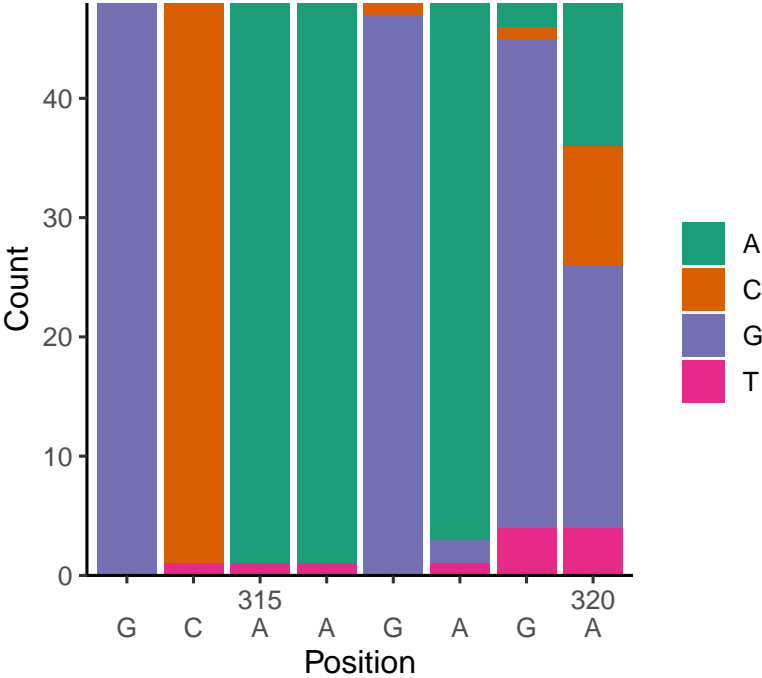


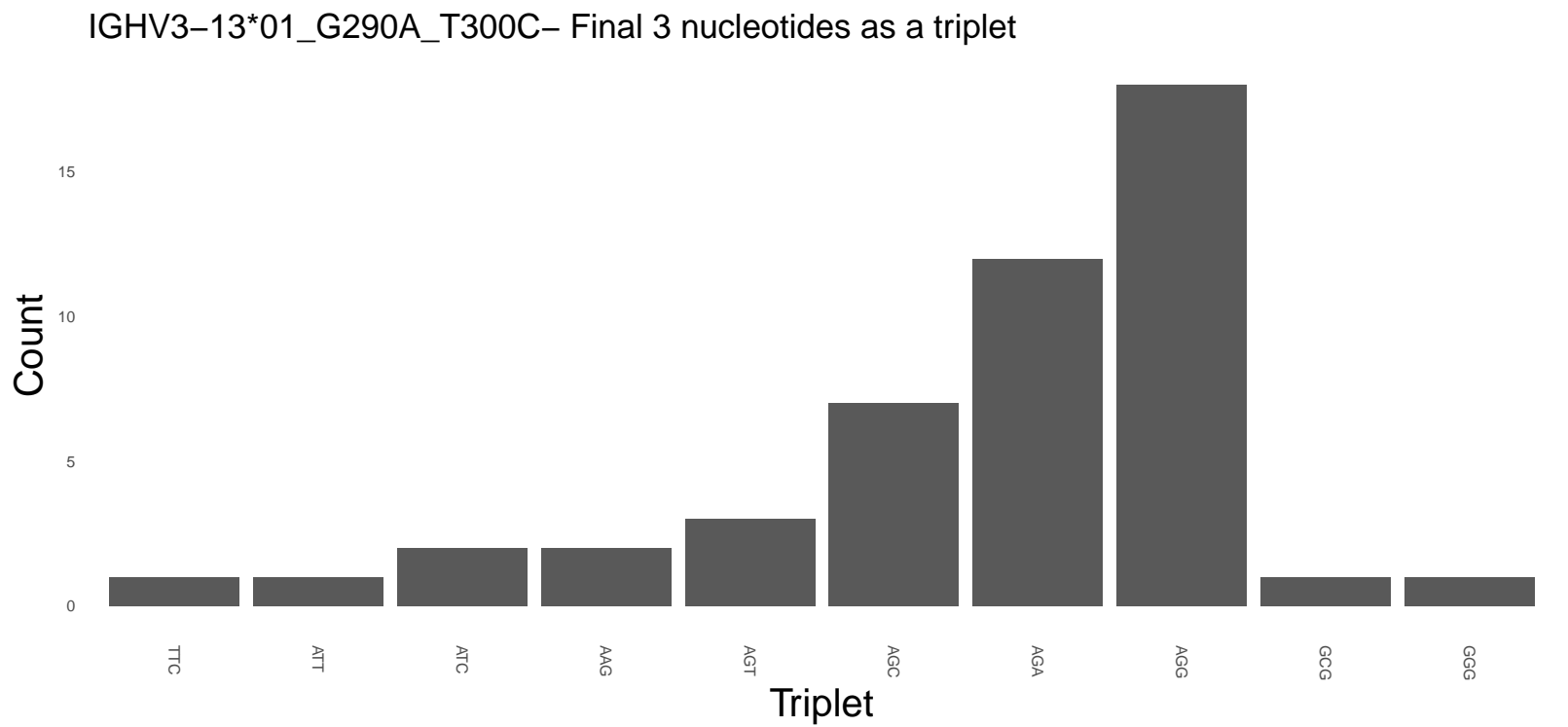
Gene IGHV3-13\*01\_G290A\_T300C



Gene IGHV3-13\*01\_G290A\_T300C

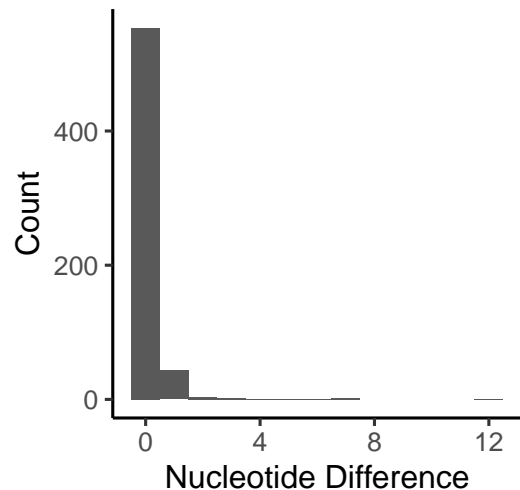


IGHV3-13\*01\_G290A\_T300C- Final 3 nucleotides as a triplet



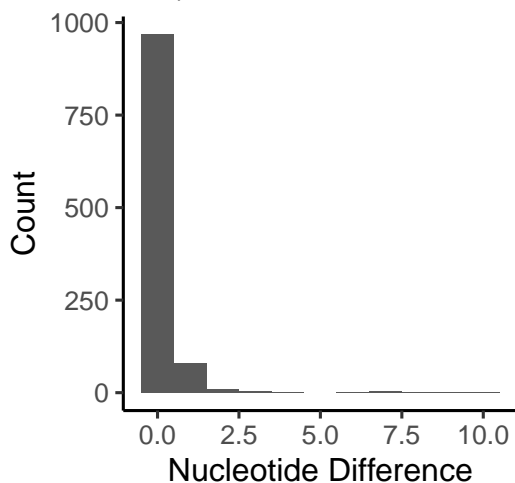
### IGHV1-2\*02

609 sequences assigned  
554 (91%) exact matches, in which:  
532 unique CDR3  
6 unique J



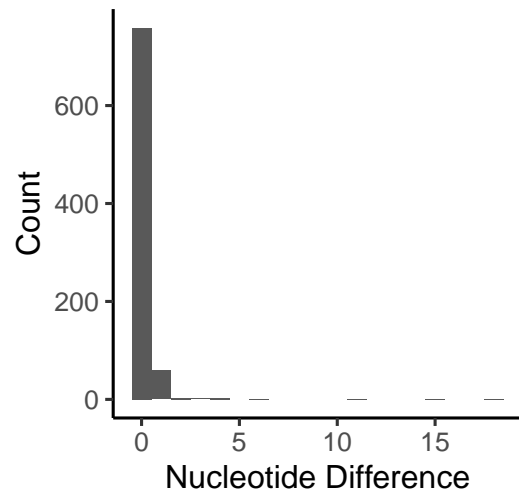
### IGHV1-18\*01

1074 sequences assigned  
968 (90.1%) exact matches, in which:  
944 unique CDR3  
6 unique J



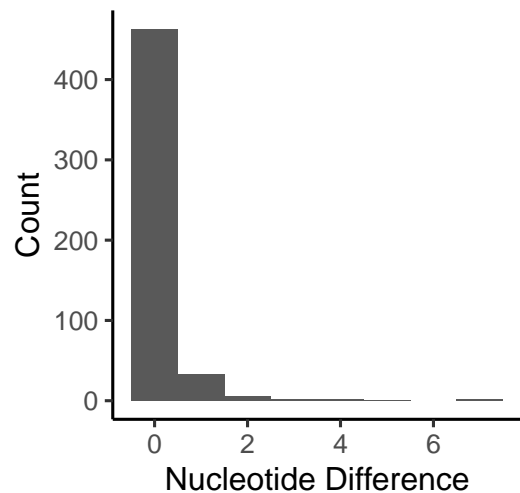
### IGHV1-46\*01

831 sequences assigned  
759 (91.3%) exact matches, in which:  
741 unique CDR3  
6 unique J



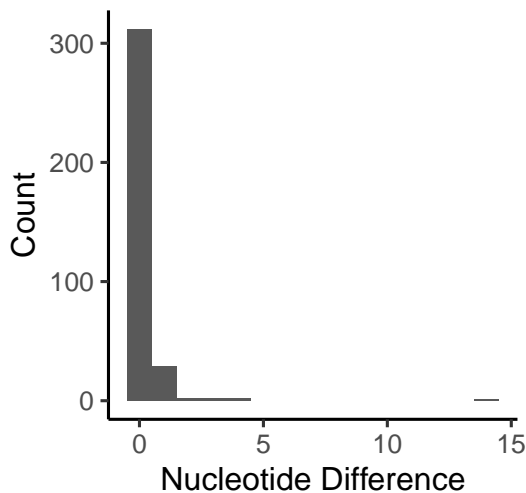
### IGHV1-2\*06

509 sequences assigned  
463 (91%) exact matches, in which:  
450 unique CDR3  
6 unique J



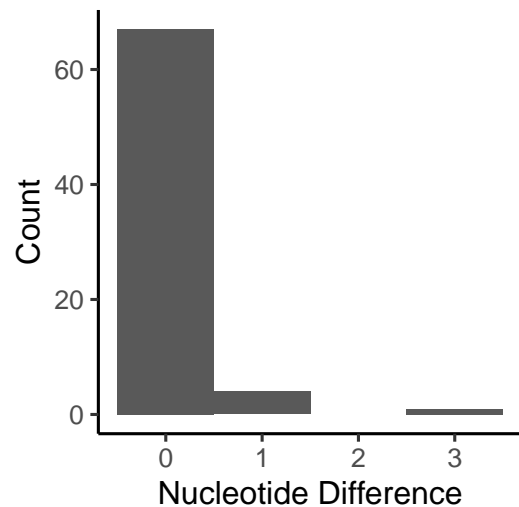
### IGHV1-24\*01

348 sequences assigned  
312 (89.7%) exact matches, in which:  
302 unique CDR3  
6 unique J



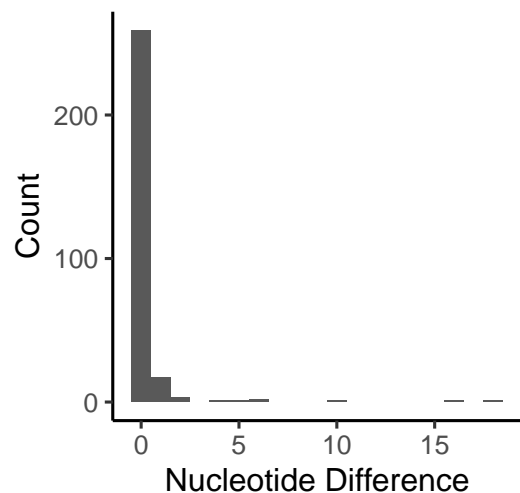
### IGHV1-58\*02

72 sequences assigned  
67 (93.1%) exact matches, in which:  
64 unique CDR3  
6 unique J



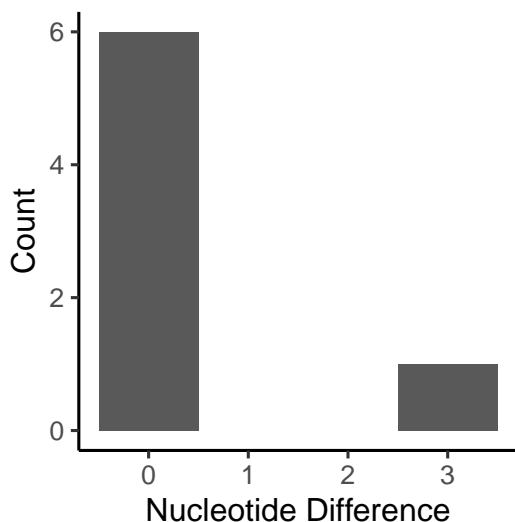
### IGHV1-3\*01

286 sequences assigned  
259 (90.6%) exact matches, in which:  
254 unique CDR3  
6 unique J



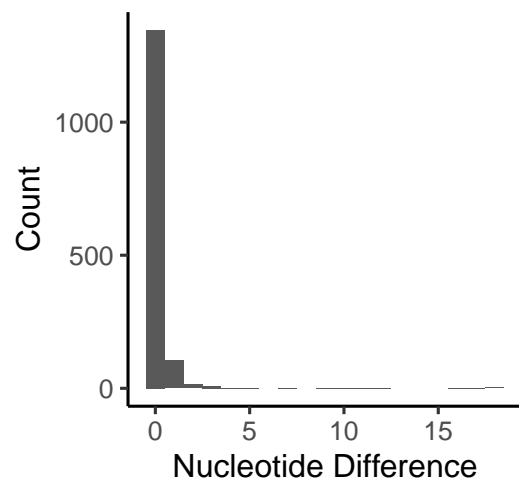
### IGHV1-45\*02

7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



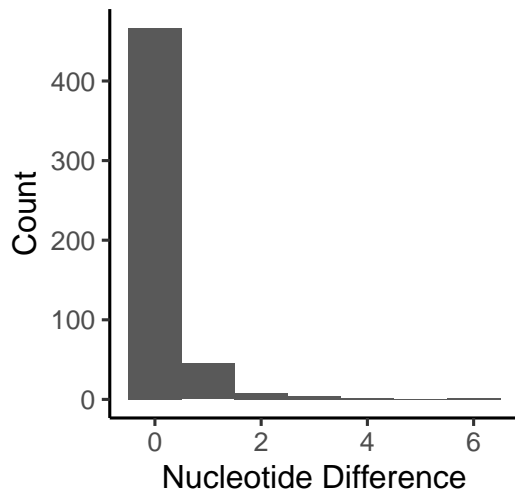
### IGHV1-69\*04

1489 sequences assigned  
1346 (90.4%) exact matches, in which:  
1303 unique CDR3  
6 unique J



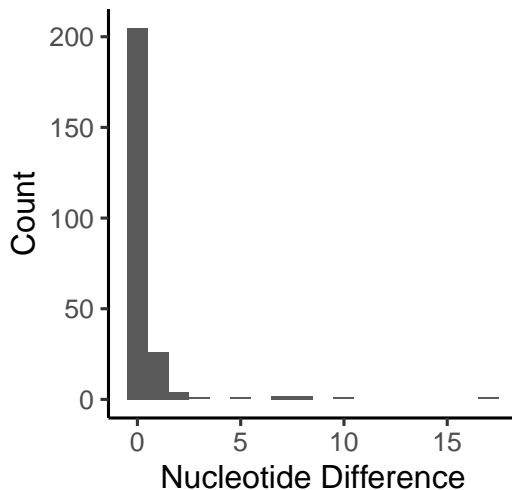
### IGHV2-5\*02

529 sequences assigned  
467 (88.3%) exact matches, in which:  
463 unique CDR3  
6 unique J



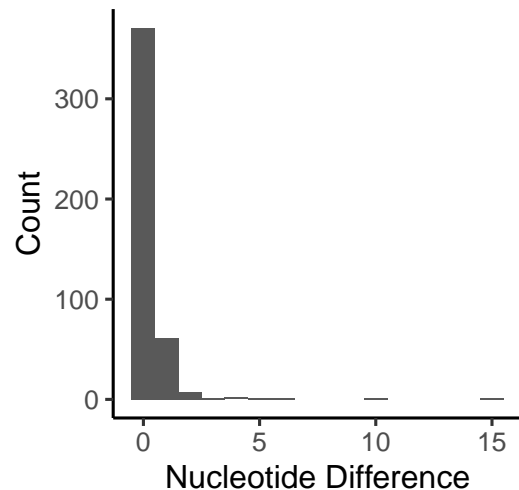
### IGHV3-7\*03

246 sequences assigned  
205 (83.3%) exact matches, in which:  
203 unique CDR3  
5 unique J



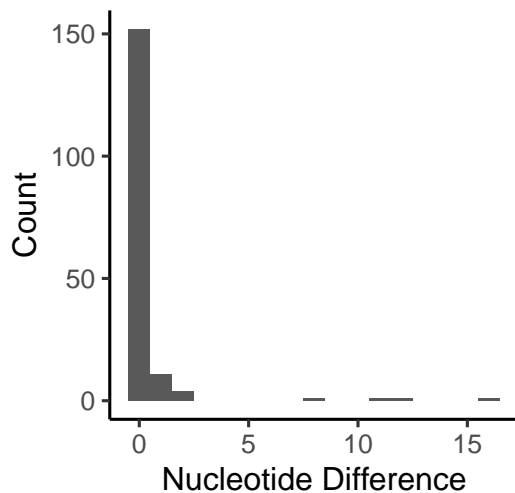
### IGHV3-11\*05

446 sequences assigned  
371 (83.2%) exact matches, in which:  
352 unique CDR3  
6 unique J



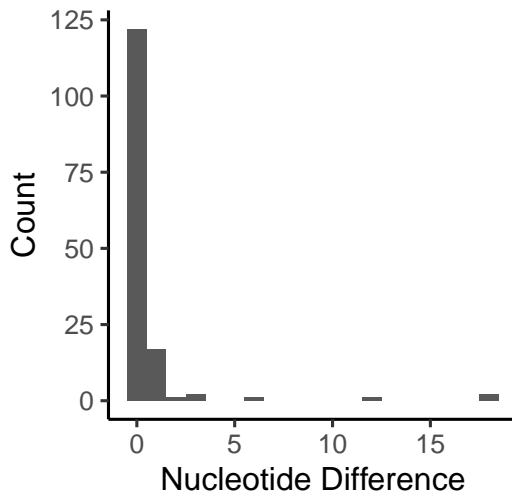
### IGHV2-26\*01

171 sequences assigned  
152 (88.9%) exact matches, in which:  
152 unique CDR3  
5 unique J



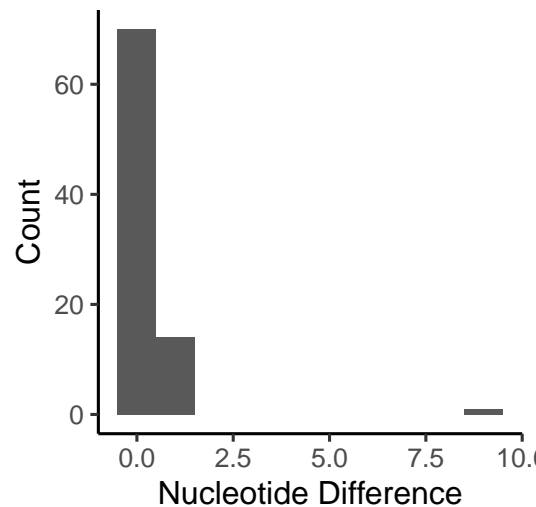
### IGHV3-7\*04

152 sequences assigned  
122 (80.3%) exact matches, in which:  
120 unique CDR3  
5 unique J



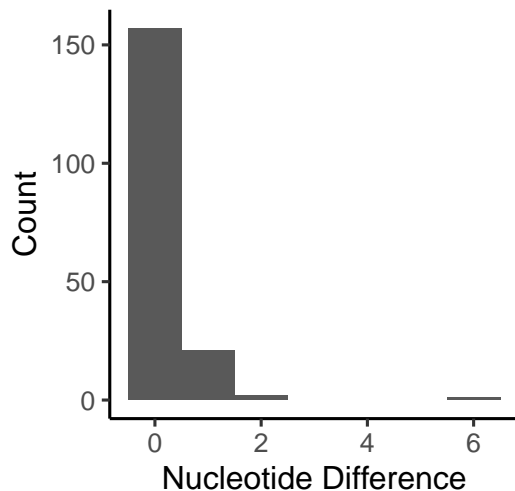
### IGHV3-11\*06

85 sequences assigned  
70 (82.4%) exact matches, in which:  
66 unique CDR3  
6 unique J



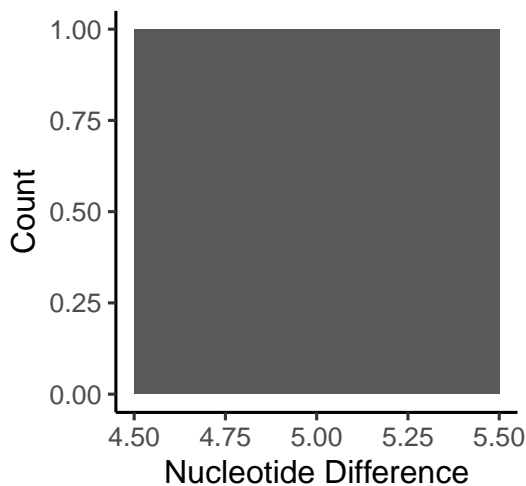
### IGHV2-70\*15

181 sequences assigned  
157 (86.7%) exact matches, in which:  
156 unique CDR3  
5 unique J



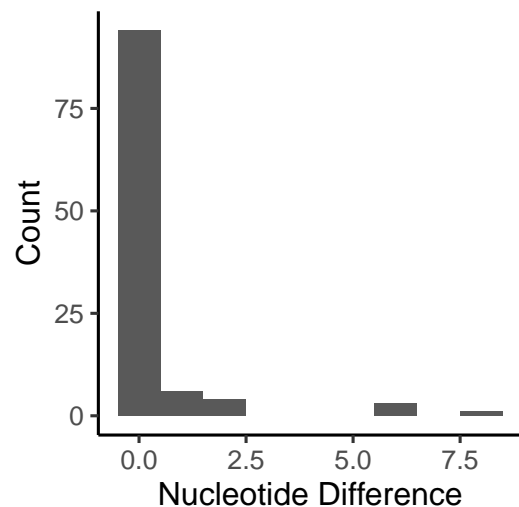
### IGHV3-9\*01

1 sequences assigned  
No exact matches.



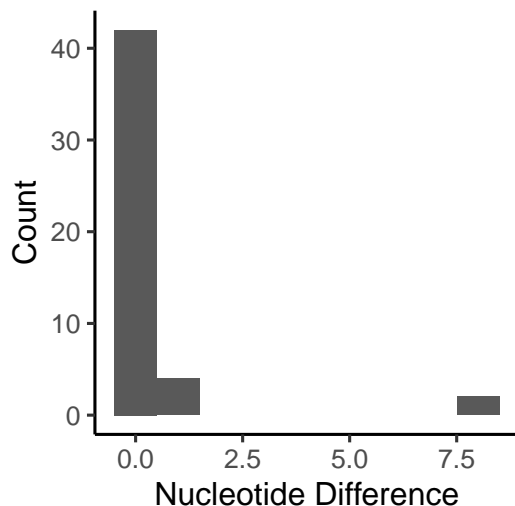
### IGHV3-13\*04

108 sequences assigned  
94 (87%) exact matches, in which:  
92 unique CDR3  
5 unique J



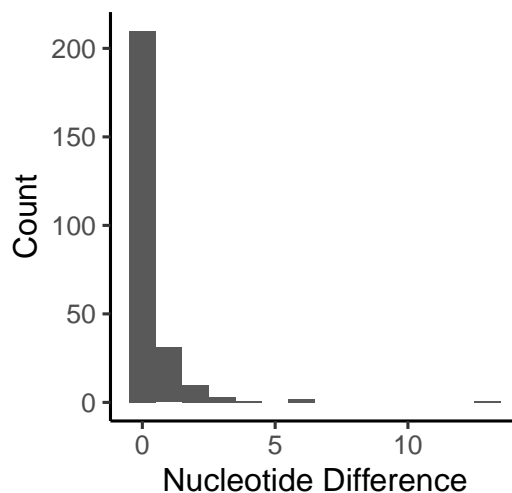
### IGHV3-13\*01\_G290A\_T3I

48 sequences assigned  
42 (87.5%) exact matches, in which:  
39 unique CDR3  
5 unique J



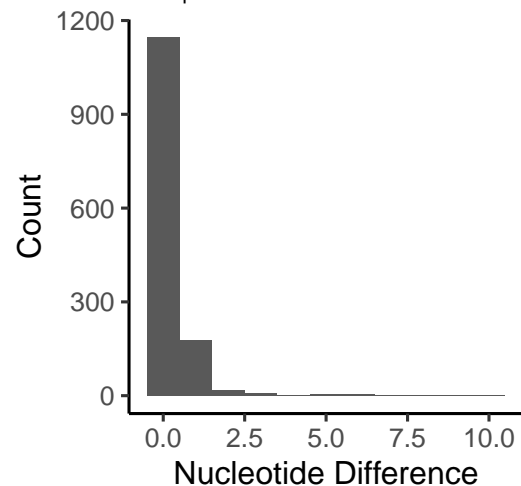
### IGHV3-20\*04

258 sequences assigned  
210 (81.4%) exact matches, in which:  
202 unique CDR3  
6 unique J



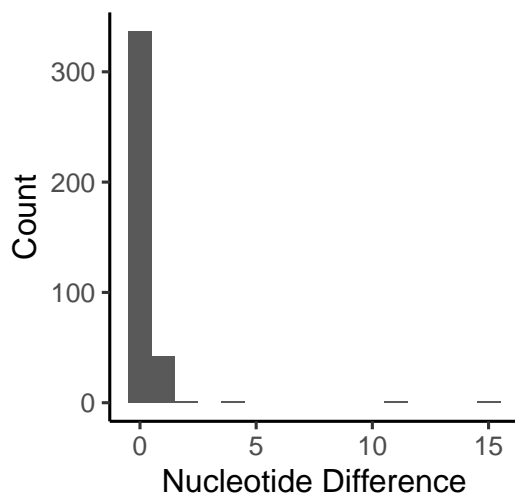
### IGHV3-30-3\*01

1367 sequences assigned  
1146 (83.8%) exact matches, in which:  
1098 unique CDR3  
6 unique J



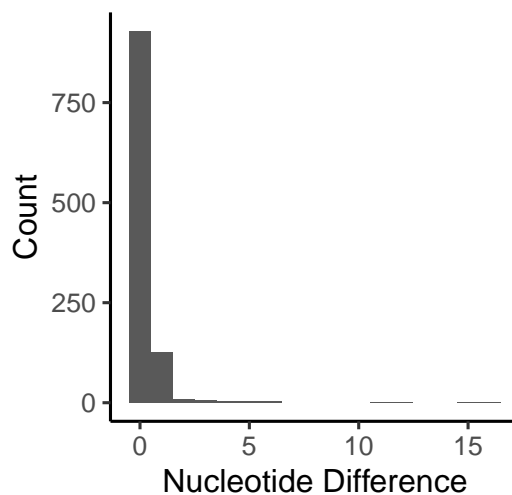
### IGHV3-15\*01

383 sequences assigned  
337 (88%) exact matches, in which:  
322 unique CDR3  
6 unique J



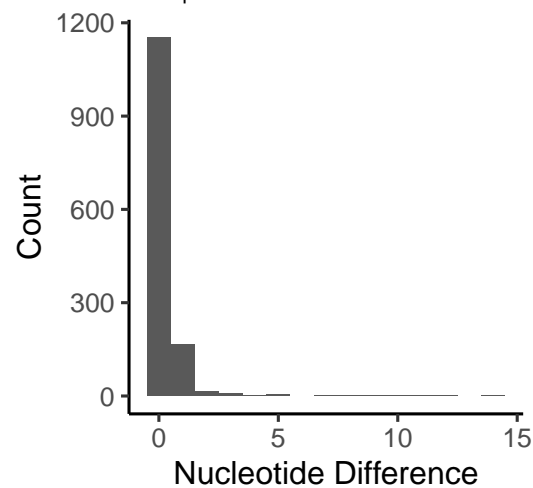
### IGHV3-21\*01

1086 sequences assigned  
929 (85.5%) exact matches, in which:  
901 unique CDR3  
6 unique J



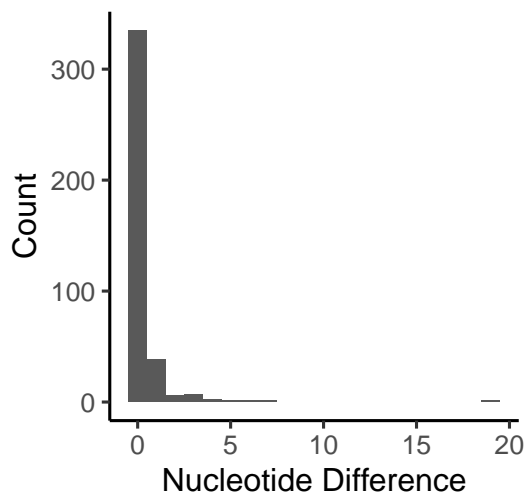
### IGHV3-30\*18

1366 sequences assigned  
1152 (84.3%) exact matches, in which:  
1115 unique CDR3  
6 unique J



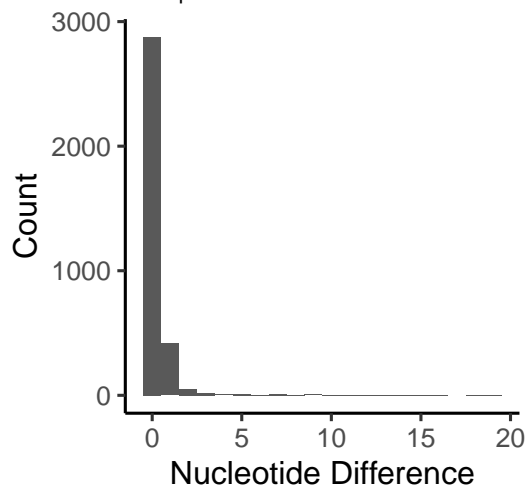
### IGHV3-15\*07

395 sequences assigned  
335 (84.8%) exact matches, in which:  
327 unique CDR3  
6 unique J



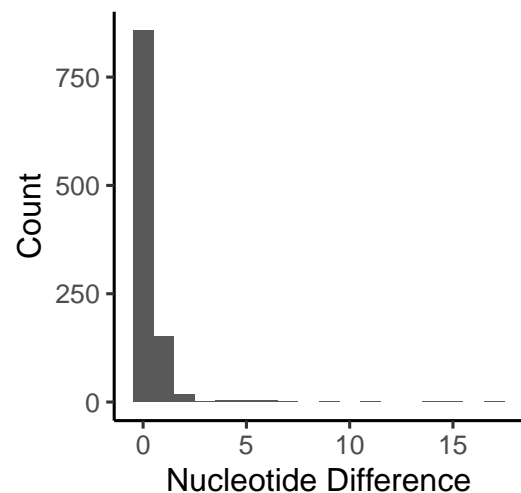
### IGHV3-23\*01

3429 sequences assigned  
2876 (83.9%) exact matches, in which:  
2725 unique CDR3  
6 unique J



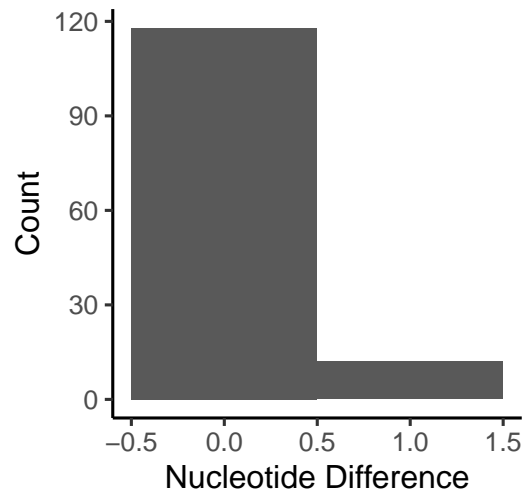
### IGHV3-33\*01

1046 sequences assigned  
858 (82%) exact matches, in which:  
834 unique CDR3  
6 unique J



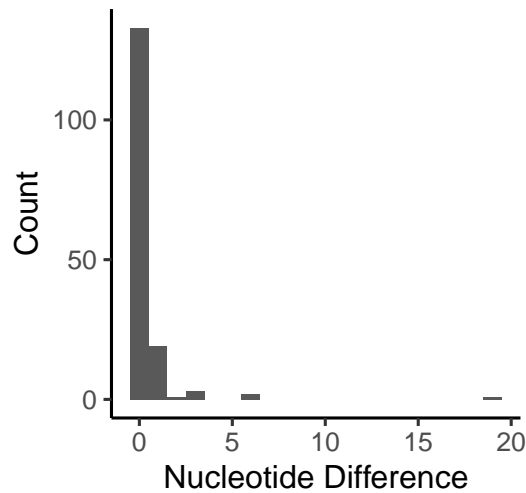
### IGHV3-43\*01

130 sequences assigned  
118 (90.8%) exact matches, in which:  
114 unique CDR3  
6 unique J



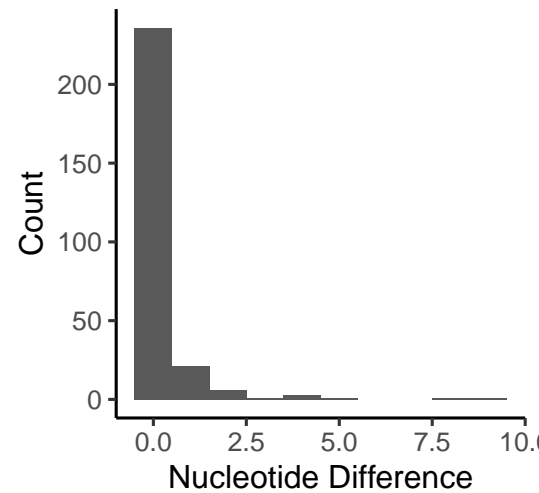
### IGHV3-49\*03

160 sequences assigned  
133 (83.1%) exact matches, in which:  
132 unique CDR3  
6 unique J



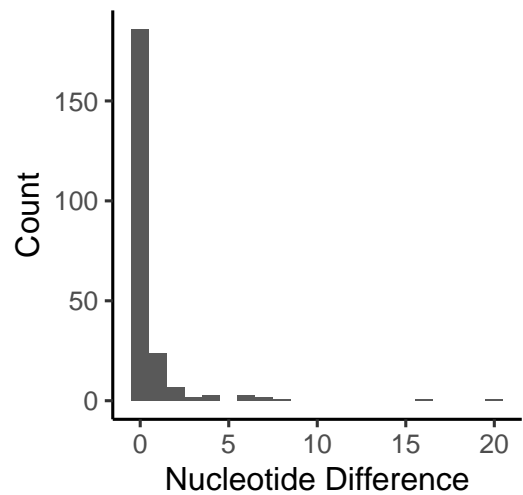
### IGHV3-53\*01

270 sequences assigned  
236 (87.4%) exact matches, in which:  
226 unique CDR3  
6 unique J



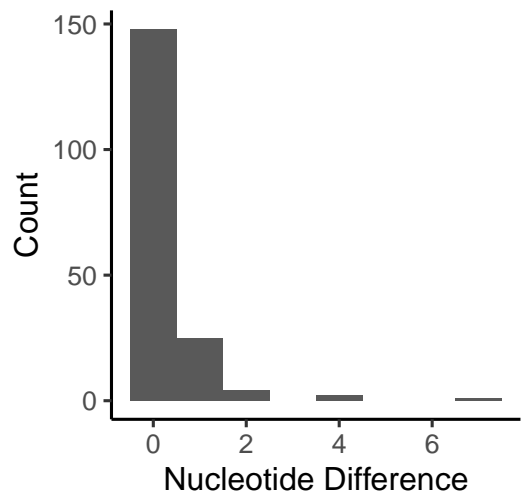
### IGHV3-48\*01

231 sequences assigned  
186 (80.5%) exact matches, in which:  
185 unique CDR3  
6 unique J



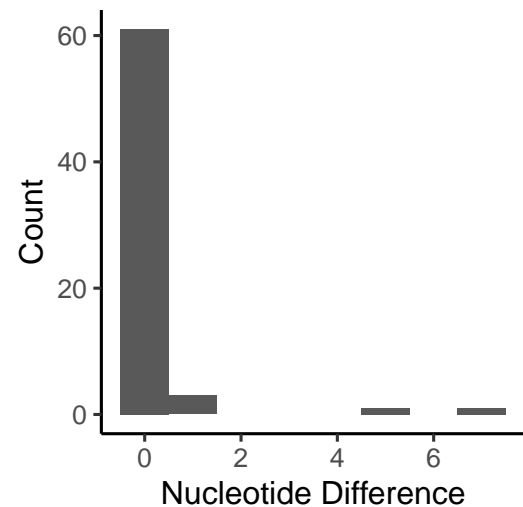
### IGHV3-49\*05

180 sequences assigned  
148 (82.2%) exact matches, in which:  
144 unique CDR3  
6 unique J



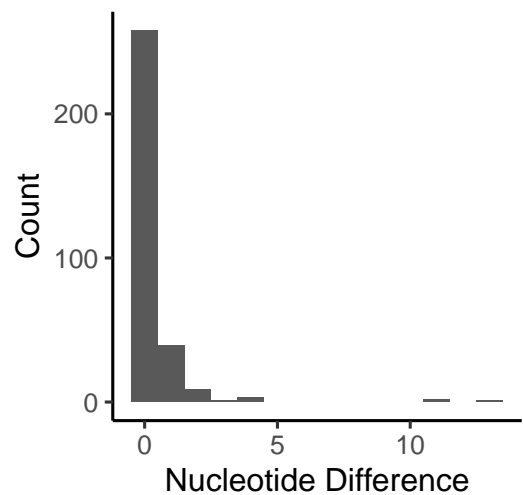
### IGHV3-53\*02

66 sequences assigned  
61 (92.4%) exact matches, in which:  
57 unique CDR3  
6 unique J



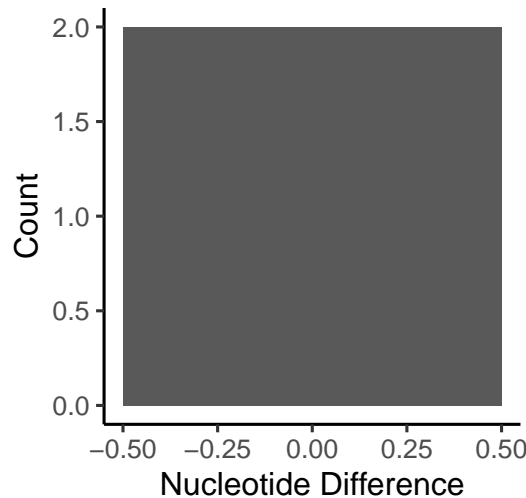
### IGHV3-48\*02

313 sequences assigned  
258 (82.4%) exact matches, in which:  
251 unique CDR3  
6 unique J



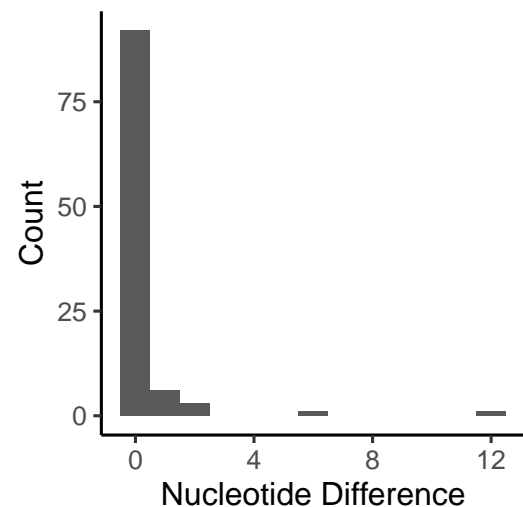
### IGHV3-52\*01

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



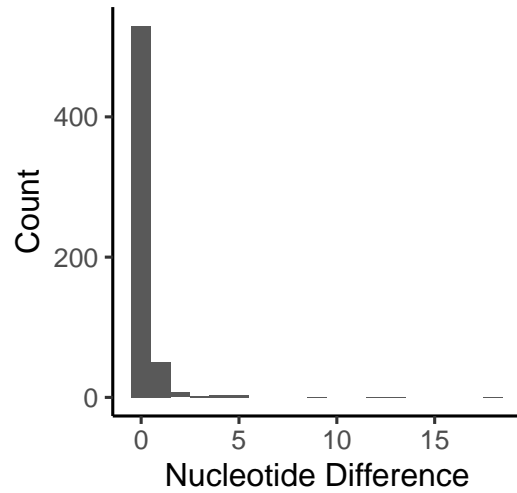
### IGHV3-64\*01

103 sequences assigned  
92 (89.3%) exact matches, in which:  
92 unique CDR3  
6 unique J



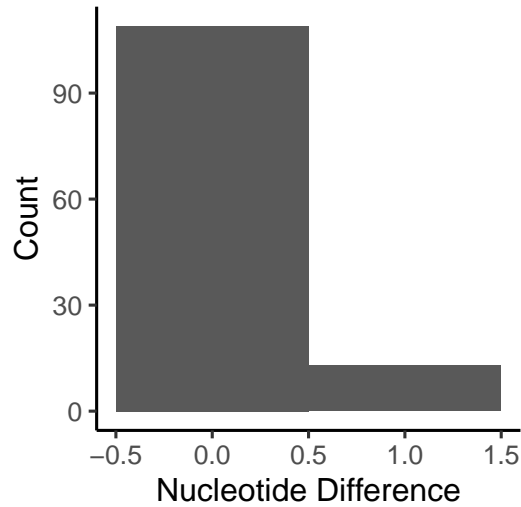
### IGHV3–66\*01

601 sequences assigned  
530 (88.2%) exact matches, in which:  
503 unique CDR3  
6 unique J



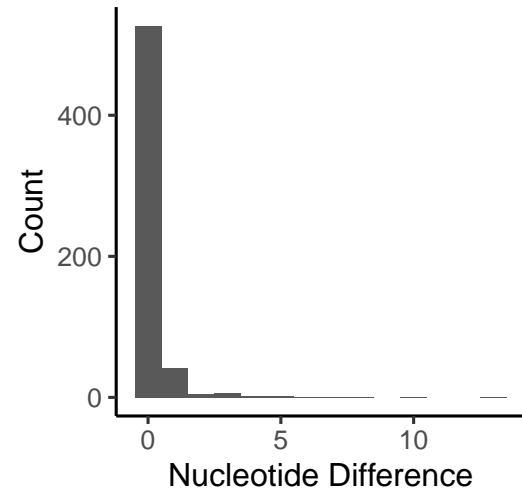
### IGHV3–73\*01

123 sequences assigned  
109 (88.6%) exact matches, in which:  
100 unique CDR3  
6 unique J



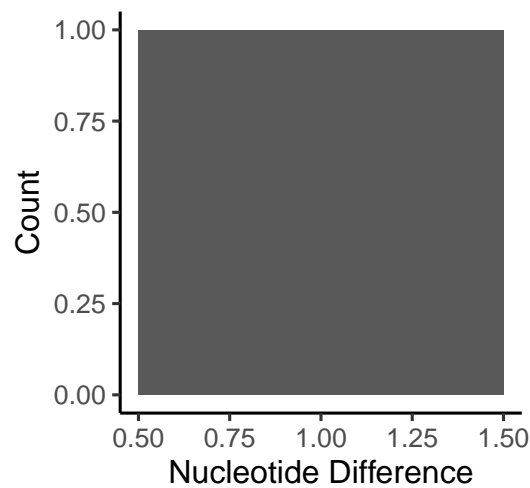
### IGHV4–4\*02

589 sequences assigned  
527 (89.5%) exact matches, in which:  
521 unique CDR3  
6 unique J



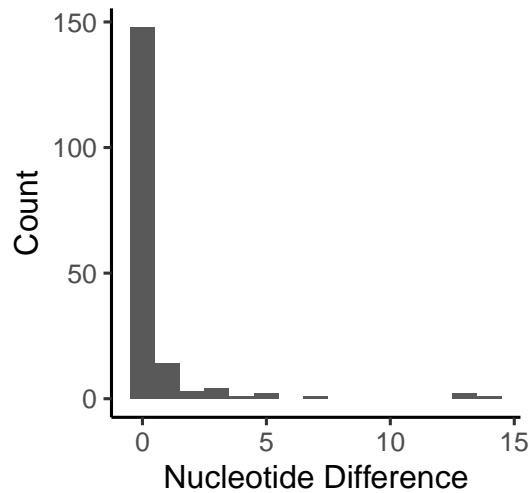
### IGHV3–69–1\*02

1 sequences assigned  
No exact matches.



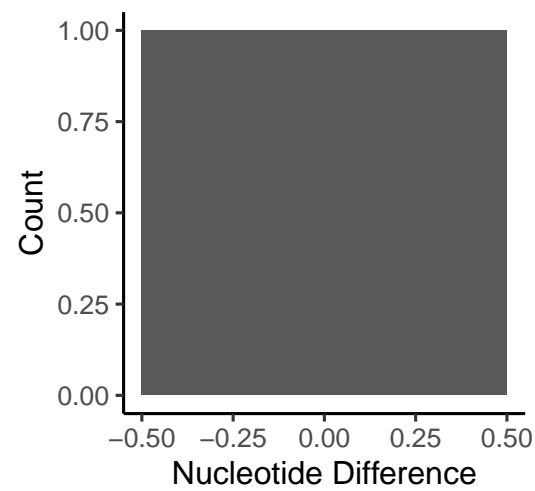
### IGHV3–74\*01

176 sequences assigned  
148 (84.1%) exact matches, in which:  
139 unique CDR3  
5 unique J



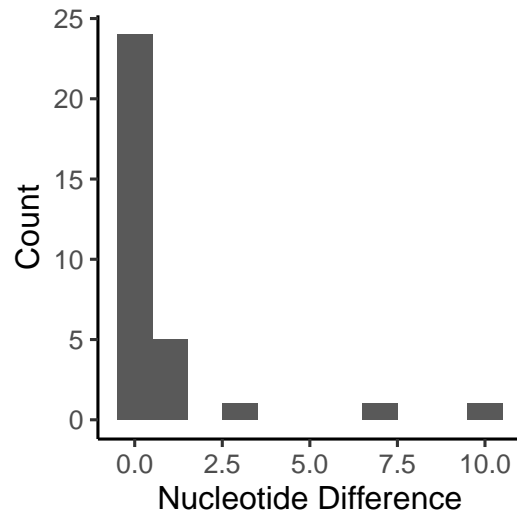
### IGHV4–28\*01

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



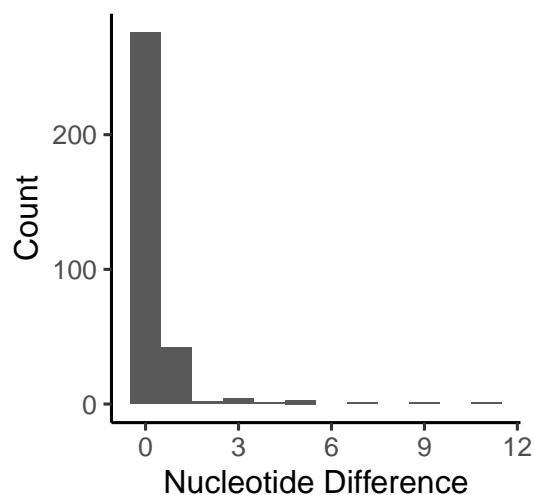
### IGHV3–72\*01

32 sequences assigned  
24 (75%) exact matches, in which:  
21 unique CDR3  
4 unique J



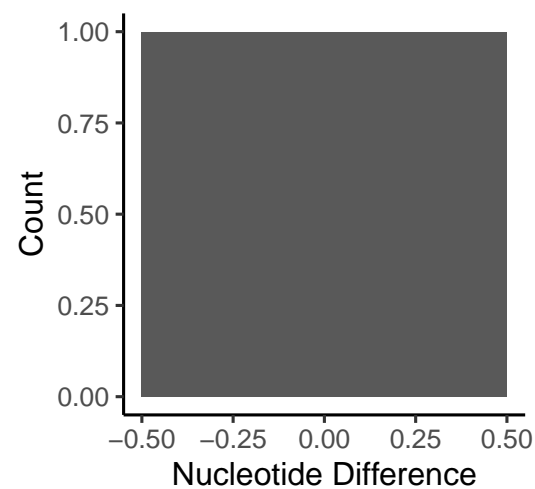
### IGHV3–64D\*06

331 sequences assigned  
276 (83.4%) exact matches, in which:  
260 unique CDR3  
6 unique J



### IGHV4–28\*03

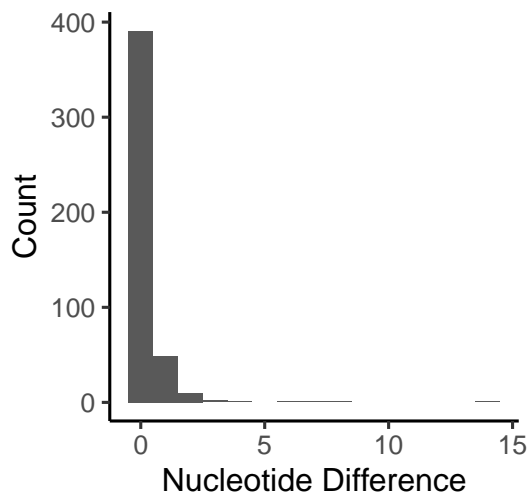
1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J





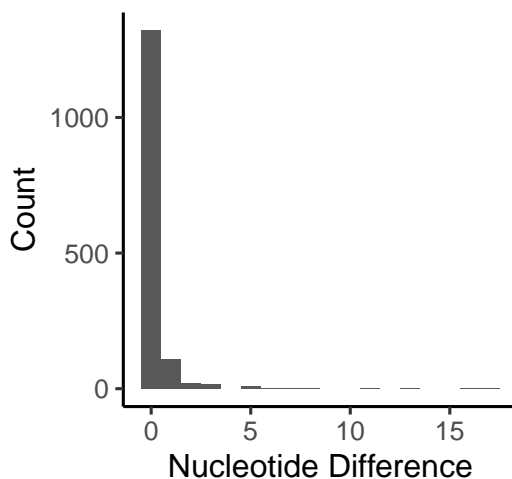
### IGHV4-30-4\*01

457 sequences assigned  
391 (85.6%) exact matches, in which:  
382 unique CDR3  
6 unique J



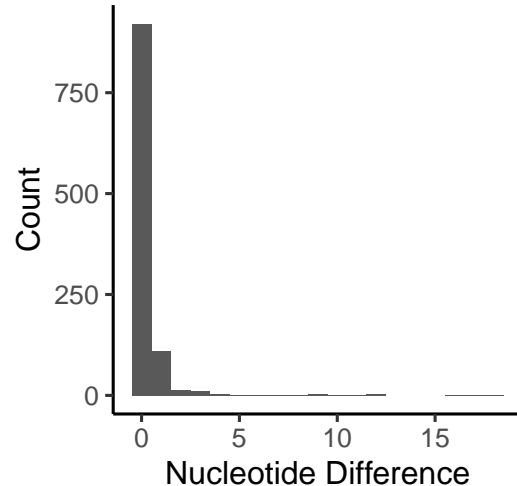
### IGHV4-34\*01

1487 sequences assigned  
1321 (88.8%) exact matches, in which:  
1278 unique CDR3  
6 unique J



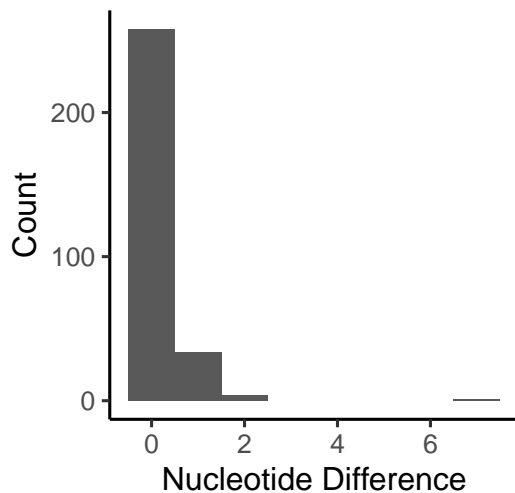
### IGHV4-59\*01

1077 sequences assigned  
921 (85.5%) exact matches, in which:  
907 unique CDR3  
6 unique J



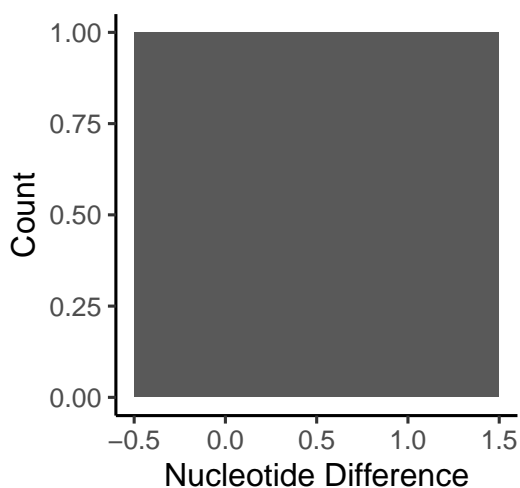
### IGHV4-30-2\*01

297 sequences assigned  
258 (86.9%) exact matches, in which:  
252 unique CDR3  
6 unique J



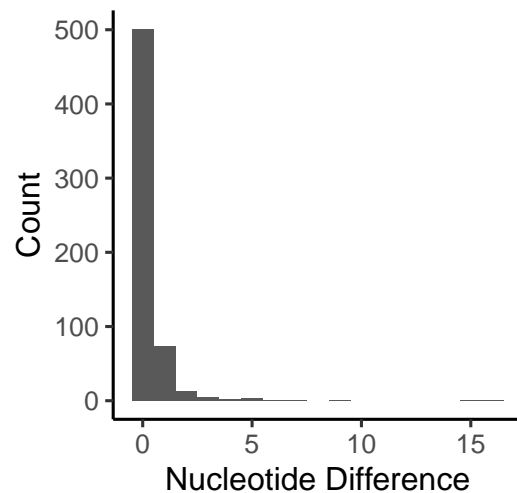
### IGHV4-38-2\*02

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



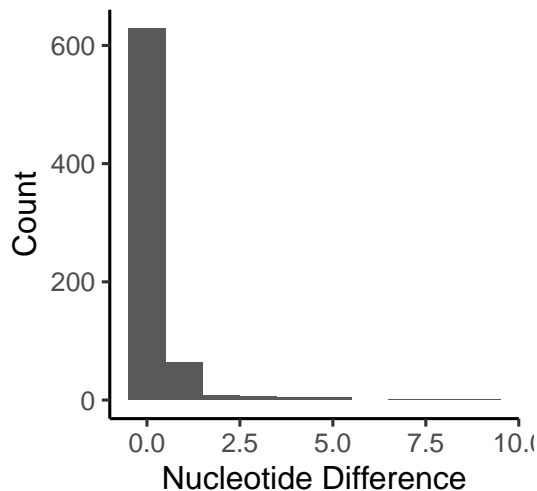
### IGHV4-59\*08

603 sequences assigned  
501 (83.1%) exact matches, in which:  
493 unique CDR3  
6 unique J



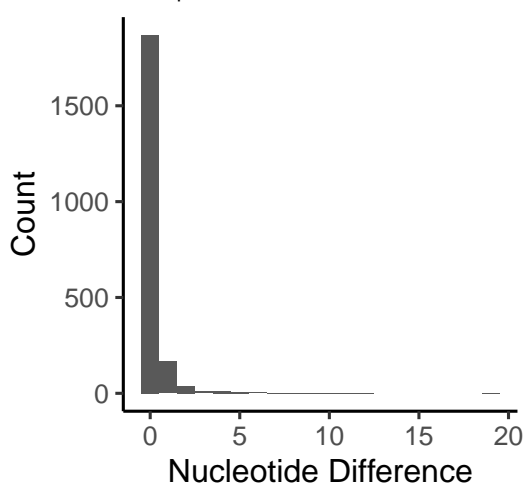
### IGHV4-31\*03

717 sequences assigned  
629 (87.7%) exact matches, in which:  
614 unique CDR3  
6 unique J



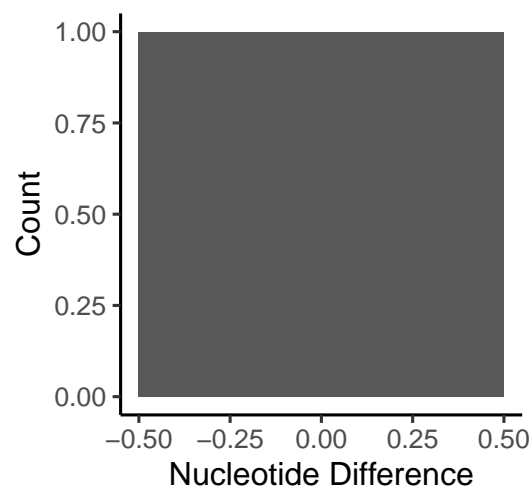
### IGHV4-39\*01

2118 sequences assigned  
1869 (88.2%) exact matches, in which:  
1800 unique CDR3  
6 unique J



### IGHV4-61\*07

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



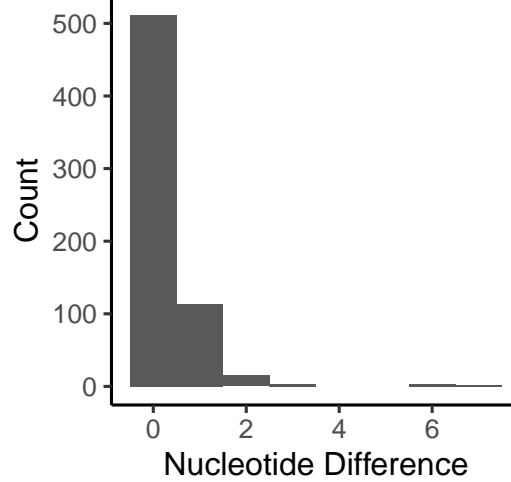
### IGHV4/OR15-8\*01

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



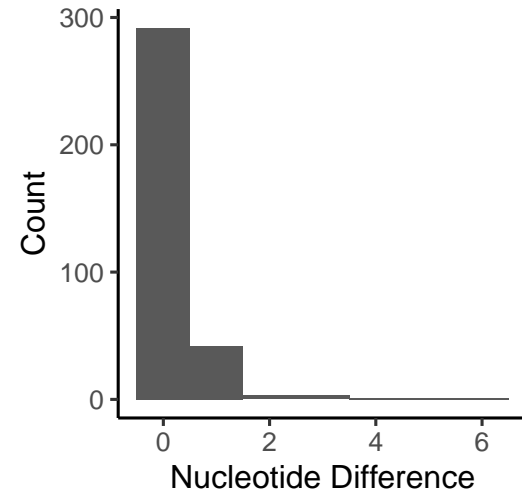
### IGHV5-51\*01

650 sequences assigned  
512 (78.8%) exact matches, in which:  
501 unique CDR3  
6 unique J



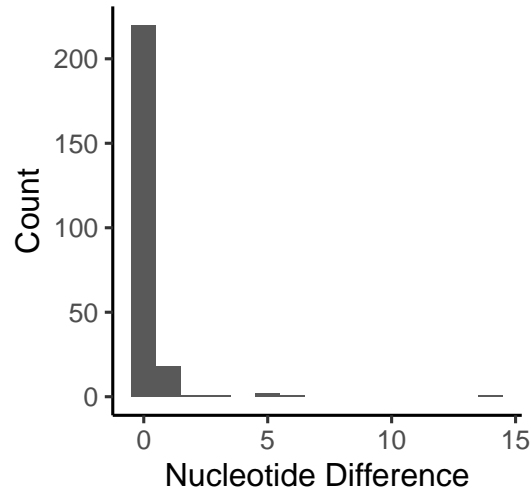
### IGHV7-4-1\*02

343 sequences assigned  
292 (85.1%) exact matches, in which:  
291 unique CDR3  
6 unique J



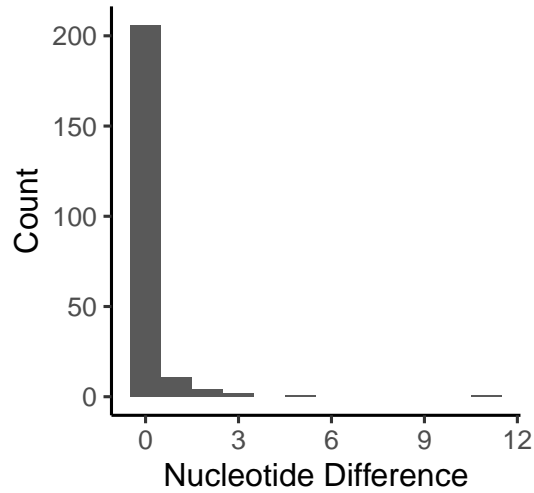
### IGHV5-10-1\*01

244 sequences assigned  
220 (90.2%) exact matches, in which:  
218 unique CDR3  
6 unique J



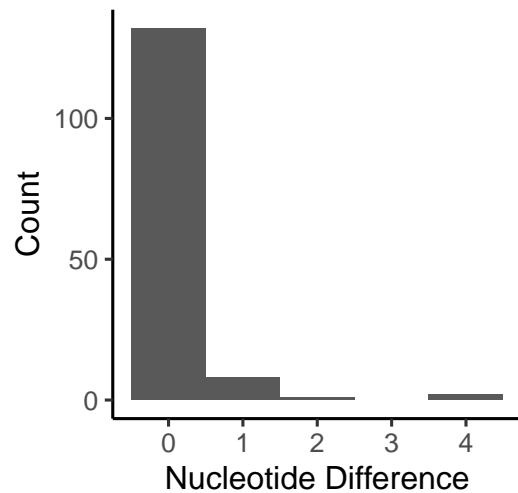
### IGHV5-51\*03

225 sequences assigned  
206 (91.6%) exact matches, in which:  
199 unique CDR3  
6 unique J



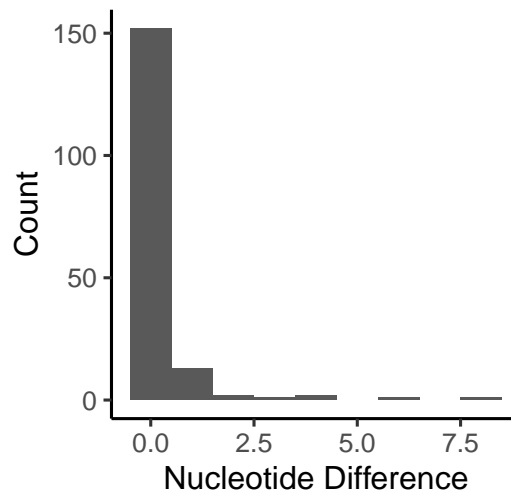
### IGHV5-10-1\*03

143 sequences assigned  
132 (92.3%) exact matches, in which:  
127 unique CDR3  
6 unique J

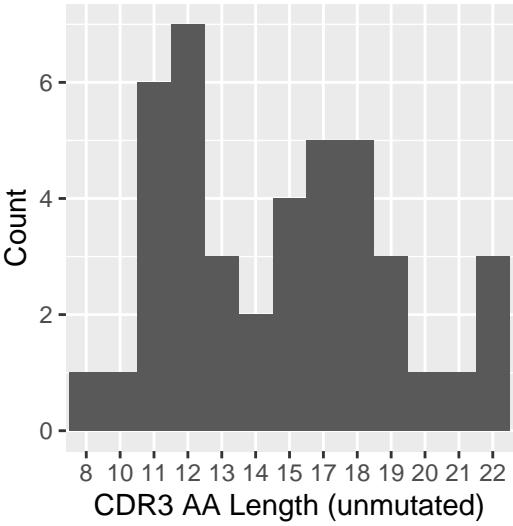


### IGHV6-1\*01

172 sequences assigned  
152 (88.4%) exact matches, in which:  
147 unique CDR3  
6 unique J



IGHV3-13\*01\_G290A\_T300C



Allele Usage

