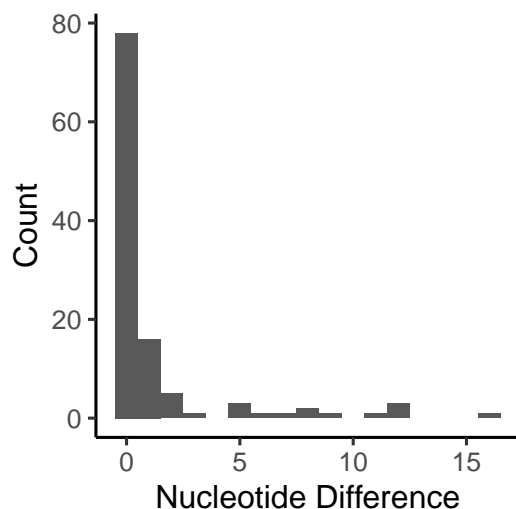


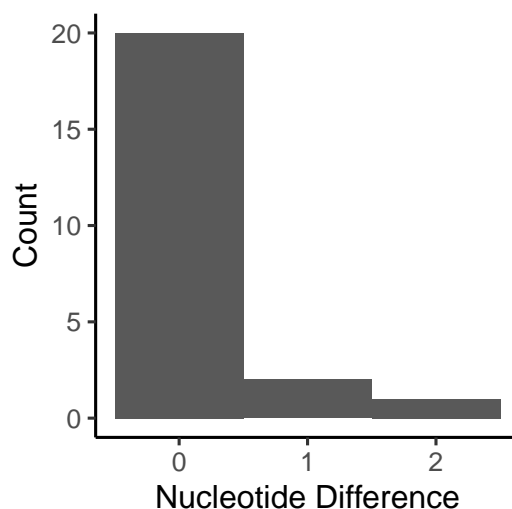
### IGHV1-2\*02

115 sequences assigned  
78 (67.8%) exact matches, in which:  
78 unique CDR3  
5 unique J



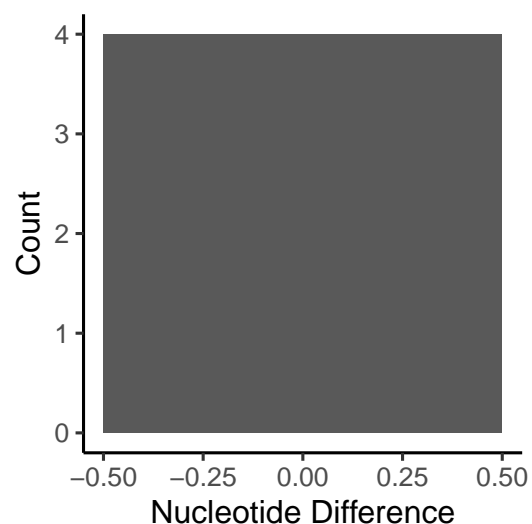
### IGHV1-24\*01

23 sequences assigned  
20 (87%) exact matches, in which:  
20 unique CDR3  
4 unique J



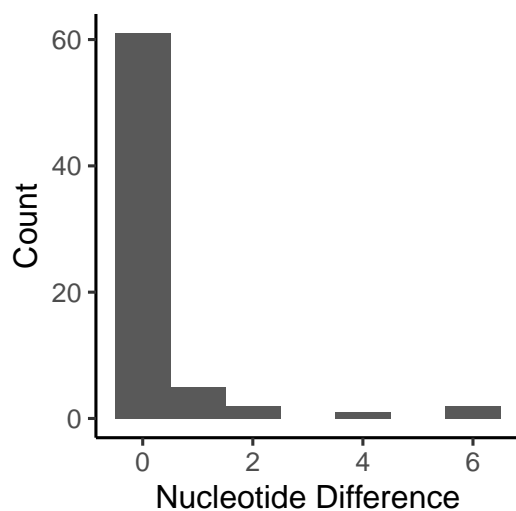
### IGHV1-58\*01

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



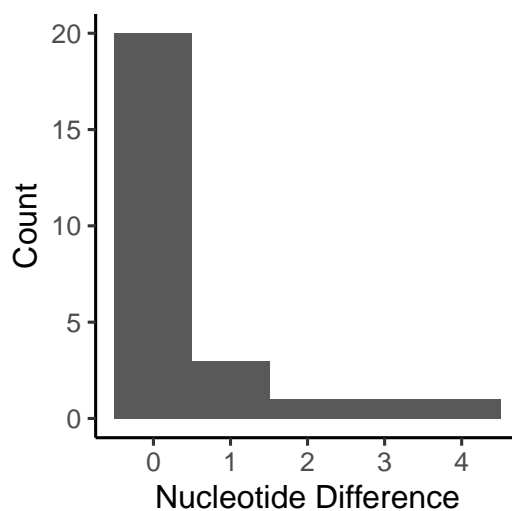
### IGHV1-8\*01

71 sequences assigned  
61 (85.9%) exact matches, in which:  
61 unique CDR3  
5 unique J



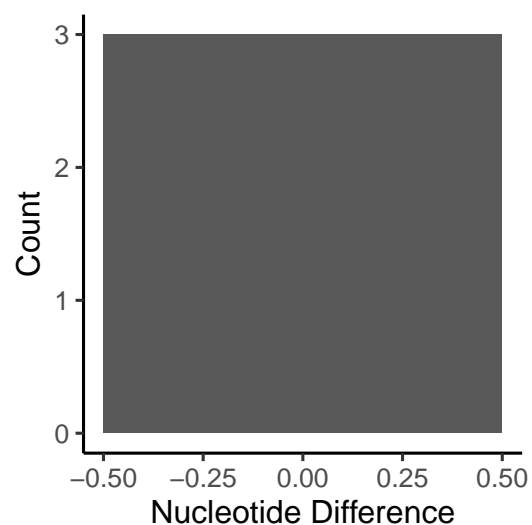
### IGHV1-46\*01

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



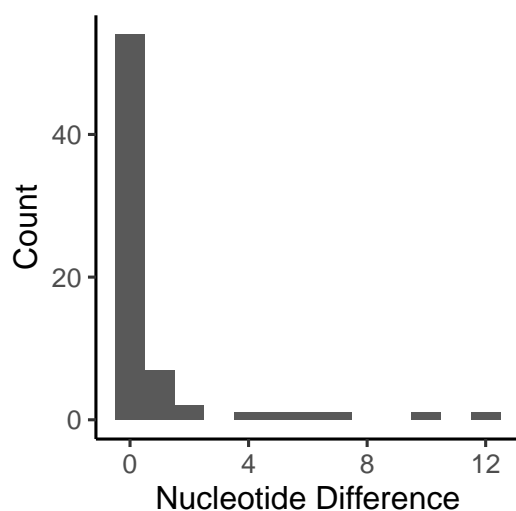
### IGHV1-58\*02

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



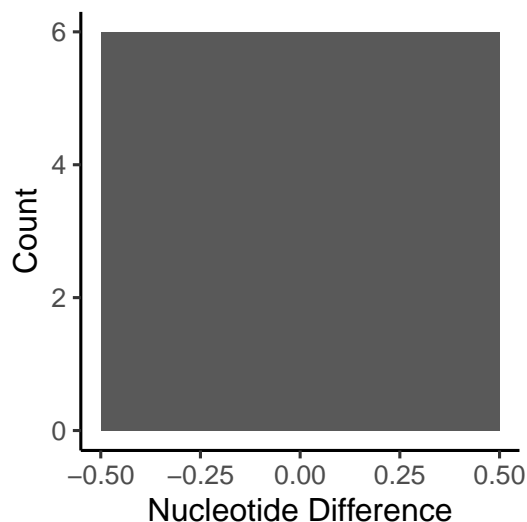
### IGHV1-18\*01

69 sequences assigned  
54 (78.3%) exact matches, in which:  
54 unique CDR3  
6 unique J



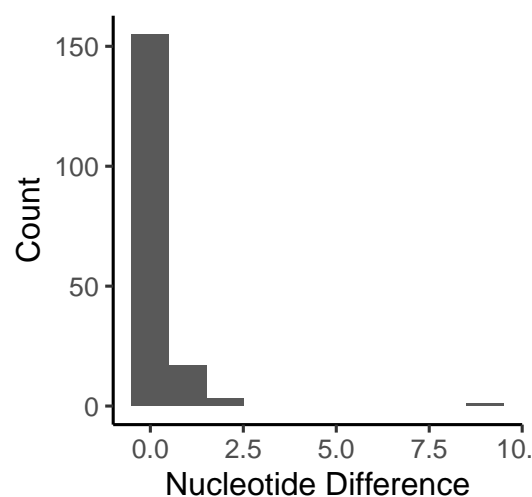
### IGHV1-46\*03

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



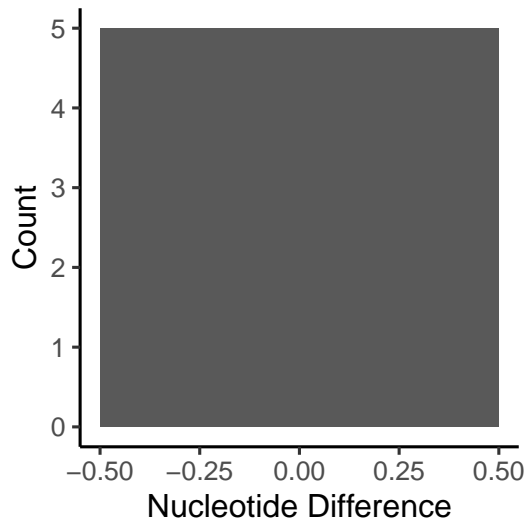
### IGHV1-69\*01

176 sequences assigned  
155 (88.1%) exact matches, in which:  
155 unique CDR3  
5 unique J



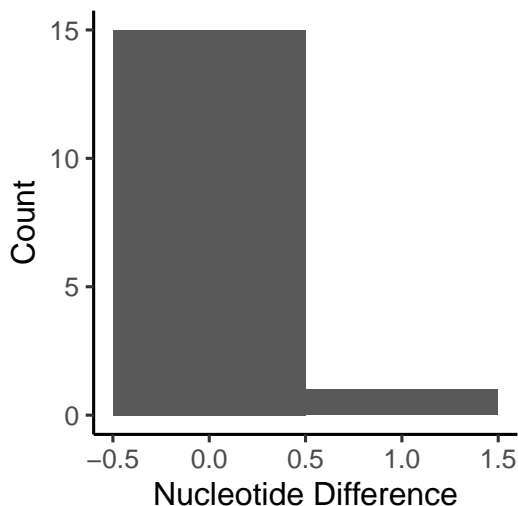
### IGHV1-69-2\*01

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



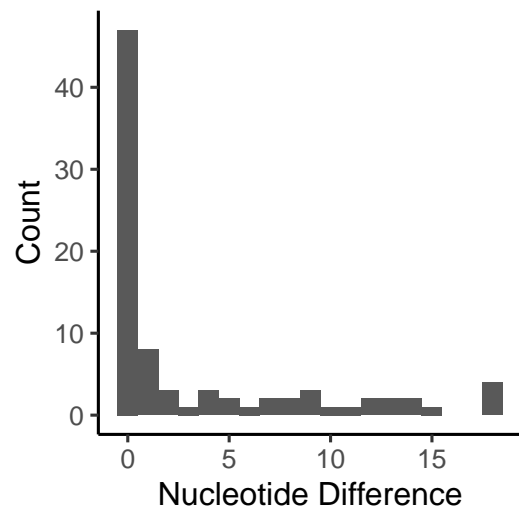
### IGHV2-26\*01

16 sequences assigned  
15 (93.8%) exact matches, in which:  
15 unique CDR3  
5 unique J



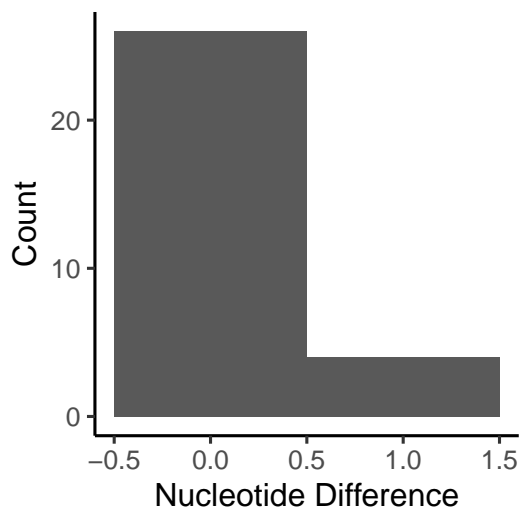
### IGHV3-7\*01

86 sequences assigned  
47 (54.7%) exact matches, in which:  
47 unique CDR3  
6 unique J



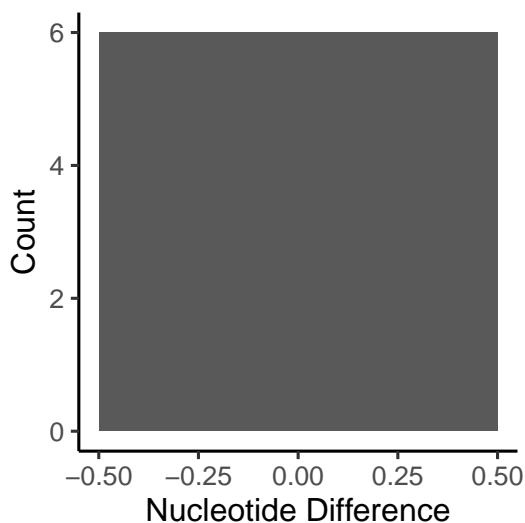
### IGHV1-69\*06

30 sequences assigned  
26 (86.7%) exact matches, in which:  
26 unique CDR3  
5 unique J



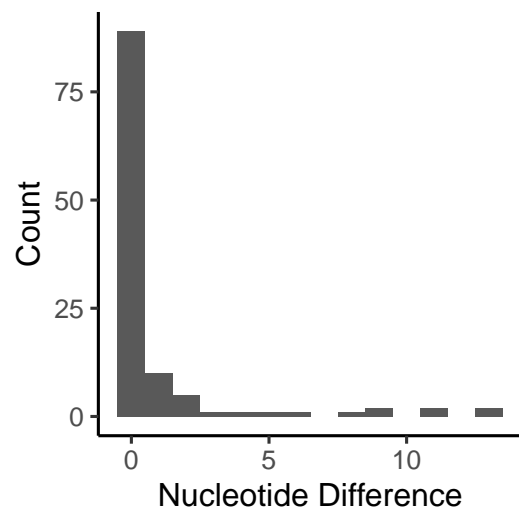
### IGHV2-70\*01

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



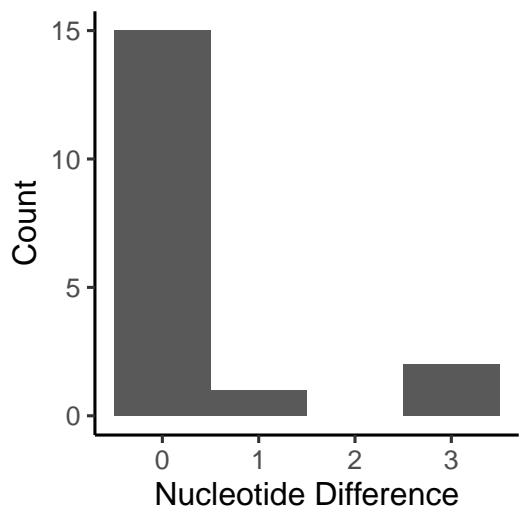
### IGHV3-9\*01

115 sequences assigned  
89 (77.4%) exact matches, in which:  
89 unique CDR3  
6 unique J



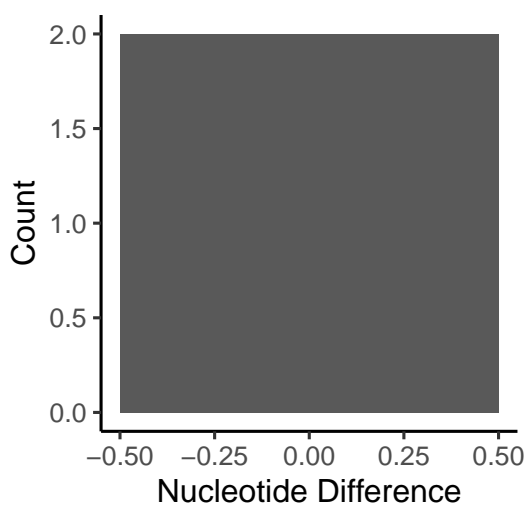
### IGHV2-5\*01

18 sequences assigned  
15 (83.3%) exact matches, in which:  
15 unique CDR3  
6 unique J



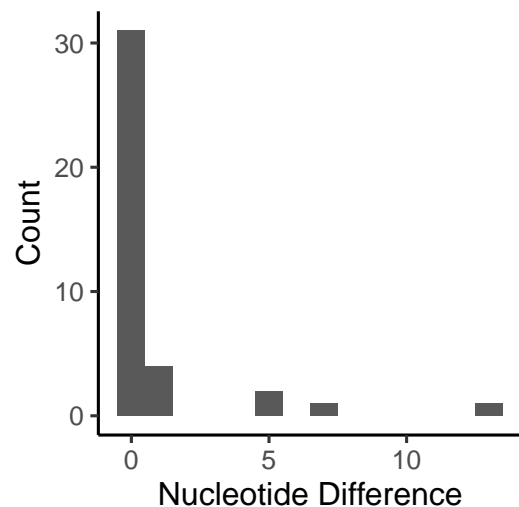
### IGHV2-70\*04

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



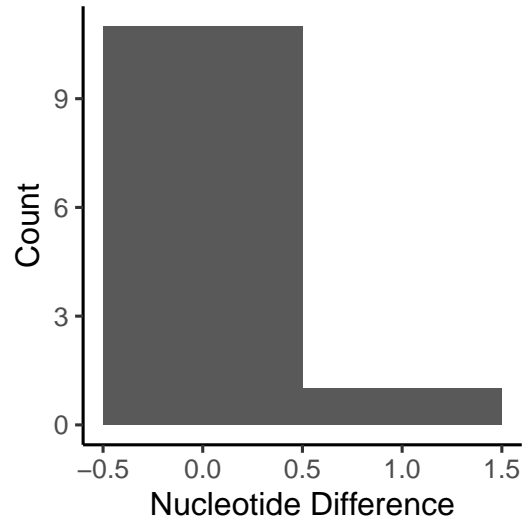
### IGHV3-11\*01

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



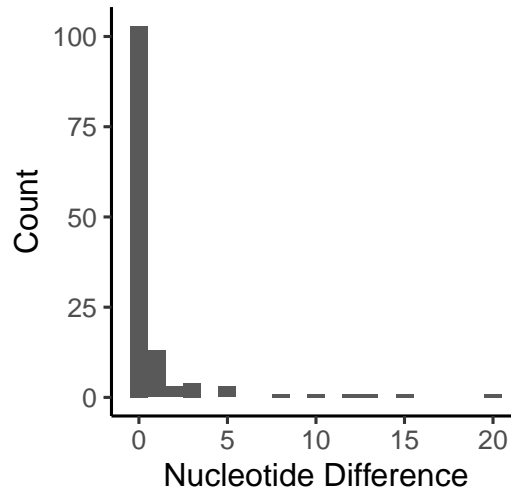
### IGHV3-13\*01

12 sequences assigned  
11 (91.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



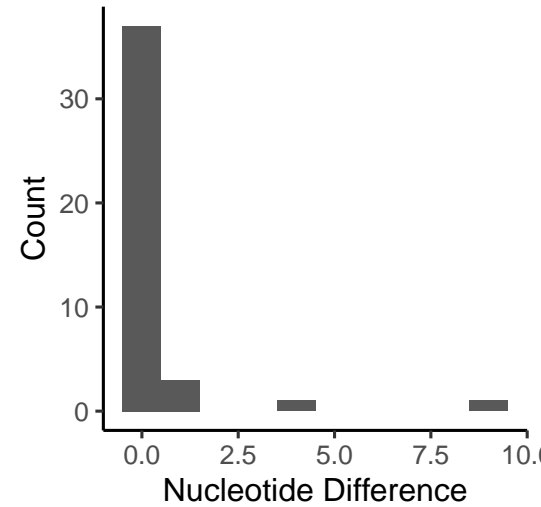
### IGHV3-21\*01

132 sequences assigned  
103 (78%) exact matches, in which:  
103 unique CDR3  
6 unique J



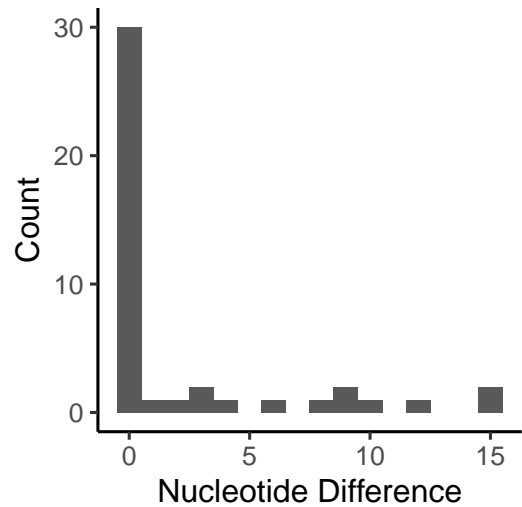
### IGHV3-30\*01

42 sequences assigned  
37 (88.1%) exact matches, in which:  
37 unique CDR3  
5 unique J



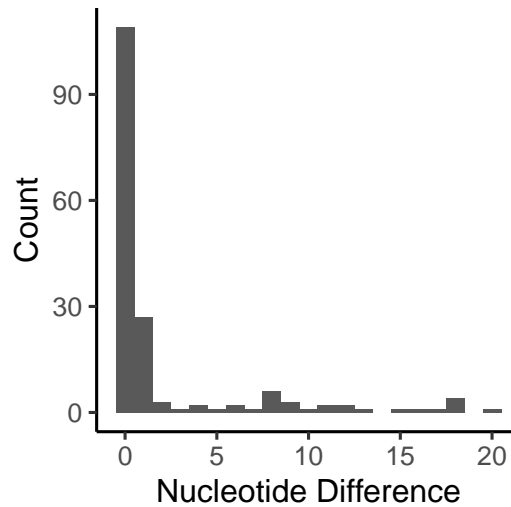
### IGHV3-15\*01

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



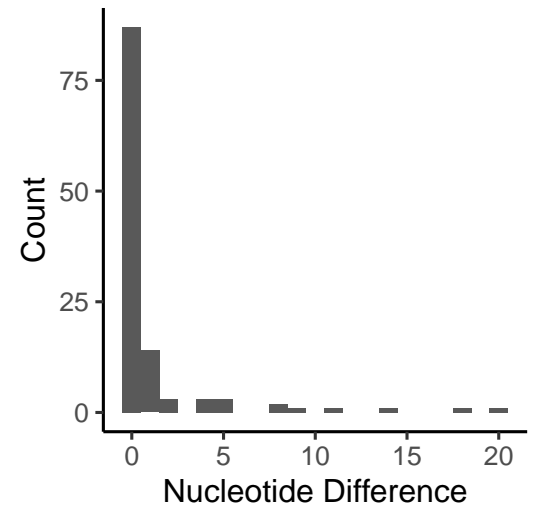
### IGHV3-23\*01

171 sequences assigned  
109 (63.7%) exact matches, in which:  
109 unique CDR3  
6 unique J



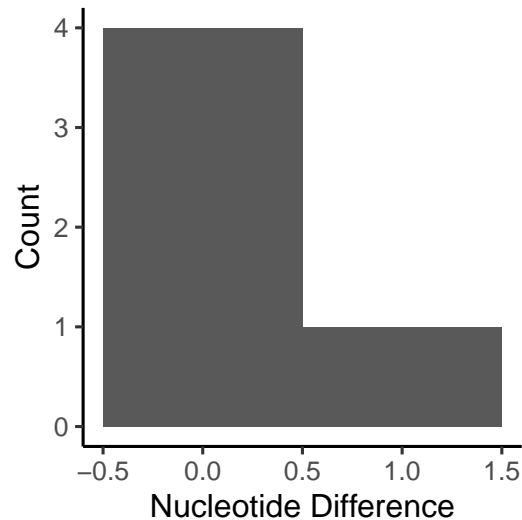
### IGHV3-30\*18

117 sequences assigned  
87 (74.4%) exact matches, in which:  
87 unique CDR3  
6 unique J



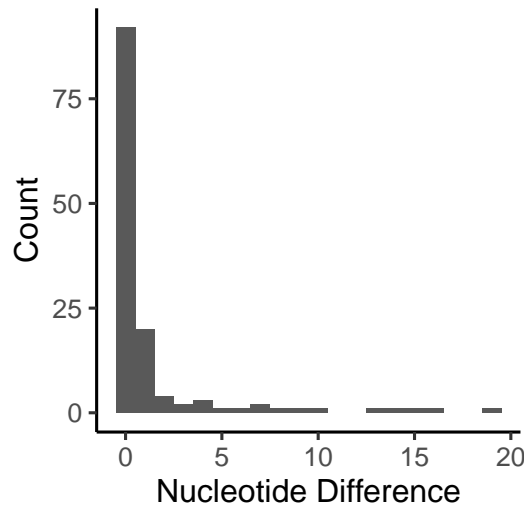
### IGHV3-20\*01

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



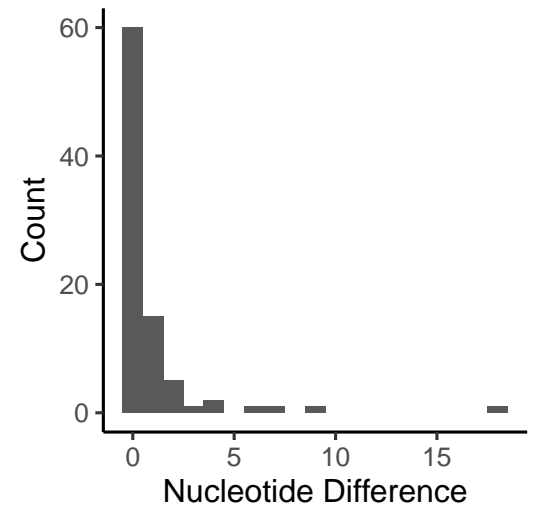
### IGHV3-30-3\*01

134 sequences assigned  
92 (68.7%) exact matches, in which:  
92 unique CDR3  
5 unique J



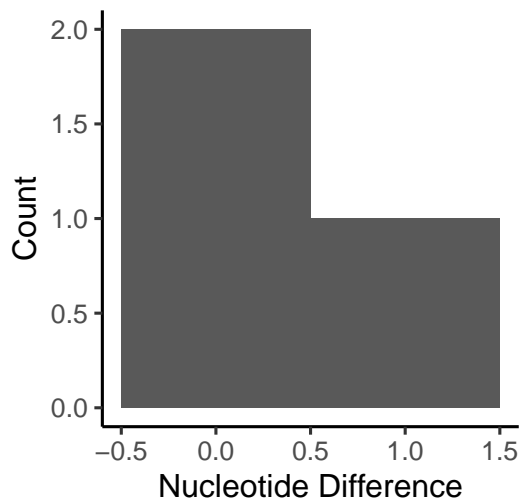
### IGHV3-33\*01

87 sequences assigned  
60 (69%) exact matches, in which:  
60 unique CDR3  
6 unique J



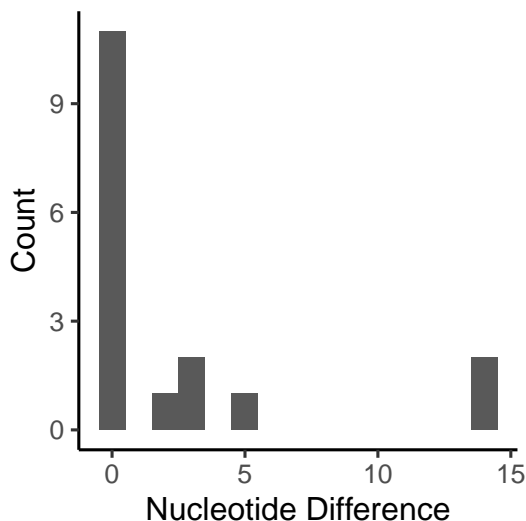
### IGHV3-43\*01

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



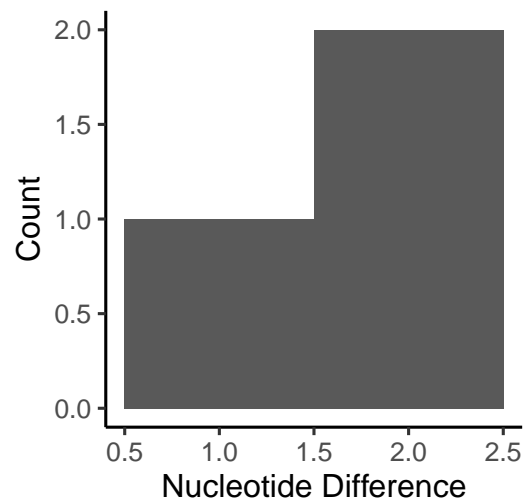
### IGHV3-49\*03

18 sequences assigned  
11 (61.1%) exact matches, in which:  
11 unique CDR3  
3 unique J



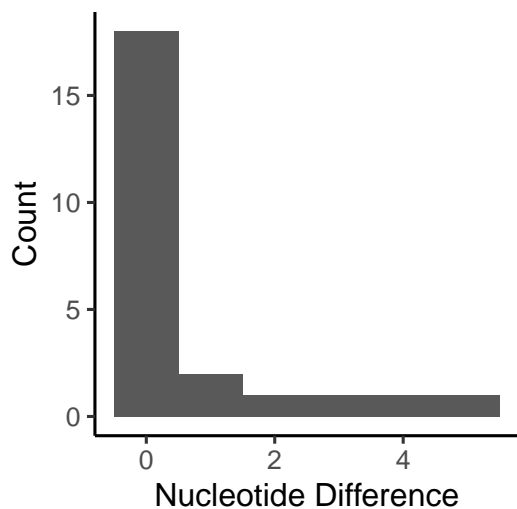
### IGHV3-64\*01

3 sequences assigned  
No exact matches.



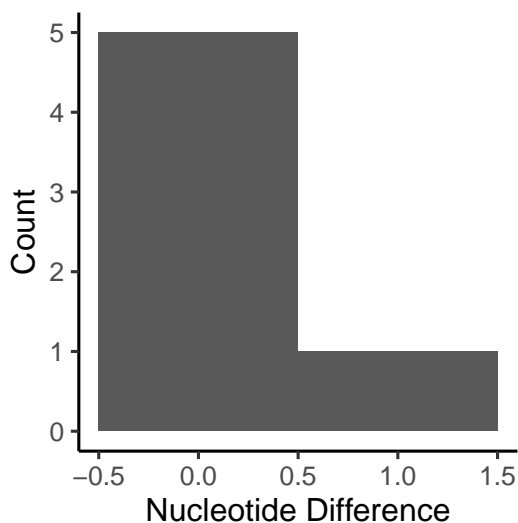
### IGHV3-48\*01

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



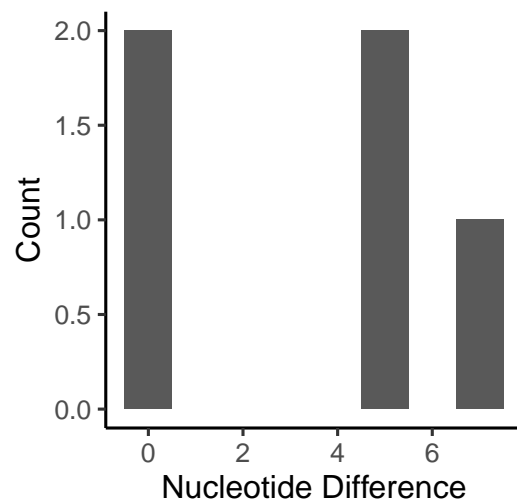
### IGHV3-49\*05

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



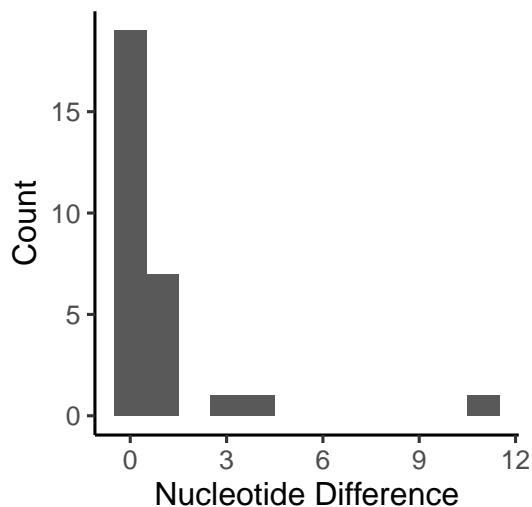
### IGHV3-72\*01

5 sequences assigned  
2 (40%) exact matches, in which:  
2 unique CDR3  
2 unique J



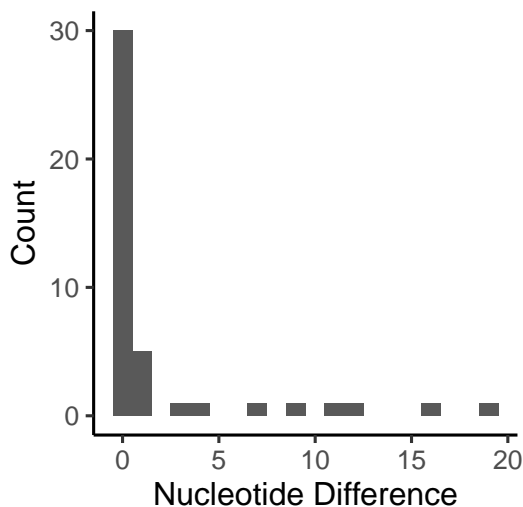
### IGHV3-48\*02

29 sequences assigned  
19 (65.5%) exact matches, in which:  
19 unique CDR3  
5 unique J



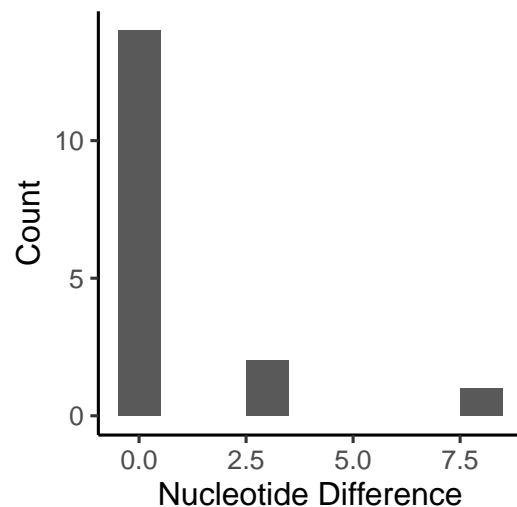
### IGHV3-53\*01

43 sequences assigned  
30 (69.8%) exact matches, in which:  
30 unique CDR3  
6 unique J



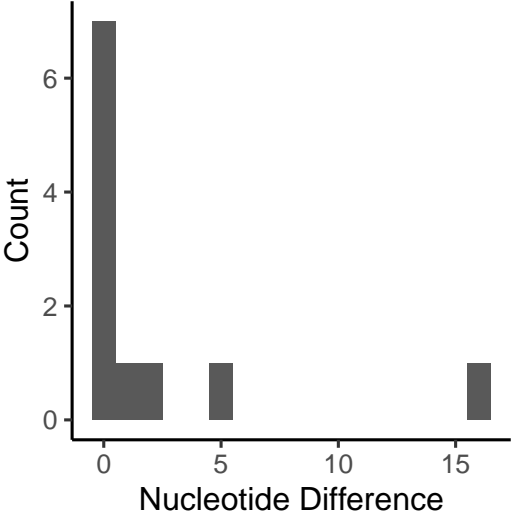
### IGHV3-73\*02

17 sequences assigned  
14 (82.4%) exact matches, in which:  
14 unique CDR3  
4 unique J



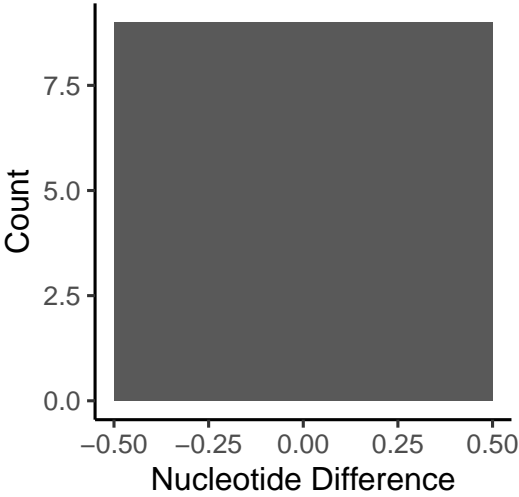
IGHV3–74\*01

12 sequences assigned  
7 (58.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



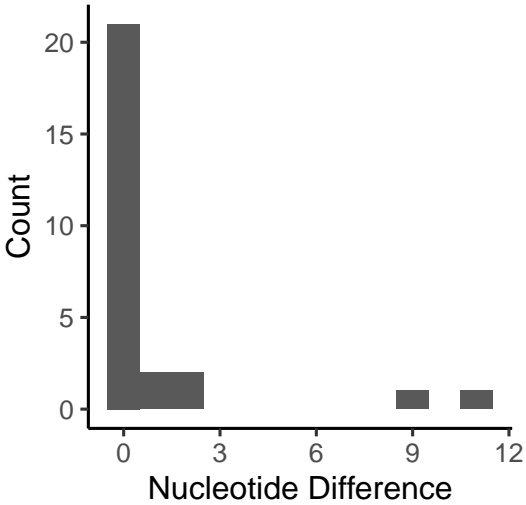
IGHV4–30–4\*01

9 sequences assigned  
9 (100%) exact matches, in which:  
9 unique CDR3  
5 unique J



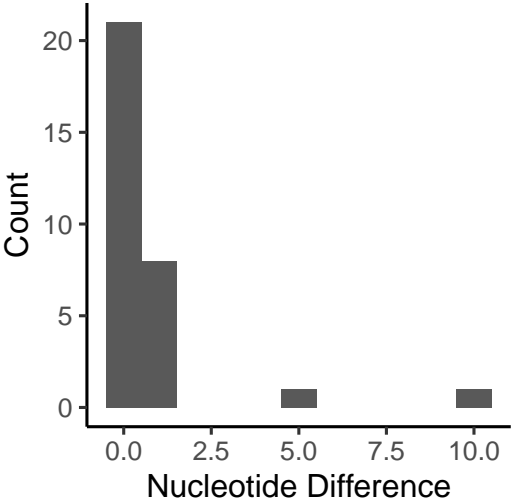
IGHV4–31\*03

27 sequences assigned  
21 (77.8%) exact matches, in which:  
21 unique CDR3  
4 unique J



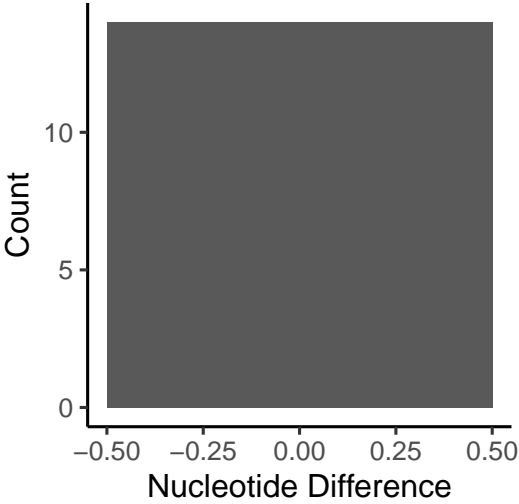
IGHV4–4\*07

31 sequences assigned  
21 (67.7%) exact matches, in which:  
21 unique CDR3  
5 unique J



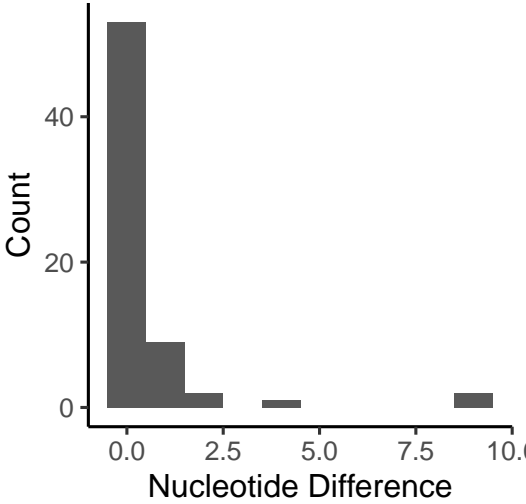
IGHV4–30–2\*01

14 sequences assigned  
14 (100%) exact matches, in which:  
14 unique CDR3  
4 unique J



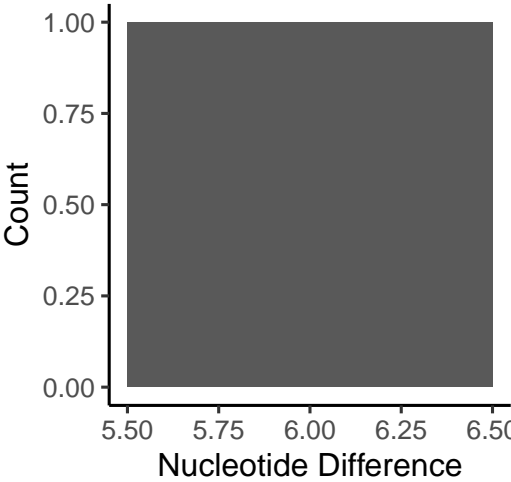
IGHV4–34\*01

67 sequences assigned  
53 (79.1%) exact matches, in which:  
53 unique CDR3  
6 unique J



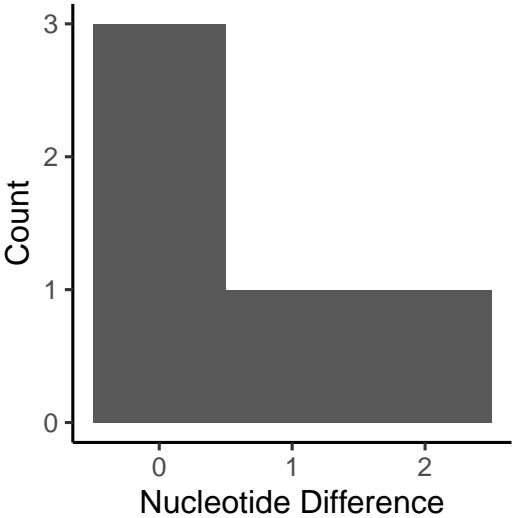
IGHV4–28\*01

1 sequences assigned  
No exact matches.



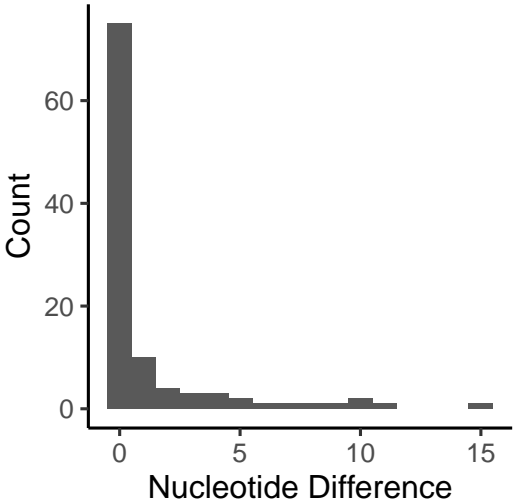
IGHV4–31\*01

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



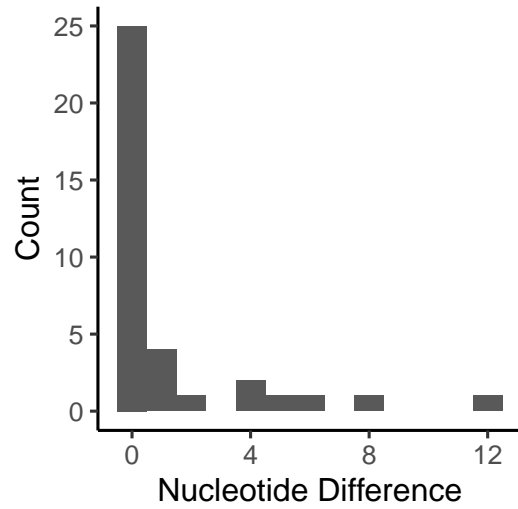
IGHV4–39\*01

105 sequences assigned  
75 (71.4%) exact matches, in which:  
74 unique CDR3  
5 unique J



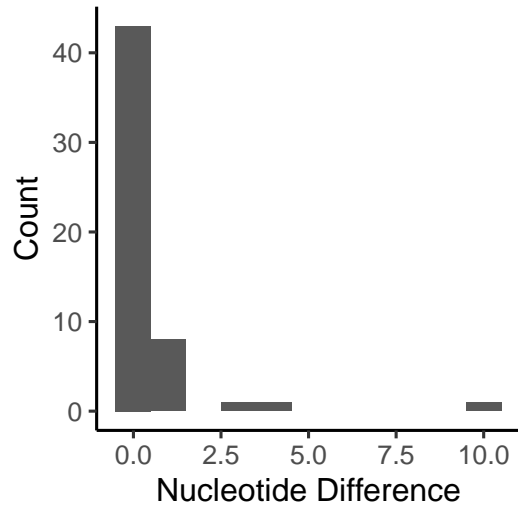
### IGHV4–59\*01

36 sequences assigned  
25 (69.4%) exact matches, in which:  
25 unique CDR3  
6 unique J



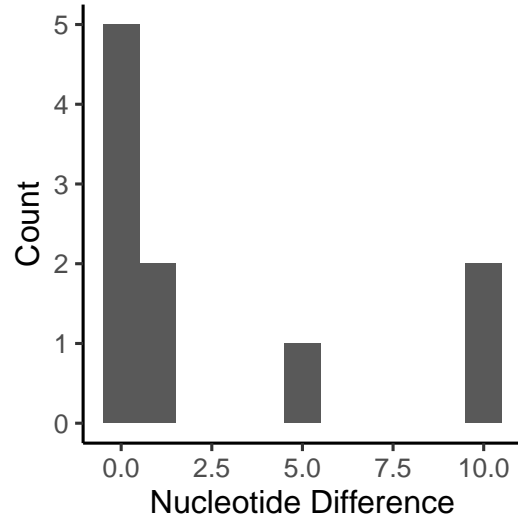
### IGHV5–51\*01

54 sequences assigned  
43 (79.6%) exact matches, in which:  
43 unique CDR3  
6 unique J



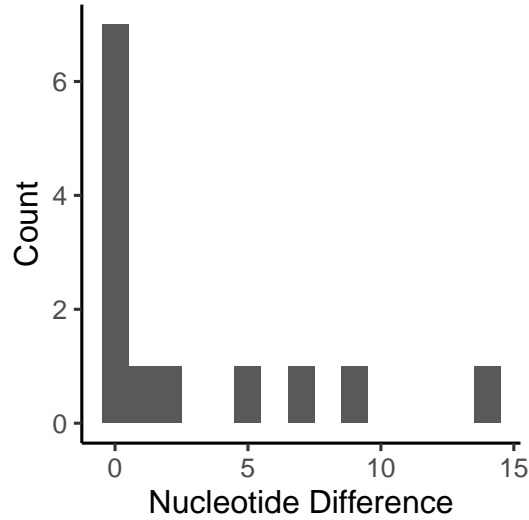
### IGHV4–61\*01

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



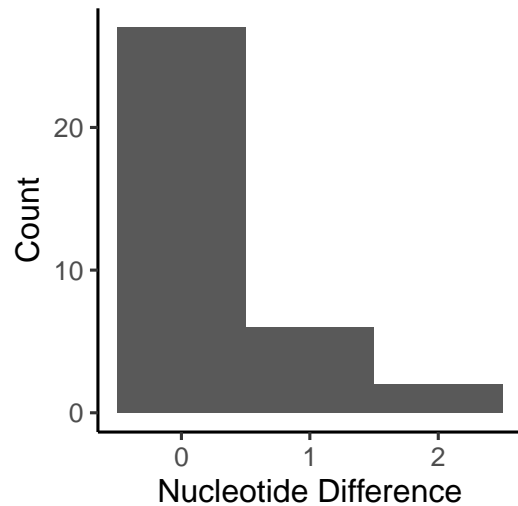
### IGHV6–1\*01

13 sequences assigned  
7 (53.8%) exact matches, in which:  
7 unique CDR3  
2 unique J



### IGHV4–61\*02

35 sequences assigned  
27 (77.1%) exact matches, in which:  
27 unique CDR3  
6 unique J





Warning – no inferred sequences found.