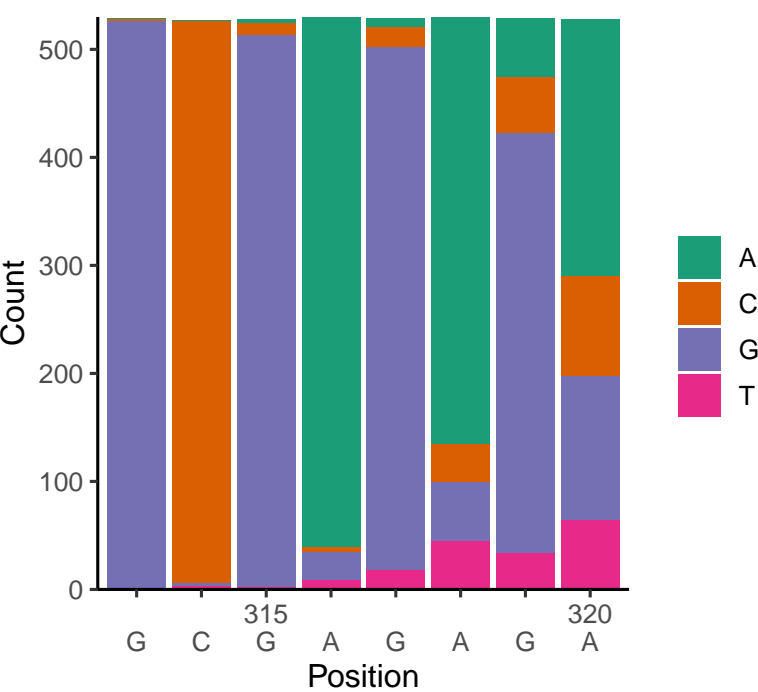
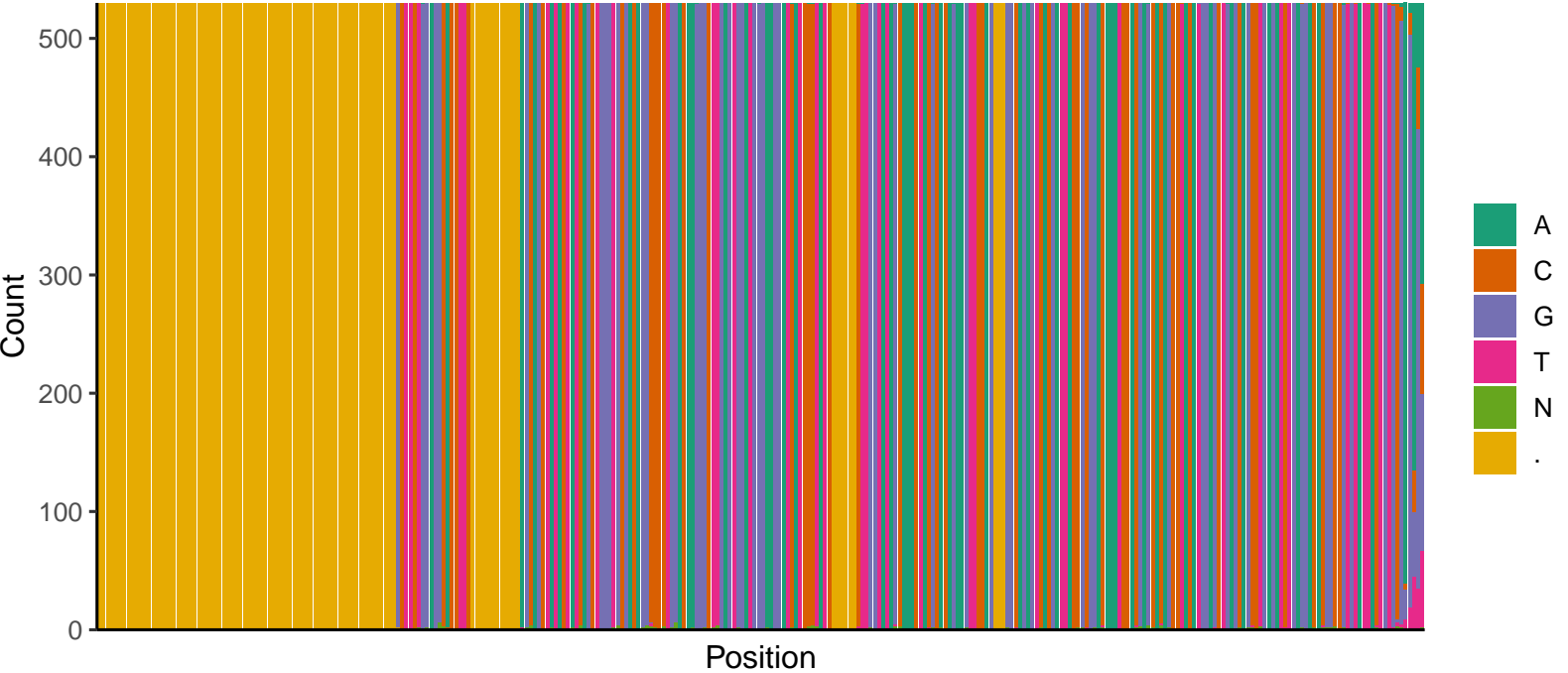


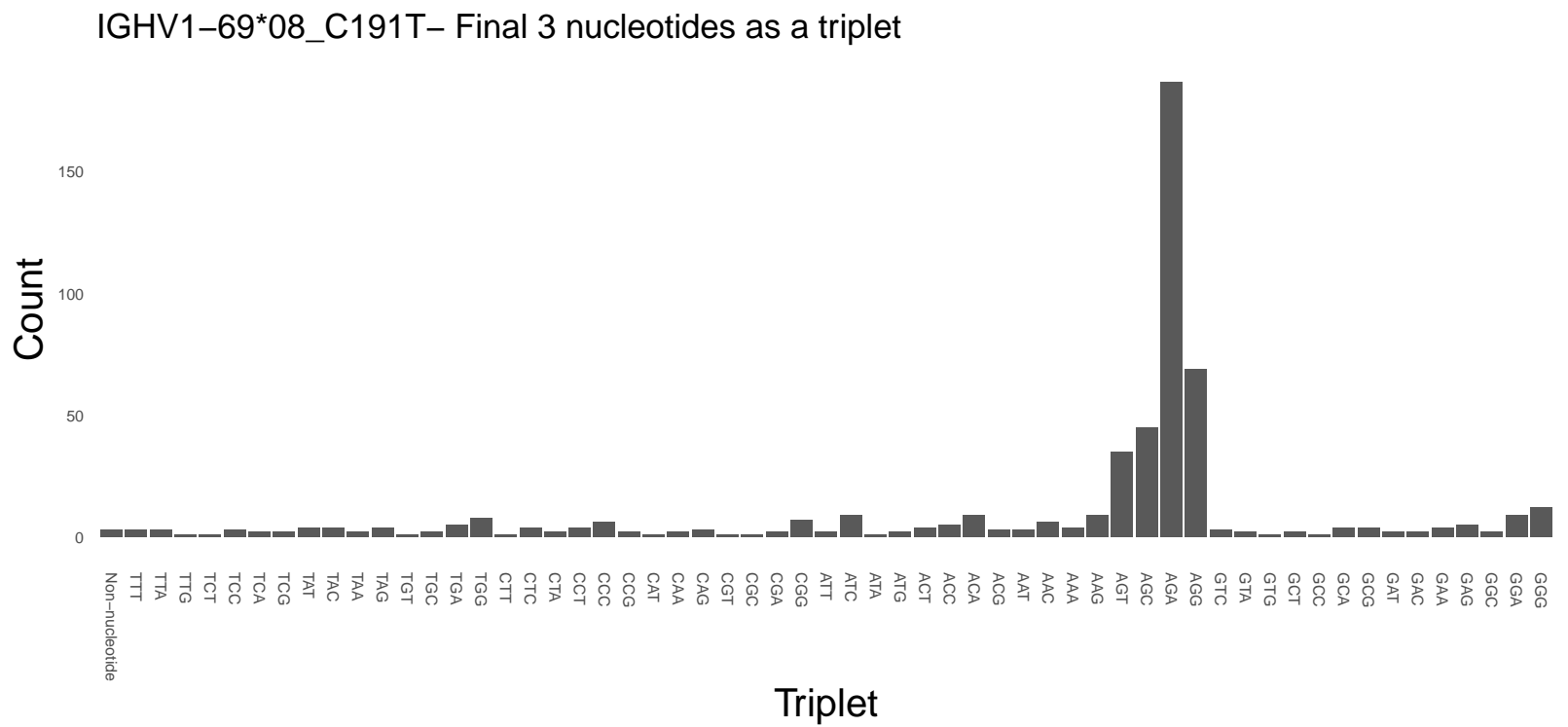
Gene IGHV1-69\*08\_C191T



Gene IGHV1-69\*08\_C191T

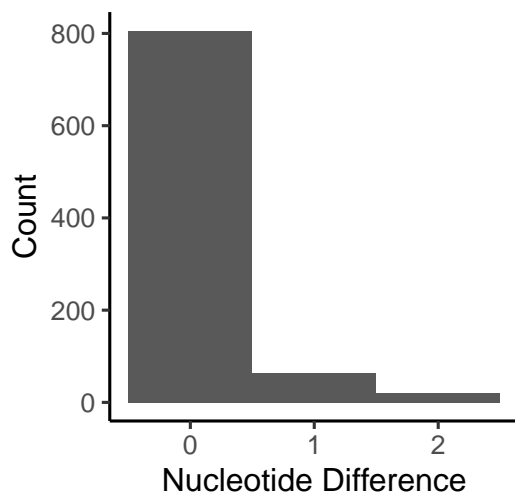


IGHV1-69\*08\_C191T- Final 3 nucleotides as a triplet



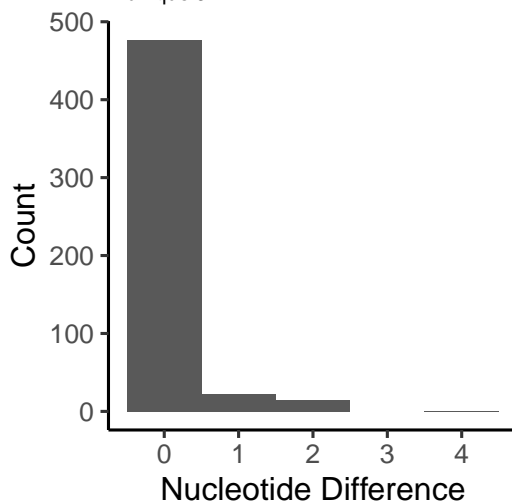
### IGHV1-2\*02

891 sequences assigned  
806 (90.5%) exact matches, in which:  
802 unique CDR3  
6 unique J



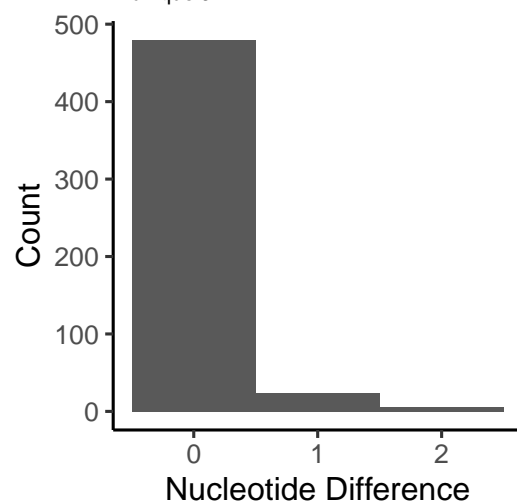
### IGHV1-3\*01\_05

515 sequences assigned  
477 (92.6%) exact matches, in which:  
477 unique CDR3  
7 unique J



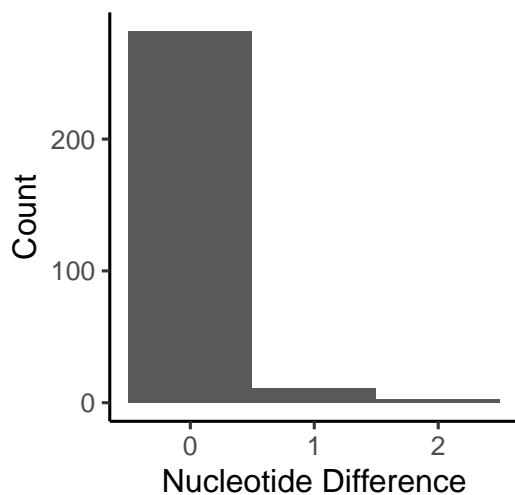
### IGHV1-24\*01

510 sequences assigned  
480 (94.1%) exact matches, in which:  
476 unique CDR3  
7 unique J



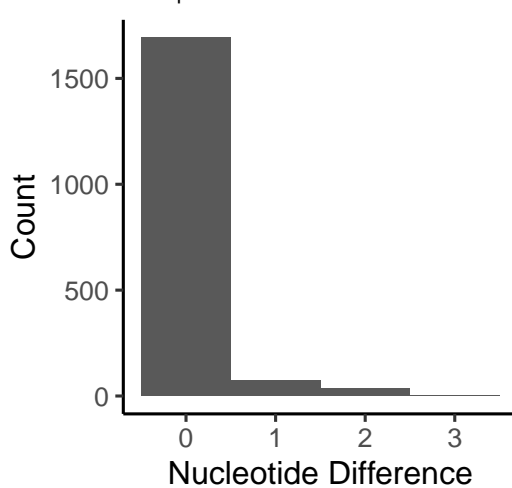
### IGHV1-2\*04

296 sequences assigned  
282 (95.3%) exact matches, in which:  
281 unique CDR3  
7 unique J



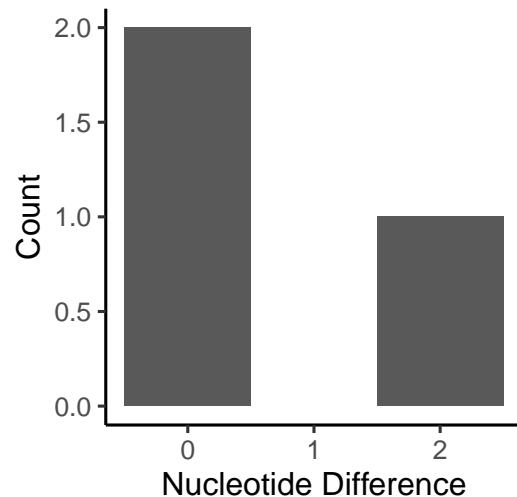
### IGHV1-8\*01

1801 sequences assigned  
1692 (93.9%) exact matches, in which:  
1687 unique CDR3  
7 unique J



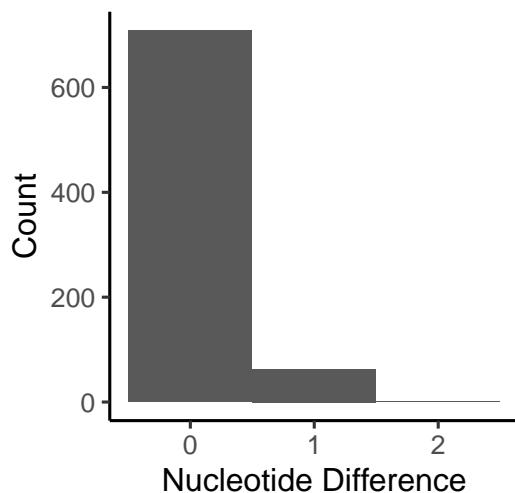
### IGHV1-45\*02

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



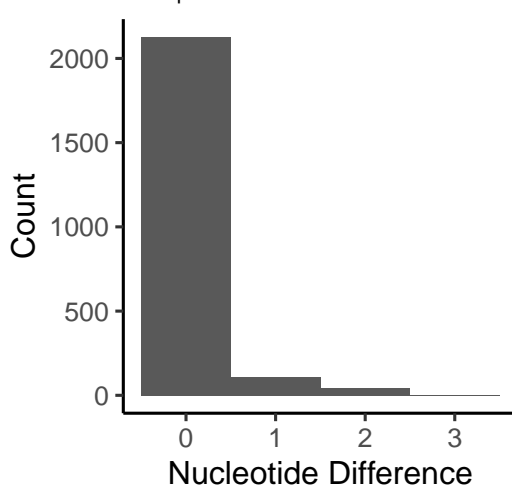
### IGHV1-2\*06

773 sequences assigned  
709 (91.7%) exact matches, in which:  
704 unique CDR3  
7 unique J



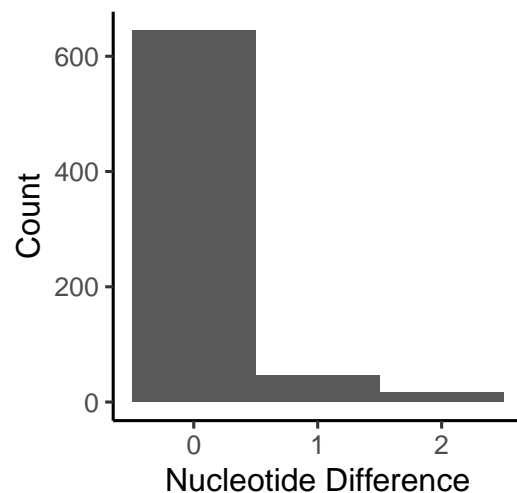
### IGHV1-18\*01

2278 sequences assigned  
2127 (93.4%) exact matches, in which:  
2120 unique CDR3  
7 unique J



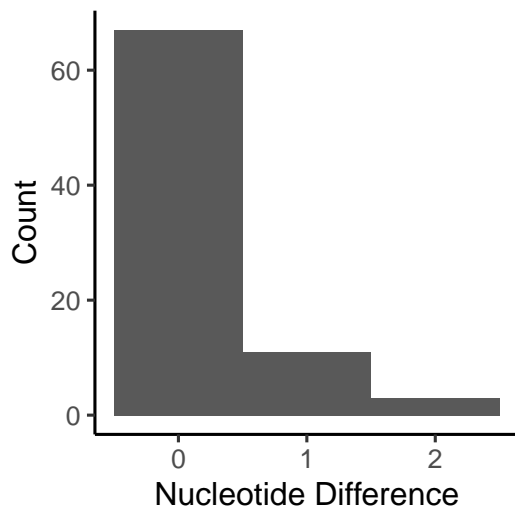
### IGHV1-46\*01

708 sequences assigned  
645 (91.1%) exact matches, in which:  
642 unique CDR3  
7 unique J



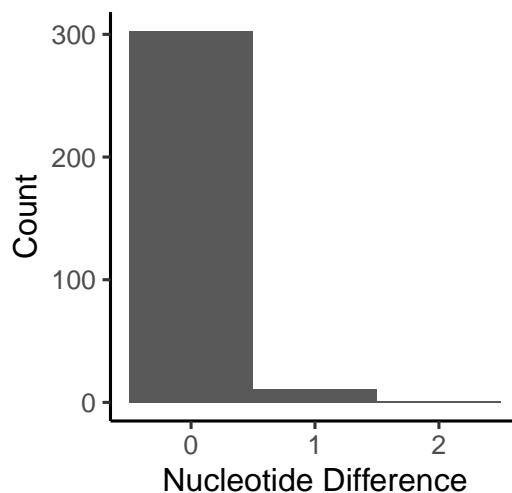
### IGHV1-58\*02

81 sequences assigned  
67 (82.7%) exact matches, in which:  
66 unique CDR3  
5 unique J



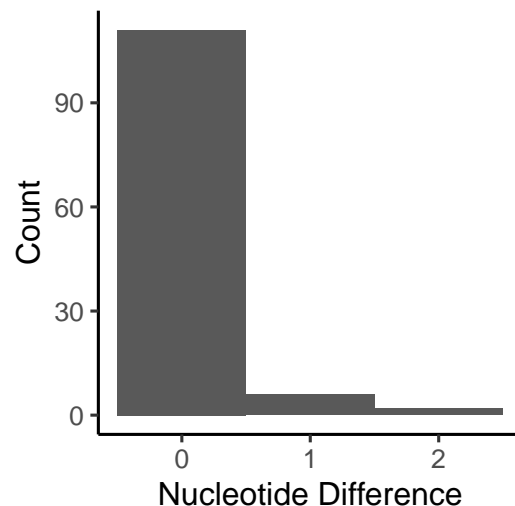
### IGHV1-69\*06\_14

315 sequences assigned  
303 (96.2%) exact matches, in which:  
303 unique CDR3  
6 unique J



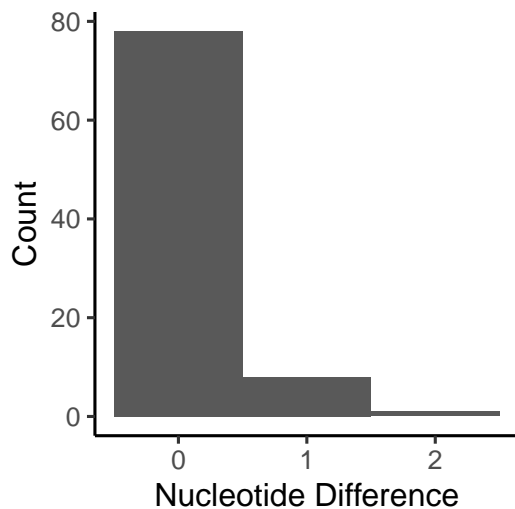
### IGHV2-26\*01

119 sequences assigned  
111 (93.3%) exact matches, in which:  
111 unique CDR3  
6 unique J



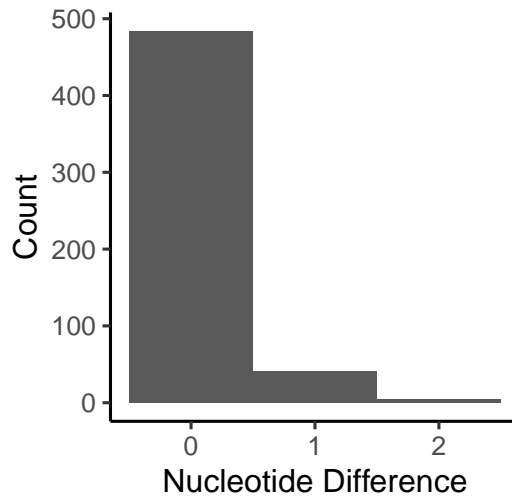
### IGHV1-58\*01\_03

87 sequences assigned  
78 (89.7%) exact matches, in which:  
78 unique CDR3  
7 unique J



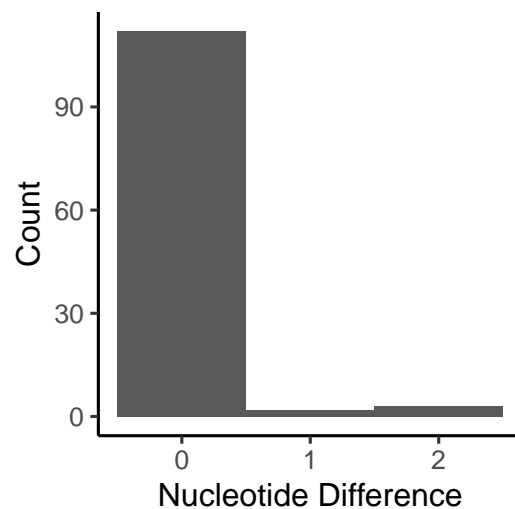
### IGHV1-69\*08\_C191T

530 sequences assigned  
484 (91.3%) exact matches, in which:  
484 unique CDR3  
6 unique J



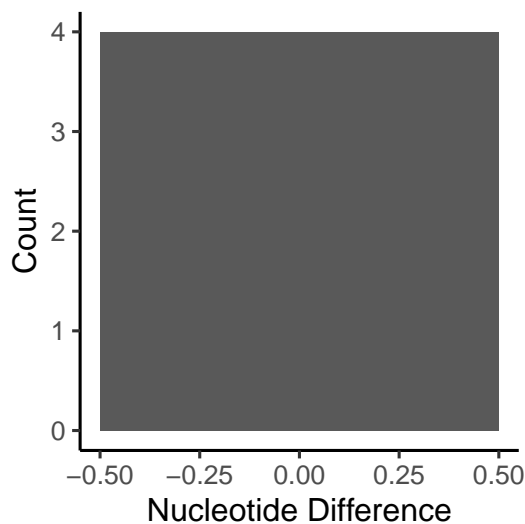
### IGHV2-70\*01

117 sequences assigned  
112 (95.7%) exact matches, in which:  
112 unique CDR3  
6 unique J



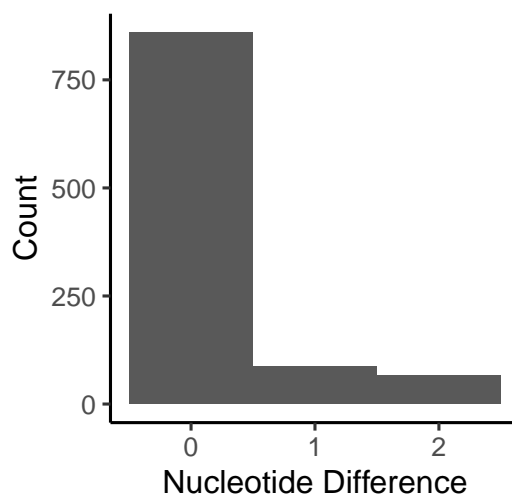
### IGHV1-69-2\*01

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



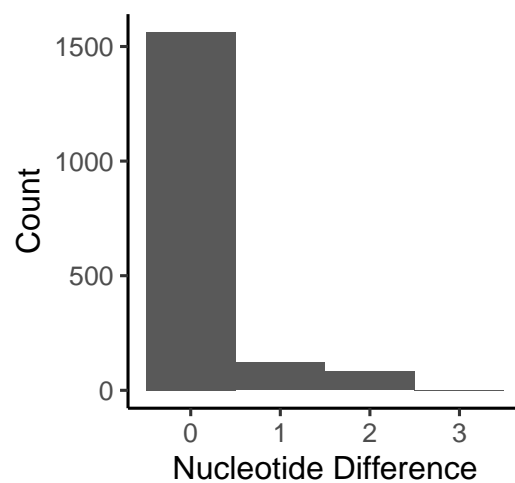
### IGHV2-5\*02

1013 sequences assigned  
860 (84.9%) exact matches, in which:  
856 unique CDR3  
7 unique J



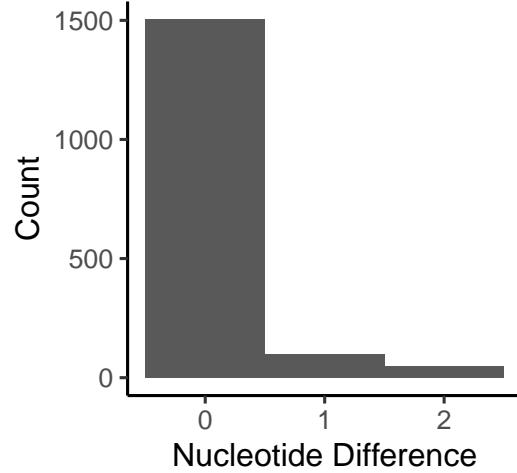
### IGHV3-7\*01

1768 sequences assigned  
1563 (88.4%) exact matches, in which:  
1516 unique CDR3  
7 unique J



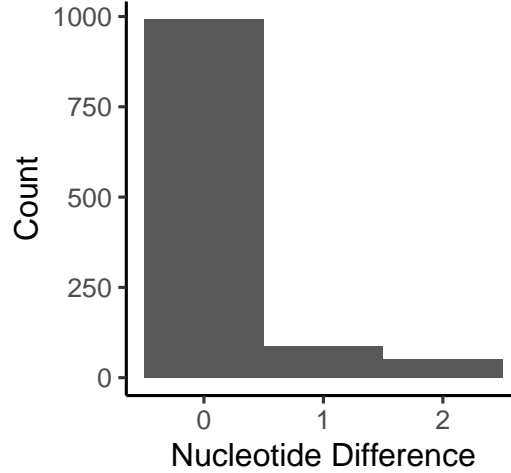
### IGHV3-9\*01

1651 sequences assigned  
1504 (91.1%) exact matches, in which:  
1472 unique CDR3  
7 unique J



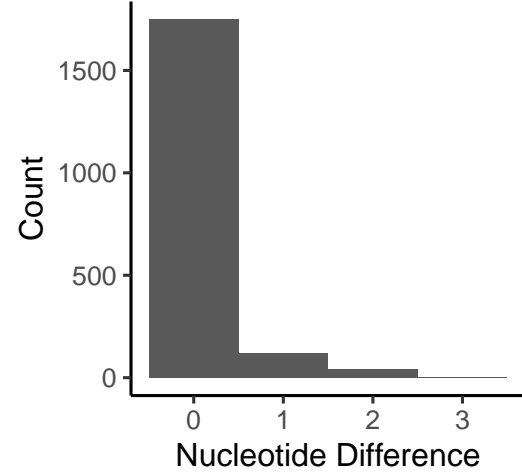
### IGHV3-15\*01\_02

1130 sequences assigned  
992 (87.8%) exact matches, in which:  
960 unique CDR3  
7 unique J



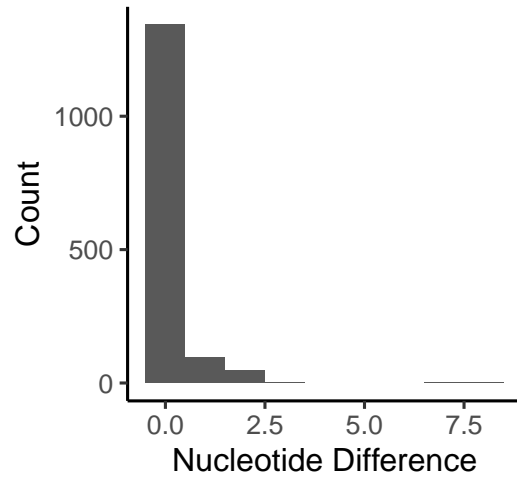
### IGHV3-30-3\*01

1911 sequences assigned  
1749 (91.5%) exact matches, in which:  
1708 unique CDR3  
7 unique J



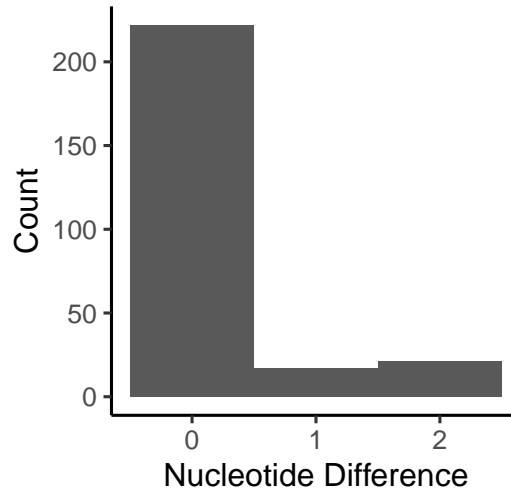
### IGHV3-11\*01

1492 sequences assigned  
1343 (90%) exact matches, in which:  
1304 unique CDR3  
7 unique J



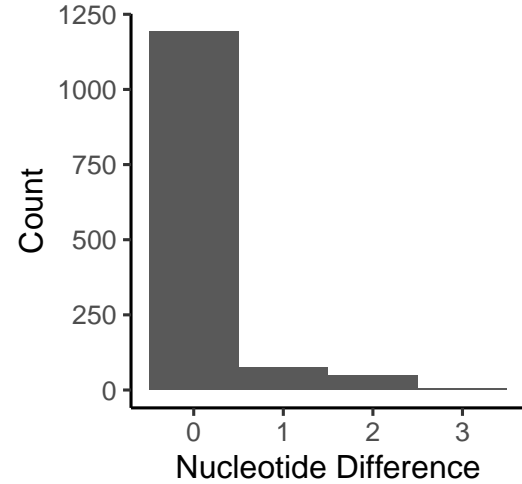
### IGHV3-20\*01\_02

260 sequences assigned  
222 (85.4%) exact matches, in which:  
208 unique CDR3  
7 unique J



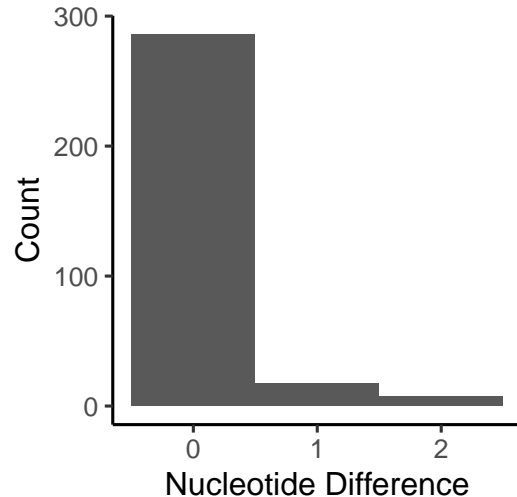
### IGHV3-33\*01

1318 sequences assigned  
1192 (90.4%) exact matches, in which:  
1158 unique CDR3  
7 unique J



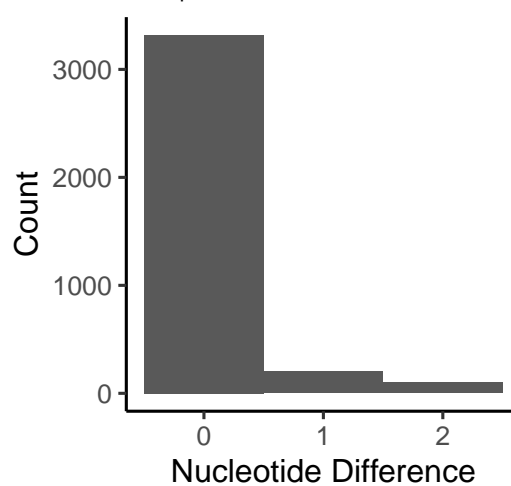
### IGHV3-13\*01

310 sequences assigned  
286 (92.3%) exact matches, in which:  
281 unique CDR3  
6 unique J



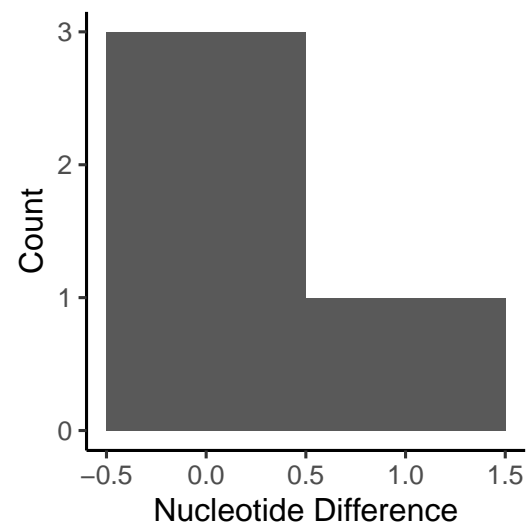
### IGHV3-21\*01\_02

3622 sequences assigned  
3318 (91.6%) exact matches, in which:  
3181 unique CDR3  
7 unique J



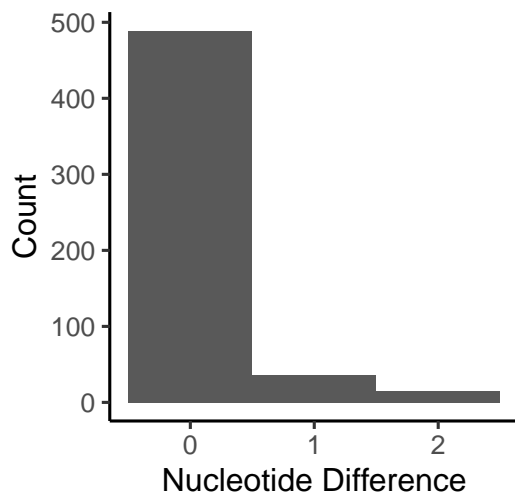
### IGHV3-35\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



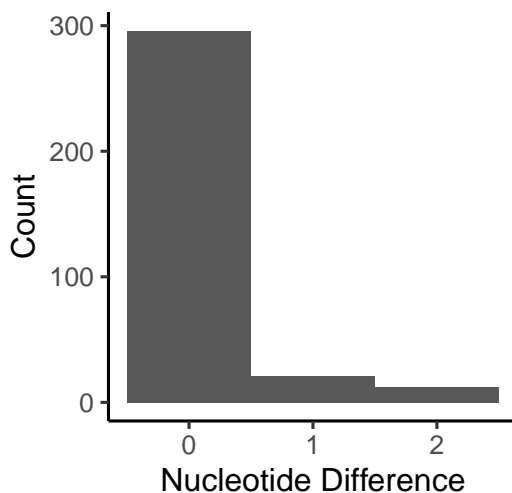
### IGHV3-43\*02

540 sequences assigned  
489 (90.6%) exact matches, in which:  
476 unique CDR3  
7 unique J



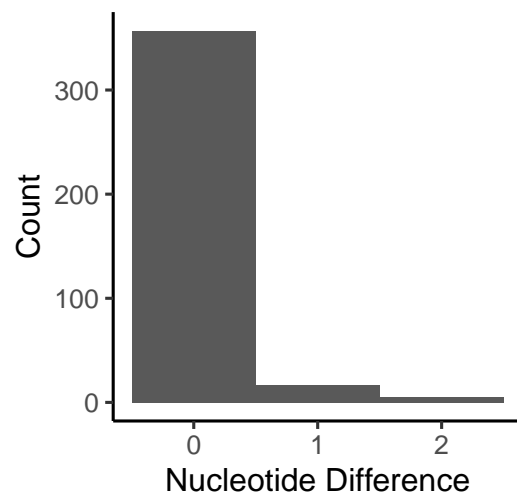
### IGHV3-49\*04

329 sequences assigned  
296 (90%) exact matches, in which:  
292 unique CDR3  
7 unique J



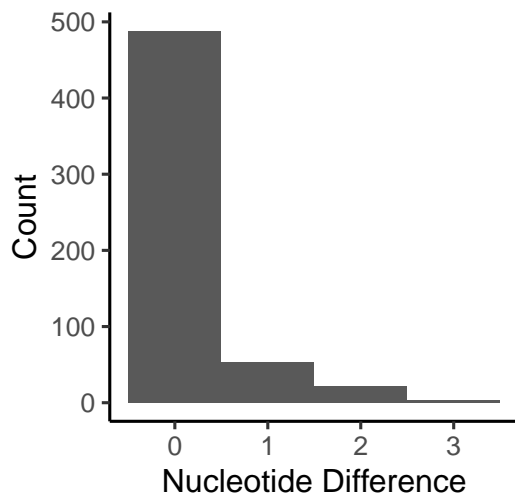
### IGHV3-53\*04

379 sequences assigned  
357 (94.2%) exact matches, in which:  
346 unique CDR3  
7 unique J



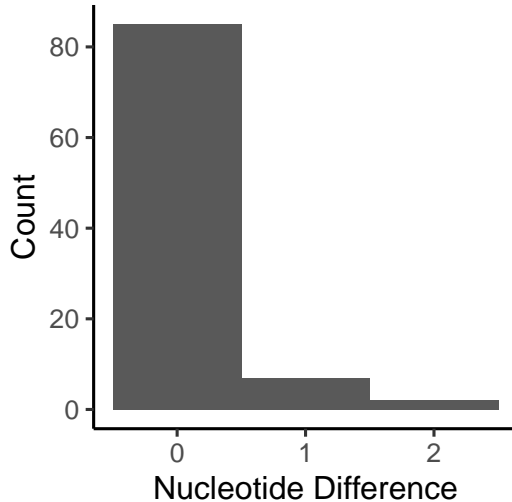
### IGHV3-48\*01

566 sequences assigned  
488 (86.2%) exact matches, in which:  
466 unique CDR3  
6 unique J



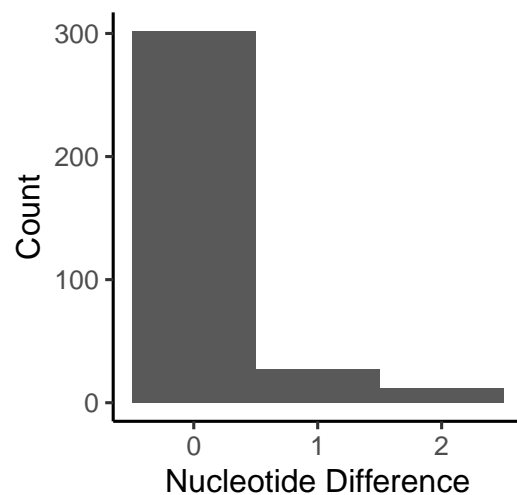
### IGHV3-49\*03\_05

94 sequences assigned  
85 (90.4%) exact matches, in which:  
83 unique CDR3  
5 unique J



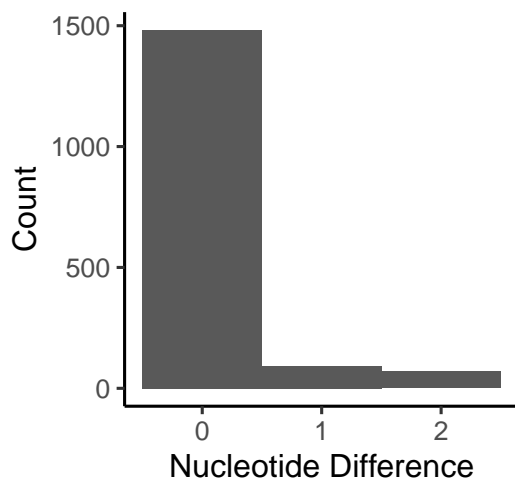
### IGHV3-53\*01\_02

341 sequences assigned  
302 (88.6%) exact matches, in which:  
294 unique CDR3  
6 unique J



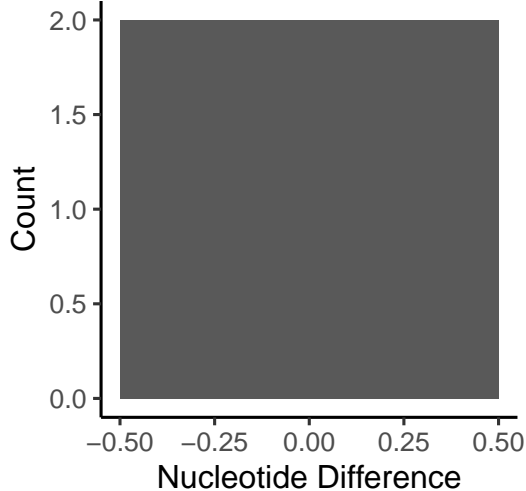
### IGHV3-48\*03

1644 sequences assigned  
1482 (90.1%) exact matches, in which:  
1450 unique CDR3  
7 unique J



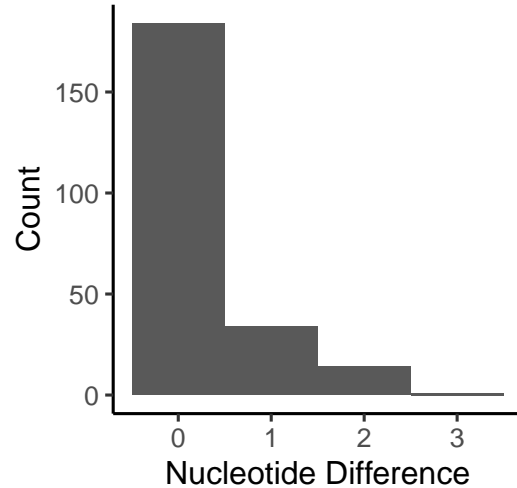
### IGHV3-52\*01\_03

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



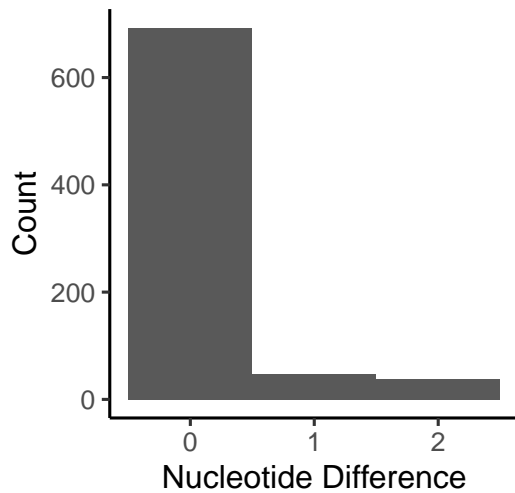
### IGHV3-64\*01

233 sequences assigned  
184 (79%) exact matches, in which:  
175 unique CDR3  
5 unique J



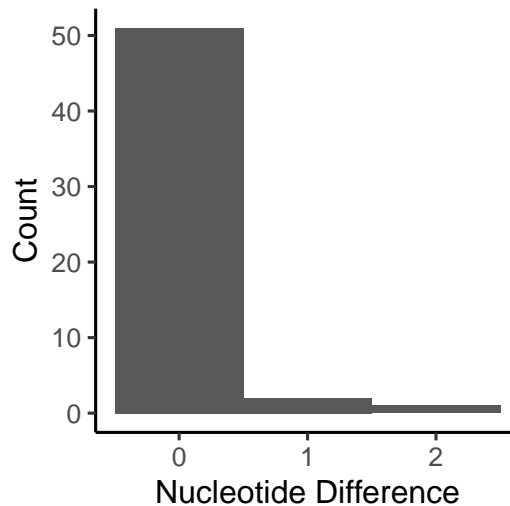
### IGHV3-66\*02

778 sequences assigned  
693 (89.1%) exact matches, in which:  
657 unique CDR3  
6 unique J



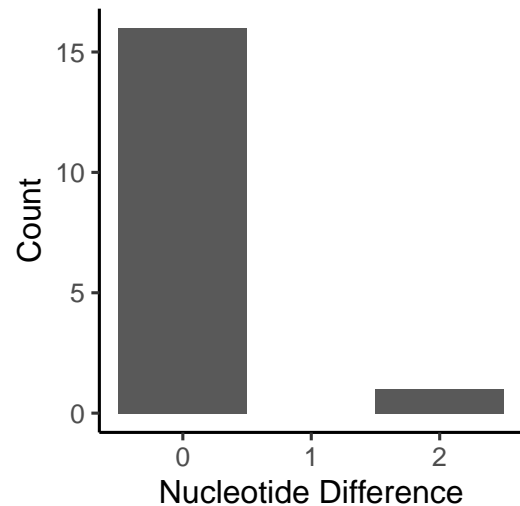
### IGHV3-72\*01

54 sequences assigned  
51 (94.4%) exact matches, in which:  
51 unique CDR3  
6 unique J



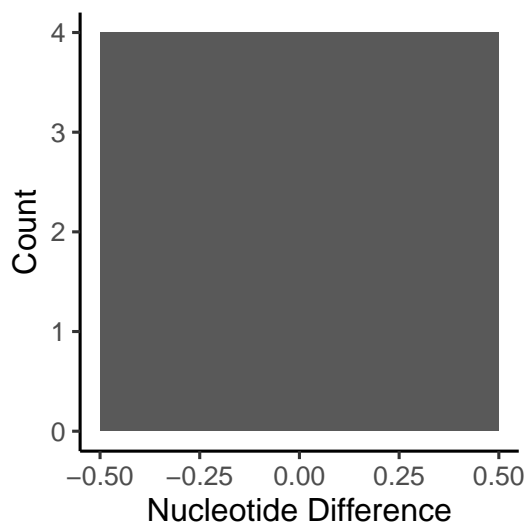
### IGHV3-43D\*04

17 sequences assigned  
16 (94.1%) exact matches, in which:  
16 unique CDR3  
2 unique J



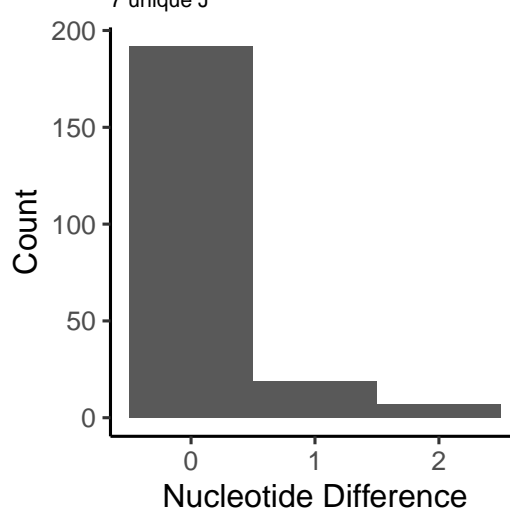
### IGHV3-69-1\*01

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



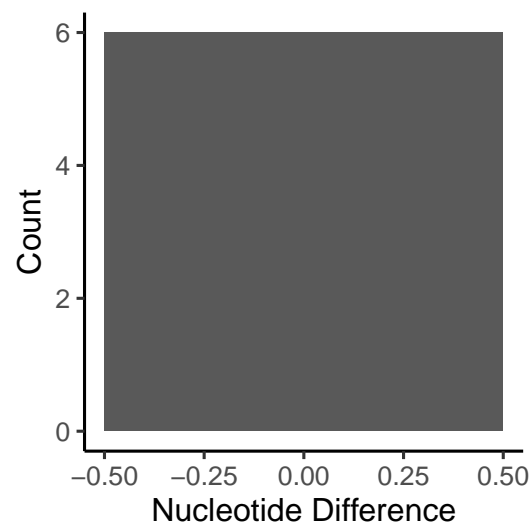
### IGHV3-73\*01\_02

218 sequences assigned  
192 (88.1%) exact matches, in which:  
188 unique CDR3  
7 unique J



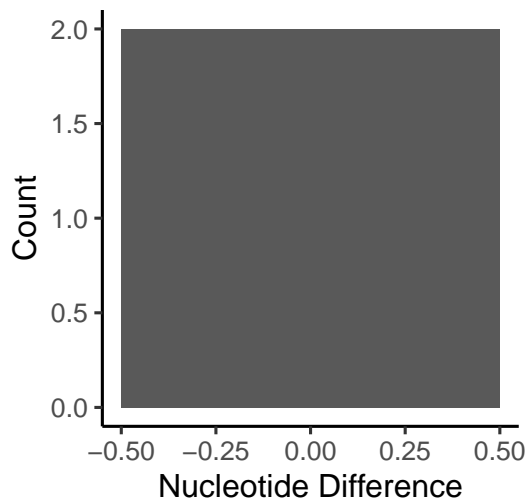
### IGHV3-64D\*06

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



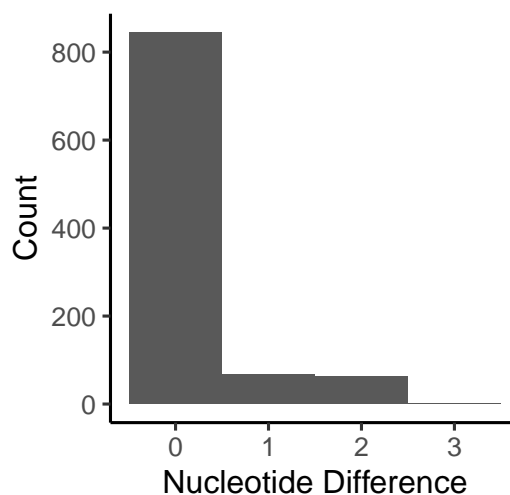
### IGHV3-69-1\*02

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



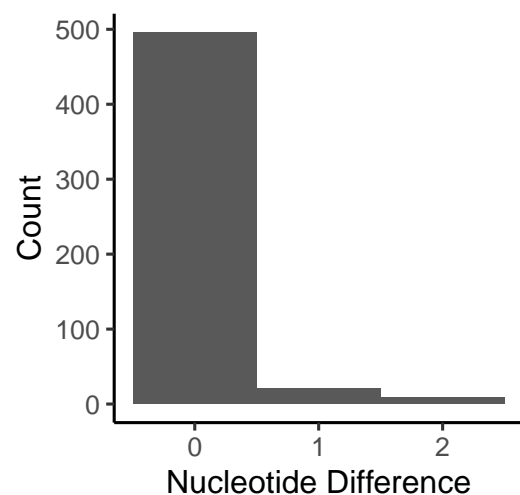
### IGHV3-74\*01\_02

978 sequences assigned  
845 (86.4%) exact matches, in which:  
820 unique CDR3  
7 unique J



### IGHV4-4\*07

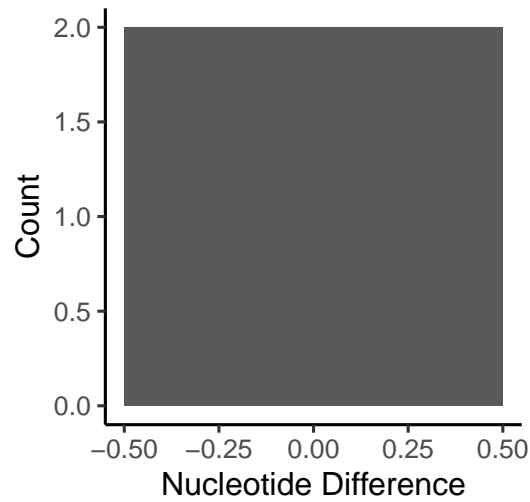
526 sequences assigned  
496 (94.3%) exact matches, in which:  
478 unique CDR3  
6 unique J





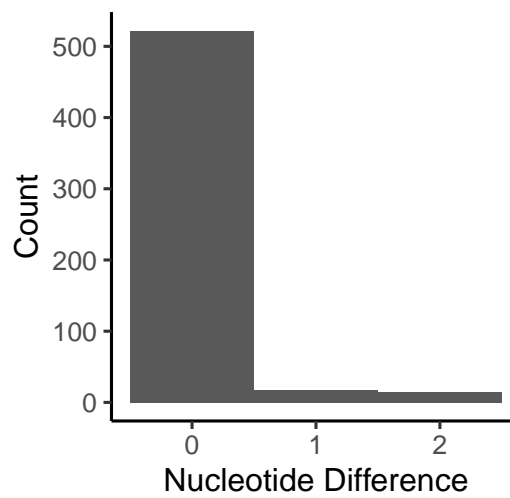
### IGHV4-28\*03

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



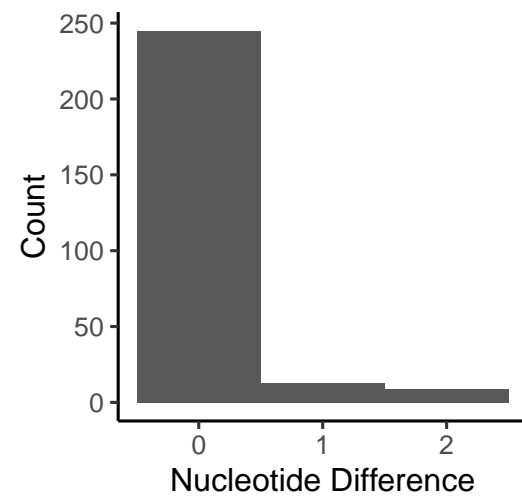
### IGHV4-30-2\*01

554 sequences assigned  
522 (94.2%) exact matches, in which:  
505 unique CDR3  
7 unique J



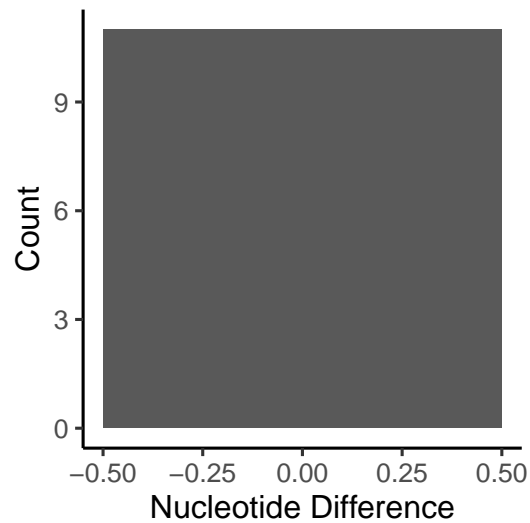
### IGHV4-38-2\*01

267 sequences assigned  
245 (91.8%) exact matches, in which:  
242 unique CDR3  
5 unique J



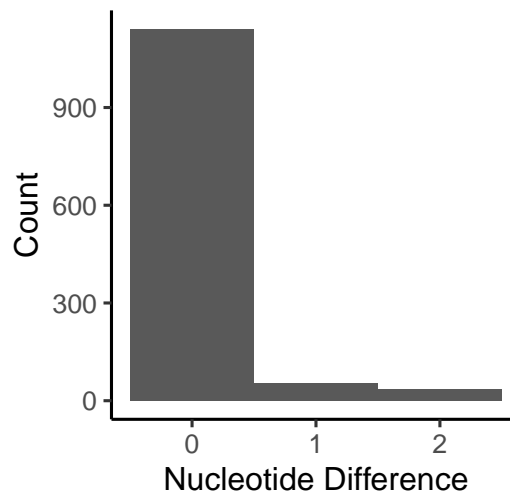
### IGHV4-28\*01\_07

11 sequences assigned  
11 (100%) exact matches, in which:  
9 unique CDR3  
3 unique J



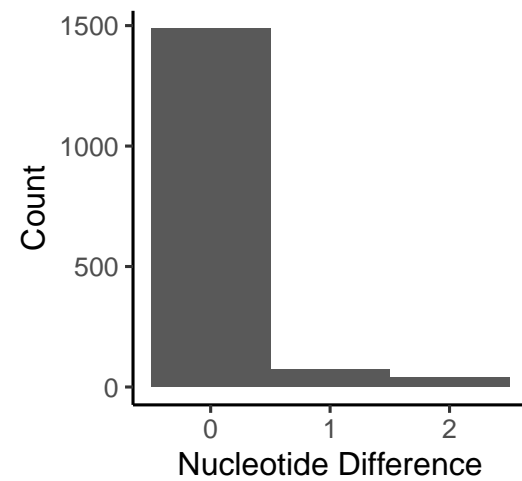
### IGHV4-31\*03\_04

1228 sequences assigned  
1141 (92.9%) exact matches, in which:  
1116 unique CDR3  
7 unique J



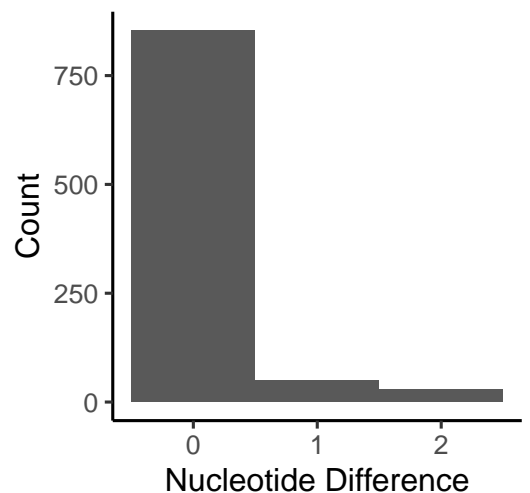
### IGHV4-39\*07

1601 sequences assigned  
1487 (92.9%) exact matches, in which:  
1433 unique CDR3  
6 unique J



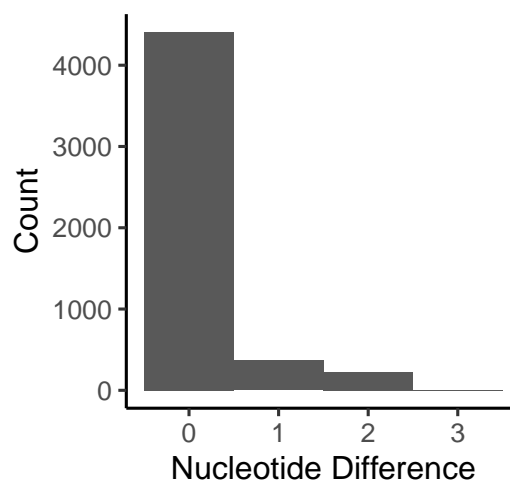
### IGHV4-30-4\*01

932 sequences assigned  
854 (91.6%) exact matches, in which:  
841 unique CDR3  
7 unique J



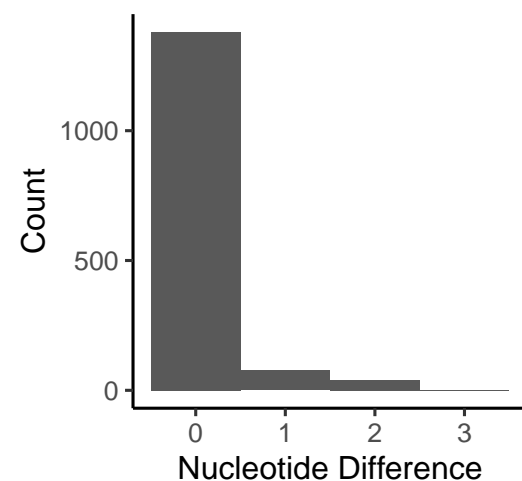
### IGHV4-34\*01\_02

4998 sequences assigned  
4408 (88.2%) exact matches, in which:  
4239 unique CDR3  
7 unique J



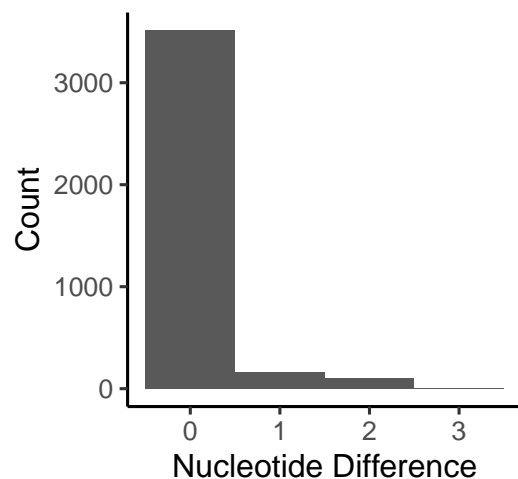
### IGHV4-39\*01\_05

1497 sequences assigned  
1380 (92.2%) exact matches, in which:  
1344 unique CDR3  
7 unique J



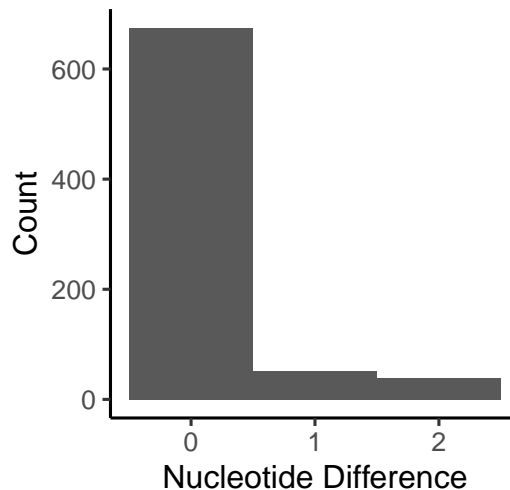
### IGHV4-59\*01\_07

3778 sequences assigned  
3513 (93%) exact matches, in which:  
3399 unique CDR3  
7 unique J



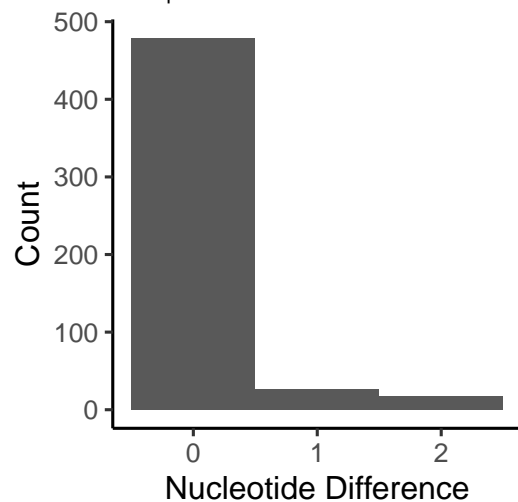
### IGHV5-51\*01\_03

766 sequences assigned  
675 (88.1%) exact matches, in which:  
674 unique CDR3  
7 unique J



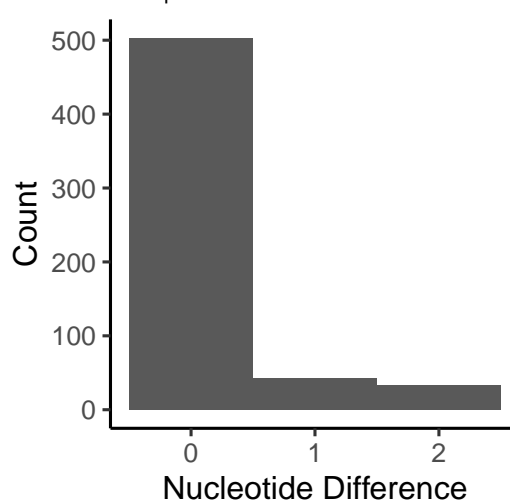
### IGHV4-61\*01

523 sequences assigned  
479 (91.6%) exact matches, in which:  
472 unique CDR3  
7 unique J



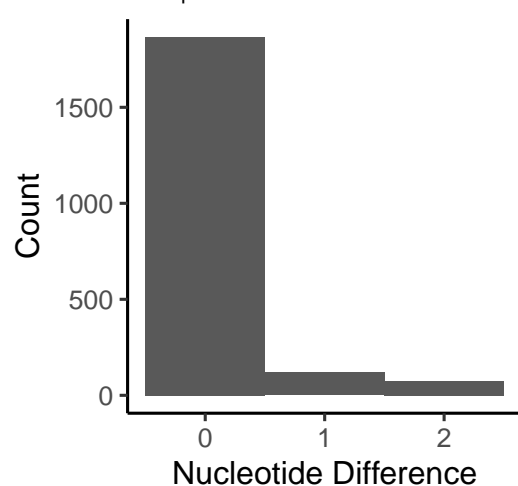
### IGHV6-1\*01\_02

579 sequences assigned  
503 (86.9%) exact matches, in which:  
496 unique CDR3  
7 unique J



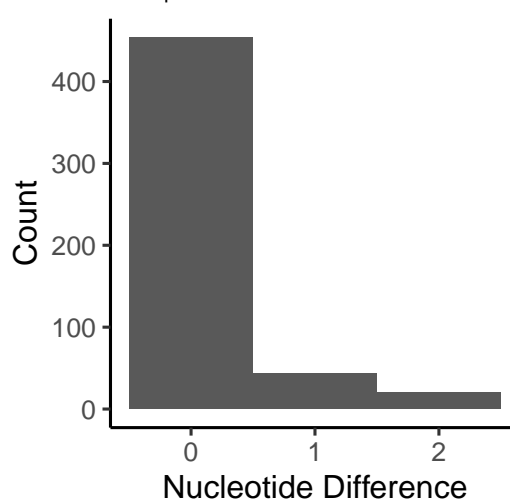
### IGHV4-61\*02

2061 sequences assigned  
1866 (90.5%) exact matches, in which:  
1814 unique CDR3  
6 unique J

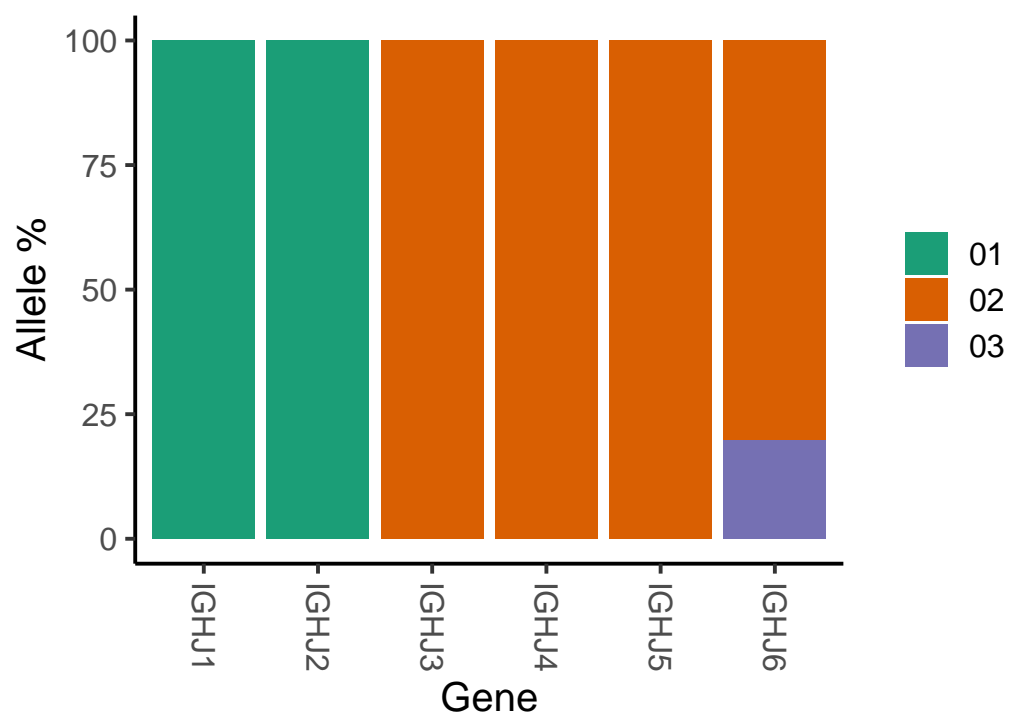


### IGHV7-4-1\*02

517 sequences assigned  
454 (87.8%) exact matches, in which:  
452 unique CDR3  
7 unique J



Allele Usage



Novel sequence(s)IGHV4-59\*02\_G88A are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV3-11\*06\_T300CIGHV4-38-2\*02\_A70GIGHV4-39\*02\_C258GIGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4-39\*02\_C258GIGHV4-59\*02\_G88AIGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4-59\*02\_G88AIGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

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