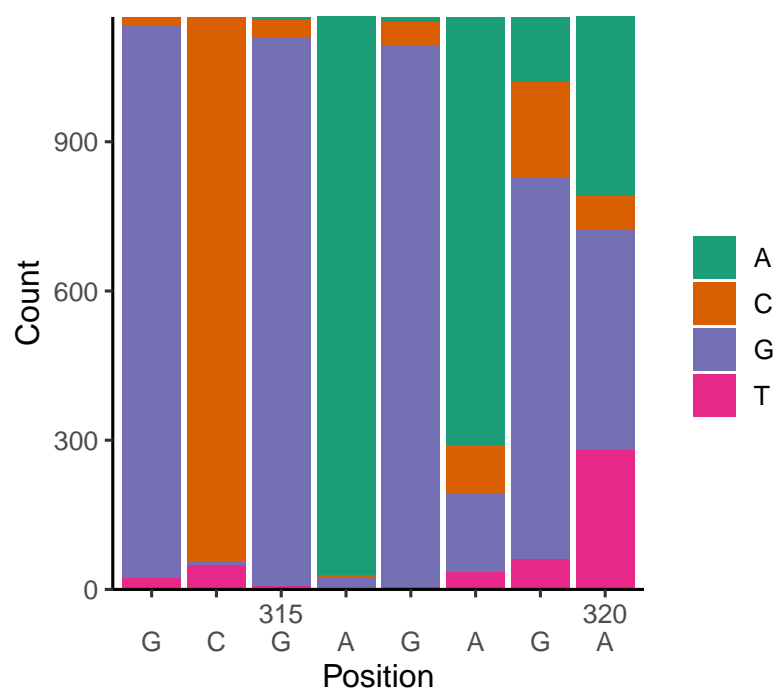
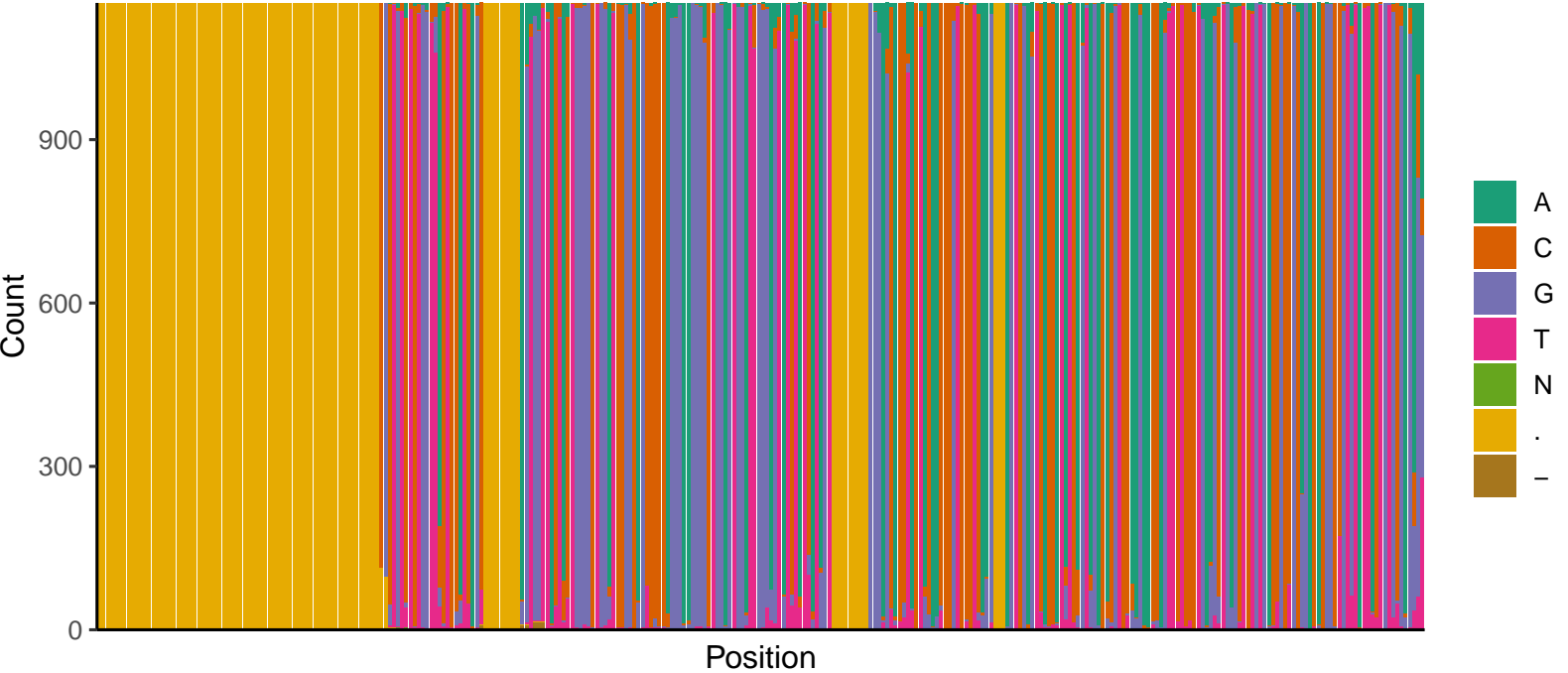


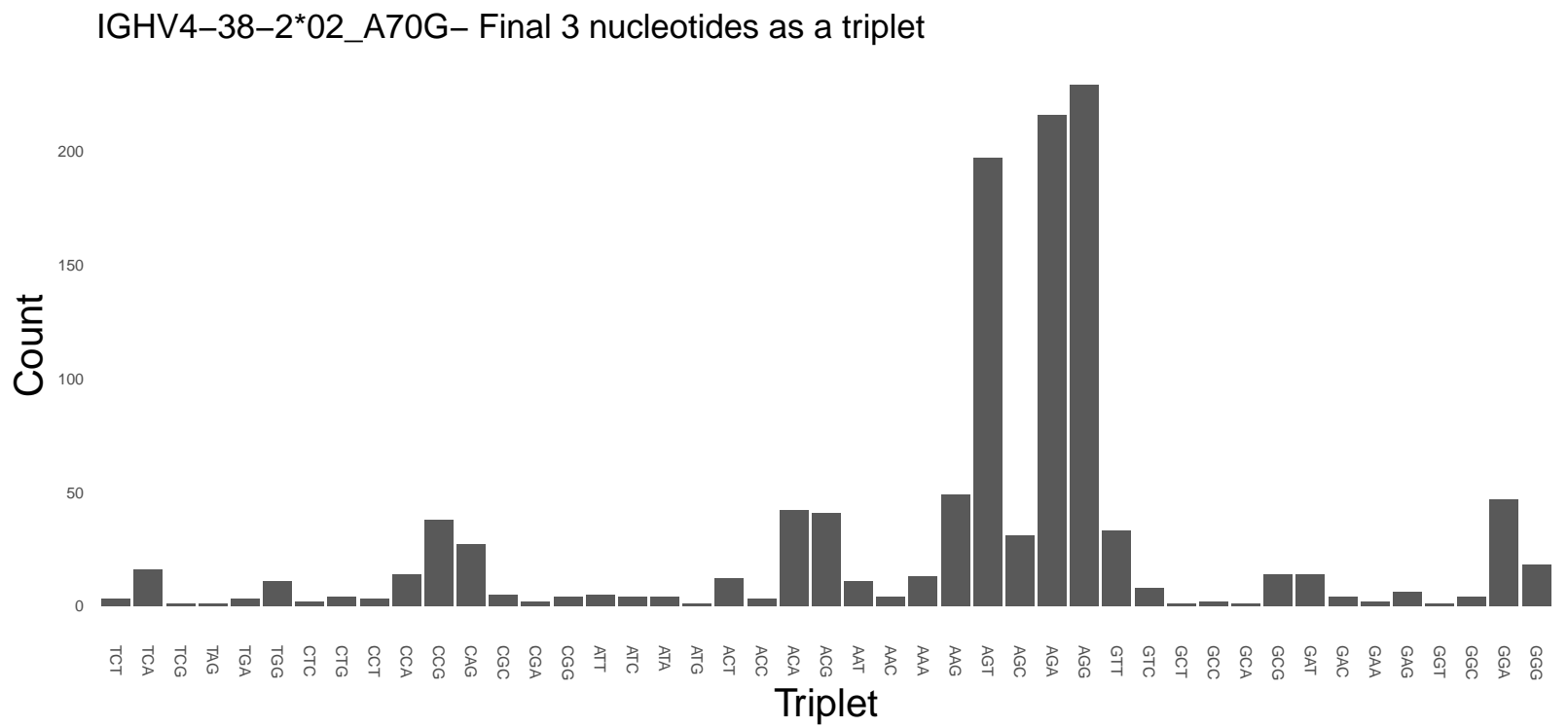
# Gene IGHV4-38-2\*02\_A70G



Gene IGHV4-38-2\*02\_A70G

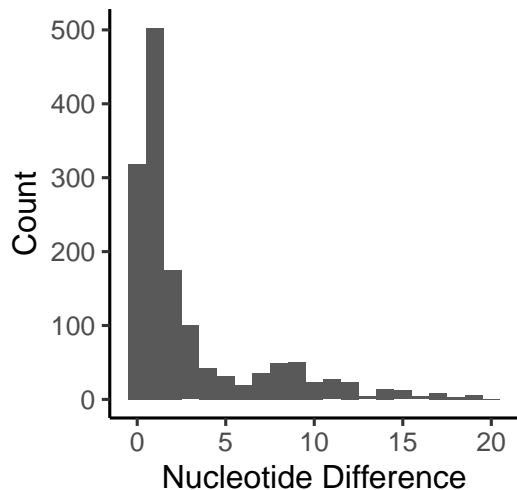


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



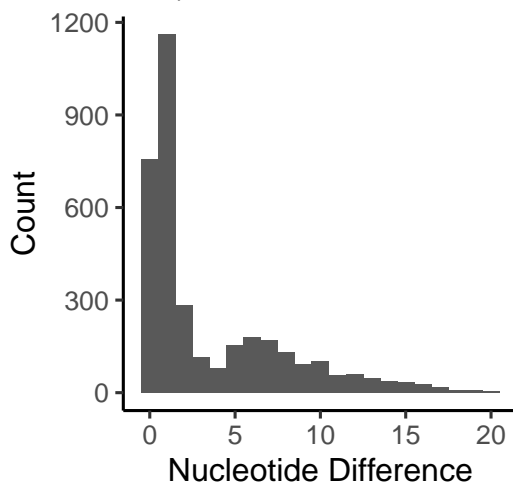
### IGHV1-2\*04

1483 sequences assigned  
319 (21.5%) exact matches, in which:  
261 unique CDR3  
7 unique J



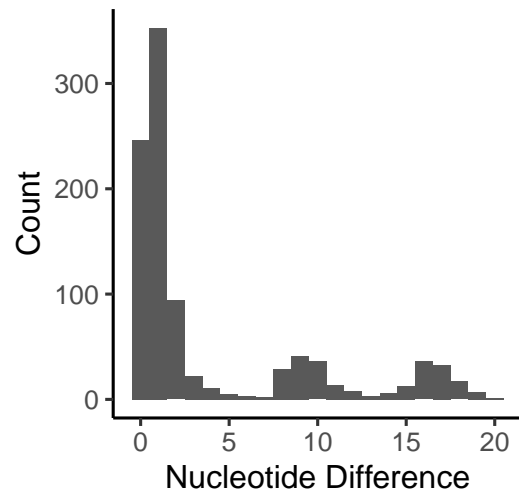
### IGHV1-8\*01

3790 sequences assigned  
756 (19.9%) exact matches, in which:  
587 unique CDR3  
7 unique J



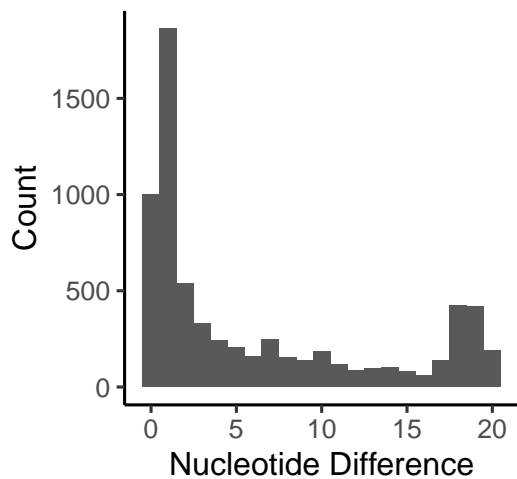
### IGHV1-24\*01

1029 sequences assigned  
246 (23.9%) exact matches, in which:  
205 unique CDR3  
6 unique J



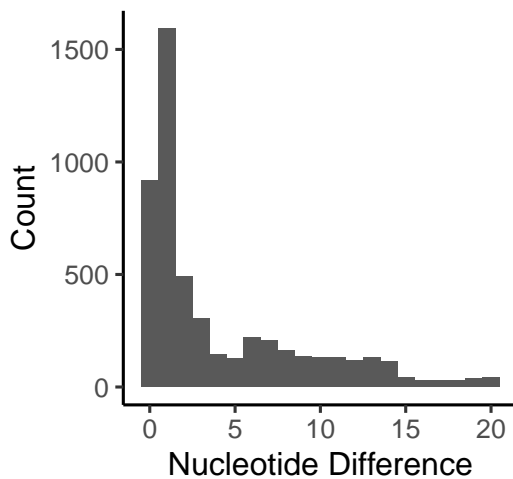
### IGHV1-2\*06

6966 sequences assigned  
1002 (14.4%) exact matches, in which:  
736 unique CDR3  
7 unique J



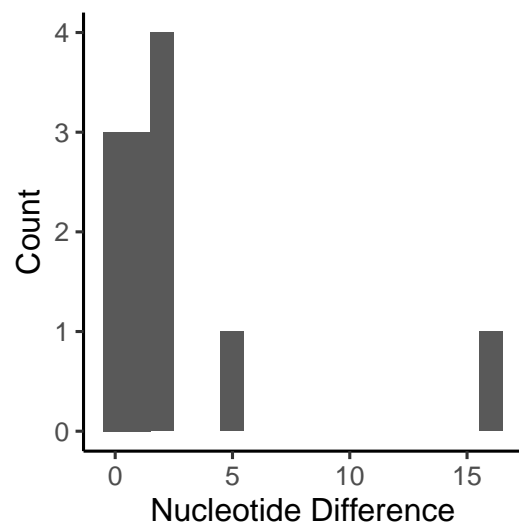
### IGHV1-18\*01

7307 sequences assigned  
919 (12.6%) exact matches, in which:  
688 unique CDR3  
7 unique J



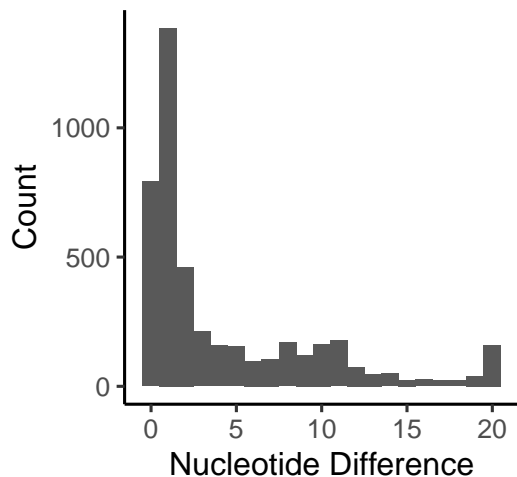
### IGHV1-45\*02

12 sequences assigned  
3 (25%) exact matches, in which:  
3 unique CDR3  
0 unique J



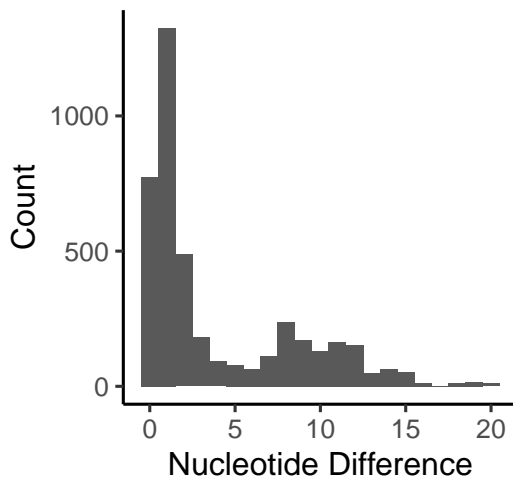
### IGHV1-3\*01\_05

7164 sequences assigned  
792 (11.1%) exact matches, in which:  
539 unique CDR3  
7 unique J



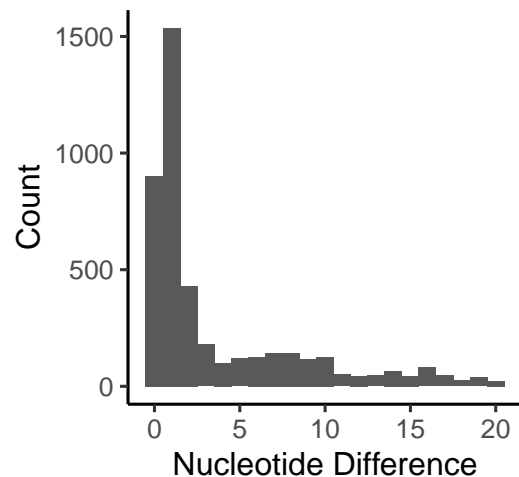
### IGHV1-18\*04

4943 sequences assigned  
773 (15.6%) exact matches, in which:  
592 unique CDR3  
7 unique J



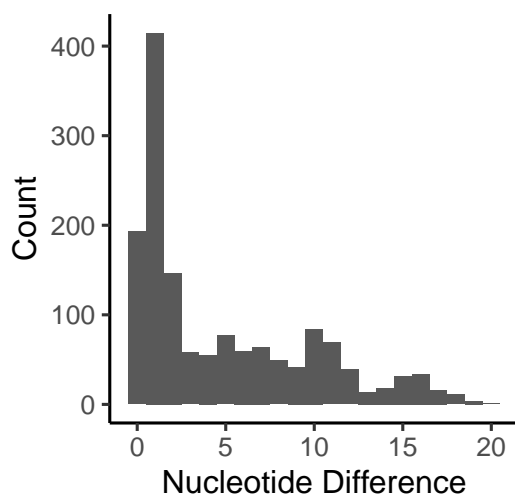
### IGHV1-46\*01

5653 sequences assigned  
901 (15.9%) exact matches, in which:  
675 unique CDR3  
7 unique J



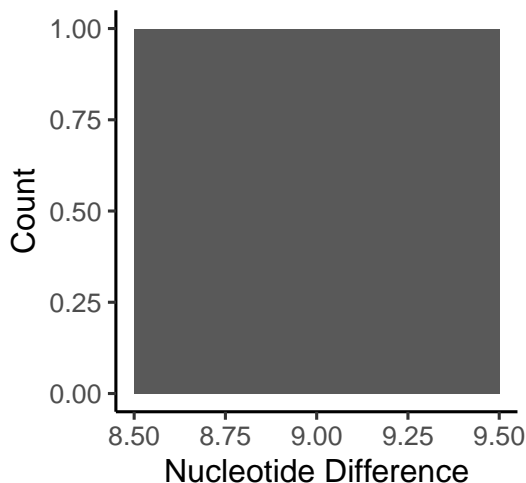
### IGHV1–58\*01\_03

1486 sequences assigned  
193 (13%) exact matches, in which:  
137 unique CDR3  
6 unique J



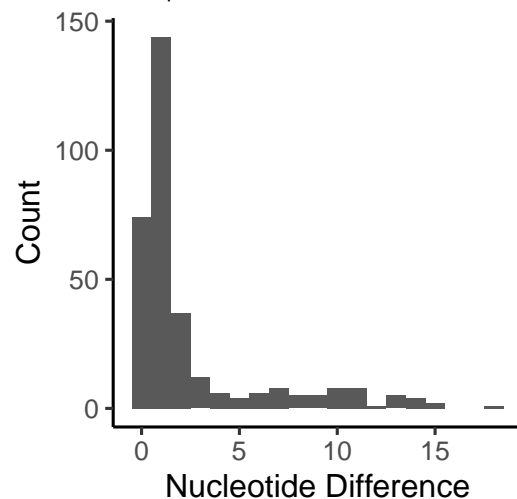
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



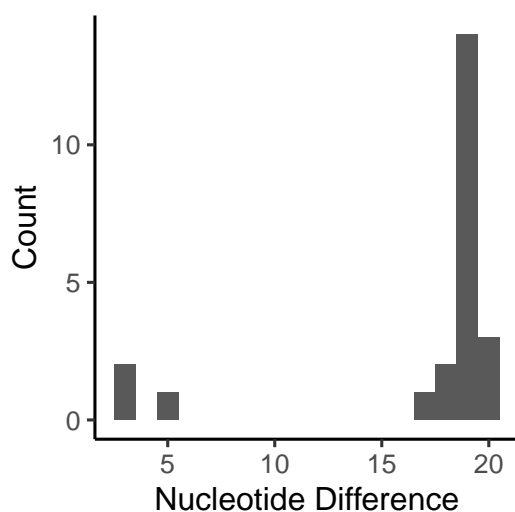
### IGHV2–26\*01

343 sequences assigned  
74 (21.6%) exact matches, in which:  
53 unique CDR3  
5 unique J



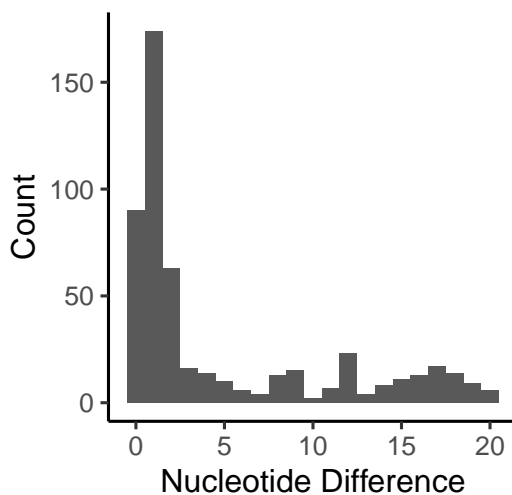
### IGHV1–69–2\*01

23 sequences assigned  
No exact matches.



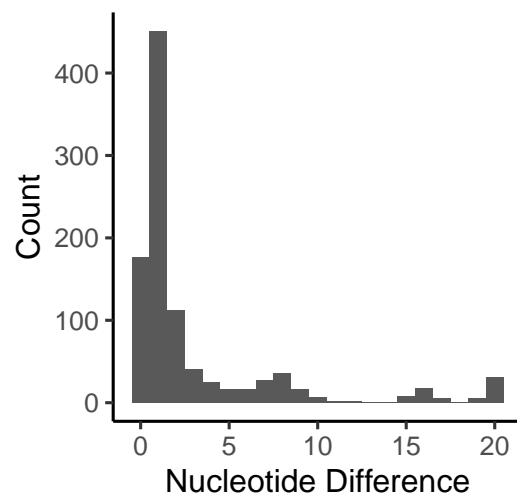
### IGHV2–5\*01

616 sequences assigned  
90 (14.6%) exact matches, in which:  
57 unique CDR3  
6 unique J



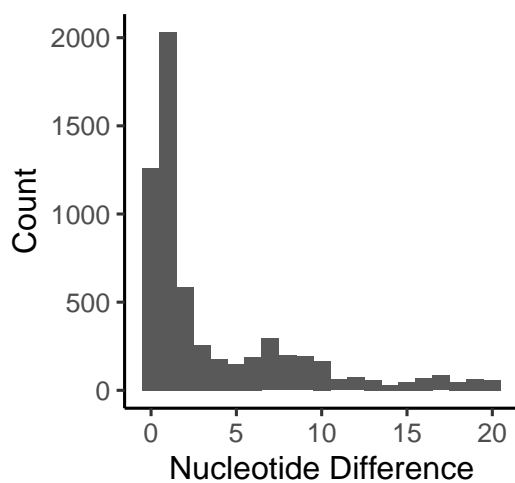
### IGHV2–70\*01

1134 sequences assigned  
177 (15.6%) exact matches, in which:  
110 unique CDR3  
6 unique J



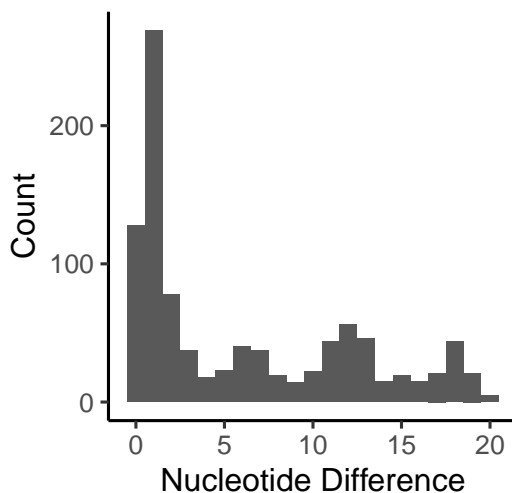
### IGHV1–69\*06\_14

7015 sequences assigned  
1261 (18%) exact matches, in which:  
967 unique CDR3  
7 unique J



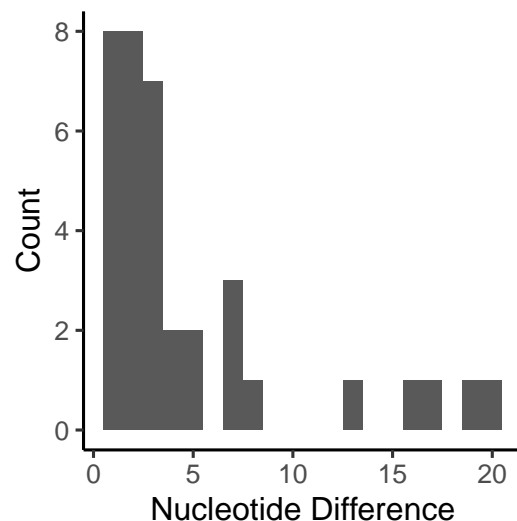
### IGHV2–5\*02

1026 sequences assigned  
128 (12.5%) exact matches, in which:  
90 unique CDR3  
5 unique J



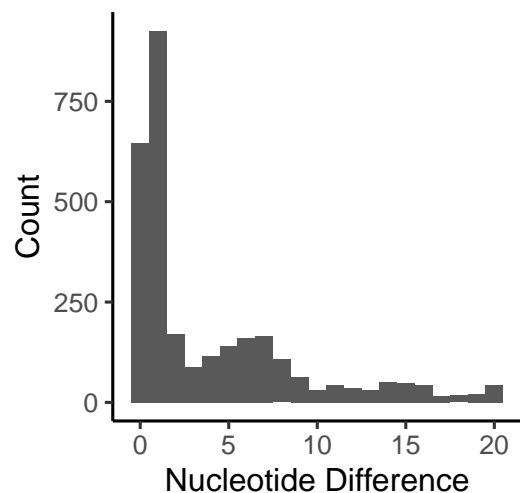
### IGHV2–70\*12

37 sequences assigned  
No exact matches.



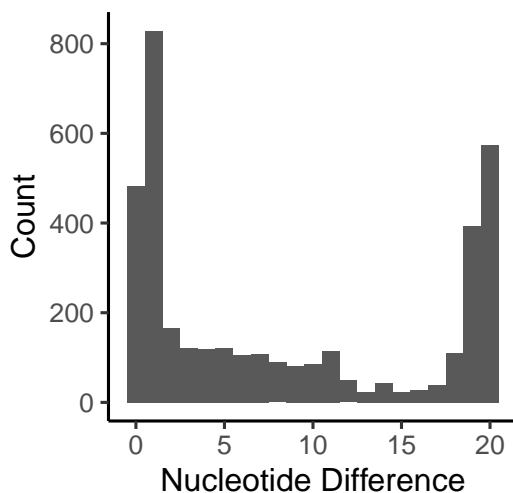
### IGHV3-7\*01

3331 sequences assigned  
646 (19.4%) exact matches, in which:  
421 unique CDR3  
6 unique J



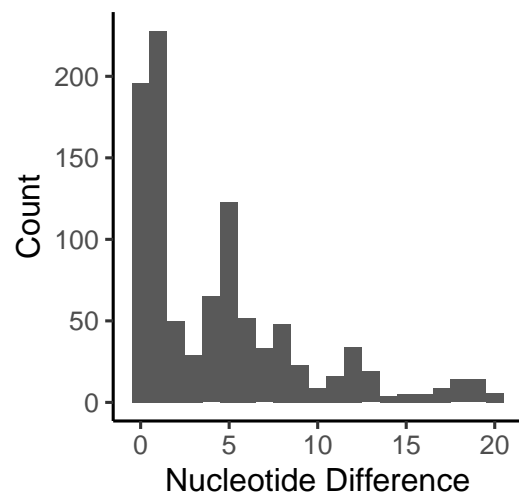
### IGHV3-9\*01

5339 sequences assigned  
483 (9%) exact matches, in which:  
286 unique CDR3  
7 unique J



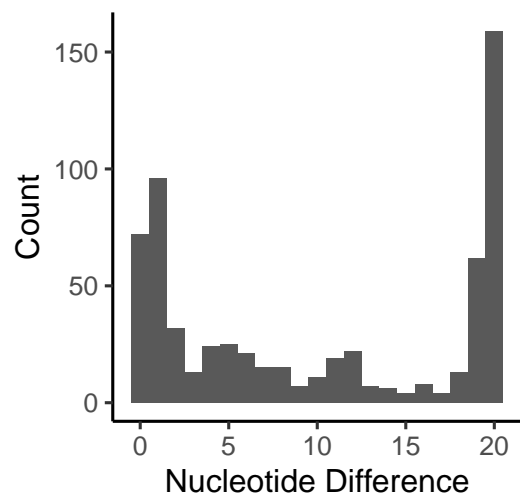
### IGHV3-11\*06

1019 sequences assigned  
196 (19.2%) exact matches, in which:  
140 unique CDR3  
6 unique J



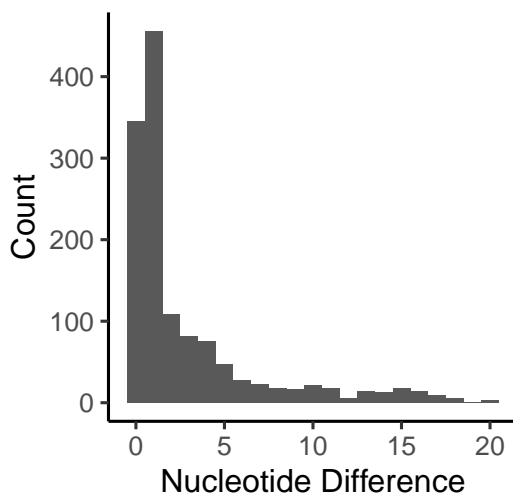
### IGHV3-7\*03

1119 sequences assigned  
72 (6.4%) exact matches, in which:  
53 unique CDR3  
6 unique J



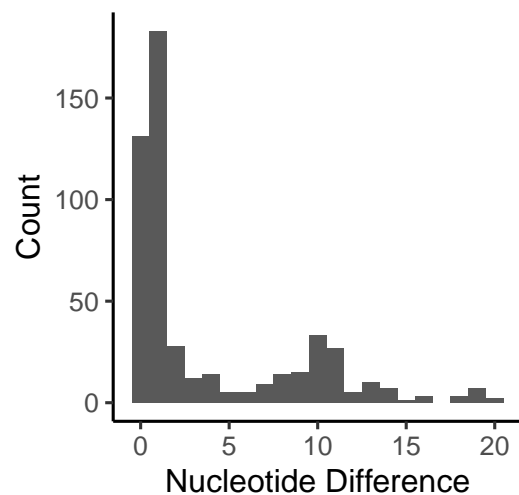
### IGHV3-11\*01

1351 sequences assigned  
345 (25.5%) exact matches, in which:  
231 unique CDR3  
7 unique J



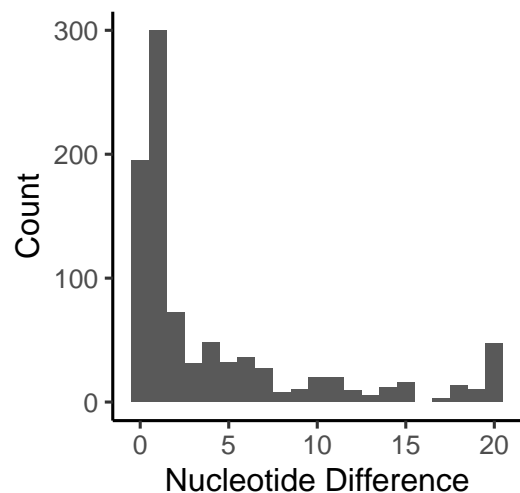
### IGHV3-13\*01

552 sequences assigned  
131 (23.7%) exact matches, in which:  
80 unique CDR3  
6 unique J



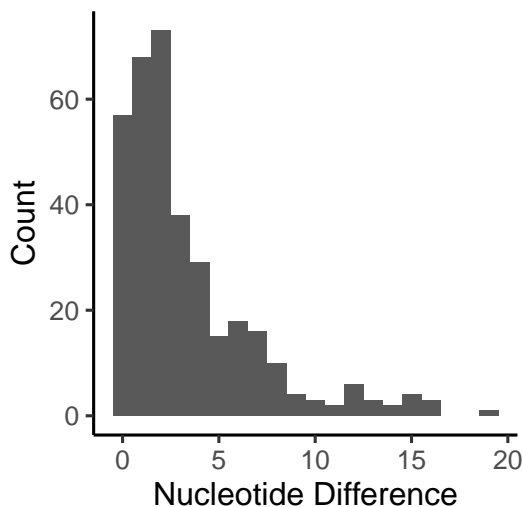
### IGHV3-7\*05

1053 sequences assigned  
195 (18.5%) exact matches, in which:  
117 unique CDR3  
6 unique J



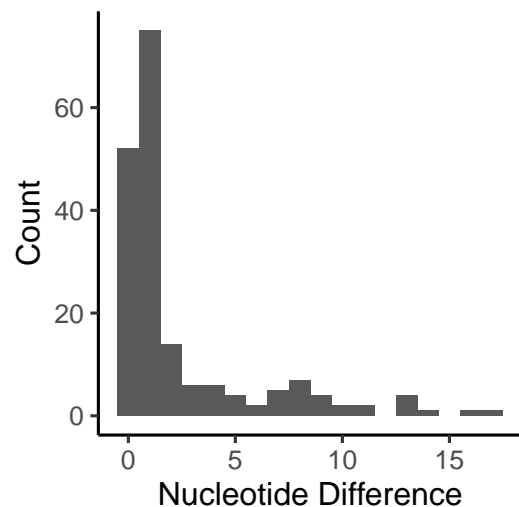
### IGHV3-11\*04

360 sequences assigned  
57 (15.8%) exact matches, in which:  
52 unique CDR3  
6 unique J



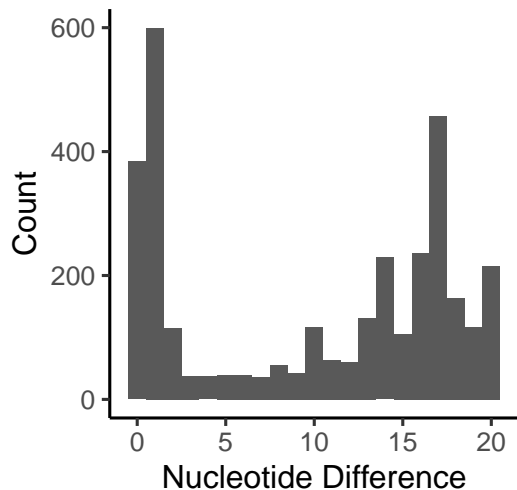
### IGHV3-13\*05

187 sequences assigned  
52 (27.8%) exact matches, in which:  
36 unique CDR3  
6 unique J



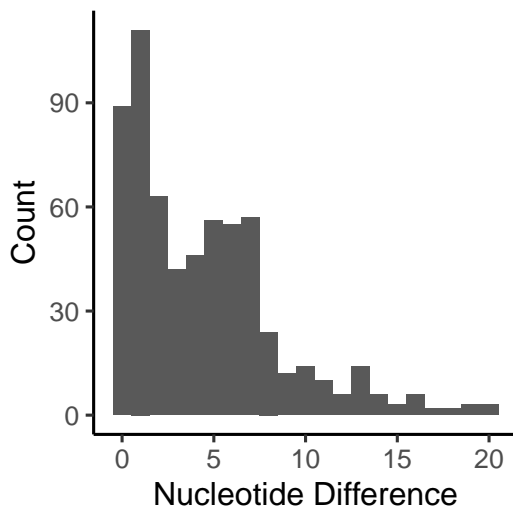
### IGHV3-15\*01\_02

4096 sequences assigned  
384 (9.4%) exact matches, in which:  
225 unique CDR3  
7 unique J



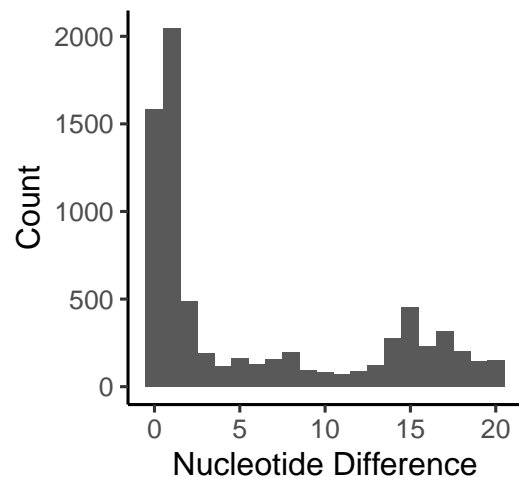
### IGHV3-21\*04

642 sequences assigned  
89 (13.9%) exact matches, in which:  
72 unique CDR3  
7 unique J



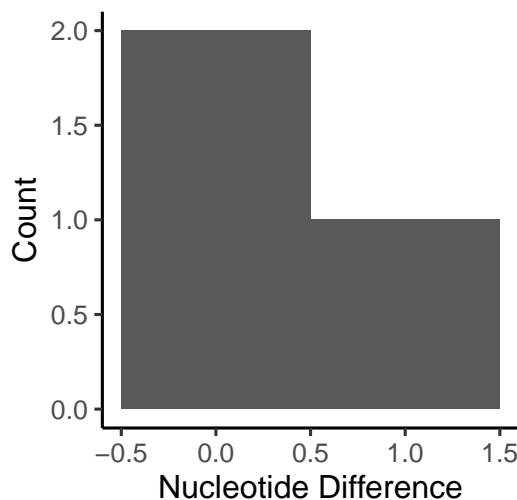
### IGHV3-30\*03

10065 sequences assigned  
1584 (15.7%) exact matches, in which:  
979 unique CDR3  
7 unique J



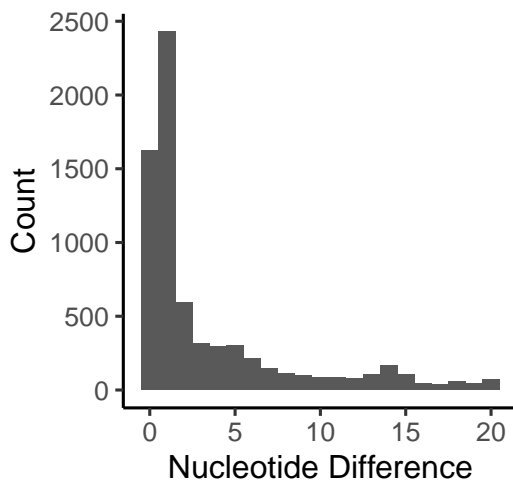
### IGHV3-20\*01\_02

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



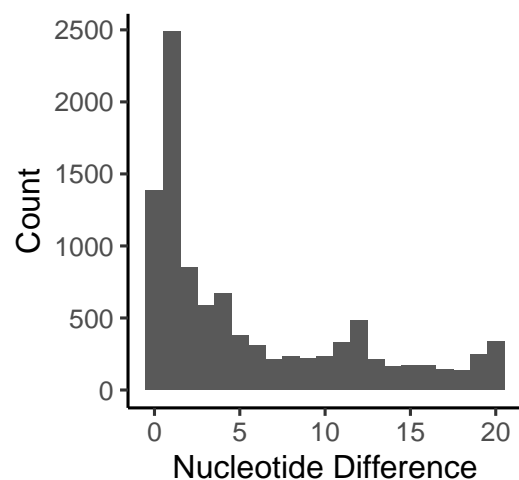
### IGHV3-21\*01\_02

7292 sequences assigned  
1625 (22.3%) exact matches, in which:  
984 unique CDR3  
7 unique J



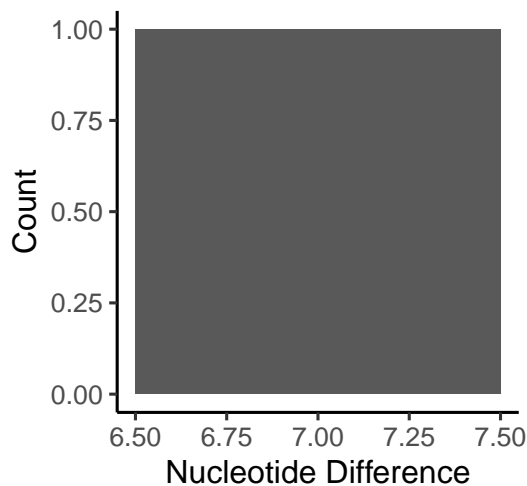
### IGHV3-33\*01

10451 sequences assigned  
1383 (13.2%) exact matches, in which:  
875 unique CDR3  
7 unique J



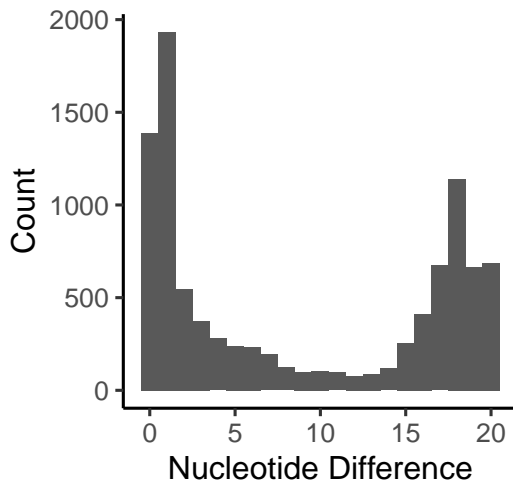
### IGHV3-20\*03\_04

5 sequences assigned  
No exact matches.



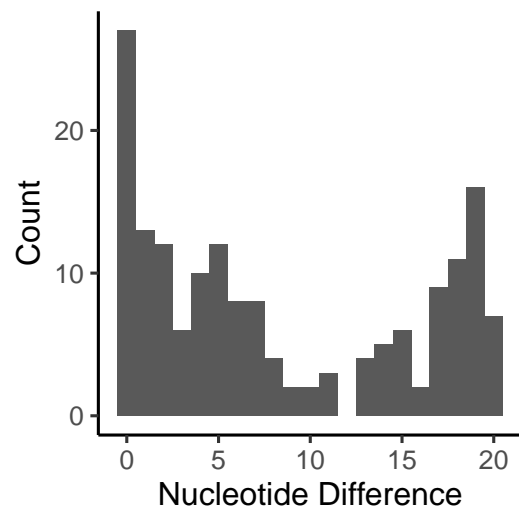
### IGHV3-30-3\*01

13400 sequences assigned  
1387 (10.4%) exact matches, in which:  
892 unique CDR3  
7 unique J



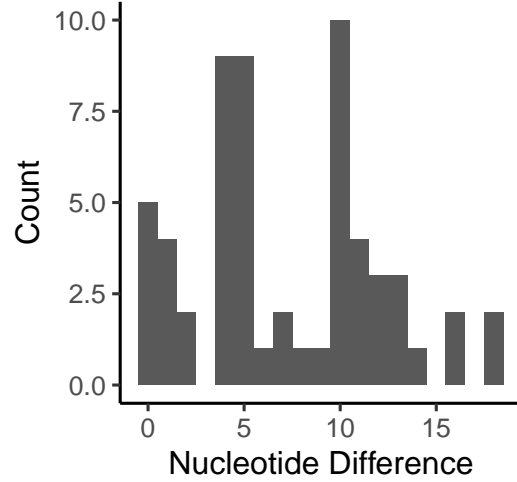
### IGHV3-33\*05

187 sequences assigned  
27 (14.4%) exact matches, in which:  
22 unique CDR3  
5 unique J



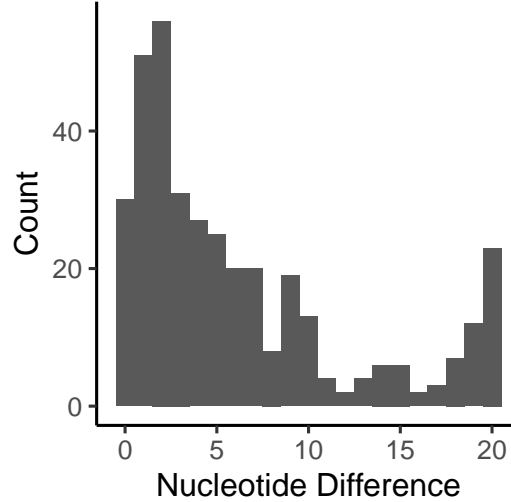
### IGHV3-43\*01

61 sequences assigned  
5 (8.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



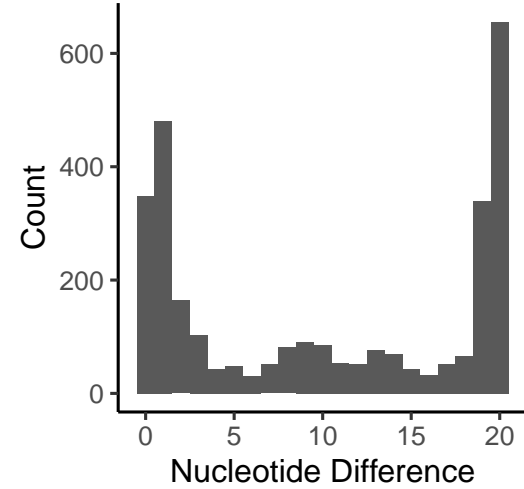
### IGHV3-48\*04

567 sequences assigned  
30 (5.3%) exact matches, in which:  
27 unique CDR3  
5 unique J



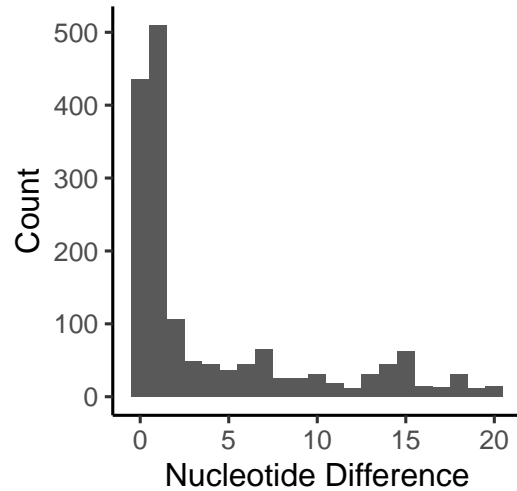
### IGHV3-53\*01\_02

4374 sequences assigned  
349 (8%) exact matches, in which:  
230 unique CDR3  
7 unique J



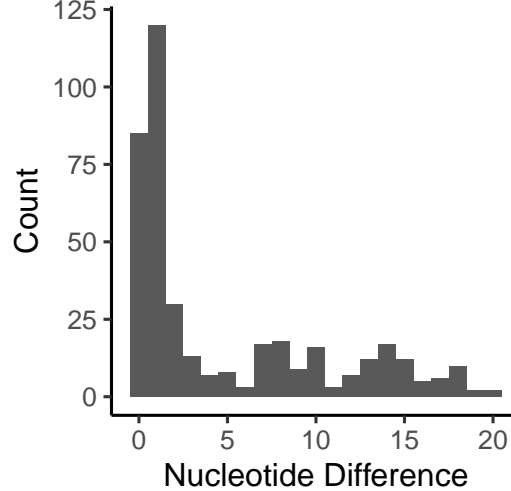
### IGHV3-48\*02

1703 sequences assigned  
436 (25.6%) exact matches, in which:  
273 unique CDR3  
6 unique J



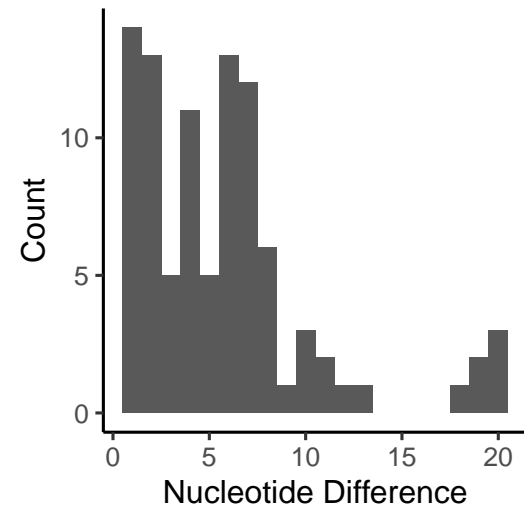
### IGHV3-49\*04

416 sequences assigned  
85 (20.4%) exact matches, in which:  
51 unique CDR3  
5 unique J



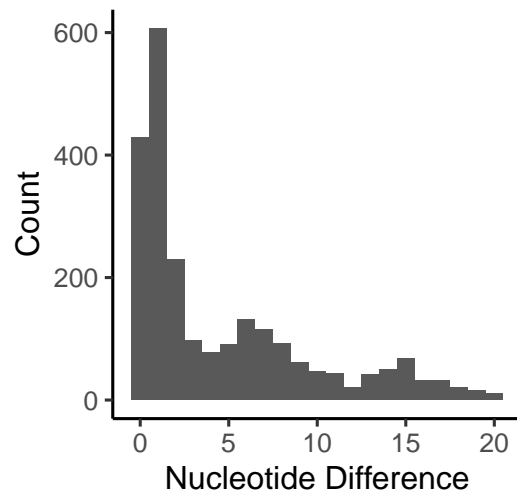
### IGHV3-64\*04

101 sequences assigned  
No exact matches.



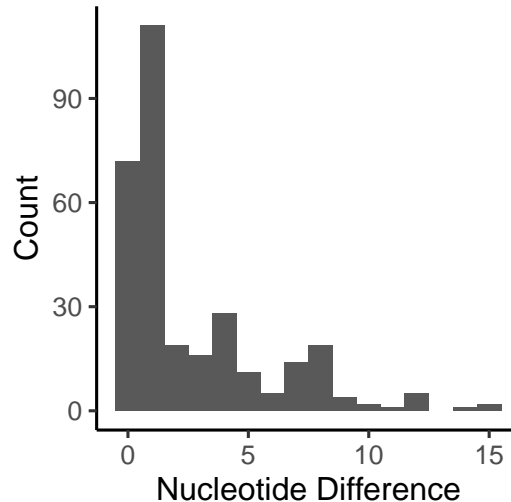
### IGHV3-48\*03

2428 sequences assigned  
429 (17.7%) exact matches, in which:  
255 unique CDR3  
6 unique J



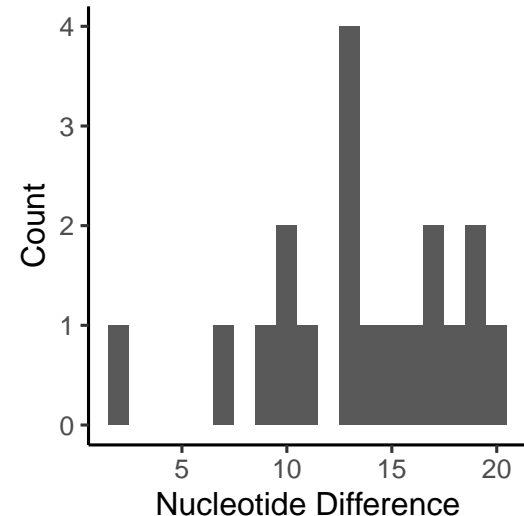
### IGHV3-49\*03\_05

317 sequences assigned  
72 (22.7%) exact matches, in which:  
42 unique CDR3  
7 unique J



### IGHV3-66\*01

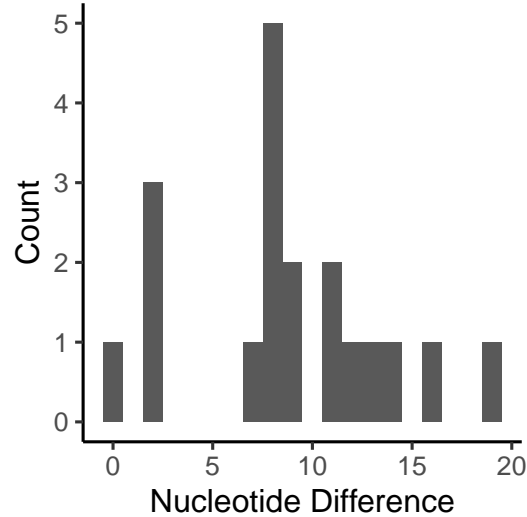
23 sequences assigned  
No exact matches.





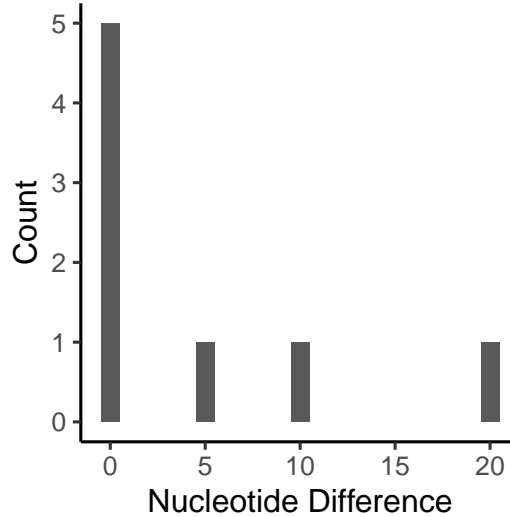
### IGHV3-66\*02

24 sequences assigned  
1 (4.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



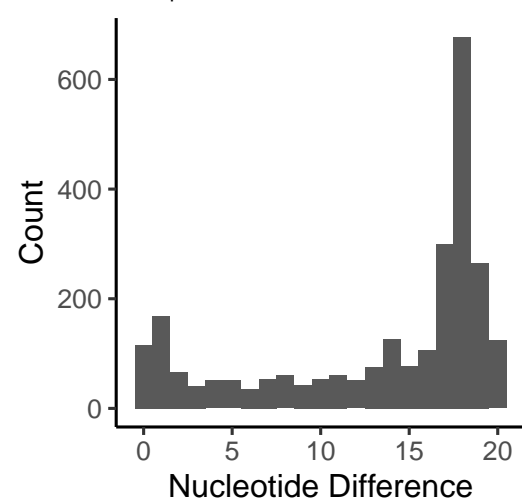
### IGHV3-69-1\*02

10 sequences assigned  
5 (50%) exact matches, in which:  
5 unique CDR3  
2 unique J



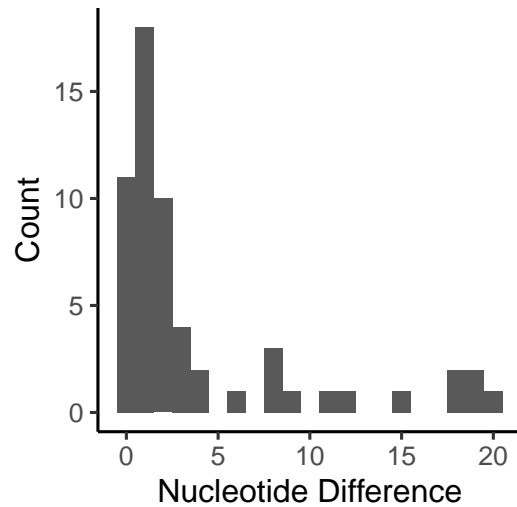
### IGHV3-74\*01\_02

3114 sequences assigned  
116 (3.7%) exact matches, in which:  
81 unique CDR3  
7 unique J



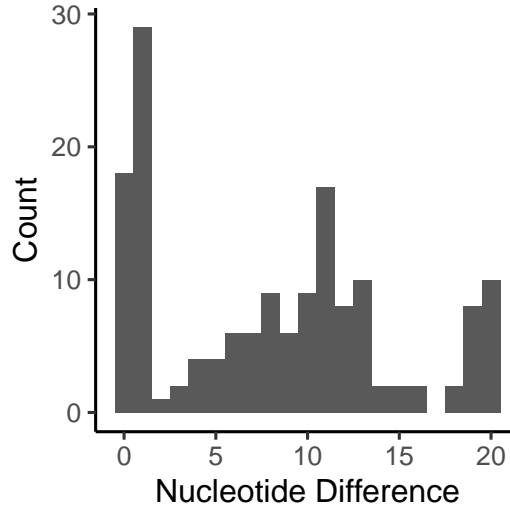
### IGHV3-66\*03

63 sequences assigned  
11 (17.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



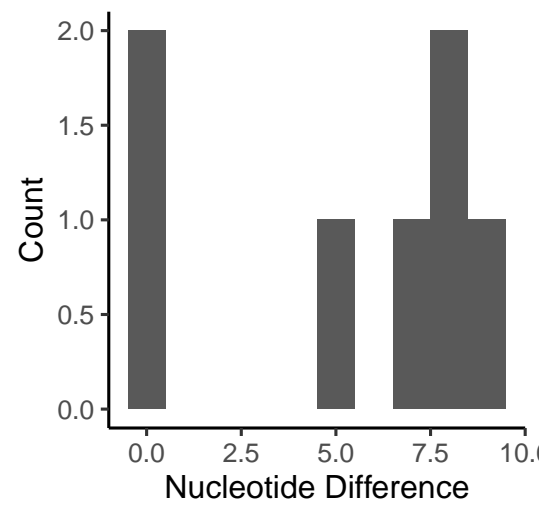
### IGHV3-72\*01

164 sequences assigned  
18 (11%) exact matches, in which:  
11 unique CDR3  
3 unique J



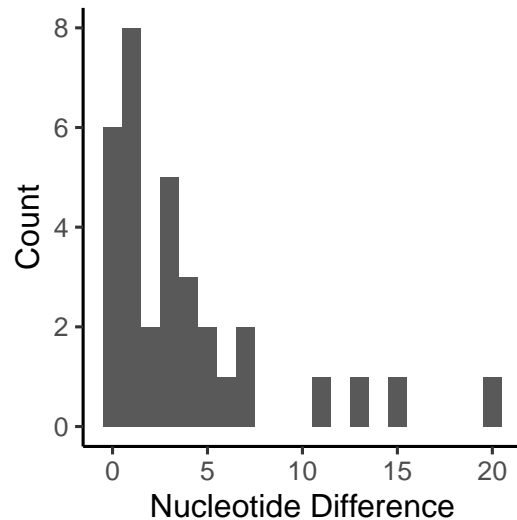
### IGHV3-43D\*04

7 sequences assigned  
2 (28.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



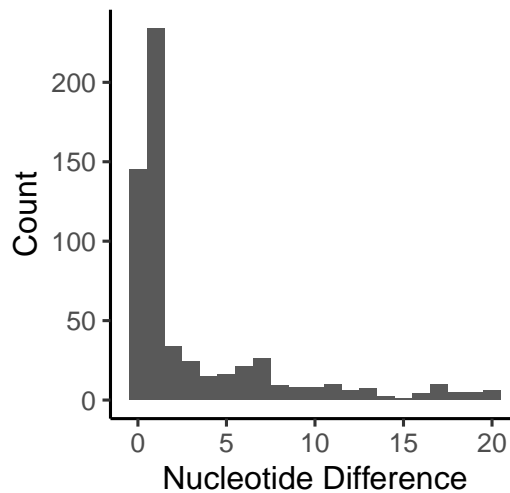
### IGHV3-69-1\*01

35 sequences assigned  
6 (17.1%) exact matches, in which:  
6 unique CDR3  
3 unique J



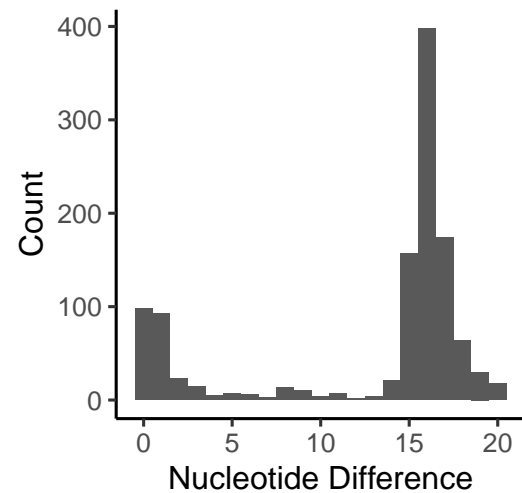
### IGHV3-73\*01\_02

700 sequences assigned  
145 (20.7%) exact matches, in which:  
93 unique CDR3  
7 unique J



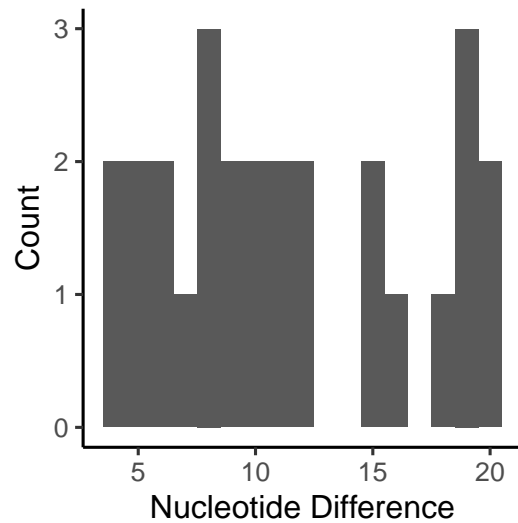
### IGHV3-64D\*08

1235 sequences assigned  
98 (7.9%) exact matches, in which:  
61 unique CDR3  
6 unique J



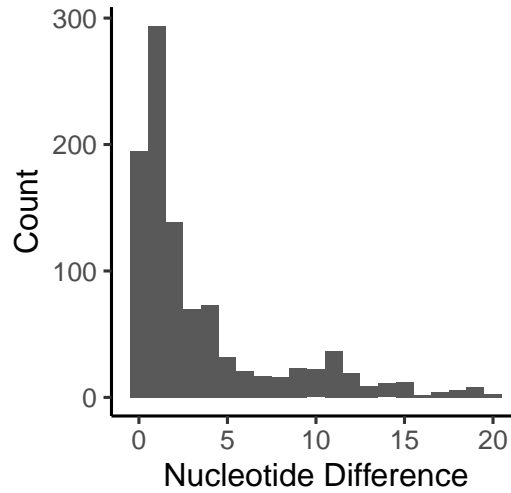
### IGHV3–NL1\*01

59 sequences assigned  
No exact matches.



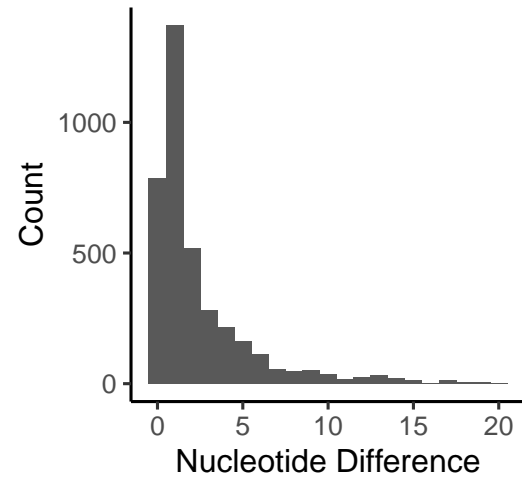
### IGHV4–30–2\*01

1028 sequences assigned  
195 (19%) exact matches, in which:  
123 unique CDR3  
6 unique J



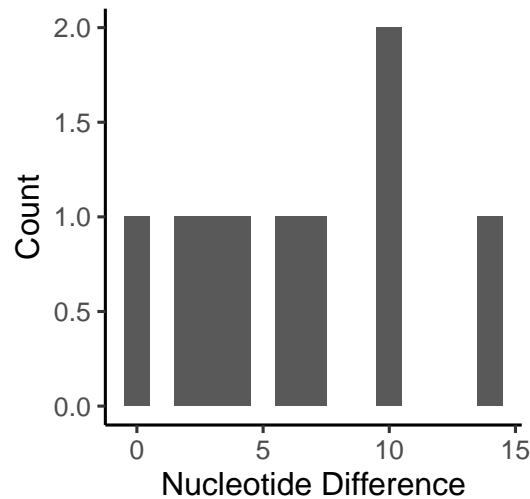
### IGHV4–34\*01\_02

4200 sequences assigned  
788 (18.8%) exact matches, in which:  
498 unique CDR3  
7 unique J



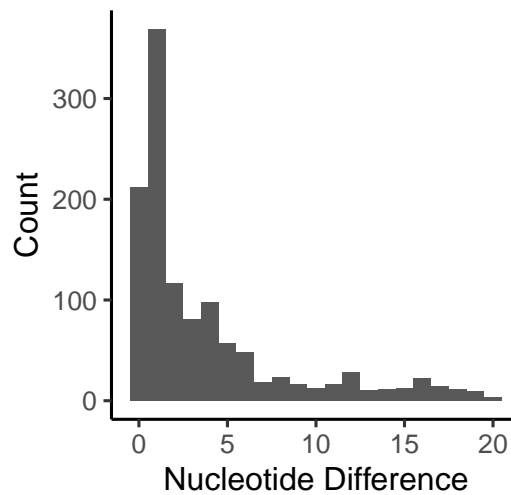
### IGHV4–28\*03

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



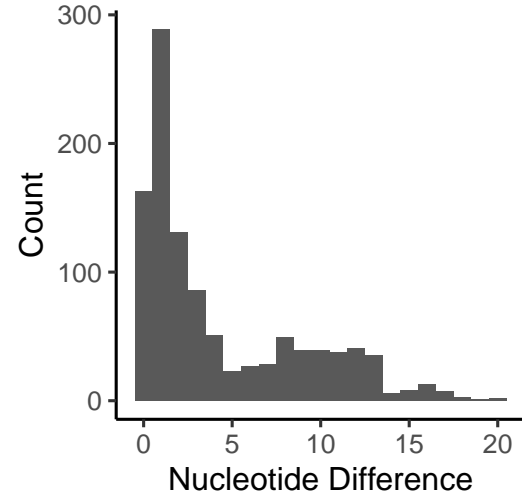
### IGHV4–30–4\*01

1259 sequences assigned  
212 (16.8%) exact matches, in which:  
153 unique CDR3  
7 unique J



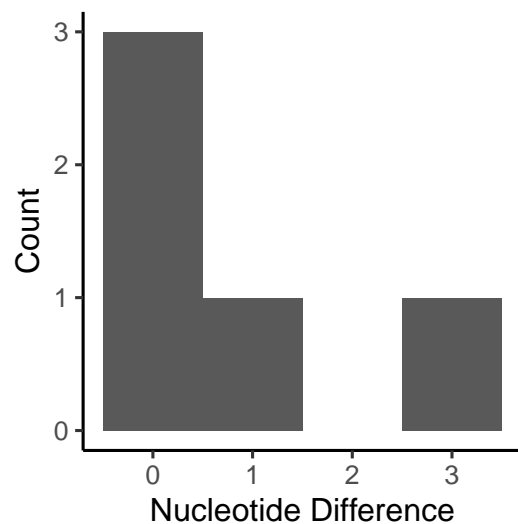
### IGHV4–38–2\*02\_A70G

1151 sequences assigned  
163 (14.2%) exact matches, in which:  
116 unique CDR3  
5 unique J



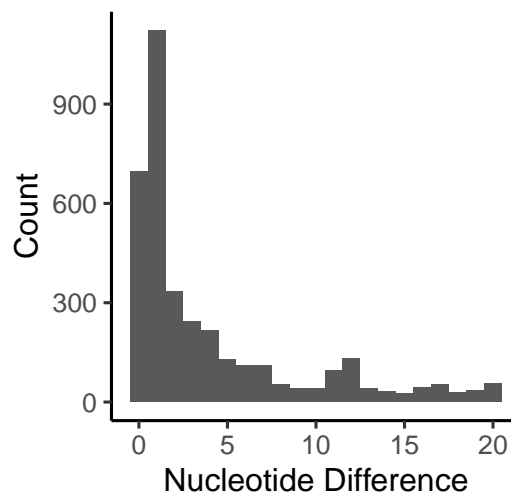
### IGHV4–28\*01\_07

5 sequences assigned  
3 (60%) exact matches, in which:  
2 unique CDR3  
1 unique J



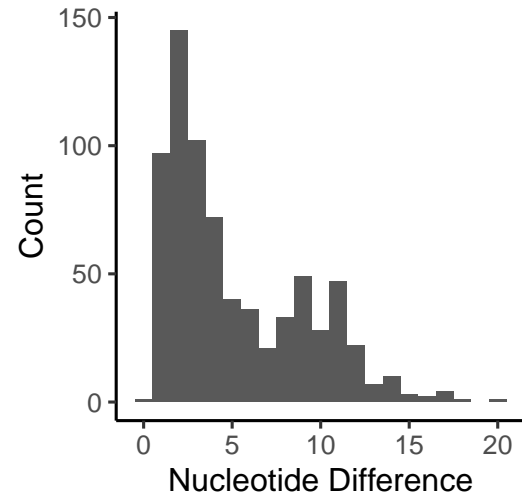
### IGHV4–31\*03\_04

4103 sequences assigned  
697 (17%) exact matches, in which:  
496 unique CDR3  
7 unique J



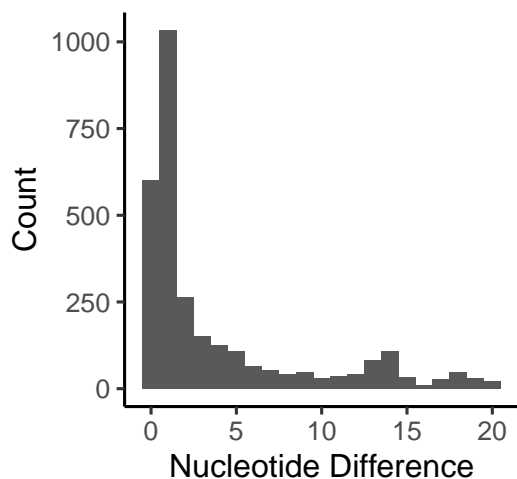
### IGHV4–39\*07

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



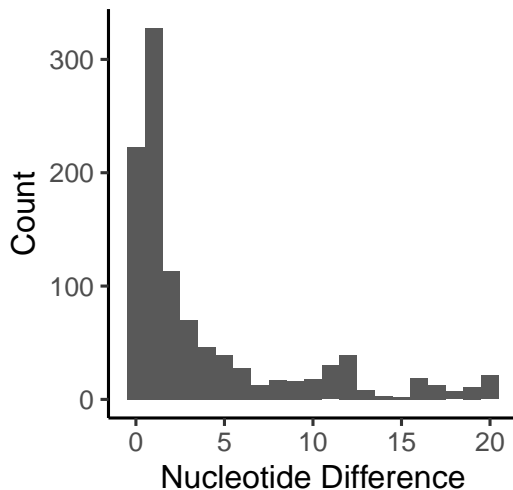
### IGHV4-39\*01\_05

4265 sequences assigned  
600 (14.1%) exact matches, in which:  
404 unique CDR3  
7 unique J



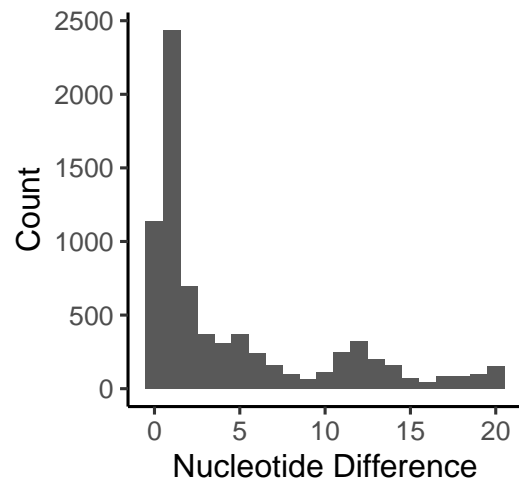
### IGHV4-61\*01

1083 sequences assigned  
223 (20.6%) exact matches, in which:  
173 unique CDR3  
6 unique J



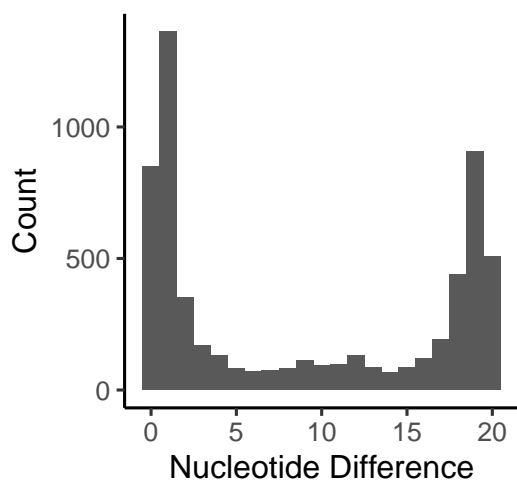
### IGHV5-51\*01\_03

8020 sequences assigned  
1139 (14.2%) exact matches, in which:  
621 unique CDR3  
7 unique J



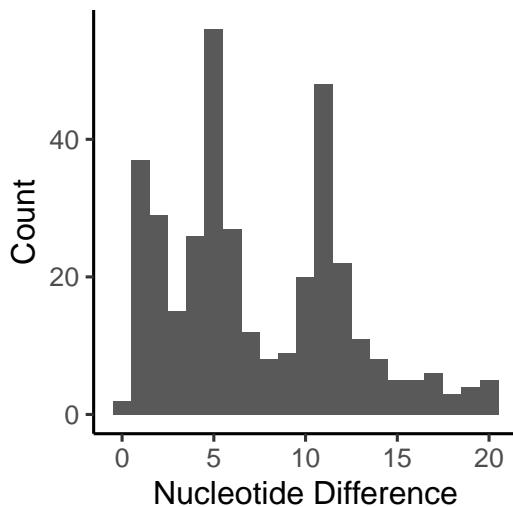
### IGHV4-59\*01\_07

6860 sequences assigned  
848 (12.4%) exact matches, in which:  
593 unique CDR3  
7 unique J



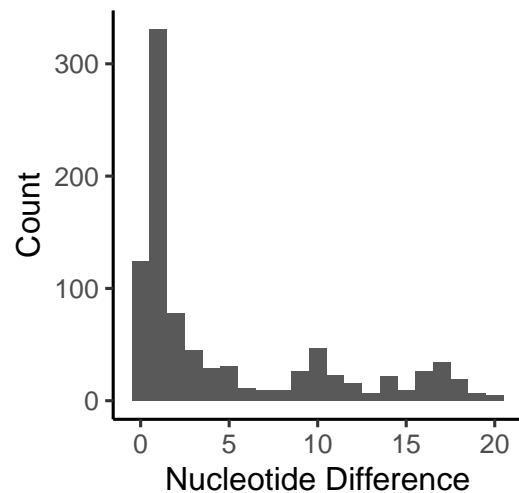
### IGHV4-61\*08

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



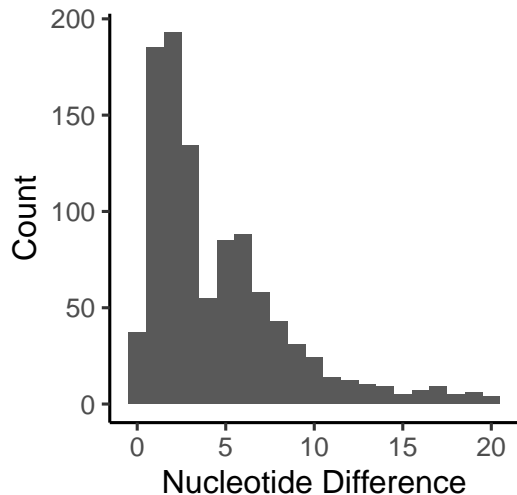
### IGHV6-1\*01\_02

999 sequences assigned  
124 (12.4%) exact matches, in which:  
89 unique CDR3  
5 unique J



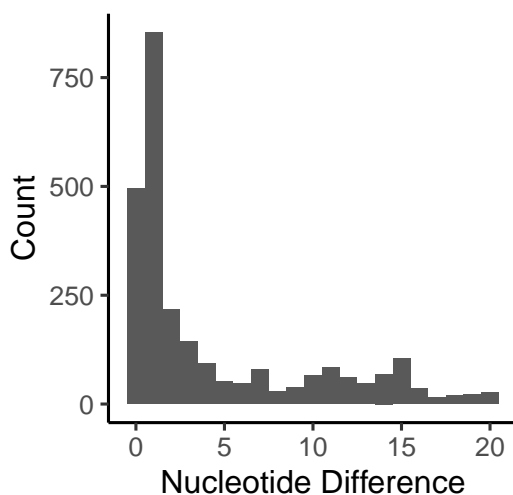
### IGHV4-59\*12

1081 sequences assigned  
37 (3.4%) exact matches, in which:  
37 unique CDR3  
7 unique J



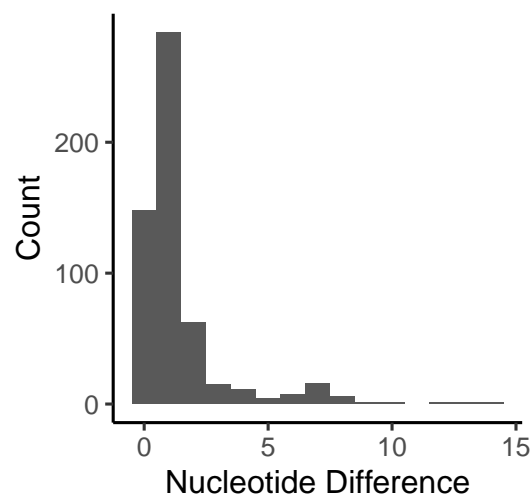
### IGHV5-10-1\*01\_03

2746 sequences assigned  
495 (18%) exact matches, in which:  
286 unique CDR3  
7 unique J



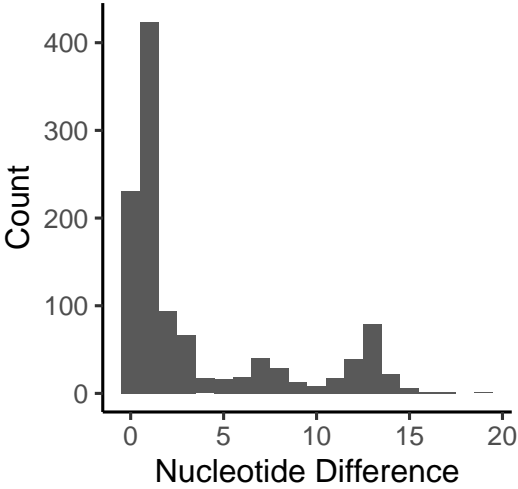
### IGHV7-4-1\*01

558 sequences assigned  
148 (26.5%) exact matches, in which:  
109 unique CDR3  
5 unique J



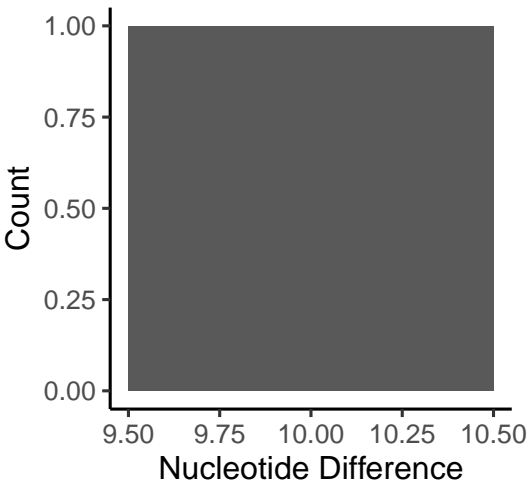
IGHV7-4-1\*02

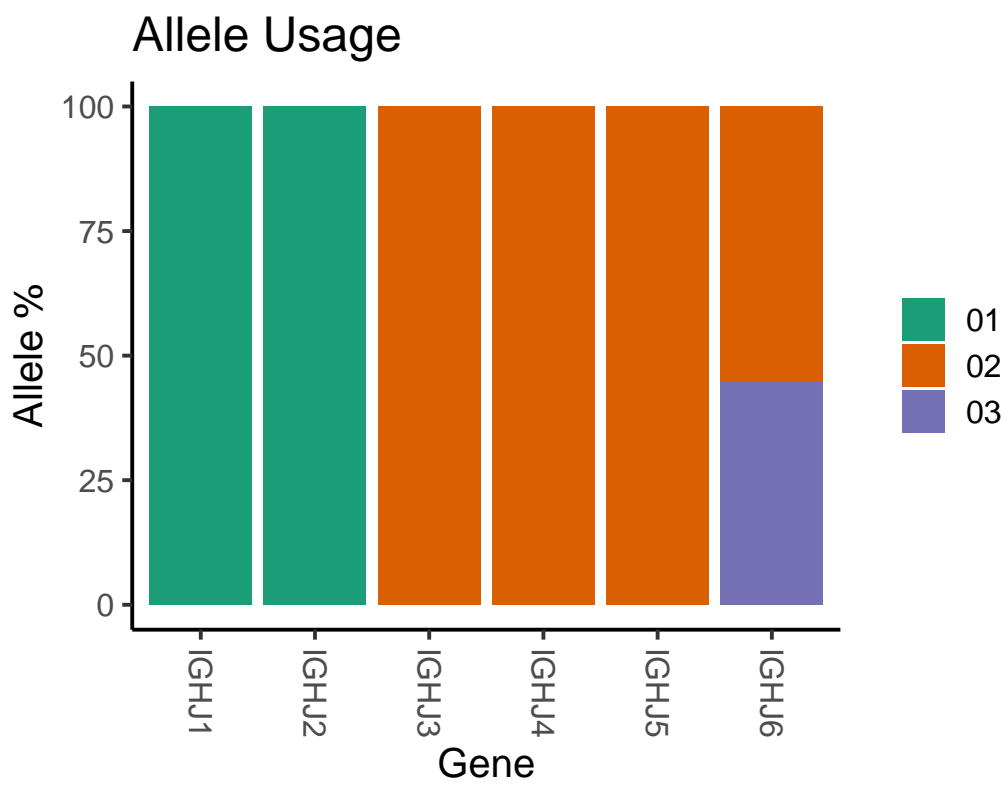
1183 sequences assigned  
231 (19.5%) exact matches, in which:  
145 unique CDR3  
6 unique J



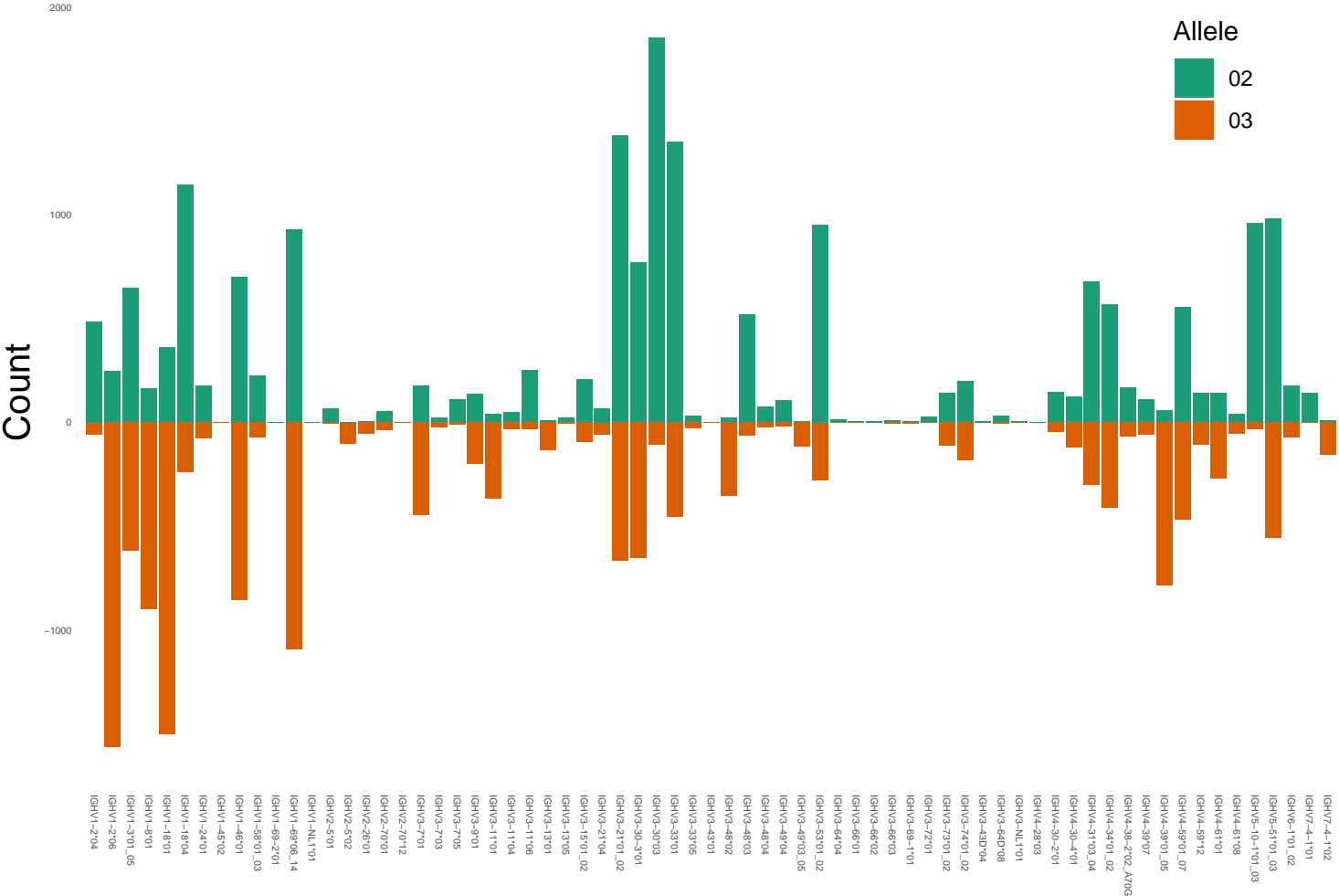
IGHV7-81\*01

1 sequences assigned  
No exact matches.





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.