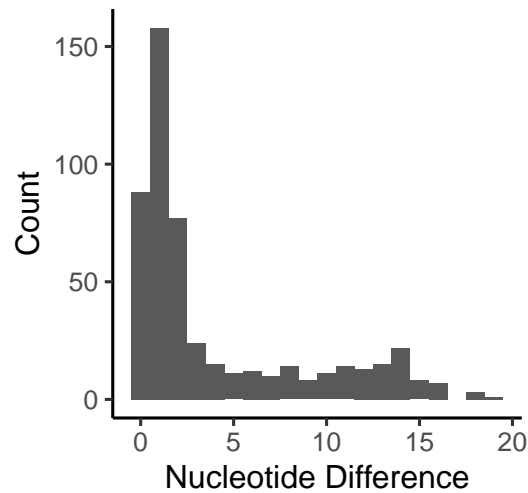


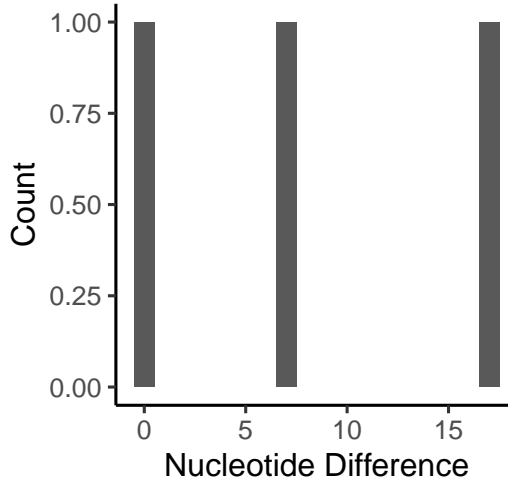
### IGHV1-2\*04

515 sequences assigned  
88 (17.1%) exact matches, in which:  
76 unique CDR3  
5 unique J



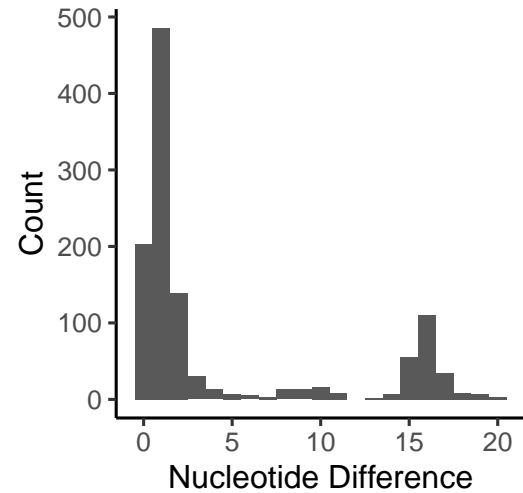
### IGHV1-8\*02

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



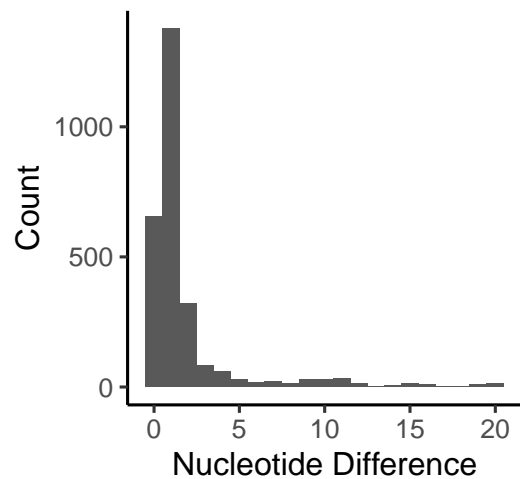
### IGHV1-24\*01

1168 sequences assigned  
203 (17.4%) exact matches, in which:  
119 unique CDR3  
6 unique J



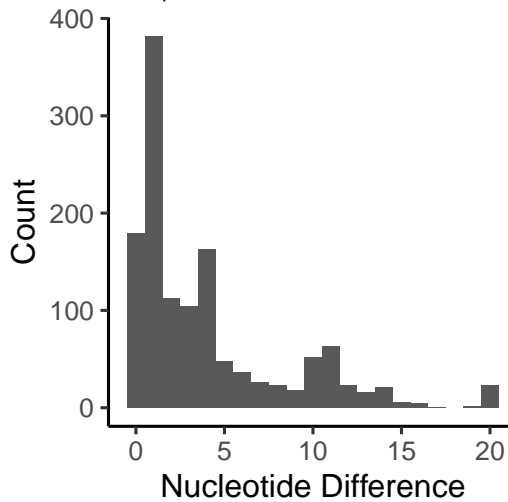
### IGHV1-3\*01\_05

3366 sequences assigned  
656 (19.5%) exact matches, in which:  
413 unique CDR3  
6 unique J



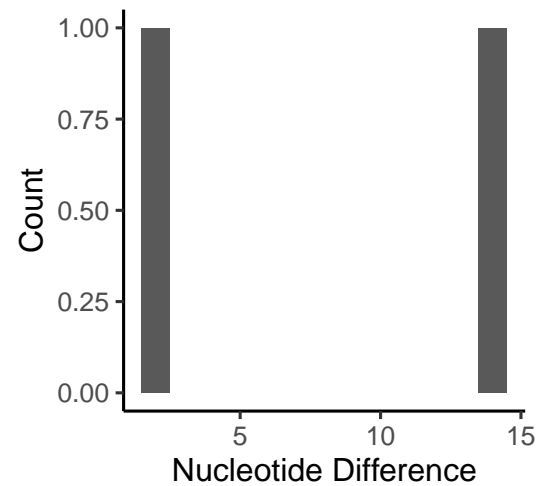
### IGHV1-18\*01

1440 sequences assigned  
179 (12.4%) exact matches, in which:  
137 unique CDR3  
6 unique J



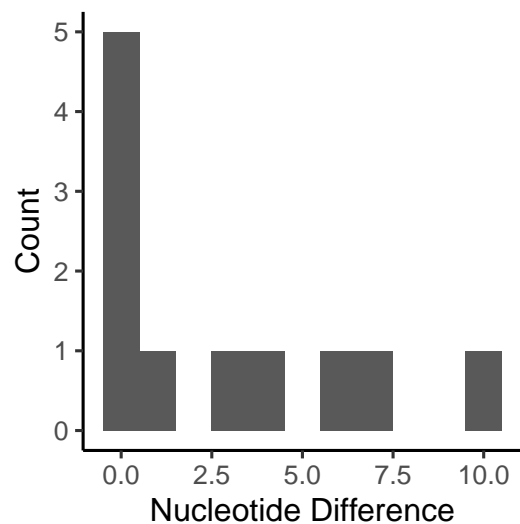
### IGHV1-45\*02

4 sequences assigned  
No exact matches.



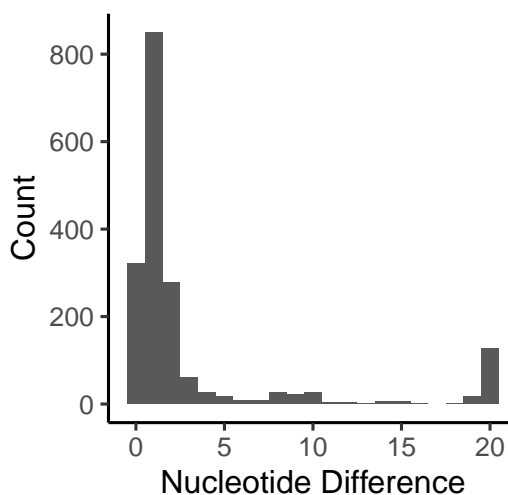
### IGHV1-8\*01

12 sequences assigned  
5 (41.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



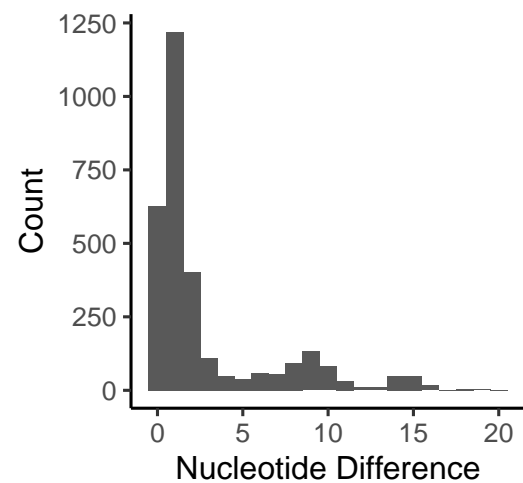
### IGHV1-18\*04

2240 sequences assigned  
321 (14.3%) exact matches, in which:  
226 unique CDR3  
4 unique J



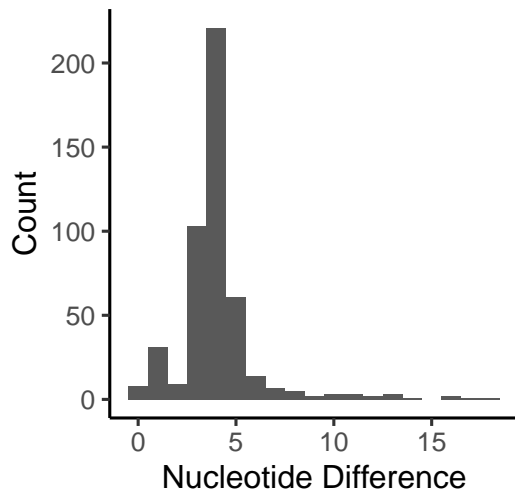
### IGHV1-46\*01

3086 sequences assigned  
628 (20.3%) exact matches, in which:  
474 unique CDR3  
6 unique J



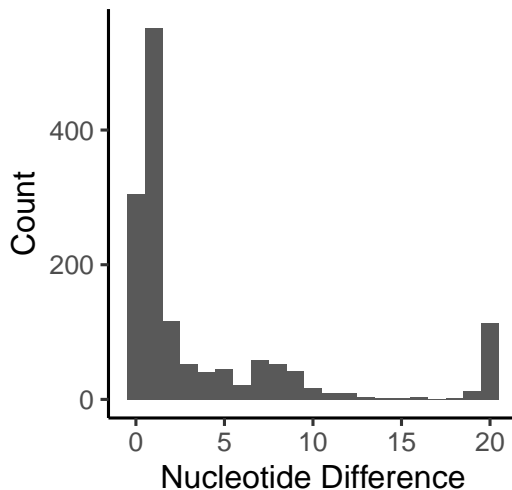
### IGHV1-58\*01\_03

477 sequences assigned  
8 (1.7%) exact matches, in which:  
5 unique CDR3  
2 unique J



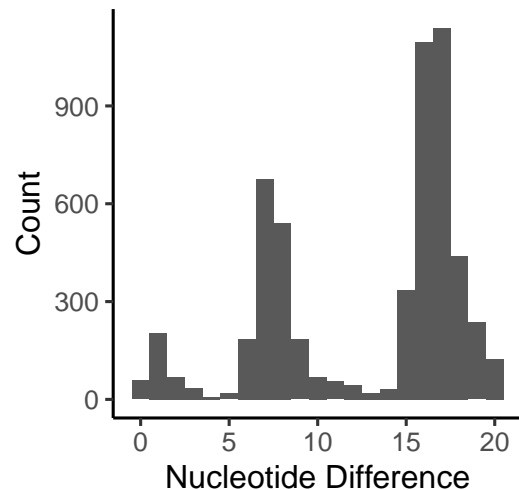
### IGHV1-69\*06\_14

1886 sequences assigned  
305 (16.2%) exact matches, in which:  
228 unique CDR3  
6 unique J



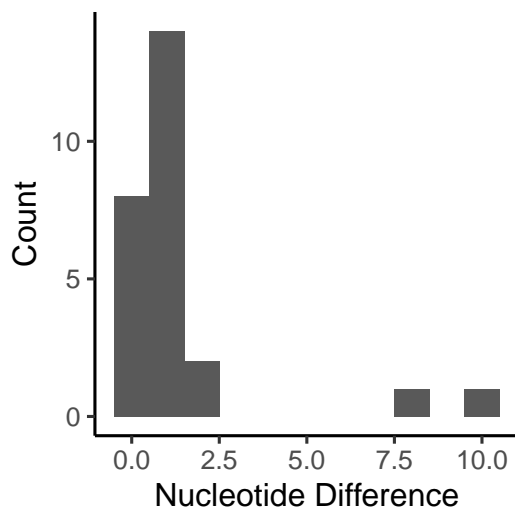
### IGHV2-5\*02

5815 sequences assigned  
58 (1%) exact matches, in which:  
33 unique CDR3  
2 unique J



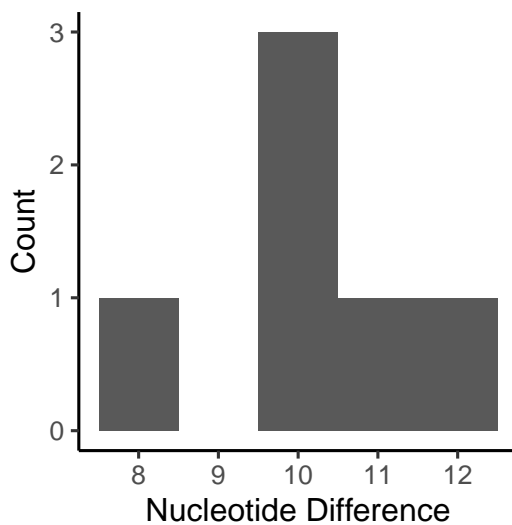
### IGHV1-69-2\*01

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



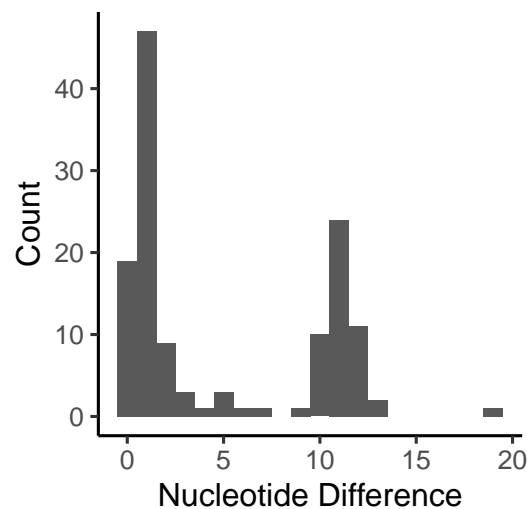
### IGHV1-NL1\*01

6 sequences assigned  
No exact matches.



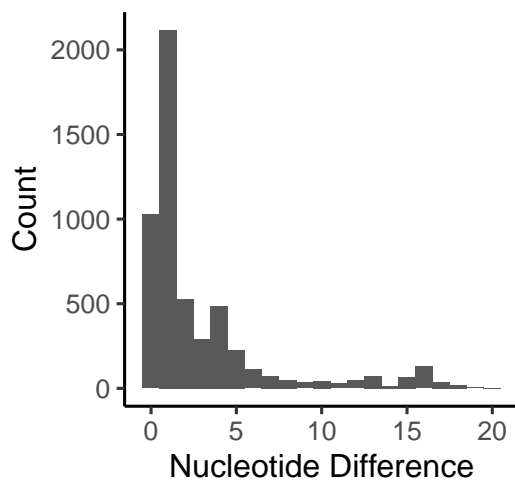
### IGHV2-26\*01

133 sequences assigned  
19 (14.3%) exact matches, in which:  
12 unique CDR3  
3 unique J



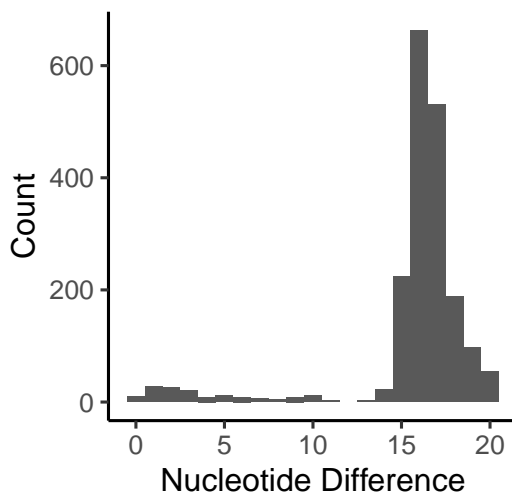
### IGHV1-69\*01\_12\_13

5460 sequences assigned  
1028 (18.8%) exact matches, in which:  
741 unique CDR3  
6 unique J



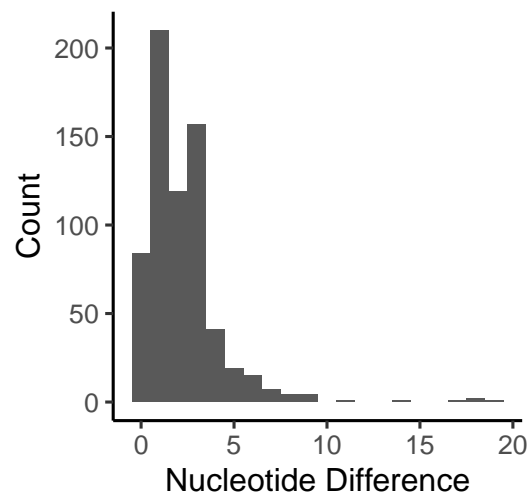
### IGHV2-5\*01

2049 sequences assigned  
10 (0.5%) exact matches, in which:  
9 unique CDR3  
4 unique J



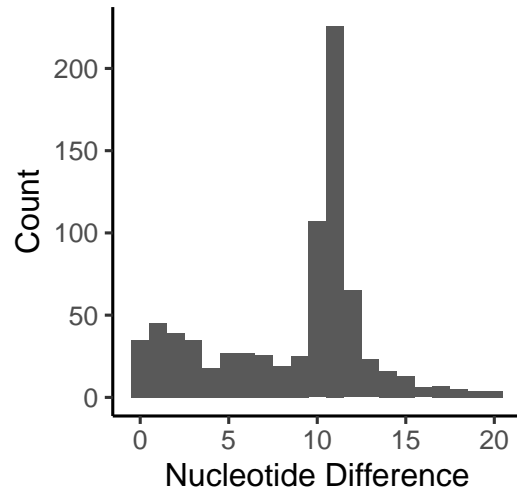
### IGHV2-70\*01

666 sequences assigned  
84 (12.6%) exact matches, in which:  
57 unique CDR3  
4 unique J



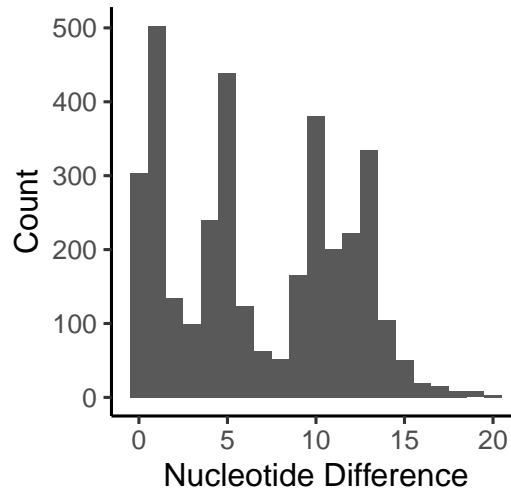
### IGHV3-7\*01

775 sequences assigned  
35 (4.5%) exact matches, in which:  
31 unique CDR3  
4 unique J



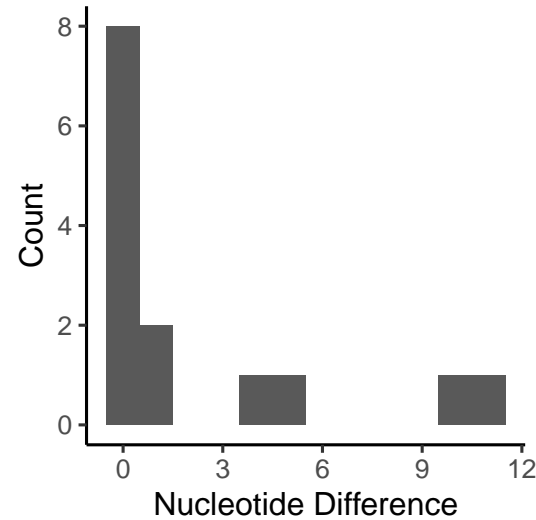
### IGHV3-11\*06

3852 sequences assigned  
304 (7.9%) exact matches, in which:  
198 unique CDR3  
5 unique J



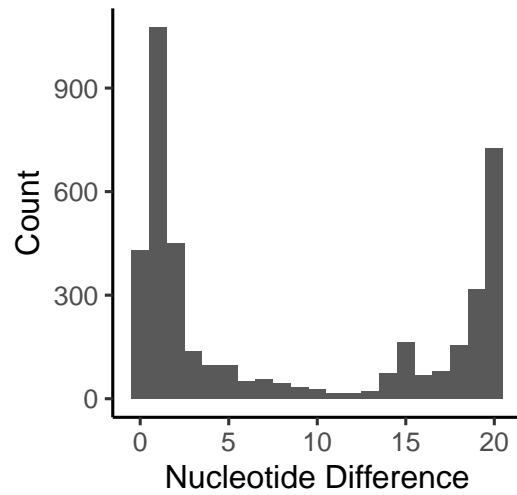
### IGHV3-19\*01

14 sequences assigned  
8 (57.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



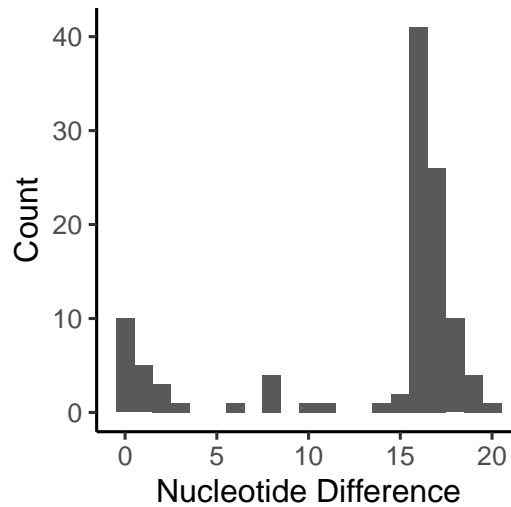
### IGHV3-7\*03

5015 sequences assigned  
431 (8.6%) exact matches, in which:  
236 unique CDR3  
5 unique J



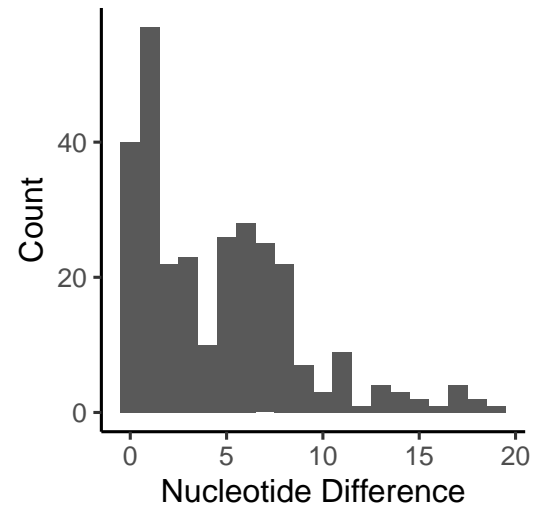
### IGHV3-13\*05

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



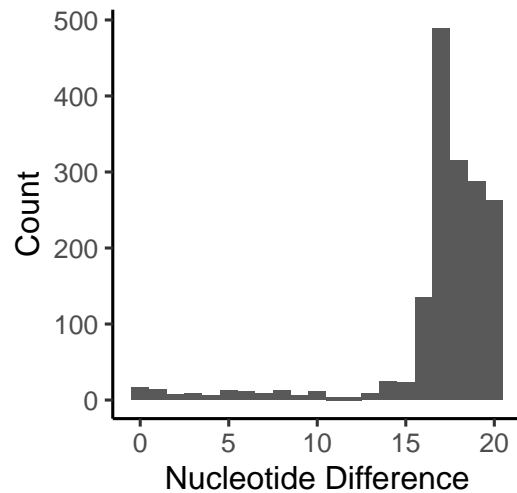
### IGHV3-21\*04

296 sequences assigned  
40 (13.5%) exact matches, in which:  
29 unique CDR3  
4 unique J



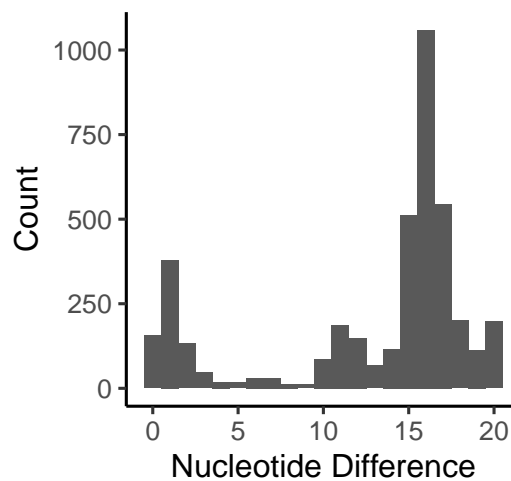
### IGHV3-7\*05

1802 sequences assigned  
16 (0.9%) exact matches, in which:  
14 unique CDR3  
3 unique J



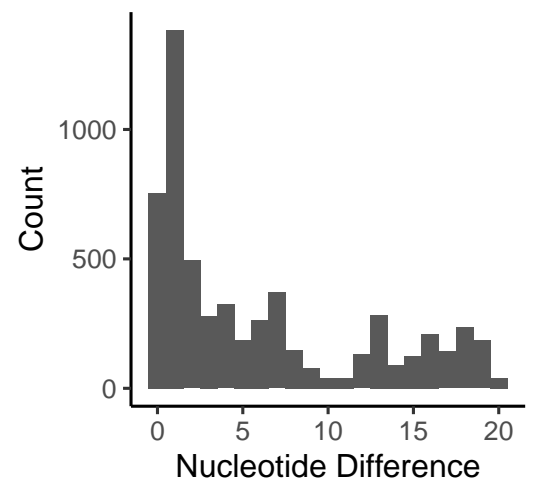
### IGHV3-15\*01\_02

6176 sequences assigned  
156 (2.5%) exact matches, in which:  
90 unique CDR3  
4 unique J



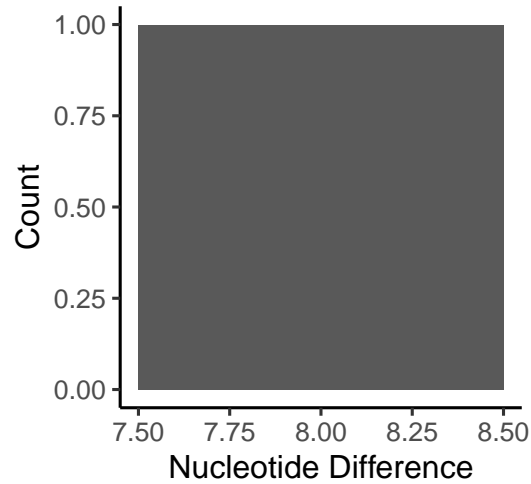
### IGHV3-21\*01\_02

5861 sequences assigned  
754 (12.9%) exact matches, in which:  
456 unique CDR3  
6 unique J



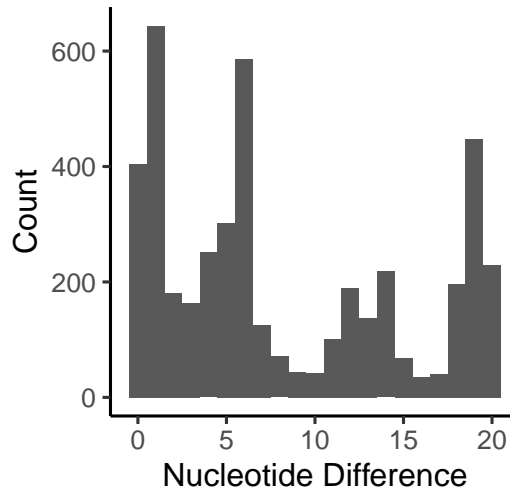
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



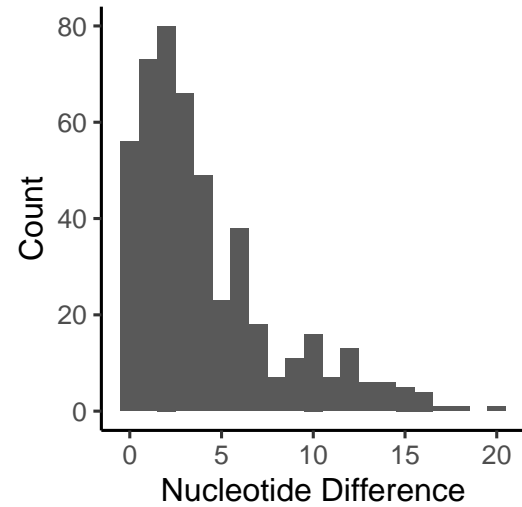
### IGHV3-30\*03

6883 sequences assigned  
405 (5.9%) exact matches, in which:  
271 unique CDR3  
6 unique J



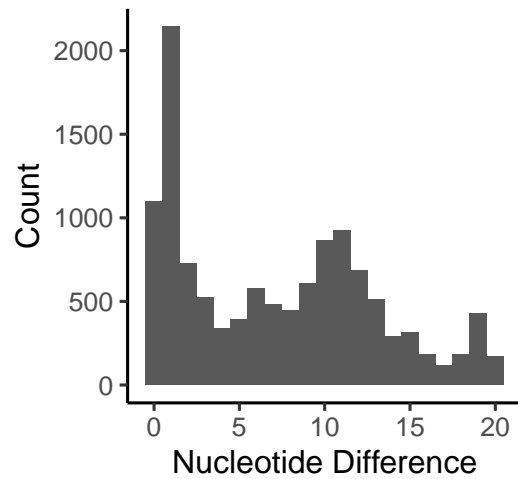
### IGHV3-33\*06

507 sequences assigned  
56 (11%) exact matches, in which:  
42 unique CDR3  
4 unique J



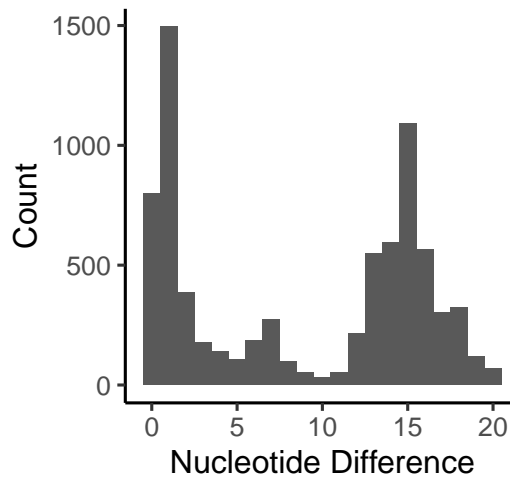
### IGHV3-23\*01\_04

15690 sequences assigned  
1097 (7%) exact matches, in which:  
602 unique CDR3  
6 unique J



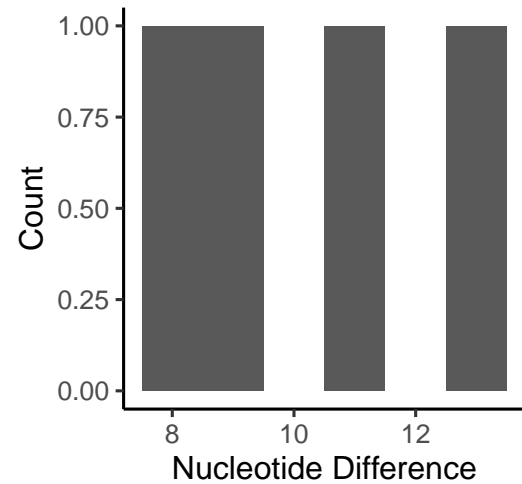
### IGHV3-33\*01

7752 sequences assigned  
798 (10.3%) exact matches, in which:  
450 unique CDR3  
6 unique J



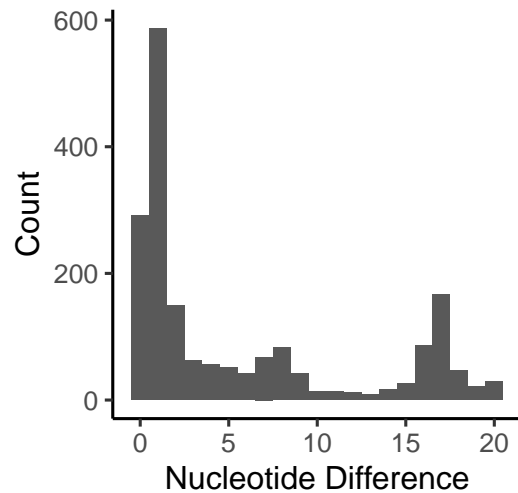
### IGHV3-35\*01

4 sequences assigned  
No exact matches.



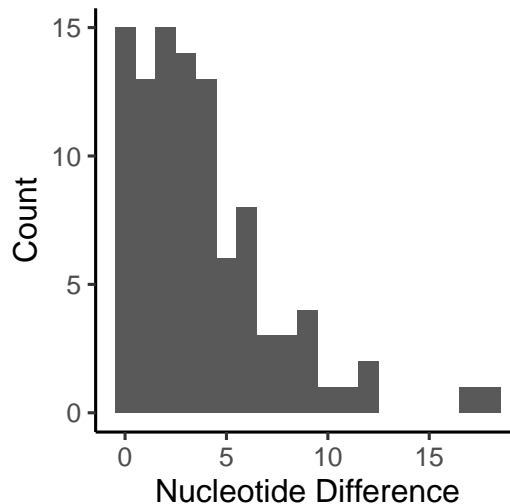
### IGHV3-30-3\*01

3455 sequences assigned  
291 (8.4%) exact matches, in which:  
163 unique CDR3  
6 unique J



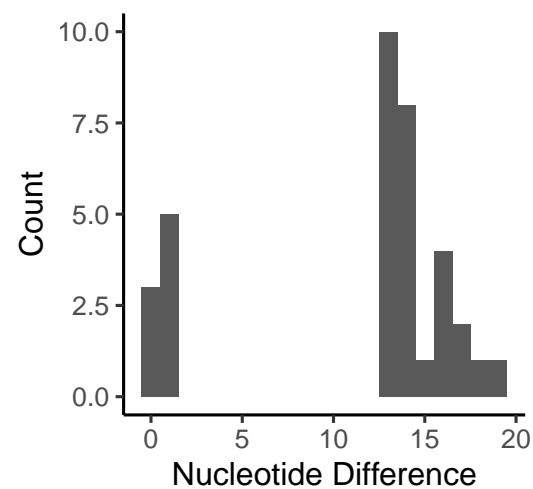
### IGHV3-33\*05

101 sequences assigned  
15 (14.9%) exact matches, in which:  
12 unique CDR3  
3 unique J



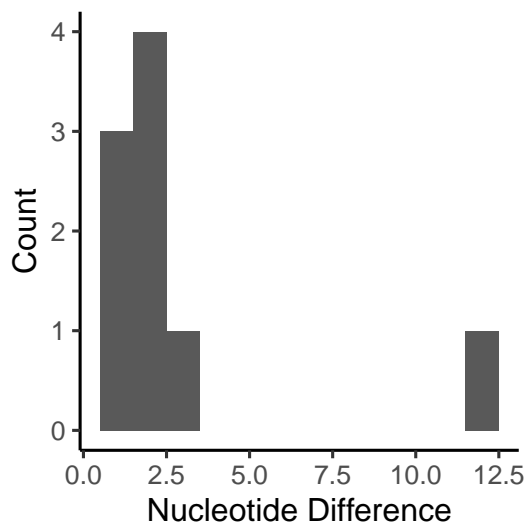
### IGHV3-43\*01

36 sequences assigned  
3 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



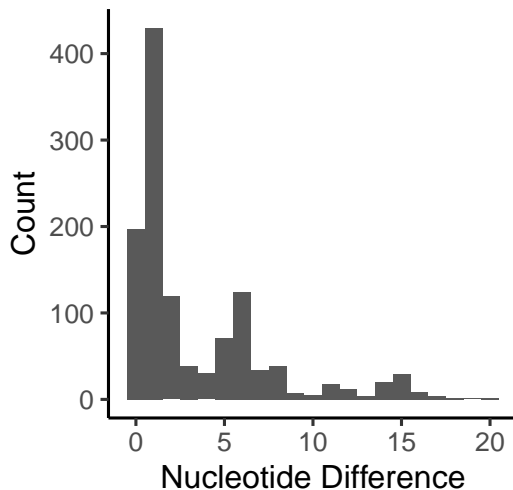
### IGHV3-47\*02

9 sequences assigned  
No exact matches.



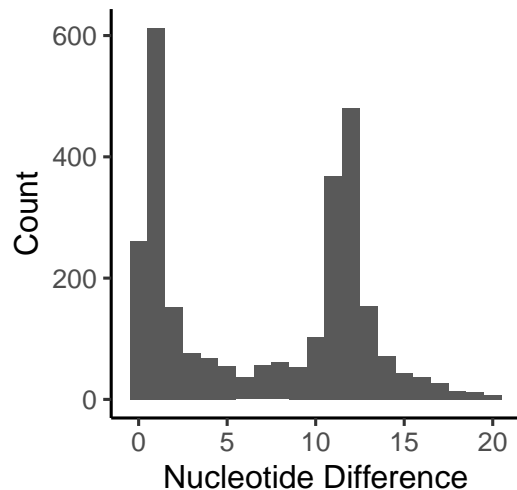
### IGHV3-49\*03\_05

1197 sequences assigned  
197 (16.5%) exact matches, in which:  
107 unique CDR3  
4 unique J



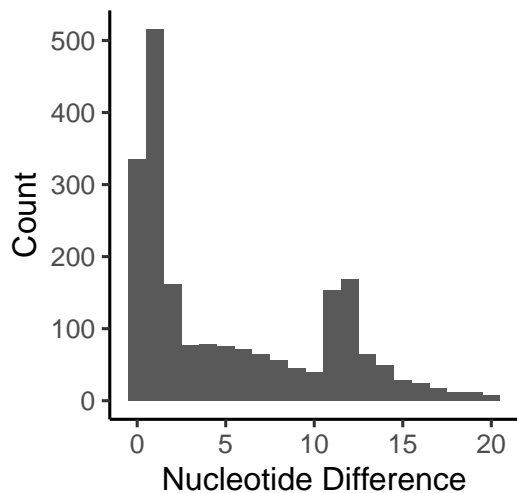
### IGHV3-53\*01\_02

2769 sequences assigned  
261 (9.4%) exact matches, in which:  
150 unique CDR3  
4 unique J



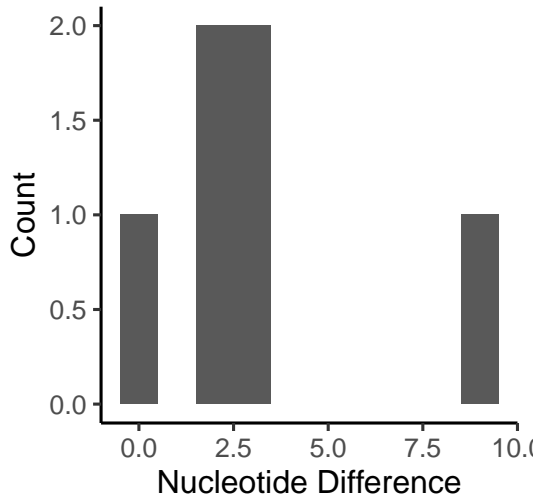
### IGHV3-48\*01

3956 sequences assigned  
335 (8.5%) exact matches, in which:  
206 unique CDR3  
6 unique J



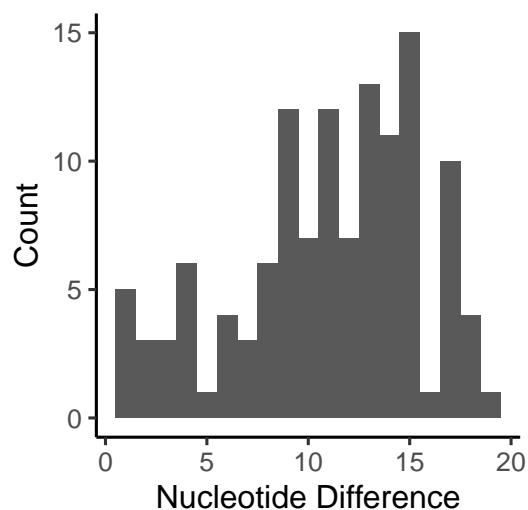
### IGHV3-52\*01\_03

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



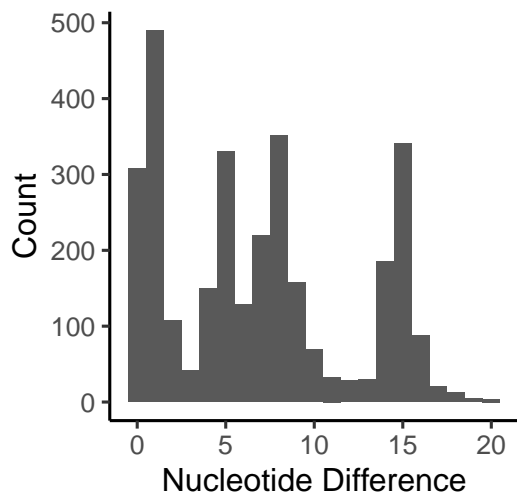
### IGHV3-64\*04

125 sequences assigned  
No exact matches.



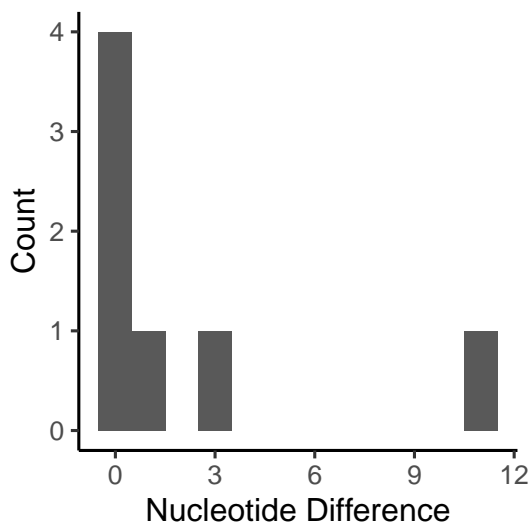
### IGHV3-48\*02

3107 sequences assigned  
308 (9.9%) exact matches, in which:  
179 unique CDR3  
5 unique J



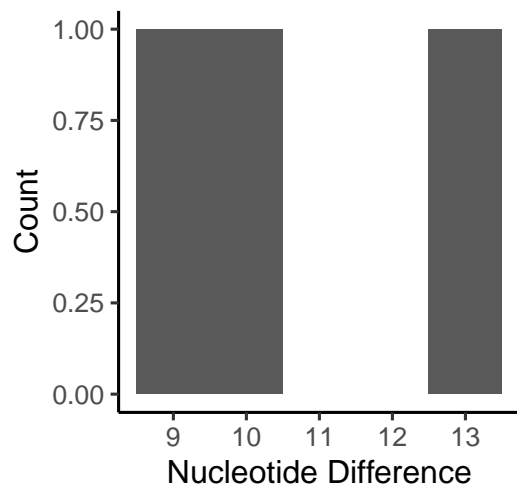
### IGHV3-53\*05

7 sequences assigned  
4 (57.1%) exact matches, in which:  
3 unique CDR3  
1 unique J



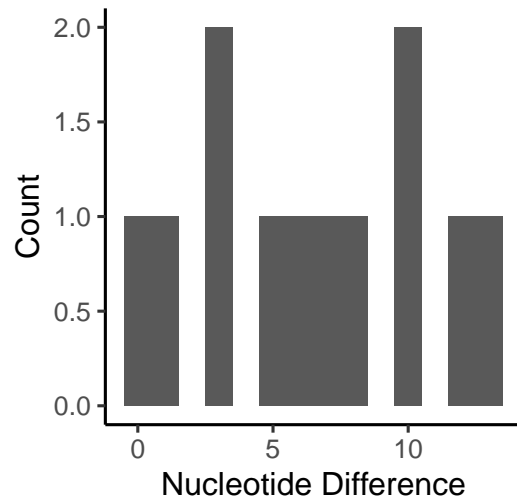
### IGHV3-66\*01

4 sequences assigned  
No exact matches.



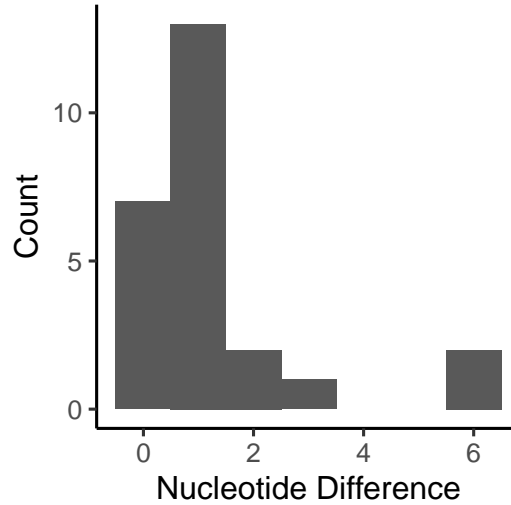
### IGHV3-66\*02

13 sequences assigned  
1 (7.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



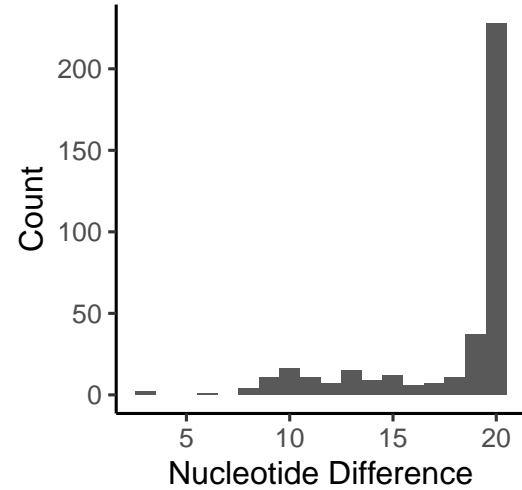
### IGHV3-69-1\*02

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



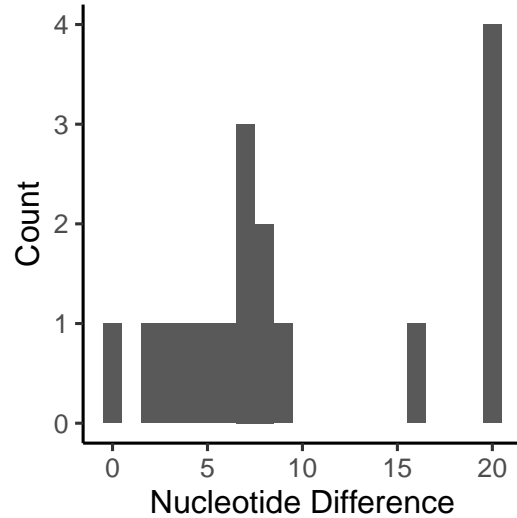
### IGHV3-74\*03

1457 sequences assigned  
No exact matches.



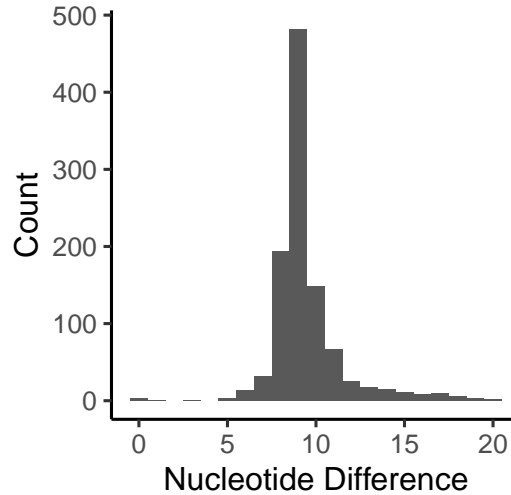
### IGHV3-66\*03

18 sequences assigned  
1 (5.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



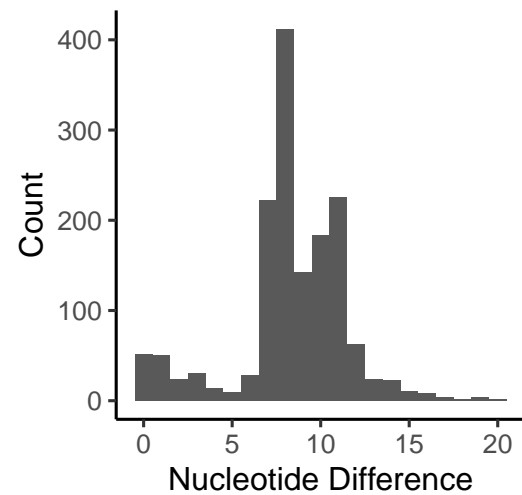
### IGHV3-72\*01

1053 sequences assigned  
3 (0.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



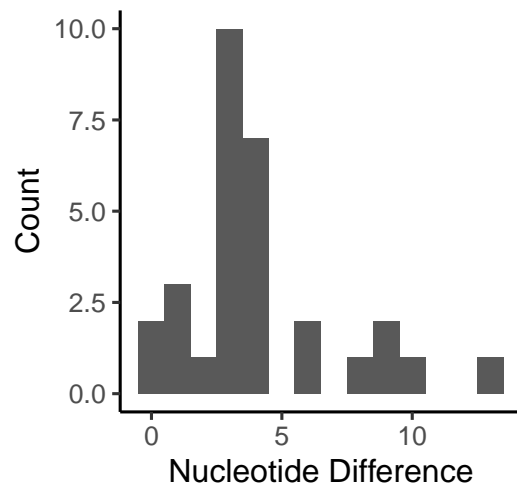
### IGHV3-74\*01\_02

1539 sequences assigned  
52 (3.4%) exact matches, in which:  
34 unique CDR3  
4 unique J



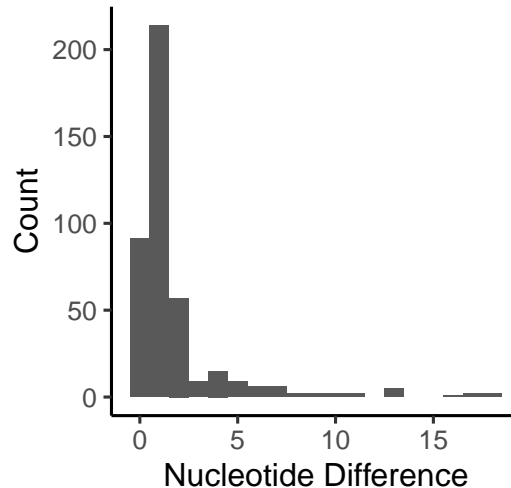
### IGHV3-69-1\*01

30 sequences assigned  
2 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



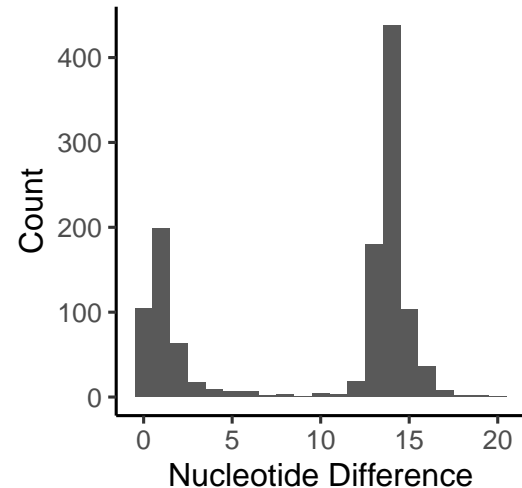
### IGHV3-73\*01\_02

427 sequences assigned  
91 (21.3%) exact matches, in which:  
45 unique CDR3  
2 unique J



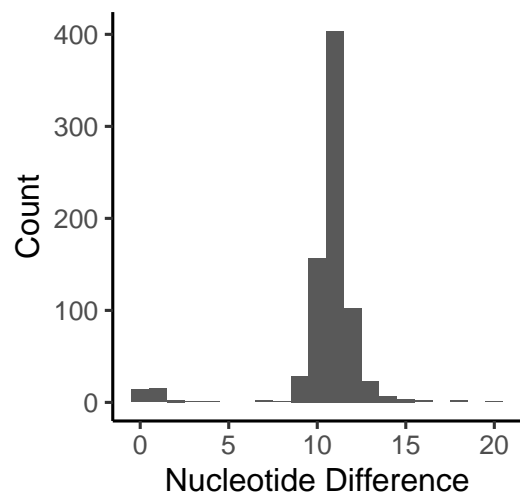
### IGHV3-64D\*06

1222 sequences assigned  
104 (8.5%) exact matches, in which:  
68 unique CDR3  
2 unique J



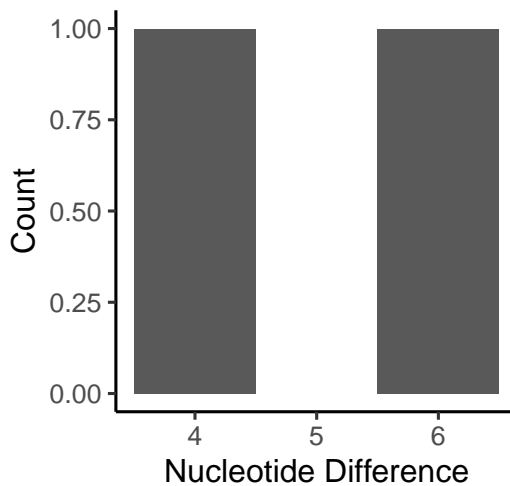
### IGHV3–64D\*08

773 sequences assigned  
14 (1.8%) exact matches, in which:  
10 unique CDR3  
3 unique J



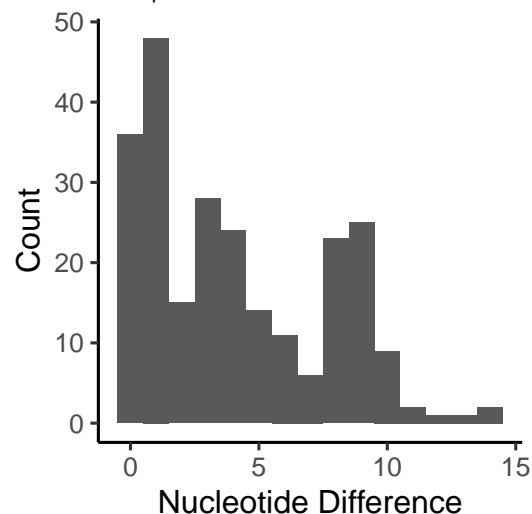
### IGHV4–28\*03

2 sequences assigned  
No exact matches.



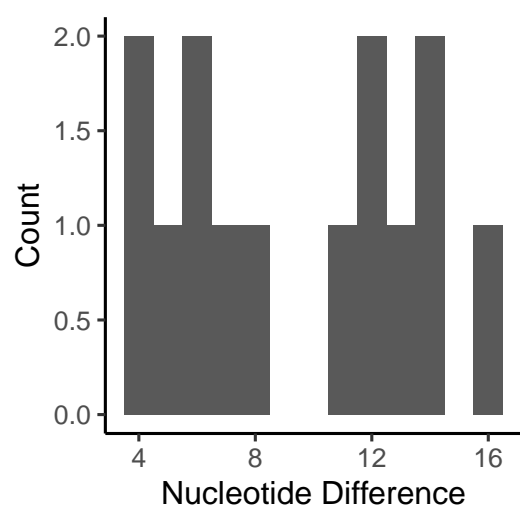
### IGHV4–30–4\*01

1501 sequences assigned  
36 (2.4%) exact matches, in which:  
27 unique CDR3  
5 unique J



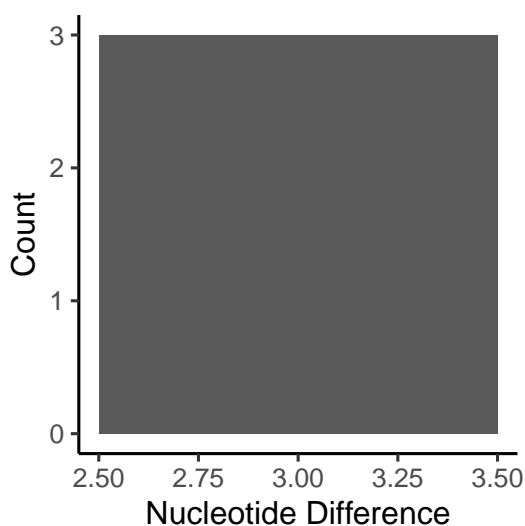
### IGHV3–NL1\*01

19 sequences assigned  
No exact matches.



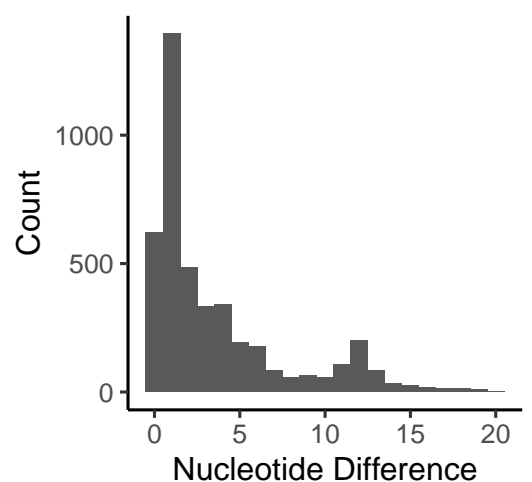
### IGHV4–28\*01\_07

3 sequences assigned  
No exact matches.



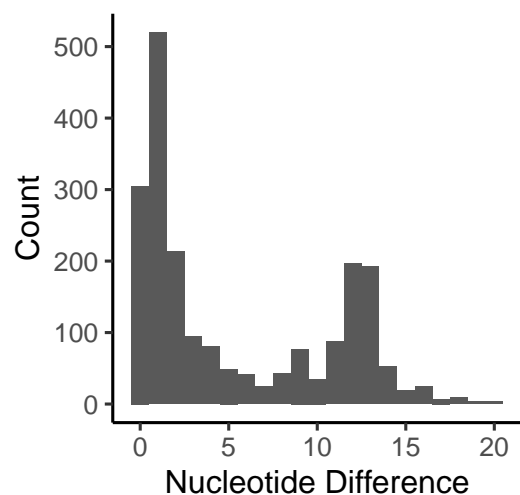
### IGHV4–31\*02

4922 sequences assigned  
620 (12.6%) exact matches, in which:  
412 unique CDR3  
6 unique J



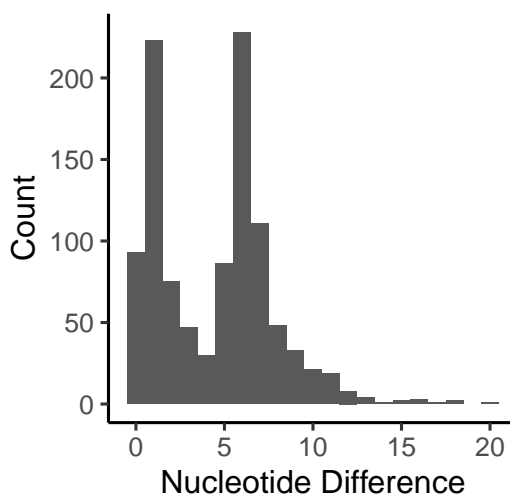
### IGHV4–4\*02\_03

3024 sequences assigned  
305 (10.1%) exact matches, in which:  
197 unique CDR3  
5 unique J



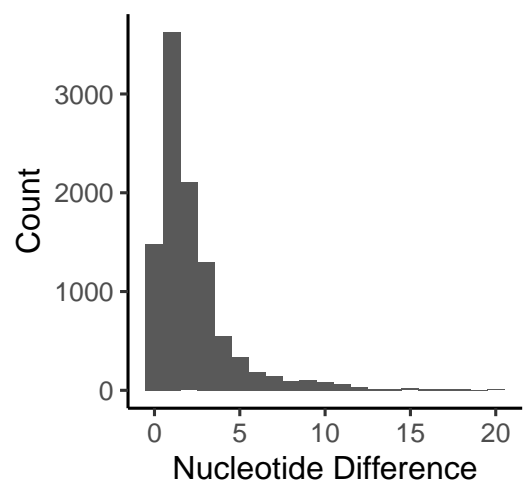
### IGHV4–30–2\*01

1046 sequences assigned  
93 (8.9%) exact matches, in which:  
58 unique CDR3  
5 unique J



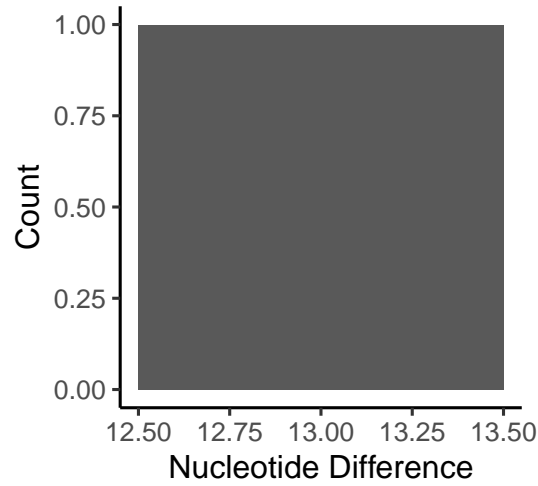
### IGHV4–34\*01\_02

10282 sequences assigned  
1479 (14.4%) exact matches, in which:  
921 unique CDR3  
6 unique J



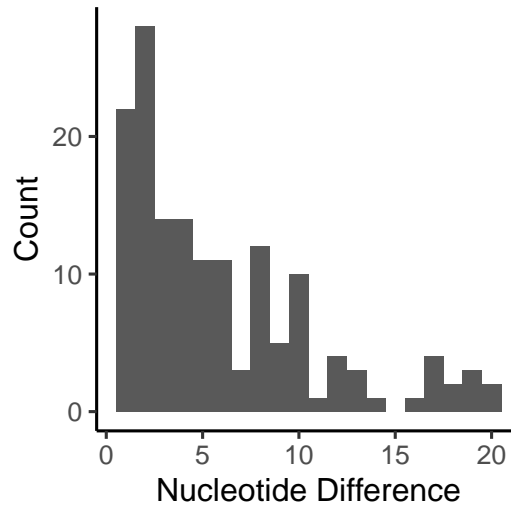
### IGHV4-38-2\*01

7 sequences assigned  
No exact matches.



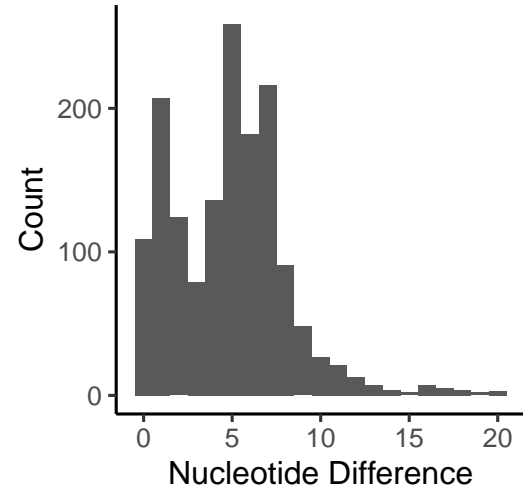
### IGHV4-59\*08

168 sequences assigned  
No exact matches.



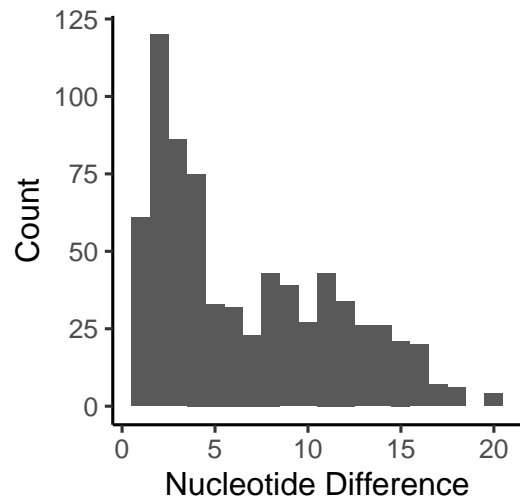
### IGHV4-61\*01

1590 sequences assigned  
109 (6.9%) exact matches, in which:  
87 unique CDR3  
5 unique J



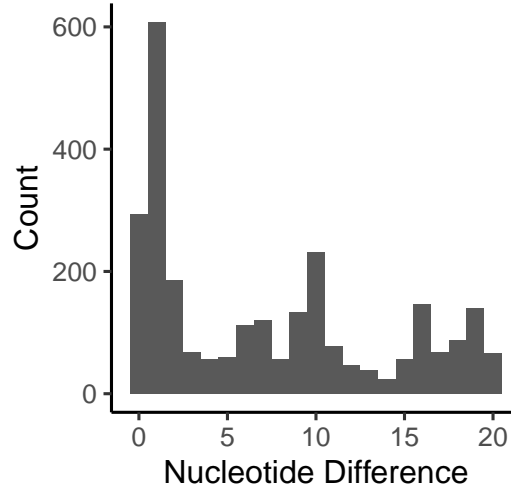
### IGHV4-39\*07

791 sequences assigned  
No exact matches.



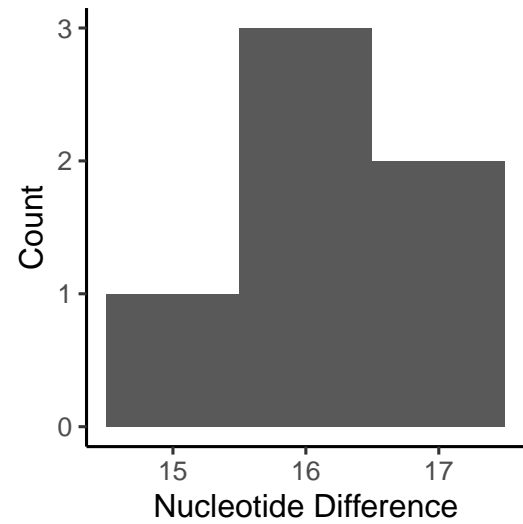
### IGHV4-59\*01\_07

3661 sequences assigned  
294 (8%) exact matches, in which:  
210 unique CDR3  
6 unique J



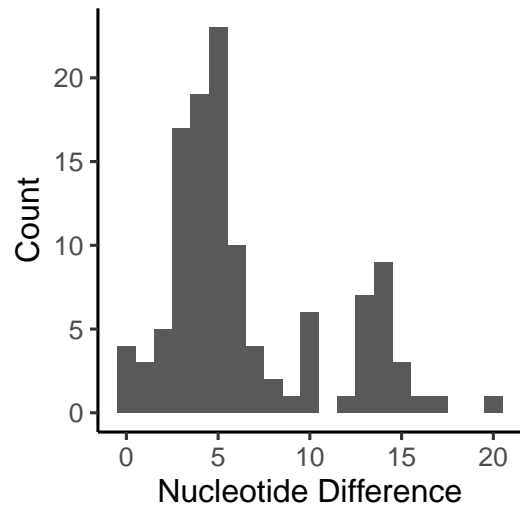
### IGHV1/OR15-2\*02\_03

6 sequences assigned  
No exact matches.



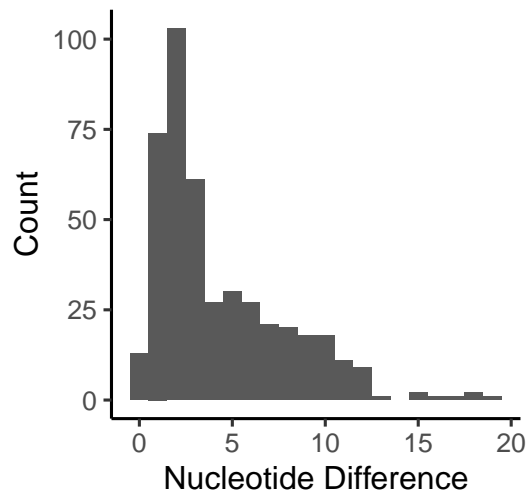
### IGHV4-59\*02

3690 sequences assigned  
4 (0.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



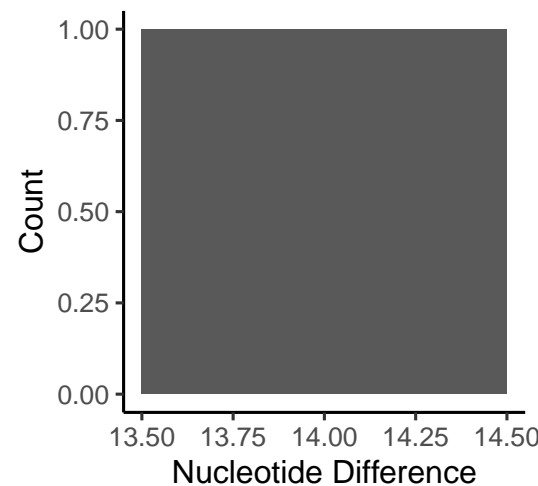
### IGHV4-59\*12

453 sequences assigned  
13 (2.9%) exact matches, in which:  
13 unique CDR3  
4 unique J



### IGHV1/OR15-3\*02

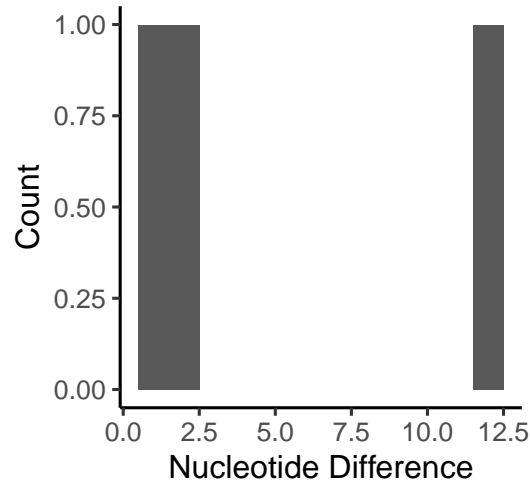
1 sequences assigned  
No exact matches.





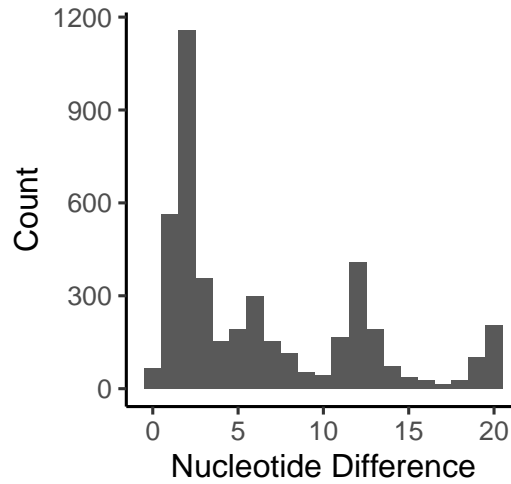
### IGHV4/OR15-8\*01

7 sequences assigned  
No exact matches.



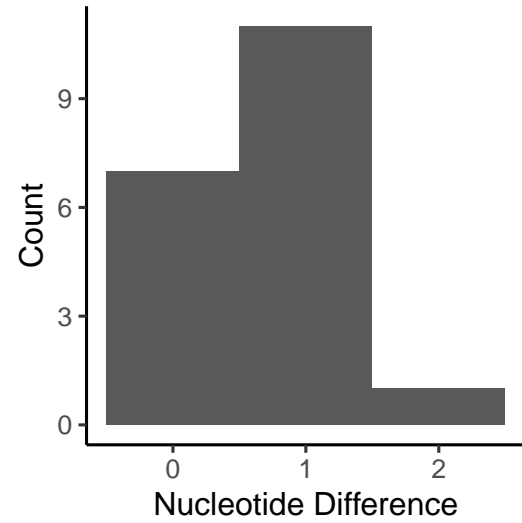
### IGHV5-51\*07

4548 sequences assigned  
66 (1.5%) exact matches, in which:  
45 unique CDR3  
4 unique J



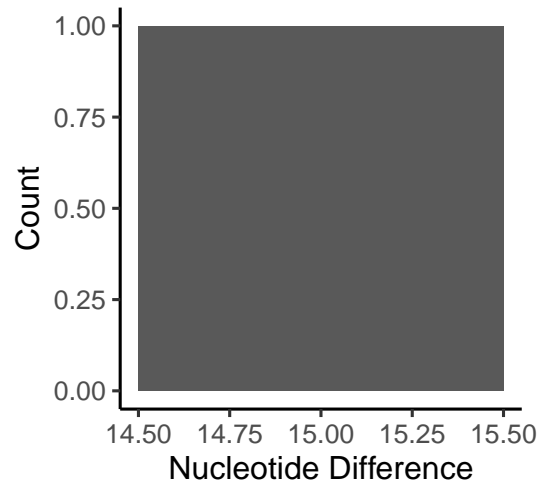
### IGHV7-4-1\*01

19 sequences assigned  
7 (36.8%) exact matches, in which:  
6 unique CDR3  
1 unique J



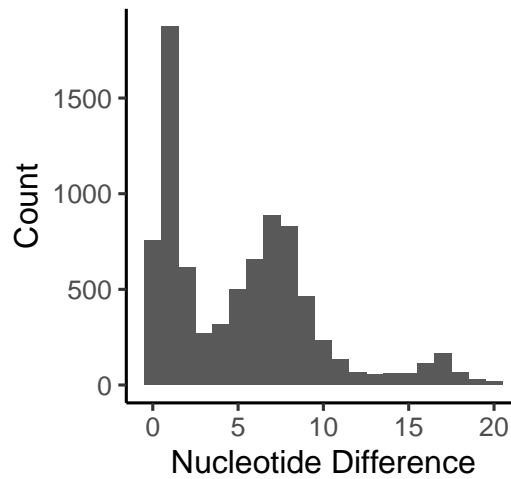
### IGHV4/OR15-8\*02

2 sequences assigned  
No exact matches.



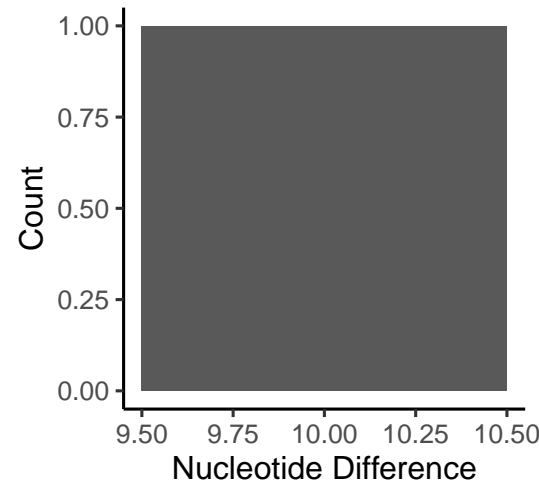
### IGHV5-51\*01\_03

8192 sequences assigned  
757 (9.2%) exact matches, in which:  
410 unique CDR3  
5 unique J



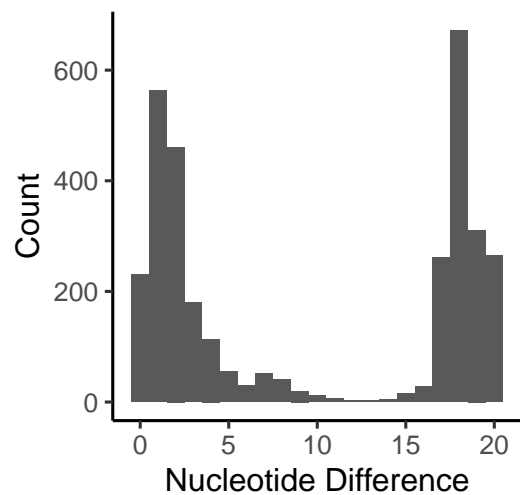
### IGHV7-4-1\*02

1 sequences assigned  
No exact matches.



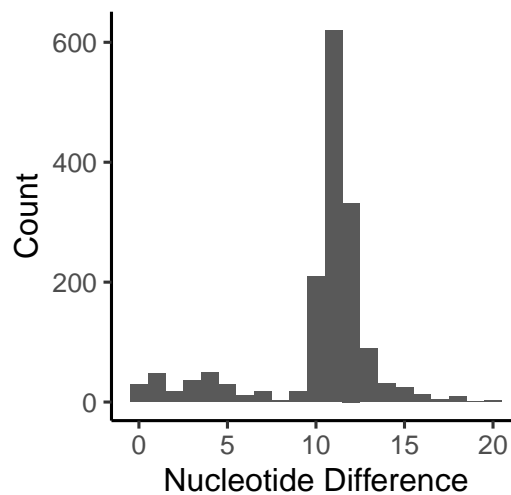
### IGHV5-10-1\*01\_03

5753 sequences assigned  
231 (4%) exact matches, in which:  
145 unique CDR3  
4 unique J



### IGHV6-1\*01\_02

1602 sequences assigned  
29 (1.8%) exact matches, in which:  
25 unique CDR3  
6 unique J





[illegible]