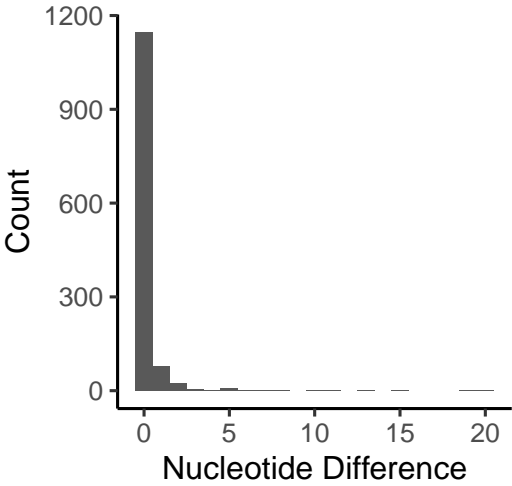


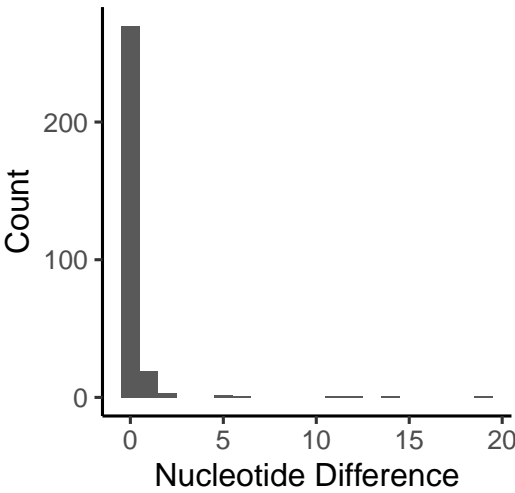
IGHV1-2\*02

1280 sequences assigned  
1146 (89.5%) exact matches, in which:  
1133 unique CDR3  
7 unique J



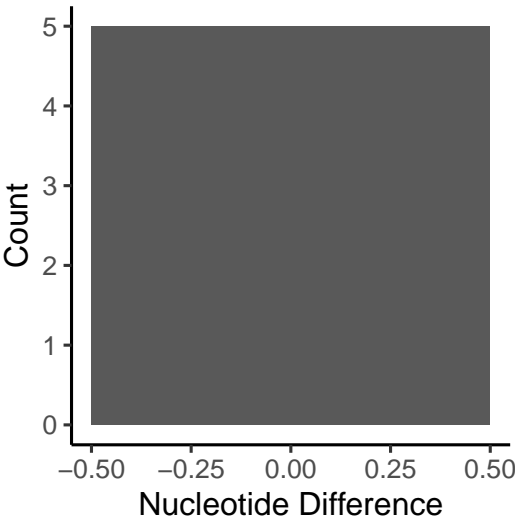
IGHV1-18\*01

299 sequences assigned  
270 (90.3%) exact matches, in which:  
267 unique CDR3  
6 unique J



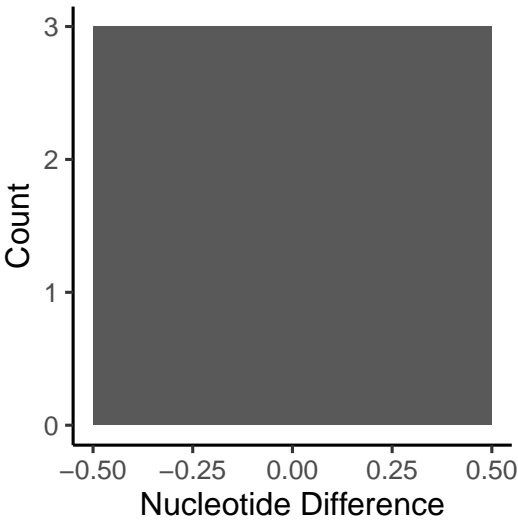
IGHV1-45\*02

6 sequences assigned  
5 (83.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



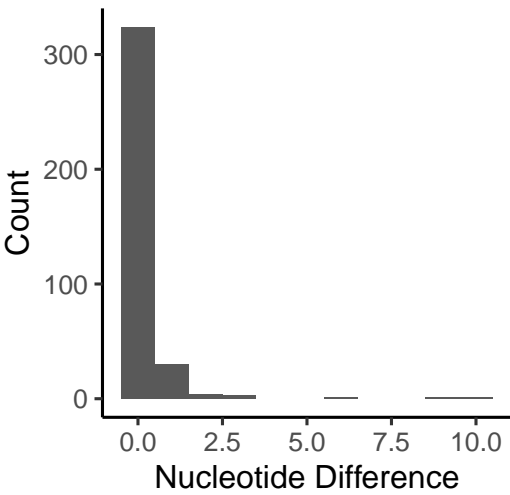
IGHV1-3\*02

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



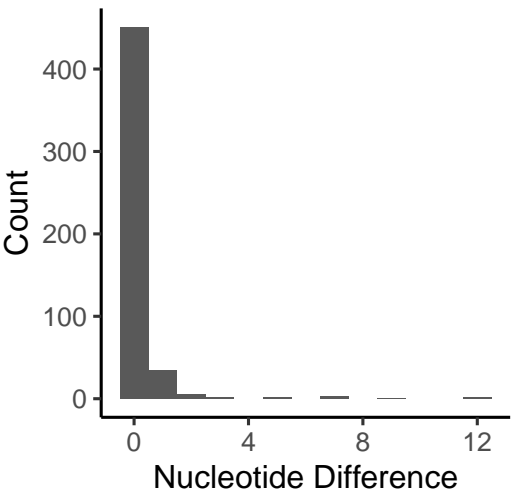
IGHV1-18\*04

364 sequences assigned  
324 (89%) exact matches, in which:  
322 unique CDR3  
6 unique J



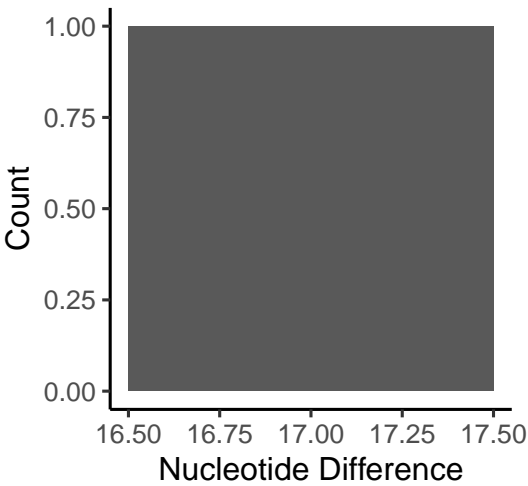
IGHV1-46\*01

501 sequences assigned  
451 (90%) exact matches, in which:  
441 unique CDR3  
7 unique J



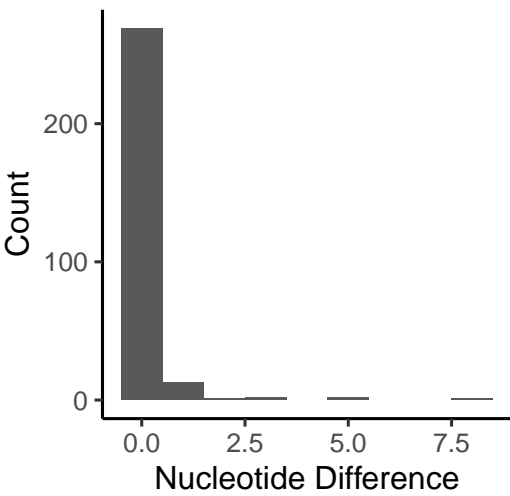
IGHV1-3\*03

1 sequences assigned  
No exact matches.



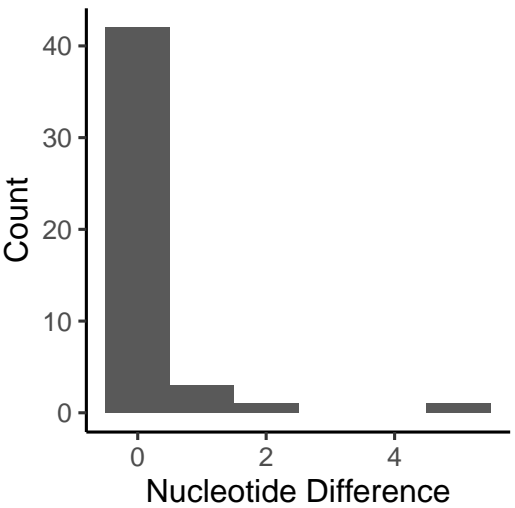
IGHV1-24\*01

288 sequences assigned  
269 (93.4%) exact matches, in which:  
268 unique CDR3  
7 unique J



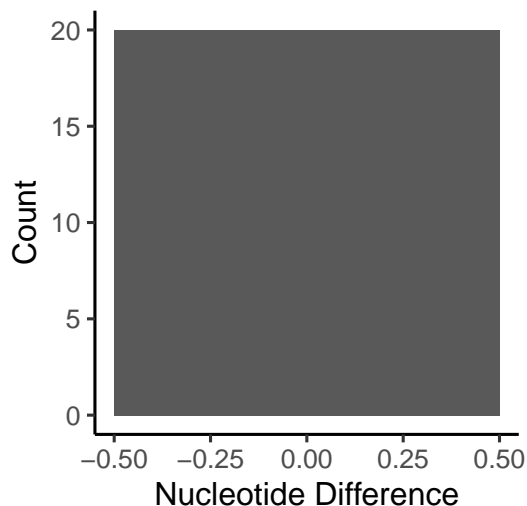
IGHV1-58\*01

47 sequences assigned  
42 (89.4%) exact matches, in which:  
42 unique CDR3  
4 unique J



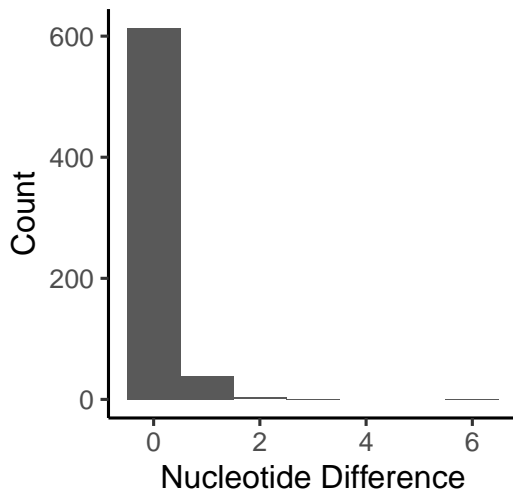
### IGHV1–58\*02

20 sequences assigned  
20 (100%) exact matches, in which:  
20 unique CDR3  
5 unique J



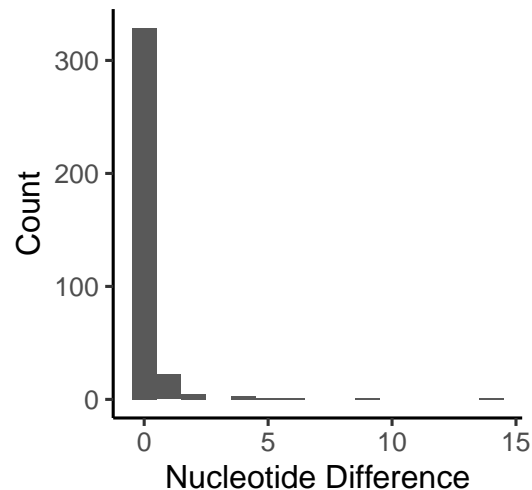
### IGHV1–69\*06

658 sequences assigned  
614 (93.3%) exact matches, in which:  
606 unique CDR3  
6 unique J



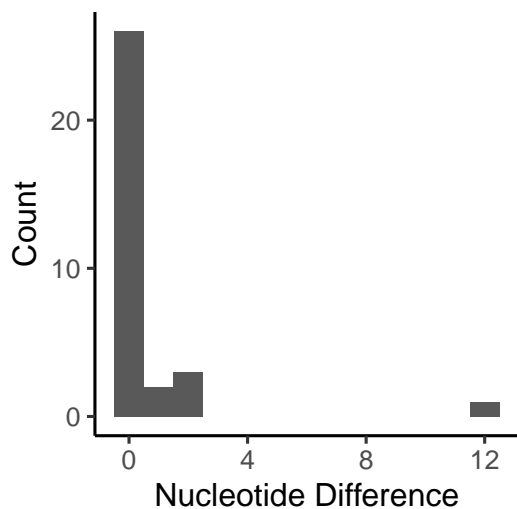
### IGHV2–26\*01

363 sequences assigned  
329 (90.6%) exact matches, in which:  
328 unique CDR3  
7 unique J



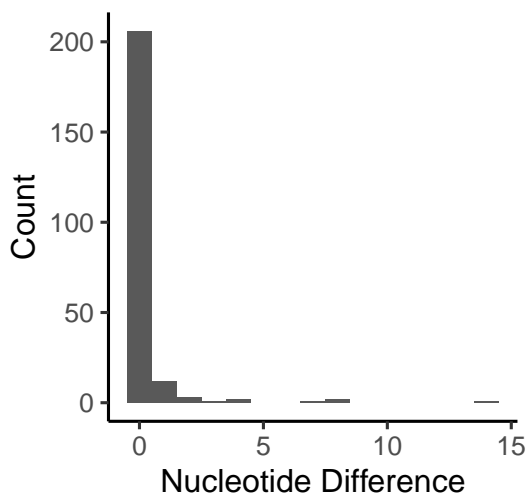
### IGHV1–69–2\*01

32 sequences assigned  
26 (81.2%) exact matches, in which:  
26 unique CDR3  
4 unique J



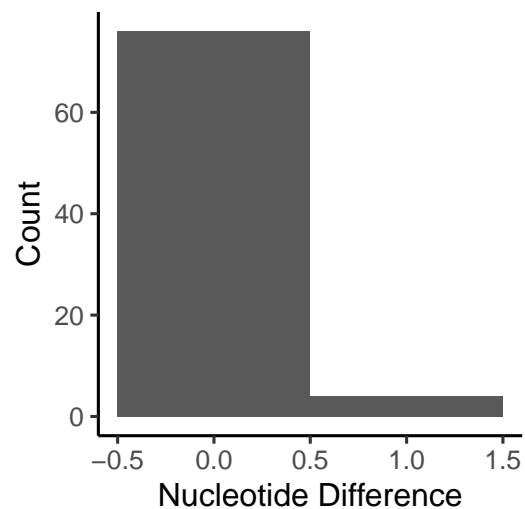
### IGHV2–5\*01

228 sequences assigned  
206 (90.4%) exact matches, in which:  
205 unique CDR3  
6 unique J



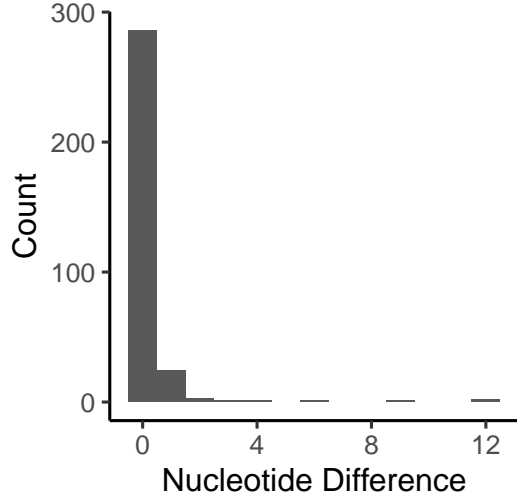
### IGHV2–70\*01

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



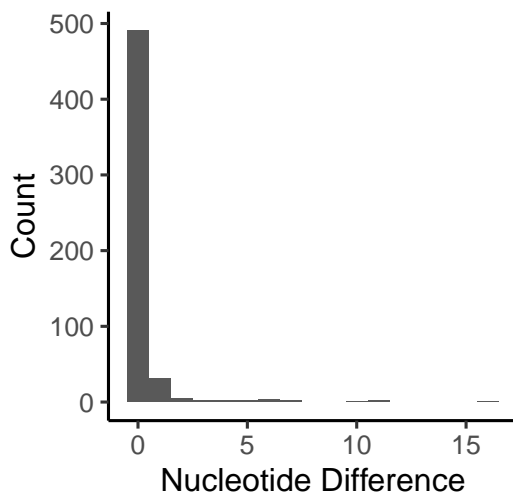
### IGHV1–69\*04

319 sequences assigned  
286 (89.7%) exact matches, in which:  
285 unique CDR3  
7 unique J



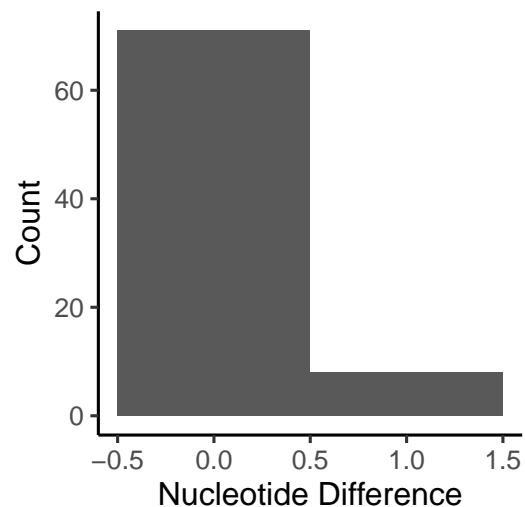
### IGHV2–5\*02

542 sequences assigned  
491 (90.6%) exact matches, in which:  
488 unique CDR3  
6 unique J



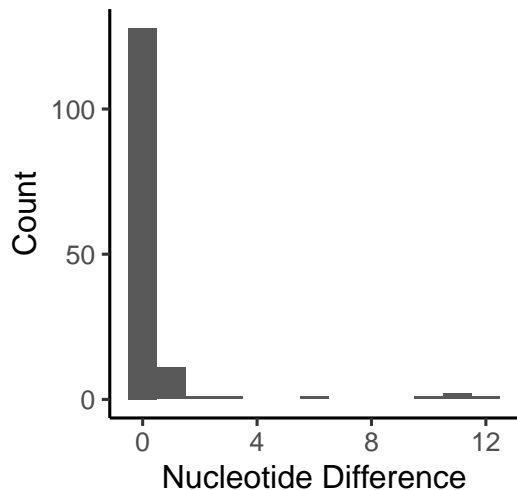
### IGHV2–70\*15

79 sequences assigned  
71 (89.9%) exact matches, in which:  
71 unique CDR3  
6 unique J



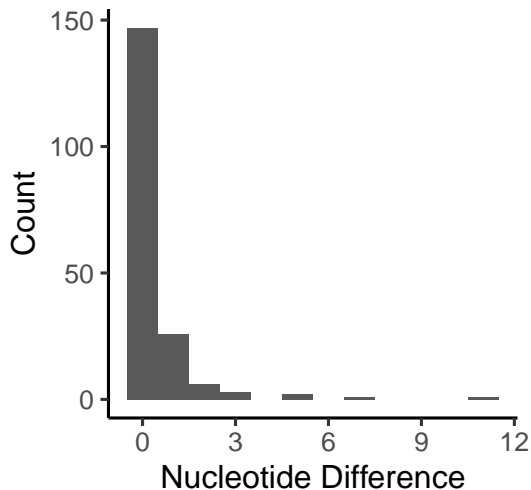
### IGHV3-7\*04

146 sequences assigned  
128 (87.7%) exact matches, in which:  
128 unique CDR3  
6 unique J



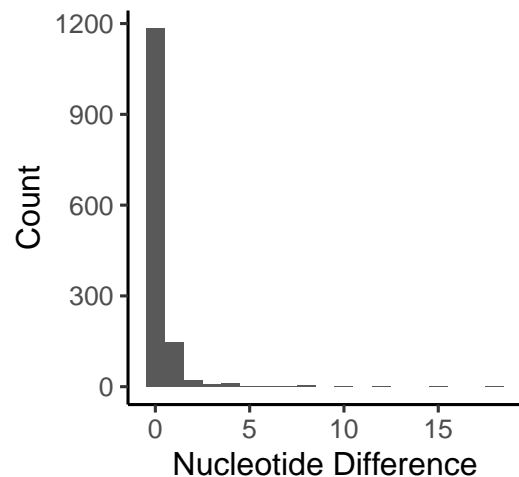
### IGHV3-11\*06

186 sequences assigned  
147 (79%) exact matches, in which:  
146 unique CDR3  
6 unique J



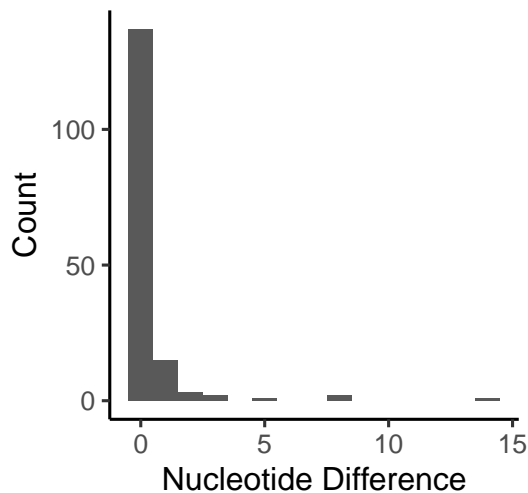
### IGHV3-15\*01

1395 sequences assigned  
1184 (84.9%) exact matches, in which:  
1163 unique CDR3  
7 unique J



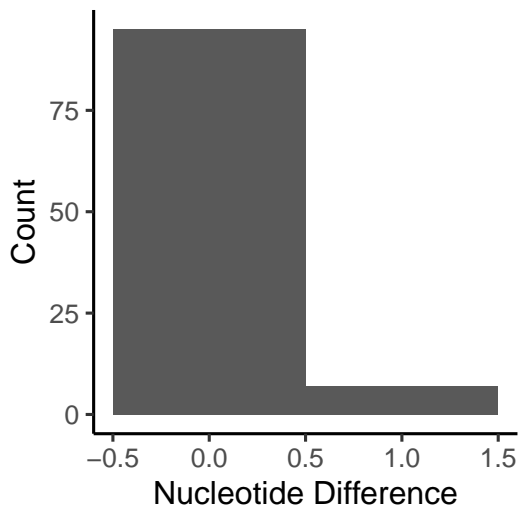
### IGHV3-7\*05

161 sequences assigned  
137 (85.1%) exact matches, in which:  
135 unique CDR3  
5 unique J



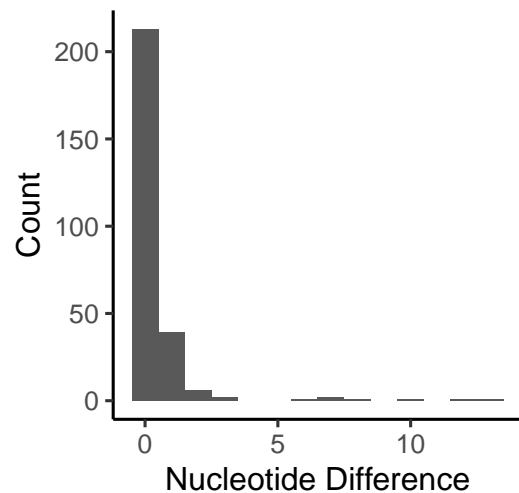
### IGHV3-13\*04

102 sequences assigned  
95 (93.1%) exact matches, in which:  
94 unique CDR3  
6 unique J



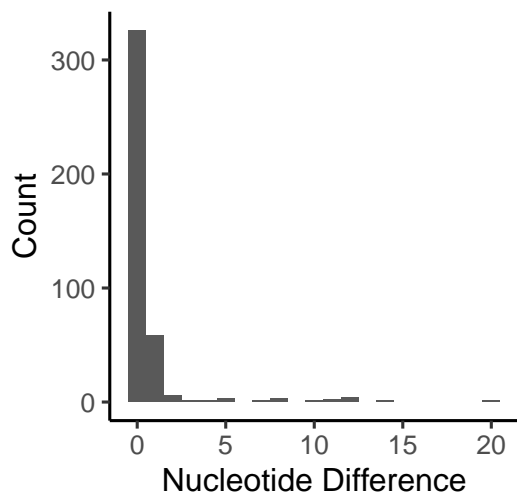
### IGHV3-20\*04

267 sequences assigned  
213 (79.8%) exact matches, in which:  
210 unique CDR3  
6 unique J



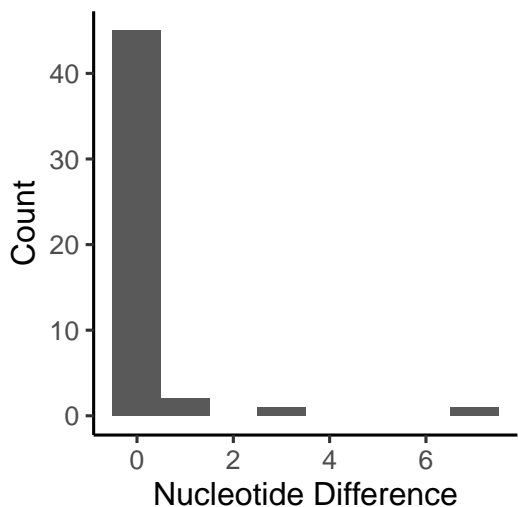
### IGHV3-11\*05

408 sequences assigned  
326 (79.9%) exact matches, in which:  
318 unique CDR3  
6 unique J



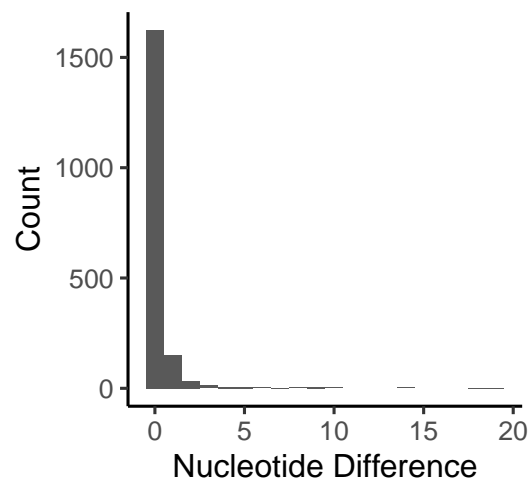
### IGHV3-13\*05

49 sequences assigned  
45 (91.8%) exact matches, in which:  
43 unique CDR3  
5 unique J



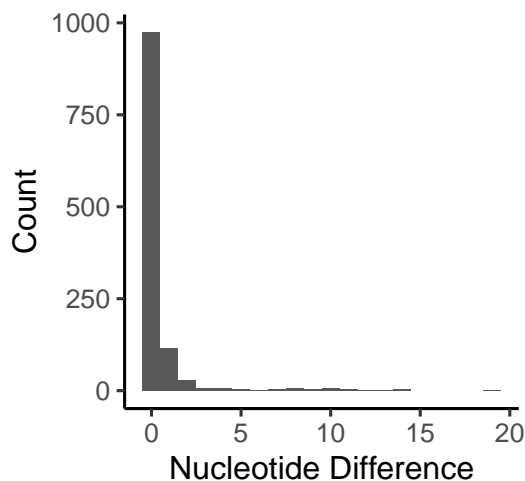
### IGHV3-21\*01

1859 sequences assigned  
1624 (87.4%) exact matches, in which:  
1574 unique CDR3  
7 unique J



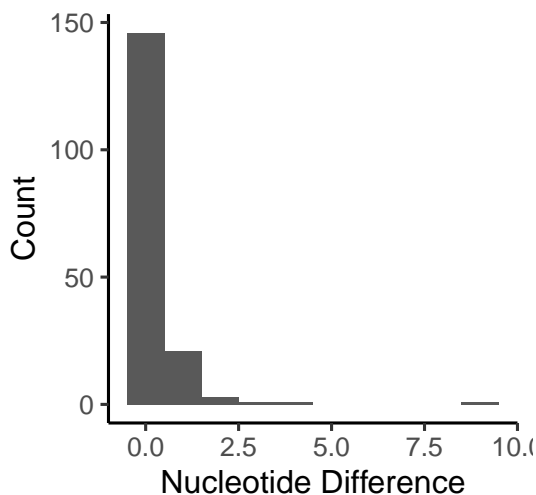
### IGHV3-23\*04

1171 sequences assigned  
974 (83.2%) exact matches, in which:  
955 unique CDR3  
6 unique J



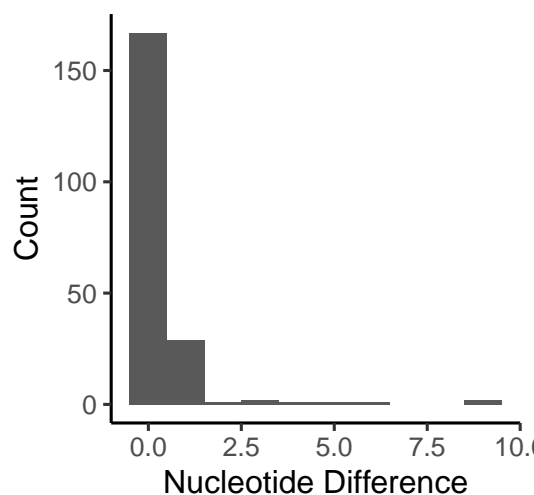
### IGHV3-43\*01

173 sequences assigned  
146 (84.4%) exact matches, in which:  
143 unique CDR3  
7 unique J



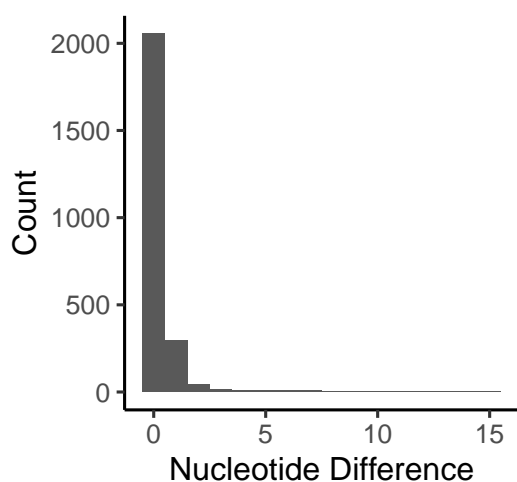
### IGHV3-49\*03

204 sequences assigned  
167 (81.9%) exact matches, in which:  
160 unique CDR3  
5 unique J



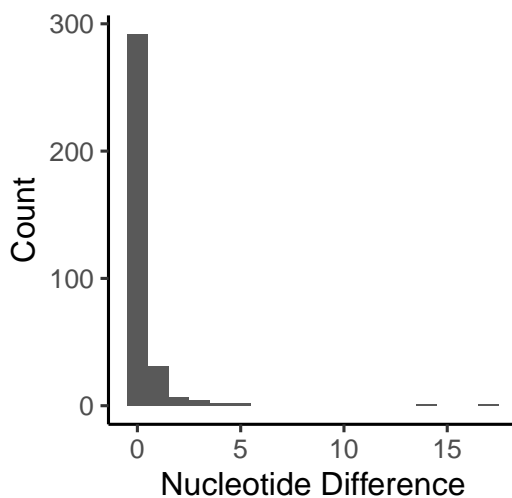
### IGHV3-30-3\*01

2459 sequences assigned  
2055 (83.6%) exact matches, in which:  
2001 unique CDR3  
7 unique J



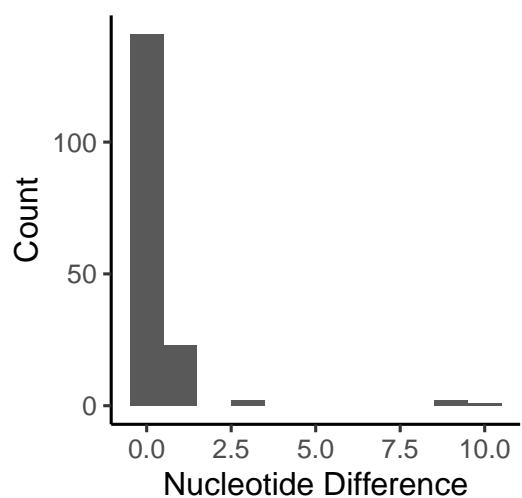
### IGHV3-48\*01

340 sequences assigned  
292 (85.9%) exact matches, in which:  
286 unique CDR3  
6 unique J



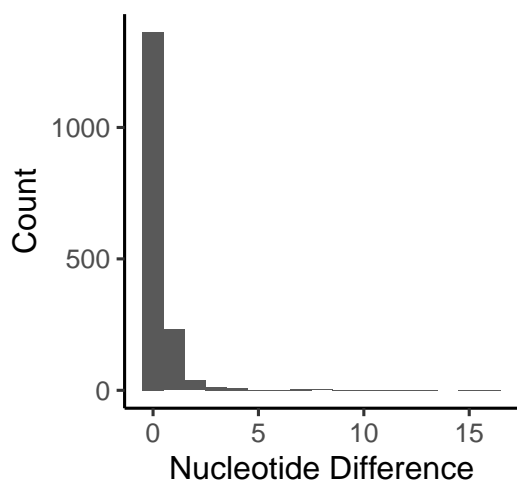
### IGHV3-49\*05

169 sequences assigned  
141 (83.4%) exact matches, in which:  
140 unique CDR3  
4 unique J



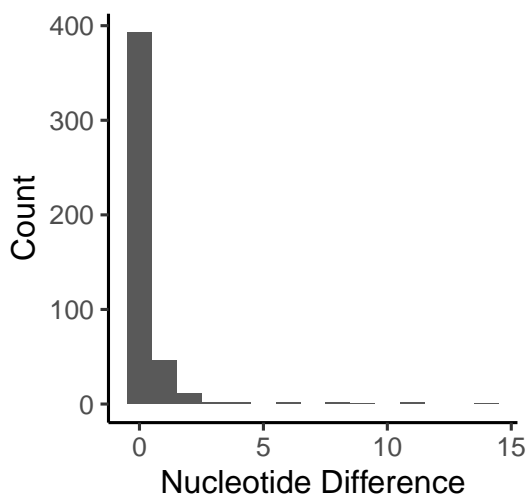
### IGHV3-33\*01

1675 sequences assigned  
1363 (81.4%) exact matches, in which:  
1322 unique CDR3  
7 unique J



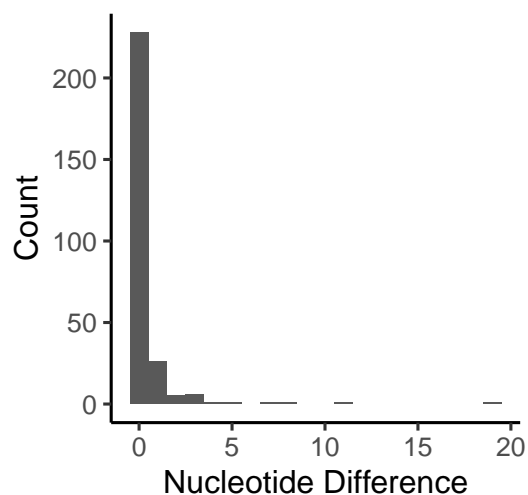
### IGHV3-48\*02

462 sequences assigned  
393 (85.1%) exact matches, in which:  
379 unique CDR3  
6 unique J



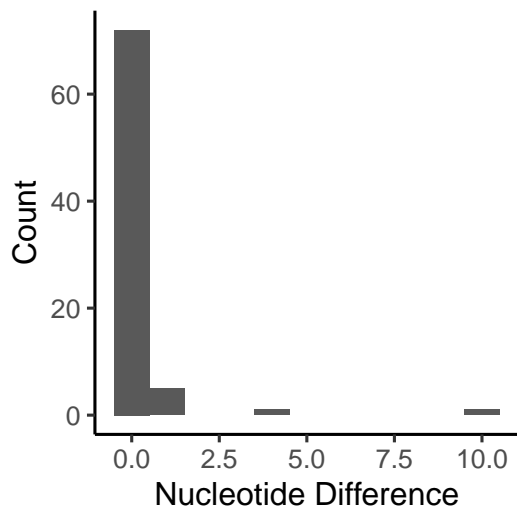
### IGHV3-53\*01

273 sequences assigned  
228 (83.5%) exact matches, in which:  
225 unique CDR3  
6 unique J



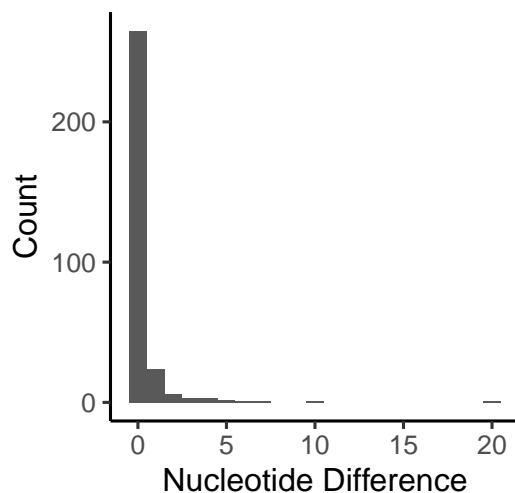
### IGHV3-53\*02

79 sequences assigned  
72 (91.1%) exact matches, in which:  
70 unique CDR3  
5 unique J



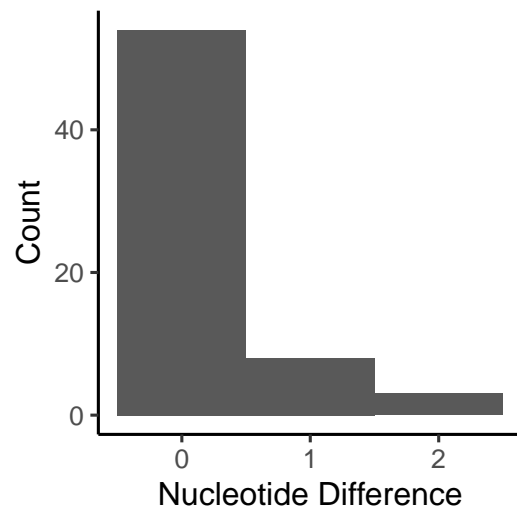
### IGHV3-66\*01

307 sequences assigned  
265 (86.3%) exact matches, in which:  
259 unique CDR3  
7 unique J



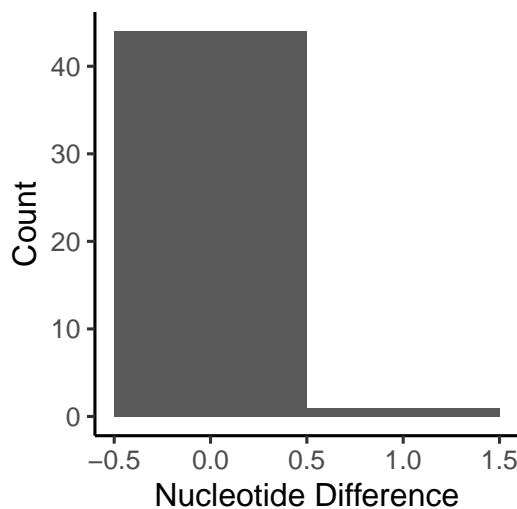
### IGHV3-73\*01

65 sequences assigned  
54 (83.1%) exact matches, in which:  
52 unique CDR3  
6 unique J



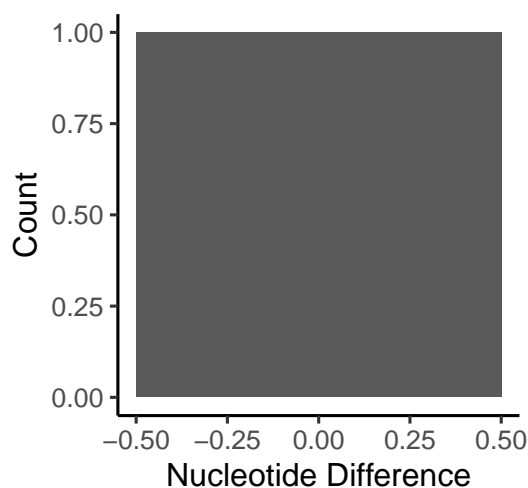
### IGHV3-64\*01

45 sequences assigned  
44 (97.8%) exact matches, in which:  
44 unique CDR3  
5 unique J



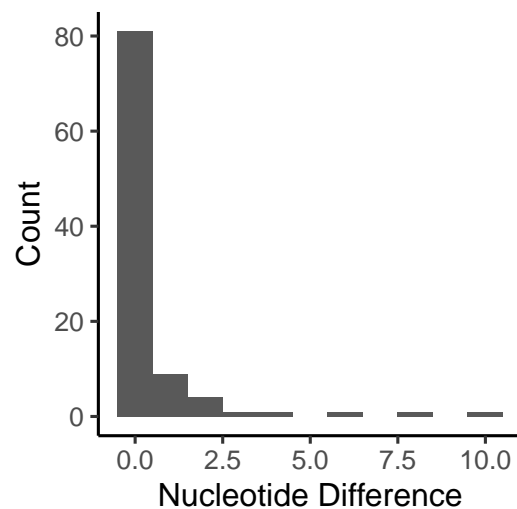
### IGHV3-69-1\*01

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



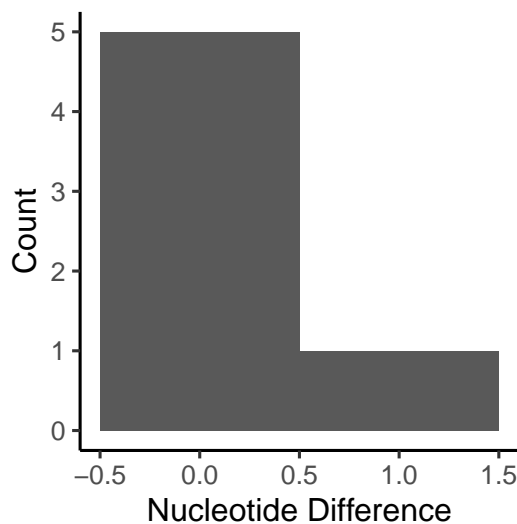
### IGHV3-73\*02

99 sequences assigned  
81 (81.8%) exact matches, in which:  
78 unique CDR3  
5 unique J



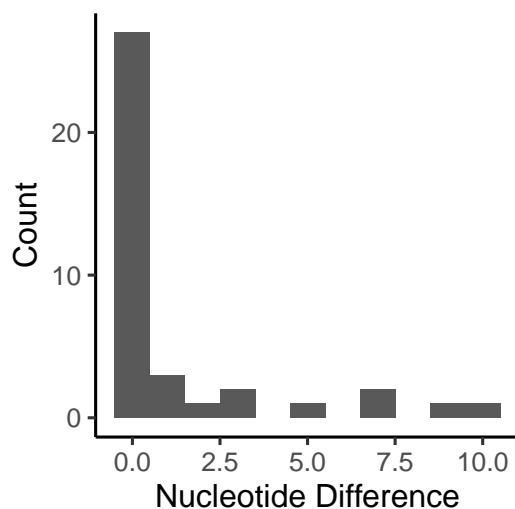
### IGHV3-64\*02

6 sequences assigned  
5 (83.3%) exact matches, in which:  
5 unique CDR3  
4 unique J



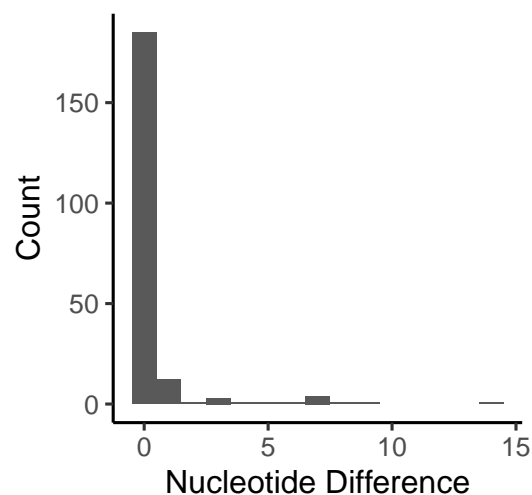
### IGHV3-72\*01

38 sequences assigned  
27 (71.1%) exact matches, in which:  
27 unique CDR3  
5 unique J



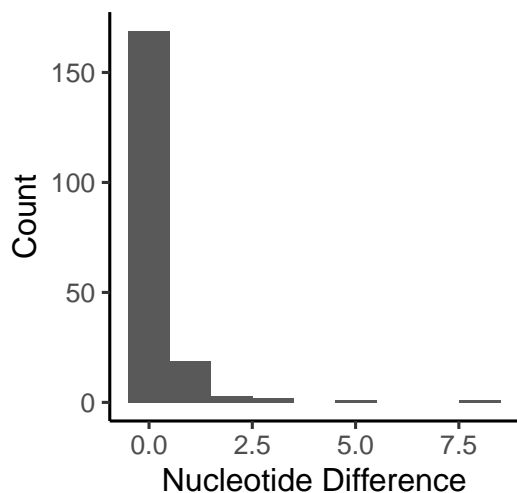
### IGHV3-74\*01

211 sequences assigned  
185 (87.7%) exact matches, in which:  
183 unique CDR3  
7 unique J



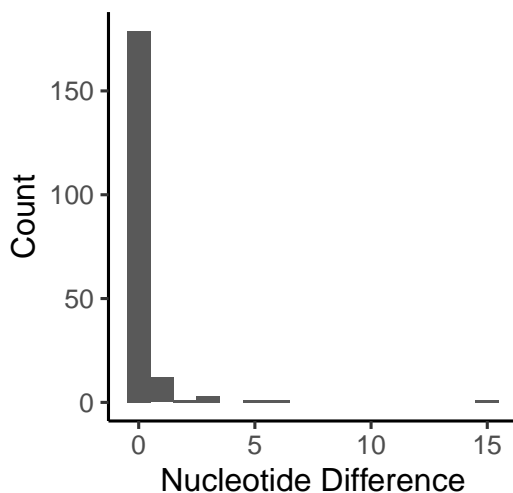
### IGHV3–64D\*06

195 sequences assigned  
169 (86.7%) exact matches, in which:  
162 unique CDR3  
6 unique J



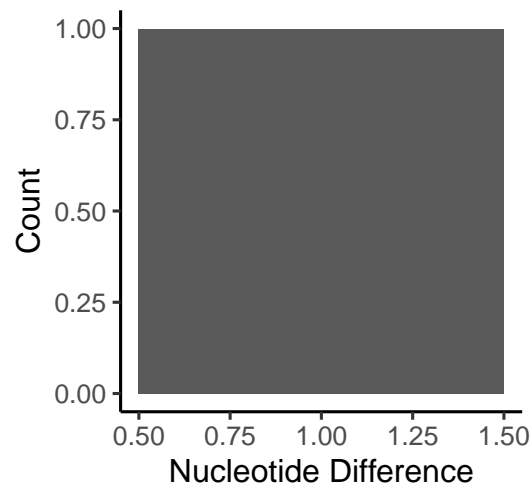
### IGHV4–4\*07

198 sequences assigned  
179 (90.4%) exact matches, in which:  
176 unique CDR3  
6 unique J



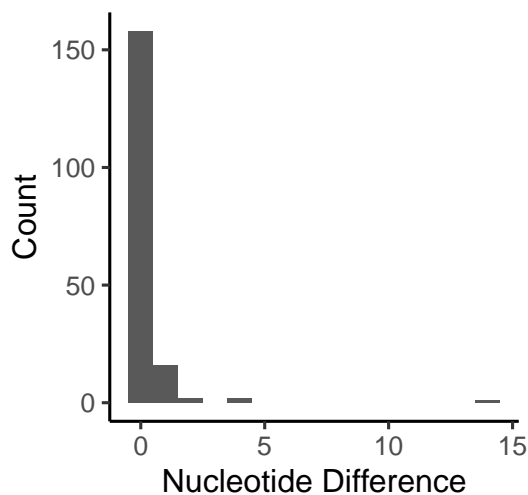
### IGHV4–28\*04

1 sequences assigned  
No exact matches.



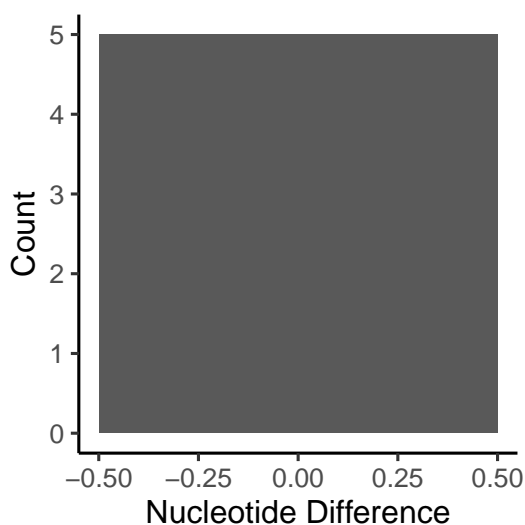
### IGHV3–64D\*08

180 sequences assigned  
158 (87.8%) exact matches, in which:  
154 unique CDR3  
6 unique J



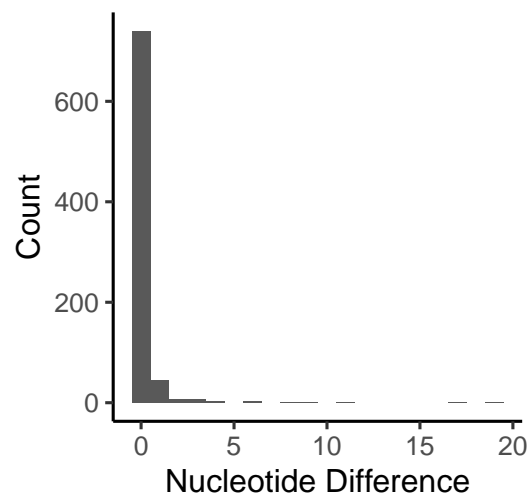
### IGHV4–28\*01

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



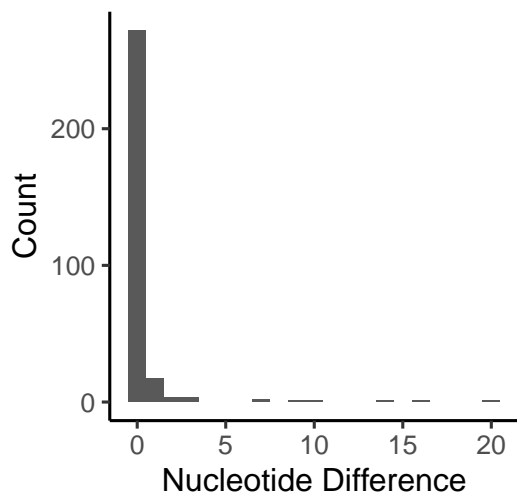
### IGHV4–30–4\*01

810 sequences assigned  
740 (91.4%) exact matches, in which:  
733 unique CDR3  
7 unique J



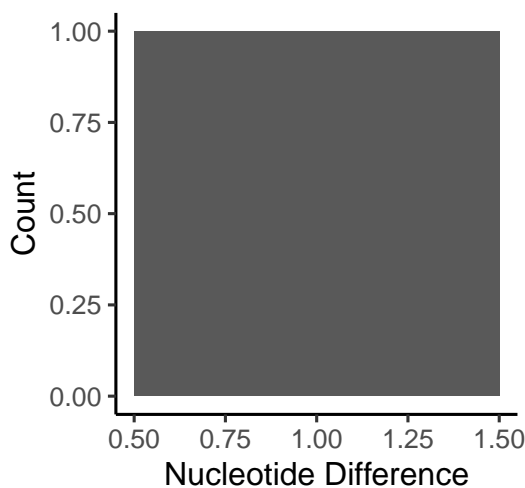
### IGHV4–4\*02

302 sequences assigned  
272 (90.1%) exact matches, in which:  
268 unique CDR3  
6 unique J



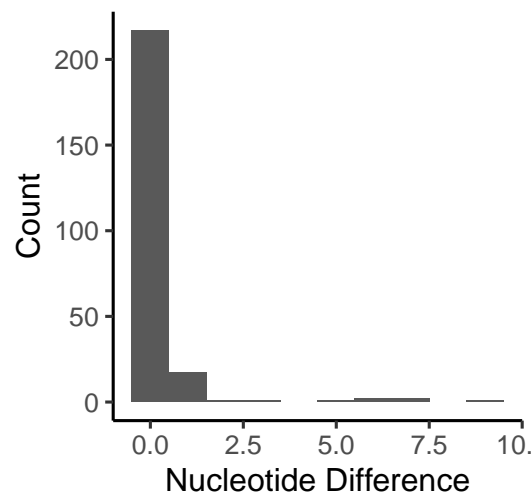
### IGHV4–28\*03

1 sequences assigned  
No exact matches.



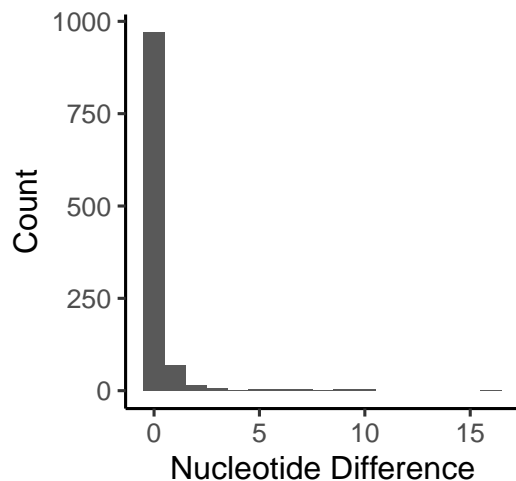
### IGHV4–30–2\*01

242 sequences assigned  
217 (89.7%) exact matches, in which:  
213 unique CDR3  
6 unique J



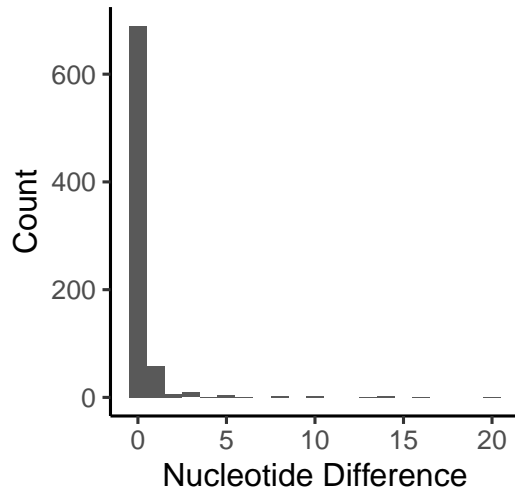
### IGHV4-31\*03

1080 sequences assigned  
970 (89.8%) exact matches, in which:  
963 unique CDR3  
7 unique J



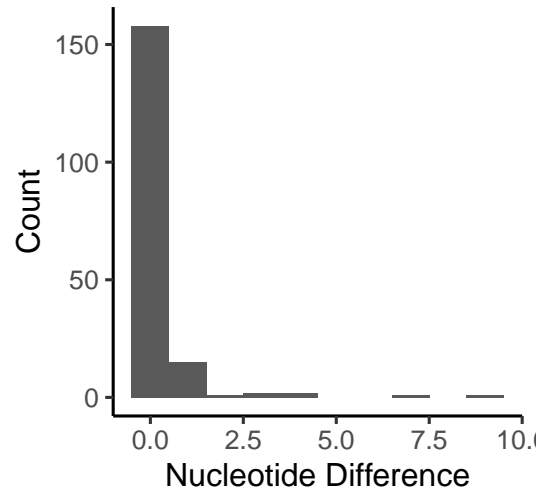
### IGHV4-59\*01

782 sequences assigned  
690 (88.2%) exact matches, in which:  
686 unique CDR3  
7 unique J



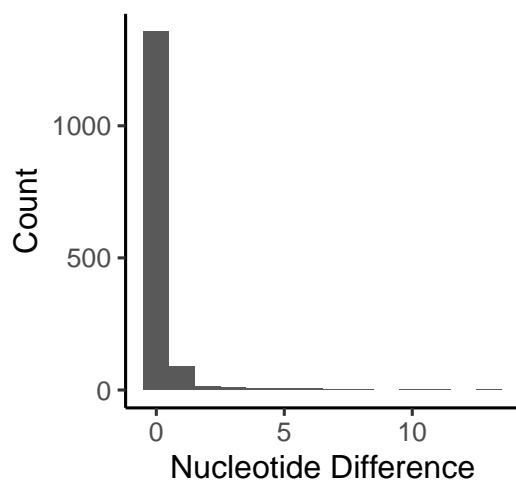
### IGHV5-10-1\*01

180 sequences assigned  
158 (87.8%) exact matches, in which:  
155 unique CDR3  
6 unique J



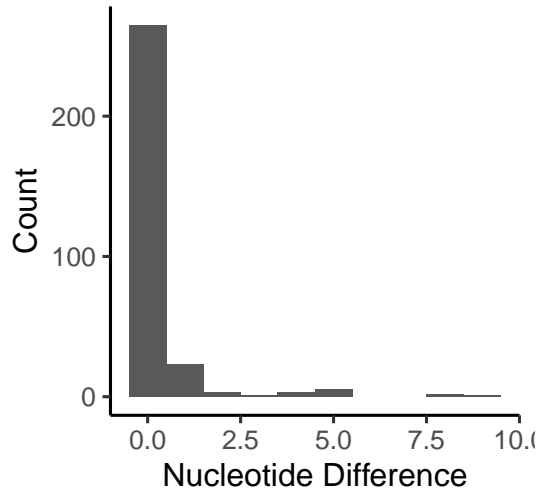
### IGHV4-34\*01

1488 sequences assigned  
1356 (91.1%) exact matches, in which:  
1331 unique CDR3  
7 unique J



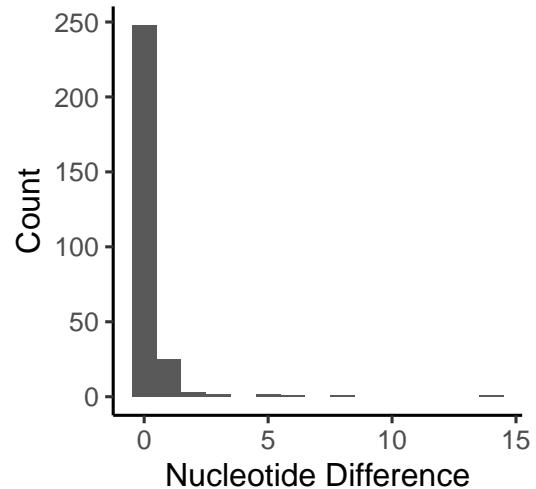
### IGHV4-59\*08

303 sequences assigned  
265 (87.5%) exact matches, in which:  
262 unique CDR3  
6 unique J



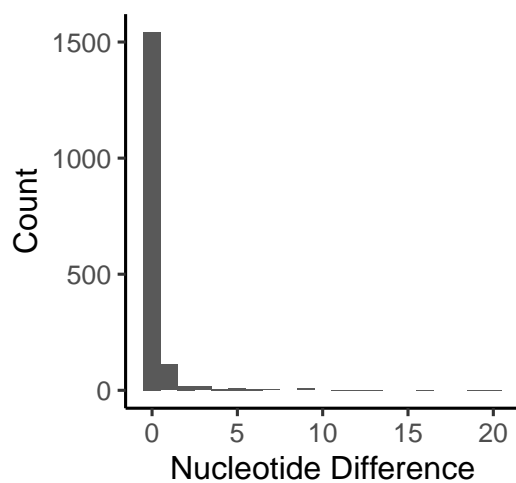
### IGHV5-10-1\*03

283 sequences assigned  
248 (87.6%) exact matches, in which:  
246 unique CDR3  
6 unique J



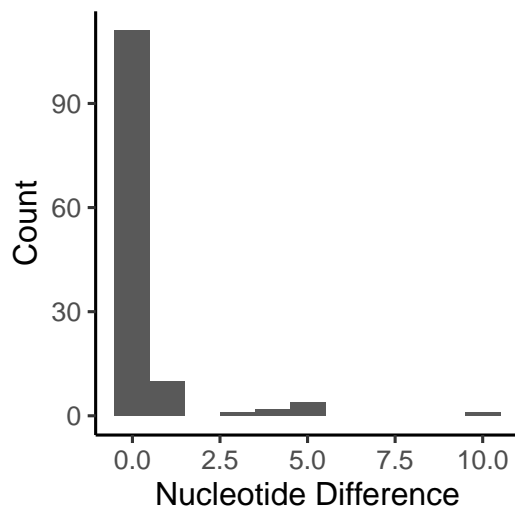
### IGHV4-39\*01

1727 sequences assigned  
1543 (89.3%) exact matches, in which:  
1516 unique CDR3  
7 unique J



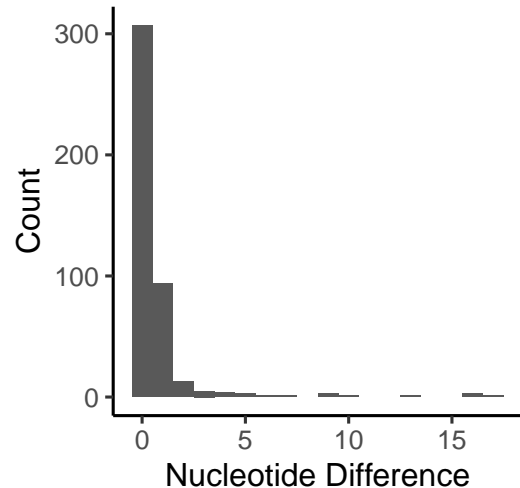
### IGHV4-61\*01

129 sequences assigned  
111 (86%) exact matches, in which:  
109 unique CDR3  
7 unique J



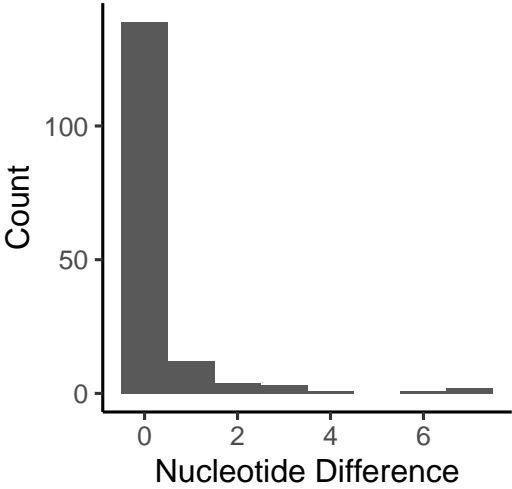
### IGHV5-51\*01

437 sequences assigned  
307 (70.3%) exact matches, in which:  
303 unique CDR3  
7 unique J



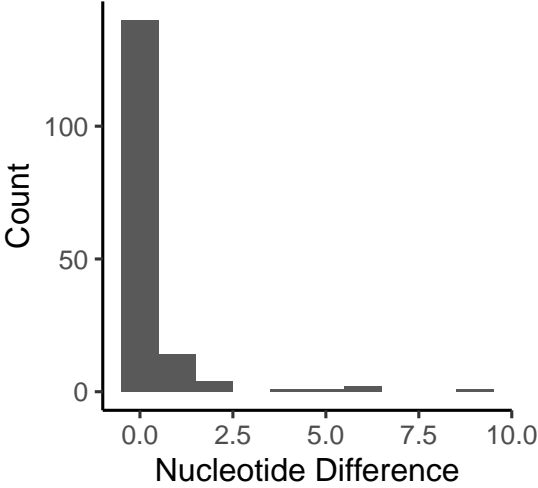
IGHV5–51\*03

162 sequences assigned  
139 (85.8%) exact matches, in which:  
137 unique CDR3  
6 unique J



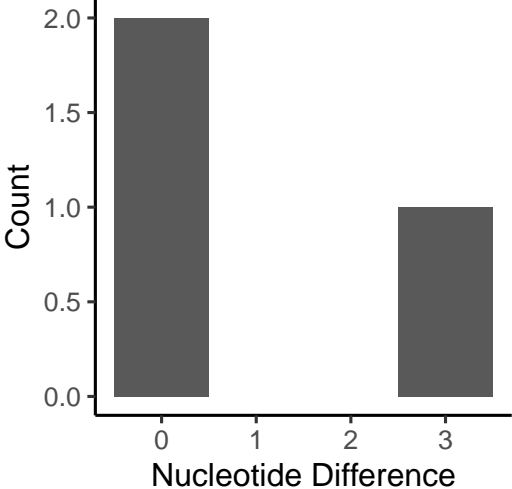
IGHV6–1\*01

163 sequences assigned  
140 (85.9%) exact matches, in which:  
136 unique CDR3  
7 unique J



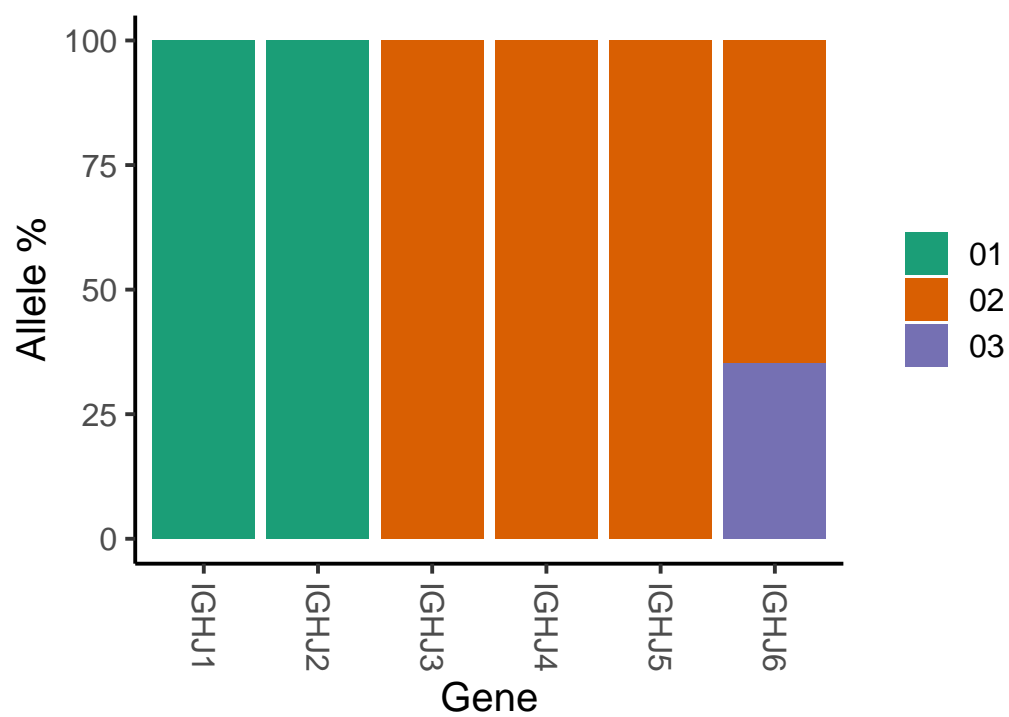
IGHV7–4–1\*01

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

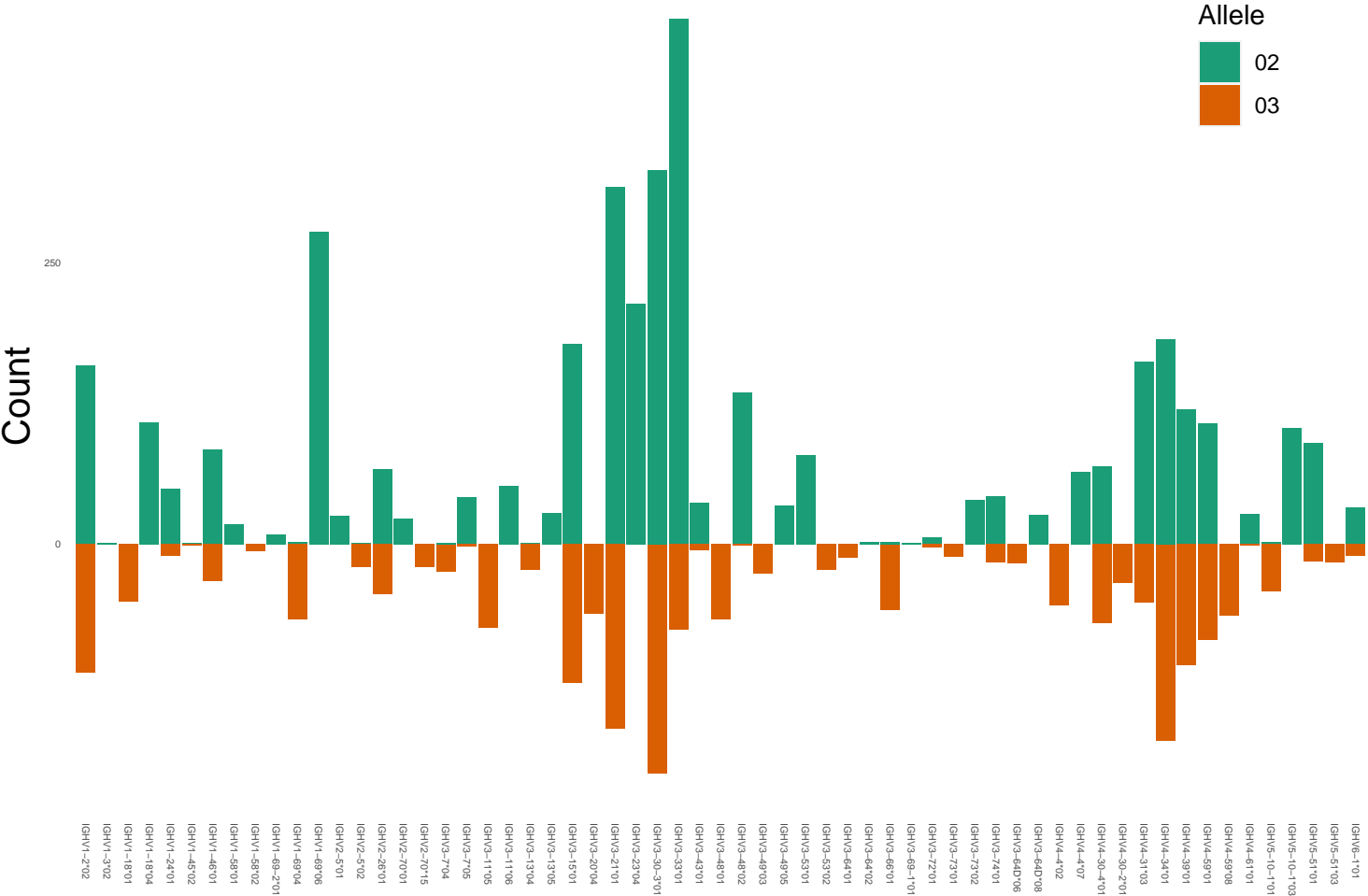




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.