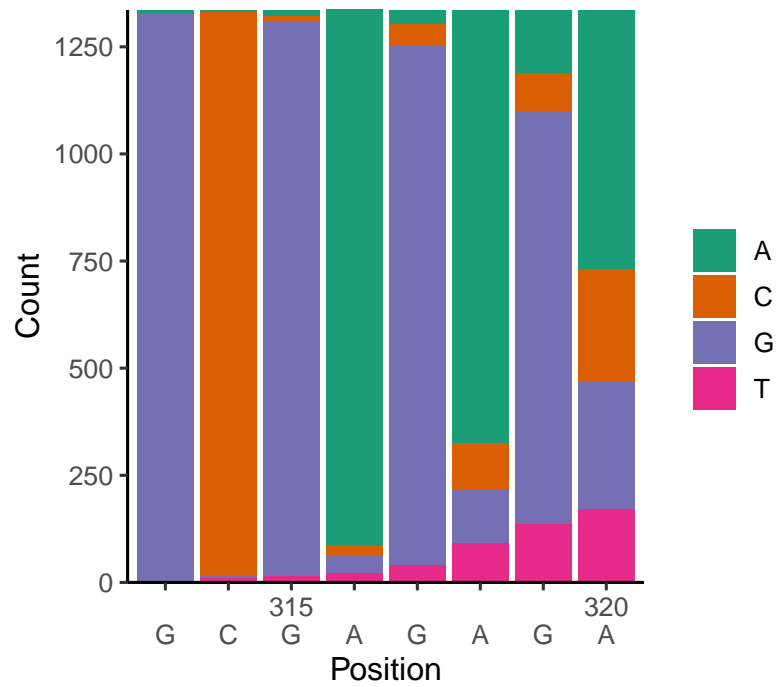
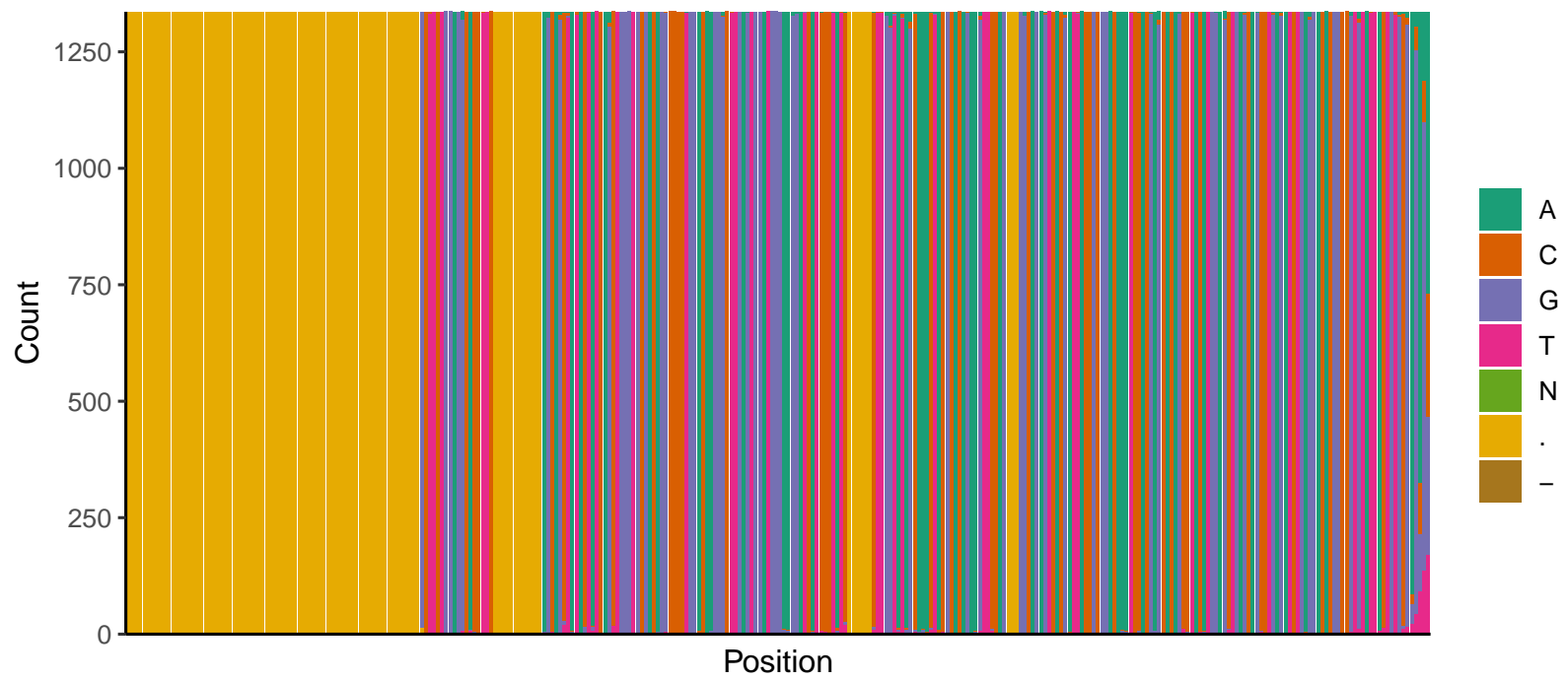


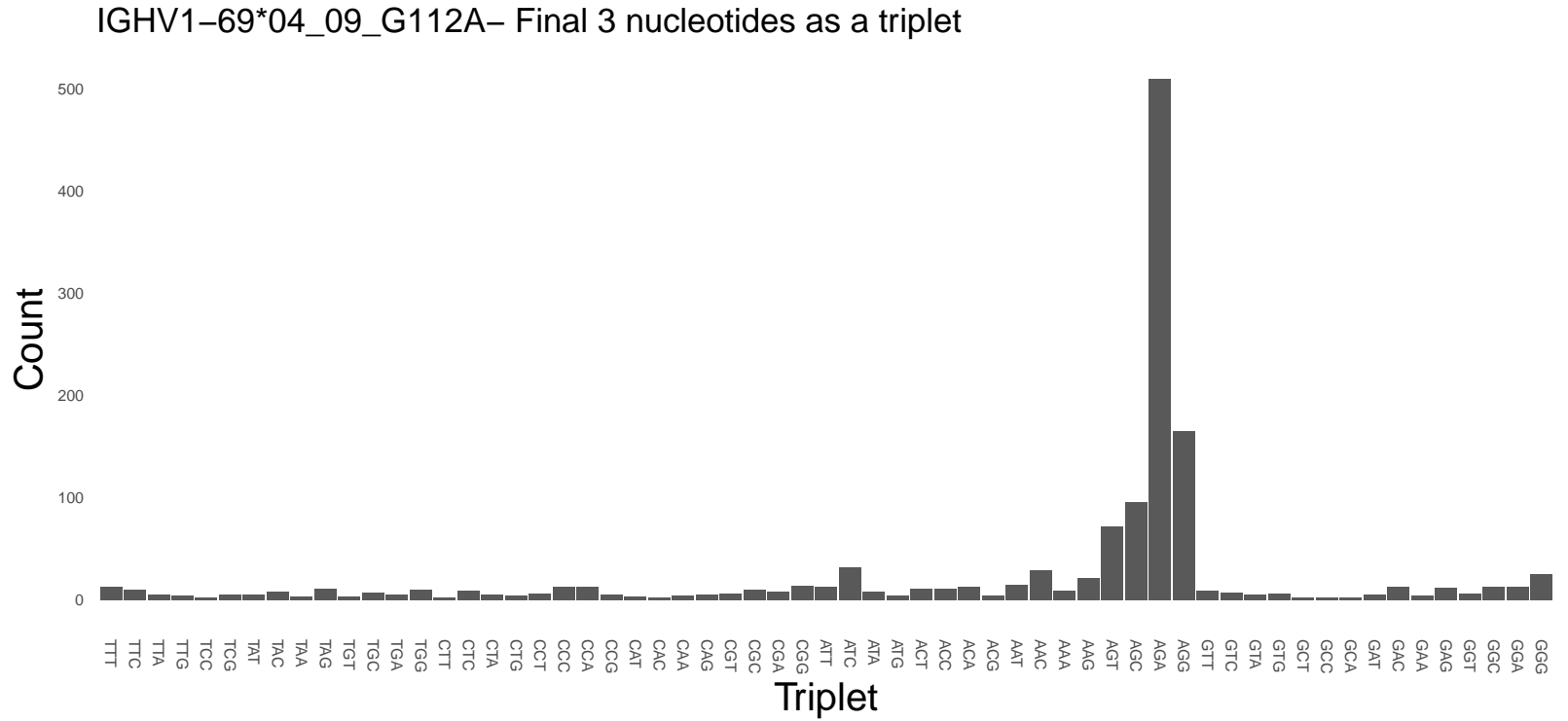
# Gene IGHV1-69\*04\_09\_G112A



# Gene IGHV1-69\*04\_09\_G112A

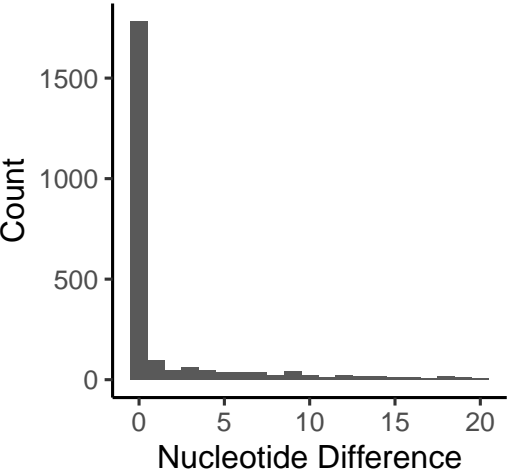


IGHV1-69\*04\_09\_G112A- Final 3 nucleotides as a triplet



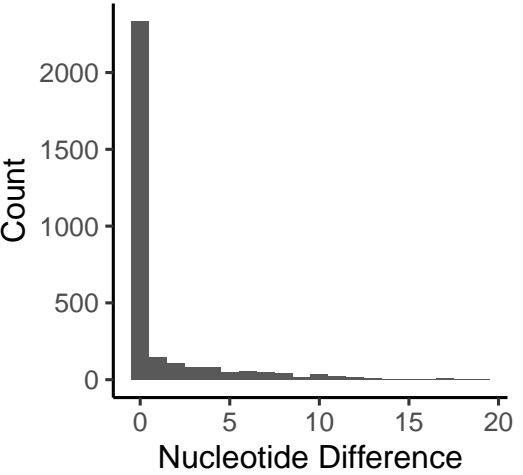
IGHV1-2\*02

2380 sequences assigned  
1782 (74.9%) exact matches, in which:  
1779 unique CDR3  
6 unique J



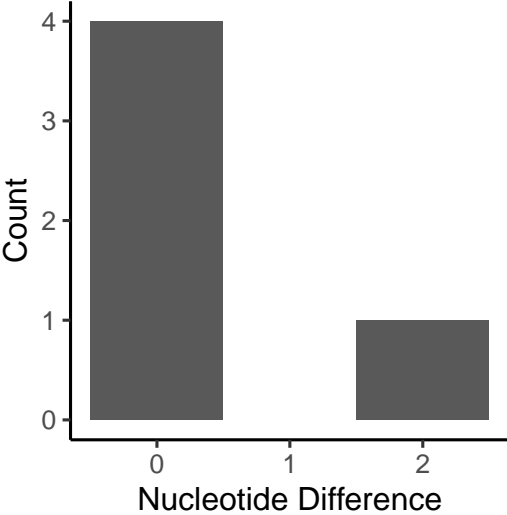
IGHV1-8\*01

3077 sequences assigned  
2333 (75.8%) exact matches, in which:  
2327 unique CDR3  
6 unique J



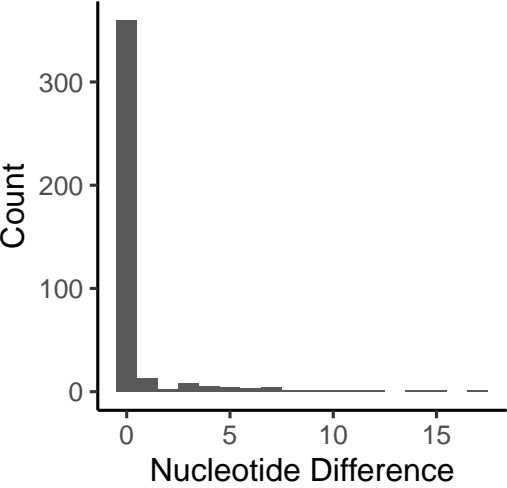
IGHV1-45\*02

9 sequences assigned  
4 (44.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



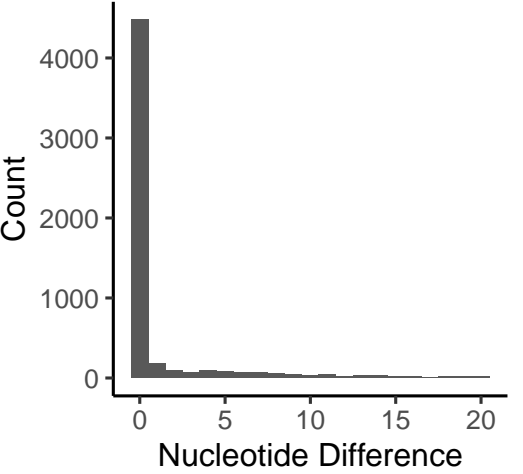
IGHV1-2\*04

408 sequences assigned  
360 (88.2%) exact matches, in which:  
360 unique CDR3  
6 unique J



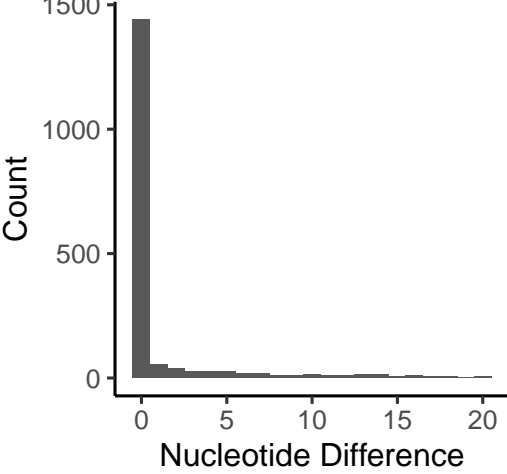
IGHV1-18\*01

5539 sequences assigned  
4478 (80.8%) exact matches, in which:  
4474 unique CDR3  
6 unique J



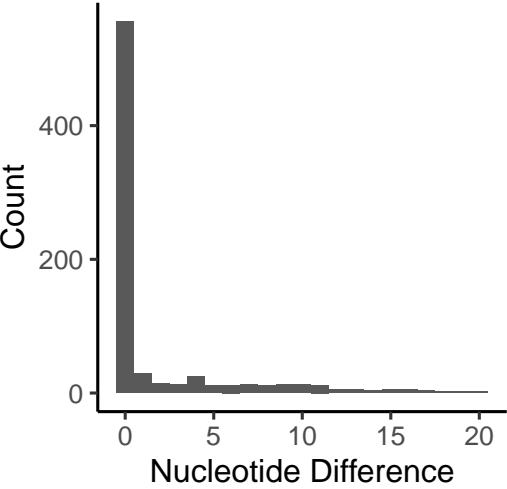
IGHV1-46\*01

1787 sequences assigned  
1440 (80.6%) exact matches, in which:  
1440 unique CDR3  
6 unique J



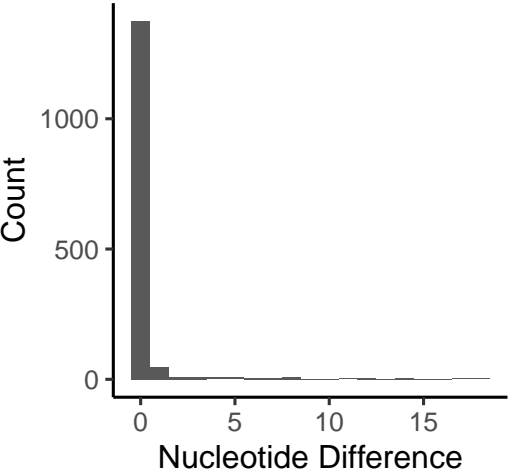
IGHV1-3\*01\_05

770 sequences assigned  
556 (72.2%) exact matches, in which:  
556 unique CDR3  
6 unique J



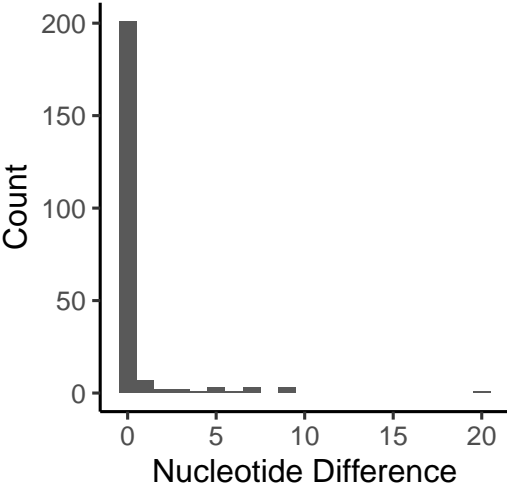
IGHV1-24\*01

1500 sequences assigned  
1375 (91.7%) exact matches, in which:  
1373 unique CDR3  
6 unique J



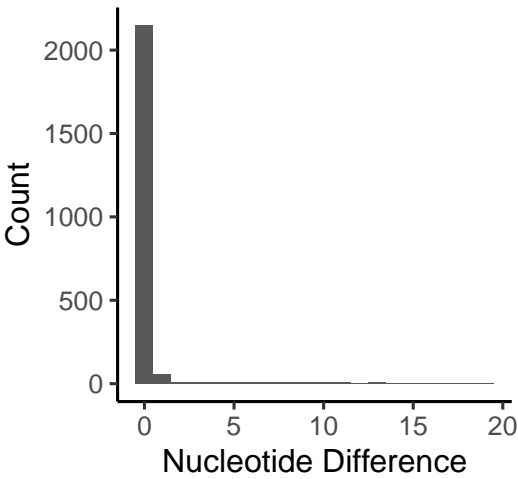
IGHV1-58\*02

224 sequences assigned  
201 (89.7%) exact matches, in which:  
201 unique CDR3  
5 unique J



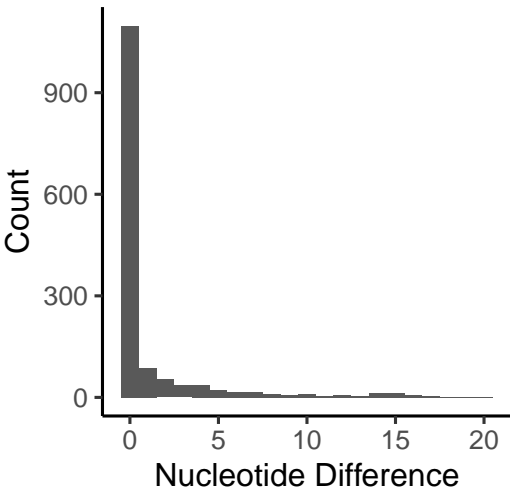
IGHV1-69\*04\_09

2330 sequences assigned  
2148 (92.2%) exact matches, in which:  
2148 unique CDR3  
6 unique J



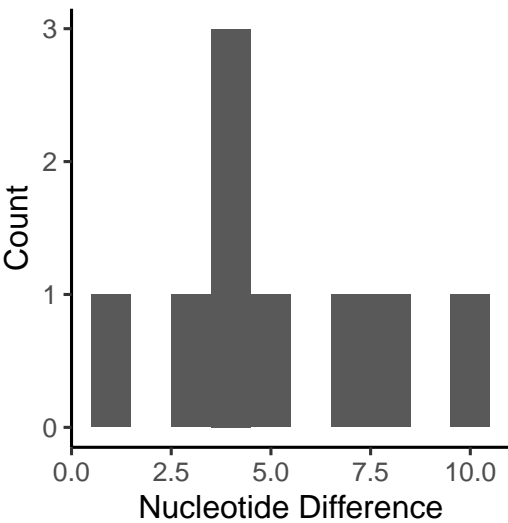
IGHV2-5\*02

1470 sequences assigned  
1098 (74.7%) exact matches, in which:  
1093 unique CDR3  
6 unique J



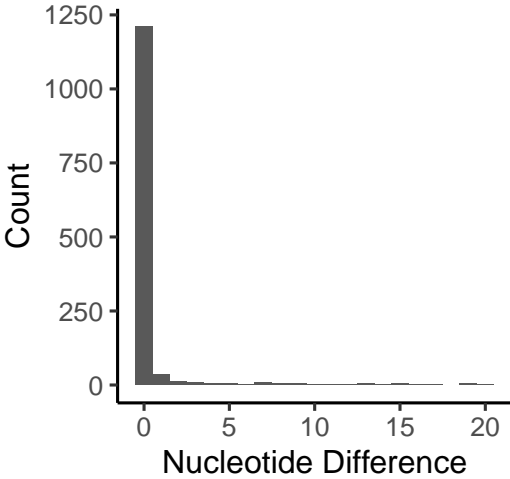
IGHV2-70D\*04

9 sequences assigned  
No exact matches.



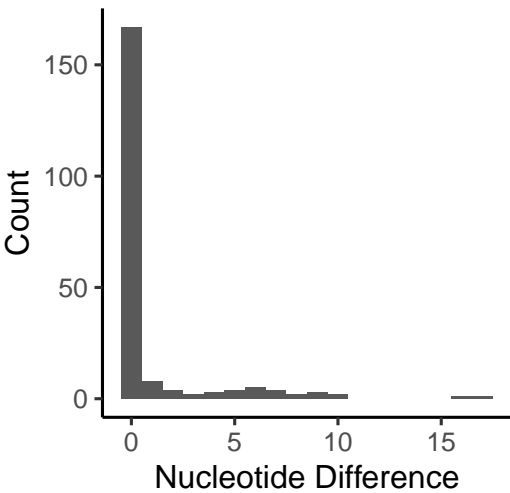
IGHV1-69\*04\_09\_G112.

1336 sequences assigned  
1210 (90.6%) exact matches, in which:  
1209 unique CDR3  
6 unique J



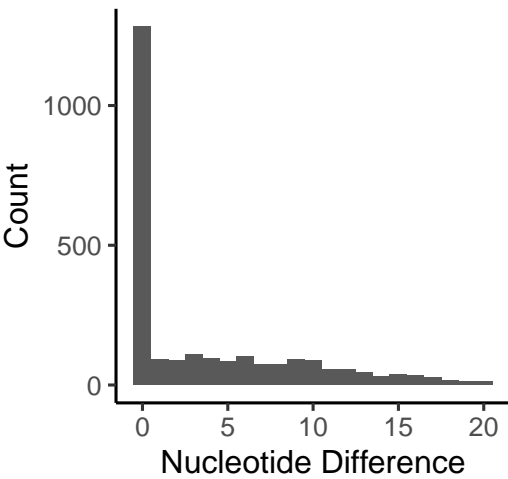
IGHV2-26\*01

206 sequences assigned  
167 (81.1%) exact matches, in which:  
167 unique CDR3  
5 unique J



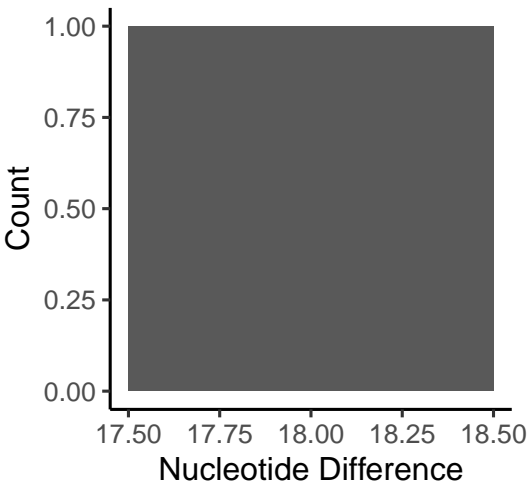
IGHV3-7\*01

2537 sequences assigned  
1282 (50.5%) exact matches, in which:  
1237 unique CDR3  
6 unique J



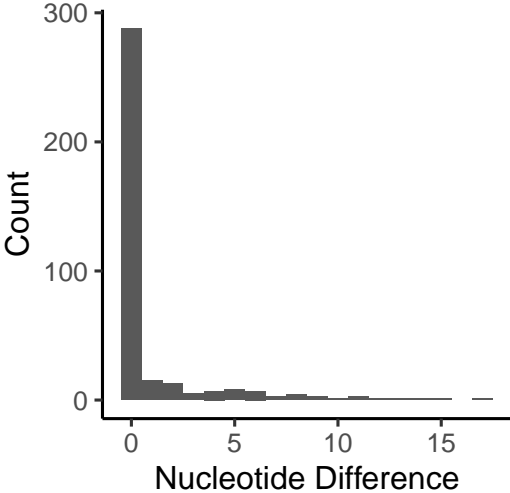
IGHV1-69D\*01

2 sequences assigned  
No exact matches.



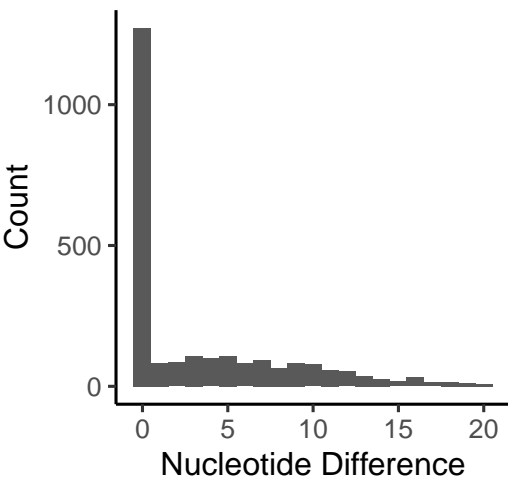
IGHV2-70\*11\_15

363 sequences assigned  
288 (79.3%) exact matches, in which:  
287 unique CDR3  
4 unique J



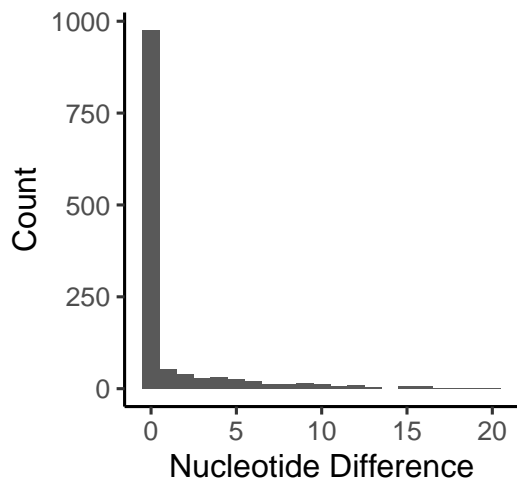
IGHV3-7\*03

2436 sequences assigned  
1272 (52.2%) exact matches, in which:  
1227 unique CDR3  
6 unique J



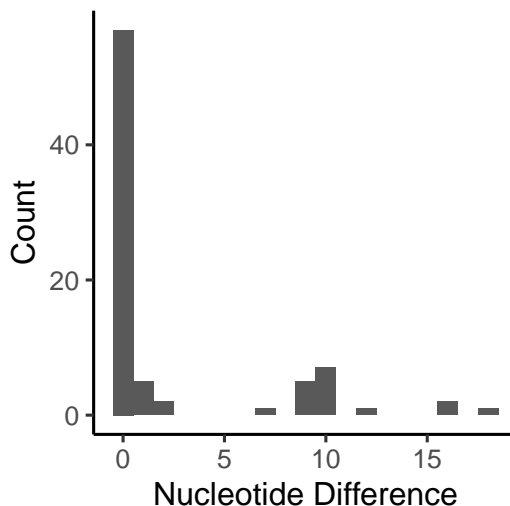
### IGHV3-9\*01

1281 sequences assigned  
975 (76.1%) exact matches, in which:  
961 unique CDR3  
6 unique J



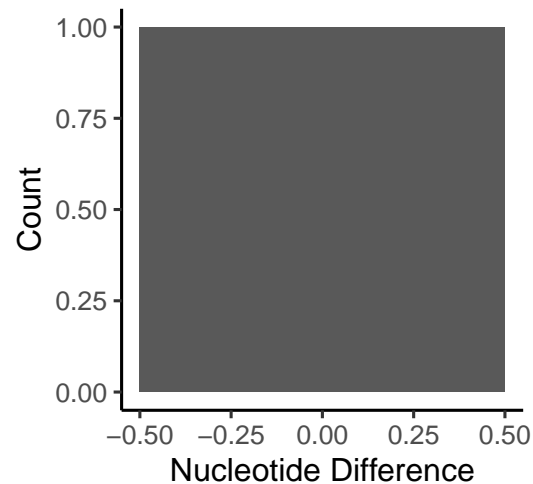
### IGHV3-13\*01

82 sequences assigned  
57 (69.5%) exact matches, in which:  
54 unique CDR3  
5 unique J



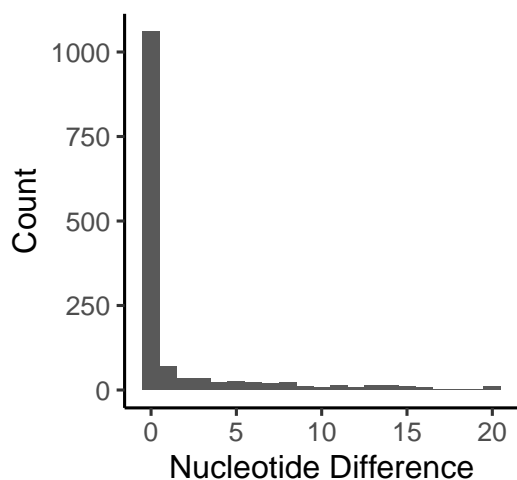
### IGHV3-19\*01

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



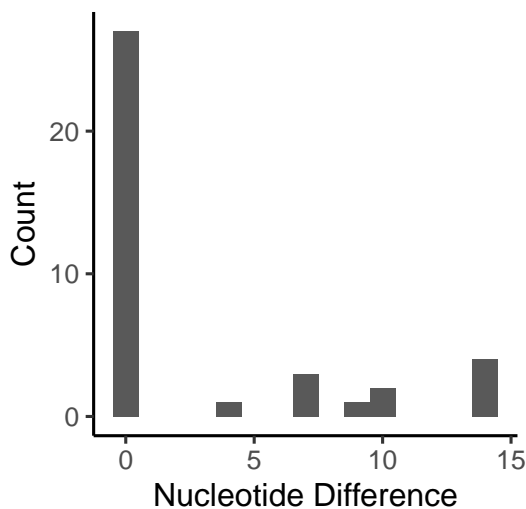
### IGHV3-11\*01

1424 sequences assigned  
1060 (74.4%) exact matches, in which:  
1034 unique CDR3  
6 unique J



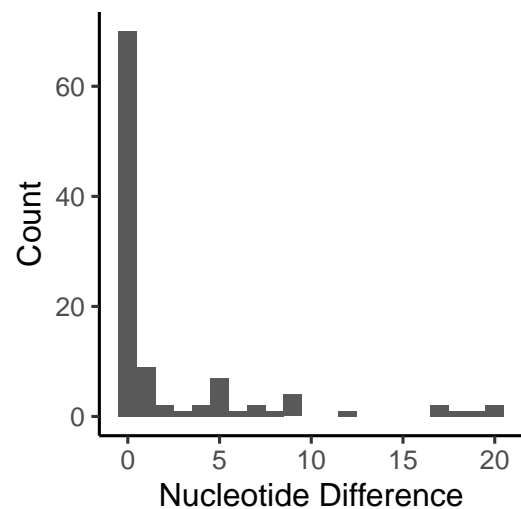
### IGHV3-13\*05

38 sequences assigned  
27 (71.1%) exact matches, in which:  
27 unique CDR3  
5 unique J



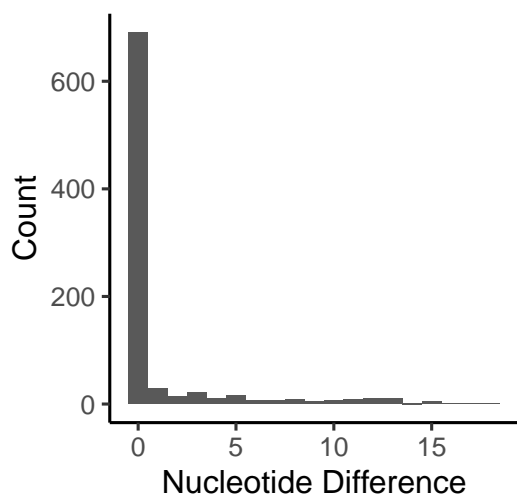
### IGHV3-20\*01\_02

107 sequences assigned  
70 (65.4%) exact matches, in which:  
67 unique CDR3  
5 unique J



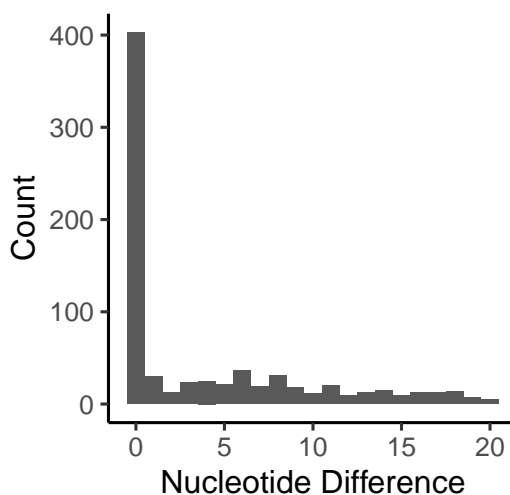
### IGHV3-11\*06

854 sequences assigned  
691 (80.9%) exact matches, in which:  
670 unique CDR3  
6 unique J



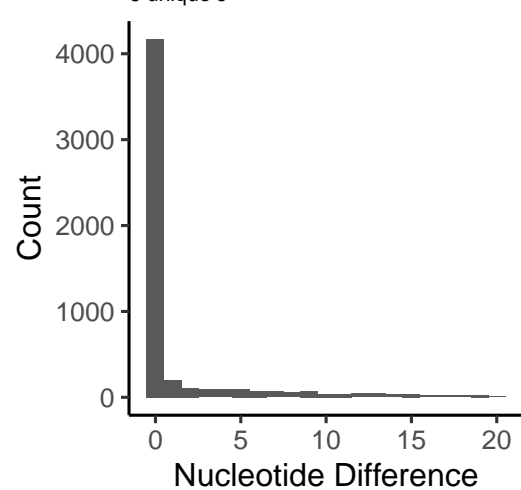
### IGHV3-15\*01\_02

763 sequences assigned  
403 (52.8%) exact matches, in which:  
393 unique CDR3  
6 unique J



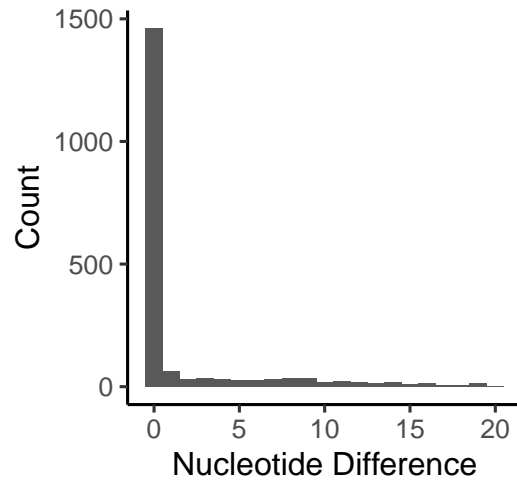
### IGHV3-21\*01\_02

5423 sequences assigned  
4171 (76.9%) exact matches, in which:  
4016 unique CDR3  
6 unique J



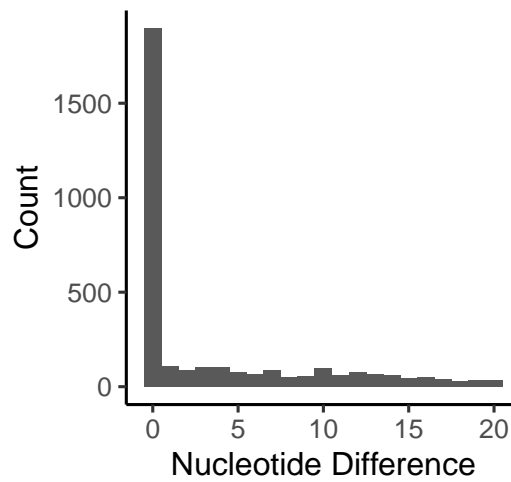
### IGHV3-30-3\*01

1938 sequences assigned  
1461 (75.4%) exact matches, in which:  
1437 unique CDR3  
6 unique J



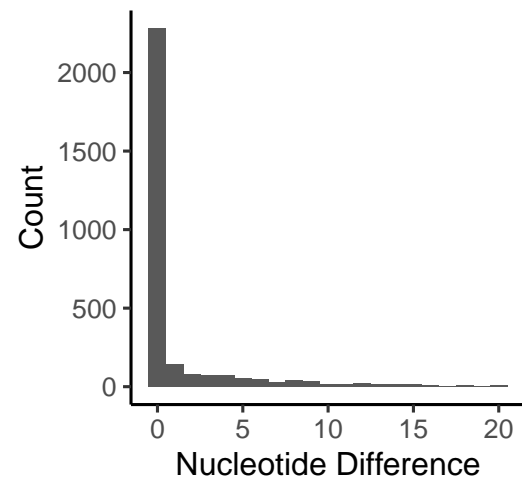
### IGHV3-48\*02

3324 sequences assigned  
1896 (57%) exact matches, in which:  
1811 unique CDR3  
6 unique J



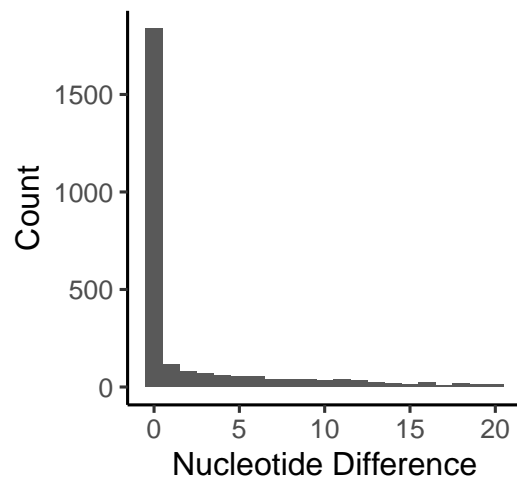
### IGHV3-53\*01\_02

3011 sequences assigned  
2281 (75.8%) exact matches, in which:  
2199 unique CDR3  
6 unique J



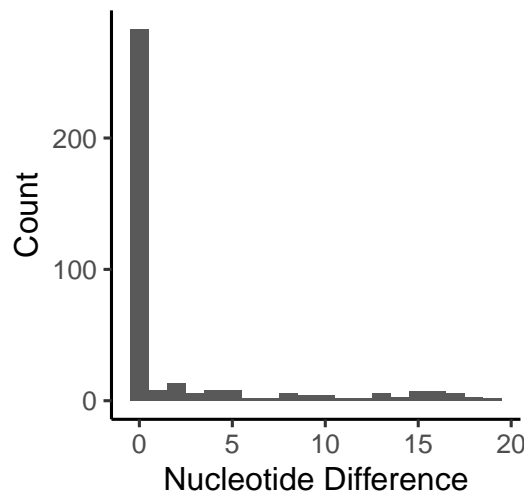
### IGHV3-33\*01

2637 sequences assigned  
1837 (69.7%) exact matches, in which:  
1797 unique CDR3  
6 unique J



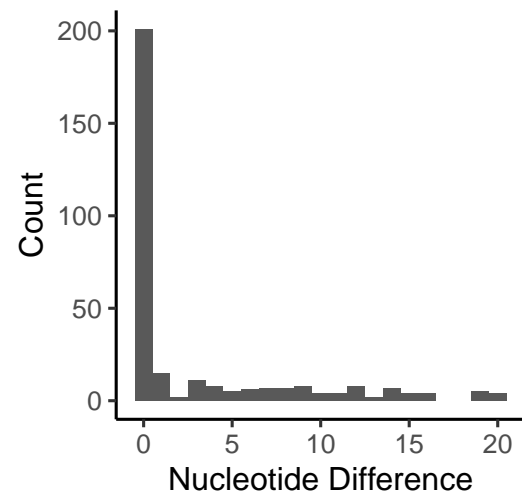
### IGHV3-49\*03\_05

385 sequences assigned  
283 (73.5%) exact matches, in which:  
279 unique CDR3  
5 unique J



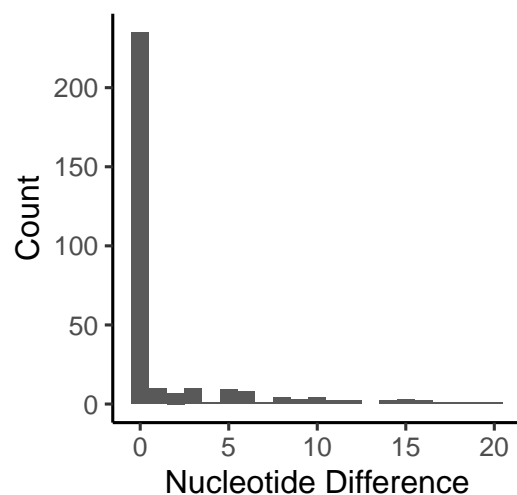
### IGHV3-64\*01

323 sequences assigned  
201 (62.2%) exact matches, in which:  
192 unique CDR3  
5 unique J



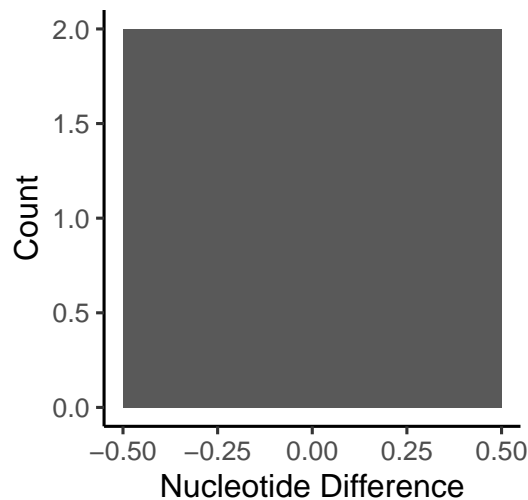
### IGHV3-43\*01

342 sequences assigned  
235 (68.7%) exact matches, in which:  
228 unique CDR3  
6 unique J



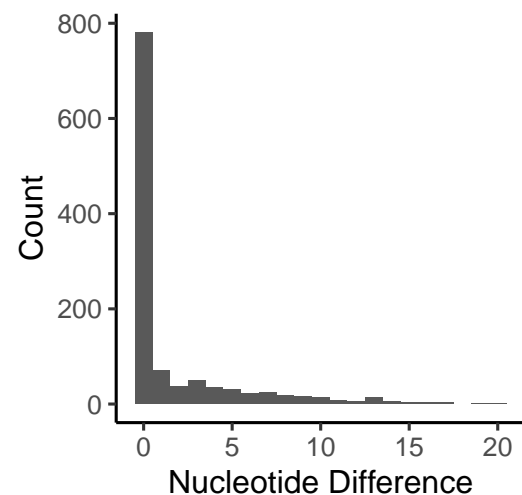
### IGHV3-52\*01\_03

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



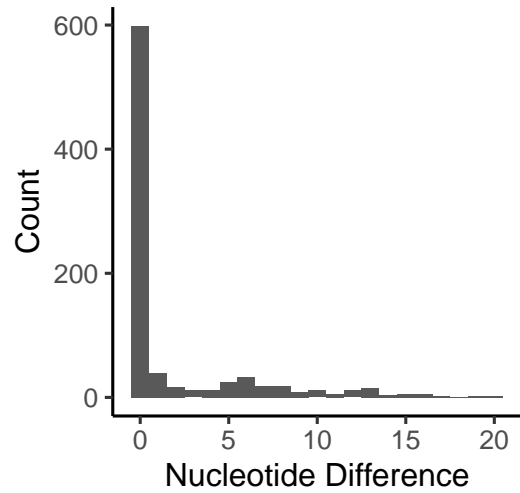
### IGHV3-66\*01

1147 sequences assigned  
781 (68.1%) exact matches, in which:  
749 unique CDR3  
6 unique J



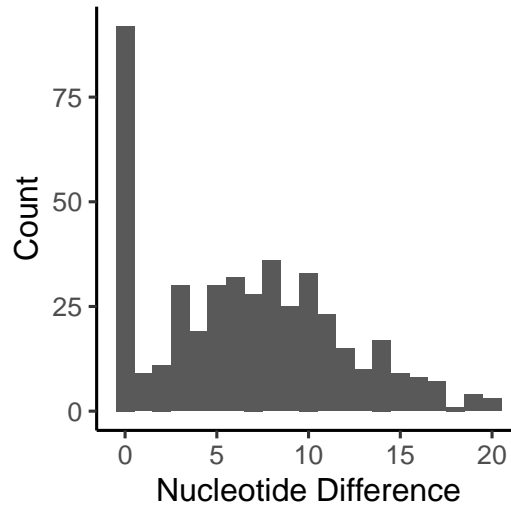
### IGHV3–66\*02

866 sequences assigned  
599 (69.2%) exact matches, in which:  
581 unique CDR3  
6 unique J



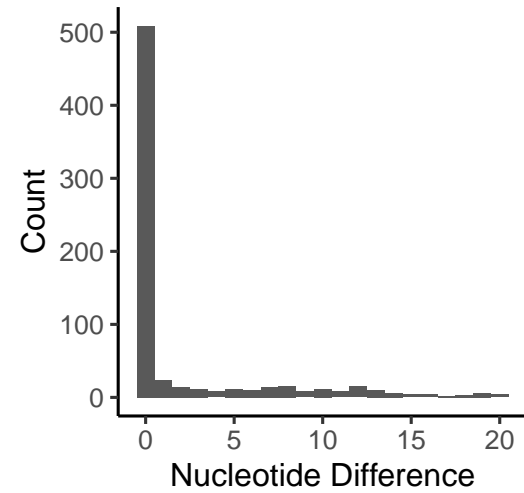
### IGHV3–72\*01

453 sequences assigned  
92 (20.3%) exact matches, in which:  
88 unique CDR3  
6 unique J



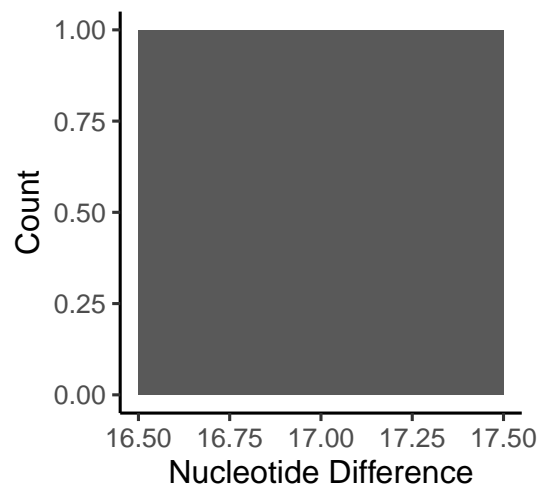
### IGHV3–64D\*09

706 sequences assigned  
509 (72.1%) exact matches, in which:  
499 unique CDR3  
6 unique J



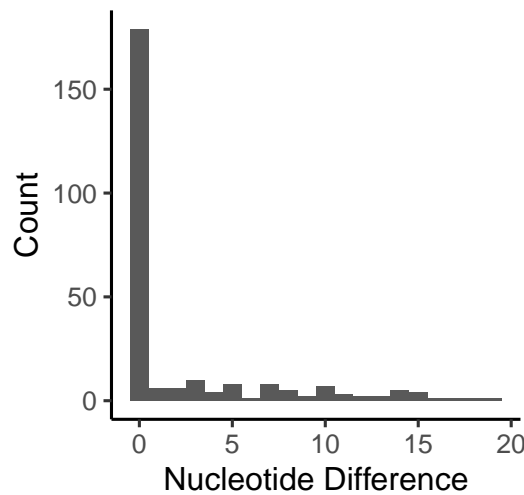
### IGHV3–69–1\*01

1 sequences assigned  
No exact matches.



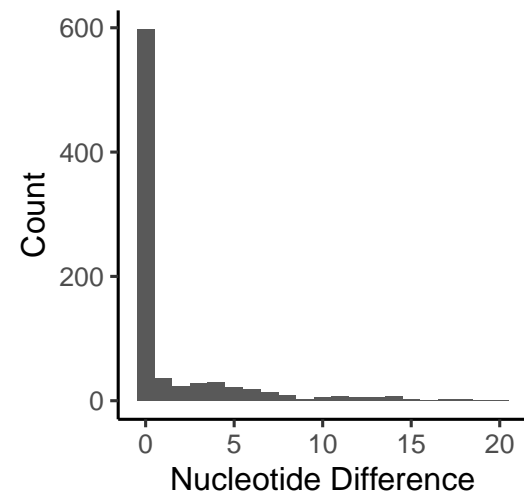
### IGHV3–73\*01\_02

258 sequences assigned  
179 (69.4%) exact matches, in which:  
164 unique CDR3  
5 unique J



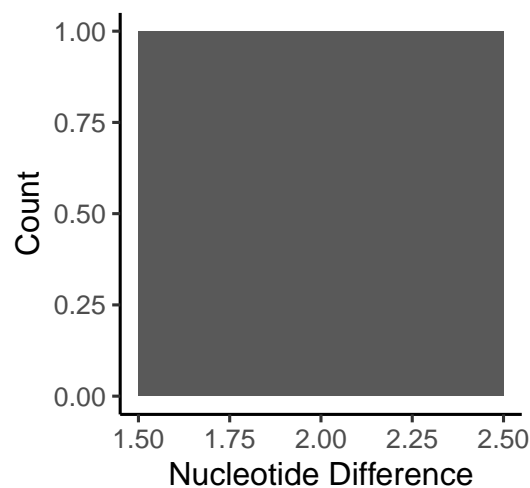
### IGHV4–4\*07

825 sequences assigned  
598 (72.5%) exact matches, in which:  
587 unique CDR3  
6 unique J



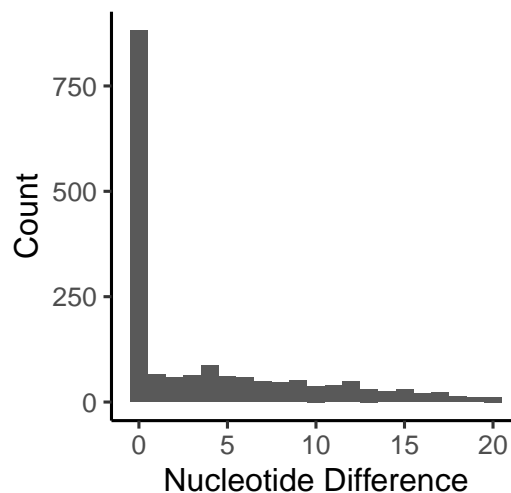
### IGHV3–69–1\*02

3 sequences assigned  
No exact matches.



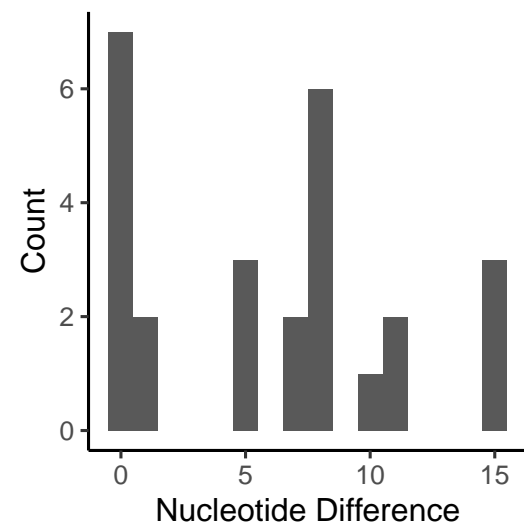
### IGHV3–74\*01\_02

1734 sequences assigned  
882 (50.9%) exact matches, in which:  
857 unique CDR3  
6 unique J



### IGHV4–28\*01\_07

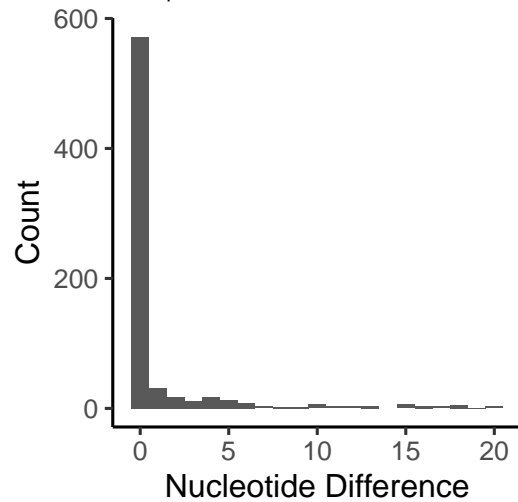
28 sequences assigned  
7 (25%) exact matches, in which:  
5 unique CDR3  
2 unique J





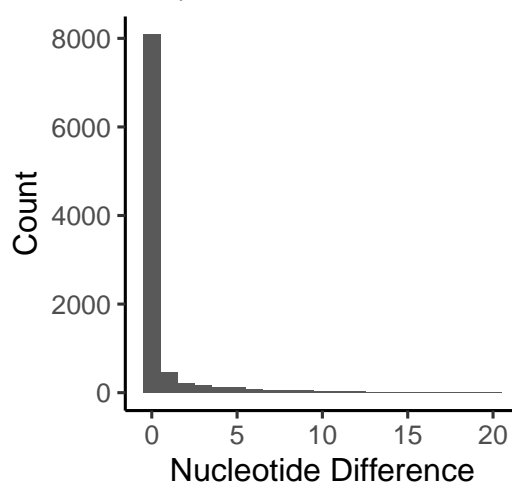
### IGHV4-30-4\*01

788 sequences assigned  
572 (72.6%) exact matches, in which:  
564 unique CDR3  
6 unique J



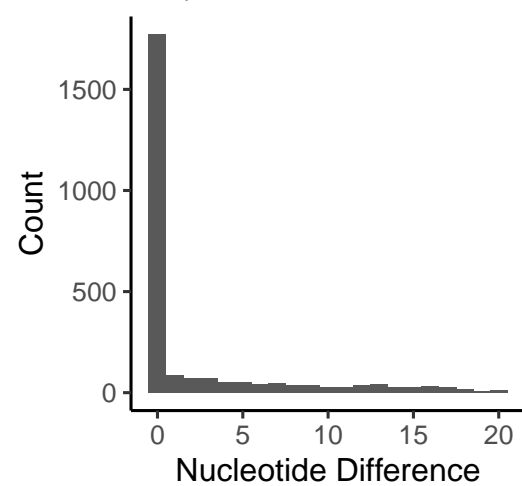
### IGHV4-34\*01\_02

9671 sequences assigned  
8089 (83.6%) exact matches, in which:  
7977 unique CDR3  
6 unique J



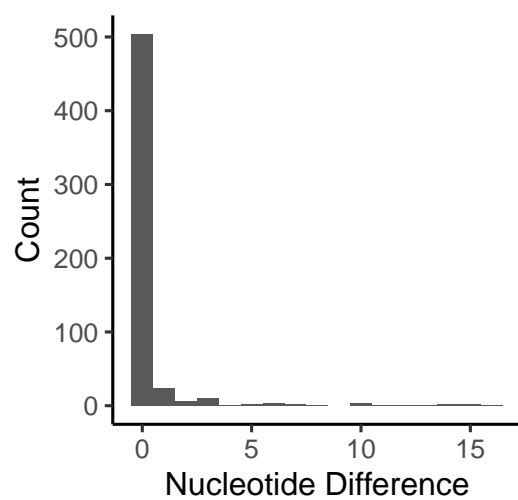
### IGHV4-39\*01\_05

2643 sequences assigned  
1772 (67%) exact matches, in which:  
1735 unique CDR3  
6 unique J



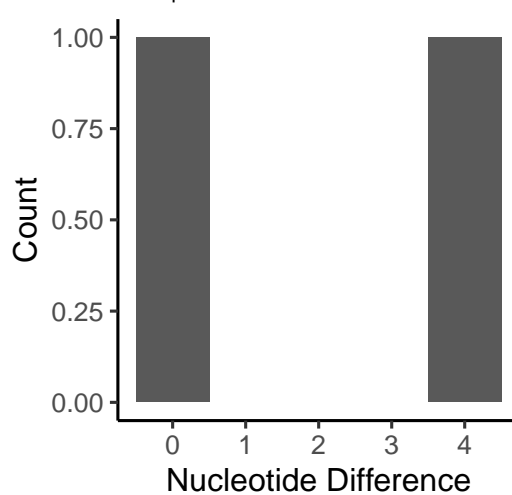
### IGHV4-30-2\*01

568 sequences assigned  
504 (88.7%) exact matches, in which:  
499 unique CDR3  
6 unique J



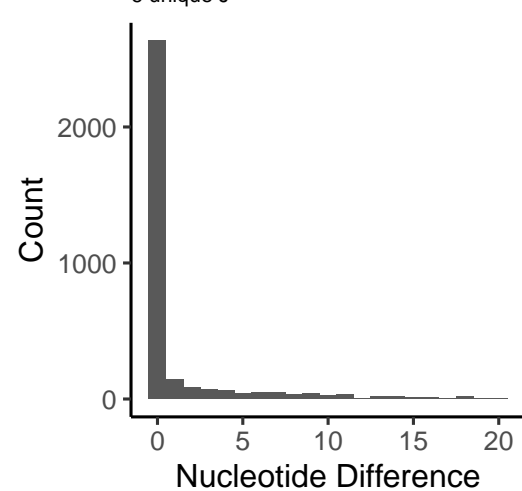
### IGHV4-38-2\*01

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



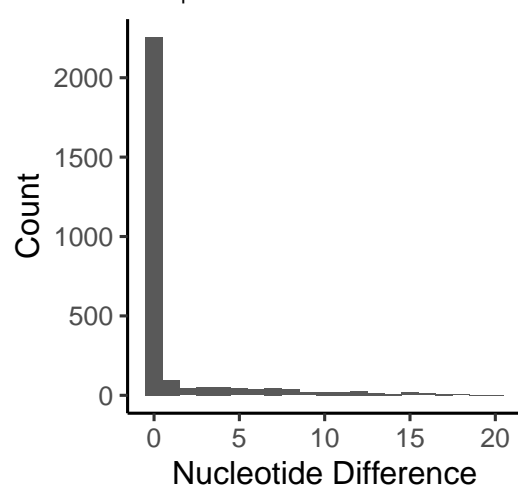
### IGHV4-59\*08

3373 sequences assigned  
2634 (78.1%) exact matches, in which:  
2555 unique CDR3  
6 unique J



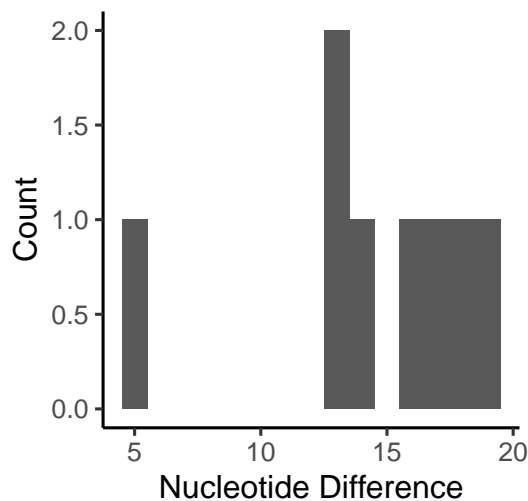
### IGHV4-31\*03\_04

2843 sequences assigned  
2256 (79.4%) exact matches, in which:  
2220 unique CDR3  
6 unique J



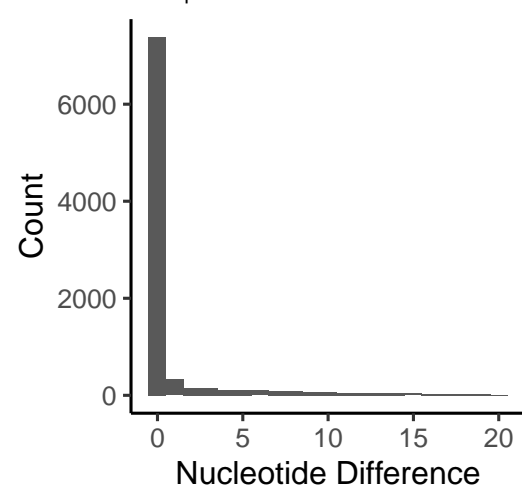
### IGHV4-38-2\*02

10 sequences assigned  
No exact matches.



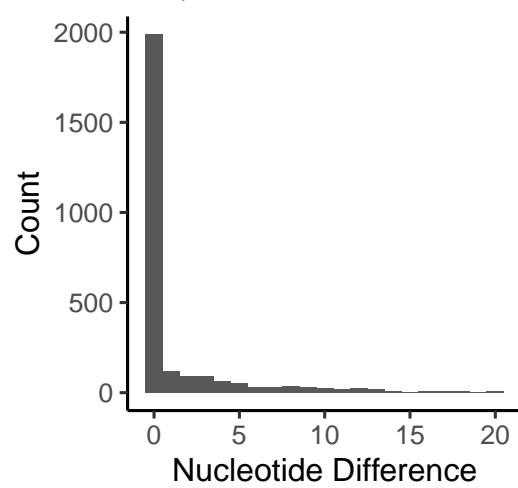
### IGHV4-59\*01\_07

9056 sequences assigned  
7384 (81.5%) exact matches, in which:  
7257 unique CDR3  
6 unique J



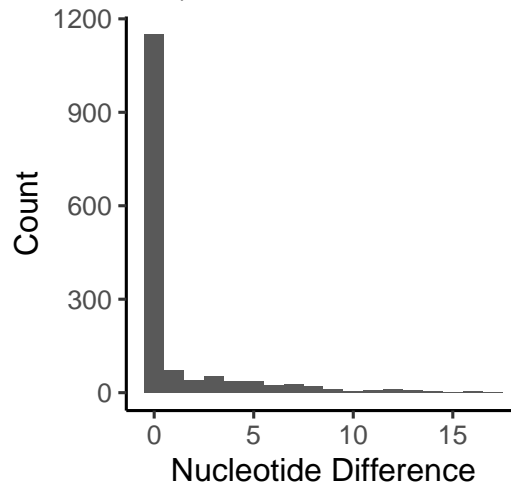
### IGHV4-61\*02

2702 sequences assigned  
1988 (73.6%) exact matches, in which:  
1949 unique CDR3  
6 unique J



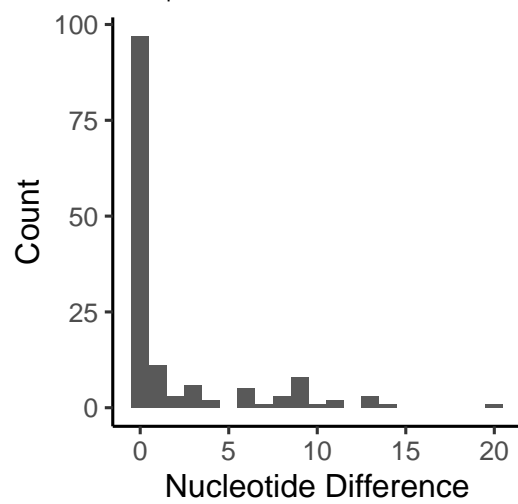
### IGHV6-1\*01\_02

1524 sequences assigned  
1150 (75.5%) exact matches, in which:  
1148 unique CDR3  
6 unique J



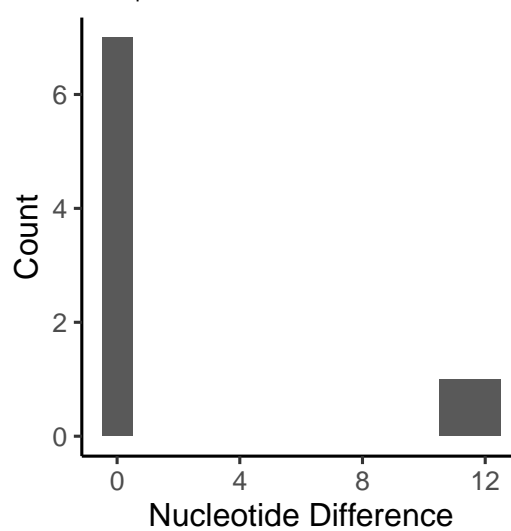
### IGHV5-10-1\*01\_03

145 sequences assigned  
97 (66.9%) exact matches, in which:  
97 unique CDR3  
5 unique J



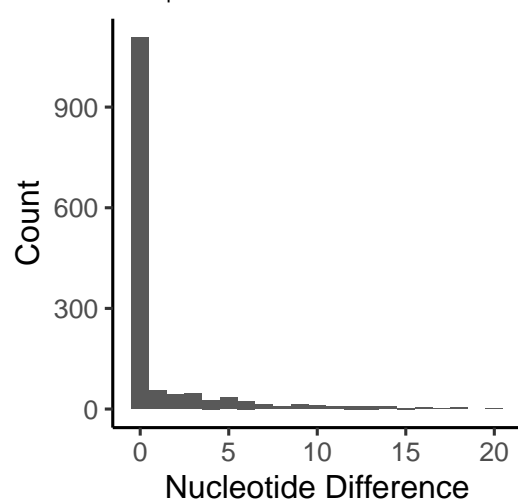
### IGHV7-4-1\*01

9 sequences assigned  
7 (77.8%) exact matches, in which:  
7 unique CDR3  
3 unique J



### IGHV5-51\*01\_03

1436 sequences assigned  
1108 (77.2%) exact matches, in which:  
1106 unique CDR3  
6 unique J





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.

Warning – no inferred sequences found.

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.

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

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

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