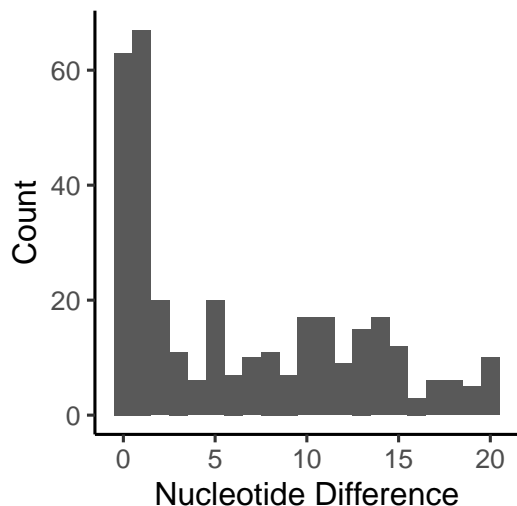


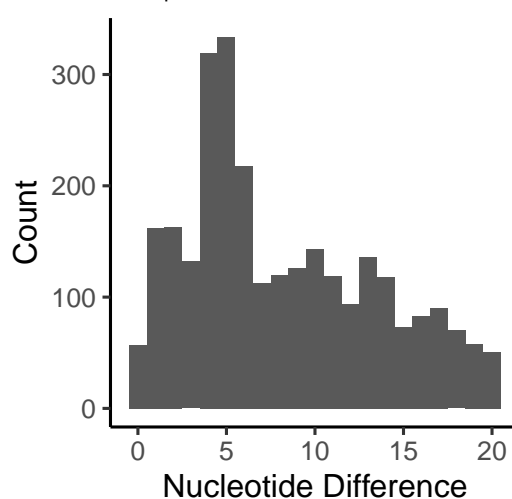
### IGHV1-2\*04

362 sequences assigned  
63 (17.4%) exact matches, in which:  
51 unique CDR3  
4 unique J



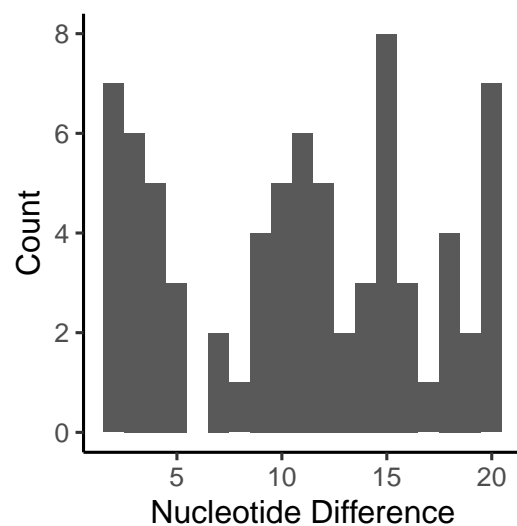
### IGHV1-8\*01

3548 sequences assigned  
57 (1.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



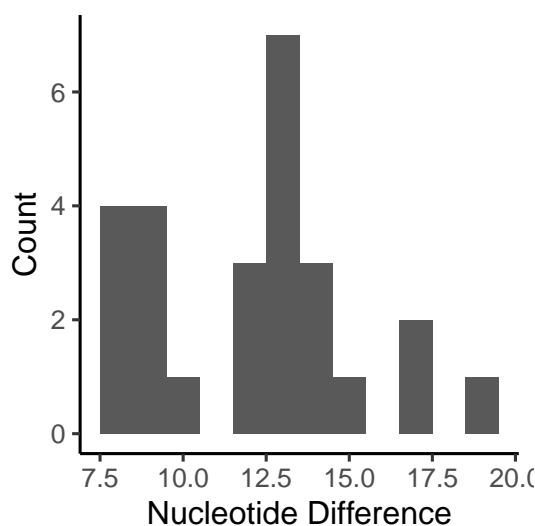
### IGHV1-24\*01

135 sequences assigned  
No exact matches.



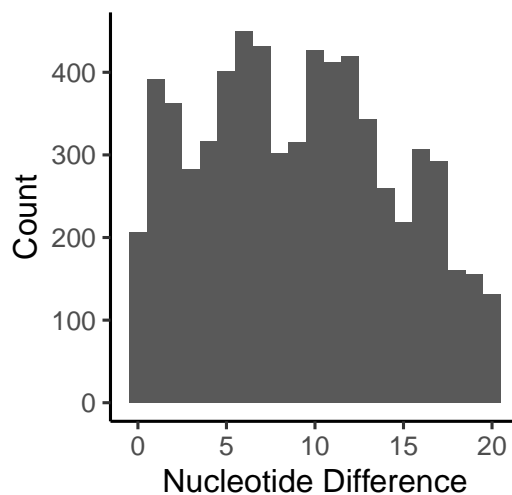
### IGHV1-3\*04

34 sequences assigned  
No exact matches.



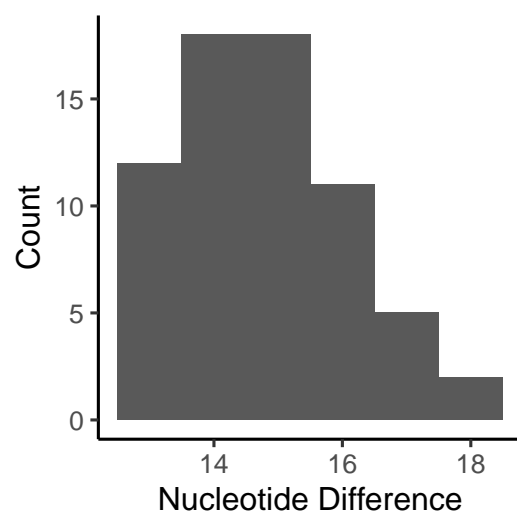
### IGHV1-18\*01

6997 sequences assigned  
206 (2.9%) exact matches, in which:  
135 unique CDR3  
4 unique J



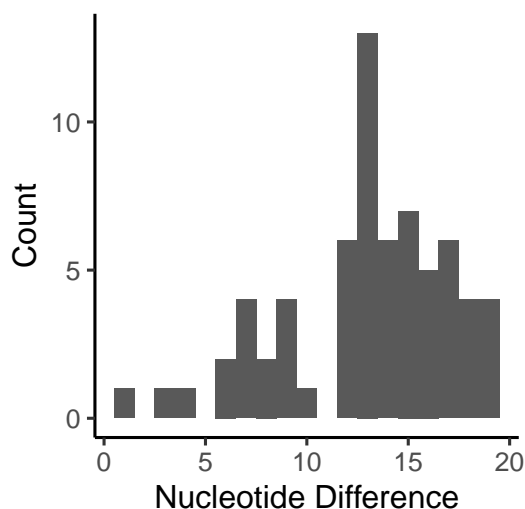
### IGHV1-45\*02

91 sequences assigned  
No exact matches.



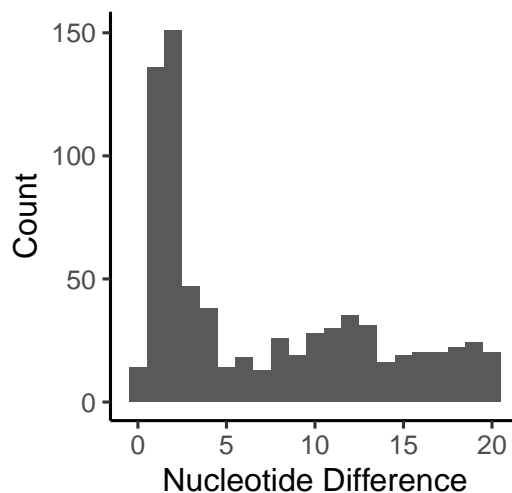
### IGHV1-3\*01\_05

81 sequences assigned  
No exact matches.



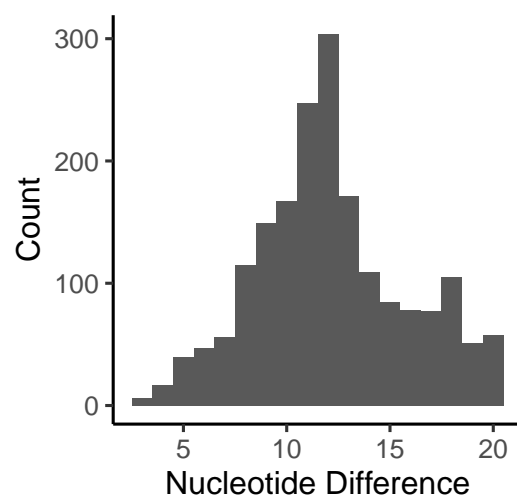
### IGHV1-18\*04

908 sequences assigned  
14 (1.5%) exact matches, in which:  
13 unique CDR3  
4 unique J



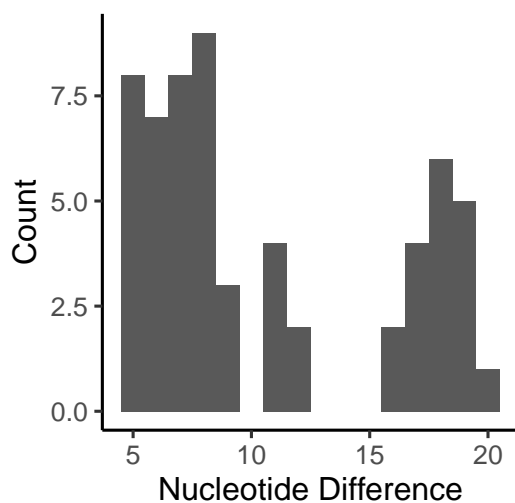
### IGHV1-46\*01

2194 sequences assigned  
No exact matches.



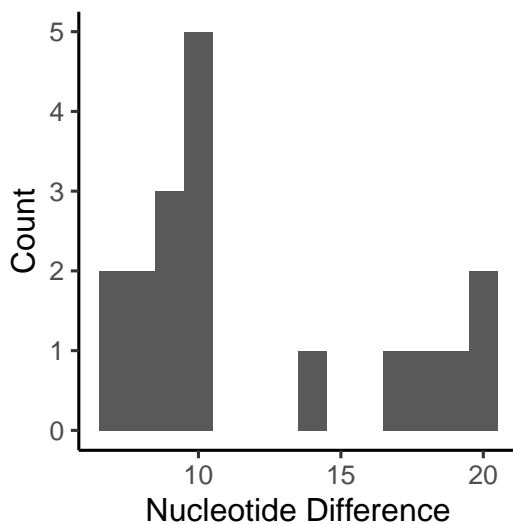
### IGHV1-58\*01\_03

59 sequences assigned  
No exact matches.



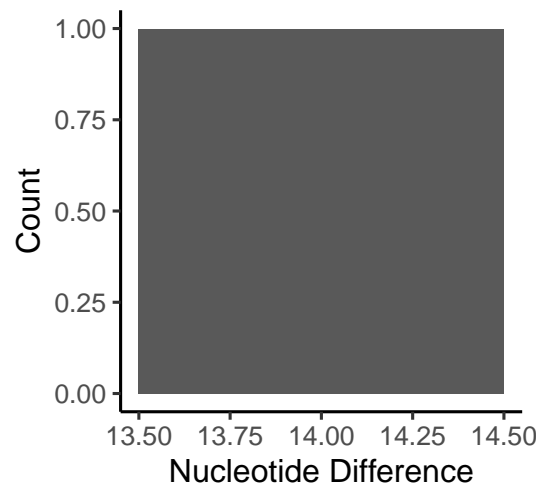
### IGHV2-5\*02

20 sequences assigned  
No exact matches.



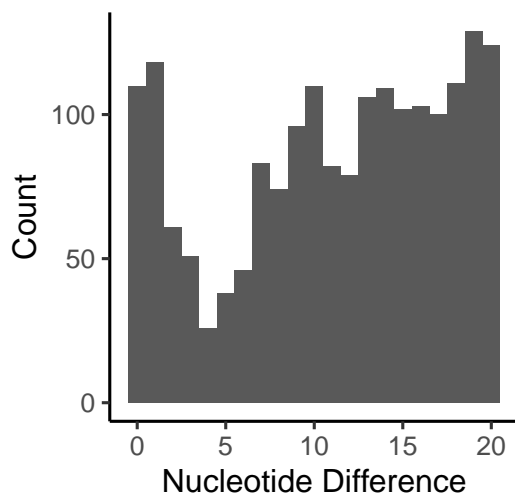
### IGHV2-70\*13

1 sequences assigned  
No exact matches.



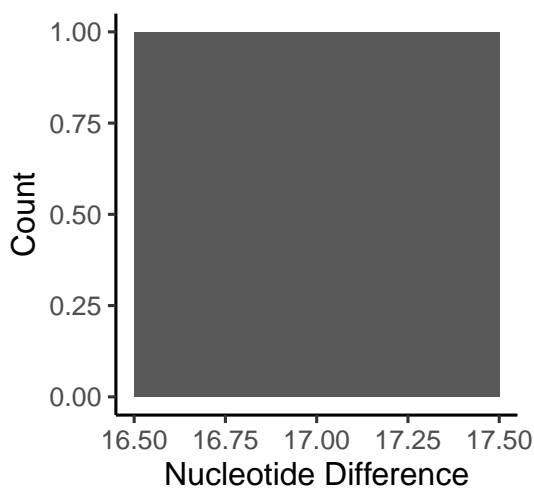
### IGHV1-69\*01\_12\_13

3031 sequences assigned  
110 (3.6%) exact matches, in which:  
77 unique CDR3  
5 unique J



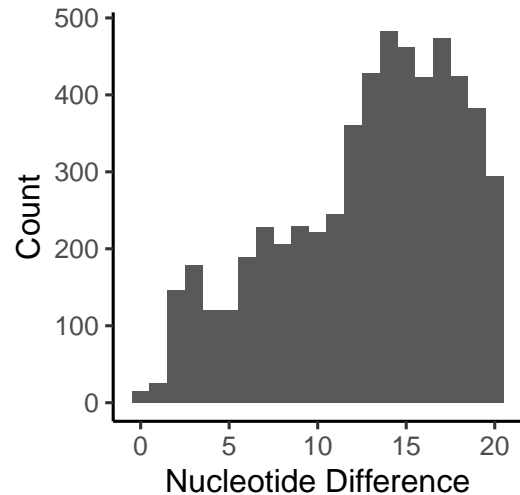
### IGHV2-26\*03

1 sequences assigned  
No exact matches.



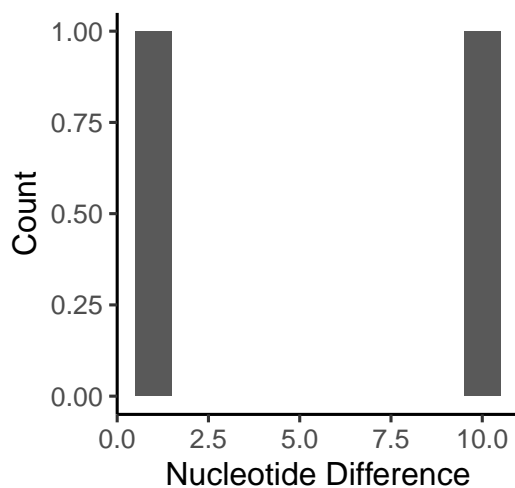
### IGHV3-7\*01

6530 sequences assigned  
15 (0.2%) exact matches, in which:  
14 unique CDR3  
2 unique J



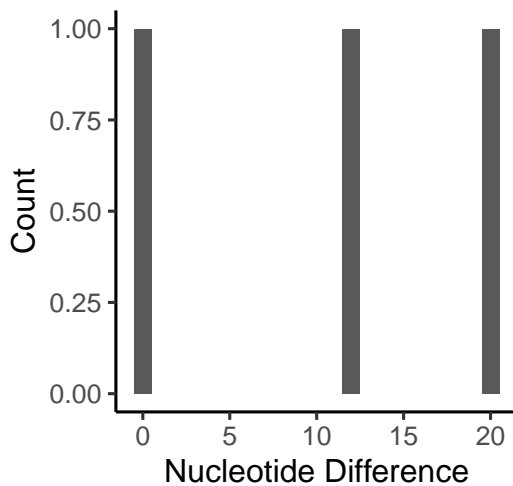
### IGHV2-5\*01

3 sequences assigned  
No exact matches.



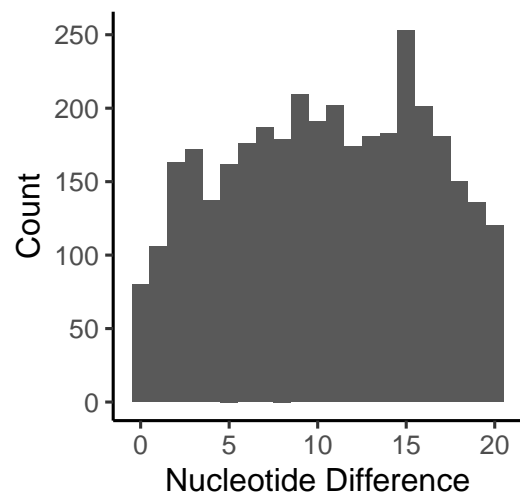
### IGHV2-70\*01

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



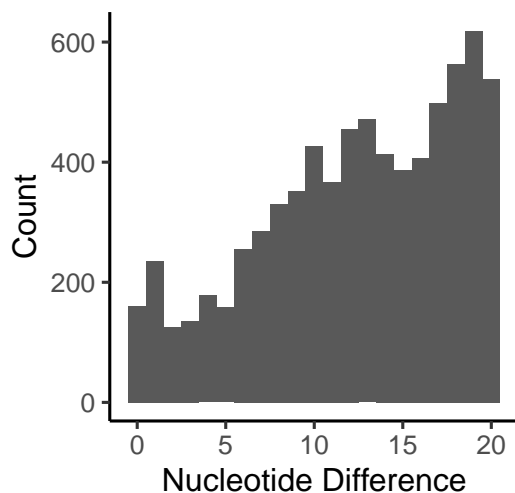
### IGHV3-7\*03

3927 sequences assigned  
80 (2%) exact matches, in which:  
57 unique CDR3  
6 unique J



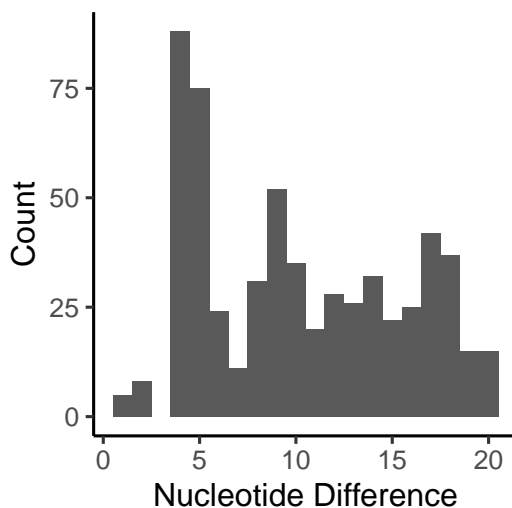
### IGHV3-9\*01

9078 sequences assigned  
160 (1.8%) exact matches, in which:  
113 unique CDR3  
6 unique J



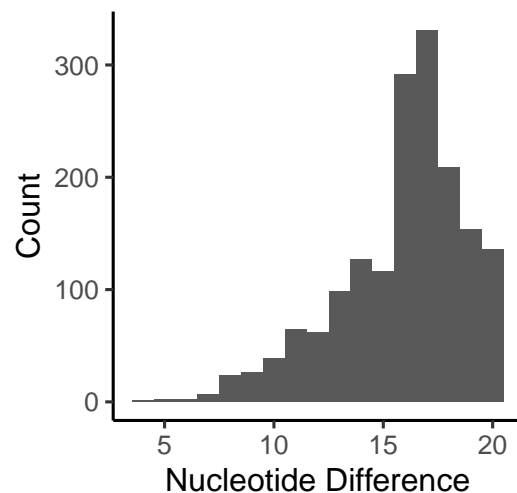
### IGHV3-13\*01

743 sequences assigned  
No exact matches.



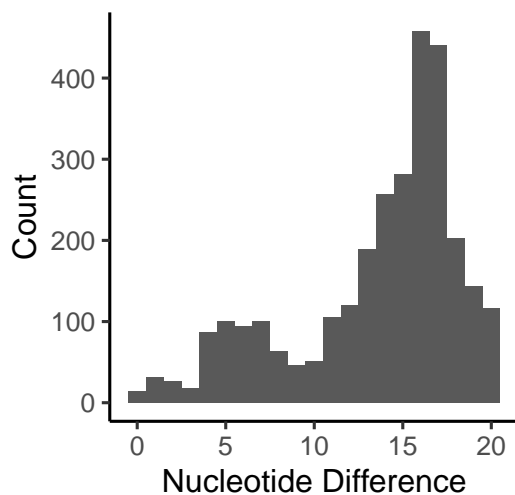
### IGHV3-20\*03\_04

2244 sequences assigned  
No exact matches.



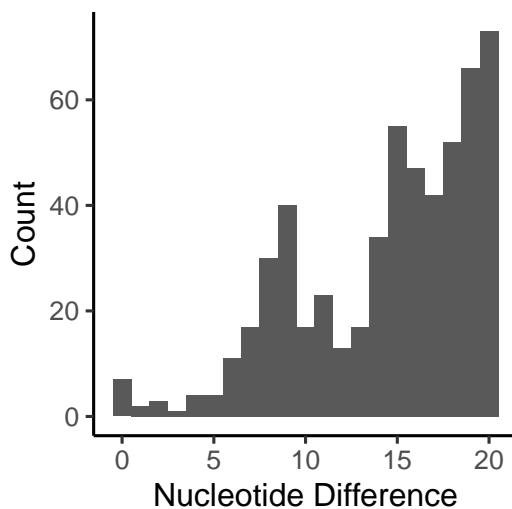
### IGHV3-11\*01

3250 sequences assigned  
14 (0.4%) exact matches, in which:  
13 unique CDR3  
4 unique J



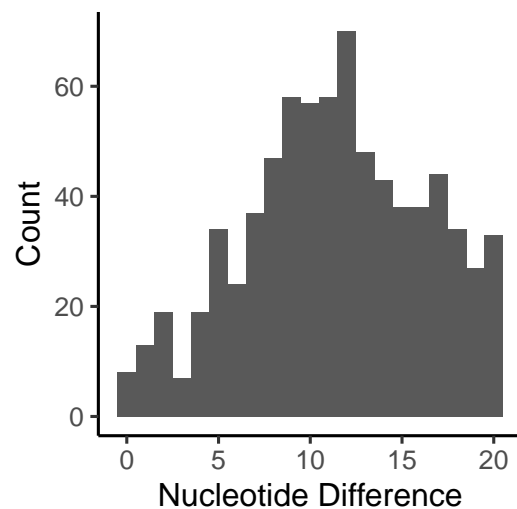
### IGHV3-15\*07

1172 sequences assigned  
7 (0.6%) exact matches, in which:  
4 unique CDR3  
0 unique J



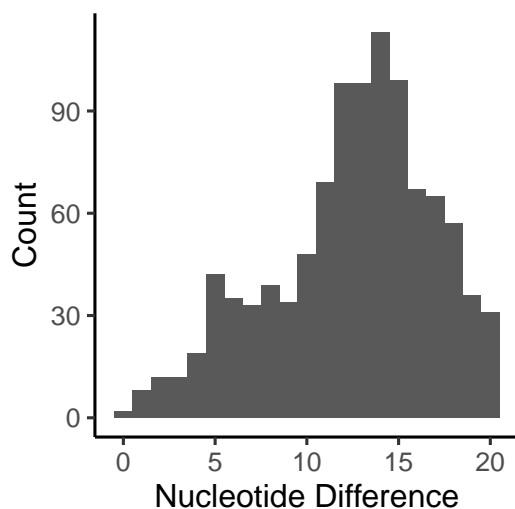
### IGHV3-21\*04

998 sequences assigned  
8 (0.8%) exact matches, in which:  
8 unique CDR3  
2 unique J



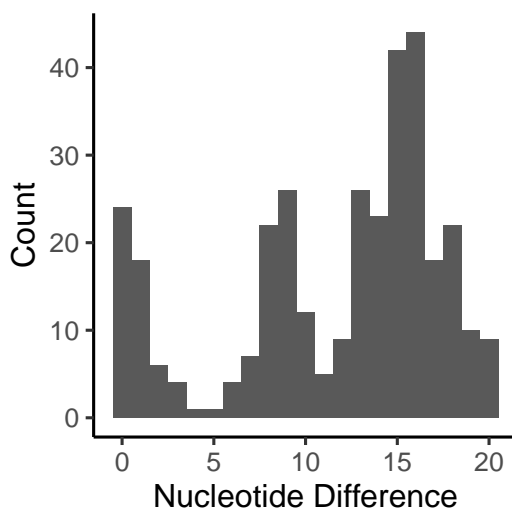
### IGHV3-11\*04

1158 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



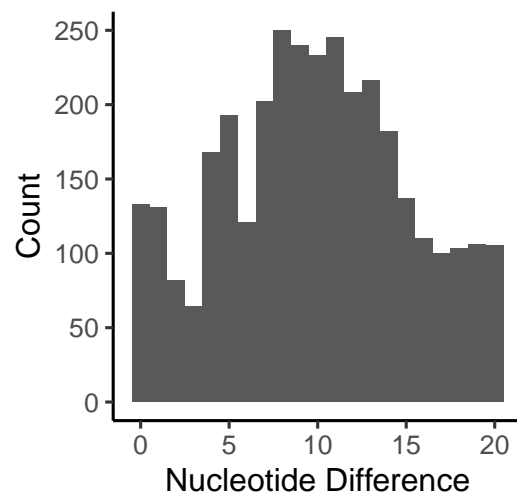
### IGHV3-15\*01\_02

432 sequences assigned  
24 (5.6%) exact matches, in which:  
14 unique CDR3  
3 unique J



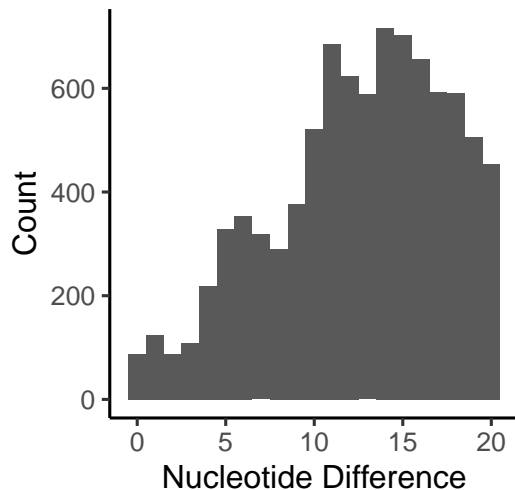
### IGHV3-21\*01\_02

4015 sequences assigned  
133 (3.3%) exact matches, in which:  
99 unique CDR3  
6 unique J



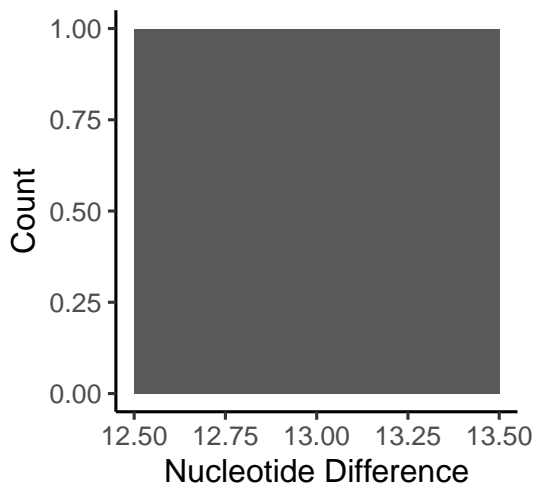
### IGHV3-23\*01\_04

10825 sequences assigned  
88 (0.8%) exact matches, in which:  
66 unique CDR3  
6 unique J



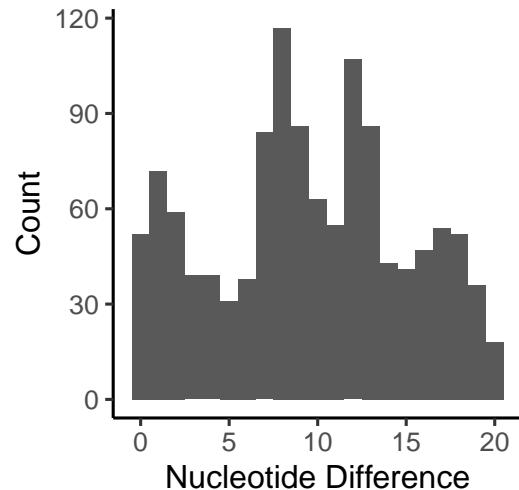
### IGHV3-30-3\*01

2 sequences assigned  
No exact matches.



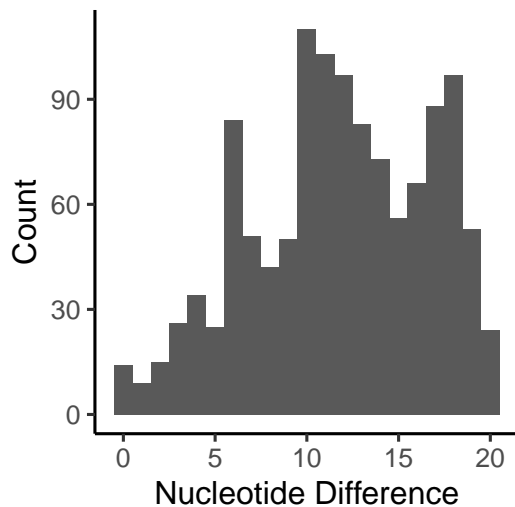
### IGHV3-33\*01

1510 sequences assigned  
52 (3.4%) exact matches, in which:  
34 unique CDR3  
5 unique J



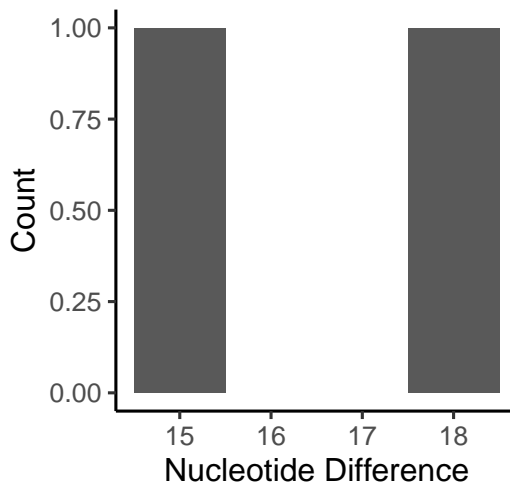
### IGHV3-30\*01

1354 sequences assigned  
14 (1%) exact matches, in which:  
12 unique CDR3  
3 unique J



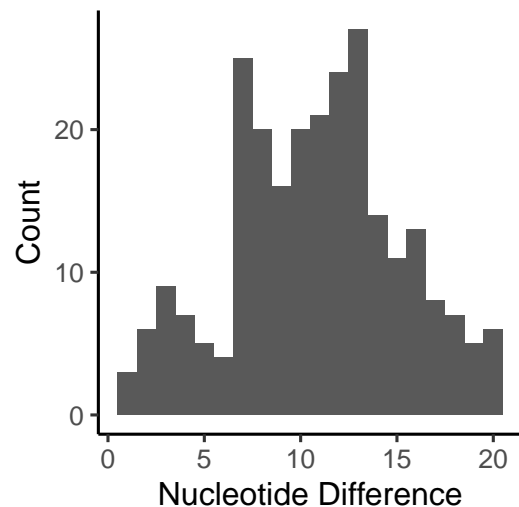
### IGHV3-30-5\*02

13 sequences assigned  
No exact matches.



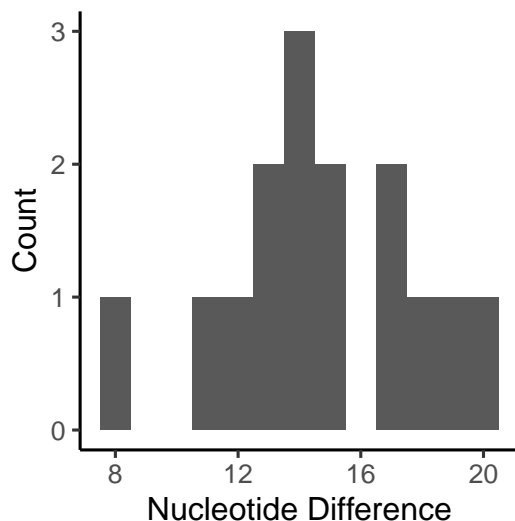
### IGHV3-33\*06

282 sequences assigned  
No exact matches.



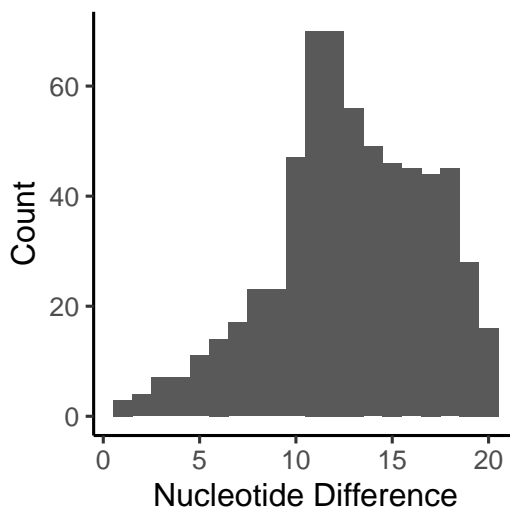
### IGHV3-30-5\*01

31 sequences assigned  
No exact matches.



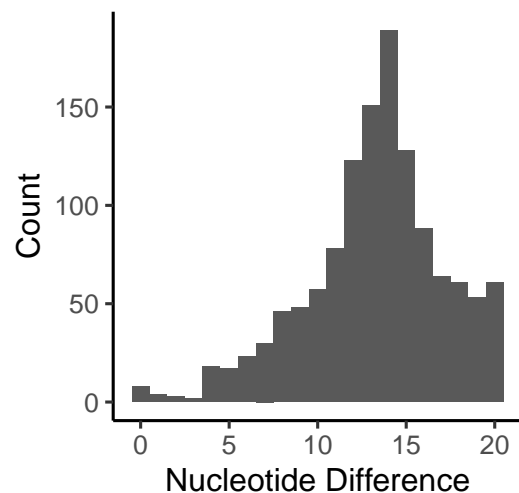
### IGHV3-30\*07

709 sequences assigned  
No exact matches.



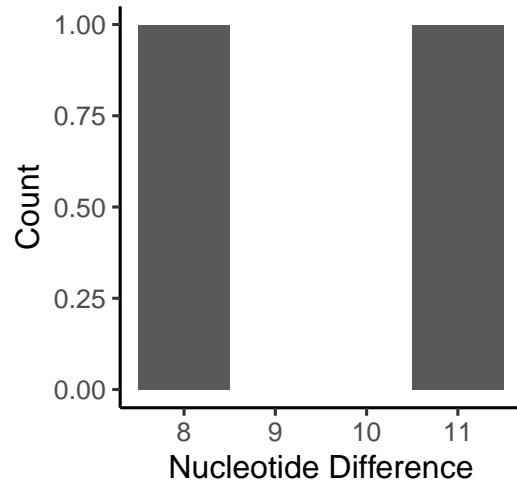
### IGHV3-33\*08

1544 sequences assigned  
8 (0.5%) exact matches, in which:  
8 unique CDR3  
2 unique J



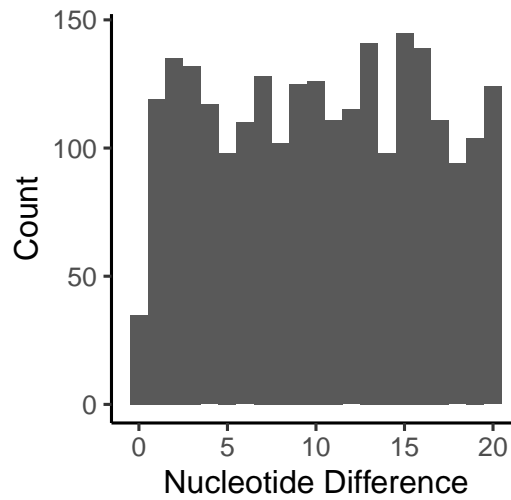
### IGHV3-43\*01

2 sequences assigned  
No exact matches.



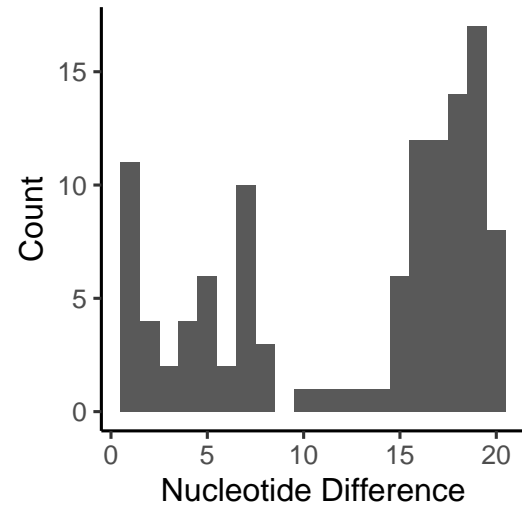
### IGHV3-48\*03

3725 sequences assigned  
35 (0.9%) exact matches, in which:  
22 unique CDR3  
5 unique J



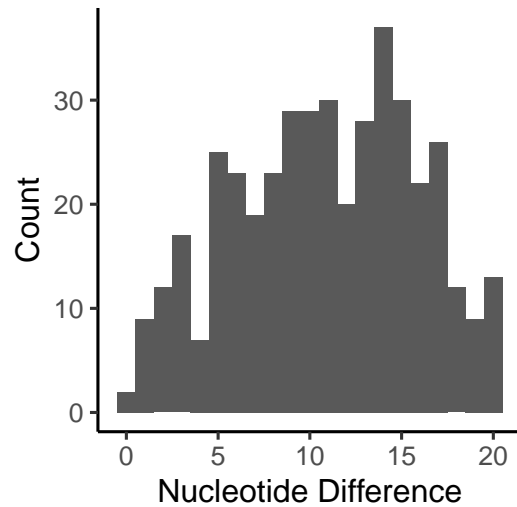
### IGHV3-49\*03\_05

146 sequences assigned  
No exact matches.



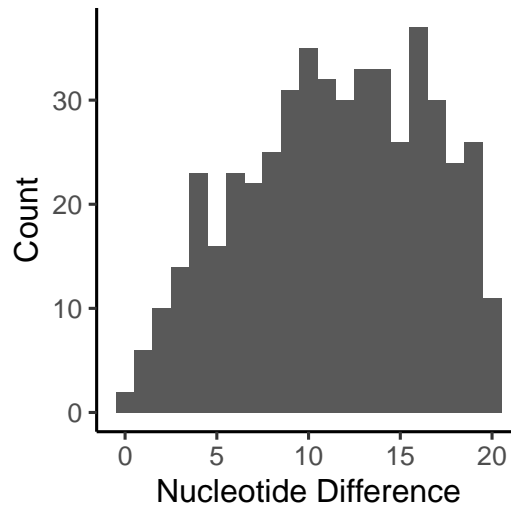
### IGHV3-48\*01

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



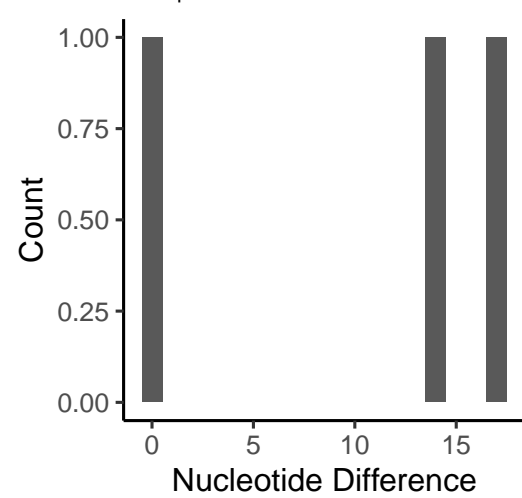
### IGHV3-48\*04

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



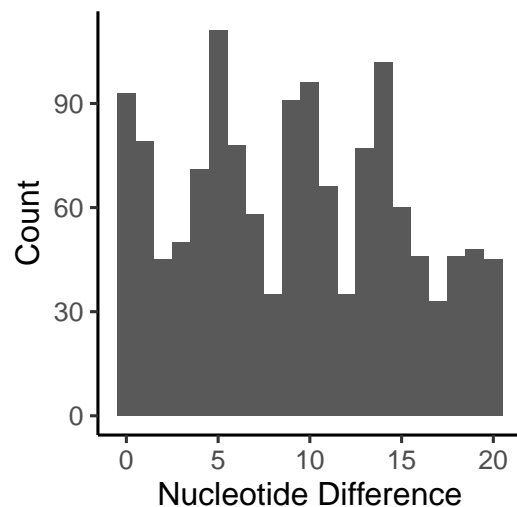
### IGHV3-52\*01\_03

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



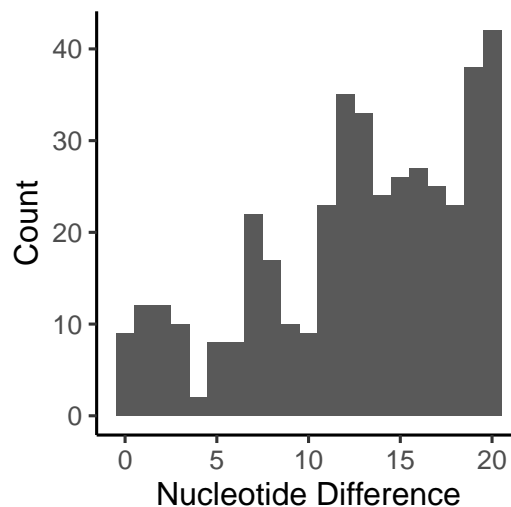
### IGHV3-48\*02

1427 sequences assigned  
93 (6.5%) exact matches, in which:  
58 unique CDR3  
5 unique J



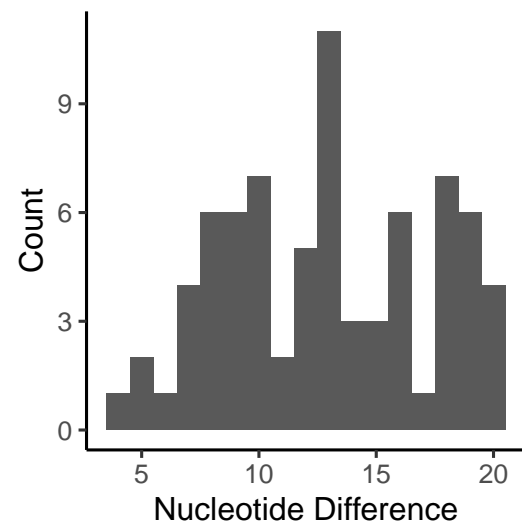
### IGHV3-49\*04

518 sequences assigned  
9 (1.7%) exact matches, in which:  
5 unique CDR3  
1 unique J



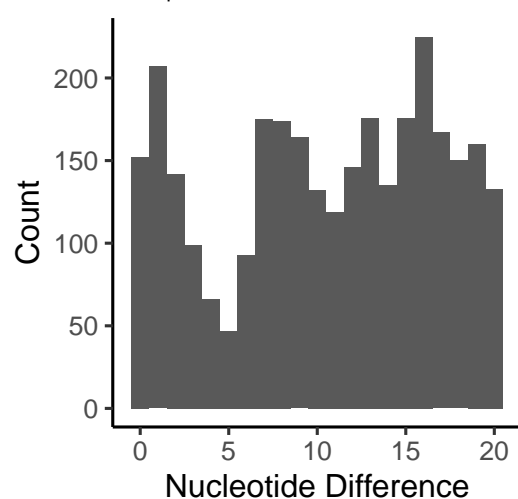
### IGHV3-53\*05

99 sequences assigned  
No exact matches.



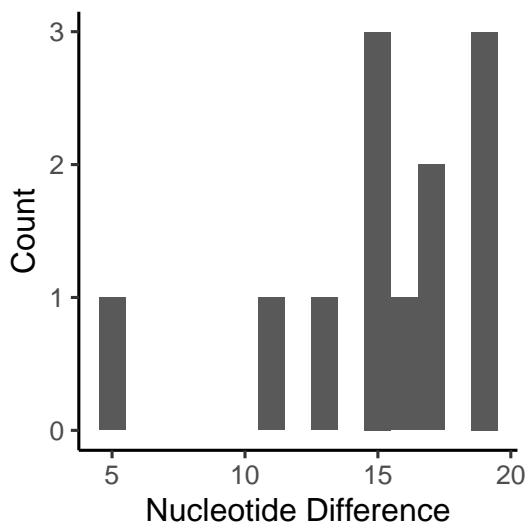
### IGHV3–53\*01\_02

3672 sequences assigned  
152 (4.1%) exact matches, in which:  
98 unique CDR3  
6 unique J



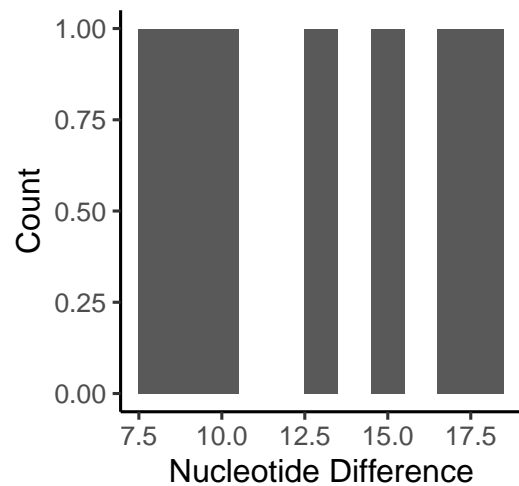
### IGHV3–66\*02

17 sequences assigned  
No exact matches.



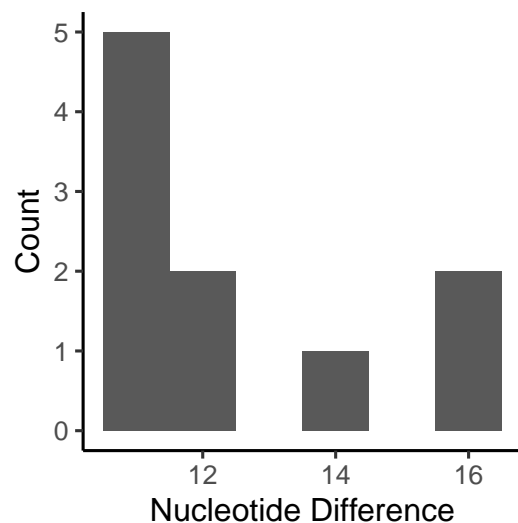
### IGHV3–69–1\*01

13 sequences assigned  
No exact matches.



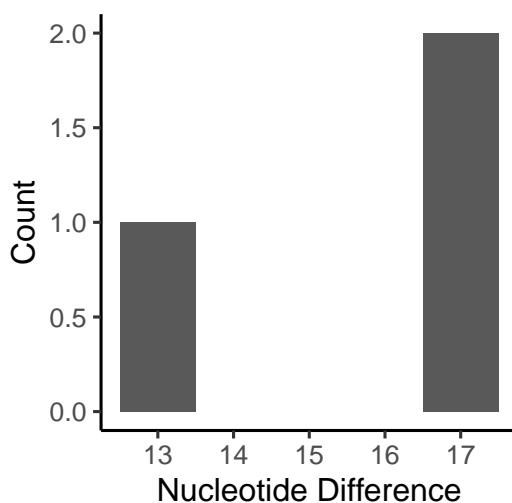
### IGHV3–64\*02\_07

11 sequences assigned  
No exact matches.



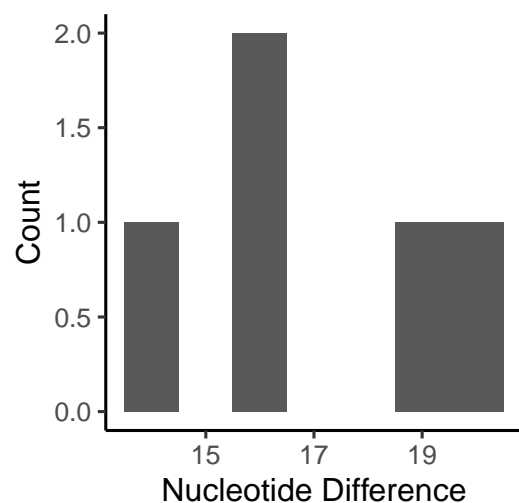
### IGHV3–66\*03

3 sequences assigned  
No exact matches.



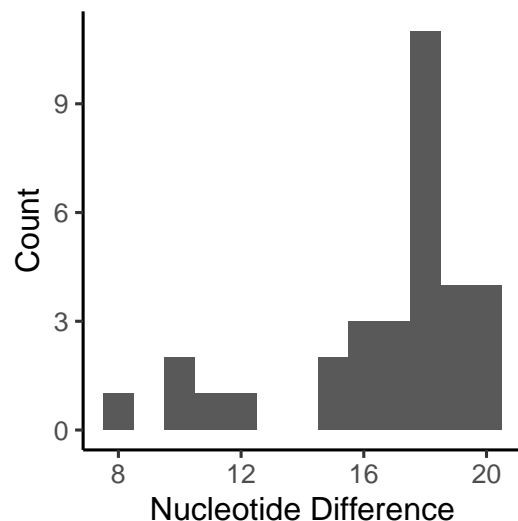
### IGHV3–69–1\*02

10 sequences assigned  
No exact matches.



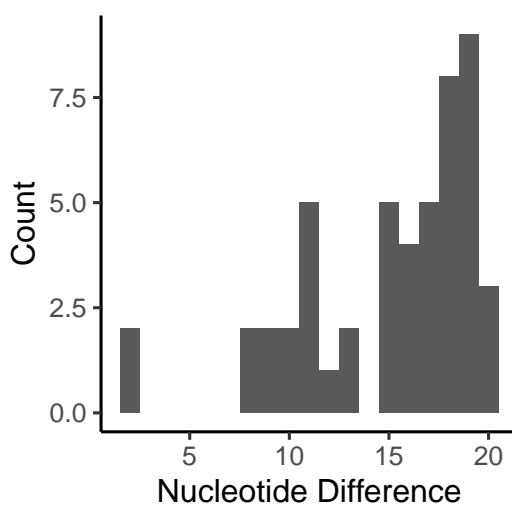
### IGHV3–66\*01

58 sequences assigned  
No exact matches.



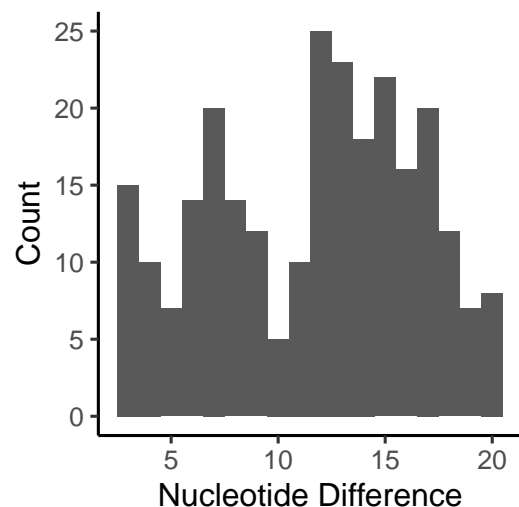
### IGHV3–66\*04

73 sequences assigned  
No exact matches.



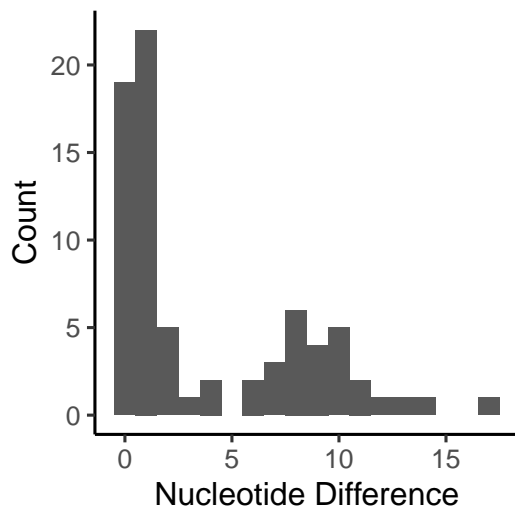
### IGHV3–72\*01

297 sequences assigned  
No exact matches.



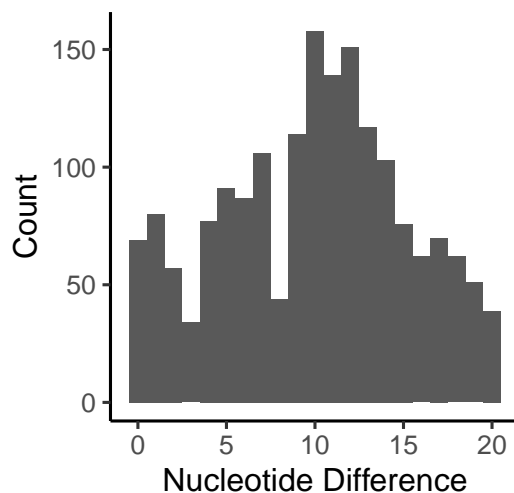
### IGHV3-72\*01\_A169G\_A1

76 sequences assigned  
19 (25%) exact matches, in which:  
16 unique CDR3  
3 unique J



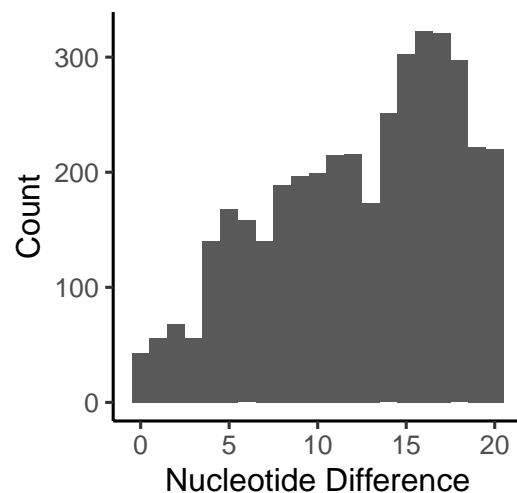
### IGHV3-74\*01\_02

1982 sequences assigned  
69 (3.5%) exact matches, in which:  
44 unique CDR3  
5 unique J



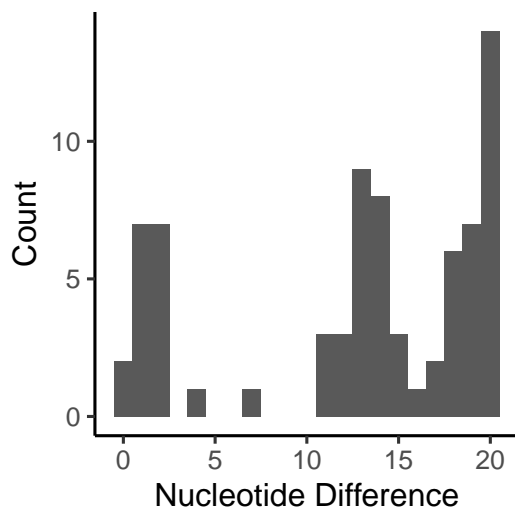
### IGHV4-4\*02\_03

5018 sequences assigned  
43 (0.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



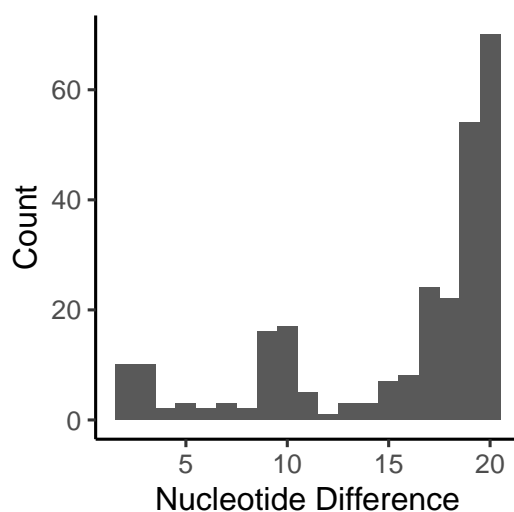
### IGHV3-73\*01\_02

142 sequences assigned  
2 (1.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



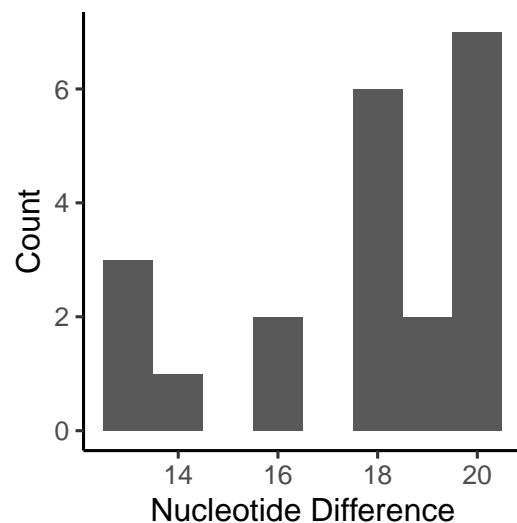
### IGHV3-43D\*04

509 sequences assigned  
No exact matches.



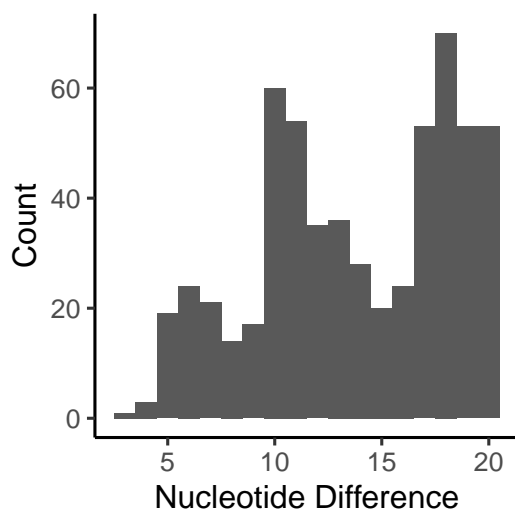
### IGHV4-28\*03

407 sequences assigned  
No exact matches.



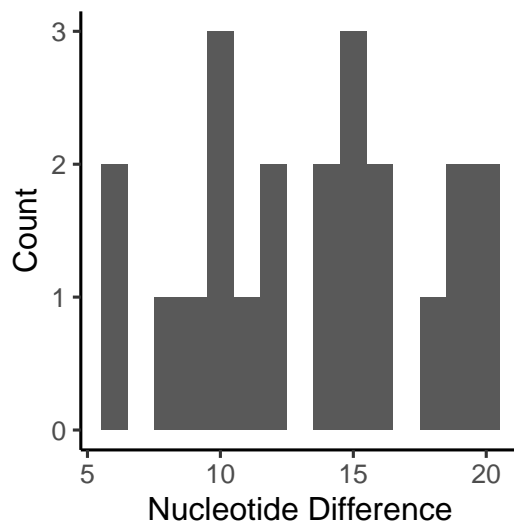
### IGHV3-74\*03

887 sequences assigned  
No exact matches.



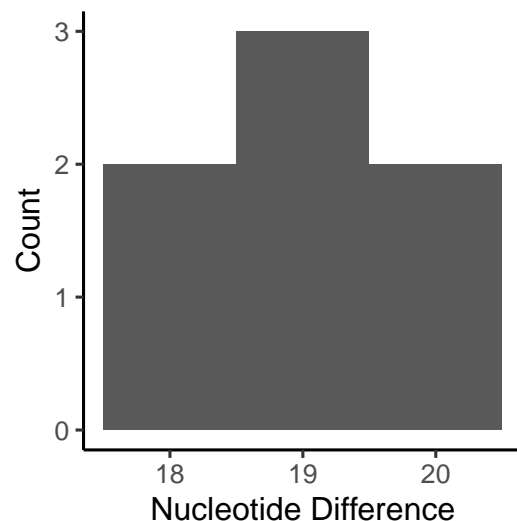
### IGHV3-NL1\*01

34 sequences assigned  
No exact matches.



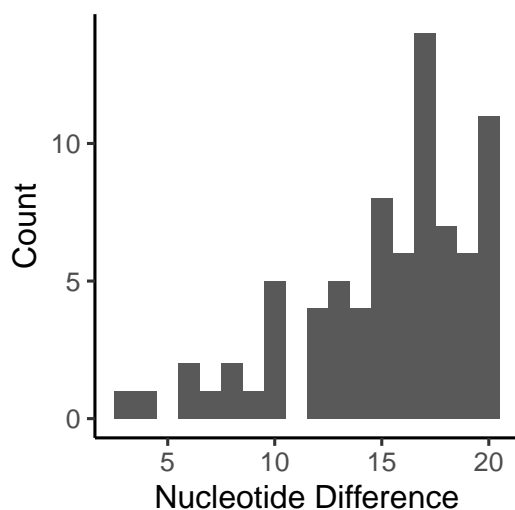
### IGHV4-30-4\*01

19 sequences assigned  
No exact matches.



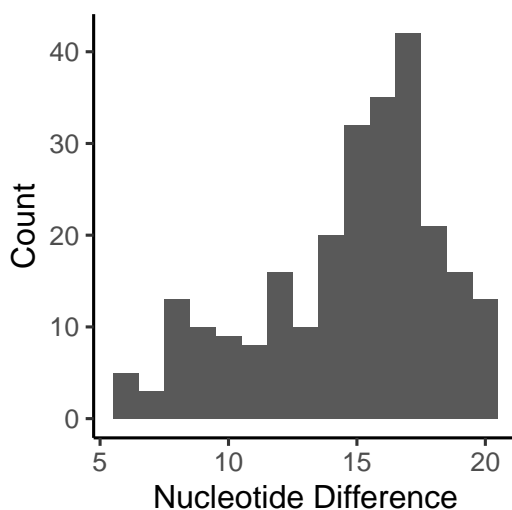
### IGHV4-30-2\*03

127 sequences assigned  
No exact matches.



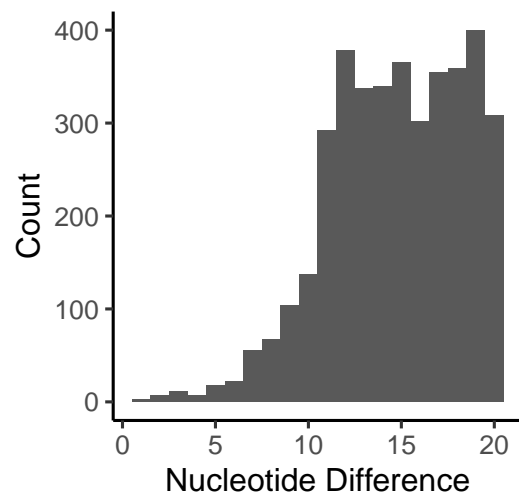
### IGHV4-31\*02

319 sequences assigned  
No exact matches.



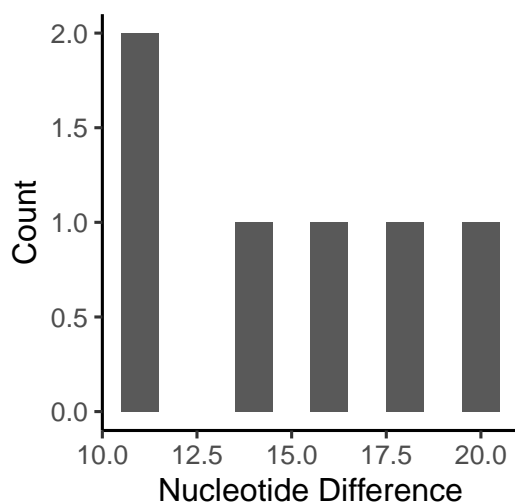
### IGHV4-38-2\*02

6063 sequences assigned  
No exact matches.



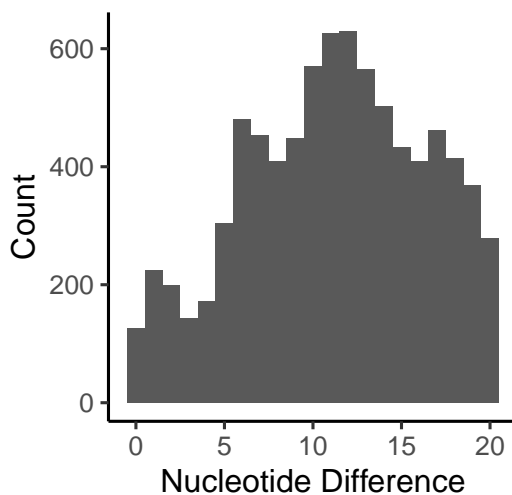
### IGHV4-30-4\*08

8 sequences assigned  
No exact matches.



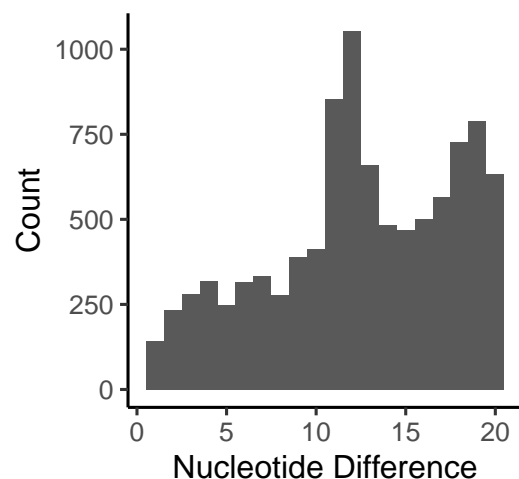
### IGHV4-34\*01\_02

10894 sequences assigned  
127 (1.2%) exact matches, in which:  
93 unique CDR3  
6 unique J



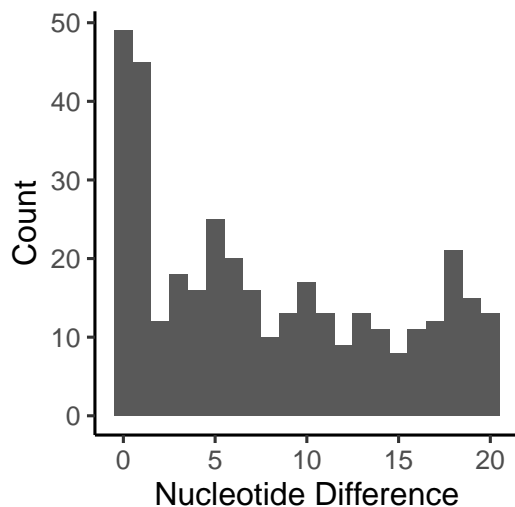
### IGHV4-39\*02

11605 sequences assigned  
No exact matches.



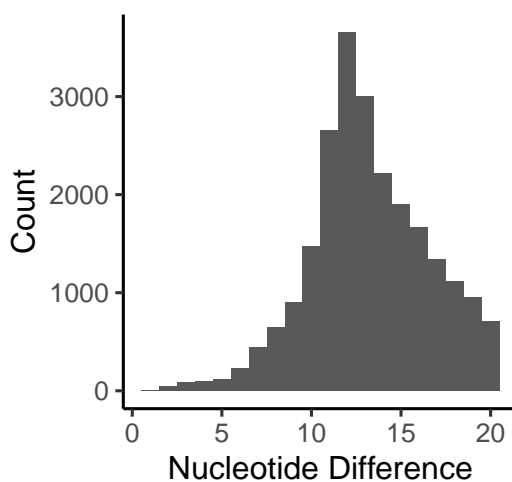
### IGHV4-31\*01

590 sequences assigned  
49 (8.3%) exact matches, in which:  
31 unique CDR3  
5 unique J



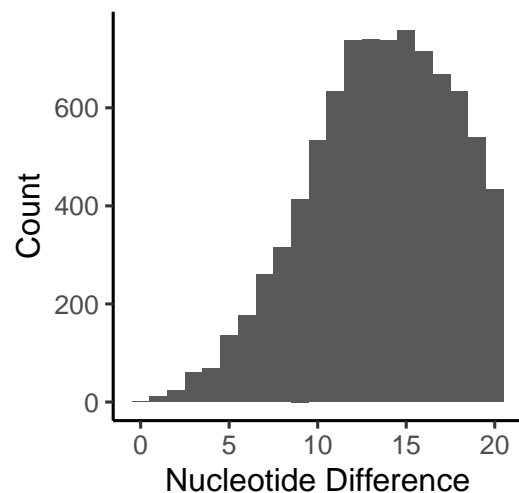
### IGHV4-38-2\*01

27390 sequences assigned  
No exact matches.



### IGHV4-39\*07

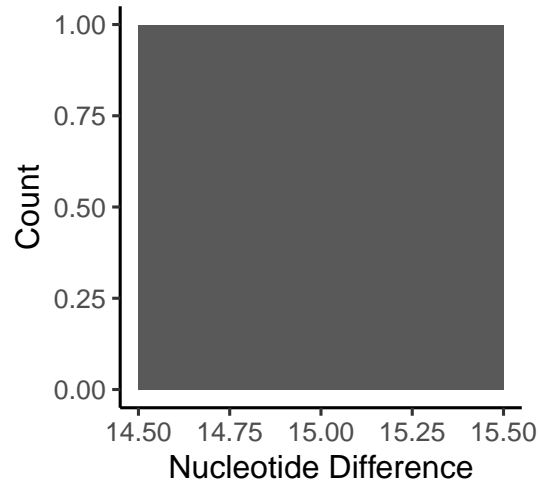
9984 sequences assigned  
2 (0%) exact matches, in which:  
2 unique CDR3  
2 unique J





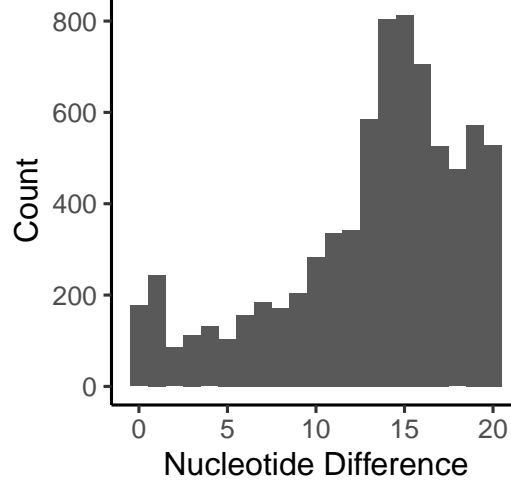
### IGHV4-55\*09

3 sequences assigned  
No exact matches.



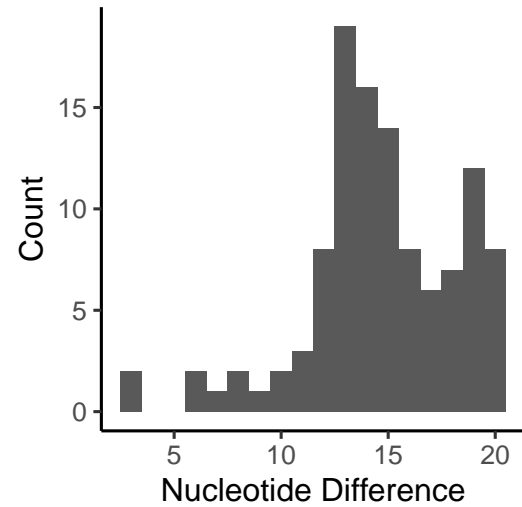
### IGHV4-59\*01\_07

10953 sequences assigned  
177 (1.6%) exact matches, in which:  
100 unique CDR3  
6 unique J



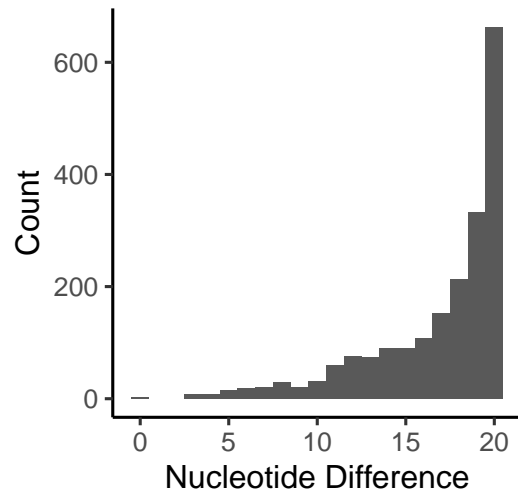
### IGHV4/OR15-8\*01

137 sequences assigned  
No exact matches.



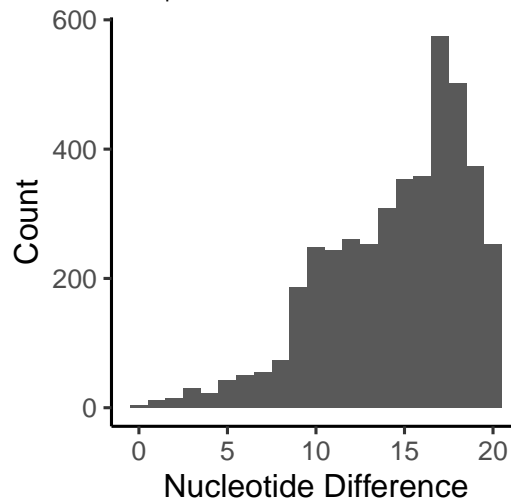
### IGHV4-59\*02

3524 sequences assigned  
3 (0.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



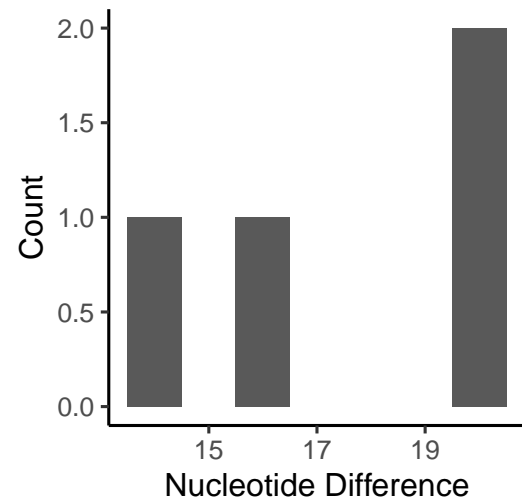
### IGHV4-59\*12

5549 sequences assigned  
4 (0.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



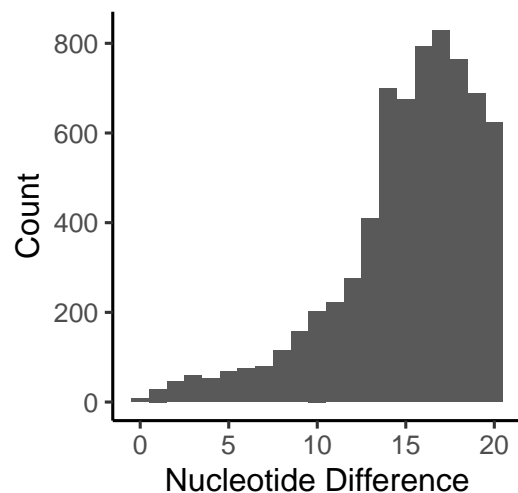
### IGHV4/OR15-8\*02

24 sequences assigned  
No exact matches.



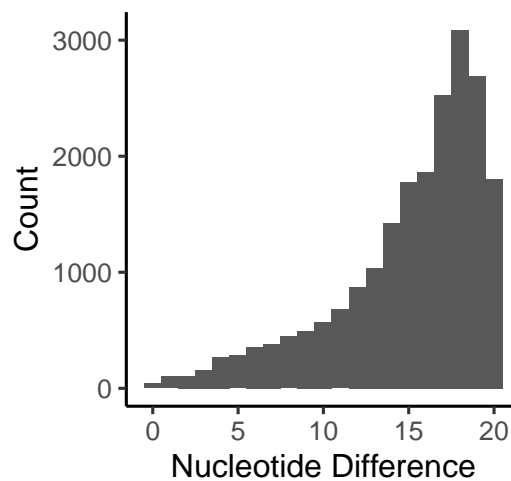
### IGHV4-59\*08

9254 sequences assigned  
7 (0.1%) exact matches, in which:  
7 unique CDR3  
3 unique J



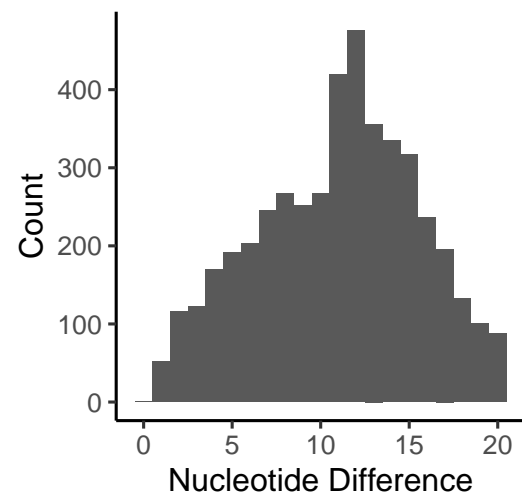
### IGHV4-61\*01

25562 sequences assigned  
41 (0.2%) exact matches, in which:  
29 unique CDR3  
6 unique J



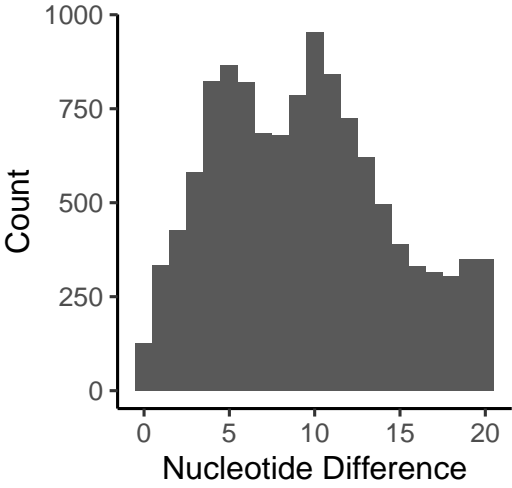
### IGHV5-51\*07

5149 sequences assigned  
1 (0%) exact matches, in which:  
1 unique CDR3  
1 unique J



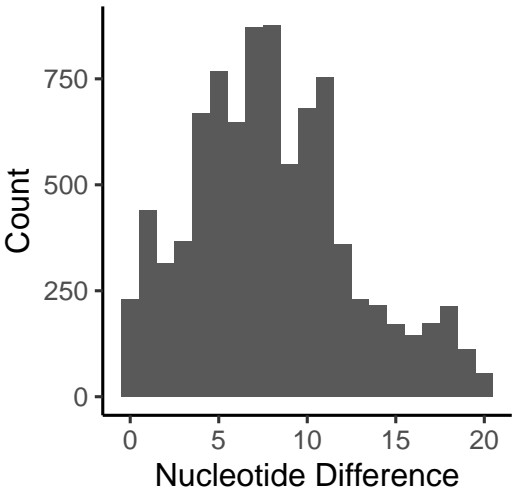
# IGHV5-51\*01\_03

13610 sequences assigned  
126 (0.9%) exact matches, in which:  
81 unique CDR3  
4 unique J



# IGHV6-1\*01\_02

8966 sequences assigned  
229 (2.6%) exact matches, in which:  
132 unique CDR3  
6 unique J





Warning – no inferred sequences found.