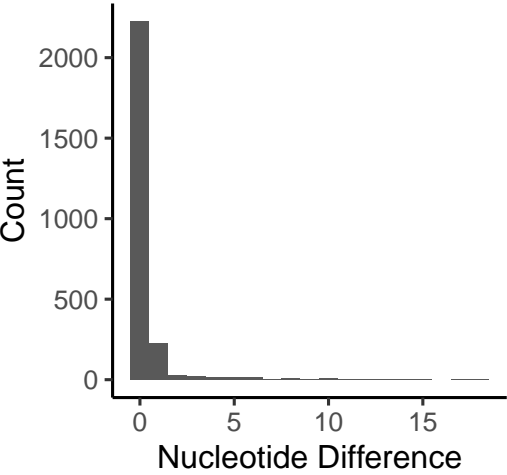


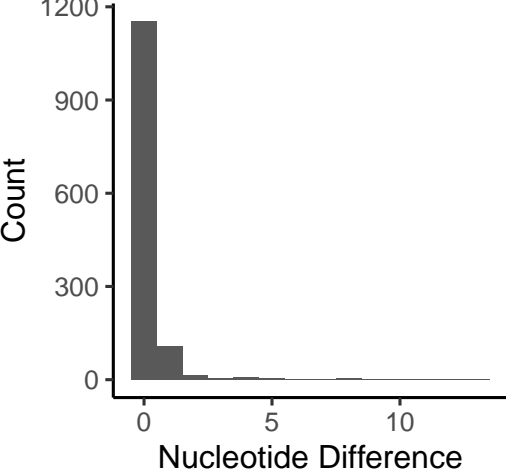
IGHV1-2\*02

2588 sequences assigned  
2225 (86%) exact matches, in which:  
2157 unique CDR3  
7 unique J



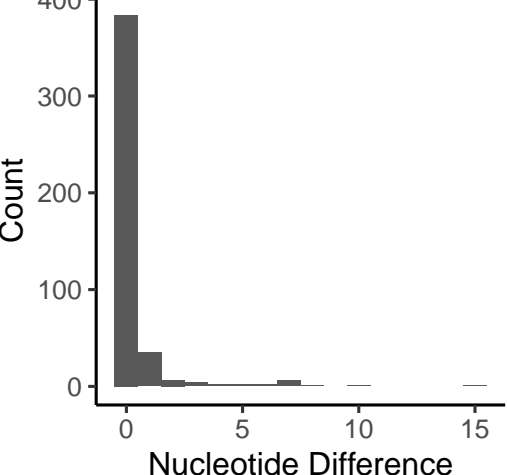
IGHV1-18\*01

1309 sequences assigned  
1153 (88.1%) exact matches, in which:  
1137 unique CDR3  
7 unique J



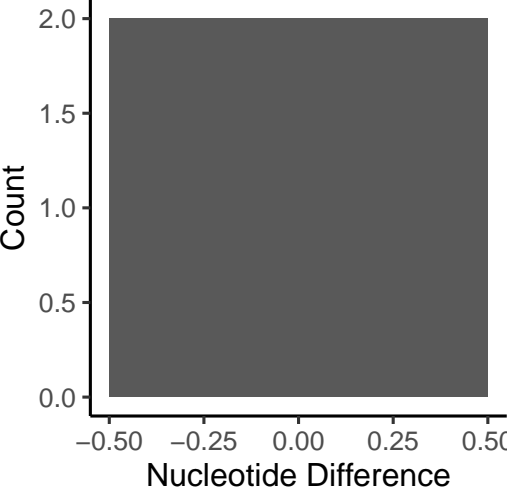
IGHV1-46\*01

445 sequences assigned  
384 (86.3%) exact matches, in which:  
374 unique CDR3  
7 unique J



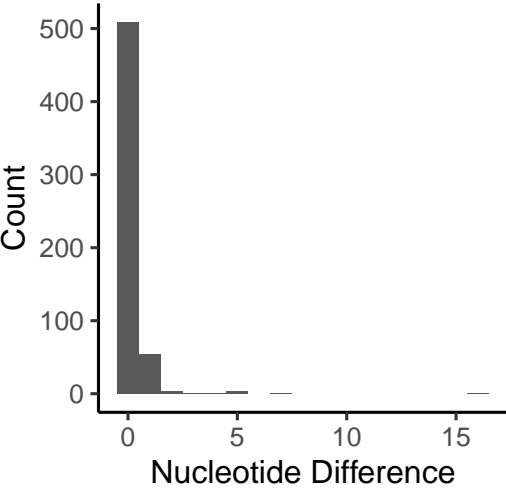
IGHV1-3\*02

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



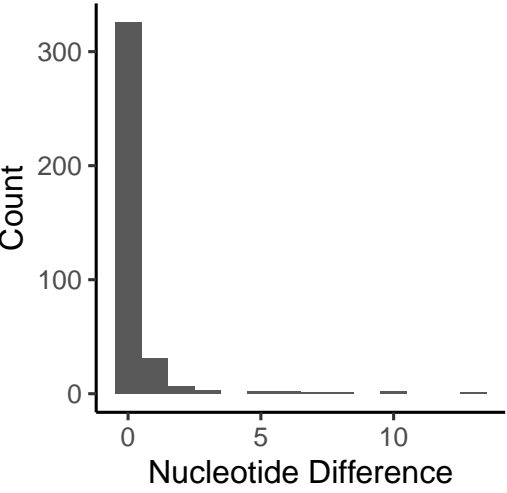
IGHV1-24\*01

574 sequences assigned  
509 (88.7%) exact matches, in which:  
496 unique CDR3  
7 unique J



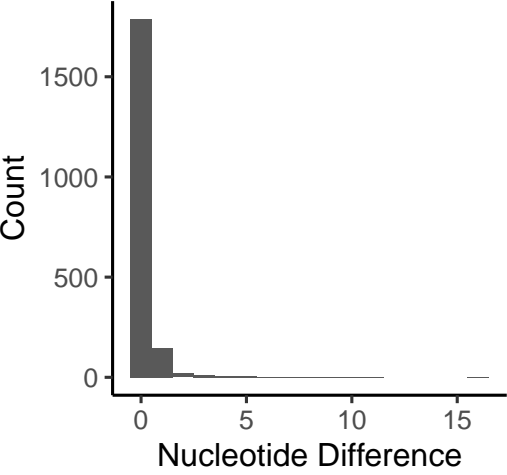
IGHV1-46\*03

376 sequences assigned  
326 (86.7%) exact matches, in which:  
321 unique CDR3  
6 unique J



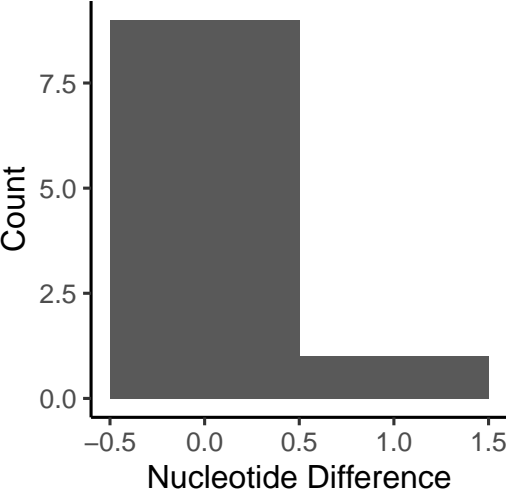
IGHV1-8\*01

1993 sequences assigned  
1788 (89.7%) exact matches, in which:  
1749 unique CDR3  
7 unique J



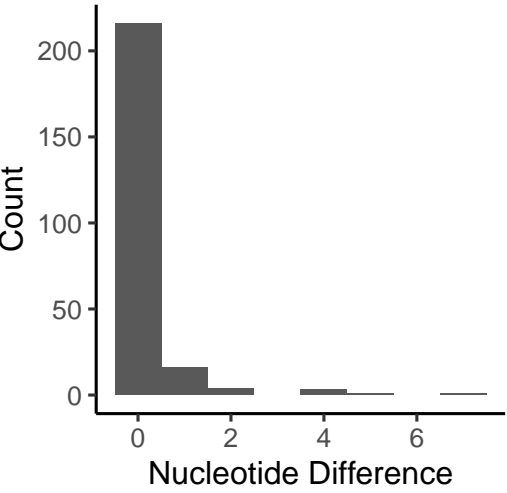
IGHV1-45\*02

10 sequences assigned  
9 (90%) exact matches, in which:  
9 unique CDR3  
4 unique J



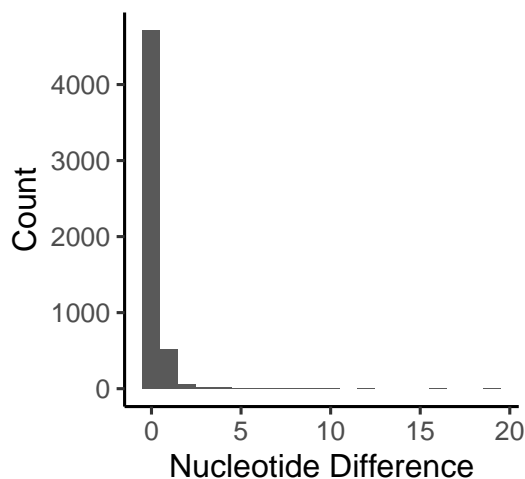
IGHV1-58\*01

241 sequences assigned  
216 (89.6%) exact matches, in which:  
214 unique CDR3  
6 unique J



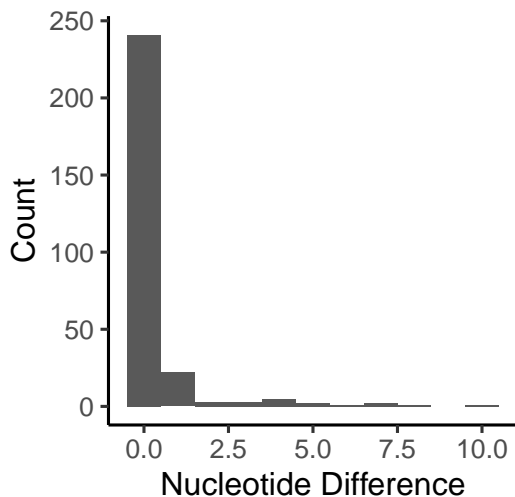
### IGHV1-69\*01

5347 sequences assigned  
4712 (88.1%) exact matches, in which:  
4618 unique CDR3  
7 unique J



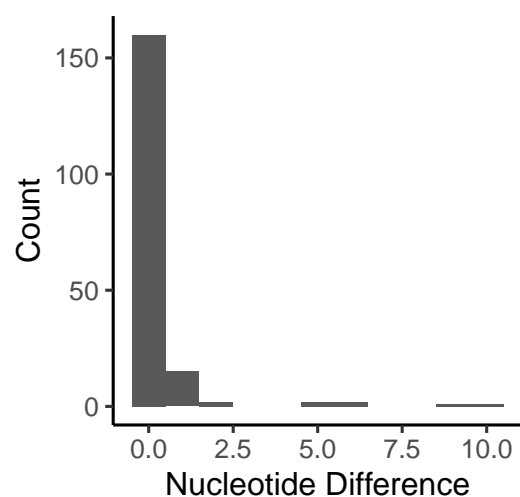
### IGHV2-5\*01

281 sequences assigned  
241 (85.8%) exact matches, in which:  
239 unique CDR3  
7 unique J



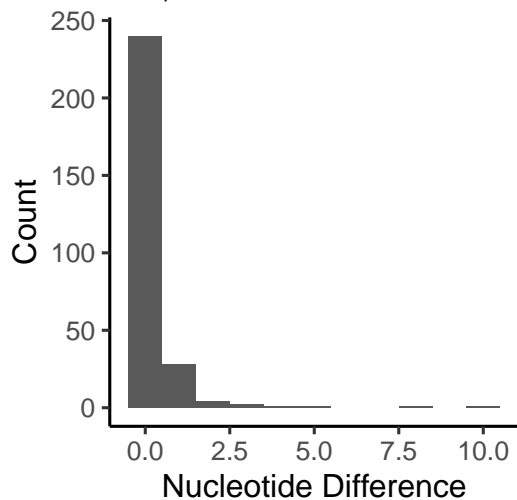
### IGHV2-70\*01

183 sequences assigned  
160 (87.4%) exact matches, in which:  
159 unique CDR3  
7 unique J



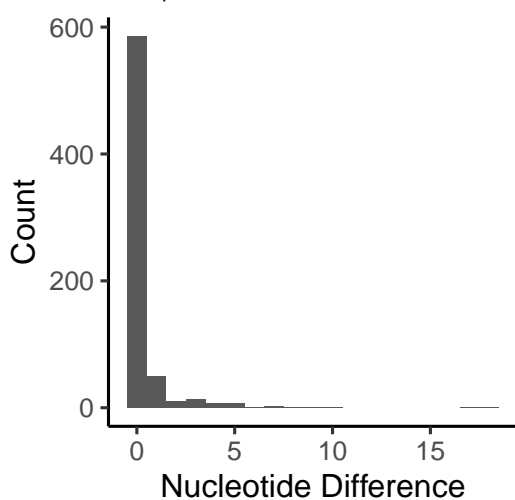
### IGHV1-69-2\*01

278 sequences assigned  
240 (86.3%) exact matches, in which:  
238 unique CDR3  
7 unique J



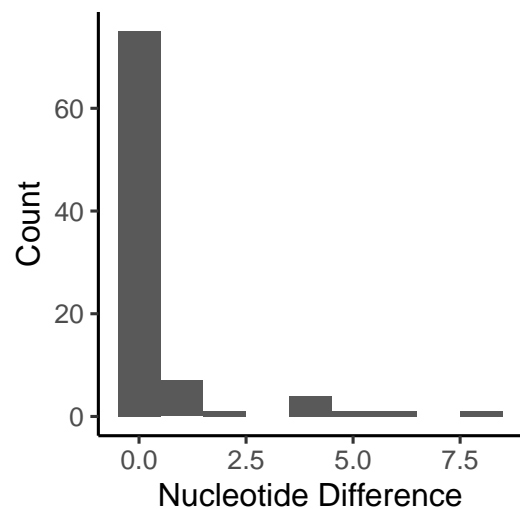
### IGHV2-5\*02

682 sequences assigned  
586 (85.9%) exact matches, in which:  
576 unique CDR3  
6 unique J



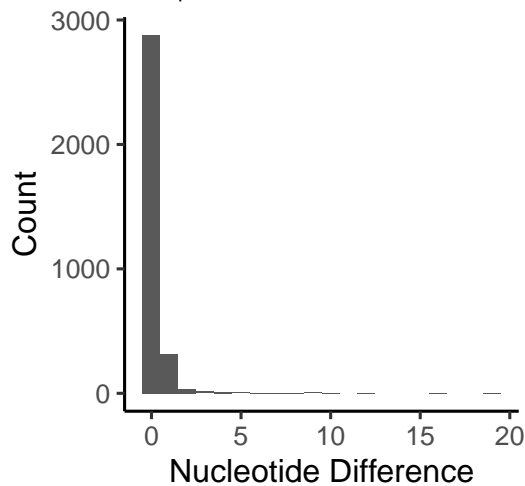
### IGHV2-70\*04

90 sequences assigned  
75 (83.3%) exact matches, in which:  
75 unique CDR3  
6 unique J



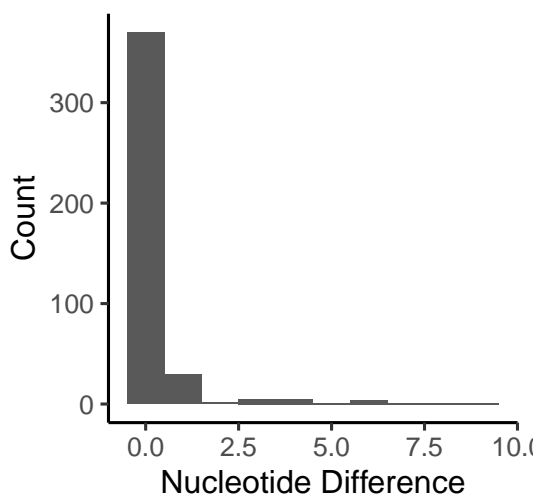
### IGHV1-69\*06

3282 sequences assigned  
2879 (87.7%) exact matches, in which:  
2818 unique CDR3  
7 unique J



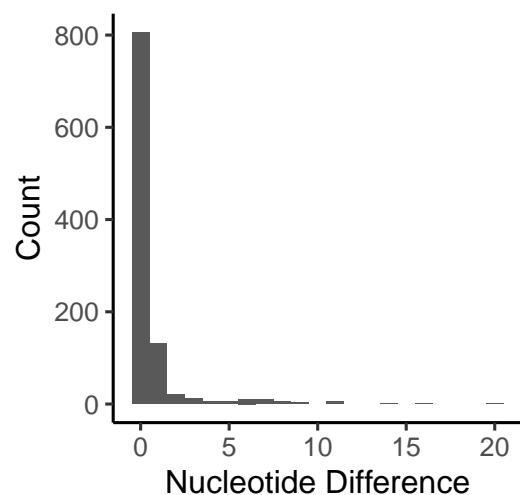
### IGHV2-26\*01

419 sequences assigned  
370 (88.3%) exact matches, in which:  
367 unique CDR3  
6 unique J



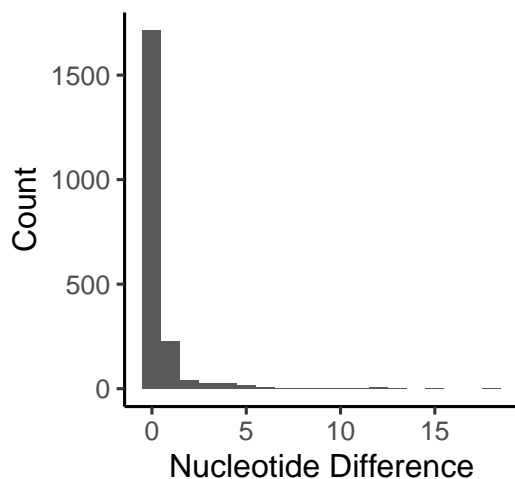
### IGHV3-7\*01

1018 sequences assigned  
806 (79.2%) exact matches, in which:  
793 unique CDR3  
7 unique J



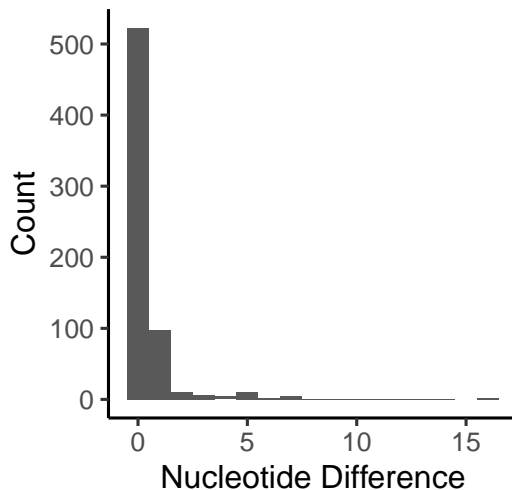
### IGHV3-9\*01

2078 sequences assigned  
1714 (82.5%) exact matches, in which:  
1670 unique CDR3  
7 unique J



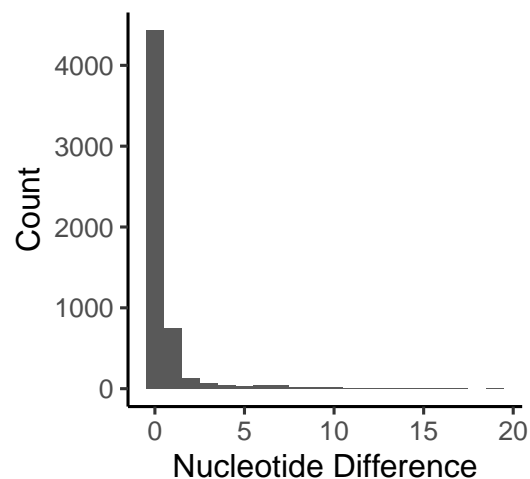
### IGHV3-15\*01

670 sequences assigned  
523 (78.1%) exact matches, in which:  
514 unique CDR3  
7 unique J



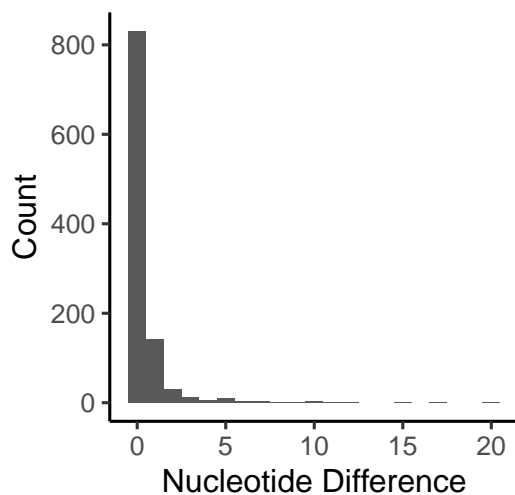
### IGHV3-23\*01

5658 sequences assigned  
4432 (78.3%) exact matches, in which:  
4325 unique CDR3  
7 unique J



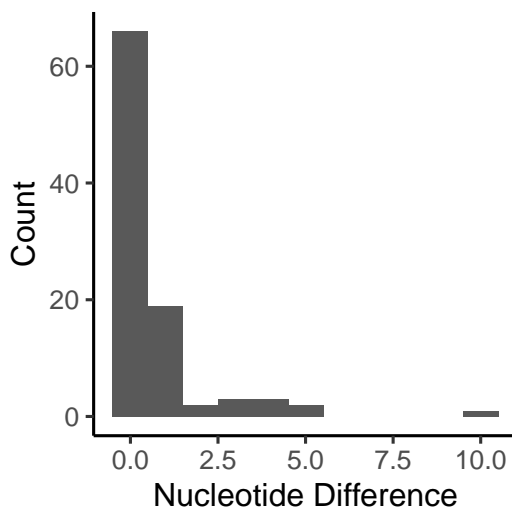
### IGHV3-11\*01

1053 sequences assigned  
831 (78.9%) exact matches, in which:  
812 unique CDR3  
7 unique J



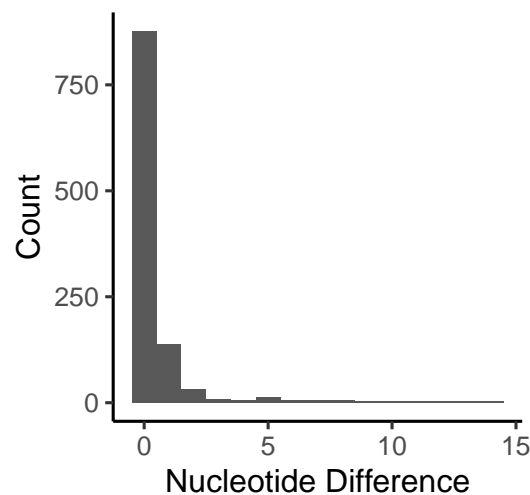
### IGHV3-20\*01

96 sequences assigned  
66 (68.8%) exact matches, in which:  
65 unique CDR3  
6 unique J



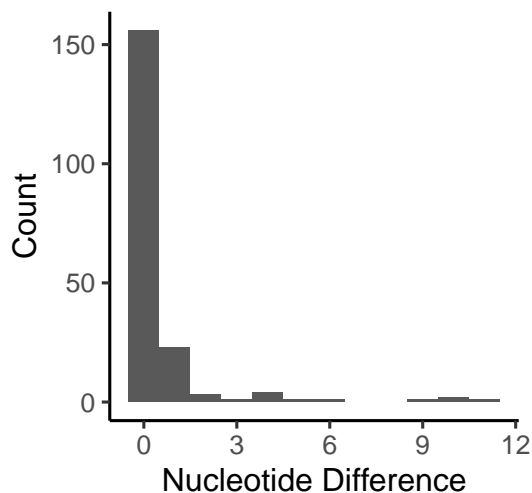
### IGHV3-30-3\*01

1109 sequences assigned  
877 (79.1%) exact matches, in which:  
856 unique CDR3  
7 unique J



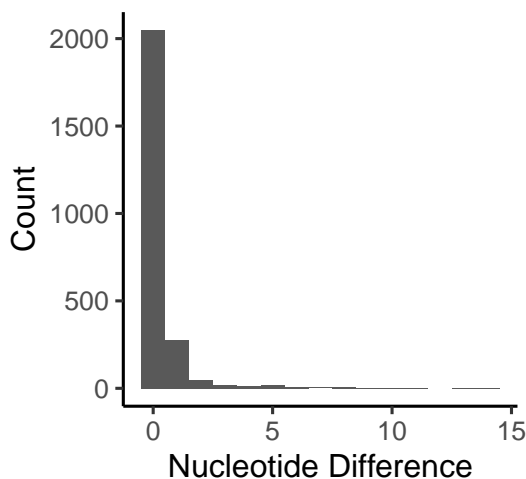
### IGHV3-13\*01

193 sequences assigned  
156 (80.8%) exact matches, in which:  
150 unique CDR3  
6 unique J



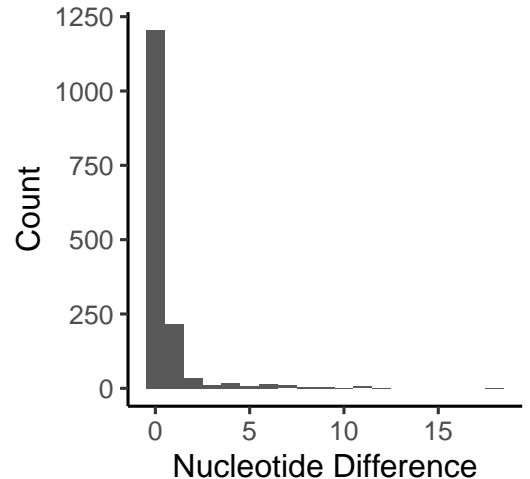
### IGHV3-21\*01

2455 sequences assigned  
2049 (83.5%) exact matches, in which:  
1988 unique CDR3  
7 unique J



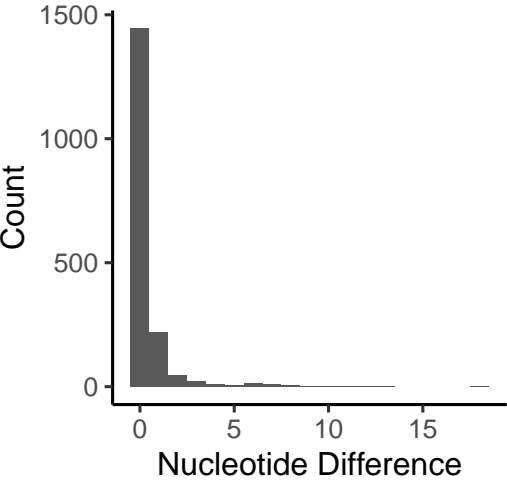
### IGHV3-30\*02

1536 sequences assigned  
1205 (78.5%) exact matches, in which:  
1178 unique CDR3  
7 unique J



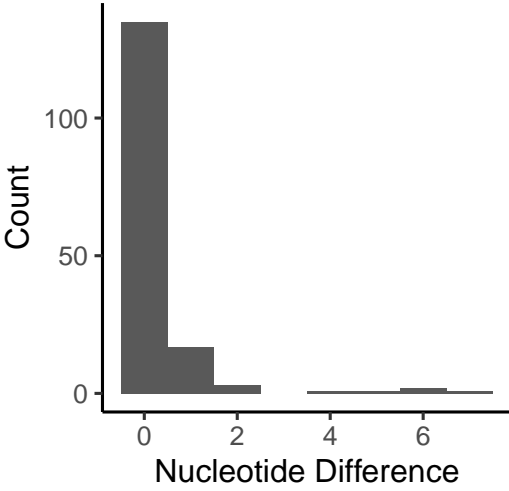
IGHV3-30\*18

1792 sequences assigned  
1445 (80.6%) exact matches, in which:  
1419 unique CDR3  
7 unique J



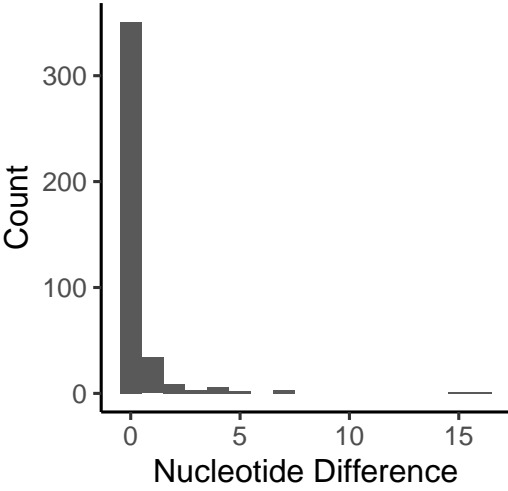
IGHV3-43\*01

160 sequences assigned  
135 (84.4%) exact matches, in which:  
133 unique CDR3  
5 unique J



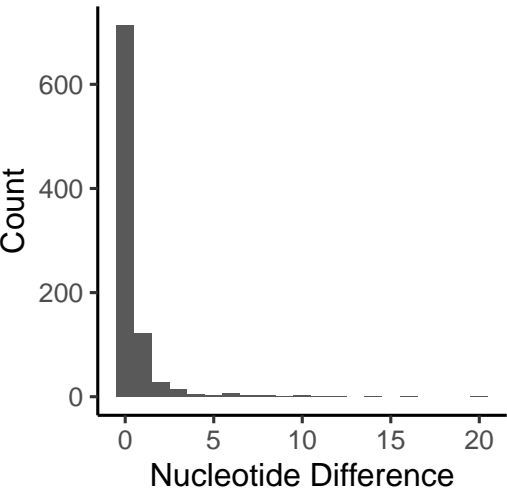
IGHV3-53\*01

410 sequences assigned  
351 (85.6%) exact matches, in which:  
345 unique CDR3  
7 unique J



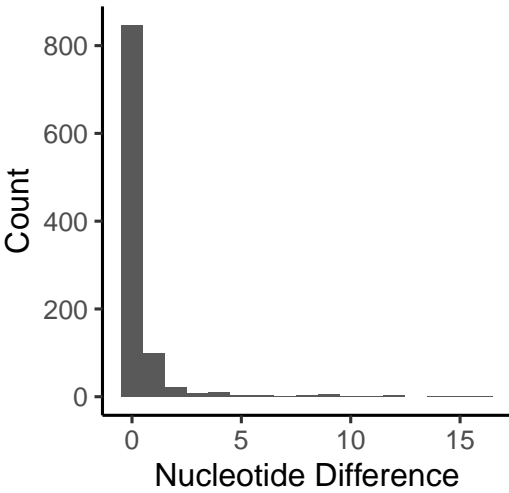
IGHV3-33\*01

904 sequences assigned  
714 (79%) exact matches, in which:  
691 unique CDR3  
7 unique J



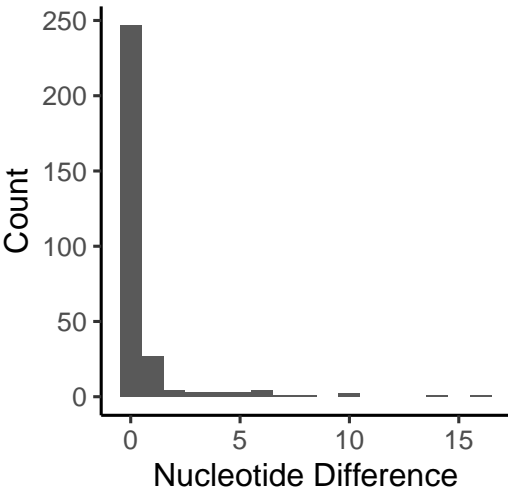
IGHV3-48\*02

1012 sequences assigned  
847 (83.7%) exact matches, in which:  
833 unique CDR3  
7 unique J



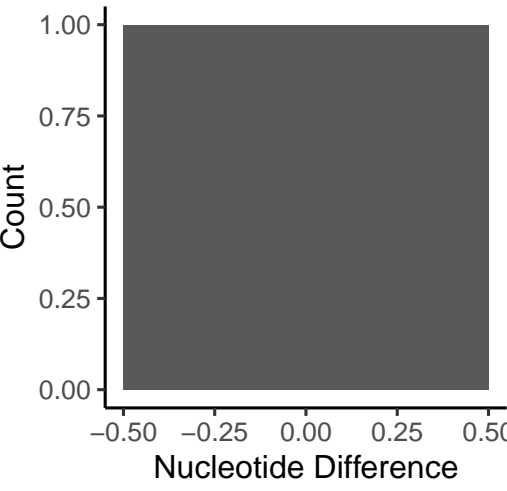
IGHV3-53\*02

297 sequences assigned  
247 (83.2%) exact matches, in which:  
243 unique CDR3  
6 unique J



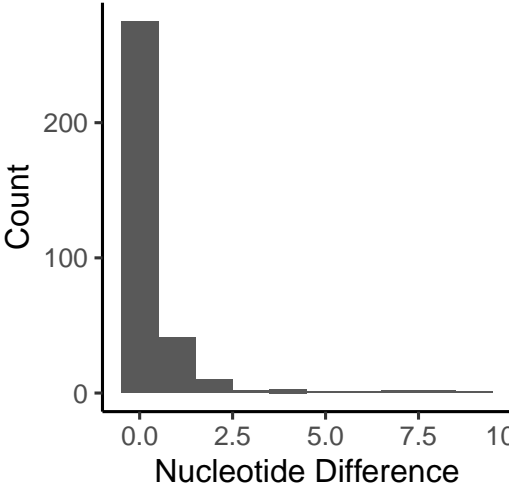
IGHV3-35\*02

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



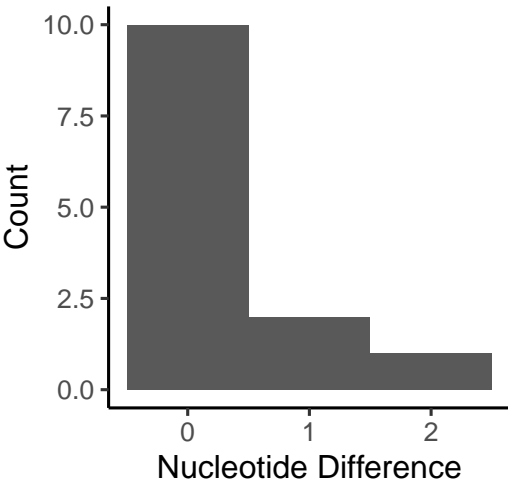
IGHV3-49\*05

338 sequences assigned  
275 (81.4%) exact matches, in which:  
268 unique CDR3  
7 unique J



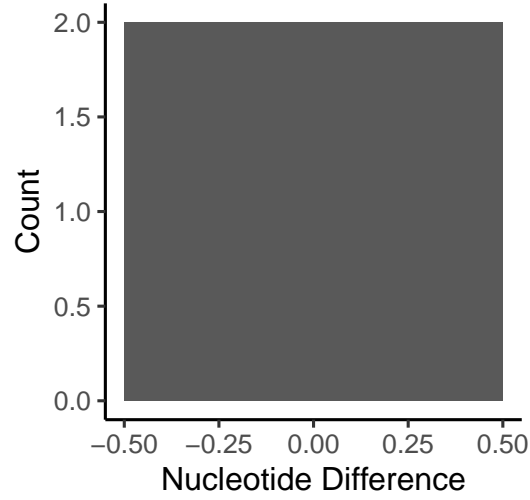
IGHV3-64\*02

13 sequences assigned  
10 (76.9%) exact matches, in which:  
9 unique CDR3  
3 unique J



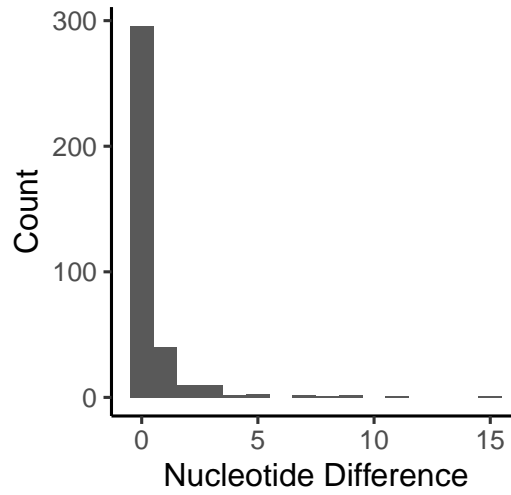
### IGHV3-66\*03

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



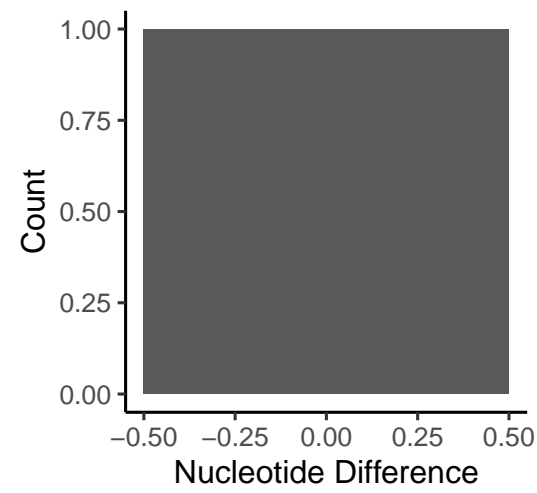
### IGHV3-74\*01

368 sequences assigned  
296 (80.4%) exact matches, in which:  
291 unique CDR3  
7 unique J



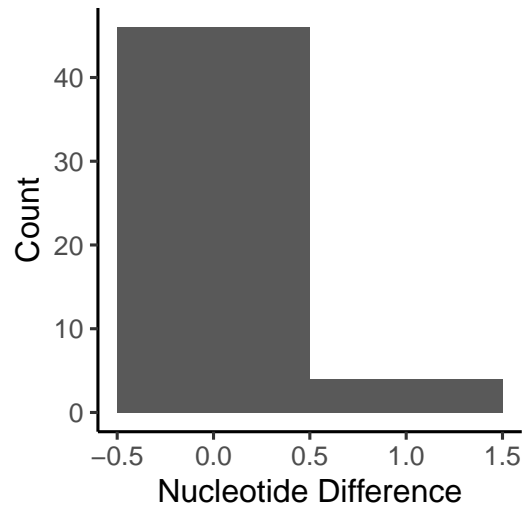
### IGHV4-28\*07

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



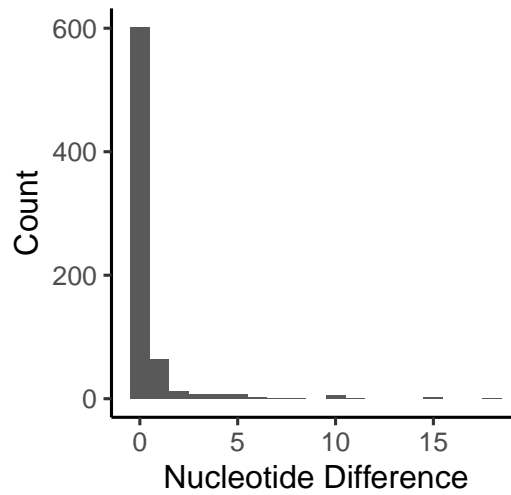
### IGHV3-72\*01

50 sequences assigned  
46 (92%) exact matches, in which:  
45 unique CDR3  
6 unique J



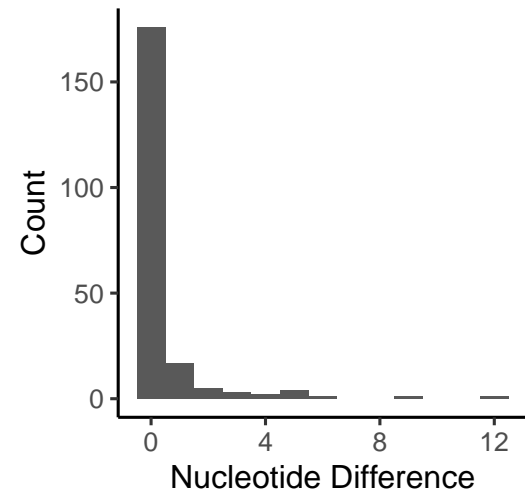
### IGHV4-4\*07

713 sequences assigned  
602 (84.4%) exact matches, in which:  
591 unique CDR3  
7 unique J



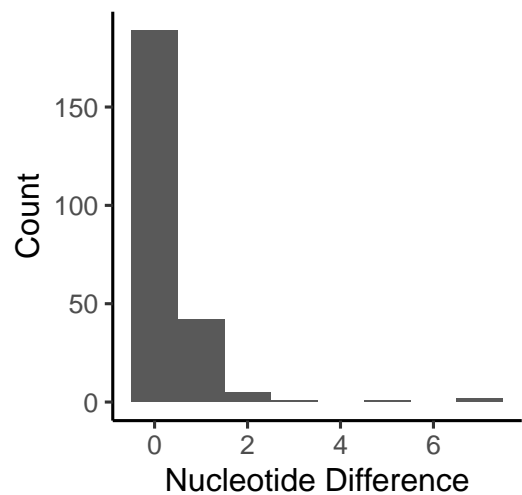
### IGHV4-30-4\*01

210 sequences assigned  
176 (83.8%) exact matches, in which:  
175 unique CDR3  
6 unique J



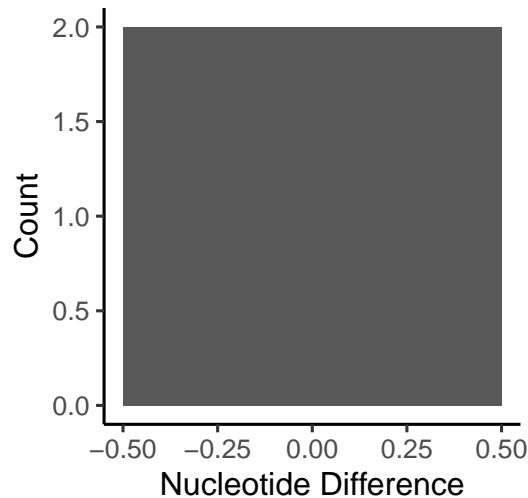
### IGHV3-73\*02

240 sequences assigned  
189 (78.8%) exact matches, in which:  
182 unique CDR3  
7 unique J



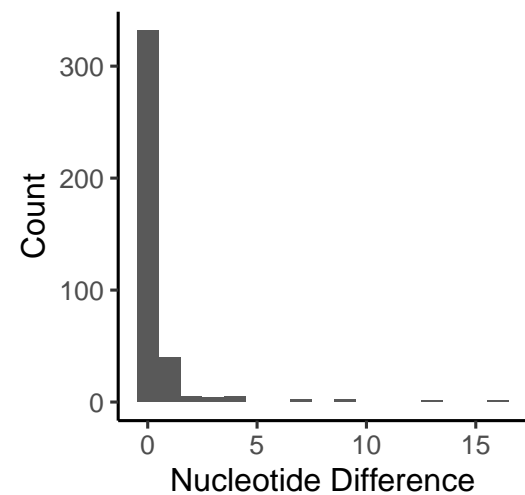
### IGHV4-28\*01

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



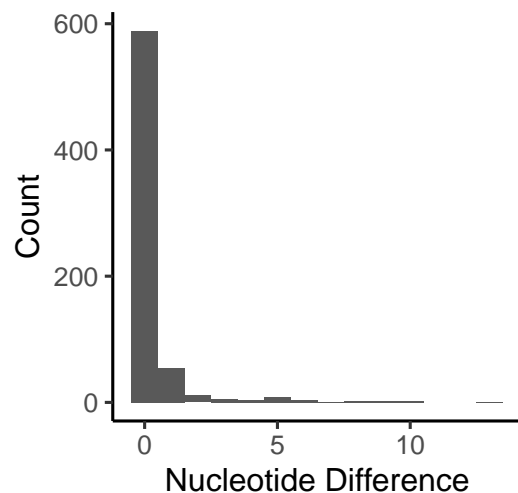
### IGHV4-30-2\*01

392 sequences assigned  
332 (84.7%) exact matches, in which:  
325 unique CDR3  
7 unique J



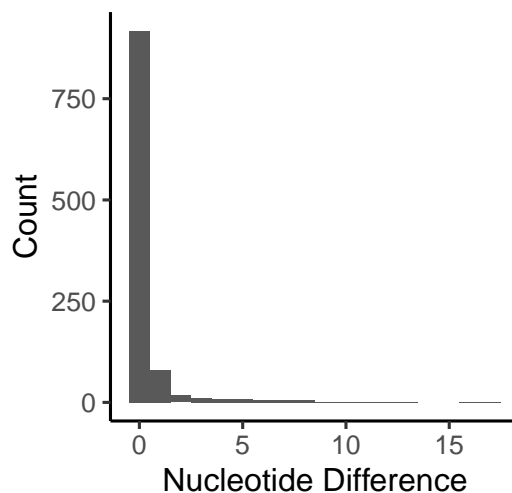
### IGHV4–31\*03

684 sequences assigned  
589 (86.1%) exact matches, in which:  
583 unique CDR3  
6 unique J



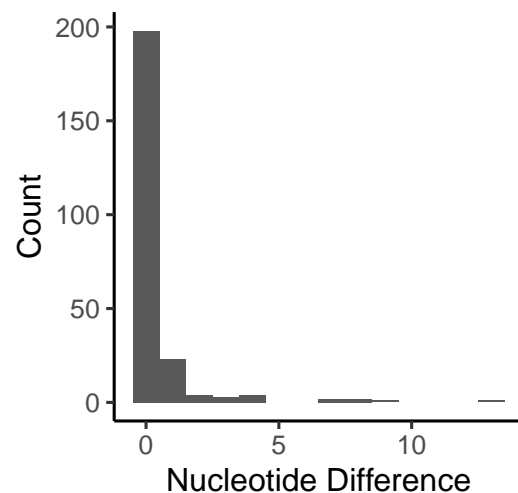
### IGHV4–59\*01

1069 sequences assigned  
918 (85.9%) exact matches, in which:  
904 unique CDR3  
7 unique J



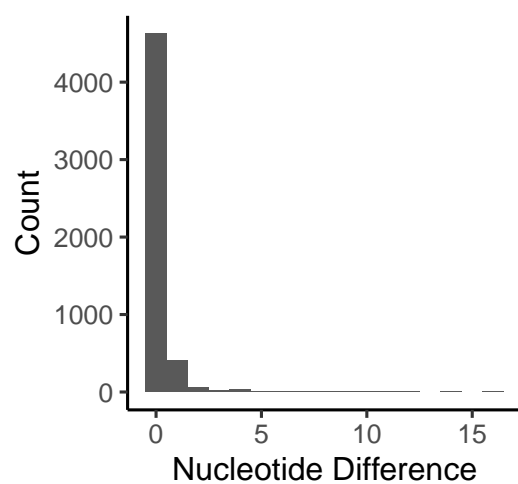
### IGHV6–1\*01

238 sequences assigned  
198 (83.2%) exact matches, in which:  
194 unique CDR3  
7 unique J



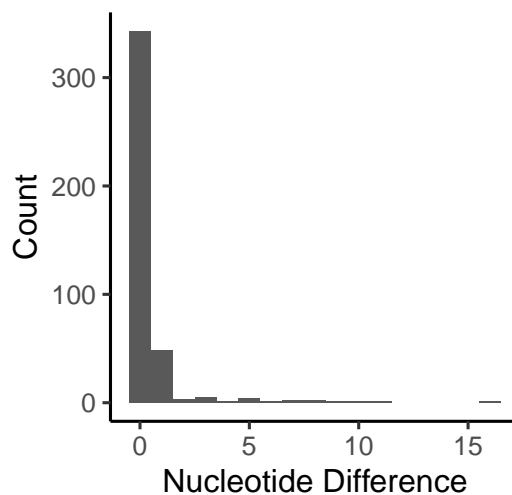
### IGHV4–34\*01

5198 sequences assigned  
4625 (89%) exact matches, in which:  
4526 unique CDR3  
7 unique J



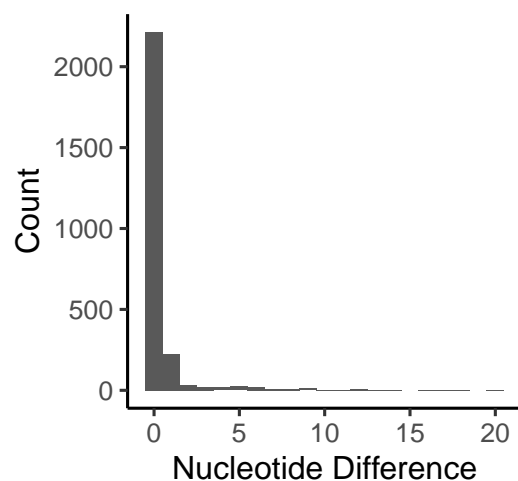
### IGHV4–61\*01

414 sequences assigned  
343 (82.9%) exact matches, in which:  
340 unique CDR3  
7 unique J



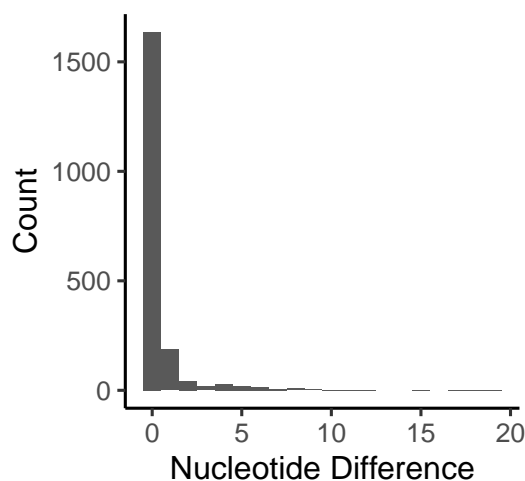
### IGHV4–39\*01

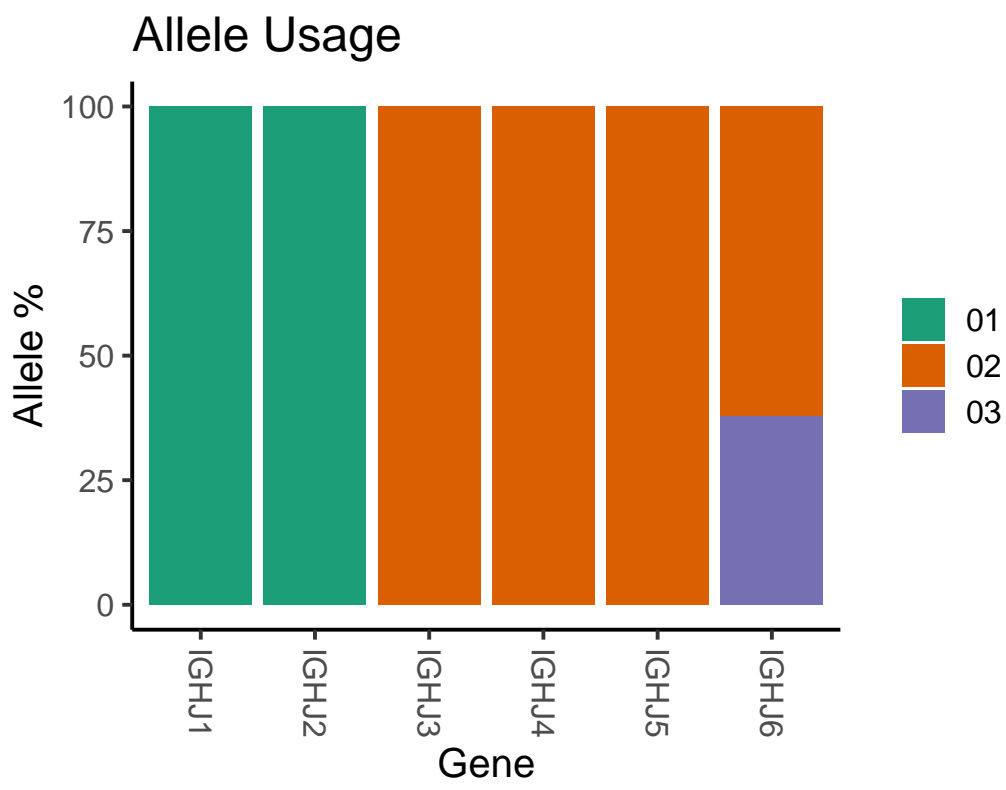
2604 sequences assigned  
2214 (85%) exact matches, in which:  
2150 unique CDR3  
7 unique J



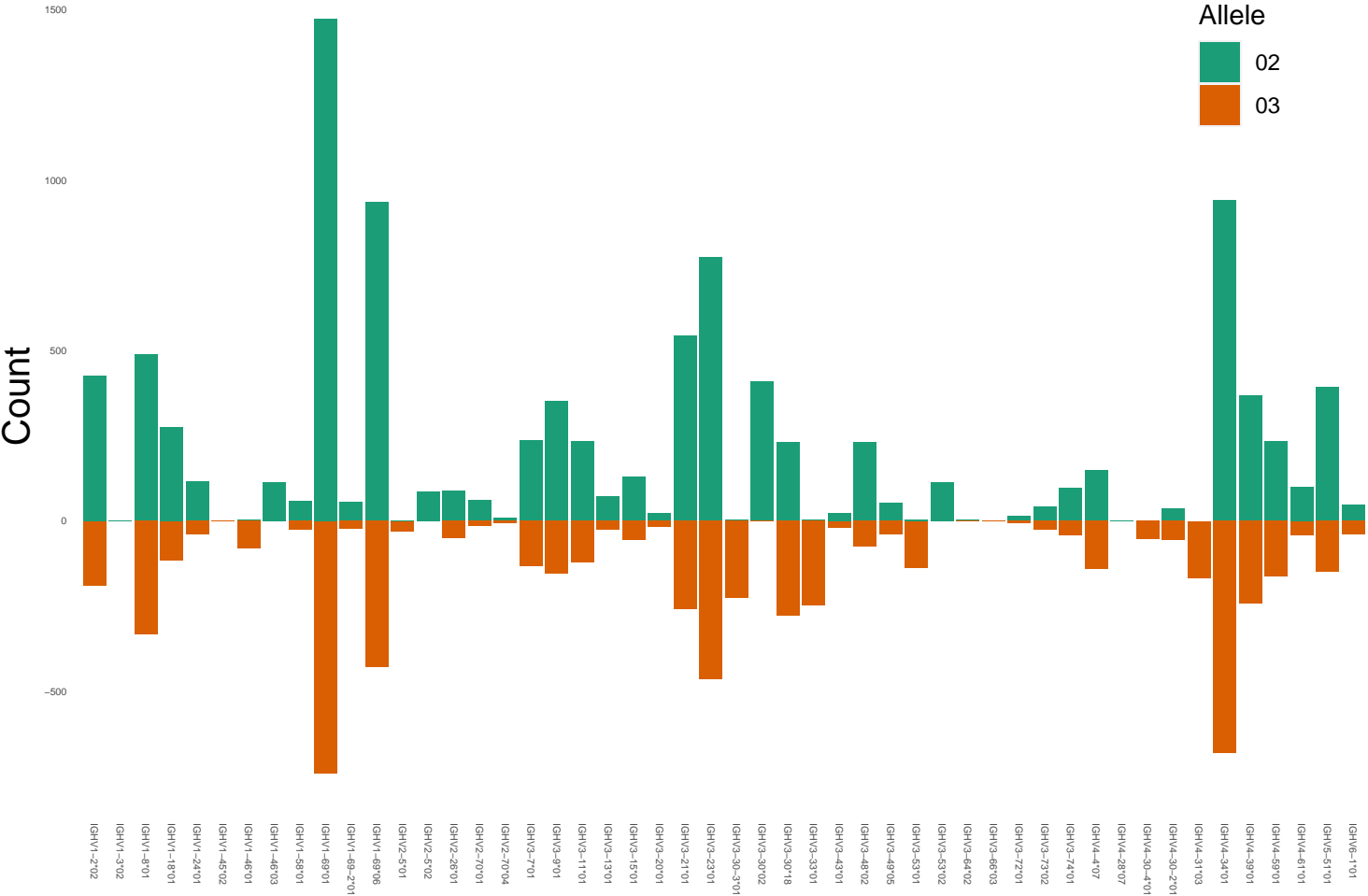
### IGHV5–51\*01

1973 sequences assigned  
1636 (82.9%) exact matches, in which:  
1599 unique CDR3  
7 unique J





Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.