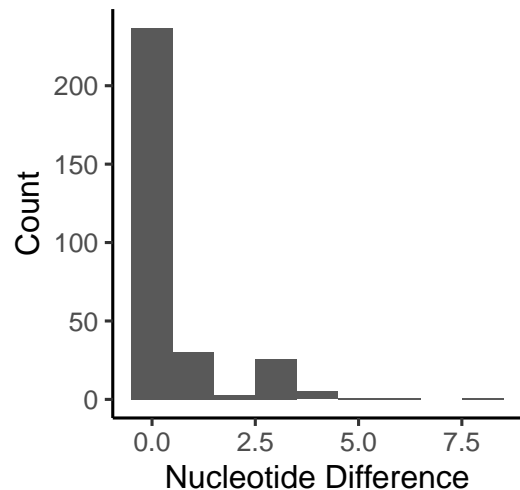


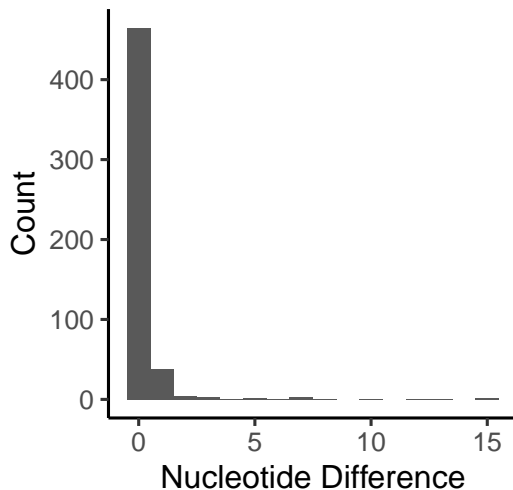
### IGHV1-2\*04

304 sequences assigned  
237 (78%) exact matches, in which:  
229 unique CDR3  
7 unique J



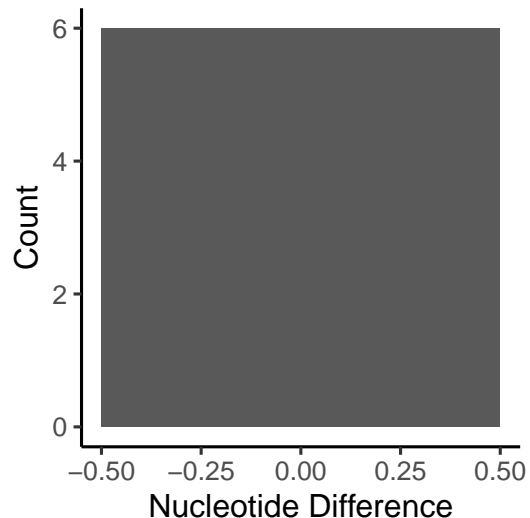
### IGHV1-18\*01

524 sequences assigned  
465 (88.7%) exact matches, in which:  
438 unique CDR3  
7 unique J



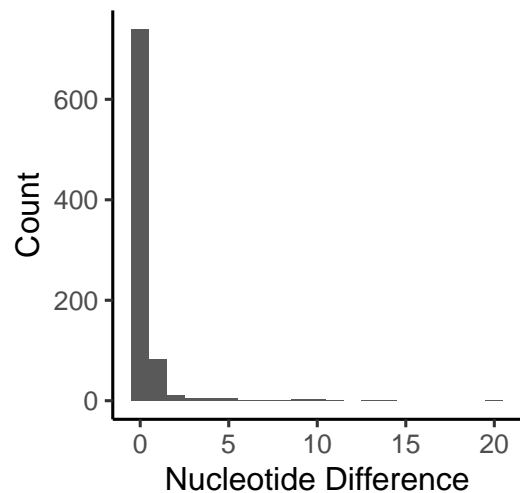
### IGHV1-45\*02

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



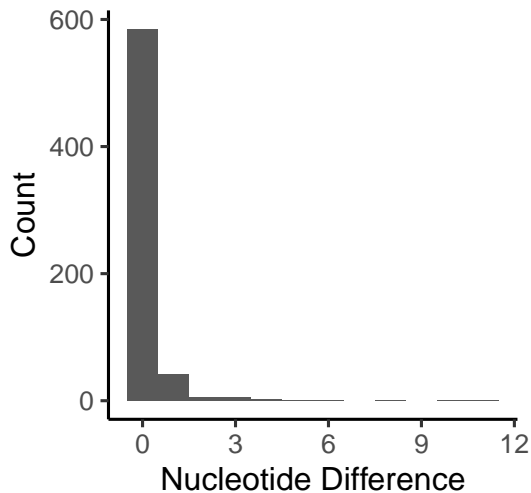
### IGHV1-3\*01

861 sequences assigned  
740 (85.9%) exact matches, in which:  
713 unique CDR3  
7 unique J



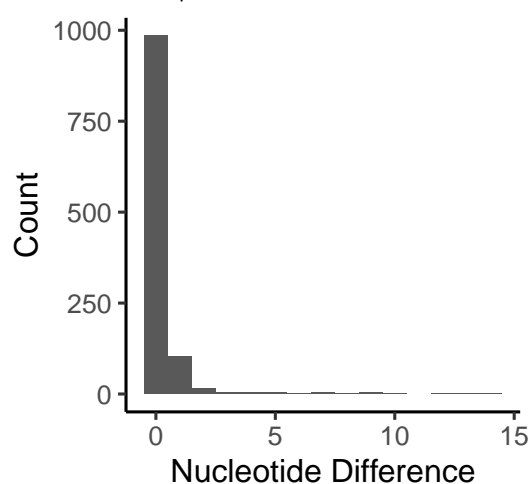
### IGHV1-18\*04

646 sequences assigned  
585 (90.6%) exact matches, in which:  
561 unique CDR3  
6 unique J



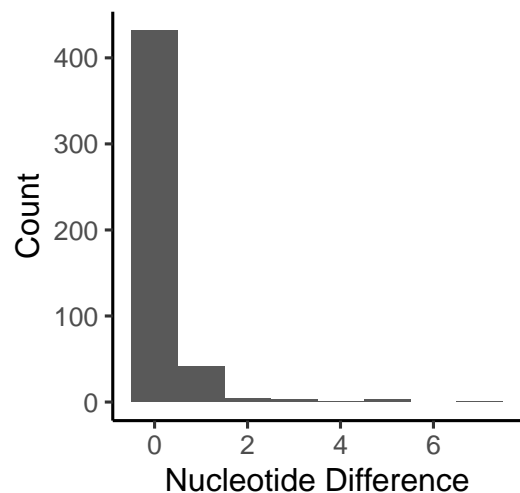
### IGHV1-46\*01

1130 sequences assigned  
985 (87.2%) exact matches, in which:  
933 unique CDR3  
7 unique J



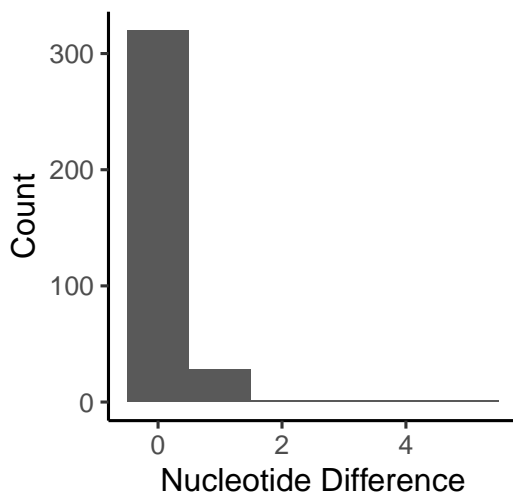
### IGHV1-8\*01

485 sequences assigned  
432 (89.1%) exact matches, in which:  
404 unique CDR3  
6 unique J



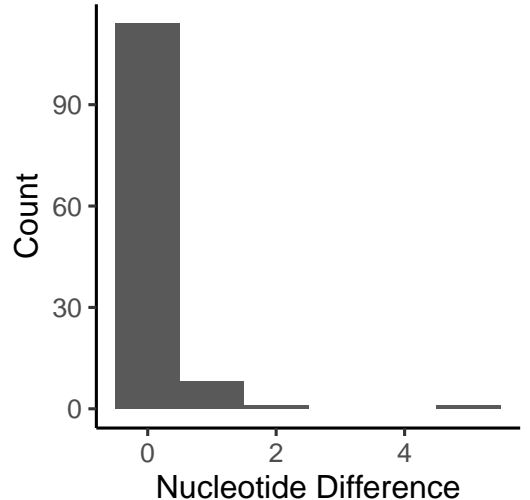
### IGHV1-24\*01

352 sequences assigned  
320 (90.9%) exact matches, in which:  
300 unique CDR3  
7 unique J



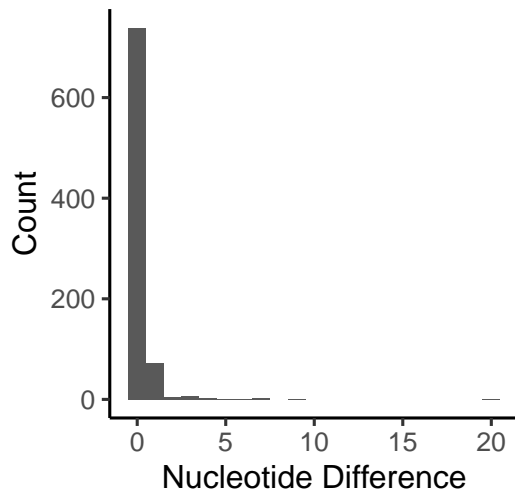
### IGHV1-58\*02

124 sequences assigned  
114 (91.9%) exact matches, in which:  
108 unique CDR3  
6 unique J



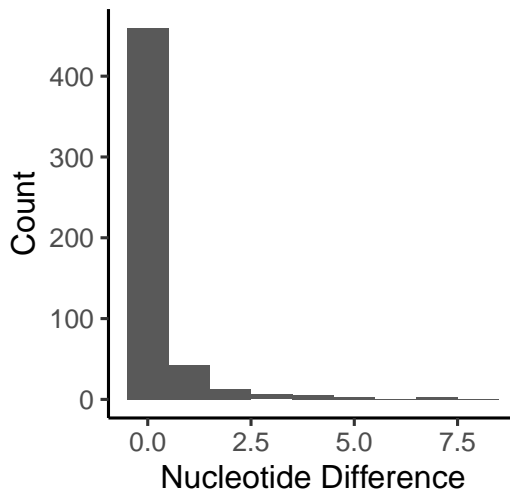
### IGHV1–69\*10

832 sequences assigned  
739 (88.8%) exact matches, in which:  
691 unique CDR3  
7 unique J



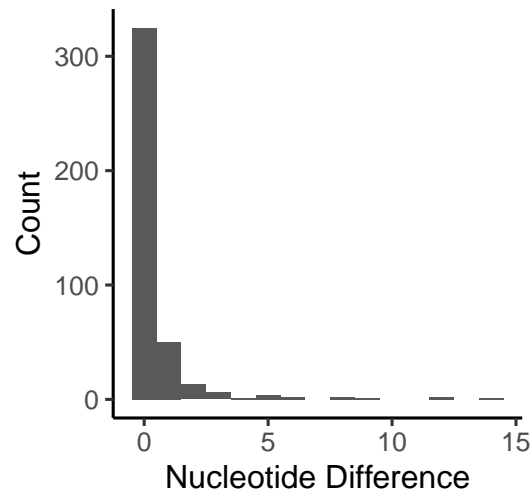
### IGHV2–5\*02

535 sequences assigned  
460 (86%) exact matches, in which:  
440 unique CDR3  
6 unique J



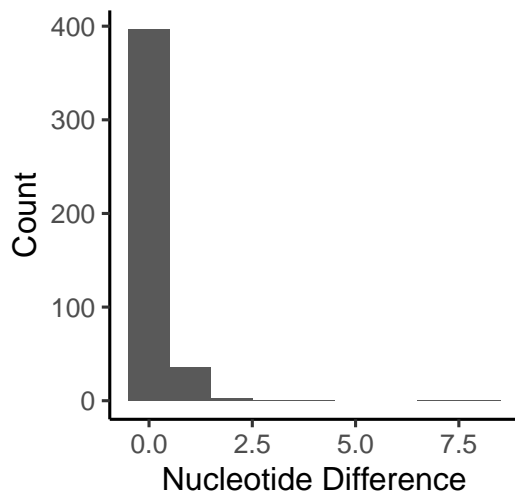
### IGHV3–7\*01

407 sequences assigned  
325 (79.9%) exact matches, in which:  
306 unique CDR3  
7 unique J



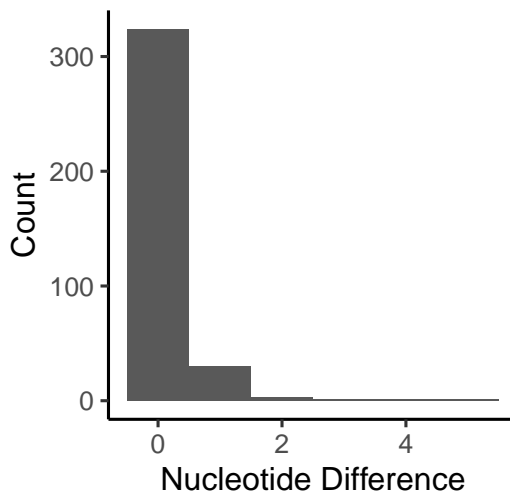
### IGHV1–69\*08\_C191T

440 sequences assigned  
397 (90.2%) exact matches, in which:  
364 unique CDR3  
6 unique J



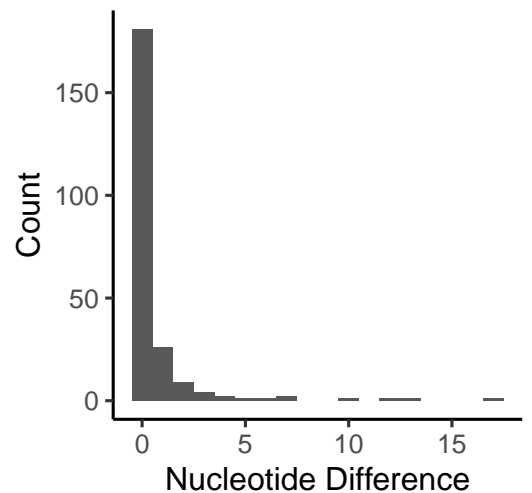
### IGHV2–26\*01

360 sequences assigned  
324 (90%) exact matches, in which:  
314 unique CDR3  
7 unique J



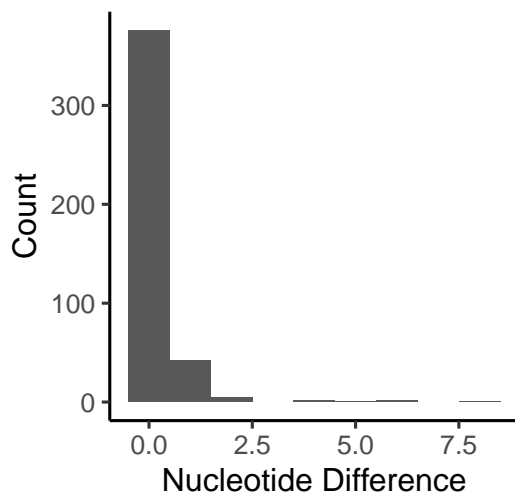
### IGHV3–7\*05

230 sequences assigned  
181 (78.7%) exact matches, in which:  
173 unique CDR3  
6 unique J



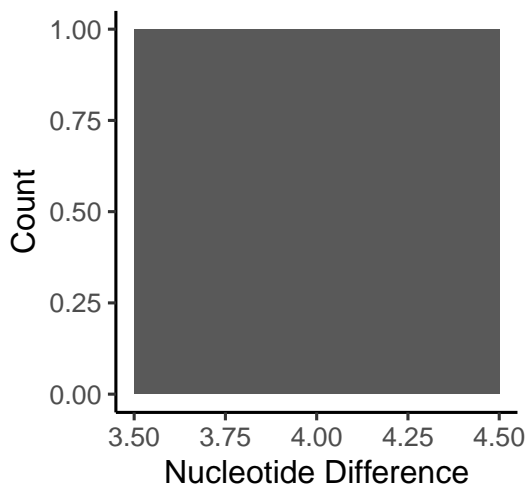
### IGHV2–5\*01

430 sequences assigned  
376 (87.4%) exact matches, in which:  
363 unique CDR3  
6 unique J



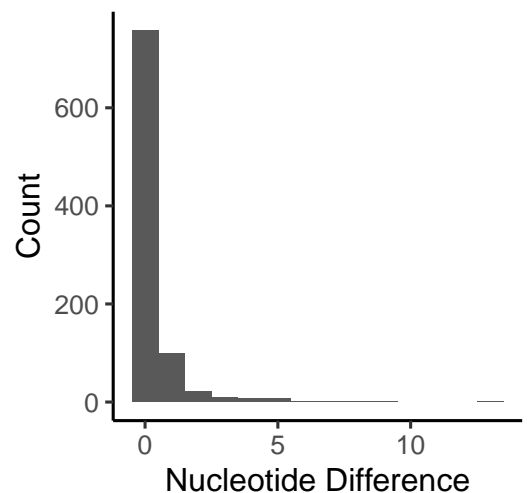
### IGHV2–70\*12

4 sequences assigned  
No exact matches.



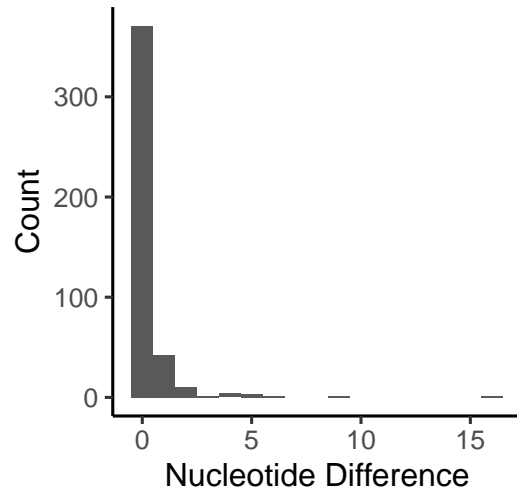
### IGHV3–9\*01

908 sequences assigned  
758 (83.5%) exact matches, in which:  
695 unique CDR3  
7 unique J



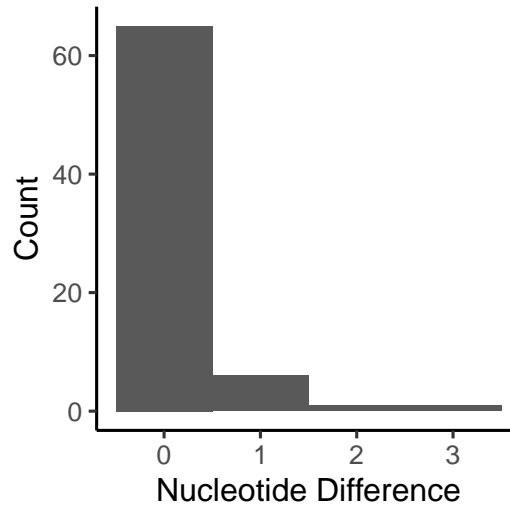
### IGHV3-11\*01

434 sequences assigned  
371 (85.5%) exact matches, in which:  
350 unique CDR3  
6 unique J



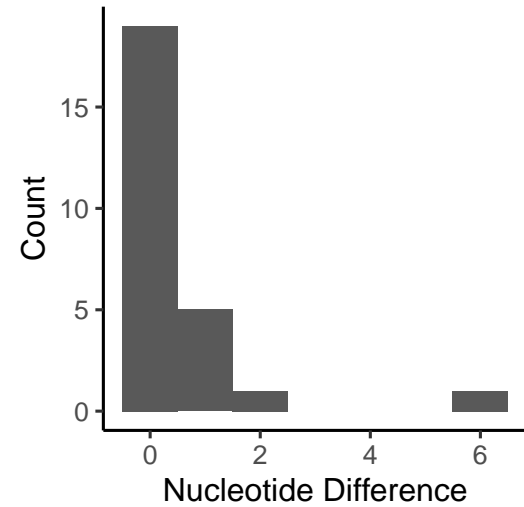
### IGHV3-13\*05

73 sequences assigned  
65 (89%) exact matches, in which:  
61 unique CDR3  
5 unique J



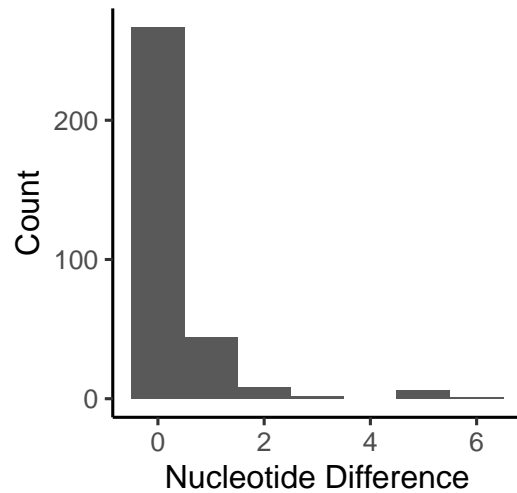
### IGHV3-20\*04

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



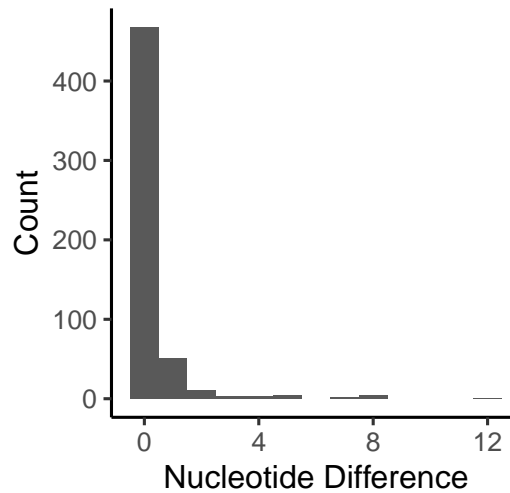
### IGHV3-11\*06

328 sequences assigned  
267 (81.4%) exact matches, in which:  
248 unique CDR3  
6 unique J



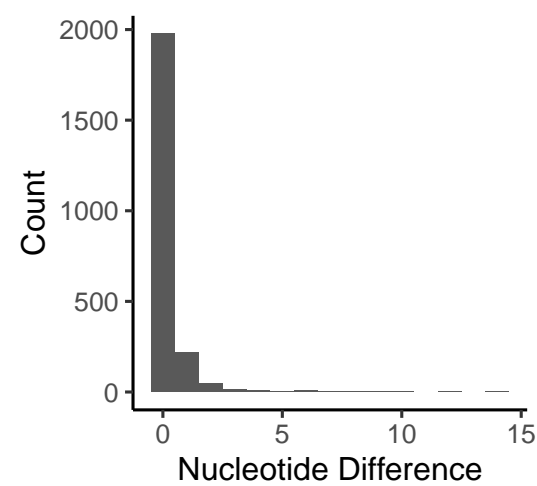
### IGHV3-15\*01

549 sequences assigned  
468 (85.2%) exact matches, in which:  
436 unique CDR3  
6 unique J



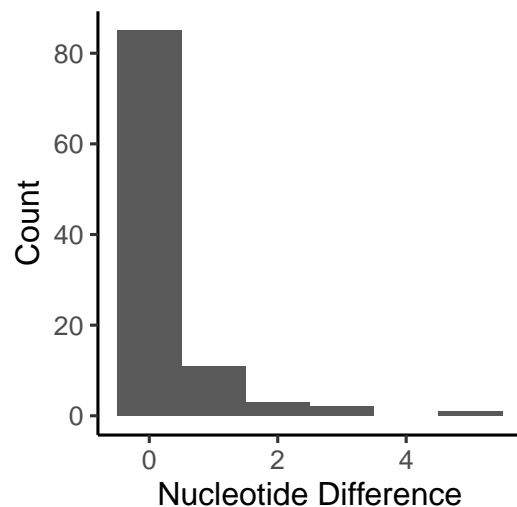
### IGHV3-21\*01

2290 sequences assigned  
1977 (86.3%) exact matches, in which:  
1818 unique CDR3  
7 unique J



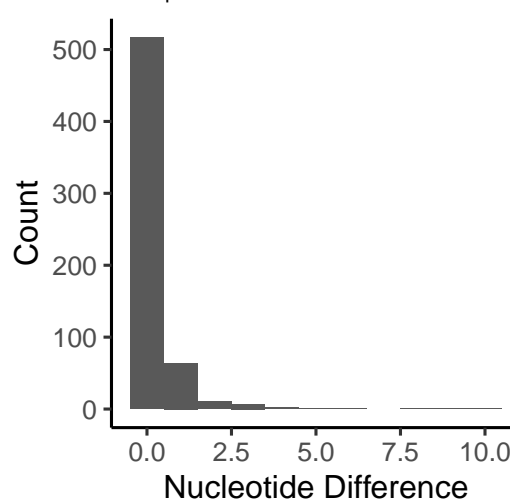
### IGHV3-13\*01

102 sequences assigned  
85 (83.3%) exact matches, in which:  
81 unique CDR3  
5 unique J



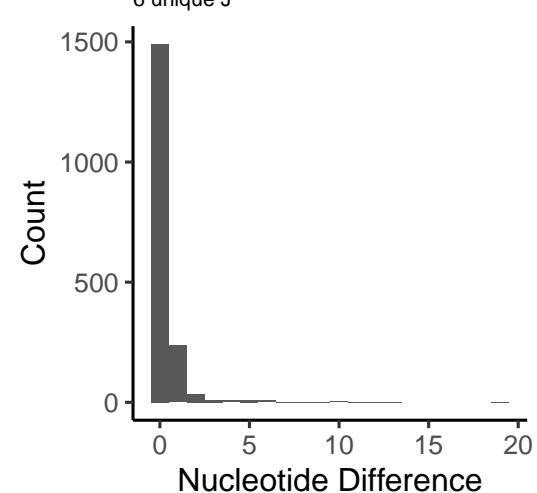
### IGHV3-15\*07

606 sequences assigned  
517 (85.3%) exact matches, in which:  
479 unique CDR3  
7 unique J



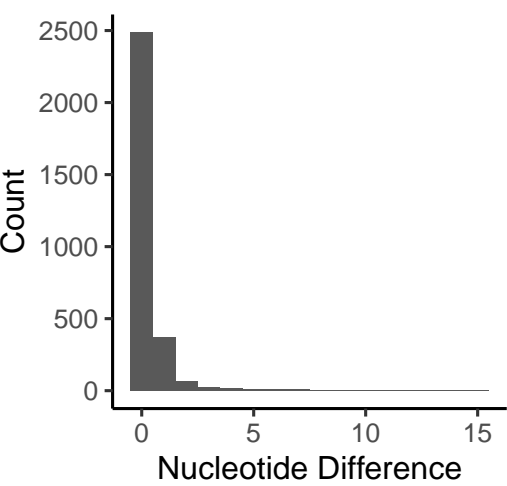
### IGHV3-23\*04

1809 sequences assigned  
1491 (82.4%) exact matches, in which:  
1390 unique CDR3  
6 unique J



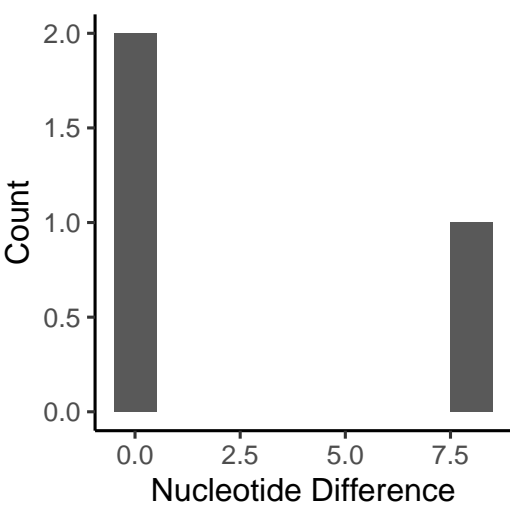
IGHV3-30-3\*01

3029 sequences assigned  
2487 (82.1%) exact matches, in which:  
2306 unique CDR3  
7 unique J



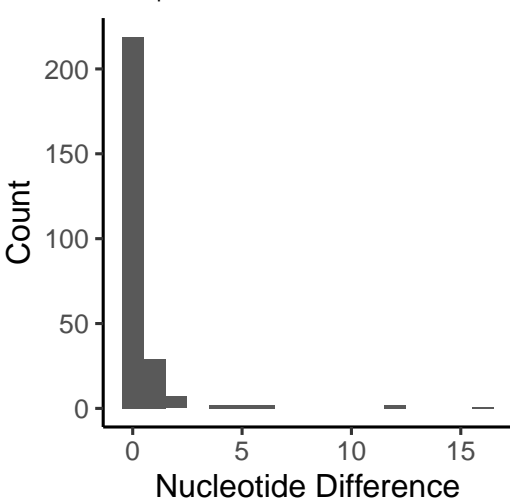
IGHV3-38-3\*01

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



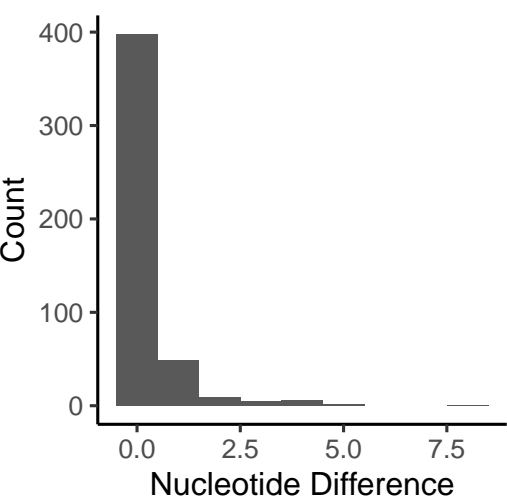
IGHV3-49\*04

264 sequences assigned  
219 (83%) exact matches, in which:  
206 unique CDR3  
6 unique J



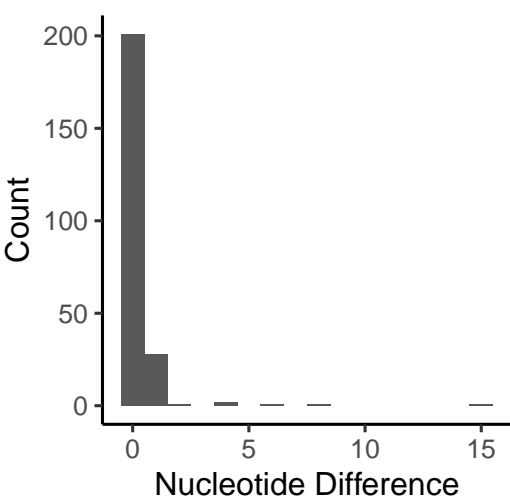
IGHV3-30\*18\_G113C\_C

476 sequences assigned  
398 (83.6%) exact matches, in which:  
376 unique CDR3  
7 unique J



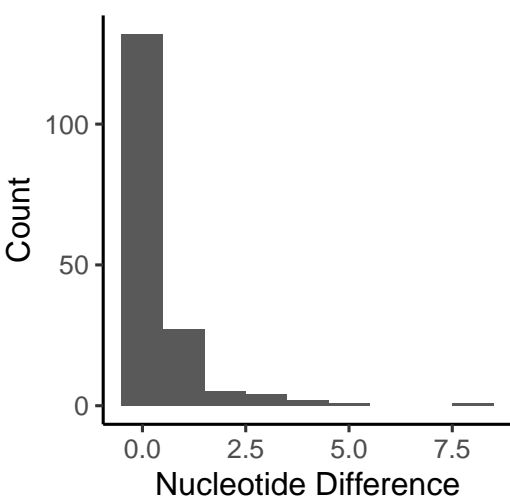
IGHV3-43\*01

235 sequences assigned  
201 (85.5%) exact matches, in which:  
184 unique CDR3  
7 unique J



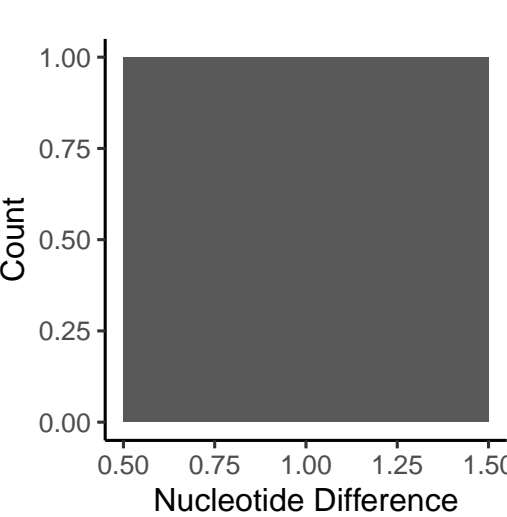
IGHV3-49\*05

172 sequences assigned  
132 (76.7%) exact matches, in which:  
129 unique CDR3  
5 unique J



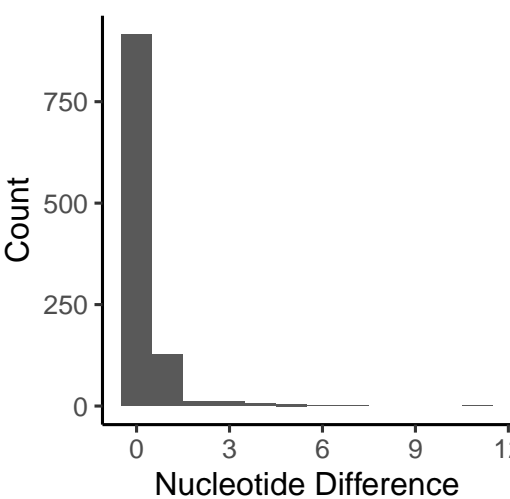
IGHV3-33\*06

1 sequences assigned  
No exact matches.



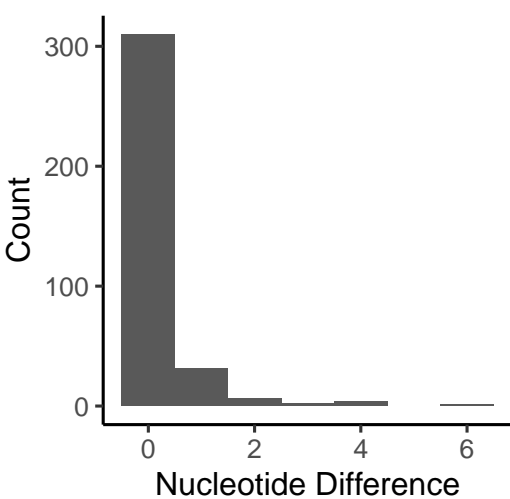
IGHV3-48\*02

1080 sequences assigned  
916 (84.8%) exact matches, in which:  
864 unique CDR3  
7 unique J



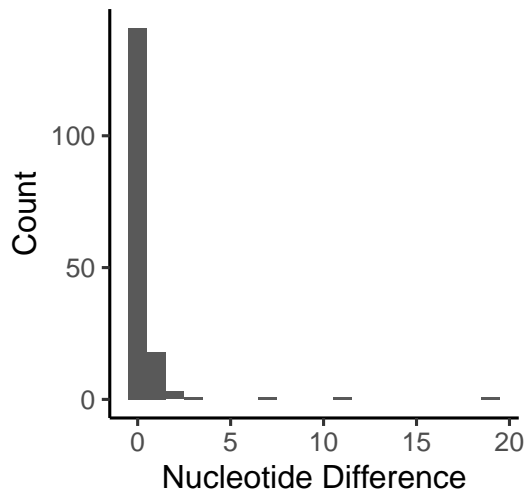
IGHV3-53\*01

354 sequences assigned  
310 (87.6%) exact matches, in which:  
288 unique CDR3  
7 unique J



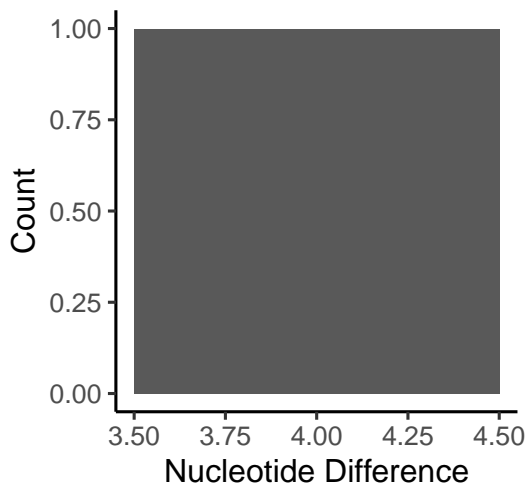
### IGHV3–53\*04

173 sequences assigned  
141 (81.5%) exact matches, in which:  
131 unique CDR3  
6 unique J



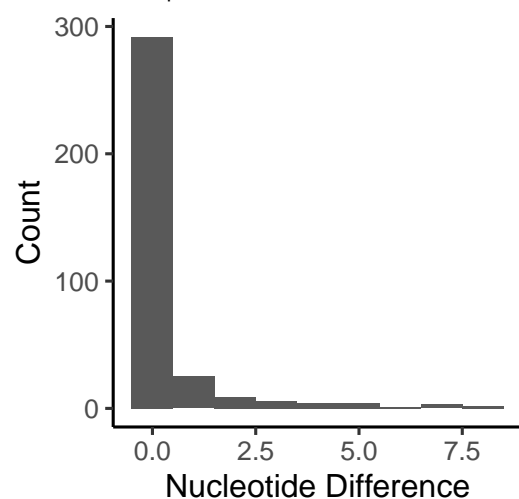
### IGHV3–71\*03

1 sequences assigned  
No exact matches.



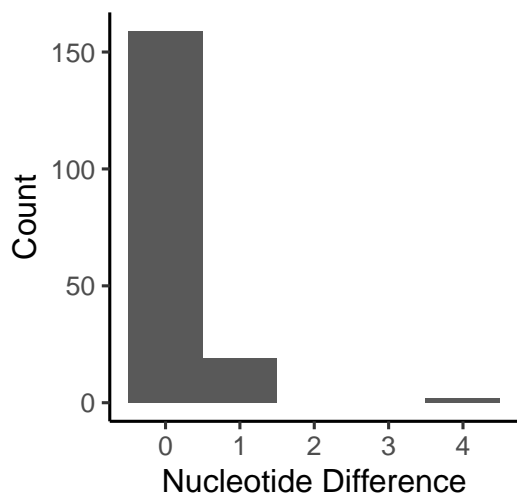
### IGHV3–74\*01

346 sequences assigned  
292 (84.4%) exact matches, in which:  
270 unique CDR3  
7 unique J



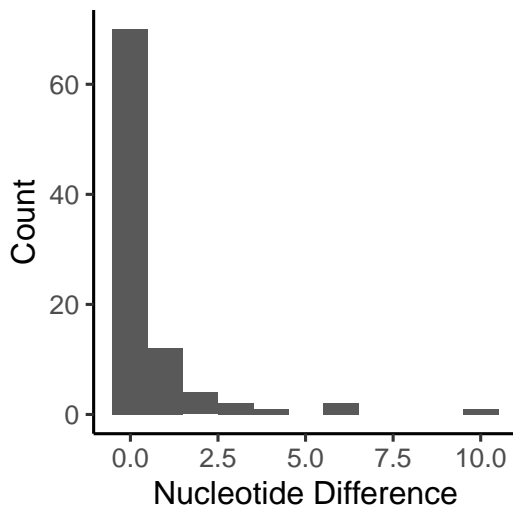
### IGHV3–64\*01

180 sequences assigned  
159 (88.3%) exact matches, in which:  
151 unique CDR3  
7 unique J



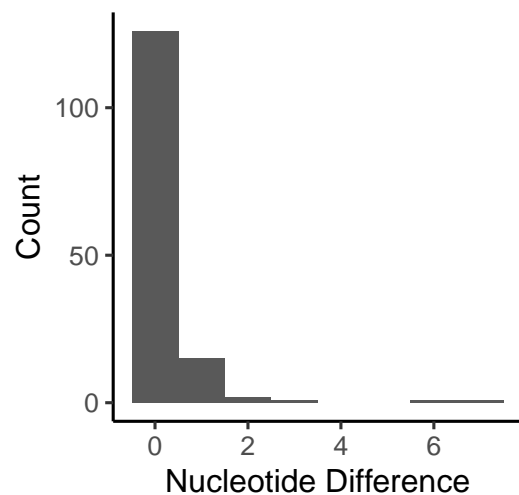
### IGHV3–72\*01

92 sequences assigned  
70 (76.1%) exact matches, in which:  
67 unique CDR3  
6 unique J



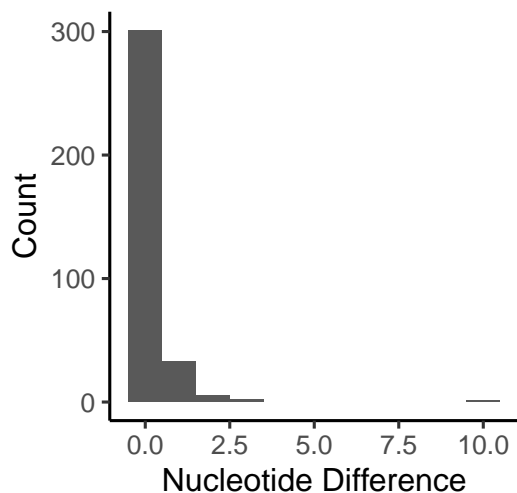
### IGHV3–43D\*03

146 sequences assigned  
126 (86.3%) exact matches, in which:  
122 unique CDR3  
5 unique J



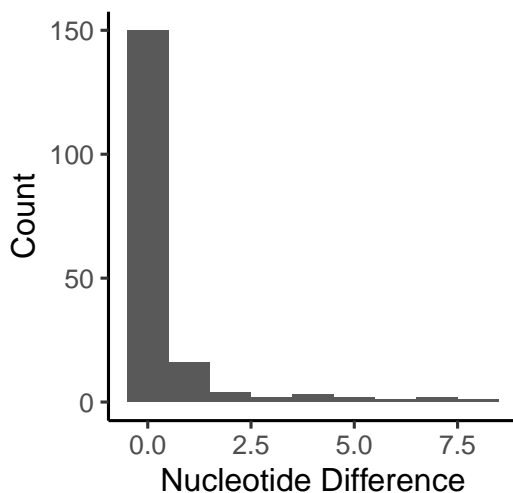
### IGHV3–66\*02

342 sequences assigned  
301 (88%) exact matches, in which:  
268 unique CDR3  
6 unique J



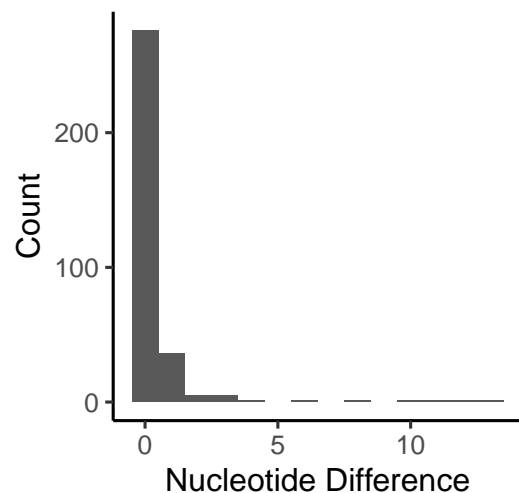
### IGHV3–73\*01

181 sequences assigned  
150 (82.9%) exact matches, in which:  
133 unique CDR3  
6 unique J



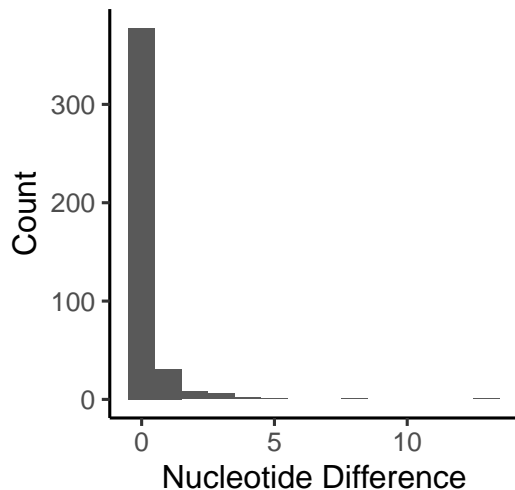
### IGHV3–64D\*08

329 sequences assigned  
276 (83.9%) exact matches, in which:  
255 unique CDR3  
6 unique J



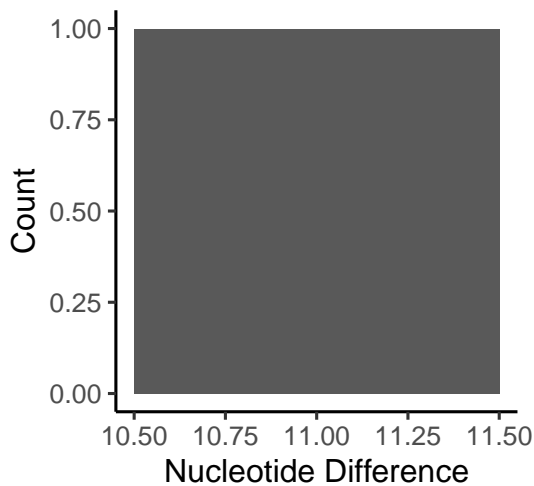
### IGHV4-4\*02

428 sequences assigned  
378 (88.3%) exact matches, in which:  
365 unique CDR3  
6 unique J



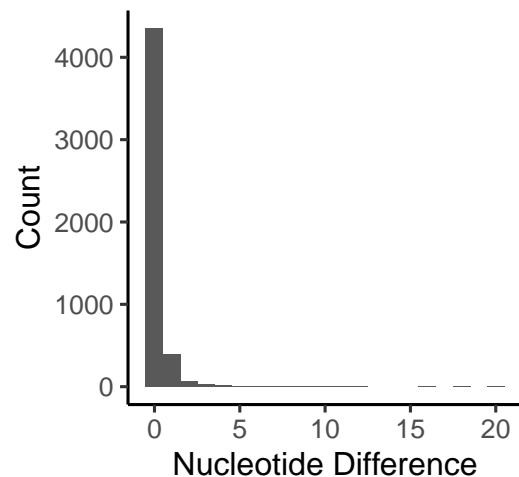
### IGHV4-28\*06

1 sequences assigned  
No exact matches.



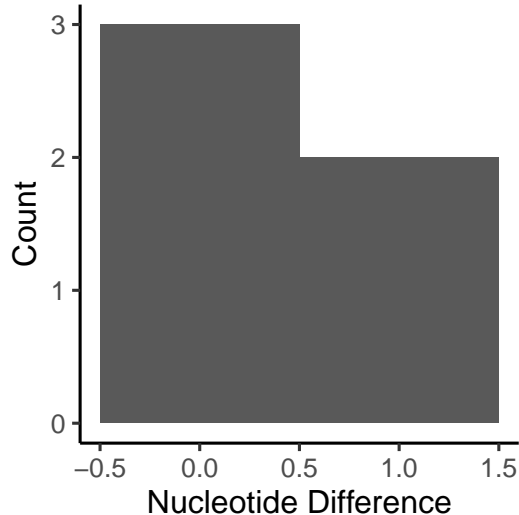
### IGHV4-34\*01

4898 sequences assigned  
4351 (88.8%) exact matches, in which:  
4063 unique CDR3  
7 unique J



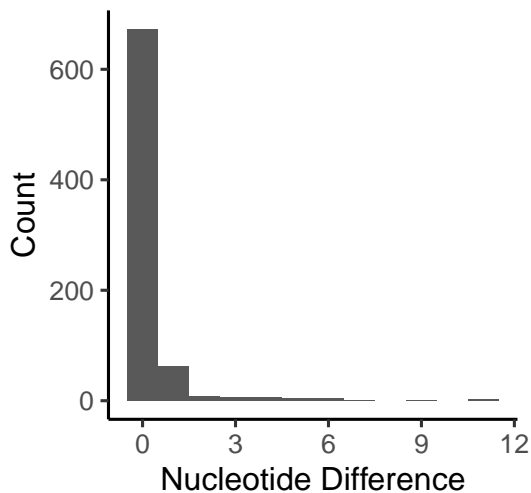
### IGHV4-28\*01

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



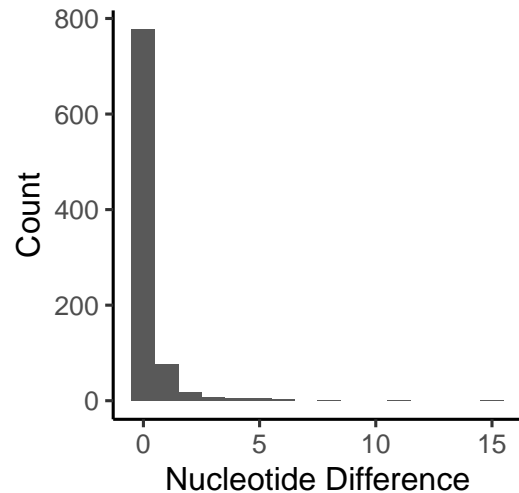
### IGHV4-30-4\*01

773 sequences assigned  
673 (87.1%) exact matches, in which:  
646 unique CDR3  
7 unique J



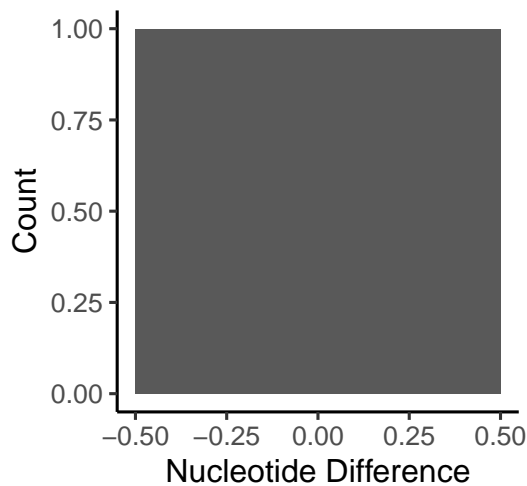
### IGHV4-38-2\*02

899 sequences assigned  
778 (86.5%) exact matches, in which:  
711 unique CDR3  
6 unique J



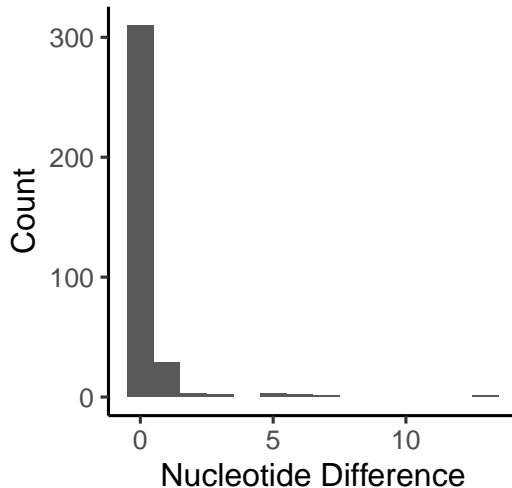
### IGHV4-28\*03

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



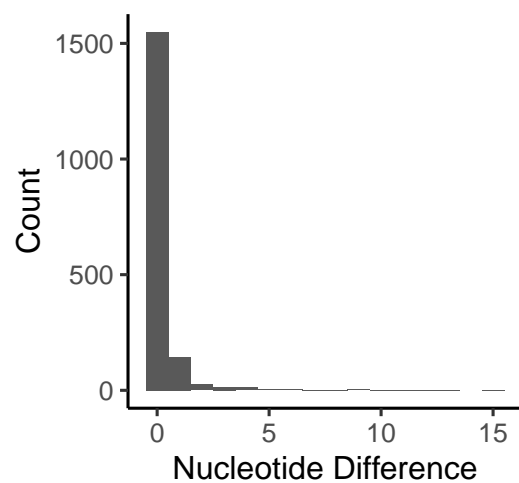
### IGHV4-30-2\*01

351 sequences assigned  
310 (88.3%) exact matches, in which:  
296 unique CDR3  
7 unique J



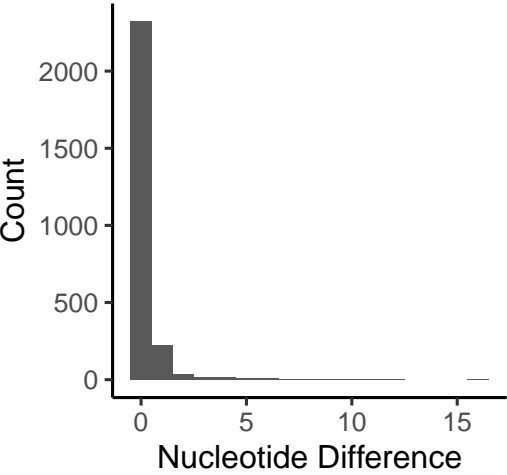
### IGHV4-39\*01

1769 sequences assigned  
1549 (87.6%) exact matches, in which:  
1415 unique CDR3  
7 unique J



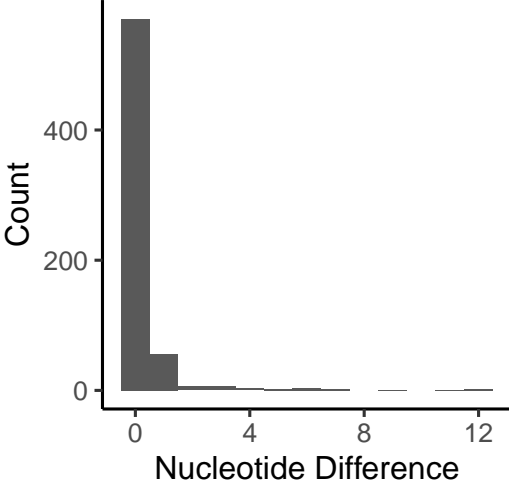
IGHV4–39\*07

2654 sequences assigned  
2322 (87.5%) exact matches, in which:  
2138 unique CDR3  
6 unique J



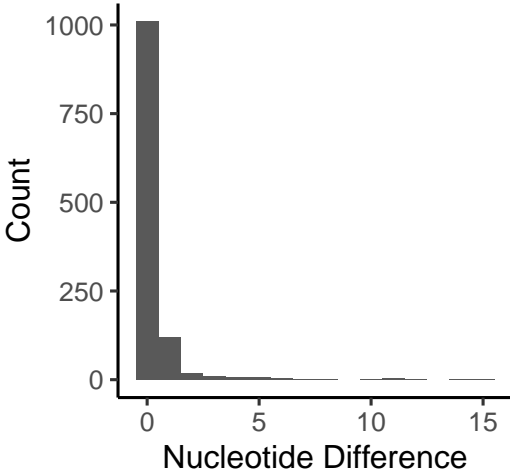
IGHV4–59\*08

654 sequences assigned  
571 (87.3%) exact matches, in which:  
548 unique CDR3  
7 unique J



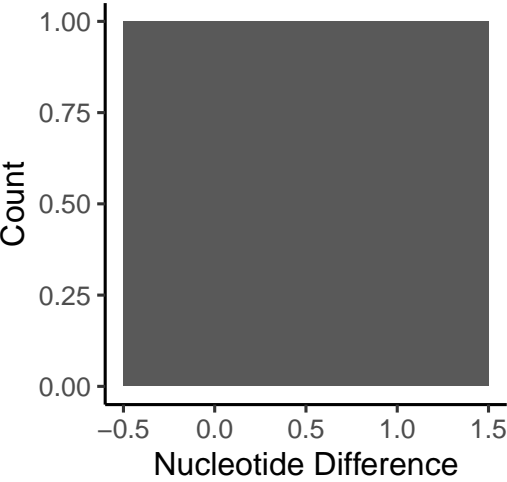
IGHV5–51\*01

1193 sequences assigned  
1010 (84.7%) exact matches, in which:  
944 unique CDR3  
7 unique J



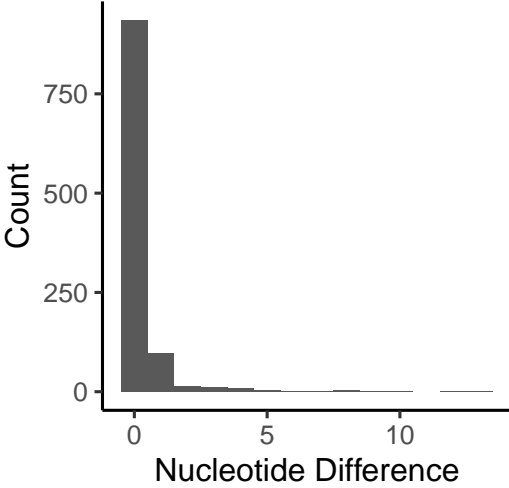
IGHV4–55\*08

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



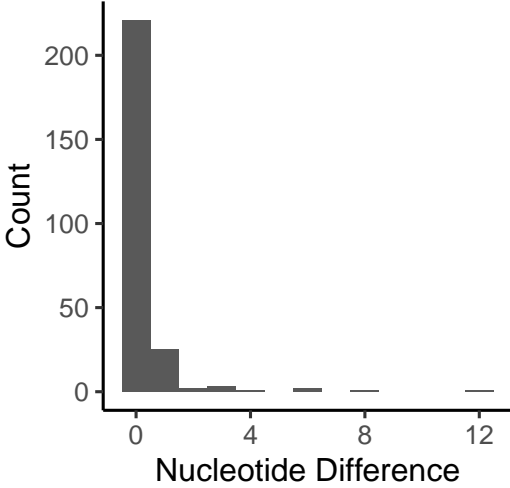
IGHV4–61\*02

1082 sequences assigned  
936 (86.5%) exact matches, in which:  
890 unique CDR3  
7 unique J



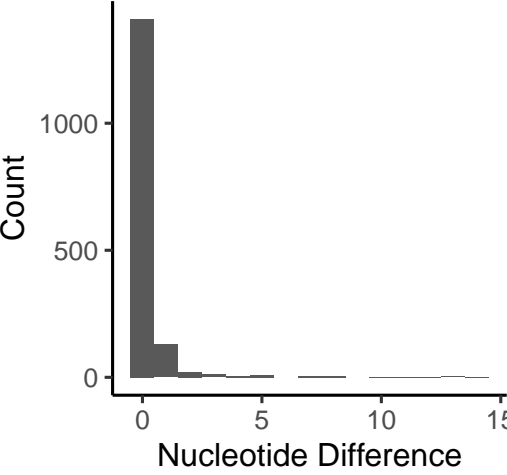
IGHV6–1\*01

256 sequences assigned  
221 (86.3%) exact matches, in which:  
212 unique CDR3  
6 unique J



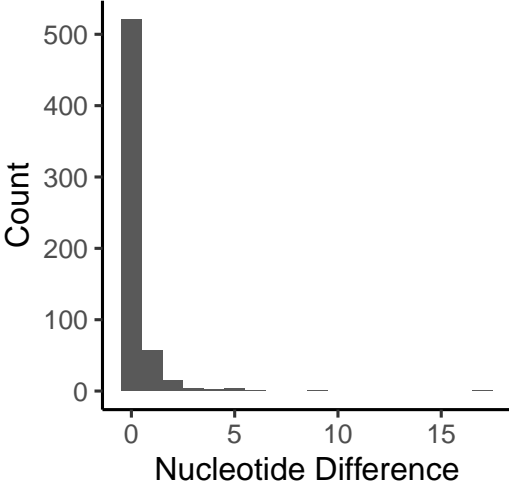
IGHV4–59\*01

1600 sequences assigned  
1410 (88.1%) exact matches, in which:  
1346 unique CDR3  
7 unique J



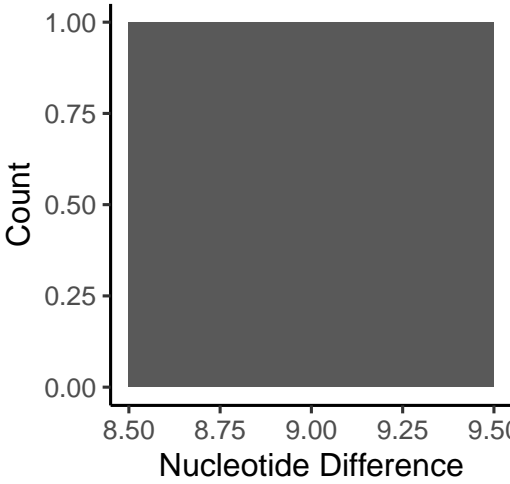
IGHV5–10–1\*03

604 sequences assigned  
521 (86.3%) exact matches, in which:  
499 unique CDR3  
7 unique J



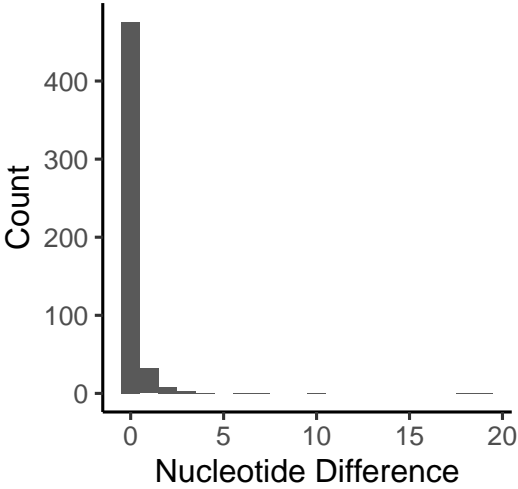
IGHV3/OR16–8\*01

1 sequences assigned  
No exact matches.



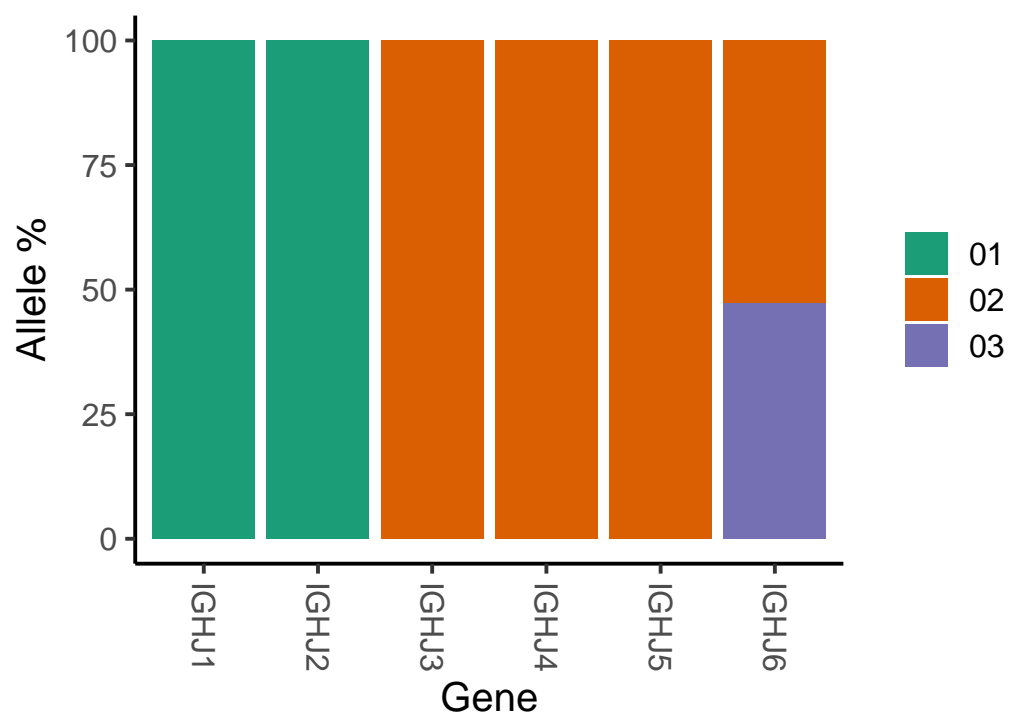
# IGHV7-4-1\*02

525 sequences assigned  
476 (90.7%) exact matches, in which:  
458 unique CDR3  
6 unique J

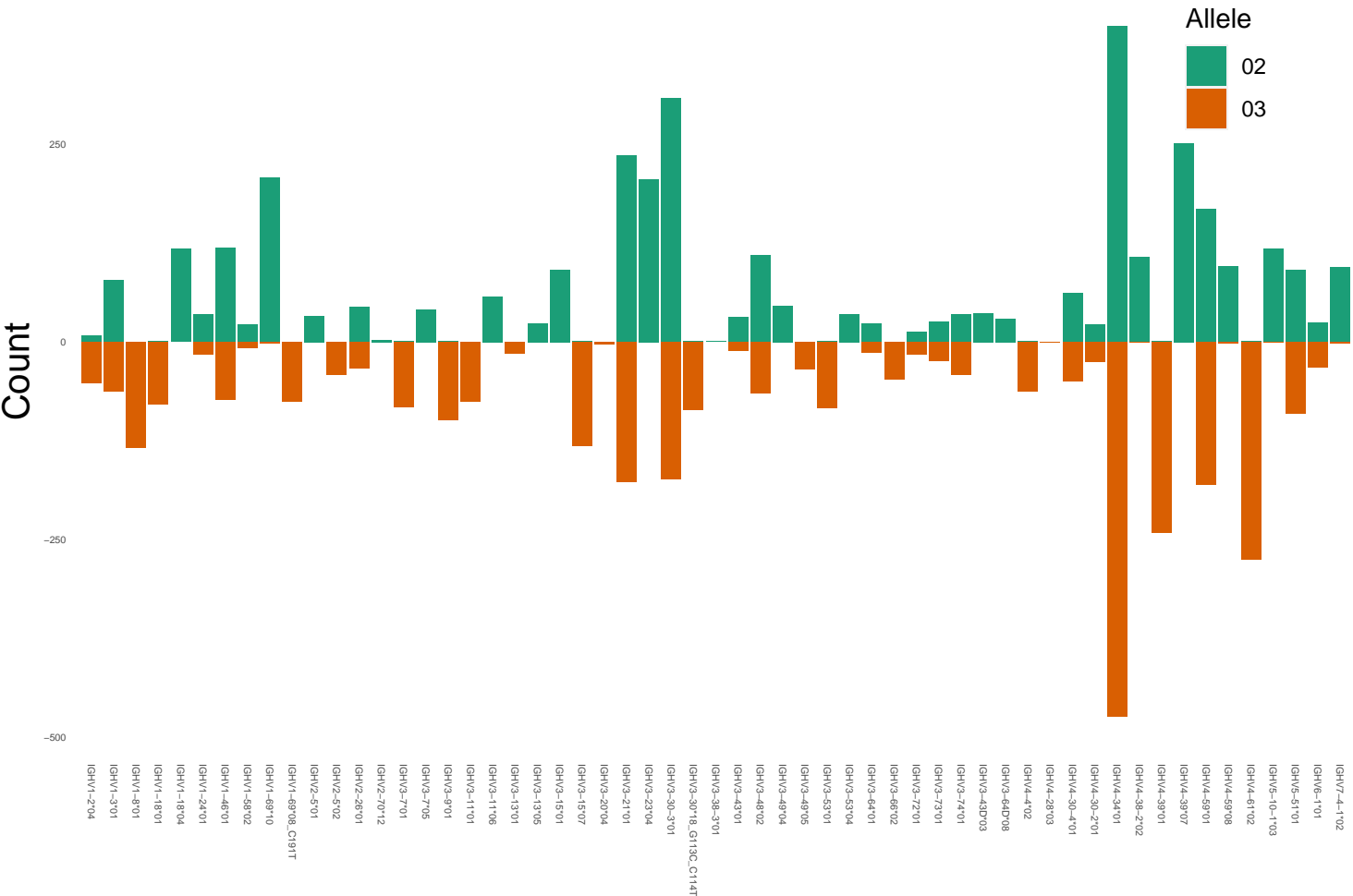




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.