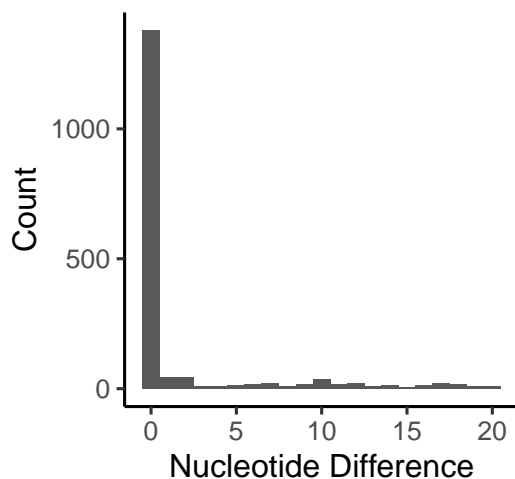


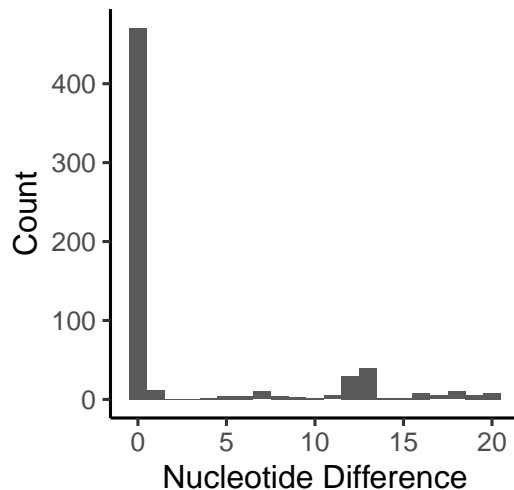
### IGHV1-2\*02

1952 sequences assigned  
1379 (70.6%) exact matches, in which:  
1372 unique CDR3  
7 unique J



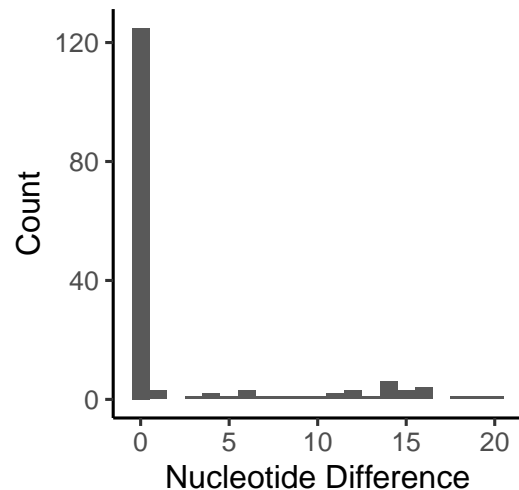
### IGHV1-8\*01

708 sequences assigned  
471 (66.5%) exact matches, in which:  
470 unique CDR3  
7 unique J



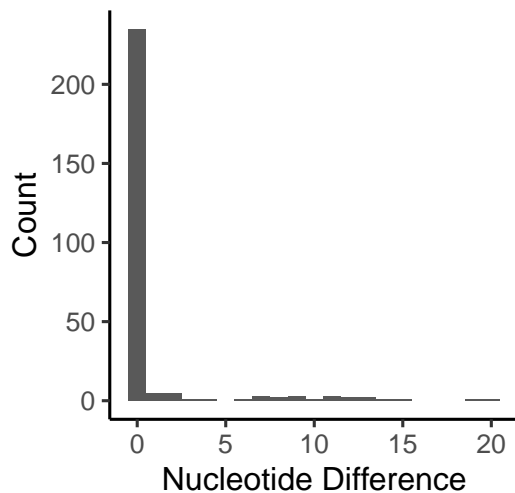
### IGHV1-24\*01

191 sequences assigned  
125 (65.4%) exact matches, in which:  
125 unique CDR3  
7 unique J



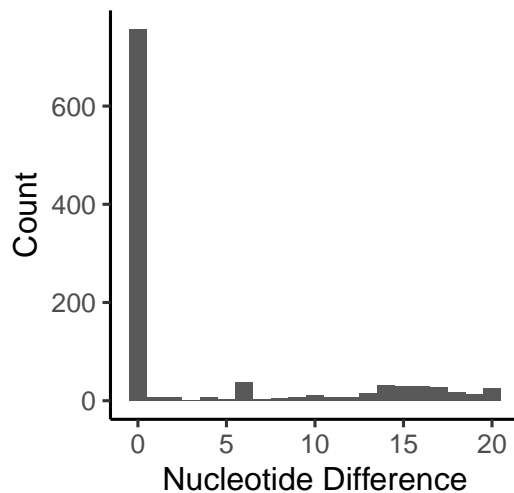
### IGHV1-2\*04

279 sequences assigned  
235 (84.2%) exact matches, in which:  
235 unique CDR3  
7 unique J



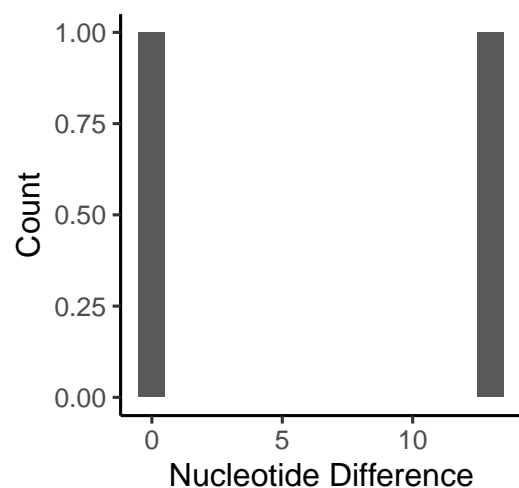
### IGHV1-18\*01

1240 sequences assigned  
757 (61%) exact matches, in which:  
752 unique CDR3  
7 unique J



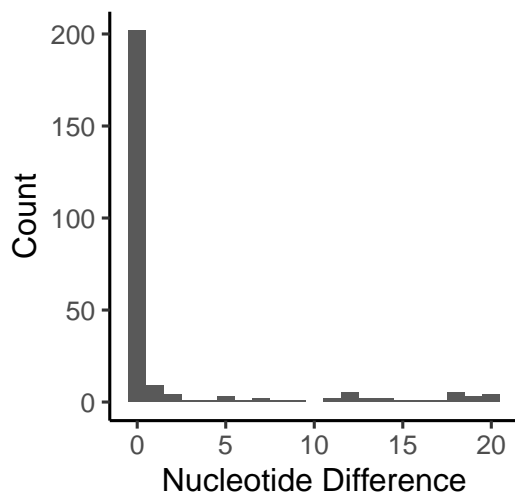
### IGHV1-45\*02

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



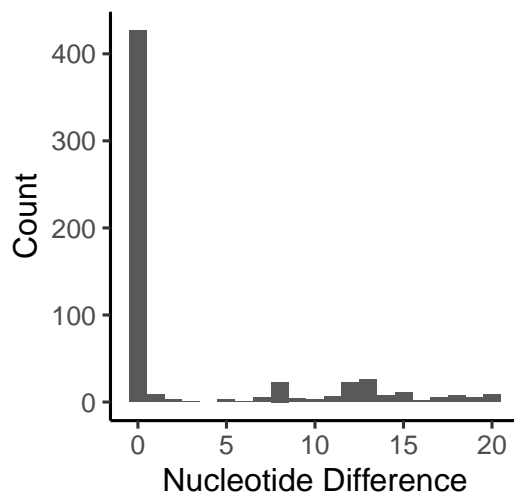
### IGHV1-3\*01\_05

279 sequences assigned  
202 (72.4%) exact matches, in which:  
198 unique CDR3  
6 unique J



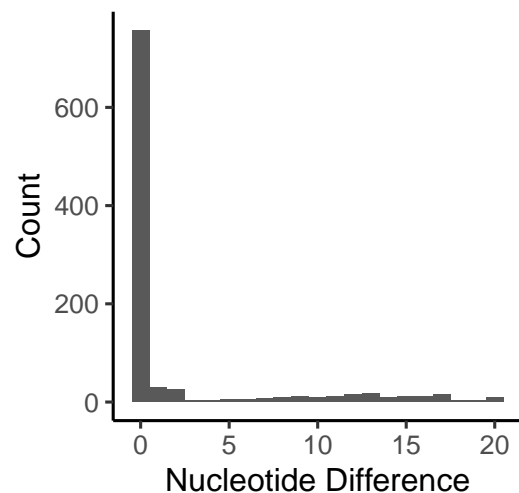
### IGHV1-18\*04

621 sequences assigned  
427 (68.8%) exact matches, in which:  
427 unique CDR3  
7 unique J



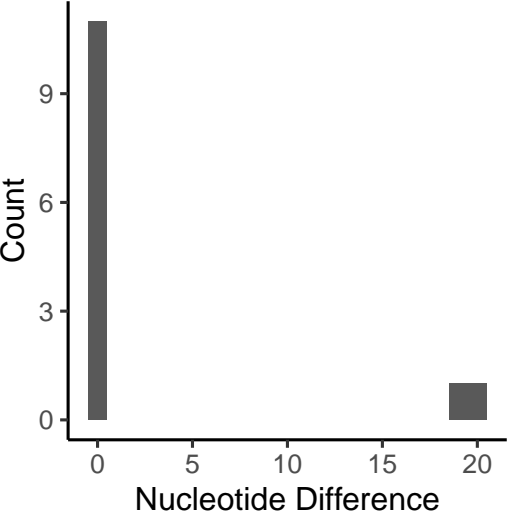
### IGHV1-46\*01

1098 sequences assigned  
757 (68.9%) exact matches, in which:  
756 unique CDR3  
7 unique J



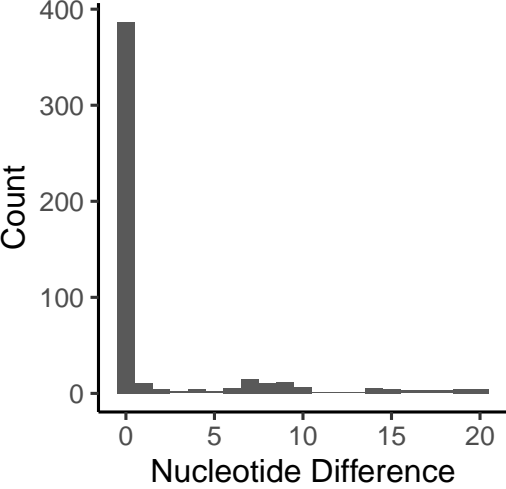
IGHV1-58\*02

13 sequences assigned  
11 (84.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



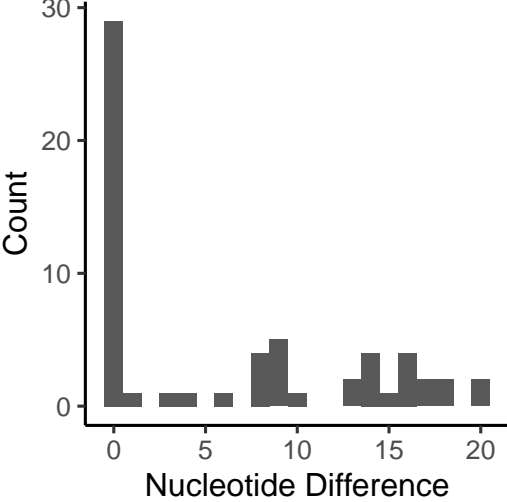
IGHV1-69\*06\_14

531 sequences assigned  
387 (72.9%) exact matches, in which:  
387 unique CDR3  
6 unique J



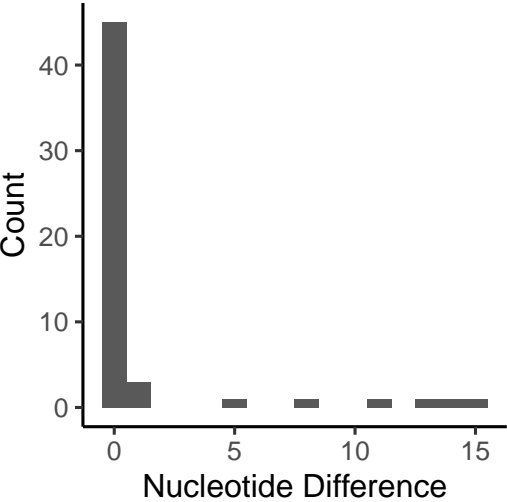
IGHV2-5\*02

81 sequences assigned  
29 (35.8%) exact matches, in which:  
28 unique CDR3  
5 unique J



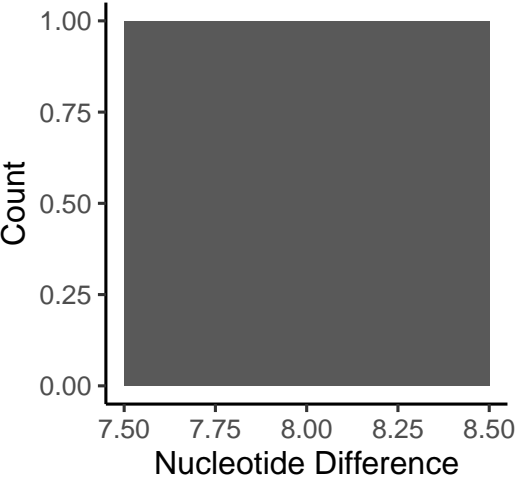
IGHV1-58\*01\_03

68 sequences assigned  
45 (66.2%) exact matches, in which:  
45 unique CDR3  
5 unique J



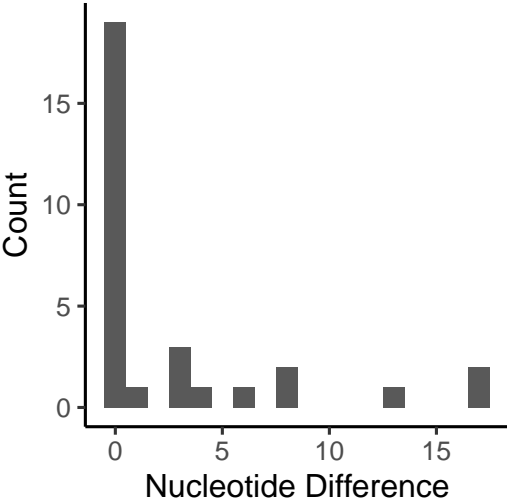
IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



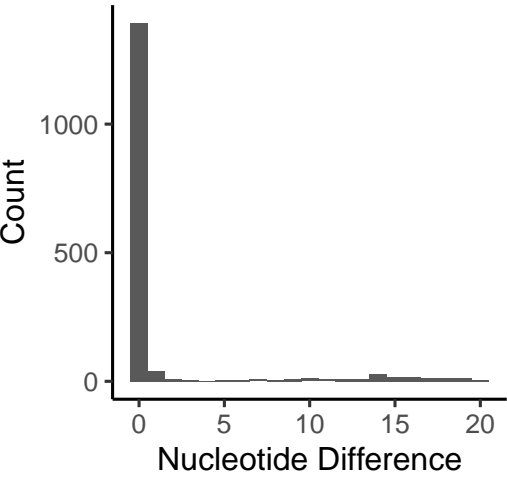
IGHV2-26\*01

33 sequences assigned  
19 (57.6%) exact matches, in which:  
18 unique CDR3  
5 unique J



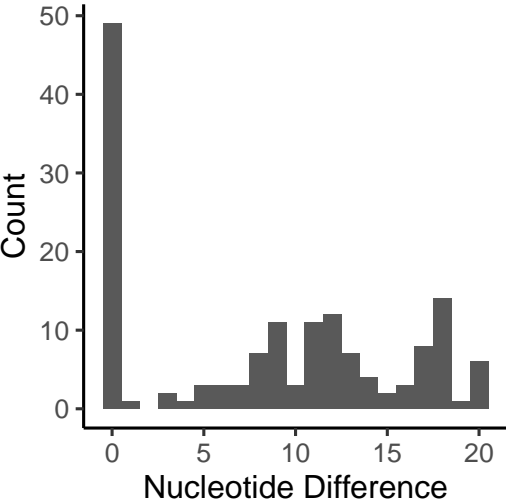
IGHV1-69\*01\_12\_13

1755 sequences assigned  
1393 (79.4%) exact matches, in which:  
1389 unique CDR3  
7 unique J



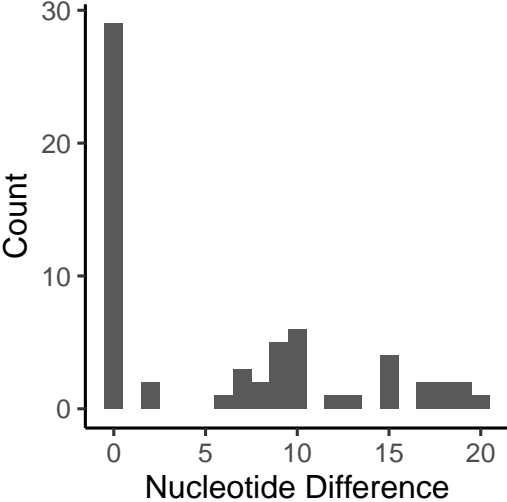
IGHV2-5\*01

170 sequences assigned  
49 (28.8%) exact matches, in which:  
48 unique CDR3  
5 unique J



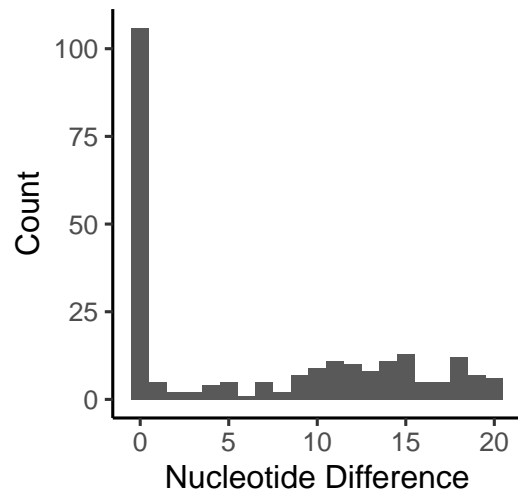
IGHV2-70\*01

68 sequences assigned  
29 (42.6%) exact matches, in which:  
29 unique CDR3  
6 unique J



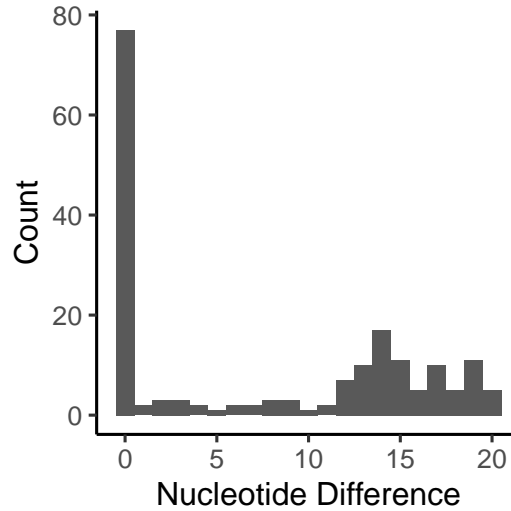
### IGHV3-7\*01

332 sequences assigned  
106 (31.9%) exact matches, in which:  
84 unique CDR3  
6 unique J



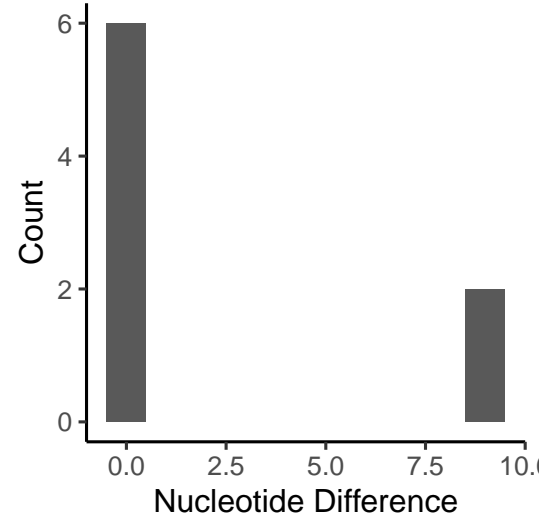
### IGHV3-11\*01

2365 sequences assigned  
77 (3.3%) exact matches, in which:  
66 unique CDR3  
5 unique J



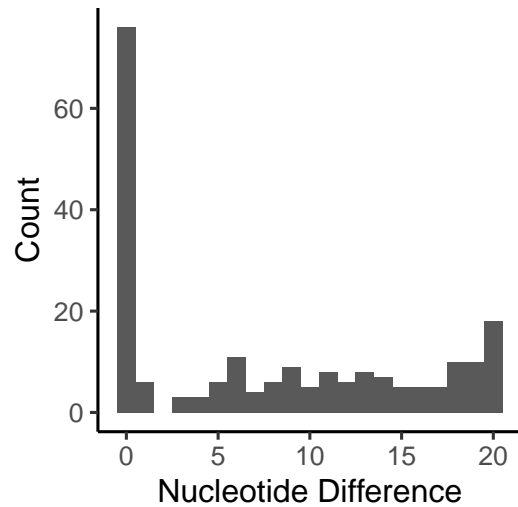
### IGHV3-13\*05

8 sequences assigned  
6 (75%) exact matches, in which:  
6 unique CDR3  
4 unique J



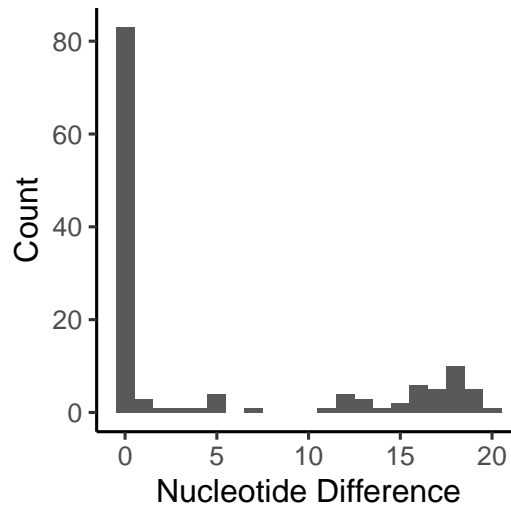
### IGHV3-7\*03

298 sequences assigned  
76 (25.5%) exact matches, in which:  
63 unique CDR3  
6 unique J



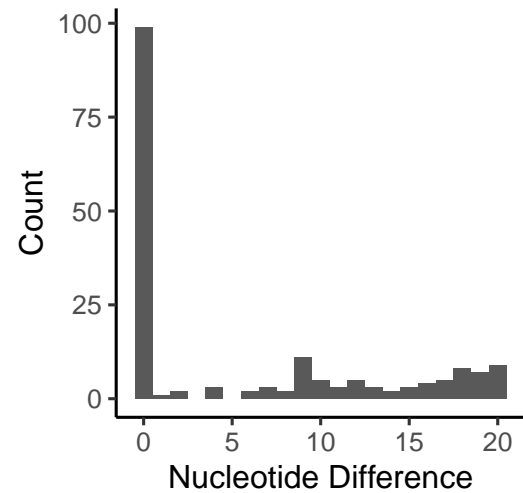
### IGHV3-11\*06

225 sequences assigned  
83 (36.9%) exact matches, in which:  
65 unique CDR3  
6 unique J



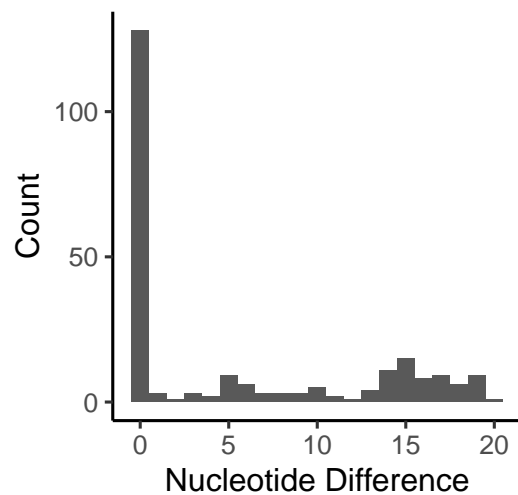
### IGHV3-15\*01\_02

262 sequences assigned  
99 (37.8%) exact matches, in which:  
78 unique CDR3  
7 unique J



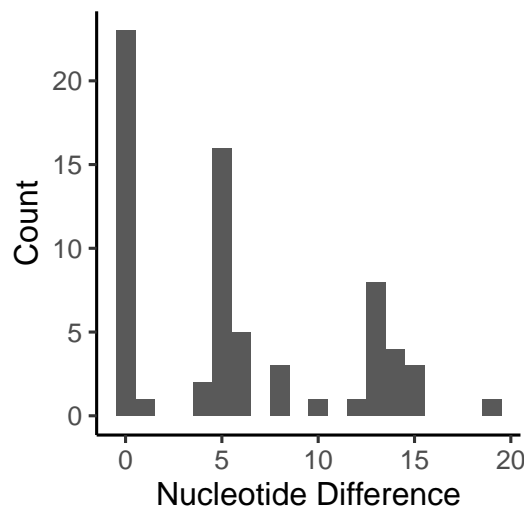
### IGHV3-9\*01

330 sequences assigned  
128 (38.8%) exact matches, in which:  
112 unique CDR3  
6 unique J



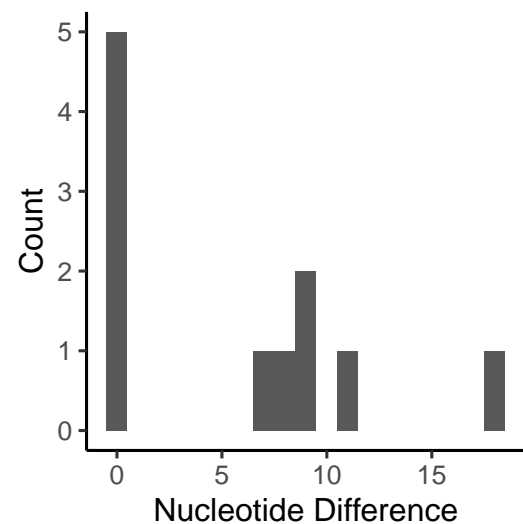
### IGHV3-13\*01

80 sequences assigned  
23 (28.8%) exact matches, in which:  
19 unique CDR3  
4 unique J



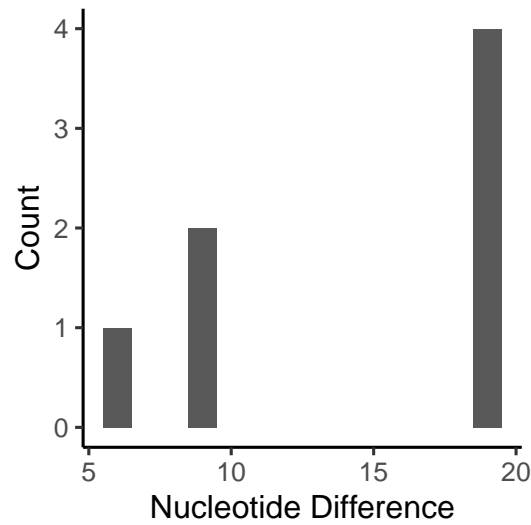
### IGHV3-20\*01\_02

12 sequences assigned  
5 (41.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



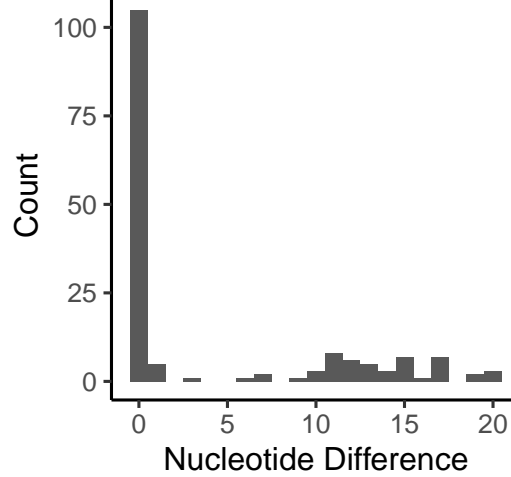
### IGHV3-20\*03\_04

16 sequences assigned  
No exact matches.



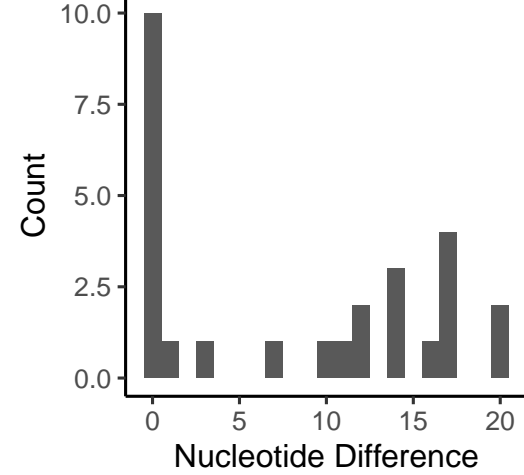
### IGHV3-30-3\*01

196 sequences assigned  
105 (53.6%) exact matches, in which:  
85 unique CDR3  
5 unique J



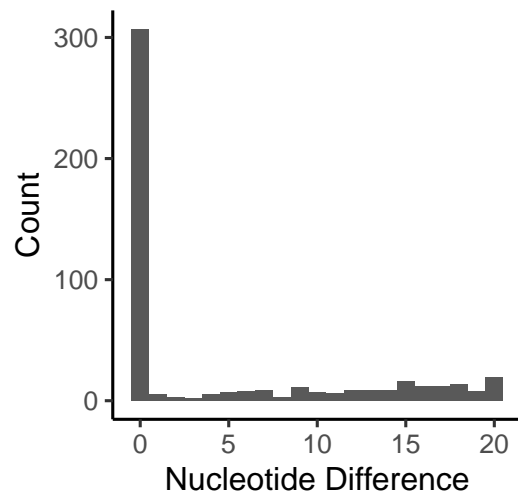
### IGHV3-43\*01

46 sequences assigned  
10 (21.7%) exact matches, in which:  
8 unique CDR3  
3 unique J



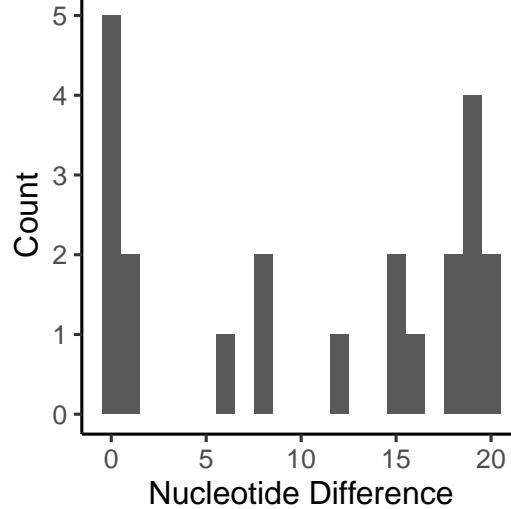
### IGHV3-21\*01\_02

679 sequences assigned  
307 (45.2%) exact matches, in which:  
257 unique CDR3  
7 unique J



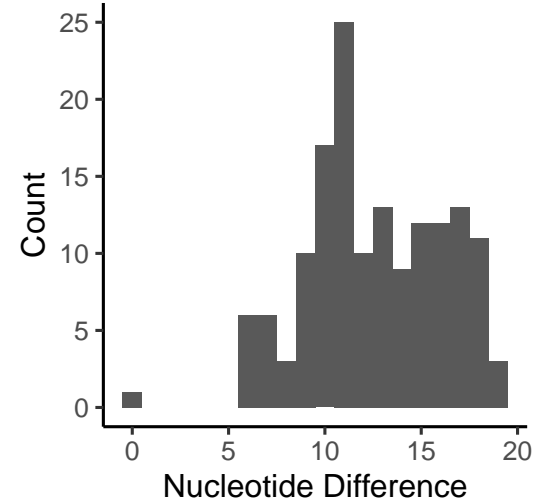
### IGHV3-30\*03

59 sequences assigned  
5 (8.5%) exact matches, in which:  
5 unique CDR3  
2 unique J



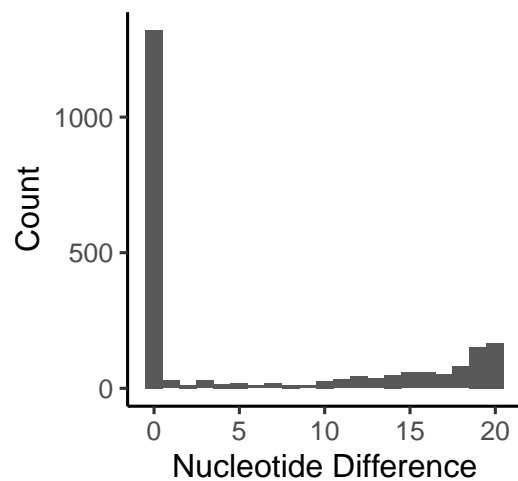
### IGHV3-43\*02

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



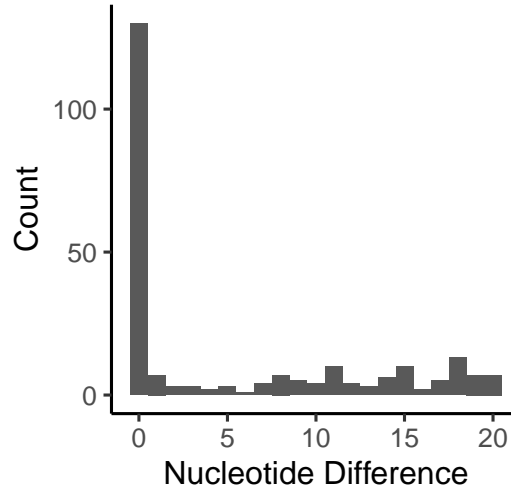
### IGHV3-23\*01\_04

2988 sequences assigned  
1321 (44.2%) exact matches, in which:  
1181 unique CDR3  
7 unique J



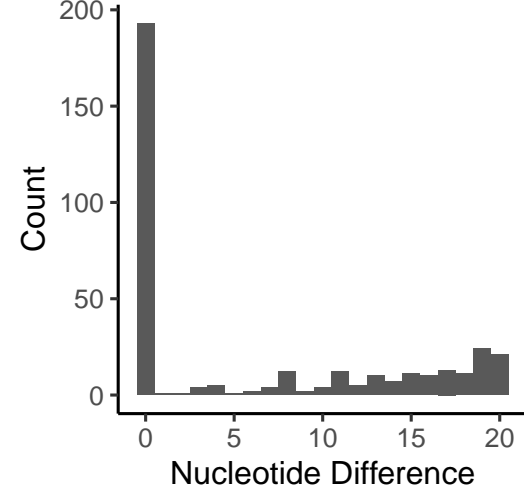
### IGHV3-33\*01

344 sequences assigned  
130 (37.8%) exact matches, in which:  
106 unique CDR3  
6 unique J



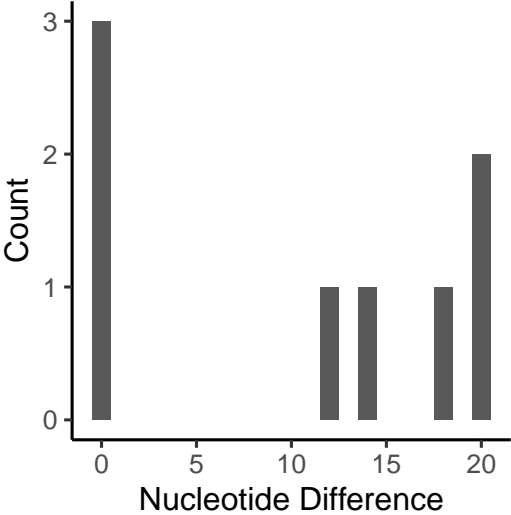
### IGHV3-48\*02

542 sequences assigned  
193 (35.6%) exact matches, in which:  
158 unique CDR3  
7 unique J



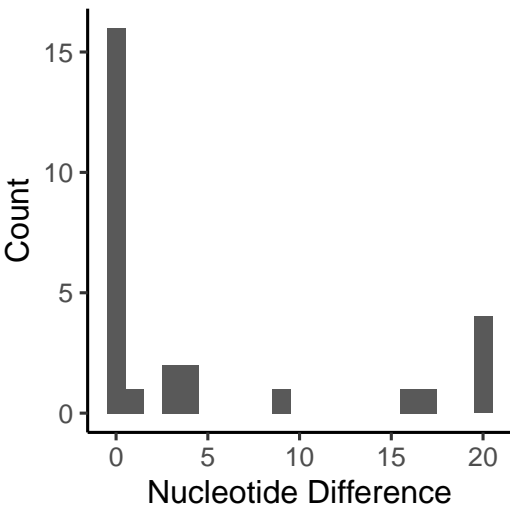
IGHV3-49\*04

40 sequences assigned  
3 (7.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



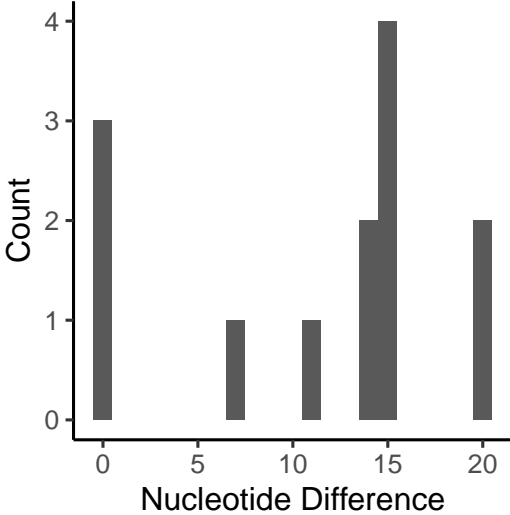
IGHV3-64\*01

28 sequences assigned  
16 (57.1%) exact matches, in which:  
13 unique CDR3  
3 unique J



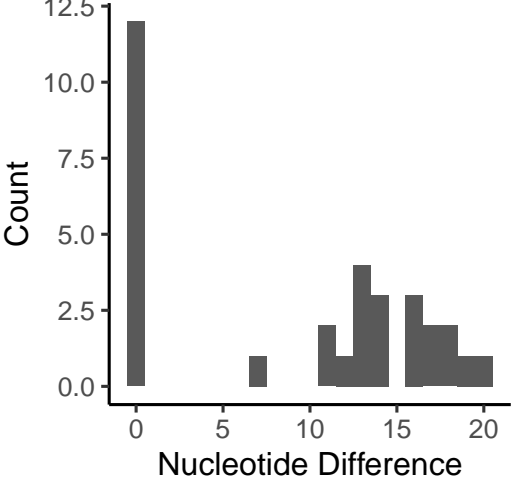
IGHV3-66\*02

42 sequences assigned  
3 (7.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



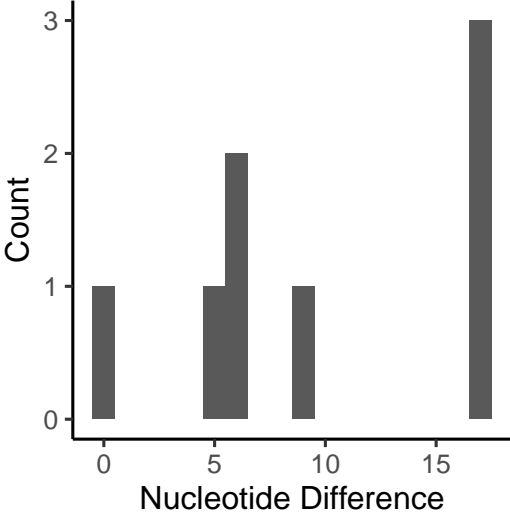
IGHV3-49\*03\_05

43 sequences assigned  
12 (27.9%) exact matches, in which:  
12 unique CDR3  
3 unique J



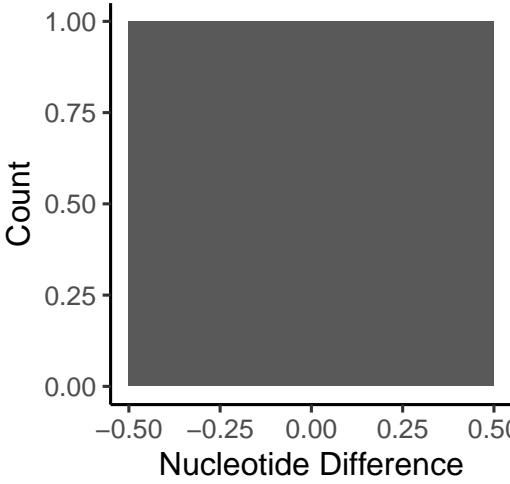
IGHV3-64\*02\_07

13 sequences assigned  
1 (7.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



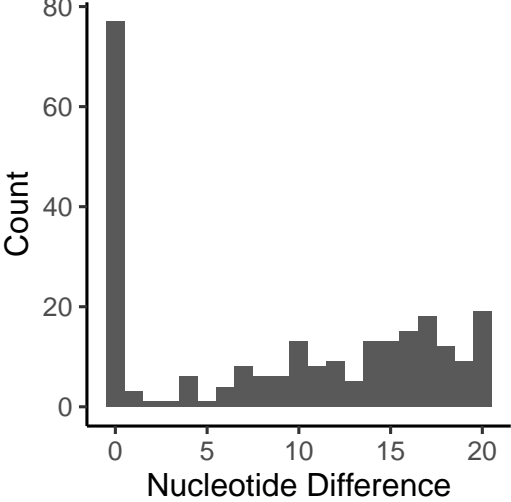
IGHV3-69-1\*01

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



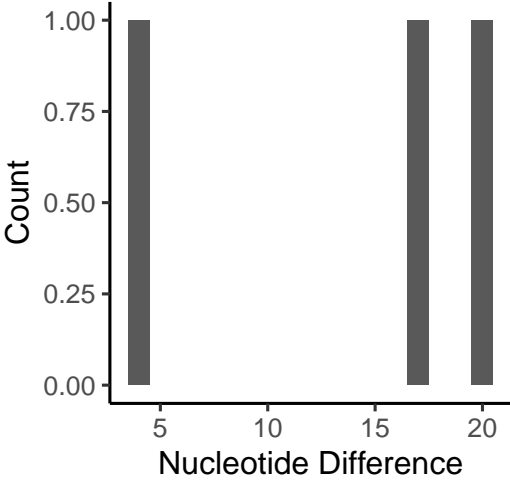
IGHV3-53\*01\_02

418 sequences assigned  
77 (18.4%) exact matches, in which:  
68 unique CDR3  
6 unique J



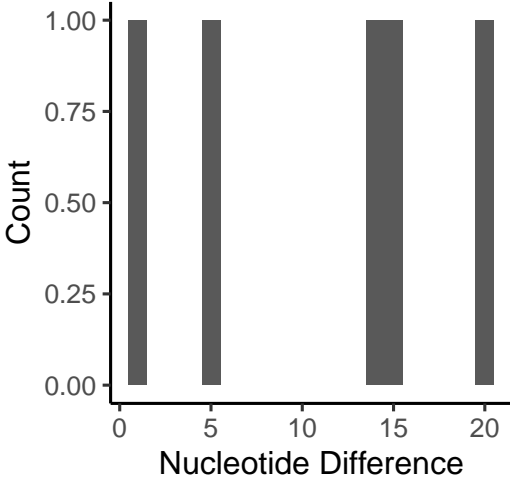
IGHV3-66\*01

5 sequences assigned  
No exact matches.



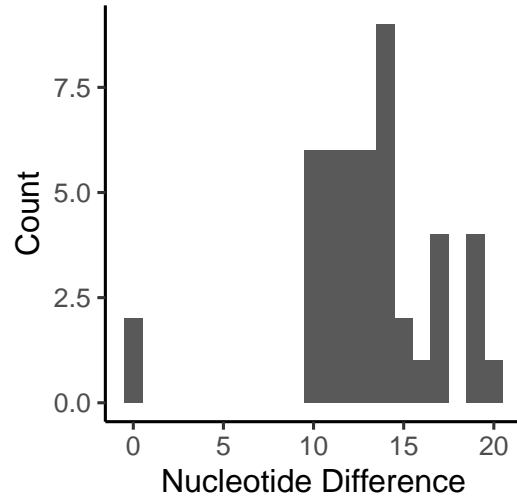
IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



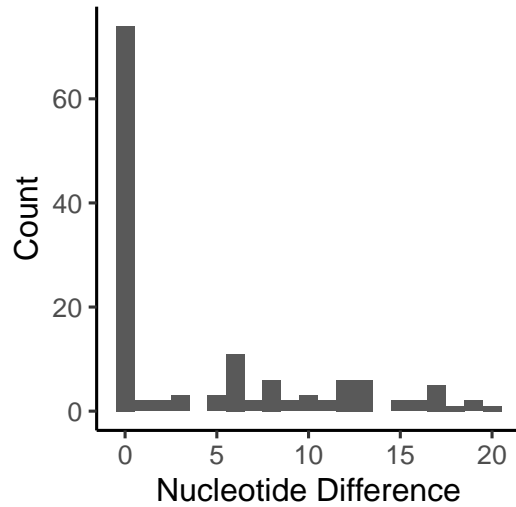
### IGHV3-72\*01

58 sequences assigned  
2 (3.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



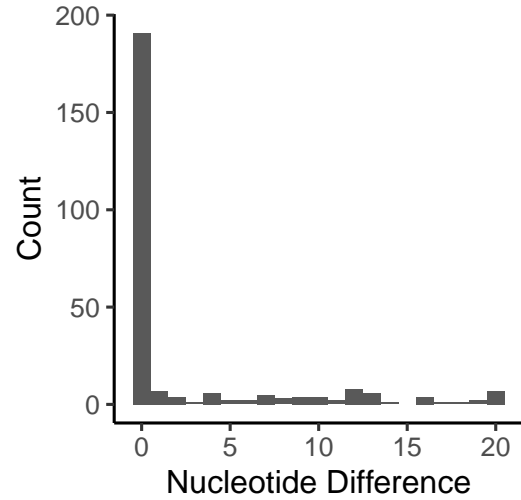
### IGHV3-74\*01\_02

173 sequences assigned  
74 (42.8%) exact matches, in which:  
61 unique CDR3  
6 unique J



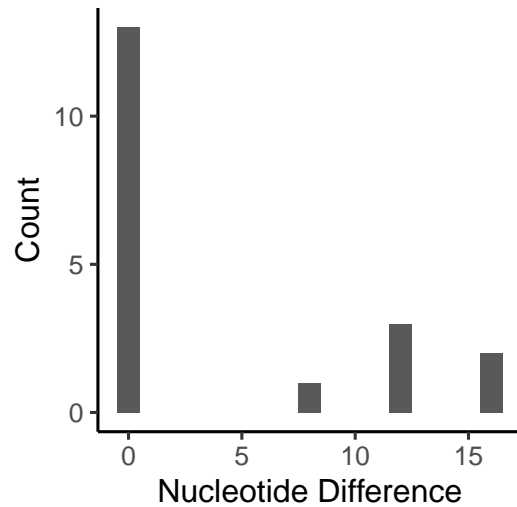
### IGHV4-4\*07

371 sequences assigned  
191 (51.5%) exact matches, in which:  
190 unique CDR3  
7 unique J



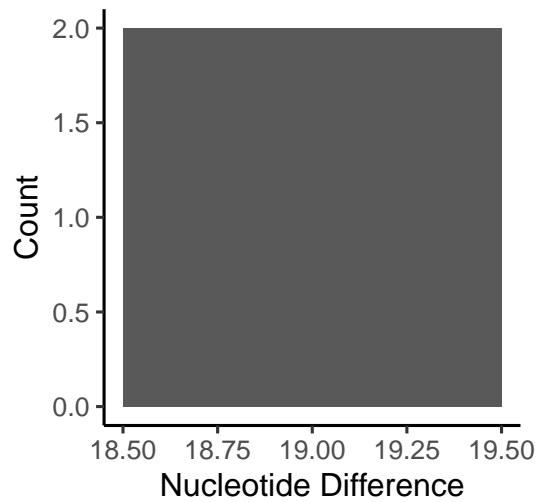
### IGHV3-73\*01\_02

38 sequences assigned  
13 (34.2%) exact matches, in which:  
12 unique CDR3  
5 unique J



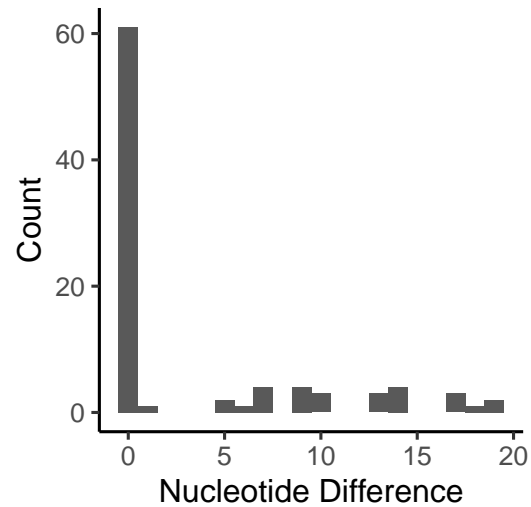
### IGHV3-43D\*04

3 sequences assigned  
No exact matches.



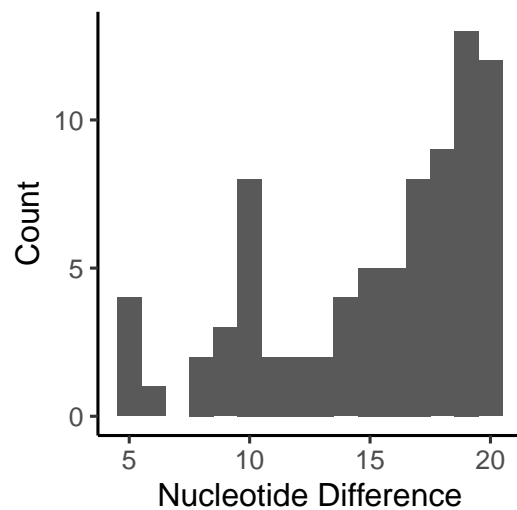
### IGHV4-4\*02\_03

101 sequences assigned  
61 (60.4%) exact matches, in which:  
59 unique CDR3  
6 unique J



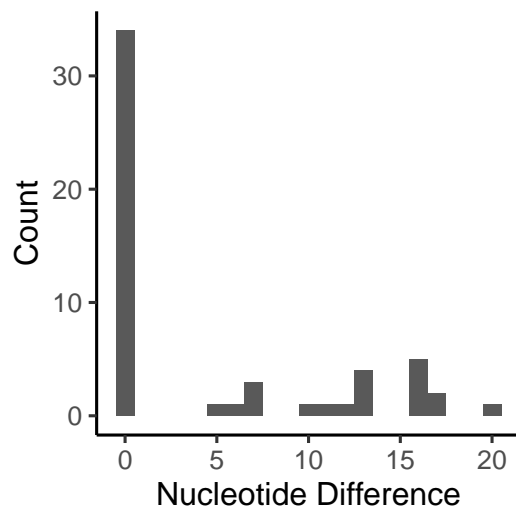
### IGHV3-74\*03

157 sequences assigned  
No exact matches.



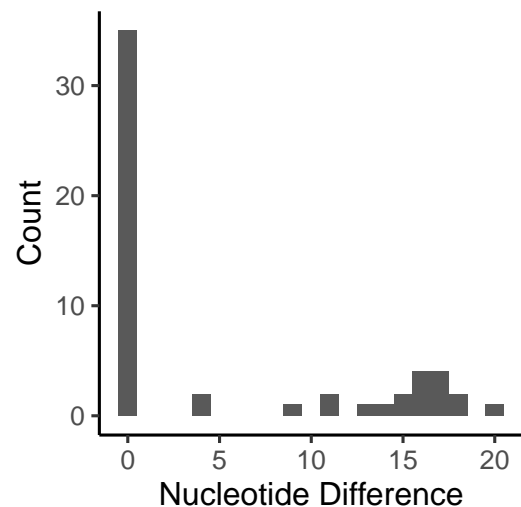
### IGHV3-64D\*06

71 sequences assigned  
34 (47.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



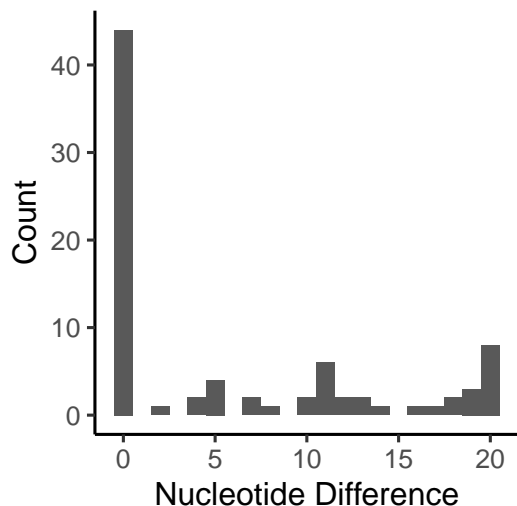
### IGHV4-30-2\*01

63 sequences assigned  
35 (55.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



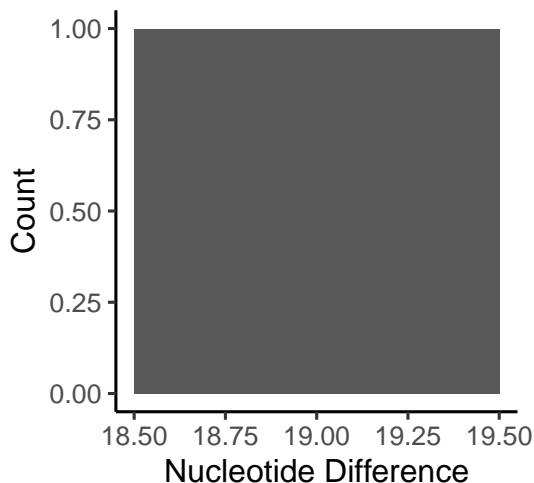
### IGHV4-30-4\*01

109 sequences assigned  
44 (40.4%) exact matches, in which:  
42 unique CDR3  
4 unique J



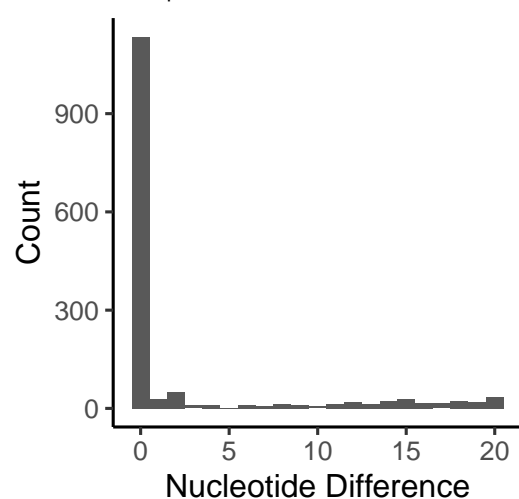
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



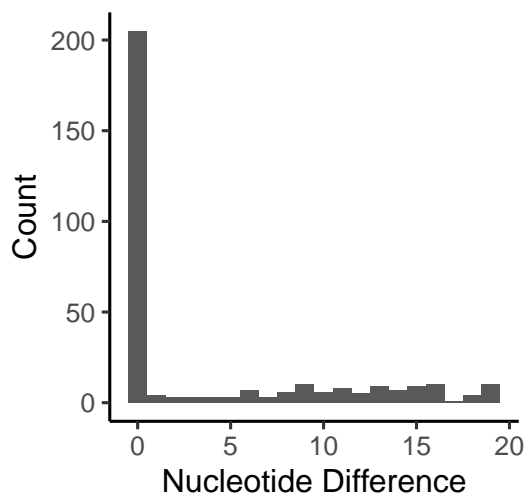
### IGHV4-59\*02\_G88A

1823 sequences assigned  
1135 (62.3%) exact matches, in which:  
1135 unique CDR3  
7 unique J



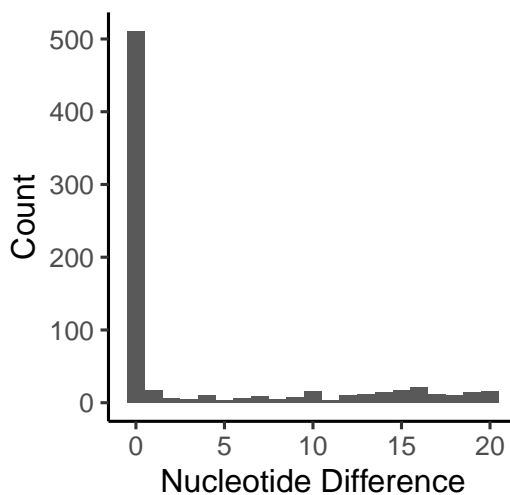
### IGHV4-31\*02

389 sequences assigned  
205 (52.7%) exact matches, in which:  
204 unique CDR3  
7 unique J



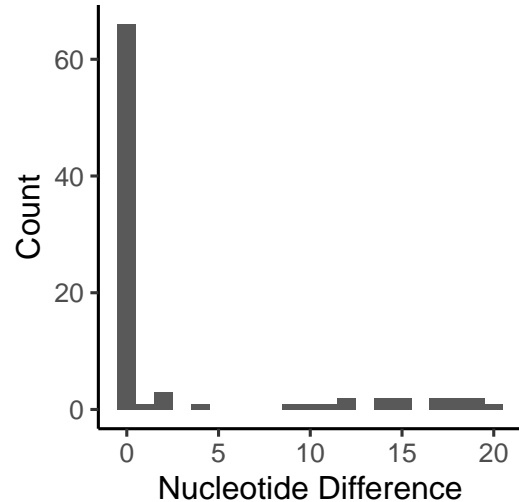
### IGHV4-39\*02\_C258G

1025 sequences assigned  
511 (49.9%) exact matches, in which:  
502 unique CDR3  
7 unique J



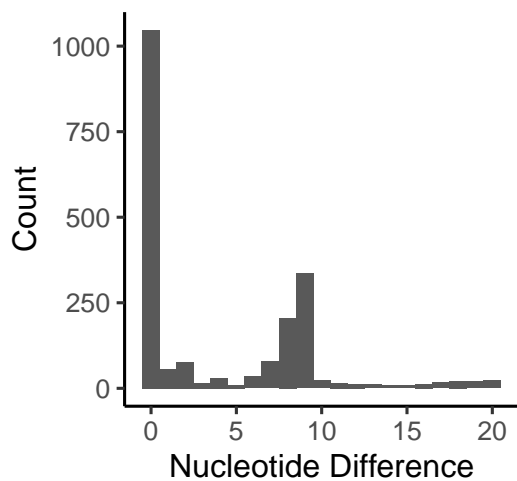
### IGHV4-61\*01

117 sequences assigned  
66 (56.4%) exact matches, in which:  
66 unique CDR3  
5 unique J



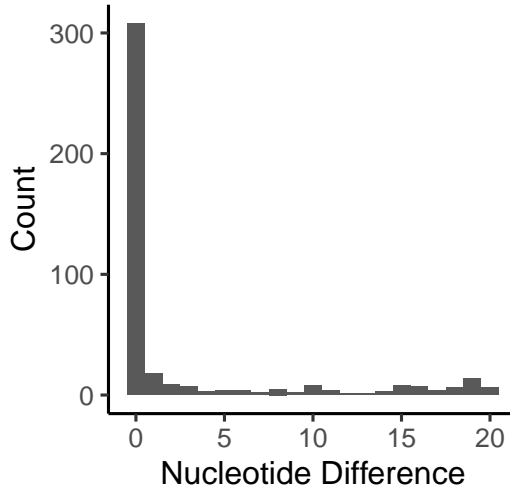
### IGHV4-34\*01\_02

2315 sequences assigned  
1047 (45.2%) exact matches, in which:  
1034 unique CDR3  
7 unique J



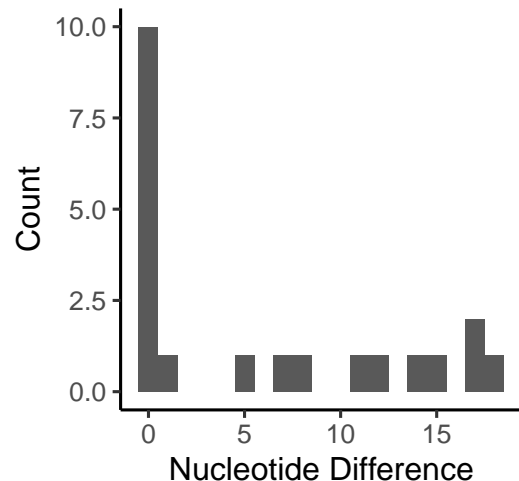
### IGHV4-59\*08

593 sequences assigned  
308 (51.9%) exact matches, in which:  
306 unique CDR3  
6 unique J



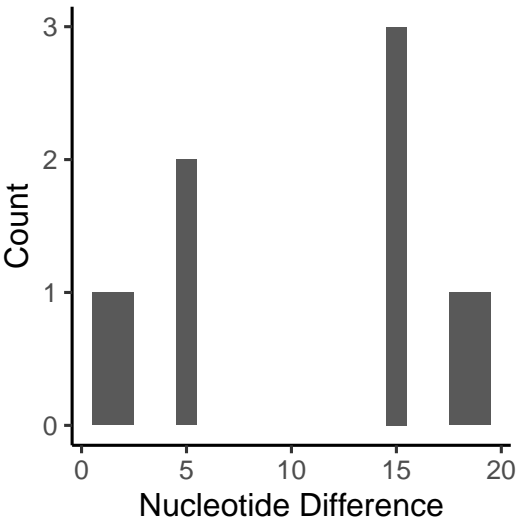
### IGHV4-61\*02

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



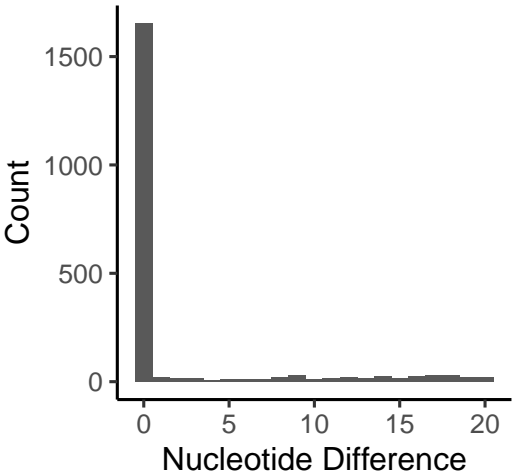
IGHV4–61\*08

18 sequences assigned  
No exact matches.



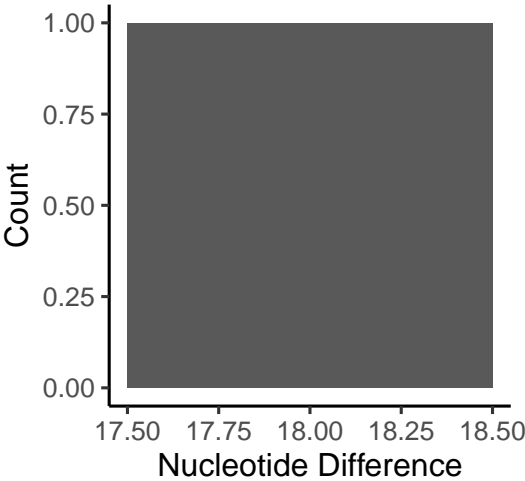
IGHV5–51\*07\_A128G

2270 sequences assigned  
1653 (72.8%) exact matches, in which:  
1553 unique CDR3  
7 unique J



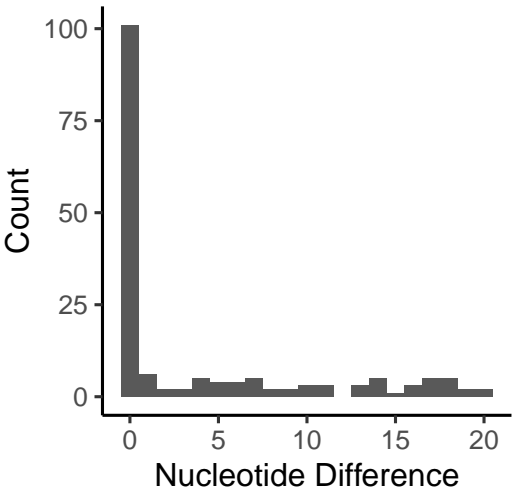
IGHV1/OR15–2\*02\_03

1 sequences assigned  
No exact matches.



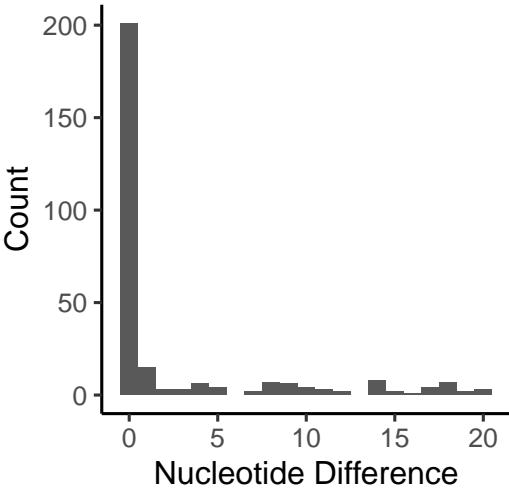
IGHV6–1\*01\_02

212 sequences assigned  
101 (47.6%) exact matches, in which:  
101 unique CDR3  
7 unique J



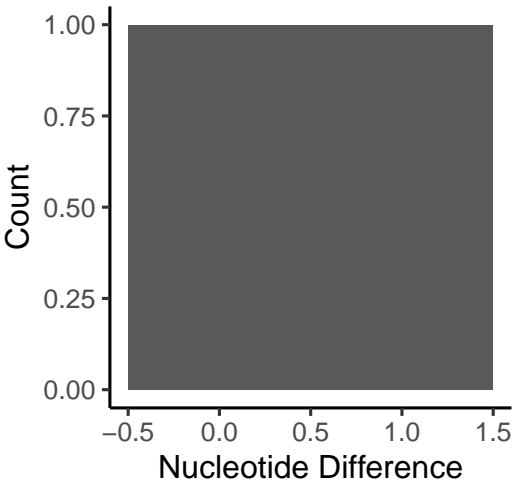
IGHV5–10–1\*01\_03

311 sequences assigned  
201 (64.6%) exact matches, in which:  
190 unique CDR3  
5 unique J

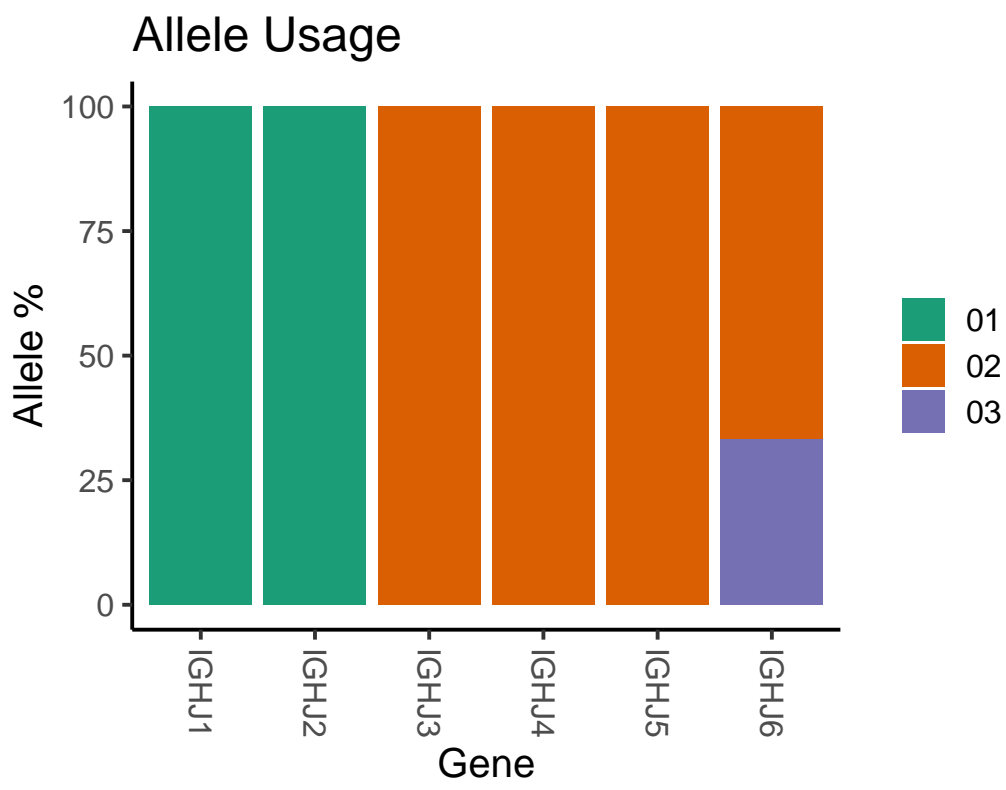


IGHV7–4–1\*01

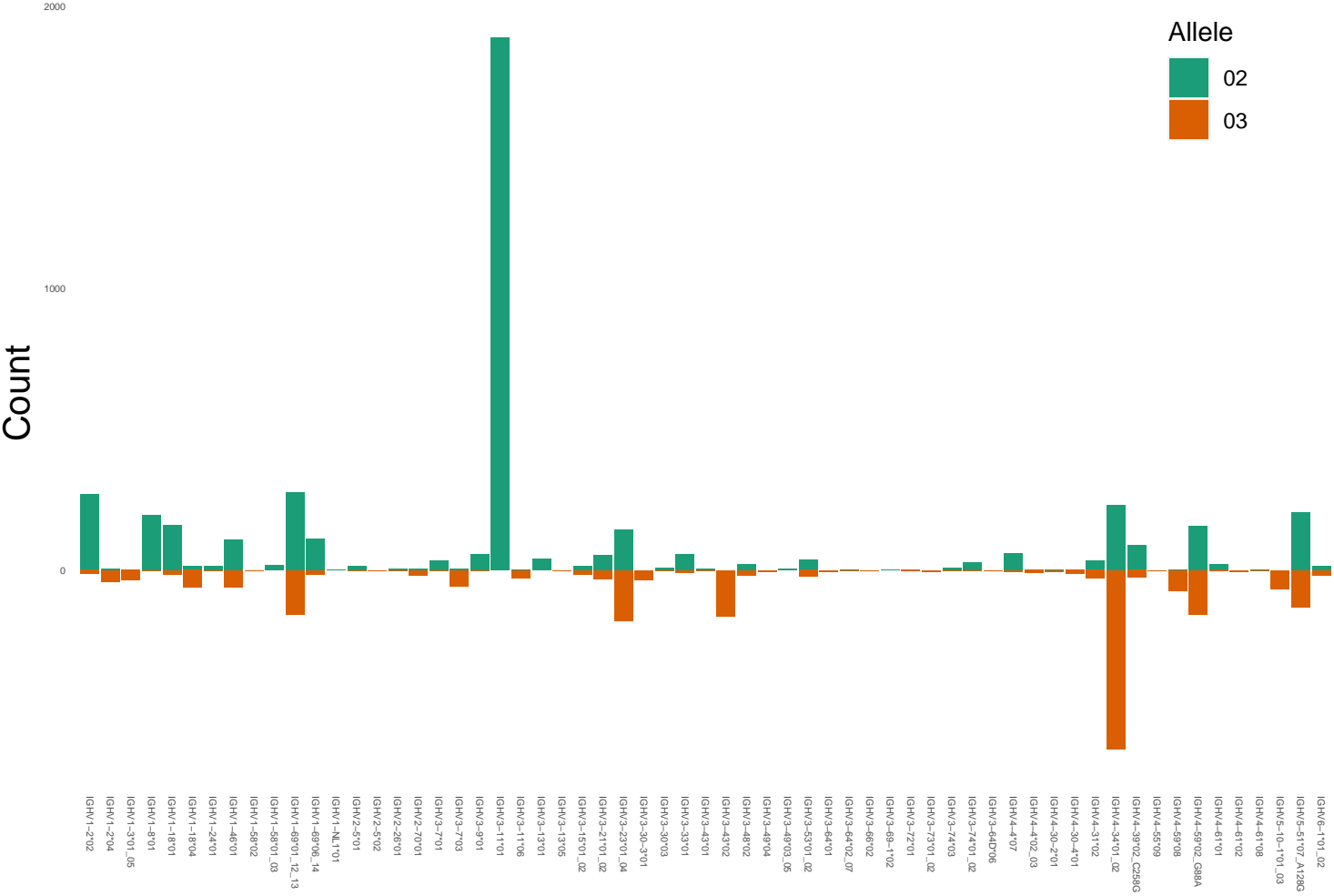
3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J







Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.