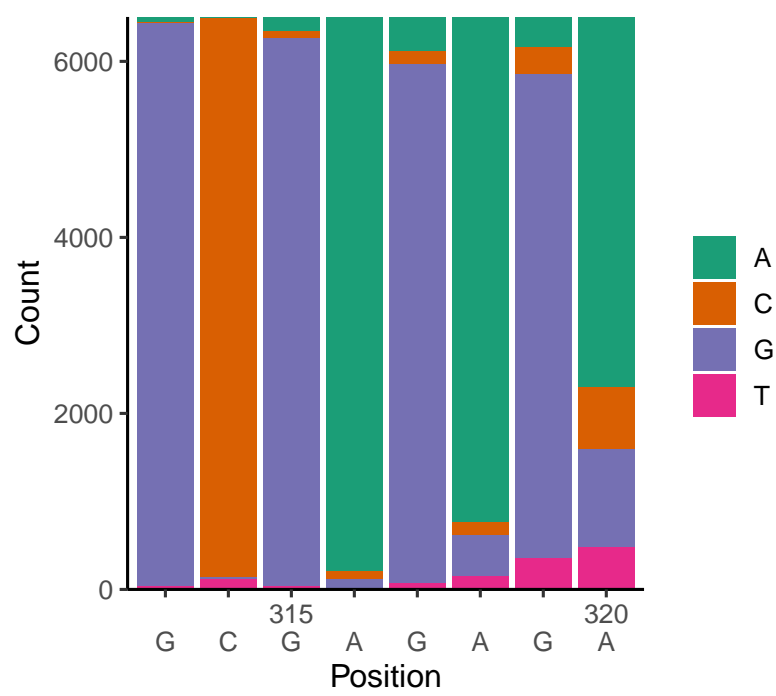
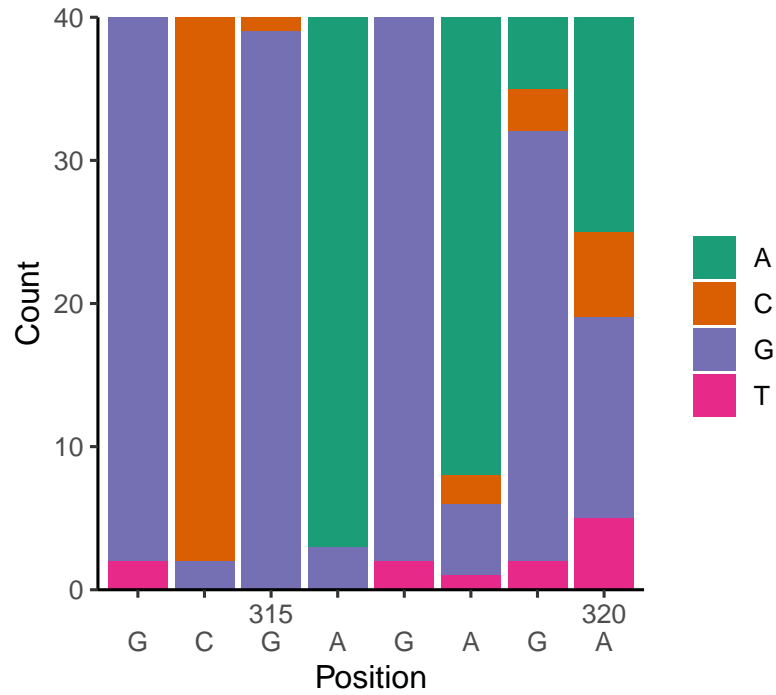


Gene IGHV3-33\*01\_G75C



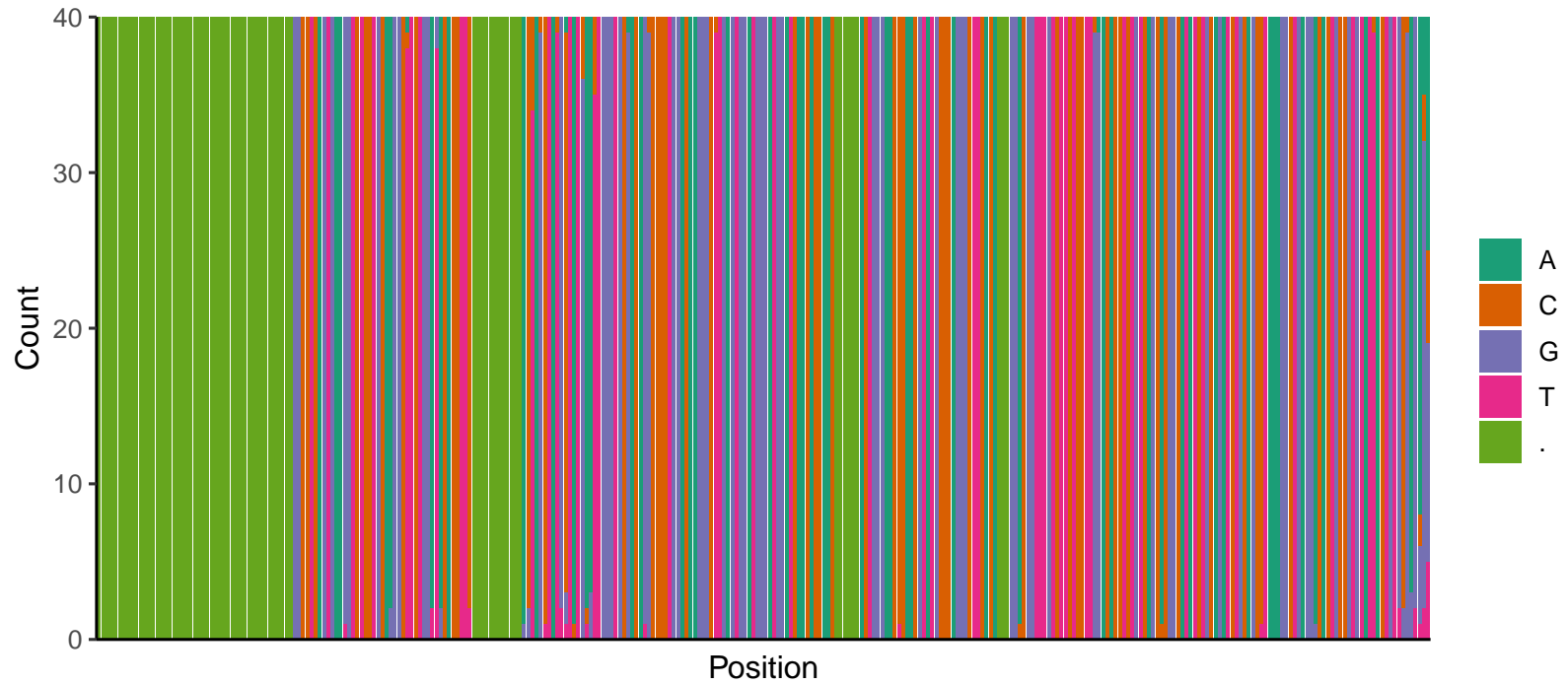
Gene IGHV7-4-1\*01\_T63C



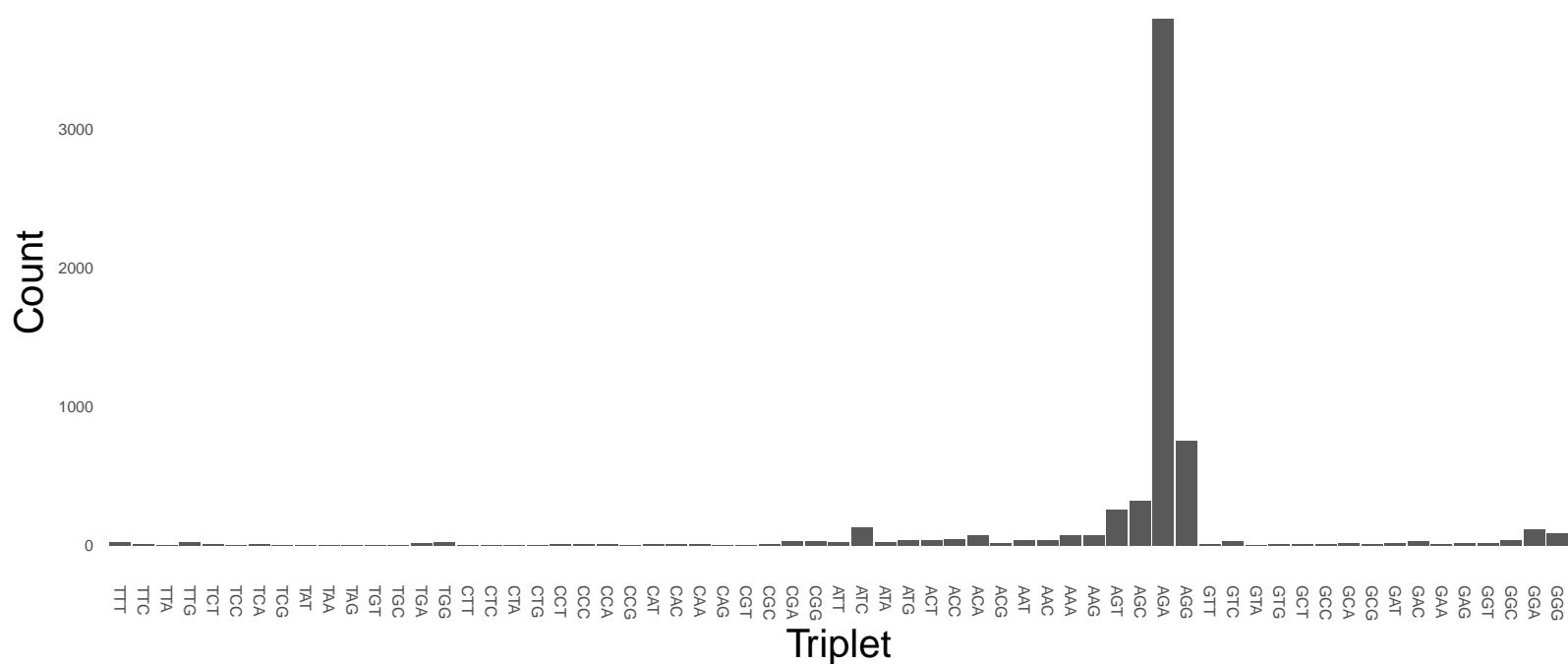
Gene IGHV3-33\*01\_G75C



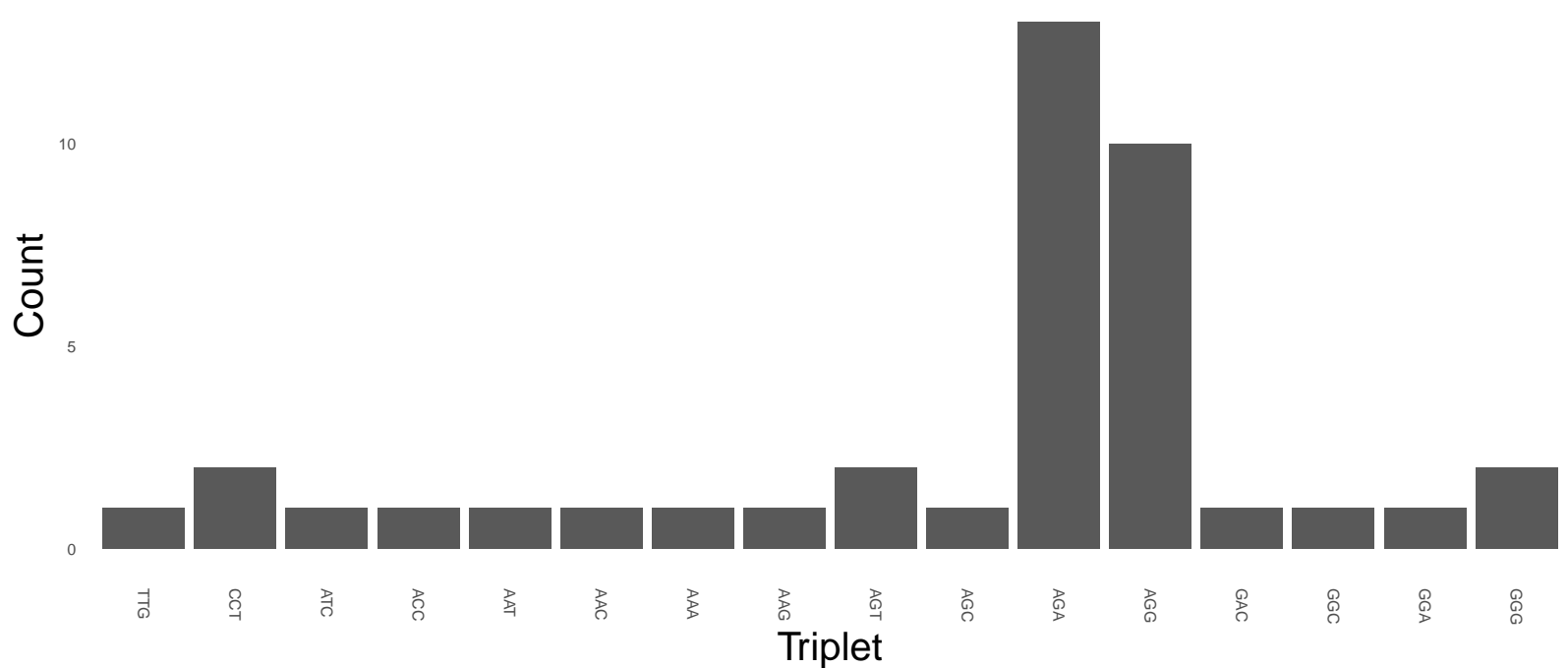
Gene IGHV7-4-1\*01\_T63C



IGHV3-33\*01\_G75C- Final 3 nucleotides as a triplet

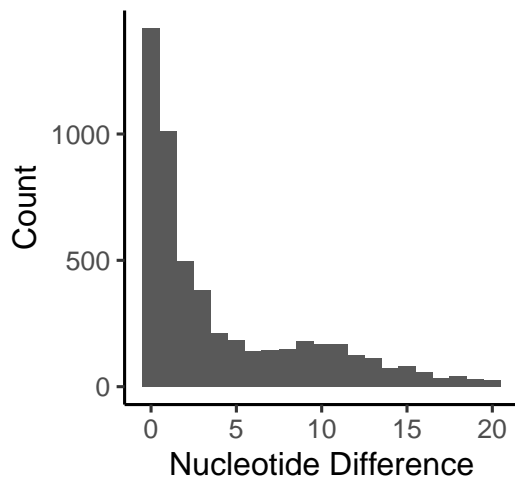


IGHV7-4-1\*01\_T63C- Final 3 nucleotides as a triplet



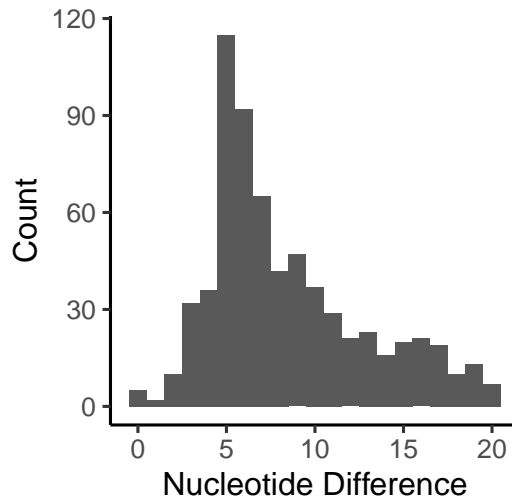
### IGHV1-2\*04

5440 sequences assigned  
1418 (26.1%) exact matches, in which:  
1325 unique CDR3  
6 unique J



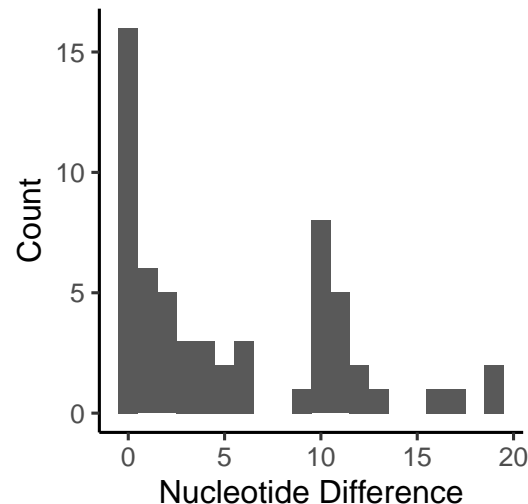
### IGHV1-8\*02

707 sequences assigned  
5 (0.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



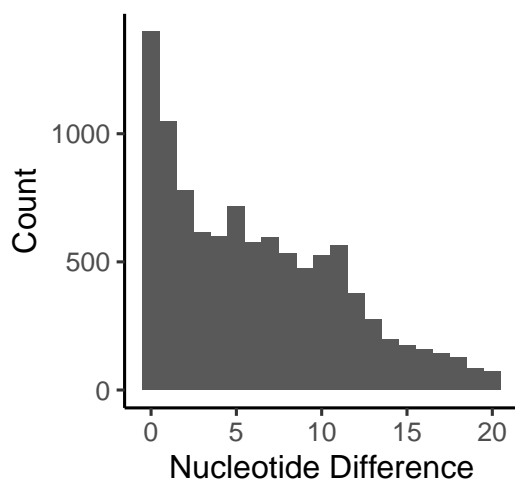
### IGHV1-45\*02

59 sequences assigned  
16 (27.1%) exact matches, in which:  
14 unique CDR3  
4 unique J



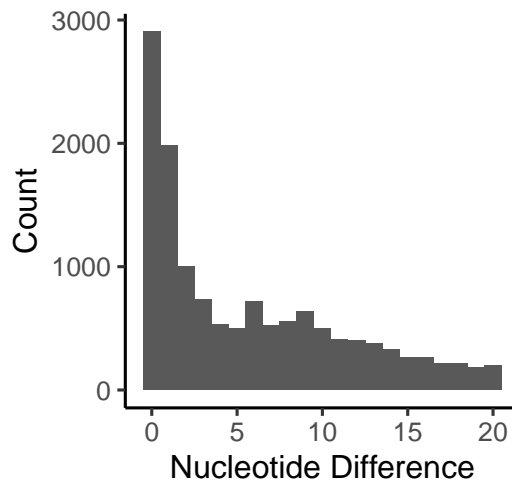
### IGHV1-3\*01\_05

10654 sequences assigned  
1398 (13.1%) exact matches, in which:  
1283 unique CDR3  
6 unique J



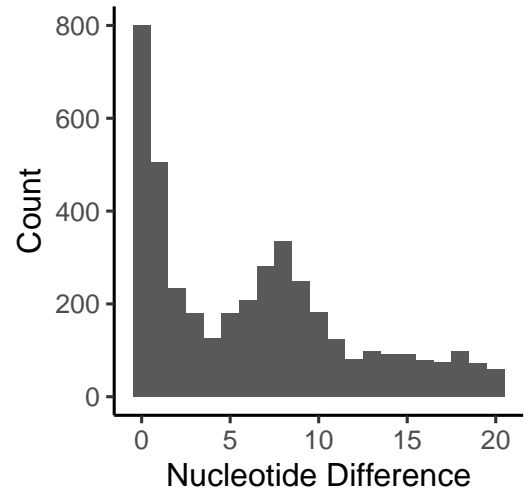
### IGHV1-18\*01

14393 sequences assigned  
2905 (20.2%) exact matches, in which:  
2698 unique CDR3  
6 unique J



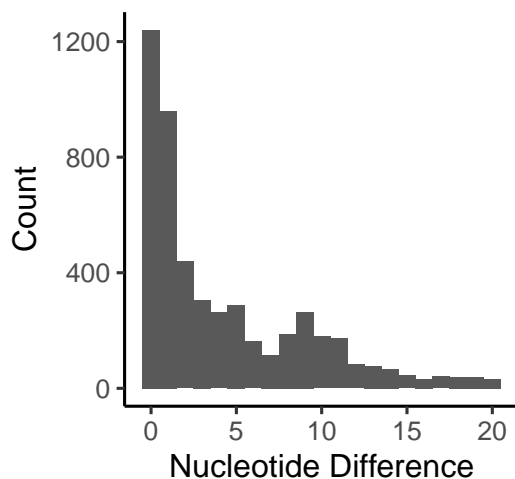
### IGHV1-46\*01

4560 sequences assigned  
801 (17.6%) exact matches, in which:  
760 unique CDR3  
6 unique J



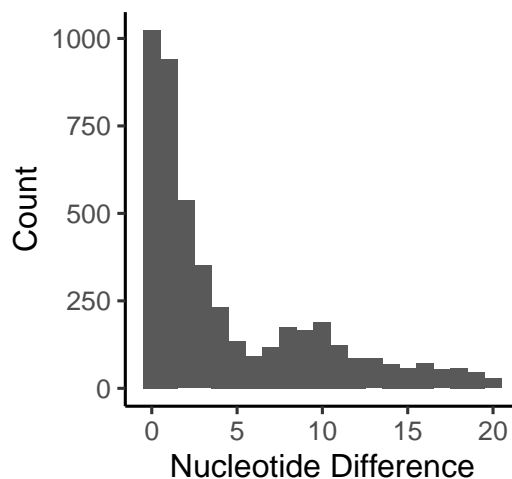
### IGHV1-8\*01

5237 sequences assigned  
1240 (23.7%) exact matches, in which:  
1136 unique CDR3  
6 unique J



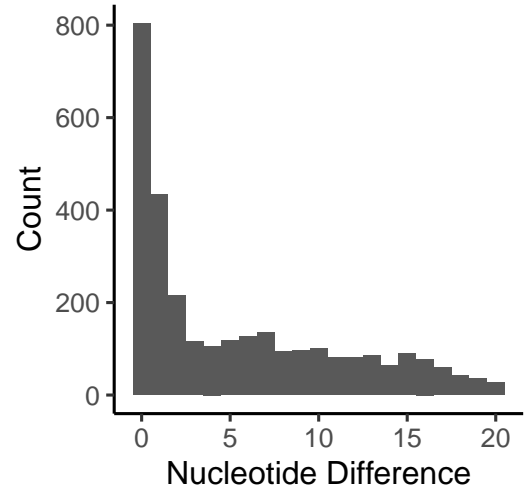
### IGHV1-24\*01

4755 sequences assigned  
1024 (21.5%) exact matches, in which:  
948 unique CDR3  
6 unique J



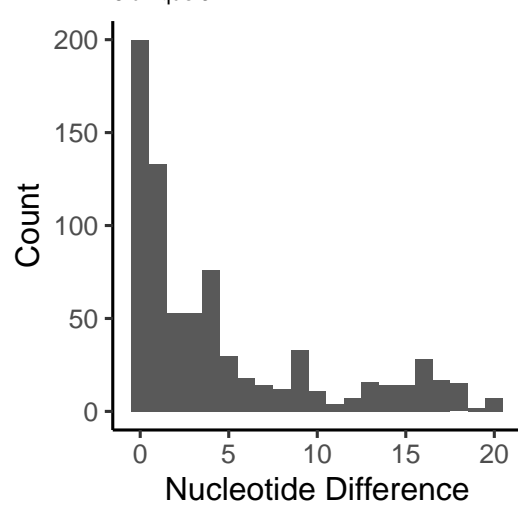
### IGHV1-46\*04

3245 sequences assigned  
804 (24.8%) exact matches, in which:  
764 unique CDR3  
6 unique J



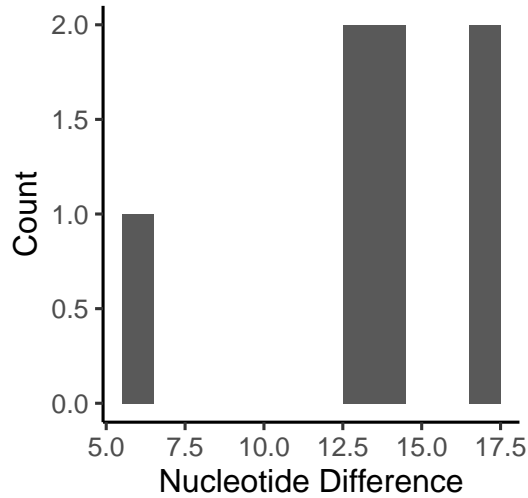
### IGHV1–58\*02

808 sequences assigned  
200 (24.8%) exact matches, in which:  
189 unique CDR3  
6 unique J



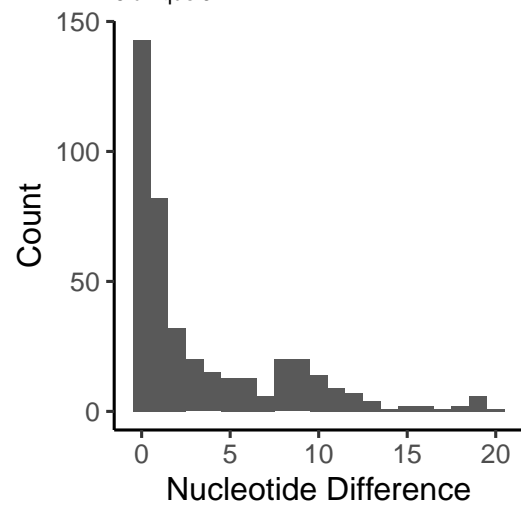
### IGHV1–69D\*01

9 sequences assigned  
No exact matches.



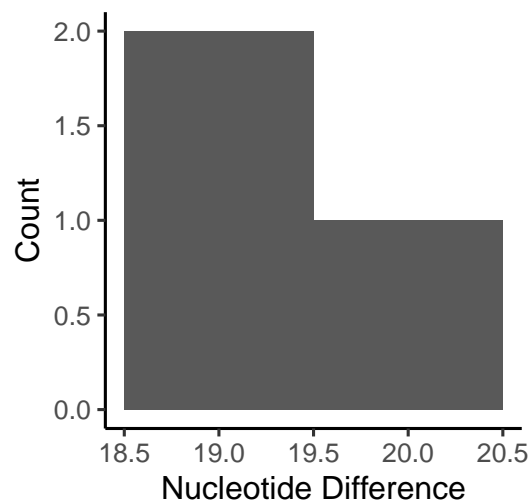
### IGHV2–26\*01

440 sequences assigned  
143 (32.5%) exact matches, in which:  
134 unique CDR3  
6 unique J



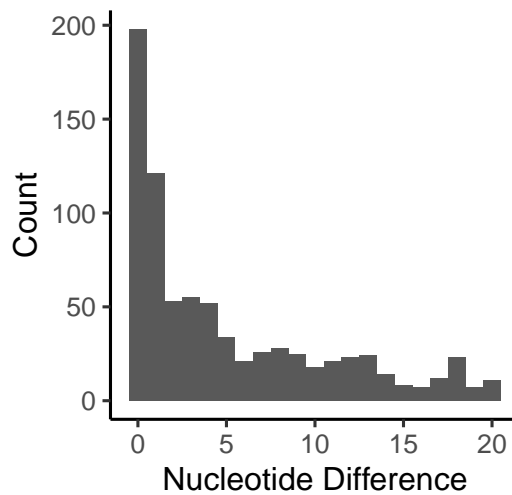
### IGHV1–69–2\*01

3 sequences assigned  
No exact matches.



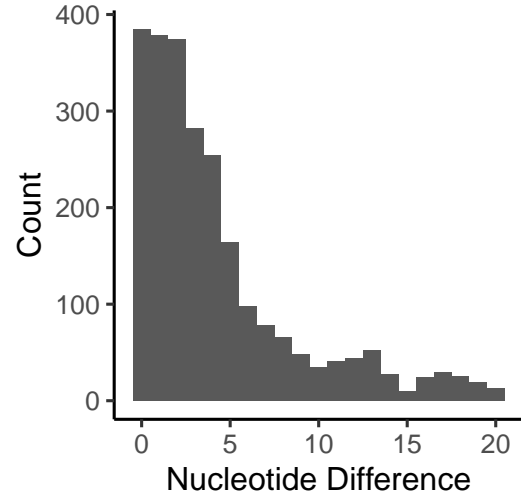
### IGHV2–5\*01

818 sequences assigned  
198 (24.2%) exact matches, in which:  
195 unique CDR3  
6 unique J



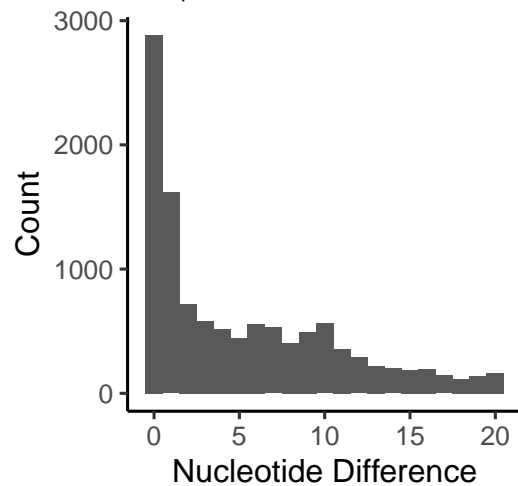
### IGHV2–70\*11\_15

2540 sequences assigned  
385 (15.2%) exact matches, in which:  
360 unique CDR3  
6 unique J



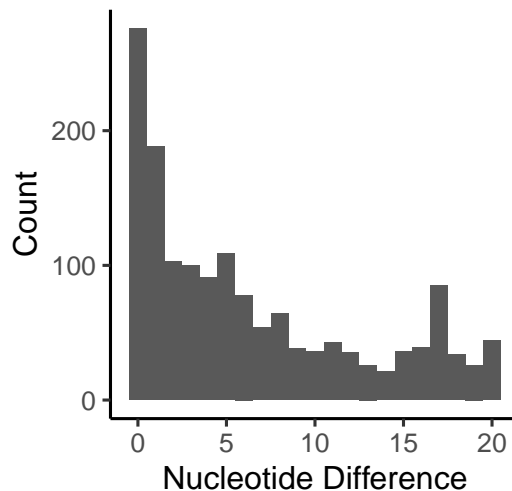
### IGHV1–69\*04\_09

12279 sequences assigned  
2884 (23.5%) exact matches, in which:  
2761 unique CDR3  
6 unique J



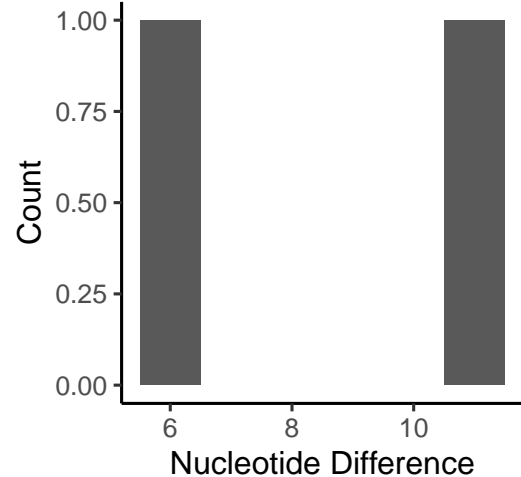
### IGHV2–5\*02

1693 sequences assigned  
276 (16.3%) exact matches, in which:  
254 unique CDR3  
6 unique J



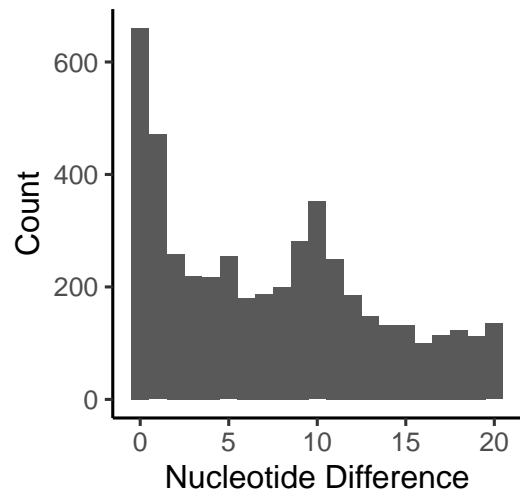
### IGHV2–70D\*04

3 sequences assigned  
No exact matches.



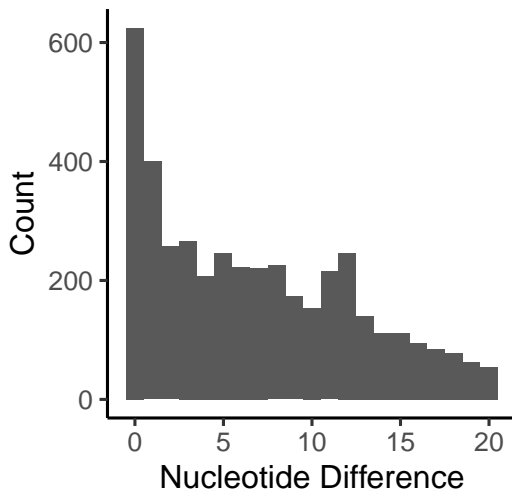
### IGHV3-7\*01

5103 sequences assigned  
661 (13%) exact matches, in which:  
614 unique CDR3  
6 unique J



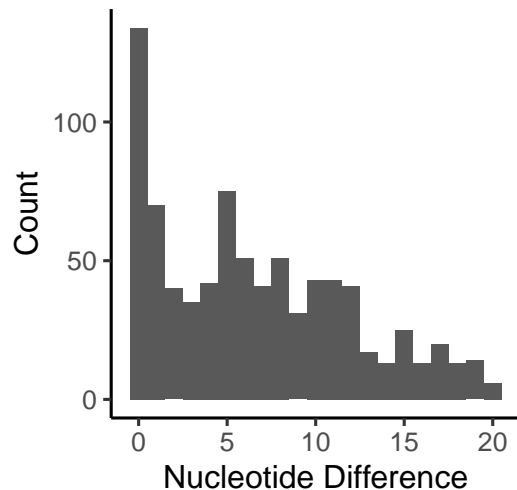
### IGHV3-9\*01

4518 sequences assigned  
625 (13.8%) exact matches, in which:  
586 unique CDR3  
6 unique J



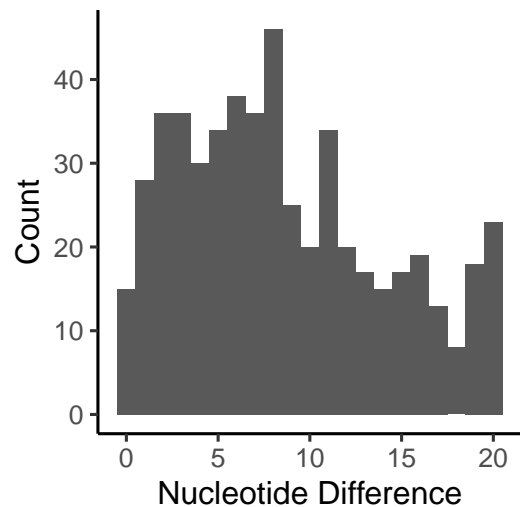
### IGHV3-11\*06

891 sequences assigned  
134 (15%) exact matches, in which:  
127 unique CDR3  
6 unique J



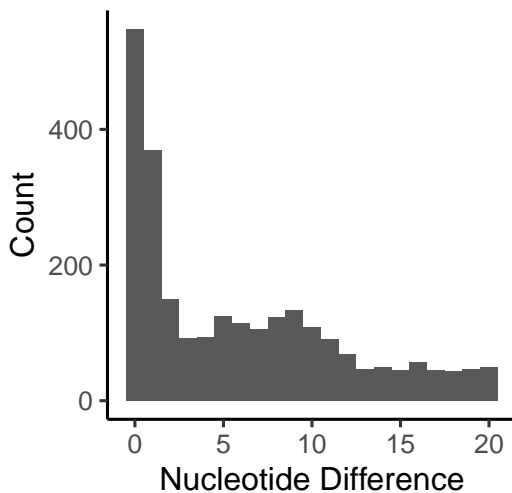
### IGHV3-7\*03

589 sequences assigned  
15 (2.5%) exact matches, in which:  
15 unique CDR3  
4 unique J



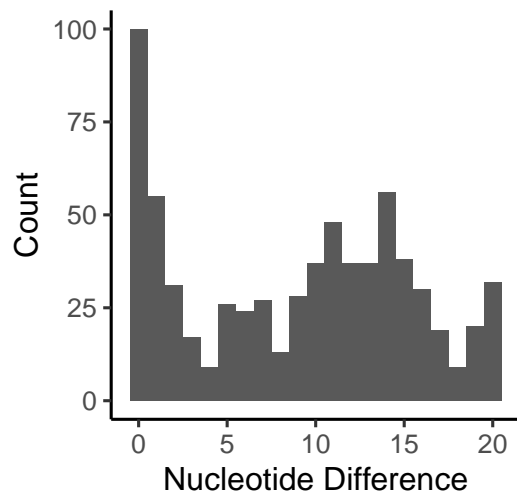
### IGHV3-11\*01

2829 sequences assigned  
548 (19.4%) exact matches, in which:  
519 unique CDR3  
6 unique J



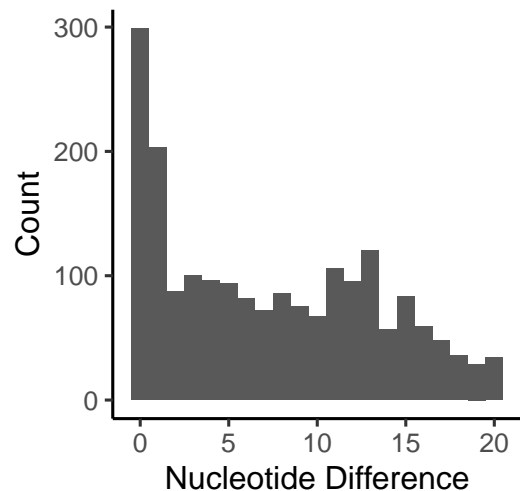
### IGHV3-13\*01

843 sequences assigned  
100 (11.9%) exact matches, in which:  
94 unique CDR3  
5 unique J



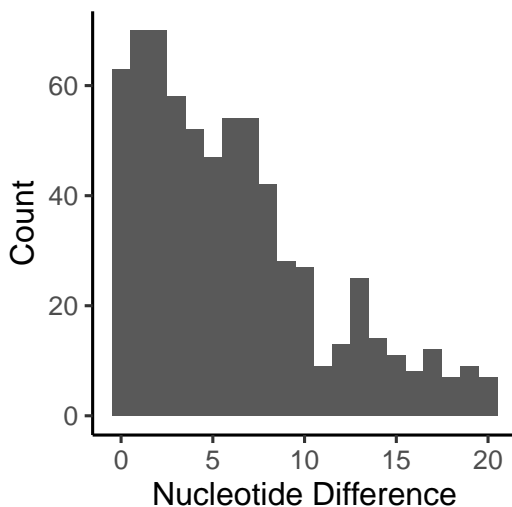
### IGHV3-7\*04

2119 sequences assigned  
299 (14.1%) exact matches, in which:  
284 unique CDR3  
6 unique J



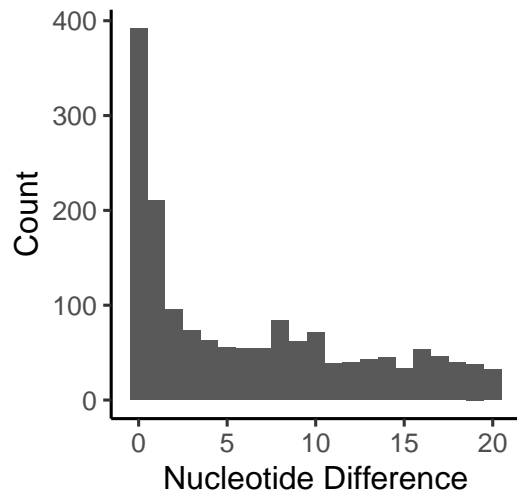
### IGHV3-11\*04

707 sequences assigned  
63 (8.9%) exact matches, in which:  
63 unique CDR3  
6 unique J



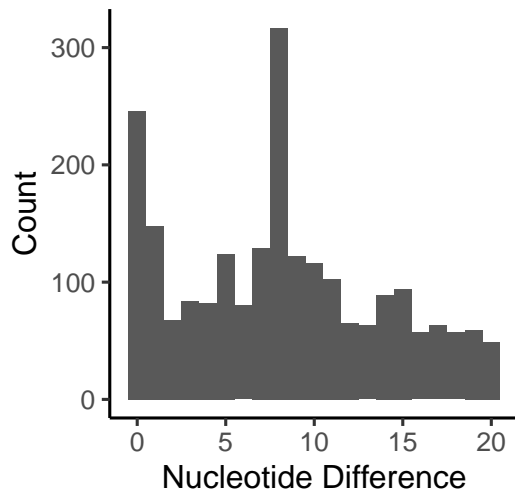
### IGHV3-15\*07

1814 sequences assigned  
392 (21.6%) exact matches, in which:  
376 unique CDR3  
6 unique J



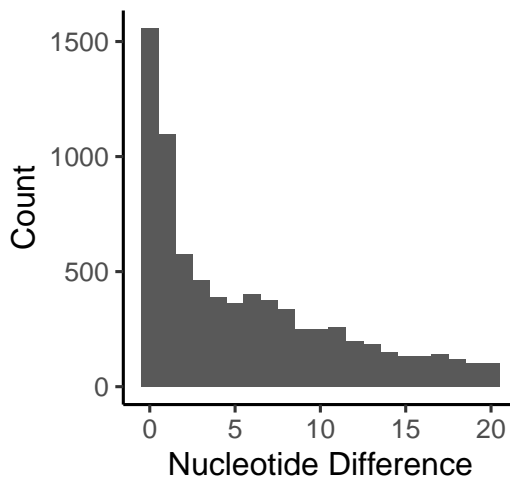
### IGHV3-15\*01\_02

2728 sequences assigned  
246 (9%) exact matches, in which:  
241 unique CDR3  
6 unique J



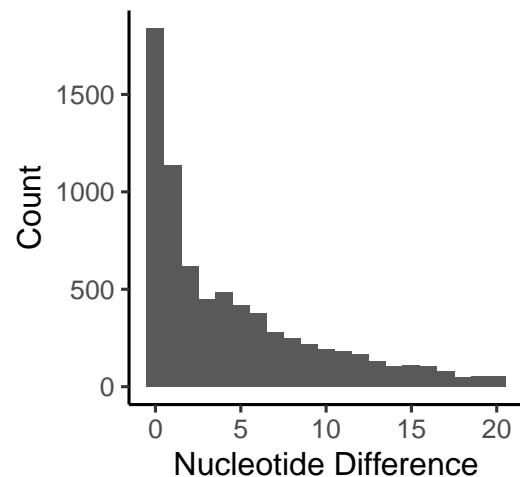
### IGHV3-21\*01\_02

8800 sequences assigned  
1557 (17.7%) exact matches, in which:  
1455 unique CDR3  
6 unique J



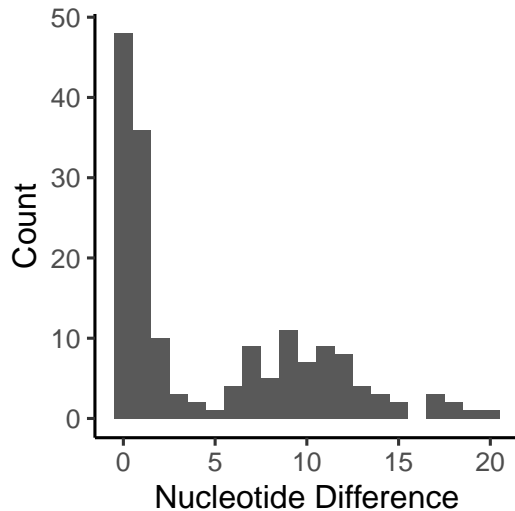
### IGHV3-33\*01

7657 sequences assigned  
1839 (24%) exact matches, in which:  
1751 unique CDR3  
6 unique J



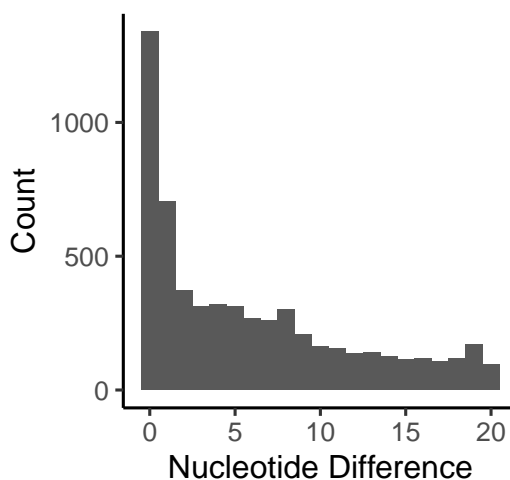
### IGHV3-20\*01\_02

170 sequences assigned  
48 (28.2%) exact matches, in which:  
47 unique CDR3  
5 unique J



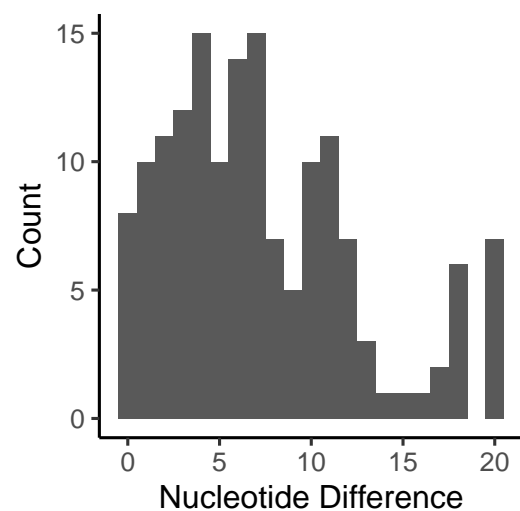
### IGHV3-30-3\*01

6522 sequences assigned  
1339 (20.5%) exact matches, in which:  
1283 unique CDR3  
6 unique J



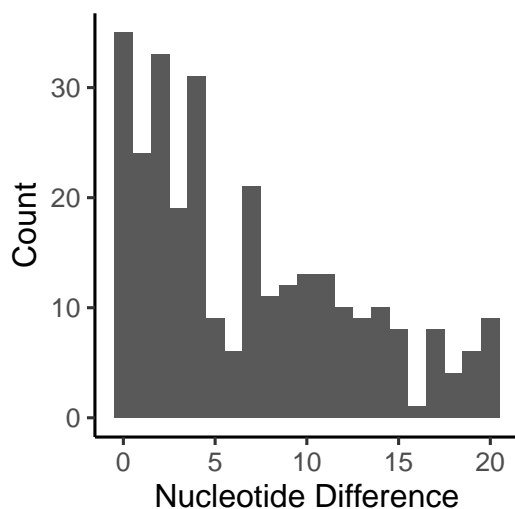
### IGHV3-33\*05

227 sequences assigned  
8 (3.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



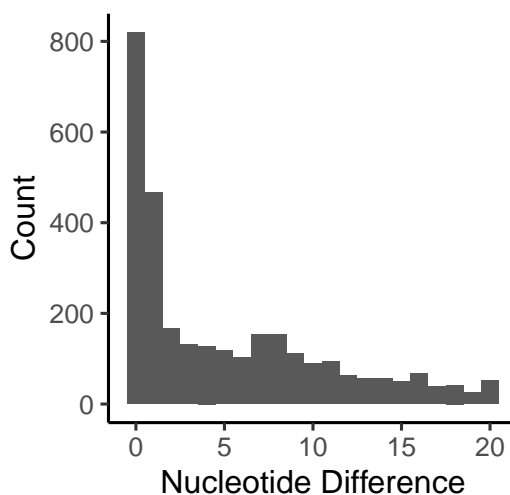
### IGHV3-20\*03\_04

365 sequences assigned  
35 (9.6%) exact matches, in which:  
32 unique CDR3  
3 unique J



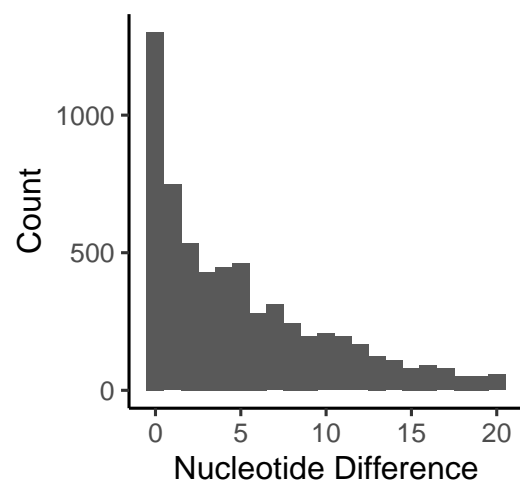
### IGHV3-30\*03

3239 sequences assigned  
820 (25.3%) exact matches, in which:  
761 unique CDR3  
6 unique J



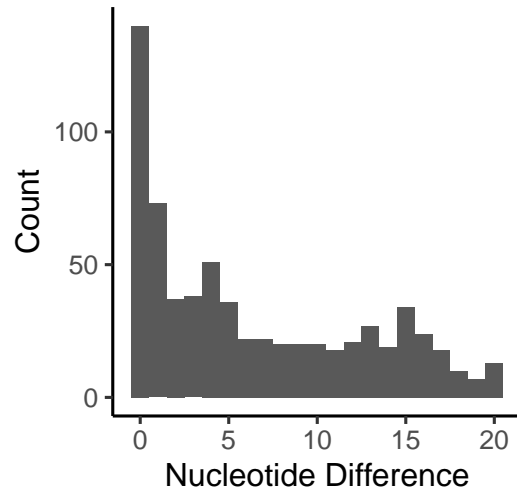
### IGHV3-33\*01\_G75C

6505 sequences assigned  
1302 (20%) exact matches, in which:  
1251 unique CDR3  
6 unique J



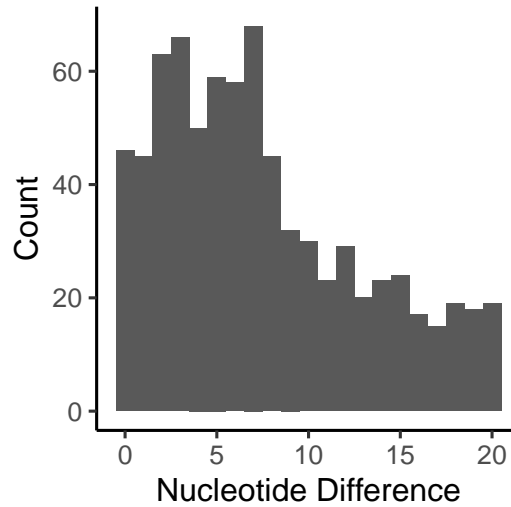
### IGHV3-43\*01

797 sequences assigned  
140 (17.6%) exact matches, in which:  
135 unique CDR3  
6 unique J



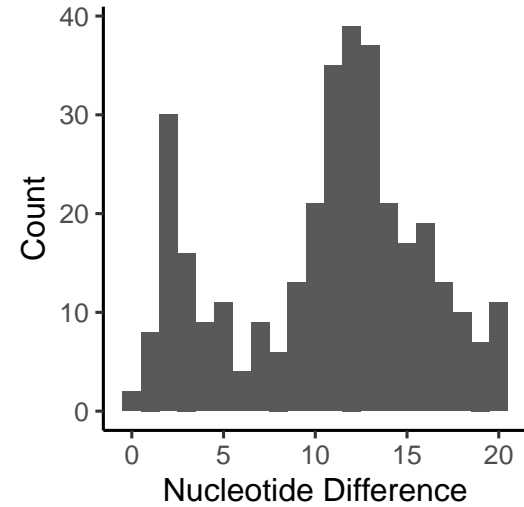
### IGHV3-48\*04

849 sequences assigned  
46 (5.4%) exact matches, in which:  
46 unique CDR3  
6 unique J



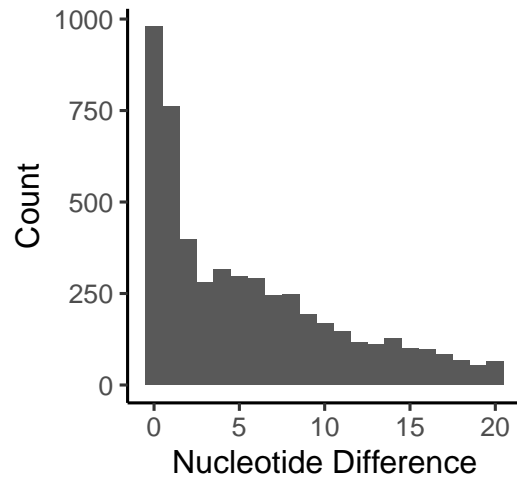
### IGHV3-53\*05

377 sequences assigned  
2 (0.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



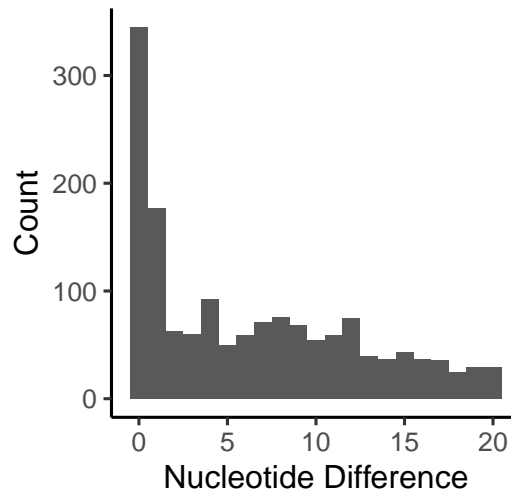
### IGHV3-48\*01

5418 sequences assigned  
979 (18.1%) exact matches, in which:  
890 unique CDR3  
6 unique J



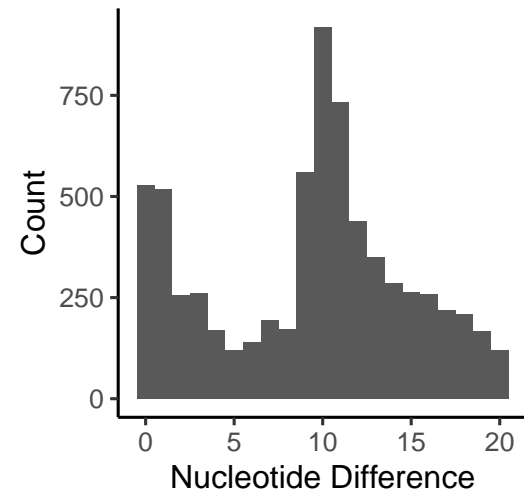
### IGHV3-49\*03\_05

1756 sequences assigned  
345 (19.6%) exact matches, in which:  
325 unique CDR3  
6 unique J



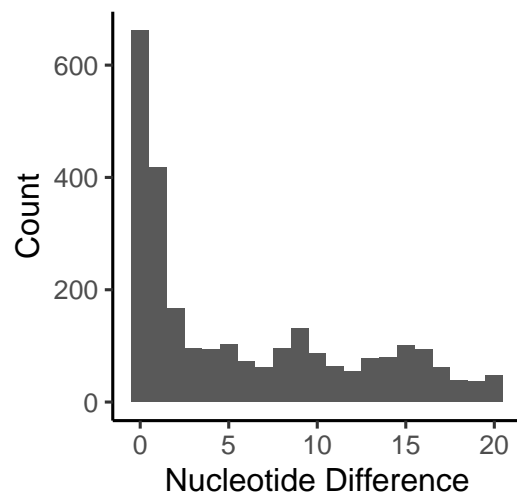
### IGHV3-53\*01\_02

7755 sequences assigned  
528 (6.8%) exact matches, in which:  
477 unique CDR3  
6 unique J



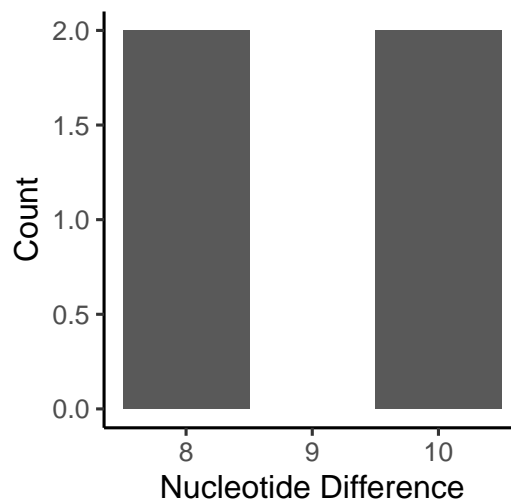
### IGHV3-48\*02

2989 sequences assigned  
662 (22.1%) exact matches, in which:  
607 unique CDR3  
6 unique J



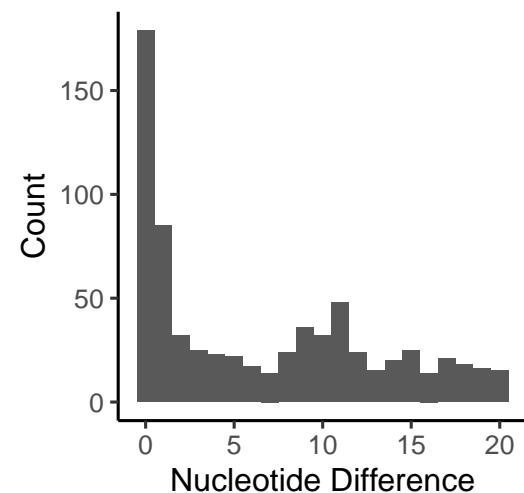
### IGHV3-52\*01\_03

4 sequences assigned  
No exact matches.



### IGHV3-64\*01

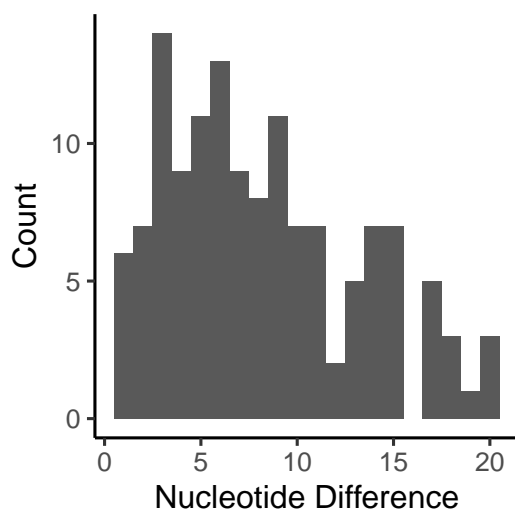
763 sequences assigned  
179 (23.5%) exact matches, in which:  
166 unique CDR3  
6 unique J





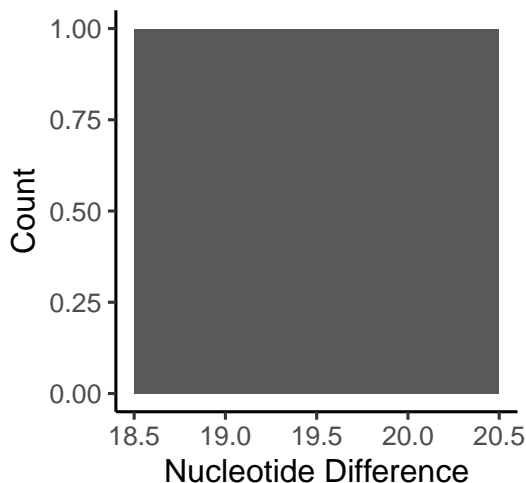
### IGHV3-64\*04

144 sequences assigned  
No exact matches.



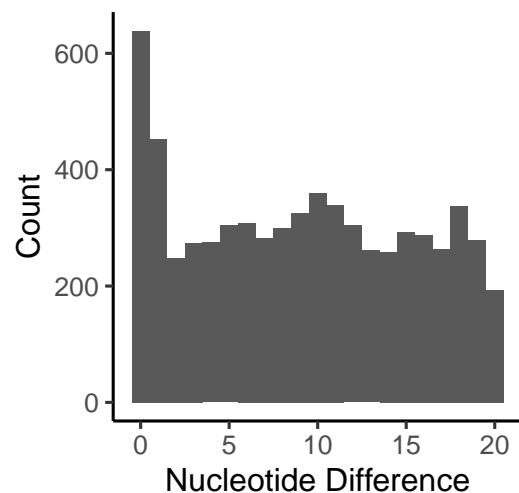
### IGHV3-71\*01\_04

26 sequences assigned  
No exact matches.



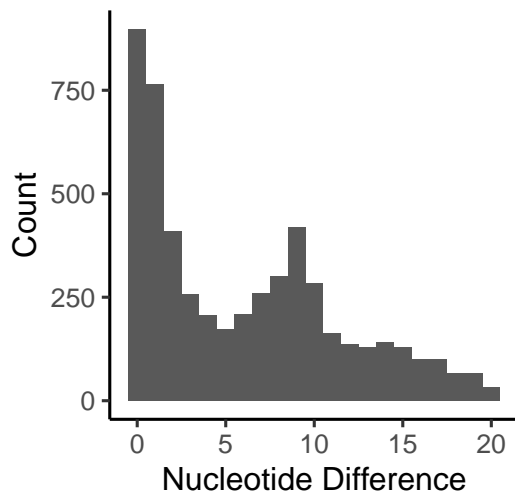
### IGHV3-74\*01\_02

7534 sequences assigned  
639 (8.5%) exact matches, in which:  
594 unique CDR3  
6 unique J



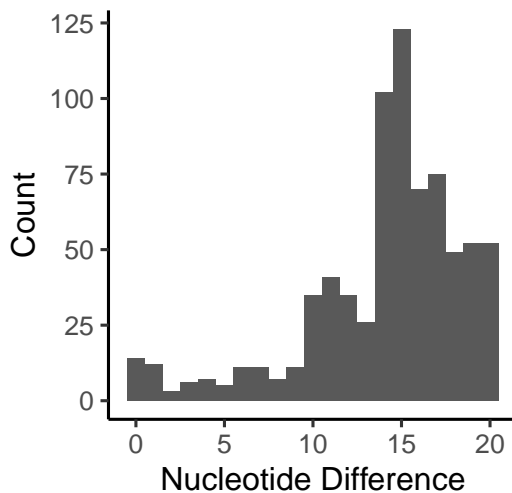
### IGHV3-66\*01

5629 sequences assigned  
898 (16%) exact matches, in which:  
845 unique CDR3  
6 unique J



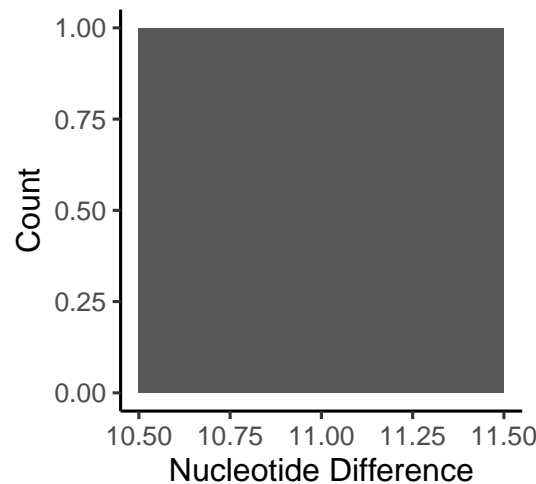
### IGHV3-72\*01

1239 sequences assigned  
14 (1.1%) exact matches, in which:  
14 unique CDR3  
2 unique J



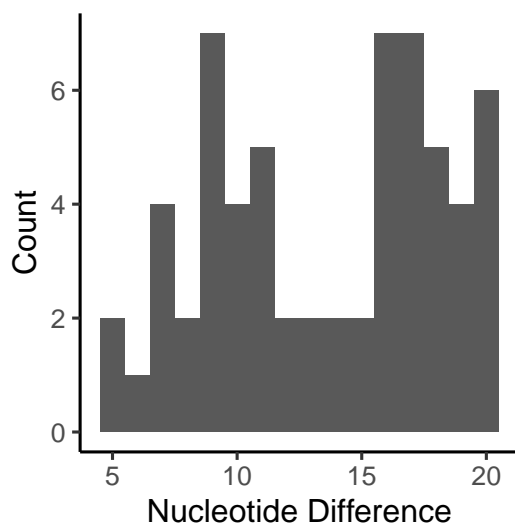
### IGHV3-43D\*04

4 sequences assigned  
No exact matches.



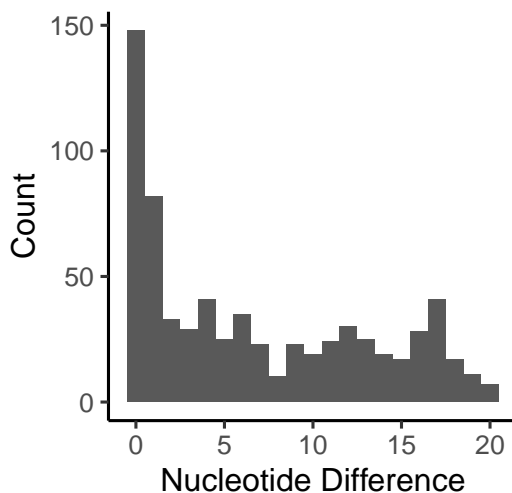
### IGHV3-69-1\*01

80 sequences assigned  
No exact matches.



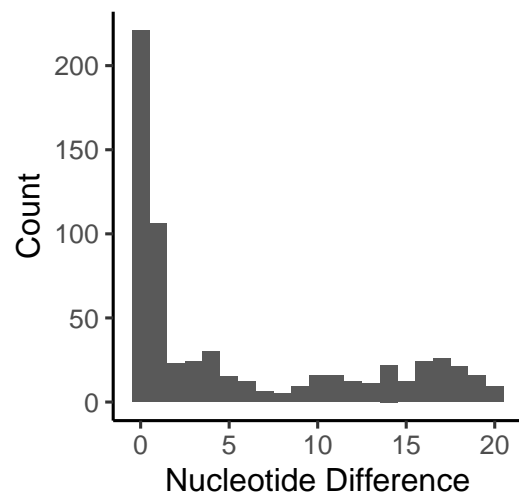
### IGHV3-73\*01\_02

764 sequences assigned  
148 (19.4%) exact matches, in which:  
140 unique CDR3  
6 unique J



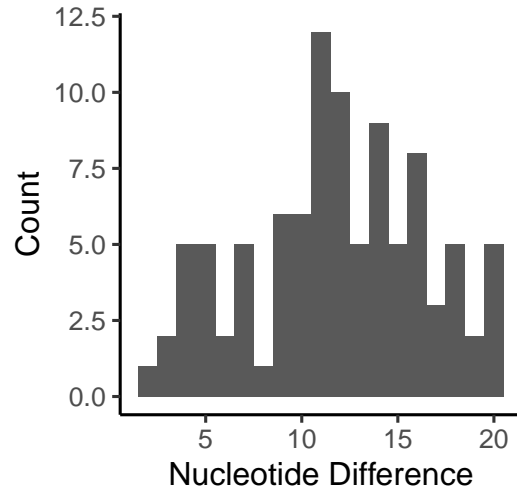
### IGHV3-64D\*06

793 sequences assigned  
221 (27.9%) exact matches, in which:  
200 unique CDR3  
6 unique J



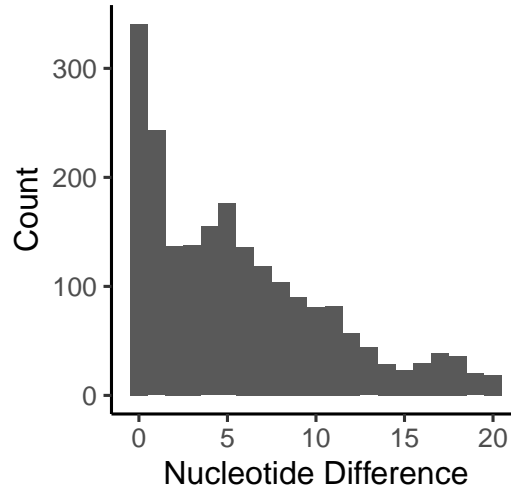
### IGHV3-NL1\*01

109 sequences assigned  
No exact matches.



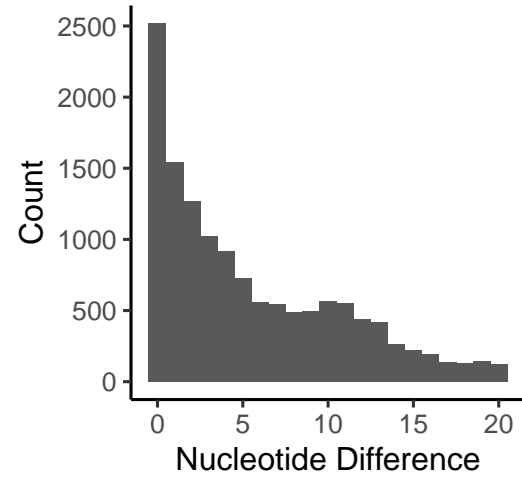
### IGHV4-30-4\*01

2256 sequences assigned  
341 (15.1%) exact matches, in which:  
328 unique CDR3  
6 unique J



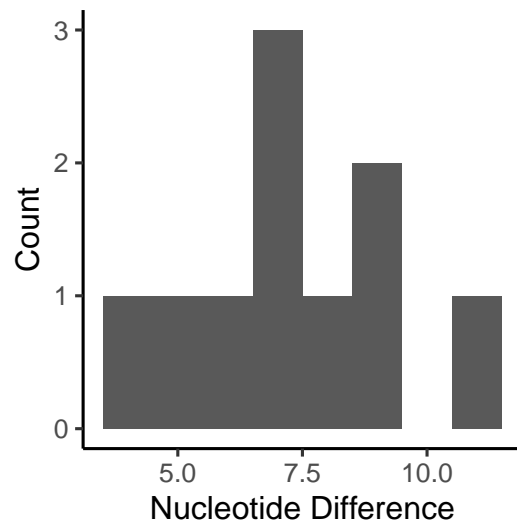
### IGHV4-34\*01\_02

14030 sequences assigned  
2518 (17.9%) exact matches, in which:  
2349 unique CDR3  
6 unique J



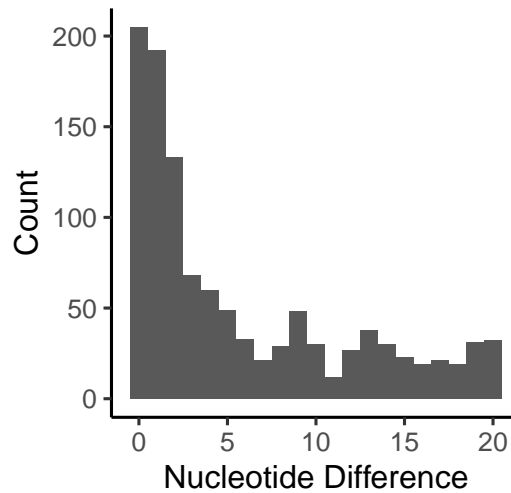
### IGHV4-28\*03

10 sequences assigned  
No exact matches.



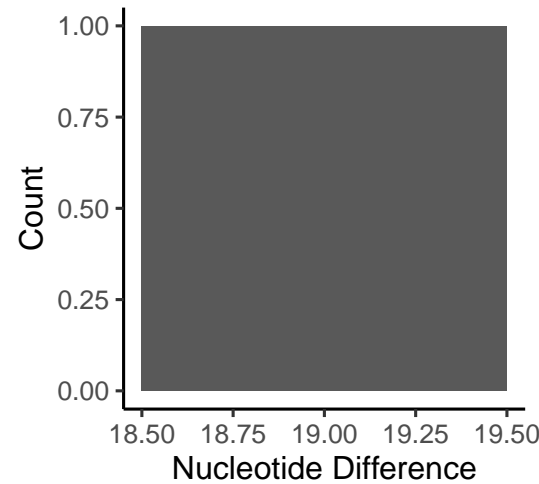
### IGHV4-30-2\*01

1271 sequences assigned  
205 (16.1%) exact matches, in which:  
176 unique CDR3  
6 unique J



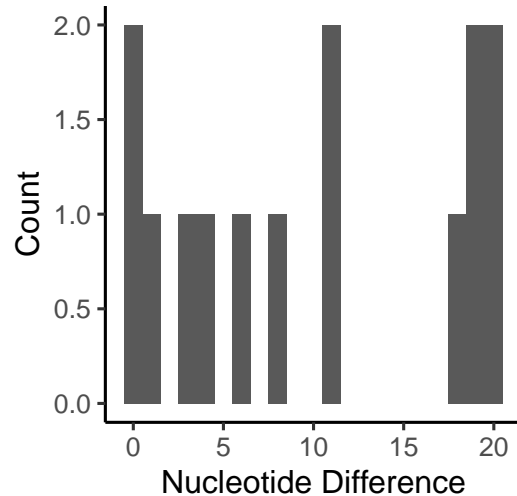
### IGHV4-38-2\*01

2 sequences assigned  
No exact matches.



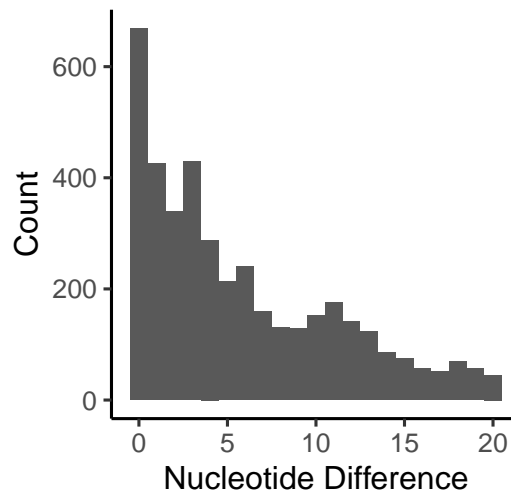
### IGHV4-28\*01\_07

21 sequences assigned  
2 (9.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



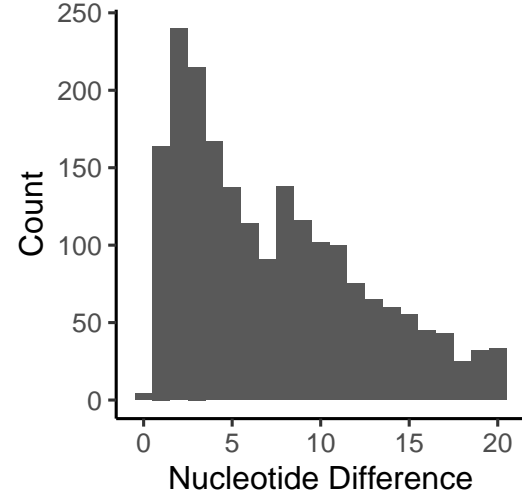
### IGHV4-31\*03\_04

4325 sequences assigned  
669 (15.5%) exact matches, in which:  
634 unique CDR3  
6 unique J



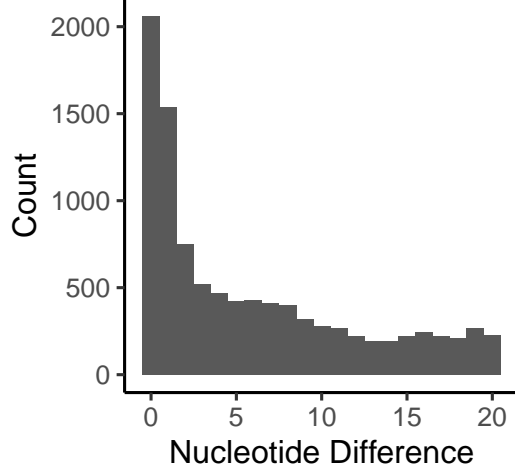
### IGHV4-39\*07

2155 sequences assigned  
4 (0.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



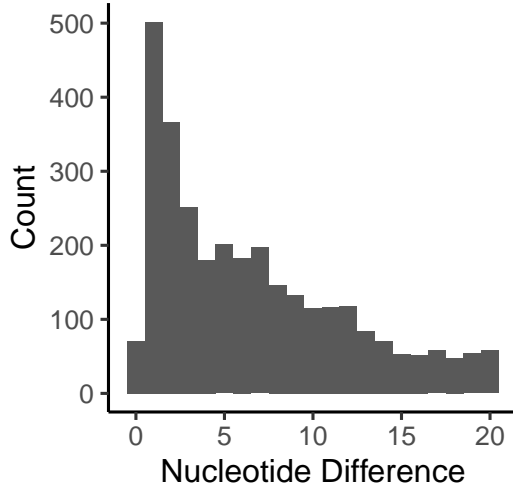
### IGHV4-39\*01\_05

11400 sequences assigned  
2059 (18.1%) exact matches, in which:  
1886 unique CDR3  
6 unique J



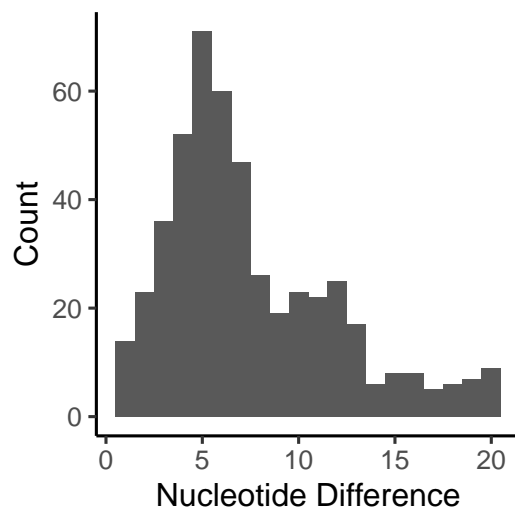
### IGHV4-59\*12

3340 sequences assigned  
71 (2.1%) exact matches, in which:  
71 unique CDR3  
6 unique J



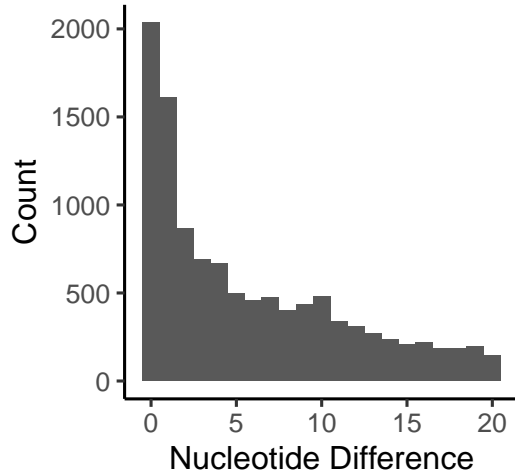
### IGHV4-61\*08

528 sequences assigned  
No exact matches.



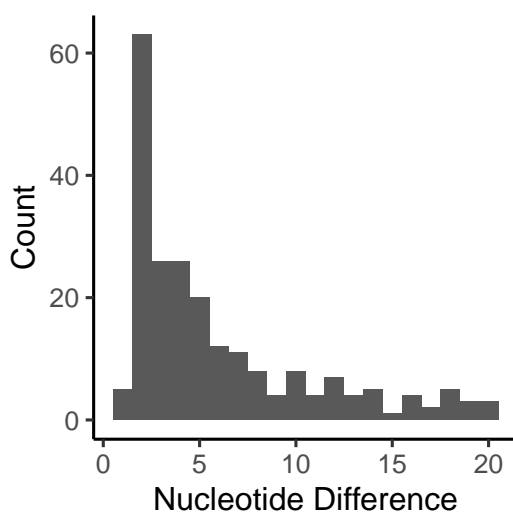
### IGHV4-59\*08

12166 sequences assigned  
2035 (16.7%) exact matches, in which:  
1893 unique CDR3  
6 unique J



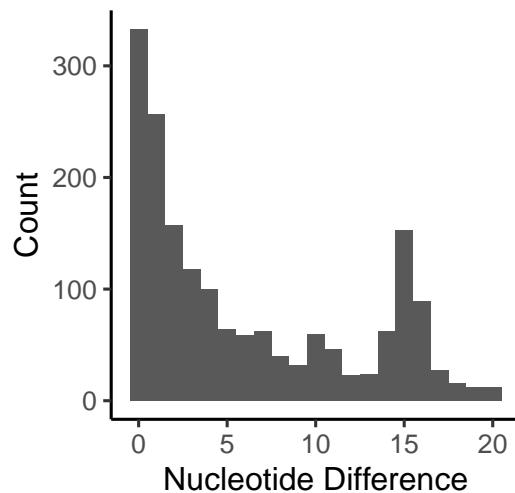
### IGHV4-61\*01

237 sequences assigned  
No exact matches.



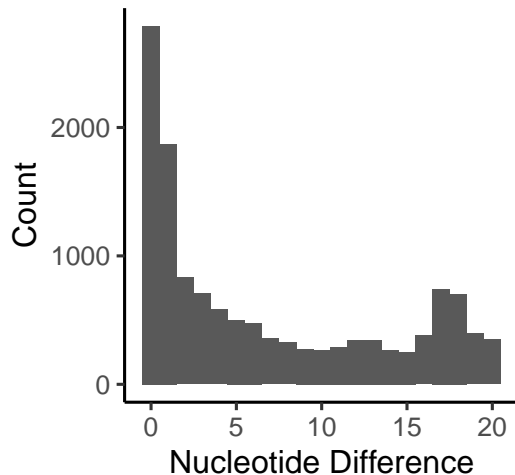
### IGHV5-10-1\*01\_03

2096 sequences assigned  
333 (15.9%) exact matches, in which:  
309 unique CDR3  
6 unique J



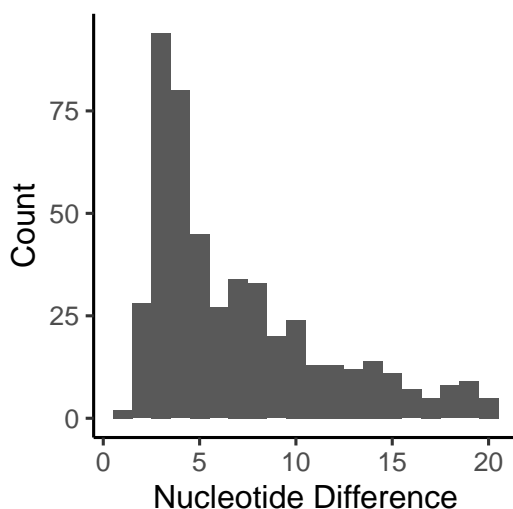
### IGHV4-59\*01\_07

14815 sequences assigned  
2790 (18.8%) exact matches, in which:  
2588 unique CDR3  
6 unique J



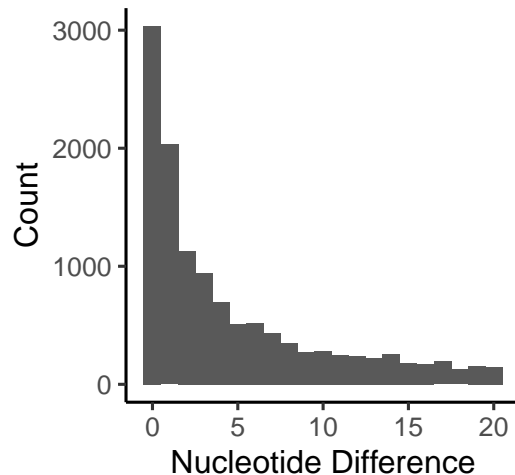
### IGHV4-61\*05

505 sequences assigned  
No exact matches.



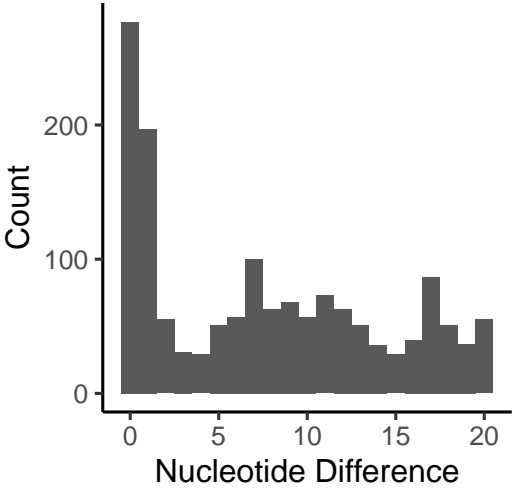
### IGHV5-51\*01\_03

12801 sequences assigned  
3035 (23.7%) exact matches, in which:  
2781 unique CDR3  
6 unique J



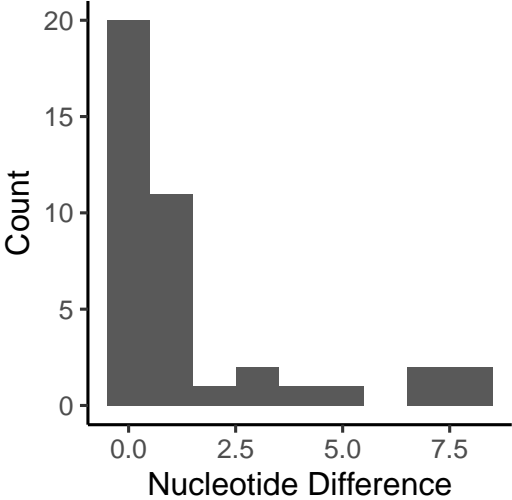
# IGHV6-1\*01\_02

1662 sequences assigned  
277 (16.7%) exact matches, in which:  
262 unique CDR3  
6 unique J



# IGHV7-4-1\*01\_T63C

40 sequences assigned  
20 (50%) exact matches, in which:  
20 unique CDR3  
4 unique J





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) 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.