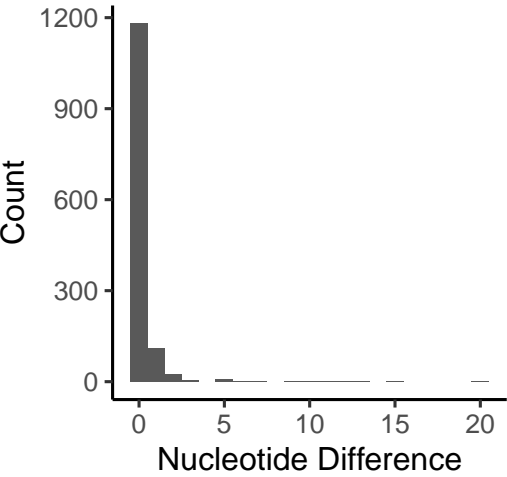


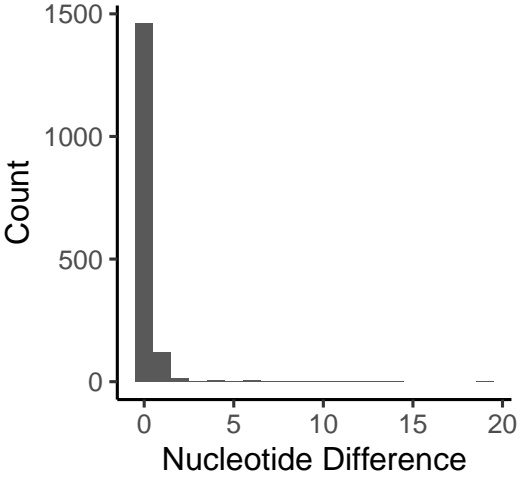
IGHV1-2\*02

1346 sequences assigned  
1181 (87.7%) exact matches, in which:  
1102 unique CDR3  
6 unique J



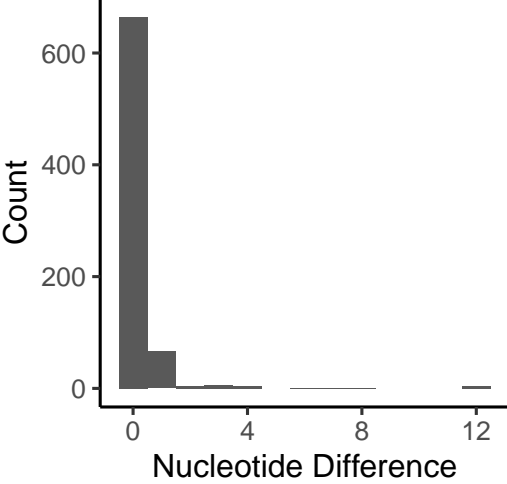
IGHV1-18\*01

1633 sequences assigned  
1461 (89.5%) exact matches, in which:  
1388 unique CDR3  
6 unique J



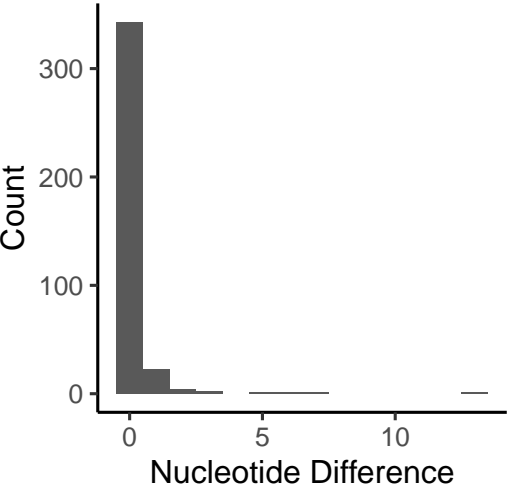
IGHV1-46\*01

753 sequences assigned  
665 (88.3%) exact matches, in which:  
629 unique CDR3  
6 unique J



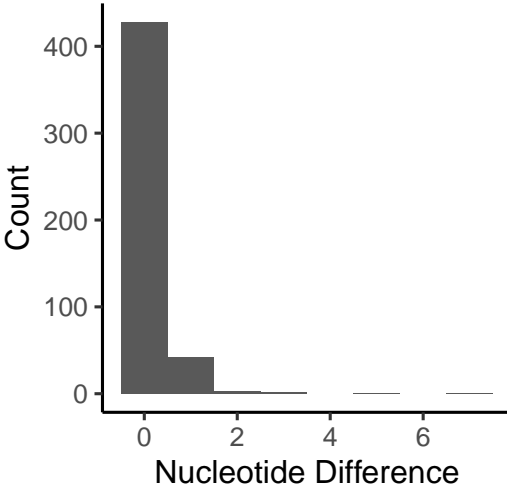
IGHV1-2\*04

376 sequences assigned  
343 (91.2%) exact matches, in which:  
327 unique CDR3  
5 unique J



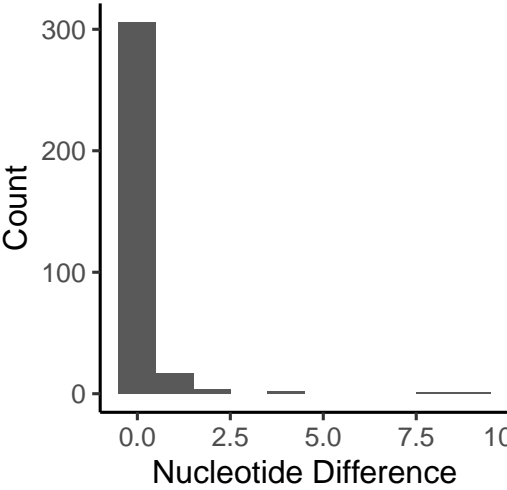
IGHV1-24\*01

477 sequences assigned  
428 (89.7%) exact matches, in which:  
405 unique CDR3  
6 unique J



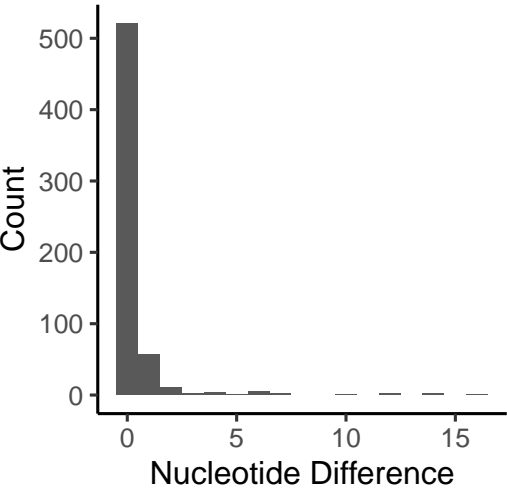
IGHV1-46\*03

331 sequences assigned  
306 (92.4%) exact matches, in which:  
290 unique CDR3  
6 unique J



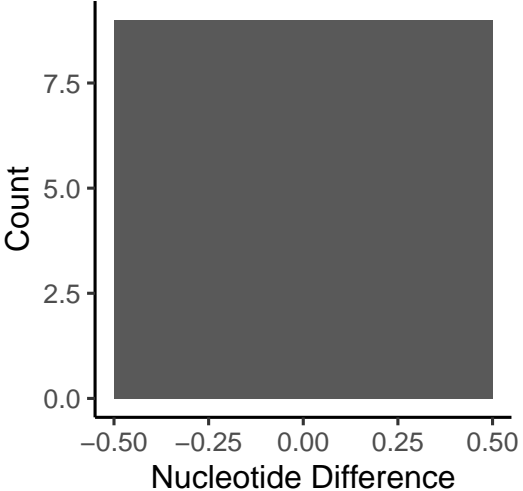
IGHV1-3\*01

609 sequences assigned  
521 (85.6%) exact matches, in which:  
496 unique CDR3  
6 unique J



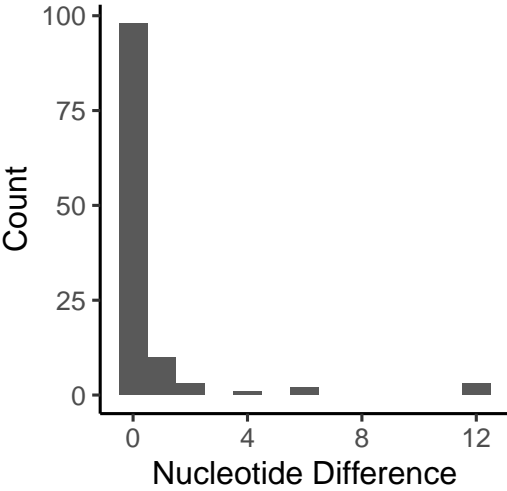
IGHV1-45\*02

9 sequences assigned  
9 (100%) exact matches, in which:  
9 unique CDR3  
5 unique J



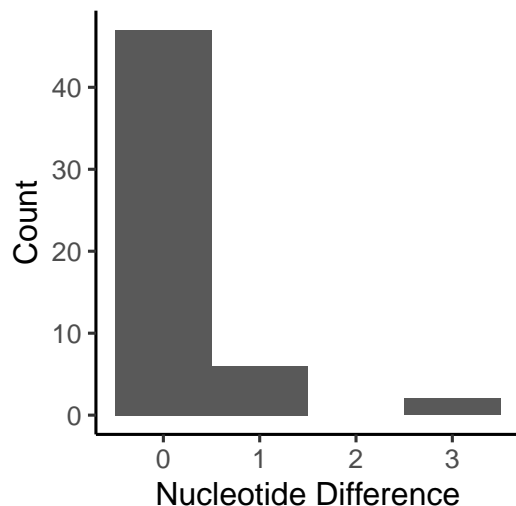
IGHV1-58\*01

117 sequences assigned  
98 (83.8%) exact matches, in which:  
90 unique CDR3  
6 unique J



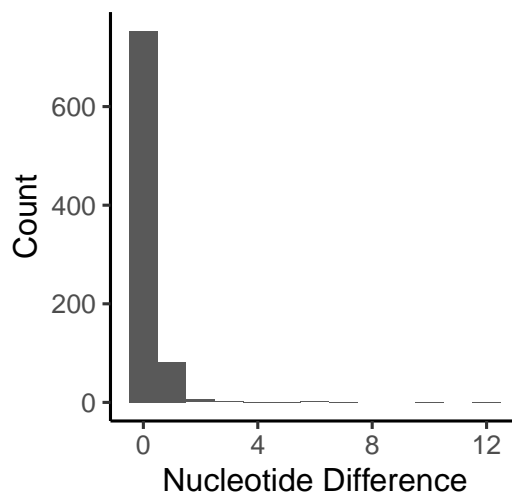
## IGHV1-58\*02

55 sequences assigned  
47 (85.5%) exact matches, in which:  
43 unique CDR3  
5 unique J



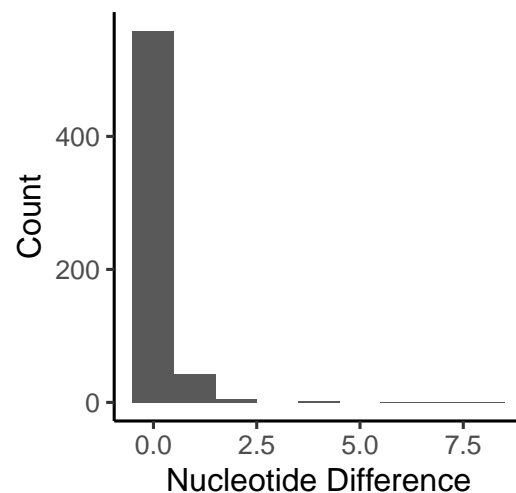
## IGHV1-69\*02

853 sequences assigned  
754 (88.4%) exact matches, in which:  
696 unique CDR3  
6 unique J



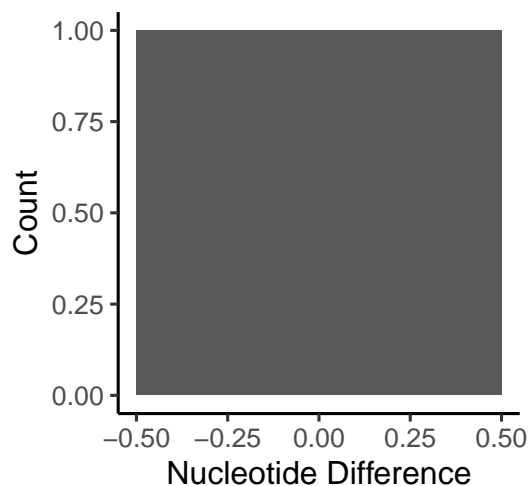
## IGHV2-26\*01

612 sequences assigned  
559 (91.3%) exact matches, in which:  
533 unique CDR3  
6 unique J



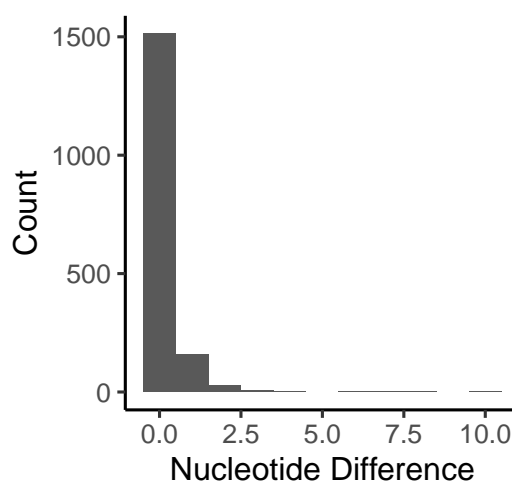
## IGHV1-68\*02

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



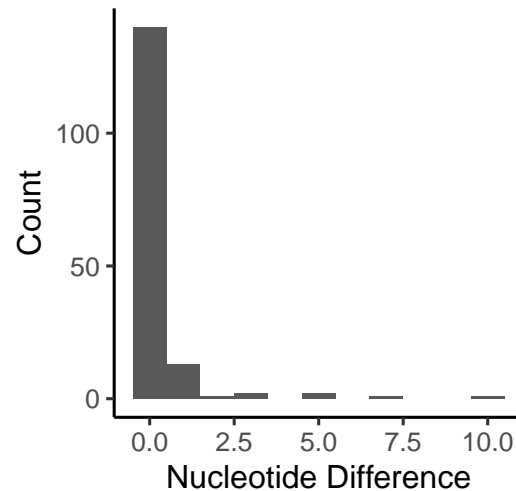
## IGHV1-69\*06

1720 sequences assigned  
1513 (88%) exact matches, in which:  
1389 unique CDR3  
6 unique J



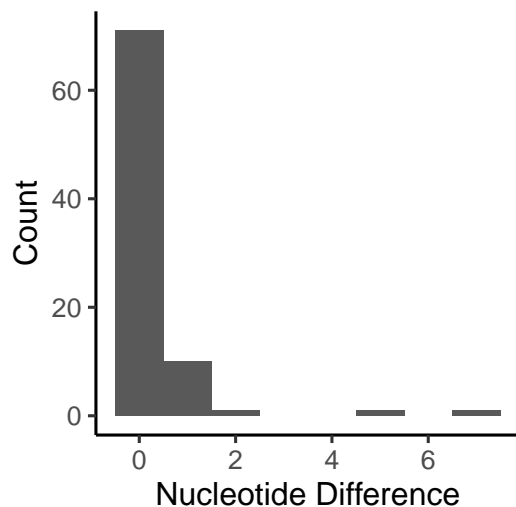
## IGHV2-70\*01

160 sequences assigned  
140 (87.5%) exact matches, in which:  
135 unique CDR3  
5 unique J



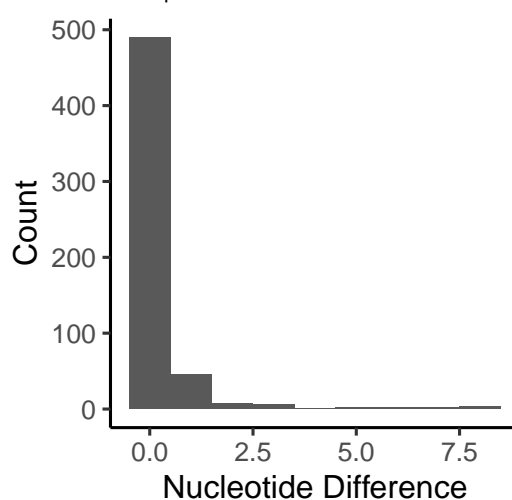
## IGHV1-69-2\*01

84 sequences assigned  
71 (84.5%) exact matches, in which:  
67 unique CDR3  
5 unique J



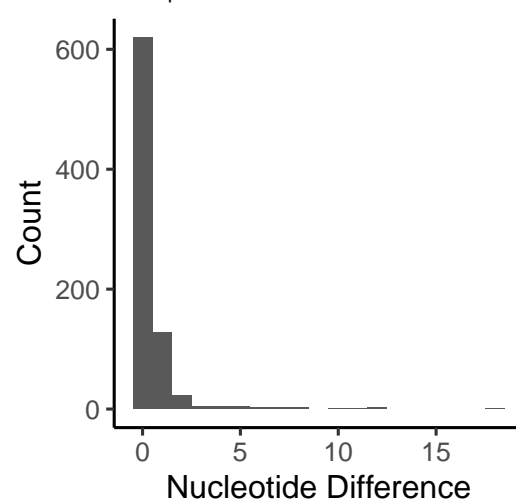
## IGHV2-5\*02

560 sequences assigned  
490 (87.5%) exact matches, in which:  
456 unique CDR3  
6 unique J



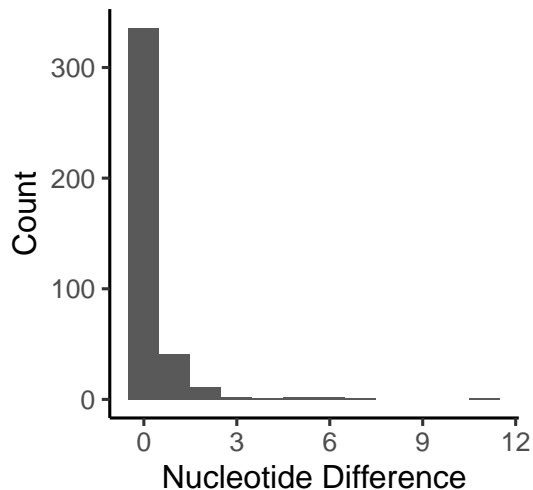
## IGHV3-7\*03

796 sequences assigned  
620 (77.9%) exact matches, in which:  
597 unique CDR3  
6 unique J



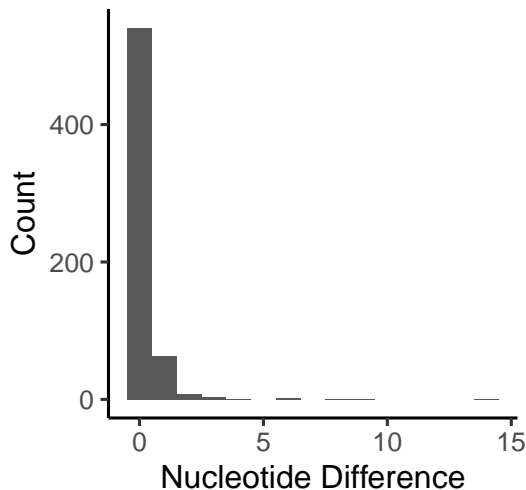
### IGHV3-11\*06

397 sequences assigned  
336 (84.6%) exact matches, in which:  
325 unique CDR3  
6 unique J



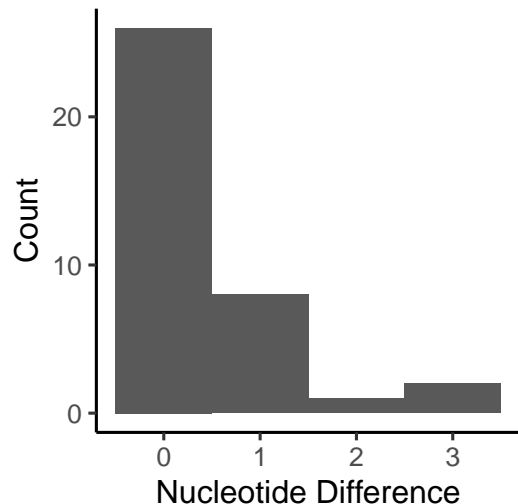
### IGHV3-15\*01

621 sequences assigned  
541 (87.1%) exact matches, in which:  
513 unique CDR3  
6 unique J



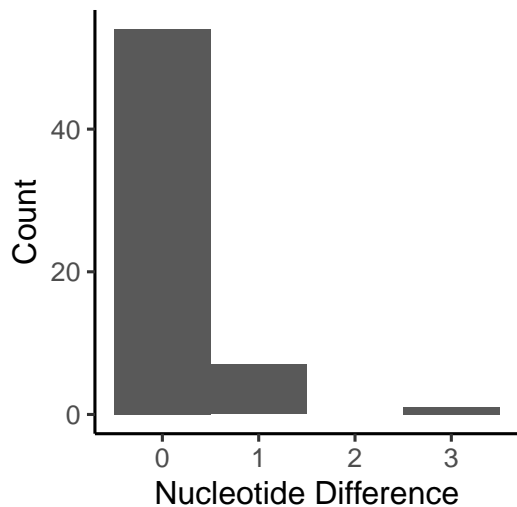
### IGHV3-20\*01

37 sequences assigned  
26 (70.3%) exact matches, in which:  
24 unique CDR3  
5 unique J



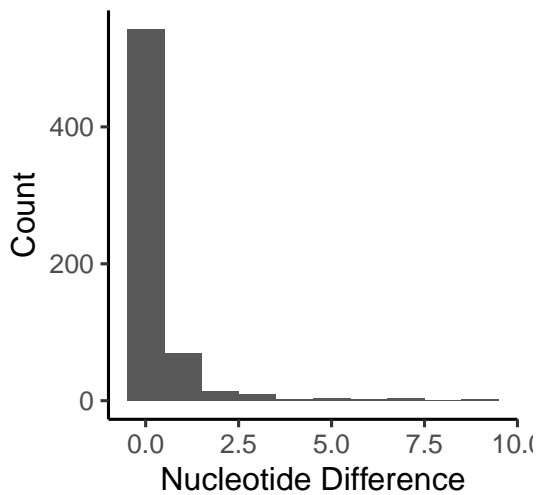
### IGHV3-13\*05

62 sequences assigned  
54 (87.1%) exact matches, in which:  
49 unique CDR3  
5 unique J



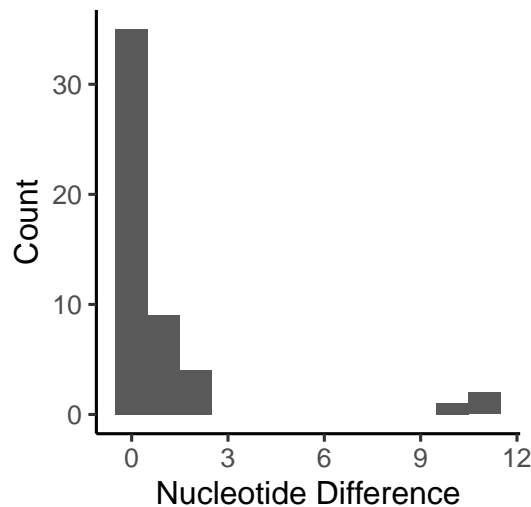
### IGHV3-15\*07

649 sequences assigned  
543 (83.7%) exact matches, in which:  
516 unique CDR3  
6 unique J



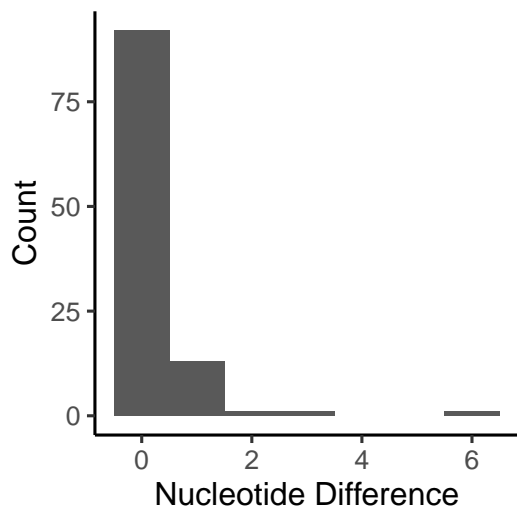
### IGHV3-20\*04

51 sequences assigned  
35 (68.6%) exact matches, in which:  
33 unique CDR3  
4 unique J



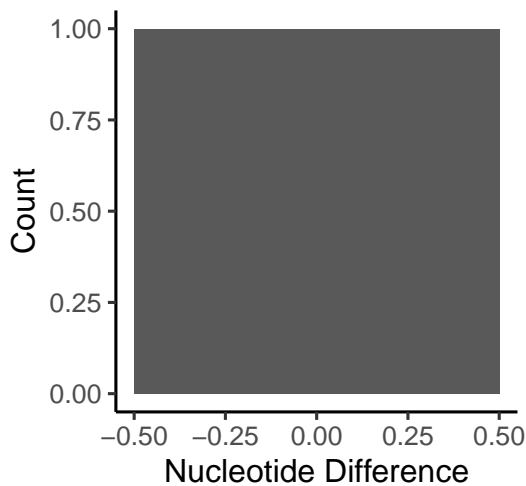
### IGHV3-13\*01\_G290A\_T30A

108 sequences assigned  
92 (85.2%) exact matches, in which:  
87 unique CDR3  
5 unique J



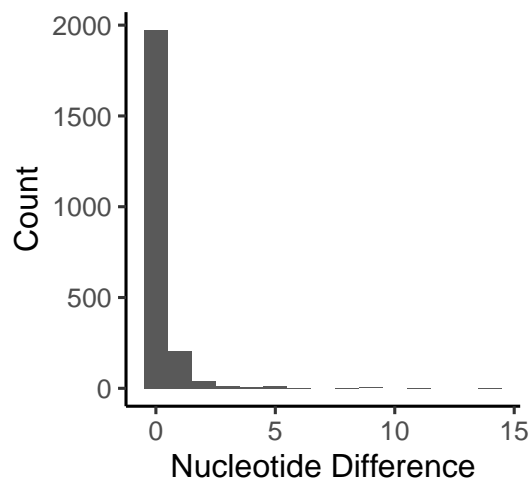
### IGHV3-19\*01

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



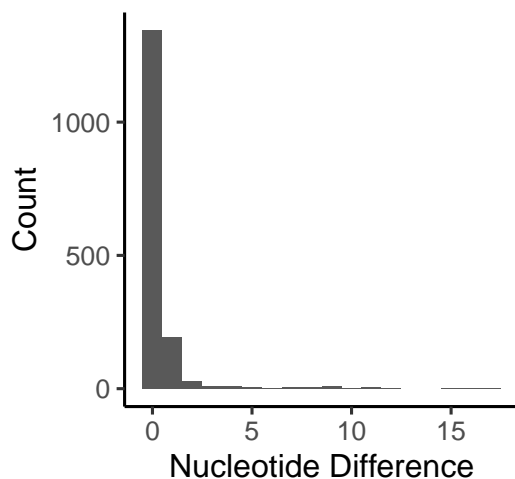
### IGHV3-21\*01

2264 sequences assigned  
1973 (87.1%) exact matches, in which:  
1851 unique CDR3  
6 unique J



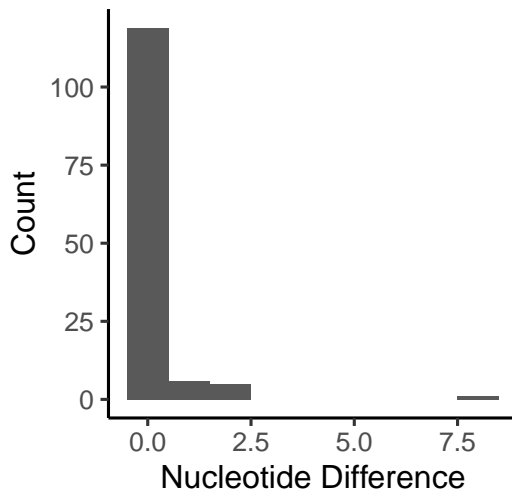
### IGHV3-23\*04

1630 sequences assigned  
1344 (82.5%) exact matches, in which:  
1263 unique CDR3  
6 unique J



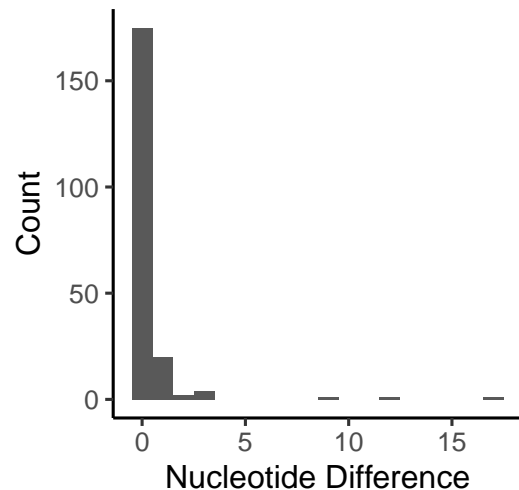
### IGHV3-43\*01

131 sequences assigned  
119 (90.8%) exact matches, in which:  
114 unique CDR3  
6 unique J



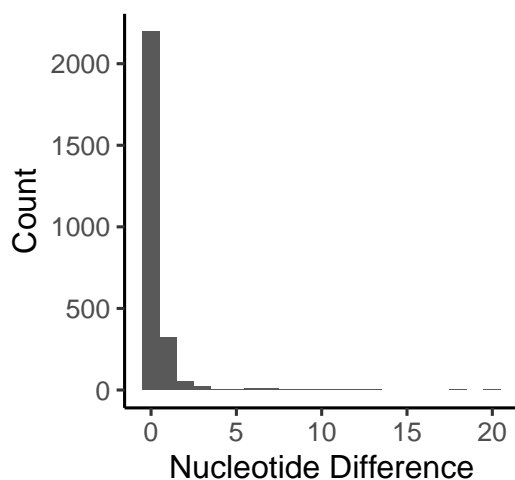
### IGHV3-49\*03

204 sequences assigned  
175 (85.8%) exact matches, in which:  
166 unique CDR3  
5 unique J



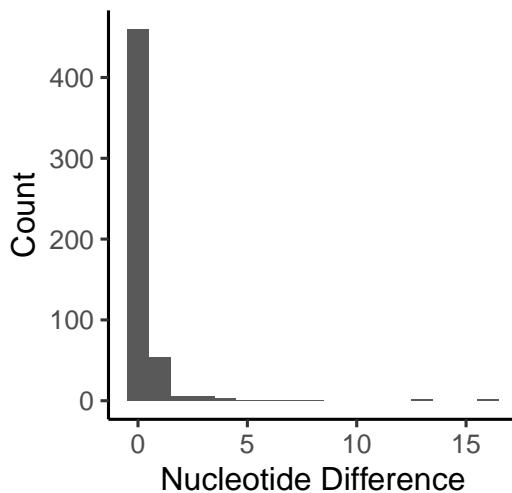
### IGHV3-30-3\*01

2643 sequences assigned  
2196 (83.1%) exact matches, in which:  
2083 unique CDR3  
6 unique J



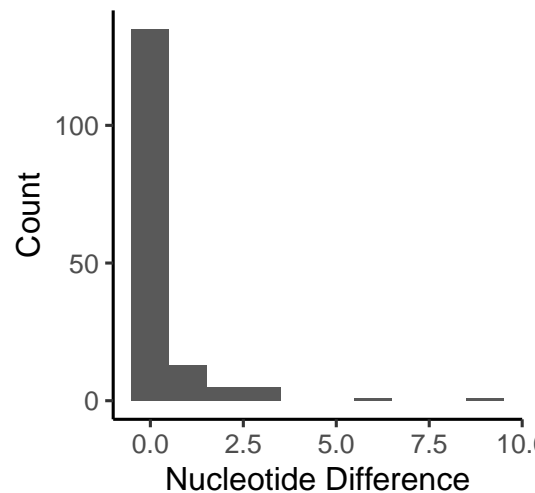
### IGHV3-48\*01

537 sequences assigned  
460 (85.7%) exact matches, in which:  
432 unique CDR3  
6 unique J



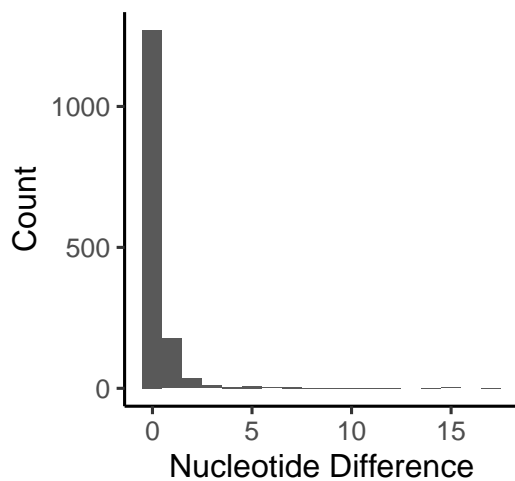
### IGHV3-49\*05

161 sequences assigned  
135 (83.9%) exact matches, in which:  
126 unique CDR3  
5 unique J



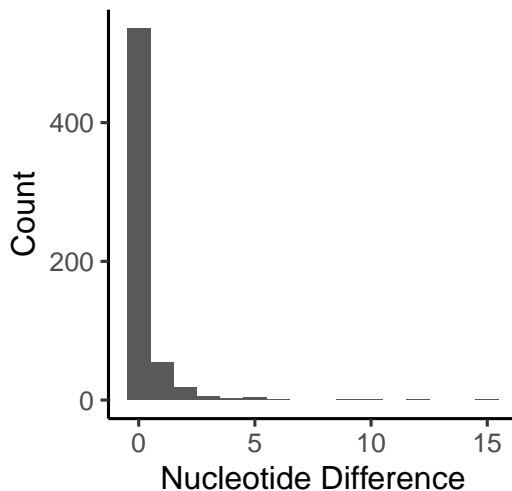
### IGHV3-33\*01

1527 sequences assigned  
1271 (83.2%) exact matches, in which:  
1212 unique CDR3  
6 unique J



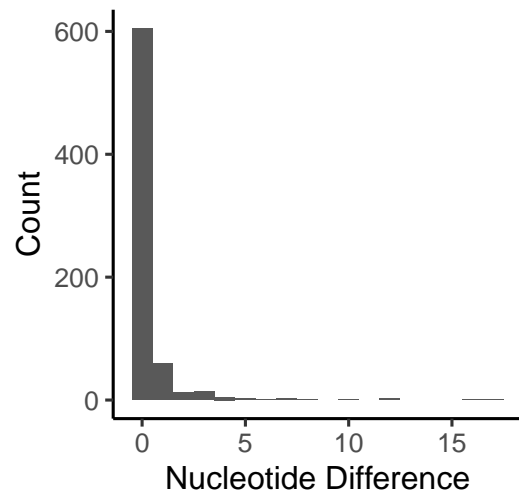
### IGHV3-48\*02

623 sequences assigned  
536 (86%) exact matches, in which:  
516 unique CDR3  
6 unique J



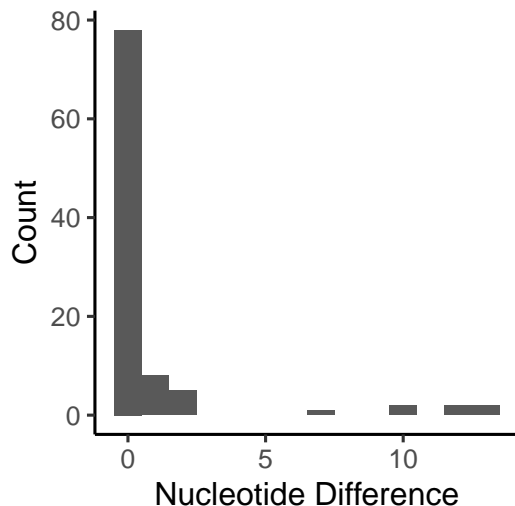
### IGHV3-53\*01

708 sequences assigned  
605 (85.5%) exact matches, in which:  
576 unique CDR3  
6 unique J



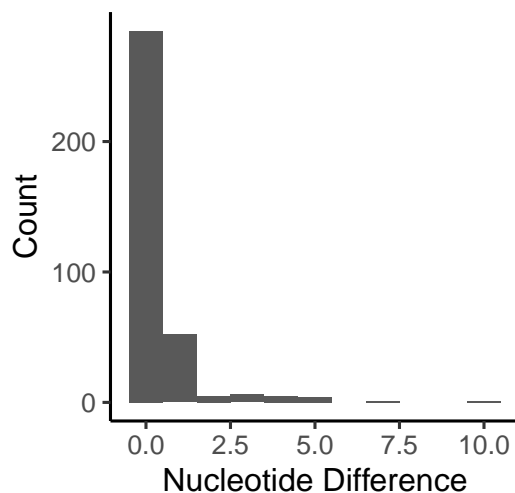
### IGHV3-64\*01

98 sequences assigned  
78 (79.6%) exact matches, in which:  
73 unique CDR3  
5 unique J



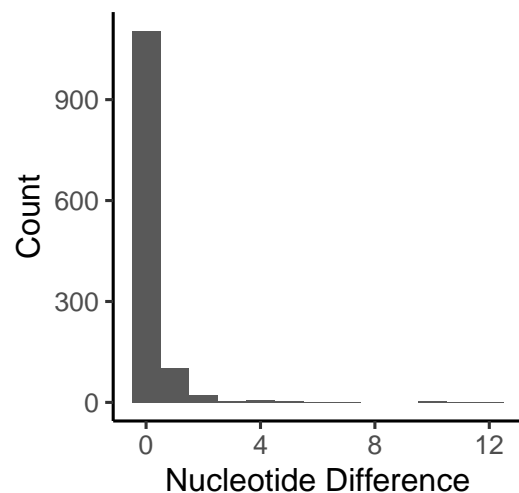
### IGHV3-73\*02

359 sequences assigned  
285 (79.4%) exact matches, in which:  
268 unique CDR3  
6 unique J



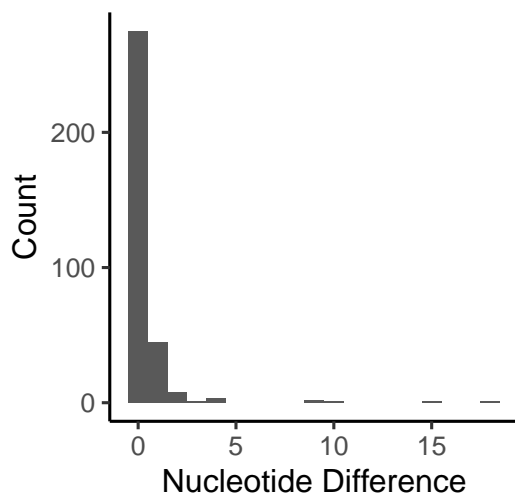
### IGHV4-4\*02

1252 sequences assigned  
1105 (88.3%) exact matches, in which:  
1057 unique CDR3  
6 unique J



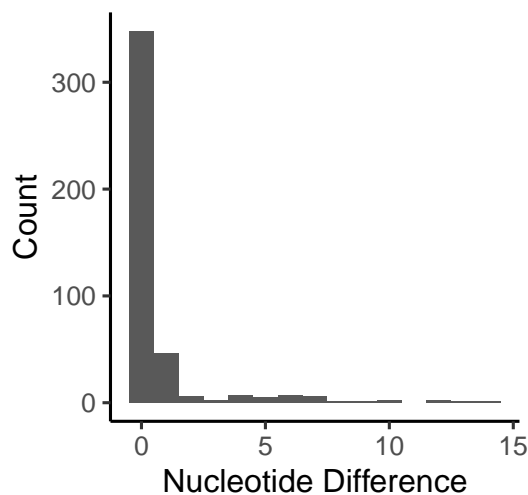
### IGHV3-66\*02

337 sequences assigned  
275 (81.6%) exact matches, in which:  
260 unique CDR3  
6 unique J



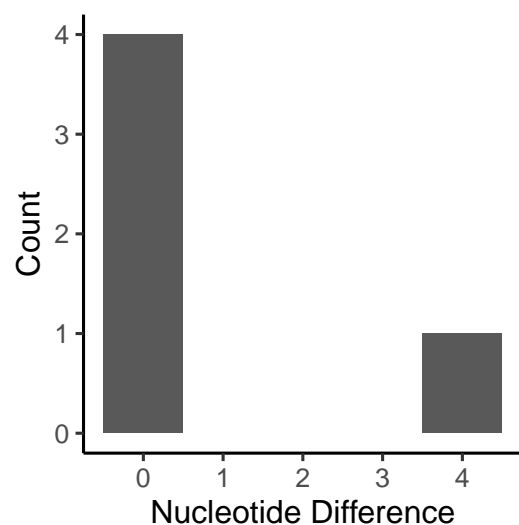
### IGHV3-74\*01

436 sequences assigned  
348 (79.8%) exact matches, in which:  
334 unique CDR3  
5 unique J



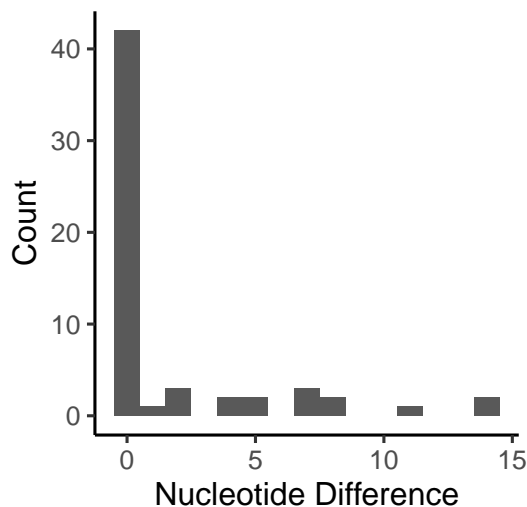
### IGHV4-28\*01

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
3 unique J



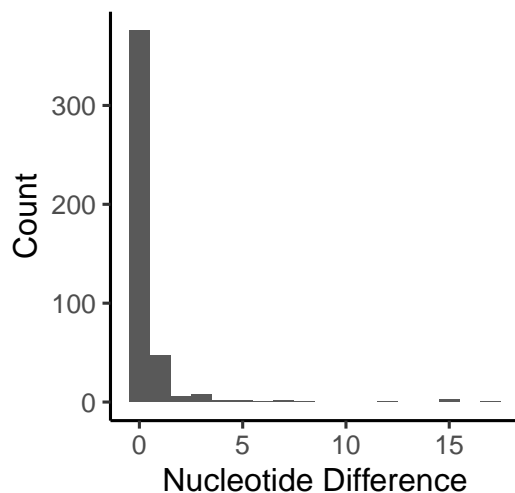
### IGHV3-72\*01

58 sequences assigned  
42 (72.4%) exact matches, in which:  
40 unique CDR3  
4 unique J



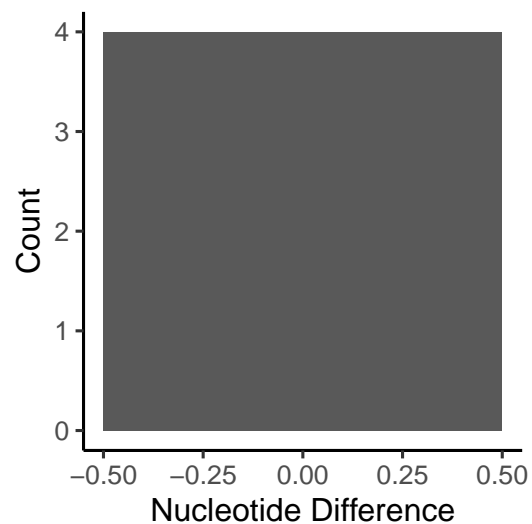
### IGHV3-64D\*06

450 sequences assigned  
376 (83.6%) exact matches, in which:  
352 unique CDR3  
6 unique J



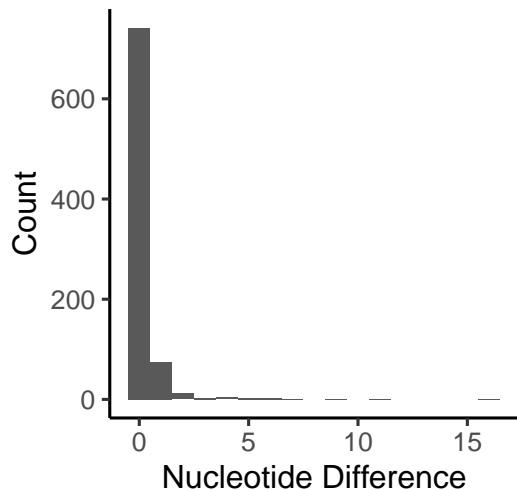
### IGHV4-28\*02

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
3 unique J



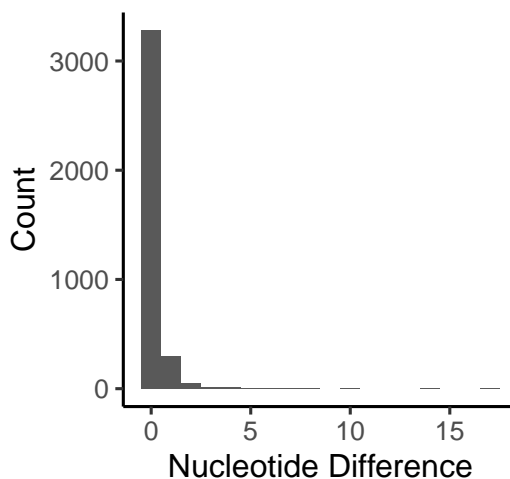
### IGHV4-30-4\*01

843 sequences assigned  
742 (88%) exact matches, in which:  
704 unique CDR3  
6 unique J



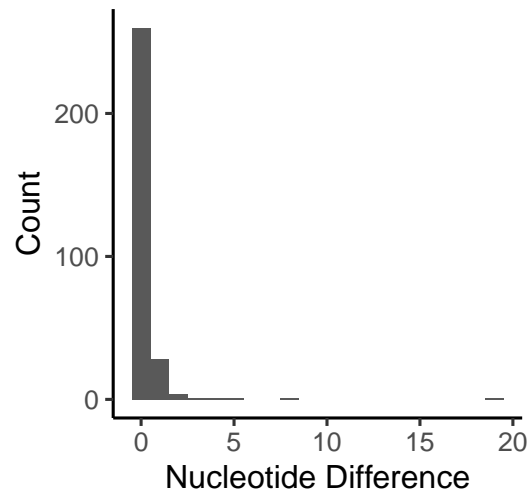
### IGHV4-34\*01

3697 sequences assigned  
3280 (88.7%) exact matches, in which:  
2997 unique CDR3  
6 unique J



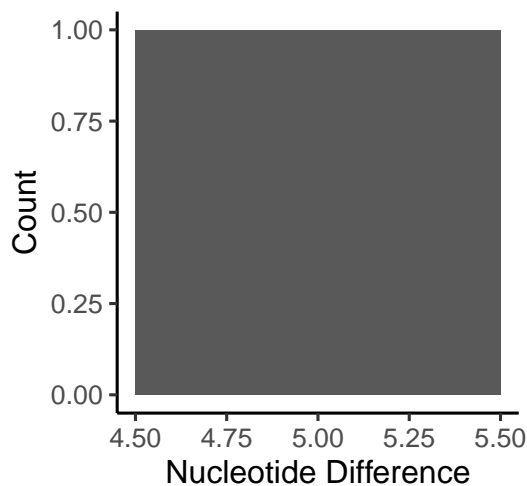
### IGHV4-61\*01

298 sequences assigned  
260 (87.2%) exact matches, in which:  
247 unique CDR3  
6 unique J



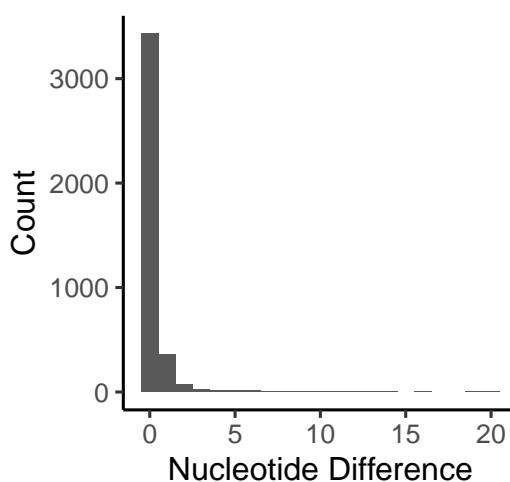
### IGHV4-30-2\*05

1 sequences assigned  
No exact matches.



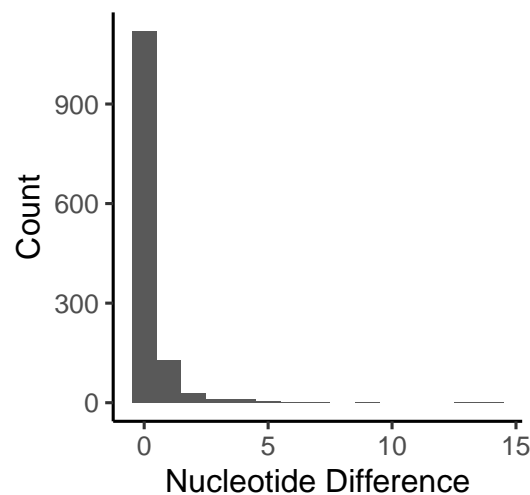
### IGHV4-39\*01

3988 sequences assigned  
3430 (86%) exact matches, in which:  
3134 unique CDR3  
6 unique J



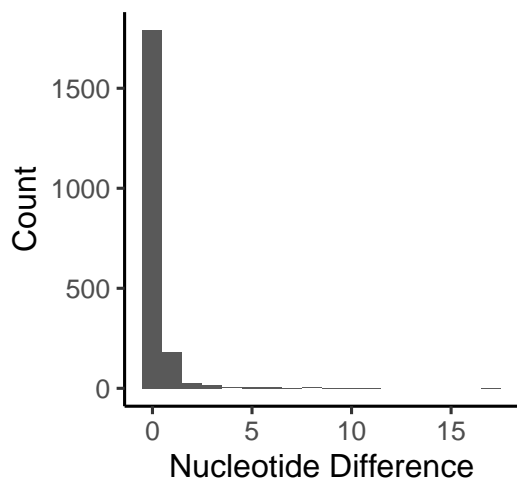
### IGHV4-61\*02

1313 sequences assigned  
1120 (85.3%) exact matches, in which:  
1069 unique CDR3  
6 unique J



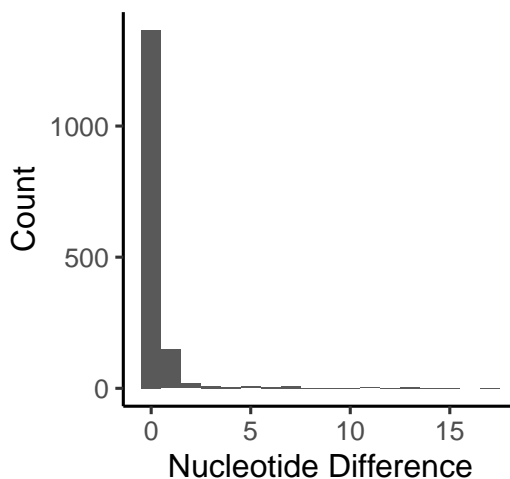
### IGHV4-31\*03

2044 sequences assigned  
1791 (87.6%) exact matches, in which:  
1703 unique CDR3  
6 unique J



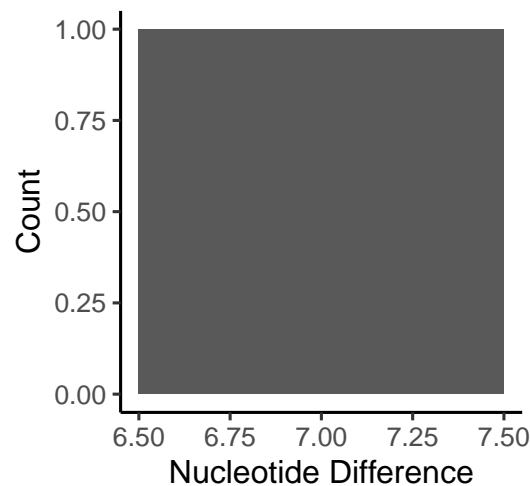
### IGHV4-59\*01

1586 sequences assigned  
1366 (86.1%) exact matches, in which:  
1306 unique CDR3  
6 unique J



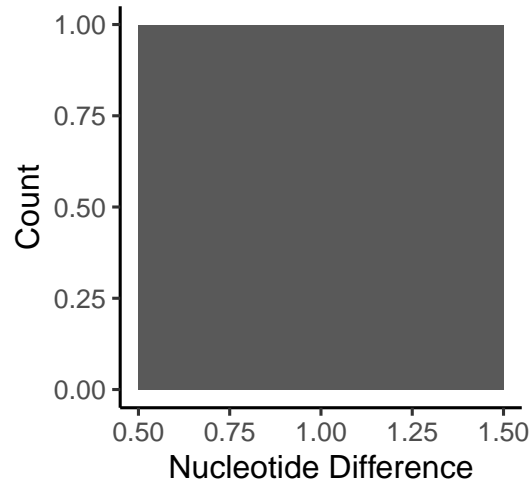
### IGHV1/OR15-3\*02

1 sequences assigned  
No exact matches.



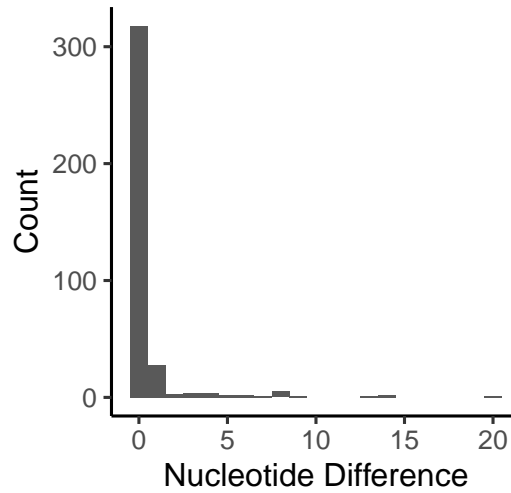
### IGHV1/OR15-4\*01

1 sequences assigned  
No exact matches.



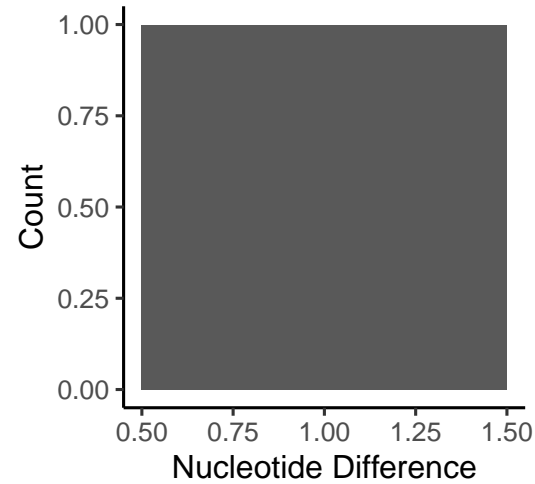
### IGHV6-1\*01

372 sequences assigned  
318 (85.5%) exact matches, in which:  
294 unique CDR3  
6 unique J



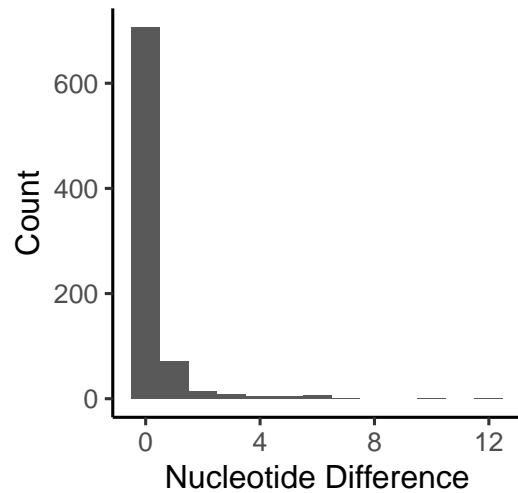
### IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.



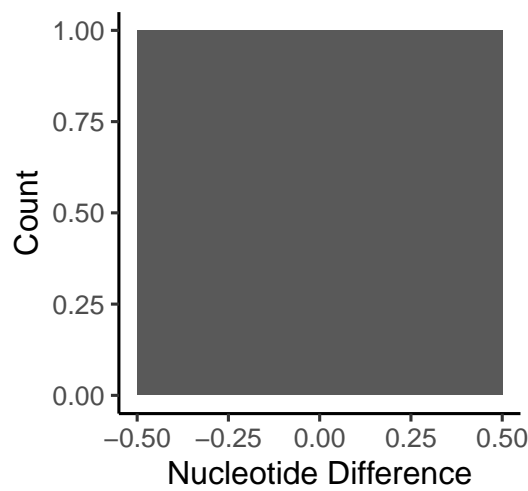
### IGHV5-10-1\*03

822 sequences assigned  
707 (86%) exact matches, in which:  
670 unique CDR3  
6 unique J



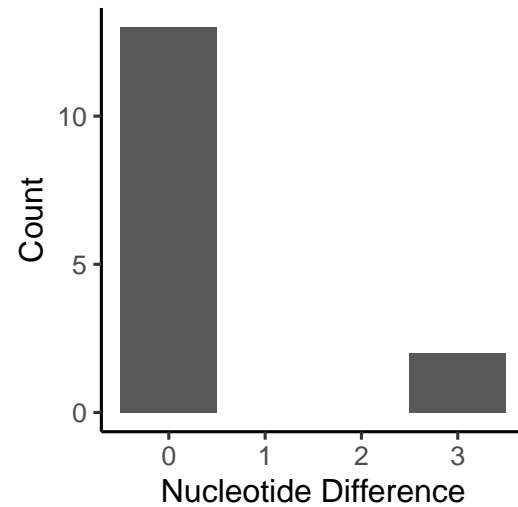
### IGHV3/OR16-8\*01

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



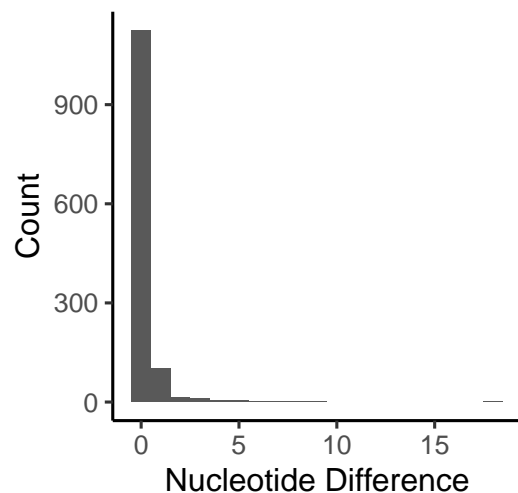
### IGHV7-4-1\*01

15 sequences assigned  
13 (86.7%) exact matches, in which:  
13 unique CDR3  
4 unique J



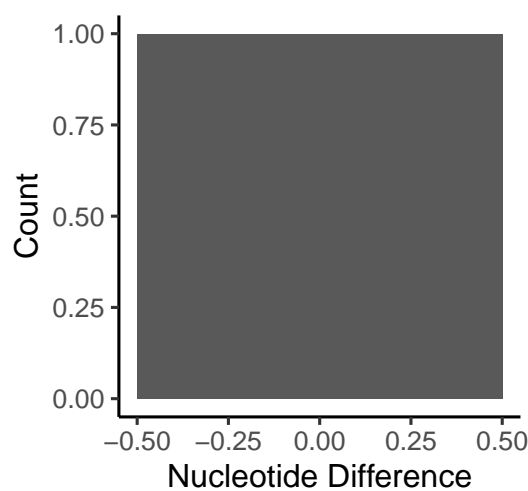
### IGHV5-51\*01

1277 sequences assigned  
1125 (88.1%) exact matches, in which:  
1071 unique CDR3  
6 unique J



### IGHV3/OR16-9\*01

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







Warning – no inferred sequences found.