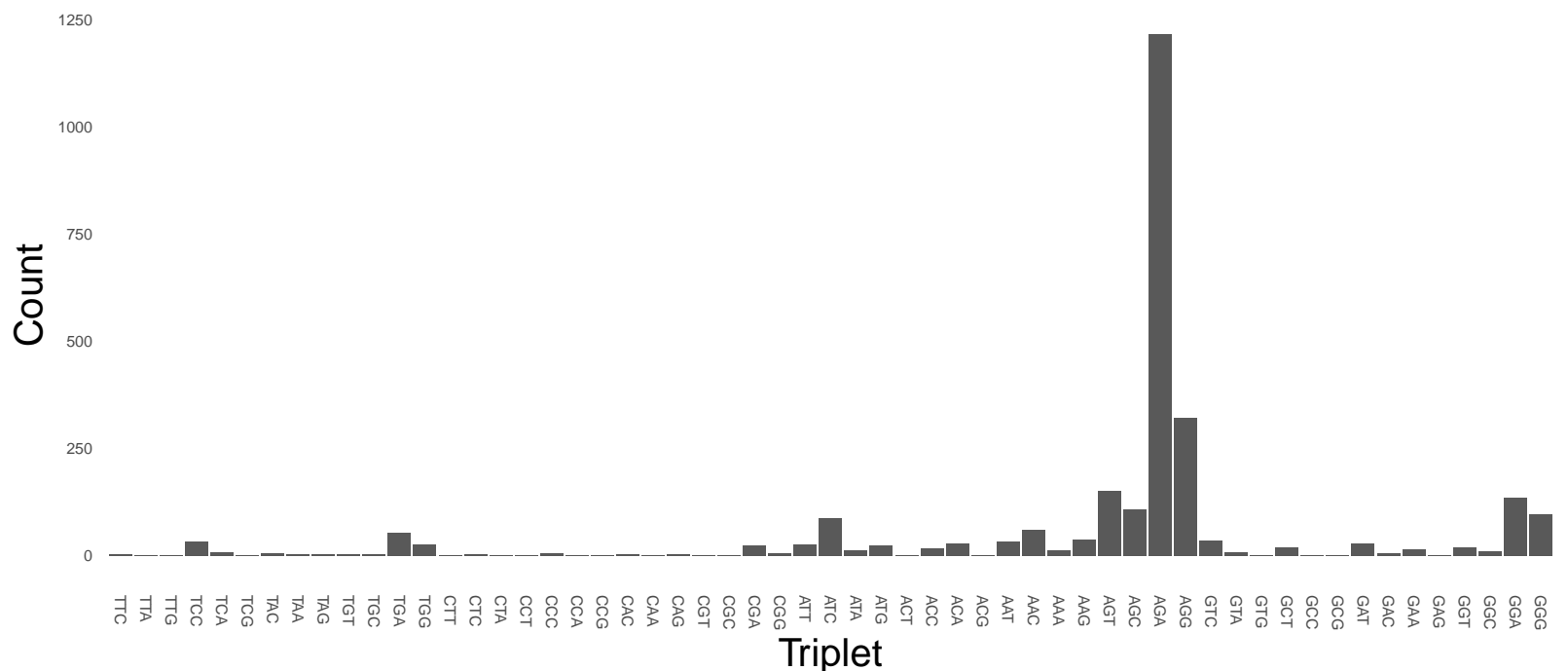
IGHV3-38\*01\_C27A\_C38T\_A39C\_G48C\_T78C\_A192G- Final 3 nucleotides as a triplet



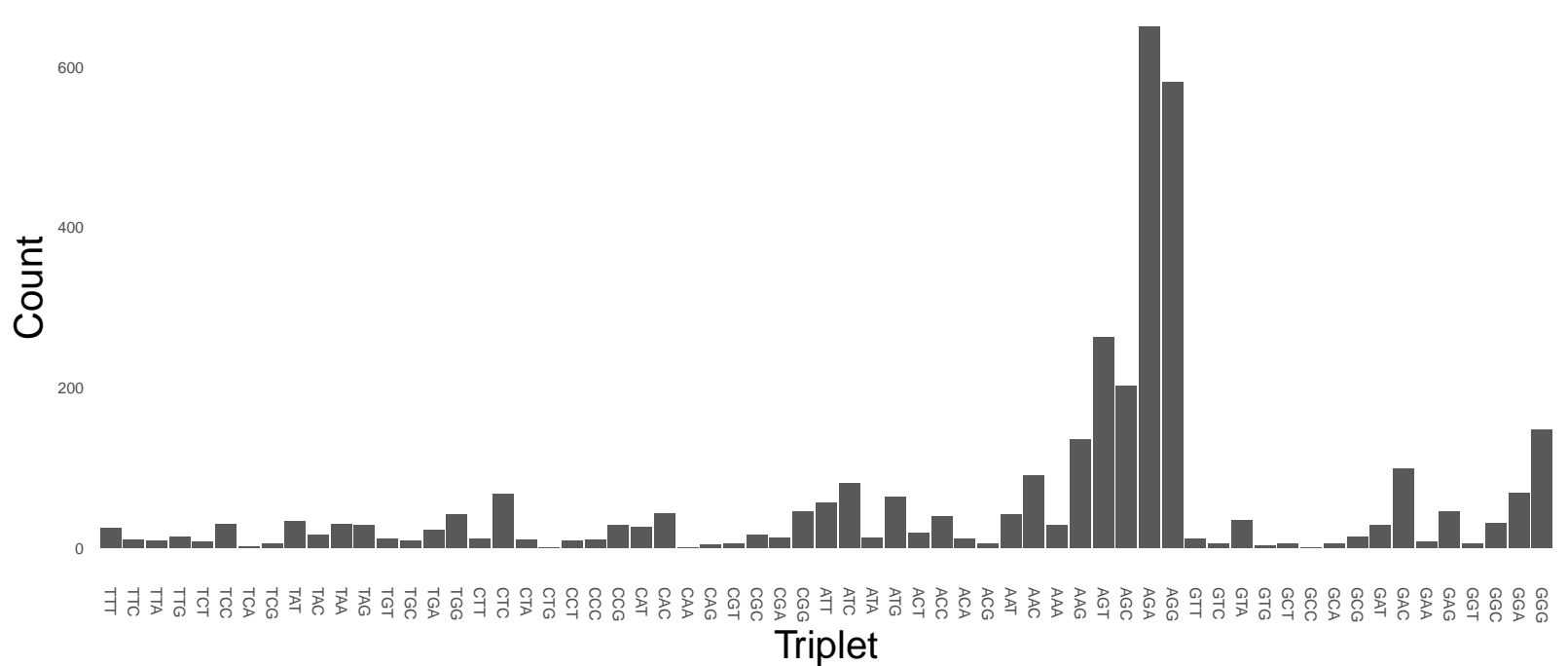
IGHV3-100\*02\_C210T- Final 3 nucleotides as a triplet



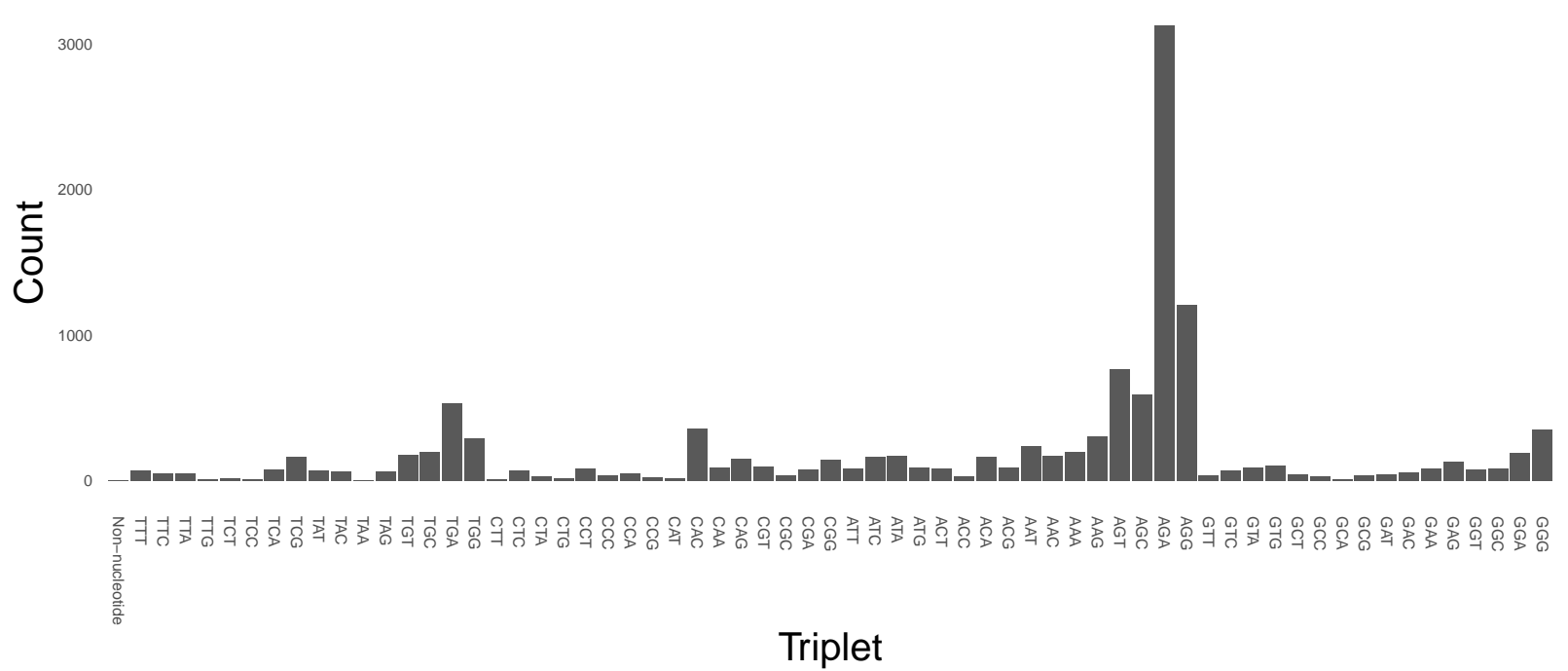
IGHV3-134\*01\_G132A\_C163A\_G175A\_G184A\_G191C\_C194T\_T198C\_C210T\_A256T\_A258C\_



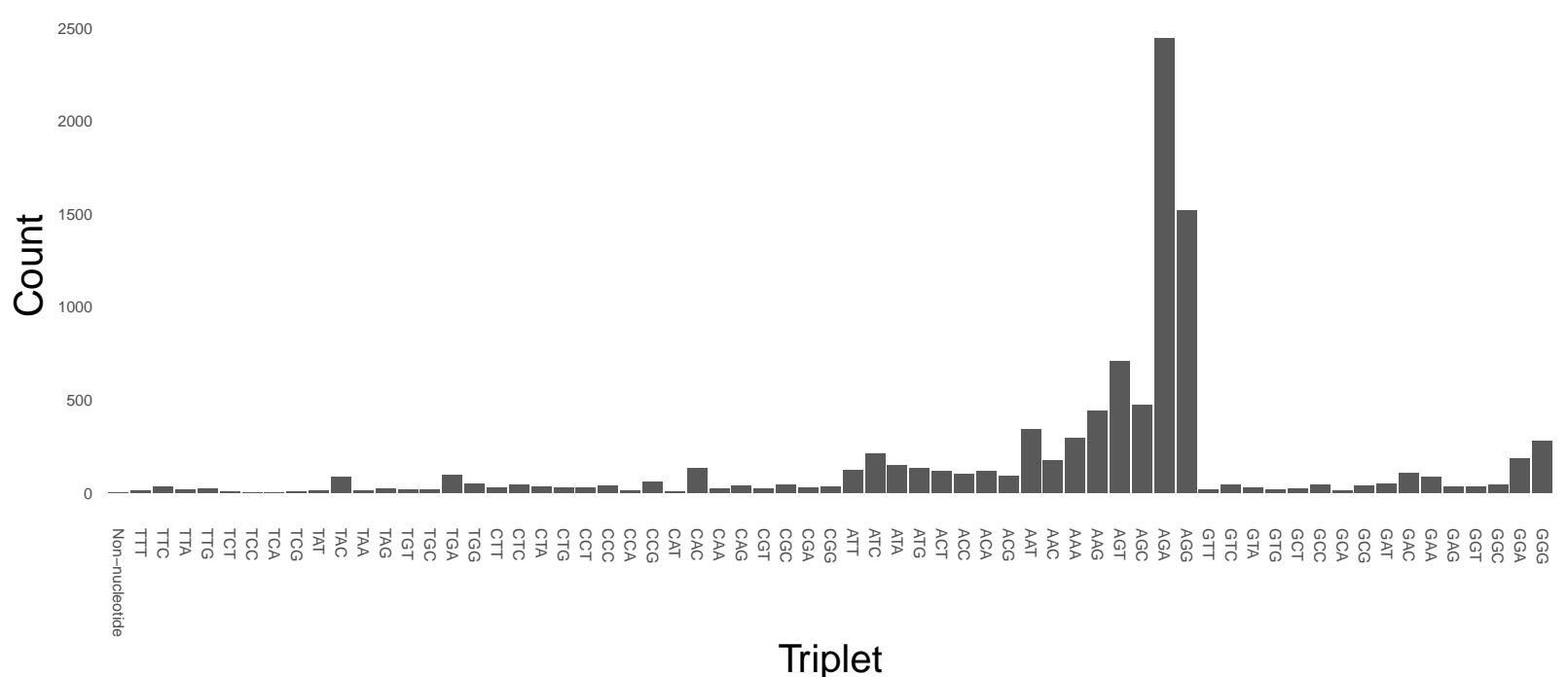
IGHV3-28\*02\_C118T\_C176G\_A187G\_G274A\_G277A- Final 3 nucleotides as a triplet



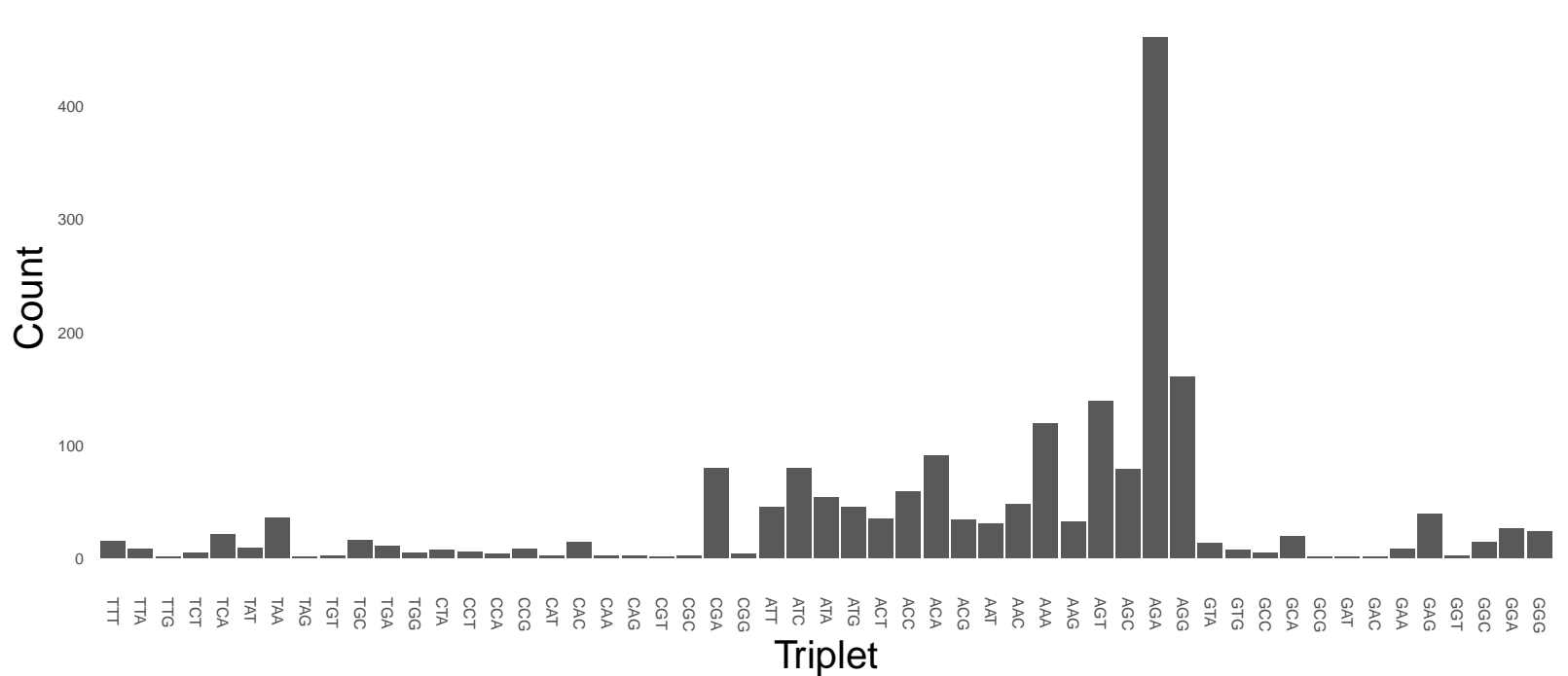
IGHV3-103\*01\_G24A\_C27A\_C38T\_A39C\_A40C\_C113G\_T114C\_C118A\_A119G\_G163T\_C164A\_



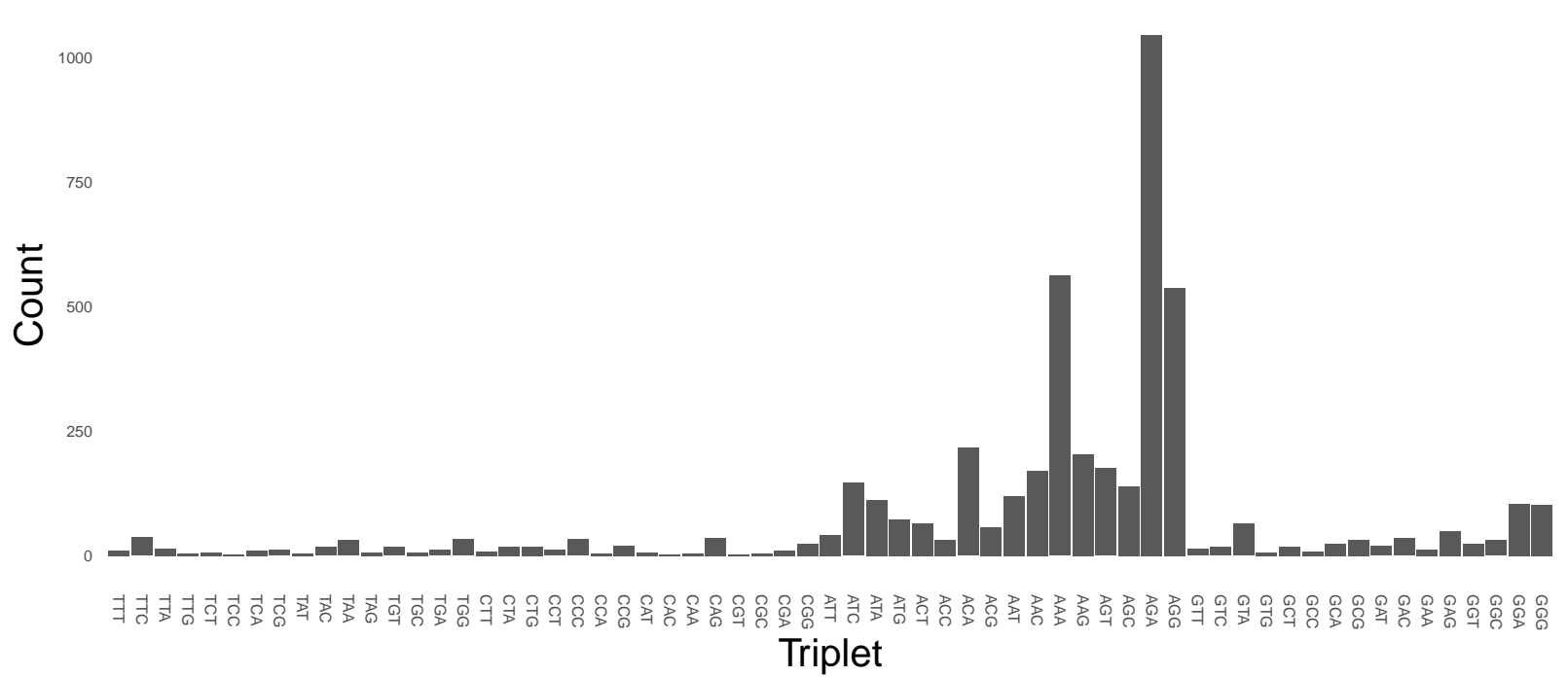
IGHV3-103\*01\_G24A\_C27A\_C38T\_A39C\_A40C\_C113G\_T114C\_C118A\_A119G\_G163T\_C164A



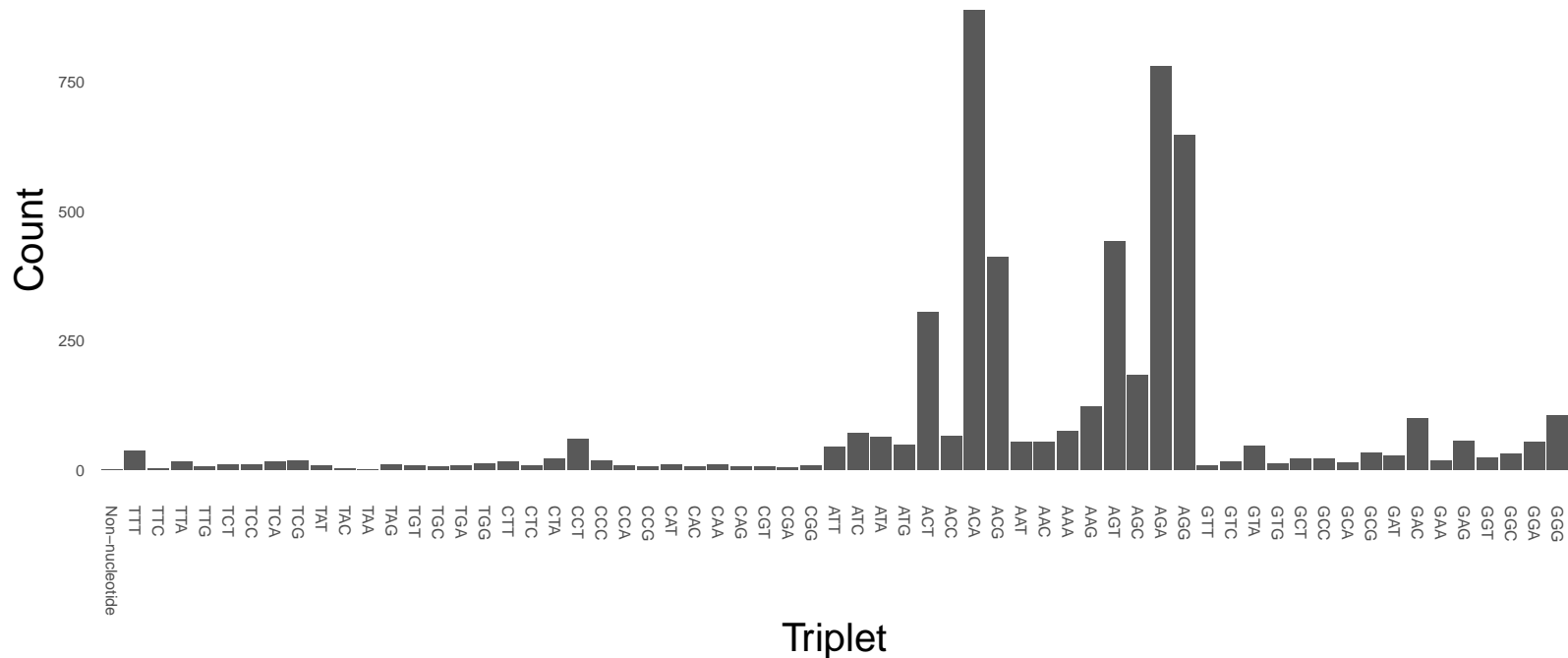
IGHV4-80\*01\_G70A\_T189G\_T196A- Final 3 nucleotides as a triplet



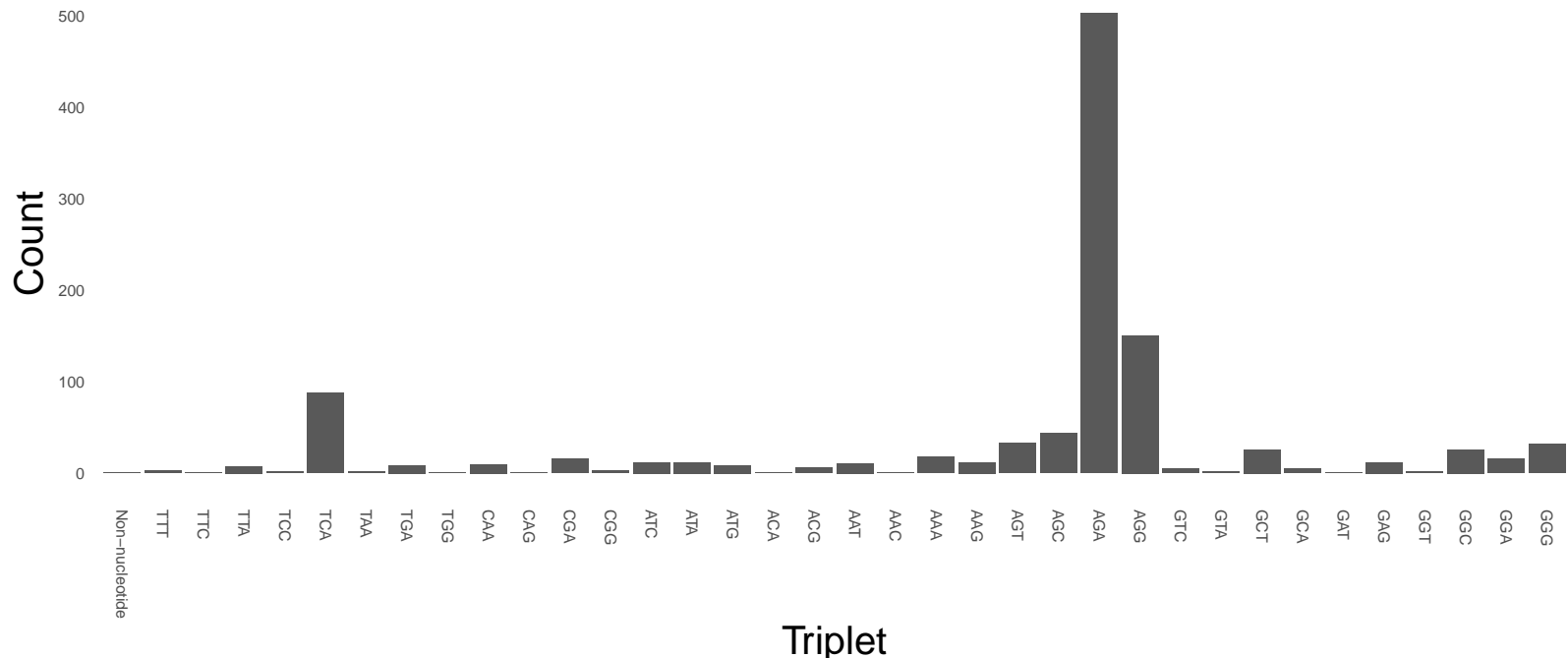
IGHV4-160\*01\_A106G\_A109T\_G147A\_C290A- Final 3 nucleotides as a triplet



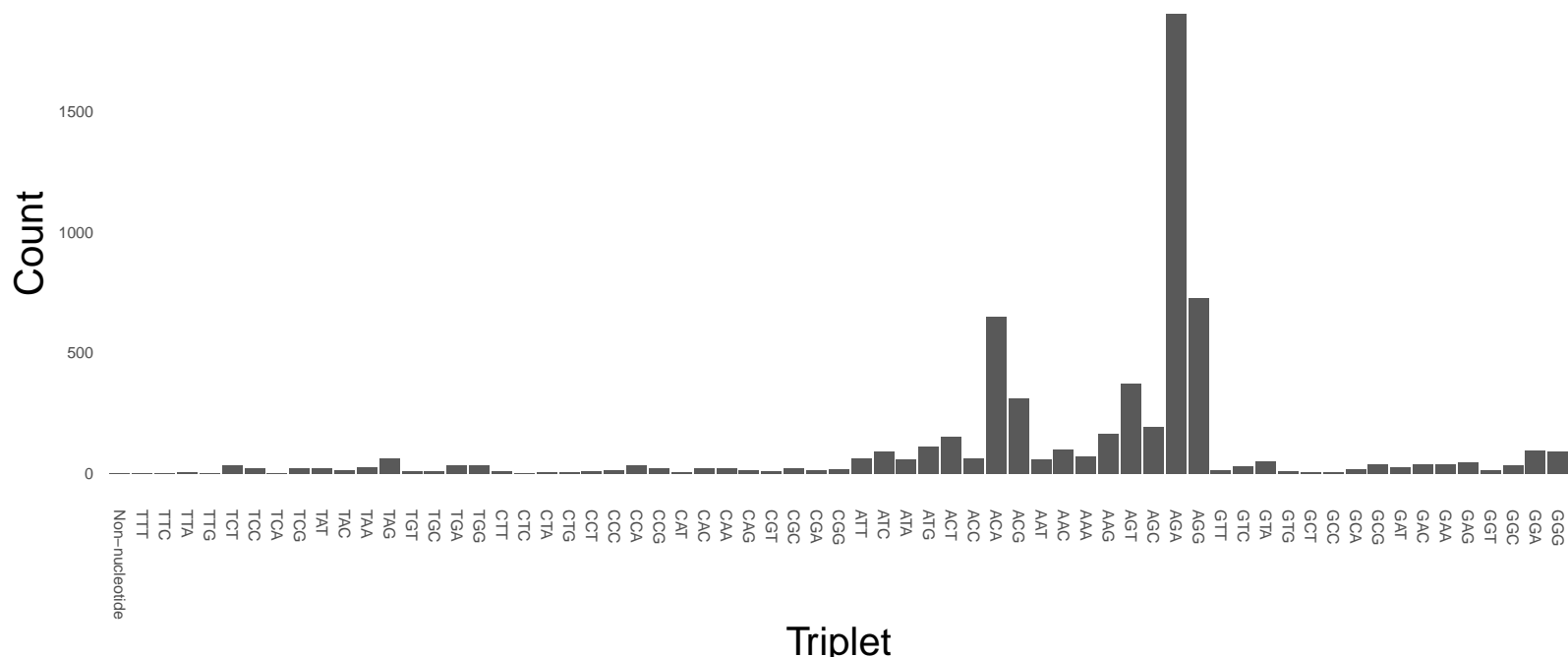
IGHV4-160\*01\_A162G\_C163T\_G164A\_G184A\_G196T\_G297C- Final 3 nucleotides as a triplet



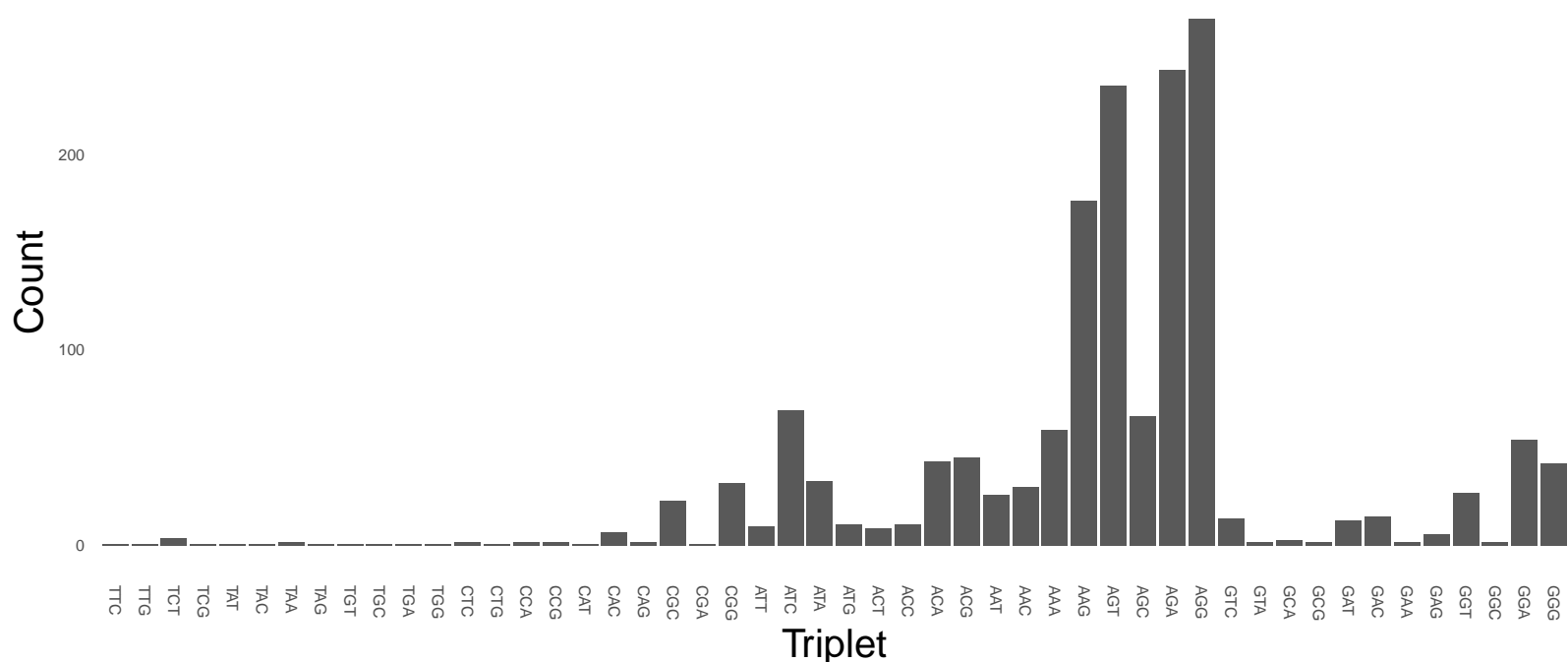
IGHV4-73\*01\_C24T\_C133G\_G147A\_T163A\_C168T\_T169G- Final 3 nucleotides as a triplet



IGHV4-127\*01\_C34G\_T82G\_A83G\_C87T\_A103G\_G106T\_G107A\_T108C\_T111C\_G112C\_G113C- Final 3 nucleotides as a triplet



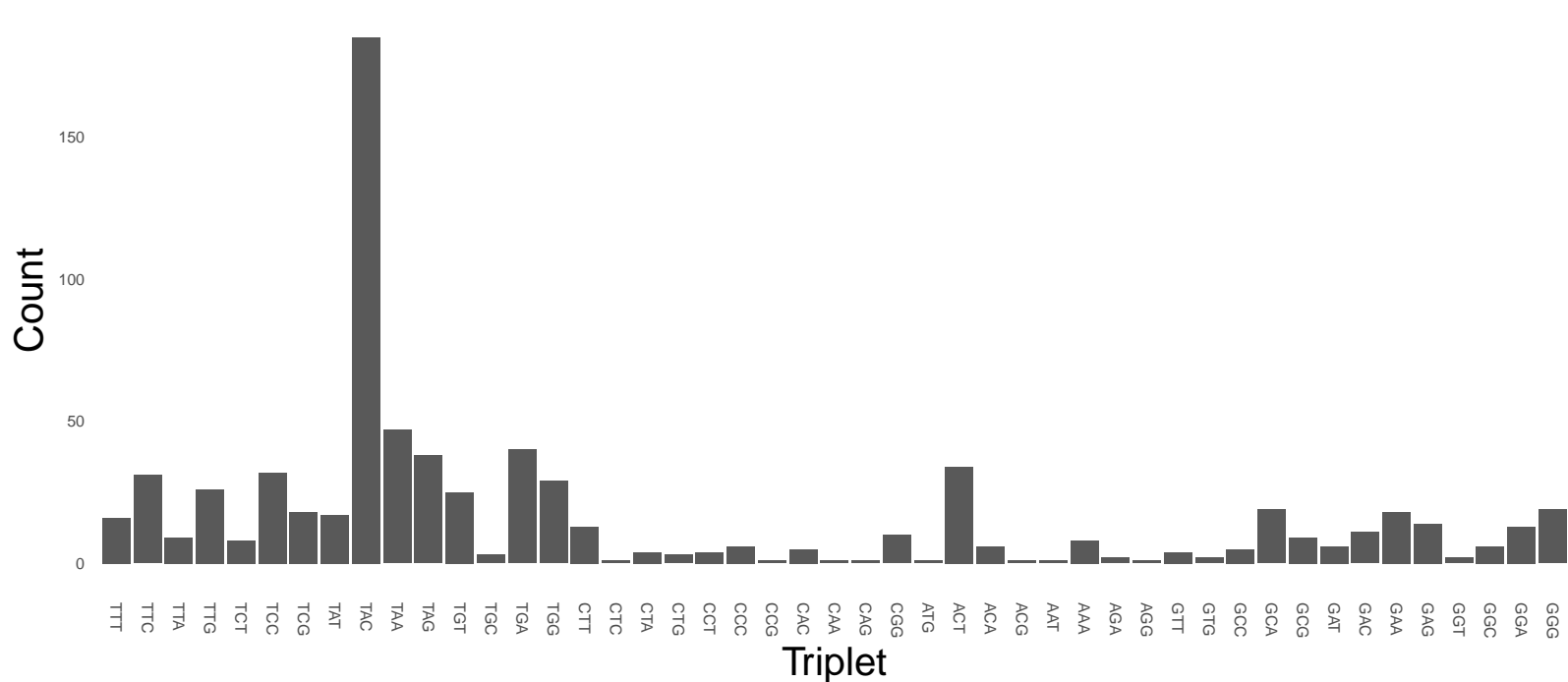
IGHV5–43\*01\_A106G\_C297T– Final 3 nucleotides as a triplet



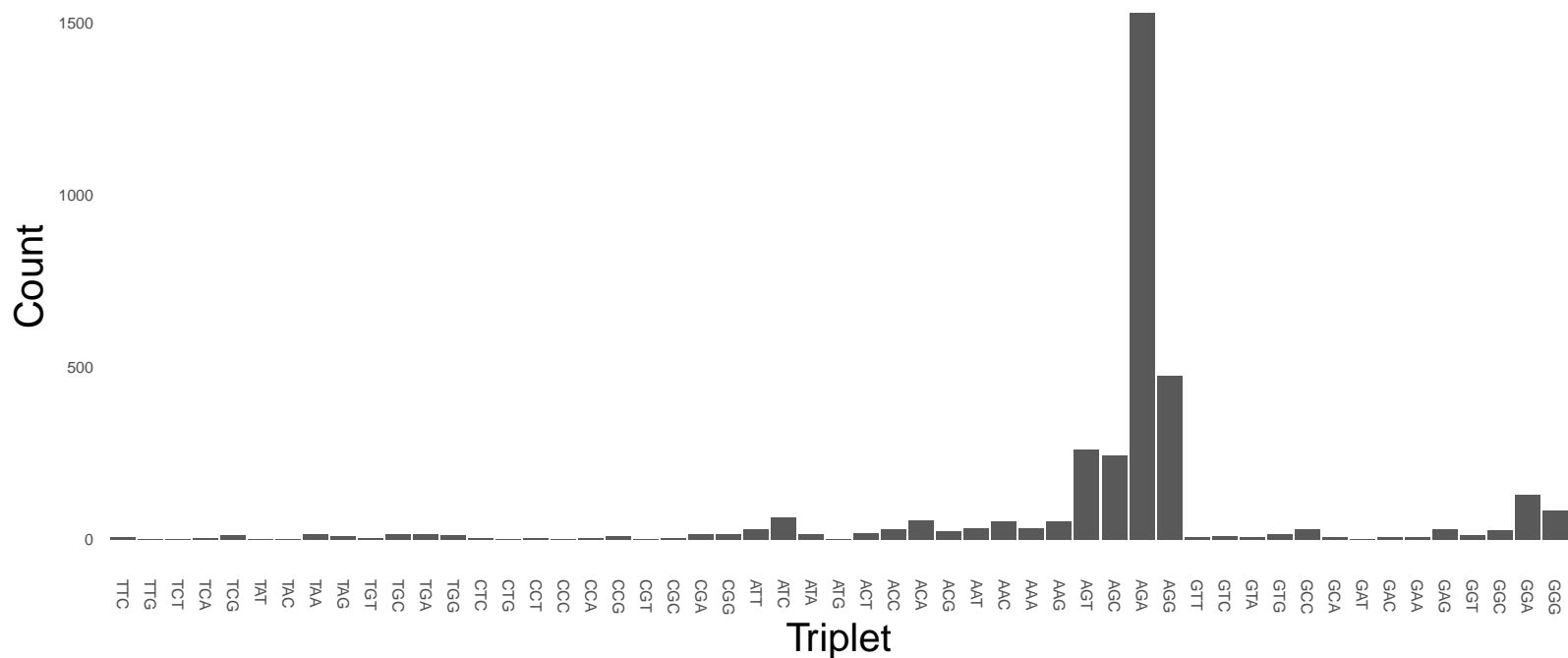
IGHV2–95\*01\_G289T– Final 3 nucleotides as a triplet



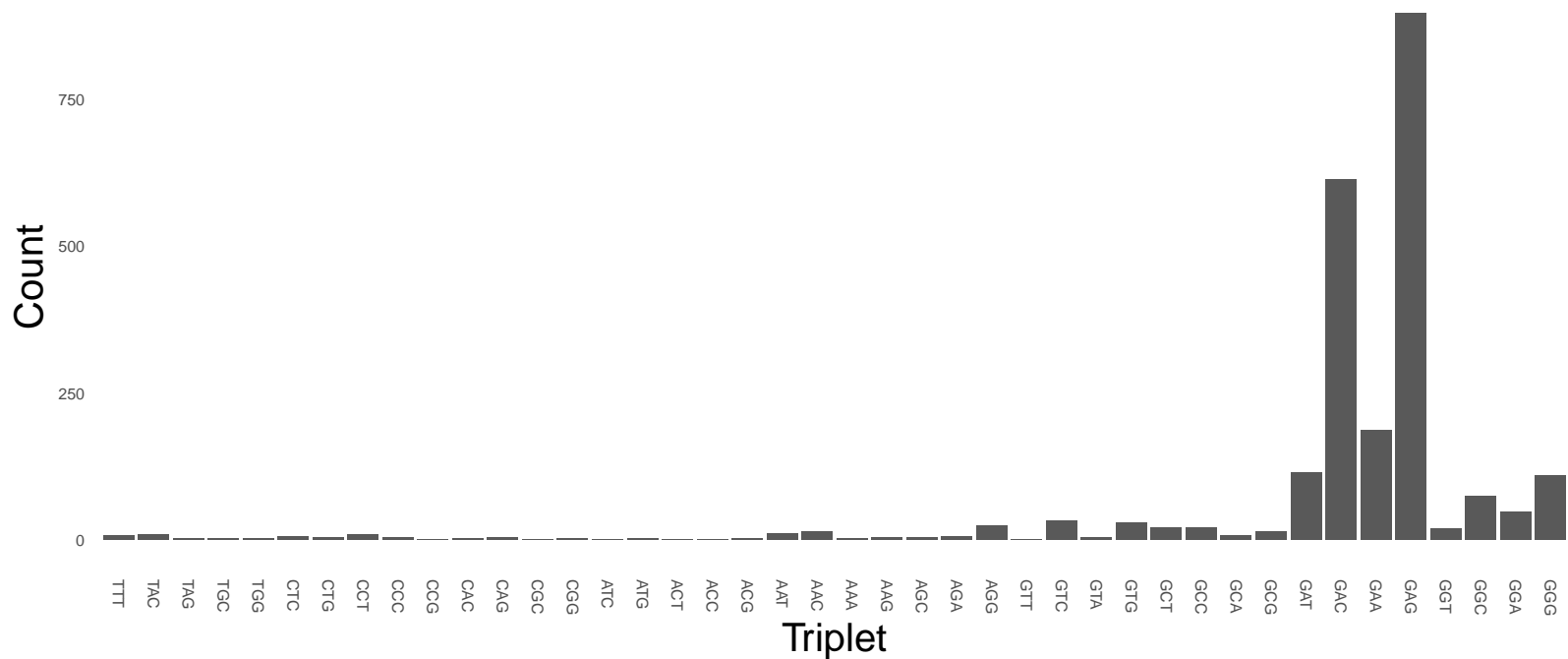
IGHV2–95\*01\_A252G\_A267G– Final 3 nucleotides as a triplet



IGHV3-59\*01\_T78C\_G274A- Final 3 nucleotides as a triplet

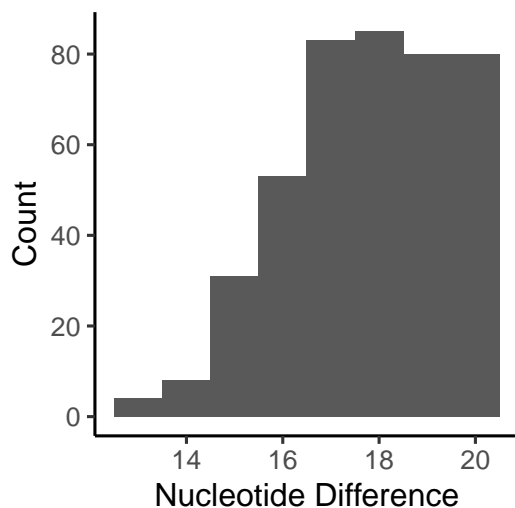


IGHV4-169\*01\_C259T- Final 3 nucleotides as a triplet



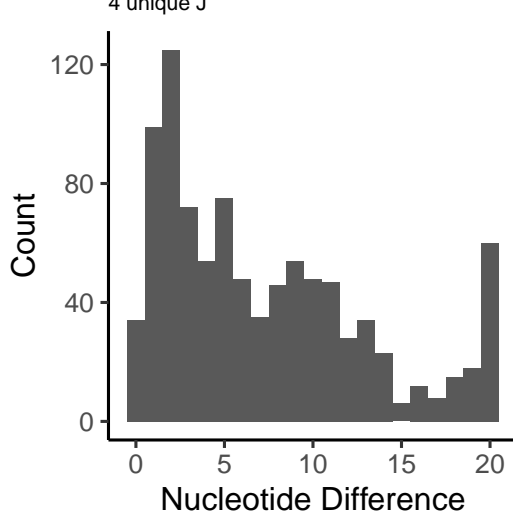
### IGHV3S3\*01

2580 sequences assigned  
No exact matches.



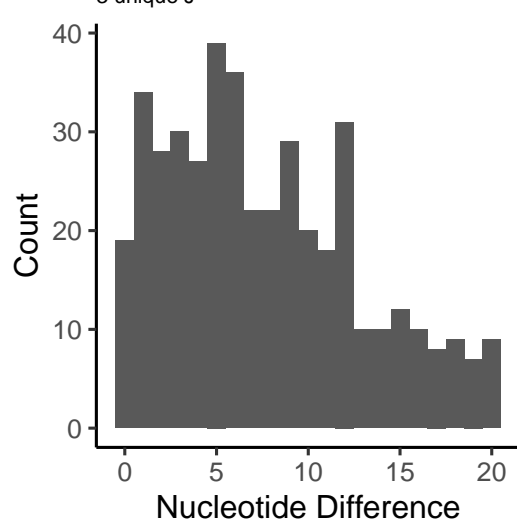
### IGHV2-95\*01\_G289T

2578 sequences assigned  
34 (1.3%) exact matches, in which:  
34 unique CDR3  
4 unique J



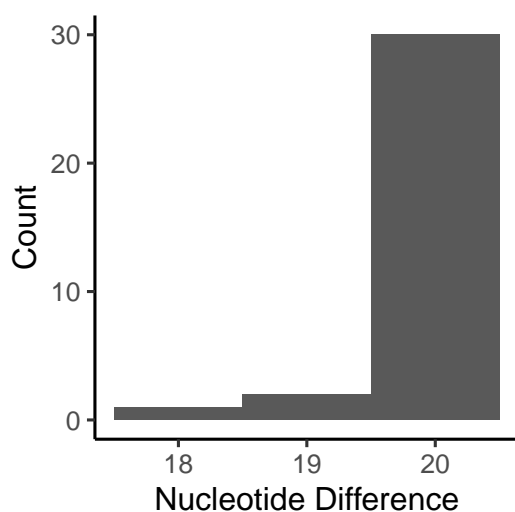
### IGHV3-38\*01\_C27A\_C38

1443 sequences assigned  
19 (1.3%) exact matches, in which:  
17 unique CDR3  
3 unique J



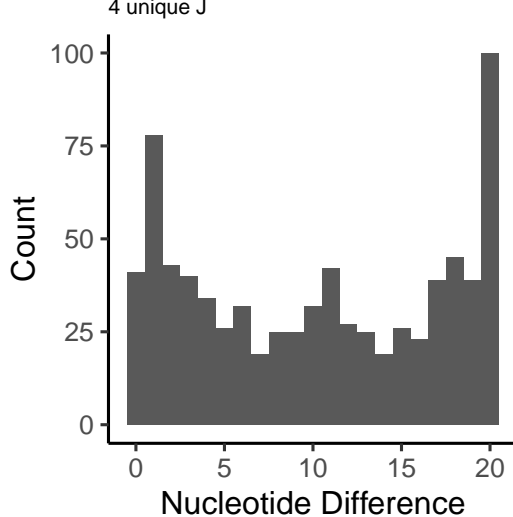
### IGHV1-156D\*01

210 sequences assigned  
No exact matches.



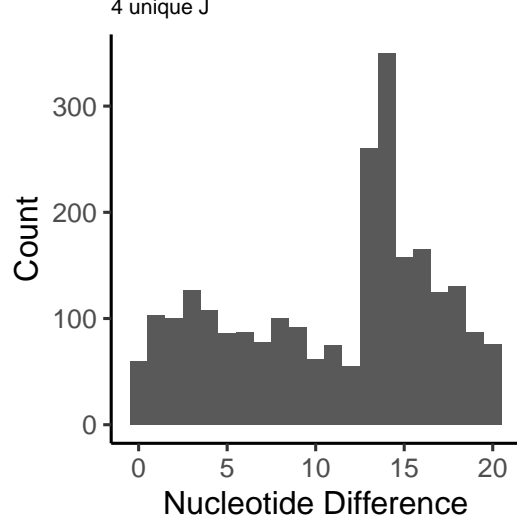
### IGHV3-16\*01\_A275G

2039 sequences assigned  
41 (2%) exact matches, in which:  
35 unique CDR3  
4 unique J



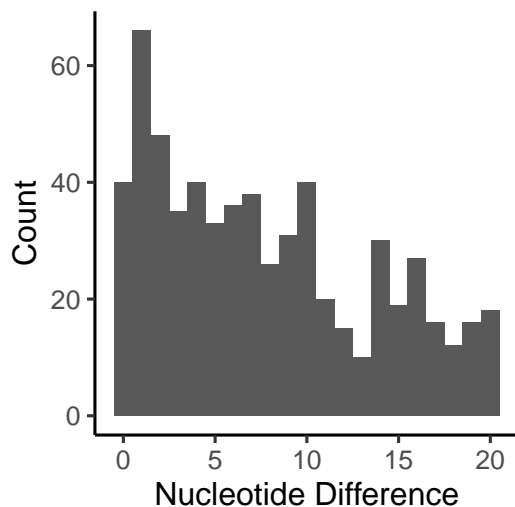
### IGHV3-59\*01\_T78C\_G27

3458 sequences assigned  
60 (1.7%) exact matches, in which:  
48 unique CDR3  
4 unique J



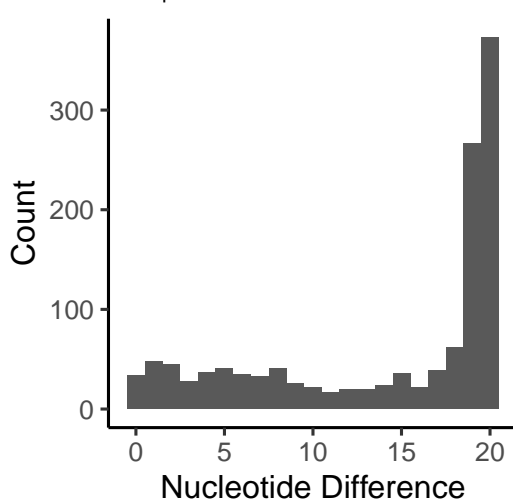
### IGHV2-95\*01\_A252G\_A21

755 sequences assigned  
40 (5.3%) exact matches, in which:  
33 unique CDR3  
4 unique J



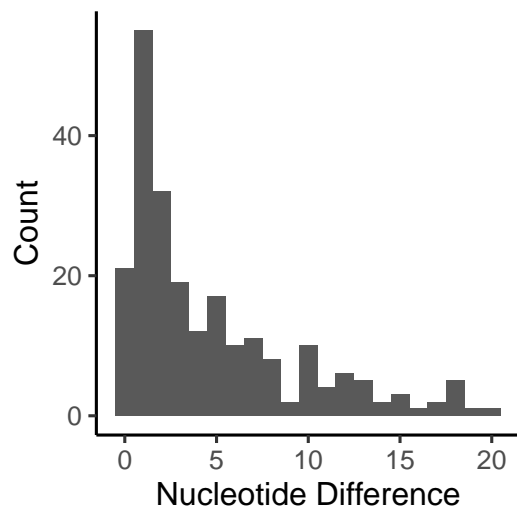
### IGHV3-28\*02\_C118T\_C1

3386 sequences assigned  
34 (1%) exact matches, in which:  
31 unique CDR3  
3 unique J



### IGHV3-100\*02\_C210T

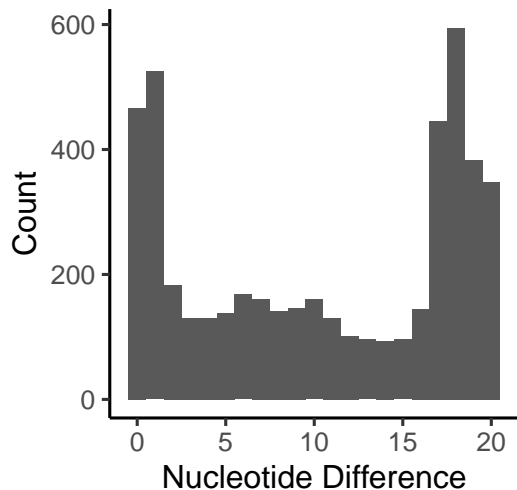
1385 sequences assigned  
21 (1.5%) exact matches, in which:  
20 unique CDR3  
3 unique J





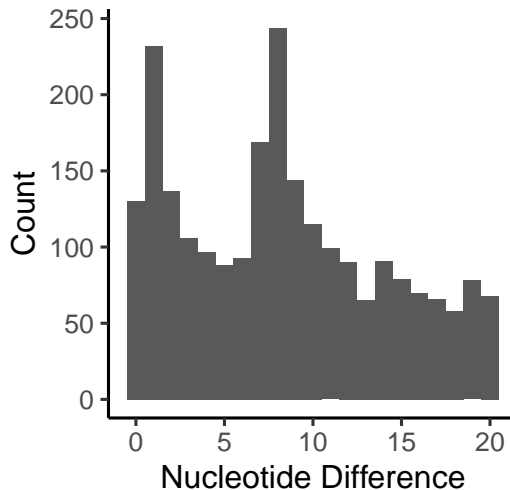
### IGHV3-103\*01\_G24A\_C2

12057 sequences assigned  
467 (3.9%) exact matches, in which:  
418 unique CDR3  
4 unique J



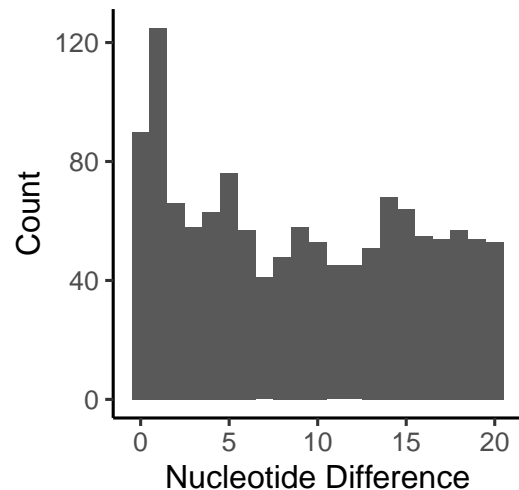
### IGHV3-134\*01\_G132A\_C

2721 sequences assigned  
130 (4.8%) exact matches, in which:  
116 unique CDR3  
4 unique J



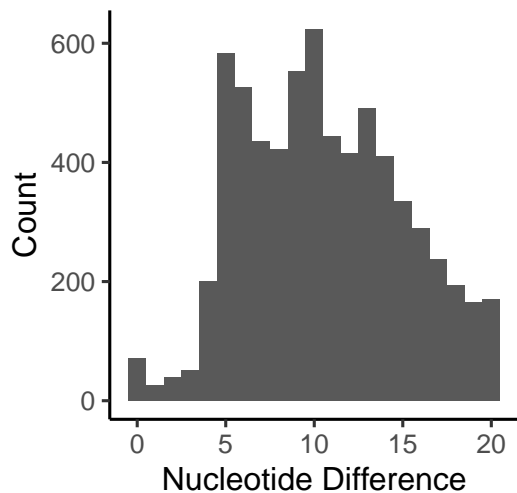
### IGHV4-80\*01\_G70A\_T18

1935 sequences assigned  
90 (4.7%) exact matches, in which:  
79 unique CDR3  
4 unique J



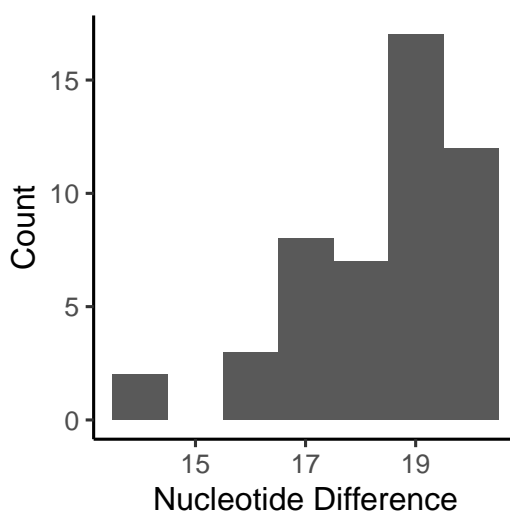
### IGHV3-103\*01\_G24A\_C2

9537 sequences assigned  
71 (0.7%) exact matches, in which:  
71 unique CDR3  
4 unique J



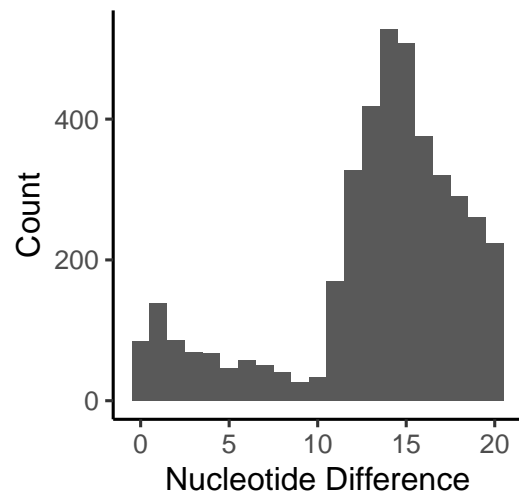
### IGHV3-137\*01

1224 sequences assigned  
No exact matches.



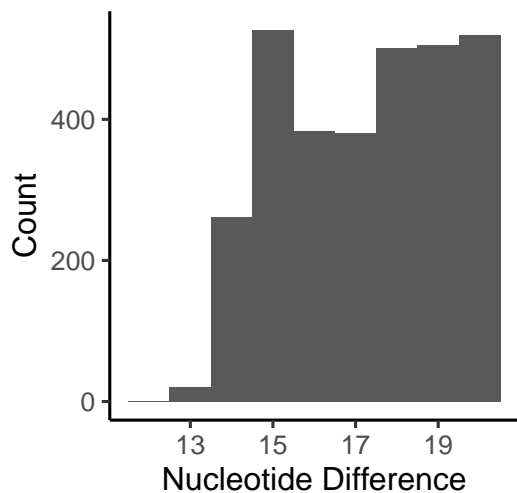
### IGHV4-127\*01\_C34G\_T8

6219 sequences assigned  
85 (1.4%) exact matches, in which:  
81 unique CDR3  
4 unique J



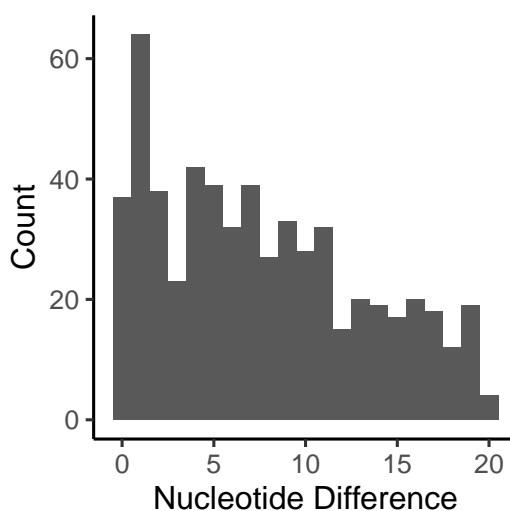
### IGHV3-108\*01

7804 sequences assigned  
No exact matches.



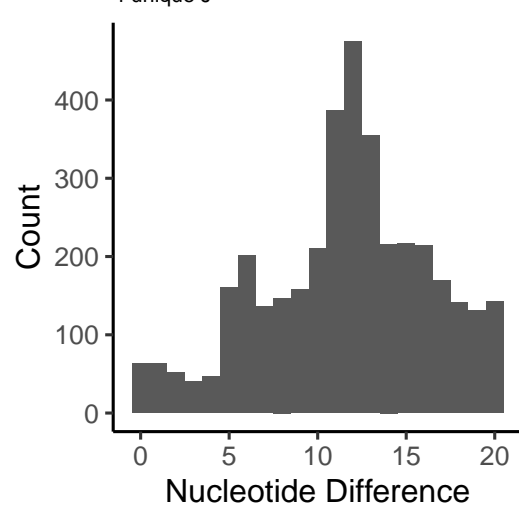
### IGHV4-73\*01\_C24T\_C13

1085 sequences assigned  
37 (3.4%) exact matches, in which:  
34 unique CDR3  
4 unique J



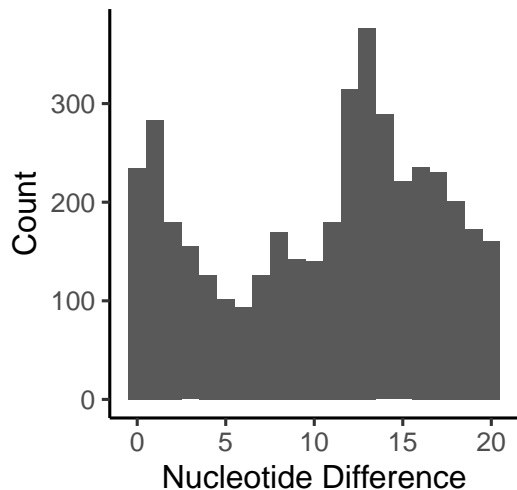
### IGHV4-160\*01\_A106G\_A

4681 sequences assigned  
63 (1.3%) exact matches, in which:  
57 unique CDR3  
4 unique J



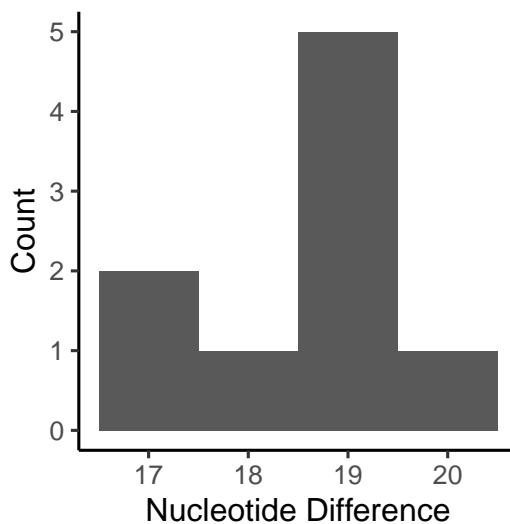
## IGHV4-160\*01\_A162G\_C

5228 sequences assigned  
235 (4.5%) exact matches, in which:  
220 unique CDR3  
4 unique J



## IGHV7-94\*01

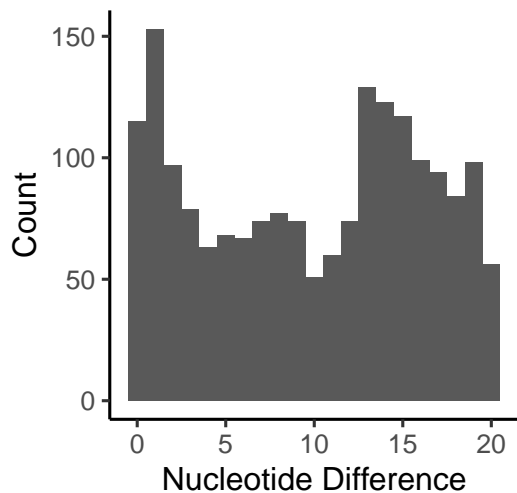
20 sequences assigned  
No exact matches.



3297C

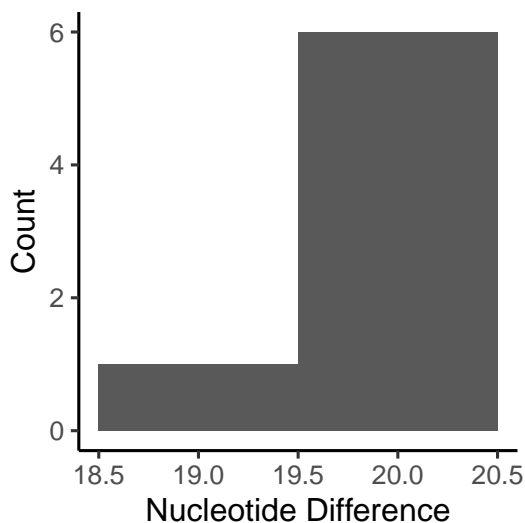
## IGHV4-169\*01\_C259T

2336 sequences assigned  
115 (4.9%) exact matches, in which:  
107 unique CDR3  
4 unique J



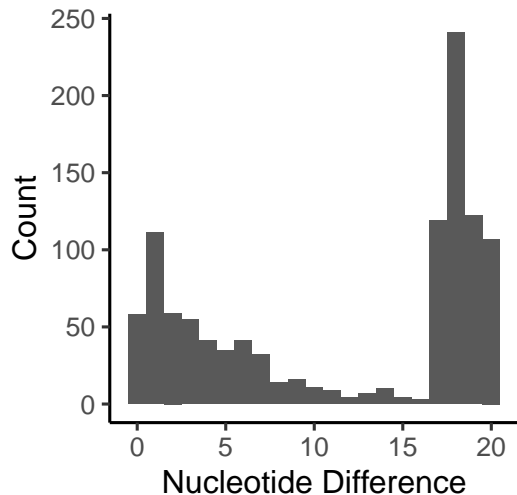
## IGHV7-128\*01

20 sequences assigned  
No exact matches.

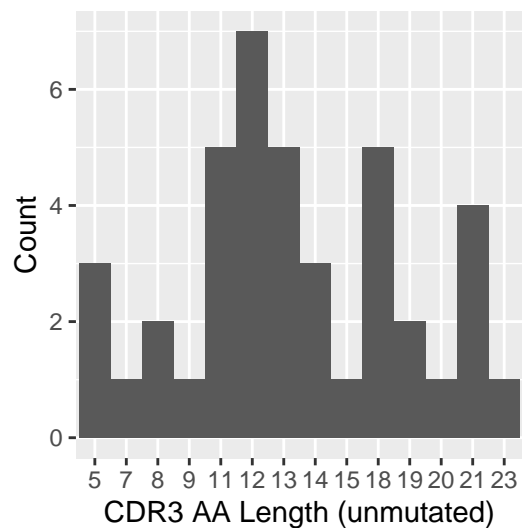


## IGHV5-43\*01\_A106G\_C297T

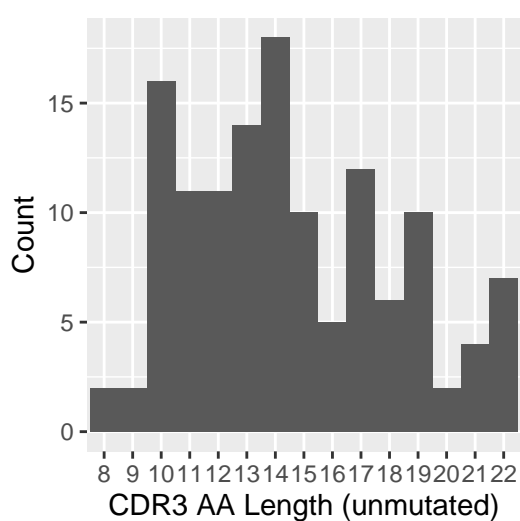
1606 sequences assigned  
58 (3.6%) exact matches, in which:  
47 unique CDR3  
3 unique J



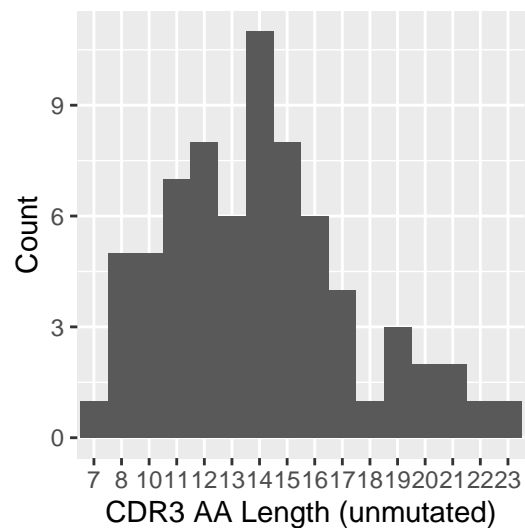
IGHV3-16\*01\_A275G



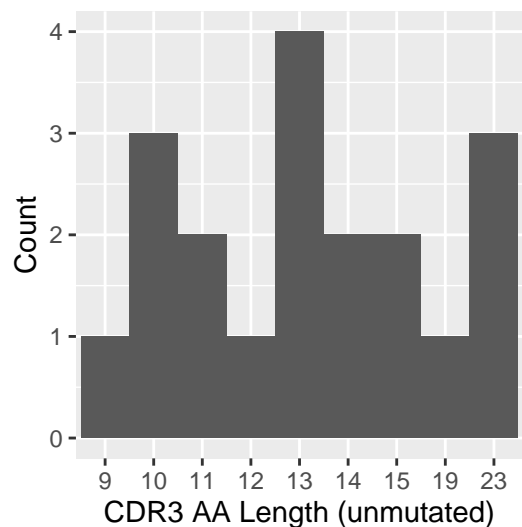
IGHV3-134\*01\_G132A\_C16:



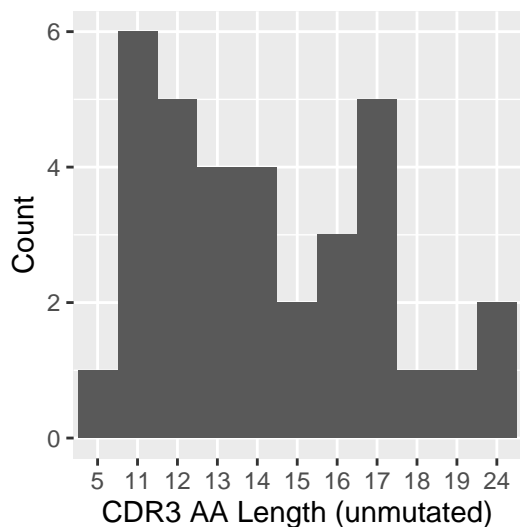
IGHV3-103\*01\_G24A\_C27A



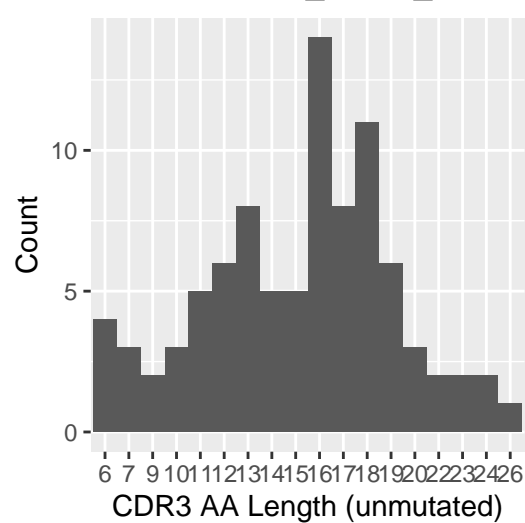
IGHV3-38\*01\_C27A\_C38T\_A



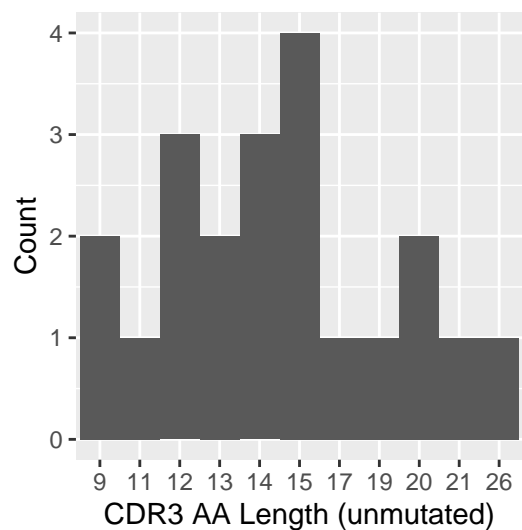
IGHV3-28\*02\_C118T\_C176G



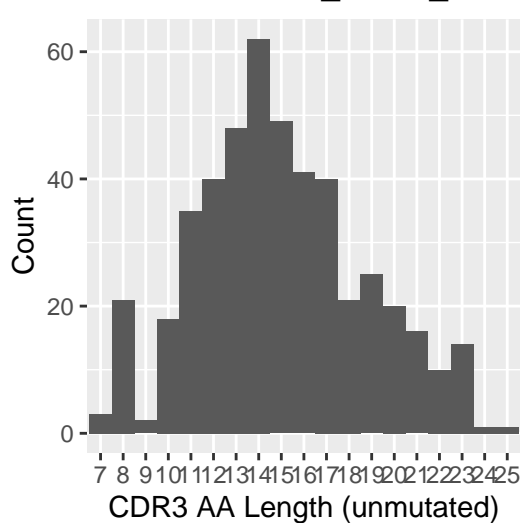
IGHV4-80\*01\_G70A\_T189G



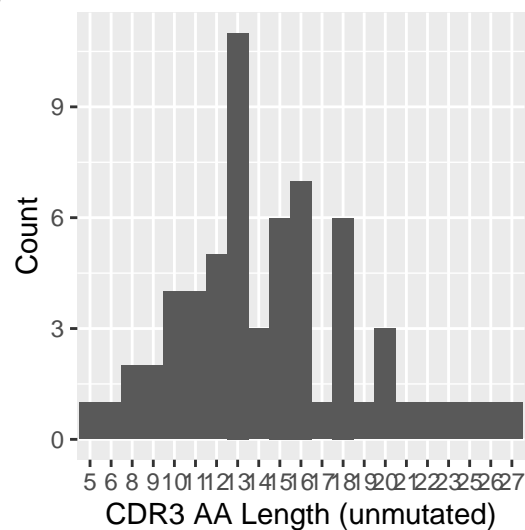
IGHV3-100\*02\_C210T



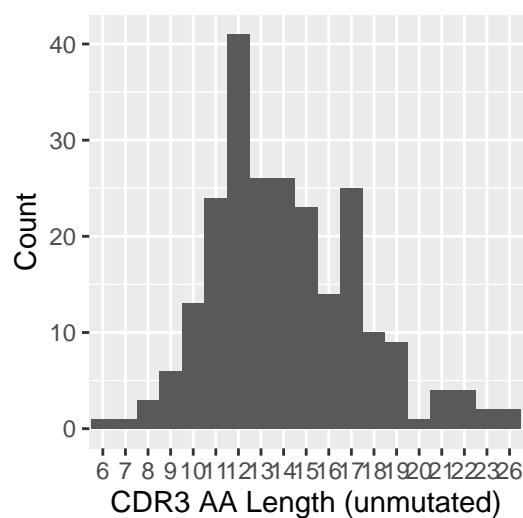
IGHV3-103\*01\_G24A\_C27A



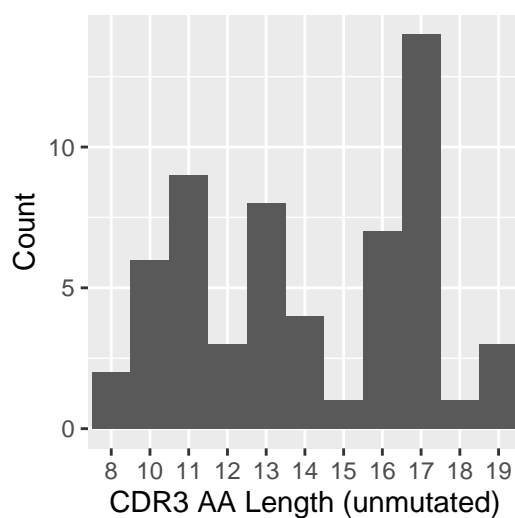
IGHV4-160\*01\_A106G\_A109



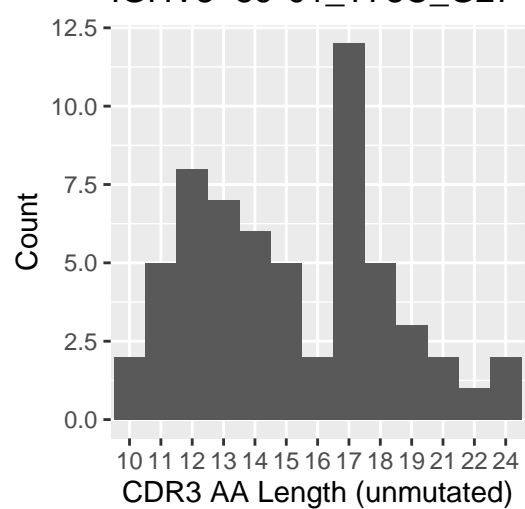
IGHV4-160\*01\_A162G\_C16:



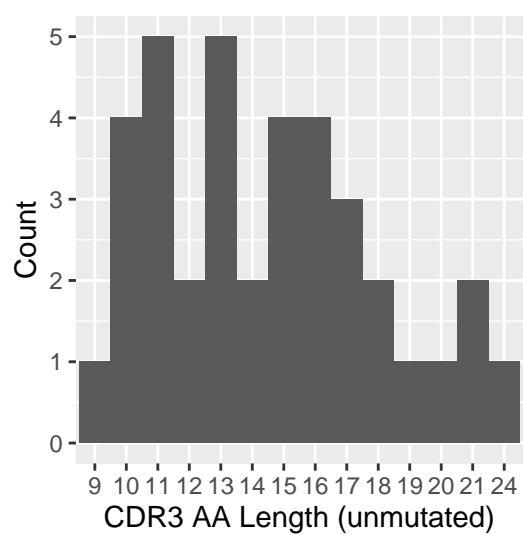
IGHV5-43\*01\_A106G\_C297



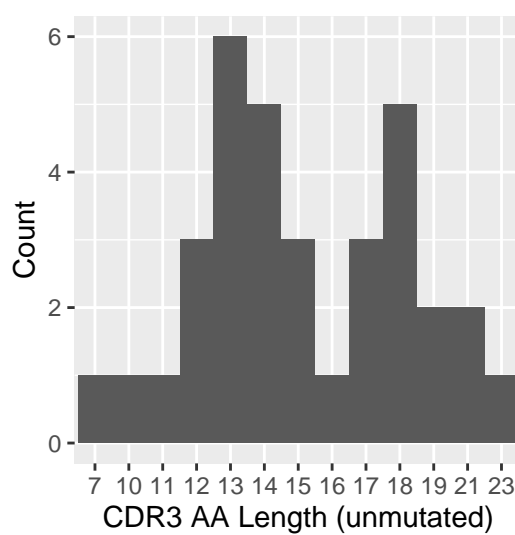
IGHV3-59\*01\_T78C\_G274



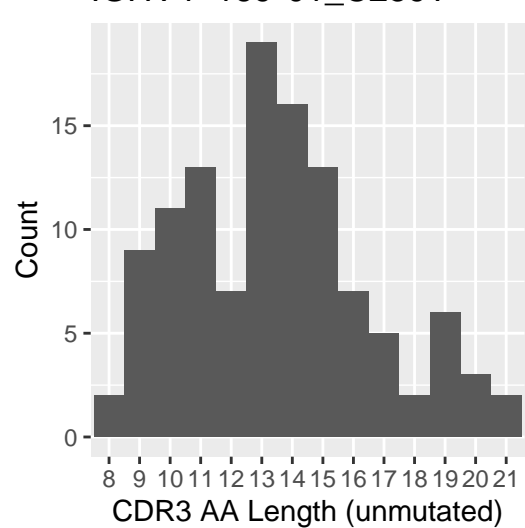
IGHV4-73\*01\_C24T\_C133G\_



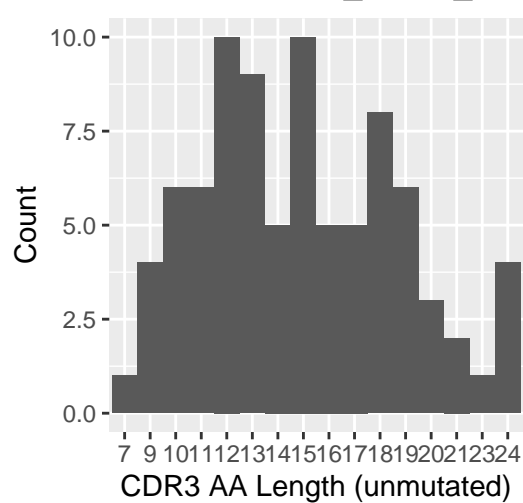
IGHV2-95\*01\_G289T



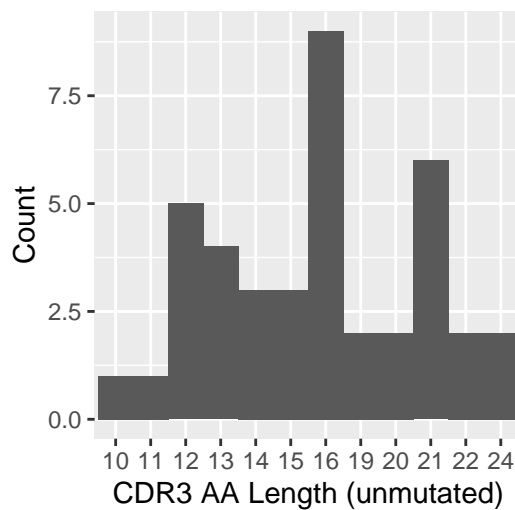
IGHV4-169\*01\_C259T

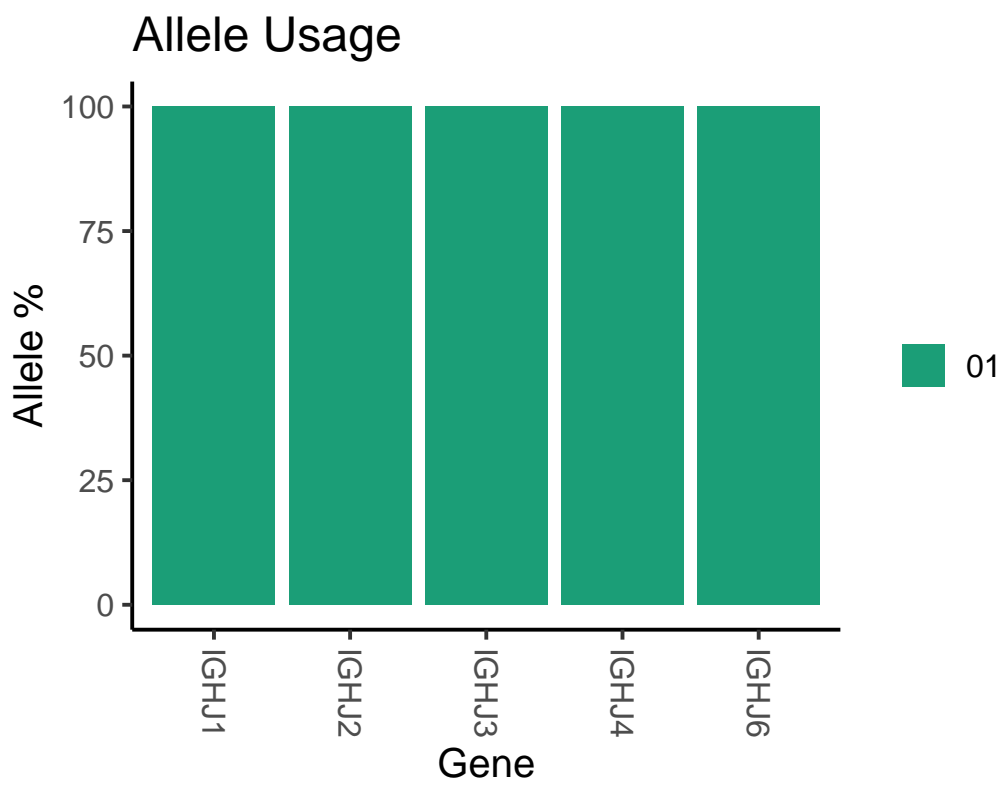


IGHV4-127\*01\_C34G\_T82



IGHV2-95\*01\_A252G\_A267G\_107A\_T108C\_T111C\_G112C\_G11





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.