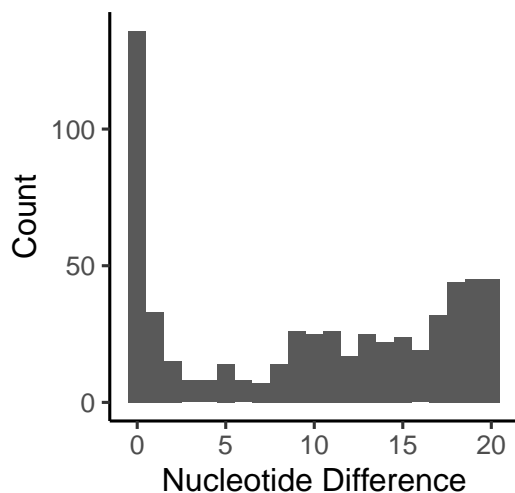


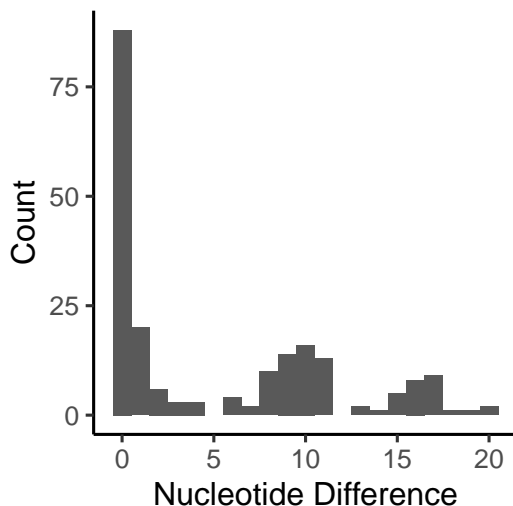
### IGHV1-2\*02

1040 sequences assigned  
136 (13.1%) exact matches, in which:  
133 unique CDR3  
6 unique J



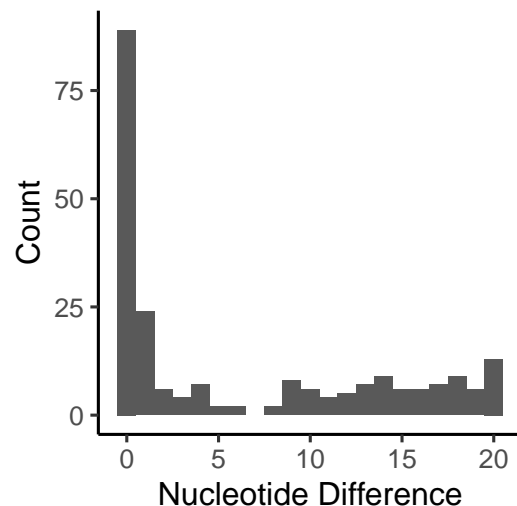
### IGHV1-8\*01

267 sequences assigned  
88 (33%) exact matches, in which:  
85 unique CDR3  
5 unique J



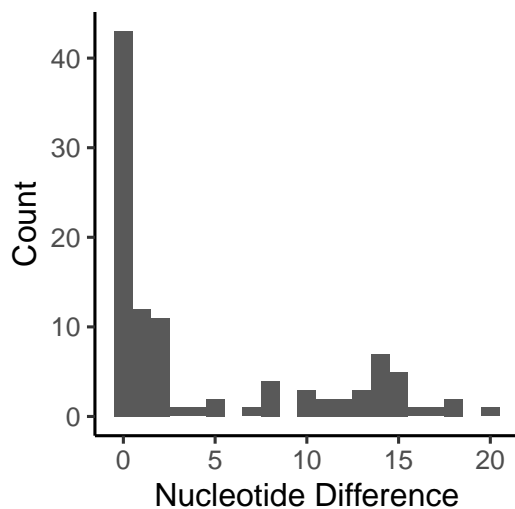
### IGHV1-24\*01

299 sequences assigned  
89 (29.8%) exact matches, in which:  
89 unique CDR3  
5 unique J



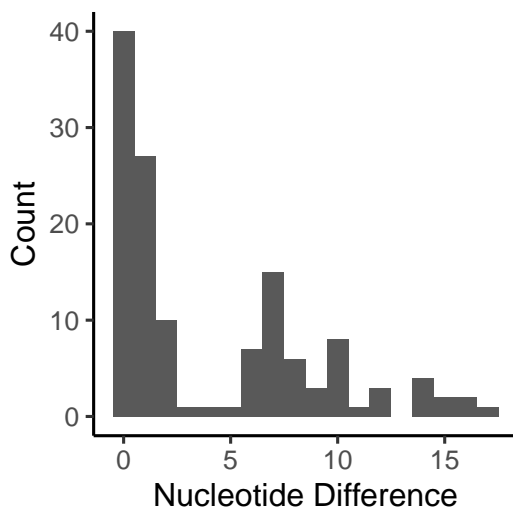
### IGHV1-2\*04

142 sequences assigned  
43 (30.3%) exact matches, in which:  
41 unique CDR3  
4 unique J



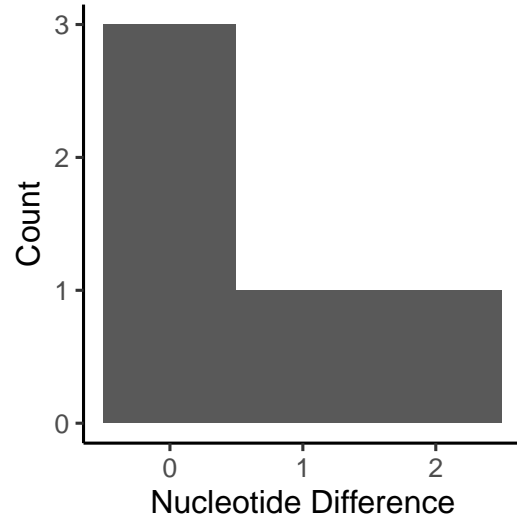
### IGHV1-8\*03

187 sequences assigned  
40 (21.4%) exact matches, in which:  
36 unique CDR3  
6 unique J



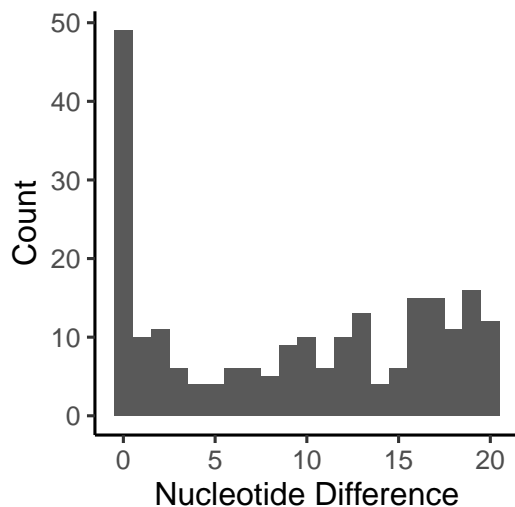
### IGHV1-45\*02

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



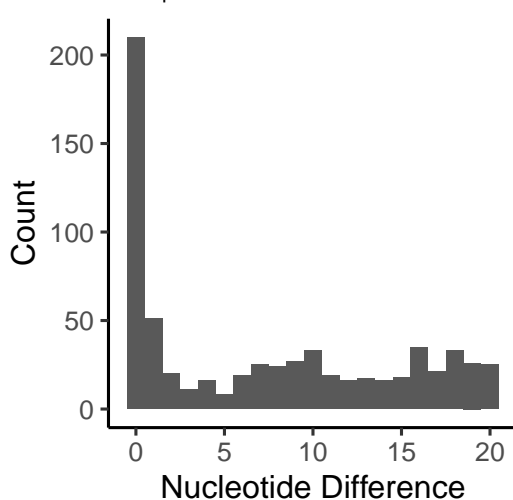
### IGHV1-3\*01

699 sequences assigned  
49 (7%) exact matches, in which:  
48 unique CDR3  
5 unique J



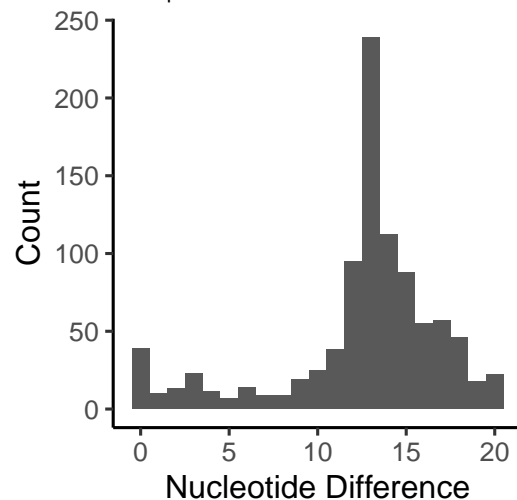
### IGHV1-18\*01

1111 sequences assigned  
210 (18.9%) exact matches, in which:  
201 unique CDR3  
5 unique J



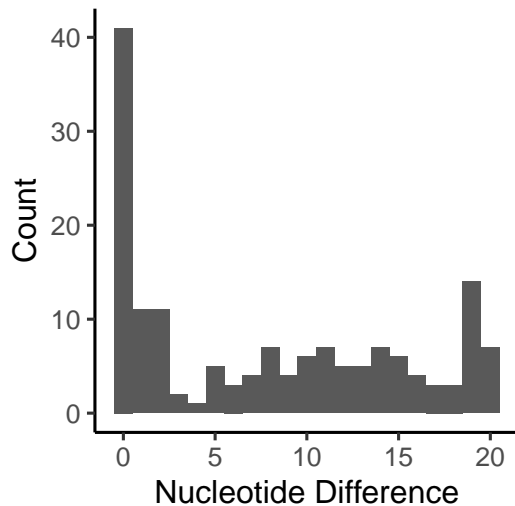
### IGHV1-46\*01

2062 sequences assigned  
39 (1.9%) exact matches, in which:  
39 unique CDR3  
5 unique J



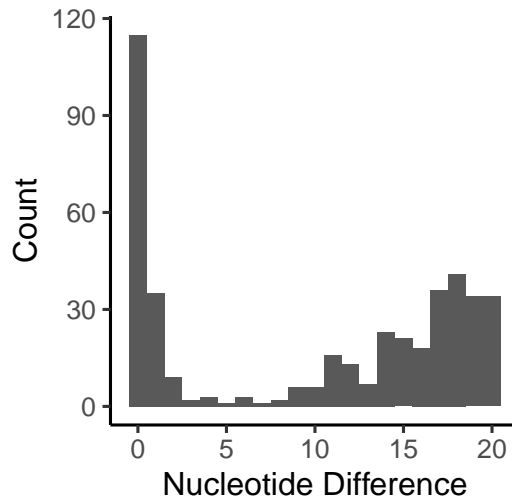
## IGHV1-46\*03

347 sequences assigned  
41 (11.8%) exact matches, in which:  
37 unique CDR3  
4 unique J



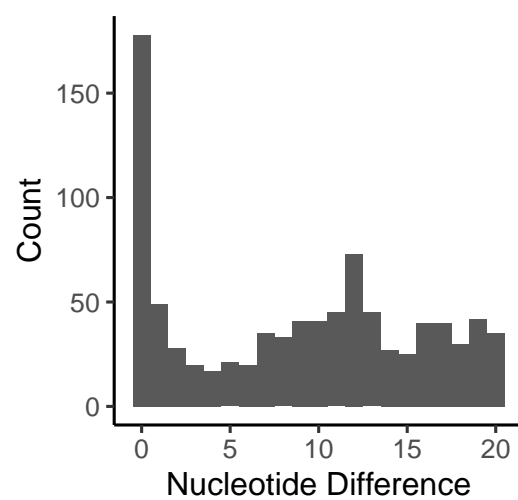
## IGHV1-69\*04

708 sequences assigned  
115 (16.2%) exact matches, in which:  
114 unique CDR3  
4 unique J



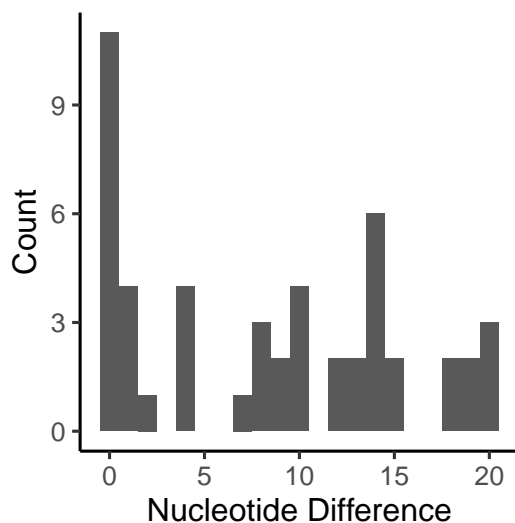
## IGHV2-5\*01

1129 sequences assigned  
178 (15.8%) exact matches, in which:  
173 unique CDR3  
6 unique J



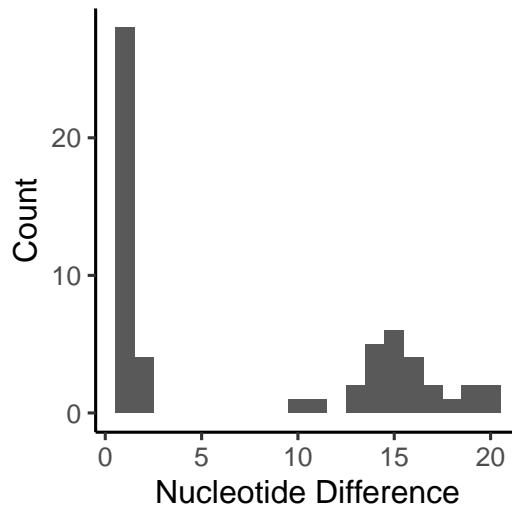
## IGHV1-58\*02

71 sequences assigned  
11 (15.5%) exact matches, in which:  
11 unique CDR3  
4 unique J



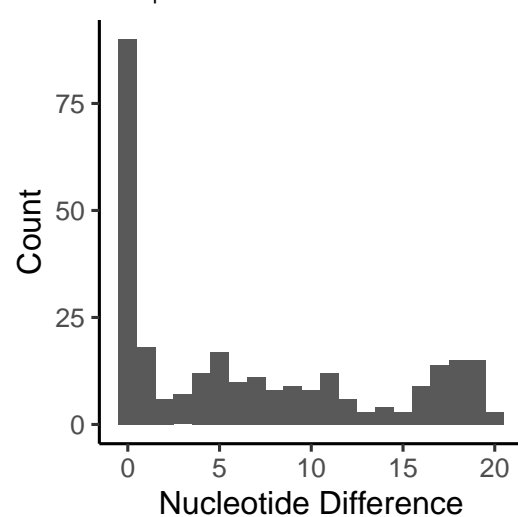
## IGHV1-69\*08

129 sequences assigned  
No exact matches.



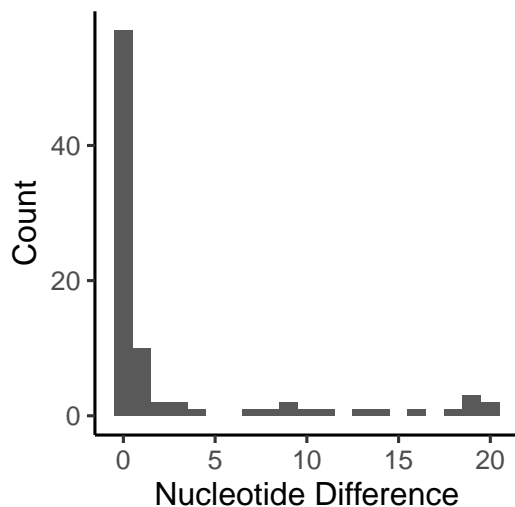
## IGHV2-26\*01

319 sequences assigned  
90 (28.2%) exact matches, in which:  
87 unique CDR3  
5 unique J



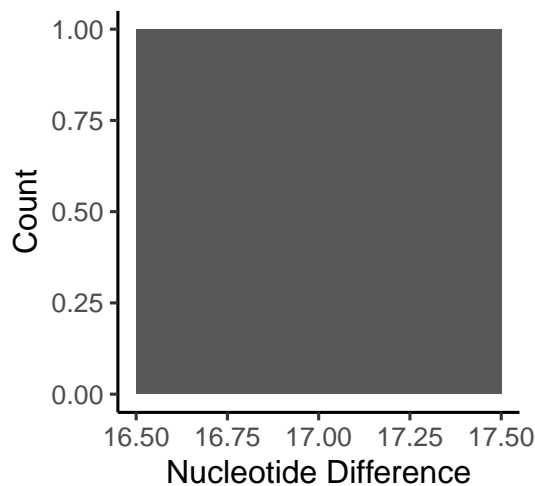
## IGHV1-69\*02

162 sequences assigned  
57 (35.2%) exact matches, in which:  
57 unique CDR3  
5 unique J



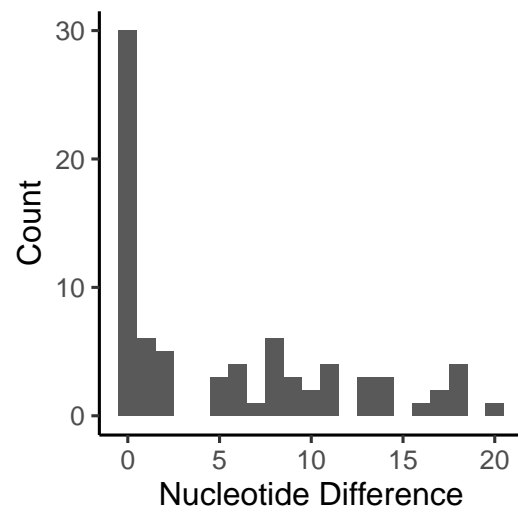
## IGHV1-69D\*01

1 sequences assigned  
No exact matches.



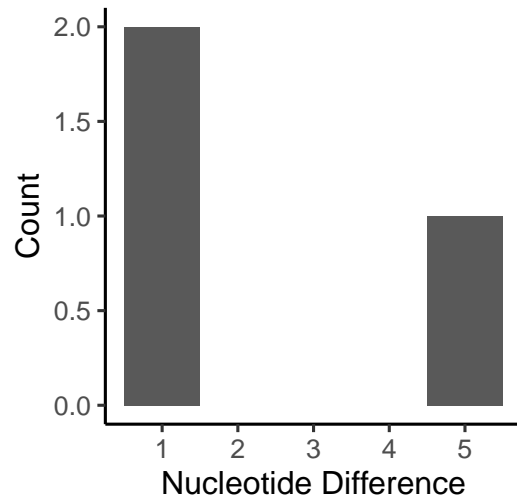
## IGHV2-70\*15

93 sequences assigned  
30 (32.3%) exact matches, in which:  
30 unique CDR3  
5 unique J



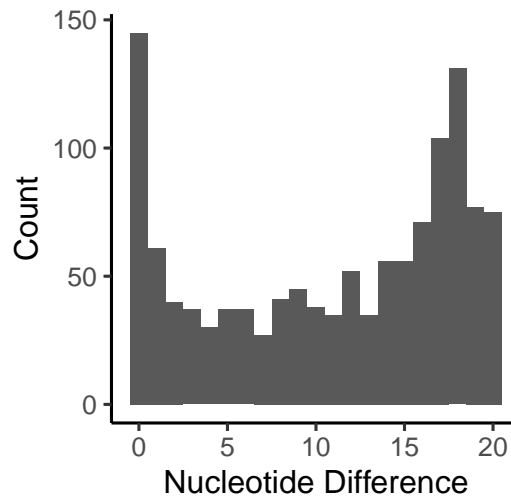
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



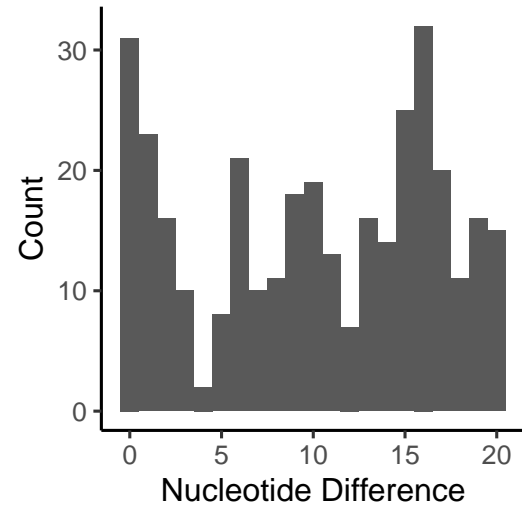
### IGHV3-9\*01

2759 sequences assigned  
145 (5.3%) exact matches, in which:  
136 unique CDR3  
6 unique J



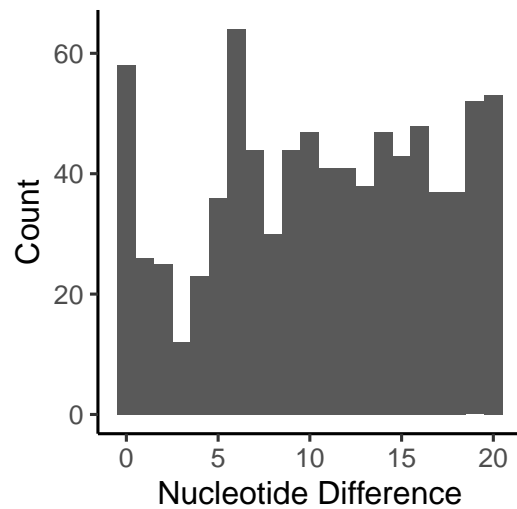
### IGHV3-11\*04

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



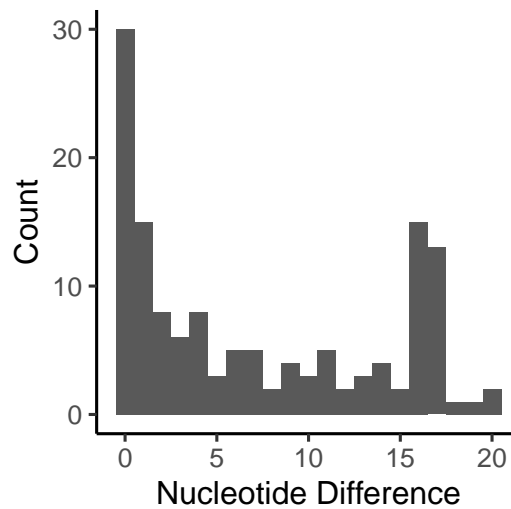
### IGHV3-7\*01

1271 sequences assigned  
58 (4.6%) exact matches, in which:  
56 unique CDR3  
5 unique J



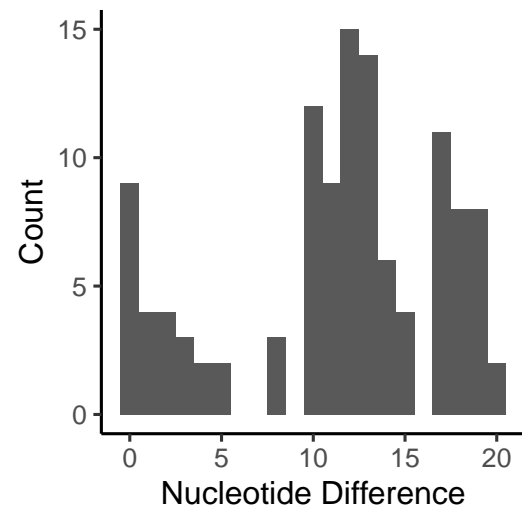
### IGHV3-9\*03

159 sequences assigned  
30 (18.9%) exact matches, in which:  
26 unique CDR3  
5 unique J



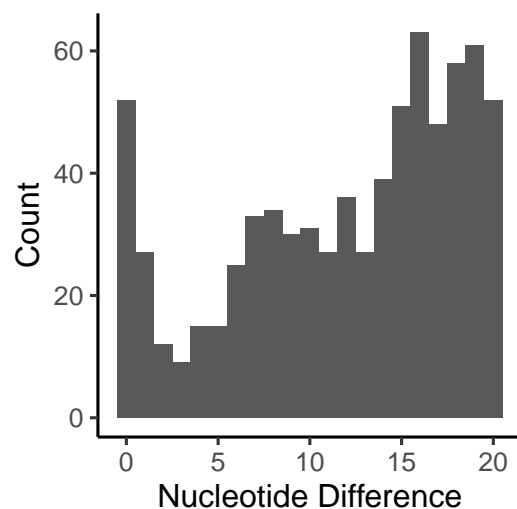
### IGHV3-13\*01

160 sequences assigned  
9 (5.6%) exact matches, in which:  
9 unique CDR3  
4 unique J



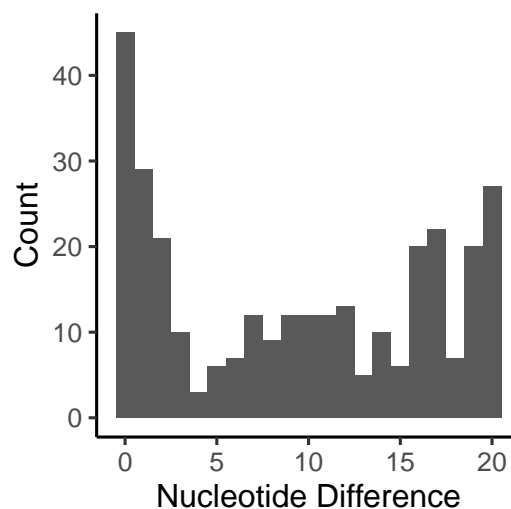
### IGHV3-7\*03

1163 sequences assigned  
52 (4.5%) exact matches, in which:  
52 unique CDR3  
5 unique J



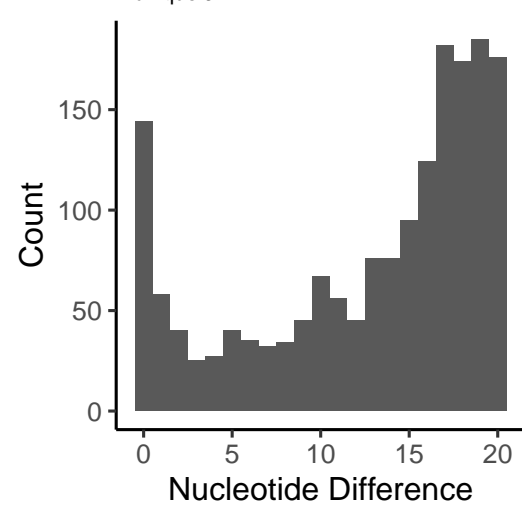
### IGHV3-11\*01

773 sequences assigned  
45 (5.8%) exact matches, in which:  
42 unique CDR3  
5 unique J



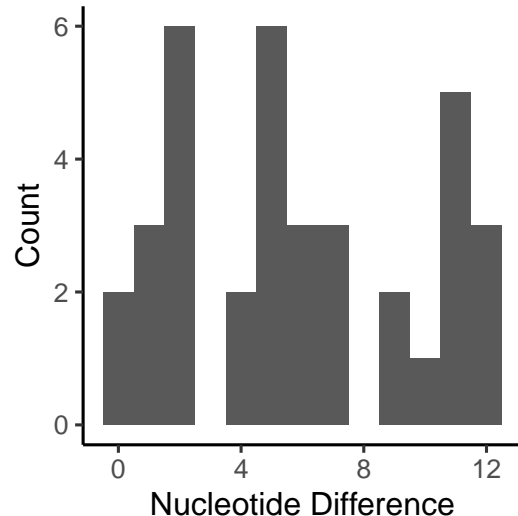
### IGHV3-15\*01

3357 sequences assigned  
144 (4.3%) exact matches, in which:  
138 unique CDR3  
4 unique J



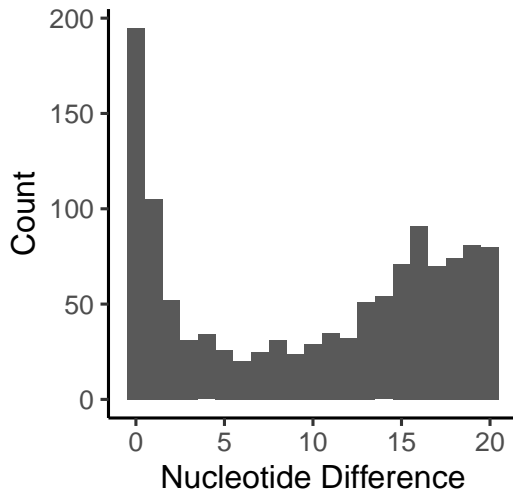
### IGHV3-20\*01

36 sequences assigned  
2 (5.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



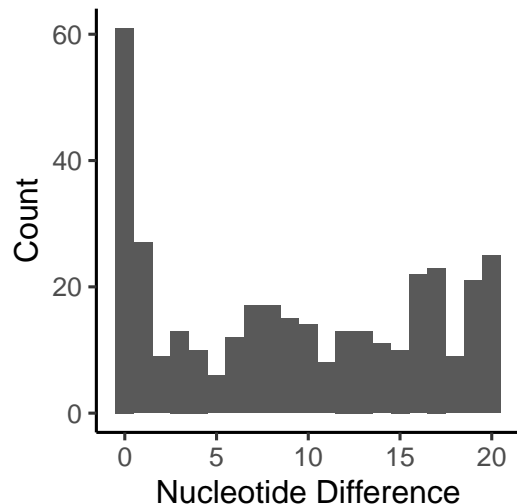
### IGHV3-33\*01

2152 sequences assigned  
195 (9.1%) exact matches, in which:  
192 unique CDR3  
6 unique J



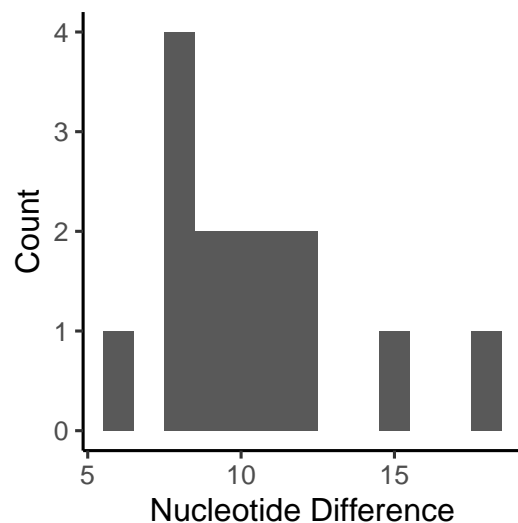
### IGHV3-48\*01

627 sequences assigned  
61 (9.7%) exact matches, in which:  
59 unique CDR3  
5 unique J



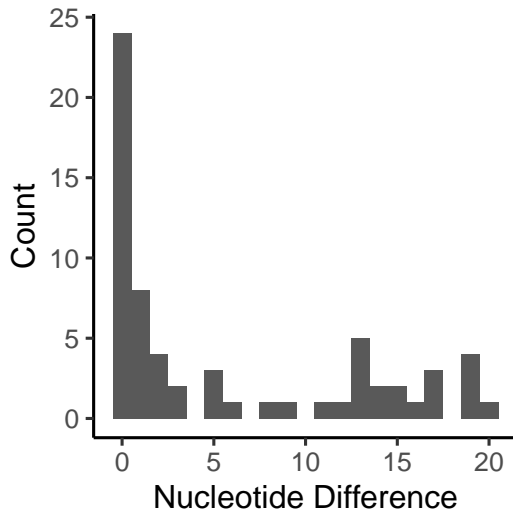
### IGHV3-20\*04

20 sequences assigned  
No exact matches.



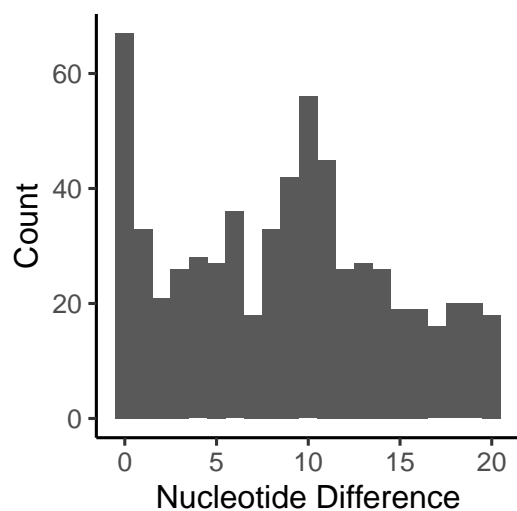
### IGHV3-43\*01

152 sequences assigned  
24 (15.8%) exact matches, in which:  
23 unique CDR3  
3 unique J



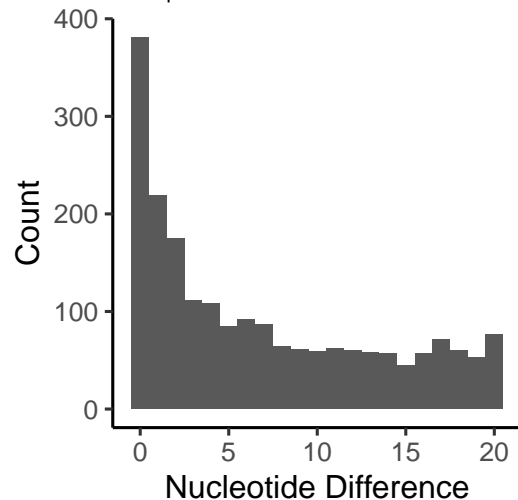
### IGHV3-48\*04

902 sequences assigned  
67 (7.4%) exact matches, in which:  
61 unique CDR3  
5 unique J



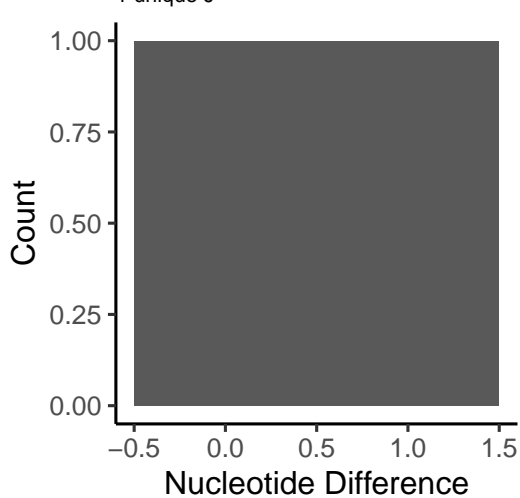
### IGHV3-21\*01

3016 sequences assigned  
381 (12.6%) exact matches, in which:  
294 unique CDR3  
6 unique J



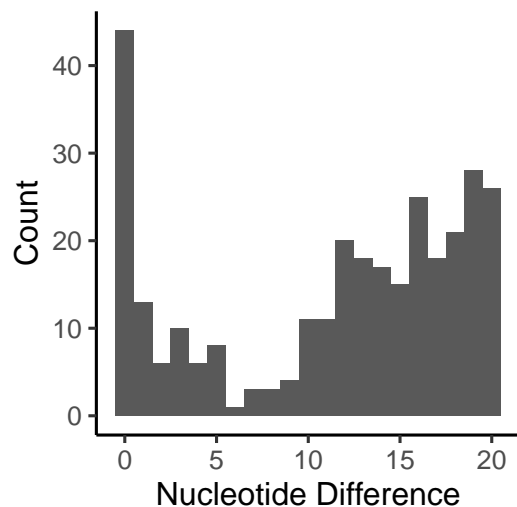
### IGHV3-47\*01

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



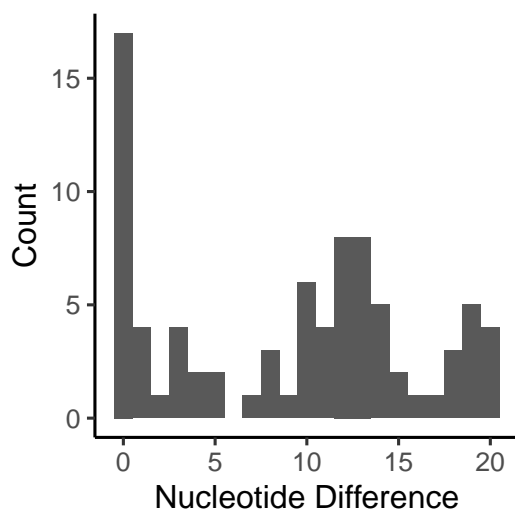
### IGHV3-49\*03

501 sequences assigned  
44 (8.8%) exact matches, in which:  
43 unique CDR3  
6 unique J



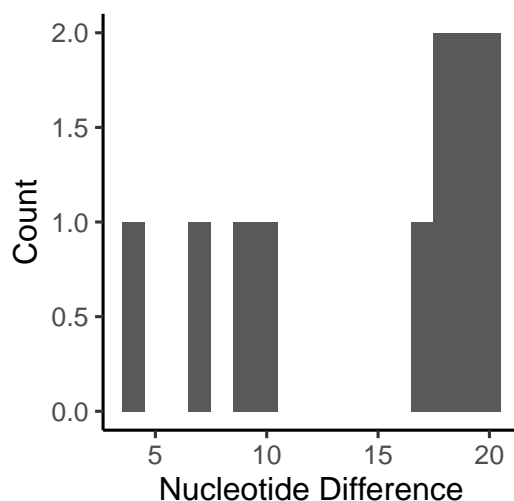
### IGHV3-53\*02

155 sequences assigned  
17 (11%) exact matches, in which:  
17 unique CDR3  
3 unique J



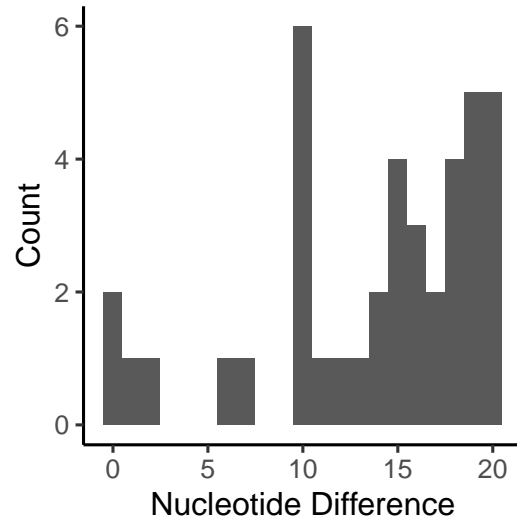
### IGHV3-64\*07

47 sequences assigned  
No exact matches.



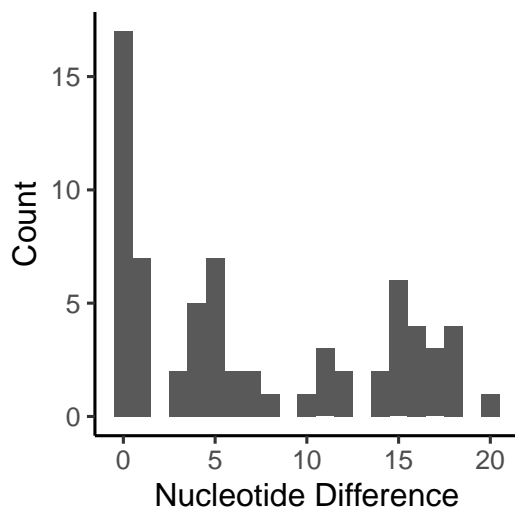
### IGHV3-66\*04

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



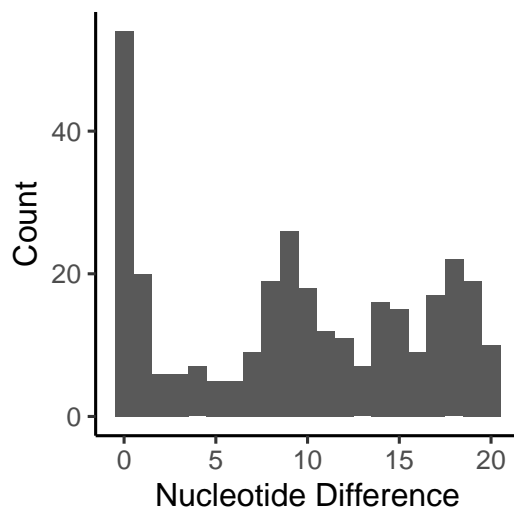
### IGHV3-53\*04

99 sequences assigned  
17 (17.2%) exact matches, in which:  
17 unique CDR3  
4 unique J



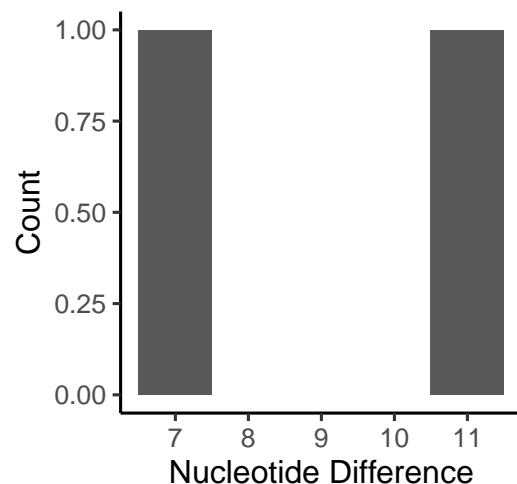
### IGHV3-66\*01

497 sequences assigned  
54 (10.9%) exact matches, in which:  
49 unique CDR3  
5 unique J



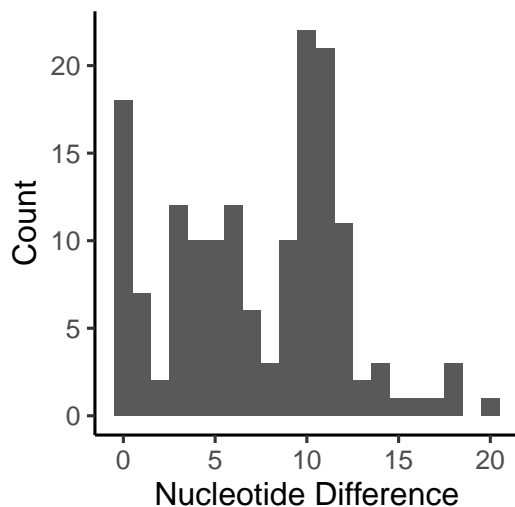
### IGHV3-69-1\*01

3 sequences assigned  
No exact matches.



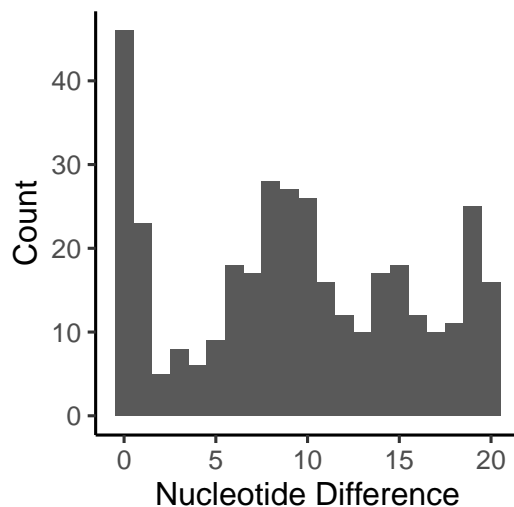
### IGHV3-64\*01

216 sequences assigned  
18 (8.3%) exact matches, in which:  
18 unique CDR3  
4 unique J



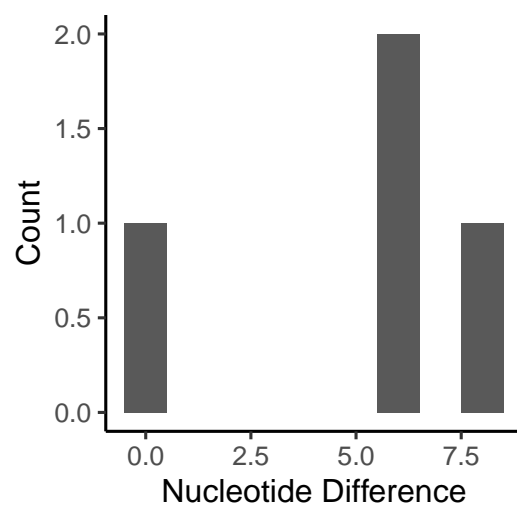
### IGHV3-66\*02

551 sequences assigned  
46 (8.3%) exact matches, in which:  
46 unique CDR3  
6 unique J



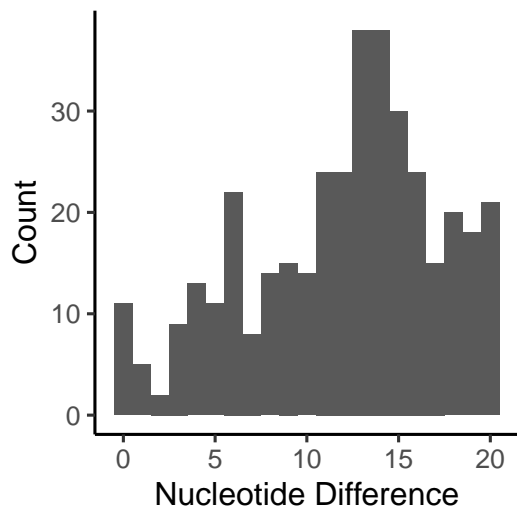
### IGHV3-69-1\*02

13 sequences assigned  
1 (7.7%) exact matches, in which:  
1 unique CDR3  
0 unique J



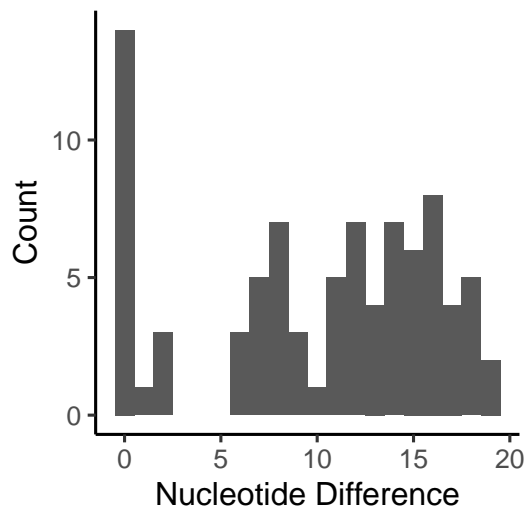
### IGHV3-72\*01

590 sequences assigned  
11 (1.9%) exact matches, in which:  
11 unique CDR3  
3 unique J



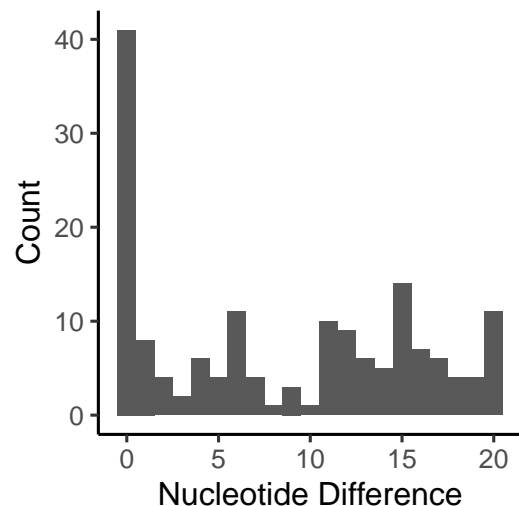
### IGHV3-43D\*03

117 sequences assigned  
14 (12%) exact matches, in which:  
14 unique CDR3  
2 unique J



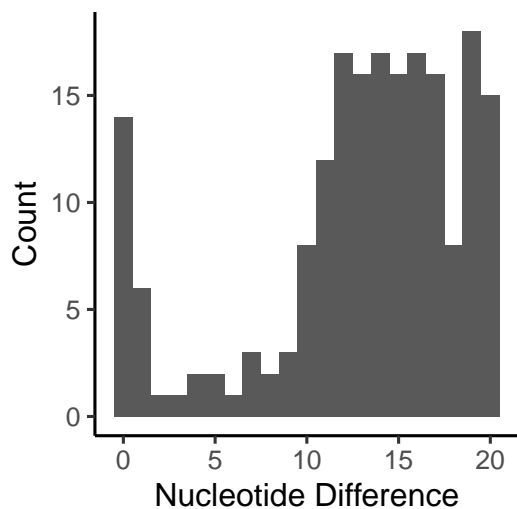
### IGHV4-4\*02

237 sequences assigned  
41 (17.3%) exact matches, in which:  
40 unique CDR3  
5 unique J



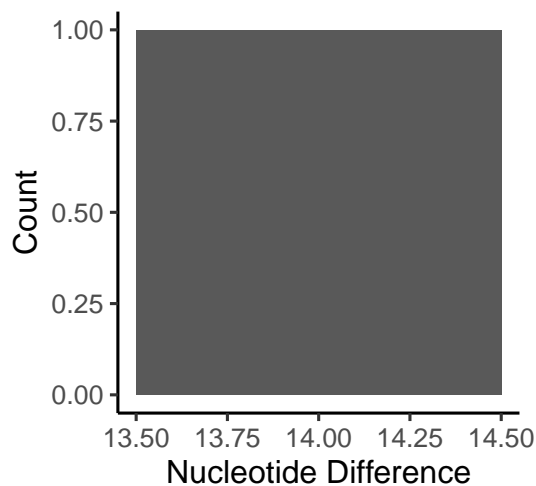
### IGHV3-73\*01

386 sequences assigned  
14 (3.6%) exact matches, in which:  
13 unique CDR3  
5 unique J



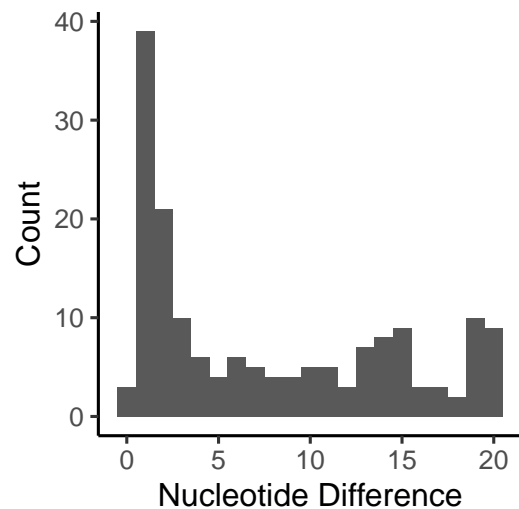
### IGHV3-64D\*06

1 sequences assigned  
No exact matches.



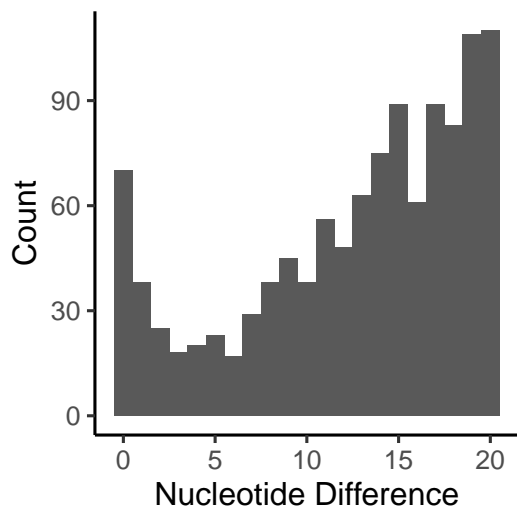
### IGHV4-4\*07

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



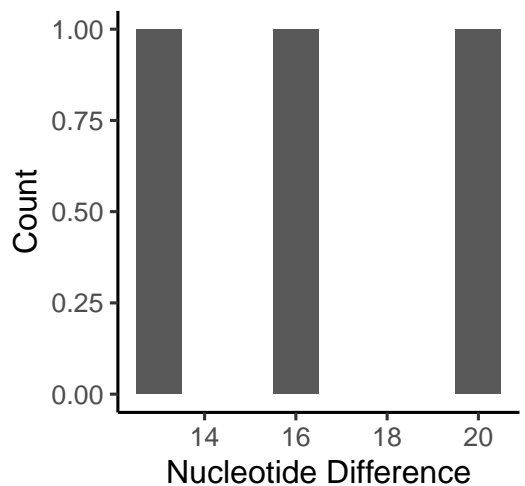
### IGHV3-74\*01

2035 sequences assigned  
70 (3.4%) exact matches, in which:  
64 unique CDR3  
5 unique J



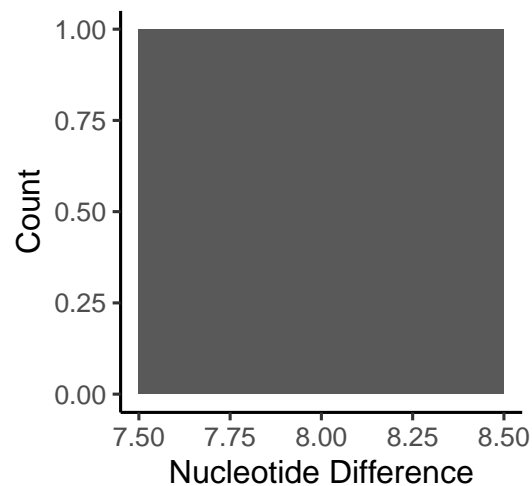
### IGHV3-NL1\*01

3 sequences assigned  
No exact matches.



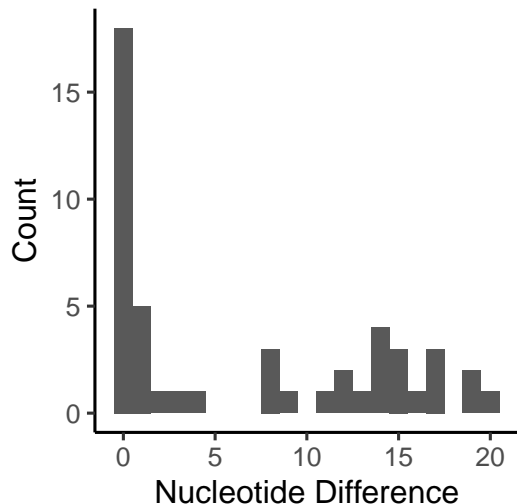
### IGHV4-28\*03

9 sequences assigned  
No exact matches.



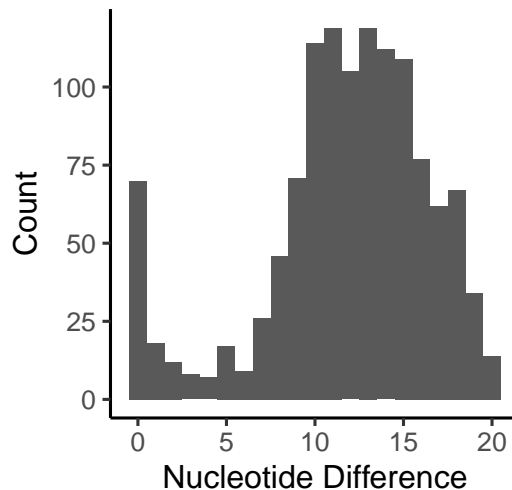
### IGHV4-30-2\*01

74 sequences assigned  
18 (24.3%) exact matches, in which:  
18 unique CDR3  
4 unique J



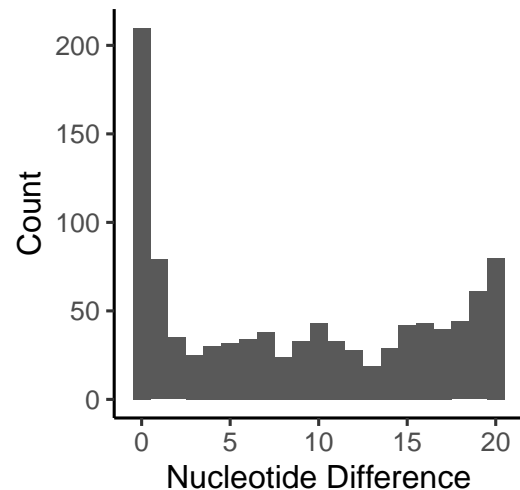
### IGHV4-31\*03

1736 sequences assigned  
70 (4%) exact matches, in which:  
66 unique CDR3  
5 unique J



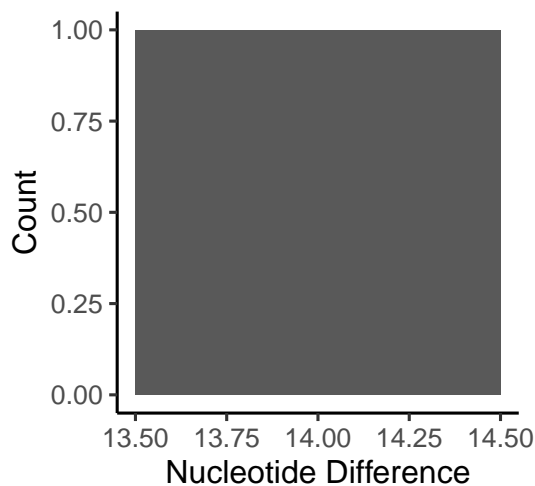
### IGHV4-39\*01

2646 sequences assigned  
210 (7.9%) exact matches, in which:  
206 unique CDR3  
6 unique J



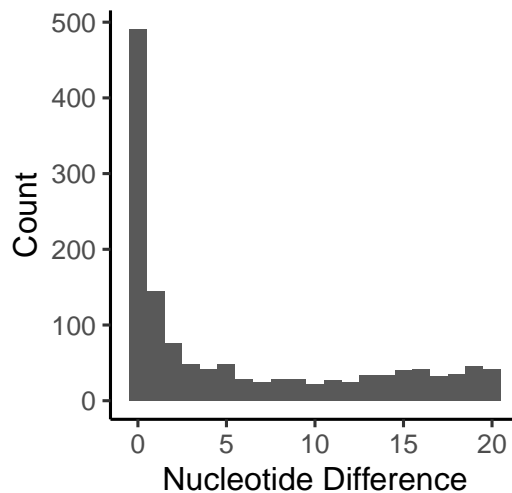
### IGHV4-30-4\*03

1 sequences assigned  
No exact matches.



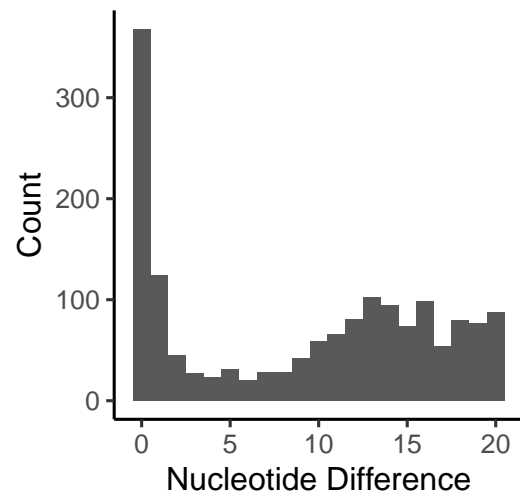
### IGHV4-34\*01

1831 sequences assigned  
491 (26.8%) exact matches, in which:  
465 unique CDR3  
6 unique J



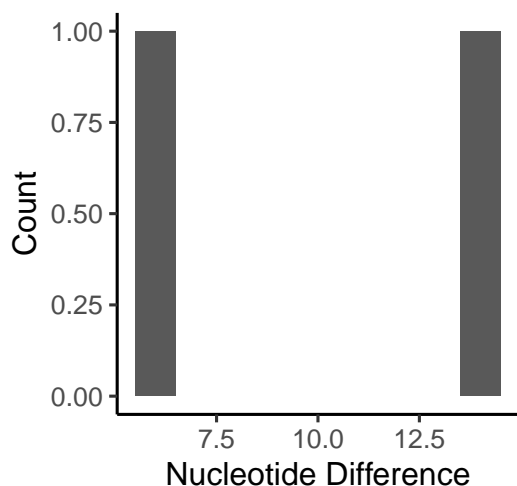
### IGHV4-39\*07

2460 sequences assigned  
368 (15%) exact matches, in which:  
342 unique CDR3  
6 unique J



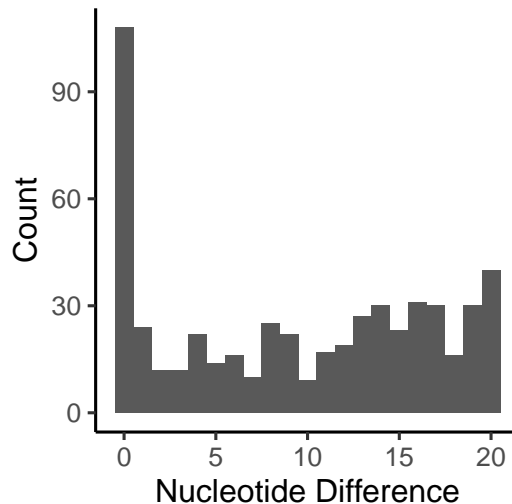
### IGHV4-30-4\*07

3 sequences assigned  
No exact matches.



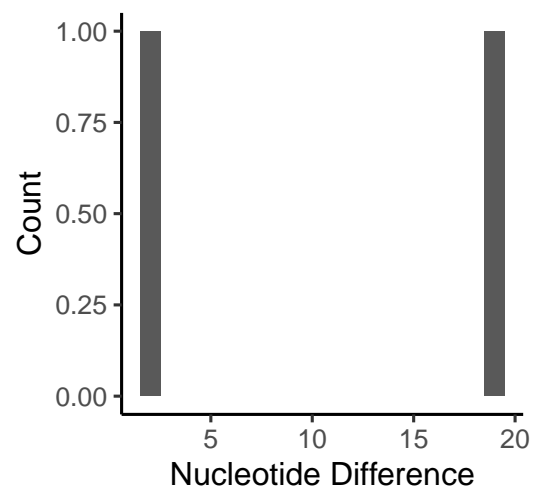
### IGHV4-38-2\*02

836 sequences assigned  
108 (12.9%) exact matches, in which:  
104 unique CDR3  
6 unique J



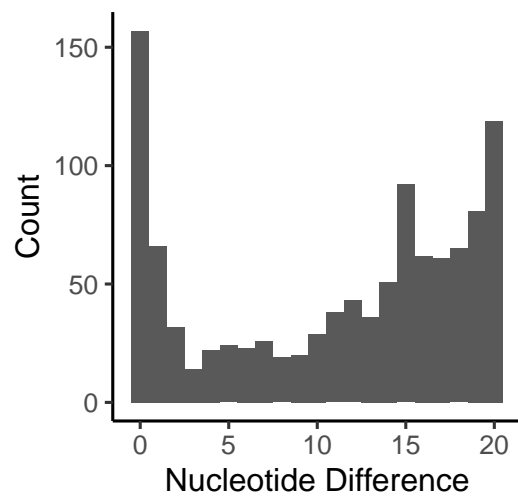
### IGHV4-55\*09

2 sequences assigned  
No exact matches.



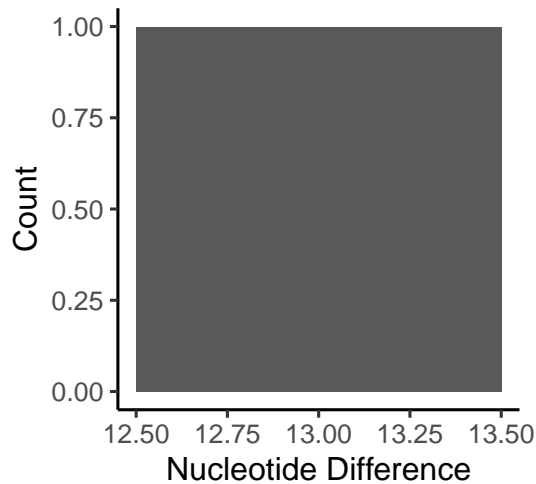
### IGHV4–59\*01

2317 sequences assigned  
157 (6.8%) exact matches, in which:  
151 unique CDR3  
6 unique J



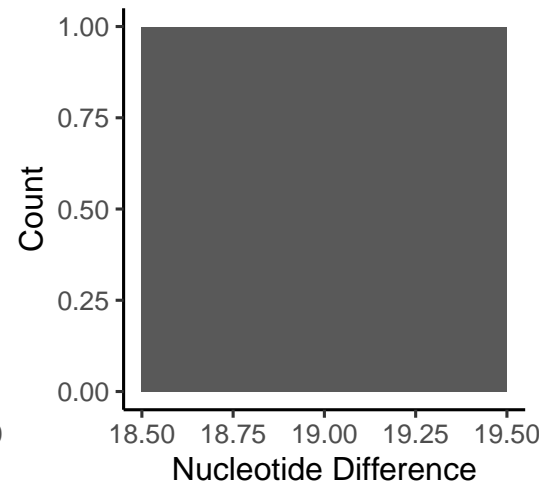
### IGHV1/OR15–1\*04

3 sequences assigned  
No exact matches.



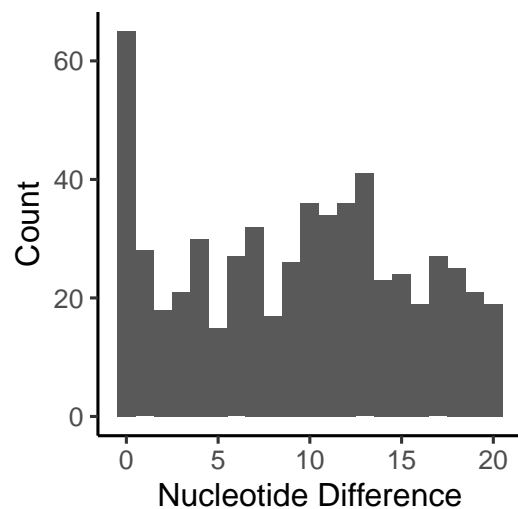
### IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



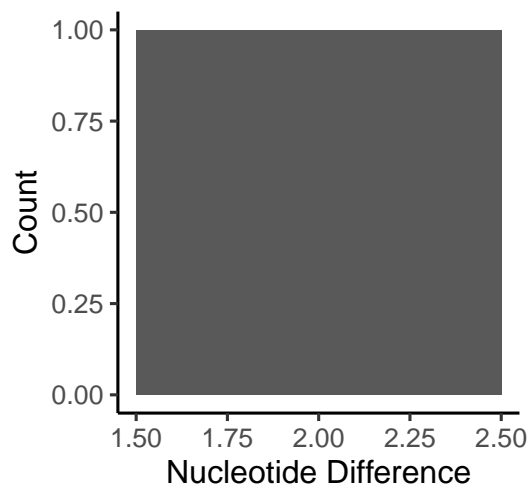
### IGHV4–59\*08

803 sequences assigned  
65 (8.1%) exact matches, in which:  
61 unique CDR3  
5 unique J



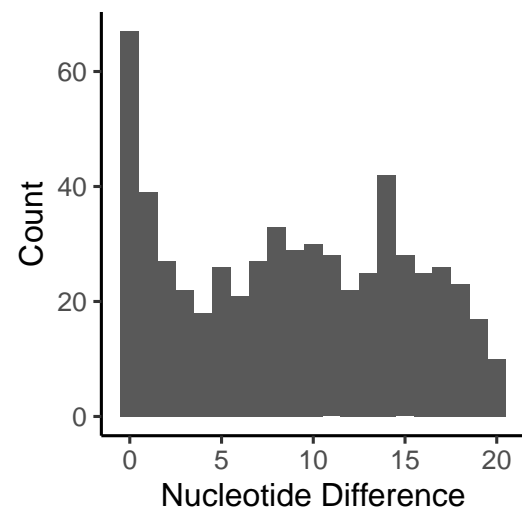
### IGHV1/OR15–2\*01

1 sequences assigned  
No exact matches.



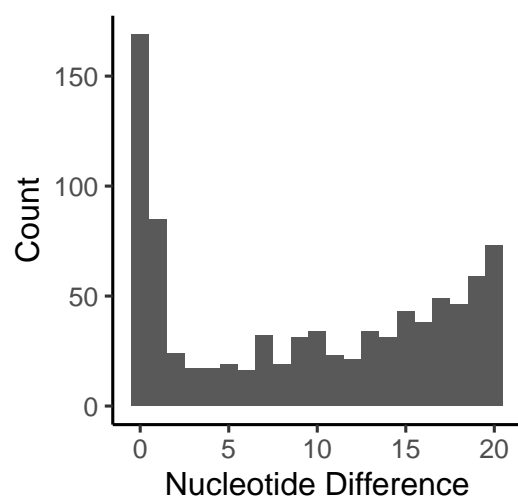
### IGHV5–51\*01

833 sequences assigned  
67 (8%) exact matches, in which:  
67 unique CDR3  
5 unique J



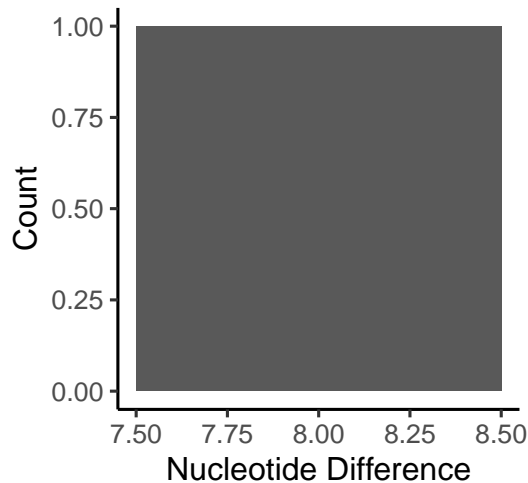
### IGHV4–61\*02

1495 sequences assigned  
169 (11.3%) exact matches, in which:  
149 unique CDR3  
6 unique J



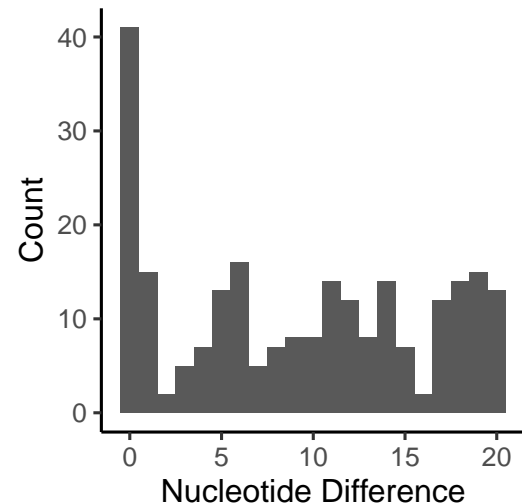
### IGHV4/OR15–8\*02

3 sequences assigned  
No exact matches.



### IGHV5–51\*03

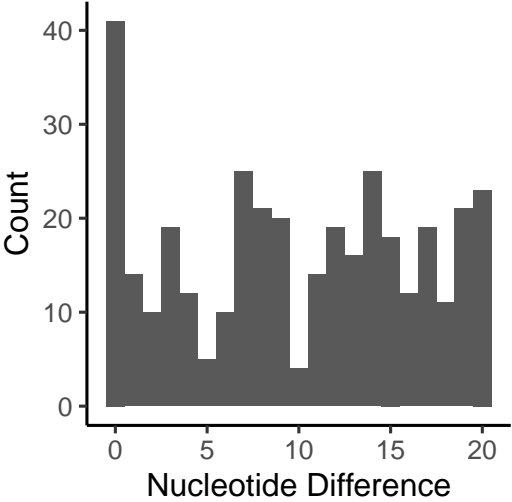
405 sequences assigned  
41 (10.1%) exact matches, in which:  
40 unique CDR3  
5 unique J





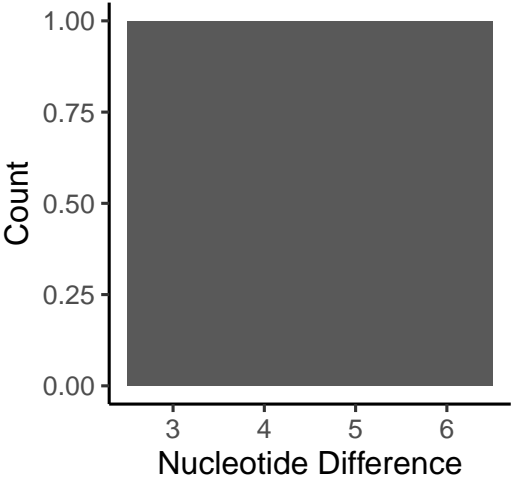
IGHV6-1\*01

665 sequences assigned  
41 (6.2%) exact matches, in which:  
40 unique CDR3  
5 unique J



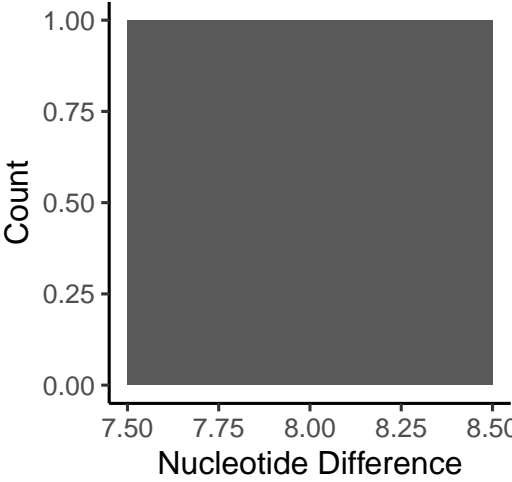
IGHV3/OR16-9\*01

4 sequences assigned  
No exact matches.



IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.





Warning – no inferred sequences found.