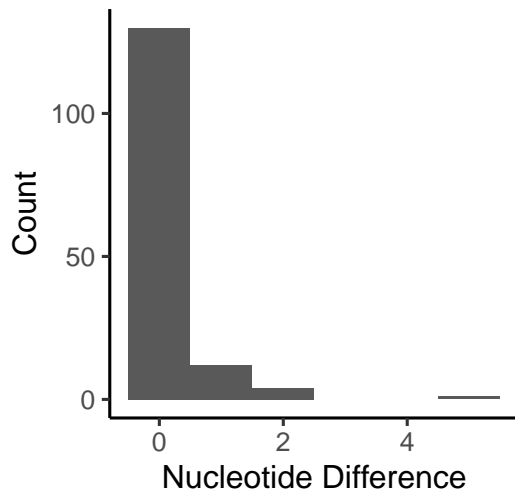


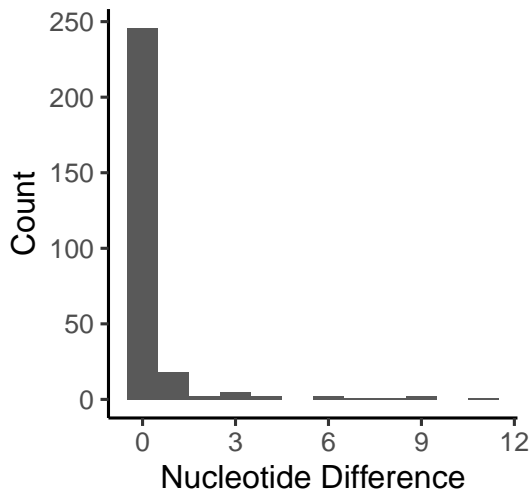
### IGHV1-2\*04

147 sequences assigned  
130 (88.4%) exact matches, in which:  
130 unique CDR3  
7 unique J



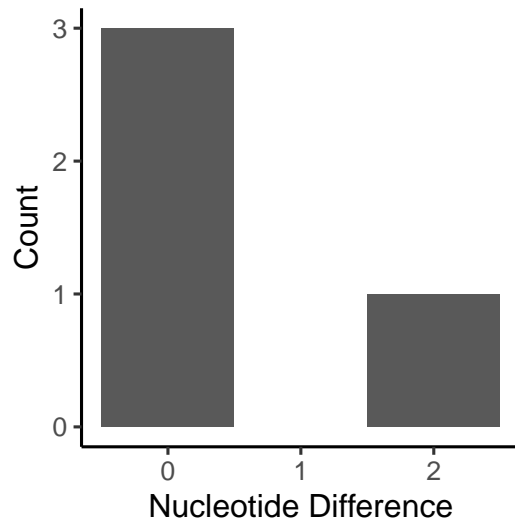
### IGHV1-8\*01

280 sequences assigned  
246 (87.9%) exact matches, in which:  
246 unique CDR3  
7 unique J



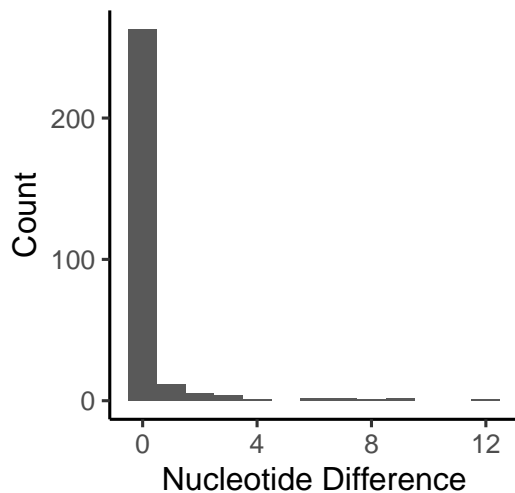
### IGHV1-45\*02

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
1 unique J



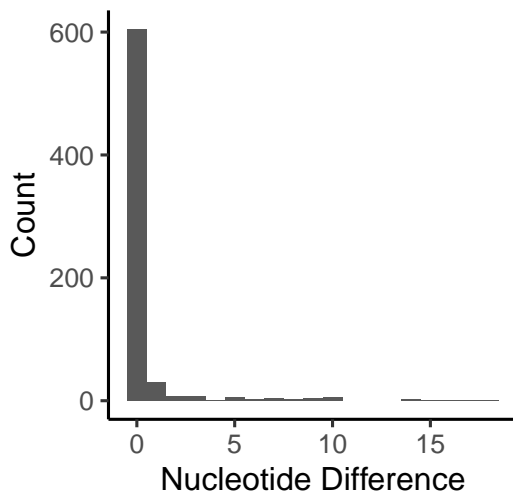
### IGHV1-2\*06

295 sequences assigned  
263 (89.2%) exact matches, in which:  
263 unique CDR3  
7 unique J



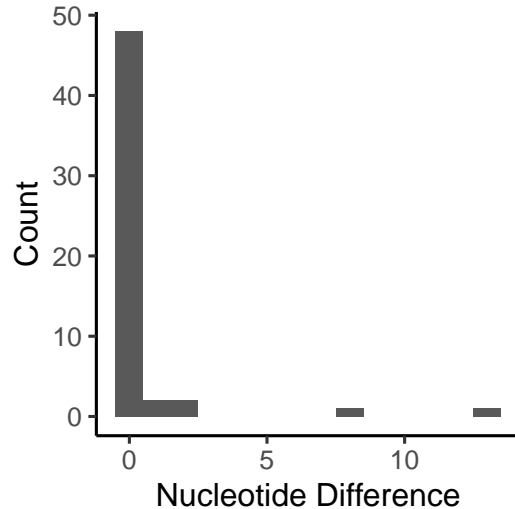
### IGHV1-18\*01

688 sequences assigned  
605 (87.9%) exact matches, in which:  
605 unique CDR3  
7 unique J



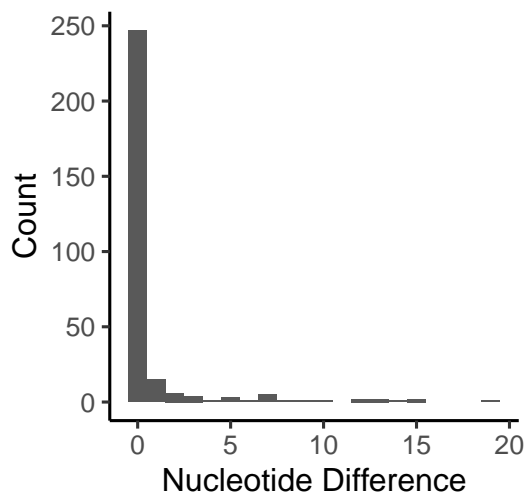
### IGHV1-46\*01

54 sequences assigned  
48 (88.9%) exact matches, in which:  
48 unique CDR3  
4 unique J



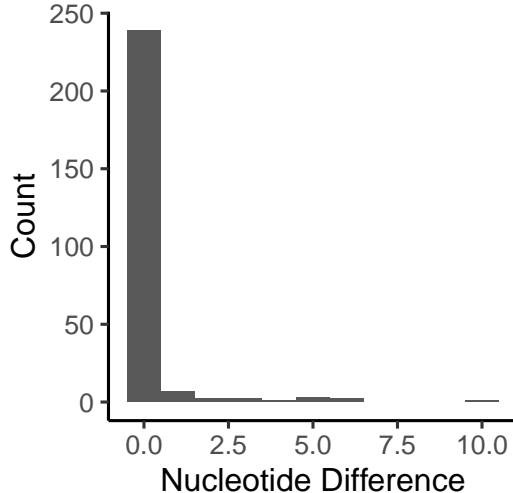
### IGHV1-3\*01

293 sequences assigned  
247 (84.3%) exact matches, in which:  
247 unique CDR3  
7 unique J



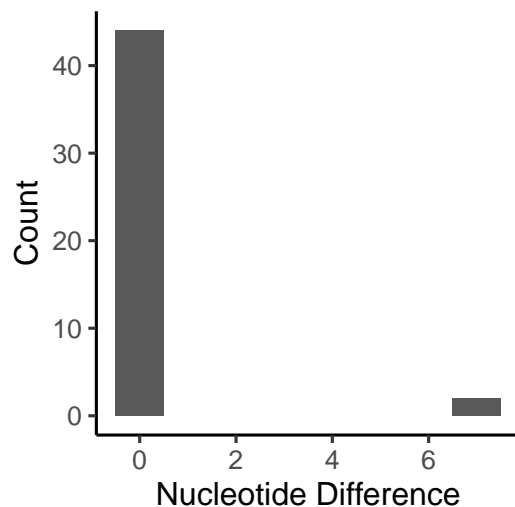
### IGHV1-24\*01

257 sequences assigned  
239 (93%) exact matches, in which:  
239 unique CDR3  
7 unique J



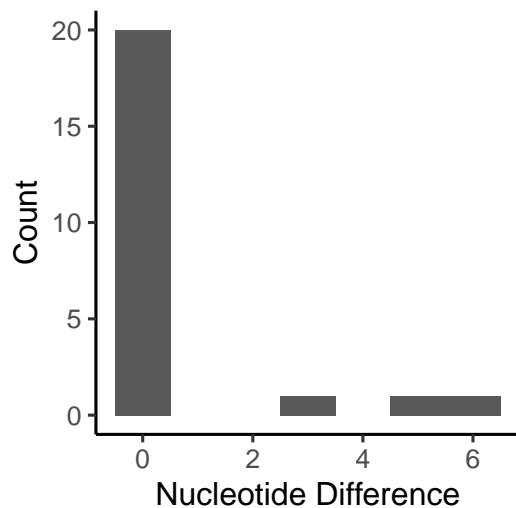
### IGHV1-46\*03

46 sequences assigned  
44 (95.7%) exact matches, in which:  
44 unique CDR3  
5 unique J



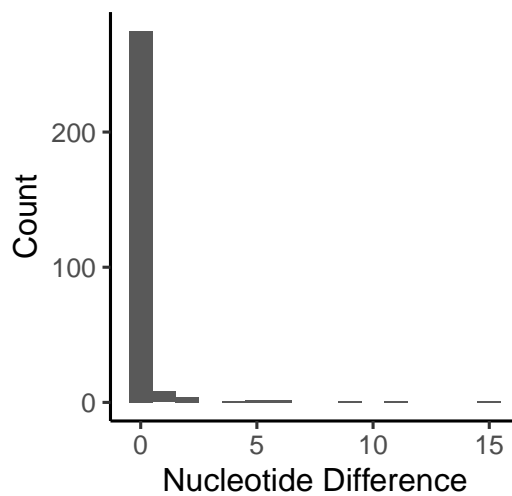
### IGHV1-58\*01

23 sequences assigned  
20 (87%) exact matches, in which:  
20 unique CDR3  
5 unique J



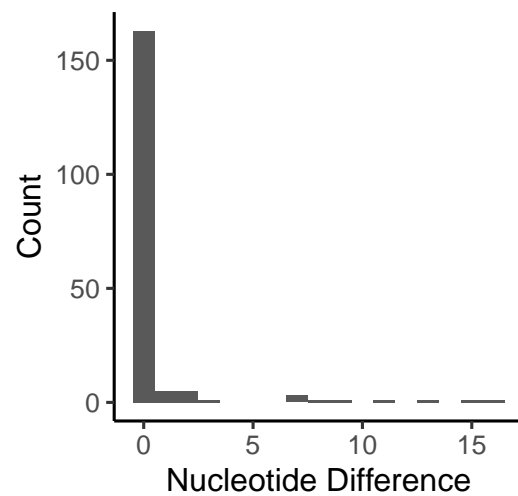
### IGHV1-69\*04

295 sequences assigned  
275 (93.2%) exact matches, in which:  
275 unique CDR3  
7 unique J



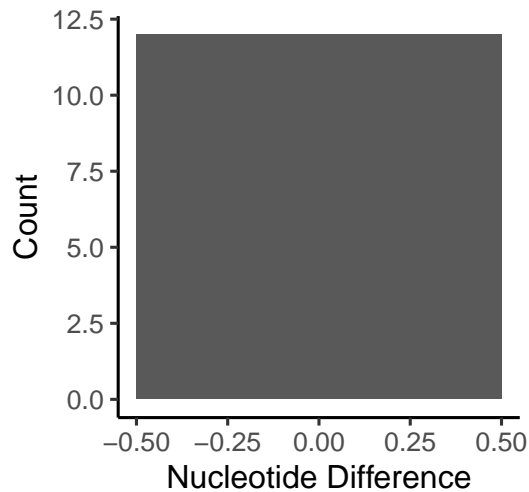
### IGHV2-5\*02

183 sequences assigned  
163 (89.1%) exact matches, in which:  
163 unique CDR3  
6 unique J



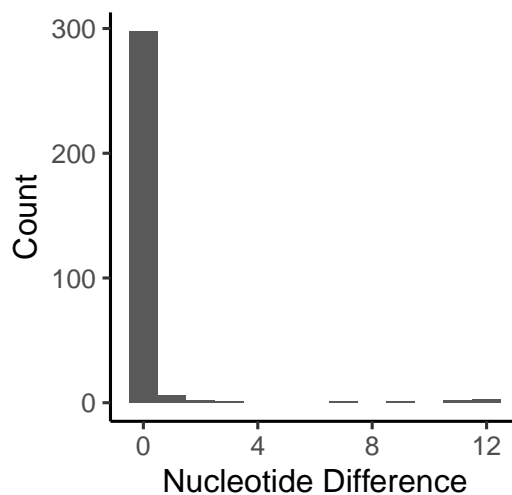
### IGHV1-58\*02

12 sequences assigned  
12 (100%) exact matches, in which:  
12 unique CDR3  
4 unique J



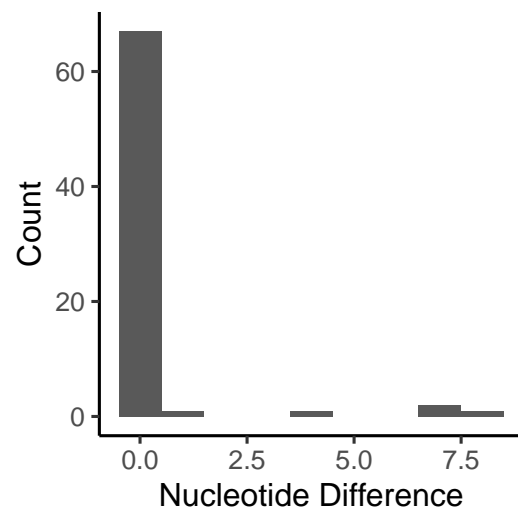
### IGHV1-69\*06

314 sequences assigned  
298 (94.9%) exact matches, in which:  
298 unique CDR3  
7 unique J



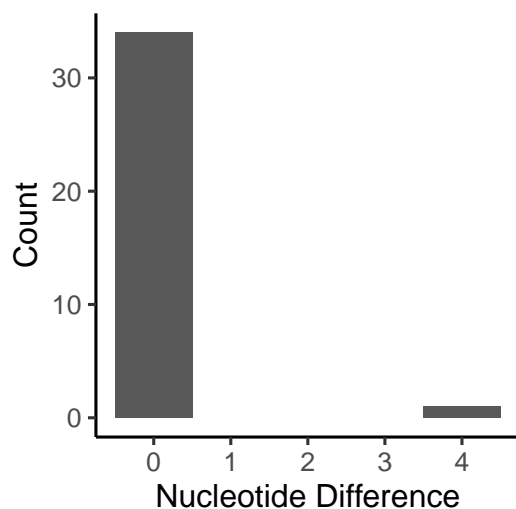
### IGHV2-26\*01

72 sequences assigned  
67 (93.1%) exact matches, in which:  
67 unique CDR3  
7 unique J



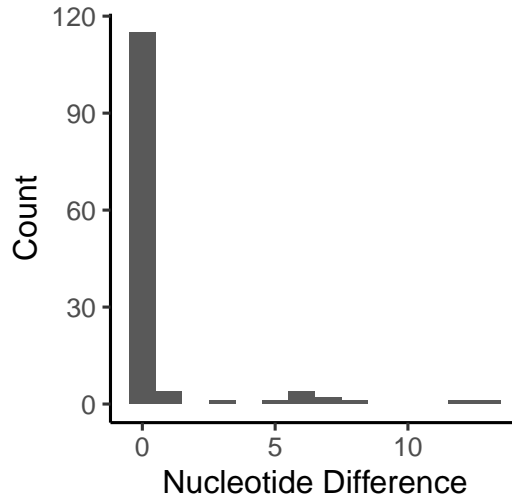
### IGHV1-69-2\*01

35 sequences assigned  
34 (97.1%) exact matches, in which:  
34 unique CDR3  
6 unique J



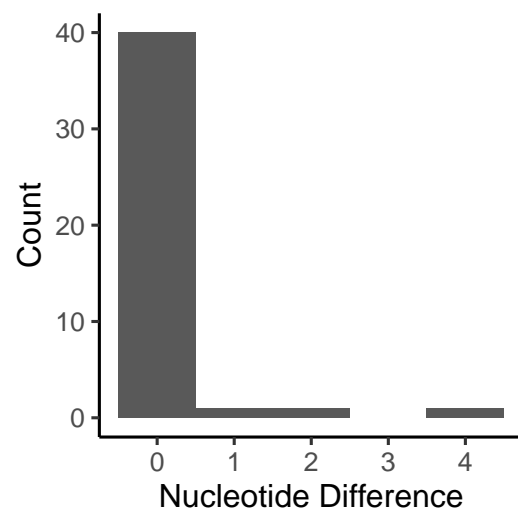
### IGHV2-5\*01

130 sequences assigned  
115 (88.5%) exact matches, in which:  
115 unique CDR3  
6 unique J



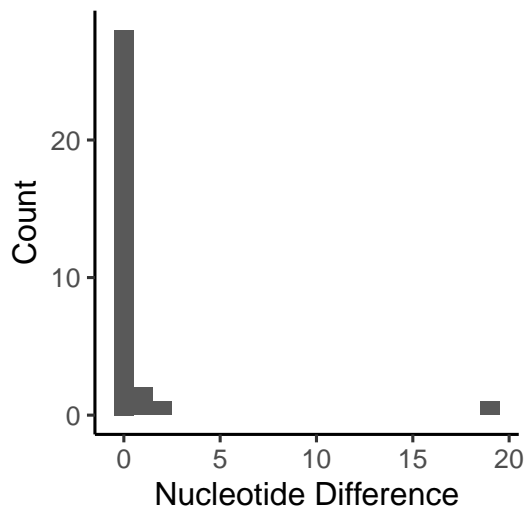
### IGHV2-70\*01

43 sequences assigned  
40 (93%) exact matches, in which:  
40 unique CDR3  
6 unique J



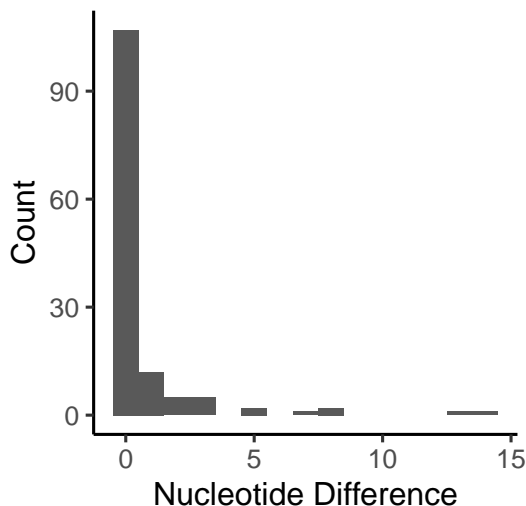
### IGHV2–70\*15

32 sequences assigned  
28 (87.5%) exact matches, in which:  
28 unique CDR3  
5 unique J



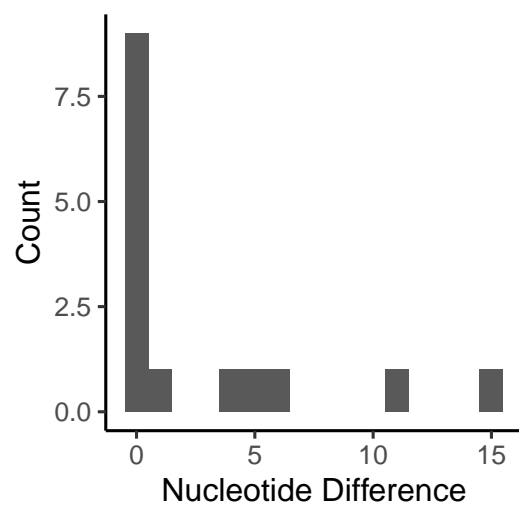
### IGHV3–11\*01

137 sequences assigned  
107 (78.1%) exact matches, in which:  
107 unique CDR3  
6 unique J



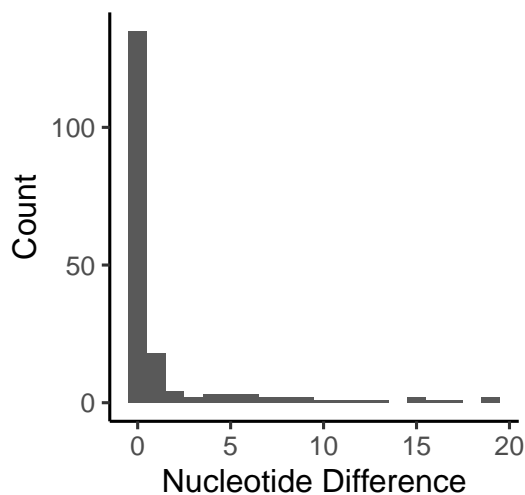
### IGHV3–20\*01

15 sequences assigned  
9 (60%) exact matches, in which:  
9 unique CDR3  
5 unique J



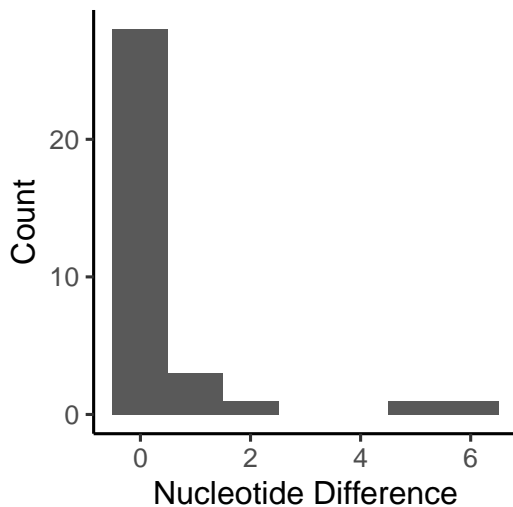
### IGHV3–7\*01

186 sequences assigned  
135 (72.6%) exact matches, in which:  
134 unique CDR3  
7 unique J



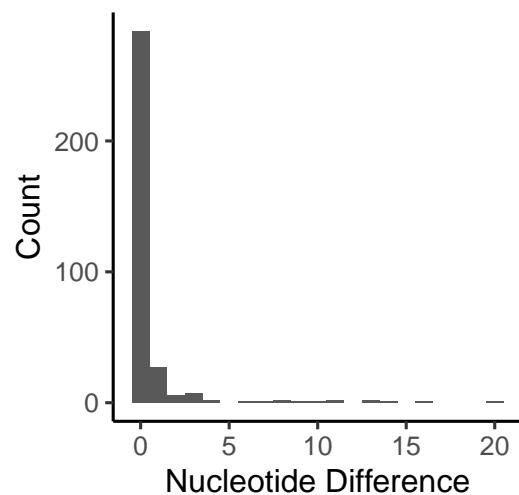
### IGHV3–13\*01

34 sequences assigned  
28 (82.4%) exact matches, in which:  
28 unique CDR3  
6 unique J



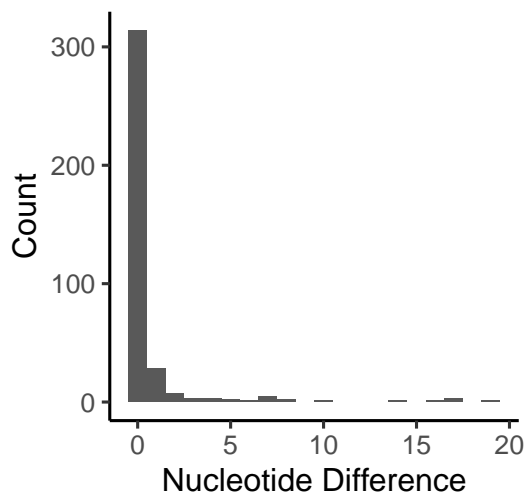
### IGHV3–21\*01

339 sequences assigned  
284 (83.8%) exact matches, in which:  
284 unique CDR3  
7 unique J



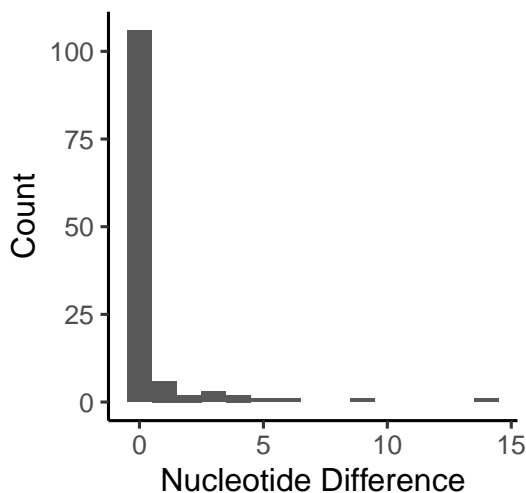
### IGHV3–9\*01

372 sequences assigned  
314 (84.4%) exact matches, in which:  
314 unique CDR3  
7 unique J



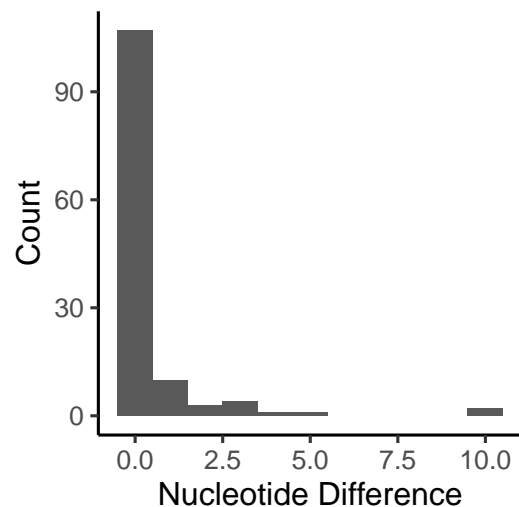
### IGHV3–15\*01

124 sequences assigned  
106 (85.5%) exact matches, in which:  
106 unique CDR3  
7 unique J



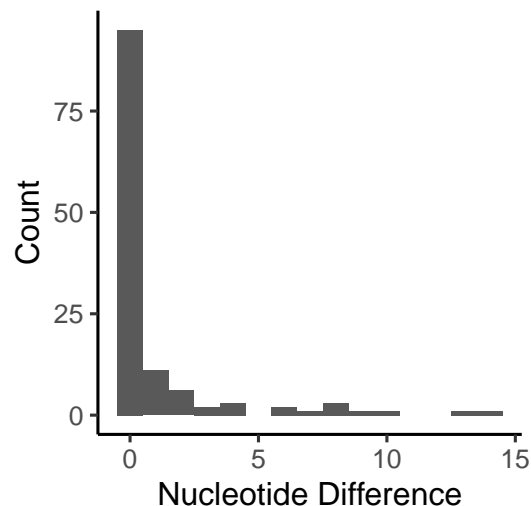
### IGHV3–30–3\*01

129 sequences assigned  
107 (82.9%) exact matches, in which:  
107 unique CDR3  
7 unique J



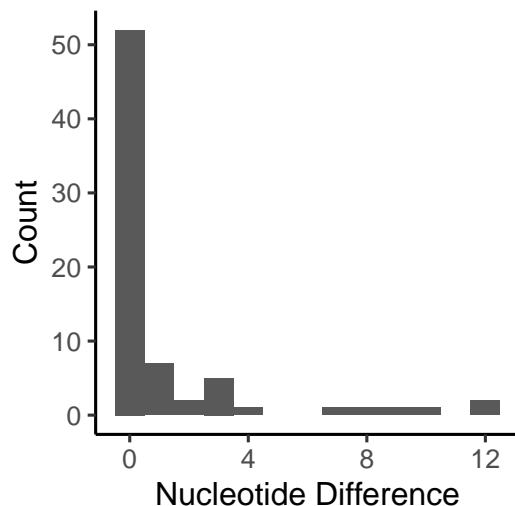
### IGHV3-30\*01

127 sequences assigned  
95 (74.8%) exact matches, in which:  
95 unique CDR3  
7 unique J



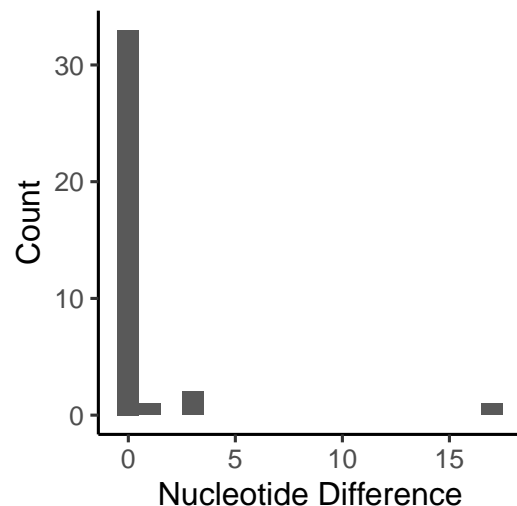
### IGHV3-48\*02

73 sequences assigned  
52 (71.2%) exact matches, in which:  
52 unique CDR3  
7 unique J



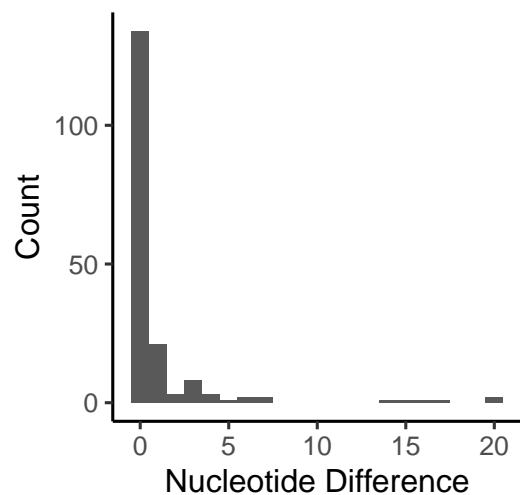
### IGHV3-49\*05

37 sequences assigned  
33 (89.2%) exact matches, in which:  
33 unique CDR3  
4 unique J



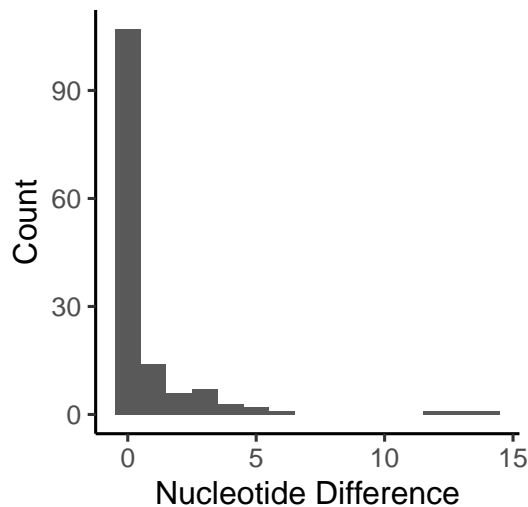
### IGHV3-33\*01

180 sequences assigned  
134 (74.4%) exact matches, in which:  
134 unique CDR3  
7 unique J



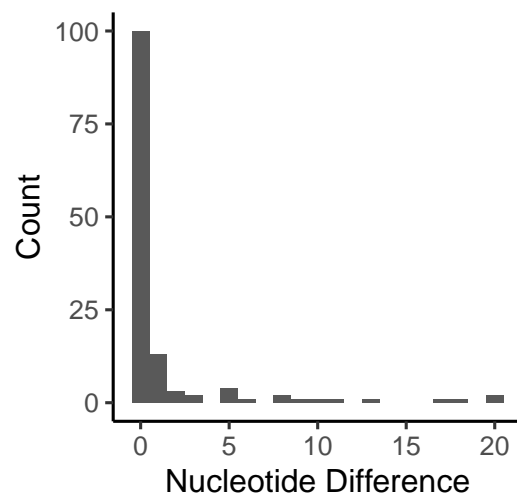
### IGHV3-48\*03

145 sequences assigned  
107 (73.8%) exact matches, in which:  
107 unique CDR3  
6 unique J



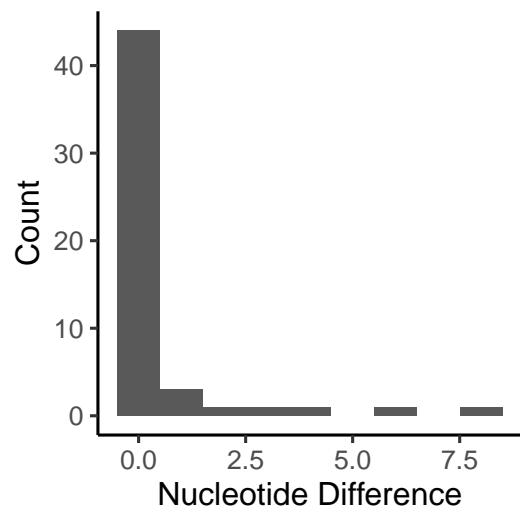
### IGHV3-53\*01

135 sequences assigned  
100 (74.1%) exact matches, in which:  
100 unique CDR3  
6 unique J



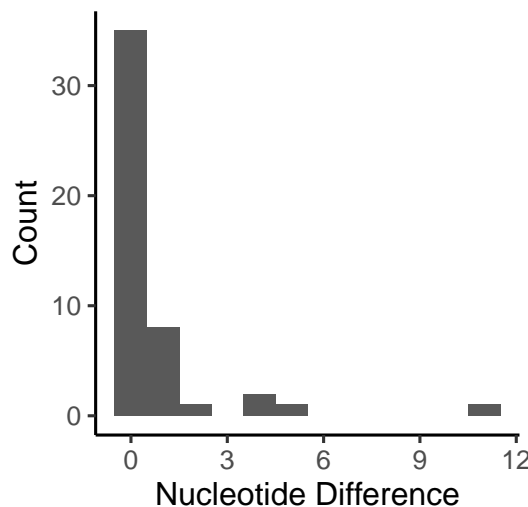
### IGHV3-43\*02

52 sequences assigned  
44 (84.6%) exact matches, in which:  
44 unique CDR3  
5 unique J



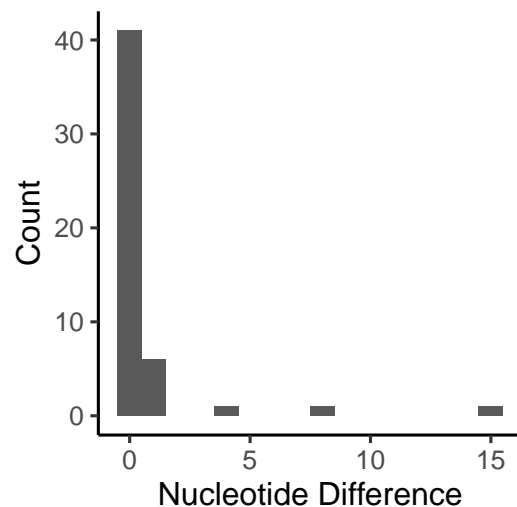
### IGHV3-49\*04

48 sequences assigned  
35 (72.9%) exact matches, in which:  
35 unique CDR3  
7 unique J



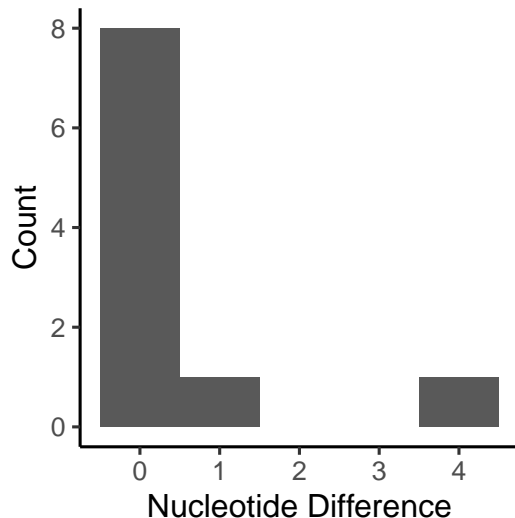
### IGHV3-53\*04

51 sequences assigned  
41 (80.4%) exact matches, in which:  
41 unique CDR3  
5 unique J



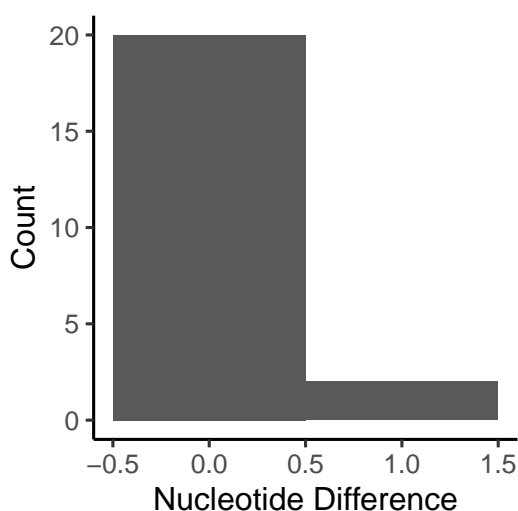
### IGHV3-64\*01

10 sequences assigned  
8 (80%) exact matches, in which:  
8 unique CDR3  
3 unique J



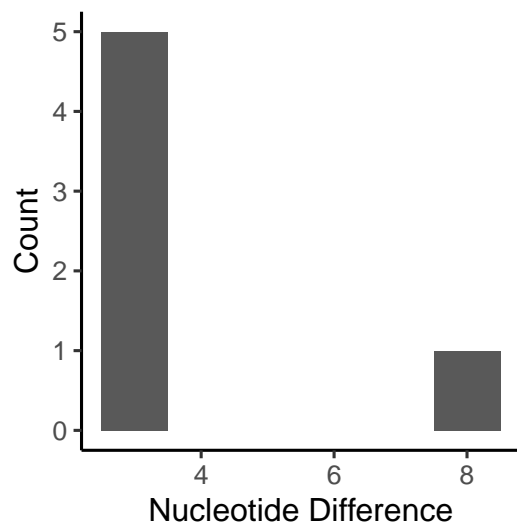
### IGHV3-73\*01

22 sequences assigned  
20 (90.9%) exact matches, in which:  
20 unique CDR3  
4 unique J



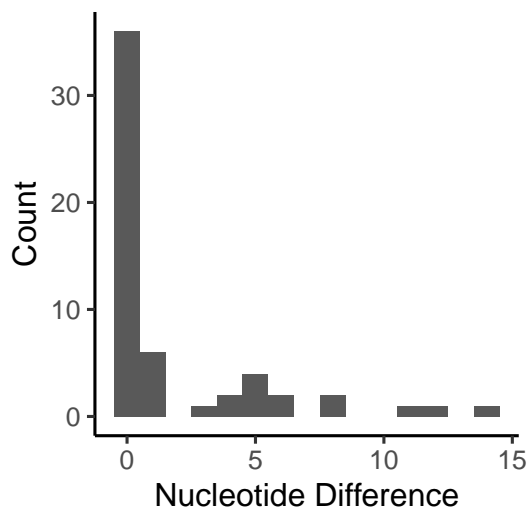
### IGHV3-43D\*04

6 sequences assigned  
No exact matches.



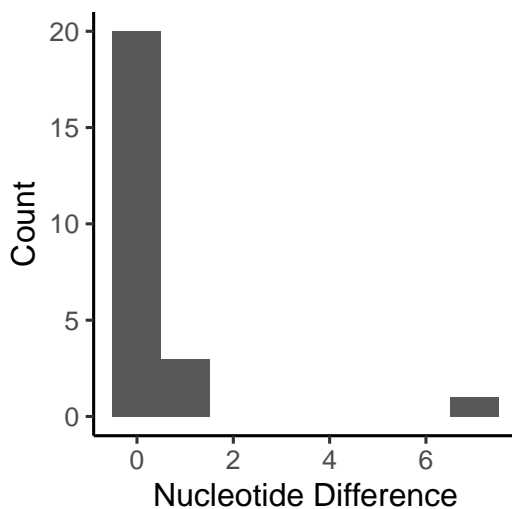
### IGHV3-66\*01

56 sequences assigned  
36 (64.3%) exact matches, in which:  
36 unique CDR3  
5 unique J



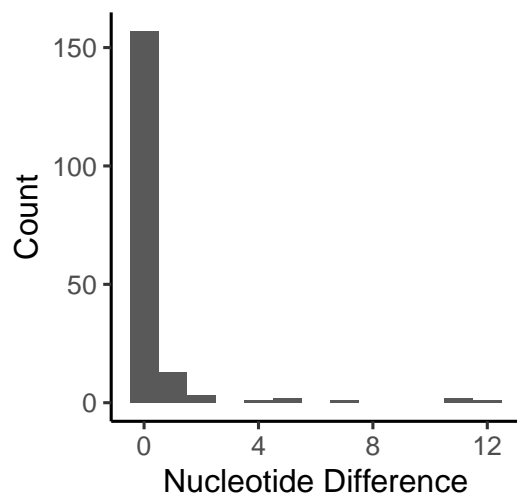
### IGHV3-73\*02

25 sequences assigned  
20 (80%) exact matches, in which:  
20 unique CDR3  
5 unique J



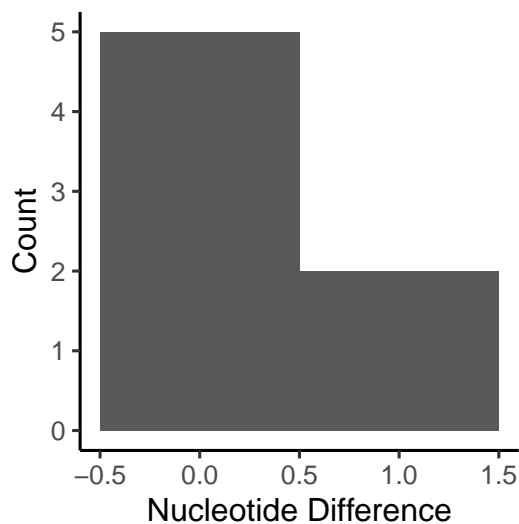
### IGHV4-4\*02

180 sequences assigned  
157 (87.2%) exact matches, in which:  
157 unique CDR3  
7 unique J



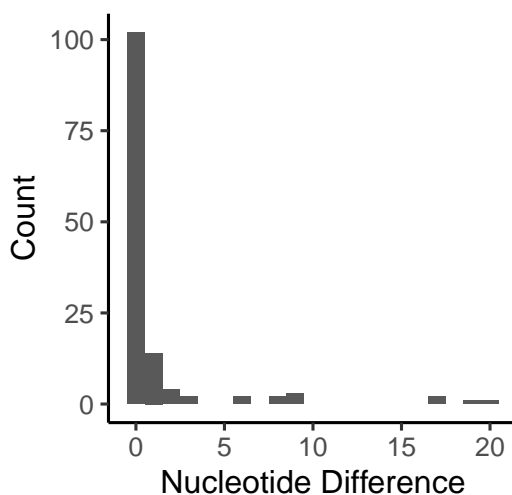
### IGHV3-72\*01

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



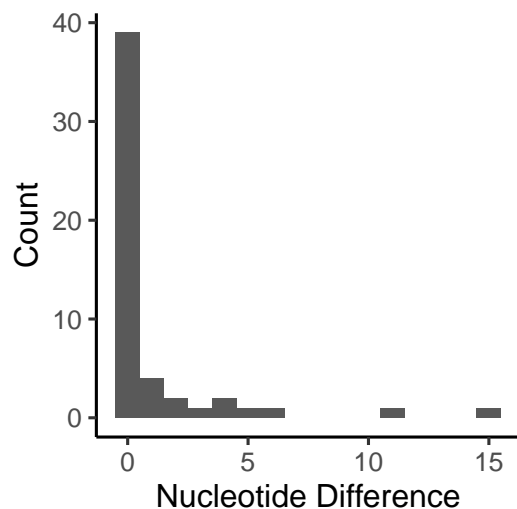
### IGHV3-74\*01

135 sequences assigned  
102 (75.6%) exact matches, in which:  
102 unique CDR3  
7 unique J



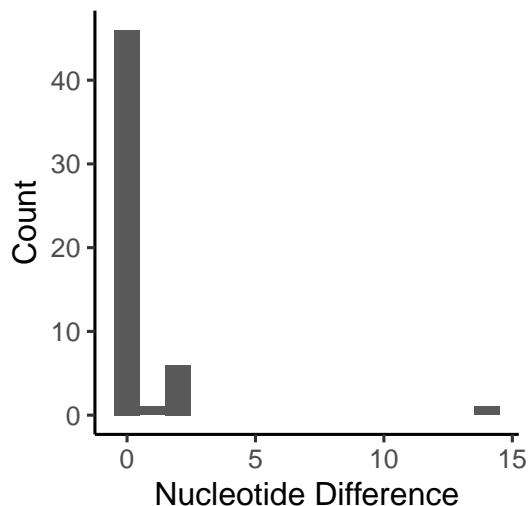
### IGHV4-30-4\*01

52 sequences assigned  
39 (75%) exact matches, in which:  
39 unique CDR3  
6 unique J



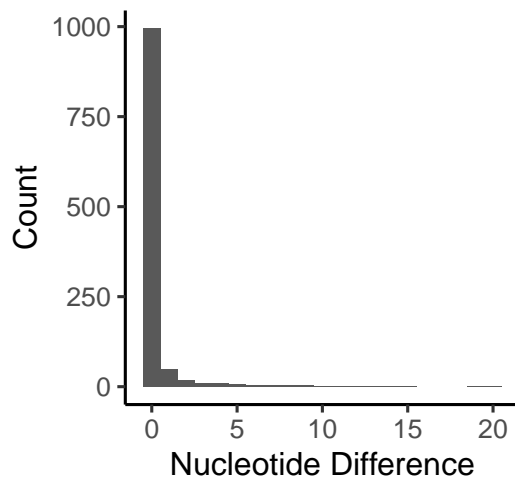
### IGHV4-30-2\*01

54 sequences assigned  
46 (85.2%) exact matches, in which:  
46 unique CDR3  
6 unique J



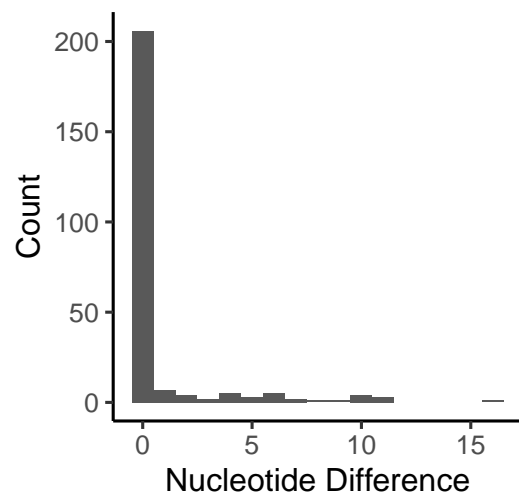
### IGHV4-34\*01

1116 sequences assigned  
995 (89.2%) exact matches, in which:  
995 unique CDR3  
7 unique J



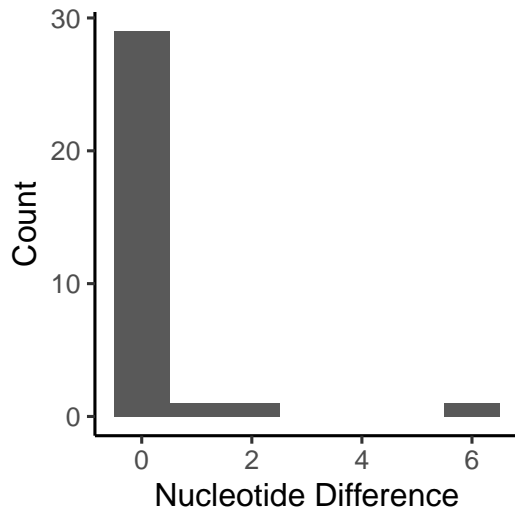
### IGHV4-59\*01

244 sequences assigned  
206 (84.4%) exact matches, in which:  
206 unique CDR3  
7 unique J



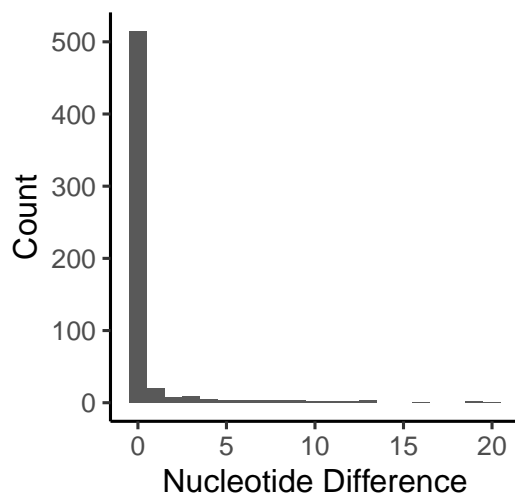
### IGHV4-31\*01

32 sequences assigned  
29 (90.6%) exact matches, in which:  
29 unique CDR3  
6 unique J



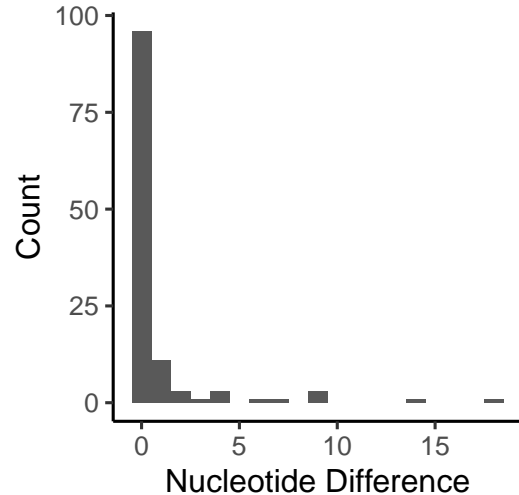
### IGHV4-39\*01

593 sequences assigned  
515 (86.8%) exact matches, in which:  
514 unique CDR3  
7 unique J



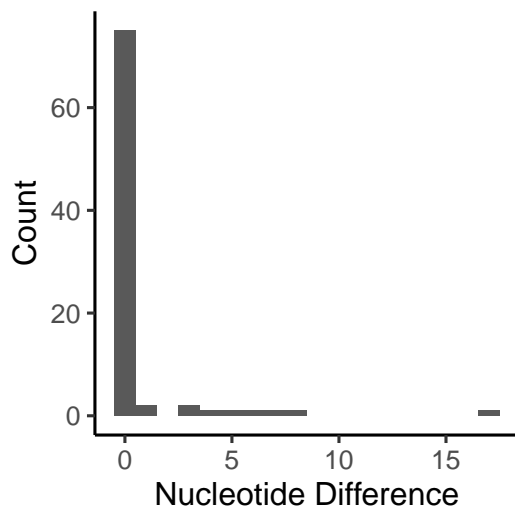
### IGHV4-59\*08

121 sequences assigned  
96 (79.3%) exact matches, in which:  
96 unique CDR3  
6 unique J



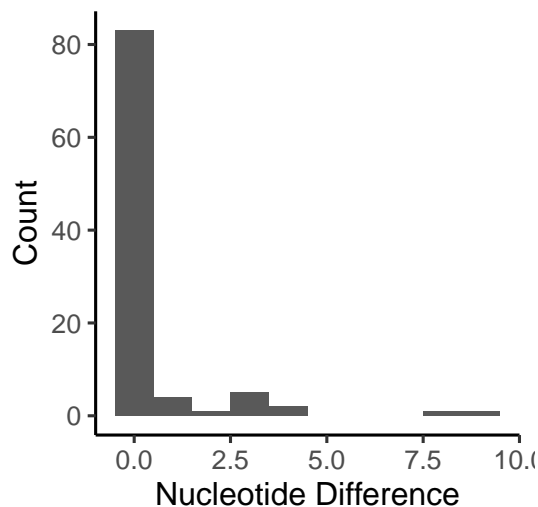
### IGHV4-31\*03

85 sequences assigned  
75 (88.2%) exact matches, in which:  
75 unique CDR3  
5 unique J



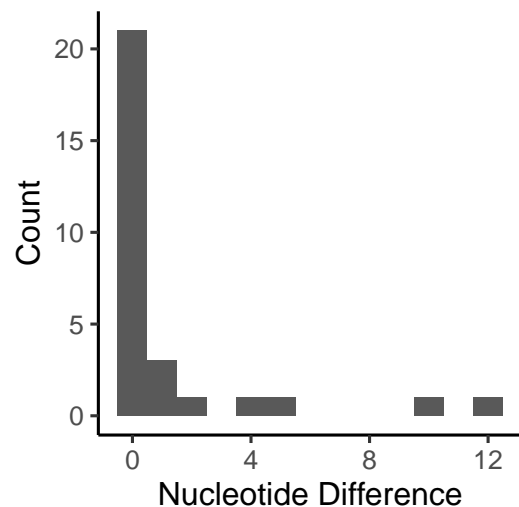
### IGHV4-39\*02\_C258G

97 sequences assigned  
83 (85.6%) exact matches, in which:  
83 unique CDR3  
7 unique J



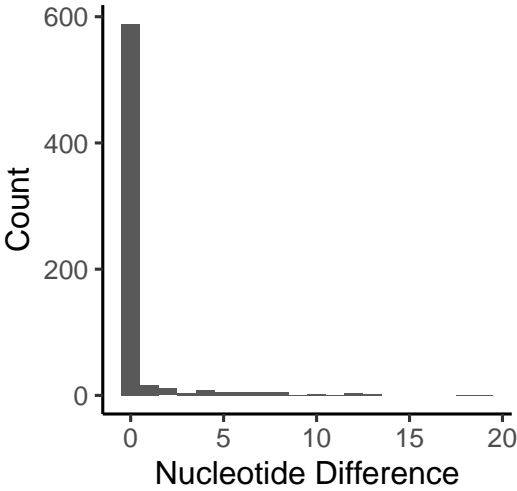
### IGHV4-61\*01

29 sequences assigned  
21 (72.4%) exact matches, in which:  
21 unique CDR3  
4 unique J



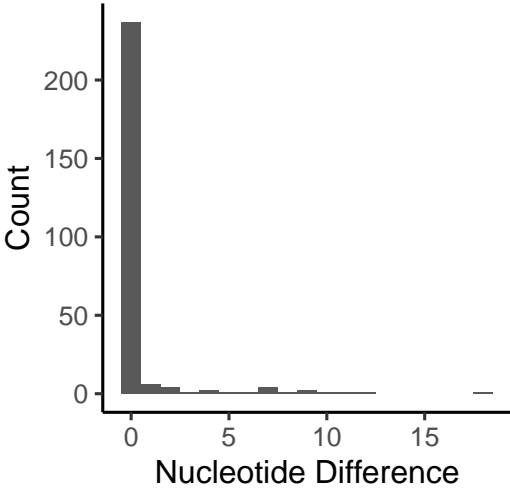
IGHV5-51\*01

664 sequences assigned  
589 (88.7%) exact matches, in which:  
589 unique CDR3  
7 unique J



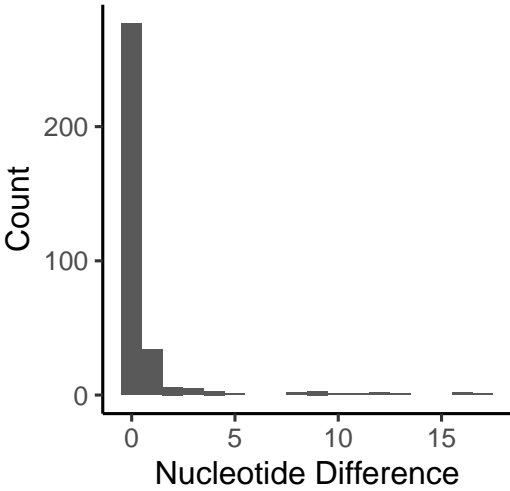
IGHV6-1\*01

264 sequences assigned  
237 (89.8%) exact matches, in which:  
237 unique CDR3  
7 unique J

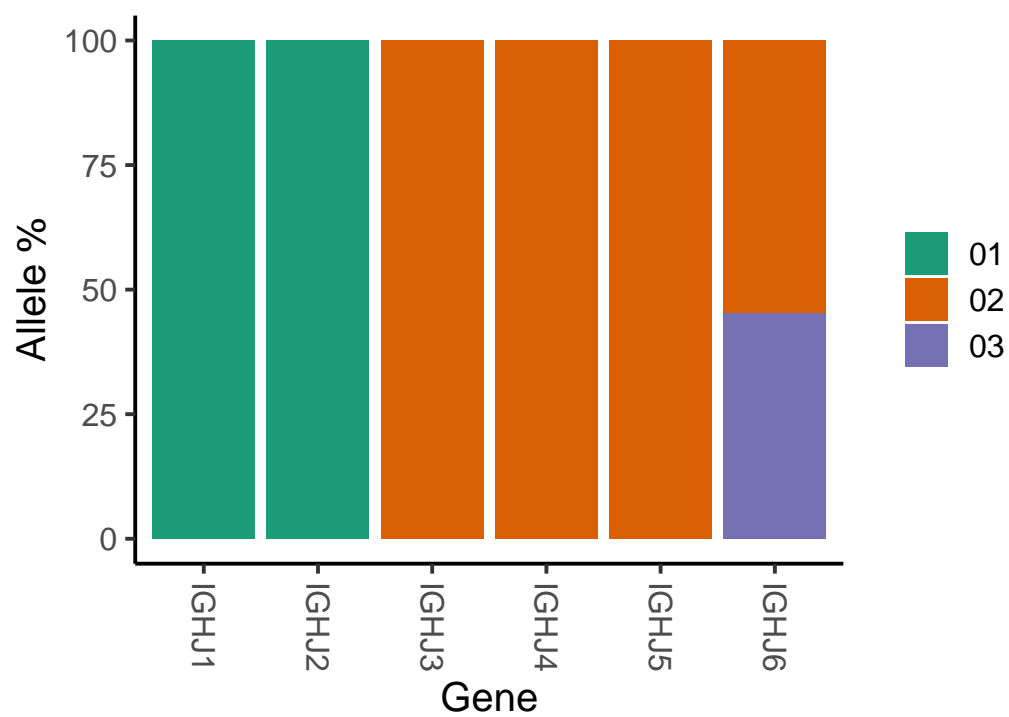


IGHV7-4-1\*02

339 sequences assigned  
277 (81.7%) exact matches, in which:  
277 unique CDR3  
7 unique J

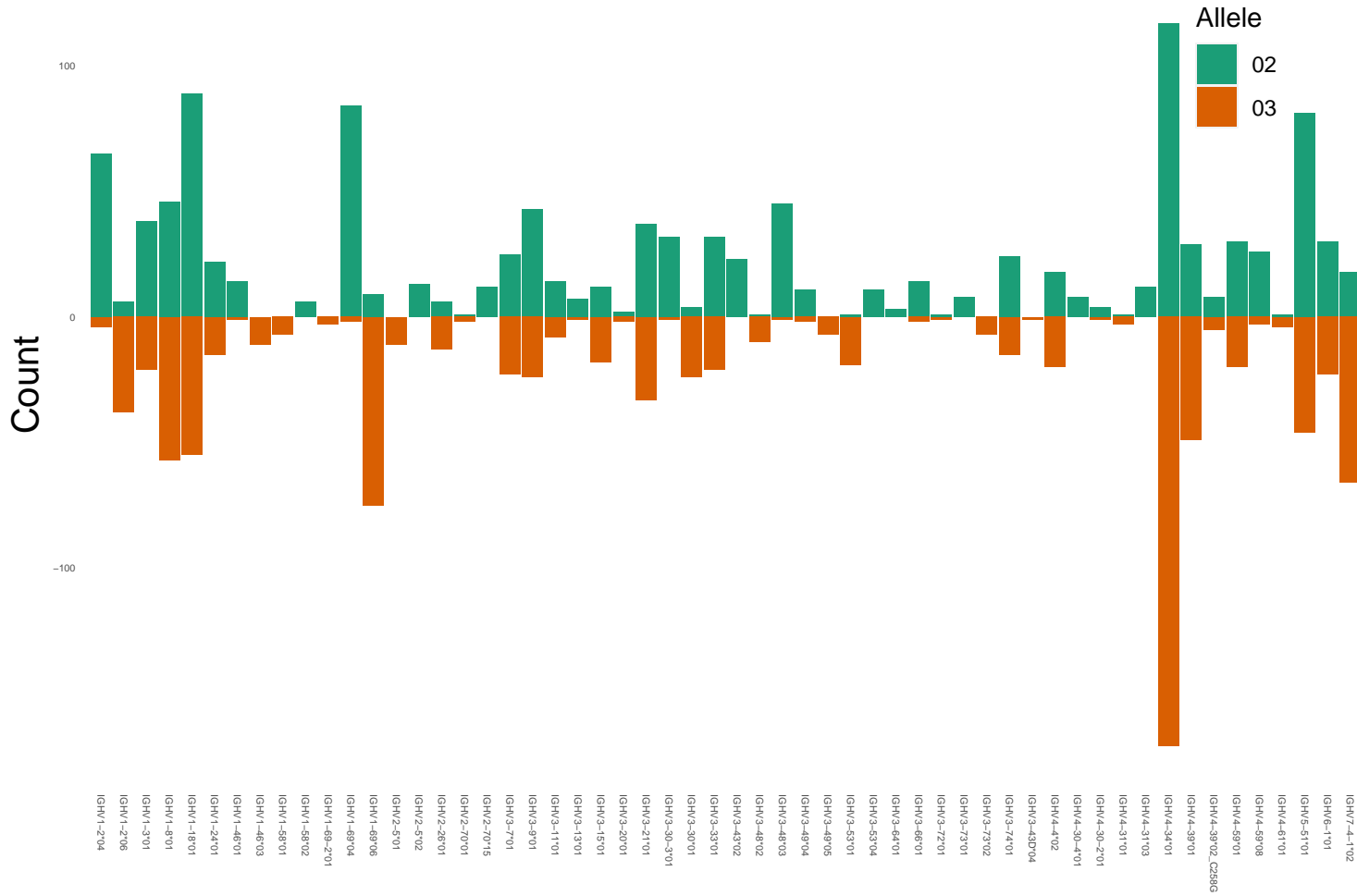


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.