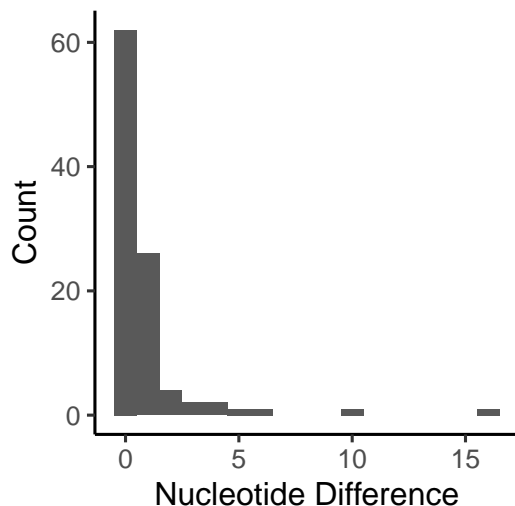


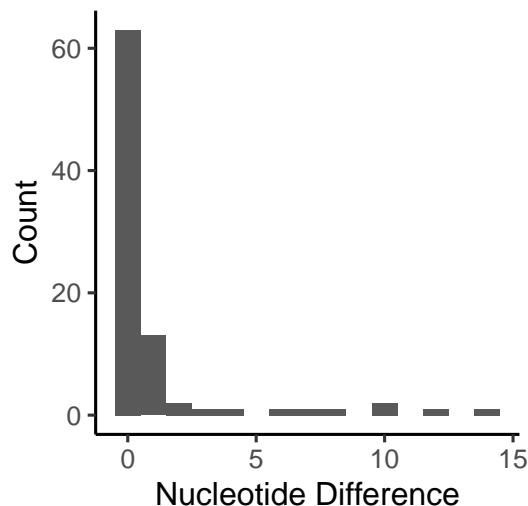
### IGHV1-2\*02

100 sequences assigned  
62 (62%) exact matches, in which:  
62 unique CDR3  
4 unique J



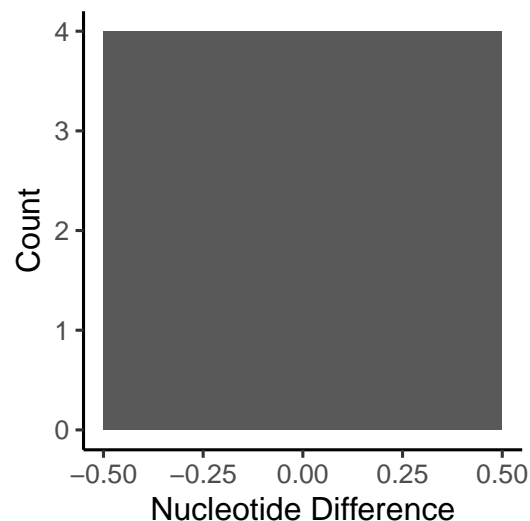
### IGHV1-18\*04

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



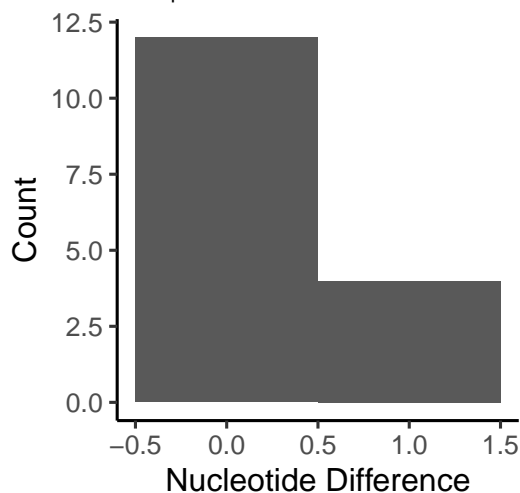
### IGHV1-58\*01

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



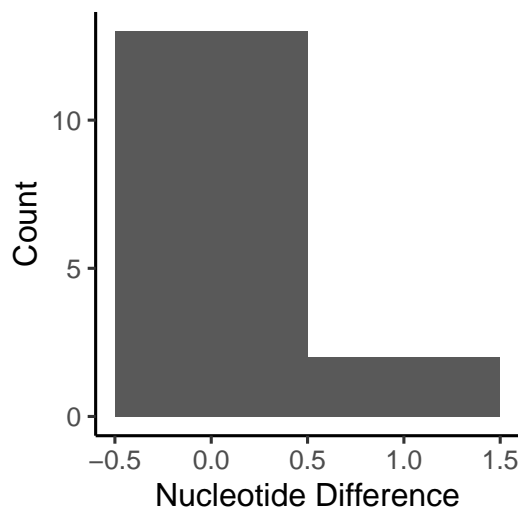
### IGHV1-3\*01

16 sequences assigned  
12 (75%) exact matches, in which:  
12 unique CDR3  
3 unique J



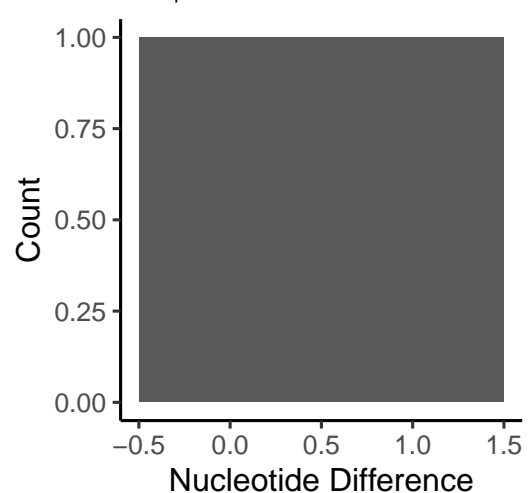
### IGHV1-24\*01

15 sequences assigned  
13 (86.7%) exact matches, in which:  
13 unique CDR3  
5 unique J



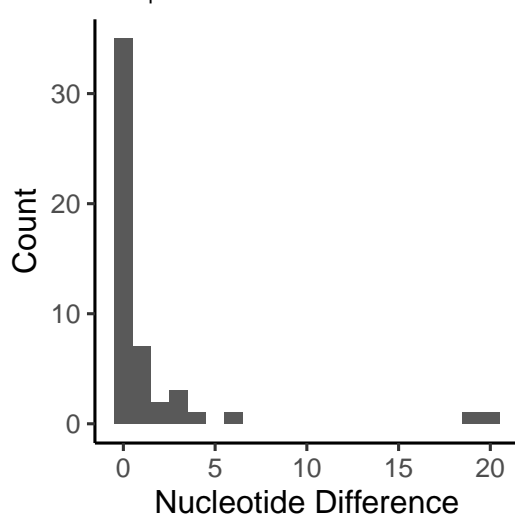
### IGHV1-58\*02

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



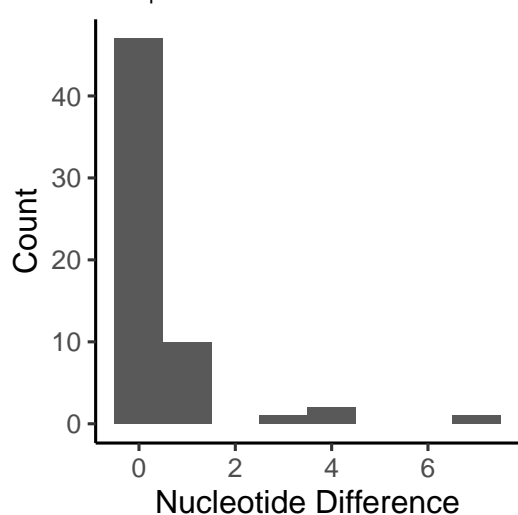
### IGHV1-8\*01

52 sequences assigned  
35 (67.3%) exact matches, in which:  
35 unique CDR3  
4 unique J



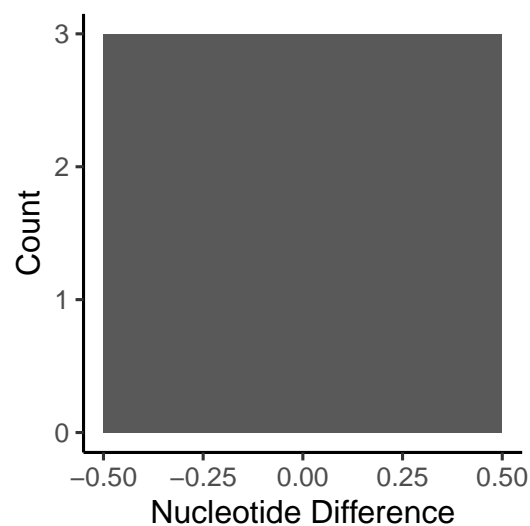
### IGHV1-46\*01

62 sequences assigned  
47 (75.8%) exact matches, in which:  
47 unique CDR3  
6 unique J



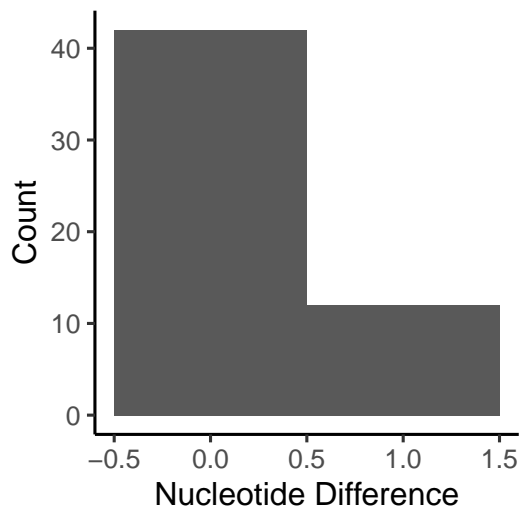
### IGHV1-69-2\*01

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



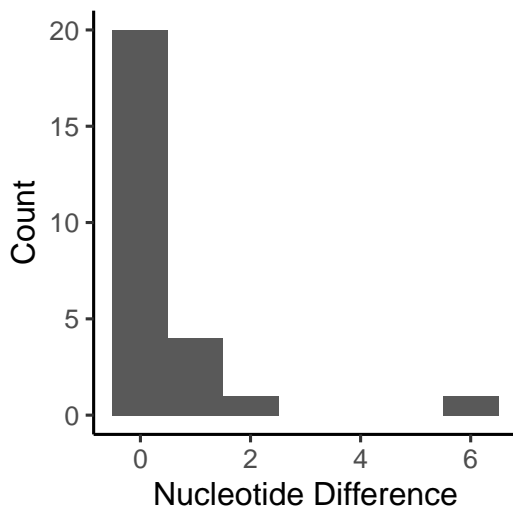
### IGHV1-69\*06

54 sequences assigned  
42 (77.8%) exact matches, in which:  
42 unique CDR3  
6 unique J



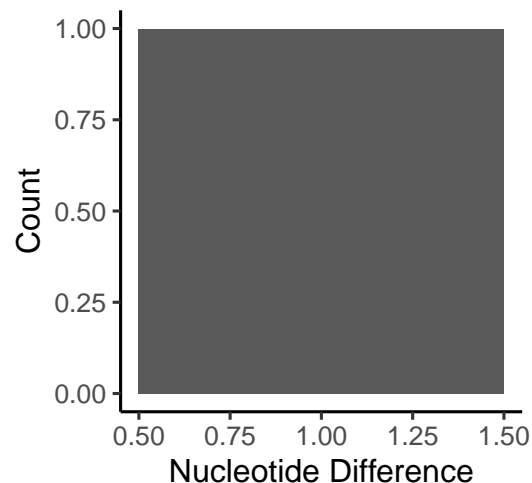
### IGHV2-26\*01

26 sequences assigned  
20 (76.9%) exact matches, in which:  
20 unique CDR3  
5 unique J



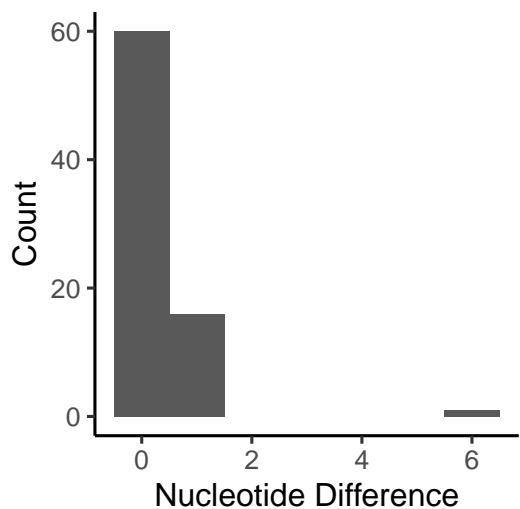
### IGHV2-70D\*04

1 sequences assigned  
No exact matches.



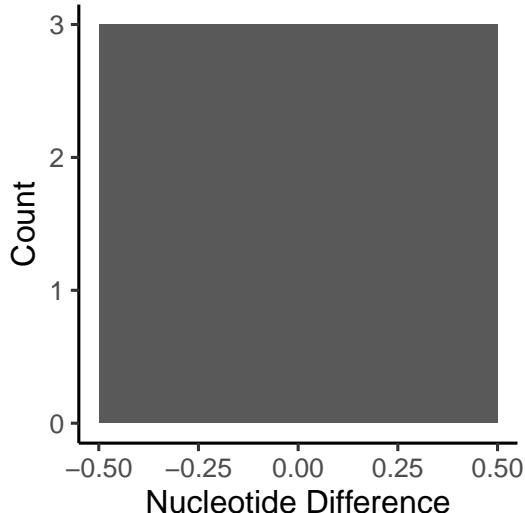
### IGHV1-69\*12

77 sequences assigned  
60 (77.9%) exact matches, in which:  
60 unique CDR3  
5 unique J



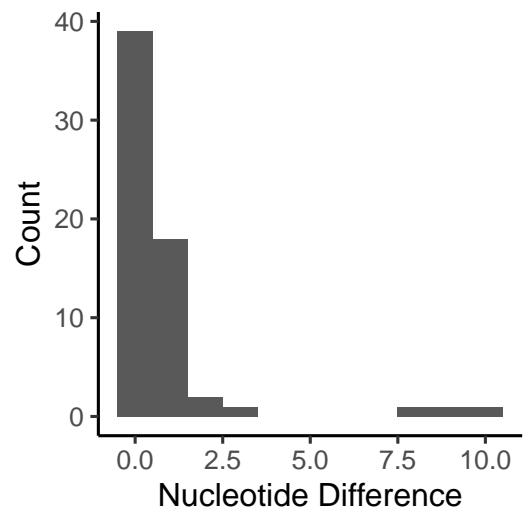
### IGHV2-70\*01

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



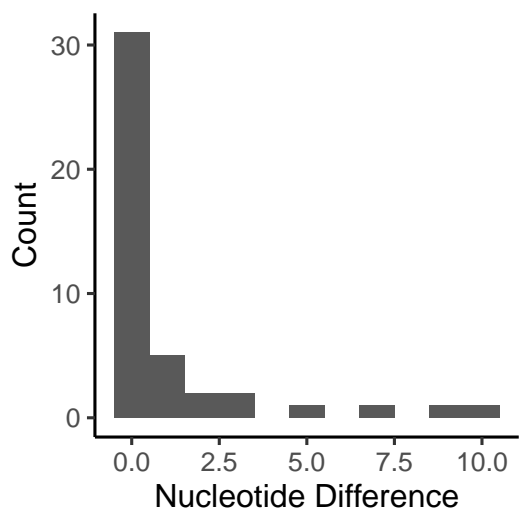
### IGHV3-7\*01

63 sequences assigned  
39 (61.9%) exact matches, in which:  
39 unique CDR3  
6 unique J



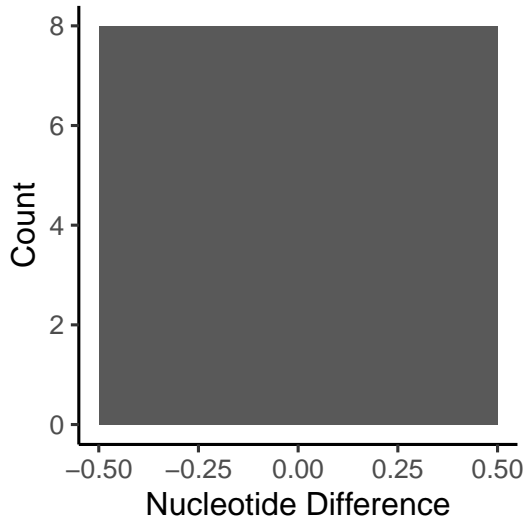
### IGHV2-5\*02

44 sequences assigned  
31 (70.5%) exact matches, in which:  
31 unique CDR3  
6 unique J



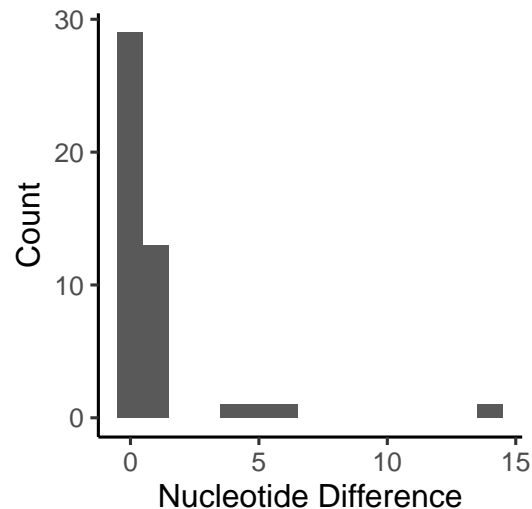
### IGHV2-70\*15

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



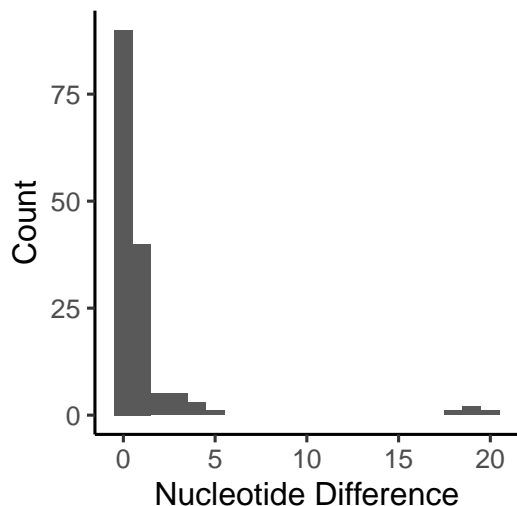
### IGHV3-7\*03

46 sequences assigned  
29 (63%) exact matches, in which:  
29 unique CDR3  
5 unique J



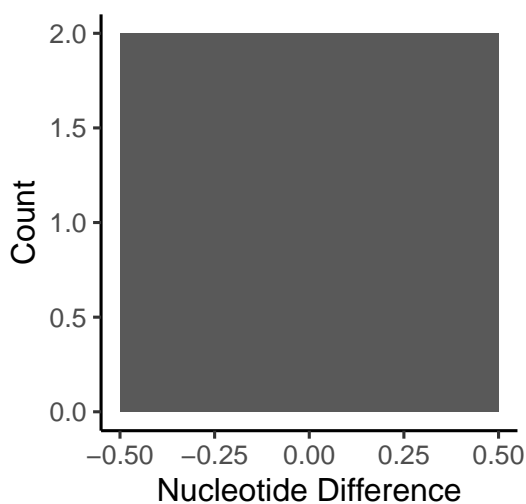
### IGHV3-9\*01

148 sequences assigned  
90 (60.8%) exact matches, in which:  
90 unique CDR3  
6 unique J



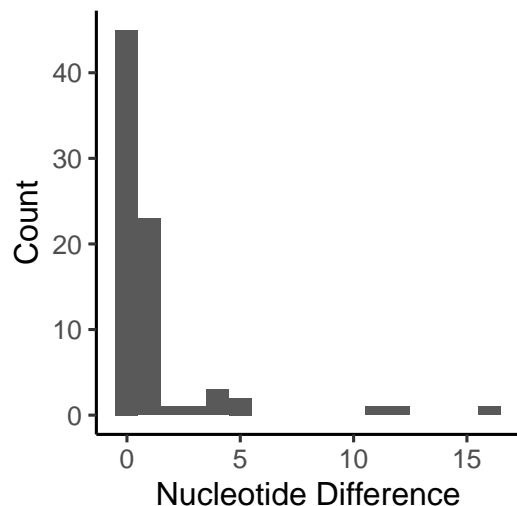
### IGHV3-13\*05

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



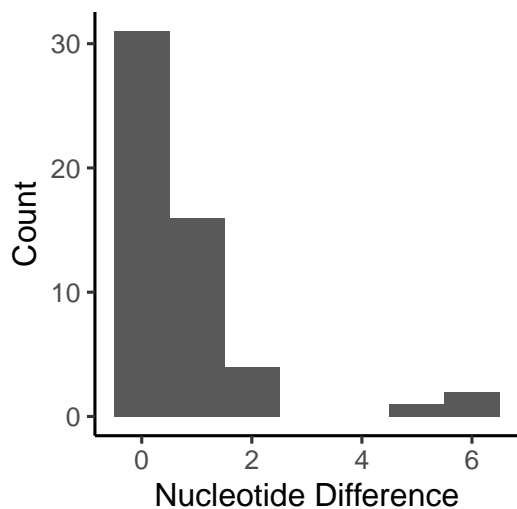
### IGHV3-30-3\*01

78 sequences assigned  
45 (57.7%) exact matches, in which:  
45 unique CDR3  
6 unique J



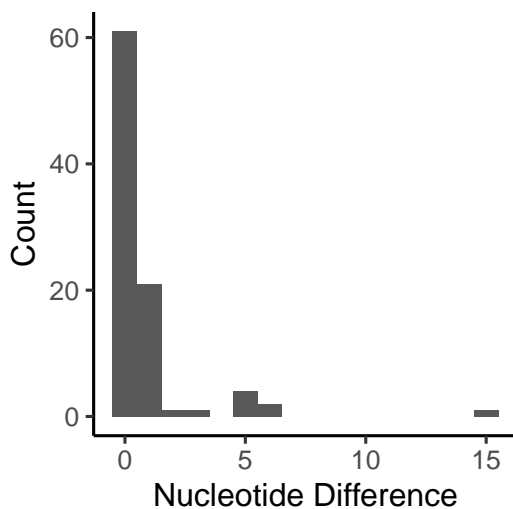
### IGHV3-11\*01

54 sequences assigned  
31 (57.4%) exact matches, in which:  
31 unique CDR3  
5 unique J



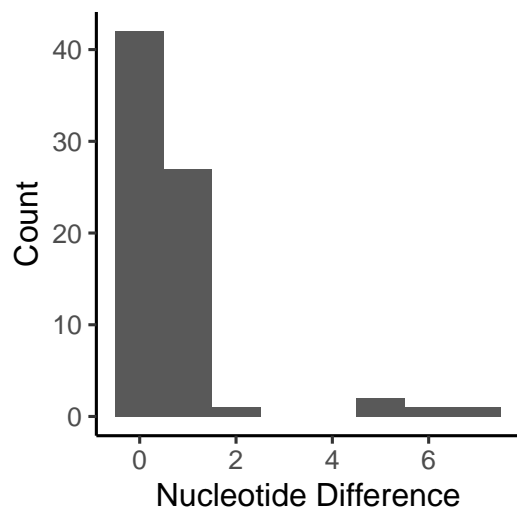
### IGHV3-15\*01

92 sequences assigned  
61 (66.3%) exact matches, in which:  
61 unique CDR3  
5 unique J



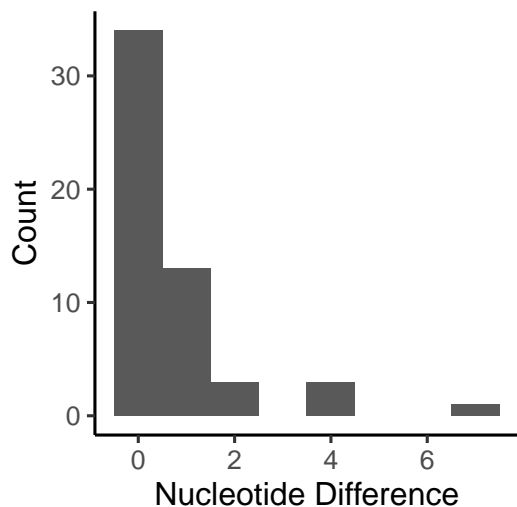
### IGHV3-30\*02\_G49A

74 sequences assigned  
42 (56.8%) exact matches, in which:  
42 unique CDR3  
5 unique J



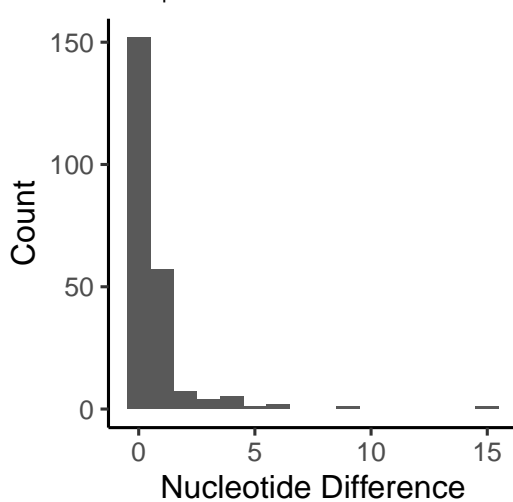
### IGHV3-11\*06

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



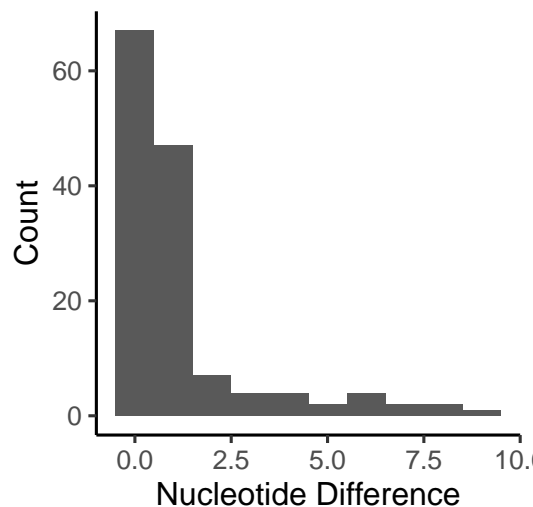
### IGHV3-21\*01

230 sequences assigned  
152 (66.1%) exact matches, in which:  
151 unique CDR3  
7 unique J



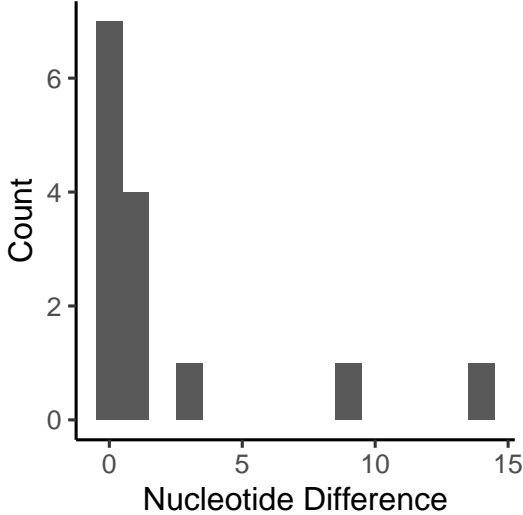
### IGHV3-33\*01

140 sequences assigned  
67 (47.9%) exact matches, in which:  
66 unique CDR3  
6 unique J



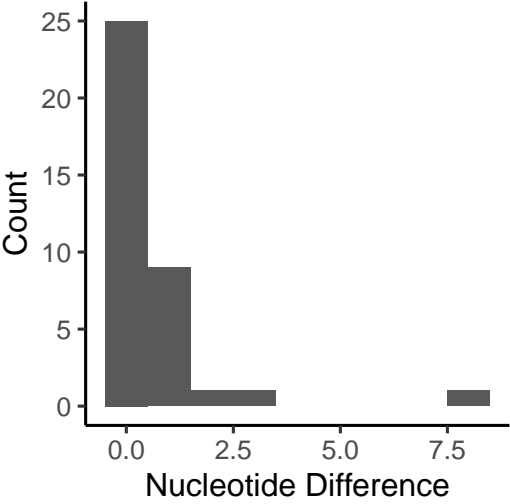
IGHV3-43\*01

14 sequences assigned  
7 (50%) exact matches, in which:  
7 unique CDR3  
3 unique J



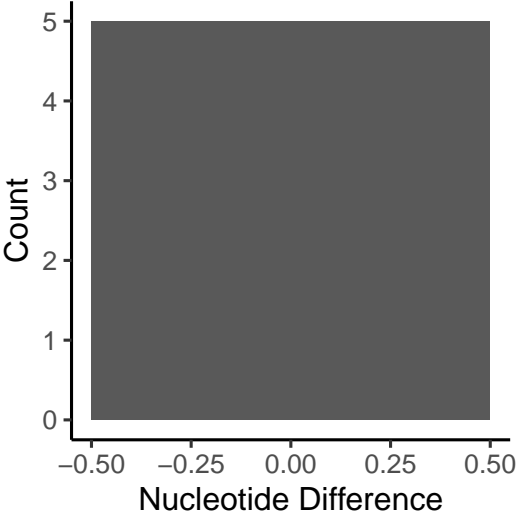
IGHV3-49\*03

37 sequences assigned  
25 (67.6%) exact matches, in which:  
25 unique CDR3  
4 unique J



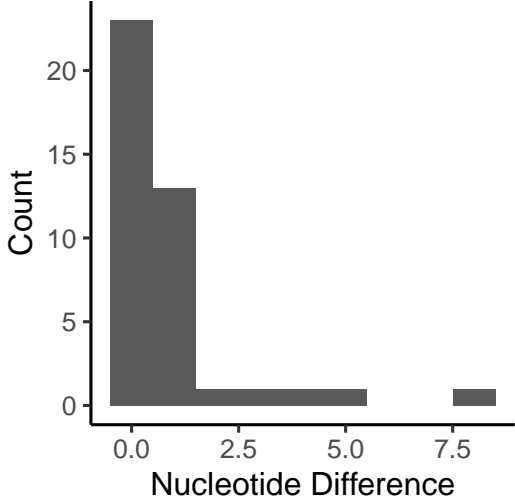
IGHV3-53\*04

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



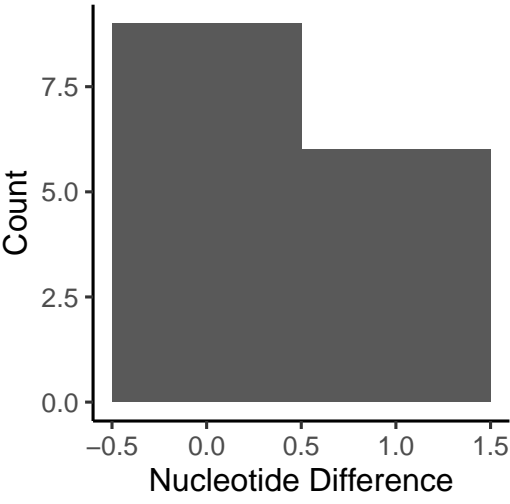
IGHV3-48\*02

41 sequences assigned  
23 (56.1%) exact matches, in which:  
22 unique CDR3  
3 unique J



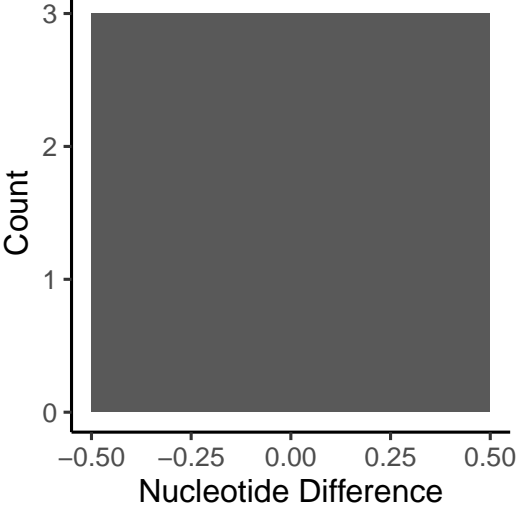
IGHV3-49\*05

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



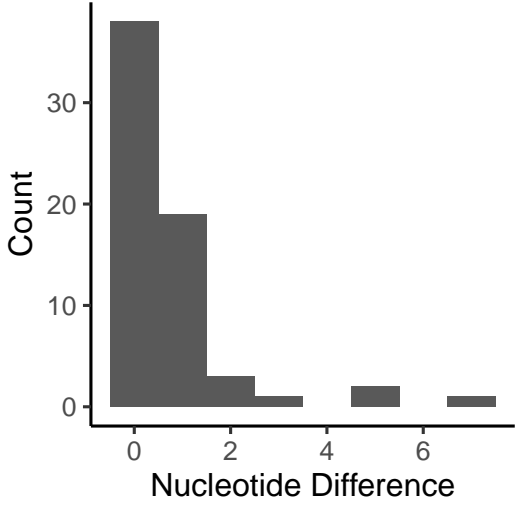
IGHV3-64\*01

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



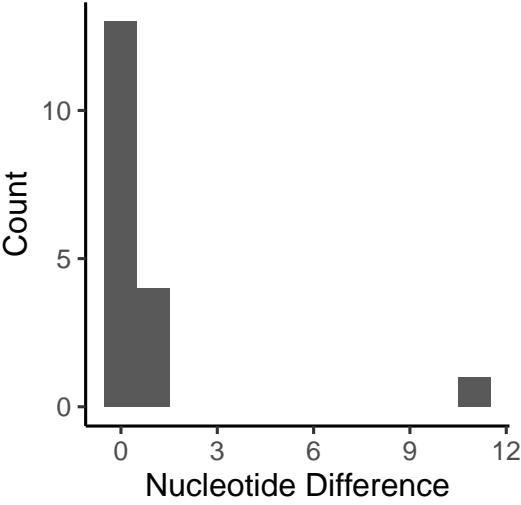
IGHV3-48\*04

64 sequences assigned  
38 (59.4%) exact matches, in which:  
38 unique CDR3  
6 unique J



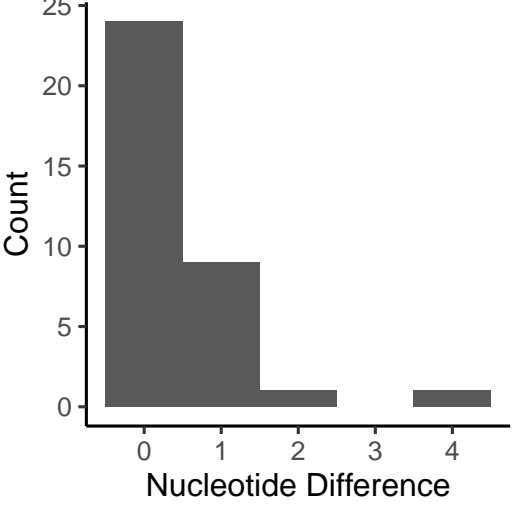
IGHV3-53\*01

18 sequences assigned  
13 (72.2%) exact matches, in which:  
13 unique CDR3  
4 unique J



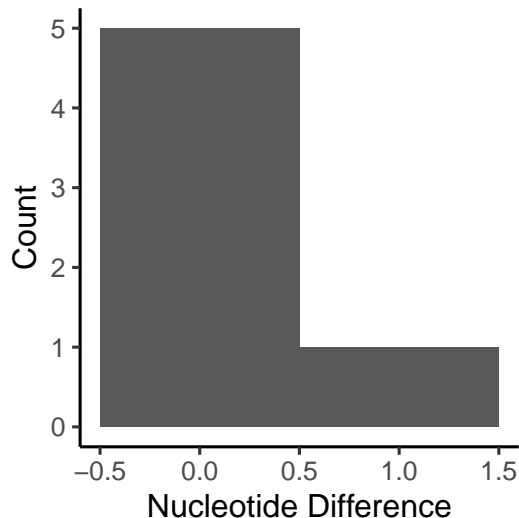
IGHV3-66\*01

35 sequences assigned  
24 (68.6%) exact matches, in which:  
24 unique CDR3  
6 unique J



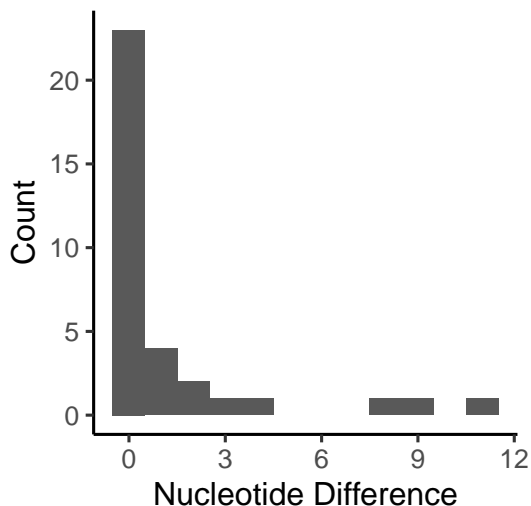
### IGHV3-72\*01

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



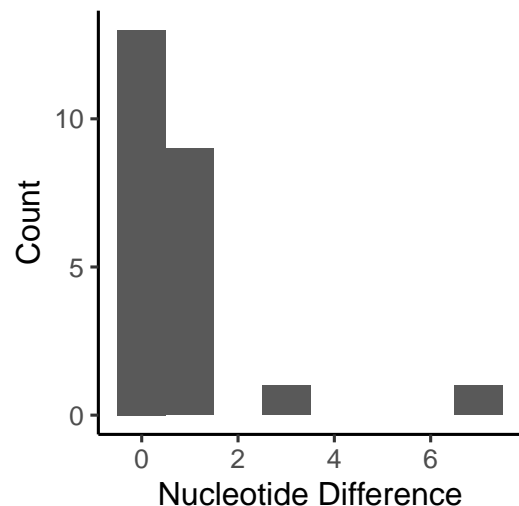
### IGHV3-74\*01

34 sequences assigned  
23 (67.6%) exact matches, in which:  
23 unique CDR3  
3 unique J



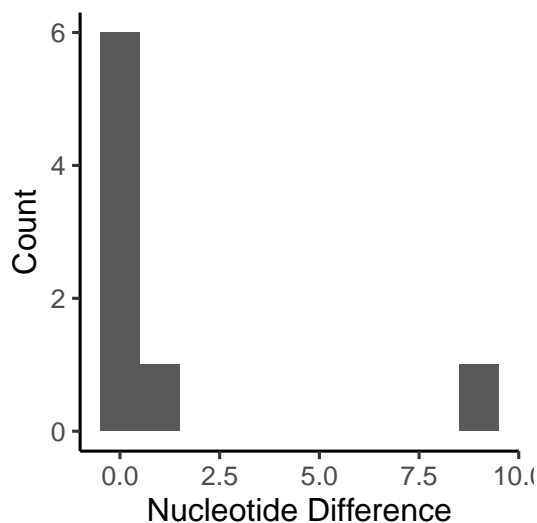
### IGHV4-4\*02

24 sequences assigned  
13 (54.2%) exact matches, in which:  
13 unique CDR3  
5 unique J



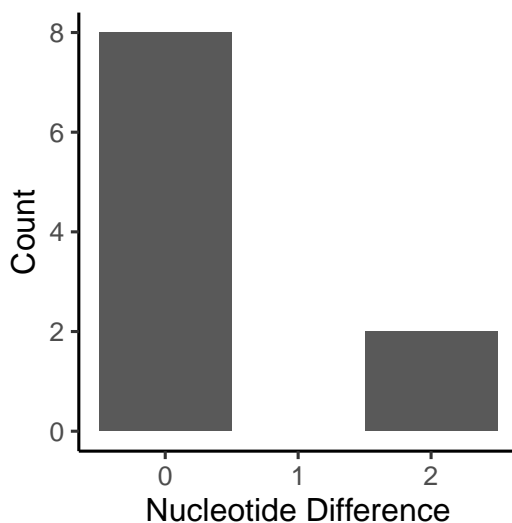
### IGHV3-73\*01

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



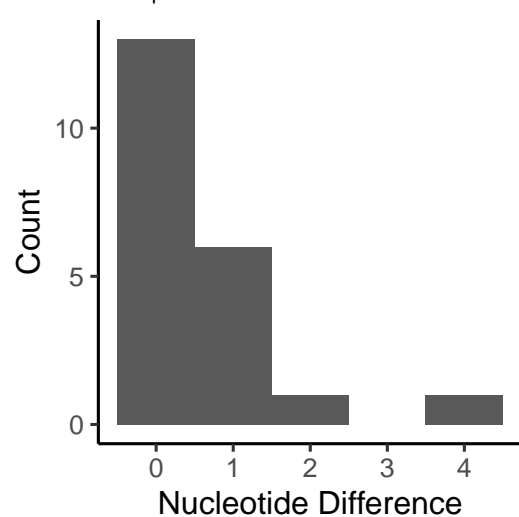
### IGHV3-43D\*03

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



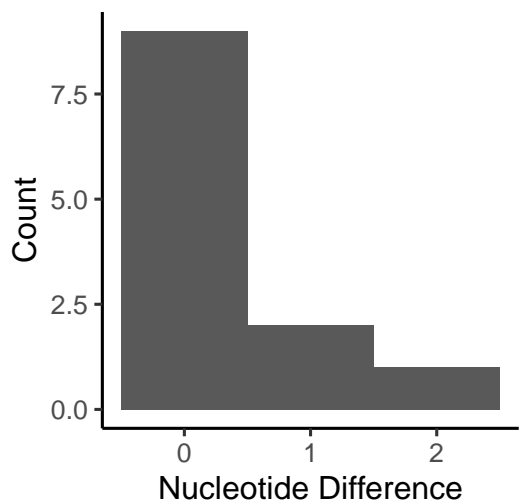
### IGHV4-4\*07

21 sequences assigned  
13 (61.9%) exact matches, in which:  
13 unique CDR3  
5 unique J



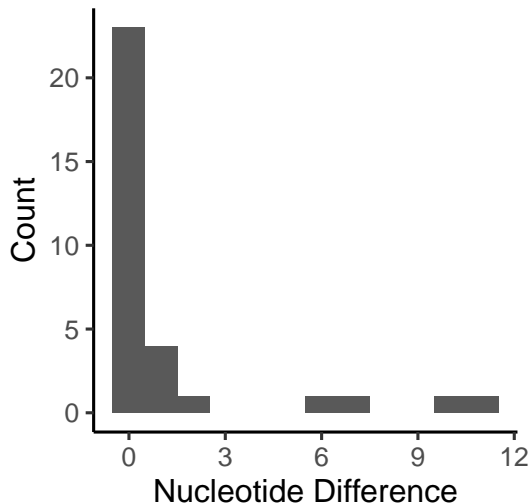
### IGHV3-73\*02

12 sequences assigned  
9 (75%) exact matches, in which:  
9 unique CDR3  
4 unique J



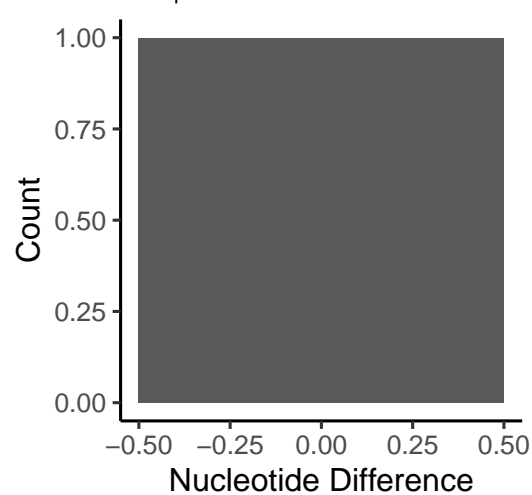
### IGHV3-64D\*06

32 sequences assigned  
23 (71.9%) exact matches, in which:  
22 unique CDR3  
4 unique J



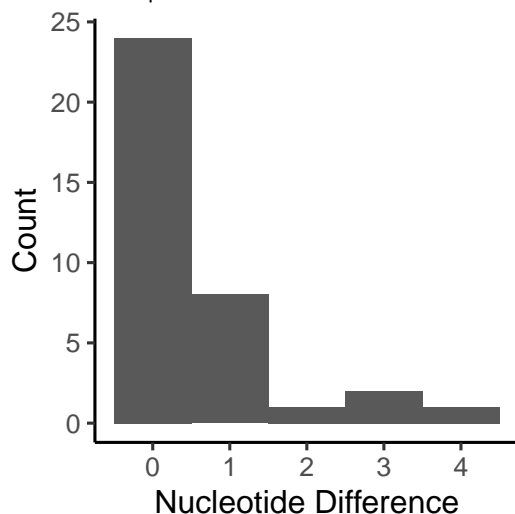
### IGHV4-28\*07

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



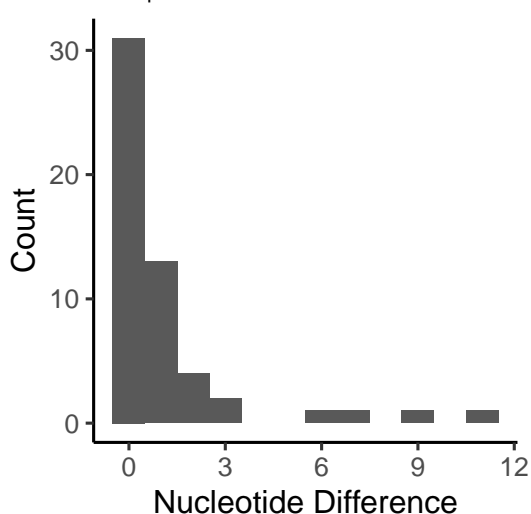
### IGHV4-30-2\*01

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



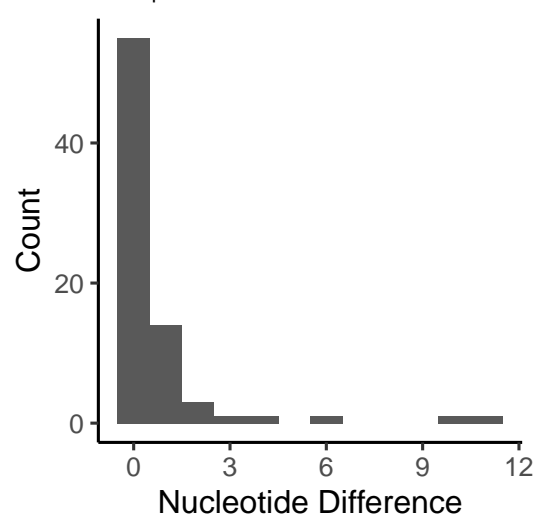
### IGHV4-31\*03

54 sequences assigned  
31 (57.4%) exact matches, in which:  
31 unique CDR3  
5 unique J



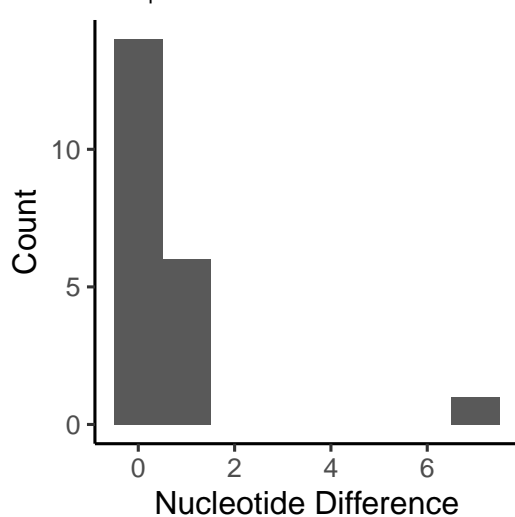
### IGHV4-39\*01

77 sequences assigned  
55 (71.4%) exact matches, in which:  
54 unique CDR3  
6 unique J



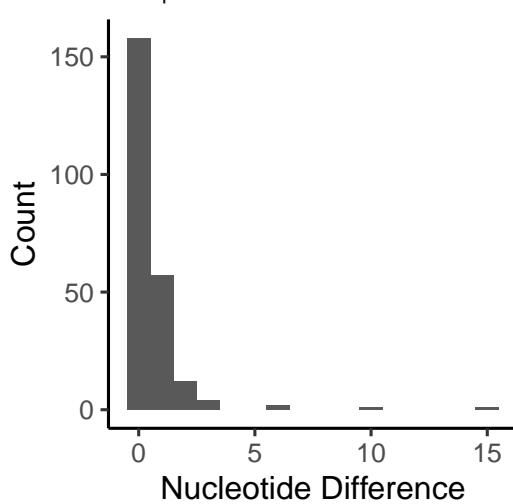
### IGHV4-30-4\*01

21 sequences assigned  
14 (66.7%) exact matches, in which:  
13 unique CDR3  
5 unique J



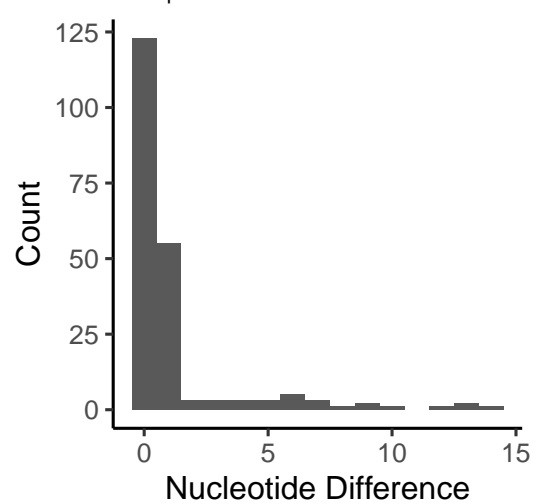
### IGHV4-34\*01

236 sequences assigned  
158 (66.9%) exact matches, in which:  
158 unique CDR3  
6 unique J



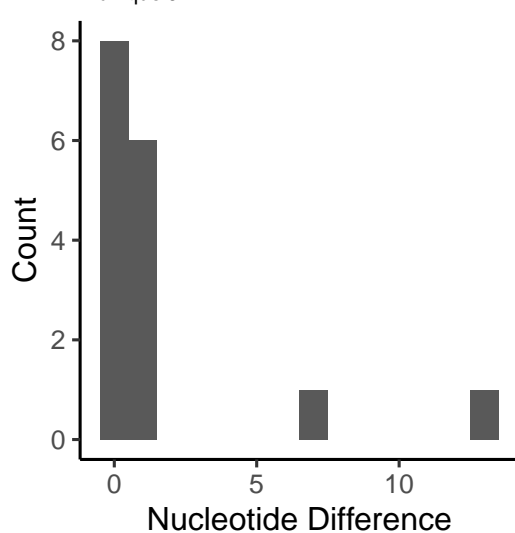
### IGHV4-39\*07

206 sequences assigned  
123 (59.7%) exact matches, in which:  
122 unique CDR3  
5 unique J



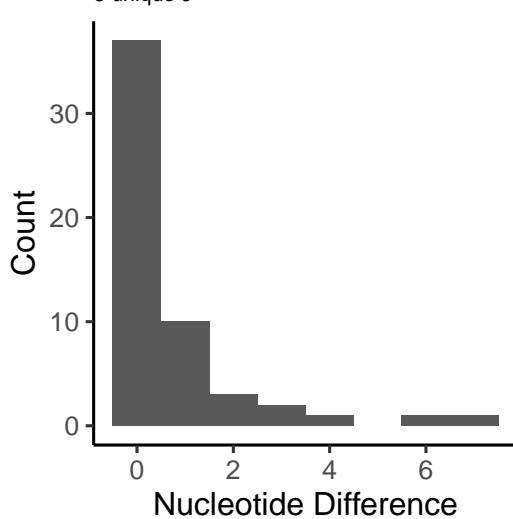
### IGHV4-30-4\*07

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



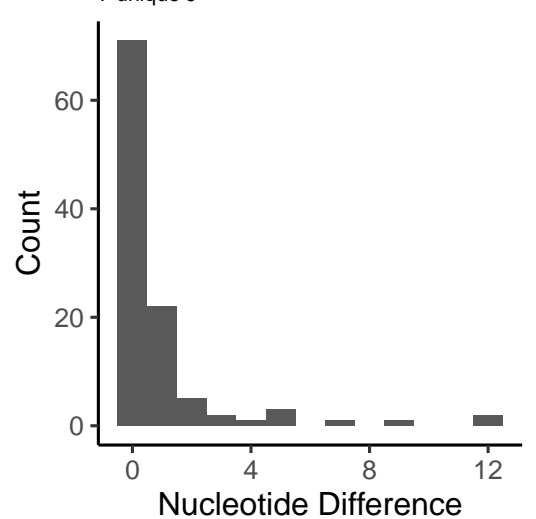
### IGHV4-38-2\*02

55 sequences assigned  
37 (67.3%) exact matches, in which:  
37 unique CDR3  
6 unique J



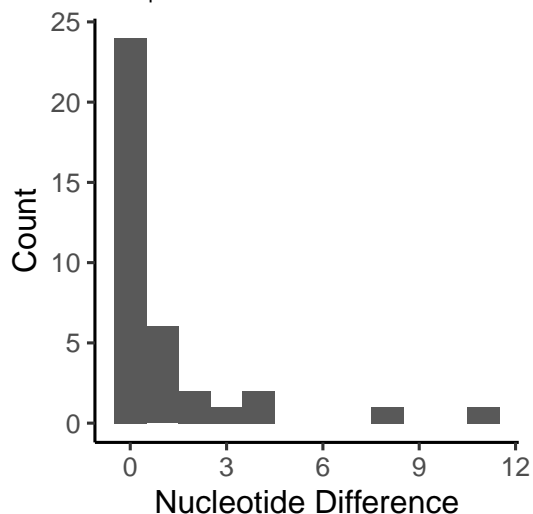
### IGHV4-59\*01

108 sequences assigned  
71 (65.7%) exact matches, in which:  
71 unique CDR3  
7 unique J



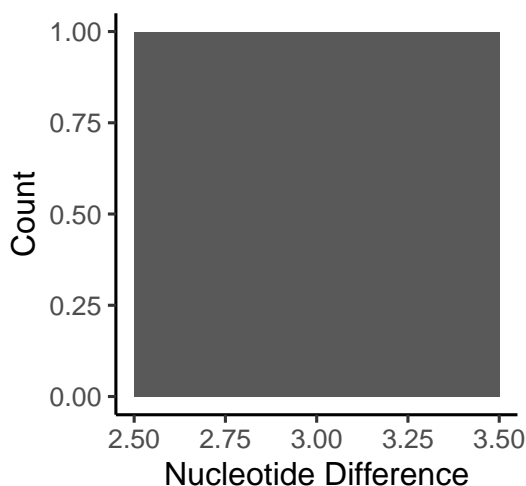
### IGHV4–59\*08

37 sequences assigned  
24 (64.9%) exact matches, in which:  
24 unique CDR3  
5 unique J



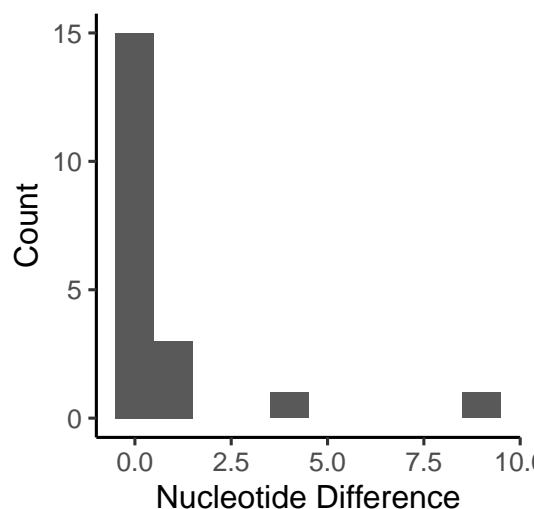
### IGHV4/OR15–8\*02

1 sequences assigned  
No exact matches.



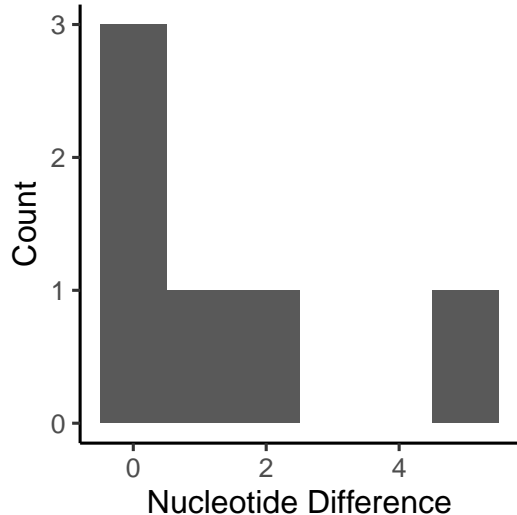
### IGHV6–1\*01

20 sequences assigned  
15 (75%) exact matches, in which:  
15 unique CDR3  
6 unique J



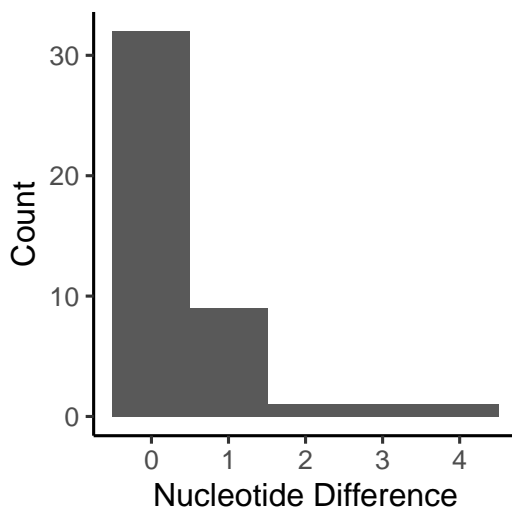
### IGHV4–61\*01

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



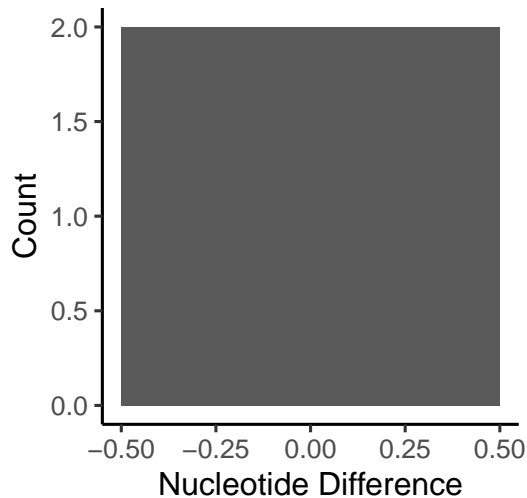
### IGHV5–10–1\*03

44 sequences assigned  
32 (72.7%) exact matches, in which:  
32 unique CDR3  
5 unique J



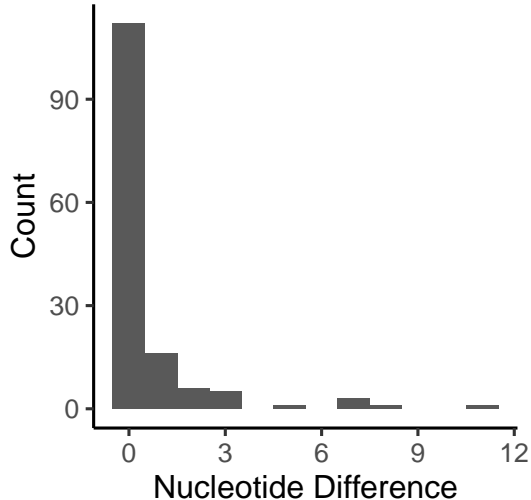
### IGHV4–61\*07

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

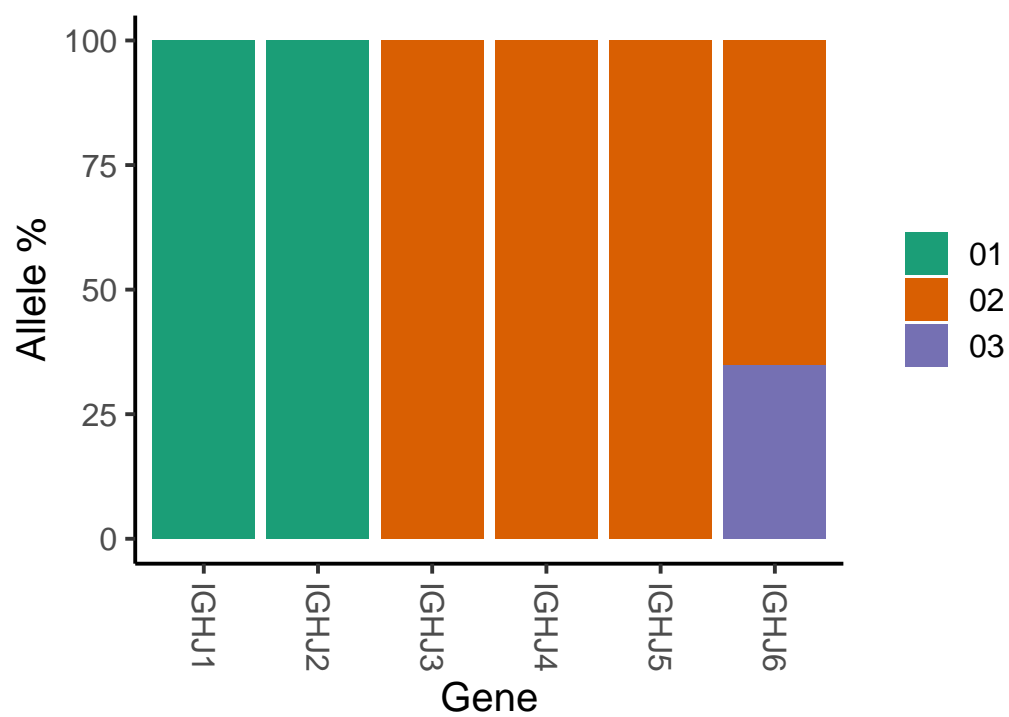


### IGHV5–51\*01

146 sequences assigned  
112 (76.7%) exact matches, in which:  
112 unique CDR3  
7 unique J

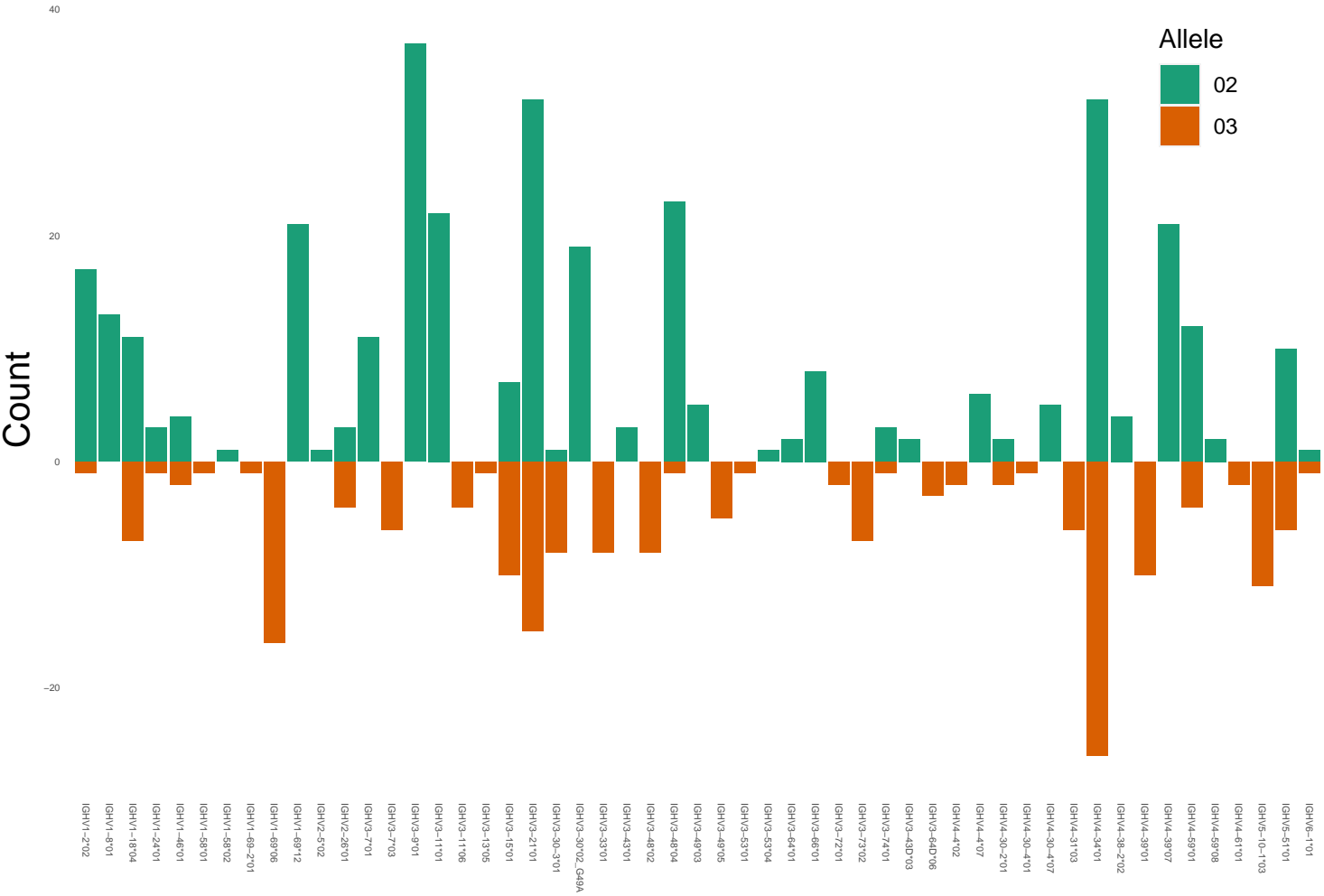


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.