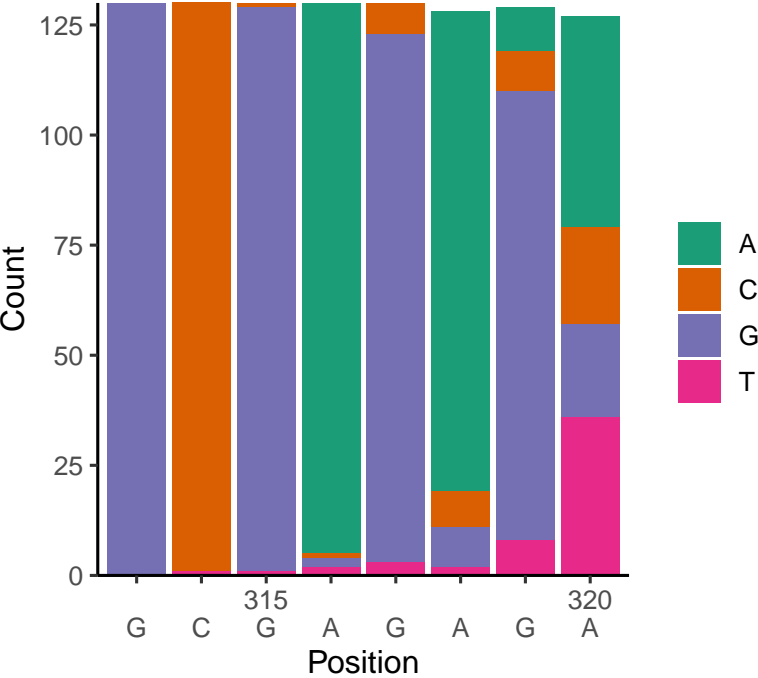
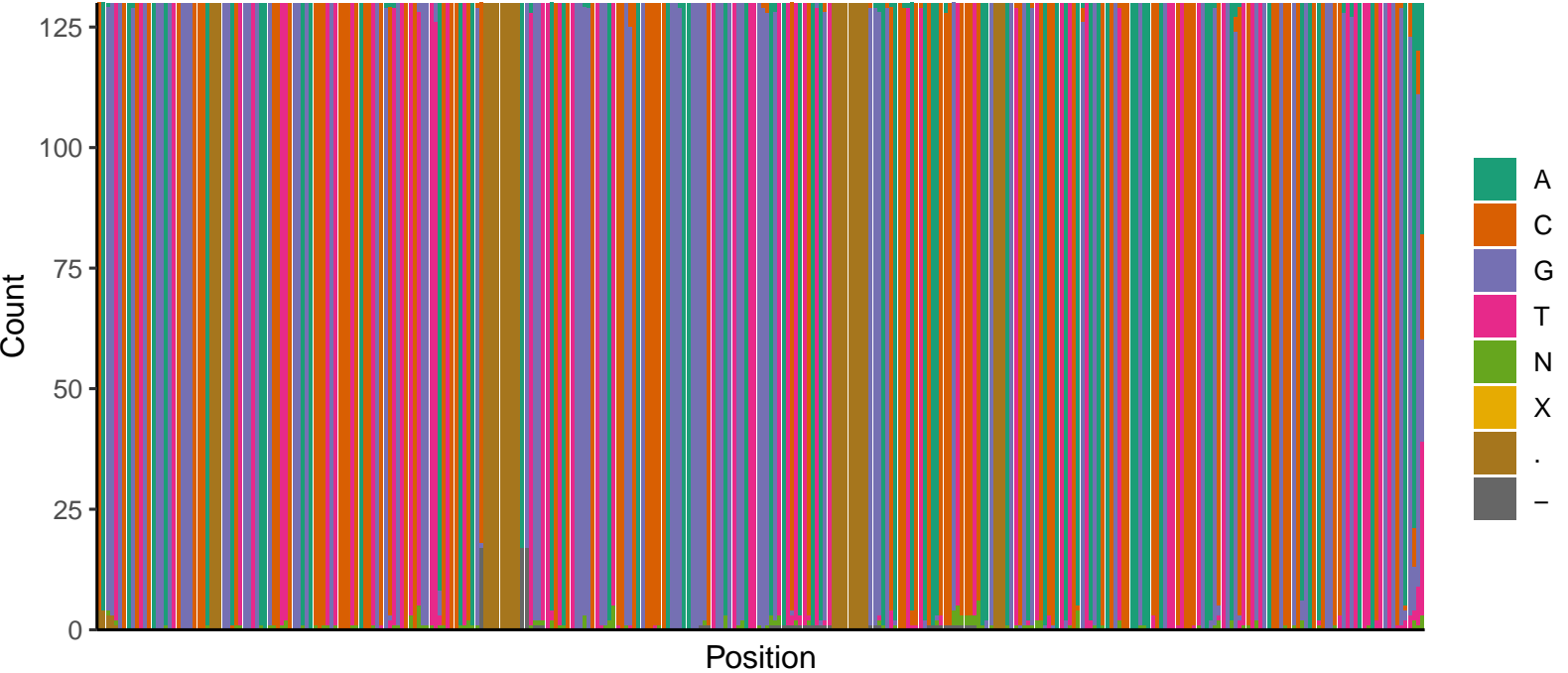


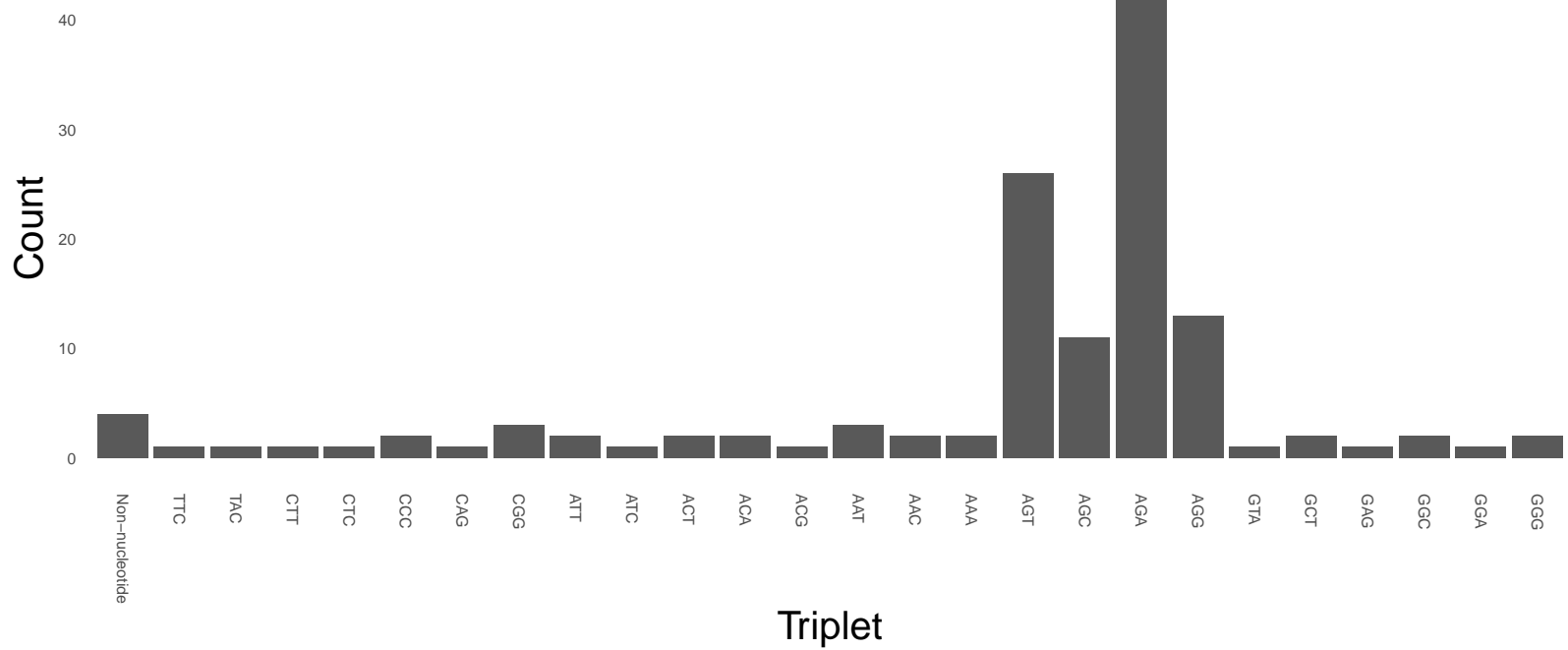
Gene IGHV4-38-2\*02\_A70G



Gene IGHV4-38-2\*02\_A70G

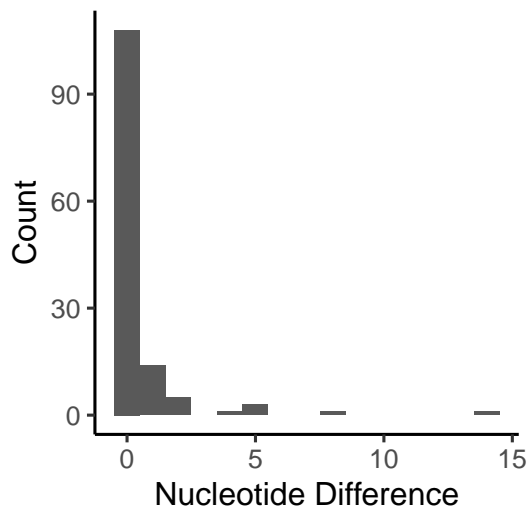


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



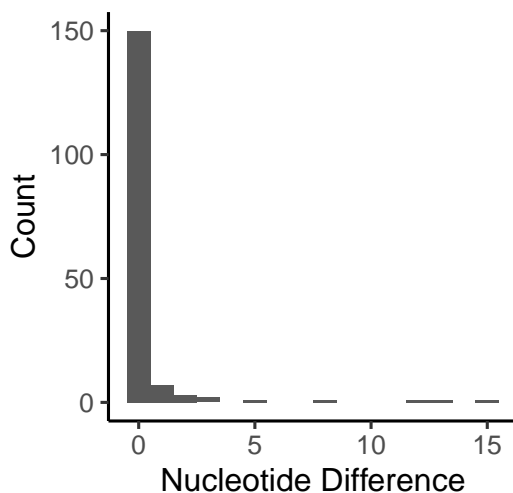
### IGHV1-2\*04

134 sequences assigned  
108 (80.6%) exact matches, in which:  
108 unique CDR3  
7 unique J



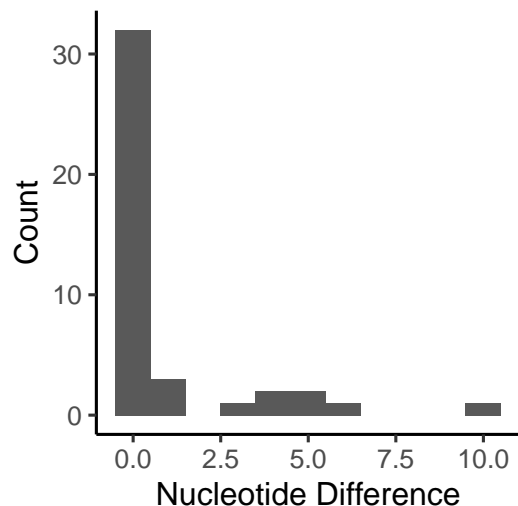
### IGHV1-24\*01

168 sequences assigned  
150 (89.3%) exact matches, in which:  
150 unique CDR3  
7 unique J



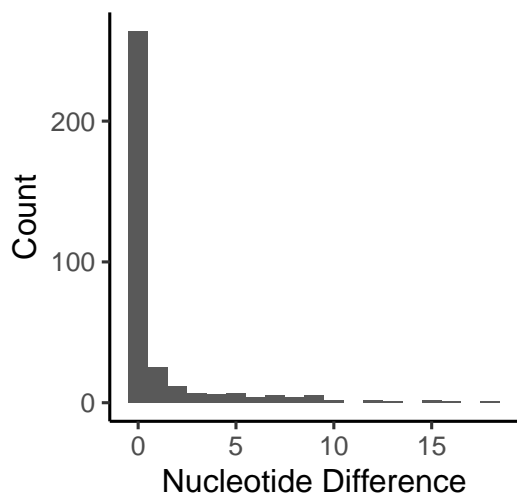
### IGHV1-58\*01

42 sequences assigned  
32 (76.2%) exact matches, in which:  
32 unique CDR3  
6 unique J



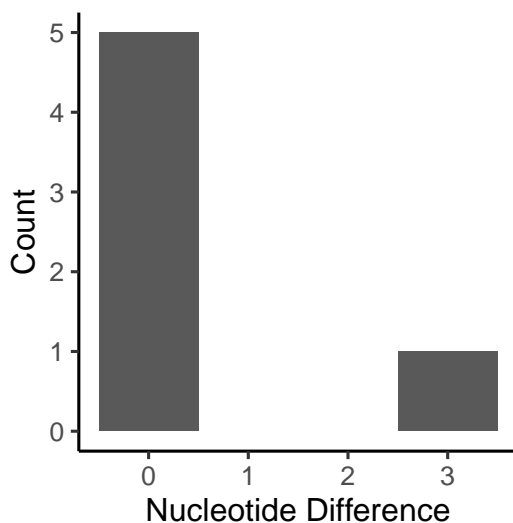
### IGHV1-3\*01

351 sequences assigned  
264 (75.2%) exact matches, in which:  
264 unique CDR3  
6 unique J



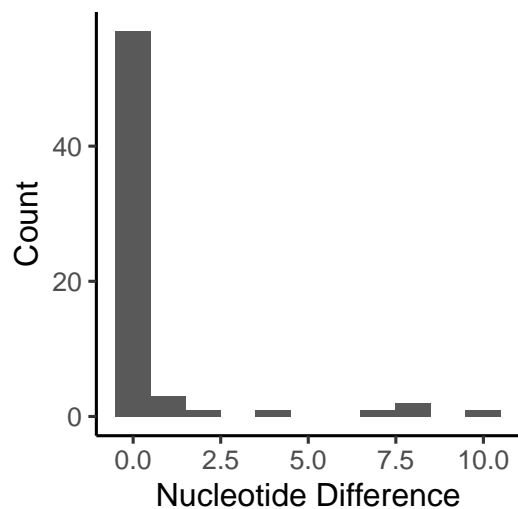
### IGHV1-45\*02

6 sequences assigned  
5 (83.3%) exact matches, in which:  
5 unique CDR3  
2 unique J



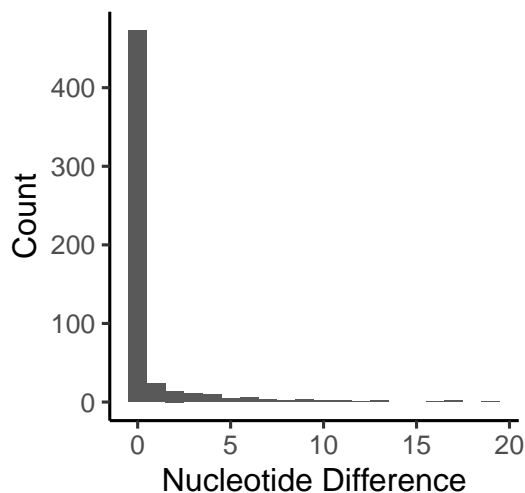
### IGHV1-69-2\*01

66 sequences assigned  
57 (86.4%) exact matches, in which:  
57 unique CDR3  
6 unique J



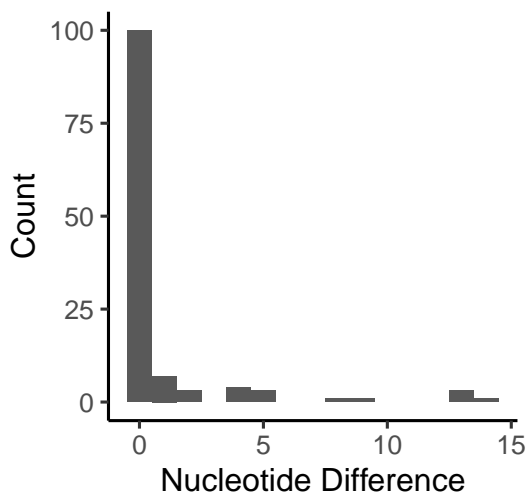
### IGHV1-18\*01

561 sequences assigned  
473 (84.3%) exact matches, in which:  
473 unique CDR3  
7 unique J



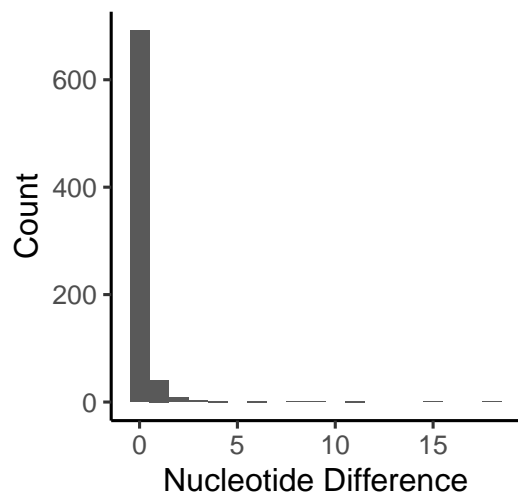
### IGHV1-46\*01

125 sequences assigned  
100 (80%) exact matches, in which:  
100 unique CDR3  
7 unique J



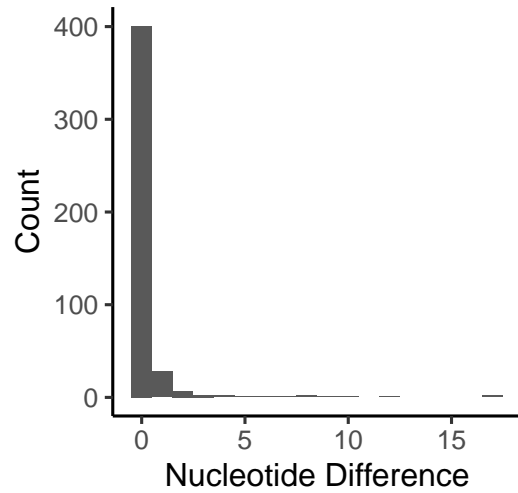
### IGHV1-69\*01

755 sequences assigned  
692 (91.7%) exact matches, in which:  
692 unique CDR3  
7 unique J



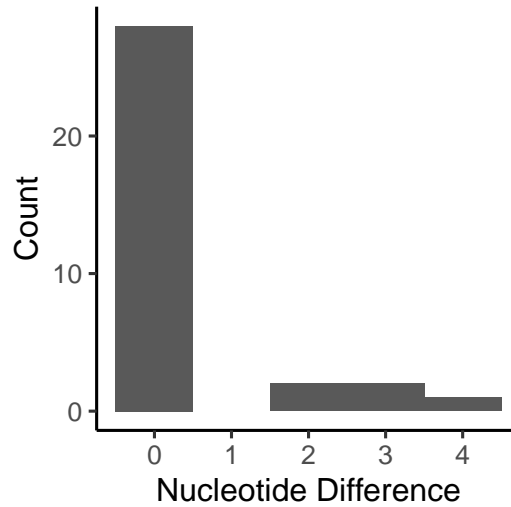
### IGHV1–69\*06

451 sequences assigned  
401 (88.9%) exact matches, in which:  
401 unique CDR3  
7 unique J



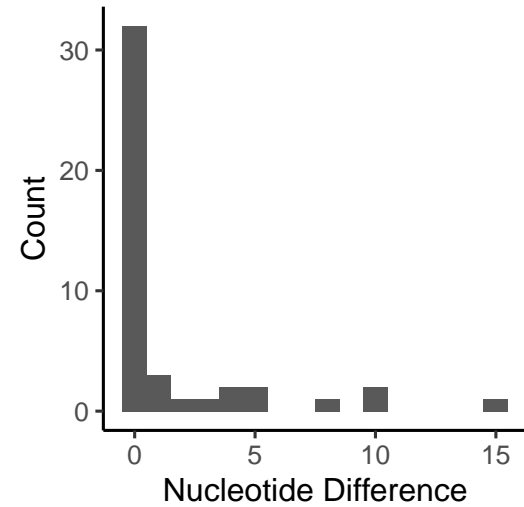
### IGHV2–70\*01

33 sequences assigned  
28 (84.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



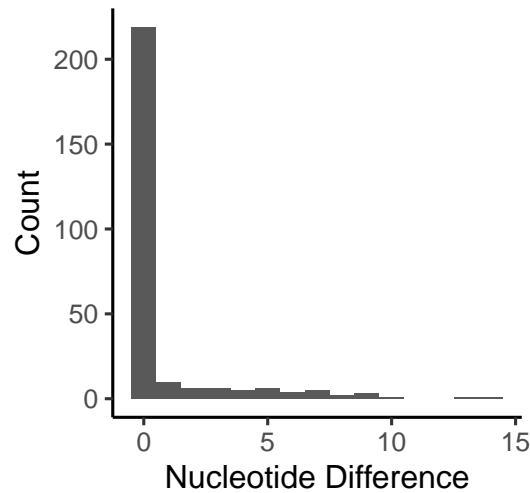
### IGHV3–7\*04

45 sequences assigned  
32 (71.1%) exact matches, in which:  
32 unique CDR3  
6 unique J



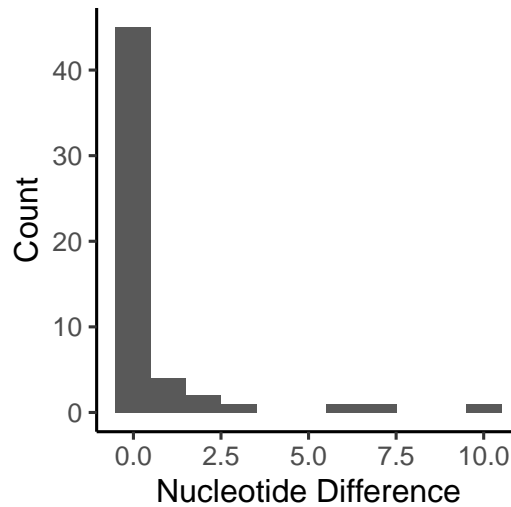
### IGHV2–5\*02

269 sequences assigned  
219 (81.4%) exact matches, in which:  
219 unique CDR3  
7 unique J



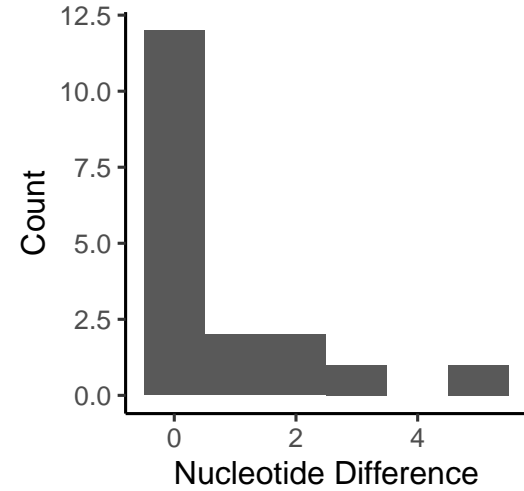
### IGHV2–70\*04

55 sequences assigned  
45 (81.8%) exact matches, in which:  
45 unique CDR3  
6 unique J



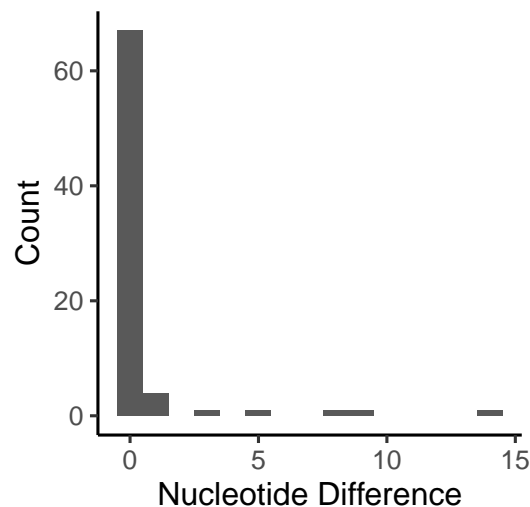
### IGHV3–11\*06

18 sequences assigned  
12 (66.7%) exact matches, in which:  
12 unique CDR3  
5 unique J



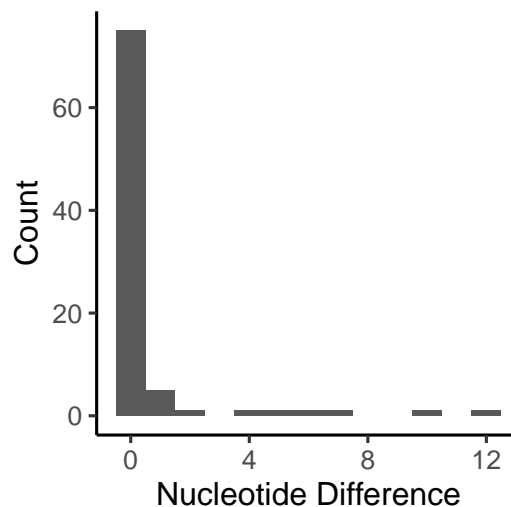
### IGHV2–26\*01

76 sequences assigned  
67 (88.2%) exact matches, in which:  
67 unique CDR3  
7 unique J



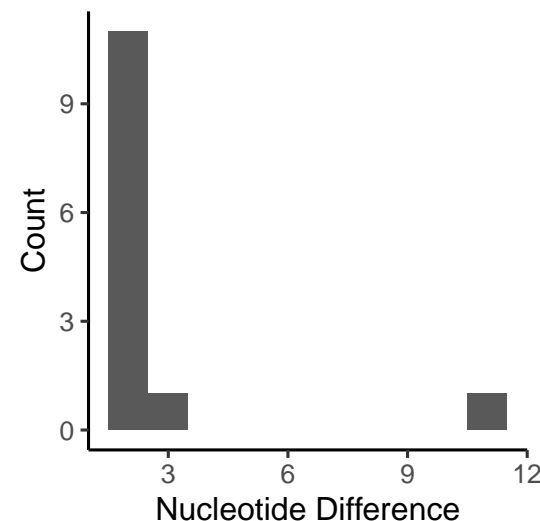
### IGHV2–70\*15

87 sequences assigned  
75 (86.2%) exact matches, in which:  
75 unique CDR3  
6 unique J



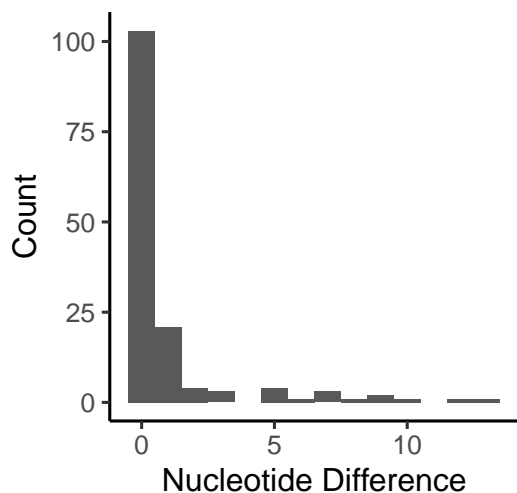
### IGHV3–13\*01

13 sequences assigned  
No exact matches.



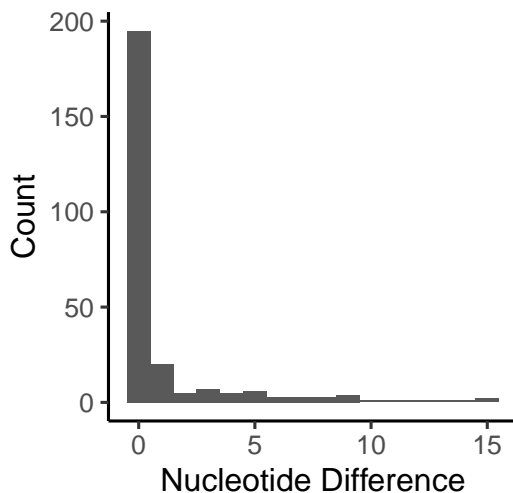
### IGHV3-15\*07

145 sequences assigned  
103 (71%) exact matches, in which:  
103 unique CDR3  
7 unique J



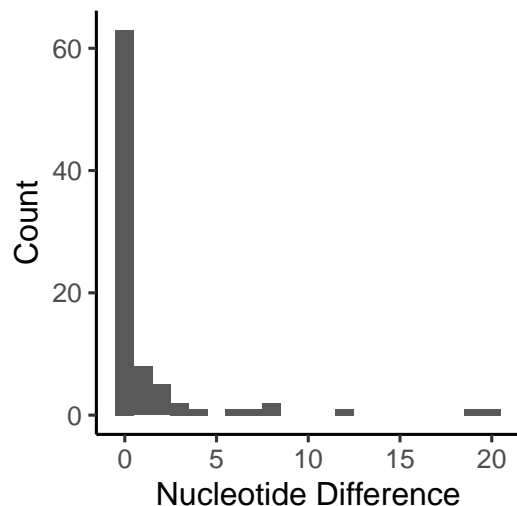
### IGHV3-23\*01

259 sequences assigned  
195 (75.3%) exact matches, in which:  
195 unique CDR3  
7 unique J



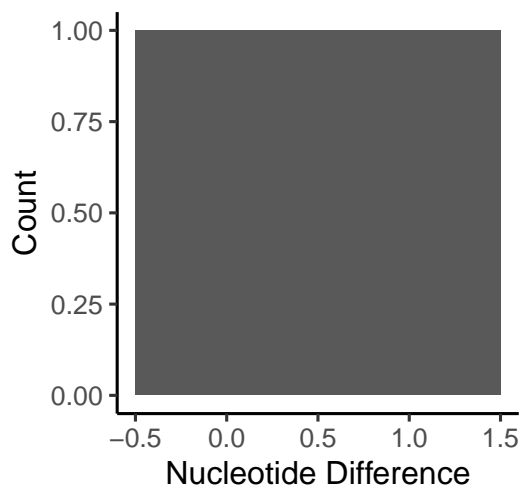
### IGHV3-30\*18

87 sequences assigned  
63 (72.4%) exact matches, in which:  
63 unique CDR3  
4 unique J



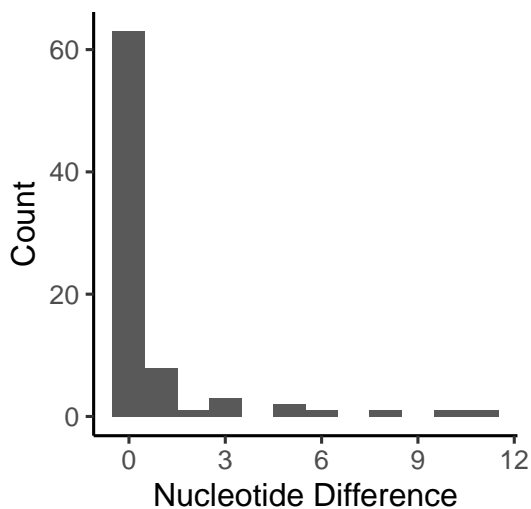
### IGHV3-20\*04

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



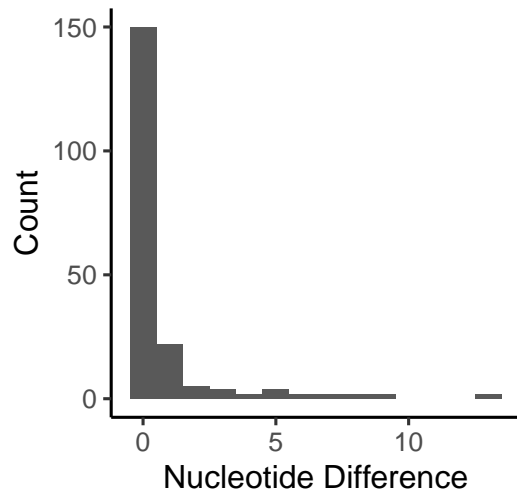
### IGHV3-30\*01

81 sequences assigned  
63 (77.8%) exact matches, in which:  
63 unique CDR3  
6 unique J



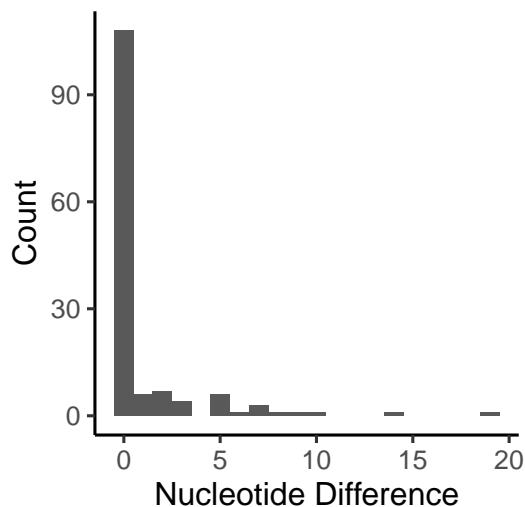
### IGHV3-33\*01

197 sequences assigned  
150 (76.1%) exact matches, in which:  
150 unique CDR3  
7 unique J



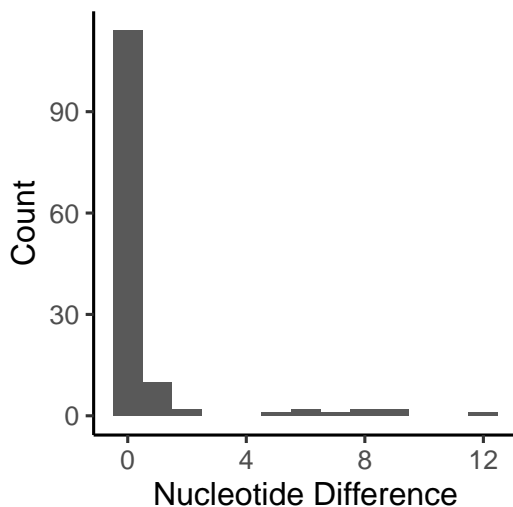
### IGHV3-21\*01

140 sequences assigned  
108 (77.1%) exact matches, in which:  
108 unique CDR3  
6 unique J



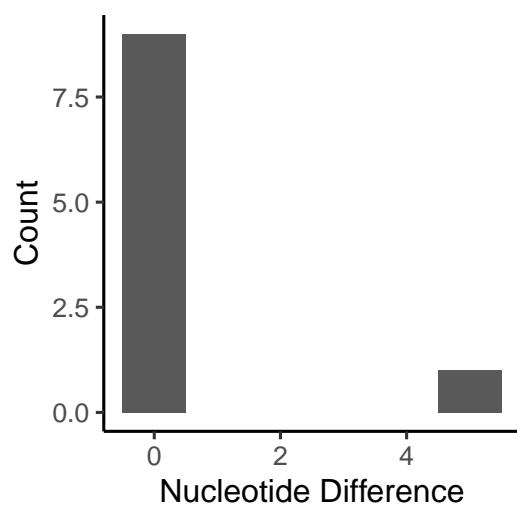
### IGHV3-30-3\*01

135 sequences assigned  
114 (84.4%) exact matches, in which:  
114 unique CDR3  
5 unique J



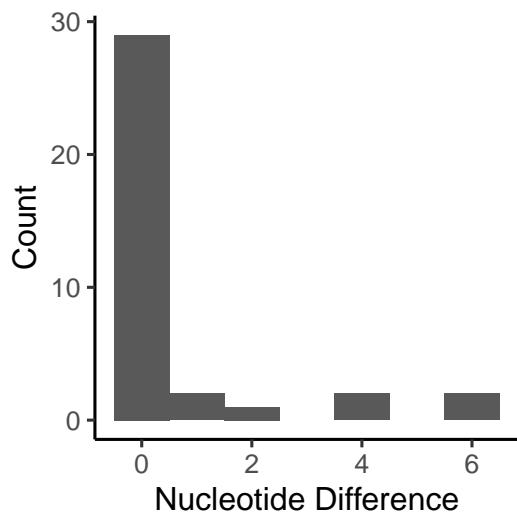
### IGHV3-43\*01

10 sequences assigned  
9 (90%) exact matches, in which:  
9 unique CDR3  
4 unique J



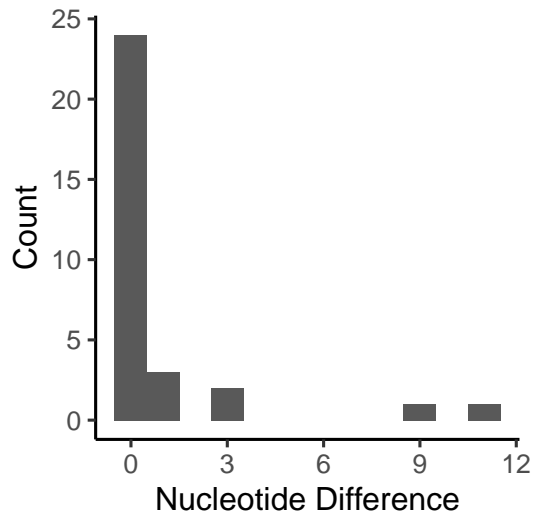
### IGHV3-48\*01

37 sequences assigned  
29 (78.4%) exact matches, in which:  
29 unique CDR3  
5 unique J



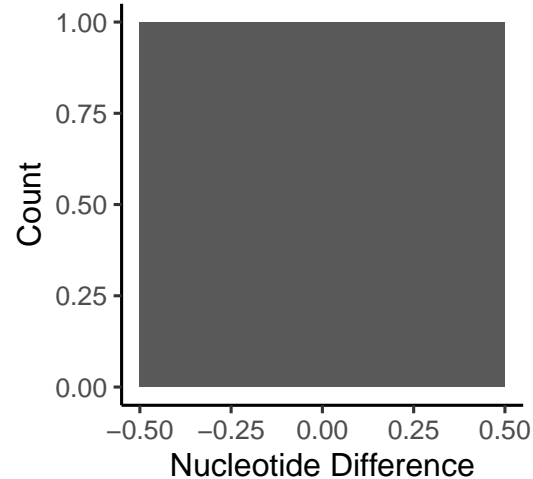
### IGHV3-49\*04

31 sequences assigned  
24 (77.4%) exact matches, in which:  
24 unique CDR3  
3 unique J



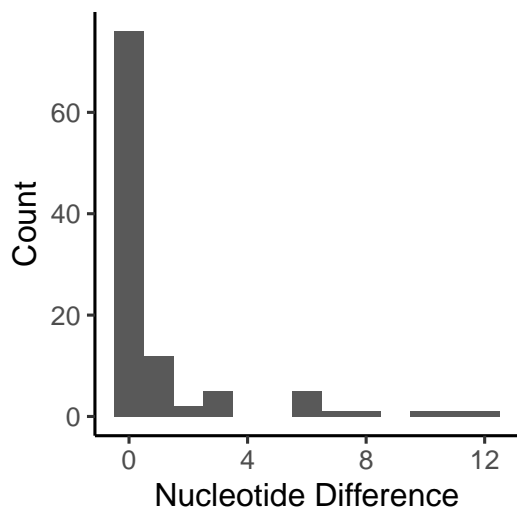
### IGHV3-64\*02

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



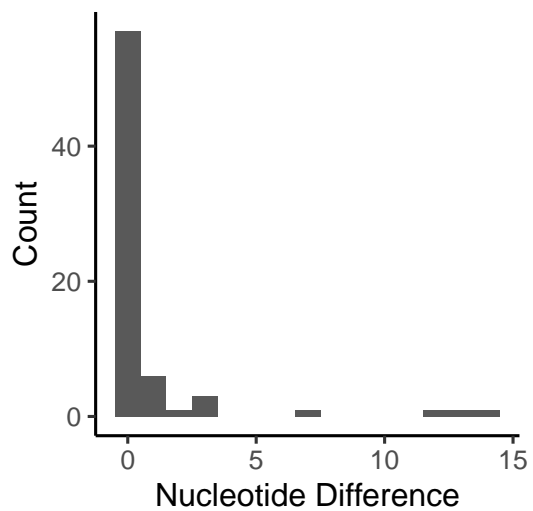
### IGHV3-48\*03

105 sequences assigned  
76 (72.4%) exact matches, in which:  
76 unique CDR3  
5 unique J



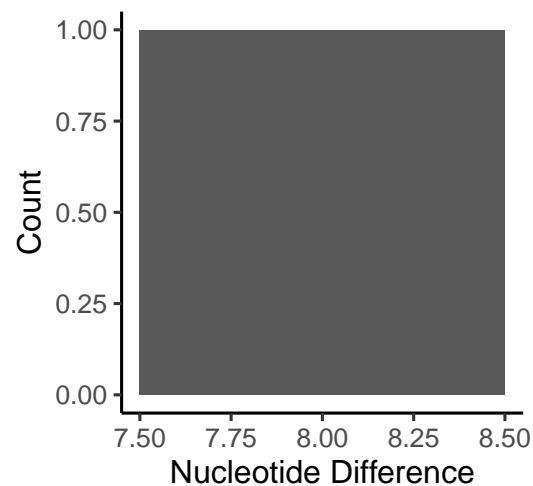
### IGHV3-53\*01

71 sequences assigned  
57 (80.3%) exact matches, in which:  
57 unique CDR3  
6 unique J



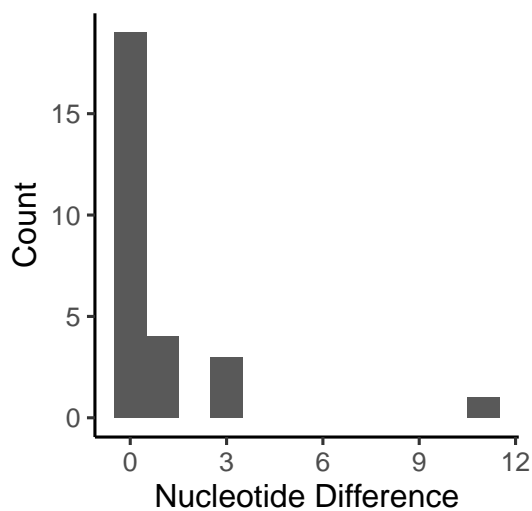
### IGHV3-64\*04

1 sequences assigned  
No exact matches.



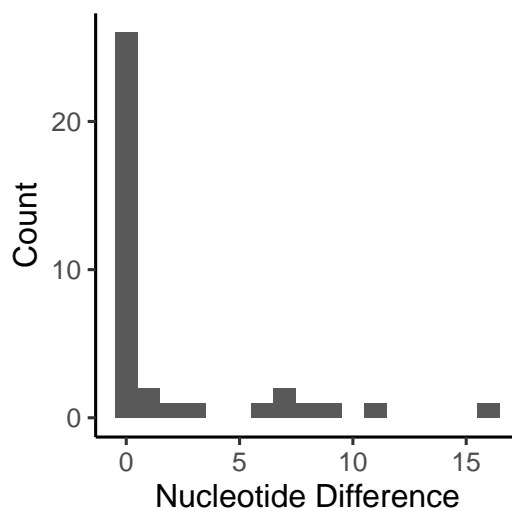
### IGHV3-49\*03

27 sequences assigned  
19 (70.4%) exact matches, in which:  
19 unique CDR3  
6 unique J



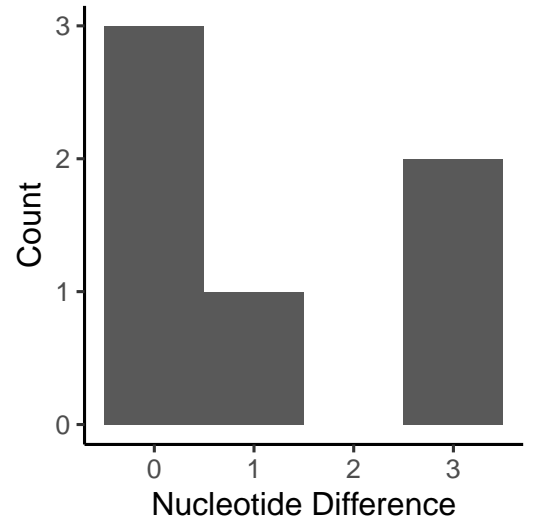
### IGHV3-53\*02

37 sequences assigned  
26 (70.3%) exact matches, in which:  
26 unique CDR3  
3 unique J



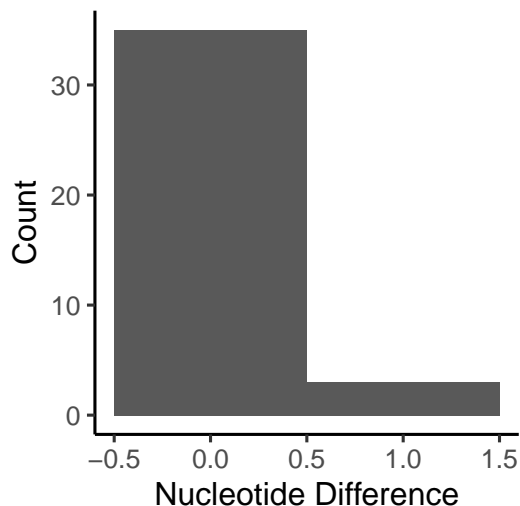
### IGHV3-72\*01

6 sequences assigned  
3 (50%) exact matches, in which:  
3 unique CDR3  
1 unique J



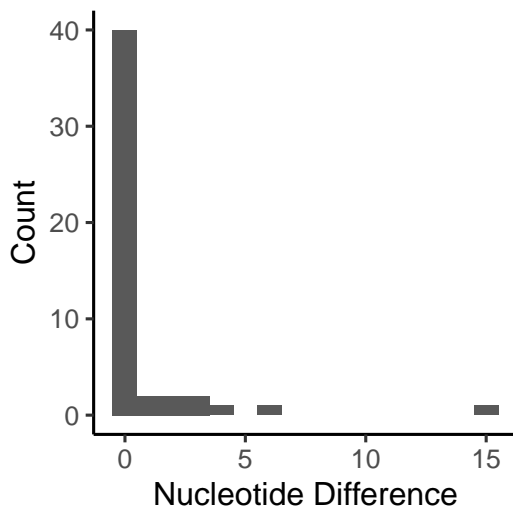
### IGHV3-73\*02

38 sequences assigned  
35 (92.1%) exact matches, in which:  
35 unique CDR3  
6 unique J



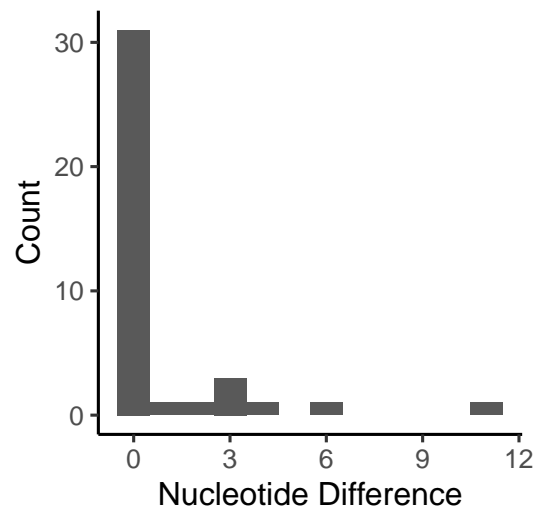
### IGHV3-64D\*06

49 sequences assigned  
40 (81.6%) exact matches, in which:  
40 unique CDR3  
6 unique J



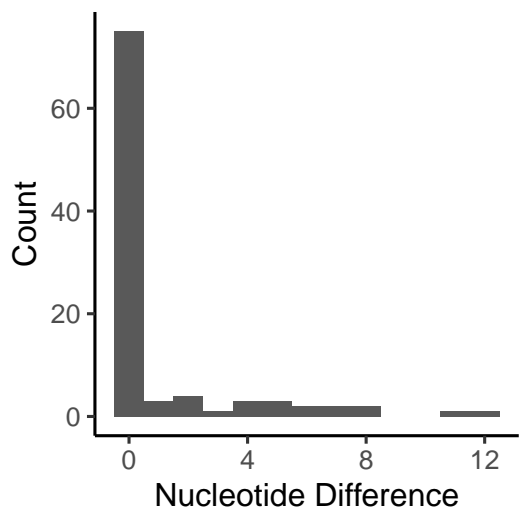
### IGHV4-30-2\*01

39 sequences assigned  
31 (79.5%) exact matches, in which:  
31 unique CDR3  
4 unique J



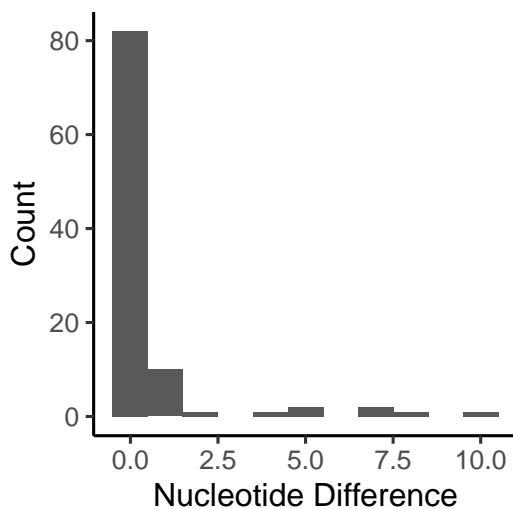
### IGHV3-74\*01

97 sequences assigned  
75 (77.3%) exact matches, in which:  
75 unique CDR3  
5 unique J



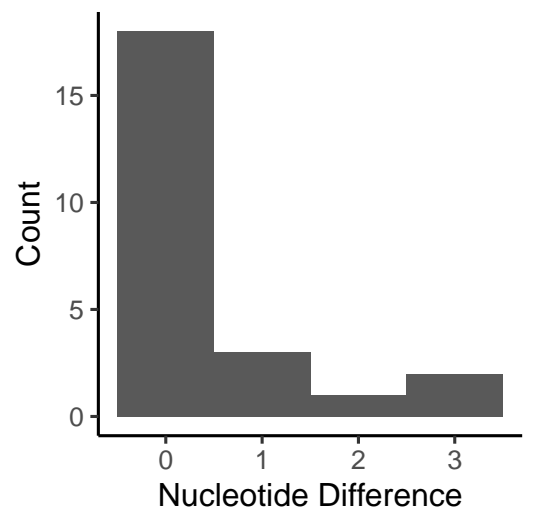
### IGHV4-4\*02

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



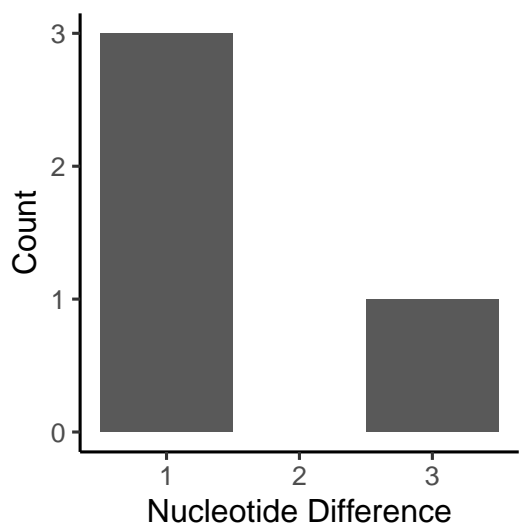
### IGHV4-31\*01

24 sequences assigned  
18 (75%) exact matches, in which:  
18 unique CDR3  
5 unique J



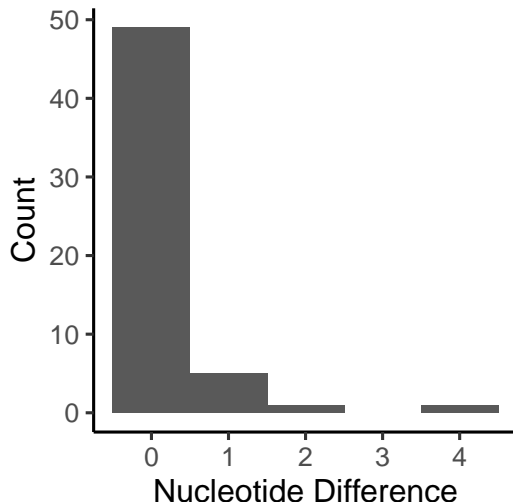
### IGHV3-43D\*04

4 sequences assigned  
No exact matches.



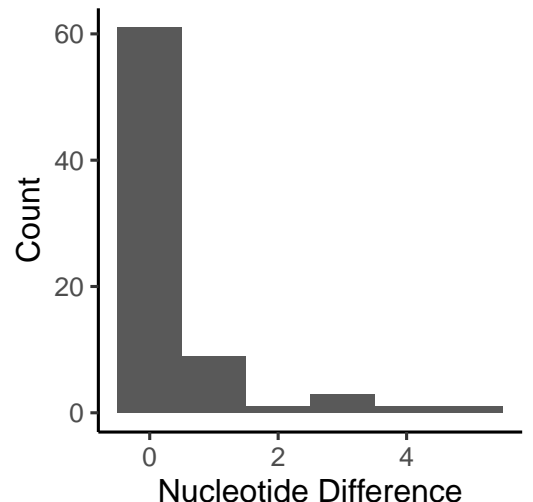
### IGHV4-30-4\*01

56 sequences assigned  
49 (87.5%) exact matches, in which:  
49 unique CDR3  
6 unique J



### IGHV4-31\*03

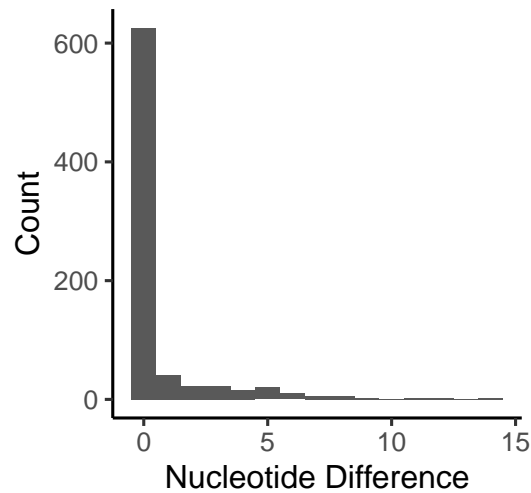
76 sequences assigned  
61 (80.3%) exact matches, in which:  
61 unique CDR3  
6 unique J





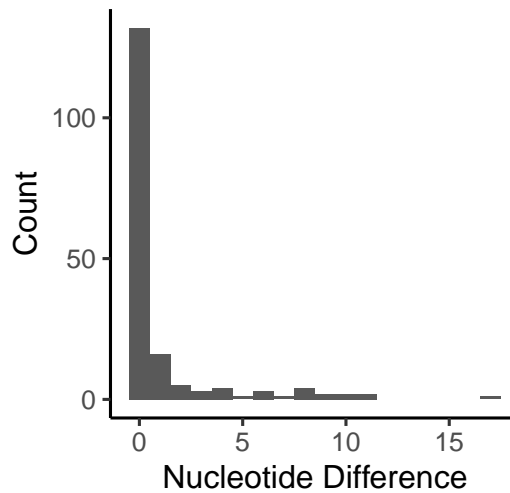
### IGHV4–34\*01

782 sequences assigned  
626 (80.1%) exact matches, in which:  
626 unique CDR3  
7 unique J



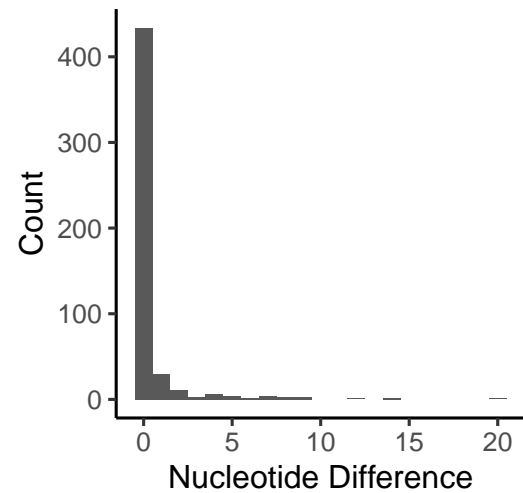
### IGHV4–59\*01

176 sequences assigned  
132 (75%) exact matches, in which:  
132 unique CDR3  
6 unique J



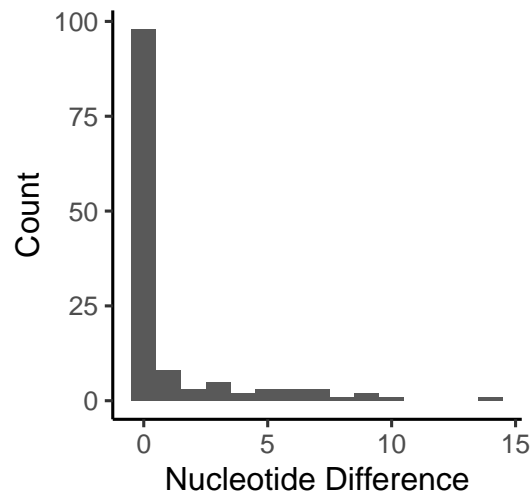
### IGHV5–51\*01

506 sequences assigned  
434 (85.8%) exact matches, in which:  
434 unique CDR3  
7 unique J



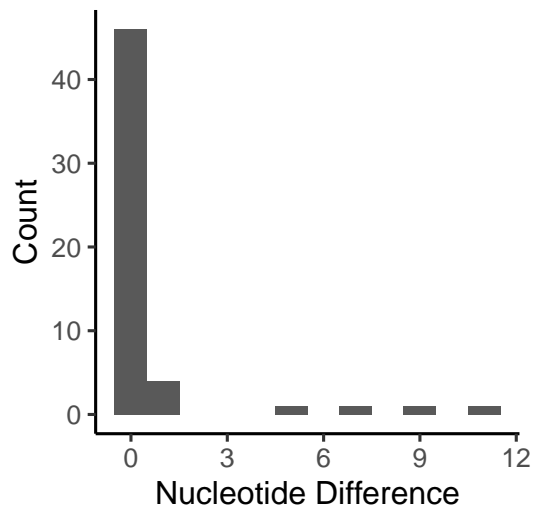
### IGHV4–38–2\*02\_A70G

130 sequences assigned  
98 (75.4%) exact matches, in which:  
98 unique CDR3  
6 unique J



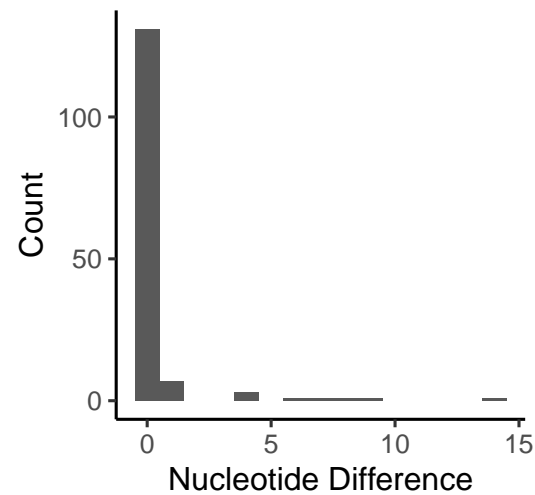
### IGHV4–61\*01

55 sequences assigned  
46 (83.6%) exact matches, in which:  
46 unique CDR3  
6 unique J



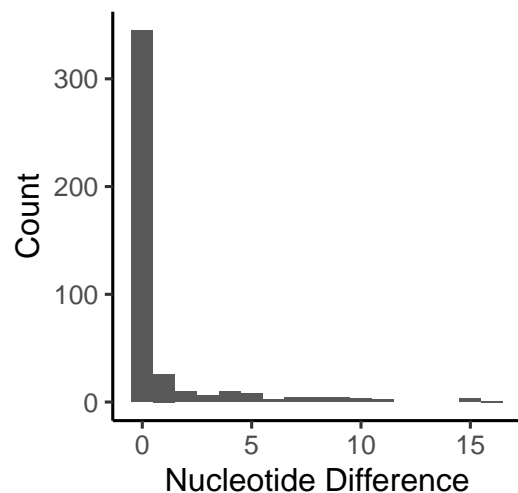
### IGHV6–1\*01

146 sequences assigned  
131 (89.7%) exact matches, in which:  
131 unique CDR3  
6 unique J



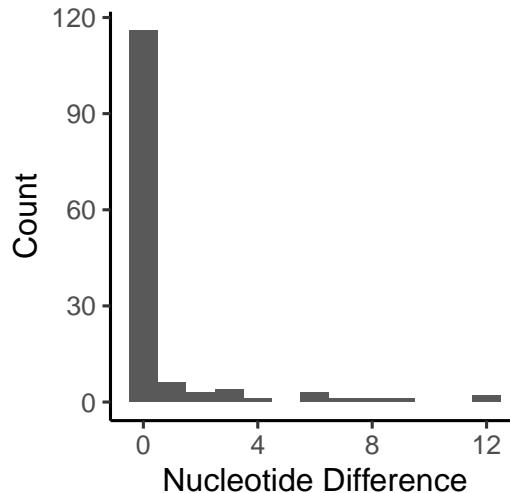
### IGHV4–39\*01

429 sequences assigned  
345 (80.4%) exact matches, in which:  
345 unique CDR3  
7 unique J



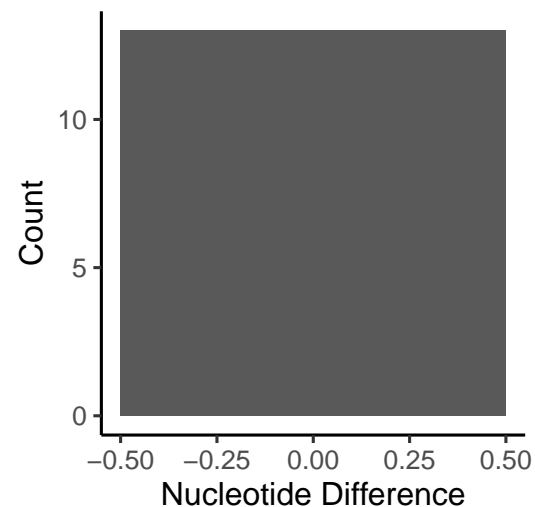
### IGHV5–10–1\*03

138 sequences assigned  
116 (84.1%) exact matches, in which:  
116 unique CDR3  
7 unique J

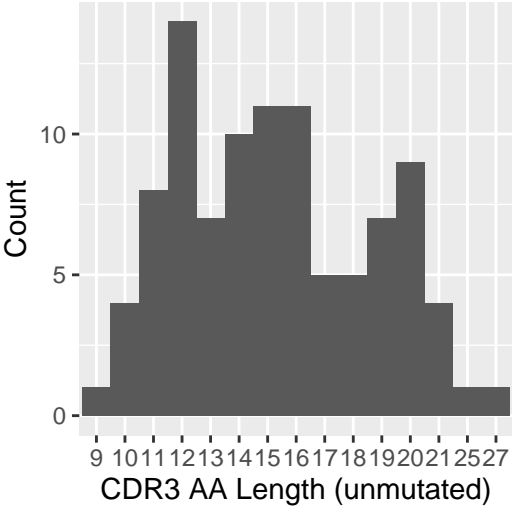


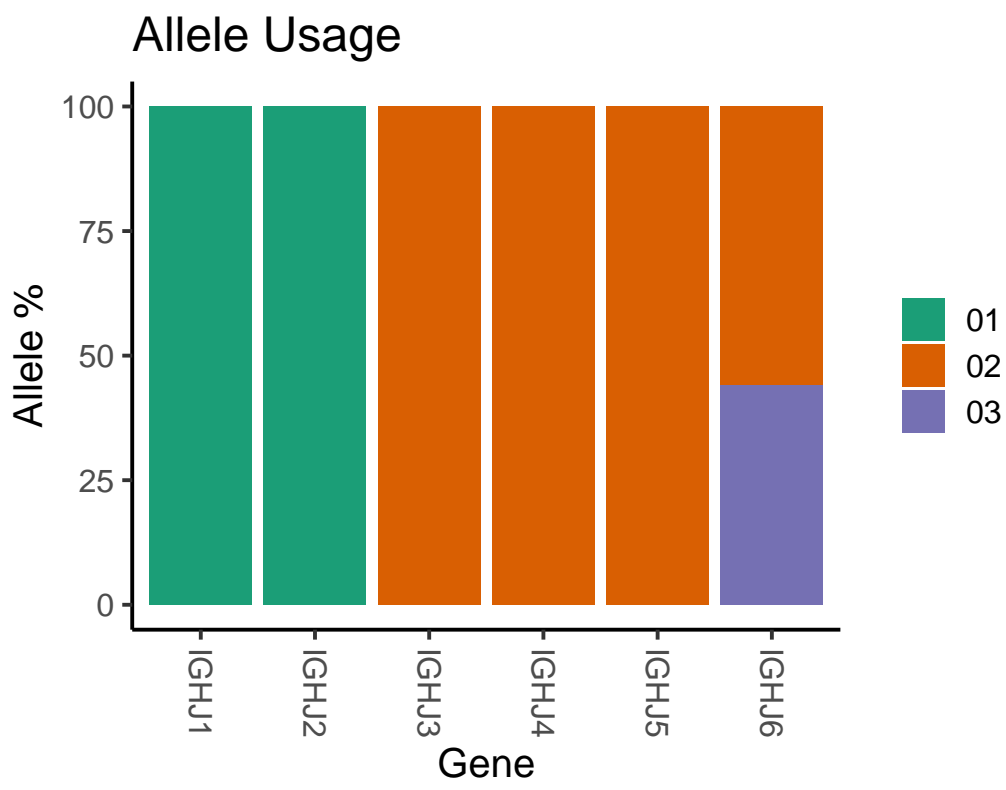
### IGHV7–4–1\*01

13 sequences assigned  
13 (100%) exact matches, in which:  
13 unique CDR3  
5 unique J



IGHV4-38-2\*02\_A70G





Sequence Count by IGHJ6 allele usage

