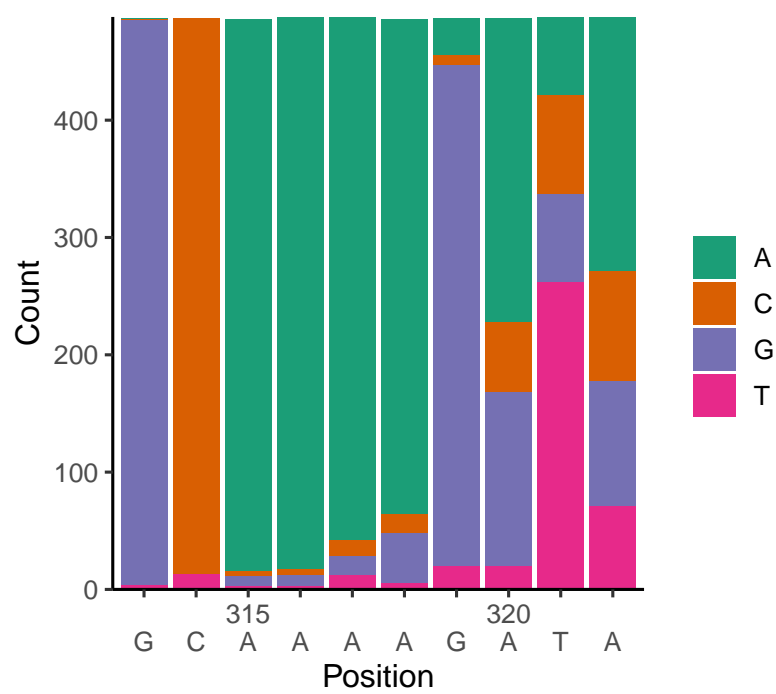
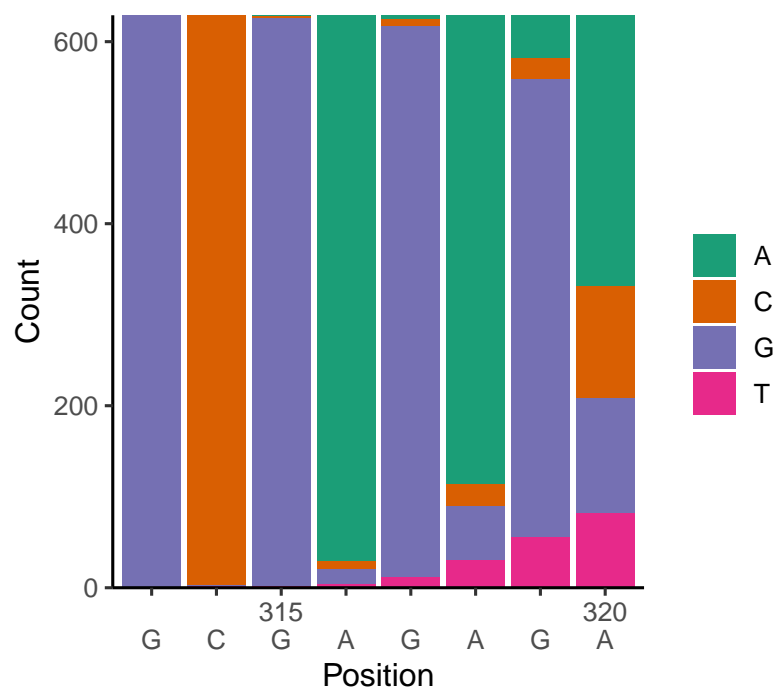


Gene IGHV3-9\*01\_T307C



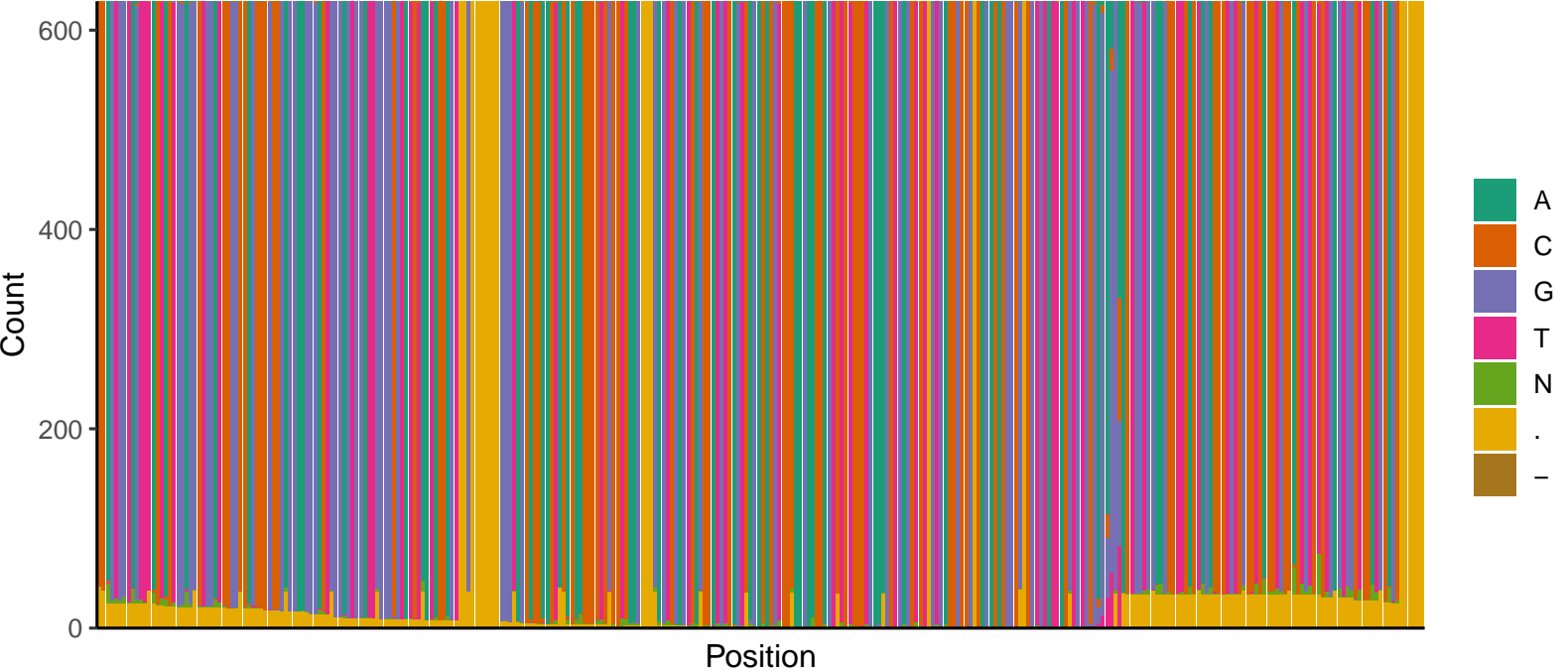
Gene IGHV4-61\*02\_A234G



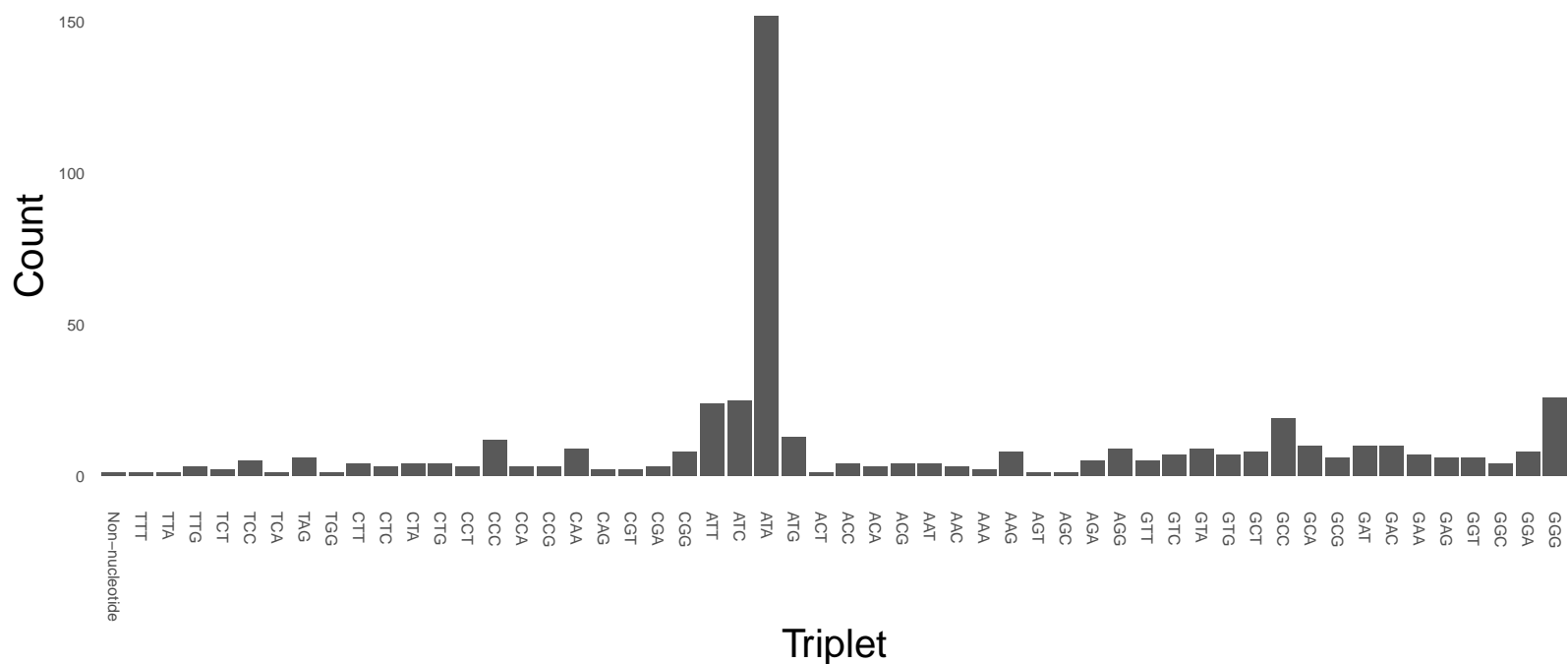
Gene IGHV3-9\*01\_T307C



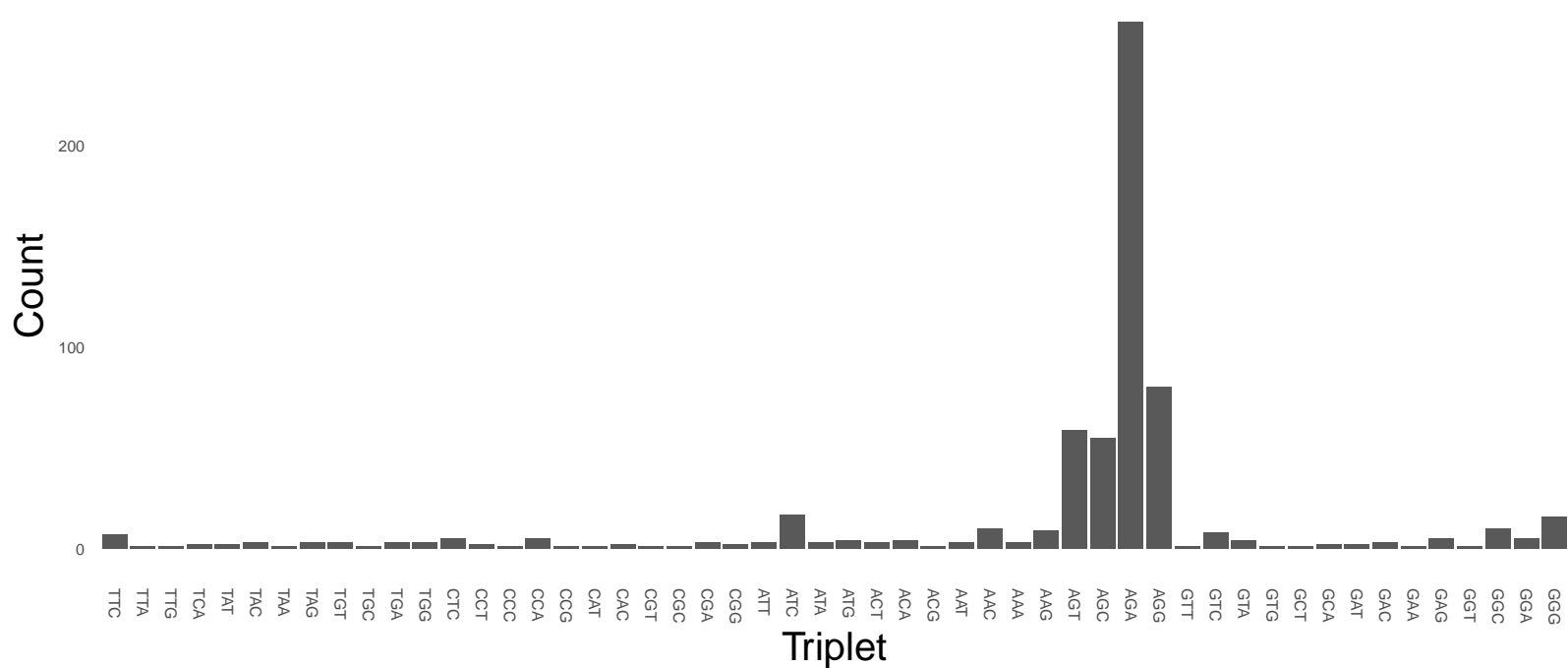
Gene IGHV4-61\*02\_A234G



IGHV3–9\*01\_T307C– Final 3 nucleotides as a triplet

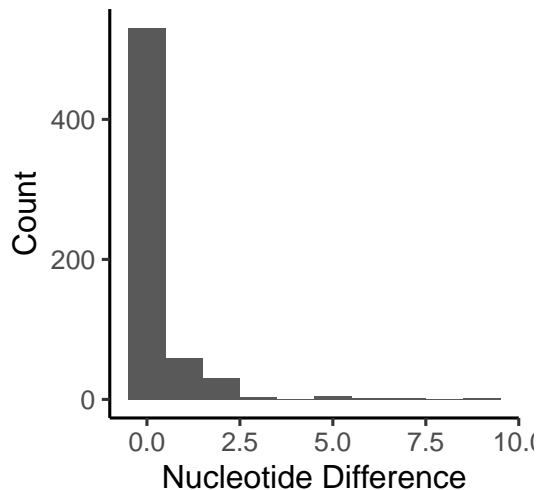


IGHV4–61\*02\_A234G– Final 3 nucleotides as a triplet



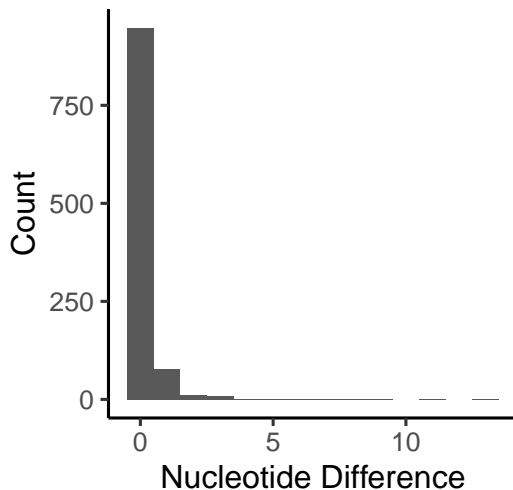
### IGHV1-2\*02

637 sequences assigned  
531 (83.4%) exact matches, in which:  
496 unique CDR3  
7 unique J



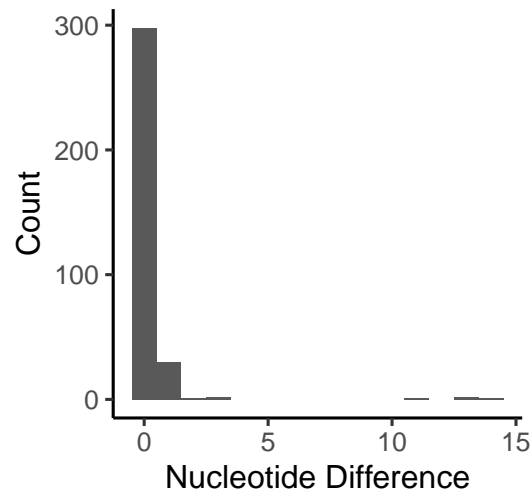
### IGHV1-18\*01

1059 sequences assigned  
948 (89.5%) exact matches, in which:  
912 unique CDR3  
7 unique J



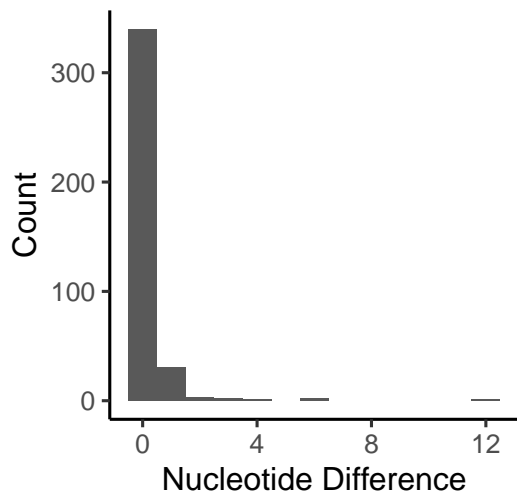
### IGHV1-46\*03

335 sequences assigned  
298 (89%) exact matches, in which:  
285 unique CDR3  
7 unique J



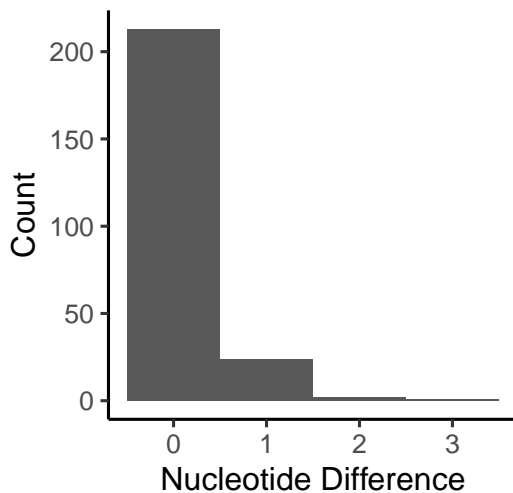
### IGHV1-3\*01

380 sequences assigned  
340 (89.5%) exact matches, in which:  
326 unique CDR3  
6 unique J



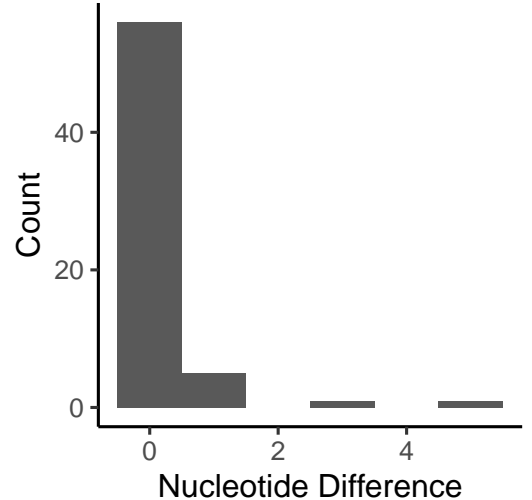
### IGHV1-24\*01

240 sequences assigned  
213 (88.8%) exact matches, in which:  
197 unique CDR3  
7 unique J



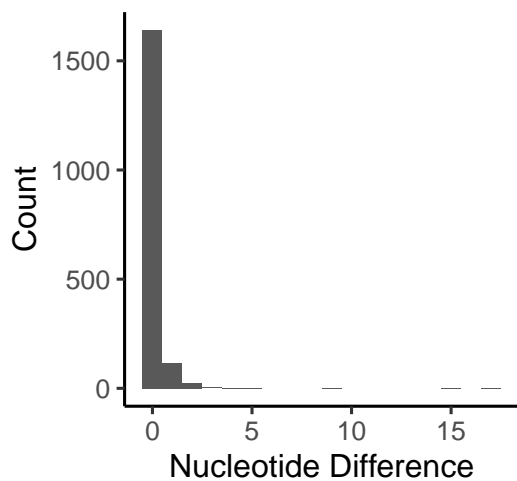
### IGHV1-58\*01

63 sequences assigned  
56 (88.9%) exact matches, in which:  
56 unique CDR3  
5 unique J



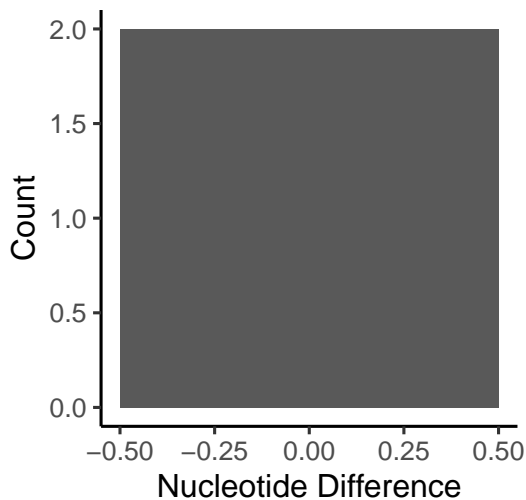
### IGHV1-8\*01

1792 sequences assigned  
1641 (91.6%) exact matches, in which:  
1537 unique CDR3  
7 unique J



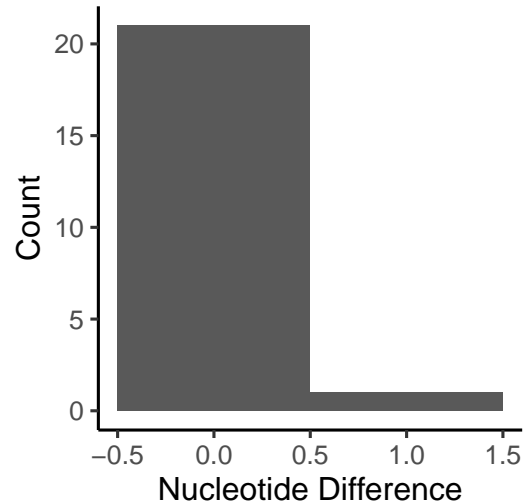
### IGHV1-45\*02

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



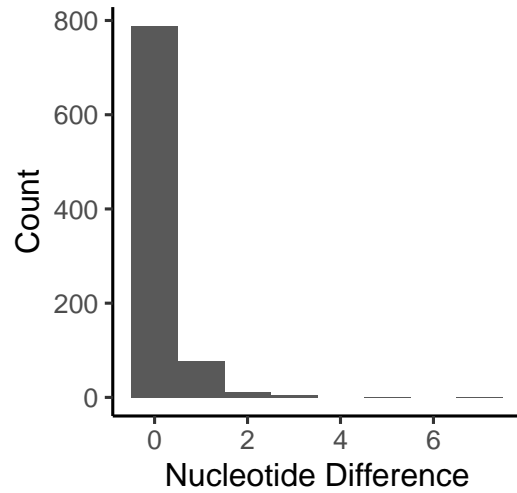
### IGHV1-58\*02

22 sequences assigned  
21 (95.5%) exact matches, in which:  
20 unique CDR3  
5 unique J



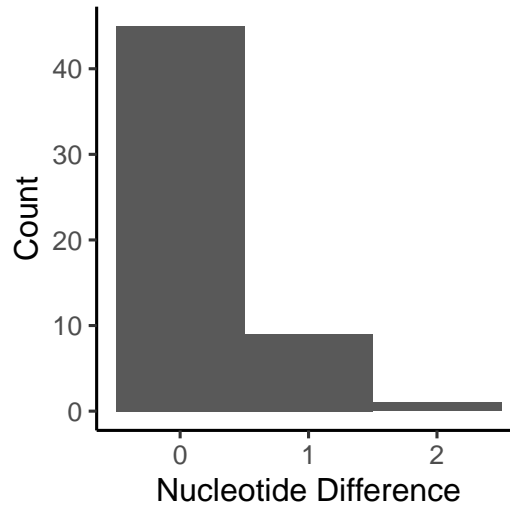
### IGHV1-69\*04

886 sequences assigned  
789 (89.1%) exact matches, in which:  
731 unique CDR3  
7 unique J



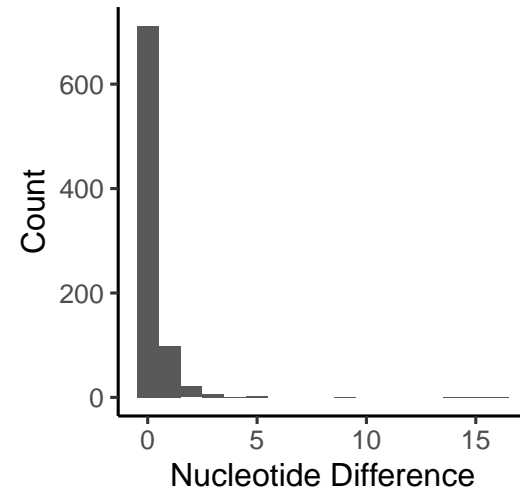
### IGHV2-70\*01

55 sequences assigned  
45 (81.8%) exact matches, in which:  
42 unique CDR3  
5 unique J



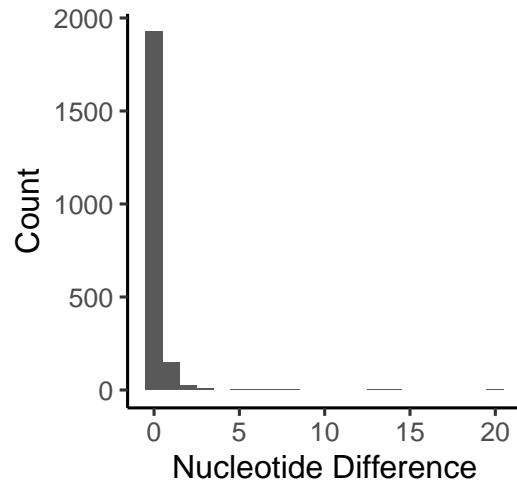
### IGHV3-9\*01

844 sequences assigned  
712 (84.4%) exact matches, in which:  
662 unique CDR3  
7 unique J



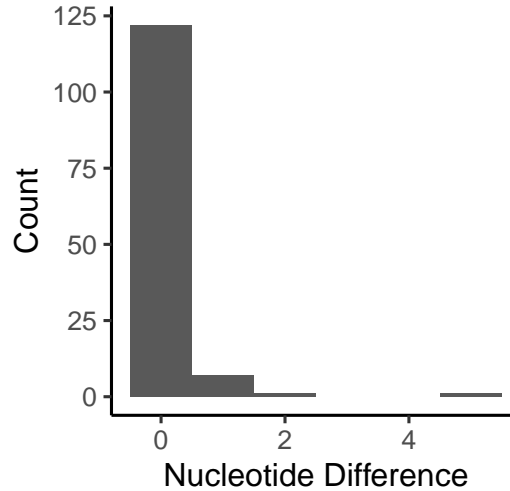
### IGHV2-5\*01

2127 sequences assigned  
1926 (90.6%) exact matches, in which:  
1810 unique CDR3  
7 unique J



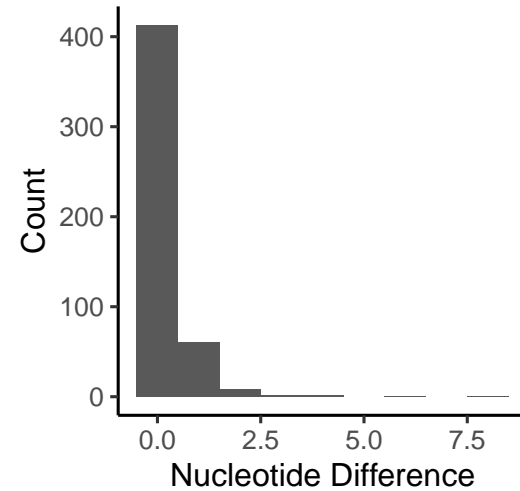
### IGHV2-70\*15

131 sequences assigned  
122 (93.1%) exact matches, in which:  
120 unique CDR3  
5 unique J



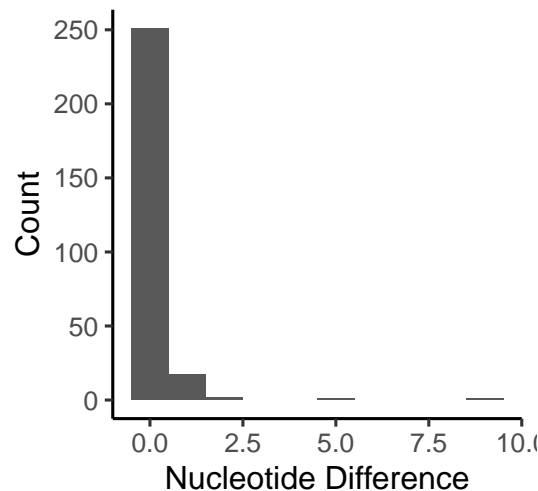
### IGHV3-9\*01\_T307C

488 sequences assigned  
413 (84.6%) exact matches, in which:  
377 unique CDR3  
6 unique J



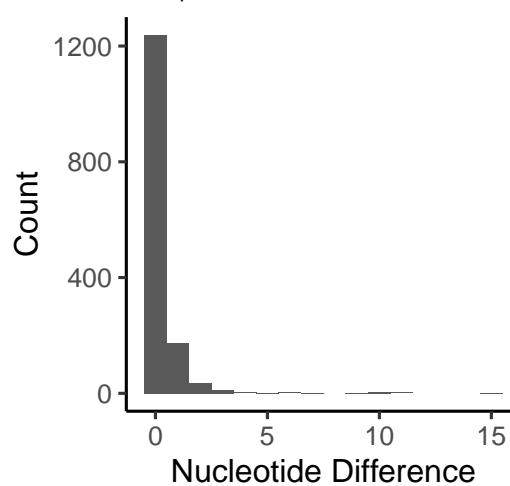
### IGHV2-26\*01

272 sequences assigned  
251 (92.3%) exact matches, in which:  
243 unique CDR3  
7 unique J



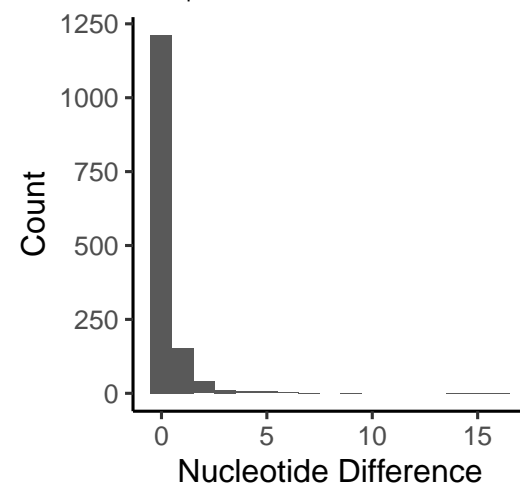
### IGHV3-7\*01

1477 sequences assigned  
1238 (83.8%) exact matches, in which:  
1181 unique CDR3  
7 unique J



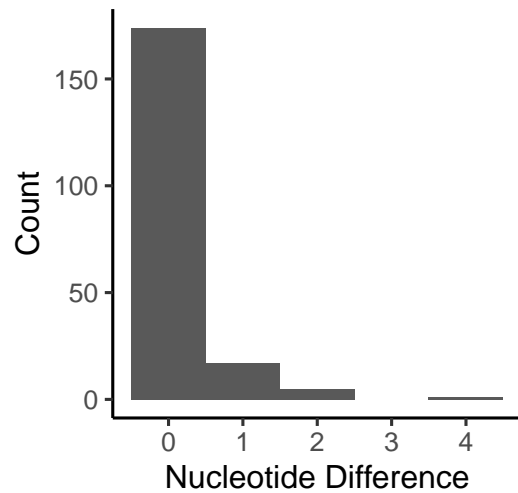
### IGHV3-11\*01

1438 sequences assigned  
1212 (84.3%) exact matches, in which:  
1153 unique CDR3  
7 unique J



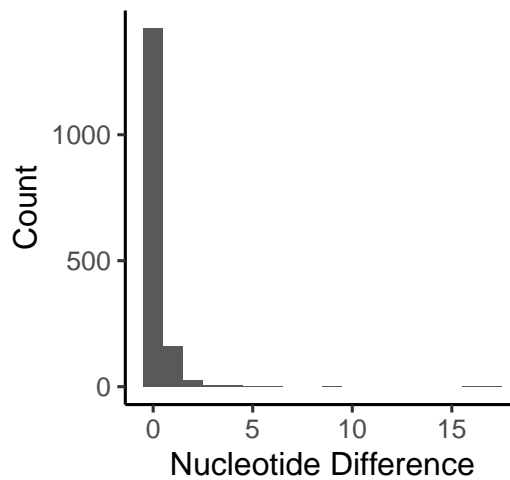
### IGHV3-13\*01

197 sequences assigned  
174 (88.3%) exact matches, in which:  
164 unique CDR3  
6 unique J



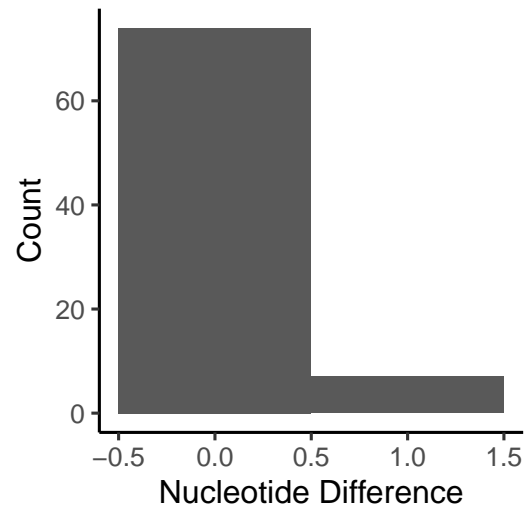
### IGHV3-21\*01

1633 sequences assigned  
1422 (87.1%) exact matches, in which:  
1336 unique CDR3  
7 unique J



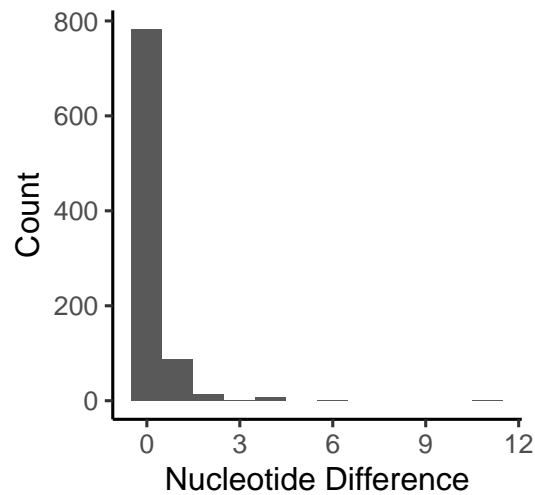
### IGHV3-43\*01

81 sequences assigned  
74 (91.4%) exact matches, in which:  
71 unique CDR3  
6 unique J



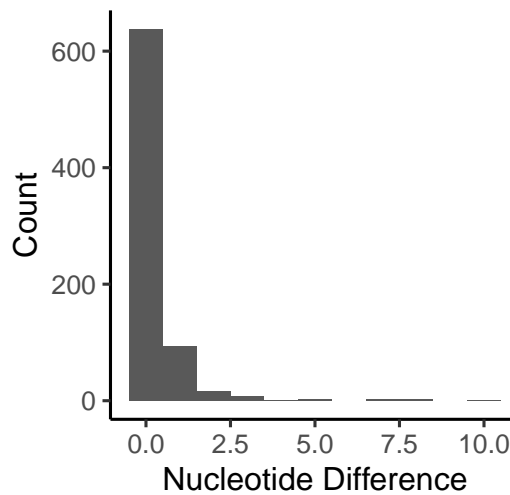
### IGHV3-15\*01

898 sequences assigned  
783 (87.2%) exact matches, in which:  
736 unique CDR3  
7 unique J



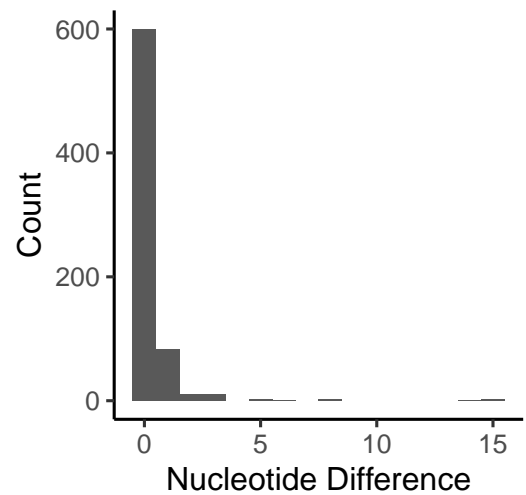
### IGHV3-30-3\*01

766 sequences assigned  
638 (83.3%) exact matches, in which:  
594 unique CDR3  
6 unique J



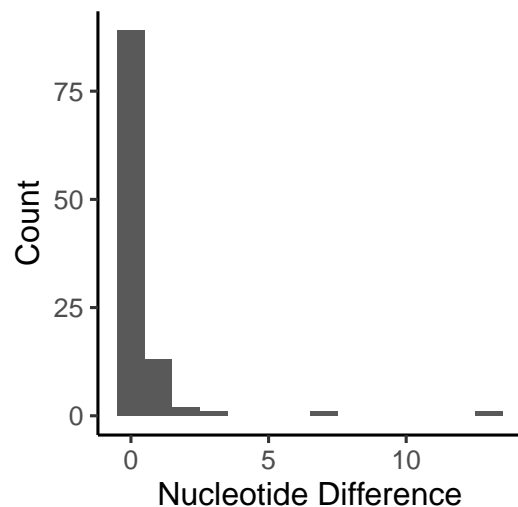
### IGHV3-48\*01

713 sequences assigned  
600 (84.2%) exact matches, in which:  
562 unique CDR3  
7 unique J



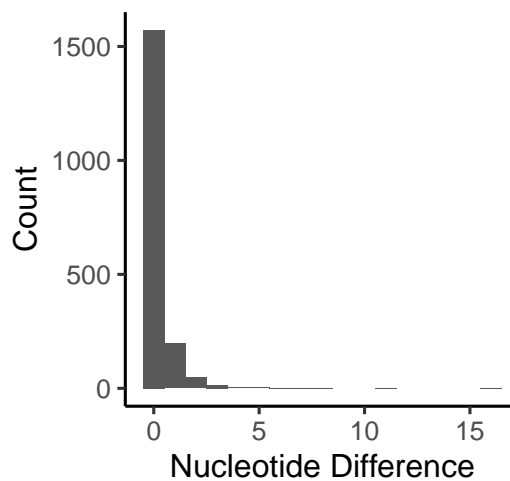
### IGHV3-20\*01

107 sequences assigned  
89 (83.2%) exact matches, in which:  
84 unique CDR3  
6 unique J



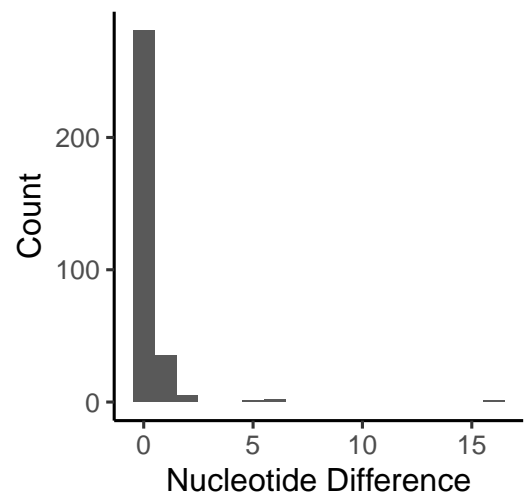
### IGHV3-33\*01

1845 sequences assigned  
1572 (85.2%) exact matches, in which:  
1482 unique CDR3  
7 unique J



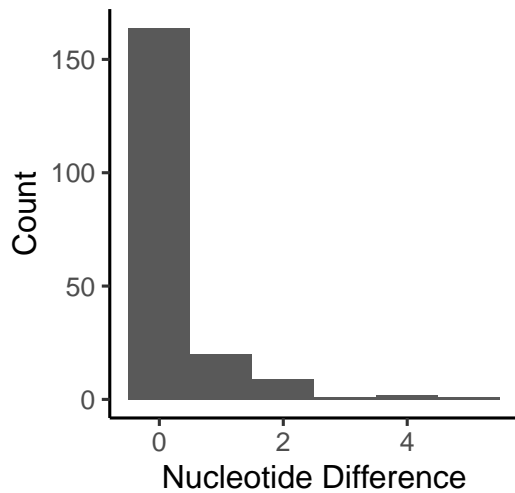
### IGHV3-49\*03

325 sequences assigned  
281 (86.5%) exact matches, in which:  
265 unique CDR3  
7 unique J



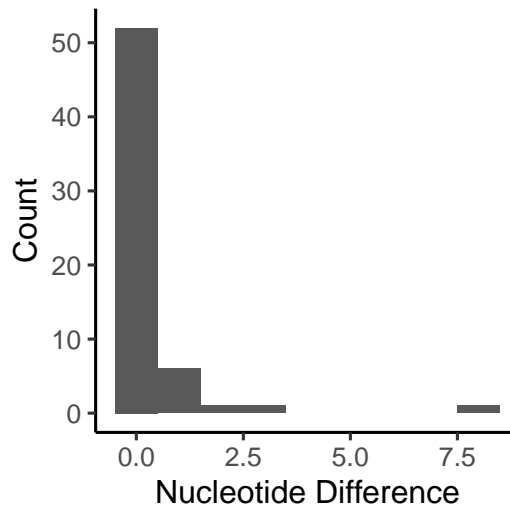
### IGHV3–53\*02

197 sequences assigned  
164 (83.2%) exact matches, in which:  
155 unique CDR3  
7 unique J



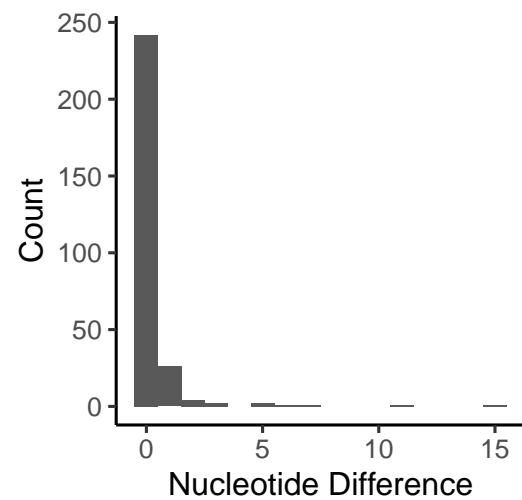
### IGHV3–72\*01

61 sequences assigned  
52 (85.2%) exact matches, in which:  
47 unique CDR3  
6 unique J



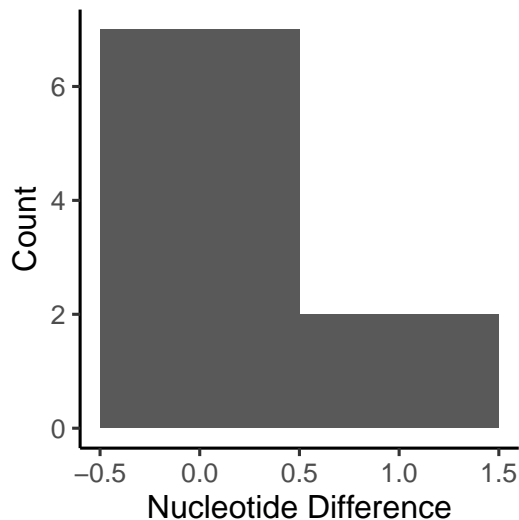
### IGHV3–74\*01

280 sequences assigned  
242 (86.4%) exact matches, in which:  
226 unique CDR3  
7 unique J



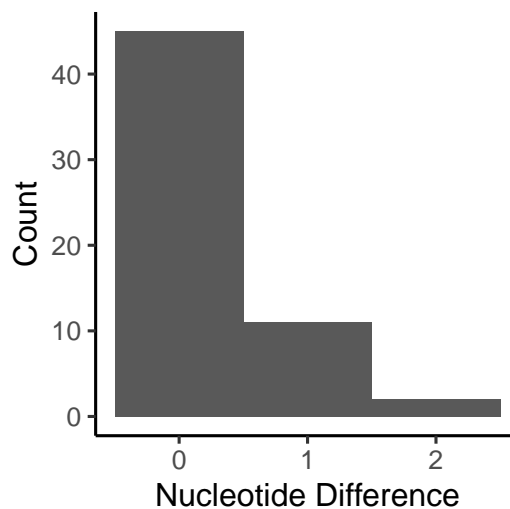
### IGHV3–64\*02

9 sequences assigned  
7 (77.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



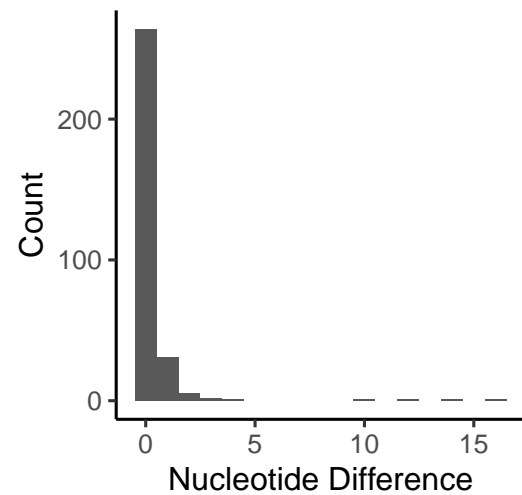
### IGHV3–73\*01

58 sequences assigned  
45 (77.6%) exact matches, in which:  
43 unique CDR3  
5 unique J



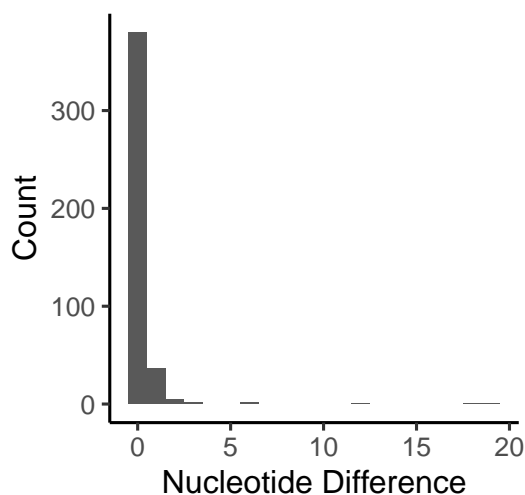
### IGHV4–4\*07

307 sequences assigned  
264 (86%) exact matches, in which:  
249 unique CDR3  
7 unique J



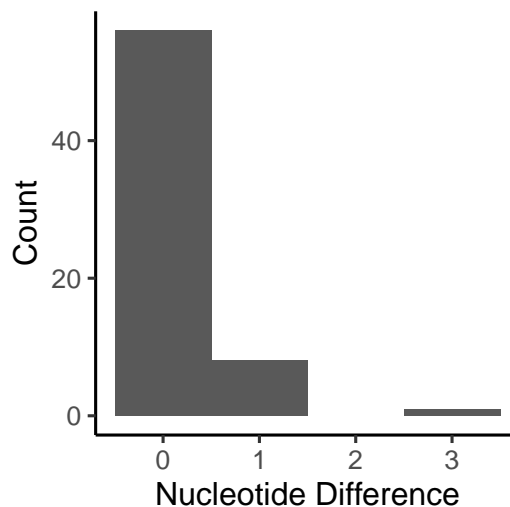
### IGHV3–66\*01

428 sequences assigned  
380 (88.8%) exact matches, in which:  
357 unique CDR3  
6 unique J



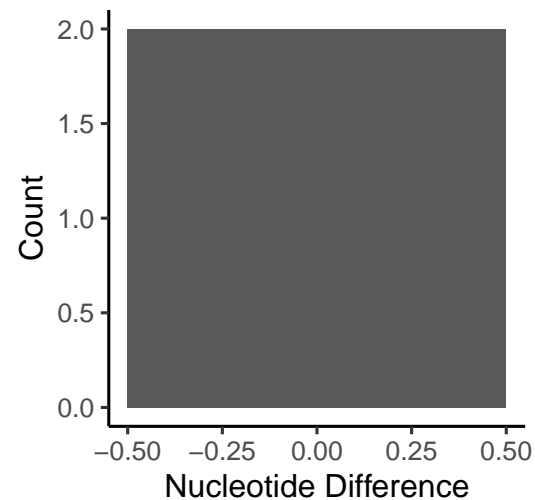
### IGHV3–73\*02

65 sequences assigned  
56 (86.2%) exact matches, in which:  
54 unique CDR3  
5 unique J



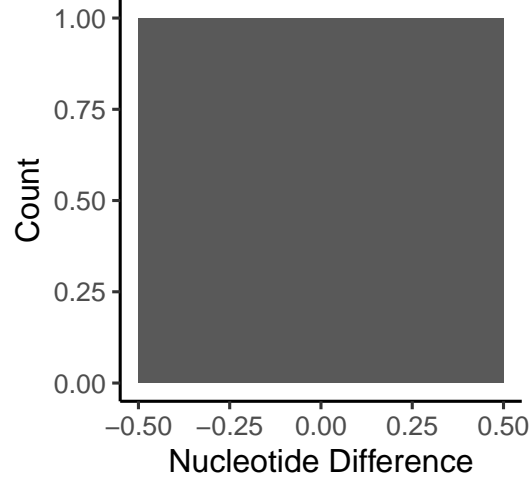
### IGHV4–28\*01

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
1 unique J



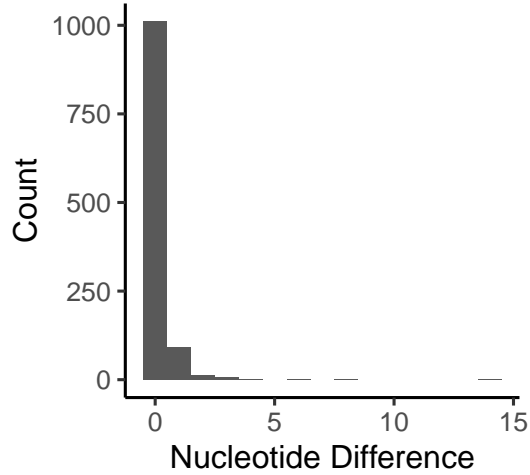
### IGHV4-28\*03

1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



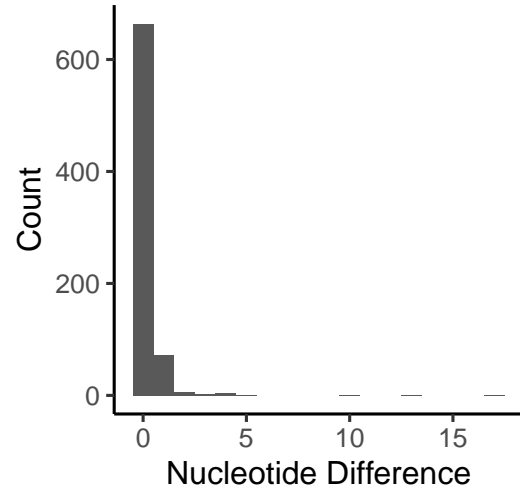
### IGHV4-31\*03

1128 sequences assigned  
1011 (89.6%) exact matches, in which:  
962 unique CDR3  
7 unique J



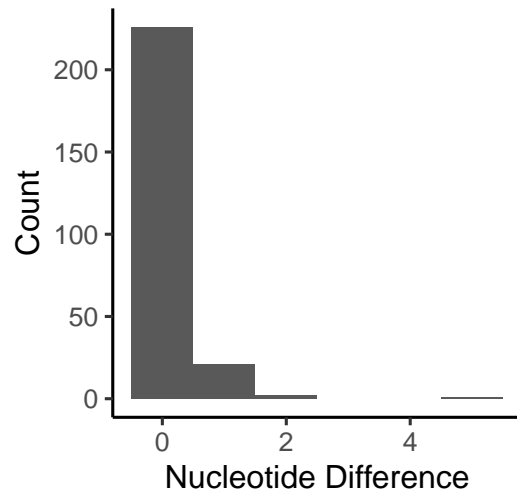
### IGHV4-59\*01

754 sequences assigned  
664 (88.1%) exact matches, in which:  
641 unique CDR3  
7 unique J



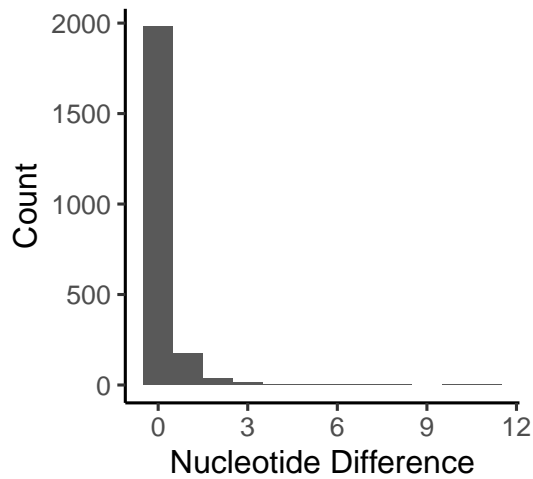
### IGHV4-30-2\*01

250 sequences assigned  
226 (90.4%) exact matches, in which:  
217 unique CDR3  
7 unique J



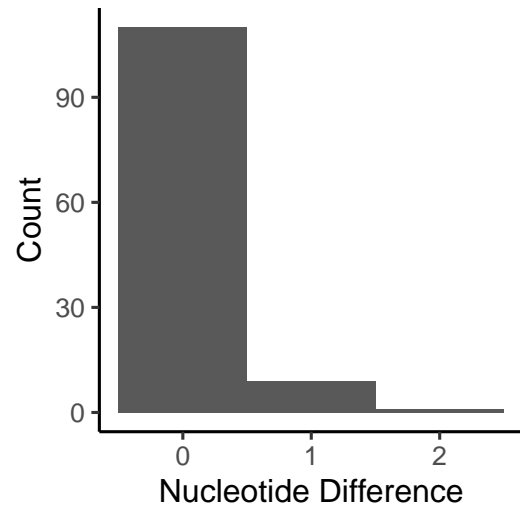
### IGHV4-34\*01

2221 sequences assigned  
1980 (89.1%) exact matches, in which:  
1846 unique CDR3  
7 unique J



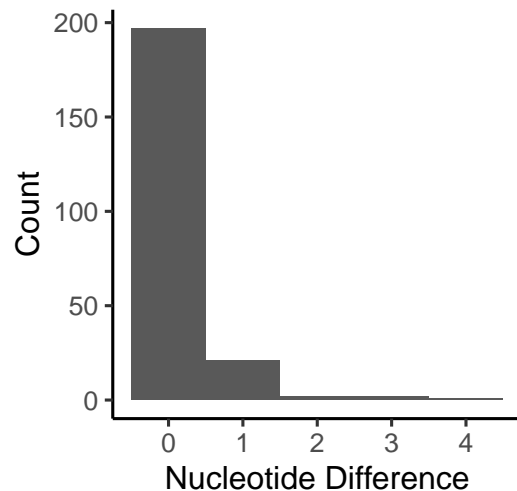
### IGHV4-61\*01

122 sequences assigned  
110 (90.2%) exact matches, in which:  
108 unique CDR3  
5 unique J



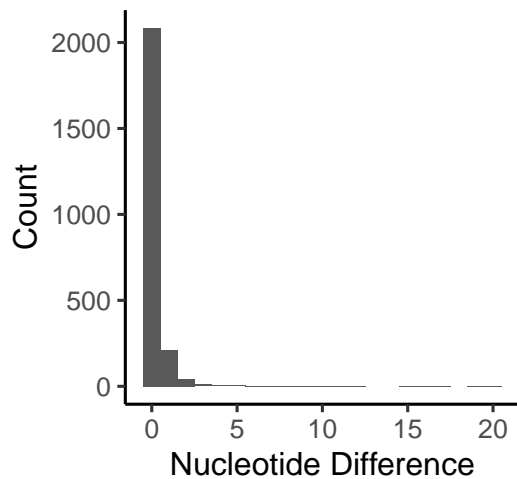
### IGHV4-30-4\*01

224 sequences assigned  
197 (87.9%) exact matches, in which:  
191 unique CDR3  
7 unique J



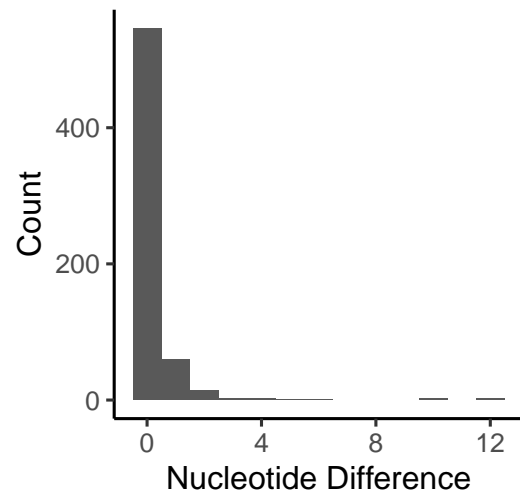
### IGHV4-39\*01

2379 sequences assigned  
2084 (87.6%) exact matches, in which:  
1935 unique CDR3  
7 unique J



### IGHV4-61\*02\_A234G

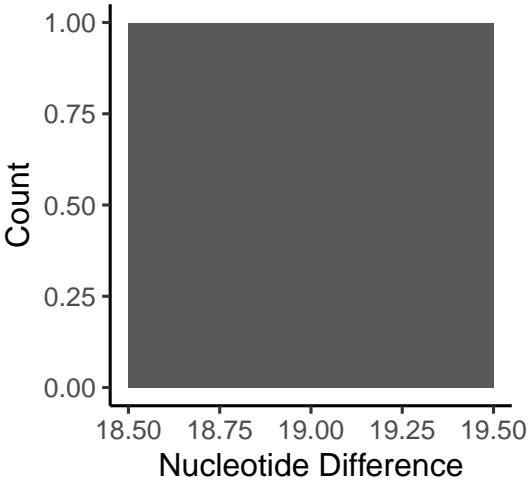
629 sequences assigned  
546 (86.8%) exact matches, in which:  
535 unique CDR3  
6 unique J





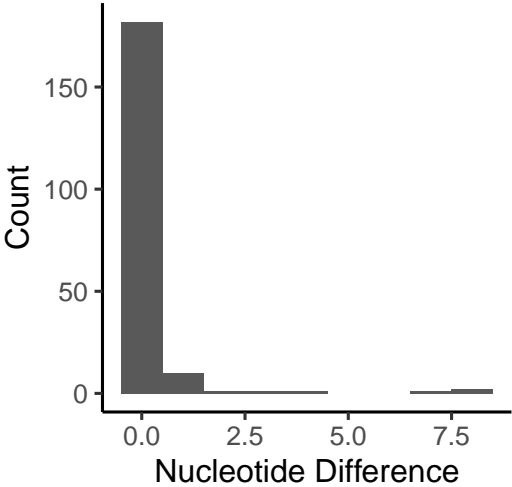
IGHV1/OR15-9\*01

1 sequences assigned  
No exact matches.



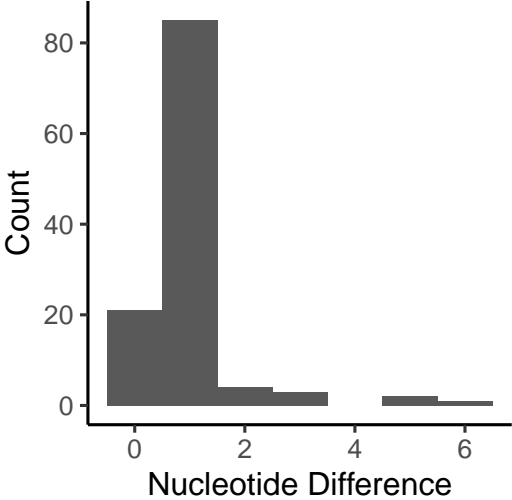
IGHV6-1\*01

198 sequences assigned  
182 (91.9%) exact matches, in which:  
173 unique CDR3  
7 unique J



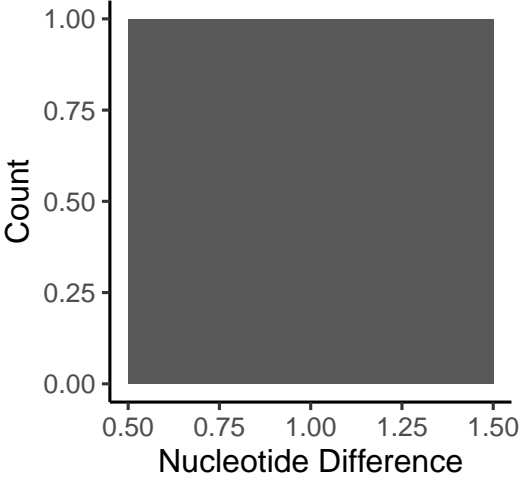
IGHV5-51\*01

116 sequences assigned  
21 (18.1%) exact matches, in which:  
21 unique CDR3  
6 unique J



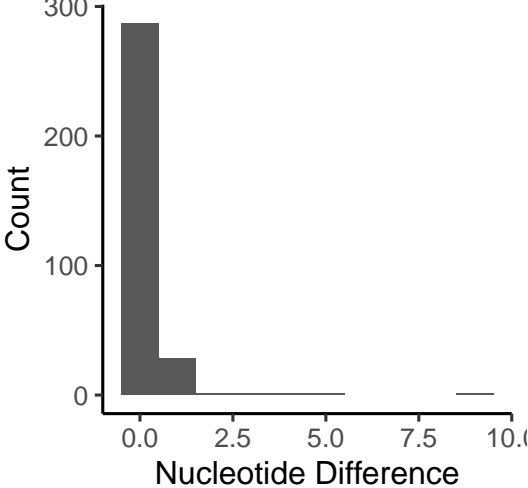
IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.



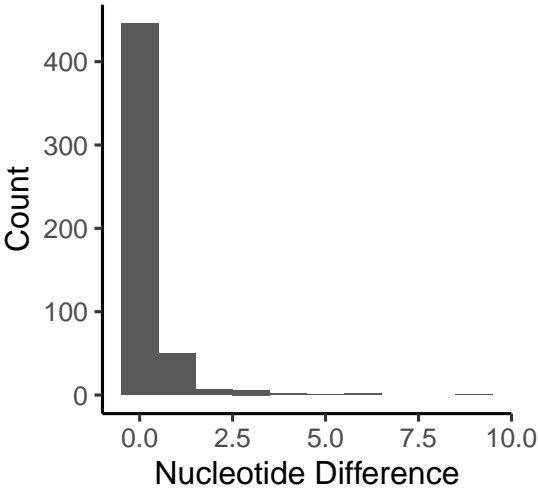
IGHV5-51\*03

320 sequences assigned  
287 (89.7%) exact matches, in which:  
272 unique CDR3  
7 unique J

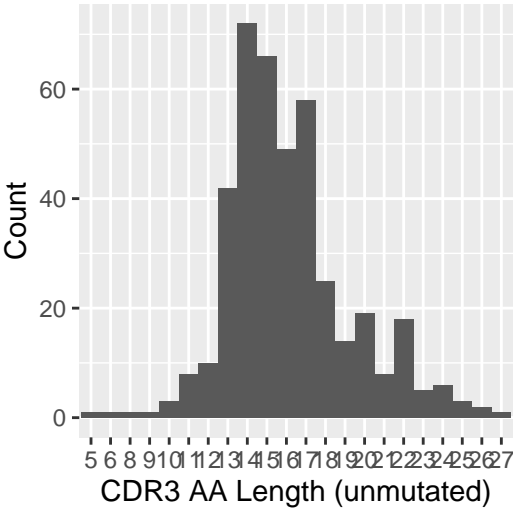


IGHV7-4-1\*02

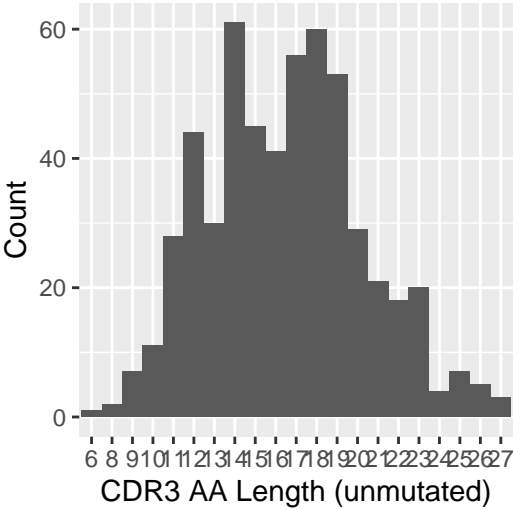
515 sequences assigned  
446 (86.6%) exact matches, in which:  
421 unique CDR3  
7 unique J

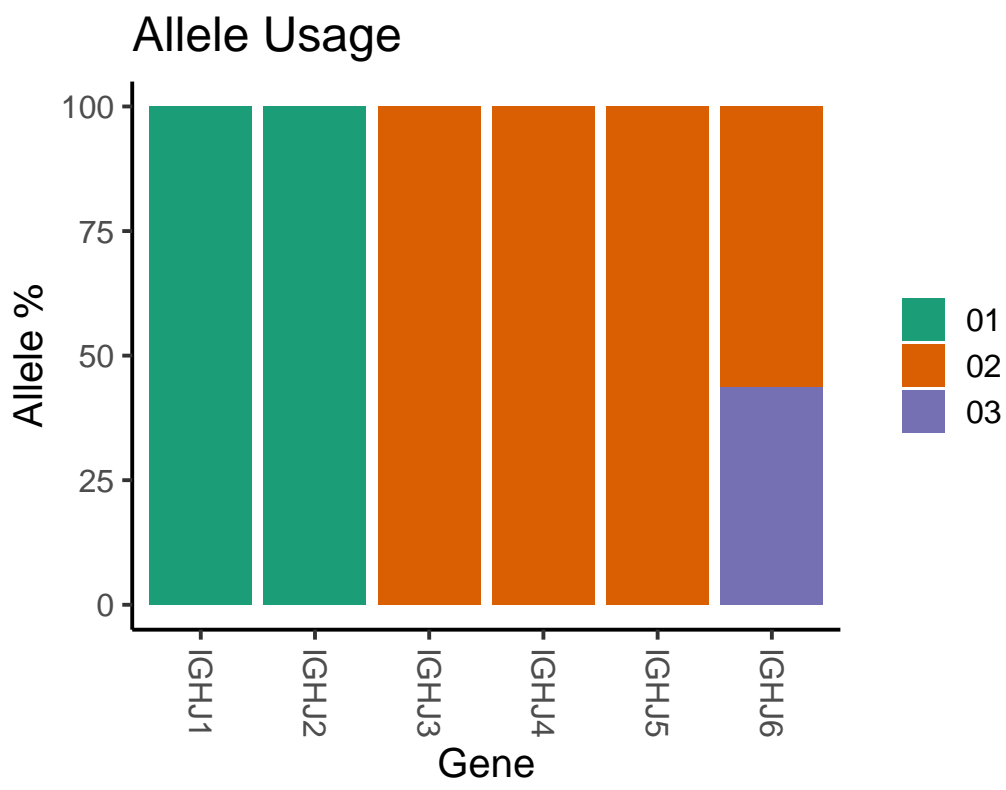


IGHV3-9\*01\_T307C

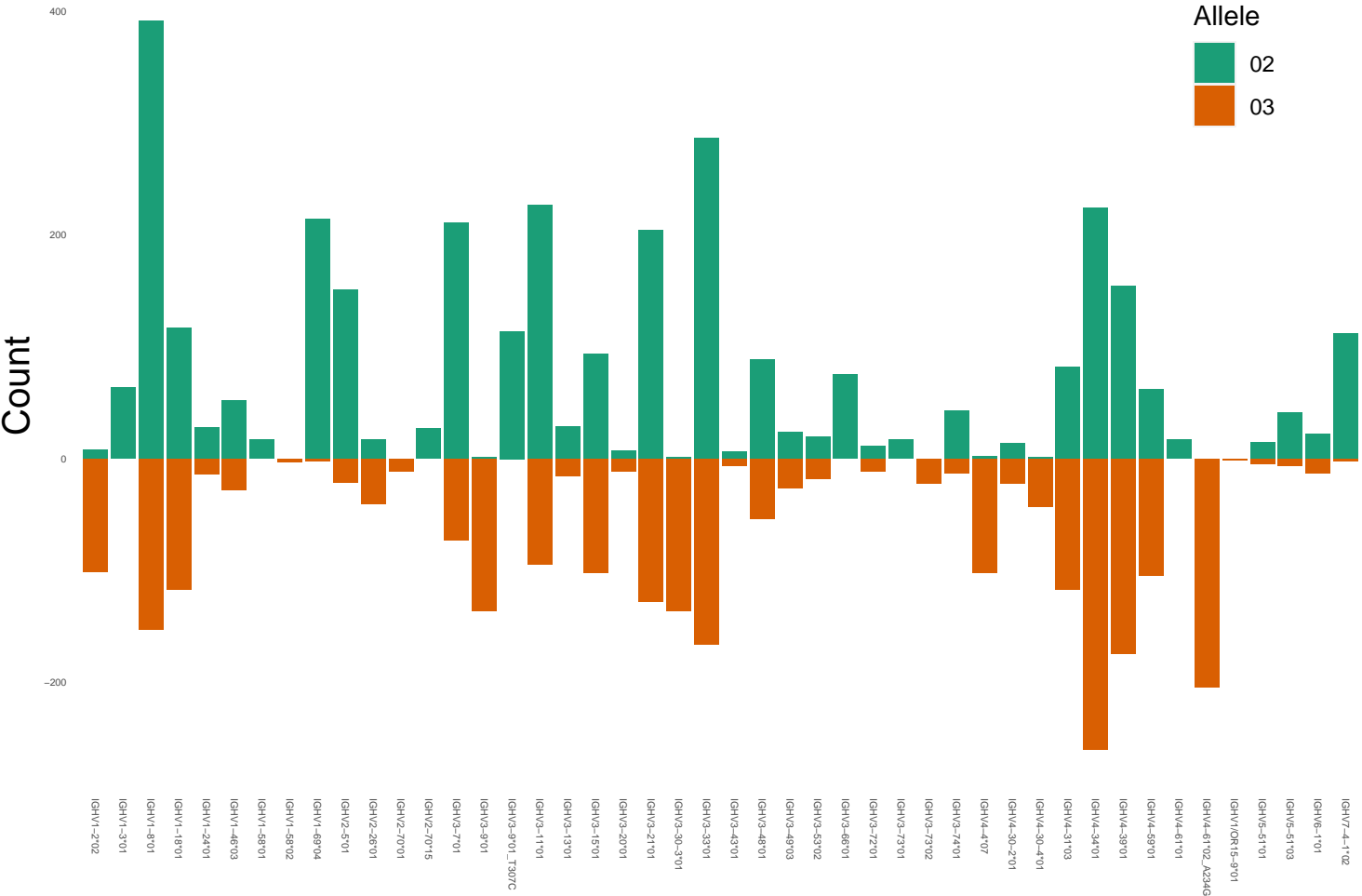


IGHV4-61\*02\_A234G





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.