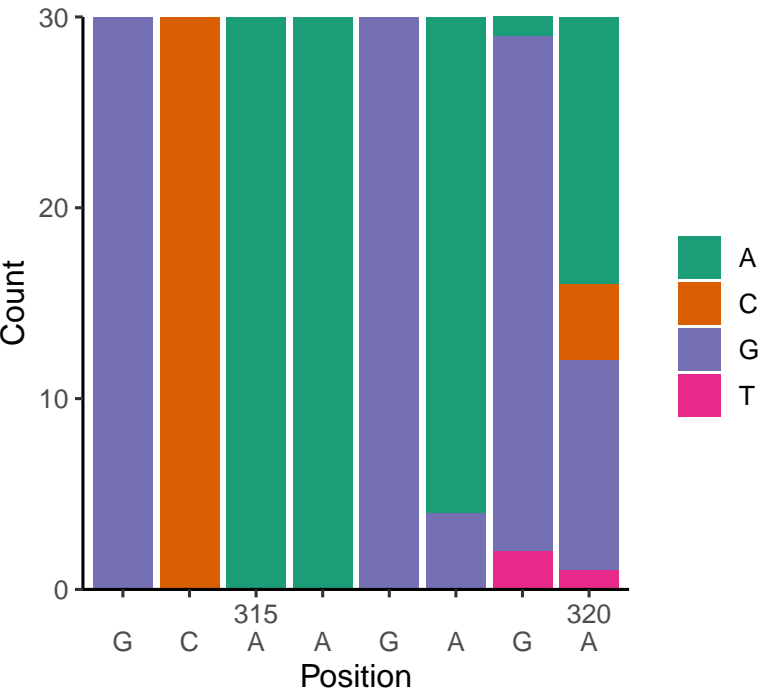
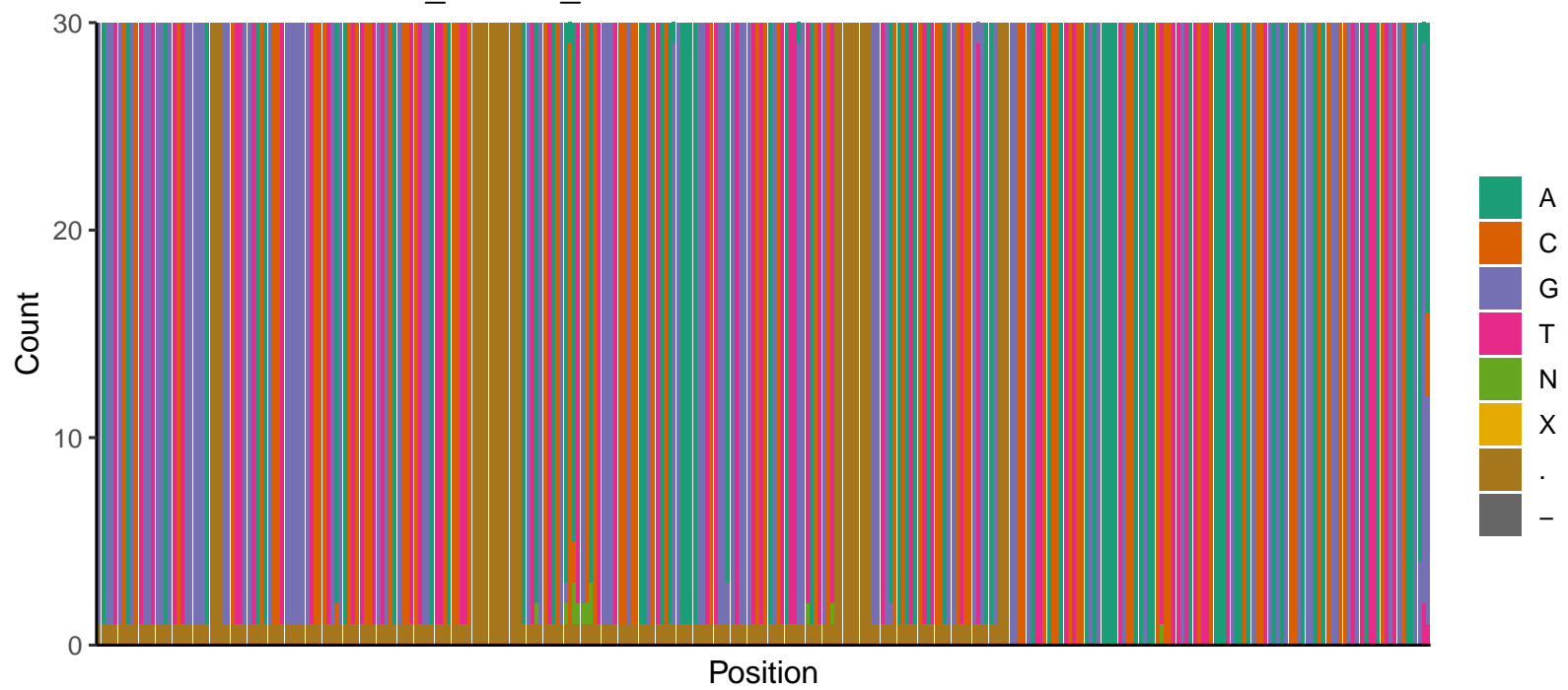


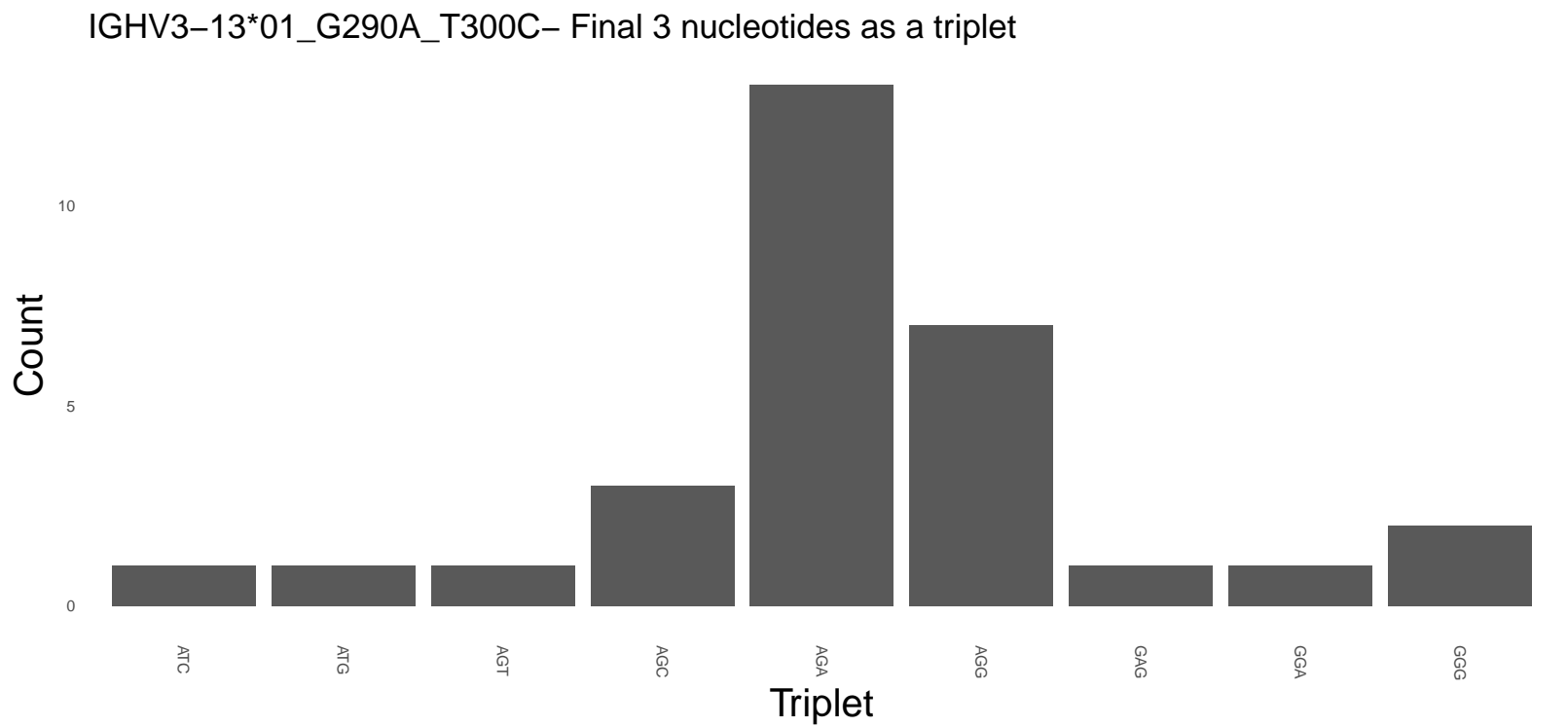
Gene IGHV3-13\*01\_G290A\_T300C



## Gene IGHV3-13\*01\_G290A\_T300C

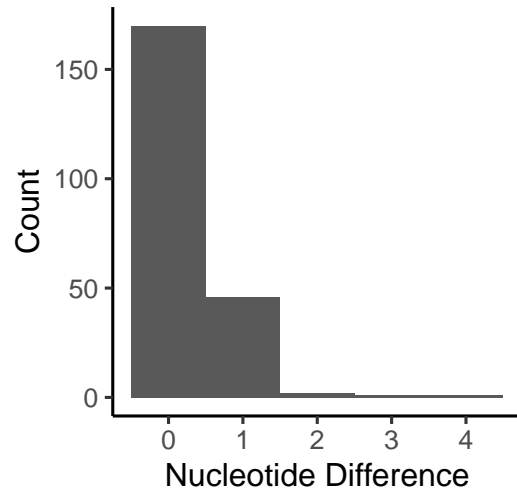


IGHV3-13\*01\_G290A\_T300C- Final 3 nucleotides as a triplet



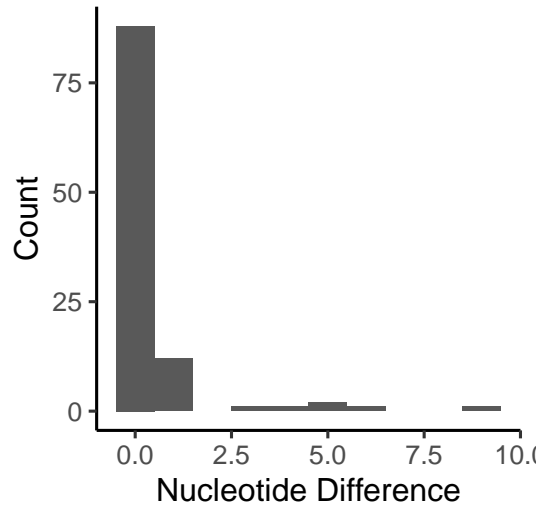
### IGHV1-2\*02

220 sequences assigned  
170 (77.3%) exact matches, in which:  
169 unique CDR3  
6 unique J



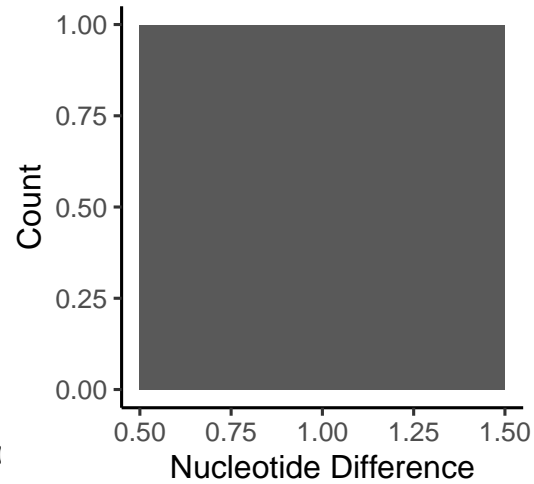
### IGHV1-18\*01

106 sequences assigned  
88 (83%) exact matches, in which:  
88 unique CDR3  
6 unique J



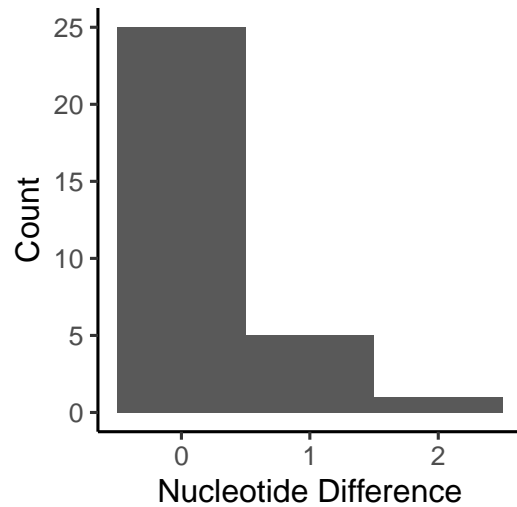
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



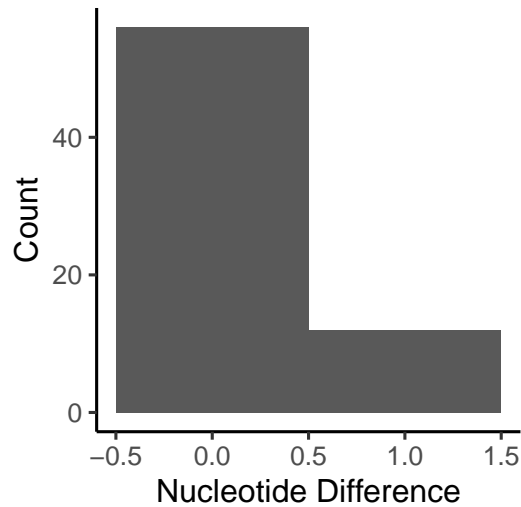
### IGHV1-2\*04

31 sequences assigned  
25 (80.6%) exact matches, in which:  
25 unique CDR3  
4 unique J



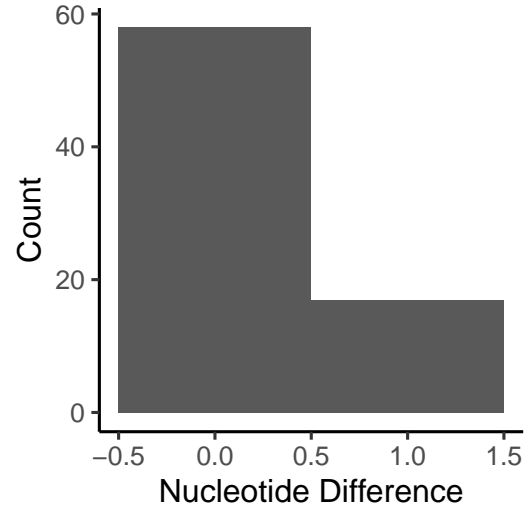
### IGHV1-18\*04

68 sequences assigned  
56 (82.4%) exact matches, in which:  
56 unique CDR3  
5 unique J



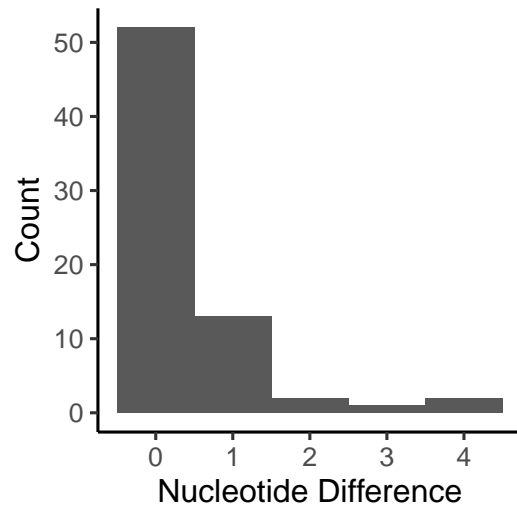
### IGHV1-46\*01

75 sequences assigned  
58 (77.3%) exact matches, in which:  
58 unique CDR3  
5 unique J



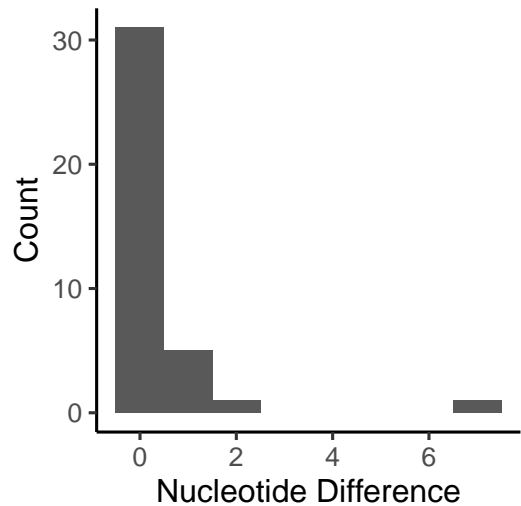
### IGHV1-3\*01

70 sequences assigned  
52 (74.3%) exact matches, in which:  
52 unique CDR3  
5 unique J



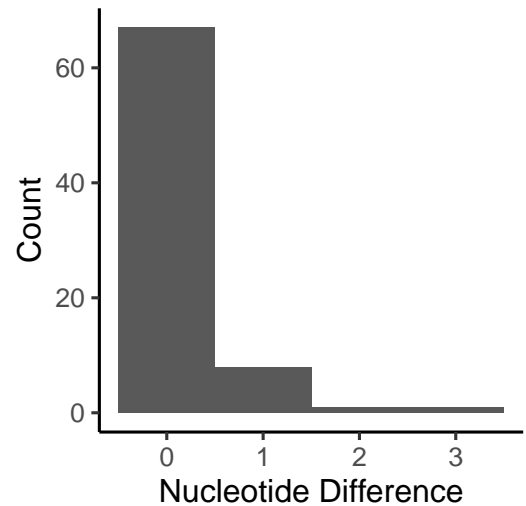
### IGHV1-24\*01

38 sequences assigned  
31 (81.6%) exact matches, in which:  
30 unique CDR3  
6 unique J



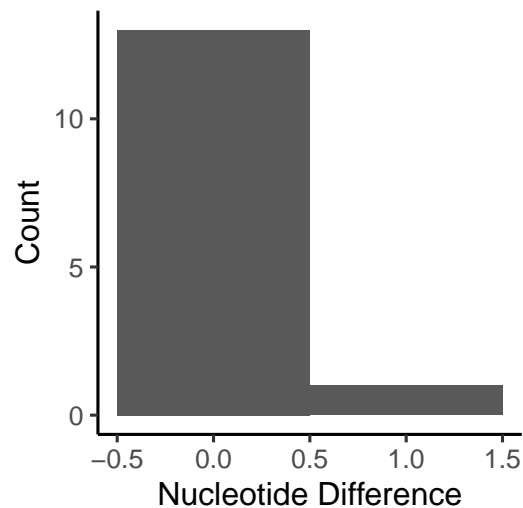
### IGHV1-46\*03

77 sequences assigned  
67 (87%) exact matches, in which:  
67 unique CDR3  
6 unique J



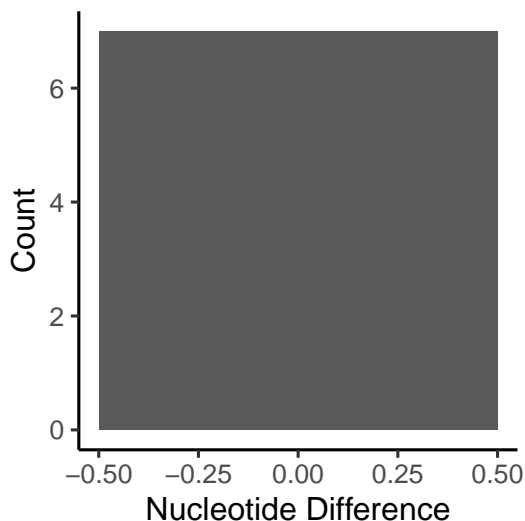
### IGHV1-58\*01

14 sequences assigned  
13 (92.9%) exact matches, in which:  
13 unique CDR3  
5 unique J



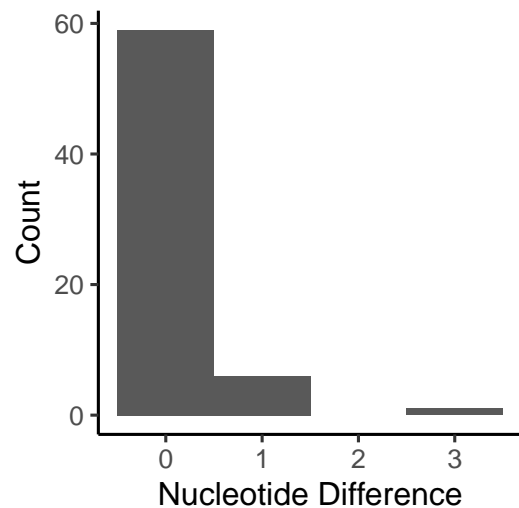
### IGHV1-69-2\*01

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



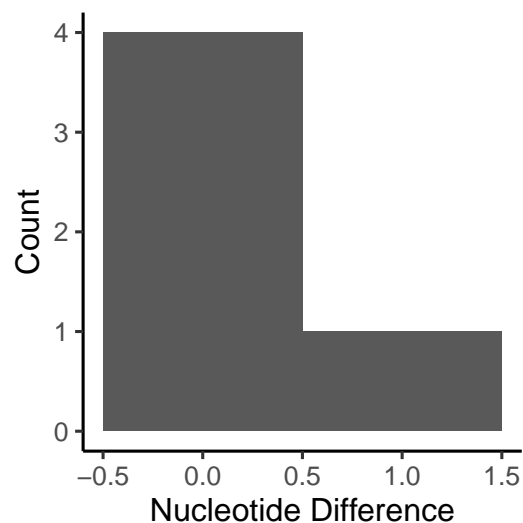
### IGHV2-5\*01

66 sequences assigned  
59 (89.4%) exact matches, in which:  
59 unique CDR3  
7 unique J



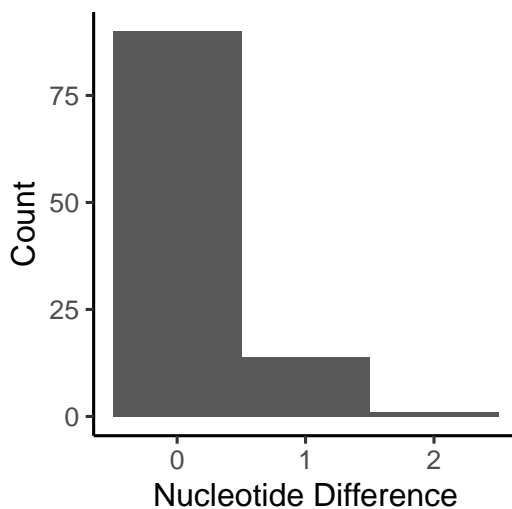
### IGHV1-58\*02

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
3 unique J



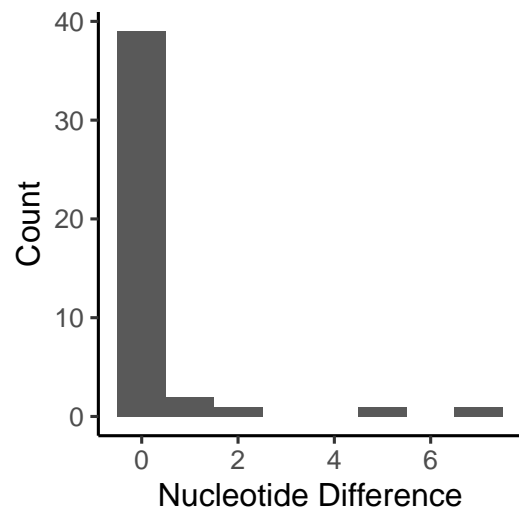
### IGHV1-69\*02

105 sequences assigned  
90 (85.7%) exact matches, in which:  
90 unique CDR3  
6 unique J



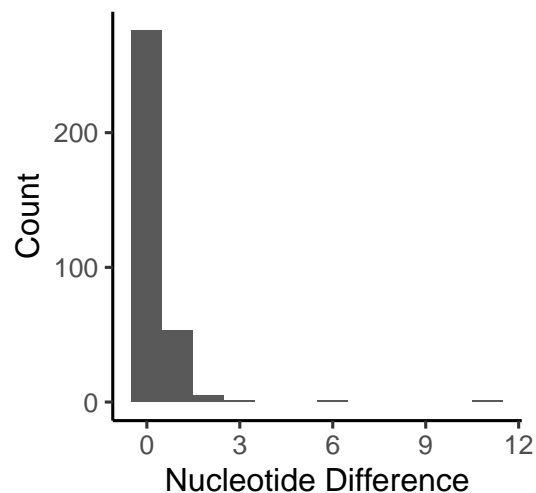
### IGHV2-26\*01

44 sequences assigned  
39 (88.6%) exact matches, in which:  
38 unique CDR3  
6 unique J



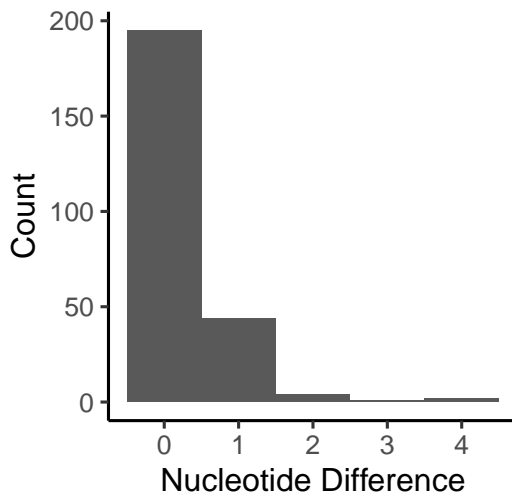
### IGHV1-69\*01

337 sequences assigned  
276 (81.9%) exact matches, in which:  
274 unique CDR3  
6 unique J



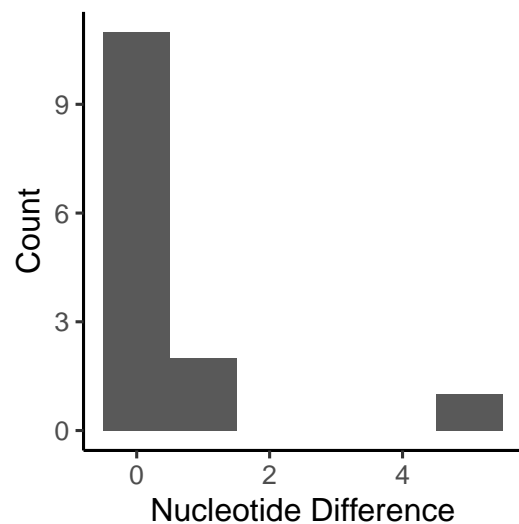
### IGHV1-69\*06

246 sequences assigned  
195 (79.3%) exact matches, in which:  
195 unique CDR3  
7 unique J



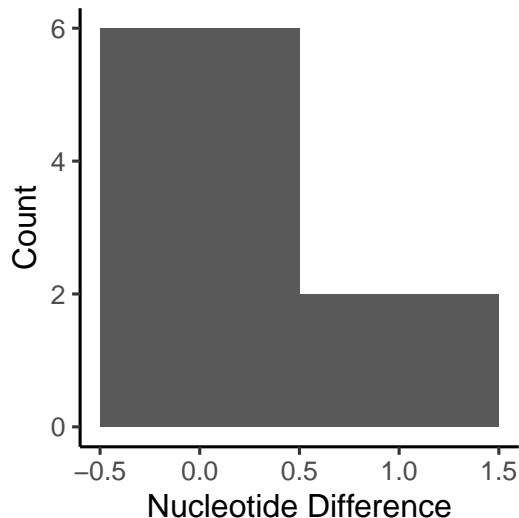
### IGHV2-70\*01

14 sequences assigned  
11 (78.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



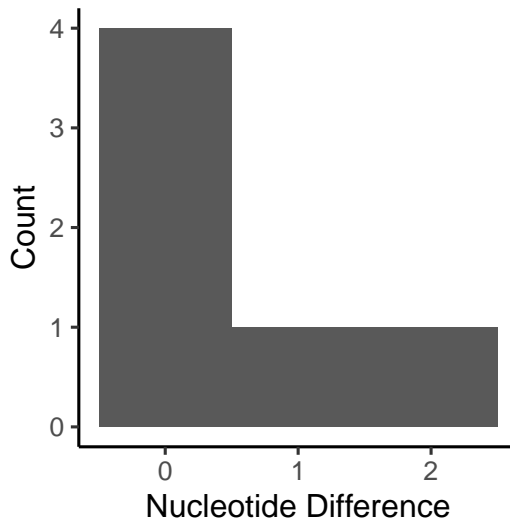
### IGHV2–70\*04

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



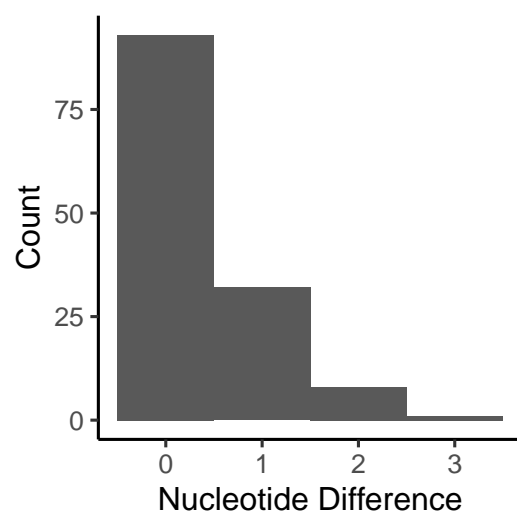
### IGHV3–13\*05

6 sequences assigned  
4 (66.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



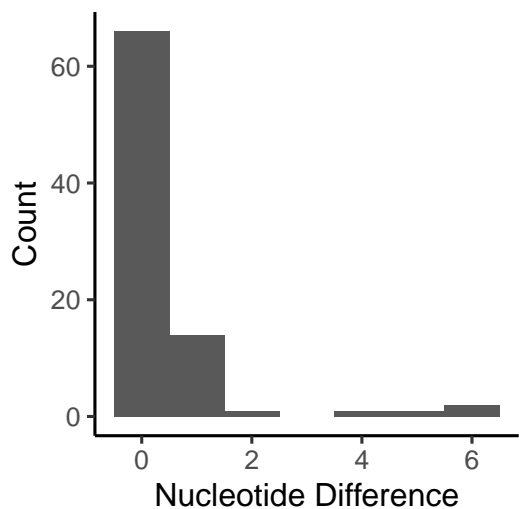
### IGHV3–15\*07

134 sequences assigned  
93 (69.4%) exact matches, in which:  
93 unique CDR3  
6 unique J



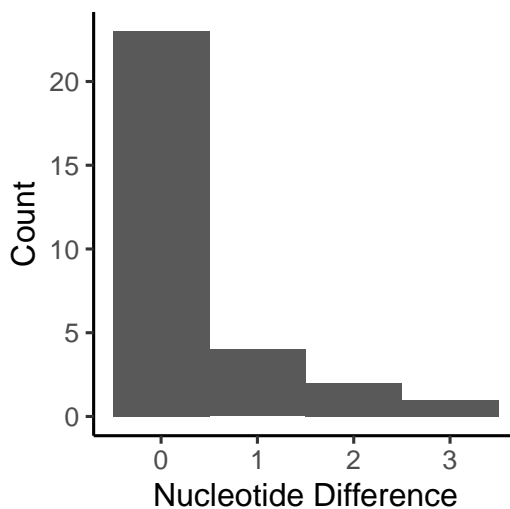
### IGHV3–7\*05

85 sequences assigned  
66 (77.6%) exact matches, in which:  
65 unique CDR3  
7 unique J



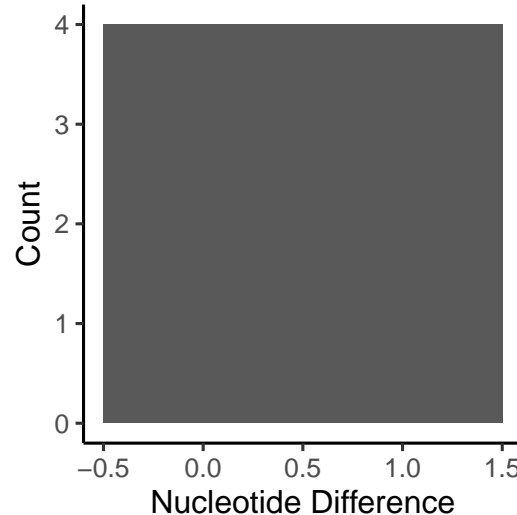
### IGHV3–13\*01\_G290A\_T30A

30 sequences assigned  
23 (76.7%) exact matches, in which:  
23 unique CDR3  
4 unique J



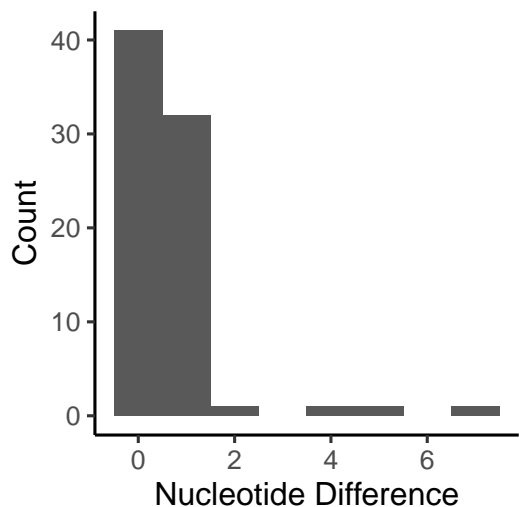
### IGHV3–20\*04

8 sequences assigned  
4 (50%) exact matches, in which:  
4 unique CDR3  
3 unique J



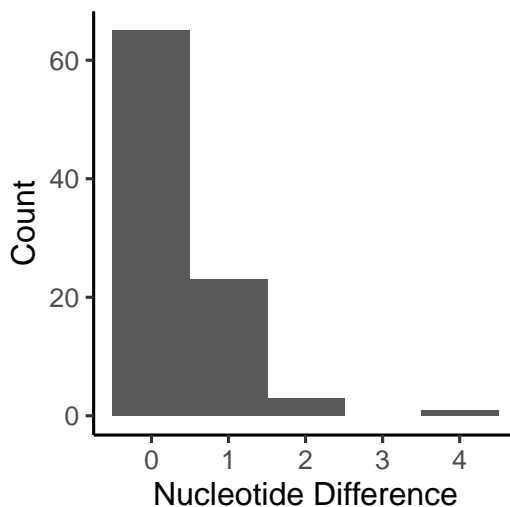
### IGHV3–11\*06

77 sequences assigned  
41 (53.2%) exact matches, in which:  
41 unique CDR3  
6 unique J



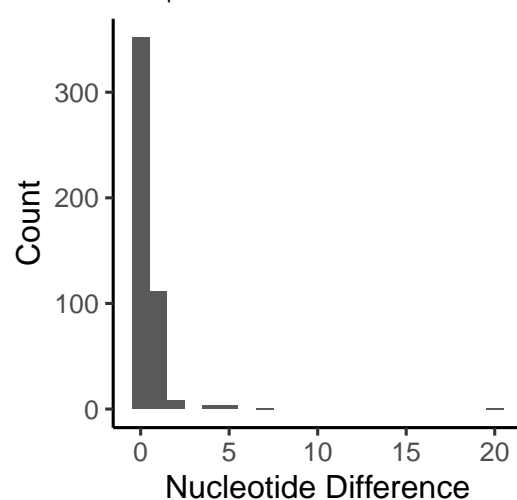
### IGHV3–15\*01

92 sequences assigned  
65 (70.7%) exact matches, in which:  
65 unique CDR3  
6 unique J



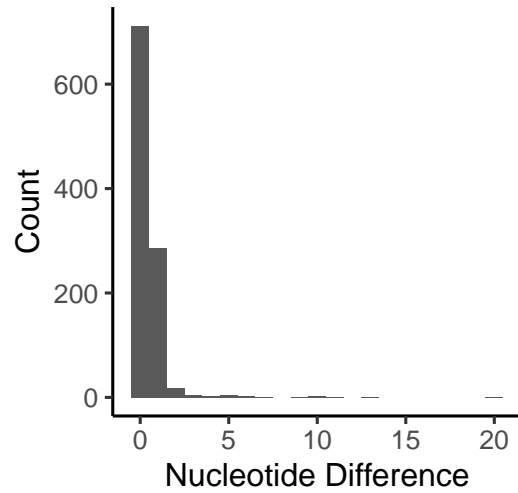
### IGHV3–21\*01

479 sequences assigned  
352 (73.5%) exact matches, in which:  
351 unique CDR3  
7 unique J



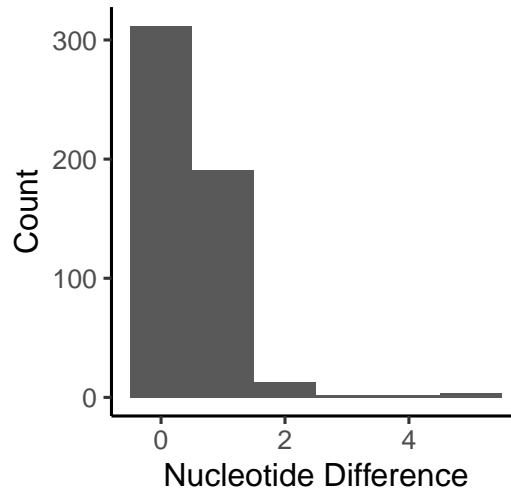
### IGHV3-23\*01

1038 sequences assigned  
712 (68.6%) exact matches, in which:  
710 unique CDR3  
7 unique J



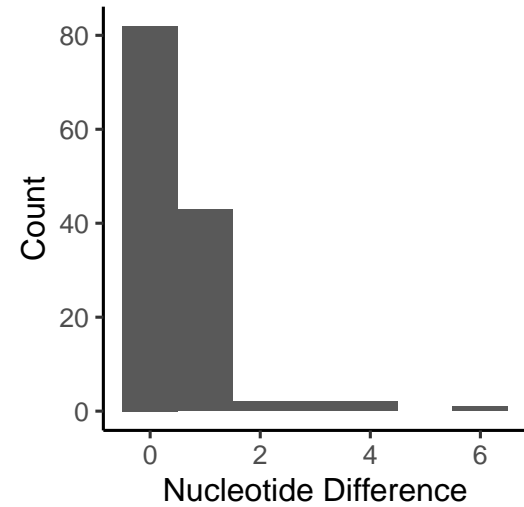
### IGHV3-30\*18

524 sequences assigned  
312 (59.5%) exact matches, in which:  
311 unique CDR3  
7 unique J



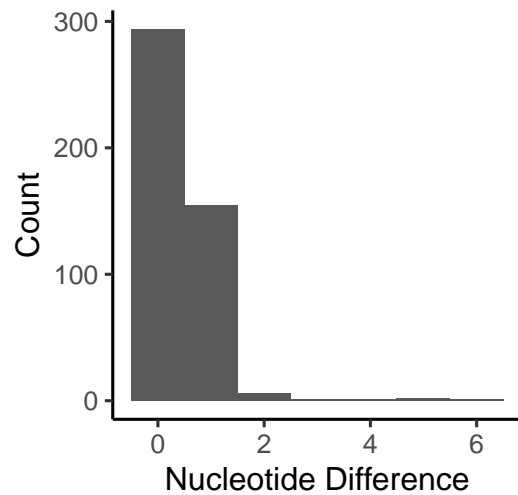
### IGHV3-48\*01

132 sequences assigned  
82 (62.1%) exact matches, in which:  
82 unique CDR3  
7 unique J



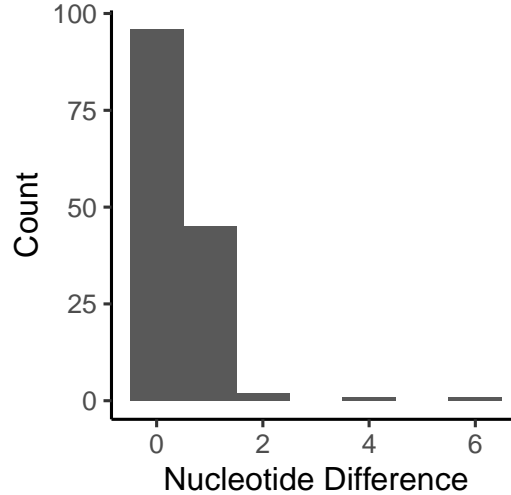
### IGHV3-30-3\*01

460 sequences assigned  
294 (63.9%) exact matches, in which:  
293 unique CDR3  
7 unique J



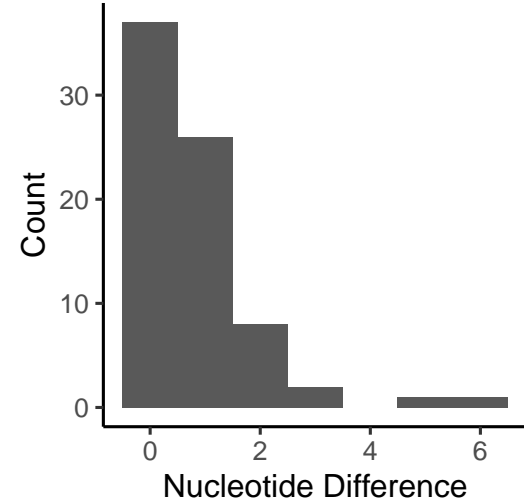
### IGHV3-33\*01

146 sequences assigned  
96 (65.8%) exact matches, in which:  
96 unique CDR3  
5 unique J



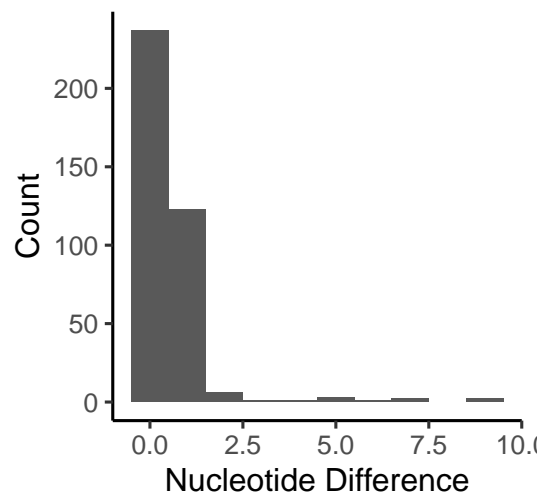
### IGHV3-48\*02

75 sequences assigned  
37 (49.3%) exact matches, in which:  
37 unique CDR3  
5 unique J



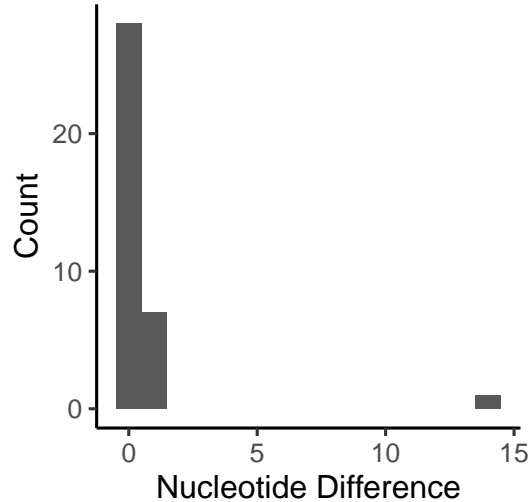
### IGHV3-30\*03

376 sequences assigned  
237 (63%) exact matches, in which:  
237 unique CDR3  
7 unique J



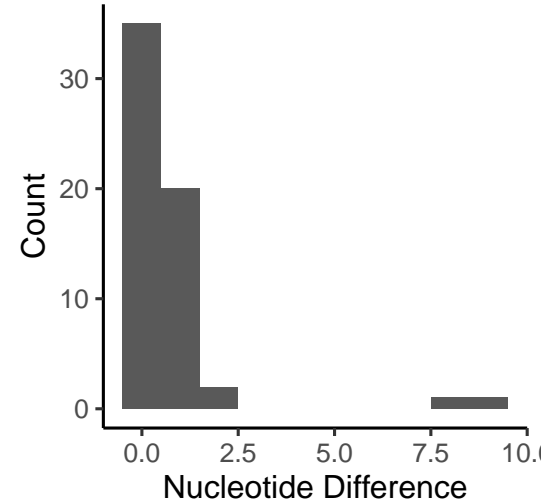
### IGHV3-43\*01

36 sequences assigned  
28 (77.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



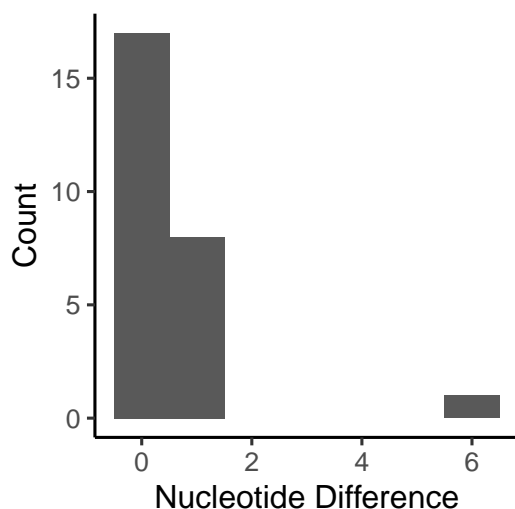
### IGHV3-49\*03

59 sequences assigned  
35 (59.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



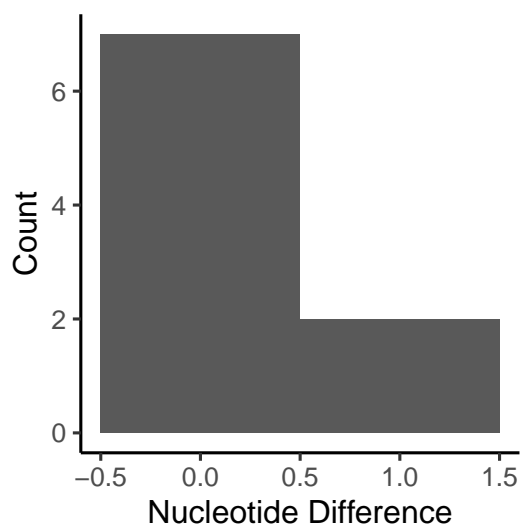
### IGHV3-49\*05

26 sequences assigned  
17 (65.4%) exact matches, in which:  
17 unique CDR3  
4 unique J



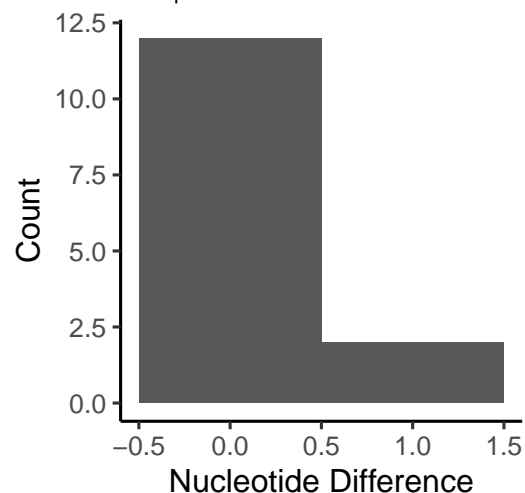
### IGHV3-64\*01

9 sequences assigned  
7 (77.8%) exact matches, in which:  
7 unique CDR3  
5 unique J



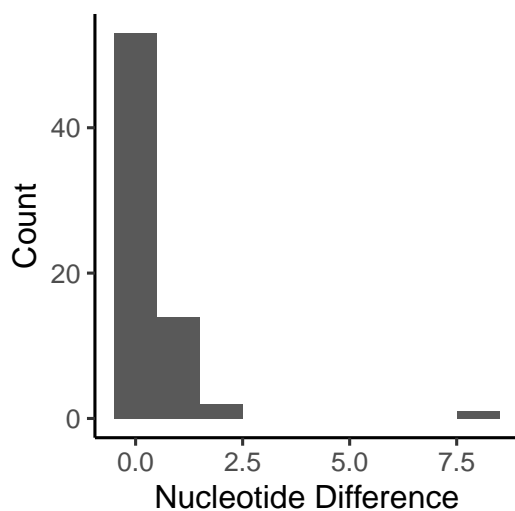
### IGHV3-72\*01

14 sequences assigned  
12 (85.7%) exact matches, in which:  
12 unique CDR3  
5 unique J



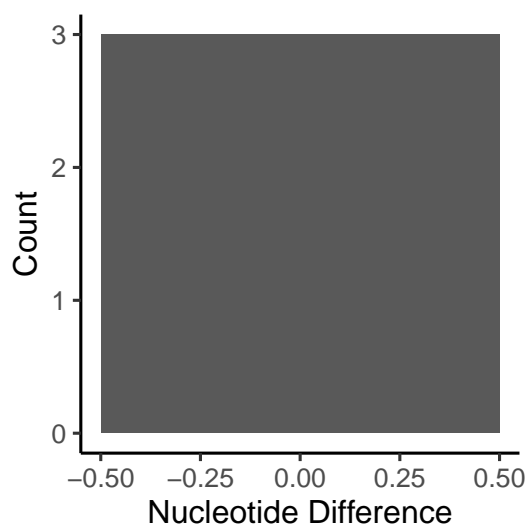
### IGHV3-53\*01

70 sequences assigned  
53 (75.7%) exact matches, in which:  
52 unique CDR3  
6 unique J



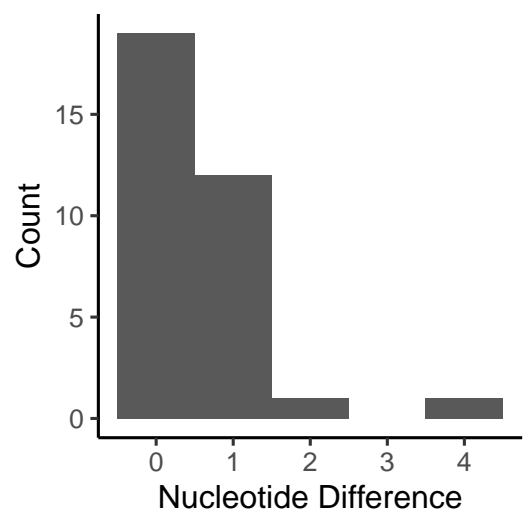
### IGHV3-64\*02

3 sequences assigned  
3 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



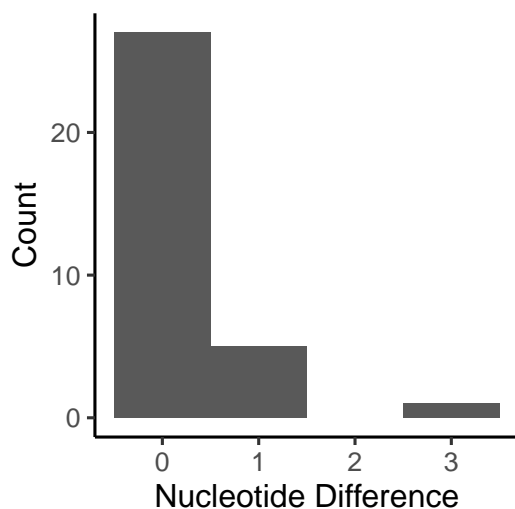
### IGHV3-73\*01

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



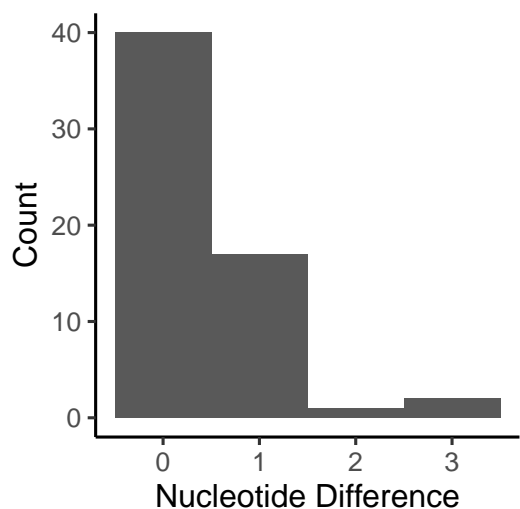
### IGHV3-53\*02

33 sequences assigned  
27 (81.8%) exact matches, in which:  
27 unique CDR3  
5 unique J



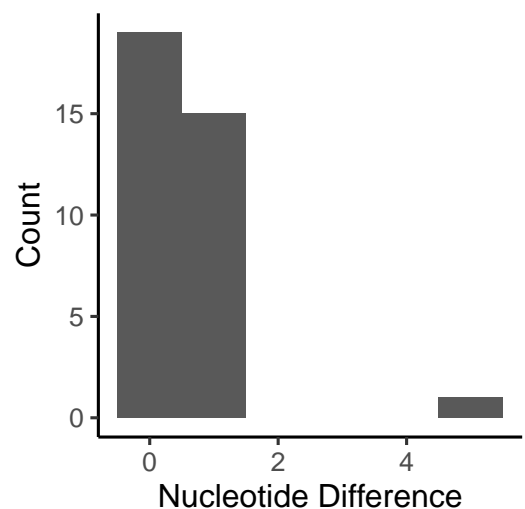
### IGHV3-66\*02

60 sequences assigned  
40 (66.7%) exact matches, in which:  
40 unique CDR3  
5 unique J



### IGHV3-73\*02

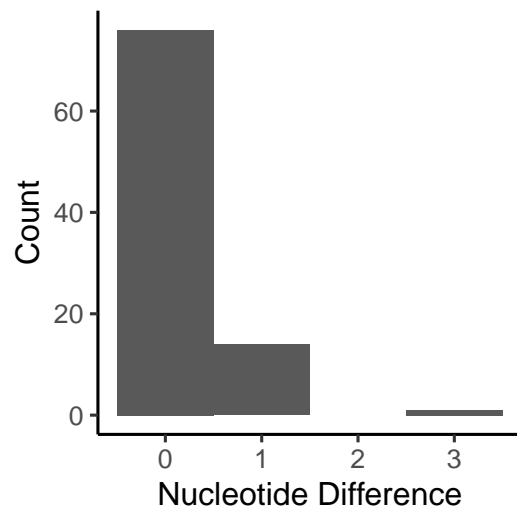
35 sequences assigned  
19 (54.3%) exact matches, in which:  
19 unique CDR3  
3 unique J





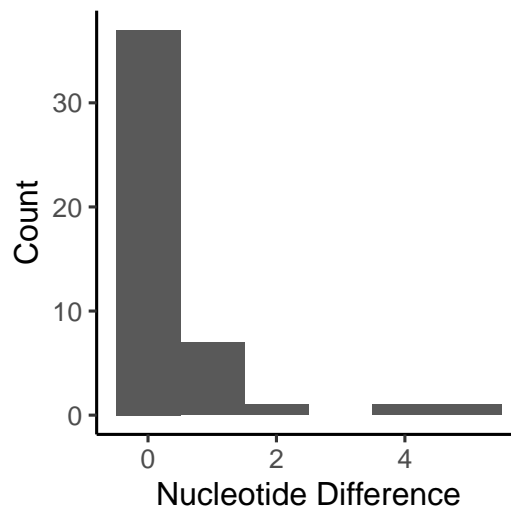
### IGHV3-74\*01

91 sequences assigned  
76 (83.5%) exact matches, in which:  
75 unique CDR3  
7 unique J



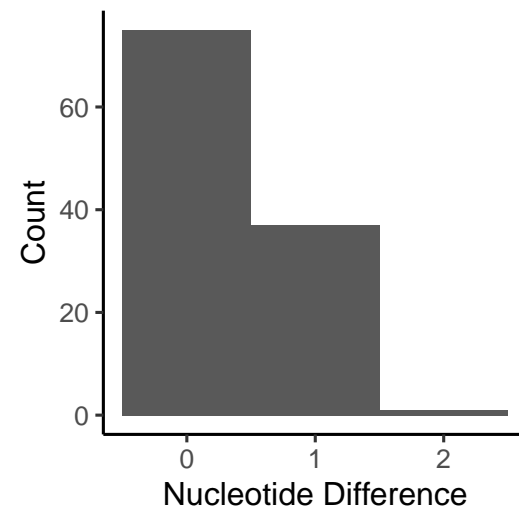
### IGHV4-4\*02

47 sequences assigned  
37 (78.7%) exact matches, in which:  
37 unique CDR3  
7 unique J



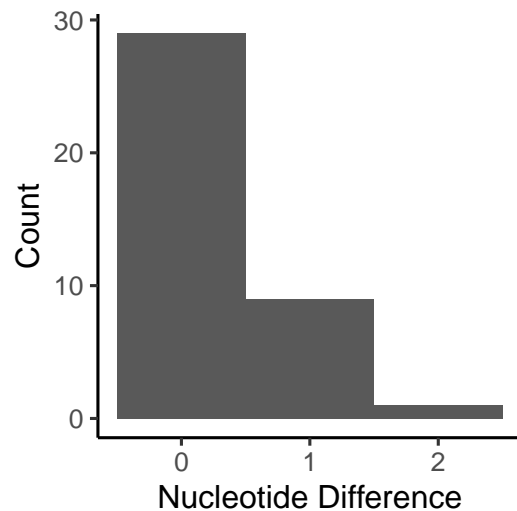
### IGHV4-30-4\*01

113 sequences assigned  
75 (66.4%) exact matches, in which:  
74 unique CDR3  
6 unique J



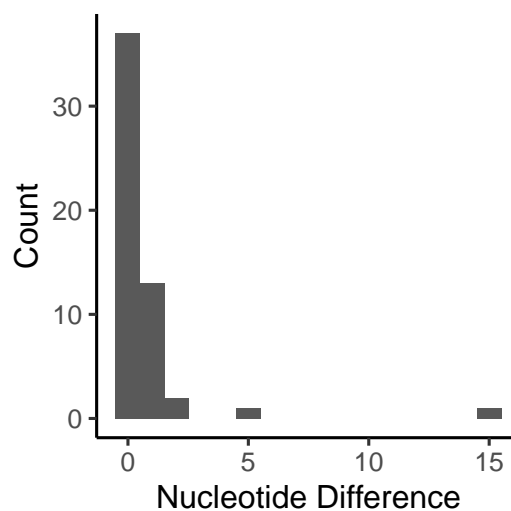
### IGHV3-43D\*03

39 sequences assigned  
29 (74.4%) exact matches, in which:  
29 unique CDR3  
4 unique J



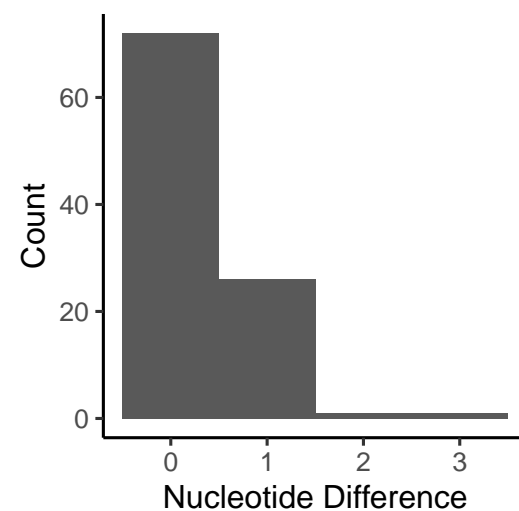
### IGHV4-4\*07

54 sequences assigned  
37 (68.5%) exact matches, in which:  
37 unique CDR3  
6 unique J



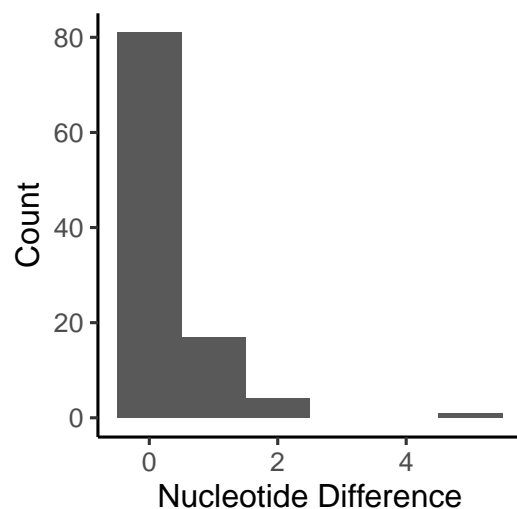
### IGHV4-30-2\*01

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



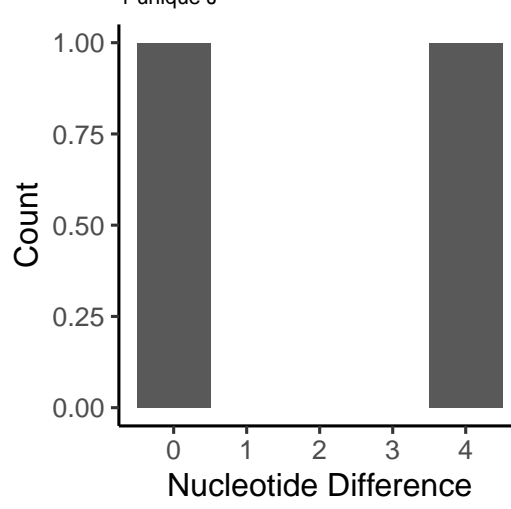
### IGHV3-64D\*08

103 sequences assigned  
81 (78.6%) exact matches, in which:  
80 unique CDR3  
7 unique J



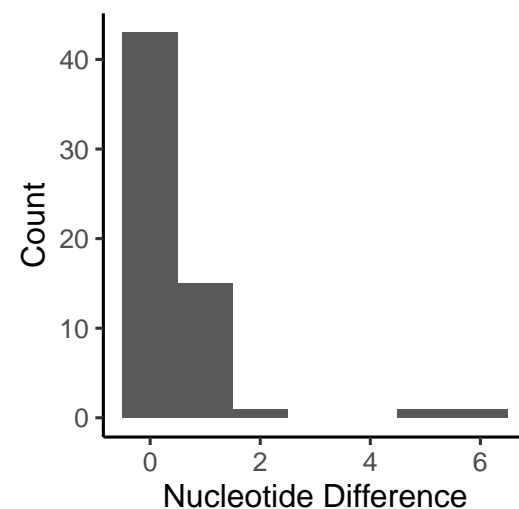
### IGHV4-28\*01

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



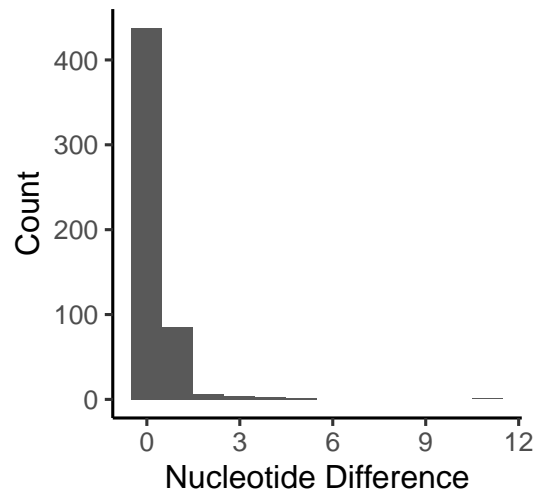
### IGHV4-31\*03

61 sequences assigned  
43 (70.5%) exact matches, in which:  
43 unique CDR3  
5 unique J



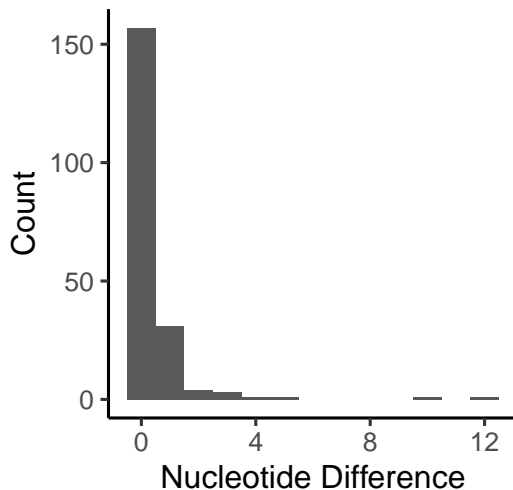
### IGHV4-34\*01

539 sequences assigned  
438 (81.3%) exact matches, in which:  
438 unique CDR3  
7 unique J



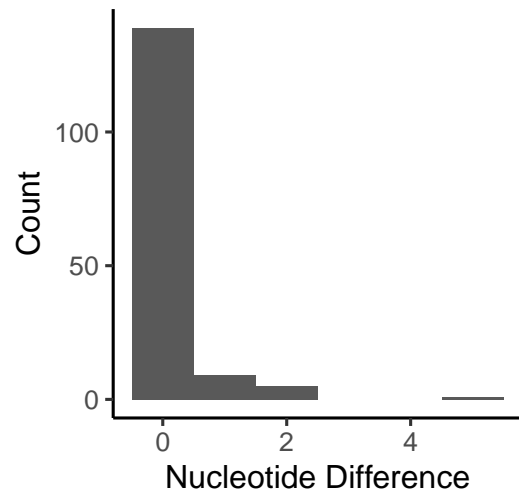
### IGHV4-59\*01

199 sequences assigned  
157 (78.9%) exact matches, in which:  
157 unique CDR3  
7 unique J



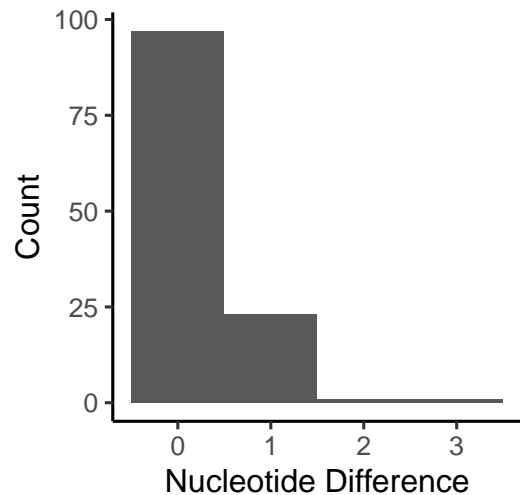
### IGHV5-10-1\*03

154 sequences assigned  
139 (90.3%) exact matches, in which:  
139 unique CDR3  
7 unique J



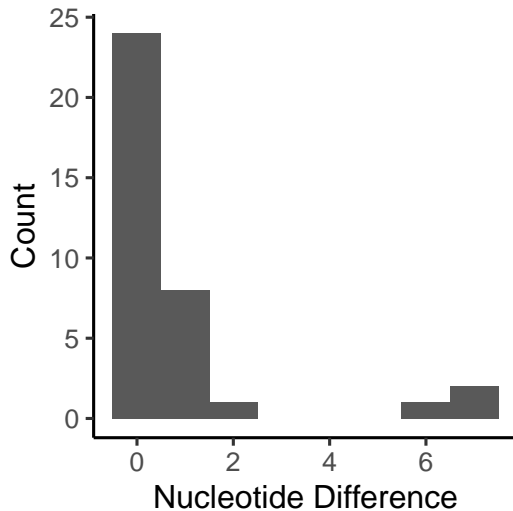
### IGHV4-38-2\*02

122 sequences assigned  
97 (79.5%) exact matches, in which:  
97 unique CDR3  
6 unique J



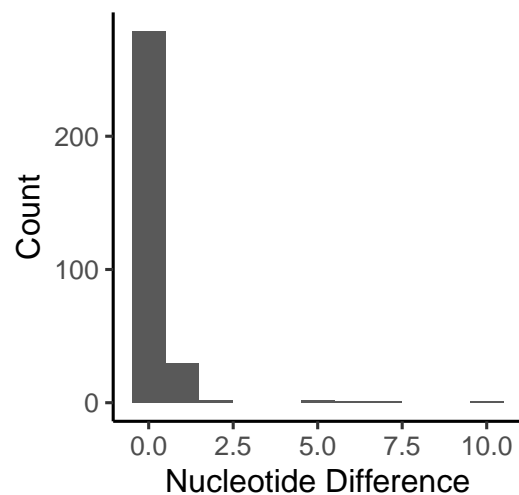
### IGHV4-61\*01

36 sequences assigned  
24 (66.7%) exact matches, in which:  
24 unique CDR3  
6 unique J



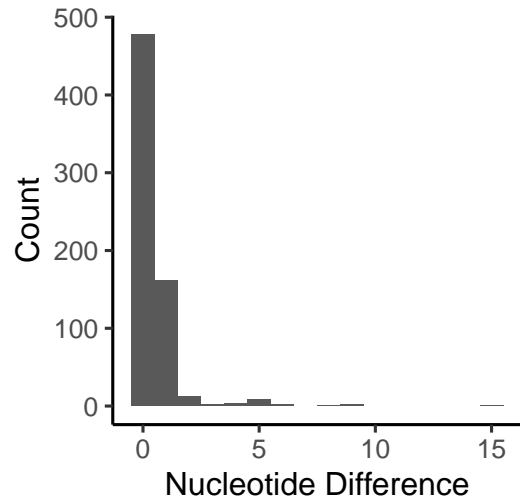
### IGHV5-51\*01

316 sequences assigned  
279 (88.3%) exact matches, in which:  
278 unique CDR3  
7 unique J



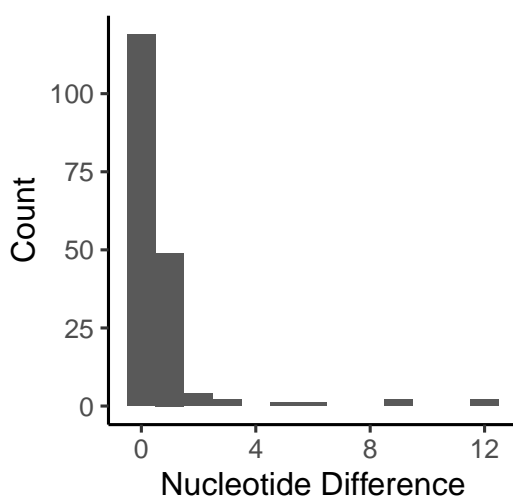
### IGHV4-39\*01

671 sequences assigned  
478 (71.2%) exact matches, in which:  
478 unique CDR3  
7 unique J



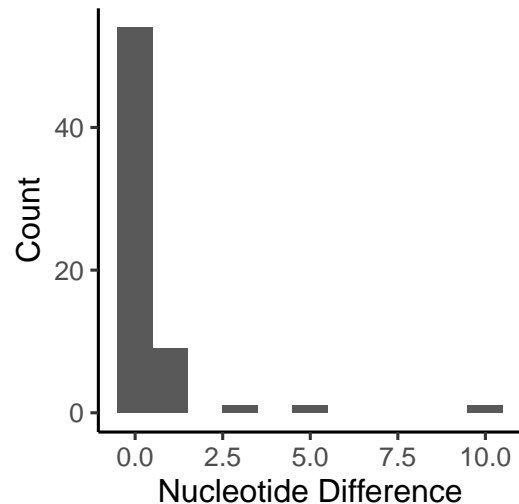
### IGHV4-61\*02

180 sequences assigned  
119 (66.1%) exact matches, in which:  
119 unique CDR3  
6 unique J



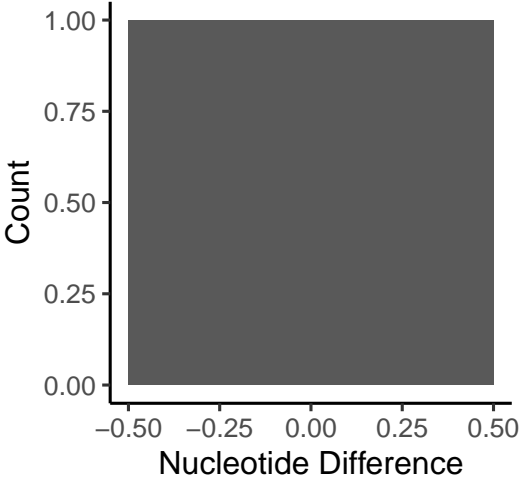
### IGHV6-1\*01

66 sequences assigned  
54 (81.8%) exact matches, in which:  
54 unique CDR3  
6 unique J

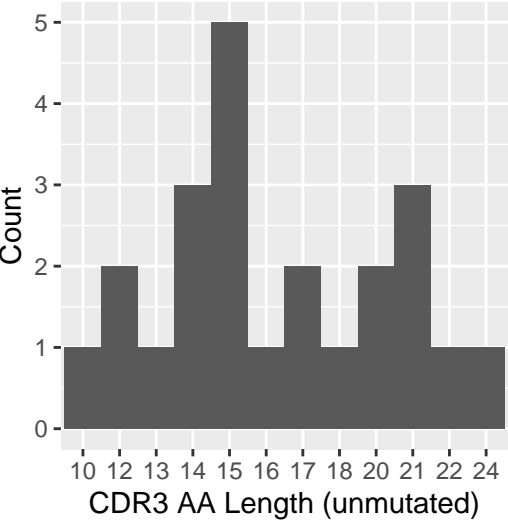


# IGHV7-4-1\*01

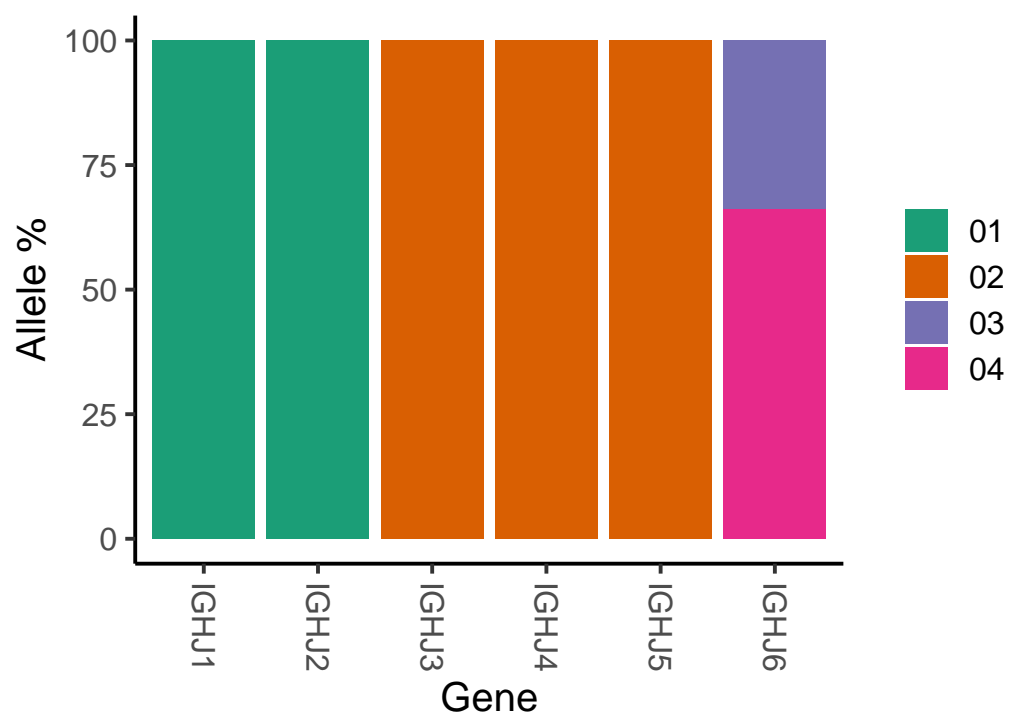
1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



IGHV3-13\*01\_G290A\_T300C



Allele Usage



Sequence Count by IGHJ6 allele usage

