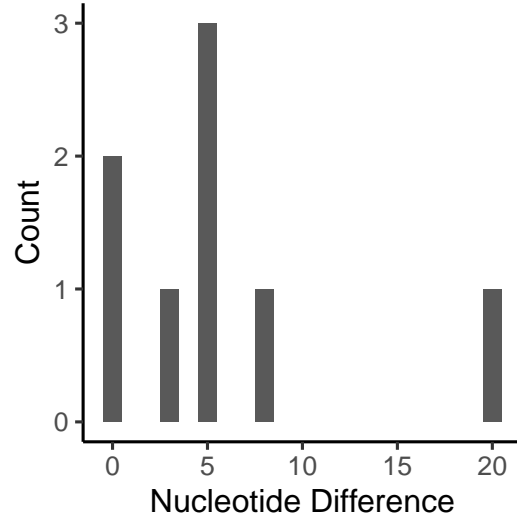


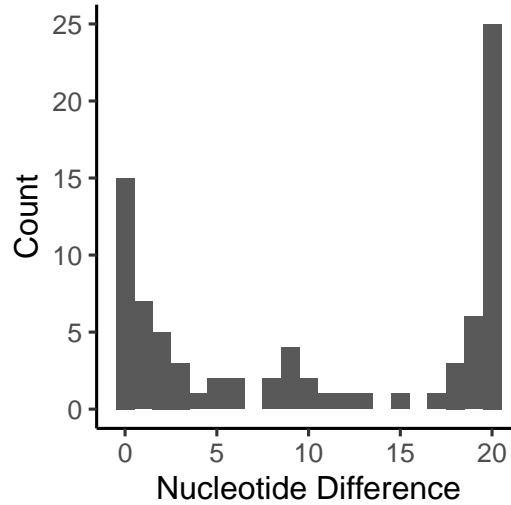
### IGHV1-2\*02

9 sequences assigned  
2 (22.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



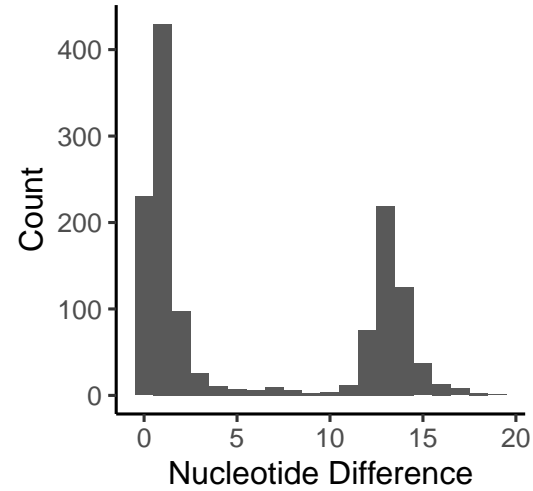
### IGHV1-8\*01

92 sequences assigned  
15 (16.3%) exact matches, in which:  
15 unique CDR3  
5 unique J



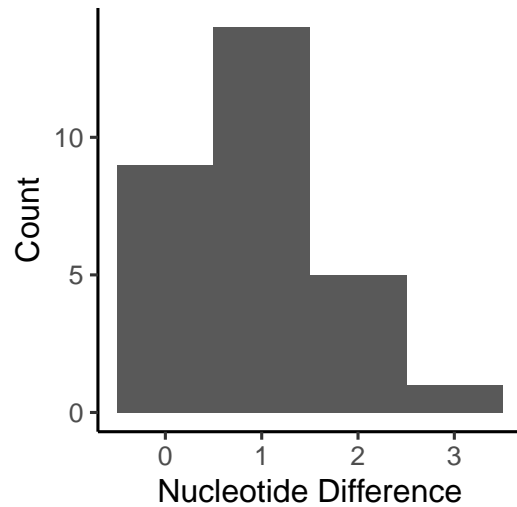
### IGHV1-46\*01

1327 sequences assigned  
230 (17.3%) exact matches, in which:  
159 unique CDR3  
4 unique J



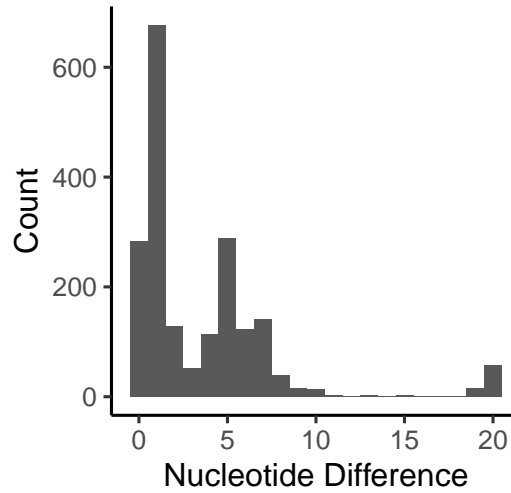
### IGHV1-2\*04

29 sequences assigned  
9 (31%) exact matches, in which:  
7 unique CDR3  
3 unique J



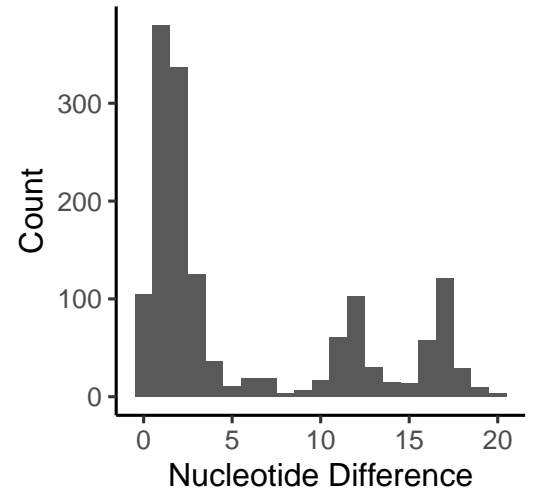
### IGHV1-18\*01

2421 sequences assigned  
283 (11.7%) exact matches, in which:  
184 unique CDR3  
4 unique J



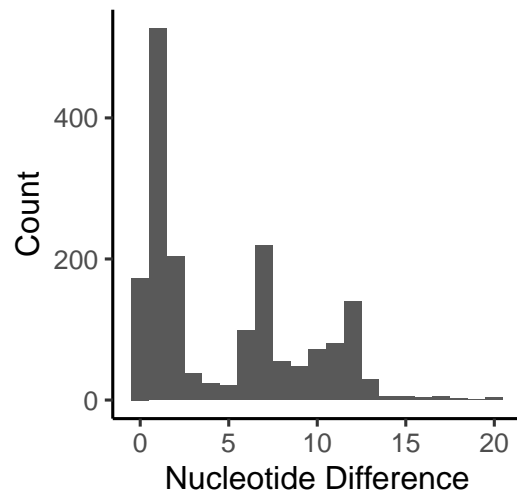
### IGHV1-69\*01\_12\_13

1602 sequences assigned  
105 (6.6%) exact matches, in which:  
66 unique CDR3  
5 unique J



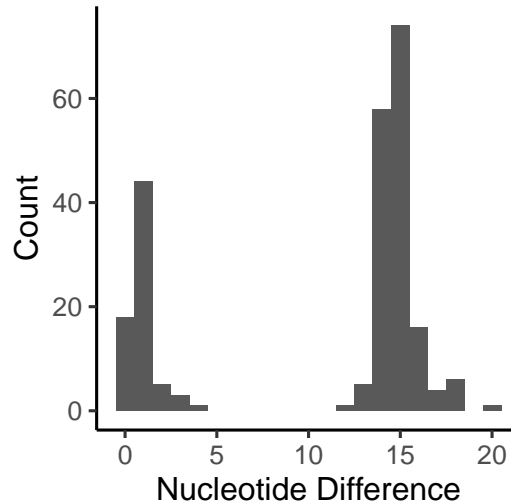
### IGHV1-3\*01\_05

1747 sequences assigned  
173 (9.9%) exact matches, in which:  
108 unique CDR3  
4 unique J



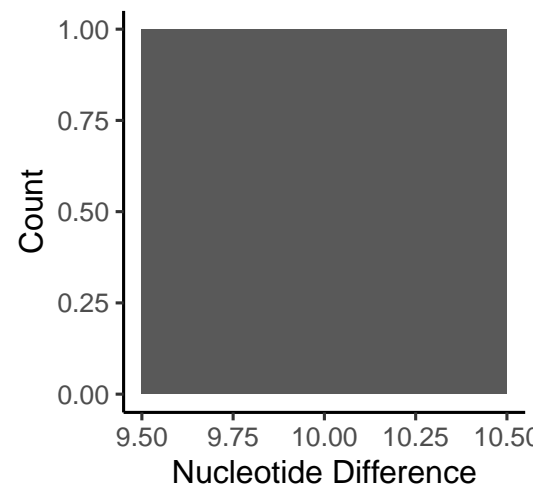
### IGHV1-24\*01

362 sequences assigned  
18 (5%) exact matches, in which:  
10 unique CDR3  
2 unique J



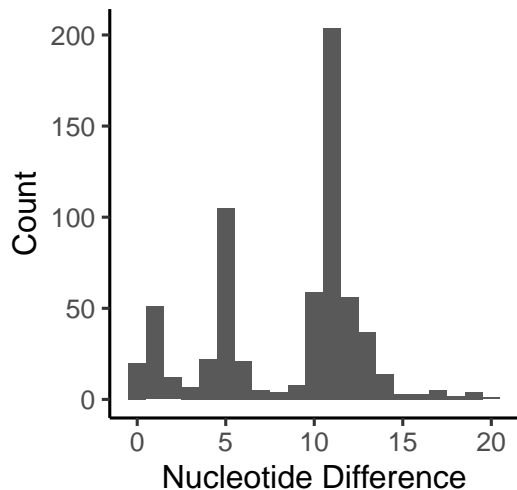
### IGHV2-5\*01

119 sequences assigned  
No exact matches.



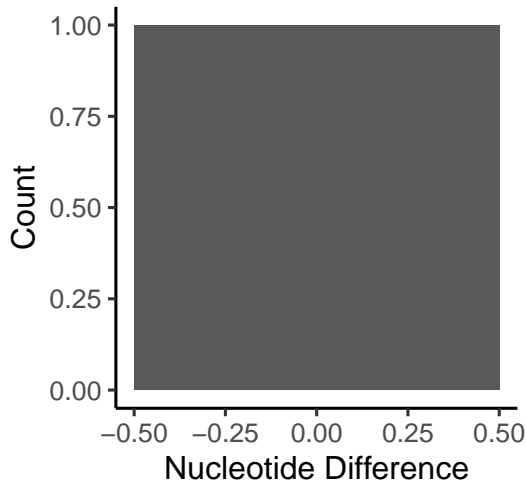
### IGHV2-5\*02

646 sequences assigned  
20 (3.1%) exact matches, in which:  
15 unique CDR3  
2 unique J



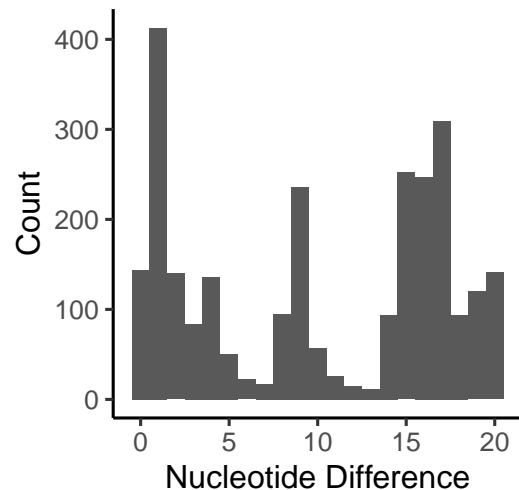
### IGHV2-70\*02

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



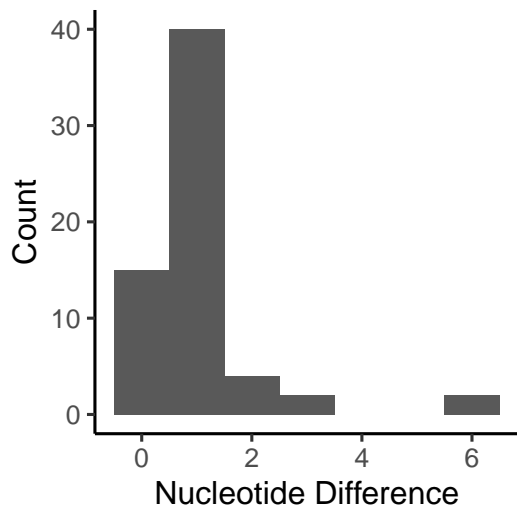
### IGHV3-7\*03

2953 sequences assigned  
144 (4.9%) exact matches, in which:  
68 unique CDR3  
4 unique J



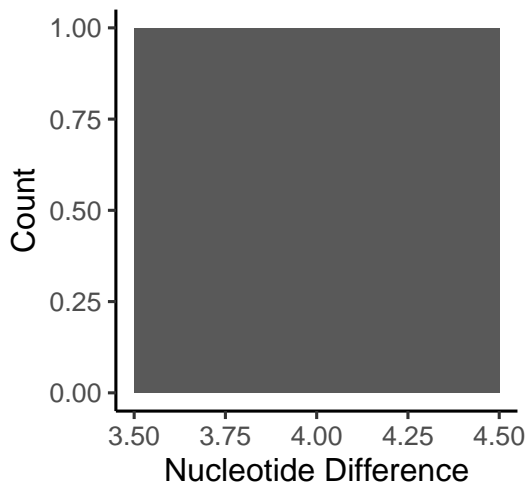
### IGHV2-26\*01

63 sequences assigned  
15 (23.8%) exact matches, in which:  
7 unique CDR3  
2 unique J



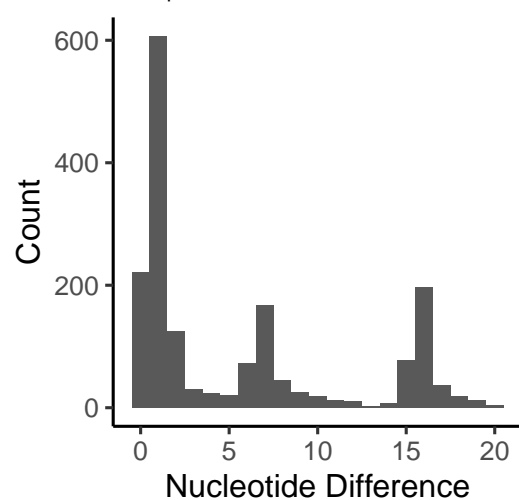
### IGHV2-70\*12

1 sequences assigned  
No exact matches.



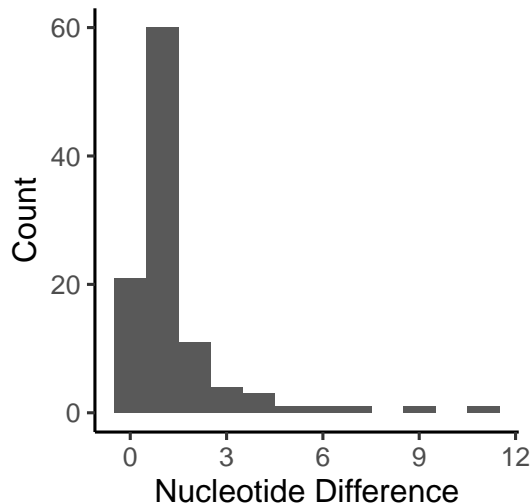
### IGHV3-9\*01

1742 sequences assigned  
221 (12.7%) exact matches, in which:  
102 unique CDR3  
4 unique J



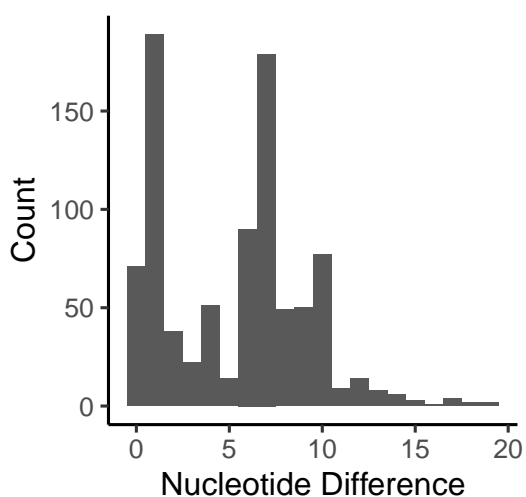
### IGHV2-70\*01

104 sequences assigned  
21 (20.2%) exact matches, in which:  
12 unique CDR3  
2 unique J



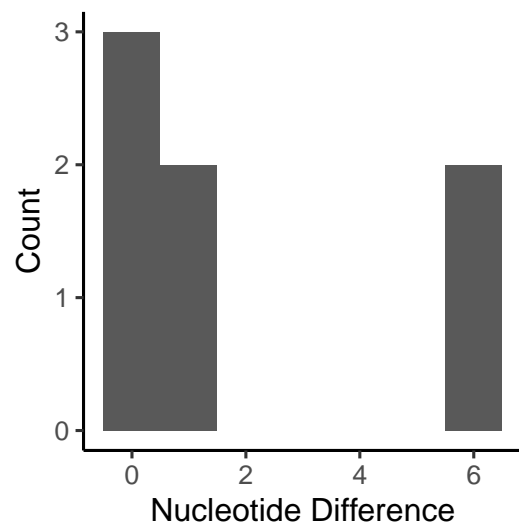
### IGHV3-7\*01

883 sequences assigned  
71 (8%) exact matches, in which:  
42 unique CDR3  
2 unique J



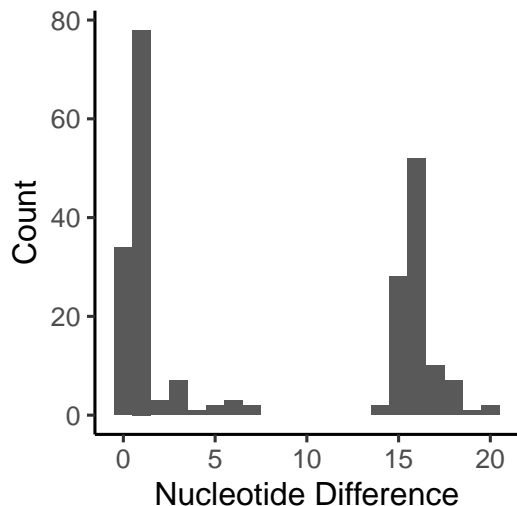
### IGHV3-11\*01

141 sequences assigned  
3 (2.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



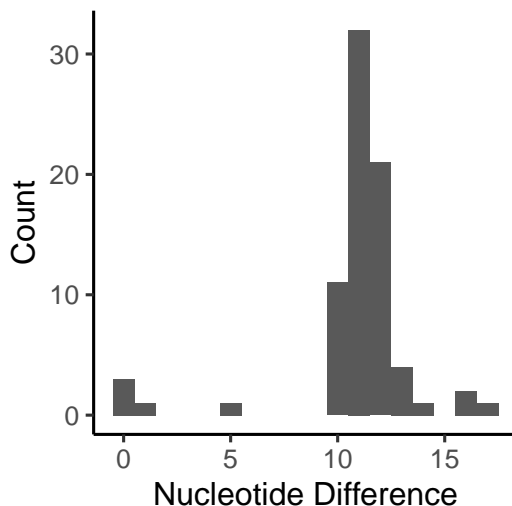
### IGHV3-11\*06

234 sequences assigned  
34 (14.5%) exact matches, in which:  
13 unique CDR3  
1 unique J



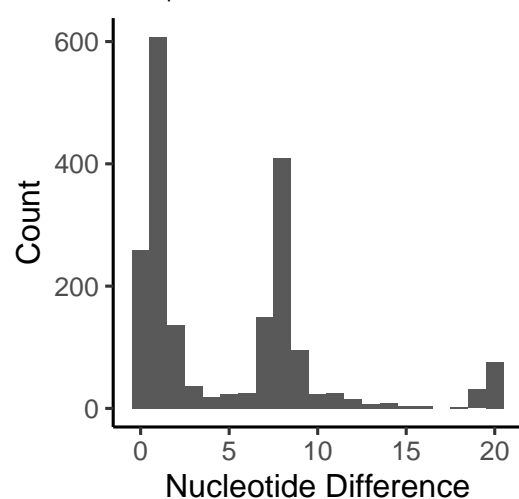
### IGHV3-15\*07

81 sequences assigned  
3 (3.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



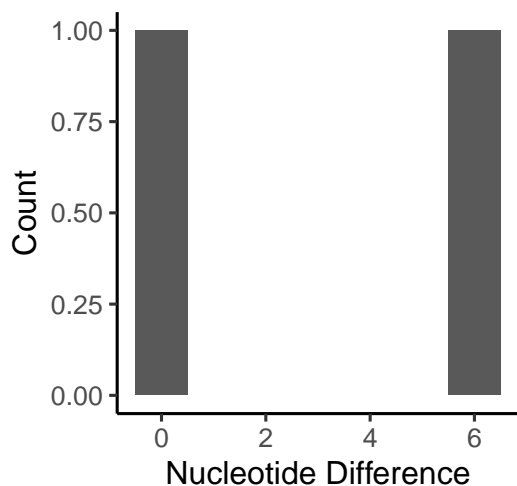
### IGHV3-21\*01\_02

2090 sequences assigned  
259 (12.4%) exact matches, in which:  
141 unique CDR3  
4 unique J



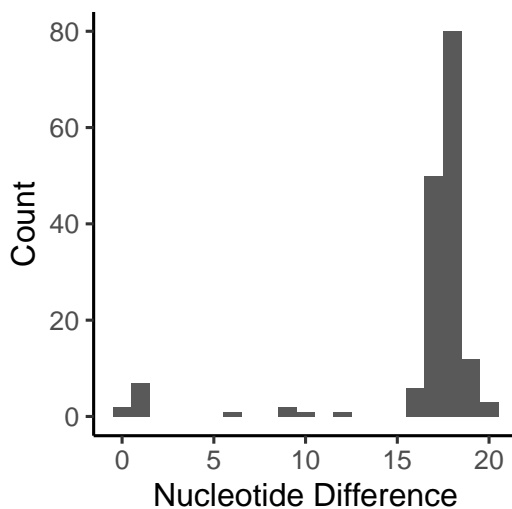
### IGHV3-11\*03\_05

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



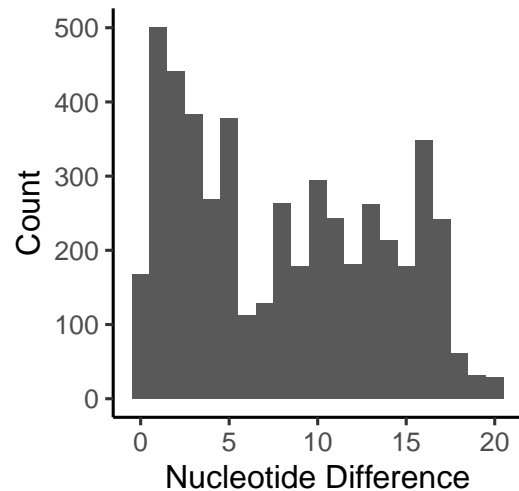
### IGHV3-15\*01\_02

167 sequences assigned  
2 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



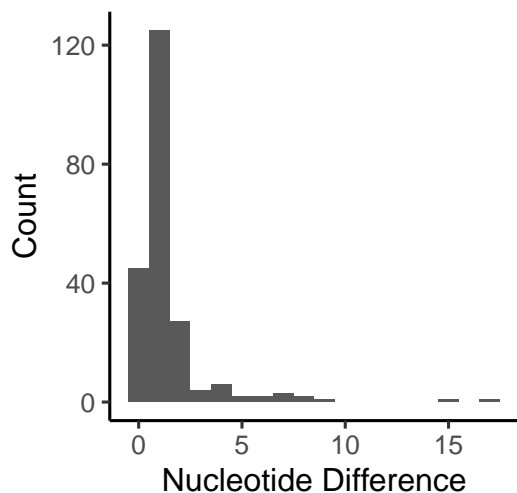
### IGHV3-23\*01\_04

5705 sequences assigned  
168 (2.9%) exact matches, in which:  
89 unique CDR3  
4 unique J



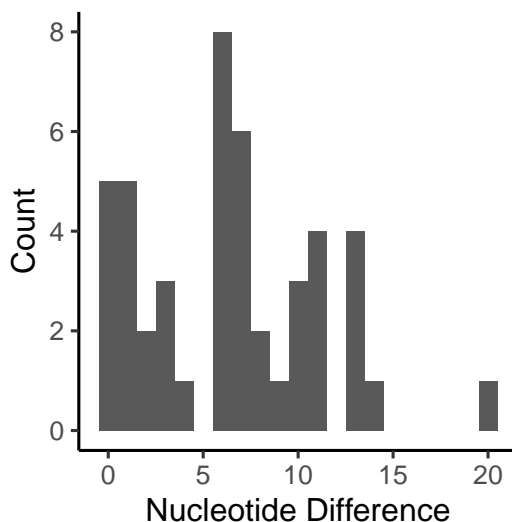
### IGHV3-13\*01

596 sequences assigned  
45 (7.6%) exact matches, in which:  
19 unique CDR3  
2 unique J



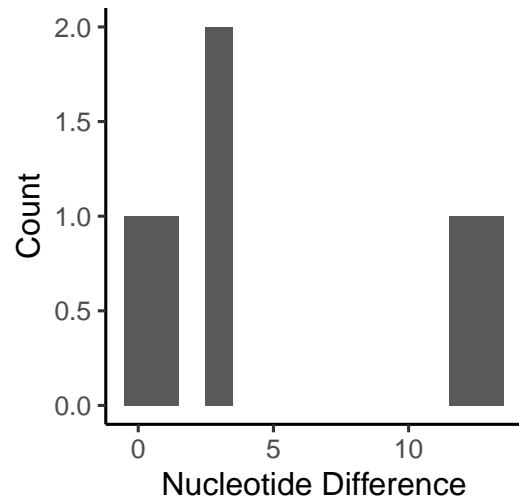
### IGHV3-21\*04

48 sequences assigned  
5 (10.4%) exact matches, in which:  
4 unique CDR3  
4 unique J



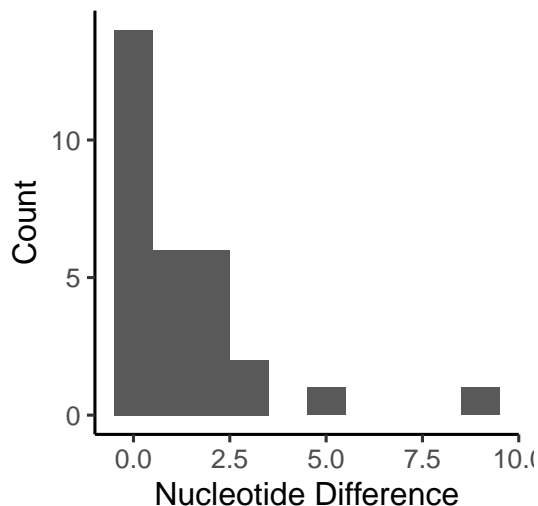
### IGHV3-30-3\*01

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



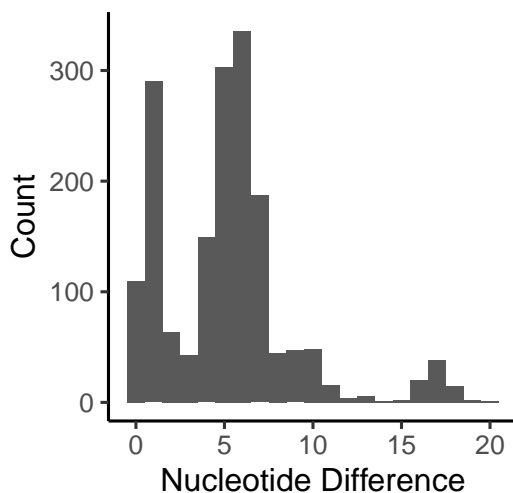
### IGHV3-30\*03

85 sequences assigned  
14 (16.5%) exact matches, in which:  
14 unique CDR3  
4 unique J



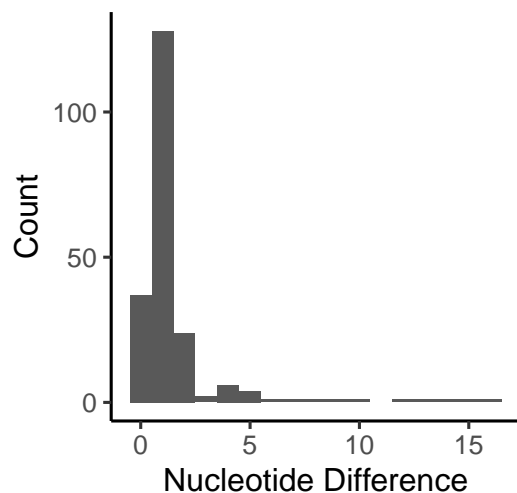
### IGHV3-33\*01

1731 sequences assigned  
110 (6.4%) exact matches, in which:  
60 unique CDR3  
4 unique J



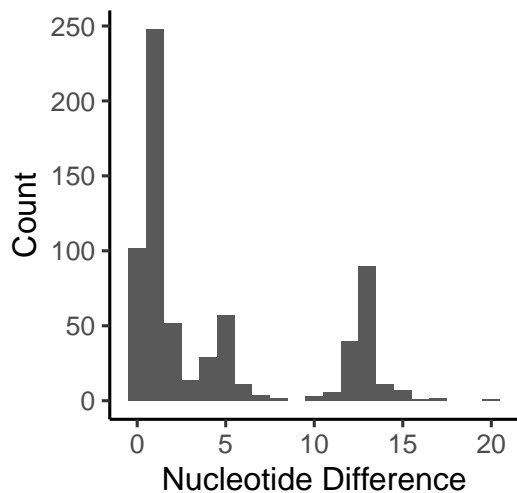
### IGHV3-43\*01

211 sequences assigned  
37 (17.5%) exact matches, in which:  
17 unique CDR3  
3 unique J



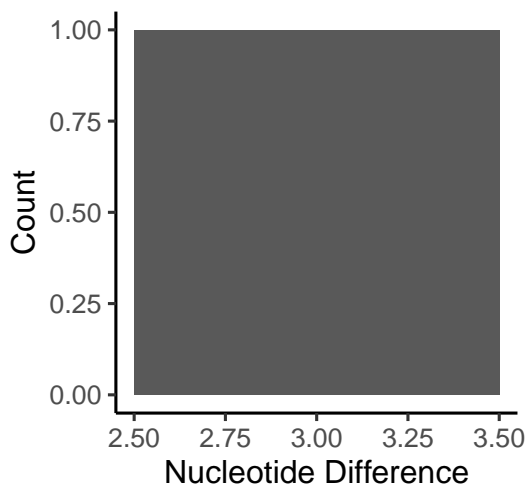
### IGHV3-30\*04

687 sequences assigned  
102 (14.8%) exact matches, in which:  
45 unique CDR3  
4 unique J



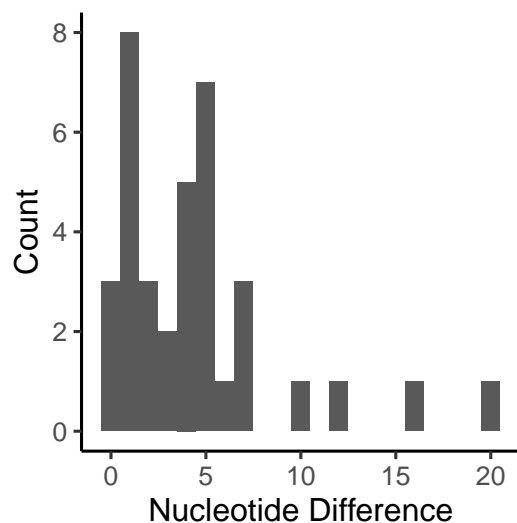
### IGHV3-33\*05

1 sequences assigned  
No exact matches.



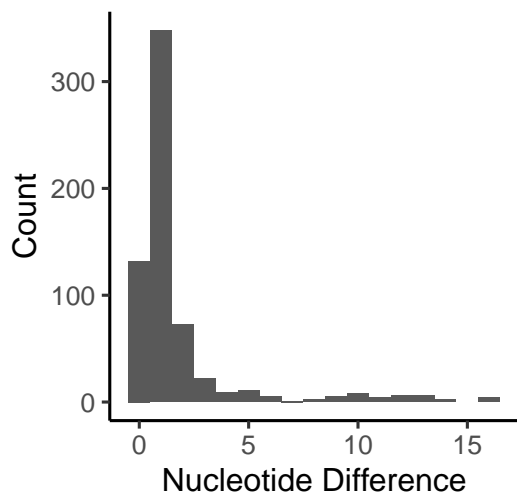
### IGHV3-48\*01

38 sequences assigned  
3 (7.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



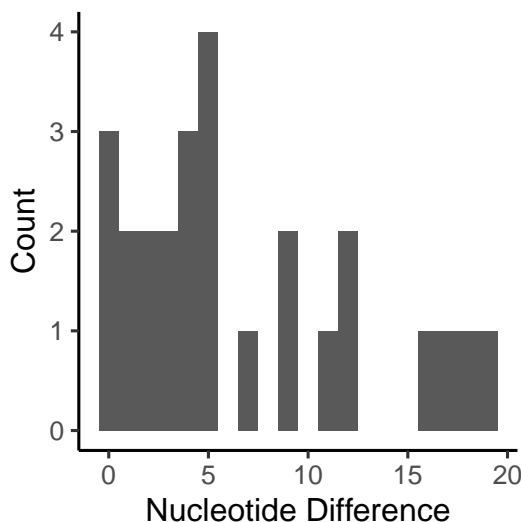
### IGHV3-30\*18

727 sequences assigned  
132 (18.2%) exact matches, in which:  
60 unique CDR3  
2 unique J



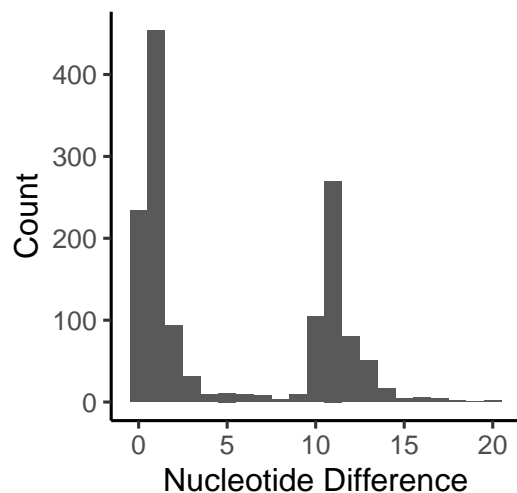
### IGHV3-33\*06

27 sequences assigned  
3 (11.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



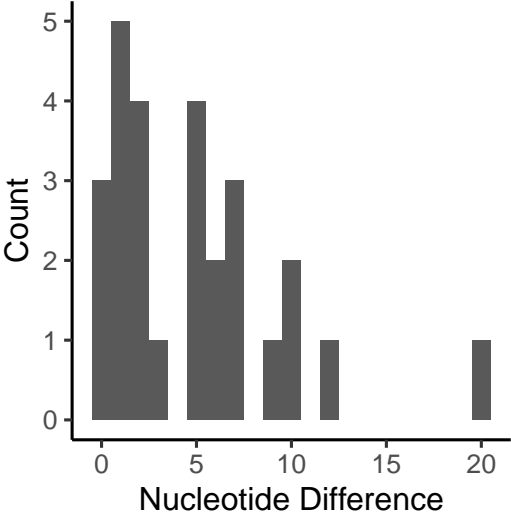
### IGHV3-48\*02

1627 sequences assigned  
234 (14.4%) exact matches, in which:  
118 unique CDR3  
5 unique J



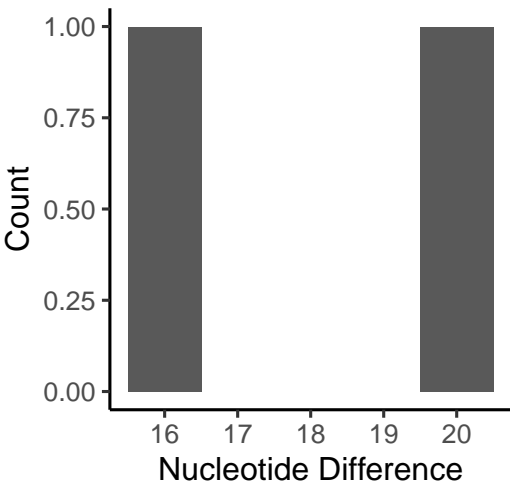
IGHV3-48\*04

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



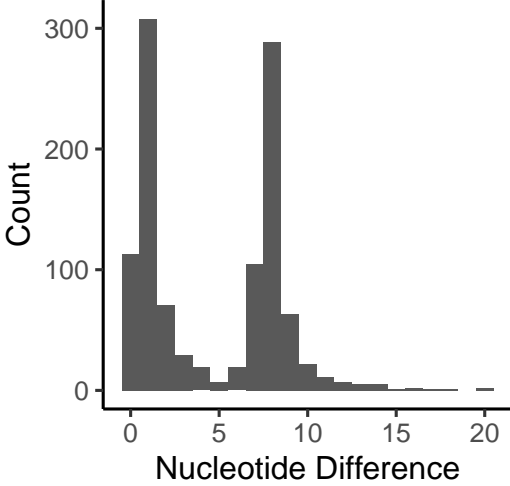
IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



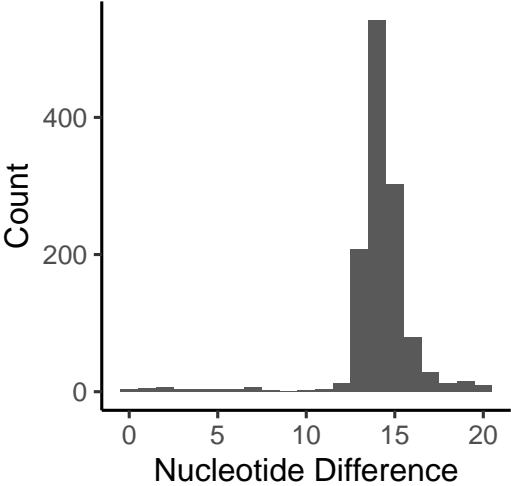
IGHV3-74\*01\_02

1148 sequences assigned  
113 (9.8%) exact matches, in which:  
56 unique CDR3  
3 unique J



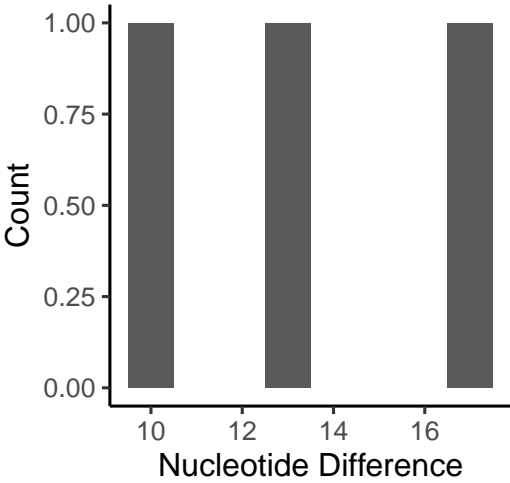
IGHV3-53\*01\_02

1285 sequences assigned  
3 (0.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



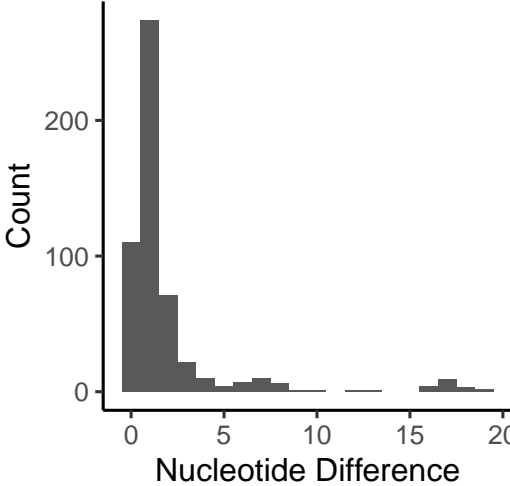
IGHV3-72\*01

3 sequences assigned  
No exact matches.



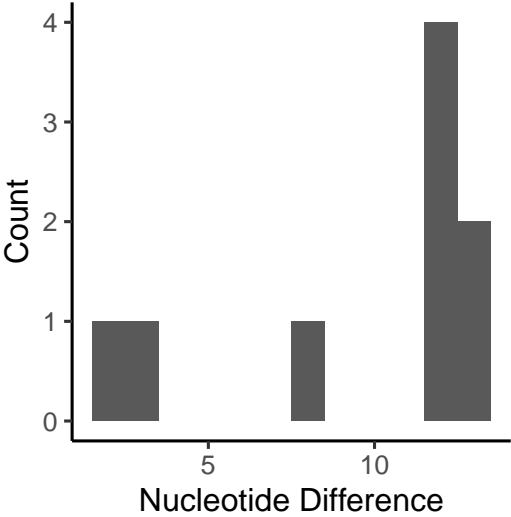
IGHV4-4\*02\_03

540 sequences assigned  
110 (20.4%) exact matches, in which:  
66 unique CDR3  
4 unique J



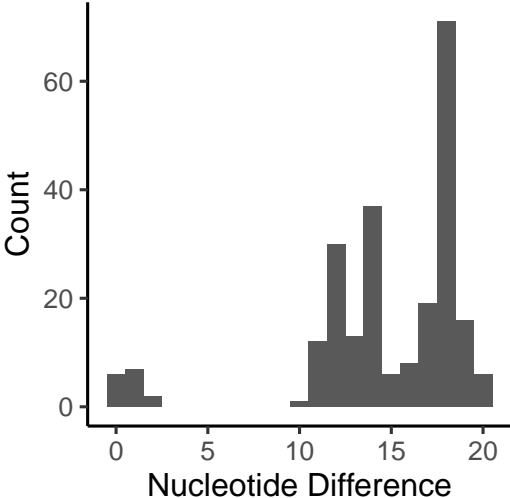
IGHV3-66\*03

10 sequences assigned  
No exact matches.



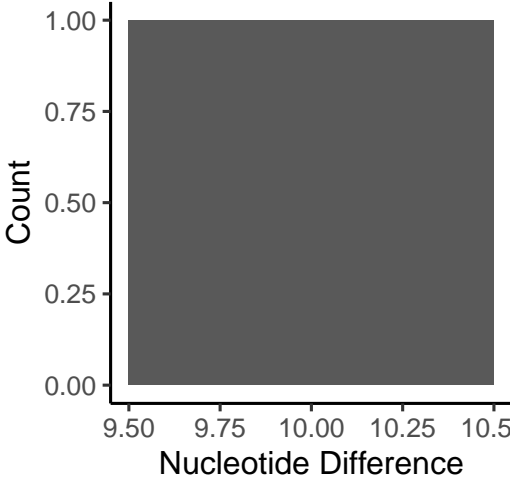
IGHV3-73\*01\_02

239 sequences assigned  
6 (2.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



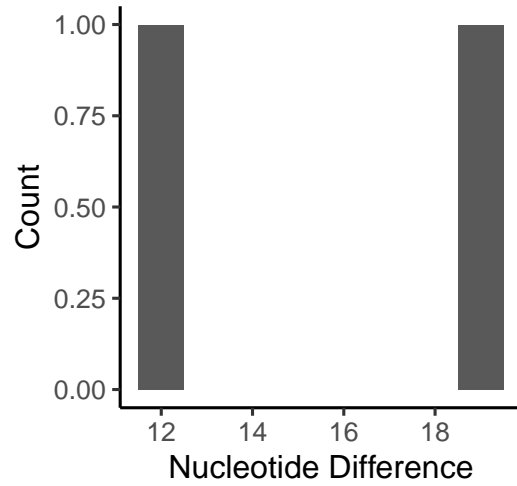
IGHV4-30-2\*03

1 sequences assigned  
No exact matches.



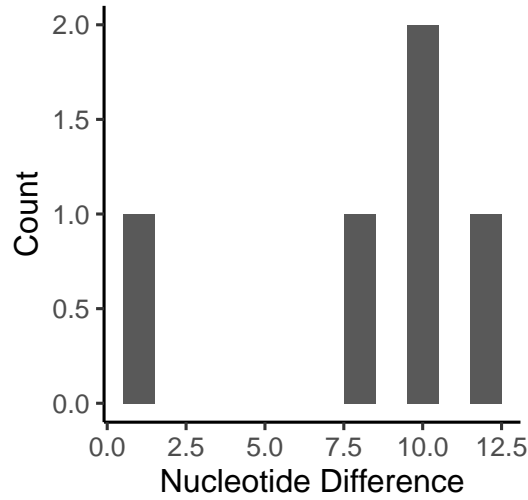
### IGHV4-30-4\*08

2 sequences assigned  
No exact matches.



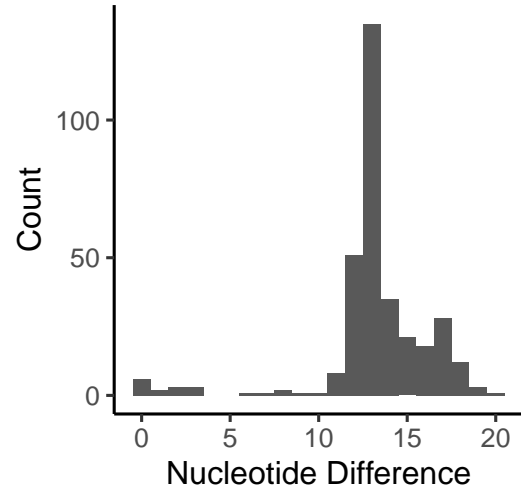
### IGHV4-38-2\*02

5 sequences assigned  
No exact matches.



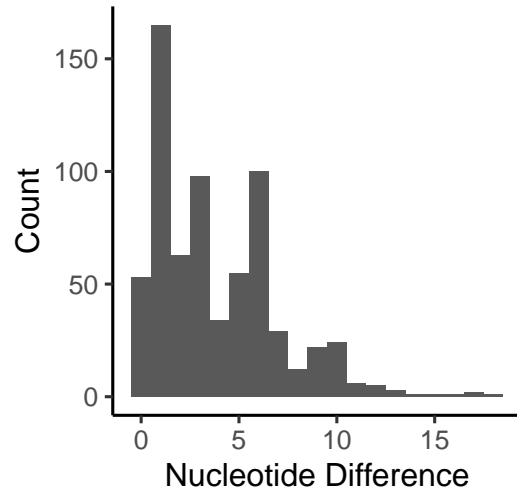
### IGHV4-59\*13

1014 sequences assigned  
6 (0.6%) exact matches, in which:  
6 unique CDR3  
3 unique J



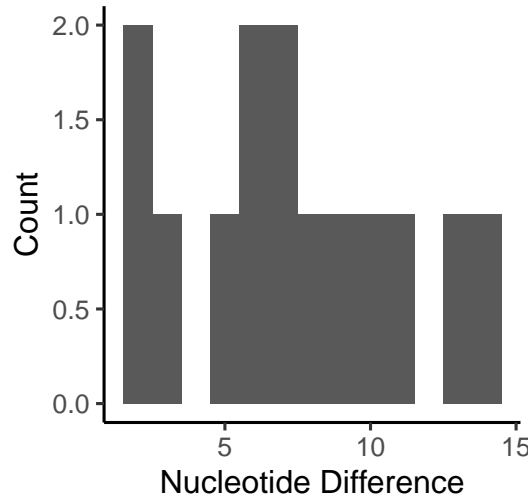
### IGHV4-31\*02

684 sequences assigned  
53 (7.7%) exact matches, in which:  
33 unique CDR3  
3 unique J



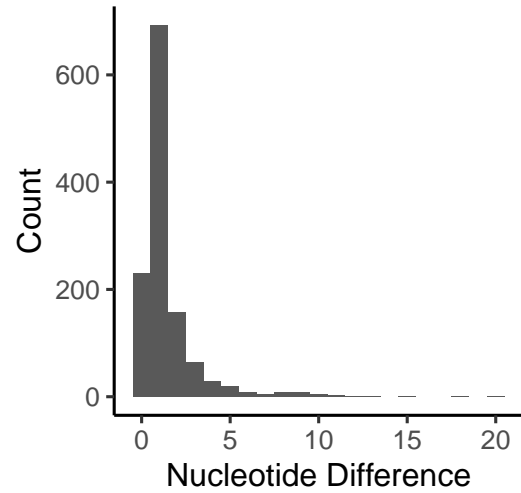
### IGHV4-39\*07

15 sequences assigned  
No exact matches.



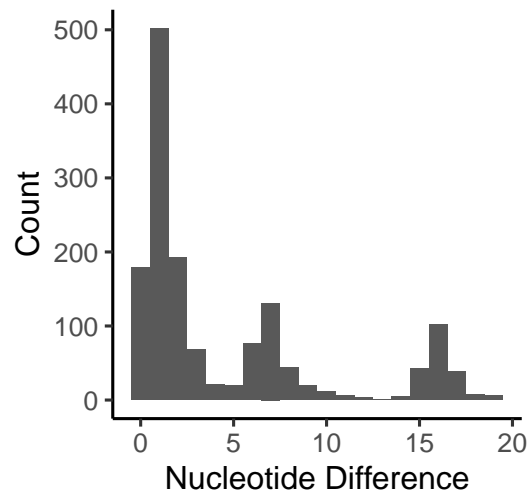
### IGHV4-59\*01\_07

1243 sequences assigned  
231 (18.6%) exact matches, in which:  
143 unique CDR3  
4 unique J



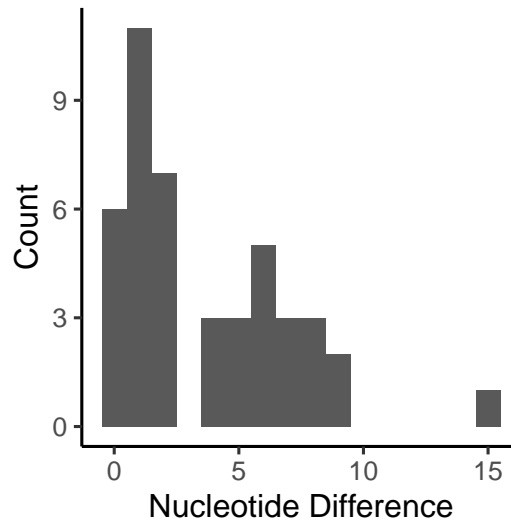
### IGHV4-34\*01\_02

1488 sequences assigned  
179 (12%) exact matches, in which:  
117 unique CDR3  
6 unique J



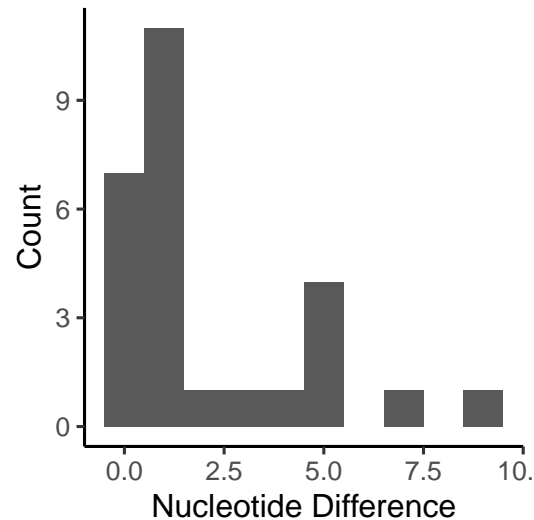
### IGHV4-59\*12

44 sequences assigned  
6 (13.6%) exact matches, in which:  
6 unique CDR3  
3 unique J



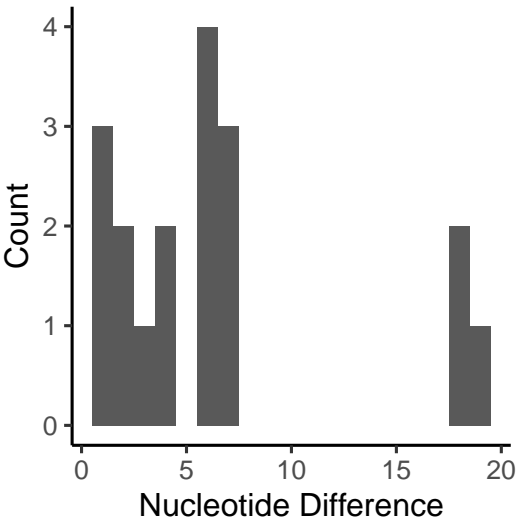
### IGHV4-61\*01

28 sequences assigned  
7 (25%) exact matches, in which:  
5 unique CDR3  
3 unique J



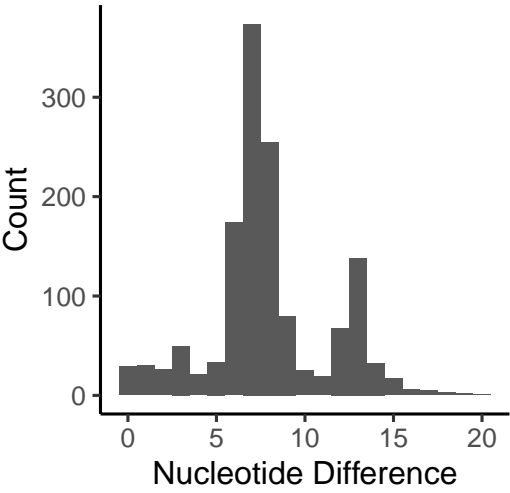
IGHV4-61\*08

309 sequences assigned  
No exact matches.



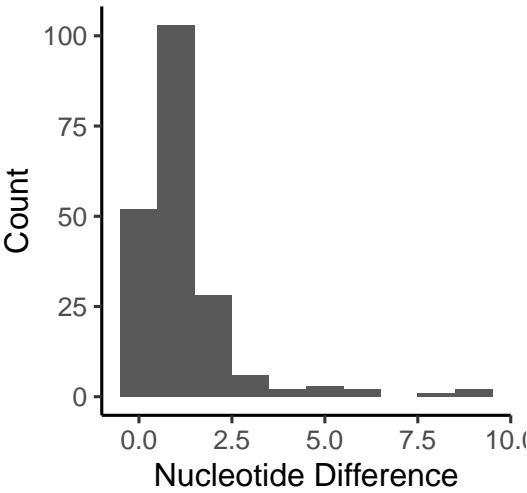
IGHV5-51\*01\_03

1773 sequences assigned  
29 (1.6%) exact matches, in which:  
16 unique CDR3  
4 unique J



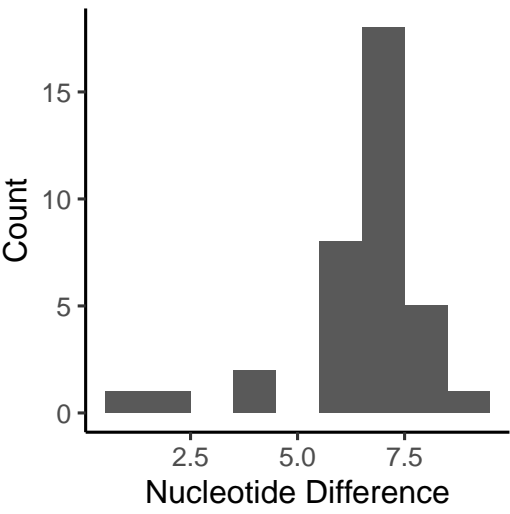
IGHV5-10-1\*01\_03

442 sequences assigned  
52 (11.8%) exact matches, in which:  
29 unique CDR3  
3 unique J



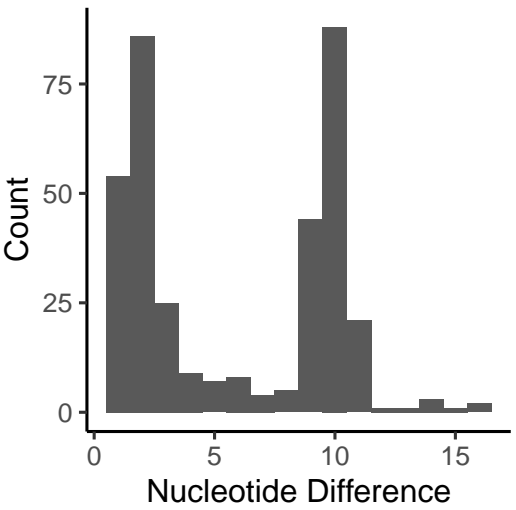
IGHV6-1\*01\_02

36 sequences assigned  
No exact matches.



IGHV5-51\*07

363 sequences assigned  
No exact matches.







Warning – no inferred sequences found.