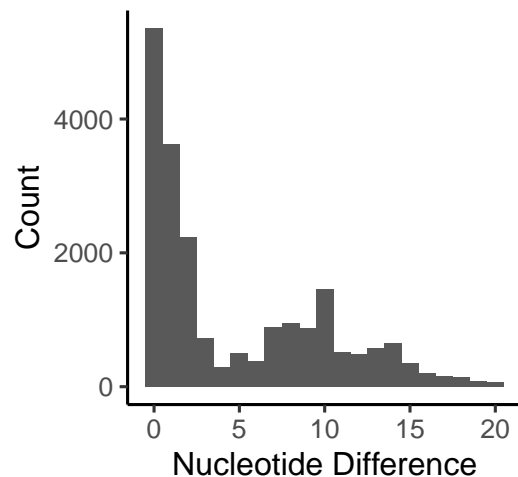


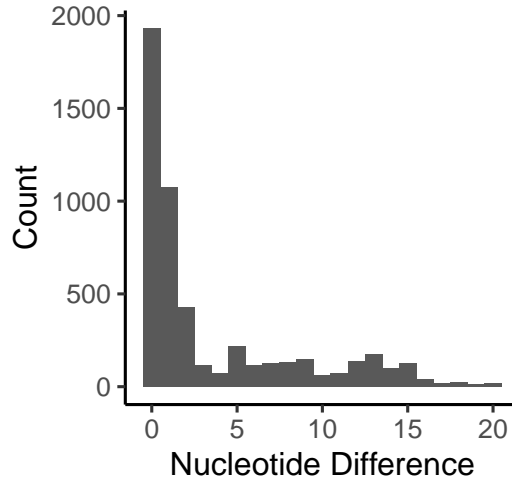
### IGHV1-2\*02

21574 sequences assigned  
5354 (24.8%) exact matches, in which:  
4850 unique CDR3  
6 unique J



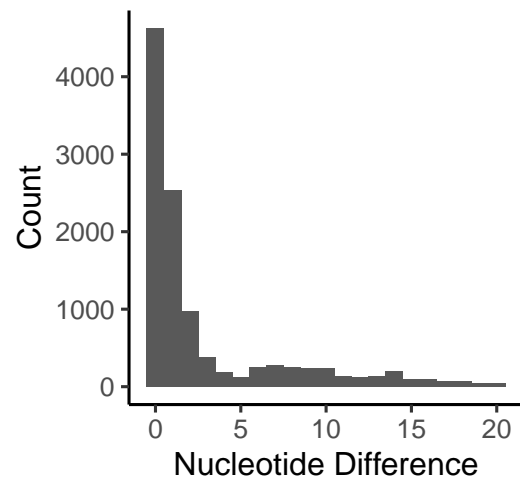
### IGHV1-8\*01

5505 sequences assigned  
1931 (35.1%) exact matches, in which:  
1811 unique CDR3  
6 unique J



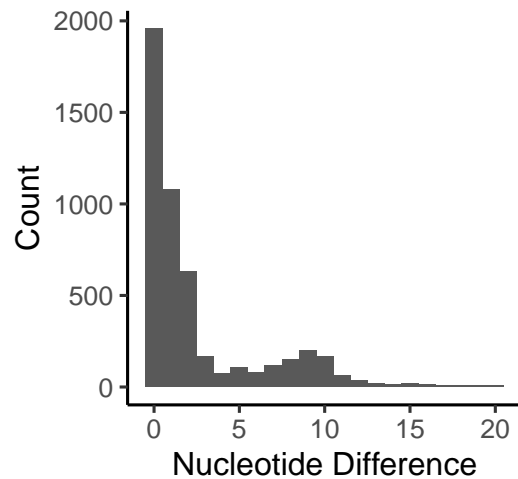
### IGHV1-18\*04

11975 sequences assigned  
4623 (38.6%) exact matches, in which:  
4258 unique CDR3  
6 unique J



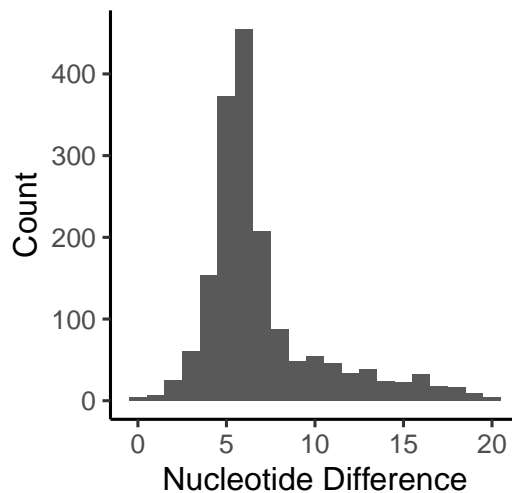
### IGHV1-2\*04

4982 sequences assigned  
1957 (39.3%) exact matches, in which:  
1804 unique CDR3  
6 unique J



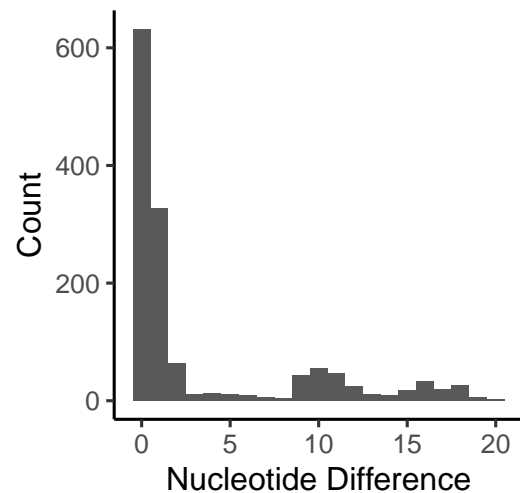
### IGHV1-8\*02

1739 sequences assigned  
4 (0.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



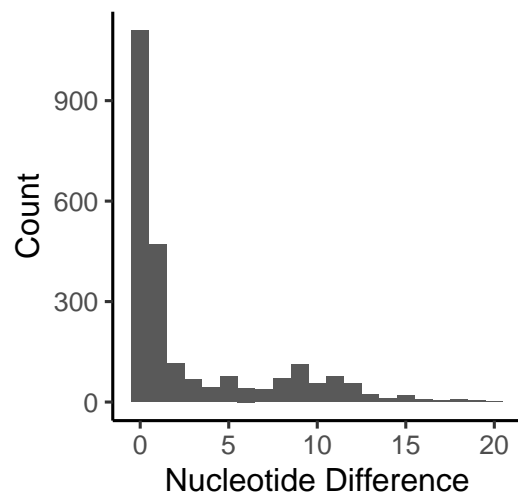
### IGHV1-24\*01

1420 sequences assigned  
632 (44.5%) exact matches, in which:  
567 unique CDR3  
6 unique J



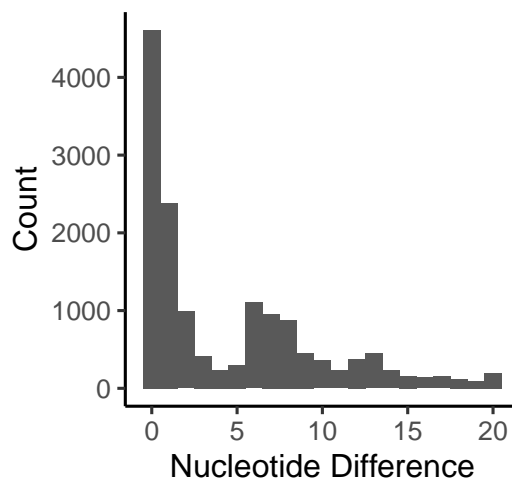
### IGHV1-3\*01\_05

2518 sequences assigned  
1110 (44.1%) exact matches, in which:  
996 unique CDR3  
6 unique J



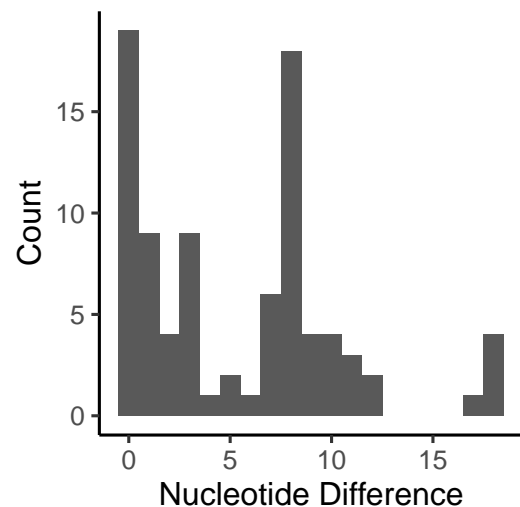
### IGHV1-18\*01

16043 sequences assigned  
4609 (28.7%) exact matches, in which:  
4265 unique CDR3  
6 unique J



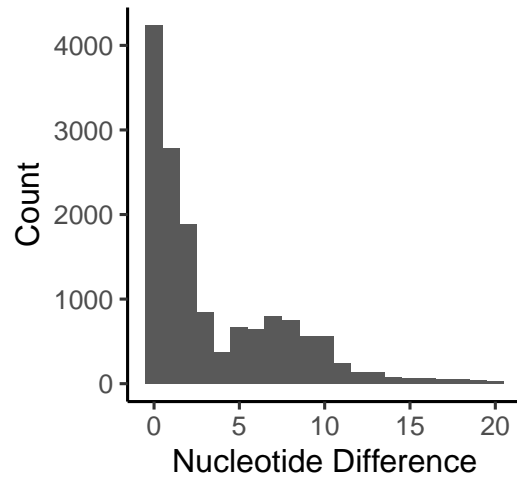
### IGHV1-45\*02

87 sequences assigned  
19 (21.8%) exact matches, in which:  
18 unique CDR3  
4 unique J



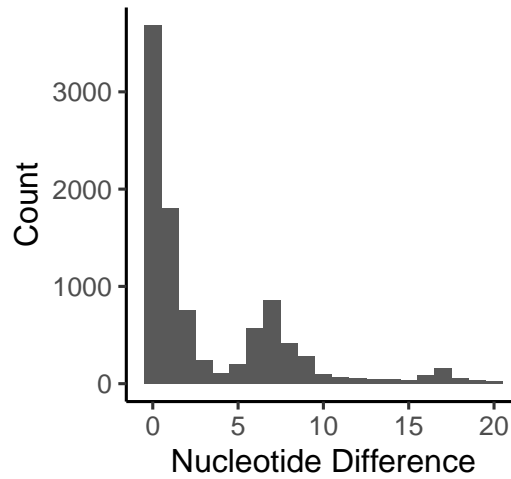
### IGHV1-46\*01

15608 sequences assigned  
4236 (27.1%) exact matches, in which:  
3915 unique CDR3  
6 unique J



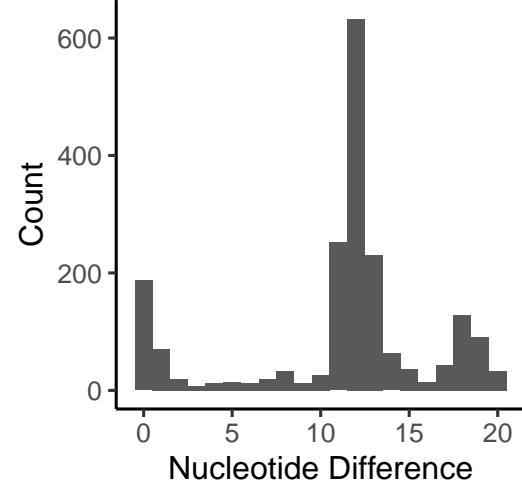
### IGHV1-69\*04\_09

10134 sequences assigned  
3683 (36.3%) exact matches, in which:  
3463 unique CDR3  
6 unique J



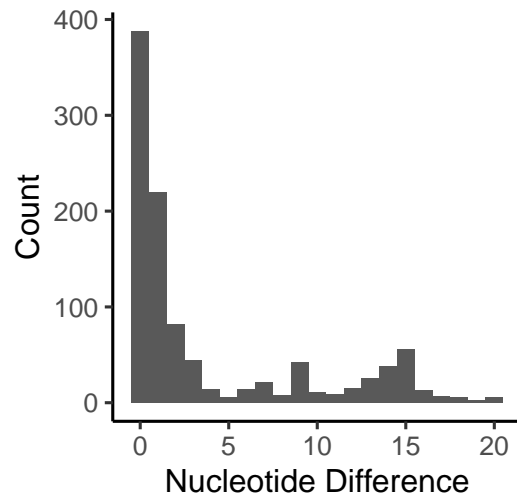
### IGHV2-26\*01

1993 sequences assigned  
187 (9.4%) exact matches, in which:  
172 unique CDR3  
5 unique J



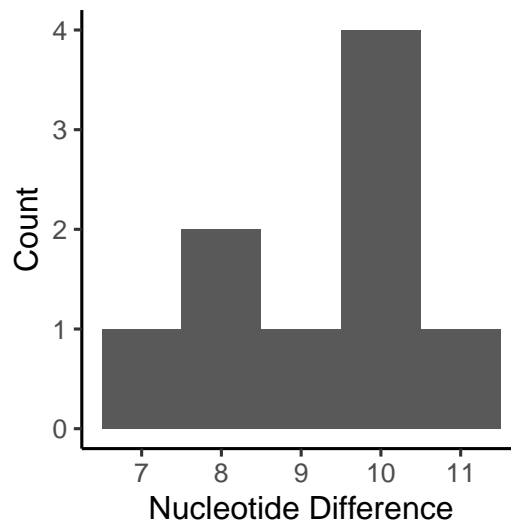
### IGHV1-58\*02

1046 sequences assigned  
388 (37.1%) exact matches, in which:  
350 unique CDR3  
6 unique J



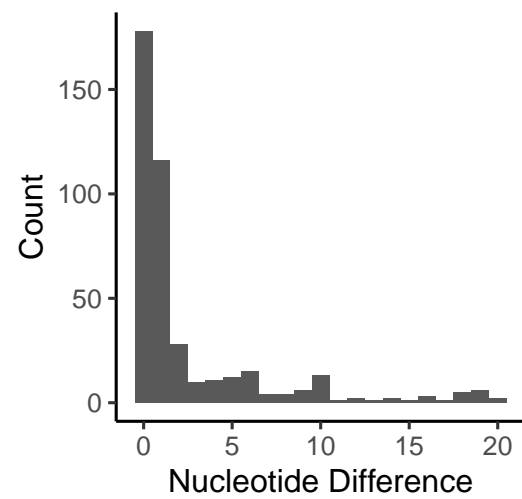
### IGHV1-NL1\*01

9 sequences assigned  
No exact matches.



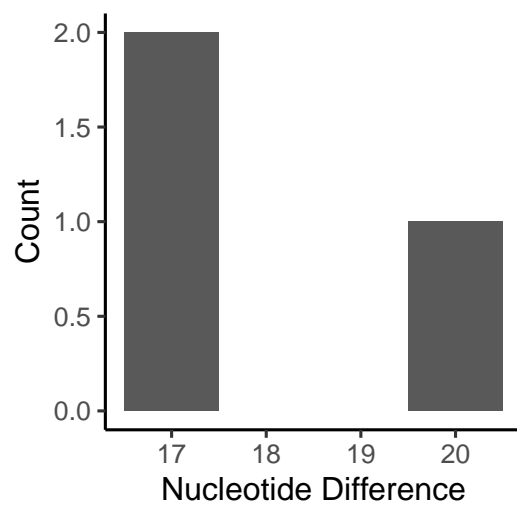
### IGHV2-70\*11\_15

464 sequences assigned  
178 (38.4%) exact matches, in which:  
152 unique CDR3  
5 unique J



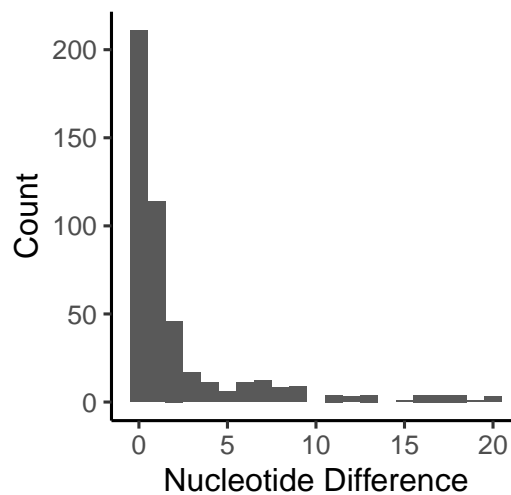
### IGHV1-69-2\*01

4 sequences assigned  
No exact matches.



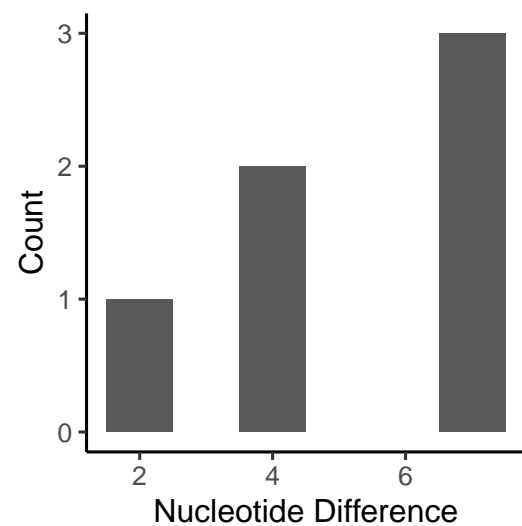
### IGHV2-5\*01

532 sequences assigned  
211 (39.7%) exact matches, in which:  
190 unique CDR3  
6 unique J



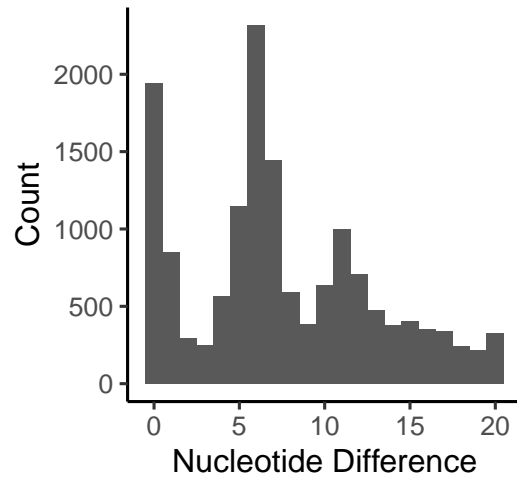
### IGHV2-70D\*14

6 sequences assigned  
No exact matches.



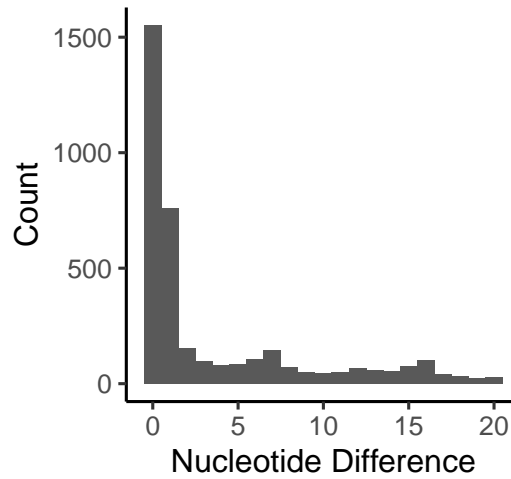
### IGHV3-7\*01

17237 sequences assigned  
1945 (11.3%) exact matches, in which:  
1581 unique CDR3  
6 unique J



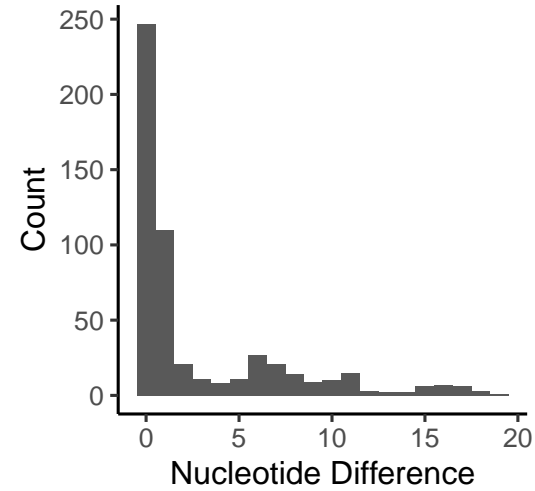
### IGHV3-11\*01

4435 sequences assigned  
1551 (35%) exact matches, in which:  
1167 unique CDR3  
6 unique J



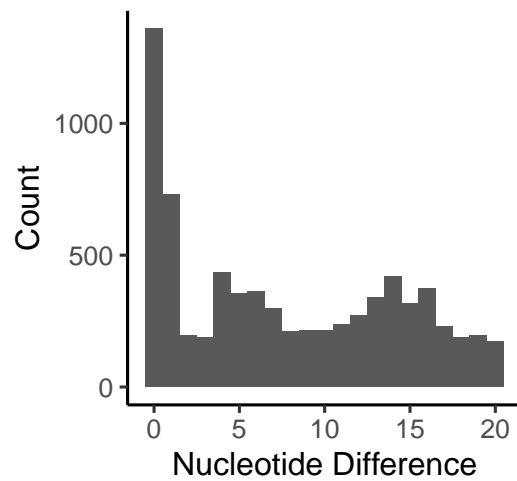
### IGHV3-13\*01

546 sequences assigned  
247 (45.2%) exact matches, in which:  
161 unique CDR3  
6 unique J



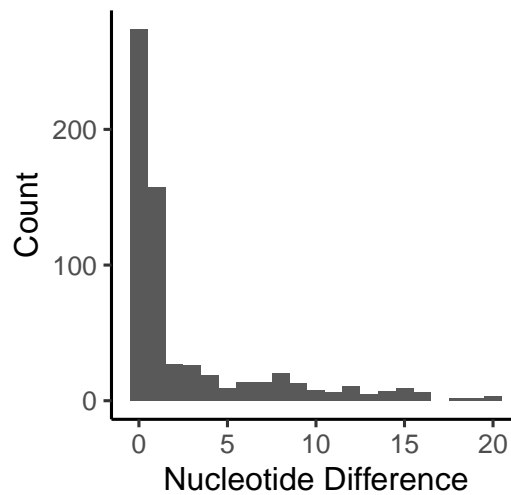
### IGHV3-7\*03

8335 sequences assigned  
1359 (16.3%) exact matches, in which:  
1036 unique CDR3  
6 unique J



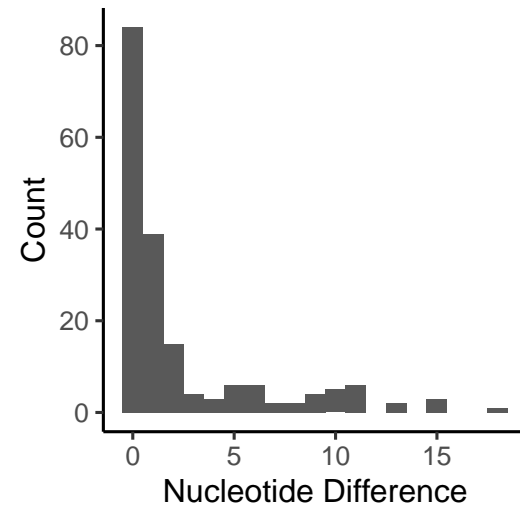
### IGHV3-11\*04

673 sequences assigned  
274 (40.7%) exact matches, in which:  
269 unique CDR3  
5 unique J



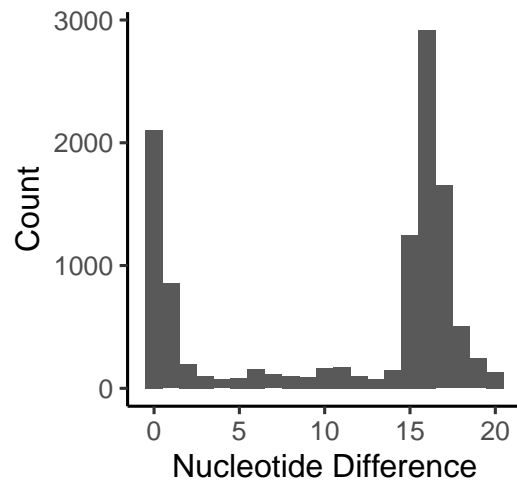
### IGHV3-13\*05

187 sequences assigned  
84 (44.9%) exact matches, in which:  
53 unique CDR3  
5 unique J



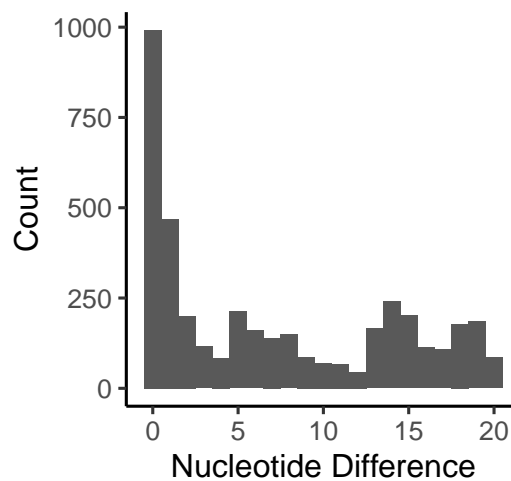
### IGHV3-9\*01

12639 sequences assigned  
2106 (16.7%) exact matches, in which:  
1494 unique CDR3  
6 unique J



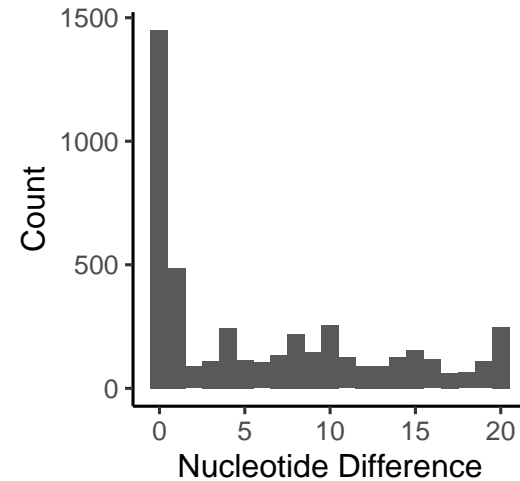
### IGHV3-11\*06

5913 sequences assigned  
992 (16.8%) exact matches, in which:  
784 unique CDR3  
6 unique J



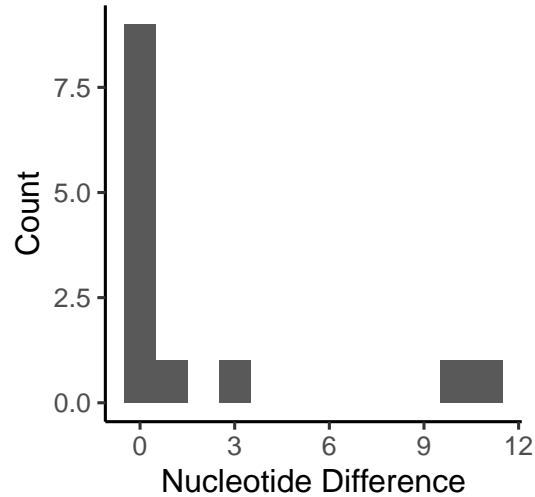
### IGHV3-15\*01\_02

6126 sequences assigned  
1450 (23.7%) exact matches, in which:  
1066 unique CDR3  
6 unique J



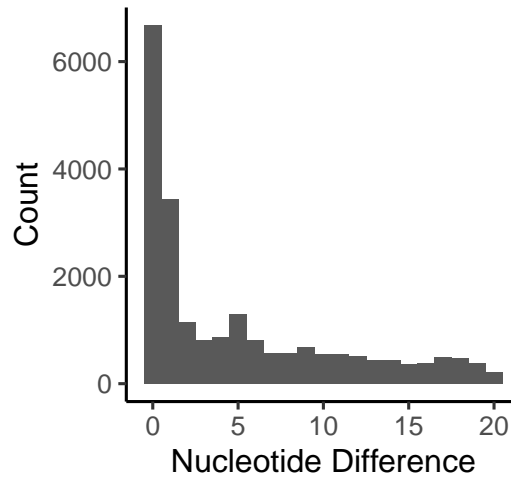
### IGHV3-19\*01

13 sequences assigned  
9 (69.2%) exact matches, in which:  
9 unique CDR3  
2 unique J



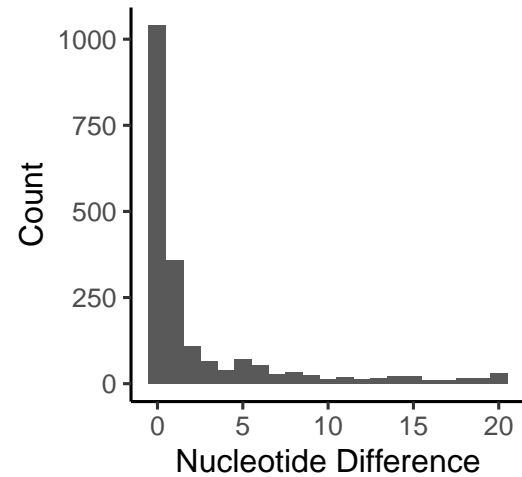
### IGHV3-21\*01\_02

26900 sequences assigned  
6674 (24.8%) exact matches, in which:  
4848 unique CDR3  
6 unique J



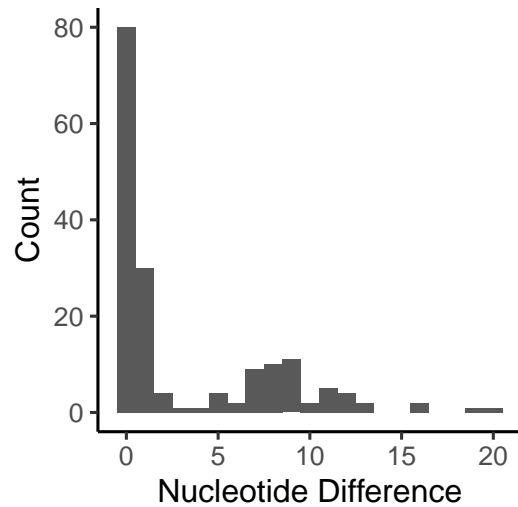
### IGHV3-30\*03

3093 sequences assigned  
1040 (33.6%) exact matches, in which:  
972 unique CDR3  
6 unique J



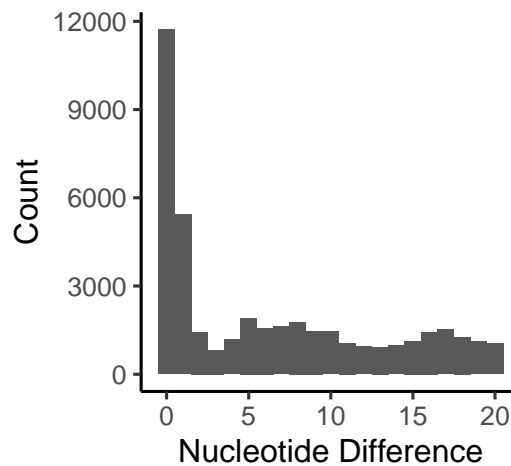
### IGHV3-20\*01\_02

169 sequences assigned  
80 (47.3%) exact matches, in which:  
56 unique CDR3  
5 unique J



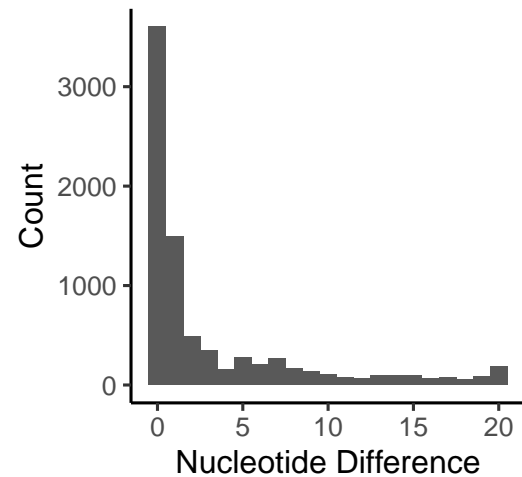
### IGHV3-23\*01\_04

58564 sequences assigned  
11723 (20%) exact matches, in which:  
7797 unique CDR3  
6 unique J



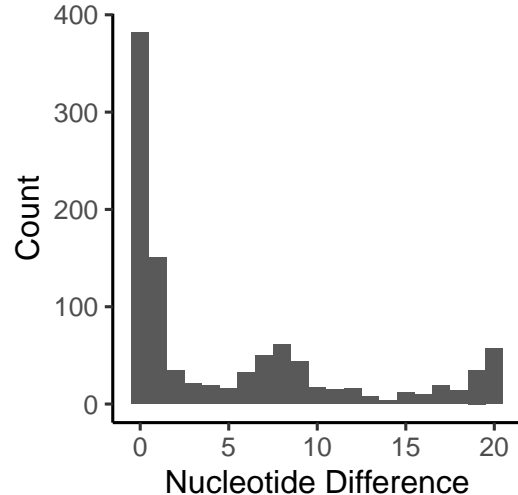
### IGHV3-30\*18

9789 sequences assigned  
3603 (36.8%) exact matches, in which:  
2515 unique CDR3  
6 unique J



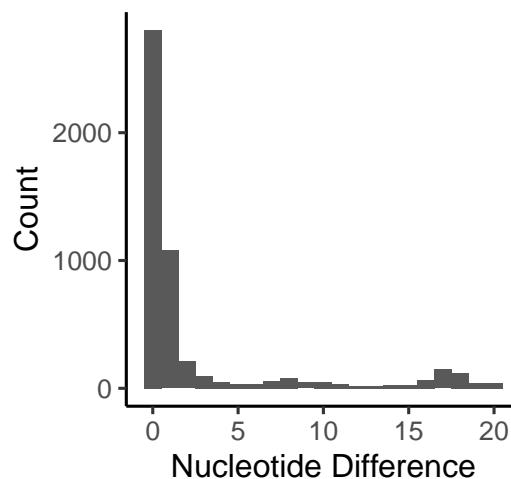
### IGHV3-20\*03\_04

1551 sequences assigned  
382 (24.6%) exact matches, in which:  
283 unique CDR3  
6 unique J



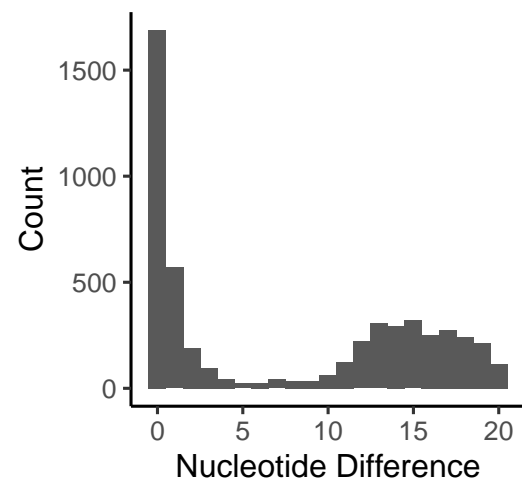
### IGHV3-30-3\*01

5740 sequences assigned  
2803 (48.8%) exact matches, in which:  
2096 unique CDR3  
6 unique J



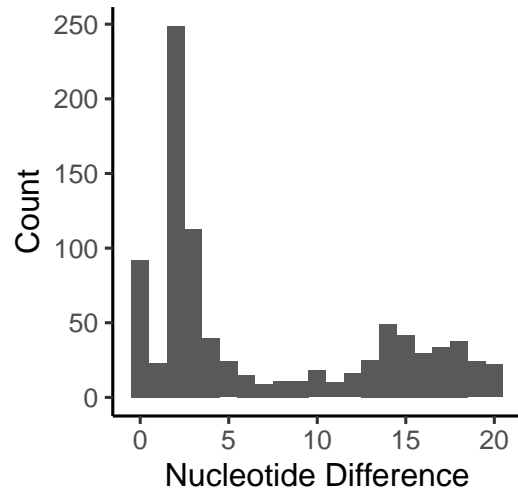
### IGHV3-33\*01

5546 sequences assigned  
1689 (30.5%) exact matches, in which:  
1329 unique CDR3  
6 unique J



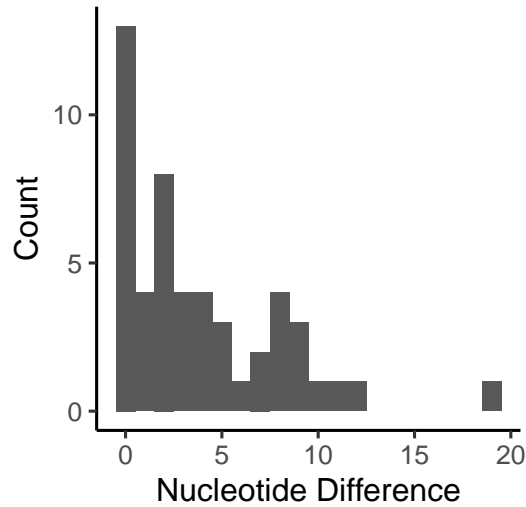
### IGHV3-33\*06

955 sequences assigned  
92 (9.6%) exact matches, in which:  
89 unique CDR3  
6 unique J



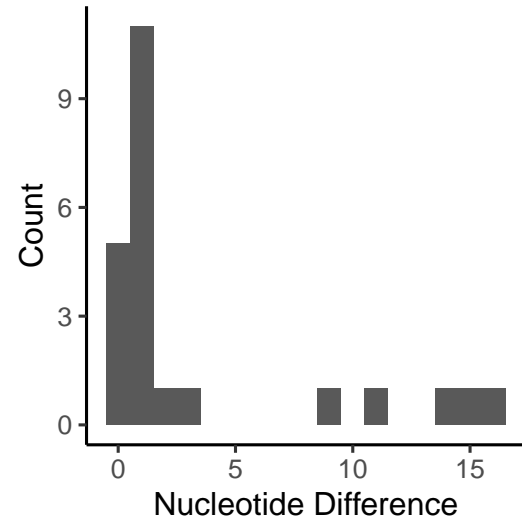
### IGHV3-38-3\*01

51 sequences assigned  
13 (25.5%) exact matches, in which:  
11 unique CDR3  
4 unique J



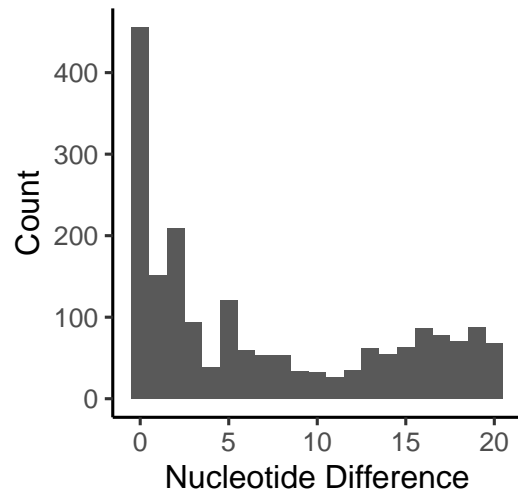
### IGHV3-47\*02

23 sequences assigned  
5 (21.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



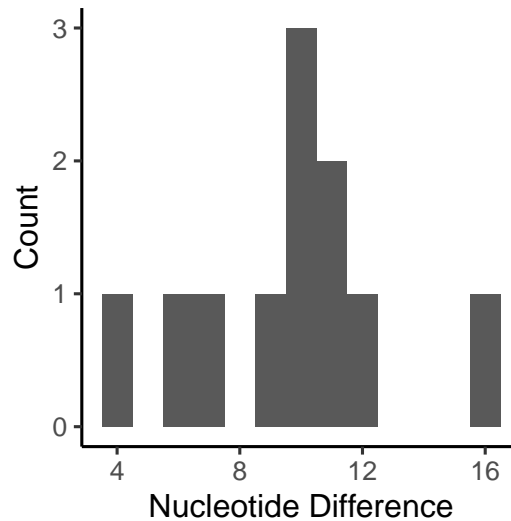
### IGHV3-33\*08

2220 sequences assigned  
456 (20.5%) exact matches, in which:  
409 unique CDR3  
6 unique J



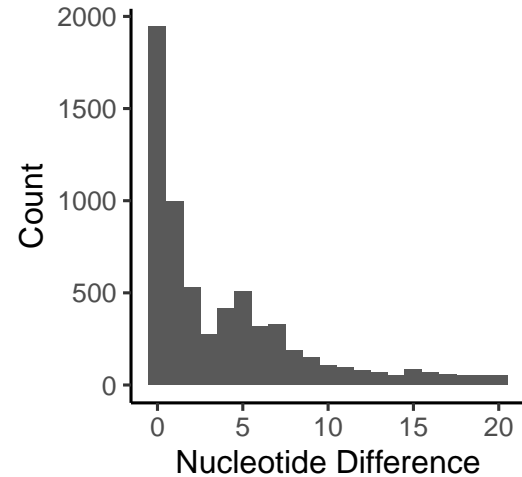
### IGHV3-38\*03

11 sequences assigned  
No exact matches.



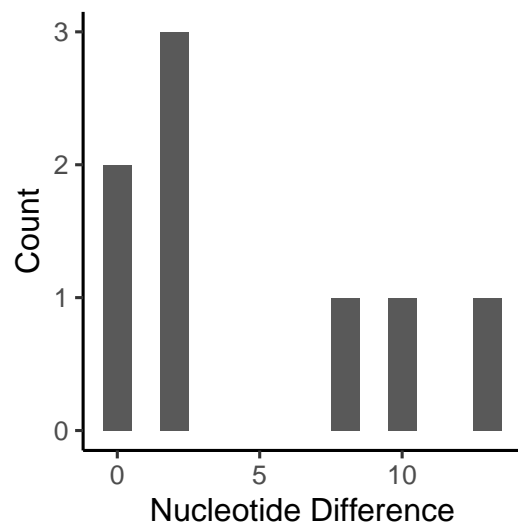
### IGHV3-48\*01

6972 sequences assigned  
1944 (27.9%) exact matches, in which:  
1513 unique CDR3  
6 unique J



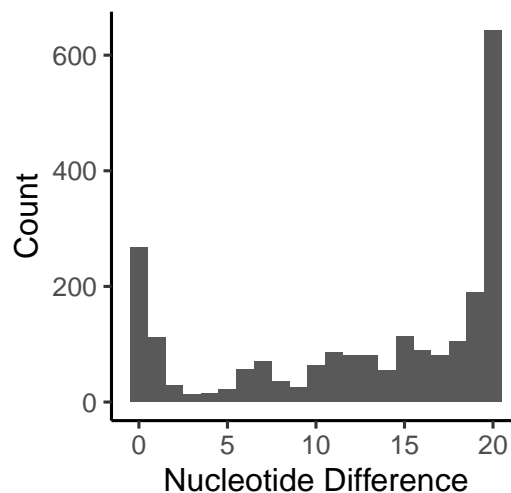
### IGHV3-35\*01

8 sequences assigned  
2 (25%) exact matches, in which:  
2 unique CDR3  
2 unique J



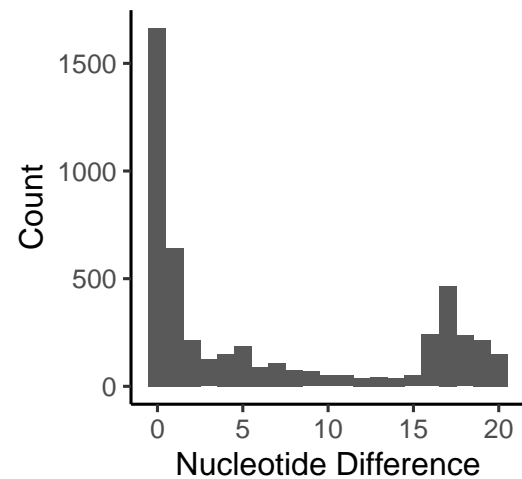
### IGHV3-43\*01

14666 sequences assigned  
268 (1.8%) exact matches, in which:  
205 unique CDR3  
6 unique J



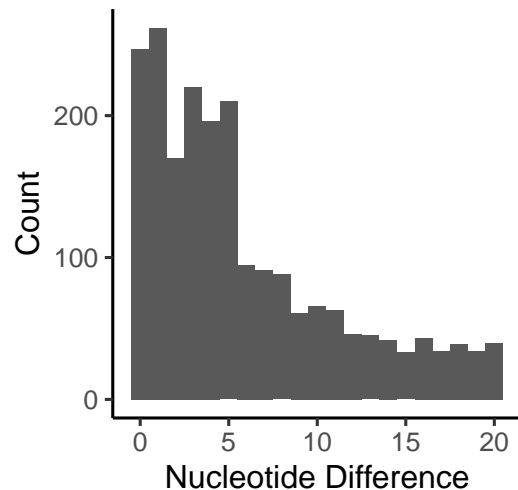
### IGHV3-48\*02

5627 sequences assigned  
1664 (29.6%) exact matches, in which:  
1217 unique CDR3  
6 unique J



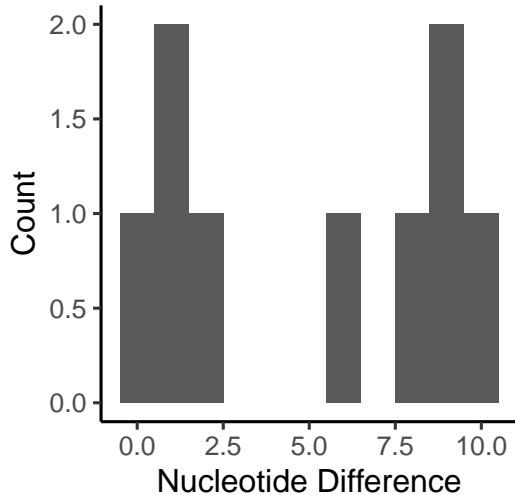
### IGHV3-48\*04

2402 sequences assigned  
247 (10.3%) exact matches, in which:  
241 unique CDR3  
6 unique J



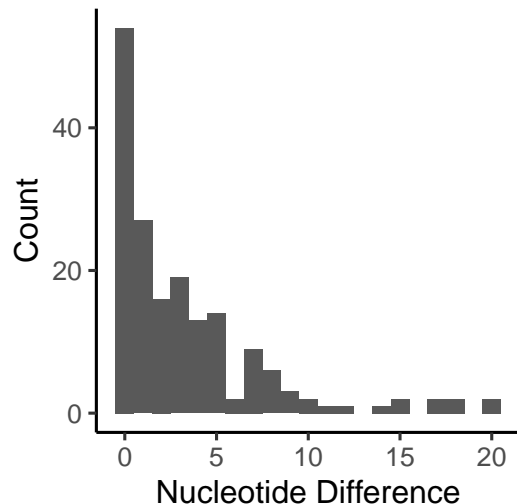
### IGHV3-52\*01\_03

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



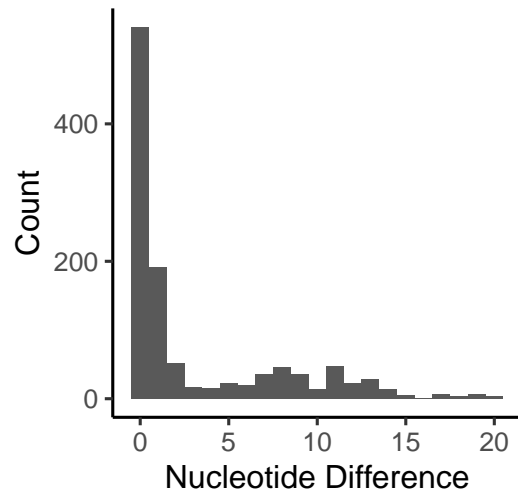
### IGHV3-64\*04

185 sequences assigned  
54 (29.2%) exact matches, in which:  
54 unique CDR3  
6 unique J



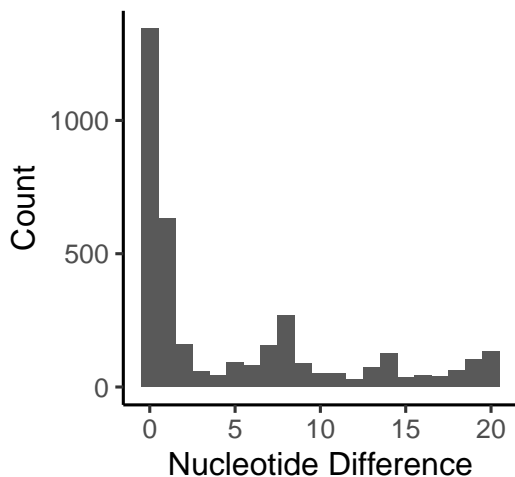
### IGHV3-49\*03\_05

1378 sequences assigned  
541 (39.3%) exact matches, in which:  
400 unique CDR3  
6 unique J



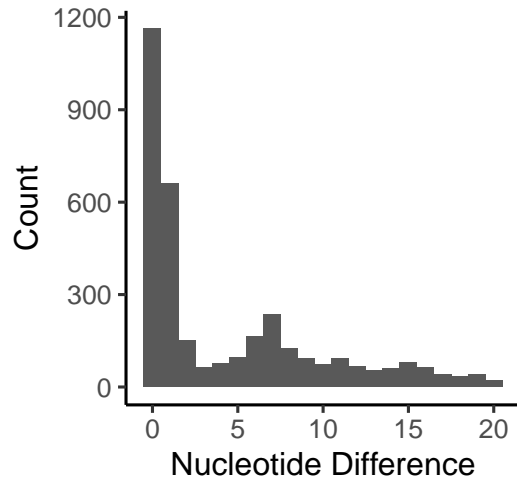
### IGHV3-53\*01\_02

4494 sequences assigned  
1344 (29.9%) exact matches, in which:  
1022 unique CDR3  
6 unique J



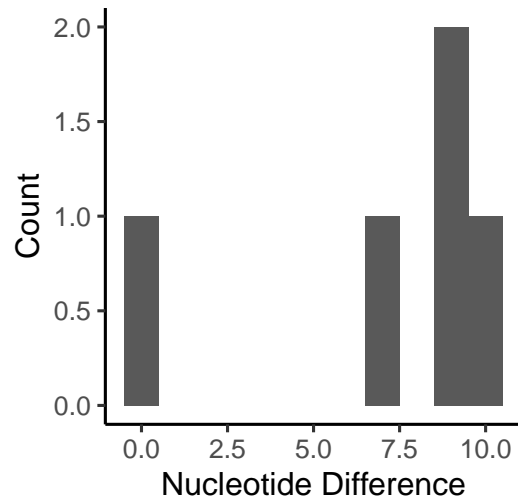
### IGHV3-66\*01

4274 sequences assigned  
1163 (27.2%) exact matches, in which:  
890 unique CDR3  
6 unique J



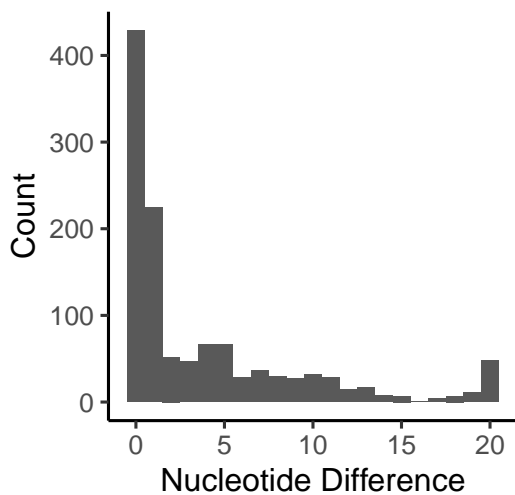
### IGHV3-52\*02

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



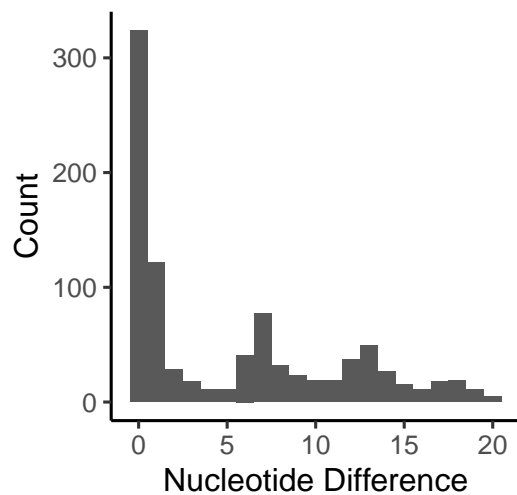
### IGHV3-64\*01

1388 sequences assigned  
429 (30.9%) exact matches, in which:  
309 unique CDR3  
6 unique J



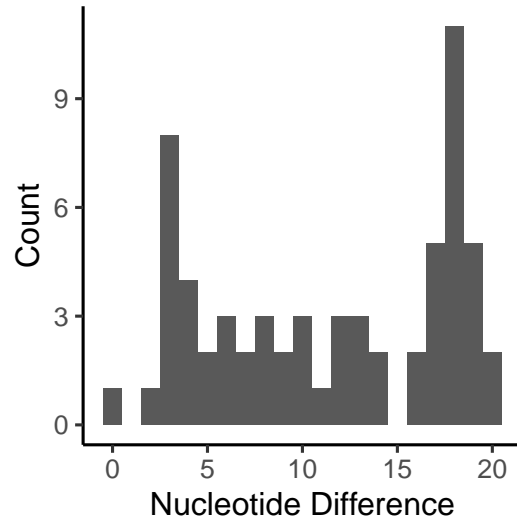
### IGHV3-66\*02

1335 sequences assigned  
324 (24.3%) exact matches, in which:  
258 unique CDR3  
6 unique J



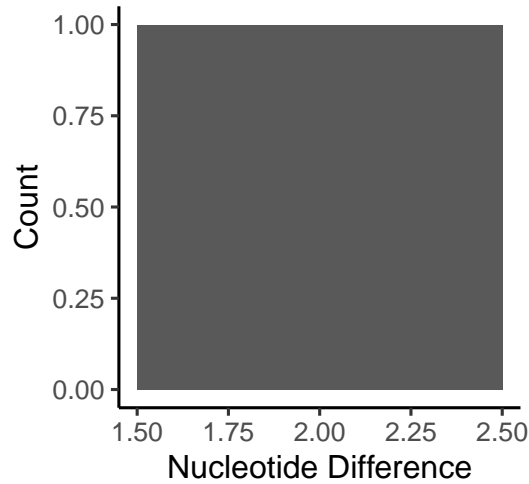
### IGHV3-69-1\*01

85 sequences assigned  
1 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



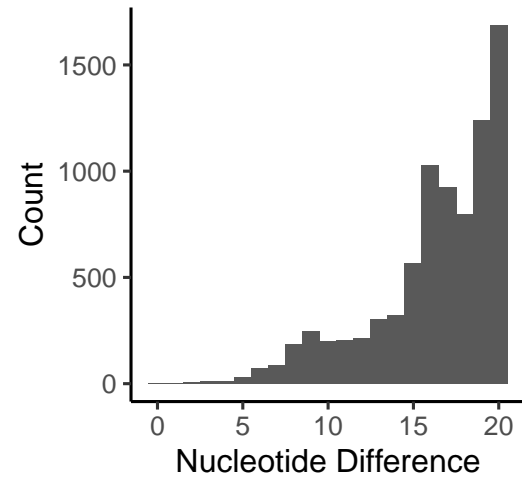
### IGHV3-71\*01\_04

1 sequences assigned  
No exact matches.



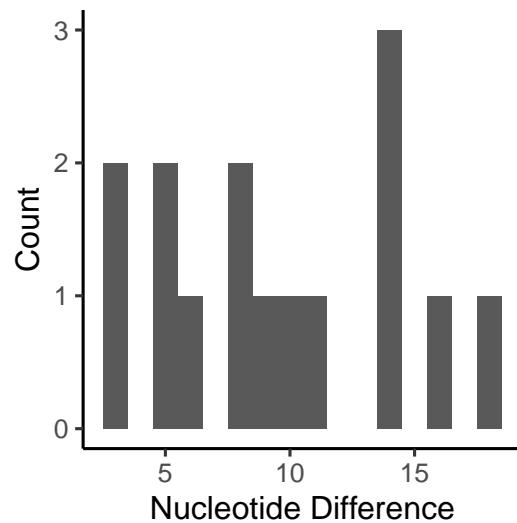
### IGHV3-74\*03

18550 sequences assigned  
1 (0%) exact matches, in which:  
1 unique CDR3  
1 unique J



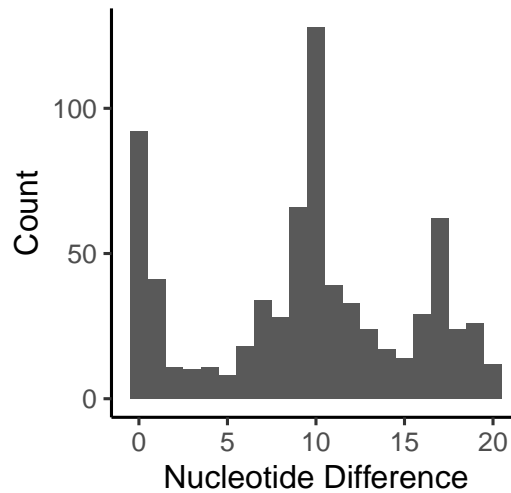
### IGHV3-69-1\*02

40 sequences assigned  
No exact matches.



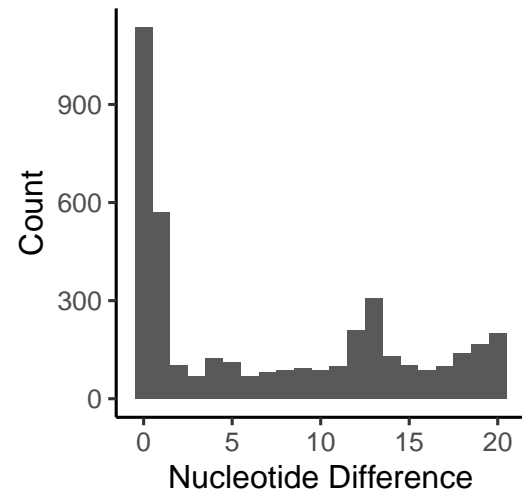
### IGHV3-72\*01

937 sequences assigned  
92 (9.8%) exact matches, in which:  
68 unique CDR3  
5 unique J



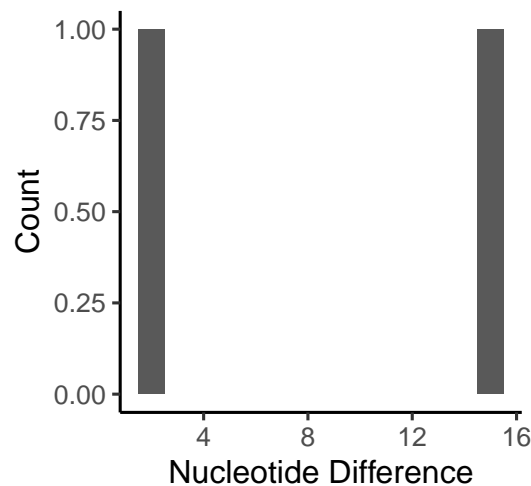
### IGHV3-74\*01\_02

6015 sequences assigned  
1137 (18.9%) exact matches, in which:  
746 unique CDR3  
6 unique J



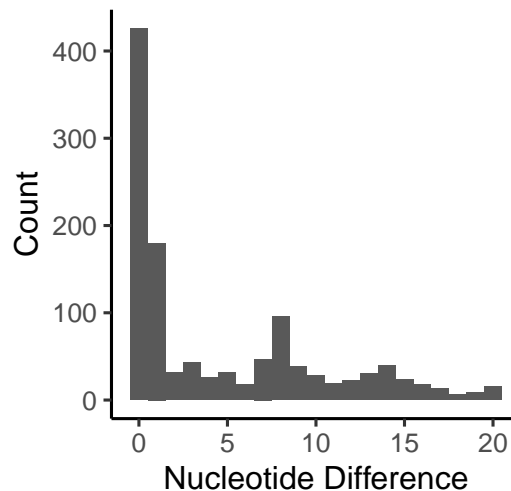
### IGHV3-71\*03

2 sequences assigned  
No exact matches.



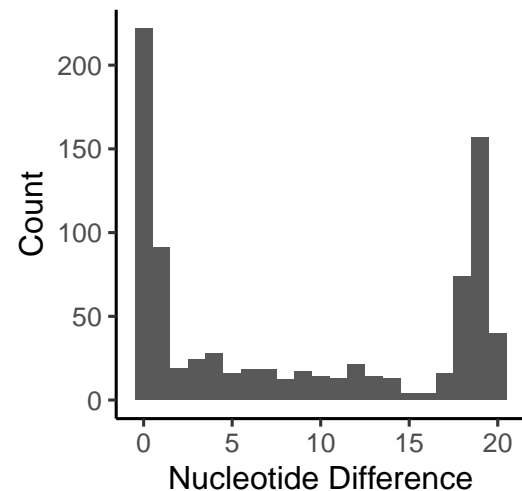
### IGHV3-73\*01\_02

1247 sequences assigned  
426 (34.2%) exact matches, in which:  
323 unique CDR3  
5 unique J



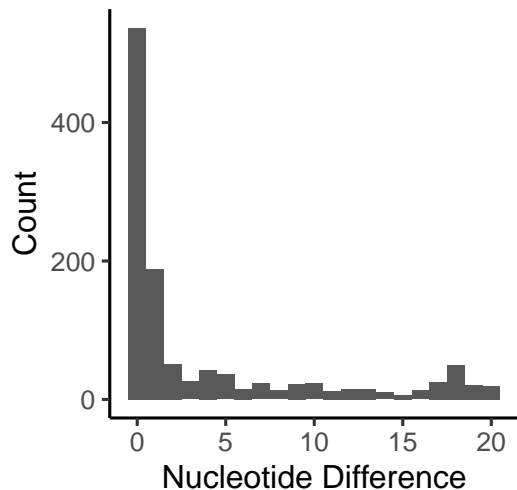
### IGHV3-43D\*03

1009 sequences assigned  
222 (22%) exact matches, in which:  
162 unique CDR3  
5 unique J



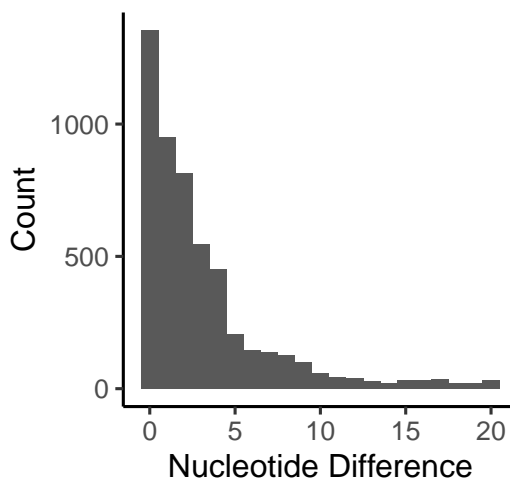
### IGHV3-64D\*09

1785 sequences assigned  
537 (30.1%) exact matches, in which:  
330 unique CDR3  
6 unique J



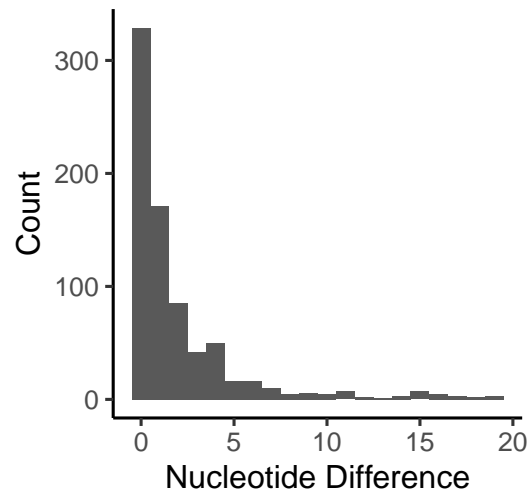
### IGHV4-4\*02\_03

6227 sequences assigned  
1354 (21.7%) exact matches, in which:  
1210 unique CDR3  
6 unique J



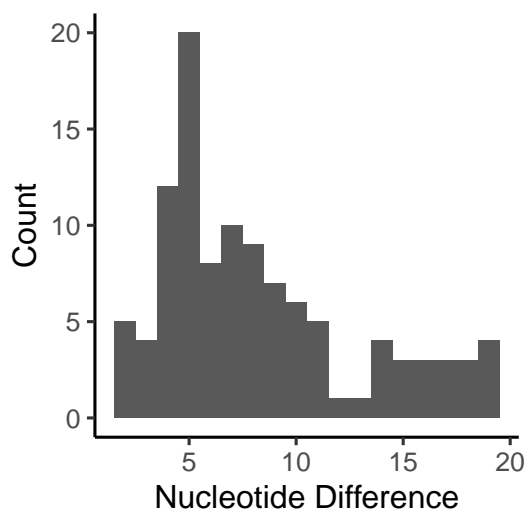
### IGHV4-30-2\*01

789 sequences assigned  
329 (41.7%) exact matches, in which:  
251 unique CDR3  
6 unique J



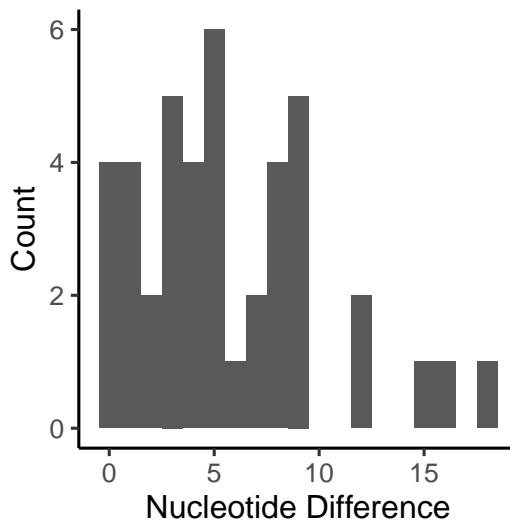
### IGHV3-NL1\*01

161 sequences assigned  
No exact matches.



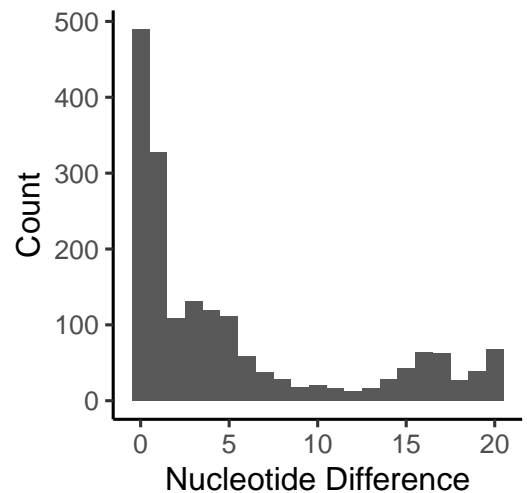
### IGHV4-28\*03

45 sequences assigned  
4 (8.9%) exact matches, in which:  
4 unique CDR3  
2 unique J



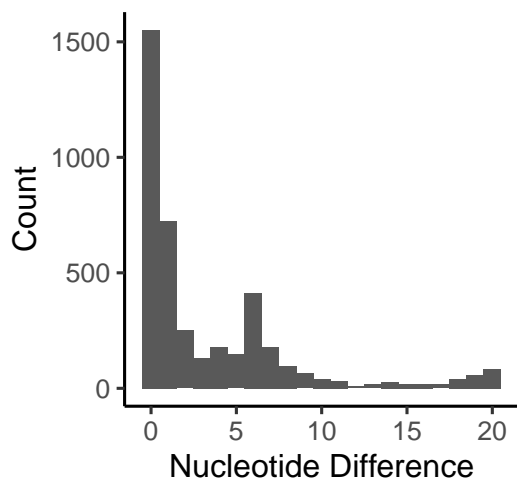
### IGHV4-30-4\*01

2336 sequences assigned  
490 (21%) exact matches, in which:  
439 unique CDR3  
6 unique J



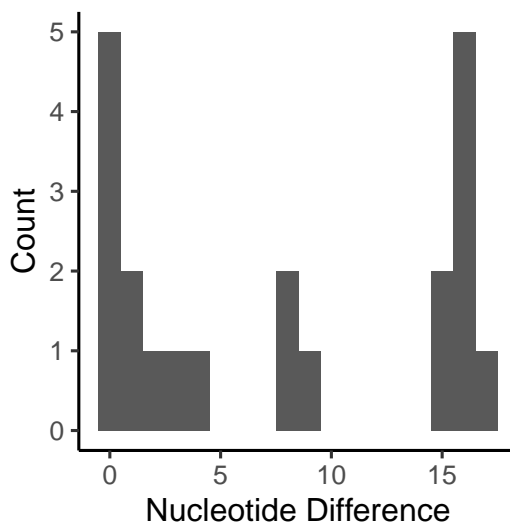
### IGHV4-4\*07

4687 sequences assigned  
1551 (33.1%) exact matches, in which:  
1447 unique CDR3  
6 unique J



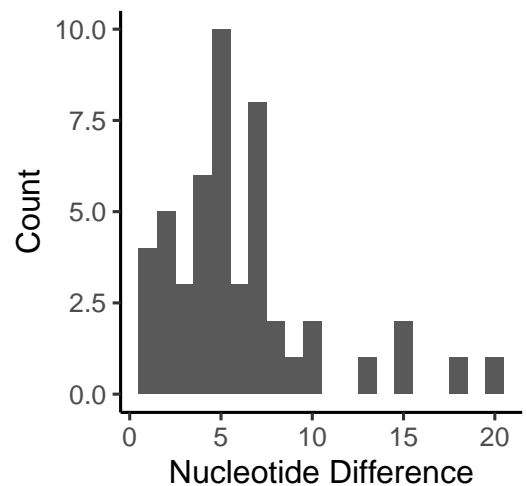
### IGHV4-28\*01\_07

21 sequences assigned  
5 (23.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



### IGHV4-30-2\*03

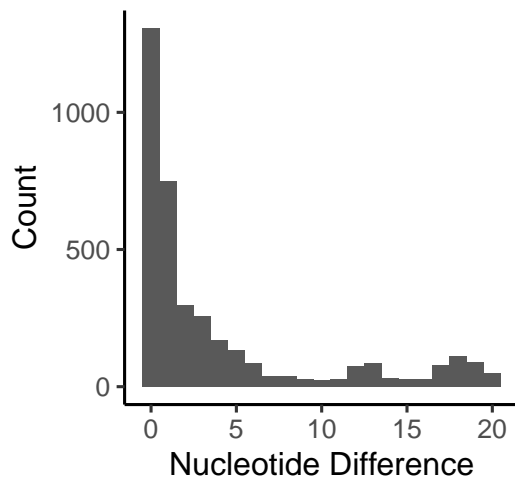
59 sequences assigned  
No exact matches.





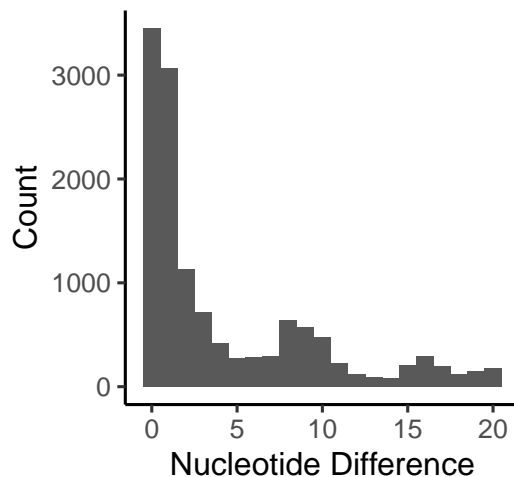
### IGHV4-31\*02

5813 sequences assigned  
1306 (22.5%) exact matches, in which:  
1196 unique CDR3  
6 unique J



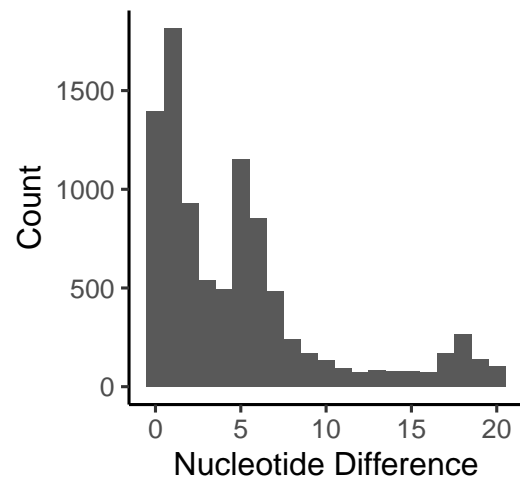
### IGHV4-39\*07

15025 sequences assigned  
3450 (23%) exact matches, in which:  
3050 unique CDR3  
6 unique J



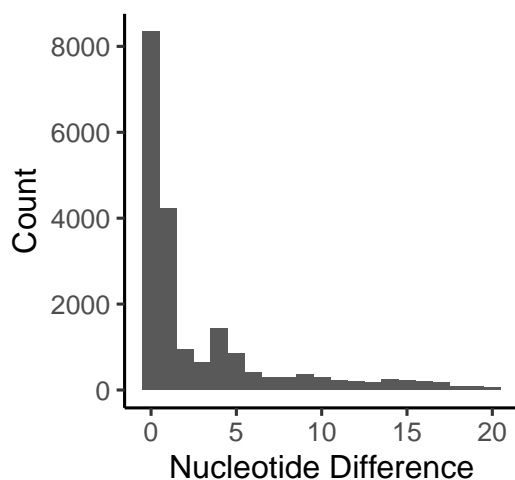
### IGHV4-59\*12

9990 sequences assigned  
1398 (14%) exact matches, in which:  
1371 unique CDR3  
6 unique J



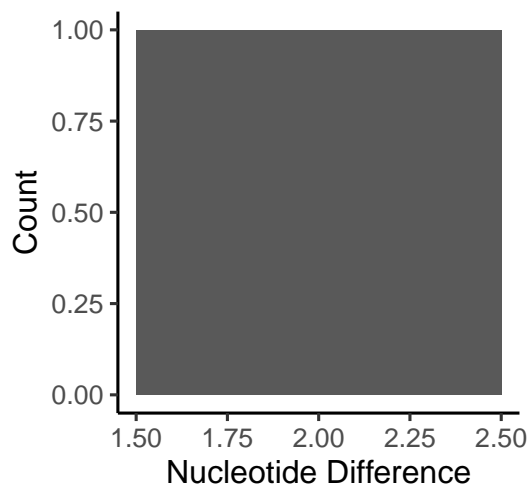
### IGHV4-34\*01\_02

20473 sequences assigned  
8341 (40.7%) exact matches, in which:  
7299 unique CDR3  
6 unique J



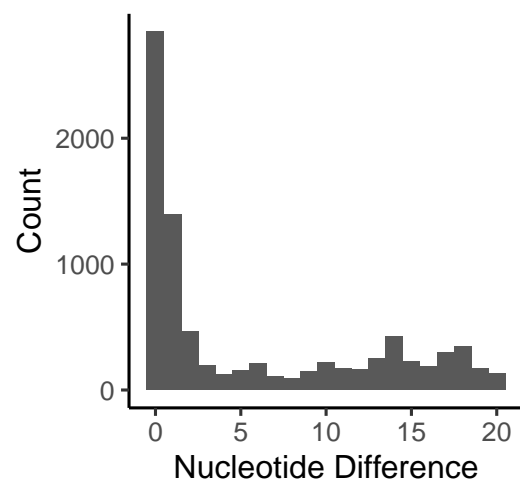
### IGHV4-55\*09

2 sequences assigned  
No exact matches.



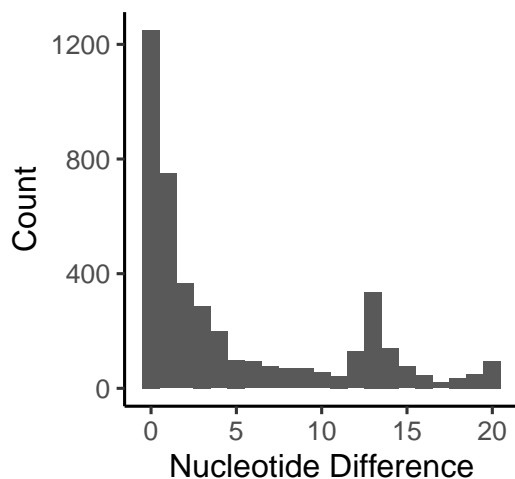
### IGHV4-61\*02

9273 sequences assigned  
2846 (30.7%) exact matches, in which:  
2679 unique CDR3  
6 unique J



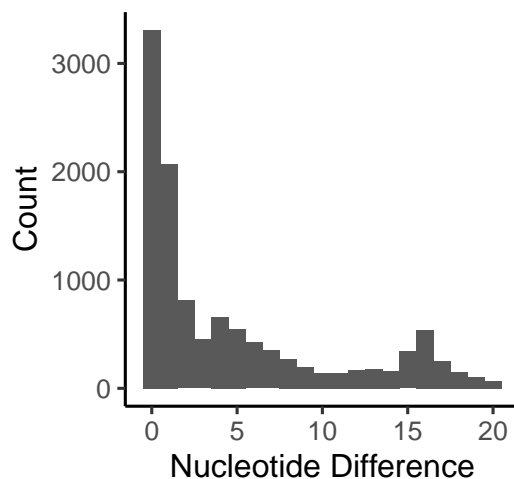
### IGHV4-38-2\*02

4672 sequences assigned  
1250 (26.8%) exact matches, in which:  
1175 unique CDR3  
6 unique J



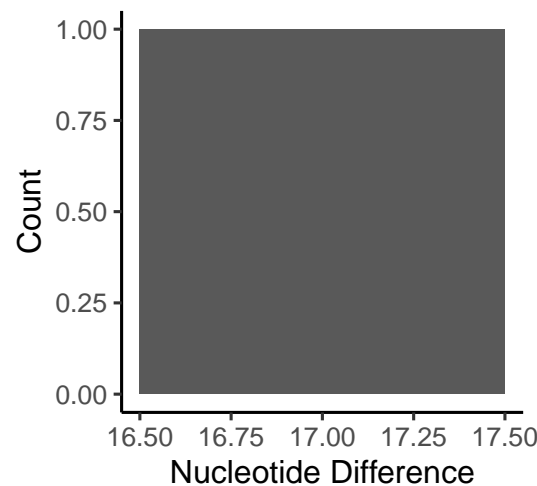
### IGHV4-59\*08

12366 sequences assigned  
3308 (26.8%) exact matches, in which:  
3000 unique CDR3  
6 unique J



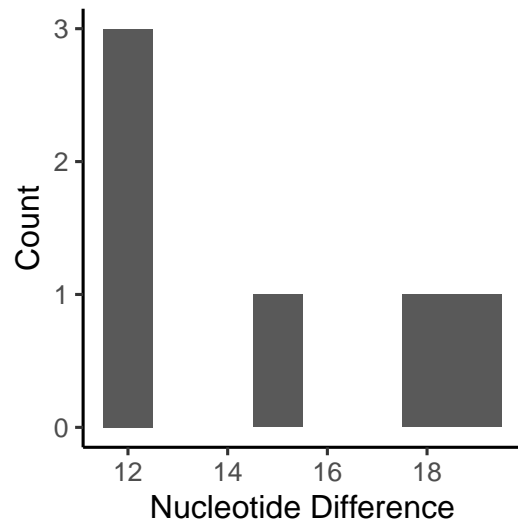
### IGHV1/OR15-1\*04

1 sequences assigned  
No exact matches.



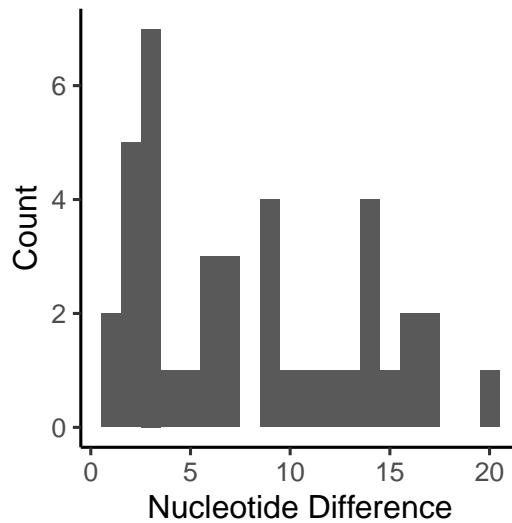
### IGHV1/OR15-2\*02\_03

7 sequences assigned  
No exact matches.



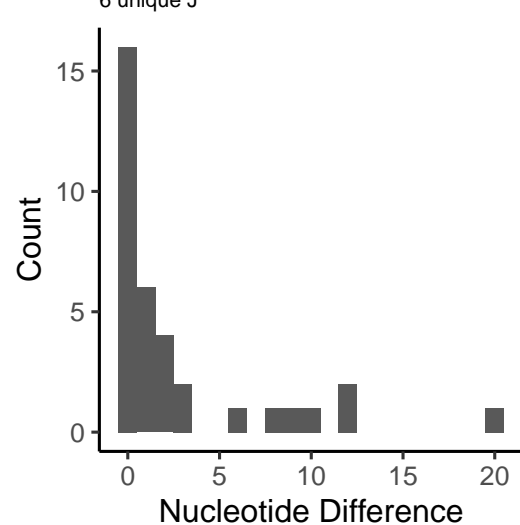
### IGHV4/OR15-8\*01

54 sequences assigned  
No exact matches.



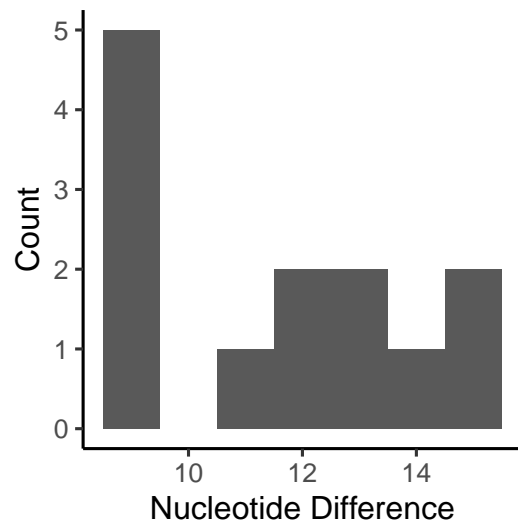
### IGHV5-51\*04

36 sequences assigned  
16 (44.4%) exact matches, in which:  
15 unique CDR3  
6 unique J



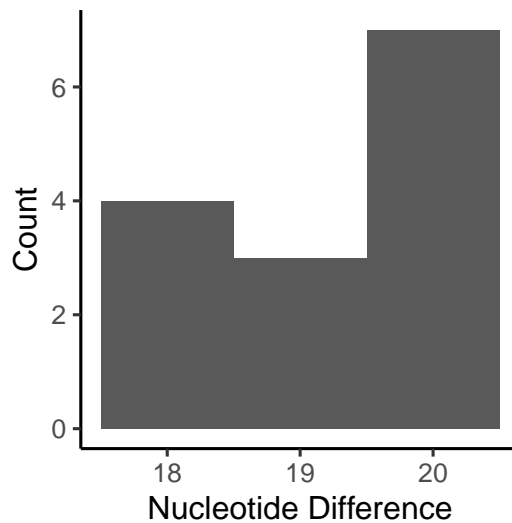
### IGHV1/OR15-3\*02

13 sequences assigned  
No exact matches.



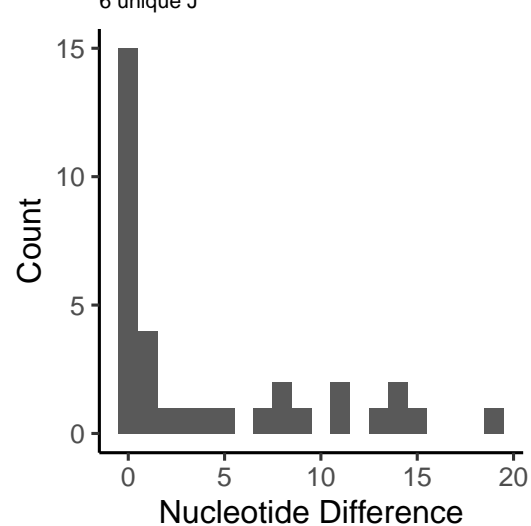
### IGHV4/OR15-8\*02

68 sequences assigned  
No exact matches.



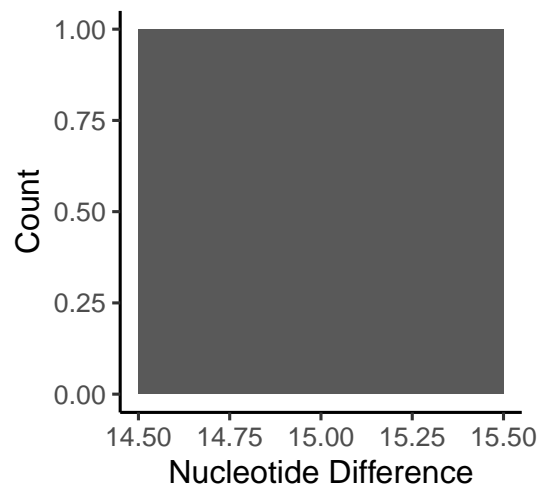
### IGHV5-51\*06

37 sequences assigned  
15 (40.5%) exact matches, in which:  
15 unique CDR3  
6 unique J



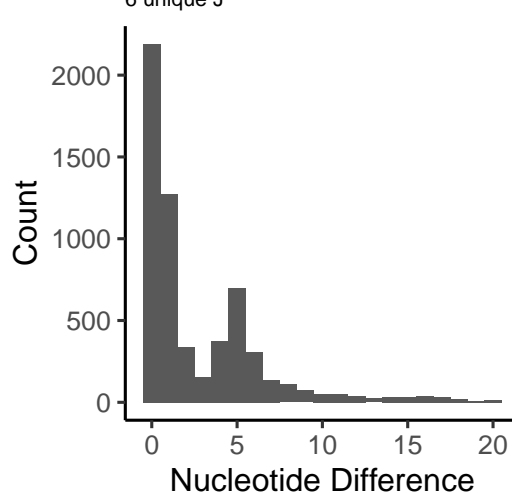
### IGHV1/OR15-4\*01

1 sequences assigned  
No exact matches.



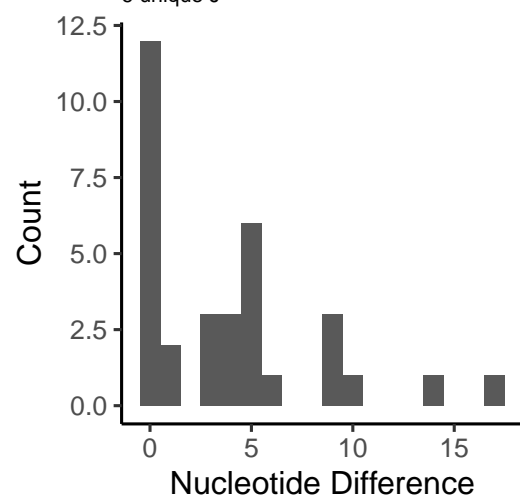
### IGHV5-10-1\*01\_03

6063 sequences assigned  
2190 (36.1%) exact matches, in which:  
1654 unique CDR3  
6 unique J



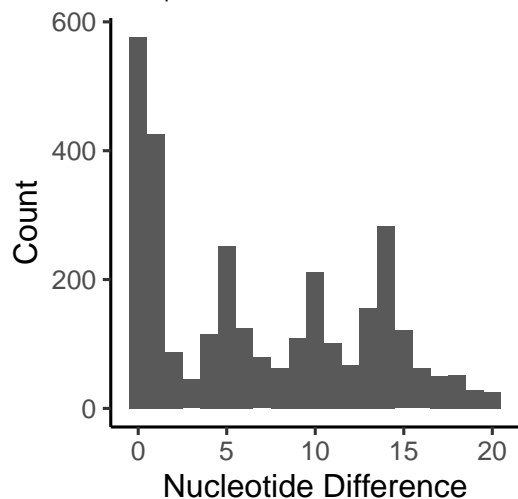
### IGHV5-51\*07

34 sequences assigned  
12 (35.3%) exact matches, in which:  
12 unique CDR3  
6 unique J



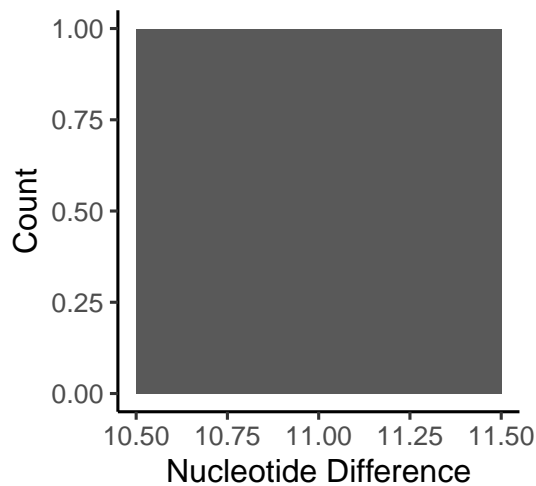
### IGHV6-1\*01\_02

3132 sequences assigned  
577 (18.4%) exact matches, in which:  
531 unique CDR3  
6 unique J



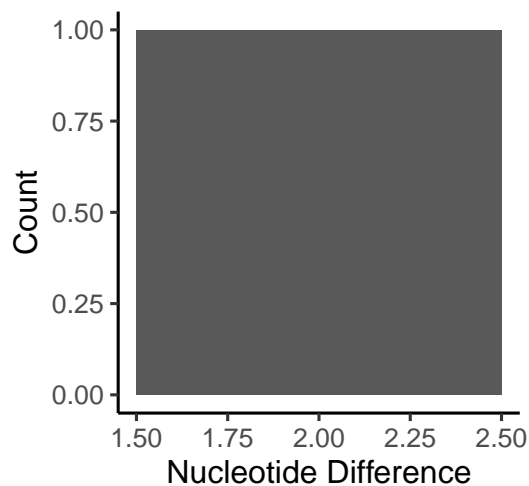
### IGHV3/OR16-13\*01

1 sequences assigned  
No exact matches.



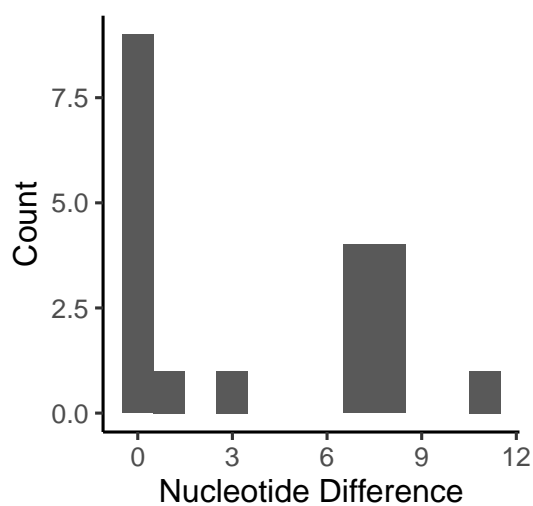
### IGHV3/OR16-8\*01

2 sequences assigned  
No exact matches.



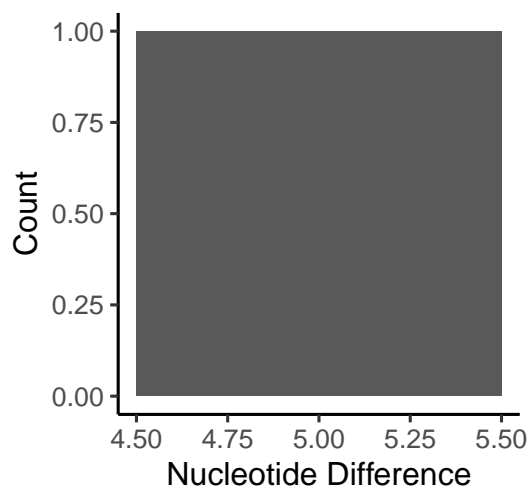
### IGHV7-4-1\*01

20 sequences assigned  
9 (45%) exact matches, in which:  
8 unique CDR3  
3 unique J



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

3 sequences assigned  
No exact matches.





Warning – no inferred sequences found.