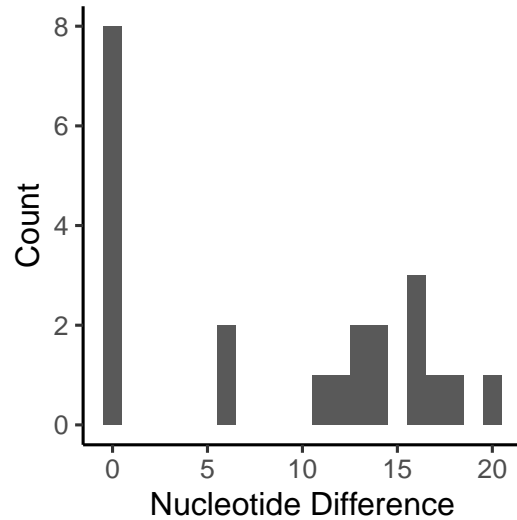


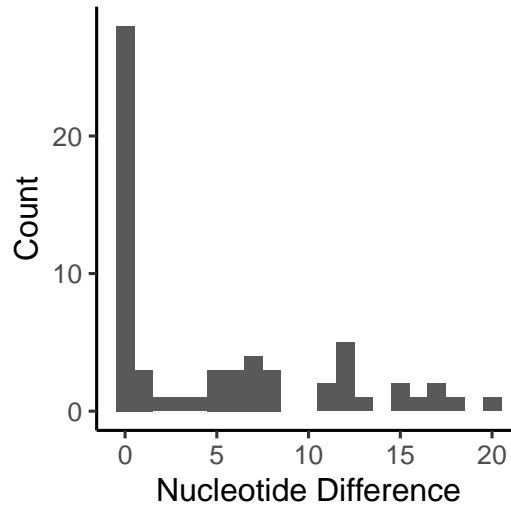
### IGHV1-2\*04

26 sequences assigned  
8 (30.8%) exact matches, in which:  
8 unique CDR3  
4 unique J



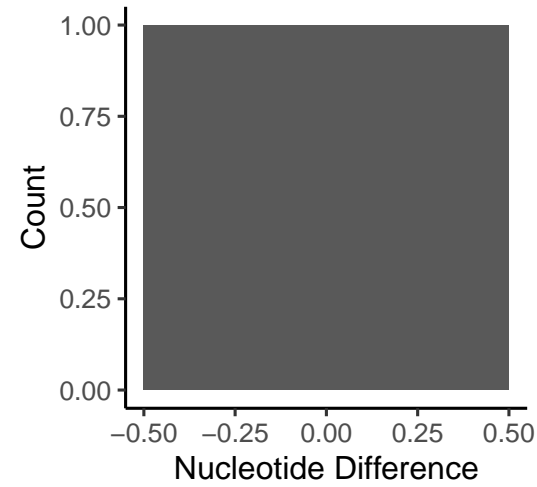
### IGHV1-8\*01

72 sequences assigned  
28 (38.9%) exact matches, in which:  
28 unique CDR3  
5 unique J



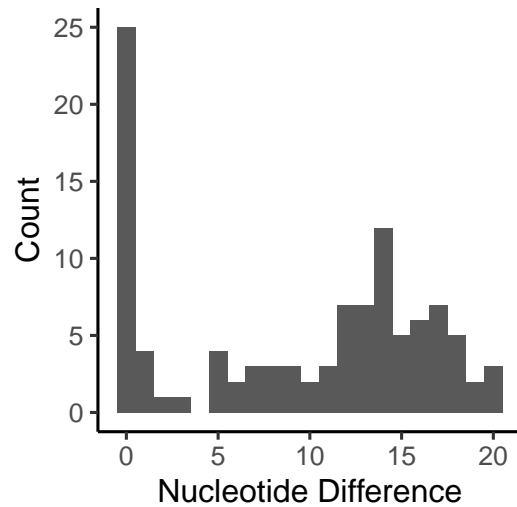
### IGHV1-45\*02

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



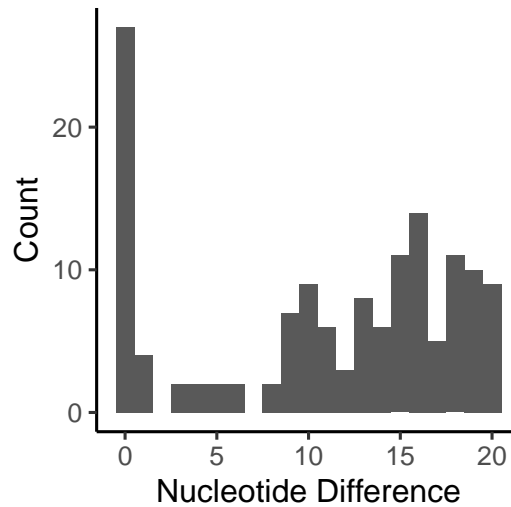
### IGHV1-2\*06

145 sequences assigned  
25 (17.2%) exact matches, in which:  
25 unique CDR3  
4 unique J



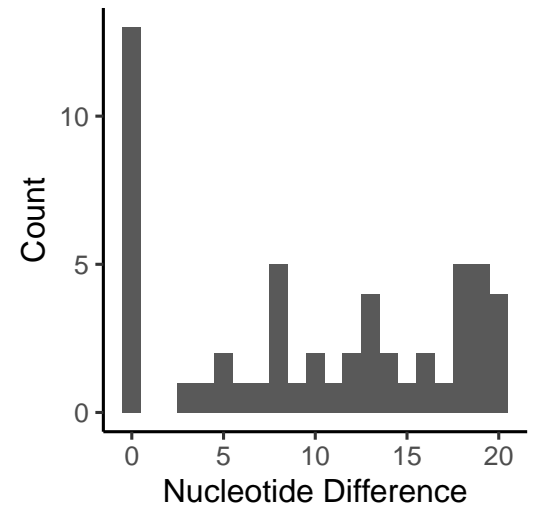
### IGHV1-18\*01

197 sequences assigned  
27 (13.7%) exact matches, in which:  
27 unique CDR3  
6 unique J



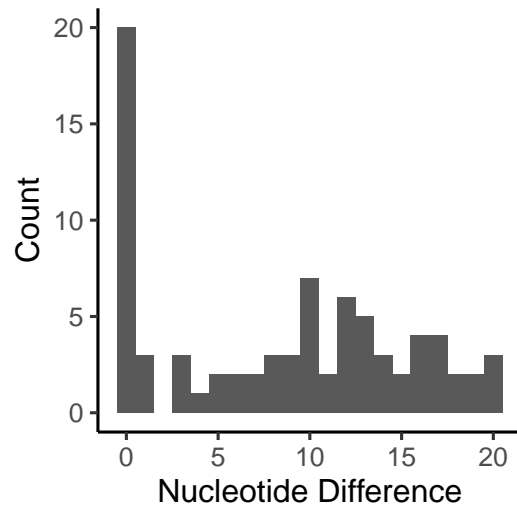
### IGHV1-46\*01

80 sequences assigned  
13 (16.2%) exact matches, in which:  
13 unique CDR3  
3 unique J



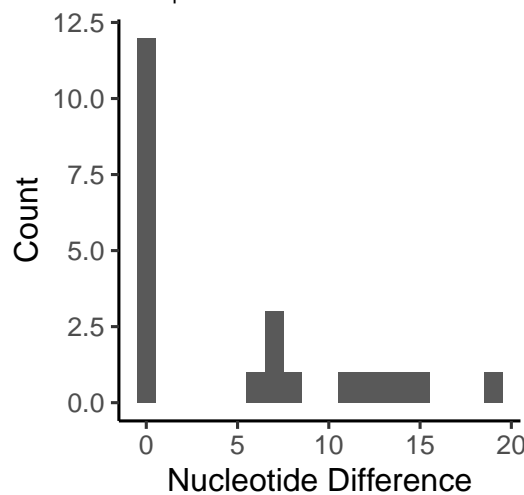
### IGHV1-3\*01

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



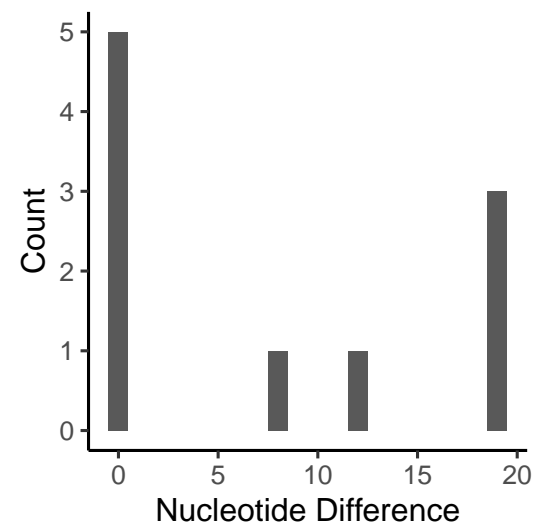
### IGHV1-24\*01

29 sequences assigned  
12 (41.4%) exact matches, in which:  
12 unique CDR3  
4 unique J



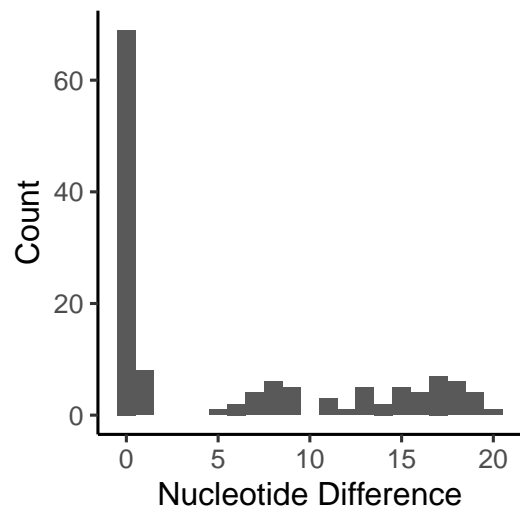
### IGHV1-58\*01

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



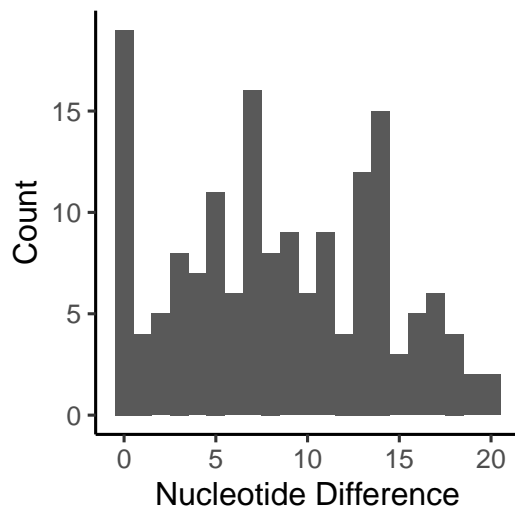
### IGHV1-69\*01

203 sequences assigned  
69 (34%) exact matches, in which:  
67 unique CDR3  
6 unique J



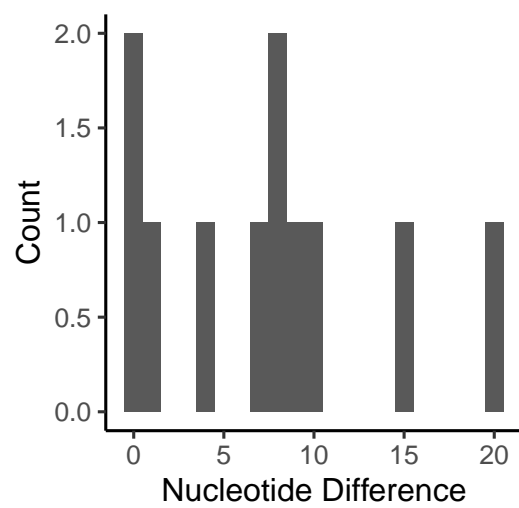
### IGHV2-5\*02

196 sequences assigned  
19 (9.7%) exact matches, in which:  
19 unique CDR3  
4 unique J



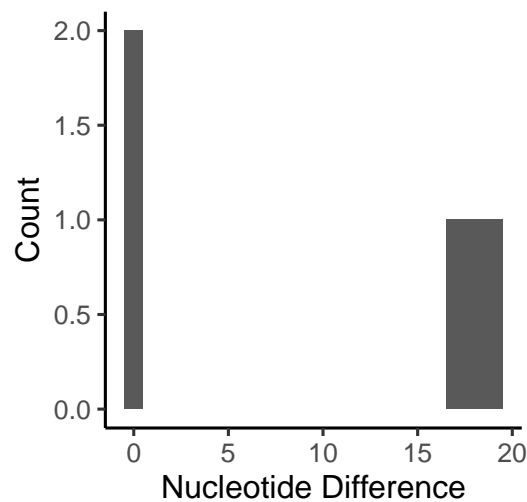
### IGHV2-70\*04

11 sequences assigned  
2 (18.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



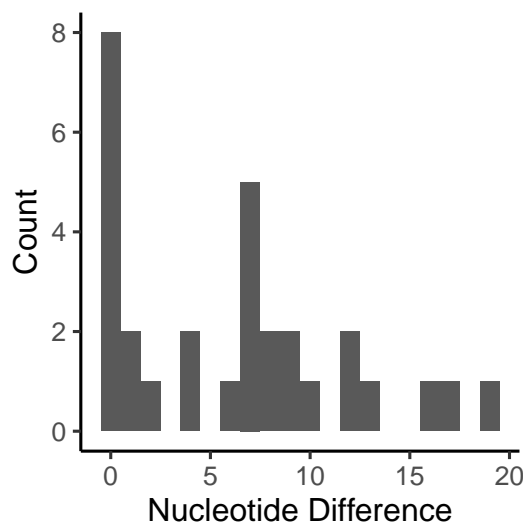
### IGHV1-69-2\*01

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



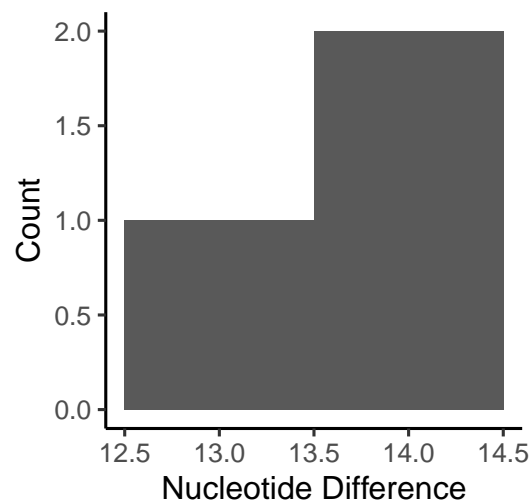
### IGHV2-26\*01

33 sequences assigned  
8 (24.2%) exact matches, in which:  
8 unique CDR3  
3 unique J



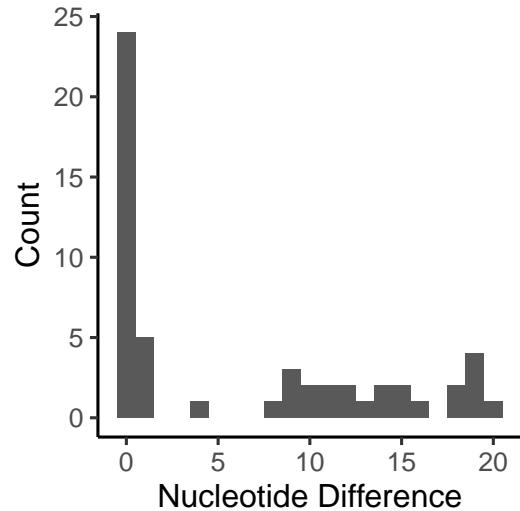
### IGHV2-70\*13

3 sequences assigned  
No exact matches.



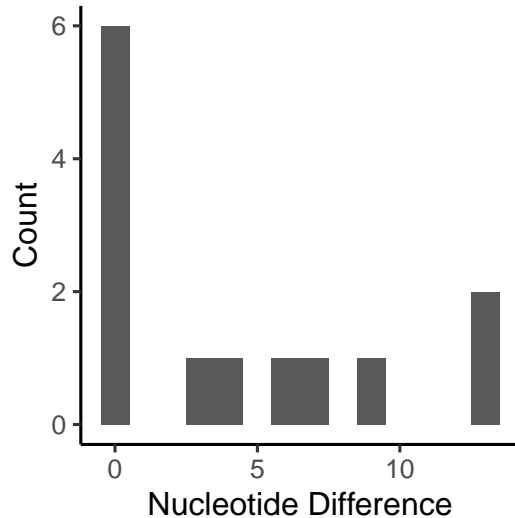
### IGHV1-69\*06

90 sequences assigned  
24 (26.7%) exact matches, in which:  
23 unique CDR3  
4 unique J



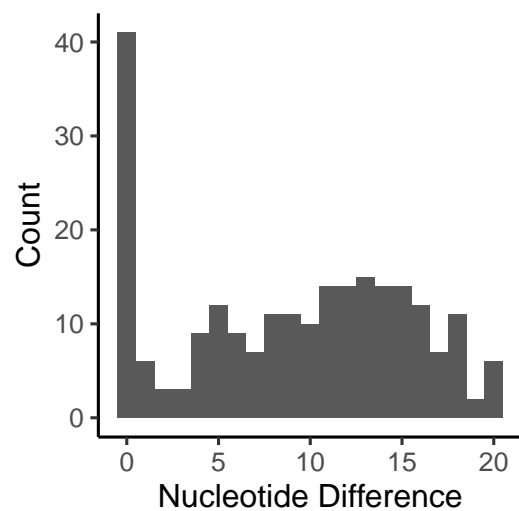
### IGHV2-70\*01

16 sequences assigned  
6 (37.5%) exact matches, in which:  
6 unique CDR3  
4 unique J



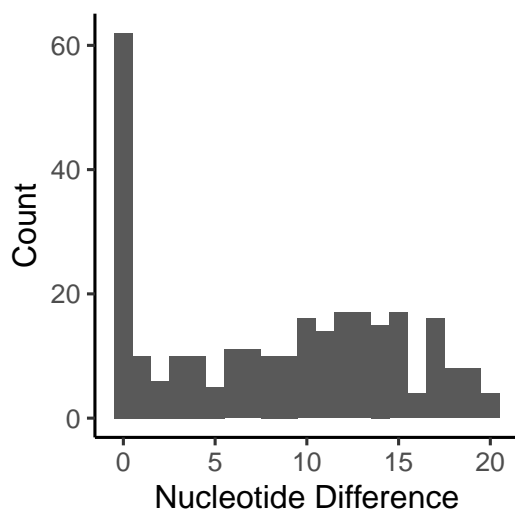
### IGHV3-7\*01

264 sequences assigned  
41 (15.5%) exact matches, in which:  
38 unique CDR3  
4 unique J



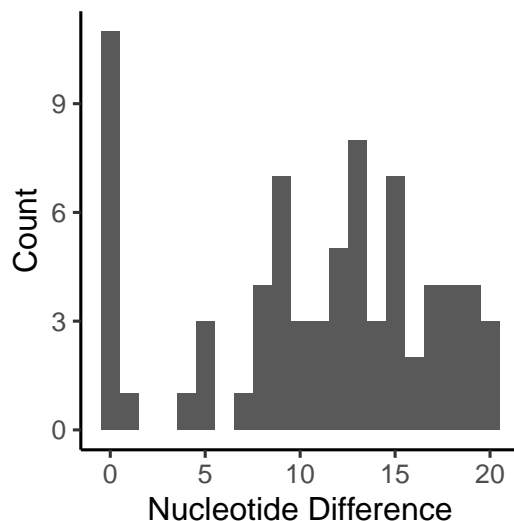
## IGHV3-9\*01

325 sequences assigned  
62 (19.1%) exact matches, in which:  
62 unique CDR3  
6 unique J



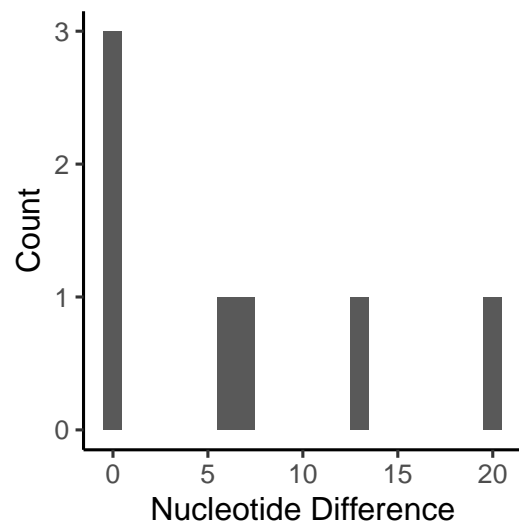
## IGHV3-15\*01

91 sequences assigned  
11 (12.1%) exact matches, in which:  
10 unique CDR3  
2 unique J



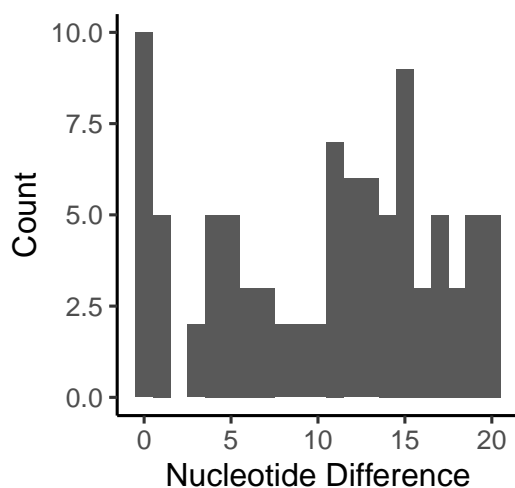
## IGHV3-20\*04

8 sequences assigned  
3 (37.5%) exact matches, in which:  
3 unique CDR3  
1 unique J



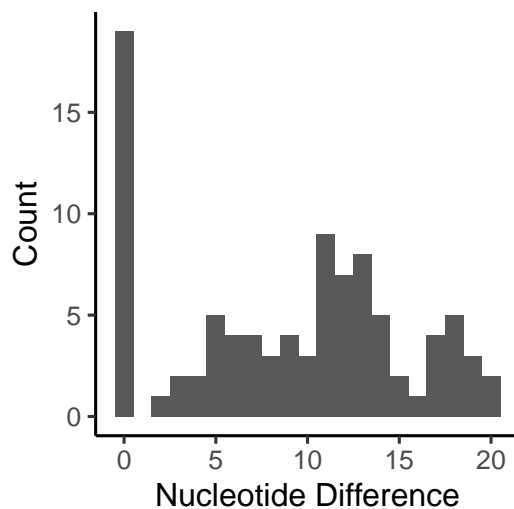
## IGHV3-11\*01

118 sequences assigned  
10 (8.5%) exact matches, in which:  
10 unique CDR3  
5 unique J



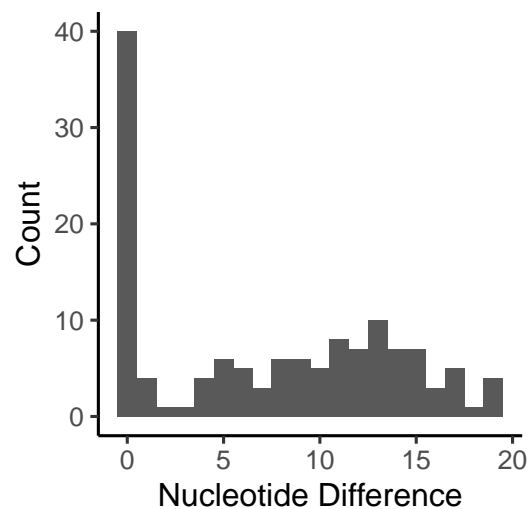
## IGHV3-15\*07

114 sequences assigned  
19 (16.7%) exact matches, in which:  
18 unique CDR3  
4 unique J



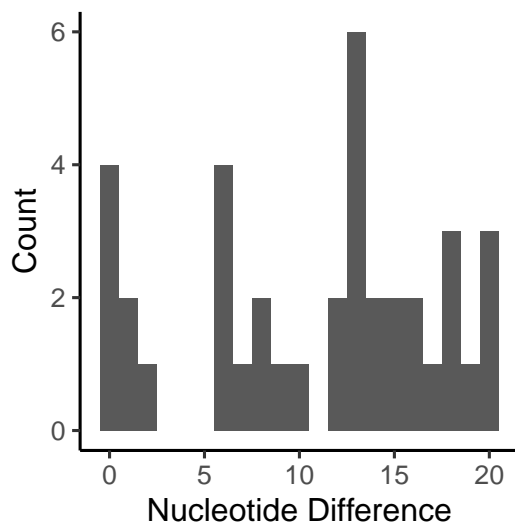
## IGHV3-21\*01

141 sequences assigned  
40 (28.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



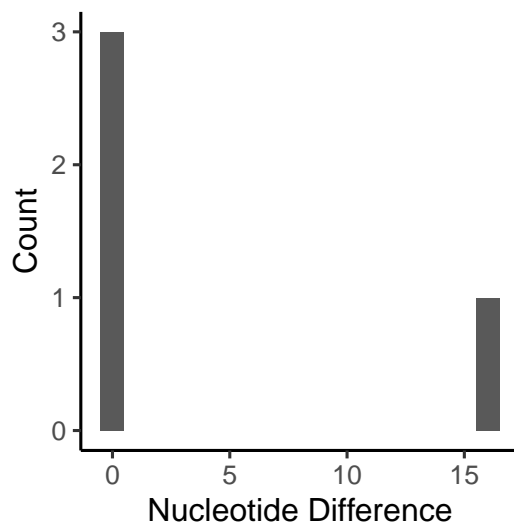
## IGHV3-13\*01

45 sequences assigned  
4 (8.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



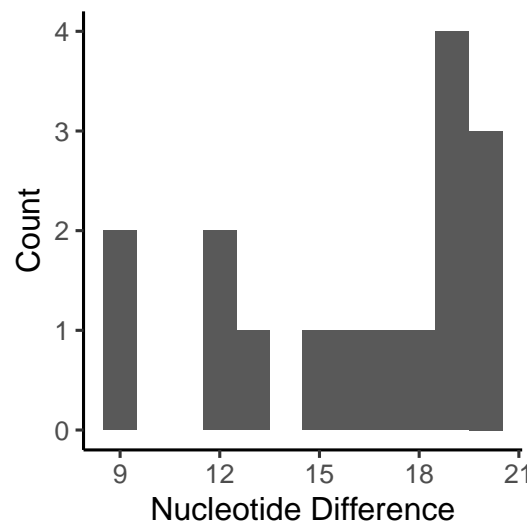
## IGHV3-20\*01

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



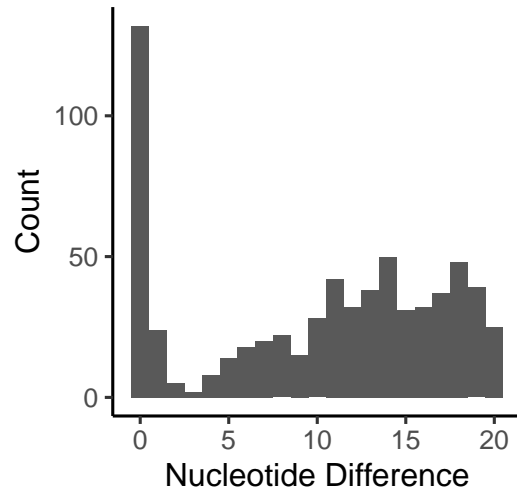
## IGHV3-21\*02

29 sequences assigned  
No exact matches.



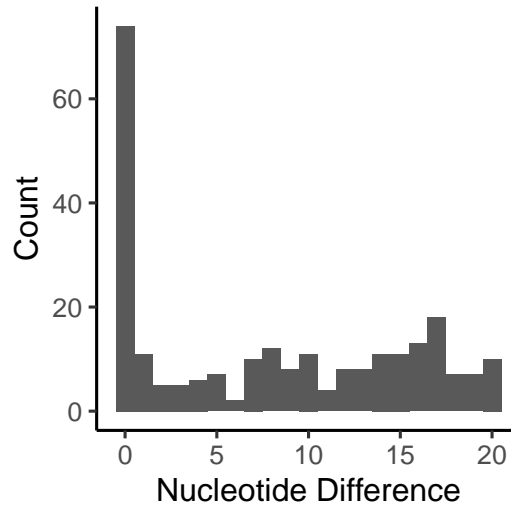
### IGHV3-23\*01

881 sequences assigned  
132 (15%) exact matches, in which:  
128 unique CDR3  
6 unique J



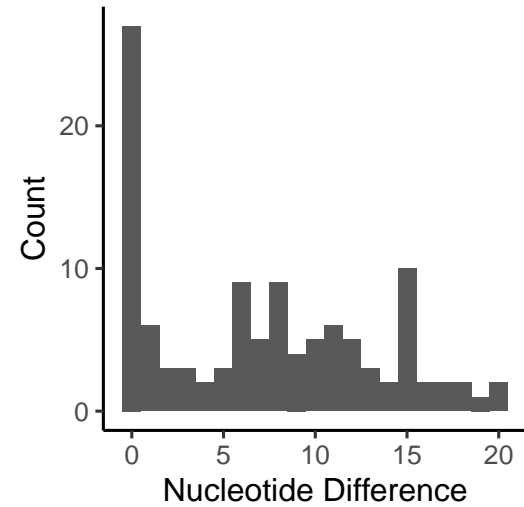
### IGHV3-33\*01

298 sequences assigned  
74 (24.8%) exact matches, in which:  
71 unique CDR3  
5 unique J



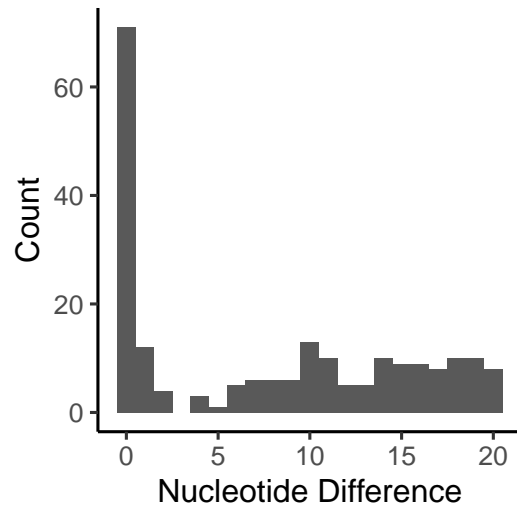
### IGHV3-48\*03

131 sequences assigned  
27 (20.6%) exact matches, in which:  
27 unique CDR3  
4 unique J



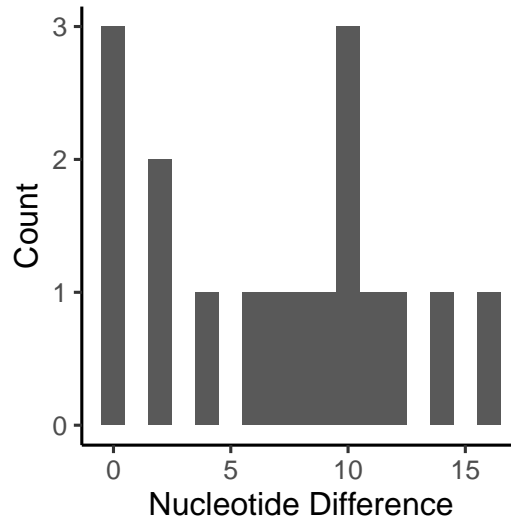
### IGHV3-30-3\*01

275 sequences assigned  
71 (25.8%) exact matches, in which:  
70 unique CDR3  
5 unique J



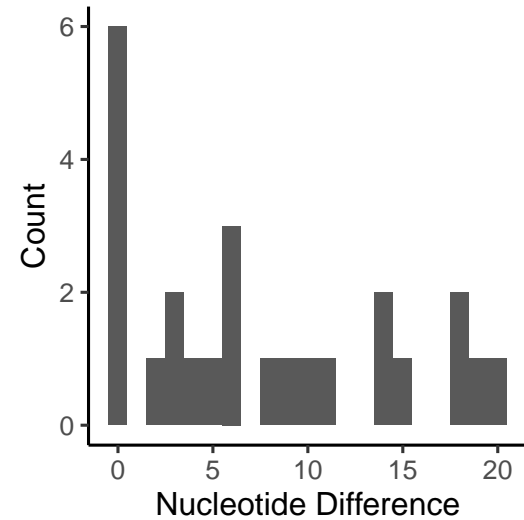
### IGHV3-43\*01

18 sequences assigned  
3 (16.7%) exact matches, in which:  
3 unique CDR3  
1 unique J



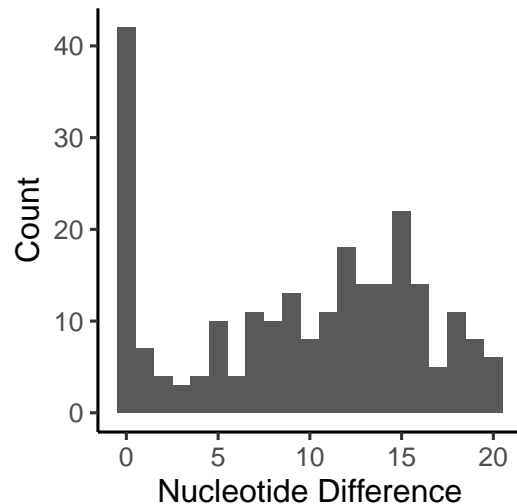
### IGHV3-49\*04

32 sequences assigned  
6 (18.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



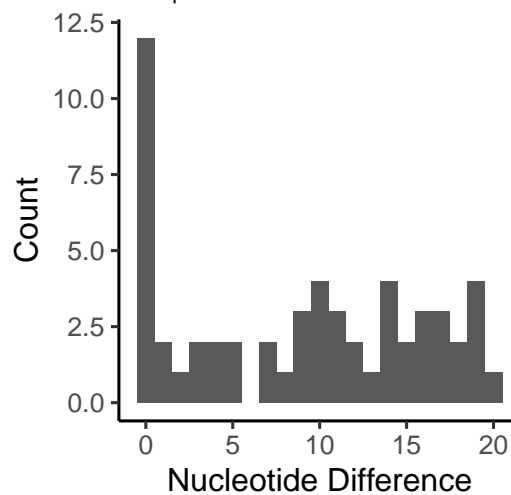
### IGHV3-30\*18

299 sequences assigned  
42 (14%) exact matches, in which:  
42 unique CDR3  
5 unique J



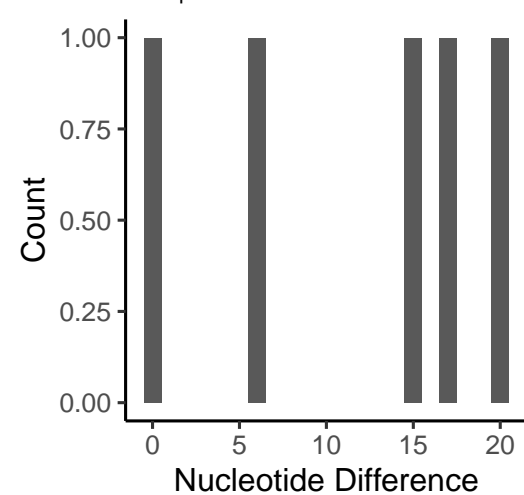
### IGHV3-48\*02

62 sequences assigned  
12 (19.4%) exact matches, in which:  
12 unique CDR3  
3 unique J



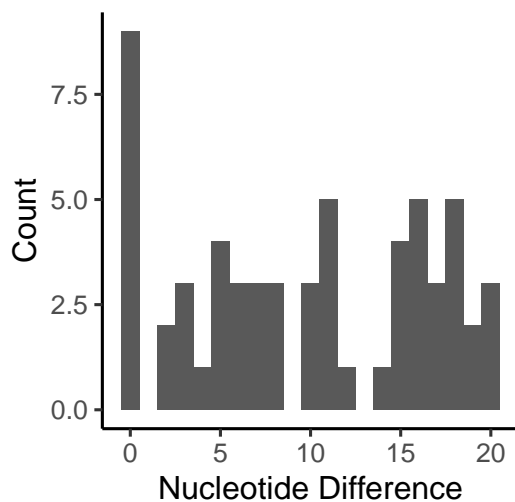
### IGHV3-49\*05

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



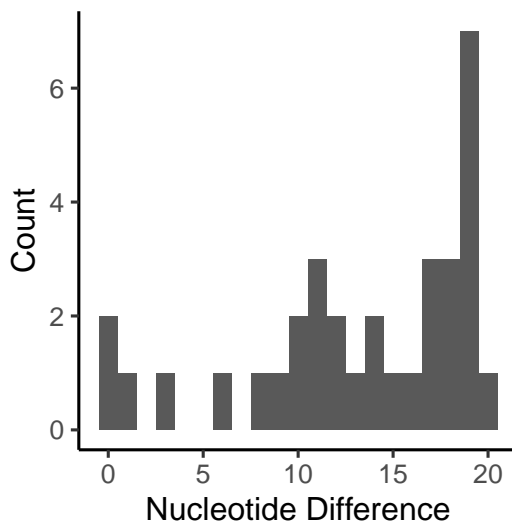
### IGHV3-53\*01

74 sequences assigned  
9 (12.2%) exact matches, in which:  
9 unique CDR3  
3 unique J



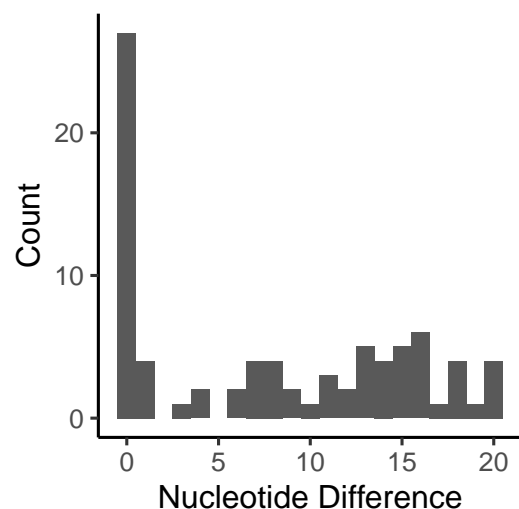
### IGHV3-73\*02

36 sequences assigned  
2 (5.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



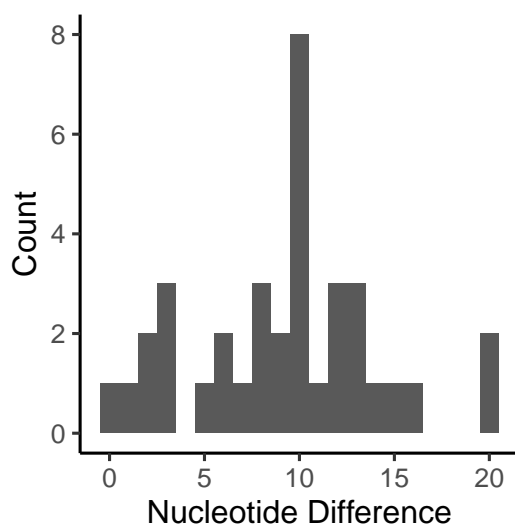
### IGHV4-4\*02

94 sequences assigned  
27 (28.7%) exact matches, in which:  
26 unique CDR3  
5 unique J



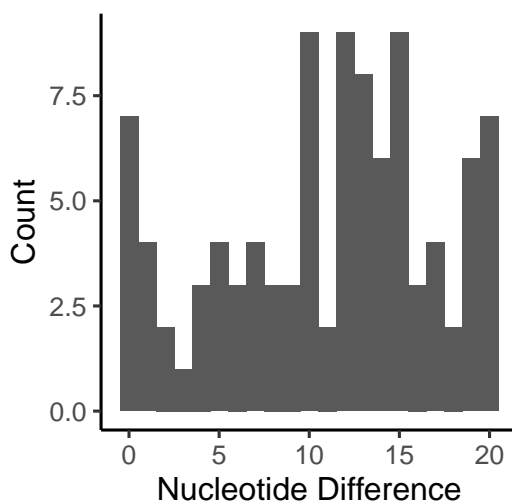
### IGHV3-53\*02

48 sequences assigned  
1 (2.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



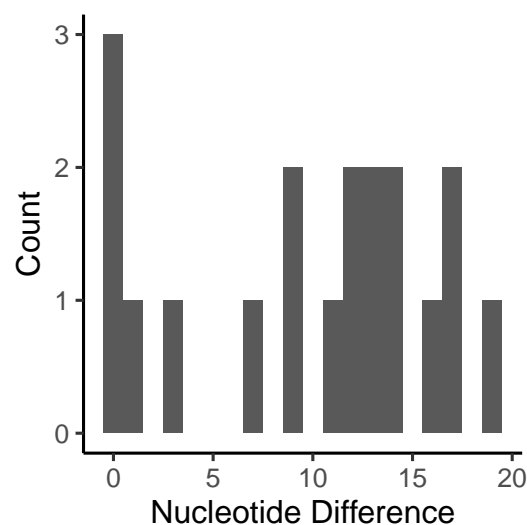
### IGHV3-74\*01

119 sequences assigned  
7 (5.9%) exact matches, in which:  
7 unique CDR3  
4 unique J



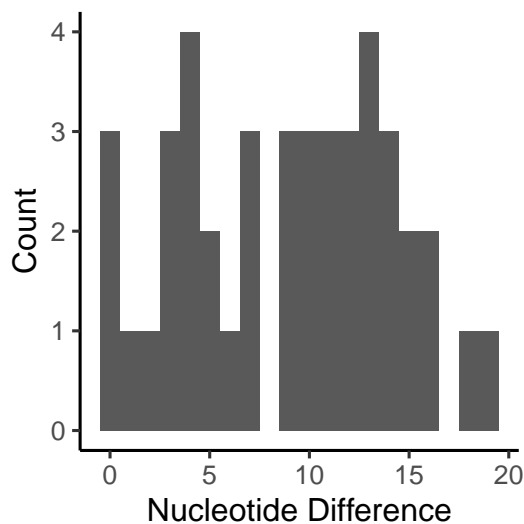
### IGHV4-30-4\*01

28 sequences assigned  
3 (10.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



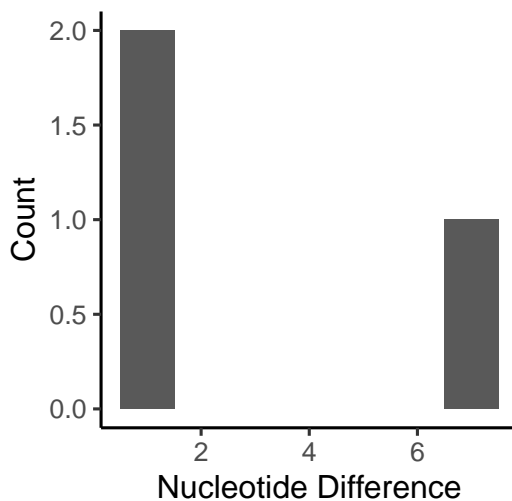
### IGHV3-72\*01

51 sequences assigned  
3 (5.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



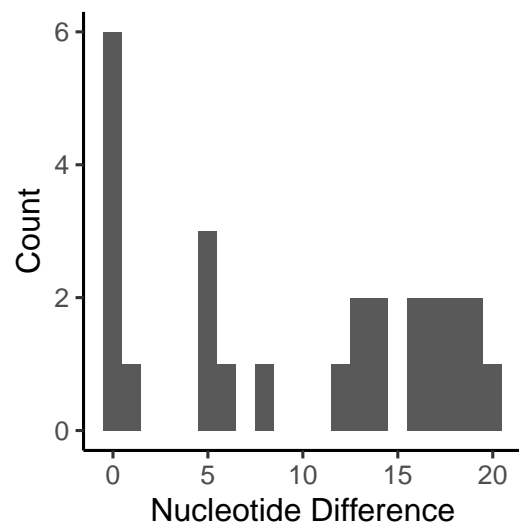
### IGHV3-43D\*04

3 sequences assigned  
No exact matches.



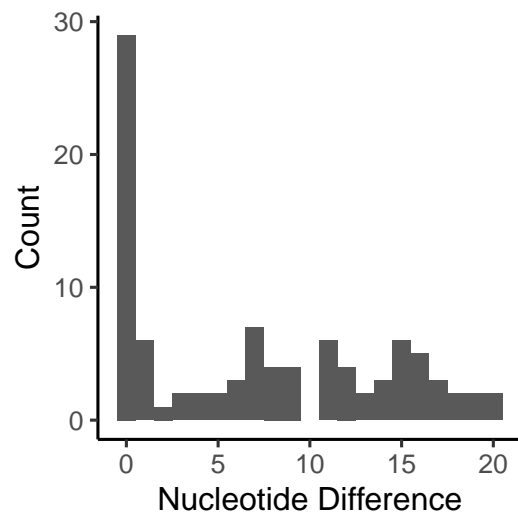
### IGHV4-30-2\*01

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



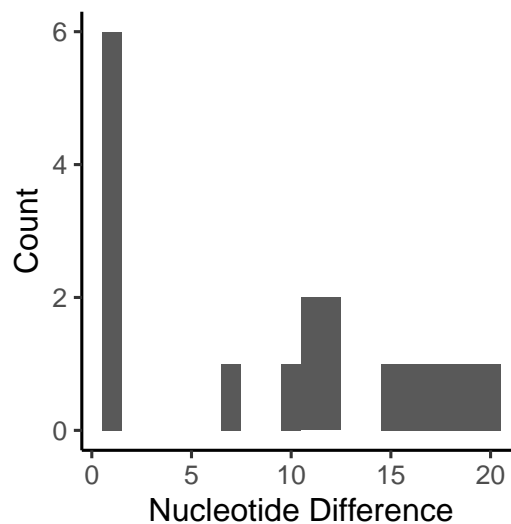
### IGHV4-31\*03

126 sequences assigned  
29 (23%) exact matches, in which:  
27 unique CDR3  
4 unique J



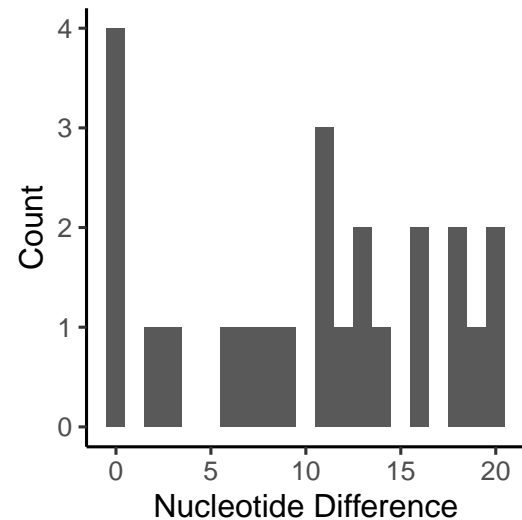
### IGHV4-38-2\*02

24 sequences assigned  
No exact matches.



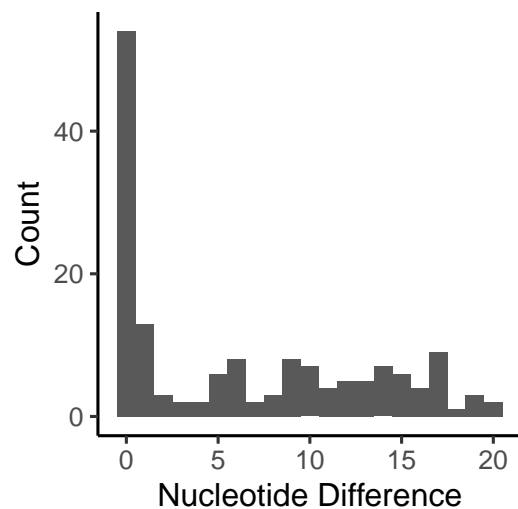
### IGHV4-61\*01

27 sequences assigned  
4 (14.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



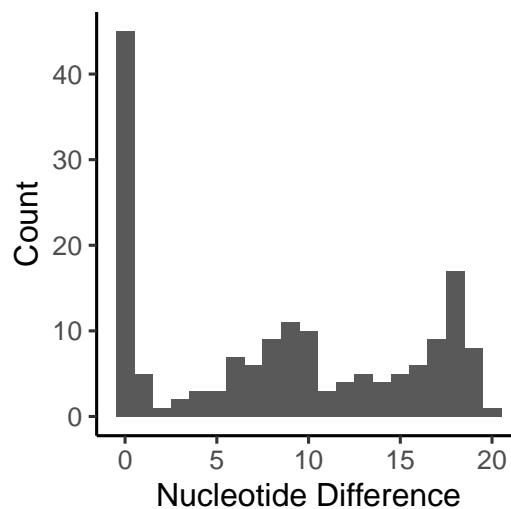
### IGHV4-34\*01

180 sequences assigned  
54 (30%) exact matches, in which:  
53 unique CDR3  
6 unique J



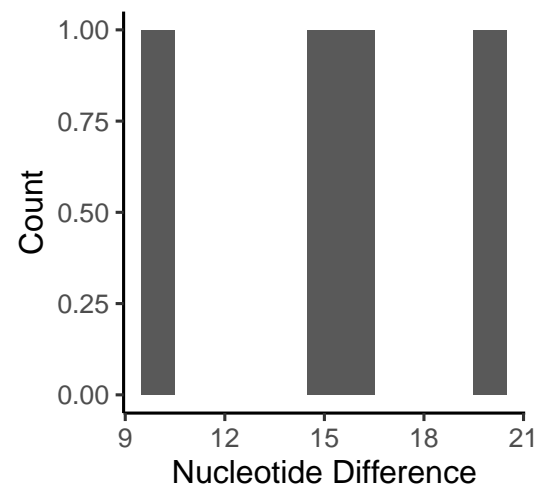
### IGHV4-39\*01

246 sequences assigned  
45 (18.3%) exact matches, in which:  
44 unique CDR3  
6 unique J



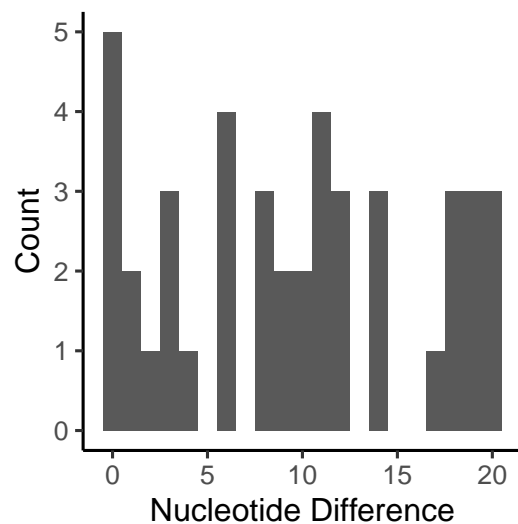
### IGHV4-61\*03

6 sequences assigned  
No exact matches.



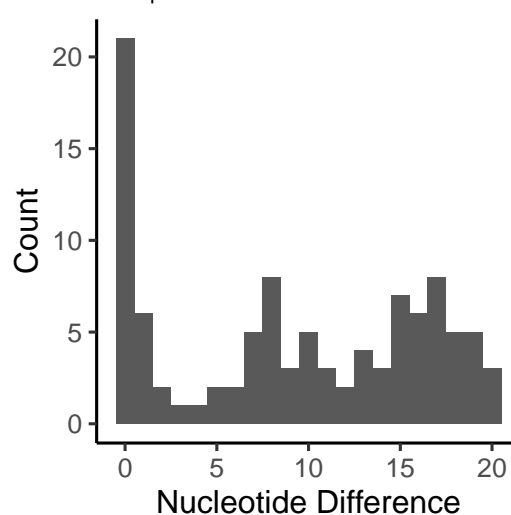
### IGHV4-38-2\*01

51 sequences assigned  
5 (9.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



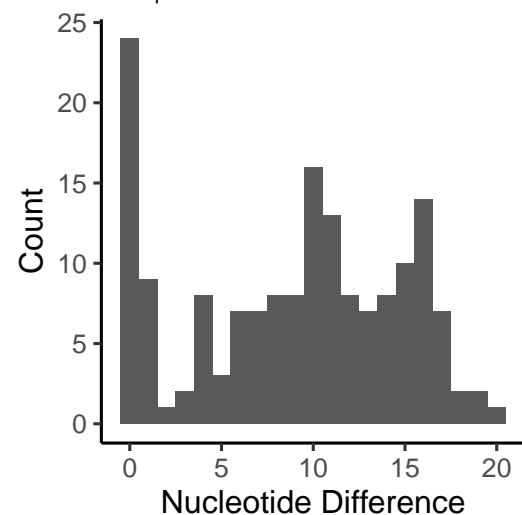
### IGHV4-59\*01

140 sequences assigned  
21 (15%) exact matches, in which:  
21 unique CDR3  
3 unique J



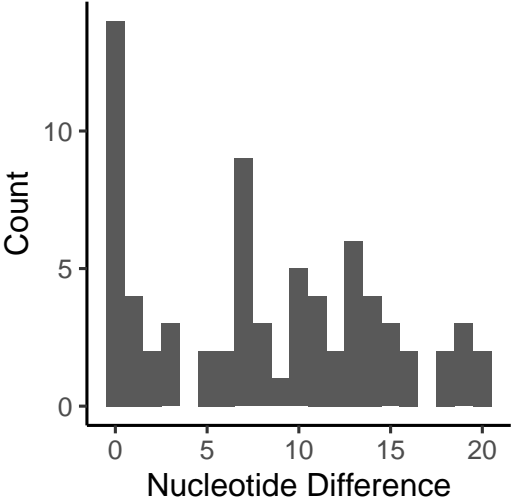
### IGHV5-51\*01

195 sequences assigned  
24 (12.3%) exact matches, in which:  
24 unique CDR3  
4 unique J



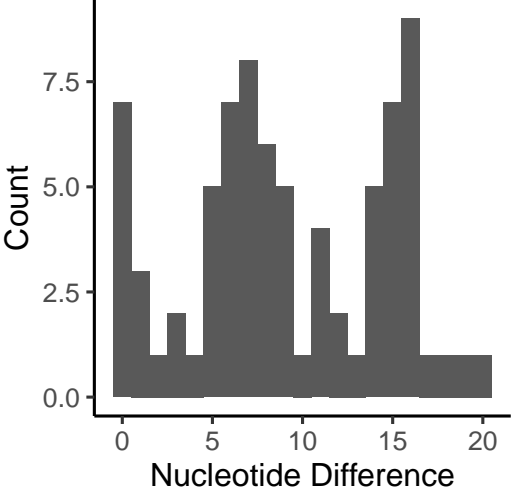
# IGHV6-1\*01

80 sequences assigned  
14 (17.5%) exact matches, in which:  
14 unique CDR3  
3 unique J



# IGHV7-4-1\*02

84 sequences assigned  
7 (8.3%) exact matches, in which:  
7 unique CDR3  
2 unique J







Warning – no inferred sequences found.