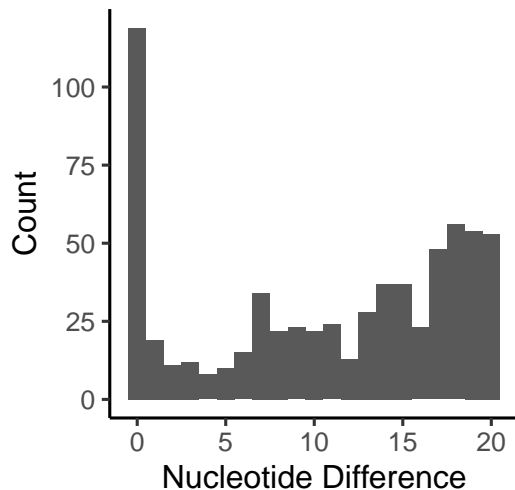


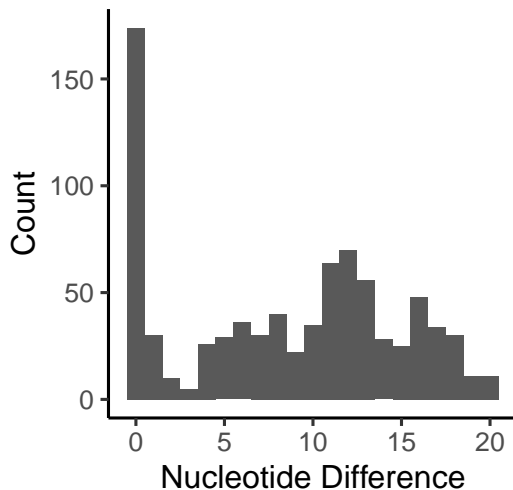
### IGHV1-2\*02

1360 sequences assigned  
119 (8.8%) exact matches, in which:  
117 unique CDR3  
6 unique J



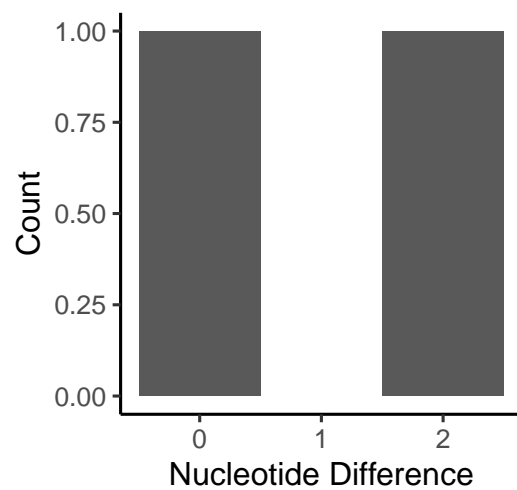
### IGHV1-8\*01

959 sequences assigned  
174 (18.1%) exact matches, in which:  
162 unique CDR3  
7 unique J



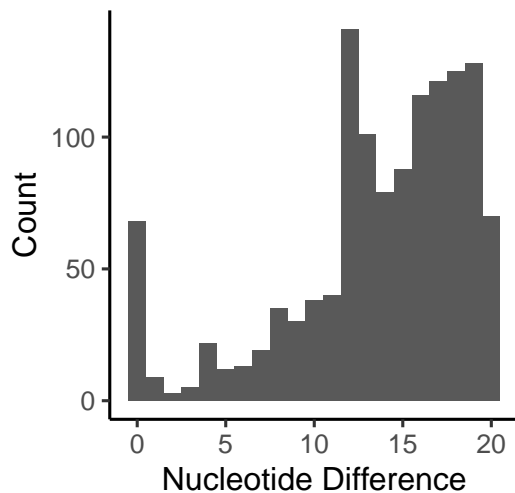
### IGHV1-45\*02

114 sequences assigned  
1 (0.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



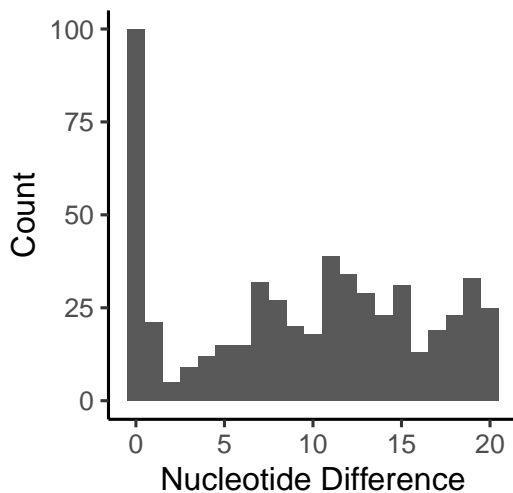
### IGHV1-2\*06

2120 sequences assigned  
68 (3.2%) exact matches, in which:  
68 unique CDR3  
5 unique J



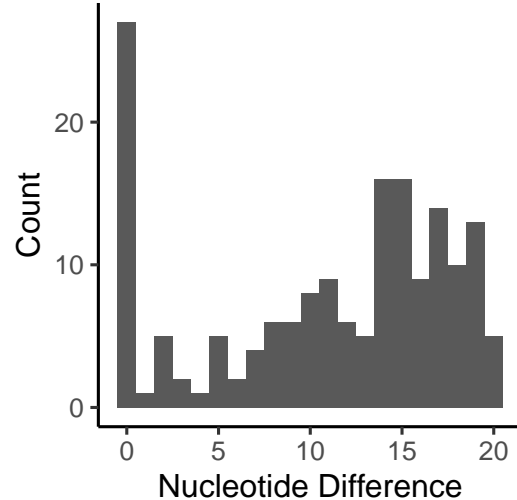
### IGHV1-18\*01

931 sequences assigned  
100 (10.7%) exact matches, in which:  
98 unique CDR3  
6 unique J



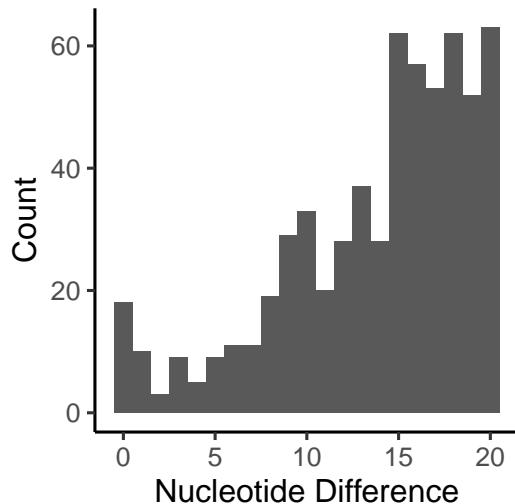
### IGHV1-46\*01

280 sequences assigned  
27 (9.6%) exact matches, in which:  
27 unique CDR3  
4 unique J



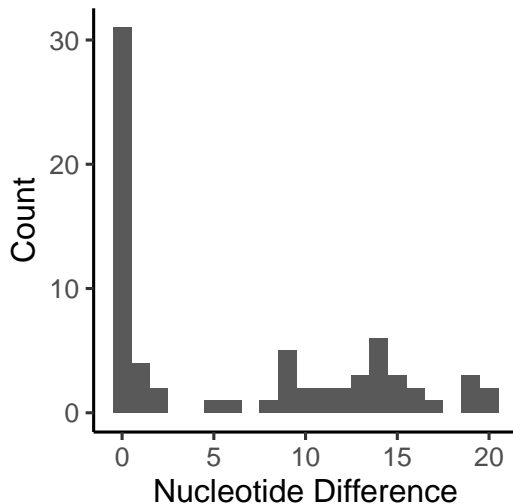
### IGHV1-3\*01

1073 sequences assigned  
18 (1.7%) exact matches, in which:  
18 unique CDR3  
4 unique J



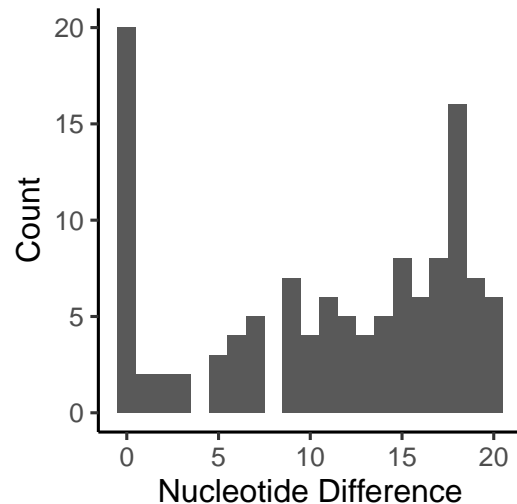
### IGHV1-24\*01

89 sequences assigned  
31 (34.8%) exact matches, in which:  
31 unique CDR3  
5 unique J



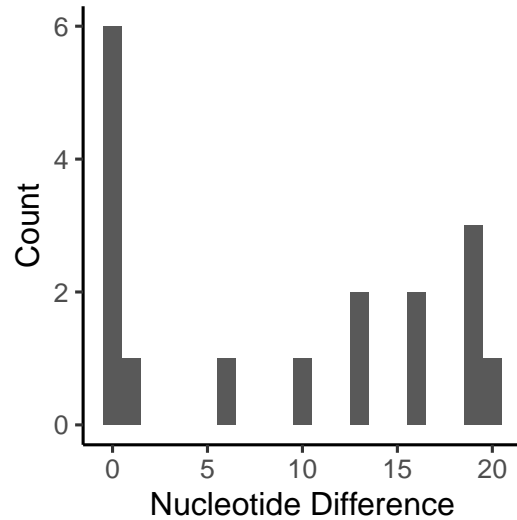
### IGHV1-46\*03

208 sequences assigned  
20 (9.6%) exact matches, in which:  
20 unique CDR3  
4 unique J



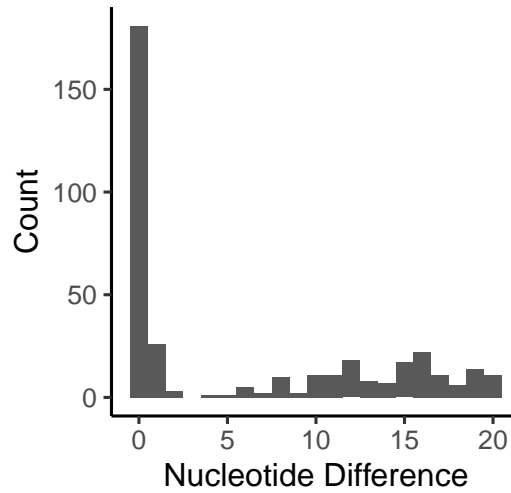
### IGHV1-58\*01

27 sequences assigned  
6 (22.2%) exact matches, in which:  
6 unique CDR3  
4 unique J



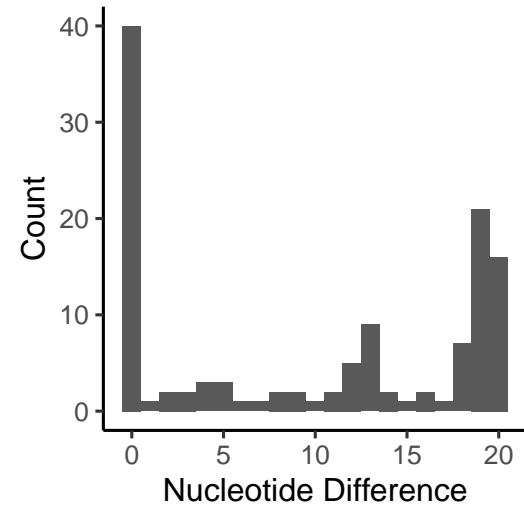
### IGHV1-69\*06

745 sequences assigned  
181 (24.3%) exact matches, in which:  
181 unique CDR3  
7 unique J



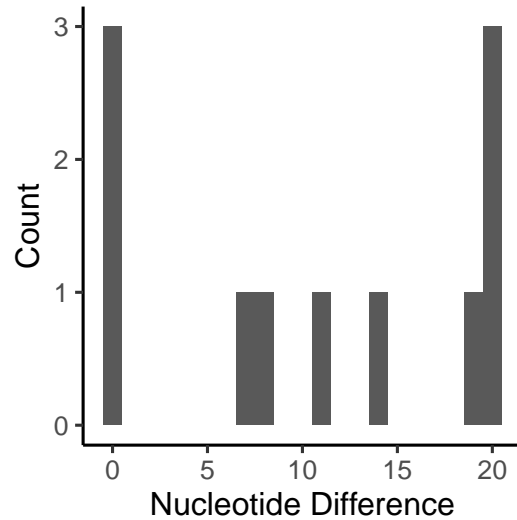
### IGHV2-26\*01

174 sequences assigned  
40 (23%) exact matches, in which:  
40 unique CDR3  
5 unique J



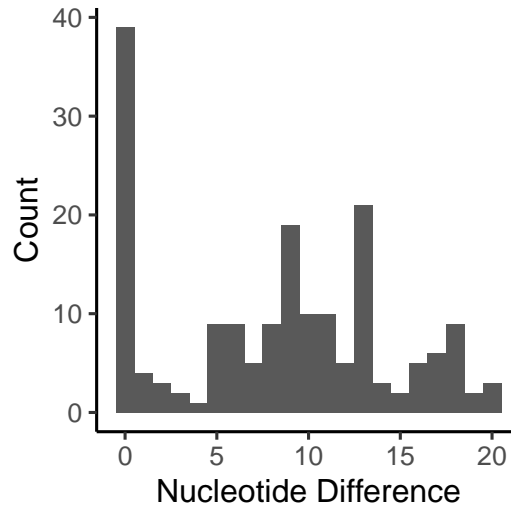
### IGHV1-58\*02

14 sequences assigned  
3 (21.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



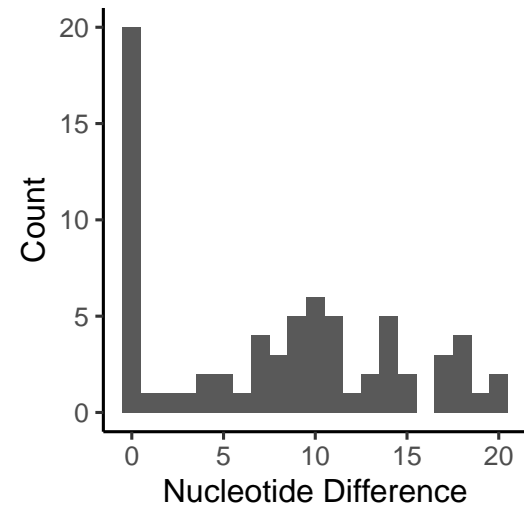
### IGHV2-5\*01

231 sequences assigned  
39 (16.9%) exact matches, in which:  
39 unique CDR3  
4 unique J



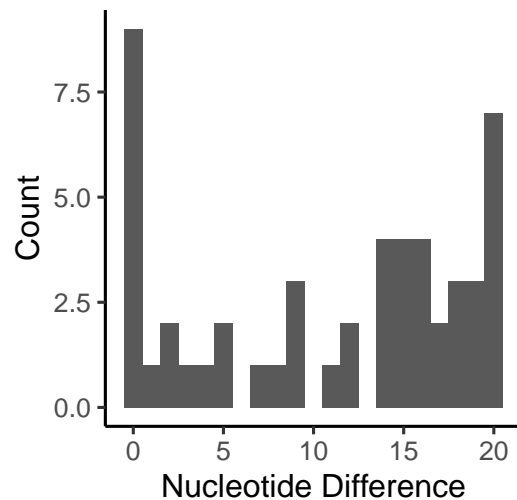
### IGHV2-70\*01

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



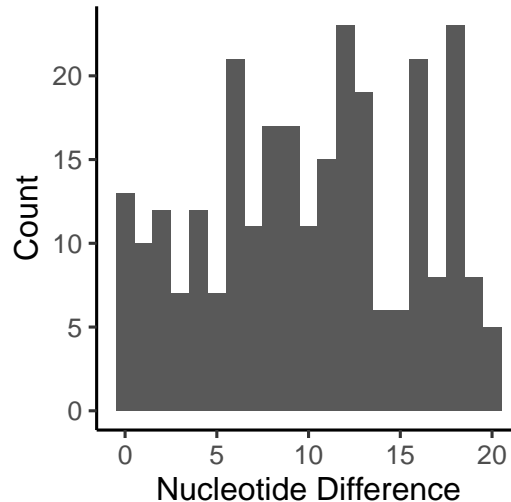
### IGHV1-69-2\*01

92 sequences assigned  
9 (9.8%) exact matches, in which:  
9 unique CDR3  
5 unique J



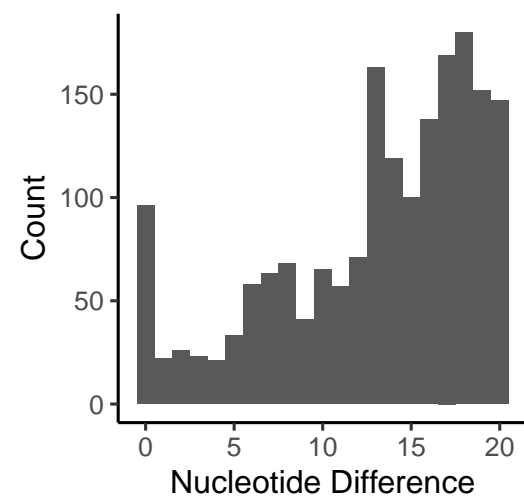
### IGHV2-5\*02

383 sequences assigned  
13 (3.4%) exact matches, in which:  
13 unique CDR3  
4 unique J



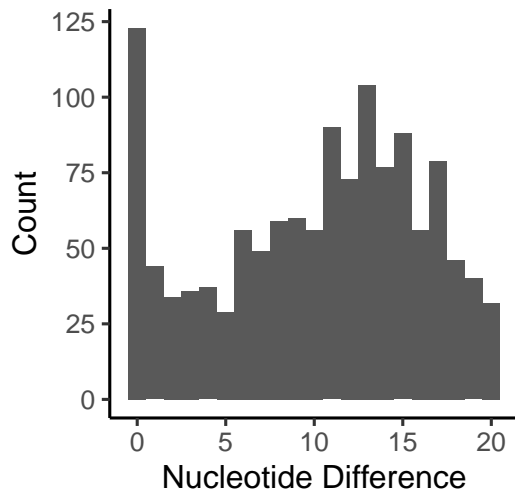
### IGHV3-7\*01

4082 sequences assigned  
96 (2.4%) exact matches, in which:  
90 unique CDR3  
6 unique J



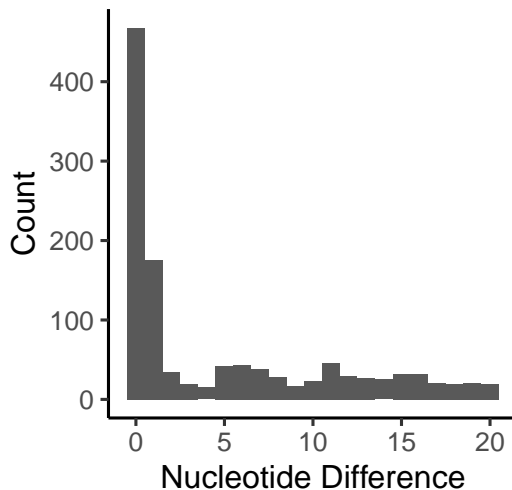
### IGHV3-9\*01

2026 sequences assigned  
123 (6.1%) exact matches, in which:  
113 unique CDR3  
6 unique J



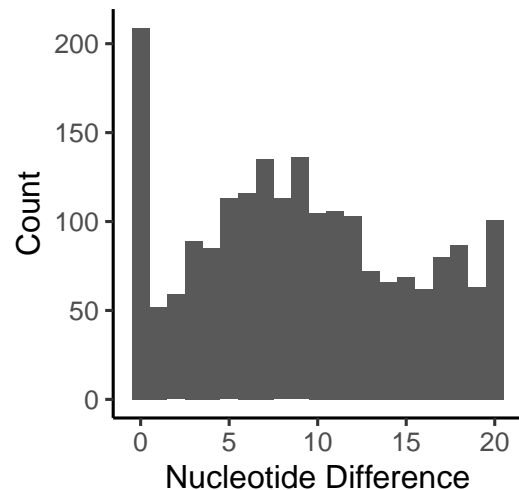
### IGHV3-15\*01

1578 sequences assigned  
468 (29.7%) exact matches, in which:  
91 unique CDR3  
7 unique J



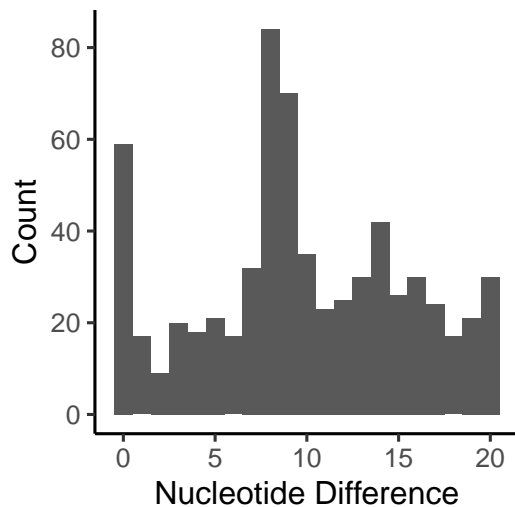
### IGHV3-21\*01

2690 sequences assigned  
209 (7.8%) exact matches, in which:  
197 unique CDR3  
7 unique J



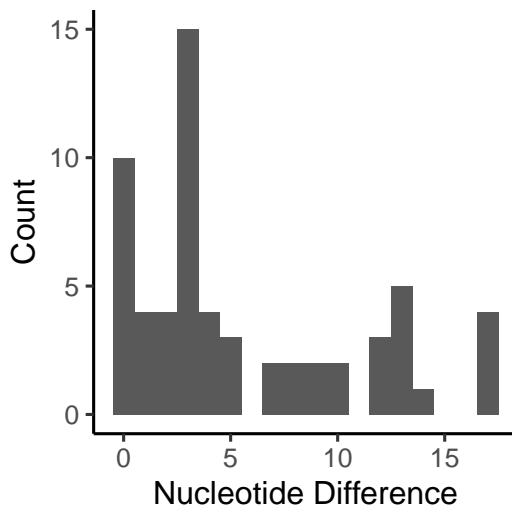
### IGHV3-11\*01

1176 sequences assigned  
59 (5%) exact matches, in which:  
59 unique CDR3  
7 unique J



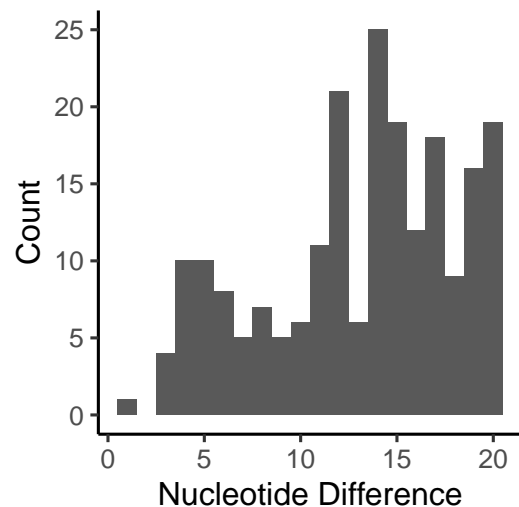
### IGHV3-20\*01

80 sequences assigned  
10 (12.5%) exact matches, in which:  
9 unique CDR3  
5 unique J



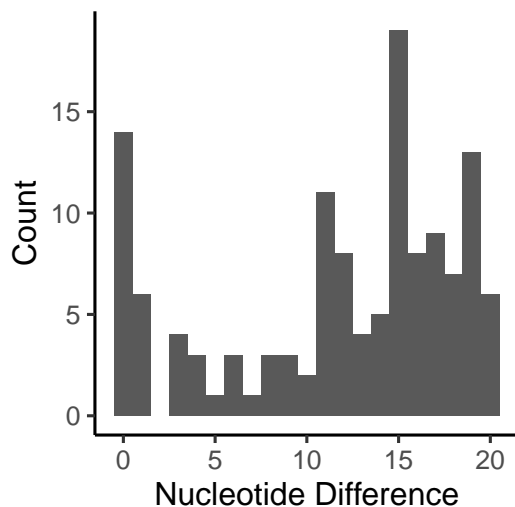
### IGHV3-21\*02

552 sequences assigned  
No exact matches.



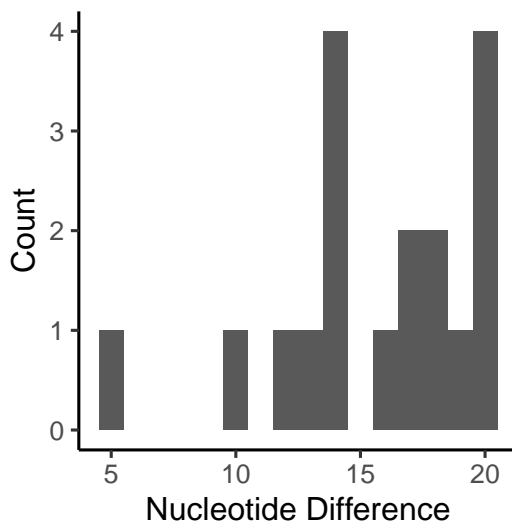
### IGHV3-13\*01

204 sequences assigned  
14 (6.9%) exact matches, in which:  
13 unique CDR3  
6 unique J



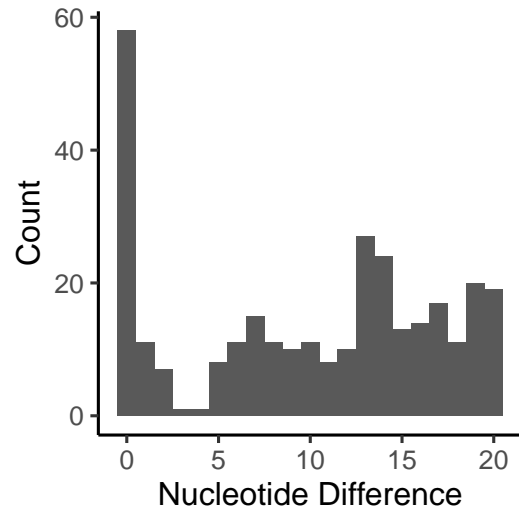
### IGHV3-20\*04

46 sequences assigned  
No exact matches.



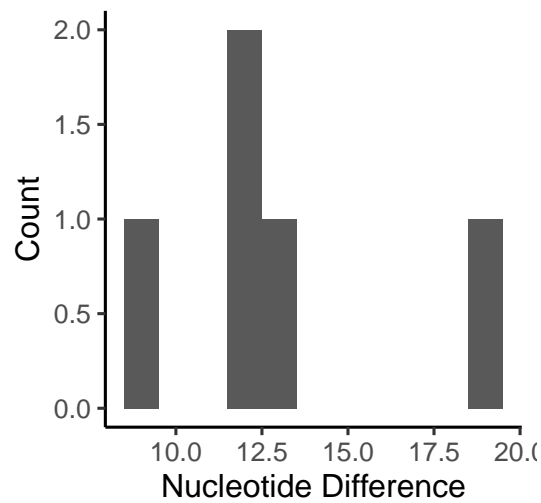
### IGHV3-30-3\*01

521 sequences assigned  
58 (11.1%) exact matches, in which:  
58 unique CDR3  
7 unique J



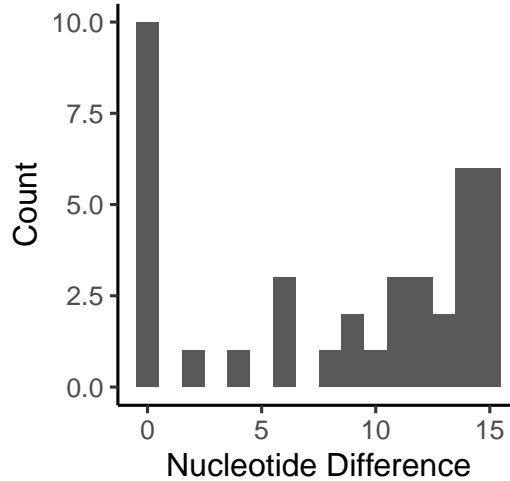
### IGHV3-30-3\*02

17 sequences assigned  
No exact matches.



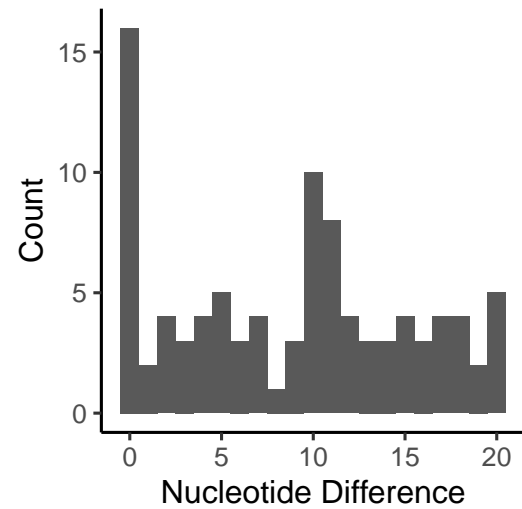
### IGHV3-43\*01

57 sequences assigned  
10 (17.5%) exact matches, in which:  
7 unique CDR3  
3 unique J



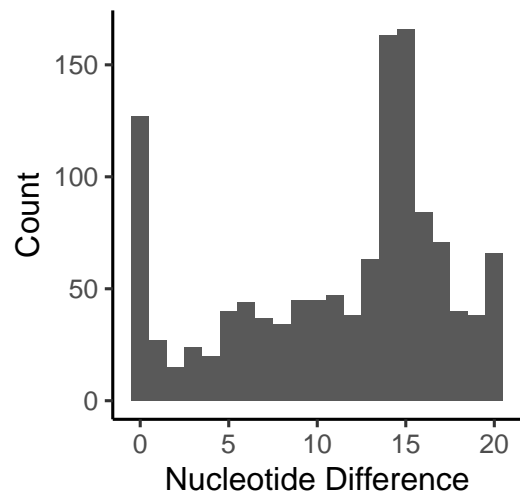
### IGHV3-49\*03

176 sequences assigned  
16 (9.1%) exact matches, in which:  
13 unique CDR3  
3 unique J



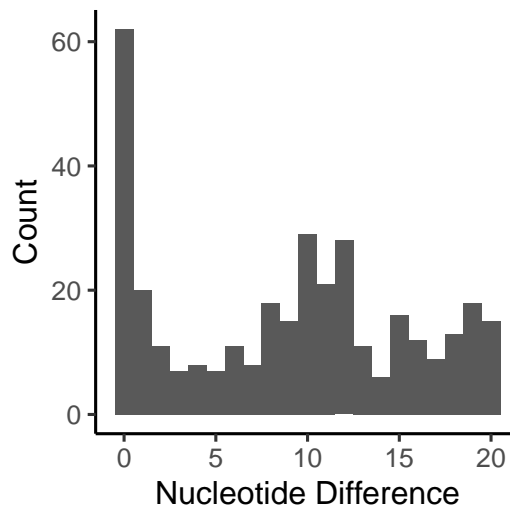
### IGHV3-33\*01

1734 sequences assigned  
127 (7.3%) exact matches, in which:  
118 unique CDR3  
7 unique J



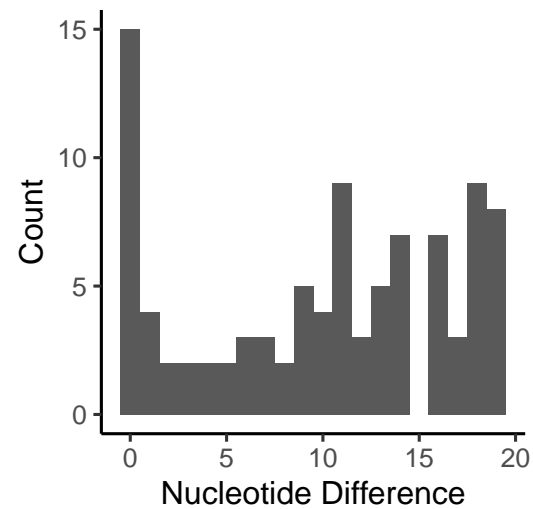
### IGHV3-48\*01

526 sequences assigned  
62 (11.8%) exact matches, in which:  
60 unique CDR3  
4 unique J



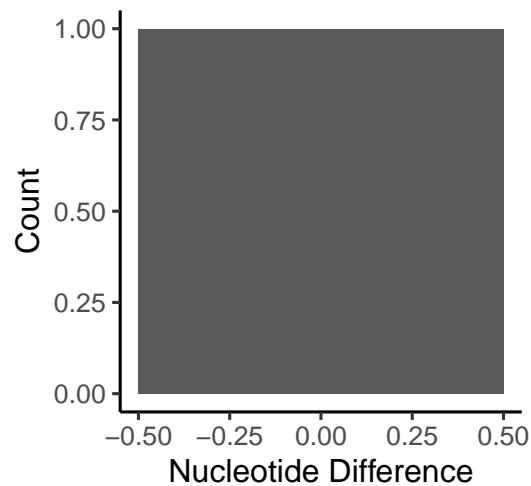
### IGHV3-49\*04

176 sequences assigned  
15 (8.5%) exact matches, in which:  
13 unique CDR3  
4 unique J



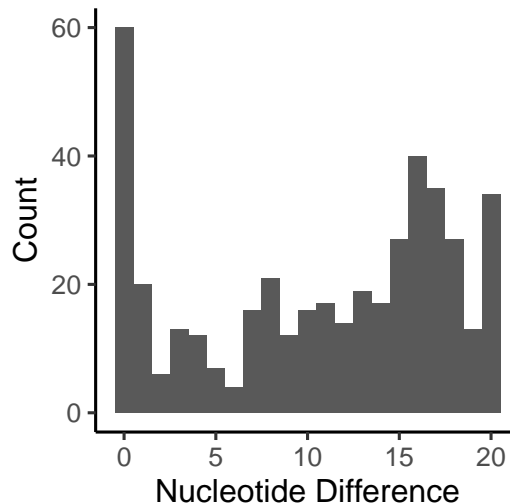
### IGHV3-35\*01

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



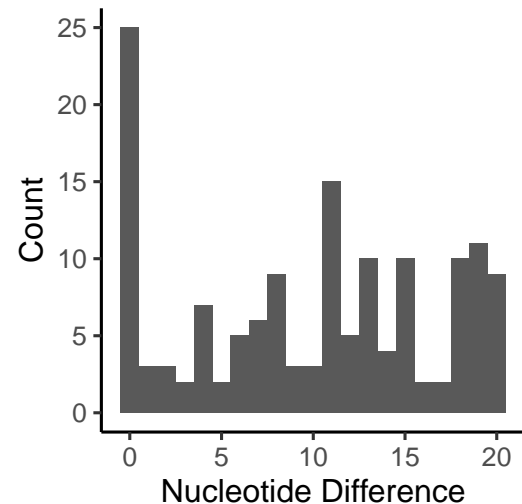
### IGHV3-48\*03

641 sequences assigned  
60 (9.4%) exact matches, in which:  
58 unique CDR3  
6 unique J



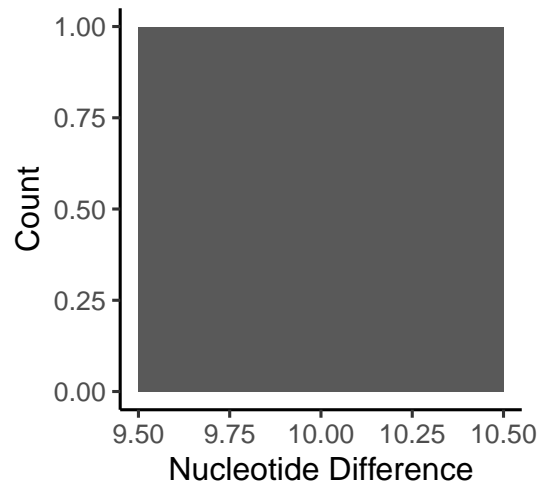
### IGHV3-53\*01

346 sequences assigned  
25 (7.2%) exact matches, in which:  
25 unique CDR3  
5 unique J



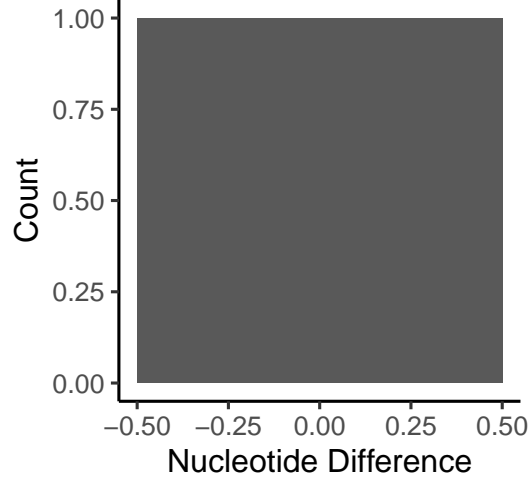
### IGHV3-62\*03

1 sequences assigned  
No exact matches.



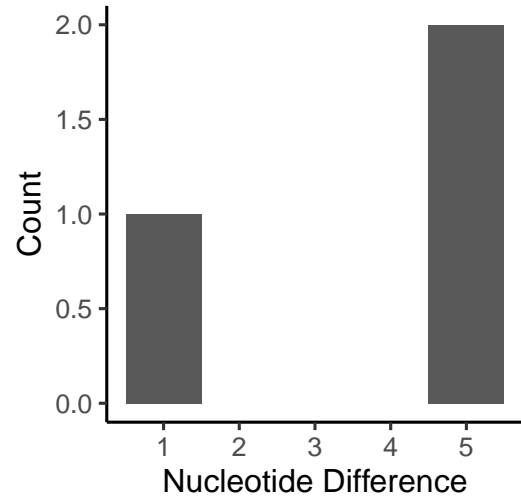
### IGHV3-66\*01

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



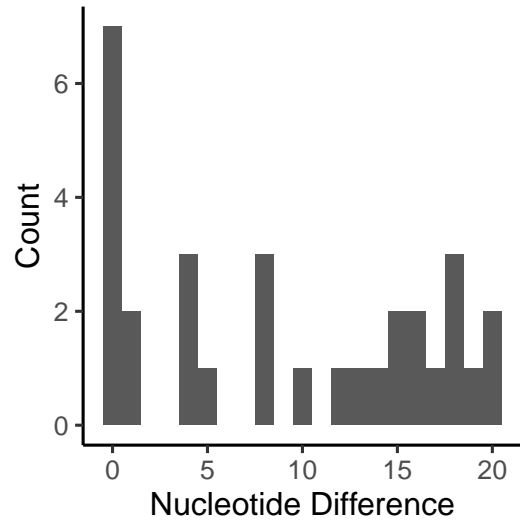
### IGHV3-69-1\*01

5 sequences assigned  
No exact matches.



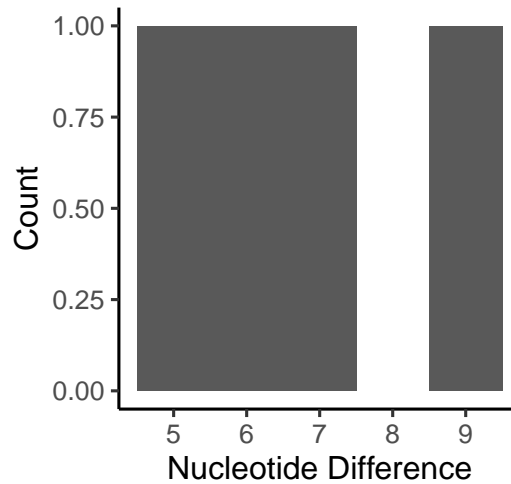
### IGHV3-64\*01

54 sequences assigned  
7 (13%) exact matches, in which:  
7 unique CDR3  
3 unique J



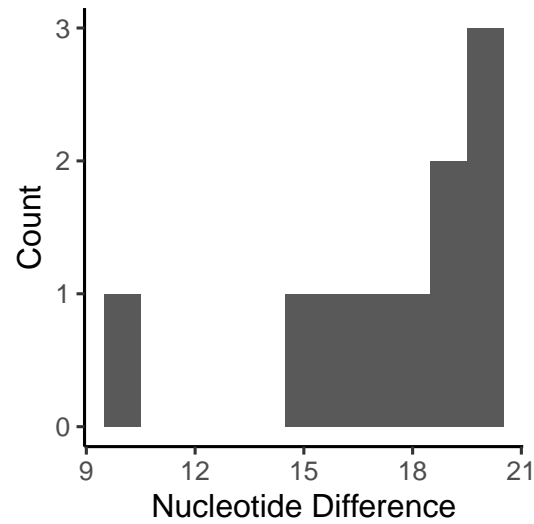
### IGHV3-66\*03

4 sequences assigned  
No exact matches.



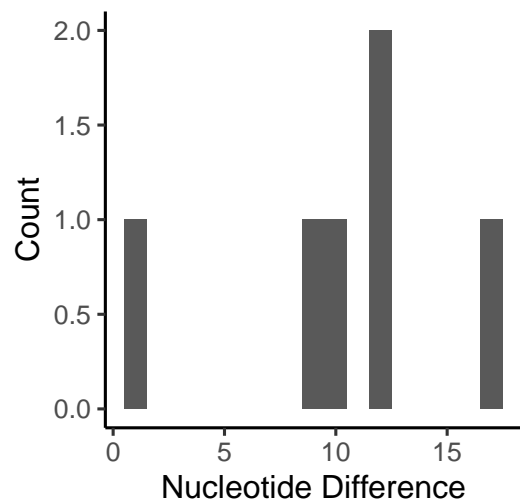
### IGHV3-69-1\*02

57 sequences assigned  
No exact matches.



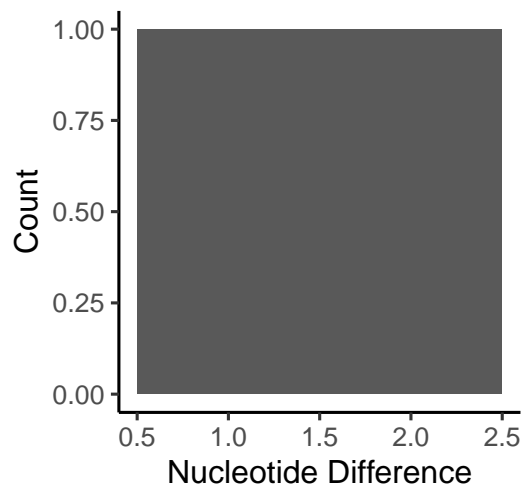
### IGHV3-64\*07

19 sequences assigned  
No exact matches.



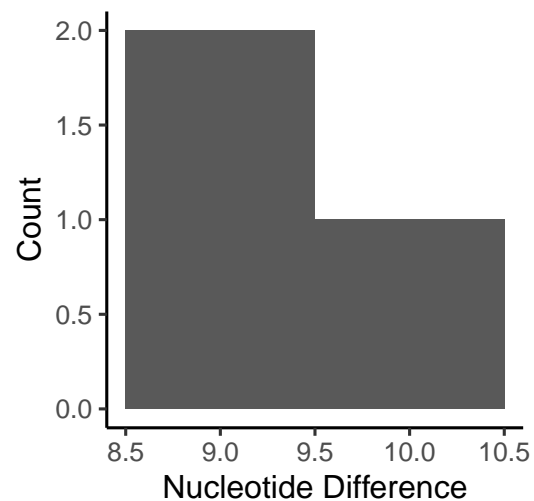
### IGHV3-66\*04

2 sequences assigned  
No exact matches.



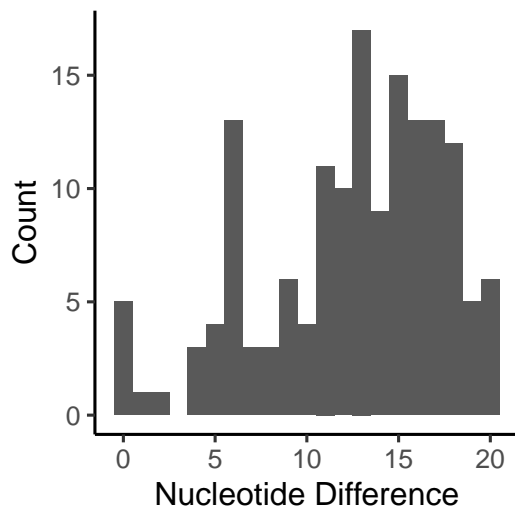
### IGHV3-71\*01

3 sequences assigned  
No exact matches.



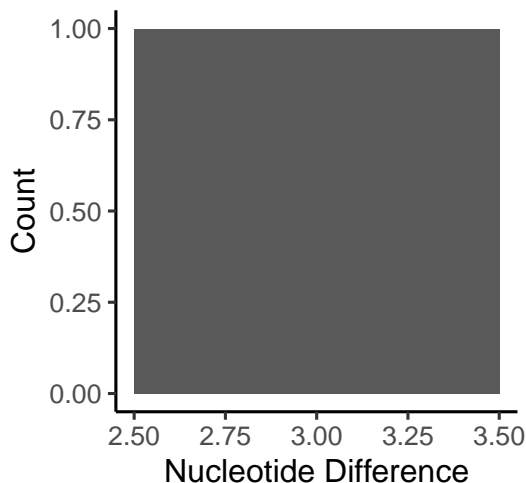
### IGHV3-72\*01

251 sequences assigned  
5 (2%) exact matches, in which:  
4 unique CDR3  
3 unique J



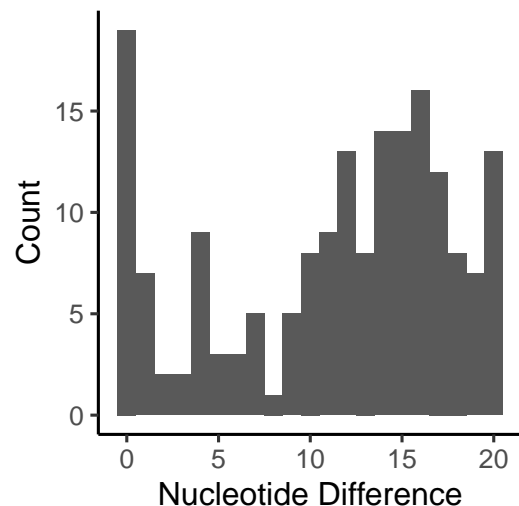
### IGHV3-64D\*06

1 sequences assigned  
No exact matches.



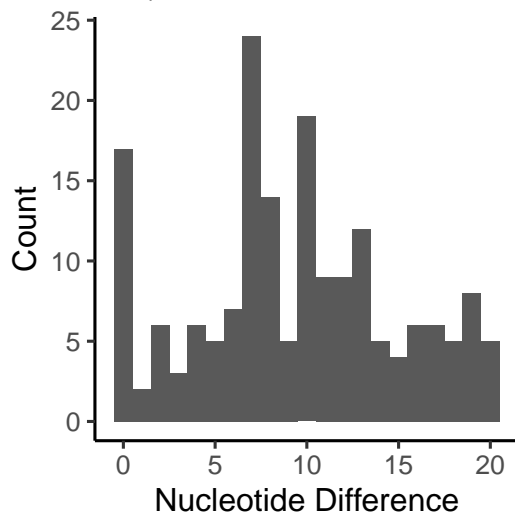
### IGHV4-4\*07

334 sequences assigned  
19 (5.7%) exact matches, in which:  
19 unique CDR3  
4 unique J



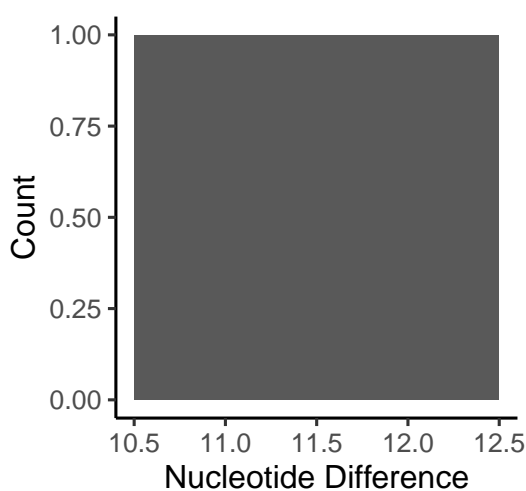
### IGHV3-73\*02

313 sequences assigned  
17 (5.4%) exact matches, in which:  
17 unique CDR3  
5 unique J



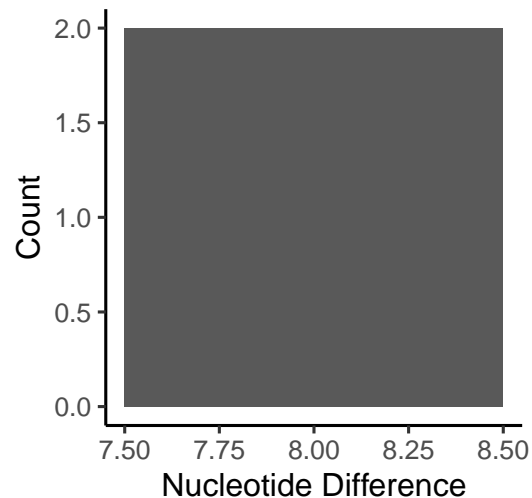
### IGHV3-NL1\*01

2 sequences assigned  
No exact matches.



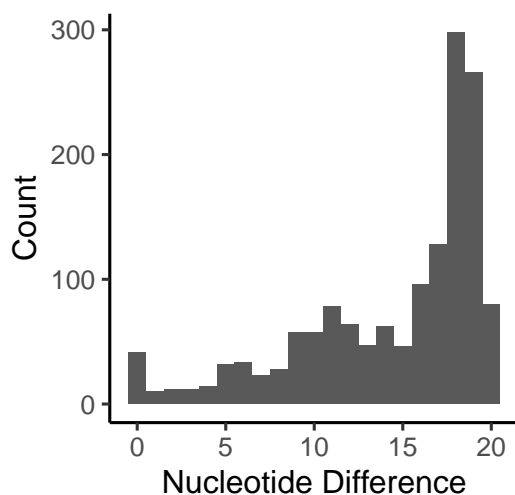
### IGHV4-28\*01

4 sequences assigned  
No exact matches.



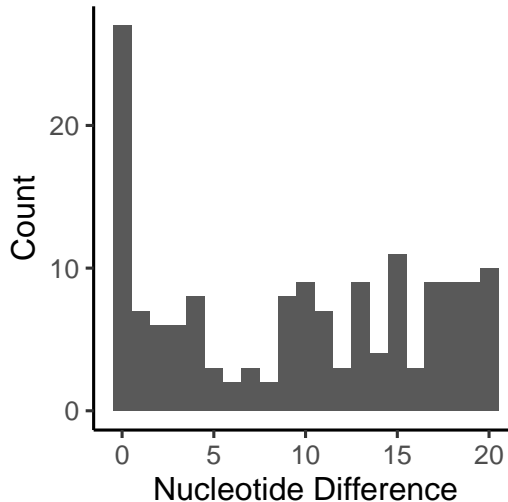
### IGHV3-74\*01

1948 sequences assigned  
41 (2.1%) exact matches, in which:  
38 unique CDR3  
5 unique J



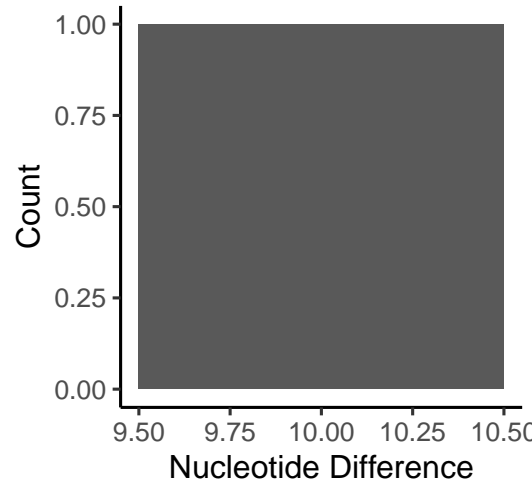
### IGHV4-4\*02

297 sequences assigned  
27 (9.1%) exact matches, in which:  
27 unique CDR3  
4 unique J



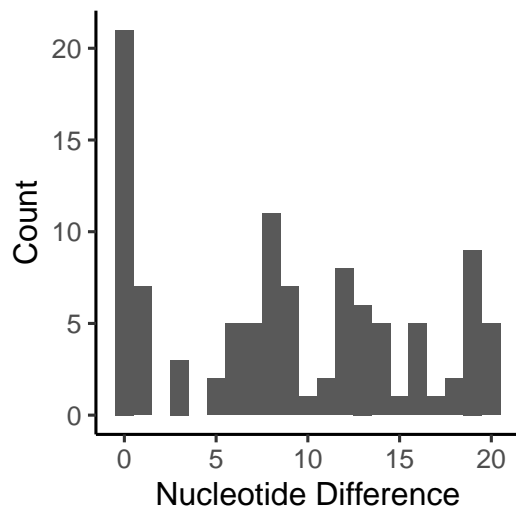
### IGHV4-28\*03

1 sequences assigned  
No exact matches.



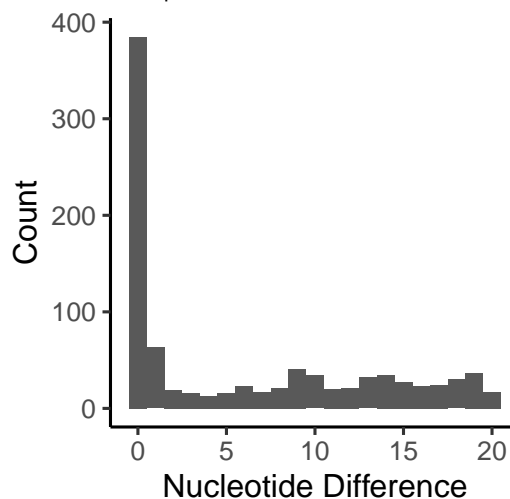
### IGHV4-30-4\*01

172 sequences assigned  
21 (12.2%) exact matches, in which:  
21 unique CDR3  
5 unique J



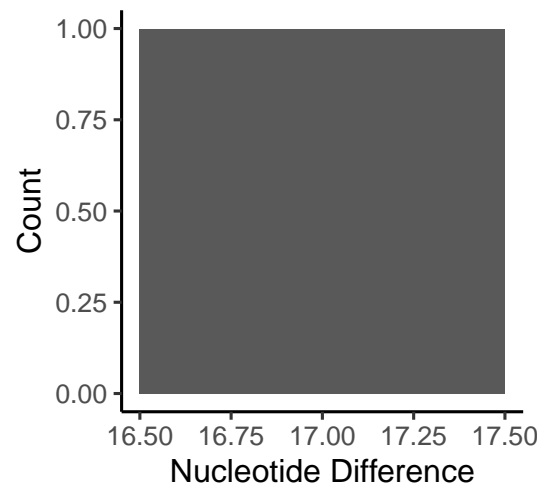
### IGHV4-34\*01

1481 sequences assigned  
385 (26%) exact matches, in which:  
382 unique CDR3  
7 unique J



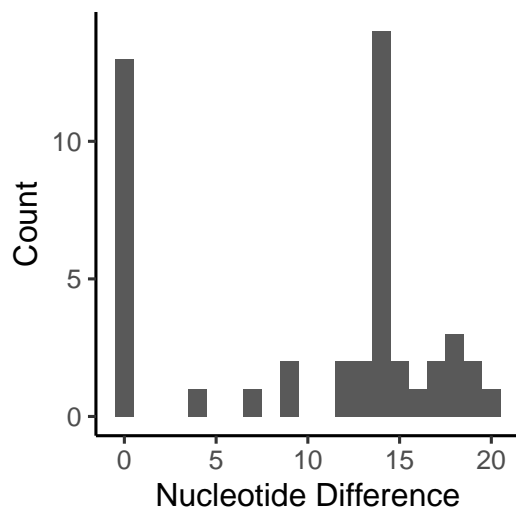
### IGHV4-55\*08

1 sequences assigned  
No exact matches.



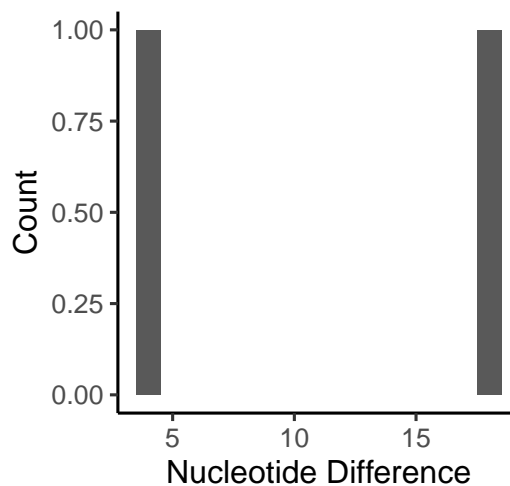
### IGHV4-30-2\*01

69 sequences assigned  
13 (18.8%) exact matches, in which:  
13 unique CDR3  
4 unique J



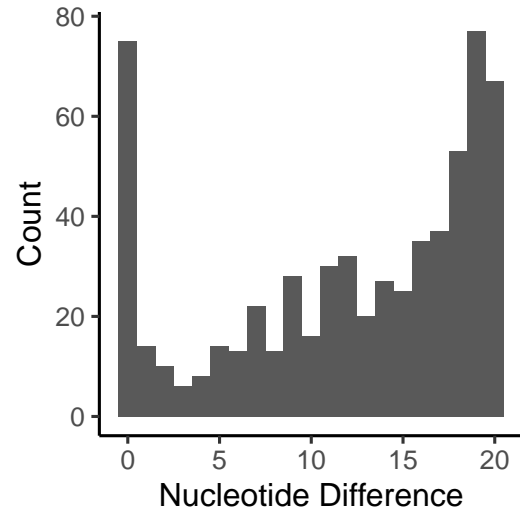
### IGHV4-38-2\*02

3 sequences assigned  
No exact matches.



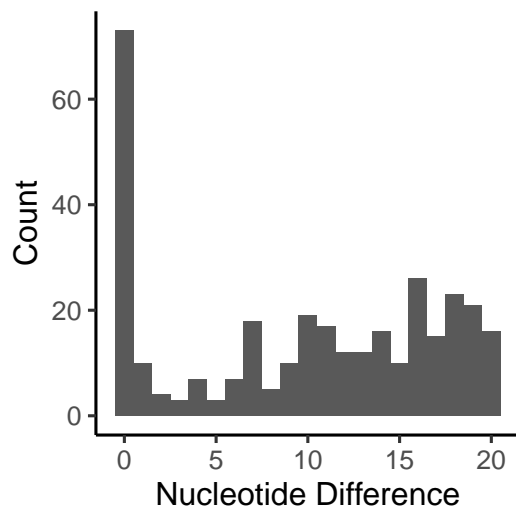
### IGHV4-59\*01

1054 sequences assigned  
75 (7.1%) exact matches, in which:  
73 unique CDR3  
7 unique J



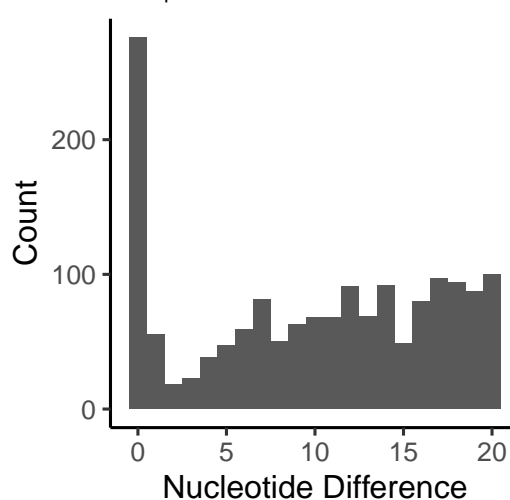
### IGHV4-31\*03

933 sequences assigned  
73 (7.8%) exact matches, in which:  
73 unique CDR3  
6 unique J



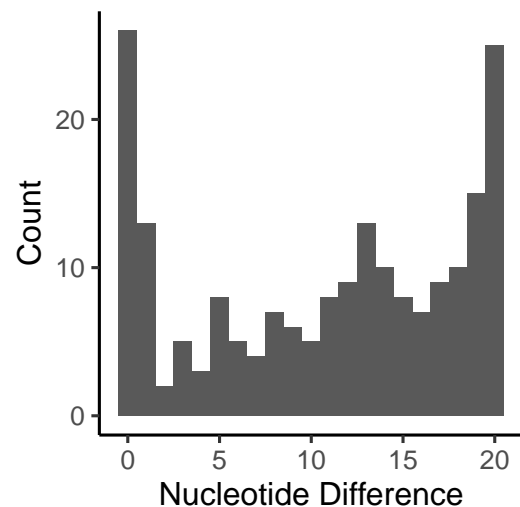
### IGHV4-39\*01

3258 sequences assigned  
276 (8.5%) exact matches, in which:  
268 unique CDR3  
7 unique J



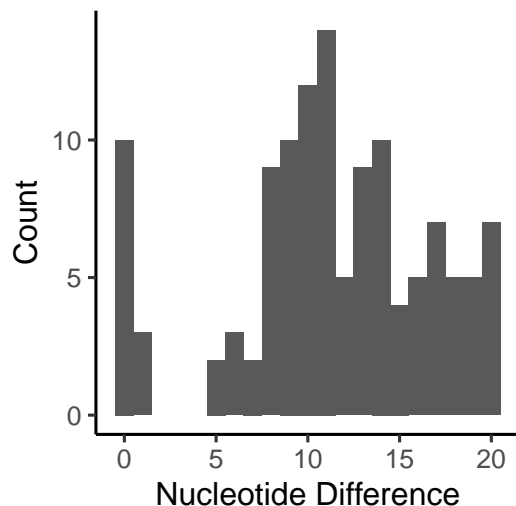
### IGHV4-59\*08

443 sequences assigned  
26 (5.9%) exact matches, in which:  
25 unique CDR3  
5 unique J



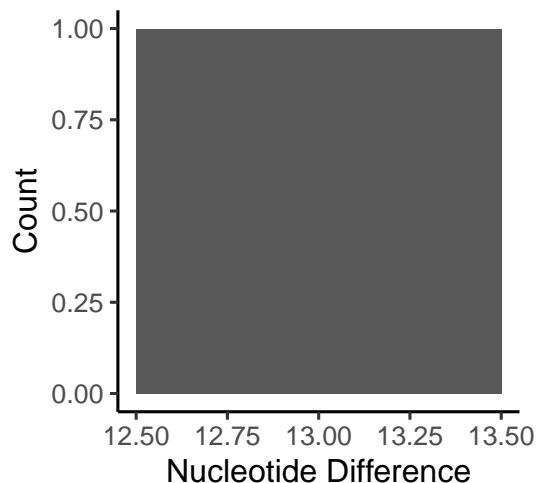
### IGHV4-61\*01

170 sequences assigned  
10 (5.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



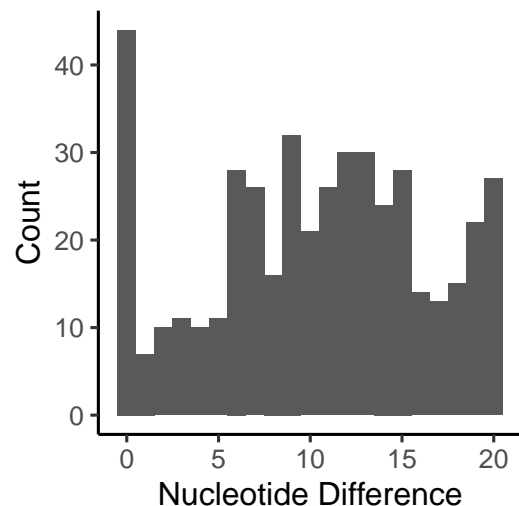
### IGHV4/OR15-8\*02

3 sequences assigned  
No exact matches.



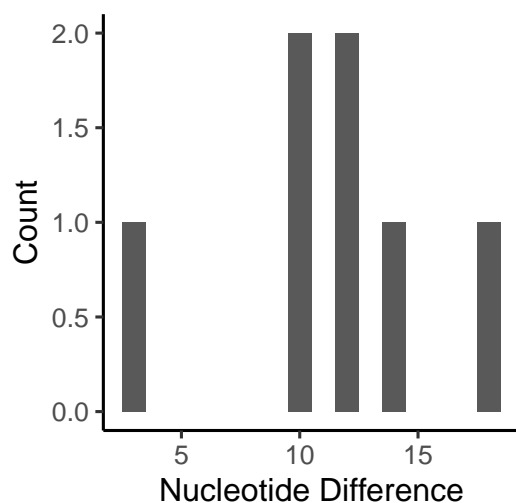
### IGHV5-51\*03

653 sequences assigned  
44 (6.7%) exact matches, in which:  
44 unique CDR3  
6 unique J



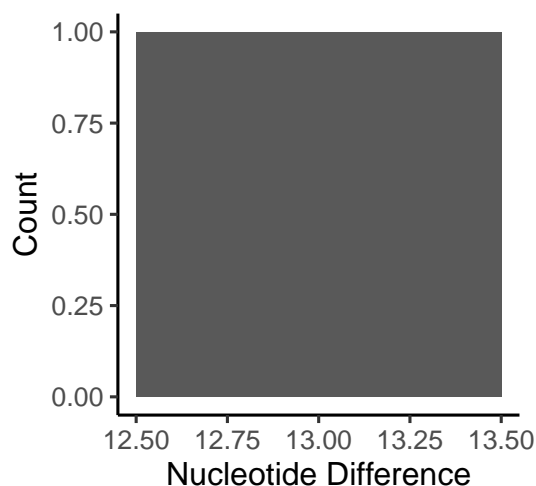
### IGHV4-61\*08

22 sequences assigned  
No exact matches.



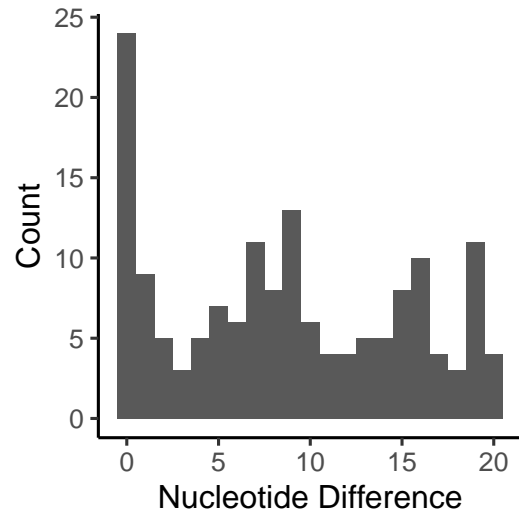
### IGHV5-10-1\*04

1 sequences assigned  
No exact matches.



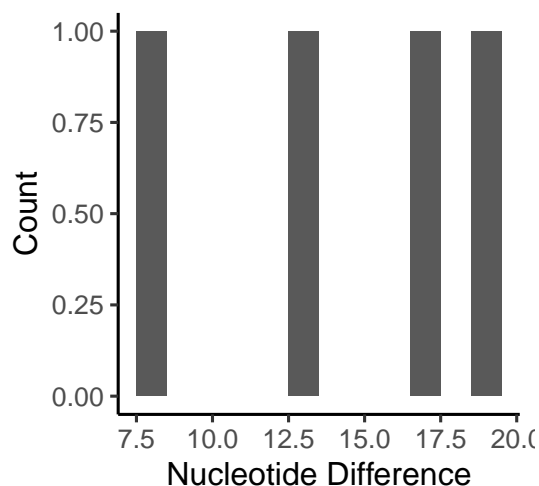
### IGHV6-1\*01

266 sequences assigned  
24 (9%) exact matches, in which:  
21 unique CDR3  
5 unique J



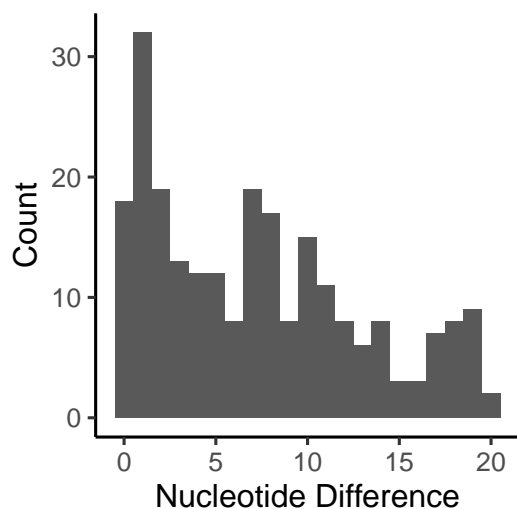
### IGHV1/OR15-1\*04

4 sequences assigned  
No exact matches.



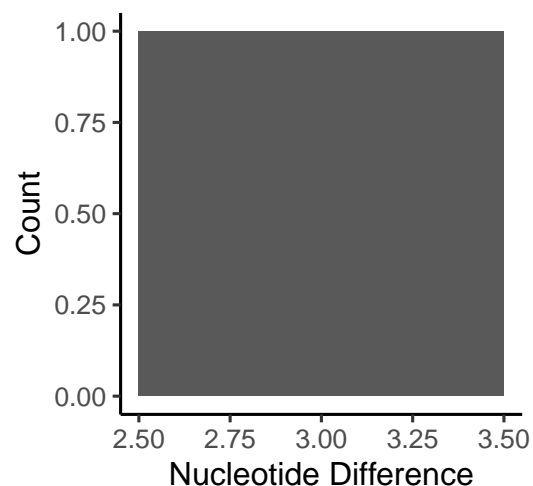
### IGHV5-51\*01

277 sequences assigned  
18 (6.5%) exact matches, in which:  
17 unique CDR3  
6 unique J



### IGHV3/OR16-8\*01

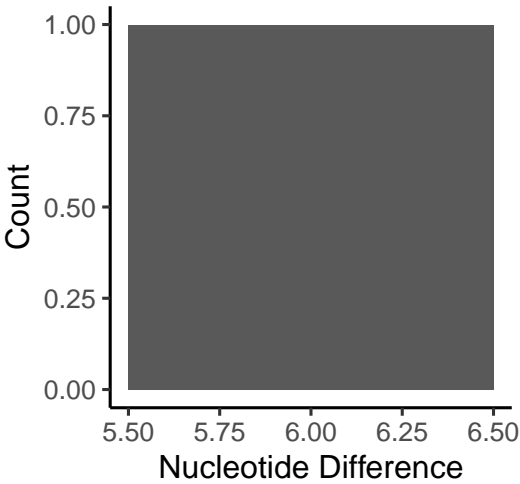
1 sequences assigned  
No exact matches.





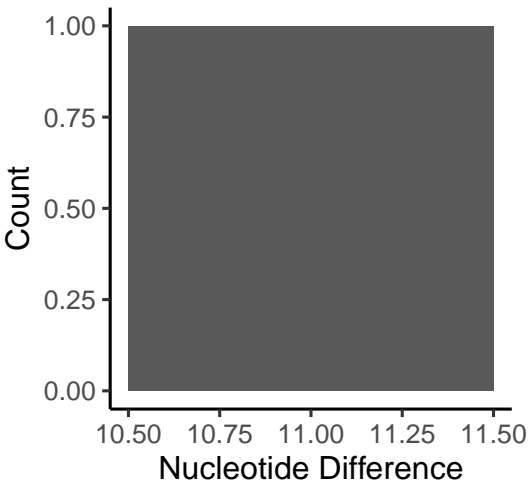
### IGHV3/OR16-9\*01

1 sequences assigned  
No exact matches.



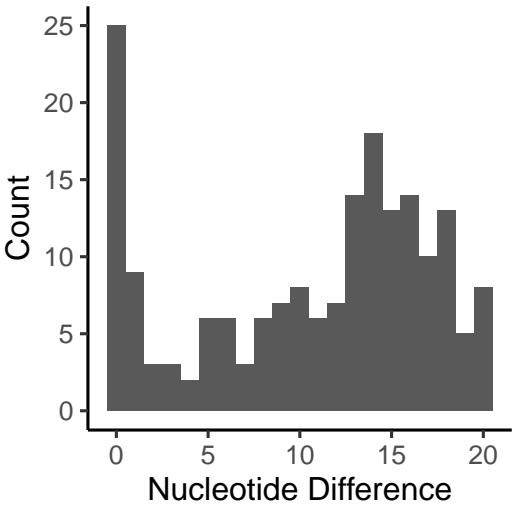
### IGHV3/OR16-12\*01

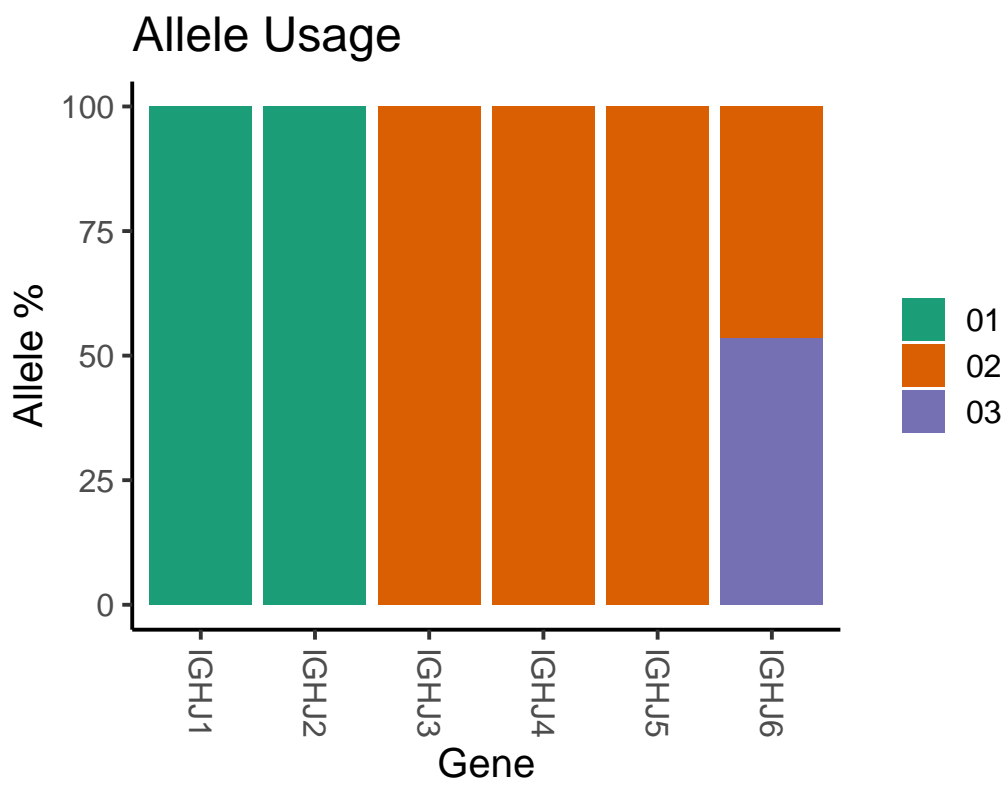
1 sequences assigned  
No exact matches.



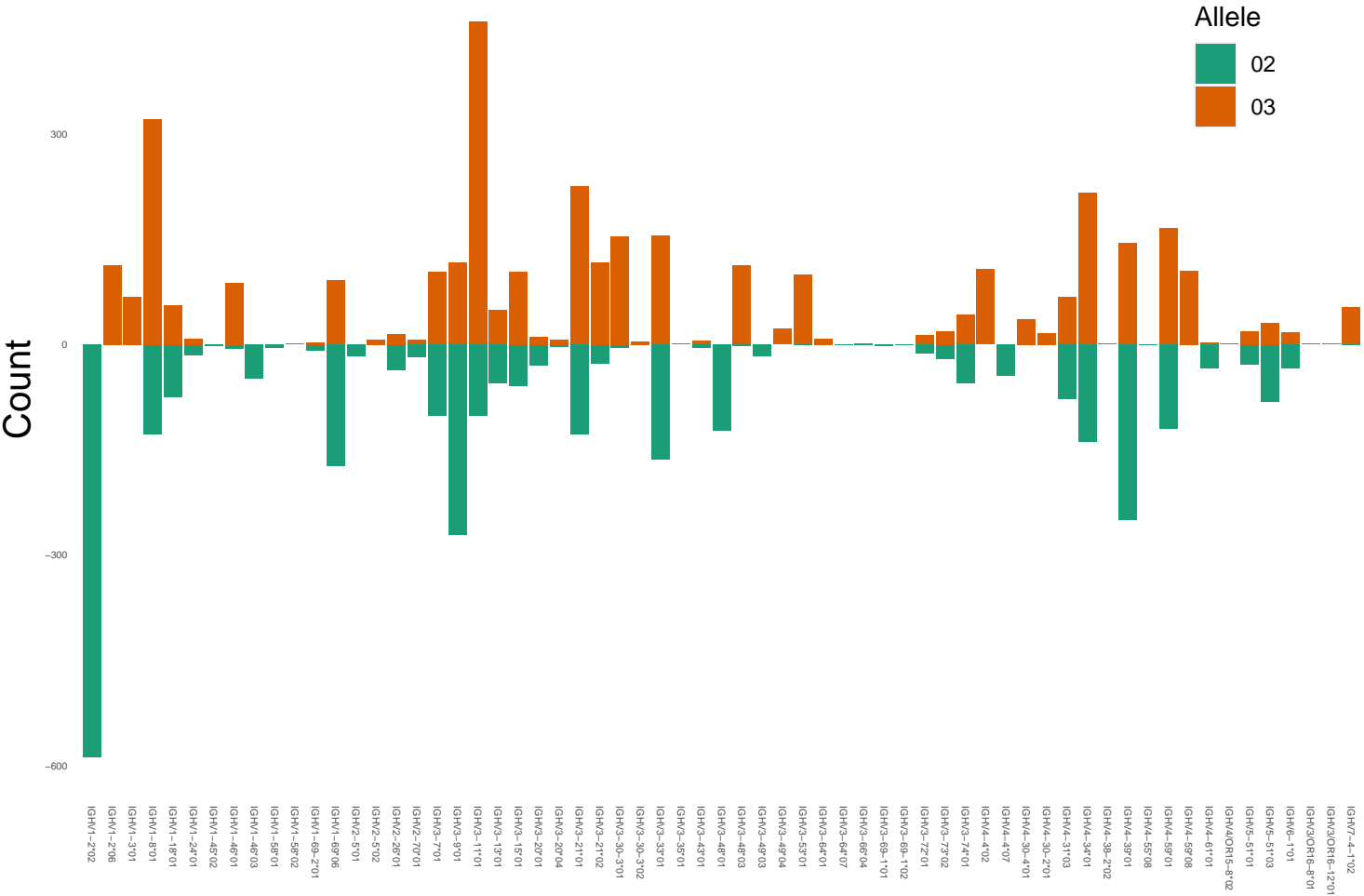
### IGHV7-4-1\*02

261 sequences assigned  
25 (9.6%) exact matches, in which:  
25 unique CDR3  
4 unique J





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.