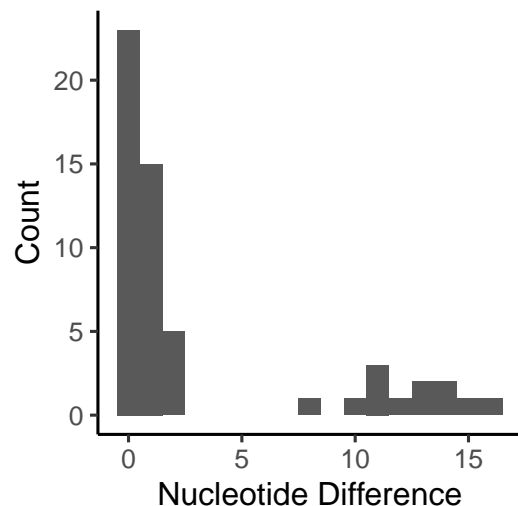


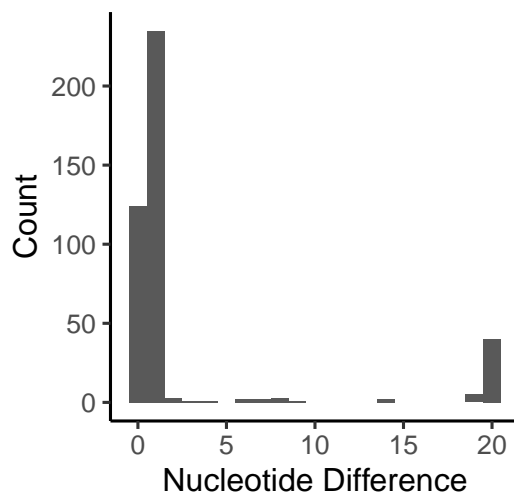
### IGHV1-2\*04

55 sequences assigned  
23 (41.8%) exact matches, in which:  
21 unique CDR3  
4 unique J



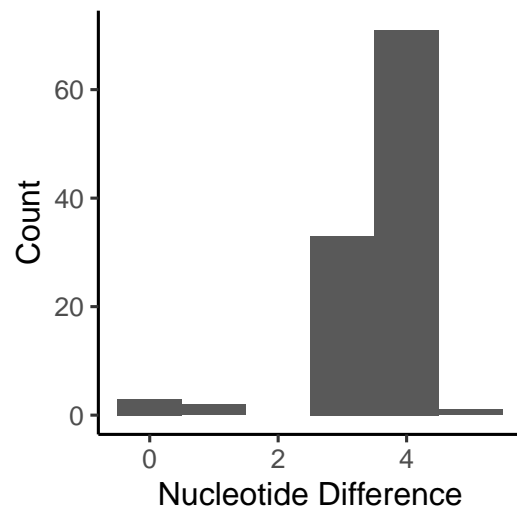
### IGHV1-18\*04

524 sequences assigned  
124 (23.7%) exact matches, in which:  
87 unique CDR3  
4 unique J



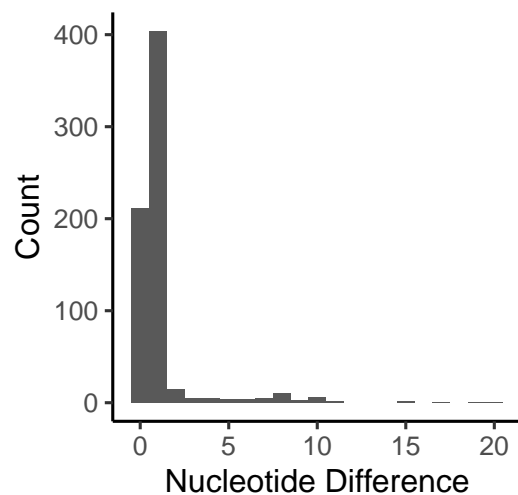
### IGHV1-58\*01\_03

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



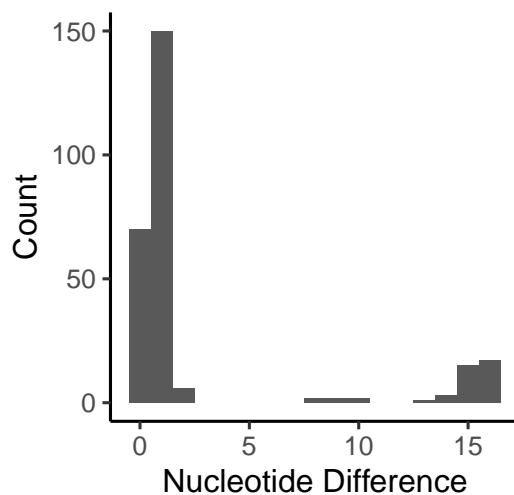
### IGHV1-3\*01\_05

792 sequences assigned  
211 (26.6%) exact matches, in which:  
132 unique CDR3  
6 unique J



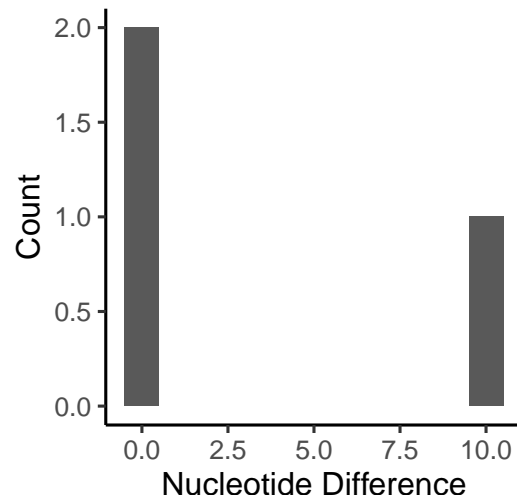
### IGHV1-24\*01

268 sequences assigned  
70 (26.1%) exact matches, in which:  
42 unique CDR3  
6 unique J



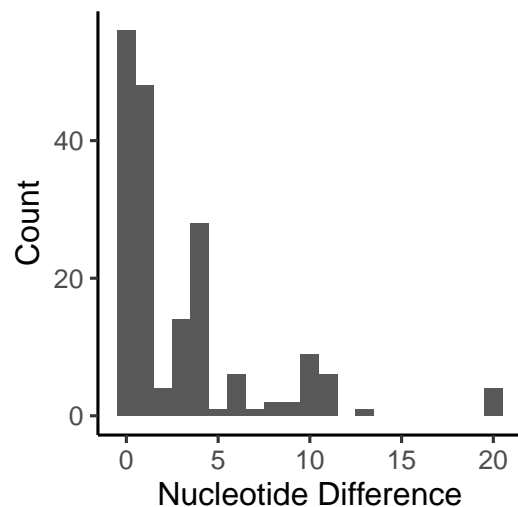
### IGHV1-69-2\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



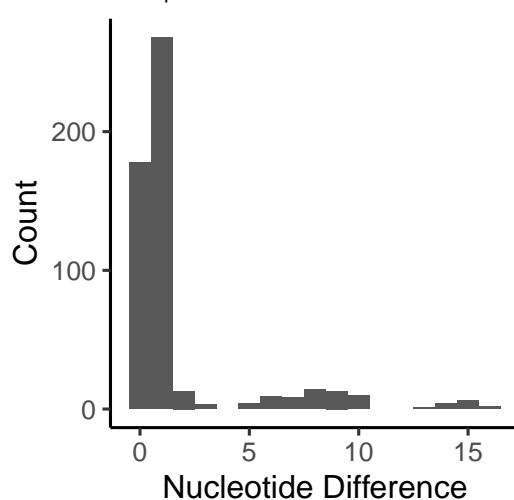
### IGHV1-18\*01

188 sequences assigned  
56 (29.8%) exact matches, in which:  
45 unique CDR3  
6 unique J



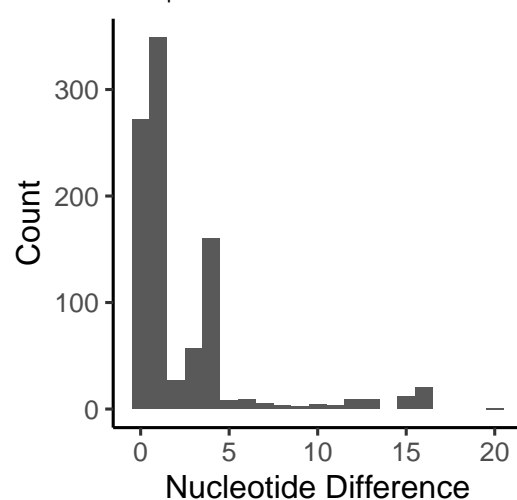
### IGHV1-46\*01

540 sequences assigned  
178 (33%) exact matches, in which:  
141 unique CDR3  
6 unique J



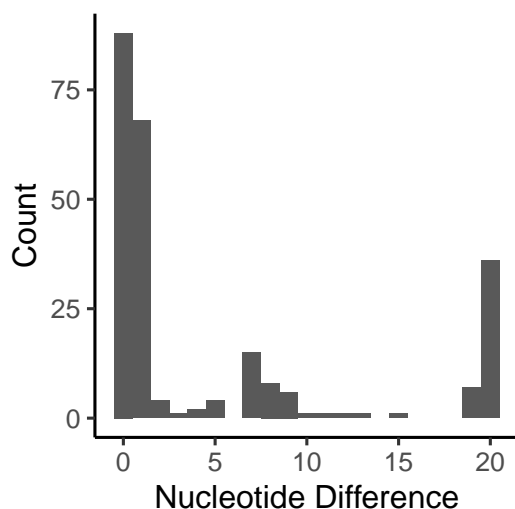
### IGHV1-69\*01\_12\_13

959 sequences assigned  
272 (28.4%) exact matches, in which:  
207 unique CDR3  
6 unique J



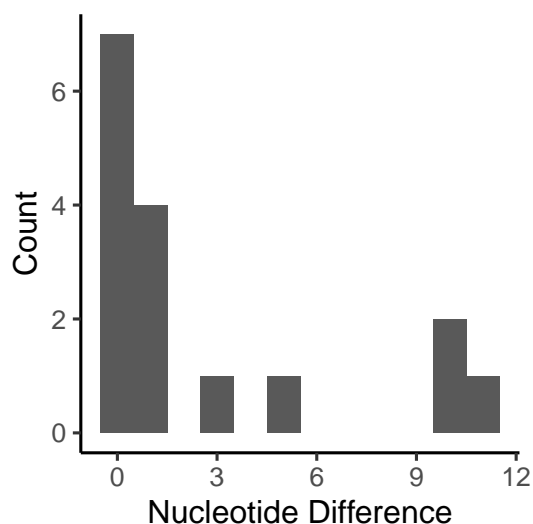
### IGHV1-69\*06\_14

327 sequences assigned  
88 (26.9%) exact matches, in which:  
68 unique CDR3  
6 unique J



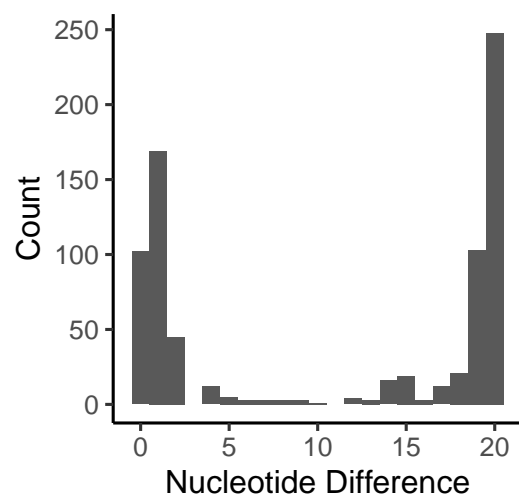
### IGHV2-26\*01

16 sequences assigned  
7 (43.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



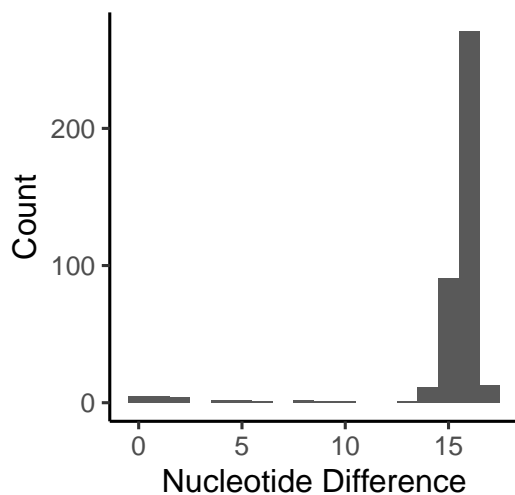
### IGHV3-7\*03

795 sequences assigned  
102 (12.8%) exact matches, in which:  
40 unique CDR3  
4 unique J



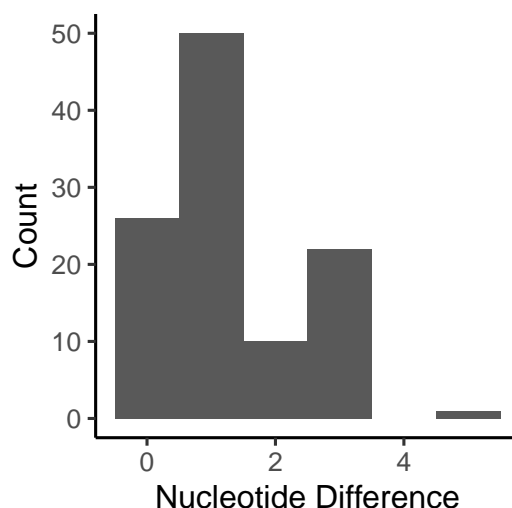
### IGHV2-5\*01

410 sequences assigned  
5 (1.2%) exact matches, in which:  
5 unique CDR3  
3 unique J



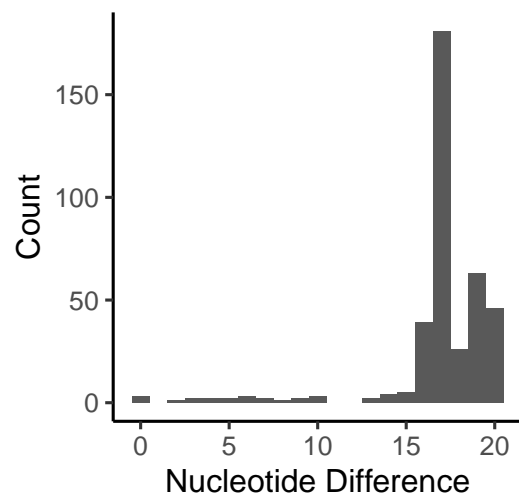
### IGHV2-70\*01

109 sequences assigned  
26 (23.9%) exact matches, in which:  
18 unique CDR3  
3 unique J



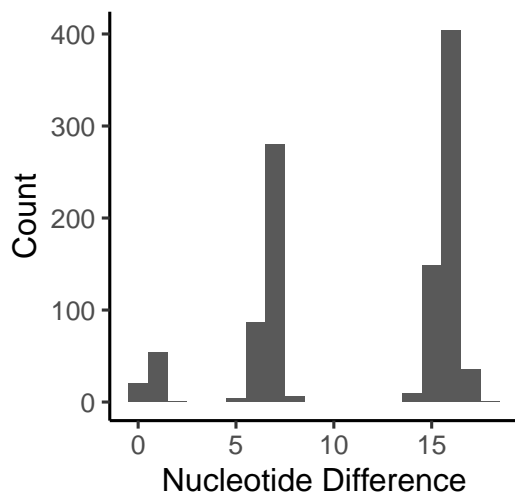
### IGHV3-7\*05

387 sequences assigned  
3 (0.8%) exact matches, in which:  
2 unique CDR3  
2 unique J



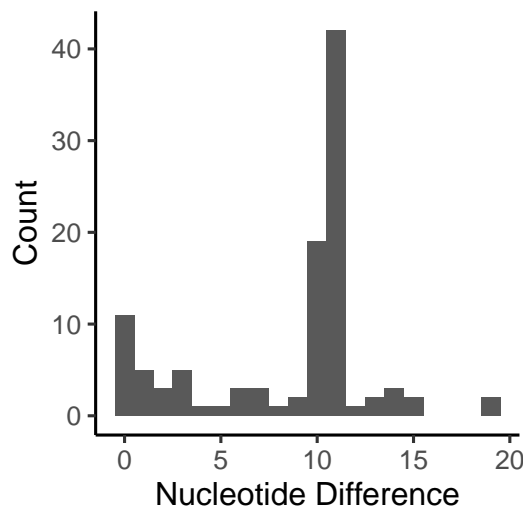
### IGHV2-5\*02

1048 sequences assigned  
20 (1.9%) exact matches, in which:  
10 unique CDR3  
2 unique J



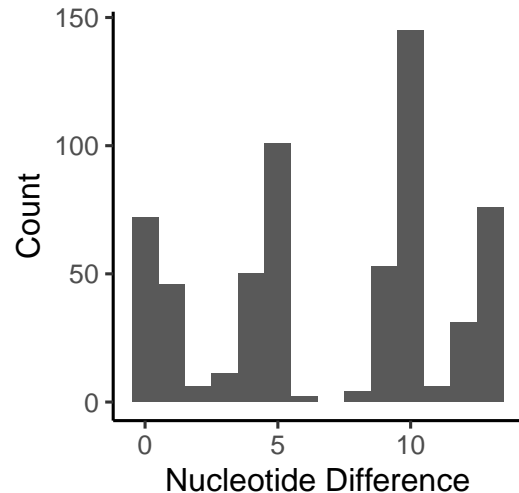
### IGHV3-7\*01

106 sequences assigned  
11 (10.4%) exact matches, in which:  
8 unique CDR3  
2 unique J



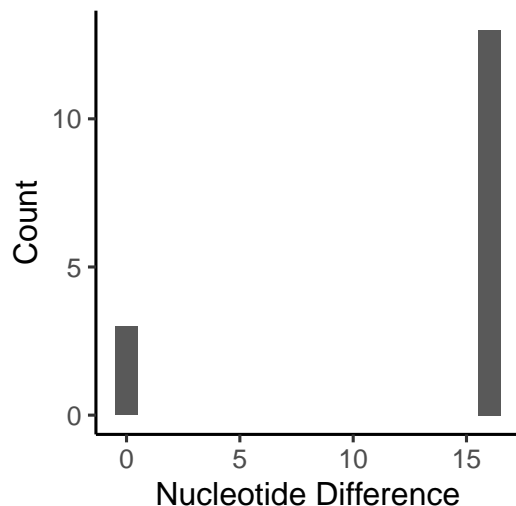
### IGHV3-11\*06

632 sequences assigned  
72 (11.4%) exact matches, in which:  
35 unique CDR3  
5 unique J



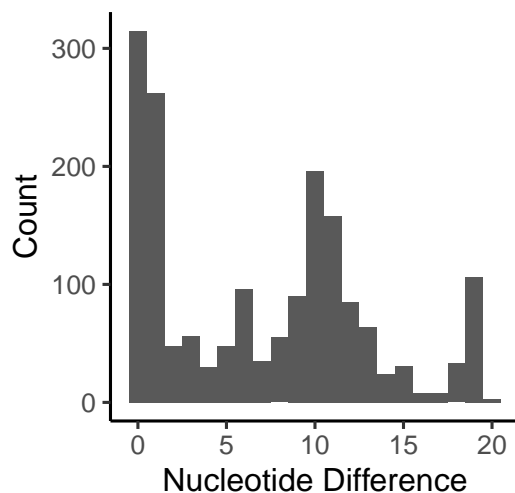
### IGHV3-13\*05

16 sequences assigned  
3 (18.8%) exact matches, in which:  
2 unique CDR3  
1 unique J



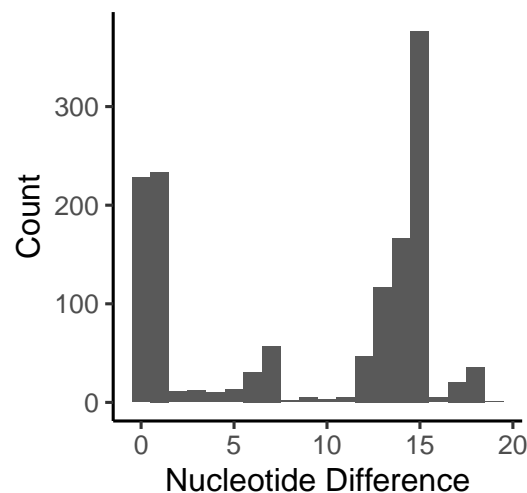
### IGHV3-23\*01\_04

2352 sequences assigned  
315 (13.4%) exact matches, in which:  
159 unique CDR3  
6 unique J



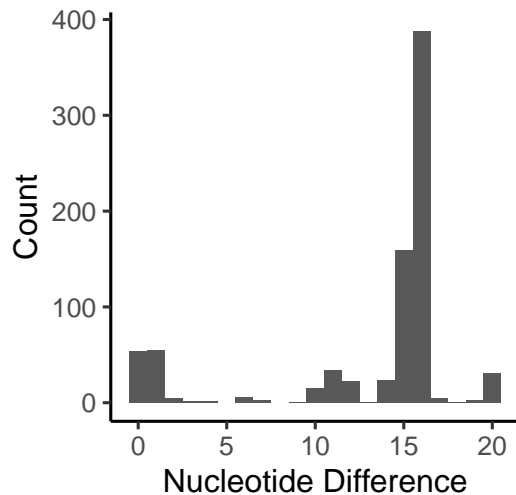
### IGHV3-33\*01

1387 sequences assigned  
228 (16.4%) exact matches, in which:  
118 unique CDR3  
5 unique J



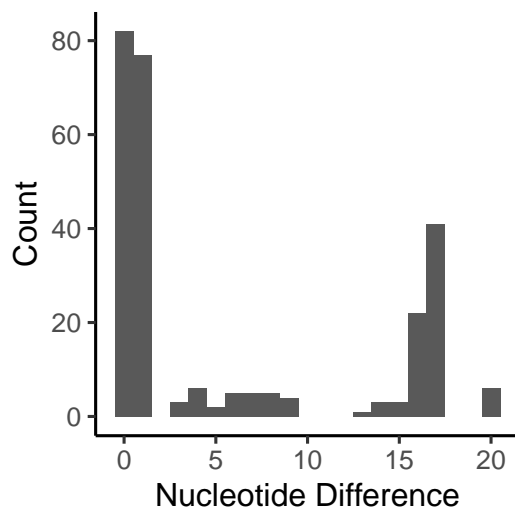
### IGHV3-15\*01\_02

1141 sequences assigned  
54 (4.7%) exact matches, in which:  
27 unique CDR3  
4 unique J



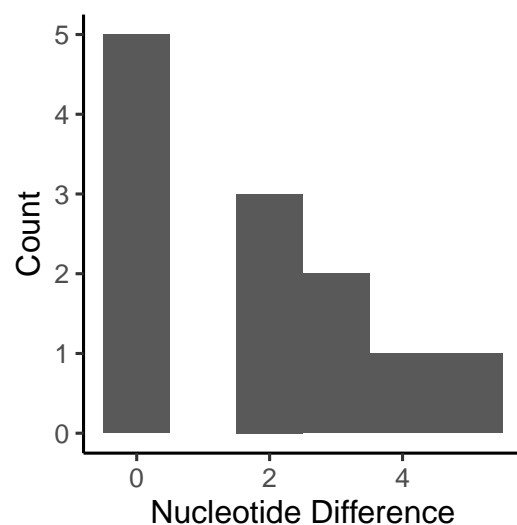
### IGHV3-30-3\*01

539 sequences assigned  
82 (15.2%) exact matches, in which:  
46 unique CDR3  
5 unique J



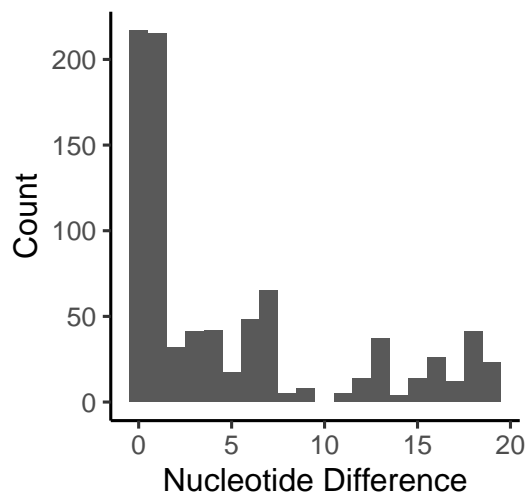
### IGHV3-33\*05

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



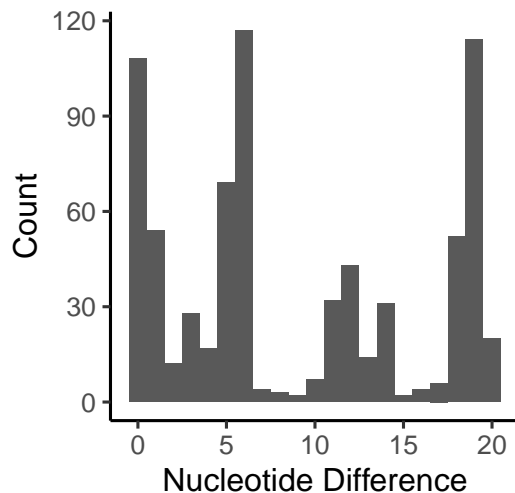
### IGHV3-21\*01\_02

868 sequences assigned  
217 (25%) exact matches, in which:  
113 unique CDR3  
6 unique J



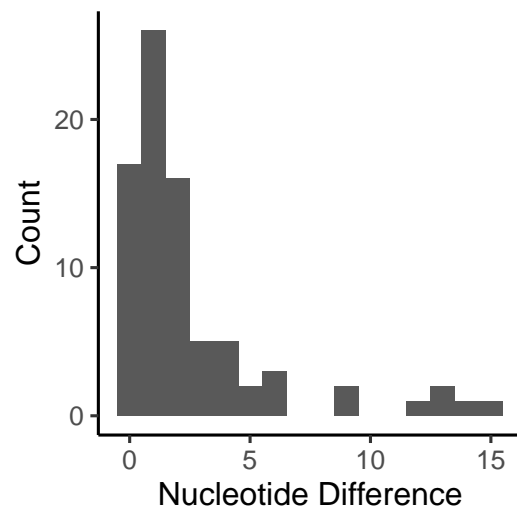
### IGHV3-30\*03

1110 sequences assigned  
108 (9.7%) exact matches, in which:  
63 unique CDR3  
6 unique J



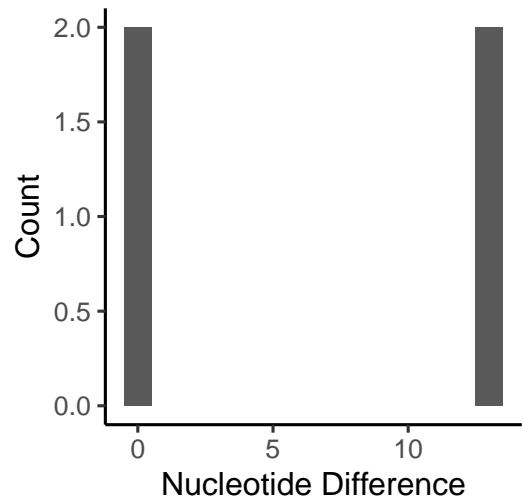
### IGHV3-33\*06

85 sequences assigned  
17 (20%) exact matches, in which:  
12 unique CDR3  
4 unique J



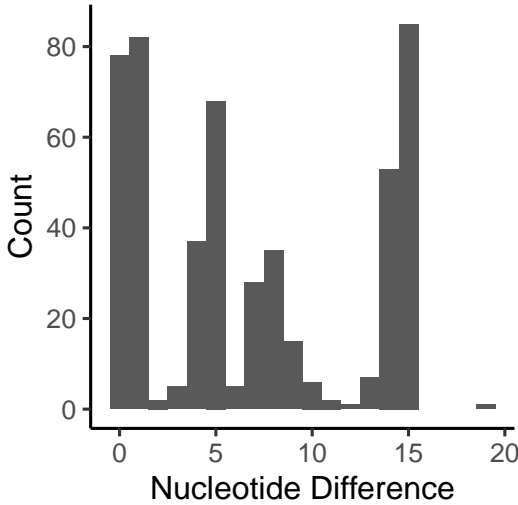
### IGHV3-43\*01

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



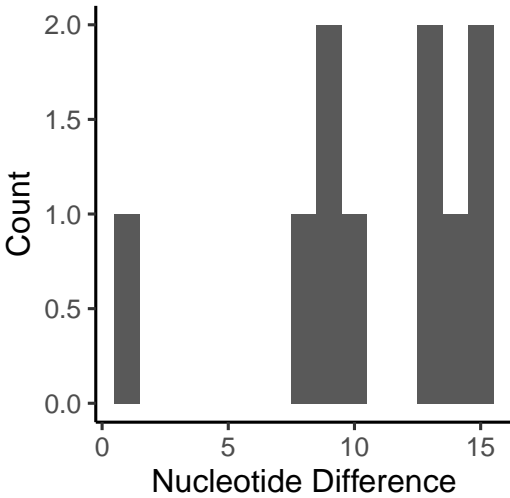
### IGHV3-48\*02

510 sequences assigned  
78 (15.3%) exact matches, in which:  
36 unique CDR3  
2 unique J



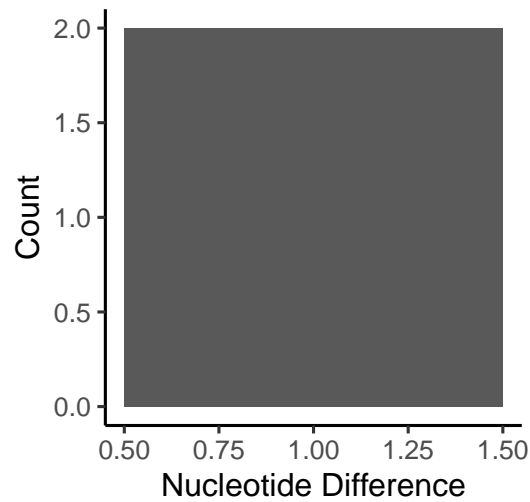
### IGHV3-64\*04

10 sequences assigned  
No exact matches.



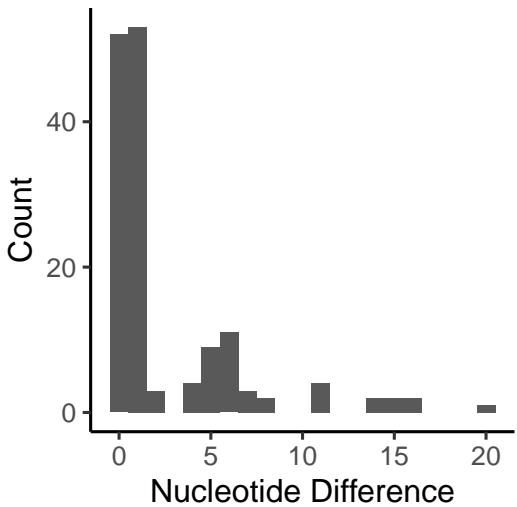
### IGHV3-47\*02

2 sequences assigned  
No exact matches.



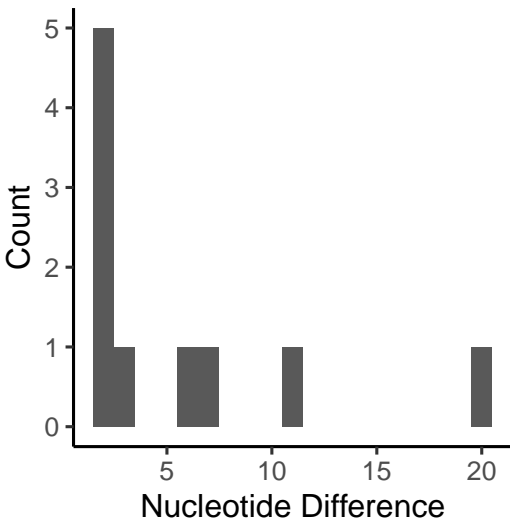
### IGHV3-49\*03\_05

148 sequences assigned  
52 (35.1%) exact matches, in which:  
23 unique CDR3  
4 unique J



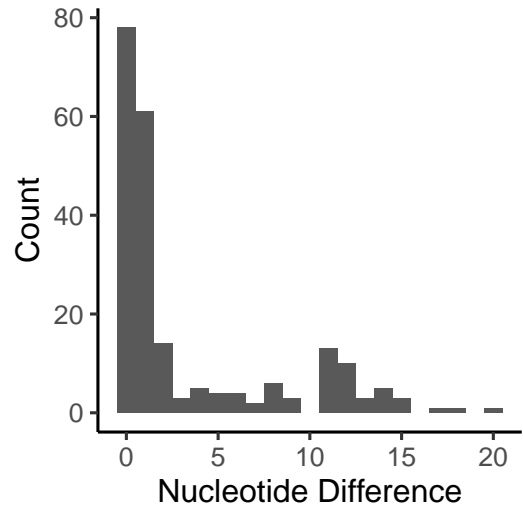
### IGHV3-66\*03

10 sequences assigned  
No exact matches.



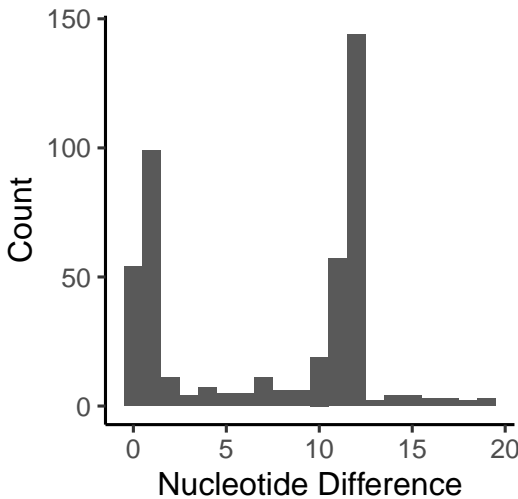
### IGHV3-48\*01

640 sequences assigned  
78 (12.2%) exact matches, in which:  
41 unique CDR3  
4 unique J



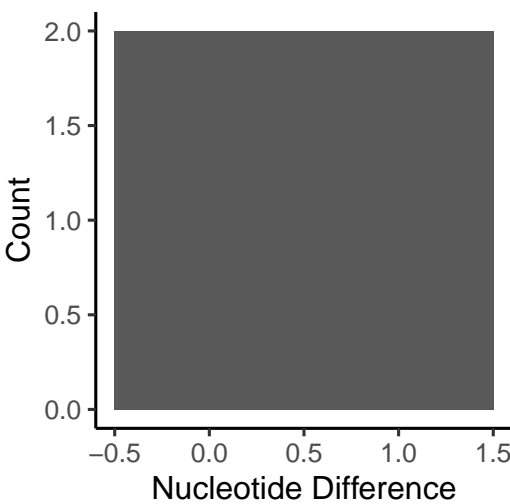
### IGHV3-53\*01\_02

451 sequences assigned  
54 (12%) exact matches, in which:  
26 unique CDR3  
3 unique J



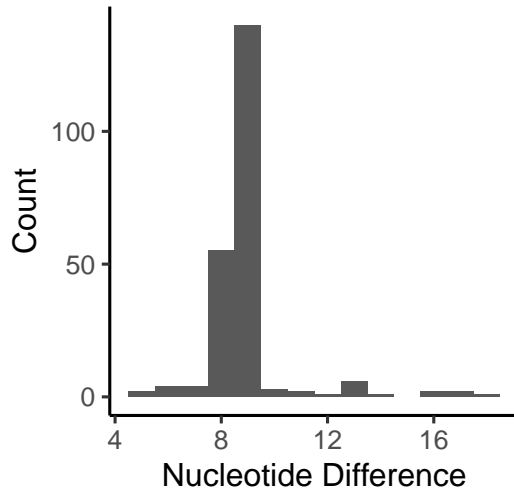
### IGHV3-69-1\*02

5 sequences assigned  
2 (40%) exact matches, in which:  
1 unique CDR3  
1 unique J



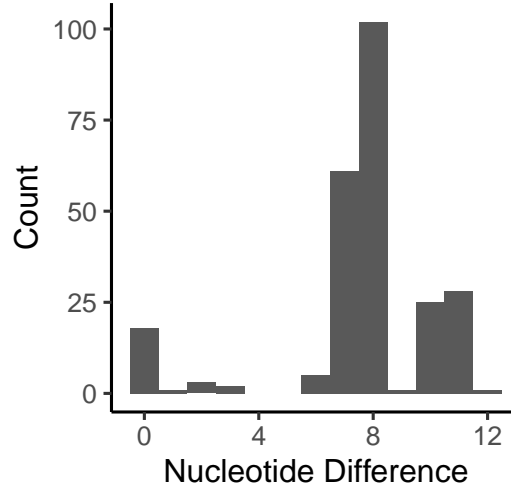
### IGHV3-72\*01

225 sequences assigned  
No exact matches.



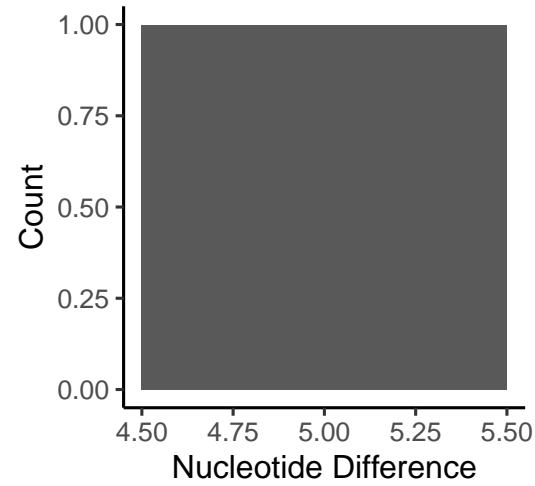
### IGHV3-74\*01\_02

247 sequences assigned  
18 (7.3%) exact matches, in which:  
10 unique CDR3  
3 unique J



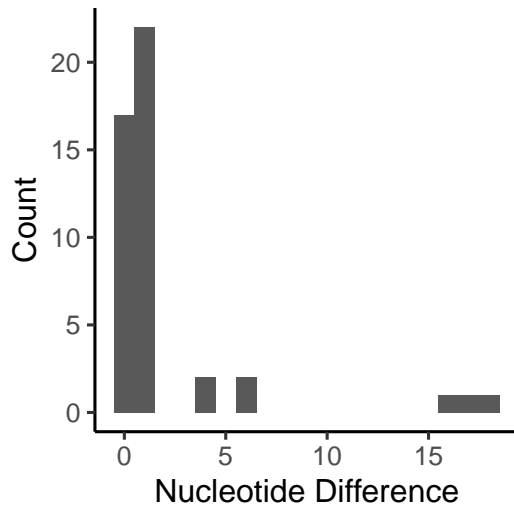
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



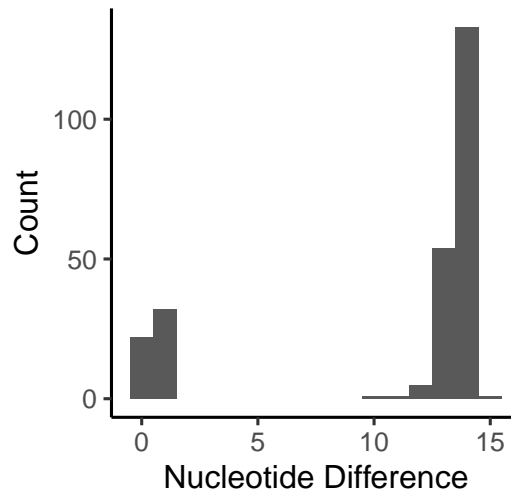
### IGHV3-73\*01\_02

46 sequences assigned  
17 (37%) exact matches, in which:  
8 unique CDR3  
1 unique J



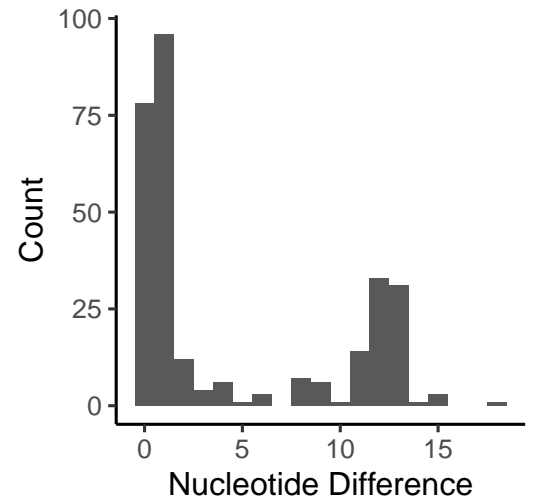
### IGHV3-64D\*06

253 sequences assigned  
22 (8.7%) exact matches, in which:  
13 unique CDR3  
2 unique J



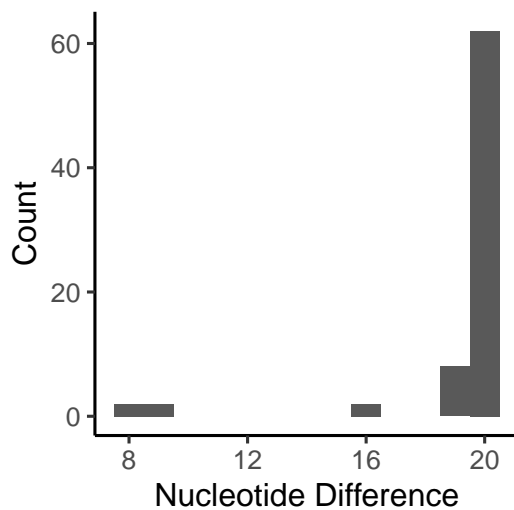
### IGHV4-4\*02\_03

464 sequences assigned  
78 (16.8%) exact matches, in which:  
51 unique CDR3  
5 unique J



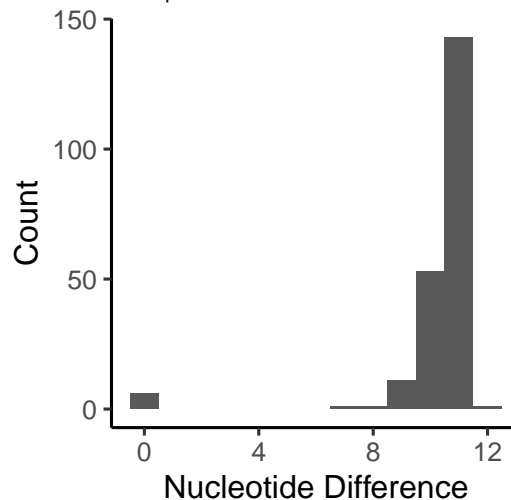
### IGHV3-74\*03

280 sequences assigned  
No exact matches.



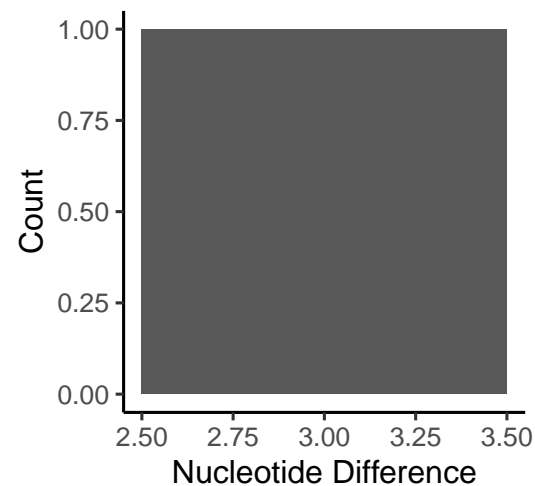
### IGHV3-64D\*08

216 sequences assigned  
6 (2.8%) exact matches, in which:  
3 unique CDR3  
3 unique J



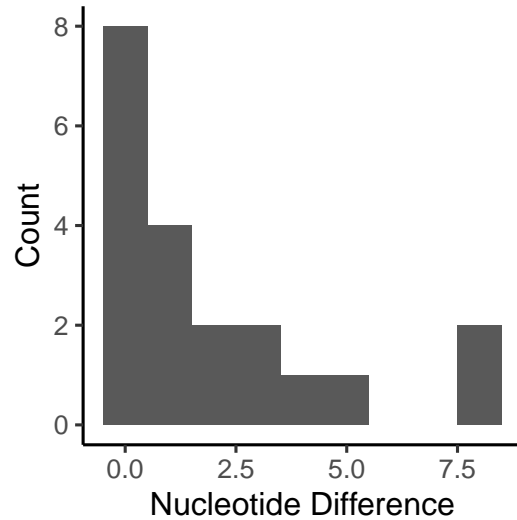
### IGHV4-28\*01\_07

1 sequences assigned  
No exact matches.



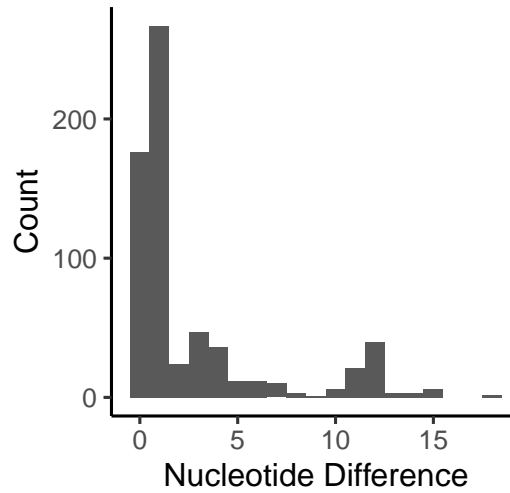
### IGHV4-30-4\*01

309 sequences assigned  
8 (2.6%) exact matches, in which:  
6 unique CDR3  
3 unique J



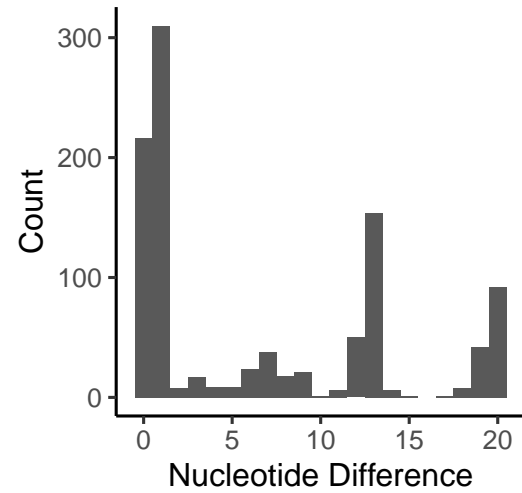
### IGHV4-31\*02

751 sequences assigned  
176 (23.4%) exact matches, in which:  
119 unique CDR3  
6 unique J



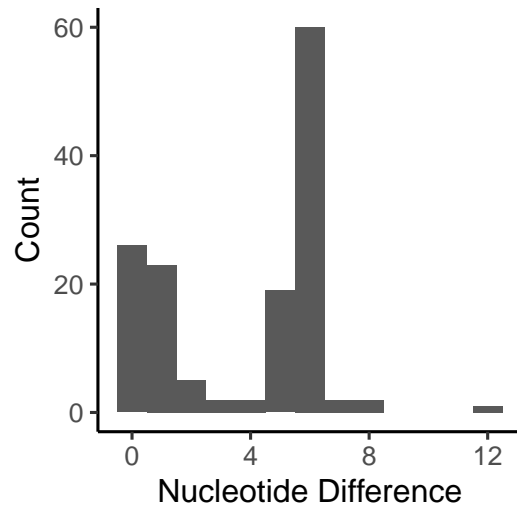
### IGHV4-39\*02\_C258G

1038 sequences assigned  
216 (20.8%) exact matches, in which:  
148 unique CDR3  
6 unique J



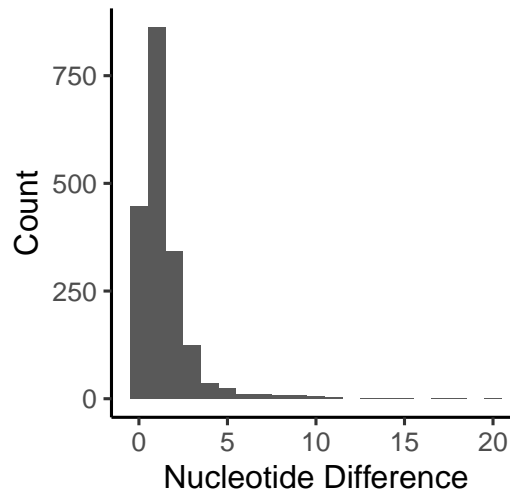
### IGHV4-30-2\*01

143 sequences assigned  
26 (18.2%) exact matches, in which:  
16 unique CDR3  
5 unique J



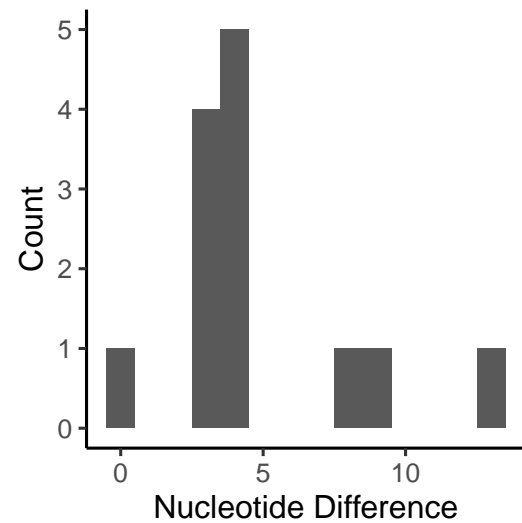
### IGHV4-34\*01\_02

1904 sequences assigned  
448 (23.5%) exact matches, in which:  
255 unique CDR3  
6 unique J



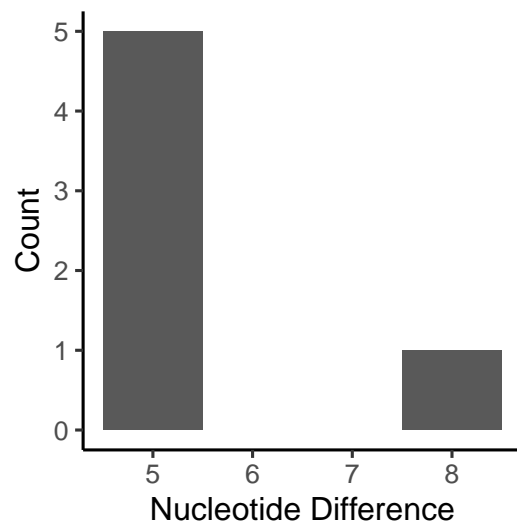
### IGHV4-59\*02

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



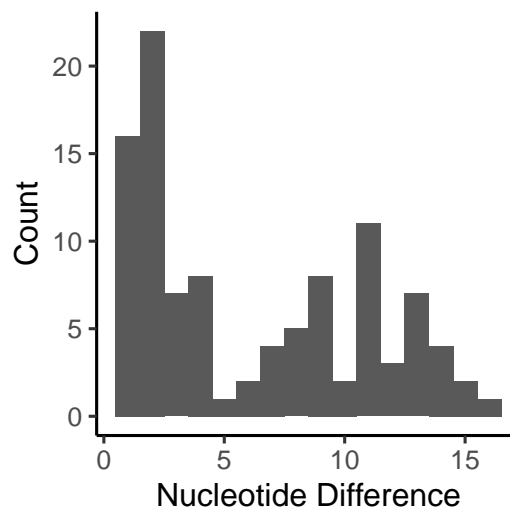
### IGHV4-30-2\*03

6 sequences assigned  
No exact matches.



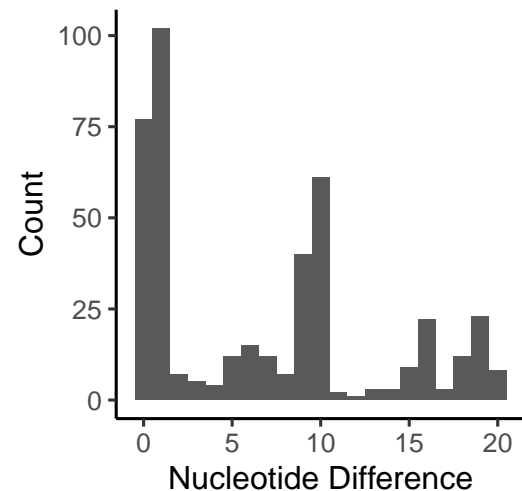
### IGHV4-39\*07

105 sequences assigned  
No exact matches.



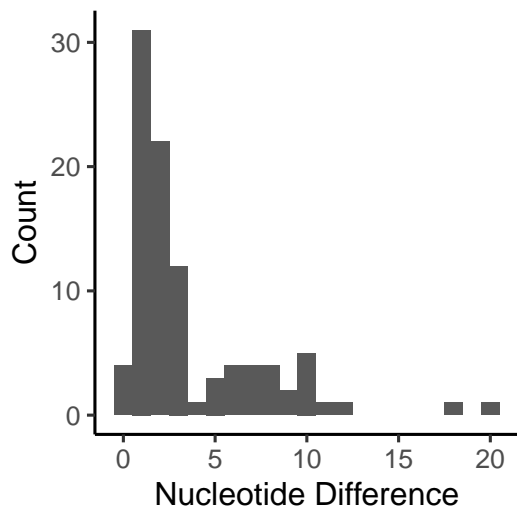
### IGHV4-59\*01\_07

903 sequences assigned  
77 (8.5%) exact matches, in which:  
53 unique CDR3  
6 unique J



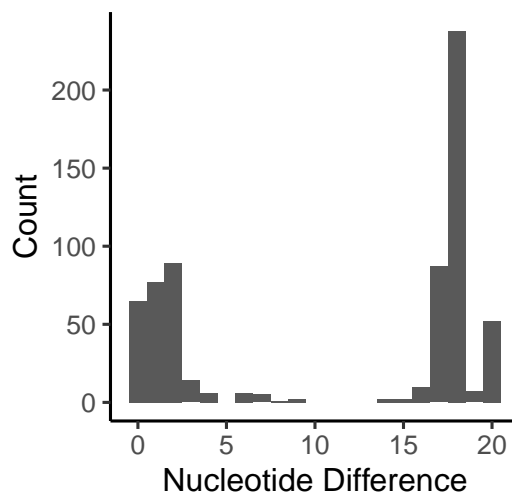
### IGHV4-59\*12

98 sequences assigned  
4 (4.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



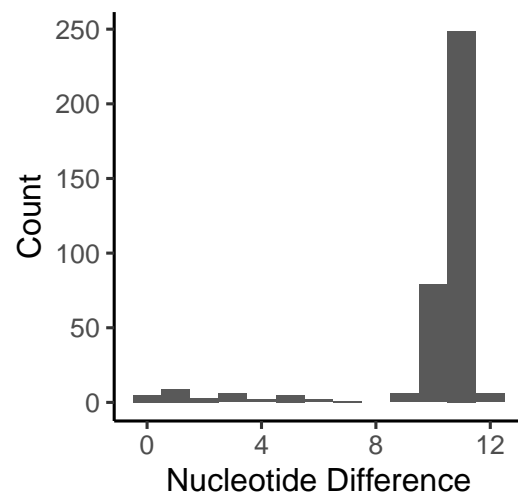
### IGHV5-10-1\*01\_03

1112 sequences assigned  
65 (5.8%) exact matches, in which:  
41 unique CDR3  
4 unique J



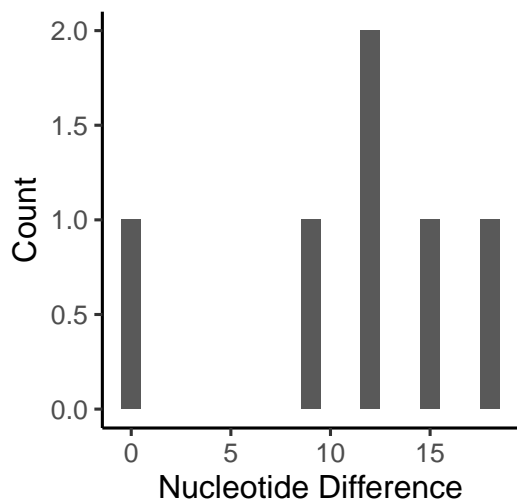
### IGHV6-1\*01\_02

374 sequences assigned  
5 (1.3%) exact matches, in which:  
5 unique CDR3  
4 unique J



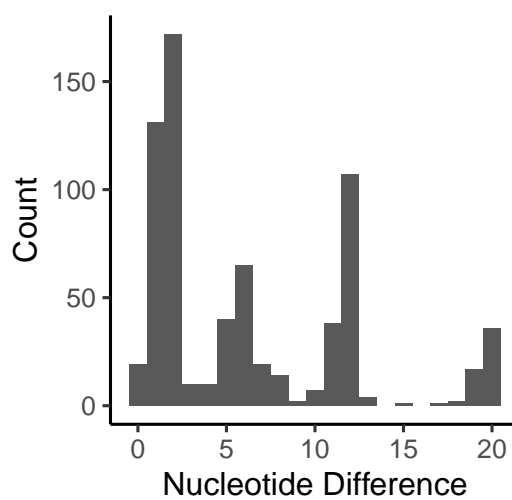
### IGHV4-59\*13

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



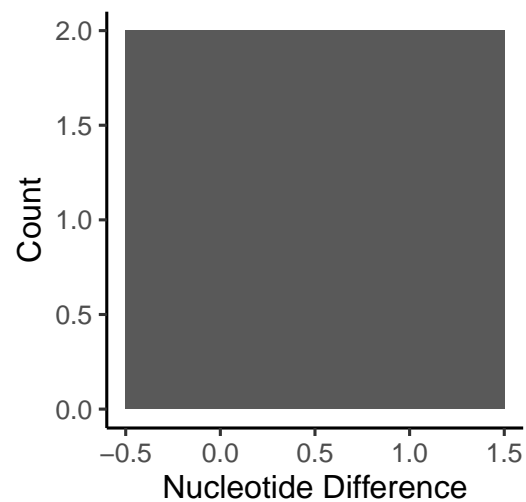
### IGHV5-51\*07

695 sequences assigned  
19 (2.7%) exact matches, in which:  
9 unique CDR3  
3 unique J



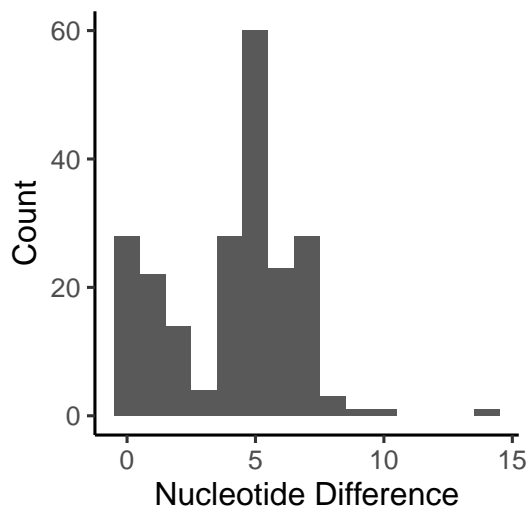
### IGHV7-4-1\*01

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



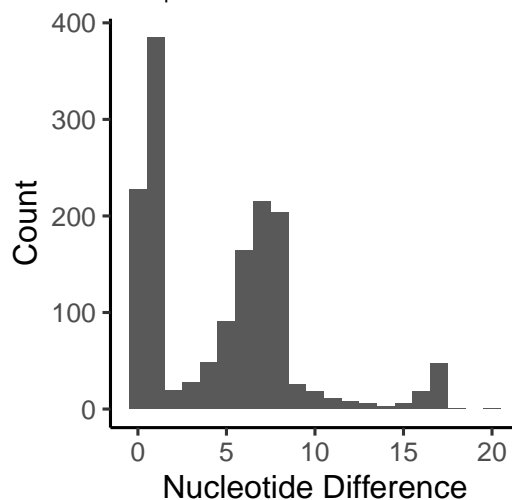
### IGHV4-61\*01

219 sequences assigned  
28 (12.8%) exact matches, in which:  
24 unique CDR3  
5 unique J



### IGHV5-51\*01\_03

1524 sequences assigned  
227 (14.9%) exact matches, in which:  
122 unique CDR3  
5 unique J







Warning – no inferred sequences found.