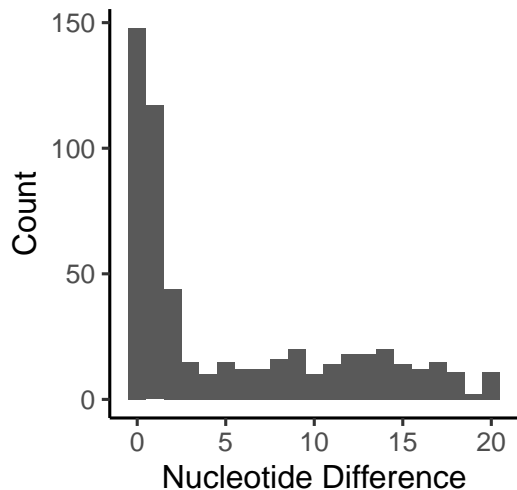


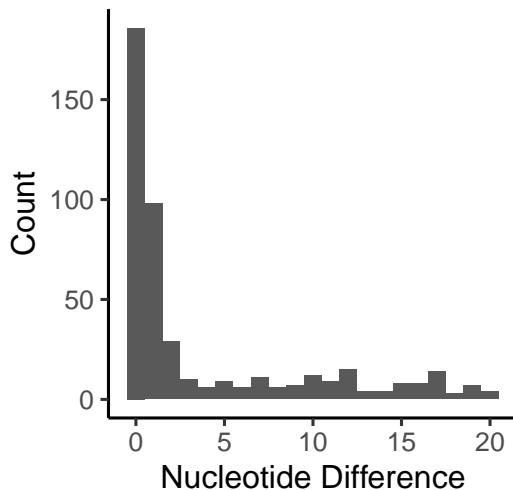
### IGHV1-2\*02

618 sequences assigned  
148 (23.9%) exact matches, in which:  
141 unique CDR3  
6 unique J



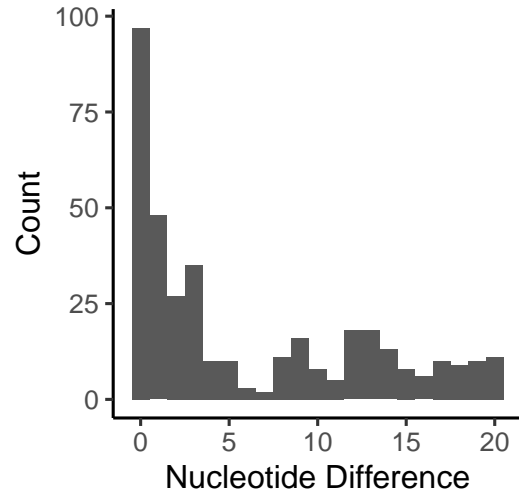
### IGHV1-18\*01

470 sequences assigned  
186 (39.6%) exact matches, in which:  
170 unique CDR3  
5 unique J



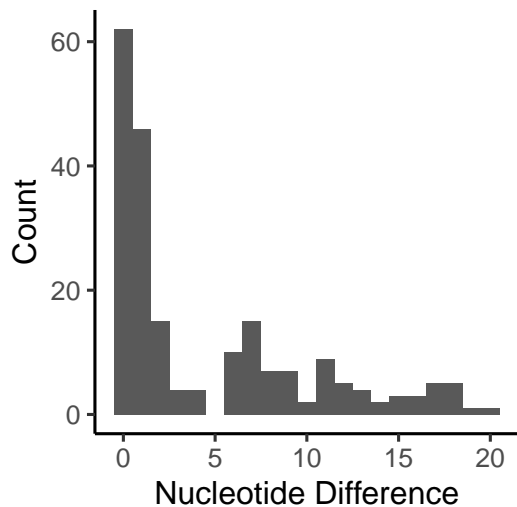
### IGHV1-46\*01

413 sequences assigned  
97 (23.5%) exact matches, in which:  
89 unique CDR3  
5 unique J



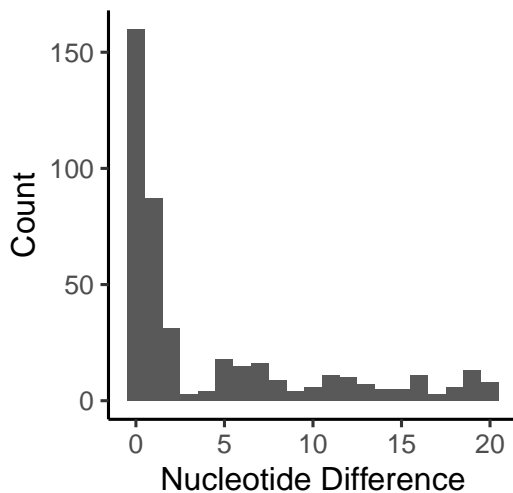
### IGHV1-3\*01

246 sequences assigned  
62 (25.2%) exact matches, in which:  
61 unique CDR3  
4 unique J



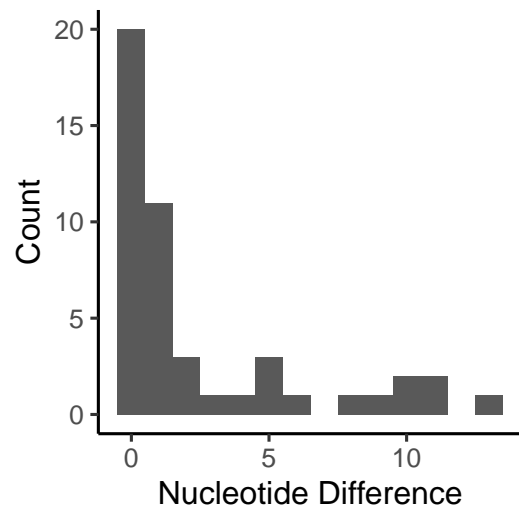
### IGHV1-18\*04

442 sequences assigned  
160 (36.2%) exact matches, in which:  
150 unique CDR3  
5 unique J



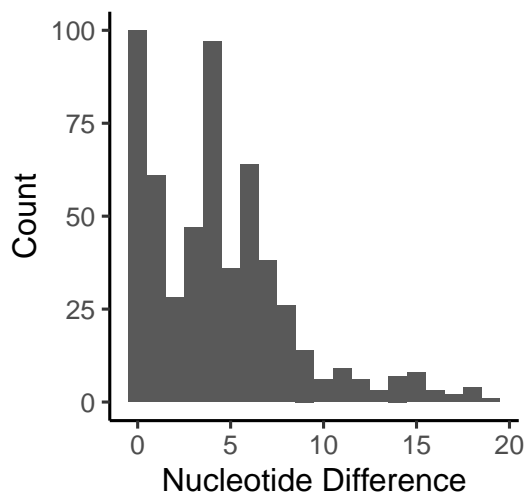
### IGHV1-58\*01

66 sequences assigned  
20 (30.3%) exact matches, in which:  
19 unique CDR3  
6 unique J



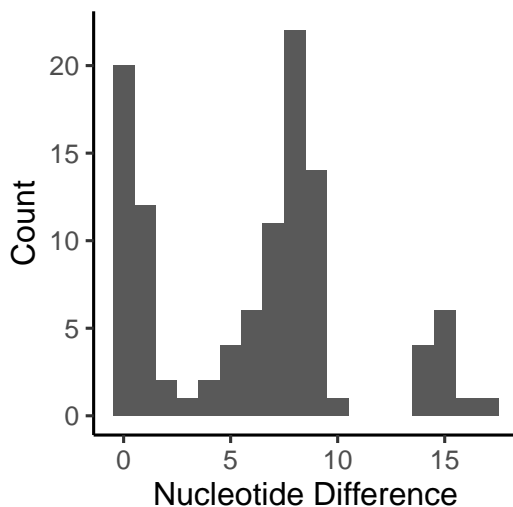
### IGHV1-8\*01

561 sequences assigned  
100 (17.8%) exact matches, in which:  
97 unique CDR3  
5 unique J



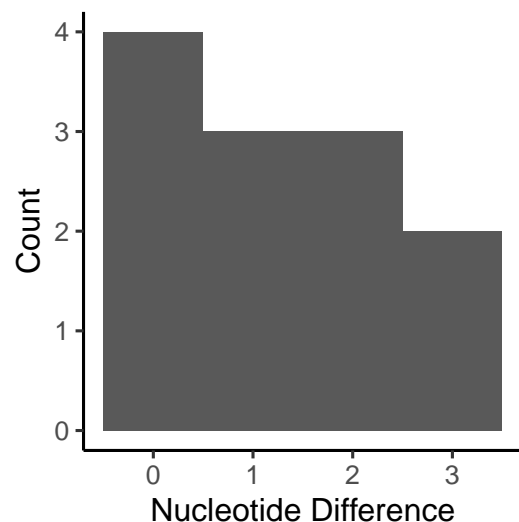
### IGHV1-24\*01

107 sequences assigned  
20 (18.7%) exact matches, in which:  
19 unique CDR3  
4 unique J



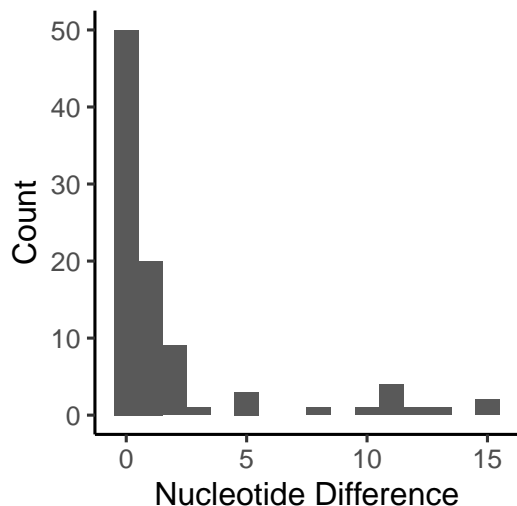
### IGHV1-69-2\*01

12 sequences assigned  
4 (33.3%) exact matches, in which:  
4 unique CDR3  
1 unique J



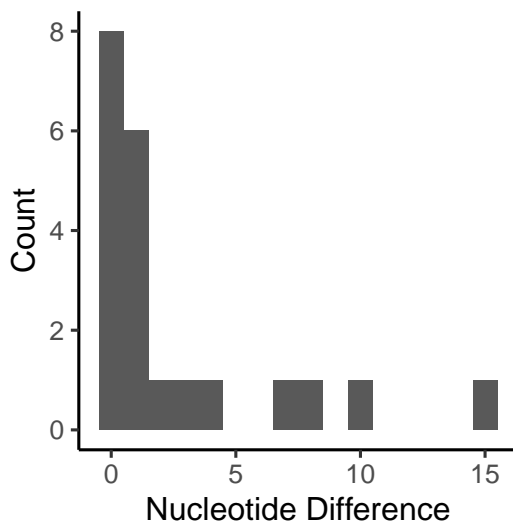
### IGHV1-69\*06

97 sequences assigned  
50 (51.5%) exact matches, in which:  
50 unique CDR3  
5 unique J



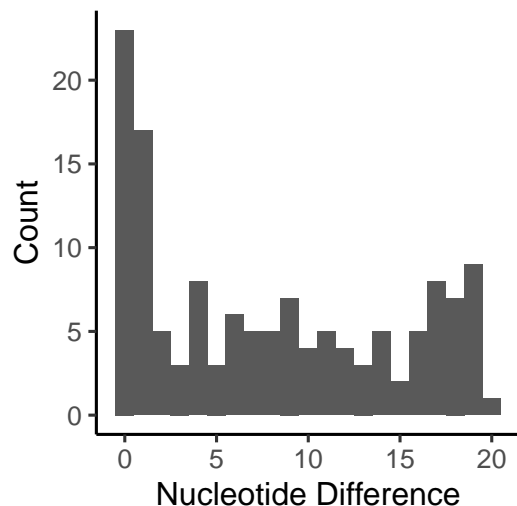
### IGHV2-26\*01

22 sequences assigned  
8 (36.4%) exact matches, in which:  
8 unique CDR3  
3 unique J



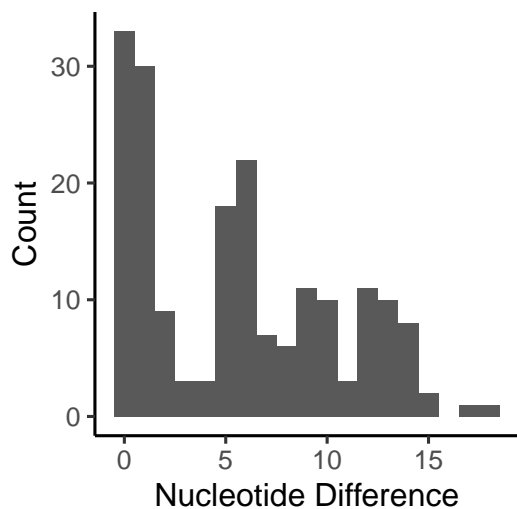
### IGHV3-7\*03

181 sequences assigned  
23 (12.7%) exact matches, in which:  
23 unique CDR3  
5 unique J



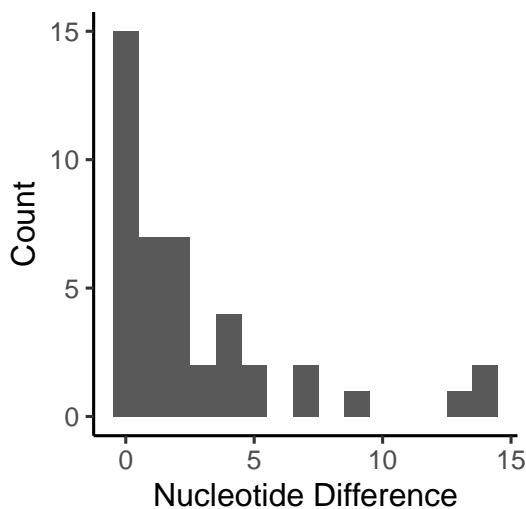
### IGHV2-5\*01

214 sequences assigned  
33 (15.4%) exact matches, in which:  
32 unique CDR3  
5 unique J



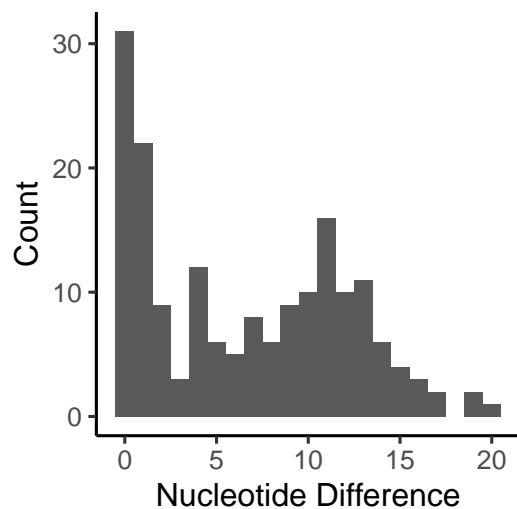
### IGHV2-70\*01

43 sequences assigned  
15 (34.9%) exact matches, in which:  
14 unique CDR3  
5 unique J



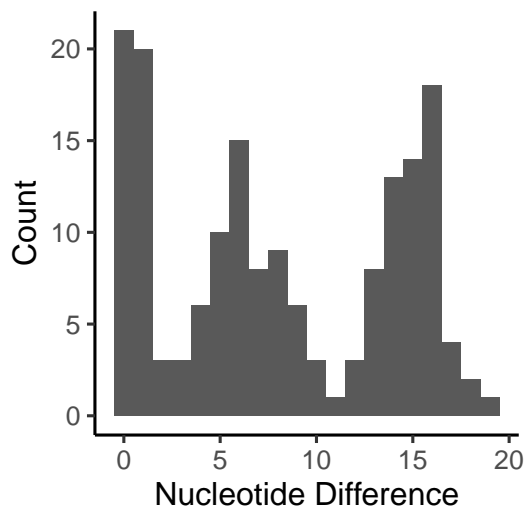
### IGHV3-9\*01

220 sequences assigned  
31 (14.1%) exact matches, in which:  
30 unique CDR3  
3 unique J



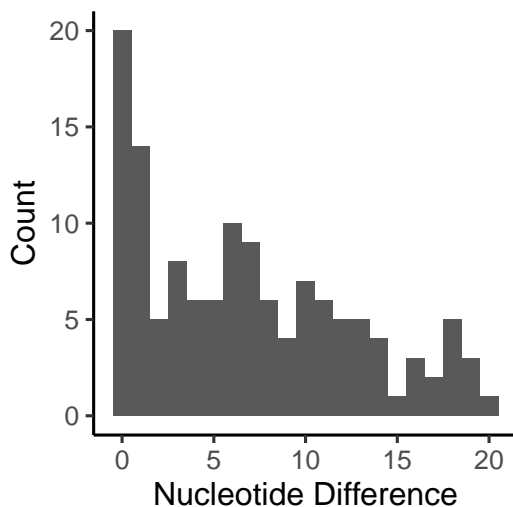
### IGHV2-5\*02

317 sequences assigned  
21 (6.6%) exact matches, in which:  
19 unique CDR3  
5 unique J



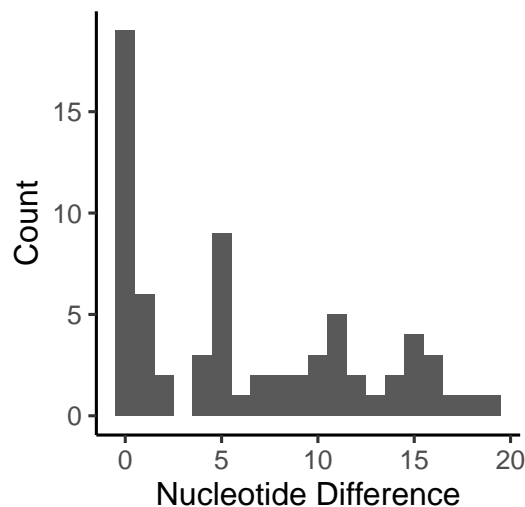
### IGHV3-7\*01

147 sequences assigned  
20 (13.6%) exact matches, in which:  
19 unique CDR3  
5 unique J



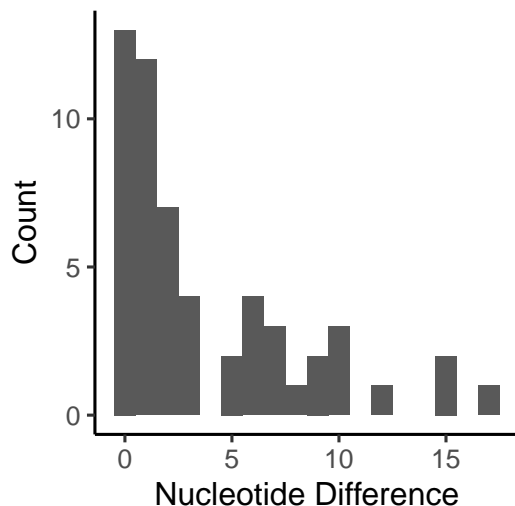
### IGHV3-11\*01

75 sequences assigned  
19 (25.3%) exact matches, in which:  
18 unique CDR3  
4 unique J



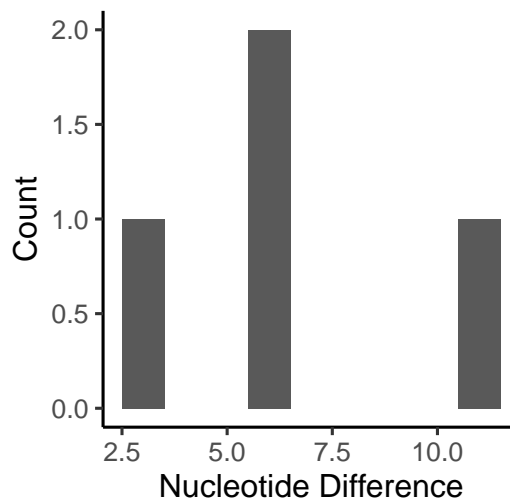
### IGHV3-11\*06

58 sequences assigned  
13 (22.4%) exact matches, in which:  
13 unique CDR3  
3 unique J



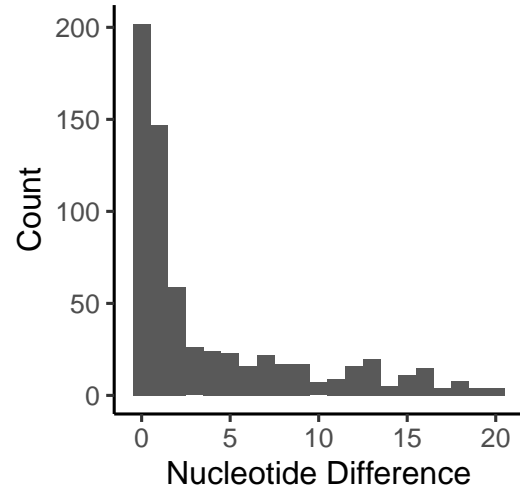
### IGHV3-20\*01

4 sequences assigned  
No exact matches.



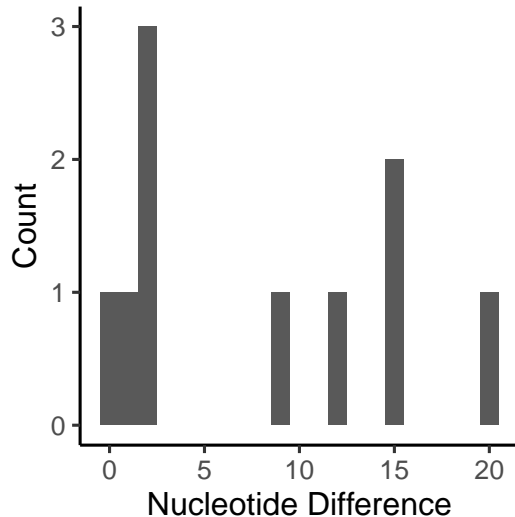
### IGHV3-33\*01

693 sequences assigned  
202 (29.1%) exact matches, in which:  
188 unique CDR3  
6 unique J



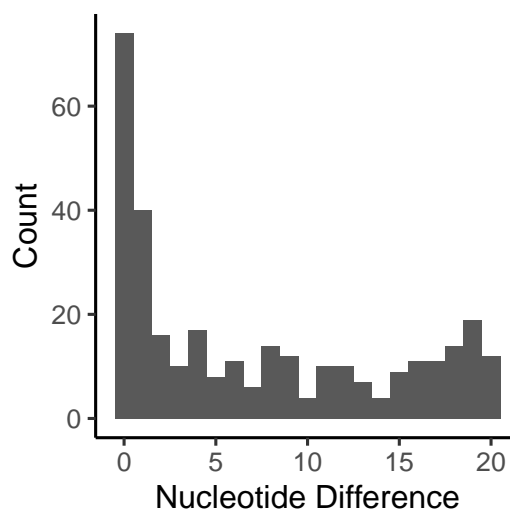
### IGHV3-13\*01

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



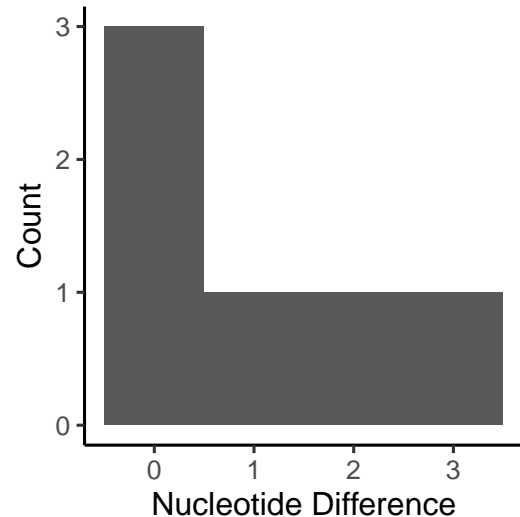
### IGHV3-21\*01

402 sequences assigned  
74 (18.4%) exact matches, in which:  
73 unique CDR3  
6 unique J



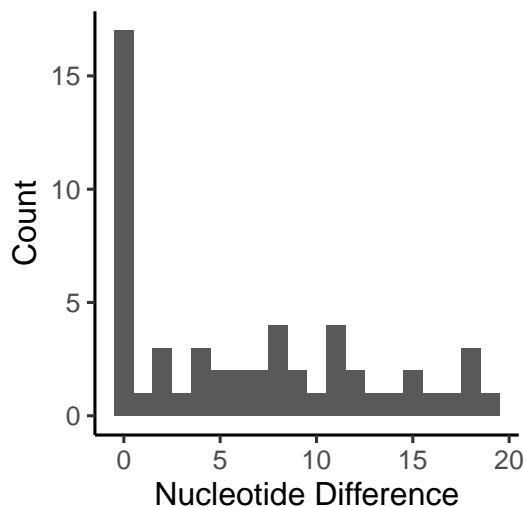
### IGHV3-43\*01

7 sequences assigned  
3 (42.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



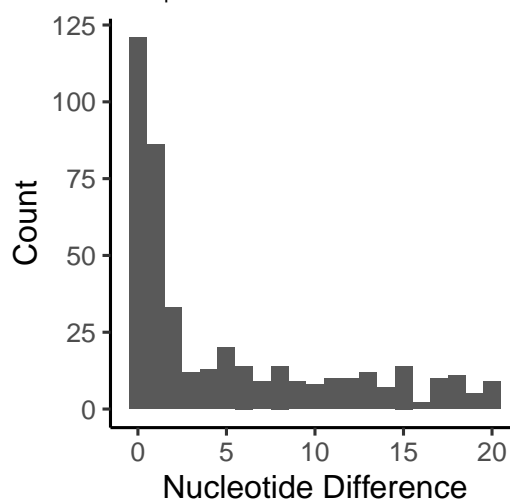
### IGHV3-15\*01

61 sequences assigned  
17 (27.9%) exact matches, in which:  
17 unique CDR3  
3 unique J



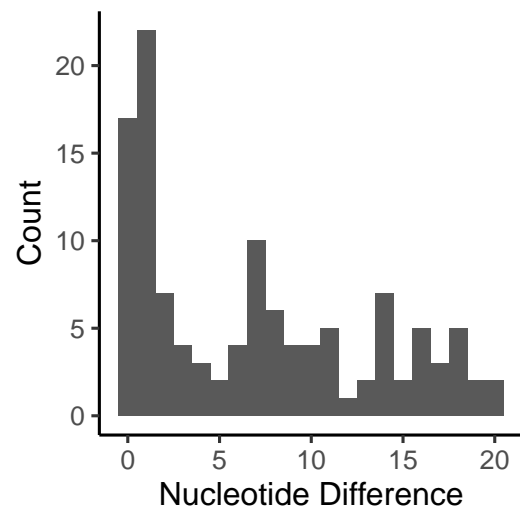
### IGHV3-30-3\*01

486 sequences assigned  
121 (24.9%) exact matches, in which:  
118 unique CDR3  
5 unique J



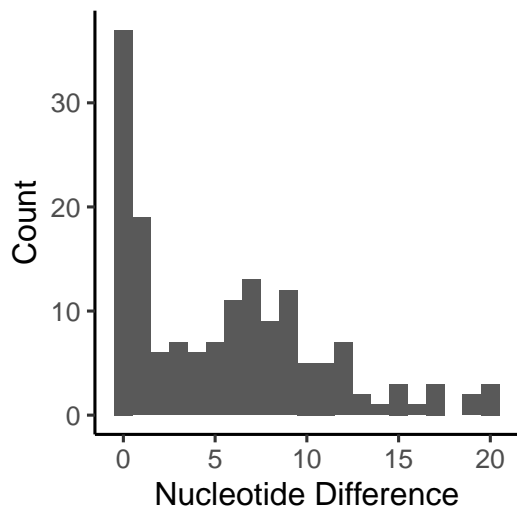
### IGHV3-48\*02

139 sequences assigned  
17 (12.2%) exact matches, in which:  
16 unique CDR3  
4 unique J



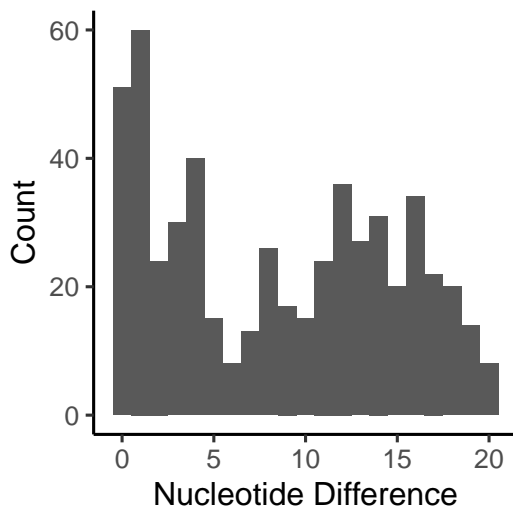
### IGHV3-48\*03

167 sequences assigned  
37 (22.2%) exact matches, in which:  
37 unique CDR3  
5 unique J



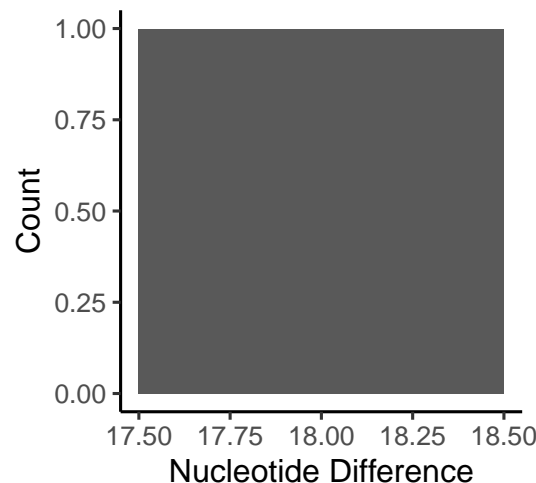
### IGHV3-53\*01

560 sequences assigned  
51 (9.1%) exact matches, in which:  
47 unique CDR3  
5 unique J



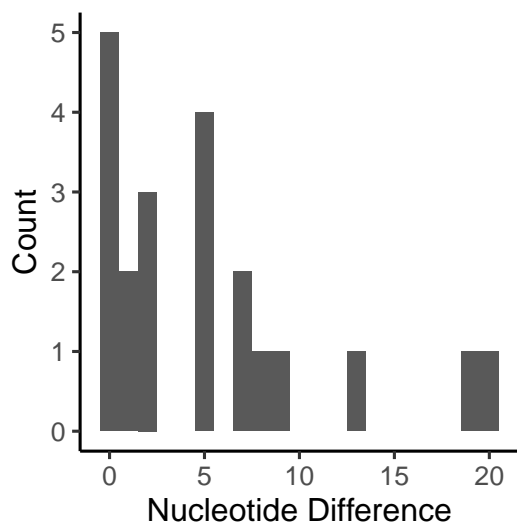
### IGHV3-66\*01

1 sequences assigned  
No exact matches.



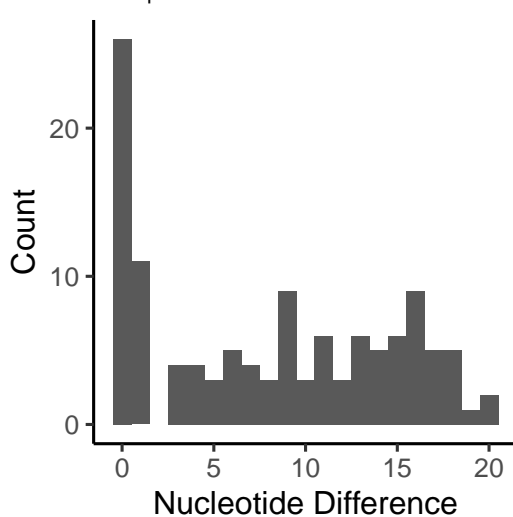
### IGHV3-49\*04

24 sequences assigned  
5 (20.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



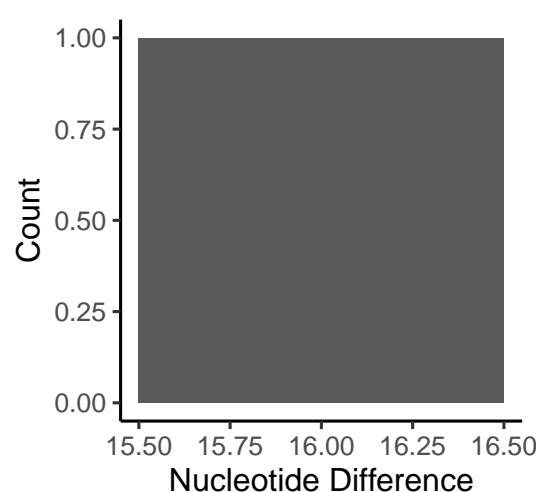
### IGHV3-53\*02

133 sequences assigned  
26 (19.5%) exact matches, in which:  
25 unique CDR3  
5 unique J



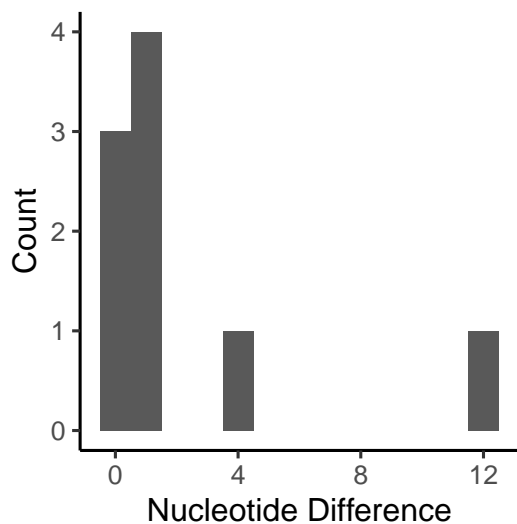
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



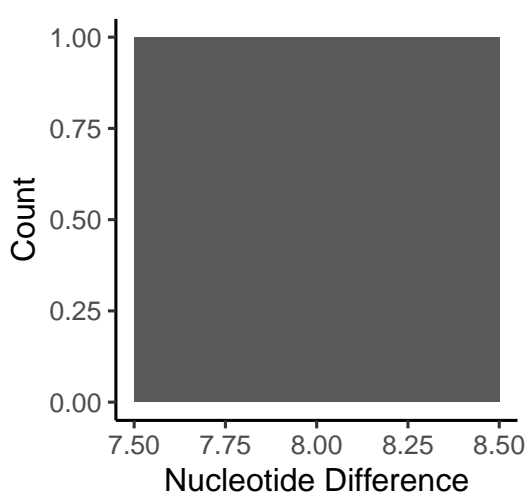
### IGHV3-49\*05

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



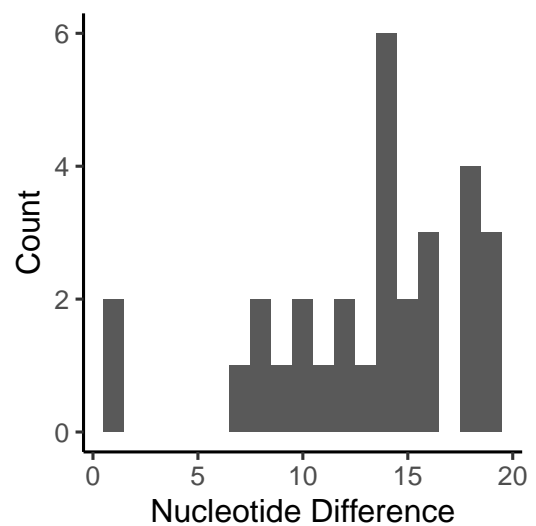
### IGHV3-64\*02

2 sequences assigned  
No exact matches.



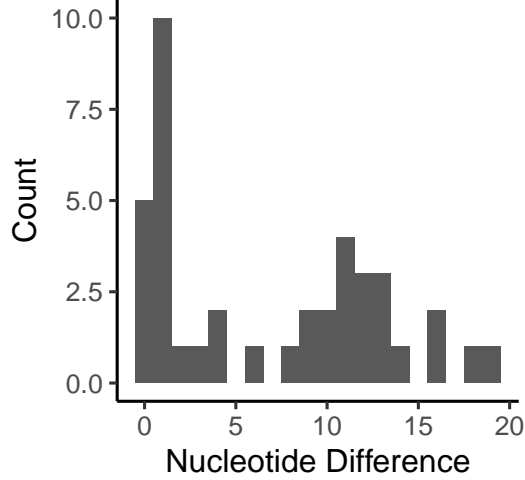
### IGHV3-72\*01

49 sequences assigned  
No exact matches.



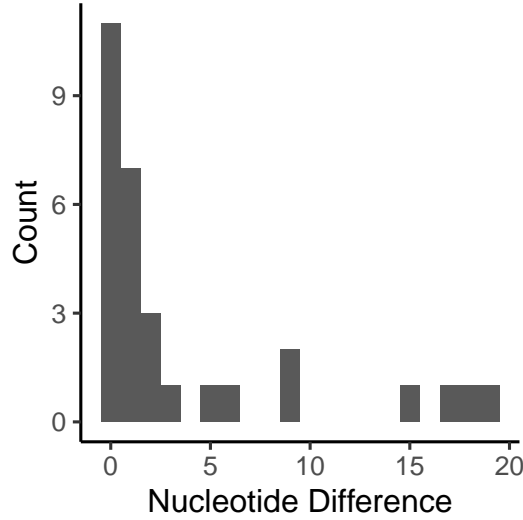
### IGHV3-73\*02

43 sequences assigned  
5 (11.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



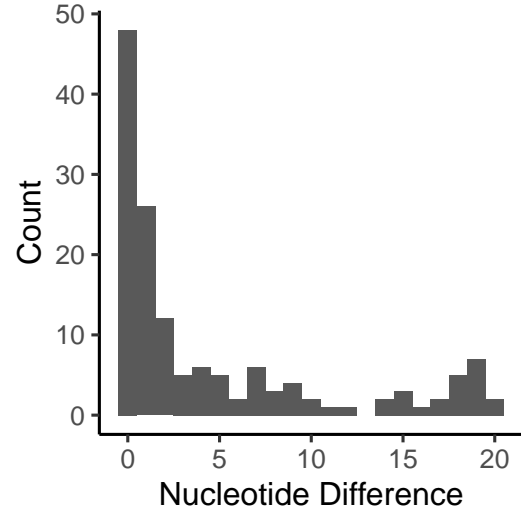
### IGHV3-64D\*06

35 sequences assigned  
11 (31.4%) exact matches, in which:  
11 unique CDR3  
4 unique J



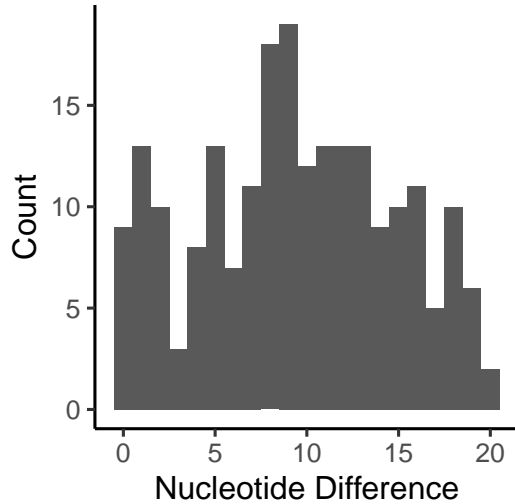
### IGHV4-30-4\*01

144 sequences assigned  
48 (33.3%) exact matches, in which:  
39 unique CDR3  
4 unique J



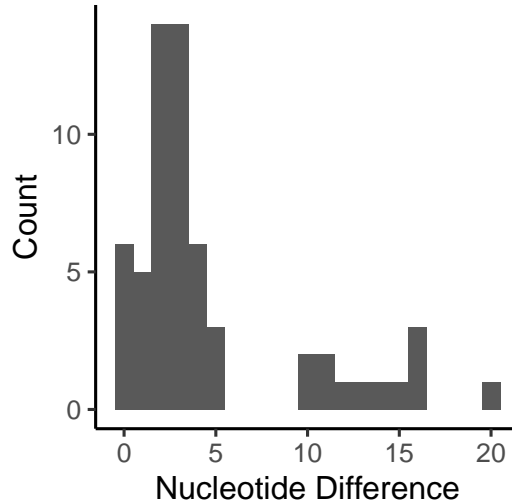
### IGHV3-74\*01

261 sequences assigned  
9 (3.4%) exact matches, in which:  
8 unique CDR3  
3 unique J



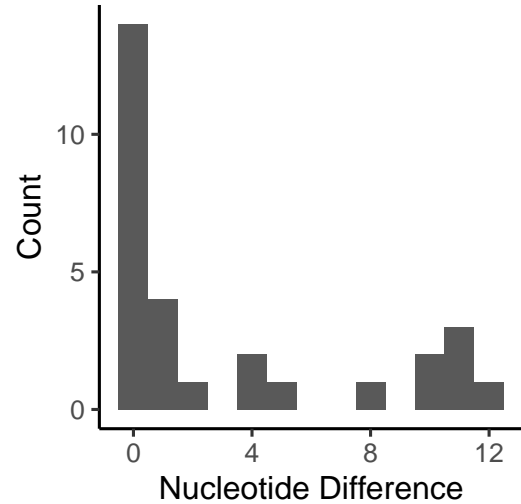
### IGHV4-4\*02

62 sequences assigned  
6 (9.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



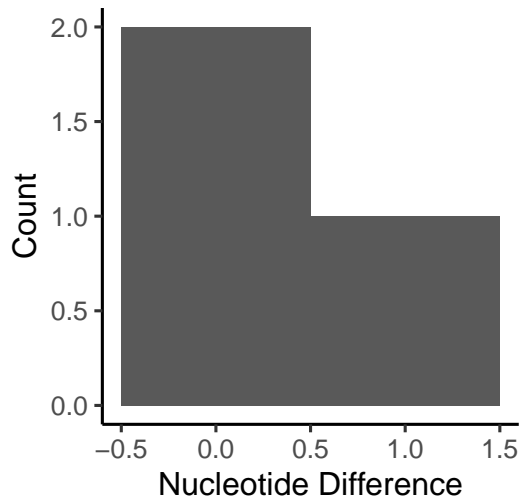
### IGHV4-30-2\*01

30 sequences assigned  
14 (46.7%) exact matches, in which:  
14 unique CDR3  
4 unique J



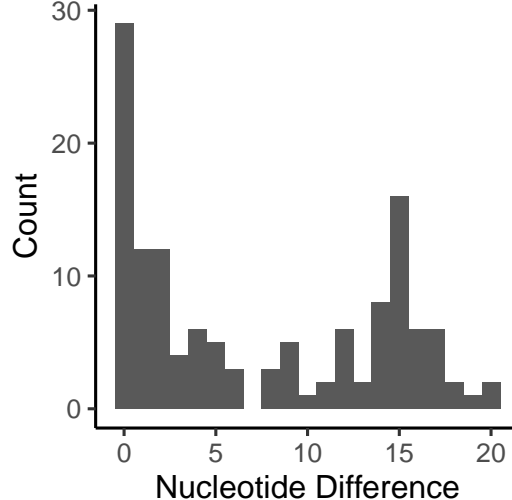
### IGHV3-43D\*04

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



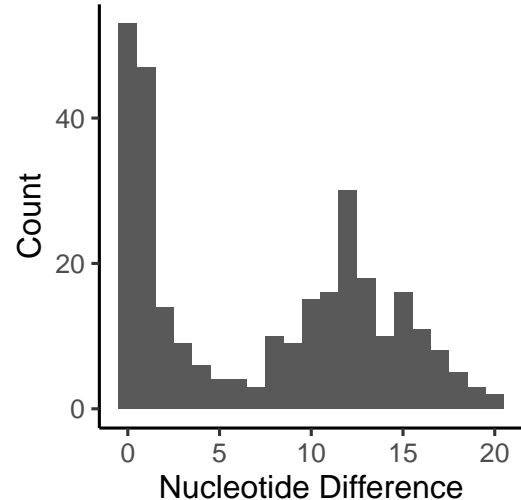
### IGHV4-4\*07

169 sequences assigned  
29 (17.2%) exact matches, in which:  
28 unique CDR3  
5 unique J



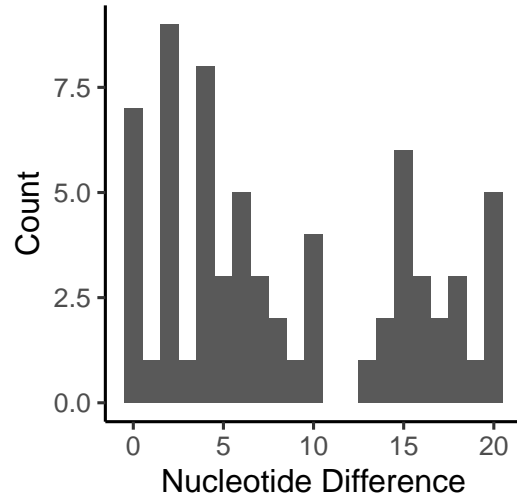
### IGHV4-31\*03

306 sequences assigned  
53 (17.3%) exact matches, in which:  
46 unique CDR3  
5 unique J



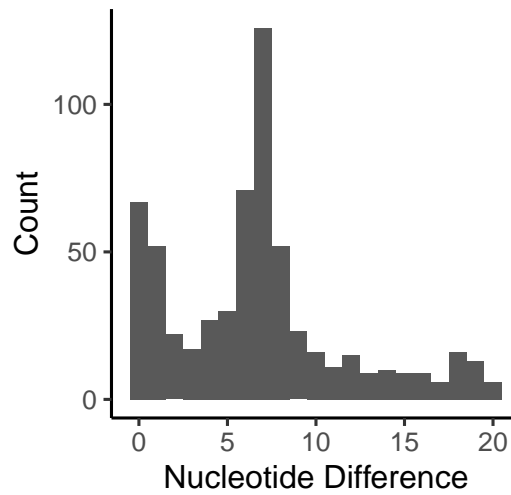
### IGHV4-34\*01

82 sequences assigned  
7 (8.5%) exact matches, in which:  
7 unique CDR3  
3 unique J



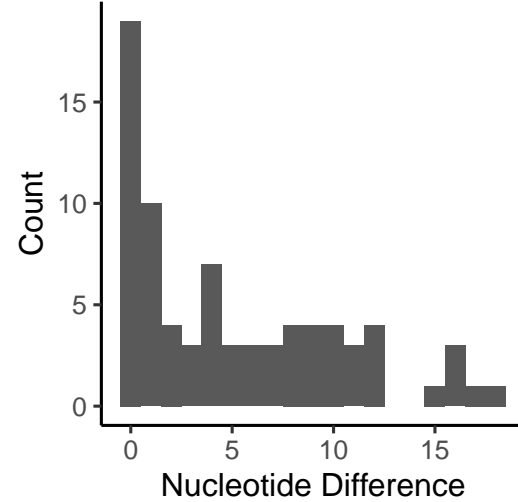
### IGHV4-39\*01

692 sequences assigned  
67 (9.7%) exact matches, in which:  
66 unique CDR3  
6 unique J



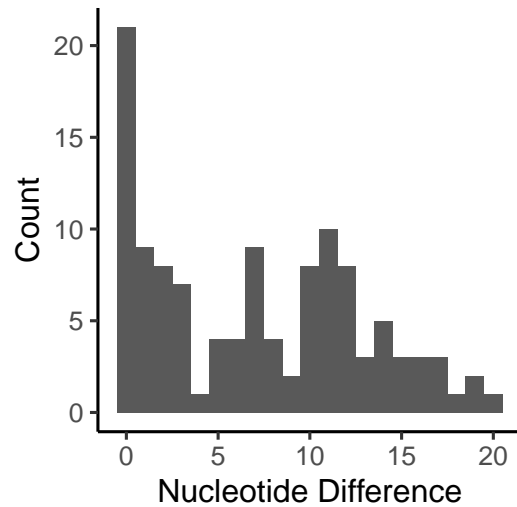
### IGHV5-10-1\*03

78 sequences assigned  
19 (24.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



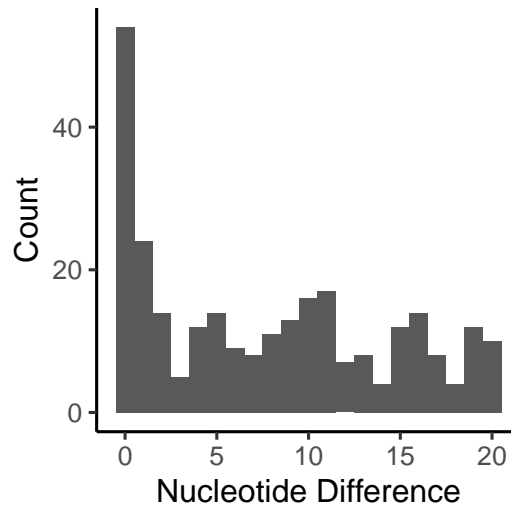
### IGHV4-38-2\*01

121 sequences assigned  
21 (17.4%) exact matches, in which:  
21 unique CDR3  
4 unique J



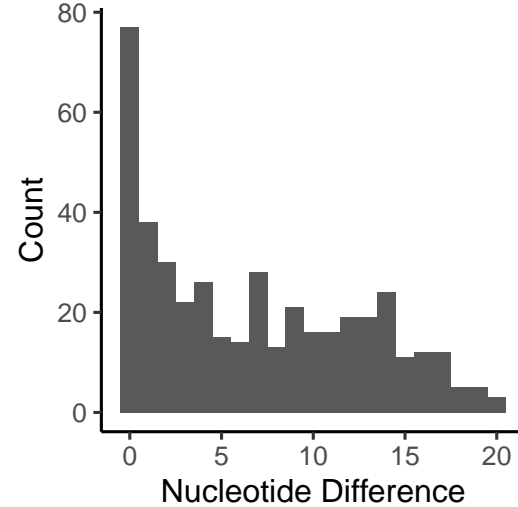
### IGHV4-59\*01

322 sequences assigned  
54 (16.8%) exact matches, in which:  
52 unique CDR3  
5 unique J



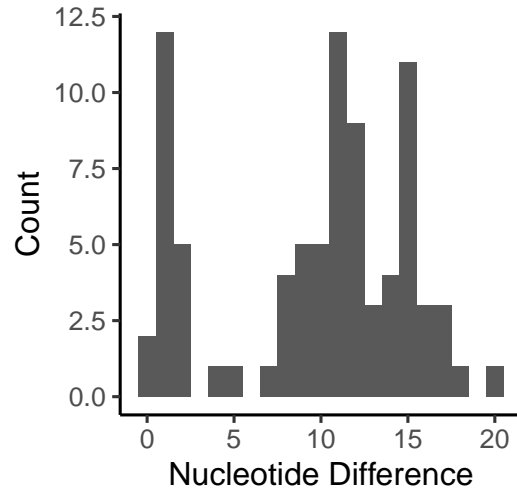
### IGHV5-51\*01

447 sequences assigned  
77 (17.2%) exact matches, in which:  
75 unique CDR3  
4 unique J



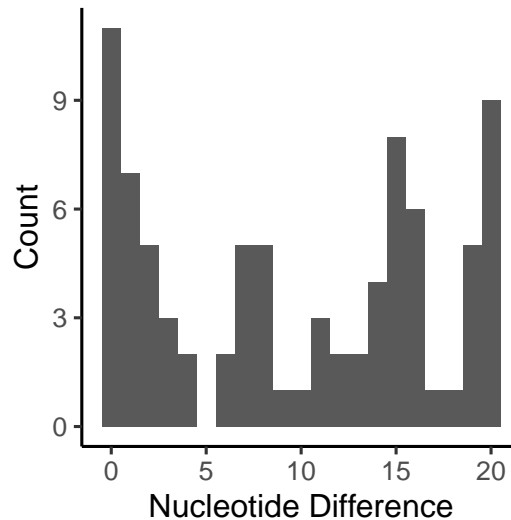
### IGHV4-38-2\*02

83 sequences assigned  
2 (2.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



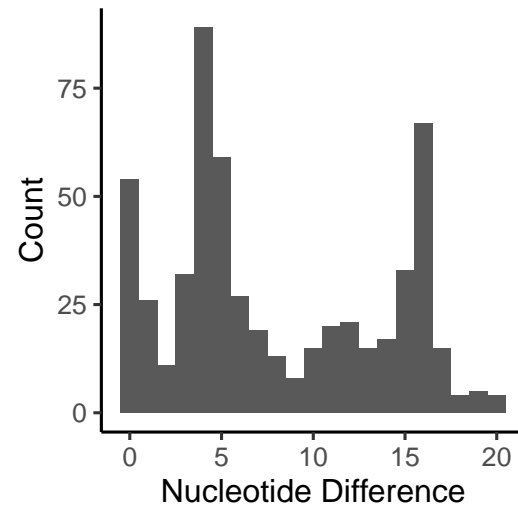
### IGHV4-61\*01

95 sequences assigned  
11 (11.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



### IGHV6-1\*01

562 sequences assigned  
54 (9.6%) exact matches, in which:  
53 unique CDR3  
5 unique J





Warning – no inferred sequences found.