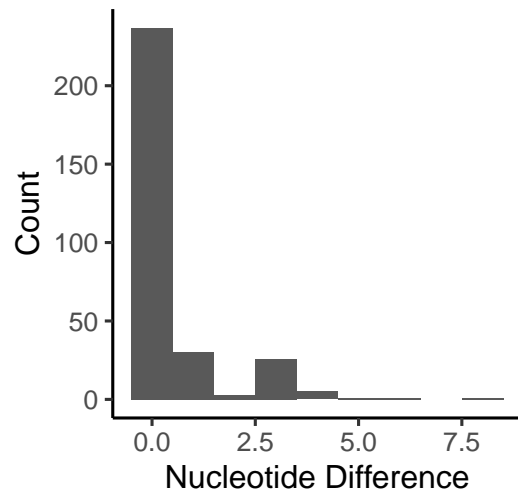


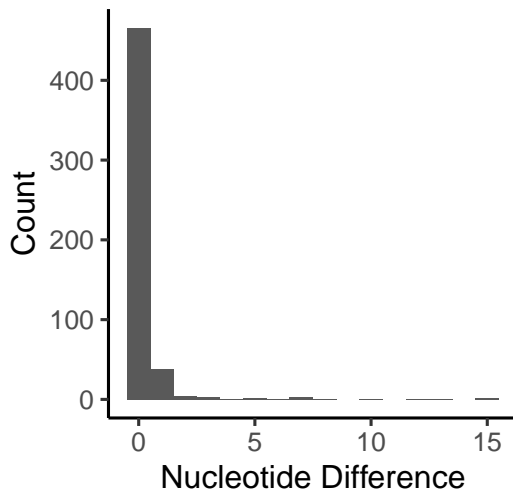
### IGHV1-2\*04

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



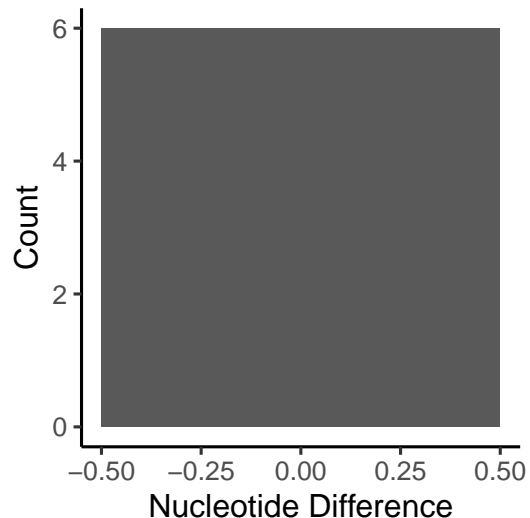
### IGHV1-18\*01

526 sequences assigned  
466 (88.6%) exact matches, in which:  
439 unique CDR3  
7 unique J



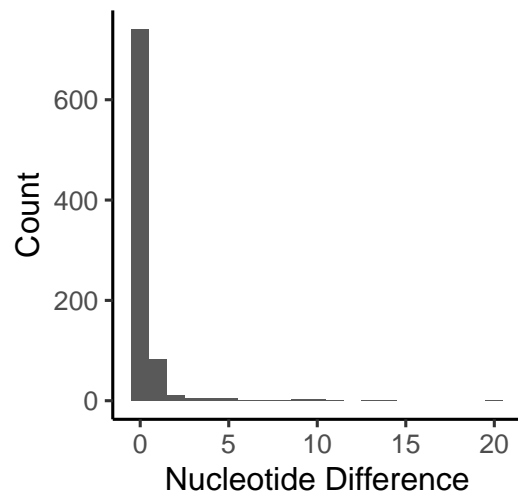
### IGHV1-45\*02

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



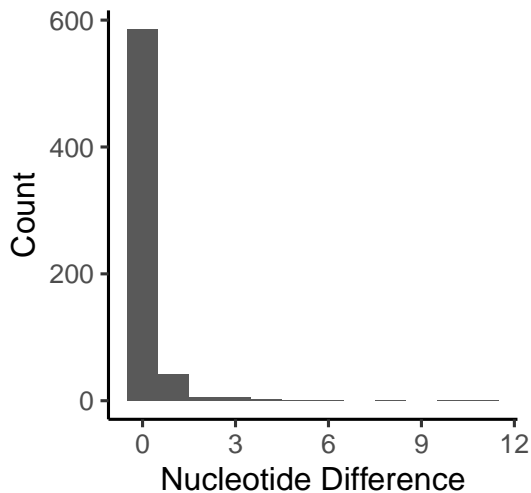
### IGHV1-3\*01

862 sequences assigned  
741 (86%) exact matches, in which:  
714 unique CDR3  
7 unique J



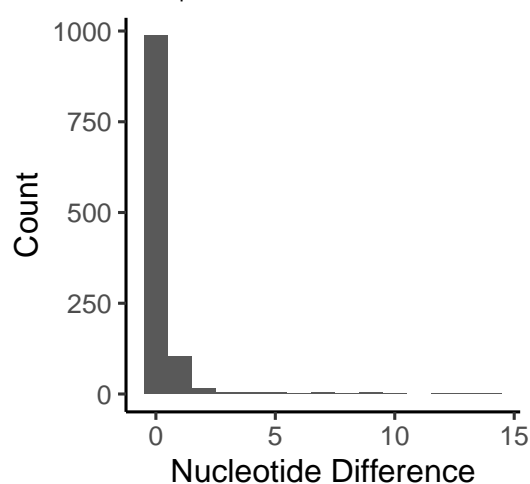
### IGHV1-18\*04

647 sequences assigned  
586 (90.6%) exact matches, in which:  
562 unique CDR3  
6 unique J



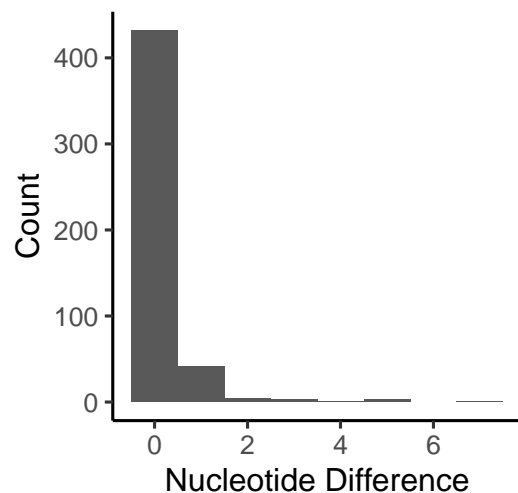
### IGHV1-46\*01

1132 sequences assigned  
987 (87.2%) exact matches, in which:  
934 unique CDR3  
7 unique J



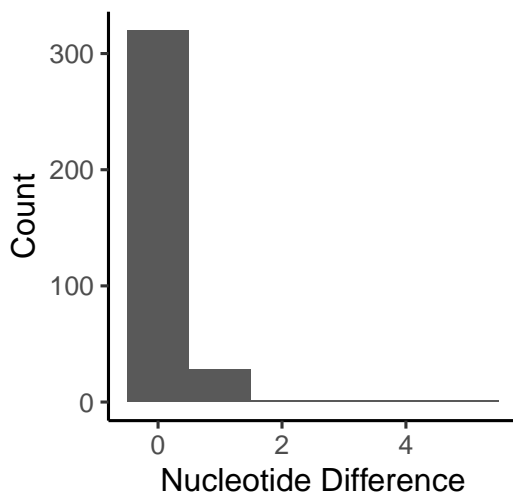
### IGHV1-8\*01

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



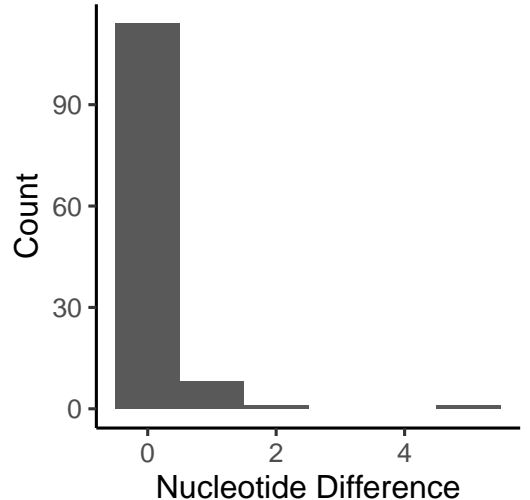
### IGHV1-24\*01

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



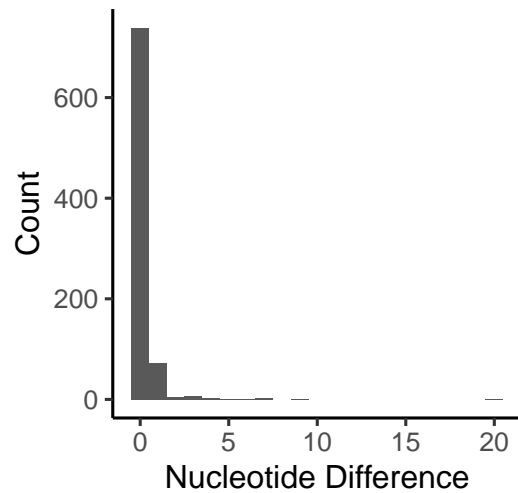
### IGHV1-58\*02

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



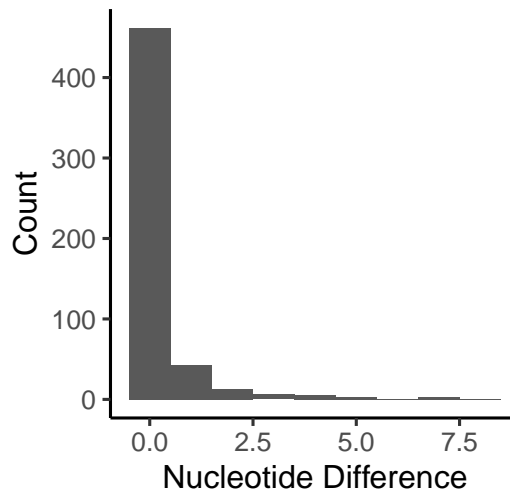
### IGHV1–69\*10

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



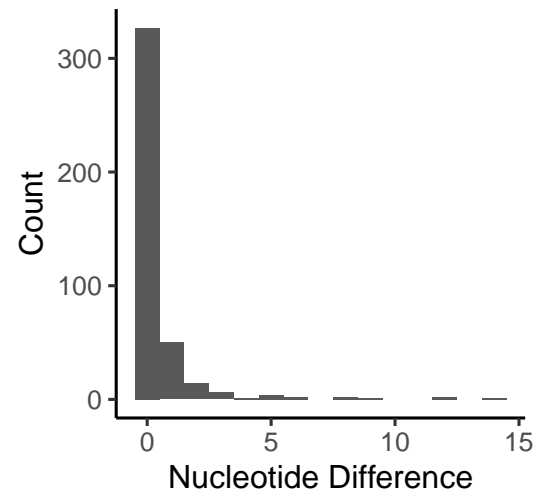
### IGHV2–5\*02

537 sequences assigned  
462 (86%) exact matches, in which:  
442 unique CDR3  
6 unique J



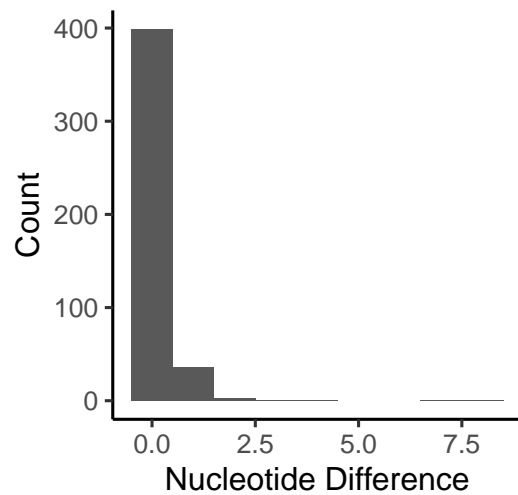
### IGHV3–7\*01

410 sequences assigned  
327 (79.8%) exact matches, in which:  
307 unique CDR3  
7 unique J



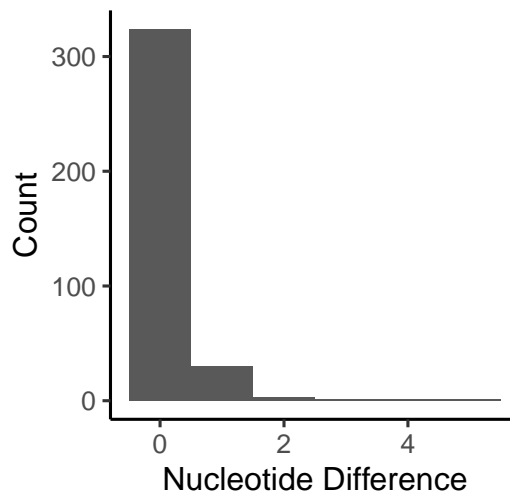
### IGHV1–69\*08\_C191T

442 sequences assigned  
399 (90.3%) exact matches, in which:  
366 unique CDR3  
6 unique J



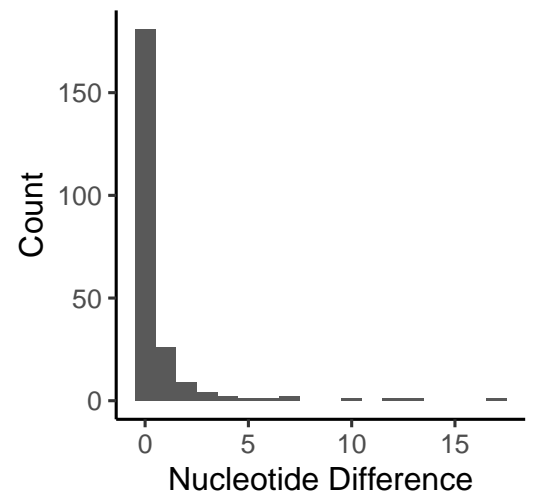
### IGHV2–26\*01

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



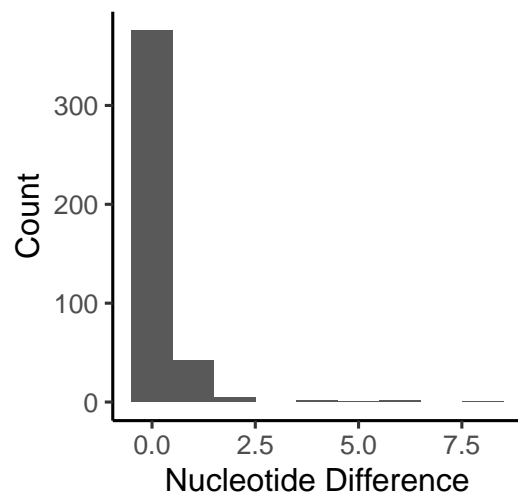
### IGHV3–7\*05

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



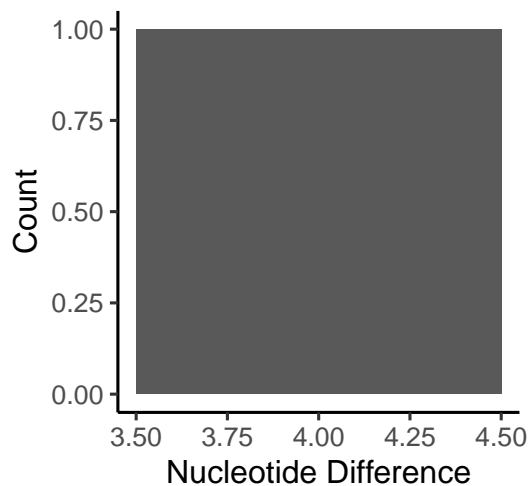
### IGHV2–5\*01

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



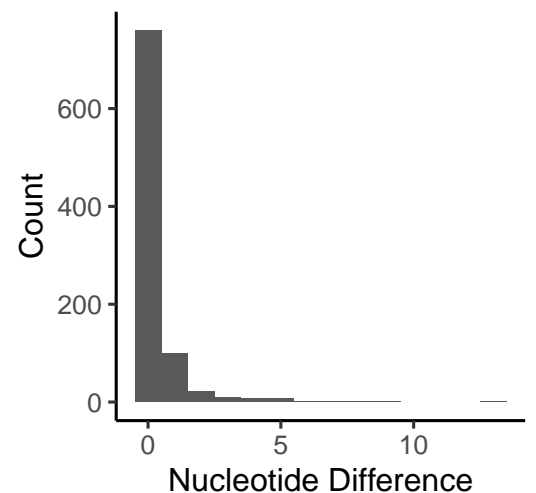
### IGHV2–70\*12

4 sequences assigned  
No exact matches.



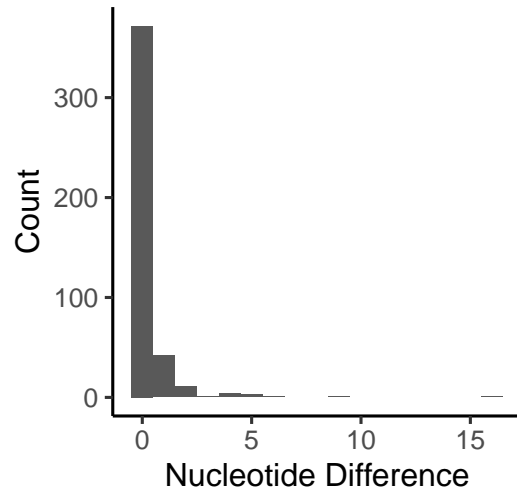
### IGHV3–9\*01

910 sequences assigned  
760 (83.5%) exact matches, in which:  
696 unique CDR3  
7 unique J



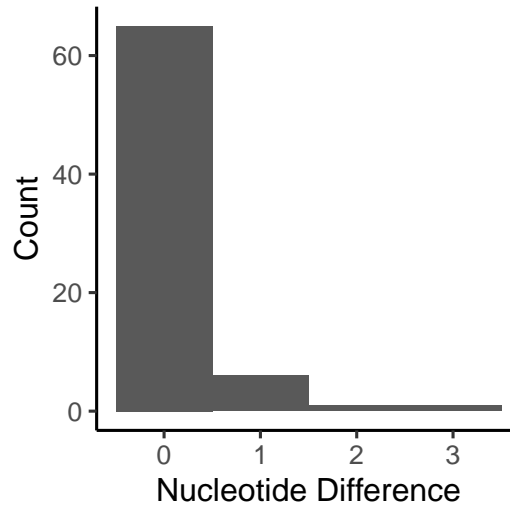
### IGHV3-11\*01

436 sequences assigned  
372 (85.3%) exact matches, in which:  
351 unique CDR3  
6 unique J



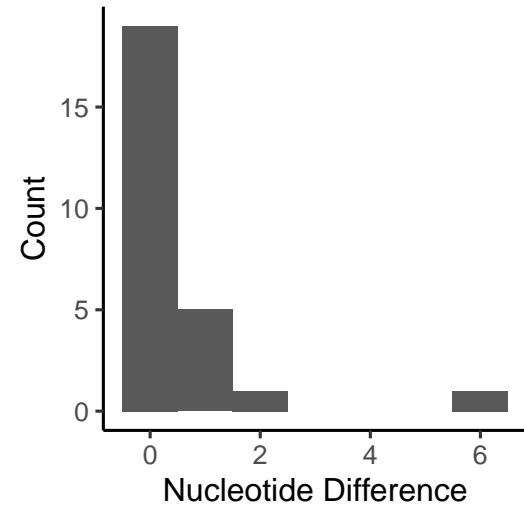
### IGHV3-13\*05

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



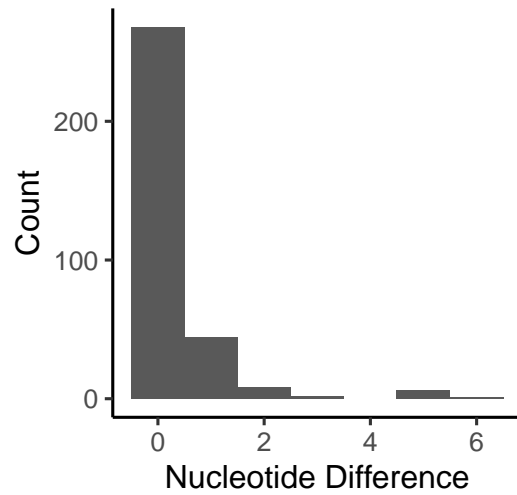
### IGHV3-20\*04

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



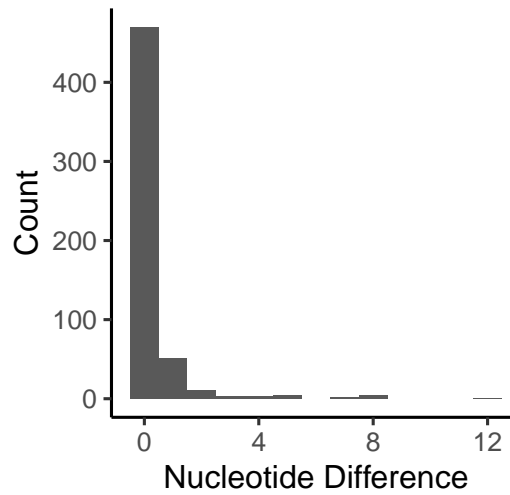
### IGHV3-11\*06

329 sequences assigned  
268 (81.5%) exact matches, in which:  
249 unique CDR3  
6 unique J



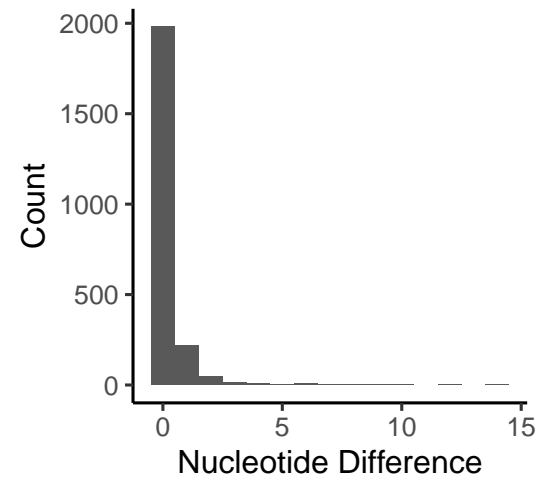
### IGHV3-15\*01

551 sequences assigned  
470 (85.3%) exact matches, in which:  
438 unique CDR3  
6 unique J



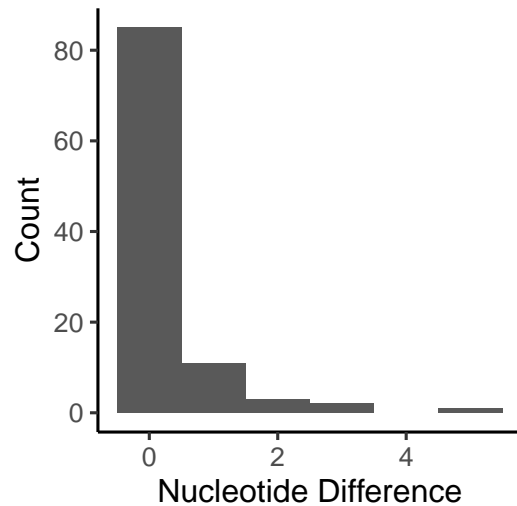
### IGHV3-21\*01

2295 sequences assigned  
1981 (86.3%) exact matches, in which:  
1822 unique CDR3  
7 unique J



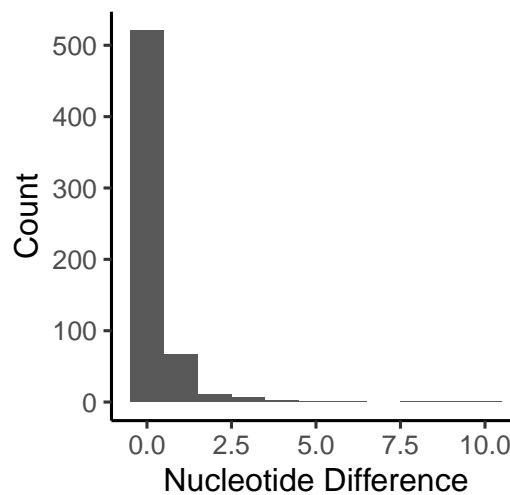
### IGHV3-13\*01

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



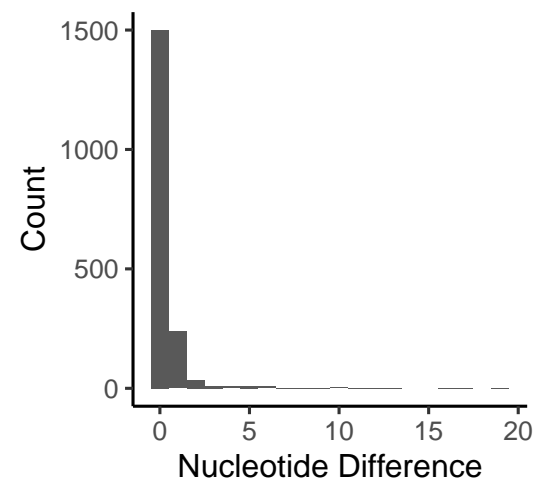
### IGHV3-15\*07

612 sequences assigned  
521 (85.1%) exact matches, in which:  
483 unique CDR3  
7 unique J



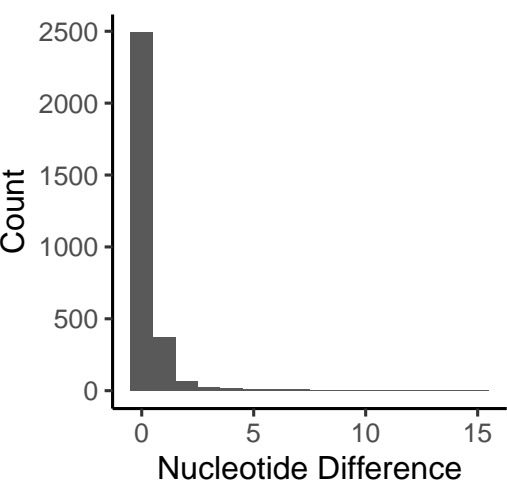
### IGHV3-23\*04

1822 sequences assigned  
1500 (82.3%) exact matches, in which:  
1399 unique CDR3  
6 unique J



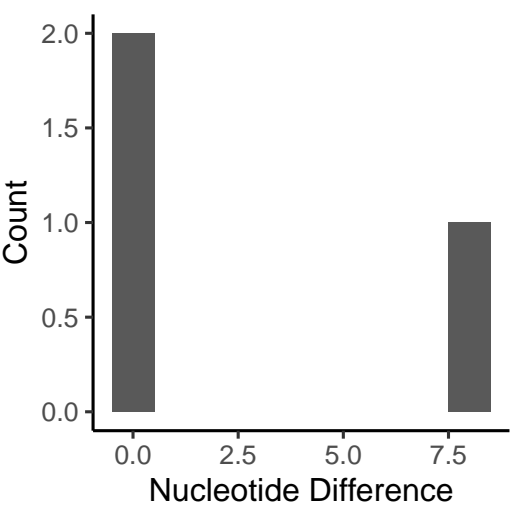
IGHV3-30-3\*01

3035 sequences assigned  
2492 (82.1%) exact matches, in which:  
2311 unique CDR3  
7 unique J



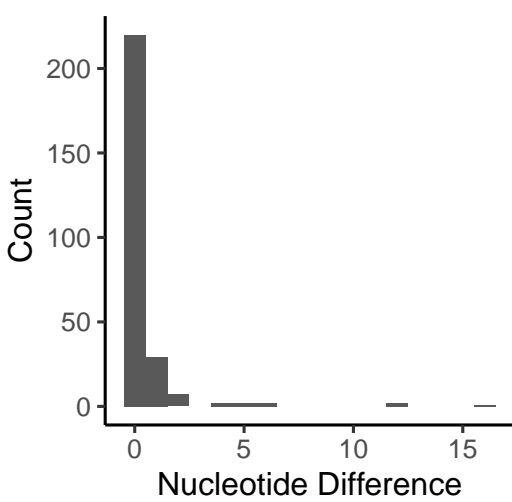
IGHV3-38-3\*01

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



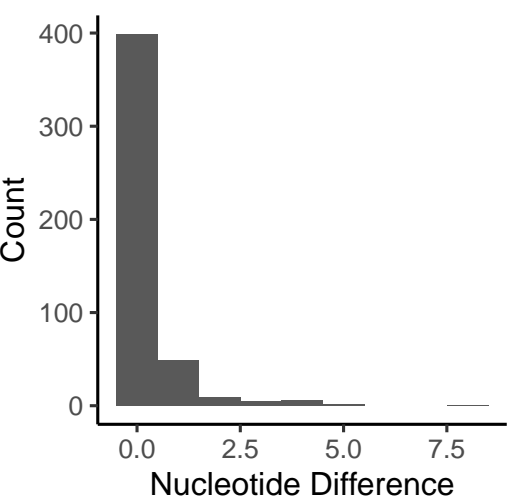
IGHV3-49\*04

265 sequences assigned  
220 (83%) exact matches, in which:  
207 unique CDR3  
6 unique J



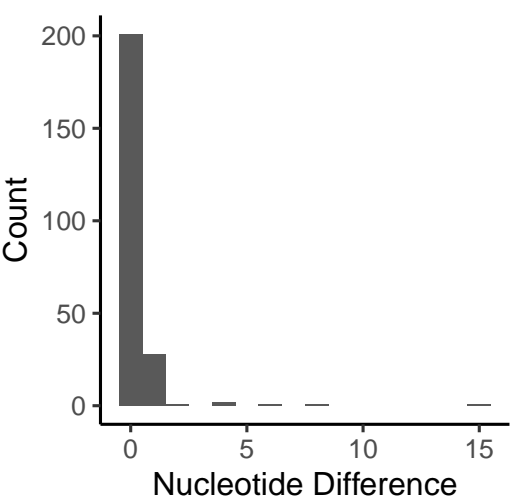
IGHV3-30\*04\_C201T\_G3

477 sequences assigned  
399 (83.6%) exact matches, in which:  
377 unique CDR3  
7 unique J



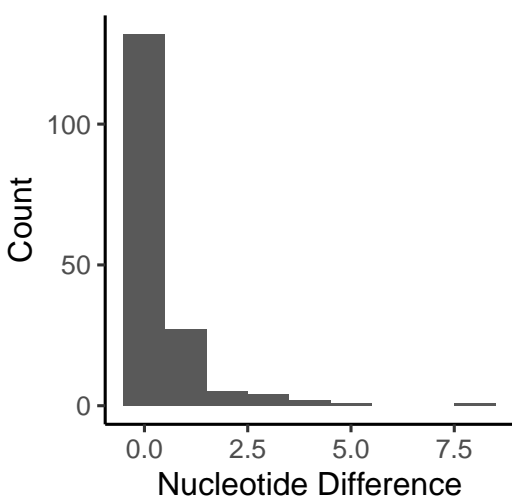
IGHV3-43\*01

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



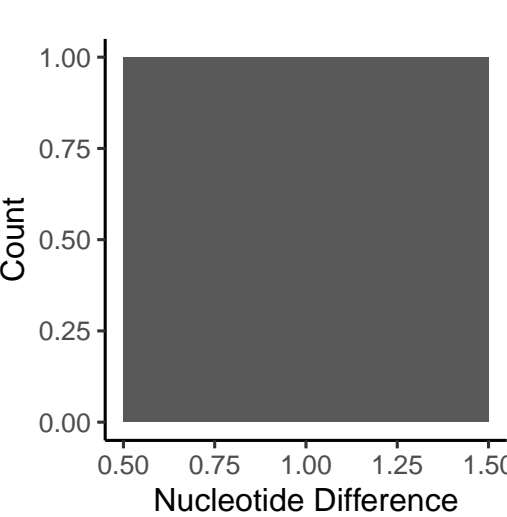
IGHV3-49\*05

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



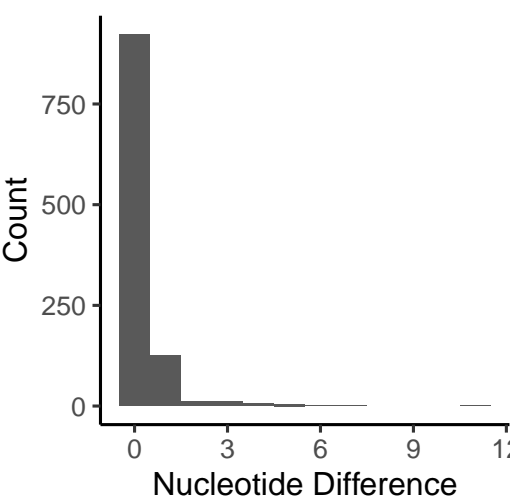
IGHV3-33\*06

1 sequences assigned  
No exact matches.



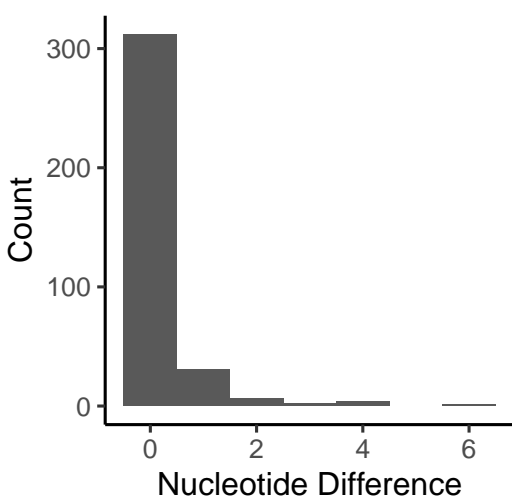
IGHV3-48\*02

1087 sequences assigned  
923 (84.9%) exact matches, in which:  
871 unique CDR3  
7 unique J



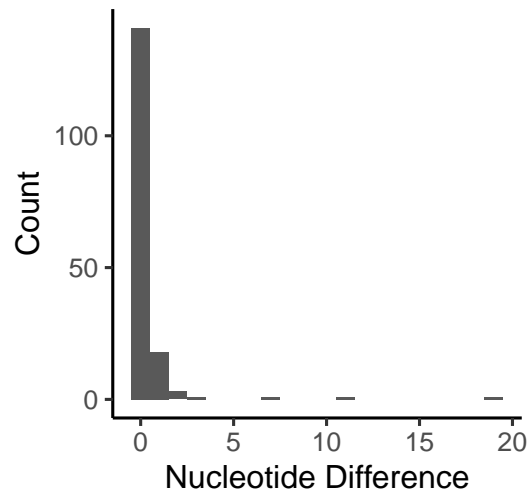
IGHV3-53\*01

356 sequences assigned  
312 (87.6%) exact matches, in which:  
289 unique CDR3  
7 unique J



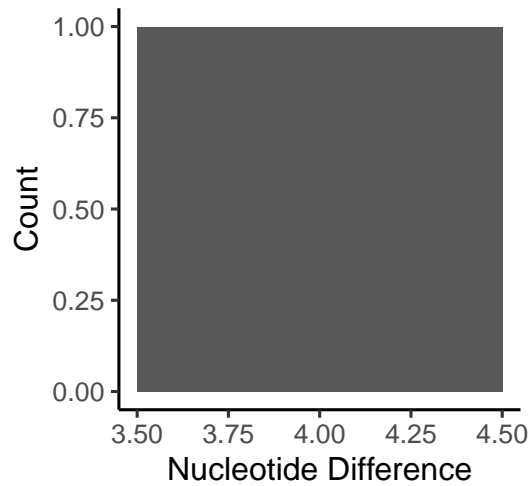
### IGHV3–53\*04

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



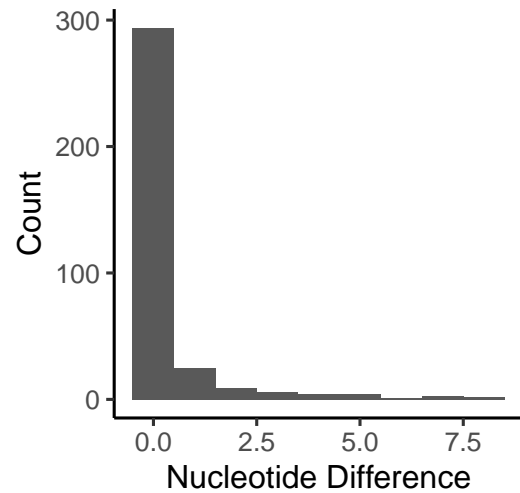
### IGHV3–71\*03

1 sequences assigned  
No exact matches.



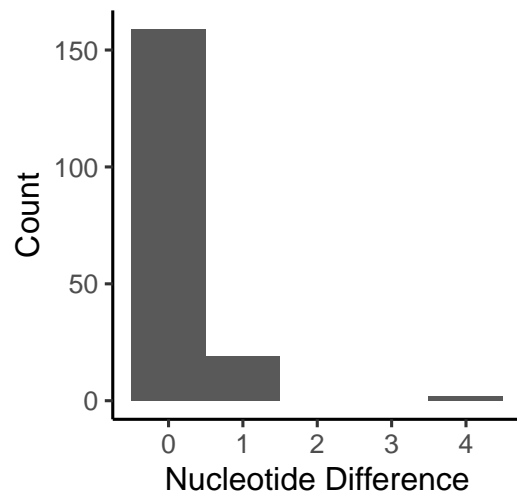
### IGHV3–74\*01

348 sequences assigned  
294 (84.5%) exact matches, in which:  
272 unique CDR3  
7 unique J



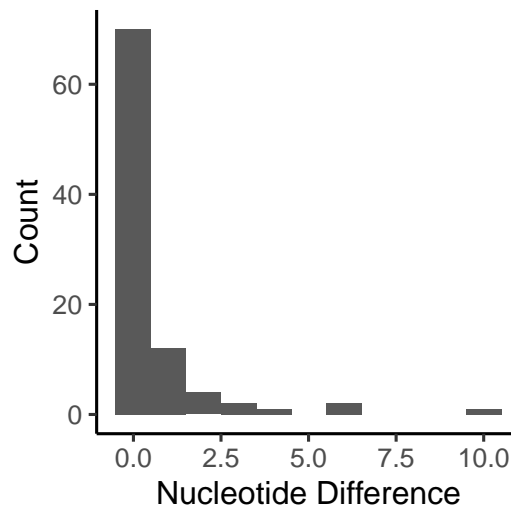
### IGHV3–64\*01

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



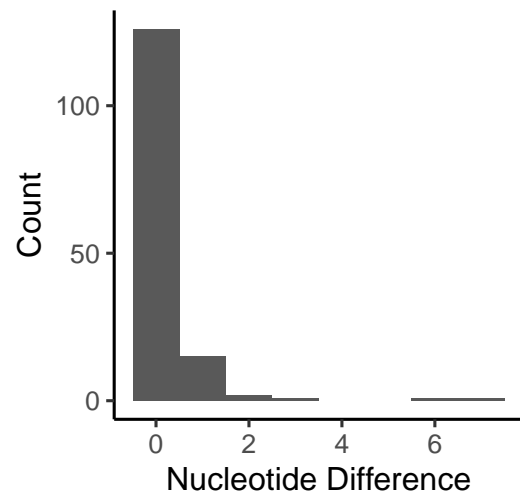
### IGHV3–72\*01

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



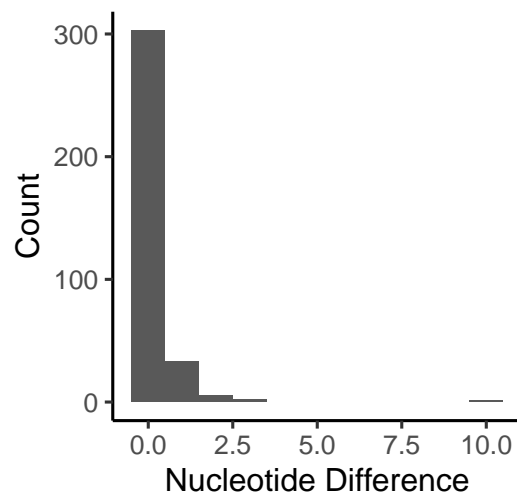
### IGHV3–43D\*03

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



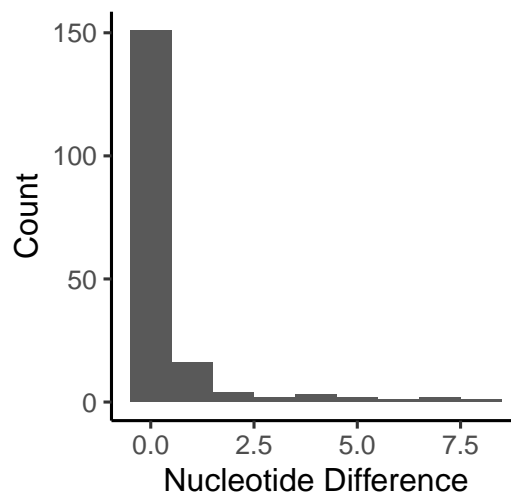
### IGHV3–66\*02

344 sequences assigned  
303 (88.1%) exact matches, in which:  
270 unique CDR3  
6 unique J



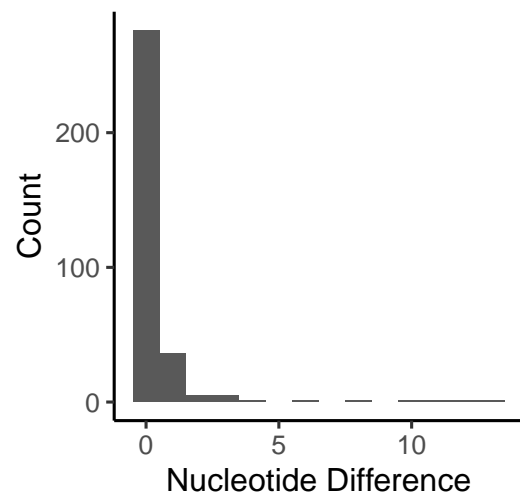
### IGHV3–73\*01

182 sequences assigned  
151 (83%) exact matches, in which:  
134 unique CDR3  
6 unique J



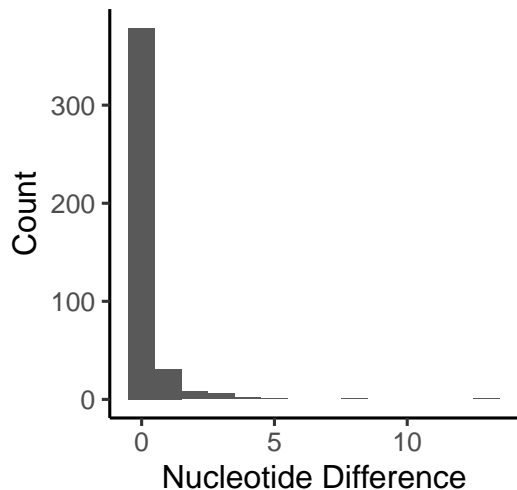
### IGHV3–64D\*08

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



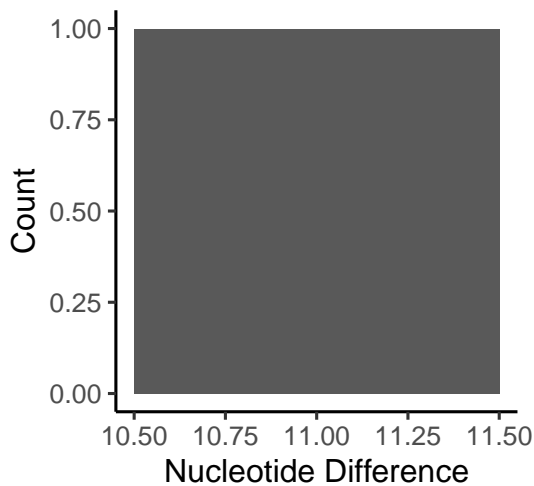
### IGHV4-4\*02

429 sequences assigned  
379 (88.3%) exact matches, in which:  
366 unique CDR3  
6 unique J



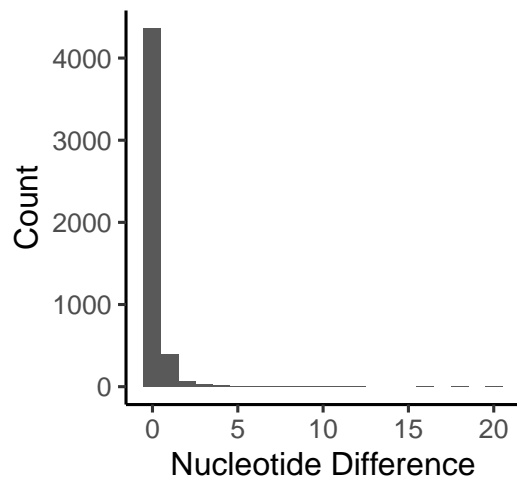
### IGHV4-28\*06

1 sequences assigned  
No exact matches.



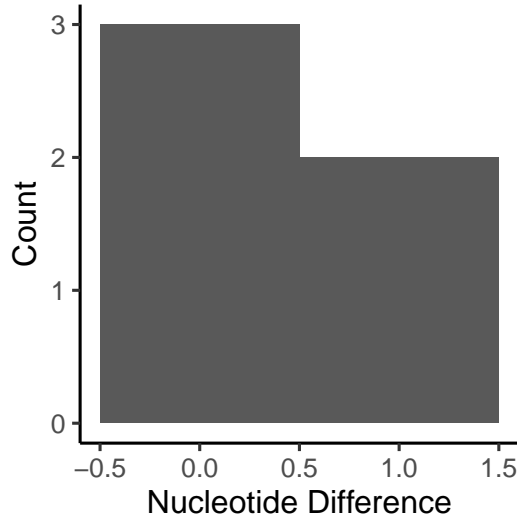
### IGHV4-34\*01

4909 sequences assigned  
4361 (88.8%) exact matches, in which:  
4073 unique CDR3  
7 unique J



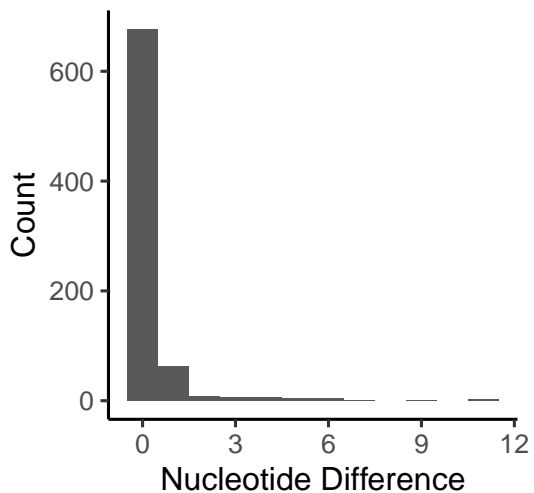
### IGHV4-28\*01

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



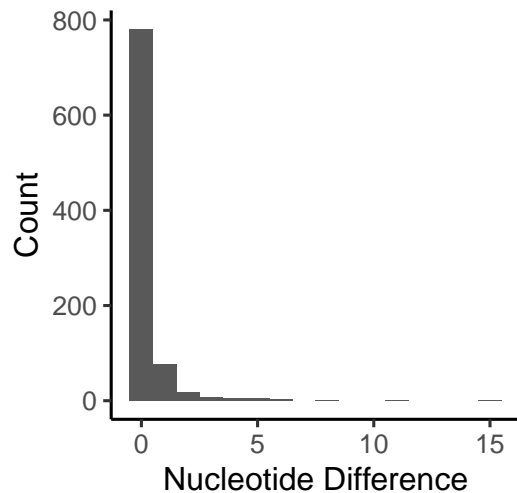
### IGHV4-30-4\*01

777 sequences assigned  
677 (87.1%) exact matches, in which:  
650 unique CDR3  
7 unique J



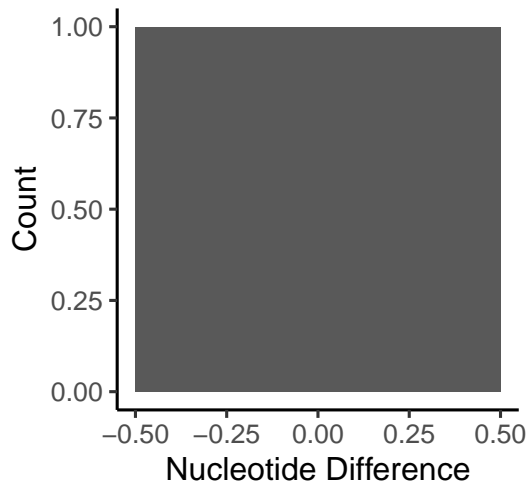
### IGHV4-38-2\*02

902 sequences assigned  
781 (86.6%) exact matches, in which:  
714 unique CDR3  
6 unique J



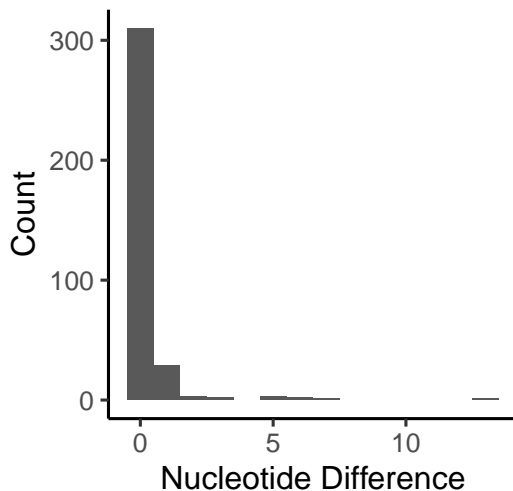
### IGHV4-28\*03

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



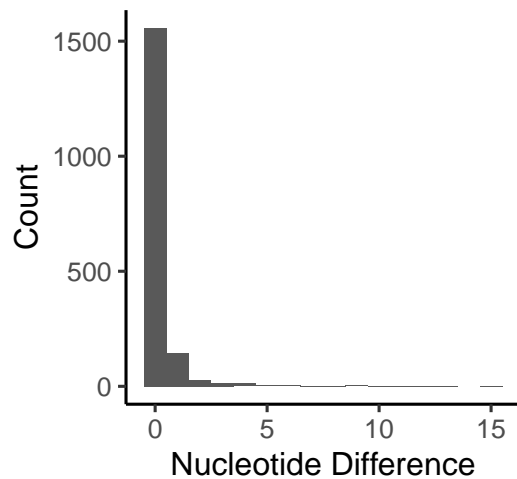
### IGHV4-30-2\*01

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



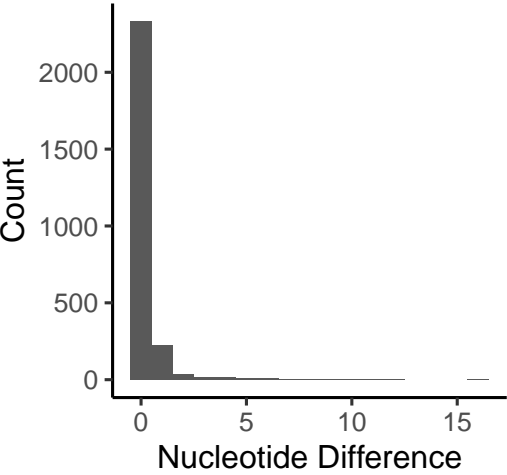
### IGHV4-39\*01

1778 sequences assigned  
1557 (87.6%) exact matches, in which:  
1422 unique CDR3  
7 unique J



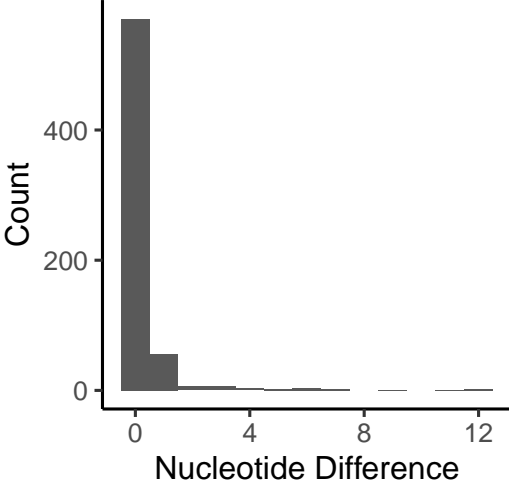
IGHV4–39\*07

2663 sequences assigned  
2331 (87.5%) exact matches, in which:  
2146 unique CDR3  
6 unique J



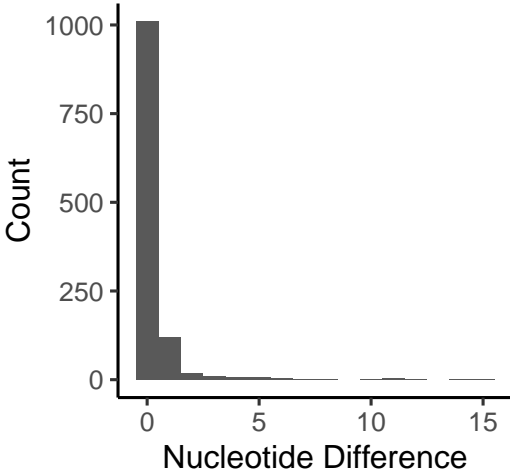
IGHV4–59\*08

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



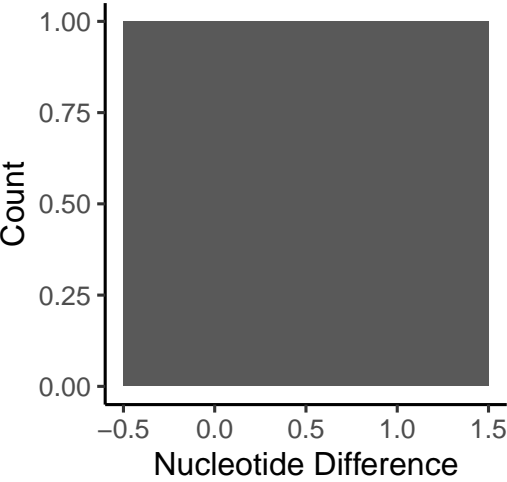
IGHV5–51\*01

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



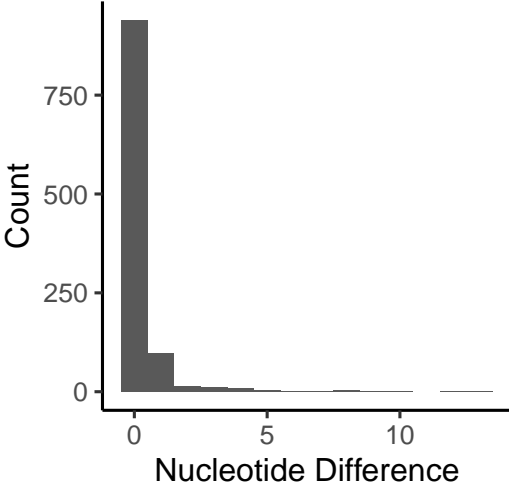
IGHV4–55\*08

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



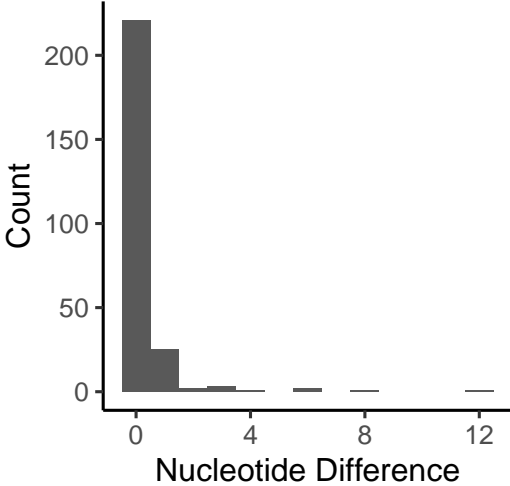
IGHV4–61\*02

1086 sequences assigned  
940 (86.6%) exact matches, in which:  
894 unique CDR3  
7 unique J



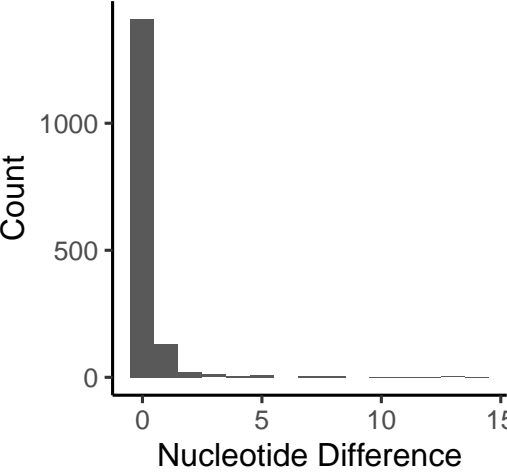
IGHV6–1\*01

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



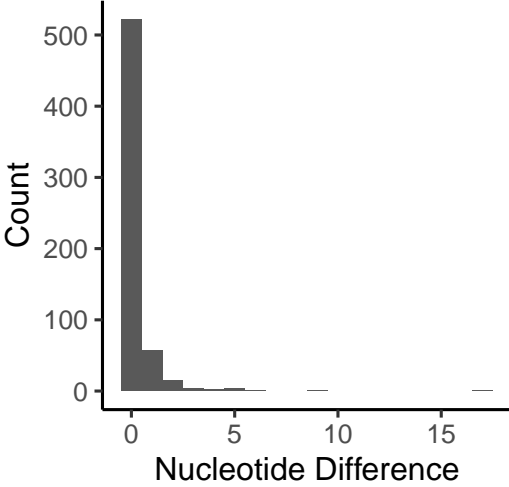
IGHV4–59\*01

1601 sequences assigned  
1410 (88.1%) exact matches, in which:  
1346 unique CDR3  
7 unique J



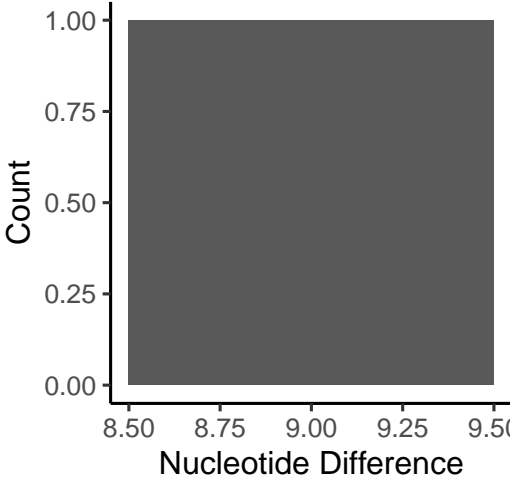
IGHV5–10–1\*03

605 sequences assigned  
522 (86.3%) exact matches, in which:  
500 unique CDR3  
7 unique J



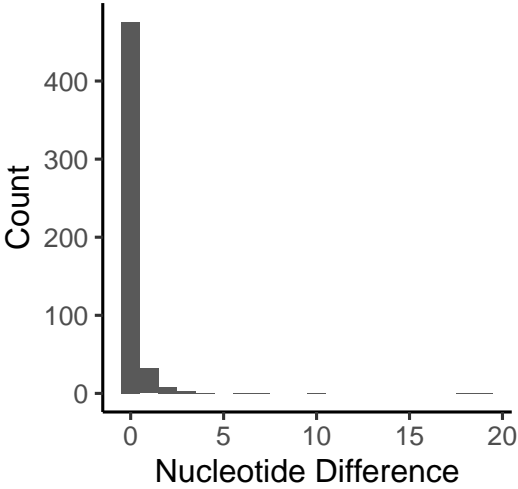
IGHV3/OR16–8\*01

1 sequences assigned  
No exact matches.



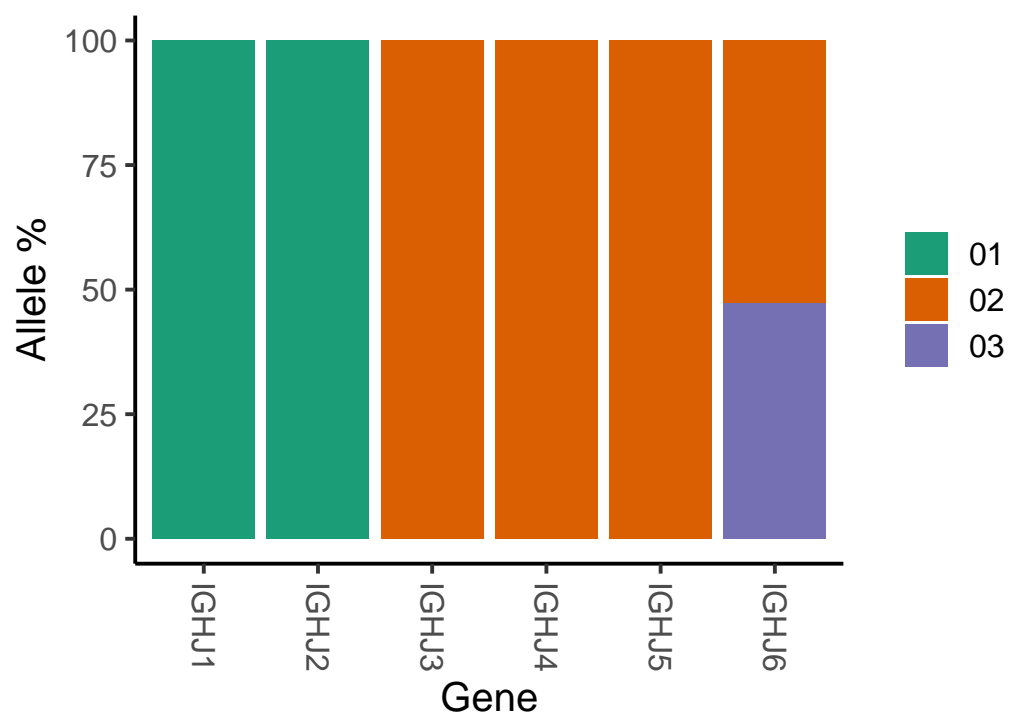
# IGHV7-4-1\*02

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

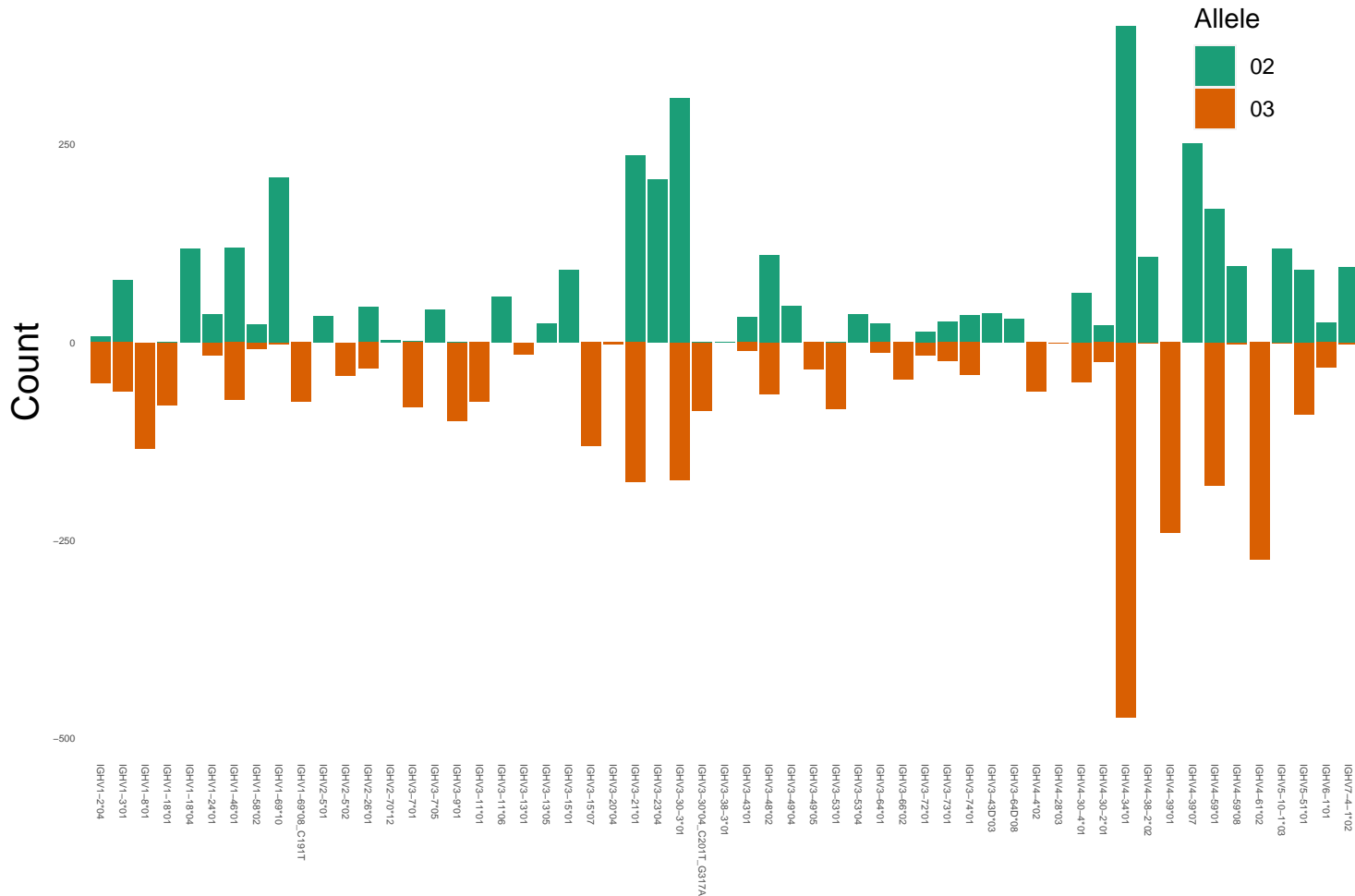




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.