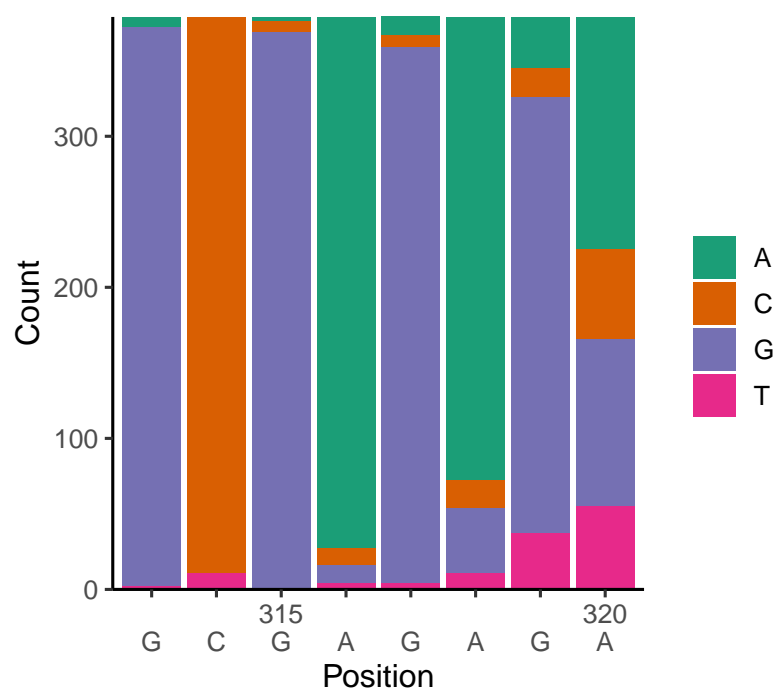
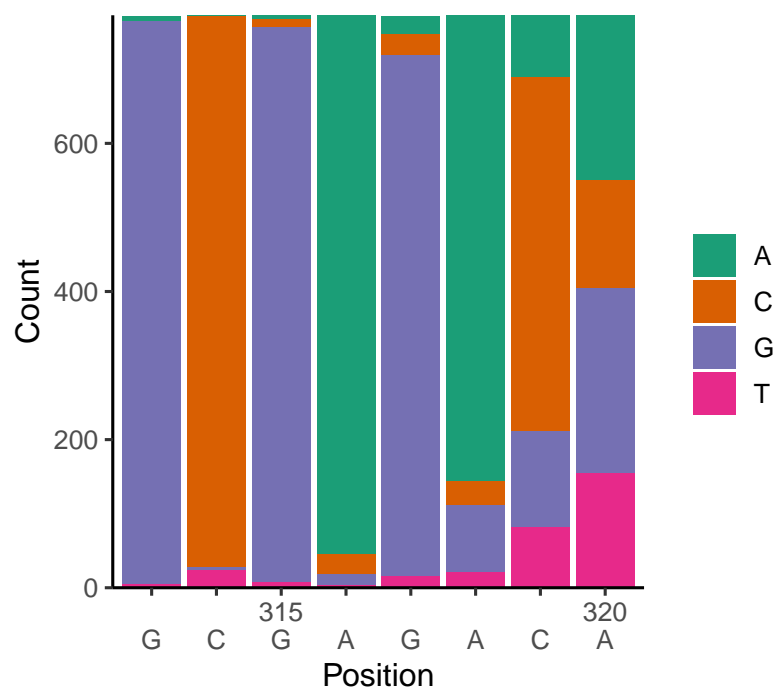


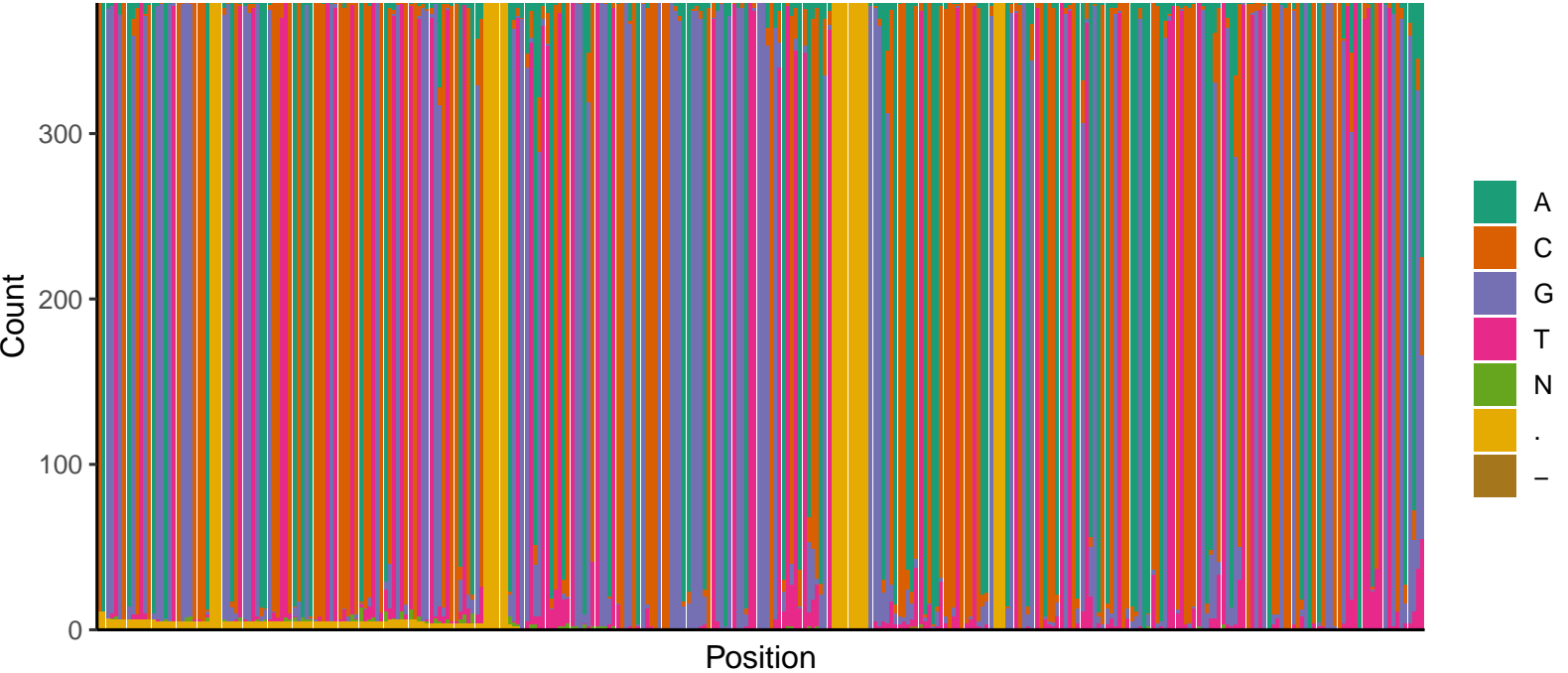
Gene IGHV4-61\*02\_A234G



Gene IGHV5-51\*01\_C45G



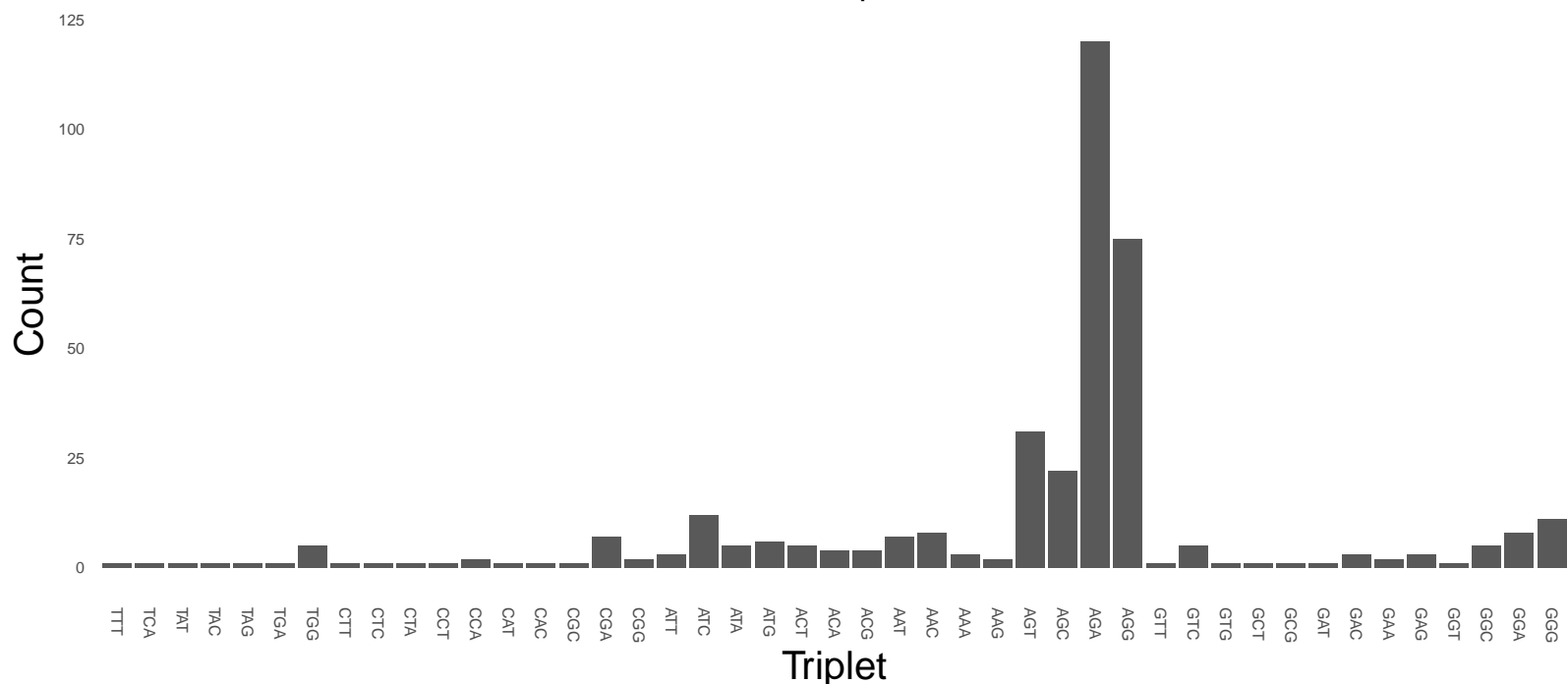
Gene IGHV4-61\*02\_A234G



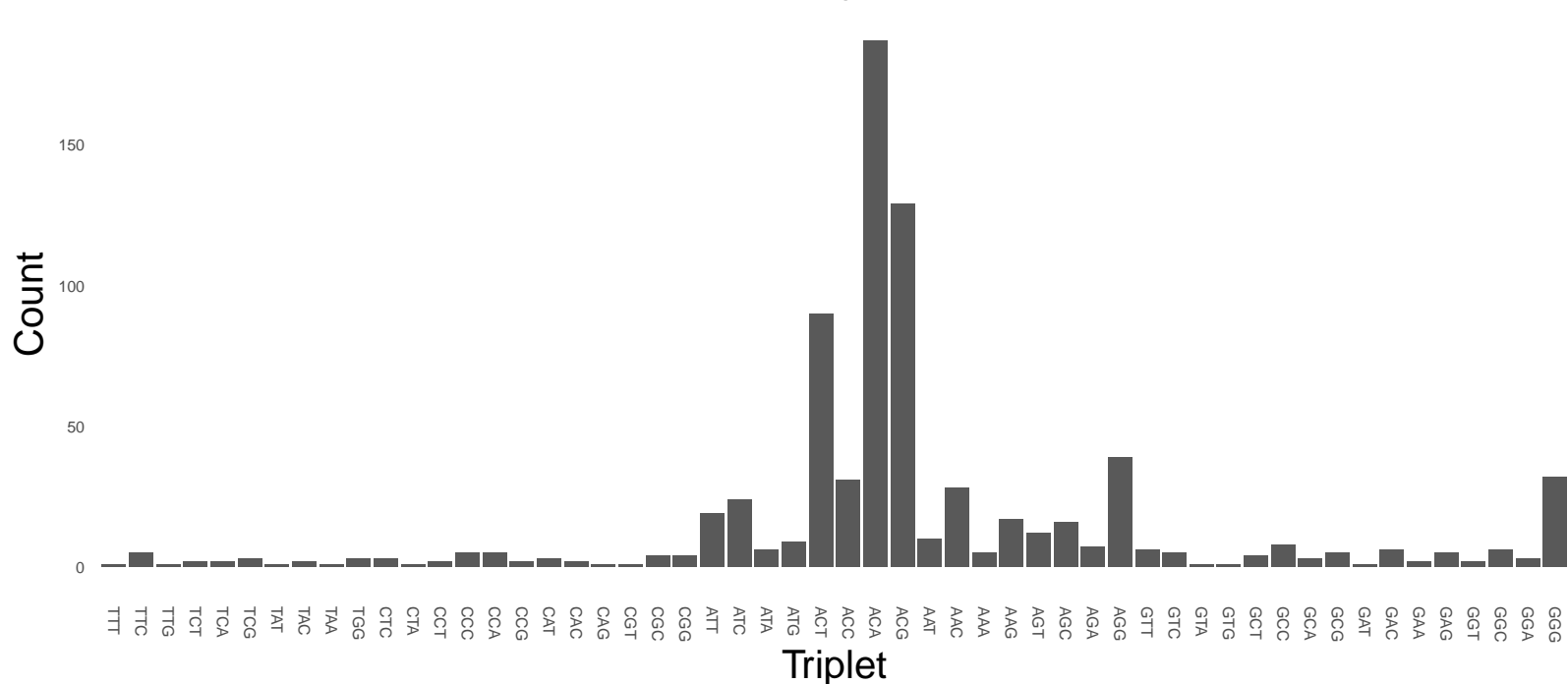
Gene IGHV5-51\*01\_C45G



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

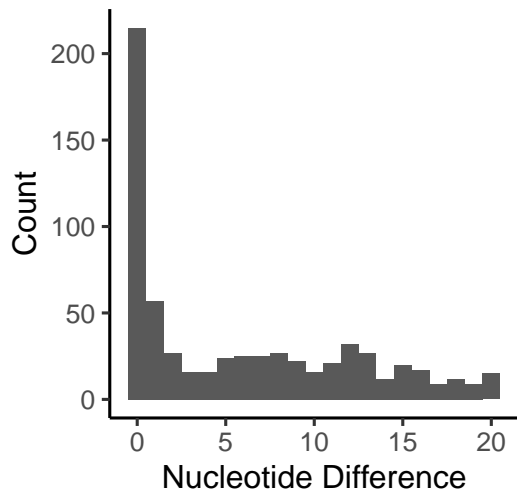


IGHV5-51\*01\_C45G- Final 3 nucleotides as a triplet



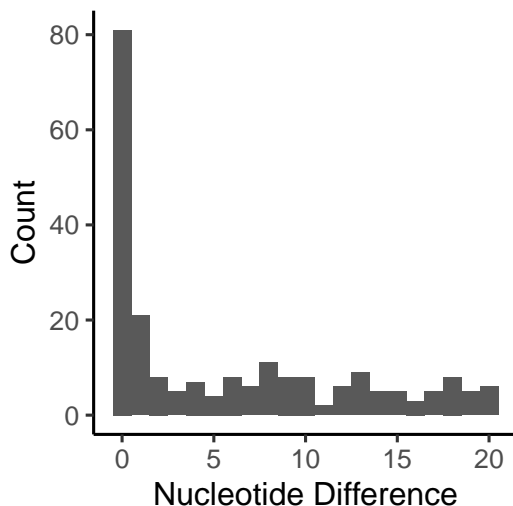
### IGHV1-2\*02

723 sequences assigned  
215 (29.7%) exact matches, in which:  
112 unique CDR3  
6 unique J



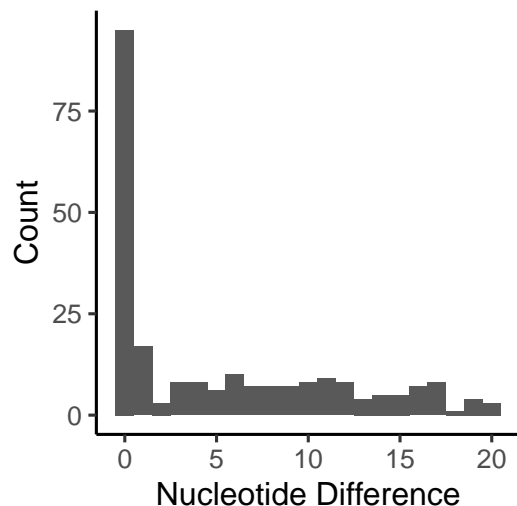
### IGHV1-18\*01

247 sequences assigned  
81 (32.8%) exact matches, in which:  
80 unique CDR3  
5 unique J



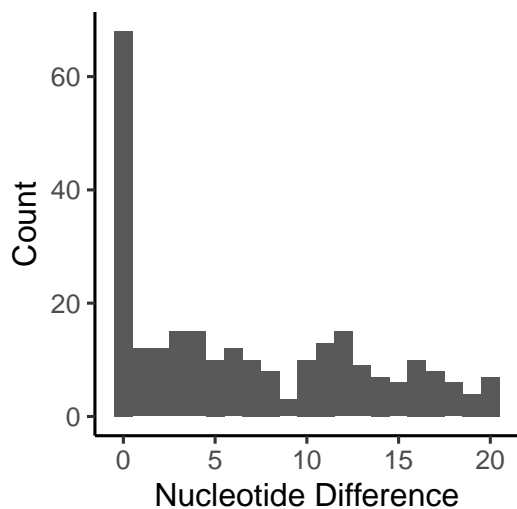
### IGHV1-46\*03

251 sequences assigned  
95 (37.8%) exact matches, in which:  
95 unique CDR3  
7 unique J



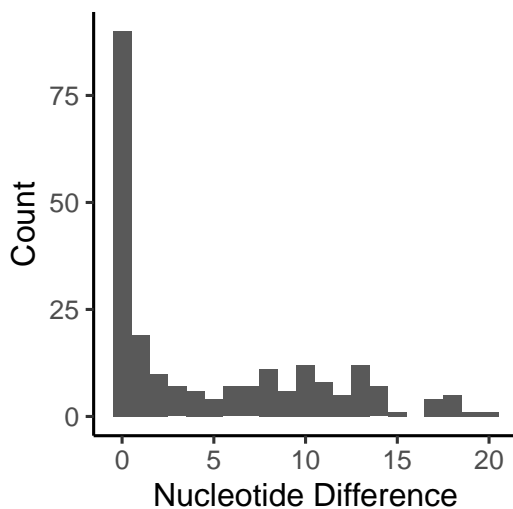
### IGHV1-3\*01

305 sequences assigned  
68 (22.3%) exact matches, in which:  
68 unique CDR3  
4 unique J



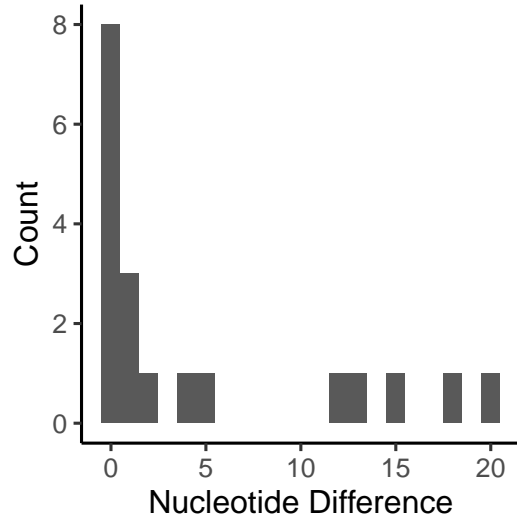
### IGHV1-18\*04

246 sequences assigned  
90 (36.6%) exact matches, in which:  
90 unique CDR3  
6 unique J



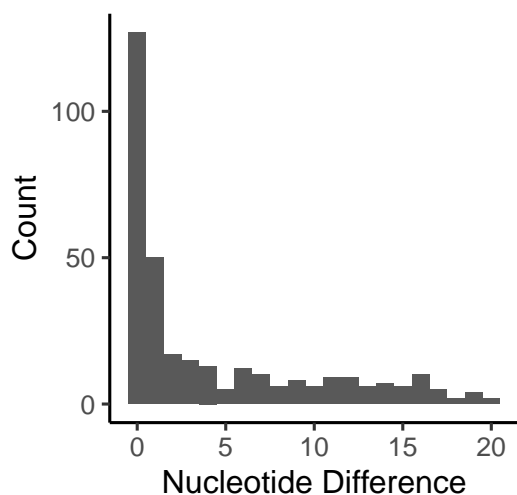
### IGHV1-58\*02

27 sequences assigned  
8 (29.6%) exact matches, in which:  
8 unique CDR3  
3 unique J



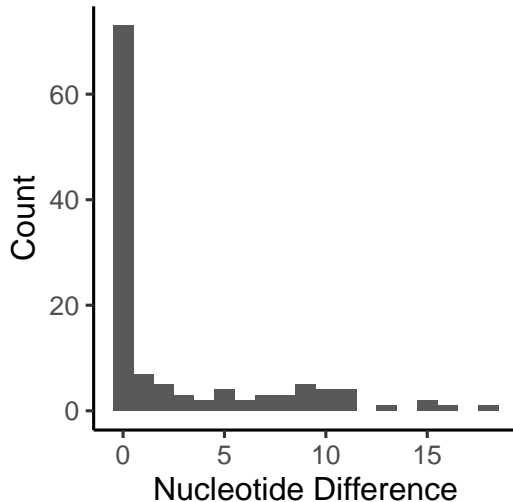
### IGHV1-8\*01

354 sequences assigned  
127 (35.9%) exact matches, in which:  
125 unique CDR3  
6 unique J



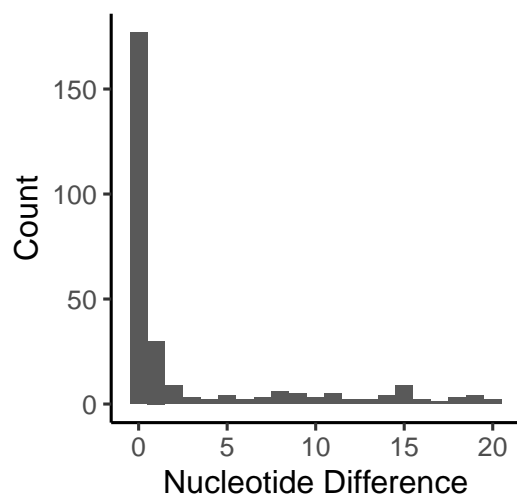
### IGHV1-24\*01

131 sequences assigned  
73 (55.7%) exact matches, in which:  
73 unique CDR3  
6 unique J



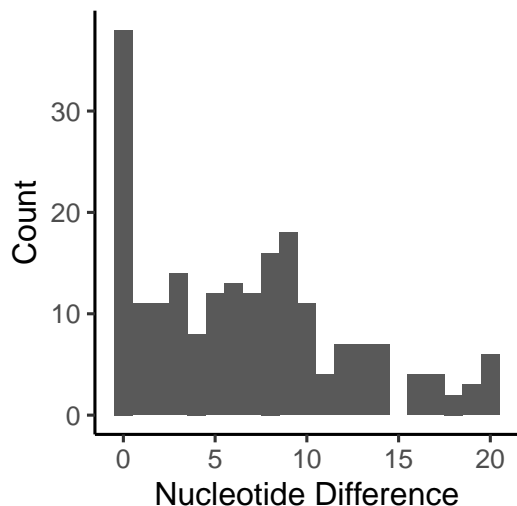
### IGHV1-69\*04

331 sequences assigned  
177 (53.5%) exact matches, in which:  
175 unique CDR3  
6 unique J



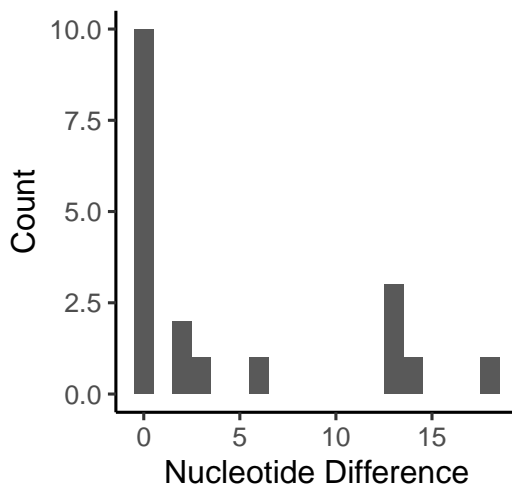
### IGHV2-5\*01

228 sequences assigned  
38 (16.7%) exact matches, in which:  
38 unique CDR3  
4 unique J



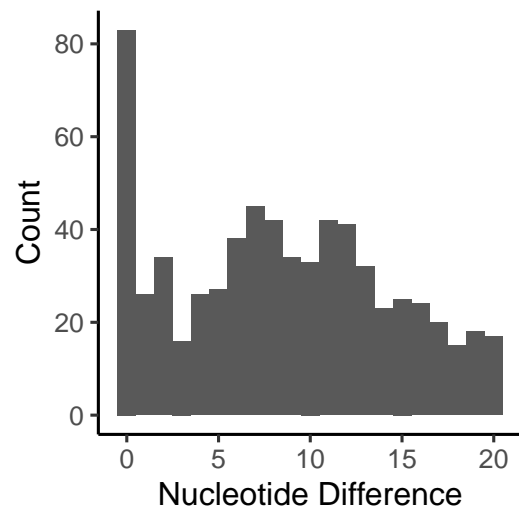
### IGHV2-70\*01

26 sequences assigned  
10 (38.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



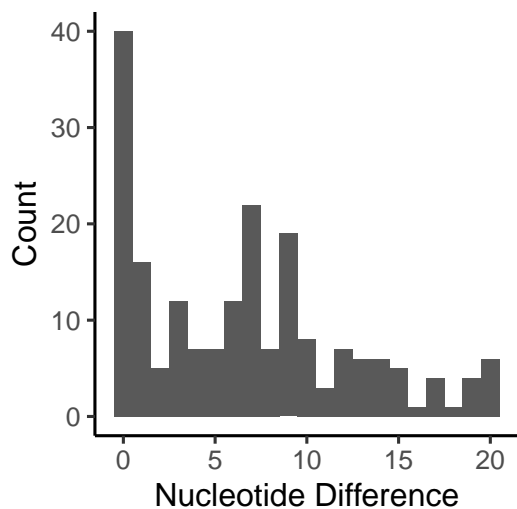
### IGHV3-7\*03

763 sequences assigned  
83 (10.9%) exact matches, in which:  
82 unique CDR3  
6 unique J



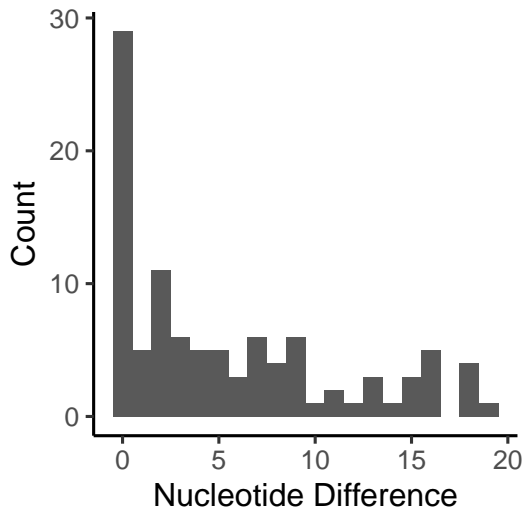
### IGHV2-5\*02

233 sequences assigned  
40 (17.2%) exact matches, in which:  
40 unique CDR3  
5 unique J



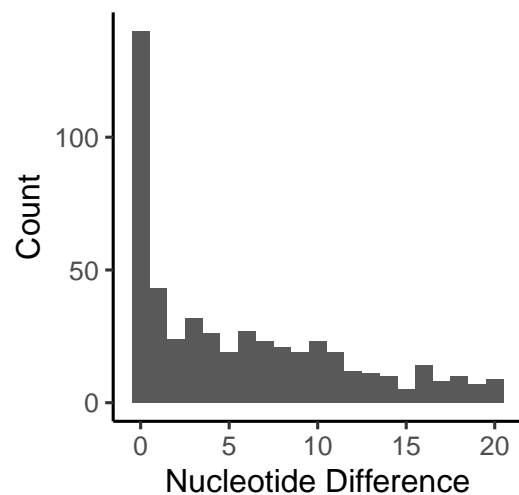
### IGHV2-70\*15

112 sequences assigned  
29 (25.9%) exact matches, in which:  
28 unique CDR3  
5 unique J



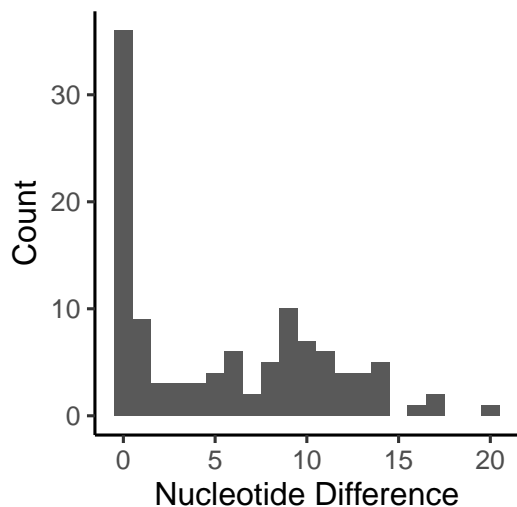
### IGHV3-9\*01

554 sequences assigned  
140 (25.3%) exact matches, in which:  
140 unique CDR3  
6 unique J



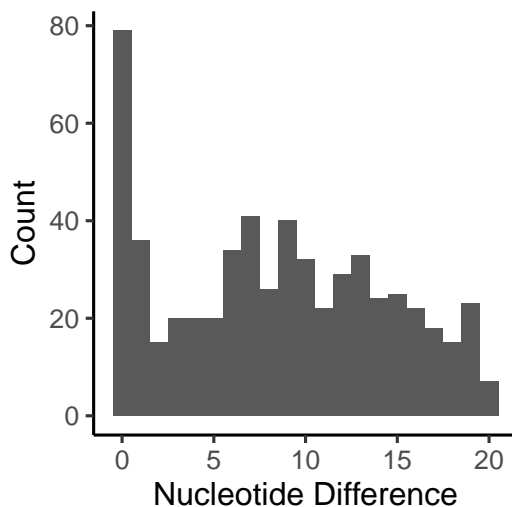
### IGHV2-26\*01

118 sequences assigned  
36 (30.5%) exact matches, in which:  
36 unique CDR3  
7 unique J



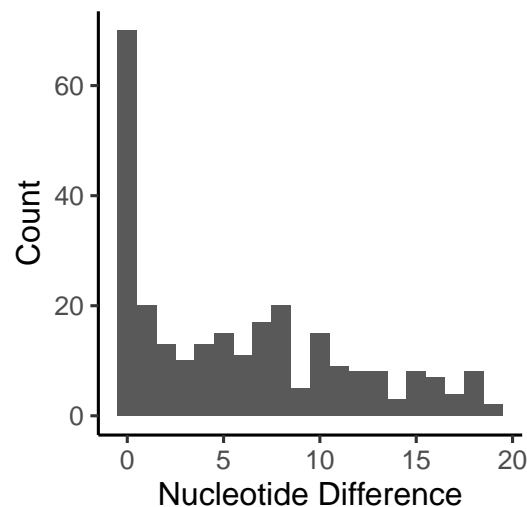
### IGHV3-7\*01

663 sequences assigned  
79 (11.9%) exact matches, in which:  
79 unique CDR3  
6 unique J



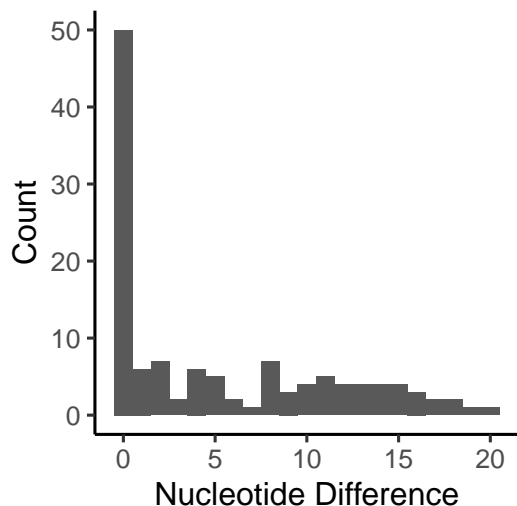
### IGHV3-11\*01

286 sequences assigned  
70 (24.5%) exact matches, in which:  
70 unique CDR3  
5 unique J



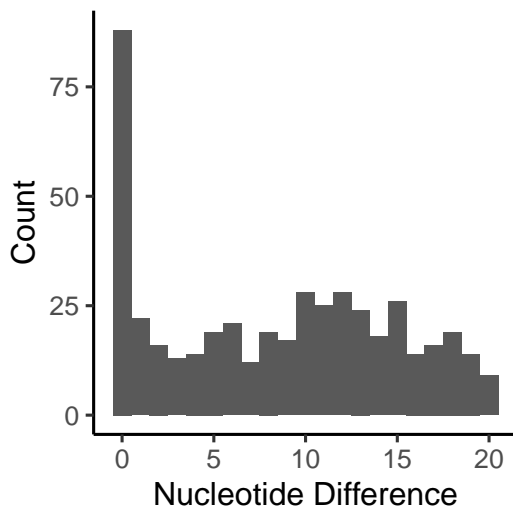
### IGHV3-11\*06

150 sequences assigned  
50 (33.3%) exact matches, in which:  
49 unique CDR3  
5 unique J



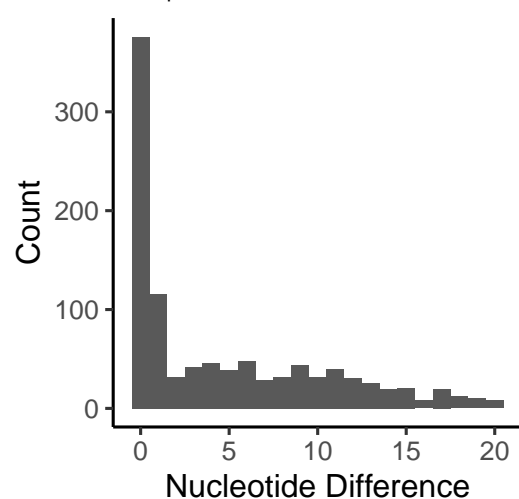
### IGHV3-15\*01

568 sequences assigned  
88 (15.5%) exact matches, in which:  
88 unique CDR3  
7 unique J



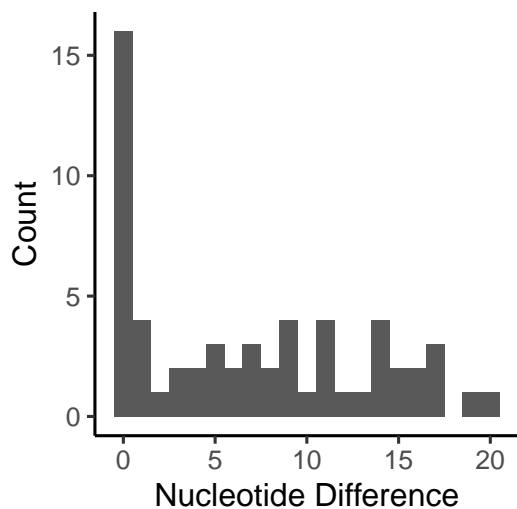
### IGHV3-21\*01

1114 sequences assigned  
376 (33.8%) exact matches, in which:  
372 unique CDR3  
6 unique J



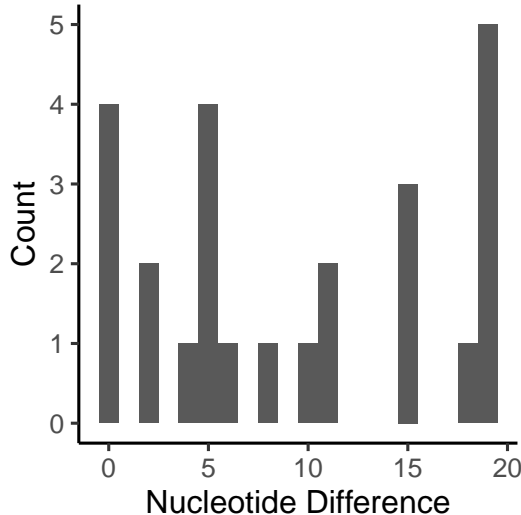
### IGHV3-13\*01

67 sequences assigned  
16 (23.9%) exact matches, in which:  
16 unique CDR3  
4 unique J



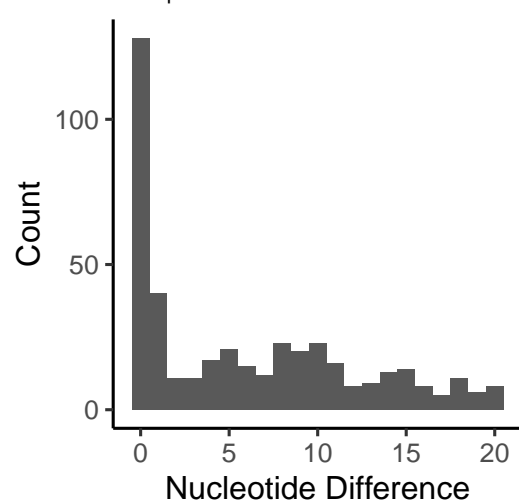
### IGHV3-20\*01

25 sequences assigned  
4 (16%) exact matches, in which:  
4 unique CDR3  
4 unique J



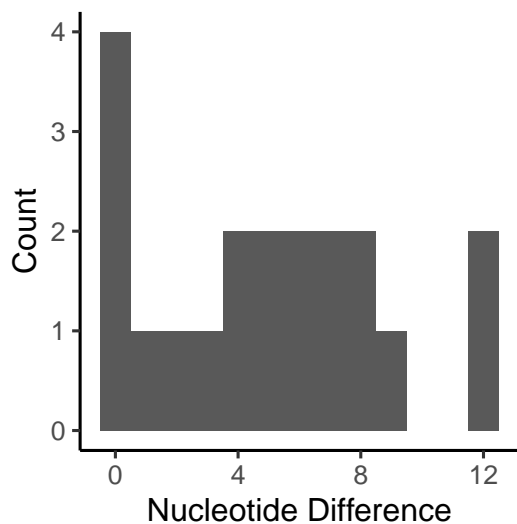
### IGHV3-30-3\*01

475 sequences assigned  
128 (26.9%) exact matches, in which:  
128 unique CDR3  
5 unique J



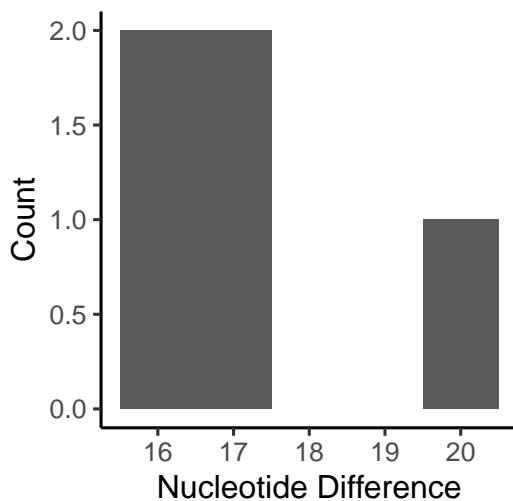
### IGHV3-13\*05

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



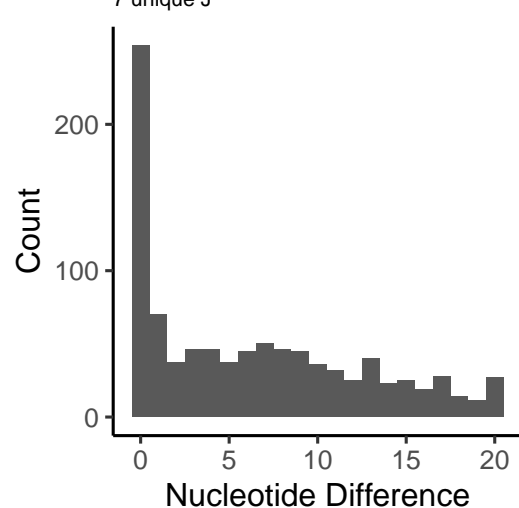
### IGHV3-20\*04

13 sequences assigned  
No exact matches.



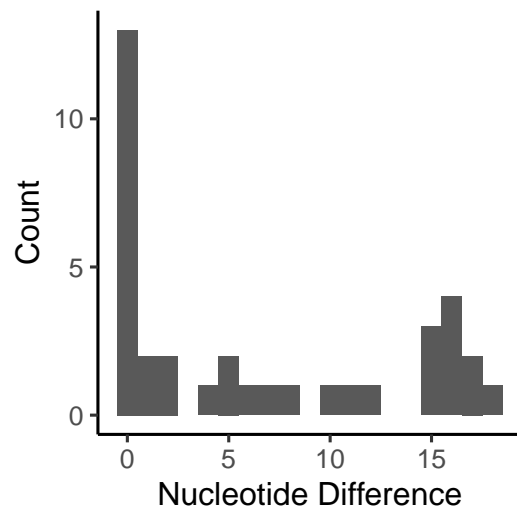
### IGHV3-33\*01

1064 sequences assigned  
254 (23.9%) exact matches, in which:  
251 unique CDR3  
7 unique J



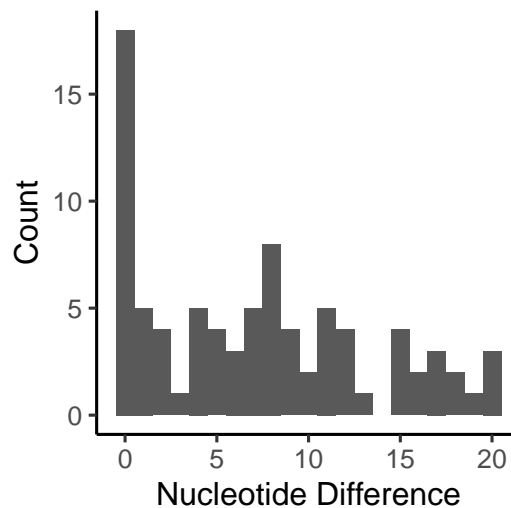
### IGHV3-43\*01

45 sequences assigned  
13 (28.9%) exact matches, in which:  
13 unique CDR3  
6 unique J



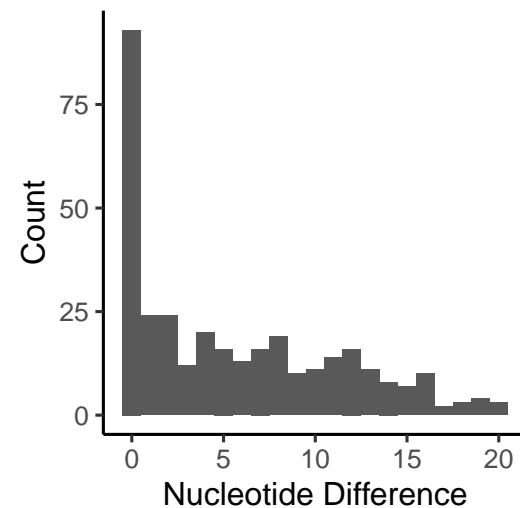
### IGHV3-53\*02

89 sequences assigned  
18 (20.2%) exact matches, in which:  
18 unique CDR3  
3 unique J



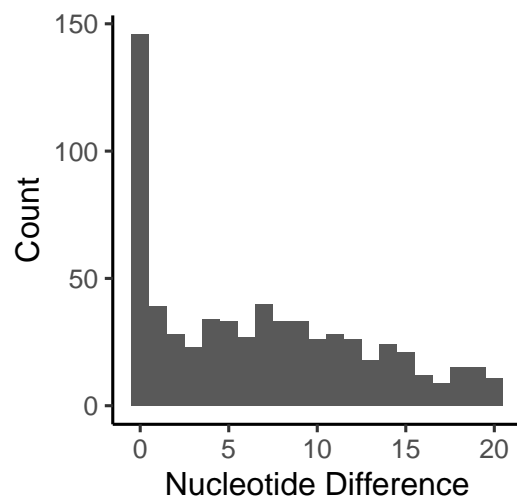
### IGHV3-66\*01

405 sequences assigned  
93 (23%) exact matches, in which:  
93 unique CDR3  
6 unique J



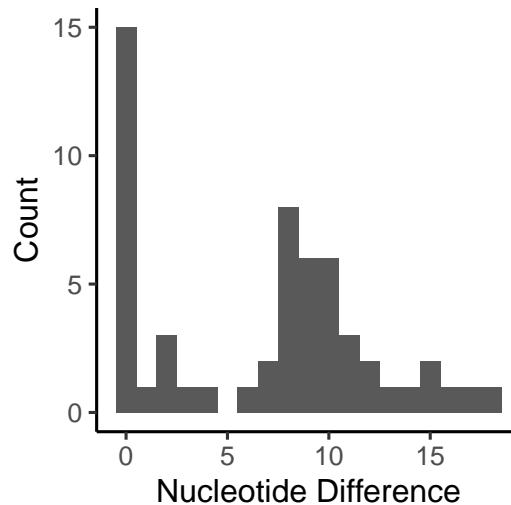
### IGHV3-48\*01

725 sequences assigned  
146 (20.1%) exact matches, in which:  
146 unique CDR3  
7 unique J



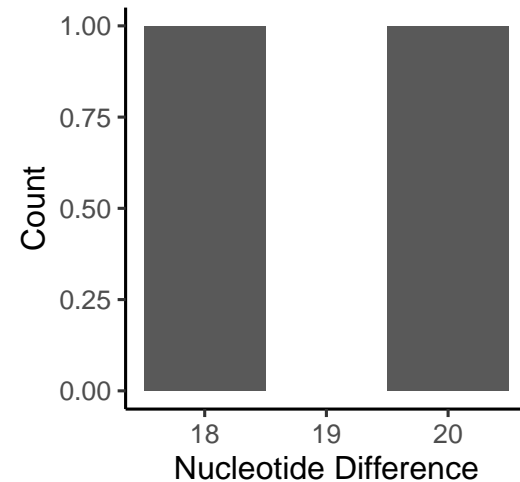
### IGHV3-64\*01

57 sequences assigned  
15 (26.3%) exact matches, in which:  
15 unique CDR3  
4 unique J



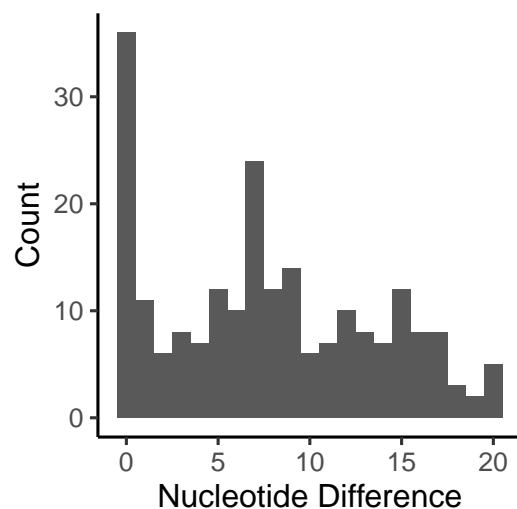
### IGHV3-69-1\*01

5 sequences assigned  
No exact matches.



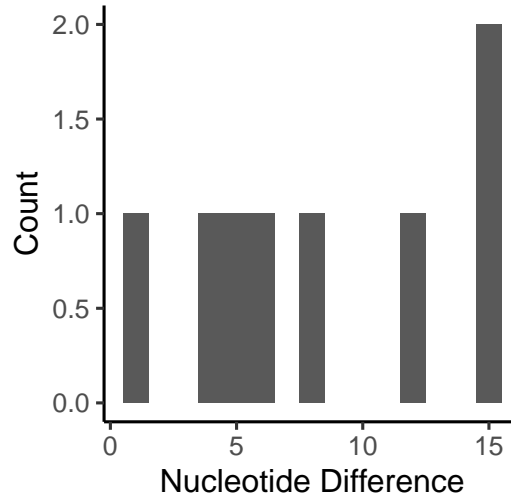
### IGHV3-49\*03

244 sequences assigned  
36 (14.8%) exact matches, in which:  
36 unique CDR3  
6 unique J



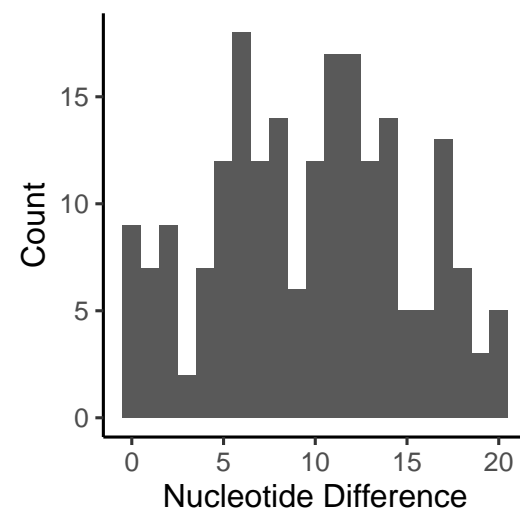
### IGHV3-64\*07

12 sequences assigned  
No exact matches.



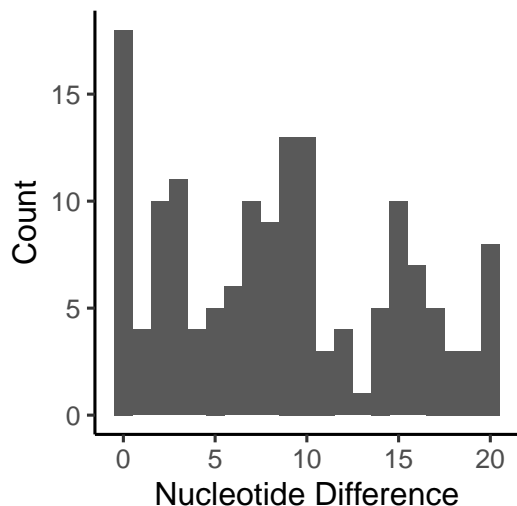
### IGHV3-72\*01

230 sequences assigned  
9 (3.9%) exact matches, in which:  
9 unique CDR3  
4 unique J



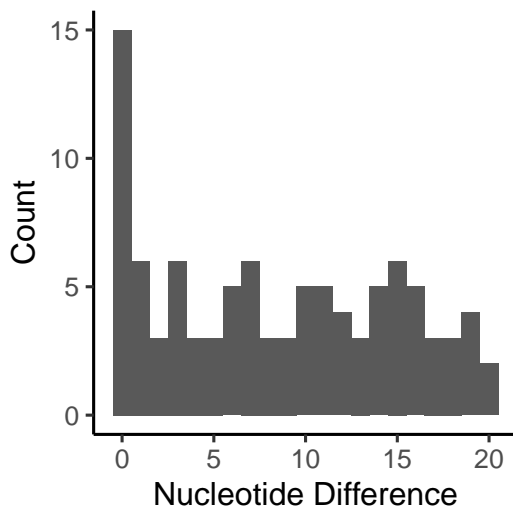
### IGHV3-73\*01

200 sequences assigned  
18 (9%) exact matches, in which:  
18 unique CDR3  
4 unique J



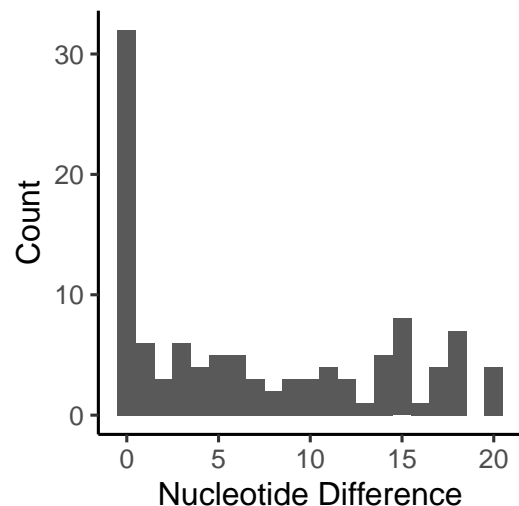
### IGHV3-64D\*06

105 sequences assigned  
15 (14.3%) exact matches, in which:  
15 unique CDR3  
3 unique J



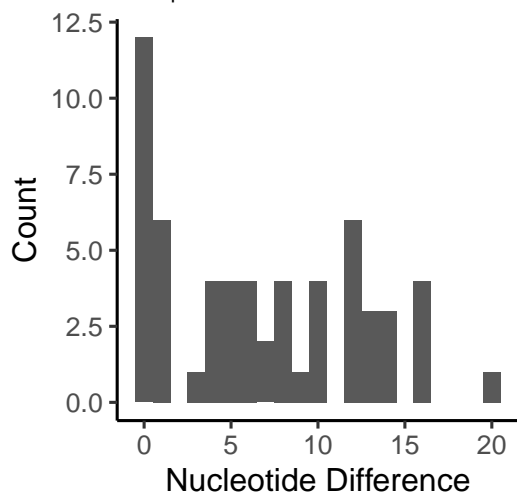
### IGHV4-30-4\*01

131 sequences assigned  
32 (24.4%) exact matches, in which:  
32 unique CDR3  
5 unique J



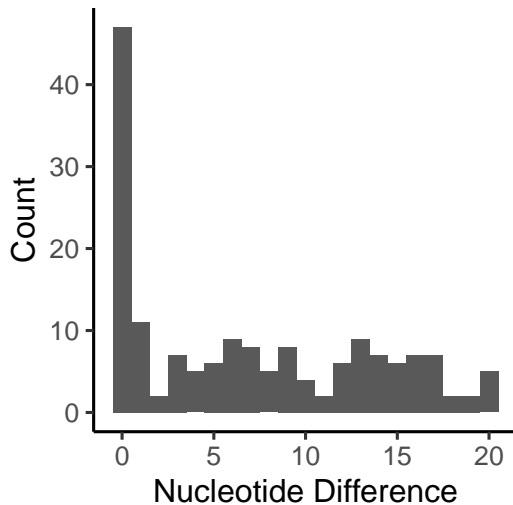
### IGHV3-73\*02

71 sequences assigned  
12 (16.9%) exact matches, in which:  
12 unique CDR3  
3 unique J



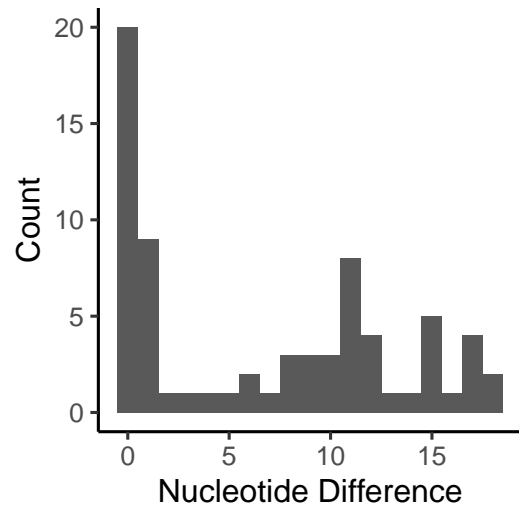
### IGHV4-4\*07

189 sequences assigned  
47 (24.9%) exact matches, in which:  
47 unique CDR3  
4 unique J



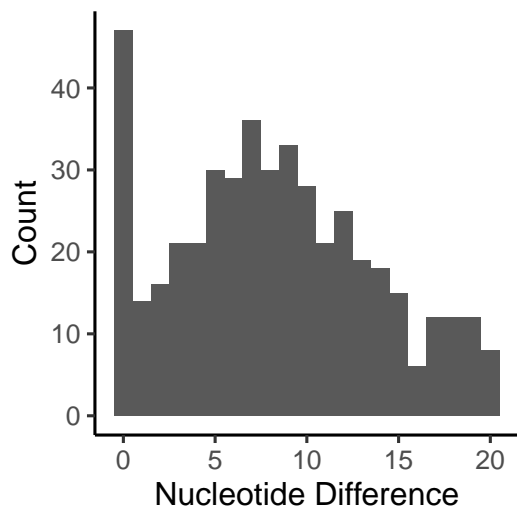
### IGHV4-30-2\*01

83 sequences assigned  
20 (24.1%) exact matches, in which:  
19 unique CDR3  
6 unique J



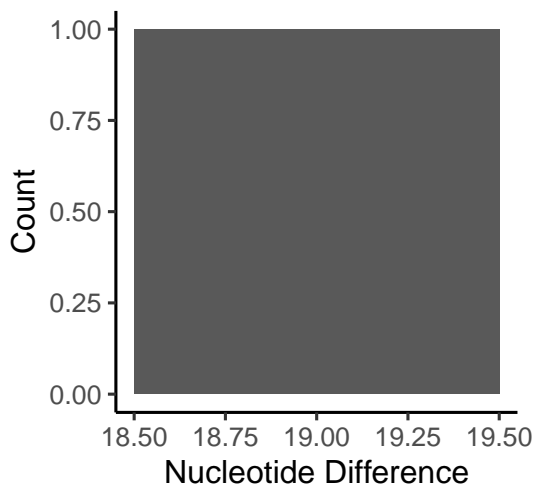
### IGHV3-74\*01

520 sequences assigned  
47 (9%) exact matches, in which:  
46 unique CDR3  
5 unique J



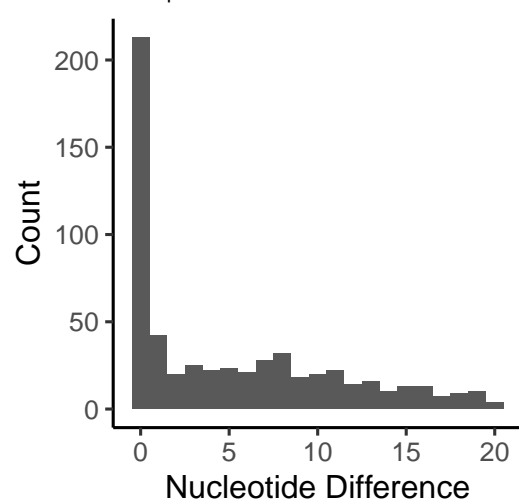
### IGHV4-28\*05

1 sequences assigned  
No exact matches.



### IGHV4-31\*03

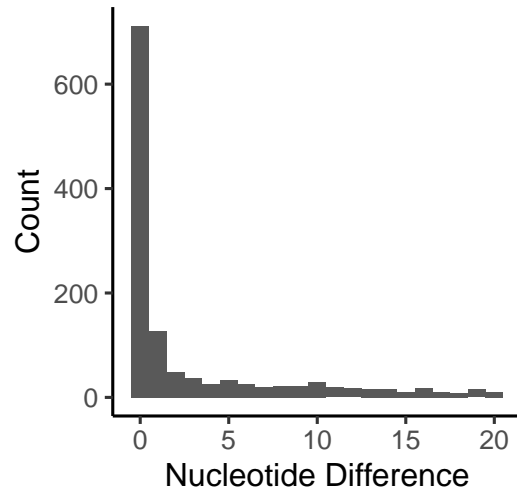
650 sequences assigned  
213 (32.8%) exact matches, in which:  
213 unique CDR3  
7 unique J





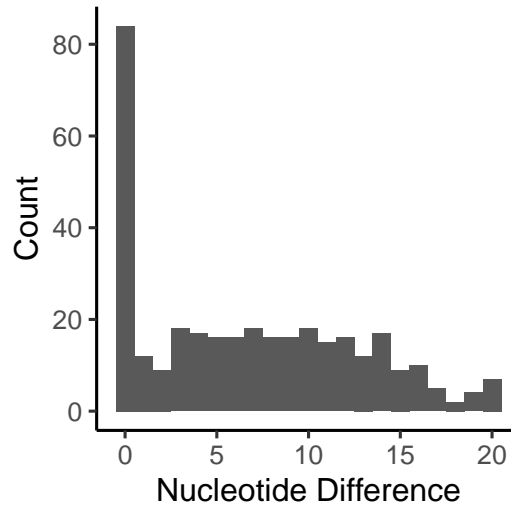
### IGHV4–34\*01

1359 sequences assigned  
712 (52.4%) exact matches, in which:  
704 unique CDR3  
7 unique J



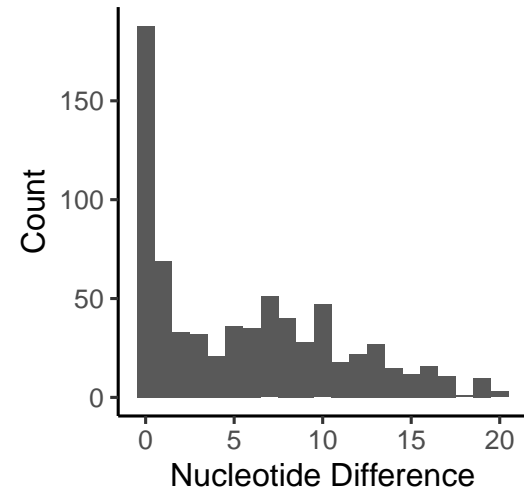
### IGHV4–59\*08

392 sequences assigned  
84 (21.4%) exact matches, in which:  
84 unique CDR3  
6 unique J



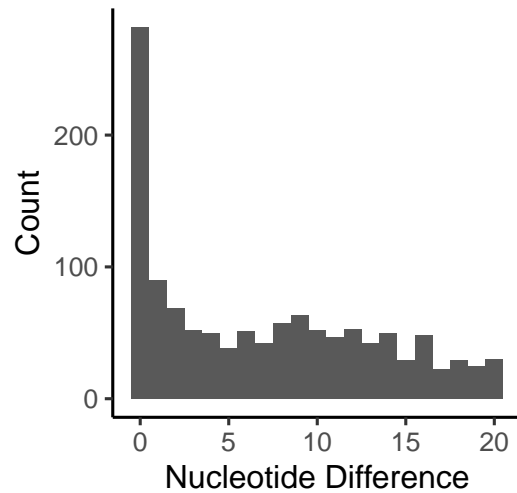
### IGHV5–51\*01\_C45G

773 sequences assigned  
188 (24.3%) exact matches, in which:  
186 unique CDR3  
7 unique J



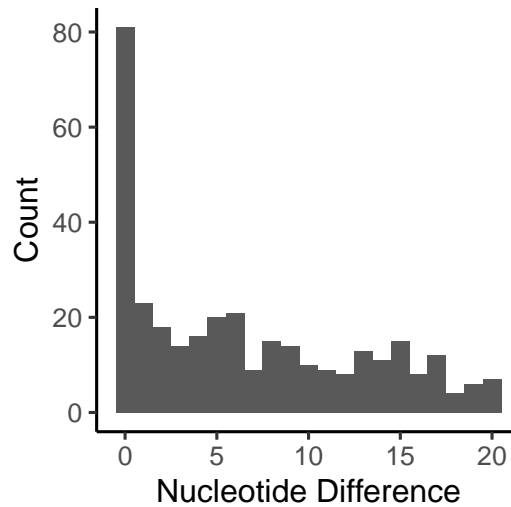
### IGHV4–39\*01

1372 sequences assigned  
282 (20.6%) exact matches, in which:  
280 unique CDR3  
7 unique J



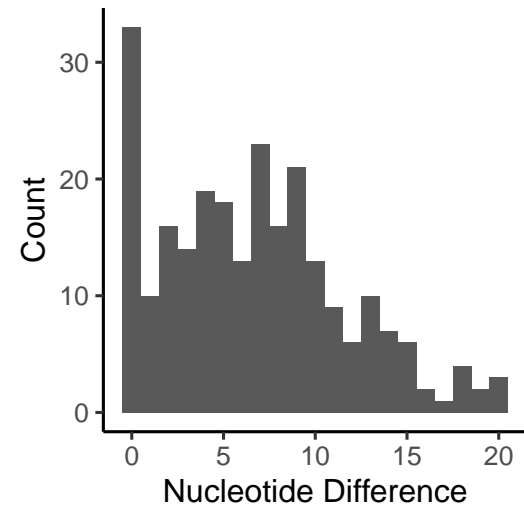
### IGHV4–61\*02\_A234G

379 sequences assigned  
81 (21.4%) exact matches, in which:  
79 unique CDR3  
6 unique J



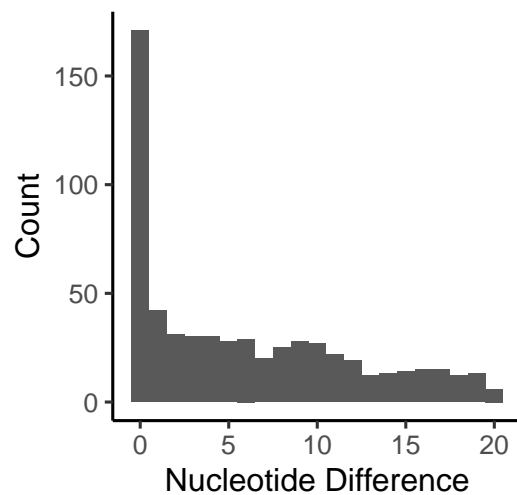
### IGHV6–1\*01

258 sequences assigned  
33 (12.8%) exact matches, in which:  
32 unique CDR3  
5 unique J



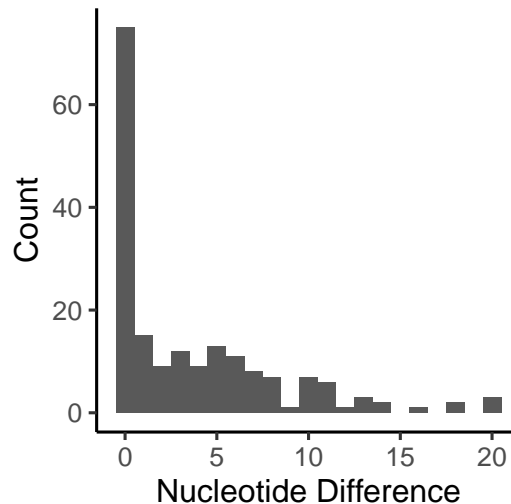
### IGHV4–59\*01

675 sequences assigned  
171 (25.3%) exact matches, in which:  
171 unique CDR3  
7 unique J



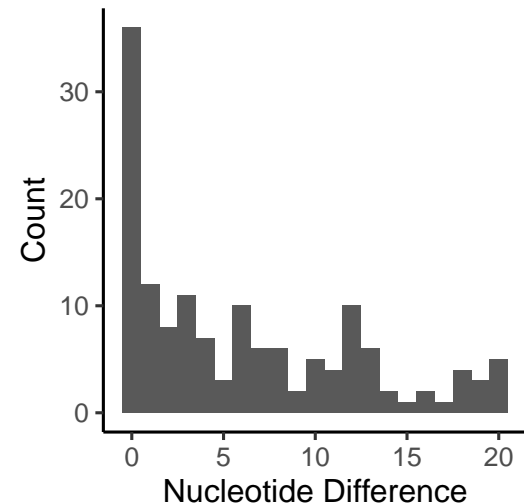
### IGHV5–10–1\*03

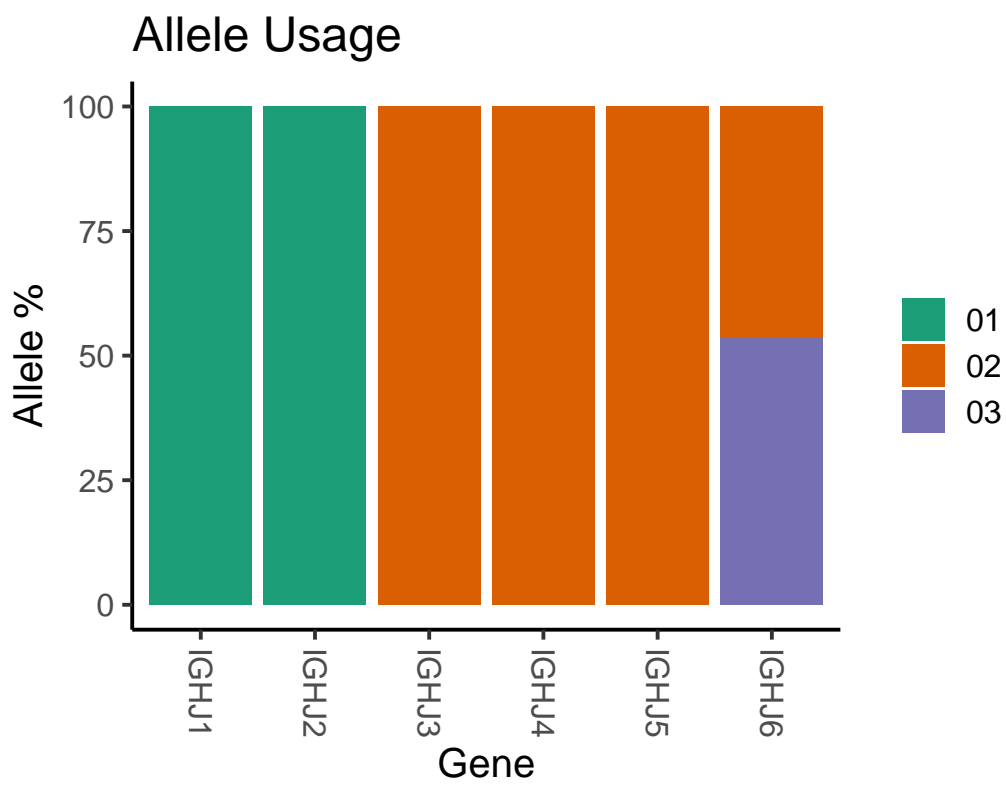
223 sequences assigned  
75 (33.6%) exact matches, in which:  
75 unique CDR3  
5 unique J



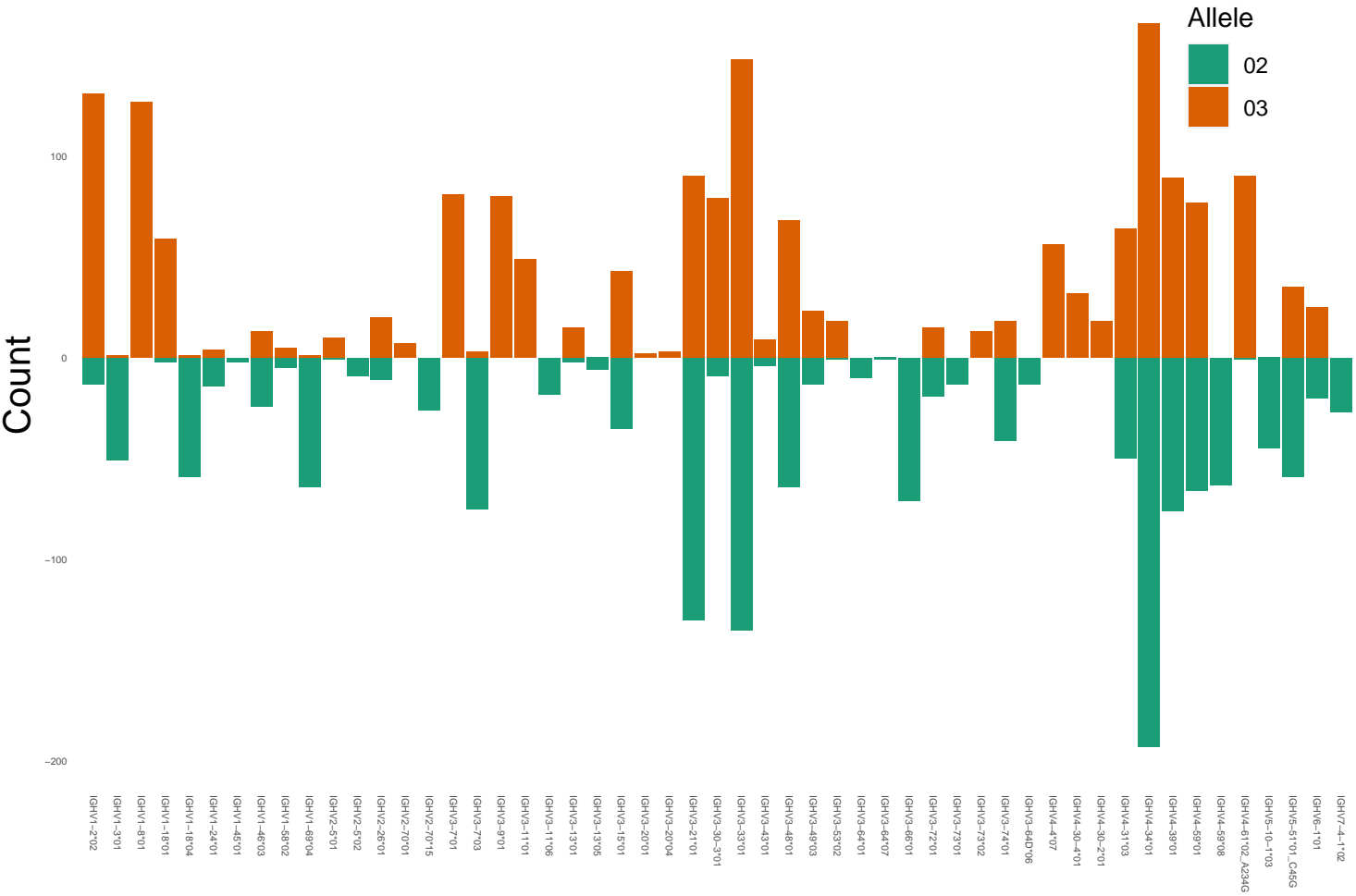
### IGHV7–4–1\*02

159 sequences assigned  
36 (22.6%) exact matches, in which:  
36 unique CDR3  
6 unique J





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.