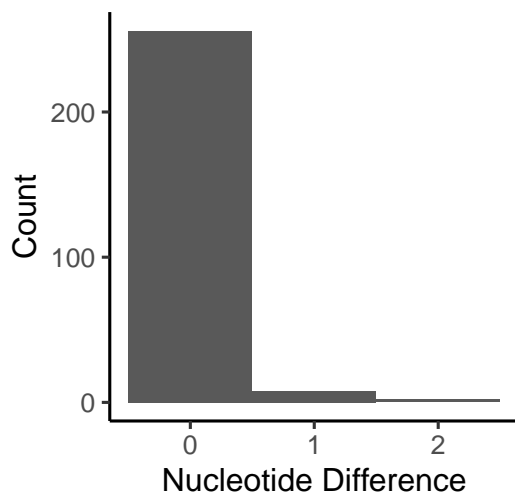


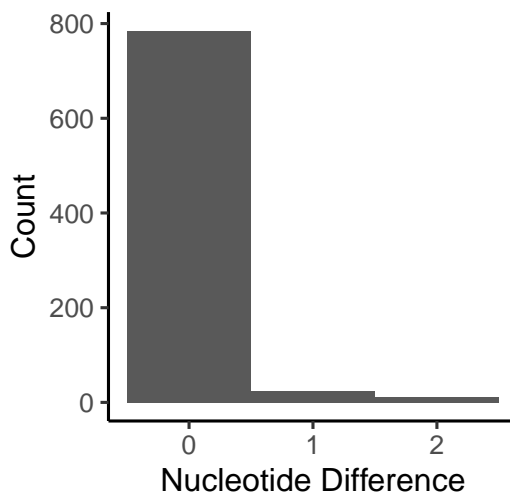
### IGHV1-2\*04

266 sequences assigned  
256 (96.2%) exact matches, in which:  
254 unique CDR3  
7 unique J



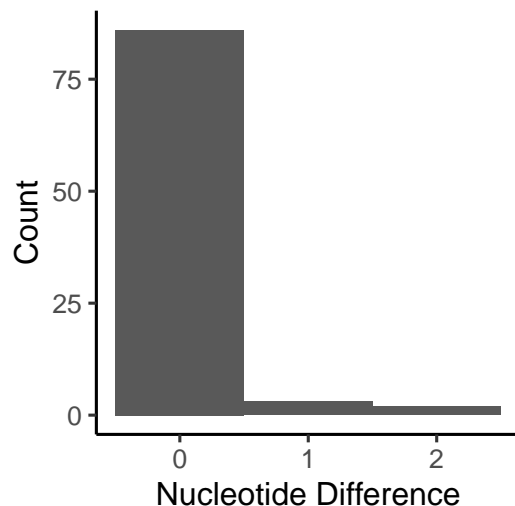
### IGHV1-18\*01

820 sequences assigned  
785 (95.7%) exact matches, in which:  
781 unique CDR3  
7 unique J



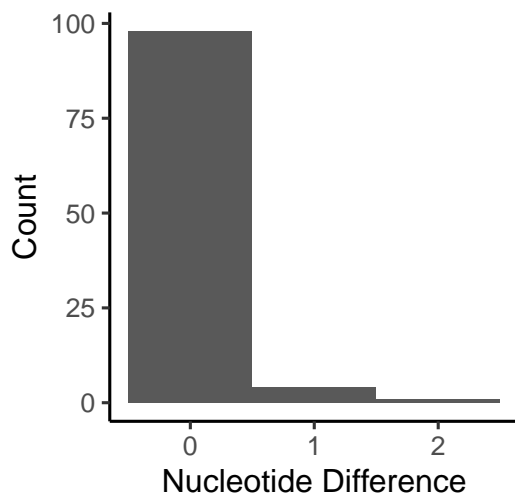
### IGHV1-46\*03

91 sequences assigned  
86 (94.5%) exact matches, in which:  
86 unique CDR3  
4 unique J



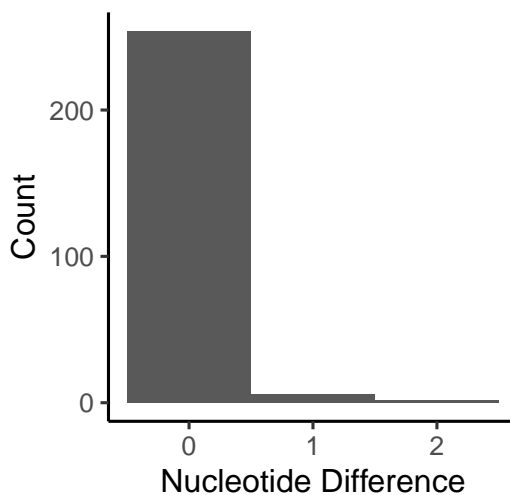
### IGHV1-3\*01\_05

103 sequences assigned  
98 (95.1%) exact matches, in which:  
98 unique CDR3  
4 unique J



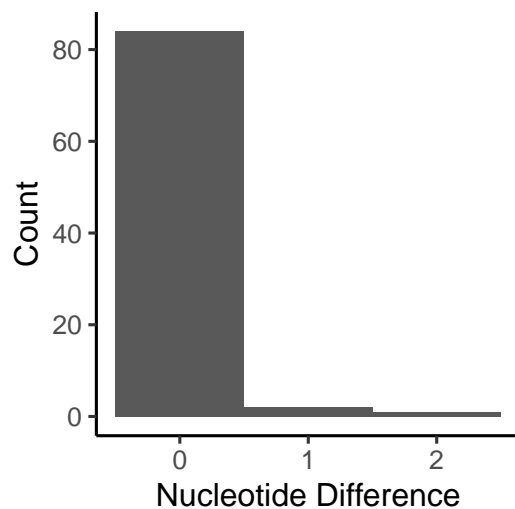
### IGHV1-24\*01

262 sequences assigned  
254 (96.9%) exact matches, in which:  
252 unique CDR3  
6 unique J



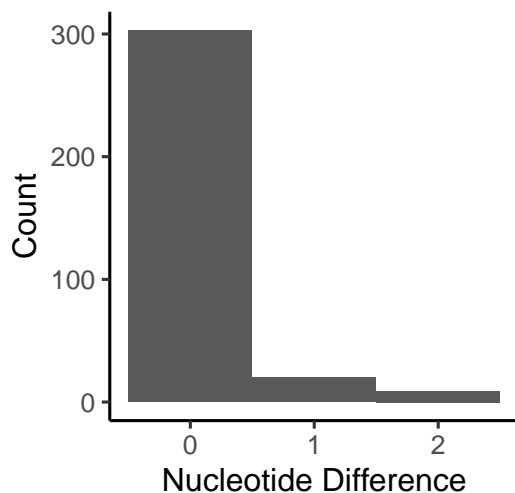
### IGHV1-58\*01\_03

87 sequences assigned  
84 (96.6%) exact matches, in which:  
84 unique CDR3  
6 unique J



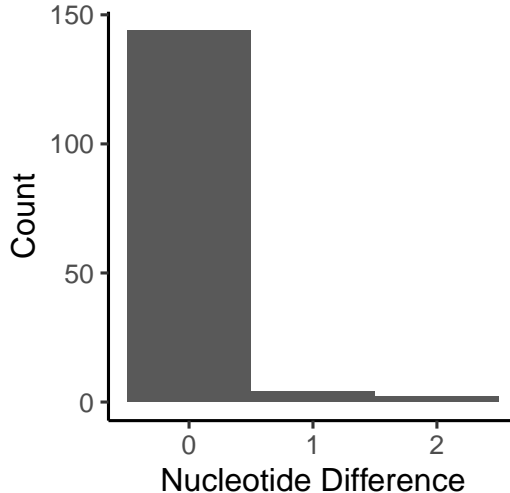
### IGHV1-8\*01

332 sequences assigned  
303 (91.3%) exact matches, in which:  
302 unique CDR3  
7 unique J



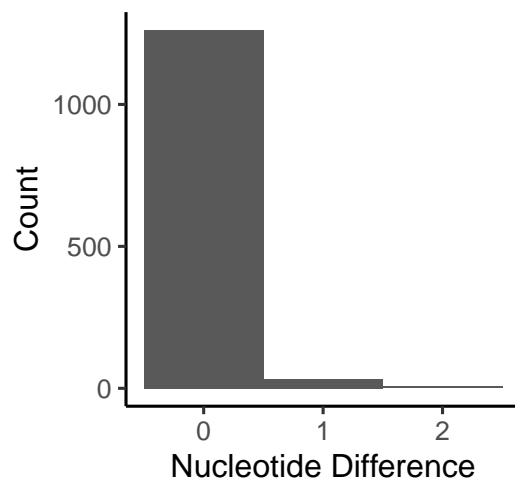
### IGHV1-46\*01

150 sequences assigned  
144 (96%) exact matches, in which:  
144 unique CDR3  
6 unique J



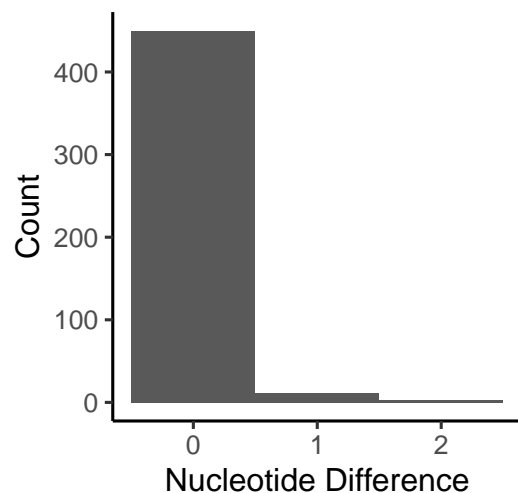
### IGHV1-69\*01\_12\_13

1302 sequences assigned  
1262 (96.9%) exact matches, in which:  
1255 unique CDR3  
7 unique J



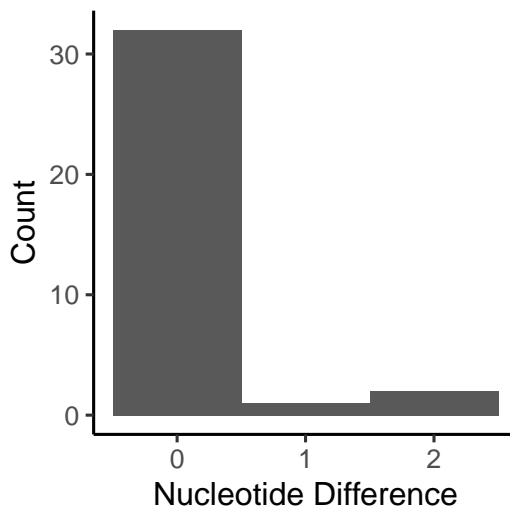
### IGHV1–69\*06\_14

464 sequences assigned  
450 (97%) exact matches, in which:  
449 unique CDR3  
6 unique J



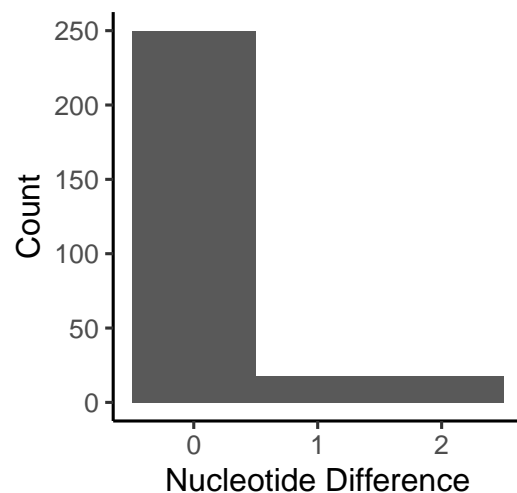
### IGHV2–26\*01

35 sequences assigned  
32 (91.4%) exact matches, in which:  
32 unique CDR3  
6 unique J



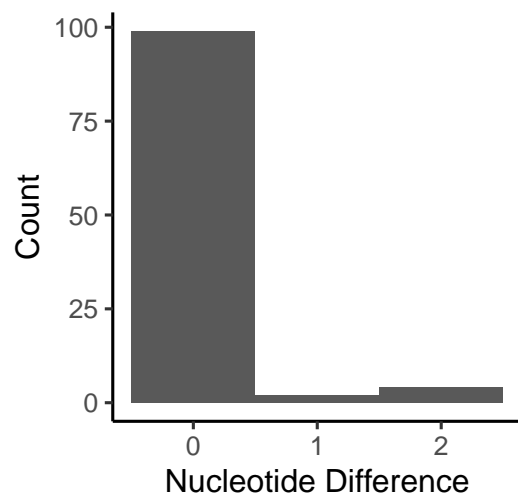
### IGHV3–7\*01

286 sequences assigned  
250 (87.4%) exact matches, in which:  
246 unique CDR3  
6 unique J



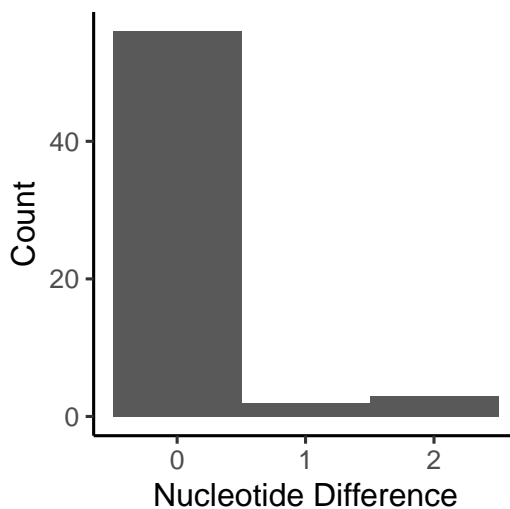
### IGHV2–5\*01

105 sequences assigned  
99 (94.3%) exact matches, in which:  
97 unique CDR3  
6 unique J



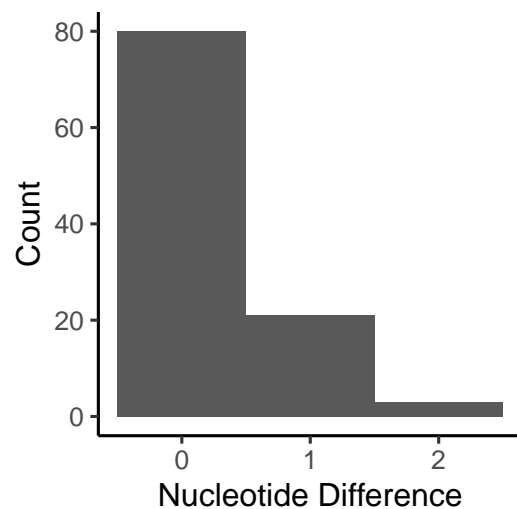
### IGHV2–70\*01

61 sequences assigned  
56 (91.8%) exact matches, in which:  
55 unique CDR3  
6 unique J



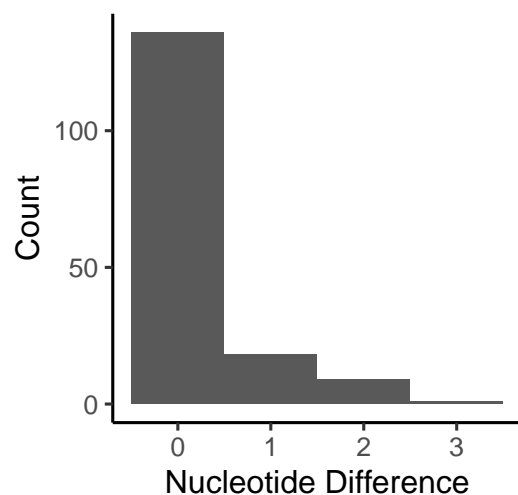
### IGHV3–7\*04

104 sequences assigned  
80 (76.9%) exact matches, in which:  
78 unique CDR3  
6 unique J



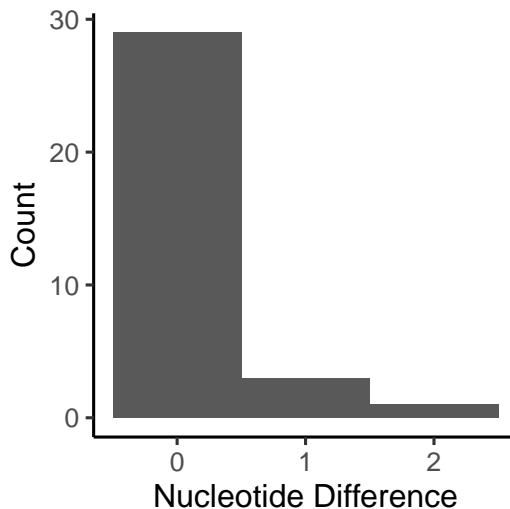
### IGHV2–5\*02

164 sequences assigned  
136 (82.9%) exact matches, in which:  
133 unique CDR3  
6 unique J



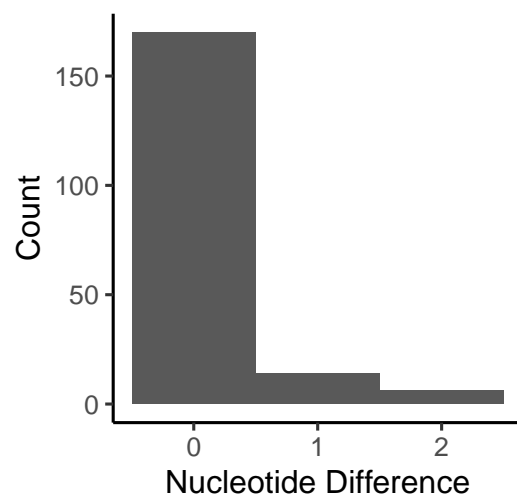
### IGHV2–70\*04

33 sequences assigned  
29 (87.9%) exact matches, in which:  
29 unique CDR3  
6 unique J



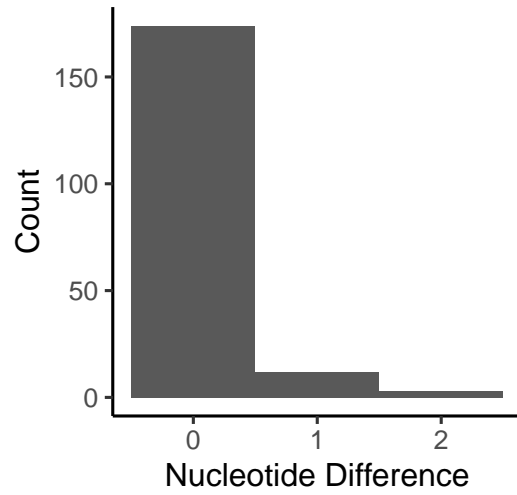
### IGHV3–9\*01

190 sequences assigned  
170 (89.5%) exact matches, in which:  
169 unique CDR3  
6 unique J



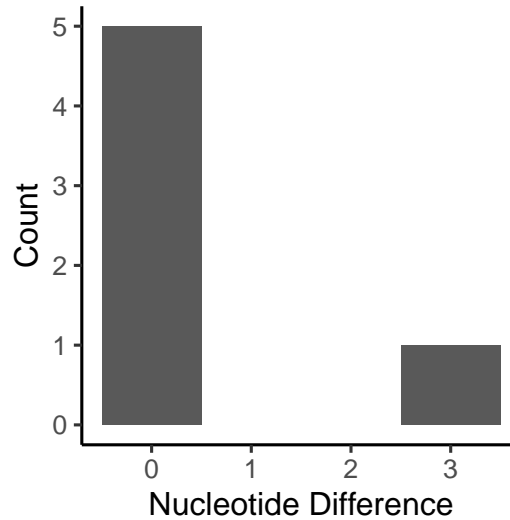
### IGHV3-11\*01

189 sequences assigned  
174 (92.1%) exact matches, in which:  
169 unique CDR3  
6 unique J



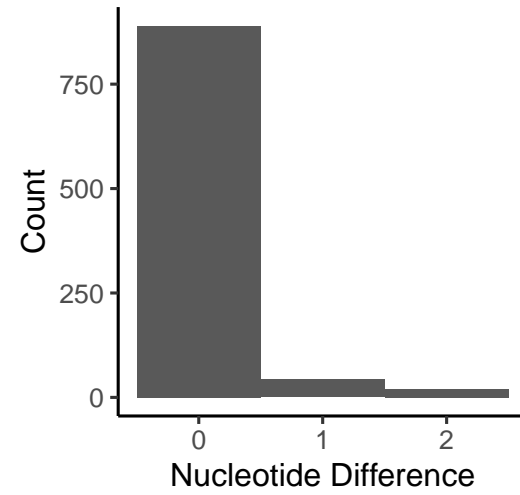
### IGHV3-13\*05

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



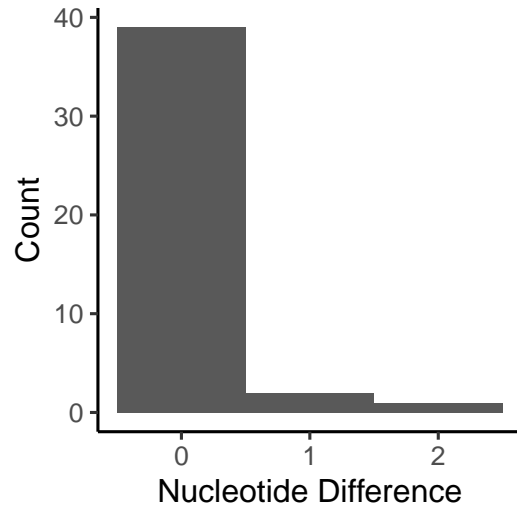
### IGHV3-21\*01\_02

954 sequences assigned  
890 (93.3%) exact matches, in which:  
861 unique CDR3  
7 unique J



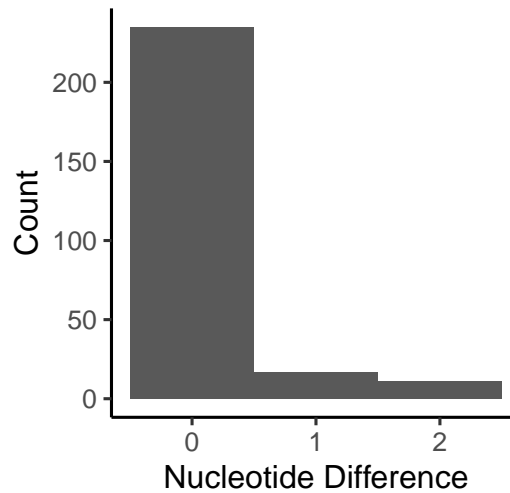
### IGHV3-11\*06

42 sequences assigned  
39 (92.9%) exact matches, in which:  
39 unique CDR3  
5 unique J



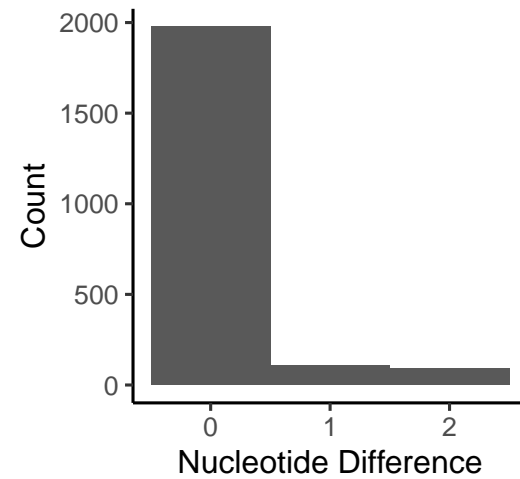
### IGHV3-15\*01\_02

263 sequences assigned  
235 (89.4%) exact matches, in which:  
231 unique CDR3  
7 unique J



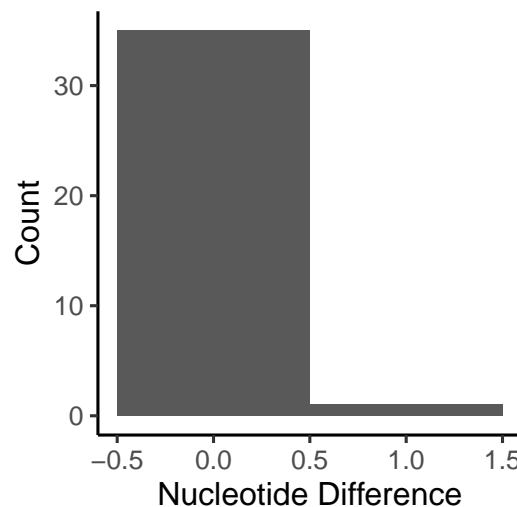
### IGHV3-23\*01\_04

2176 sequences assigned  
1977 (90.9%) exact matches, in which:  
1911 unique CDR3  
7 unique J



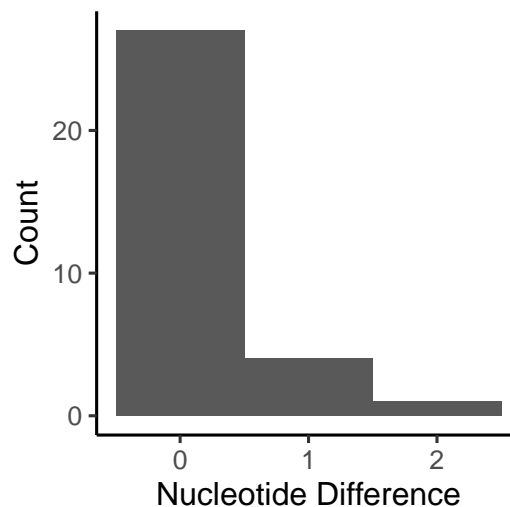
### IGHV3-13\*01

36 sequences assigned  
35 (97.2%) exact matches, in which:  
33 unique CDR3  
4 unique J



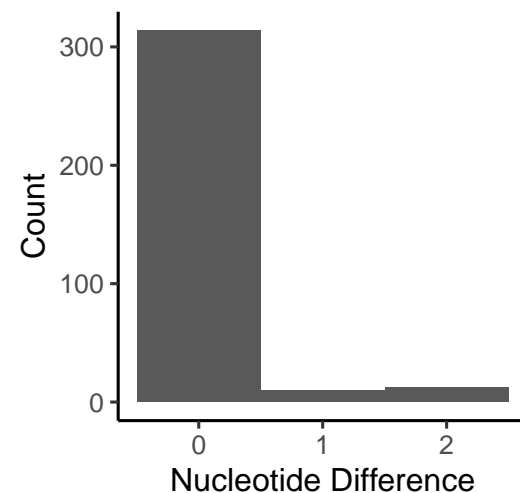
### IGHV3-20\*01\_02

32 sequences assigned  
27 (84.4%) exact matches, in which:  
25 unique CDR3  
5 unique J



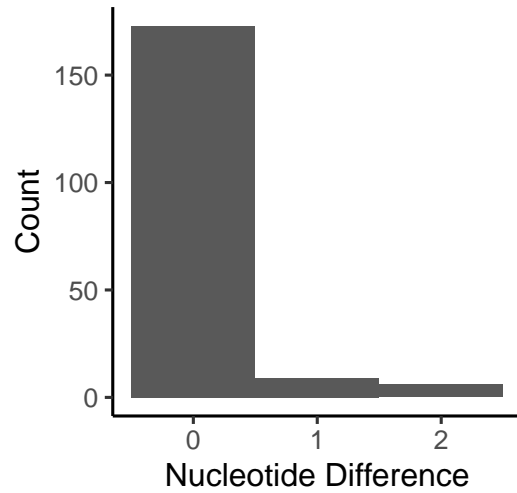
### IGHV3-30\*03

336 sequences assigned  
314 (93.5%) exact matches, in which:  
310 unique CDR3  
7 unique J



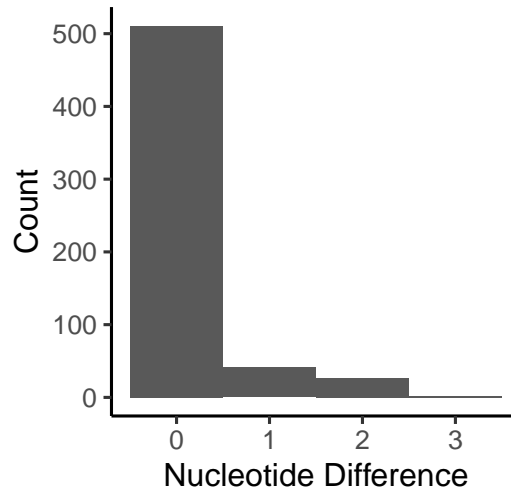
### IGHV3–30\*18

188 sequences assigned  
173 (92%) exact matches, in which:  
169 unique CDR3  
5 unique J



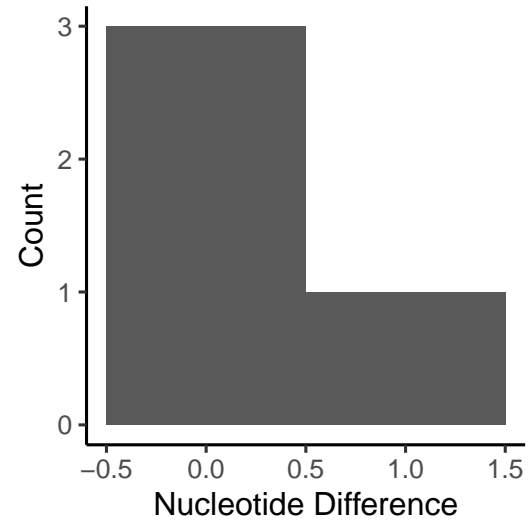
### IGHV3–48\*02

581 sequences assigned  
511 (88%) exact matches, in which:  
499 unique CDR3  
7 unique J



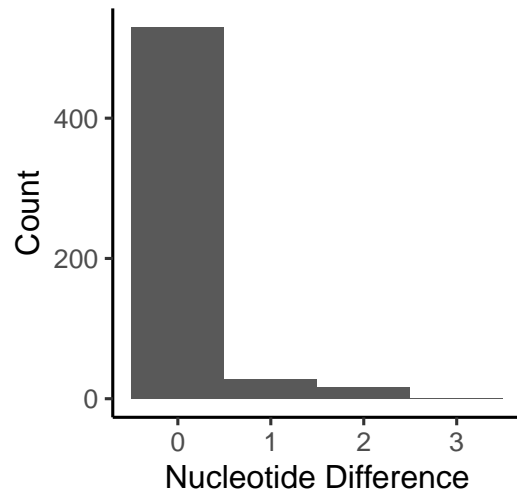
### IGHV3–64\*02\_07

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
3 unique J



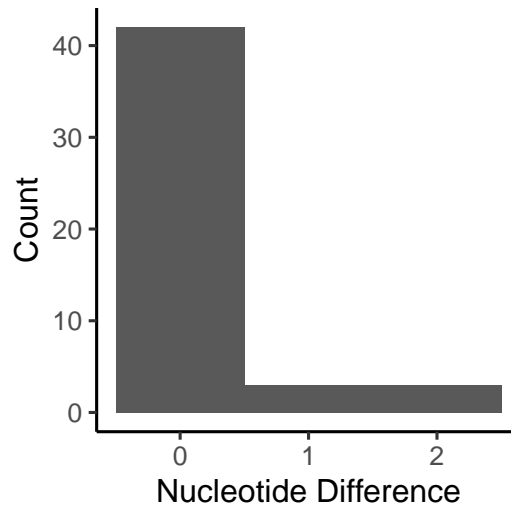
### IGHV3–33\*01

576 sequences assigned  
530 (92%) exact matches, in which:  
520 unique CDR3  
7 unique J



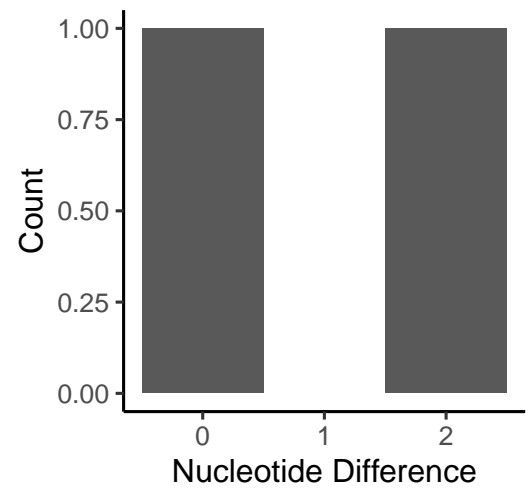
### IGHV3–49\*03\_05

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



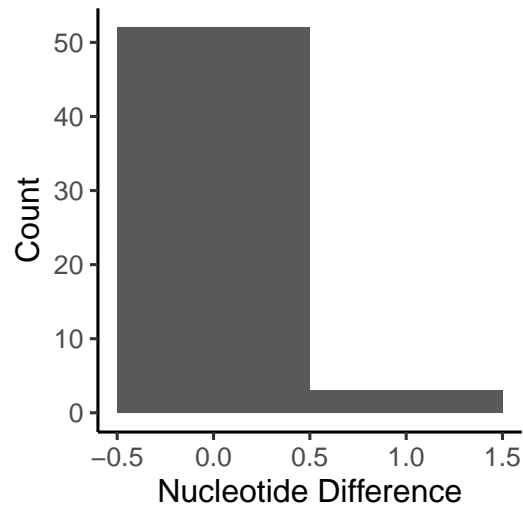
### IGHV3–69–1\*01

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



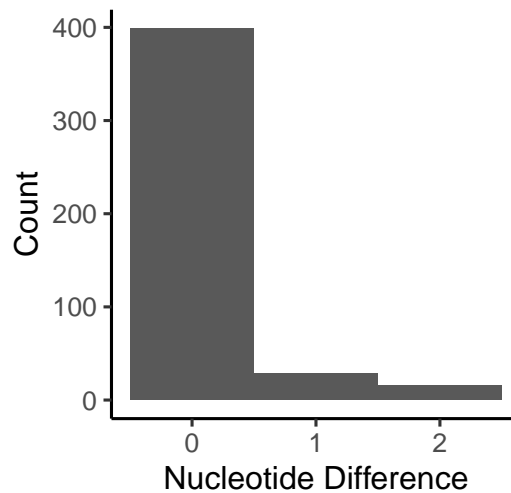
### IGHV3–43\*01

55 sequences assigned  
52 (94.5%) exact matches, in which:  
50 unique CDR3  
6 unique J



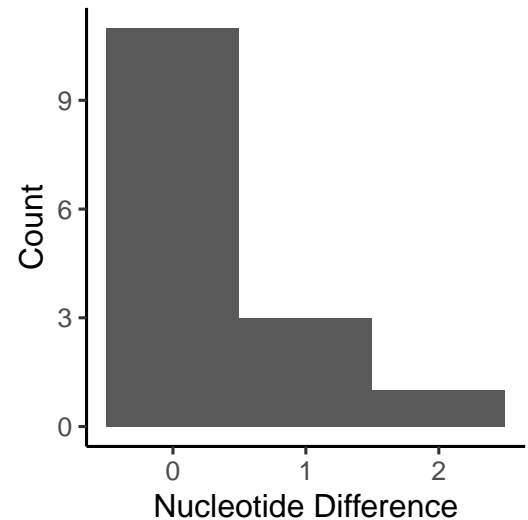
### IGHV3–53\*01\_02

443 sequences assigned  
399 (90.1%) exact matches, in which:  
390 unique CDR3  
7 unique J



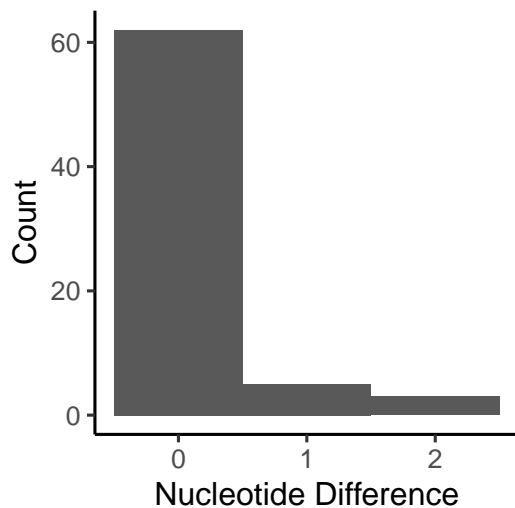
### IGHV3–72\*01

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



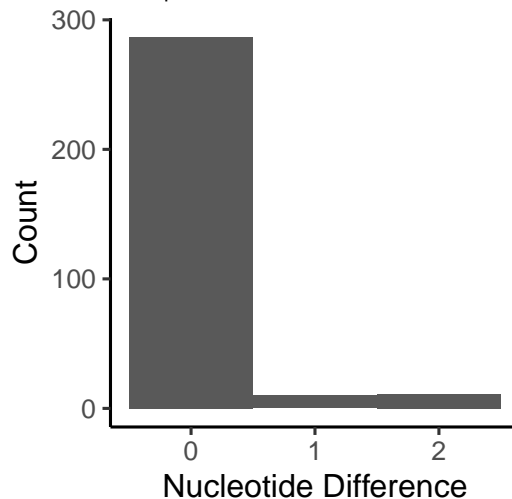
### IGHV3-73\*01\_02

70 sequences assigned  
62 (88.6%) exact matches, in which:  
61 unique CDR3  
6 unique J



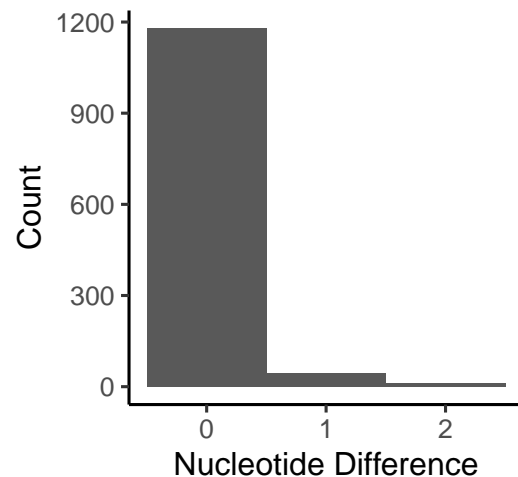
### IGHV4-4\*07

308 sequences assigned  
287 (93.2%) exact matches, in which:  
283 unique CDR3  
5 unique J



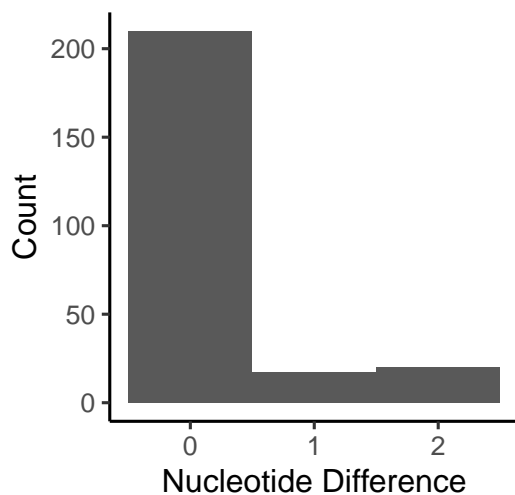
### IGHV4-31\*02

1235 sequences assigned  
1179 (95.5%) exact matches, in which:  
1156 unique CDR3  
7 unique J



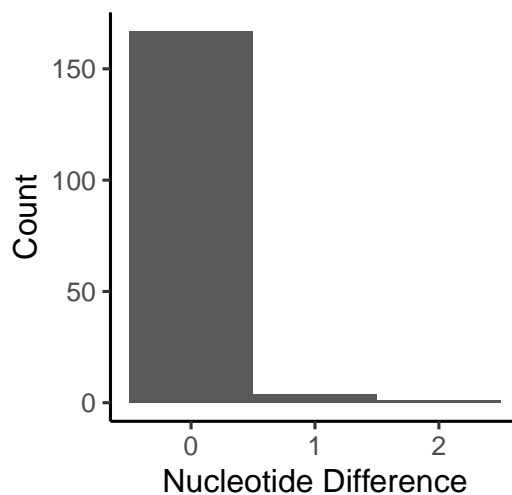
### IGHV3-74\*01\_02

247 sequences assigned  
210 (85%) exact matches, in which:  
200 unique CDR3  
7 unique J



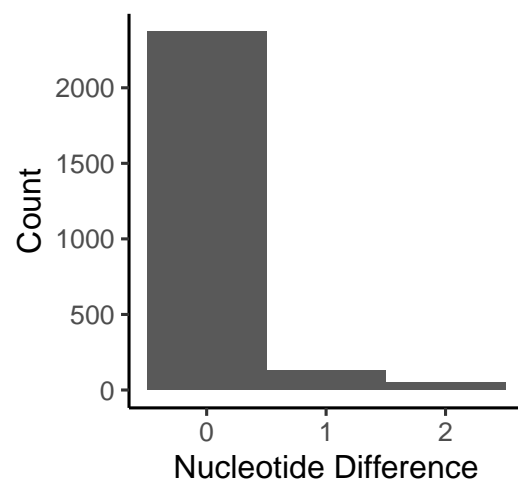
### IGHV4-4\*02\_03

172 sequences assigned  
167 (97.1%) exact matches, in which:  
161 unique CDR3  
6 unique J



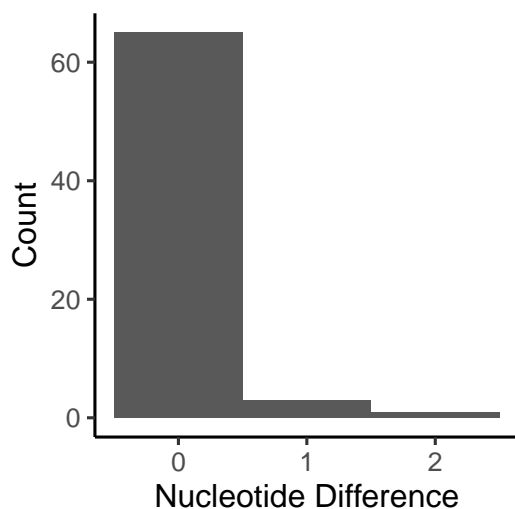
### IGHV4-34\*01\_02

2554 sequences assigned  
2371 (92.8%) exact matches, in which:  
2290 unique CDR3  
7 unique J



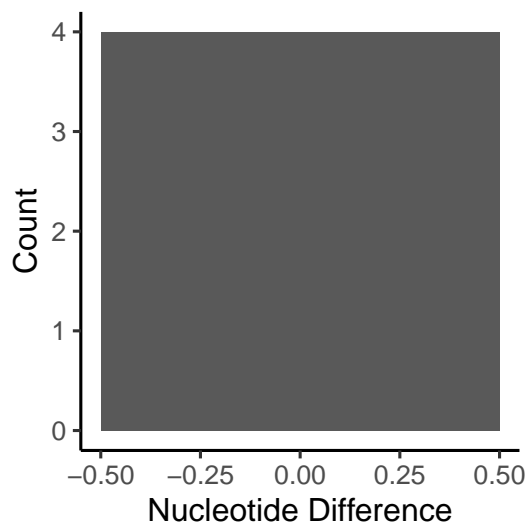
### IGHV3-64D\*06

69 sequences assigned  
65 (94.2%) exact matches, in which:  
63 unique CDR3  
5 unique J



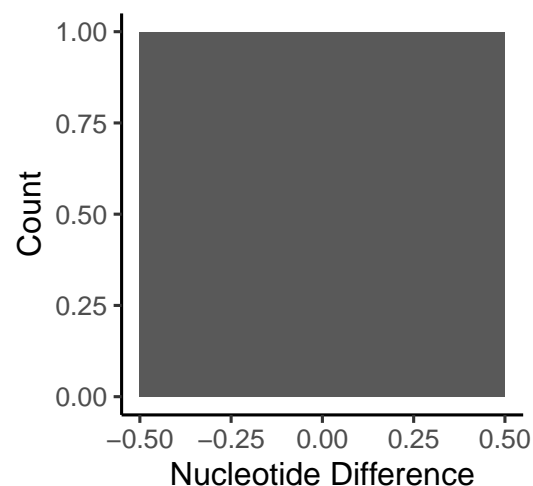
### IGHV4-28\*01\_07

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
3 unique J



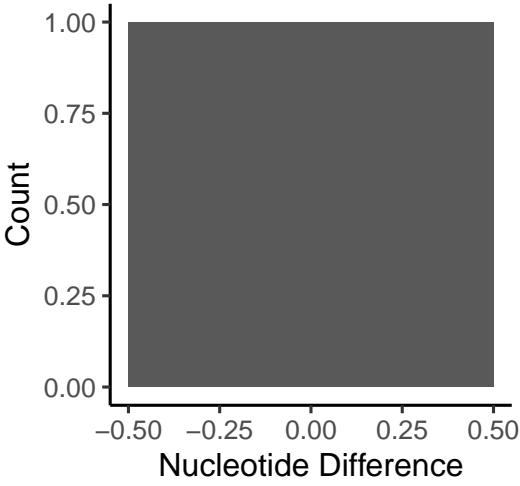
### IGHV4-39\*01\_05

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



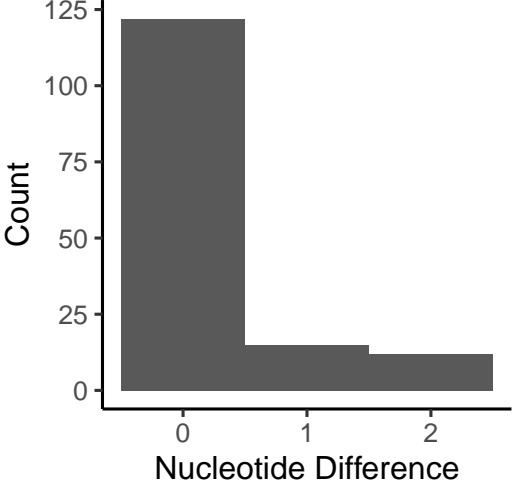
IGHV4-59\*01\_07

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



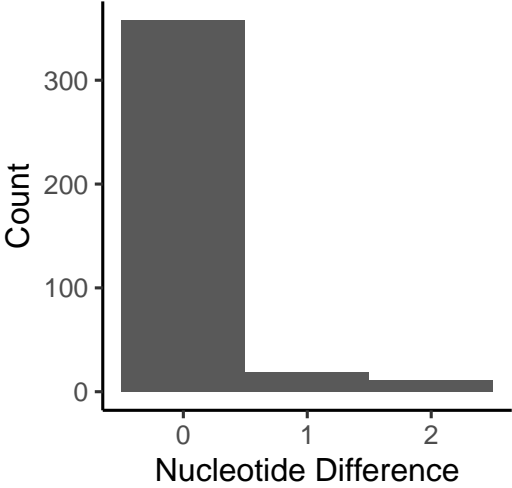
IGHV6-1\*01\_02

149 sequences assigned  
122 (81.9%) exact matches, in which:  
122 unique CDR3  
7 unique J



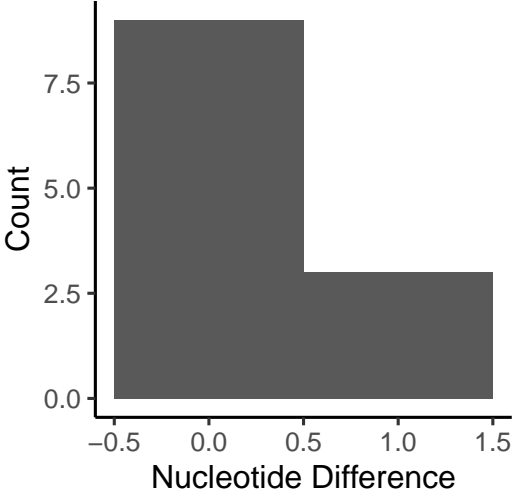
IGHV4-61\*01

388 sequences assigned  
358 (92.3%) exact matches, in which:  
349 unique CDR3  
7 unique J

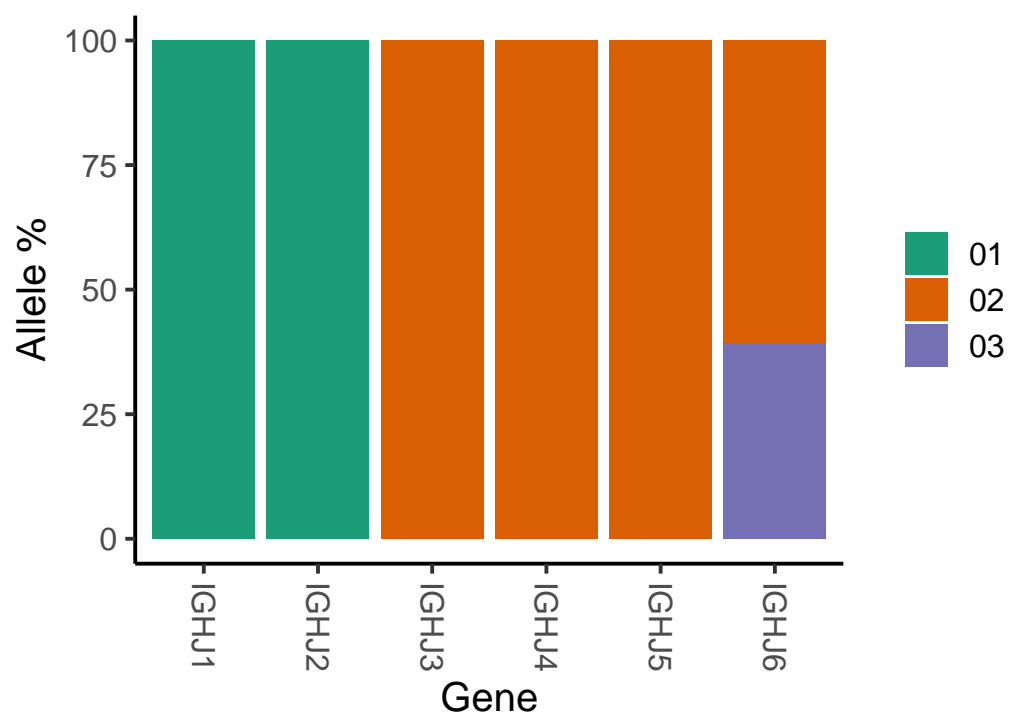


IGHV5-10-1\*01\_03

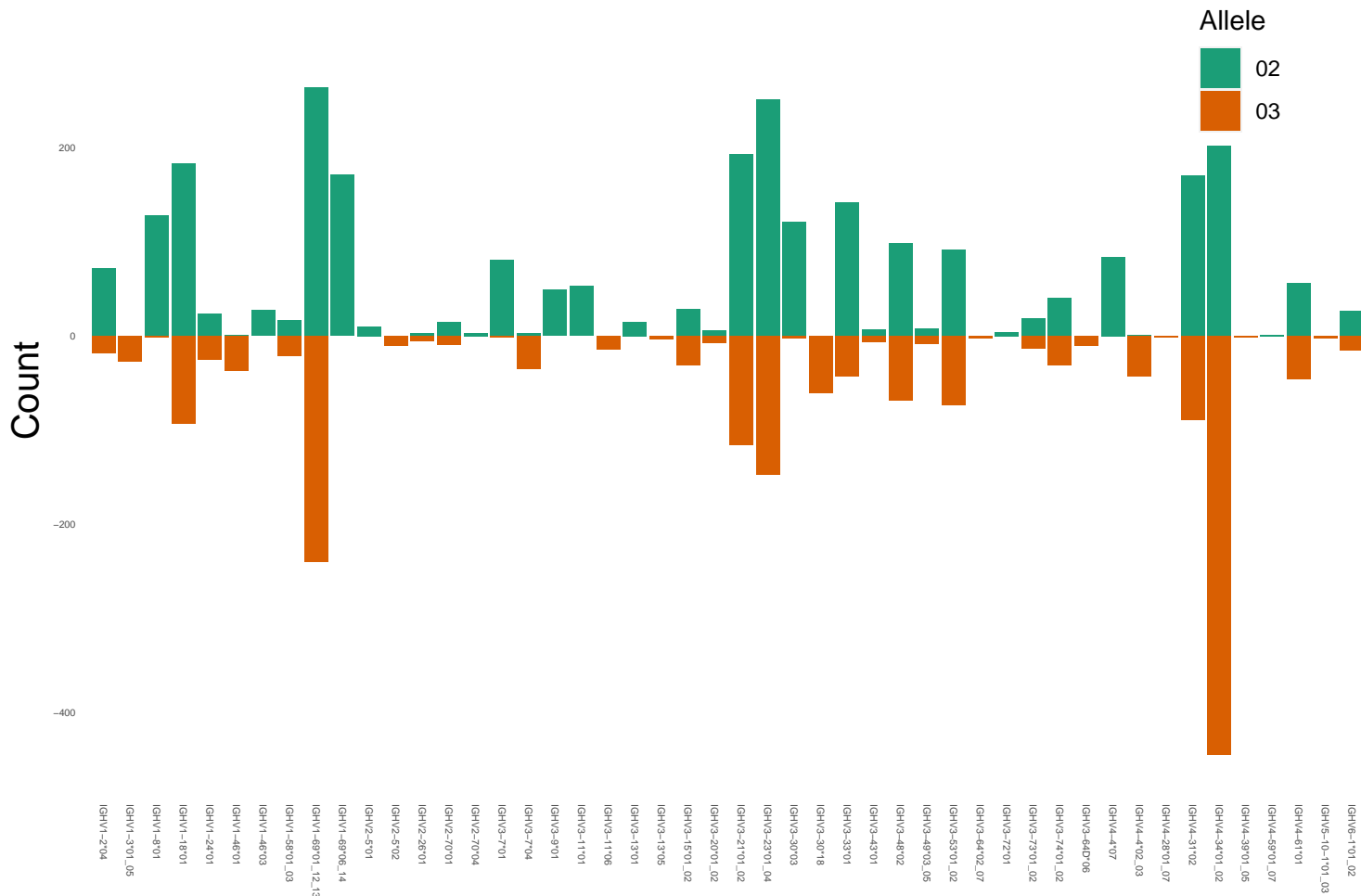
12 sequences assigned  
9 (75%) exact matches, in which:  
9 unique CDR3  
4 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.