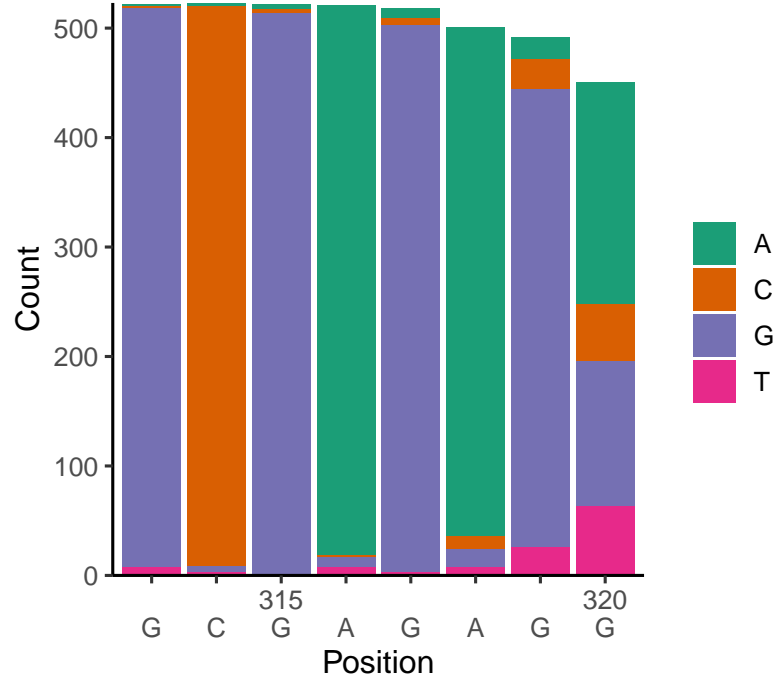
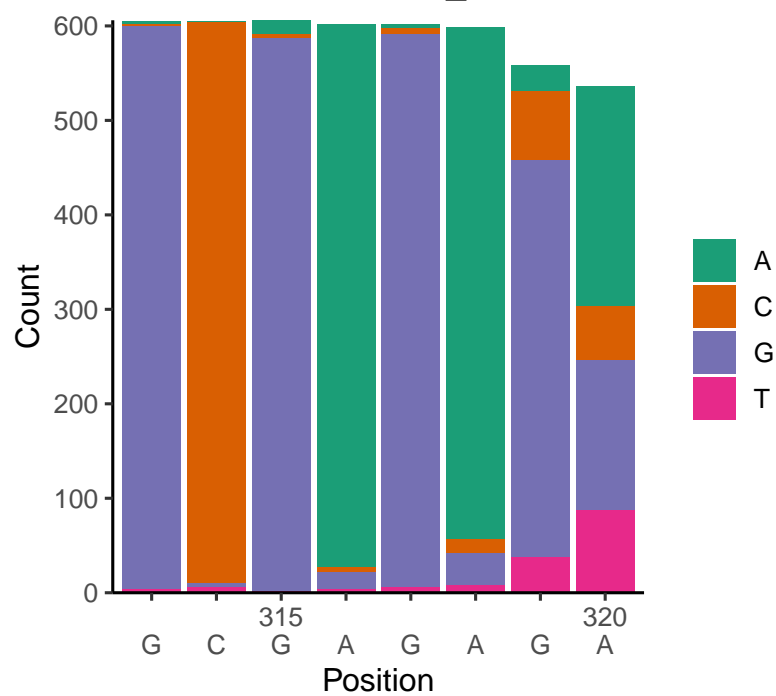


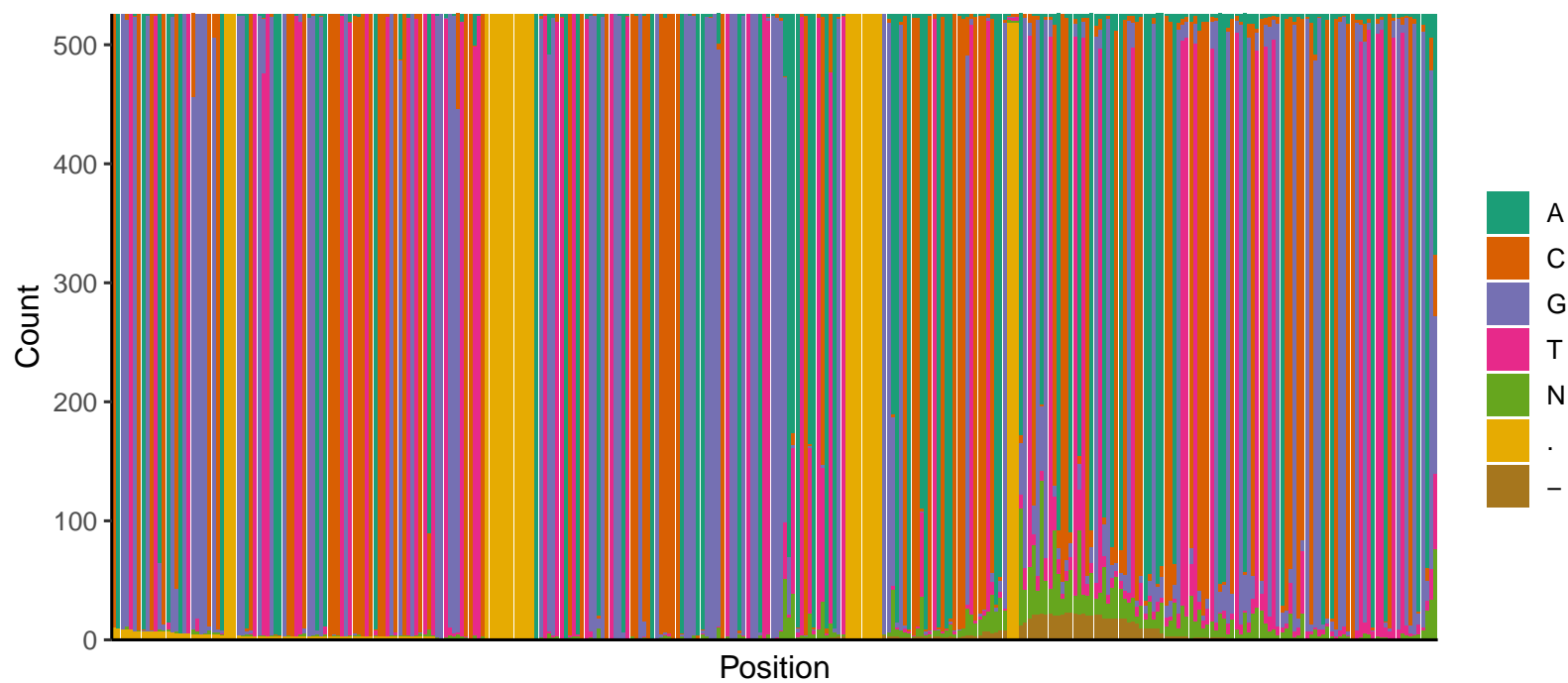
Gene IGHV4-34\*01\_T300C



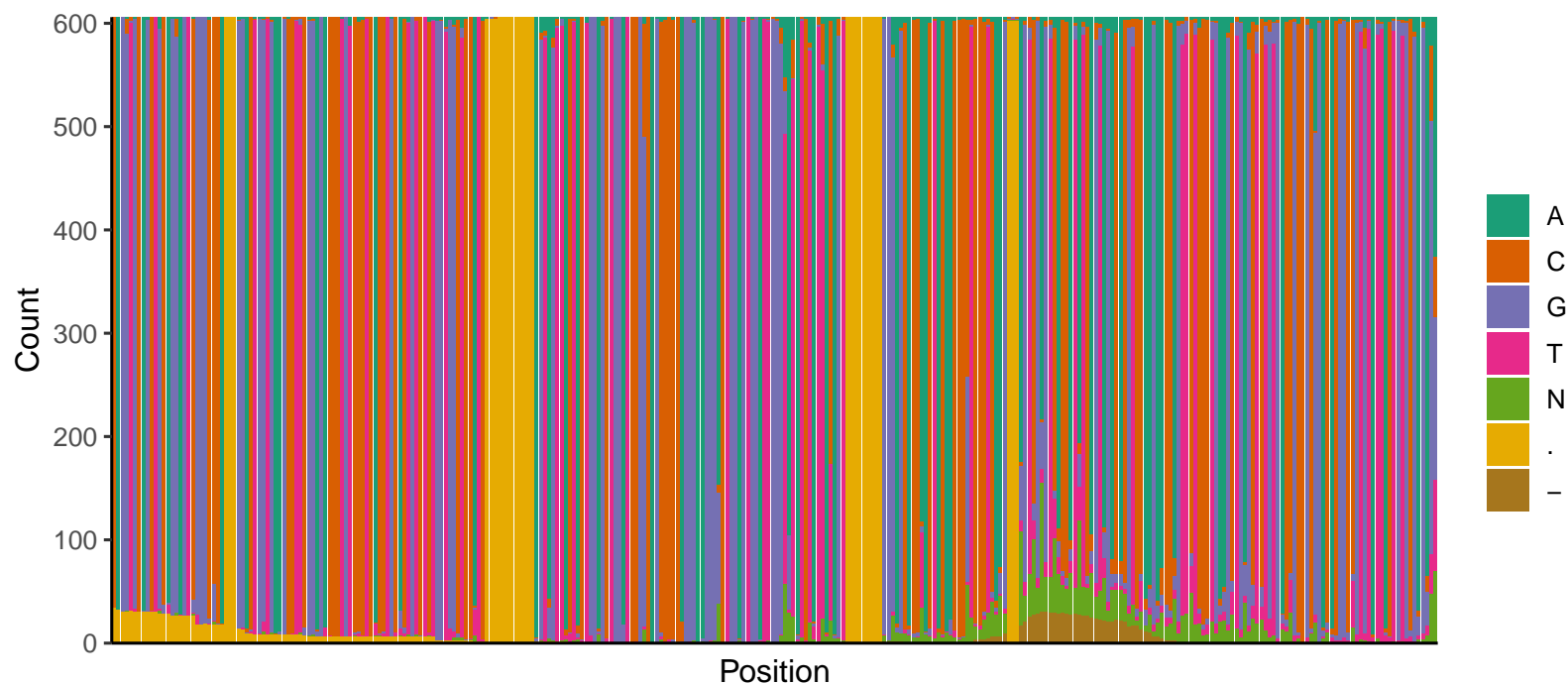
Gene IGHV4-59\*01\_T288C



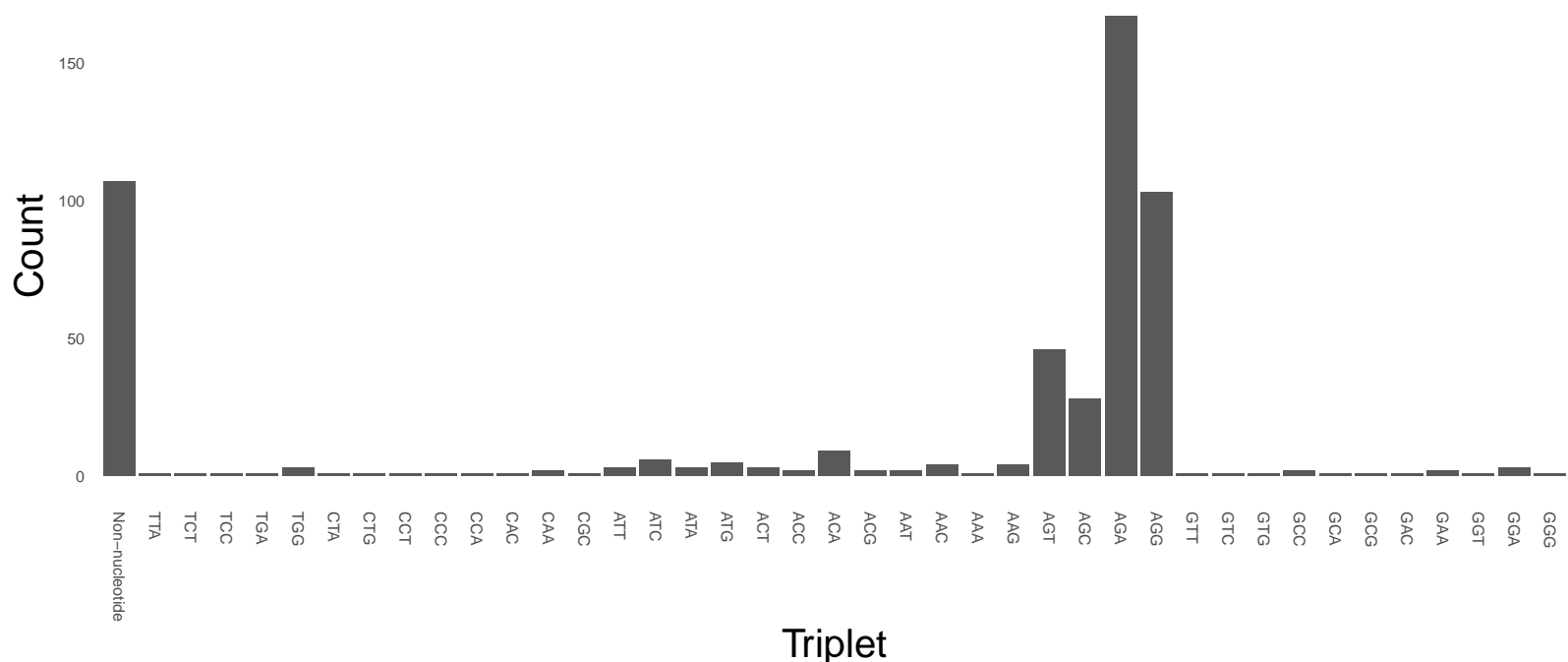
Gene IGHV4-34\*01\_T300C



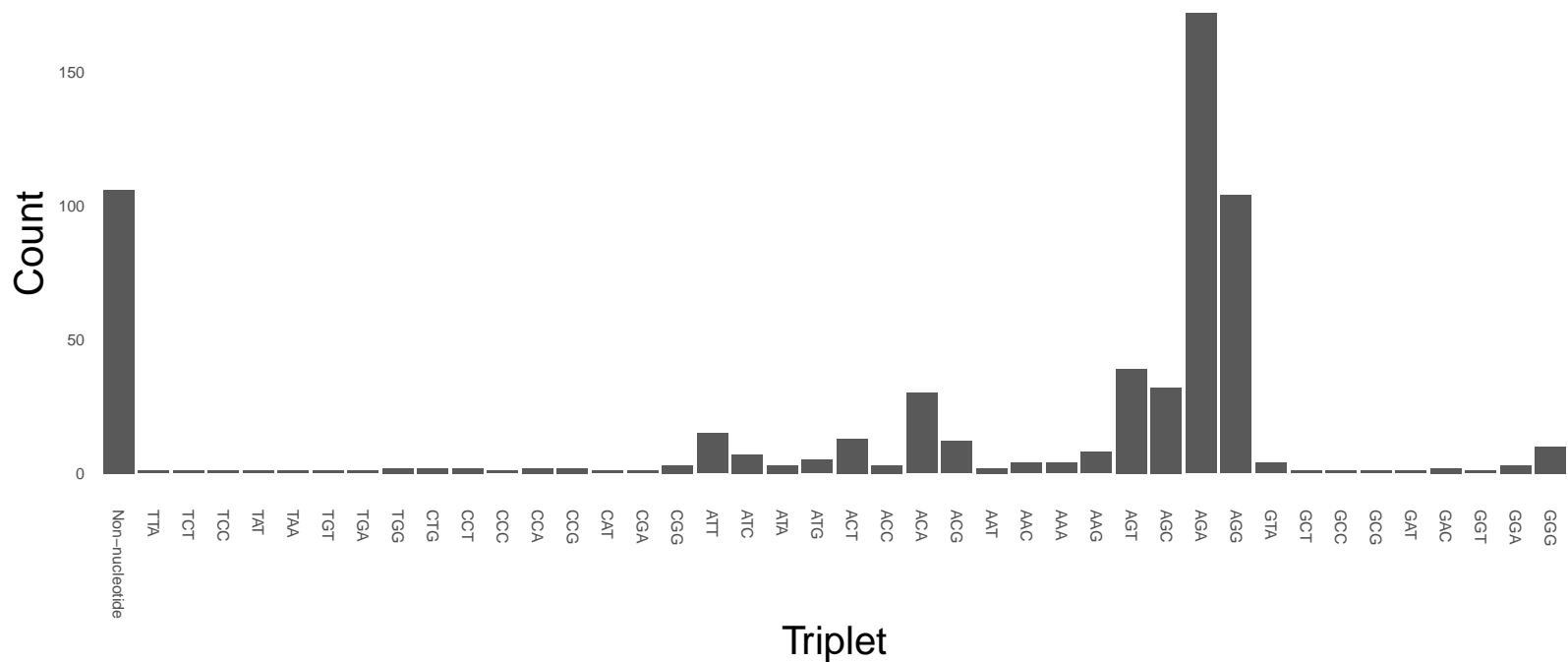
Gene IGHV4-59\*01\_T288C



IGHV4–34\*01\_T300C– Final 3 nucleotides as a triplet

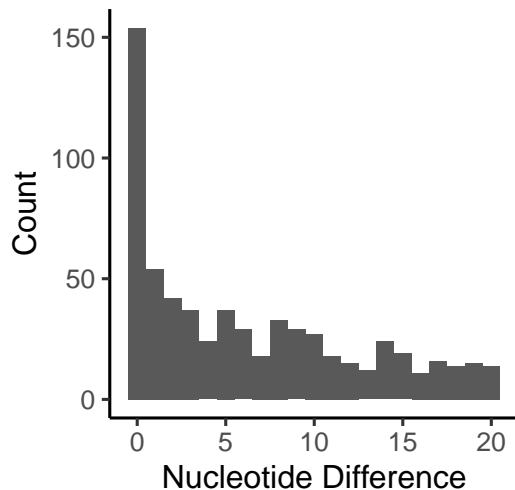


IGHV4–59\*01\_T288C– Final 3 nucleotides as a triplet



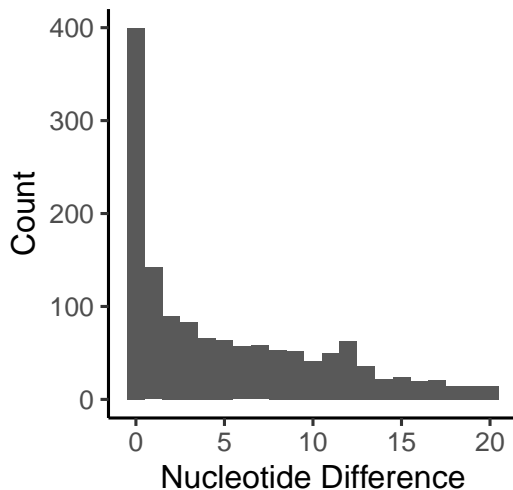
### IGHV1-2\*02

798 sequences assigned  
154 (19.3%) exact matches, in which:  
151 unique CDR3  
8 unique J



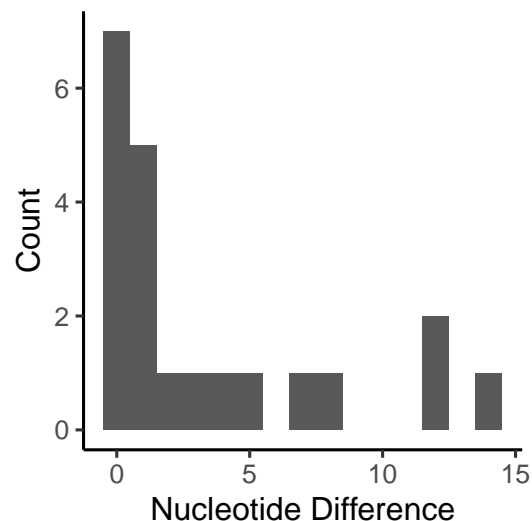
### IGHV1-18\*01

1569 sequences assigned  
400 (25.5%) exact matches, in which:  
395 unique CDR3  
9 unique J



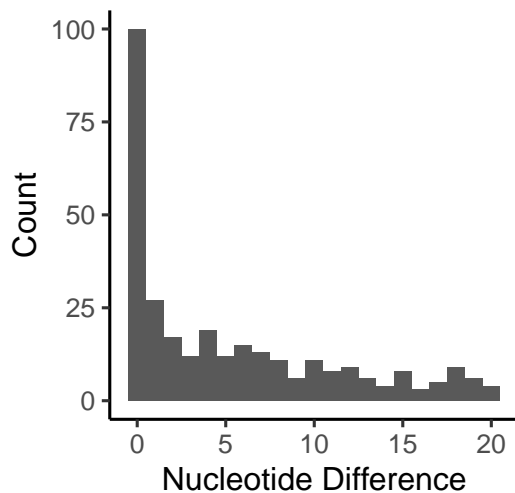
### IGHV1-58\*01

24 sequences assigned  
7 (29.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



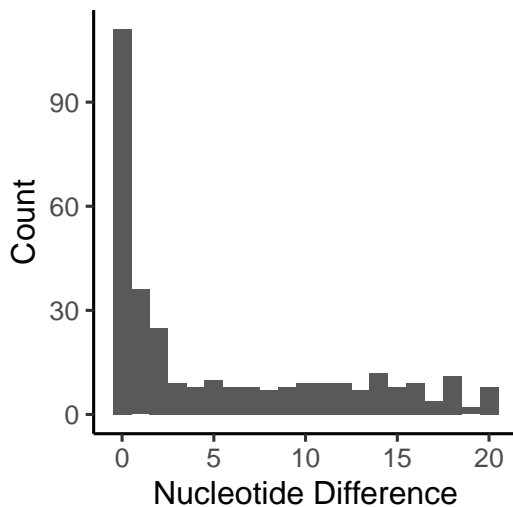
### IGHV1-3\*01

375 sequences assigned  
100 (26.7%) exact matches, in which:  
82 unique CDR3  
7 unique J



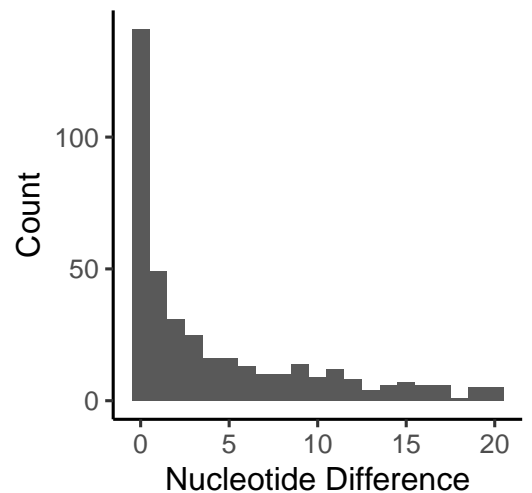
### IGHV1-24\*01

403 sequences assigned  
111 (27.5%) exact matches, in which:  
107 unique CDR3  
8 unique J



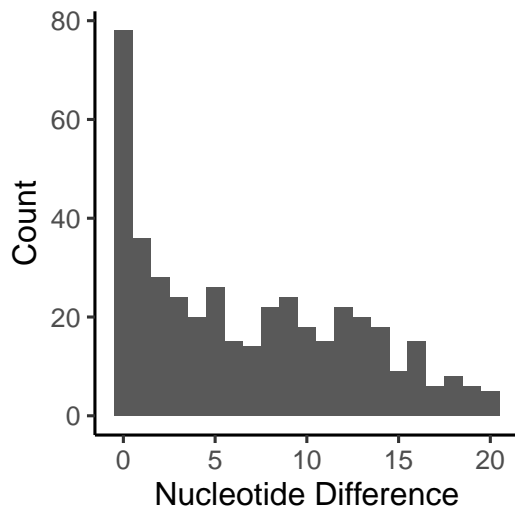
### IGHV1-69\*04

439 sequences assigned  
141 (32.1%) exact matches, in which:  
139 unique CDR3  
9 unique J



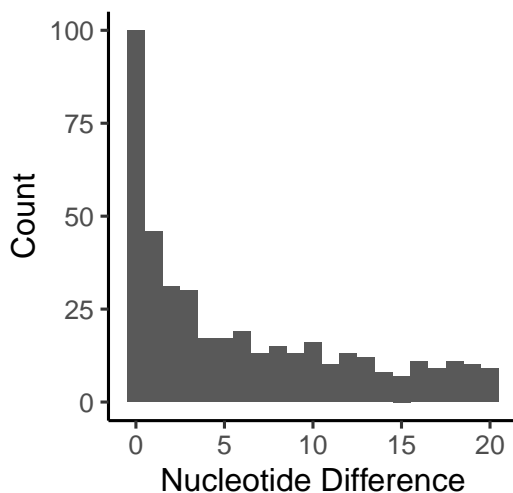
### IGHV1-8\*01

469 sequences assigned  
78 (16.6%) exact matches, in which:  
78 unique CDR3  
8 unique J



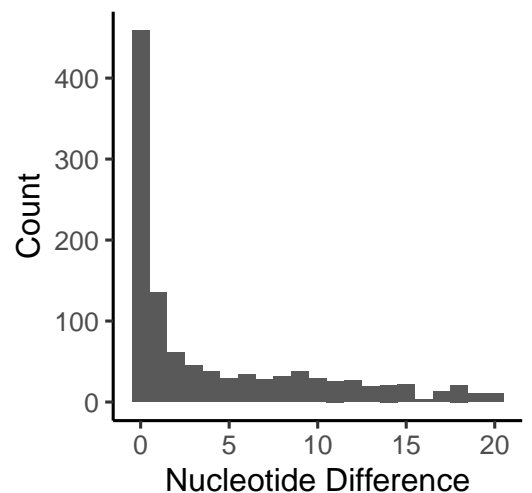
### IGHV1-46\*01

520 sequences assigned  
100 (19.2%) exact matches, in which:  
95 unique CDR3  
7 unique J



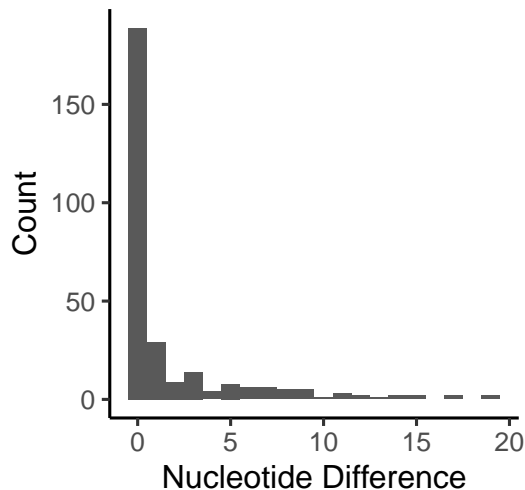
### IGHV1-69\*06

1219 sequences assigned  
459 (37.7%) exact matches, in which:  
455 unique CDR3  
11 unique J



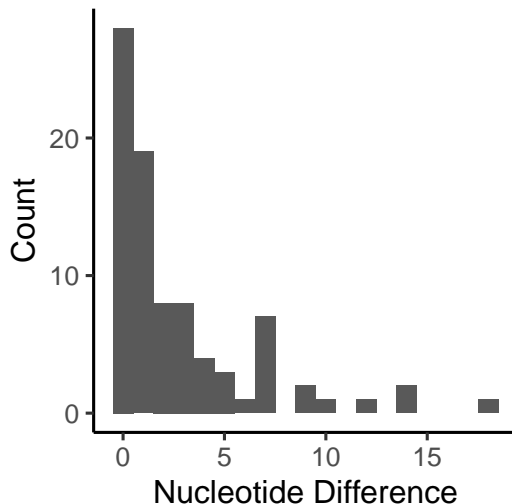
### IGHV2-5\*02

324 sequences assigned  
189 (58.3%) exact matches, in which:  
185 unique CDR3  
8 unique J



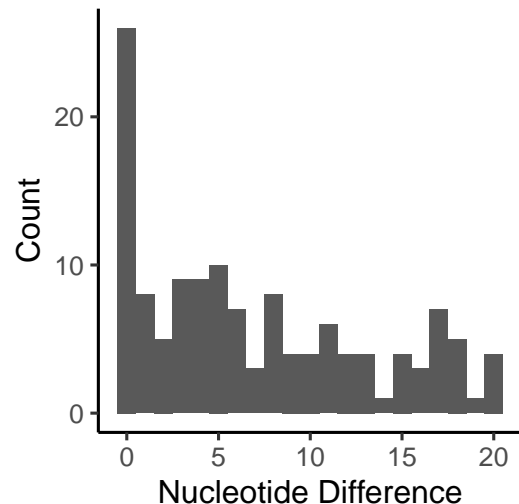
### IGHV2-70\*01

97 sequences assigned  
28 (28.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



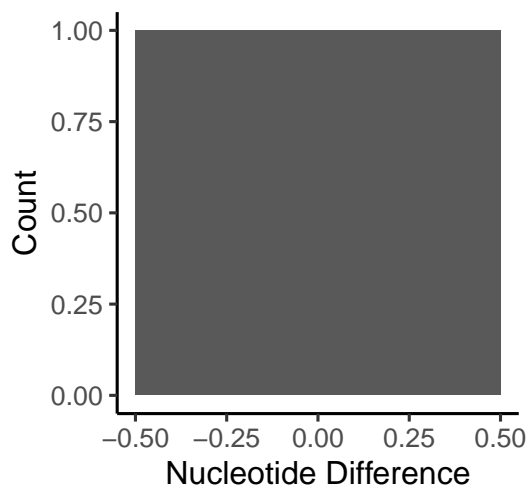
### IGHV3-11\*01

153 sequences assigned  
26 (17%) exact matches, in which:  
26 unique CDR3  
6 unique J



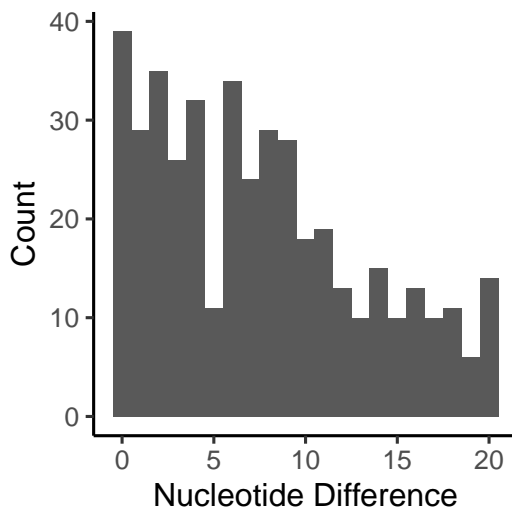
### IGHV2-10\*01

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



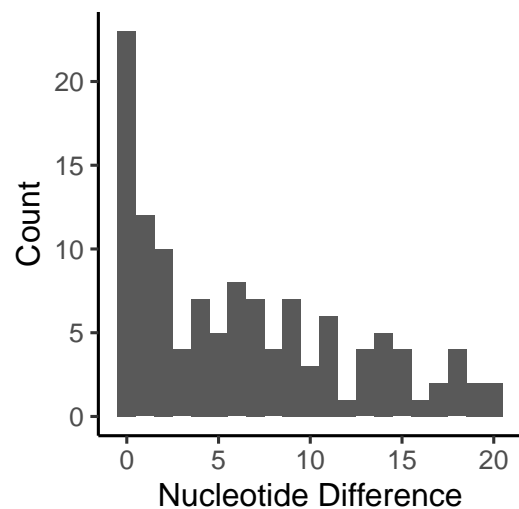
### IGHV3-7\*01

556 sequences assigned  
39 (7%) exact matches, in which:  
39 unique CDR3  
7 unique J



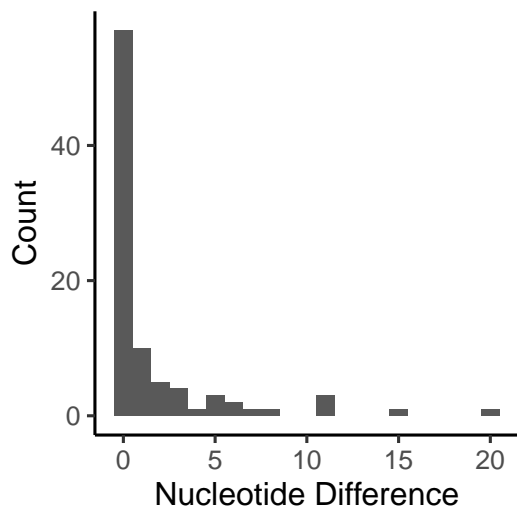
### IGHV3-11\*05

140 sequences assigned  
23 (16.4%) exact matches, in which:  
23 unique CDR3  
5 unique J



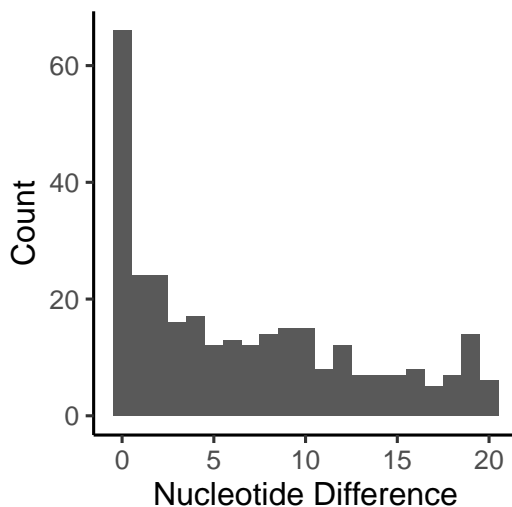
### IGHV2-26\*01

102 sequences assigned  
57 (55.9%) exact matches, in which:  
55 unique CDR3  
6 unique J



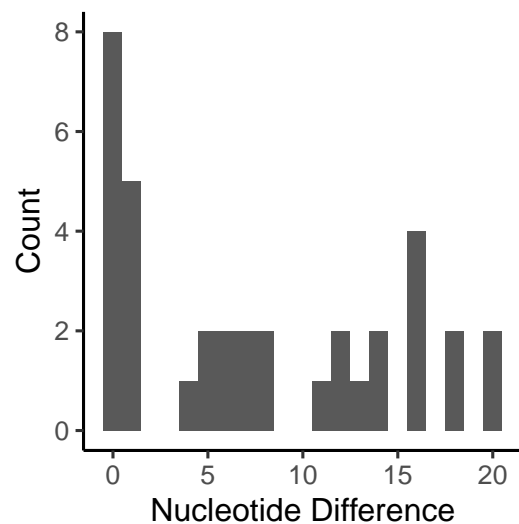
### IGHV3-9\*01

352 sequences assigned  
66 (18.8%) exact matches, in which:  
66 unique CDR3  
5 unique J



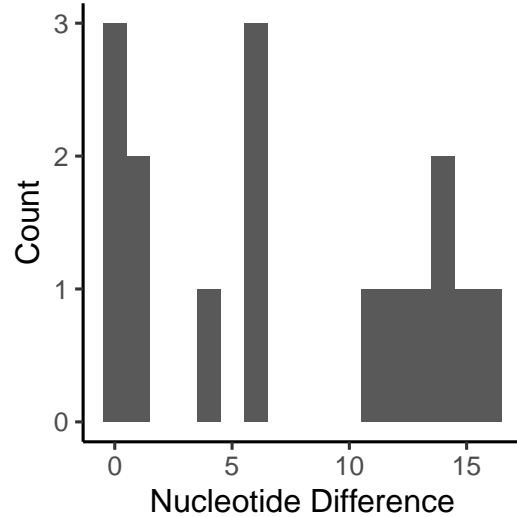
### IGHV3-13\*01

37 sequences assigned  
8 (21.6%) exact matches, in which:  
8 unique CDR3  
3 unique J



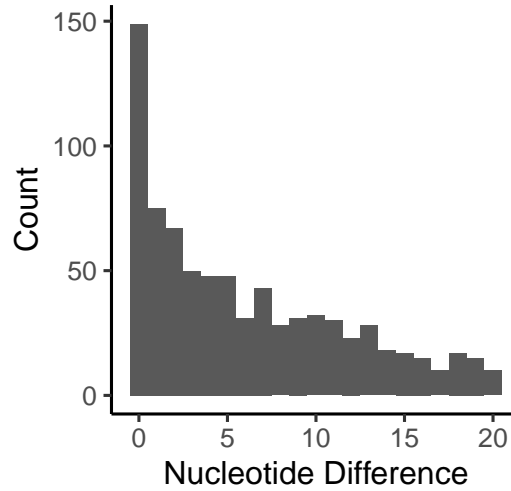
### IGHV3-13\*04

17 sequences assigned  
3 (17.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



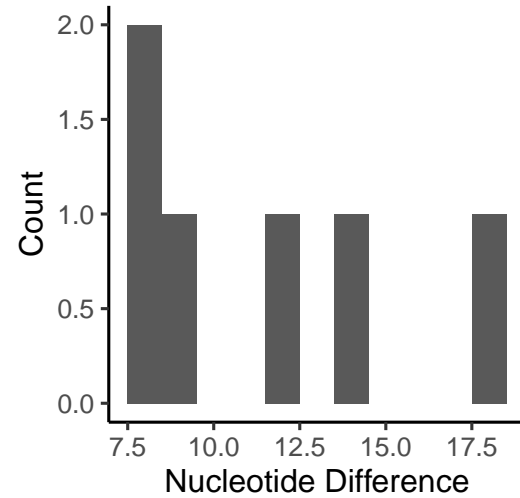
### IGHV3-21\*01

861 sequences assigned  
149 (17.3%) exact matches, in which:  
148 unique CDR3  
9 unique J



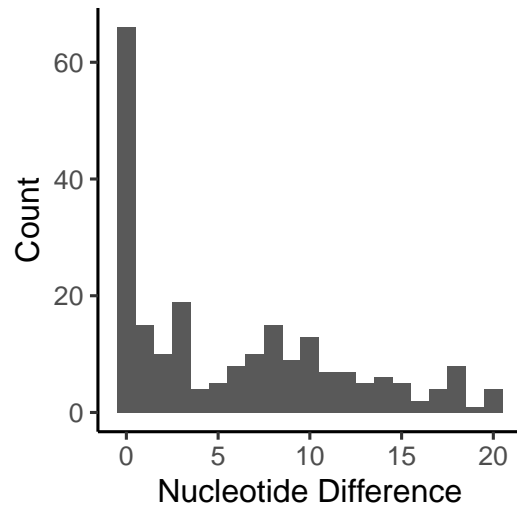
### IGHV3-30-3\*03

10 sequences assigned  
No exact matches.



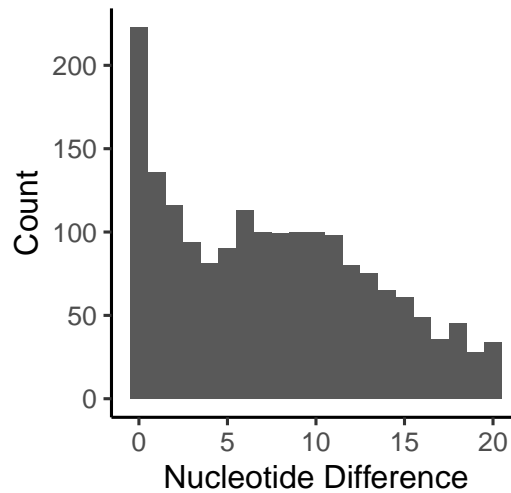
### IGHV3-15\*01

254 sequences assigned  
66 (26%) exact matches, in which:  
65 unique CDR3  
6 unique J



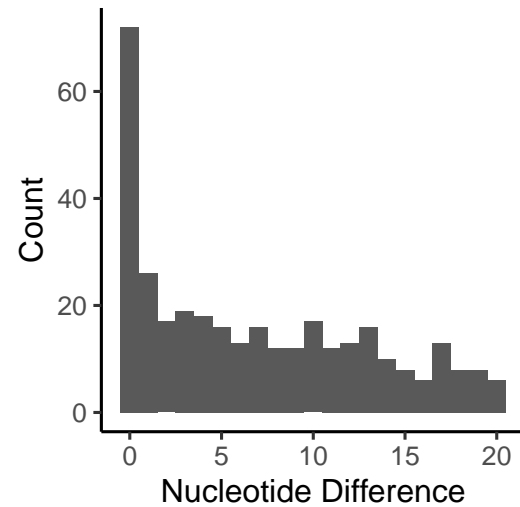
### IGHV3-23\*01

2110 sequences assigned  
223 (10.6%) exact matches, in which:  
221 unique CDR3  
8 unique J



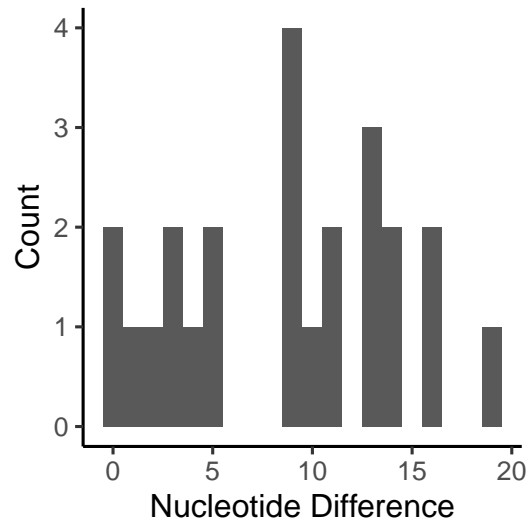
### IGHV3-30\*04

376 sequences assigned  
72 (19.1%) exact matches, in which:  
70 unique CDR3  
8 unique J



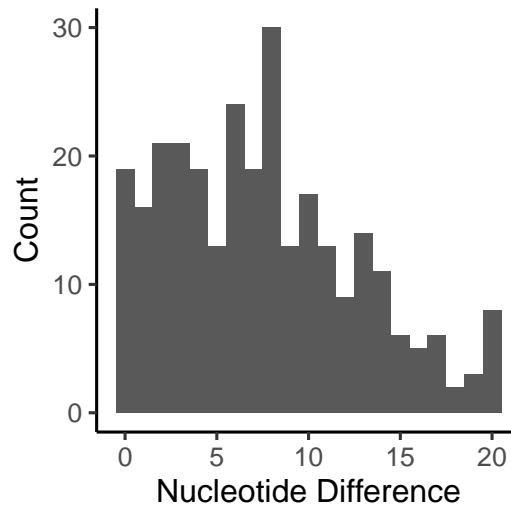
### IGHV3-20\*01

29 sequences assigned  
2 (6.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



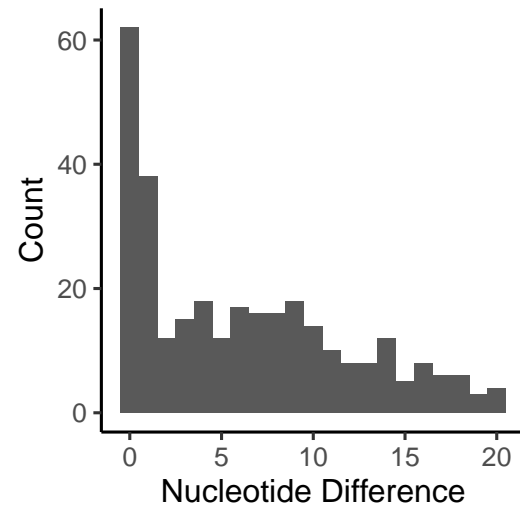
### IGHV3-30\*03

316 sequences assigned  
19 (6%) exact matches, in which:  
19 unique CDR3  
4 unique J



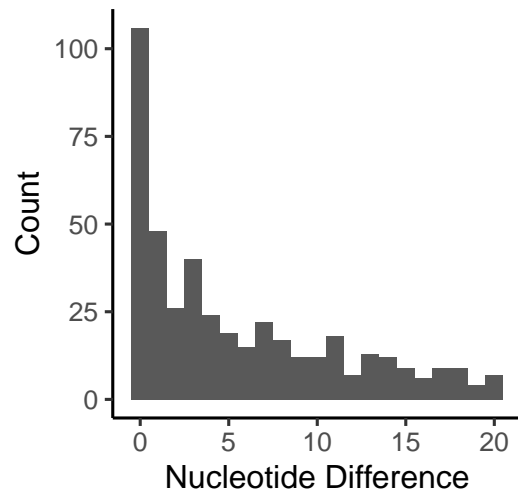
### IGHV3-30\*18

353 sequences assigned  
62 (17.6%) exact matches, in which:  
61 unique CDR3  
8 unique J



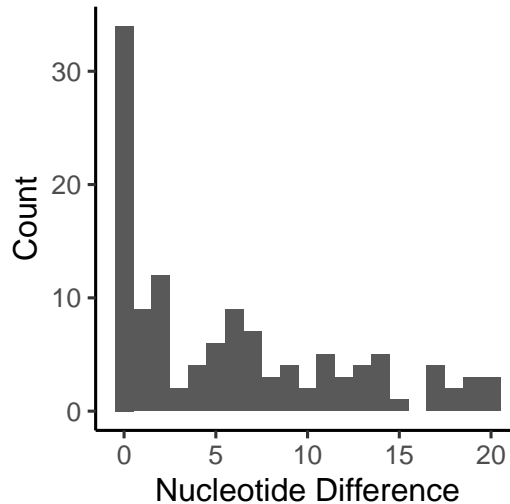
### IGHV3–33\*01

497 sequences assigned  
106 (21.3%) exact matches, in which:  
105 unique CDR3  
7 unique J



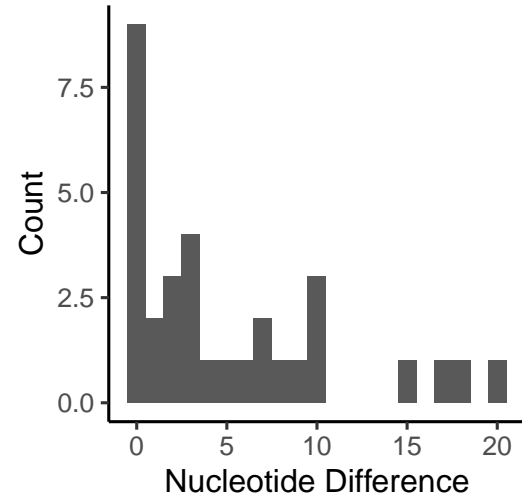
### IGHV3–48\*02

130 sequences assigned  
34 (26.2%) exact matches, in which:  
34 unique CDR3  
4 unique J



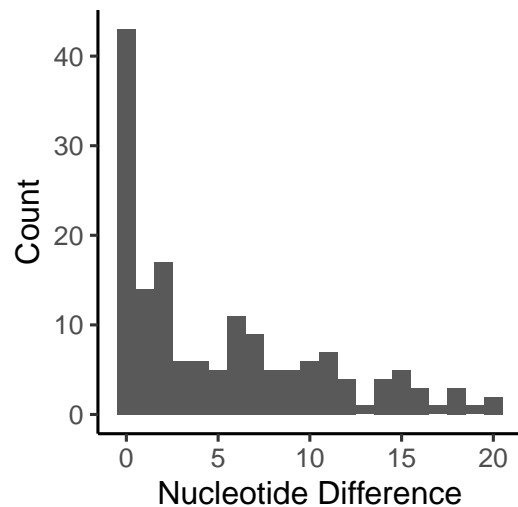
### IGHV3–49\*05

36 sequences assigned  
9 (25%) exact matches, in which:  
9 unique CDR3  
4 unique J



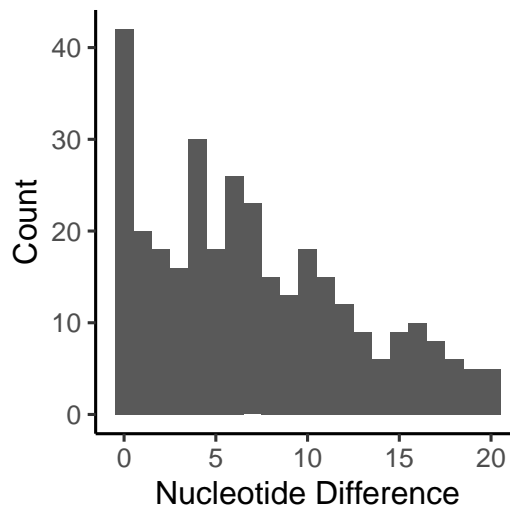
### IGHV3–33\*06

169 sequences assigned  
43 (25.4%) exact matches, in which:  
42 unique CDR3  
7 unique J



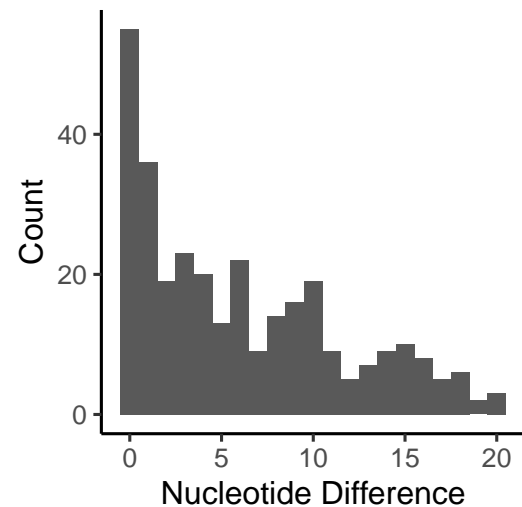
### IGHV3–48\*04

358 sequences assigned  
42 (11.7%) exact matches, in which:  
42 unique CDR3  
9 unique J



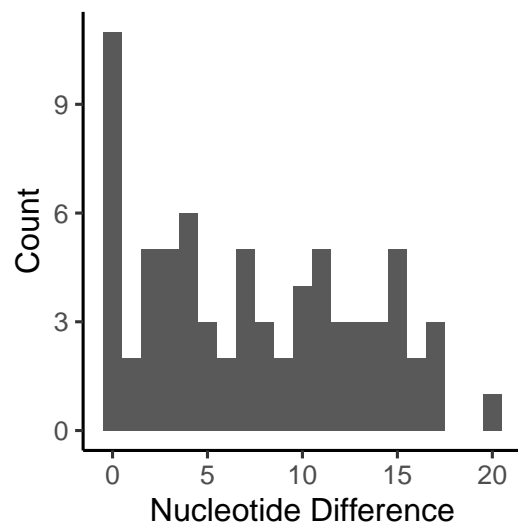
### IGHV3–53\*01

352 sequences assigned  
55 (15.6%) exact matches, in which:  
55 unique CDR3  
7 unique J



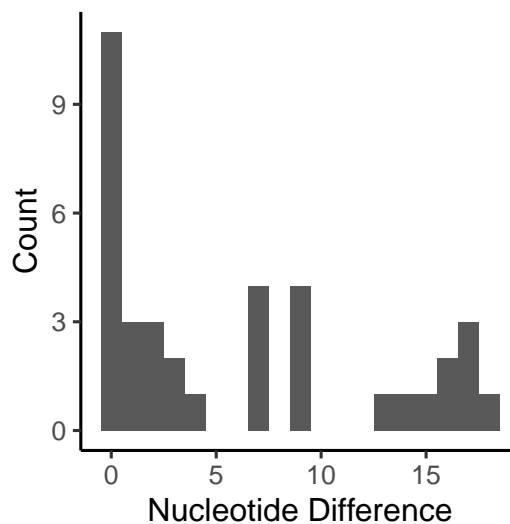
### IGHV3–43\*01

86 sequences assigned  
11 (12.8%) exact matches, in which:  
11 unique CDR3  
3 unique J



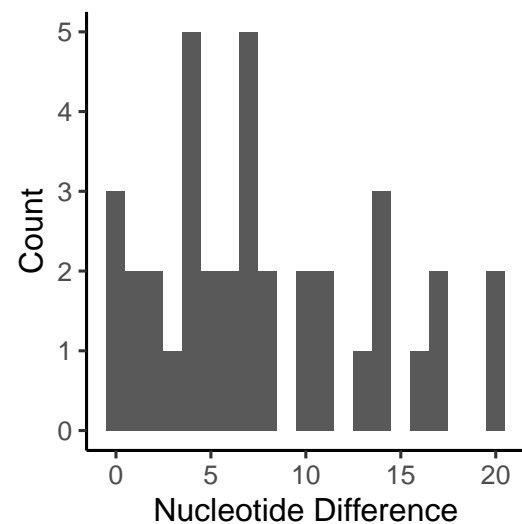
### IGHV3–49\*03

45 sequences assigned  
11 (24.4%) exact matches, in which:  
11 unique CDR3  
4 unique J



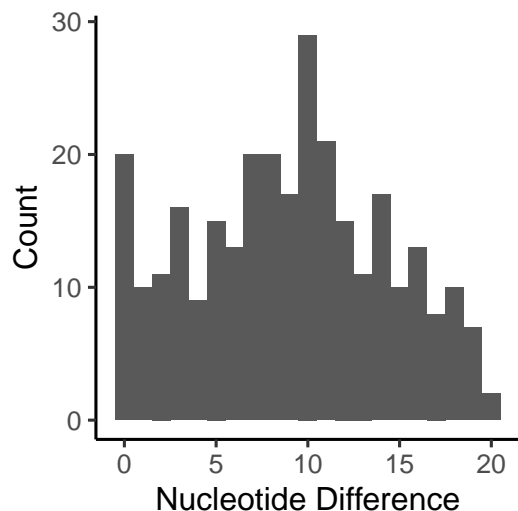
### IGHV3–64\*01

54 sequences assigned  
3 (5.6%) exact matches, in which:  
3 unique CDR3  
1 unique J



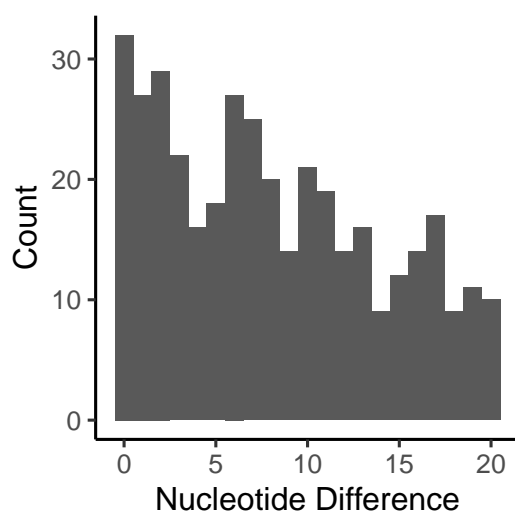
### IGHV3-66\*01

338 sequences assigned  
20 (5.9%) exact matches, in which:  
20 unique CDR3  
6 unique J



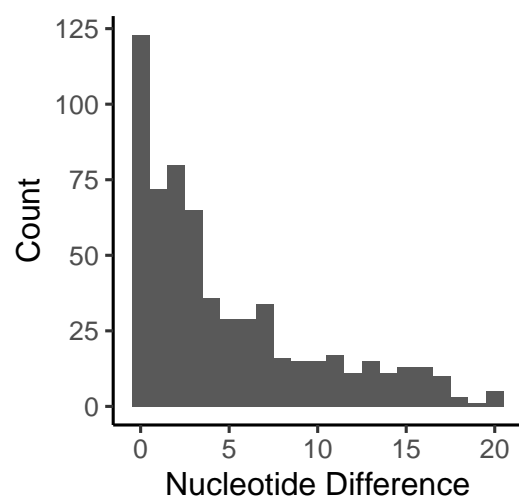
### IGHV3-74\*01

482 sequences assigned  
32 (6.6%) exact matches, in which:  
30 unique CDR3  
6 unique J



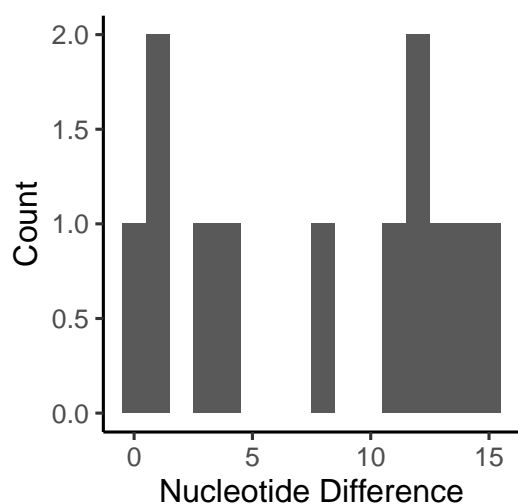
### IGHV4-31\*03

694 sequences assigned  
123 (17.7%) exact matches, in which:  
121 unique CDR3  
9 unique J



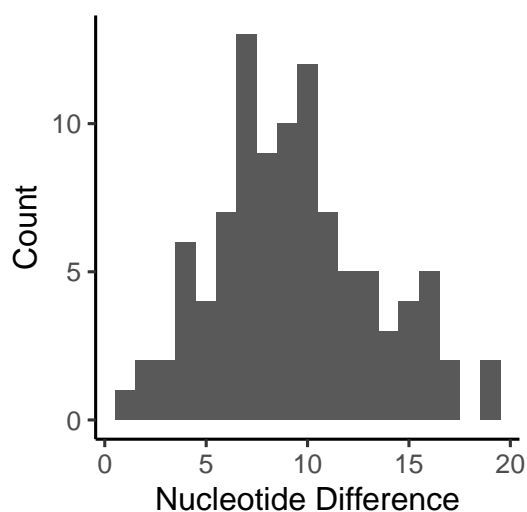
### IGHV3-72\*01

14 sequences assigned  
1 (7.1%) exact matches, in which:  
1 unique CDR3  
0 unique J



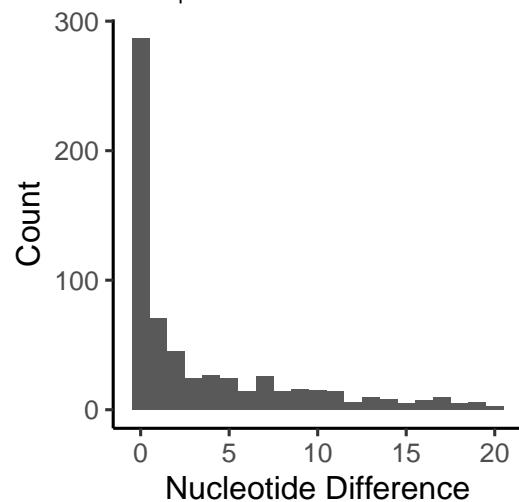
### IGHV3-NL1\*01

118 sequences assigned  
No exact matches.



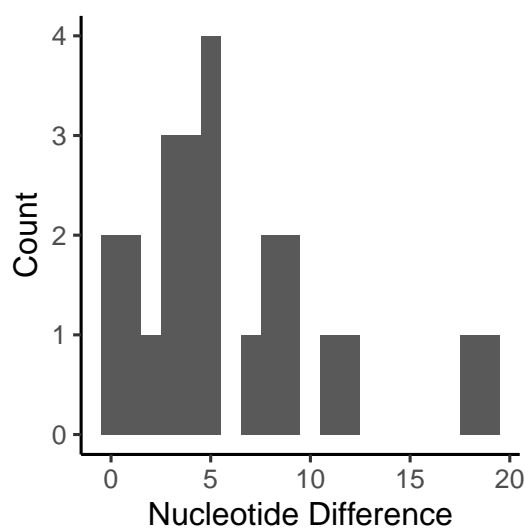
### IGHV4-34\*01

692 sequences assigned  
287 (41.5%) exact matches, in which:  
282 unique CDR3  
10 unique J



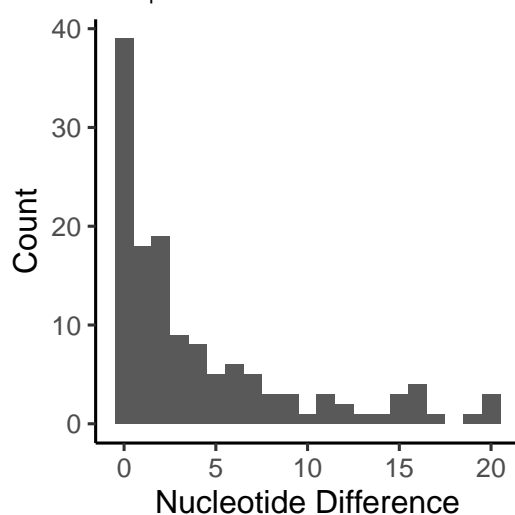
### IGHV3-73\*01

31 sequences assigned  
2 (6.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



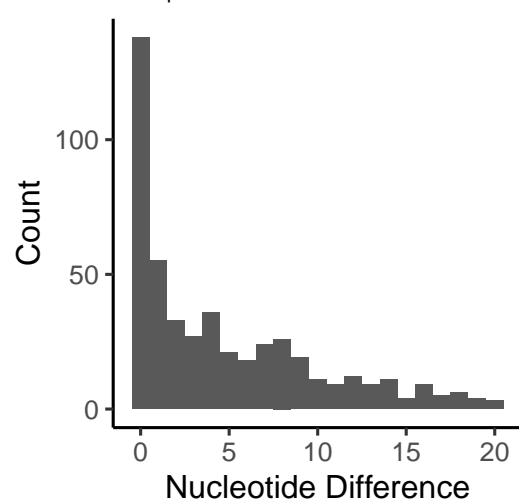
### IGHV4-4\*07

163 sequences assigned  
39 (23.9%) exact matches, in which:  
35 unique CDR3  
7 unique J



### IGHV4-34\*01\_T300C

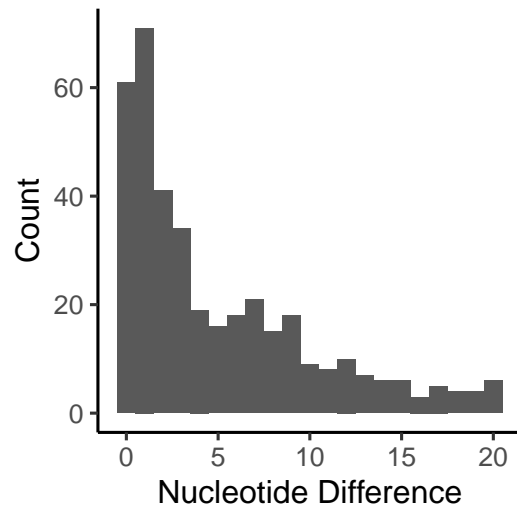
526 sequences assigned  
138 (26.2%) exact matches, in which:  
138 unique CDR3  
8 unique J





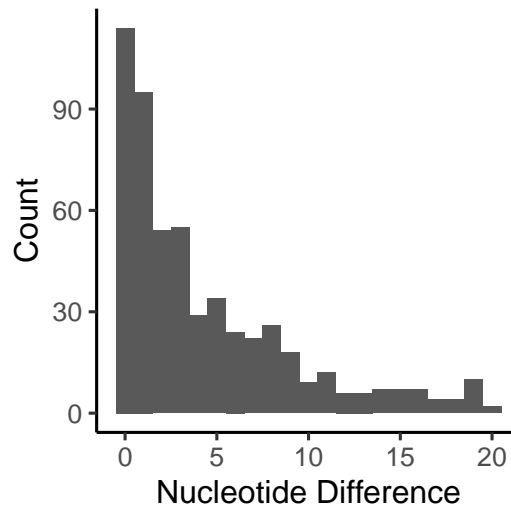
### IGHV4-38-2\*02

427 sequences assigned  
61 (14.3%) exact matches, in which:  
55 unique CDR3  
7 unique J



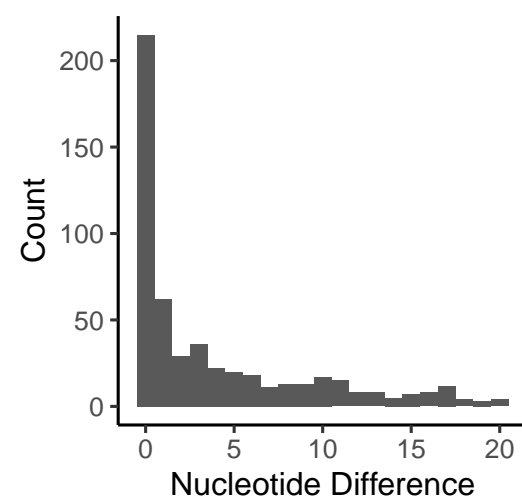
### IGHV4-59\*01\_T288C

606 sequences assigned  
114 (18.8%) exact matches, in which:  
114 unique CDR3  
10 unique J



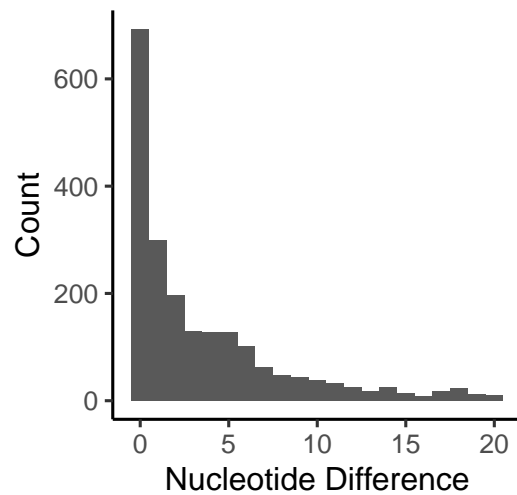
### IGHV5-51\*01

574 sequences assigned  
215 (37.5%) exact matches, in which:  
209 unique CDR3  
10 unique J



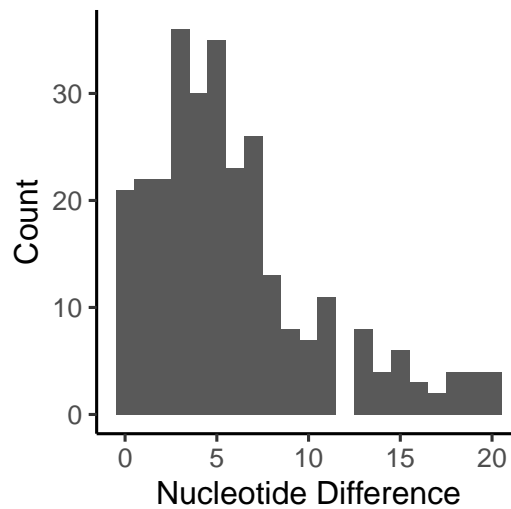
### IGHV4-39\*07

2229 sequences assigned  
693 (31.1%) exact matches, in which:  
691 unique CDR3  
11 unique J



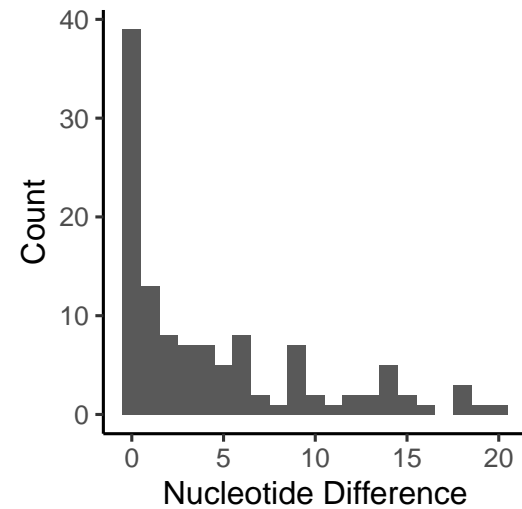
### IGHV4-61\*01

322 sequences assigned  
21 (6.5%) exact matches, in which:  
21 unique CDR3  
4 unique J



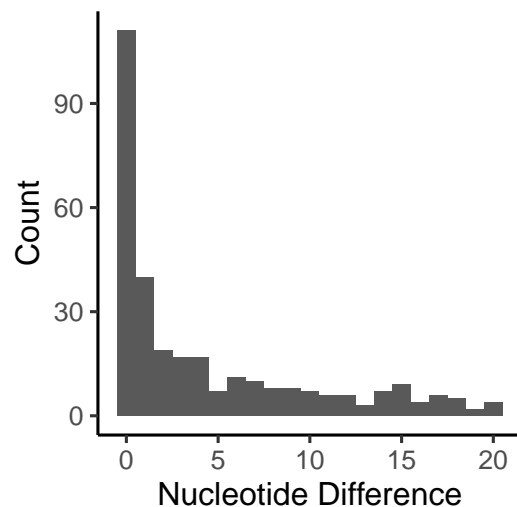
### IGHV6-1\*01

124 sequences assigned  
39 (31.5%) exact matches, in which:  
39 unique CDR3  
7 unique J



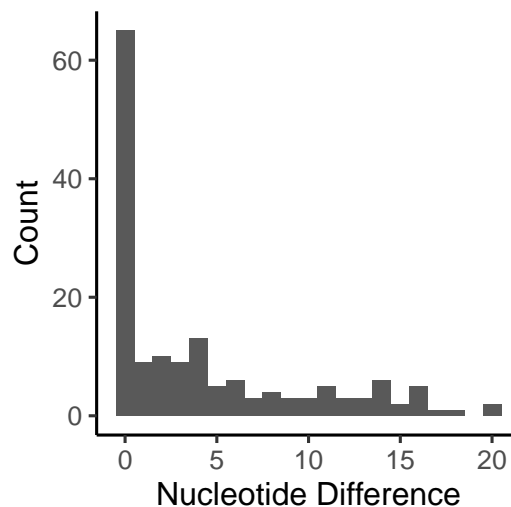
### IGHV4-59\*01

340 sequences assigned  
111 (32.6%) exact matches, in which:  
108 unique CDR3  
8 unique J



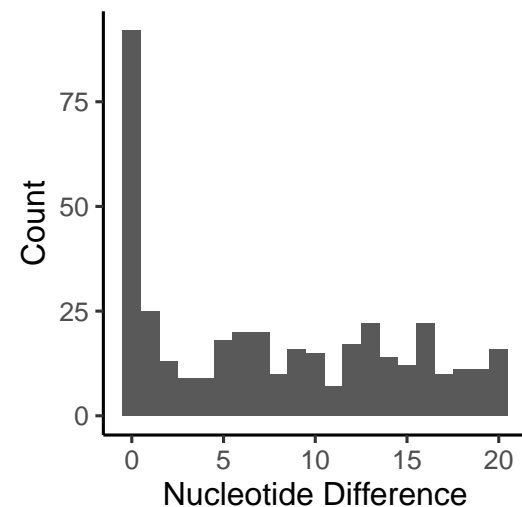
### IGHV5-10-1\*01

171 sequences assigned  
65 (38%) exact matches, in which:  
61 unique CDR3  
9 unique J

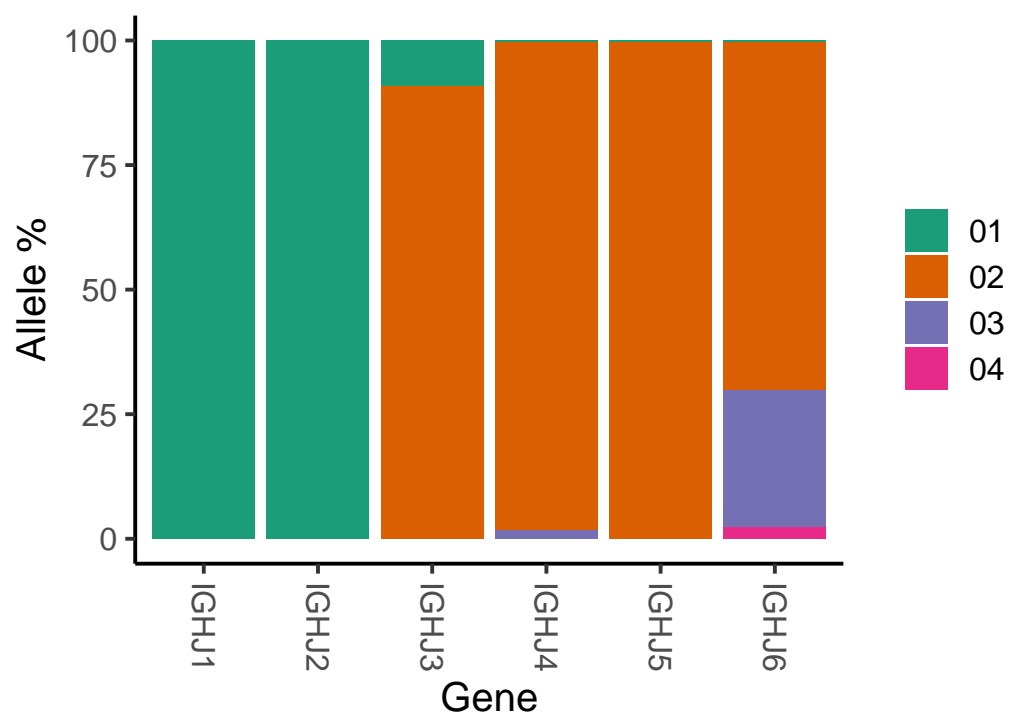


### IGHV7-4-1\*02

540 sequences assigned  
92 (17%) exact matches, in which:  
91 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage

