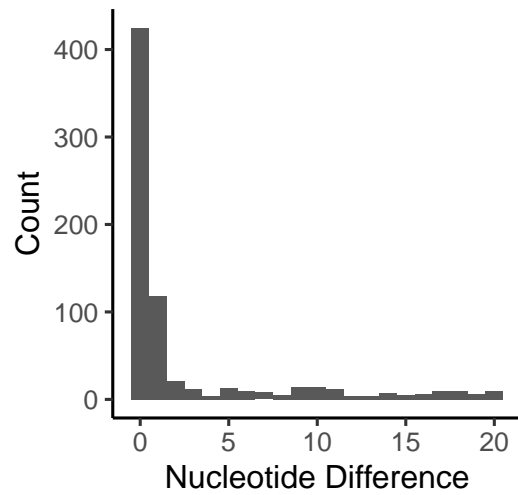


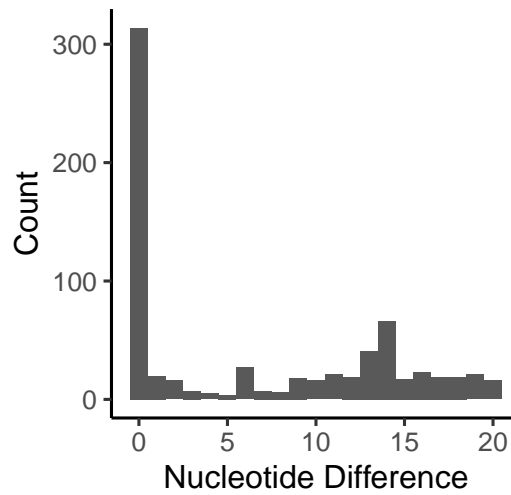
### IGHV1–2\*02

834 sequences assigned  
425 (51%) exact matches, in which:  
417 unique CDR3  
6 unique J



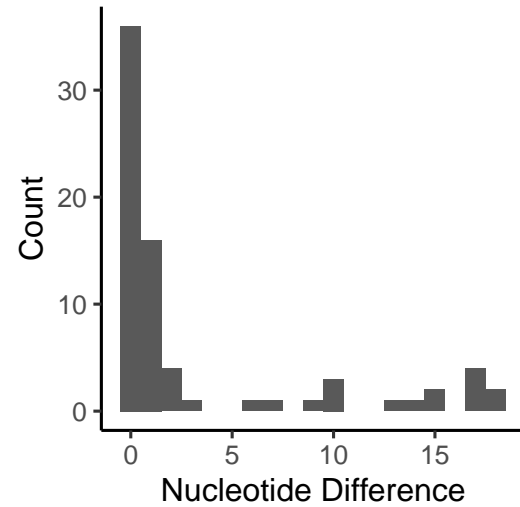
### IGHV1–18\*01

789 sequences assigned  
314 (39.8%) exact matches, in which:  
306 unique CDR3  
6 unique J



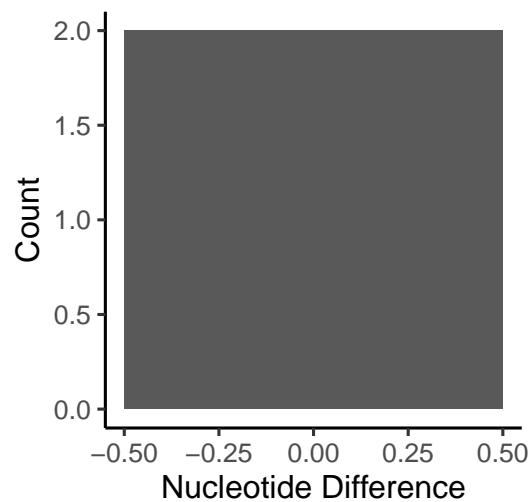
### IGHV1–46\*03

77 sequences assigned  
36 (46.8%) exact matches, in which:  
35 unique CDR3  
4 unique J



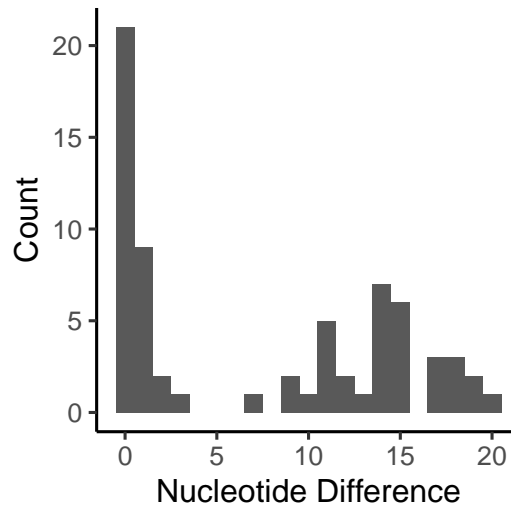
### IGHV1–3\*02

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



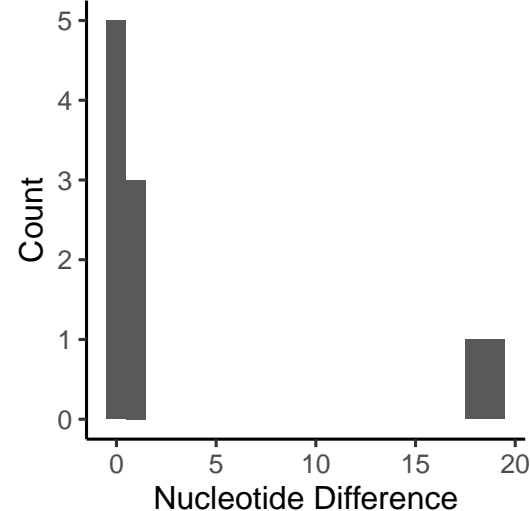
### IGHV1–24\*01

82 sequences assigned  
21 (25.6%) exact matches, in which:  
21 unique CDR3  
6 unique J



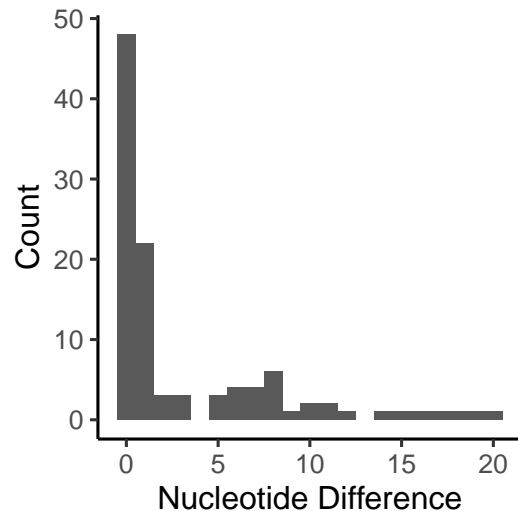
### IGHV1–58\*02

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



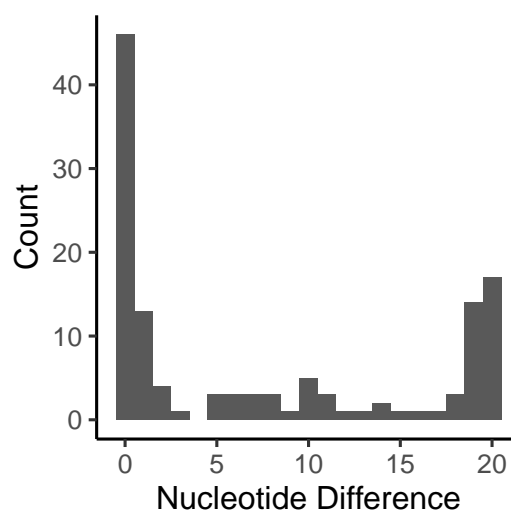
### IGHV1–8\*01

111 sequences assigned  
48 (43.2%) exact matches, in which:  
46 unique CDR3  
4 unique J



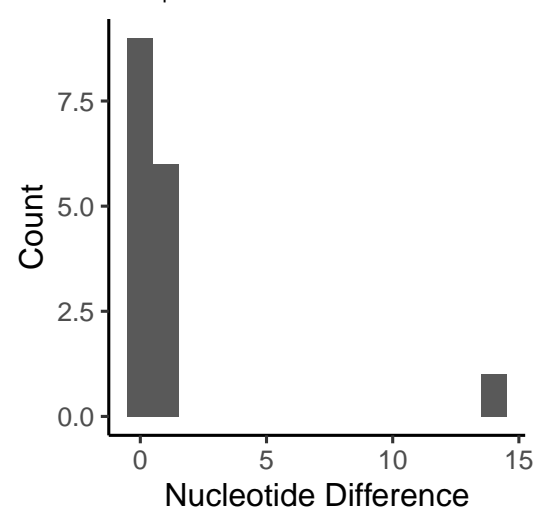
### IGHV1–46\*01

149 sequences assigned  
46 (30.9%) exact matches, in which:  
45 unique CDR3  
4 unique J



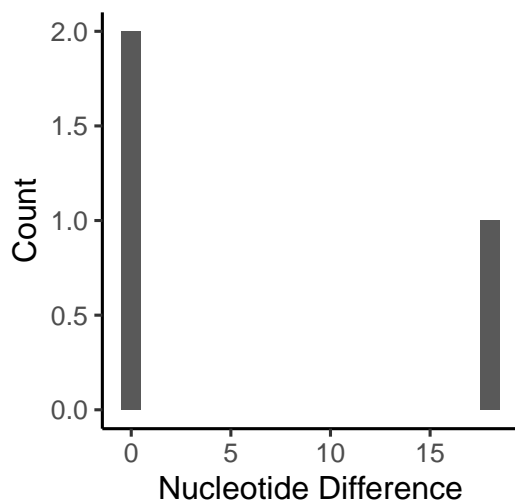
### IGHV1–58\*01\_03

17 sequences assigned  
9 (52.9%) exact matches, in which:  
9 unique CDR3  
3 unique J



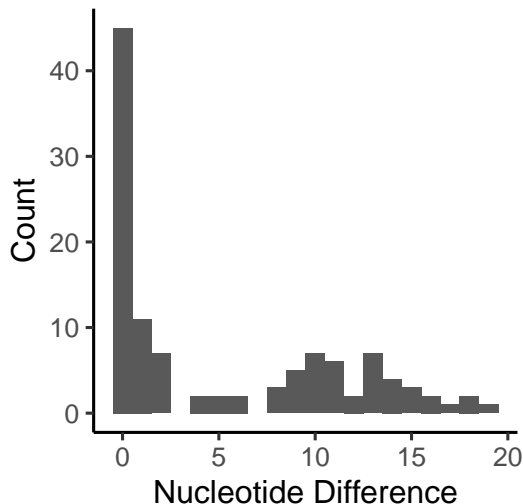
### IGHV1-69-2\*01

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



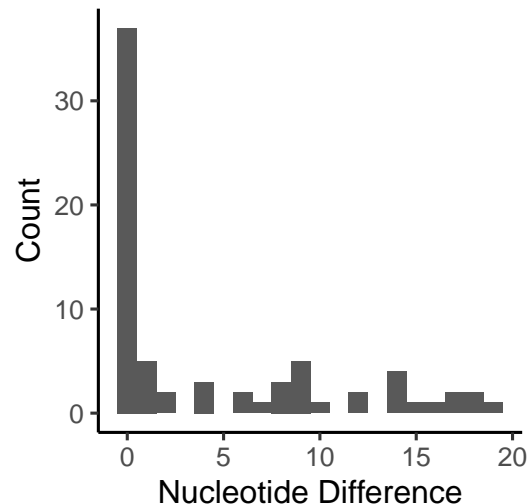
### IGHV2-5\*02

119 sequences assigned  
45 (37.8%) exact matches, in which:  
41 unique CDR3  
5 unique J



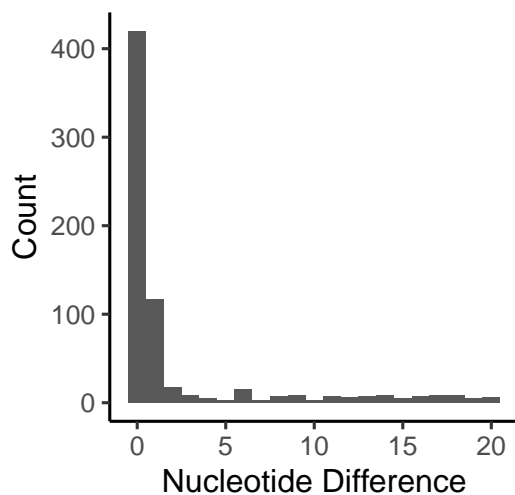
### IGHV3-7\*01

73 sequences assigned  
37 (50.7%) exact matches, in which:  
23 unique CDR3  
4 unique J



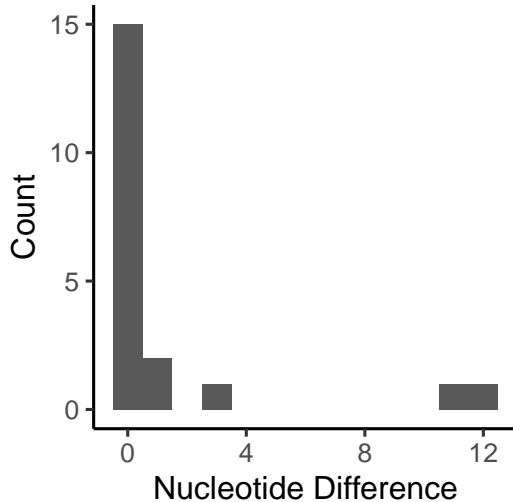
### IGHV1-69\*01\_12\_13

741 sequences assigned  
420 (56.7%) exact matches, in which:  
406 unique CDR3  
6 unique J



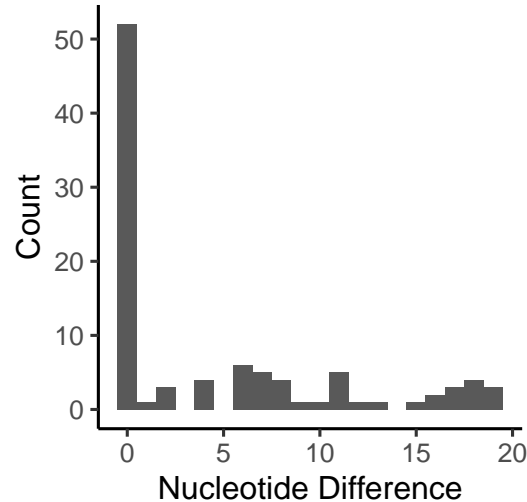
### IGHV2-26\*01

20 sequences assigned  
15 (75%) exact matches, in which:  
13 unique CDR3  
5 unique J



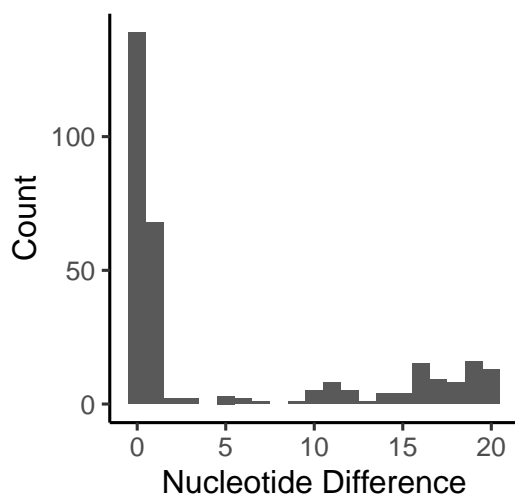
### IGHV3-7\*03

111 sequences assigned  
52 (46.8%) exact matches, in which:  
31 unique CDR3  
6 unique J



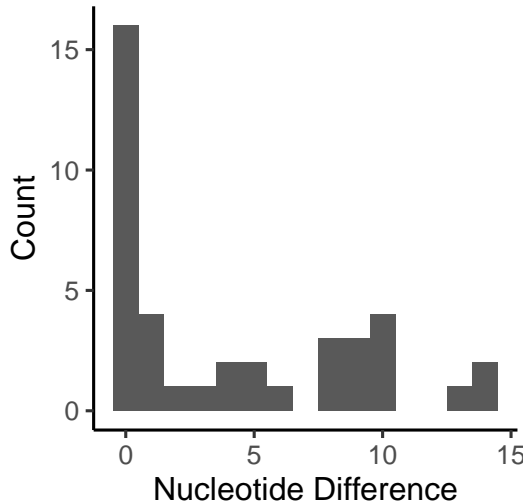
### IGHV1-69\*10

383 sequences assigned  
139 (36.3%) exact matches, in which:  
138 unique CDR3  
5 unique J



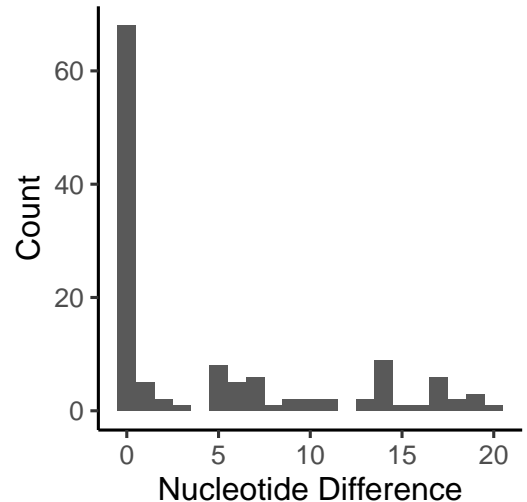
### IGHV2-70\*01

40 sequences assigned  
16 (40%) exact matches, in which:  
13 unique CDR3  
4 unique J



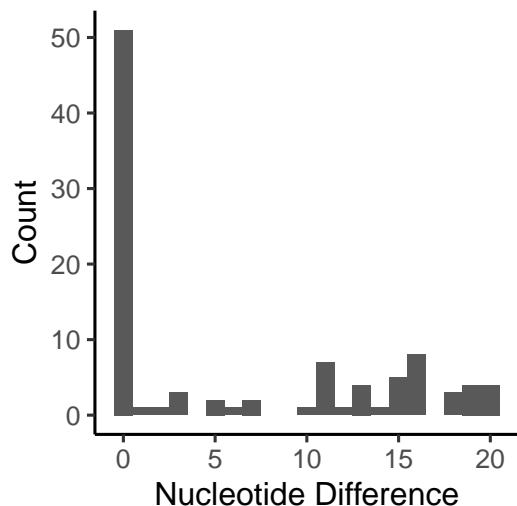
### IGHV3-9\*01

144 sequences assigned  
68 (47.2%) exact matches, in which:  
42 unique CDR3  
5 unique J



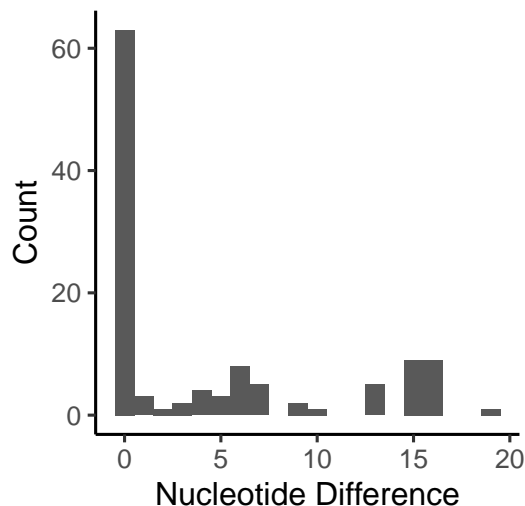
### IGHV3-11\*01

117 sequences assigned  
51 (43.6%) exact matches, in which:  
32 unique CDR3  
4 unique J



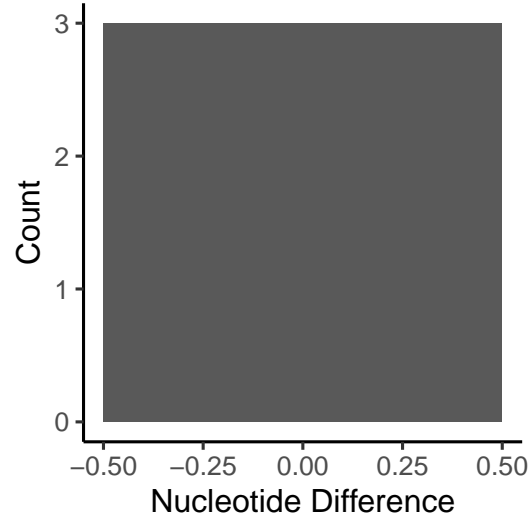
### IGHV3-15\*07

125 sequences assigned  
63 (50.4%) exact matches, in which:  
43 unique CDR3  
4 unique J



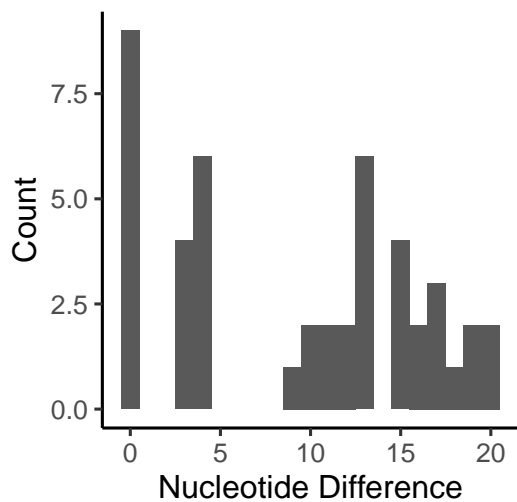
### IGHV3-20\*01\_02

3 sequences assigned  
3 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



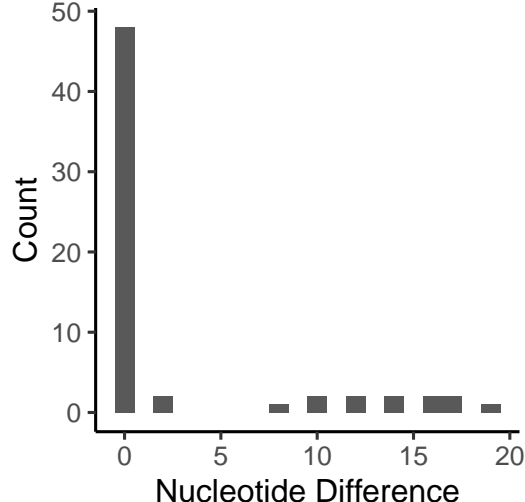
### IGHV3-11\*06

53 sequences assigned  
9 (17%) exact matches, in which:  
6 unique CDR3  
2 unique J



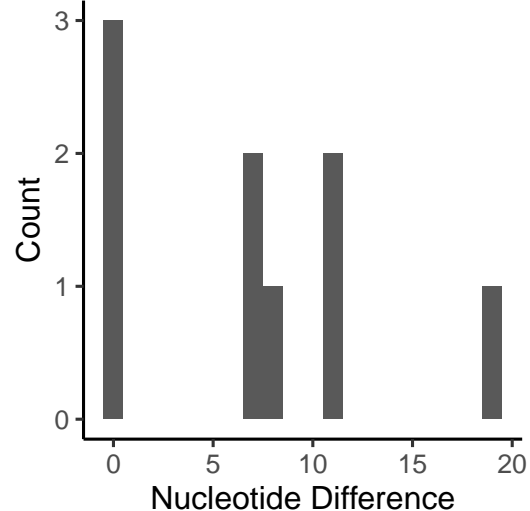
### IGHV3-15\*01\_02

66 sequences assigned  
48 (72.7%) exact matches, in which:  
30 unique CDR3  
4 unique J



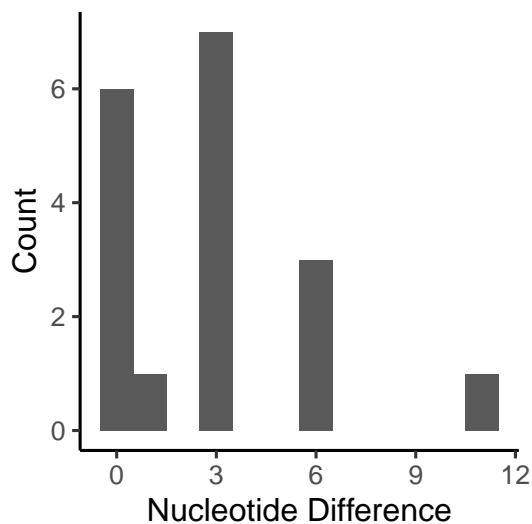
### IGHV3-20\*03\_04

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



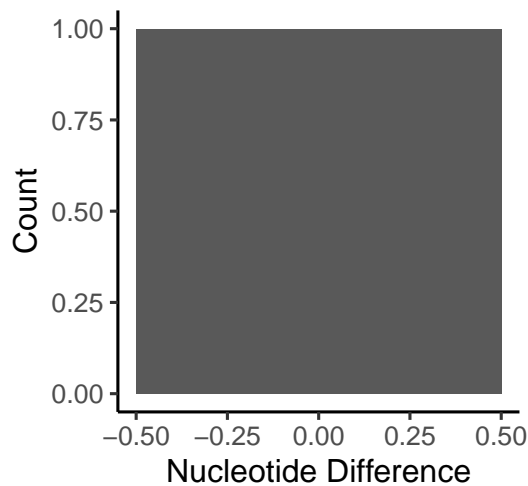
### IGHV3-13\*01

18 sequences assigned  
6 (33.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



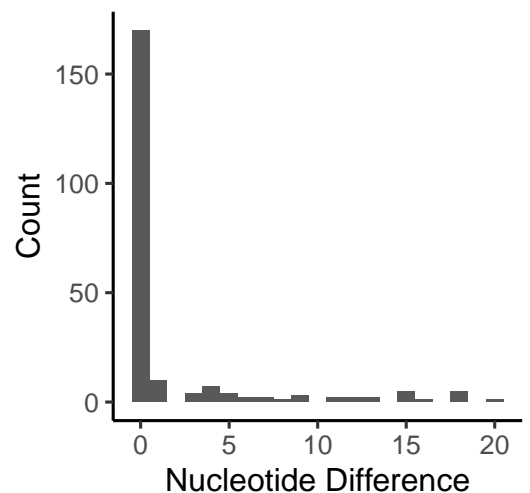
### IGHV3-19\*01

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



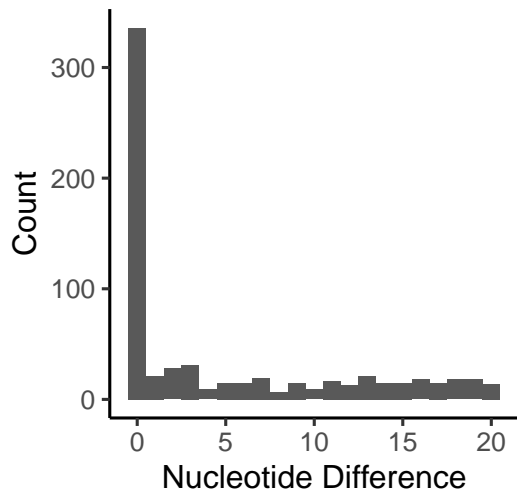
### IGHV3-21\*01\_02

227 sequences assigned  
170 (74.9%) exact matches, in which:  
102 unique CDR3  
5 unique J



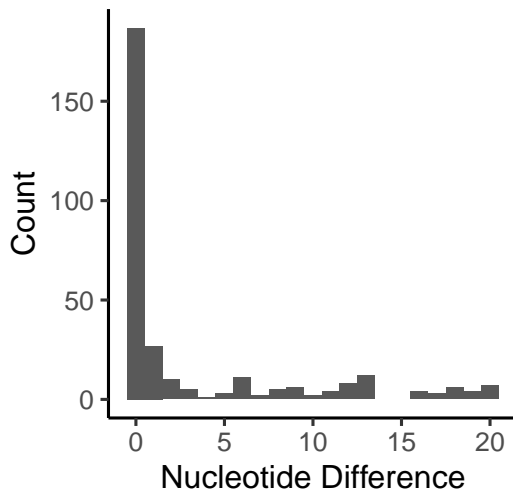
### IGHV3–23\*01\_04

826 sequences assigned  
336 (40.7%) exact matches, in which:  
231 unique CDR3  
6 unique J



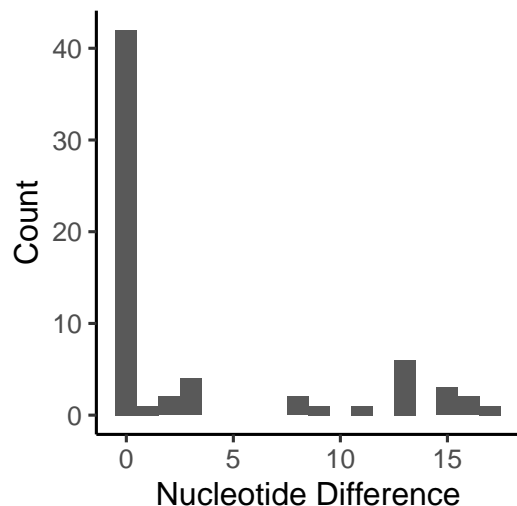
### IGHV3–33\*01

364 sequences assigned  
187 (51.4%) exact matches, in which:  
119 unique CDR3  
5 unique J



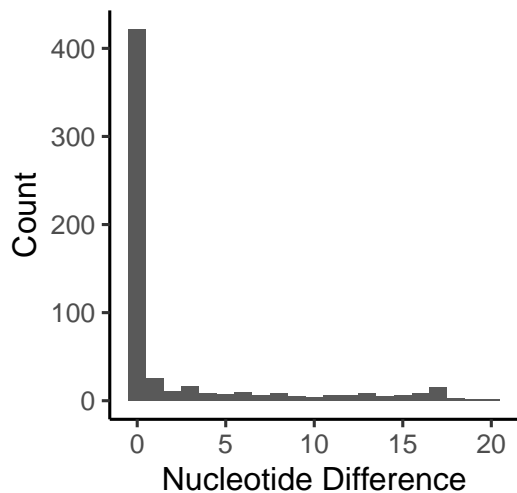
### IGHV3–48\*02

72 sequences assigned  
42 (58.3%) exact matches, in which:  
28 unique CDR3  
4 unique J



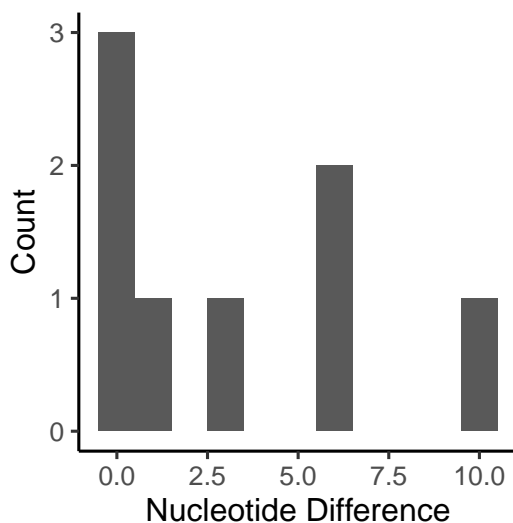
### IGHV3–30–3\*01

614 sequences assigned  
422 (68.7%) exact matches, in which:  
273 unique CDR3  
6 unique J



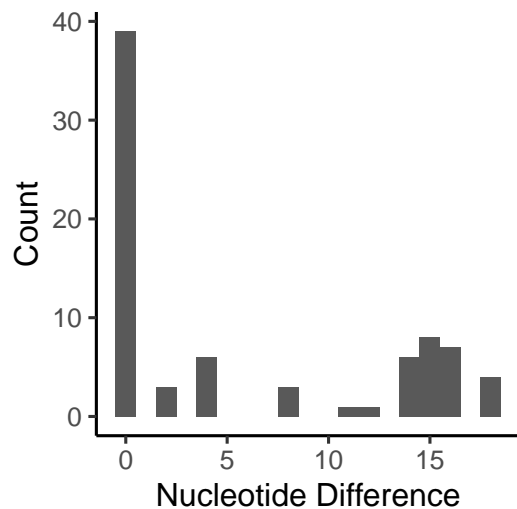
### IGHV3–43\*01

10 sequences assigned  
3 (30%) exact matches, in which:  
2 unique CDR3  
2 unique J



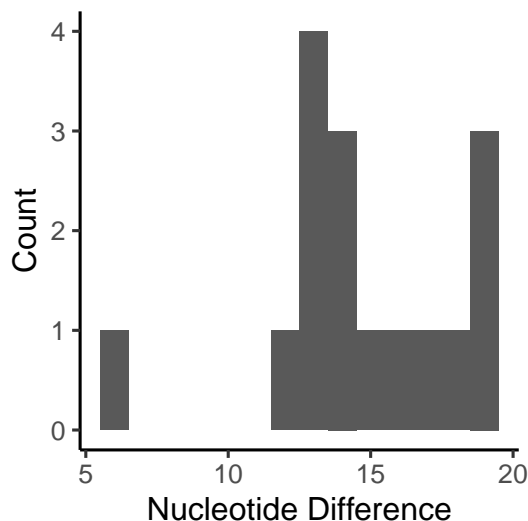
### IGHV3–49\*03\_05

86 sequences assigned  
39 (45.3%) exact matches, in which:  
24 unique CDR3  
4 unique J



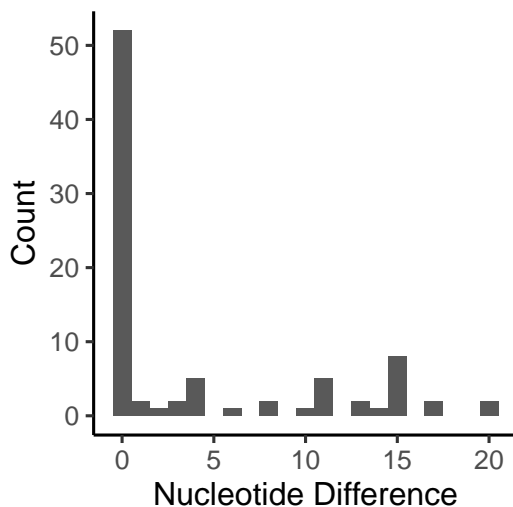
### IGHV3–30\*04

27 sequences assigned  
No exact matches.



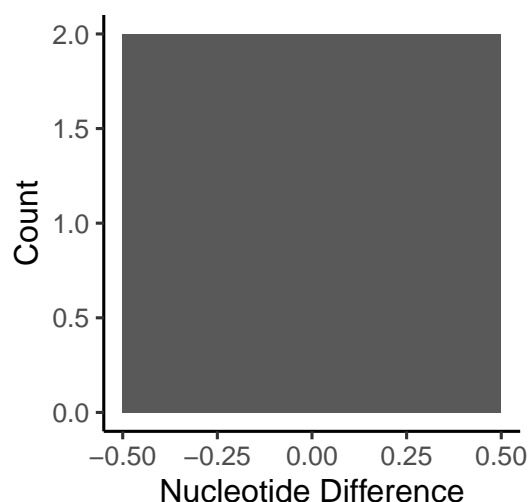
### IGHV3–48\*01

90 sequences assigned  
52 (57.8%) exact matches, in which:  
32 unique CDR3  
4 unique J



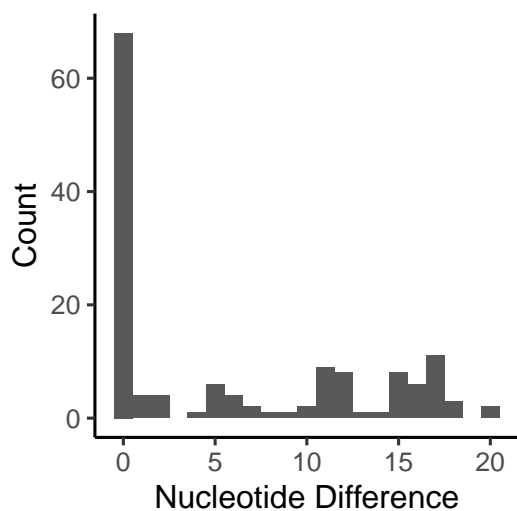
### IGHV3–52\*01\_03

2 sequences assigned  
2 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



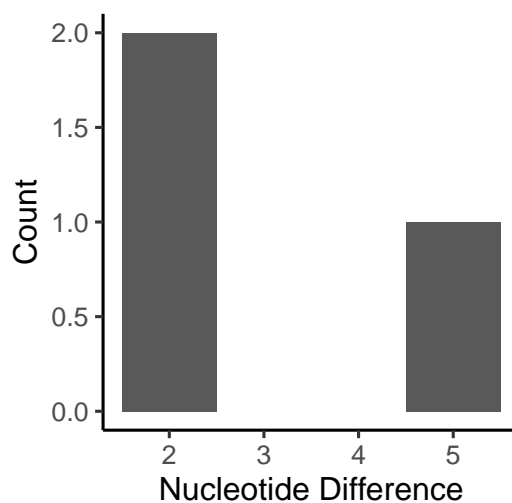
### IGHV3-53\*01\_02

163 sequences assigned  
68 (41.7%) exact matches, in which:  
43 unique CDR3  
4 unique J



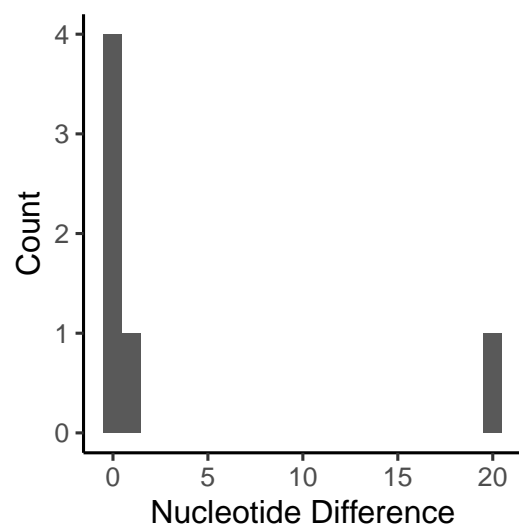
### IGHV3-66\*03

3 sequences assigned  
No exact matches.



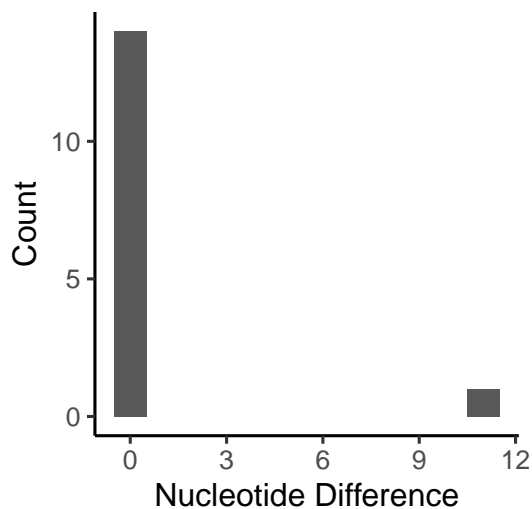
### IGHV3-72\*01

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



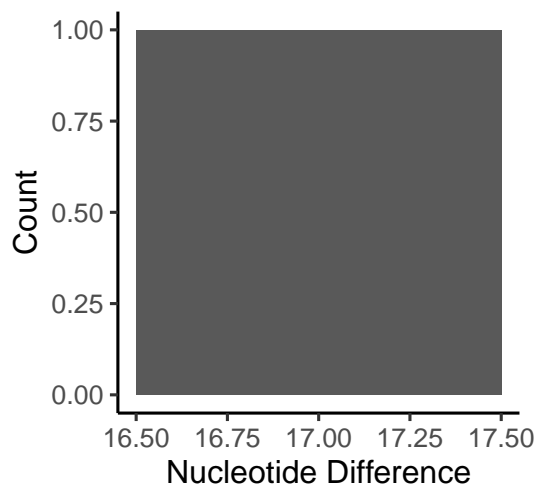
### IGHV3-64\*01

15 sequences assigned  
14 (93.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



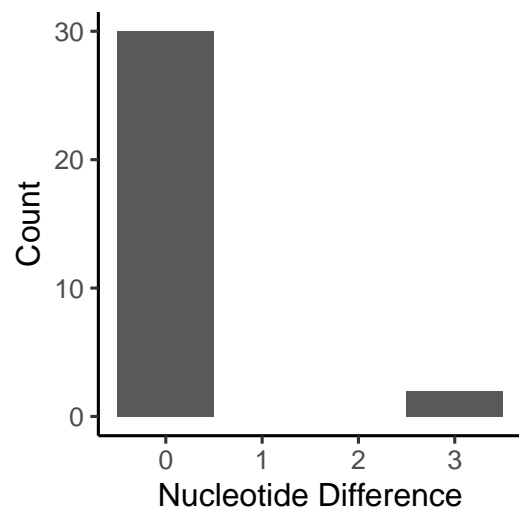
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



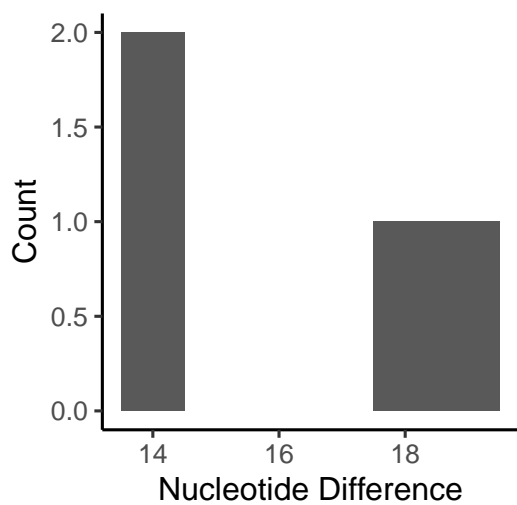
### IGHV3-73\*01\_02

33 sequences assigned  
30 (90.9%) exact matches, in which:  
17 unique CDR3  
3 unique J



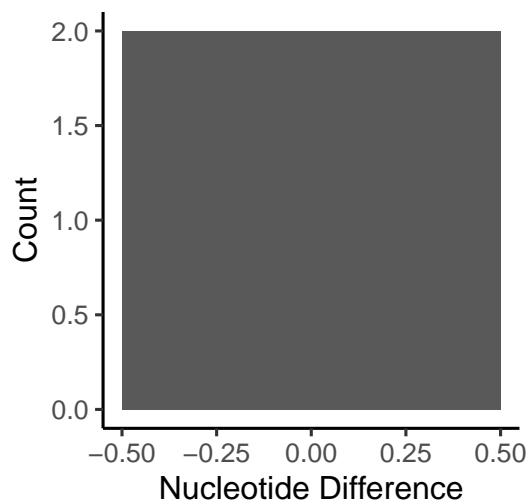
### IGHV3-64\*02\_07

8 sequences assigned  
No exact matches.



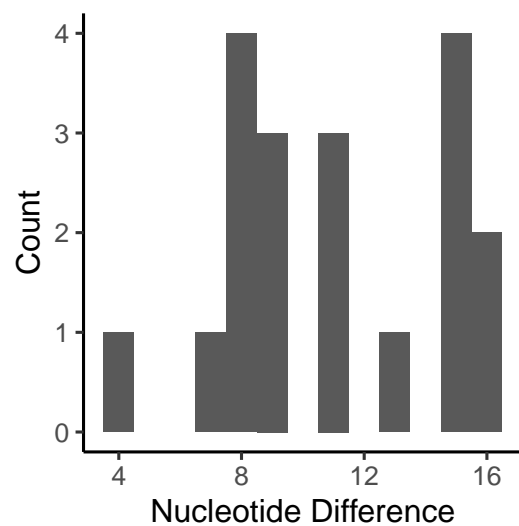
### IGHV3-69-1\*01

2 sequences assigned  
2 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



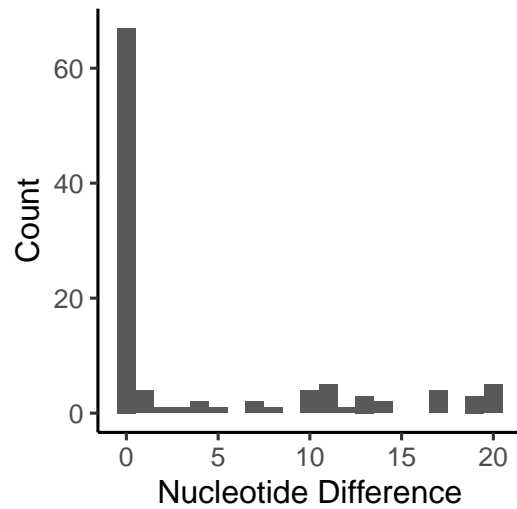
### IGHV3-74\*03

37 sequences assigned  
No exact matches.



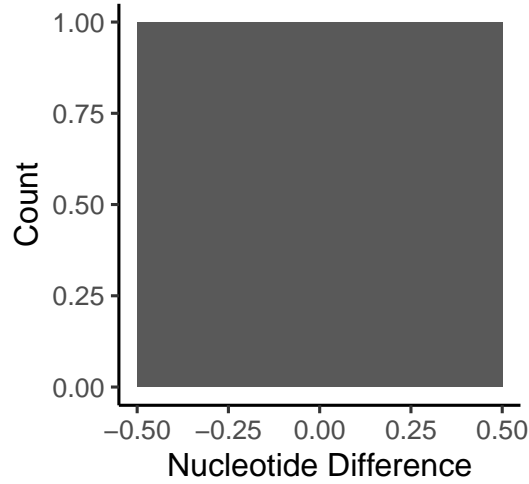
### IGHV3-74\*01\_02

113 sequences assigned  
67 (59.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



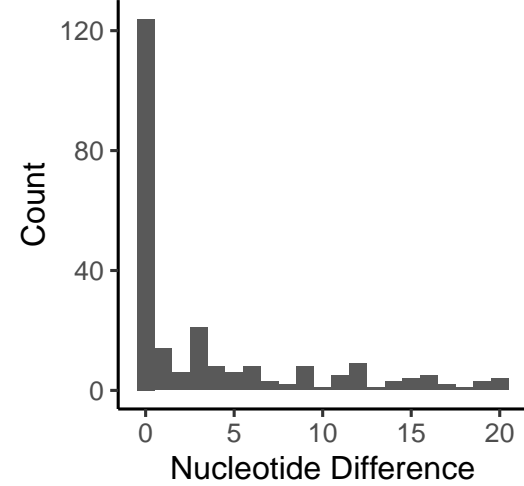
### IGHV4-28\*01\_07

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



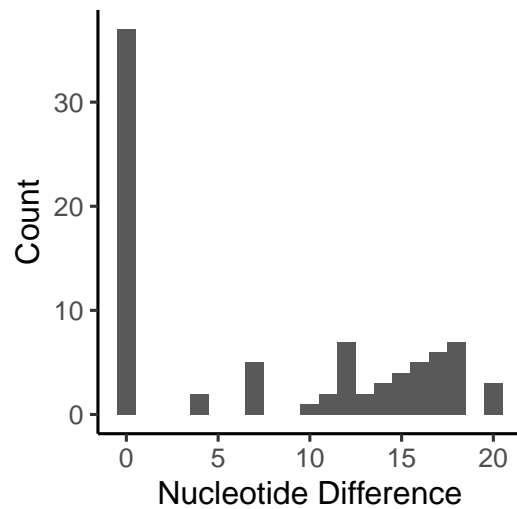
### IGHV4-31\*02

295 sequences assigned  
124 (42%) exact matches, in which:  
110 unique CDR3  
6 unique J



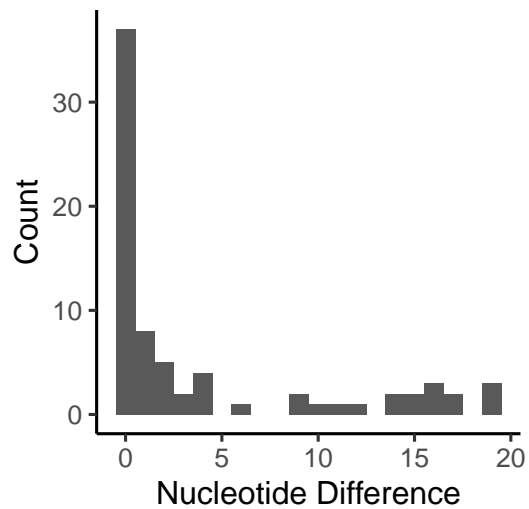
### IGHV3-64D\*06

158 sequences assigned  
37 (23.4%) exact matches, in which:  
19 unique CDR3  
5 unique J



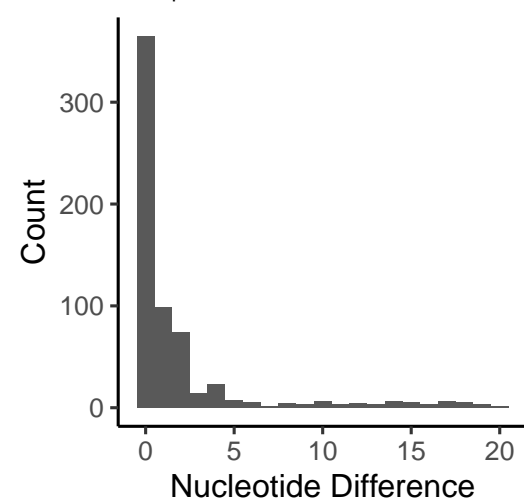
### IGHV4-30-2\*01

83 sequences assigned  
37 (44.6%) exact matches, in which:  
28 unique CDR3  
5 unique J



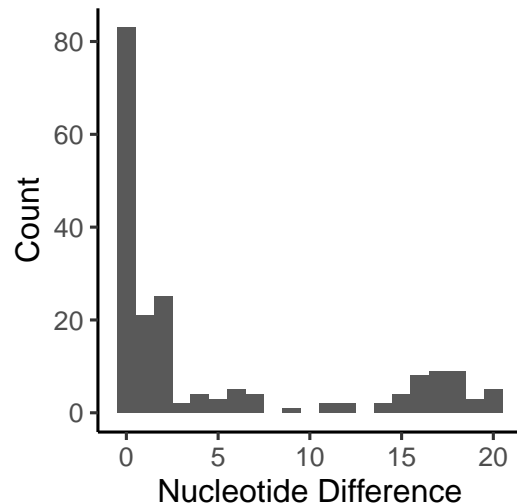
### IGHV4-34\*01\_02

681 sequences assigned  
365 (53.6%) exact matches, in which:  
299 unique CDR3  
6 unique J



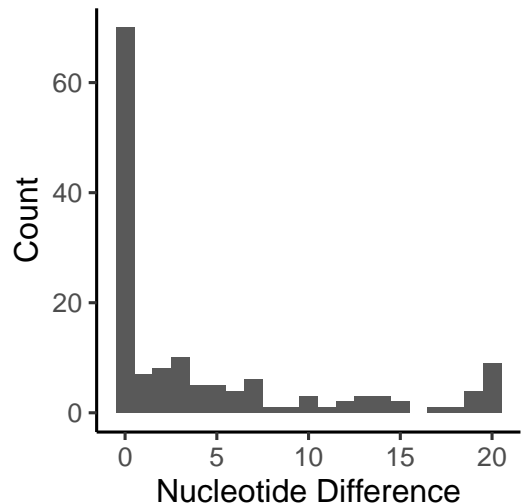
### IGHV4-4\*07

211 sequences assigned  
83 (39.3%) exact matches, in which:  
78 unique CDR3  
6 unique J



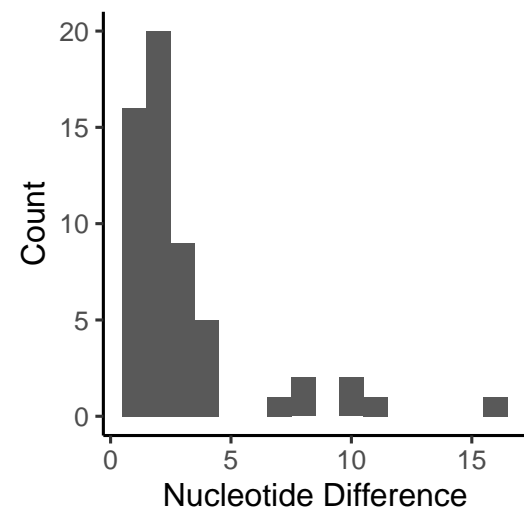
### IGHV4-30-4\*01

179 sequences assigned  
70 (39.1%) exact matches, in which:  
61 unique CDR3  
5 unique J



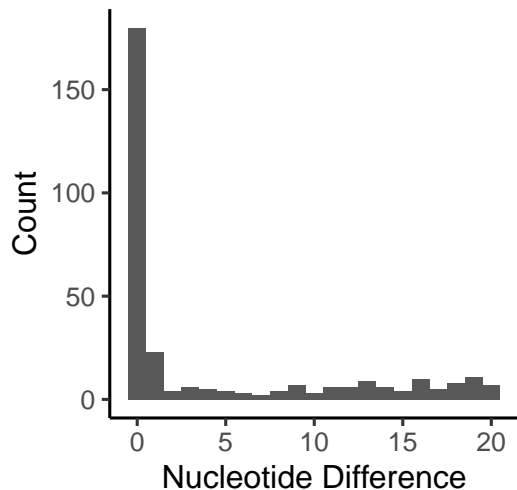
### IGHV4-39\*07

59 sequences assigned  
No exact matches.



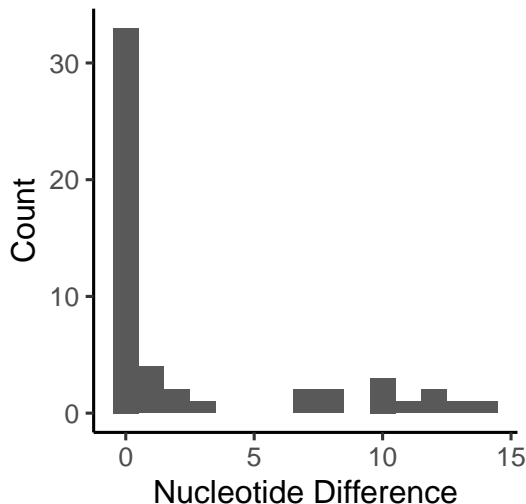
### IGHV4-39\*02\_C258G

365 sequences assigned  
180 (49.3%) exact matches, in which:  
157 unique CDR3  
6 unique J



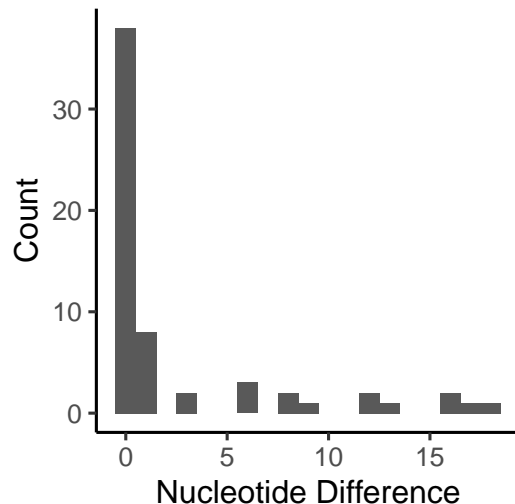
### IGHV4-59\*12\_C300T

52 sequences assigned  
33 (63.5%) exact matches, in which:  
33 unique CDR3  
6 unique J



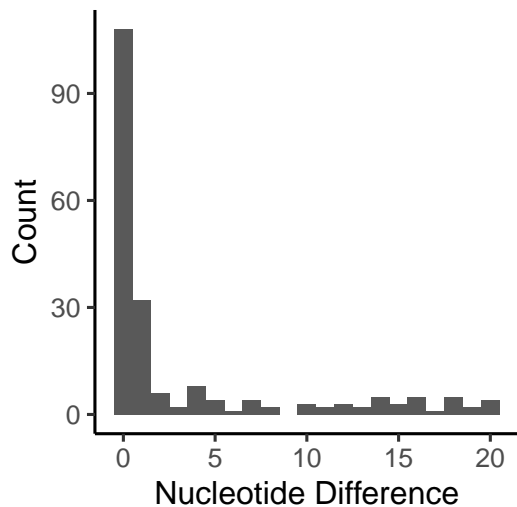
### IGHV5-10-1\*01\_03

67 sequences assigned  
38 (56.7%) exact matches, in which:  
28 unique CDR3  
4 unique J



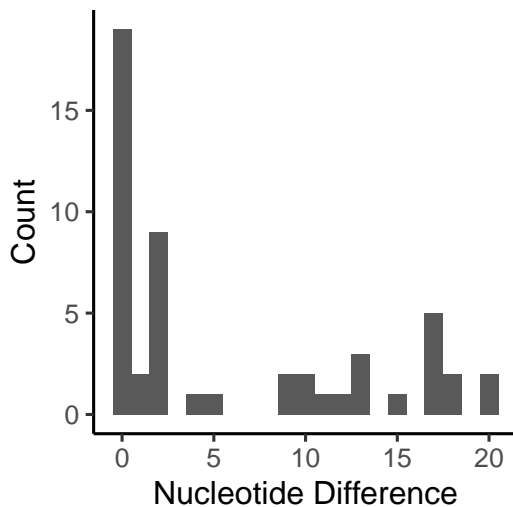
### IGHV4-59\*08

226 sequences assigned  
108 (47.8%) exact matches, in which:  
100 unique CDR3  
6 unique J



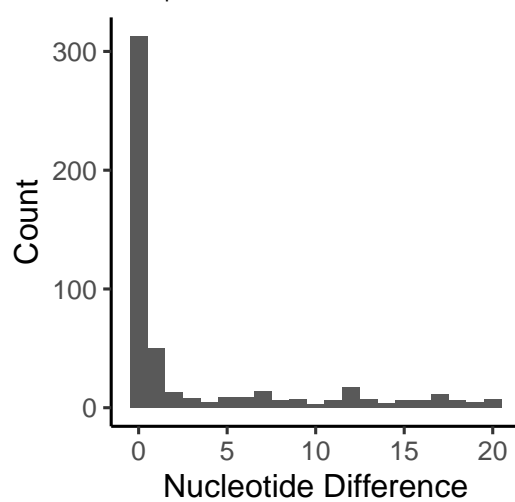
### IGHV4-61\*01

66 sequences assigned  
19 (28.8%) exact matches, in which:  
19 unique CDR3  
5 unique J



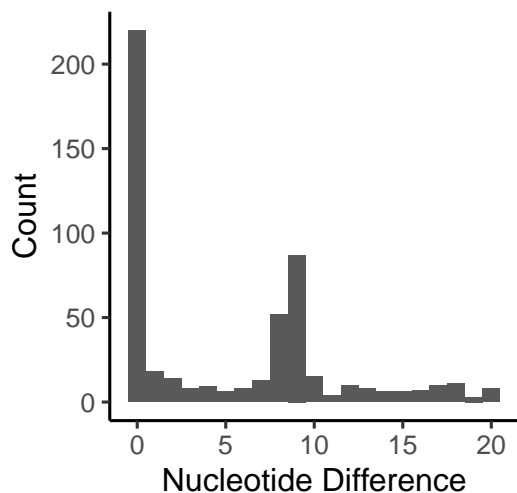
### IGHV5-51\*07\_A128G

549 sequences assigned  
313 (57%) exact matches, in which:  
233 unique CDR3  
6 unique J



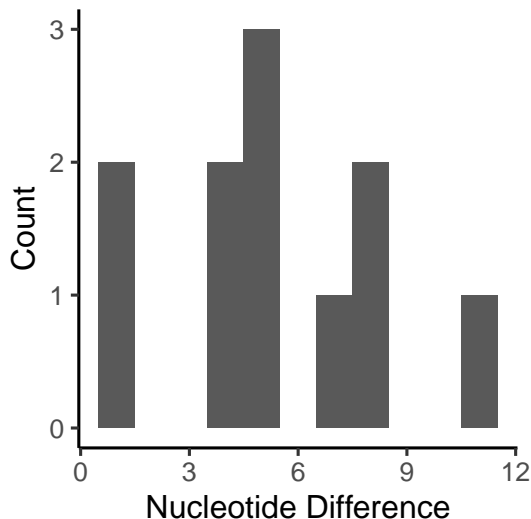
### IGHV4-59\*02\_G88A

565 sequences assigned  
220 (38.9%) exact matches, in which:  
212 unique CDR3  
6 unique J



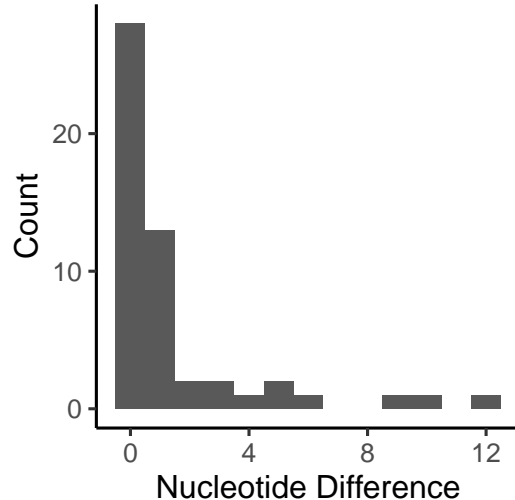
### IGHV4-61\*08

13 sequences assigned  
No exact matches.



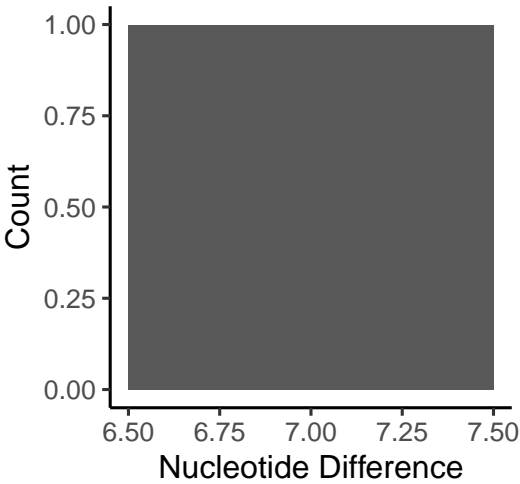
### IGHV6-1\*01\_02

54 sequences assigned  
28 (51.9%) exact matches, in which:  
28 unique CDR3  
4 unique J



# IGHV7-4-1\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.