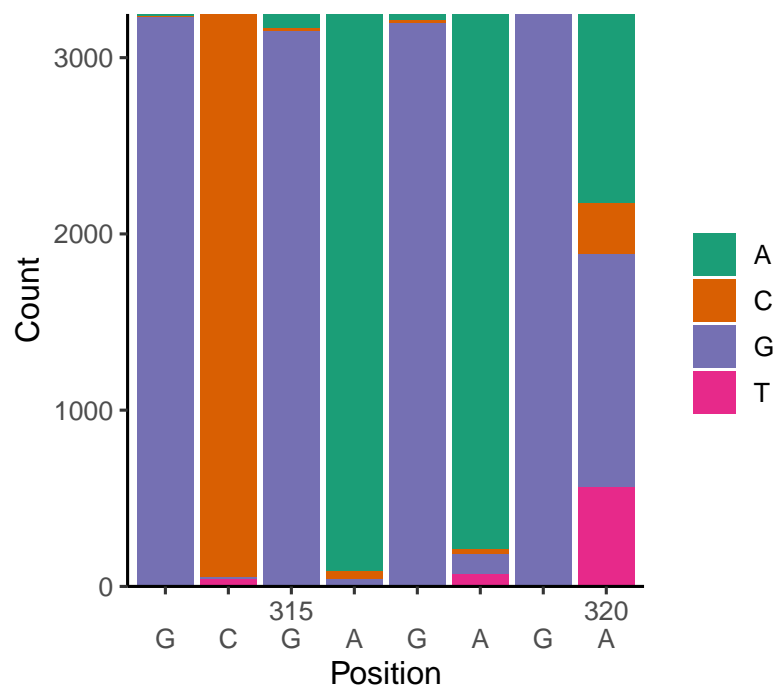


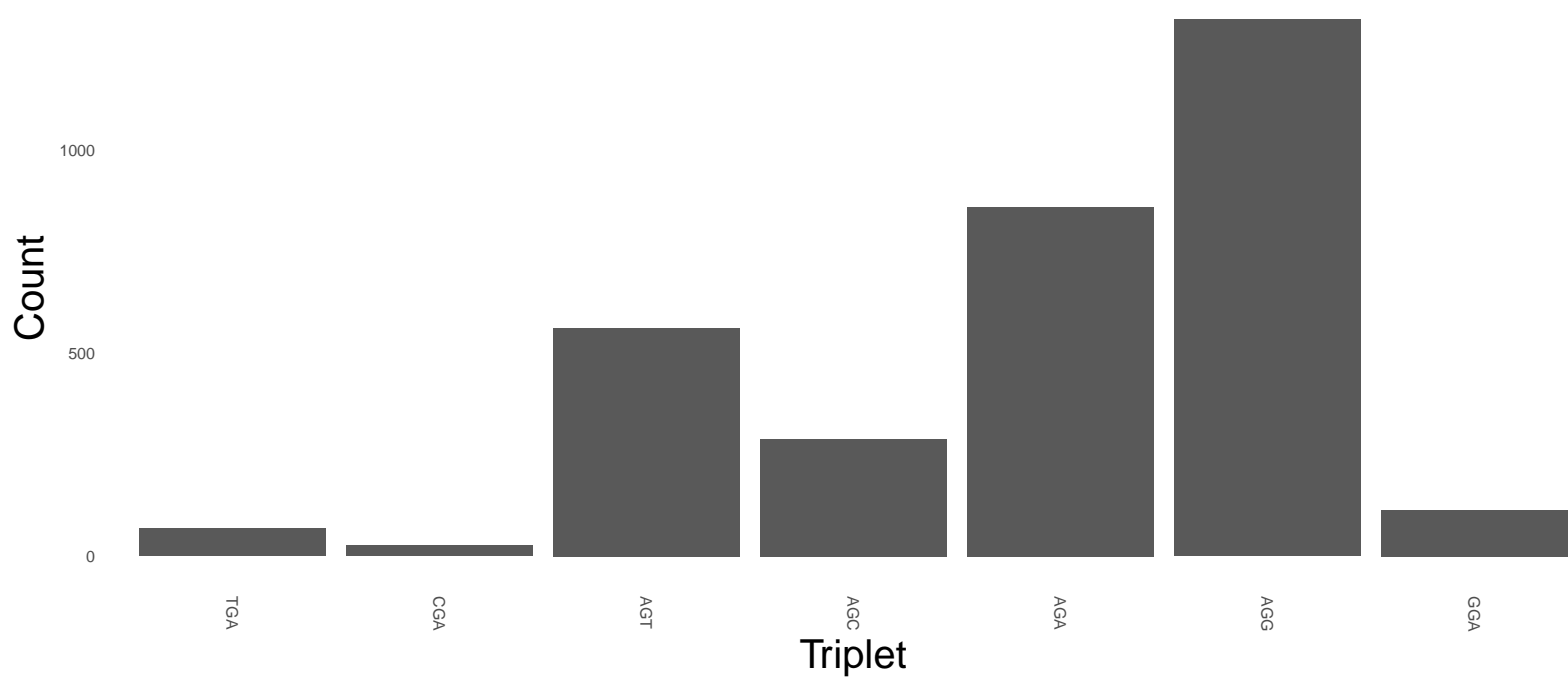
# Gene IGHV4-39\*02\_C258G



# Gene IGHV4-39\*02\_C258G

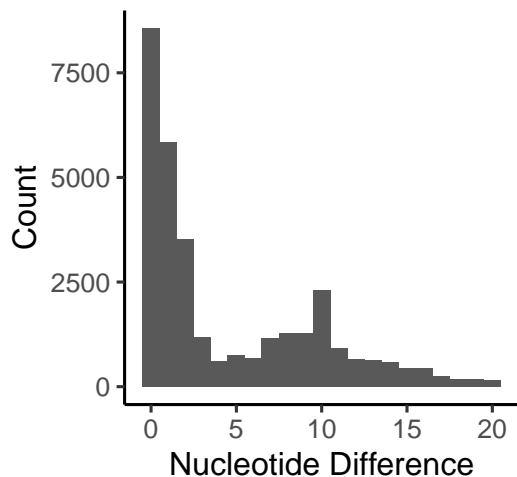


IGHV4-39\*02\_C258G- Final 3 nucleotides as a triplet



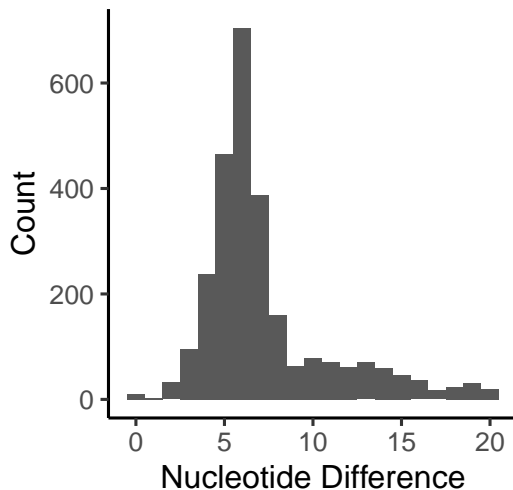
### IGHV1-2\*02

34176 sequences assigned  
8561 (25%) exact matches, in which:  
7698 unique CDR3  
7 unique J



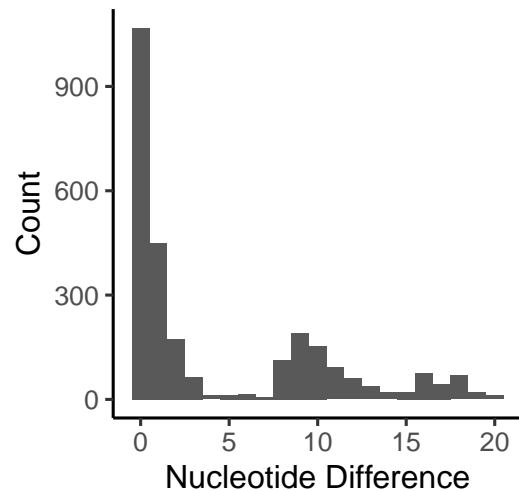
### IGHV1-8\*02

2757 sequences assigned  
10 (0.4%) exact matches, in which:  
10 unique CDR3  
4 unique J



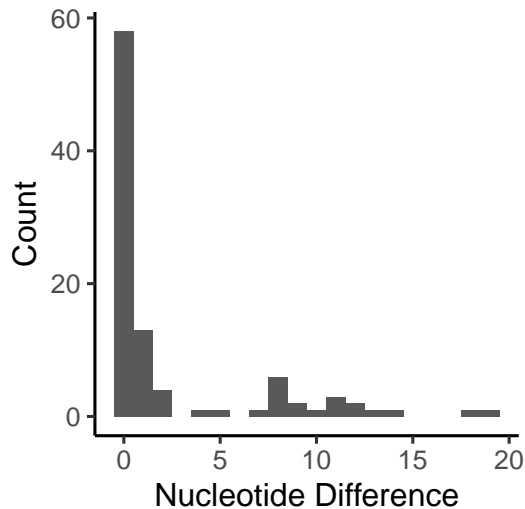
### IGHV1-24\*01

2759 sequences assigned  
1069 (38.7%) exact matches, in which:  
1003 unique CDR3  
7 unique J



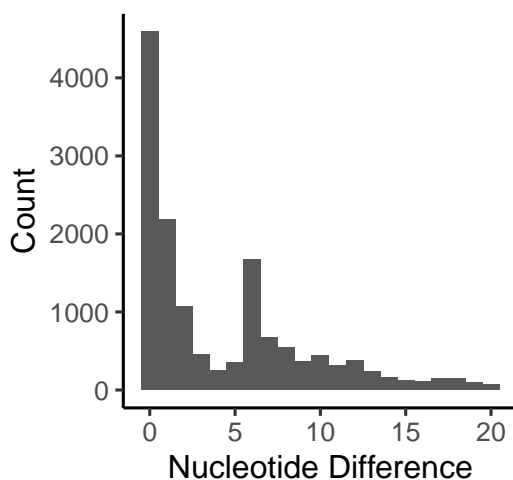
### IGHV1-3\*02

100 sequences assigned  
58 (58%) exact matches, in which:  
56 unique CDR3  
6 unique J



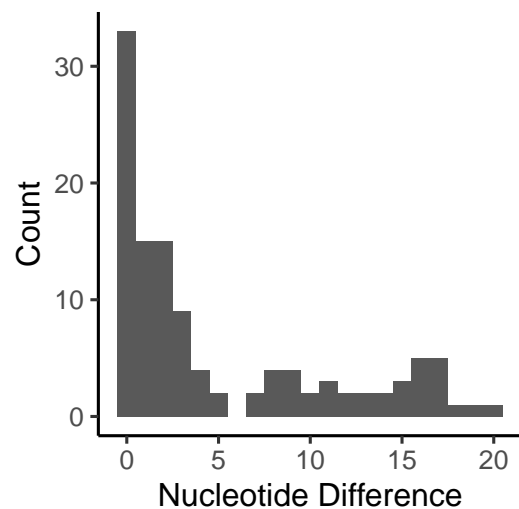
### IGHV1-18\*01

15569 sequences assigned  
4591 (29.5%) exact matches, in which:  
4305 unique CDR3  
7 unique J



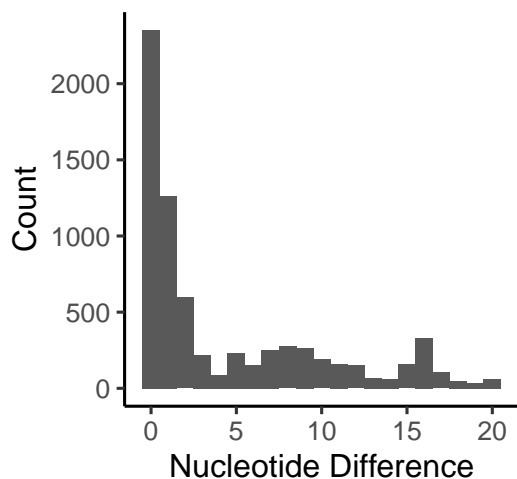
### IGHV1-45\*02

145 sequences assigned  
33 (22.8%) exact matches, in which:  
29 unique CDR3  
6 unique J



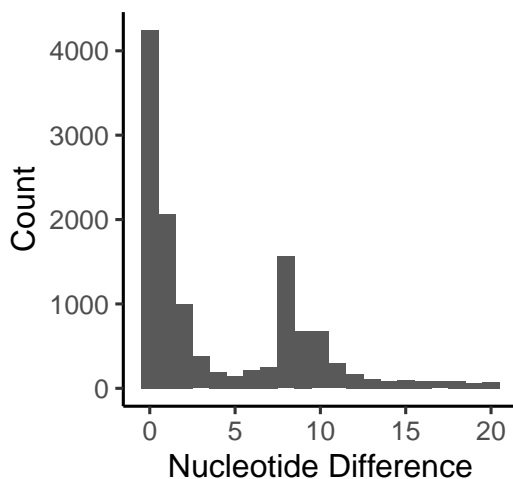
### IGHV1-8\*01

7292 sequences assigned  
2352 (32.3%) exact matches, in which:  
2194 unique CDR3  
7 unique J



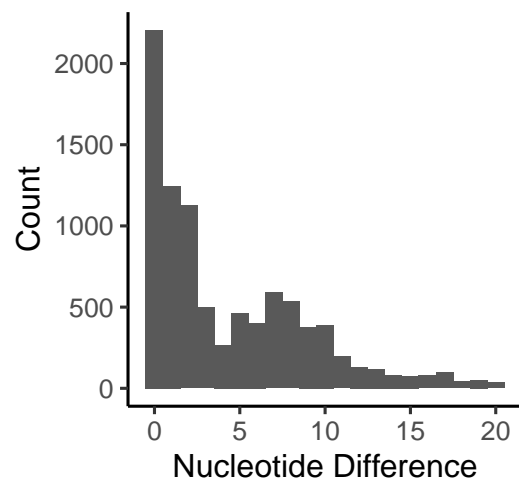
### IGHV1-18\*04

13152 sequences assigned  
4246 (32.3%) exact matches, in which:  
3958 unique CDR3  
7 unique J



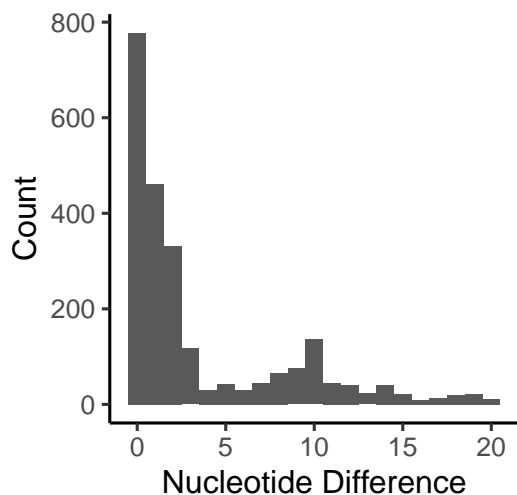
### IGHV1-46\*01

9322 sequences assigned  
2206 (23.7%) exact matches, in which:  
2083 unique CDR3  
7 unique J



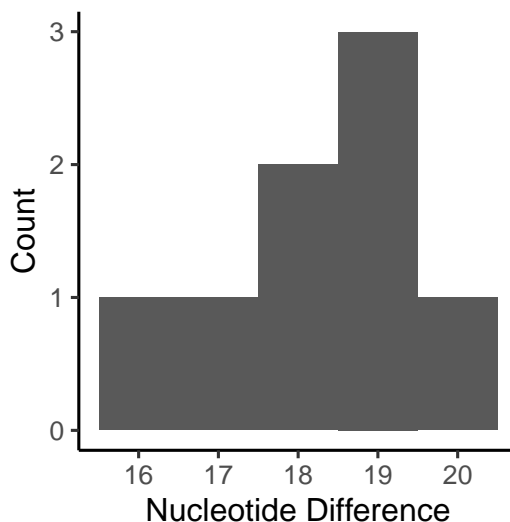
### IGHV1-46\*03

2441 sequences assigned  
778 (31.9%) exact matches, in which:  
687 unique CDR3  
7 unique J



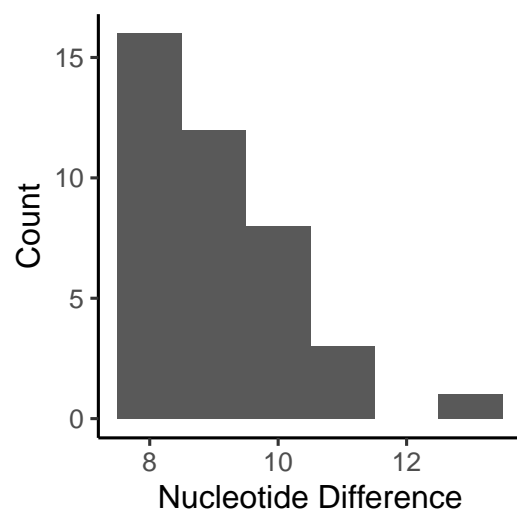
### IGHV1-69-2\*01

8 sequences assigned  
No exact matches.



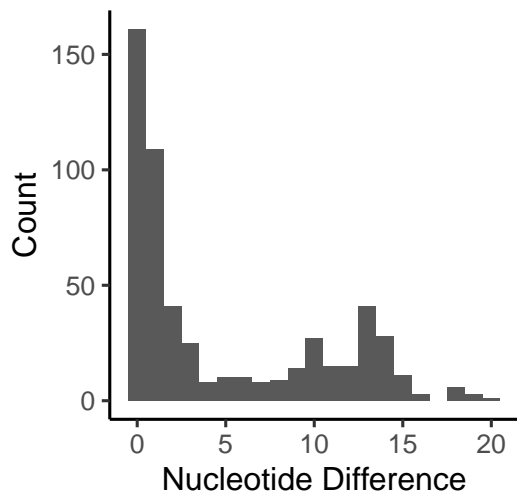
### IGHV1-NL1\*01

40 sequences assigned  
No exact matches.



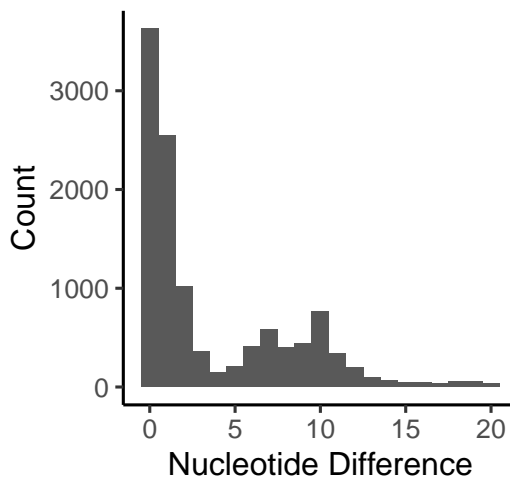
### IGHV1-58\*02

559 sequences assigned  
161 (28.8%) exact matches, in which:  
153 unique CDR3  
7 unique J



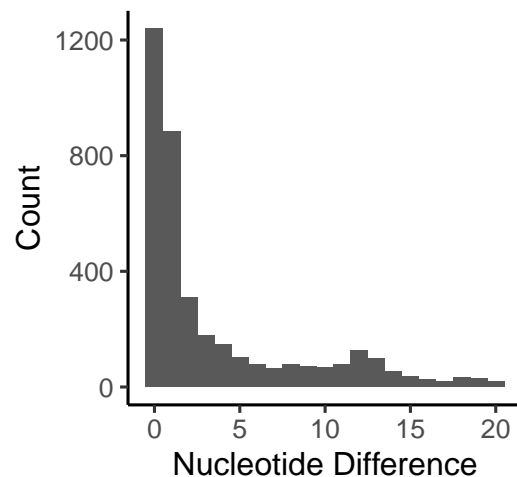
### IGHV1-69\*04\_09

12006 sequences assigned  
3628 (30.2%) exact matches, in which:  
3416 unique CDR3  
7 unique J



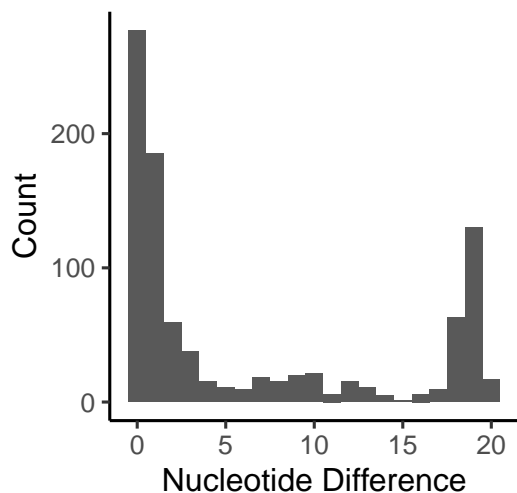
### IGHV2-5\*02

4058 sequences assigned  
1239 (30.5%) exact matches, in which:  
1121 unique CDR3  
7 unique J



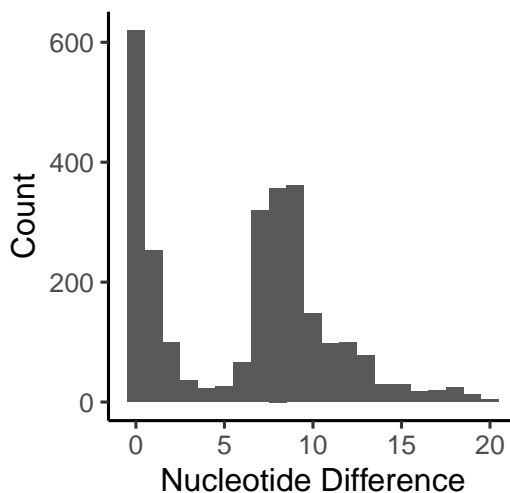
### IGHV1-58\*01\_03

955 sequences assigned  
277 (29%) exact matches, in which:  
263 unique CDR3  
7 unique J



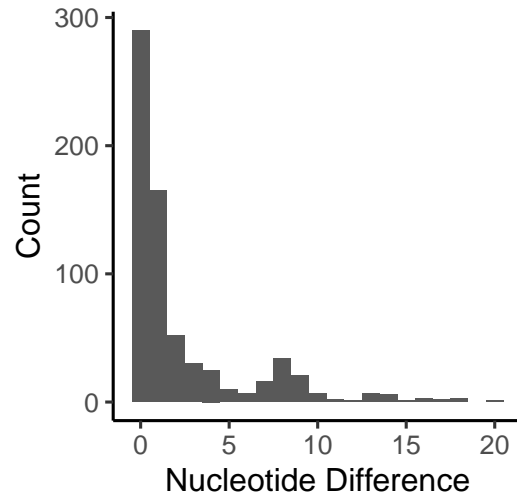
### IGHV1-69\*06\_14

2887 sequences assigned  
620 (21.5%) exact matches, in which:  
616 unique CDR3  
7 unique J



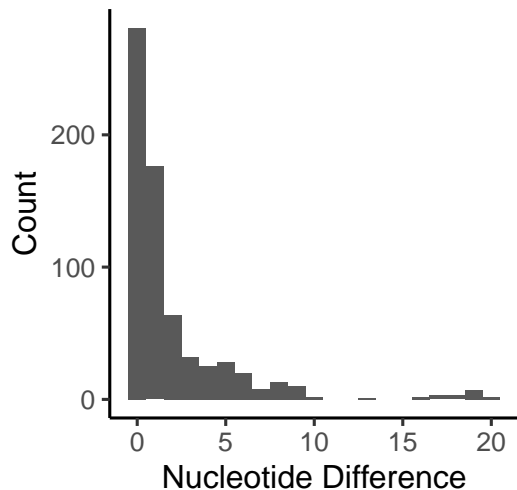
### IGHV2-26\*01

700 sequences assigned  
290 (41.4%) exact matches, in which:  
269 unique CDR3  
7 unique J



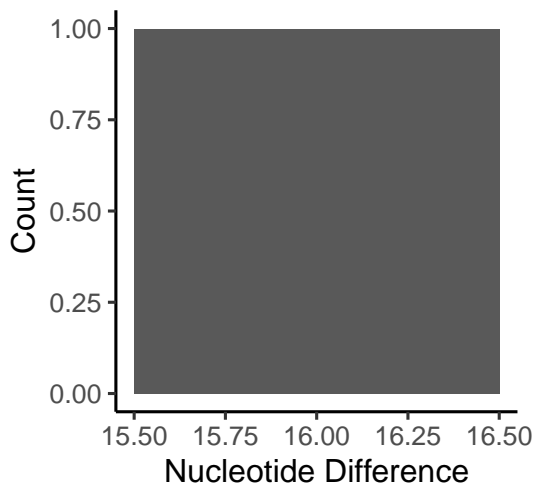
### IGHV2-70\*01

686 sequences assigned  
281 (41%) exact matches, in which:  
256 unique CDR3  
7 unique J



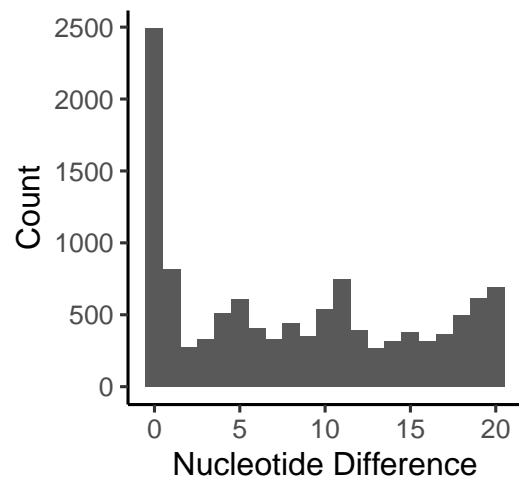
### IGHV2-70D\*04

6 sequences assigned  
No exact matches.



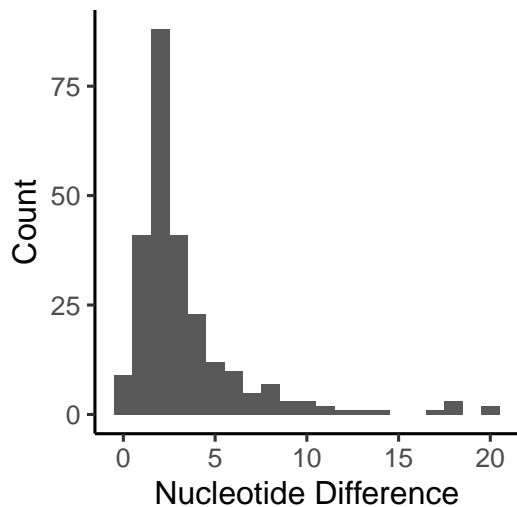
### IGHV3-9\*01

13338 sequences assigned  
2491 (18.7%) exact matches, in which:  
1832 unique CDR3  
7 unique J



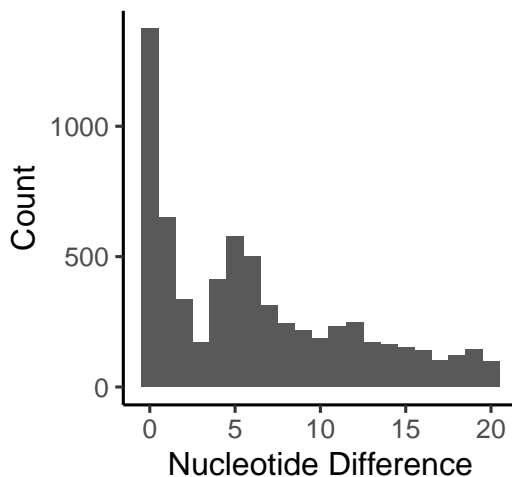
### IGHV2-70\*12

257 sequences assigned  
9 (3.5%) exact matches, in which:  
8 unique CDR3  
4 unique J



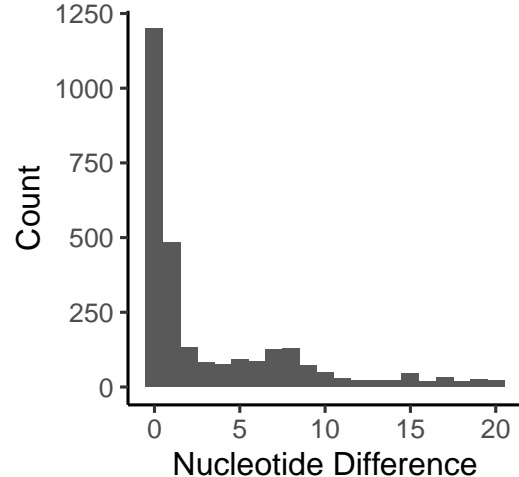
### IGHV3-7\*01

7146 sequences assigned  
1374 (19.2%) exact matches, in which:  
1113 unique CDR3  
7 unique J



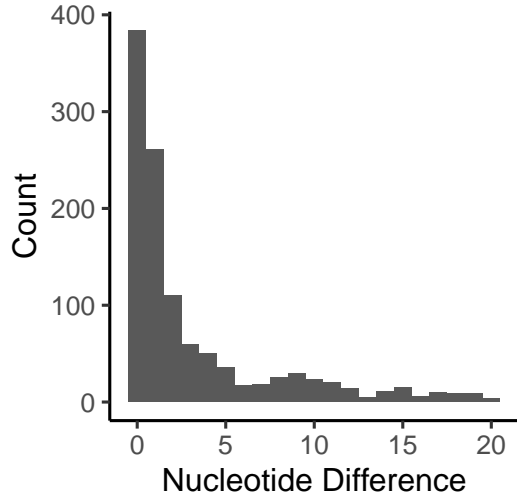
### IGHV3-11\*01

4894 sequences assigned  
1199 (24.5%) exact matches, in which:  
967 unique CDR3  
7 unique J



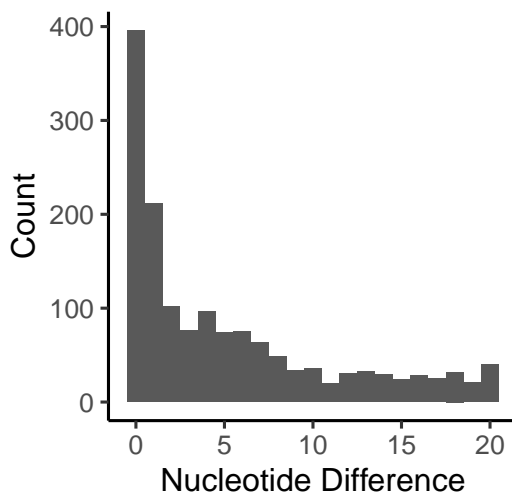
### IGHV2-70\*11\_15

1152 sequences assigned  
384 (33.3%) exact matches, in which:  
354 unique CDR3  
7 unique J



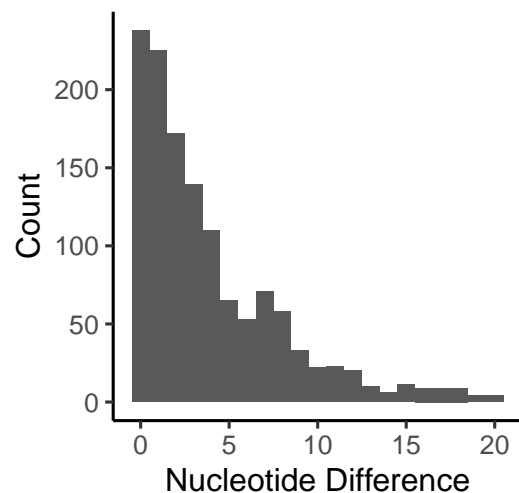
### IGHV3-7\*04

3291 sequences assigned  
396 (12%) exact matches, in which:  
313 unique CDR3  
7 unique J



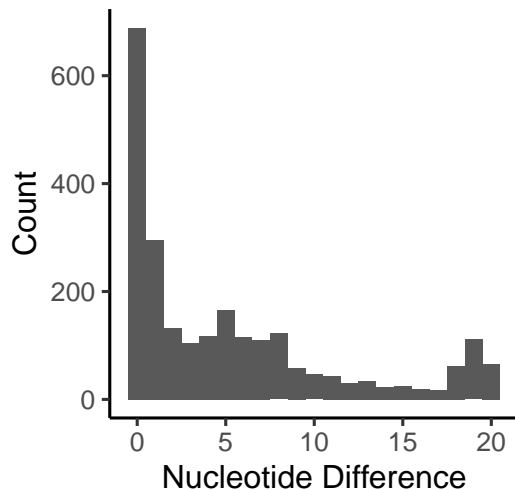
### IGHV3-11\*04

1426 sequences assigned  
238 (16.7%) exact matches, in which:  
238 unique CDR3  
7 unique J



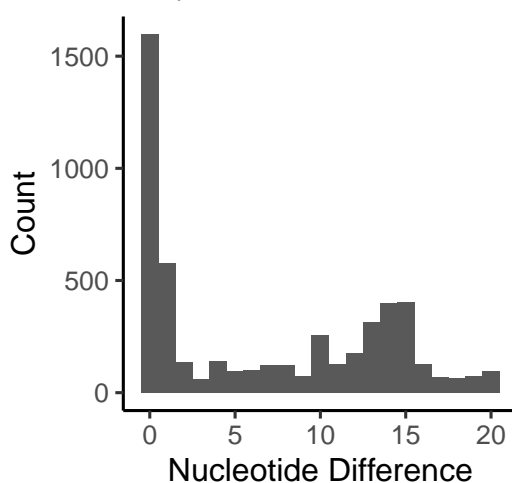
### IGHV3-11\*06

2552 sequences assigned  
689 (27%) exact matches, in which:  
568 unique CDR3  
7 unique J



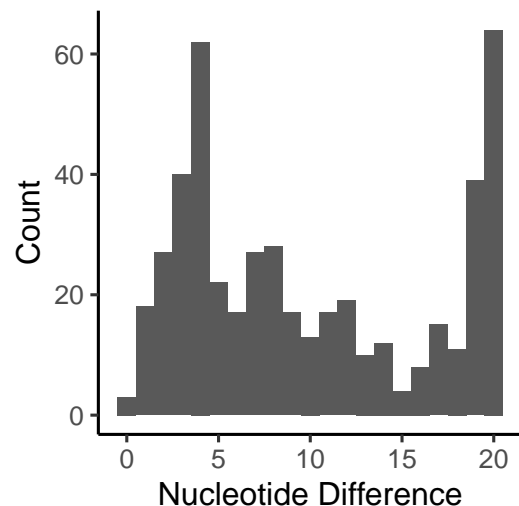
### IGHV3-15\*01\_02

5902 sequences assigned  
1597 (27.1%) exact matches, in which:  
1209 unique CDR3  
7 unique J



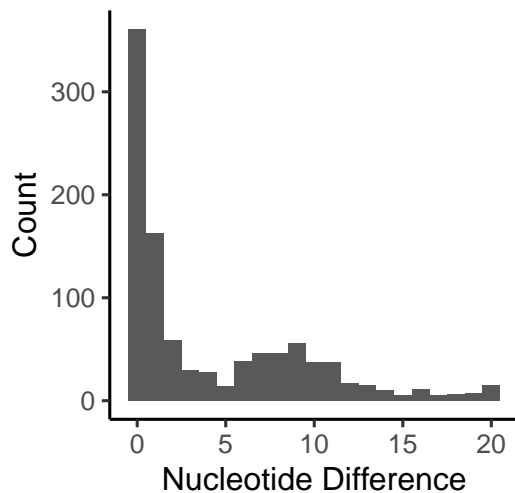
### IGHV3-20\*03\_04

661 sequences assigned  
3 (0.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



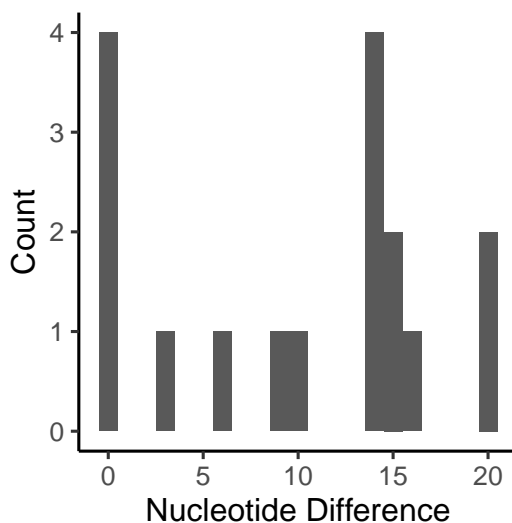
### IGHV3-13\*01

1074 sequences assigned  
361 (33.6%) exact matches, in which:  
279 unique CDR3  
6 unique J



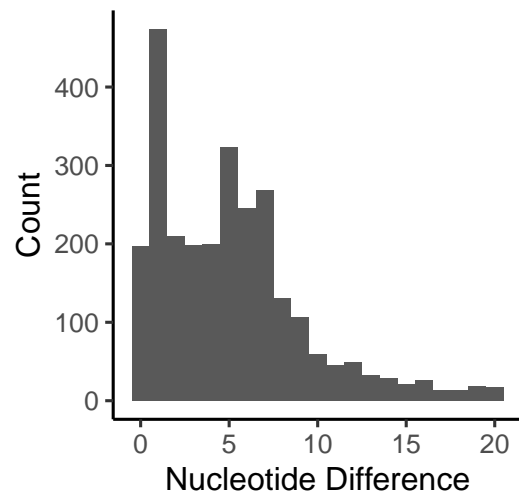
### IGHV3-19\*01

17 sequences assigned  
4 (23.5%) exact matches, in which:  
4 unique CDR3  
3 unique J



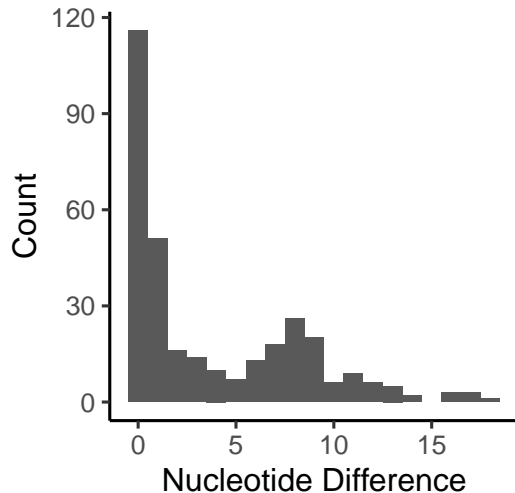
### IGHV3-21\*04

2847 sequences assigned  
197 (6.9%) exact matches, in which:  
196 unique CDR3  
7 unique J



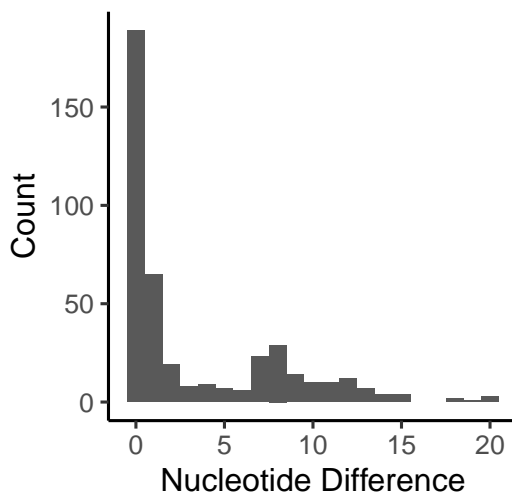
### IGHV3-13\*05

332 sequences assigned  
116 (34.9%) exact matches, in which:  
89 unique CDR3  
6 unique J



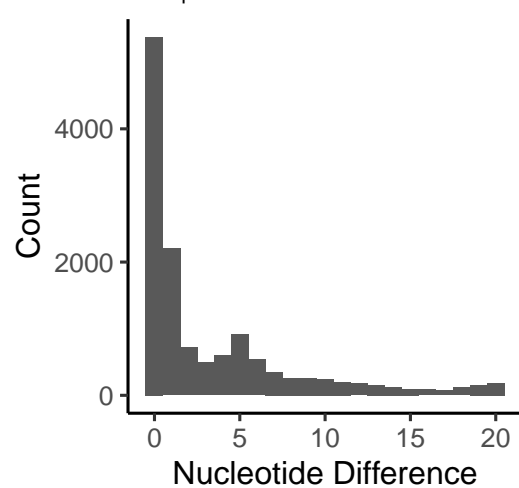
### IGHV3-20\*01\_02

423 sequences assigned  
189 (44.7%) exact matches, in which:  
150 unique CDR3  
7 unique J



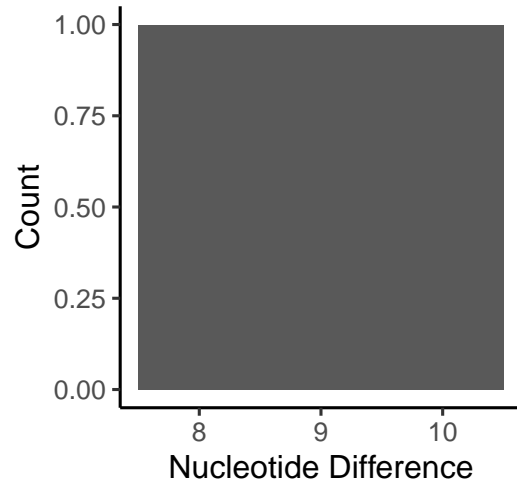
### IGHV3-21\*01\_02

15470 sequences assigned  
5378 (34.8%) exact matches, in which:  
4126 unique CDR3  
7 unique J



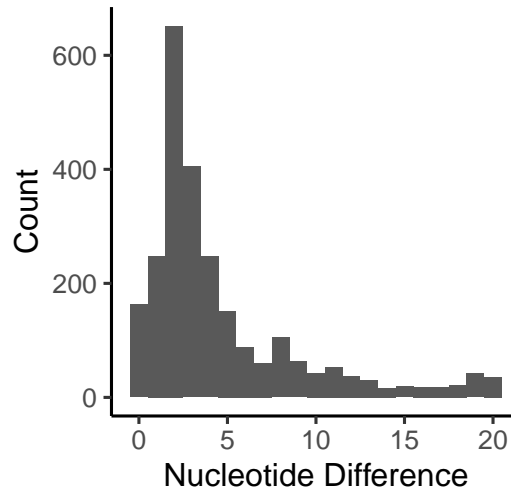
### IGHV3-22\*01\_02

4 sequences assigned  
No exact matches.



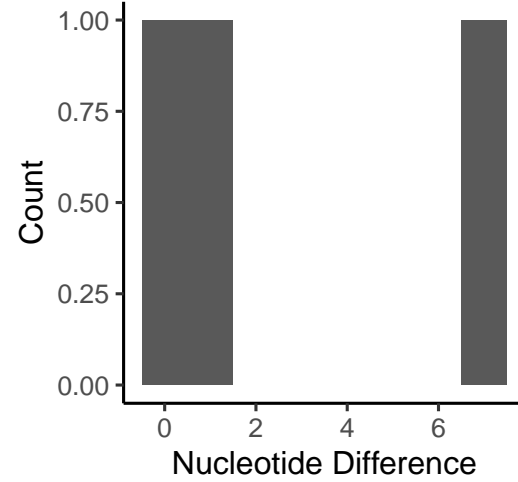
### IGHV3-33\*06

2690 sequences assigned  
163 (6.1%) exact matches, in which:  
158 unique CDR3  
7 unique J



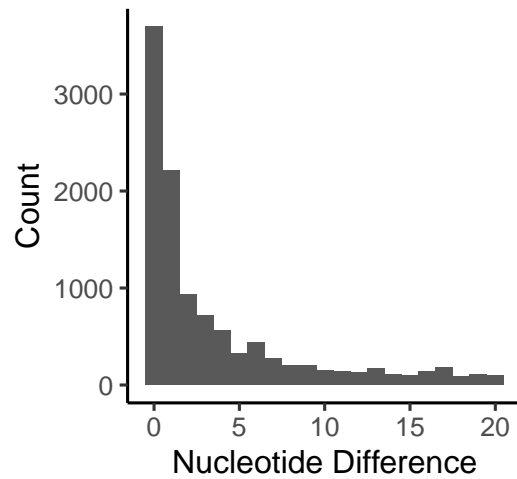
### IGHV3-47\*02

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



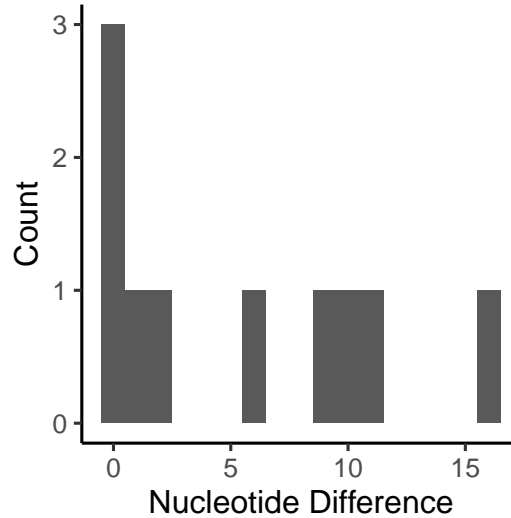
### IGHV3-33\*01

12433 sequences assigned  
3694 (29.7%) exact matches, in which:  
3023 unique CDR3  
7 unique J



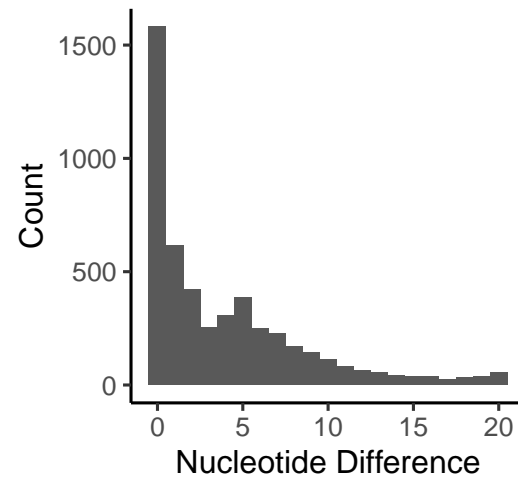
### IGHV3-35\*01

10 sequences assigned  
3 (30%) exact matches, in which:  
2 unique CDR3  
1 unique J



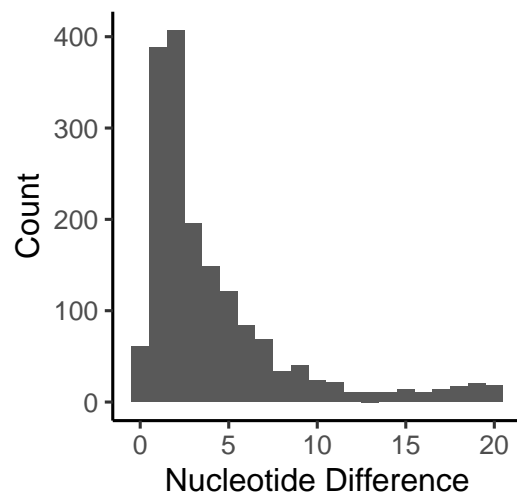
### IGHV3-48\*01

5616 sequences assigned  
1581 (28.2%) exact matches, in which:  
1271 unique CDR3  
7 unique J



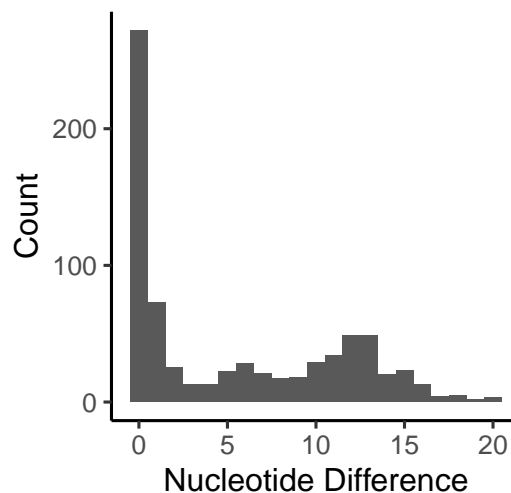
### IGHV3-33\*05

2318 sequences assigned  
61 (2.6%) exact matches, in which:  
60 unique CDR3  
7 unique J



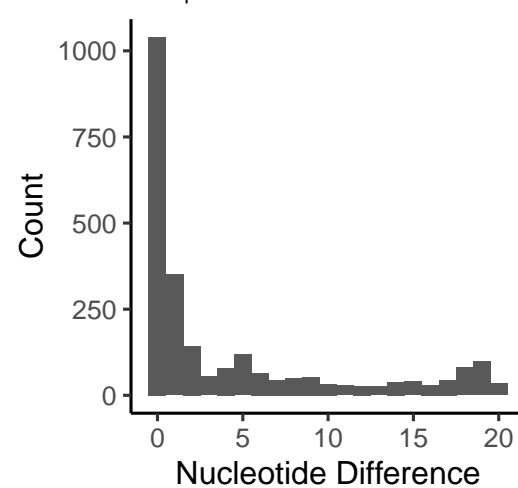
### IGHV3-43\*01

1095 sequences assigned  
272 (24.8%) exact matches, in which:  
210 unique CDR3  
7 unique J



### IGHV3-48\*02

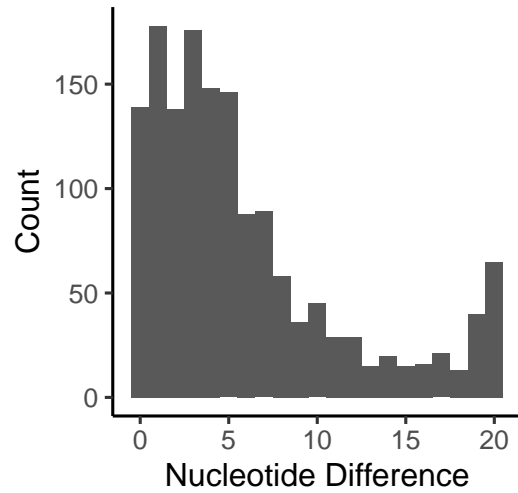
2867 sequences assigned  
1040 (36.3%) exact matches, in which:  
797 unique CDR3  
7 unique J





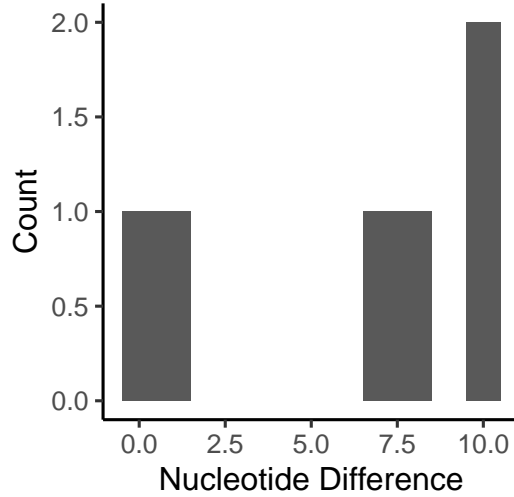
### IGHV3-48\*04

1799 sequences assigned  
139 (7.7%) exact matches, in which:  
138 unique CDR3  
7 unique J



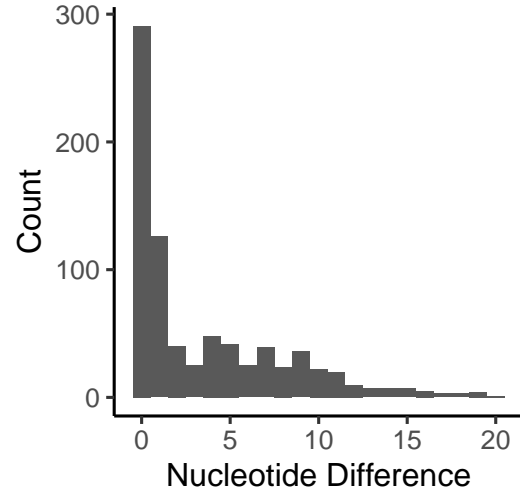
### IGHV3-52\*01\_03

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
0 unique J



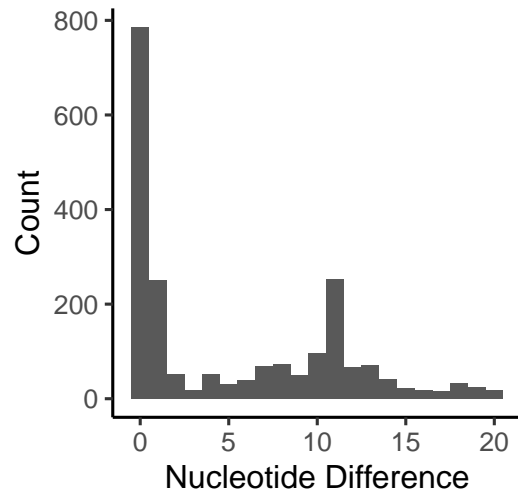
### IGHV3-64\*01

819 sequences assigned  
291 (35.5%) exact matches, in which:  
211 unique CDR3  
6 unique J



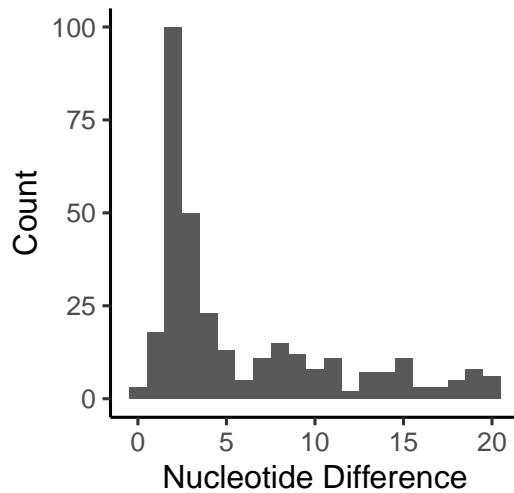
### IGHV3-49\*03\_05

2239 sequences assigned  
786 (35.1%) exact matches, in which:  
606 unique CDR3  
6 unique J



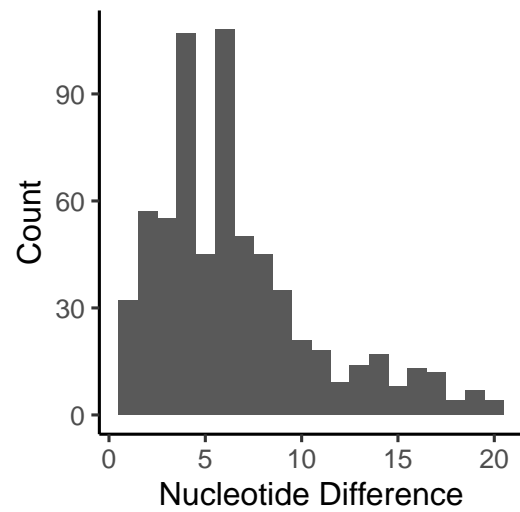
### IGHV3-53\*05

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



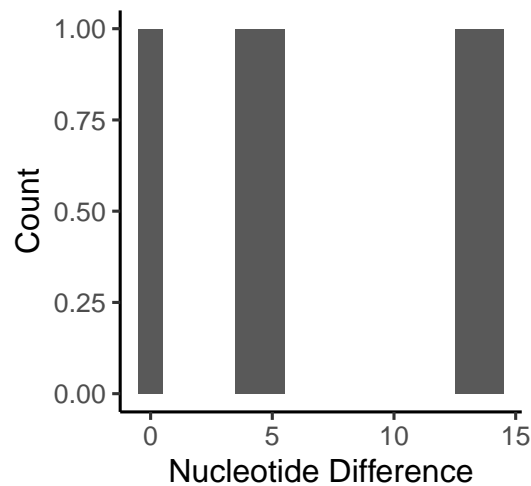
### IGHV3-64\*04

690 sequences assigned  
No exact matches.



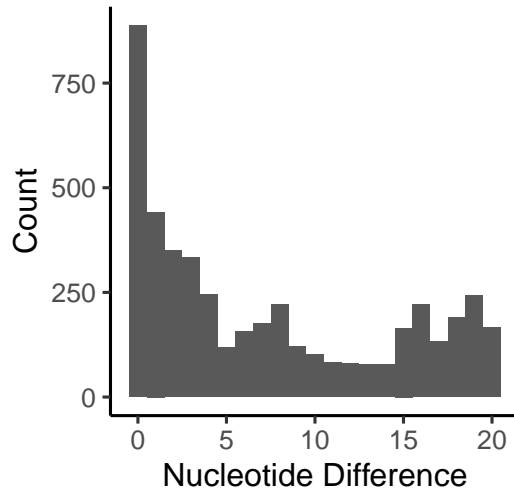
### IGHV3-52\*02

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



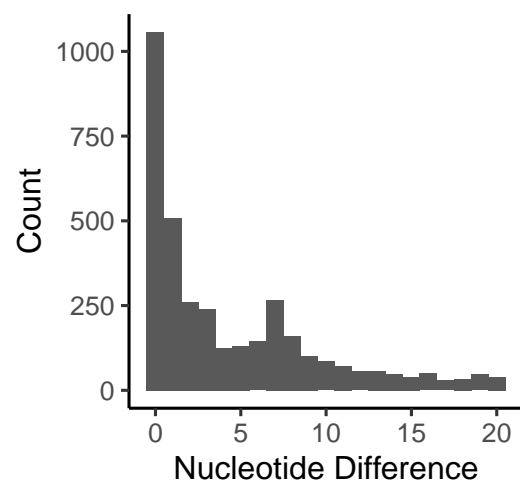
### IGHV3-53\*01\_02

5467 sequences assigned  
888 (16.2%) exact matches, in which:  
710 unique CDR3  
7 unique J



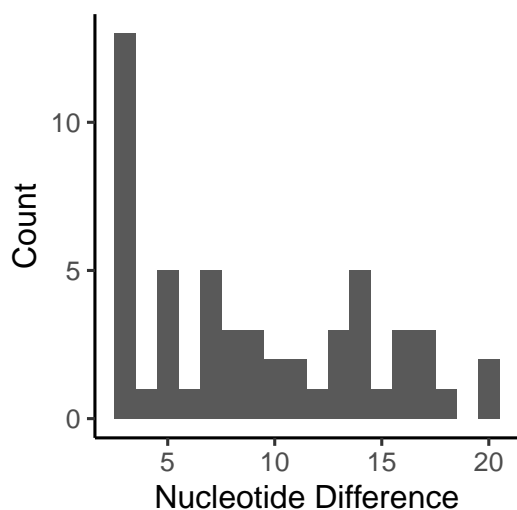
### IGHV3-66\*01

4171 sequences assigned  
1057 (25.3%) exact matches, in which:  
852 unique CDR3  
7 unique J



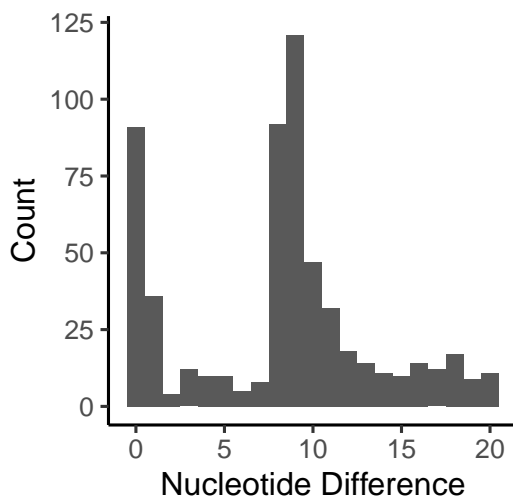
### IGHV3-69-1\*01

113 sequences assigned  
No exact matches.



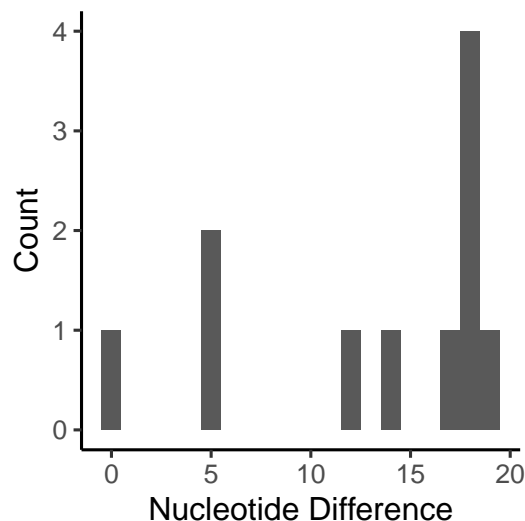
### IGHV3-72\*01

795 sequences assigned  
91 (11.4%) exact matches, in which:  
72 unique CDR3  
6 unique J



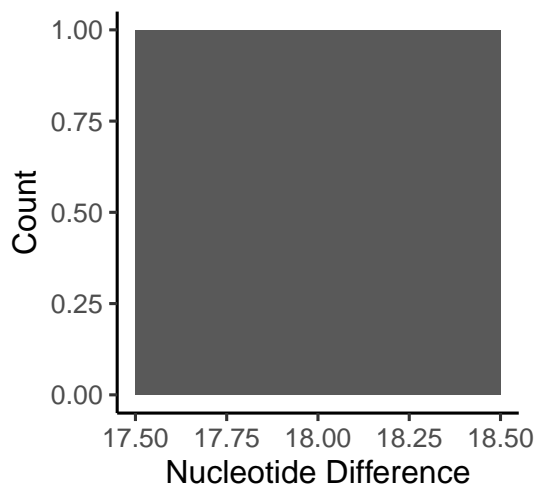
### IGHV3-43D\*04

13 sequences assigned  
1 (7.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



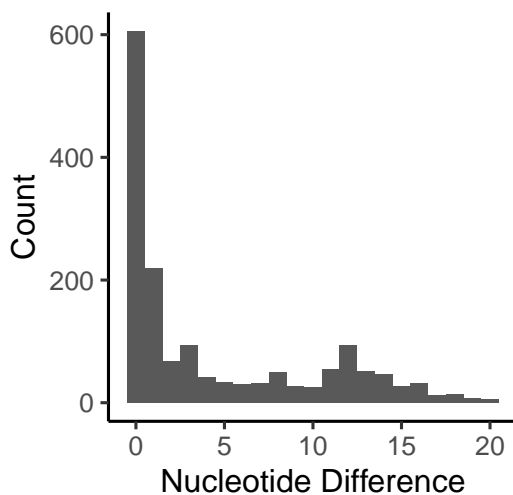
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



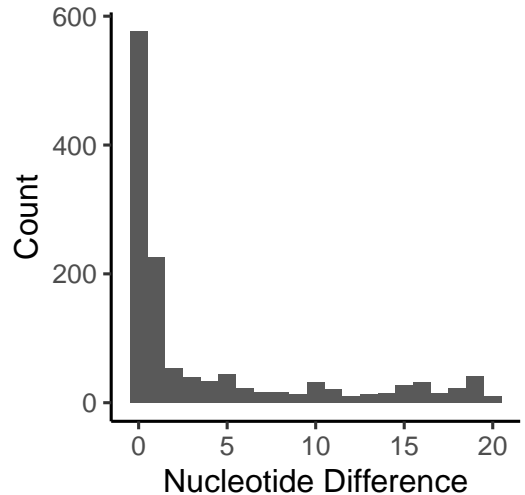
### IGHV3-73\*01\_02

1654 sequences assigned  
606 (36.6%) exact matches, in which:  
457 unique CDR3  
7 unique J



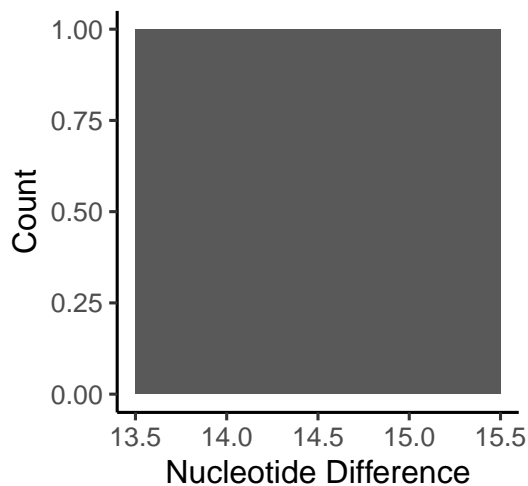
### IGHV3-64D\*06

1675 sequences assigned  
577 (34.4%) exact matches, in which:  
422 unique CDR3  
7 unique J



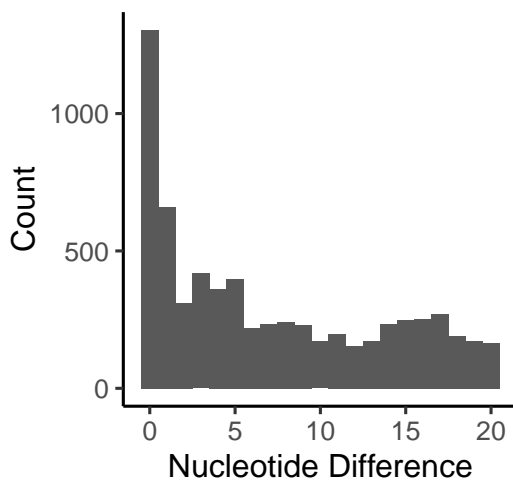
### IGHV3-71\*01\_04

5 sequences assigned  
No exact matches.



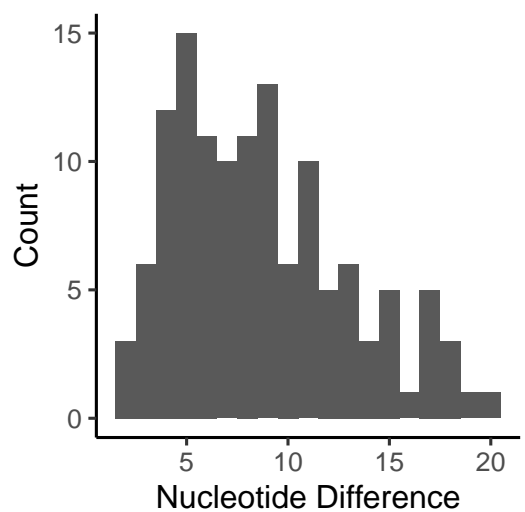
### IGHV3-74\*01\_02

9838 sequences assigned  
1304 (13.3%) exact matches, in which:  
1015 unique CDR3  
7 unique J



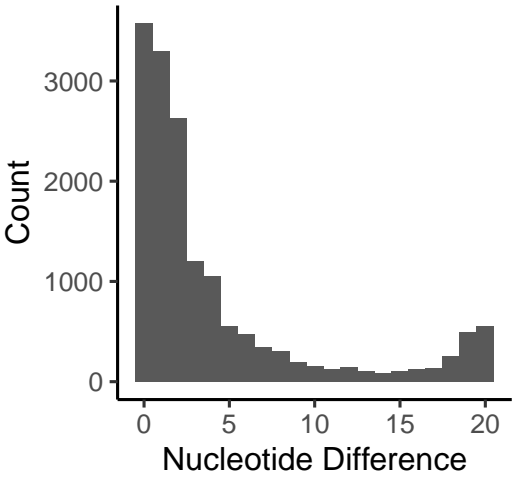
### IGHV3-NL1\*01

145 sequences assigned  
No exact matches.



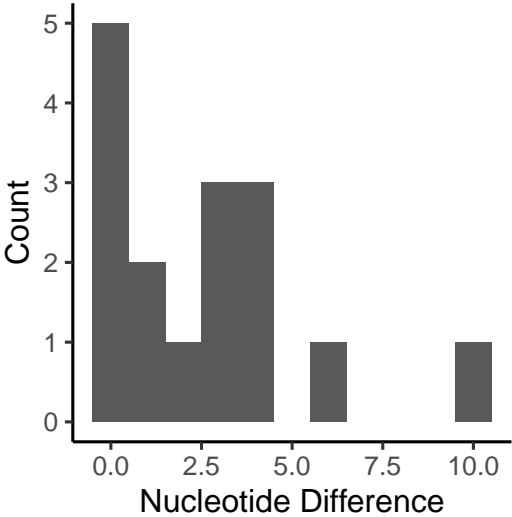
IGHV4-4\*07

17450 sequences assigned  
3574 (20.5%) exact matches, in which:  
3312 unique CDR3  
7 unique J



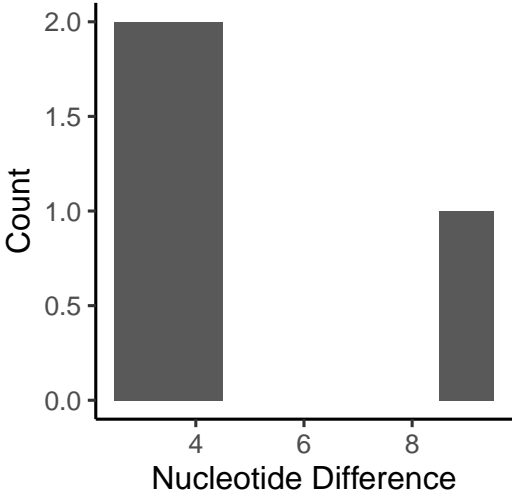
IGHV4-28\*02\_05

17 sequences assigned  
5 (29.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



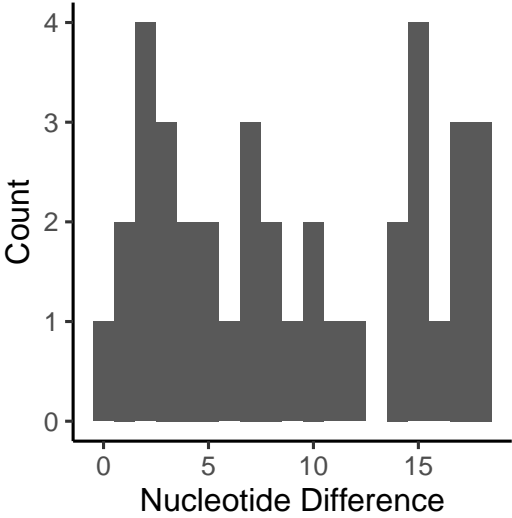
IGHV4-30-2\*04

5 sequences assigned  
No exact matches.



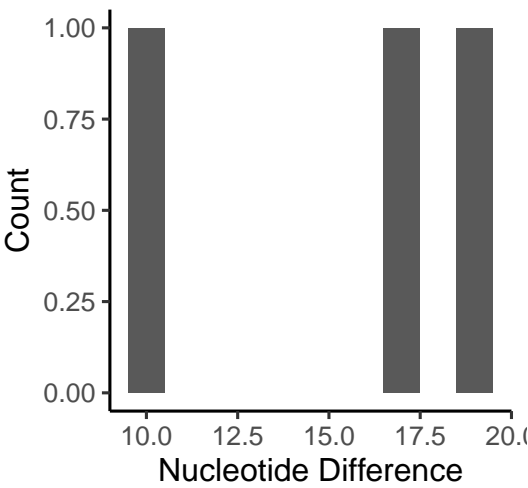
IGHV4-28\*03

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



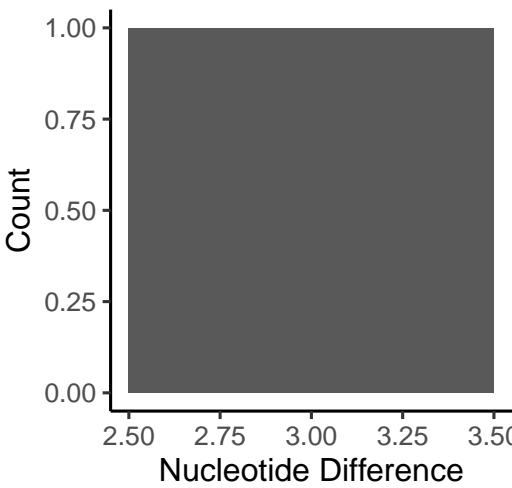
IGHV4-30-4\*01

14 sequences assigned  
No exact matches.



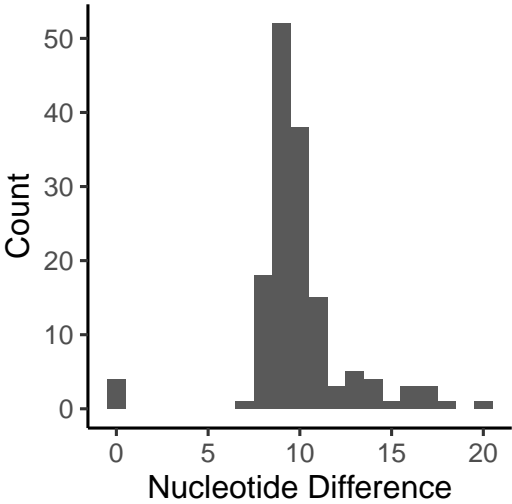
IGHV4-30-4\*05

1 sequences assigned  
No exact matches.



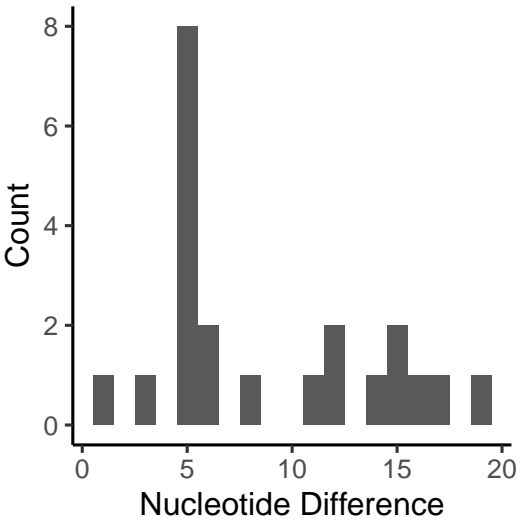
IGHV4-28\*01\_07

155 sequences assigned  
4 (2.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



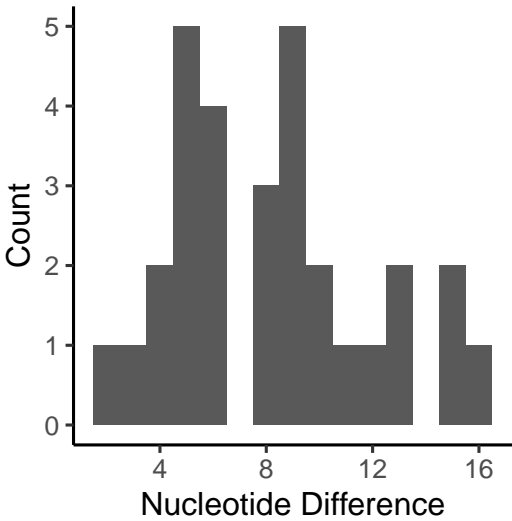
IGHV4-30-2\*03

39 sequences assigned  
No exact matches.



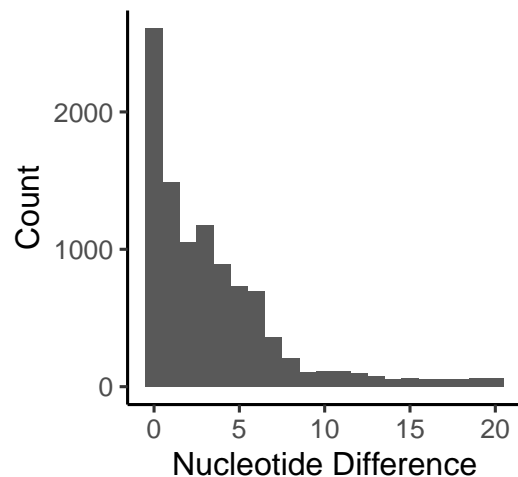
IGHV4-30-4\*08

43 sequences assigned  
No exact matches.



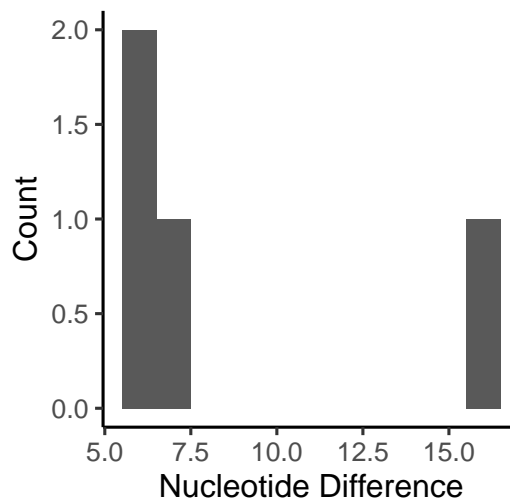
### IGHV4-31\*03\_04

11427 sequences assigned  
2608 (22.8%) exact matches, in which:  
2440 unique CDR3  
7 unique J



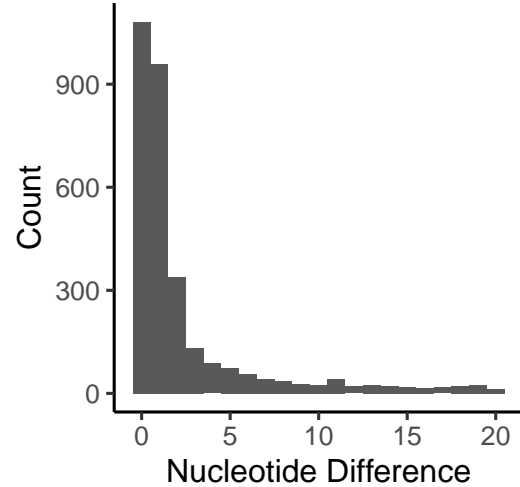
### IGHV4-38-2\*02

20 sequences assigned  
No exact matches.



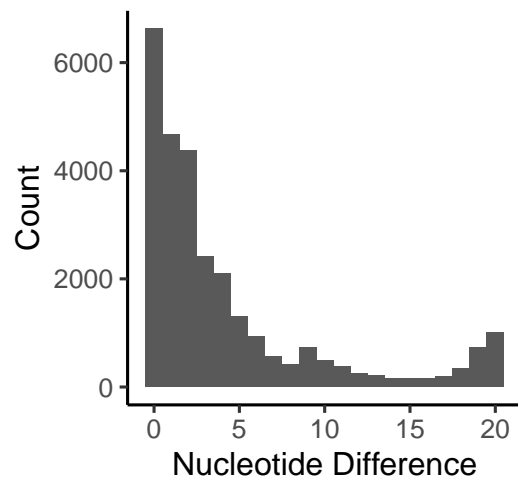
### IGHV4-39\*02\_C258G

3248 sequences assigned  
1082 (33.3%) exact matches, in which:  
1007 unique CDR3  
7 unique J



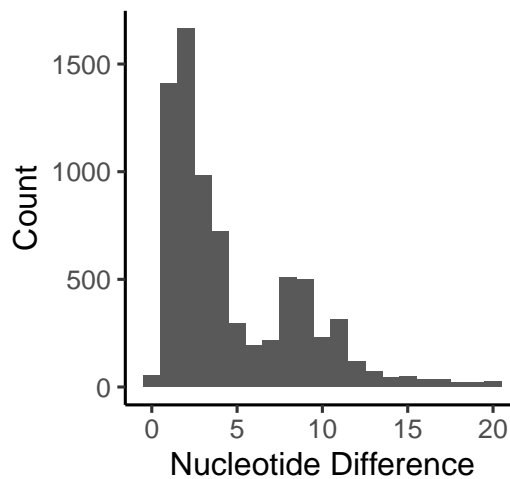
### IGHV4-34\*01\_02

30689 sequences assigned  
6627 (21.6%) exact matches, in which:  
5868 unique CDR3  
7 unique J



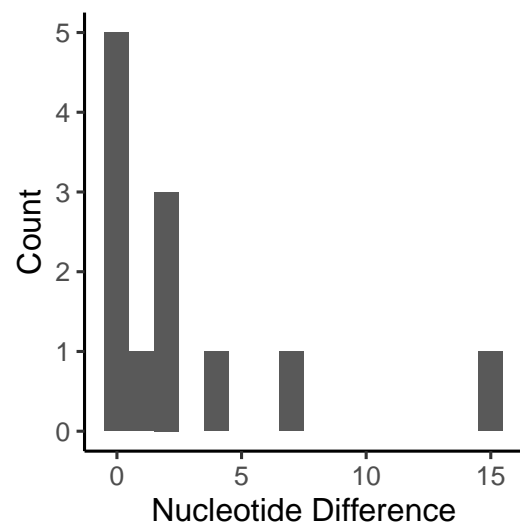
### IGHV4-39\*07

7871 sequences assigned  
55 (0.7%) exact matches, in which:  
55 unique CDR3  
6 unique J



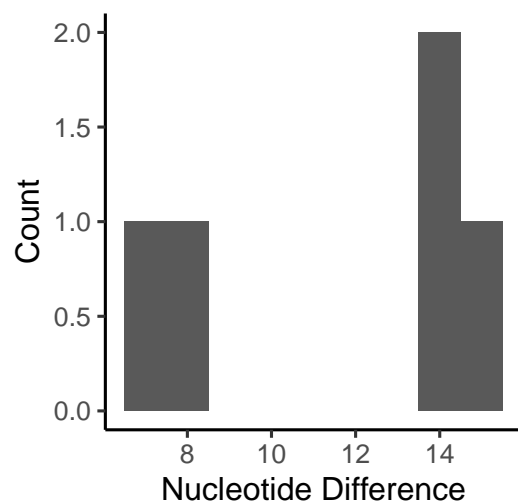
### IGHV4-55\*02\_04\_08

16 sequences assigned  
5 (31.2%) exact matches, in which:  
5 unique CDR3  
1 unique J



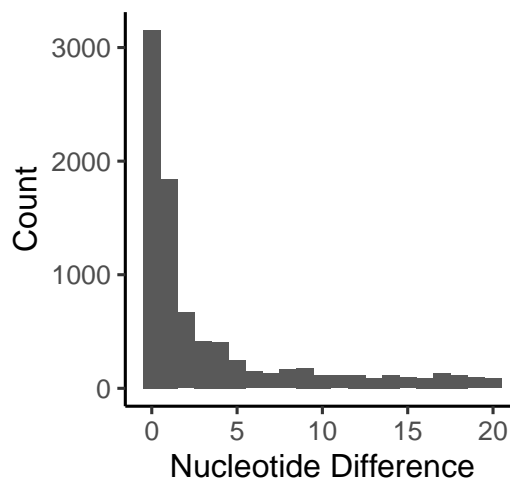
### IGHV4-38-2\*01

6 sequences assigned  
No exact matches.



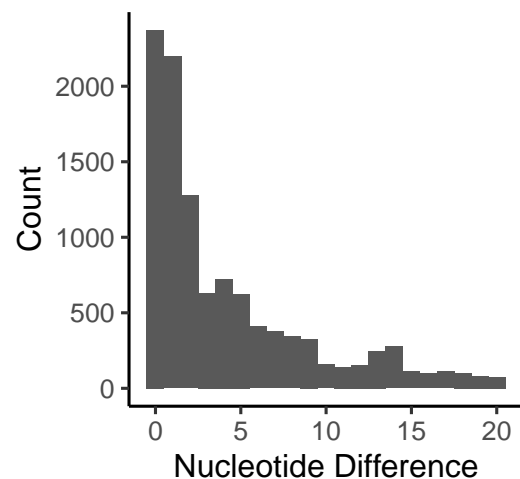
### IGHV4-39\*01\_05

12034 sequences assigned  
3154 (26.2%) exact matches, in which:  
2656 unique CDR3  
7 unique J



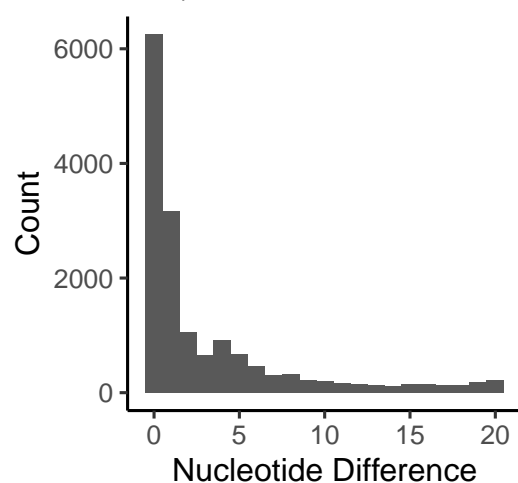
### IGHV4-59\*08

13284 sequences assigned  
2372 (17.9%) exact matches, in which:  
2163 unique CDR3  
7 unique J



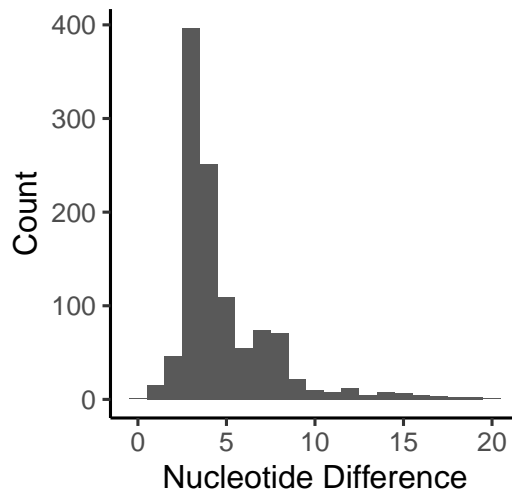
### IGHV4-59\*01\_07

18992 sequences assigned  
6251 (32.9%) exact matches, in which:  
5686 unique CDR3  
7 unique J



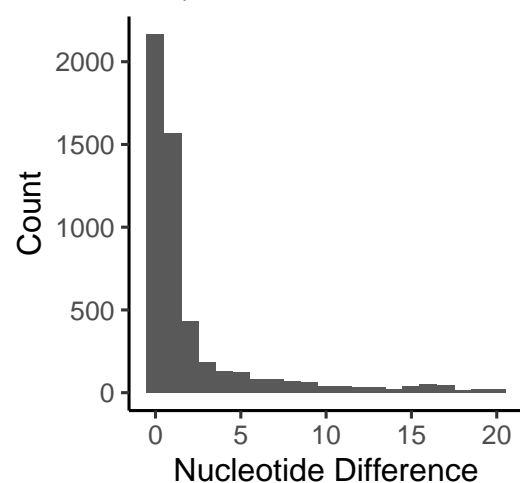
### IGHV4-61\*02

1156 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



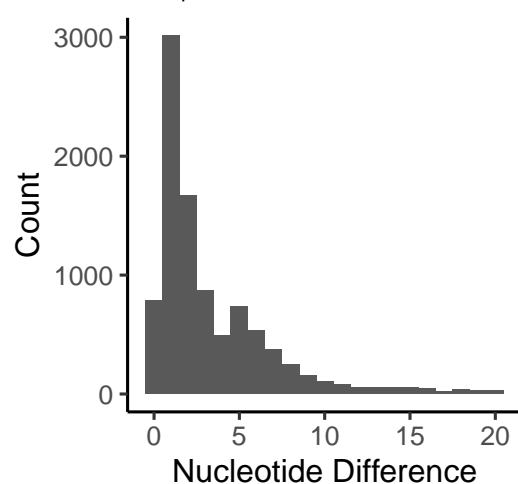
### IGHV5-10-1\*01\_03

5593 sequences assigned  
2165 (38.7%) exact matches, in which:  
1771 unique CDR3  
7 unique J



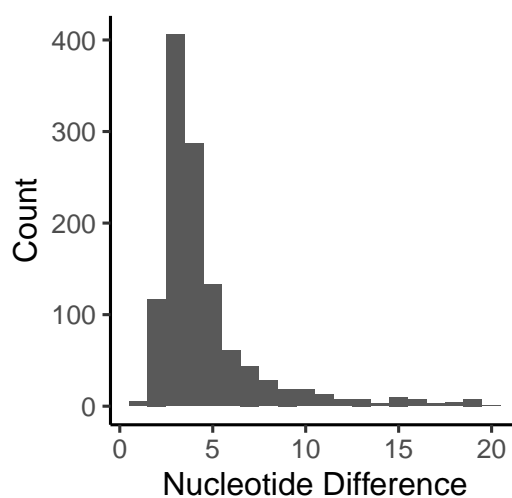
### IGHV4-59\*12

9813 sequences assigned  
783 (8%) exact matches, in which:  
766 unique CDR3  
7 unique J



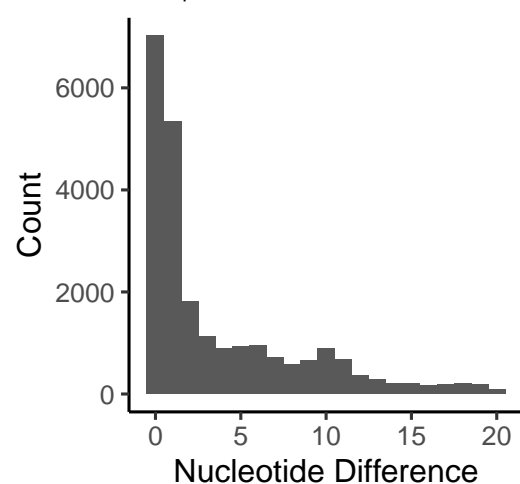
### IGHV4-61\*05

1255 sequences assigned  
No exact matches.



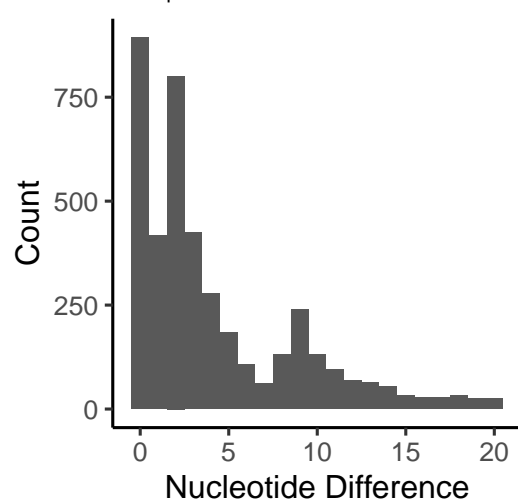
### IGHV5-51\*01\_03

24235 sequences assigned  
7022 (29%) exact matches, in which:  
4936 unique CDR3  
7 unique J



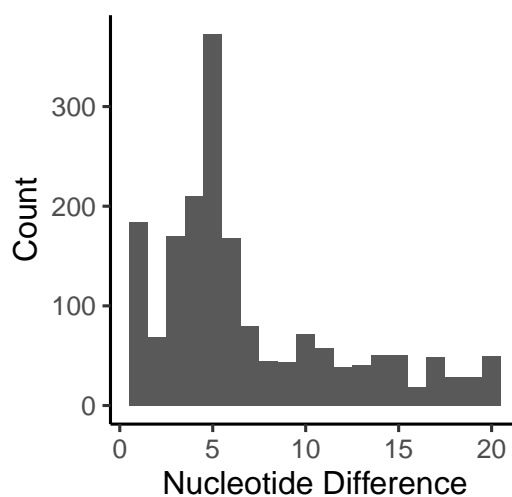
### IGHV4-61\*01

4365 sequences assigned  
894 (20.5%) exact matches, in which:  
860 unique CDR3  
7 unique J



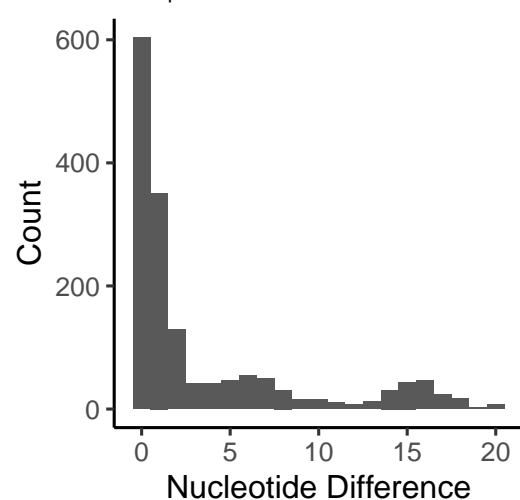
### IGHV4-61\*08

3837 sequences assigned  
No exact matches.



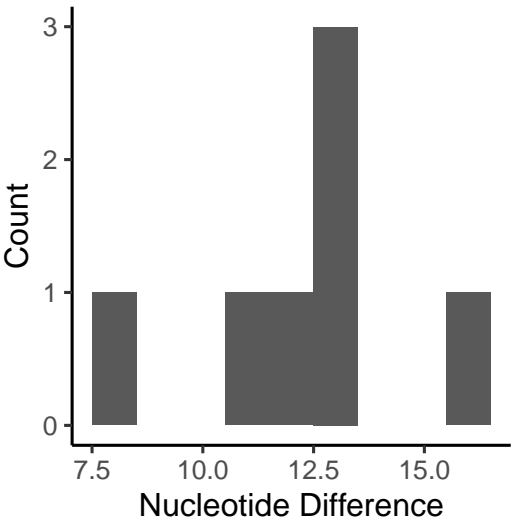
### IGHV6-1\*01\_02

1678 sequences assigned  
604 (36%) exact matches, in which:  
556 unique CDR3  
7 unique J



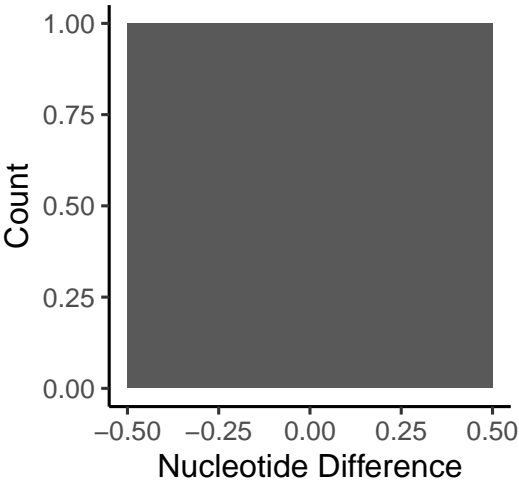
IGHV7-4-1\*02

7 sequences assigned  
No exact matches.

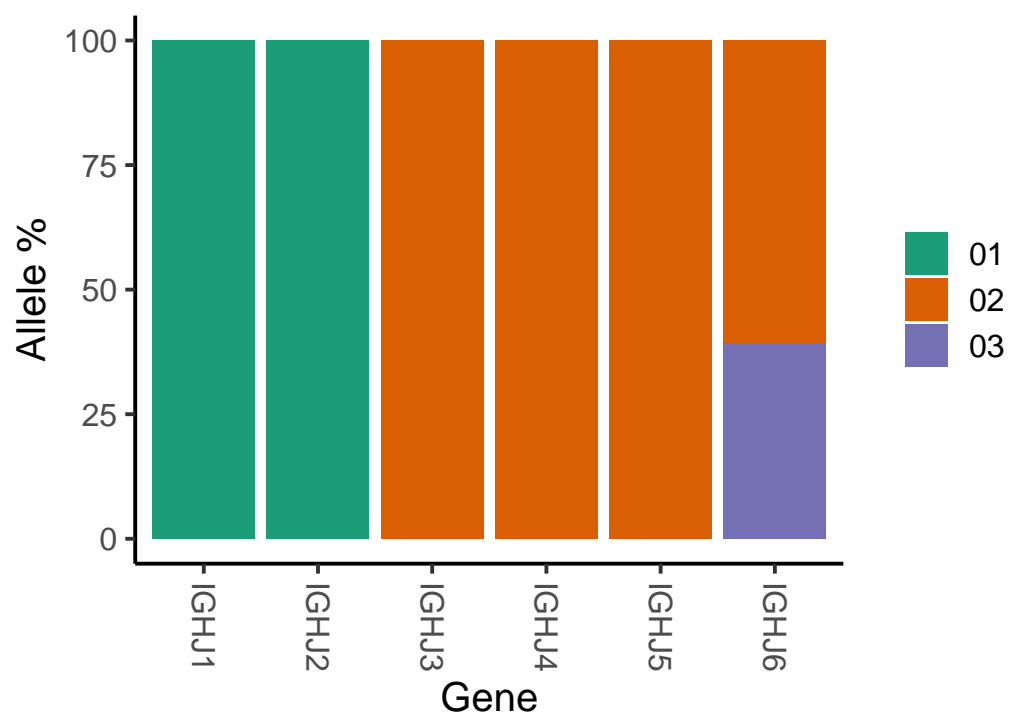


IGHV7-81\*01

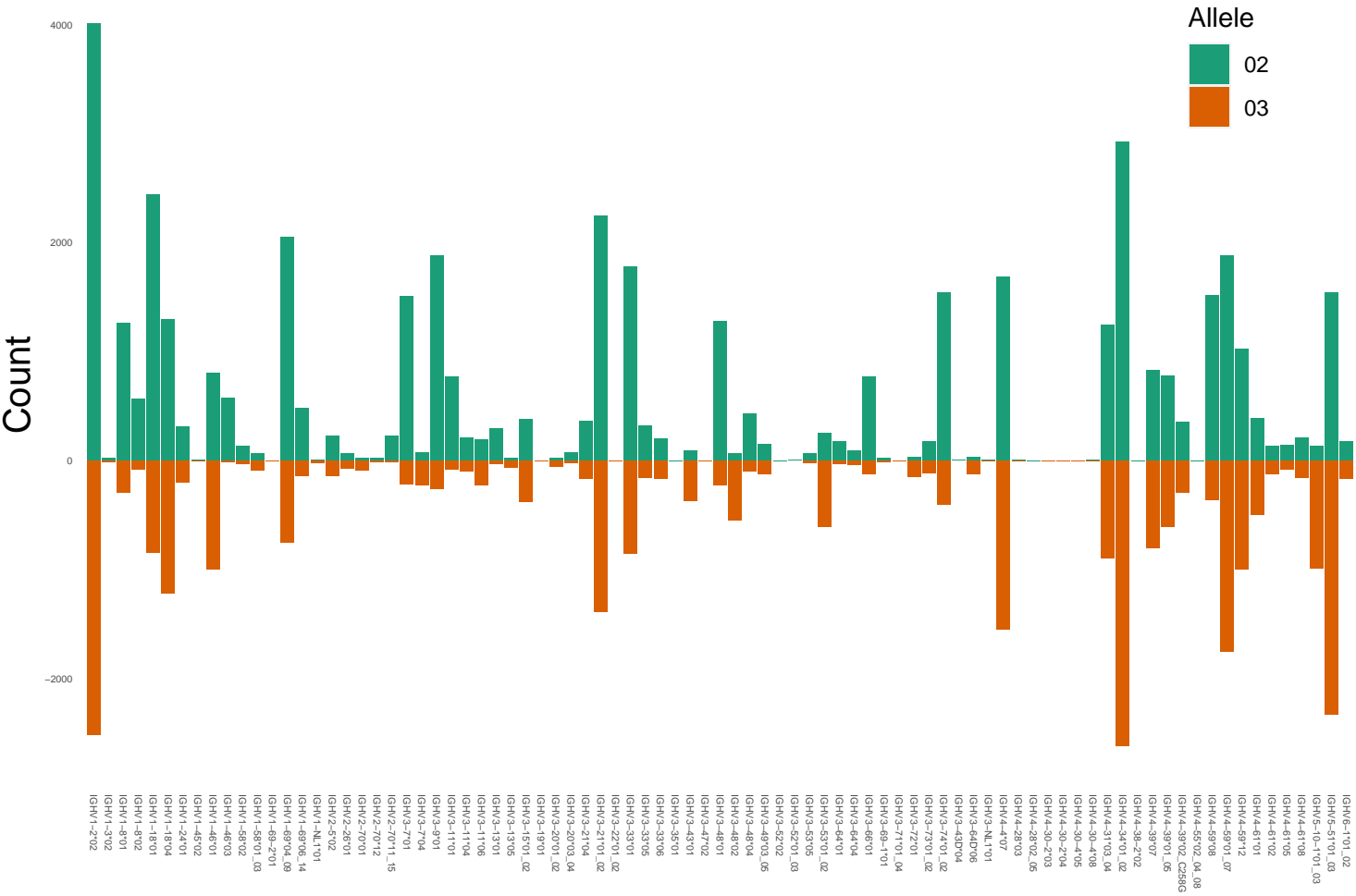
1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Novel sequence(s) IGHV1-69\*01\_12\_13\_G238A IGHV3-48\*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.