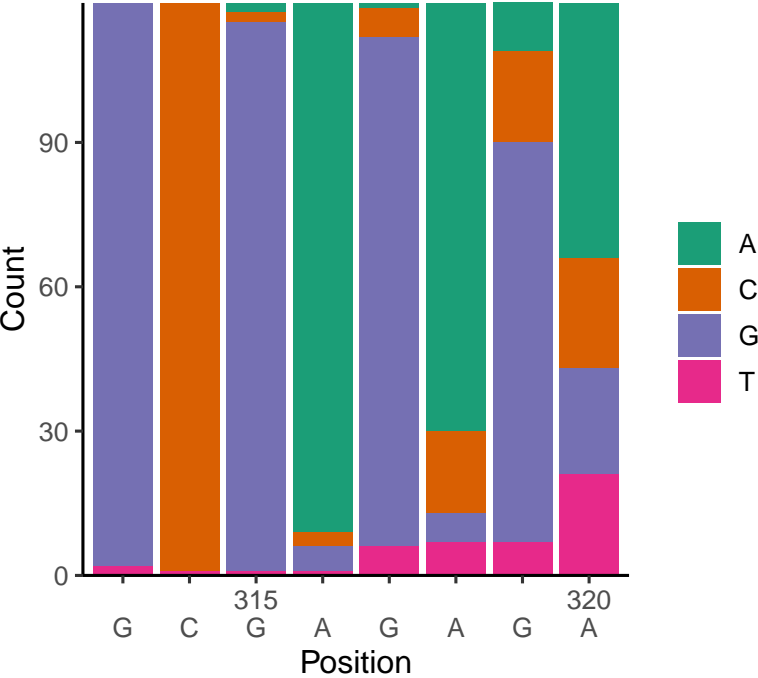
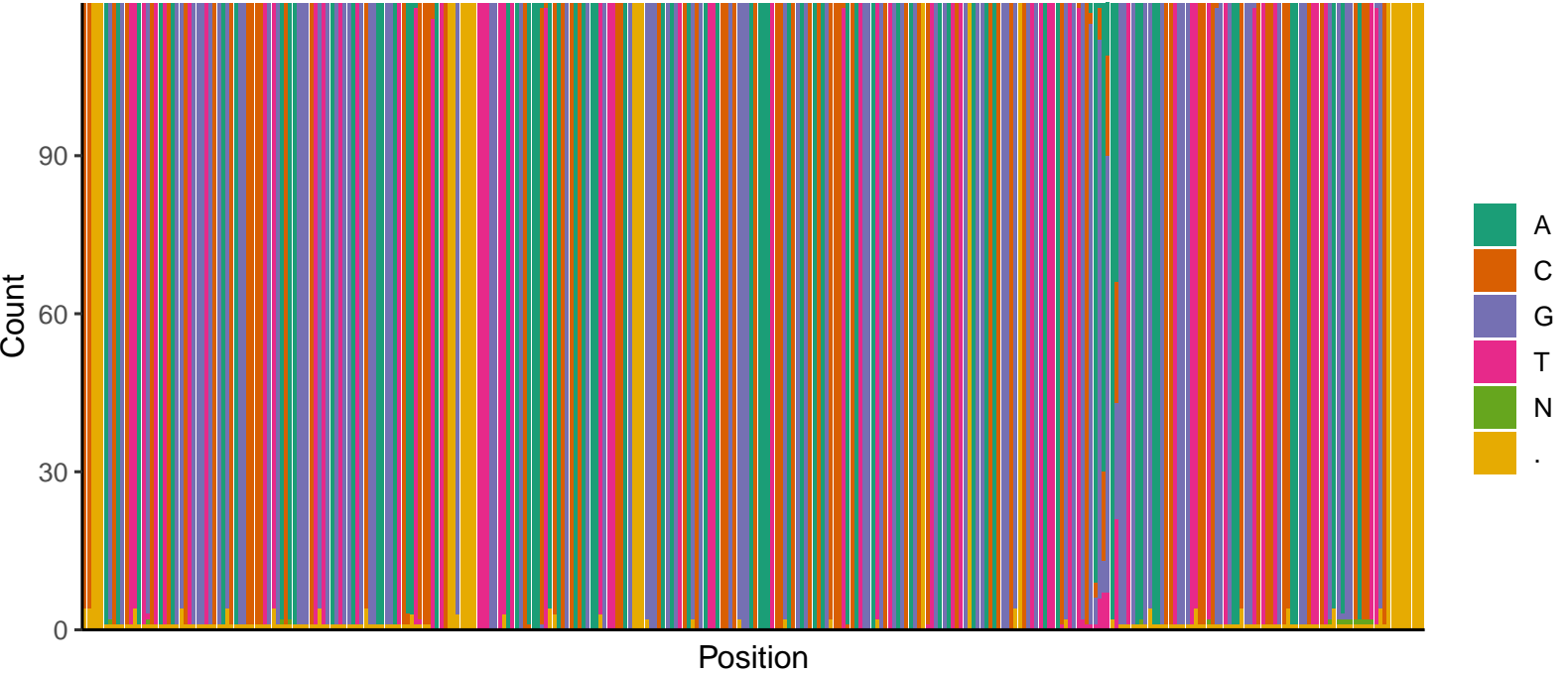


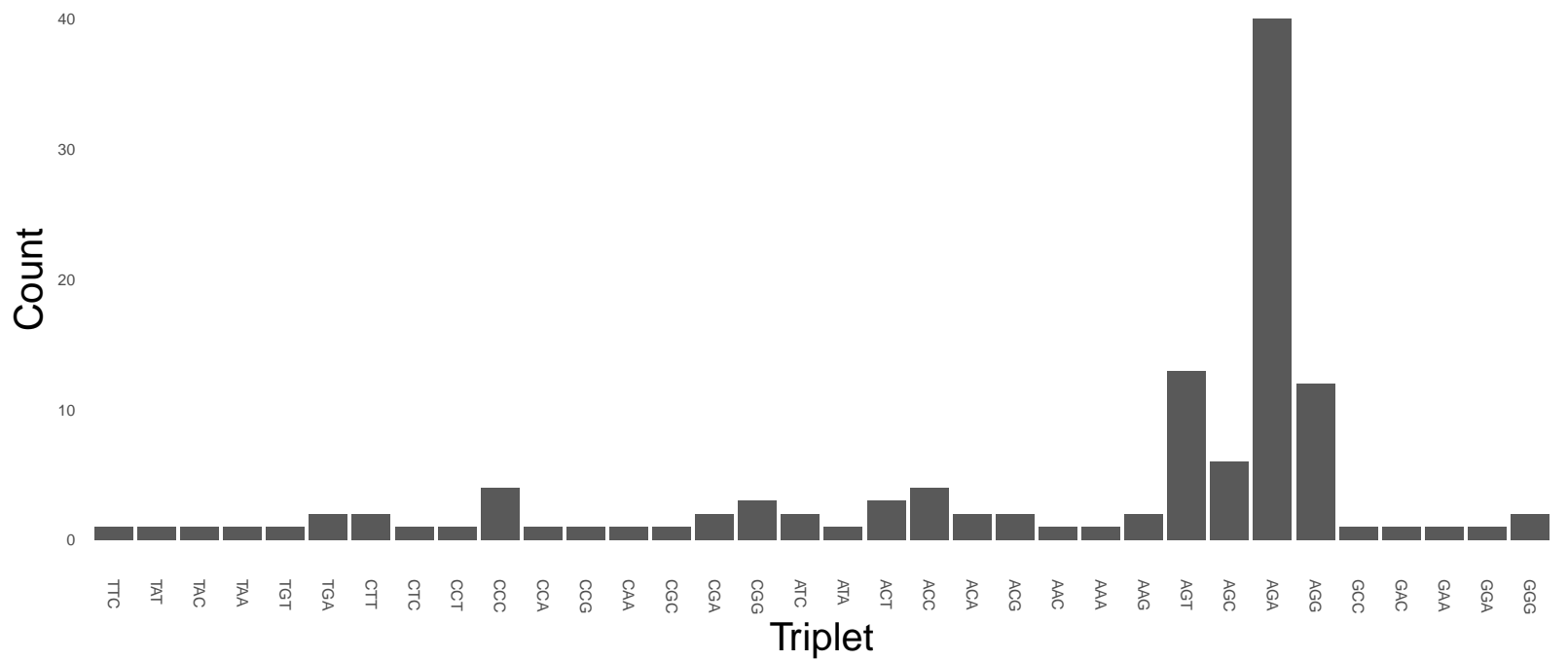
Gene IGHV1-69\*04\_C184T



Gene IGHV1-69\*04\_C184T

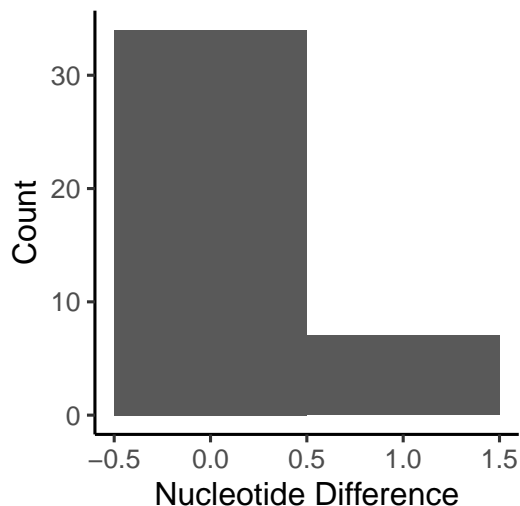


IGHV1-69\*04\_C184T- Final 3 nucleotides as a triplet



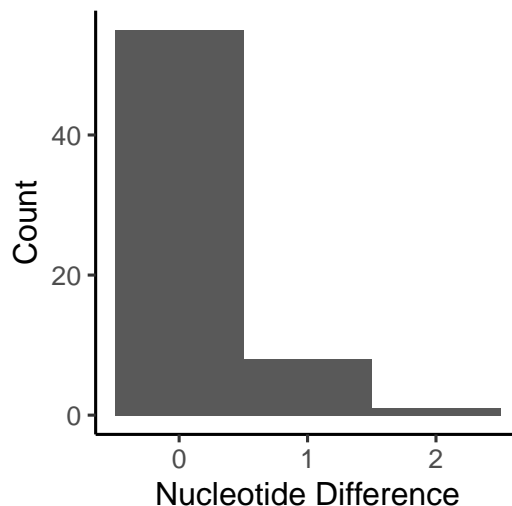
### IGHV1-2\*04

41 sequences assigned  
34 (82.9%) exact matches, in which:  
34 unique CDR3  
4 unique J



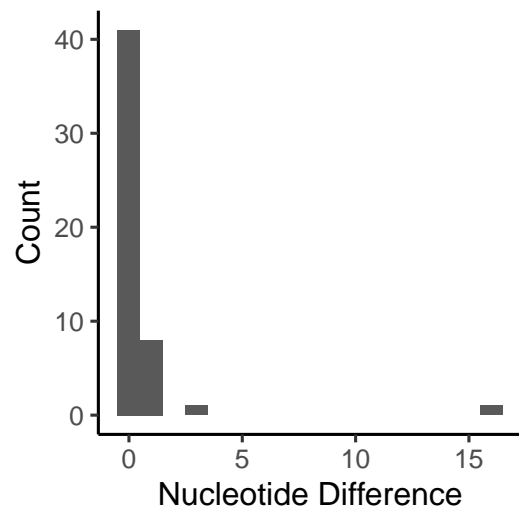
### IGHV1-8\*01

64 sequences assigned  
55 (85.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



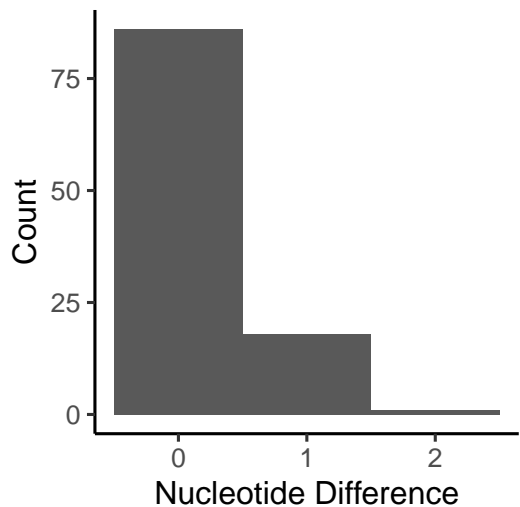
### IGHV1-46\*01

52 sequences assigned  
41 (78.8%) exact matches, in which:  
41 unique CDR3  
4 unique J



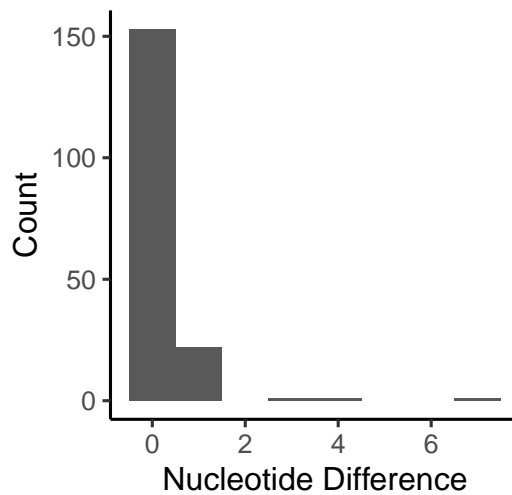
### IGHV1-2\*06

106 sequences assigned  
86 (81.1%) exact matches, in which:  
86 unique CDR3  
5 unique J



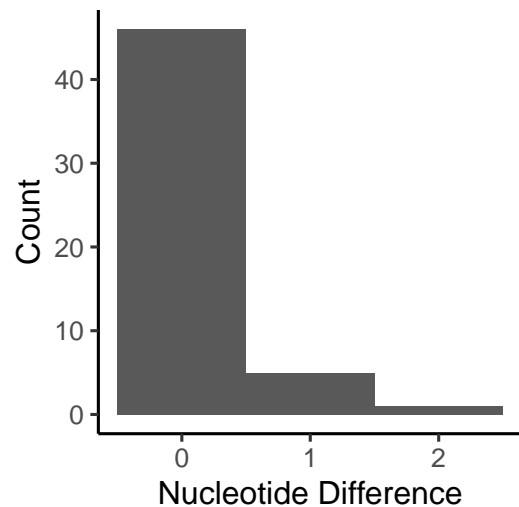
### IGHV1-18\*01

178 sequences assigned  
153 (86%) exact matches, in which:  
152 unique CDR3  
4 unique J



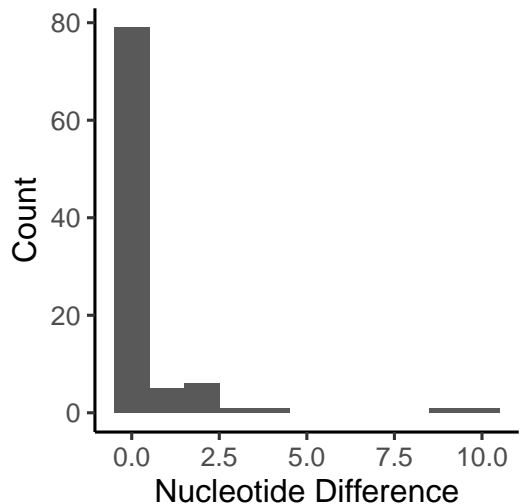
### IGHV1-46\*03

52 sequences assigned  
46 (88.5%) exact matches, in which:  
46 unique CDR3  
6 unique J



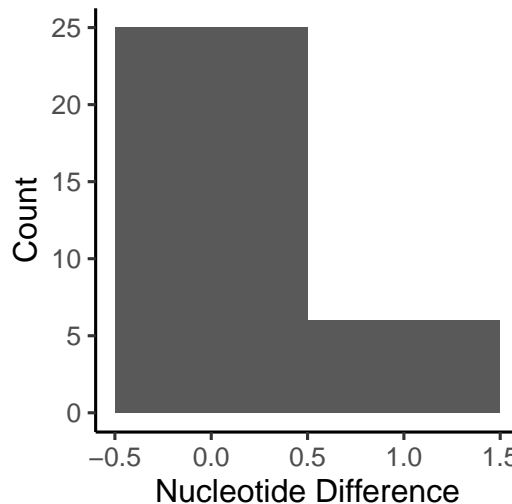
### IGHV1-3\*01

96 sequences assigned  
79 (82.3%) exact matches, in which:  
79 unique CDR3  
5 unique J



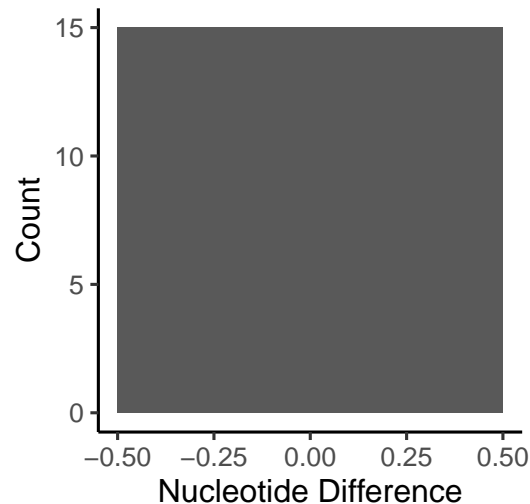
### IGHV1-24\*01

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



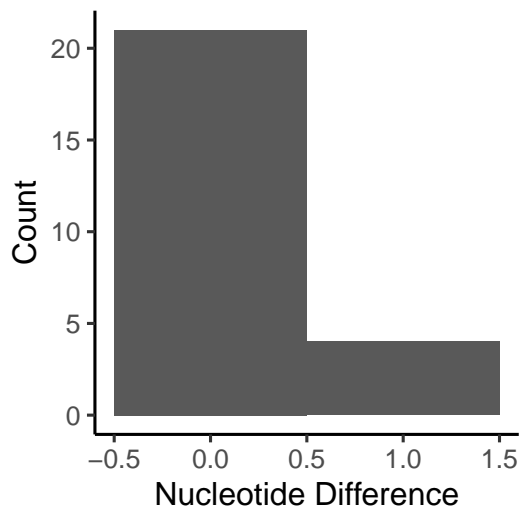
### IGHV1-58\*02

15 sequences assigned  
15 (100%) exact matches, in which:  
15 unique CDR3  
3 unique J



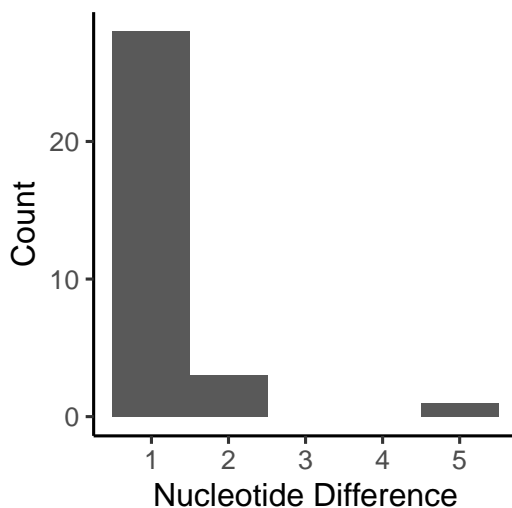
### IGHV1-69-2\*01

25 sequences assigned  
21 (84%) exact matches, in which:  
21 unique CDR3  
4 unique J



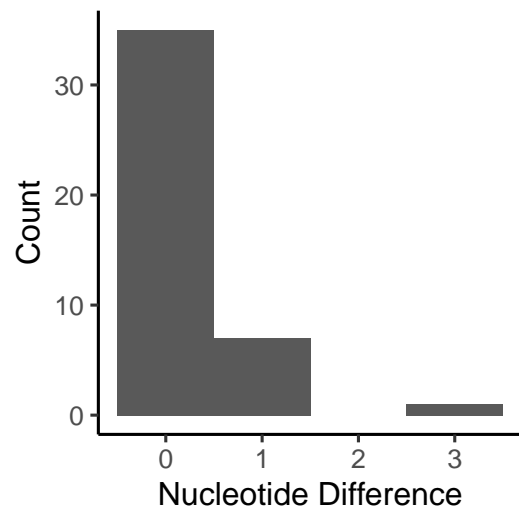
### IGHV1-69\*08

32 sequences assigned  
No exact matches.



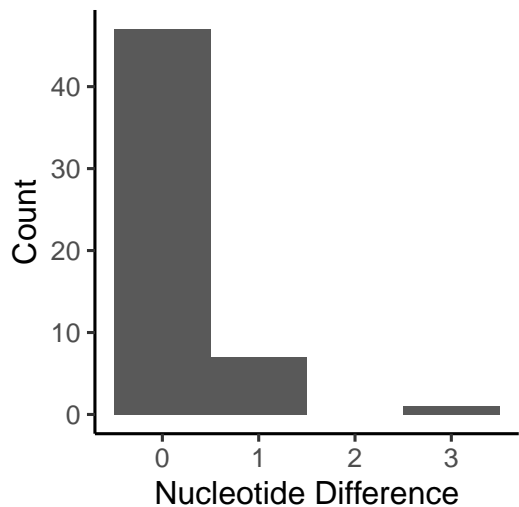
### IGHV2-26\*01

43 sequences assigned  
35 (81.4%) exact matches, in which:  
34 unique CDR3  
4 unique J



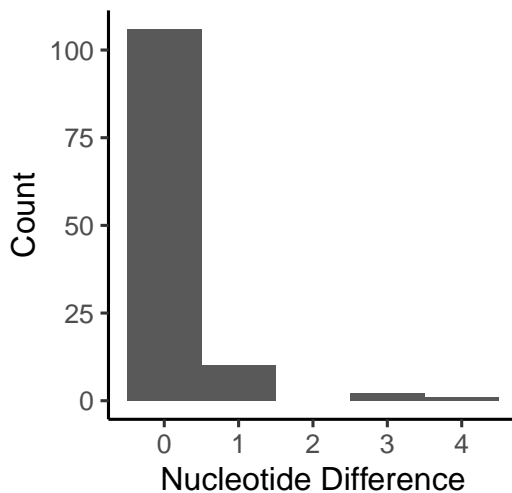
### IGHV1-69\*02

55 sequences assigned  
47 (85.5%) exact matches, in which:  
46 unique CDR3  
5 unique J



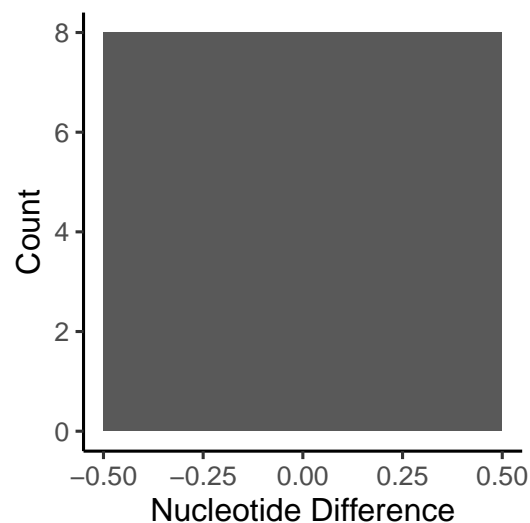
### IGHV1-69\*04\_C184T

119 sequences assigned  
106 (89.1%) exact matches, in which:  
106 unique CDR3  
4 unique J



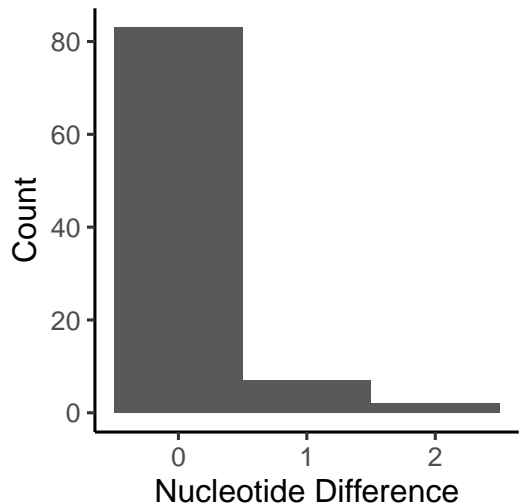
### IGHV2-70\*15

8 sequences assigned  
8 (100%) exact matches, in which:  
8 unique CDR3  
3 unique J



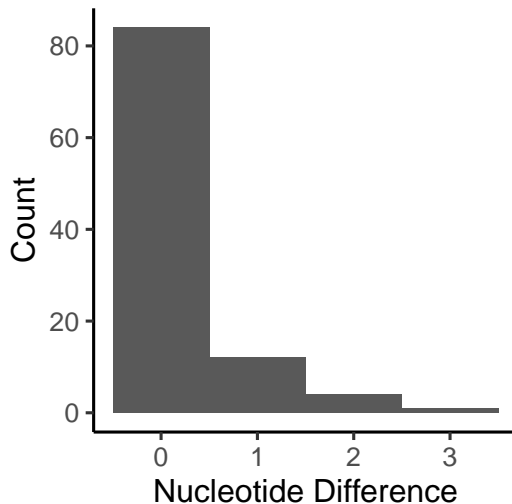
### IGHV1-69\*04

92 sequences assigned  
83 (90.2%) exact matches, in which:  
83 unique CDR3  
6 unique J



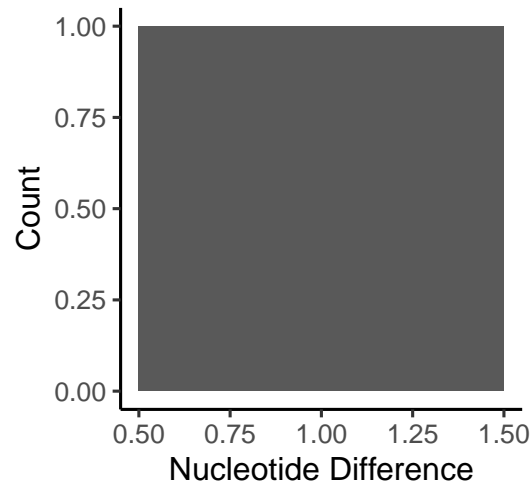
### IGHV2-5\*02

101 sequences assigned  
84 (83.2%) exact matches, in which:  
84 unique CDR3  
6 unique J



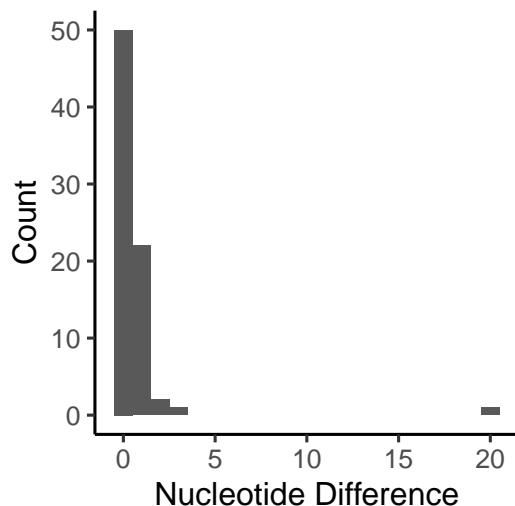
### IGHV2-70D\*04

1 sequences assigned  
No exact matches.



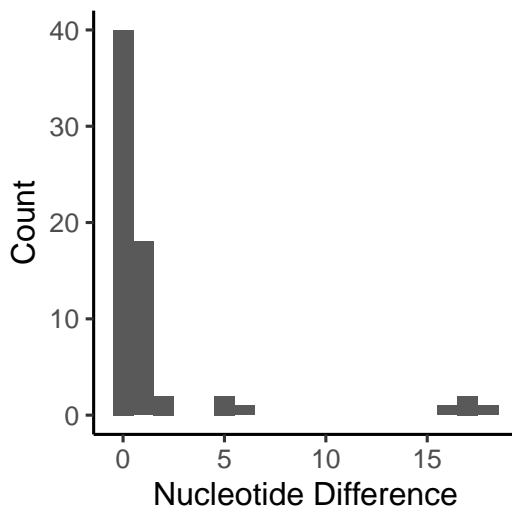
### IGHV3-7\*01

77 sequences assigned  
50 (64.9%) exact matches, in which:  
49 unique CDR3  
6 unique J



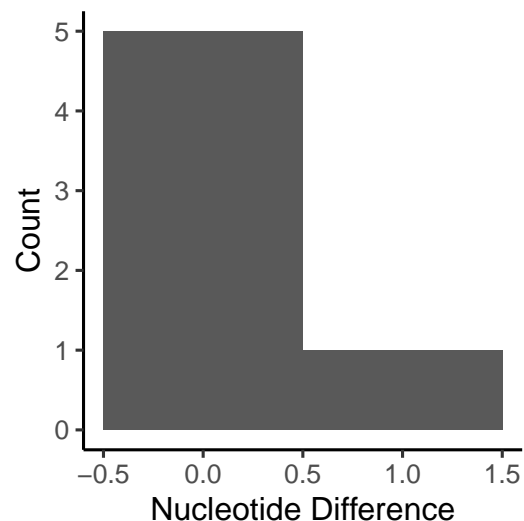
### IGHV3-11\*01

67 sequences assigned  
40 (59.7%) exact matches, in which:  
40 unique CDR3  
5 unique J



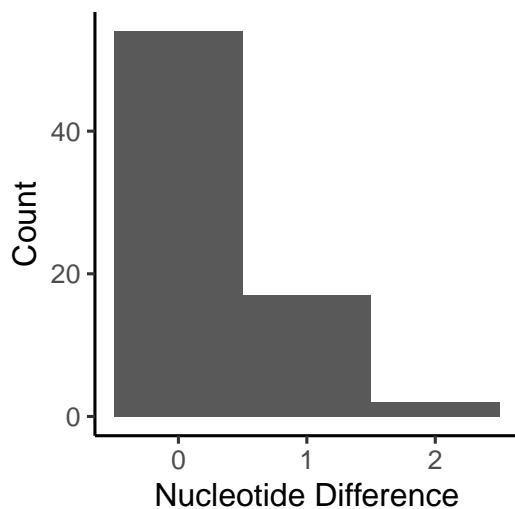
### IGHV3-13\*05

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



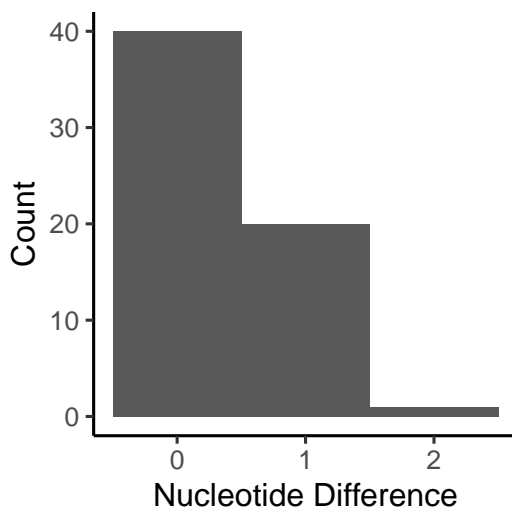
### IGHV3-7\*03

73 sequences assigned  
54 (74%) exact matches, in which:  
52 unique CDR3  
5 unique J



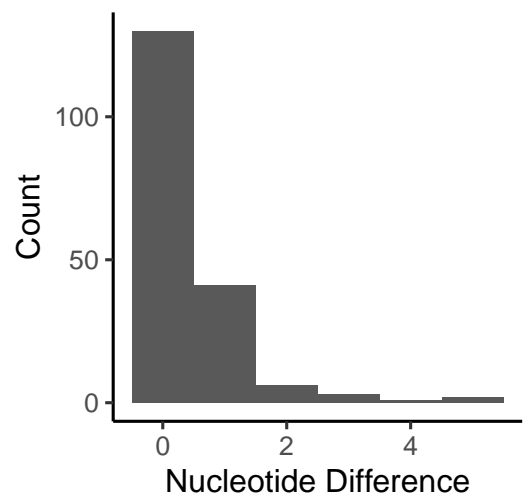
### IGHV3-11\*06

61 sequences assigned  
40 (65.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



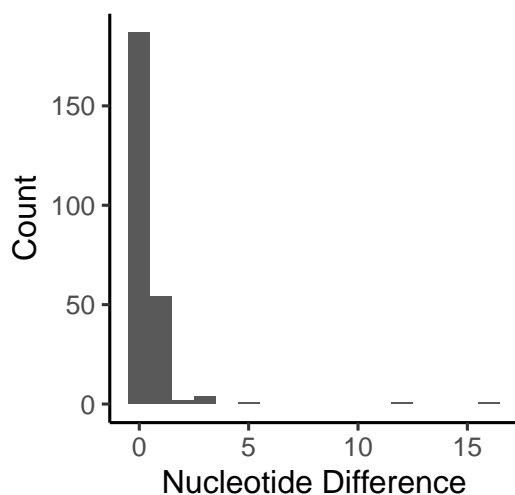
### IGHV3-15\*01

183 sequences assigned  
130 (71%) exact matches, in which:  
128 unique CDR3  
6 unique J



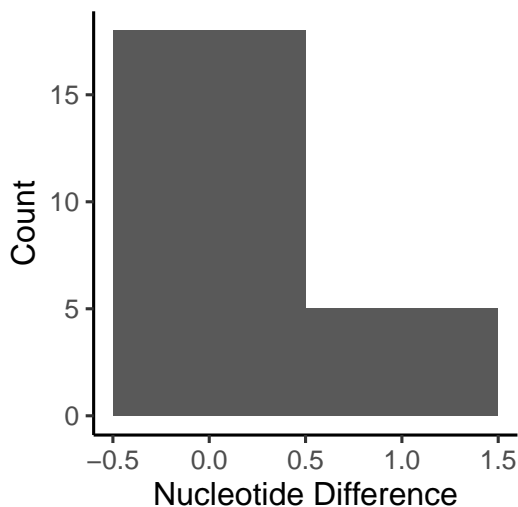
### IGHV3-9\*01

250 sequences assigned  
187 (74.8%) exact matches, in which:  
185 unique CDR3  
6 unique J



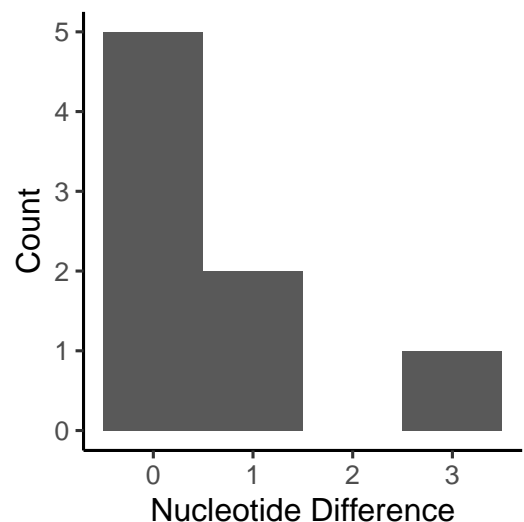
### IGHV3-13\*01

23 sequences assigned  
18 (78.3%) exact matches, in which:  
17 unique CDR3  
4 unique J



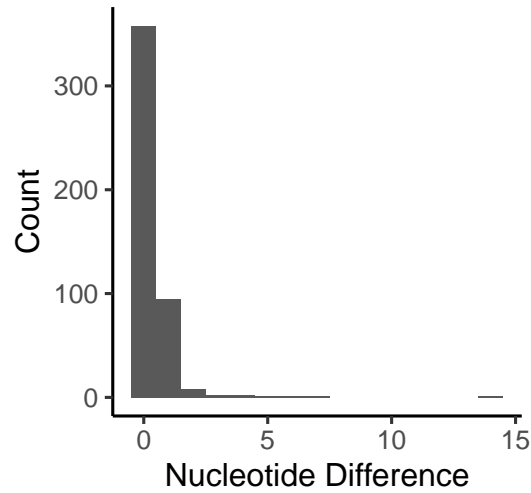
### IGHV3-20\*01

8 sequences assigned  
5 (62.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



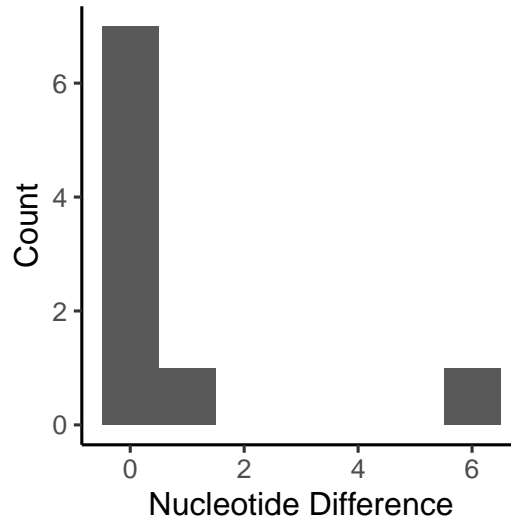
### IGHV3-21\*01

469 sequences assigned  
358 (76.3%) exact matches, in which:  
354 unique CDR3  
6 unique J



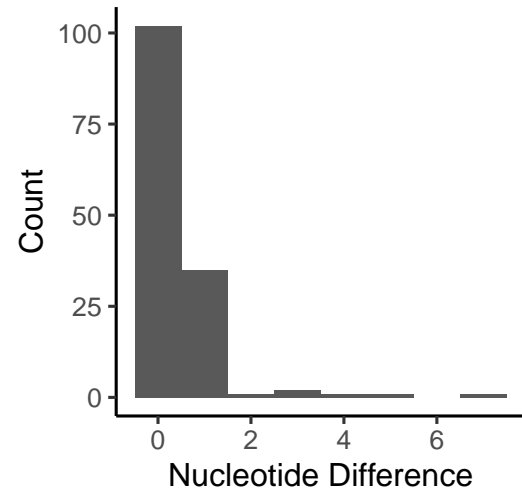
### IGHV3-43\*01

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



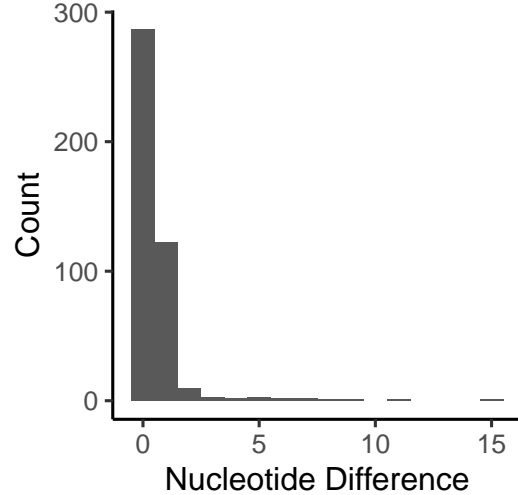
### IGHV3-48\*03

147 sequences assigned  
102 (69.4%) exact matches, in which:  
102 unique CDR3  
6 unique J



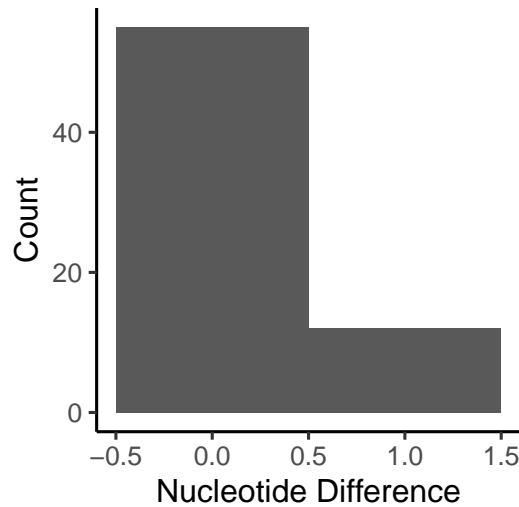
### IGHV3-30-3\*01

437 sequences assigned  
287 (65.7%) exact matches, in which:  
285 unique CDR3  
6 unique J



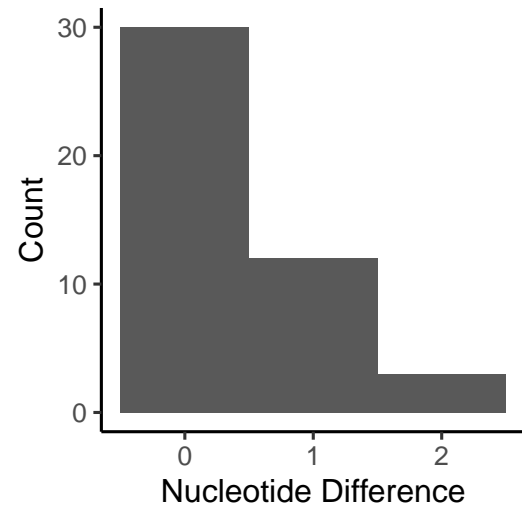
### IGHV3-43\*02

67 sequences assigned  
55 (82.1%) exact matches, in which:  
55 unique CDR3  
4 unique J



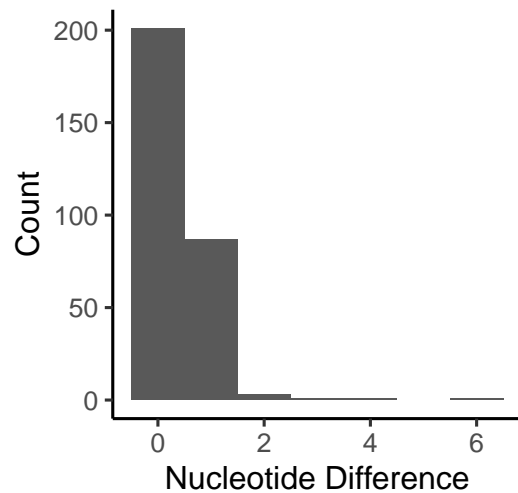
### IGHV3-49\*03

45 sequences assigned  
30 (66.7%) exact matches, in which:  
29 unique CDR3  
4 unique J



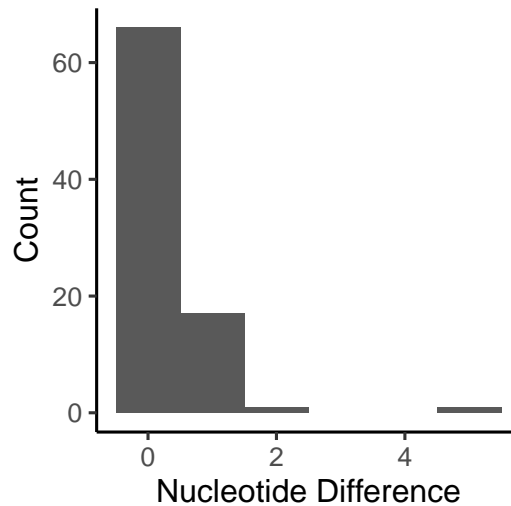
### IGHV3-33\*01

294 sequences assigned  
201 (68.4%) exact matches, in which:  
201 unique CDR3  
5 unique J



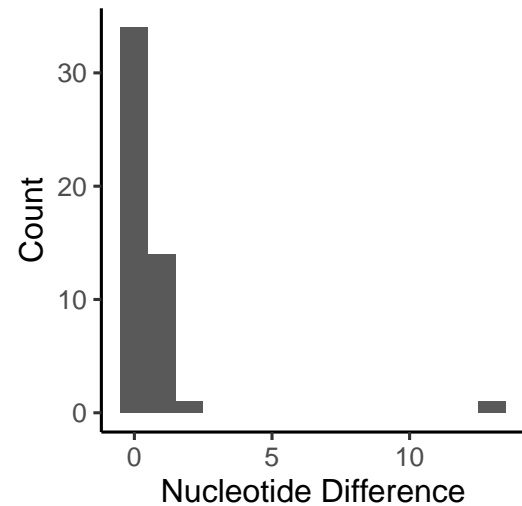
### IGHV3-48\*01

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



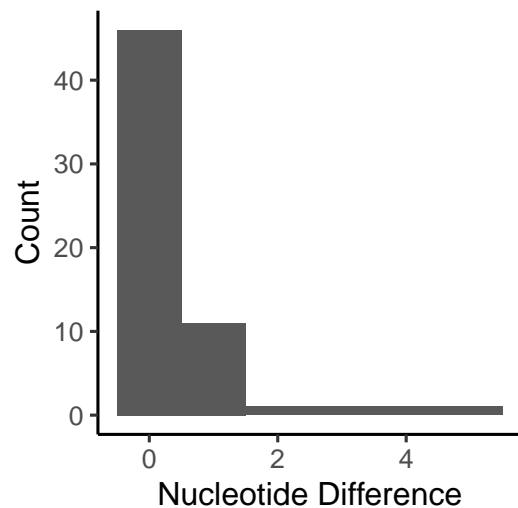
### IGHV3-49\*04

50 sequences assigned  
34 (68%) exact matches, in which:  
33 unique CDR3  
4 unique J



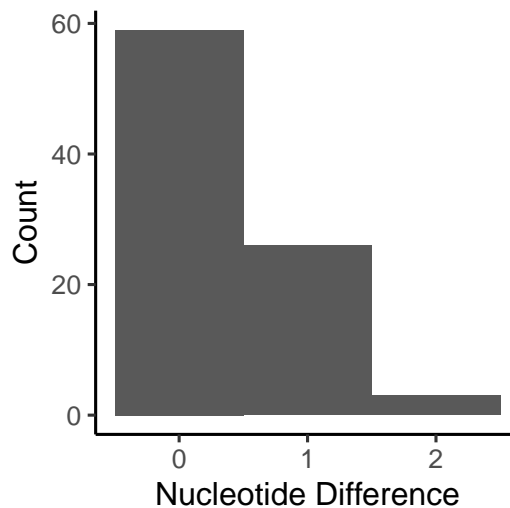
### IGHV3-53\*01

61 sequences assigned  
46 (75.4%) exact matches, in which:  
46 unique CDR3  
5 unique J



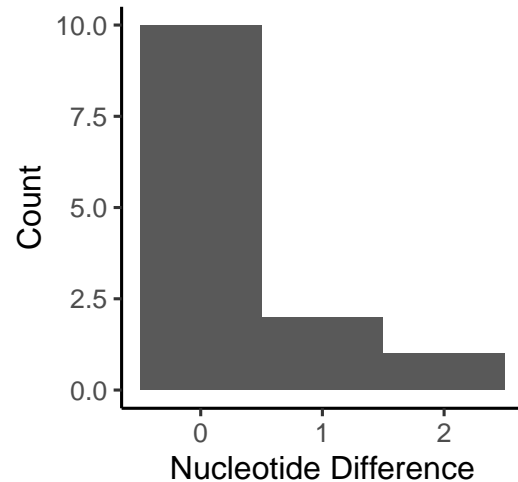
### IGHV3-66\*01

88 sequences assigned  
59 (67%) exact matches, in which:  
58 unique CDR3  
6 unique J



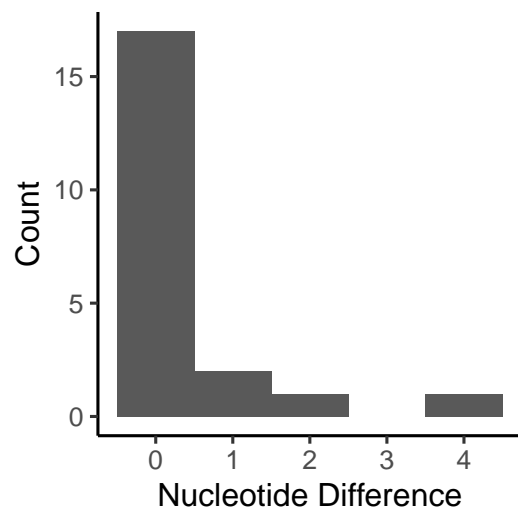
### IGHV3-72\*01

13 sequences assigned  
10 (76.9%) exact matches, in which:  
10 unique CDR3  
2 unique J



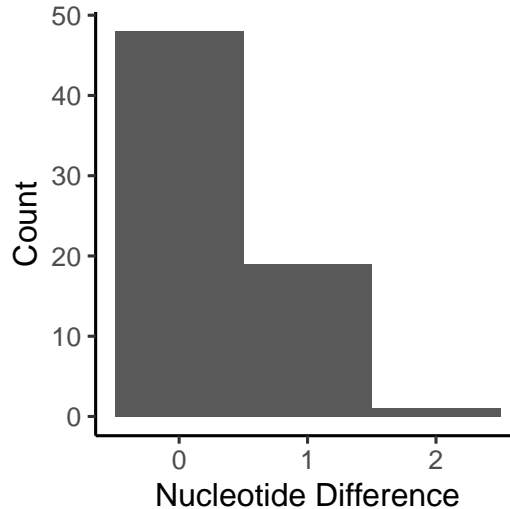
### IGHV3-53\*04

21 sequences assigned  
17 (81%) exact matches, in which:  
17 unique CDR3  
6 unique J



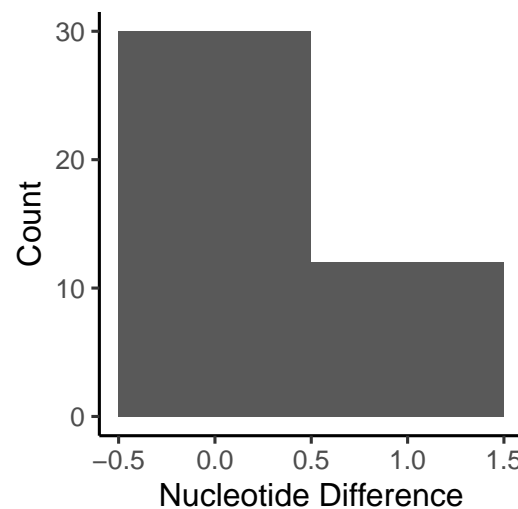
### IGHV3-66\*02

68 sequences assigned  
48 (70.6%) exact matches, in which:  
48 unique CDR3  
5 unique J



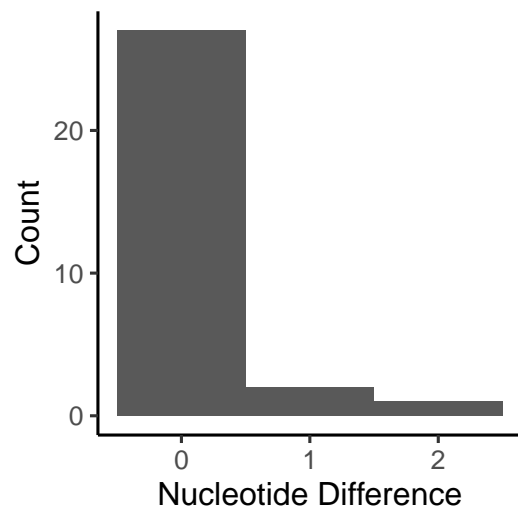
### IGHV3-73\*01

42 sequences assigned  
30 (71.4%) exact matches, in which:  
30 unique CDR3  
3 unique J



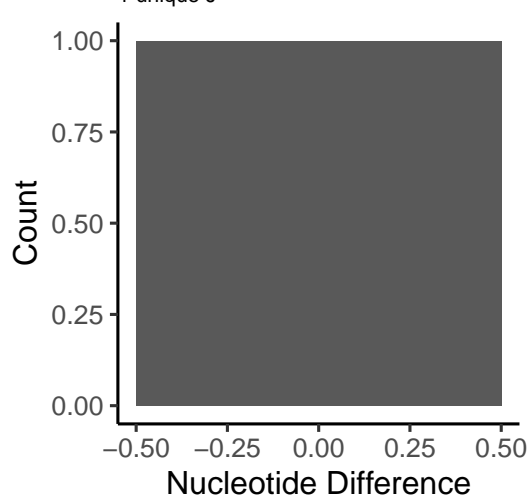
### IGHV3-64\*01

30 sequences assigned  
27 (90%) exact matches, in which:  
26 unique CDR3  
4 unique J



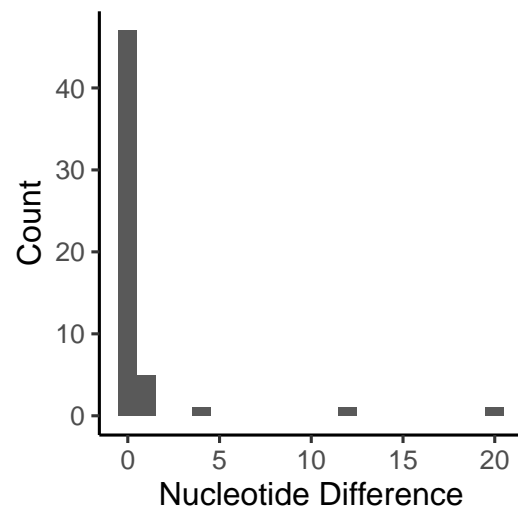
### IGHV3-69-1\*02

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



### IGHV3-74\*01

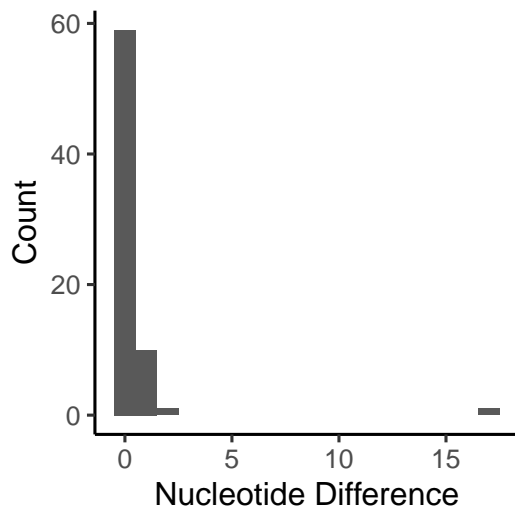
56 sequences assigned  
47 (83.9%) exact matches, in which:  
47 unique CDR3  
5 unique J





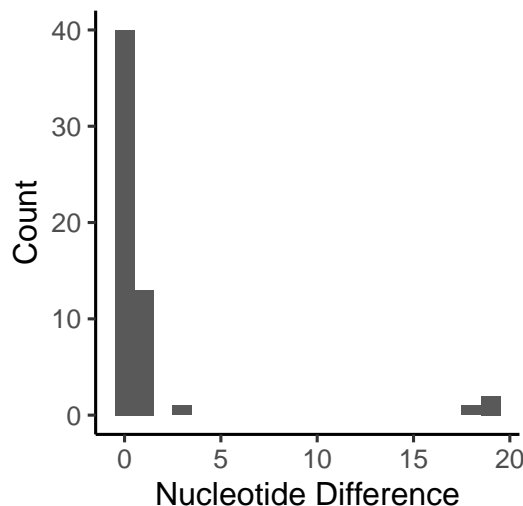
### IGHV3-64D\*06

71 sequences assigned  
59 (83.1%) exact matches, in which:  
59 unique CDR3  
6 unique J



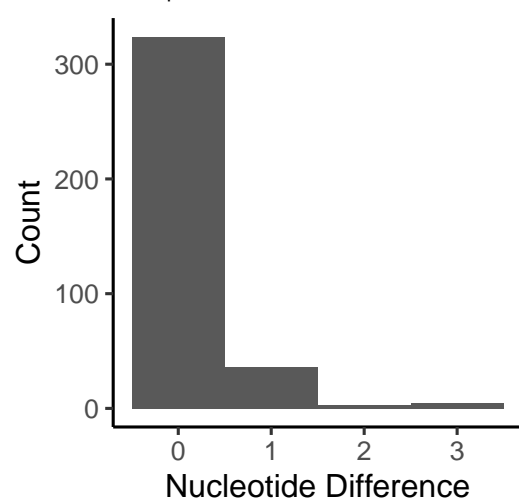
### IGHV4-30-2\*01

57 sequences assigned  
40 (70.2%) exact matches, in which:  
40 unique CDR3  
5 unique J



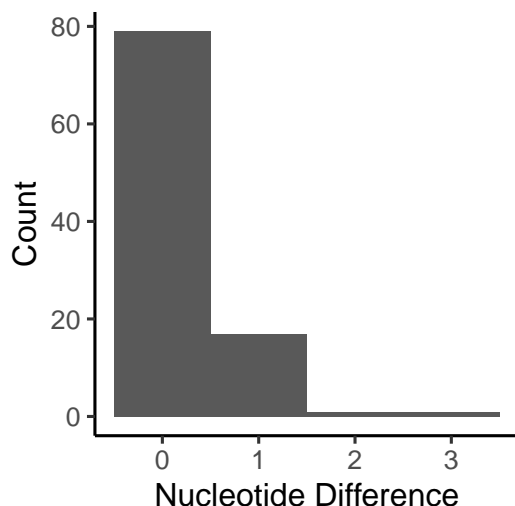
### IGHV4-34\*01

368 sequences assigned  
324 (88%) exact matches, in which:  
324 unique CDR3  
5 unique J



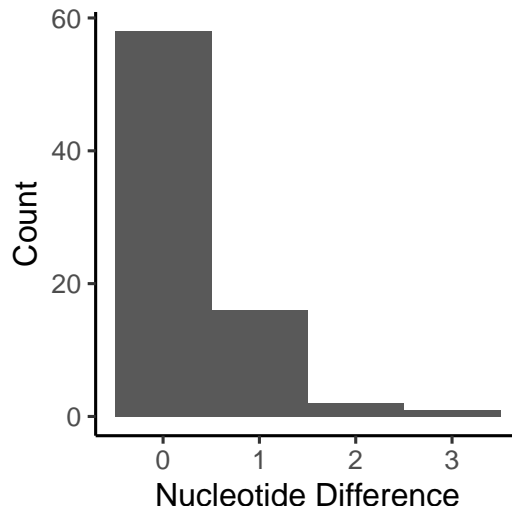
### IGHV4-4\*02

98 sequences assigned  
79 (80.6%) exact matches, in which:  
79 unique CDR3  
5 unique J



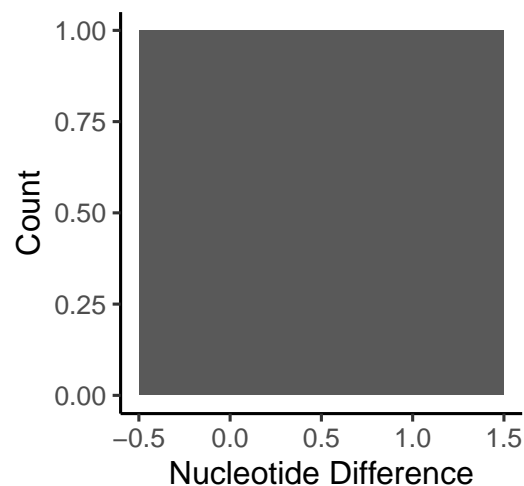
### IGHV4-30-4\*01

77 sequences assigned  
58 (75.3%) exact matches, in which:  
58 unique CDR3  
4 unique J



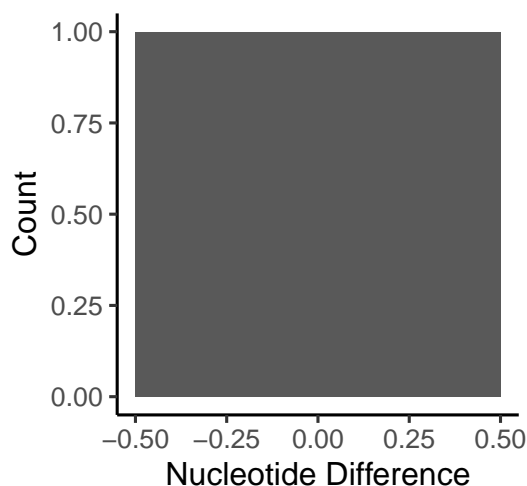
### IGHV4-38-2\*02

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



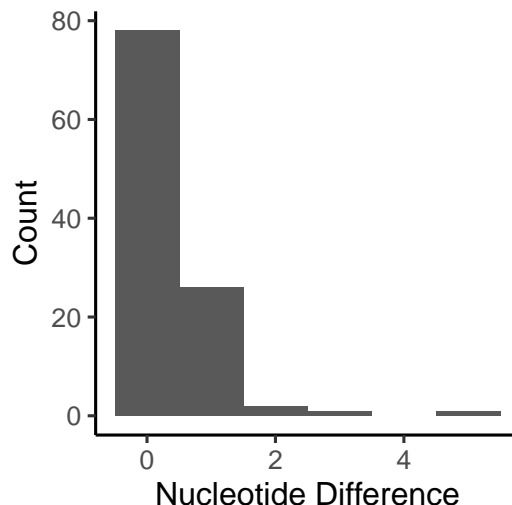
### IGHV4-28\*03

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



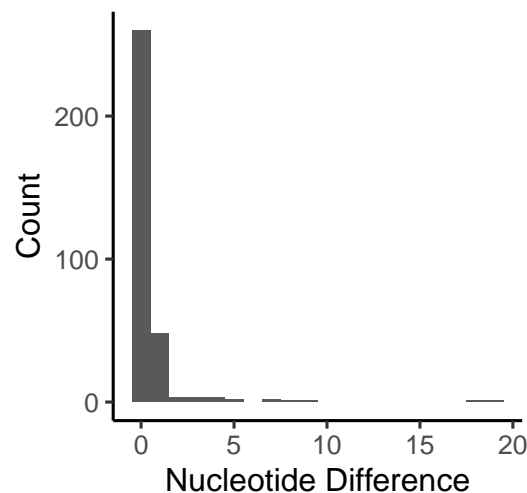
### IGHV4-31\*03

109 sequences assigned  
78 (71.6%) exact matches, in which:  
78 unique CDR3  
6 unique J



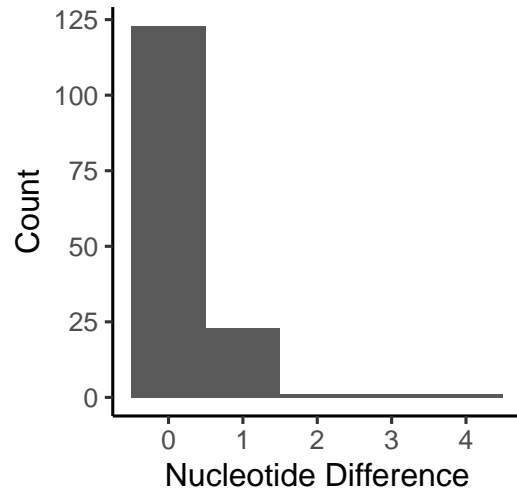
### IGHV4-39\*01

325 sequences assigned  
260 (80%) exact matches, in which:  
258 unique CDR3  
6 unique J



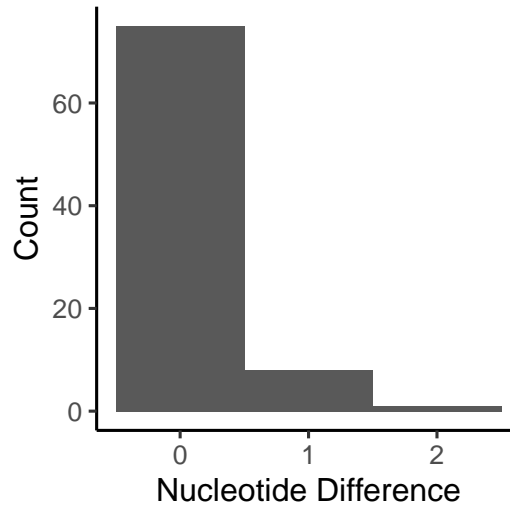
### IGHV4–59\*01

151 sequences assigned  
123 (81.5%) exact matches, in which:  
123 unique CDR3  
5 unique J



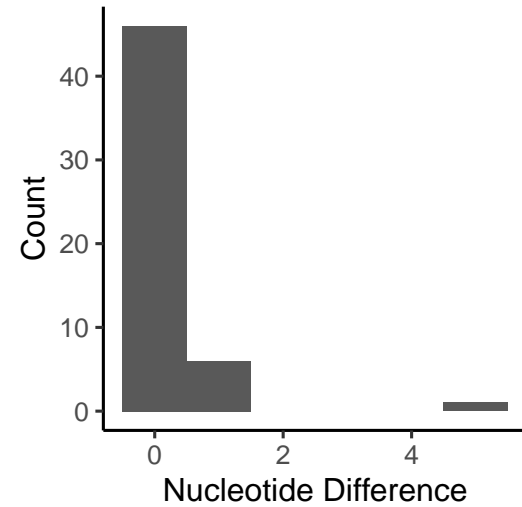
### IGHV5–10–1\*03

84 sequences assigned  
75 (89.3%) exact matches, in which:  
74 unique CDR3  
6 unique J



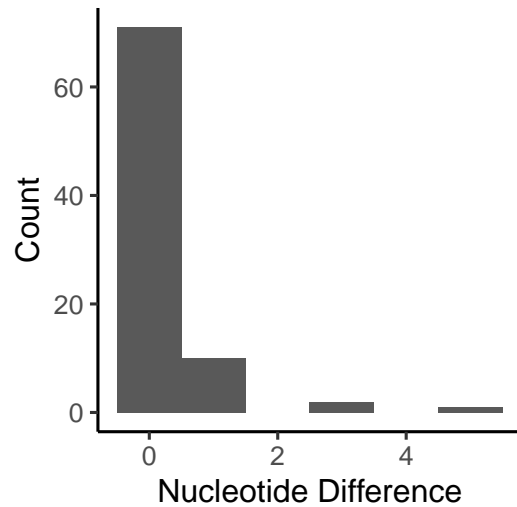
### IGHV6–1\*01

53 sequences assigned  
46 (86.8%) exact matches, in which:  
46 unique CDR3  
5 unique J



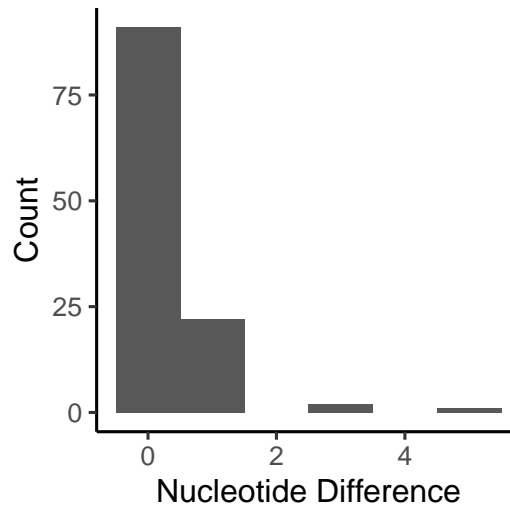
### IGHV4–59\*08

84 sequences assigned  
71 (84.5%) exact matches, in which:  
71 unique CDR3  
6 unique J



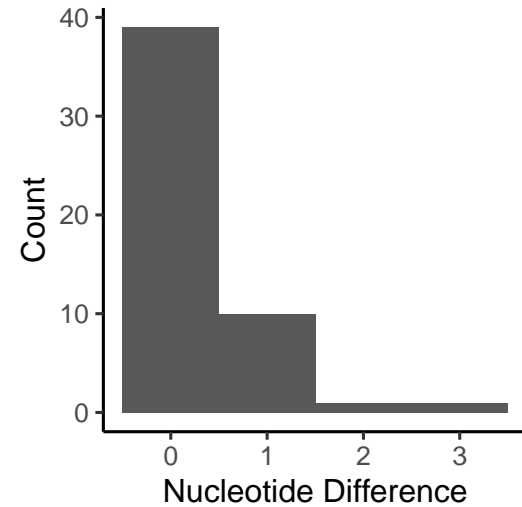
### IGHV5–51\*01

116 sequences assigned  
91 (78.4%) exact matches, in which:  
91 unique CDR3  
5 unique J



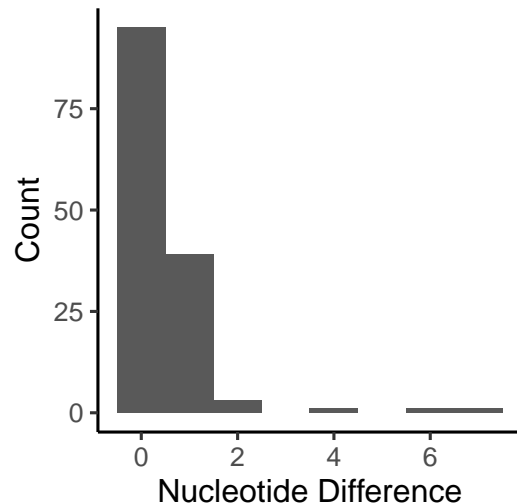
### IGHV7–4–1\*02

51 sequences assigned  
39 (76.5%) exact matches, in which:  
39 unique CDR3  
6 unique J



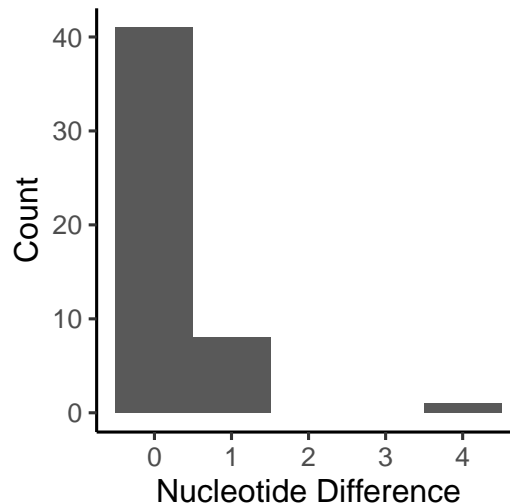
### IGHV4–61\*02

140 sequences assigned  
95 (67.9%) exact matches, in which:  
95 unique CDR3  
6 unique J

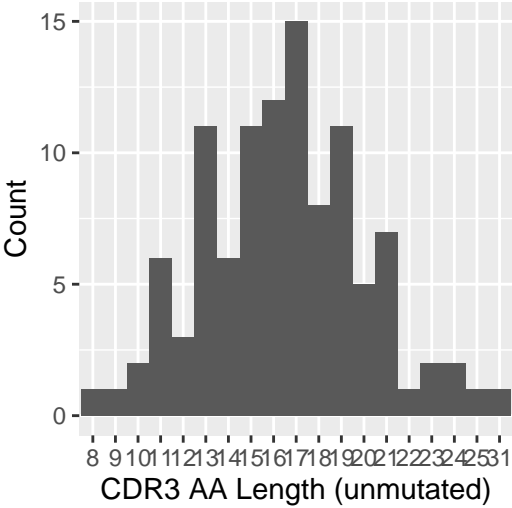


### IGHV5–51\*03

50 sequences assigned  
41 (82%) exact matches, in which:  
41 unique CDR3  
5 unique J



IGHV1-69\*04\_C184T





[illegible]