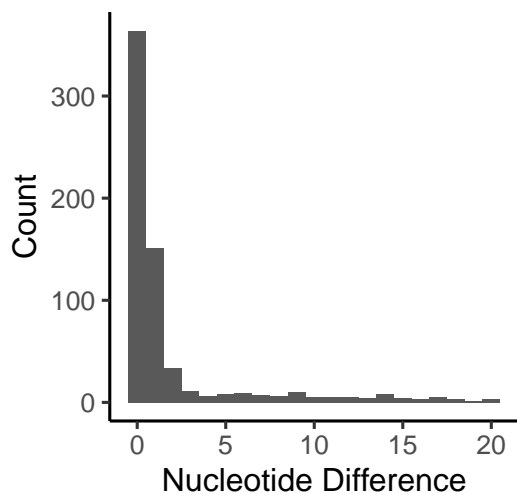


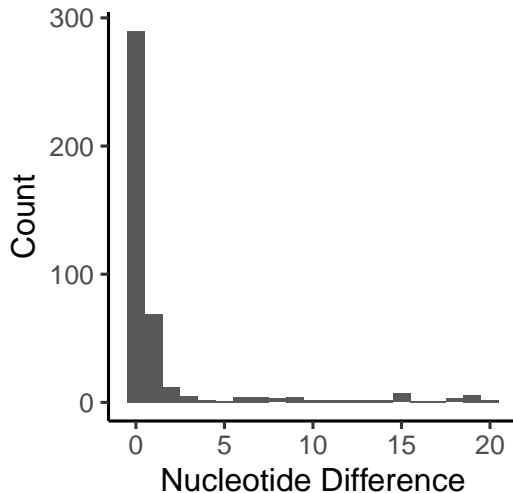
### IGHV1-2\*02

673 sequences assigned  
364 (54.1%) exact matches, in which:  
349 unique CDR3  
6 unique J



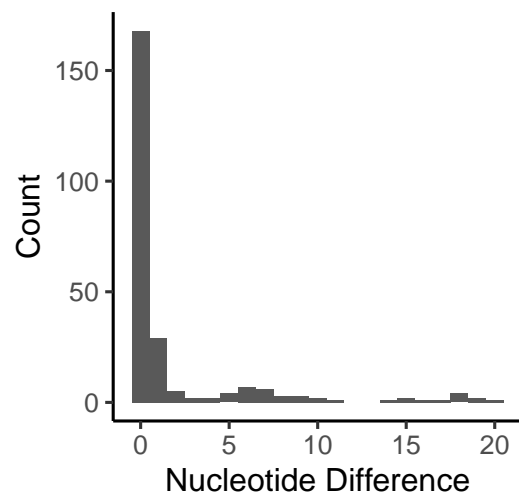
### IGHV1-18\*01

440 sequences assigned  
290 (65.9%) exact matches, in which:  
282 unique CDR3  
6 unique J



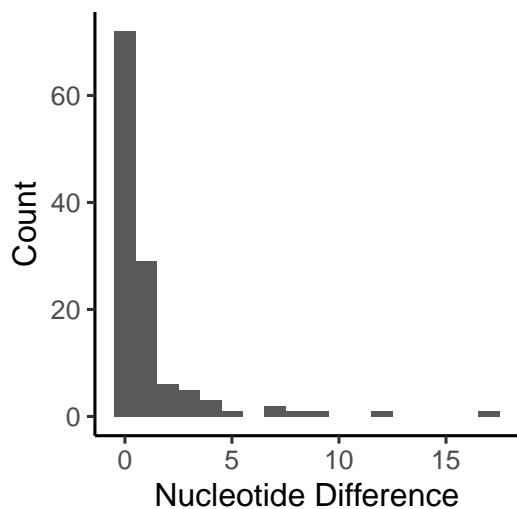
### IGHV1-46\*01

248 sequences assigned  
168 (67.7%) exact matches, in which:  
165 unique CDR3  
6 unique J



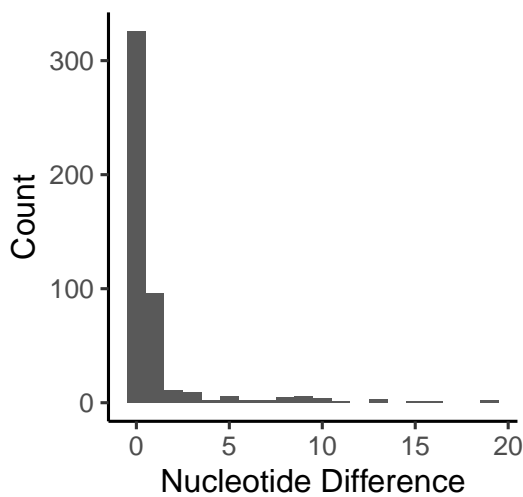
### IGHV1-2\*04

123 sequences assigned  
72 (58.5%) exact matches, in which:  
69 unique CDR3  
5 unique J



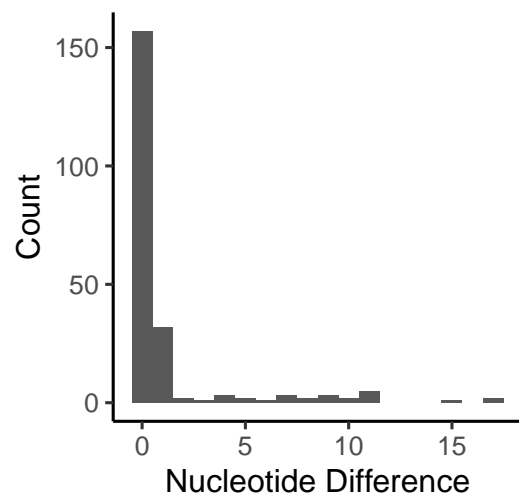
### IGHV1-18\*04

487 sequences assigned  
326 (66.9%) exact matches, in which:  
321 unique CDR3  
6 unique J



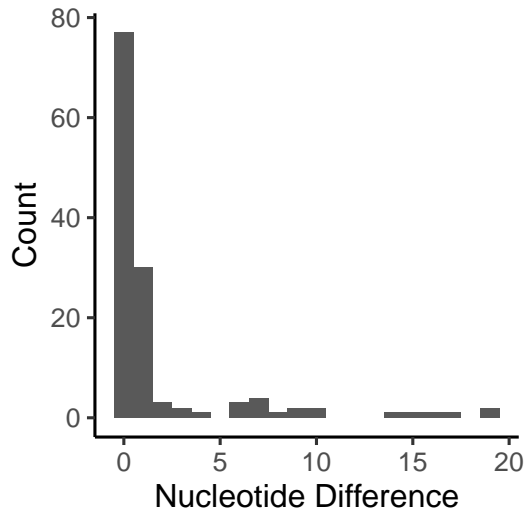
### IGHV1-46\*03

222 sequences assigned  
157 (70.7%) exact matches, in which:  
154 unique CDR3  
6 unique J



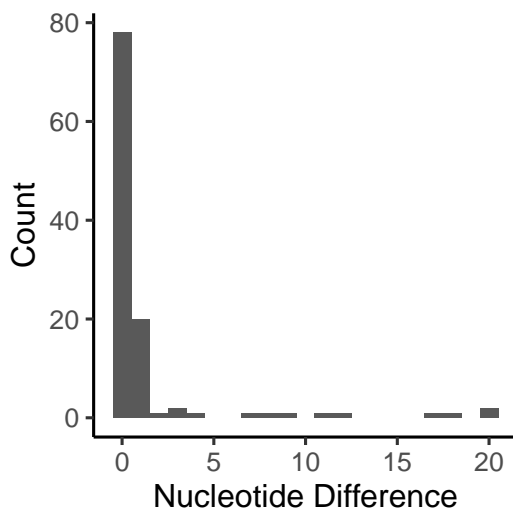
### IGHV1-3\*01

146 sequences assigned  
77 (52.7%) exact matches, in which:  
77 unique CDR3  
5 unique J



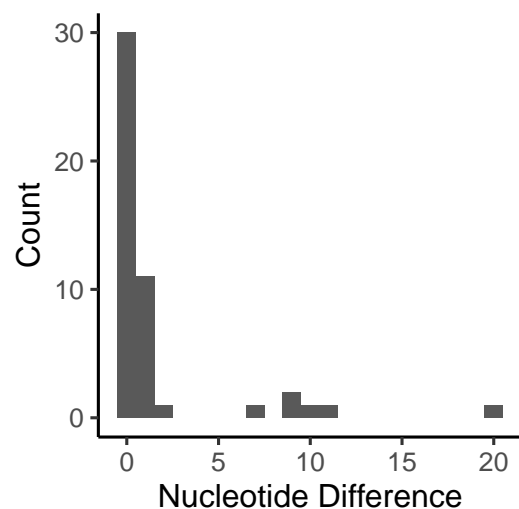
### IGHV1-24\*01

116 sequences assigned  
78 (67.2%) exact matches, in which:  
78 unique CDR3  
5 unique J



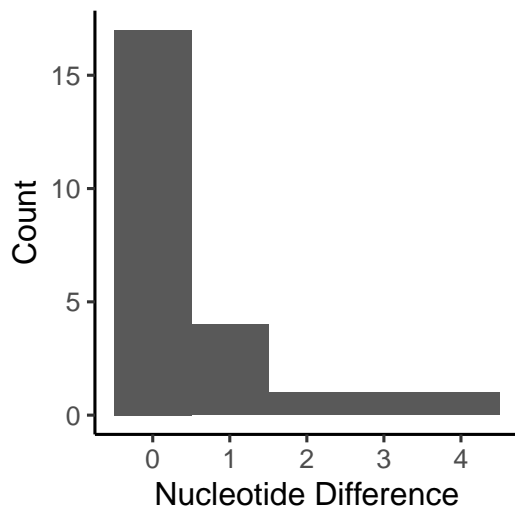
### IGHV1-58\*01

48 sequences assigned  
30 (62.5%) exact matches, in which:  
30 unique CDR3  
4 unique J



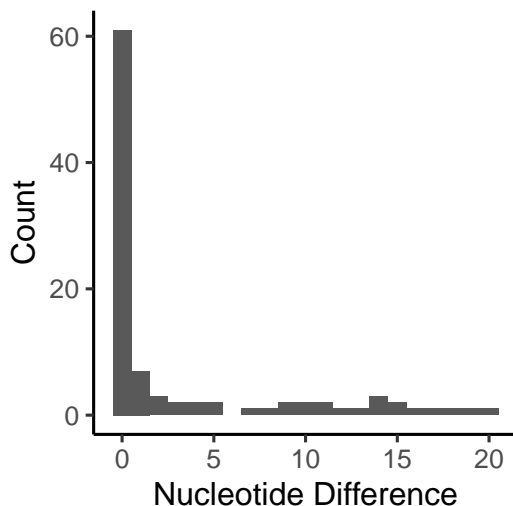
### IGHV1-69-2\*01

25 sequences assigned  
17 (68%) exact matches, in which:  
17 unique CDR3  
4 unique J



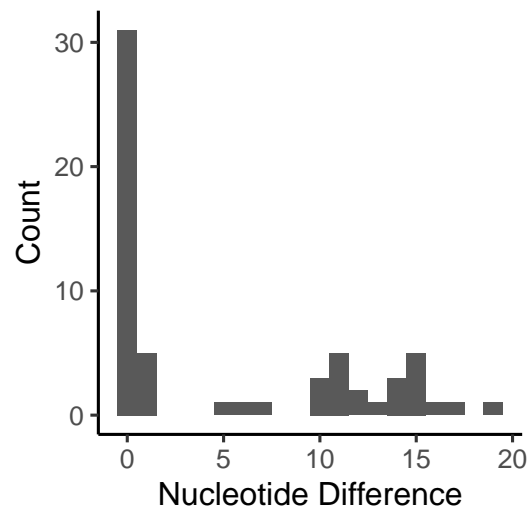
### IGHV2-5\*02

102 sequences assigned  
61 (59.8%) exact matches, in which:  
58 unique CDR3  
5 unique J



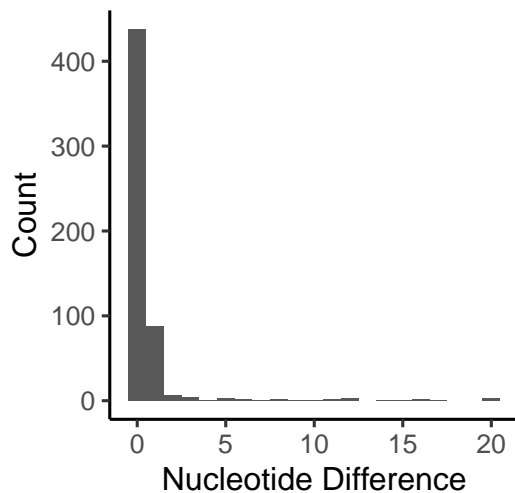
### IGHV3-7\*01

64 sequences assigned  
31 (48.4%) exact matches, in which:  
31 unique CDR3  
5 unique J



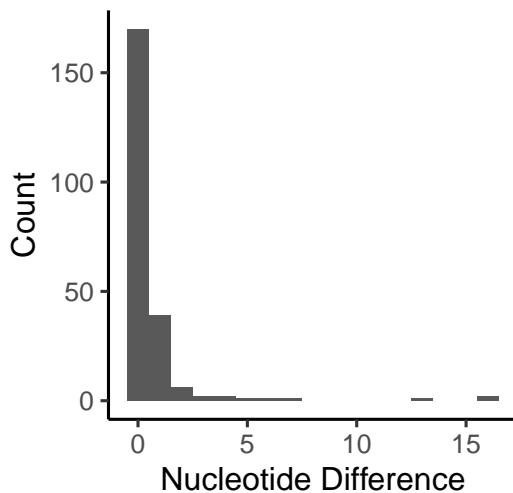
### IGHV1-69\*06

569 sequences assigned  
438 (77%) exact matches, in which:  
420 unique CDR3  
6 unique J



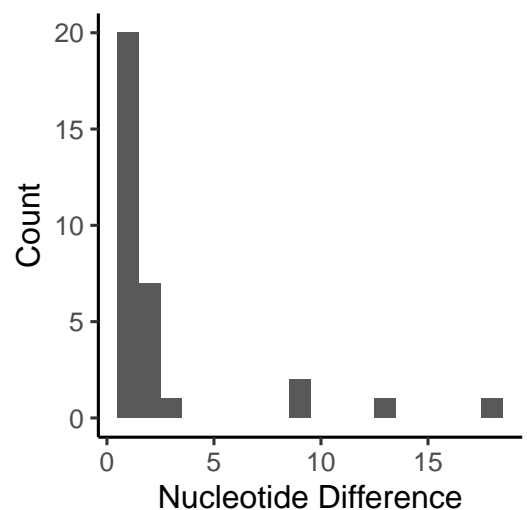
### IGHV2-26\*01

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



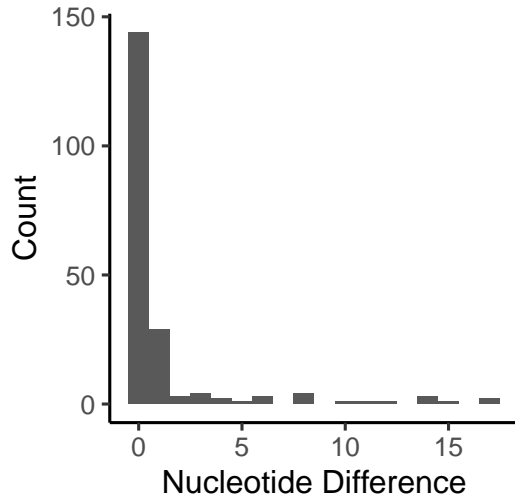
### IGHV3-7\*04

33 sequences assigned  
No exact matches.



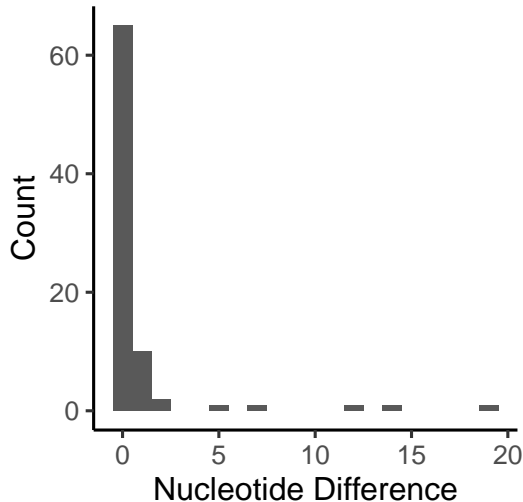
### IGHV2-5\*01

201 sequences assigned  
144 (71.6%) exact matches, in which:  
143 unique CDR3  
6 unique J



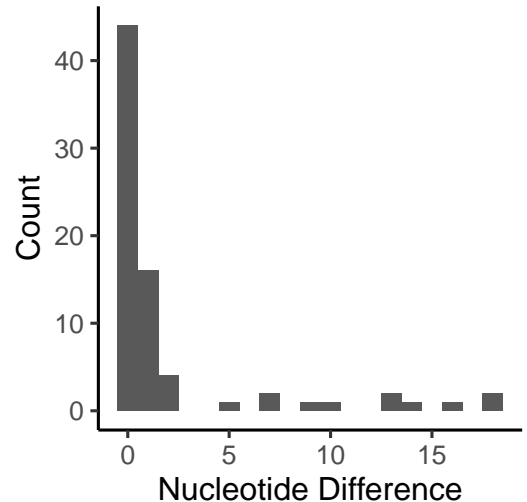
### IGHV2-70\*01

82 sequences assigned  
65 (79.3%) exact matches, in which:  
65 unique CDR3  
5 unique J



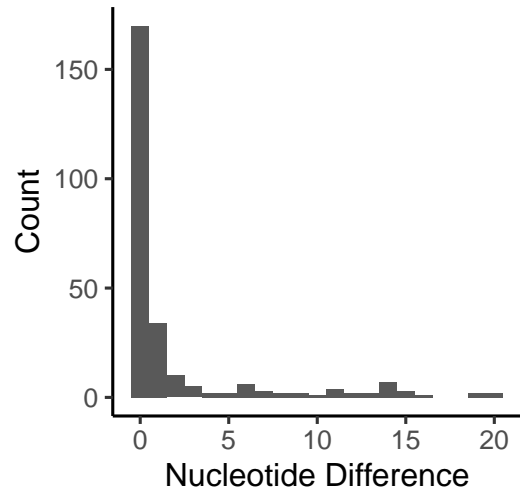
### IGHV3-7\*05

77 sequences assigned  
44 (57.1%) exact matches, in which:  
43 unique CDR3  
5 unique J



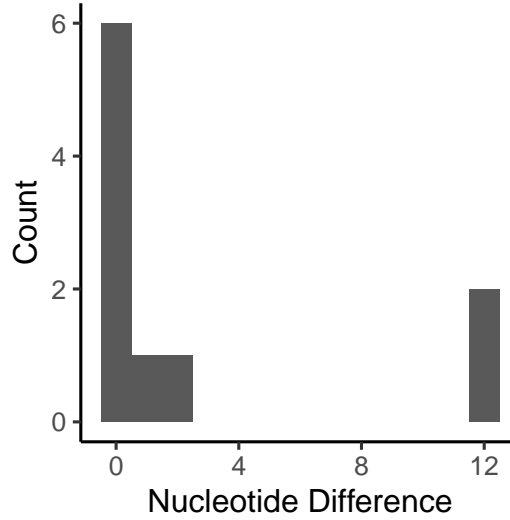
### IGHV3-11\*05

272 sequences assigned  
170 (62.5%) exact matches, in which:  
169 unique CDR3  
6 unique J



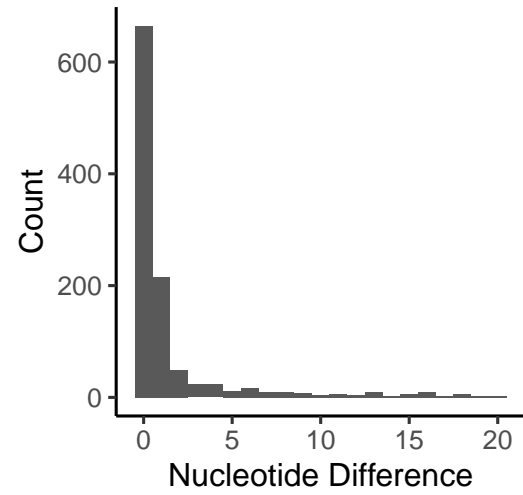
### IGHV3-13\*05

10 sequences assigned  
6 (60%) exact matches, in which:  
6 unique CDR3  
3 unique J



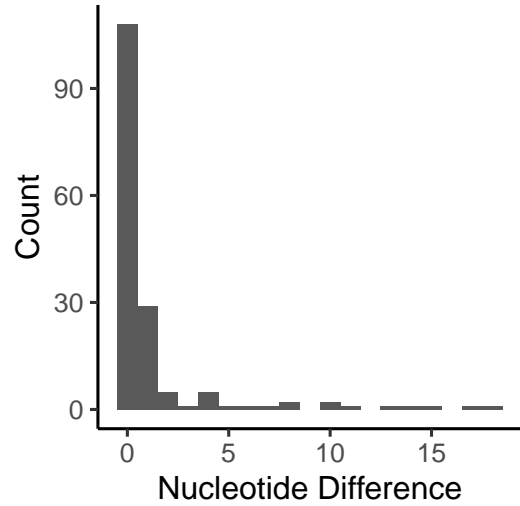
### IGHV3-21\*01

1113 sequences assigned  
665 (59.7%) exact matches, in which:  
647 unique CDR3  
6 unique J



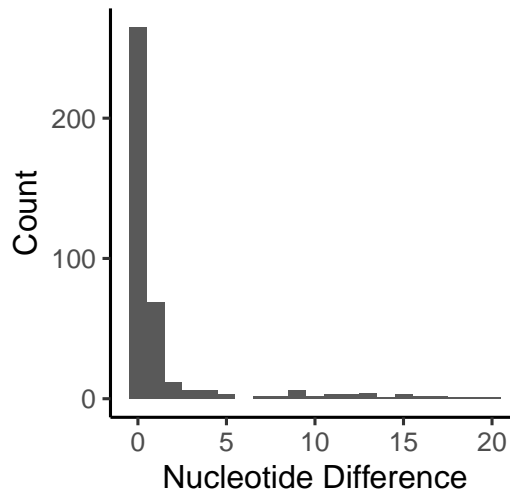
### IGHV3-11\*06

163 sequences assigned  
108 (66.3%) exact matches, in which:  
105 unique CDR3  
5 unique J



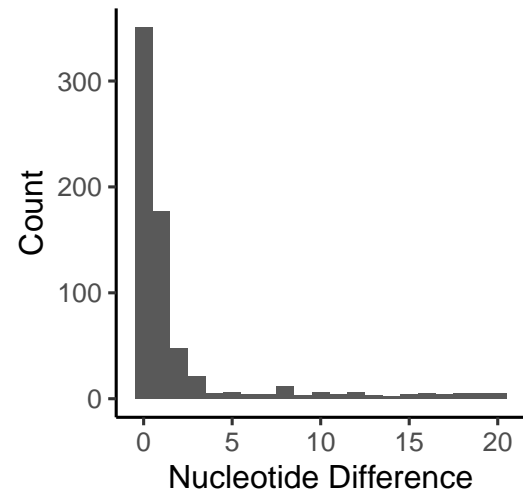
### IGHV3-15\*01

403 sequences assigned  
265 (65.8%) exact matches, in which:  
264 unique CDR3  
6 unique J



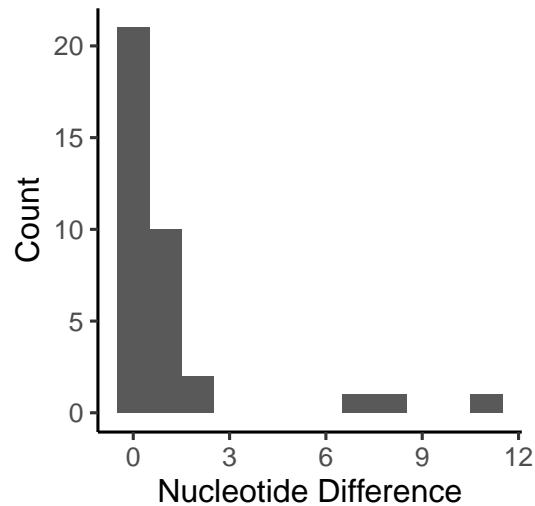
### IGHV3-33\*01

696 sequences assigned  
351 (50.4%) exact matches, in which:  
340 unique CDR3  
6 unique J



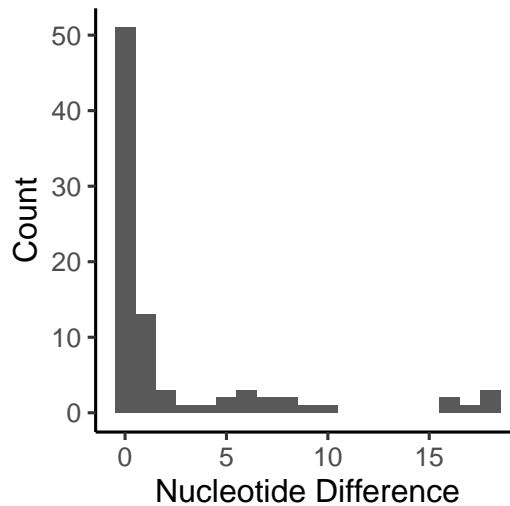
### IGHV3-13\*04

36 sequences assigned  
21 (58.3%) exact matches, in which:  
21 unique CDR3  
4 unique J



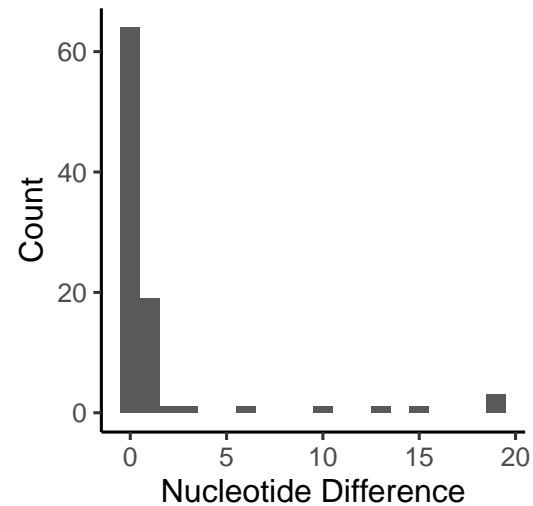
### IGHV3-20\*04

86 sequences assigned  
51 (59.3%) exact matches, in which:  
51 unique CDR3  
4 unique J



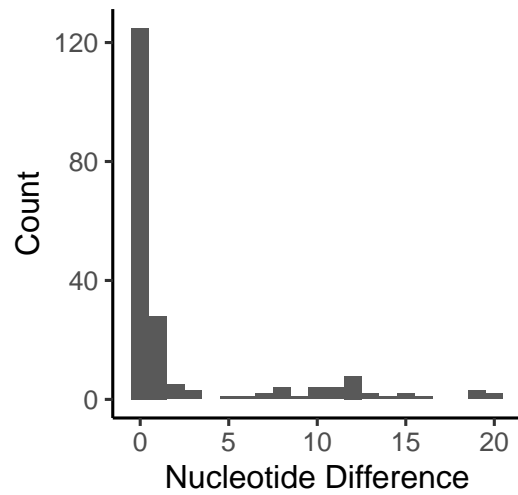
### IGHV3-43\*02

95 sequences assigned  
64 (67.4%) exact matches, in which:  
63 unique CDR3  
6 unique J



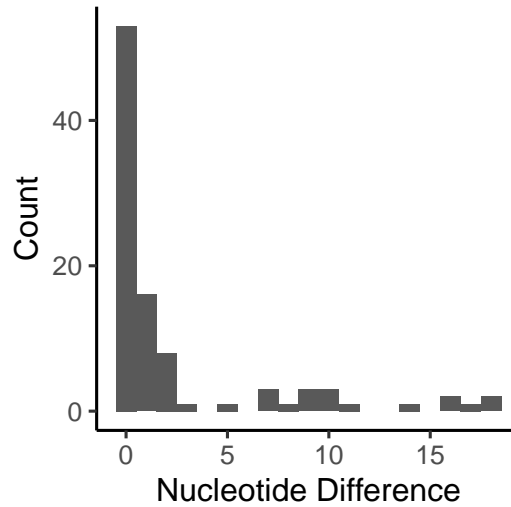
### IGHV3-48\*01

204 sequences assigned  
125 (61.3%) exact matches, in which:  
123 unique CDR3  
6 unique J



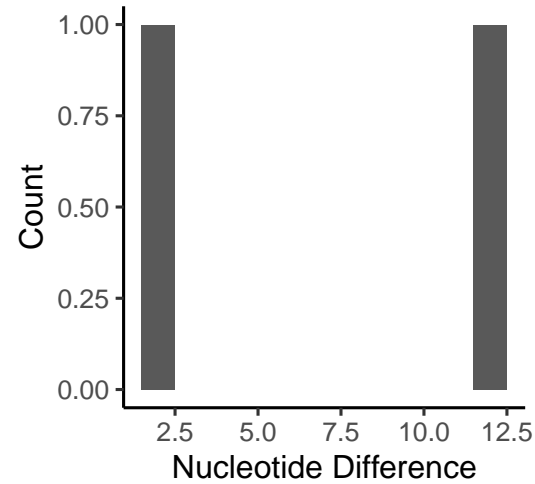
### IGHV3-49\*04

103 sequences assigned  
53 (51.5%) exact matches, in which:  
52 unique CDR3  
4 unique J



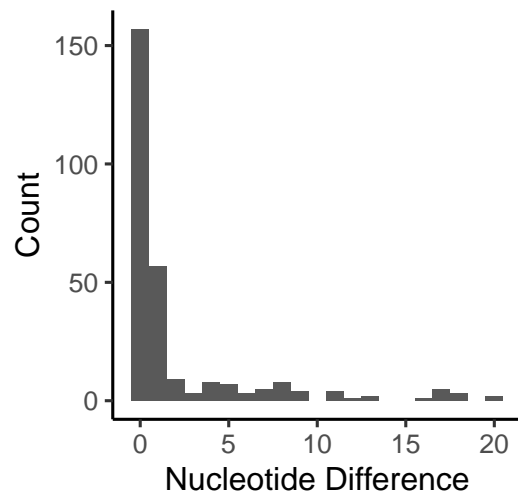
### IGHV3-66\*03

2 sequences assigned  
No exact matches.



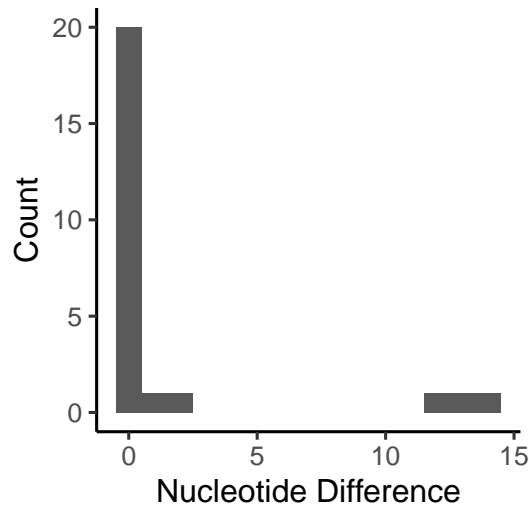
### IGHV3-48\*03

293 sequences assigned  
157 (53.6%) exact matches, in which:  
155 unique CDR3  
6 unique J



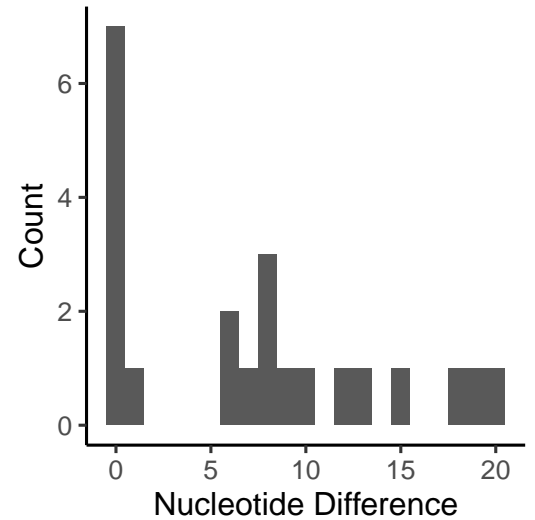
### IGHV3-53\*04

26 sequences assigned  
20 (76.9%) exact matches, in which:  
19 unique CDR3  
5 unique J



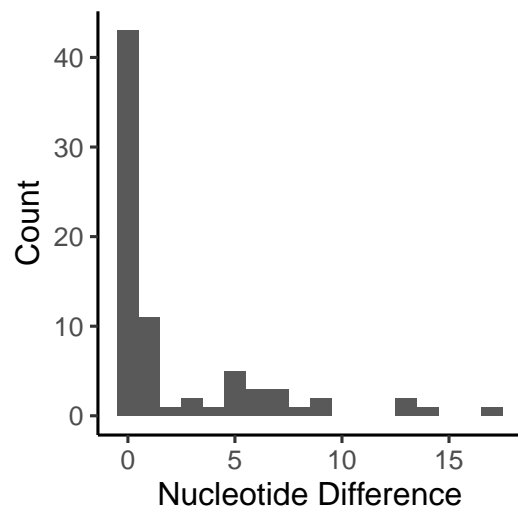
### IGHV3-72\*01

24 sequences assigned  
7 (29.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



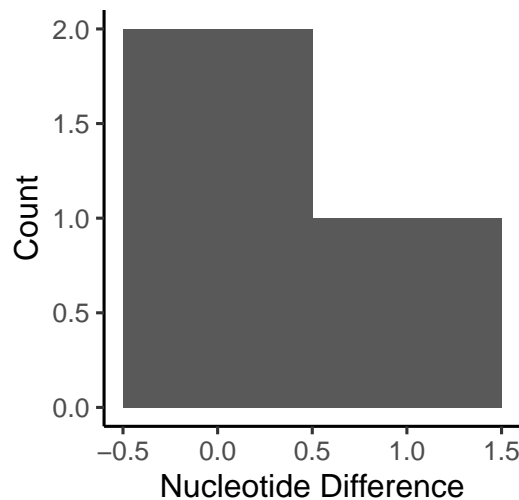
### IGHV3-49\*03

77 sequences assigned  
43 (55.8%) exact matches, in which:  
43 unique CDR3  
4 unique J



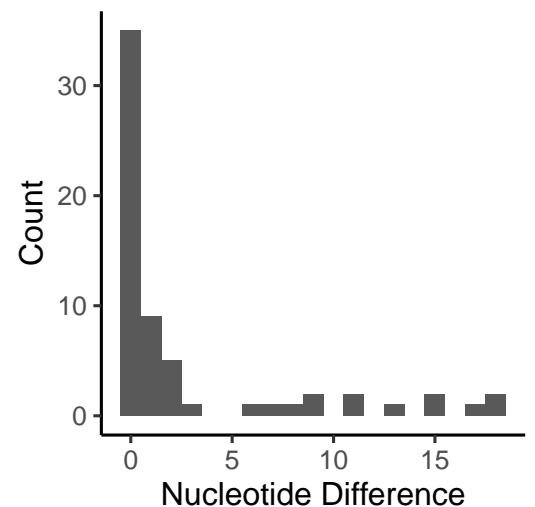
### IGHV3-64\*02

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



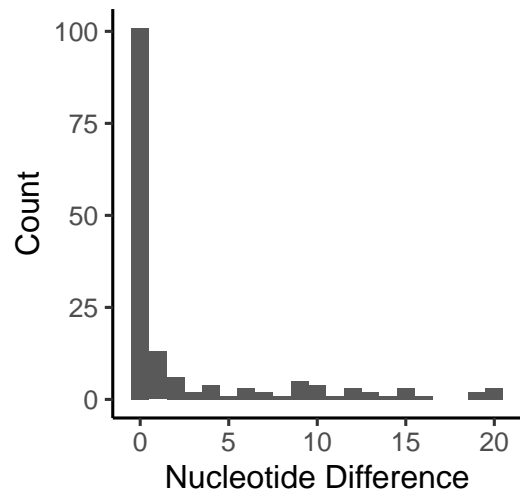
### IGHV3-73\*02

65 sequences assigned  
35 (53.8%) exact matches, in which:  
33 unique CDR3  
4 unique J



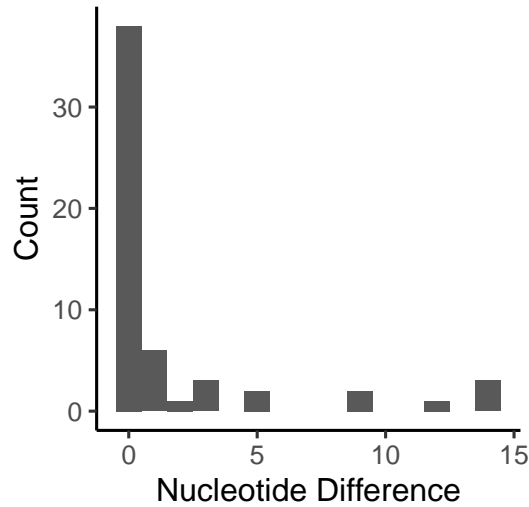
### IGHV3-74\*01

164 sequences assigned  
101 (61.6%) exact matches, in which:  
101 unique CDR3  
6 unique J



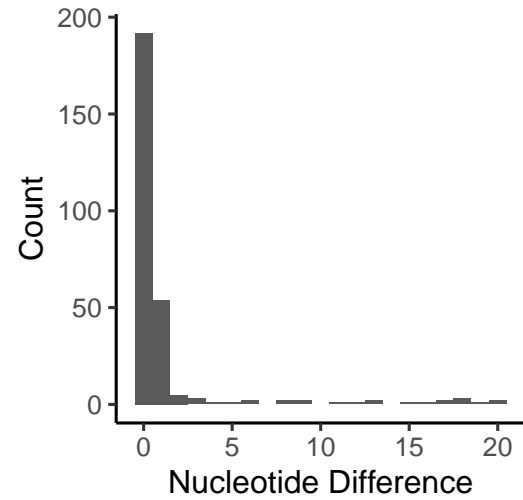
### IGHV3-64D\*08

58 sequences assigned  
38 (65.5%) exact matches, in which:  
36 unique CDR3  
5 unique J



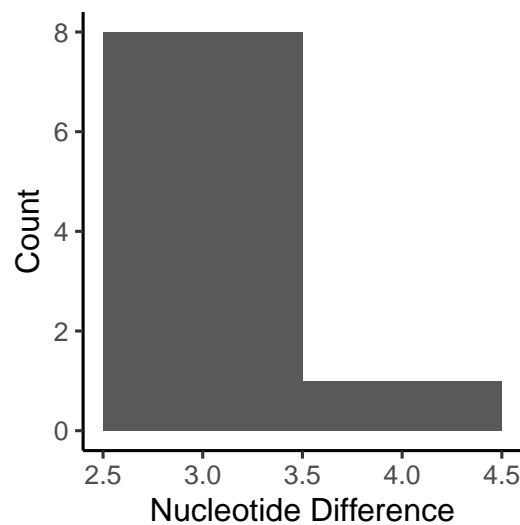
### IGHV4-31\*03

283 sequences assigned  
192 (67.8%) exact matches, in which:  
192 unique CDR3  
6 unique J



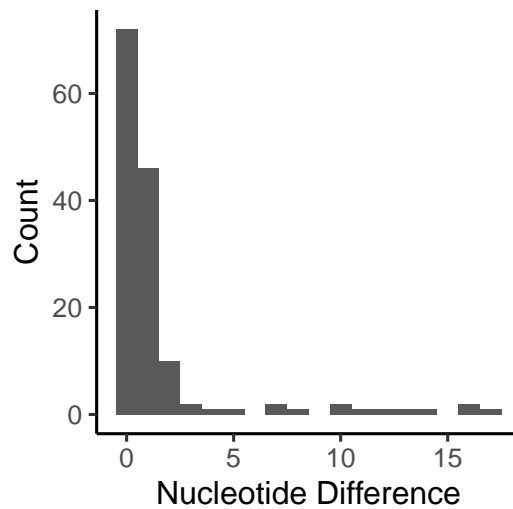
### IGHV3-43D\*04

9 sequences assigned  
No exact matches.



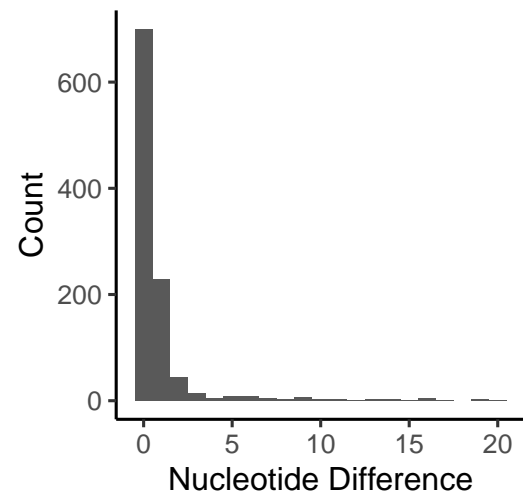
### IGHV4-4\*02

152 sequences assigned  
72 (47.4%) exact matches, in which:  
72 unique CDR3  
5 unique J



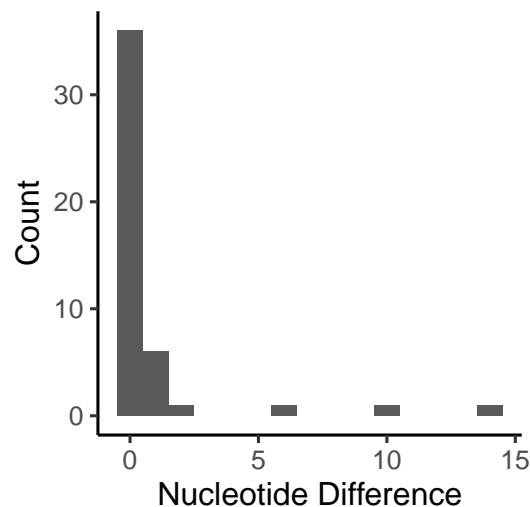
### IGHV4-34\*01

1068 sequences assigned  
700 (65.5%) exact matches, in which:  
687 unique CDR3  
6 unique J



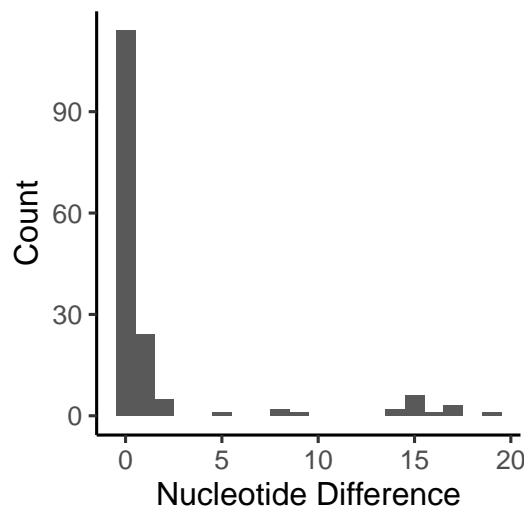
### IGHV3-64D\*06

49 sequences assigned  
36 (73.5%) exact matches, in which:  
35 unique CDR3  
5 unique J



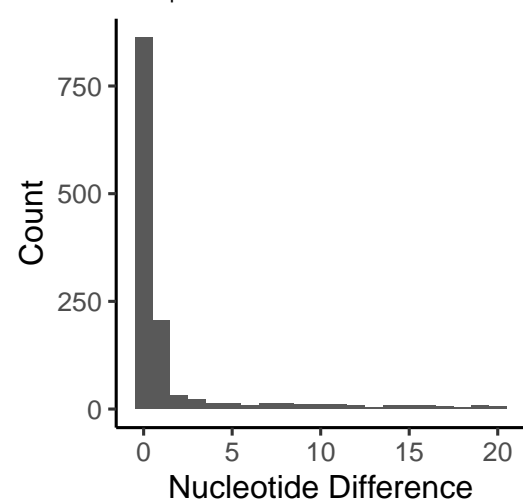
### IGHV4-4\*07

164 sequences assigned  
114 (69.5%) exact matches, in which:  
113 unique CDR3  
5 unique J



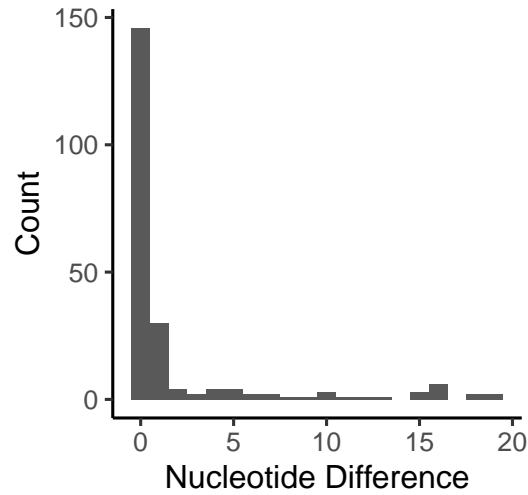
### IGHV4-39\*01

1307 sequences assigned  
863 (66%) exact matches, in which:  
845 unique CDR3  
6 unique J



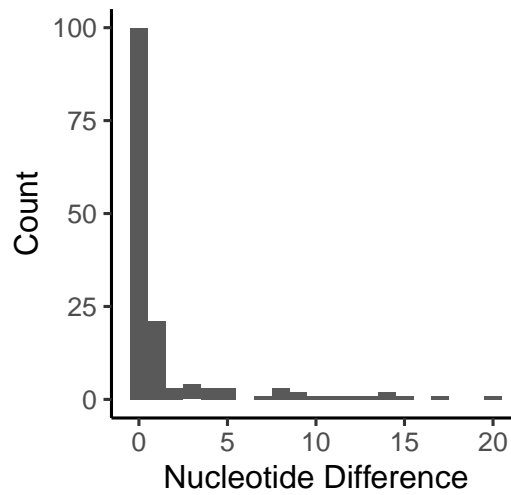
### IGHV4–59\*01

226 sequences assigned  
146 (64.6%) exact matches, in which:  
146 unique CDR3  
5 unique J



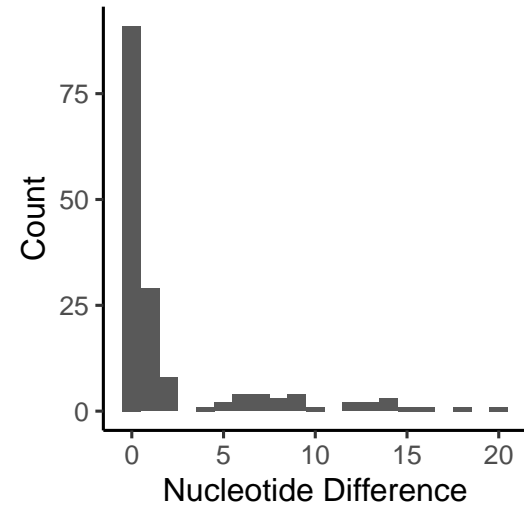
### IGHV5–10–1\*01

165 sequences assigned  
100 (60.6%) exact matches, in which:  
97 unique CDR3  
6 unique J



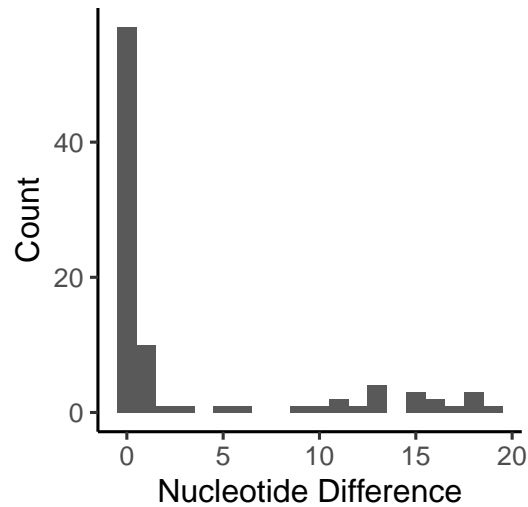
### IGHV5–51\*03

162 sequences assigned  
91 (56.2%) exact matches, in which:  
89 unique CDR3  
5 unique J



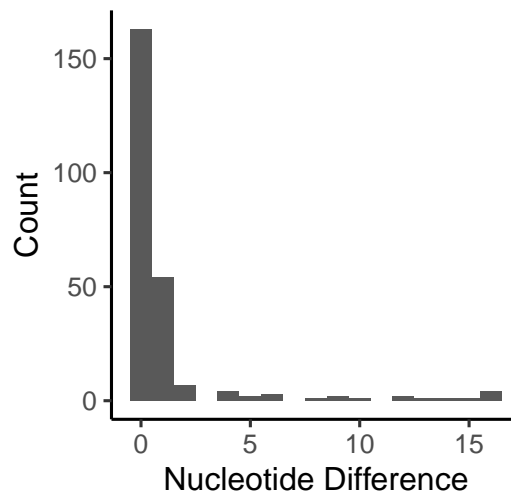
### IGHV4–61\*01

93 sequences assigned  
57 (61.3%) exact matches, in which:  
56 unique CDR3  
5 unique J



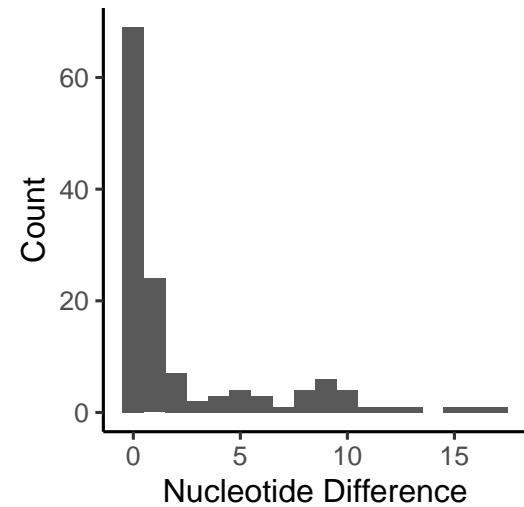
### IGHV5–10–1\*03

256 sequences assigned  
163 (63.7%) exact matches, in which:  
163 unique CDR3  
6 unique J



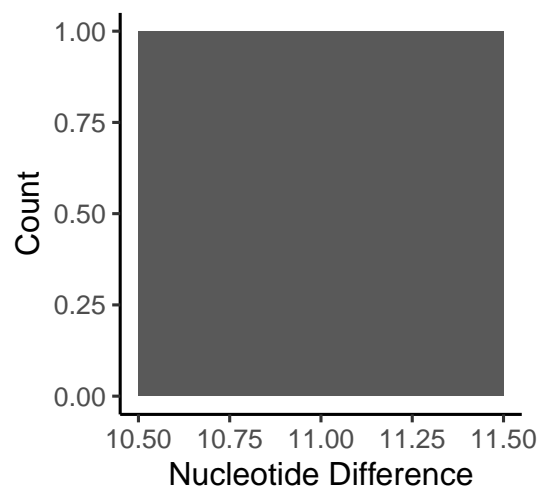
### IGHV6–1\*01

141 sequences assigned  
69 (48.9%) exact matches, in which:  
69 unique CDR3  
4 unique J



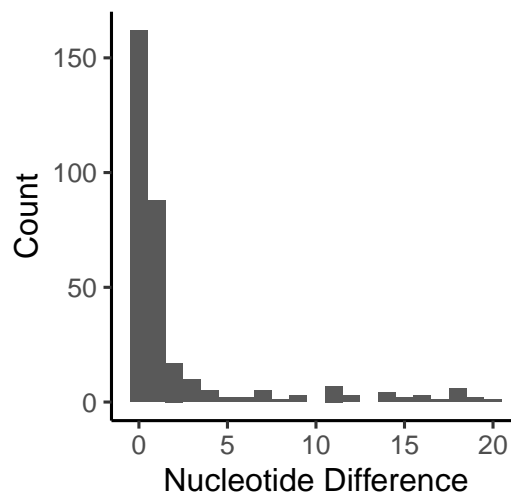
### IGHV1/OR15–1\*04

1 sequences assigned  
No exact matches.



### IGHV5–51\*01

332 sequences assigned  
162 (48.8%) exact matches, in which:  
162 unique CDR3  
6 unique J



### IGHV7–4–1\*01

1 sequences assigned  
No exact matches.

