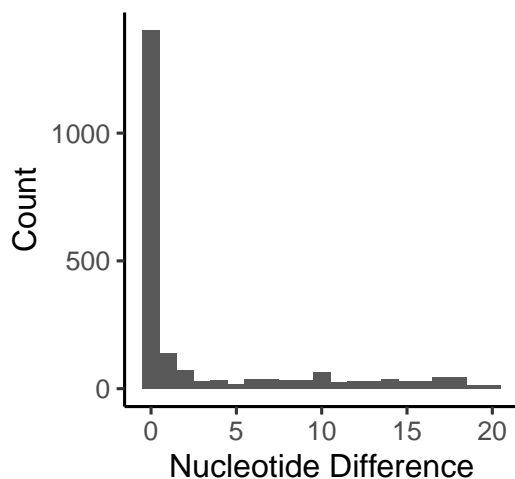


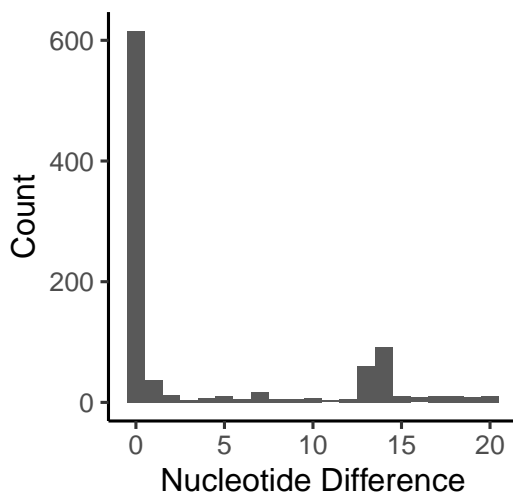
### IGHV1-2\*02

2315 sequences assigned  
1402 (60.6%) exact matches, in which:  
1373 unique CDR3  
6 unique J



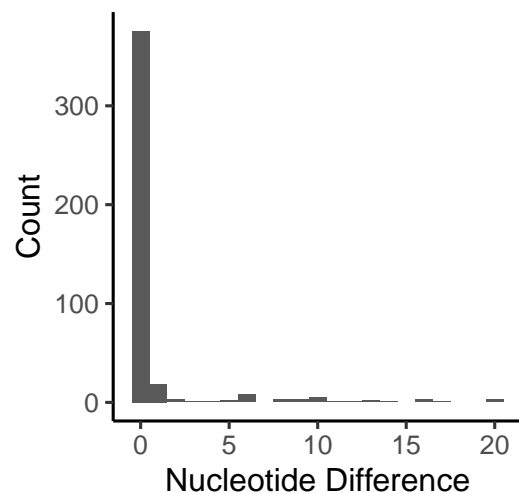
### IGHV1-8\*01

969 sequences assigned  
616 (63.6%) exact matches, in which:  
608 unique CDR3  
6 unique J



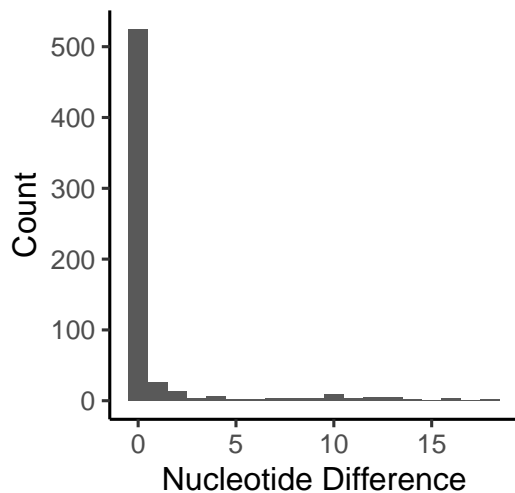
### IGHV1-24\*01

454 sequences assigned  
376 (82.8%) exact matches, in which:  
375 unique CDR3  
6 unique J



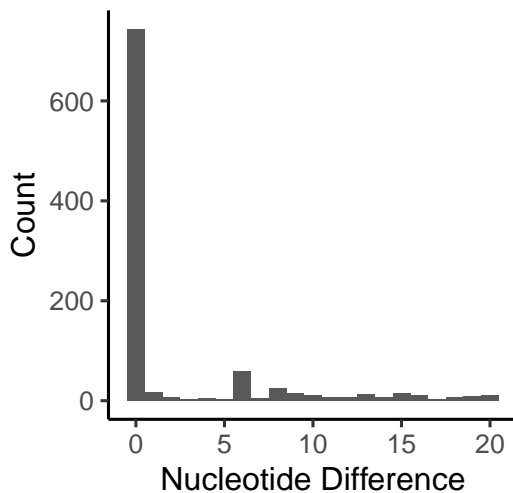
### IGHV1-2\*04

631 sequences assigned  
525 (83.2%) exact matches, in which:  
520 unique CDR3  
5 unique J



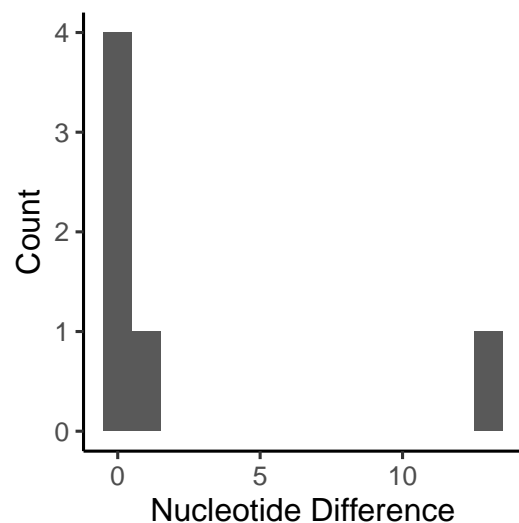
### IGHV1-18\*01

1131 sequences assigned  
744 (65.8%) exact matches, in which:  
740 unique CDR3  
6 unique J



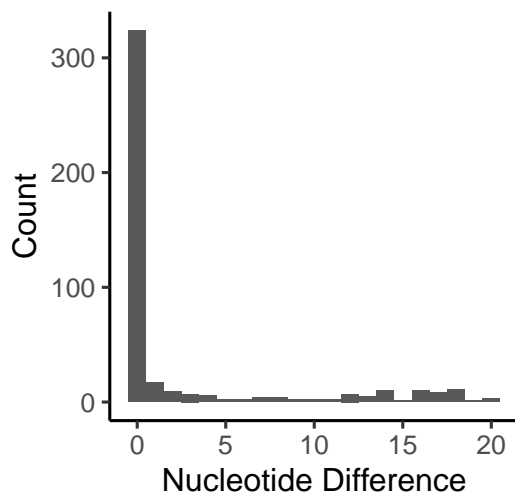
### IGHV1-45\*02

6 sequences assigned  
4 (66.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



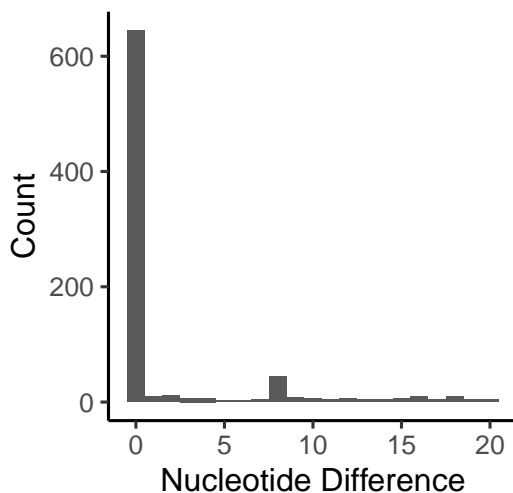
### IGHV1-3\*01\_05

475 sequences assigned  
324 (68.2%) exact matches, in which:  
320 unique CDR3  
6 unique J



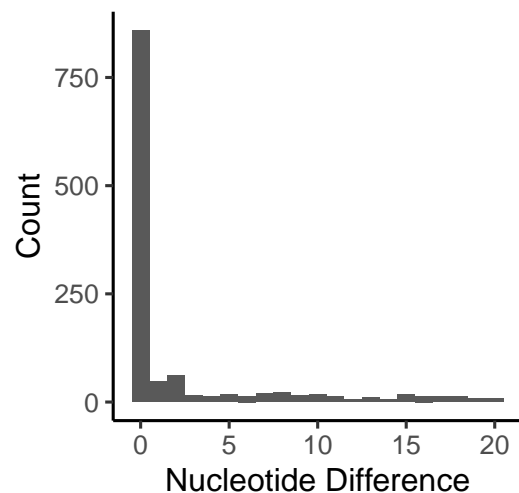
### IGHV1-18\*04

844 sequences assigned  
645 (76.4%) exact matches, in which:  
638 unique CDR3  
6 unique J



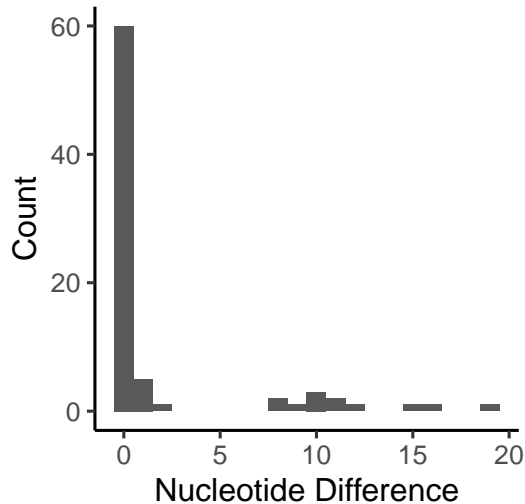
### IGHV1-46\*01

1309 sequences assigned  
859 (65.6%) exact matches, in which:  
849 unique CDR3  
6 unique J



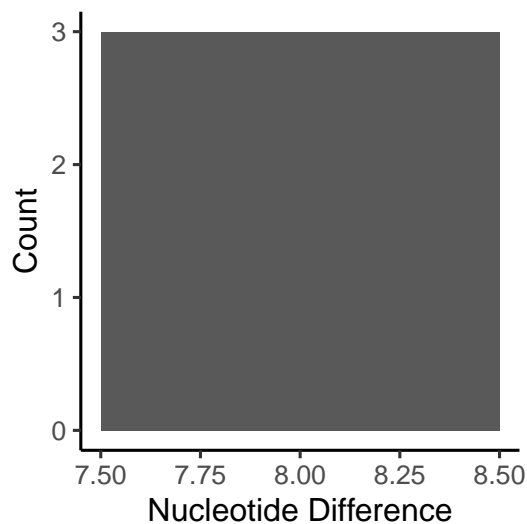
### IGHV1-58\*02

79 sequences assigned  
60 (75.9%) exact matches, in which:  
60 unique CDR3  
5 unique J



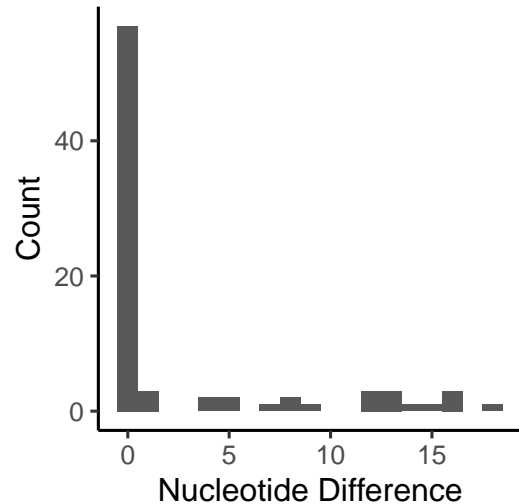
### IGHV1-NL1\*01

3 sequences assigned  
No exact matches.



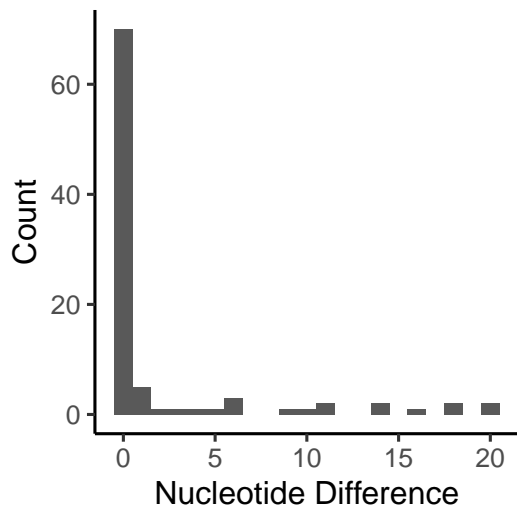
### IGHV2-26\*01

81 sequences assigned  
57 (70.4%) exact matches, in which:  
52 unique CDR3  
4 unique J



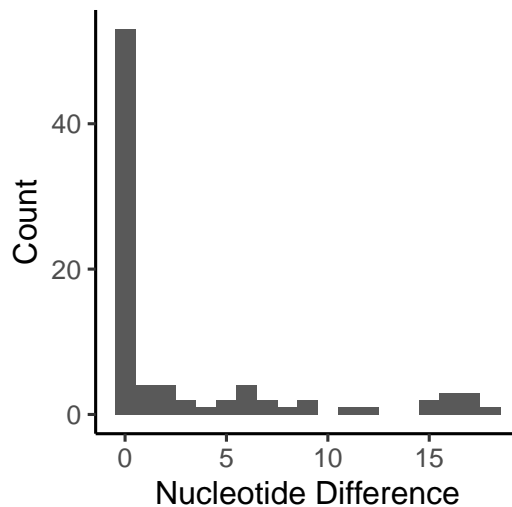
### IGHV1-58\*01\_03

95 sequences assigned  
70 (73.7%) exact matches, in which:  
69 unique CDR3  
5 unique J



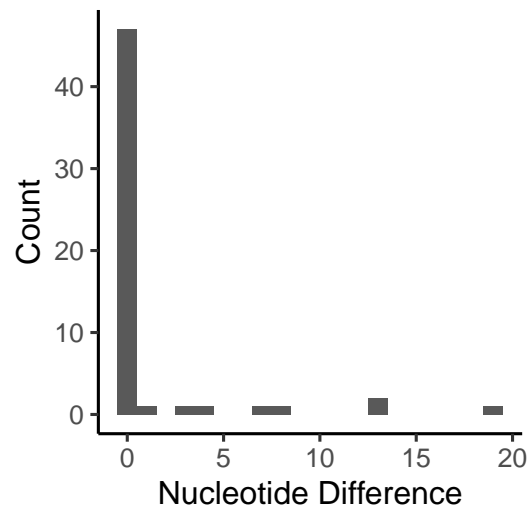
### IGHV2-5\*01

94 sequences assigned  
53 (56.4%) exact matches, in which:  
53 unique CDR3  
5 unique J



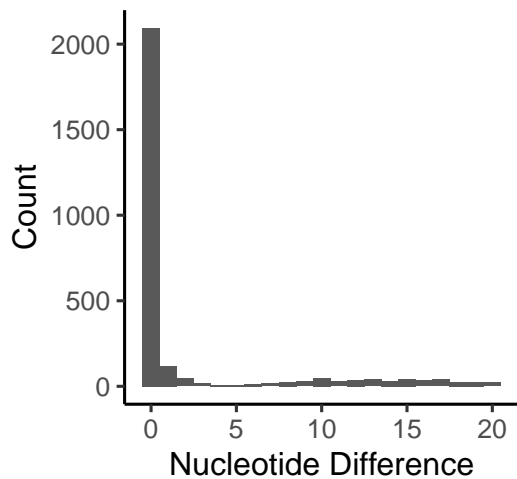
### IGHV2-70\*01

55 sequences assigned  
47 (85.5%) exact matches, in which:  
44 unique CDR3  
5 unique J



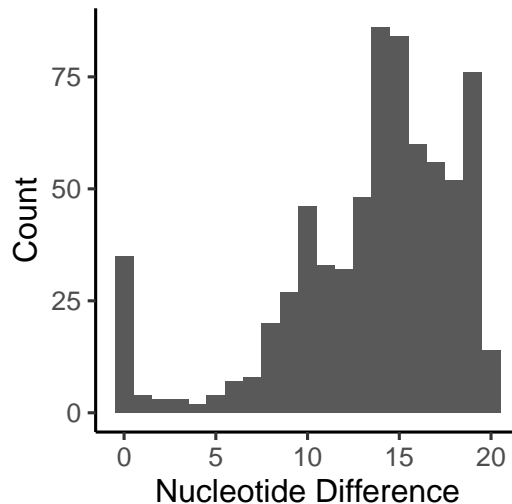
### IGHV1-69\*01\_12\_13

3212 sequences assigned  
2094 (65.2%) exact matches, in which:  
2079 unique CDR3  
6 unique J



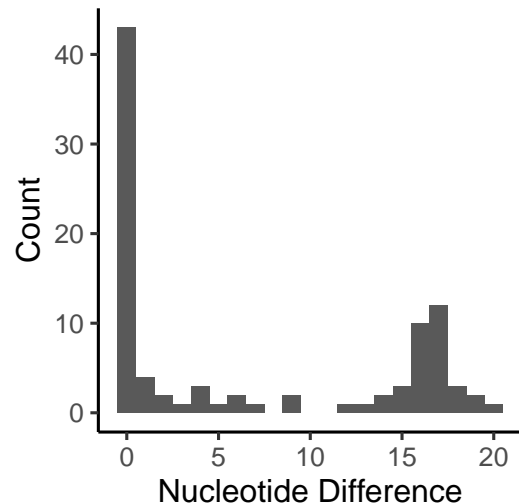
### IGHV2-5\*02

789 sequences assigned  
35 (4.4%) exact matches, in which:  
33 unique CDR3  
5 unique J



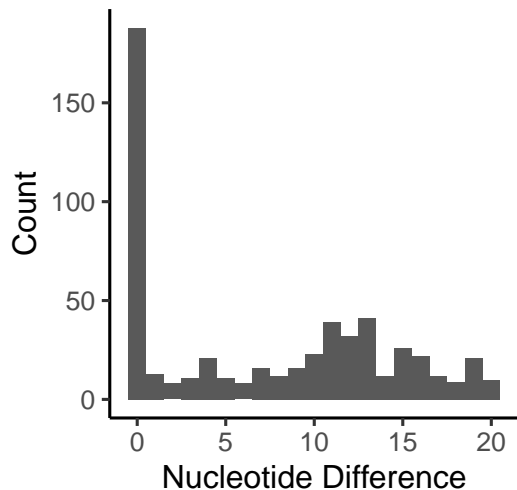
### IGHV2-70\*11\_15

96 sequences assigned  
43 (44.8%) exact matches, in which:  
43 unique CDR3  
5 unique J



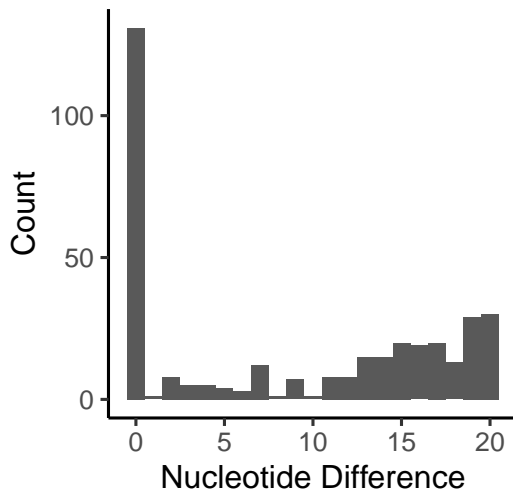
### IGHV3-7\*01

633 sequences assigned  
188 (29.7%) exact matches, in which:  
166 unique CDR3  
6 unique J



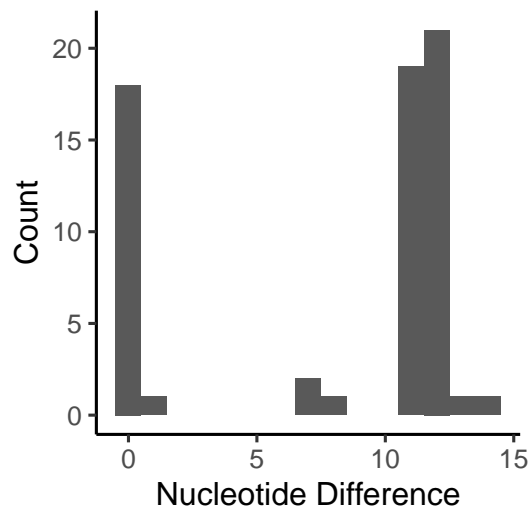
### IGHV3-11\*01

493 sequences assigned  
131 (26.6%) exact matches, in which:  
114 unique CDR3  
5 unique J



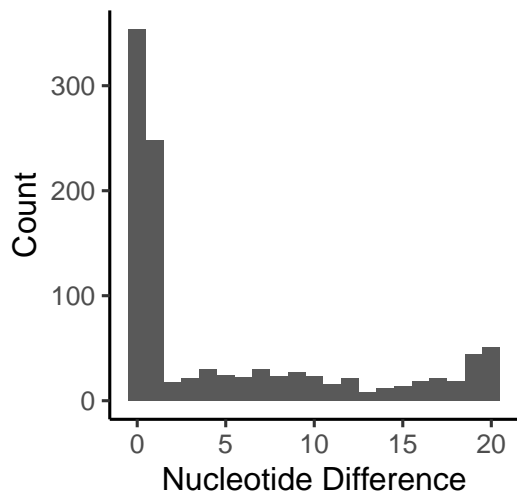
### IGHV3-13\*05

64 sequences assigned  
18 (28.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



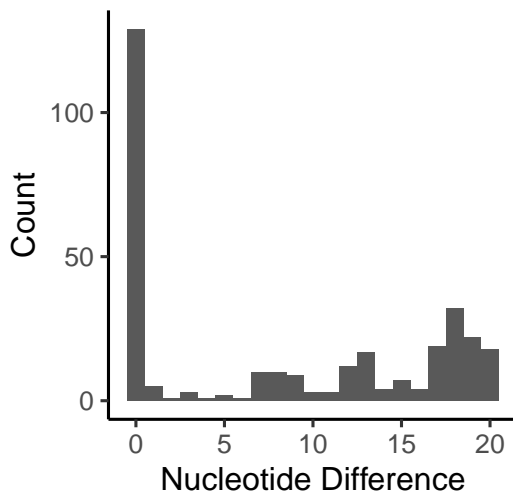
### IGHV3-7\*03

1349 sequences assigned  
354 (26.2%) exact matches, in which:  
245 unique CDR3  
6 unique J



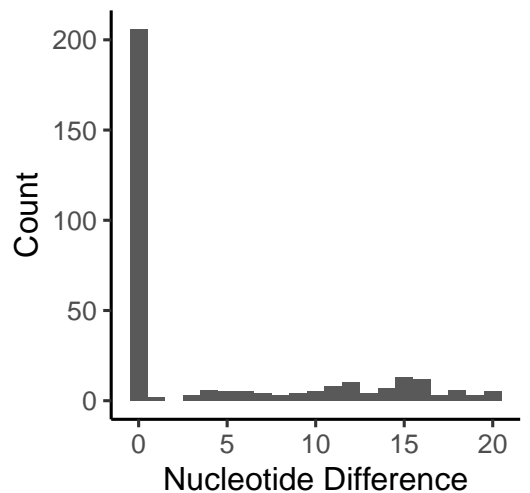
### IGHV3-11\*06

419 sequences assigned  
129 (30.8%) exact matches, in which:  
110 unique CDR3  
6 unique J



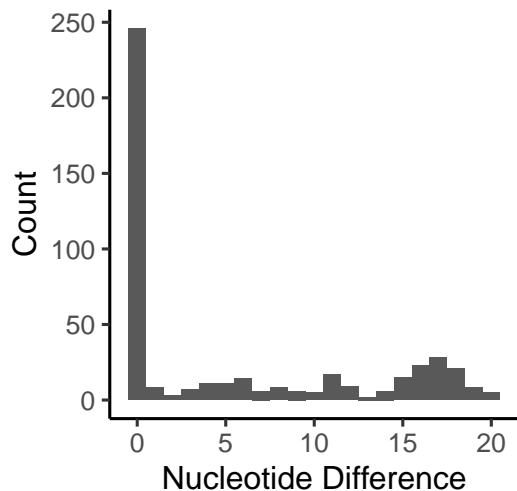
### IGHV3-15\*01\_02

364 sequences assigned  
206 (56.6%) exact matches, in which:  
179 unique CDR3  
6 unique J



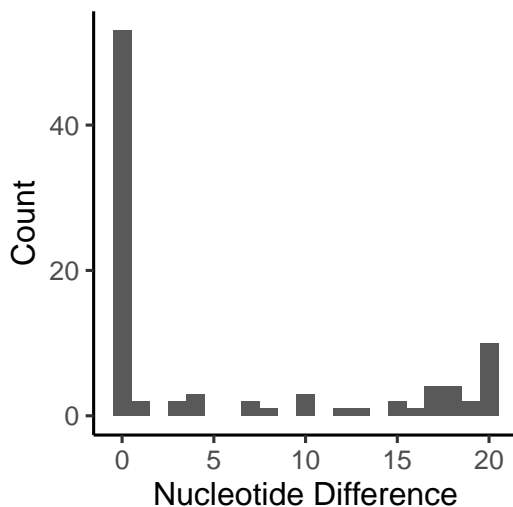
### IGHV3-9\*01

515 sequences assigned  
246 (47.8%) exact matches, in which:  
211 unique CDR3  
5 unique J



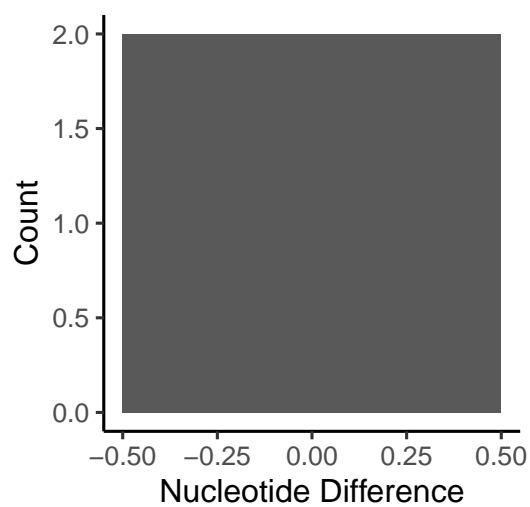
### IGHV3-13\*01

106 sequences assigned  
53 (50%) exact matches, in which:  
44 unique CDR3  
5 unique J



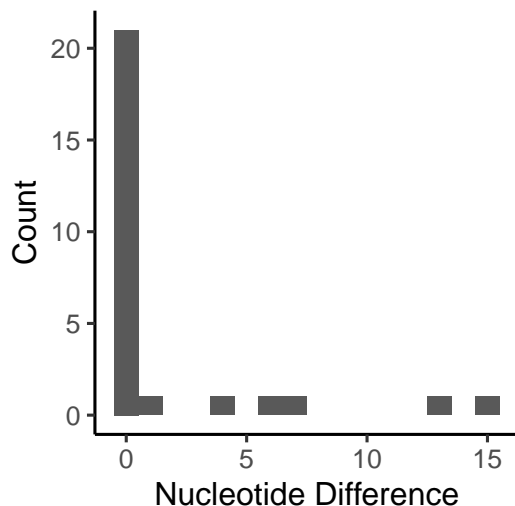
### IGHV3-19\*01

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



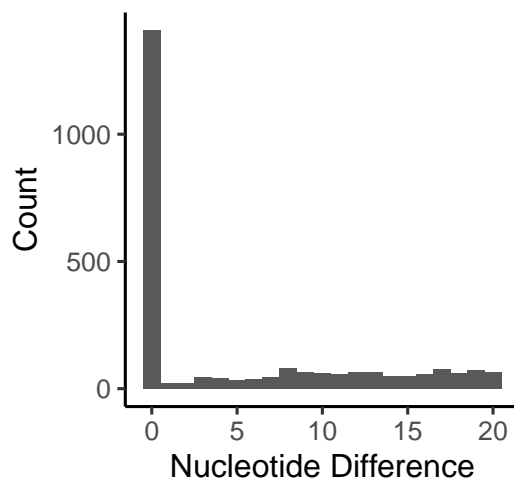
## IGHV3-20\*01\_02

27 sequences assigned  
21 (77.8%) exact matches, in which:  
16 unique CDR3  
3 unique J



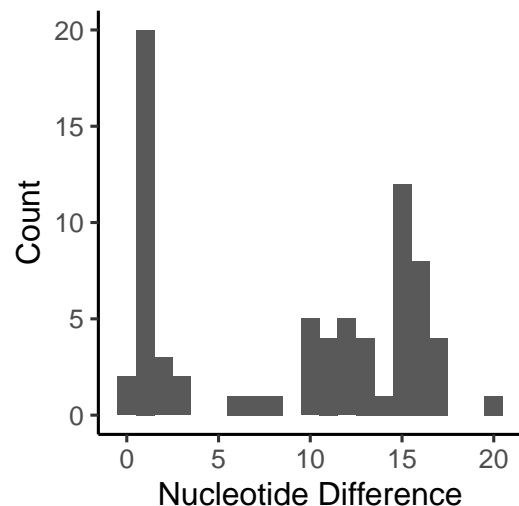
## IGHV3-23\*01\_04

3194 sequences assigned  
1408 (44.1%) exact matches, in which:  
1173 unique CDR3  
6 unique J



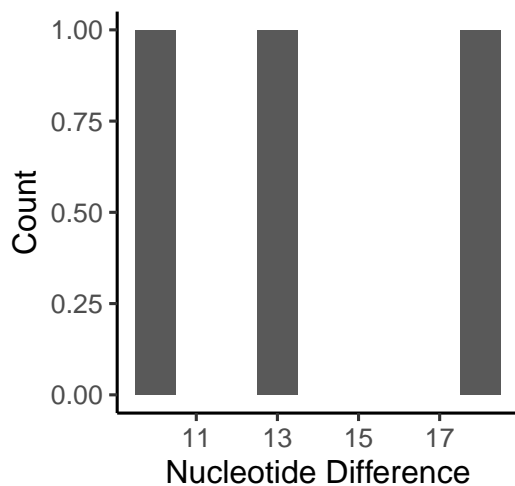
## IGHV3-33\*05

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



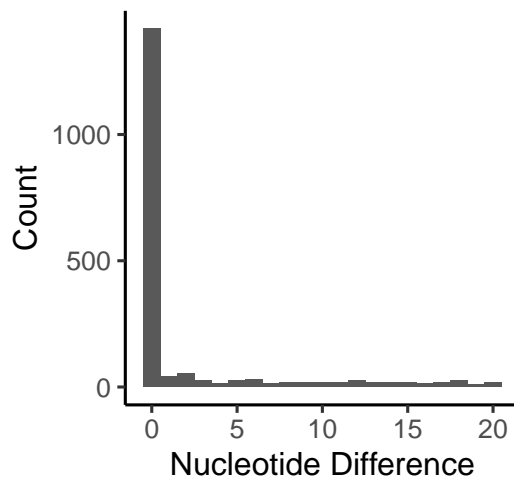
## IGHV3-20\*03\_04

5 sequences assigned  
No exact matches.



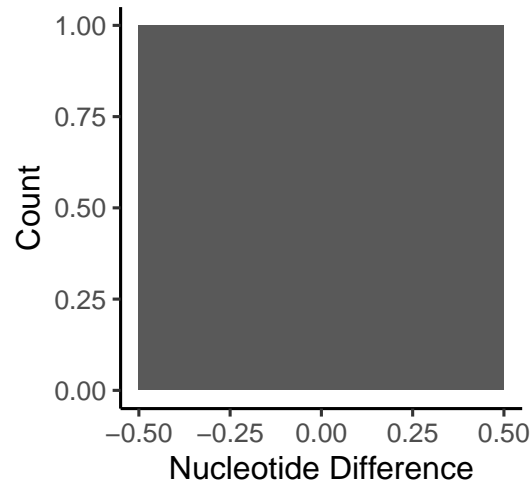
## IGHV3-30-3\*01

4266 sequences assigned  
1419 (33.3%) exact matches, in which:  
1224 unique CDR3  
6 unique J



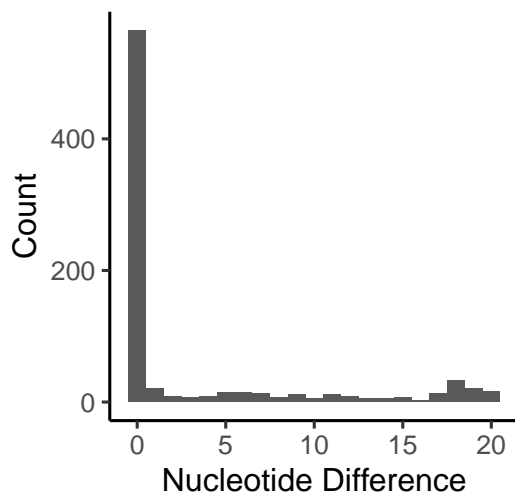
## IGHV3-38-3\*01

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



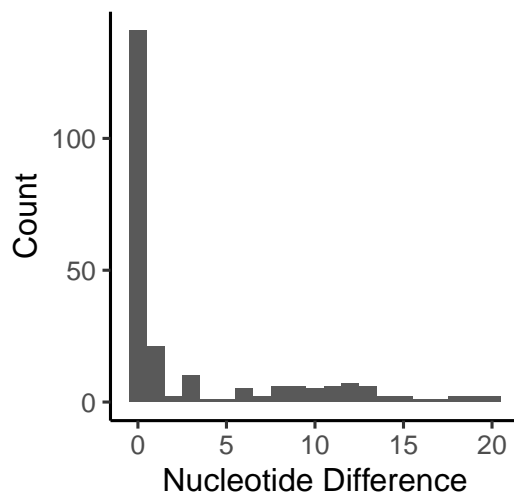
## IGHV3-21\*01\_02

908 sequences assigned  
565 (62.2%) exact matches, in which:  
485 unique CDR3  
6 unique J



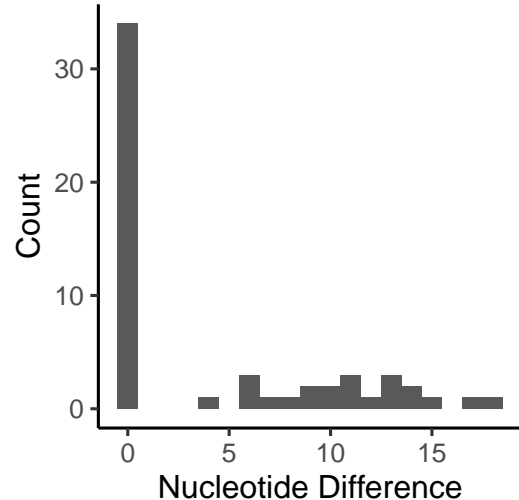
## IGHV3-33\*01

262 sequences assigned  
141 (53.8%) exact matches, in which:  
121 unique CDR3  
6 unique J



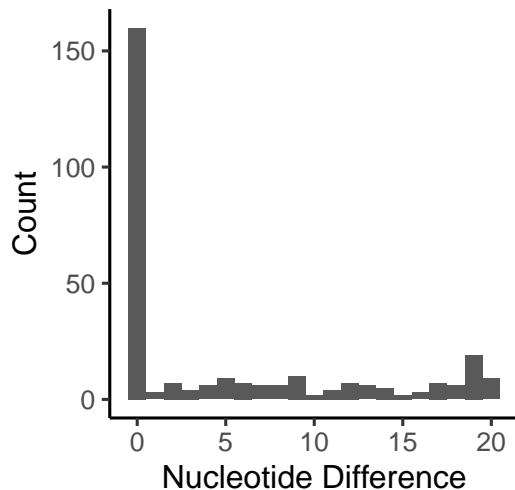
## IGHV3-43\*01

60 sequences assigned  
34 (56.7%) exact matches, in which:  
28 unique CDR3  
5 unique J



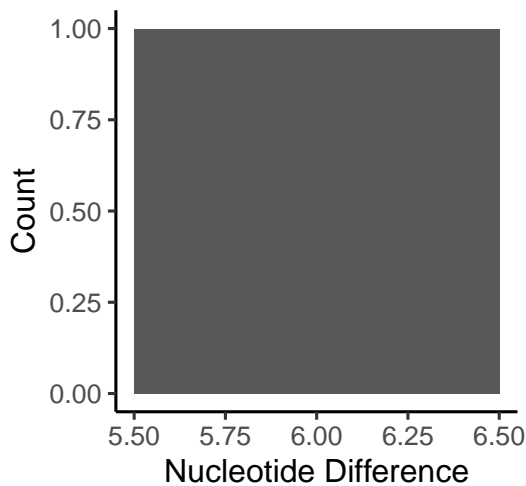
### IGHV3-48\*02

313 sequences assigned  
160 (51.1%) exact matches, in which:  
132 unique CDR3  
5 unique J



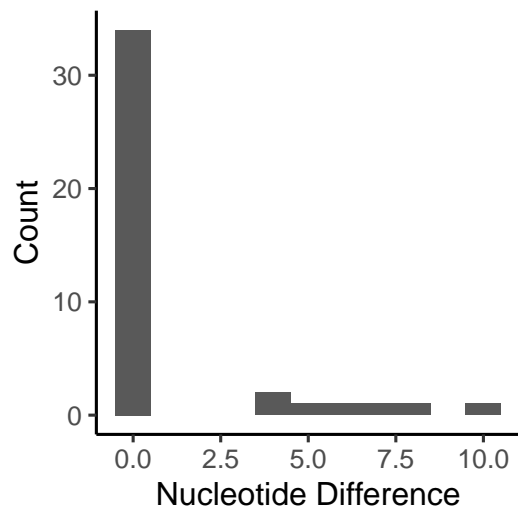
### IGHV3-52\*01\_03

1 sequences assigned  
No exact matches.



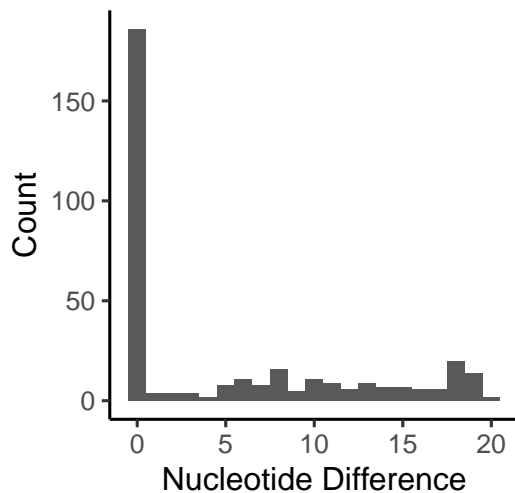
### IGHV3-64\*01

43 sequences assigned  
34 (79.1%) exact matches, in which:  
28 unique CDR3  
5 unique J



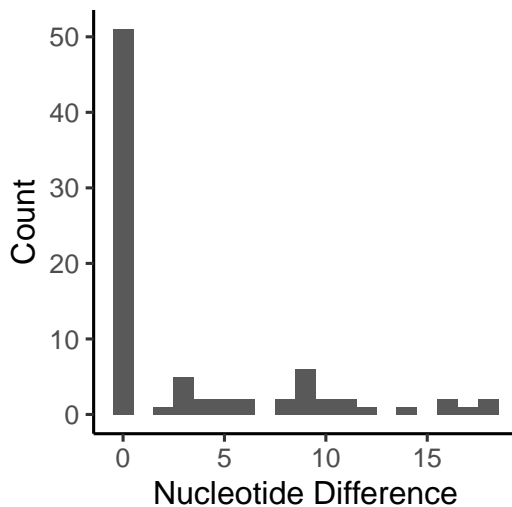
### IGHV3-48\*04

449 sequences assigned  
186 (41.4%) exact matches, in which:  
161 unique CDR3  
5 unique J



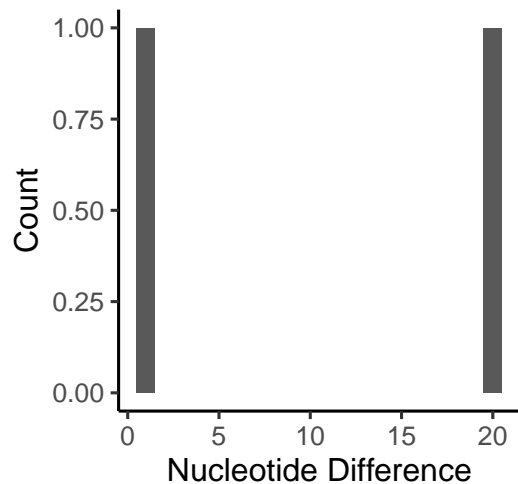
### IGHV3-53\*04

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



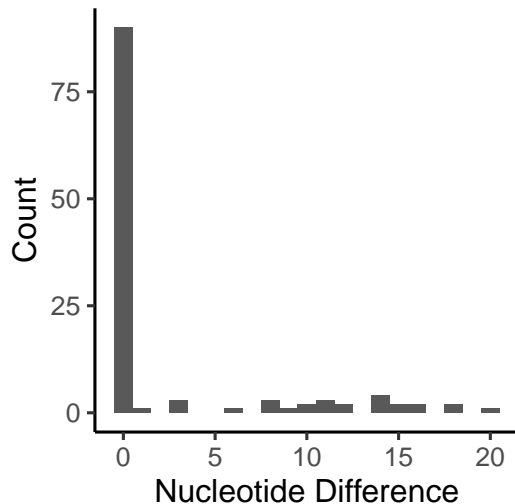
### IGHV3-64\*04

5 sequences assigned  
No exact matches.



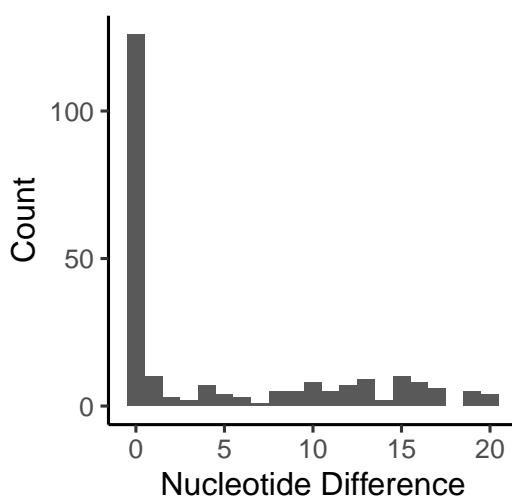
### IGHV3-49\*03\_05

126 sequences assigned  
90 (71.4%) exact matches, in which:  
79 unique CDR3  
5 unique J



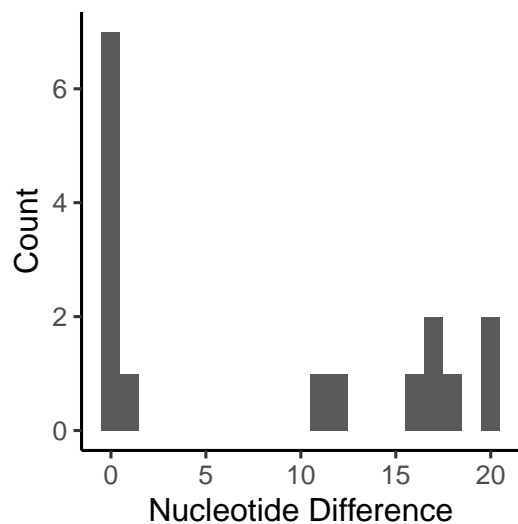
### IGHV3-53\*01\_02

276 sequences assigned  
126 (45.7%) exact matches, in which:  
104 unique CDR3  
5 unique J



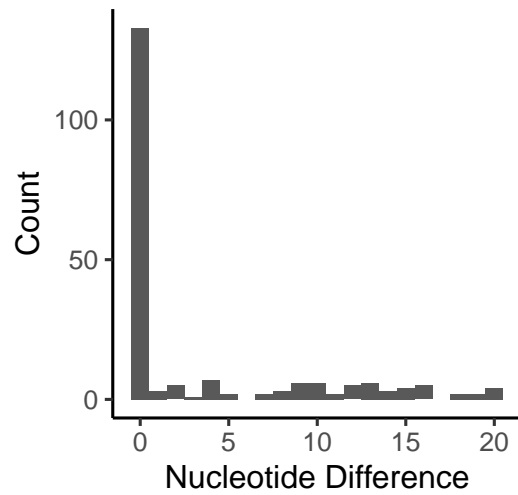
### IGHV3-64\*02\_07

17 sequences assigned  
7 (41.2%) exact matches, in which:  
6 unique CDR3  
3 unique J



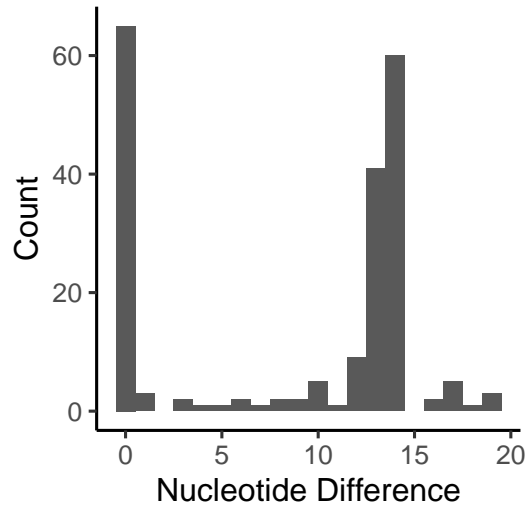
### IGHV3-66\*01

267 sequences assigned  
133 (49.8%) exact matches, in which:  
111 unique CDR3  
5 unique J



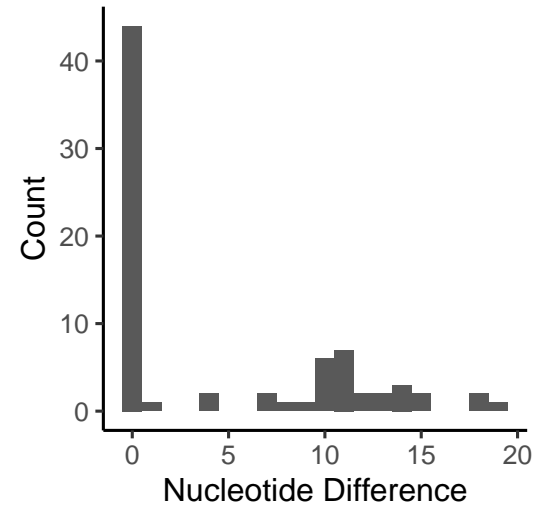
### IGHV3-73\*01\_02

213 sequences assigned  
65 (30.5%) exact matches, in which:  
60 unique CDR3  
5 unique J



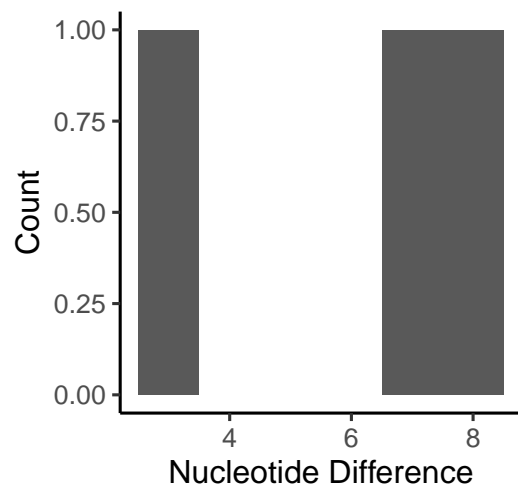
### IGHV3-43D\*03

78 sequences assigned  
44 (56.4%) exact matches, in which:  
40 unique CDR3  
4 unique J



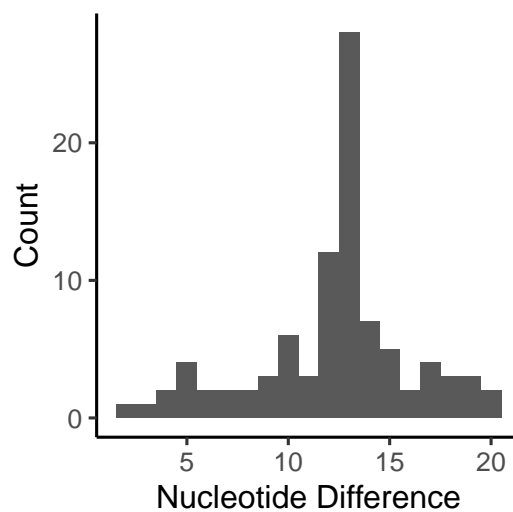
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



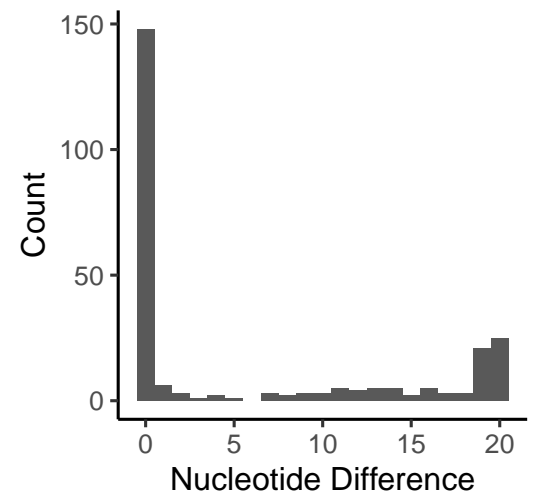
### IGHV3-74\*03

134 sequences assigned  
No exact matches.



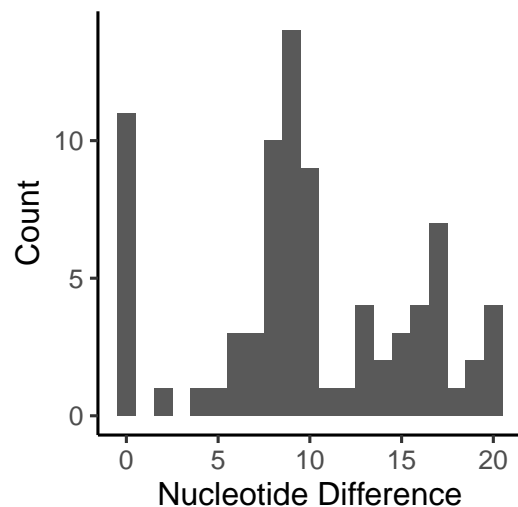
### IGHV3-64D\*06

264 sequences assigned  
148 (56.1%) exact matches, in which:  
118 unique CDR3  
6 unique J



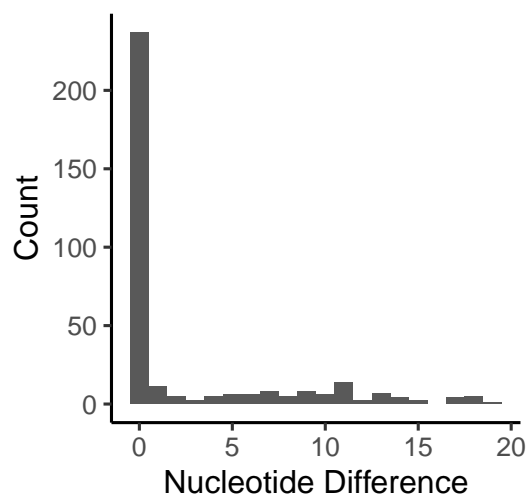
### IGHV3-72\*01

92 sequences assigned  
11 (12%) exact matches, in which:  
9 unique CDR3  
4 unique J



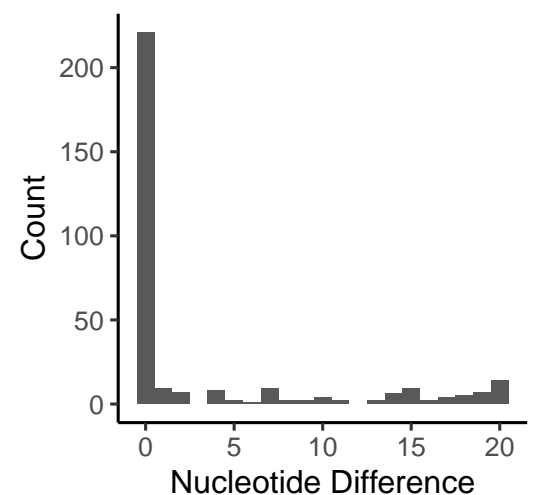
### IGHV3-74\*01\_02

357 sequences assigned  
237 (66.4%) exact matches, in which:  
198 unique CDR3  
6 unique J



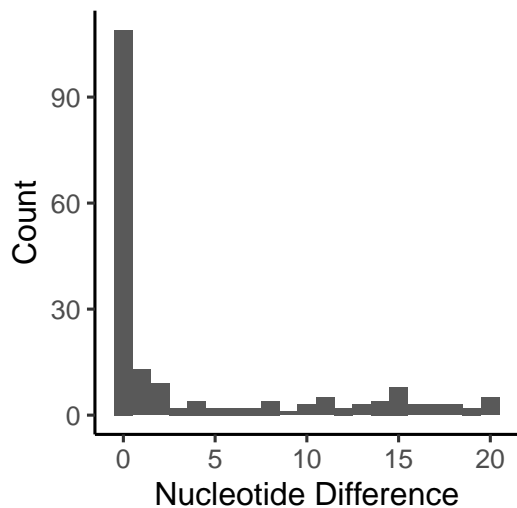
### IGHV4-4\*07

427 sequences assigned  
221 (51.8%) exact matches, in which:  
219 unique CDR3  
6 unique J



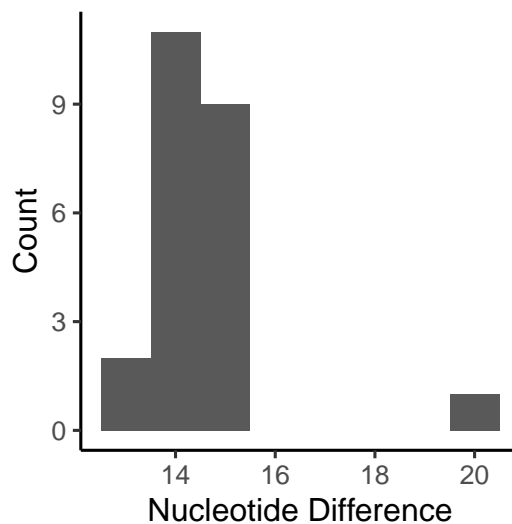
### IGHV4-4\*02\_03

274 sequences assigned  
109 (39.8%) exact matches, in which:  
100 unique CDR3  
6 unique J



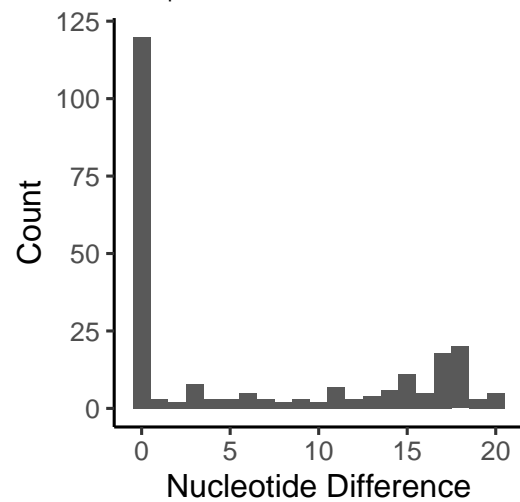
### IGHV4-28\*02\_05

24 sequences assigned  
No exact matches.



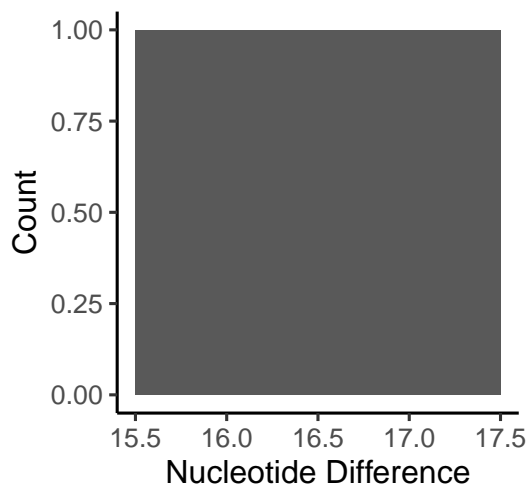
### IGHV4-31\*02

425 sequences assigned  
120 (28.2%) exact matches, in which:  
117 unique CDR3  
6 unique J



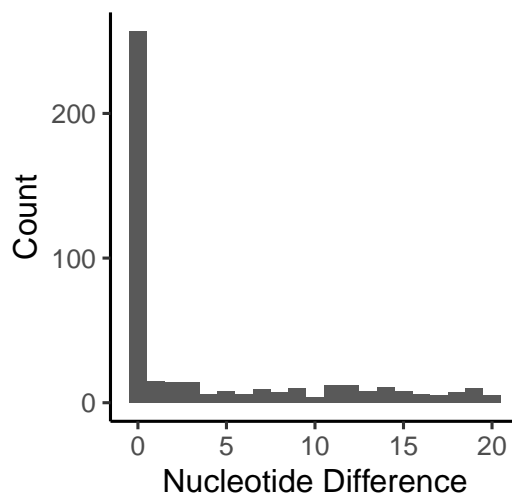
### IGHV4-28\*03

4 sequences assigned  
No exact matches.



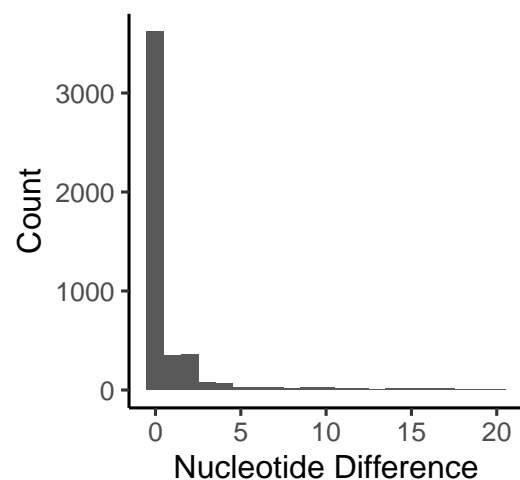
### IGHV4-30-4\*01

462 sequences assigned  
257 (55.6%) exact matches, in which:  
251 unique CDR3  
6 unique J



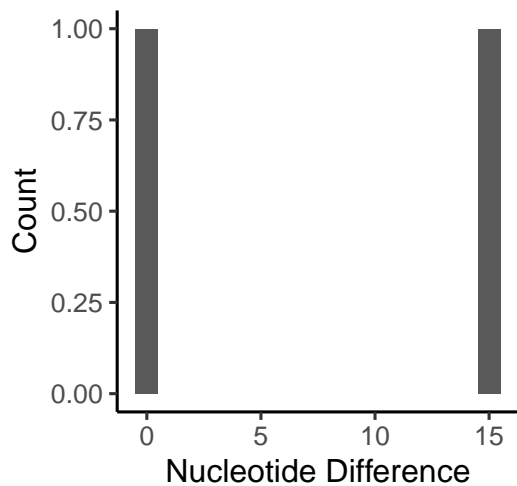
### IGHV4-34\*01\_02

4900 sequences assigned  
3619 (73.9%) exact matches, in which:  
3520 unique CDR3  
6 unique J



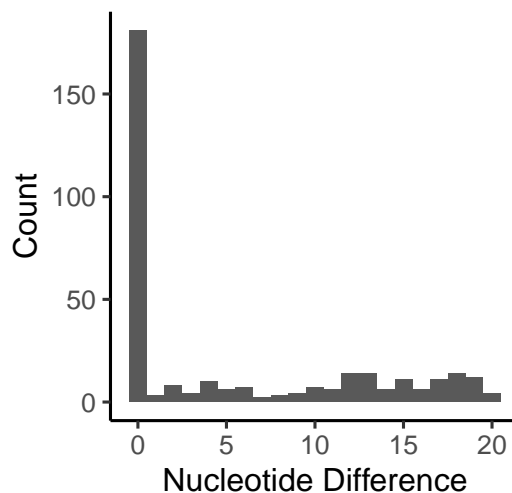
### IGHV4-28\*01\_07

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



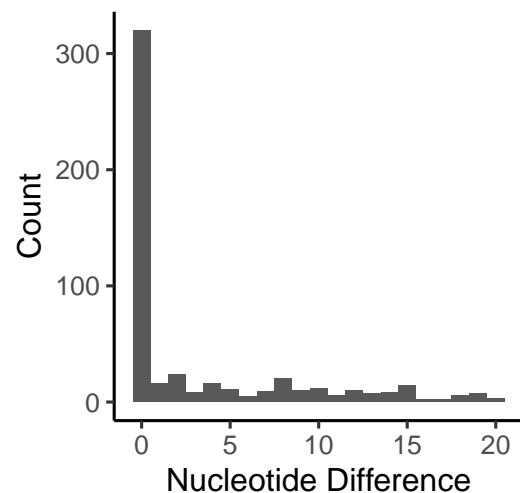
### IGHV4-30-2\*01

348 sequences assigned  
181 (52%) exact matches, in which:  
174 unique CDR3  
5 unique J



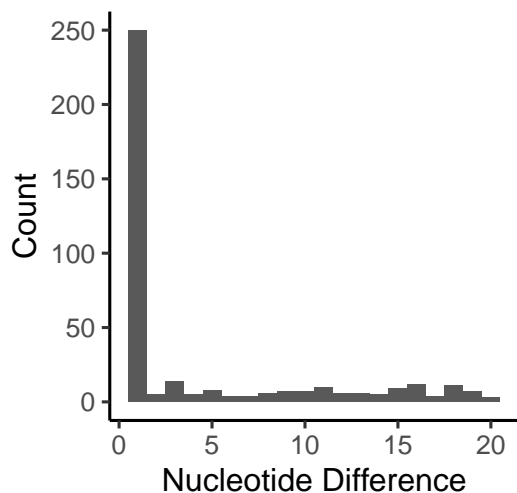
### IGHV4-38-2\*02

557 sequences assigned  
320 (57.5%) exact matches, in which:  
317 unique CDR3  
6 unique J



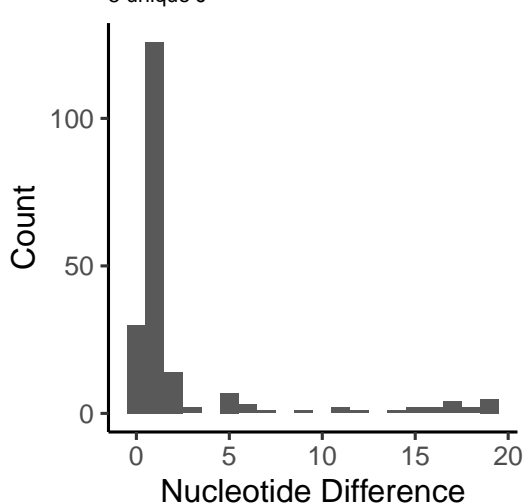
### IGHV4–39\*02

515 sequences assigned  
No exact matches.



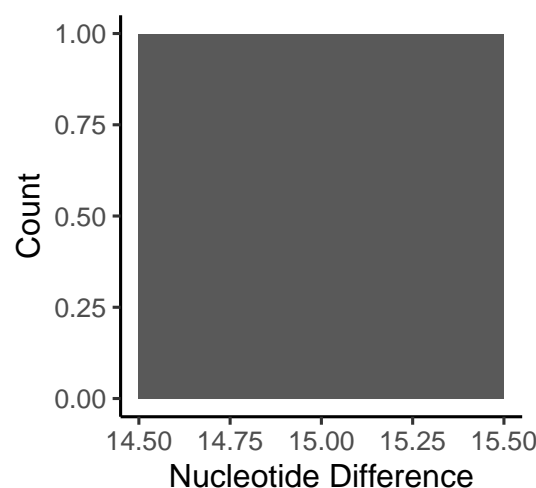
### IGHV4–59\*12

212 sequences assigned  
30 (14.2%) exact matches, in which:  
30 unique CDR3  
5 unique J



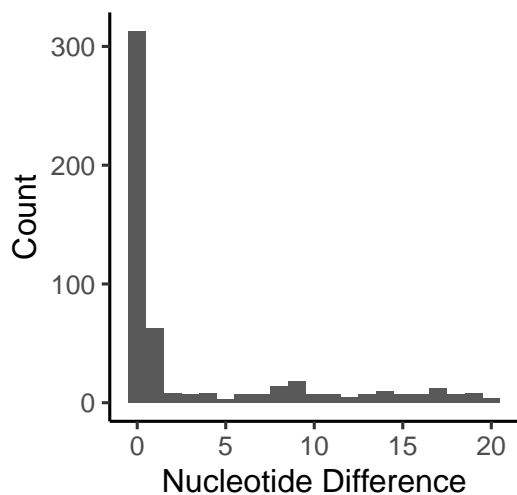
### IGHV4/OR15–8\*02

5 sequences assigned  
No exact matches.



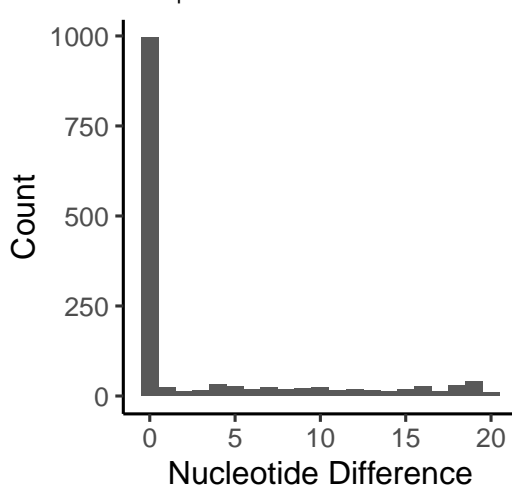
### IGHV4–39\*07

628 sequences assigned  
313 (49.8%) exact matches, in which:  
309 unique CDR3  
6 unique J



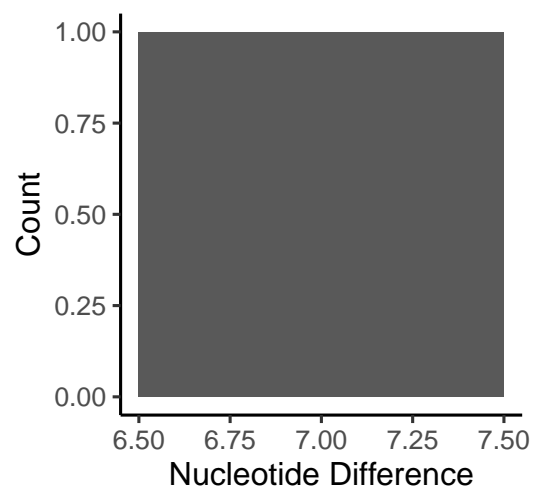
### IGHV4–59\*02\_G88A

1476 sequences assigned  
995 (67.4%) exact matches, in which:  
987 unique CDR3  
6 unique J



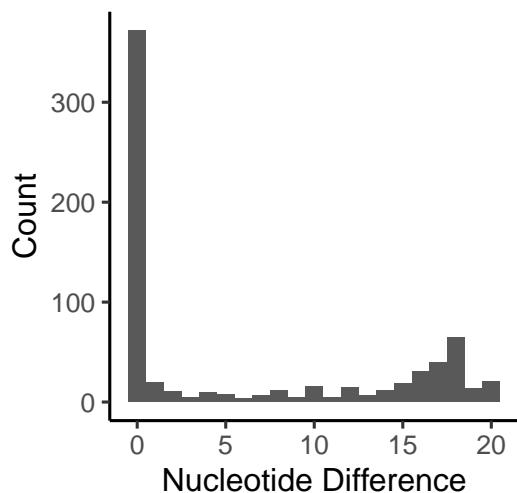
### IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



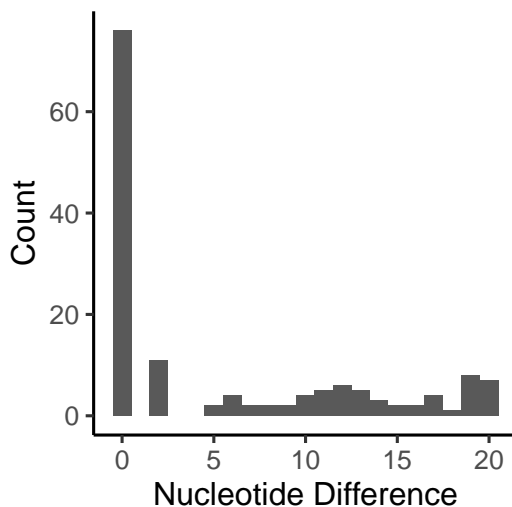
### IGHV4–59\*08

782 sequences assigned  
372 (47.6%) exact matches, in which:  
368 unique CDR3  
6 unique J



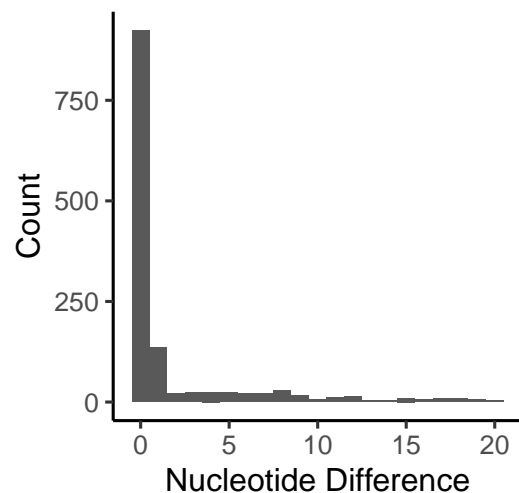
### IGHV4–61\*01

181 sequences assigned  
76 (42%) exact matches, in which:  
76 unique CDR3  
5 unique J



### IGHV5–10–1\*01\_03

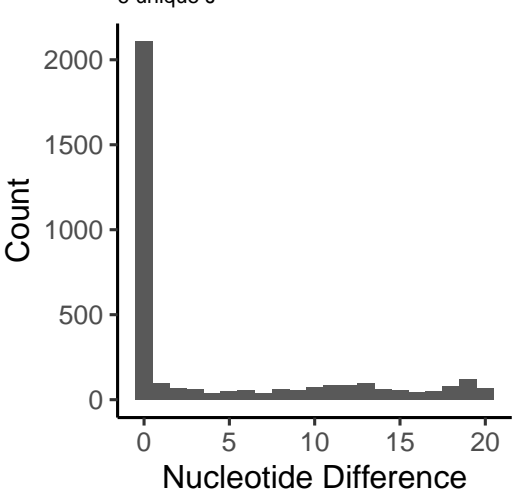
1399 sequences assigned  
924 (66%) exact matches, in which:  
850 unique CDR3  
6 unique J





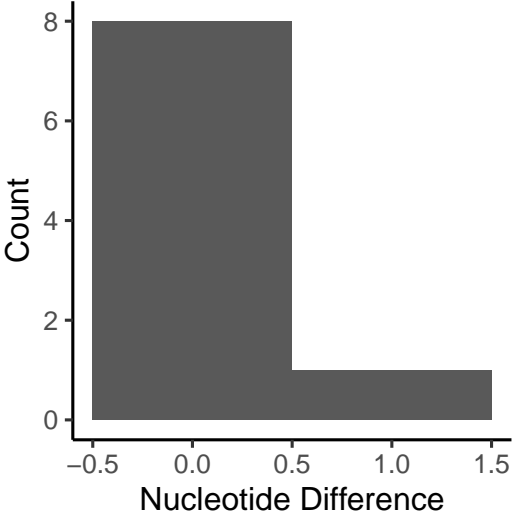
### IGHV5–51\*07\_A128G

3713 sequences assigned  
2108 (56.8%) exact matches, in which:  
1945 unique CDR3  
6 unique J



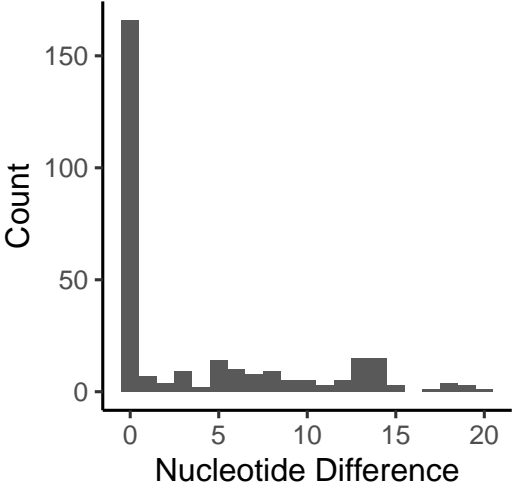
### IGHV7–4–1\*01

9 sequences assigned  
8 (88.9%) exact matches, in which:  
8 unique CDR3  
3 unique J



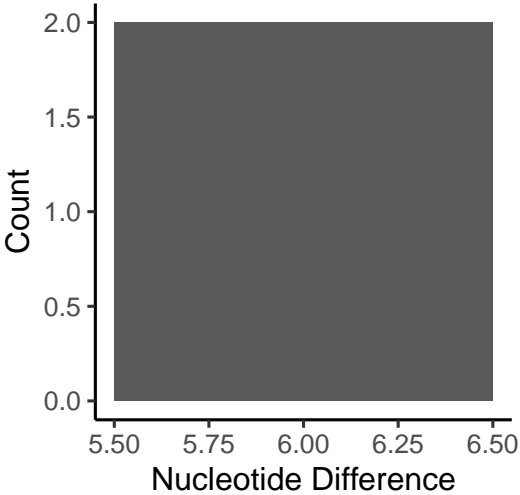
### IGHV6–1\*01\_02

301 sequences assigned  
166 (55.1%) exact matches, in which:  
166 unique CDR3  
5 unique J



### IGHV3/OR16–9\*01

2 sequences assigned  
No exact matches.





Warning – no inferred sequences found.