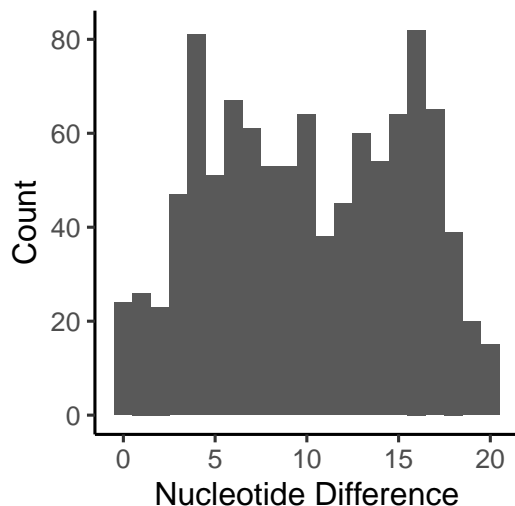


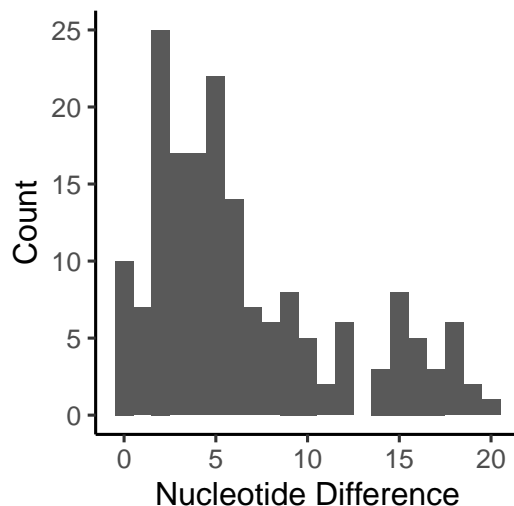
### IGHV1-2\*02

1109 sequences assigned  
24 (2.2%) exact matches, in which:  
20 unique CDR3  
3 unique J



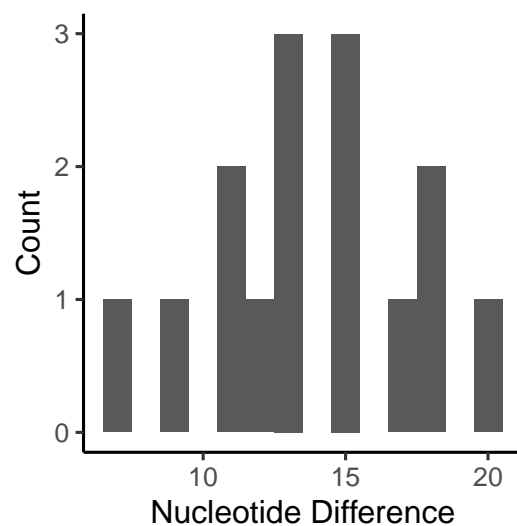
### IGHV1-8\*03

182 sequences assigned  
10 (5.5%) exact matches, in which:  
10 unique CDR3  
3 unique J



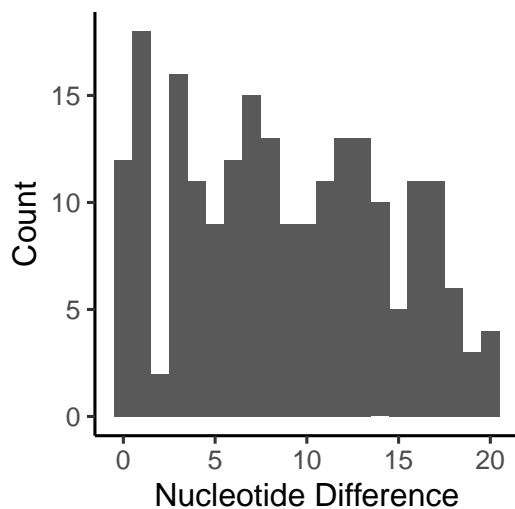
### IGHV1-45\*02

28 sequences assigned  
No exact matches.



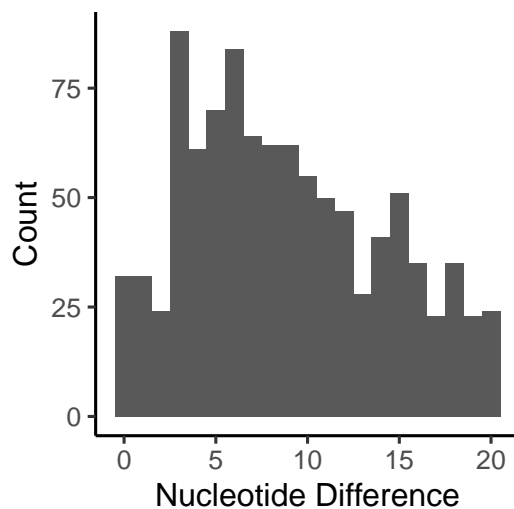
### IGHV1-3\*01\_05

232 sequences assigned  
12 (5.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



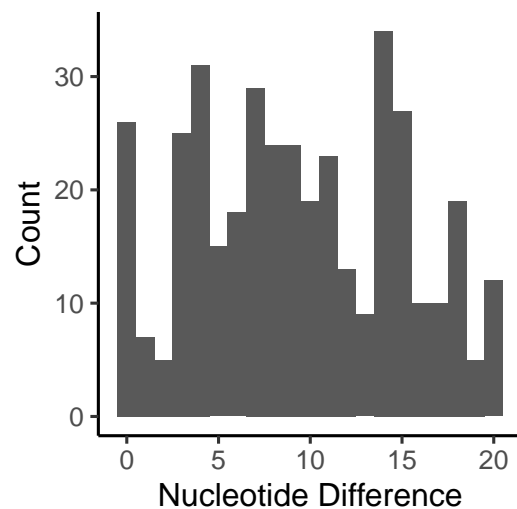
### IGHV1-18\*04

1112 sequences assigned  
32 (2.9%) exact matches, in which:  
26 unique CDR3  
4 unique J



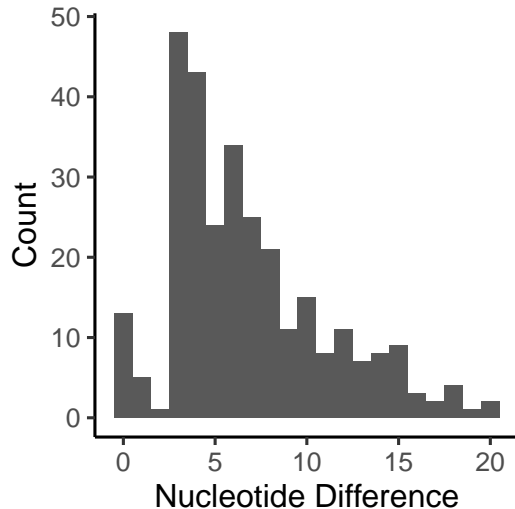
### IGHV1-46\*01

467 sequences assigned  
26 (5.6%) exact matches, in which:  
21 unique CDR3  
4 unique J



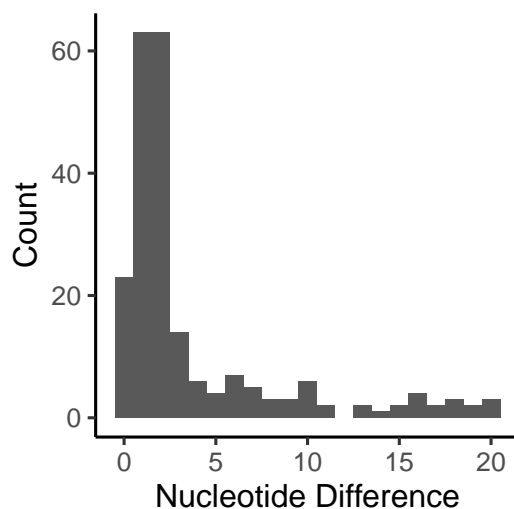
### IGHV1-8\*01

307 sequences assigned  
13 (4.2%) exact matches, in which:  
13 unique CDR3  
2 unique J



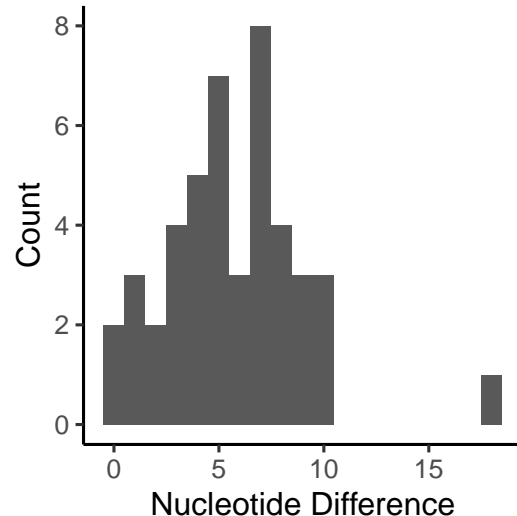
### IGHV1-24\*01

227 sequences assigned  
23 (10.1%) exact matches, in which:  
18 unique CDR3  
5 unique J



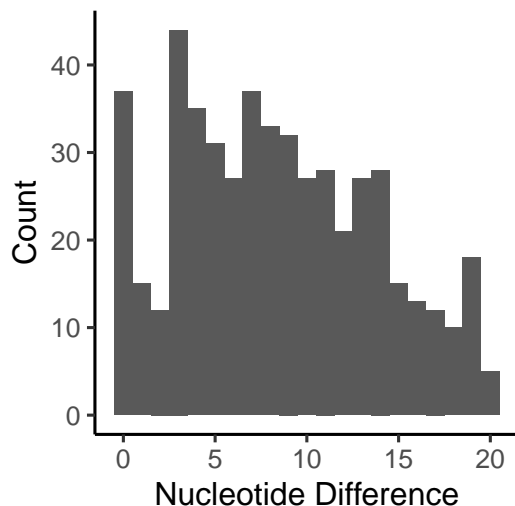
### IGHV1-58\*01\_03

46 sequences assigned  
2 (4.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



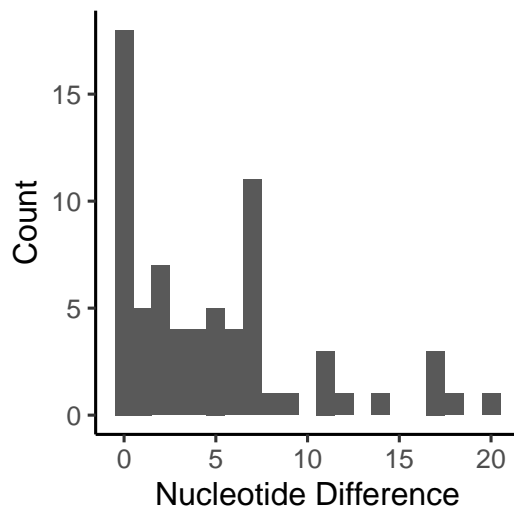
### IGHV1-69\*01\_12\_13

593 sequences assigned  
37 (6.2%) exact matches, in which:  
33 unique CDR3  
4 unique J



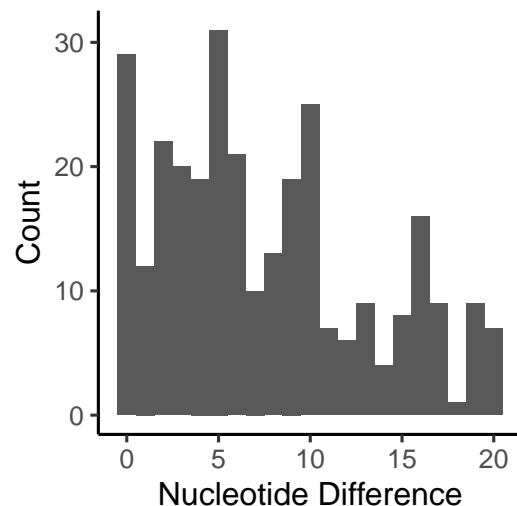
### IGHV2-70\*01

70 sequences assigned  
18 (25.7%) exact matches, in which:  
8 unique CDR3  
3 unique J



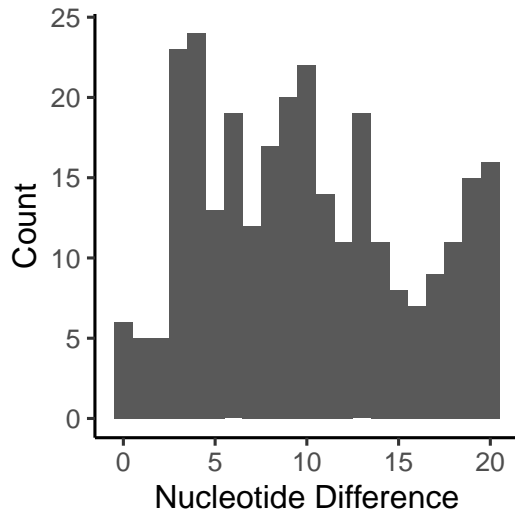
### IGHV3-9\*01

313 sequences assigned  
29 (9.3%) exact matches, in which:  
16 unique CDR3  
5 unique J



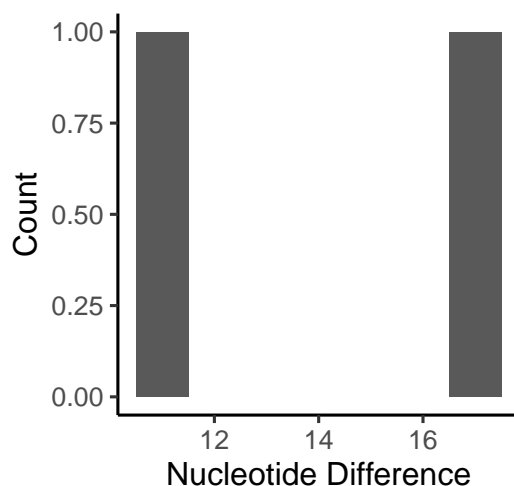
### IGHV2-5\*01

335 sequences assigned  
6 (1.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



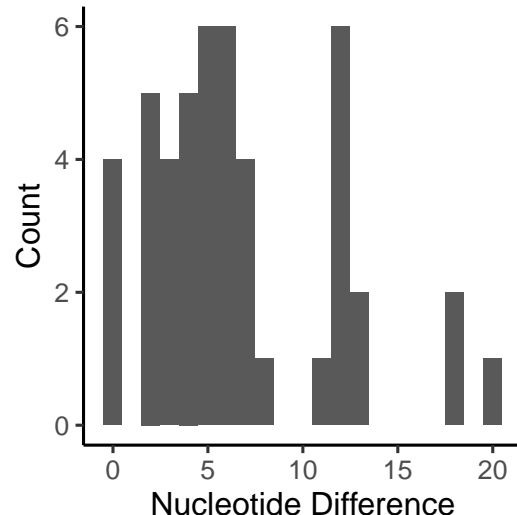
### IGHV2-70D\*04

2 sequences assigned  
No exact matches.



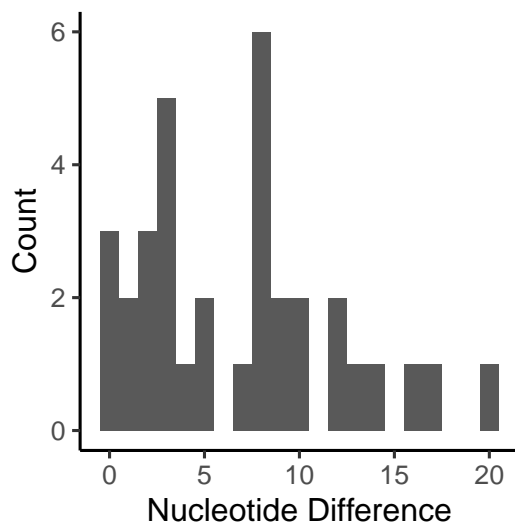
### IGHV3-9\*03

48 sequences assigned  
4 (8.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



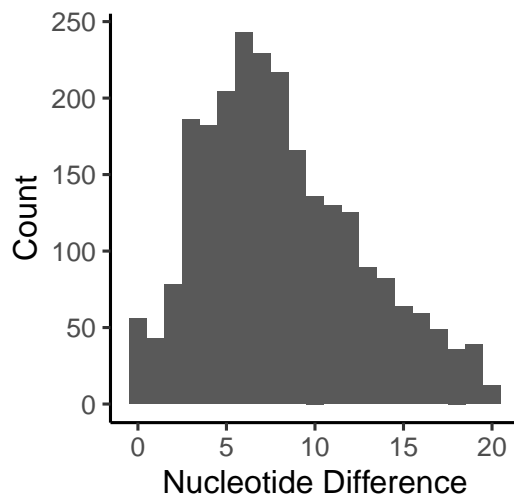
### IGHV2-26\*01

37 sequences assigned  
3 (8.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



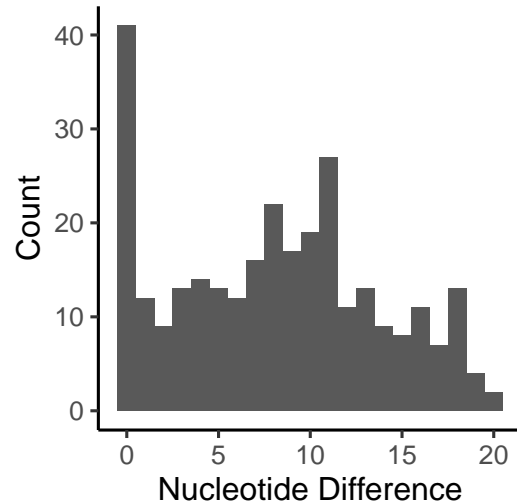
### IGHV3-7\*01

2490 sequences assigned  
56 (2.2%) exact matches, in which:  
30 unique CDR3  
4 unique J



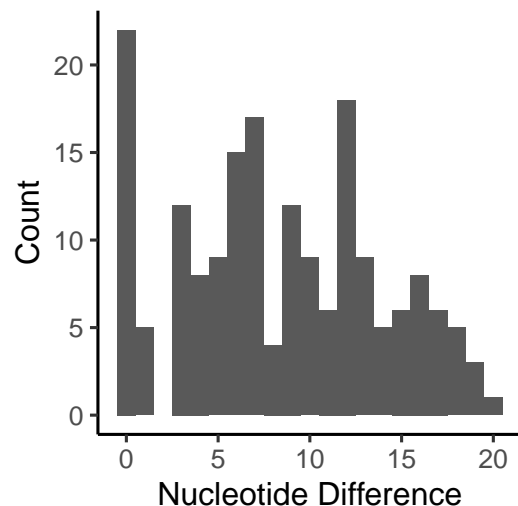
### IGHV3-11\*01

317 sequences assigned  
41 (12.9%) exact matches, in which:  
16 unique CDR3  
4 unique J



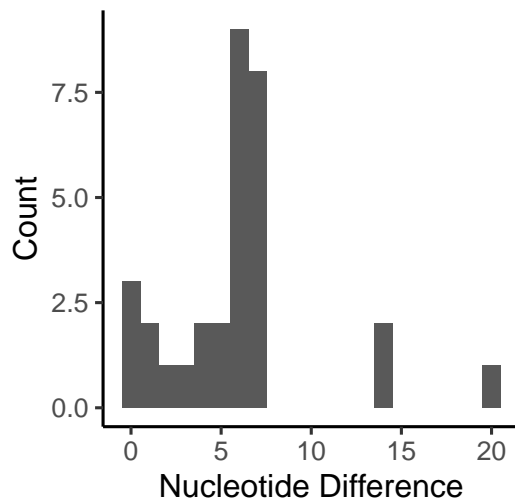
### IGHV3-11\*04

207 sequences assigned  
22 (10.6%) exact matches, in which:  
9 unique CDR3  
4 unique J



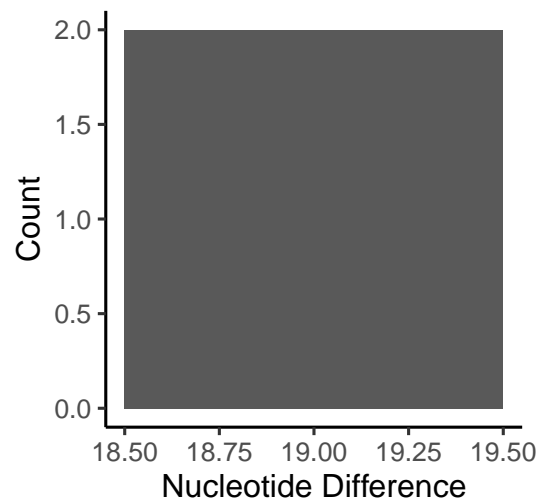
### IGHV3-20\*01\_02

31 sequences assigned  
3 (9.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



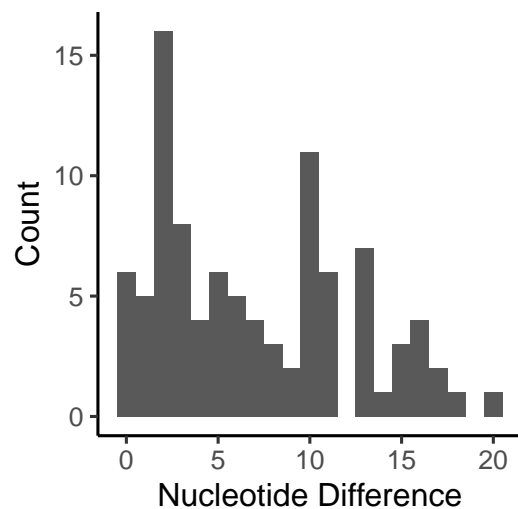
### IGHV3-22\*01\_02

2 sequences assigned  
No exact matches.



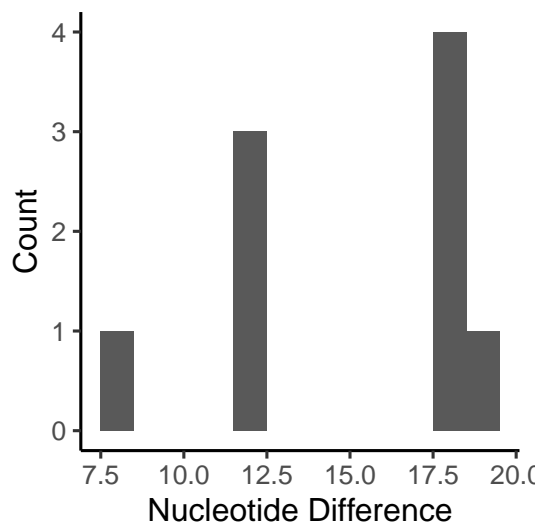
### IGHV3-13\*01

98 sequences assigned  
6 (6.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



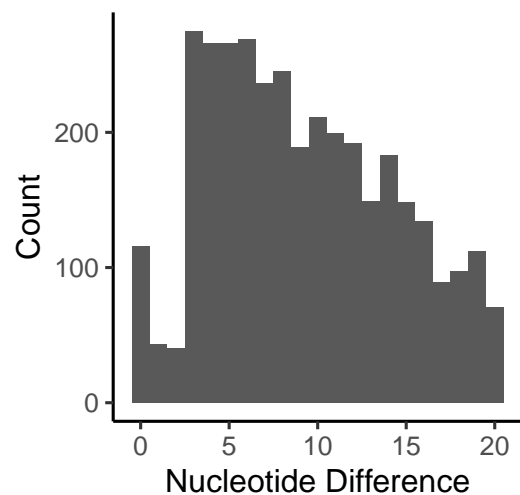
### IGHV3-20\*03\_04

9 sequences assigned  
No exact matches.



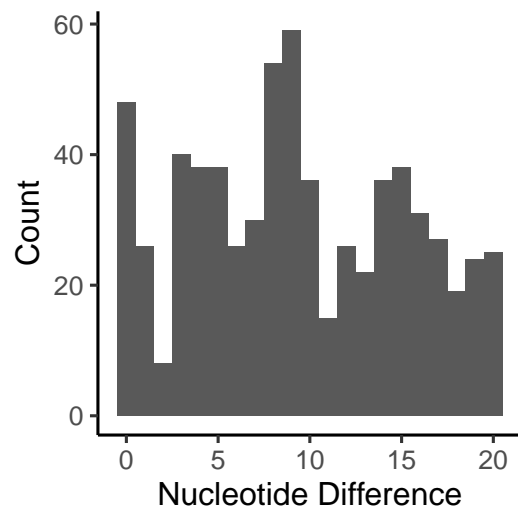
### IGHV3-23\*01\_04

3869 sequences assigned  
116 (3%) exact matches, in which:  
59 unique CDR3  
6 unique J



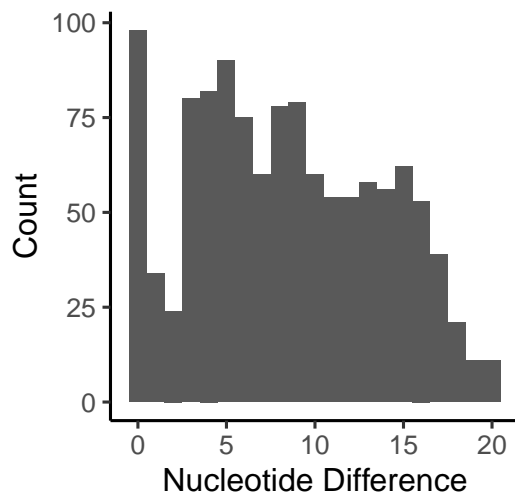
### IGHV3-15\*01\_02

768 sequences assigned  
48 (6.2%) exact matches, in which:  
19 unique CDR3  
3 unique J



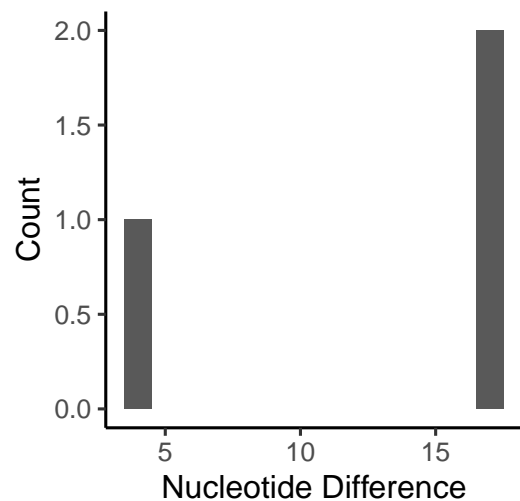
### IGHV3-21\*01\_02

1444 sequences assigned  
98 (6.8%) exact matches, in which:  
50 unique CDR3  
5 unique J



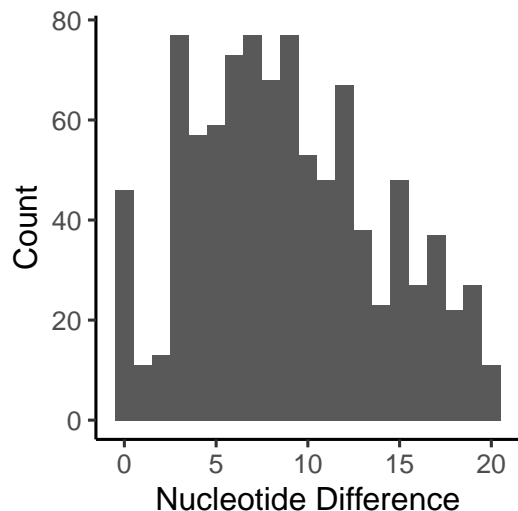
### IGHV3-30-3\*03

4 sequences assigned  
No exact matches.



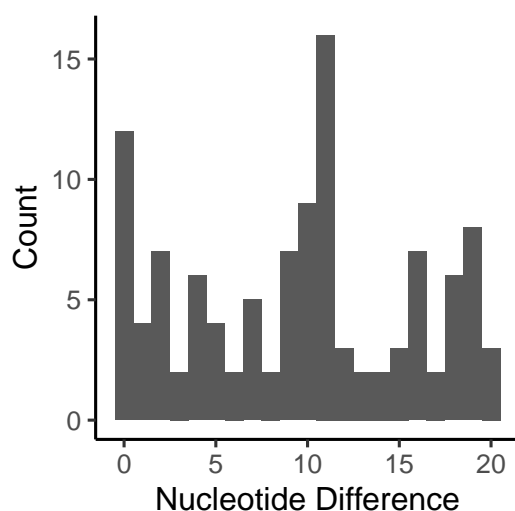
### IGHV3-33\*01

1062 sequences assigned  
46 (4.3%) exact matches, in which:  
27 unique CDR3  
4 unique J



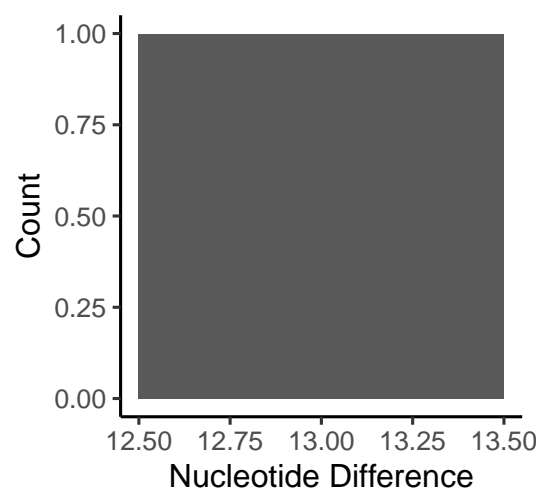
### IGHV3-49\*03\_05

134 sequences assigned  
12 (9%) exact matches, in which:  
6 unique CDR3  
3 unique J



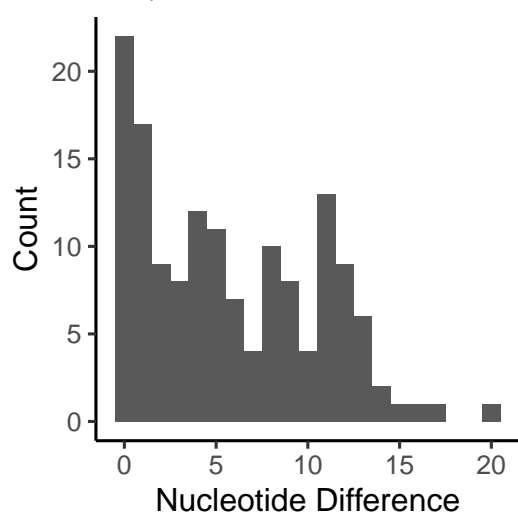
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



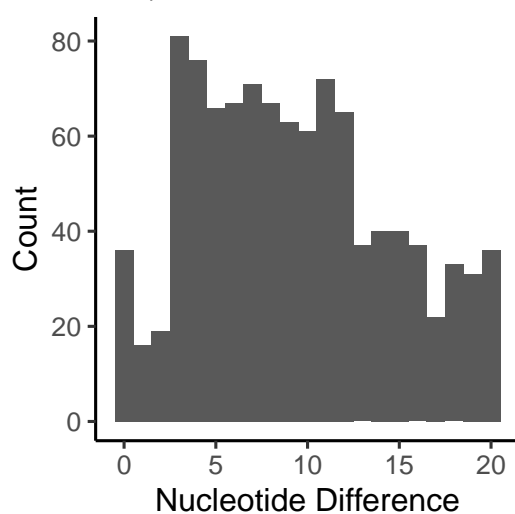
### IGHV3-43\*01

148 sequences assigned  
22 (14.9%) exact matches, in which:  
10 unique CDR3  
2 unique J



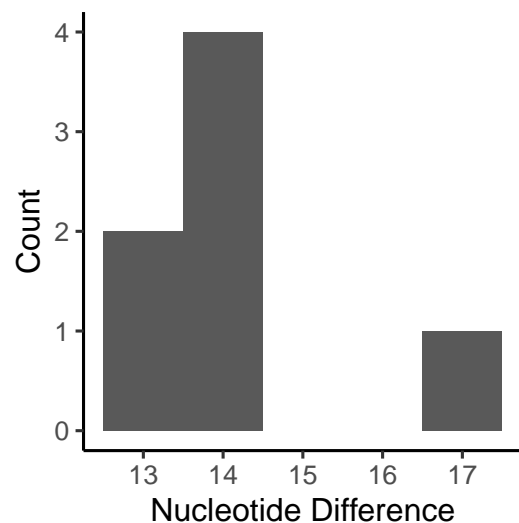
### IGHV3-53\*01\_02

1157 sequences assigned  
36 (3.1%) exact matches, in which:  
19 unique CDR3  
4 unique J



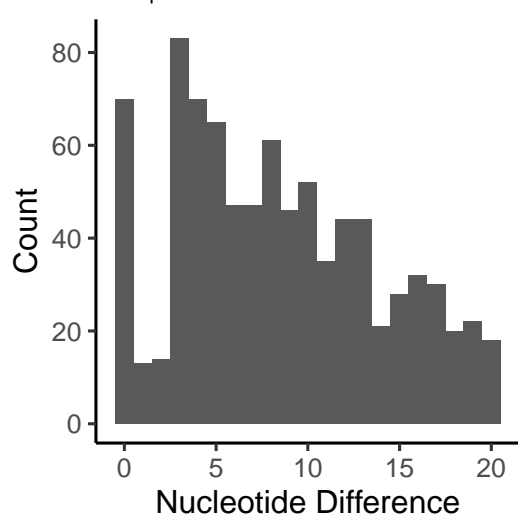
### IGHV3-69-1\*01

21 sequences assigned  
No exact matches.



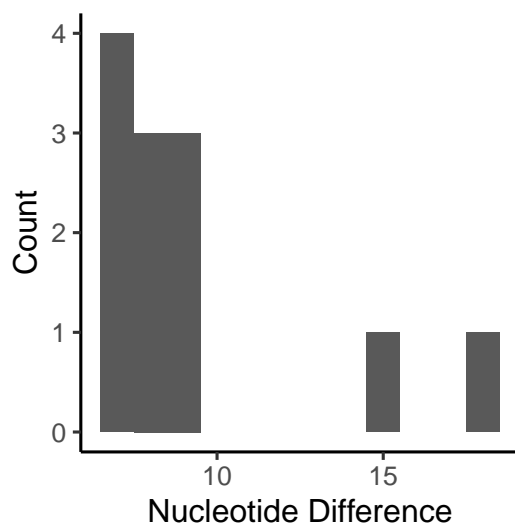
### IGHV3-48\*02

925 sequences assigned  
70 (7.6%) exact matches, in which:  
39 unique CDR3  
4 unique J



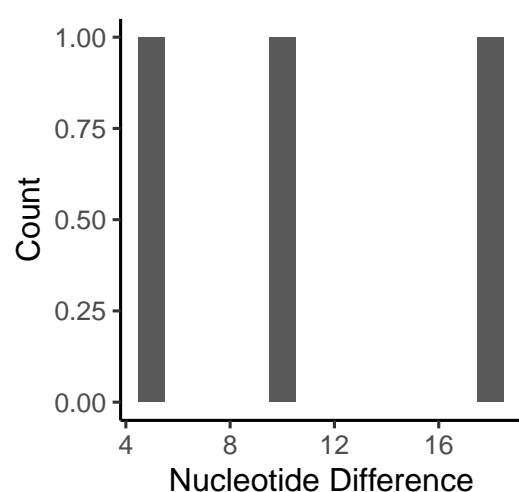
### IGHV3-64\*02\_07

12 sequences assigned  
No exact matches.



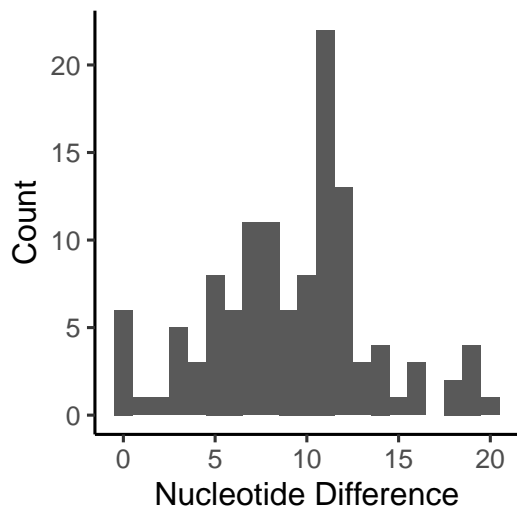
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



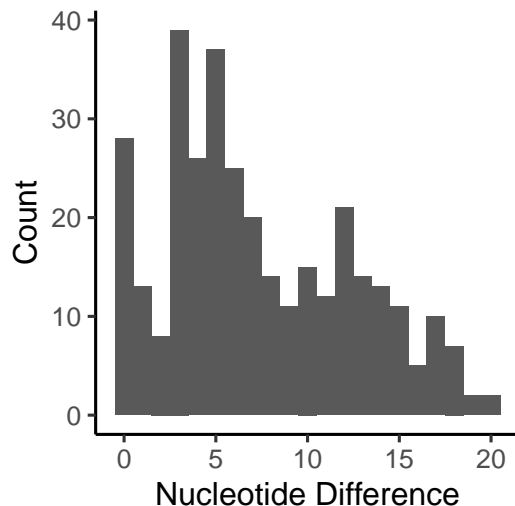
### IGHV3-72\*01

124 sequences assigned  
6 (4.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



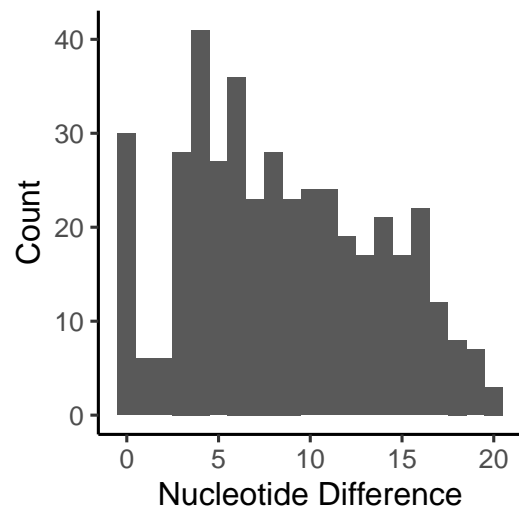
### IGHV3-74\*01\_02

350 sequences assigned  
28 (8%) exact matches, in which:  
17 unique CDR3  
3 unique J



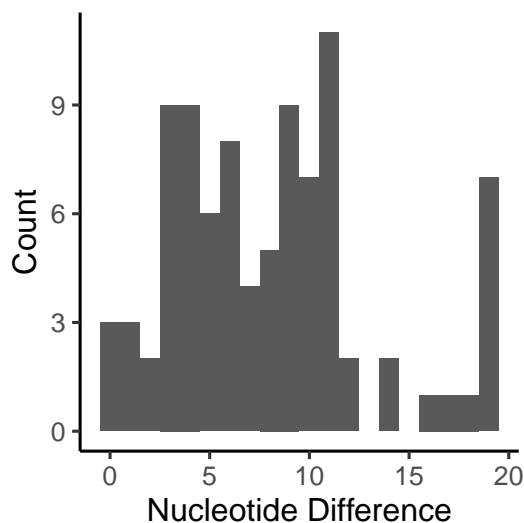
### IGHV4-4\*07

459 sequences assigned  
30 (6.5%) exact matches, in which:  
16 unique CDR3  
4 unique J



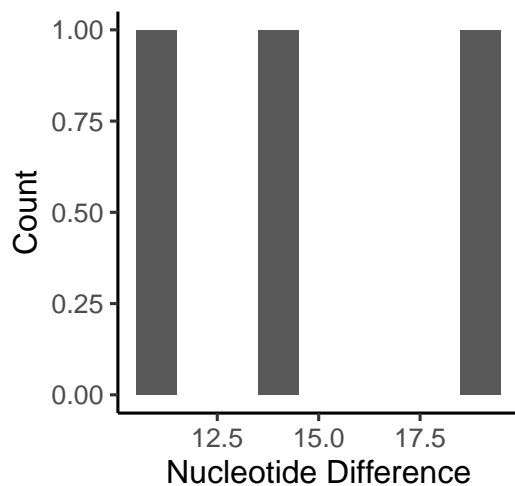
### IGHV3-73\*01\_02

93 sequences assigned  
3 (3.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



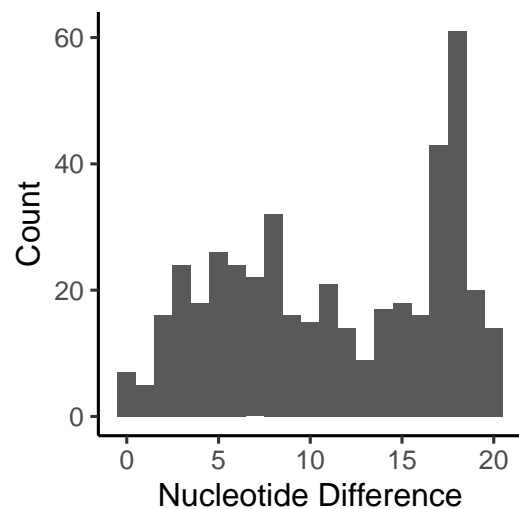
### IGHV3-64D\*06

3 sequences assigned  
No exact matches.



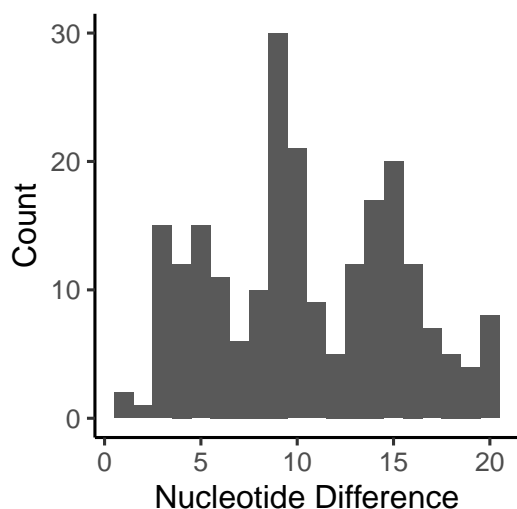
### IGHV4-4\*02\_03

509 sequences assigned  
7 (1.4%) exact matches, in which:  
5 unique CDR3  
2 unique J



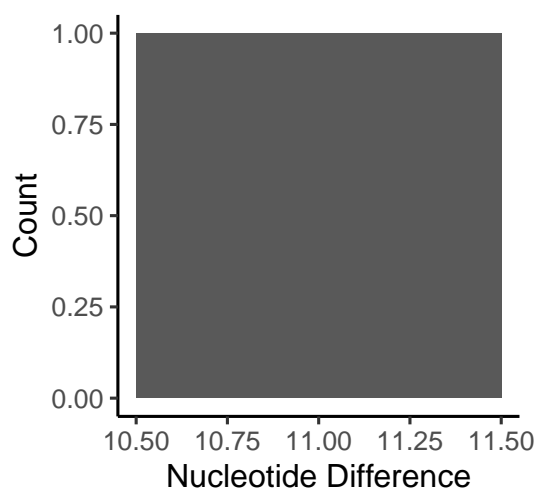
### IGHV3-74\*03

263 sequences assigned  
No exact matches.



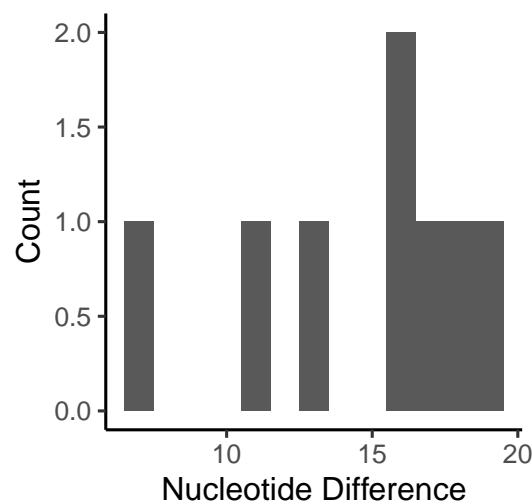
### IGHV3-64D\*09

1 sequences assigned  
No exact matches.



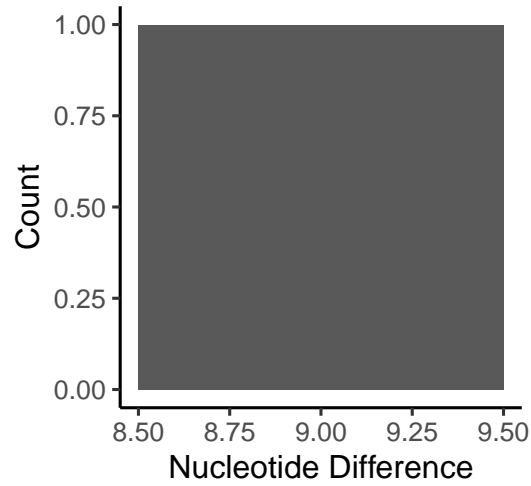
### IGHV4-28\*01\_07

12 sequences assigned  
No exact matches.



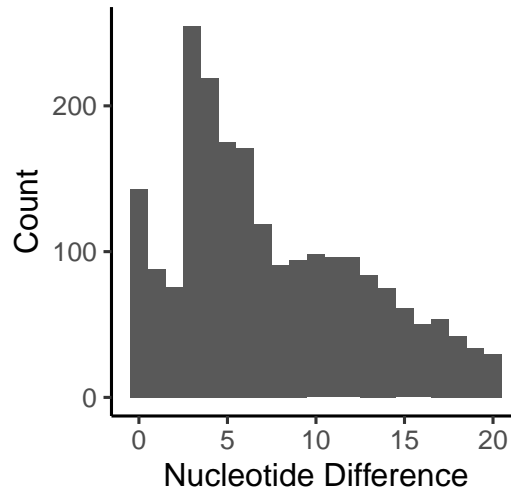
### IGHV4-30-4\*01

2 sequences assigned  
No exact matches.



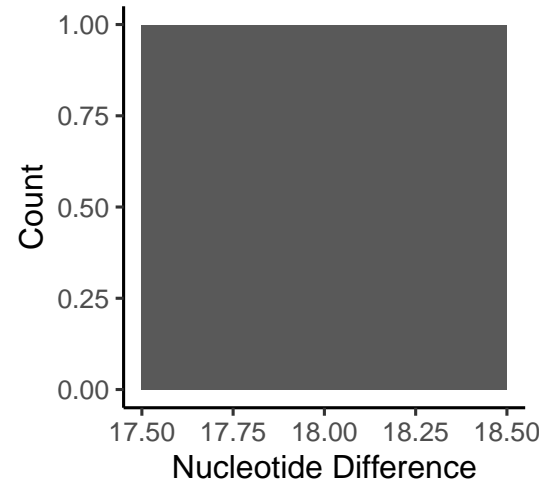
### IGHV4-34\*01\_02

2367 sequences assigned  
143 (6%) exact matches, in which:  
84 unique CDR3  
6 unique J



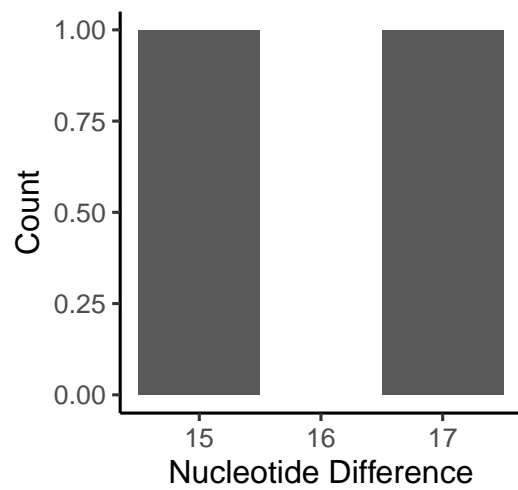
### IGHV4-55\*07

1 sequences assigned  
No exact matches.



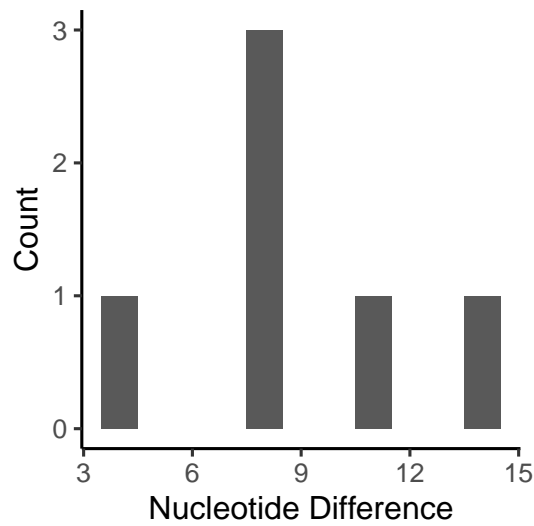
### IGHV4-30-2\*03

3 sequences assigned  
No exact matches.



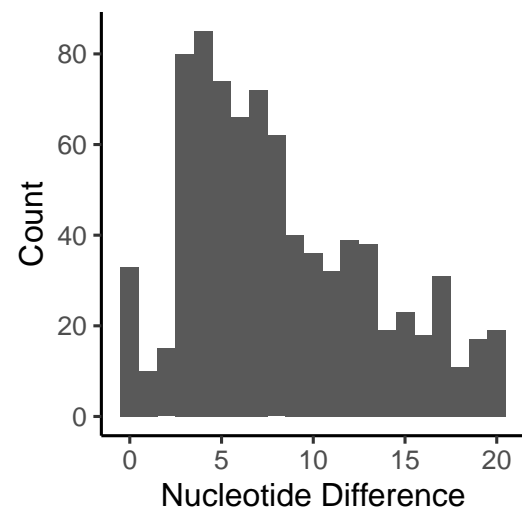
### IGHV4-38-2\*02

10 sequences assigned  
No exact matches.



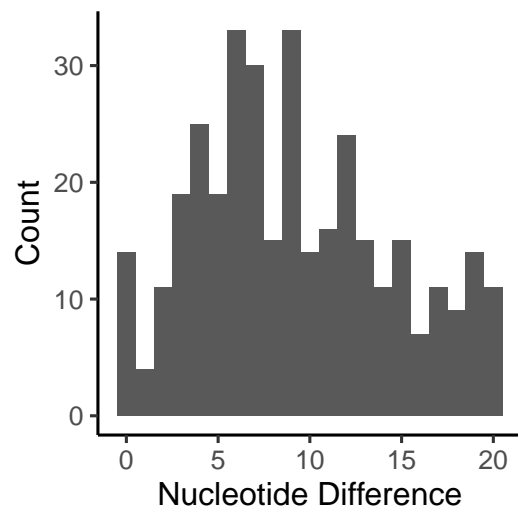
### IGHV4-59\*01\_07

909 sequences assigned  
33 (3.6%) exact matches, in which:  
23 unique CDR3  
5 unique J



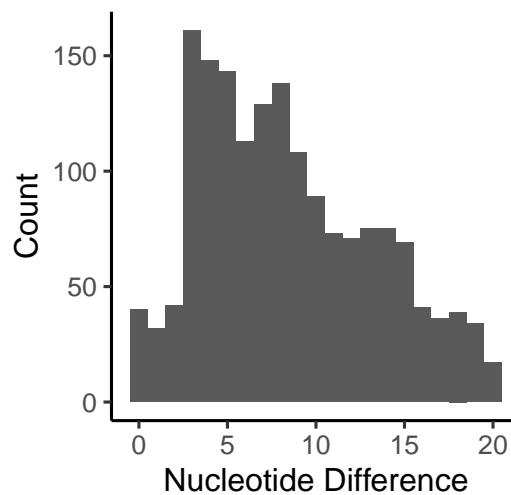
### IGHV4-31\*02

396 sequences assigned  
14 (3.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



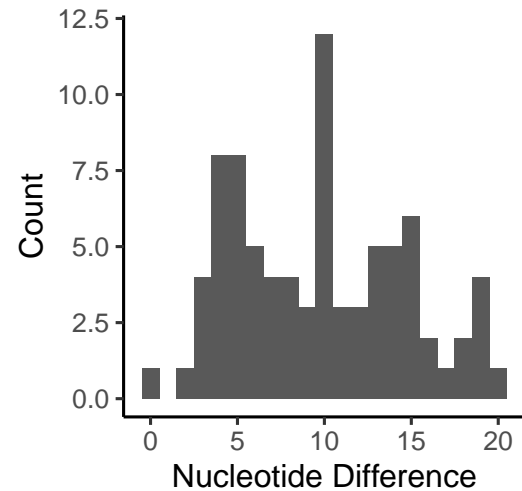
### IGHV4-39\*02\_C258G

1903 sequences assigned  
40 (2.1%) exact matches, in which:  
25 unique CDR3  
4 unique J



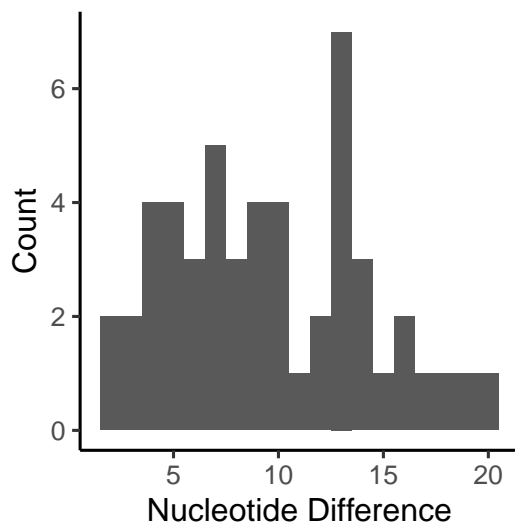
### IGHV4-59\*11

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



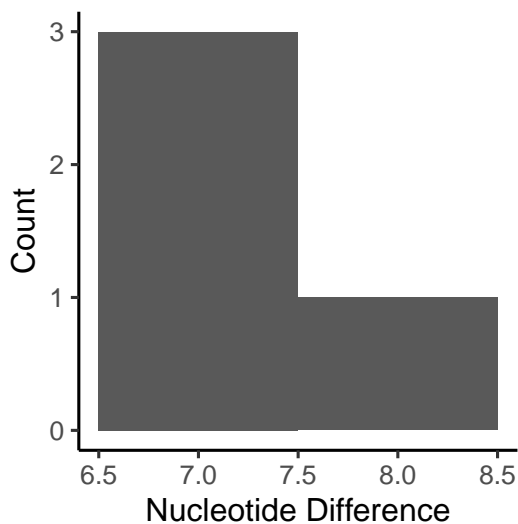
### IGHV4–59\*13

64 sequences assigned  
No exact matches.



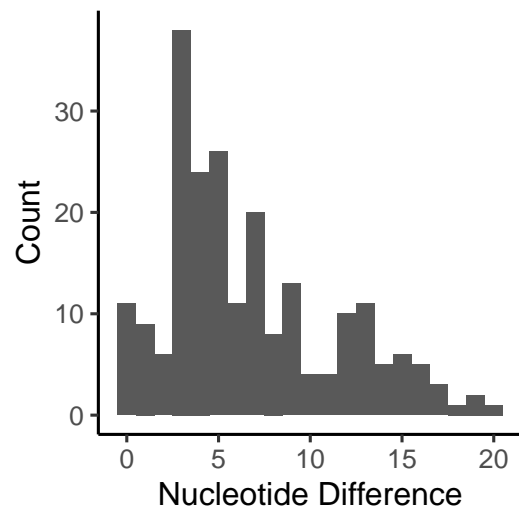
### IGHV4/OR15–8\*01

8 sequences assigned  
No exact matches.



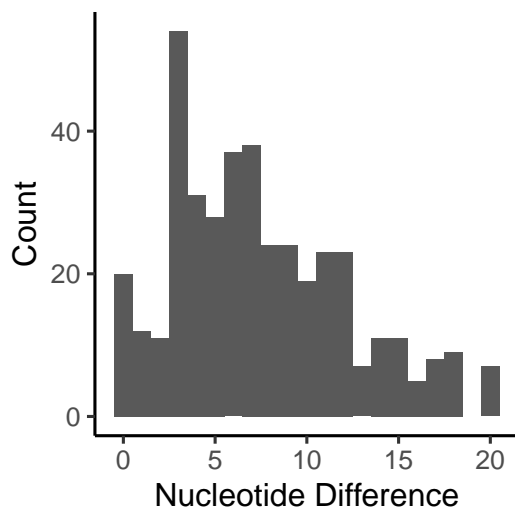
### IGHV5–51\*01\_03

224 sequences assigned  
11 (4.9%) exact matches, in which:  
11 unique CDR3  
3 unique J



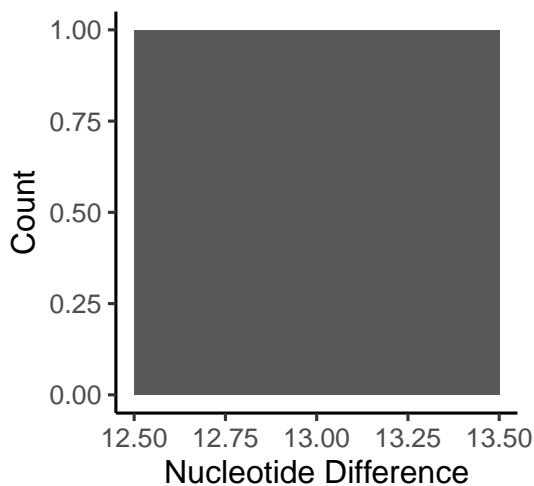
### IGHV4–61\*01

447 sequences assigned  
20 (4.5%) exact matches, in which:  
11 unique CDR3  
3 unique J



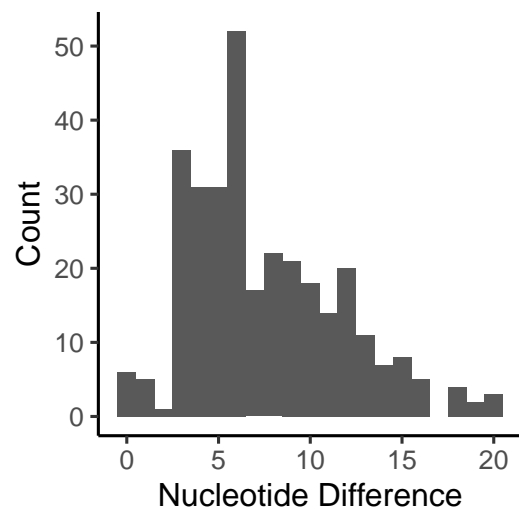
### IGHV4/OR15–8\*03

1 sequences assigned  
No exact matches.



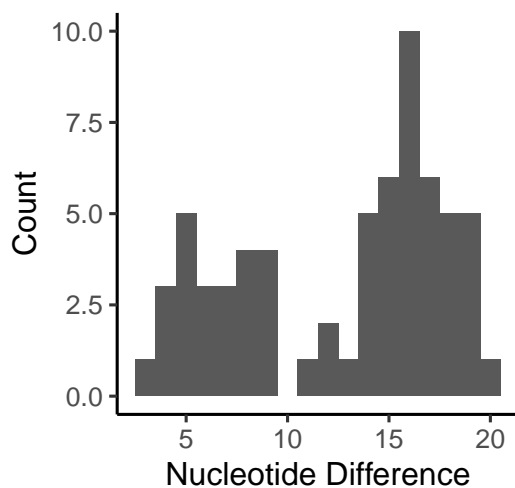
### IGHV6–1\*01\_02

340 sequences assigned  
6 (1.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



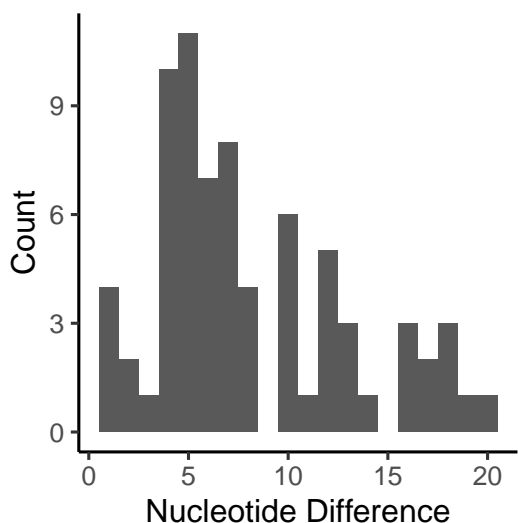
### IGHV4–61\*08

80 sequences assigned  
No exact matches.



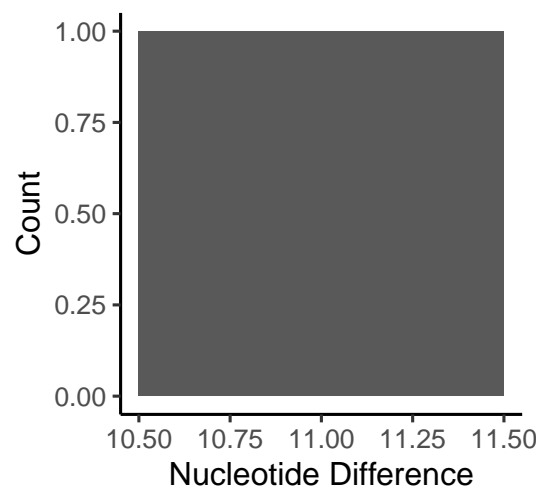
### IGHV5–51\*07

77 sequences assigned  
No exact matches.



### IGHV3/OR16–6\*02

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.