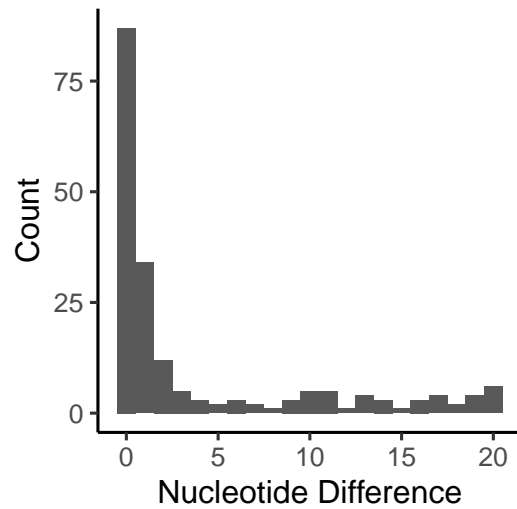


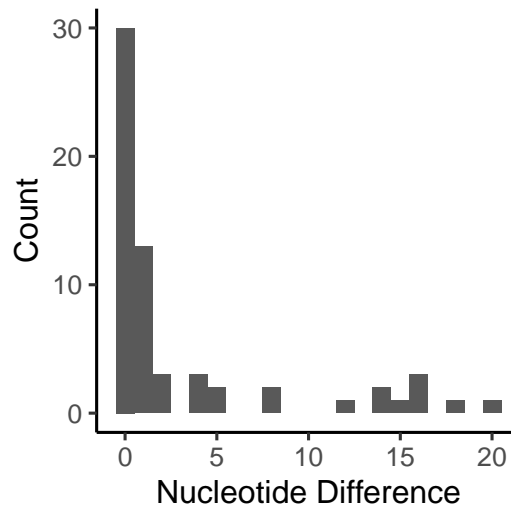
### IGHV1-2\*02

231 sequences assigned  
87 (37.7%) exact matches, in which:  
86 unique CDR3  
6 unique J



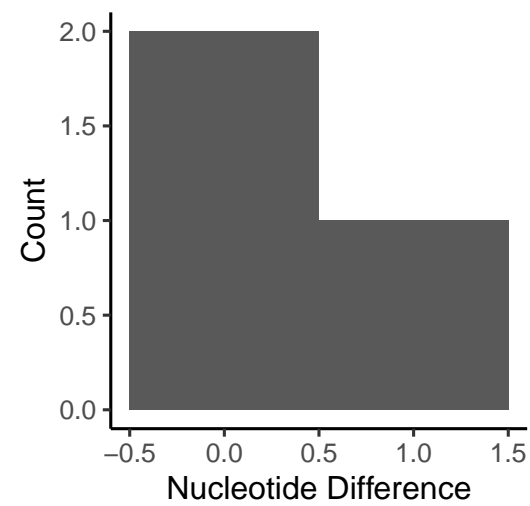
### IGHV1-8\*01

82 sequences assigned  
30 (36.6%) exact matches, in which:  
30 unique CDR3  
3 unique J



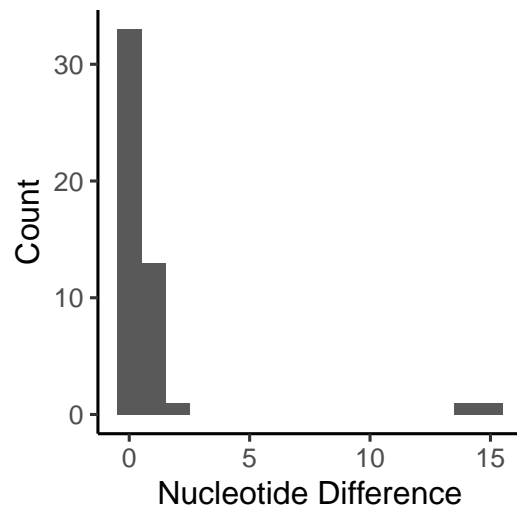
### IGHV1-45\*02

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



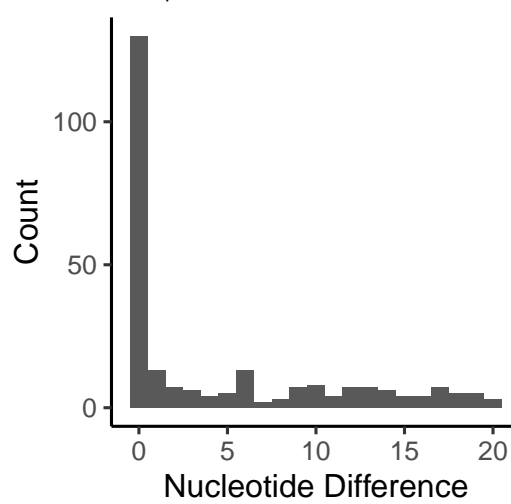
### IGHV1-2\*04

49 sequences assigned  
33 (67.3%) exact matches, in which:  
32 unique CDR3  
4 unique J



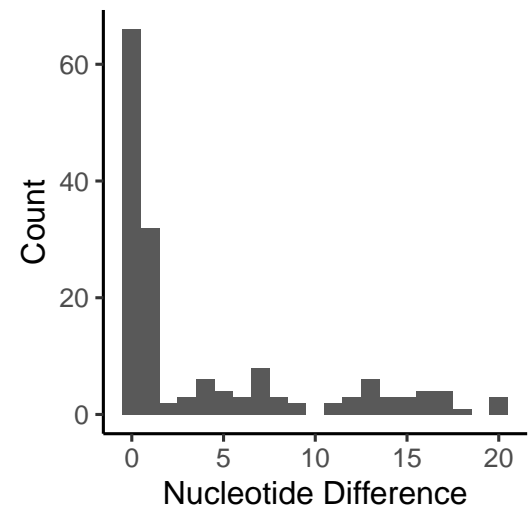
### IGHV1-18\*01

302 sequences assigned  
130 (43%) exact matches, in which:  
130 unique CDR3  
6 unique J



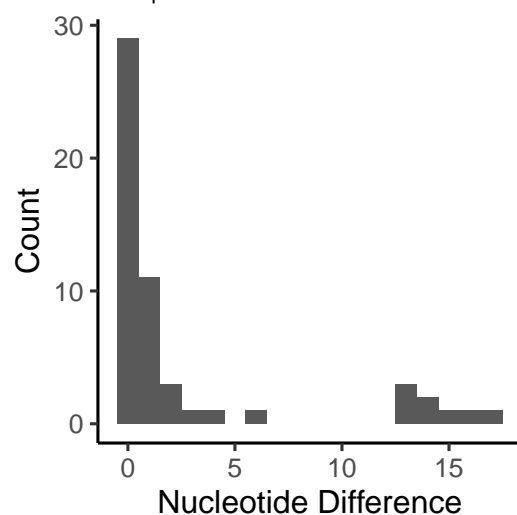
### IGHV1-46\*01

172 sequences assigned  
66 (38.4%) exact matches, in which:  
65 unique CDR3  
5 unique J



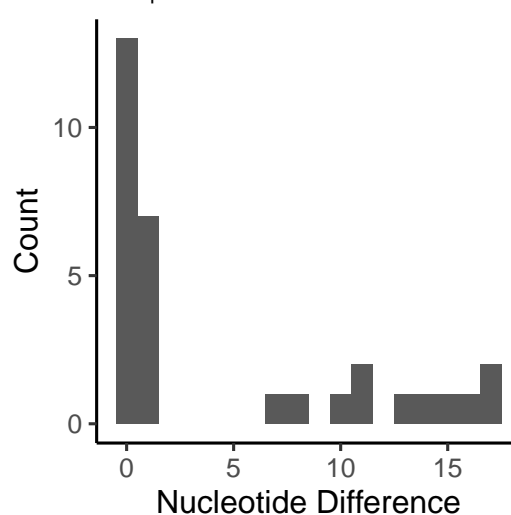
### IGHV1-3\*01\_05

64 sequences assigned  
29 (45.3%) exact matches, in which:  
28 unique CDR3  
4 unique J



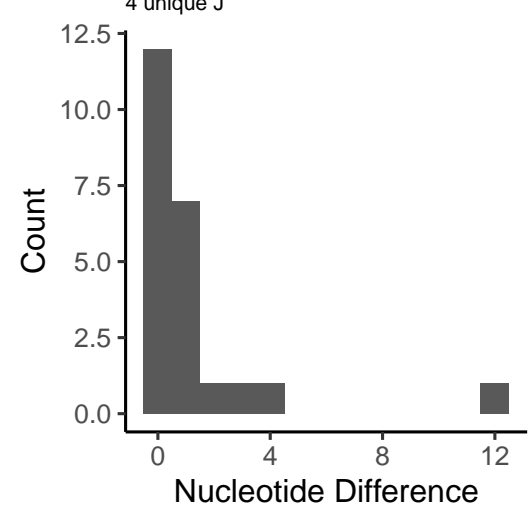
### IGHV1-24\*01

33 sequences assigned  
13 (39.4%) exact matches, in which:  
13 unique CDR3  
2 unique J



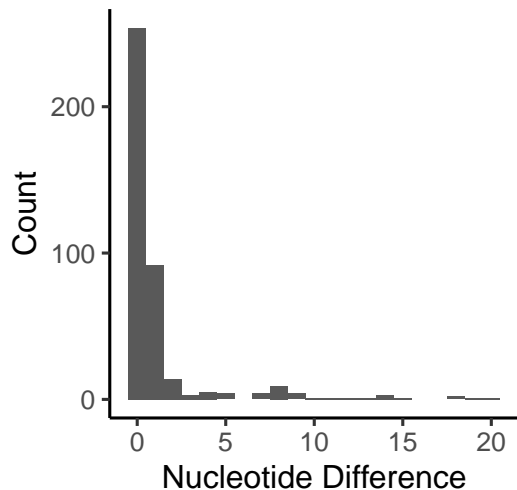
### IGHV1-58\*01\_03

25 sequences assigned  
12 (48%) exact matches, in which:  
12 unique CDR3  
4 unique J



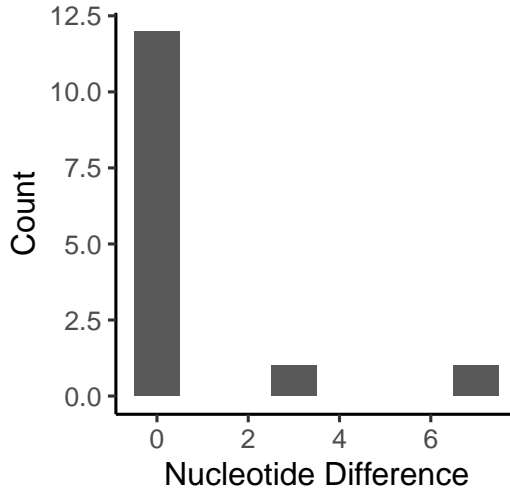
### IGHV1-69\*01\_12\_13

427 sequences assigned  
254 (59.5%) exact matches, in which:  
252 unique CDR3  
6 unique J



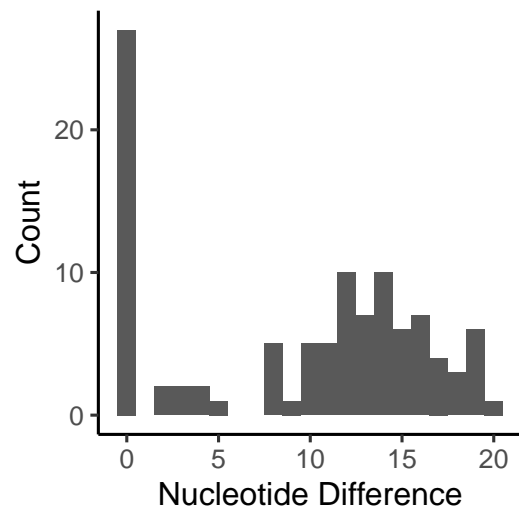
### IGHV2-26\*01

14 sequences assigned  
12 (85.7%) exact matches, in which:  
11 unique CDR3  
3 unique J



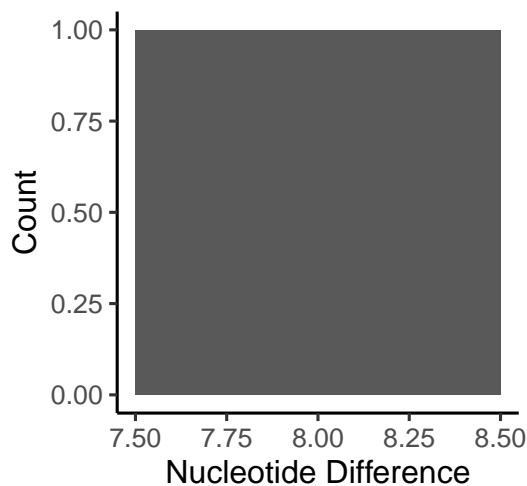
### IGHV3-7\*03

125 sequences assigned  
27 (21.6%) exact matches, in which:  
18 unique CDR3  
4 unique J



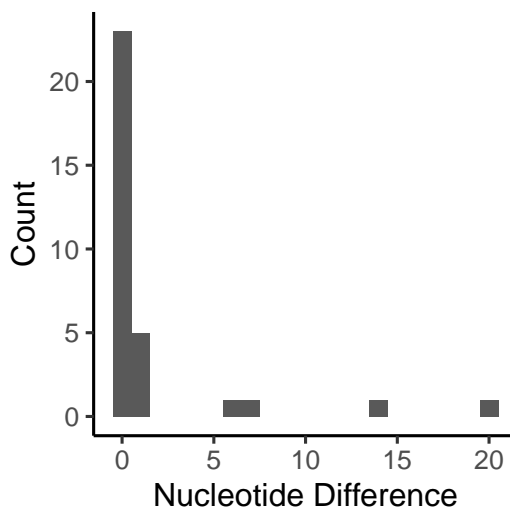
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



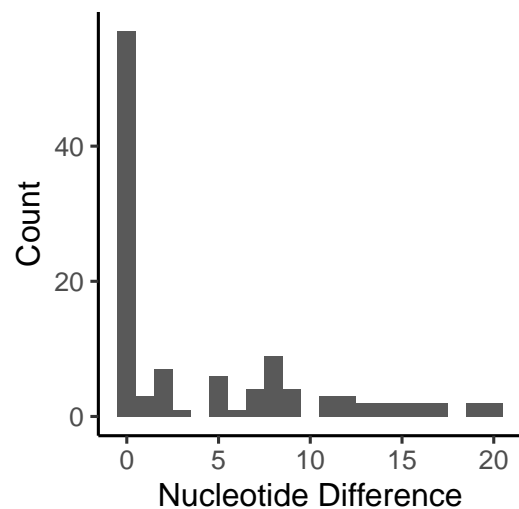
### IGHV2-70\*01

38 sequences assigned  
23 (60.5%) exact matches, in which:  
23 unique CDR3  
4 unique J



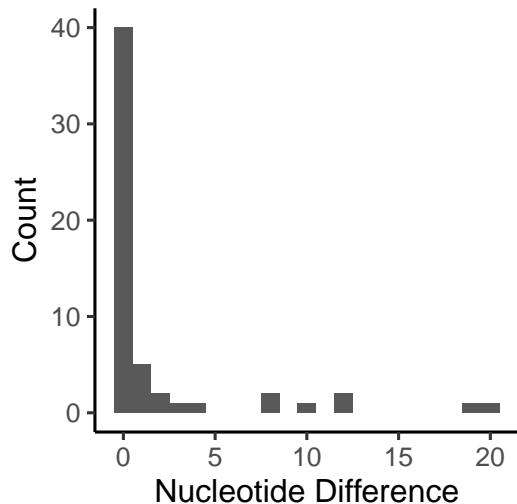
### IGHV3-9\*01

124 sequences assigned  
57 (46%) exact matches, in which:  
40 unique CDR3  
4 unique J



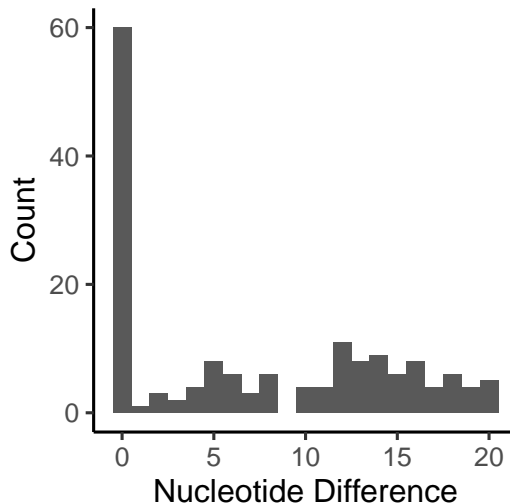
### IGHV2-5\*02

59 sequences assigned  
40 (67.8%) exact matches, in which:  
38 unique CDR3  
4 unique J



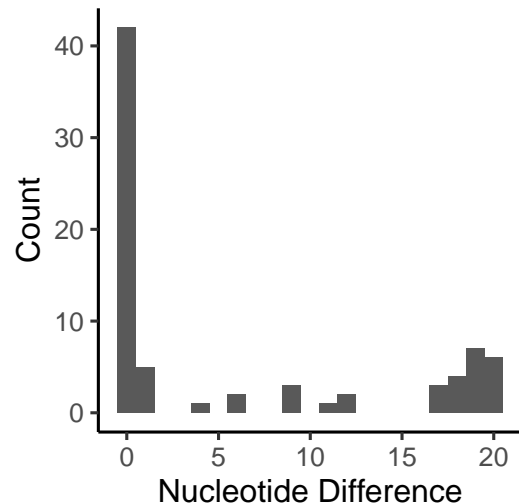
### IGHV3-7\*01

202 sequences assigned  
60 (29.7%) exact matches, in which:  
40 unique CDR3  
5 unique J



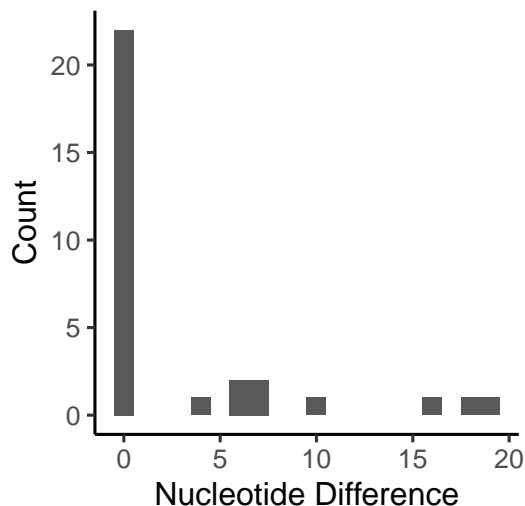
### IGHV3-11\*01

94 sequences assigned  
42 (44.7%) exact matches, in which:  
27 unique CDR3  
3 unique J



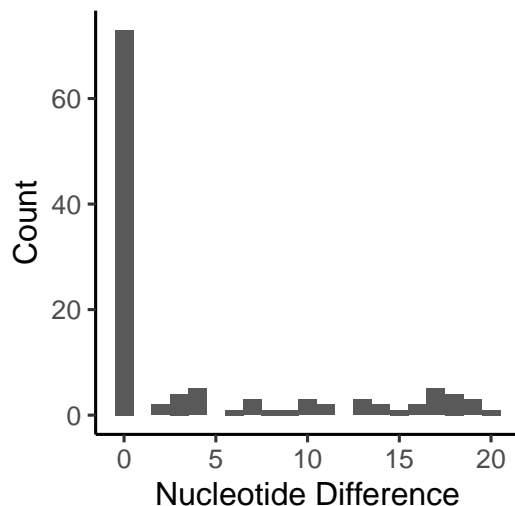
### IGHV3-11\*06

45 sequences assigned  
22 (48.9%) exact matches, in which:  
14 unique CDR3  
4 unique J



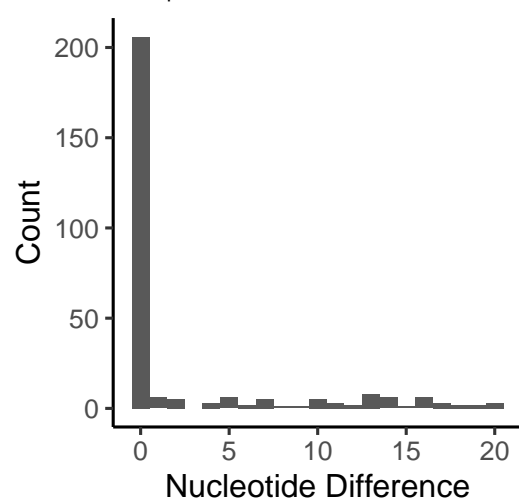
### IGHV3-15\*01\_02

128 sequences assigned  
73 (57%) exact matches, in which:  
53 unique CDR3  
4 unique J



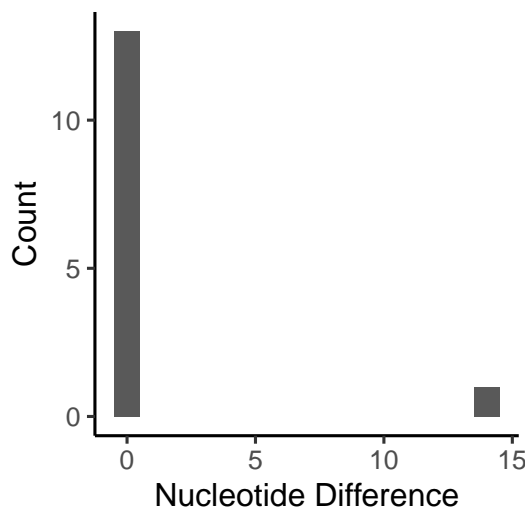
### IGHV3-21\*01\_02

299 sequences assigned  
206 (68.9%) exact matches, in which:  
132 unique CDR3  
5 unique J



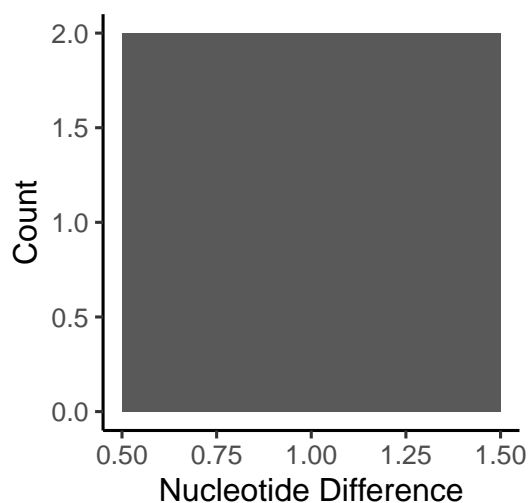
### IGHV3-13\*01

19 sequences assigned  
13 (68.4%) exact matches, in which:  
8 unique CDR3  
3 unique J



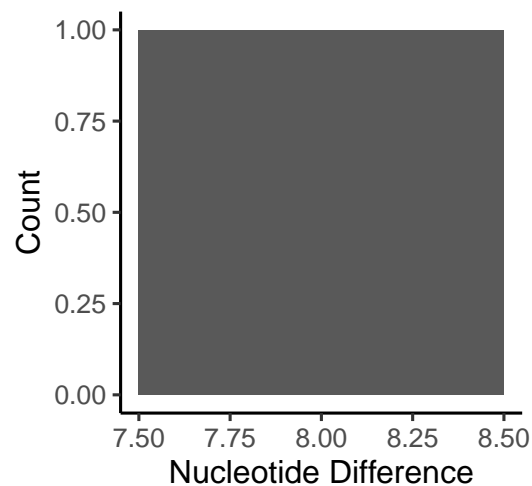
### IGHV3-19\*01

2 sequences assigned  
No exact matches.



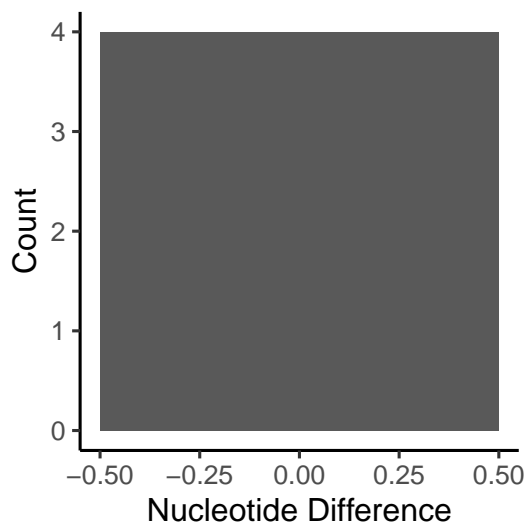
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



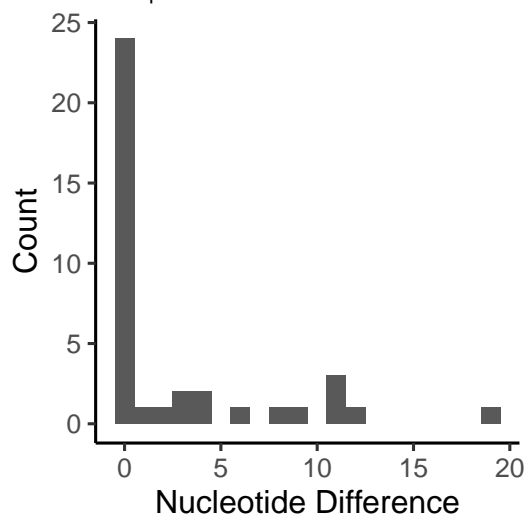
### IGHV3-13\*05

4 sequences assigned  
4 (100%) exact matches, in which:  
2 unique CDR3  
1 unique J



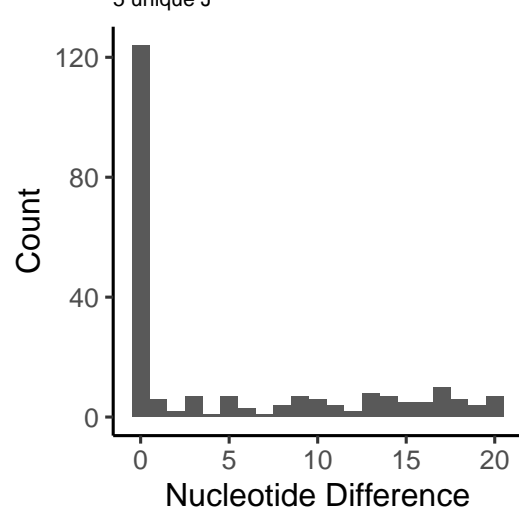
### IGHV3-20\*03\_04\_A104G

39 sequences assigned  
24 (61.5%) exact matches, in which:  
18 unique CDR3  
4 unique J



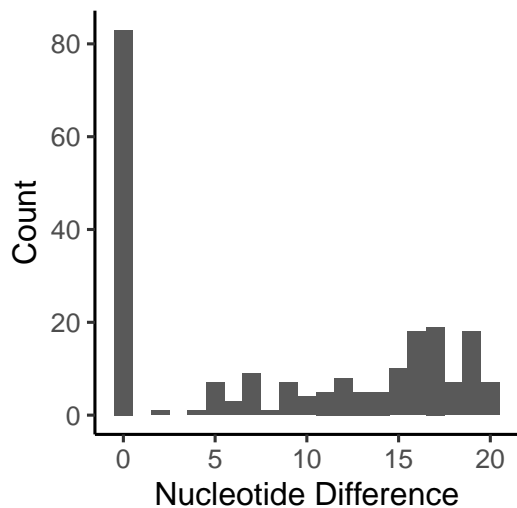
### IGHV3-23\*03

259 sequences assigned  
124 (47.9%) exact matches, in which:  
83 unique CDR3  
5 unique J



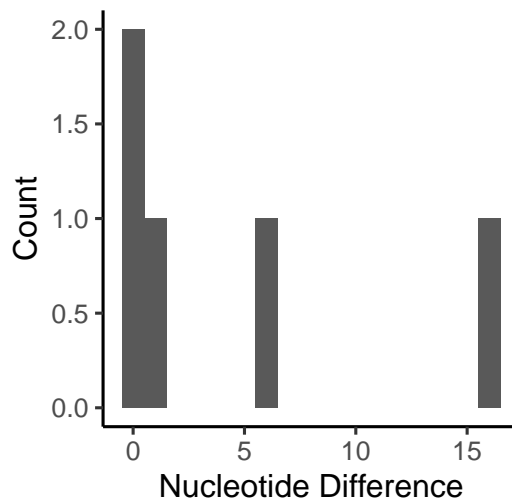
### IGHV3-23\*01\_04

268 sequences assigned  
83 (31%) exact matches, in which:  
54 unique CDR3  
5 unique J



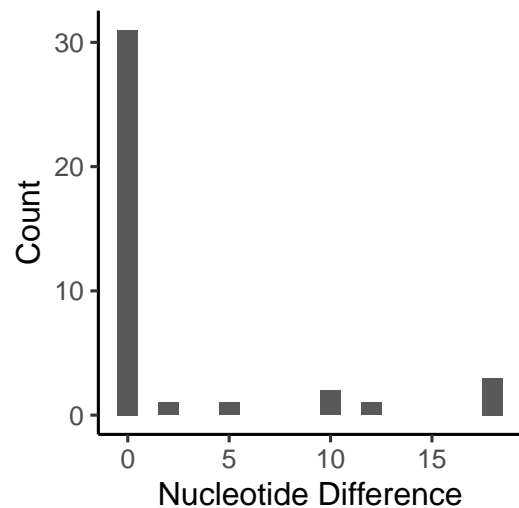
### IGHV3-43\*01

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



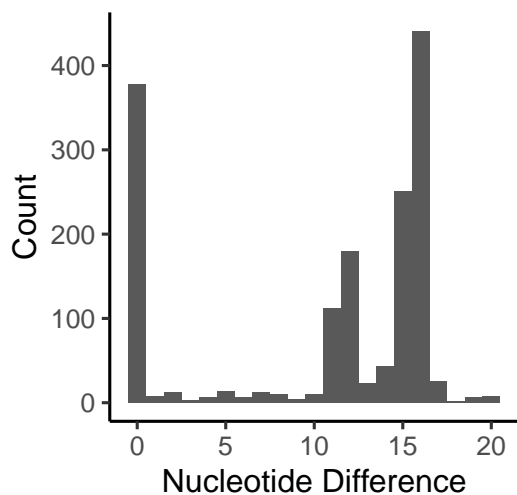
### IGHV3-49\*03\_05

43 sequences assigned  
31 (72.1%) exact matches, in which:  
22 unique CDR3  
6 unique J



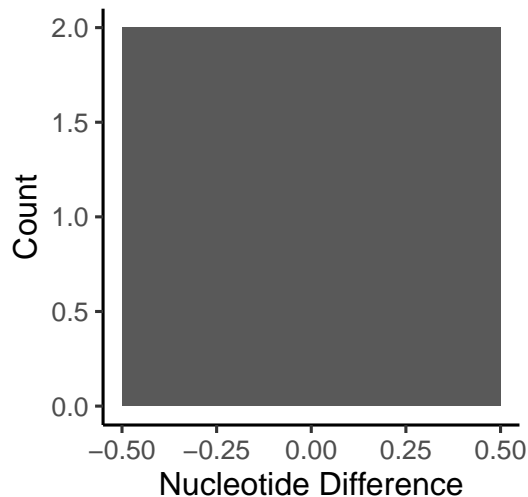
### IGHV3-30-3\*01

1642 sequences assigned  
378 (23%) exact matches, in which:  
250 unique CDR3  
5 unique J



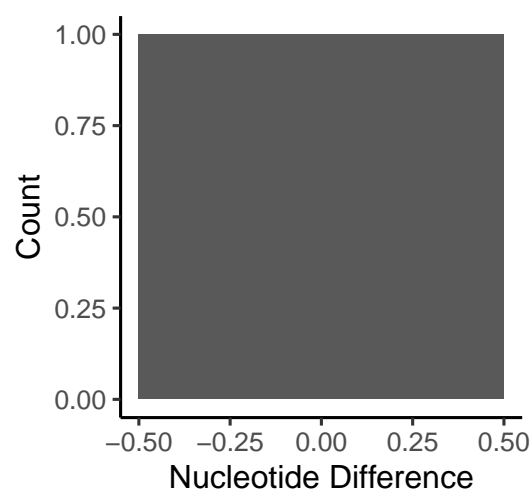
### IGHV3-47\*02

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



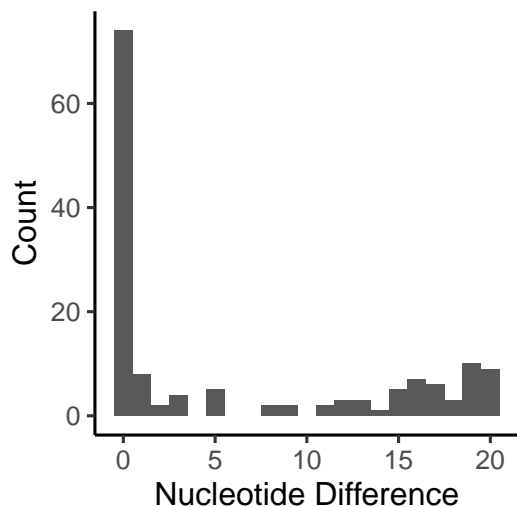
### IGHV3-52\*01\_03

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



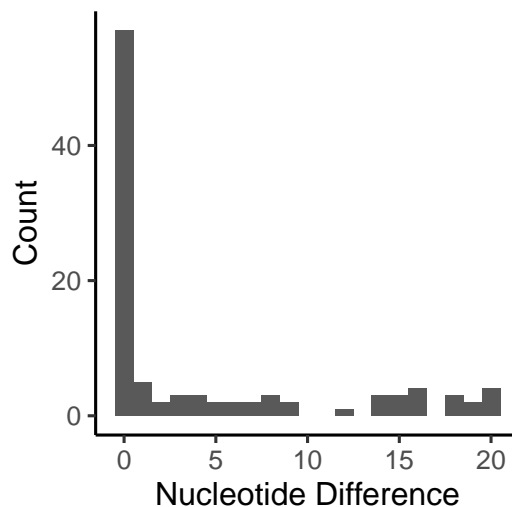
### IGHV3-33\*01

183 sequences assigned  
74 (40.4%) exact matches, in which:  
55 unique CDR3  
4 unique J



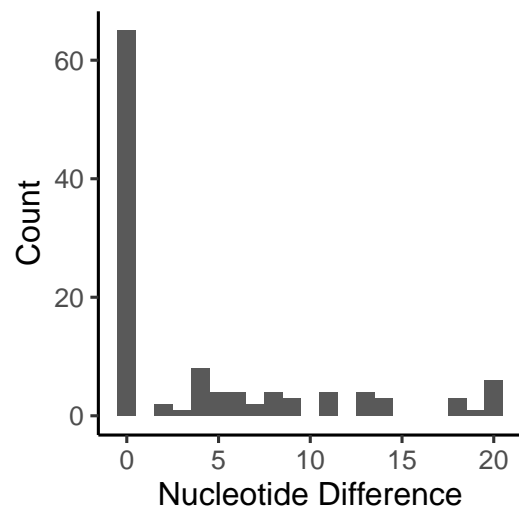
### IGHV3-48\*02

123 sequences assigned  
57 (46.3%) exact matches, in which:  
36 unique CDR3  
5 unique J



### IGHV3-53\*01\_02

141 sequences assigned  
65 (46.1%) exact matches, in which:  
43 unique CDR3  
6 unique J



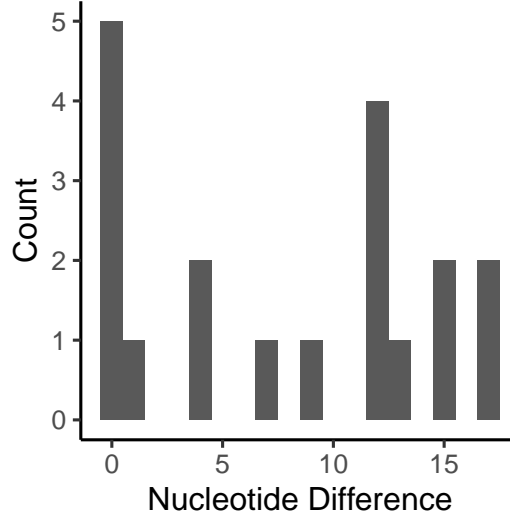
### IGHV3-64\*02\_07

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



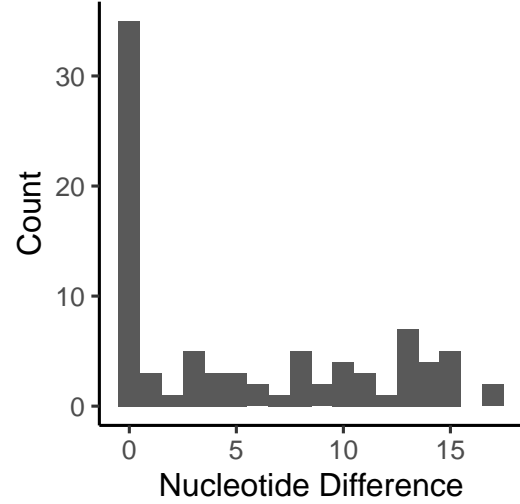
### IGHV3-72\*01

19 sequences assigned  
5 (26.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



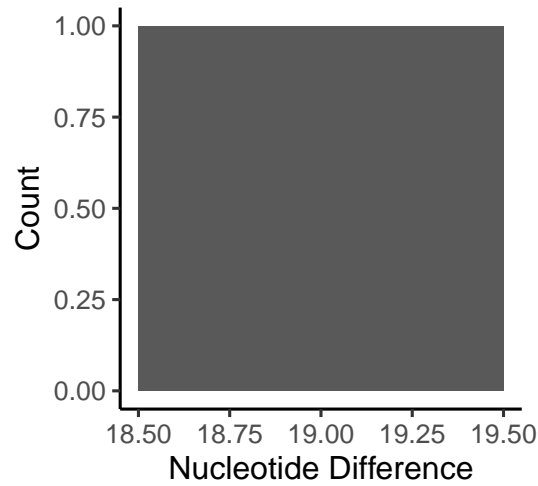
### IGHV3-74\*01\_02

94 sequences assigned  
35 (37.2%) exact matches, in which:  
24 unique CDR3  
3 unique J



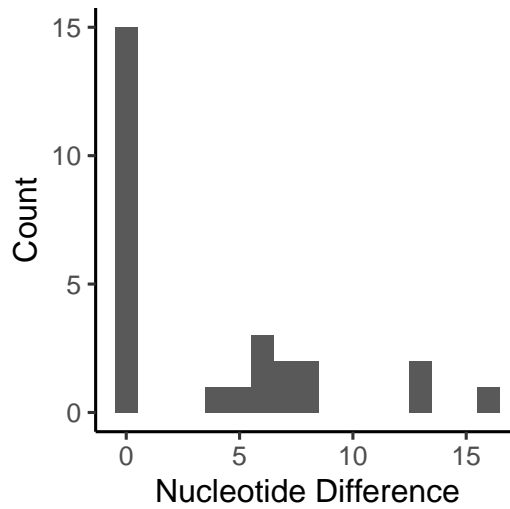
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



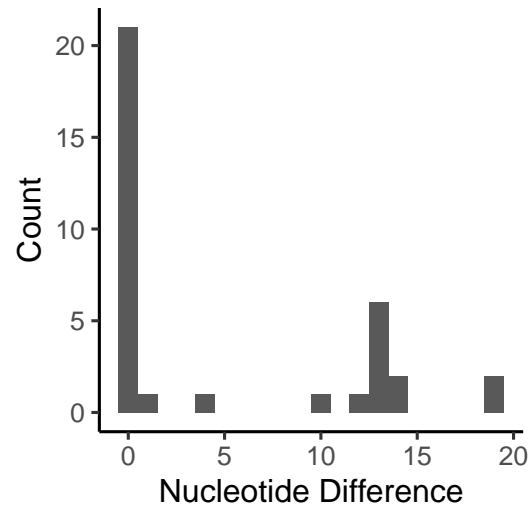
### IGHV3-73\*01\_02

33 sequences assigned  
15 (45.5%) exact matches, in which:  
10 unique CDR3  
3 unique J



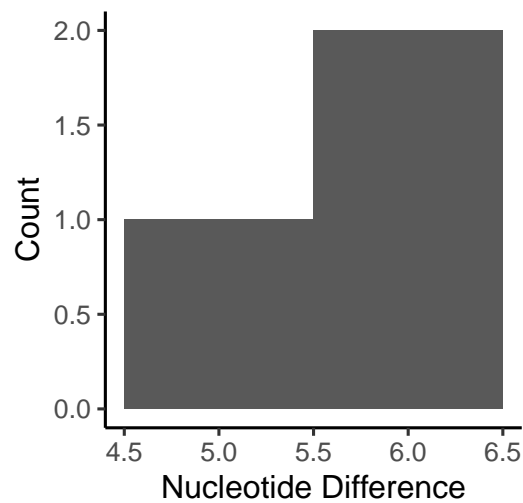
### IGHV3-64D\*06

50 sequences assigned  
21 (42%) exact matches, in which:  
12 unique CDR3  
2 unique J



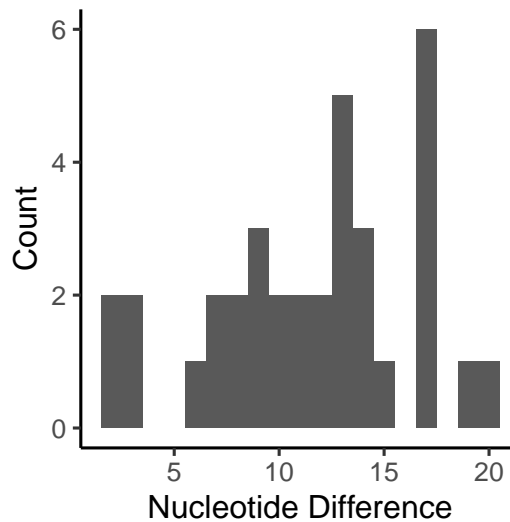
### IGHV3-69-1\*02

3 sequences assigned  
No exact matches.



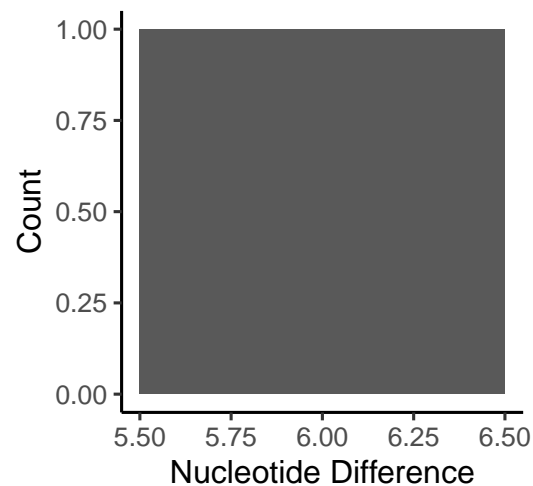
### IGHV3-74\*03

59 sequences assigned  
No exact matches.



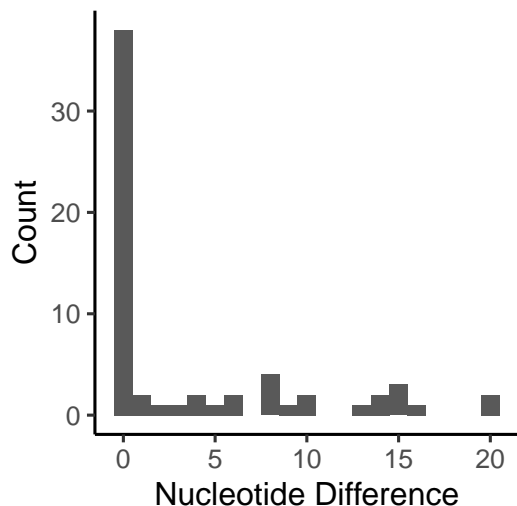
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



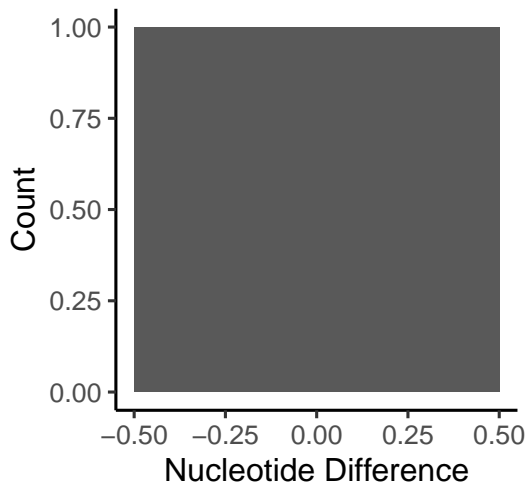
### IGHV4-4\*07

119 sequences assigned  
38 (31.9%) exact matches, in which:  
34 unique CDR3  
4 unique J



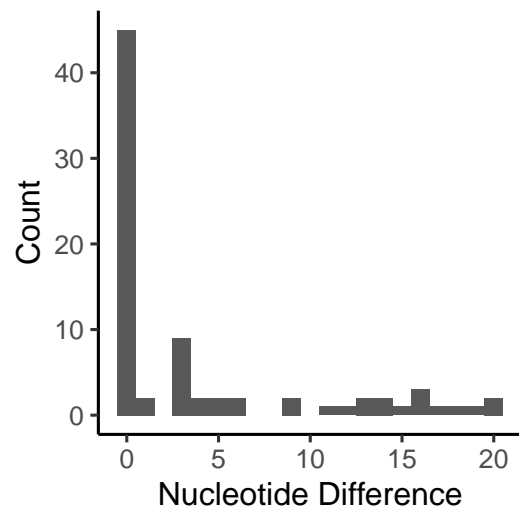
### IGHV4-28\*01\_07

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



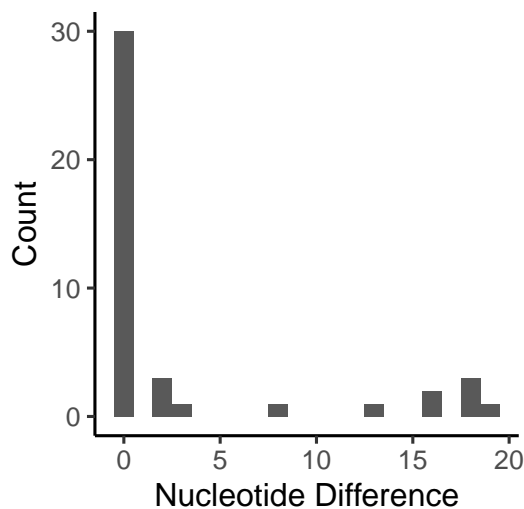
### IGHV4-31\*02

104 sequences assigned  
45 (43.3%) exact matches, in which:  
42 unique CDR3  
5 unique J



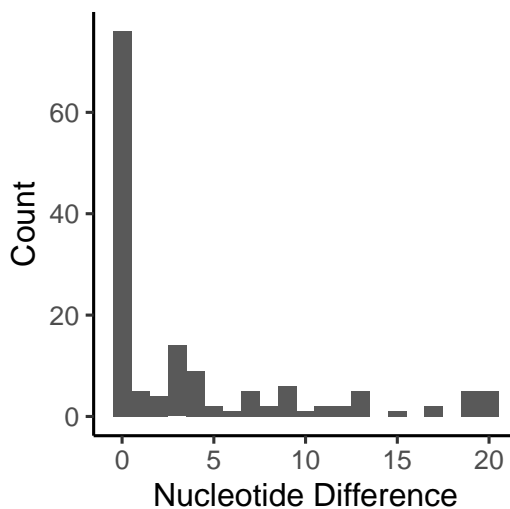
### IGHV4-4\*02\_03

58 sequences assigned  
30 (51.7%) exact matches, in which:  
29 unique CDR3  
3 unique J



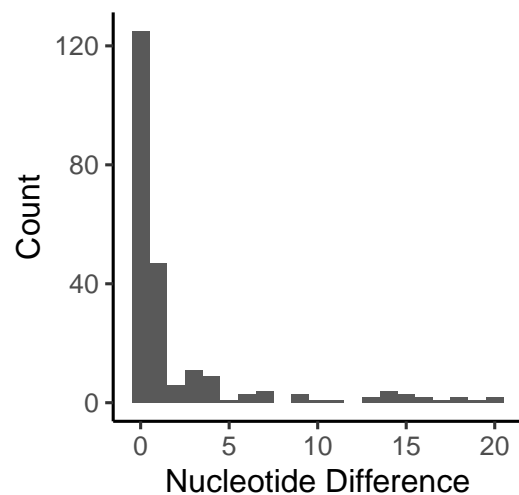
### IGHV4-30-4\*01

163 sequences assigned  
76 (46.6%) exact matches, in which:  
69 unique CDR3  
4 unique J



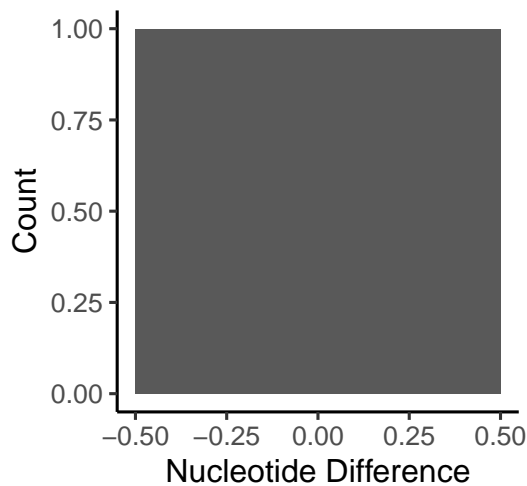
### IGHV4-34\*01\_02

248 sequences assigned  
125 (50.4%) exact matches, in which:  
112 unique CDR3  
5 unique J



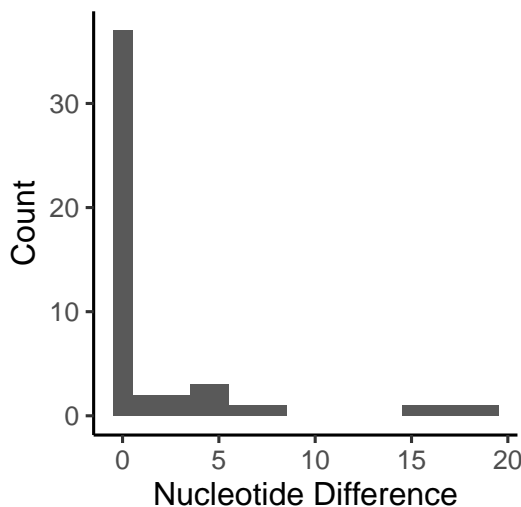
### IGHV4-28\*03

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



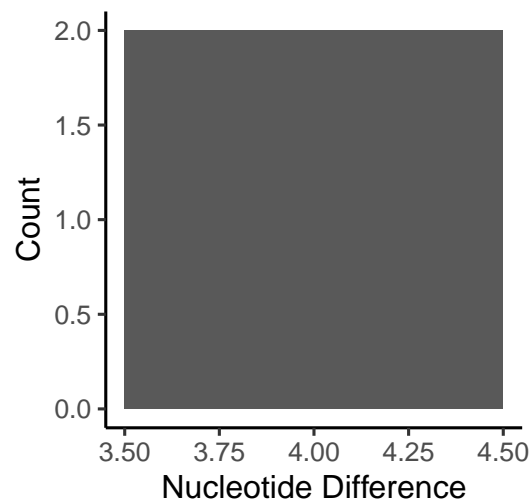
### IGHV4-30-2\*01

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



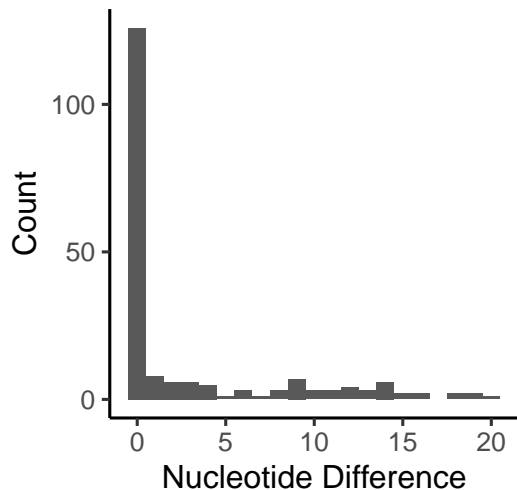
### IGHV4-38-2\*02

2 sequences assigned  
No exact matches.



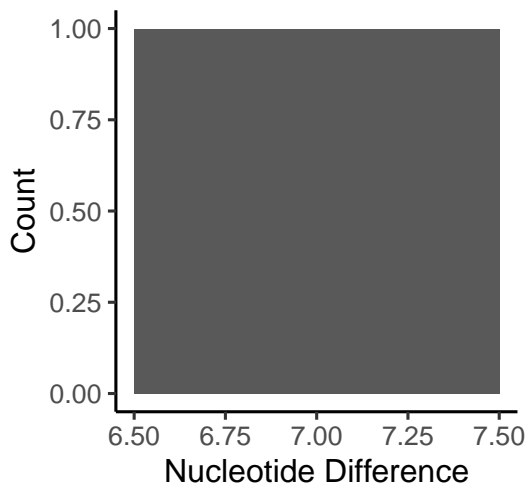
### IGHV4–39\*02\_C258G

222 sequences assigned  
126 (56.8%) exact matches, in which:  
118 unique CDR3  
6 unique J



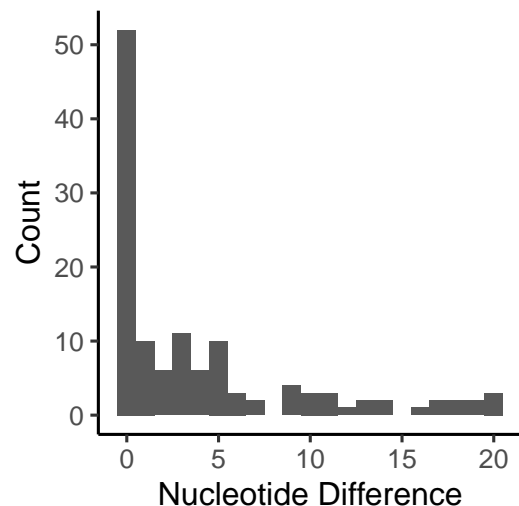
### IGHV4/OR15–8\*02

1 sequences assigned  
No exact matches.



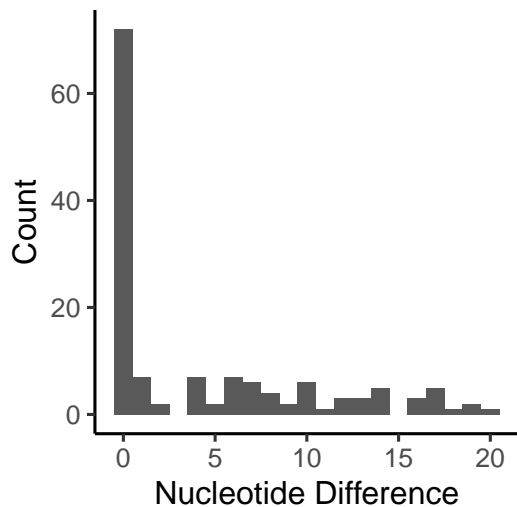
### IGHV5–51\*01\_03

146 sequences assigned  
52 (35.6%) exact matches, in which:  
46 unique CDR3  
4 unique J



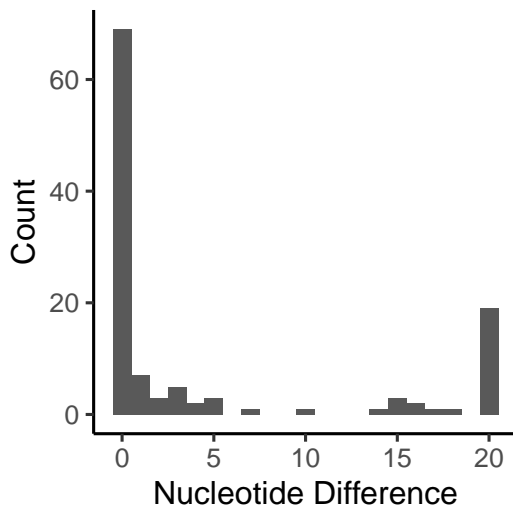
### IGHV4–59\*02\_G88A

193 sequences assigned  
72 (37.3%) exact matches, in which:  
70 unique CDR3  
6 unique J



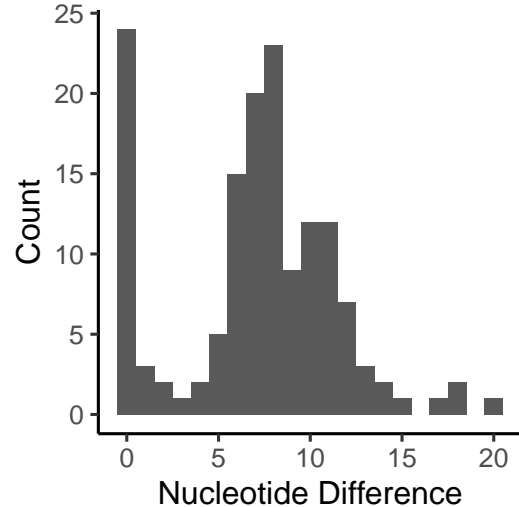
### IGHV5–10–1\*01\_03

528 sequences assigned  
69 (13.1%) exact matches, in which:  
60 unique CDR3  
5 unique J



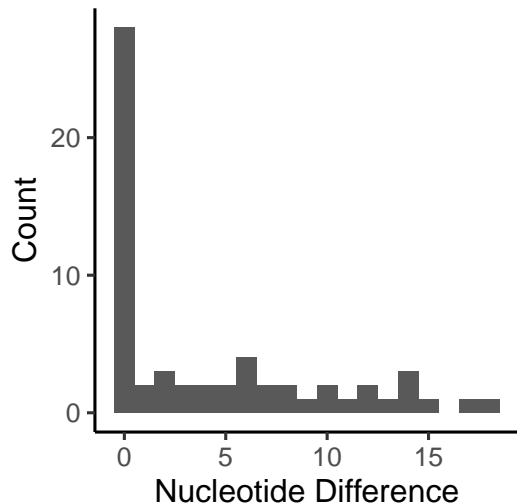
### IGHV6–1\*01\_02

157 sequences assigned  
24 (15.3%) exact matches, in which:  
24 unique CDR3  
4 unique J



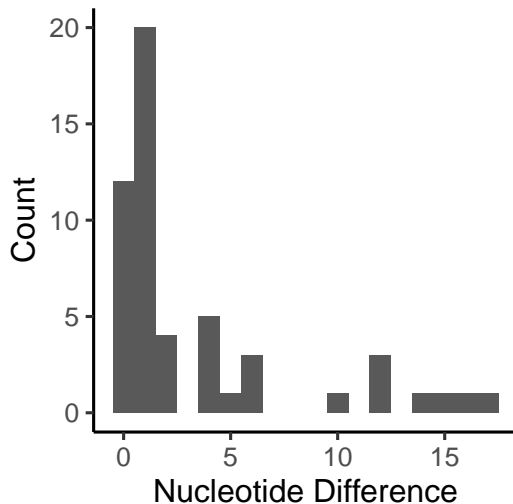
### IGHV4–61\*01

68 sequences assigned  
28 (41.2%) exact matches, in which:  
27 unique CDR3  
4 unique J



### IGHV5–51\*07

65 sequences assigned  
12 (18.5%) exact matches, in which:  
11 unique CDR3  
2 unique J







Warning – no inferred sequences found.