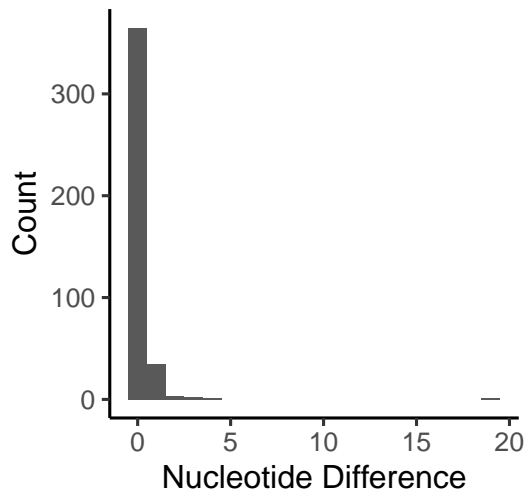


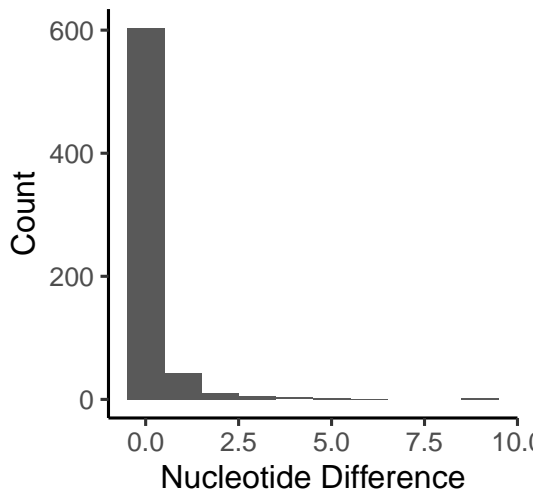
### IGHV1-2\*04

408 sequences assigned  
365 (89.5%) exact matches, in which:  
350 unique CDR3  
6 unique J



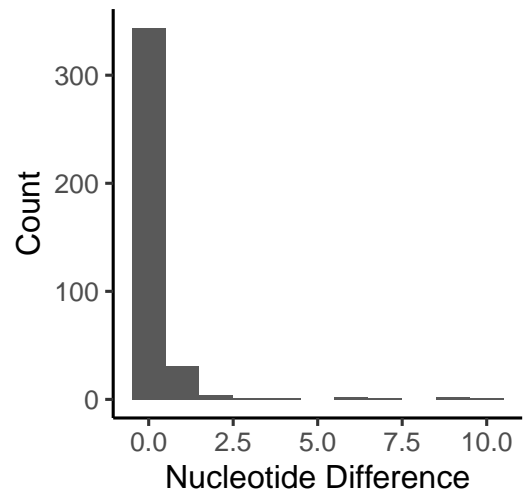
### IGHV1-18\*01

671 sequences assigned  
604 (90%) exact matches, in which:  
586 unique CDR3  
6 unique J



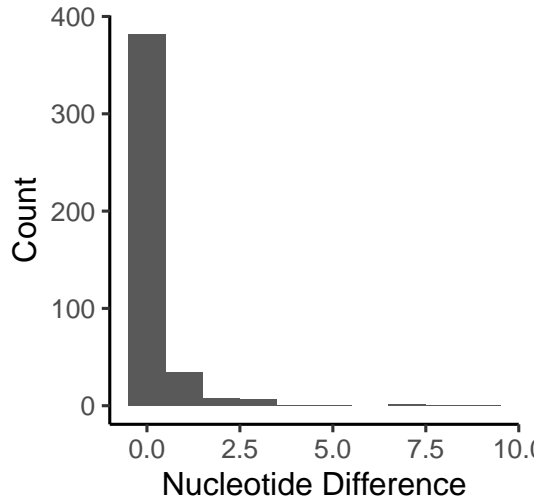
### IGHV1-46\*01

387 sequences assigned  
344 (88.9%) exact matches, in which:  
327 unique CDR3  
6 unique J



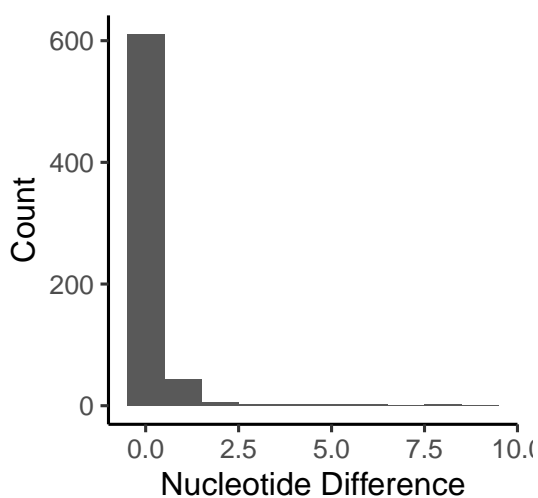
### IGHV1-3\*01

437 sequences assigned  
382 (87.4%) exact matches, in which:  
367 unique CDR3  
6 unique J



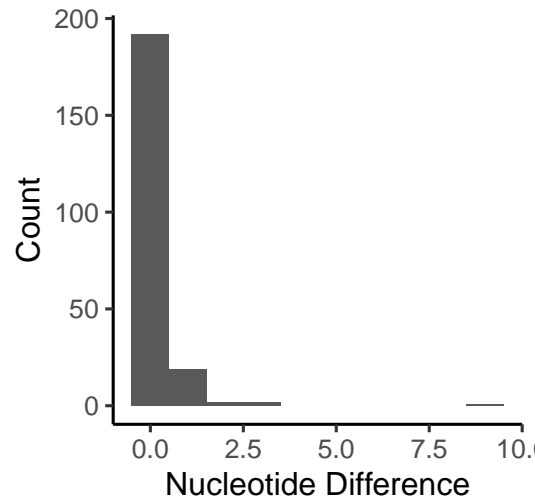
### IGHV1-18\*04

675 sequences assigned  
611 (90.5%) exact matches, in which:  
589 unique CDR3  
6 unique J



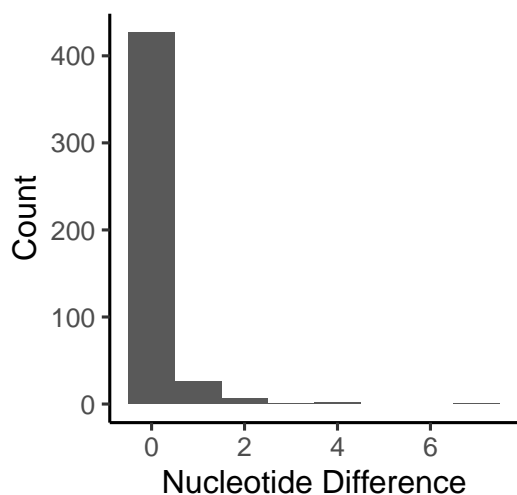
### IGHV1-46\*03

216 sequences assigned  
192 (88.9%) exact matches, in which:  
187 unique CDR3  
6 unique J



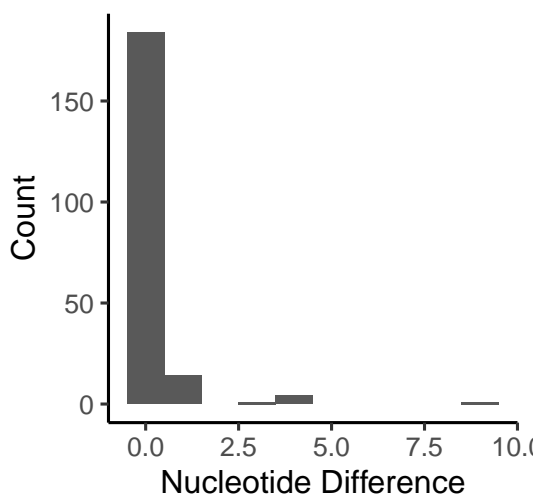
### IGHV1-8\*01

463 sequences assigned  
427 (92.2%) exact matches, in which:  
402 unique CDR3  
6 unique J



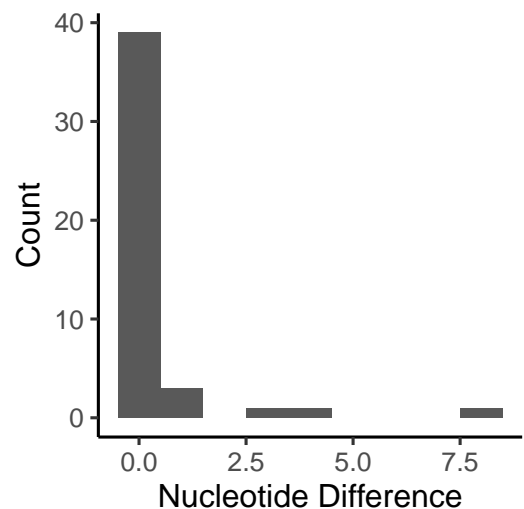
### IGHV1-24\*01

204 sequences assigned  
184 (90.2%) exact matches, in which:  
177 unique CDR3  
6 unique J



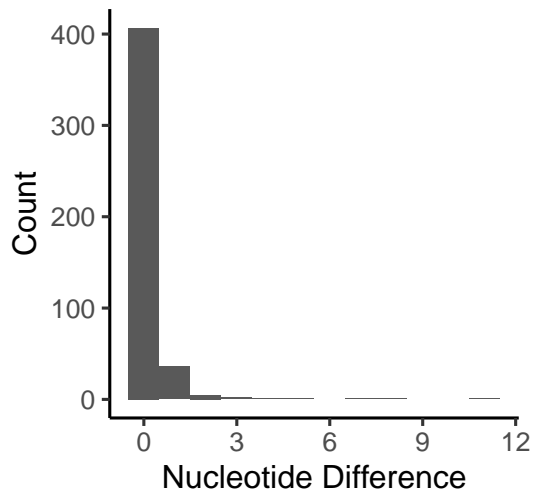
### IGHV1-58\*02

45 sequences assigned  
39 (86.7%) exact matches, in which:  
37 unique CDR3  
6 unique J



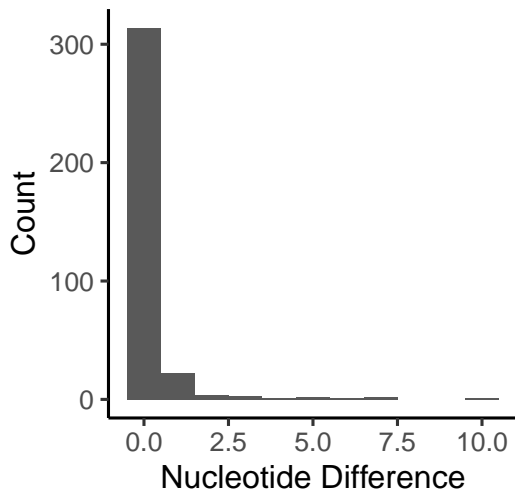
### IGHV1–69\*08\_C191T

455 sequences assigned  
407 (89.5%) exact matches, in which:  
382 unique CDR3  
6 unique J



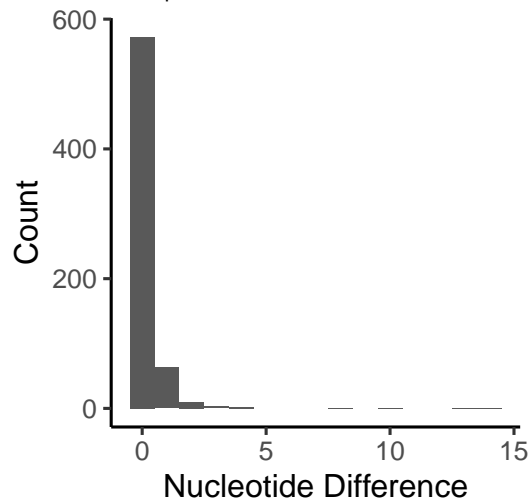
### IGHV2–26\*01

350 sequences assigned  
314 (89.7%) exact matches, in which:  
303 unique CDR3  
5 unique J



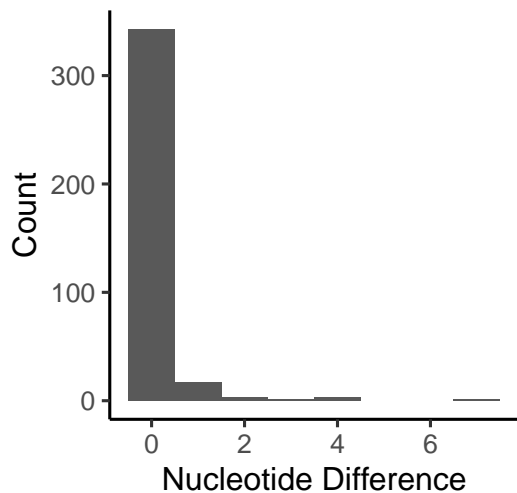
### IGHV3–7\*03

655 sequences assigned  
573 (87.5%) exact matches, in which:  
535 unique CDR3  
6 unique J



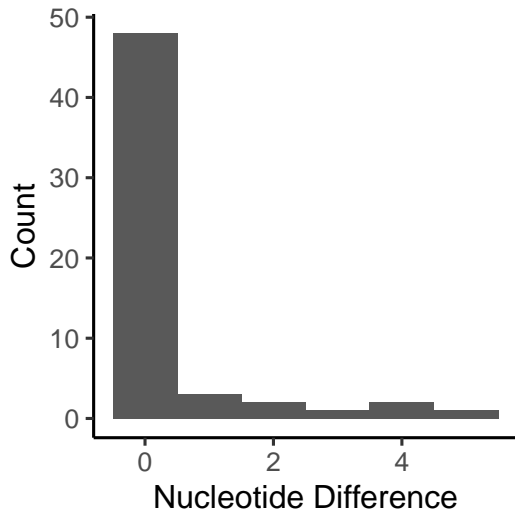
### IGHV2–5\*01

368 sequences assigned  
343 (93.2%) exact matches, in which:  
332 unique CDR3  
6 unique J



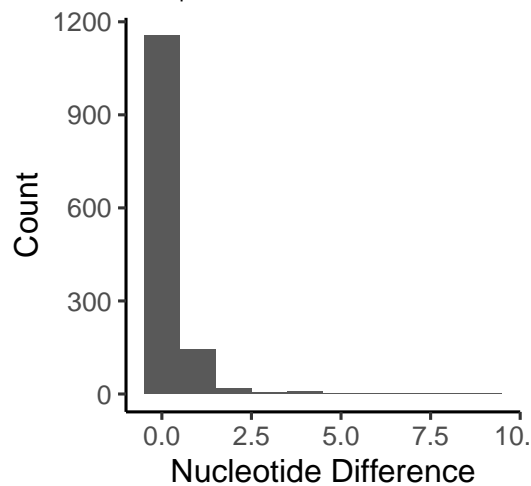
### IGHV2–70\*01

57 sequences assigned  
48 (84.2%) exact matches, in which:  
48 unique CDR3  
4 unique J



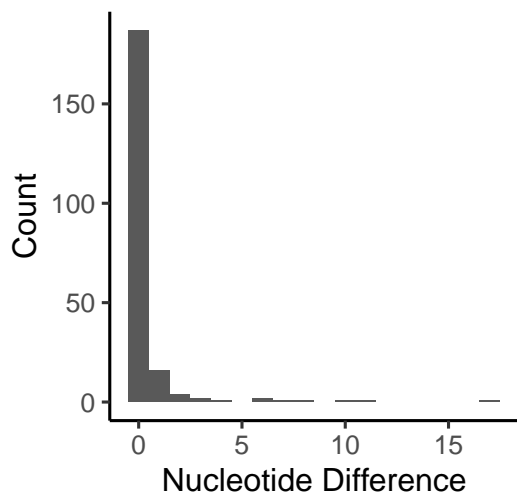
### IGHV3–9\*01

1342 sequences assigned  
1155 (86.1%) exact matches, in which:  
1047 unique CDR3  
6 unique J



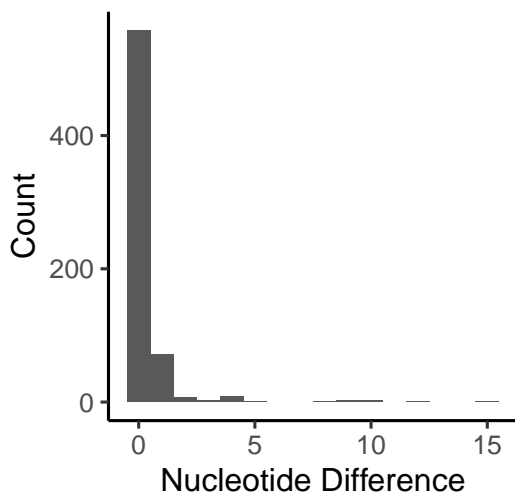
### IGHV2–5\*02

217 sequences assigned  
187 (86.2%) exact matches, in which:  
176 unique CDR3  
6 unique J



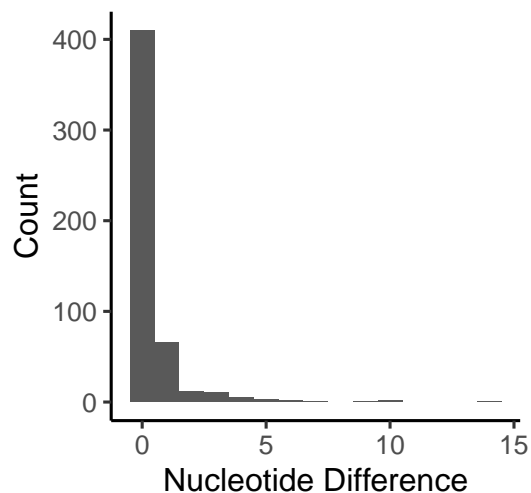
### IGHV3–7\*01

656 sequences assigned  
558 (85.1%) exact matches, in which:  
524 unique CDR3  
6 unique J



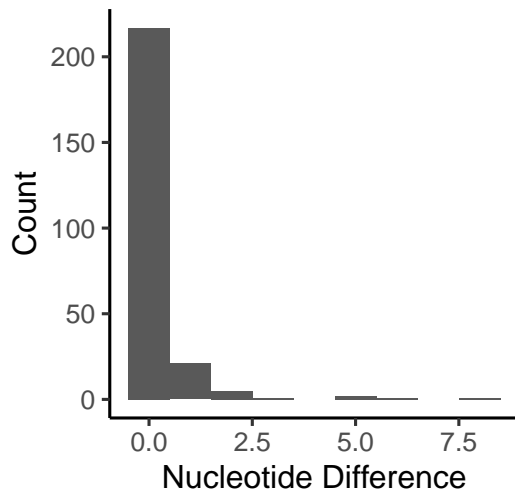
### IGHV3–11\*01

515 sequences assigned  
410 (79.6%) exact matches, in which:  
386 unique CDR3  
6 unique J



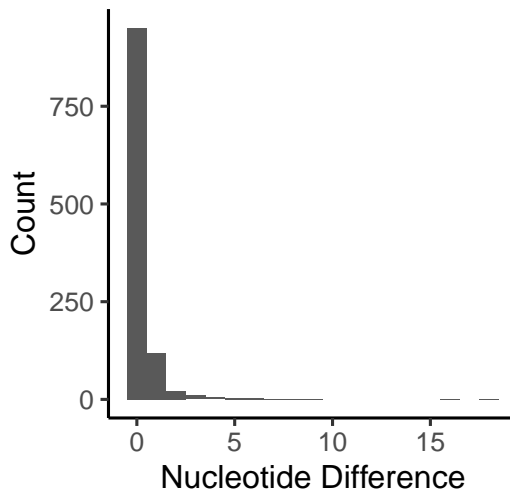
### IGHV3-11\*06

249 sequences assigned  
217 (87.1%) exact matches, in which:  
199 unique CDR3  
6 unique J



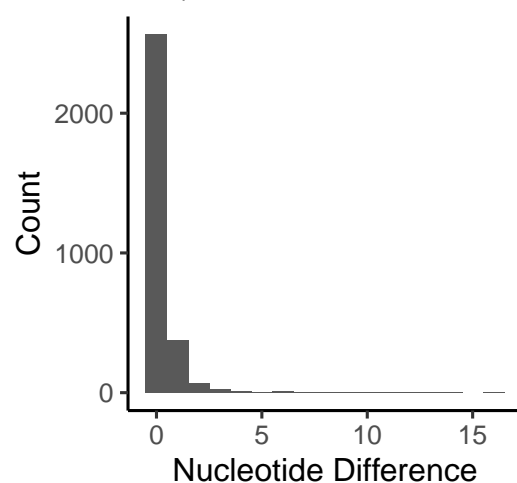
### IGHV3-15\*01

1122 sequences assigned  
951 (84.8%) exact matches, in which:  
884 unique CDR3  
6 unique J



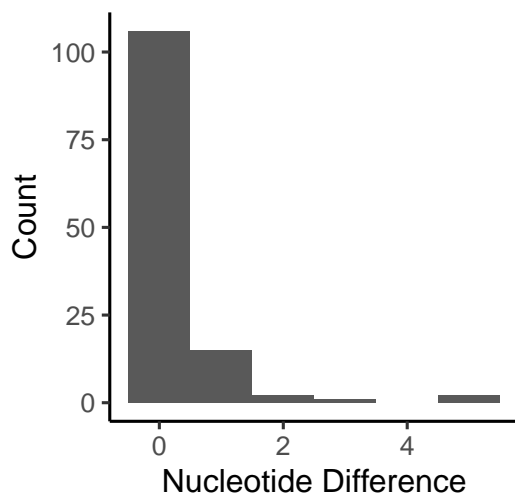
### IGHV3-30-3\*01

3083 sequences assigned  
2564 (83.2%) exact matches, in which:  
2370 unique CDR3  
6 unique J



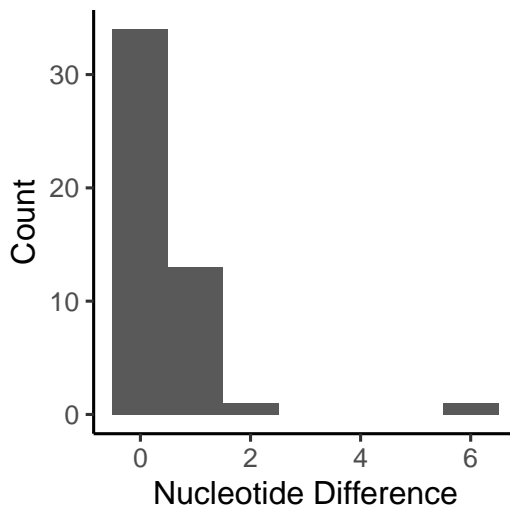
### IGHV3-13\*01

126 sequences assigned  
106 (84.1%) exact matches, in which:  
103 unique CDR3  
6 unique J



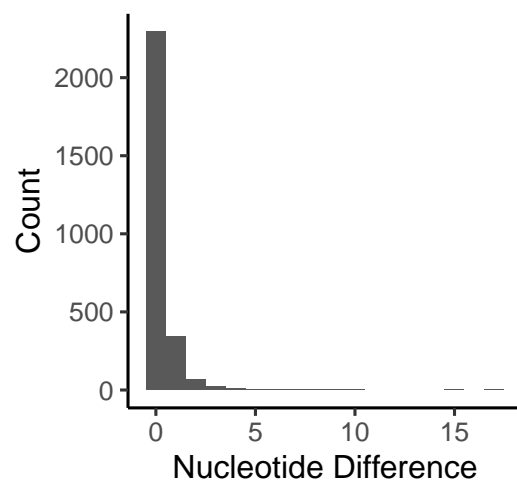
### IGHV3-20\*01

49 sequences assigned  
34 (69.4%) exact matches, in which:  
32 unique CDR3  
6 unique J



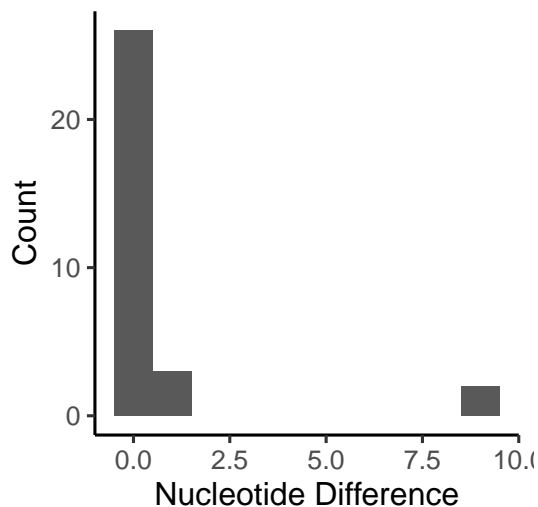
### IGHV3-33\*01

2760 sequences assigned  
2294 (83.1%) exact matches, in which:  
2112 unique CDR3  
6 unique J



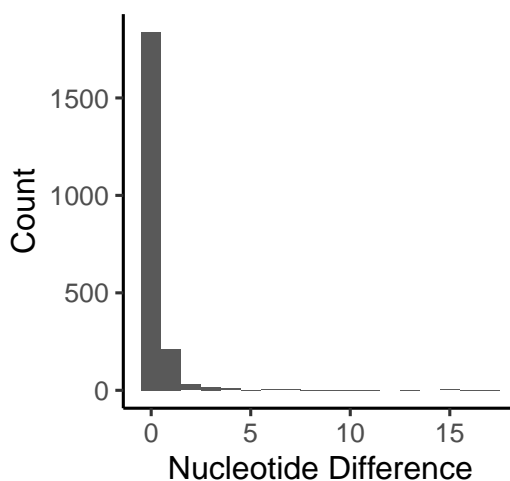
### IGHV3-13\*05

31 sequences assigned  
26 (83.9%) exact matches, in which:  
24 unique CDR3  
5 unique J



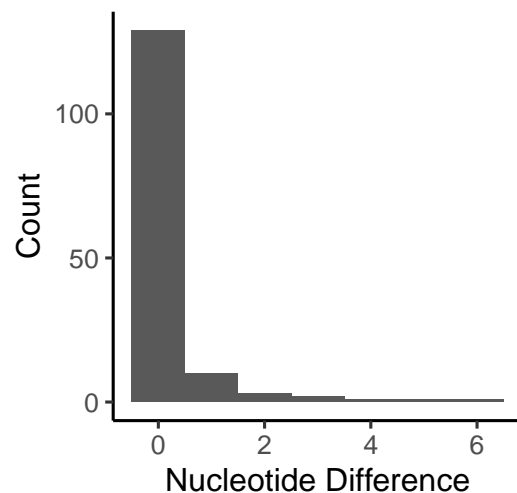
### IGHV3-21\*01

2137 sequences assigned  
1838 (86%) exact matches, in which:  
1696 unique CDR3  
6 unique J



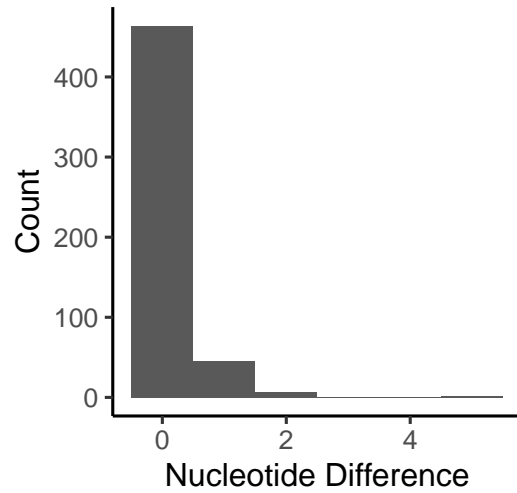
### IGHV3-43\*01

147 sequences assigned  
129 (87.8%) exact matches, in which:  
121 unique CDR3  
5 unique J



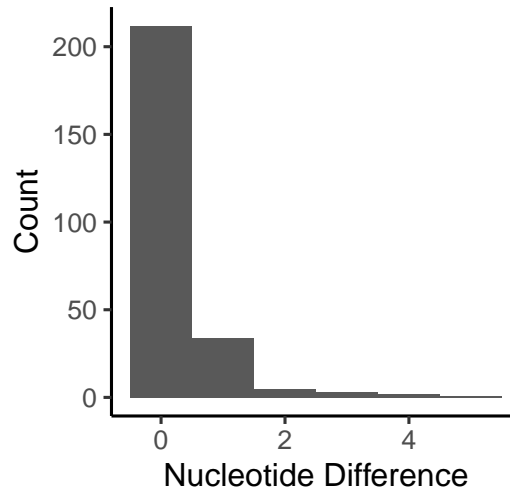
### IGHV3-48\*01

520 sequences assigned  
464 (89.2%) exact matches, in which:  
437 unique CDR3  
6 unique J



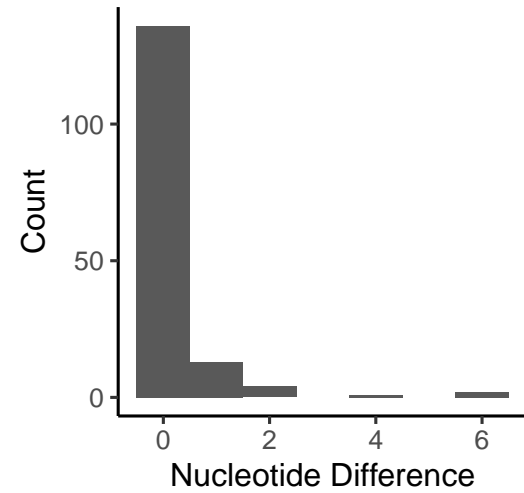
### IGHV3-49\*05

257 sequences assigned  
212 (82.5%) exact matches, in which:  
202 unique CDR3  
5 unique J



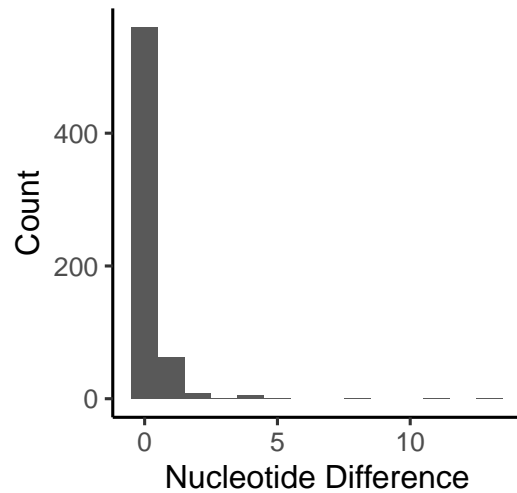
### IGHV3-53\*02

156 sequences assigned  
136 (87.2%) exact matches, in which:  
128 unique CDR3  
6 unique J



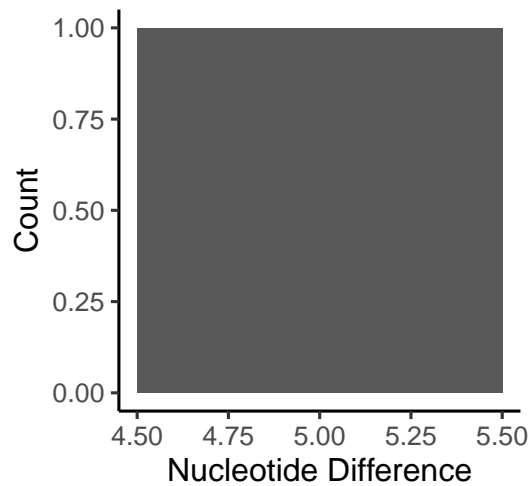
### IGHV3-48\*02

642 sequences assigned  
560 (87.2%) exact matches, in which:  
537 unique CDR3  
6 unique J



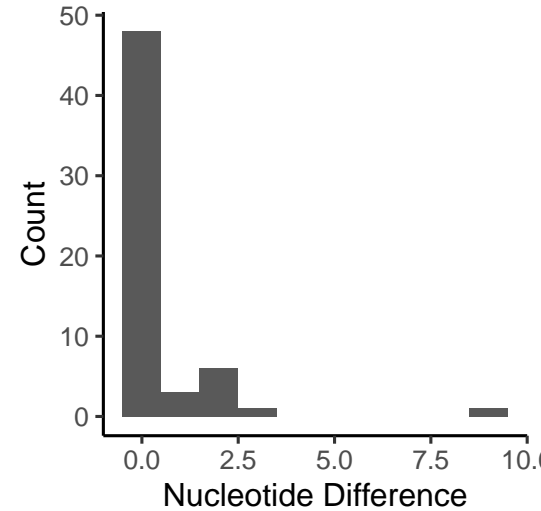
### IGHV3-52\*01

1 sequences assigned  
No exact matches.



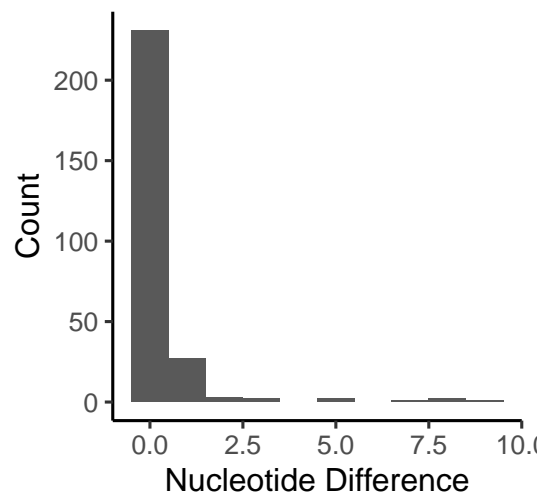
### IGHV3-64\*01

59 sequences assigned  
48 (81.4%) exact matches, in which:  
47 unique CDR3  
6 unique J



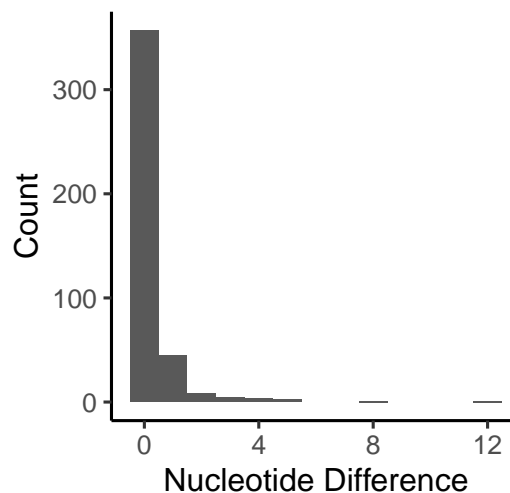
### IGHV3-49\*03

269 sequences assigned  
231 (85.9%) exact matches, in which:  
215 unique CDR3  
6 unique J



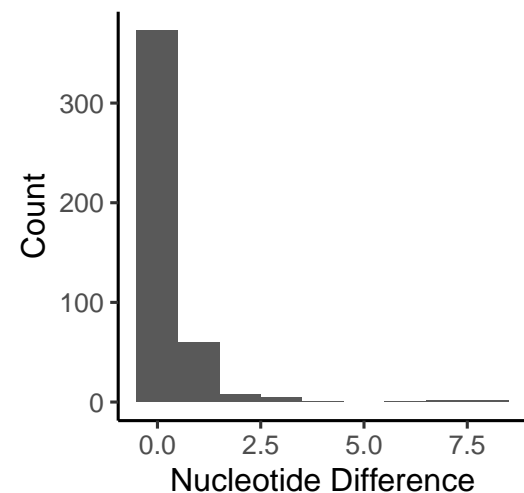
### IGHV3-53\*01

421 sequences assigned  
357 (84.8%) exact matches, in which:  
339 unique CDR3  
6 unique J



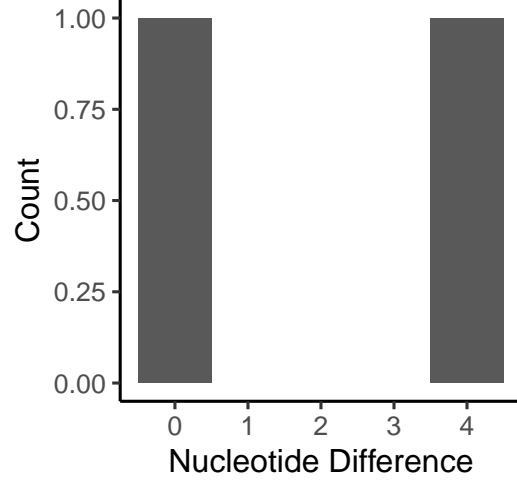
### IGHV3-66\*02

452 sequences assigned  
373 (82.5%) exact matches, in which:  
343 unique CDR3  
6 unique J



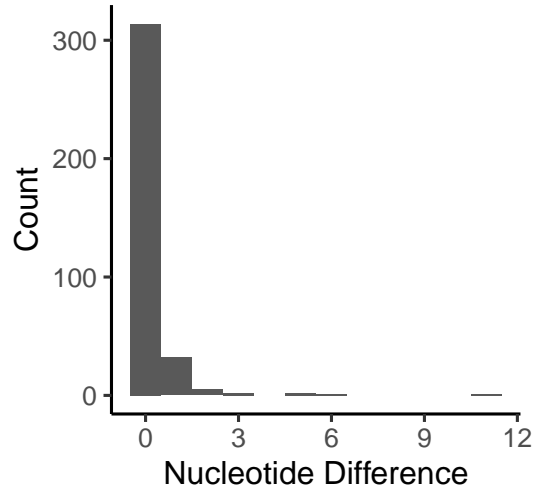
### IGHV3-69-1\*01

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



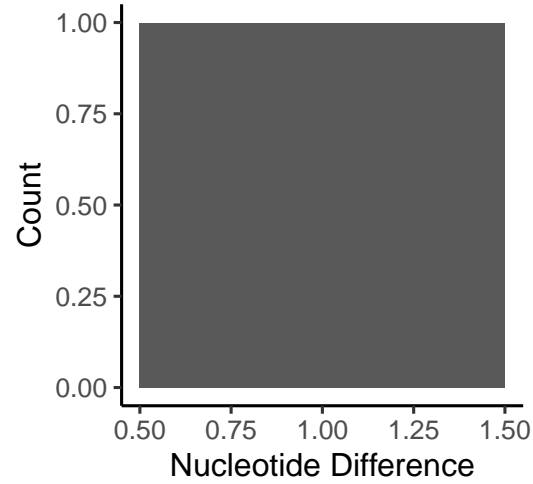
### IGHV3-64D\*06

357 sequences assigned  
314 (88%) exact matches, in which:  
283 unique CDR3  
6 unique J



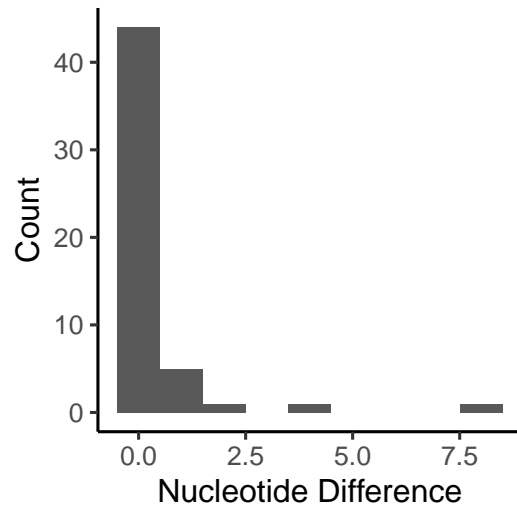
### IGHV4-28\*04

1 sequences assigned  
No exact matches.



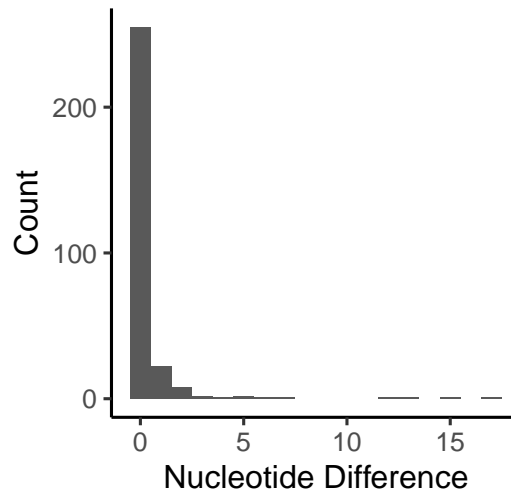
### IGHV3-72\*01

52 sequences assigned  
44 (84.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



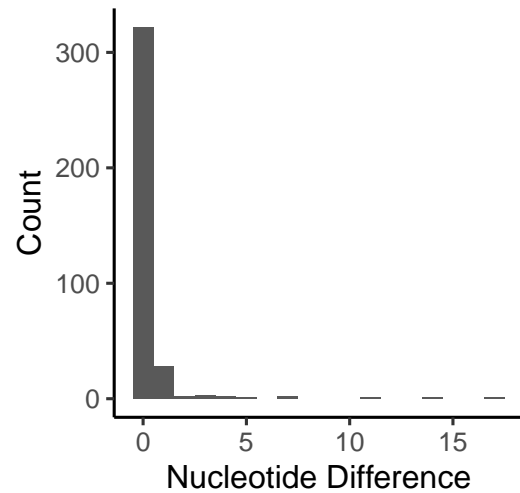
### IGHV4-4\*02

296 sequences assigned  
255 (86.1%) exact matches, in which:  
251 unique CDR3  
6 unique J



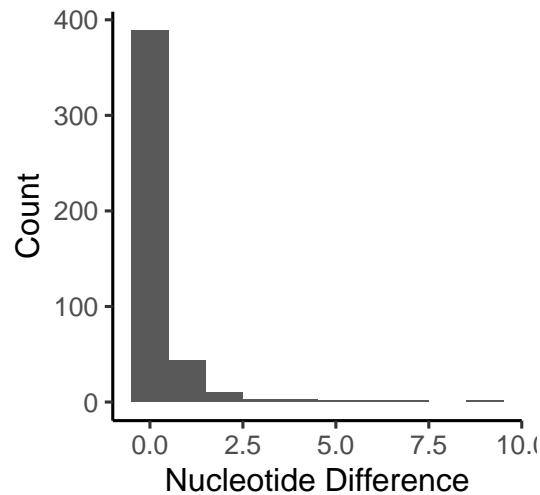
### IGHV4-30-2\*01

363 sequences assigned  
322 (88.7%) exact matches, in which:  
312 unique CDR3  
6 unique J



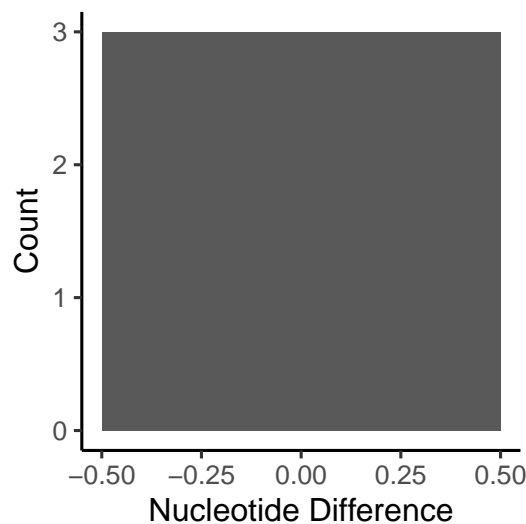
### IGHV3-74\*01

456 sequences assigned  
389 (85.3%) exact matches, in which:  
377 unique CDR3  
6 unique J



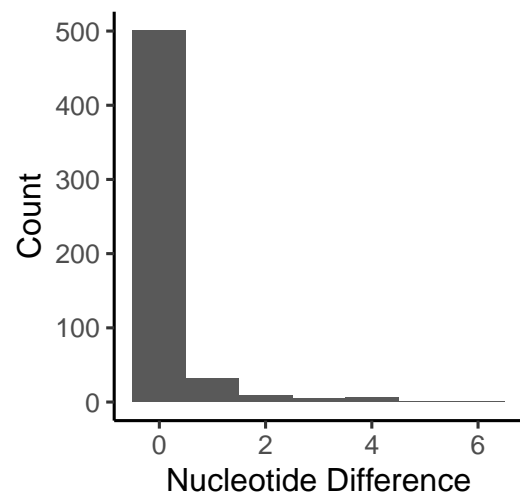
### IGHV4-28\*01

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



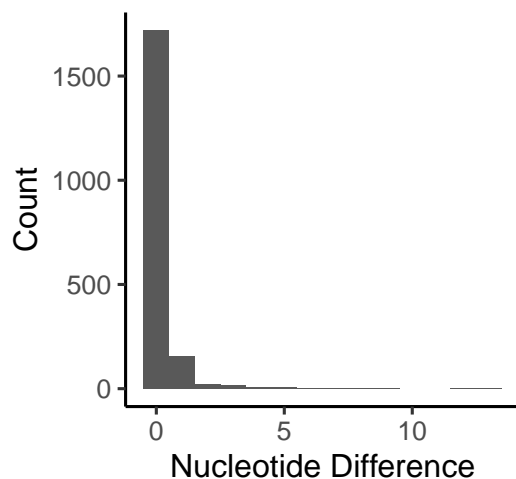
### IGHV4-30-4\*01

555 sequences assigned  
501 (90.3%) exact matches, in which:  
479 unique CDR3  
6 unique J



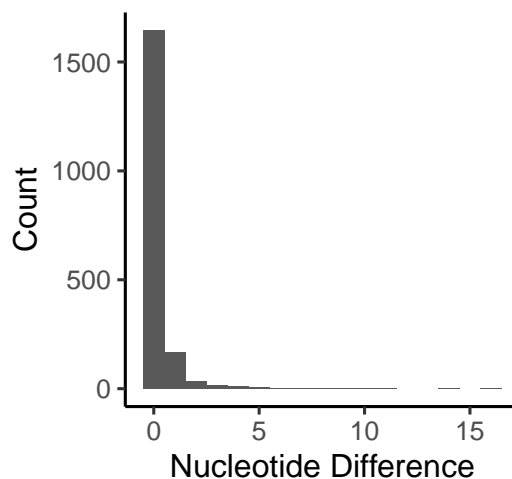
### IGHV4-31\*03

1945 sequences assigned  
1719 (88.4%) exact matches, in which:  
1641 unique CDR3  
6 unique J



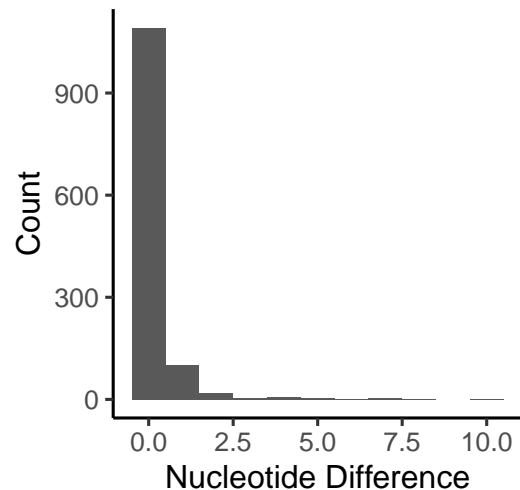
### IGHV4-39\*01

1894 sequences assigned  
1645 (86.9%) exact matches, in which:  
1559 unique CDR3  
6 unique J



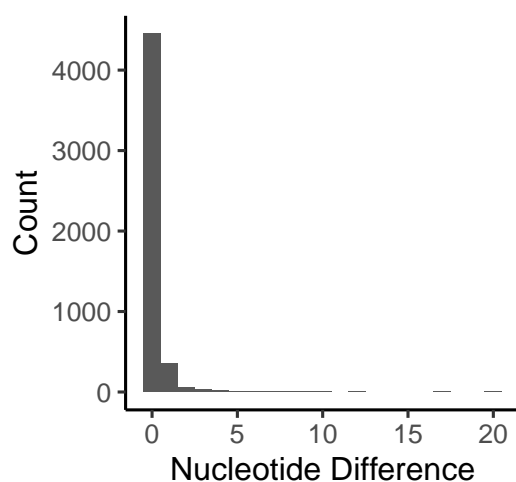
### IGHV4-61\*02

1234 sequences assigned  
1092 (88.5%) exact matches, in which:  
1042 unique CDR3  
6 unique J



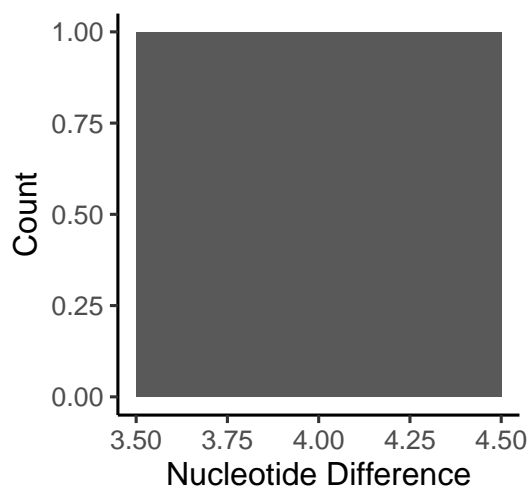
### IGHV4-34\*01

4948 sequences assigned  
4452 (90%) exact matches, in which:  
4161 unique CDR3  
6 unique J



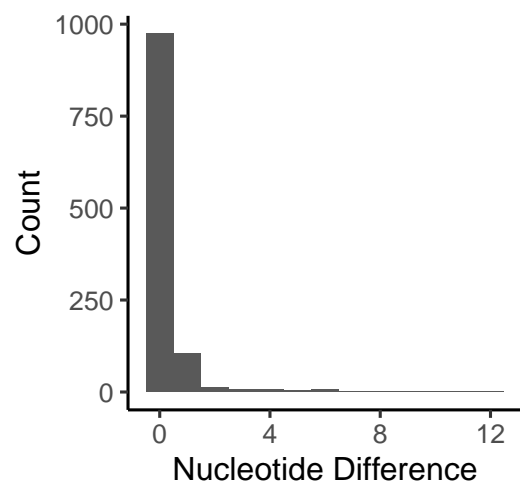
### IGHV4-55\*08

1 sequences assigned  
No exact matches.



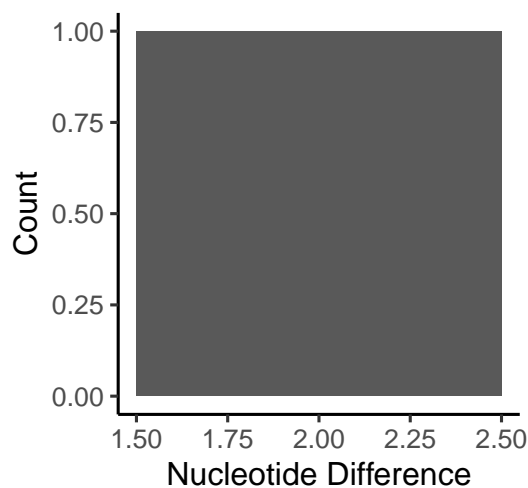
### IGHV4-61\*02\_A234G

1123 sequences assigned  
974 (86.7%) exact matches, in which:  
924 unique CDR3  
6 unique J



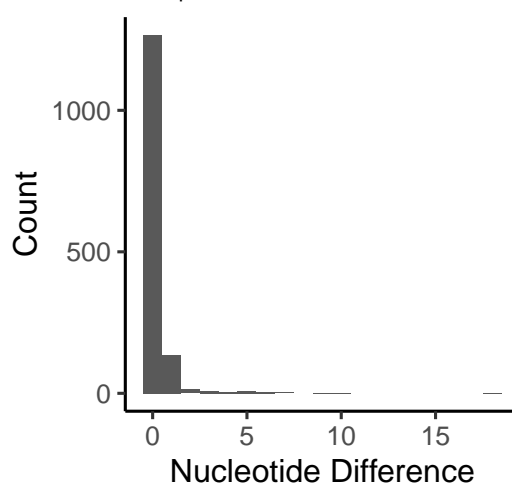
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



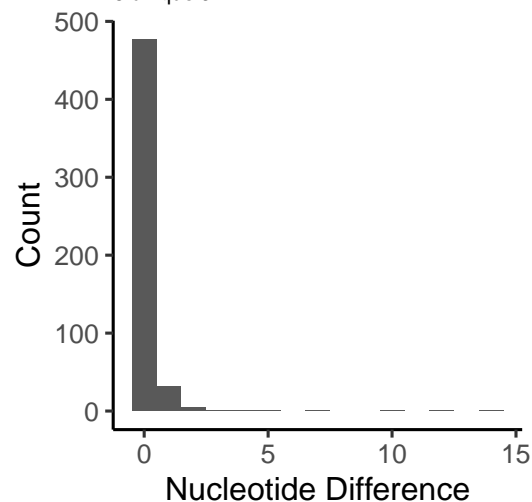
### IGHV4-59\*01

1446 sequences assigned  
1266 (87.6%) exact matches, in which:  
1207 unique CDR3  
6 unique J



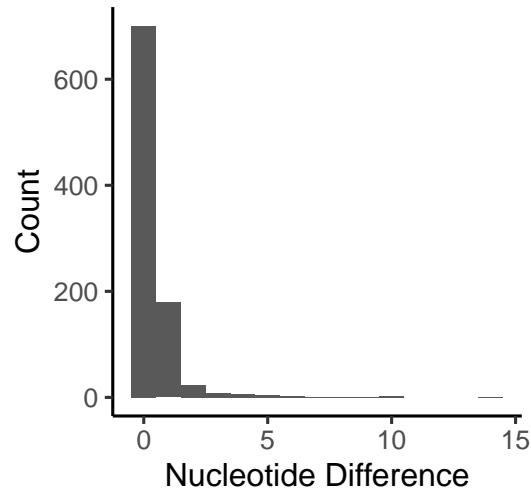
### IGHV5-10-1\*03

520 sequences assigned  
477 (91.7%) exact matches, in which:  
456 unique CDR3  
6 unique J



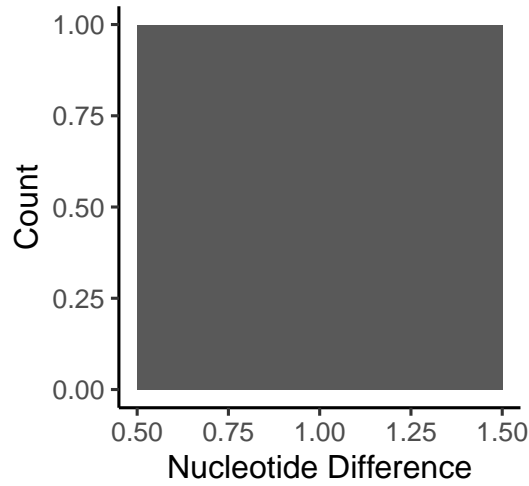
### IGHV5–51\*01

931 sequences assigned  
701 (75.3%) exact matches, in which:  
665 unique CDR3  
6 unique J



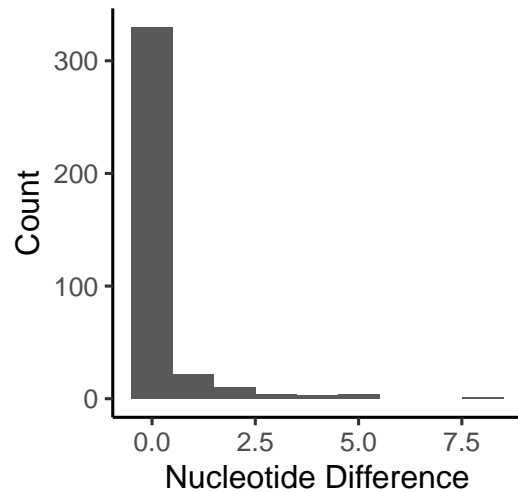
### IGHV3/OR16–12\*01

1 sequences assigned  
No exact matches.



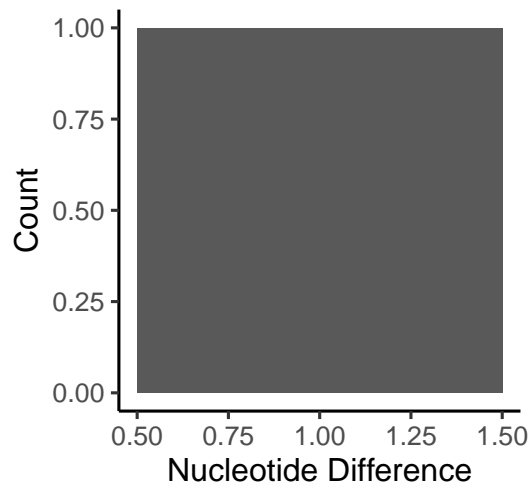
### IGHV5–51\*03

374 sequences assigned  
330 (88.2%) exact matches, in which:  
314 unique CDR3  
5 unique J



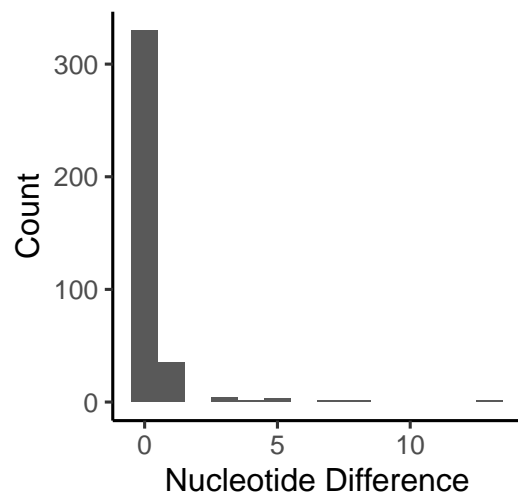
### IGHV3/OR16–13\*01

1 sequences assigned  
No exact matches.



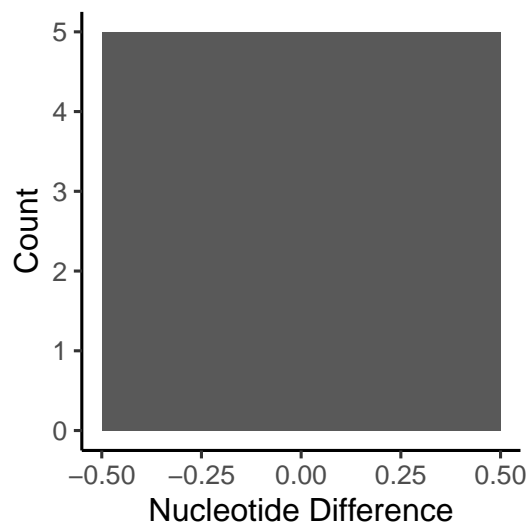
### IGHV6–1\*01

376 sequences assigned  
330 (87.8%) exact matches, in which:  
309 unique CDR3  
6 unique J



### IGHV7–4–1\*01

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







Warning – no inferred sequences found.