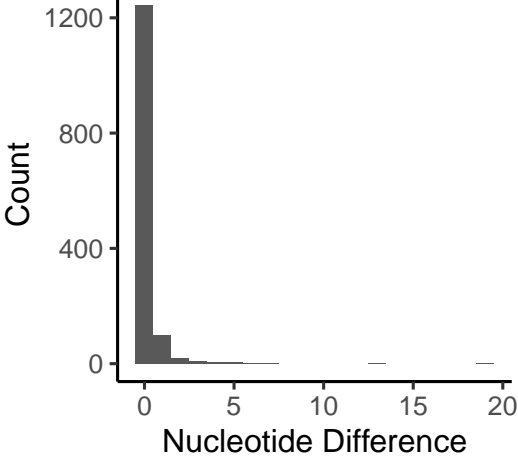


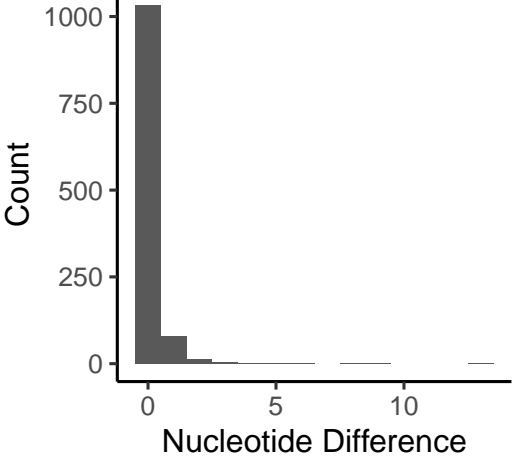
IGHV1-2\*02

1384 sequences assigned  
1243 (89.8%) exact matches, in which:  
1183 unique CDR3  
6 unique J



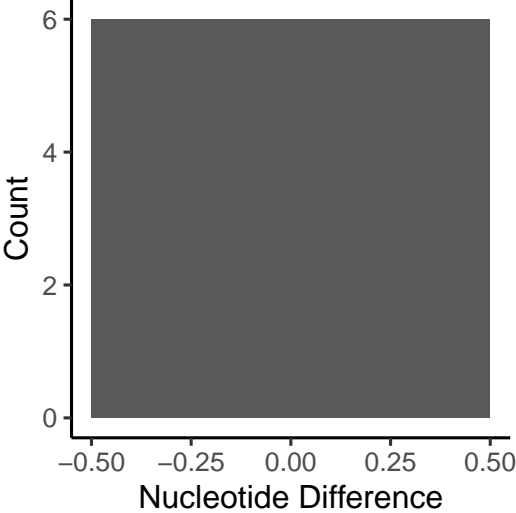
IGHV1-8\*01

1138 sequences assigned  
1032 (90.7%) exact matches, in which:  
985 unique CDR3  
6 unique J



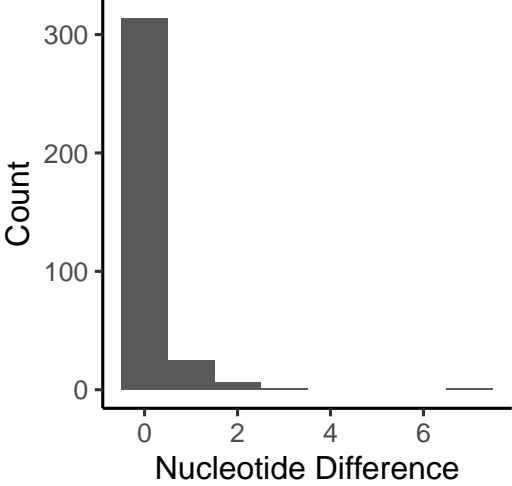
IGHV1-45\*02

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



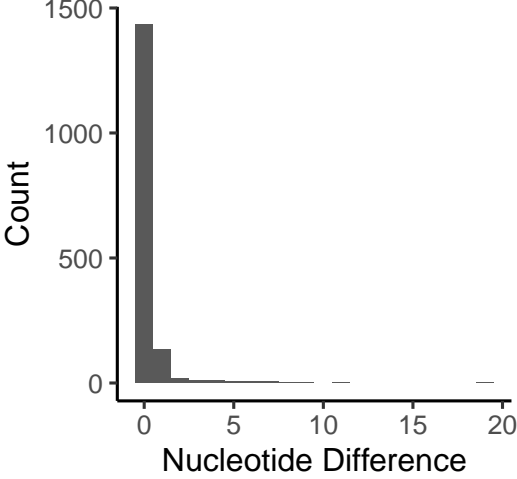
IGHV1-2\*04

347 sequences assigned  
314 (90.5%) exact matches, in which:  
289 unique CDR3  
6 unique J



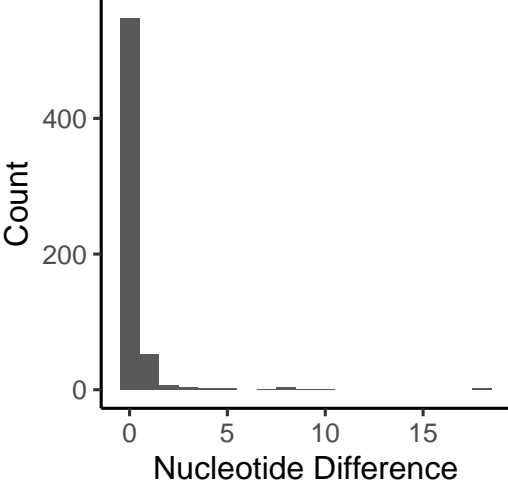
IGHV1-18\*01

1626 sequences assigned  
1433 (88.1%) exact matches, in which:  
1381 unique CDR3  
6 unique J



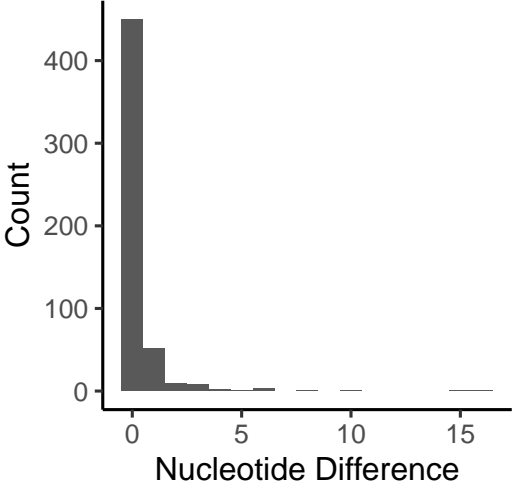
IGHV1-46\*01

623 sequences assigned  
548 (88%) exact matches, in which:  
521 unique CDR3  
6 unique J



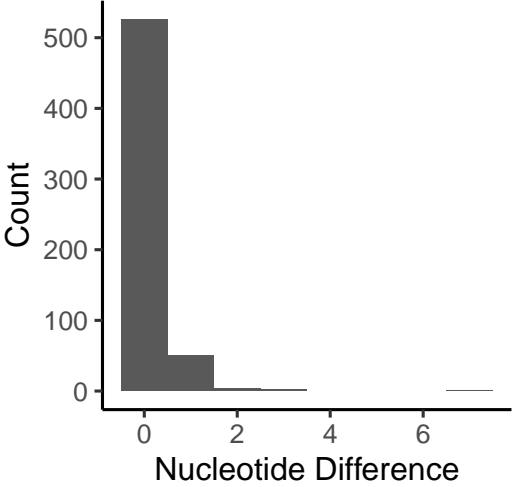
IGHV1-3\*01

529 sequences assigned  
450 (85.1%) exact matches, in which:  
436 unique CDR3  
6 unique J



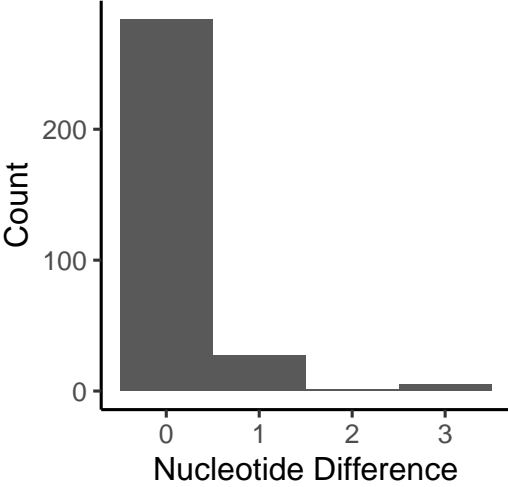
IGHV1-24\*01

583 sequences assigned  
526 (90.2%) exact matches, in which:  
503 unique CDR3  
6 unique J



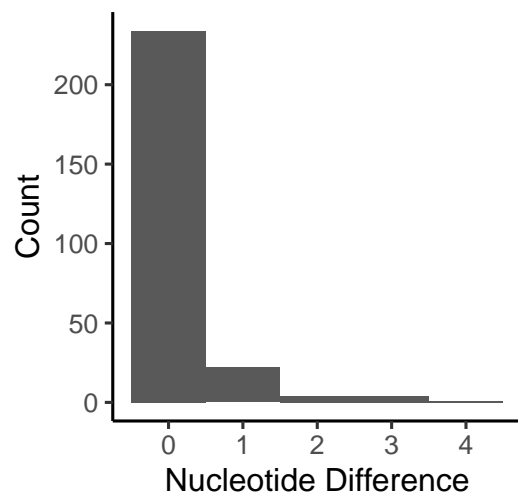
IGHV1-46\*03

318 sequences assigned  
284 (89.3%) exact matches, in which:  
265 unique CDR3  
6 unique J



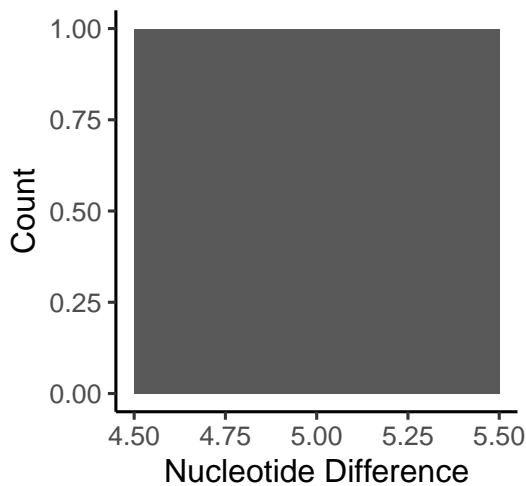
### IGHV1–58\*01

265 sequences assigned  
234 (88.3%) exact matches, in which:  
220 unique CDR3  
6 unique J



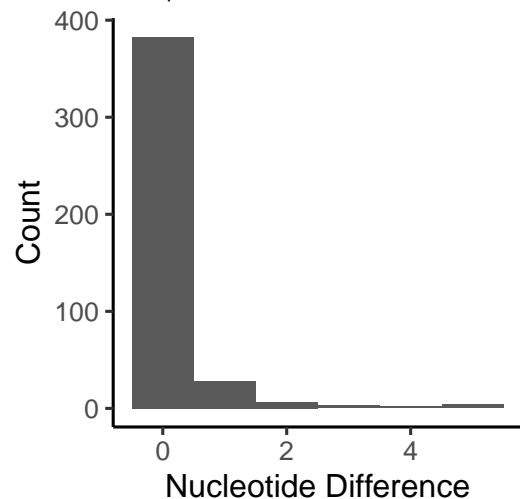
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



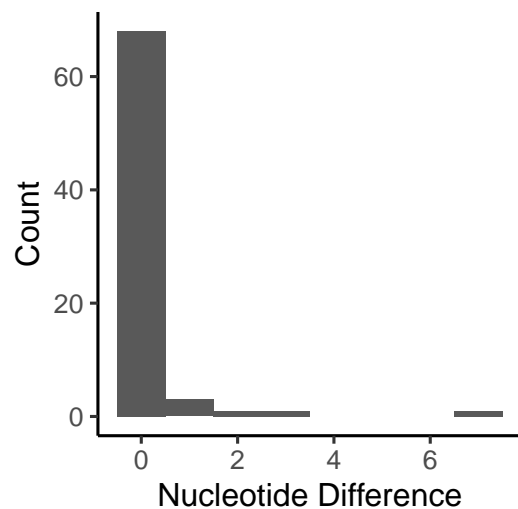
### IGHV2–26\*01

427 sequences assigned  
383 (89.7%) exact matches, in which:  
373 unique CDR3  
6 unique J



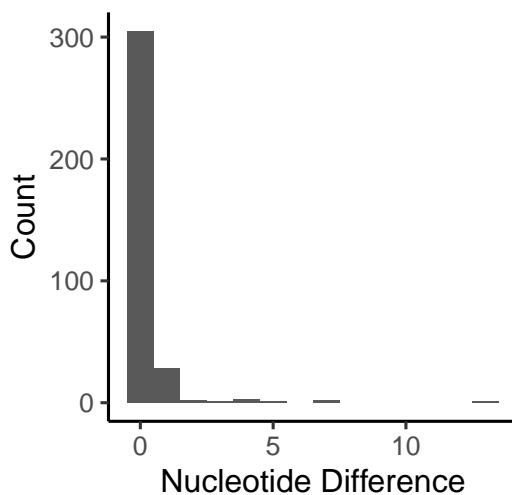
### IGHV1–69–2\*01

74 sequences assigned  
68 (91.9%) exact matches, in which:  
67 unique CDR3  
5 unique J



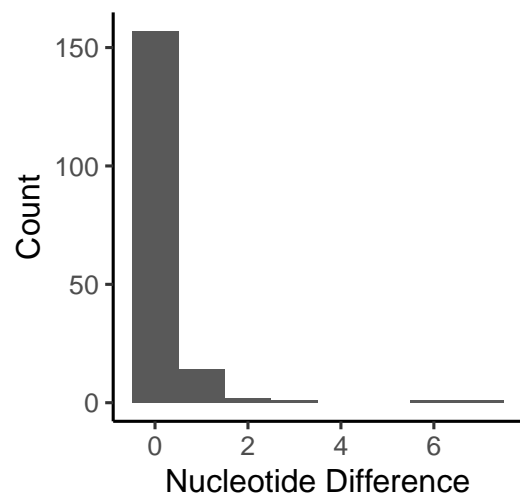
### IGHV2–5\*01

343 sequences assigned  
305 (88.9%) exact matches, in which:  
295 unique CDR3  
6 unique J



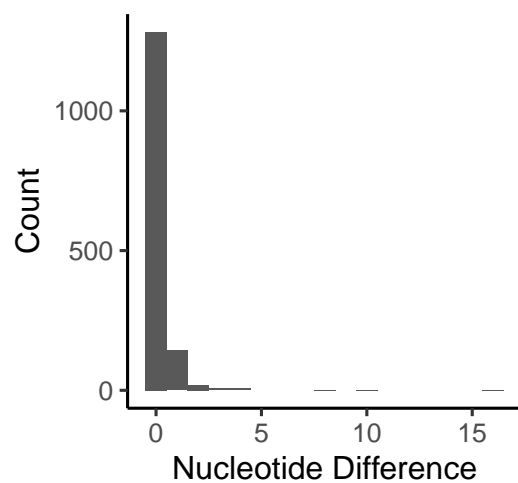
### IGHV2–70\*01

176 sequences assigned  
157 (89.2%) exact matches, in which:  
153 unique CDR3  
5 unique J



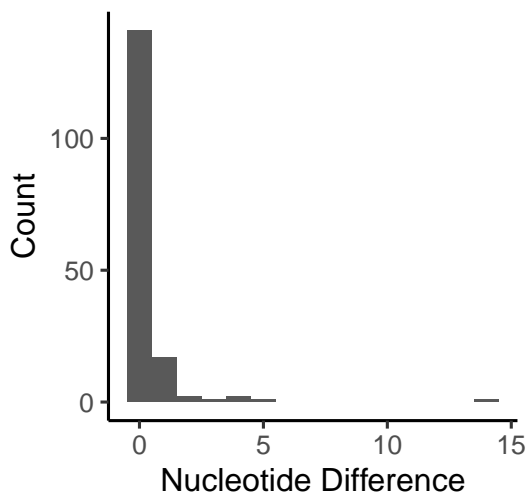
### IGHV1–69\*06

1463 sequences assigned  
1282 (87.6%) exact matches, in which:  
1203 unique CDR3  
6 unique J



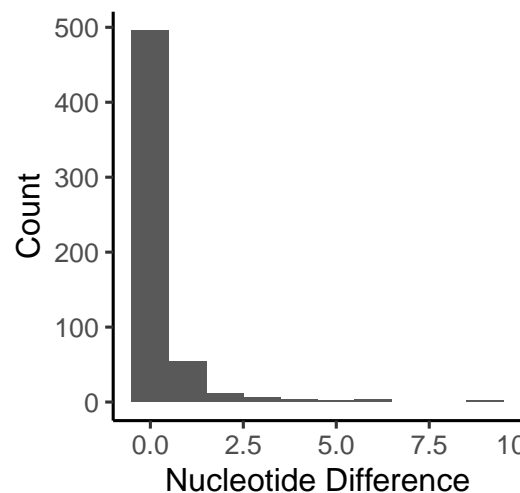
### IGHV2–5\*02

165 sequences assigned  
141 (85.5%) exact matches, in which:  
139 unique CDR3  
6 unique J



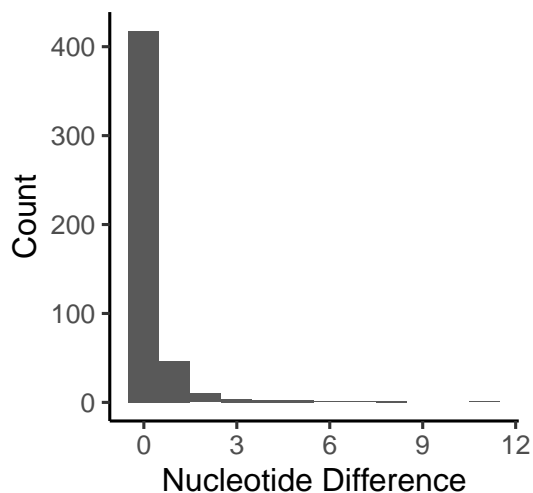
### IGHV3–7\*01

578 sequences assigned  
496 (85.8%) exact matches, in which:  
477 unique CDR3  
6 unique J



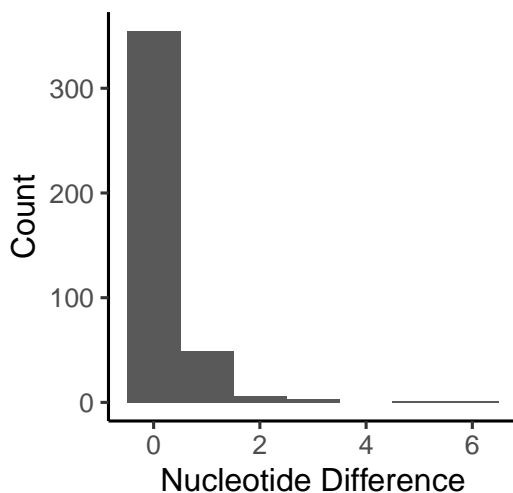
### IGHV3-7\*03

490 sequences assigned  
418 (85.3%) exact matches, in which:  
396 unique CDR3  
6 unique J



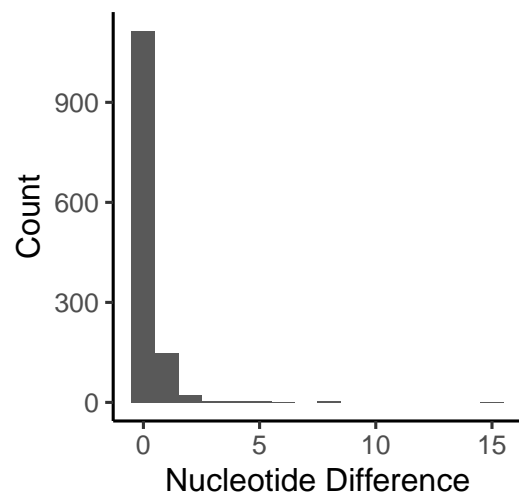
### IGHV3-11\*06

415 sequences assigned  
355 (85.5%) exact matches, in which:  
335 unique CDR3  
6 unique J



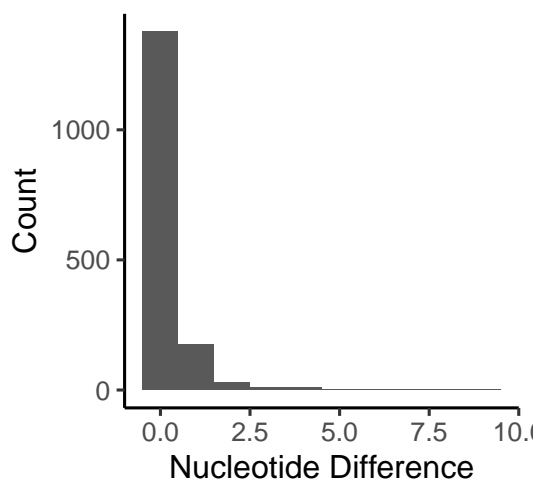
### IGHV3-15\*01

1304 sequences assigned  
1115 (85.5%) exact matches, in which:  
1066 unique CDR3  
6 unique J



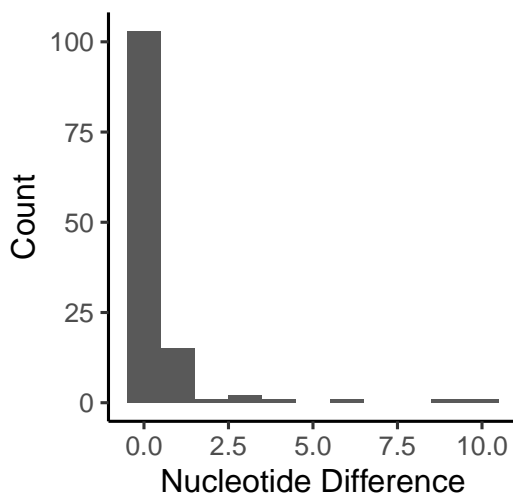
### IGHV3-9\*01

1606 sequences assigned  
1377 (85.7%) exact matches, in which:  
1270 unique CDR3  
6 unique J



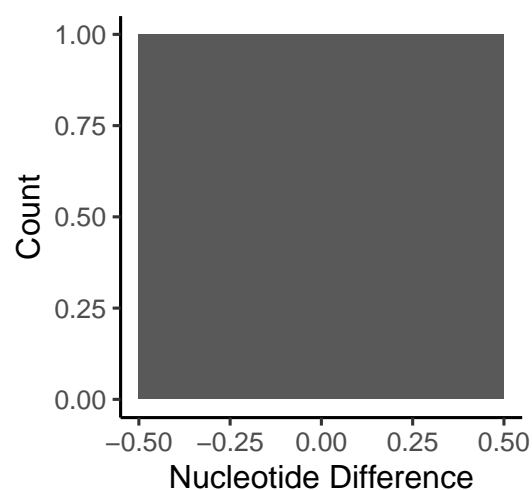
### IGHV3-13\*01

125 sequences assigned  
103 (82.4%) exact matches, in which:  
98 unique CDR3  
5 unique J



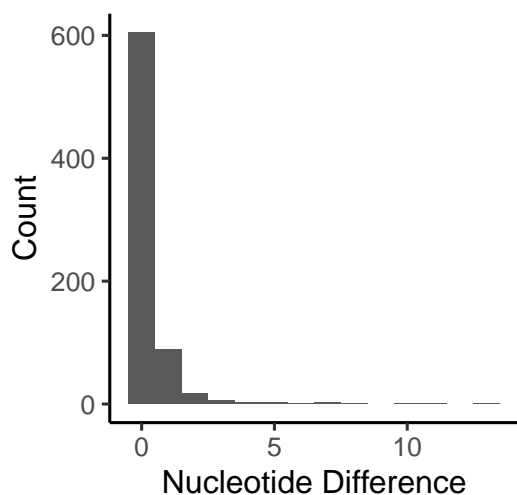
### IGHV3-19\*01

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



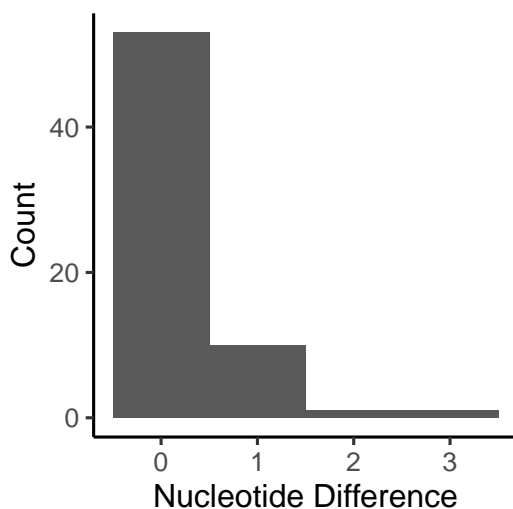
### IGHV3-11\*01

729 sequences assigned  
605 (83%) exact matches, in which:  
574 unique CDR3  
6 unique J



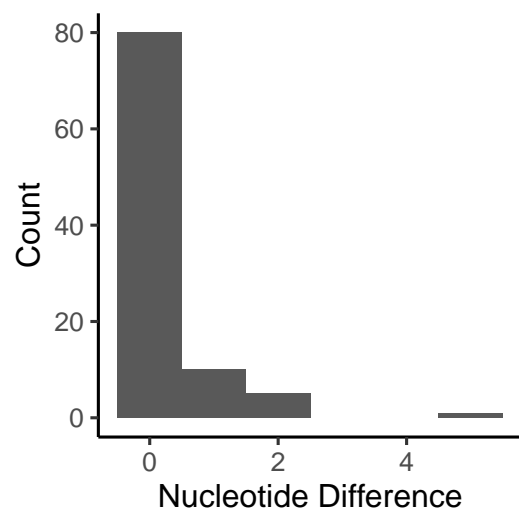
### IGHV3-13\*05

65 sequences assigned  
53 (81.5%) exact matches, in which:  
50 unique CDR3  
5 unique J



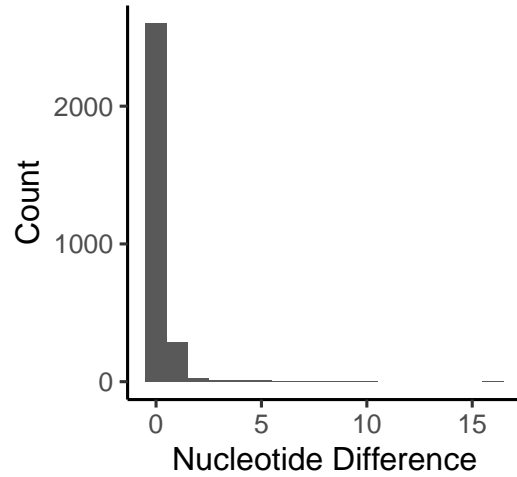
### IGHV3-20\*01

96 sequences assigned  
80 (83.3%) exact matches, in which:  
75 unique CDR3  
5 unique J



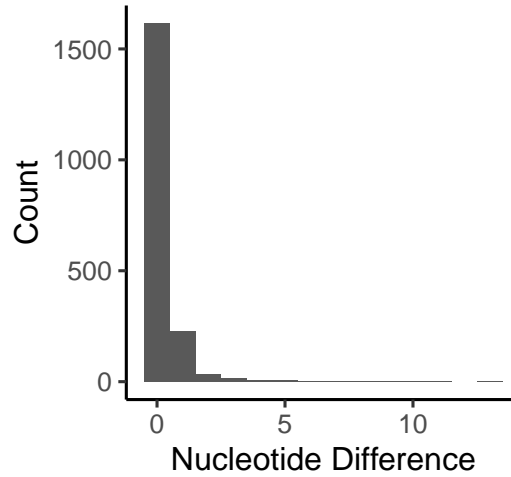
### IGHV3-21\*01

2975 sequences assigned  
2601 (87.4%) exact matches, in which:  
2437 unique CDR3  
6 unique J



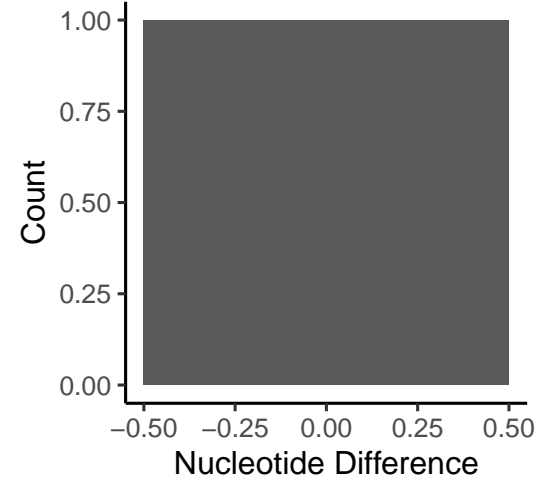
### IGHV3-33\*01

1913 sequences assigned  
1615 (84.4%) exact matches, in which:  
1519 unique CDR3  
6 unique J



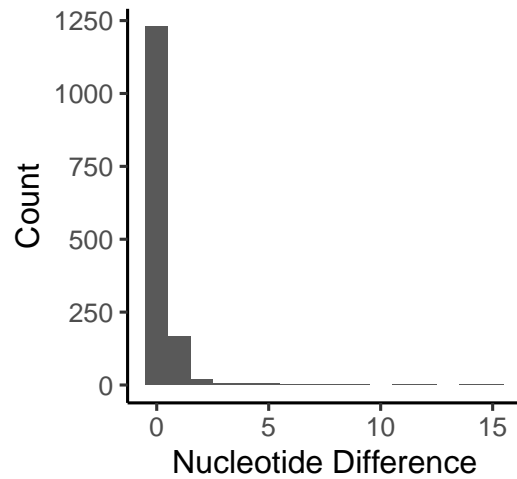
### IGHV3-47\*02

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



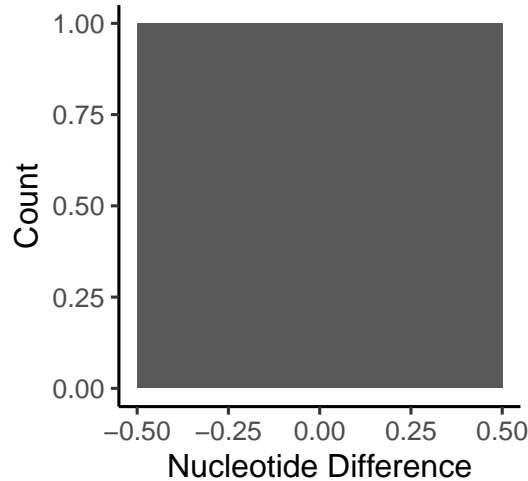
### IGHV3-30-3\*01

1446 sequences assigned  
1229 (85%) exact matches, in which:  
1158 unique CDR3  
6 unique J



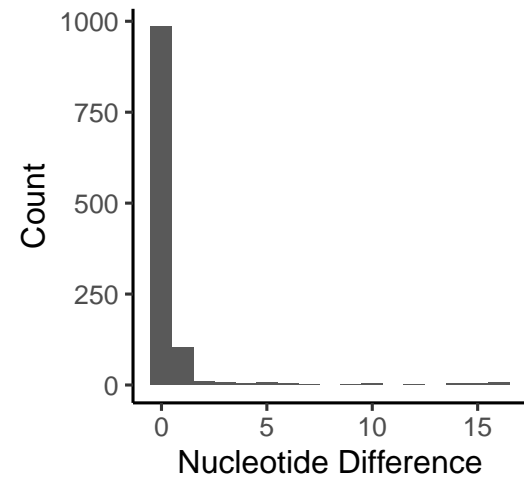
### IGHV3-35\*01

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



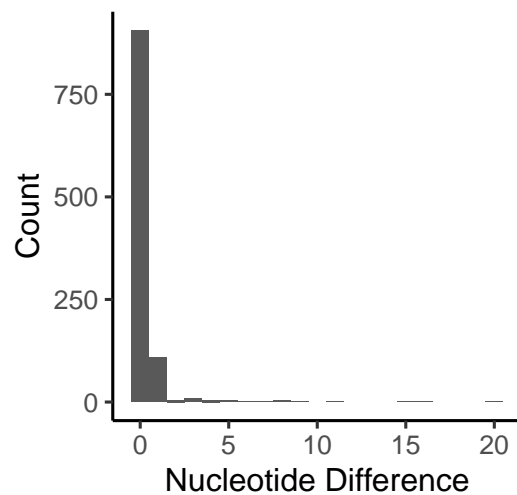
### IGHV3-48\*02

1137 sequences assigned  
985 (86.6%) exact matches, in which:  
929 unique CDR3  
6 unique J



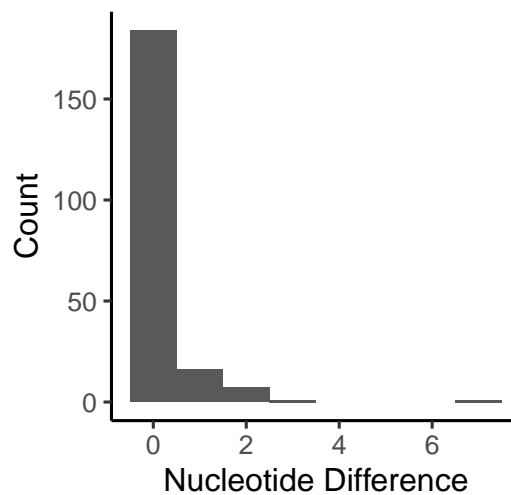
### IGHV3-30\*03

1049 sequences assigned  
906 (86.4%) exact matches, in which:  
844 unique CDR3  
6 unique J



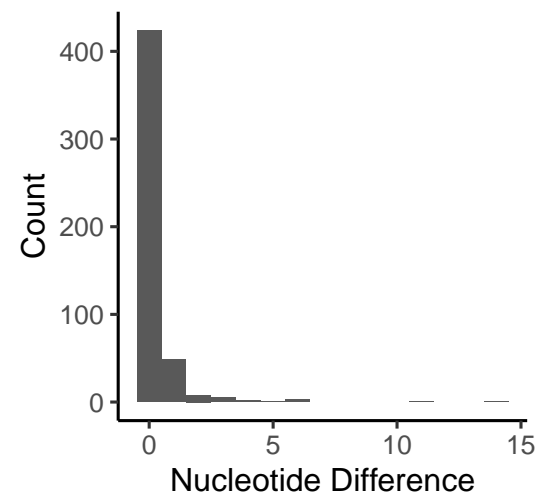
### IGHV3-43\*01

209 sequences assigned  
184 (88%) exact matches, in which:  
173 unique CDR3  
6 unique J



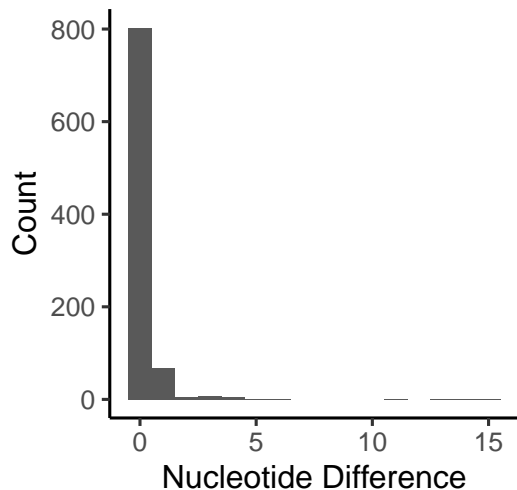
### IGHV3-49\*05

493 sequences assigned  
424 (86%) exact matches, in which:  
399 unique CDR3  
6 unique J



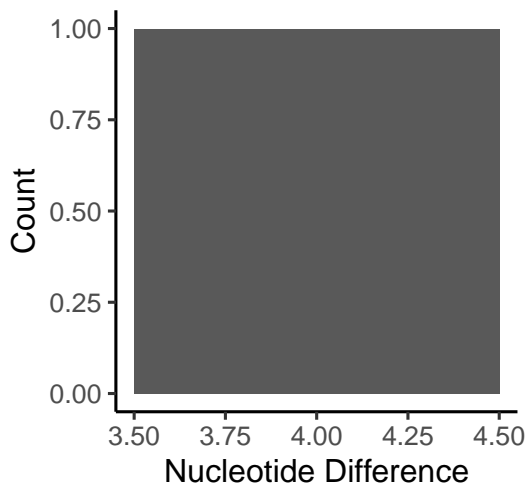
### IGHV3–53\*01

896 sequences assigned  
803 (89.6%) exact matches, in which:  
764 unique CDR3  
6 unique J



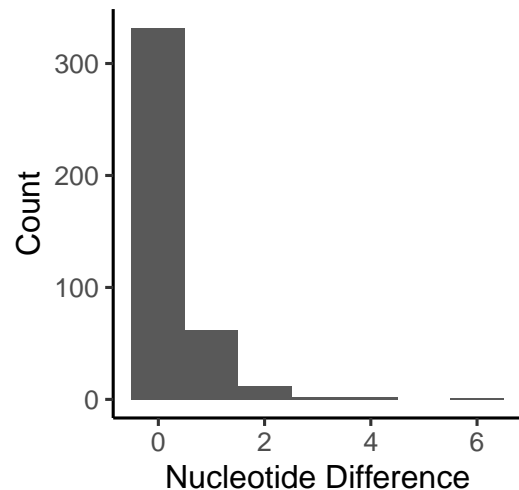
### IGHV3–66\*01

1 sequences assigned  
No exact matches.



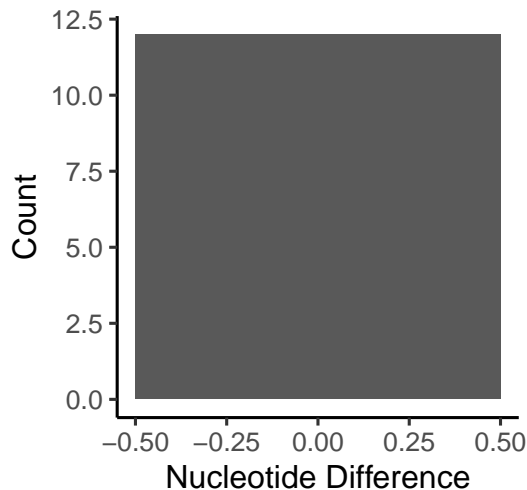
### IGHV3–73\*02

411 sequences assigned  
332 (80.8%) exact matches, in which:  
312 unique CDR3  
6 unique J



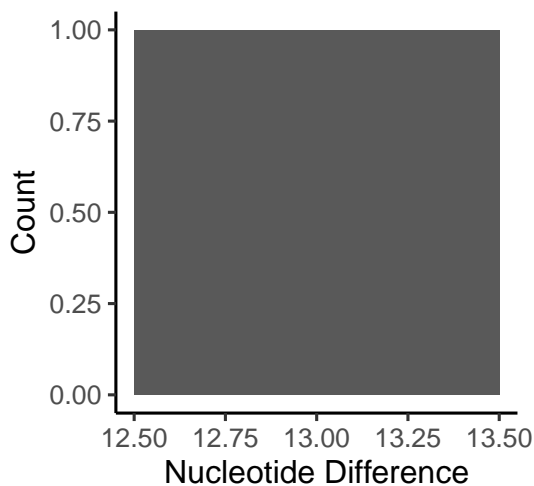
### IGHV3–64\*02

12 sequences assigned  
12 (100%) exact matches, in which:  
12 unique CDR3  
3 unique J



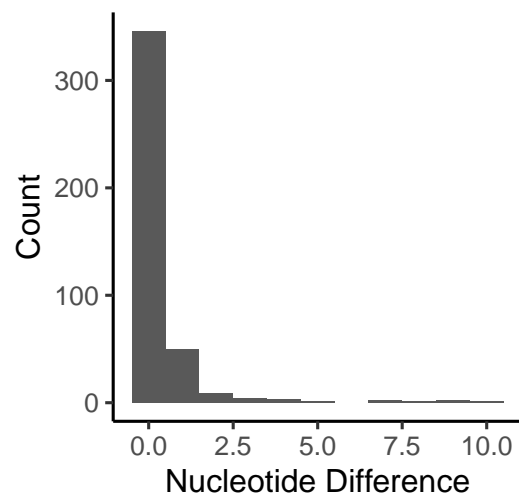
### IGHV3–66\*02

1 sequences assigned  
No exact matches.



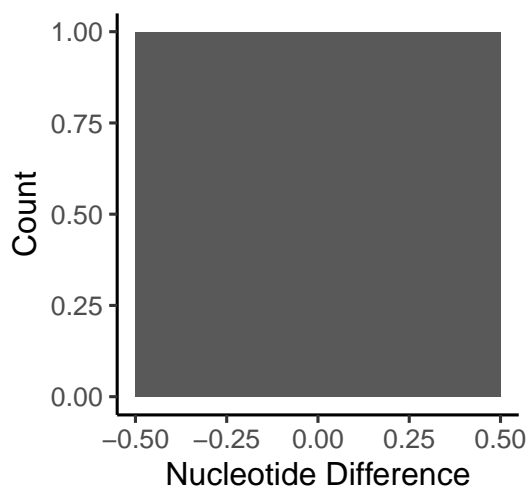
### IGHV3–74\*01

419 sequences assigned  
346 (82.6%) exact matches, in which:  
332 unique CDR3  
6 unique J



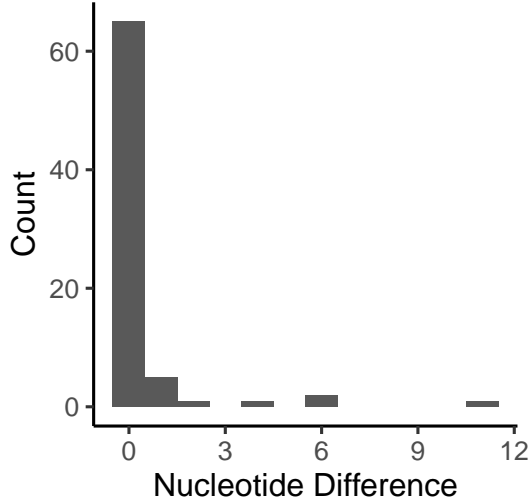
### IGHV3–64\*04

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



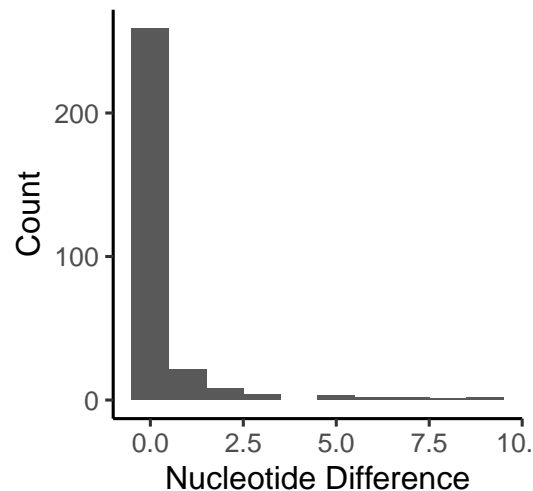
### IGHV3–72\*01

75 sequences assigned  
65 (86.7%) exact matches, in which:  
61 unique CDR3  
5 unique J



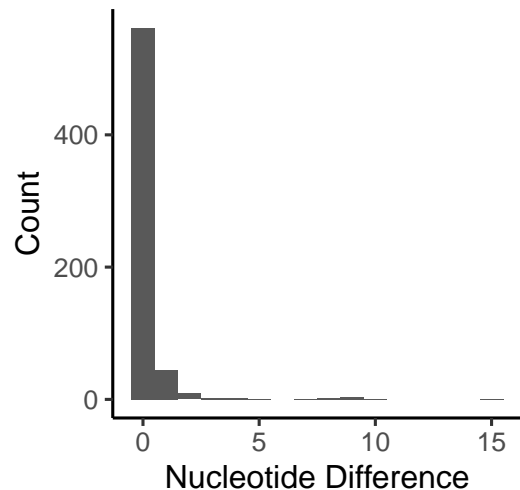
### IGHV3–64D\*09

302 sequences assigned  
259 (85.8%) exact matches, in which:  
239 unique CDR3  
6 unique J



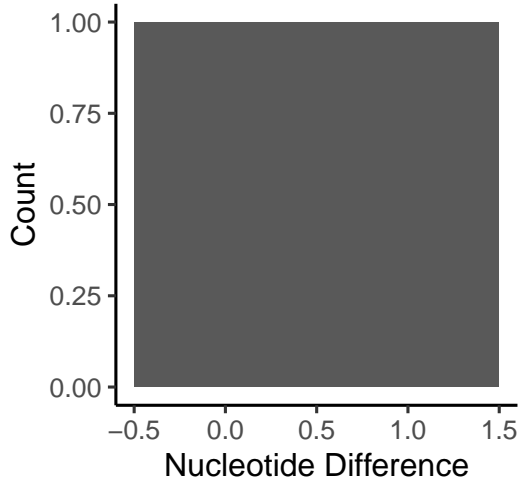
### IGHV4-4\*02

629 sequences assigned  
562 (89.3%) exact matches, in which:  
539 unique CDR3  
6 unique J



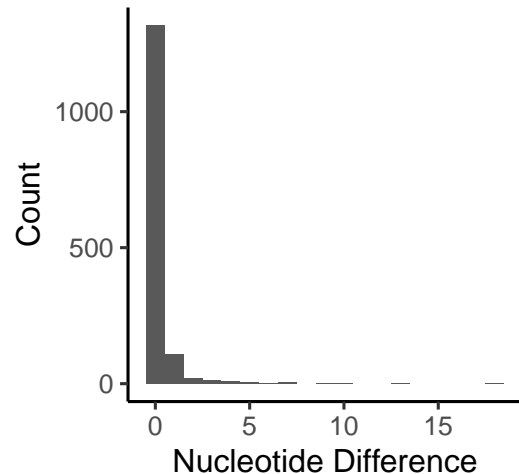
### IGHV4-28\*03

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



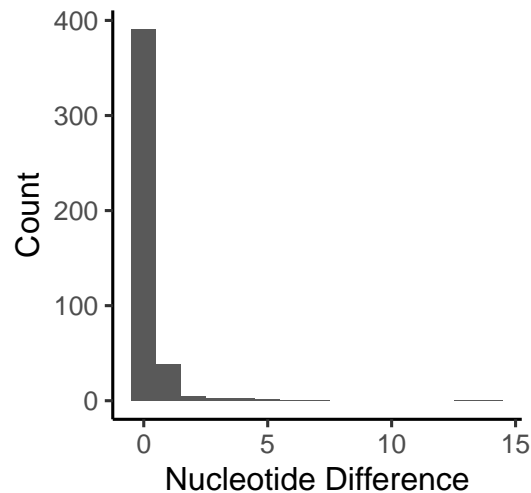
### IGHV4-31\*03

1486 sequences assigned  
1317 (88.6%) exact matches, in which:  
1256 unique CDR3  
6 unique J



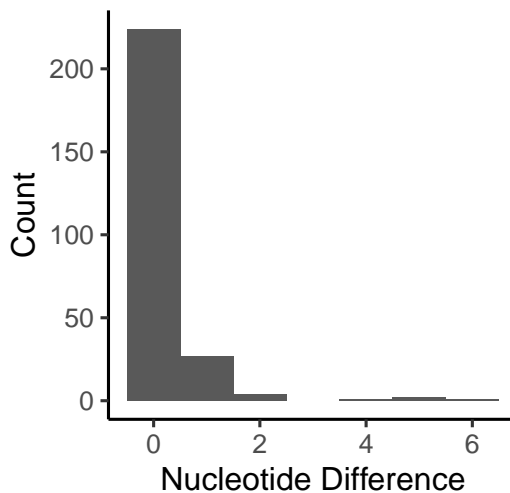
### IGHV4-4\*07

446 sequences assigned  
391 (87.7%) exact matches, in which:  
378 unique CDR3  
6 unique J



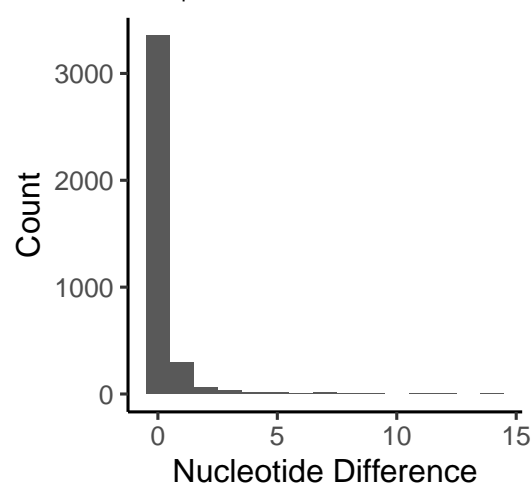
### IGHV4-30-2\*01

259 sequences assigned  
224 (86.5%) exact matches, in which:  
213 unique CDR3  
5 unique J



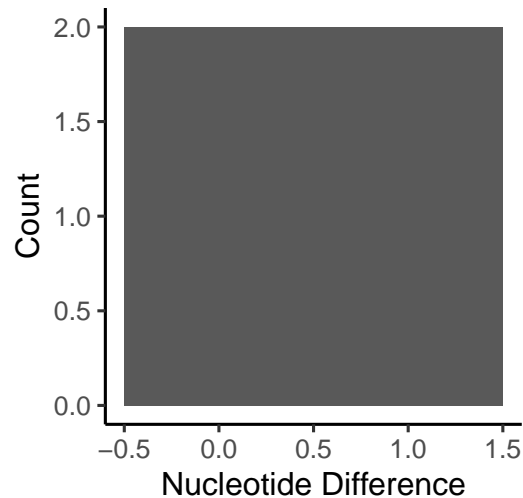
### IGHV4-34\*01

3801 sequences assigned  
3353 (88.2%) exact matches, in which:  
3141 unique CDR3  
6 unique J



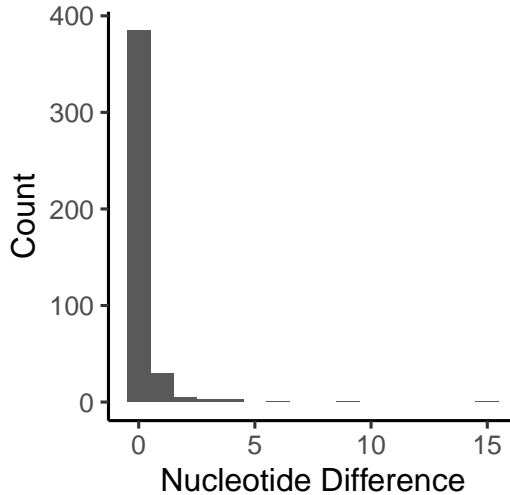
### IGHV4-28\*01

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



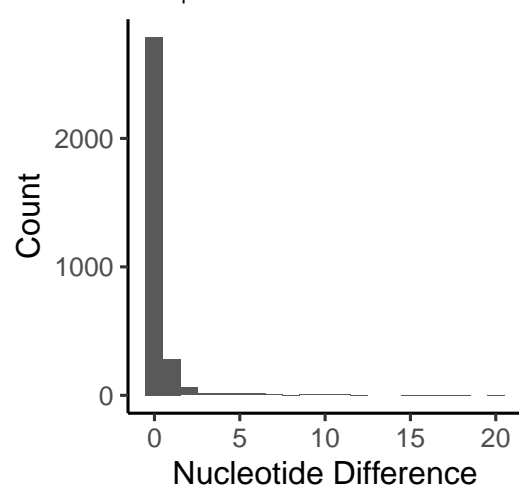
### IGHV4-30-4\*01

430 sequences assigned  
385 (89.5%) exact matches, in which:  
371 unique CDR3  
6 unique J



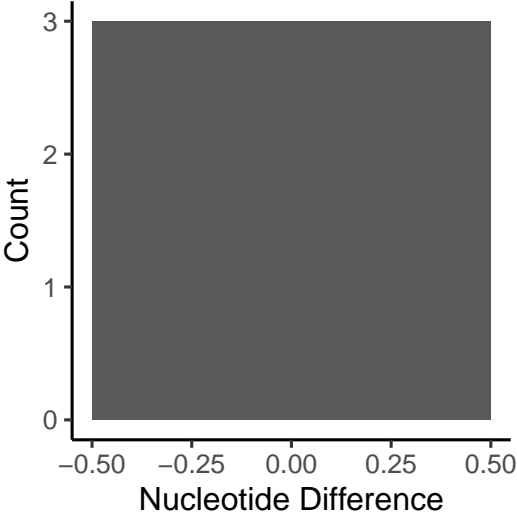
### IGHV4-39\*01

3221 sequences assigned  
2789 (86.6%) exact matches, in which:  
2630 unique CDR3  
6 unique J



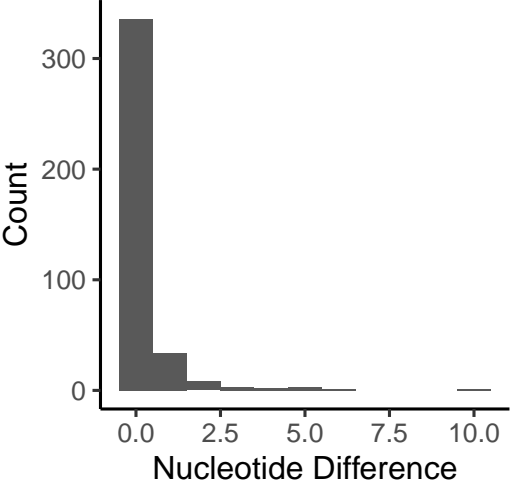
IGHV4–55\*01

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



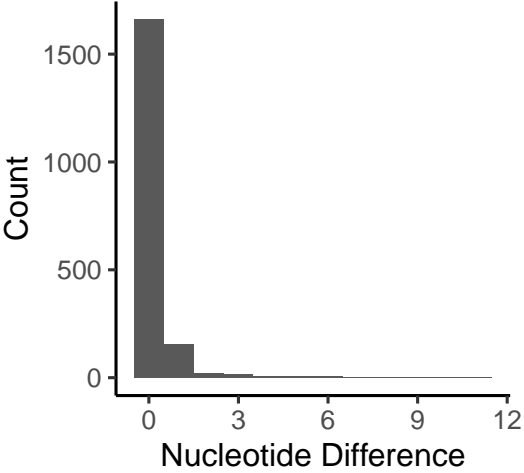
IGHV4–61\*01

388 sequences assigned  
336 (86.6%) exact matches, in which:  
328 unique CDR3  
6 unique J



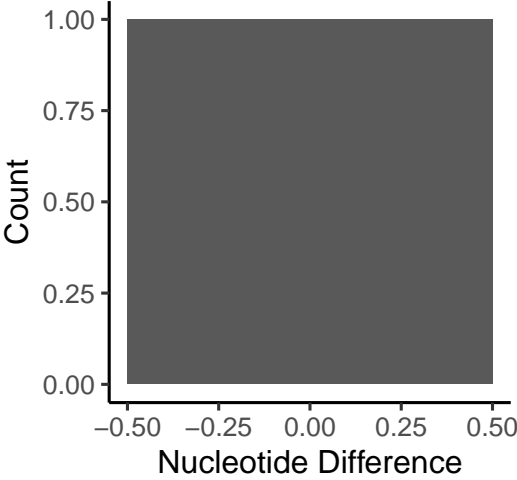
IGHV5–51\*01

1881 sequences assigned  
1661 (88.3%) exact matches, in which:  
1579 unique CDR3  
6 unique J



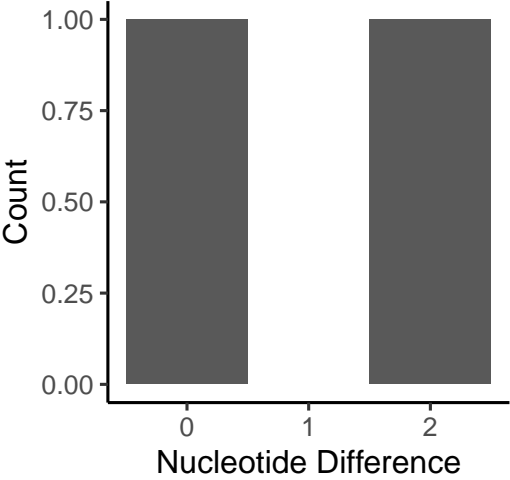
IGHV4–55\*08

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



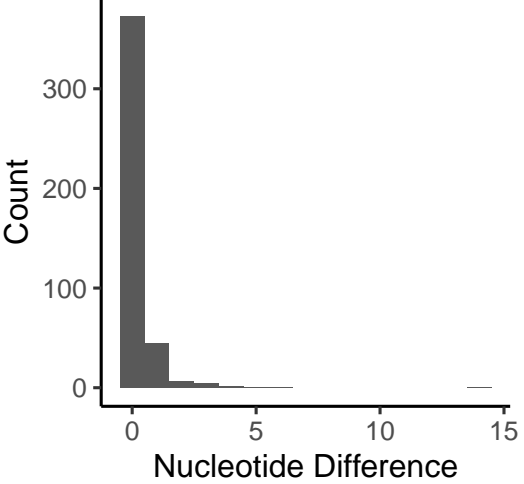
IGHV1/OR15–2\*01

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



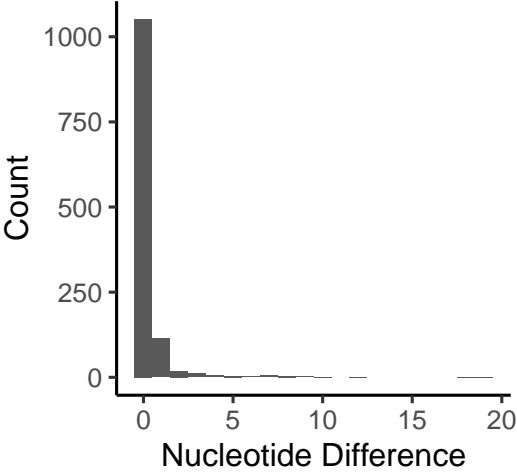
IGHV6–1\*01

435 sequences assigned  
373 (85.7%) exact matches, in which:  
346 unique CDR3  
6 unique J



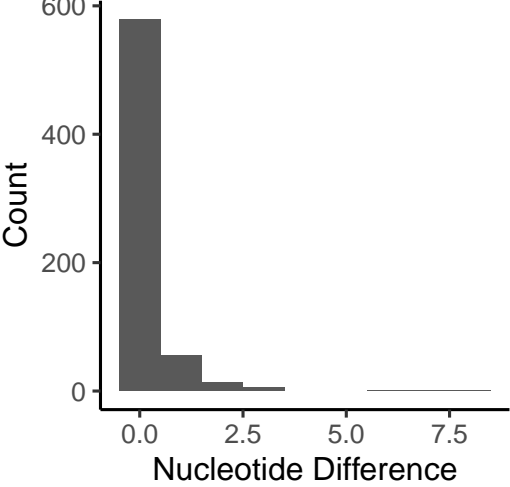
IGHV4–59\*01

1220 sequences assigned  
1052 (86.2%) exact matches, in which:  
1022 unique CDR3  
6 unique J



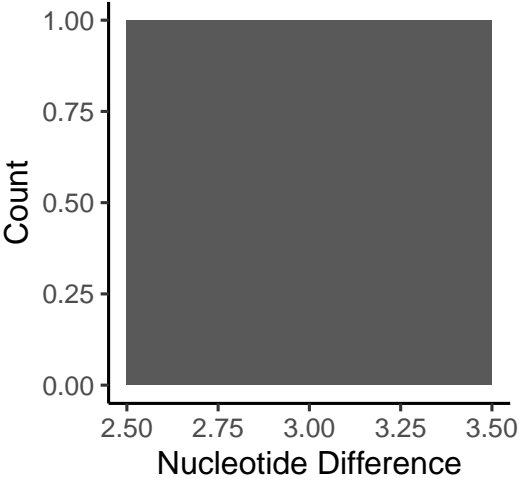
IGHV5–10–1\*03

657 sequences assigned  
579 (88.1%) exact matches, in which:  
541 unique CDR3  
6 unique J



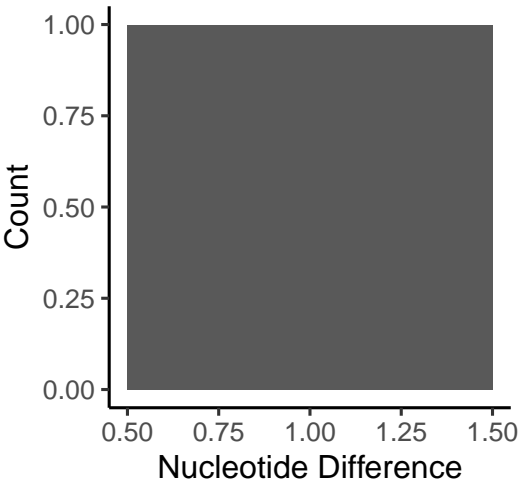
IGHV3/OR16–6\*02

1 sequences assigned  
No exact matches.



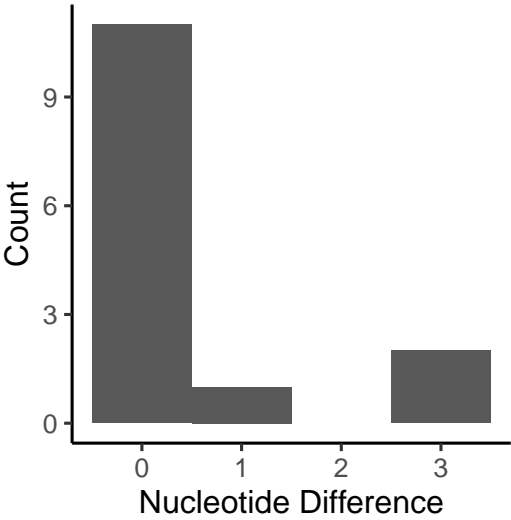
IGHV3-OR16-12\*01

1 sequences assigned  
No exact matches.



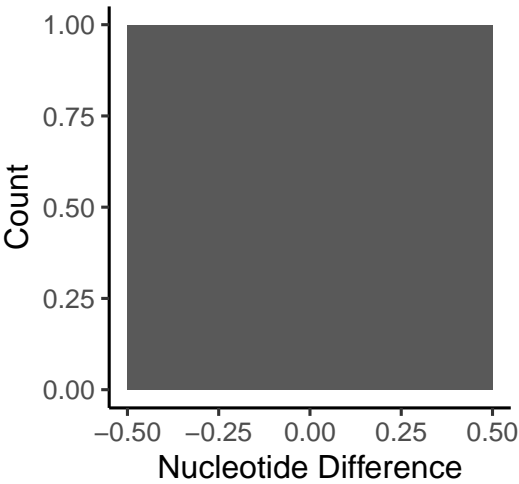
IGHV7-4-1\*01

14 sequences assigned  
11 (78.6%) exact matches, in which:  
11 unique CDR3  
3 unique J



IGHV7-81\*01

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







[illegible]