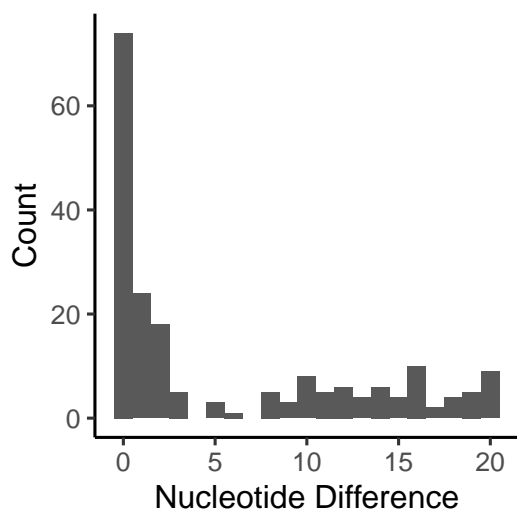


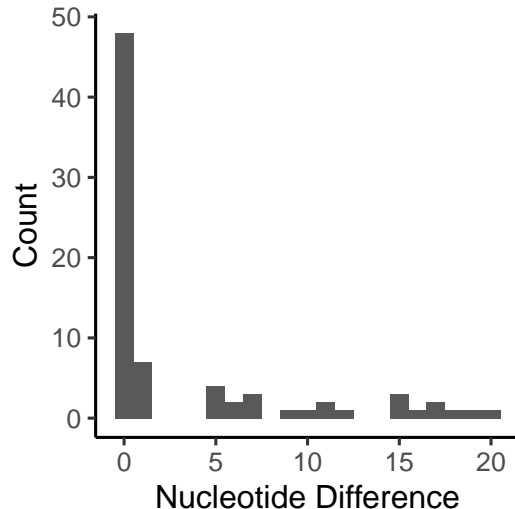
### IGHV1-2\*06

443 sequences assigned  
74 (16.7%) exact matches, in which:  
72 unique CDR3  
6 unique J



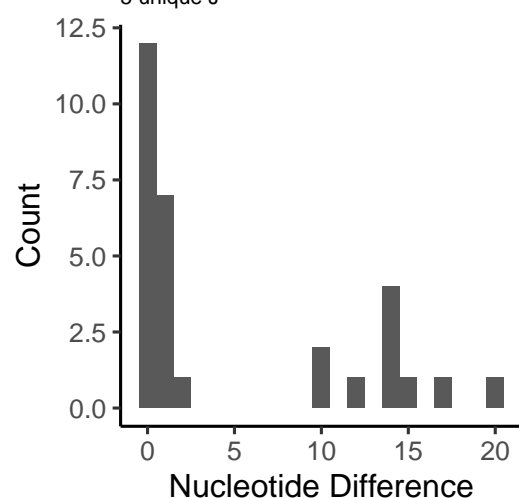
### IGHV1-8\*01

121 sequences assigned  
48 (39.7%) exact matches, in which:  
48 unique CDR3  
6 unique J



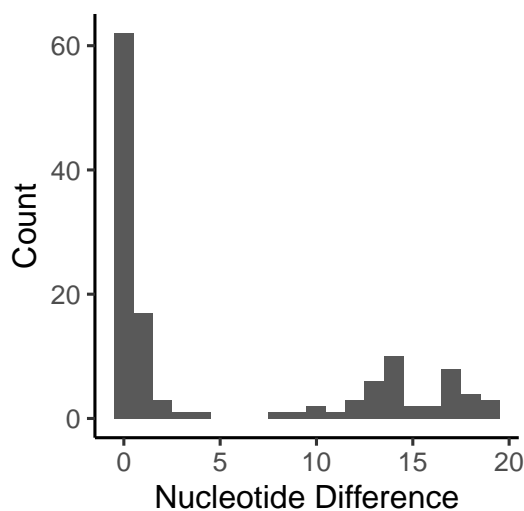
### IGHV1-24\*01

45 sequences assigned  
12 (26.7%) exact matches, in which:  
12 unique CDR3  
5 unique J



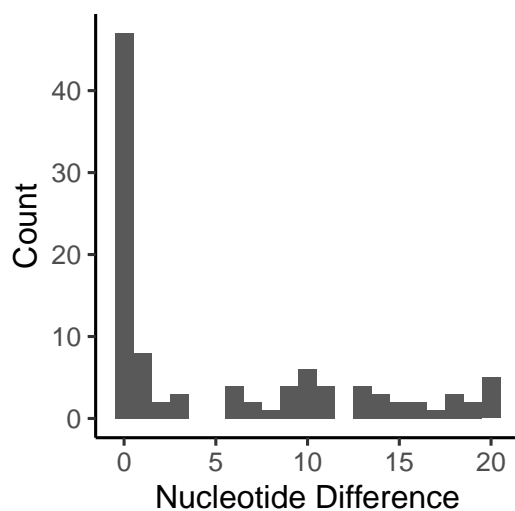
### IGHV1-3\*01

289 sequences assigned  
62 (21.5%) exact matches, in which:  
62 unique CDR3  
6 unique J



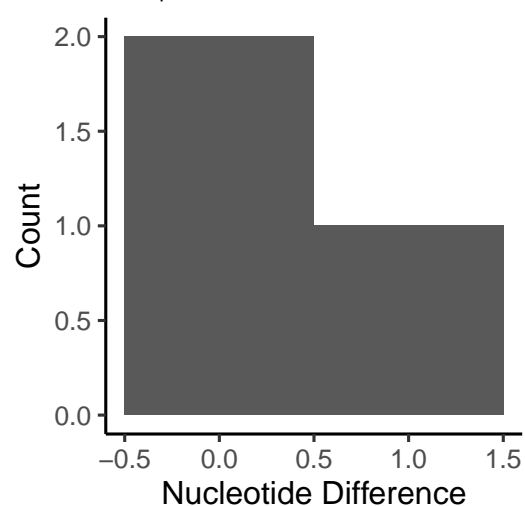
### IGHV1-18\*01

282 sequences assigned  
47 (16.7%) exact matches, in which:  
47 unique CDR3  
6 unique J



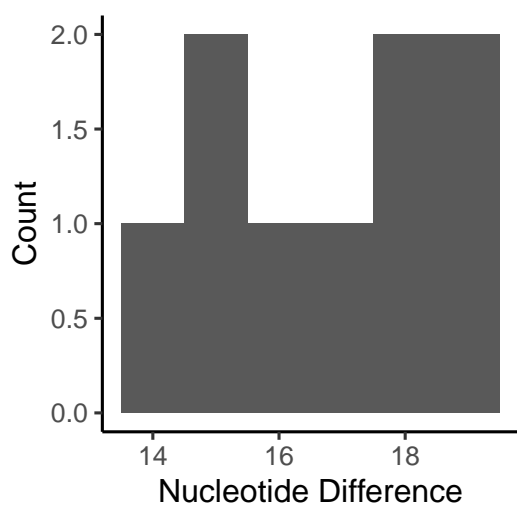
### IGHV1-45\*02

18 sequences assigned  
2 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



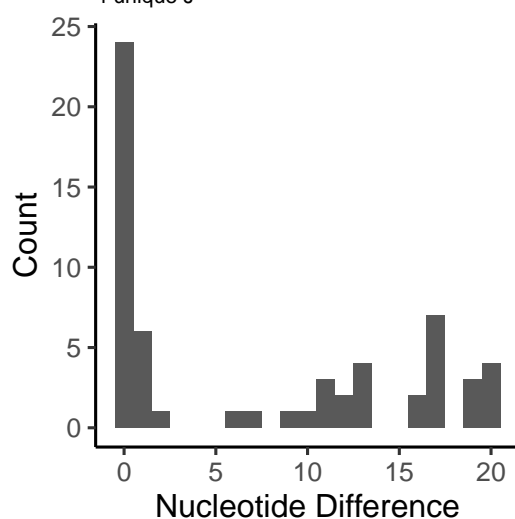
### IGHV1-3\*04

70 sequences assigned  
No exact matches.



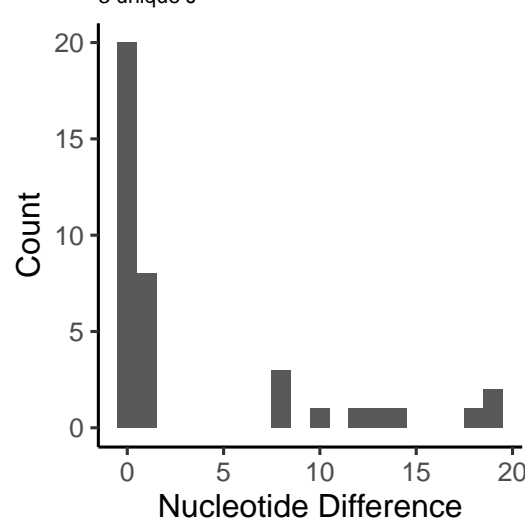
### IGHV1-18\*04

165 sequences assigned  
24 (14.5%) exact matches, in which:  
24 unique CDR3  
4 unique J



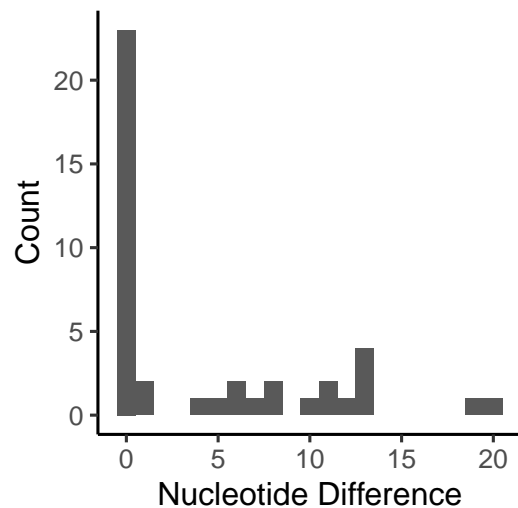
### IGHV1-46\*01

114 sequences assigned  
20 (17.5%) exact matches, in which:  
20 unique CDR3  
3 unique J



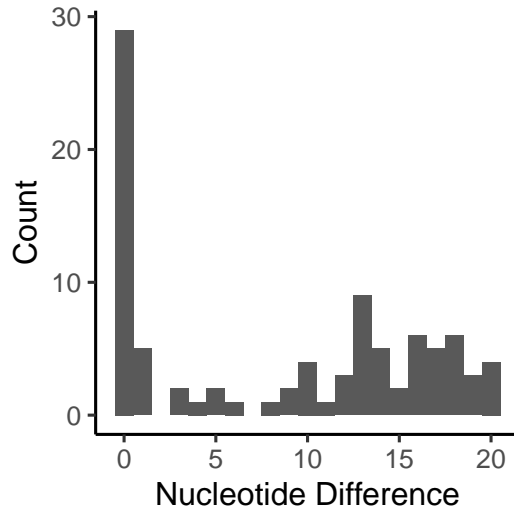
### IGHV1-46\*03

127 sequences assigned  
23 (18.1%) exact matches, in which:  
23 unique CDR3  
4 unique J



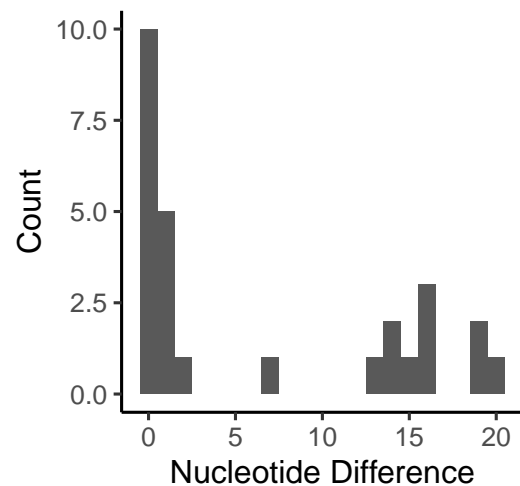
### IGHV2-5\*01

132 sequences assigned  
29 (22%) exact matches, in which:  
29 unique CDR3  
6 unique J



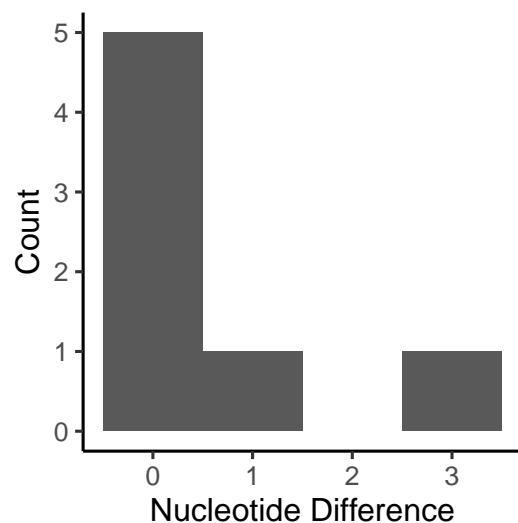
### IGHV2-70\*01

43 sequences assigned  
10 (23.3%) exact matches, in which:  
10 unique CDR3  
5 unique J



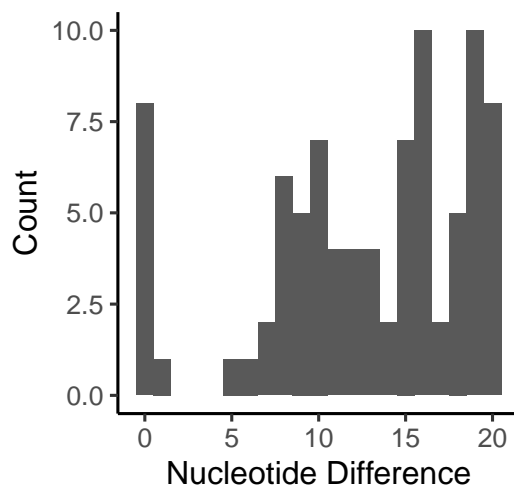
### IGHV1-58\*01

18 sequences assigned  
5 (27.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



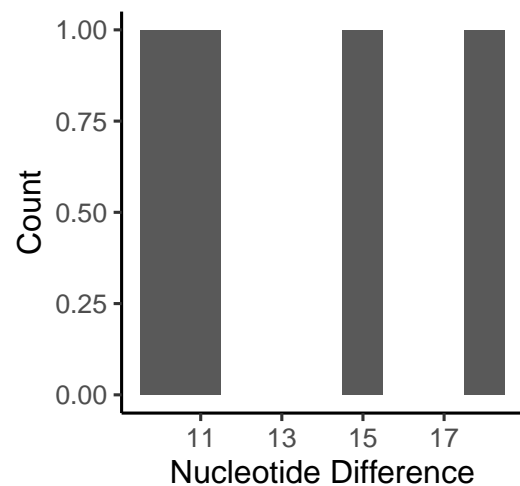
### IGHV2-5\*02

119 sequences assigned  
8 (6.7%) exact matches, in which:  
8 unique CDR3  
2 unique J



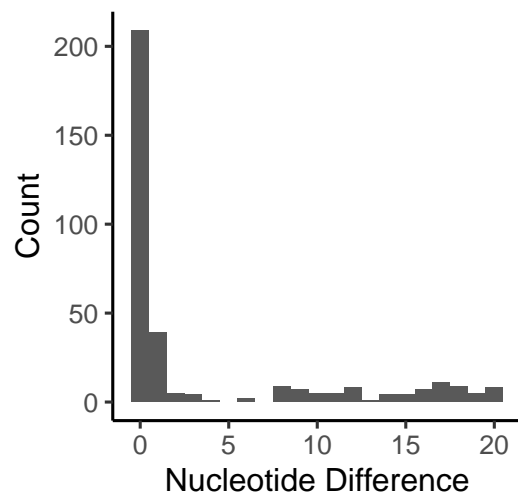
### IGHV2-70\*13

10 sequences assigned  
No exact matches.



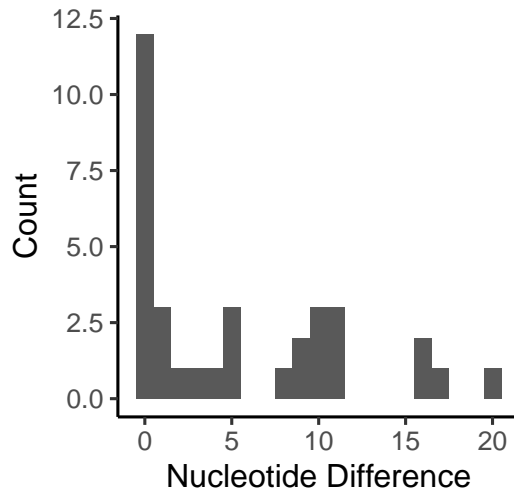
### IGHV1-69\*01

762 sequences assigned  
209 (27.4%) exact matches, in which:  
209 unique CDR3  
7 unique J



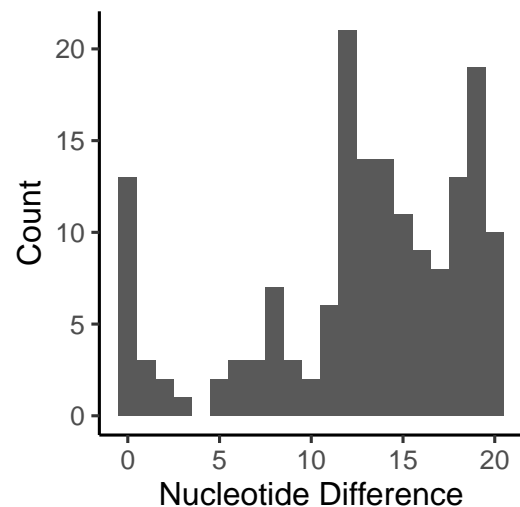
### IGHV2-26\*01

49 sequences assigned  
12 (24.5%) exact matches, in which:  
12 unique CDR3  
4 unique J



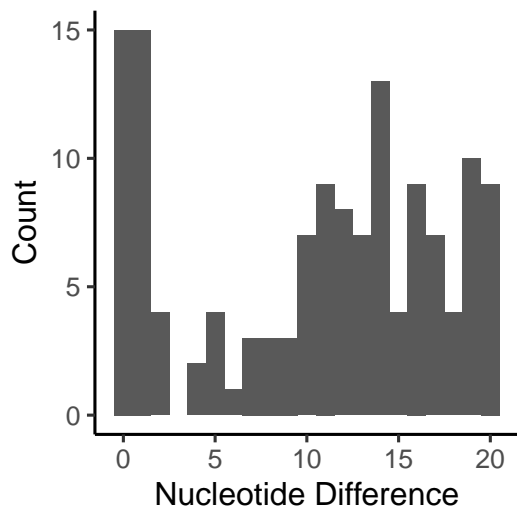
### IGHV3-7\*01

325 sequences assigned  
13 (4%) exact matches, in which:  
13 unique CDR3  
4 unique J



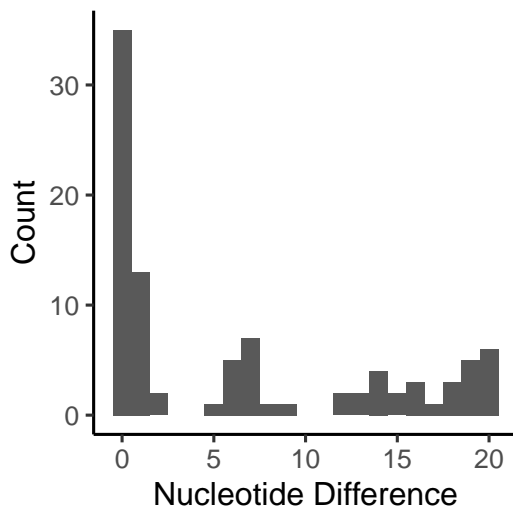
### IGHV3-7\*03

319 sequences assigned  
15 (4.7%) exact matches, in which:  
12 unique CDR3  
3 unique J



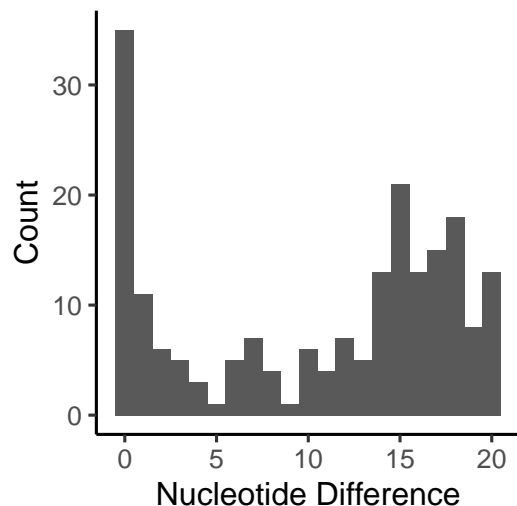
### IGHV3-11\*06

240 sequences assigned  
35 (14.6%) exact matches, in which:  
35 unique CDR3  
7 unique J



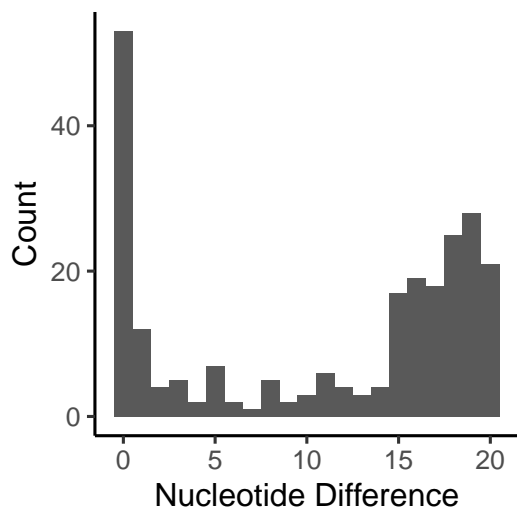
### IGHV3-15\*01

418 sequences assigned  
35 (8.4%) exact matches, in which:  
35 unique CDR3  
6 unique J



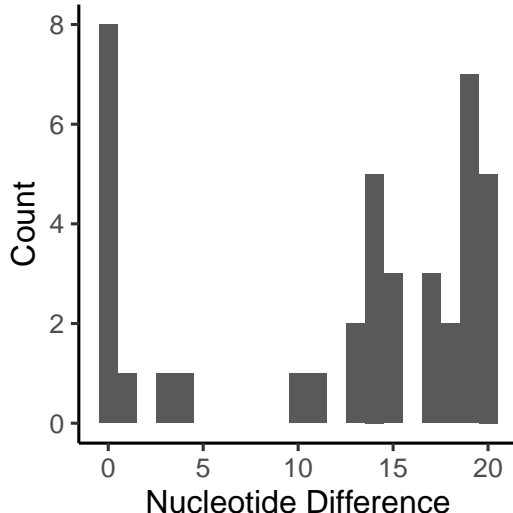
### IGHV3-9\*01

551 sequences assigned  
53 (9.6%) exact matches, in which:  
53 unique CDR3  
6 unique J



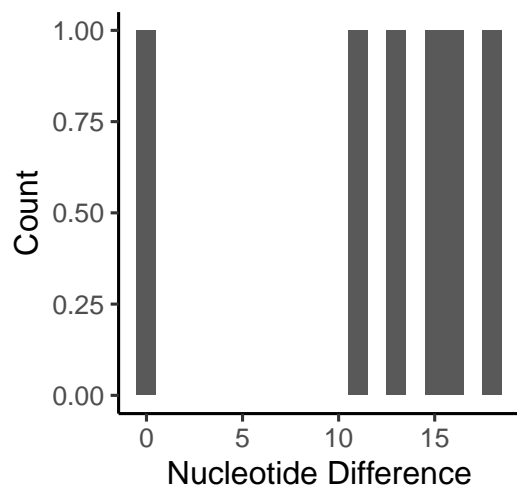
### IGHV3-13\*01

96 sequences assigned  
8 (8.3%) exact matches, in which:  
8 unique CDR3  
3 unique J



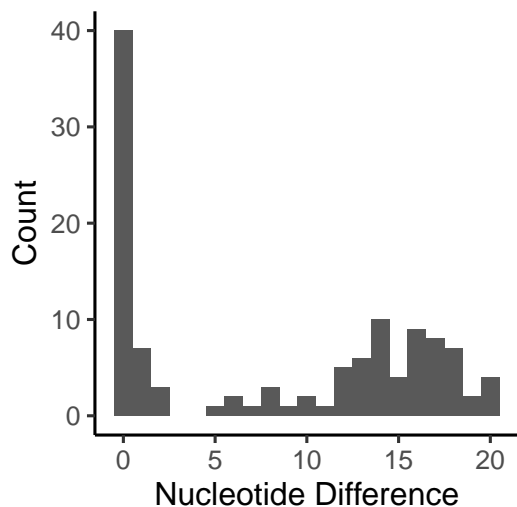
### IGHV3-20\*01

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



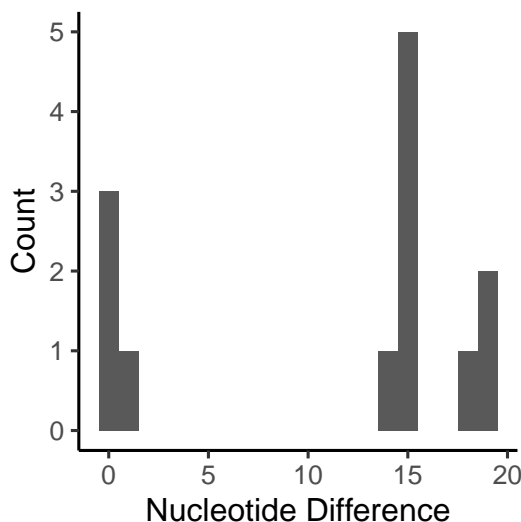
### IGHV3-11\*01

274 sequences assigned  
40 (14.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



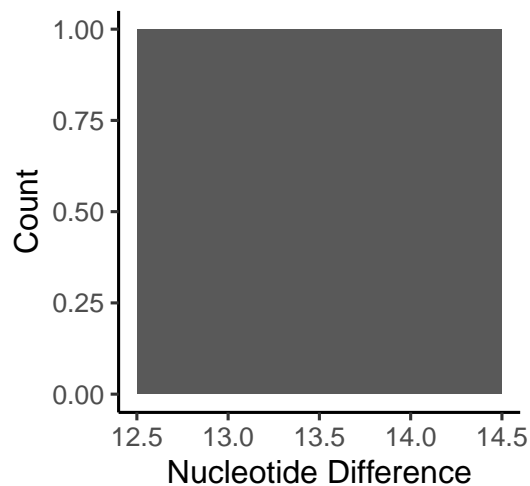
### IGHV3-13\*05

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



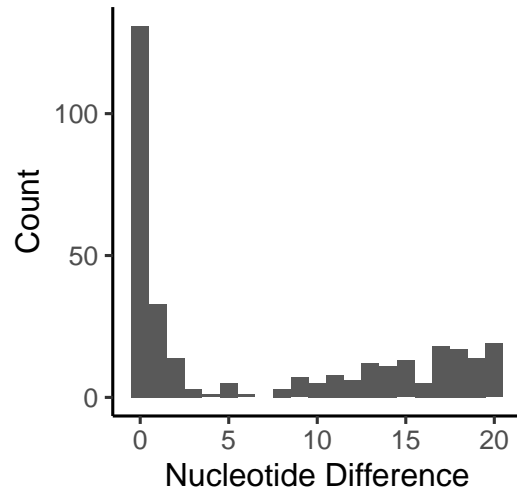
### IGHV3-20\*04

6 sequences assigned  
No exact matches.



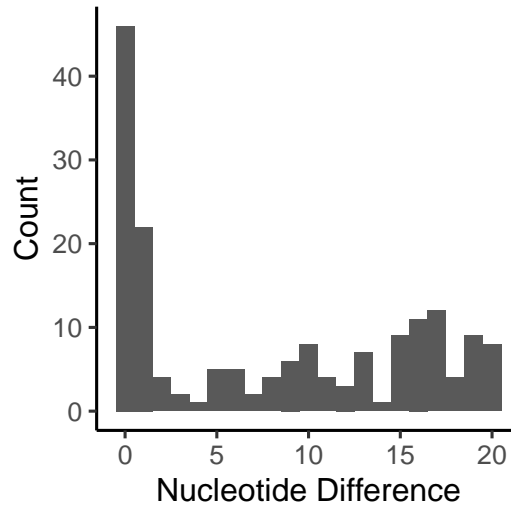
### IGHV3-21\*01

531 sequences assigned  
131 (24.7%) exact matches, in which:  
128 unique CDR3  
7 unique J



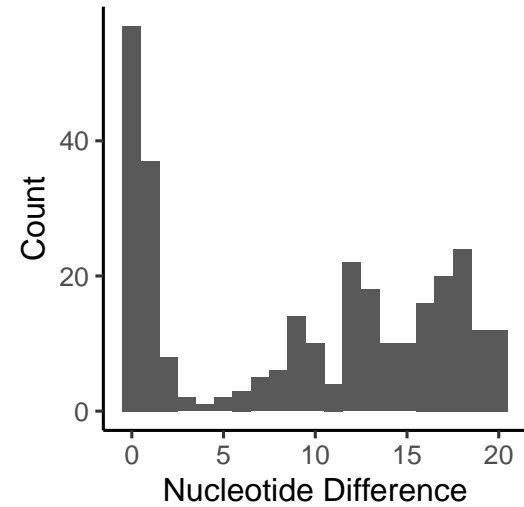
### IGHV3-30-3\*01

328 sequences assigned  
46 (14%) exact matches, in which:  
46 unique CDR3  
5 unique J



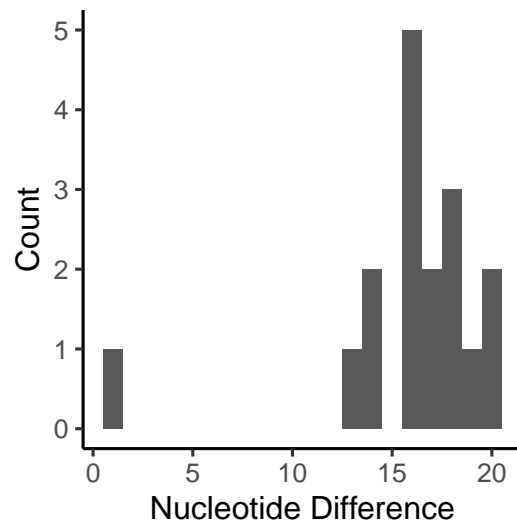
### IGHV3-30\*18

615 sequences assigned  
57 (9.3%) exact matches, in which:  
56 unique CDR3  
6 unique J



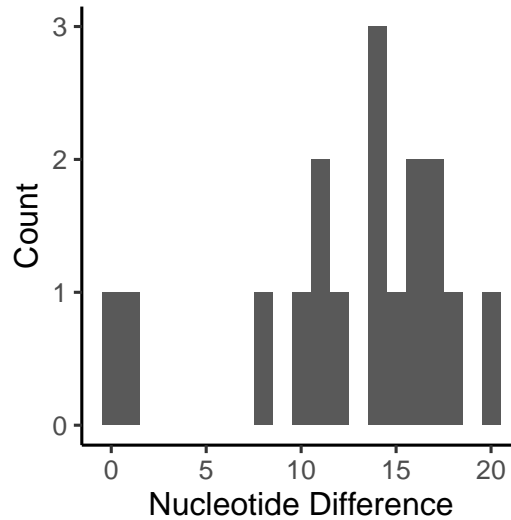
### IGHV3-21\*02

118 sequences assigned  
No exact matches.



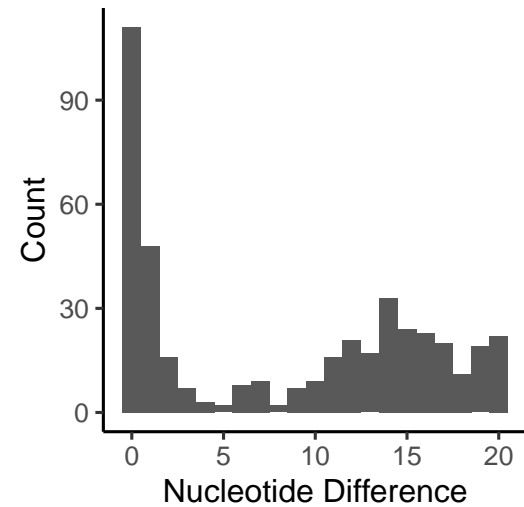
### IGHV3-30\*03

124 sequences assigned  
1 (0.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



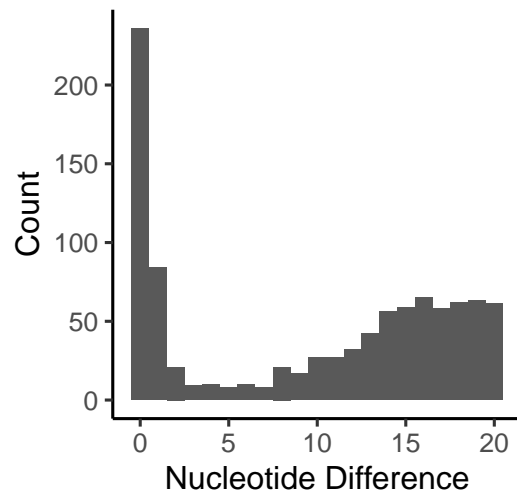
### IGHV3-33\*01

1063 sequences assigned  
111 (10.4%) exact matches, in which:  
109 unique CDR3  
7 unique J



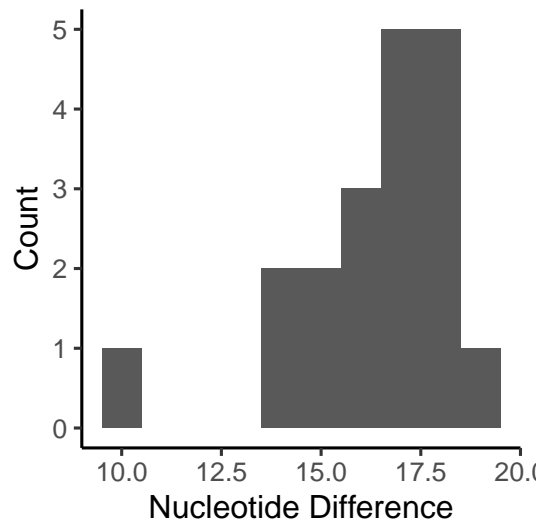
### IGHV3-23\*01

2298 sequences assigned  
236 (10.3%) exact matches, in which:  
234 unique CDR3  
7 unique J



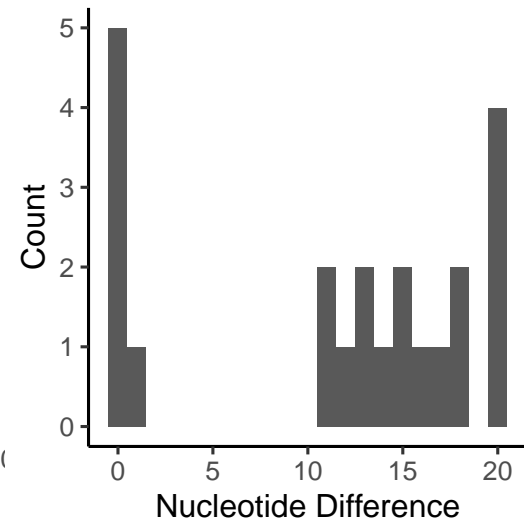
### IGHV3-30\*04

83 sequences assigned  
No exact matches.



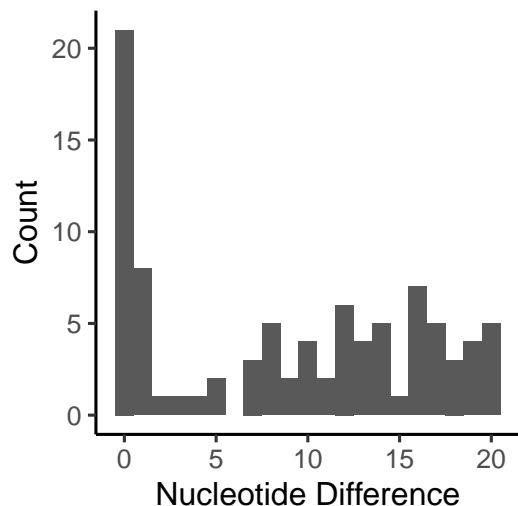
### IGHV3-43\*01

96 sequences assigned  
5 (5.2%) exact matches, in which:  
5 unique CDR3  
4 unique J



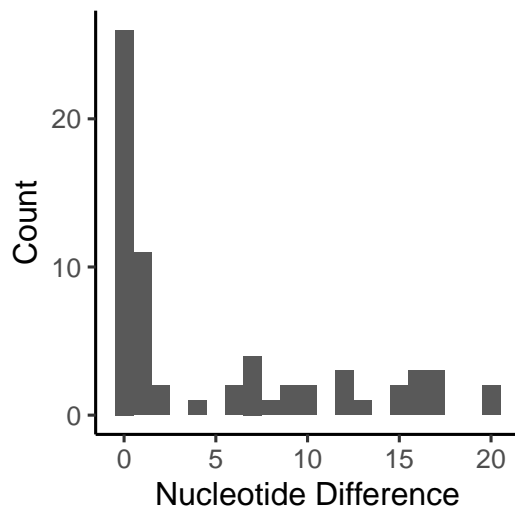
### IGHV3-48\*01

144 sequences assigned  
21 (14.6%) exact matches, in which:  
21 unique CDR3  
4 unique J



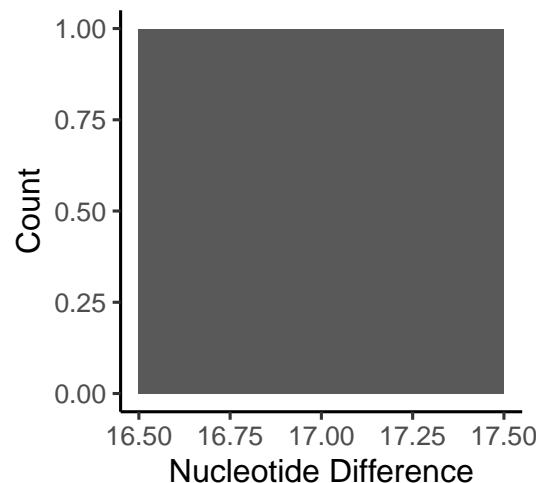
### IGHV3-53\*01

142 sequences assigned  
26 (18.3%) exact matches, in which:  
26 unique CDR3  
5 unique J



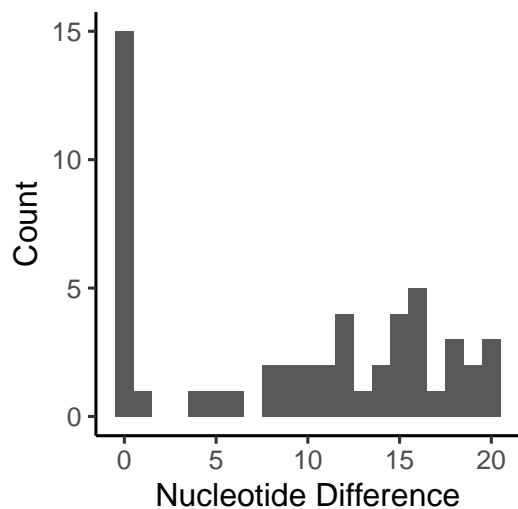
### IGHV3-64\*07

4 sequences assigned  
No exact matches.



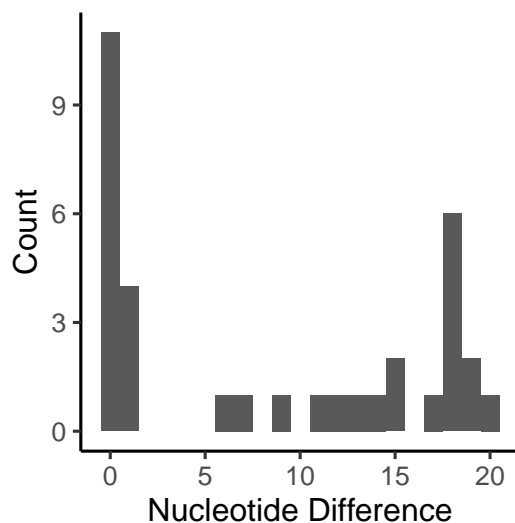
### IGHV3-48\*02

102 sequences assigned  
15 (14.7%) exact matches, in which:  
15 unique CDR3  
4 unique J



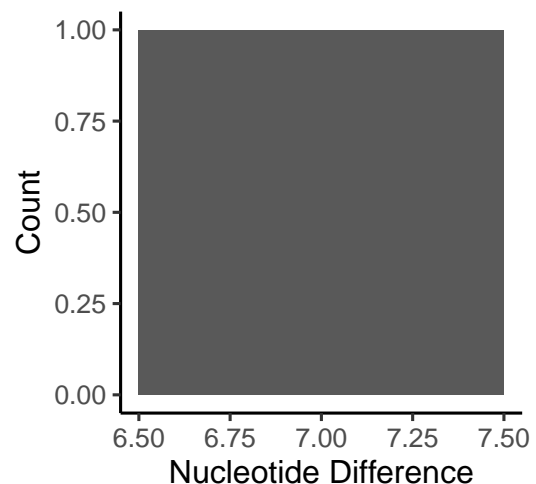
### IGHV3-53\*02

91 sequences assigned  
11 (12.1%) exact matches, in which:  
11 unique CDR3  
5 unique J



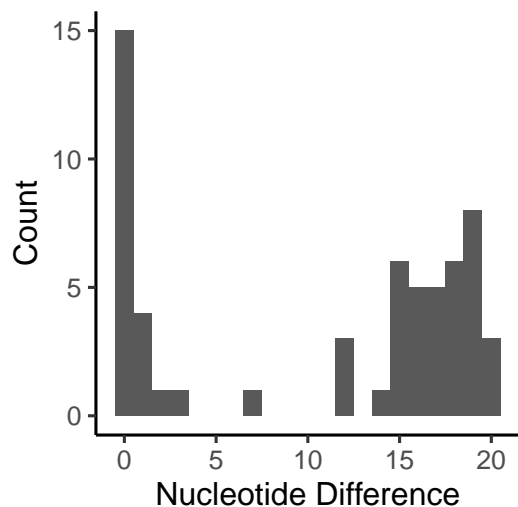
### IGHV3-66\*03

1 sequences assigned  
No exact matches.



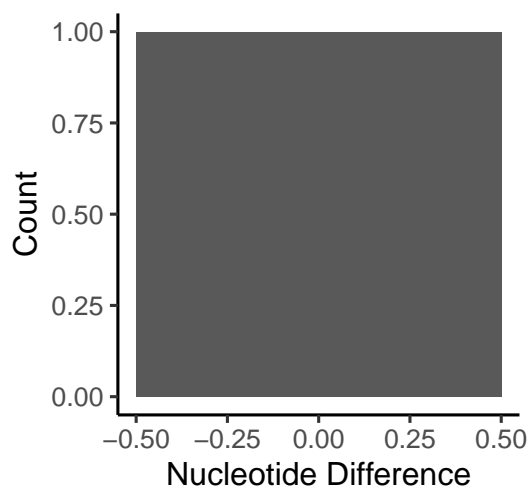
### IGHV3-49\*05

112 sequences assigned  
15 (13.4%) exact matches, in which:  
15 unique CDR3  
5 unique J



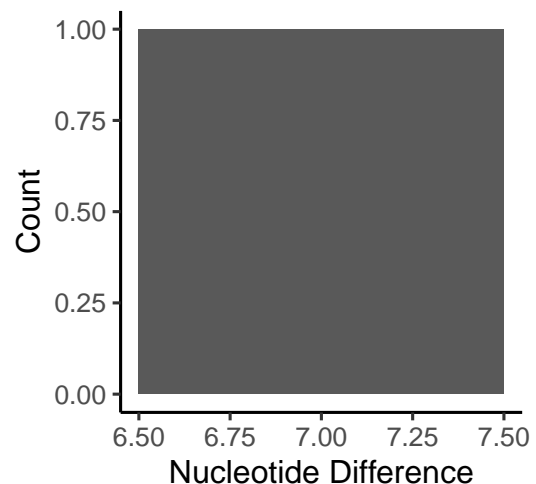
### IGHV3-64\*02

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



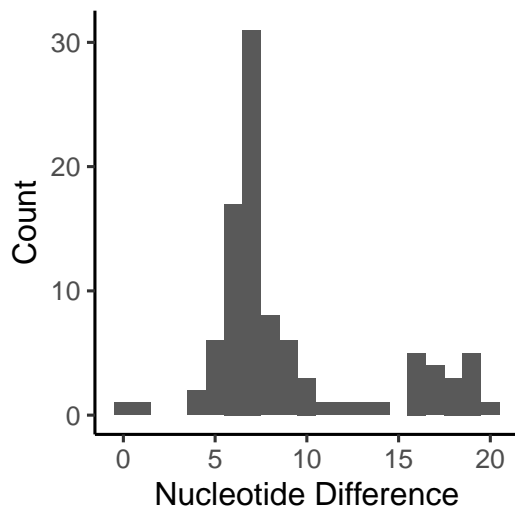
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



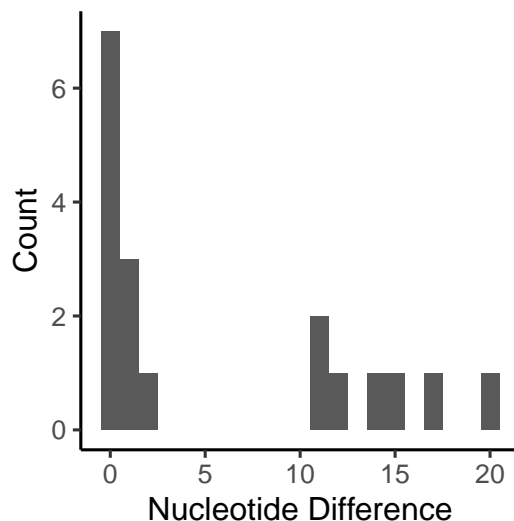
### IGHV3-72\*01

166 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



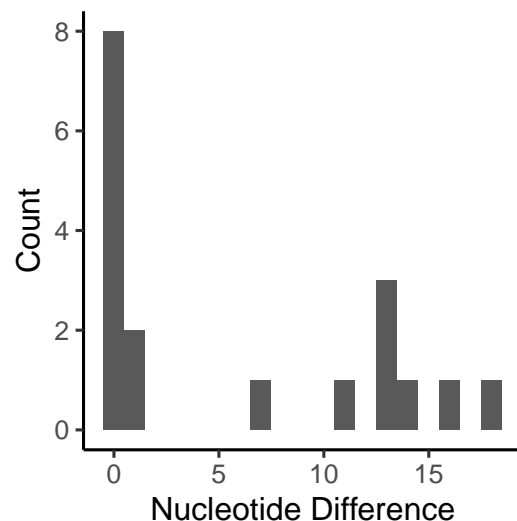
### IGHV3-64D\*06

77 sequences assigned  
7 (9.1%) exact matches, in which:  
7 unique CDR3  
2 unique J



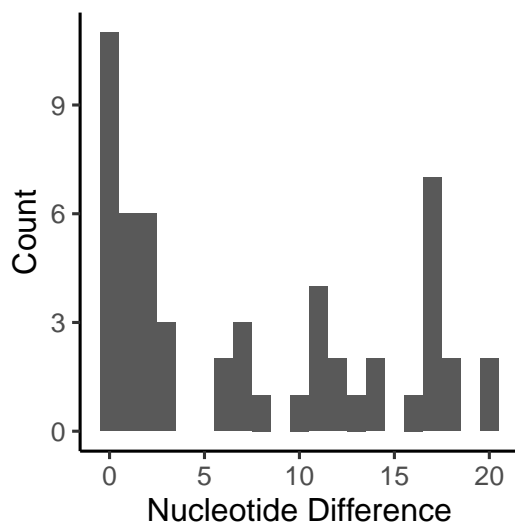
### IGHV4-30-2\*01

28 sequences assigned  
8 (28.6%) exact matches, in which:  
8 unique CDR3  
4 unique J



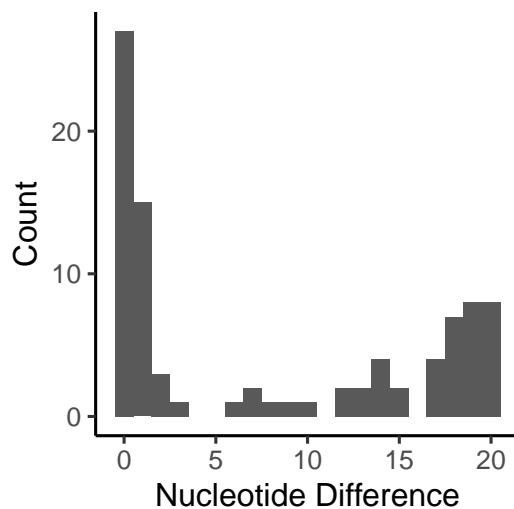
### IGHV3-73\*02

94 sequences assigned  
11 (11.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



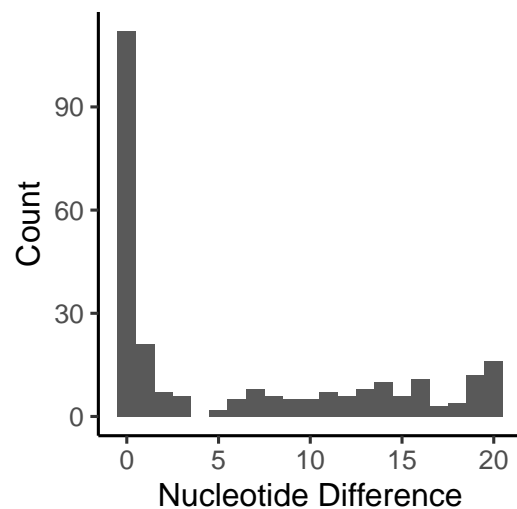
### IGHV4-4\*02

204 sequences assigned  
27 (13.2%) exact matches, in which:  
27 unique CDR3  
6 unique J



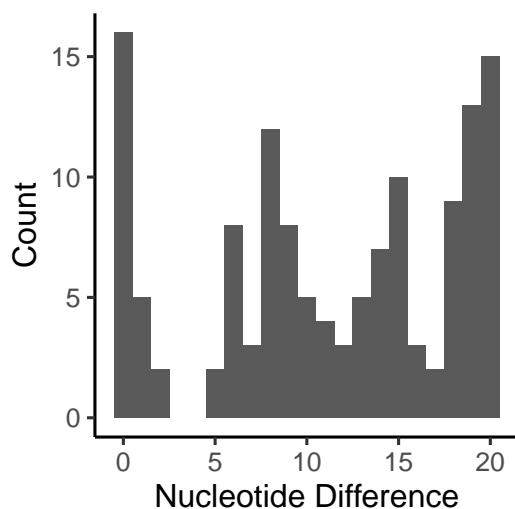
### IGHV4-31\*03

573 sequences assigned  
112 (19.5%) exact matches, in which:  
112 unique CDR3  
7 unique J



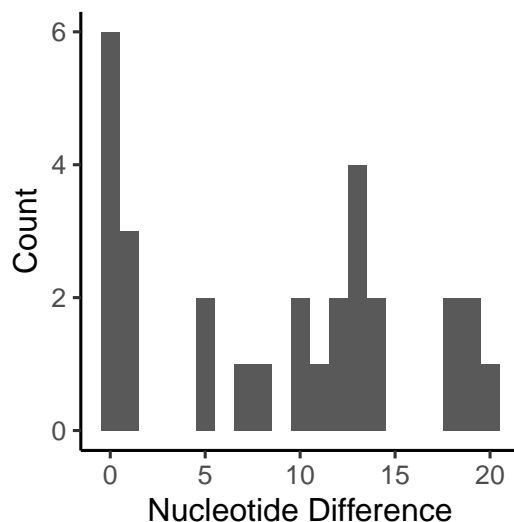
### IGHV3-74\*01

395 sequences assigned  
16 (4.1%) exact matches, in which:  
16 unique CDR3  
5 unique J



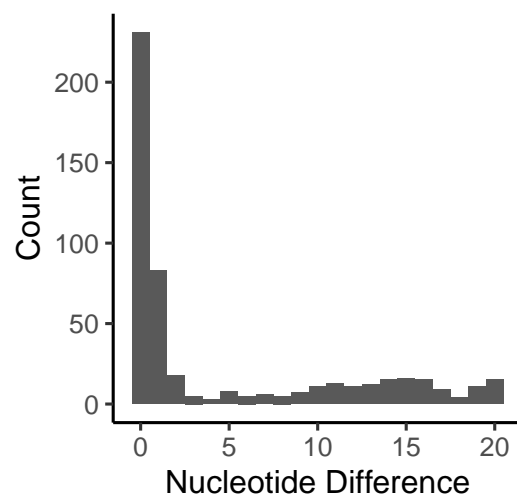
### IGHV4-30-4\*01

55 sequences assigned  
6 (10.9%) exact matches, in which:  
6 unique CDR3  
4 unique J



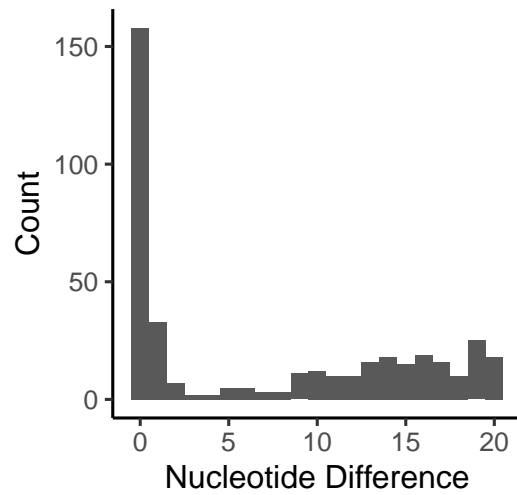
### IGHV4-34\*01

743 sequences assigned  
231 (31.1%) exact matches, in which:  
231 unique CDR3  
7 unique J



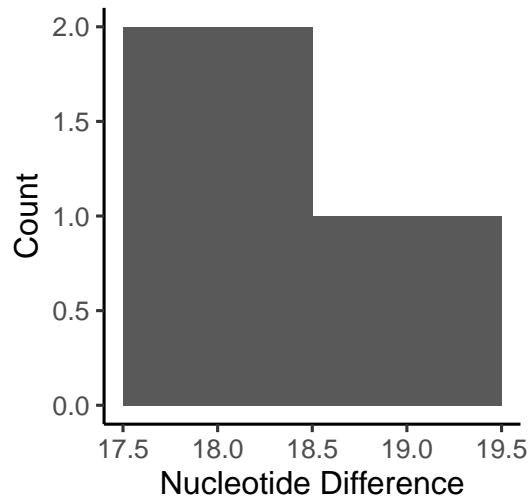
### IGHV4-39\*01

935 sequences assigned  
158 (16.9%) exact matches, in which:  
157 unique CDR3  
7 unique J



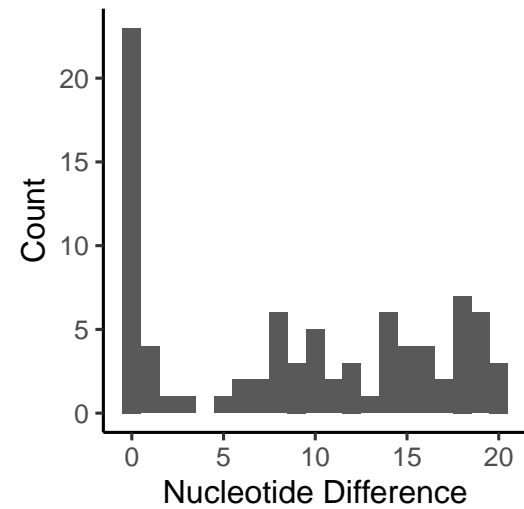
### IGHV4-61\*08

13 sequences assigned  
No exact matches.



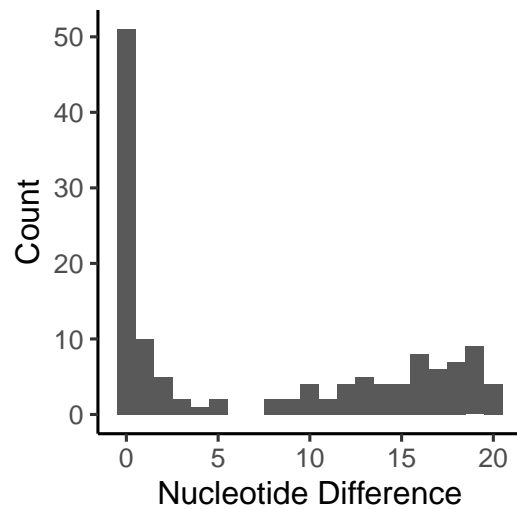
### IGHV5-51\*03

144 sequences assigned  
23 (16%) exact matches, in which:  
23 unique CDR3  
6 unique J



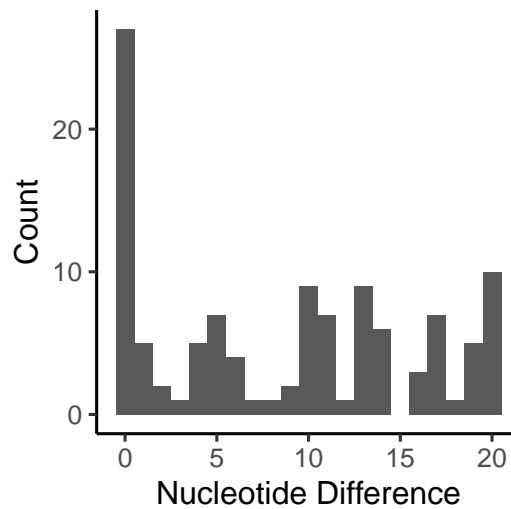
### IGHV4-59\*01

333 sequences assigned  
51 (15.3%) exact matches, in which:  
51 unique CDR3  
6 unique J



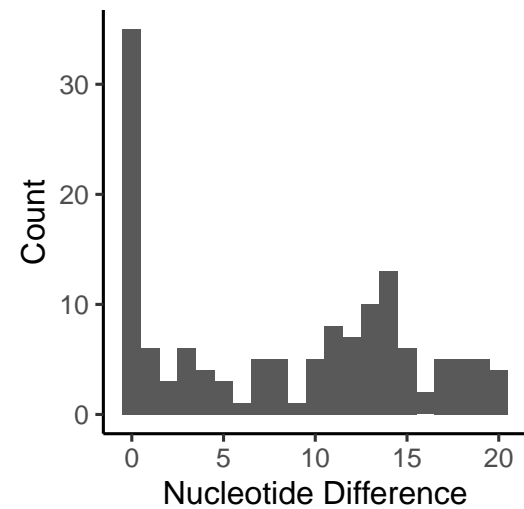
### IGHV5-10-1\*03

194 sequences assigned  
27 (13.9%) exact matches, in which:  
27 unique CDR3  
6 unique J



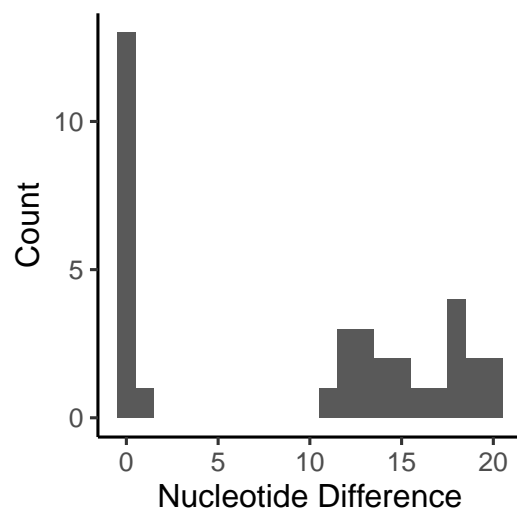
### IGHV6-1\*01

206 sequences assigned  
35 (17%) exact matches, in which:  
35 unique CDR3  
6 unique J



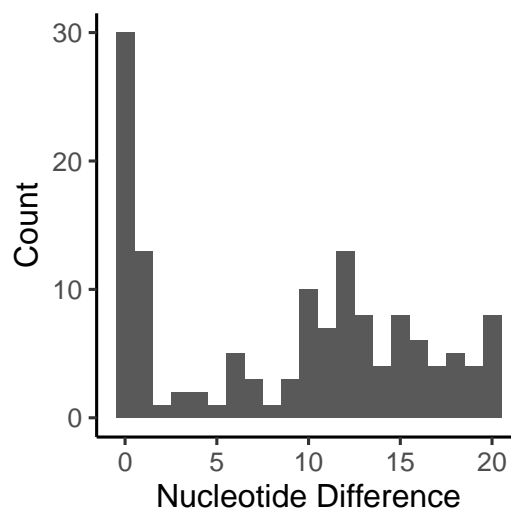
### IGHV4-61\*01

66 sequences assigned  
13 (19.7%) exact matches, in which:  
13 unique CDR3  
5 unique J



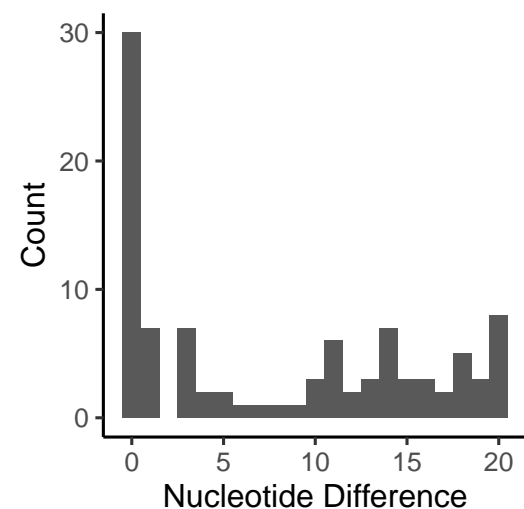
### IGHV5-51\*01

253 sequences assigned  
30 (11.9%) exact matches, in which:  
30 unique CDR3  
5 unique J

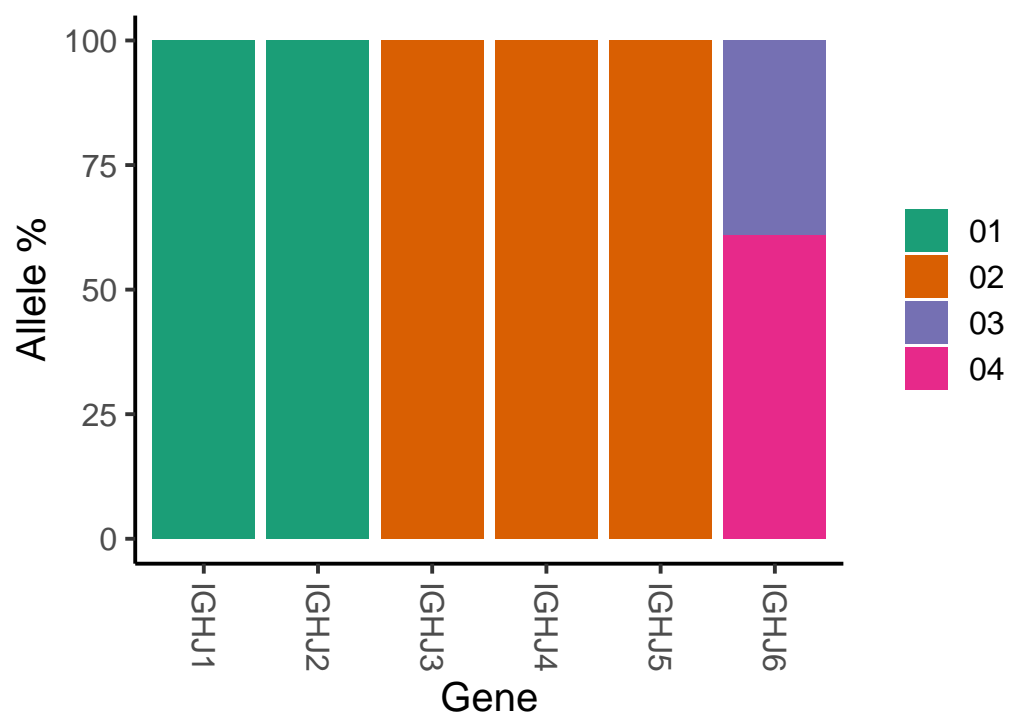


### IGHV7-4-1\*02

201 sequences assigned  
30 (14.9%) exact matches, in which:  
30 unique CDR3  
5 unique J

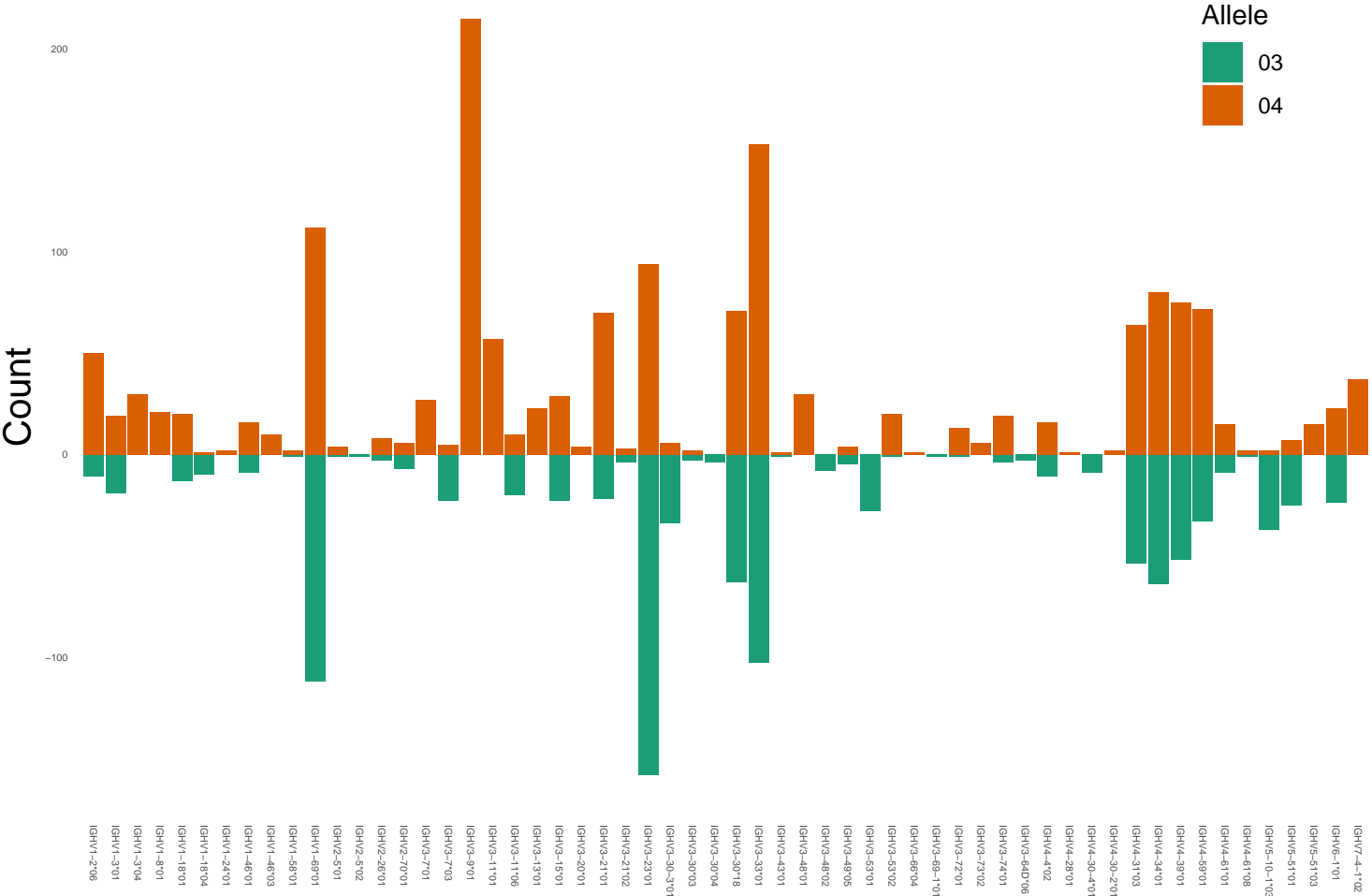


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.