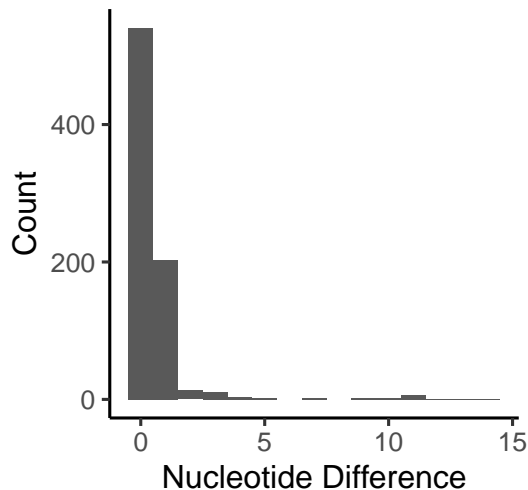


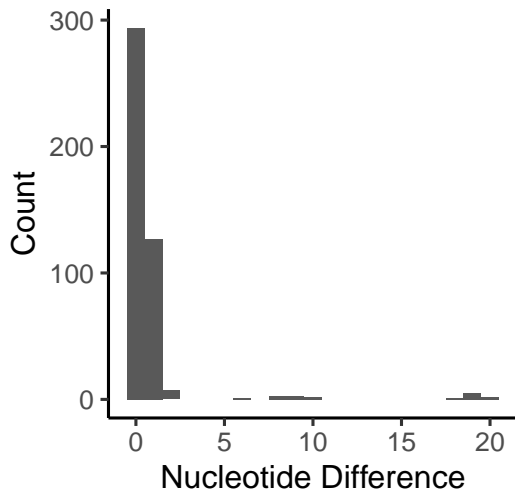
### IGHV1-2\*02

789 sequences assigned  
541 (68.6%) exact matches, in which:  
480 unique CDR3  
7 unique J



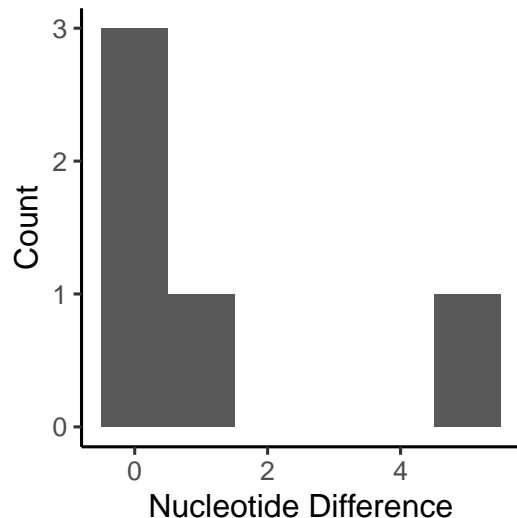
### IGHV1-8\*01

445 sequences assigned  
294 (66.1%) exact matches, in which:  
262 unique CDR3  
7 unique J



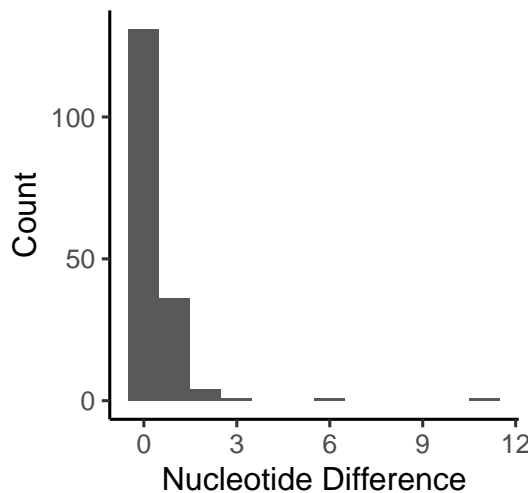
### IGHV1-45\*03

5 sequences assigned  
3 (60%) exact matches, in which:  
1 unique CDR3  
1 unique J



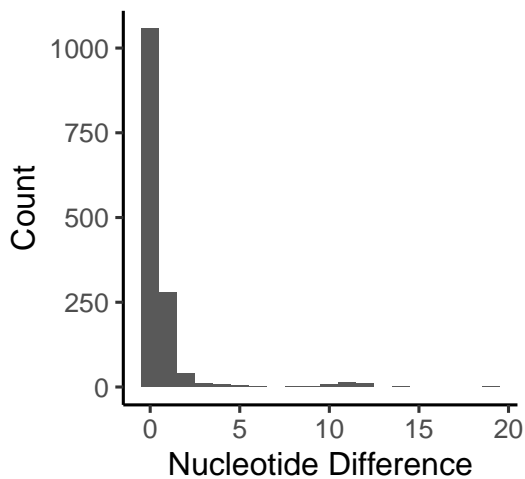
### IGHV1-2\*04

174 sequences assigned  
131 (75.3%) exact matches, in which:  
117 unique CDR3  
6 unique J



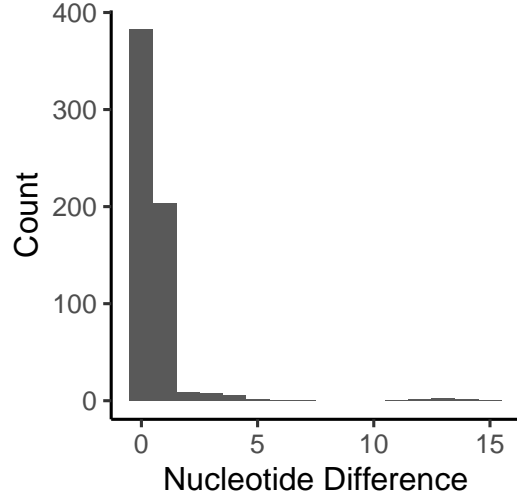
### IGHV1-18\*01

1431 sequences assigned  
1057 (73.9%) exact matches, in which:  
958 unique CDR3  
7 unique J



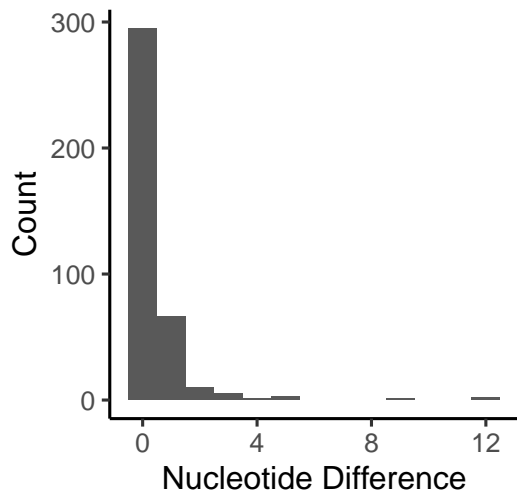
### IGHV1-46\*01

623 sequences assigned  
383 (61.5%) exact matches, in which:  
347 unique CDR3  
7 unique J



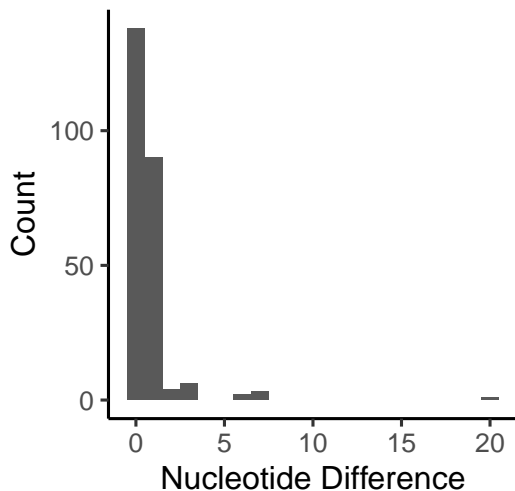
### IGHV1-3\*01

384 sequences assigned  
295 (76.8%) exact matches, in which:  
273 unique CDR3  
6 unique J



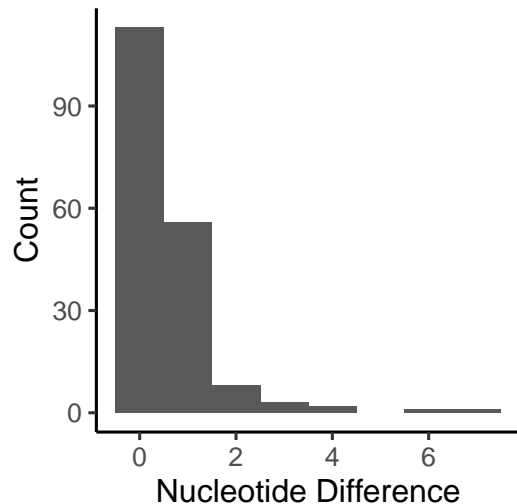
### IGHV1-24\*01

245 sequences assigned  
138 (56.3%) exact matches, in which:  
119 unique CDR3  
7 unique J



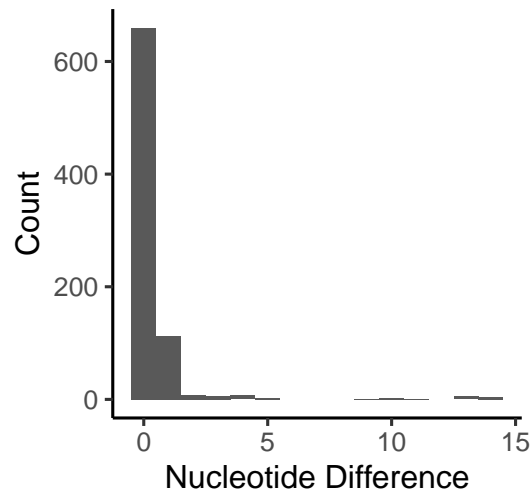
### IGHV1-58\*02

184 sequences assigned  
113 (61.4%) exact matches, in which:  
95 unique CDR3  
7 unique J



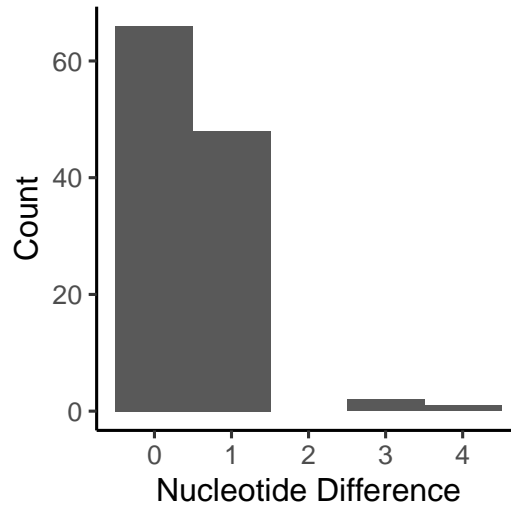
### IGHV1–69\*04

812 sequences assigned  
660 (81.3%) exact matches, in which:  
592 unique CDR3  
7 unique J



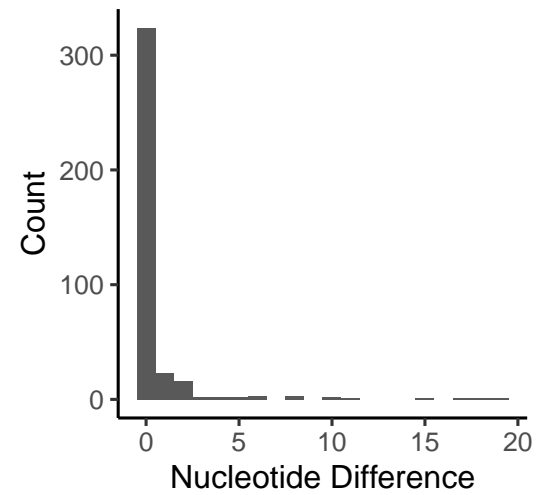
### IGHV2–26\*01

117 sequences assigned  
66 (56.4%) exact matches, in which:  
58 unique CDR3  
6 unique J



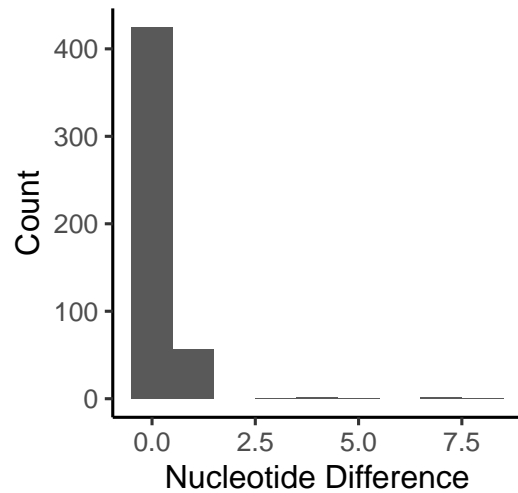
### IGHV3–7\*03

382 sequences assigned  
324 (84.8%) exact matches, in which:  
299 unique CDR3  
6 unique J



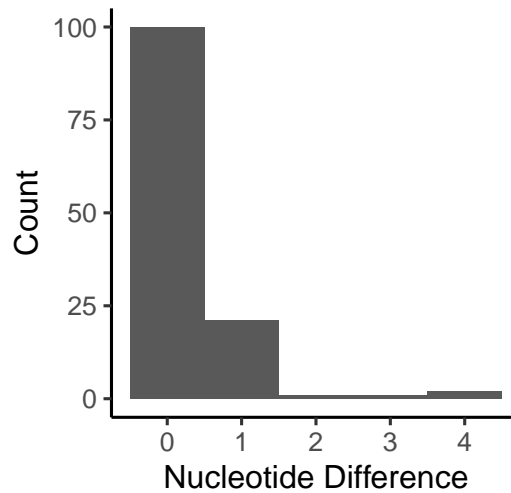
### IGHV1–69\*08\_C191T

489 sequences assigned  
425 (86.9%) exact matches, in which:  
364 unique CDR3  
7 unique J



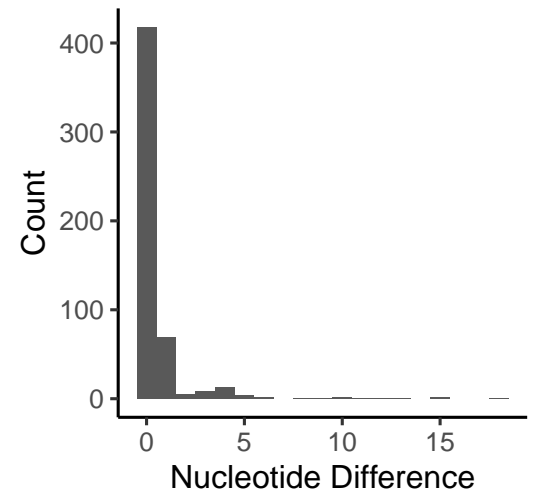
### IGHV2–70\*15

125 sequences assigned  
100 (80%) exact matches, in which:  
95 unique CDR3  
6 unique J



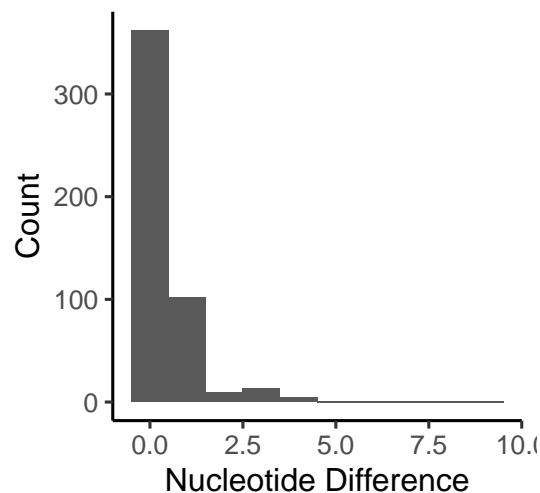
### IGHV3–9\*01

529 sequences assigned  
418 (79%) exact matches, in which:  
339 unique CDR3  
6 unique J



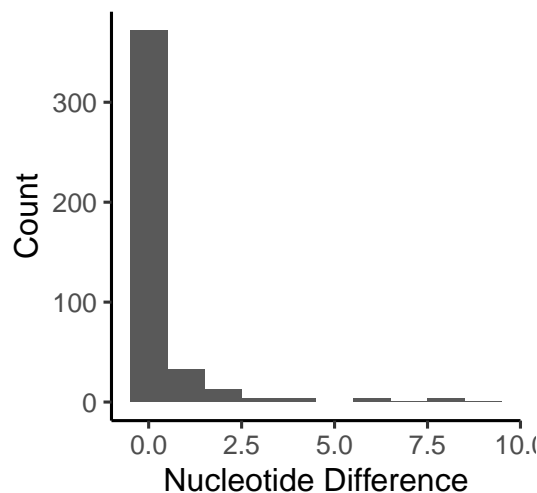
### IGHV2–5\*02

495 sequences assigned  
362 (73.1%) exact matches, in which:  
322 unique CDR3  
7 unique J



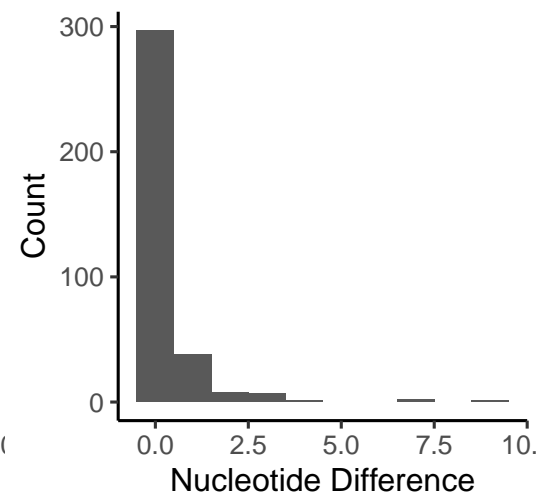
### IGHV3–7\*01

437 sequences assigned  
372 (85.1%) exact matches, in which:  
336 unique CDR3  
7 unique J



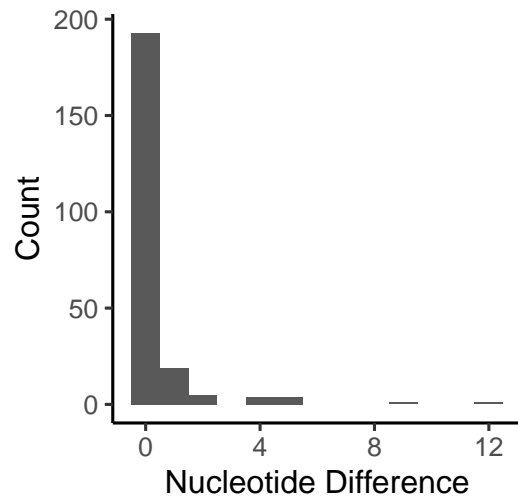
### IGHV3–11\*01

354 sequences assigned  
297 (83.9%) exact matches, in which:  
256 unique CDR3  
6 unique J



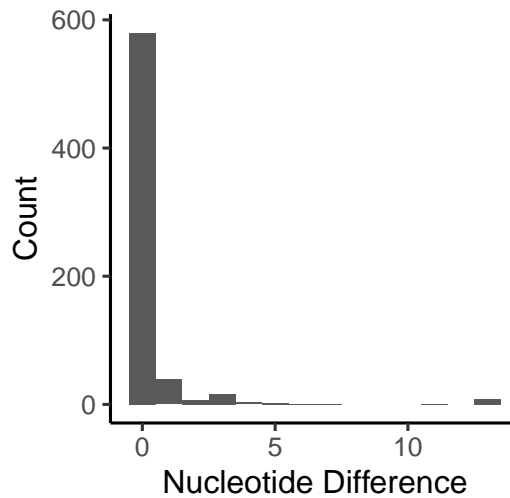
### IGHV3-11\*06

227 sequences assigned  
193 (85%) exact matches, in which:  
167 unique CDR3  
6 unique J



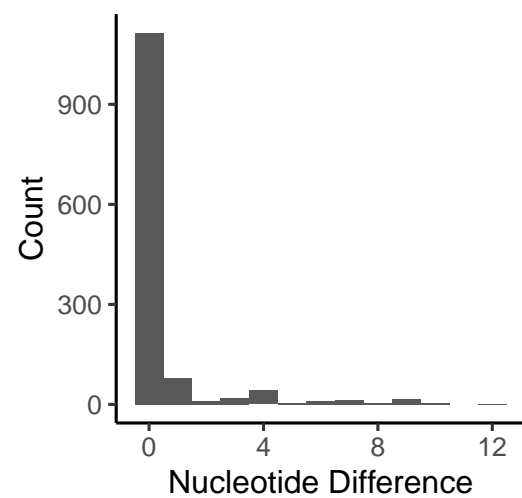
### IGHV3-15\*01

658 sequences assigned  
580 (88.1%) exact matches, in which:  
529 unique CDR3  
7 unique J



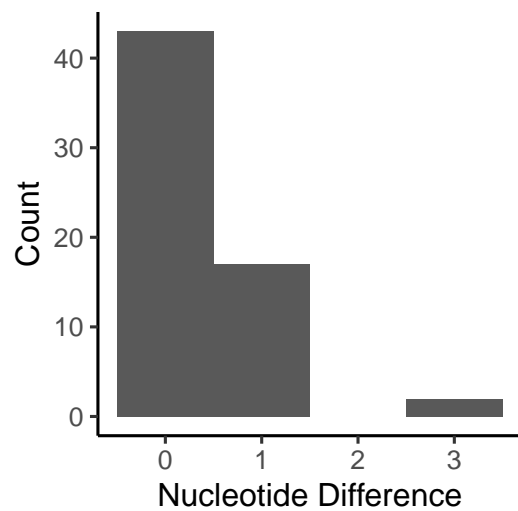
### IGHV3-21\*01

1317 sequences assigned  
1115 (84.7%) exact matches, in which:  
982 unique CDR3  
7 unique J



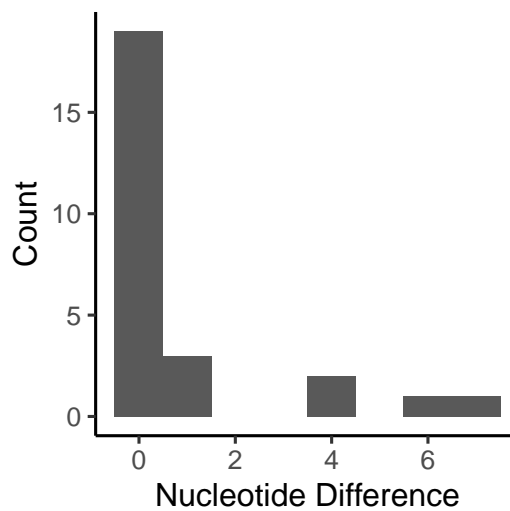
### IGHV3-13\*01

62 sequences assigned  
43 (69.4%) exact matches, in which:  
38 unique CDR3  
5 unique J



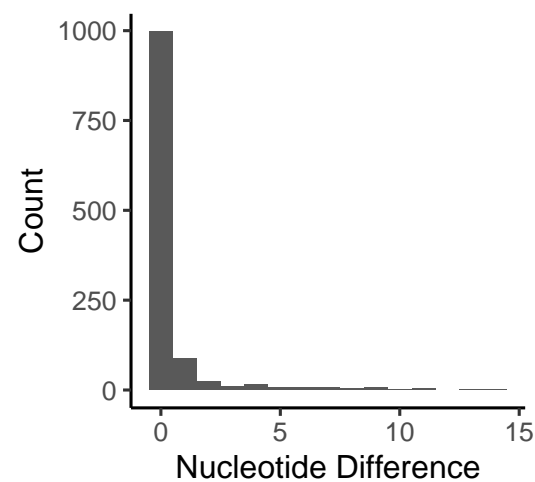
### IGHV3-20\*01

26 sequences assigned  
19 (73.1%) exact matches, in which:  
19 unique CDR3  
4 unique J



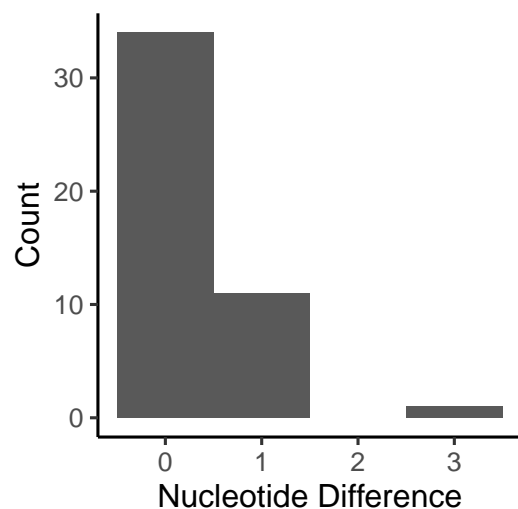
### IGHV3-23\*03

1175 sequences assigned  
997 (84.9%) exact matches, in which:  
906 unique CDR3  
7 unique J



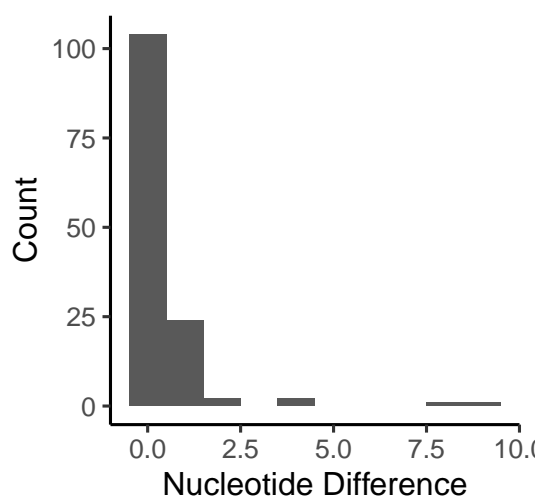
### IGHV3-13\*05

46 sequences assigned  
34 (73.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



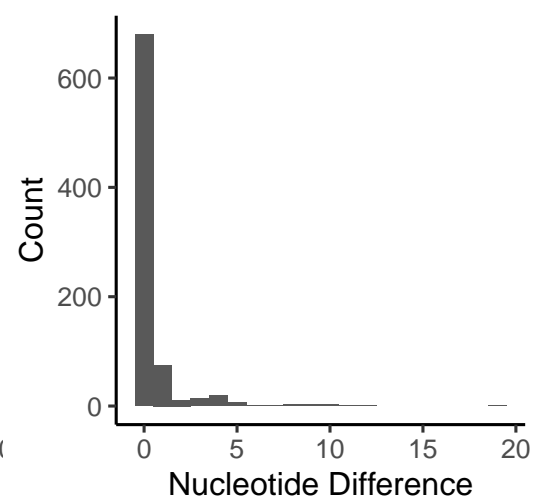
### IGHV3-20\*04

134 sequences assigned  
104 (77.6%) exact matches, in which:  
97 unique CDR3  
5 unique J



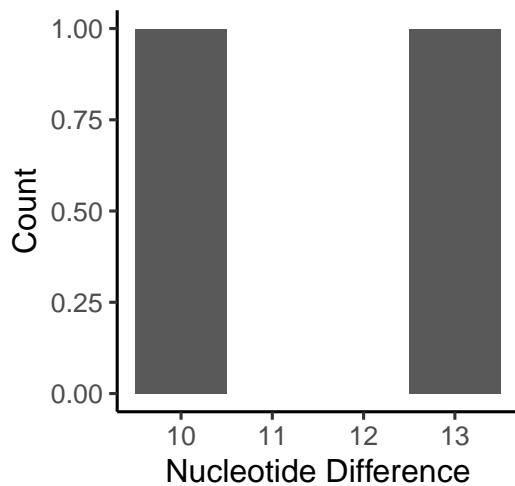
### IGHV3-30\*01

818 sequences assigned  
680 (83.1%) exact matches, in which:  
616 unique CDR3  
7 unique J



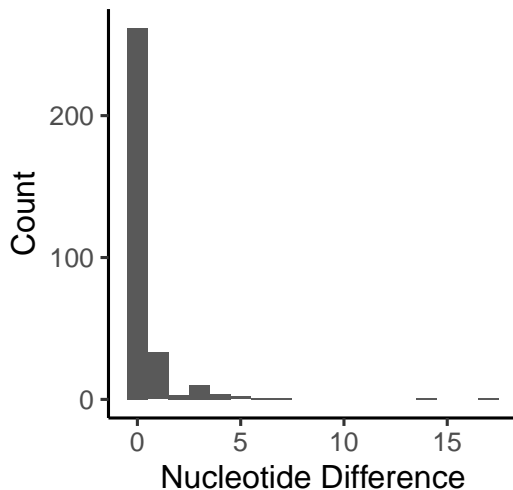
### IGHV3-30-3\*03

2 sequences assigned  
No exact matches.



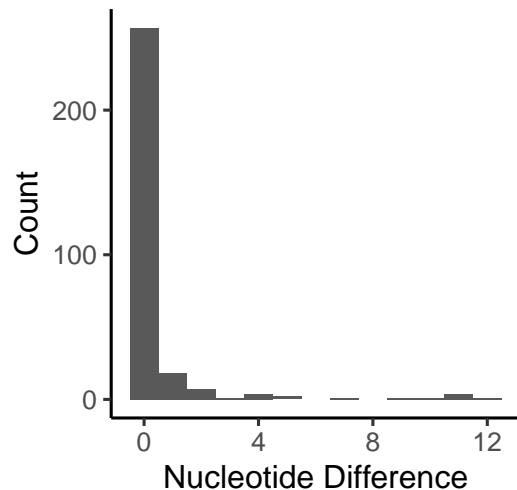
### IGHV3-43\*02

318 sequences assigned  
262 (82.4%) exact matches, in which:  
241 unique CDR3  
7 unique J



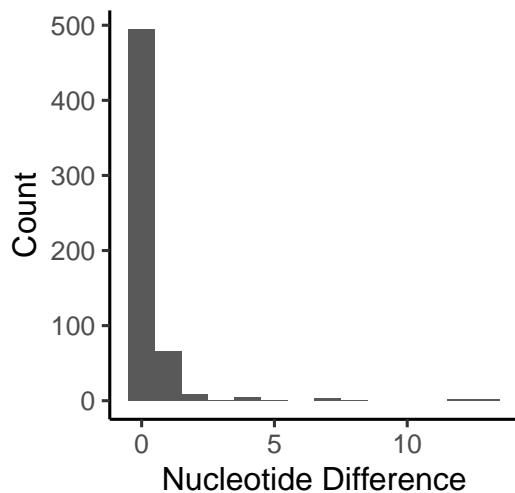
### IGHV3-49\*04

297 sequences assigned  
257 (86.5%) exact matches, in which:  
230 unique CDR3  
7 unique J



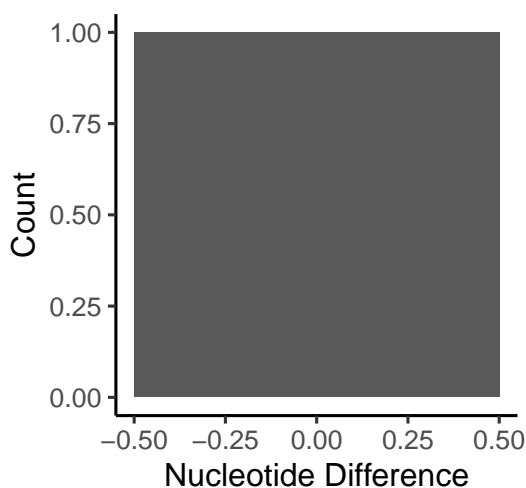
### IGHV3-33\*01

584 sequences assigned  
495 (84.8%) exact matches, in which:  
458 unique CDR3  
7 unique J



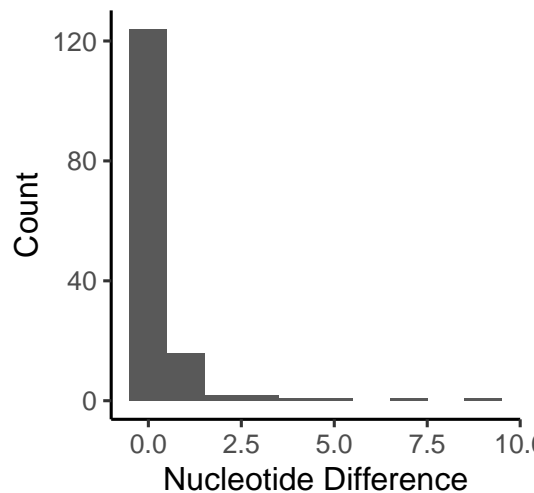
### IGHV3-47\*01

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



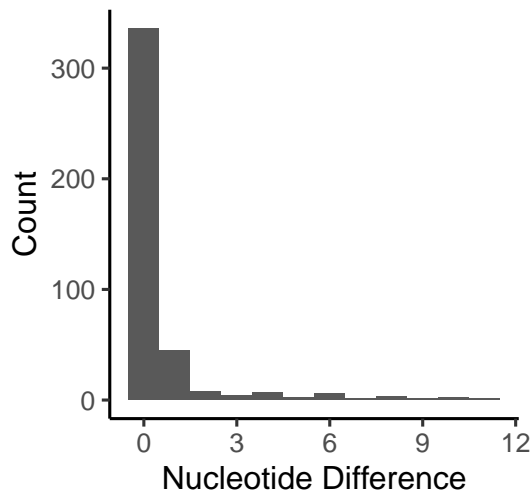
### IGHV3-53\*02

148 sequences assigned  
124 (83.8%) exact matches, in which:  
119 unique CDR3  
4 unique J



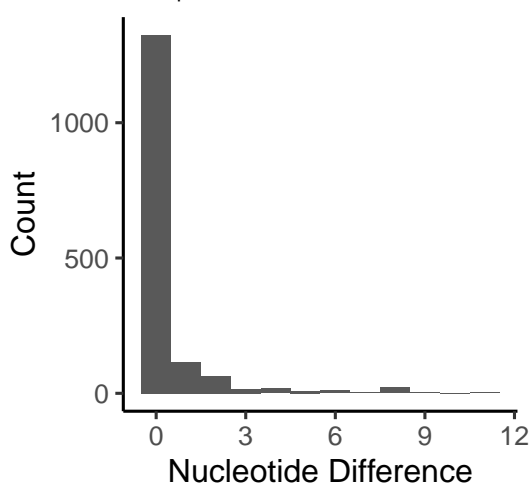
### IGHV3-33\*08

416 sequences assigned  
336 (80.8%) exact matches, in which:  
301 unique CDR3  
6 unique J



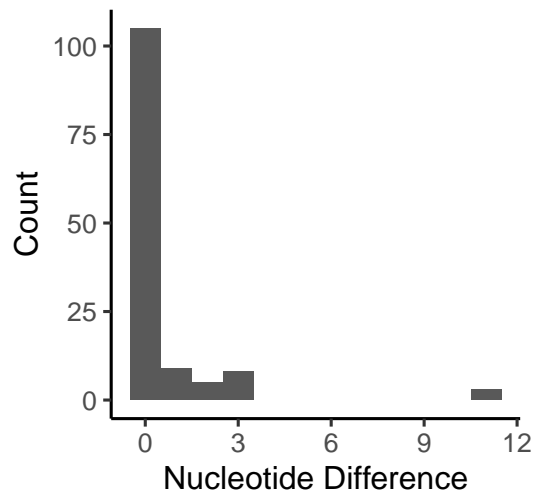
### IGHV3-48\*03

1590 sequences assigned  
1324 (83.3%) exact matches, in which:  
1191 unique CDR3  
7 unique J



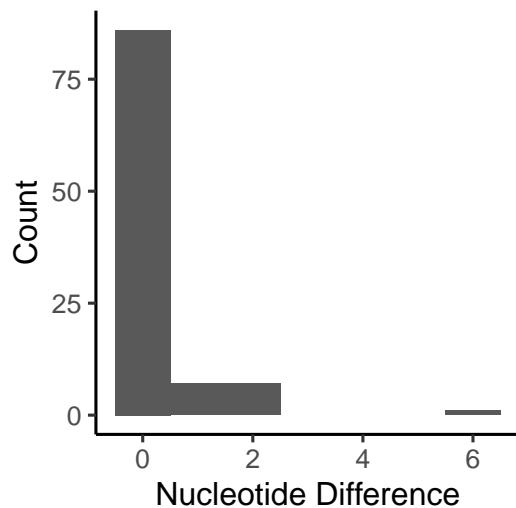
### IGHV3-53\*04

130 sequences assigned  
105 (80.8%) exact matches, in which:  
87 unique CDR3  
6 unique J



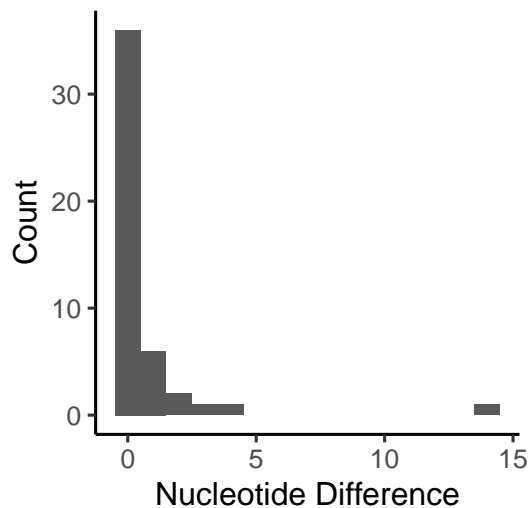
### IGHV3-64\*01

101 sequences assigned  
86 (85.1%) exact matches, in which:  
79 unique CDR3  
7 unique J



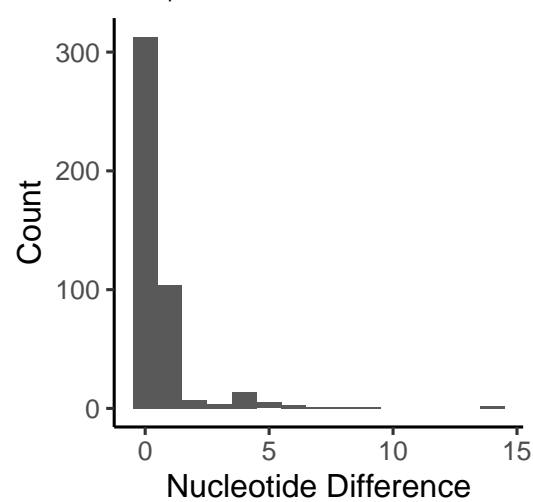
### IGHV3-72\*01

47 sequences assigned  
36 (76.6%) exact matches, in which:  
36 unique CDR3  
5 unique J



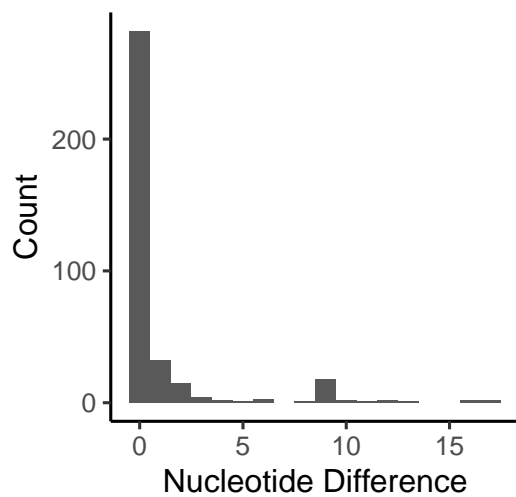
### IGHV3-74\*01

455 sequences assigned  
313 (68.8%) exact matches, in which:  
288 unique CDR3  
6 unique J



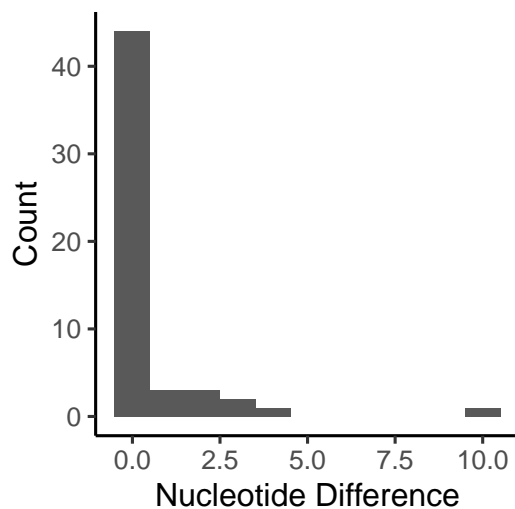
### IGHV3-66\*01

368 sequences assigned  
282 (76.6%) exact matches, in which:  
253 unique CDR3  
6 unique J



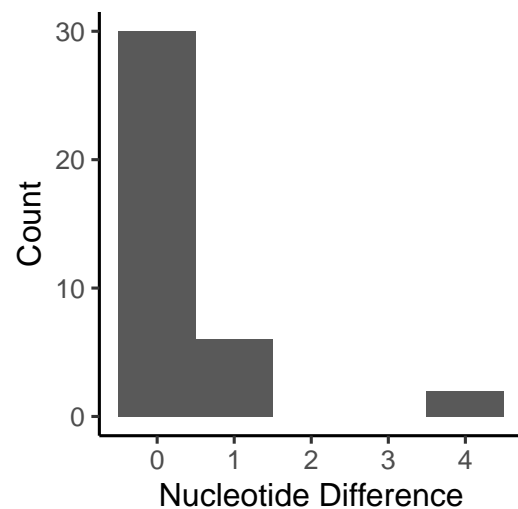
### IGHV3-73\*01

54 sequences assigned  
44 (81.5%) exact matches, in which:  
37 unique CDR3  
6 unique J



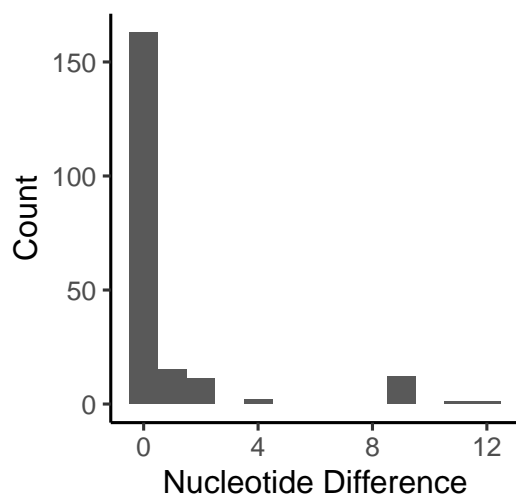
### IGHV3-43D\*04

38 sequences assigned  
30 (78.9%) exact matches, in which:  
30 unique CDR3  
4 unique J



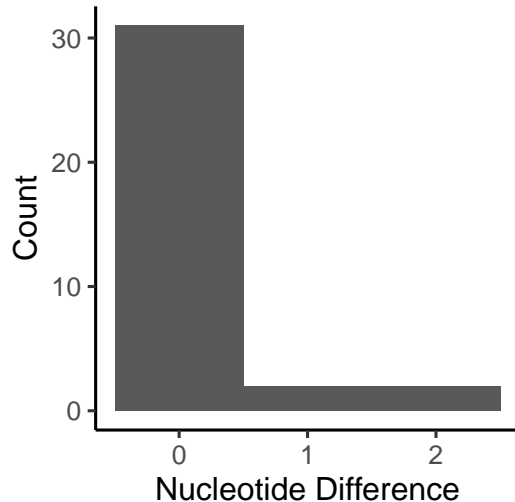
### IGHV3-66\*02

205 sequences assigned  
163 (79.5%) exact matches, in which:  
145 unique CDR3  
6 unique J



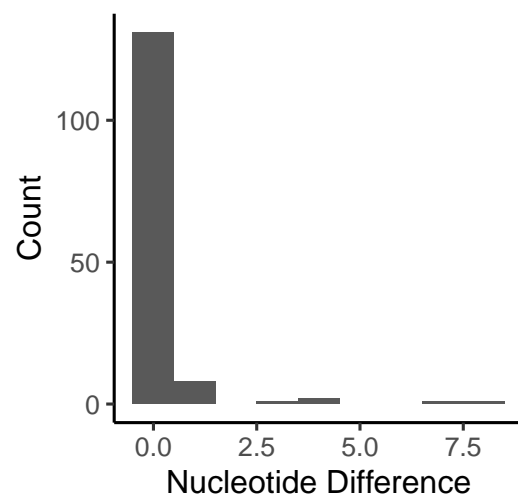
### IGHV3-73\*02

35 sequences assigned  
31 (88.6%) exact matches, in which:  
30 unique CDR3  
5 unique J



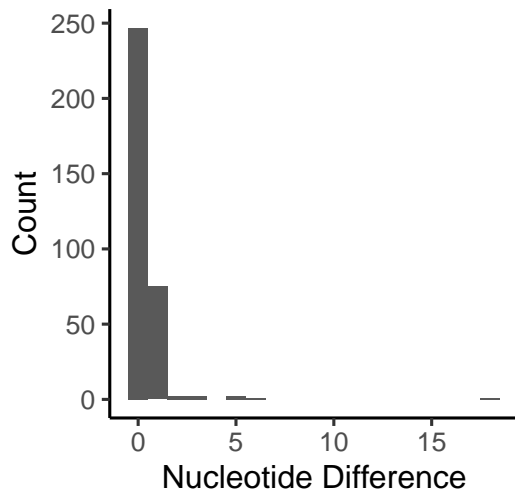
### IGHV3-64D\*06

144 sequences assigned  
131 (91%) exact matches, in which:  
120 unique CDR3  
6 unique J



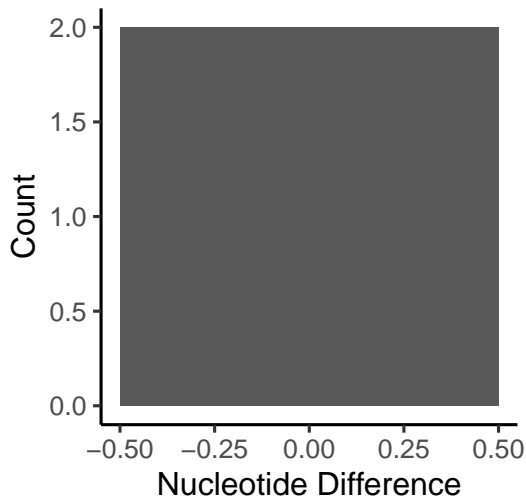
### IGHV4-4\*02

330 sequences assigned  
247 (74.8%) exact matches, in which:  
220 unique CDR3  
6 unique J



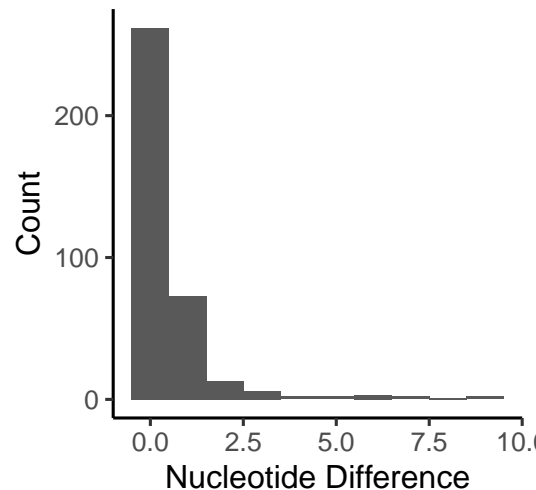
### IGHV4-28\*07

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



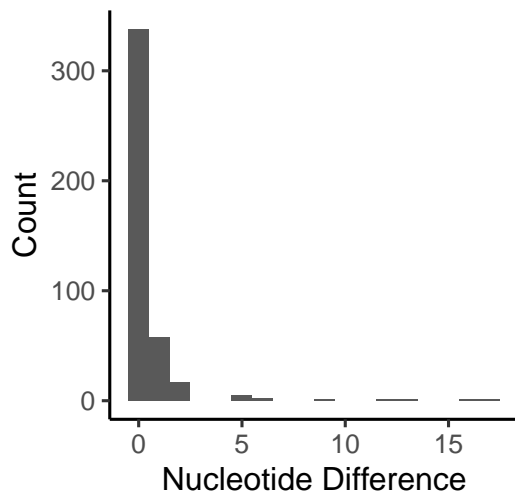
### IGHV4-38-2\*02\_A70G

366 sequences assigned  
262 (71.6%) exact matches, in which:  
240 unique CDR3  
6 unique J



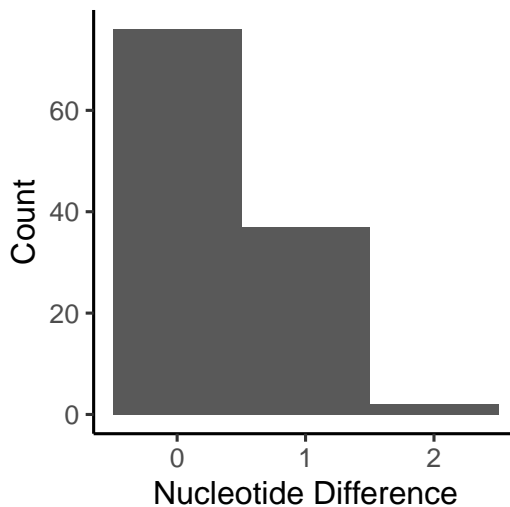
### IGHV4-4\*07

425 sequences assigned  
338 (79.5%) exact matches, in which:  
297 unique CDR3  
6 unique J



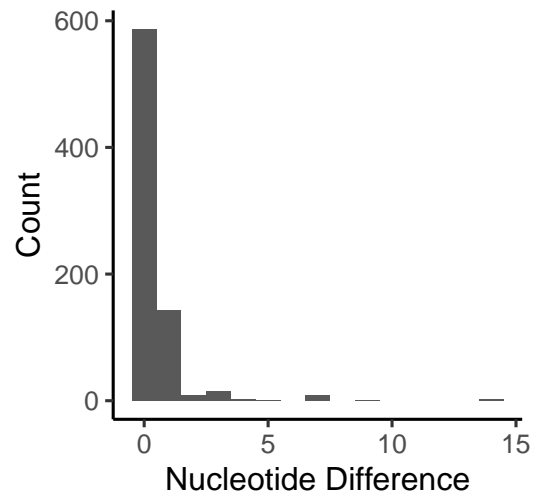
### IGHV4-31\*01

115 sequences assigned  
76 (66.1%) exact matches, in which:  
66 unique CDR3  
5 unique J



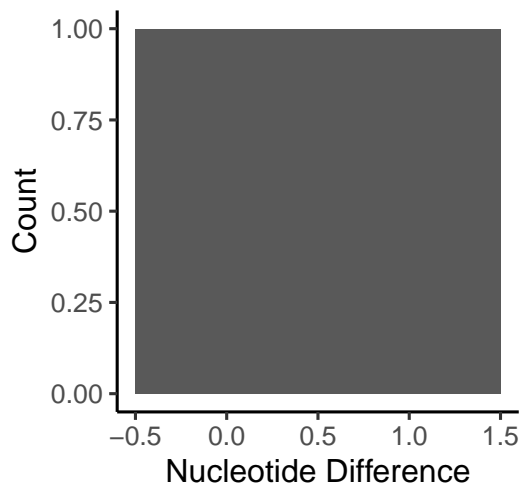
### IGHV4-39\*01

769 sequences assigned  
587 (76.3%) exact matches, in which:  
525 unique CDR3  
6 unique J



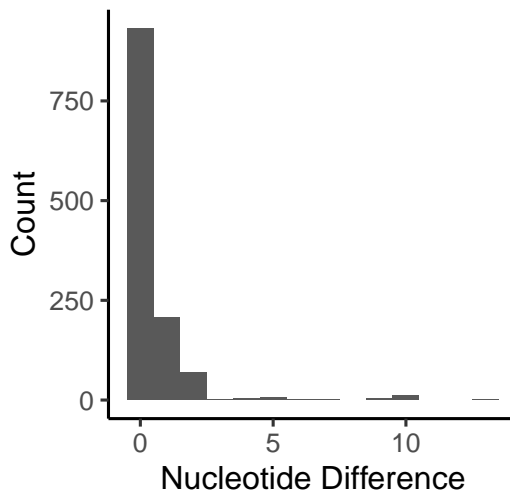
### IGHV4-28\*02

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



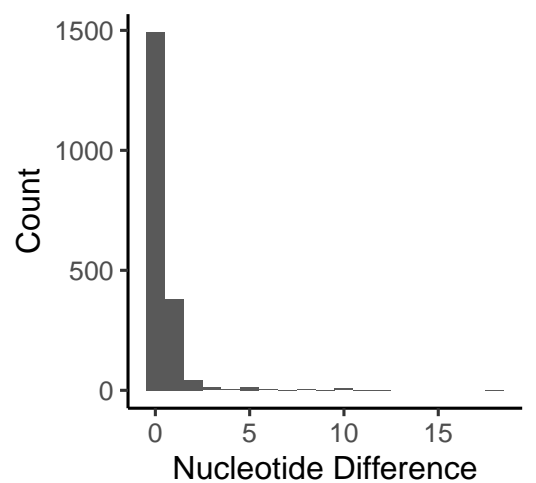
### IGHV4-34\*01

1239 sequences assigned  
932 (75.2%) exact matches, in which:  
851 unique CDR3  
7 unique J



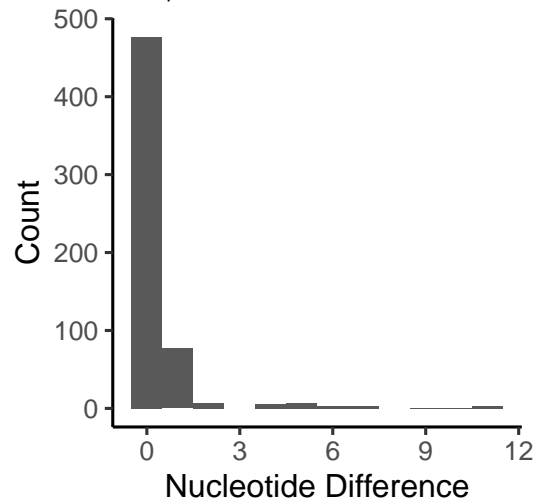
### IGHV4-59\*01

1966 sequences assigned  
1493 (75.9%) exact matches, in which:  
1277 unique CDR3  
7 unique J



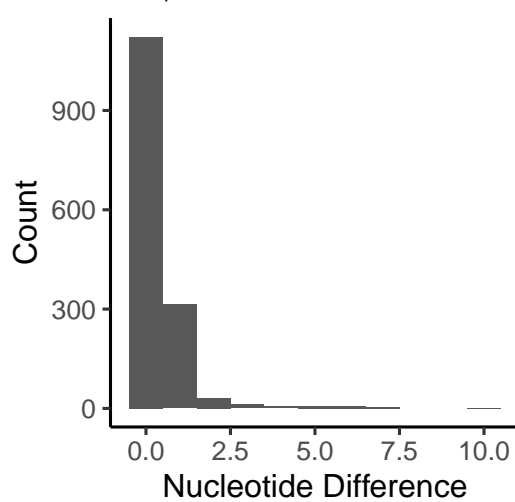
### IGHV4–59\*08

585 sequences assigned  
477 (81.5%) exact matches, in which:  
434 unique CDR3  
7 unique J



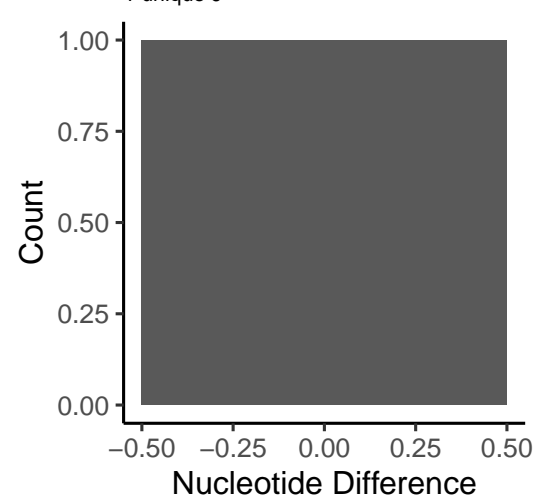
### IGHV5–51\*01

1505 sequences assigned  
1123 (74.6%) exact matches, in which:  
947 unique CDR3  
7 unique J



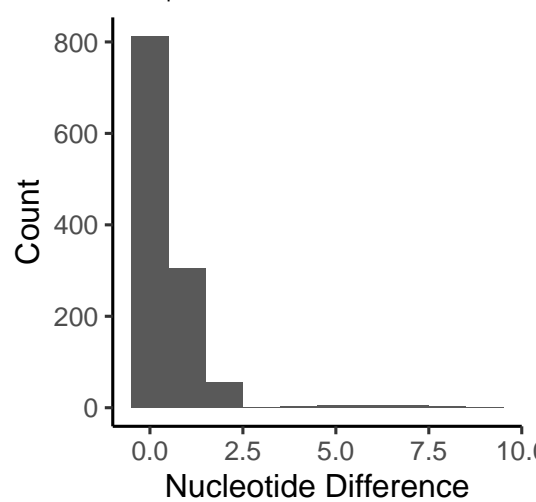
### IGHV7–4–1\*01

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



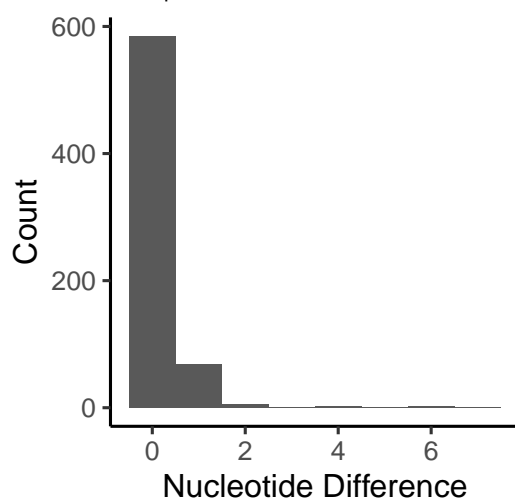
### IGHV4–61\*02

1198 sequences assigned  
813 (67.9%) exact matches, in which:  
717 unique CDR3  
6 unique J



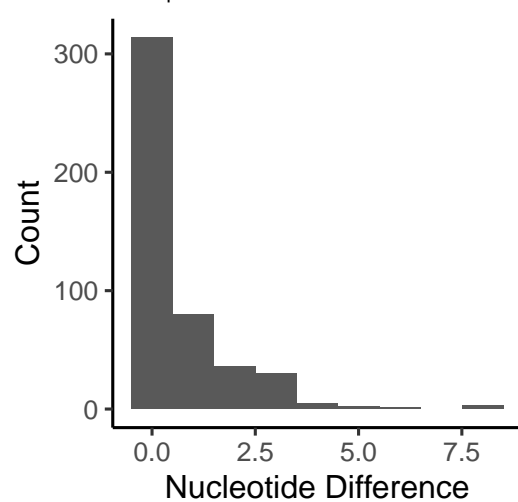
### IGHV5–51\*01\_A59C

666 sequences assigned  
585 (87.8%) exact matches, in which:  
572 unique CDR3  
7 unique J



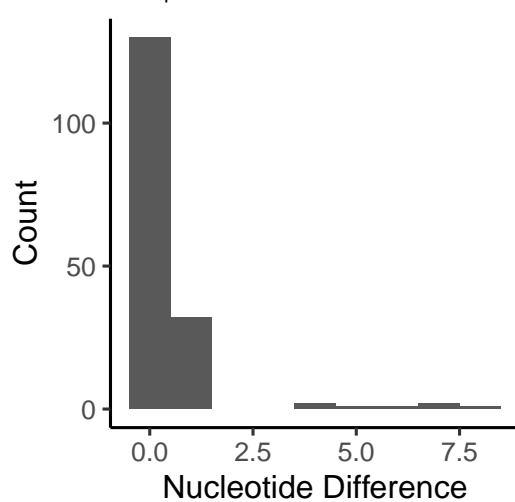
### IGHV5–10–1\*03

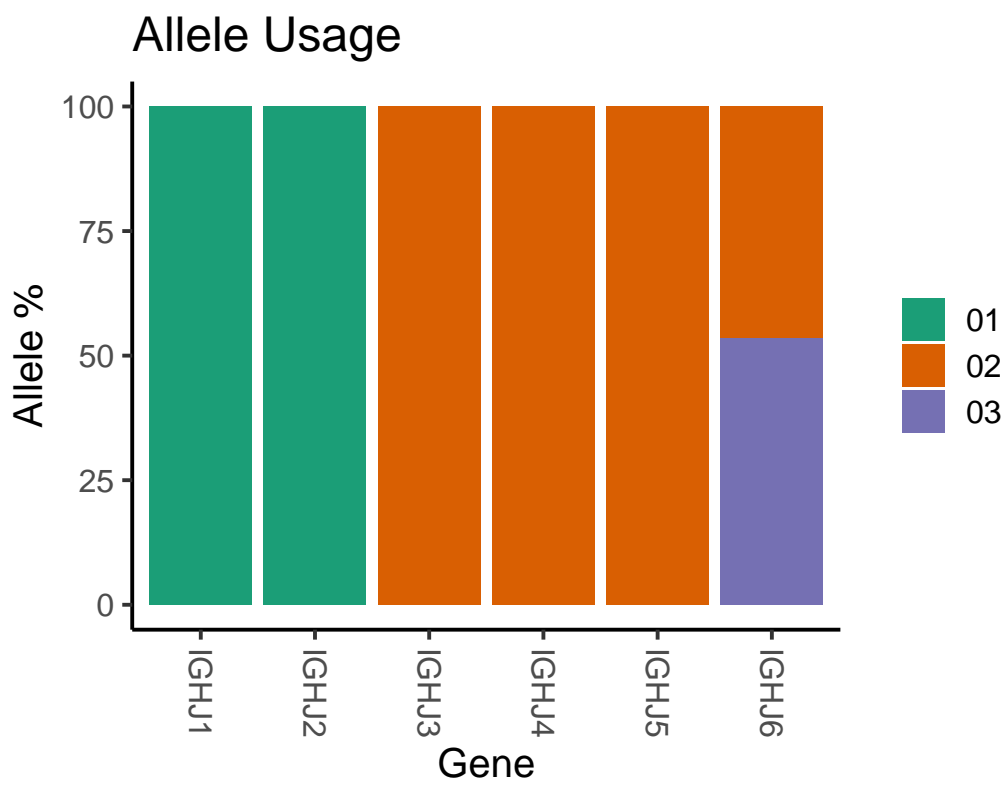
472 sequences assigned  
314 (66.5%) exact matches, in which:  
287 unique CDR3  
7 unique J



### IGHV6–1\*01

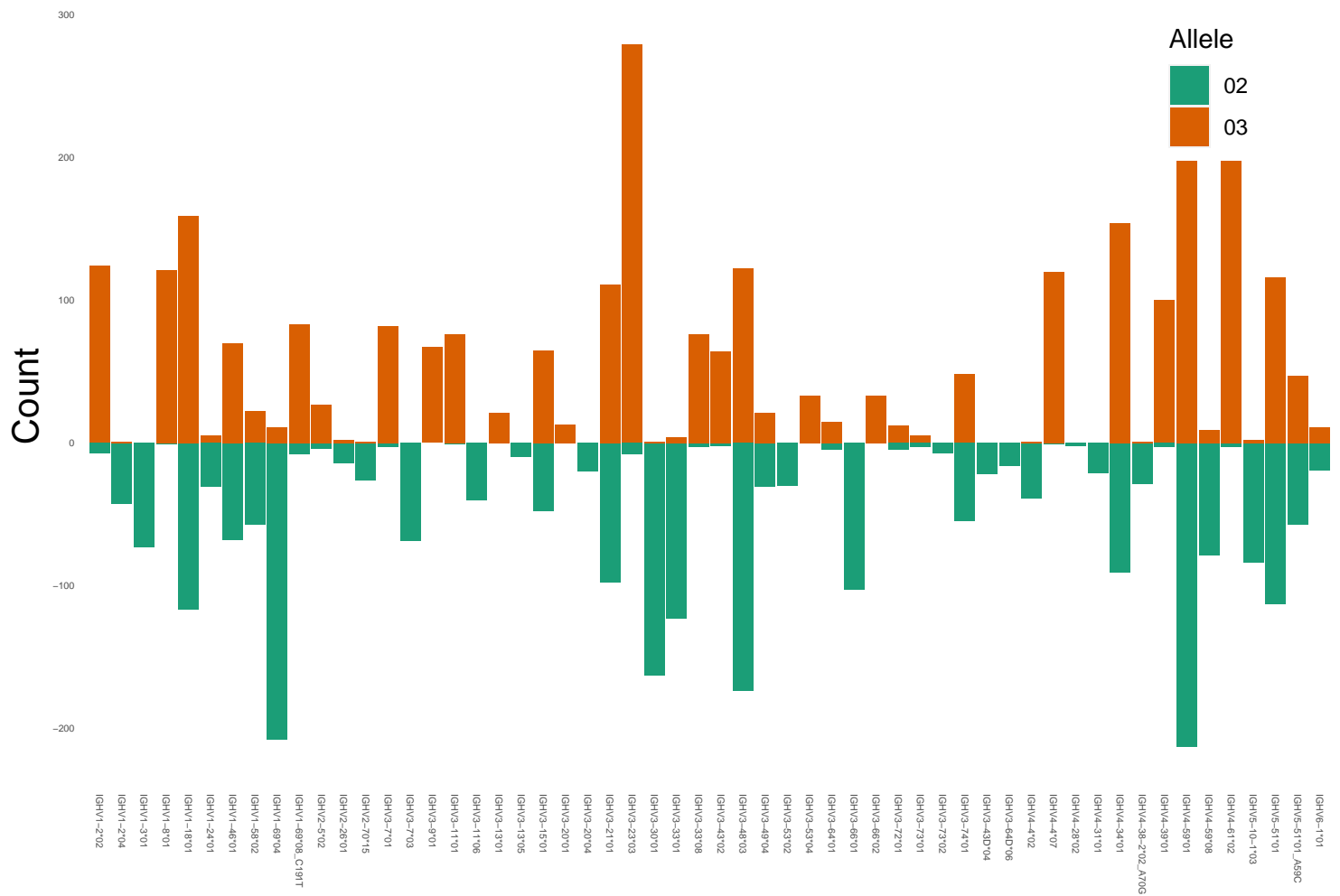
169 sequences assigned  
130 (76.9%) exact matches, in which:  
114 unique CDR3  
7 unique J







## Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.