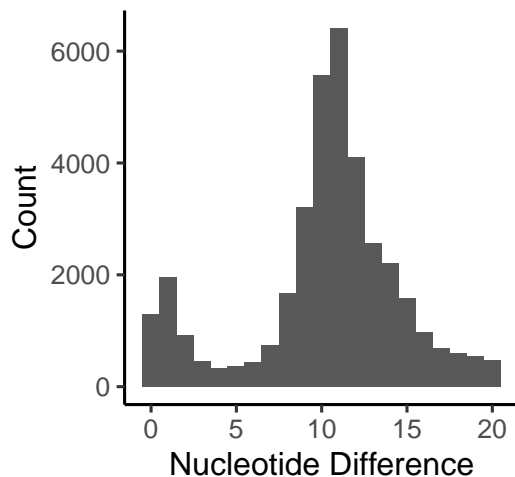


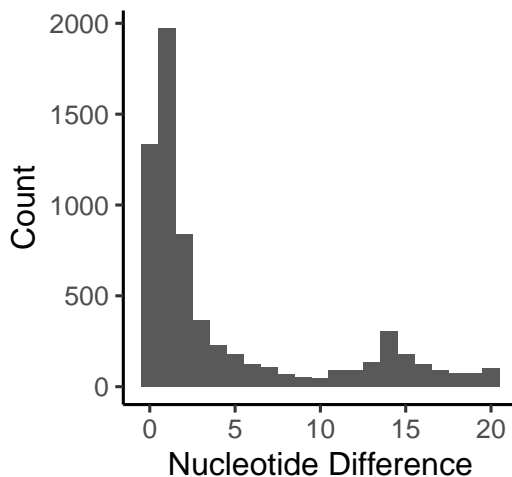
### IGHV1-2\*02

40751 sequences assigned  
1303 (3.2%) exact matches, in which:  
1134 unique CDR3  
6 unique J



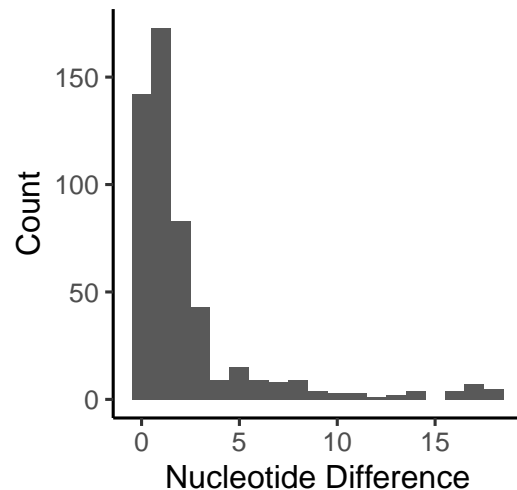
### IGHV1-8\*01

6847 sequences assigned  
1336 (19.5%) exact matches, in which:  
1152 unique CDR3  
6 unique J



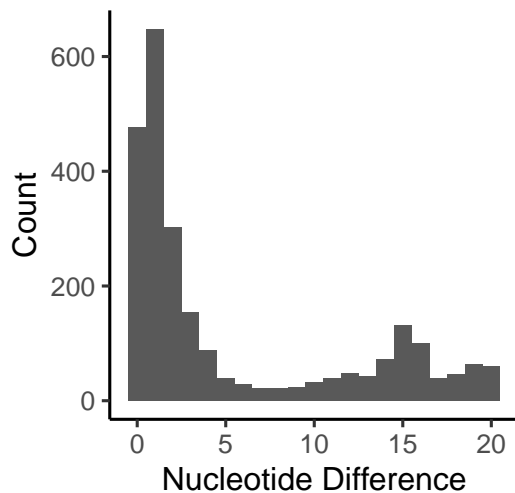
### IGHV1-24\*01

525 sequences assigned  
142 (27%) exact matches, in which:  
132 unique CDR3  
5 unique J



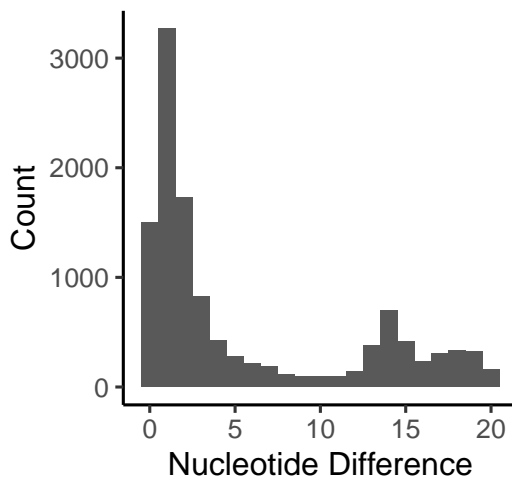
### IGHV1-2\*04

3592 sequences assigned  
477 (13.3%) exact matches, in which:  
421 unique CDR3  
6 unique J



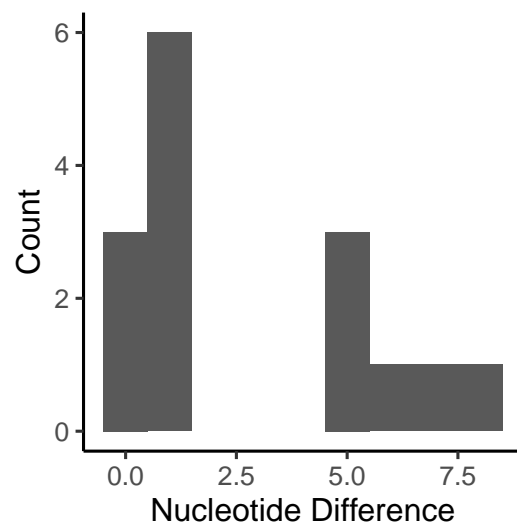
### IGHV1-18\*01

25924 sequences assigned  
1505 (5.8%) exact matches, in which:  
1240 unique CDR3  
6 unique J



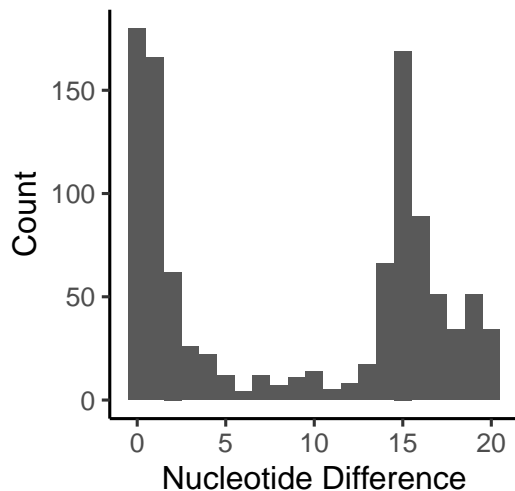
### IGHV1-45\*02

69 sequences assigned  
3 (4.3%) exact matches, in which:  
3 unique CDR3  
3 unique J



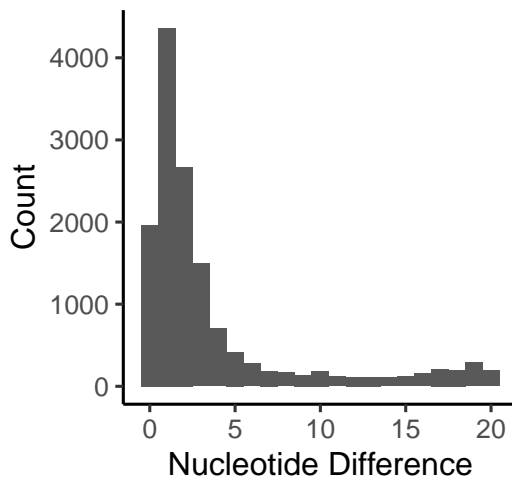
### IGHV1-3\*01\_05

1304 sequences assigned  
180 (13.8%) exact matches, in which:  
164 unique CDR3  
6 unique J



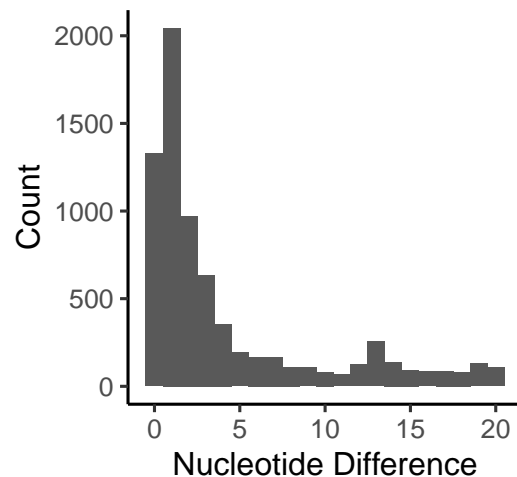
### IGHV1-18\*04

15032 sequences assigned  
1961 (13%) exact matches, in which:  
1637 unique CDR3  
6 unique J



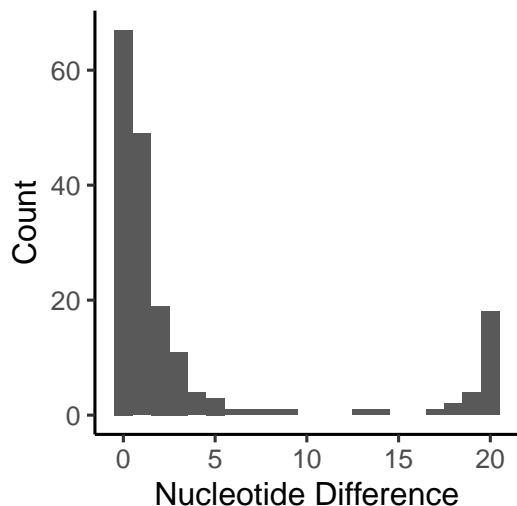
### IGHV1-46\*01

10109 sequences assigned  
1328 (13.1%) exact matches, in which:  
1156 unique CDR3  
6 unique J



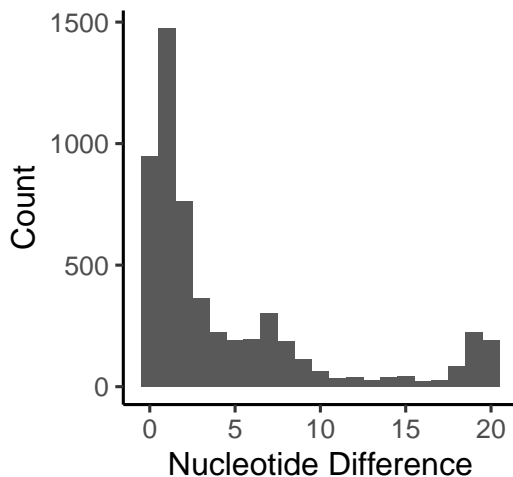
### IGHV1-58\*01\_03

214 sequences assigned  
67 (31.3%) exact matches, in which:  
64 unique CDR3  
5 unique J



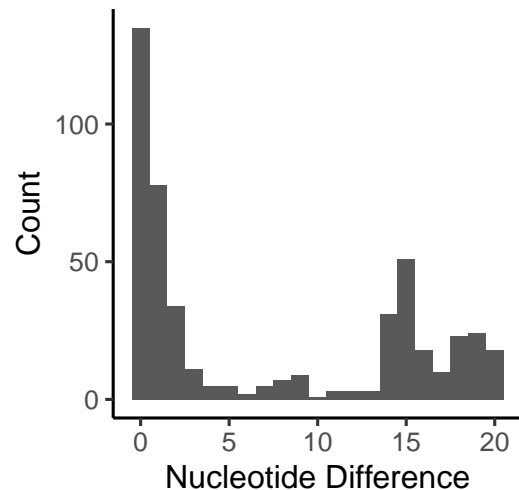
### IGHV1-69\*06\_14

7746 sequences assigned  
948 (12.2%) exact matches, in which:  
840 unique CDR3  
6 unique J



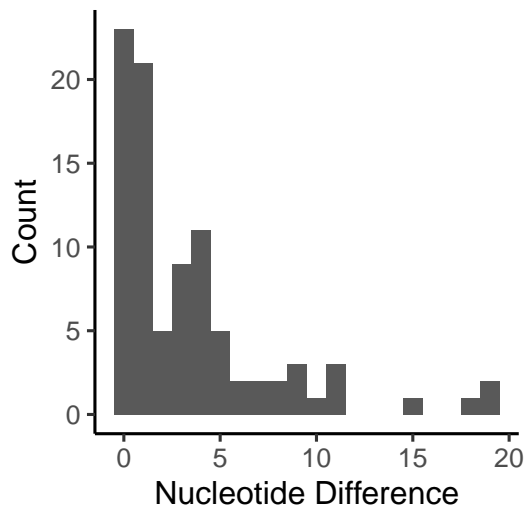
### IGHV2-70\*01

522 sequences assigned  
135 (25.9%) exact matches, in which:  
121 unique CDR3  
5 unique J



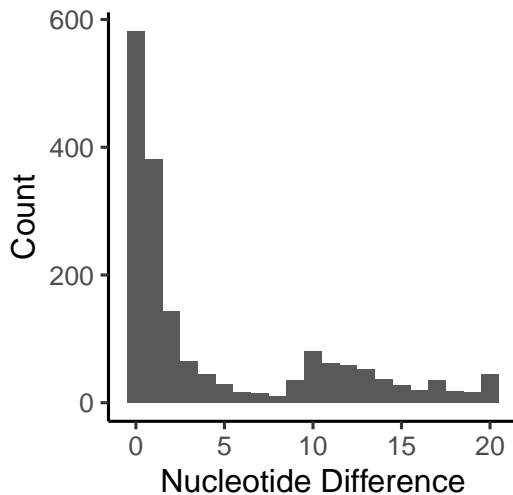
### IGHV1-69-2\*01

93 sequences assigned  
23 (24.7%) exact matches, in which:  
22 unique CDR3  
4 unique J



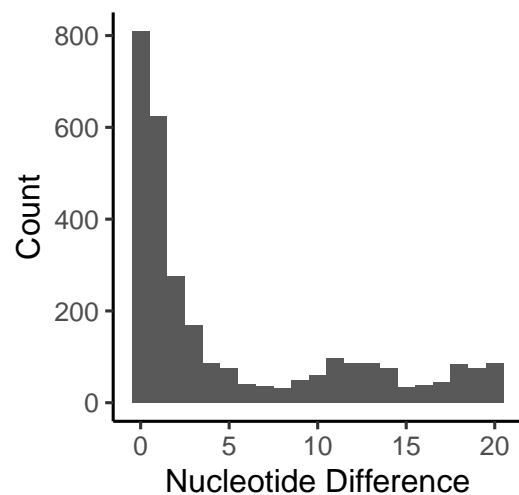
### IGHV2-5\*01

2255 sequences assigned  
582 (25.8%) exact matches, in which:  
520 unique CDR3  
6 unique J



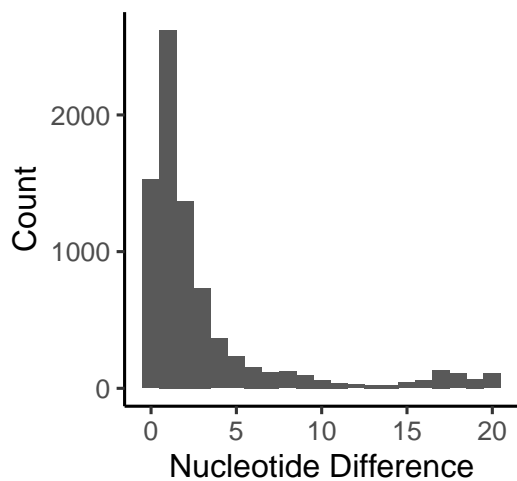
### IGHV3-7\*01

3651 sequences assigned  
810 (22.2%) exact matches, in which:  
682 unique CDR3  
6 unique J



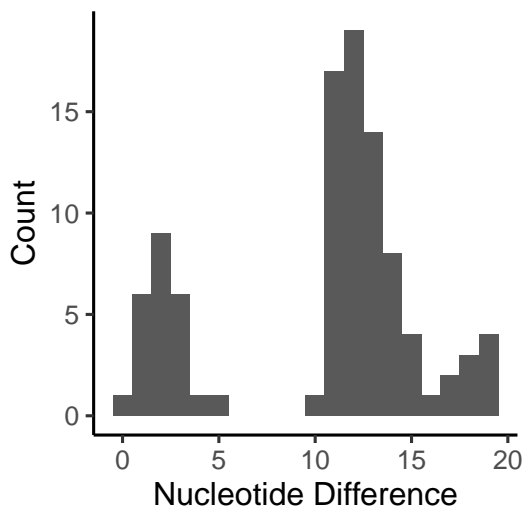
### IGHV1-69\*01\_12\_13

9695 sequences assigned  
1528 (15.8%) exact matches, in which:  
1333 unique CDR3  
6 unique J



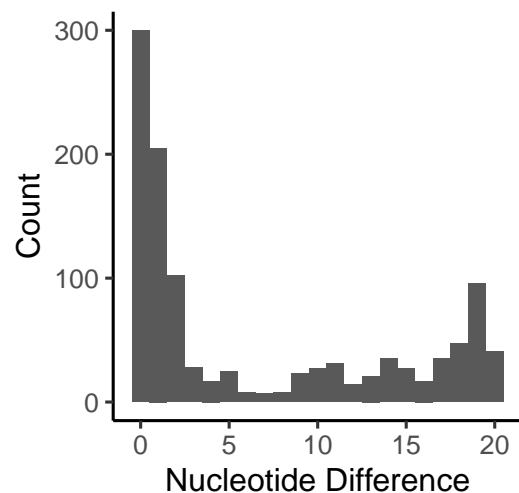
### IGHV2-26\*01

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



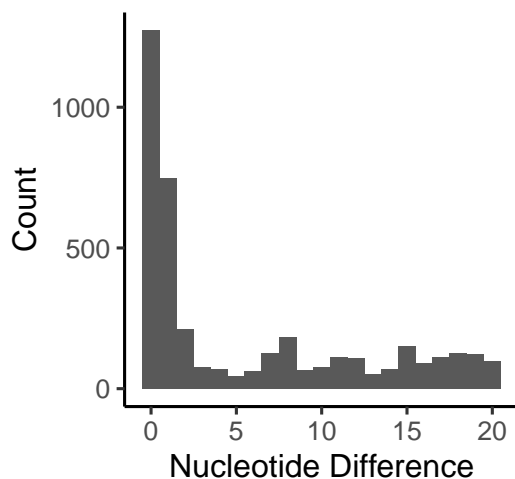
### IGHV3-7\*05

1272 sequences assigned  
300 (23.6%) exact matches, in which:  
272 unique CDR3  
6 unique J



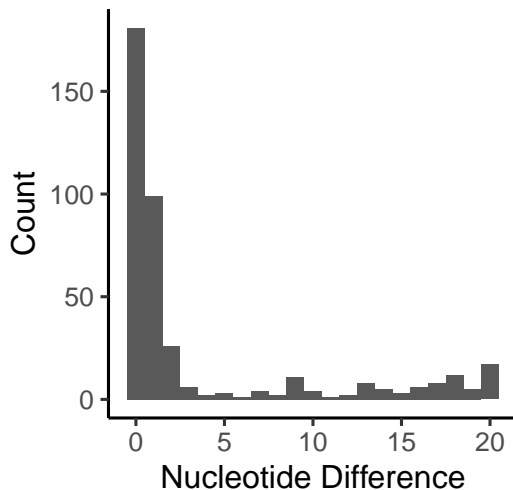
### IGHV3-9\*01

5367 sequences assigned  
1273 (23.7%) exact matches, in which:  
1135 unique CDR3  
6 unique J



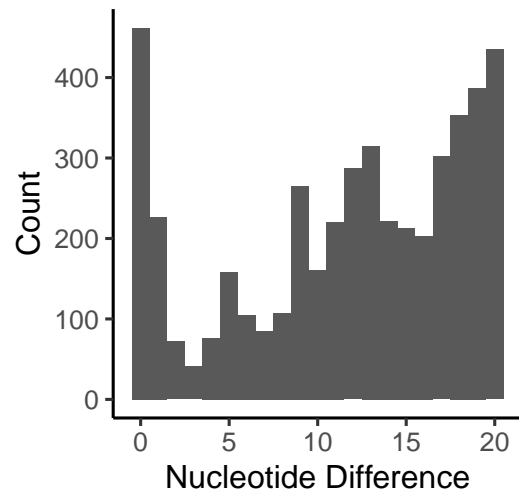
### IGHV3-13\*01

454 sequences assigned  
181 (39.9%) exact matches, in which:  
149 unique CDR3  
5 unique J



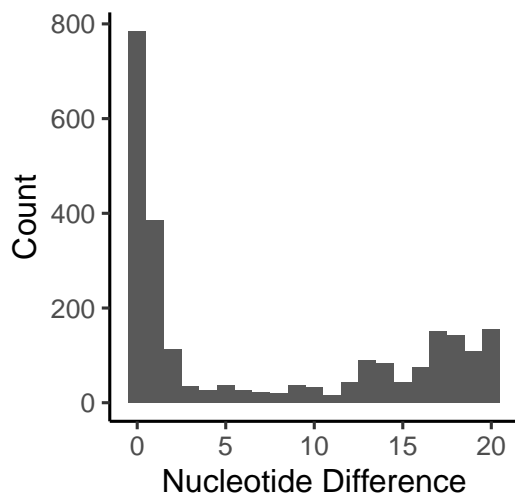
### IGHV3-15\*01\_02

7704 sequences assigned  
462 (6%) exact matches, in which:  
428 unique CDR3  
6 unique J



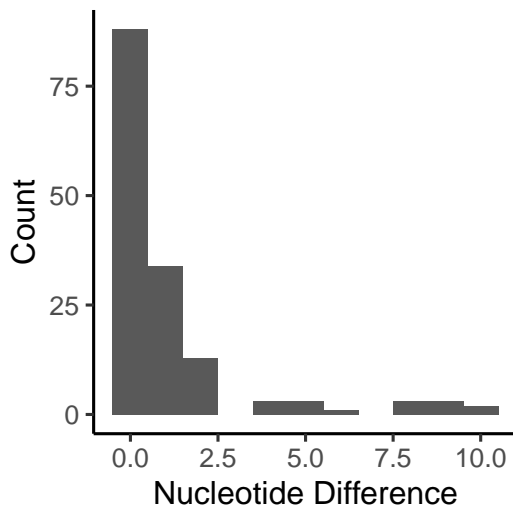
### IGHV3-11\*01

3749 sequences assigned  
785 (20.9%) exact matches, in which:  
698 unique CDR3  
6 unique J



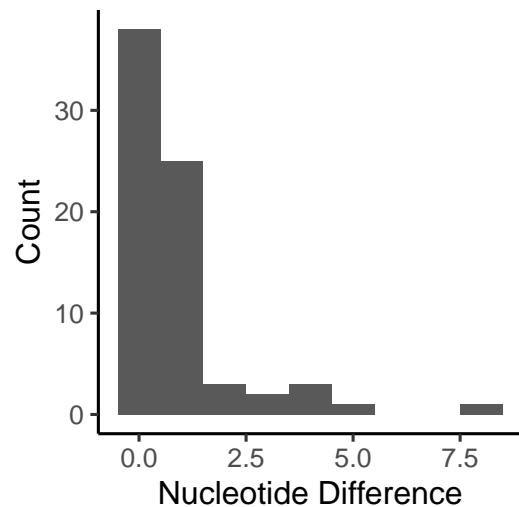
### IGHV3-13\*05

239 sequences assigned  
88 (36.8%) exact matches, in which:  
77 unique CDR3  
5 unique J



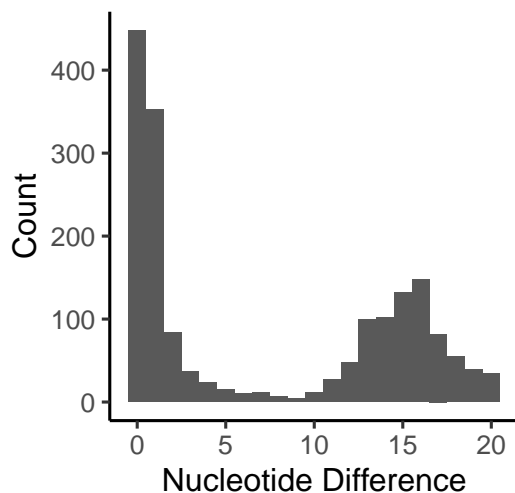
### IGHV3-20\*03\_04

82 sequences assigned  
38 (46.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



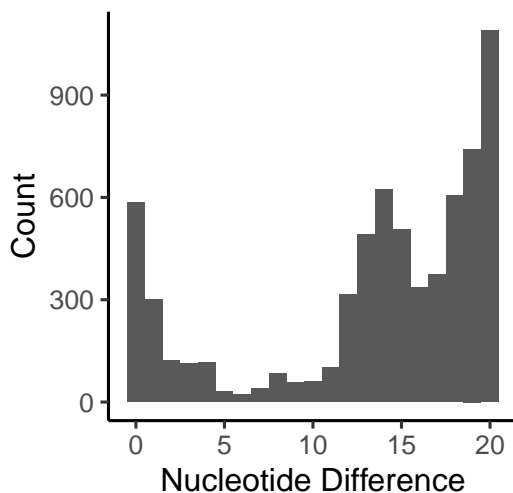
### IGHV3-11\*06

3067 sequences assigned  
448 (14.6%) exact matches, in which:  
380 unique CDR3  
6 unique J



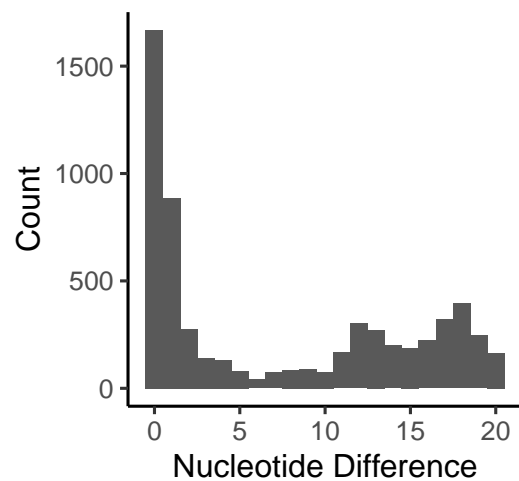
### IGHV3-15\*07

33216 sequences assigned  
585 (1.8%) exact matches, in which:  
552 unique CDR3  
6 unique J



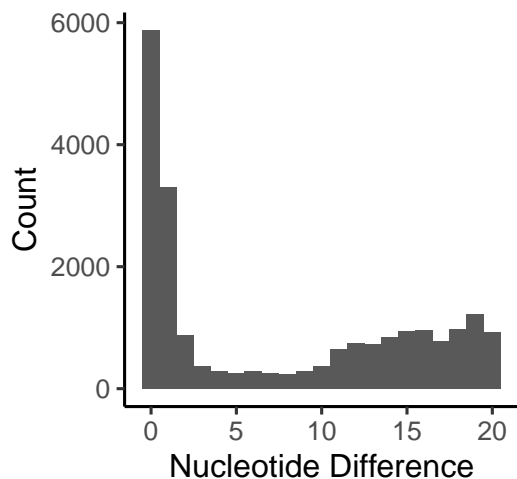
### IGHV3-21\*01\_02

8541 sequences assigned  
1668 (19.5%) exact matches, in which:  
1496 unique CDR3  
6 unique J



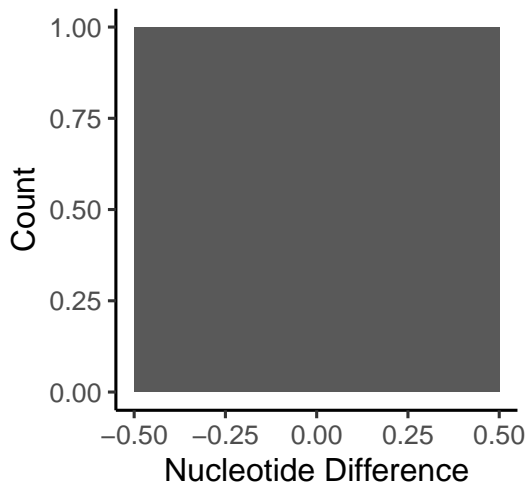
### IGHV3-23\*01\_04

30445 sequences assigned  
5873 (19.3%) exact matches, in which:  
5219 unique CDR3  
6 unique J



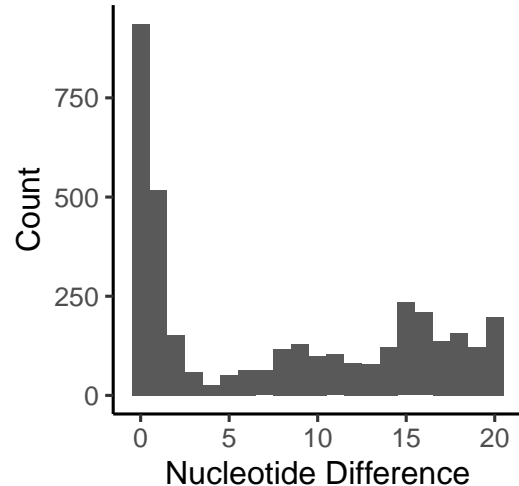
### IGHV3-35\*01

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



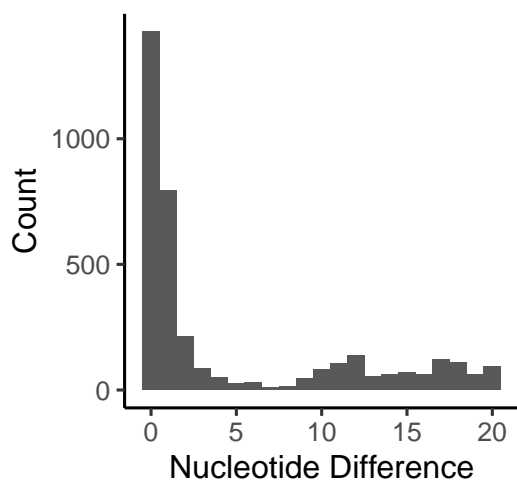
### IGHV3-48\*03

4894 sequences assigned  
937 (19.1%) exact matches, in which:  
826 unique CDR3  
6 unique J



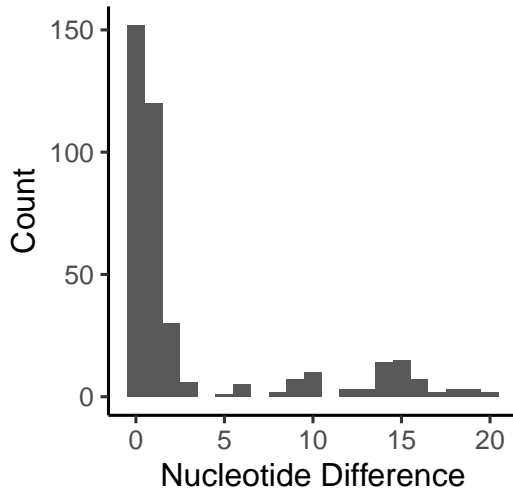
### IGHV3-30-3\*01

4665 sequences assigned  
1426 (30.6%) exact matches, in which:  
1299 unique CDR3  
6 unique J



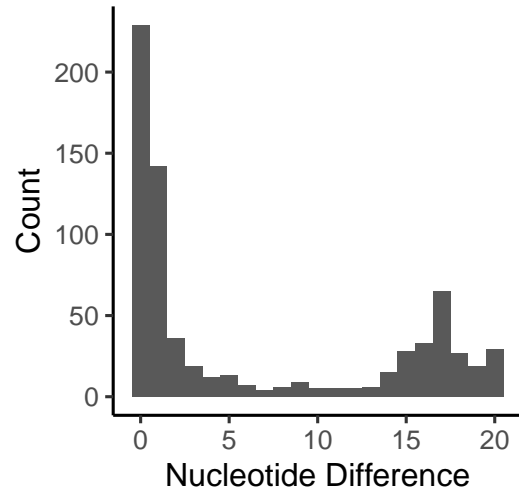
### IGHV3-43\*01

479 sequences assigned  
152 (31.7%) exact matches, in which:  
132 unique CDR3  
6 unique J



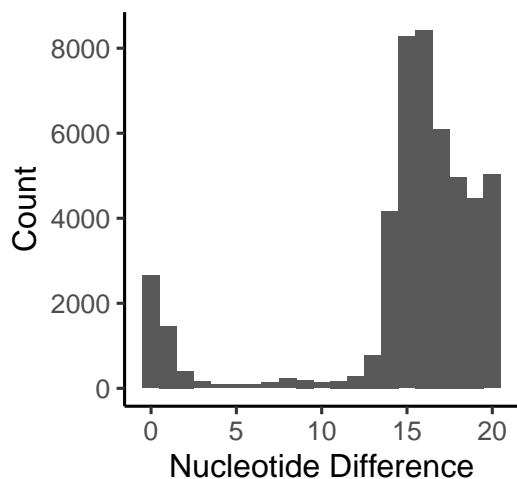
### IGHV3-49\*04

909 sequences assigned  
229 (25.2%) exact matches, in which:  
209 unique CDR3  
6 unique J



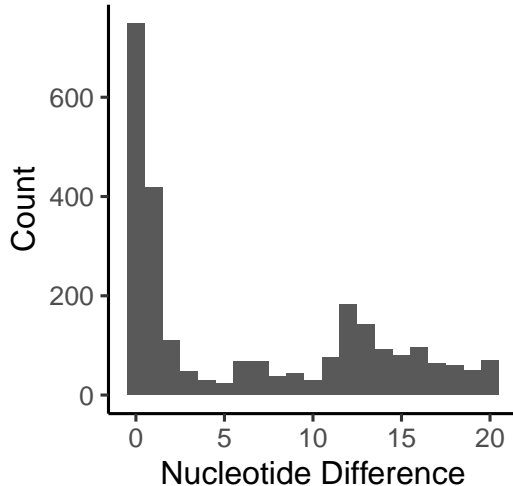
### IGHV3-33\*01

61887 sequences assigned  
2657 (4.3%) exact matches, in which:  
1953 unique CDR3  
6 unique J



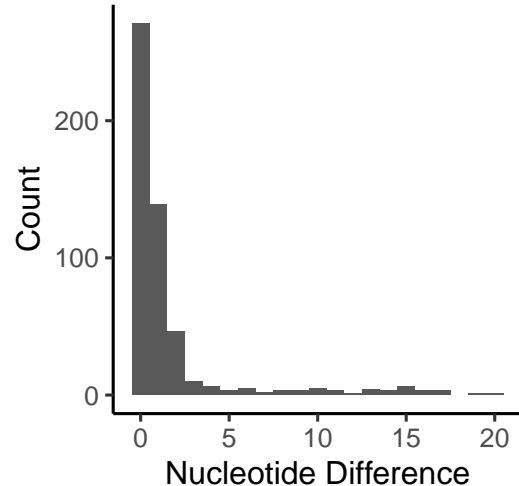
### IGHV3-48\*02

3225 sequences assigned  
749 (23.2%) exact matches, in which:  
657 unique CDR3  
6 unique J



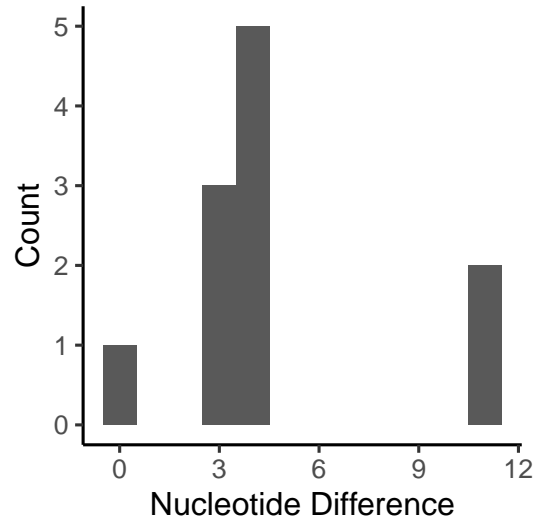
### IGHV3-49\*03\_05

548 sequences assigned  
271 (49.5%) exact matches, in which:  
254 unique CDR3  
6 unique J



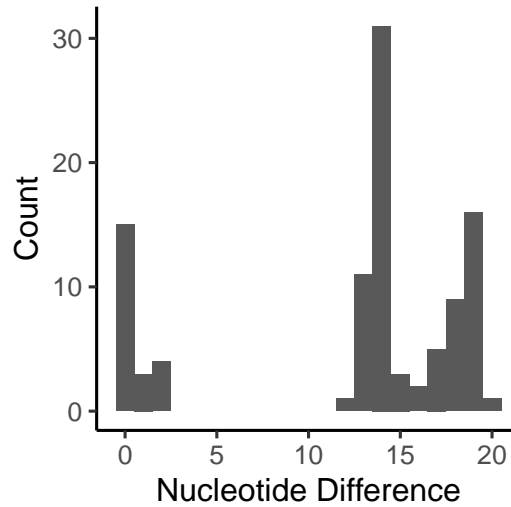
### IGHV3-52\*01\_03

11 sequences assigned  
1 (9.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



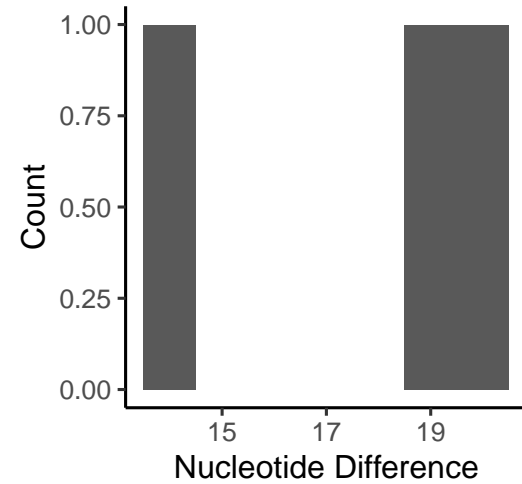
### IGHV3-64\*02\_07

108 sequences assigned  
15 (13.9%) exact matches, in which:  
15 unique CDR3  
5 unique J



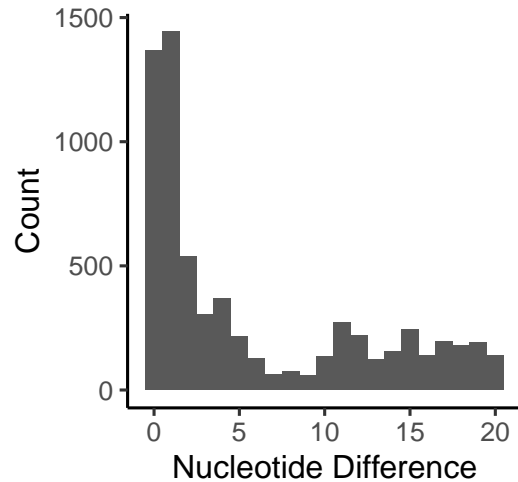
### IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



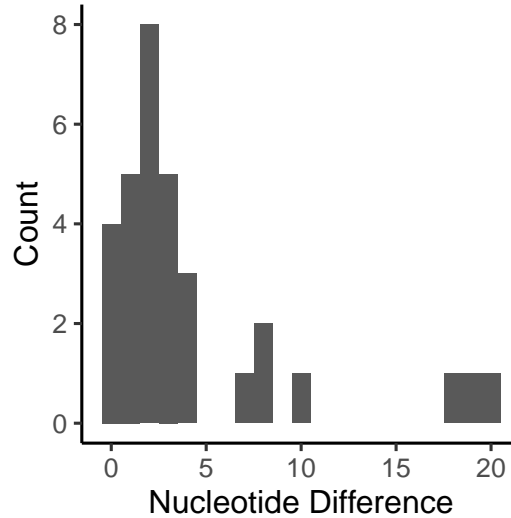
### IGHV3-53\*01\_02

8170 sequences assigned  
1366 (16.7%) exact matches, in which:  
1134 unique CDR3  
6 unique J



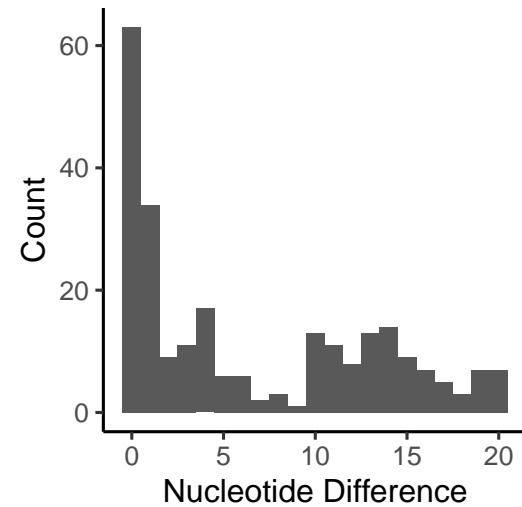
### IGHV3-66\*03

38 sequences assigned  
4 (10.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



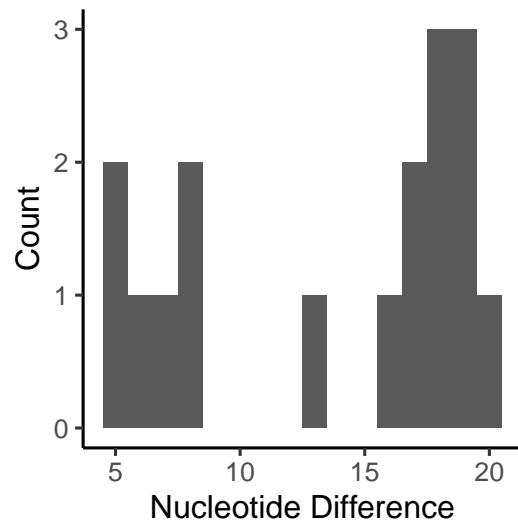
### IGHV3-72\*01

368 sequences assigned  
63 (17.1%) exact matches, in which:  
57 unique CDR3  
5 unique J



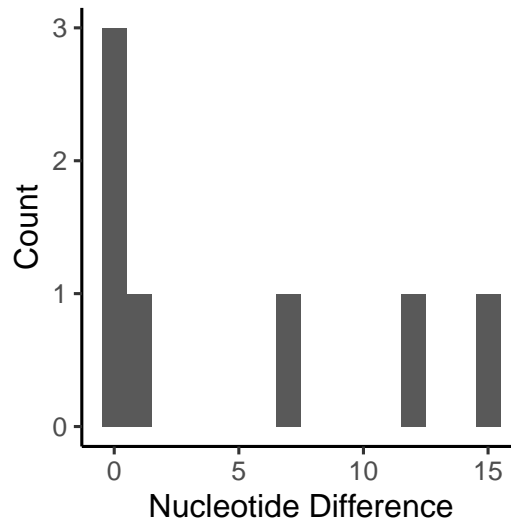
### IGHV3-64\*04

31 sequences assigned  
No exact matches.



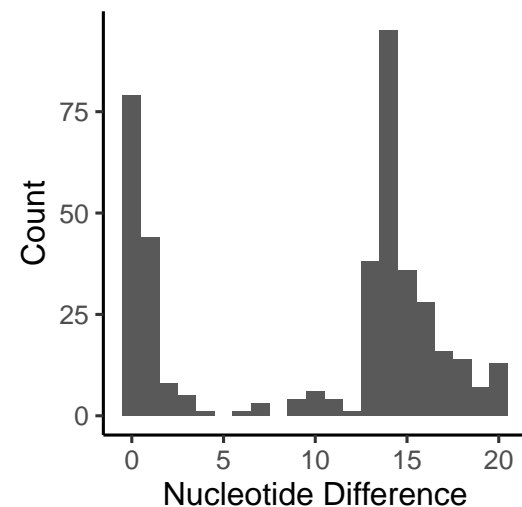
### IGHV3-69-1\*01

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



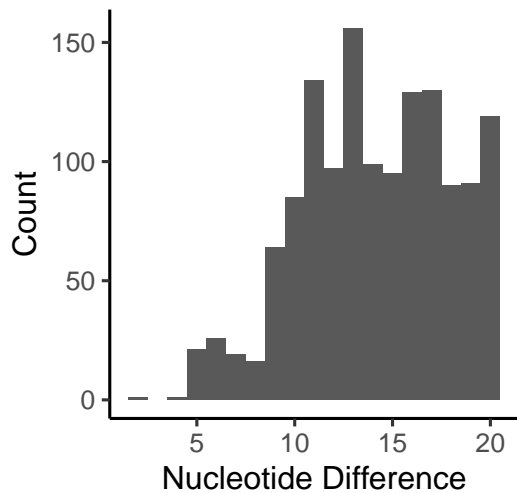
### IGHV3-73\*01\_02

712 sequences assigned  
79 (11.1%) exact matches, in which:  
76 unique CDR3  
6 unique J



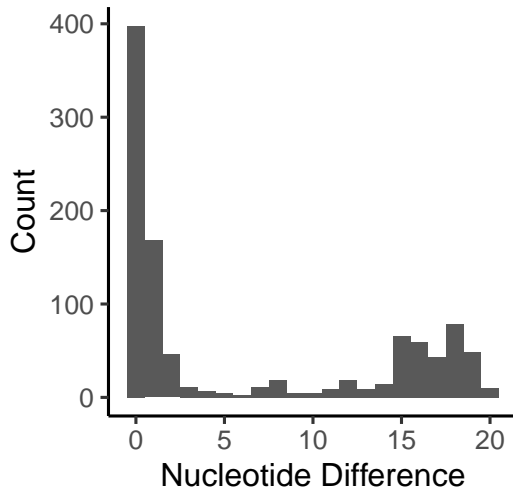
### IGHV3-74\*03

2753 sequences assigned  
No exact matches.



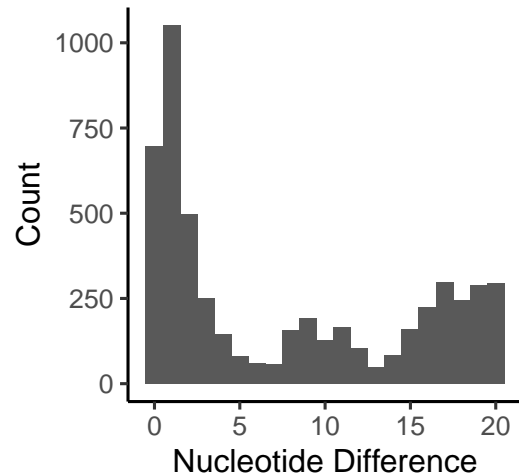
### IGHV3-64D\*08

1113 sequences assigned  
398 (35.8%) exact matches, in which:  
357 unique CDR3  
6 unique J



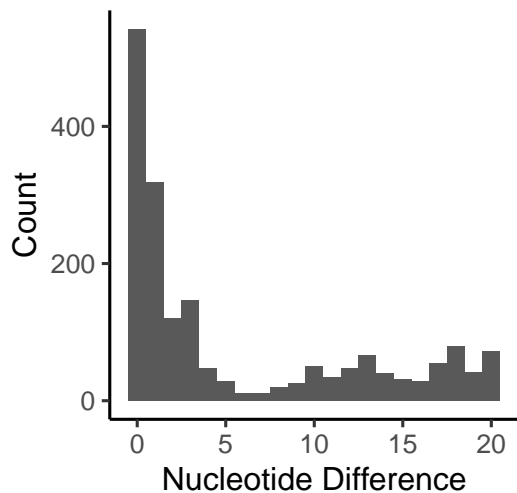
### IGHV4-4\*02\_03

9513 sequences assigned  
697 (7.3%) exact matches, in which:  
573 unique CDR3  
6 unique J



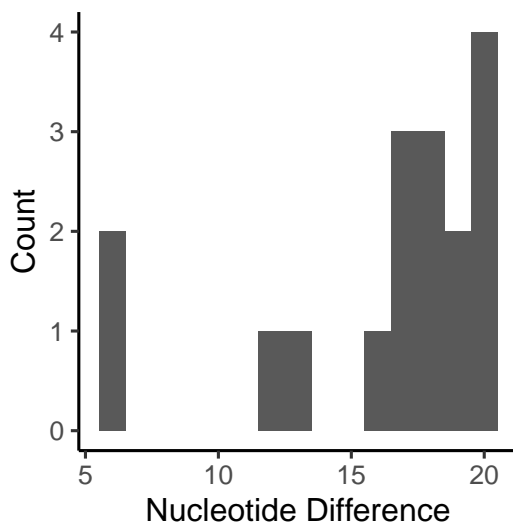
### IGHV3-74\*01\_02

1998 sequences assigned  
542 (27.1%) exact matches, in which:  
492 unique CDR3  
6 unique J



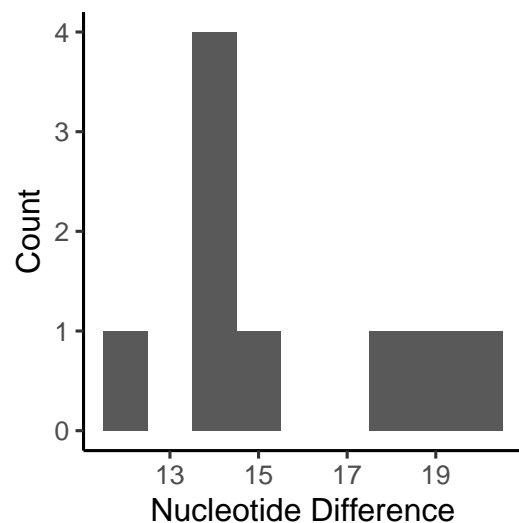
### IGHV3-NL1\*01

33 sequences assigned  
No exact matches.



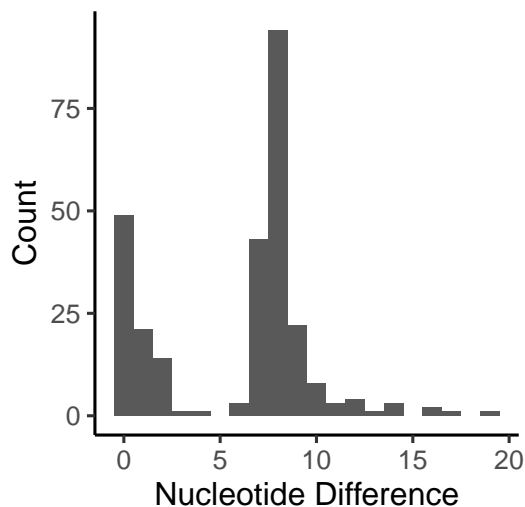
### IGHV4-28\*03

12 sequences assigned  
No exact matches.



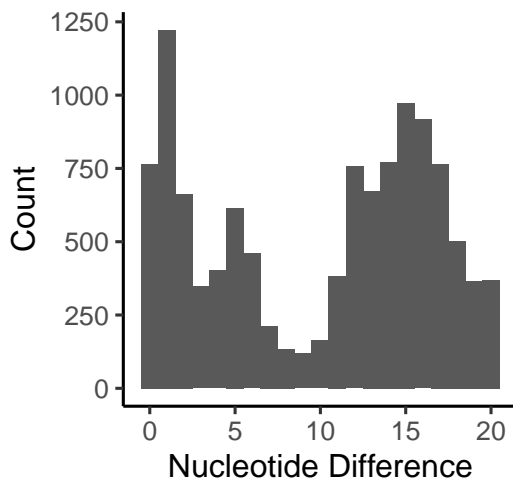
### IGHV3-43D\*04

278 sequences assigned  
49 (17.6%) exact matches, in which:  
46 unique CDR3  
5 unique J



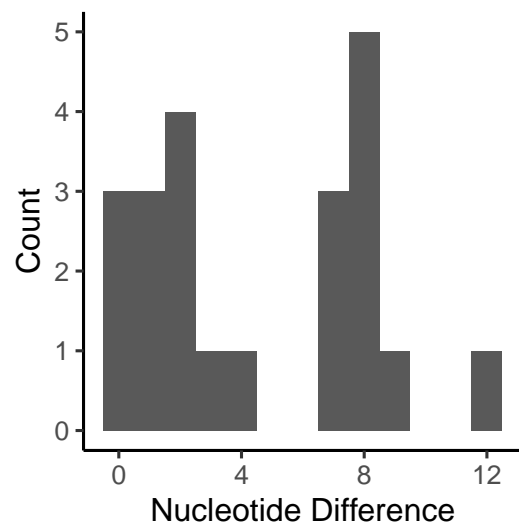
### IGHV4-4\*07

15929 sequences assigned  
766 (4.8%) exact matches, in which:  
646 unique CDR3  
6 unique J



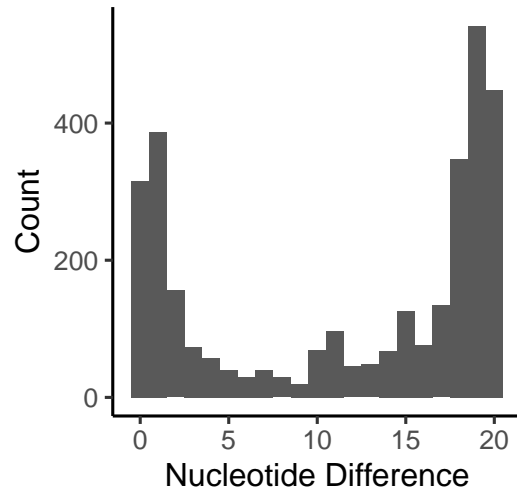
### IGHV4-28\*01\_07

22 sequences assigned  
3 (13.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



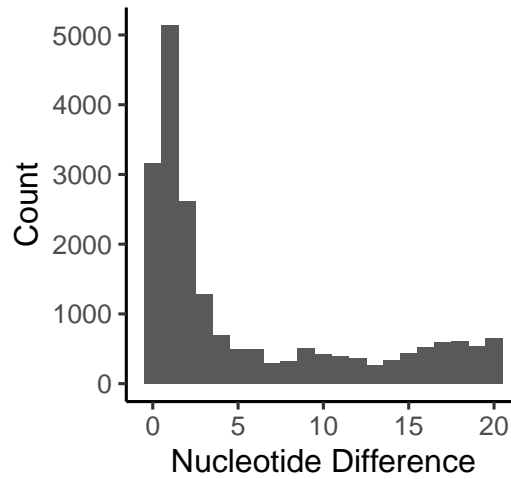
### IGHV4-30-2\*01

5032 sequences assigned  
316 (6.3%) exact matches, in which:  
258 unique CDR3  
6 unique J



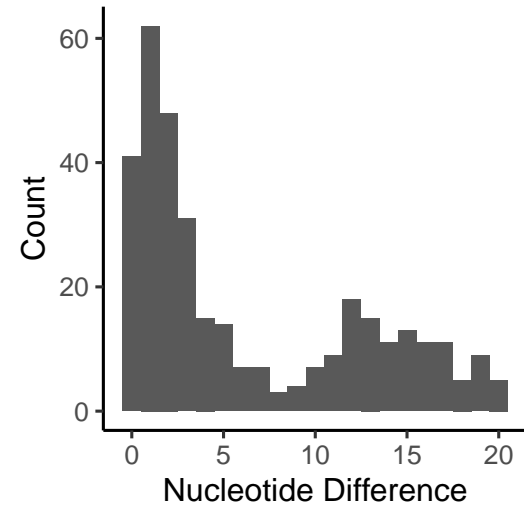
### IGHV4-34\*01\_02

28457 sequences assigned  
3159 (11.1%) exact matches, in which:  
2623 unique CDR3  
6 unique J



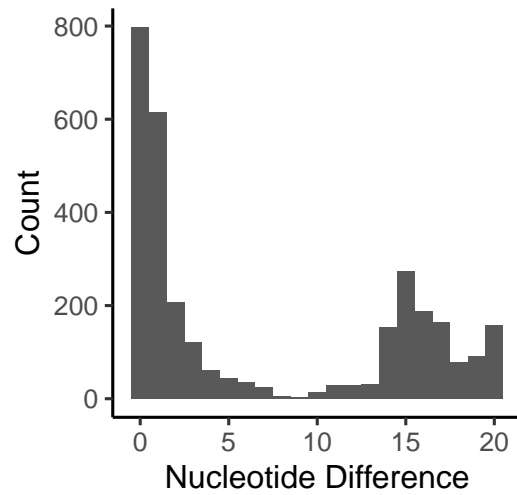
### IGHV4-38-2\*01\_T247C

388 sequences assigned  
41 (10.6%) exact matches, in which:  
41 unique CDR3  
6 unique J



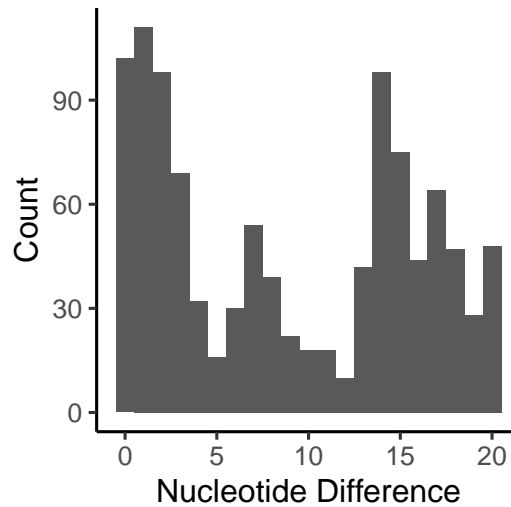
### IGHV4-30-4\*01

5038 sequences assigned  
798 (15.8%) exact matches, in which:  
637 unique CDR3  
6 unique J



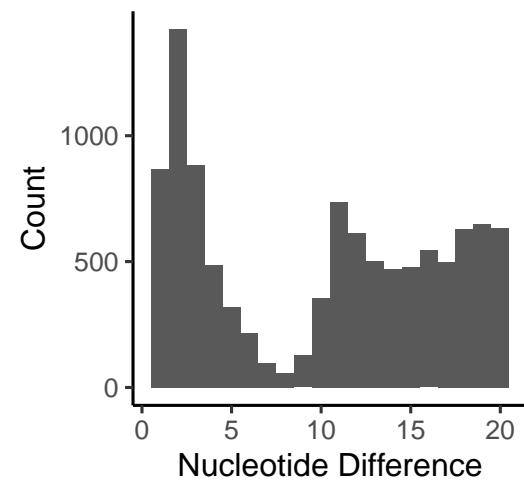
### IGHV4-38-2\*01

1537 sequences assigned  
102 (6.6%) exact matches, in which:  
99 unique CDR3  
6 unique J



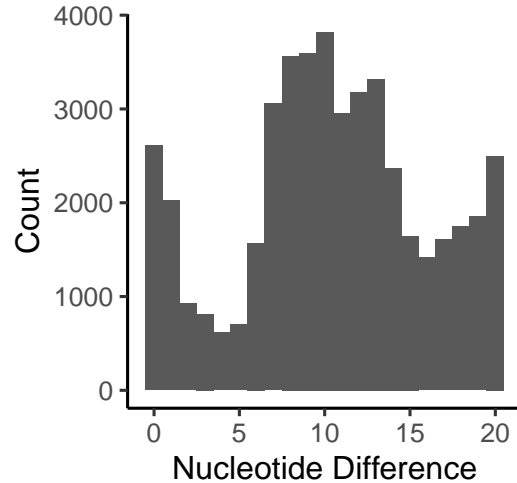
### IGHV4-39\*02

20158 sequences assigned  
No exact matches.



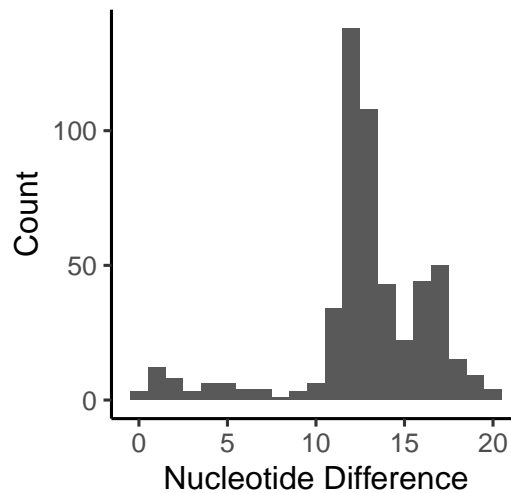
### IGHV4-31\*02

54278 sequences assigned  
2612 (4.8%) exact matches, in which:  
2068 unique CDR3  
6 unique J



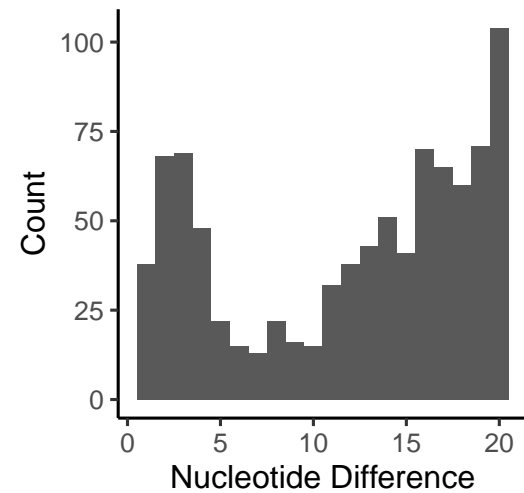
### IGHV4-38-2\*02

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



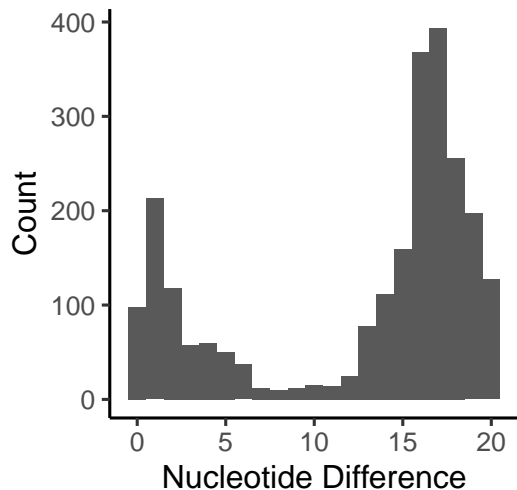
### IGHV4-39\*07

2948 sequences assigned  
No exact matches.



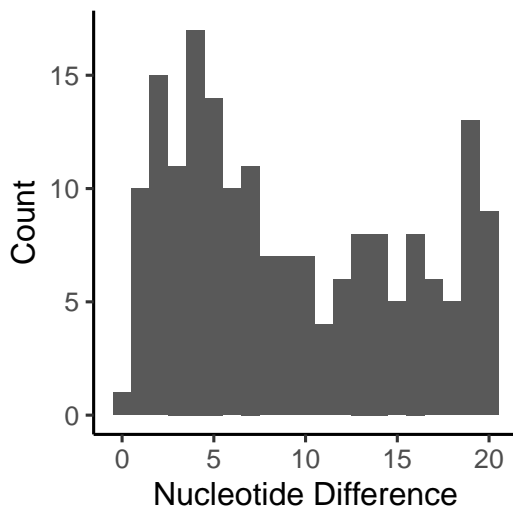
### IGHV4–39\*01\_05

4812 sequences assigned  
98 (2%) exact matches, in which:  
85 unique CDR3  
6 unique J



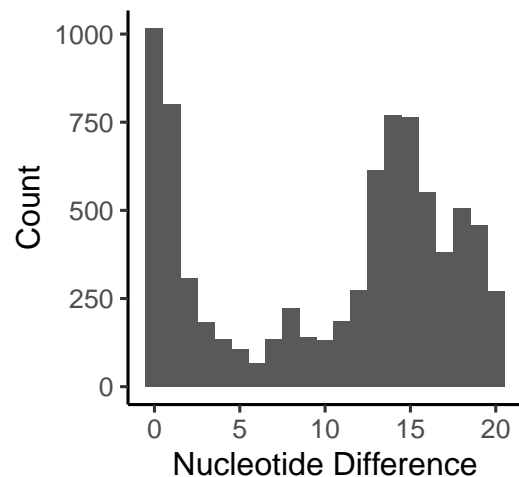
### IGHV4–59\*08

376 sequences assigned  
1 (0.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



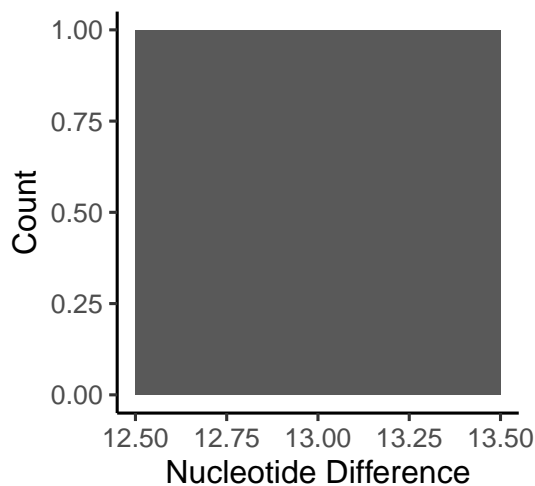
### IGHV4–61\*01

12877 sequences assigned  
1016 (7.9%) exact matches, in which:  
814 unique CDR3  
6 unique J



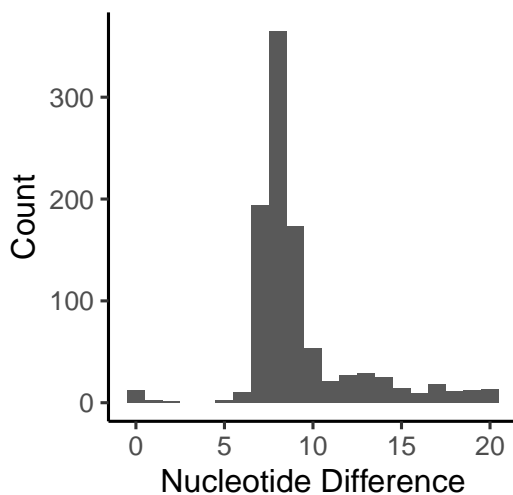
### IGHV4–55\*09

3 sequences assigned  
No exact matches.



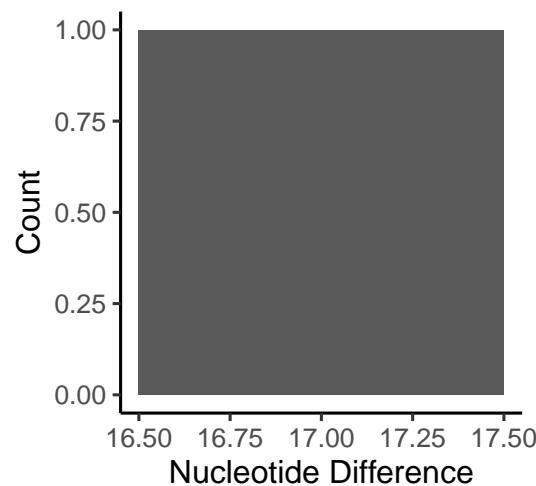
### IGHV4–59\*11

2314 sequences assigned  
12 (0.5%) exact matches, in which:  
12 unique CDR3  
4 unique J



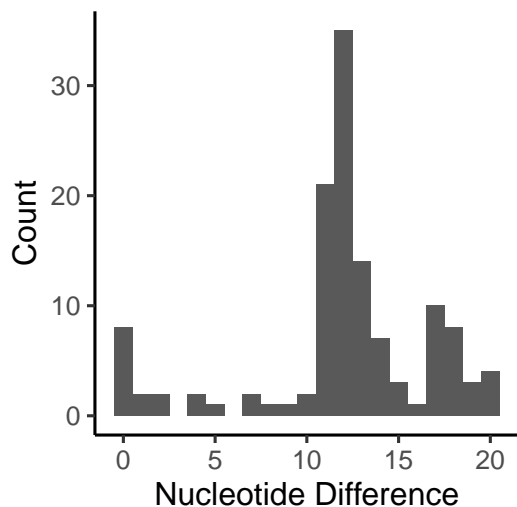
### IGHV1/OR15–2\*02\_03

1 sequences assigned  
No exact matches.



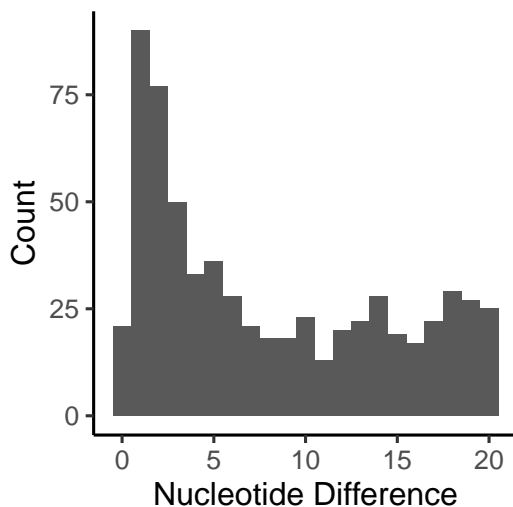
### IGHV4–59\*02

831 sequences assigned  
8 (1%) exact matches, in which:  
8 unique CDR3  
3 unique J



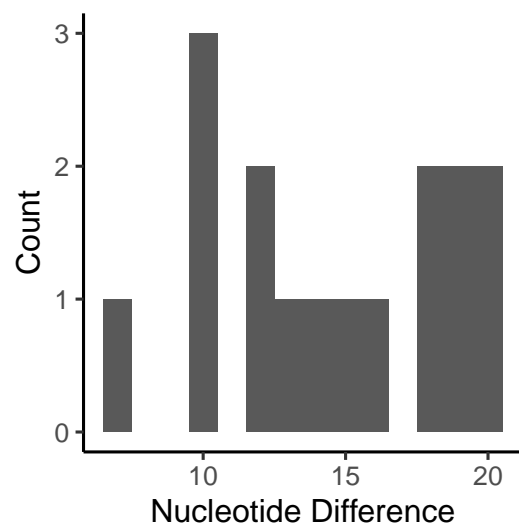
### IGHV4–59\*12

967 sequences assigned  
21 (2.2%) exact matches, in which:  
21 unique CDR3  
4 unique J



### IGHV4/OR15–8\*01

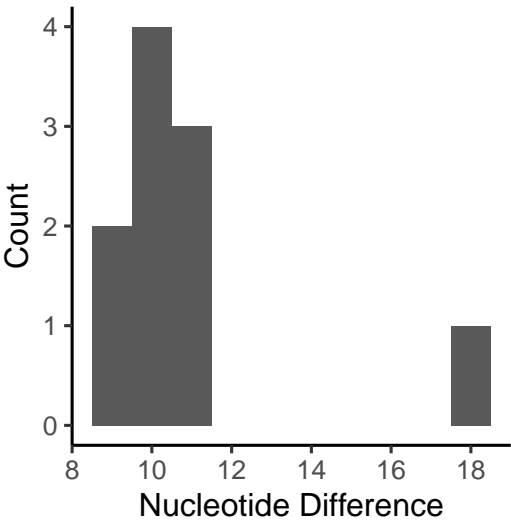
24 sequences assigned  
No exact matches.





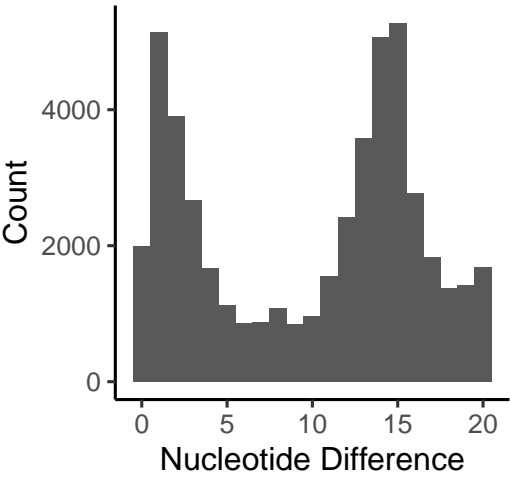
IGHV4/OR15-8\*02

72 sequences assigned  
No exact matches.



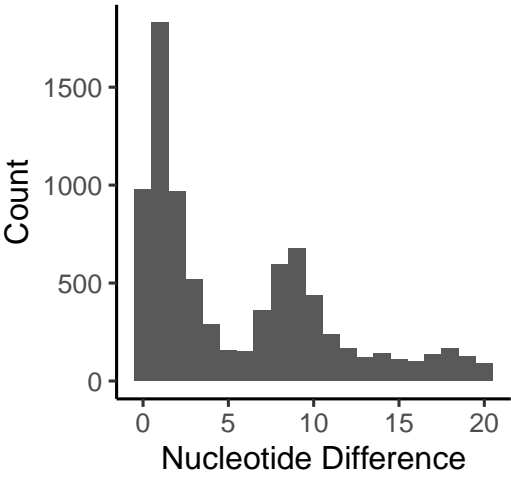
IGHV5-51\*01\_03

63761 sequences assigned  
1987 (3.1%) exact matches, in which:  
1715 unique CDR3  
6 unique J



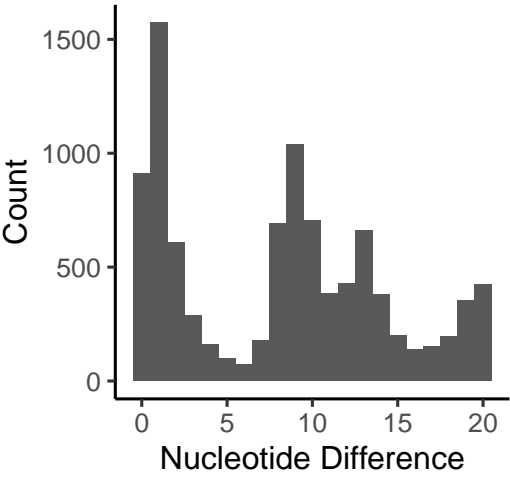
IGHV5-10-1\*01\_03

9237 sequences assigned  
976 (10.6%) exact matches, in which:  
852 unique CDR3  
6 unique J



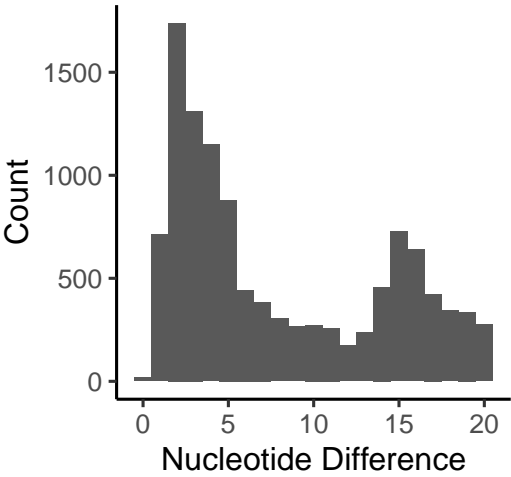
IGHV6-1\*01\_02

11794 sequences assigned  
909 (7.7%) exact matches, in which:  
724 unique CDR3  
6 unique J



IGHV5-51\*07

13275 sequences assigned  
18 (0.1%) exact matches, in which:  
16 unique CDR3  
4 unique J





Warning – no inferred sequences found.