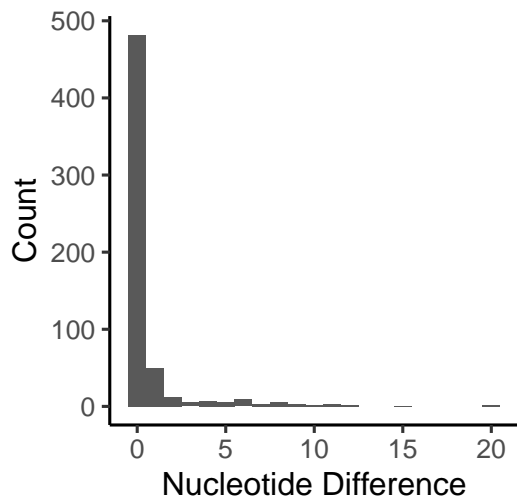


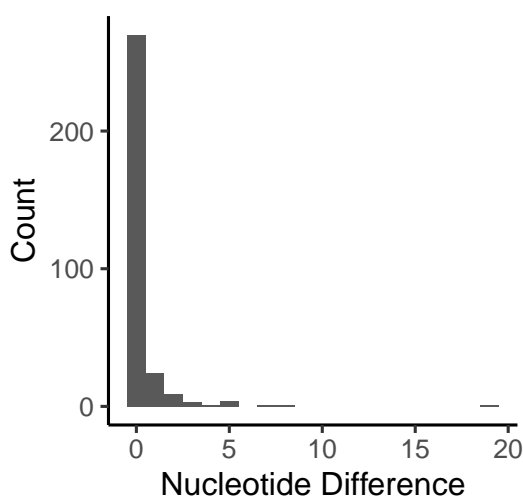
### IGHV1-2\*02

594 sequences assigned  
482 (81.1%) exact matches, in which:  
456 unique CDR3  
6 unique J



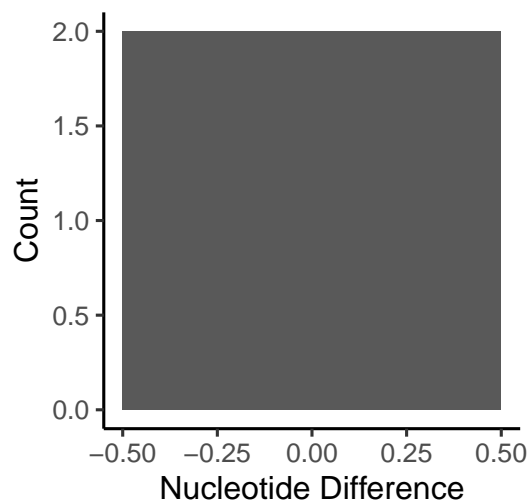
### IGHV1-8\*01

316 sequences assigned  
270 (85.4%) exact matches, in which:  
254 unique CDR3  
6 unique J



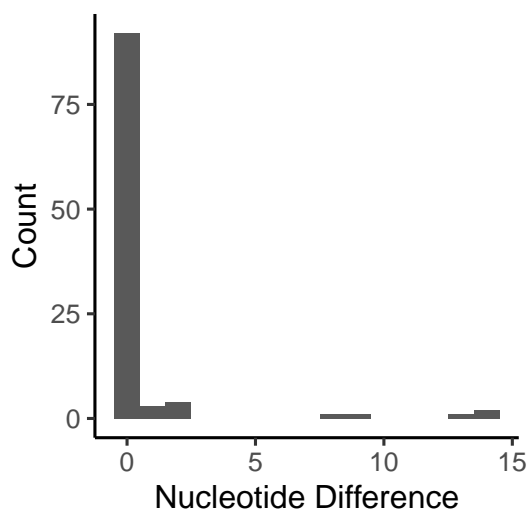
### IGHV1-38-4\*01

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



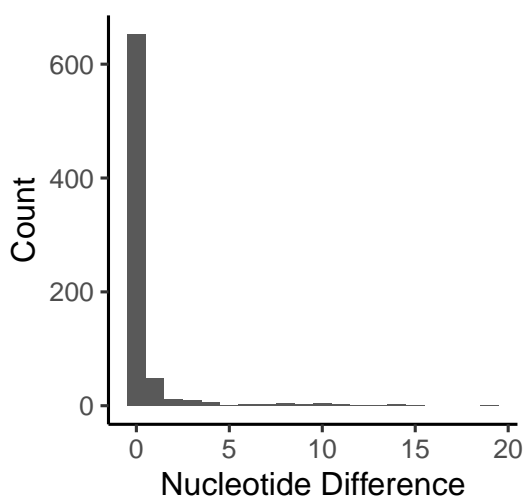
### IGHV1-2\*04

104 sequences assigned  
92 (88.5%) exact matches, in which:  
88 unique CDR3  
6 unique J



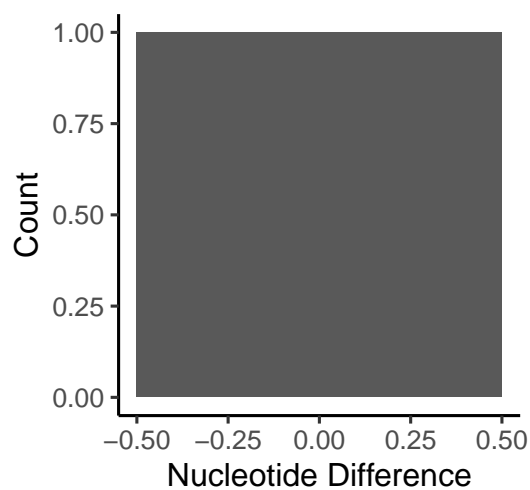
### IGHV1-18\*01

760 sequences assigned  
653 (85.9%) exact matches, in which:  
628 unique CDR3  
6 unique J



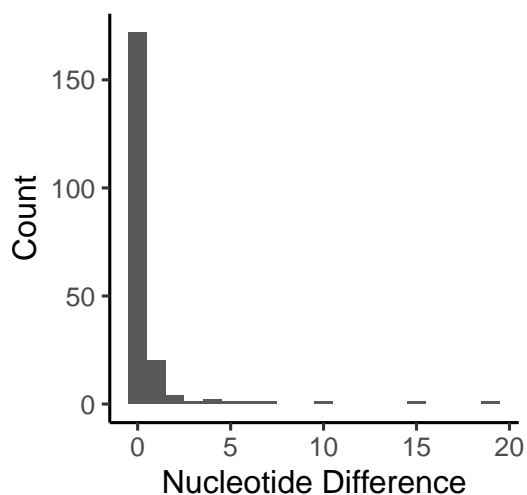
### IGHV1-45\*02

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



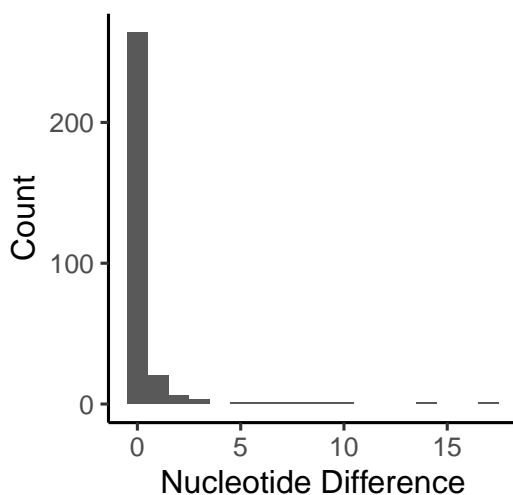
### IGHV1-3\*01

206 sequences assigned  
172 (83.5%) exact matches, in which:  
165 unique CDR3  
5 unique J



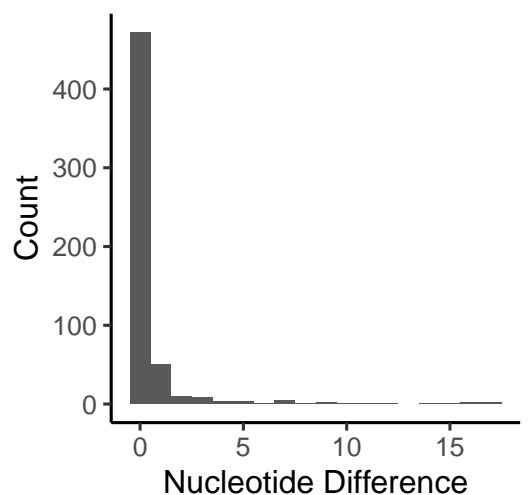
### IGHV1-24\*01

301 sequences assigned  
264 (87.7%) exact matches, in which:  
248 unique CDR3  
6 unique J



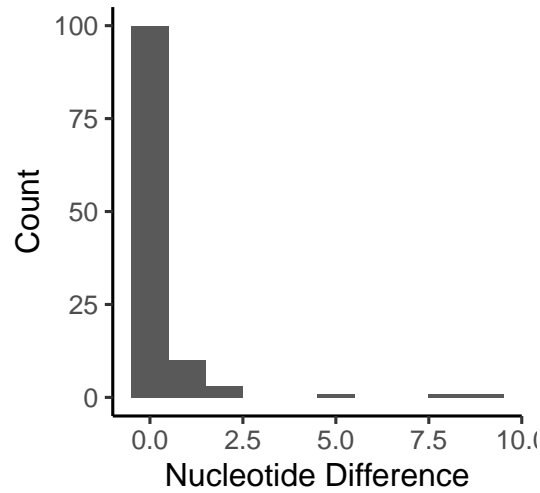
### IGHV1-46\*01

566 sequences assigned  
472 (83.4%) exact matches, in which:  
445 unique CDR3  
6 unique J



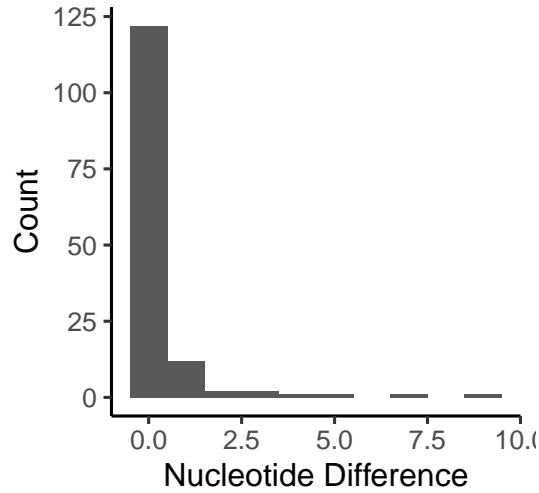
### IGHV1–58\*01

116 sequences assigned  
100 (86.2%) exact matches, in which:  
99 unique CDR3  
6 unique J



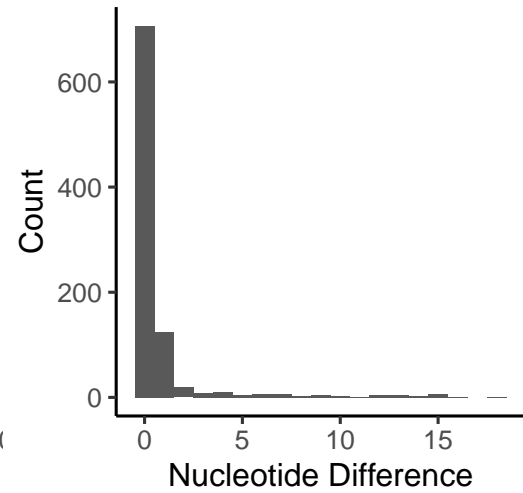
### IGHV2–70\*01

142 sequences assigned  
122 (85.9%) exact matches, in which:  
121 unique CDR3  
5 unique J



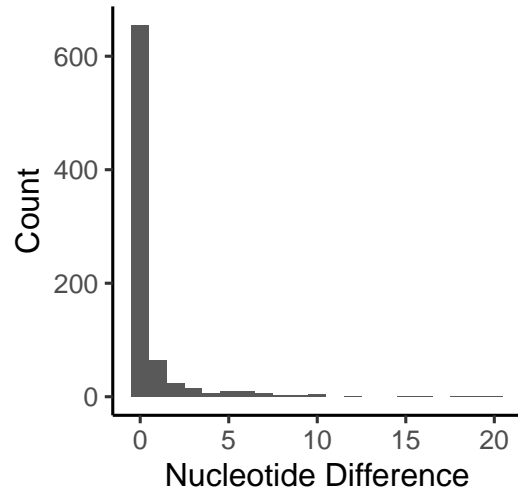
### IGHV3–9\*01

918 sequences assigned  
707 (77%) exact matches, in which:  
646 unique CDR3  
6 unique J



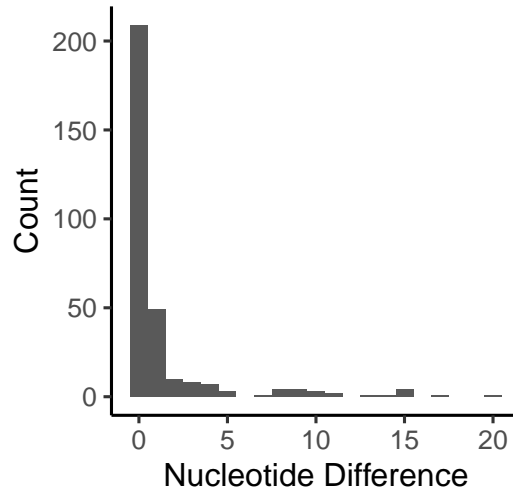
### IGHV2–5\*02

810 sequences assigned  
655 (80.9%) exact matches, in which:  
630 unique CDR3  
6 unique J



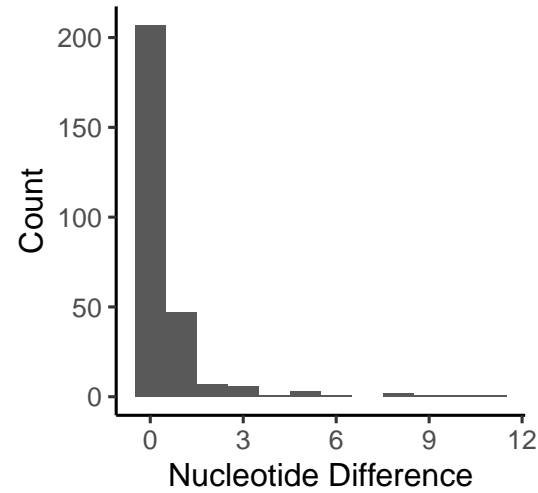
### IGHV3–7\*01

309 sequences assigned  
209 (67.6%) exact matches, in which:  
194 unique CDR3  
6 unique J



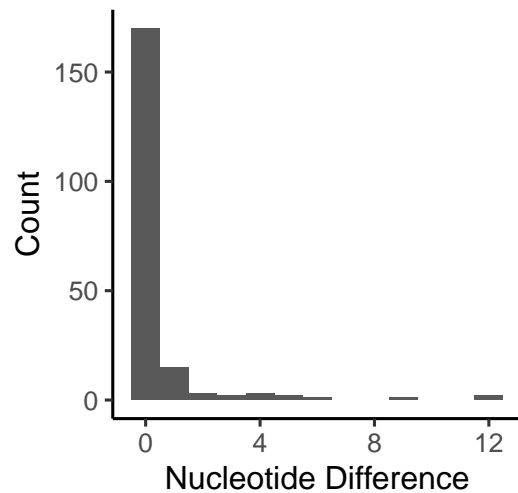
### IGHV3–11\*01

278 sequences assigned  
207 (74.5%) exact matches, in which:  
192 unique CDR3  
6 unique J



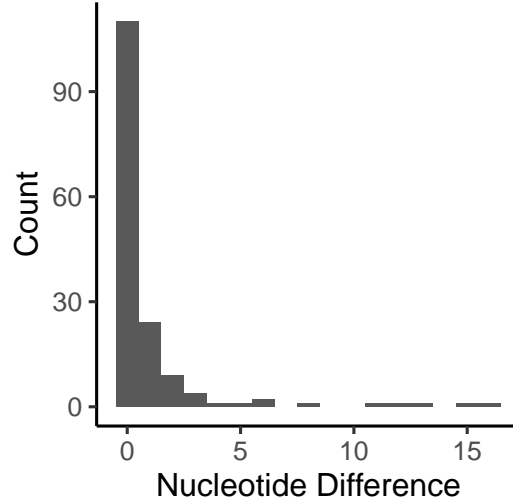
### IGHV2–26\*01

199 sequences assigned  
170 (85.4%) exact matches, in which:  
168 unique CDR3  
5 unique J



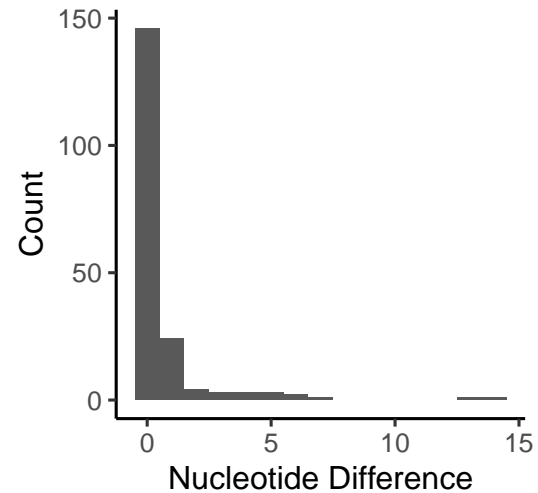
### IGHV3–7\*04

159 sequences assigned  
110 (69.2%) exact matches, in which:  
105 unique CDR3  
6 unique J



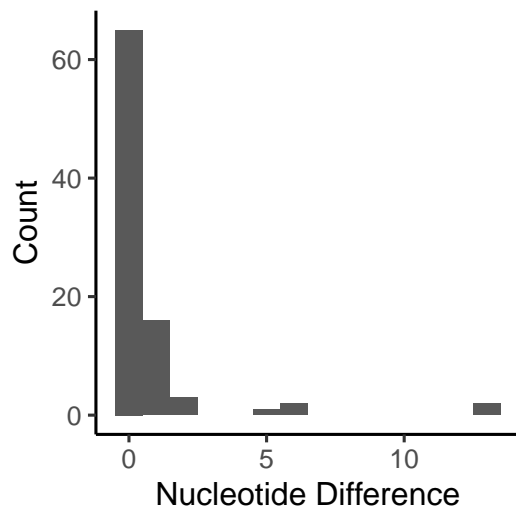
### IGHV3–11\*06

191 sequences assigned  
146 (76.4%) exact matches, in which:  
134 unique CDR3  
5 unique J



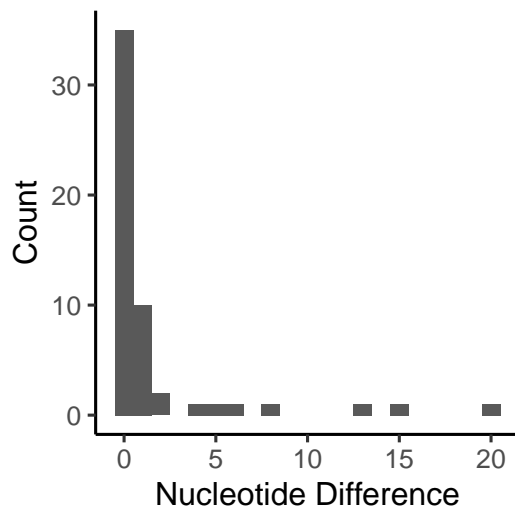
### IGHV3-13\*01

91 sequences assigned  
65 (71.4%) exact matches, in which:  
62 unique CDR3  
5 unique J



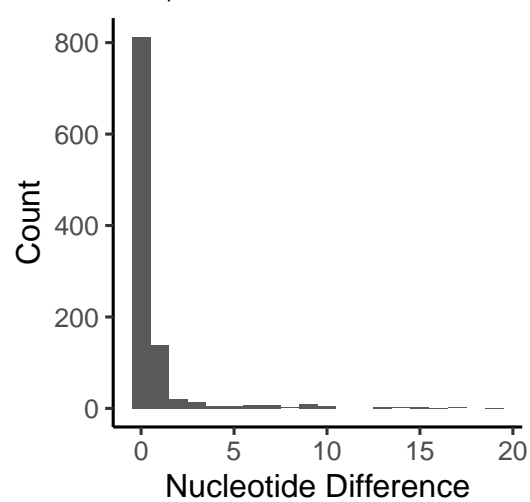
### IGHV3-20\*01

54 sequences assigned  
35 (64.8%) exact matches, in which:  
33 unique CDR3  
5 unique J



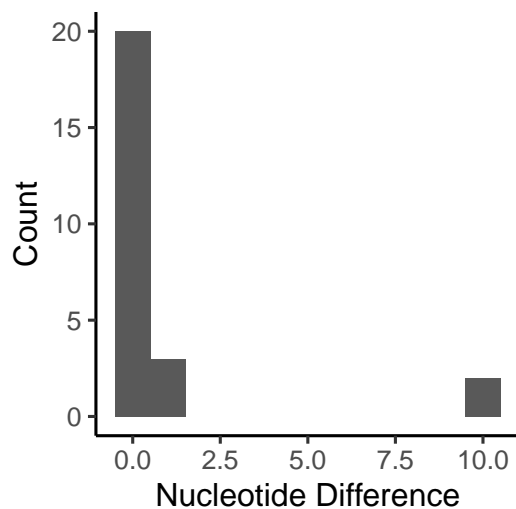
### IGHV3-30-3\*01

1041 sequences assigned  
813 (78.1%) exact matches, in which:  
742 unique CDR3  
6 unique J



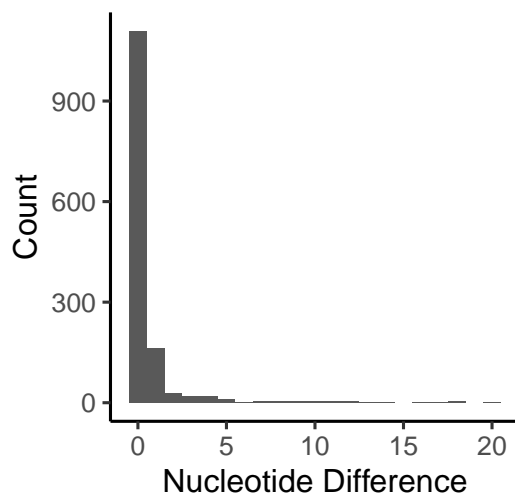
### IGHV3-13\*05

25 sequences assigned  
20 (80%) exact matches, in which:  
20 unique CDR3  
4 unique J



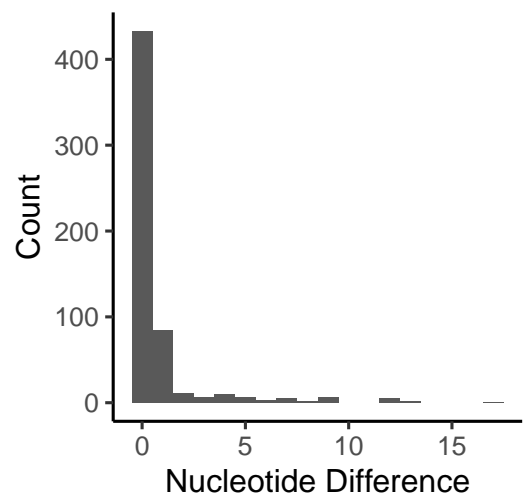
### IGHV3-21\*01

1393 sequences assigned  
1109 (79.6%) exact matches, in which:  
1025 unique CDR3  
6 unique J



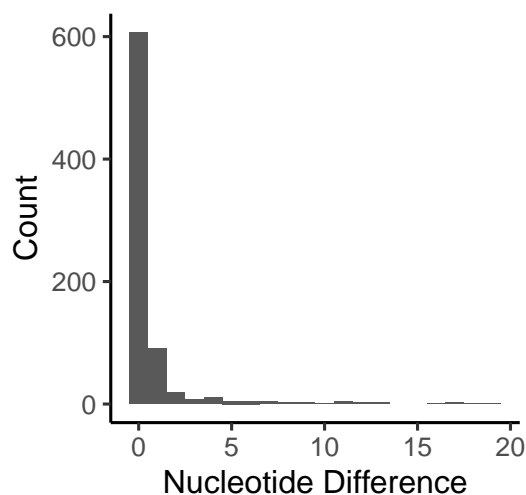
### IGHV3-33\*01

576 sequences assigned  
433 (75.2%) exact matches, in which:  
391 unique CDR3  
6 unique J



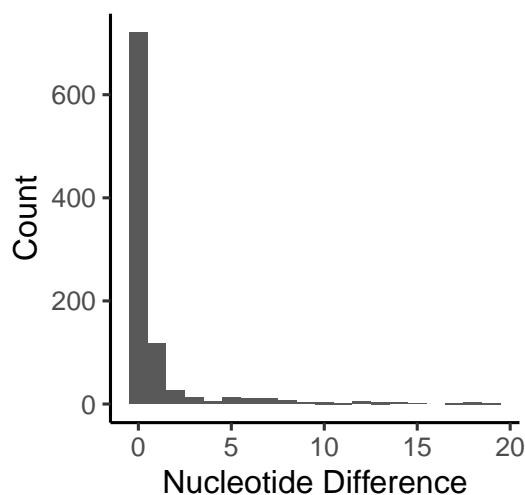
### IGHV3-15\*01

768 sequences assigned  
607 (79%) exact matches, in which:  
558 unique CDR3  
6 unique J



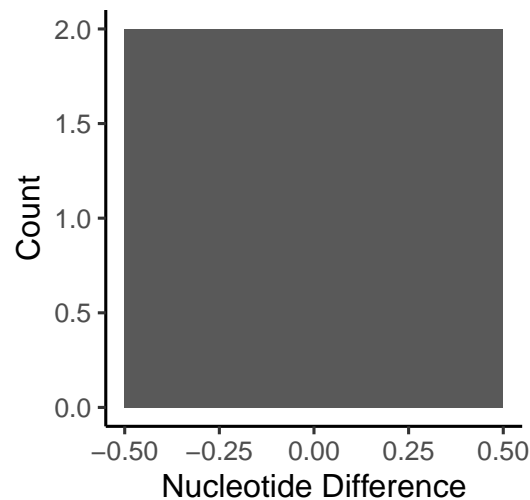
### IGHV3-23\*04

959 sequences assigned  
721 (75.2%) exact matches, in which:  
655 unique CDR3  
6 unique J



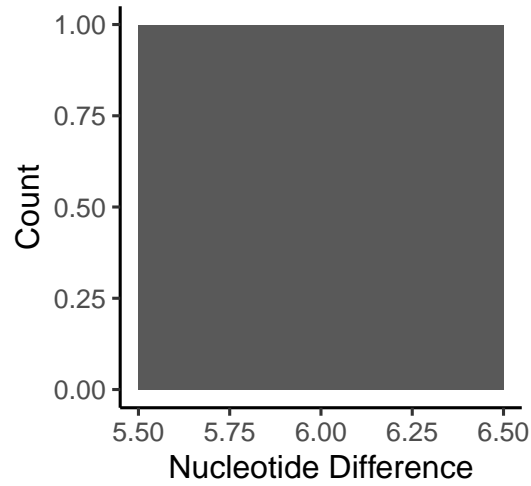
### IGHV3-35\*01

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



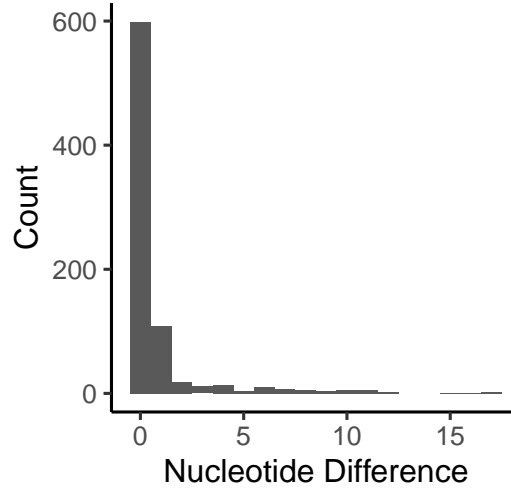
### IGHV3-35\*02

1 sequences assigned  
No exact matches.



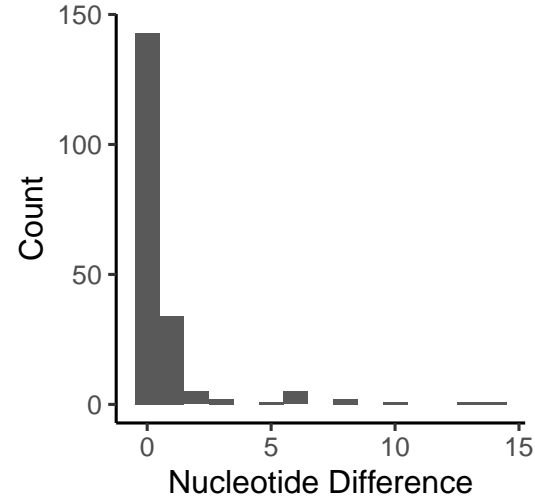
### IGHV3-48\*03

800 sequences assigned  
599 (74.9%) exact matches, in which:  
559 unique CDR3  
6 unique J



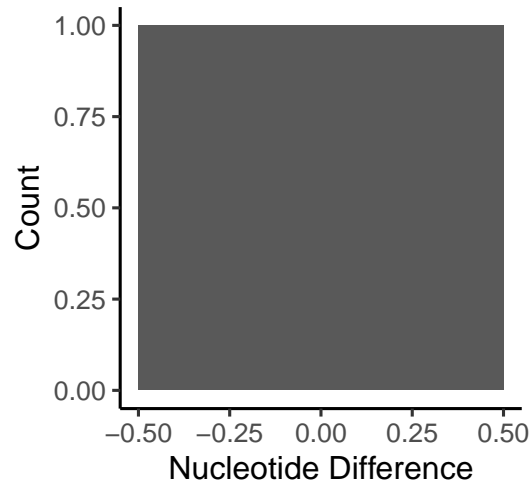
### IGHV3-49\*04

196 sequences assigned  
143 (73%) exact matches, in which:  
133 unique CDR3  
6 unique J



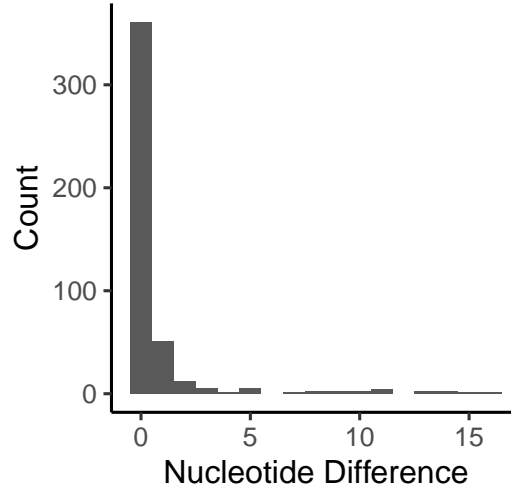
### IGHV3-38-3\*01

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



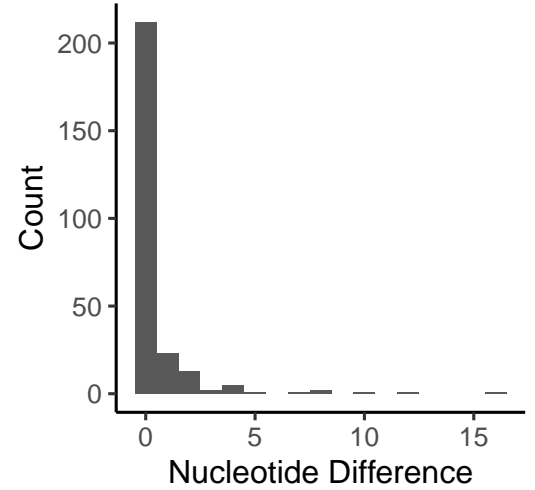
### IGHV3-48\*04

454 sequences assigned  
361 (79.5%) exact matches, in which:  
341 unique CDR3  
6 unique J



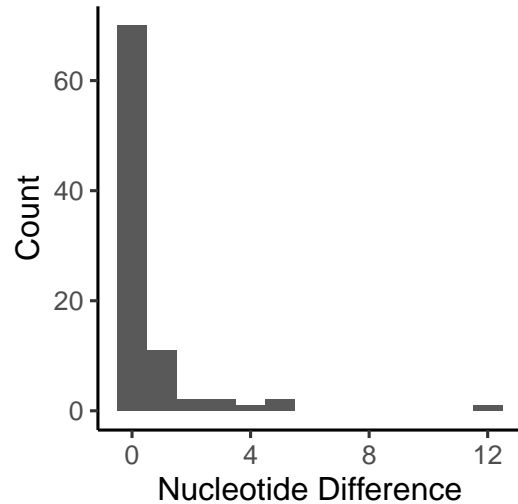
### IGHV3-53\*01

262 sequences assigned  
212 (80.9%) exact matches, in which:  
198 unique CDR3  
6 unique J



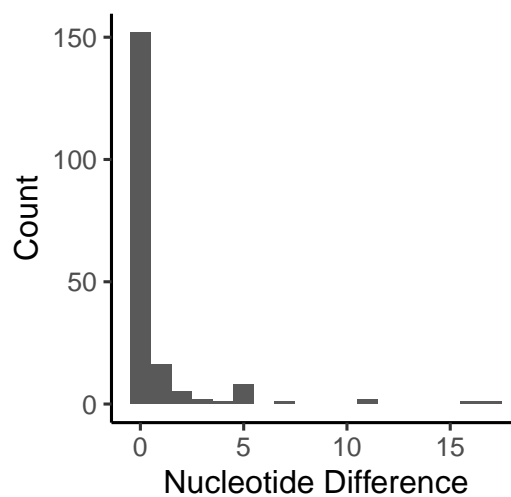
### IGHV3-43\*01

89 sequences assigned  
70 (78.7%) exact matches, in which:  
65 unique CDR3  
5 unique J



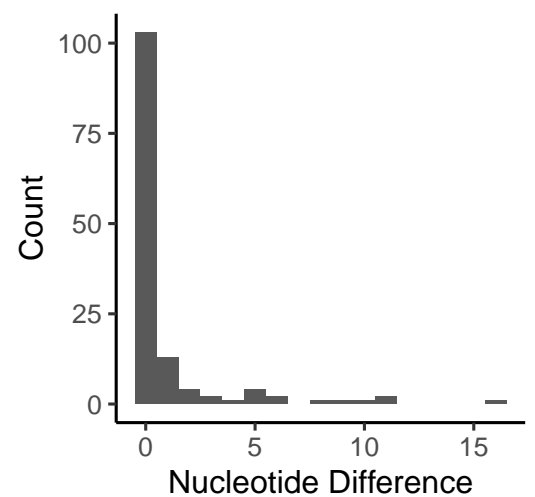
### IGHV3-49\*03

189 sequences assigned  
152 (80.4%) exact matches, in which:  
133 unique CDR3  
5 unique J



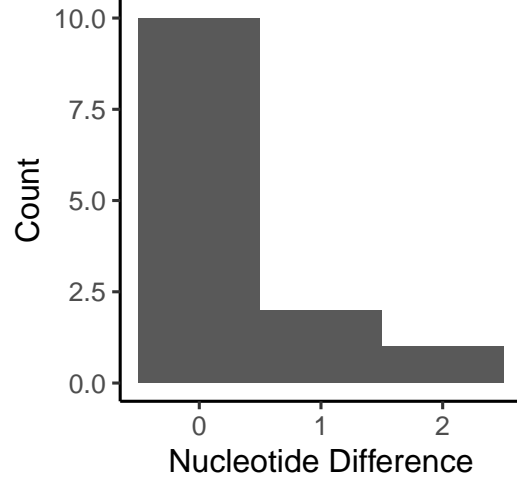
### IGHV3-53\*02

135 sequences assigned  
103 (76.3%) exact matches, in which:  
95 unique CDR3  
6 unique J



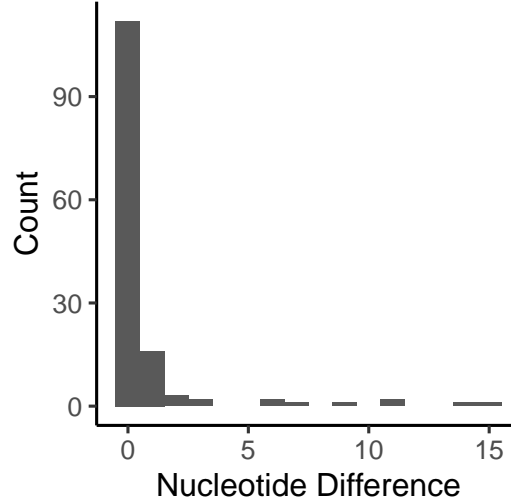
### IGHV3-64\*02

13 sequences assigned  
10 (76.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



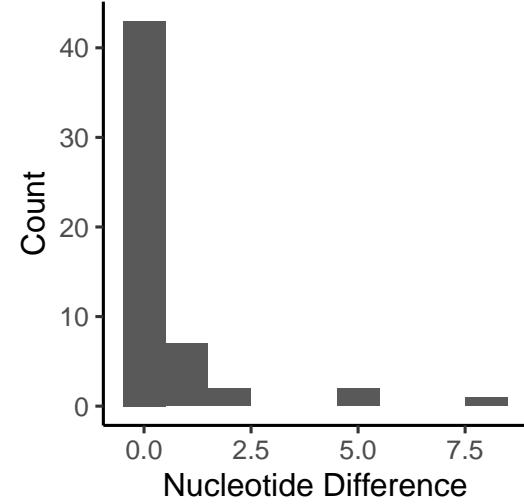
### IGHV3-73\*02

142 sequences assigned  
112 (78.9%) exact matches, in which:  
100 unique CDR3  
5 unique J



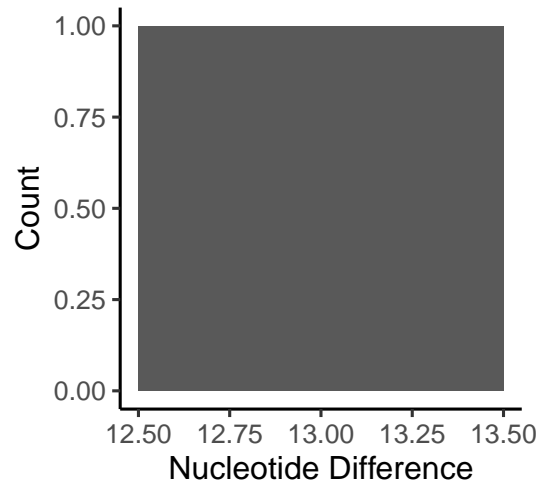
### IGHV3-43D\*04

55 sequences assigned  
43 (78.2%) exact matches, in which:  
41 unique CDR3  
5 unique J



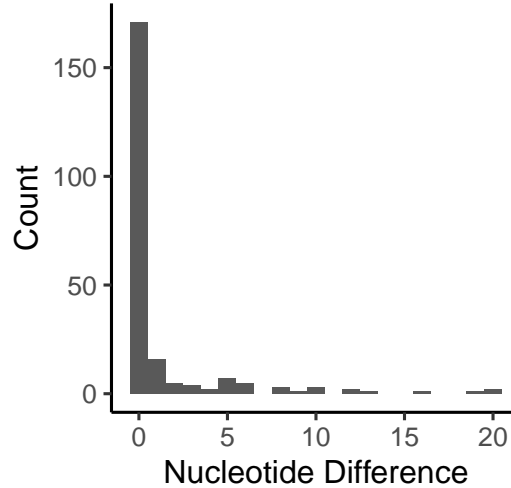
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



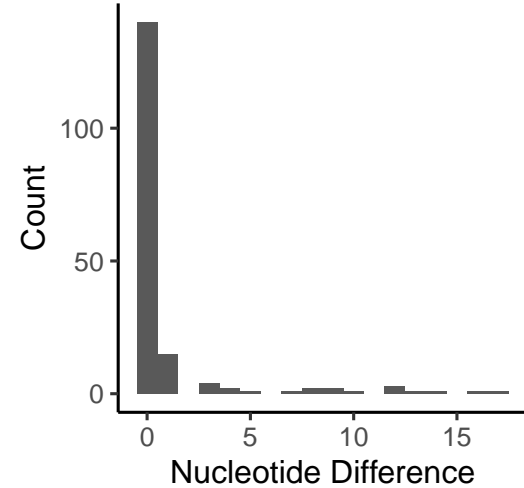
### IGHV3-74\*01

226 sequences assigned  
171 (75.7%) exact matches, in which:  
160 unique CDR3  
5 unique J



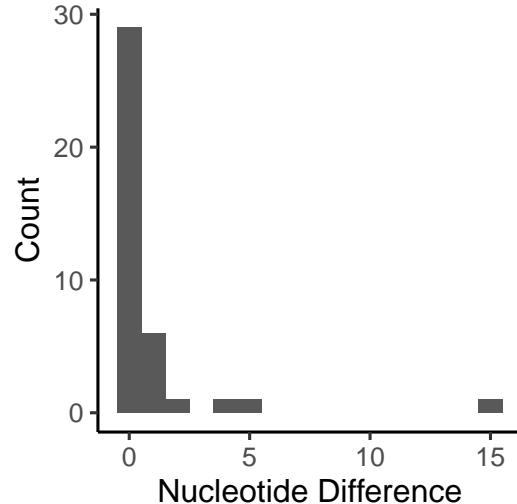
### IGHV3-64D\*06

176 sequences assigned  
140 (79.5%) exact matches, in which:  
124 unique CDR3  
6 unique J



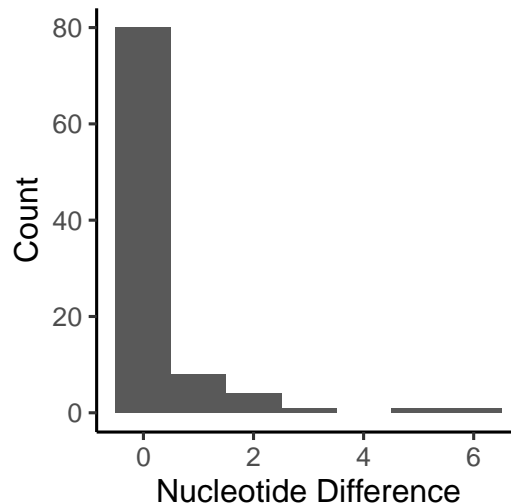
### IGHV3-72\*01

40 sequences assigned  
29 (72.5%) exact matches, in which:  
28 unique CDR3  
4 unique J



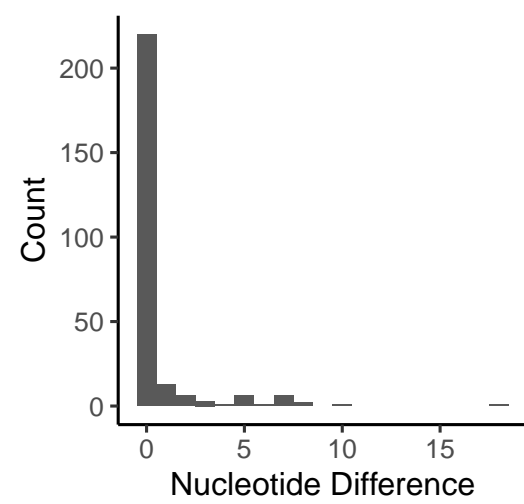
### IGHV3-43D\*03

95 sequences assigned  
80 (84.2%) exact matches, in which:  
76 unique CDR3  
5 unique J



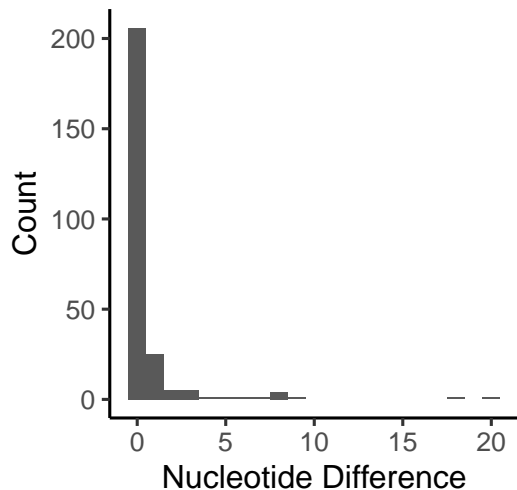
### IGHV4-4\*02

261 sequences assigned  
220 (84.3%) exact matches, in which:  
214 unique CDR3  
6 unique J



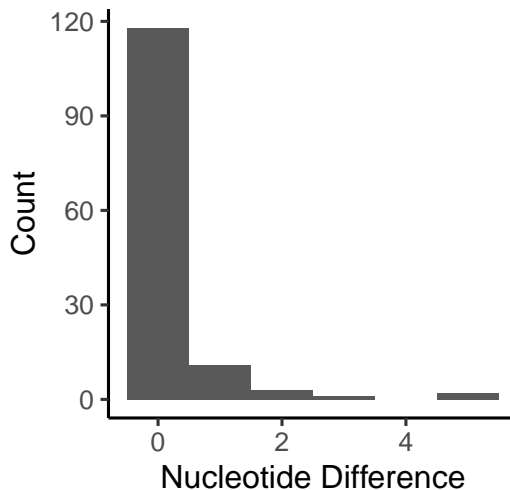
### IGHV4-4\*07

252 sequences assigned  
206 (81.7%) exact matches, in which:  
201 unique CDR3  
6 unique J



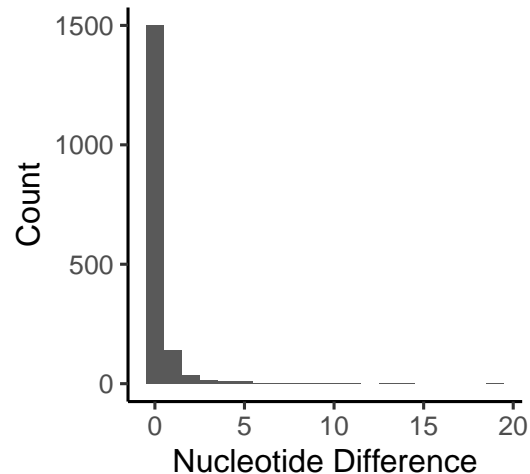
### IGHV4-30-2\*01

135 sequences assigned  
118 (87.4%) exact matches, in which:  
112 unique CDR3  
6 unique J



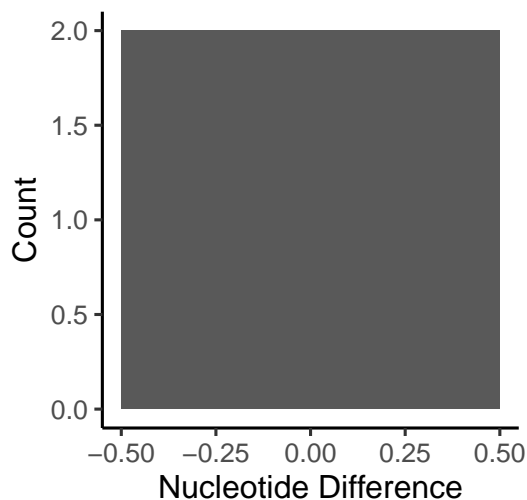
### IGHV4-34\*01

1740 sequences assigned  
1500 (86.2%) exact matches, in which:  
1408 unique CDR3  
6 unique J



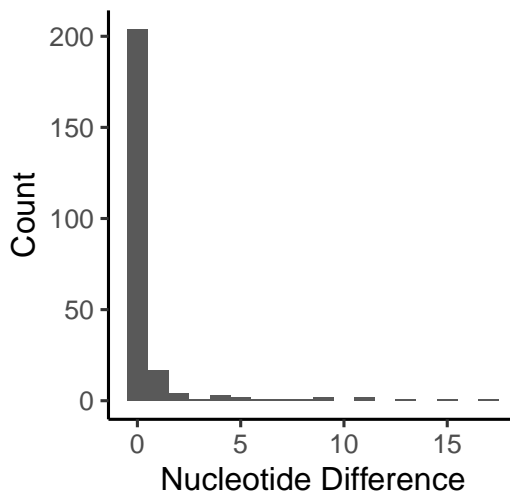
### IGHV4-28\*01

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



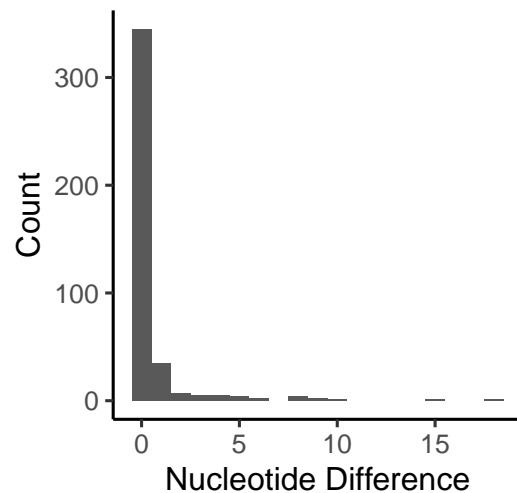
### IGHV4-30-4\*01

241 sequences assigned  
204 (84.6%) exact matches, in which:  
194 unique CDR3  
6 unique J



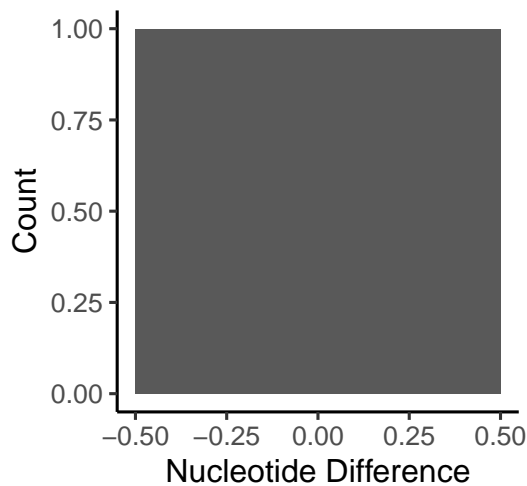
### IGHV4-38-2\*02

413 sequences assigned  
345 (83.5%) exact matches, in which:  
321 unique CDR3  
6 unique J



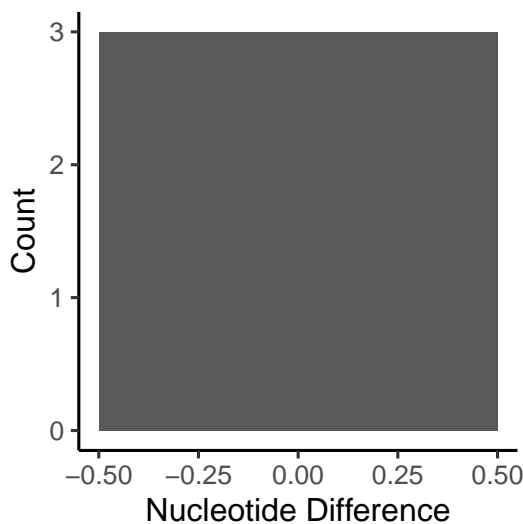
### IGHV4-28\*07

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



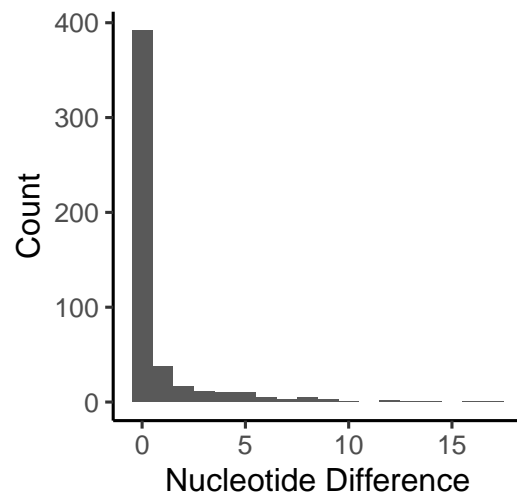
### IGHV4-31\*10

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



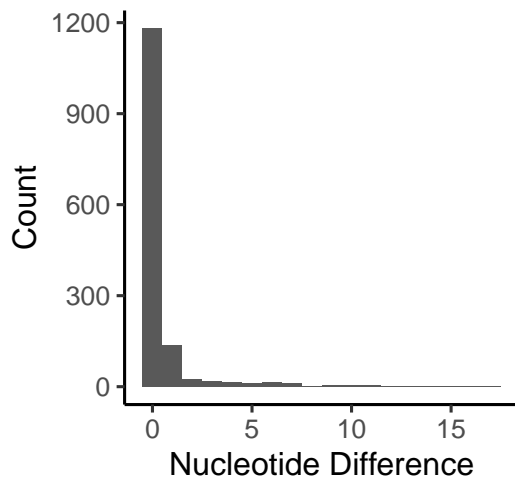
### IGHV4-38-2\*02\_A70G

500 sequences assigned  
392 (78.4%) exact matches, in which:  
372 unique CDR3  
6 unique J



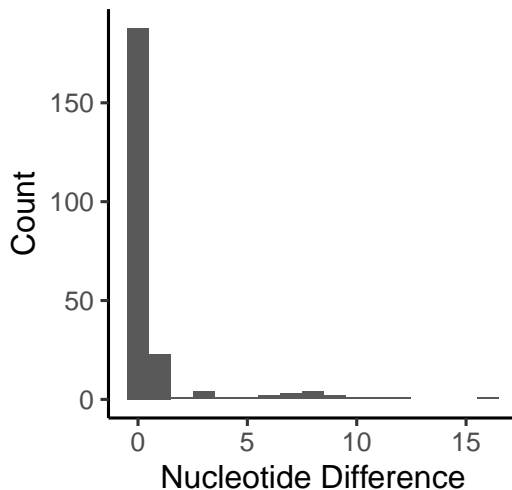
### IGHV4-39\*07

1443 sequences assigned  
1181 (81.8%) exact matches, in which:  
1086 unique CDR3  
6 unique J



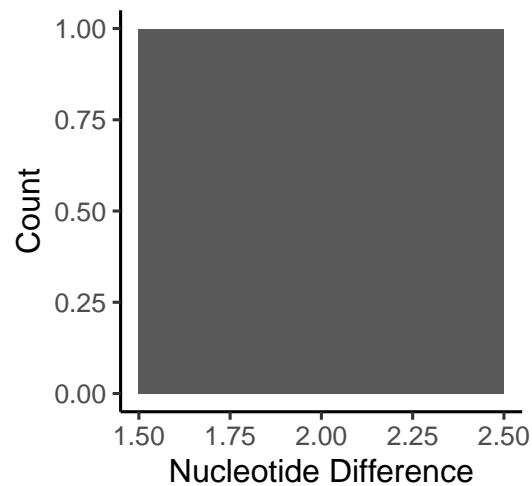
### IGHV4-61\*01

233 sequences assigned  
188 (80.7%) exact matches, in which:  
179 unique CDR3  
6 unique J



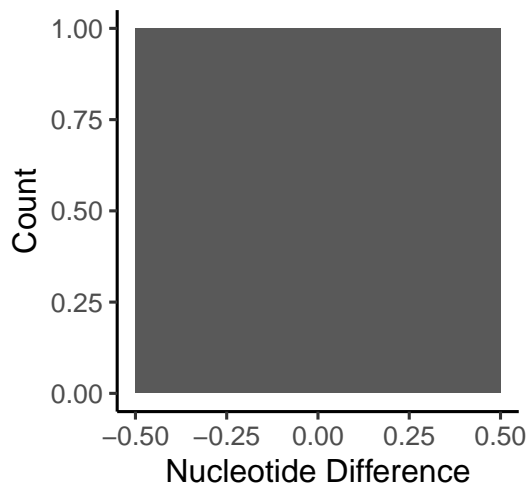
### IGHV5-78\*01

1 sequences assigned  
No exact matches.



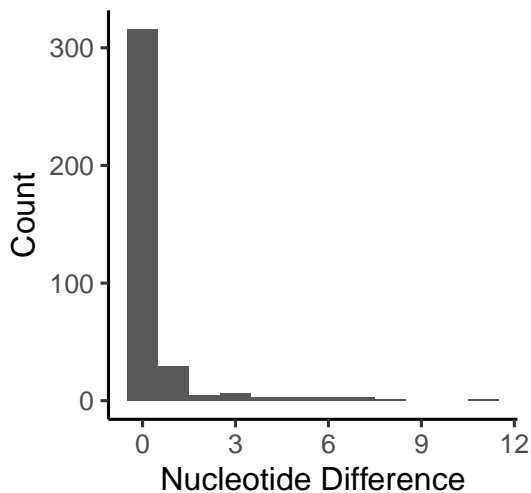
### IGHV4-55\*08

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



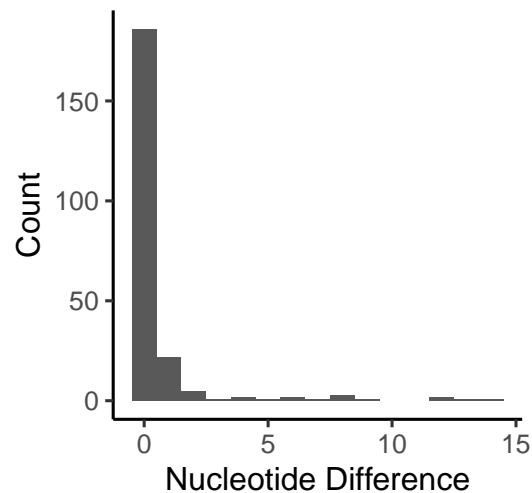
### IGHV5-10-1\*03

370 sequences assigned  
316 (85.4%) exact matches, in which:  
304 unique CDR3  
5 unique J



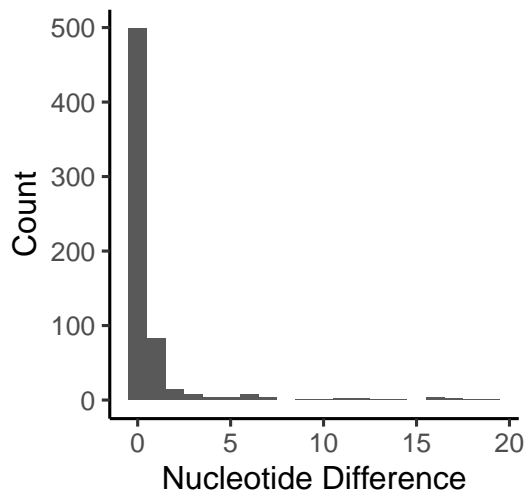
### IGHV6-1\*01

228 sequences assigned  
186 (81.6%) exact matches, in which:  
175 unique CDR3  
6 unique J



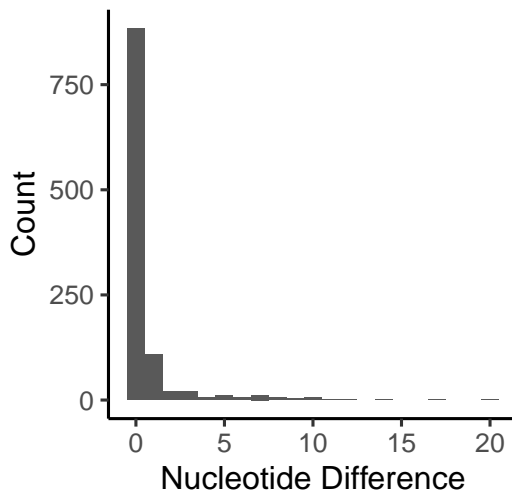
### IGHV4-59\*01

636 sequences assigned  
499 (78.5%) exact matches, in which:  
485 unique CDR3  
6 unique J



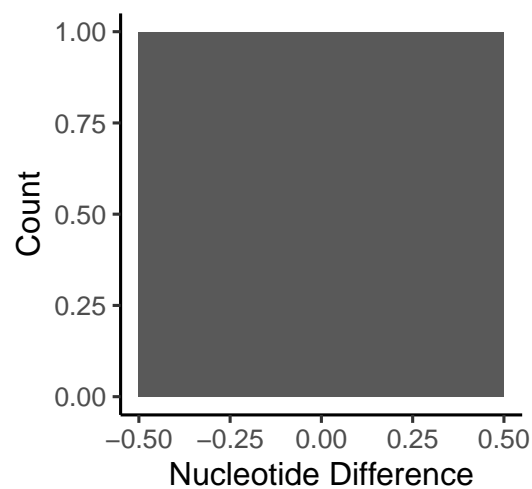
### IGHV5-51\*01

1098 sequences assigned  
884 (80.5%) exact matches, in which:  
830 unique CDR3  
6 unique J



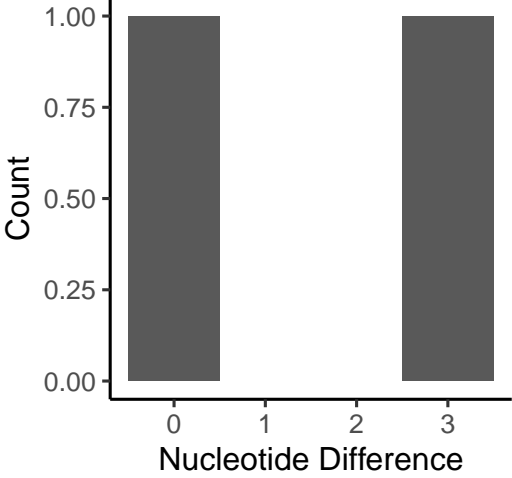
### IGHV3/OR16-6\*02

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



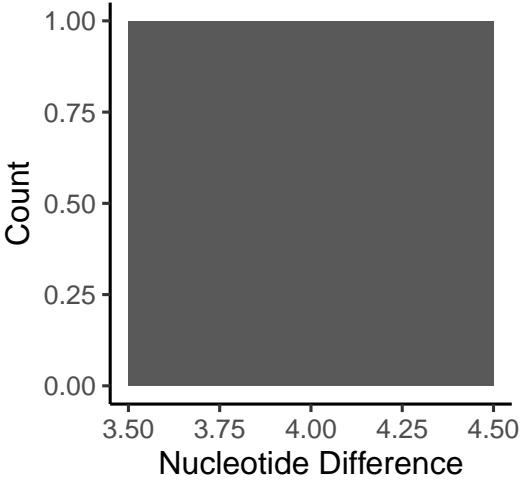
IGHV7-4-1\*01

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



IGHV7-81\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.