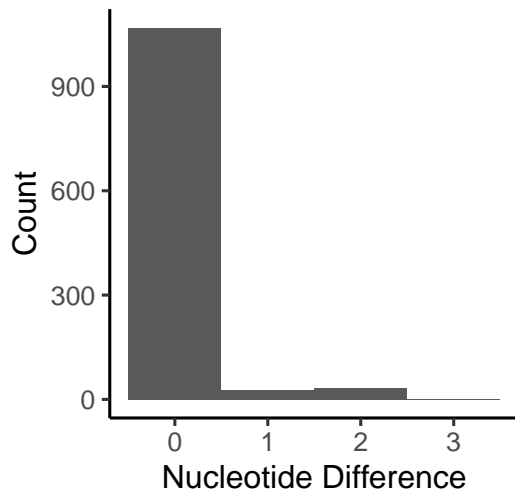


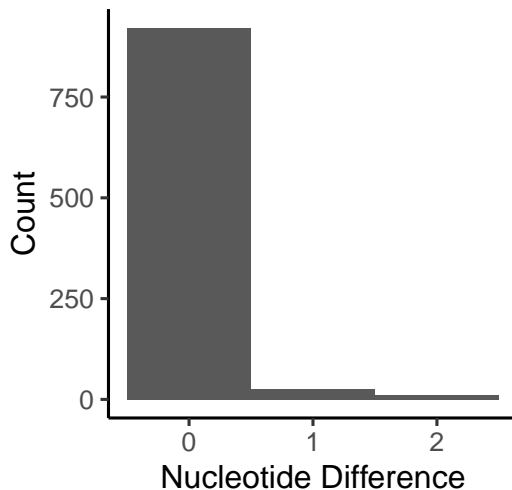
### IGHV1–2\*02

1131 sequences assigned  
1069 (94.5%) exact matches, in which:  
1065 unique CDR3  
6 unique J



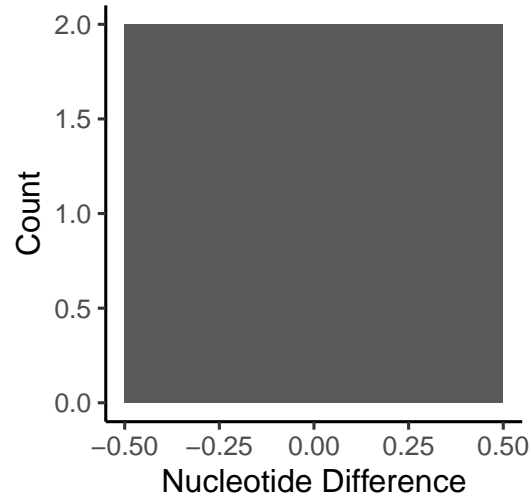
### IGHV1–18\*01

957 sequences assigned  
922 (96.3%) exact matches, in which:  
918 unique CDR3  
7 unique J



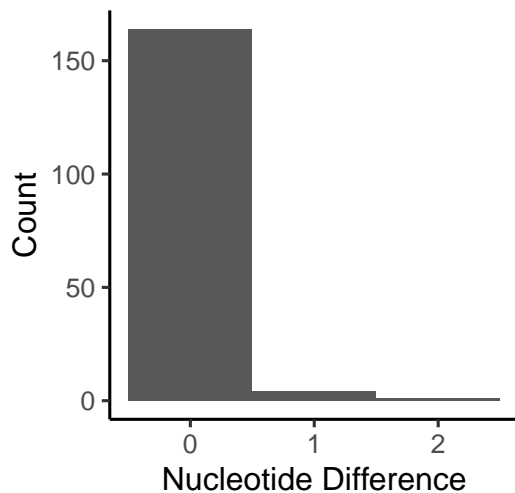
### IGHV1–45\*02

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



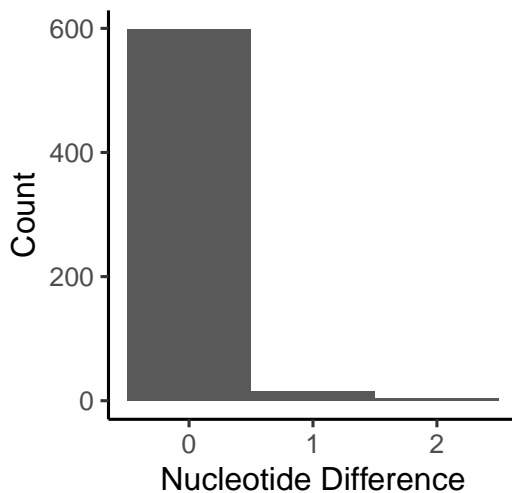
### IGHV1–3\*01\_05

169 sequences assigned  
164 (97%) exact matches, in which:  
164 unique CDR3  
6 unique J



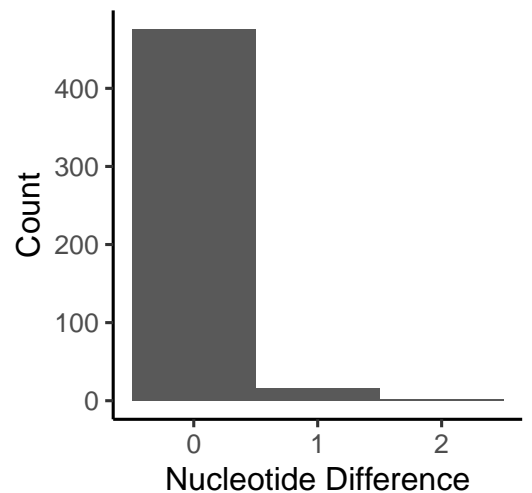
### IGHV1–18\*04

618 sequences assigned  
599 (96.9%) exact matches, in which:  
598 unique CDR3  
6 unique J



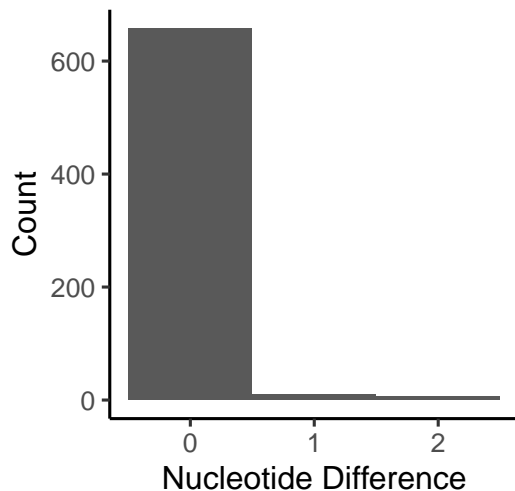
### IGHV1–46\*01

494 sequences assigned  
476 (96.4%) exact matches, in which:  
476 unique CDR3  
7 unique J



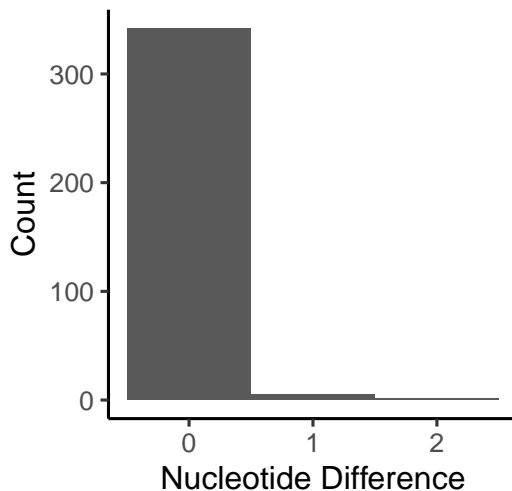
### IGHV1–8\*01

674 sequences assigned  
658 (97.6%) exact matches, in which:  
655 unique CDR3  
7 unique J



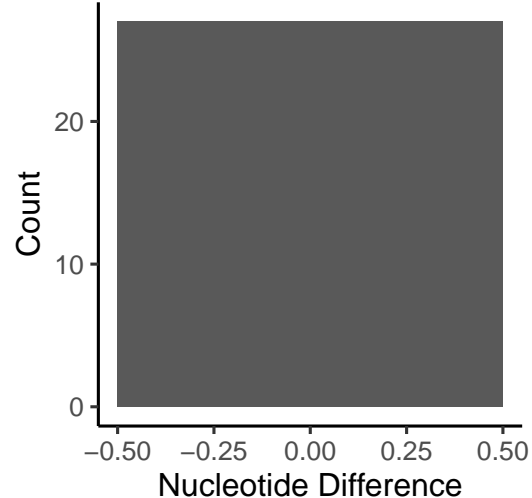
### IGHV1–24\*01

348 sequences assigned  
342 (98.3%) exact matches, in which:  
342 unique CDR3  
7 unique J



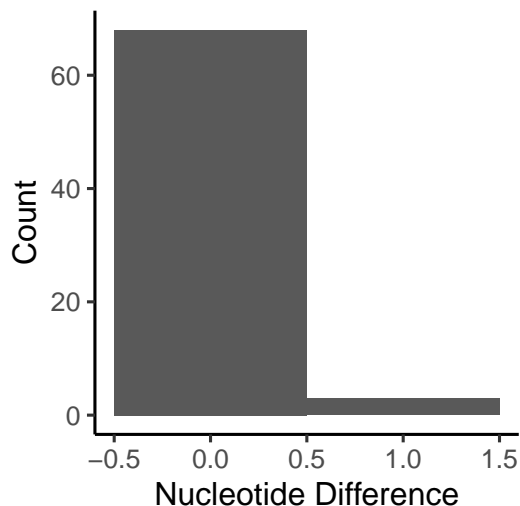
### IGHV1–58\*02

27 sequences assigned  
27 (100%) exact matches, in which:  
27 unique CDR3  
5 unique J



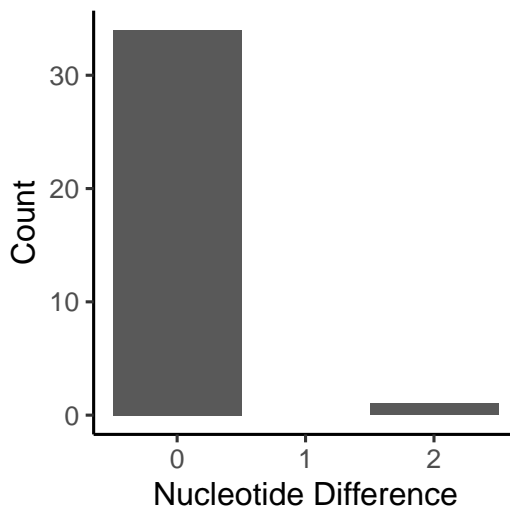
### IGHV1-58\*01\_03

71 sequences assigned  
68 (95.8%) exact matches, in which:  
68 unique CDR3  
5 unique J



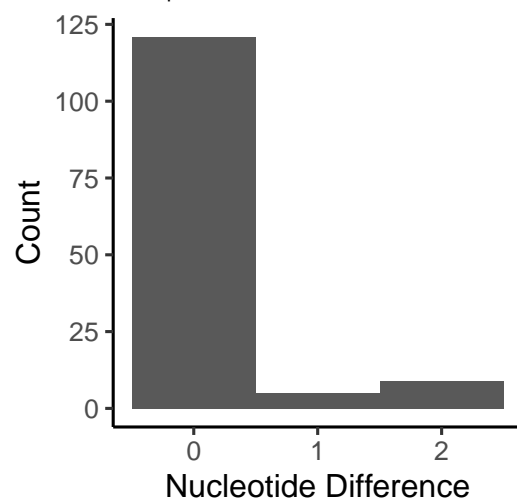
### IGHV2-26\*01

35 sequences assigned  
34 (97.1%) exact matches, in which:  
34 unique CDR3  
5 unique J



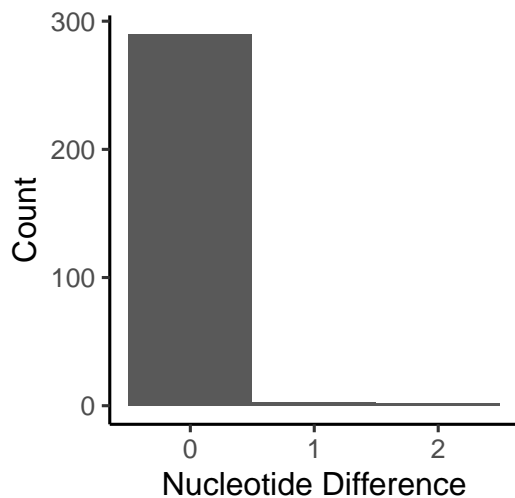
### IGHV2-70\*11\_15

135 sequences assigned  
121 (89.6%) exact matches, in which:  
118 unique CDR3  
4 unique J



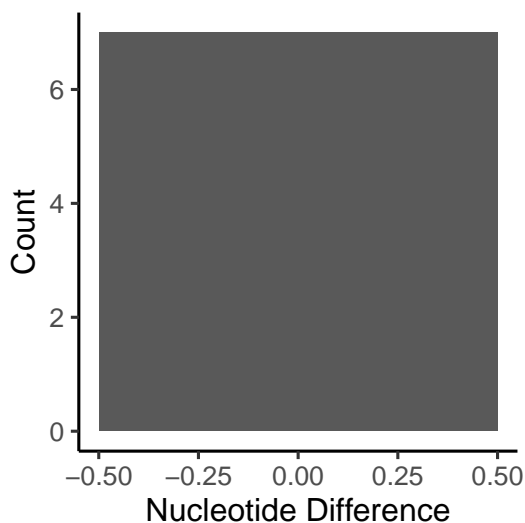
### IGHV1-69\*04\_09

295 sequences assigned  
290 (98.3%) exact matches, in which:  
290 unique CDR3  
6 unique J



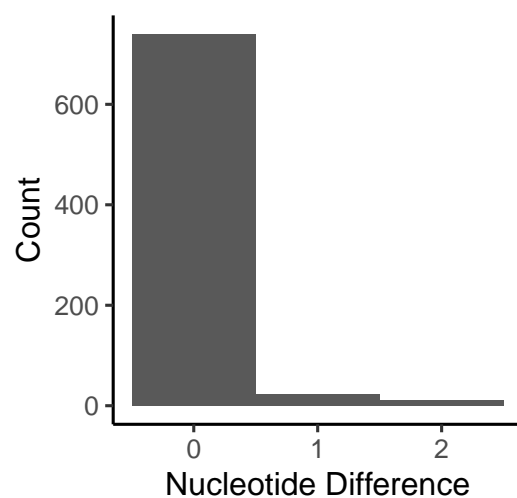
### IGHV2-26\*02

7 sequences assigned  
7 (100%) exact matches, in which:  
7 unique CDR3  
5 unique J



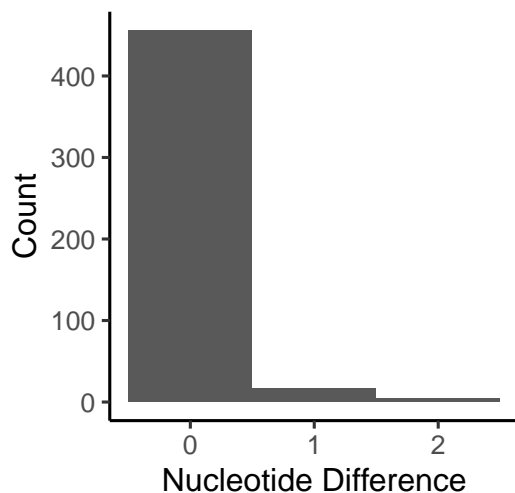
### IGHV3-7\*01

774 sequences assigned  
740 (95.6%) exact matches, in which:  
731 unique CDR3  
7 unique J



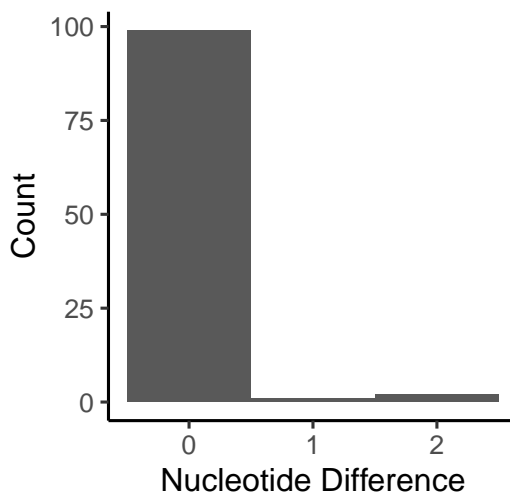
### IGHV2-5\*01

477 sequences assigned  
456 (95.6%) exact matches, in which:  
455 unique CDR3  
7 unique J



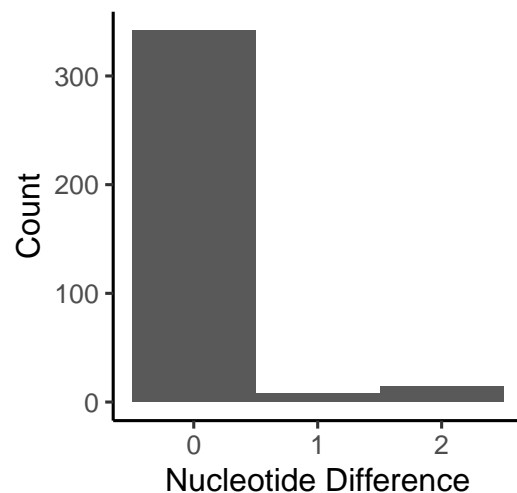
### IGHV2-70\*01

102 sequences assigned  
99 (97.1%) exact matches, in which:  
96 unique CDR3  
6 unique J



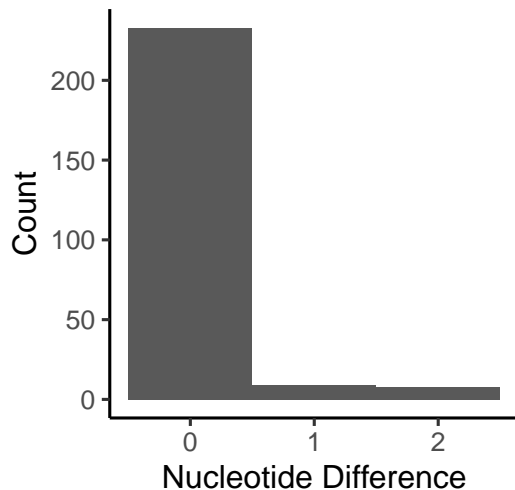
### IGHV3-9\*01

364 sequences assigned  
342 (94%) exact matches, in which:  
339 unique CDR3  
6 unique J



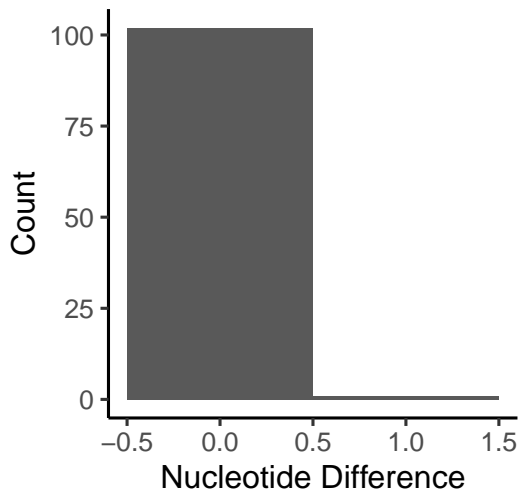
### IGHV3-11\*01

250 sequences assigned  
233 (93.2%) exact matches, in which:  
231 unique CDR3  
6 unique J



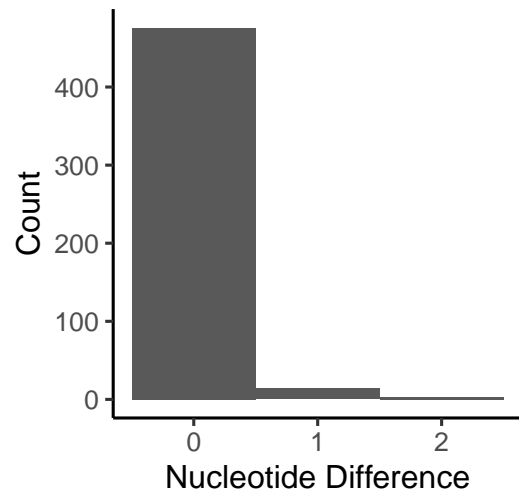
### IGHV3-13\*04

103 sequences assigned  
102 (99%) exact matches, in which:  
102 unique CDR3  
5 unique J



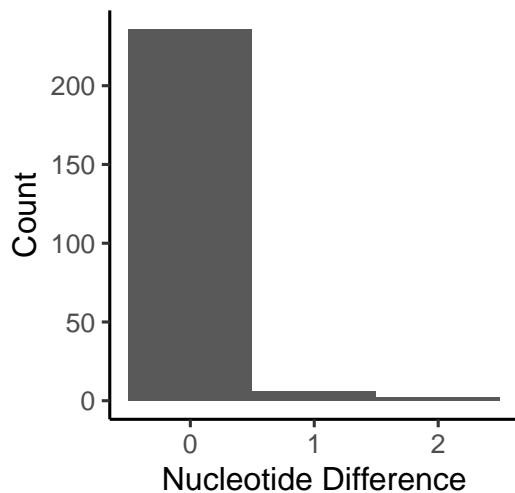
### IGHV3-30-3\*01

493 sequences assigned  
476 (96.6%) exact matches, in which:  
472 unique CDR3  
6 unique J



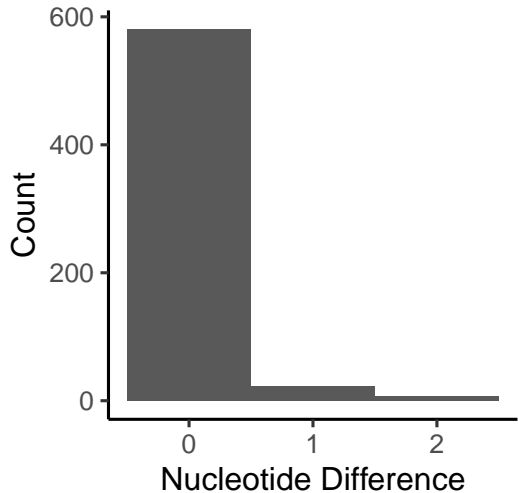
### IGHV3-11\*03\_05

244 sequences assigned  
236 (96.7%) exact matches, in which:  
233 unique CDR3  
7 unique J



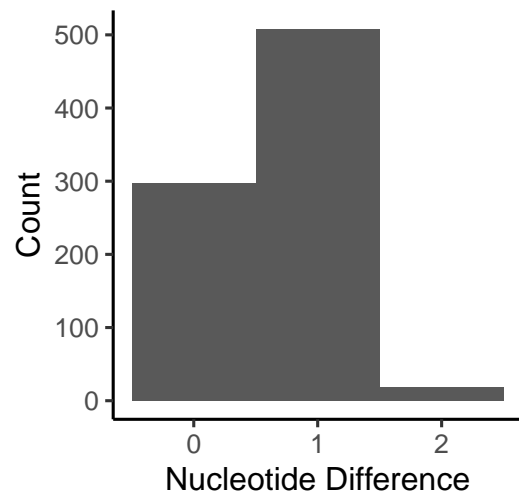
### IGHV3-15\*01\_02

611 sequences assigned  
581 (95.1%) exact matches, in which:  
578 unique CDR3  
7 unique J



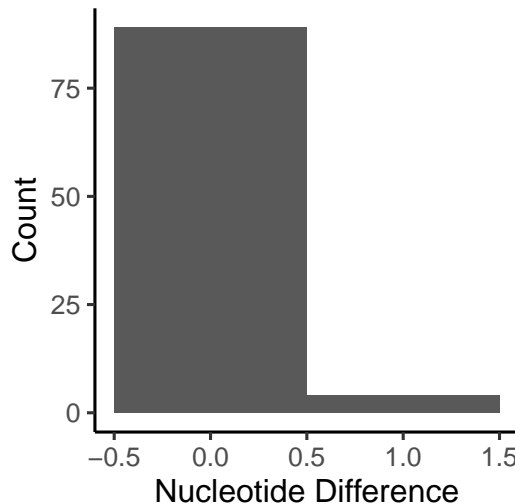
### IGHV3-33\*01

824 sequences assigned  
297 (36%) exact matches, in which:  
297 unique CDR3  
7 unique J



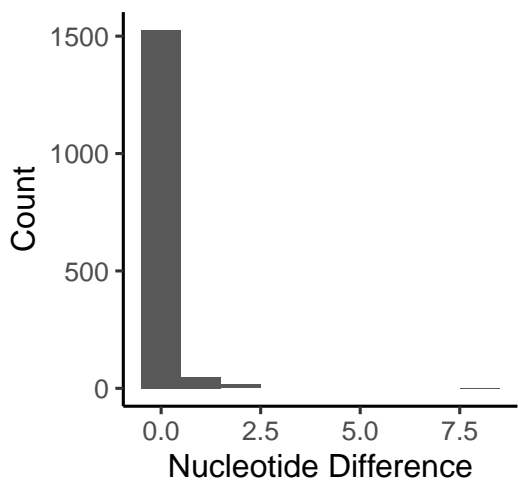
### IGHV3-13\*01

93 sequences assigned  
89 (95.7%) exact matches, in which:  
88 unique CDR3  
5 unique J



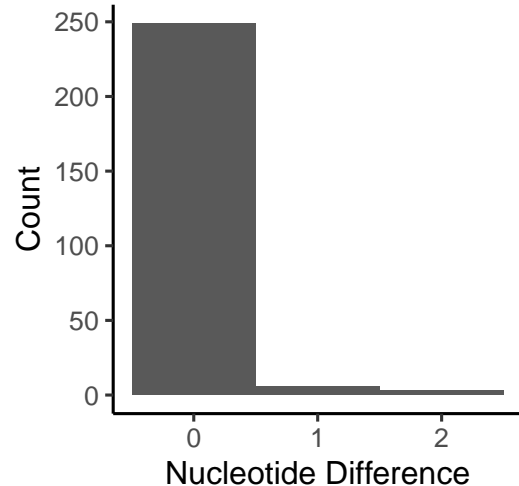
### IGHV3-21\*01\_02

1590 sequences assigned  
1526 (96%) exact matches, in which:  
1483 unique CDR3  
7 unique J



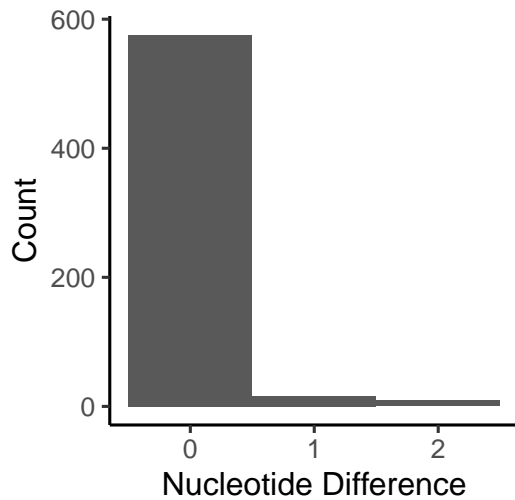
### IGHV3-43\*02

258 sequences assigned  
249 (96.5%) exact matches, in which:  
238 unique CDR3  
6 unique J



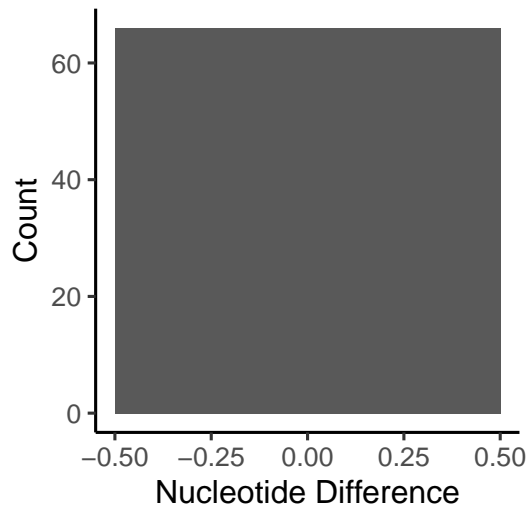
### IGHV3-48\*02

601 sequences assigned  
576 (95.8%) exact matches, in which:  
567 unique CDR3  
6 unique J



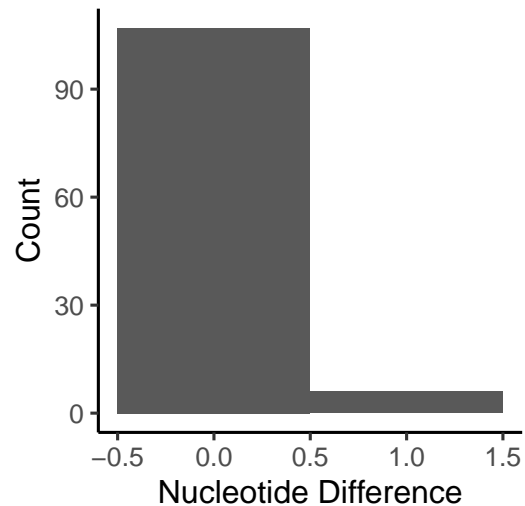
### IGHV3-49\*03\_05

66 sequences assigned  
66 (100%) exact matches, in which:  
65 unique CDR3  
5 unique J



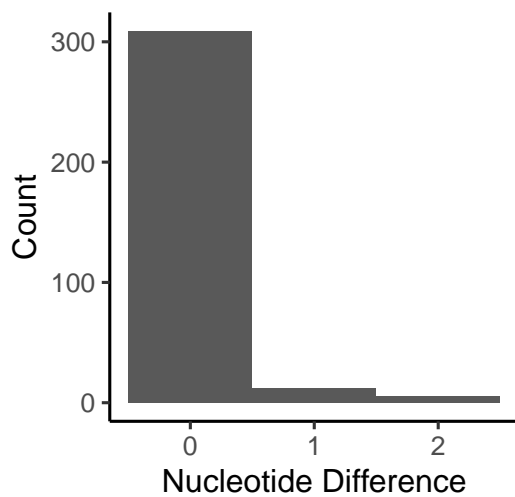
### IGHV3-64\*01

113 sequences assigned  
107 (94.7%) exact matches, in which:  
104 unique CDR3  
6 unique J



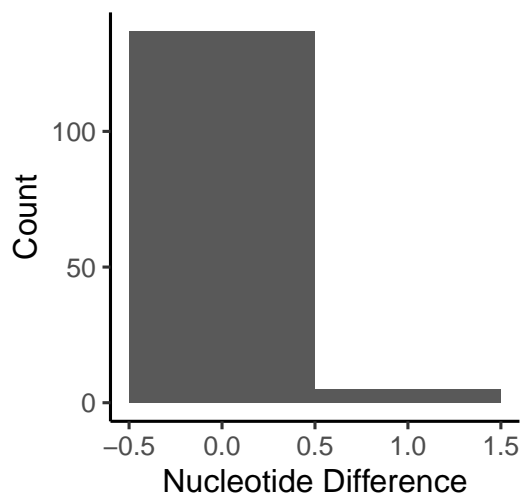
### IGHV3-48\*03

326 sequences assigned  
309 (94.8%) exact matches, in which:  
300 unique CDR3  
6 unique J



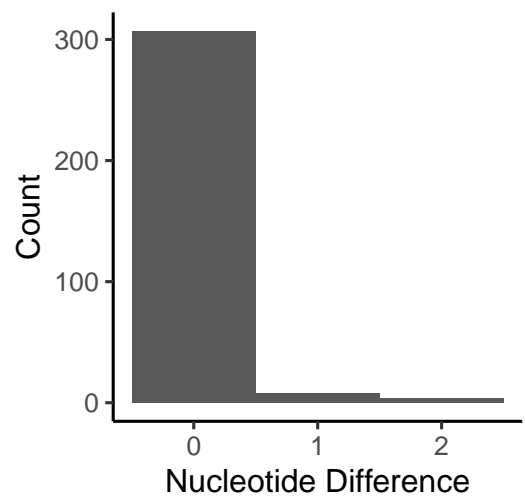
### IGHV3-53\*04

142 sequences assigned  
137 (96.5%) exact matches, in which:  
132 unique CDR3  
6 unique J



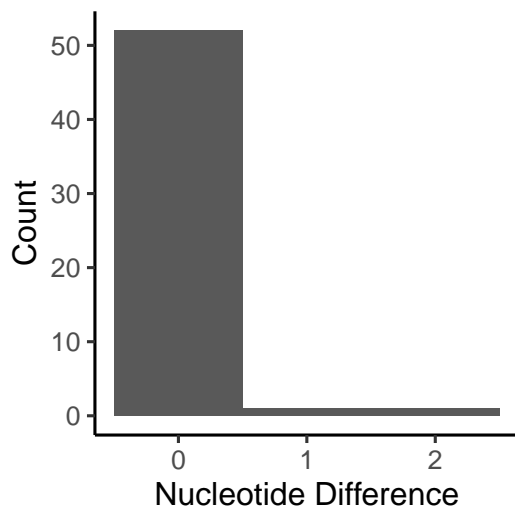
### IGHV3-66\*01

319 sequences assigned  
307 (96.2%) exact matches, in which:  
299 unique CDR3  
6 unique J



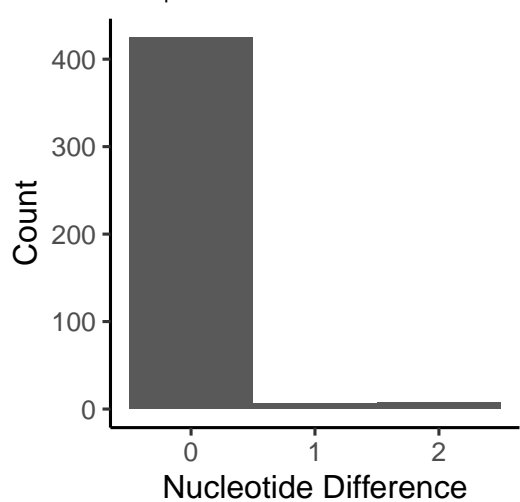
### IGHV3-49\*04

54 sequences assigned  
52 (96.3%) exact matches, in which:  
52 unique CDR3  
5 unique J



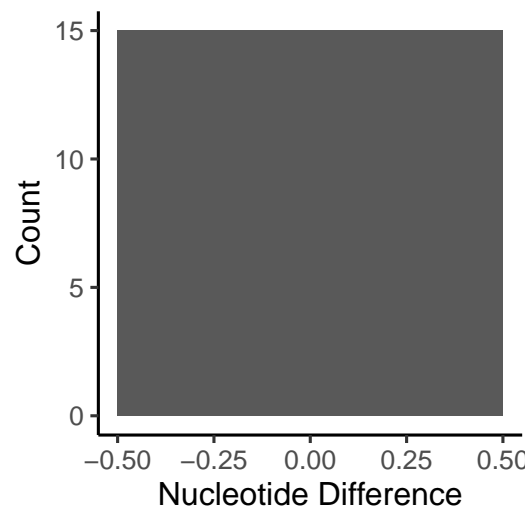
### IGHV3-53\*01\_02

438 sequences assigned  
425 (97%) exact matches, in which:  
418 unique CDR3  
6 unique J



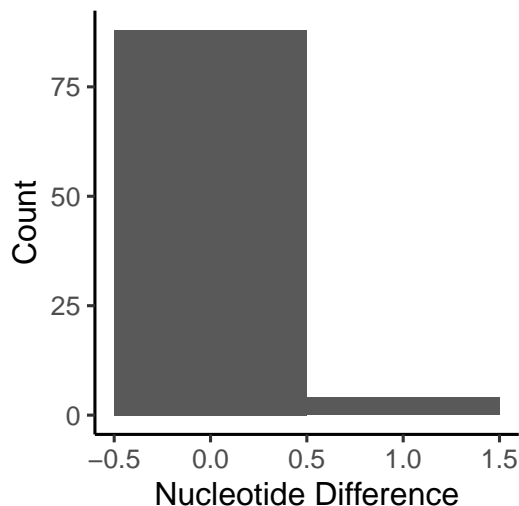
### IGHV3-72\*01

15 sequences assigned  
15 (100%) exact matches, in which:  
14 unique CDR3  
5 unique J



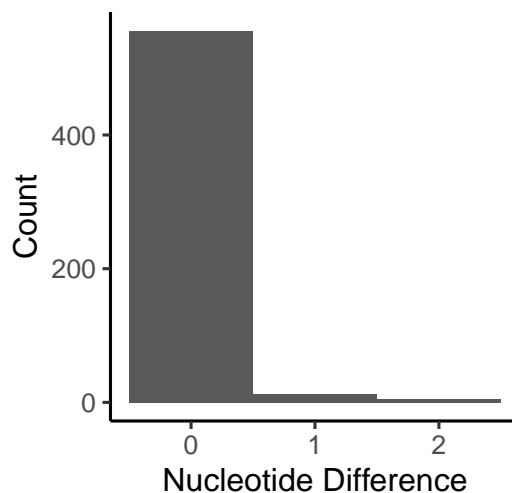
### IGHV3-73\*01\_02

92 sequences assigned  
88 (95.7%) exact matches, in which:  
88 unique CDR3  
6 unique J



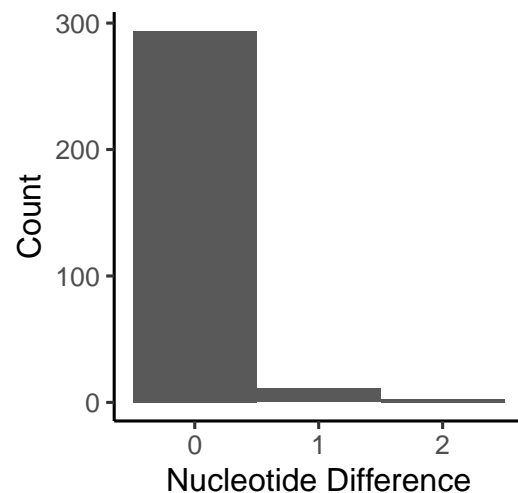
### IGHV4-4\*07

573 sequences assigned  
556 (97%) exact matches, in which:  
534 unique CDR3  
6 unique J



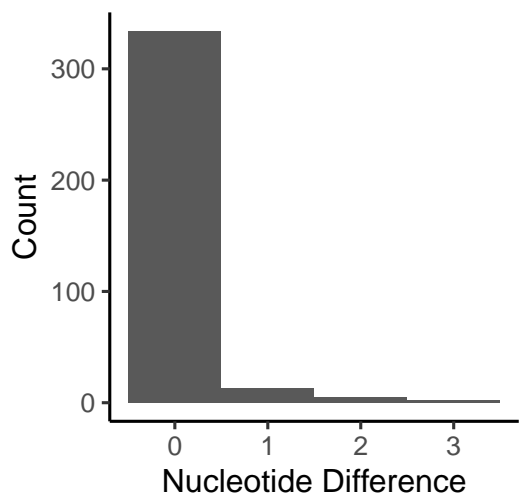
### IGHV4-30-4\*01

308 sequences assigned  
294 (95.5%) exact matches, in which:  
292 unique CDR3  
6 unique J



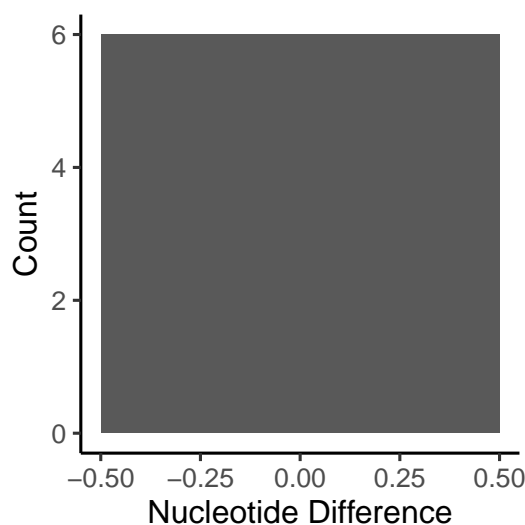
### IGHV3-74\*01\_02

354 sequences assigned  
334 (94.4%) exact matches, in which:  
327 unique CDR3  
7 unique J



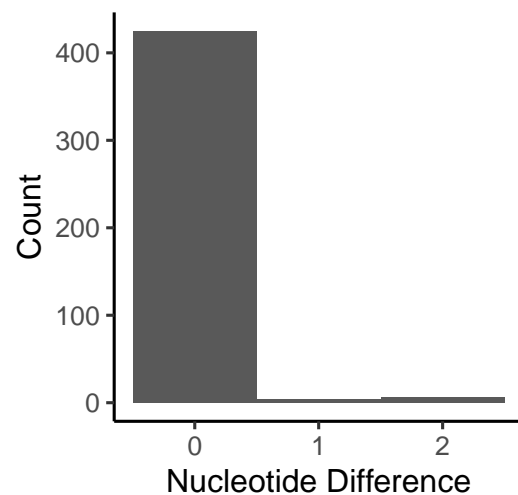
### IGHV4-28\*01\_07

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



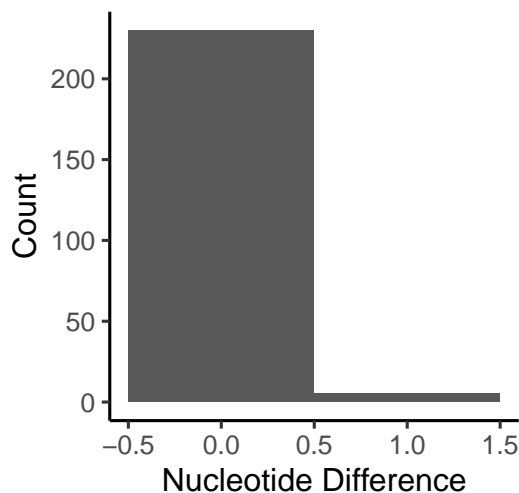
### IGHV4-31\*03\_04

435 sequences assigned  
425 (97.7%) exact matches, in which:  
420 unique CDR3  
7 unique J



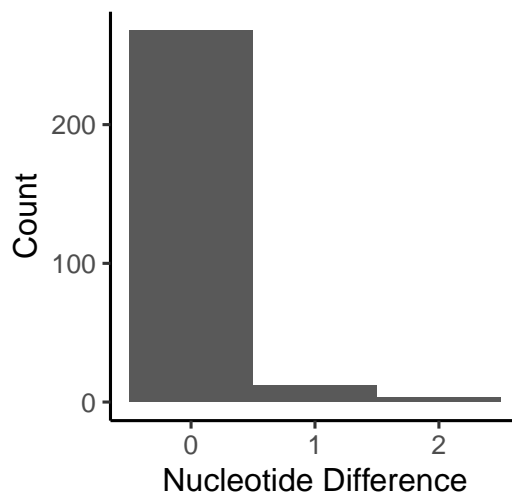
### IGHV3-64D\*09

235 sequences assigned  
230 (97.9%) exact matches, in which:  
228 unique CDR3  
6 unique J



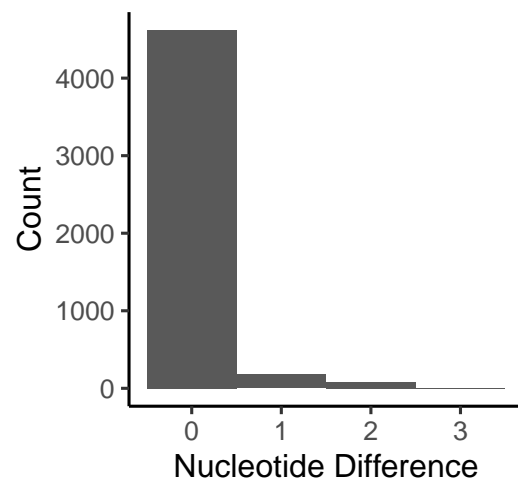
### IGHV4-30-2\*01

283 sequences assigned  
268 (94.7%) exact matches, in which:  
266 unique CDR3  
6 unique J



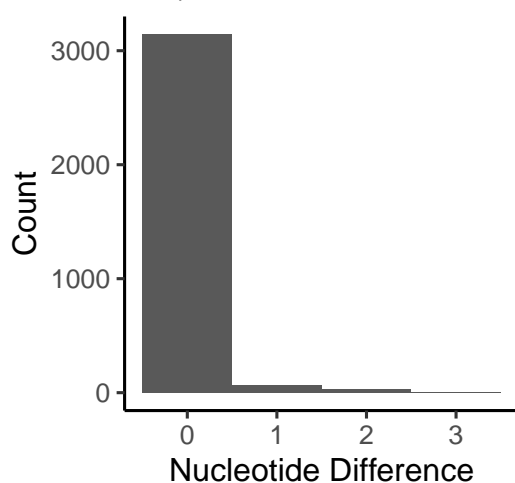
### IGHV4-34\*01\_02

4881 sequences assigned  
4620 (94.7%) exact matches, in which:  
4506 unique CDR3  
7 unique J



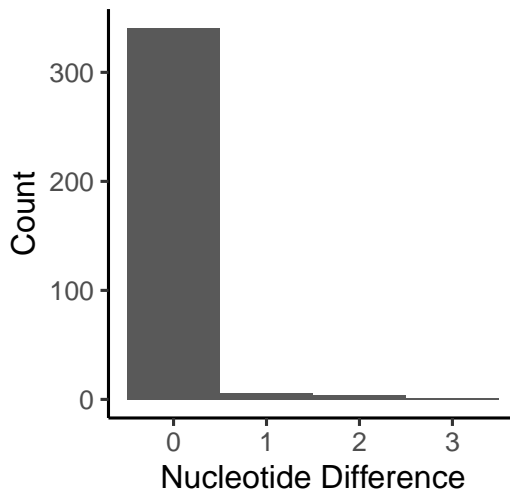
### IGHV4-39\*01\_05

3240 sequences assigned  
3143 (97%) exact matches, in which:  
3070 unique CDR3  
7 unique J



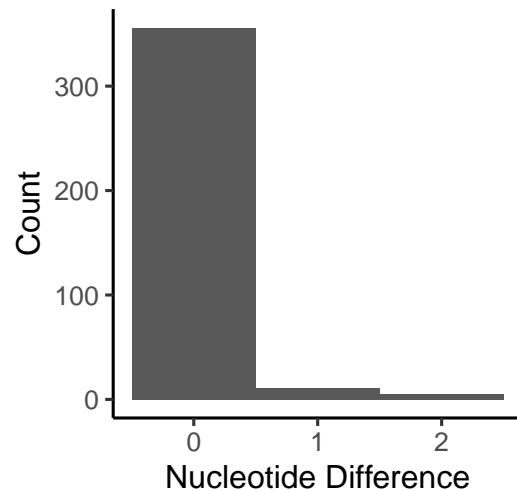
### IGHV4-61\*01

352 sequences assigned  
341 (96.9%) exact matches, in which:  
337 unique CDR3  
6 unique J



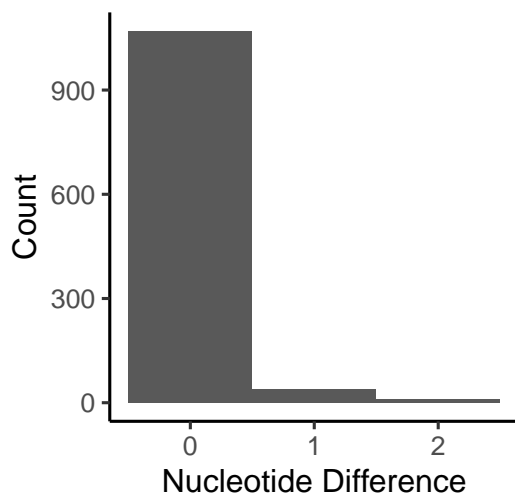
### IGHV6-1\*01\_02

372 sequences assigned  
356 (95.7%) exact matches, in which:  
355 unique CDR3  
7 unique J



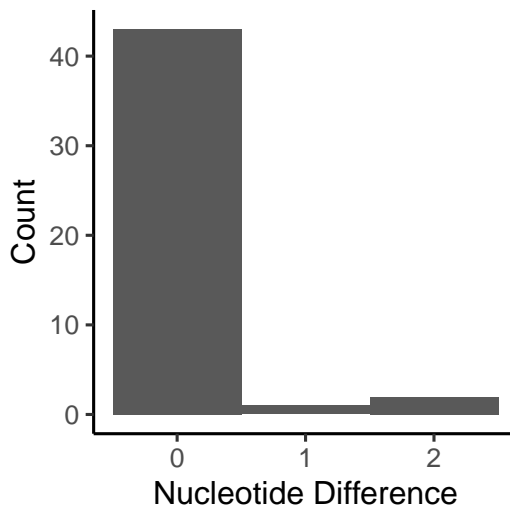
### IGHV4-59\*08

1120 sequences assigned  
1070 (95.5%) exact matches, in which:  
1049 unique CDR3  
6 unique J



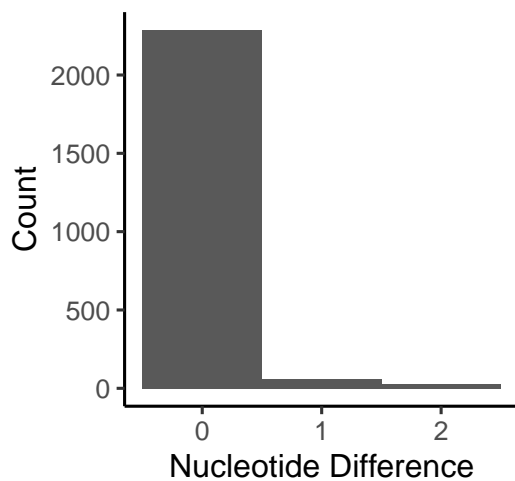
### IGHV5-10-1\*01\_03

46 sequences assigned  
43 (93.5%) exact matches, in which:  
43 unique CDR3  
5 unique J



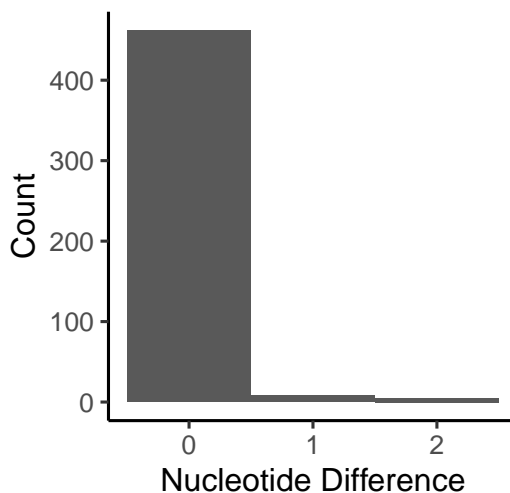
### IGHV4-59\*01\_07

2372 sequences assigned  
2287 (96.4%) exact matches, in which:  
2234 unique CDR3  
7 unique J

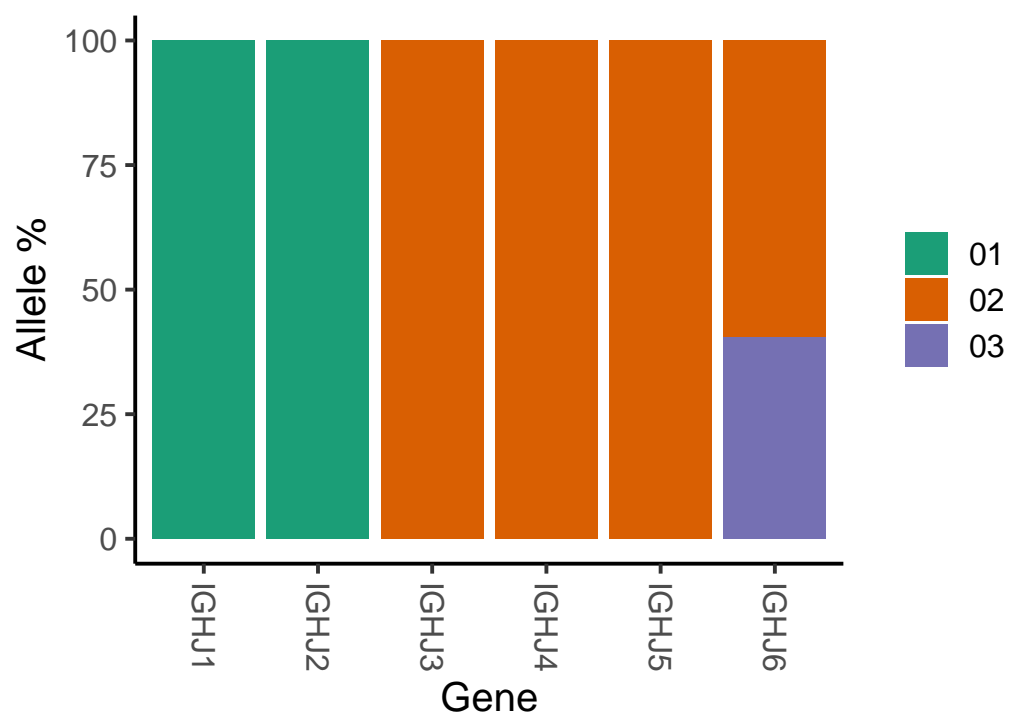


### IGHV5-51\*01\_03

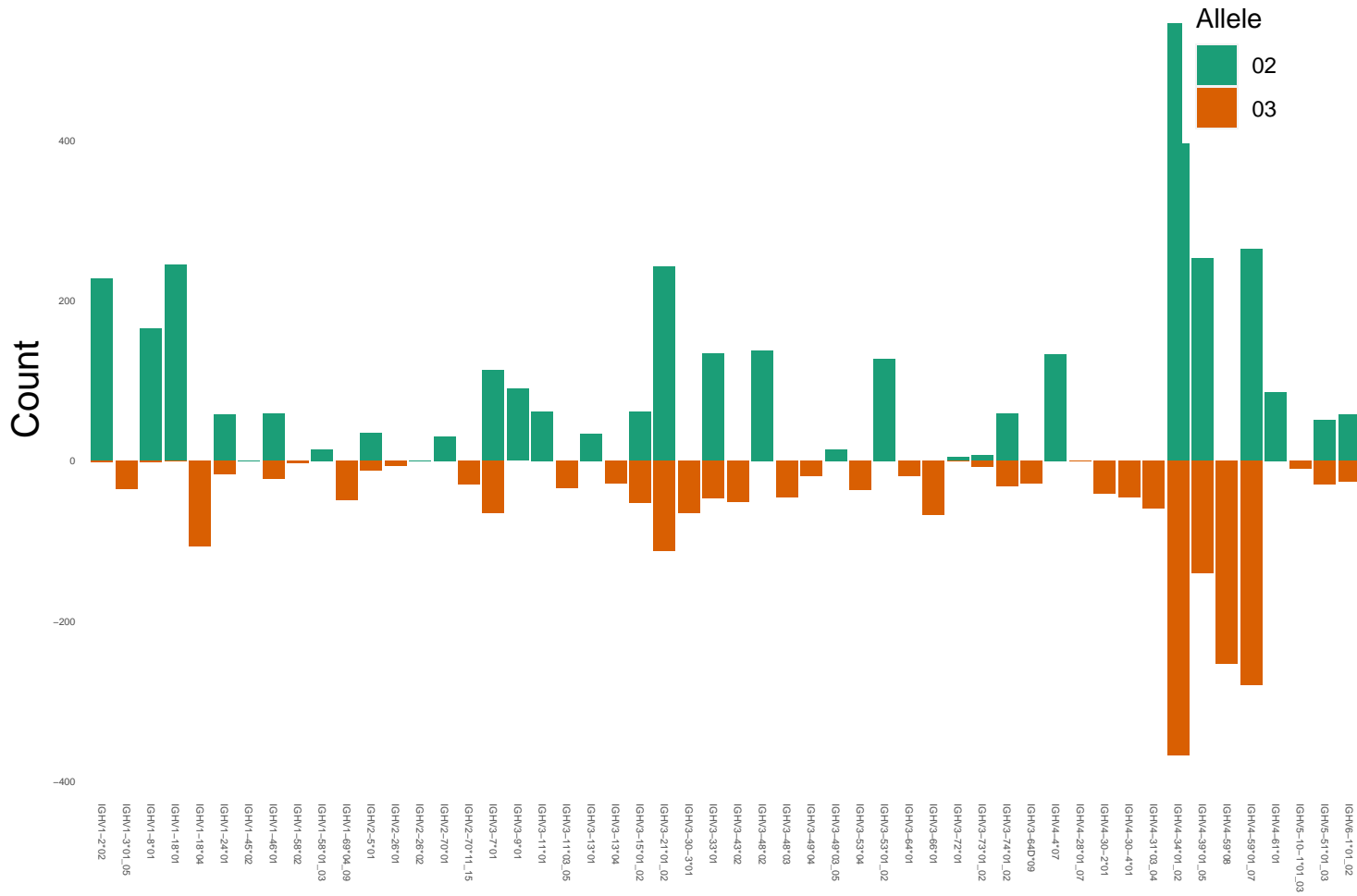
475 sequences assigned  
462 (97.3%) exact matches, in which:  
461 unique CDR3  
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Novel sequence(s)IGHV3-11\*06\_T300C are not listed in the genotype and will be ignored.