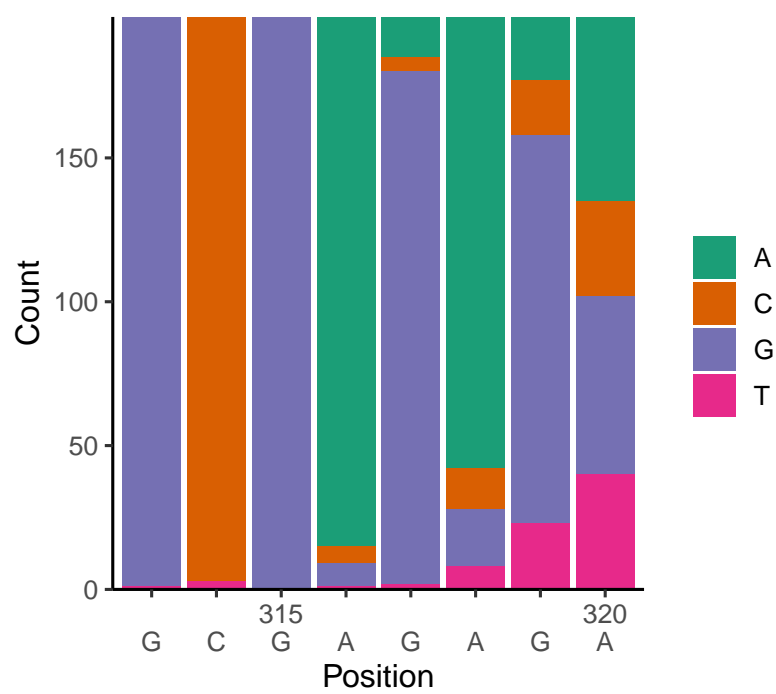


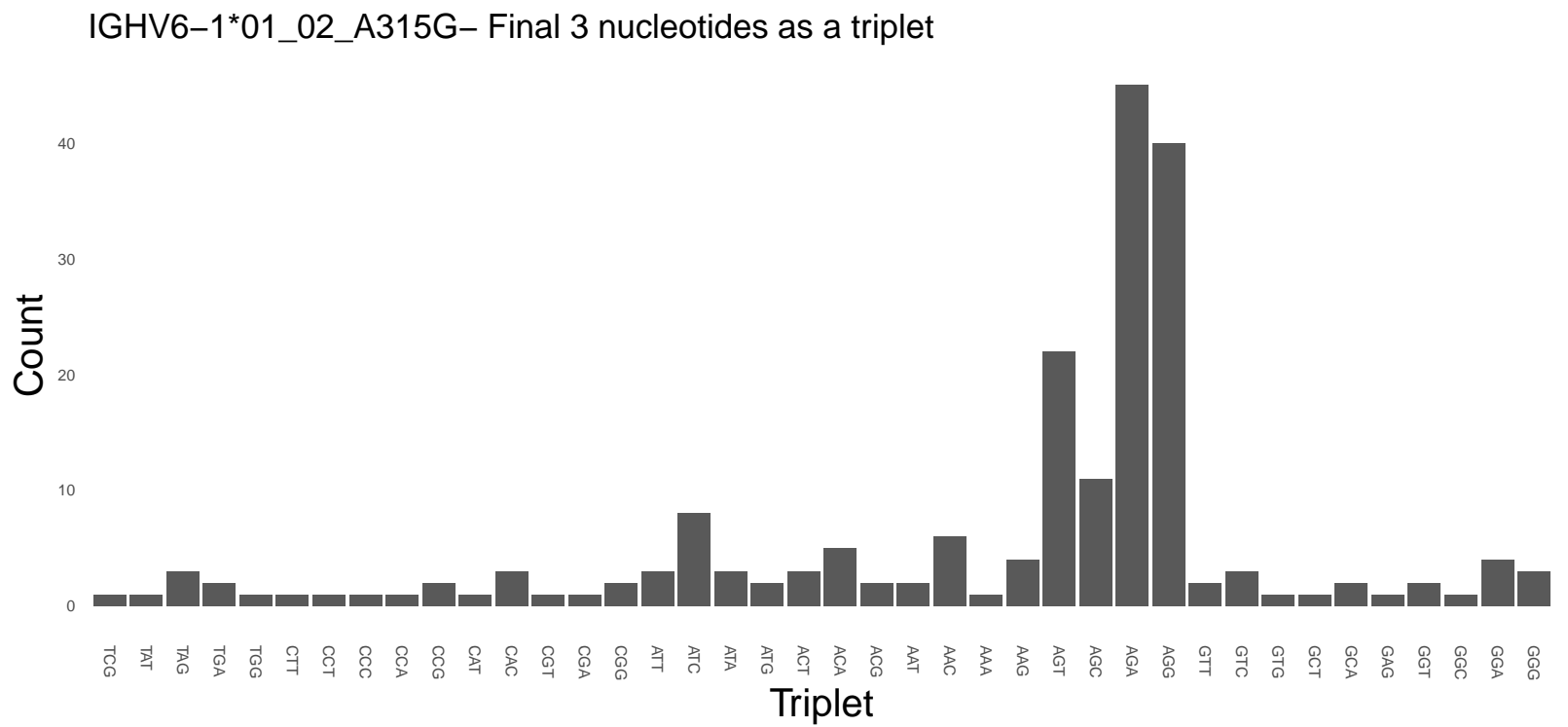
# Gene IGHV6-1\*01\_02\_A315G



Gene IGHV6-1\*01\_02\_A315G

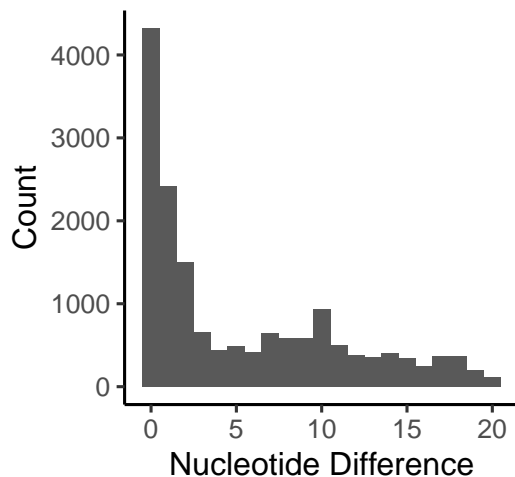


IGHV6-1\*01\_02\_A315G- Final 3 nucleotides as a triplet



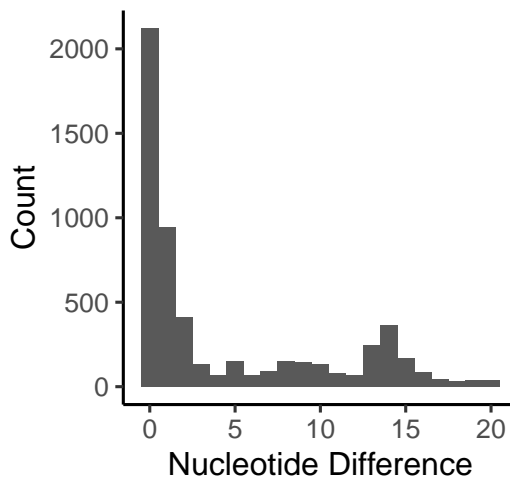
### IGHV1-2\*02

17192 sequences assigned  
4320 (25.1%) exact matches, in which:  
4001 unique CDR3  
6 unique J



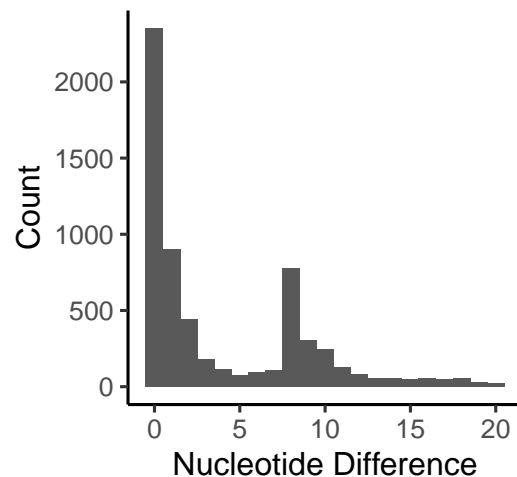
### IGHV1-8\*01

5675 sequences assigned  
2121 (37.4%) exact matches, in which:  
2001 unique CDR3  
6 unique J



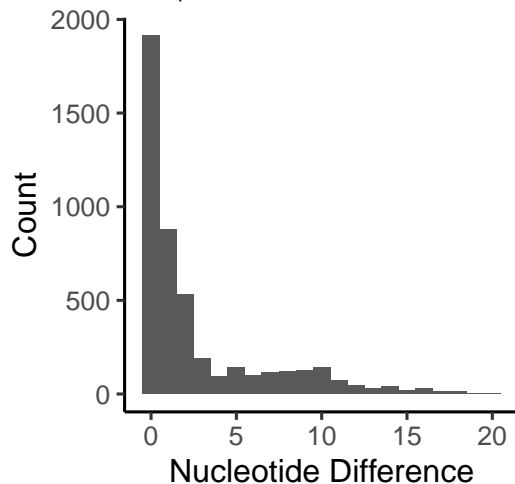
### IGHV1-18\*04

6498 sequences assigned  
2351 (36.2%) exact matches, in which:  
2241 unique CDR3  
6 unique J



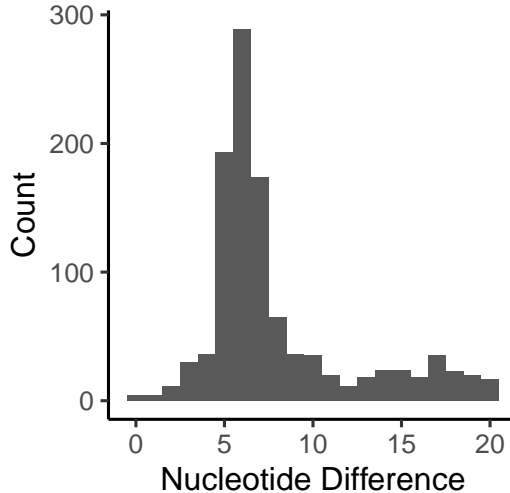
### IGHV1-2\*04

4783 sequences assigned  
1913 (40%) exact matches, in which:  
1819 unique CDR3  
6 unique J



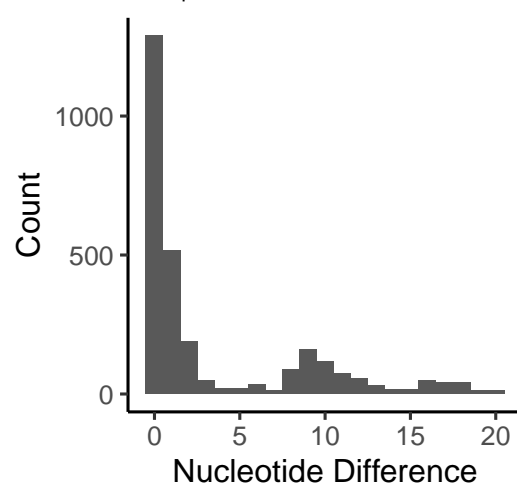
### IGHV1-8\*02

1139 sequences assigned  
4 (0.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



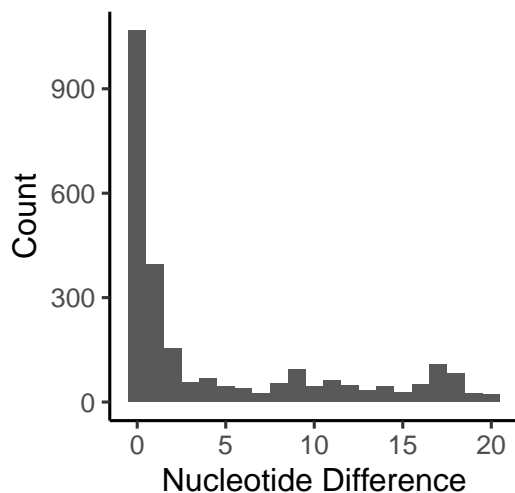
### IGHV1-24\*01

2993 sequences assigned  
1289 (43.1%) exact matches, in which:  
1226 unique CDR3  
6 unique J



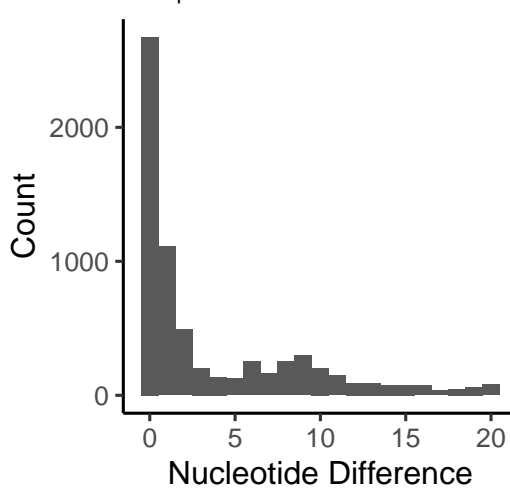
### IGHV1-3\*01\_05

2783 sequences assigned  
1068 (38.4%) exact matches, in which:  
1003 unique CDR3  
6 unique J



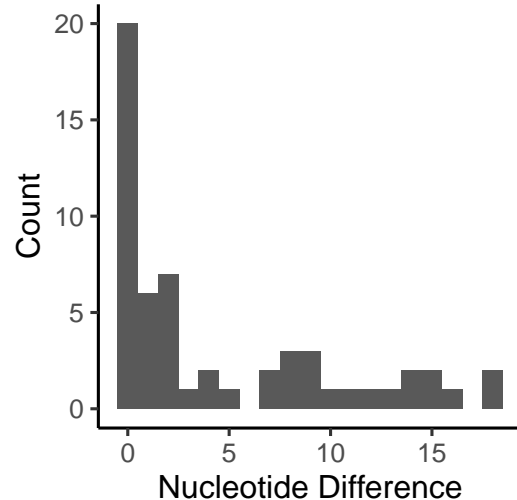
### IGHV1-18\*01

7563 sequences assigned  
2674 (35.4%) exact matches, in which:  
2567 unique CDR3  
6 unique J



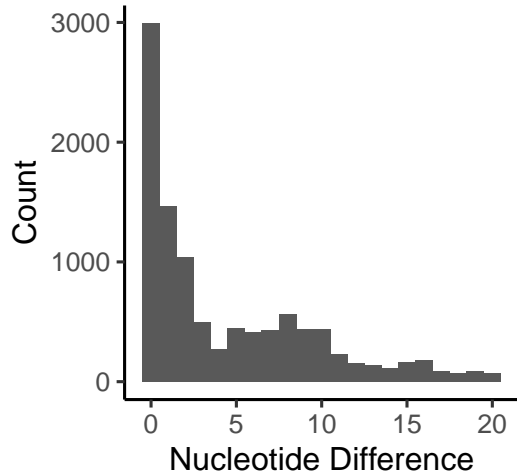
### IGHV1-45\*02

58 sequences assigned  
20 (34.5%) exact matches, in which:  
19 unique CDR3  
4 unique J



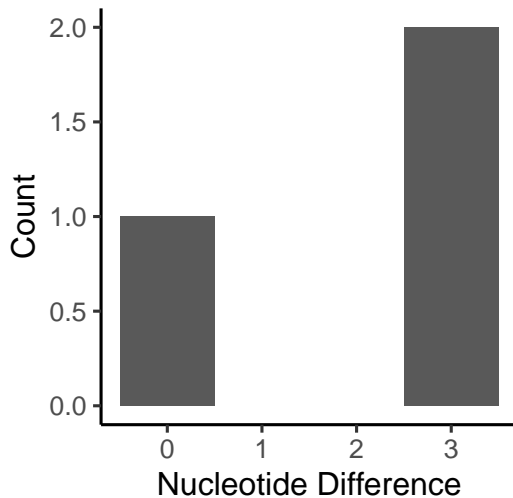
### IGHV1-46\*01

11120 sequences assigned  
2992 (26.9%) exact matches, in which:  
2844 unique CDR3  
6 unique J



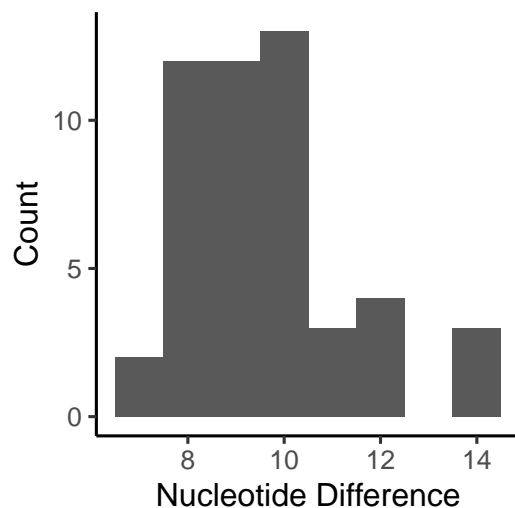
### IGHV1-68\*01

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



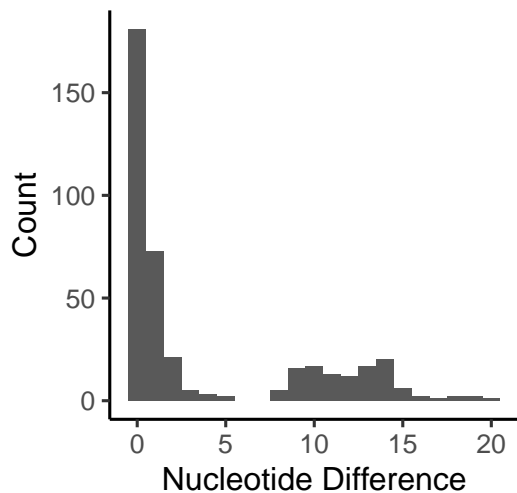
### IGHV1-NL1\*01

49 sequences assigned  
No exact matches.



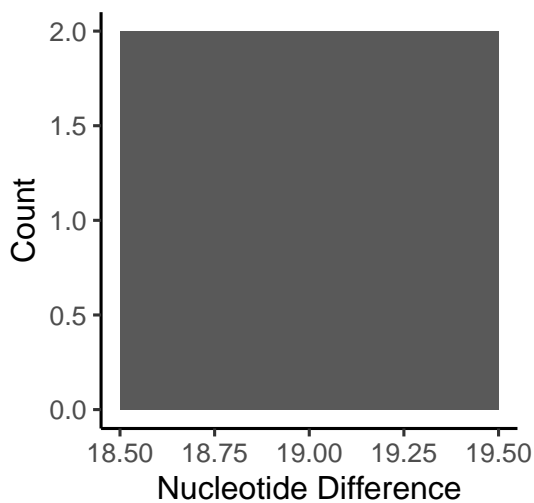
### IGHV1-58\*02

411 sequences assigned  
181 (44%) exact matches, in which:  
174 unique CDR3  
6 unique J



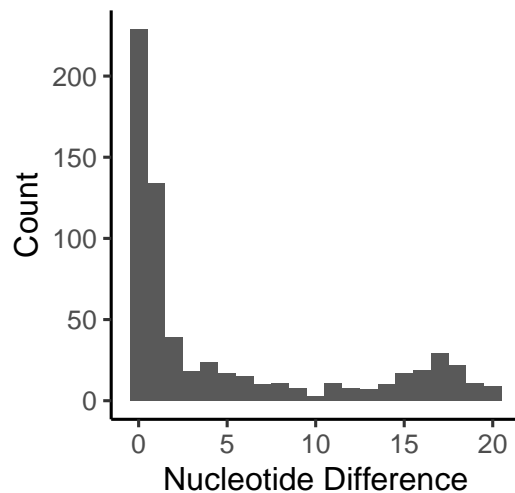
### IGHV1-69-2\*01

2 sequences assigned  
No exact matches.



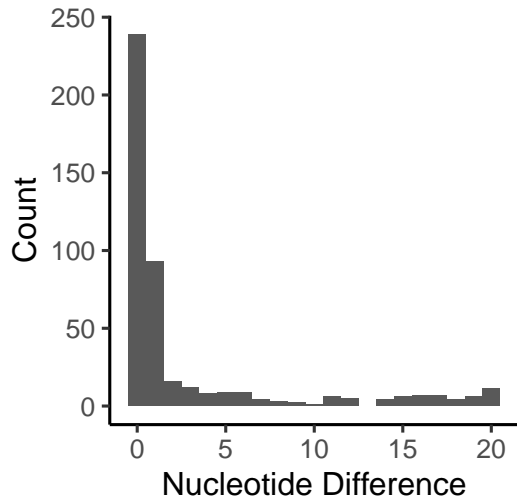
### IGHV2-5\*01

713 sequences assigned  
229 (32.1%) exact matches, in which:  
215 unique CDR3  
6 unique J



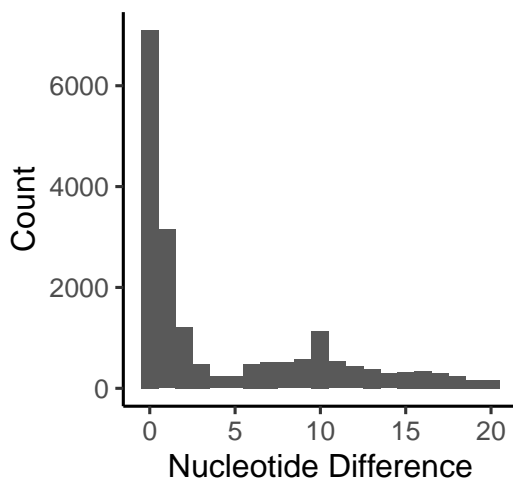
### IGHV1-58\*01\_03

480 sequences assigned  
239 (49.8%) exact matches, in which:  
230 unique CDR3  
5 unique J



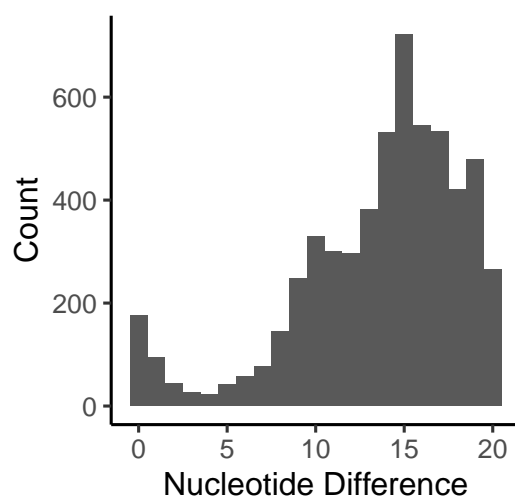
### IGHV1-69\*01\_12\_13

22032 sequences assigned  
7104 (32.2%) exact matches, in which:  
6725 unique CDR3  
6 unique J



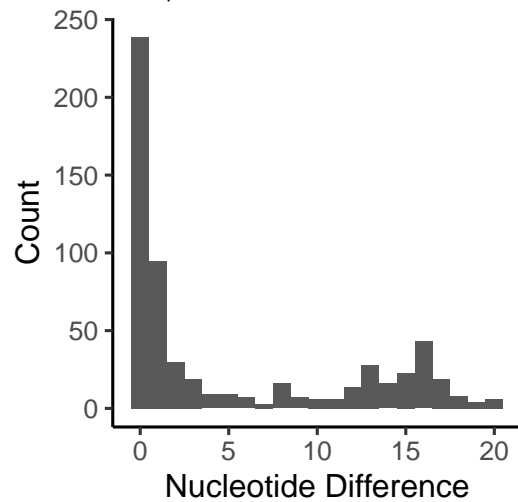
### IGHV2-5\*02

6988 sequences assigned  
175 (2.5%) exact matches, in which:  
165 unique CDR3  
6 unique J



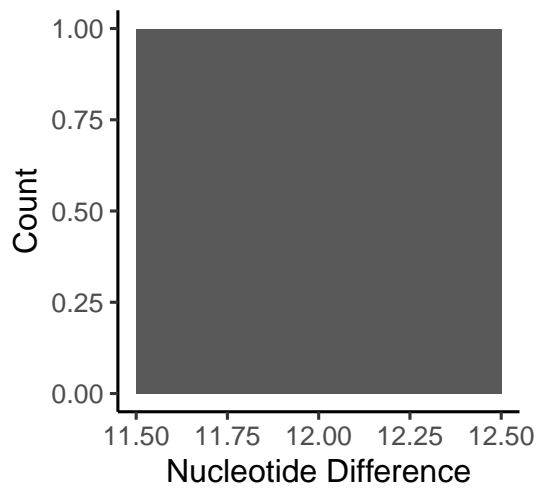
### IGHV2-26\*01

634 sequences assigned  
239 (37.7%) exact matches, in which:  
223 unique CDR3  
5 unique J



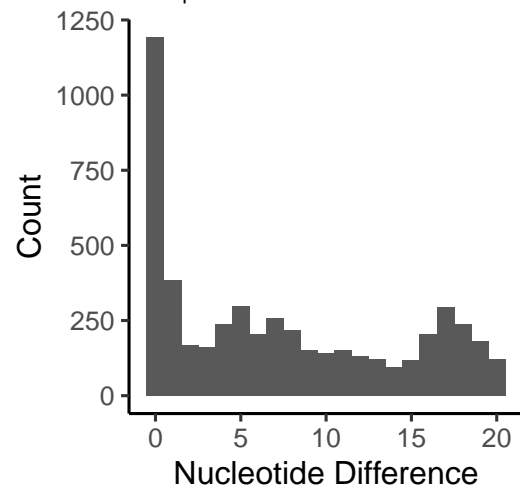
### IGHV2-70D\*04

1 sequences assigned  
No exact matches.



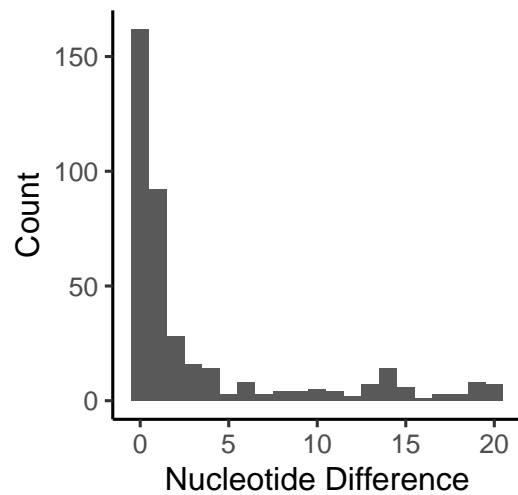
### IGHV3-9\*01

6052 sequences assigned  
1192 (19.7%) exact matches, in which:  
975 unique CDR3  
6 unique J



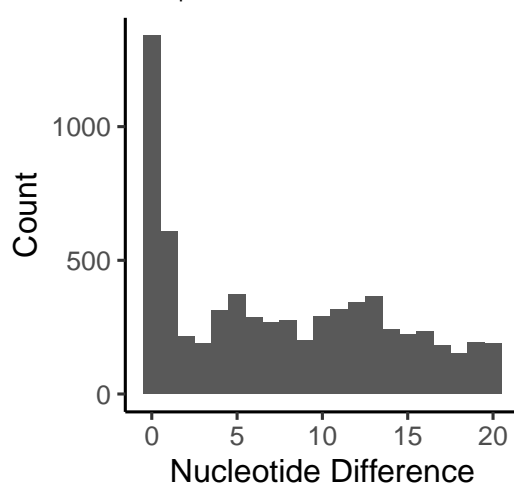
### IGHV2-70\*01

411 sequences assigned  
162 (39.4%) exact matches, in which:  
149 unique CDR3  
5 unique J



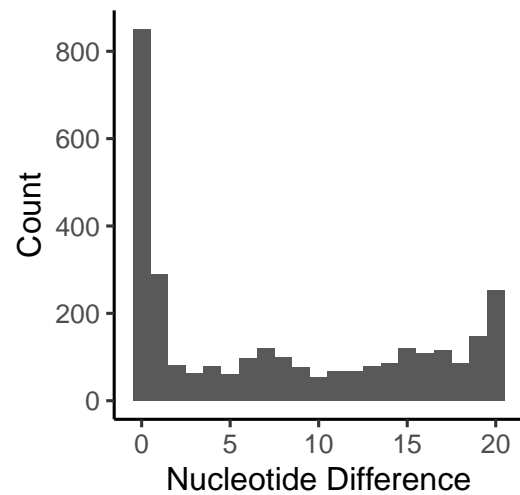
### IGHV3-7\*01

7860 sequences assigned  
1340 (17%) exact matches, in which:  
1165 unique CDR3  
6 unique J



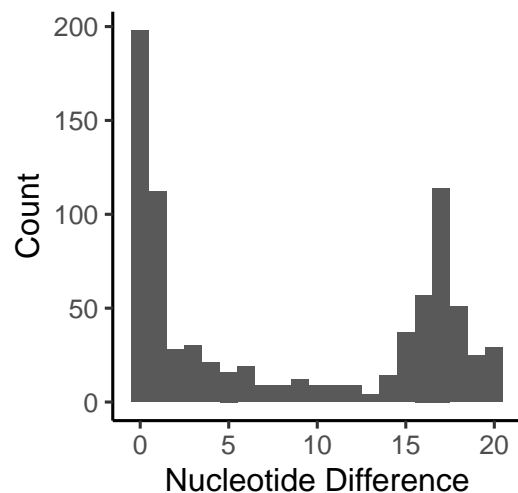
### IGHV3-11\*01

4238 sequences assigned  
851 (20.1%) exact matches, in which:  
726 unique CDR3  
6 unique J



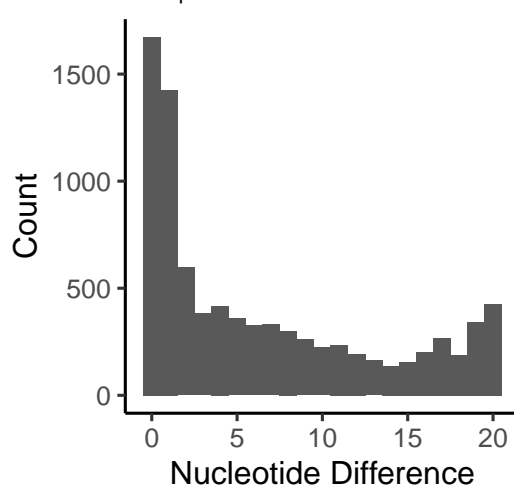
### IGHV2-70\*11\_15

856 sequences assigned  
198 (23.1%) exact matches, in which:  
193 unique CDR3  
6 unique J



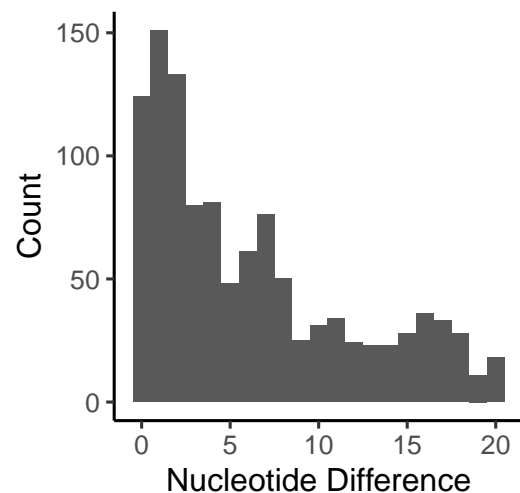
### IGHV3-7\*03

11269 sequences assigned  
1673 (14.8%) exact matches, in which:  
1219 unique CDR3  
6 unique J



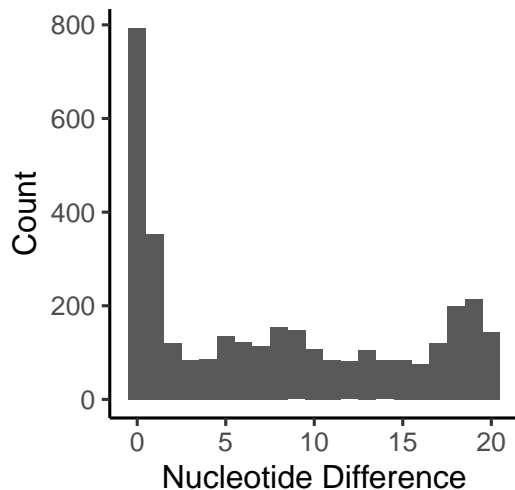
### IGHV3-11\*04

1222 sequences assigned  
124 (10.1%) exact matches, in which:  
124 unique CDR3  
4 unique J



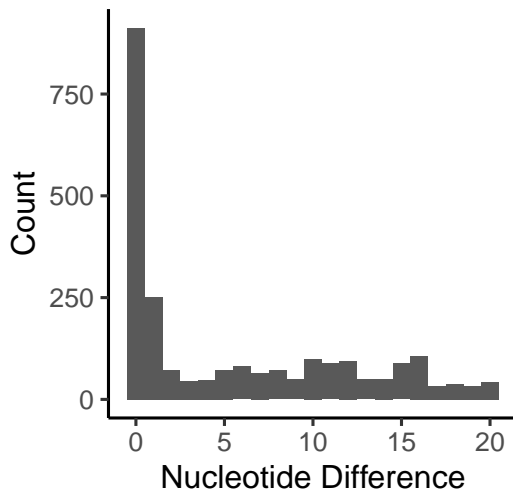
### IGHV3-11\*06

4363 sequences assigned  
794 (18.2%) exact matches, in which:  
677 unique CDR3  
6 unique J



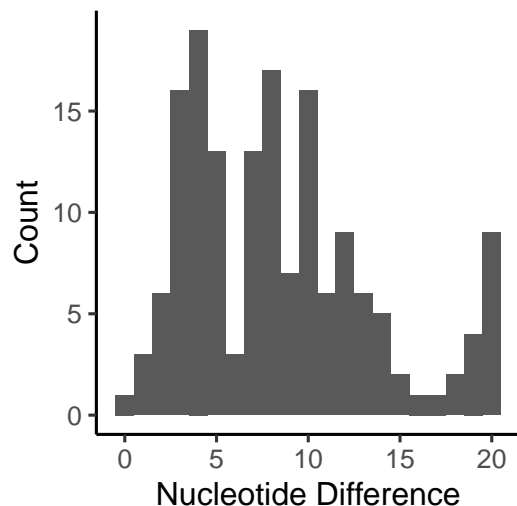
### IGHV3-15\*01\_02

2971 sequences assigned  
913 (30.7%) exact matches, in which:  
735 unique CDR3  
6 unique J



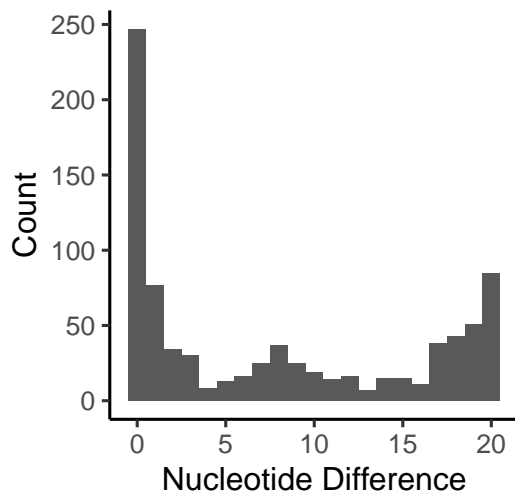
### IGHV3-20\*03\_04

180 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



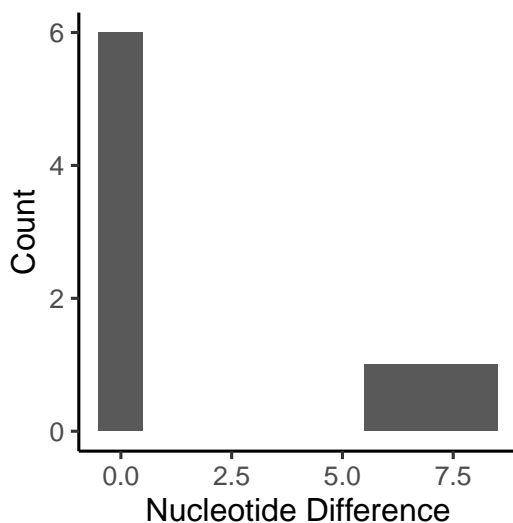
### IGHV3-13\*01

1116 sequences assigned  
247 (22.1%) exact matches, in which:  
210 unique CDR3  
5 unique J



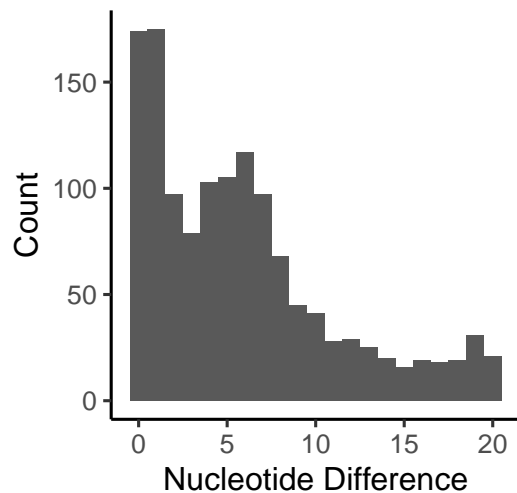
### IGHV3-19\*01

9 sequences assigned  
6 (66.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



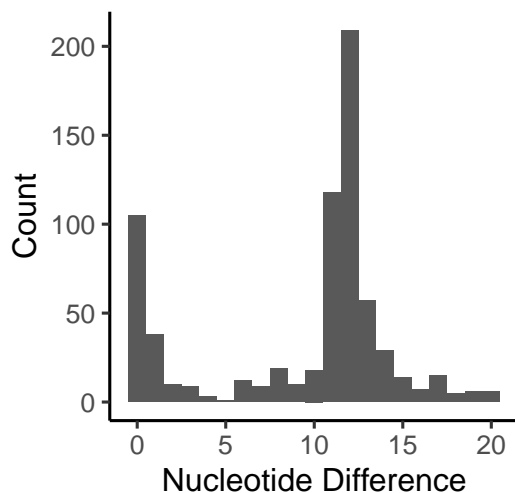
### IGHV3-21\*04

1530 sequences assigned  
174 (11.4%) exact matches, in which:  
171 unique CDR3  
6 unique J



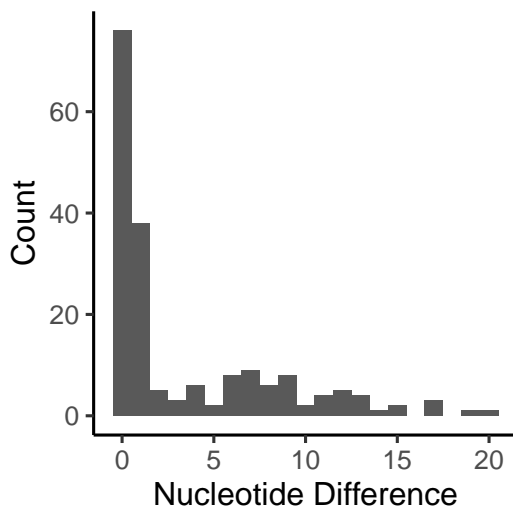
### IGHV3-13\*05

714 sequences assigned  
105 (14.7%) exact matches, in which:  
88 unique CDR3  
5 unique J



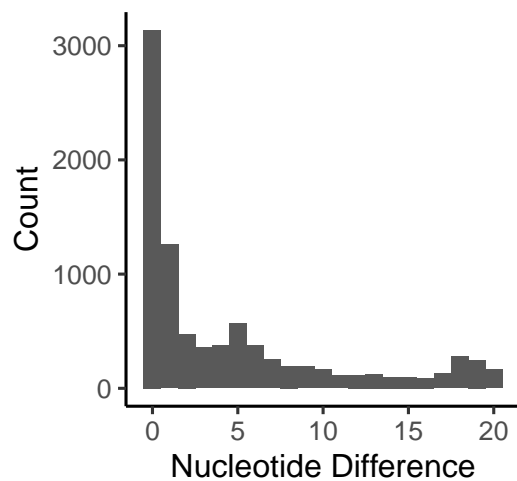
### IGHV3-20\*01\_02

186 sequences assigned  
76 (40.9%) exact matches, in which:  
60 unique CDR3  
4 unique J



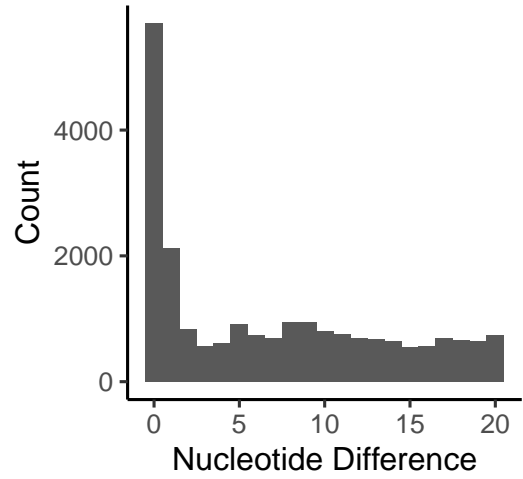
### IGHV3-21\*01\_02

9952 sequences assigned  
3137 (31.5%) exact matches, in which:  
2573 unique CDR3  
6 unique J



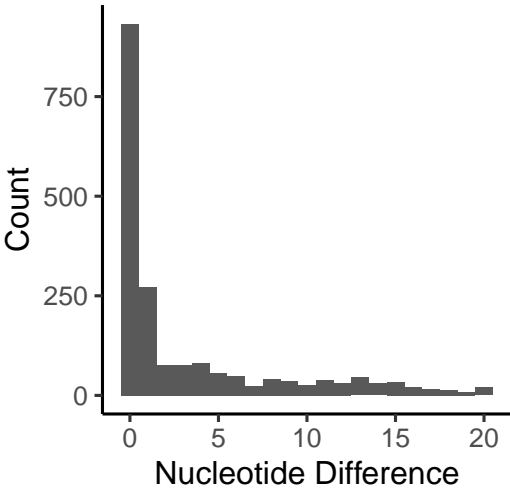
### IGHV3-23\*01\_04

28496 sequences assigned  
5696 (20%) exact matches, in which:  
4444 unique CDR3  
6 unique J



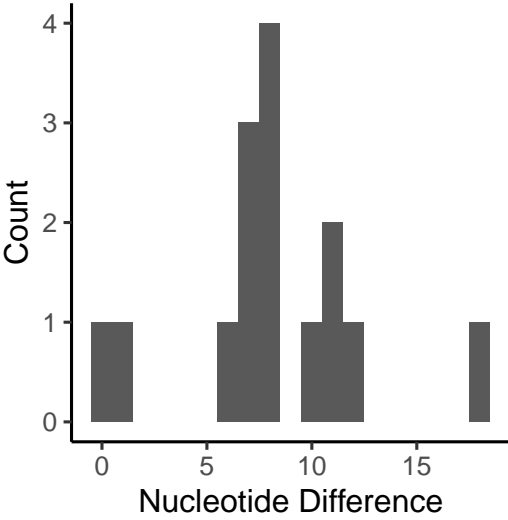
### IGHV3-33\*01

2184 sequences assigned  
933 (42.7%) exact matches, in which:  
806 unique CDR3  
6 unique J



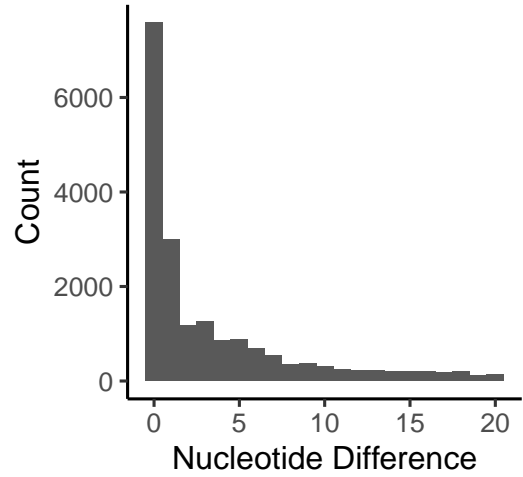
### IGHV3-35\*01

15 sequences assigned  
1 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



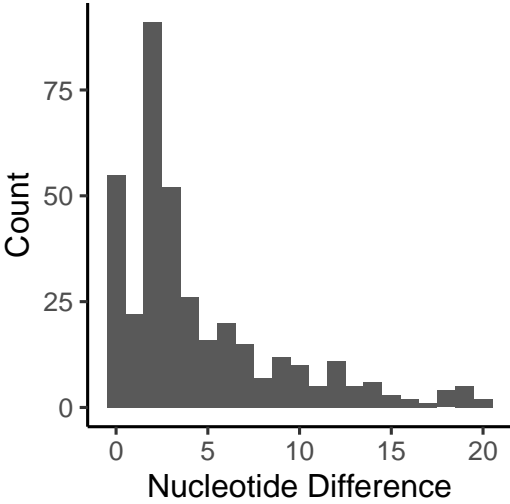
### IGHV3-30-3\*01

33457 sequences assigned  
7582 (22.7%) exact matches, in which:  
6254 unique CDR3  
6 unique J



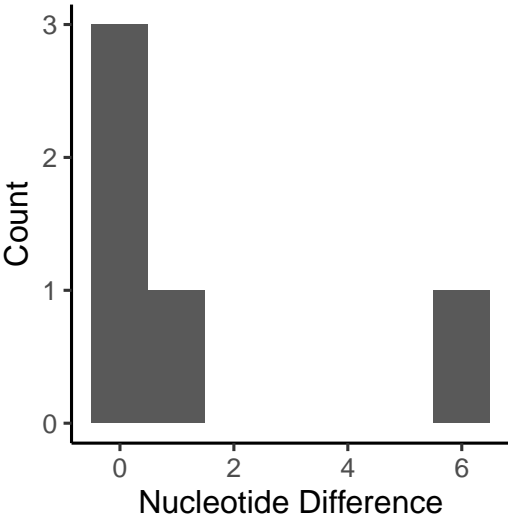
### IGHV3-33\*06

410 sequences assigned  
55 (13.4%) exact matches, in which:  
54 unique CDR3  
4 unique J



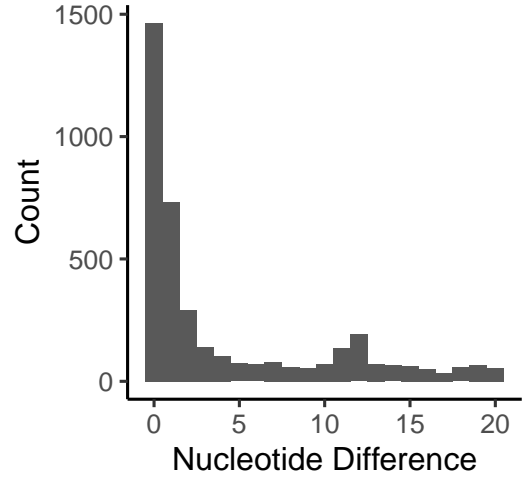
### IGHV3-35\*02

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



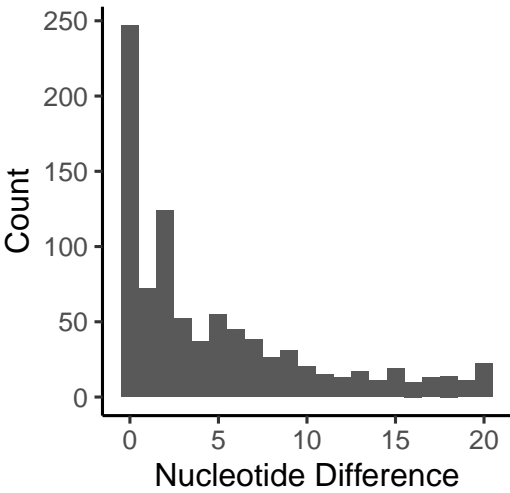
### IGHV3-30\*03

4480 sequences assigned  
1464 (32.7%) exact matches, in which:  
1391 unique CDR3  
6 unique J



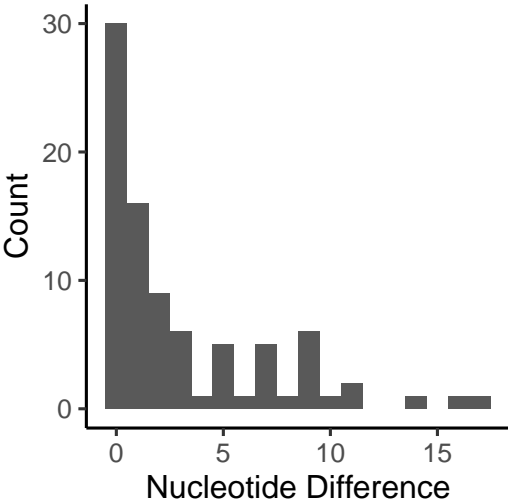
### IGHV3-33\*08

962 sequences assigned  
247 (25.7%) exact matches, in which:  
235 unique CDR3  
6 unique J



### IGHV3-38-3\*01

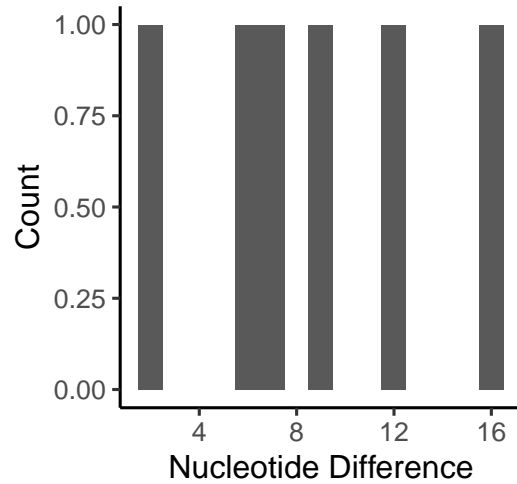
86 sequences assigned  
30 (34.9%) exact matches, in which:  
30 unique CDR3  
3 unique J





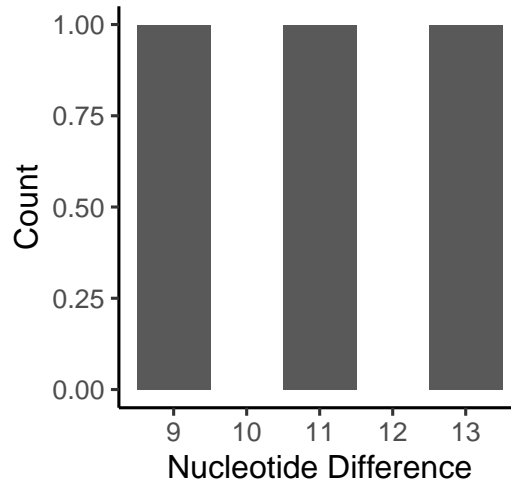
### IGHV3-38\*02

6 sequences assigned  
No exact matches.



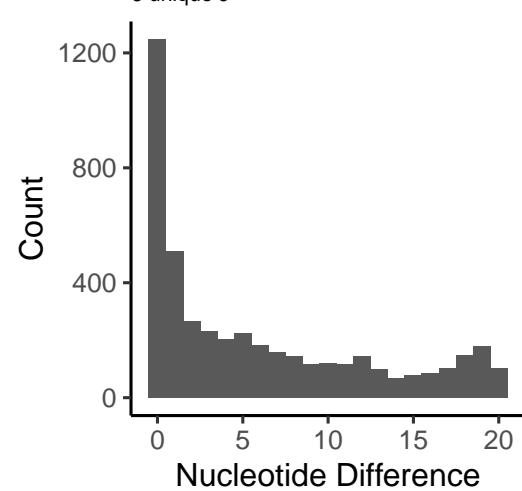
### IGHV3-47\*02

3 sequences assigned  
No exact matches.



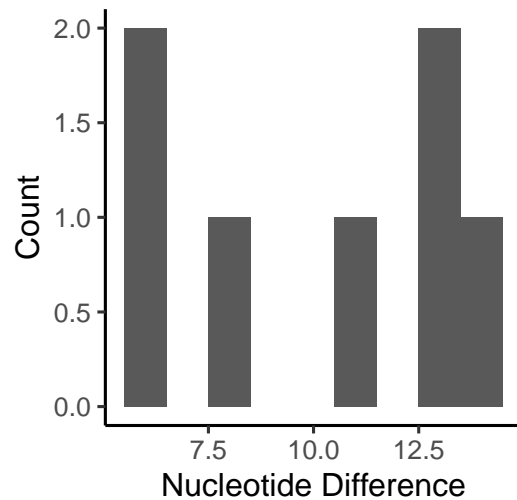
### IGHV3-48\*04

5750 sequences assigned  
1247 (21.7%) exact matches, in which:  
1051 unique CDR3  
6 unique J



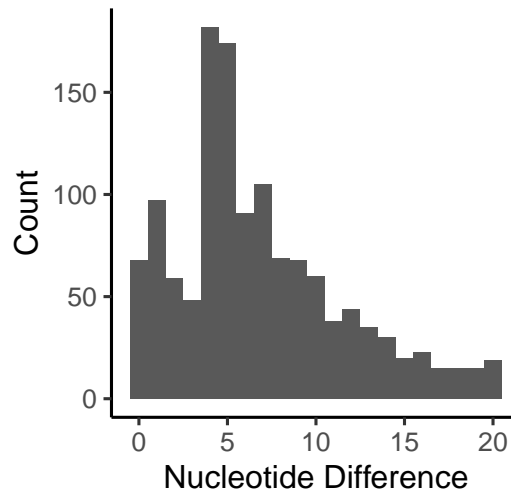
### IGHV3-38\*03

7 sequences assigned  
No exact matches.



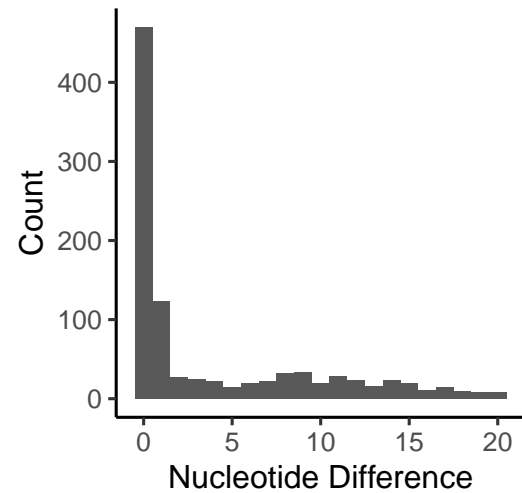
### IGHV3-48\*01

1370 sequences assigned  
68 (5%) exact matches, in which:  
68 unique CDR3  
5 unique J



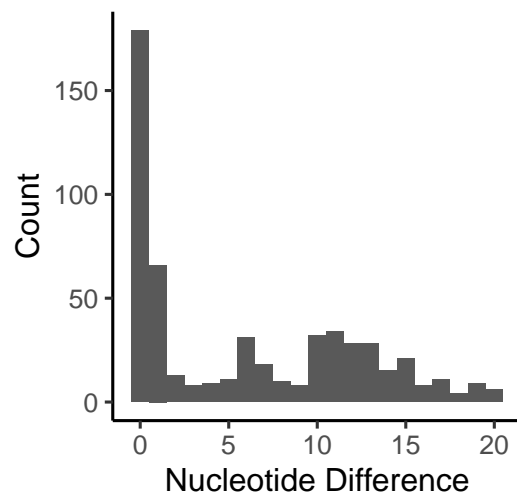
### IGHV3-49\*03\_05

1077 sequences assigned  
470 (43.6%) exact matches, in which:  
395 unique CDR3  
6 unique J



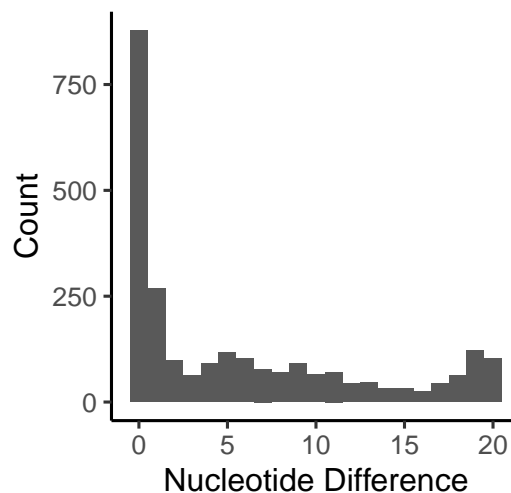
### IGHV3-43\*01

581 sequences assigned  
179 (30.8%) exact matches, in which:  
151 unique CDR3  
5 unique J



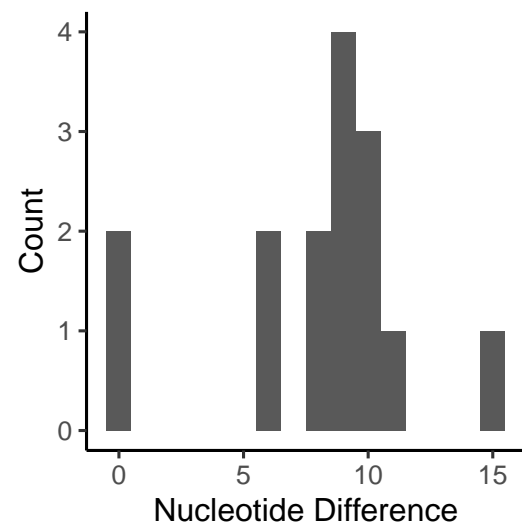
### IGHV3-48\*02

2813 sequences assigned  
878 (31.2%) exact matches, in which:  
727 unique CDR3  
6 unique J



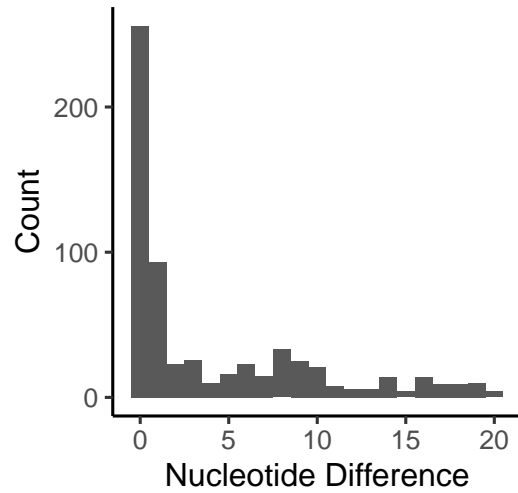
### IGHV3-52\*01\_03

15 sequences assigned  
2 (13.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



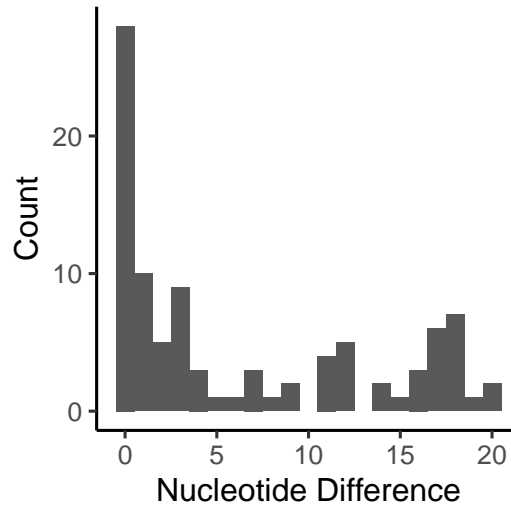
### IGHV3-53\*04

647 sequences assigned  
256 (39.6%) exact matches, in which:  
222 unique CDR3  
6 unique J



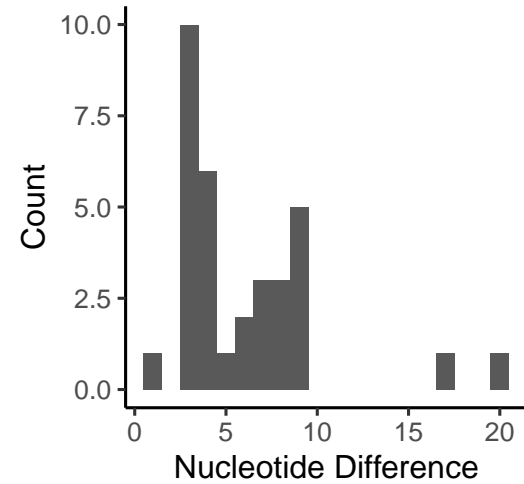
### IGHV3-64\*02\_07

101 sequences assigned  
28 (27.7%) exact matches, in which:  
21 unique CDR3  
4 unique J



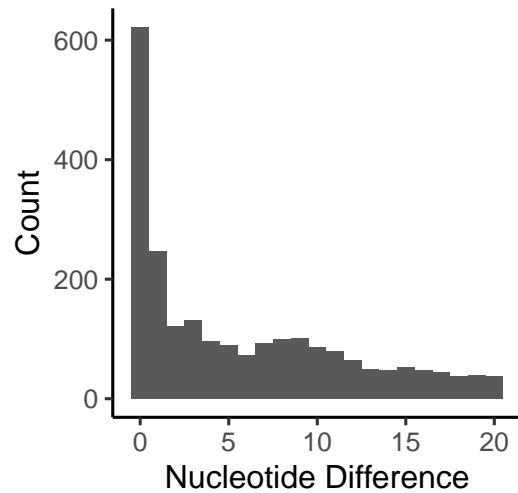
### IGHV3-69-1\*02

59 sequences assigned  
No exact matches.



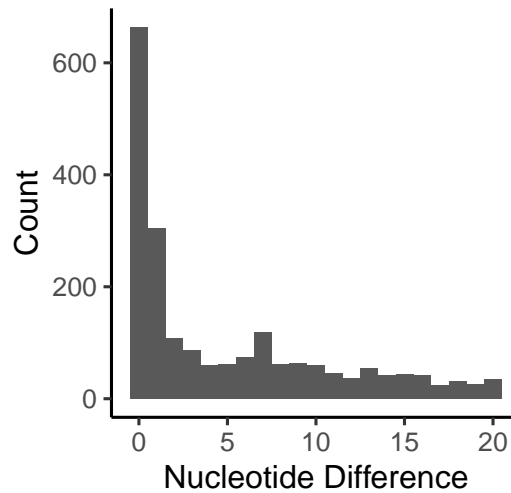
### IGHV3-53\*01\_02

2803 sequences assigned  
622 (22.2%) exact matches, in which:  
531 unique CDR3  
6 unique J



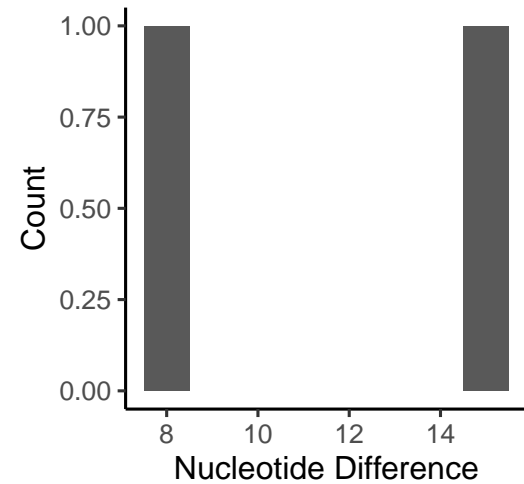
### IGHV3-66\*01

2757 sequences assigned  
664 (24.1%) exact matches, in which:  
556 unique CDR3  
6 unique J



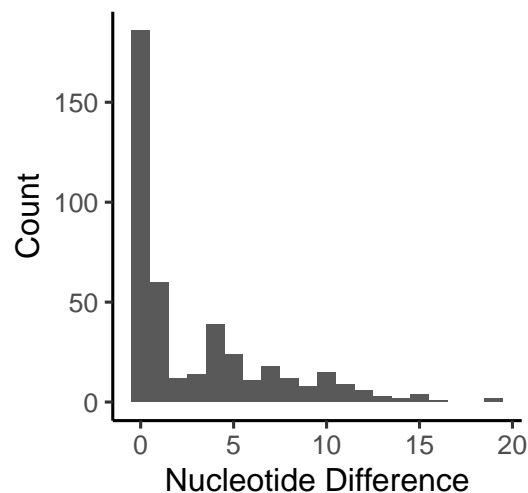
### IGHV3-71\*03

3 sequences assigned  
No exact matches.



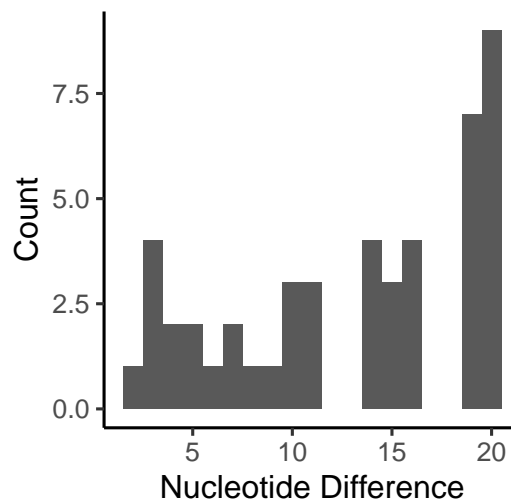
### IGHV3-64\*01

441 sequences assigned  
186 (42.2%) exact matches, in which:  
154 unique CDR3  
6 unique J



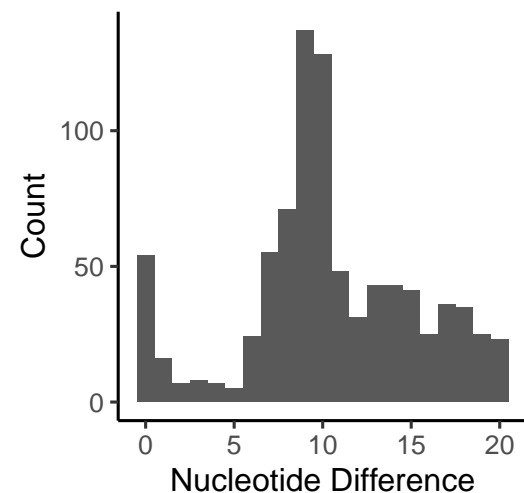
### IGHV3-69-1\*01

95 sequences assigned  
No exact matches.



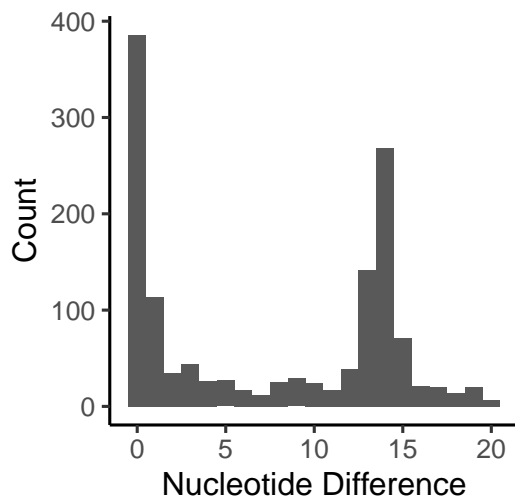
### IGHV3-72\*01

979 sequences assigned  
54 (5.5%) exact matches, in which:  
43 unique CDR3  
5 unique J



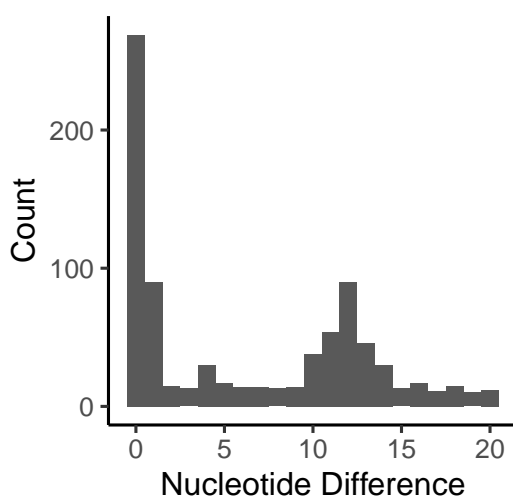
### IGHV3-73\*01\_02

1412 sequences assigned  
386 (27.3%) exact matches, in which:  
335 unique CDR3  
6 unique J



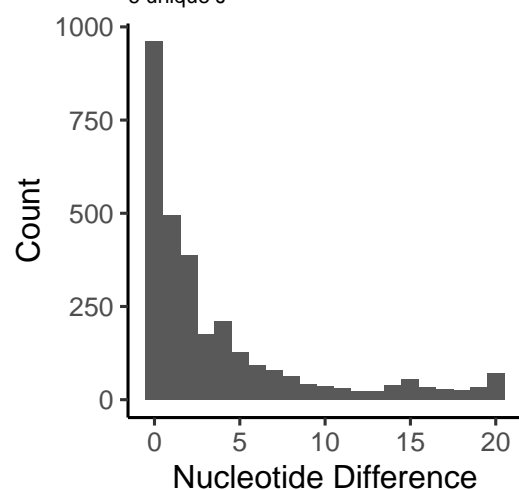
### IGHV3-43D\*03

880 sequences assigned  
269 (30.6%) exact matches, in which:  
217 unique CDR3  
6 unique J



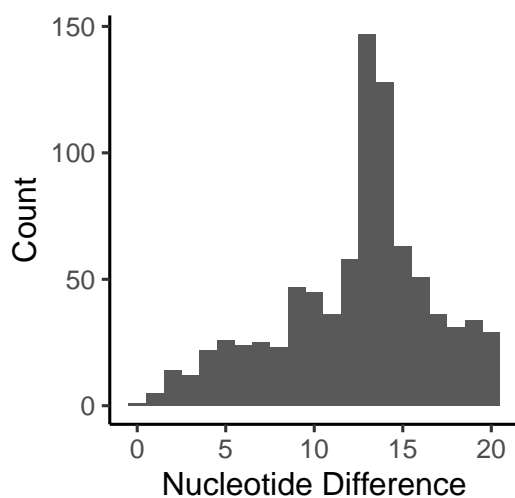
### IGHV4-4\*07

3801 sequences assigned  
961 (25.3%) exact matches, in which:  
924 unique CDR3  
6 unique J



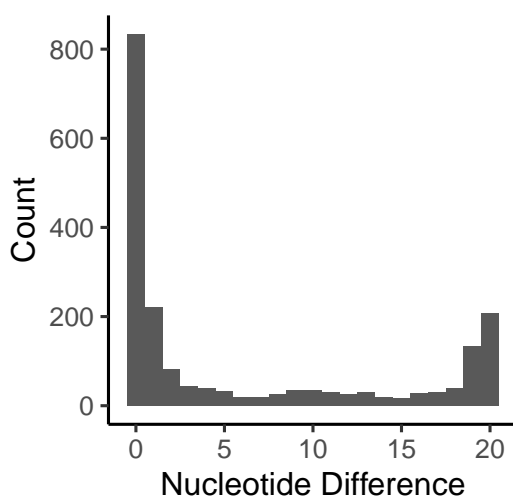
### IGHV3-74\*03

1216 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



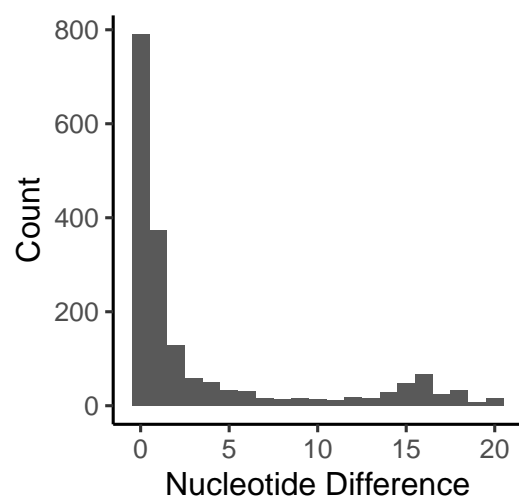
### IGHV3-64D\*06

2148 sequences assigned  
834 (38.8%) exact matches, in which:  
645 unique CDR3  
6 unique J



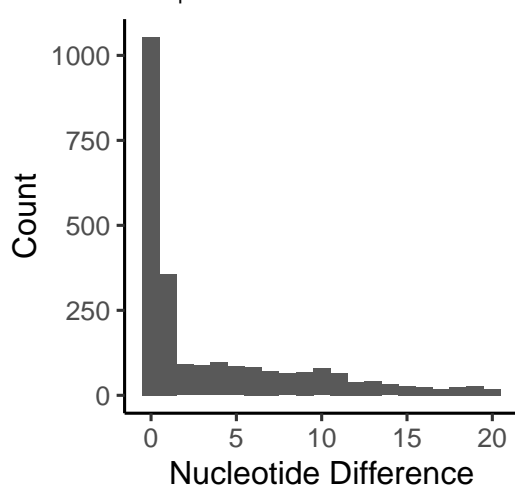
### IGHV4-4\*02\_03

2546 sequences assigned  
791 (31.1%) exact matches, in which:  
724 unique CDR3  
6 unique J



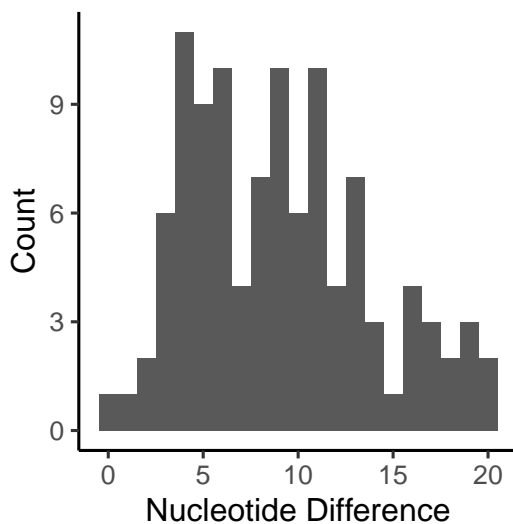
### IGHV3-74\*01\_02

2556 sequences assigned  
1054 (41.2%) exact matches, in which:  
855 unique CDR3  
6 unique J



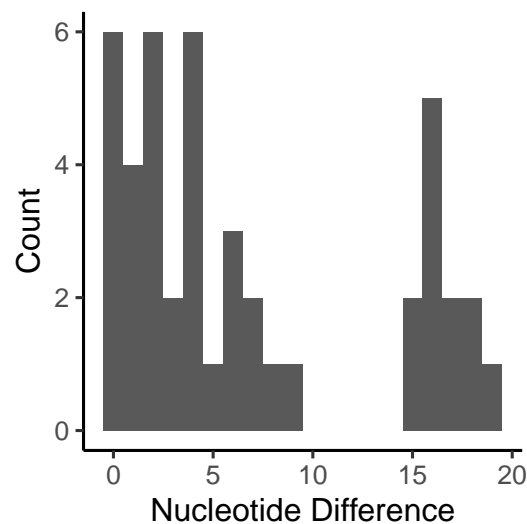
### IGHV3-NL1\*01

133 sequences assigned  
1 (0.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



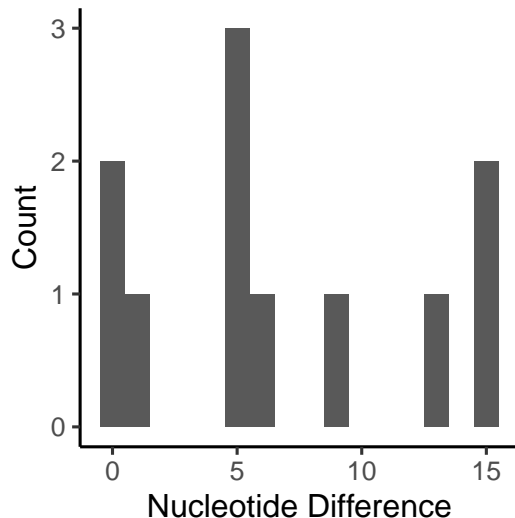
### IGHV4-28\*03

59 sequences assigned  
6 (10.2%) exact matches, in which:  
5 unique CDR3  
3 unique J



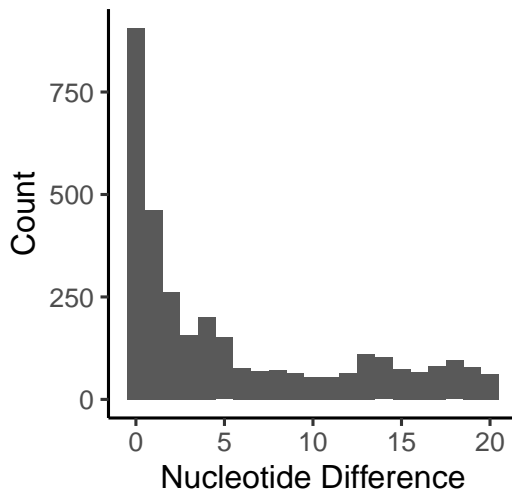
### IGHV4-28\*01\_07

12 sequences assigned  
2 (16.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



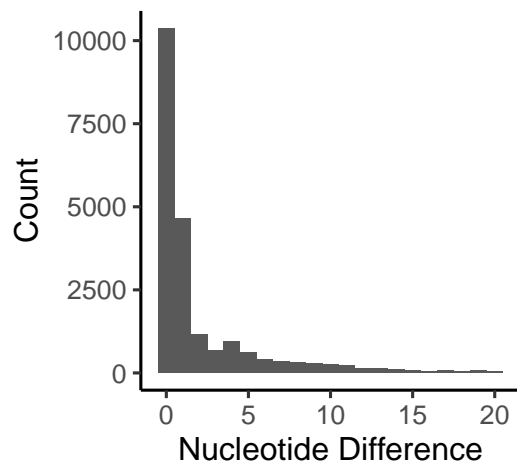
### IGHV4-30-2\*01

3428 sequences assigned  
907 (26.5%) exact matches, in which:  
828 unique CDR3  
6 unique J



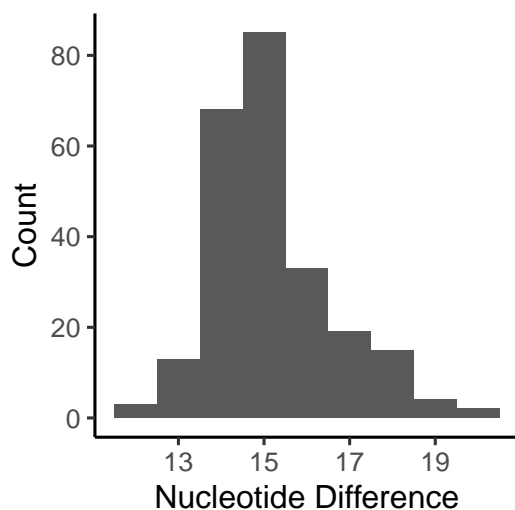
### IGHV4-34\*01\_02

22333 sequences assigned  
10376 (46.5%) exact matches, in which:  
9235 unique CDR3  
6 unique J



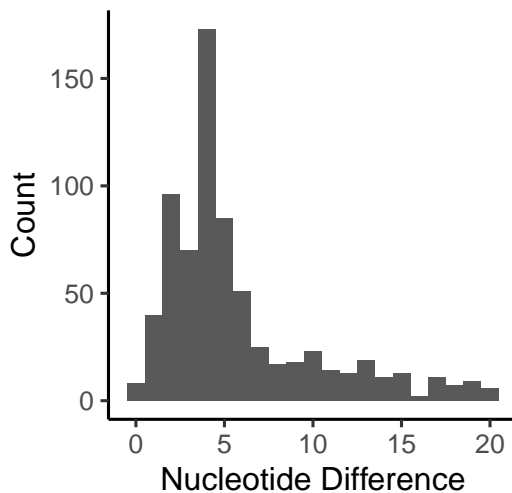
### IGHV4-28\*02\_05

261 sequences assigned  
No exact matches.



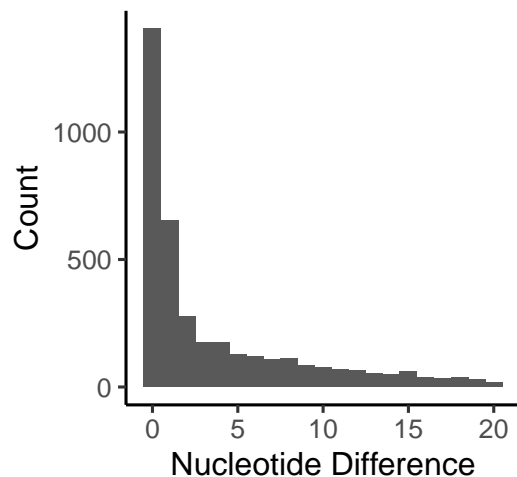
### IGHV4-30-4\*08

748 sequences assigned  
8 (1.1%) exact matches, in which:  
8 unique CDR3  
4 unique J



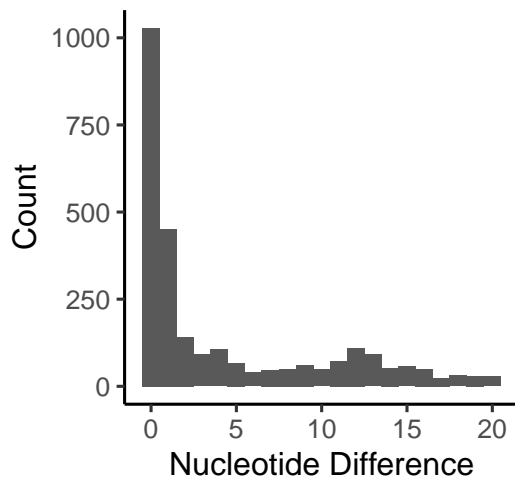
### IGHV4-38-2\*02

4018 sequences assigned  
1405 (35%) exact matches, in which:  
1356 unique CDR3  
6 unique J



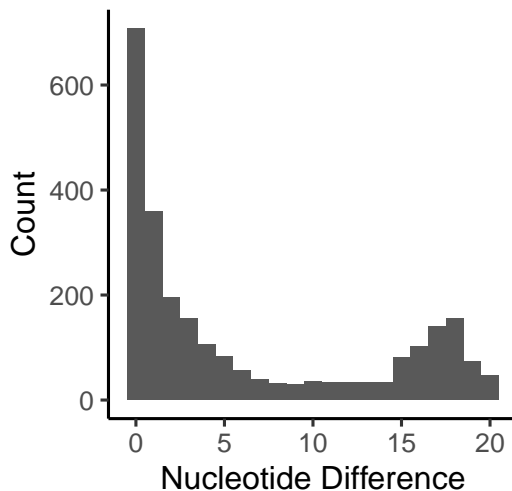
### IGHV4-30-4\*01

2824 sequences assigned  
1028 (36.4%) exact matches, in which:  
976 unique CDR3  
6 unique J



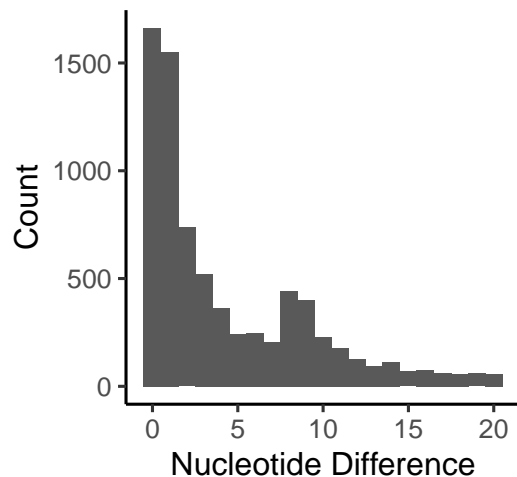
### IGHV4-31\*02

3812 sequences assigned  
708 (18.6%) exact matches, in which:  
677 unique CDR3  
6 unique J



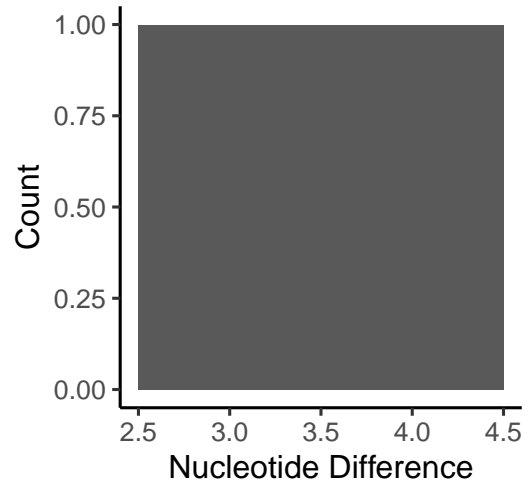
### IGHV4-39\*07

8536 sequences assigned  
1662 (19.5%) exact matches, in which:  
1566 unique CDR3  
6 unique J



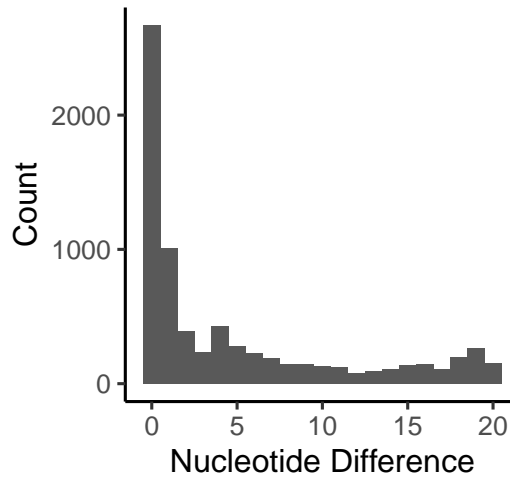
### IGHV4-55\*09

5 sequences assigned  
No exact matches.



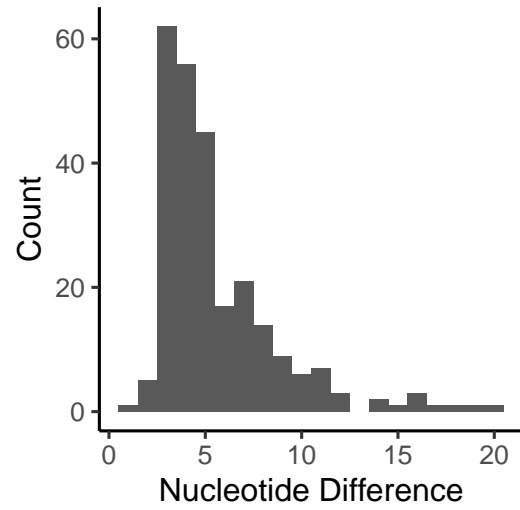
### IGHV4-59\*01\_07

7773 sequences assigned  
2668 (34.3%) exact matches, in which:  
2518 unique CDR3  
6 unique J



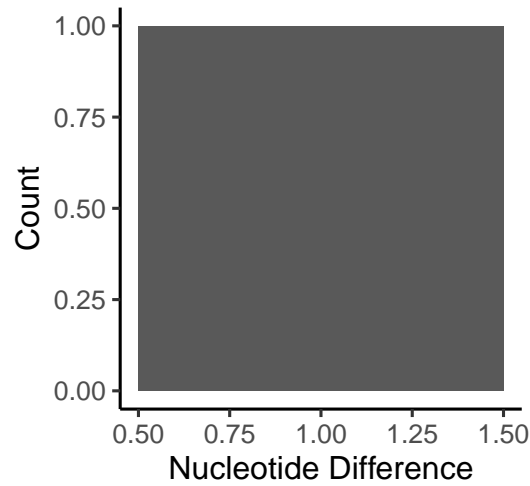
### IGHV4-61\*02

268 sequences assigned  
No exact matches.



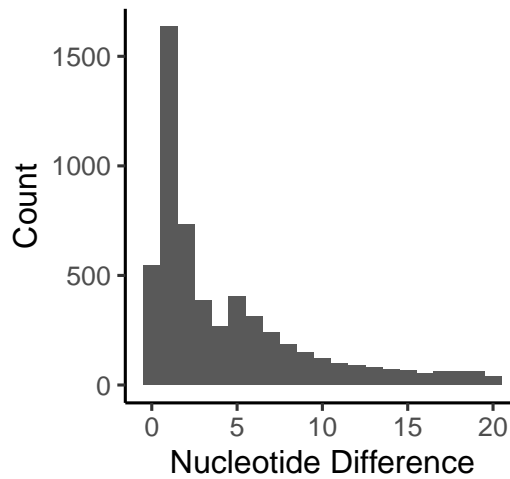
### IGHV4-55\*02\_04\_08

1 sequences assigned  
No exact matches.



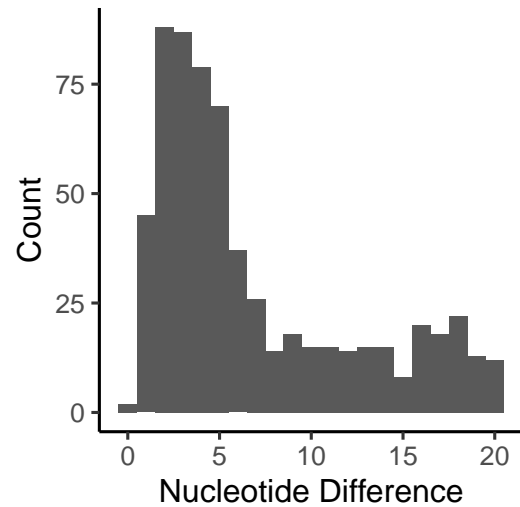
### IGHV4-59\*12

5917 sequences assigned  
546 (9.2%) exact matches, in which:  
539 unique CDR3  
6 unique J



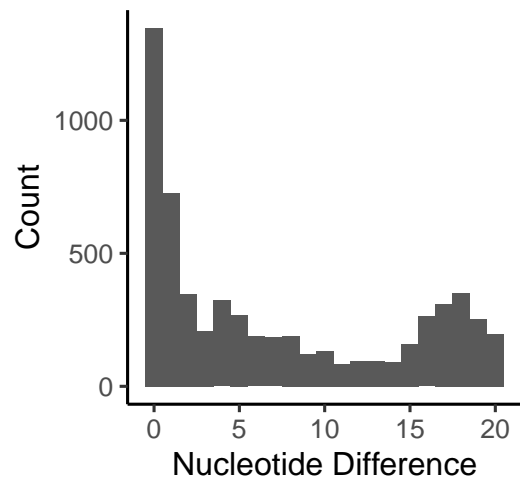
### IGHV4-61\*08

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



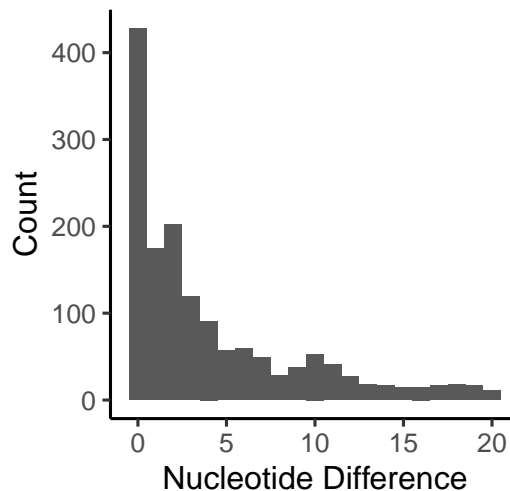
### IGHV4-59\*08

6679 sequences assigned  
1347 (20.2%) exact matches, in which:  
1275 unique CDR3  
6 unique J



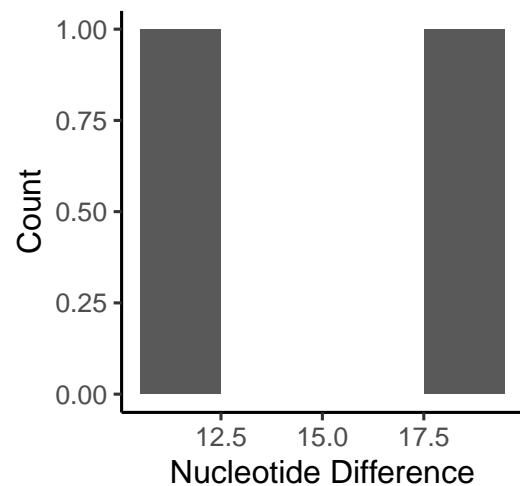
### IGHV4-61\*01

1532 sequences assigned  
428 (27.9%) exact matches, in which:  
415 unique CDR3  
6 unique J



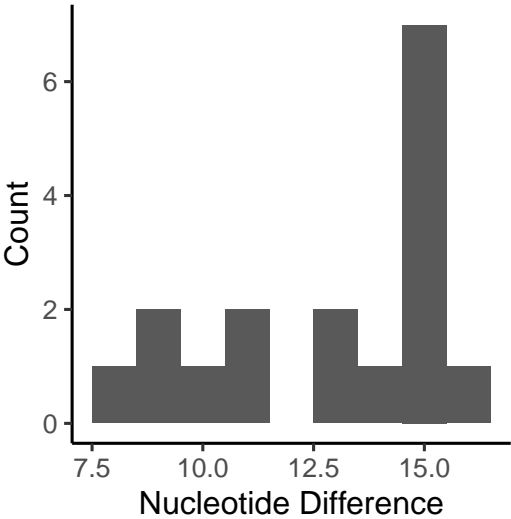
### IGHV1/OR15-2\*02\_03

4 sequences assigned  
No exact matches.



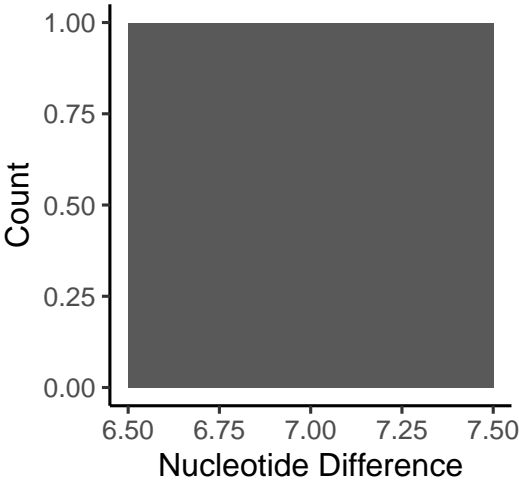
IGHV1/OR15-3\*02

18 sequences assigned  
No exact matches.



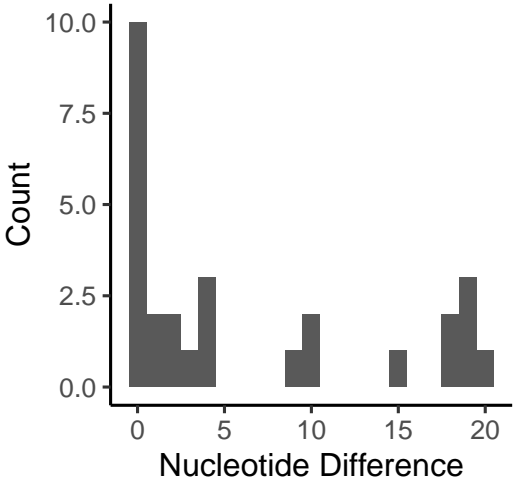
IGHV1/OR15-9\*01

1 sequences assigned  
No exact matches.



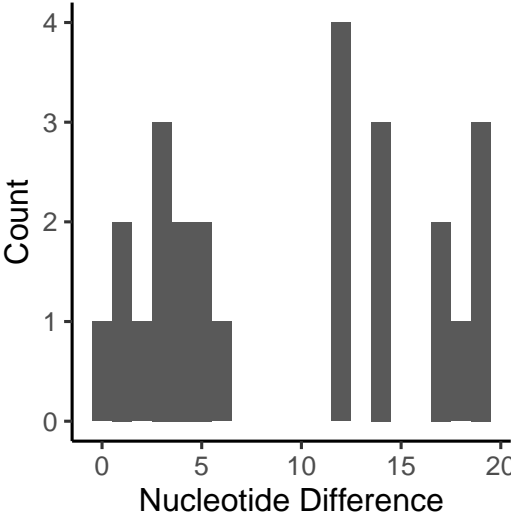
IGHV5-51\*06

40 sequences assigned  
10 (25%) exact matches, in which:  
10 unique CDR3  
4 unique J



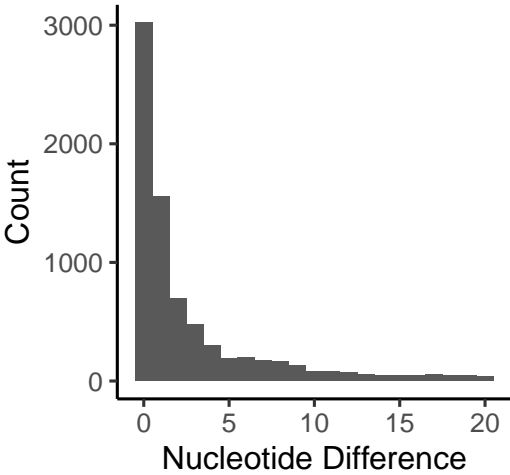
IGHV4/OR15-8\*01

37 sequences assigned  
1 (2.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



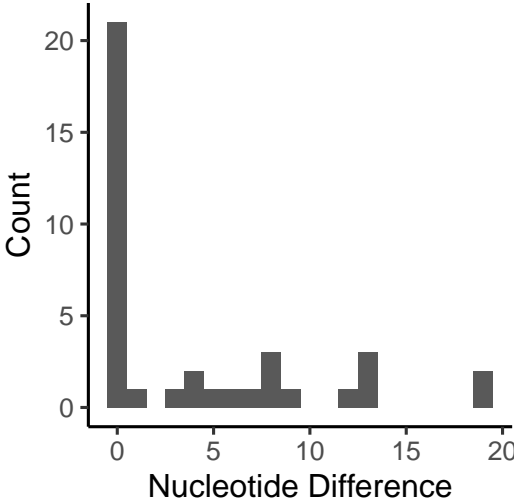
IGHV5-10-1\*01\_03

8151 sequences assigned  
3021 (37.1%) exact matches, in which:  
2453 unique CDR3  
6 unique J



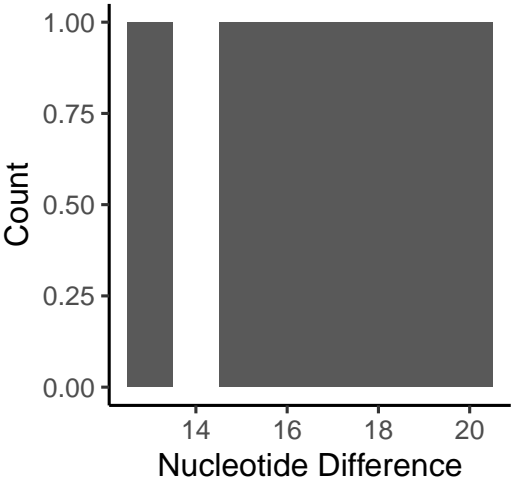
IGHV5-51\*07

38 sequences assigned  
21 (55.3%) exact matches, in which:  
20 unique CDR3  
4 unique J



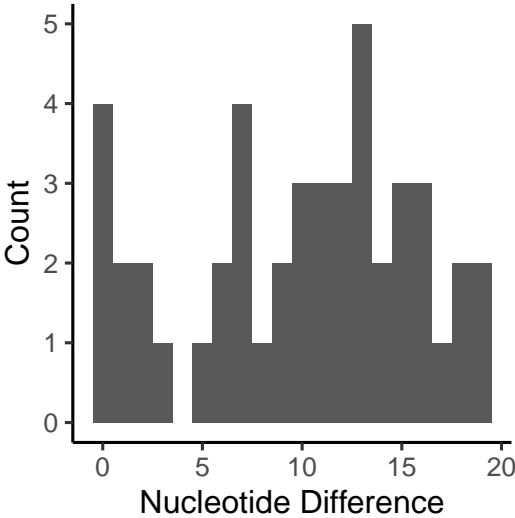
IGHV4/OR15-8\*02

39 sequences assigned  
No exact matches.



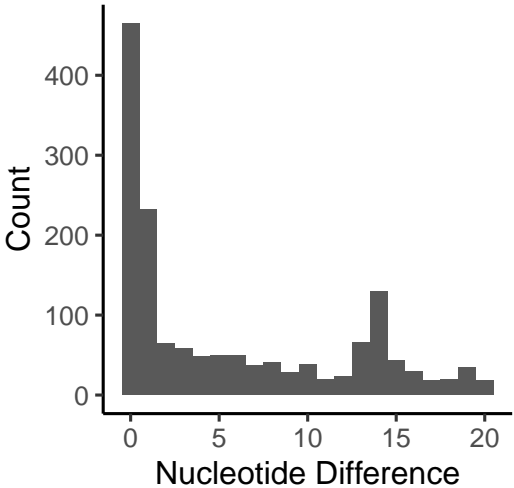
IGHV5-51\*04

58 sequences assigned  
4 (6.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



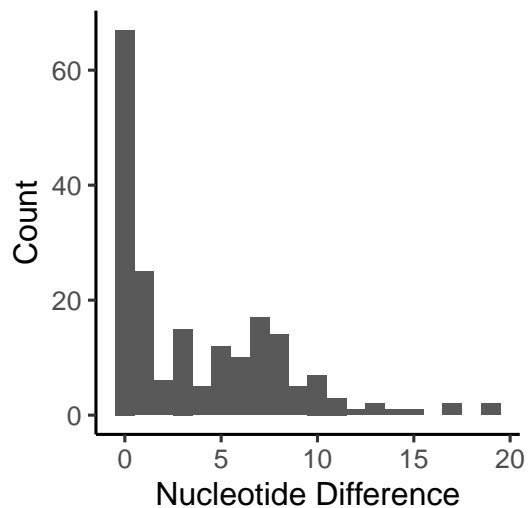
IGHV6-1\*01\_02

1560 sequences assigned  
465 (29.8%) exact matches, in which:  
434 unique CDR3  
6 unique J



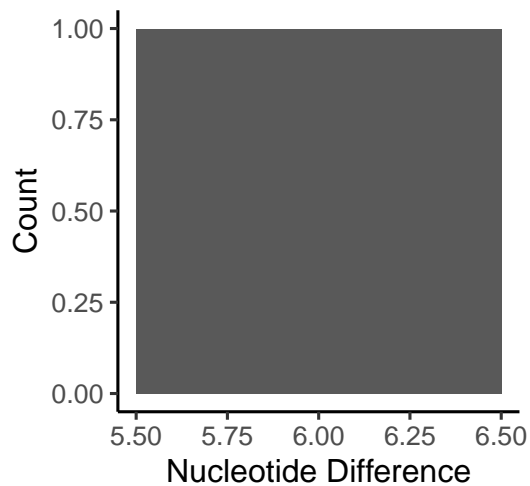
## IGHV6-1\*01\_02\_A315G

199 sequences assigned  
67 (33.7%) exact matches, in which:  
67 unique CDR3  
5 unique J



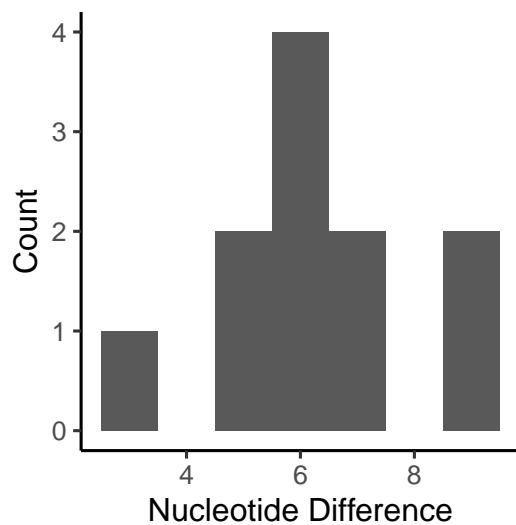
## IGHV3/OR16-13\*01

1 sequences assigned  
No exact matches.



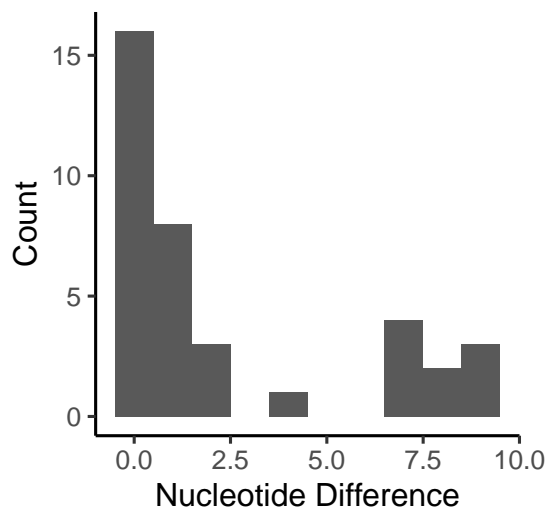
## IGHV3/OR16-9\*01

11 sequences assigned  
No exact matches.



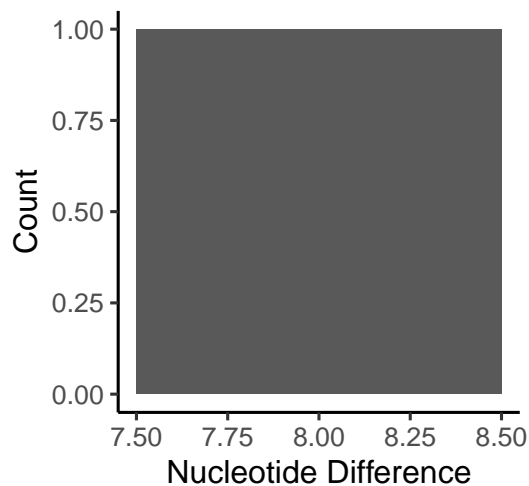
## IGHV7-4-1\*01

39 sequences assigned  
16 (41%) exact matches, in which:  
16 unique CDR3  
4 unique J

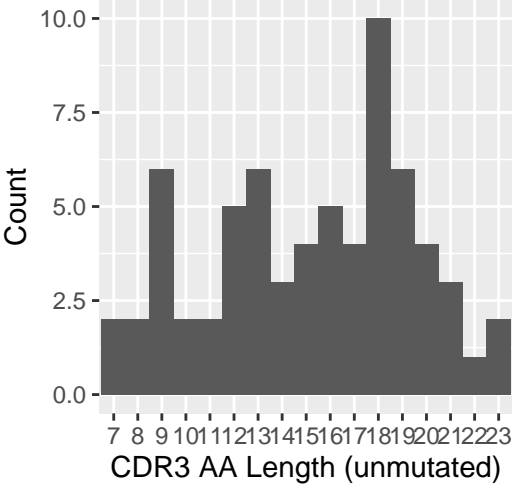


## IGHV3/OR16-10\*01\_03

1 sequences assigned  
No exact matches.



IGHV6-1\*01\_02\_A315G







[illegible]