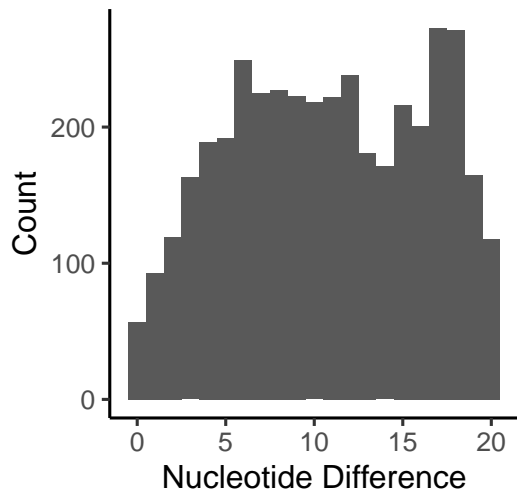


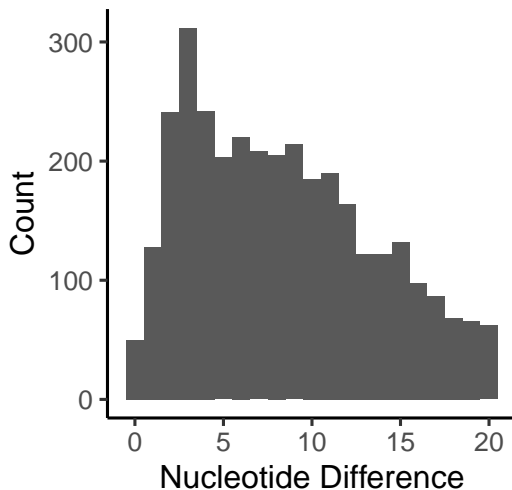
### IGHV1-2\*02

4767 sequences assigned  
57 (1.2%) exact matches, in which:  
50 unique CDR3  
4 unique J



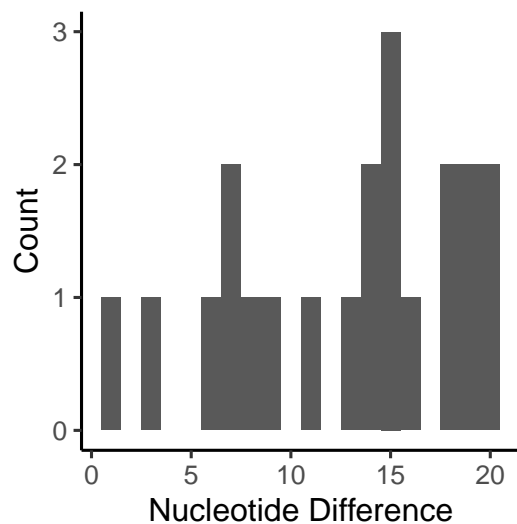
### IGHV1-8\*01

3555 sequences assigned  
50 (1.4%) exact matches, in which:  
42 unique CDR3  
5 unique J



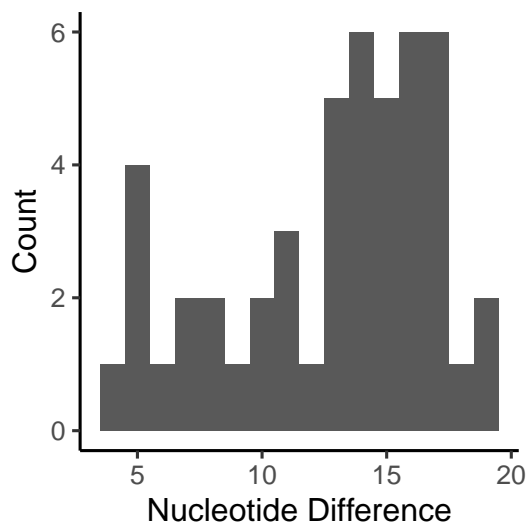
### IGHV1-45\*02

27 sequences assigned  
No exact matches.



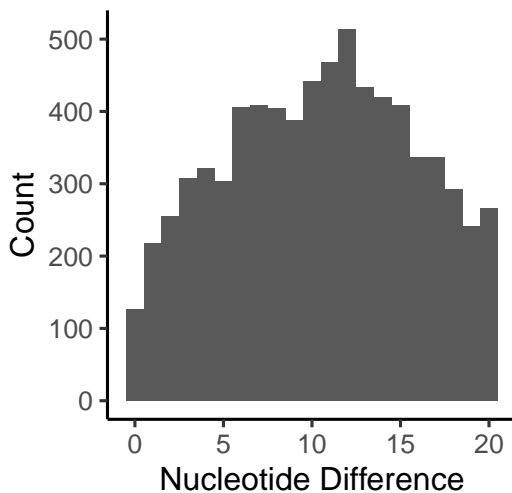
### IGHV1-3\*04

81 sequences assigned  
No exact matches.



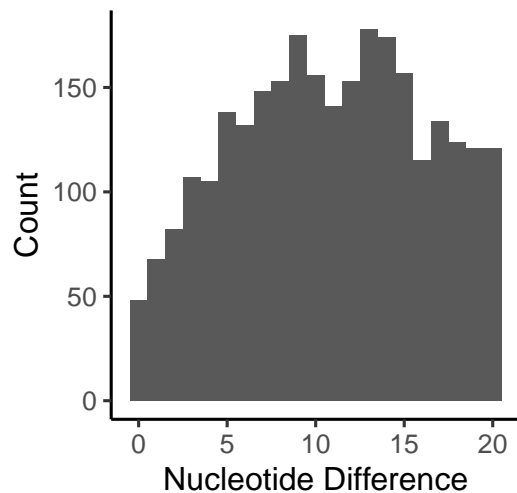
### IGHV1-18\*01

8648 sequences assigned  
126 (1.5%) exact matches, in which:  
109 unique CDR3  
6 unique J



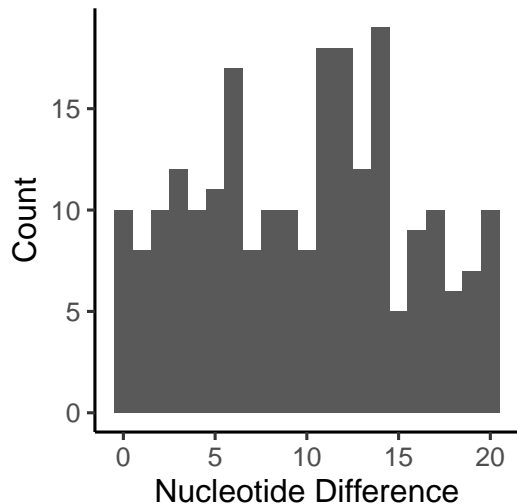
### IGHV1-46\*01

3576 sequences assigned  
48 (1.3%) exact matches, in which:  
41 unique CDR3  
5 unique J



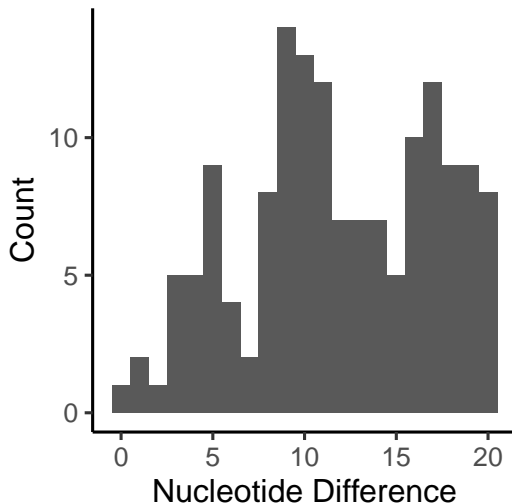
### IGHV1-3\*01\_05

297 sequences assigned  
10 (3.4%) exact matches, in which:  
8 unique CDR3  
2 unique J



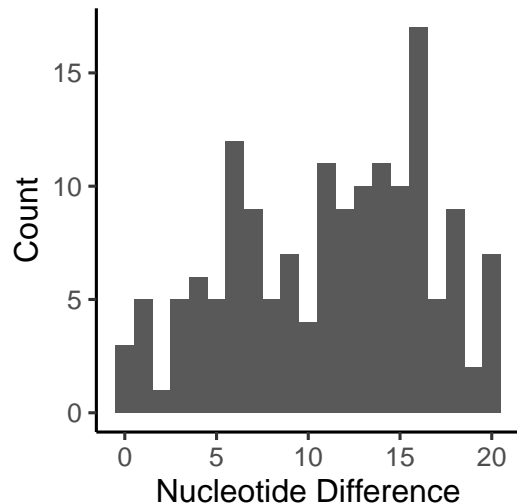
### IGHV1-24\*01

179 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



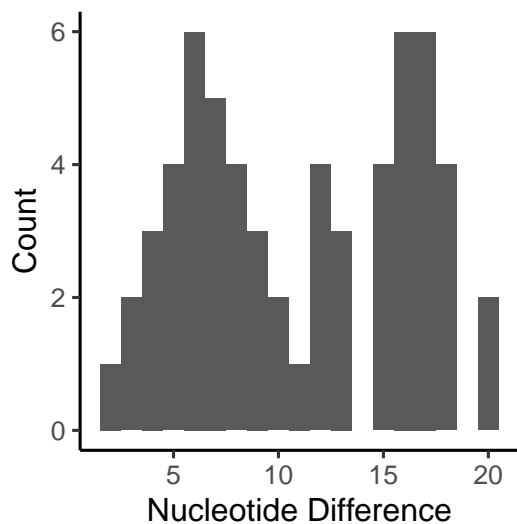
### IGHV1-58\*01\_03

194 sequences assigned  
3 (1.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



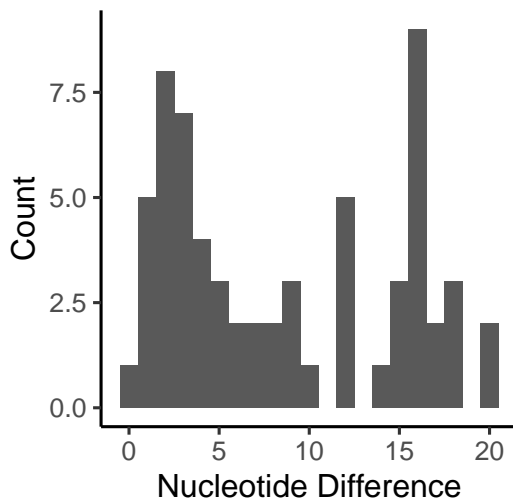
### IGHV1-69-2\*01

82 sequences assigned  
No exact matches.



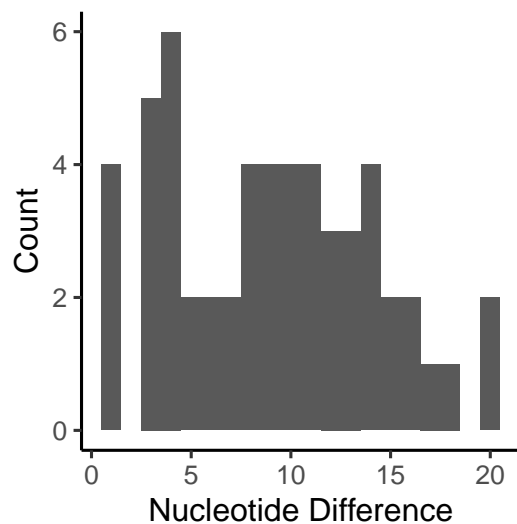
### IGHV2-5\*01

65 sequences assigned  
1 (1.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



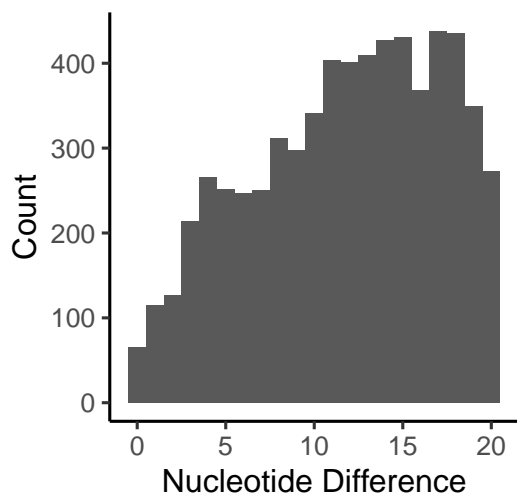
### IGHV2-70\*01

65 sequences assigned  
No exact matches.



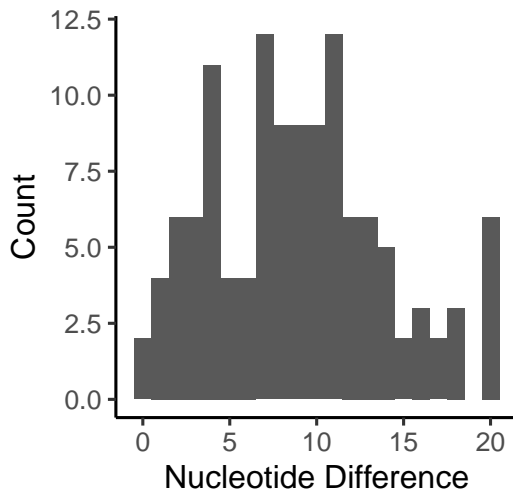
### IGHV1-69\*01\_12\_13

10258 sequences assigned  
65 (0.6%) exact matches, in which:  
59 unique CDR3  
6 unique J



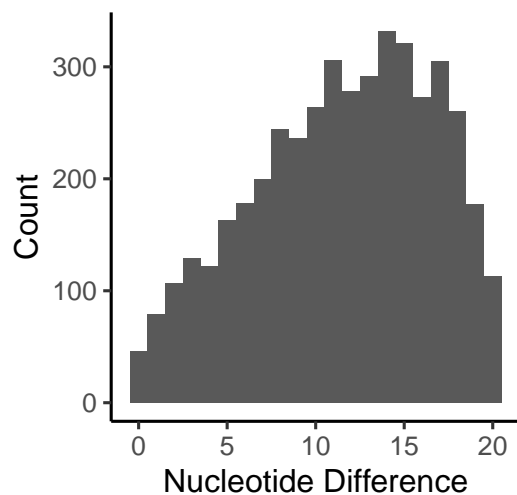
### IGHV2-5\*02

133 sequences assigned  
2 (1.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



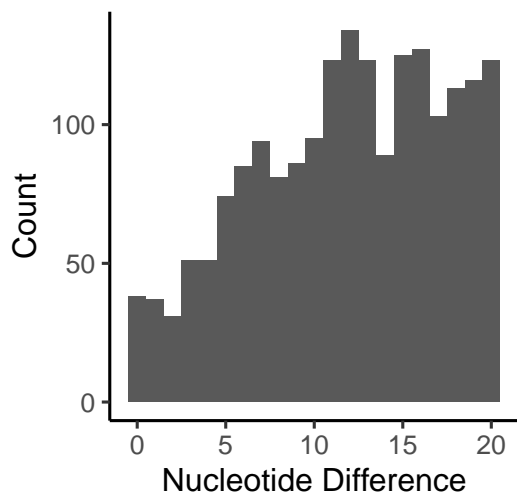
### IGHV3-7\*01

4990 sequences assigned  
46 (0.9%) exact matches, in which:  
42 unique CDR3  
5 unique J



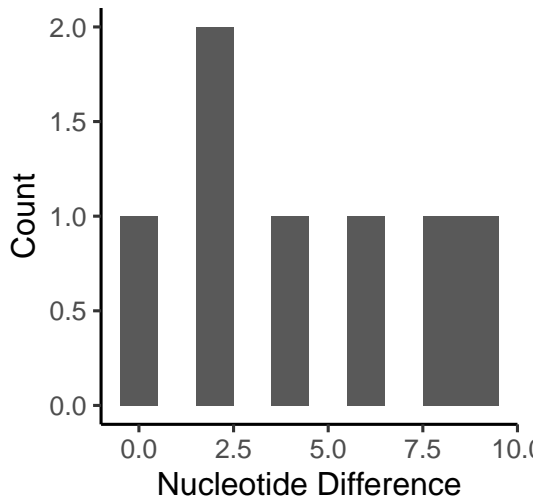
### IGHV1-69\*06\_14

3611 sequences assigned  
38 (1.1%) exact matches, in which:  
35 unique CDR3  
5 unique J



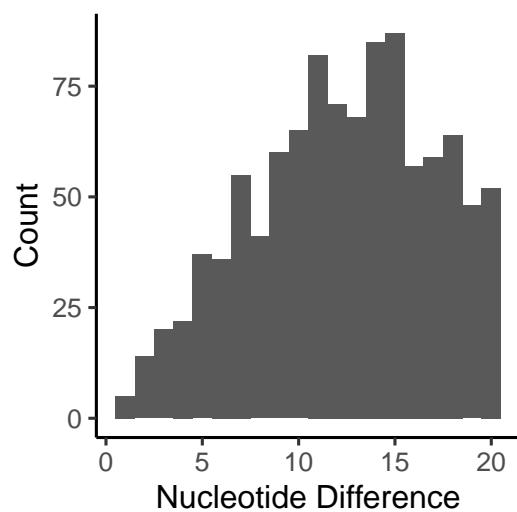
### IGHV2-26\*01

7 sequences assigned  
1 (14.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



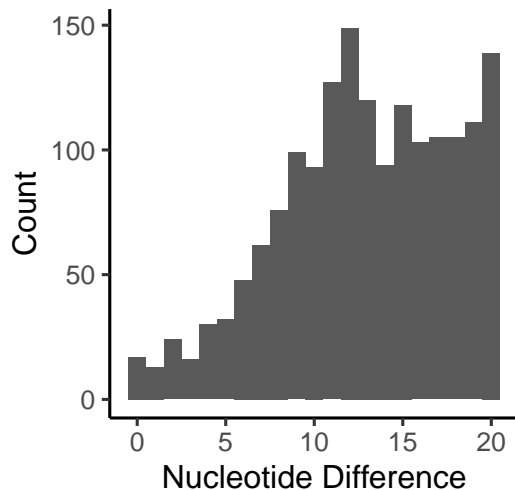
### IGHV3-7\*03

1239 sequences assigned  
No exact matches.



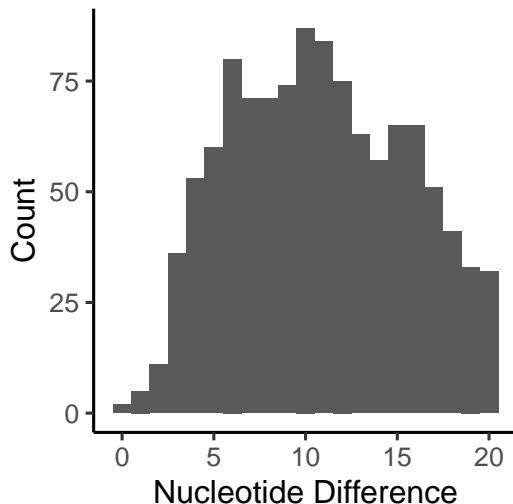
### IGHV3-7\*05

2279 sequences assigned  
17 (0.7%) exact matches, in which:  
15 unique CDR3  
3 unique J



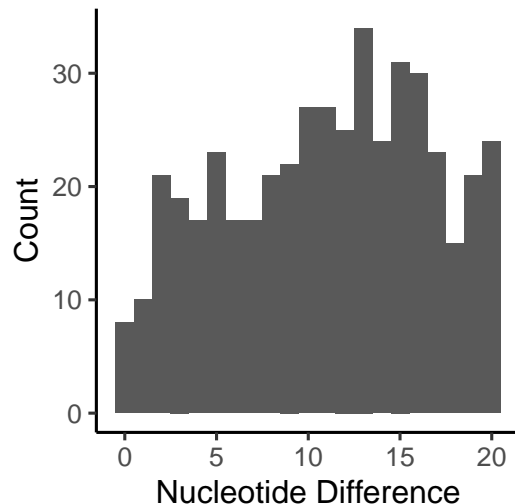
### IGHV3-11\*04

1272 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



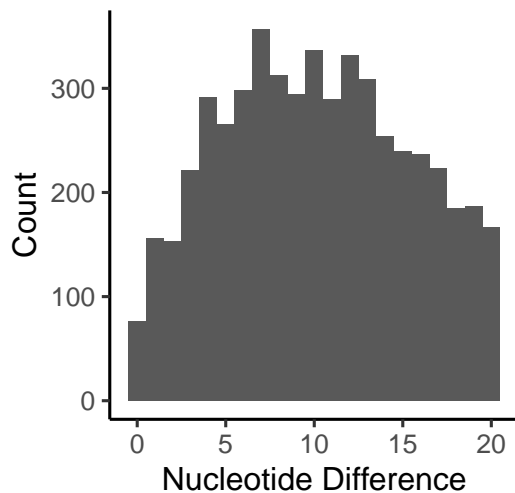
### IGHV3-15\*07

613 sequences assigned  
8 (1.3%) exact matches, in which:  
8 unique CDR3  
2 unique J



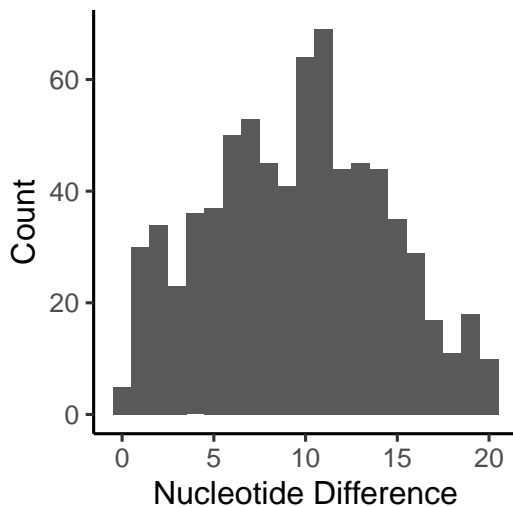
### IGHV3-9\*01

6348 sequences assigned  
76 (1.2%) exact matches, in which:  
64 unique CDR3  
6 unique J



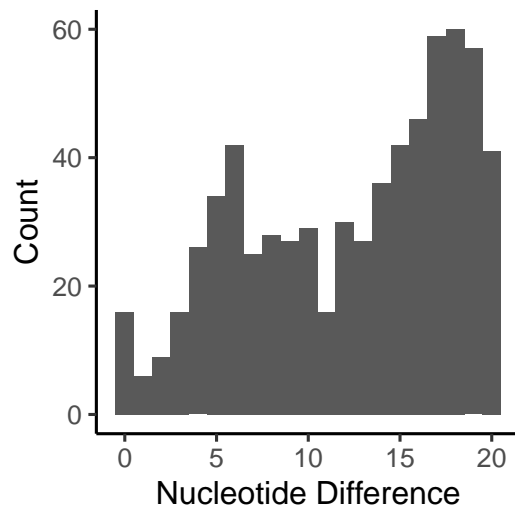
### IGHV3-11\*06

834 sequences assigned  
5 (0.6%) exact matches, in which:  
5 unique CDR3  
2 unique J



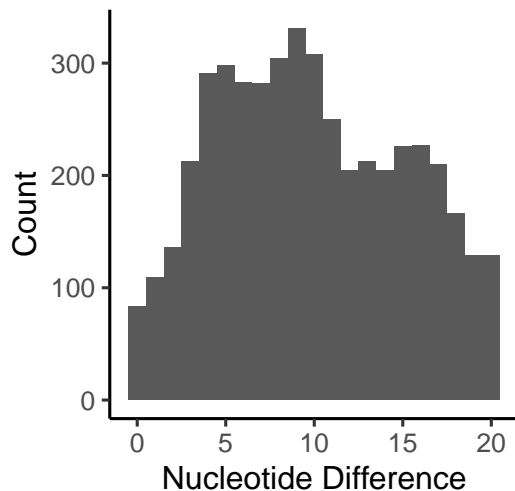
### IGHV3-15\*01\_02

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



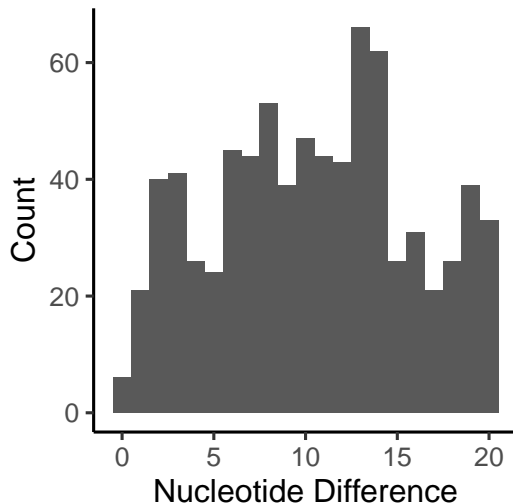
### IGHV3-11\*01

5470 sequences assigned  
83 (1.5%) exact matches, in which:  
69 unique CDR3  
6 unique J



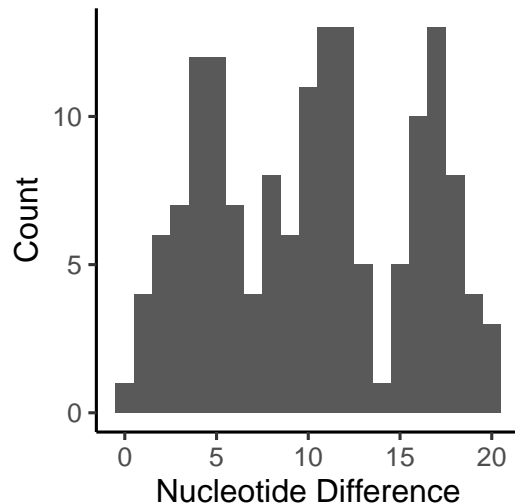
### IGHV3-13\*01

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



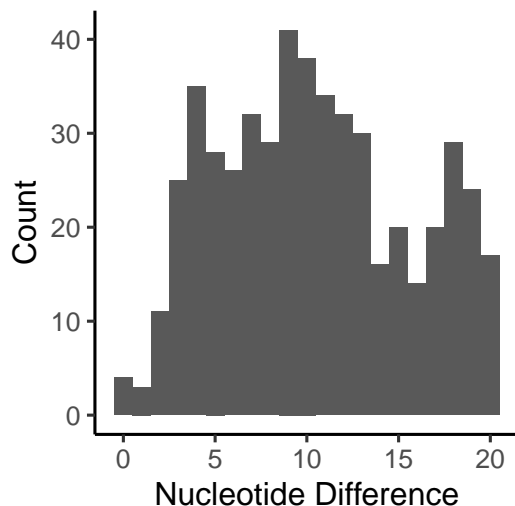
### IGHV3-20\*01\_02

163 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



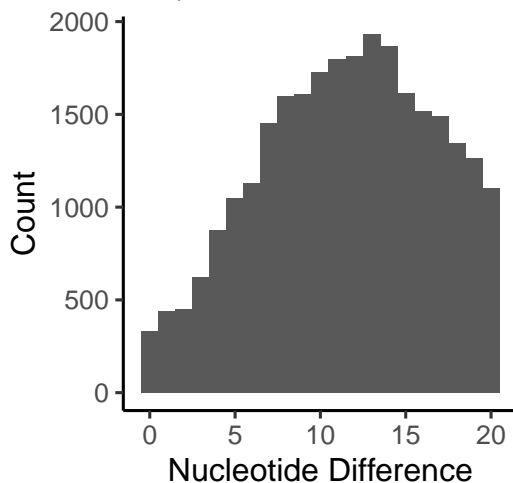
### IGHV3-20\*03\_04

627 sequences assigned  
4 (0.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



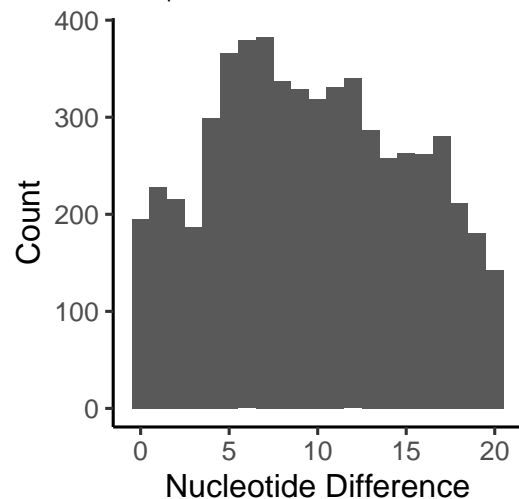
### IGHV3-23\*01\_04

34620 sequences assigned  
333 (1%) exact matches, in which:  
268 unique CDR3  
6 unique J



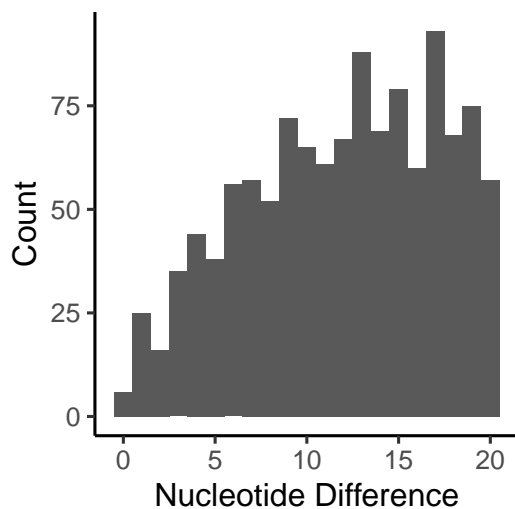
### IGHV3-33\*01

6609 sequences assigned  
195 (3%) exact matches, in which:  
146 unique CDR3  
6 unique J



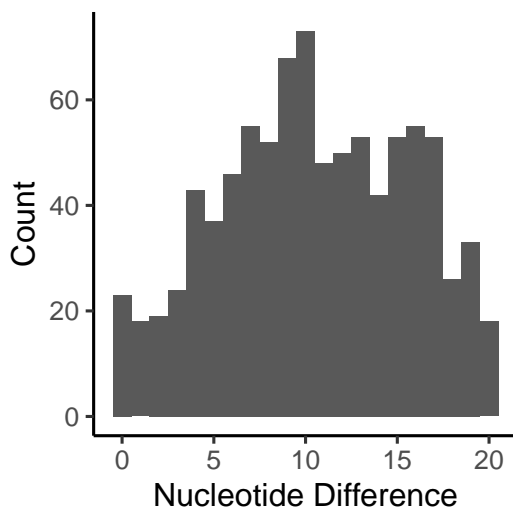
### IGHV3-21\*04

1442 sequences assigned  
6 (0.4%) exact matches, in which:  
6 unique CDR3  
2 unique J



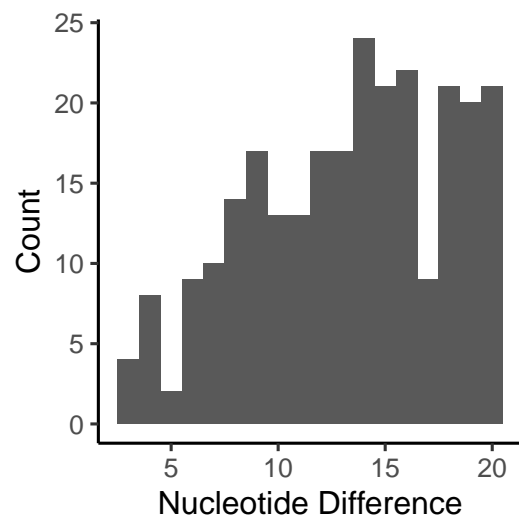
### IGHV3-30\*03

1095 sequences assigned  
23 (2.1%) exact matches, in which:  
23 unique CDR3  
4 unique J



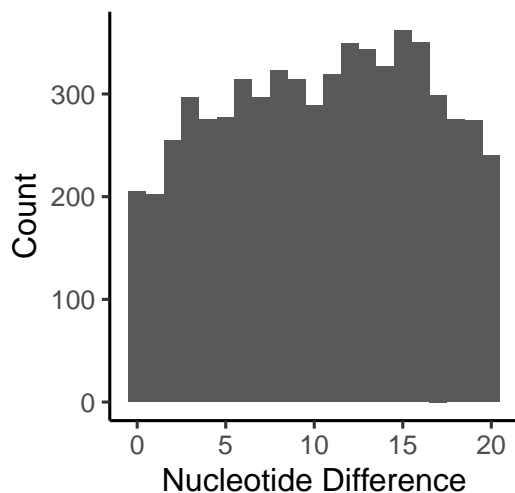
### IGHV3-33\*05

698 sequences assigned  
No exact matches.



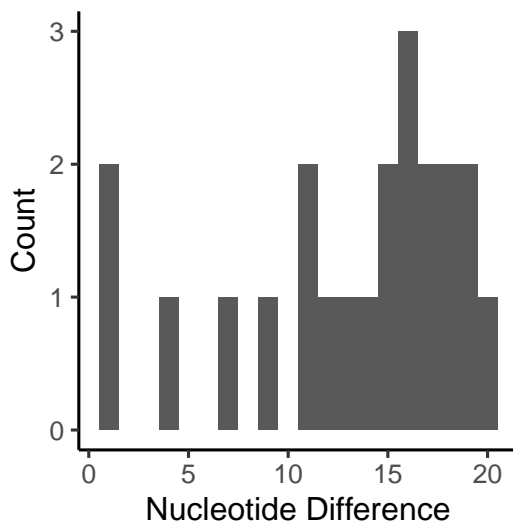
### IGHV3-21\*01\_02

7544 sequences assigned  
205 (2.7%) exact matches, in which:  
168 unique CDR3  
6 unique J



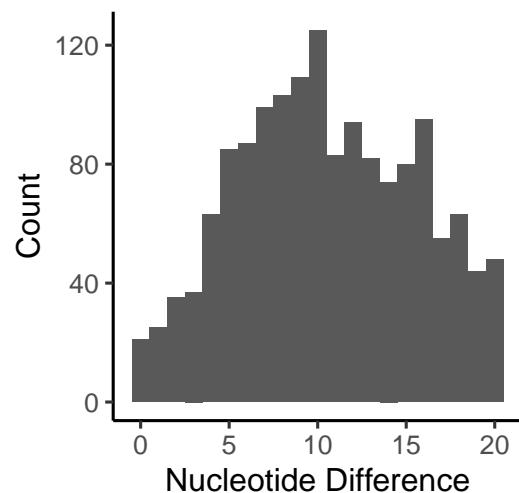
### IGHV3-30-3\*03

35 sequences assigned  
No exact matches.



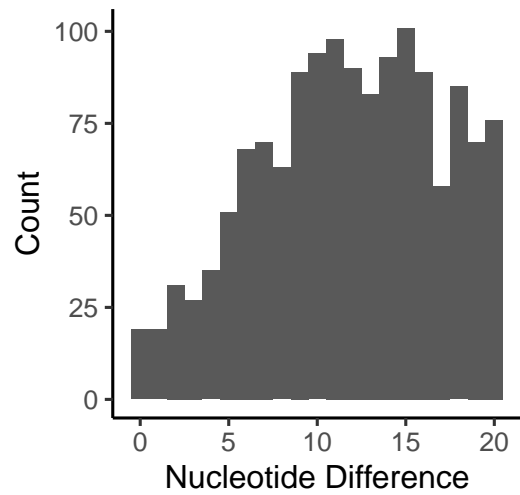
### IGHV3-33\*06

1747 sequences assigned  
21 (1.2%) exact matches, in which:  
19 unique CDR3  
4 unique J



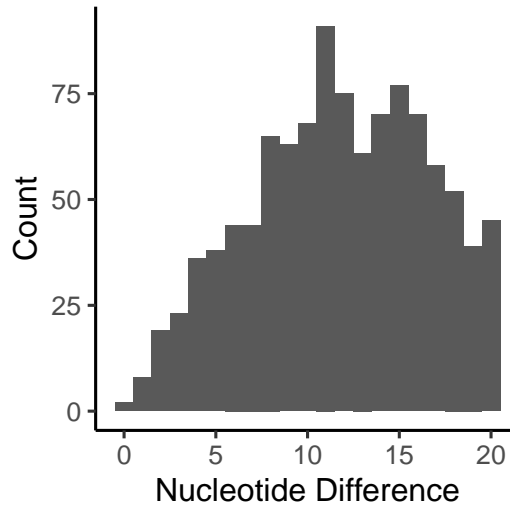
### IGHV3-33\*08

1814 sequences assigned  
19 (1%) exact matches, in which:  
19 unique CDR3  
5 unique J



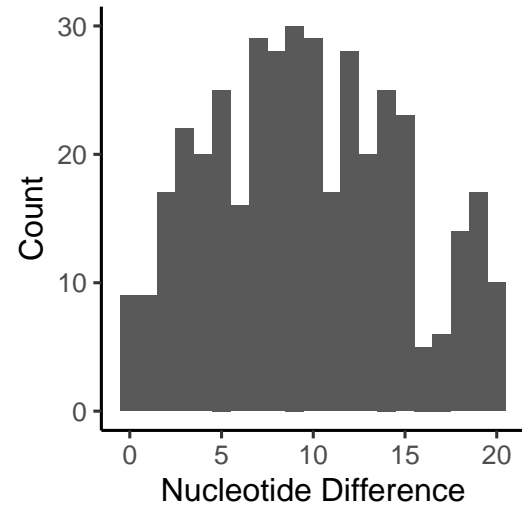
### IGHV3-48\*01

1242 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



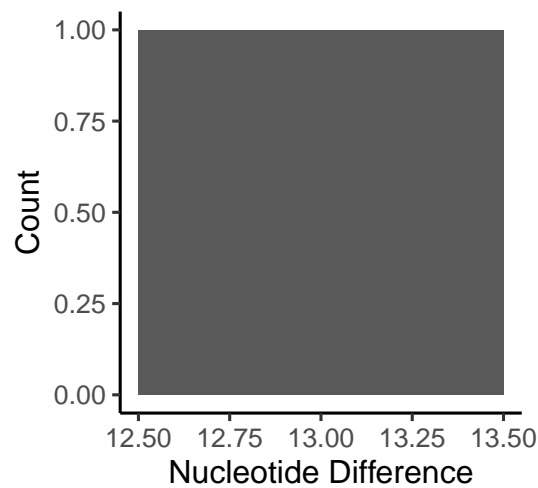
### IGHV3-49\*03\_05

474 sequences assigned  
9 (1.9%) exact matches, in which:  
8 unique CDR3  
3 unique J



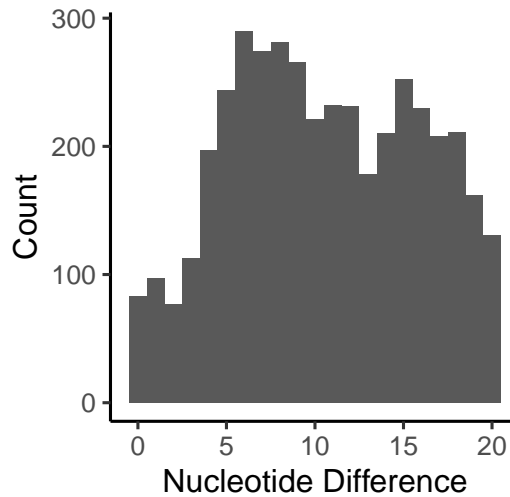
### IGHV3-35\*01

1 sequences assigned  
No exact matches.



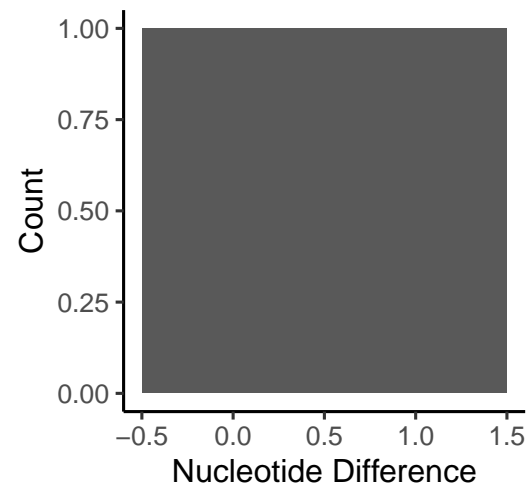
### IGHV3-48\*02

4916 sequences assigned  
83 (1.7%) exact matches, in which:  
71 unique CDR3  
4 unique J



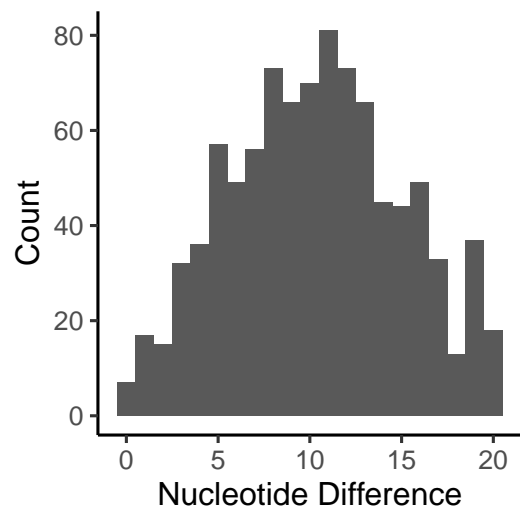
### IGHV3-52\*02

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



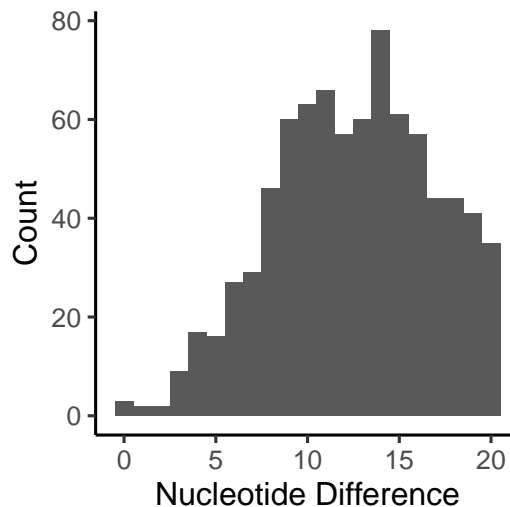
### IGHV3-43\*01

1135 sequences assigned  
7 (0.6%) exact matches, in which:  
6 unique CDR3  
2 unique J



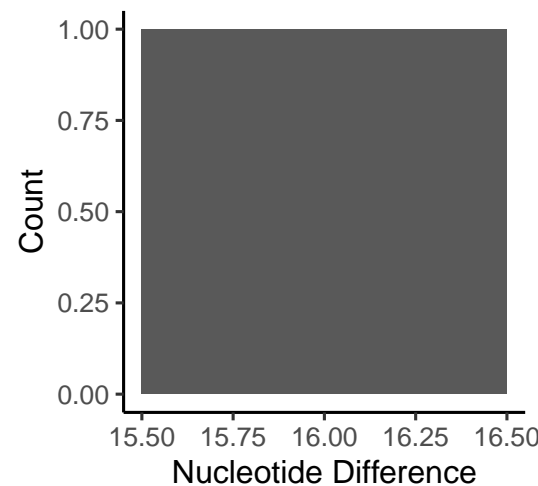
### IGHV3-48\*04

1028 sequences assigned  
3 (0.3%) exact matches, in which:  
3 unique CDR3  
3 unique J



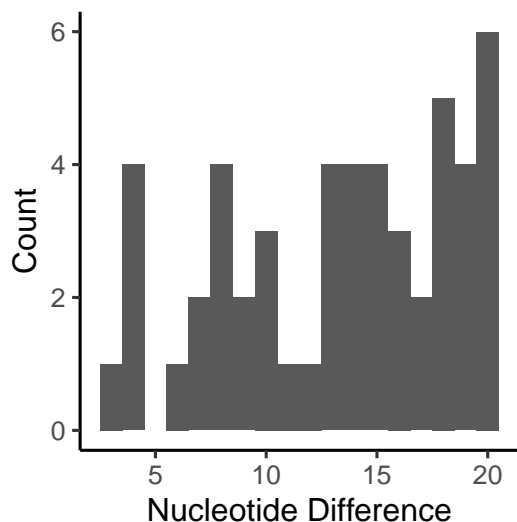
### IGHV3-52\*01\_03

1 sequences assigned  
No exact matches.



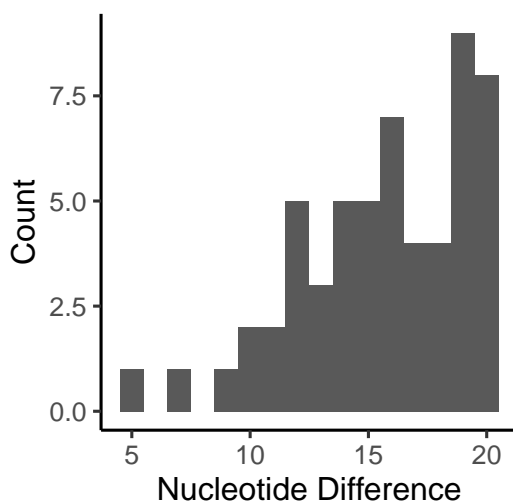
### IGHV3-53\*05

72 sequences assigned  
No exact matches.



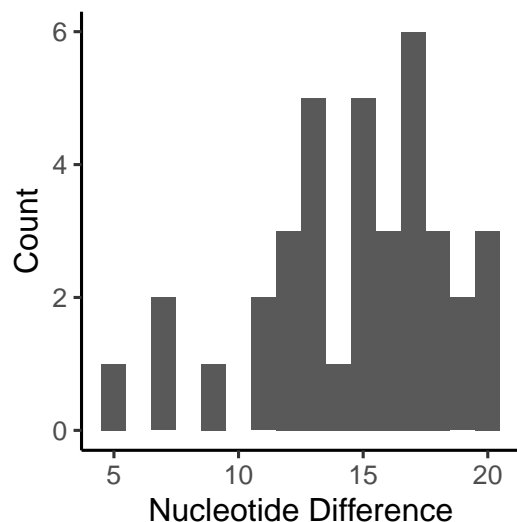
### IGHV3-66\*01

89 sequences assigned  
No exact matches.



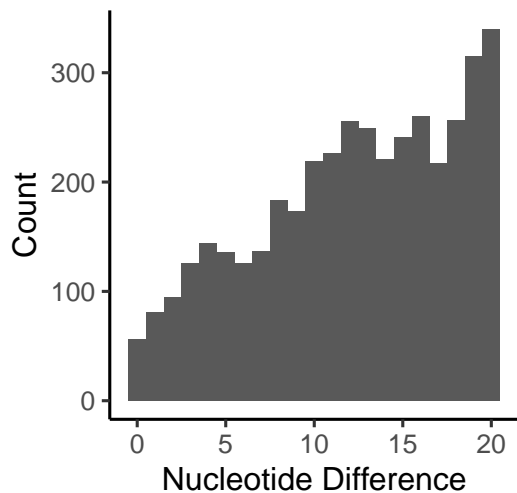
### IGHV3-69-1\*01

82 sequences assigned  
No exact matches.



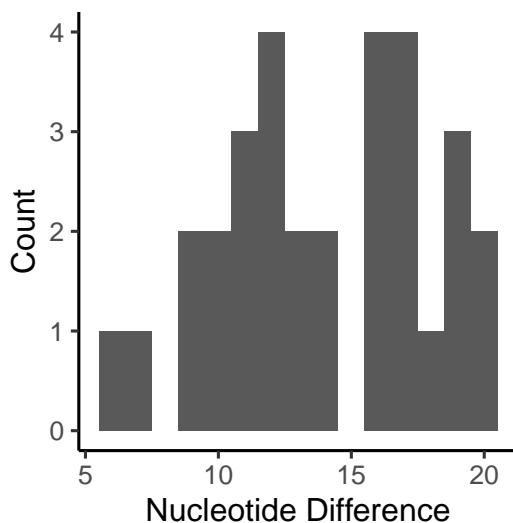
### IGHV3-53\*01\_02

6064 sequences assigned  
56 (0.9%) exact matches, in which:  
49 unique CDR3  
5 unique J



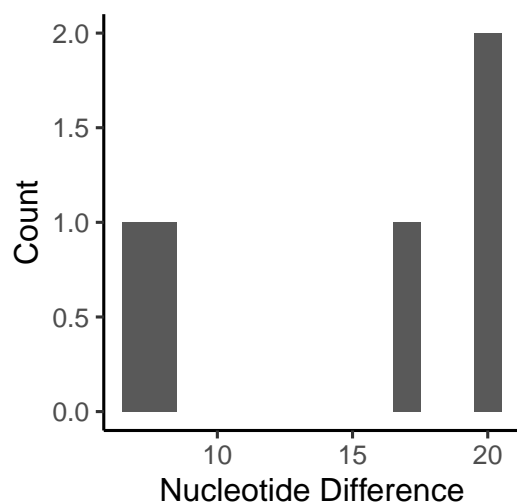
### IGHV3-66\*02

51 sequences assigned  
No exact matches.



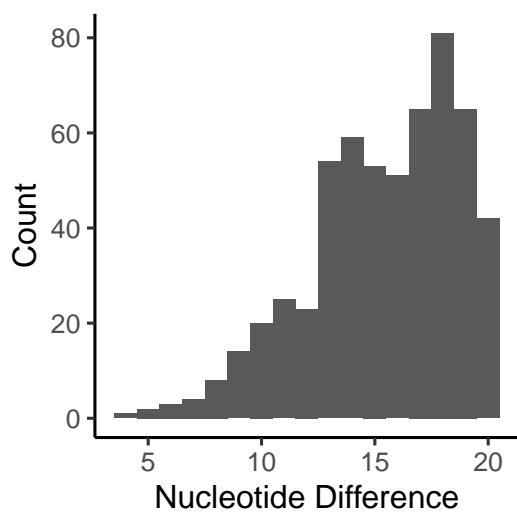
### IGHV3-69-1\*02

14 sequences assigned  
No exact matches.



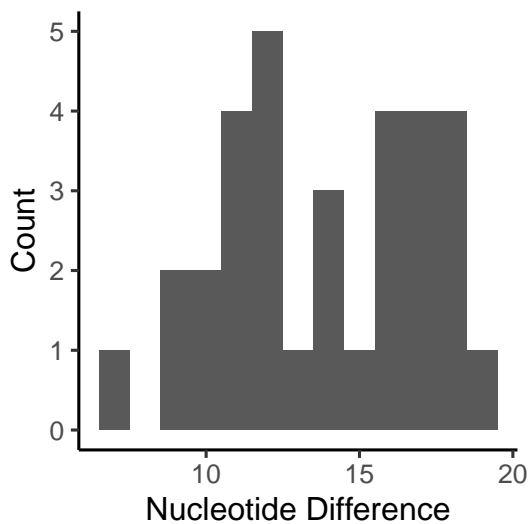
### IGHV3-64\*04

739 sequences assigned  
No exact matches.



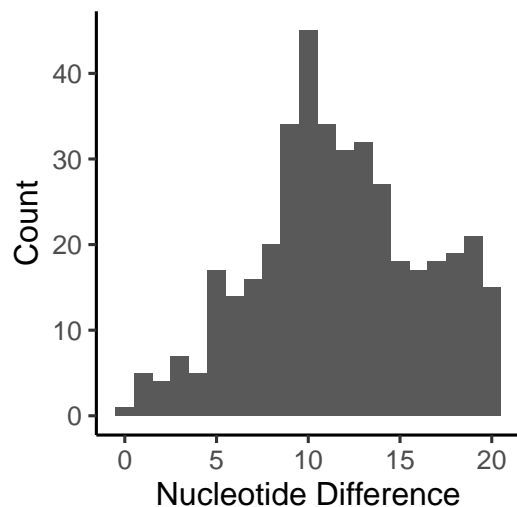
### IGHV3-66\*03

41 sequences assigned  
No exact matches.



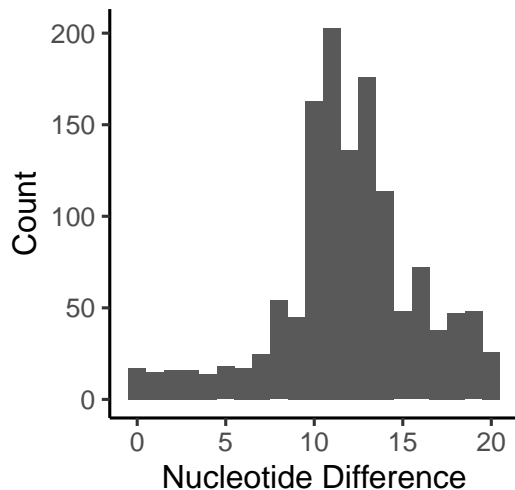
### IGHV3-72\*01

475 sequences assigned  
1 (0.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



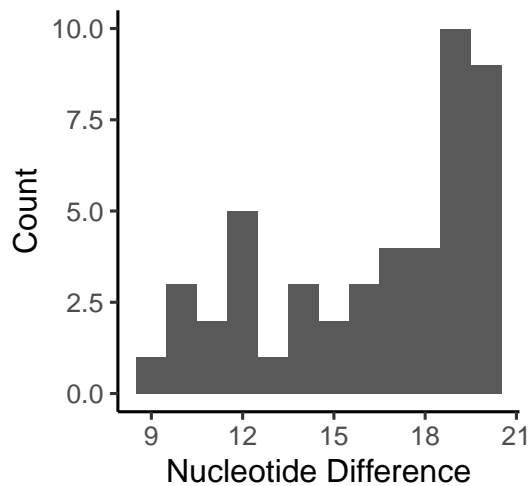
### IGHV3-73\*01\_02

1405 sequences assigned  
17 (1.2%) exact matches, in which:  
10 unique CDR3  
2 unique J



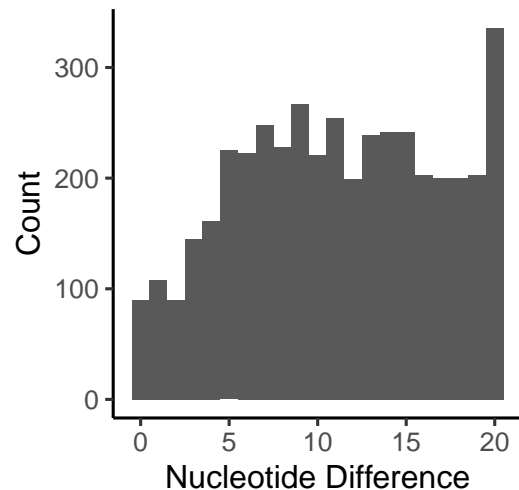
### IGHV3-43D\*04

70 sequences assigned  
No exact matches.



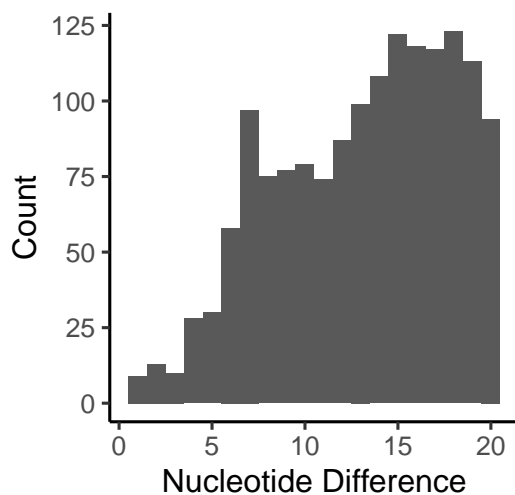
### IGHV4-4\*07

6374 sequences assigned  
90 (1.4%) exact matches, in which:  
74 unique CDR3  
5 unique J



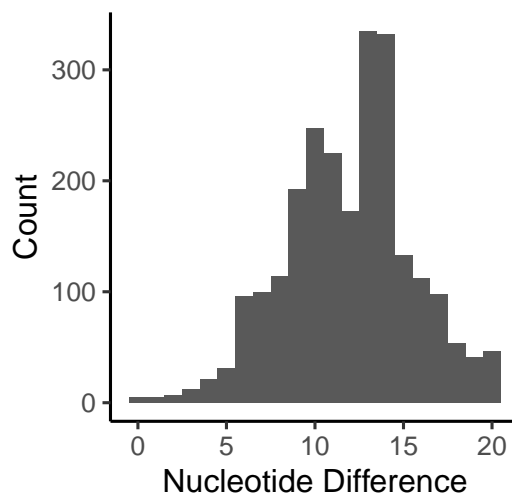
### IGHV3-74\*03

2370 sequences assigned  
No exact matches.



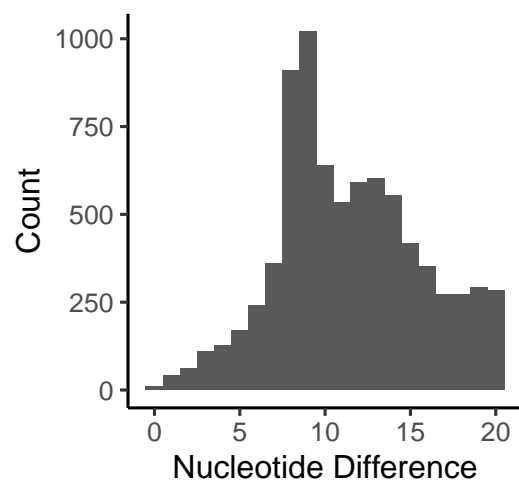
### IGHV3-64D\*08

2571 sequences assigned  
5 (0.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



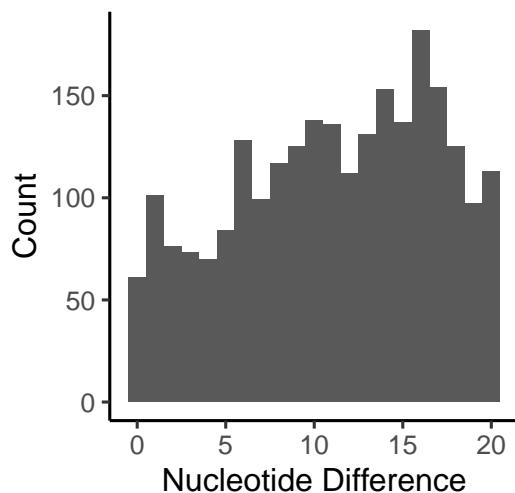
### IGHV4-4\*02\_03

9850 sequences assigned  
9 (0.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



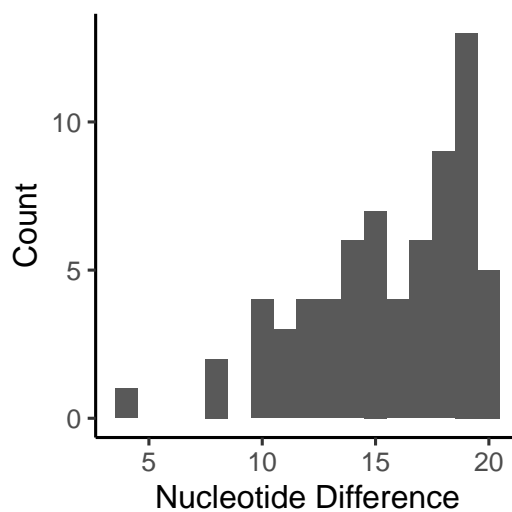
### IGHV3-74\*01\_02

2882 sequences assigned  
61 (2.1%) exact matches, in which:  
51 unique CDR3  
6 unique J



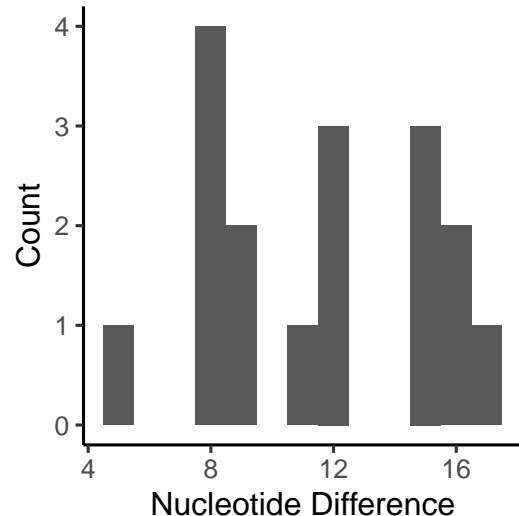
### IGHV3-NL1\*01

129 sequences assigned  
No exact matches.



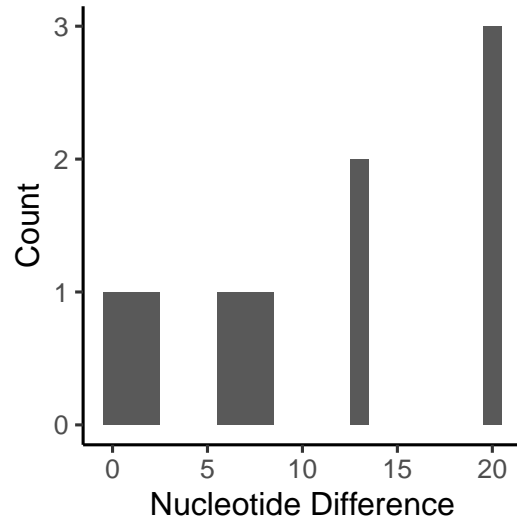
### IGHV4-28\*03

25 sequences assigned  
No exact matches.



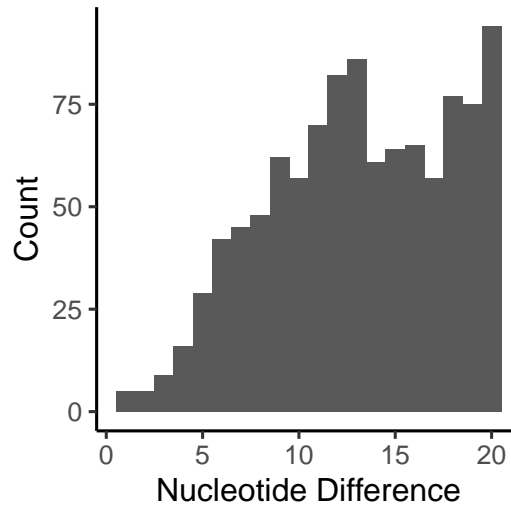
### IGHV4-28\*01\_07

12 sequences assigned  
1 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



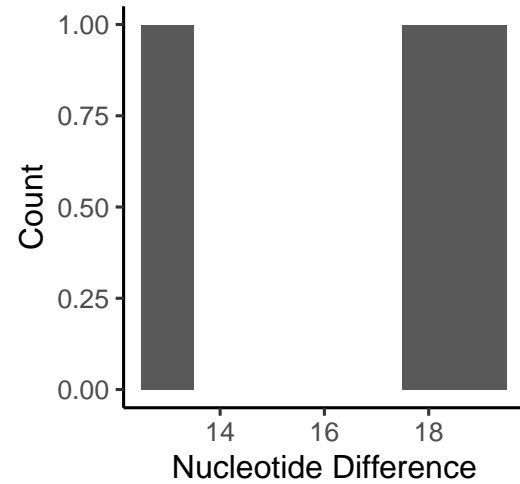
### IGHV4-30-4\*08

1606 sequences assigned  
No exact matches.



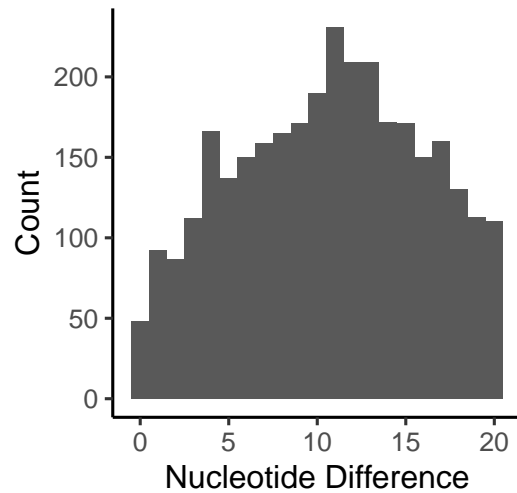
### IGHV4-38-2\*01

7 sequences assigned  
No exact matches.



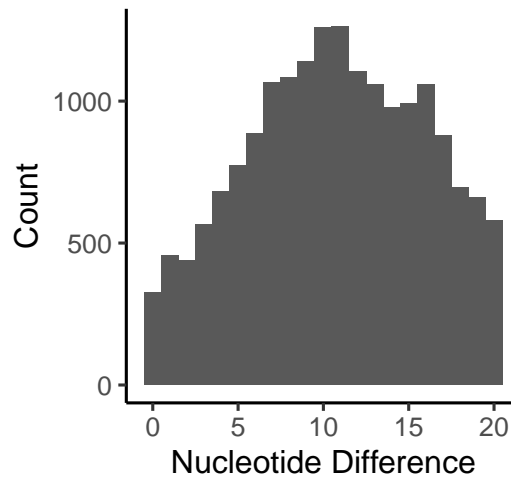
### IGHV4-30-4\*01

4945 sequences assigned  
48 (1%) exact matches, in which:  
34 unique CDR3  
4 unique J



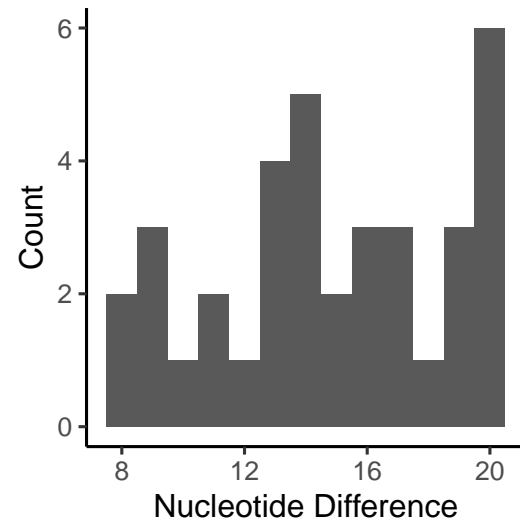
### IGHV4-31\*02

22551 sequences assigned  
327 (1.5%) exact matches, in which:  
250 unique CDR3  
6 unique J



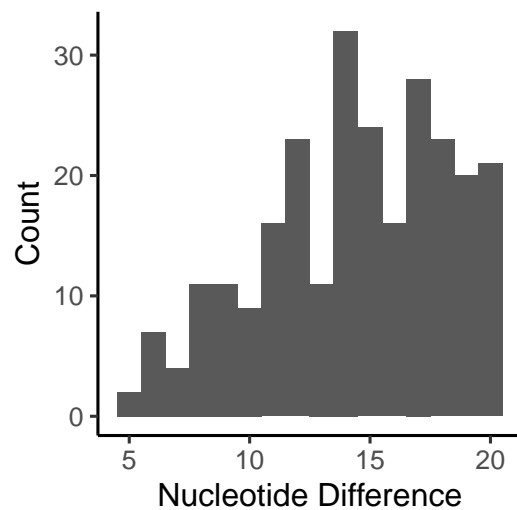
### IGHV4-38-2\*02

71 sequences assigned  
No exact matches.



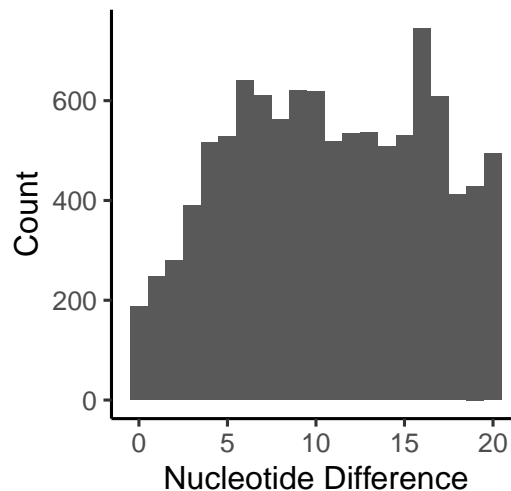
### IGHV4-30-2\*03

366 sequences assigned  
No exact matches.



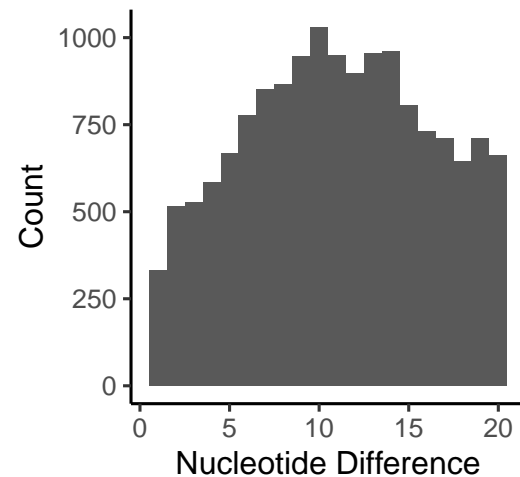
### IGHV4-34\*01\_02

12259 sequences assigned  
188 (1.5%) exact matches, in which:  
147 unique CDR3  
5 unique J



### IGHV4-39\*02

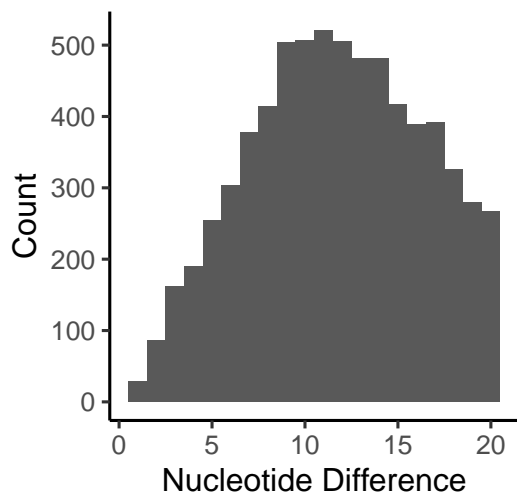
20330 sequences assigned  
No exact matches.





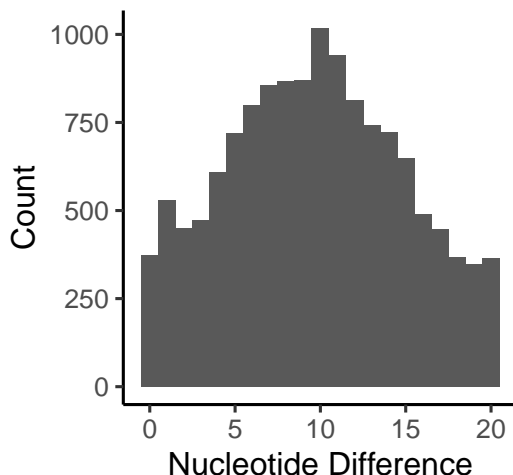
### IGHV4-39\*07

8218 sequences assigned  
No exact matches.



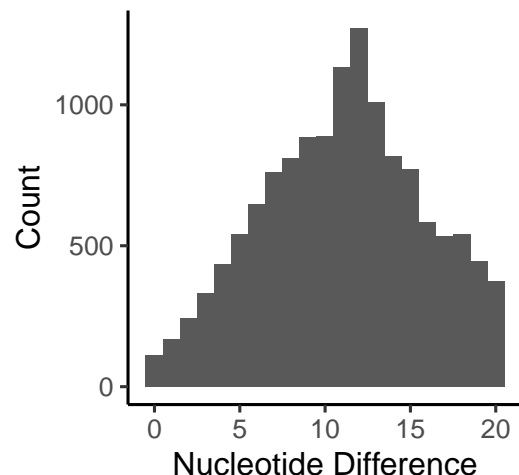
### IGHV4-59\*01\_07

15435 sequences assigned  
374 (2.4%) exact matches, in which:  
287 unique CDR3  
6 unique J



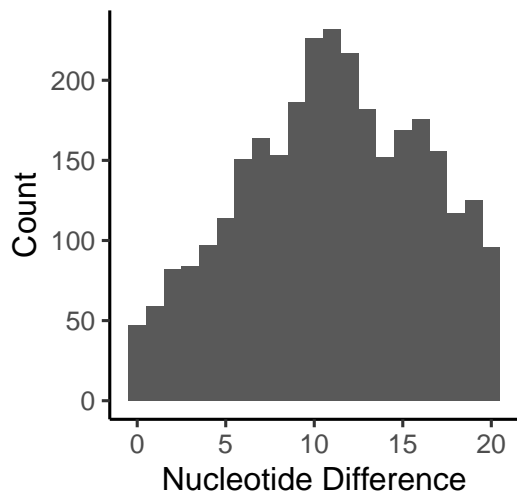
### IGHV4-61\*01

15752 sequences assigned  
112 (0.7%) exact matches, in which:  
96 unique CDR3  
6 unique J



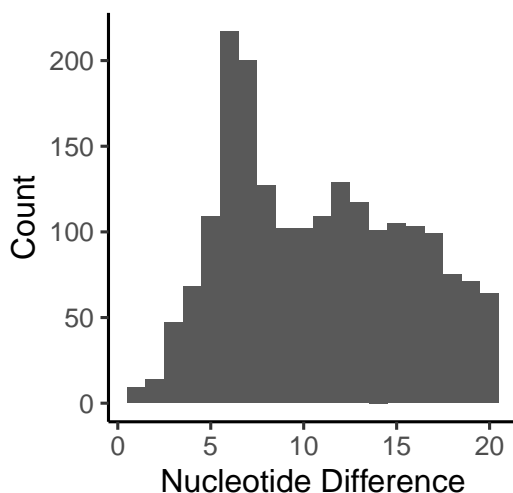
### IGHV4-39\*01\_05

3629 sequences assigned  
47 (1.3%) exact matches, in which:  
40 unique CDR3  
5 unique J



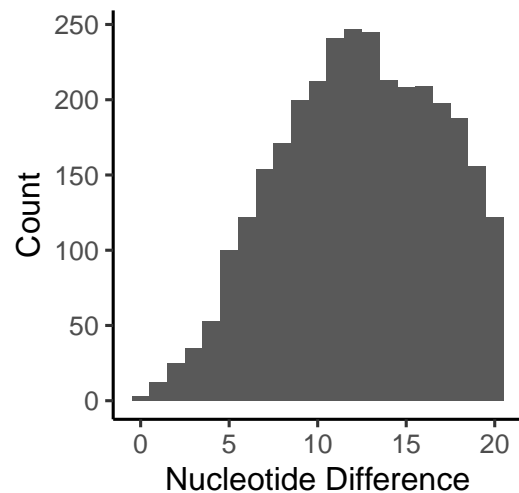
### IGHV4-59\*11

2842 sequences assigned  
No exact matches.



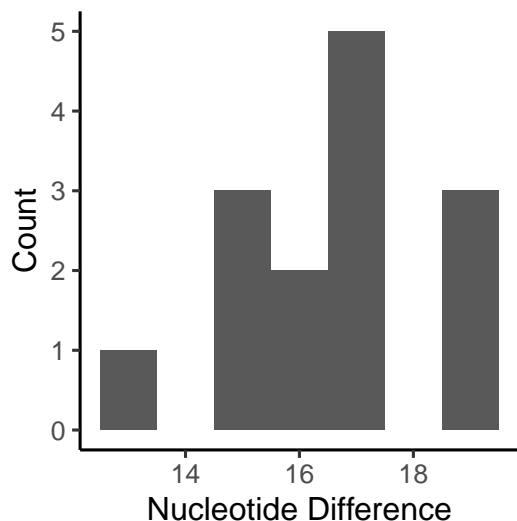
### IGHV4-61\*08

3942 sequences assigned  
3 (0.1%) exact matches, in which:  
3 unique CDR3  
3 unique J



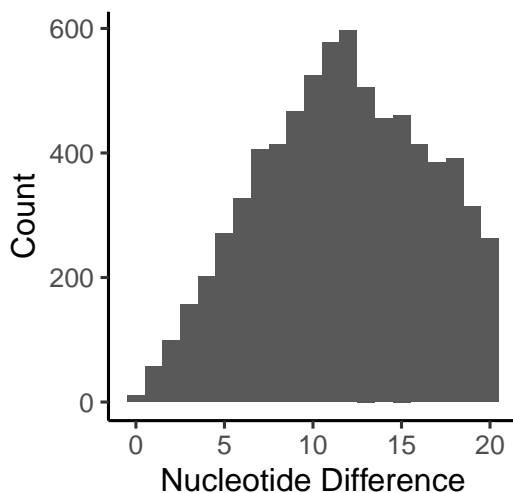
### IGHV4-55\*09

52 sequences assigned  
No exact matches.



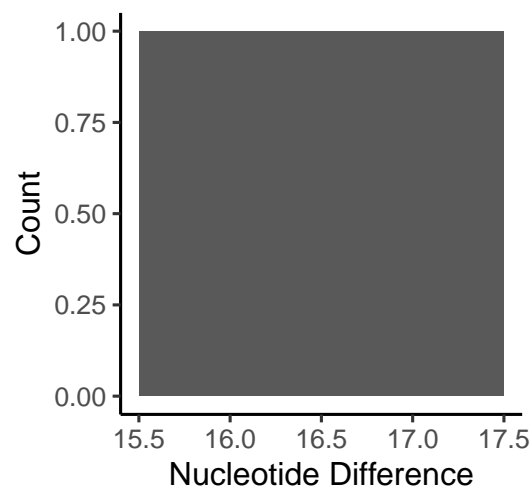
### IGHV4-59\*12

8680 sequences assigned  
11 (0.1%) exact matches, in which:  
11 unique CDR3  
4 unique J



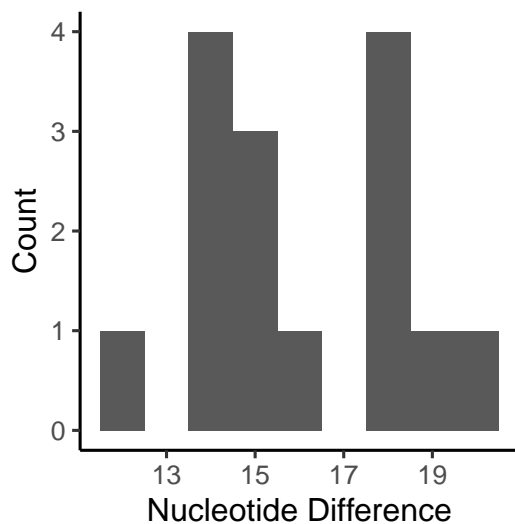
### IGHV1/OR15-1\*04

2 sequences assigned  
No exact matches.



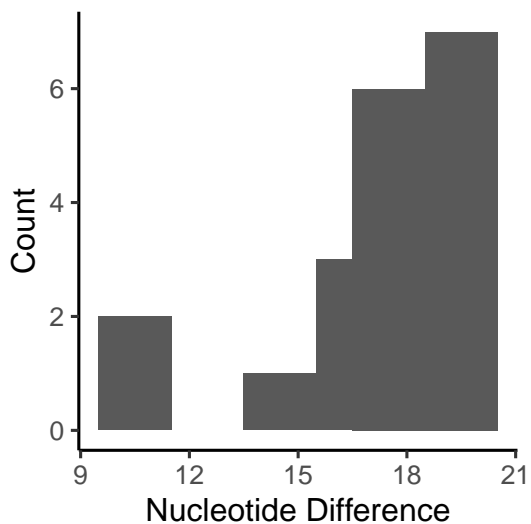
### IGHV1/OR15-2\*02\_03

25 sequences assigned  
No exact matches.



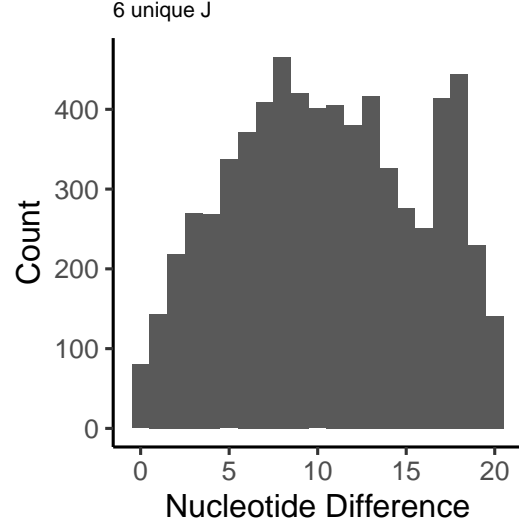
### IGHV4/OR15-8\*02

119 sequences assigned  
No exact matches.



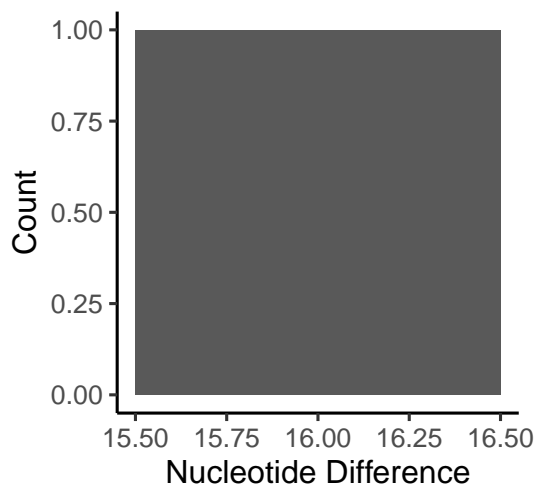
### IGHV5-51\*01\_03

7288 sequences assigned  
80 (1.1%) exact matches, in which:  
70 unique CDR3  
6 unique J



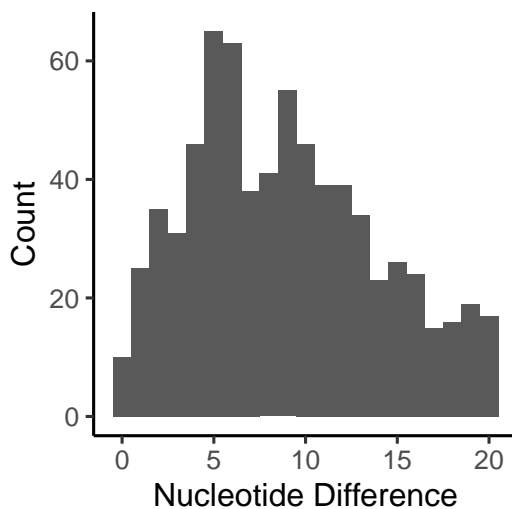
### IGHV1/OR15-3\*02

1 sequences assigned  
No exact matches.



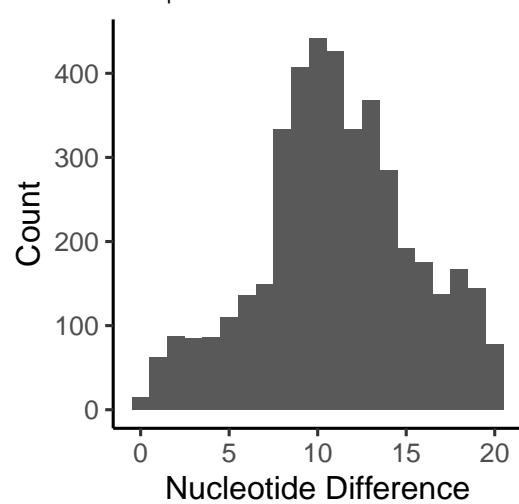
### IGHV5-10-1\*01\_03

778 sequences assigned  
10 (1.3%) exact matches, in which:  
9 unique CDR3  
4 unique J



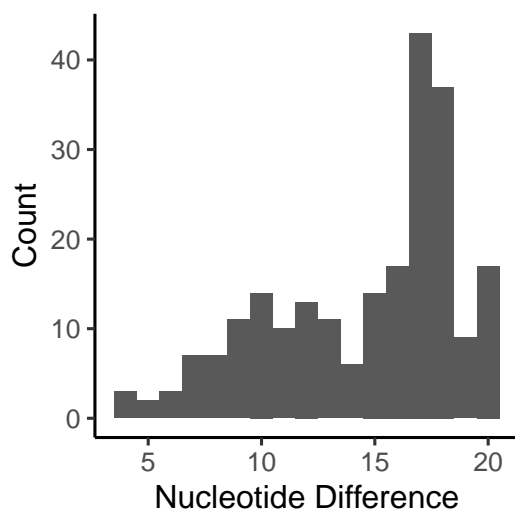
### IGHV6-1\*01\_02

4950 sequences assigned  
15 (0.3%) exact matches, in which:  
13 unique CDR3  
4 unique J



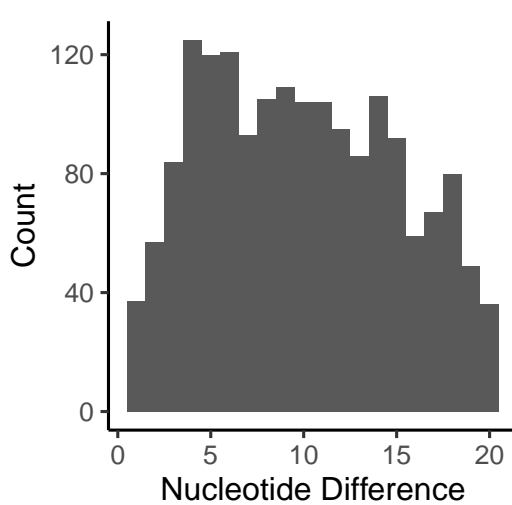
### IGHV4/OR15-8\*01

276 sequences assigned  
No exact matches.



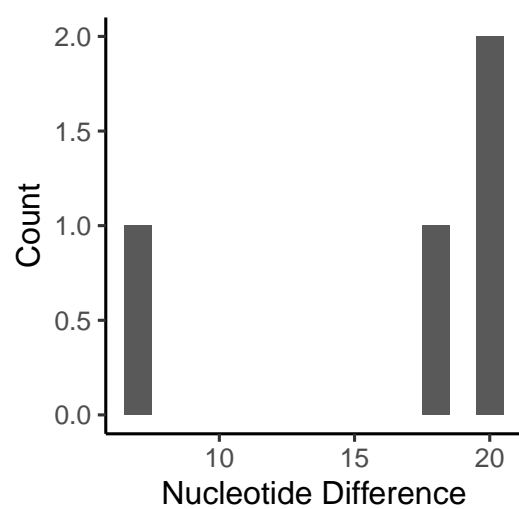
### IGHV5-51\*07

1914 sequences assigned  
No exact matches.



### IGHV7-4-1\*02

45 sequences assigned  
No exact matches.





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.