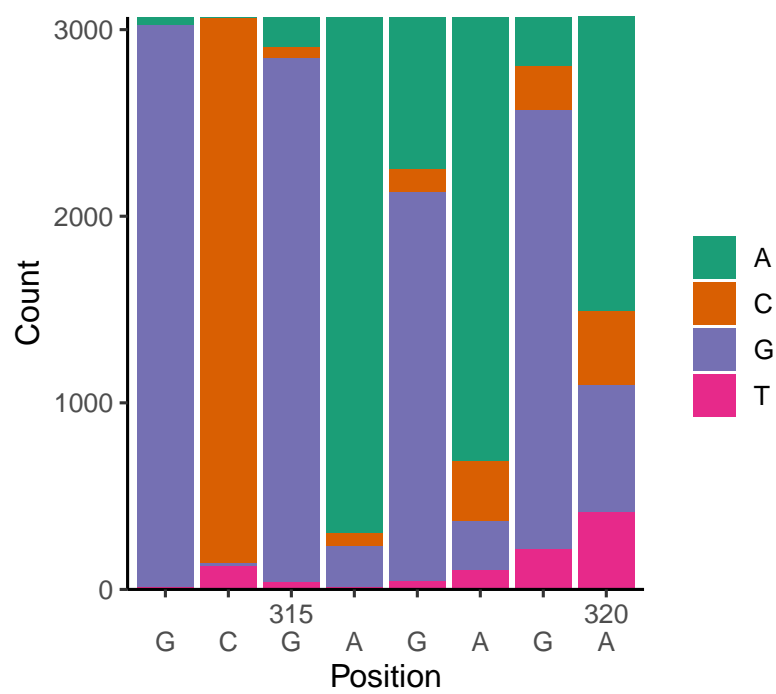
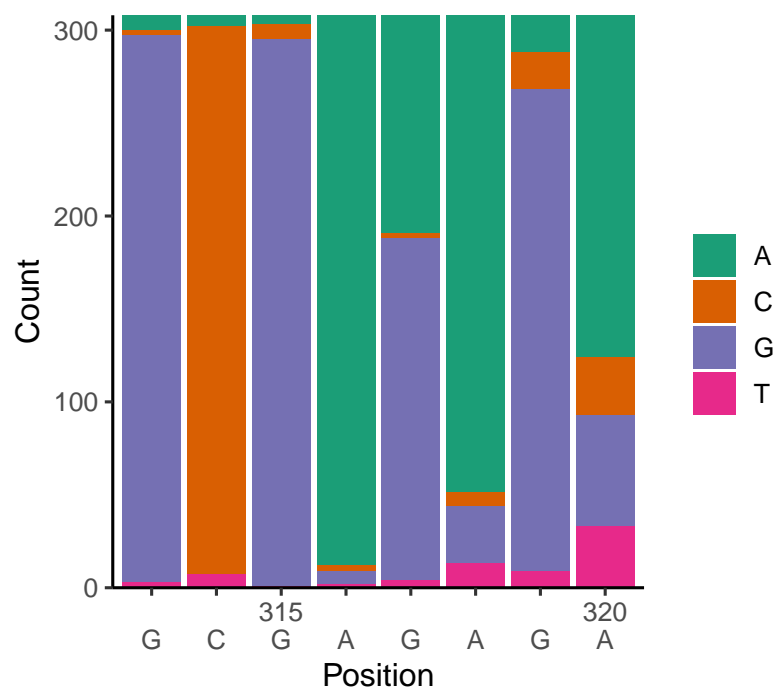


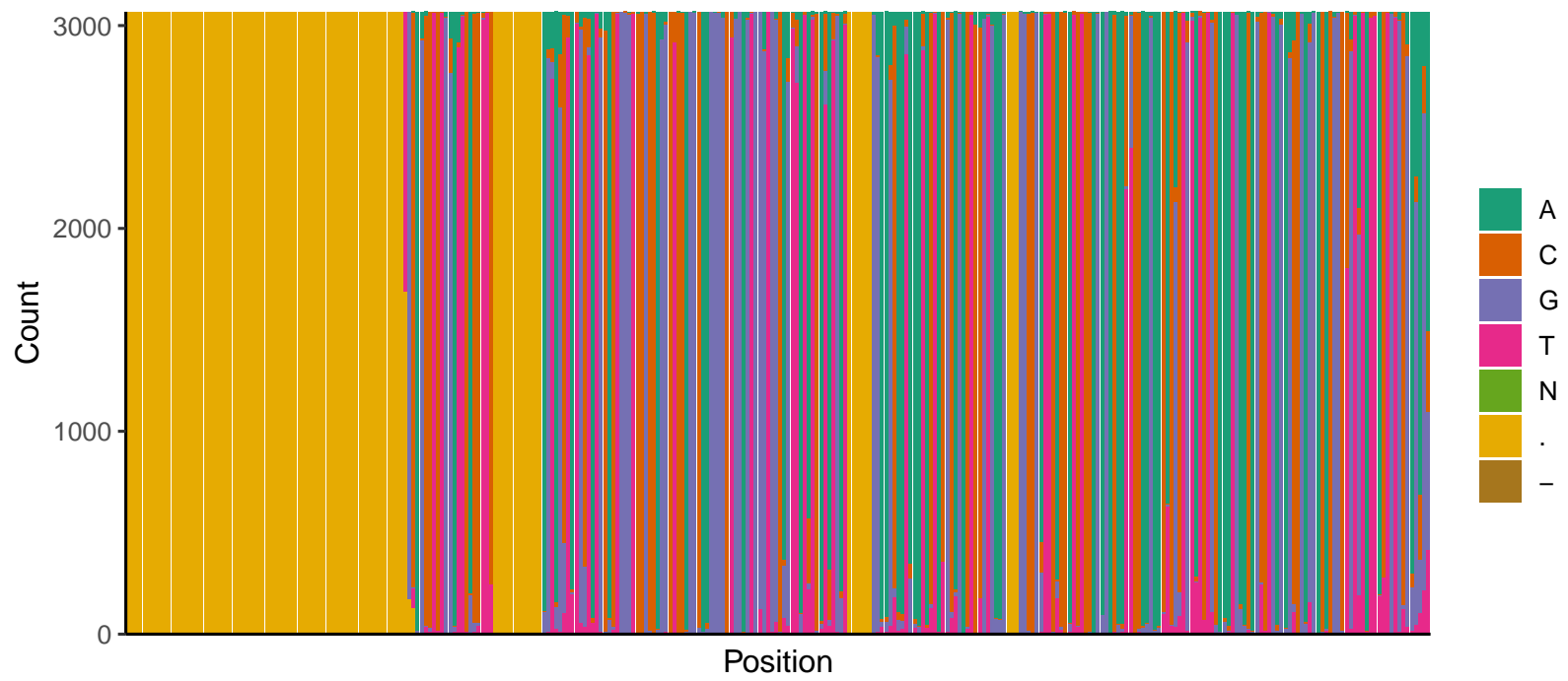
Gene IGHV3-30-3\*01\_T288C



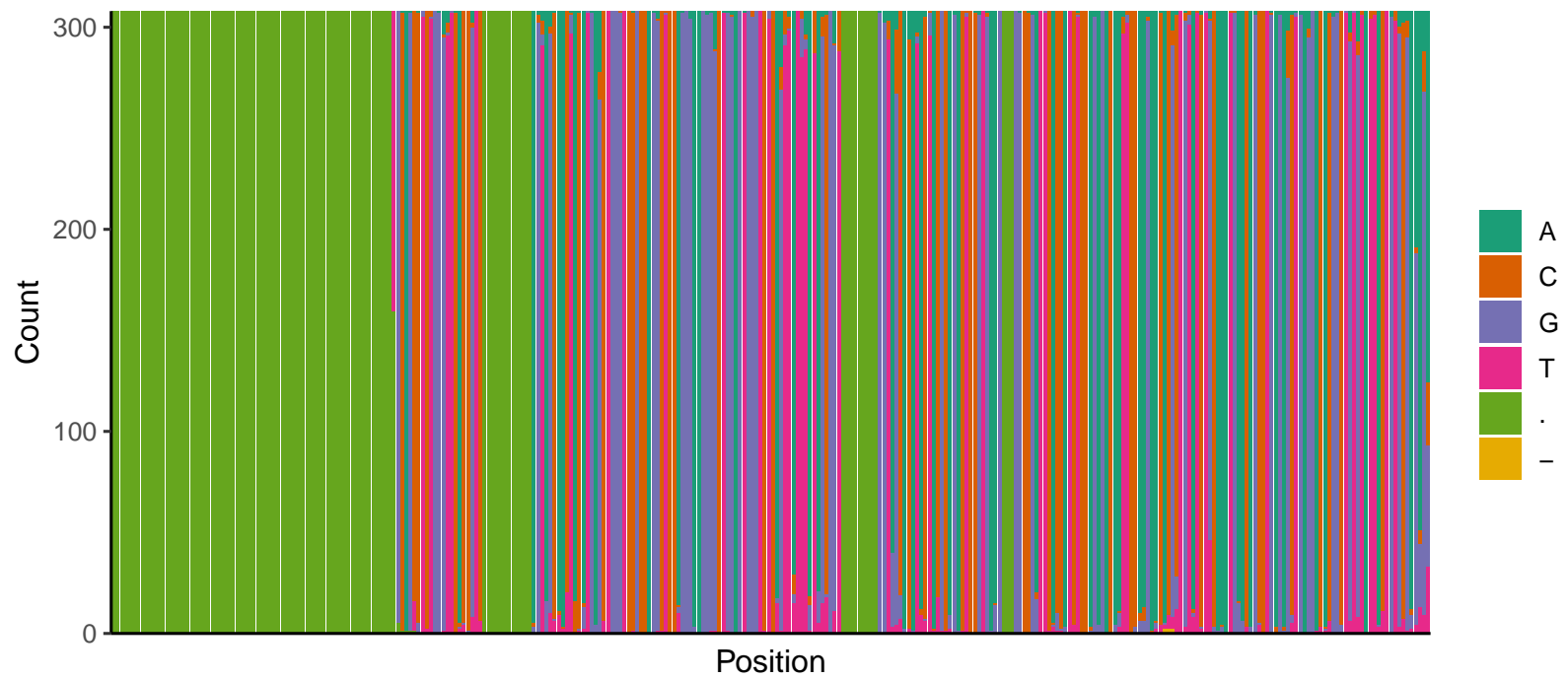
Gene IGHV3-53\*05\_C300T



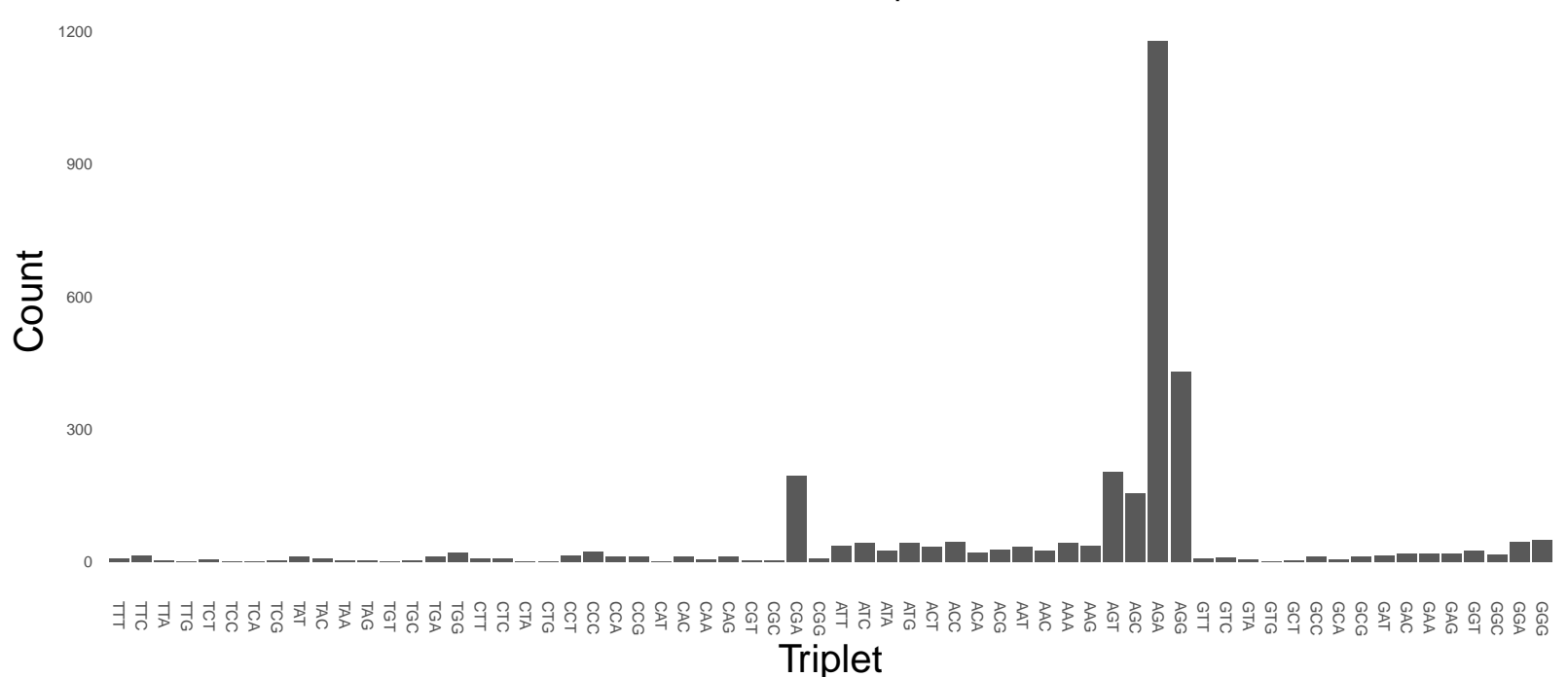
Gene IGHV3-30-3\*01\_T288C



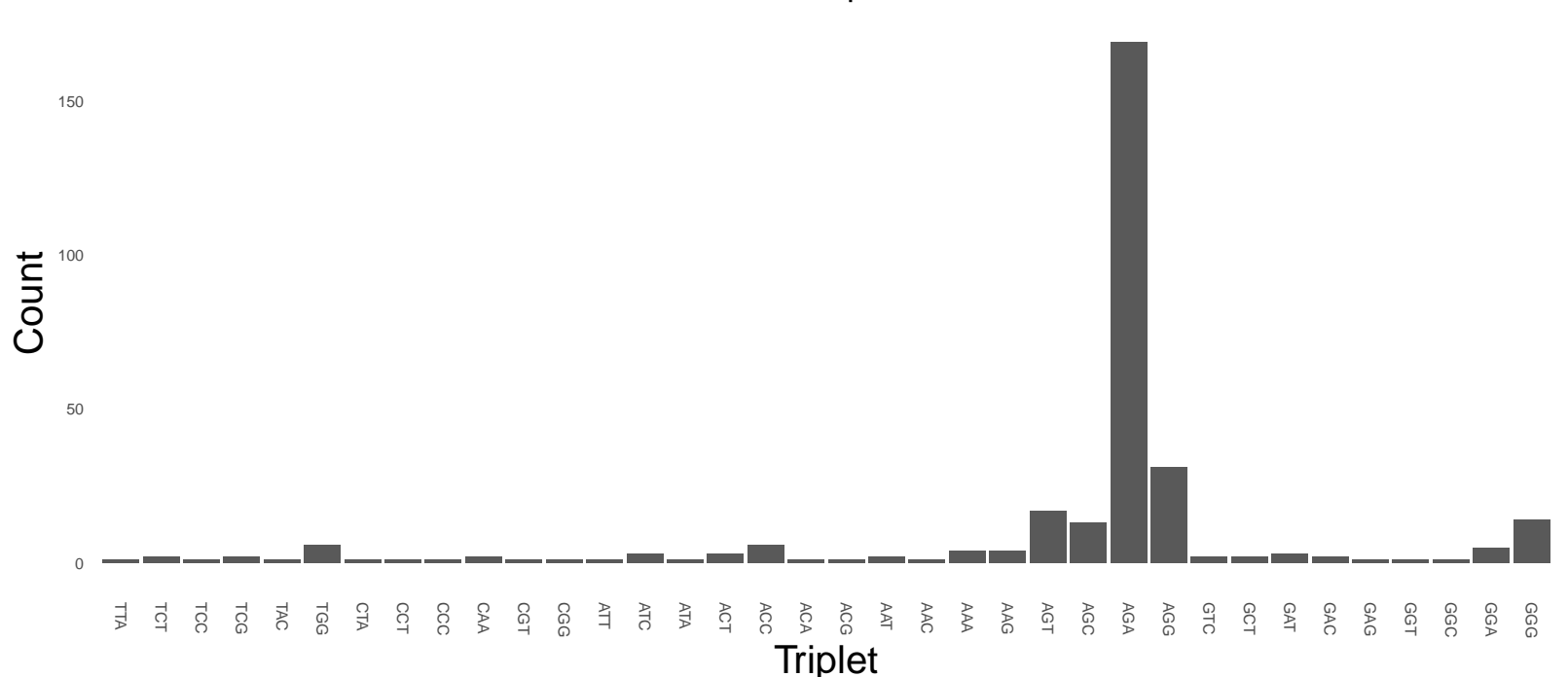
Gene IGHV3-53\*05\_C300T



IGHV3-30-3\*01\_T288C- Final 3 nucleotides as a triplet

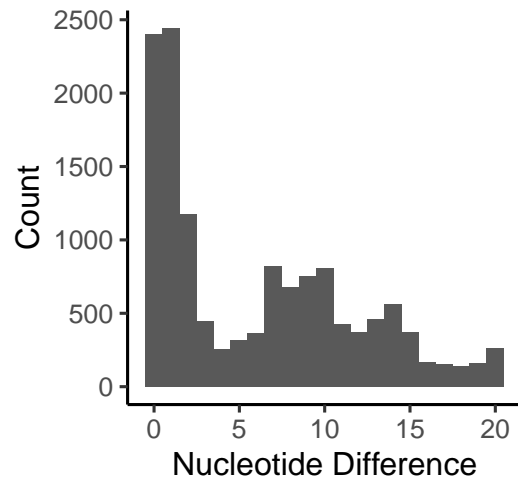


IGHV3-53\*05\_C300T- Final 3 nucleotides as a triplet



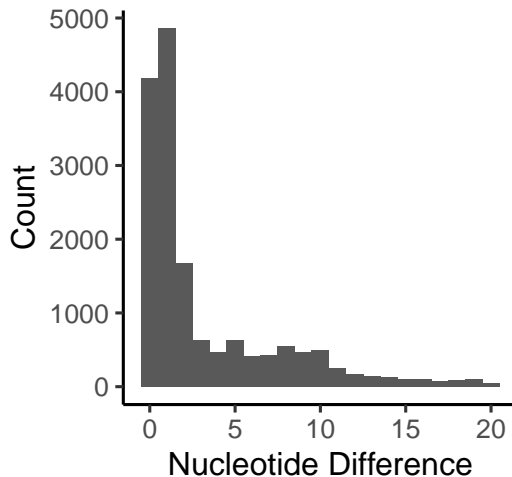
### IGHV1-2\*02

14685 sequences assigned  
2401 (16.4%) exact matches, in which:  
1974 unique CDR3  
6 unique J



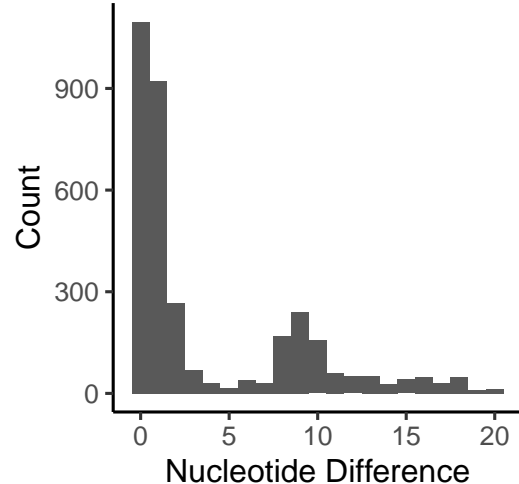
### IGHV1-8\*01

17185 sequences assigned  
4190 (24.4%) exact matches, in which:  
3374 unique CDR3  
6 unique J



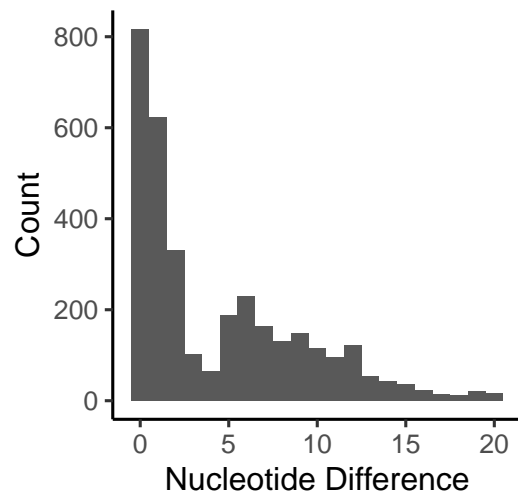
### IGHV1-24\*01

3510 sequences assigned  
1097 (31.3%) exact matches, in which:  
907 unique CDR3  
6 unique J



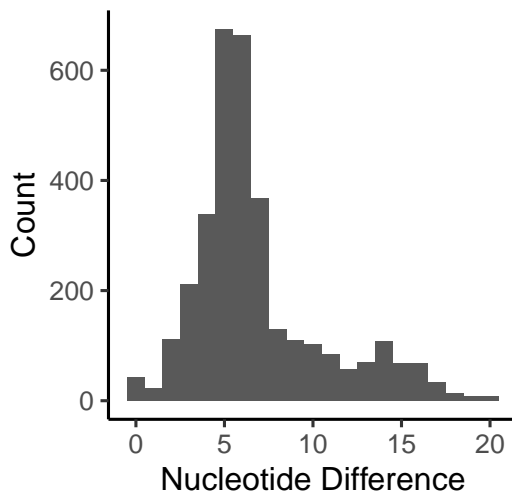
### IGHV1-2\*04

3433 sequences assigned  
817 (23.8%) exact matches, in which:  
694 unique CDR3  
6 unique J



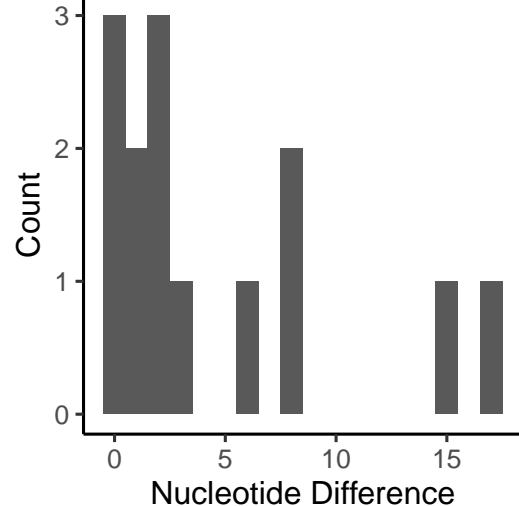
### IGHV1-8\*02

3388 sequences assigned  
42 (1.2%) exact matches, in which:  
42 unique CDR3  
5 unique J



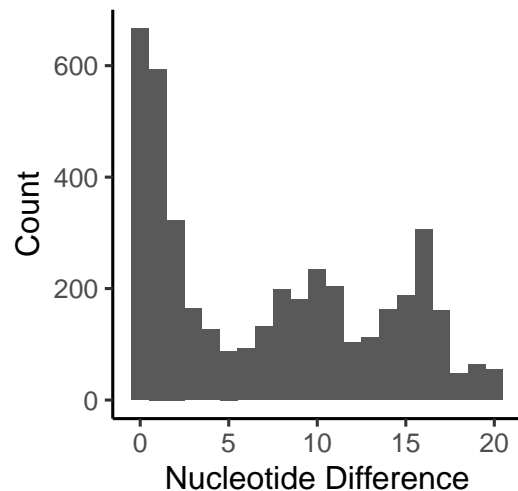
### IGHV1-45\*02

17 sequences assigned  
3 (17.6%) exact matches, in which:  
3 unique CDR3  
3 unique J



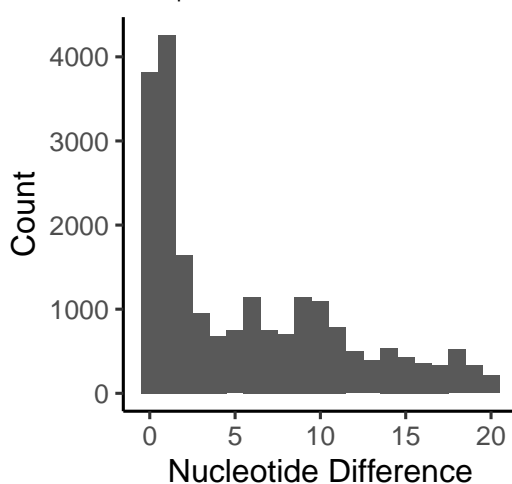
### IGHV1-3\*01\_05

4488 sequences assigned  
667 (14.9%) exact matches, in which:  
559 unique CDR3  
6 unique J



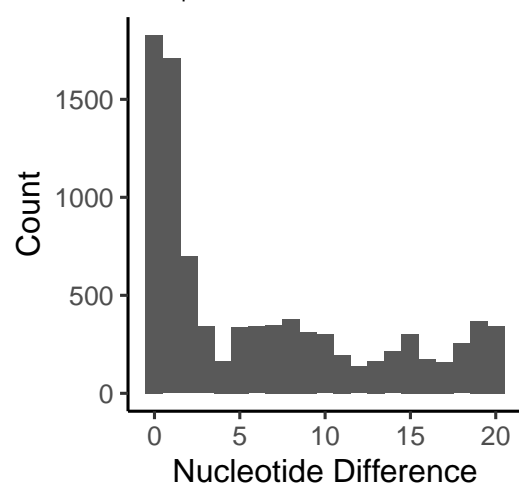
### IGHV1-18\*01

24413 sequences assigned  
3817 (15.6%) exact matches, in which:  
3071 unique CDR3  
6 unique J



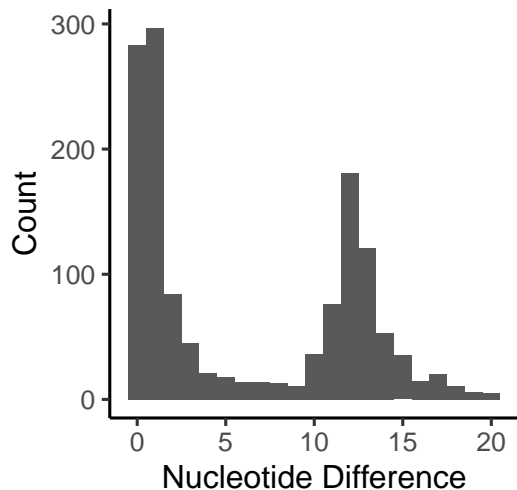
### IGHV1-46\*01

10535 sequences assigned  
1828 (17.4%) exact matches, in which:  
1550 unique CDR3  
6 unique J



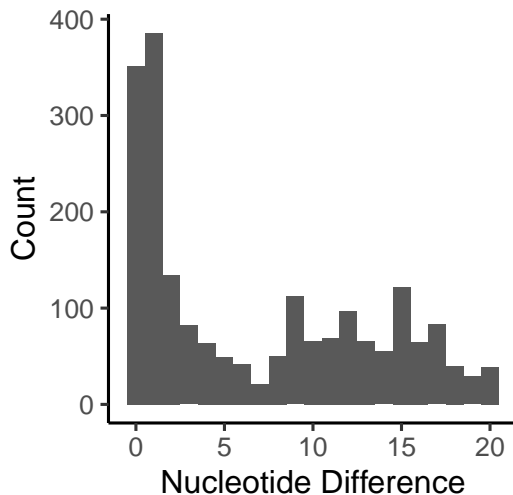
### IGHV1-58\*01\_03

1483 sequences assigned  
283 (19.1%) exact matches, in which:  
232 unique CDR3  
6 unique J



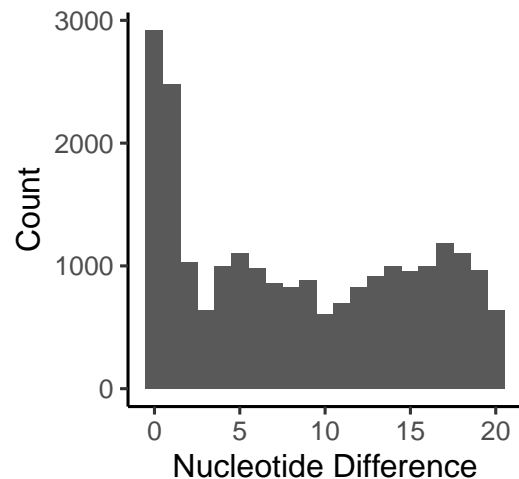
### IGHV2-5\*01

2487 sequences assigned  
351 (14.1%) exact matches, in which:  
287 unique CDR3  
6 unique J



### IGHV3-7\*01

25566 sequences assigned  
2918 (11.4%) exact matches, in which:  
1985 unique CDR3  
6 unique J



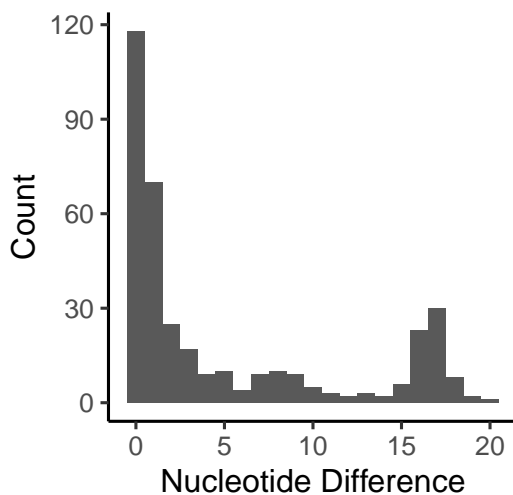
### IGHV1-68\*01

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



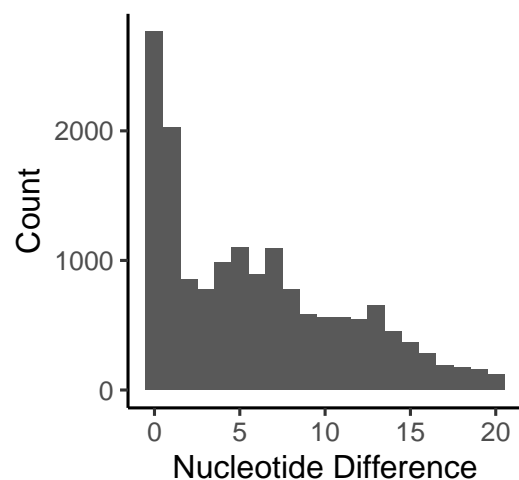
### IGHV2-26\*01

400 sequences assigned  
118 (29.5%) exact matches, in which:  
102 unique CDR3  
6 unique J



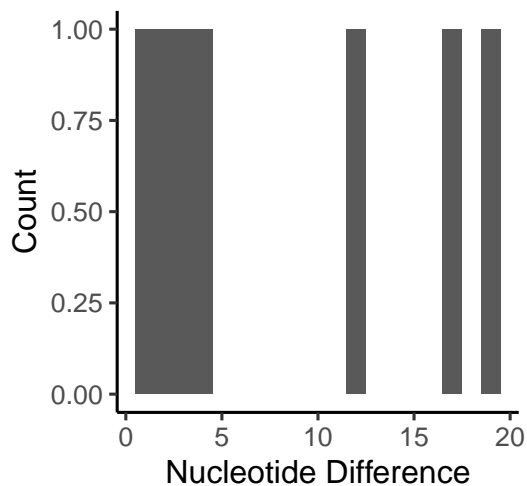
### IGHV3-9\*01

17174 sequences assigned  
2765 (16.1%) exact matches, in which:  
1702 unique CDR3  
6 unique J



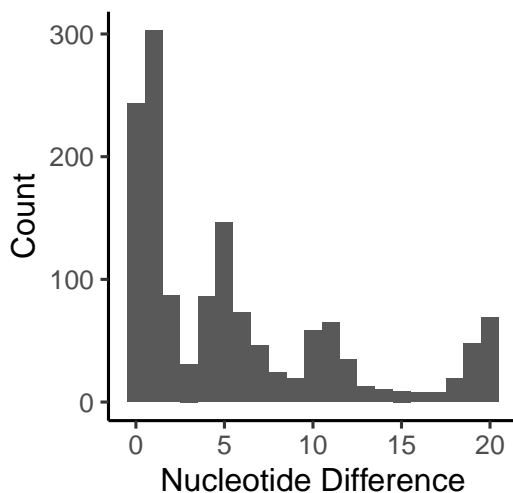
### IGHV1-69-2\*01

27 sequences assigned  
No exact matches.



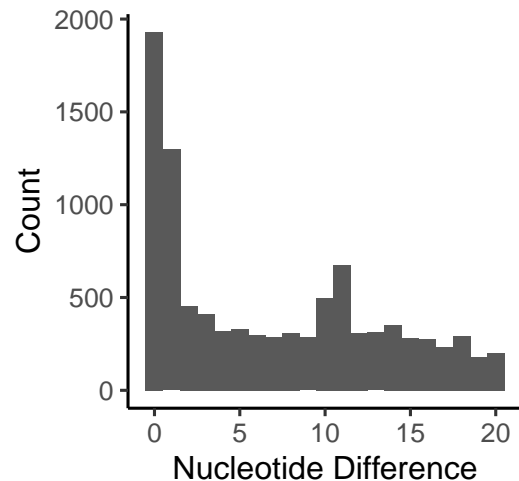
### IGHV2-70\*01

1811 sequences assigned  
243 (13.4%) exact matches, in which:  
178 unique CDR3  
6 unique J



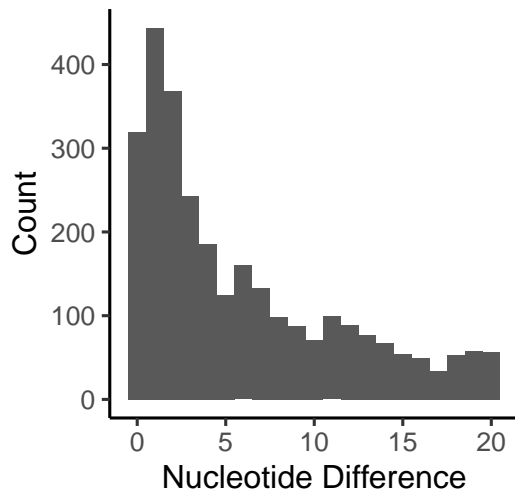
### IGHV3-11\*01

13641 sequences assigned  
1930 (14.1%) exact matches, in which:  
1307 unique CDR3  
6 unique J



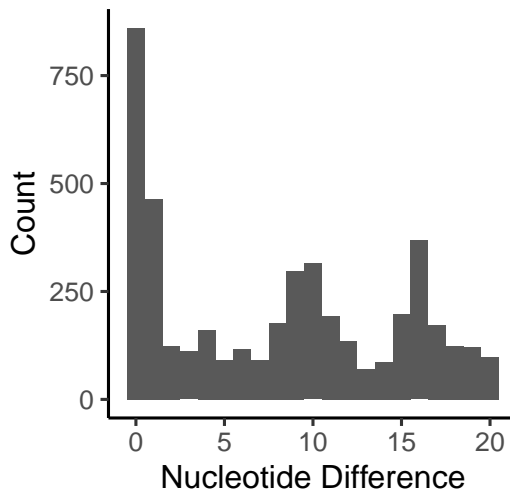
### IGHV3-11\*04

3060 sequences assigned  
319 (10.4%) exact matches, in which:  
300 unique CDR3  
6 unique J



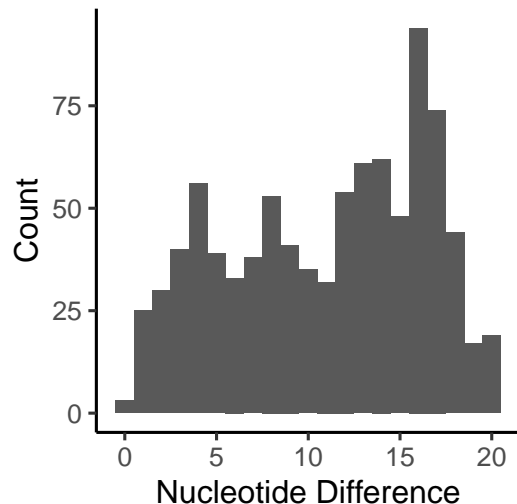
### IGHV3-15\*01\_02

4936 sequences assigned  
861 (17.4%) exact matches, in which:  
553 unique CDR3  
6 unique J



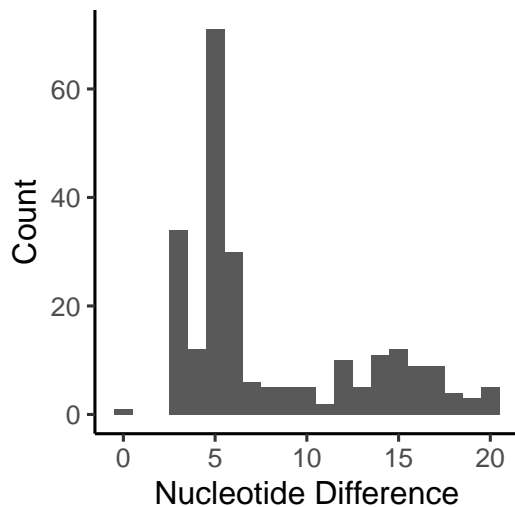
### IGHV3-20\*03\_04

972 sequences assigned  
3 (0.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



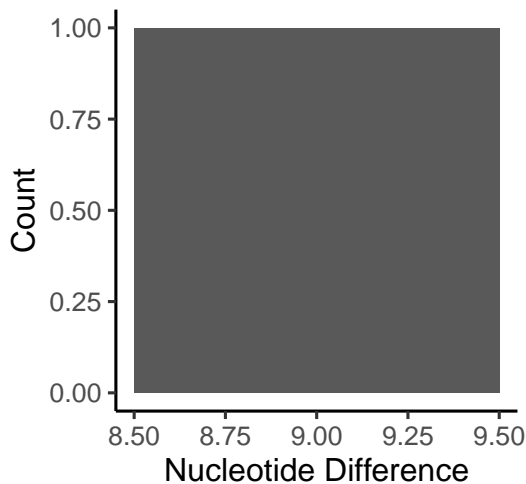
### IGHV3-11\*06

269 sequences assigned  
1 (0.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



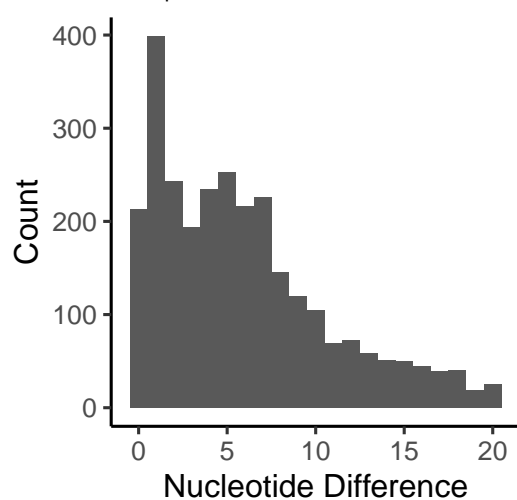
### IGHV3-19\*01

1 sequences assigned  
No exact matches.



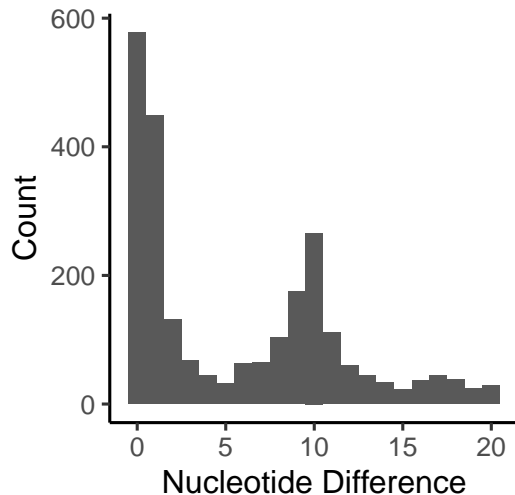
### IGHV3-21\*04

3122 sequences assigned  
213 (6.8%) exact matches, in which:  
202 unique CDR3  
6 unique J



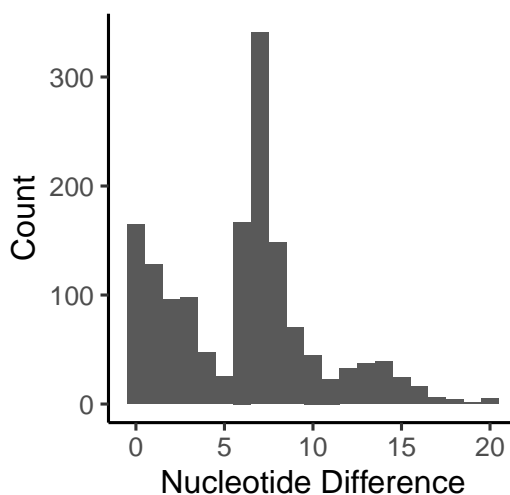
### IGHV3-13\*01

2684 sequences assigned  
578 (21.5%) exact matches, in which:  
372 unique CDR3  
6 unique J



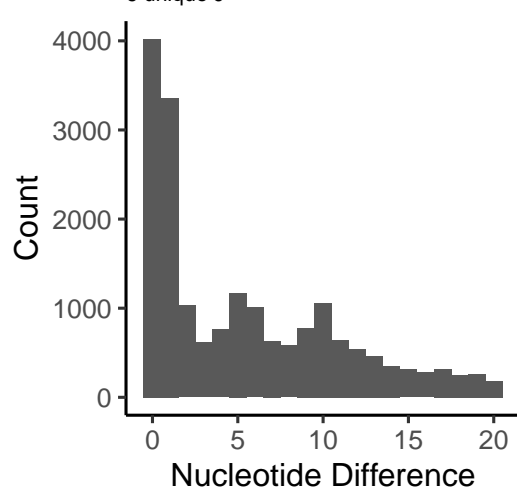
### IGHV3-20\*01\_02

1534 sequences assigned  
165 (10.8%) exact matches, in which:  
102 unique CDR3  
5 unique J



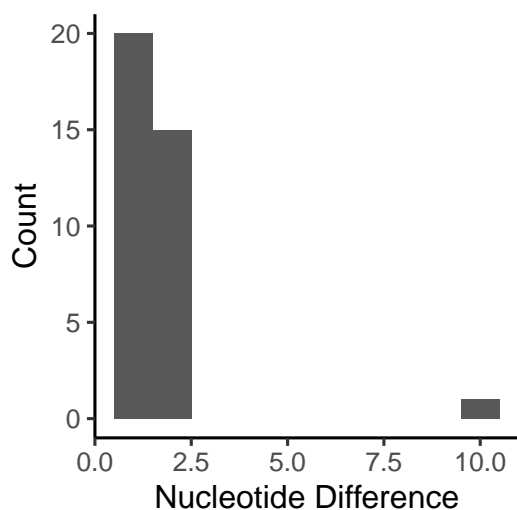
### IGHV3-21\*01\_02

22445 sequences assigned  
4020 (17.9%) exact matches, in which:  
2569 unique CDR3  
6 unique J



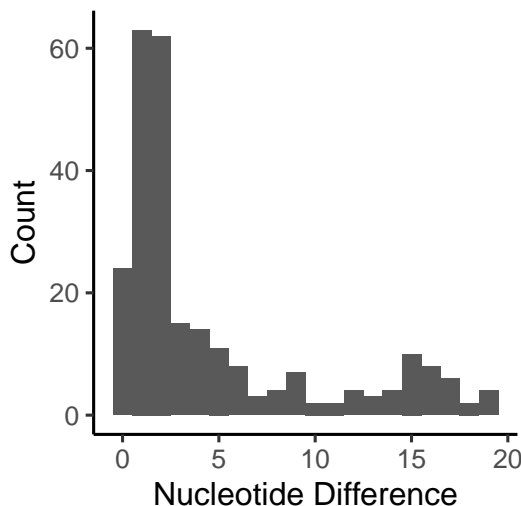
### IGHV3-22\*01\_02

36 sequences assigned  
No exact matches.



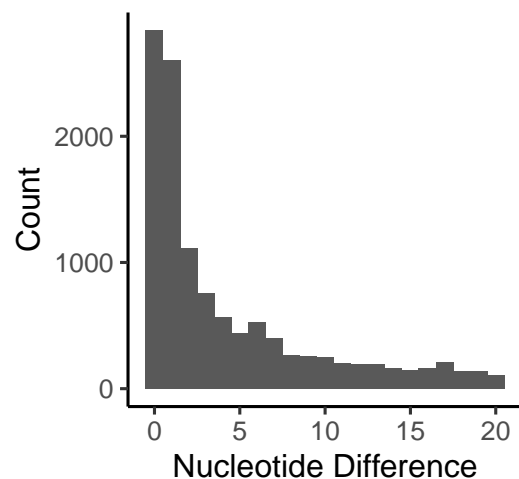
### IGHV3-30-3\*02

280 sequences assigned  
24 (8.6%) exact matches, in which:  
20 unique CDR3  
4 unique J



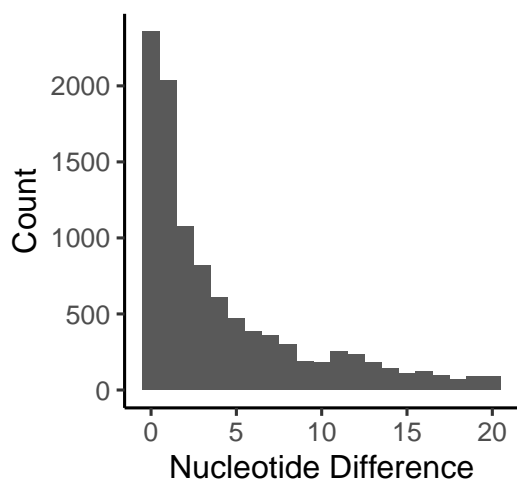
### IGHV3-33\*01

12301 sequences assigned  
2839 (23.1%) exact matches, in which:  
1887 unique CDR3  
6 unique J



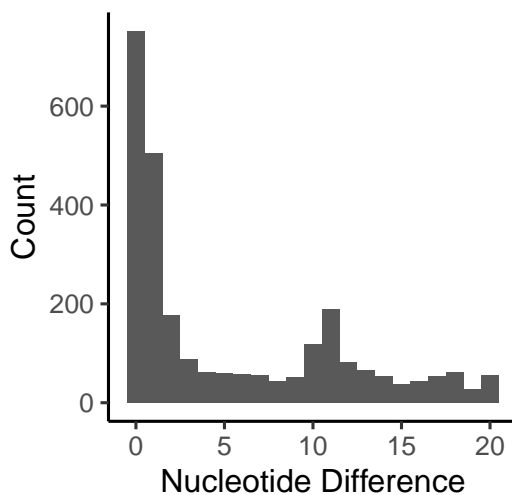
### IGHV3-30\*01

11441 sequences assigned  
2356 (20.6%) exact matches, in which:  
1643 unique CDR3  
6 unique J



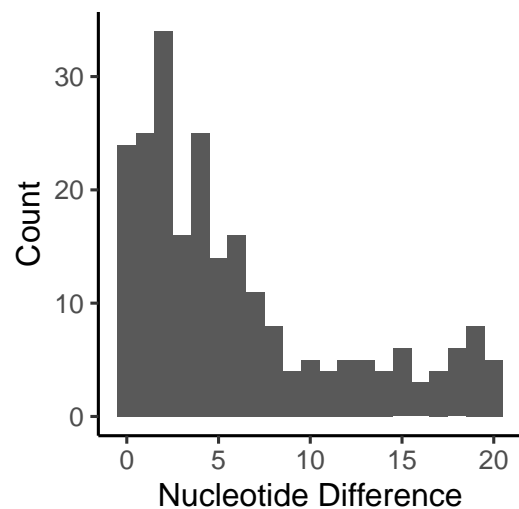
### IGHV3-30\*03

2967 sequences assigned  
752 (25.3%) exact matches, in which:  
688 unique CDR3  
6 unique J



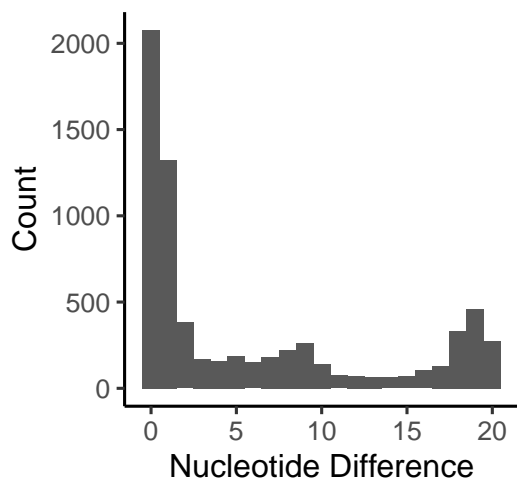
### IGHV3-33\*05

262 sequences assigned  
24 (9.2%) exact matches, in which:  
24 unique CDR3  
3 unique J



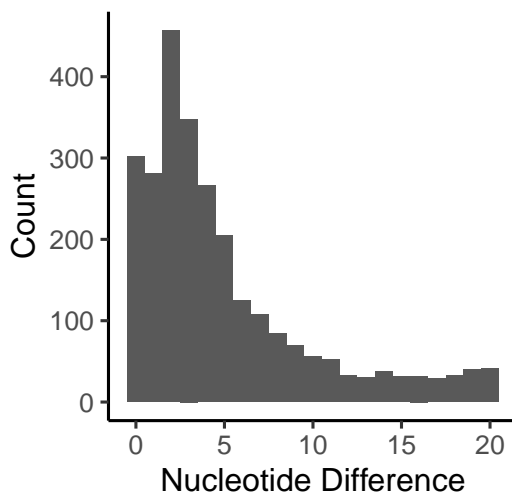
### IGHV3-30-3\*01

8047 sequences assigned  
2077 (25.8%) exact matches, in which:  
1424 unique CDR3  
6 unique J



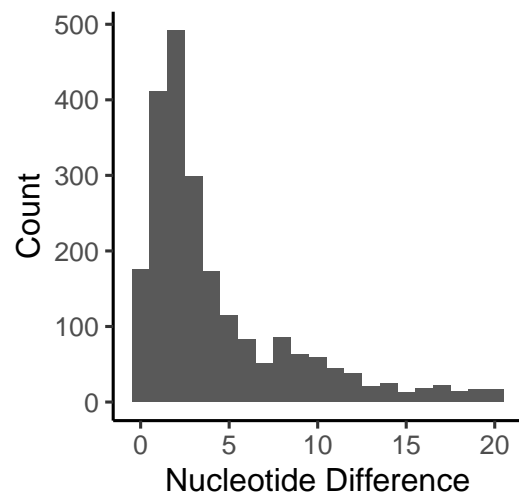
### IGHV3-30-3\*01\_T288C

3068 sequences assigned  
302 (9.8%) exact matches, in which:  
286 unique CDR3  
6 unique J



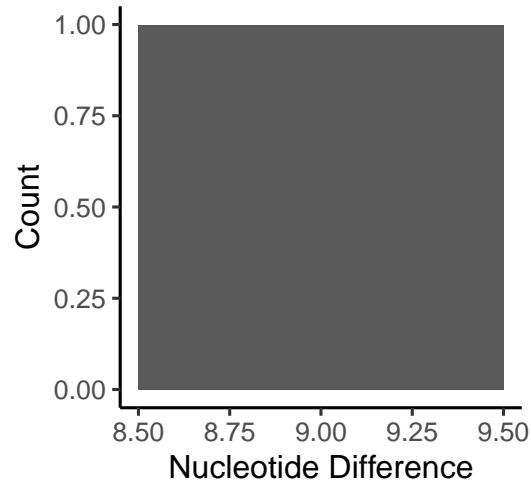
### IGHV3-33\*06

2321 sequences assigned  
176 (7.6%) exact matches, in which:  
163 unique CDR3  
6 unique J



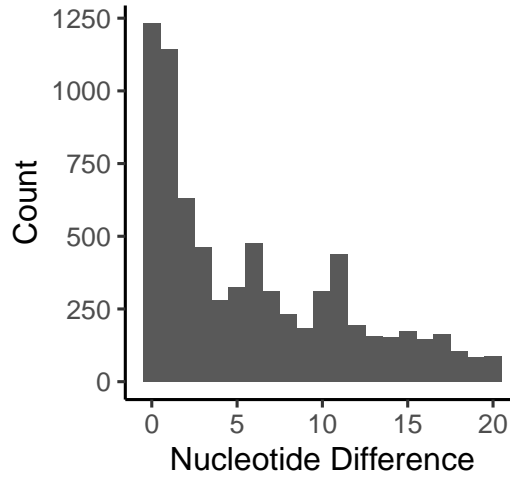
### IGHV3-35\*01

1 sequences assigned  
No exact matches.



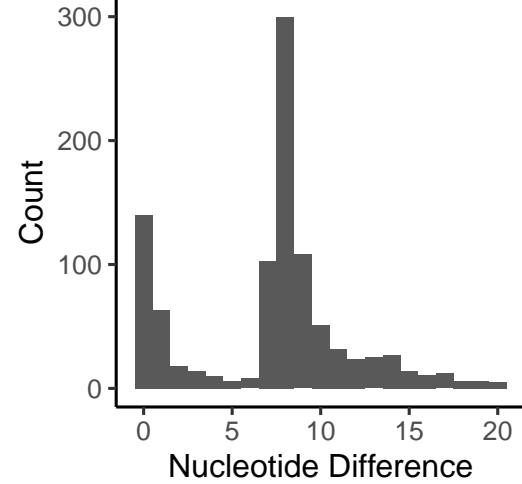
### IGHV3-48\*03

8403 sequences assigned  
1232 (14.7%) exact matches, in which:  
786 unique CDR3  
6 unique J



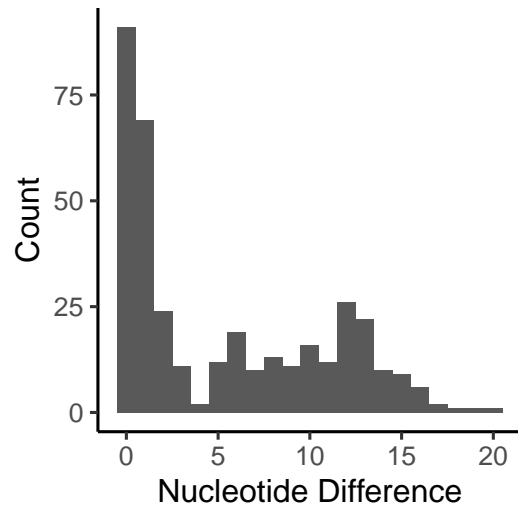
### IGHV3-49\*03\_05

995 sequences assigned  
140 (14.1%) exact matches, in which:  
93 unique CDR3  
5 unique J



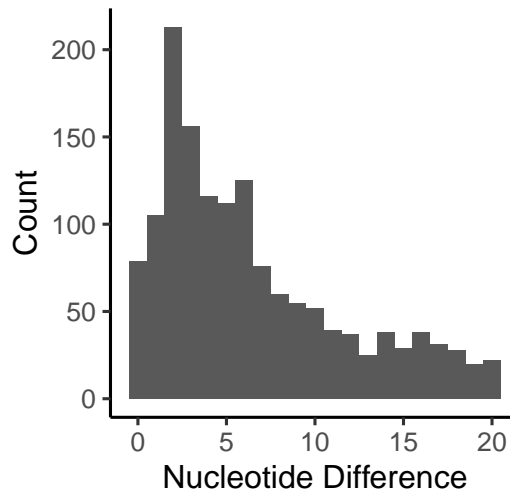
### IGHV3-43\*01

444 sequences assigned  
91 (20.5%) exact matches, in which:  
51 unique CDR3  
5 unique J



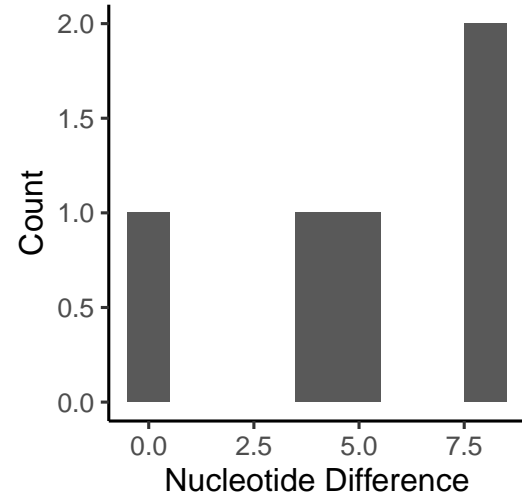
### IGHV3-48\*04

1611 sequences assigned  
79 (4.9%) exact matches, in which:  
77 unique CDR3  
6 unique J



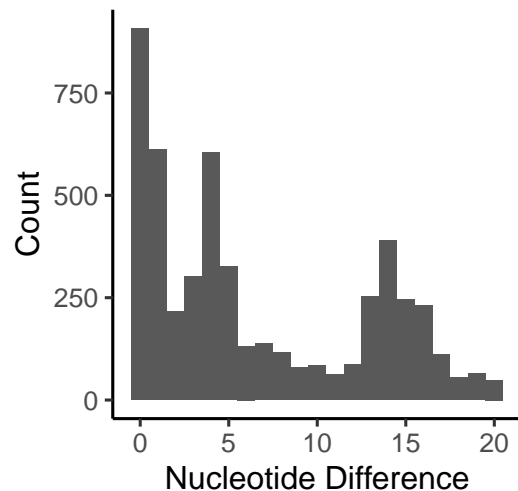
### IGHV3-52\*02

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



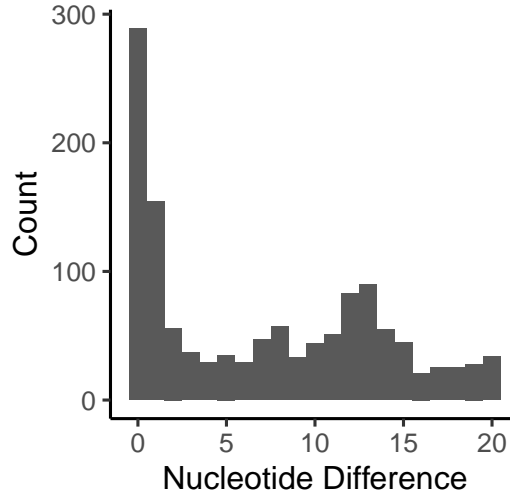
### IGHV3-48\*02

5806 sequences assigned  
908 (15.6%) exact matches, in which:  
583 unique CDR3  
6 unique J



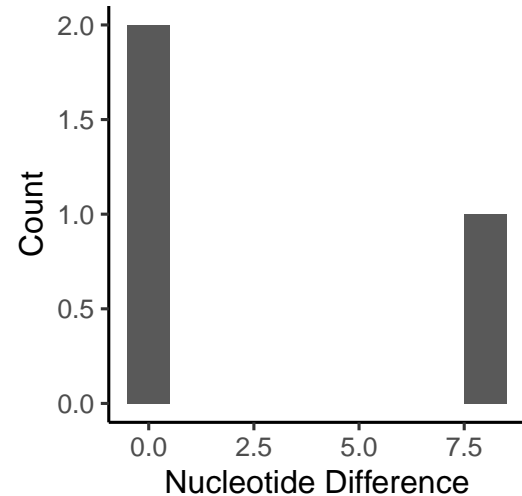
### IGHV3-49\*04

1369 sequences assigned  
289 (21.1%) exact matches, in which:  
185 unique CDR3  
6 unique J



### IGHV3-52\*01\_03

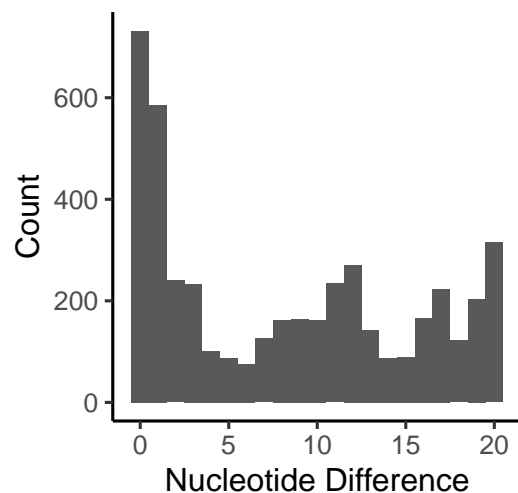
3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J





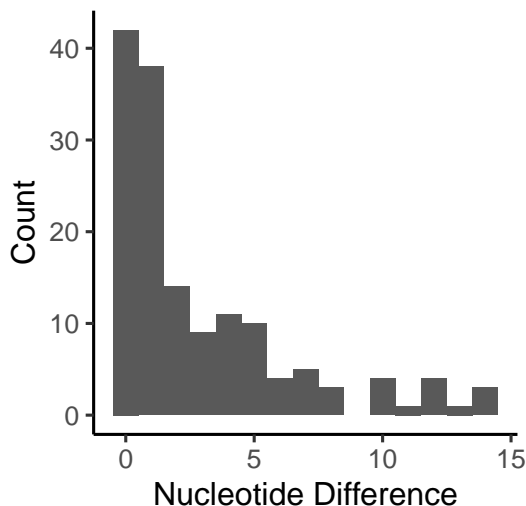
### IGHV3-53\*01\_02

6256 sequences assigned  
732 (11.7%) exact matches, in which:  
513 unique CDR3  
6 unique J



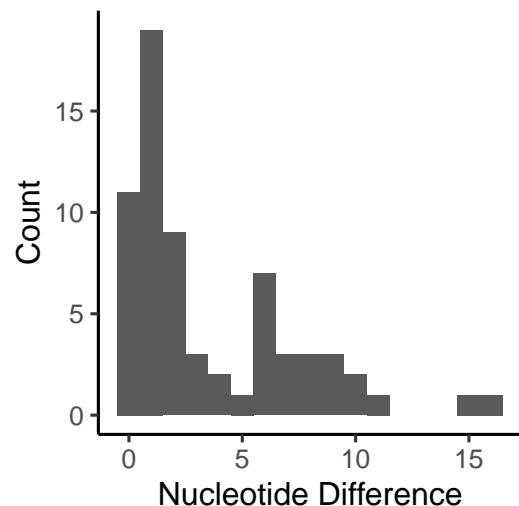
### IGHV3-64\*02\_07

150 sequences assigned  
42 (28%) exact matches, in which:  
30 unique CDR3  
5 unique J



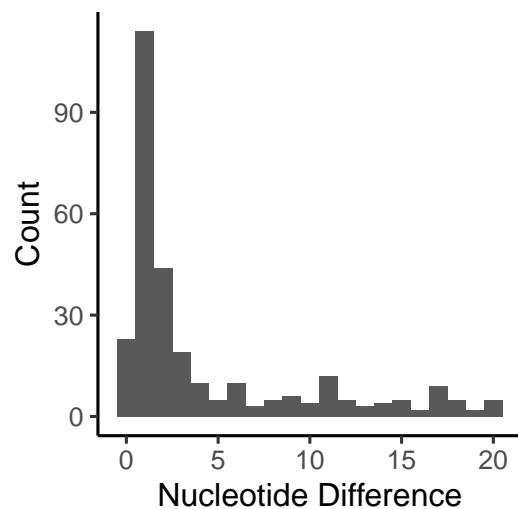
### IGHV3-66\*03

68 sequences assigned  
11 (16.2%) exact matches, in which:  
11 unique CDR3  
3 unique J



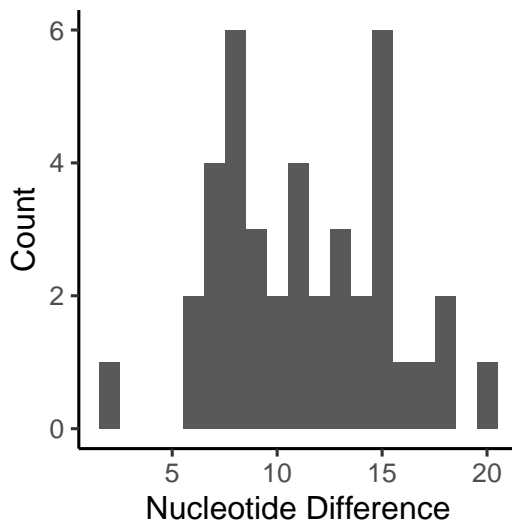
### IGHV3-53\*05\_C300T

308 sequences assigned  
23 (7.5%) exact matches, in which:  
23 unique CDR3  
3 unique J



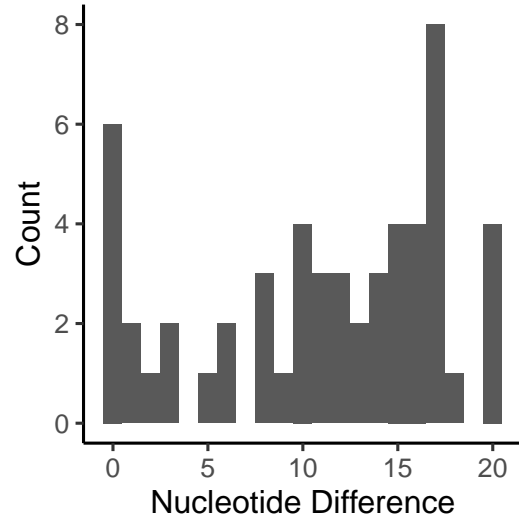
### IGHV3-66\*01

47 sequences assigned  
No exact matches.



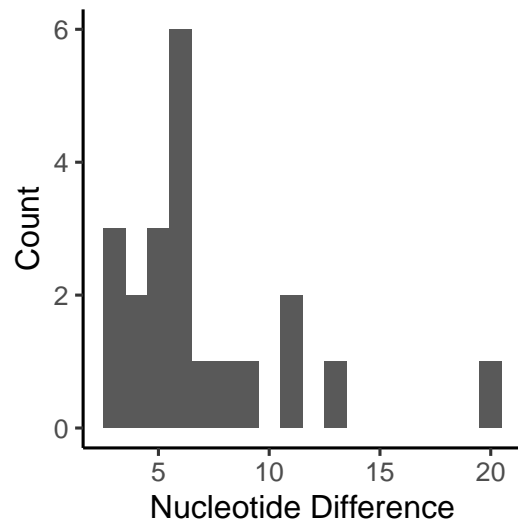
### IGHV3-69-1\*01

79 sequences assigned  
6 (7.6%) exact matches, in which:  
6 unique CDR3  
4 unique J



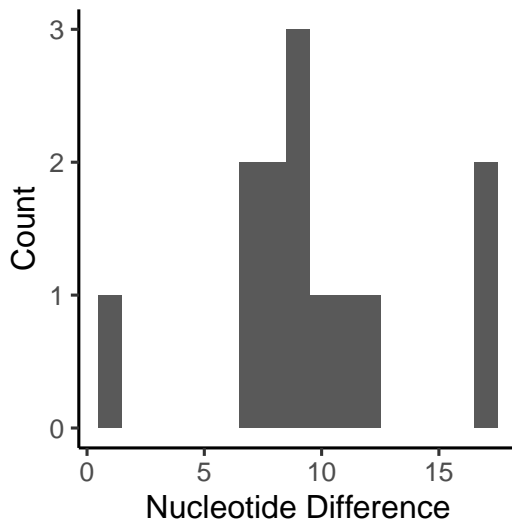
### IGHV3-64\*04

22 sequences assigned  
No exact matches.



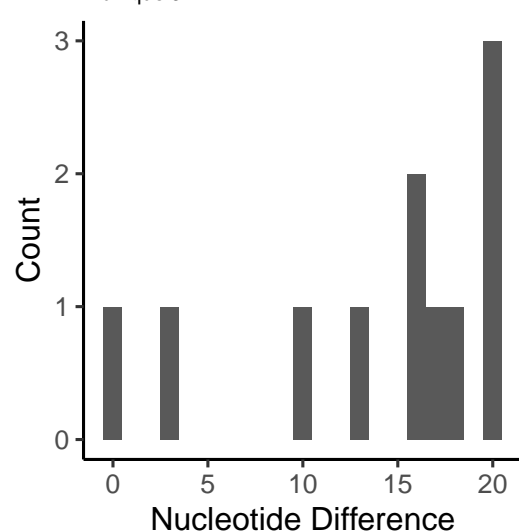
### IGHV3-66\*02

22 sequences assigned  
No exact matches.



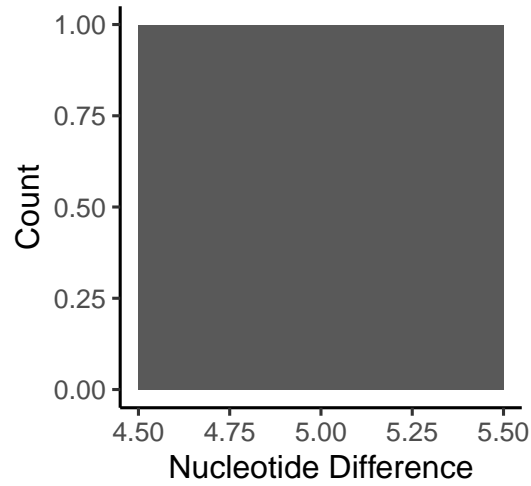
### IGHV3-69-1\*02

21 sequences assigned  
1 (4.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



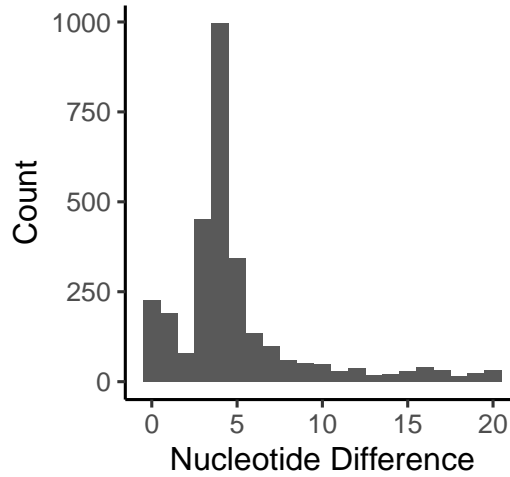
### IGHV3-71\*03

2 sequences assigned  
No exact matches.



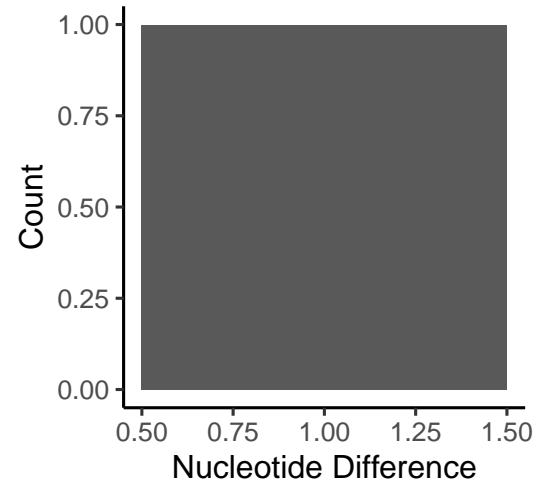
### IGHV3-73\*01\_02

3150 sequences assigned  
228 (7.2%) exact matches, in which:  
144 unique CDR3  
6 unique J



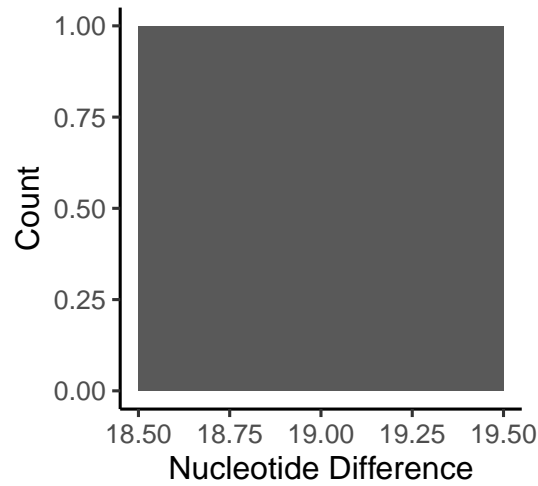
### IGHV3-64D\*09

1 sequences assigned  
No exact matches.



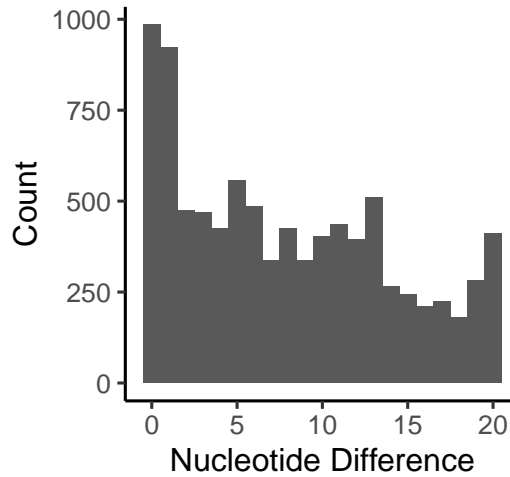
### IGHV3-71\*01\_04

3 sequences assigned  
No exact matches.



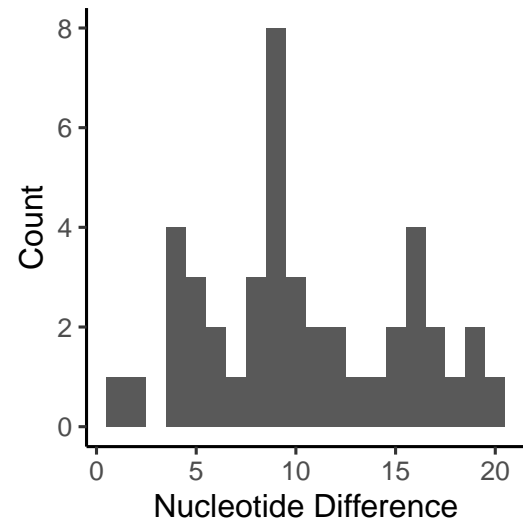
### IGHV3-74\*01\_02

10619 sequences assigned  
985 (9.3%) exact matches, in which:  
664 unique CDR3  
6 unique J



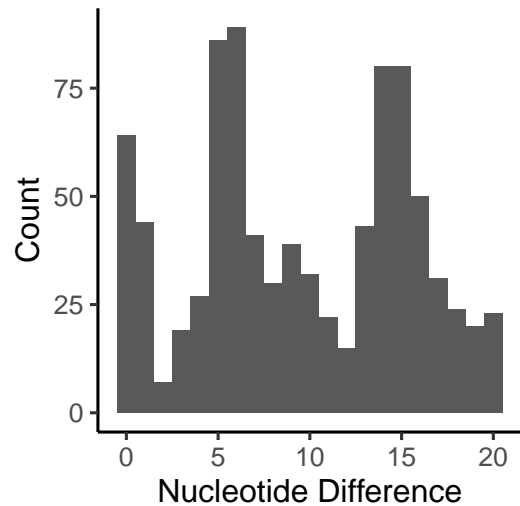
### IGHV3-NL1\*01

88 sequences assigned  
No exact matches.



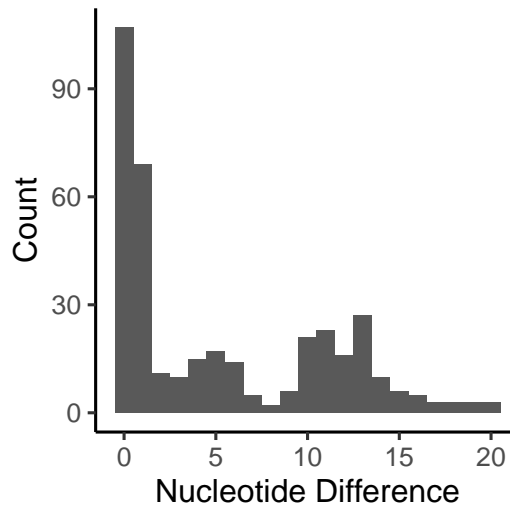
### IGHV3-72\*01

998 sequences assigned  
64 (6.4%) exact matches, in which:  
41 unique CDR3  
3 unique J



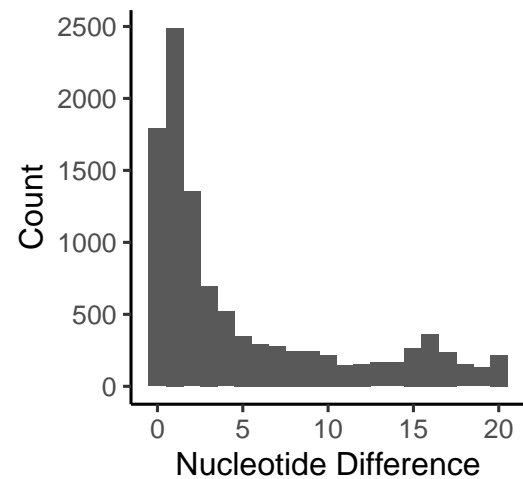
### IGHV3-43D\*04

379 sequences assigned  
107 (28.2%) exact matches, in which:  
62 unique CDR3  
5 unique J



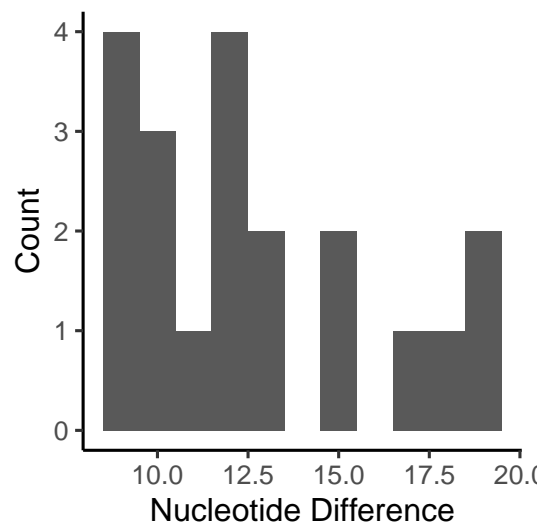
### IGHV4-4\*07

12359 sequences assigned  
1792 (14.5%) exact matches, in which:  
1469 unique CDR3  
6 unique J



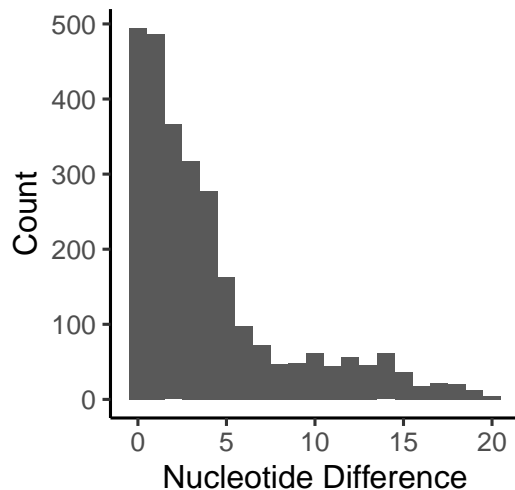
### IGHV4-28\*03

26 sequences assigned  
No exact matches.



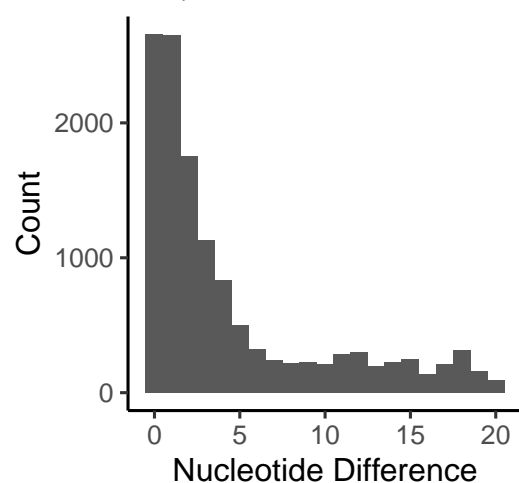
### IGHV4-30-2\*01

2939 sequences assigned  
495 (16.8%) exact matches, in which:  
379 unique CDR3  
6 unique J



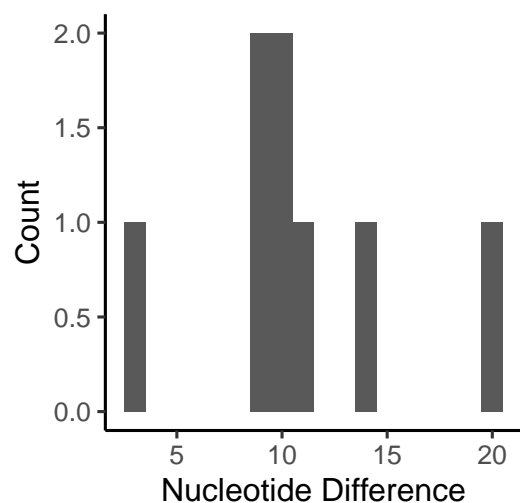
### IGHV4-34\*01\_02

14174 sequences assigned  
2656 (18.7%) exact matches, in which:  
2200 unique CDR3  
6 unique J



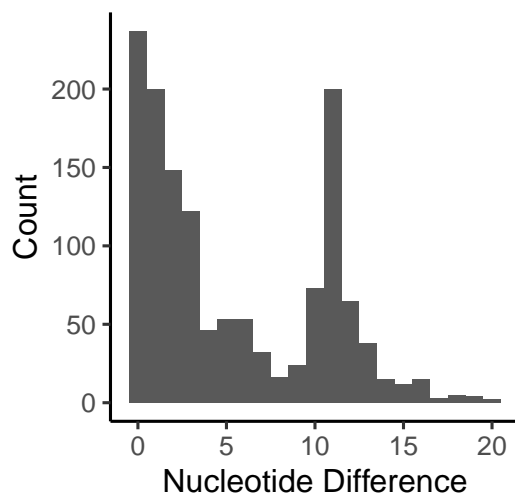
### IGHV4-28\*01\_07

12 sequences assigned  
No exact matches.



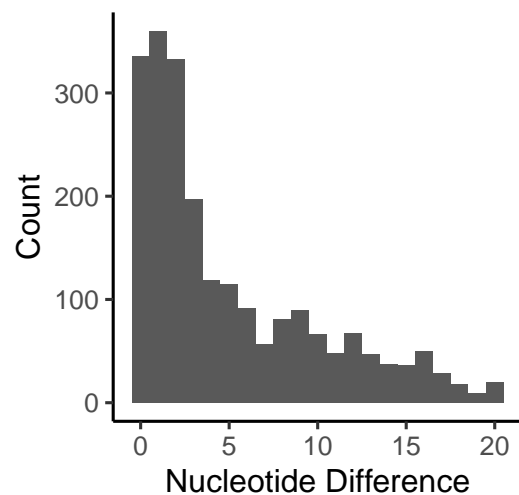
### IGHV4-31\*01

1379 sequences assigned  
237 (17.2%) exact matches, in which:  
202 unique CDR3  
6 unique J



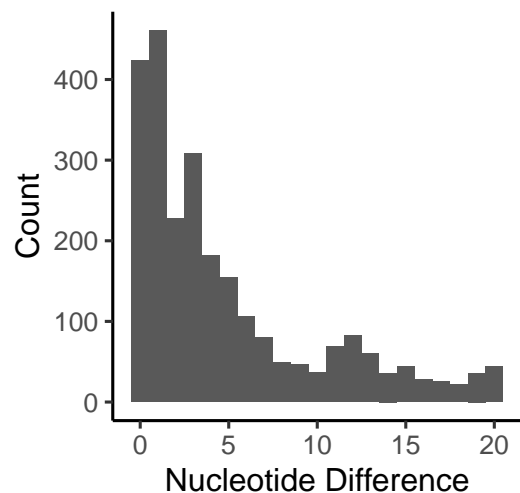
### IGHV4-38-2\*01

2332 sequences assigned  
336 (14.4%) exact matches, in which:  
291 unique CDR3  
6 unique J



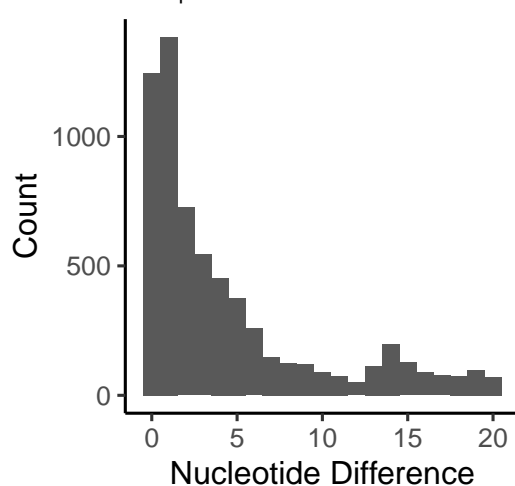
### IGHV4-30-4\*01

3173 sequences assigned  
424 (13.4%) exact matches, in which:  
373 unique CDR3  
6 unique J



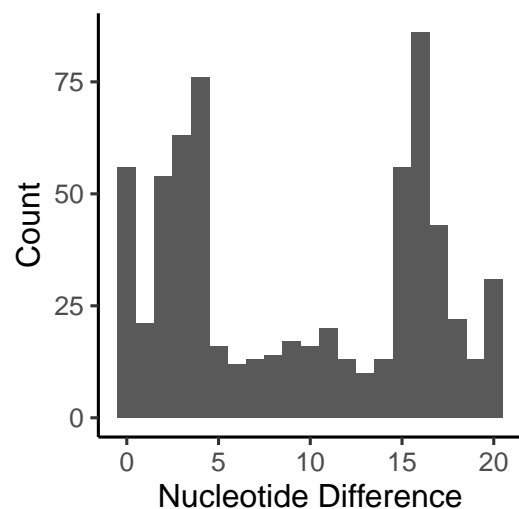
### IGHV4-31\*03\_04

7661 sequences assigned  
1246 (16.3%) exact matches, in which:  
1045 unique CDR3  
6 unique J



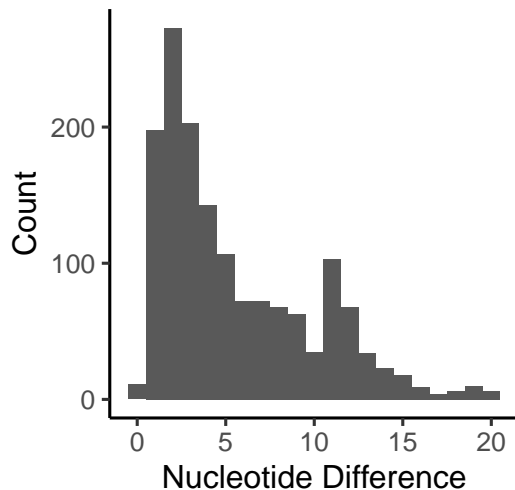
### IGHV4-38-2\*02

1096 sequences assigned  
56 (5.1%) exact matches, in which:  
53 unique CDR3  
6 unique J



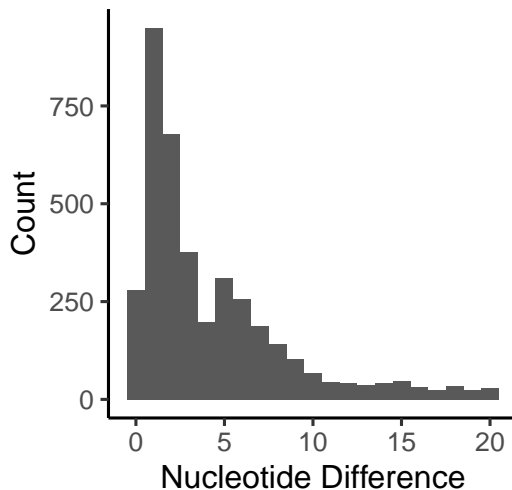
### IGHV4-39\*07

1602 sequences assigned  
11 (0.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



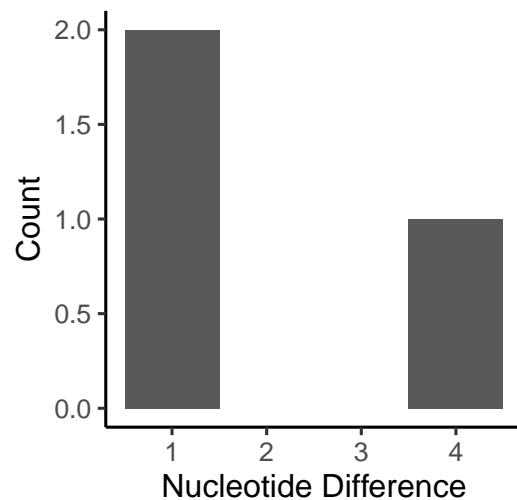
### IGHV4-59\*12

4987 sequences assigned  
280 (5.6%) exact matches, in which:  
274 unique CDR3  
6 unique J



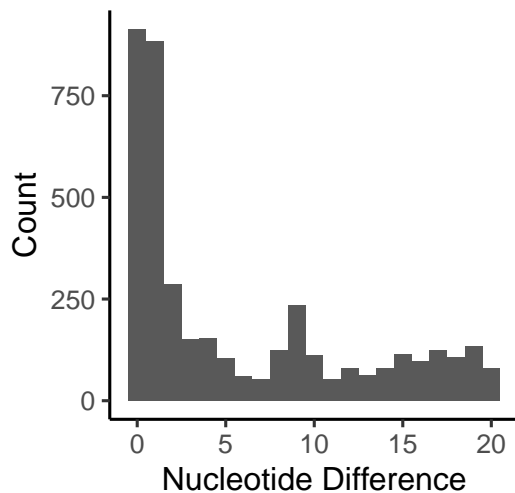
### IGHV5-10-1\*01\_03

4 sequences assigned  
No exact matches.



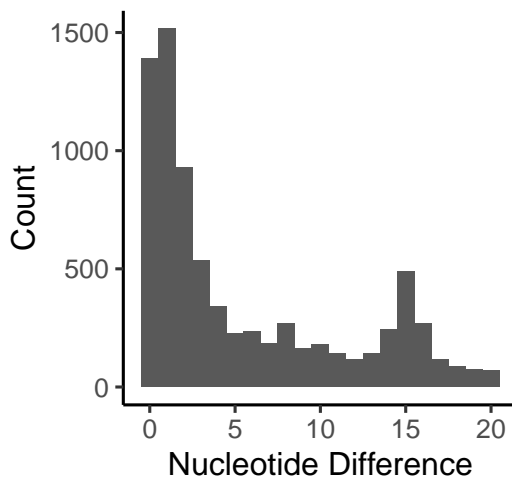
### IGHV4-39\*01\_05

4450 sequences assigned  
914 (20.5%) exact matches, in which:  
695 unique CDR3  
6 unique J



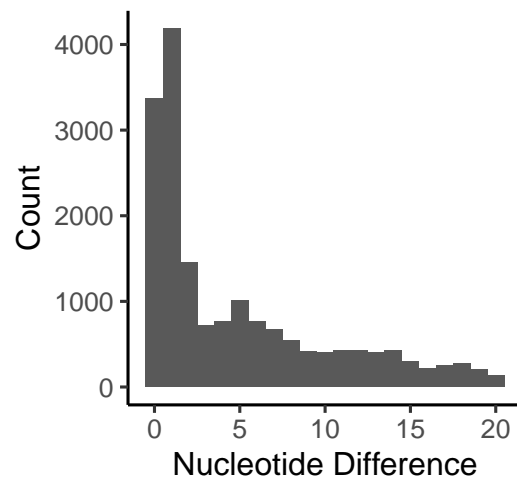
### IGHV4-61\*01

8660 sequences assigned  
1391 (16.1%) exact matches, in which:  
1198 unique CDR3  
6 unique J



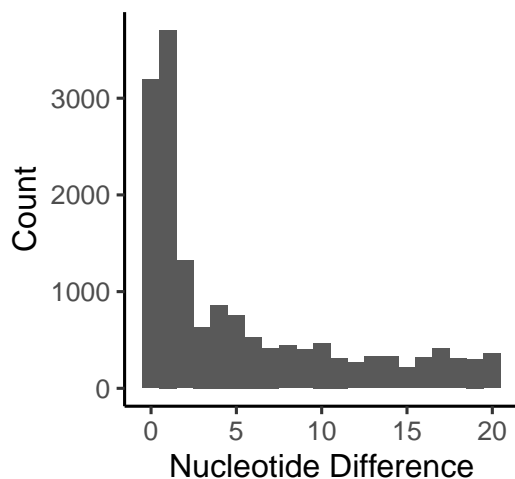
### IGHV5-51\*01\_03

19698 sequences assigned  
3364 (17.1%) exact matches, in which:  
1879 unique CDR3  
6 unique J



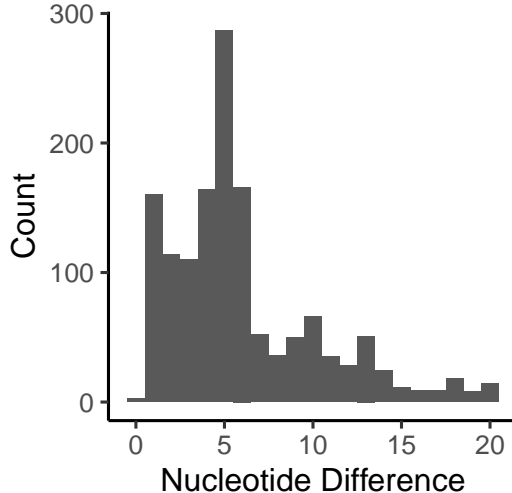
### IGHV4-59\*01\_07

25382 sequences assigned  
3195 (12.6%) exact matches, in which:  
2557 unique CDR3  
6 unique J



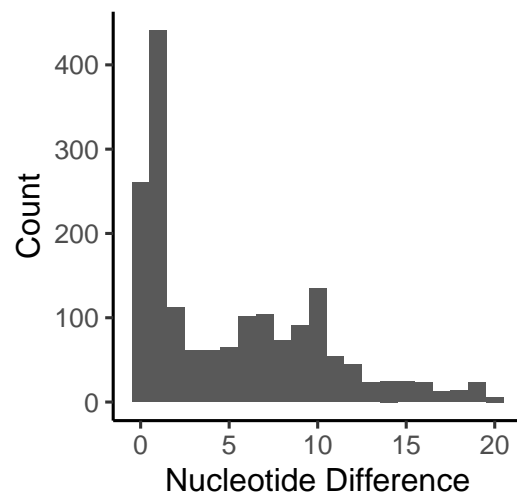
### IGHV4-61\*08

1653 sequences assigned  
3 (0.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



### IGHV6-1\*01\_02

1902 sequences assigned  
260 (13.7%) exact matches, in which:  
201 unique CDR3  
6 unique J





Novel sequence(s)IGHV1–69\*01\_12\_13\_G238AIGHV3–48\*03\_T303G 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)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s)IGHV3–30–3\*01\_T288CIGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3–30\*03\_T288C 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.

Warning – no inferred sequences found.

Warning – no inferred sequences found.