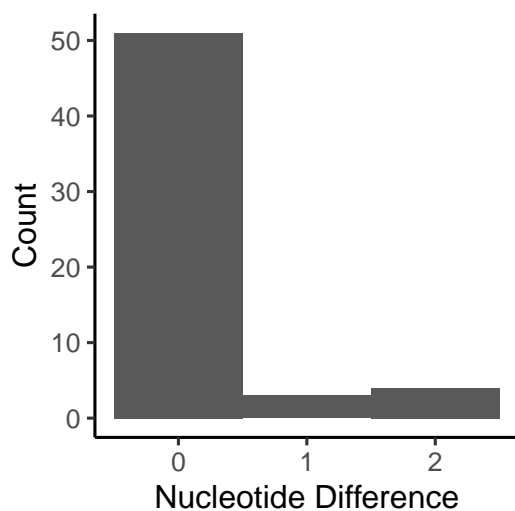


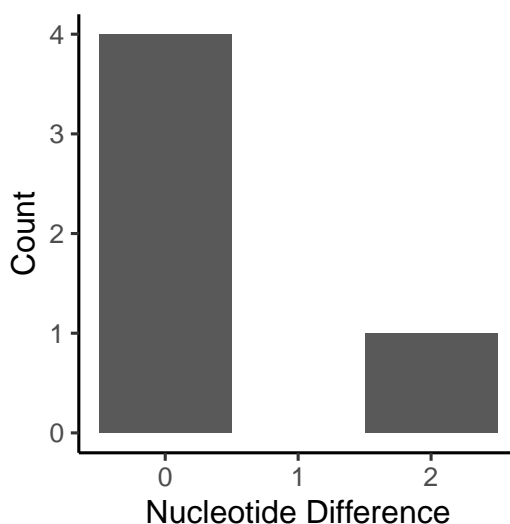
### IGHV1-2\*02

58 sequences assigned  
51 (87.9%) exact matches, in which:  
49 unique CDR3  
6 unique J



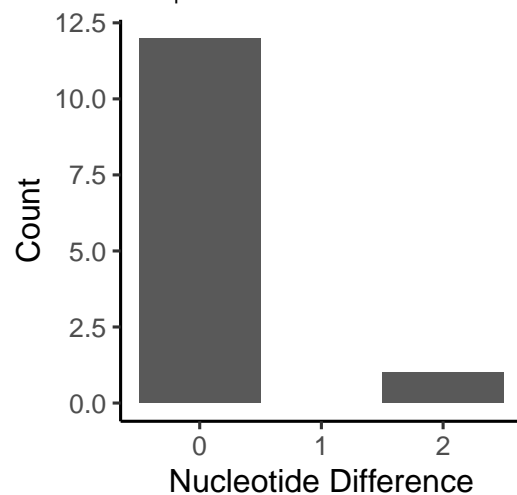
### IGHV1-3\*01\_05

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



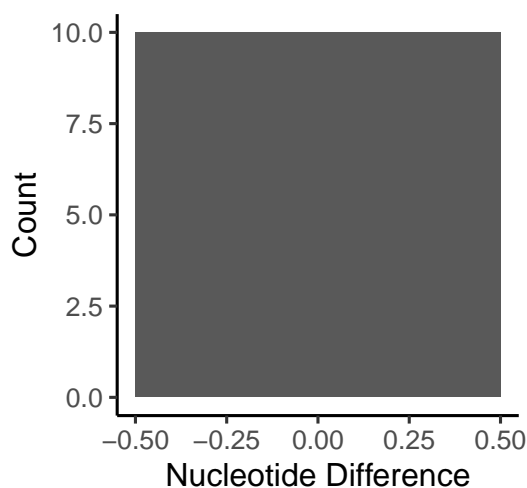
### IGHV1-24\*01

13 sequences assigned  
12 (92.3%) exact matches, in which:  
12 unique CDR3  
4 unique J



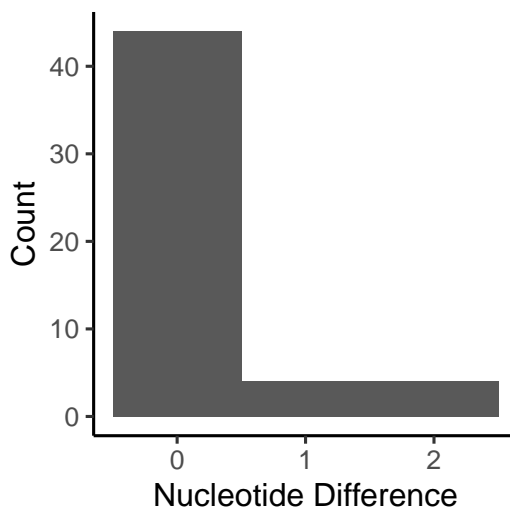
### IGHV1-2\*04

10 sequences assigned  
10 (100%) exact matches, in which:  
10 unique CDR3  
4 unique J



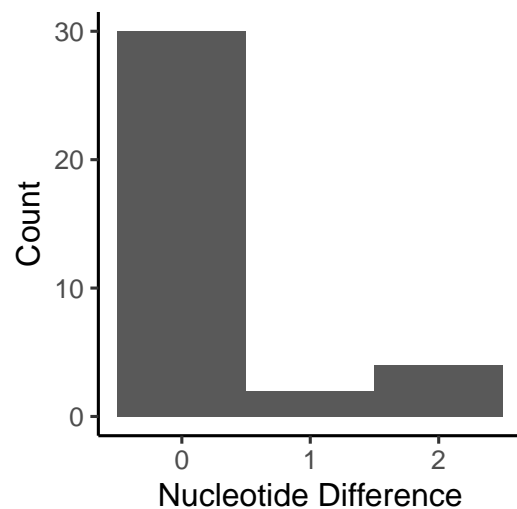
### IGHV1-8\*01

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



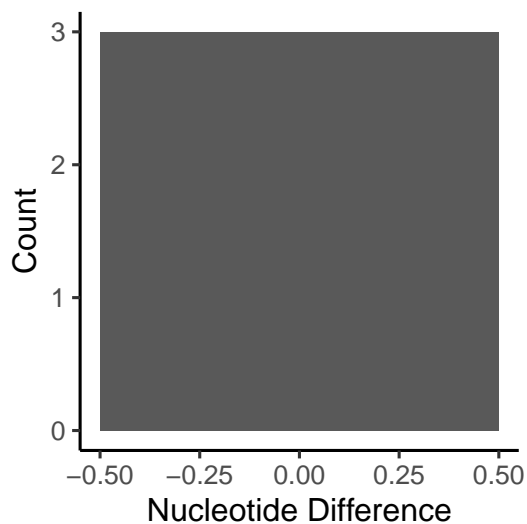
### IGHV1-46\*01

36 sequences assigned  
30 (83.3%) exact matches, in which:  
30 unique CDR3  
6 unique J



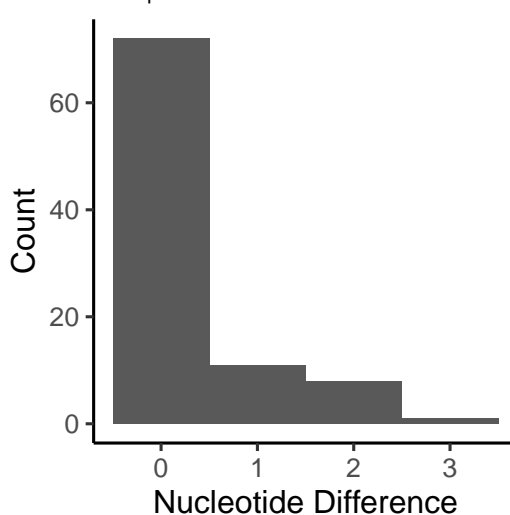
### IGHV1-3\*03

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



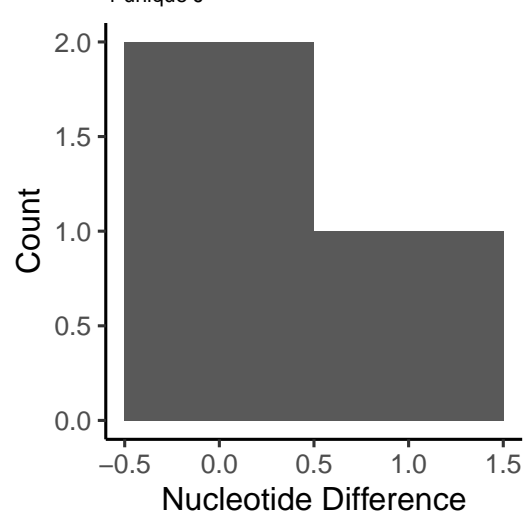
### IGHV1-18\*01

92 sequences assigned  
72 (78.3%) exact matches, in which:  
72 unique CDR3  
7 unique J



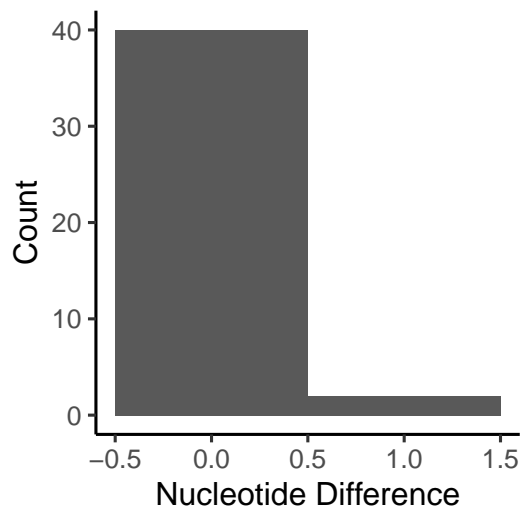
### IGHV1-69-2\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



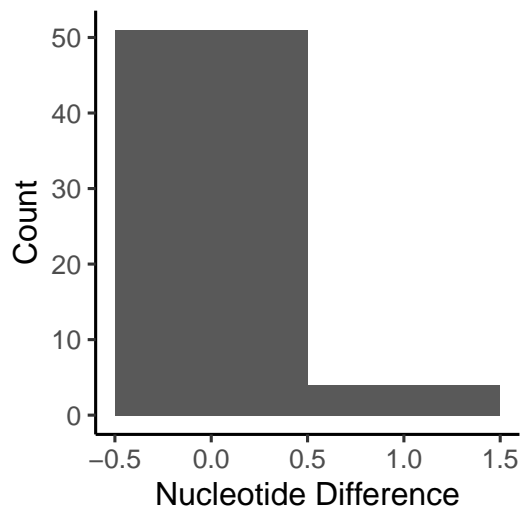
### IGHV1-69\*02

42 sequences assigned  
40 (95.2%) exact matches, in which:  
40 unique CDR3  
6 unique J



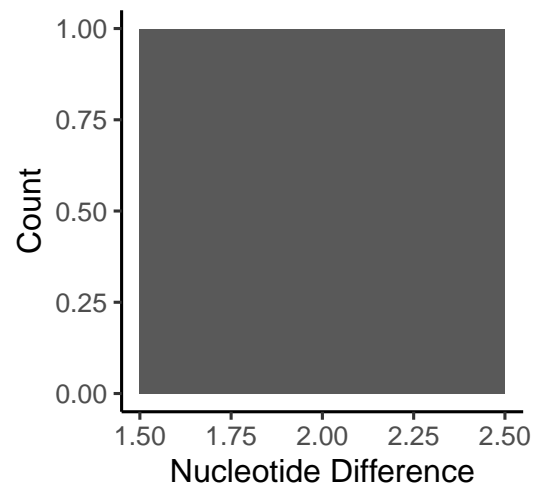
### IGHV1-69\*15\_18

55 sequences assigned  
51 (92.7%) exact matches, in which:  
51 unique CDR3  
6 unique J



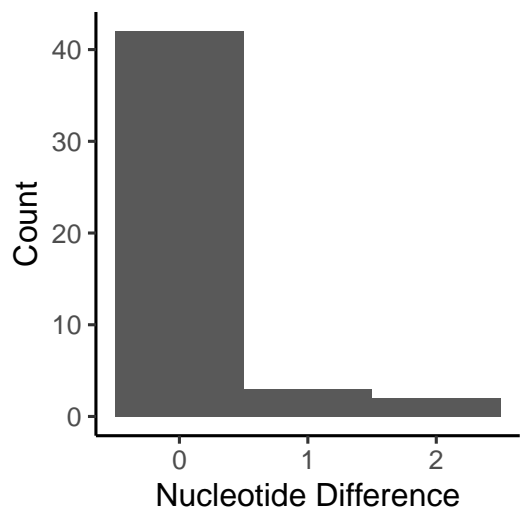
### IGHV2-26\*01

1 sequences assigned  
No exact matches.



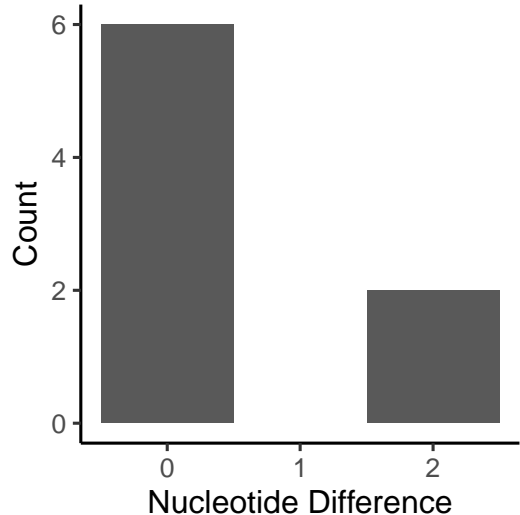
### IGHV1-69\*05

47 sequences assigned  
42 (89.4%) exact matches, in which:  
42 unique CDR3  
5 unique J



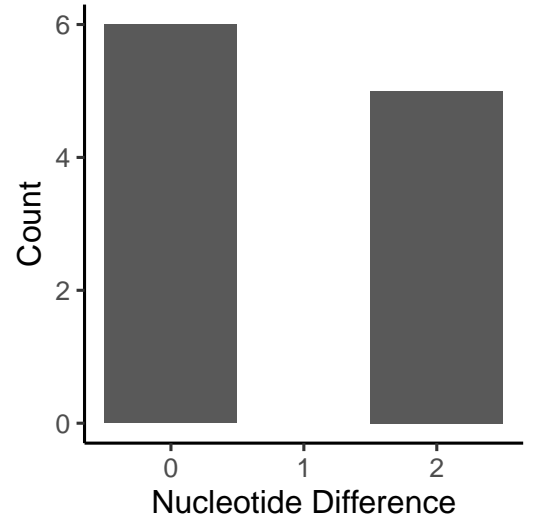
### IGHV2-5\*01

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



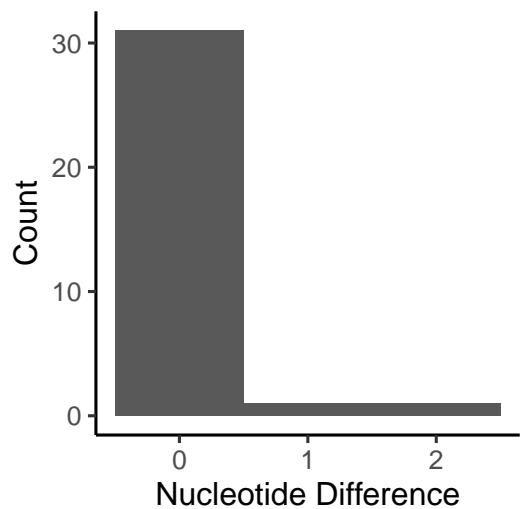
### IGHV2-70\*04

11 sequences assigned  
6 (54.5%) exact matches, in which:  
6 unique CDR3  
2 unique J



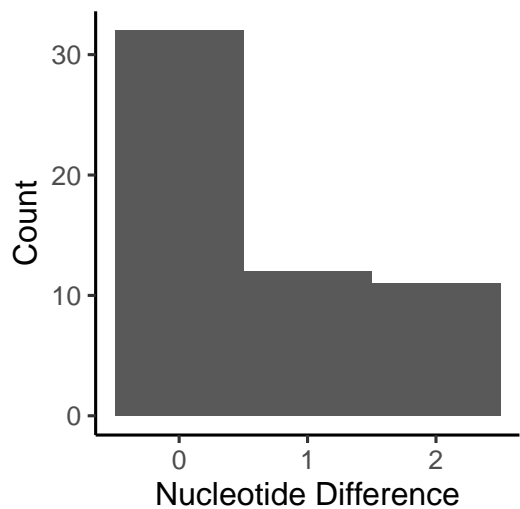
### IGHV1-69\*01\_12\_13

33 sequences assigned  
31 (93.9%) exact matches, in which:  
31 unique CDR3  
5 unique J



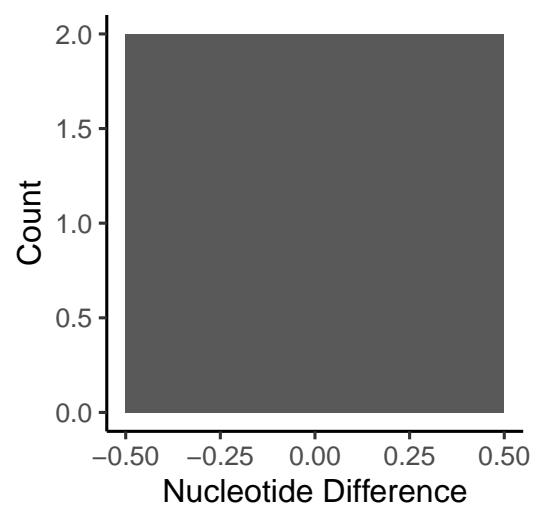
### IGHV2-5\*02

55 sequences assigned  
32 (58.2%) exact matches, in which:  
31 unique CDR3  
4 unique J



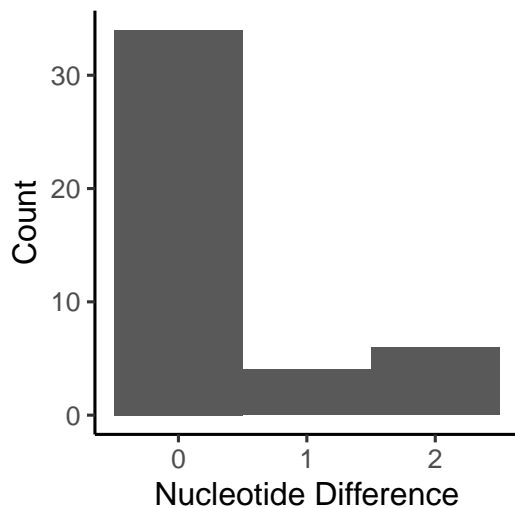
### IGHV2-70\*20

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



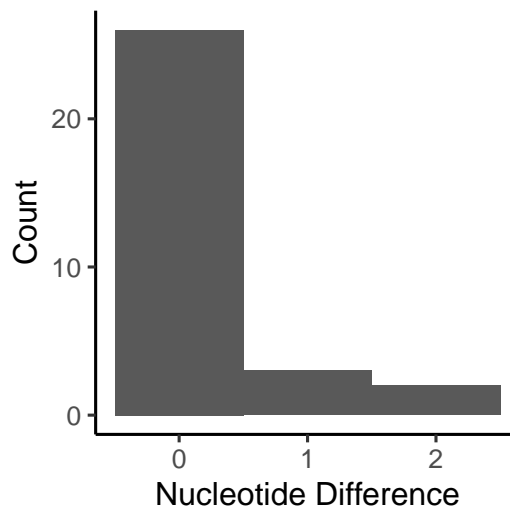
### IGHV3-7\*01

44 sequences assigned  
34 (77.3%) exact matches, in which:  
32 unique CDR3  
4 unique J



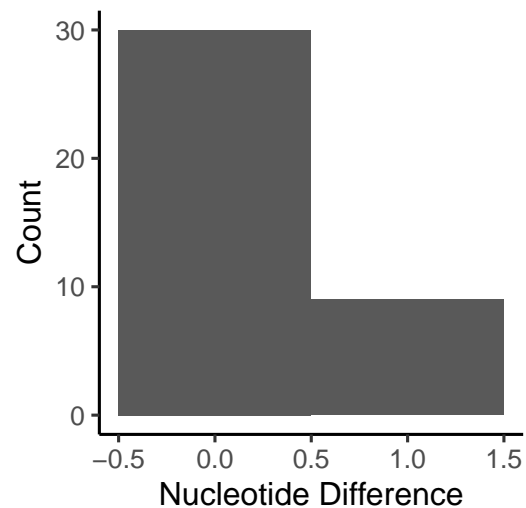
### IGHV3-11\*01

31 sequences assigned  
26 (83.9%) exact matches, in which:  
25 unique CDR3  
5 unique J



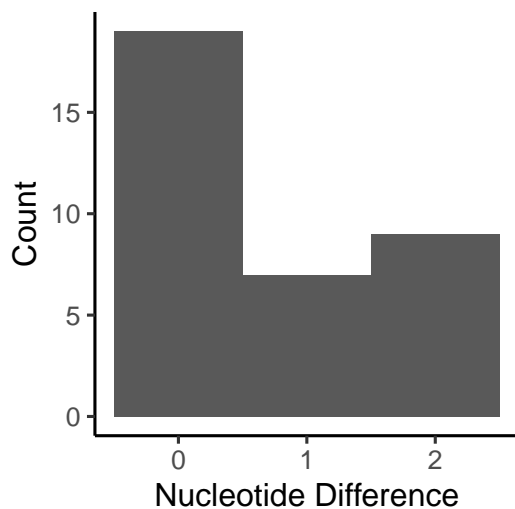
### IGHV3-20\*03\_04

39 sequences assigned  
30 (76.9%) exact matches, in which:  
28 unique CDR3  
6 unique J



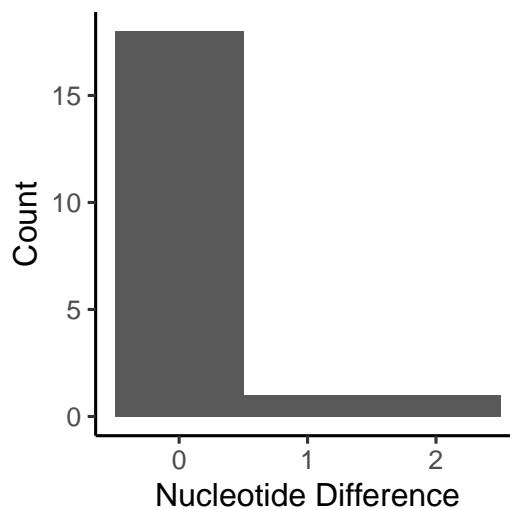
### IGHV3-7\*03

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



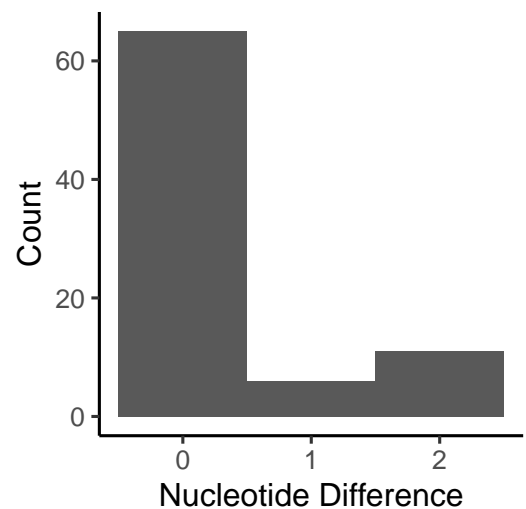
### IGHV3-11\*04

20 sequences assigned  
18 (90%) exact matches, in which:  
18 unique CDR3  
4 unique J



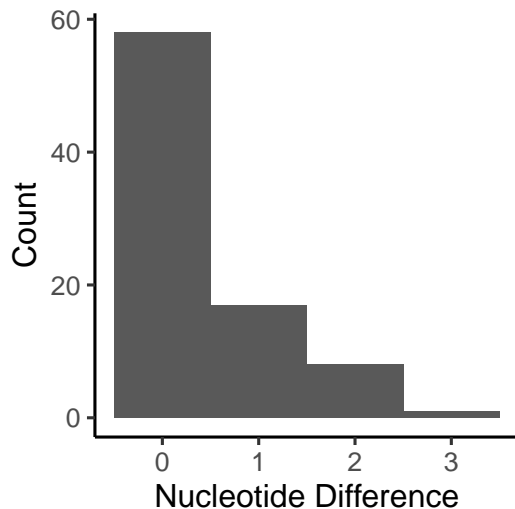
### IGHV3-21\*03

82 sequences assigned  
65 (79.3%) exact matches, in which:  
61 unique CDR3  
6 unique J



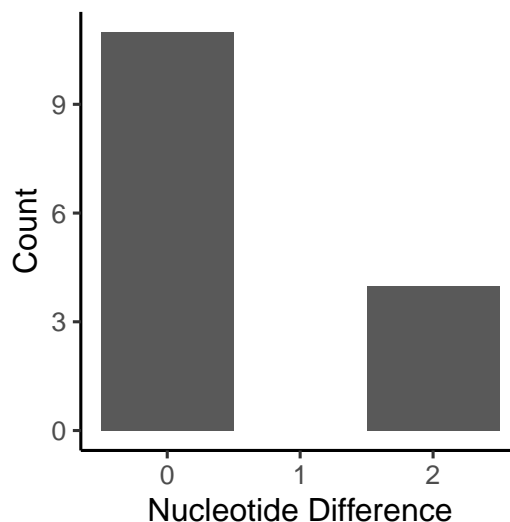
### IGHV3-9\*01

84 sequences assigned  
58 (69%) exact matches, in which:  
52 unique CDR3  
6 unique J



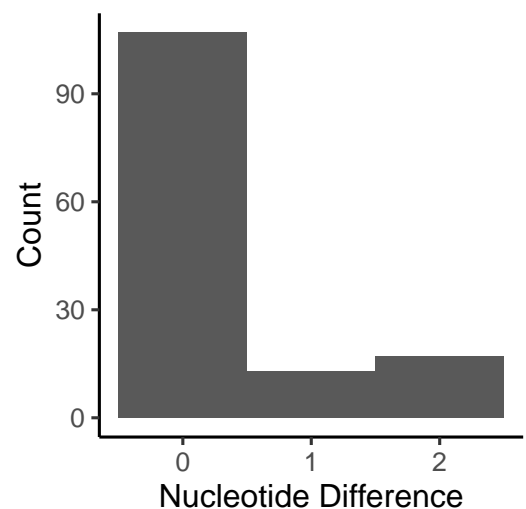
### IGHV3-15\*01\_02

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



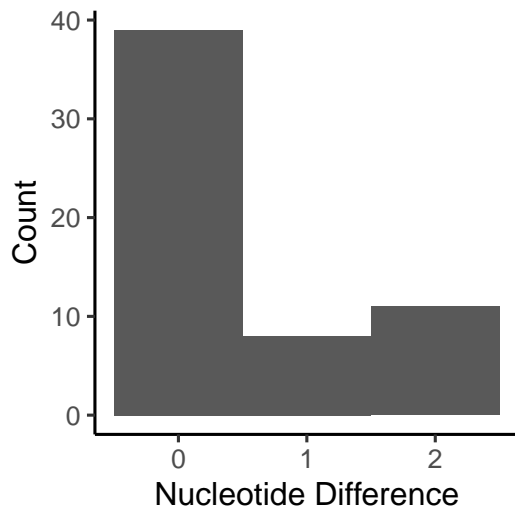
### IGHV3-23\*01\_04

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



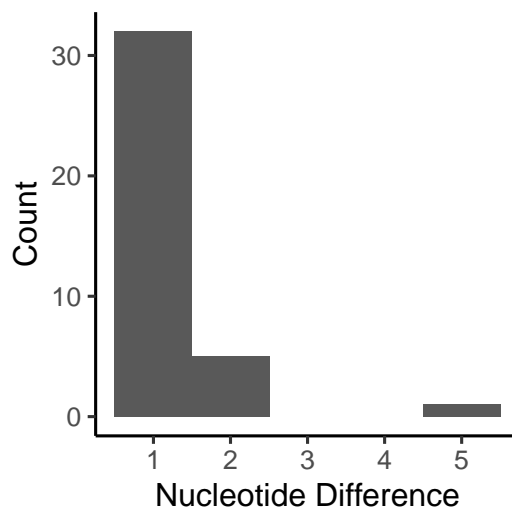
### IGHV3-30\*02

58 sequences assigned  
39 (67.2%) exact matches, in which:  
38 unique CDR3  
6 unique J



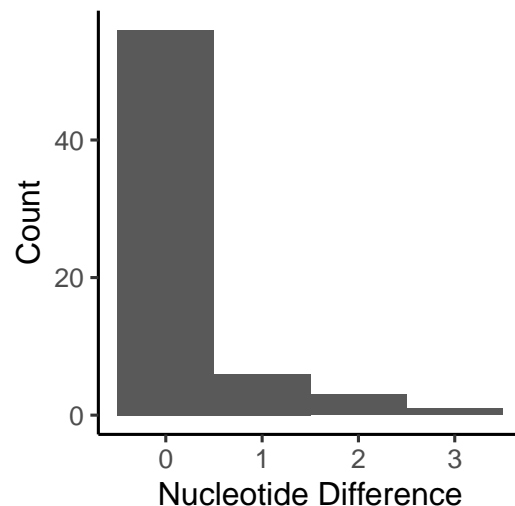
### IGHV3-33\*06

38 sequences assigned  
No exact matches.



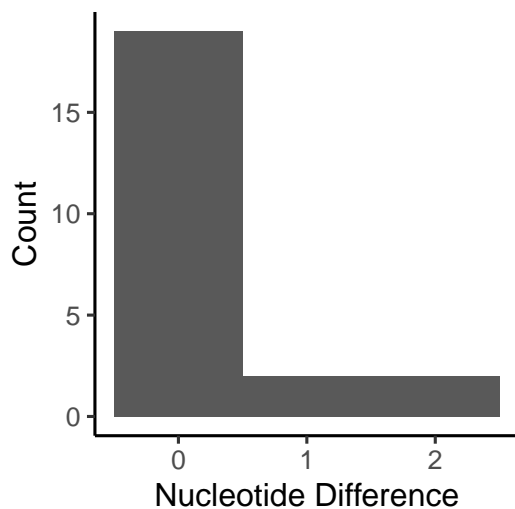
### IGHV3-48\*04

66 sequences assigned  
56 (84.8%) exact matches, in which:  
48 unique CDR3  
5 unique J



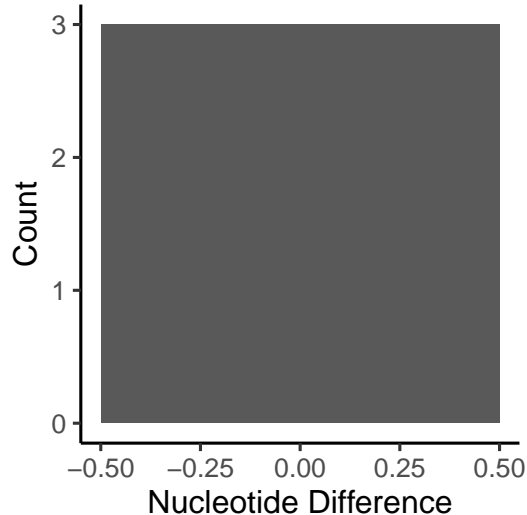
### IGHV3-30\*04

23 sequences assigned  
19 (82.6%) exact matches, in which:  
17 unique CDR3  
4 unique J



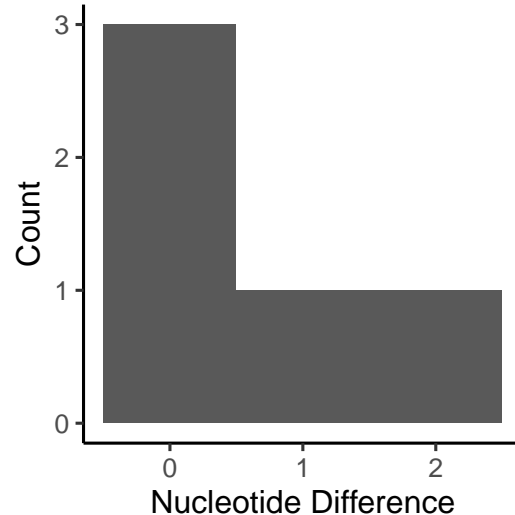
### IGHV3-43\*01

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



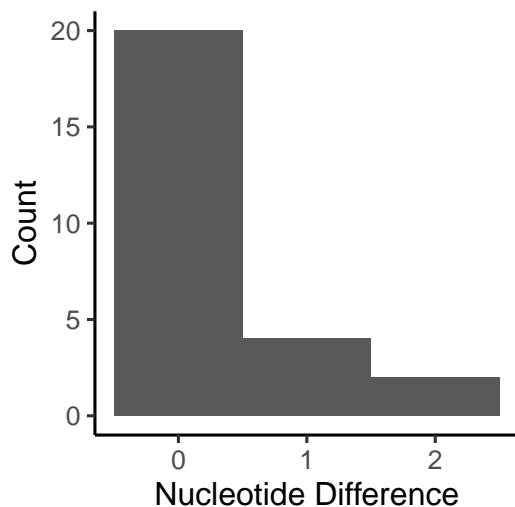
### IGHV3-49\*04

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
2 unique J



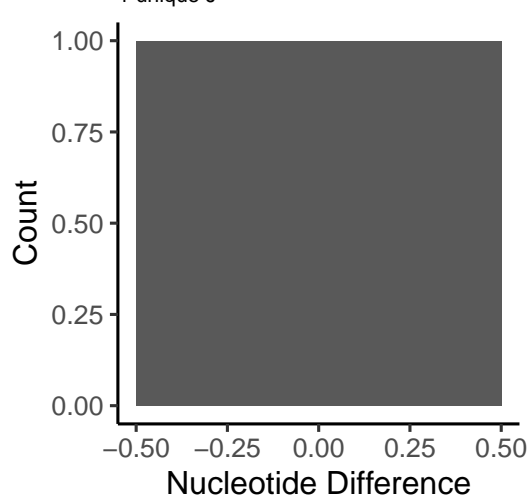
### IGHV3-33\*01

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



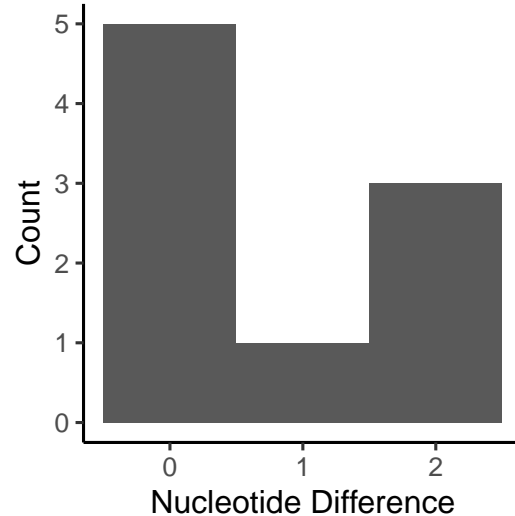
### IGHV3-47\*02

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



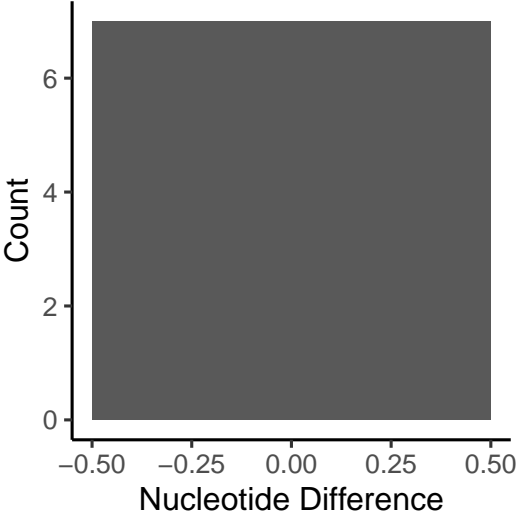
### IGHV3-49\*03\_05

9 sequences assigned  
5 (55.6%) exact matches, in which:  
4 unique CDR3  
3 unique J



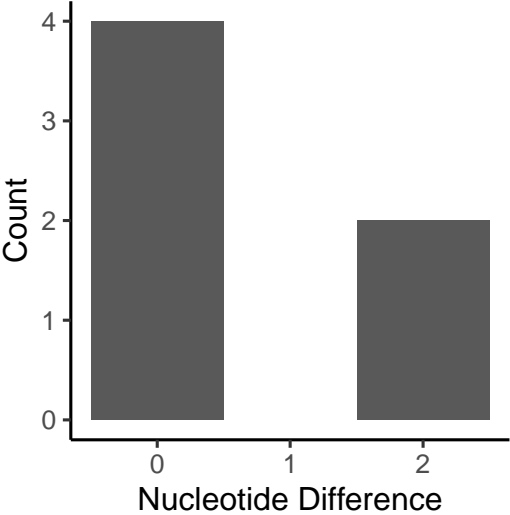
IGHV3-53\*04

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



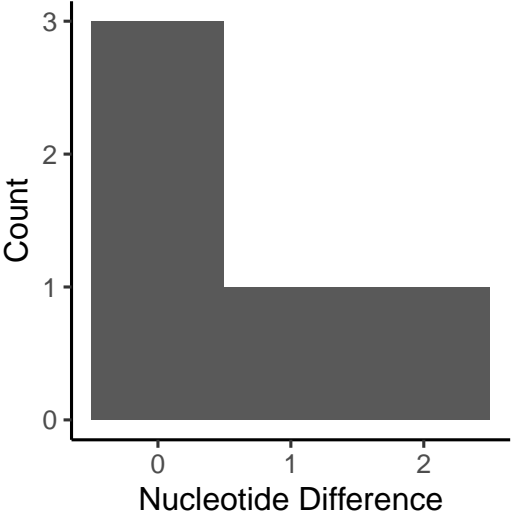
IGHV3-64\*02\_07

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



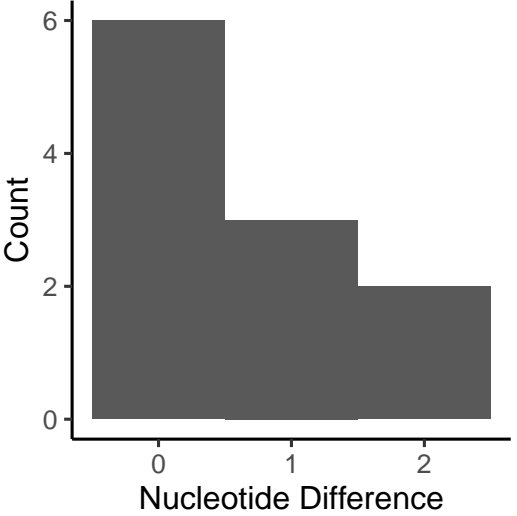
IGHV3-73\*01\_02

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
3 unique J



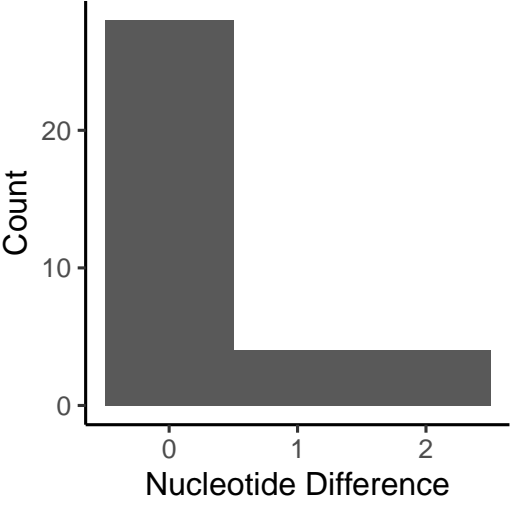
IGHV3-53\*01\_02

11 sequences assigned  
6 (54.5%) exact matches, in which:  
6 unique CDR3  
3 unique J



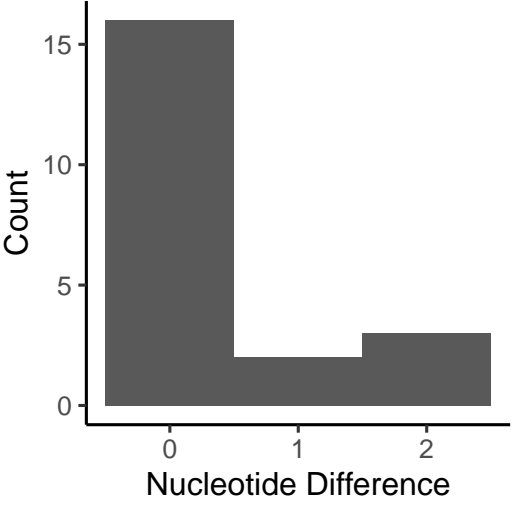
IGHV3-66\*02

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



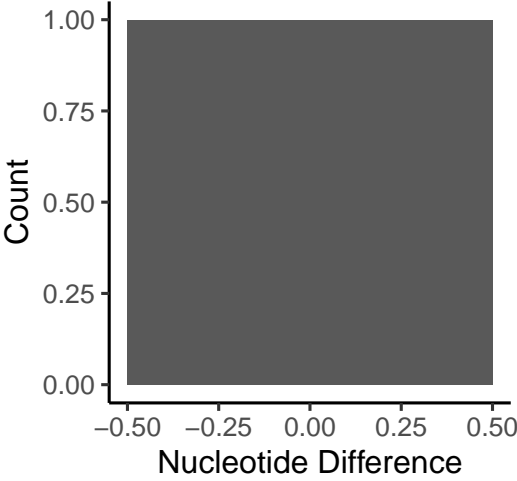
IGHV3-74\*01\_02

21 sequences assigned  
16 (76.2%) exact matches, in which:  
14 unique CDR3  
5 unique J



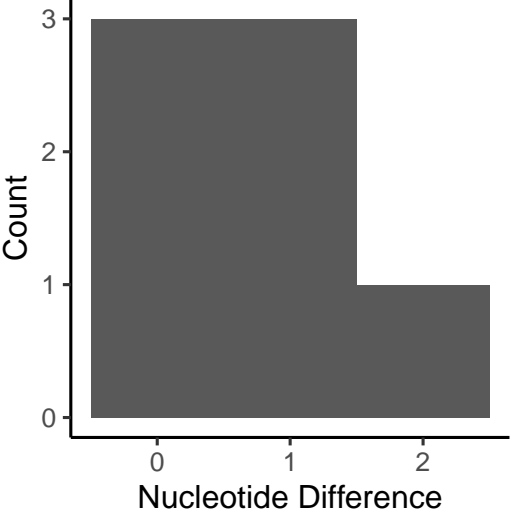
IGHV3-64\*01

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



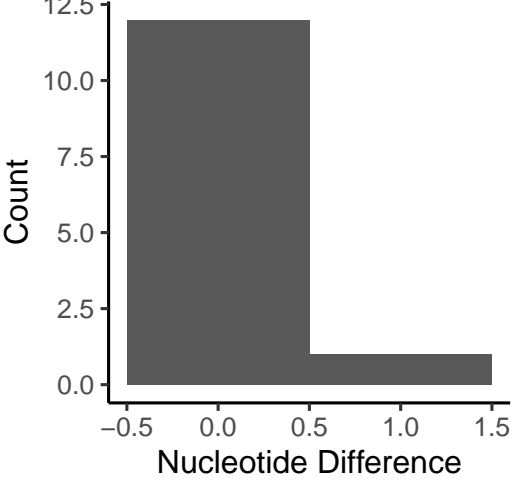
IGHV3-72\*01

7 sequences assigned  
3 (42.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



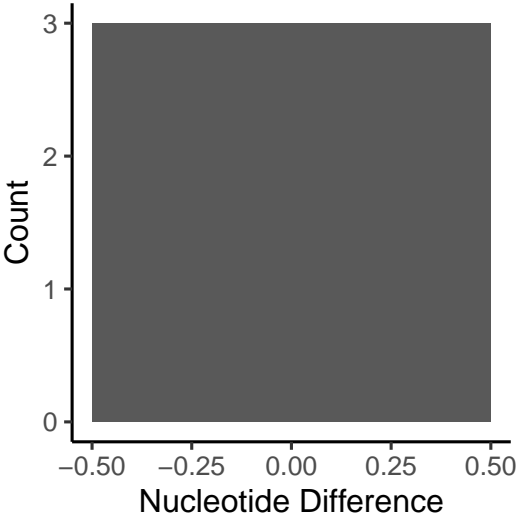
IGHV3-43D\*03

13 sequences assigned  
12 (92.3%) exact matches, in which:  
8 unique CDR3  
4 unique J



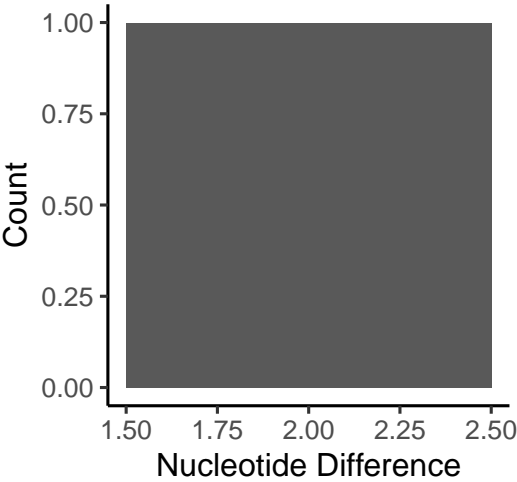
IGHV3-43D\*04

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



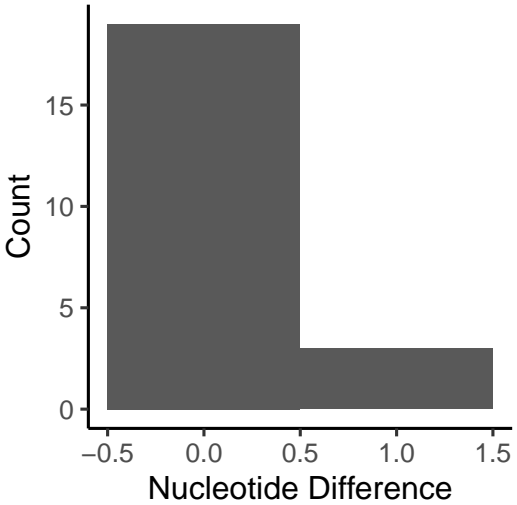
IGHV4-28\*01\_07

1 sequences assigned  
No exact matches.



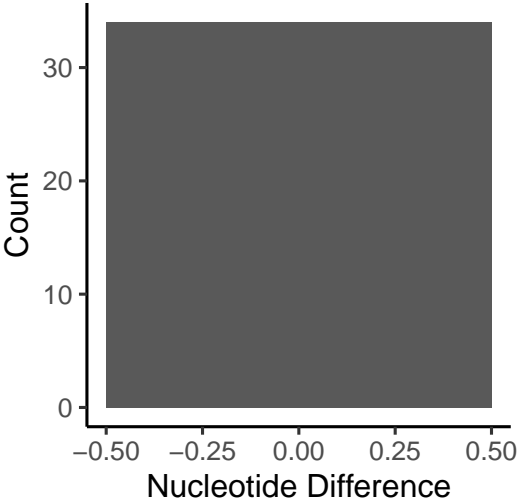
IGHV4-31\*02

22 sequences assigned  
19 (86.4%) exact matches, in which:  
18 unique CDR3  
4 unique J



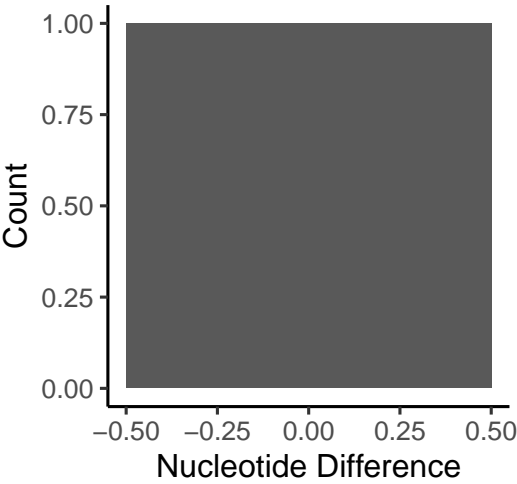
IGHV4-4\*09

34 sequences assigned  
34 (100%) exact matches, in which:  
29 unique CDR3  
6 unique J



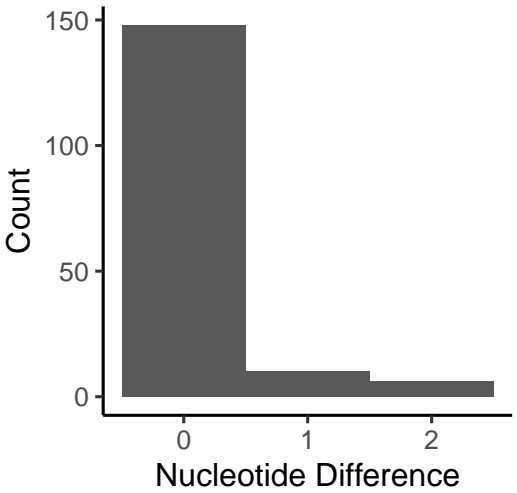
IGHV4-30-2\*01

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



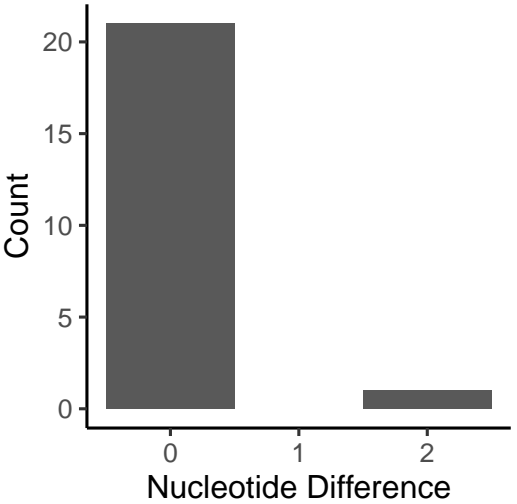
IGHV4-34\*01\_02

164 sequences assigned  
148 (90.2%) exact matches, in which:  
141 unique CDR3  
7 unique J



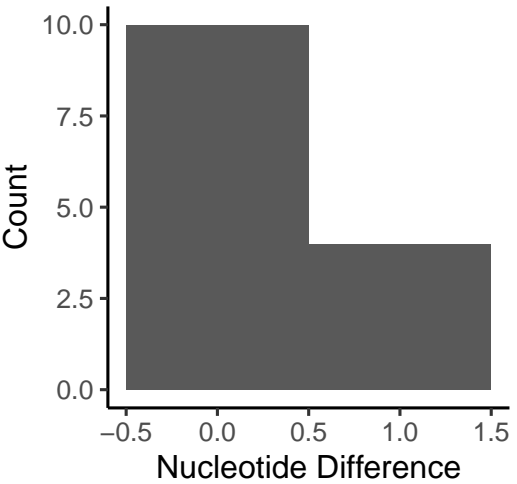
IGHV4-4\*02\_03

22 sequences assigned  
21 (95.5%) exact matches, in which:  
18 unique CDR3  
6 unique J



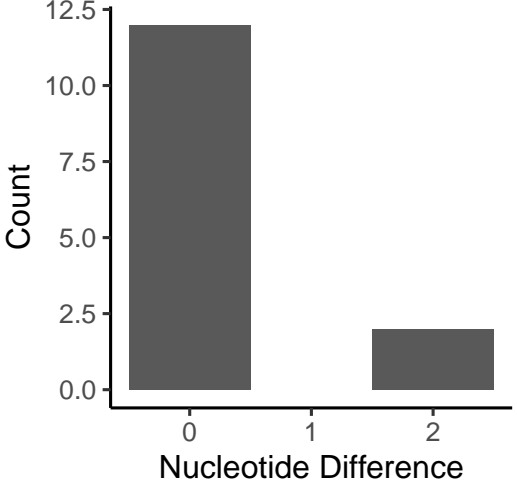
IGHV4-30-4\*08

14 sequences assigned  
10 (71.4%) exact matches, in which:  
9 unique CDR3  
4 unique J



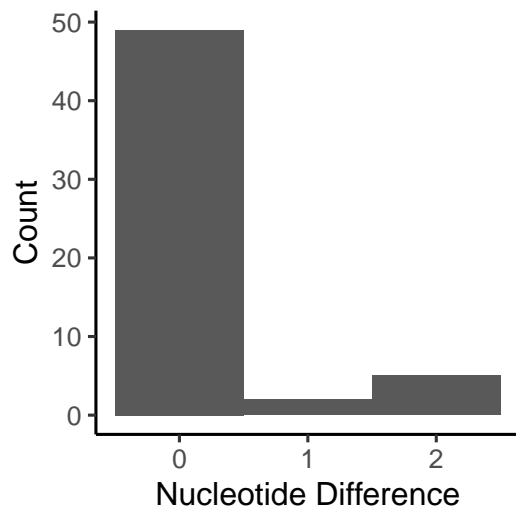
IGHV4-38-2\*01

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



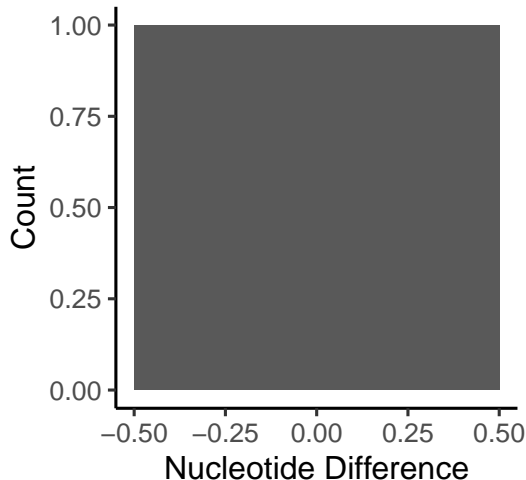
### IGHV4-38-2\*02

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



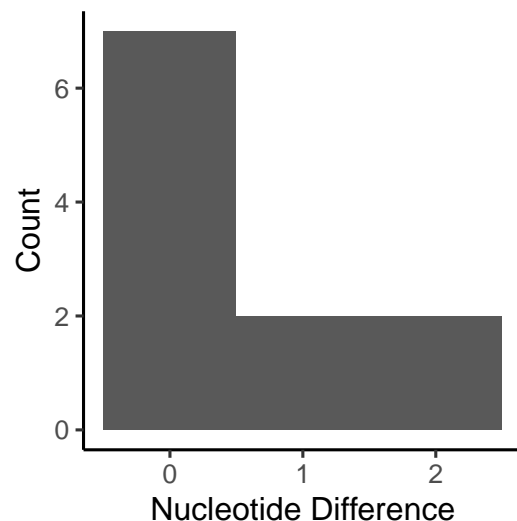
### IGHV4-61\*01

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



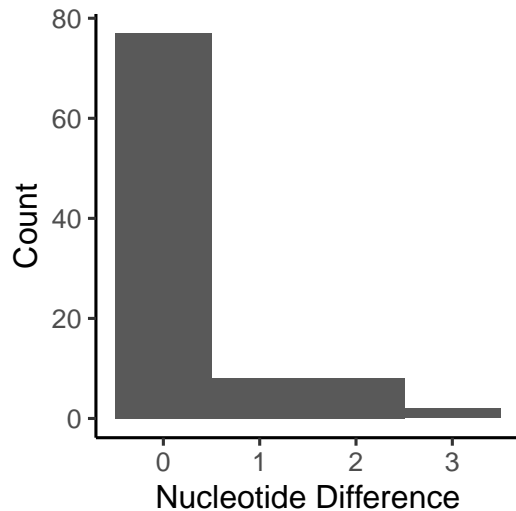
### IGHV6-1\*01\_02

11 sequences assigned  
7 (63.6%) exact matches, in which:  
7 unique CDR3  
4 unique J



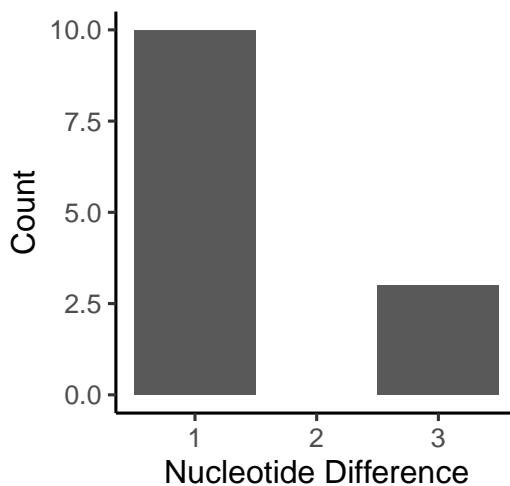
### IGHV4-39\*07

95 sequences assigned  
77 (81.1%) exact matches, in which:  
70 unique CDR3  
5 unique J



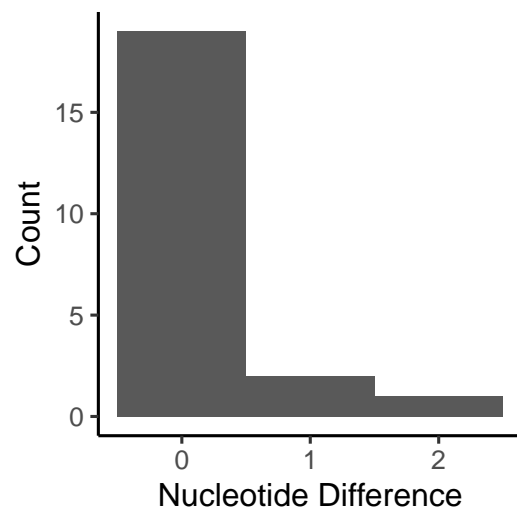
### IGHV5-51\*07

13 sequences assigned  
No exact matches.



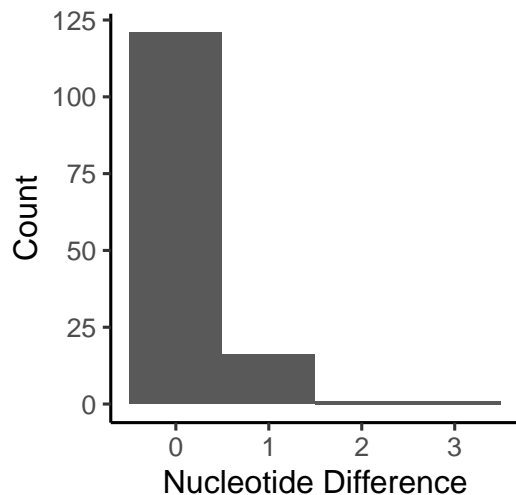
### IGHV7-4-1\*02

22 sequences assigned  
19 (86.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



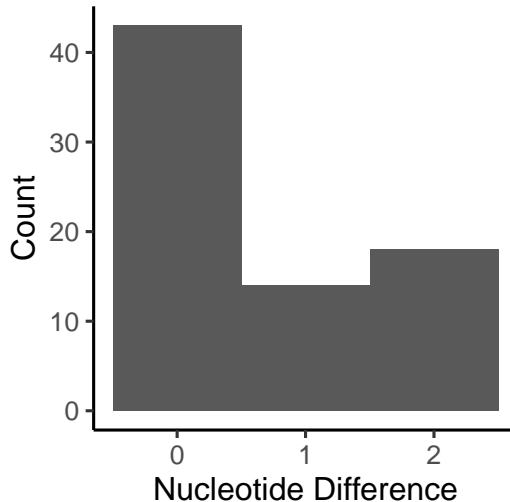
### IGHV4-59\*11

139 sequences assigned  
121 (87.1%) exact matches, in which:  
116 unique CDR3  
7 unique J

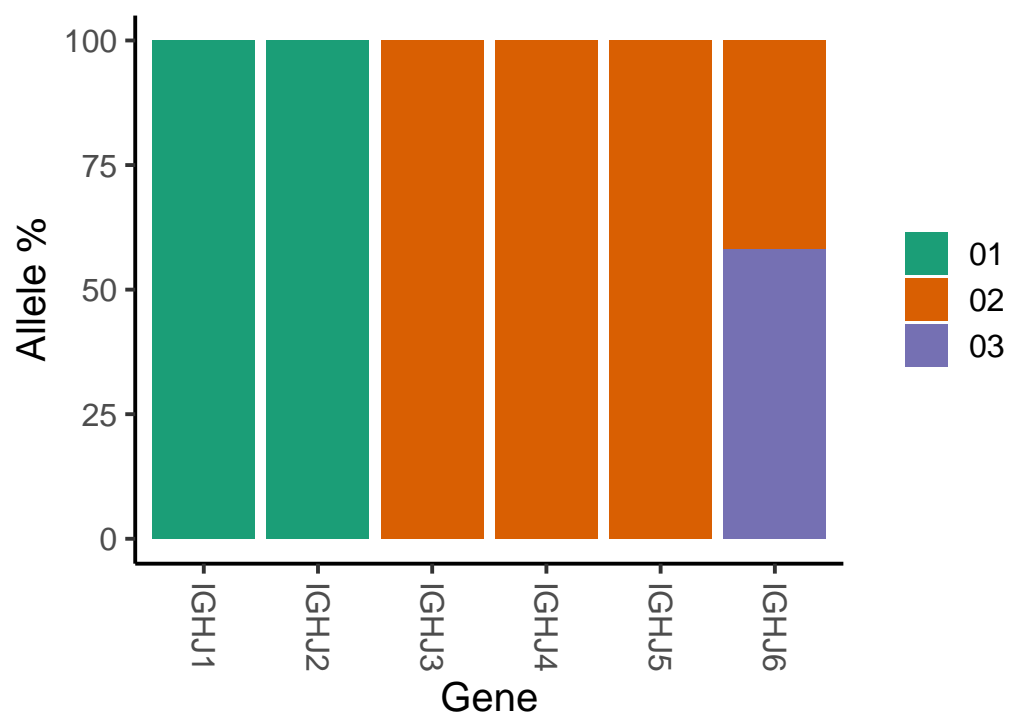


### IGHV5-51\*01\_03

75 sequences assigned  
43 (57.3%) exact matches, in which:  
42 unique CDR3  
6 unique J

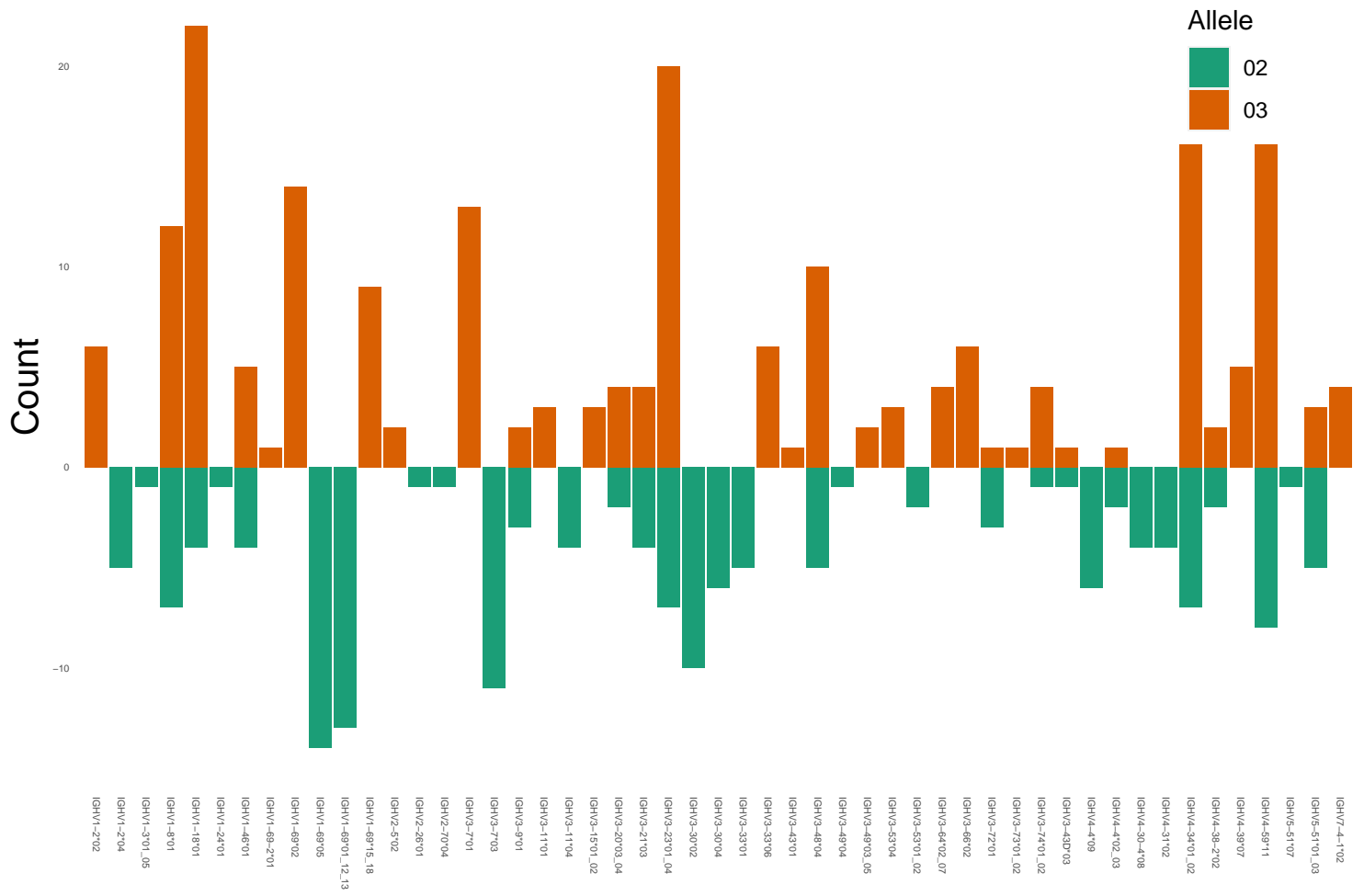


Allele Usage





### Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.