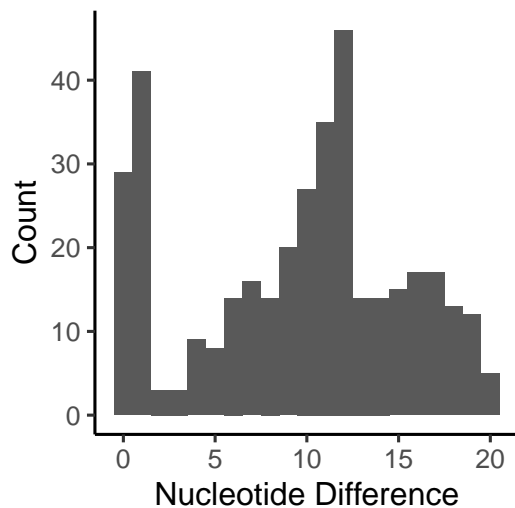


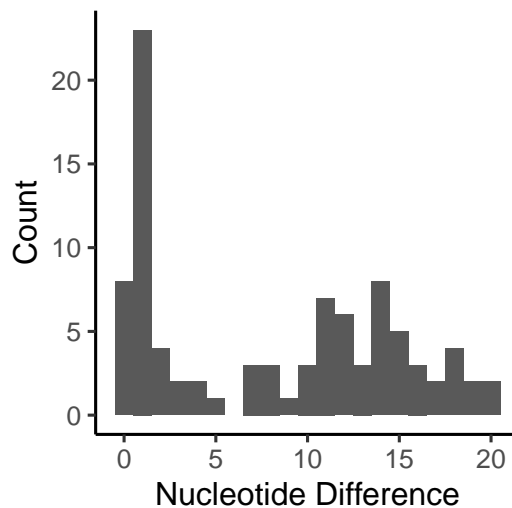
### IGHV1-2\*02

445 sequences assigned  
29 (6.5%) exact matches, in which:  
25 unique CDR3  
5 unique J



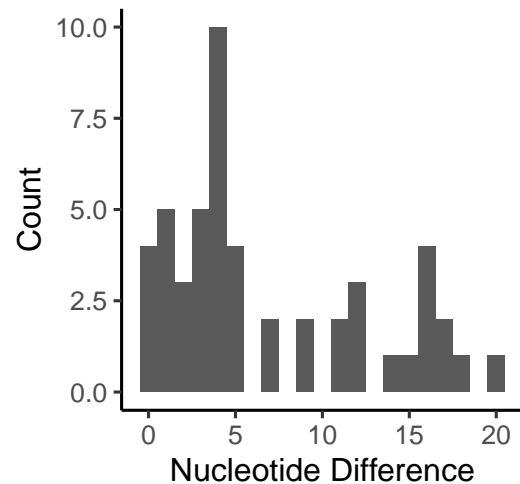
### IGHV1-8\*01

112 sequences assigned  
8 (7.1%) exact matches, in which:  
6 unique CDR3  
3 unique J



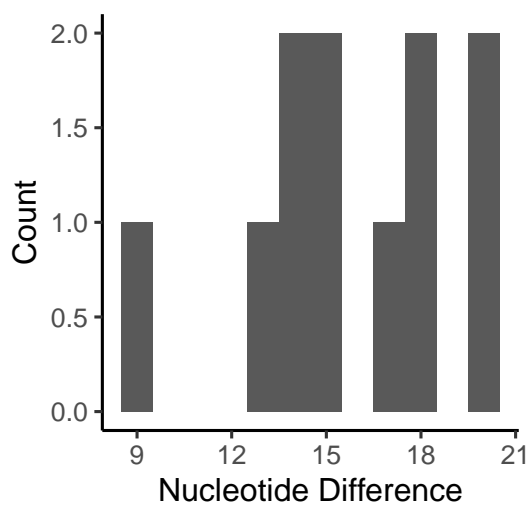
### IGHV1-24\*01

63 sequences assigned  
4 (6.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



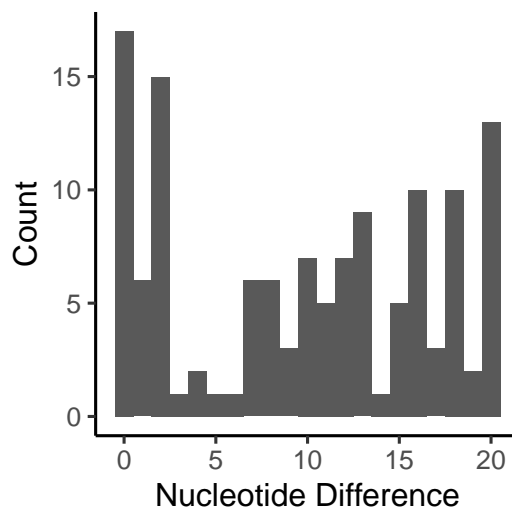
### IGHV1-3\*04

16 sequences assigned  
No exact matches.



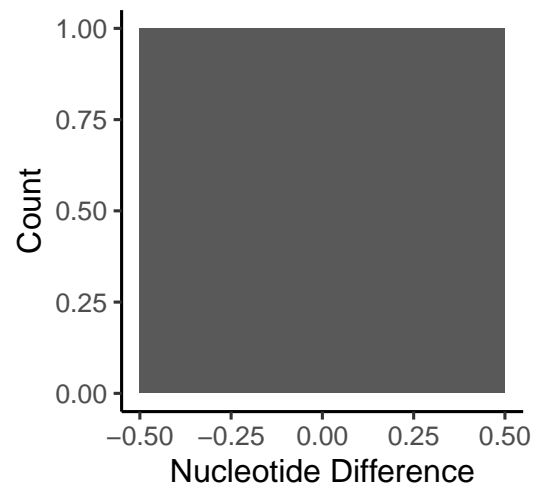
### IGHV1-18\*01

147 sequences assigned  
17 (11.6%) exact matches, in which:  
17 unique CDR3  
3 unique J



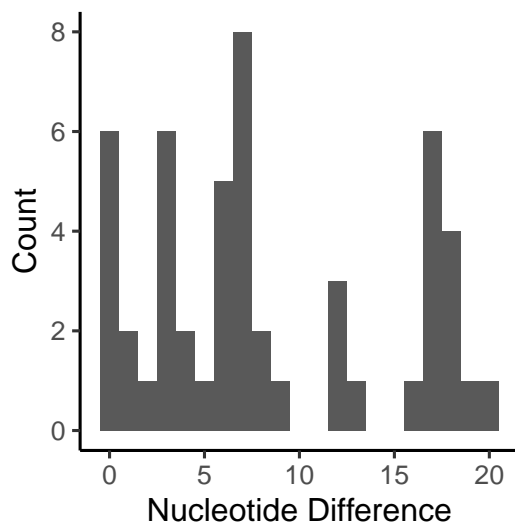
### IGHV1-45\*02

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



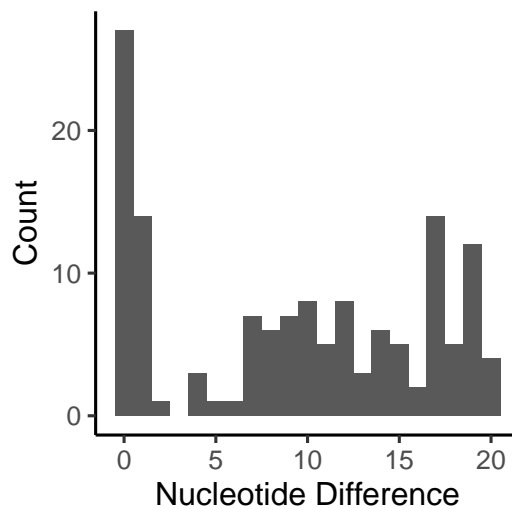
### IGHV1-3\*01\_05

114 sequences assigned  
6 (5.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



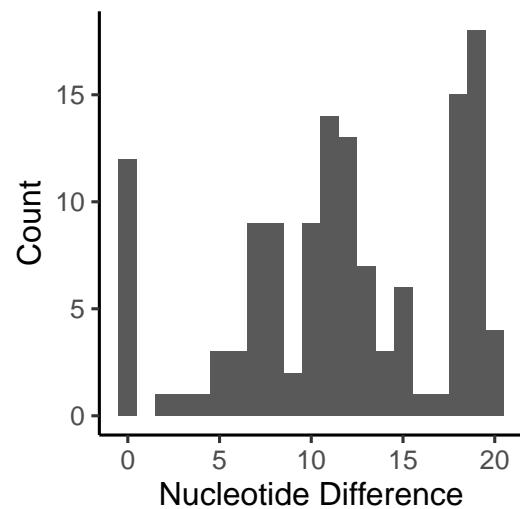
### IGHV1-18\*04

190 sequences assigned  
27 (14.2%) exact matches, in which:  
26 unique CDR3  
4 unique J



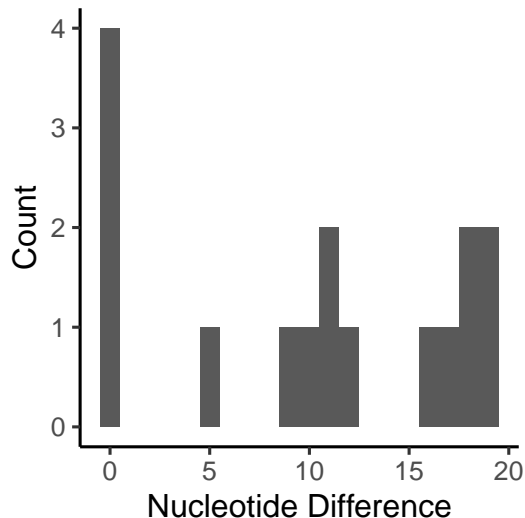
### IGHV1-46\*01

167 sequences assigned  
12 (7.2%) exact matches, in which:  
12 unique CDR3  
4 unique J



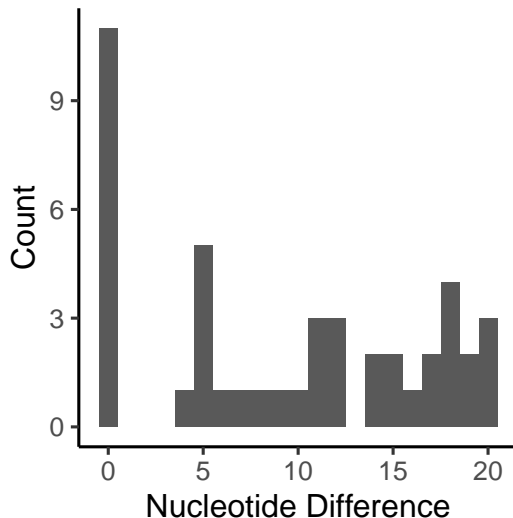
### IGHV1-58\*01\_03

18 sequences assigned  
4 (22.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



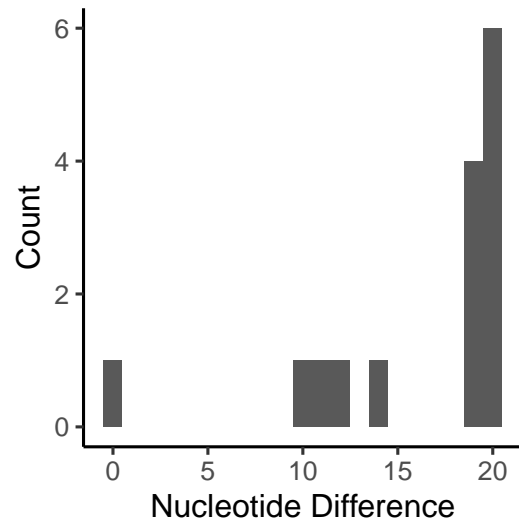
### IGHV1-69\*06\_14

66 sequences assigned  
11 (16.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



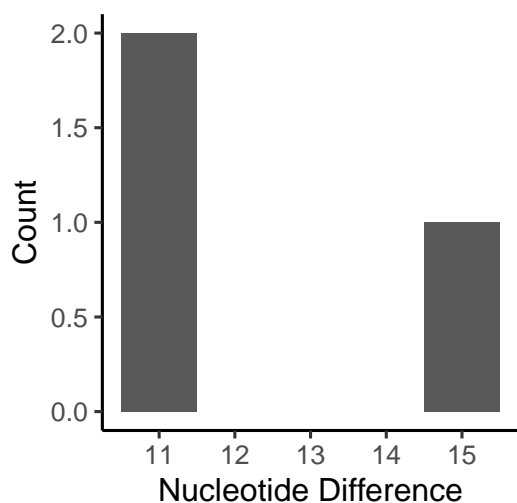
### IGHV2-26\*01

17 sequences assigned  
1 (5.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



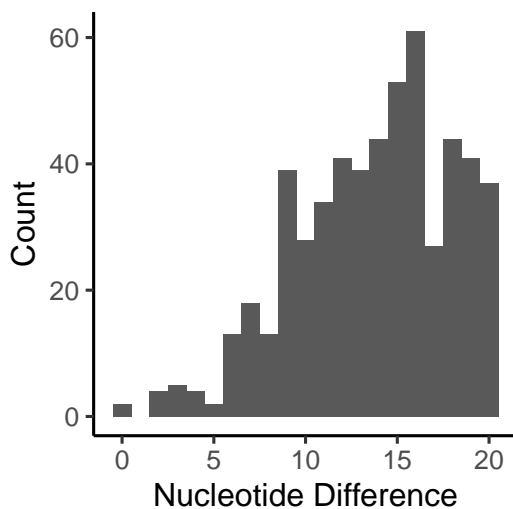
### IGHV1-69-2\*01

3 sequences assigned  
No exact matches.



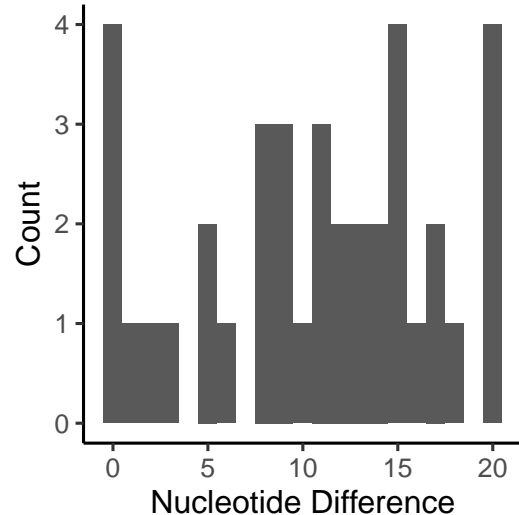
### IGHV2-5\*01

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



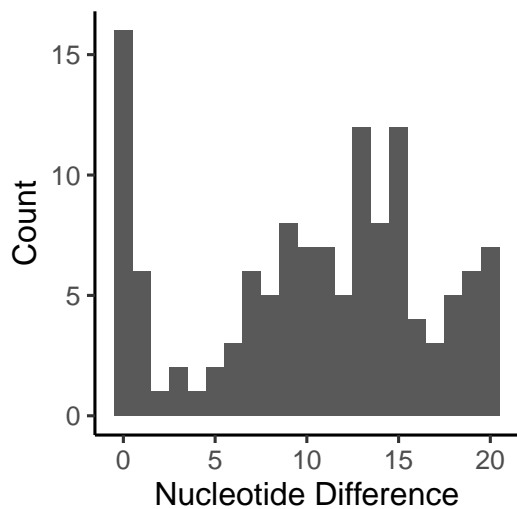
### IGHV2-70\*11\_15

51 sequences assigned  
4 (7.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



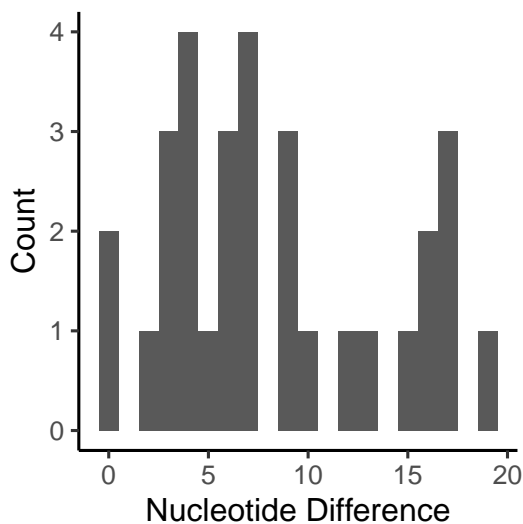
### IGHV1-69\*01\_12\_13

163 sequences assigned  
16 (9.8%) exact matches, in which:  
15 unique CDR3  
4 unique J



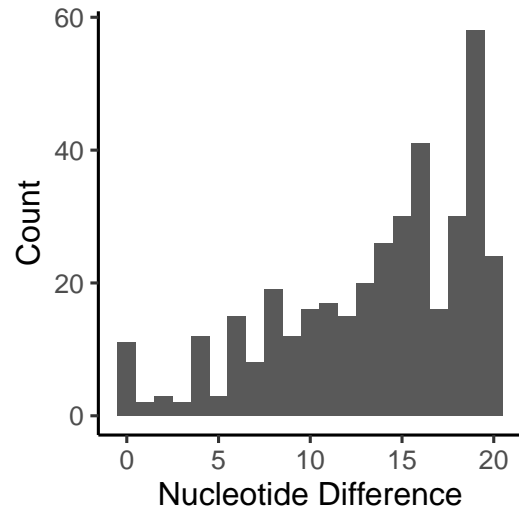
### IGHV2-5\*02

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



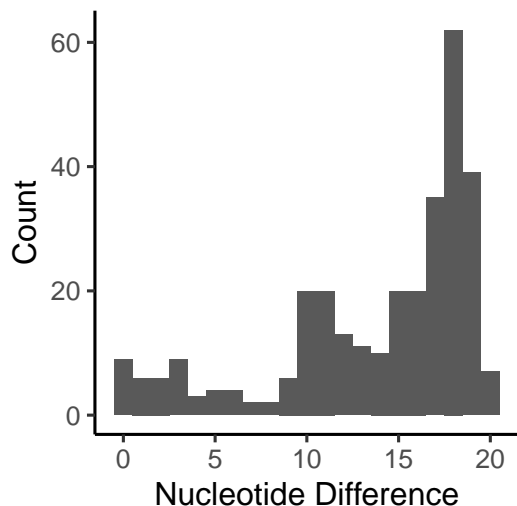
### IGHV3-7\*01

469 sequences assigned  
11 (2.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



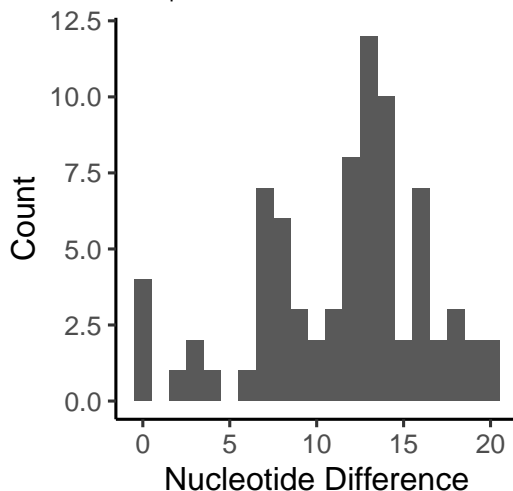
### IGHV3-7\*03

338 sequences assigned  
9 (2.7%) exact matches, in which:  
9 unique CDR3  
3 unique J



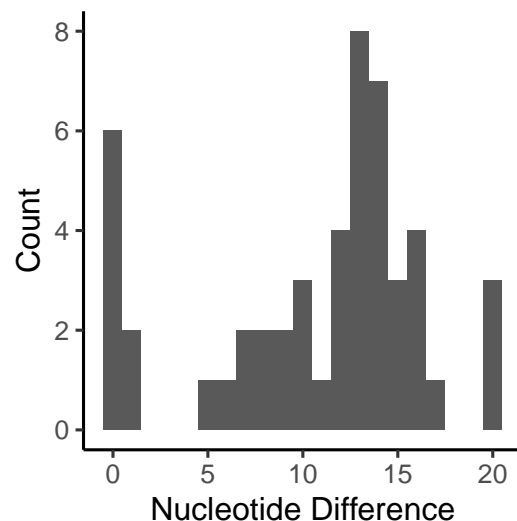
### IGHV3-11\*06

84 sequences assigned  
4 (4.8%) exact matches, in which:  
4 unique CDR3  
3 unique J



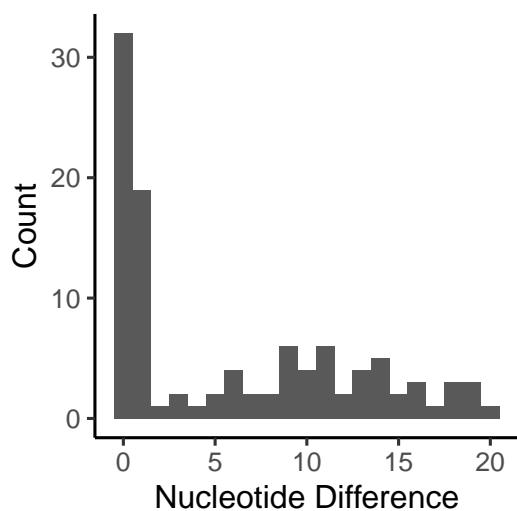
### IGHV3-15\*01\_02

57 sequences assigned  
6 (10.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



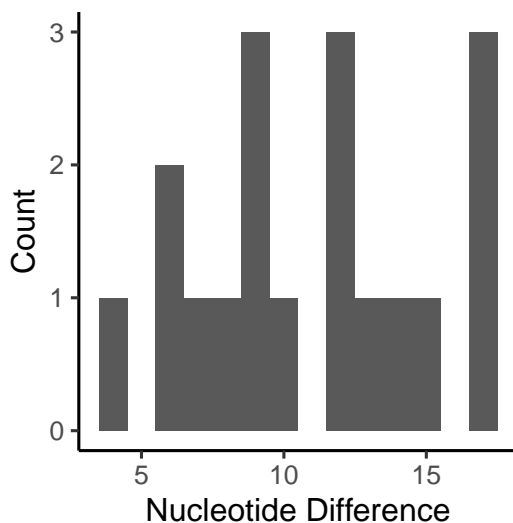
### IGHV3-9\*01

118 sequences assigned  
32 (27.1%) exact matches, in which:  
28 unique CDR3  
4 unique J



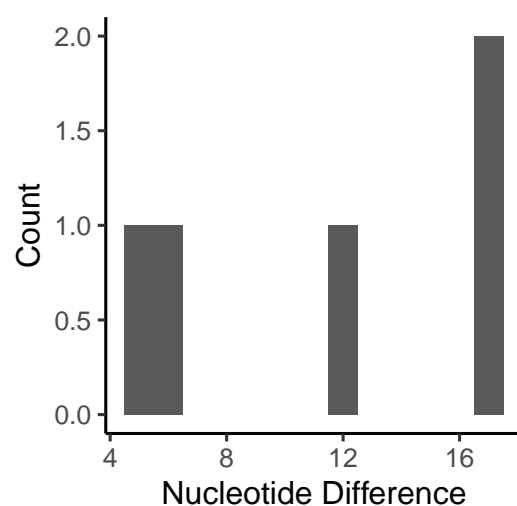
### IGHV3-13\*01

19 sequences assigned  
No exact matches.



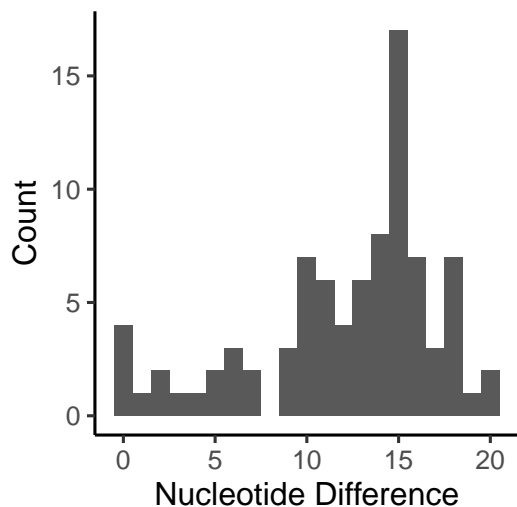
### IGHV3-20\*03\_04

6 sequences assigned  
No exact matches.



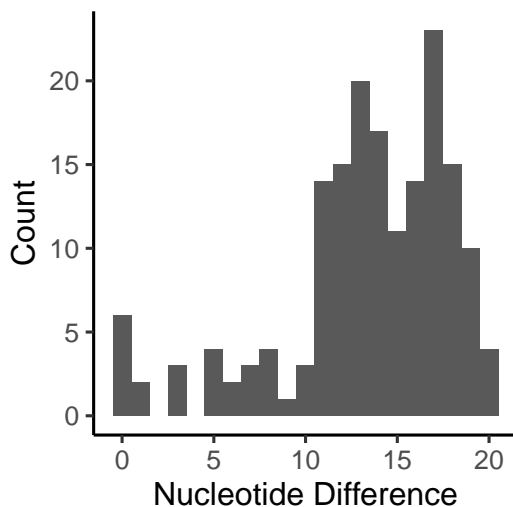
### IGHV3-11\*01

105 sequences assigned  
4 (3.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



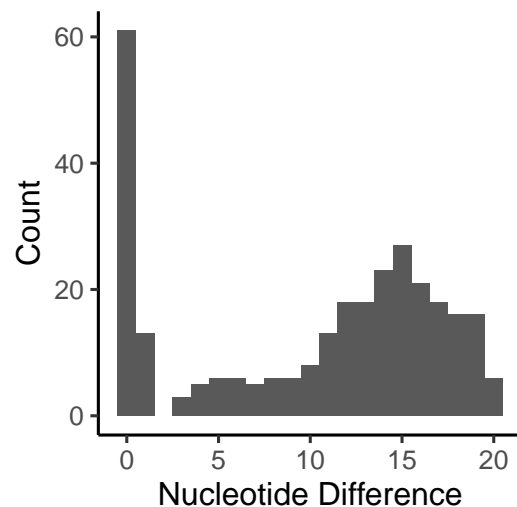
### IGHV3-15\*07

187 sequences assigned  
6 (3.2%) exact matches, in which:  
6 unique CDR3  
2 unique J



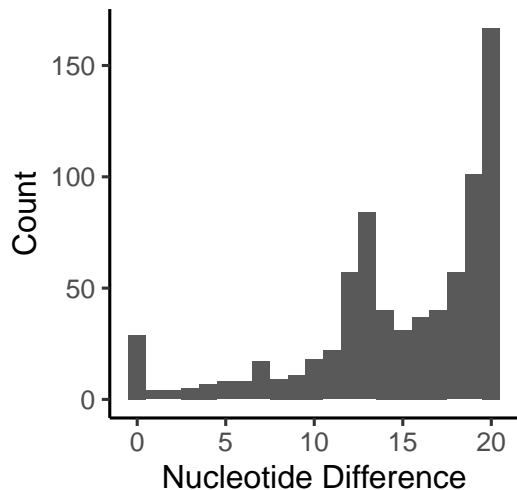
### IGHV3-21\*01\_02

361 sequences assigned  
61 (16.9%) exact matches, in which:  
59 unique CDR3  
6 unique J



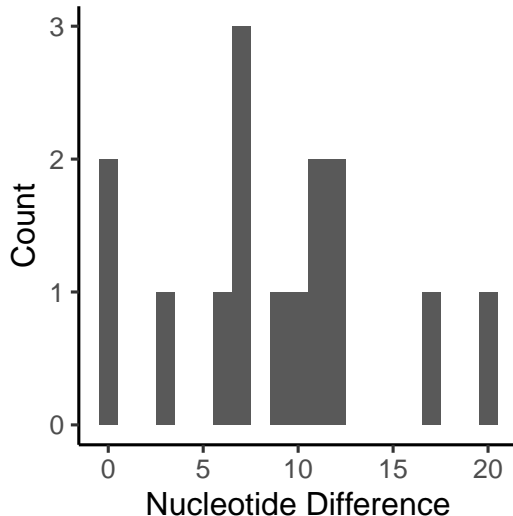
### IGHV3–23\*01\_04

1153 sequences assigned  
29 (2.5%) exact matches, in which:  
29 unique CDR3  
6 unique J



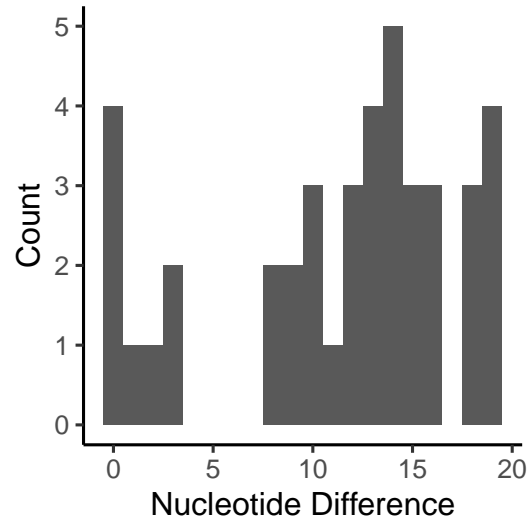
### IGHV3–43\*01

19 sequences assigned  
2 (10.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



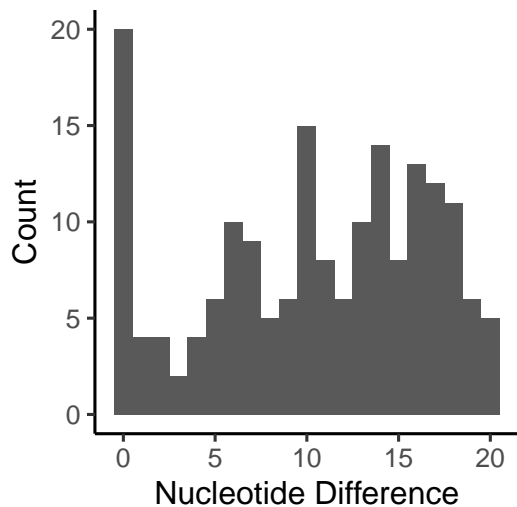
### IGHV3–49\*03\_05

50 sequences assigned  
4 (8%) exact matches, in which:  
3 unique CDR3  
2 unique J



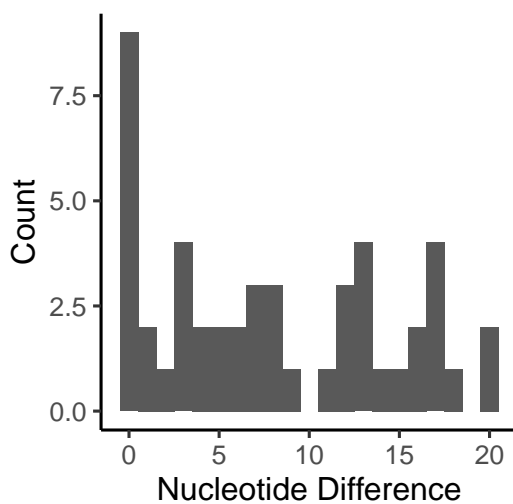
### IGHV3–30–3\*01

228 sequences assigned  
20 (8.8%) exact matches, in which:  
20 unique CDR3  
2 unique J



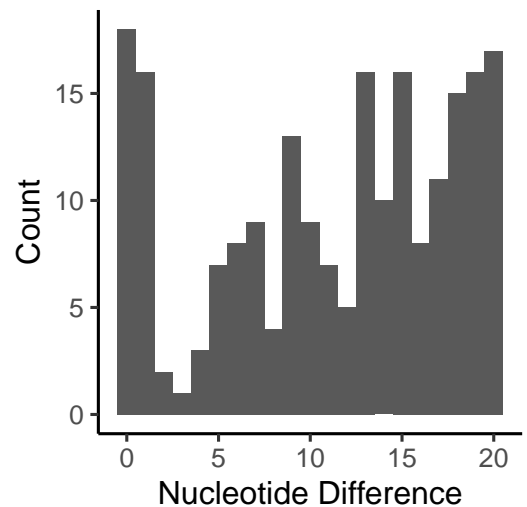
### IGHV3–48\*02

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



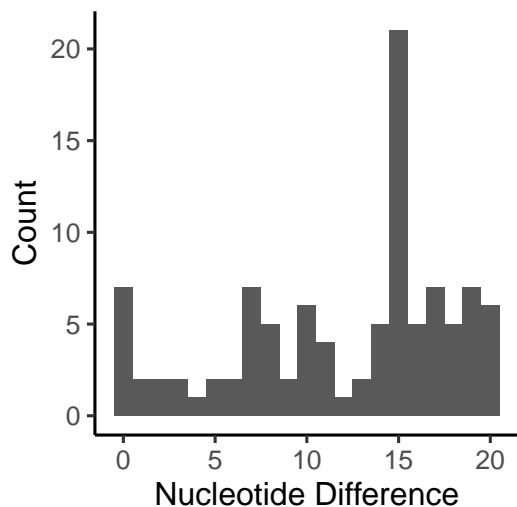
### IGHV3–53\*01\_02

608 sequences assigned  
18 (3%) exact matches, in which:  
16 unique CDR3  
4 unique J



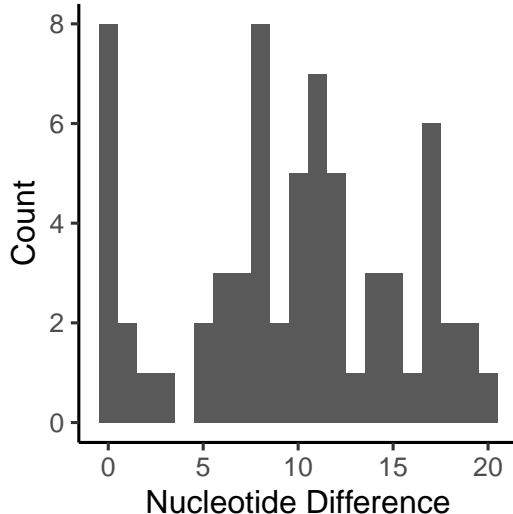
### IGHV3–33\*01

145 sequences assigned  
7 (4.8%) exact matches, in which:  
7 unique CDR3  
2 unique J



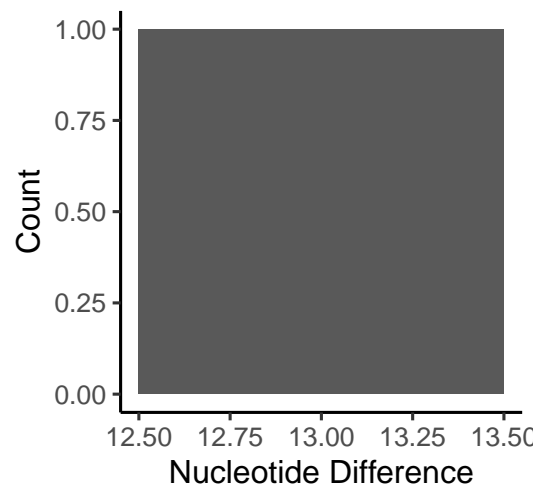
### IGHV3–48\*04

95 sequences assigned  
8 (8.4%) exact matches, in which:  
7 unique CDR3  
3 unique J



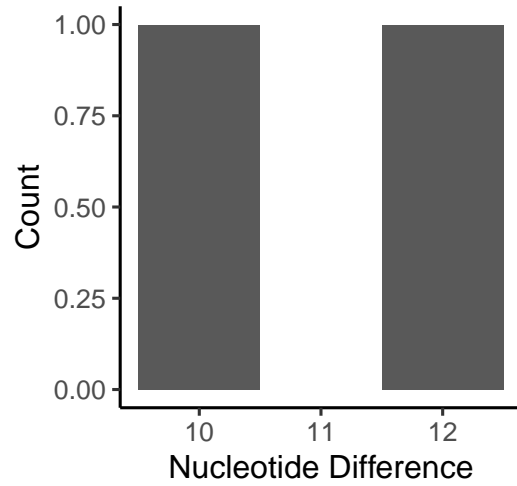
### IGHV3–64\*04

1 sequences assigned  
No exact matches.



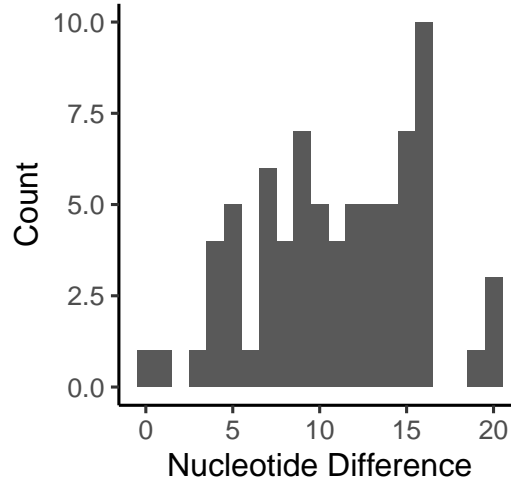
### IGHV3-64\*02\_07

2 sequences assigned  
No exact matches.



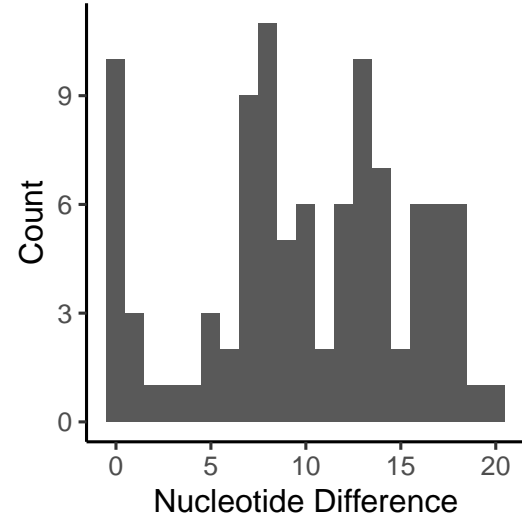
### IGHV3-72\*01

75 sequences assigned  
1 (1.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



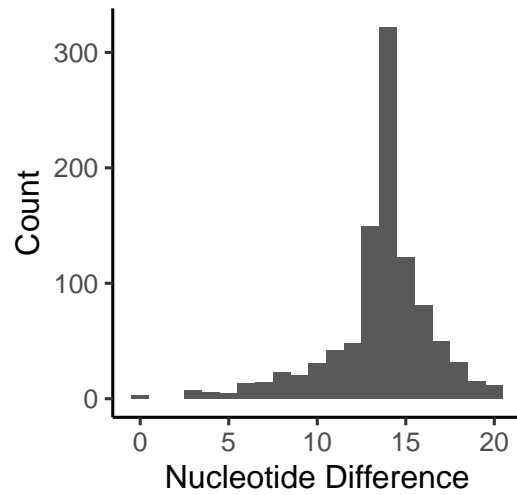
### IGHV3-74\*01\_02

113 sequences assigned  
10 (8.8%) exact matches, in which:  
9 unique CDR3  
3 unique J



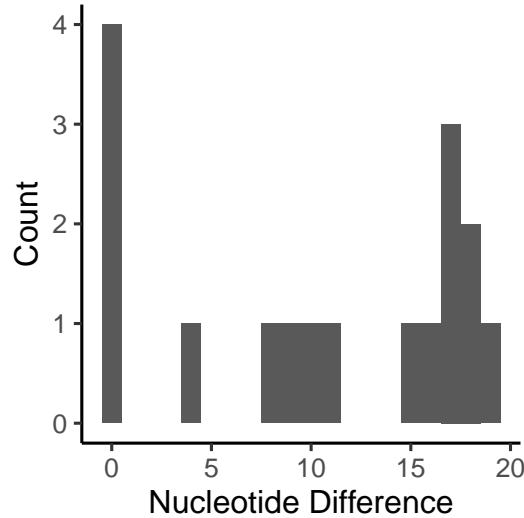
### IGHV3-66\*01

1019 sequences assigned  
3 (0.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



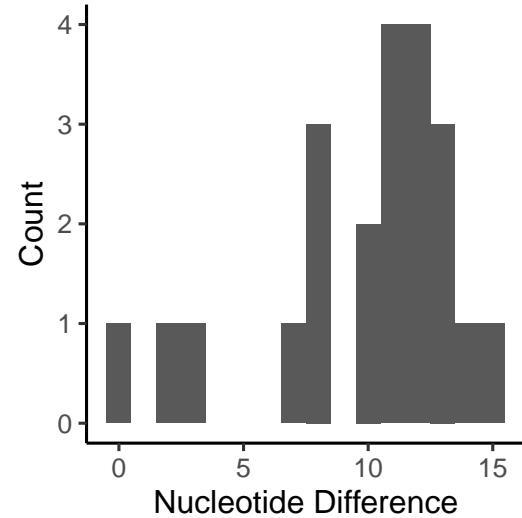
### IGHV3-73\*01\_02

25 sequences assigned  
4 (16%) exact matches, in which:  
4 unique CDR3  
1 unique J



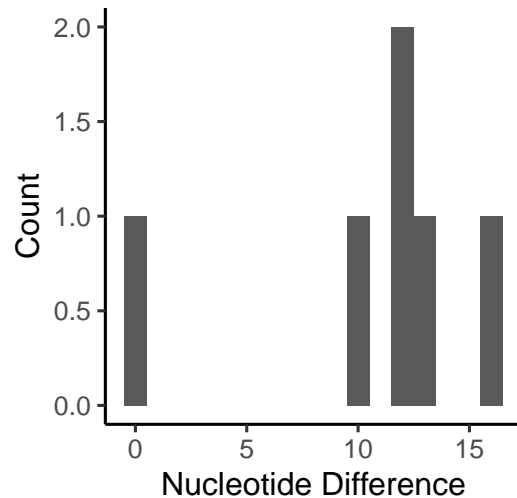
### IGHV3-43D\*03

24 sequences assigned  
1 (4.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



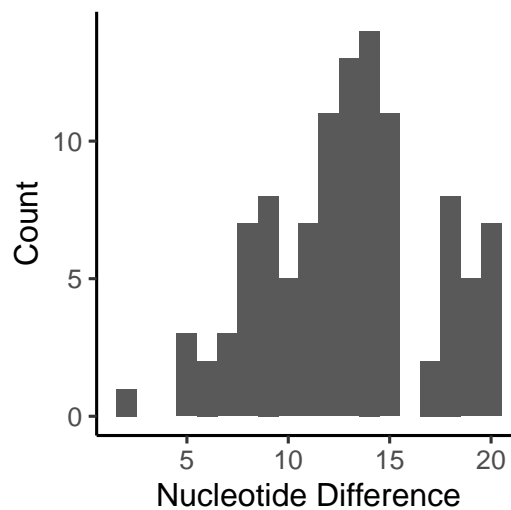
### IGHV3-66\*04

8 sequences assigned  
1 (12.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



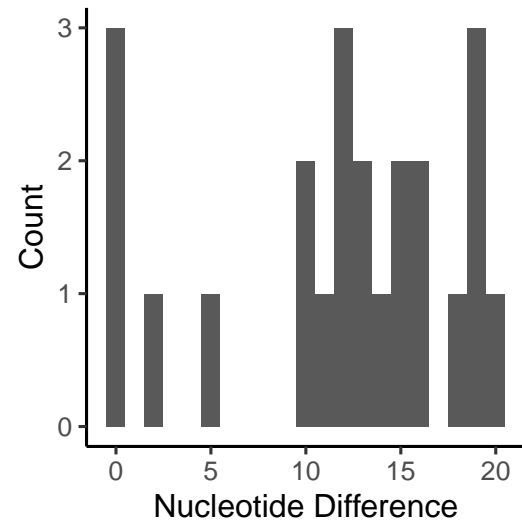
### IGHV3-74\*03

123 sequences assigned  
No exact matches.



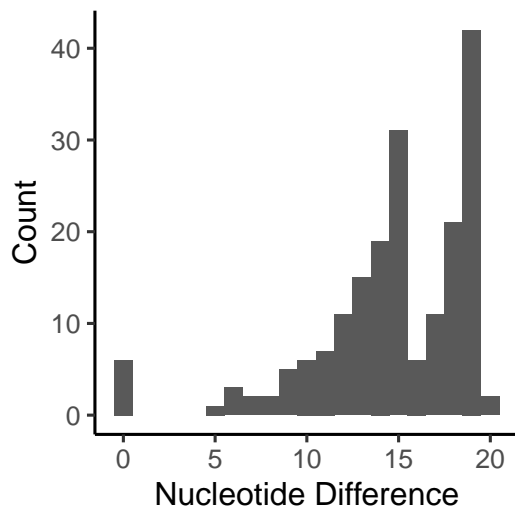
### IGHV3-64D\*09

34 sequences assigned  
3 (8.8%) exact matches, in which:  
3 unique CDR3  
1 unique J



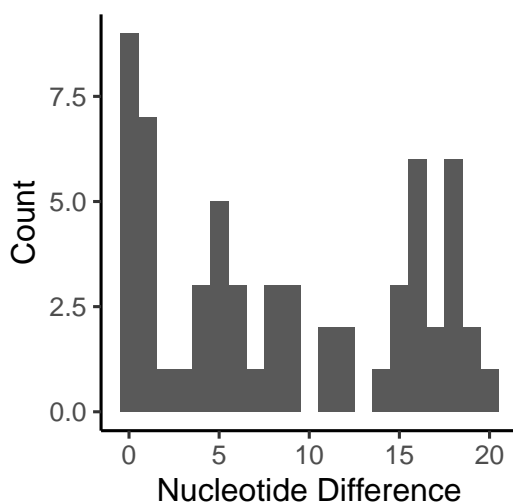
### IGHV4-4\*07

204 sequences assigned  
6 (2.9%) exact matches, in which:  
6 unique CDR3  
3 unique J



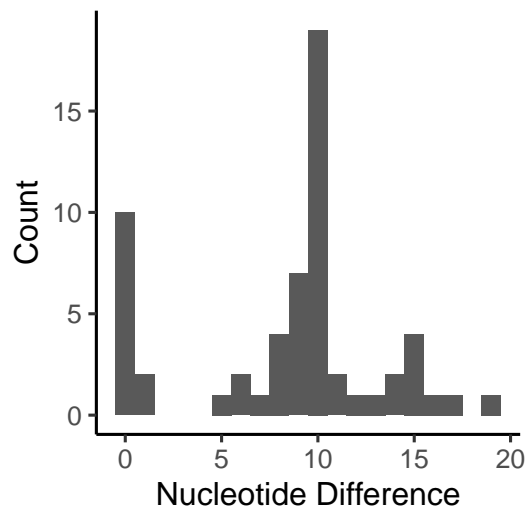
### IGHV4-30-4\*01

71 sequences assigned  
9 (12.7%) exact matches, in which:  
9 unique CDR3  
4 unique J



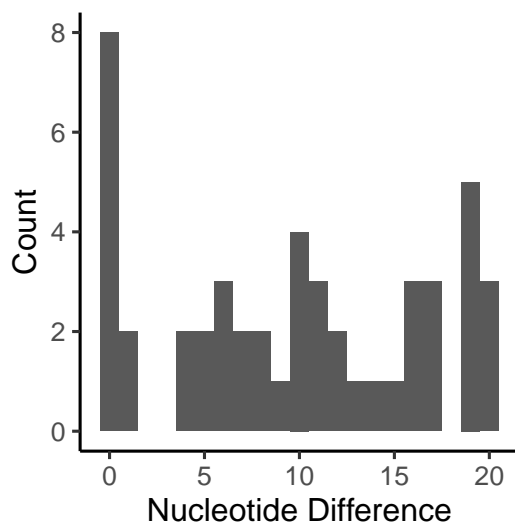
### IGHV4-38-2\*02

71 sequences assigned  
10 (14.1%) exact matches, in which:  
10 unique CDR3  
3 unique J



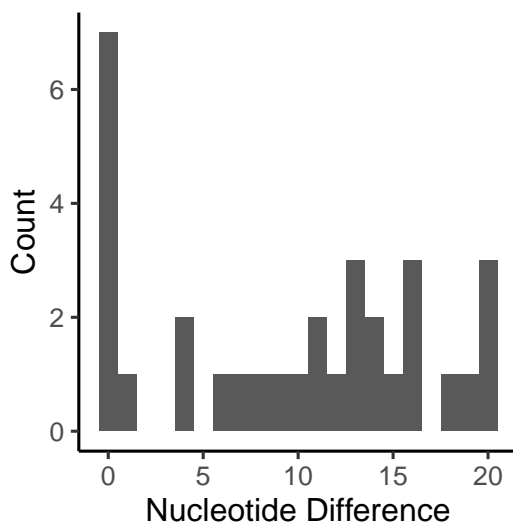
### IGHV4-4\*02\_03

64 sequences assigned  
8 (12.5%) exact matches, in which:  
7 unique CDR3  
4 unique J



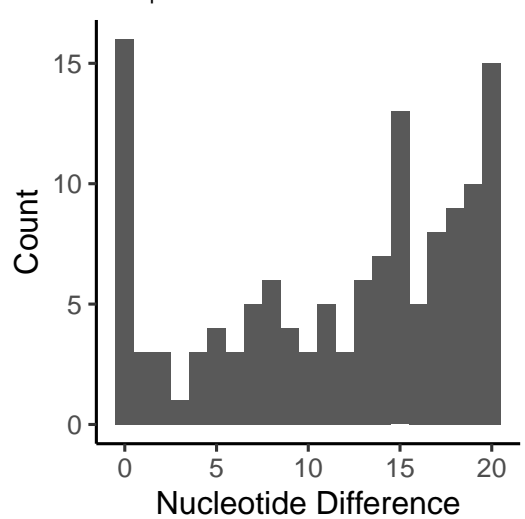
### IGHV4-31\*02

41 sequences assigned  
7 (17.1%) exact matches, in which:  
7 unique CDR3  
4 unique J



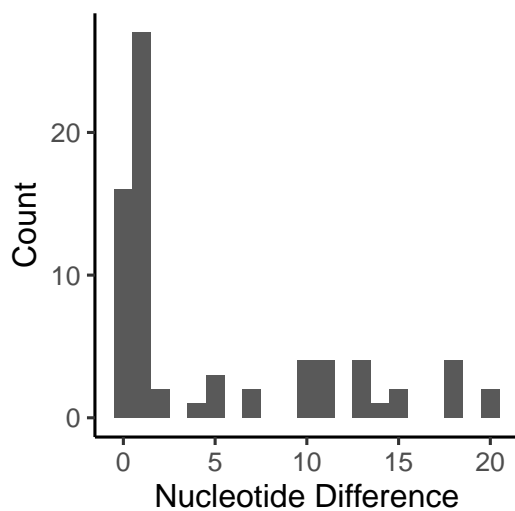
### IGHV4-39\*07

204 sequences assigned  
16 (7.8%) exact matches, in which:  
16 unique CDR3  
4 unique J



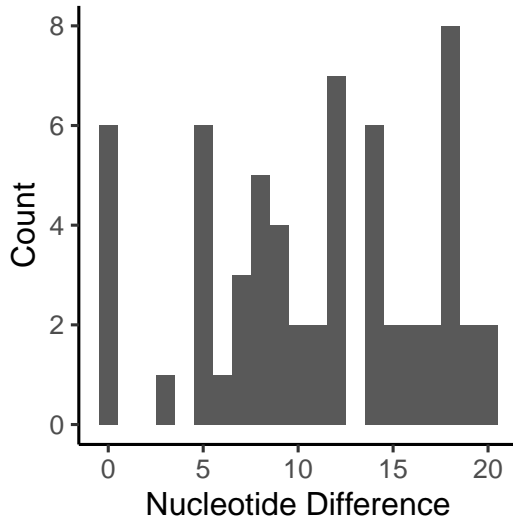
### IGHV4-30-2\*01

86 sequences assigned  
16 (18.6%) exact matches, in which:  
13 unique CDR3  
4 unique J



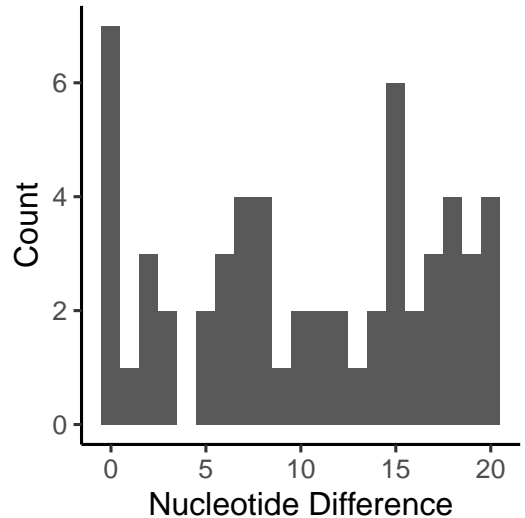
### IGHV4-34\*01\_02

80 sequences assigned  
6 (7.5%) exact matches, in which:  
6 unique CDR3  
4 unique J



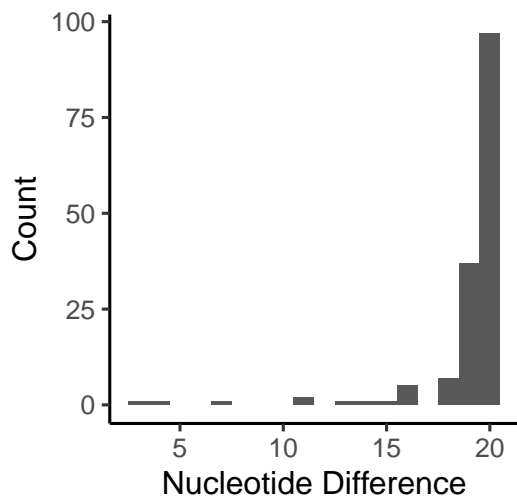
### IGHV4-39\*02\_C258G

83 sequences assigned  
7 (8.4%) exact matches, in which:  
7 unique CDR3  
4 unique J



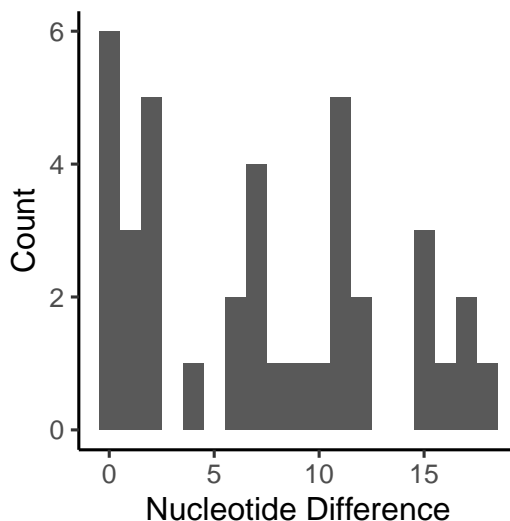
### IGHV4-59\*02

1869 sequences assigned  
No exact matches.



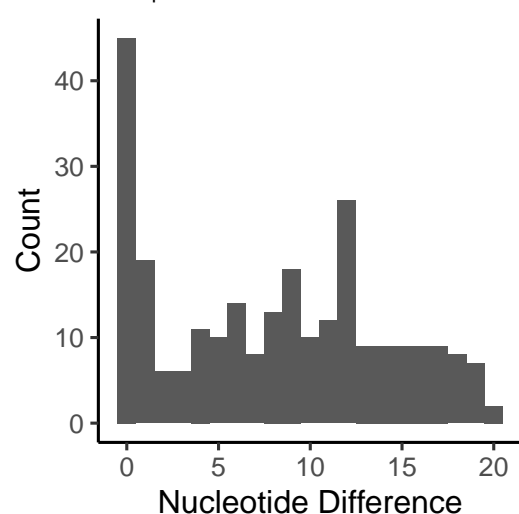
### IGHV4-61\*01

65 sequences assigned  
6 (9.2%) exact matches, in which:  
6 unique CDR3  
4 unique J



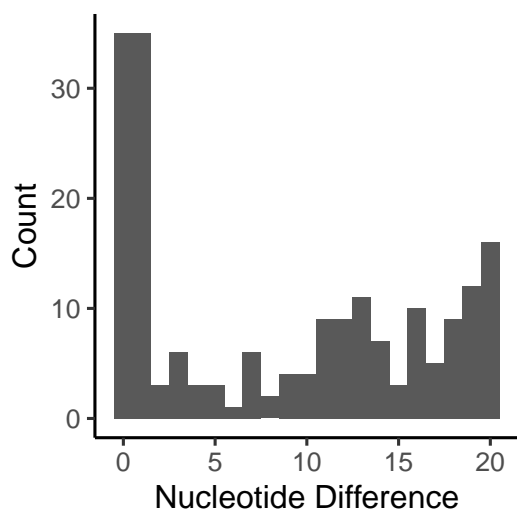
### IGHV5-51\*07\_A128G

283 sequences assigned  
45 (15.9%) exact matches, in which:  
42 unique CDR3  
6 unique J



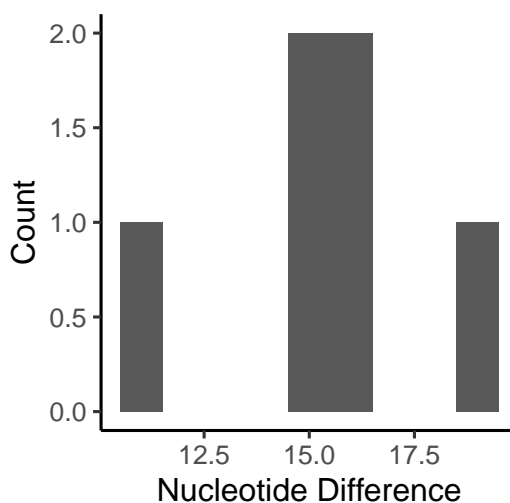
### IGHV4-59\*01\_07

295 sequences assigned  
35 (11.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



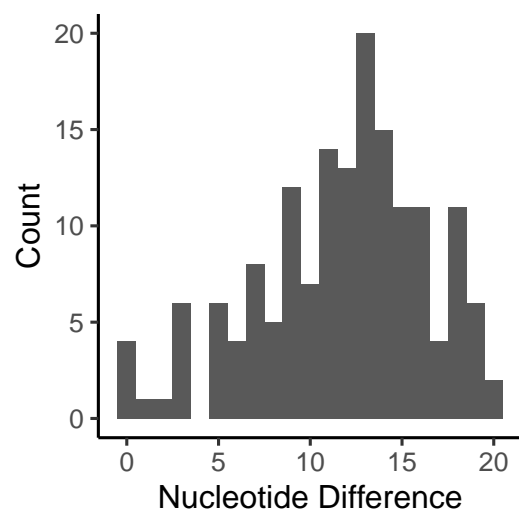
### IGHV4-61\*08

14 sequences assigned  
No exact matches.



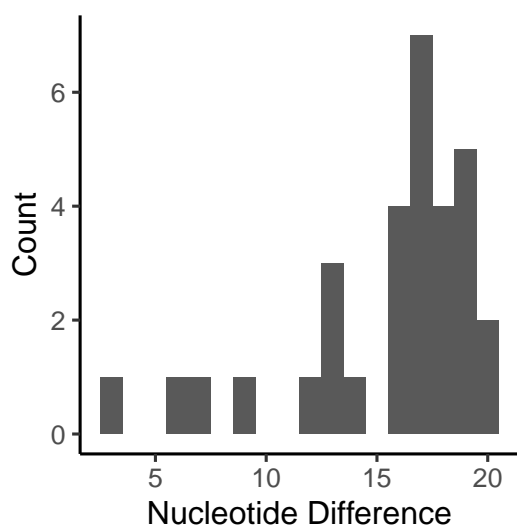
### IGHV6-1\*01\_02

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



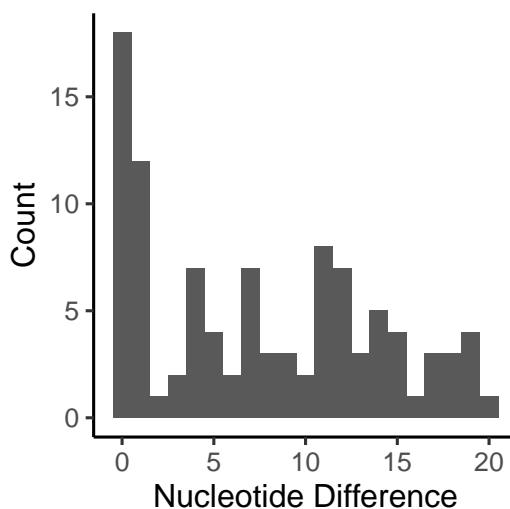
### IGHV4-59\*11

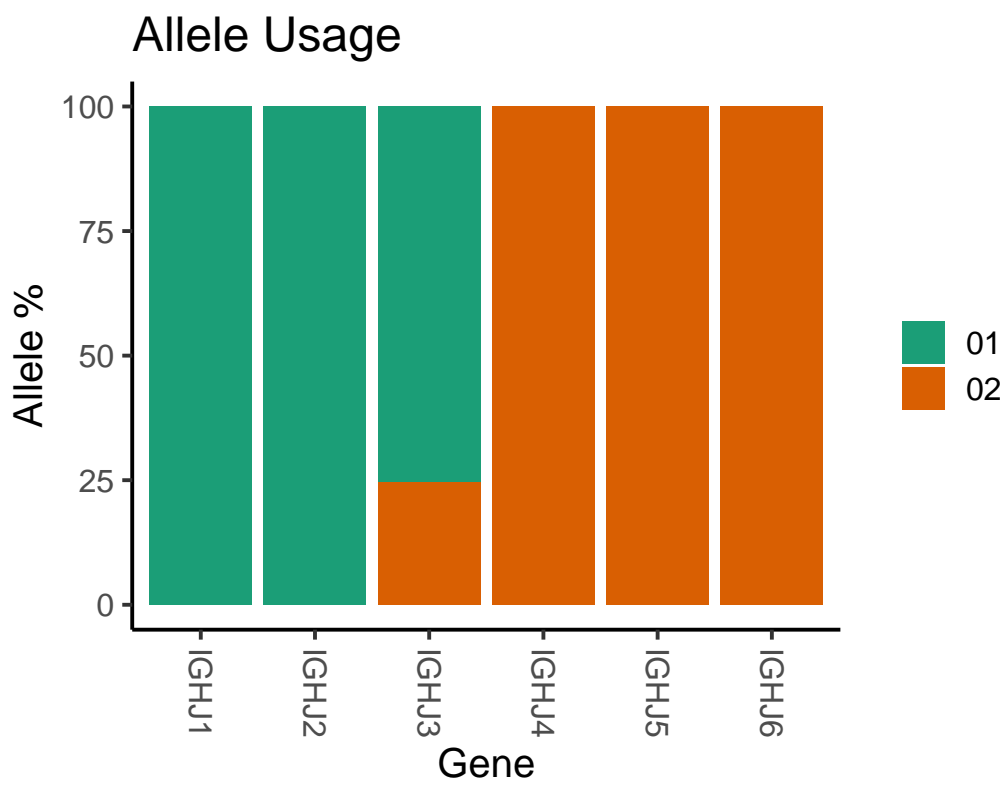
40 sequences assigned  
No exact matches.



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

130 sequences assigned  
18 (13.8%) exact matches, in which:  
15 unique CDR3  
4 unique J







Warning – no inferred sequences found.