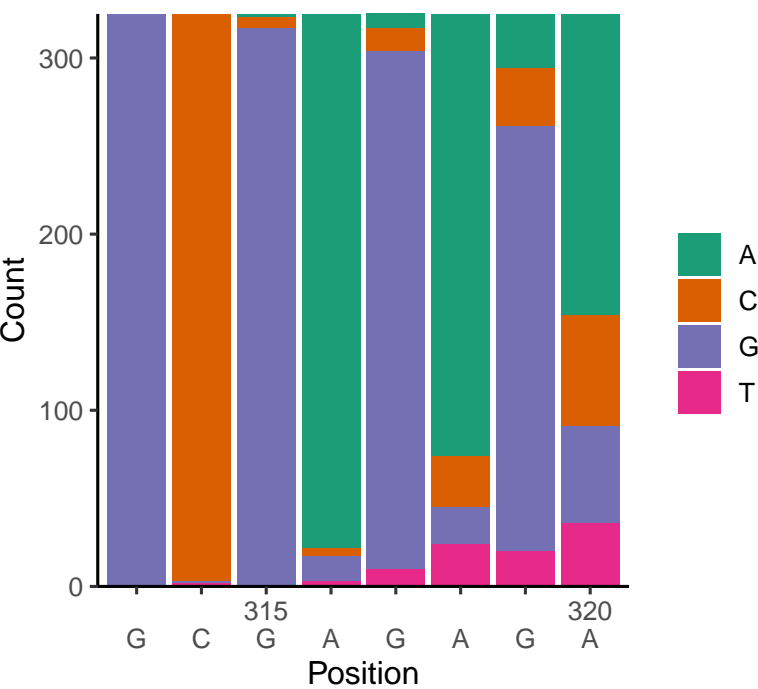
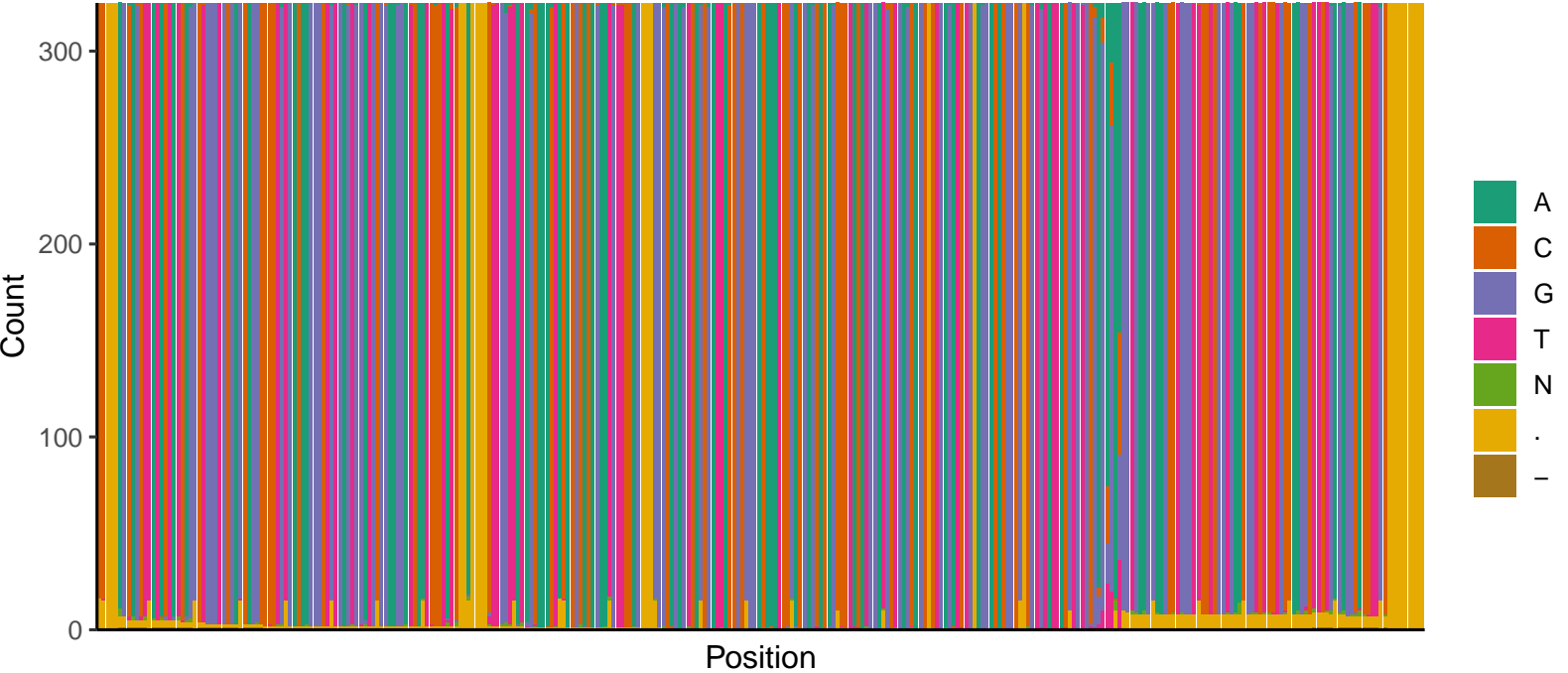


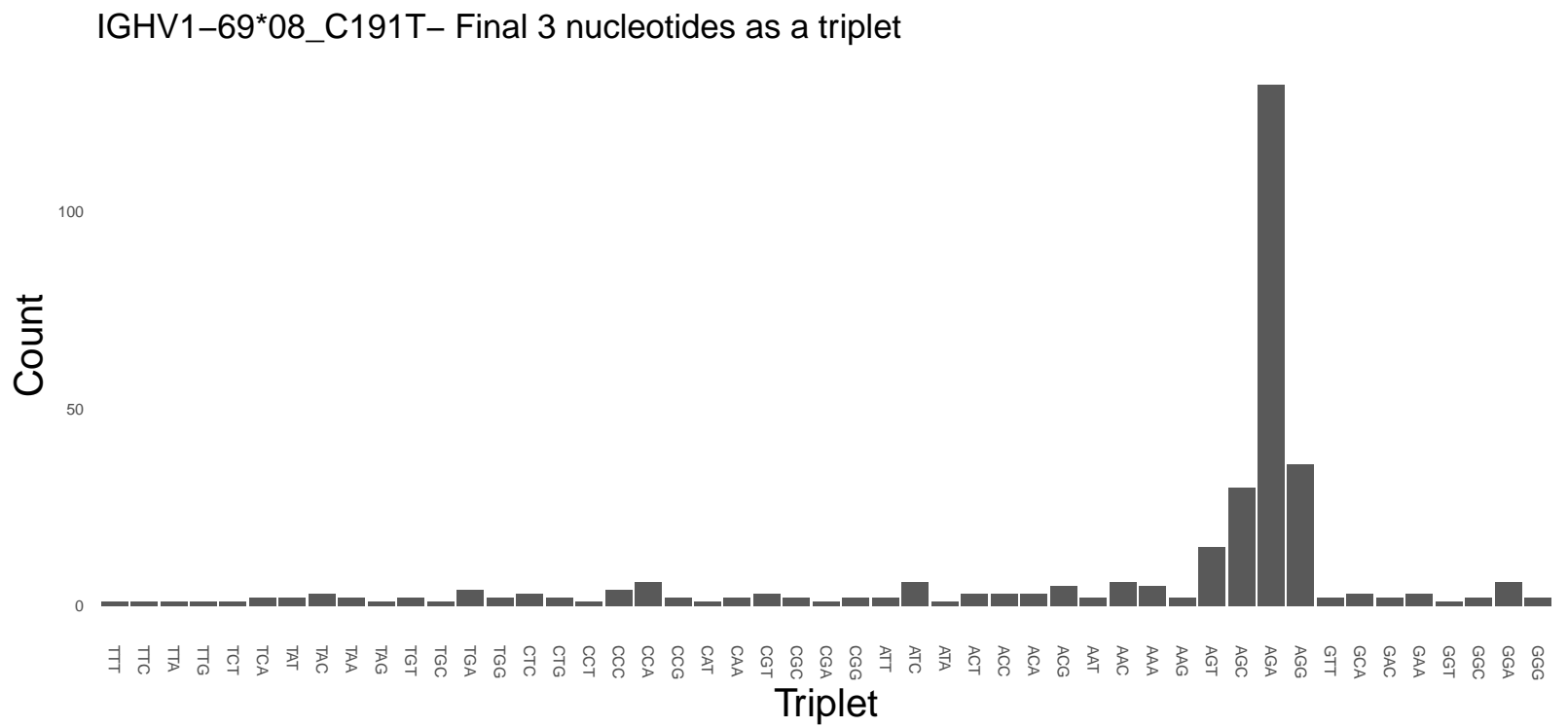
Gene IGHV1-69\*08\_C191T



Gene IGHV1-69\*08\_C191T

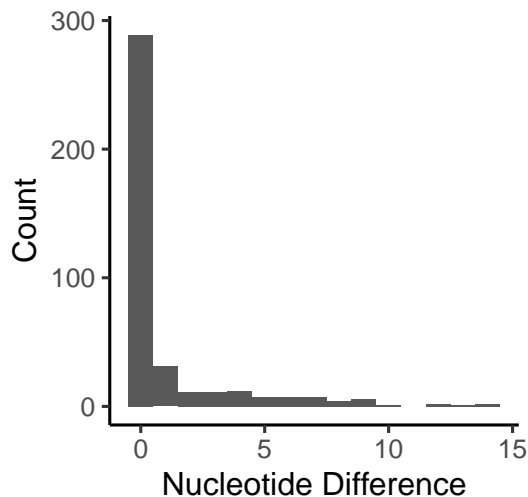


IGHV1-69\*08\_C191T- Final 3 nucleotides as a triplet



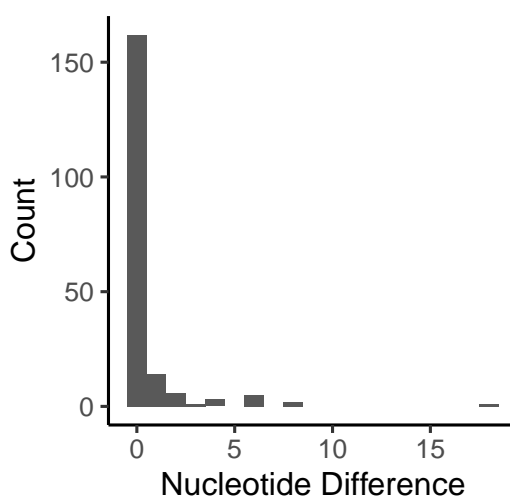
### IGHV1-2\*02

391 sequences assigned  
289 (73.9%) exact matches, in which:  
278 unique CDR3  
6 unique J



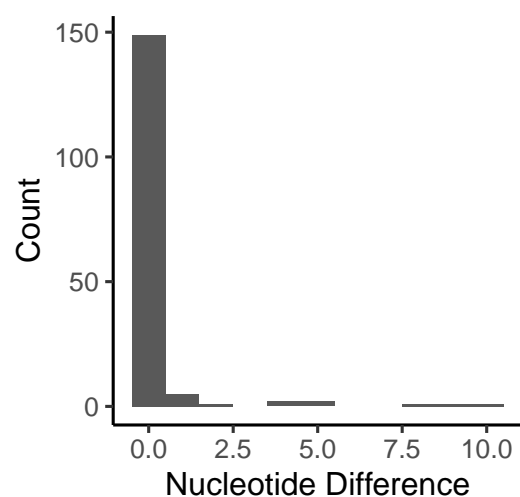
### IGHV1-8\*01

195 sequences assigned  
162 (83.1%) exact matches, in which:  
160 unique CDR3  
6 unique J



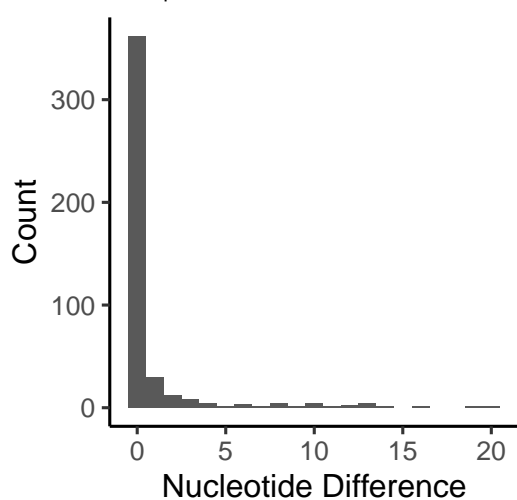
### IGHV1-24\*01

162 sequences assigned  
149 (92%) exact matches, in which:  
141 unique CDR3  
6 unique J



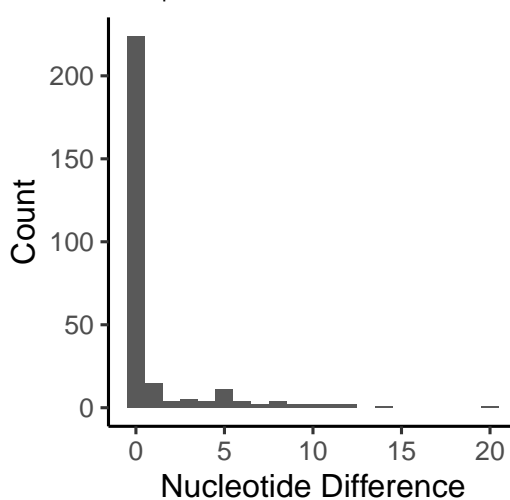
### IGHV1-2\*06

442 sequences assigned  
362 (81.9%) exact matches, in which:  
341 unique CDR3  
6 unique J



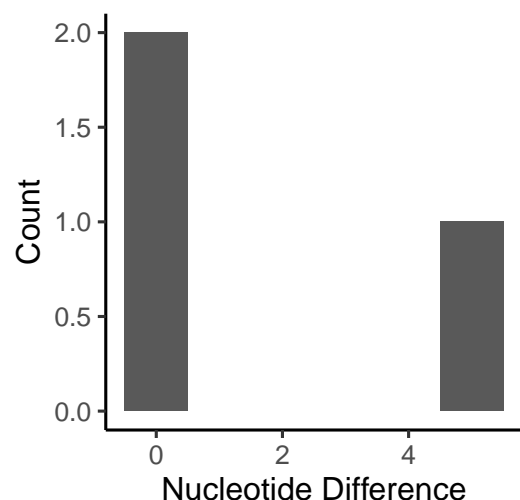
### IGHV1-18\*01

285 sequences assigned  
224 (78.6%) exact matches, in which:  
217 unique CDR3  
6 unique J



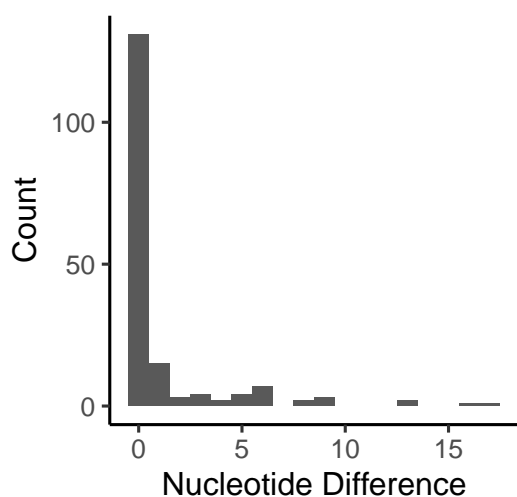
### IGHV1-45\*02

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



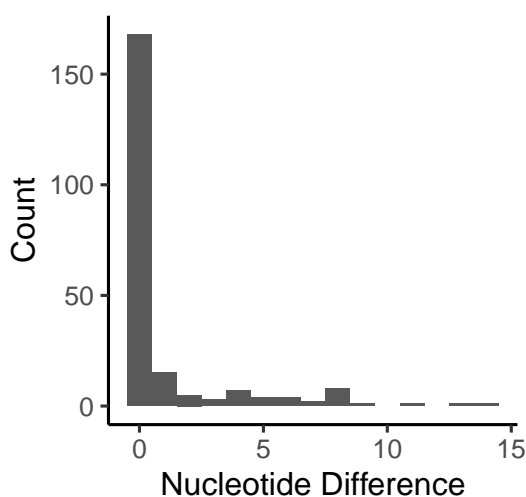
### IGHV1-3\*01

176 sequences assigned  
131 (74.4%) exact matches, in which:  
124 unique CDR3  
6 unique J



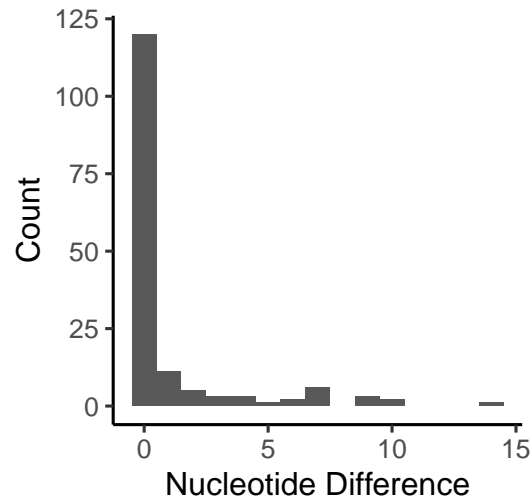
### IGHV1-18\*04

220 sequences assigned  
168 (76.4%) exact matches, in which:  
162 unique CDR3  
6 unique J



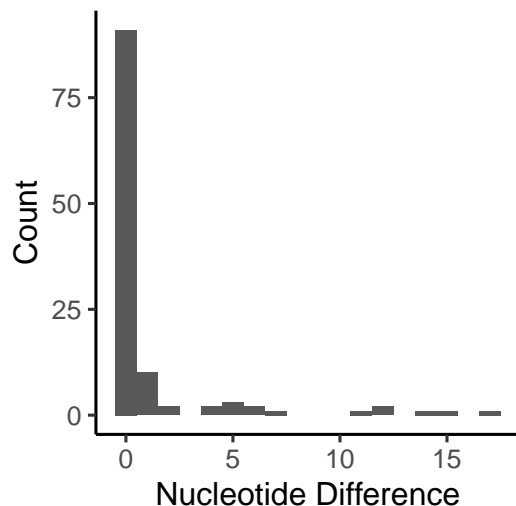
### IGHV1-46\*01

157 sequences assigned  
120 (76.4%) exact matches, in which:  
117 unique CDR3  
5 unique J



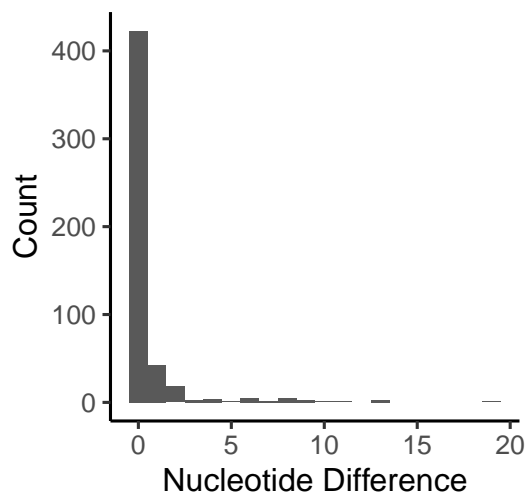
### IGHV1-46\*03

117 sequences assigned  
91 (77.8%) exact matches, in which:  
85 unique CDR3  
5 unique J



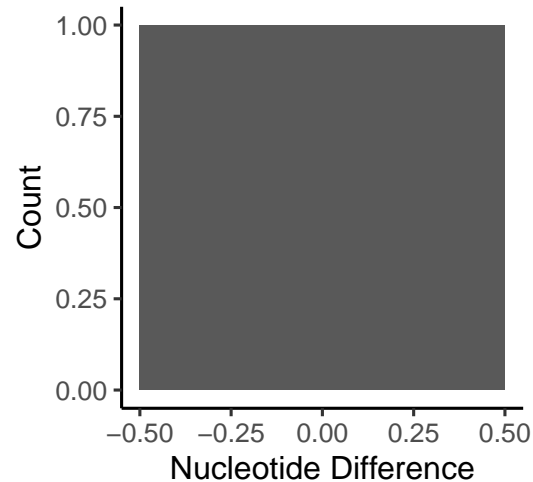
### IGHV1-69\*12

513 sequences assigned  
423 (82.5%) exact matches, in which:  
409 unique CDR3  
6 unique J



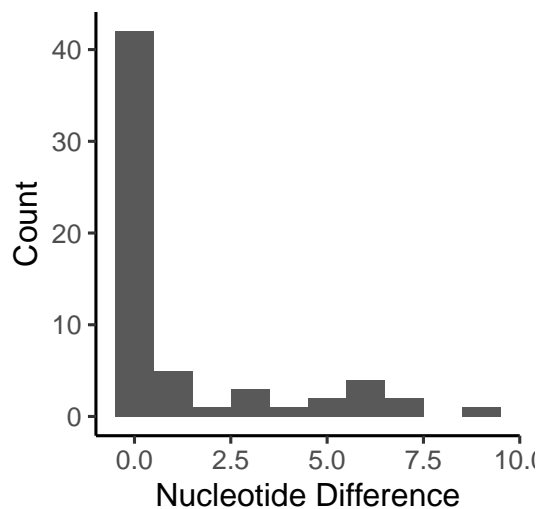
### IGHV1-NL1\*01

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



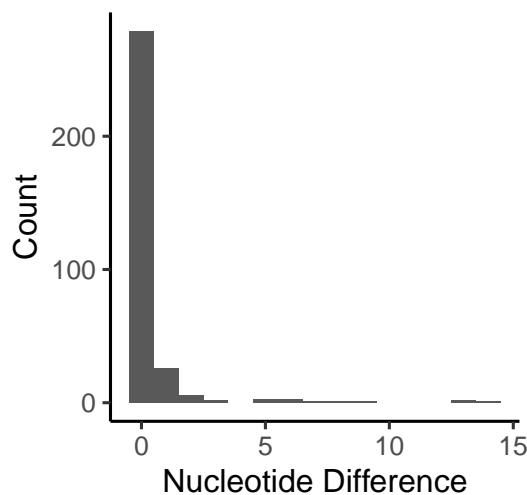
### IGHV1-58\*01

61 sequences assigned  
42 (68.9%) exact matches, in which:  
40 unique CDR3  
6 unique J



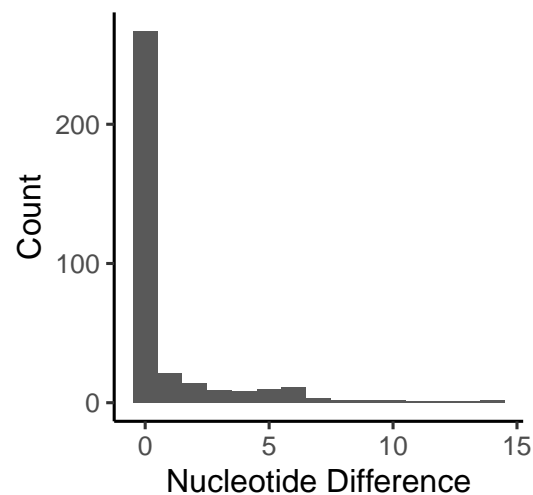
### IGHV1-69\*08\_C191T

325 sequences assigned  
279 (85.8%) exact matches, in which:  
266 unique CDR3  
6 unique J



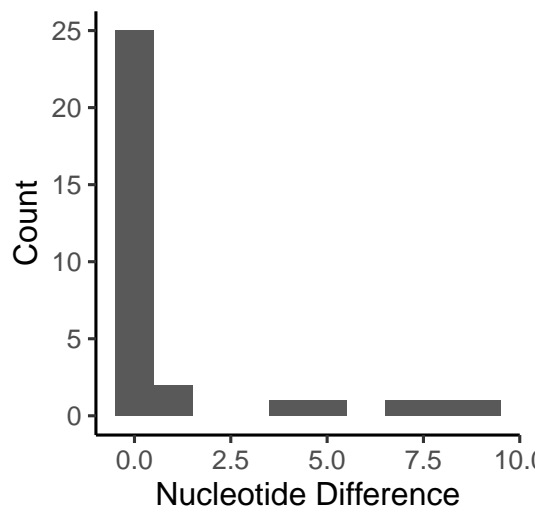
### IGHV2-5\*02

354 sequences assigned  
267 (75.4%) exact matches, in which:  
258 unique CDR3  
6 unique J



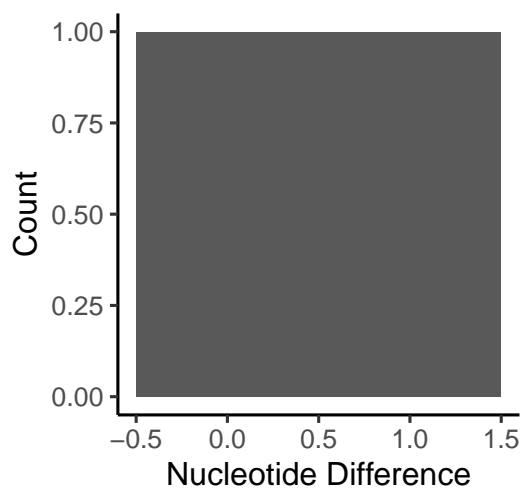
### IGHV1-58\*02

32 sequences assigned  
25 (78.1%) exact matches, in which:  
25 unique CDR3  
5 unique J



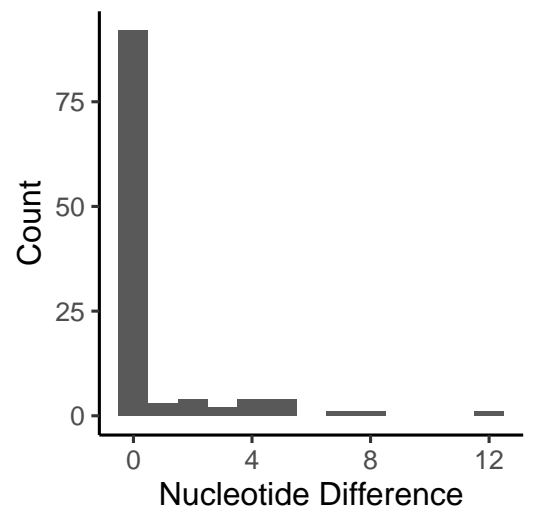
### IGHV1-69D\*01

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



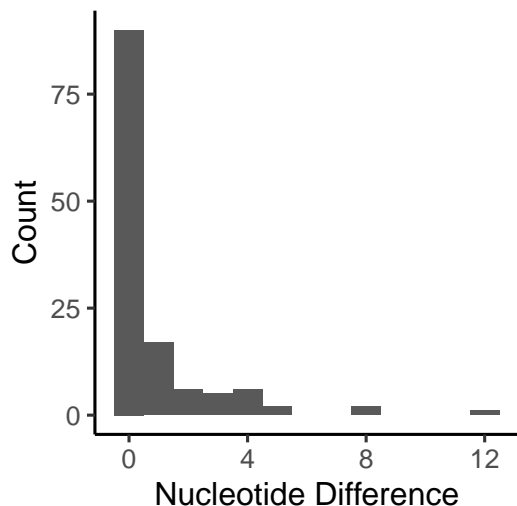
### IGHV2-26\*01

112 sequences assigned  
92 (82.1%) exact matches, in which:  
91 unique CDR3  
5 unique J



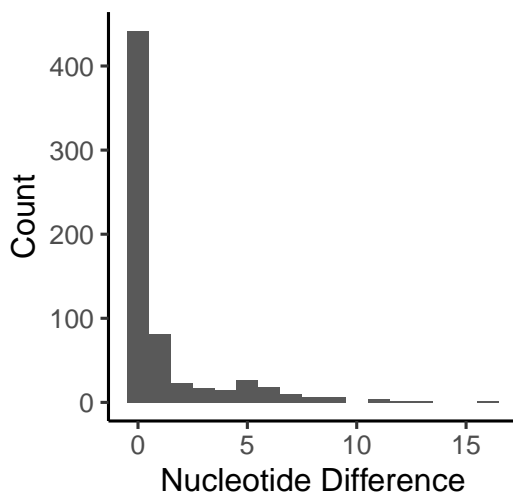
## IGHV2-70\*15

129 sequences assigned  
90 (69.8%) exact matches, in which:  
89 unique CDR3  
5 unique J



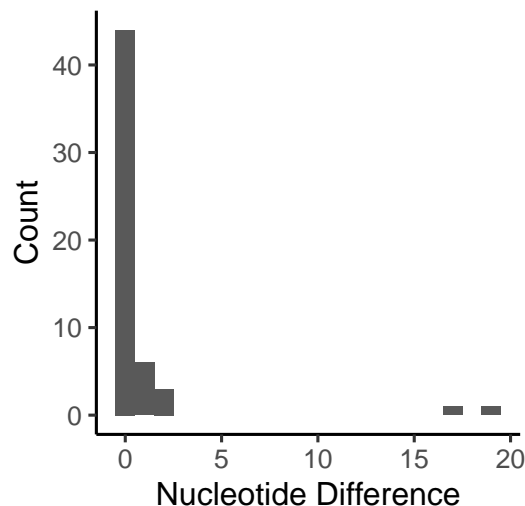
## IGHV3-9\*01

655 sequences assigned  
442 (67.5%) exact matches, in which:  
403 unique CDR3  
6 unique J



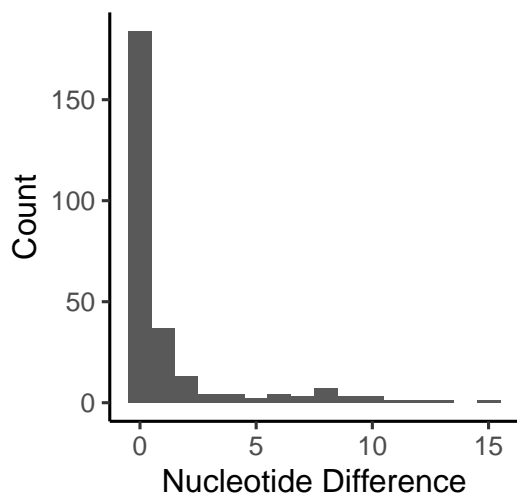
## IGHV3-13\*01

55 sequences assigned  
44 (80%) exact matches, in which:  
41 unique CDR3  
6 unique J



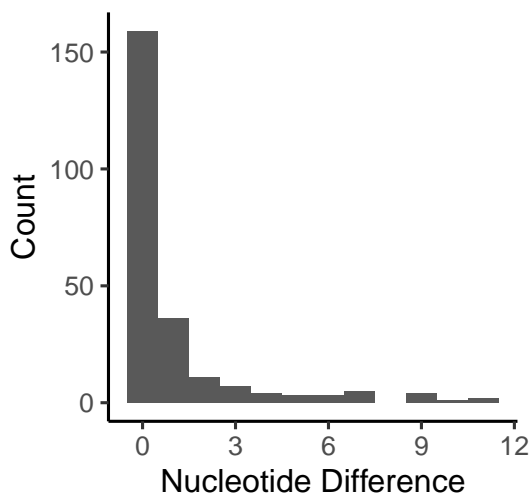
## IGHV3-7\*01

268 sequences assigned  
184 (68.7%) exact matches, in which:  
173 unique CDR3  
6 unique J



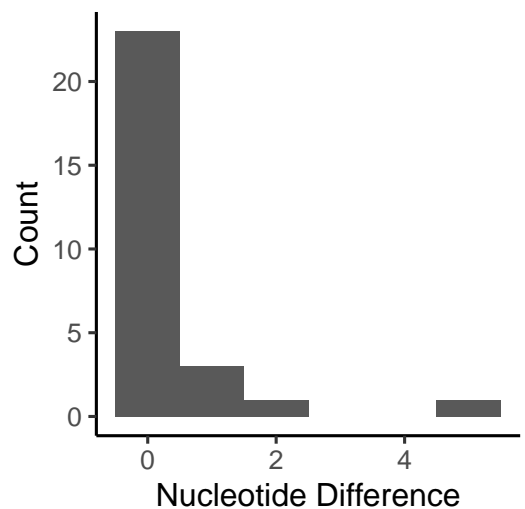
## IGHV3-11\*01

235 sequences assigned  
159 (67.7%) exact matches, in which:  
150 unique CDR3  
6 unique J



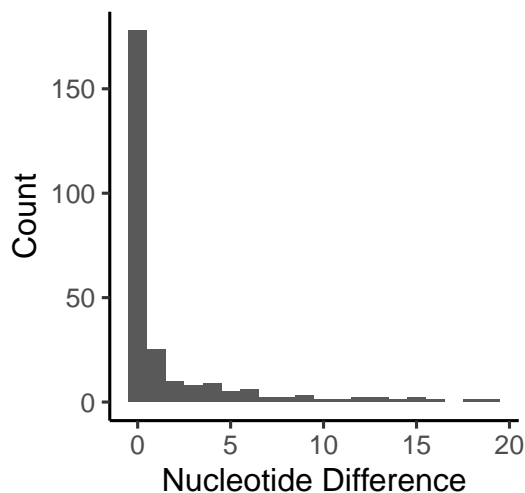
## IGHV3-13\*05

28 sequences assigned  
23 (82.1%) exact matches, in which:  
22 unique CDR3  
5 unique J



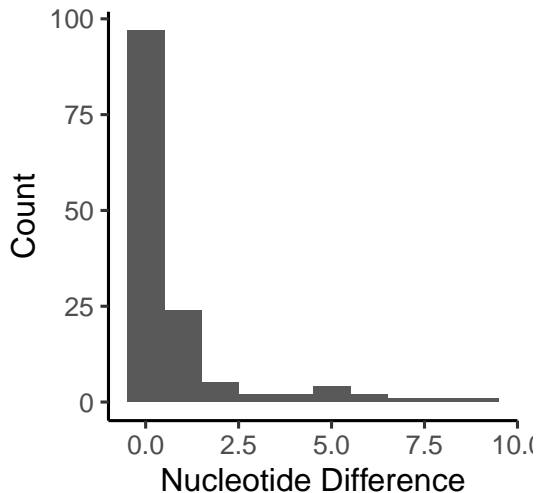
## IGHV3-7\*03

261 sequences assigned  
178 (68.2%) exact matches, in which:  
169 unique CDR3  
5 unique J



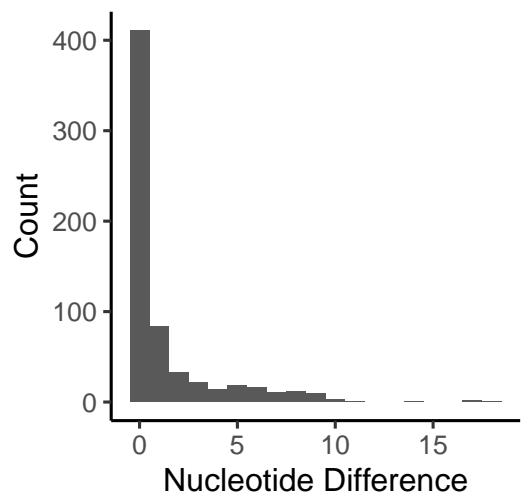
## IGHV3-11\*06

139 sequences assigned  
97 (69.8%) exact matches, in which:  
91 unique CDR3  
5 unique J



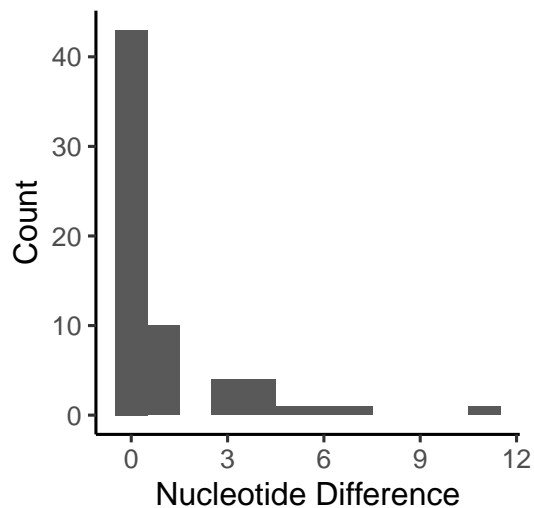
## IGHV3-15\*01

638 sequences assigned  
411 (64.4%) exact matches, in which:  
389 unique CDR3  
6 unique J



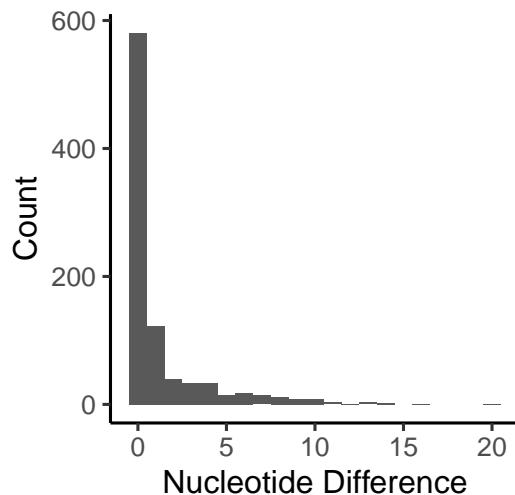
### IGHV3–20\*01

65 sequences assigned  
43 (66.2%) exact matches, in which:  
39 unique CDR3  
6 unique J



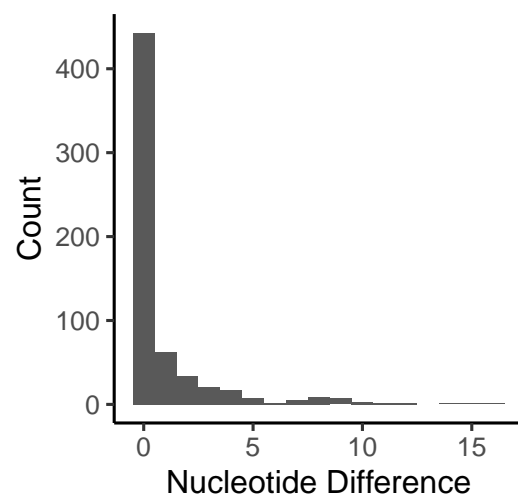
### IGHV3–33\*01

901 sequences assigned  
581 (64.5%) exact matches, in which:  
543 unique CDR3  
6 unique J



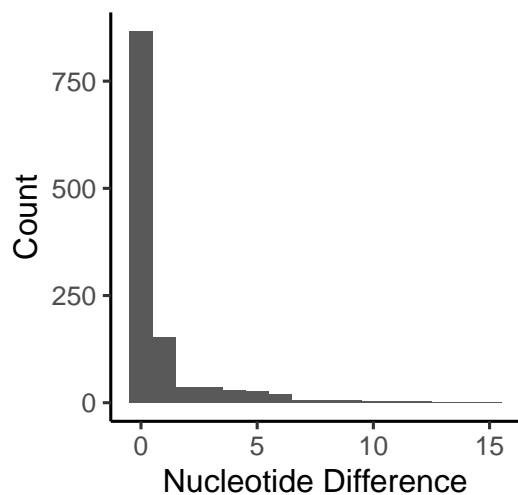
### IGHV3–48\*02

618 sequences assigned  
443 (71.7%) exact matches, in which:  
426 unique CDR3  
6 unique J



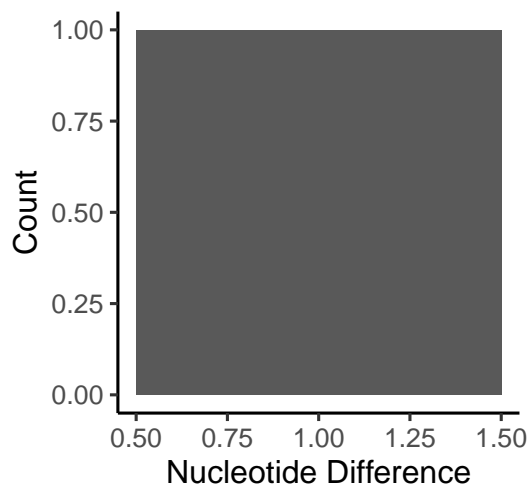
### IGHV3–21\*01

1200 sequences assigned  
867 (72.2%) exact matches, in which:  
812 unique CDR3  
6 unique J



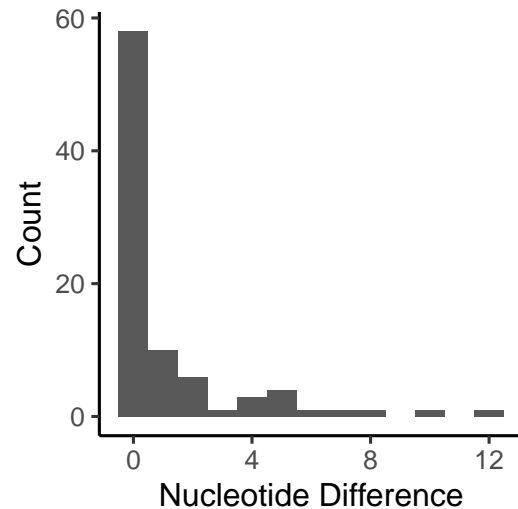
### IGHV3–35\*01

1 sequences assigned  
No exact matches.



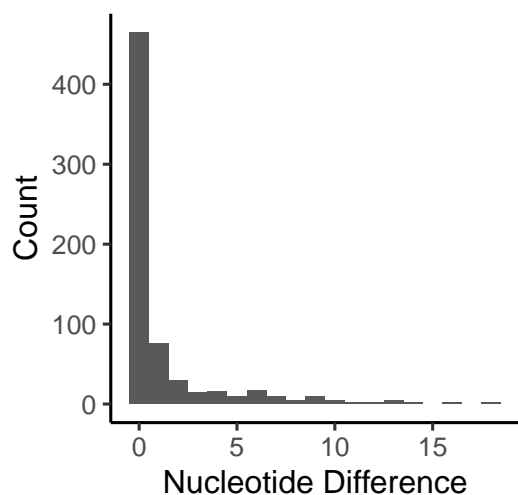
### IGHV3–49\*03

87 sequences assigned  
58 (66.7%) exact matches, in which:  
56 unique CDR3  
5 unique J



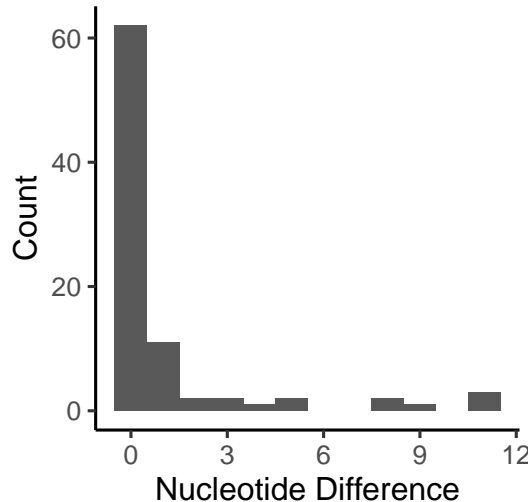
### IGHV3–30–3\*01

668 sequences assigned  
465 (69.6%) exact matches, in which:  
429 unique CDR3  
6 unique J



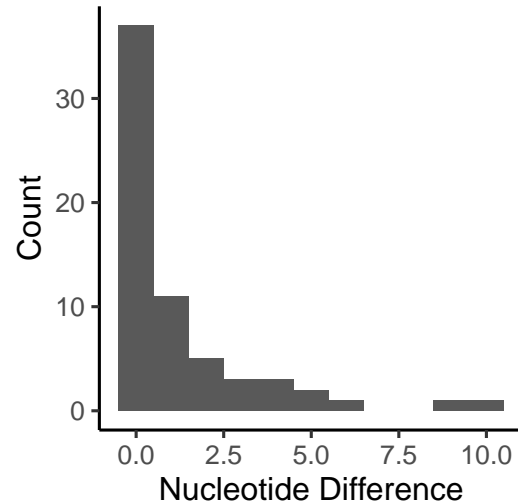
### IGHV3–43\*01

86 sequences assigned  
62 (72.1%) exact matches, in which:  
56 unique CDR3  
6 unique J



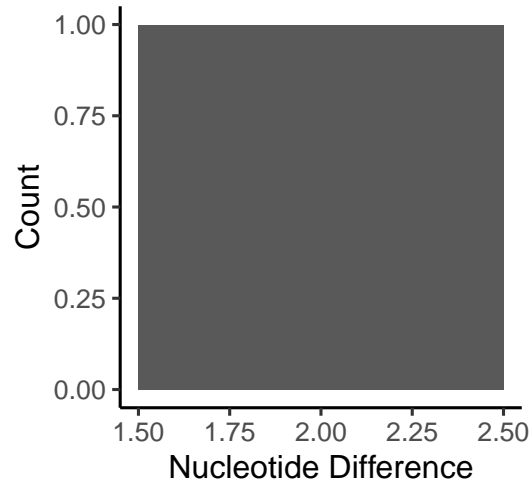
### IGHV3–49\*05

64 sequences assigned  
37 (57.8%) exact matches, in which:  
35 unique CDR3  
5 unique J



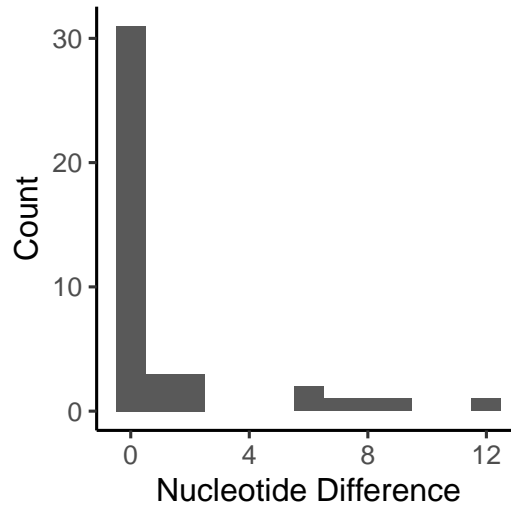
### IGHV3-52\*01

1 sequences assigned  
No exact matches.



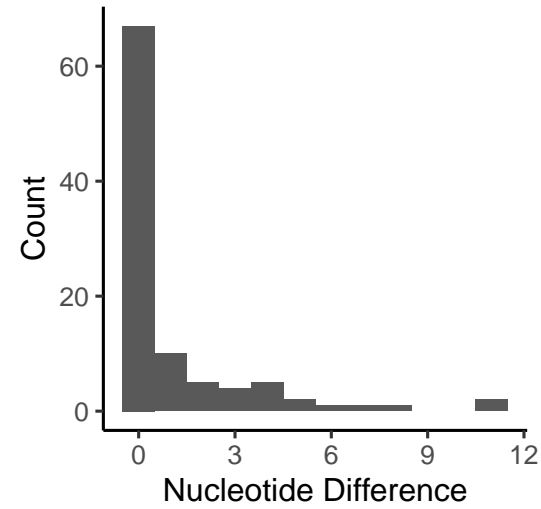
### IGHV3-64\*01

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



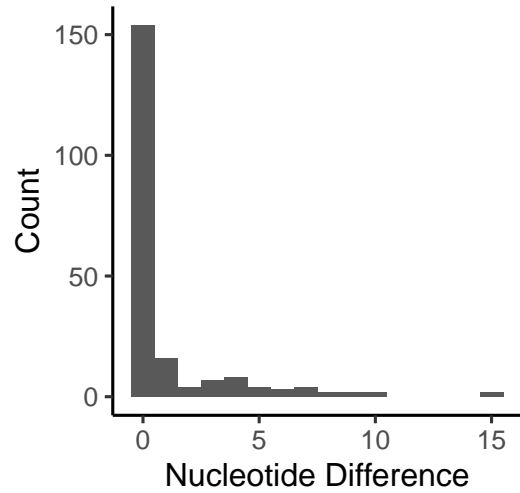
### IGHV3-73\*01

103 sequences assigned  
67 (65%) exact matches, in which:  
61 unique CDR3  
6 unique J



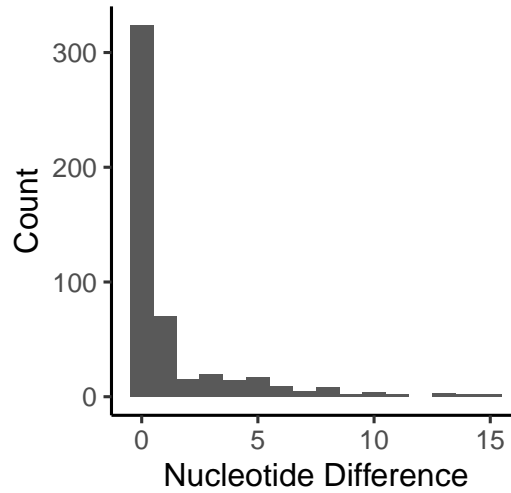
### IGHV3-53\*01

208 sequences assigned  
154 (74%) exact matches, in which:  
142 unique CDR3  
6 unique J



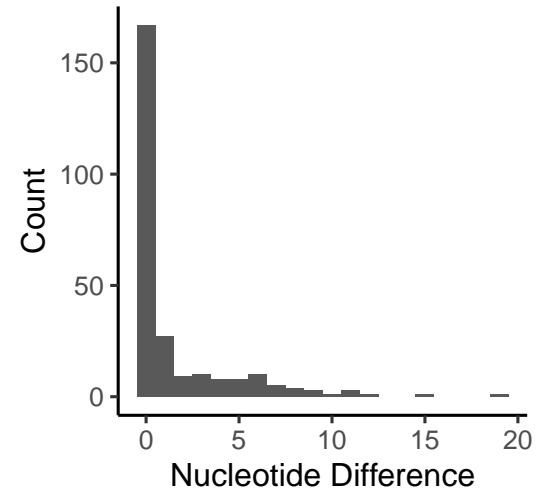
### IGHV3-66\*01

497 sequences assigned  
324 (65.2%) exact matches, in which:  
301 unique CDR3  
6 unique J



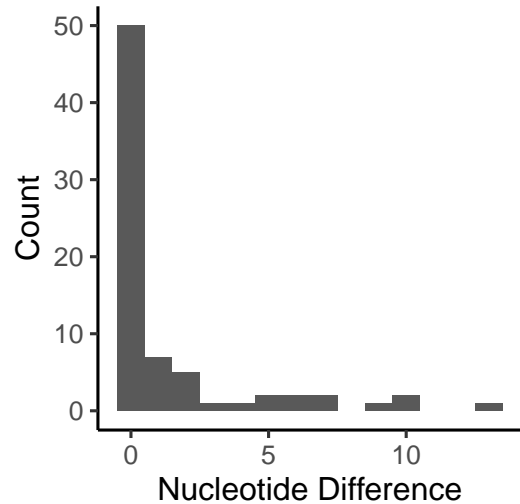
### IGHV3-74\*01

259 sequences assigned  
167 (64.5%) exact matches, in which:  
161 unique CDR3  
6 unique J



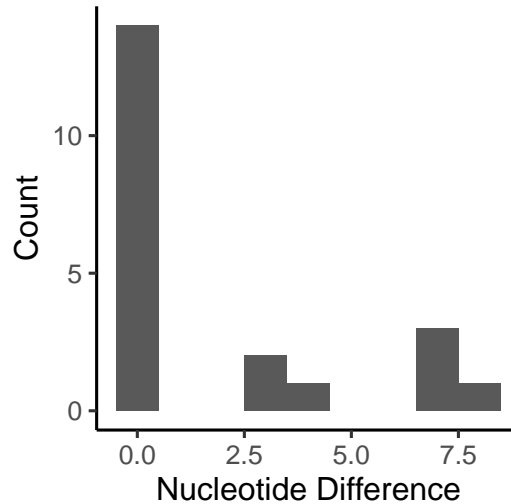
### IGHV3-53\*04

74 sequences assigned  
50 (67.6%) exact matches, in which:  
48 unique CDR3  
6 unique J



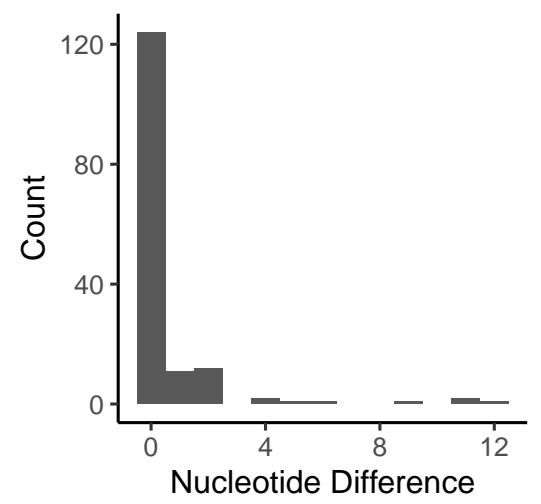
### IGHV3-72\*01

21 sequences assigned  
14 (66.7%) exact matches, in which:  
13 unique CDR3  
4 unique J



### IGHV3-64D\*09

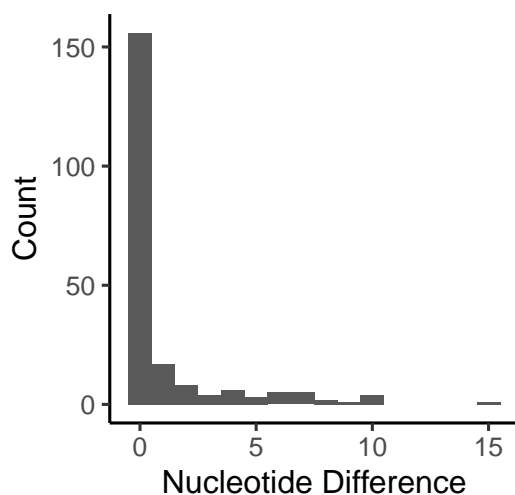
156 sequences assigned  
124 (79.5%) exact matches, in which:  
115 unique CDR3  
6 unique J





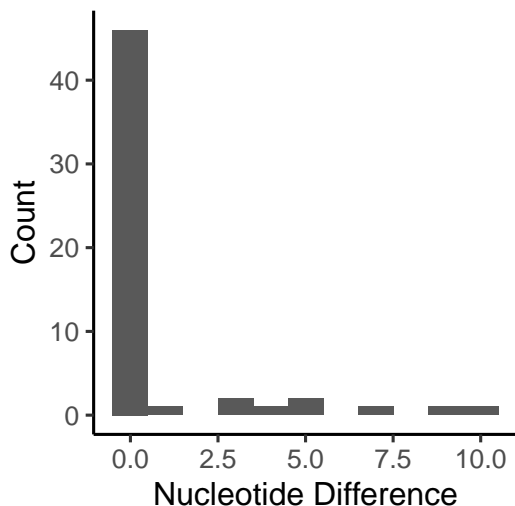
### IGHV4-4\*02

212 sequences assigned  
156 (73.6%) exact matches, in which:  
150 unique CDR3  
5 unique J



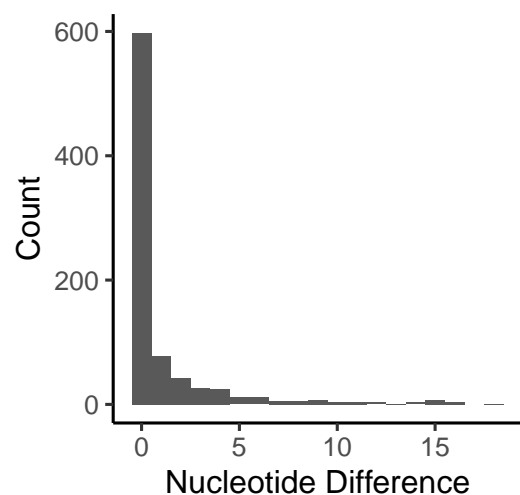
### IGHV4-30-2\*01

55 sequences assigned  
46 (83.6%) exact matches, in which:  
43 unique CDR3  
6 unique J



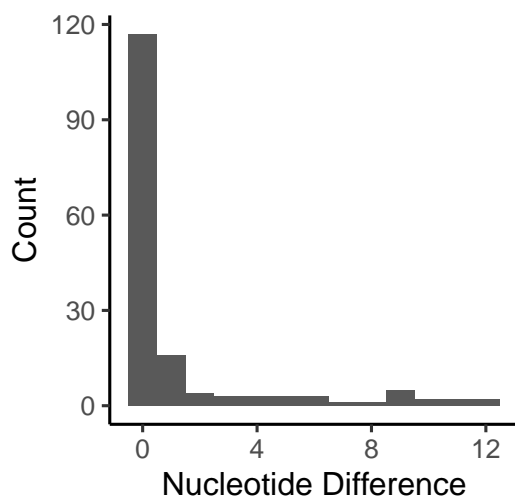
### IGHV4-34\*01

839 sequences assigned  
598 (71.3%) exact matches, in which:  
563 unique CDR3  
6 unique J



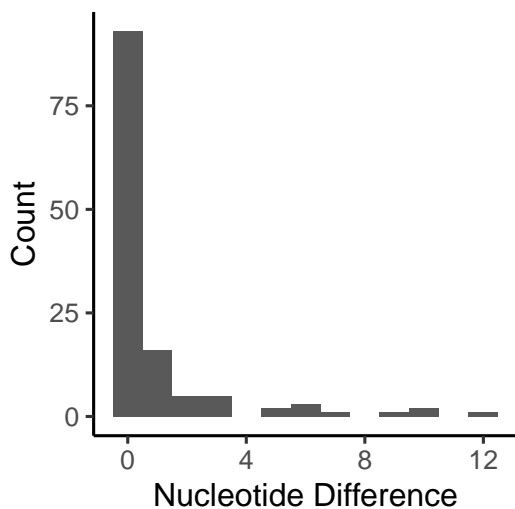
### IGHV4-4\*07

162 sequences assigned  
117 (72.2%) exact matches, in which:  
113 unique CDR3  
6 unique J



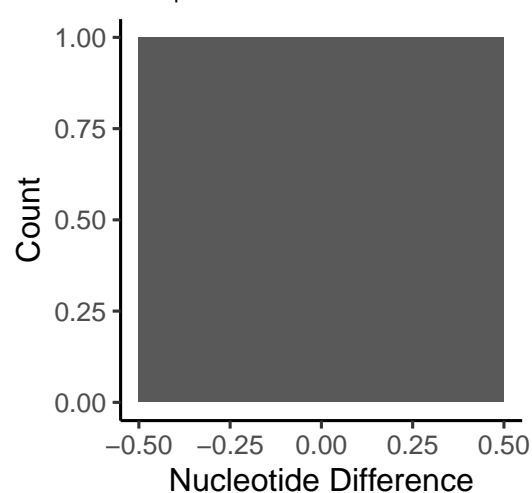
### IGHV4-30-4\*01

129 sequences assigned  
93 (72.1%) exact matches, in which:  
91 unique CDR3  
6 unique J



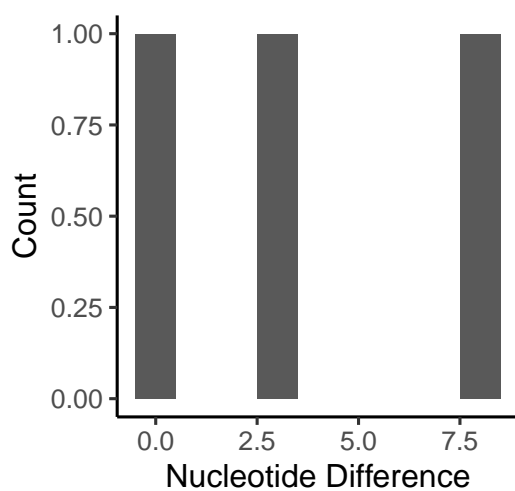
### IGHV4-38-2\*02

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



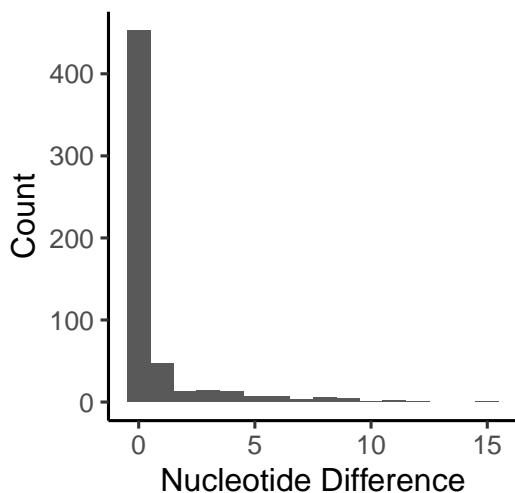
### IGHV4-28\*01

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



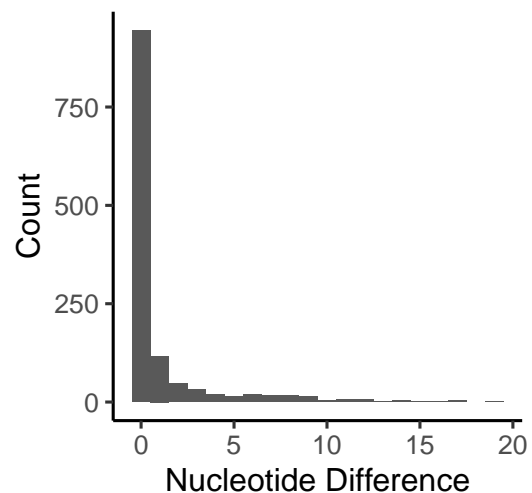
### IGHV4-31\*03

572 sequences assigned  
453 (79.2%) exact matches, in which:  
443 unique CDR3  
6 unique J



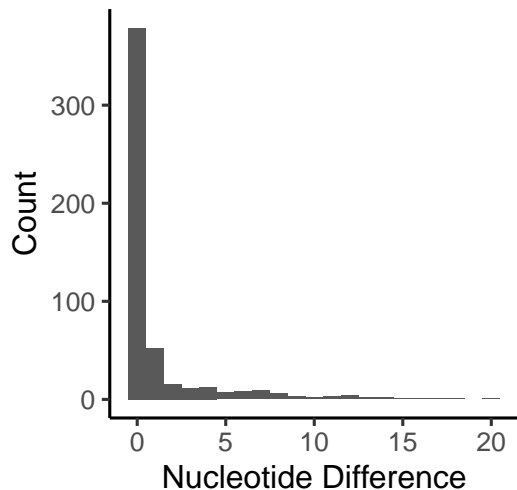
### IGHV4-39\*01

1272 sequences assigned  
945 (74.3%) exact matches, in which:  
898 unique CDR3  
6 unique J



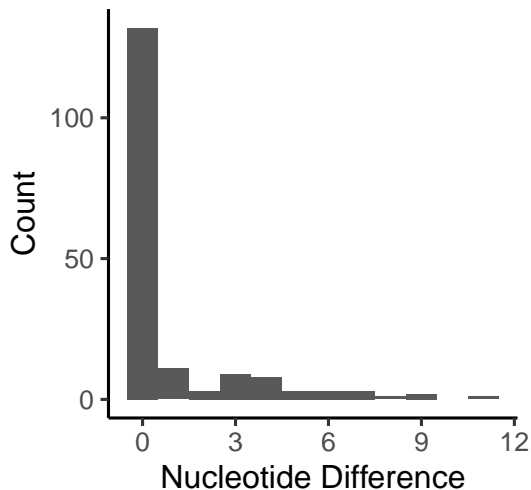
### IGHV4–59\*01

525 sequences assigned  
379 (72.2%) exact matches, in which:  
371 unique CDR3  
6 unique J



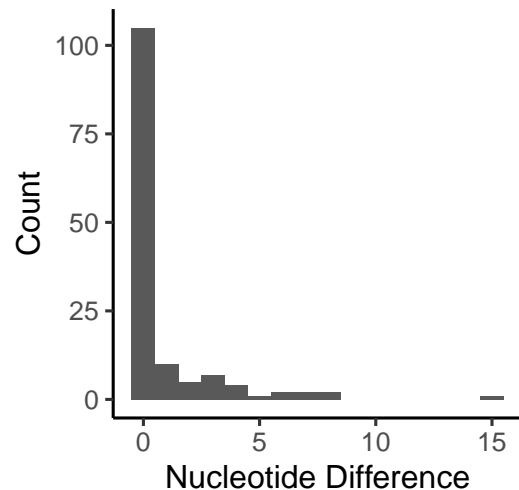
### IGHV5–10–1\*03

176 sequences assigned  
132 (75%) exact matches, in which:  
125 unique CDR3  
6 unique J



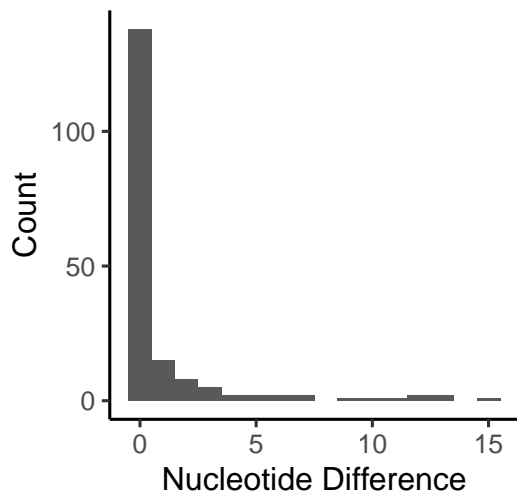
### IGHV6–1\*01

139 sequences assigned  
105 (75.5%) exact matches, in which:  
99 unique CDR3  
5 unique J



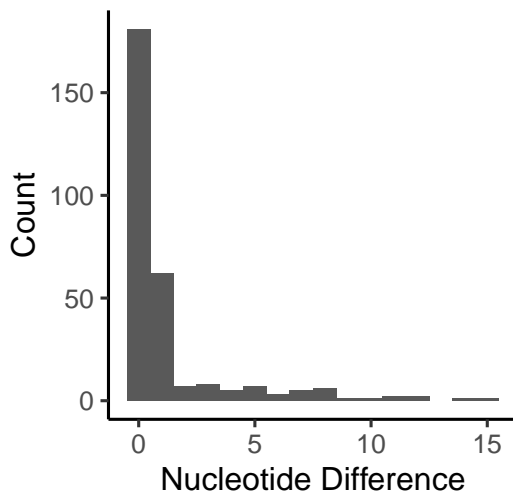
### IGHV4–59\*08

183 sequences assigned  
138 (75.4%) exact matches, in which:  
135 unique CDR3  
6 unique J



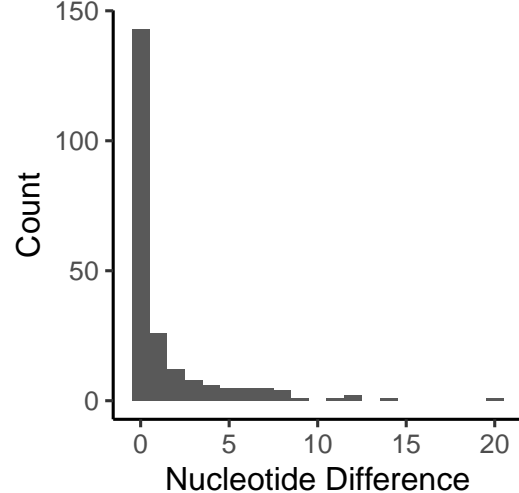
### IGHV5–51\*01

292 sequences assigned  
181 (62%) exact matches, in which:  
173 unique CDR3  
5 unique J



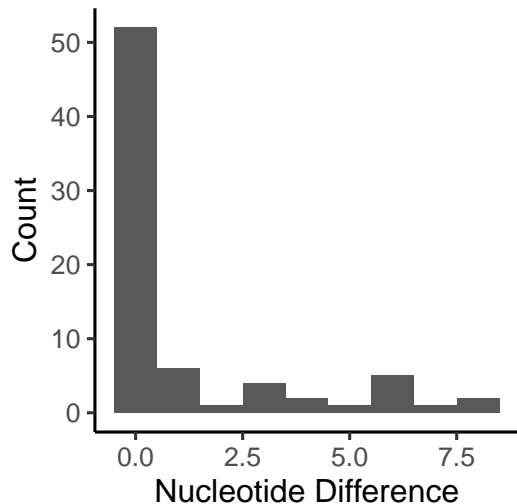
### IGHV7–4–1\*02

220 sequences assigned  
143 (65%) exact matches, in which:  
140 unique CDR3  
5 unique J



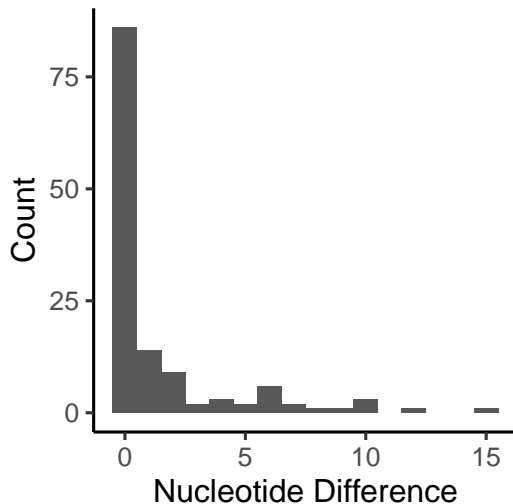
### IGHV4–61\*01

74 sequences assigned  
52 (70.3%) exact matches, in which:  
52 unique CDR3  
5 unique J

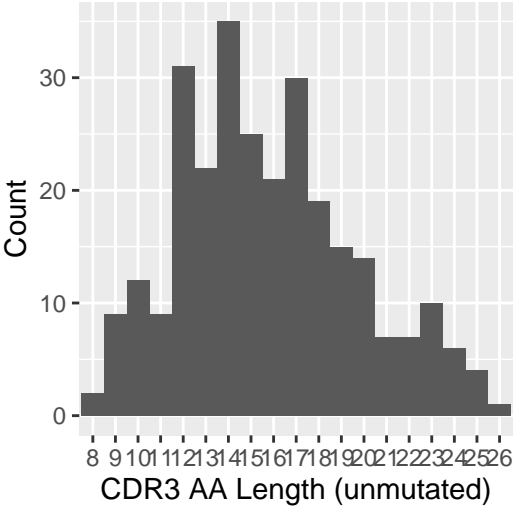


### IGHV5–51\*03

131 sequences assigned  
86 (65.6%) exact matches, in which:  
84 unique CDR3  
6 unique J



IGHV1-69\*08\_C191T





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