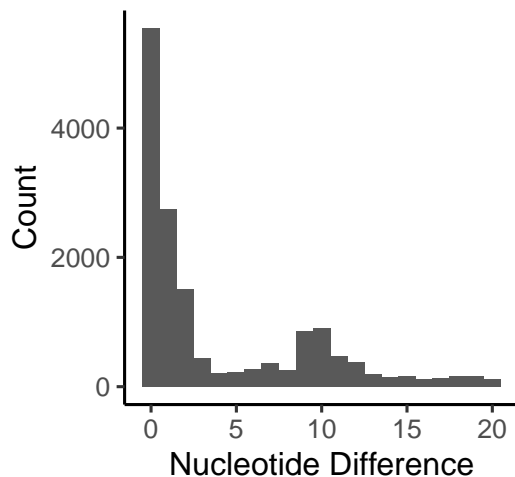


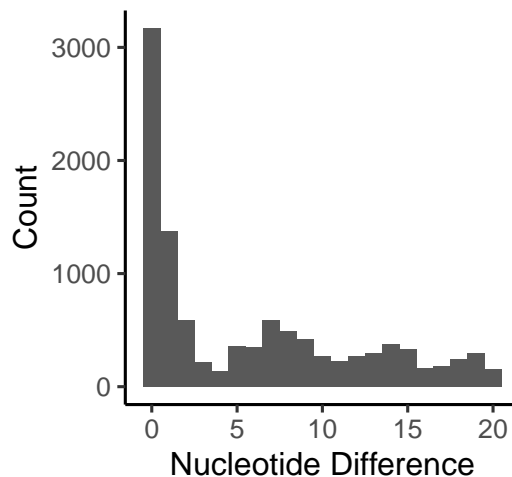
### IGHV1-2\*02

17732 sequences assigned  
5542 (31.3%) exact matches, in which:  
5161 unique CDR3  
6 unique J



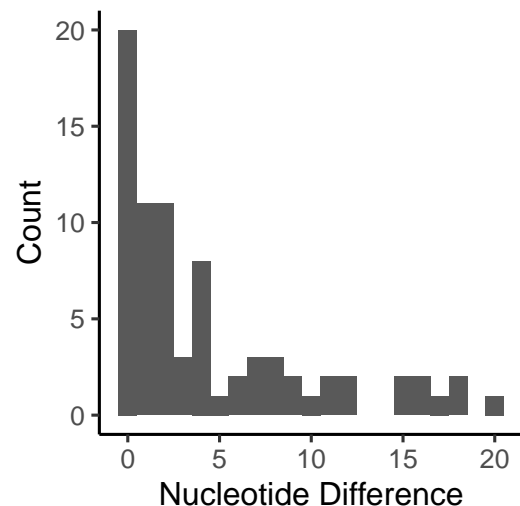
### IGHV1-8\*01

12146 sequences assigned  
3168 (26.1%) exact matches, in which:  
3034 unique CDR3  
6 unique J



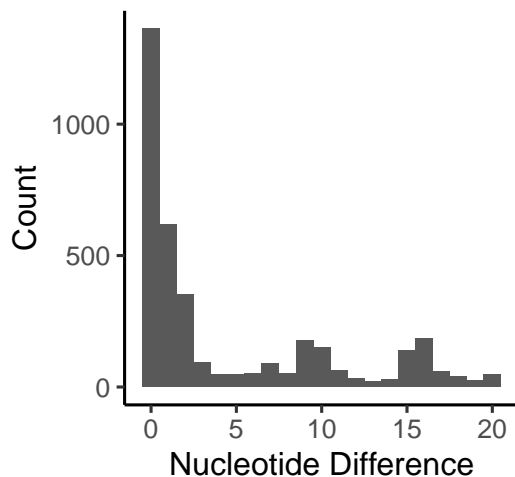
### IGHV1-45\*02

80 sequences assigned  
20 (25%) exact matches, in which:  
19 unique CDR3  
4 unique J



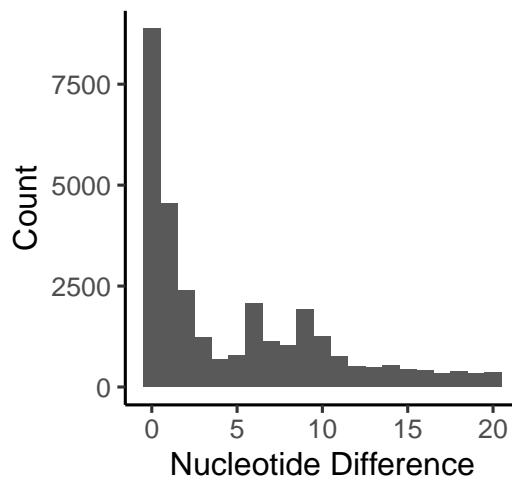
### IGHV1-2\*04

4085 sequences assigned  
1363 (33.4%) exact matches, in which:  
1303 unique CDR3  
6 unique J



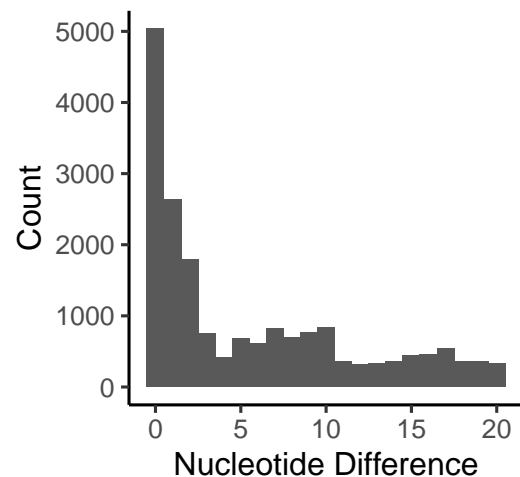
### IGHV1-18\*01

38353 sequences assigned  
8874 (23.1%) exact matches, in which:  
8272 unique CDR3  
6 unique J



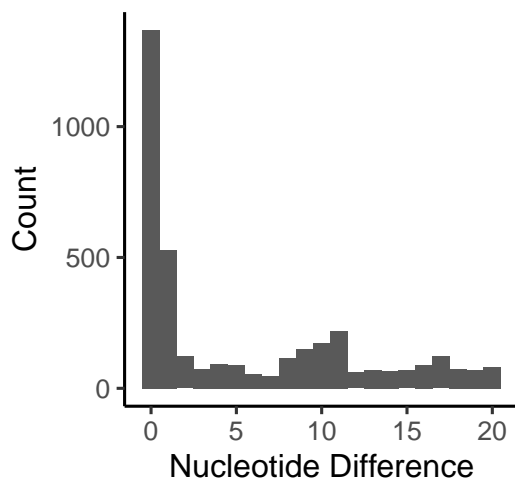
### IGHV1-46\*01

25942 sequences assigned  
5037 (19.4%) exact matches, in which:  
4760 unique CDR3  
6 unique J



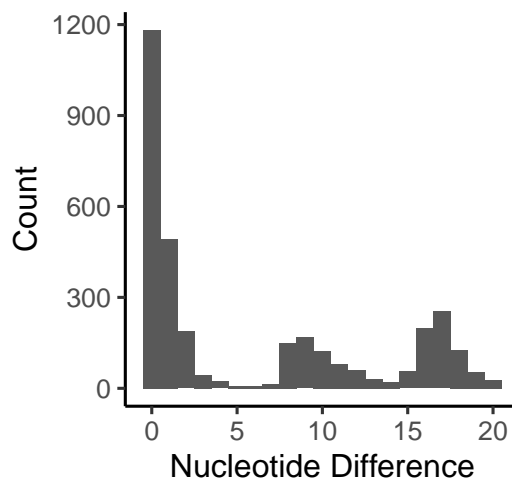
### IGHV1-3\*01\_05

5174 sequences assigned  
1369 (26.5%) exact matches, in which:  
1293 unique CDR3  
6 unique J



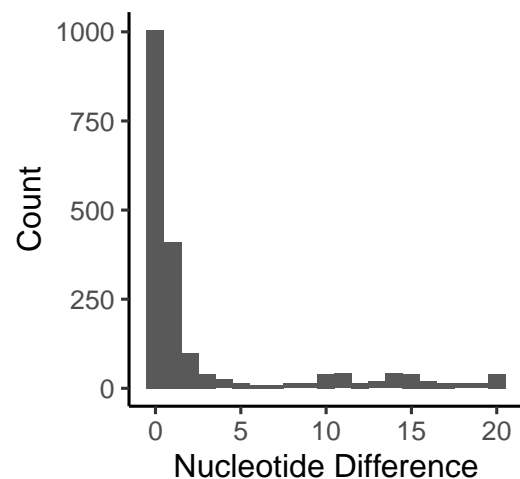
### IGHV1-24\*01

3587 sequences assigned  
1182 (33%) exact matches, in which:  
1134 unique CDR3  
6 unique J



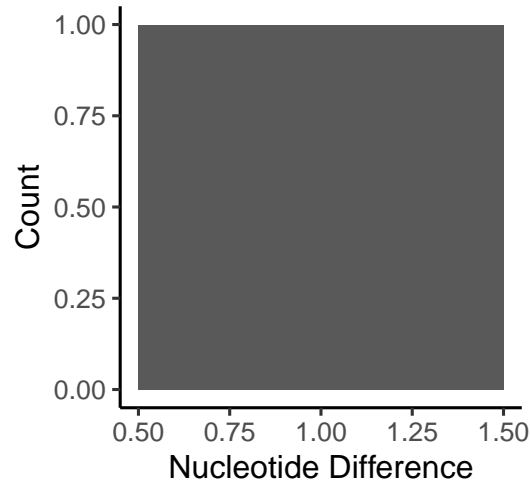
### IGHV1-58\*01\_03

2517 sequences assigned  
1005 (39.9%) exact matches, in which:  
947 unique CDR3  
6 unique J



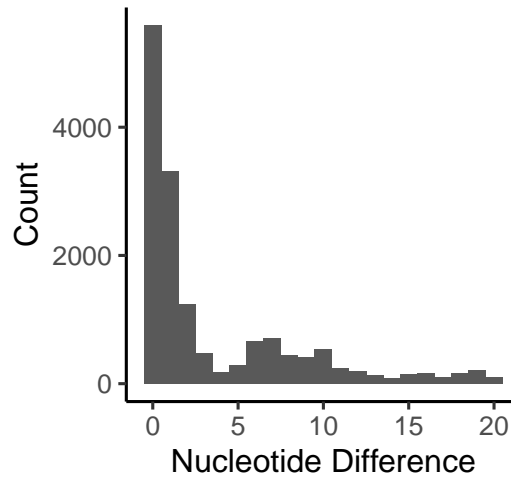
### IGHV1-68\*01

1 sequences assigned  
No exact matches.



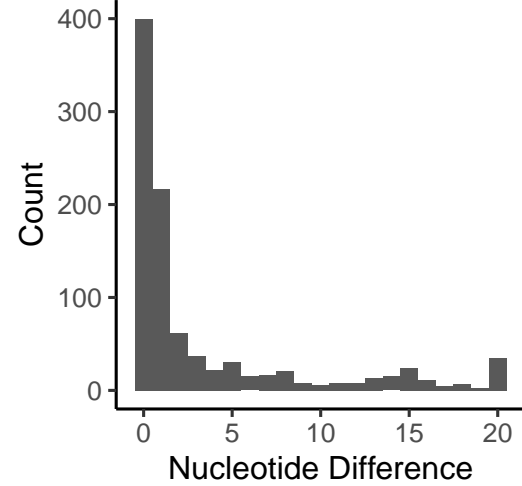
### IGHV1-69\*04\_09

16107 sequences assigned  
5588 (34.7%) exact matches, in which:  
5339 unique CDR3  
6 unique J



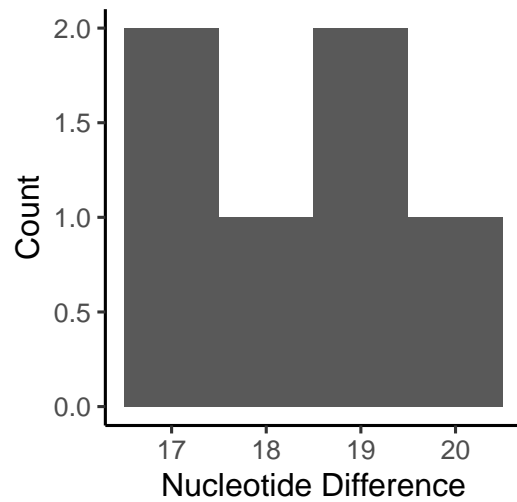
### IGHV2-5\*01

1124 sequences assigned  
400 (35.6%) exact matches, in which:  
372 unique CDR3  
6 unique J



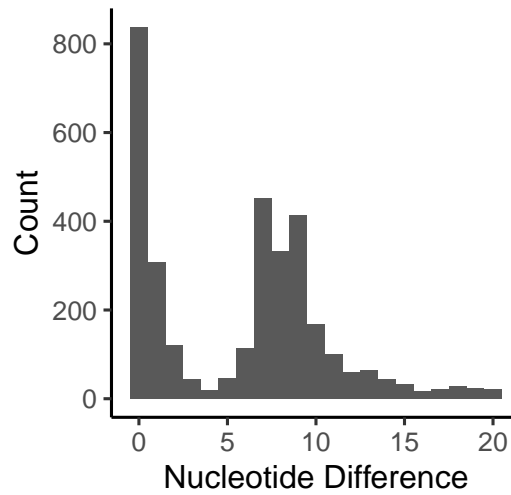
### IGHV1-69-2\*01

8 sequences assigned  
No exact matches.



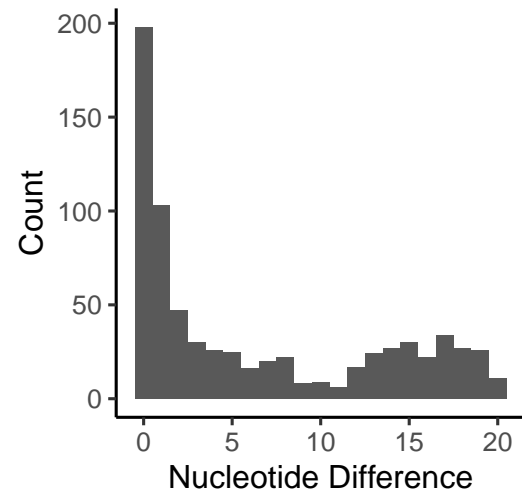
### IGHV1-69\*06\_14

3695 sequences assigned  
838 (22.7%) exact matches, in which:  
828 unique CDR3  
6 unique J



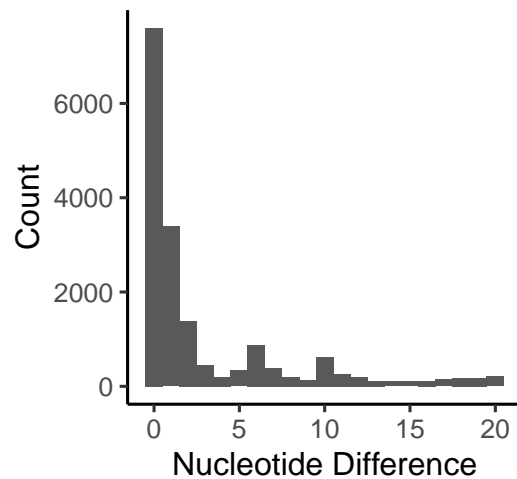
### IGHV2-5\*02

1014 sequences assigned  
198 (19.5%) exact matches, in which:  
184 unique CDR3  
6 unique J



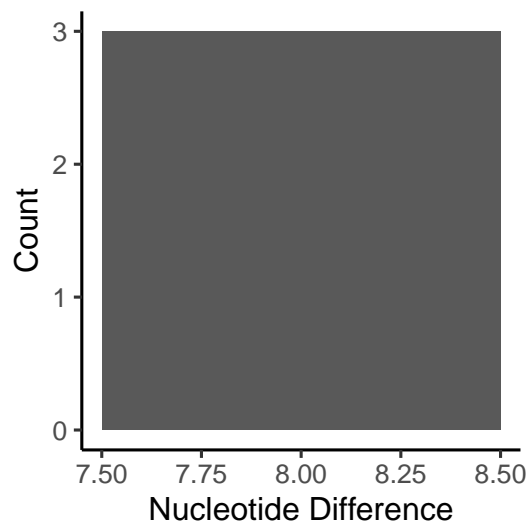
### IGHV1-69\*01\_12\_13

20422 sequences assigned  
7598 (37.2%) exact matches, in which:  
7263 unique CDR3  
6 unique J



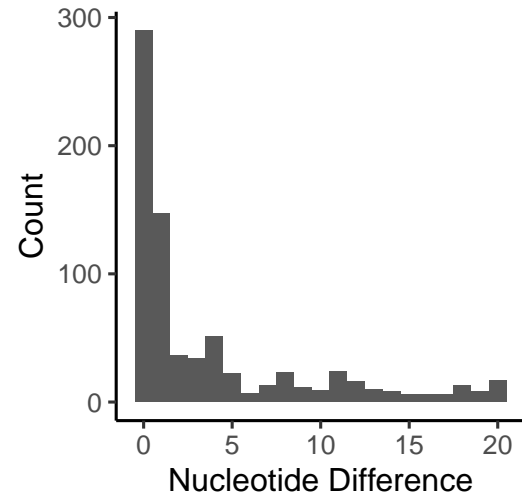
### IGHV1-NL1\*01

3 sequences assigned  
No exact matches.



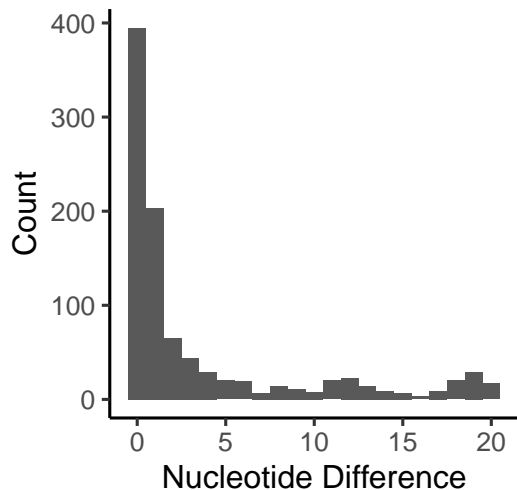
### IGHV2-26\*01

931 sequences assigned  
290 (31.1%) exact matches, in which:  
270 unique CDR3  
6 unique J



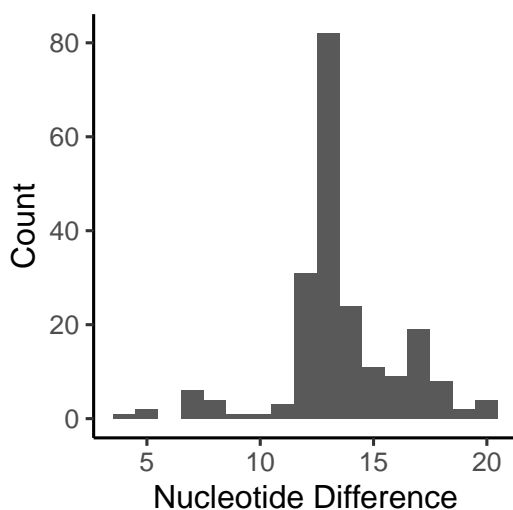
### IGHV2-70\*01

1082 sequences assigned  
395 (36.5%) exact matches, in which:  
370 unique CDR3  
6 unique J



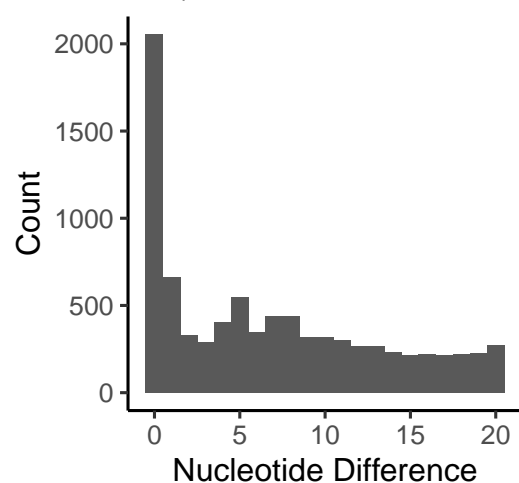
### IGHV2-70D\*04

226 sequences assigned  
No exact matches.



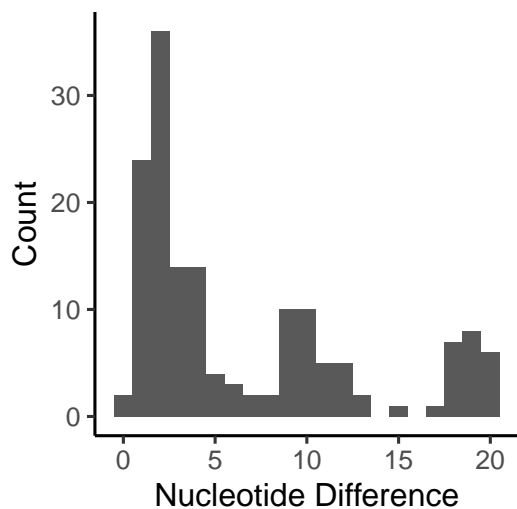
### IGHV3-9\*01

10942 sequences assigned  
2054 (18.8%) exact matches, in which:  
1615 unique CDR3  
6 unique J



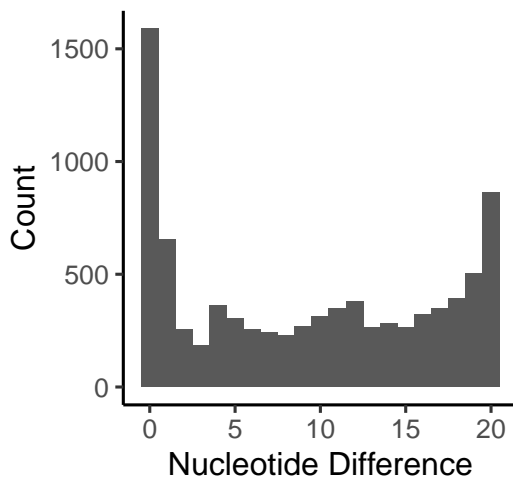
### IGHV2-70\*12

285 sequences assigned  
2 (0.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



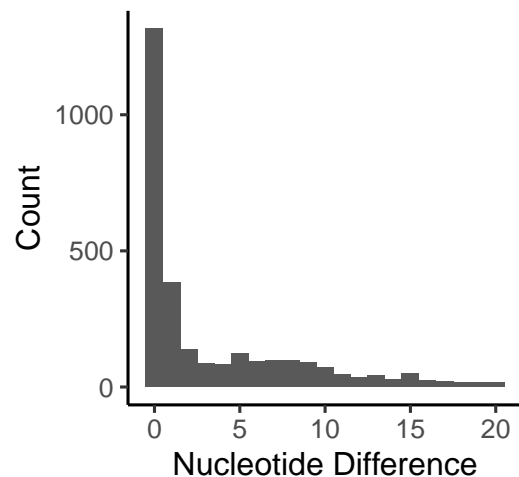
### IGHV3-7\*01

14950 sequences assigned  
1589 (10.6%) exact matches, in which:  
1367 unique CDR3  
6 unique J



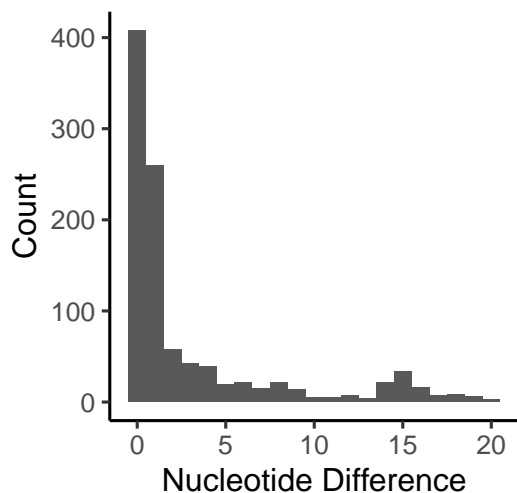
### IGHV3-11\*01

3737 sequences assigned  
1316 (35.2%) exact matches, in which:  
1116 unique CDR3  
6 unique J



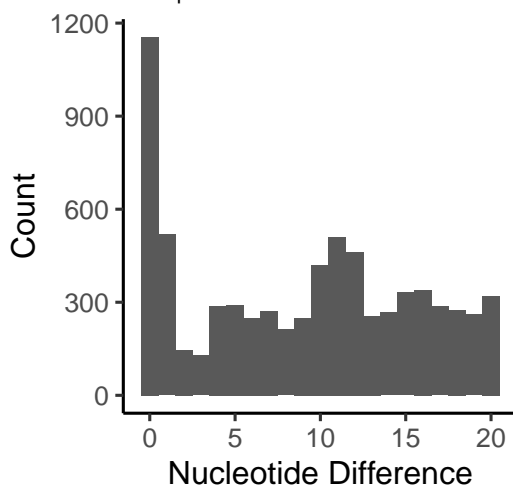
### IGHV2-70\*11\_15

1097 sequences assigned  
408 (37.2%) exact matches, in which:  
379 unique CDR3  
6 unique J



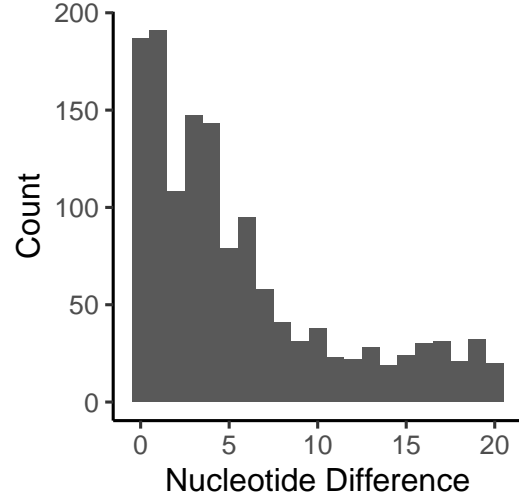
### IGHV3-7\*03

11136 sequences assigned  
1155 (10.4%) exact matches, in which:  
979 unique CDR3  
6 unique J



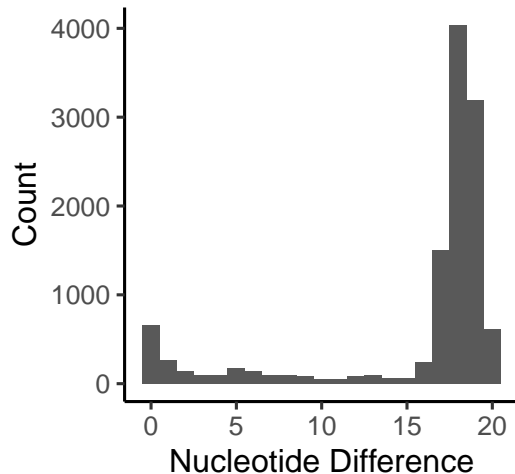
### IGHV3-11\*04

1758 sequences assigned  
187 (10.6%) exact matches, in which:  
182 unique CDR3  
6 unique J



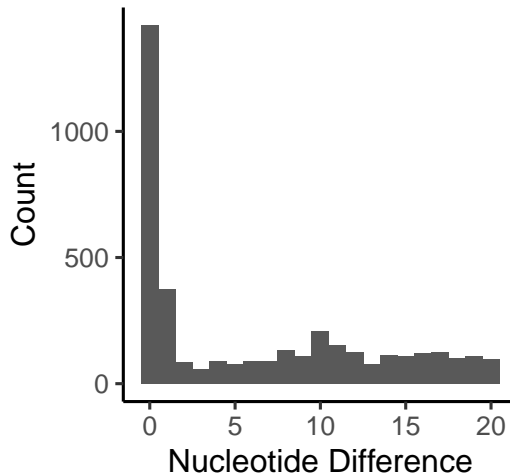
### IGHV3-11\*06

13482 sequences assigned  
659 (4.9%) exact matches, in which:  
574 unique CDR3  
6 unique J



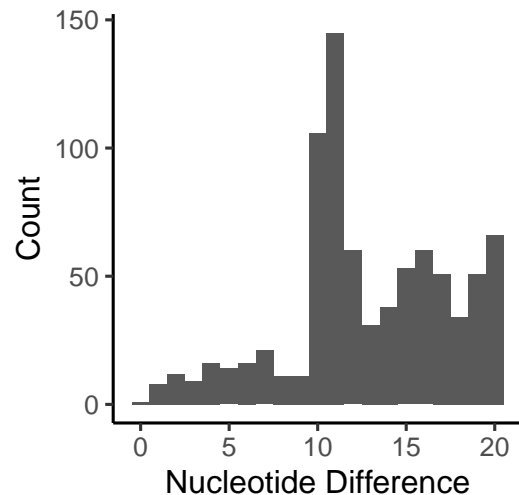
### IGHV3-15\*01\_02

6652 sequences assigned  
1420 (21.3%) exact matches, in which:  
1180 unique CDR3  
6 unique J



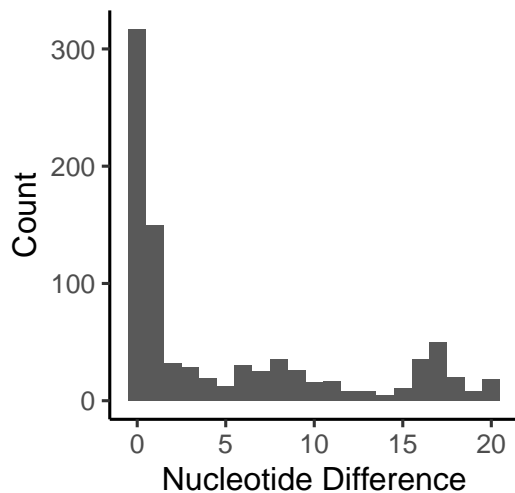
### IGHV3-20\*03\_04

1323 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



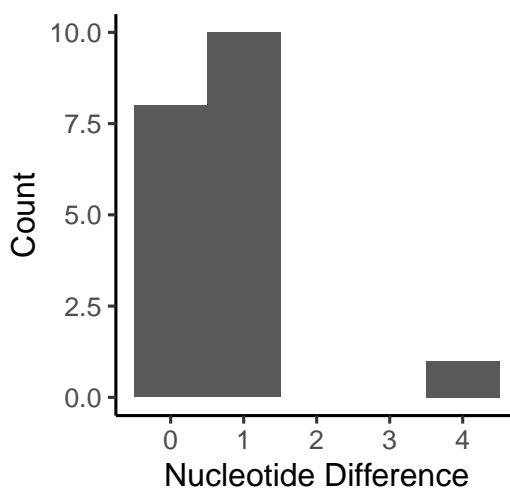
### IGHV3-13\*01

1217 sequences assigned  
317 (26%) exact matches, in which:  
254 unique CDR3  
6 unique J



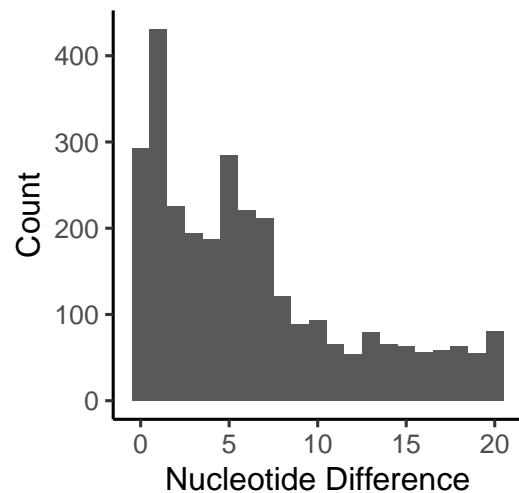
### IGHV3-19\*01

19 sequences assigned  
8 (42.1%) exact matches, in which:  
6 unique CDR3  
1 unique J



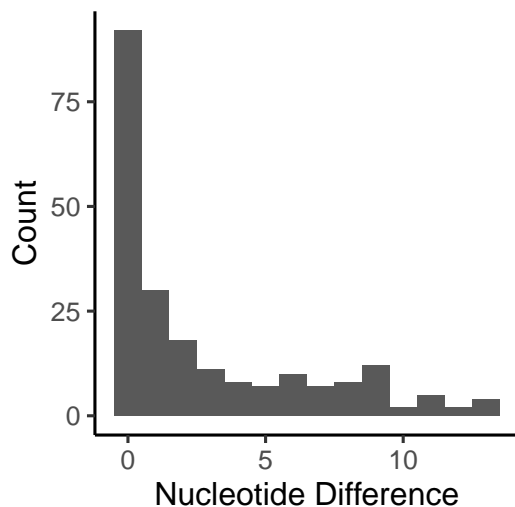
### IGHV3-21\*04

4098 sequences assigned  
293 (7.1%) exact matches, in which:  
290 unique CDR3  
6 unique J



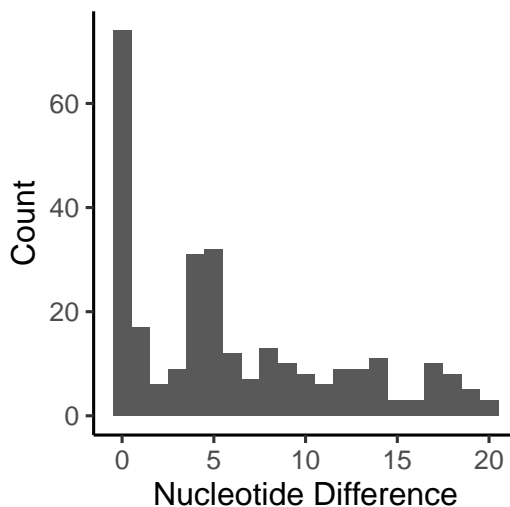
### IGHV3-13\*05

222 sequences assigned  
92 (41.4%) exact matches, in which:  
76 unique CDR3  
6 unique J



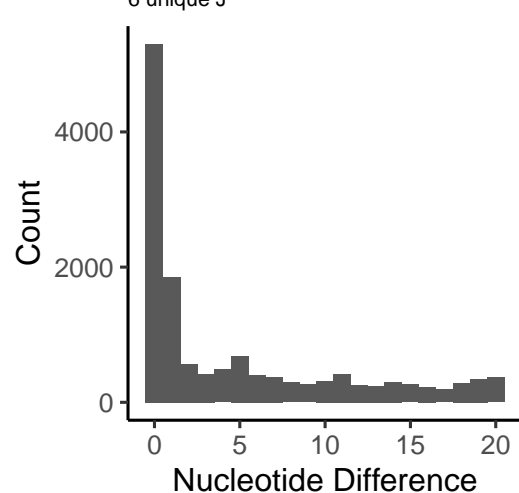
### IGHV3-20\*01\_02

583 sequences assigned  
74 (12.7%) exact matches, in which:  
56 unique CDR3  
6 unique J



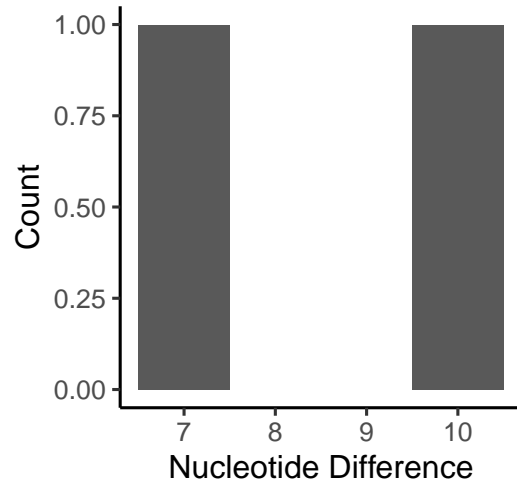
### IGHV3-21\*01\_02

16954 sequences assigned  
5300 (31.3%) exact matches, in which:  
4297 unique CDR3  
6 unique J



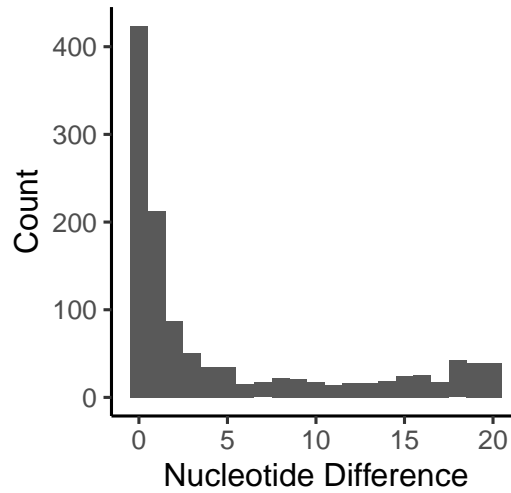
### IGHV3-22\*01\_02

2 sequences assigned  
No exact matches.



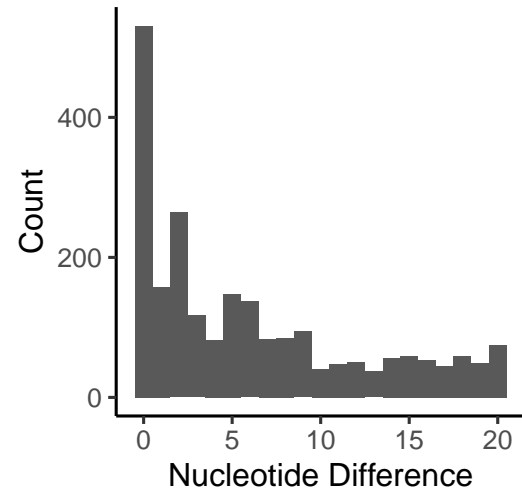
### IGHV3-30\*03

2088 sequences assigned  
424 (20.3%) exact matches, in which:  
407 unique CDR3  
6 unique J



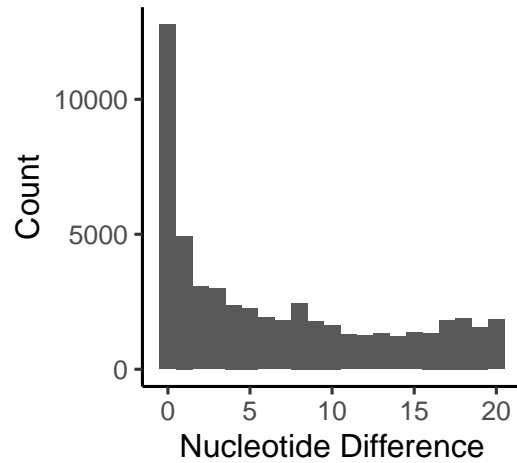
### IGHV3-33\*08

3081 sequences assigned  
531 (17.2%) exact matches, in which:  
514 unique CDR3  
6 unique J



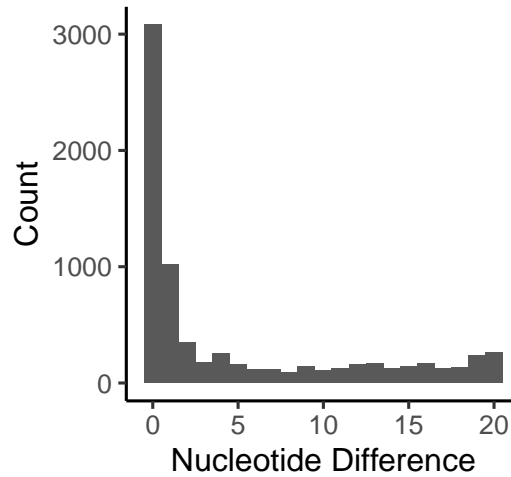
### IGHV3-23\*01\_04

91560 sequences assigned  
12772 (13.9%) exact matches, in which:  
9744 unique CDR3  
6 unique J



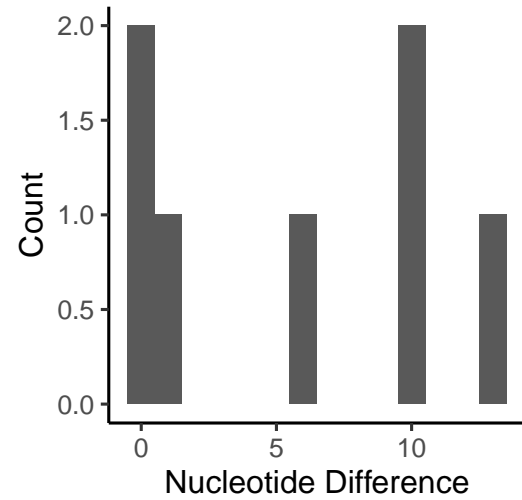
### IGHV3-33\*01

9756 sequences assigned  
3081 (31.6%) exact matches, in which:  
2627 unique CDR3  
6 unique J



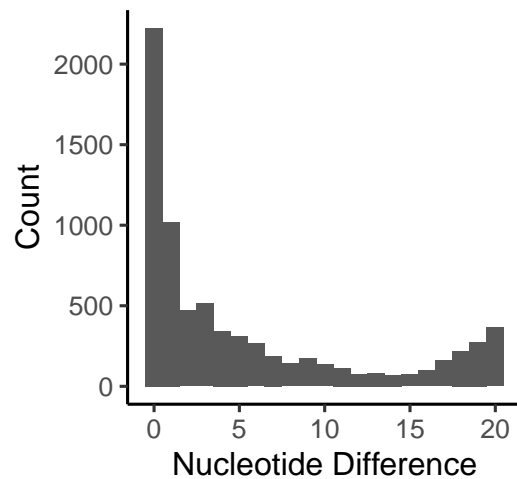
### IGHV3-35\*01

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



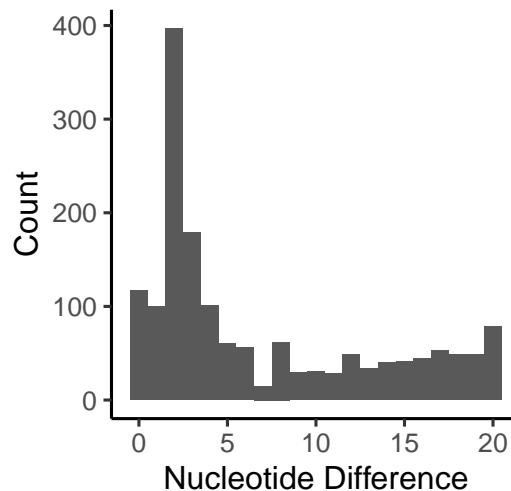
### IGHV3-30-3\*01

9635 sequences assigned  
2224 (23.1%) exact matches, in which:  
1898 unique CDR3  
6 unique J



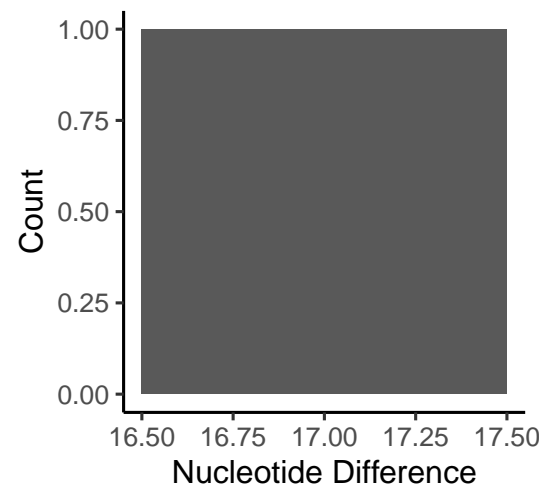
### IGHV3-33\*06

2114 sequences assigned  
117 (5.5%) exact matches, in which:  
117 unique CDR3  
6 unique J



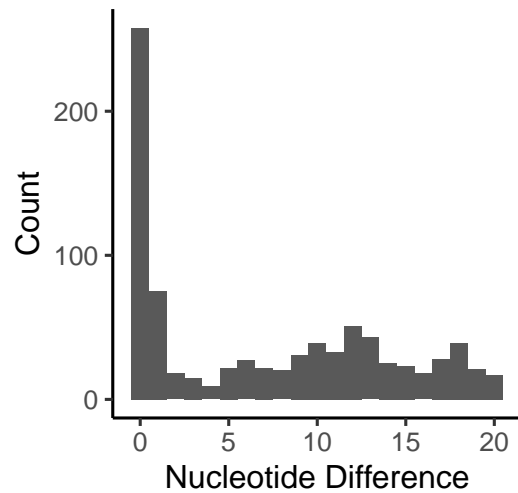
### IGHV3-38-3\*01

1 sequences assigned  
No exact matches.



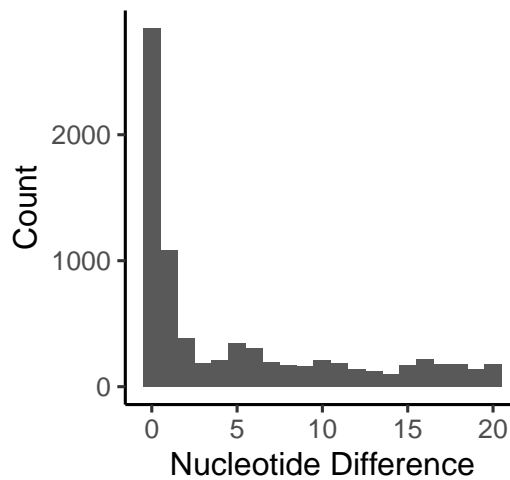
### IGHV3-43\*01

1253 sequences assigned  
258 (20.6%) exact matches, in which:  
215 unique CDR3  
6 unique J



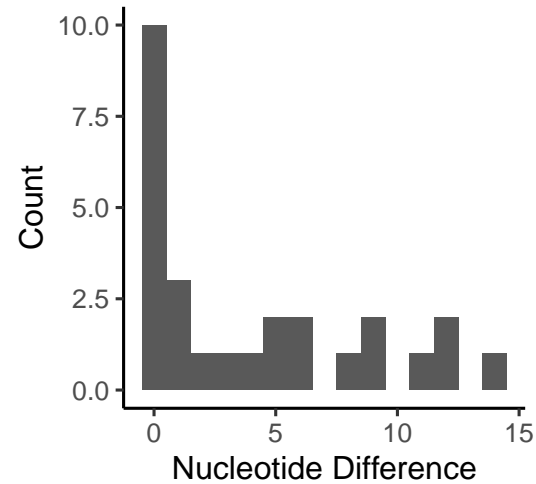
### IGHV3-48\*02

12138 sequences assigned  
2844 (23.4%) exact matches, in which:  
2301 unique CDR3  
6 unique J



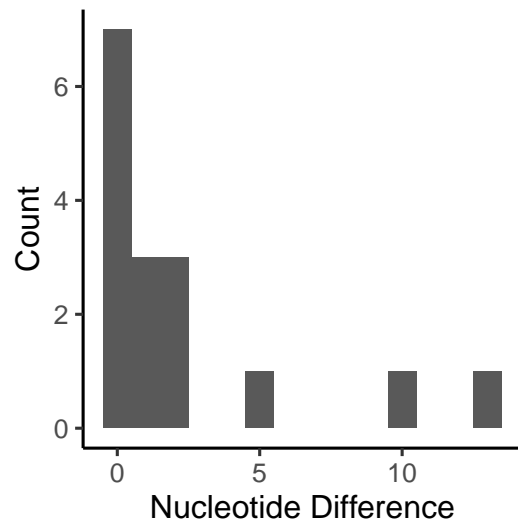
### IGHV3-52\*01\_03

27 sequences assigned  
10 (37%) exact matches, in which:  
9 unique CDR3  
3 unique J



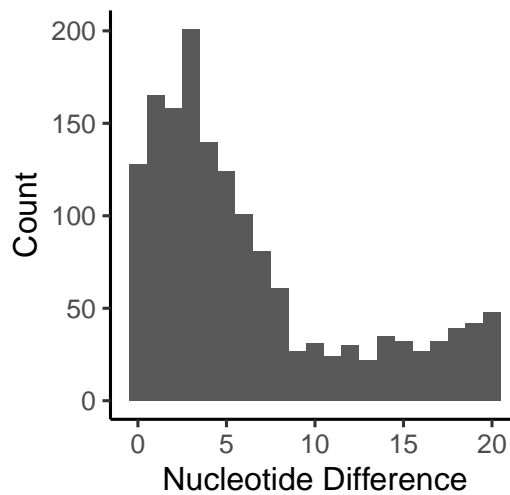
### IGHV3-47\*02

16 sequences assigned  
7 (43.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



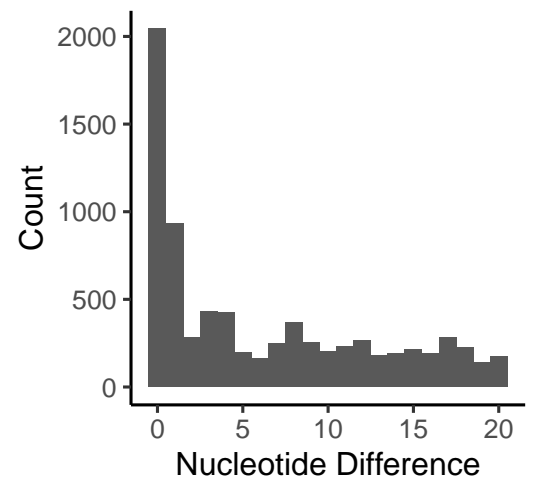
### IGHV3-48\*04

2701 sequences assigned  
128 (4.7%) exact matches, in which:  
128 unique CDR3  
5 unique J



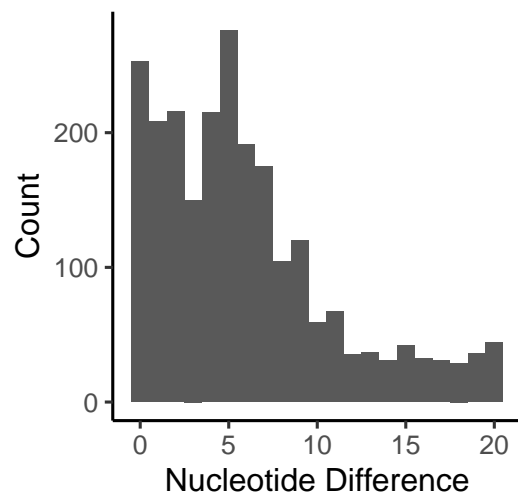
### IGHV3-53\*01\_02

12358 sequences assigned  
2044 (16.5%) exact matches, in which:  
1733 unique CDR3  
6 unique J



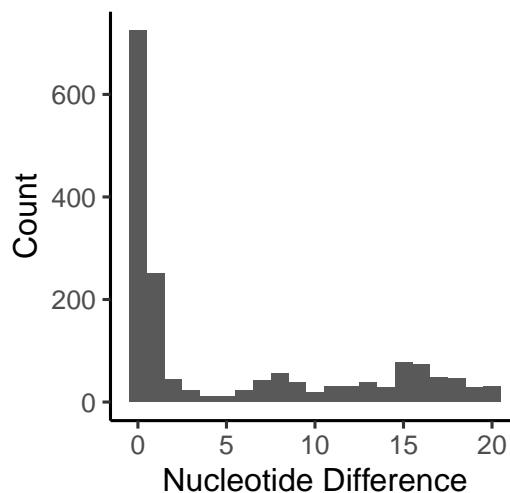
### IGHV3-48\*01

2904 sequences assigned  
253 (8.7%) exact matches, in which:  
251 unique CDR3  
5 unique J



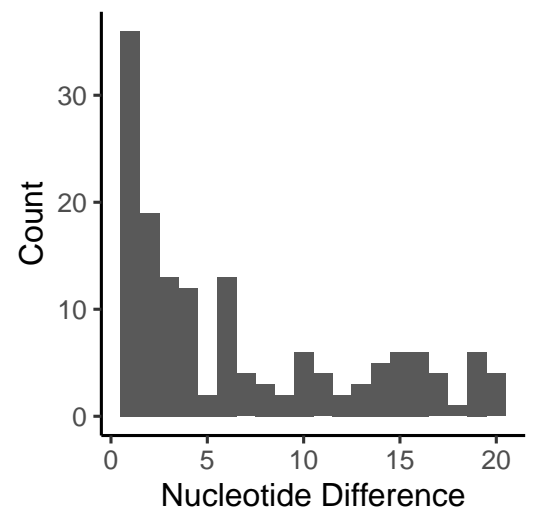
### IGHV3-49\*03\_05

2180 sequences assigned  
725 (33.3%) exact matches, in which:  
620 unique CDR3  
6 unique J



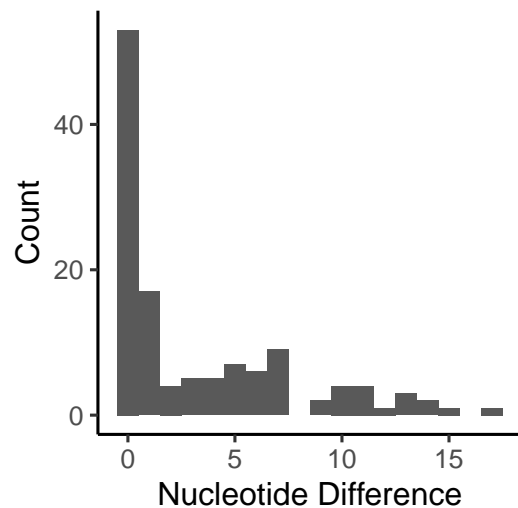
### IGHV3-64\*04

187 sequences assigned  
No exact matches.



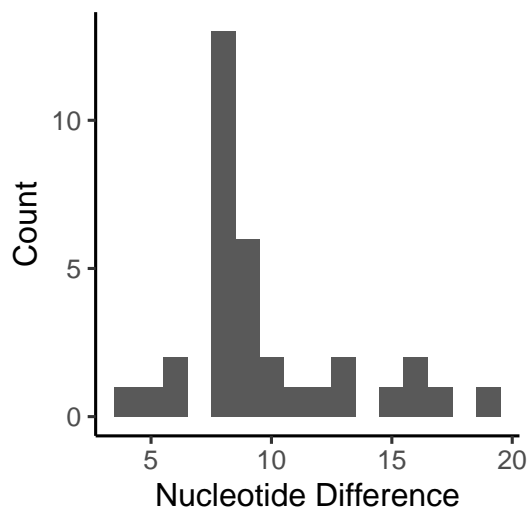
### IGHV3-64\*02\_07

134 sequences assigned  
53 (39.6%) exact matches, in which:  
42 unique CDR3  
5 unique J



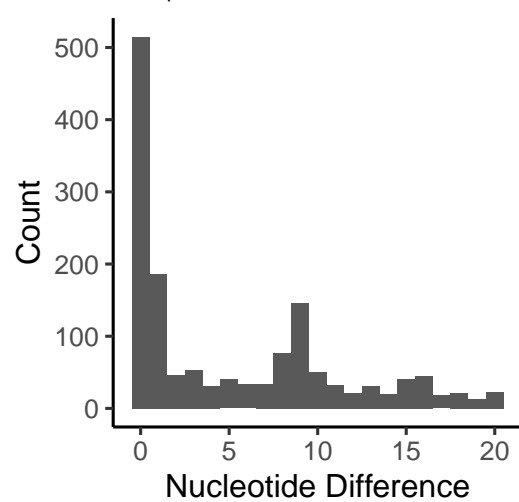
### IGHV3-69-1\*02

708 sequences assigned  
No exact matches.



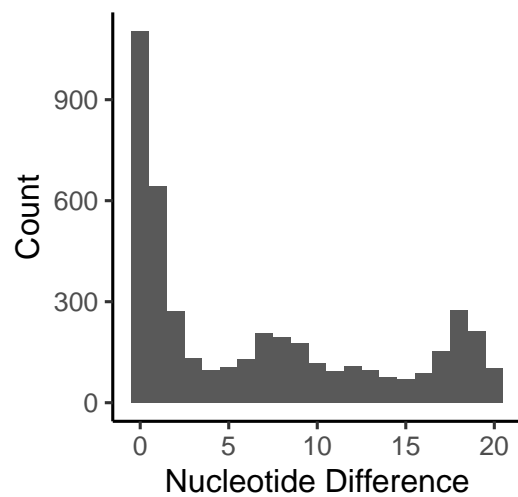
### IGHV3-73\*01\_02

1690 sequences assigned  
515 (30.5%) exact matches, in which:  
426 unique CDR3  
6 unique J



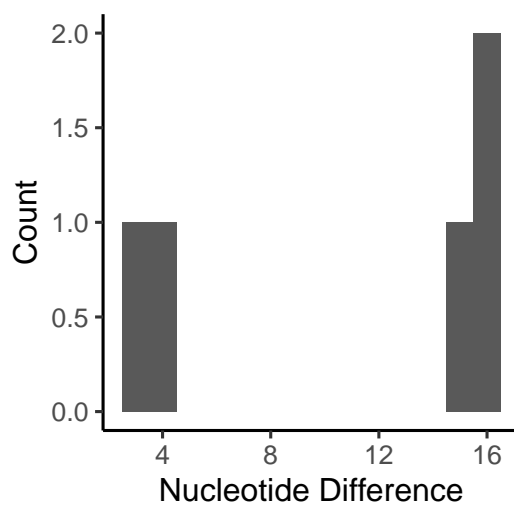
### IGHV3-66\*01

6975 sequences assigned  
1104 (15.8%) exact matches, in which:  
929 unique CDR3  
6 unique J



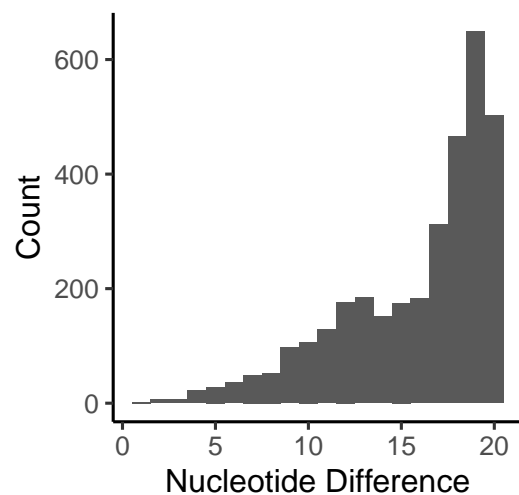
### IGHV3-71\*01\_04

12 sequences assigned  
No exact matches.



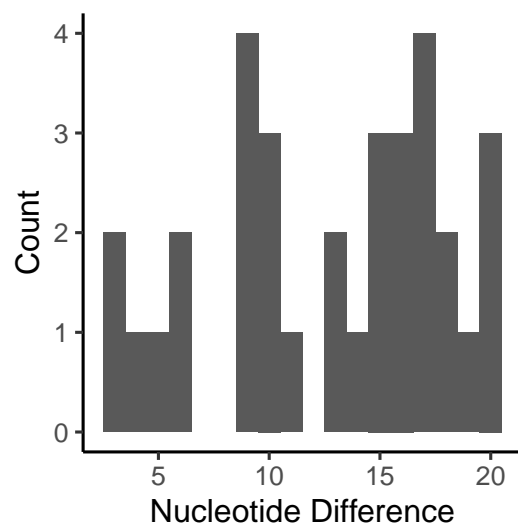
### IGHV3-74\*03

8148 sequences assigned  
No exact matches.



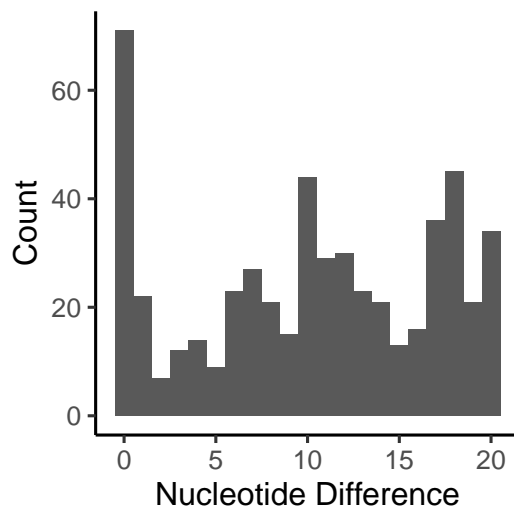
### IGHV3-69-1\*01

175 sequences assigned  
No exact matches.



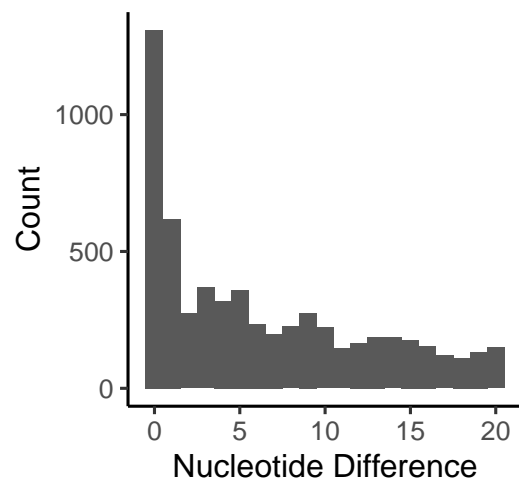
### IGHV3-72\*01

1292 sequences assigned  
71 (5.5%) exact matches, in which:  
63 unique CDR3  
5 unique J



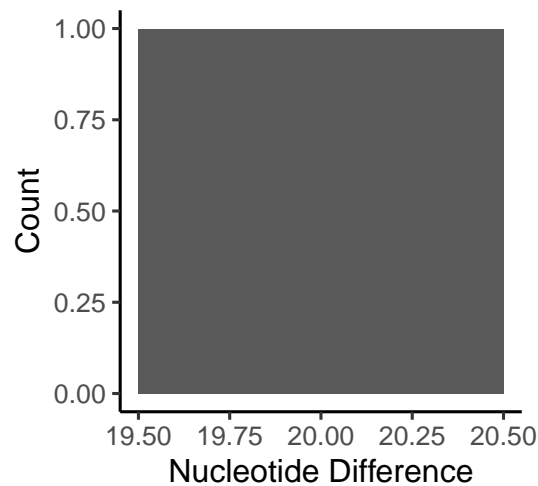
### IGHV3-74\*01\_02

7230 sequences assigned  
1309 (18.1%) exact matches, in which:  
1059 unique CDR3  
6 unique J



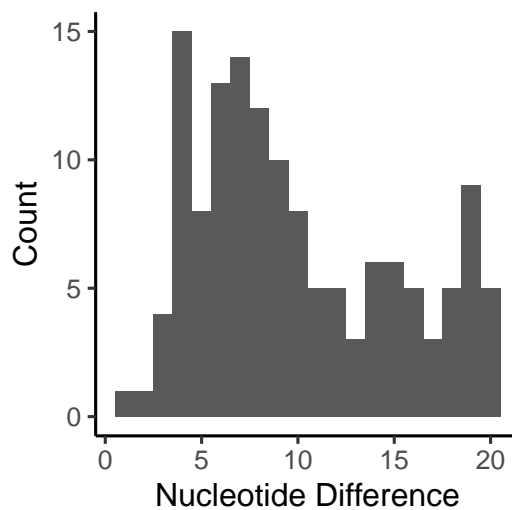
### IGHV3-43D\*03

3 sequences assigned  
No exact matches.



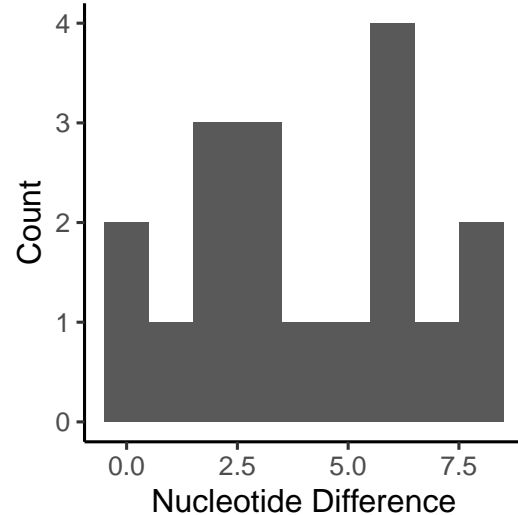
### IGHV3-NL1\*01

256 sequences assigned  
No exact matches.



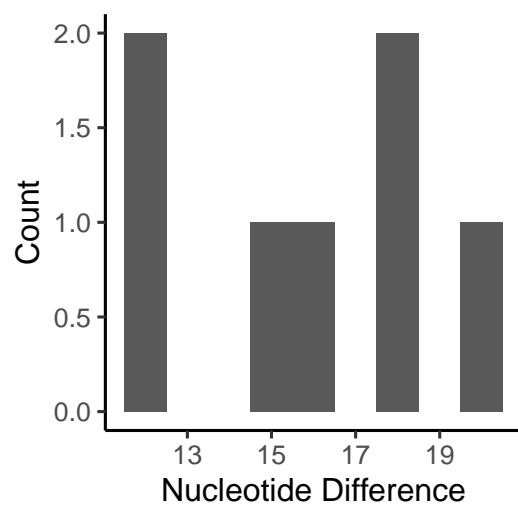
### IGHV4-28\*03

26 sequences assigned  
2 (7.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



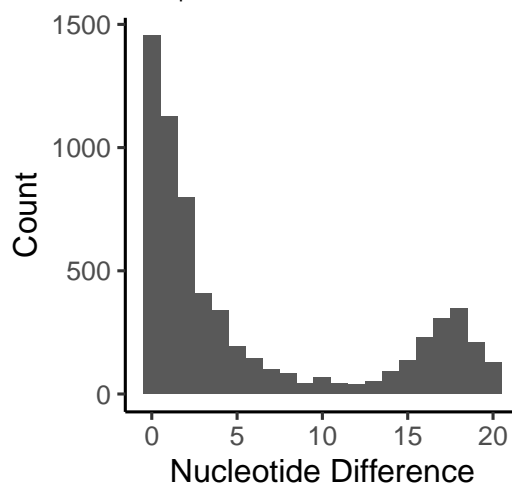
### IGHV3-43D\*04

31 sequences assigned  
No exact matches.



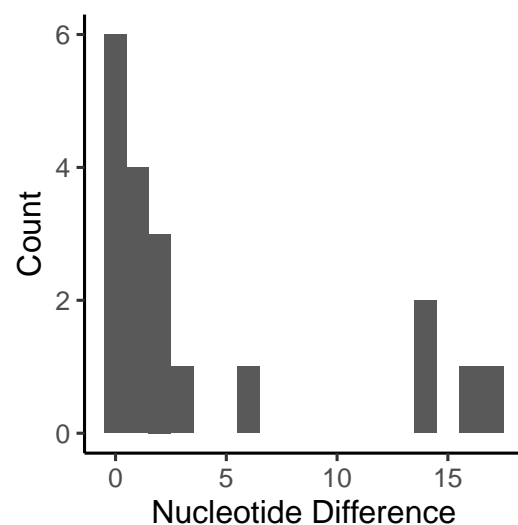
### IGHV4-4\*07

8707 sequences assigned  
1454 (16.7%) exact matches, in which:  
1348 unique CDR3  
6 unique J



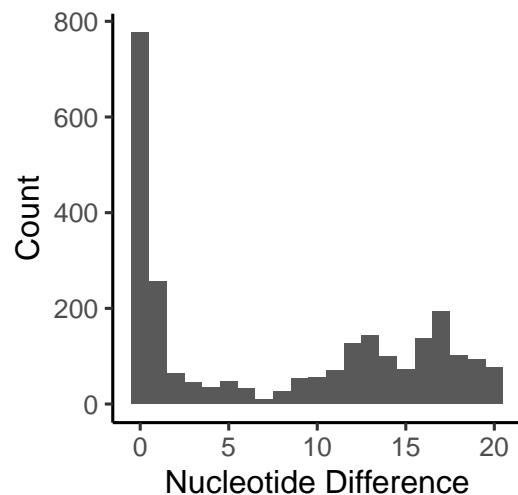
### IGHV4-28\*01\_07

19 sequences assigned  
6 (31.6%) exact matches, in which:  
5 unique CDR3  
3 unique J



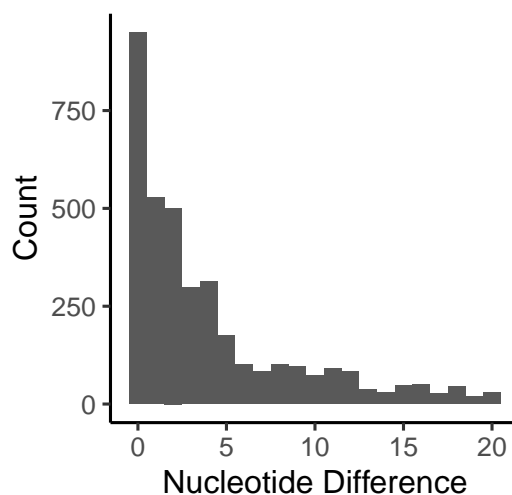
### IGHV3-64D\*06

3020 sequences assigned  
777 (25.7%) exact matches, in which:  
597 unique CDR3  
6 unique J



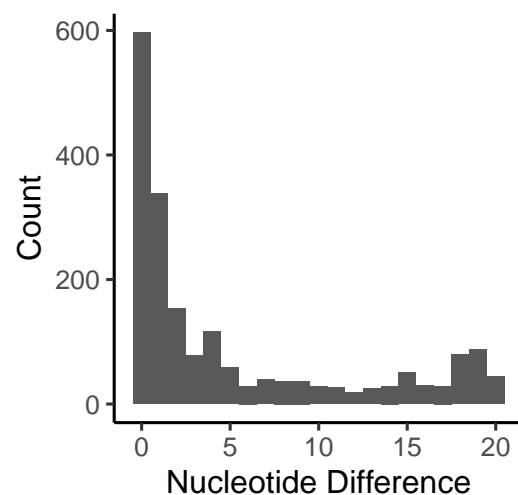
### IGHV4-4\*02\_03

4562 sequences assigned  
950 (20.8%) exact matches, in which:  
880 unique CDR3  
6 unique J



### IGHV4-30-2\*01

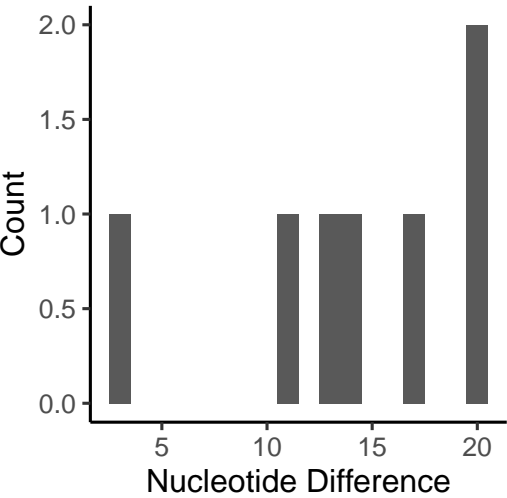
2189 sequences assigned  
597 (27.3%) exact matches, in which:  
520 unique CDR3  
6 unique J





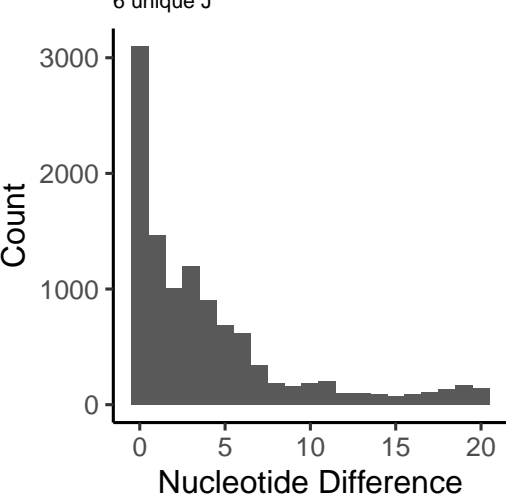
IGHV4-30-4\*01

79 sequences assigned  
No exact matches.



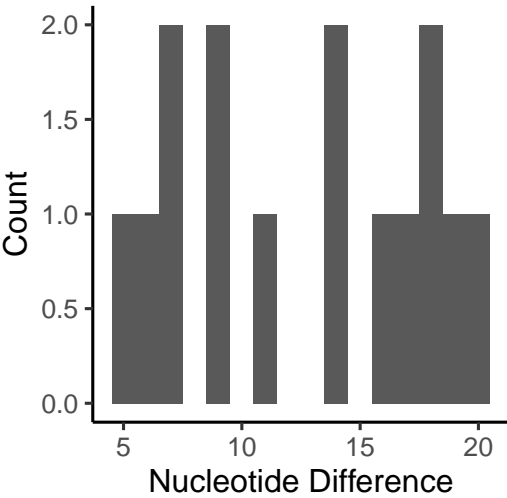
IGHV4-31\*02

14095 sequences assigned  
3098 (22%) exact matches, in which:  
2937 unique CDR3  
6 unique J



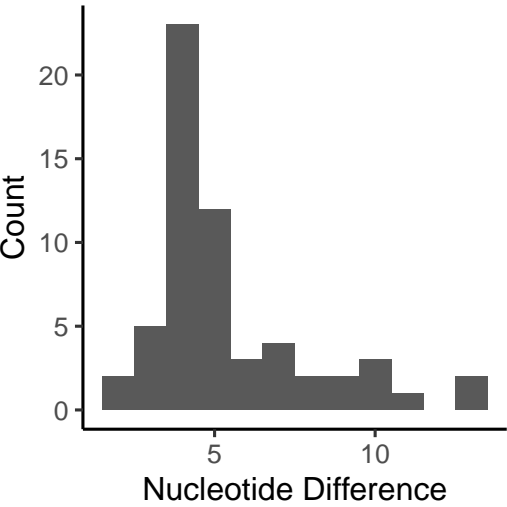
IGHV4-38-2\*02

43 sequences assigned  
No exact matches.



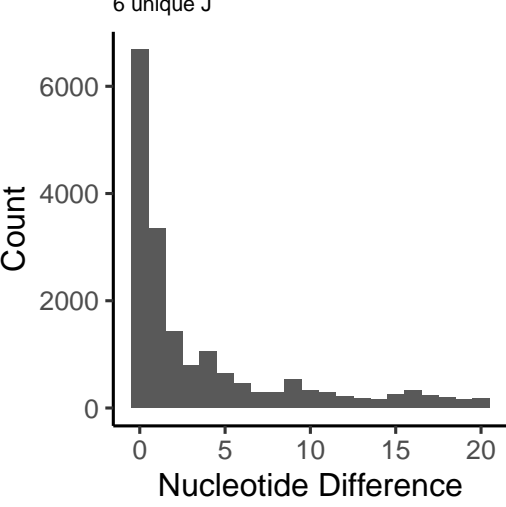
IGHV4-30-4\*07

62 sequences assigned  
No exact matches.



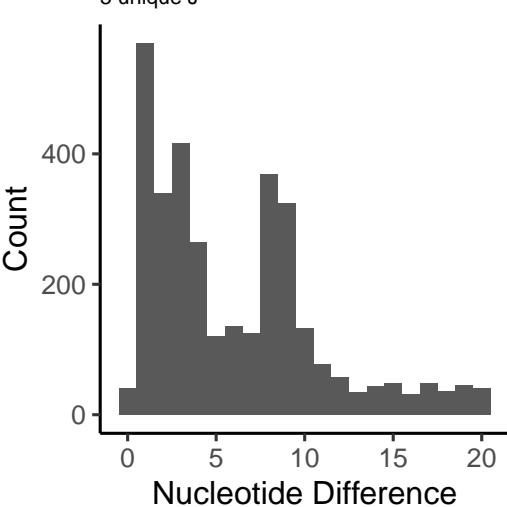
IGHV4-34\*01\_02

26503 sequences assigned  
6682 (25.2%) exact matches, in which:  
6099 unique CDR3  
6 unique J



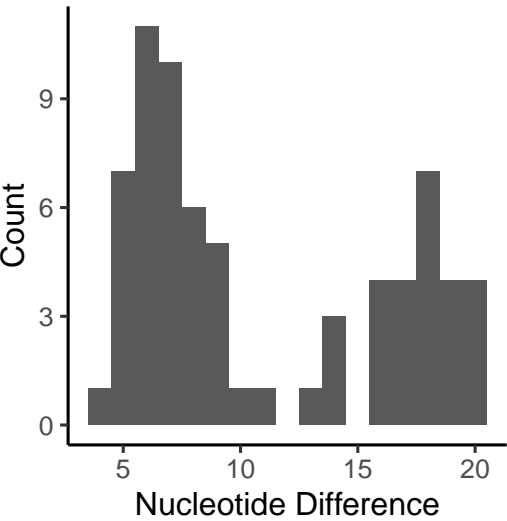
IGHV4-39\*07

4438 sequences assigned  
40 (0.9%) exact matches, in which:  
40 unique CDR3  
5 unique J



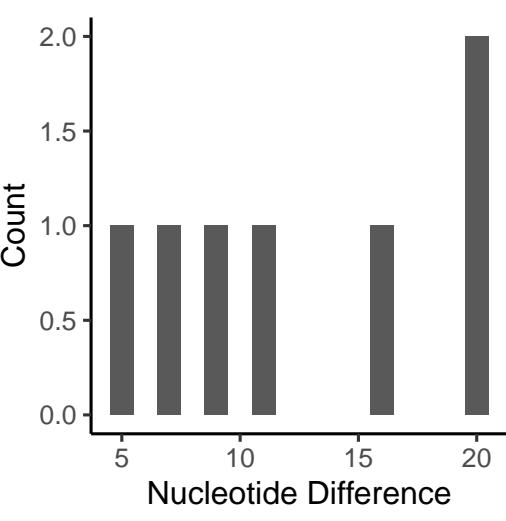
IGHV4-30-4\*08

157 sequences assigned  
No exact matches.



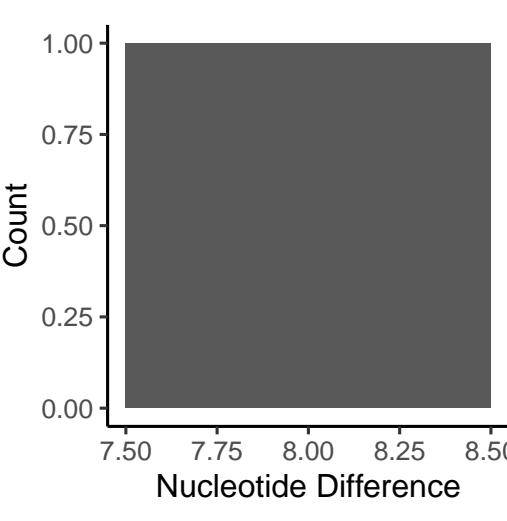
IGHV4-38-2\*01

12 sequences assigned  
No exact matches.



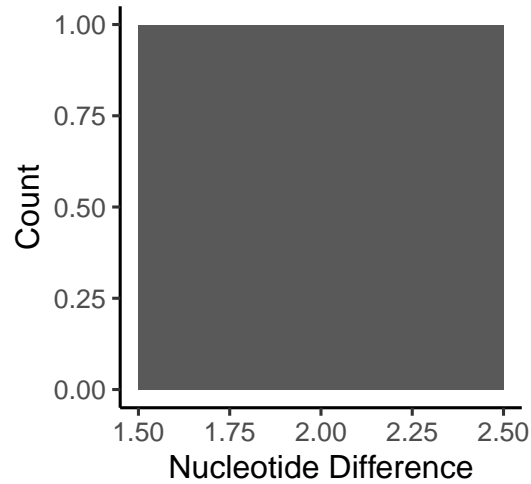
IGHV4-55\*07

14 sequences assigned  
No exact matches.



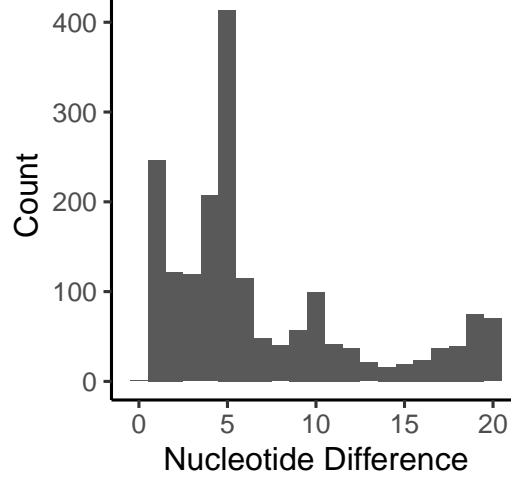
### IGHV4–55\*09

7 sequences assigned  
No exact matches.



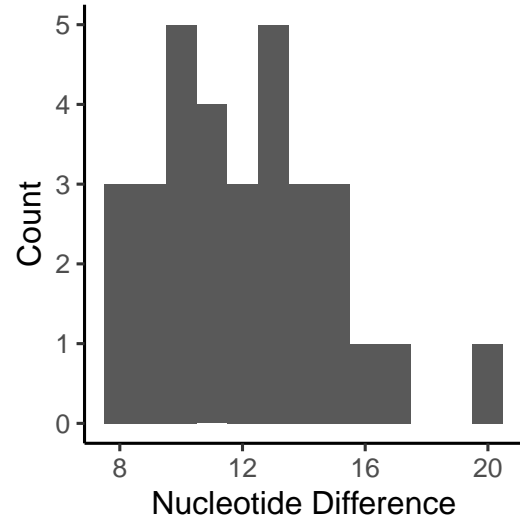
### IGHV4–61\*08

2409 sequences assigned  
1 (0%) exact matches, in which:  
1 unique CDR3  
1 unique J



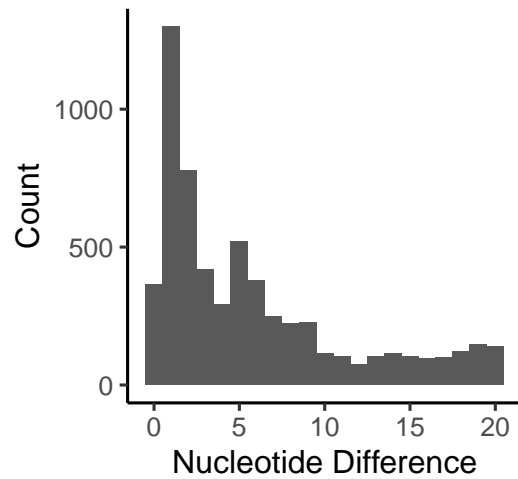
### IGHV1/OR15–3\*02

43 sequences assigned  
No exact matches.



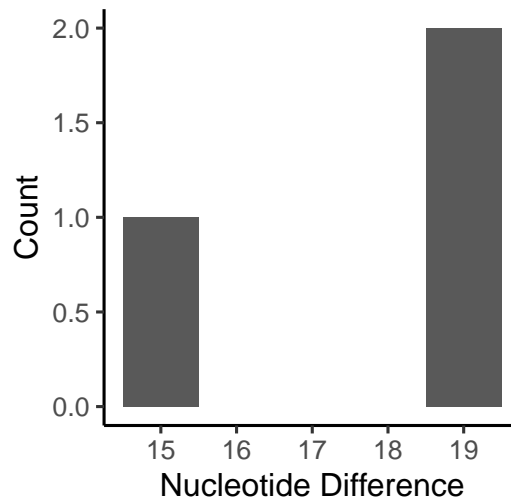
### IGHV4–59\*12

8701 sequences assigned  
363 (4.2%) exact matches, in which:  
362 unique CDR3  
6 unique J



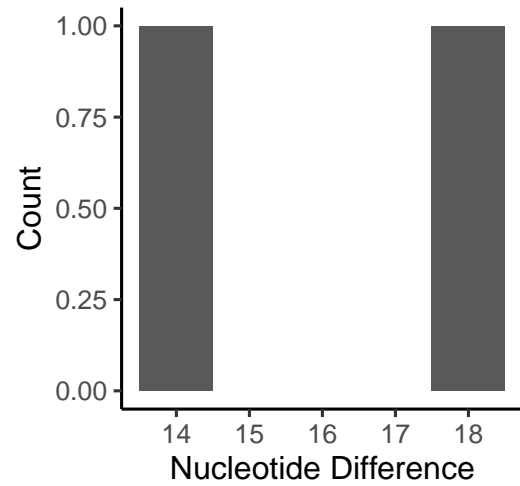
### IGHV1/OR15–1\*04

11 sequences assigned  
No exact matches.



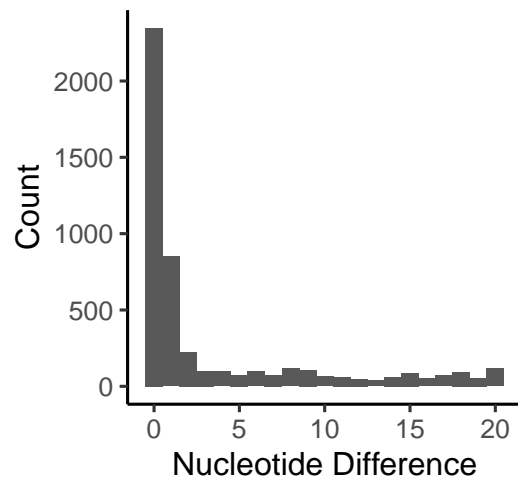
### IGHV1/OR15–4\*01

2 sequences assigned  
No exact matches.



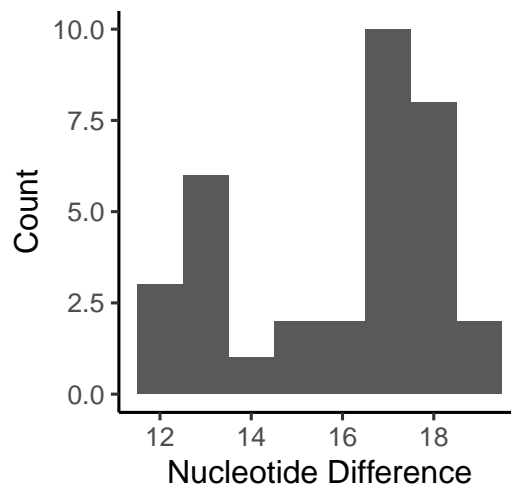
### IGHV4–61\*01

6438 sequences assigned  
2347 (36.5%) exact matches, in which:  
2271 unique CDR3  
6 unique J



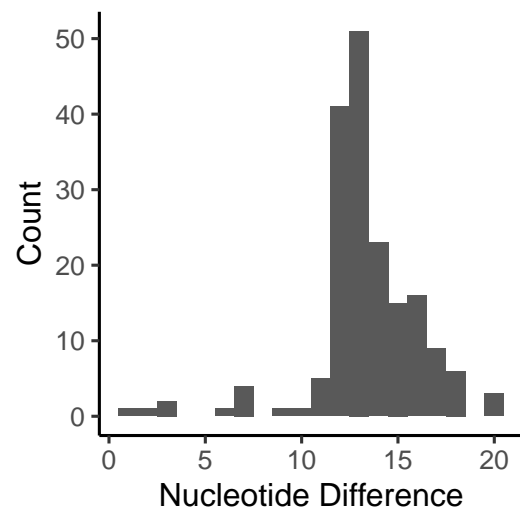
### IGHV1/OR15–2\*02\_03

51 sequences assigned  
No exact matches.



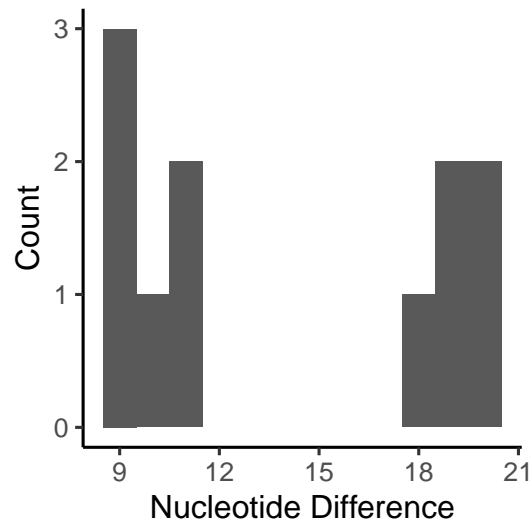
### IGHV4/OR15–8\*01

218 sequences assigned  
No exact matches.



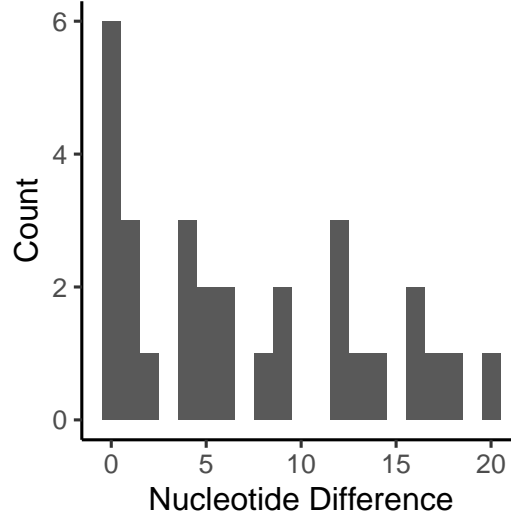
### IGHV4/OR15–8\*02

335 sequences assigned  
No exact matches.



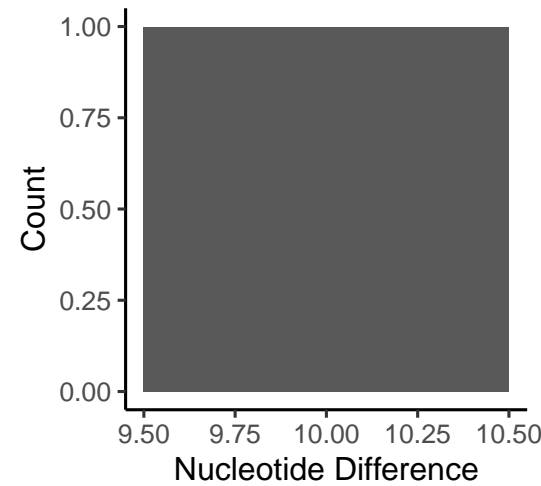
### IGHV5–51\*06

30 sequences assigned  
6 (20%) exact matches, in which:  
6 unique CDR3  
3 unique J



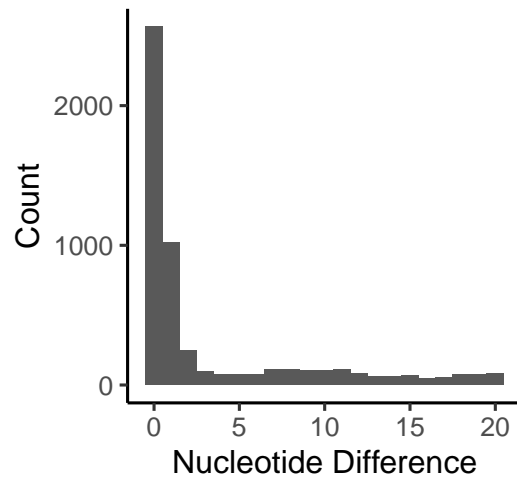
### IGHV3/OR16–9\*01

1 sequences assigned  
No exact matches.



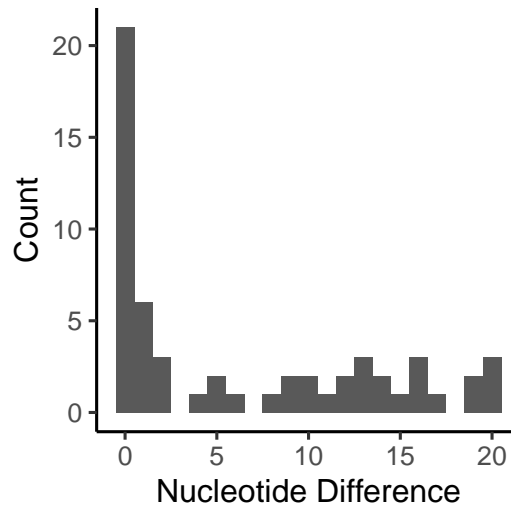
### IGHV5–10–1\*01\_03

5967 sequences assigned  
2565 (43%) exact matches, in which:  
2161 unique CDR3  
6 unique J



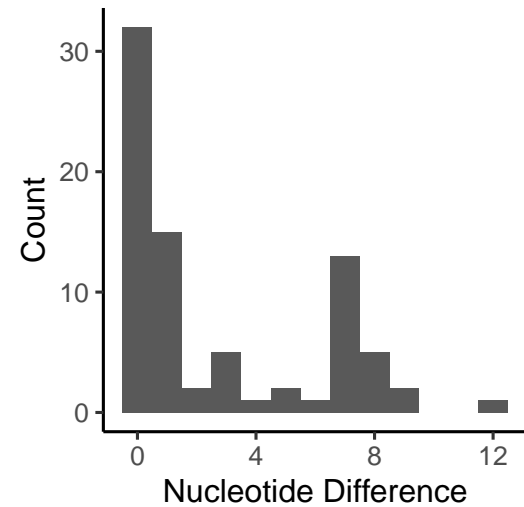
### IGHV5–51\*07

72 sequences assigned  
21 (29.2%) exact matches, in which:  
20 unique CDR3  
5 unique J



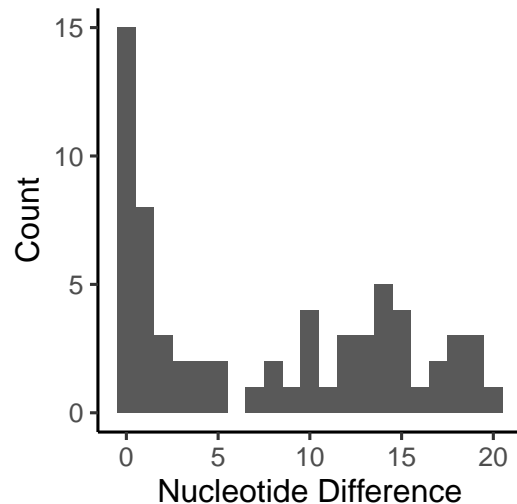
### IGHV7–4–1\*01

79 sequences assigned  
32 (40.5%) exact matches, in which:  
31 unique CDR3  
6 unique J



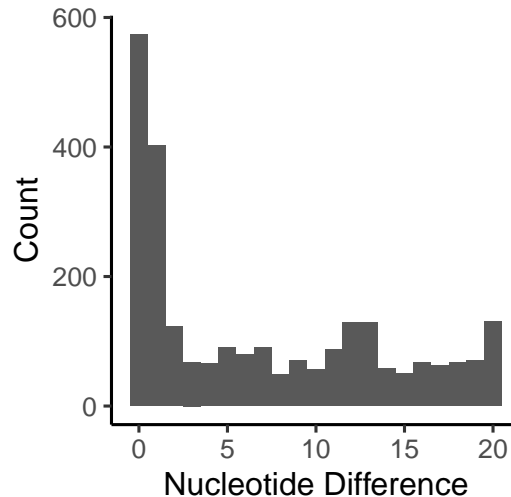
### IGHV5–51\*04

139 sequences assigned  
15 (10.8%) exact matches, in which:  
15 unique CDR3  
4 unique J



### IGHV6–1\*01\_02

4306 sequences assigned  
574 (13.3%) exact matches, in which:  
547 unique CDR3  
6 unique J





Warning – no inferred sequences found.