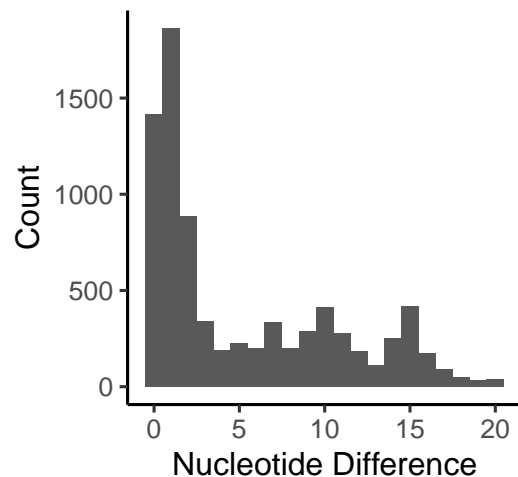


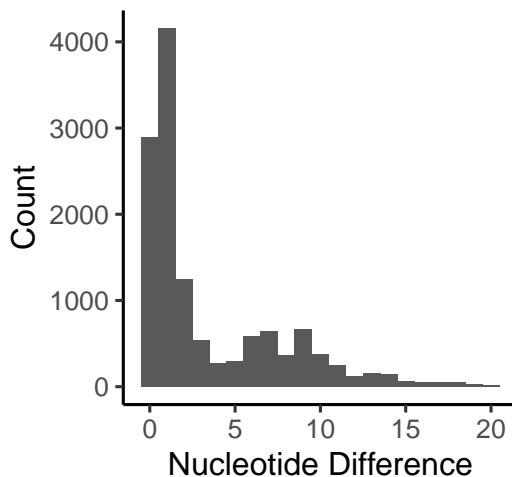
### IGHV1-2\*02

8684 sequences assigned  
1418 (16.3%) exact matches, in which:  
1139 unique CDR3  
6 unique J



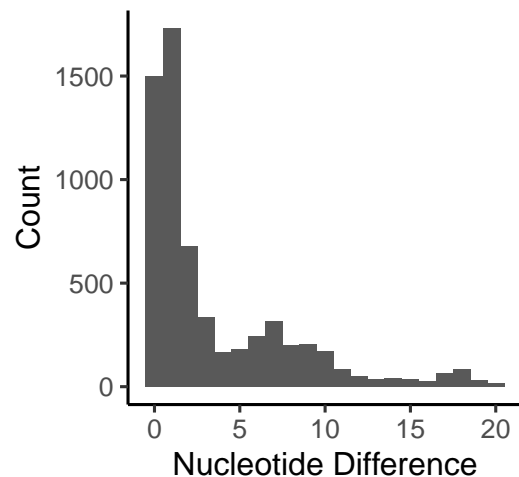
### IGHV1-18\*01

14929 sequences assigned  
2891 (19.4%) exact matches, in which:  
2206 unique CDR3  
6 unique J



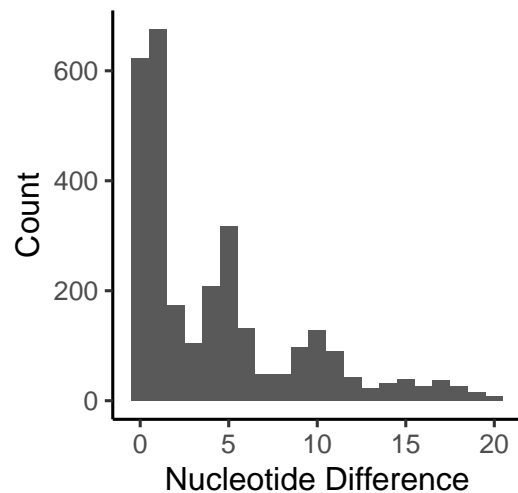
### IGHV1-46\*01

9089 sequences assigned  
1500 (16.5%) exact matches, in which:  
1249 unique CDR3  
6 unique J



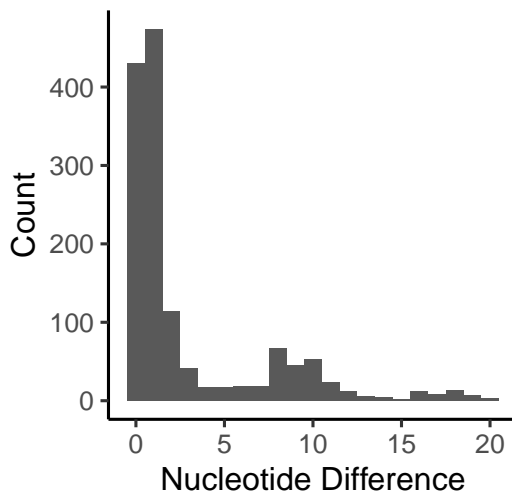
### IGHV1-3\*01\_05

2944 sequences assigned  
622 (21.1%) exact matches, in which:  
502 unique CDR3  
6 unique J



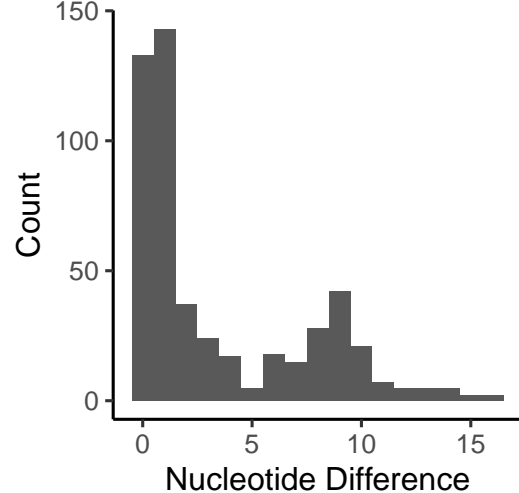
### IGHV1-24\*01

1430 sequences assigned  
431 (30.1%) exact matches, in which:  
357 unique CDR3  
6 unique J



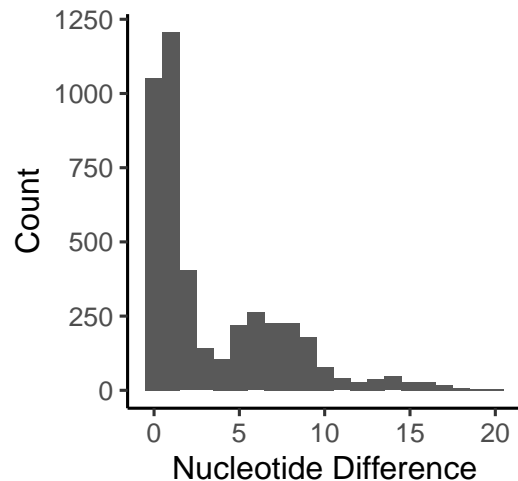
### IGHV1-58\*02

514 sequences assigned  
133 (25.9%) exact matches, in which:  
106 unique CDR3  
5 unique J



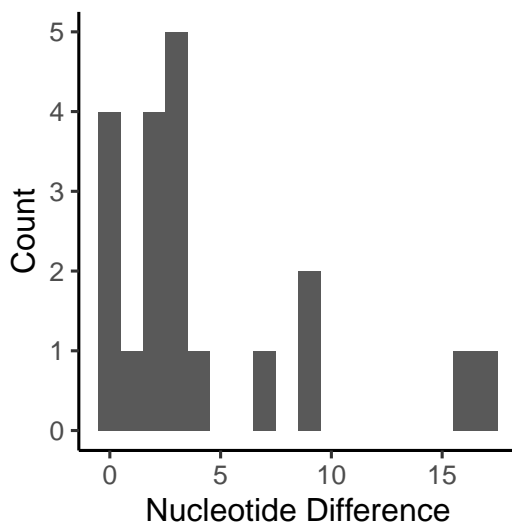
### IGHV1-8\*01

4460 sequences assigned  
1053 (23.6%) exact matches, in which:  
875 unique CDR3  
6 unique J



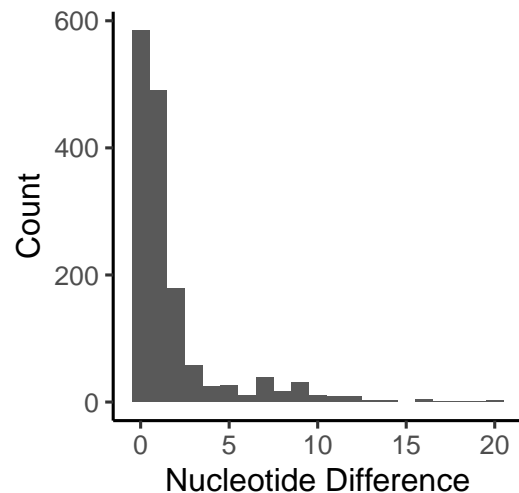
### IGHV1-45\*03

21 sequences assigned  
4 (19%) exact matches, in which:  
4 unique CDR3  
2 unique J



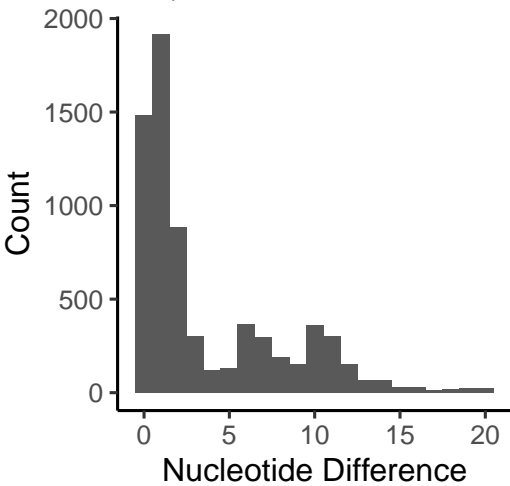
### IGHV1-69\*02

1605 sequences assigned  
585 (36.4%) exact matches, in which:  
518 unique CDR3  
6 unique J



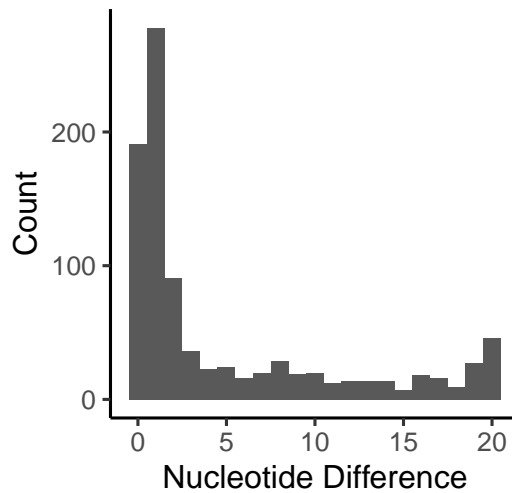
### IGHV1-69\*04\_09

7048 sequences assigned  
1484 (21.1%) exact matches, in which:  
1248 unique CDR3  
6 unique J



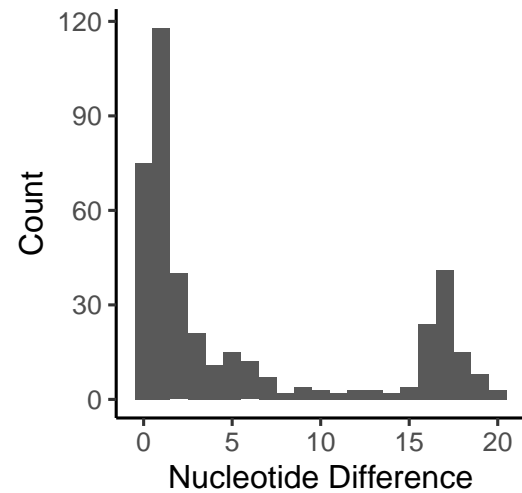
### IGHV2-5\*02

1187 sequences assigned  
191 (16.1%) exact matches, in which:  
145 unique CDR3  
6 unique J



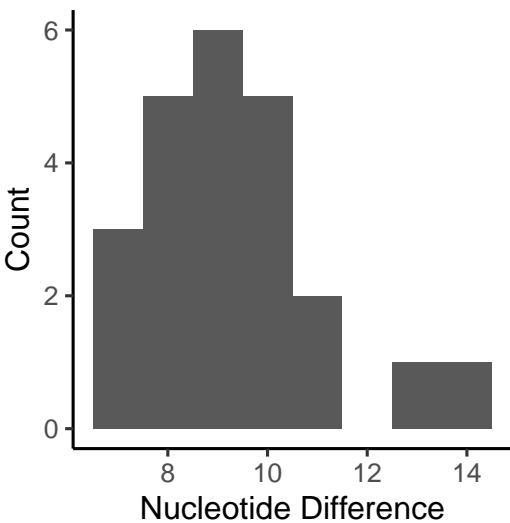
### IGHV2-70\*11\_15

457 sequences assigned  
75 (16.4%) exact matches, in which:  
53 unique CDR3  
4 unique J



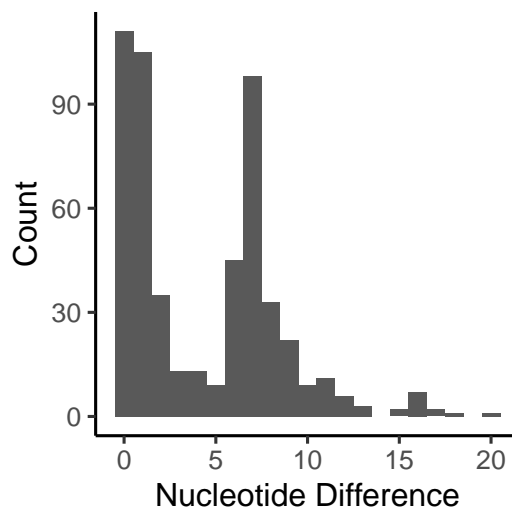
### IGHV1-NL1\*01

23 sequences assigned  
No exact matches.



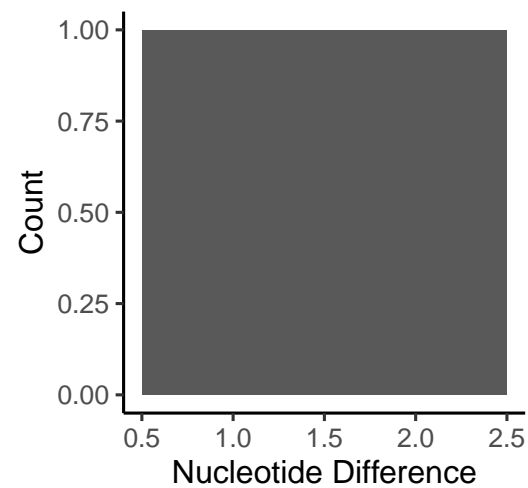
### IGHV2-26\*01

528 sequences assigned  
111 (21%) exact matches, in which:  
95 unique CDR3  
5 unique J



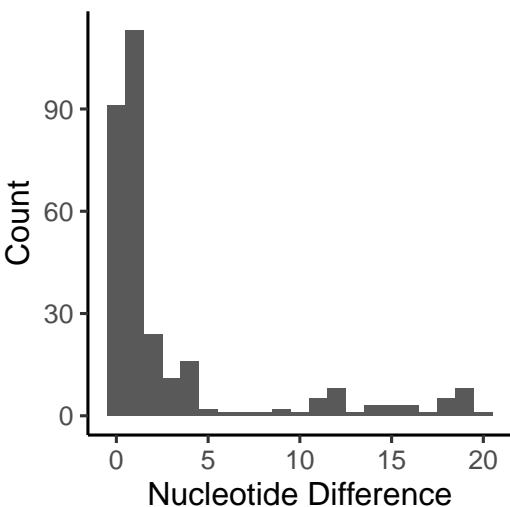
### IGHV2-70D\*04

2 sequences assigned  
No exact matches.



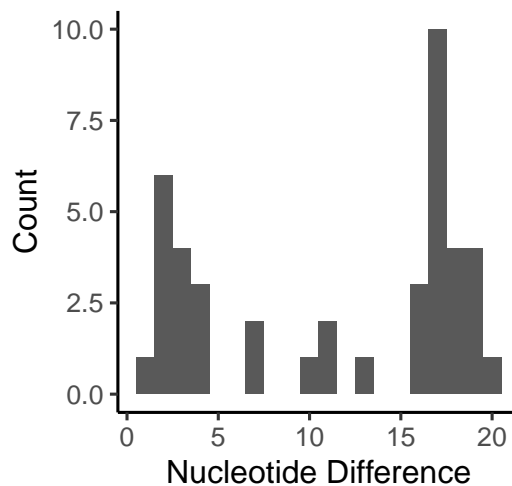
### IGHV2-5\*01

312 sequences assigned  
91 (29.2%) exact matches, in which:  
72 unique CDR3  
6 unique J



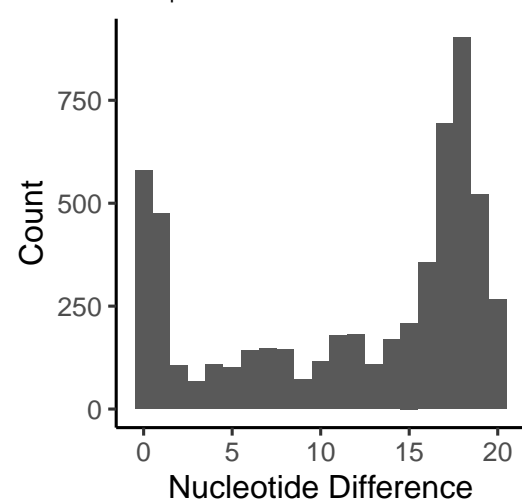
### IGHV2-70\*12

782 sequences assigned  
No exact matches.



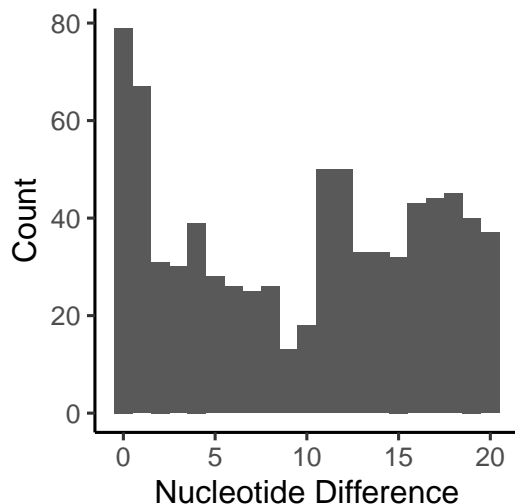
### IGHV3-7\*01

8500 sequences assigned  
579 (6.8%) exact matches, in which:  
411 unique CDR3  
6 unique J



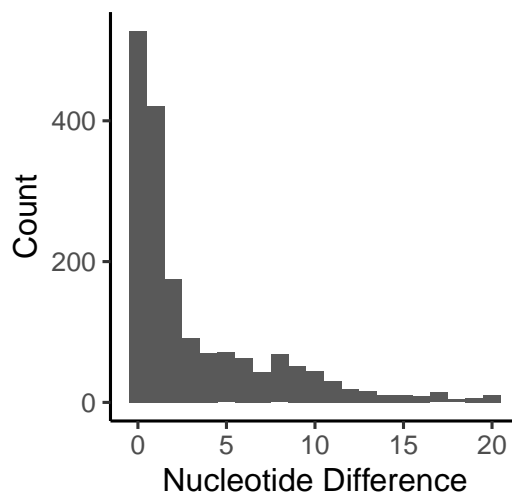
### IGHV3-7\*03

1147 sequences assigned  
79 (6.9%) exact matches, in which:  
67 unique CDR3  
6 unique J



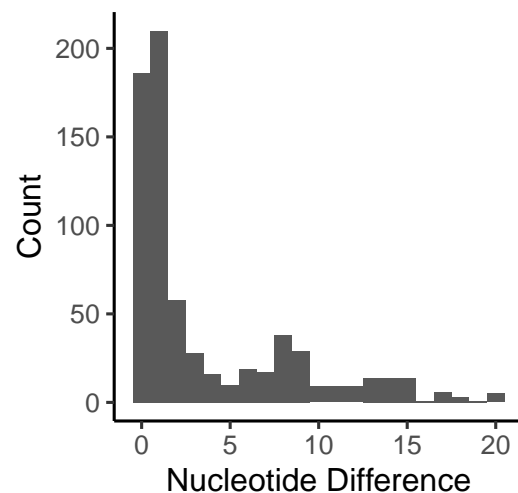
### IGHV3-11\*01

2630 sequences assigned  
528 (20.1%) exact matches, in which:  
370 unique CDR3  
6 unique J



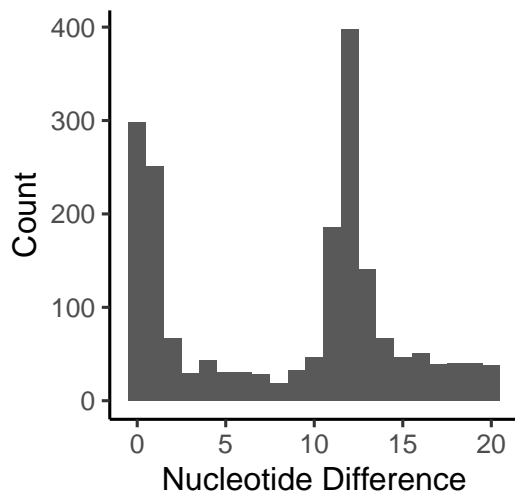
### IGHV3-13\*01

1112 sequences assigned  
186 (16.7%) exact matches, in which:  
123 unique CDR3  
6 unique J



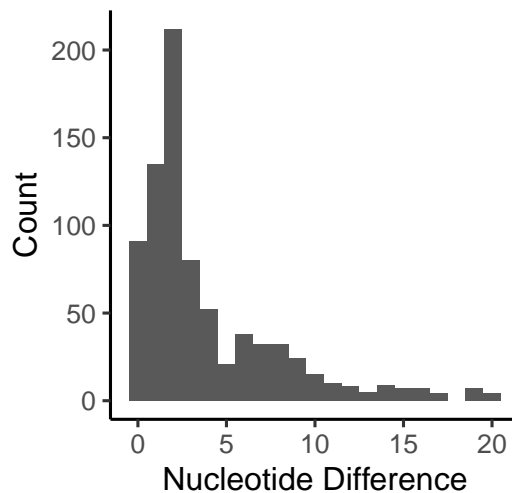
### IGHV3-7\*05

2116 sequences assigned  
298 (14.1%) exact matches, in which:  
205 unique CDR3  
6 unique J



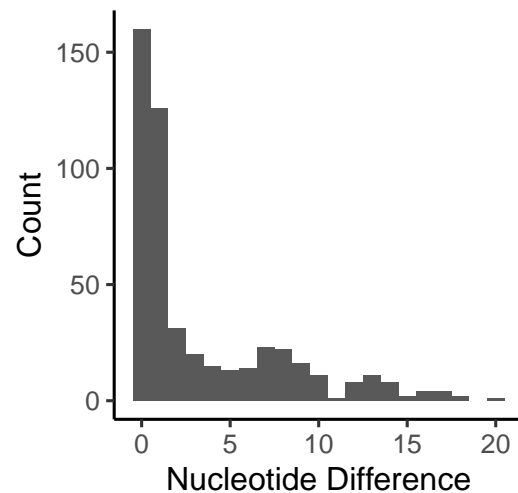
### IGHV3-11\*04

864 sequences assigned  
91 (10.5%) exact matches, in which:  
88 unique CDR3  
5 unique J



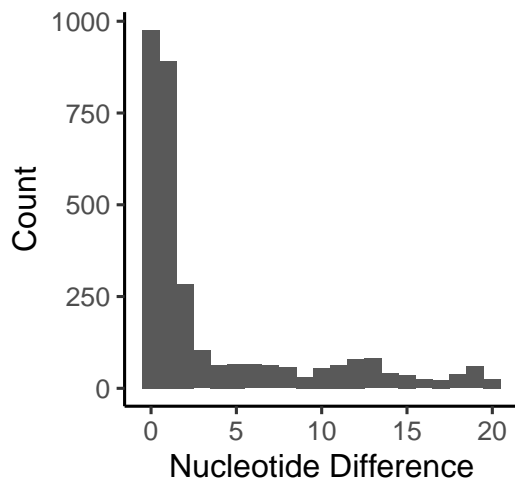
### IGHV3-13\*04

508 sequences assigned  
160 (31.5%) exact matches, in which:  
109 unique CDR3  
6 unique J



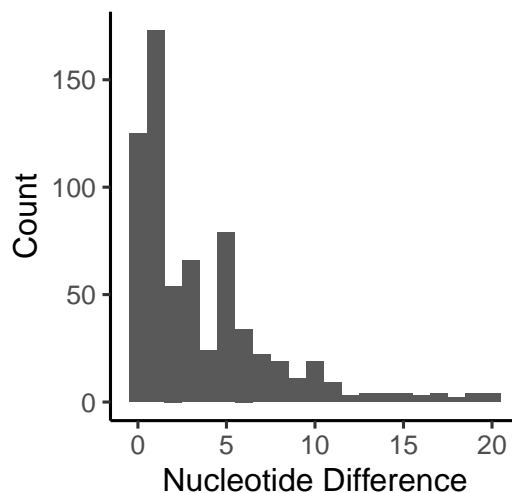
### IGHV3-9\*01

3399 sequences assigned  
976 (28.7%) exact matches, in which:  
580 unique CDR3  
6 unique J



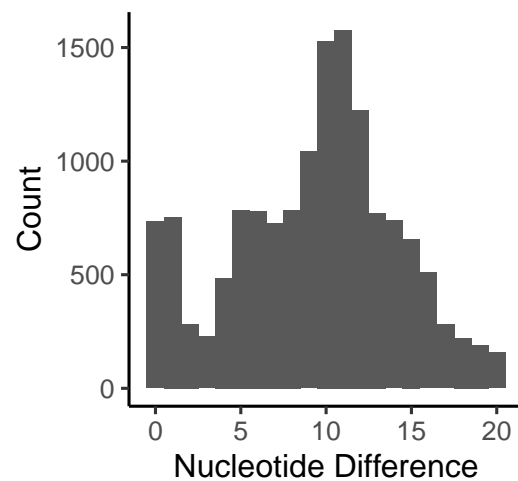
### IGHV3-11\*06

727 sequences assigned  
125 (17.2%) exact matches, in which:  
118 unique CDR3  
4 unique J



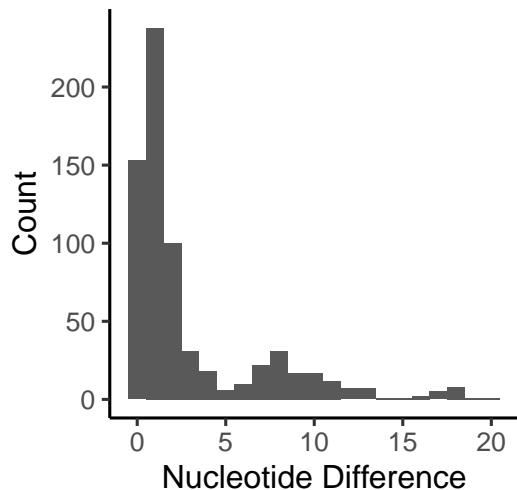
### IGHV3-15\*01\_02

15448 sequences assigned  
734 (4.8%) exact matches, in which:  
420 unique CDR3  
6 unique J



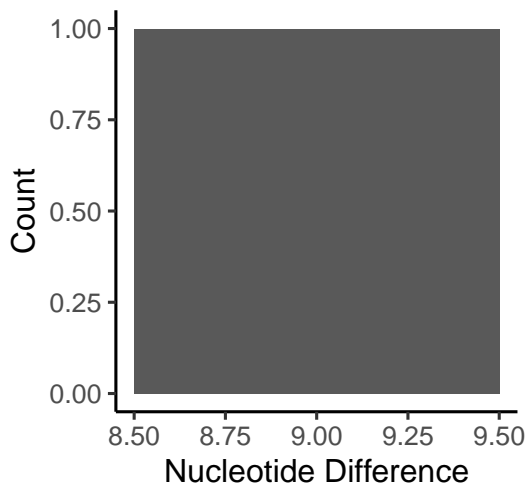
### IGHV3-20\*03\_04

947 sequences assigned  
153 (16.2%) exact matches, in which:  
87 unique CDR3  
5 unique J



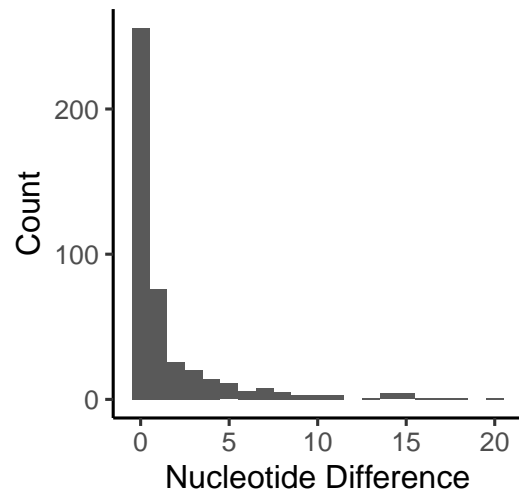
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



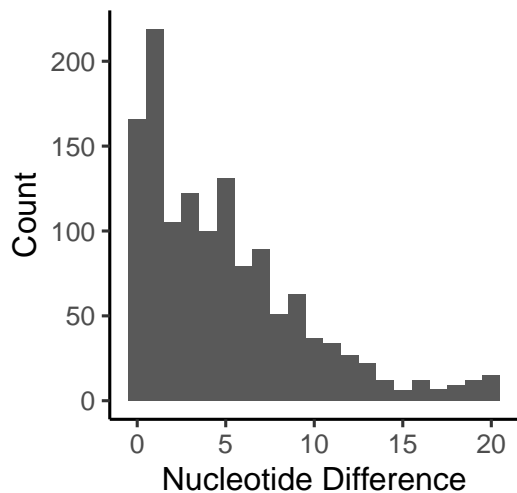
### IGHV3-30\*03

547 sequences assigned  
256 (46.8%) exact matches, in which:  
238 unique CDR3  
6 unique J



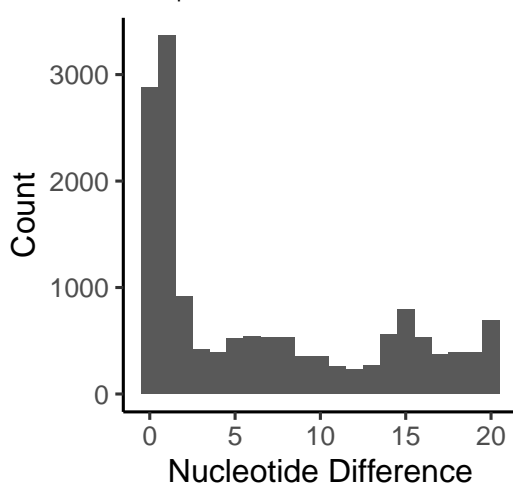
### IGHV3-21\*04

1422 sequences assigned  
166 (11.7%) exact matches, in which:  
144 unique CDR3  
6 unique J



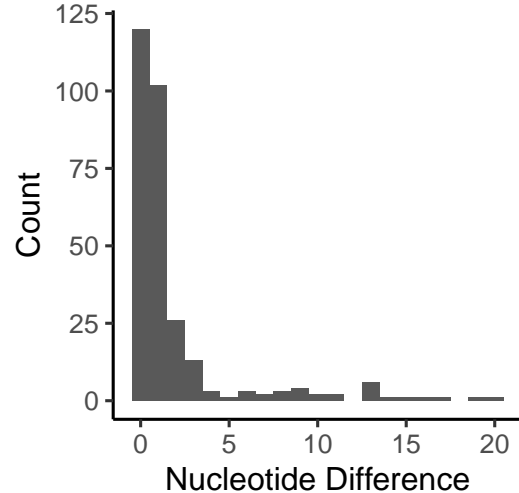
### IGHV3-23\*01\_04

20608 sequences assigned  
2881 (14%) exact matches, in which:  
1653 unique CDR3  
6 unique J



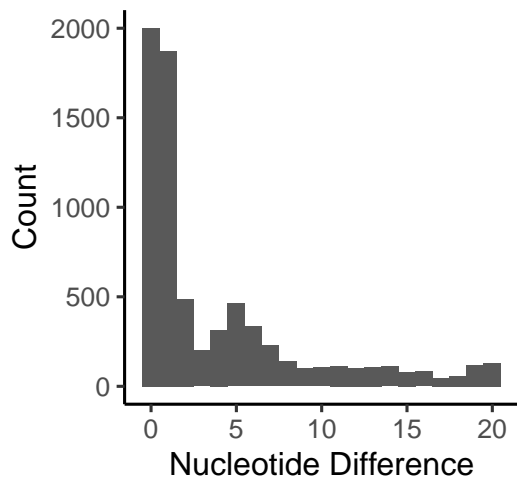
### IGHV3-30\*19

326 sequences assigned  
120 (36.8%) exact matches, in which:  
110 unique CDR3  
6 unique J



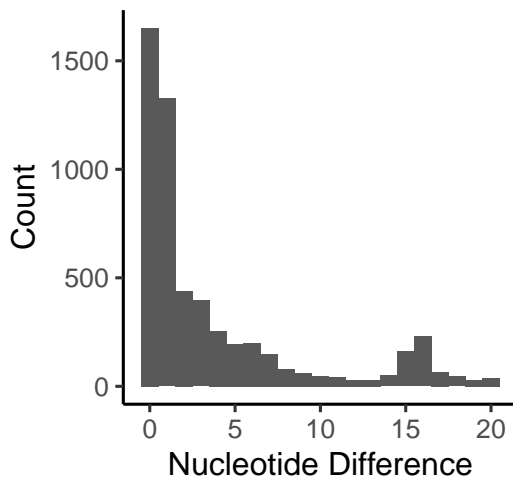
### IGHV3-21\*01\_02

8832 sequences assigned  
2001 (22.7%) exact matches, in which:  
1253 unique CDR3  
6 unique J



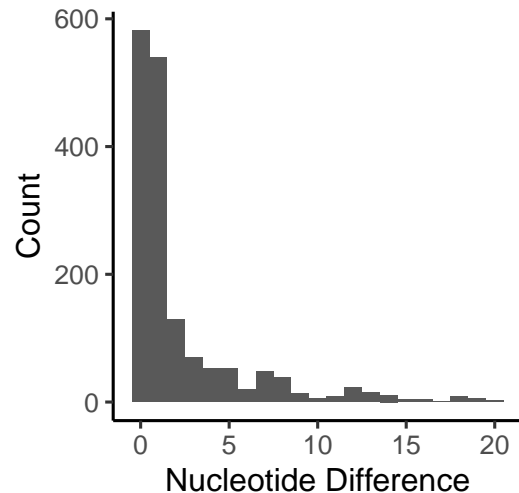
### IGHV3-30-3\*01

5752 sequences assigned  
1651 (28.7%) exact matches, in which:  
1139 unique CDR3  
6 unique J



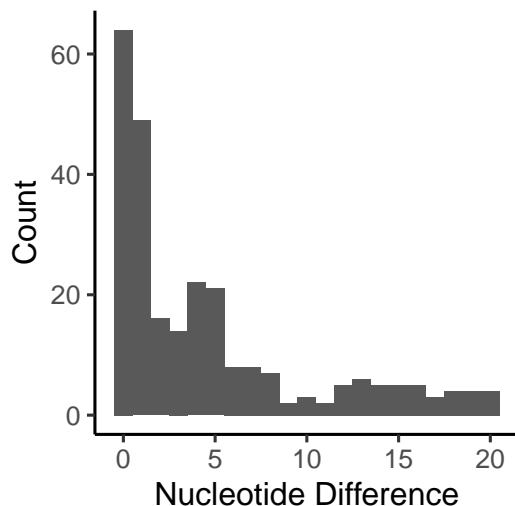
### IGHV3-33\*01

2098 sequences assigned  
582 (27.7%) exact matches, in which:  
398 unique CDR3  
6 unique J



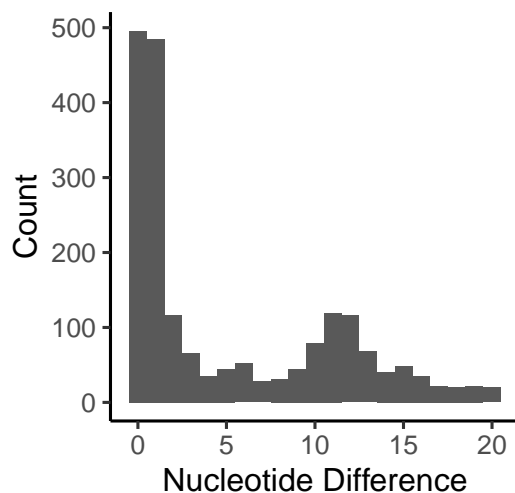
### IGHV3-33\*05

284 sequences assigned  
64 (22.5%) exact matches, in which:  
61 unique CDR3  
5 unique J



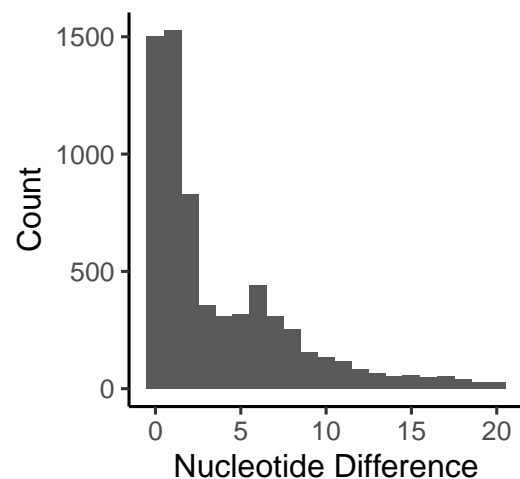
### IGHV3-43\*02

2239 sequences assigned  
496 (22.2%) exact matches, in which:  
284 unique CDR3  
6 unique J



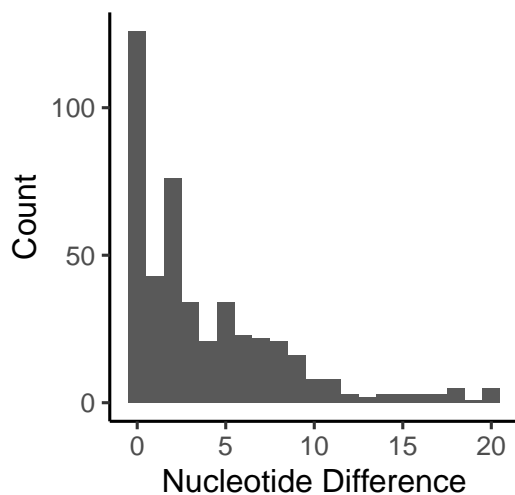
### IGHV3-48\*03

7692 sequences assigned  
1501 (19.5%) exact matches, in which:  
895 unique CDR3  
6 unique J



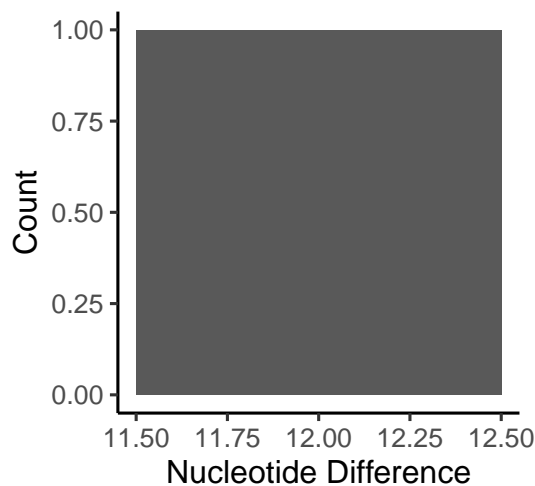
### IGHV3-33\*08

602 sequences assigned  
126 (20.9%) exact matches, in which:  
101 unique CDR3  
4 unique J



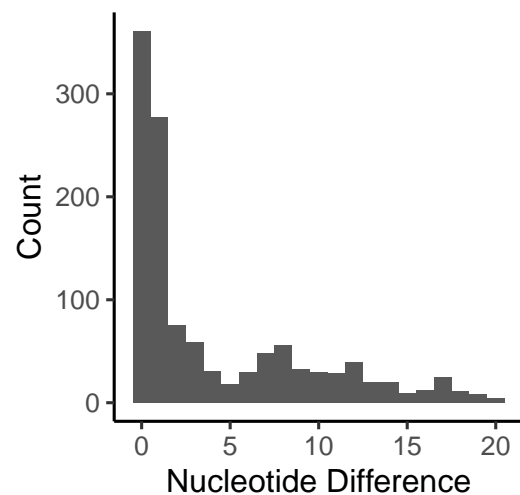
### IGHV3-47\*01

1 sequences assigned  
No exact matches.



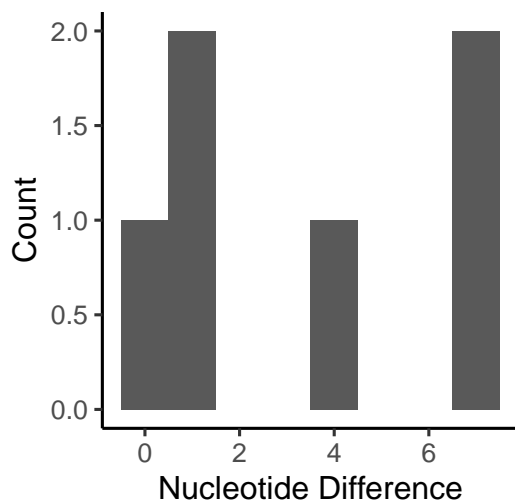
### IGHV3-49\*04

2049 sequences assigned  
361 (17.6%) exact matches, in which:  
223 unique CDR3  
6 unique J



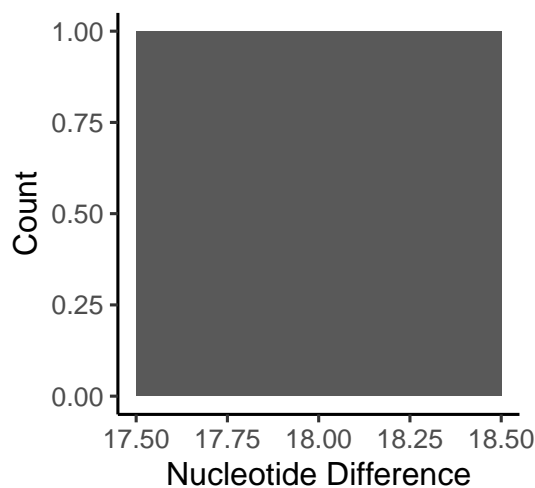
### IGHV3-35\*01

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



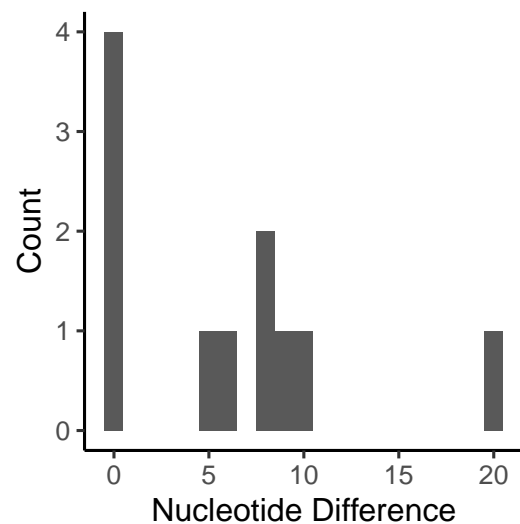
### IGHV3-47\*02

1 sequences assigned  
No exact matches.



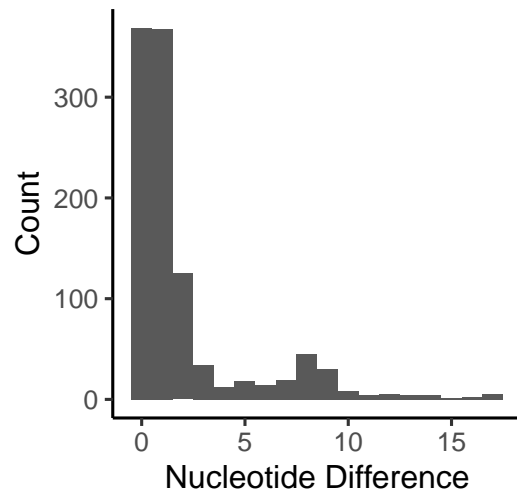
### IGHV3-52\*01\_03

11 sequences assigned  
4 (36.4%) exact matches, in which:  
4 unique CDR3  
4 unique J



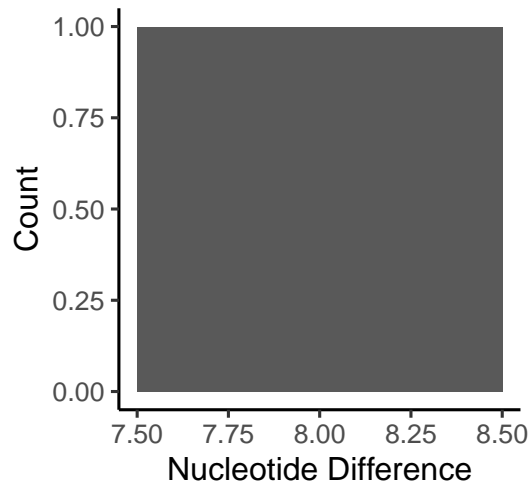
### IGHV3-53\*04

1125 sequences assigned  
369 (32.8%) exact matches, in which:  
247 unique CDR3  
5 unique J



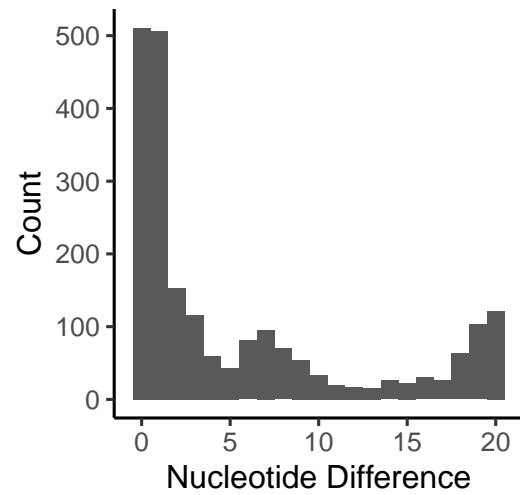
### IGHV3-62\*04

1 sequences assigned  
No exact matches.



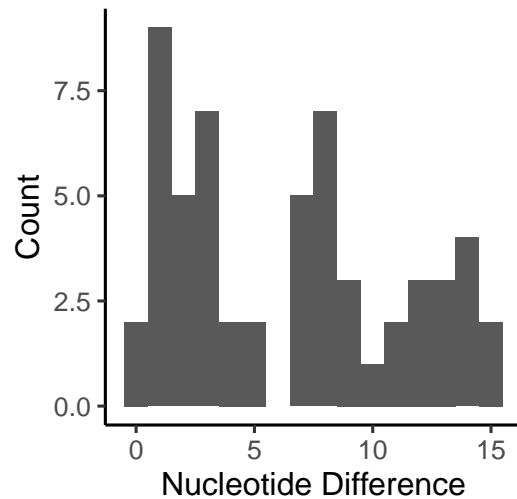
### IGHV3-66\*01

5644 sequences assigned  
511 (9.1%) exact matches, in which:  
373 unique CDR3  
5 unique J



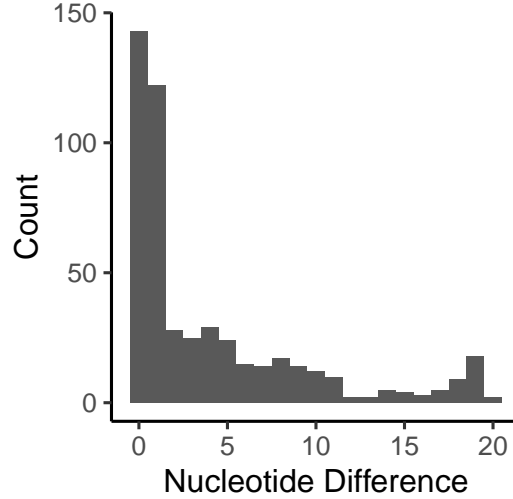
### IGHV3-53\*05

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



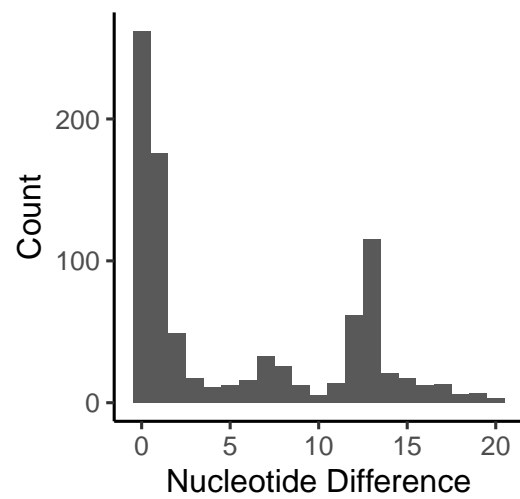
### IGHV3-64\*01

523 sequences assigned  
143 (27.3%) exact matches, in which:  
88 unique CDR3  
5 unique J



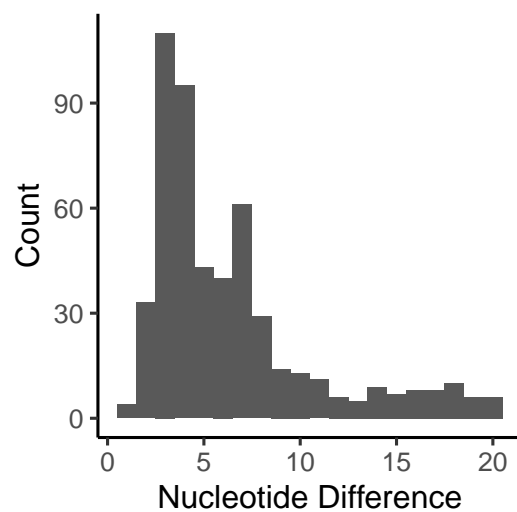
### IGHV3-66\*02

1072 sequences assigned  
262 (24.4%) exact matches, in which:  
184 unique CDR3  
5 unique J



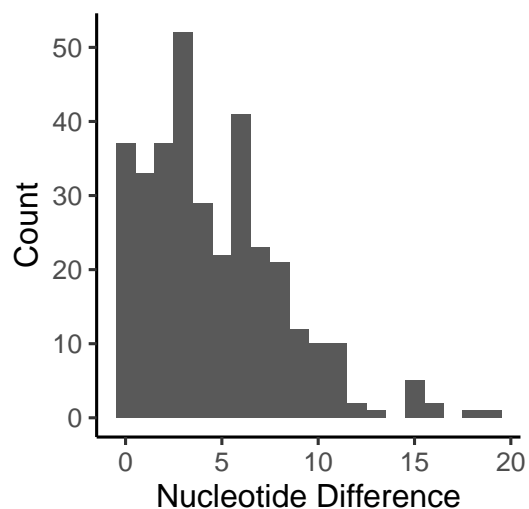
### IGHV3-53\*01\_02

635 sequences assigned  
No exact matches.



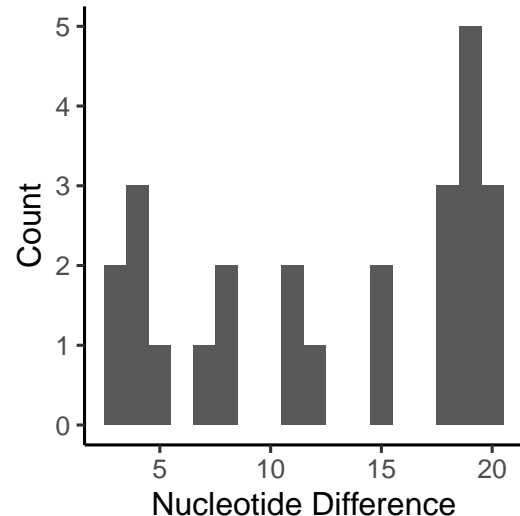
### IGHV3-64\*04

363 sequences assigned  
37 (10.2%) exact matches, in which:  
36 unique CDR3  
4 unique J



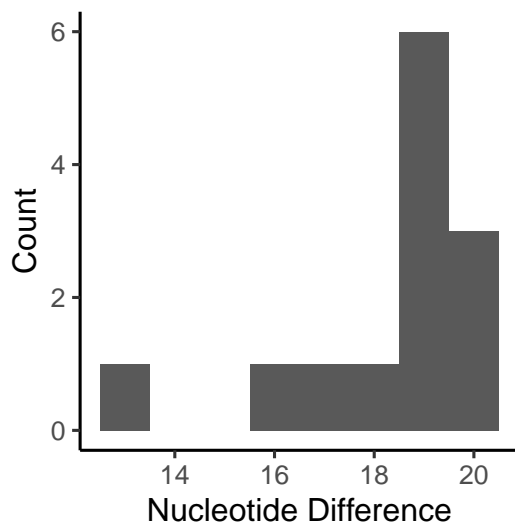
### IGHV3-69-1\*01

45 sequences assigned  
No exact matches.



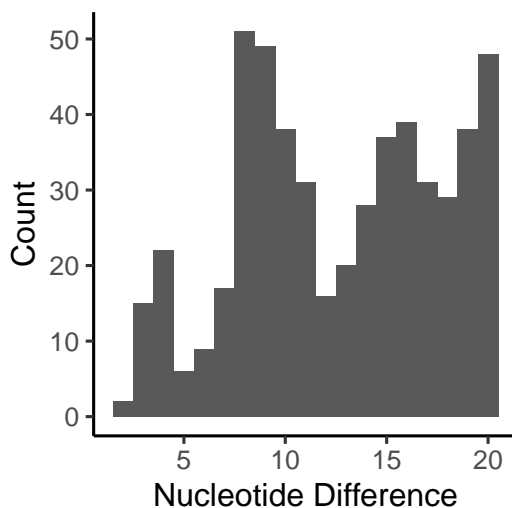
### IGHV3-69-1\*02

26 sequences assigned  
No exact matches.



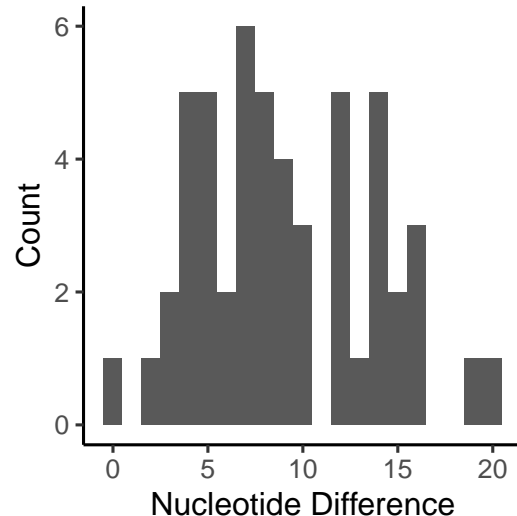
### IGHV3-74\*03

1870 sequences assigned  
No exact matches.



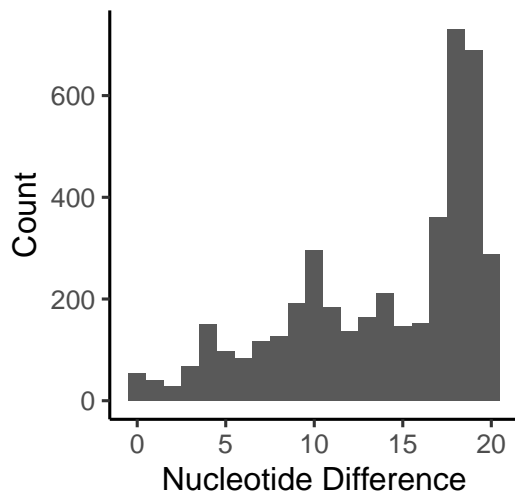
### IGHV3-NL1\*01

59 sequences assigned  
1 (1.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



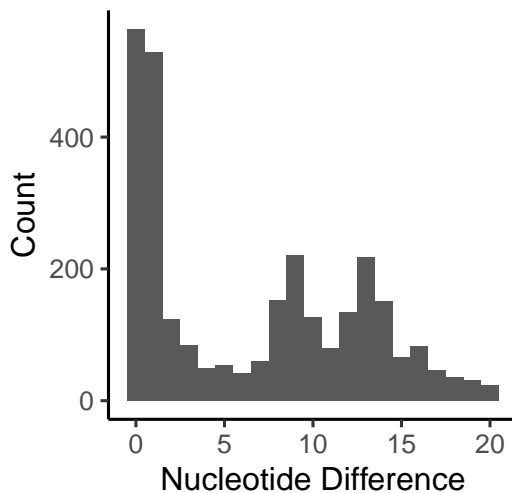
### IGHV3-72\*01

5838 sequences assigned  
54 (0.9%) exact matches, in which:  
34 unique CDR3  
5 unique J



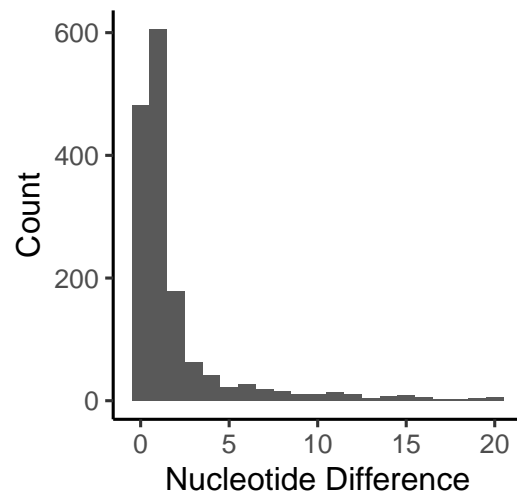
### IGHV3-74\*01\_02

3270 sequences assigned  
564 (17.2%) exact matches, in which:  
377 unique CDR3  
6 unique J



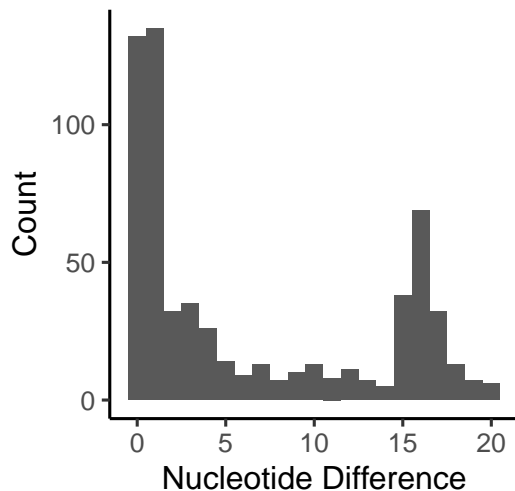
### IGHV4-4\*07

1668 sequences assigned  
481 (28.8%) exact matches, in which:  
404 unique CDR3  
6 unique J



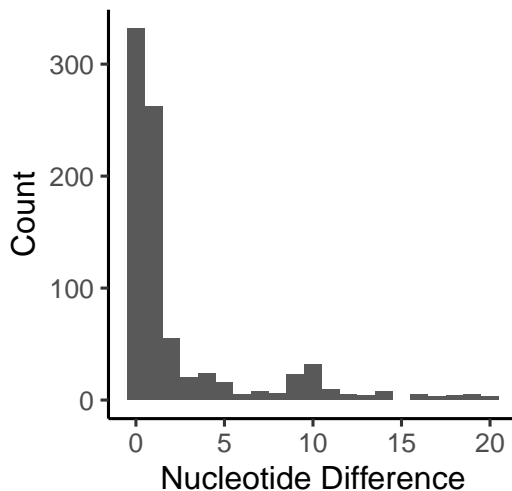
### IGHV3-73\*01\_02

987 sequences assigned  
132 (13.4%) exact matches, in which:  
81 unique CDR3  
5 unique J



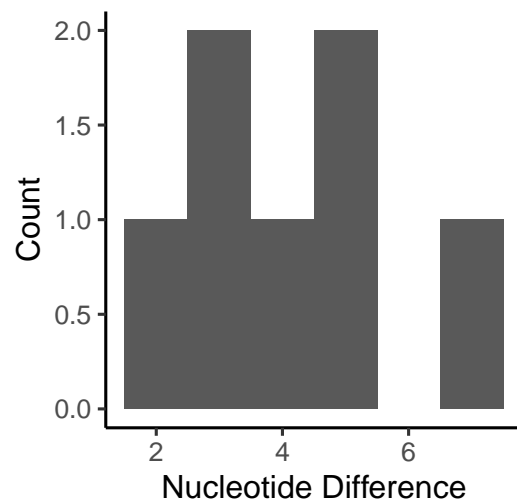
### IGHV3-64D\*09

941 sequences assigned  
332 (35.3%) exact matches, in which:  
199 unique CDR3  
5 unique J



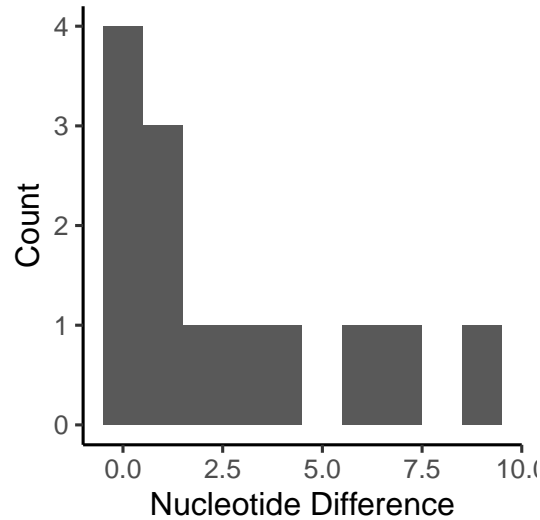
### IGHV4-28\*03

8 sequences assigned  
No exact matches.



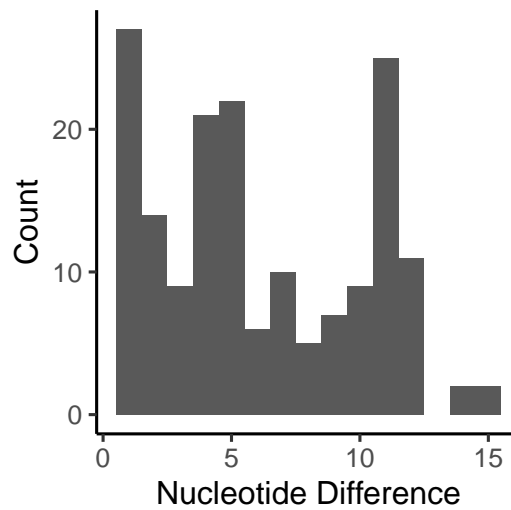
### IGHV4-28\*02\_05

13 sequences assigned  
4 (30.8%) exact matches, in which:  
3 unique CDR3  
3 unique J



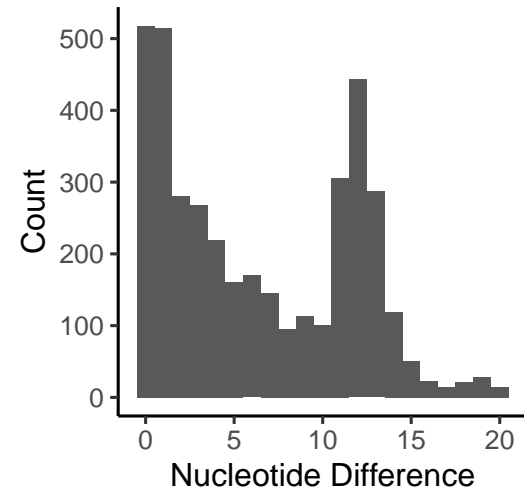
### IGHV4-30-2\*03

191 sequences assigned  
No exact matches.



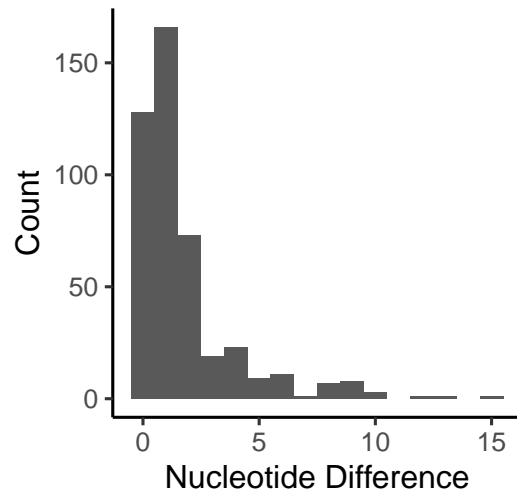
### IGHV4-31\*02

3981 sequences assigned  
518 (13%) exact matches, in which:  
414 unique CDR3  
6 unique J



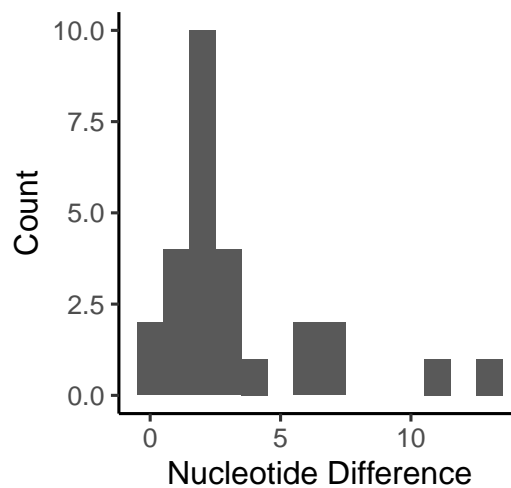
### IGHV4-30-2\*01

1447 sequences assigned  
128 (8.8%) exact matches, in which:  
68 unique CDR3  
4 unique J



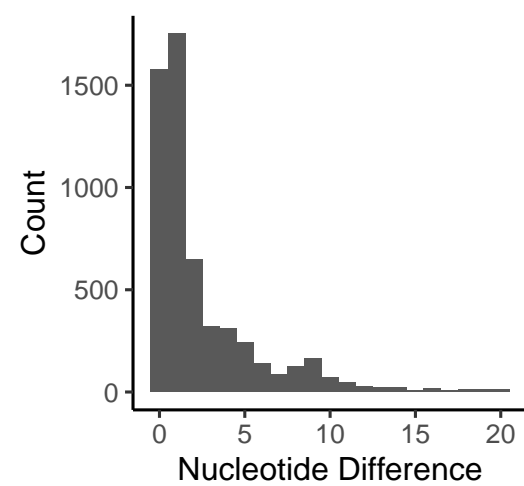
### IGHV4-30-2\*05

38 sequences assigned  
2 (5.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



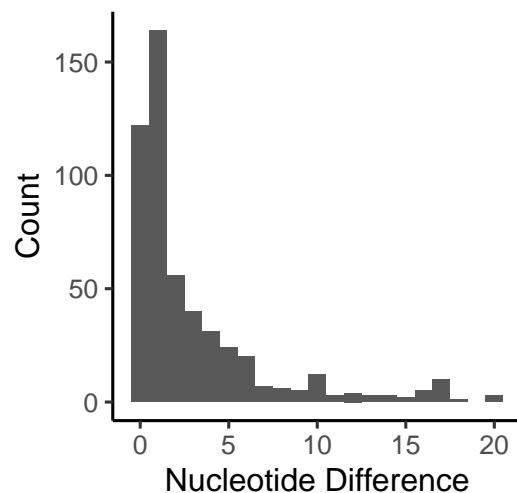
### IGHV4-34\*01\_02

5922 sequences assigned  
1579 (26.7%) exact matches, in which:  
1124 unique CDR3  
6 unique J



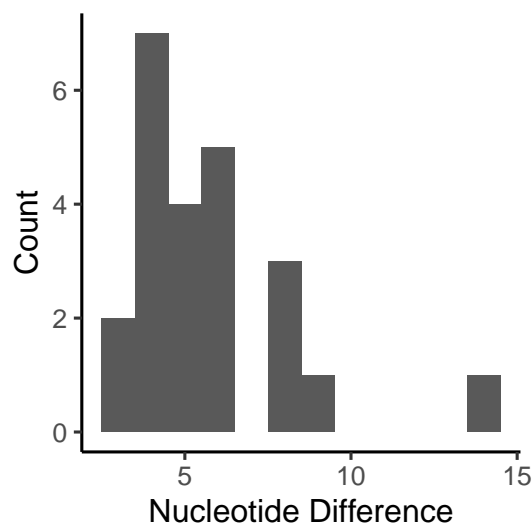
### IGHV4-30-4\*01

765 sequences assigned  
122 (15.9%) exact matches, in which:  
92 unique CDR3  
4 unique J



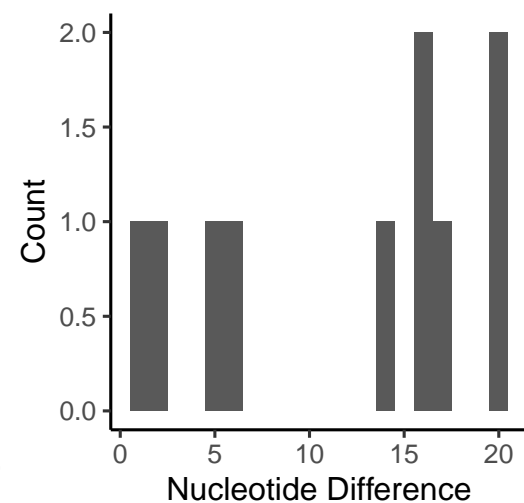
### IGHV4-30-4\*07

23 sequences assigned  
No exact matches.



### IGHV4-38-2\*01

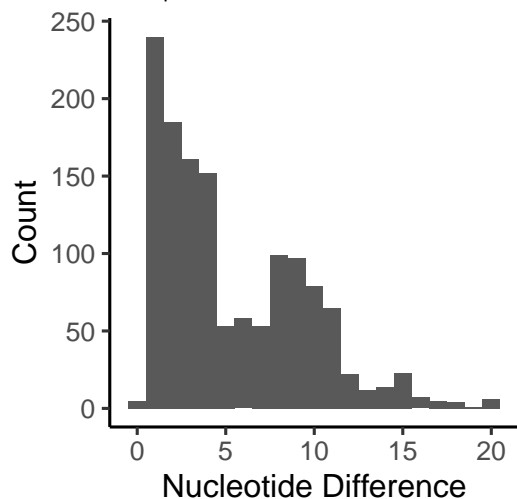
16 sequences assigned  
No exact matches.





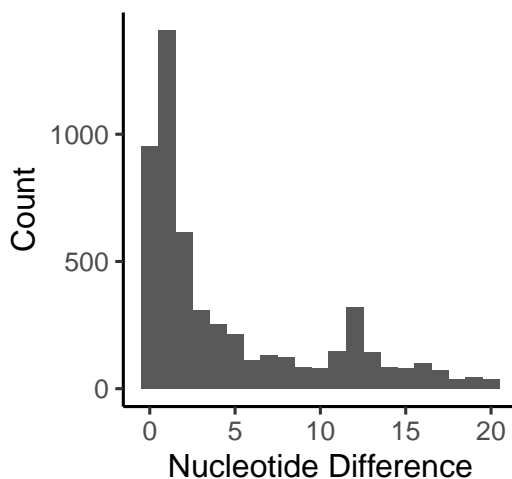
### IGHV4-39\*07

1550 sequences assigned  
5 (0.3%) exact matches, in which:  
5 unique CDR3  
2 unique J



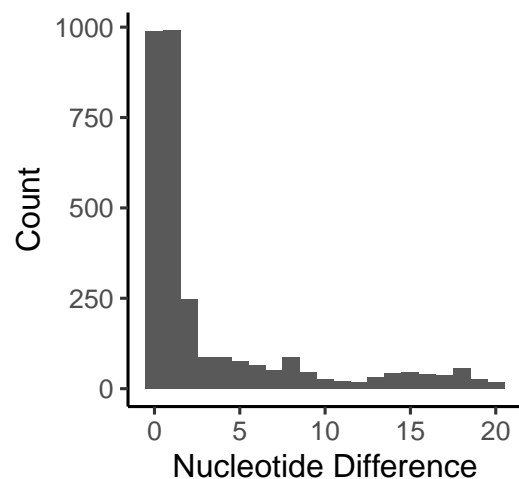
### IGHV4-59\*08

5883 sequences assigned  
954 (16.2%) exact matches, in which:  
730 unique CDR3  
6 unique J



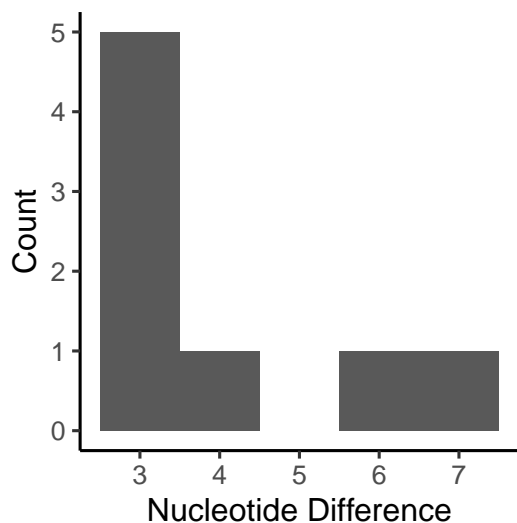
### IGHV4-61\*02

3252 sequences assigned  
990 (30.4%) exact matches, in which:  
828 unique CDR3  
6 unique J



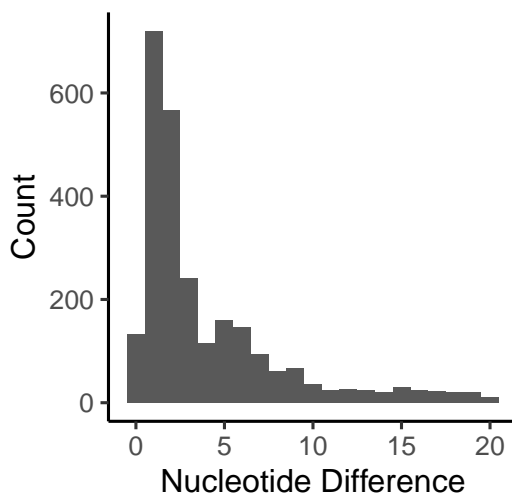
### IGHV4-55\*09

10 sequences assigned  
No exact matches.



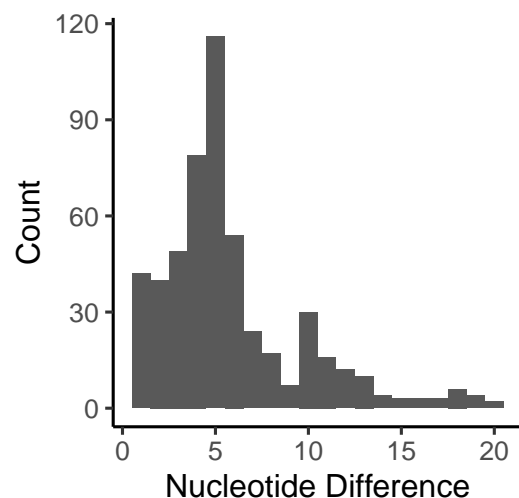
### IGHV4-59\*12

3345 sequences assigned  
133 (4%) exact matches, in which:  
126 unique CDR3  
6 unique J



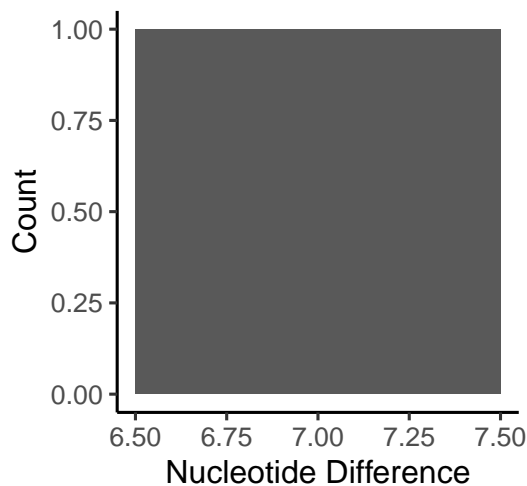
### IGHV4-61\*08

541 sequences assigned  
No exact matches.



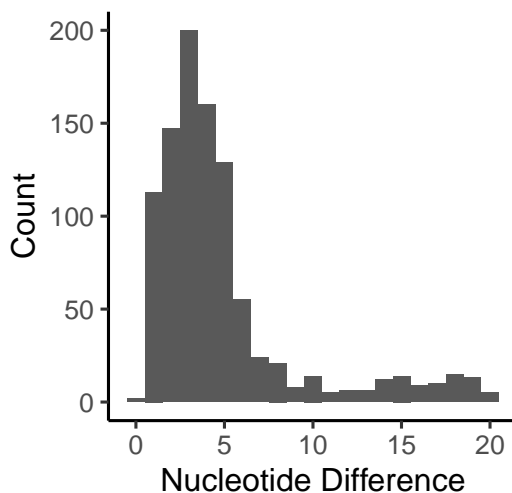
### IGHV4-55\*02\_04\_08

1 sequences assigned  
No exact matches.



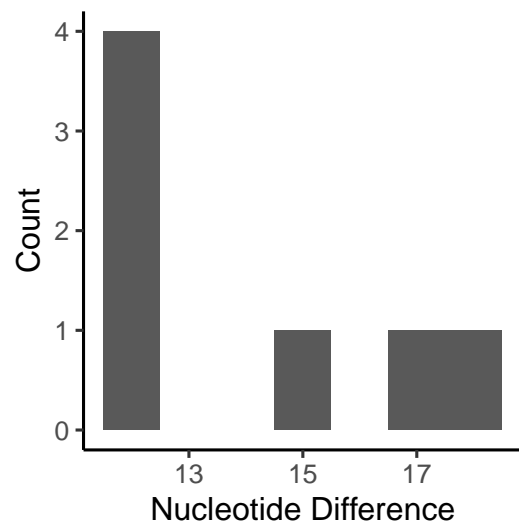
### IGHV4-61\*01

1019 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



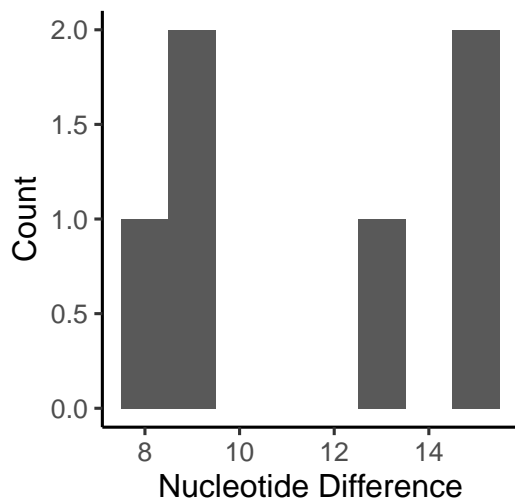
### IGHV1/OR15-2\*02\_03

10 sequences assigned  
No exact matches.



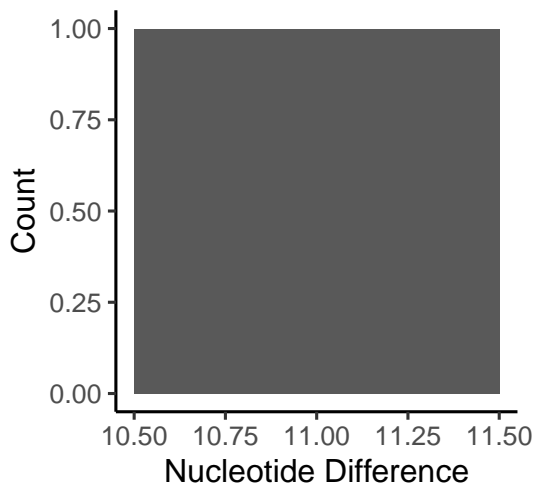
### IGHV1/OR15-3\*02

7 sequences assigned  
No exact matches.



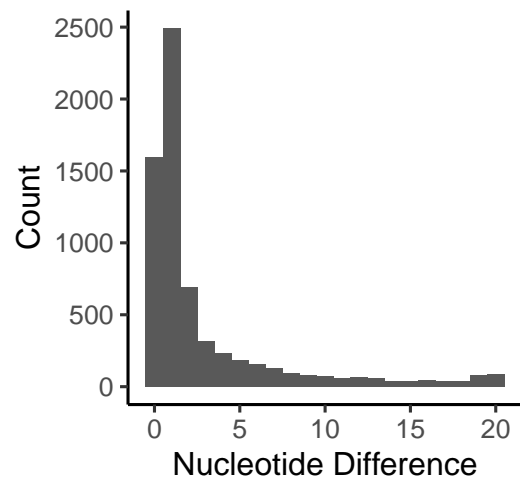
### IGHV1/OR15-9\*01

1 sequences assigned  
No exact matches.



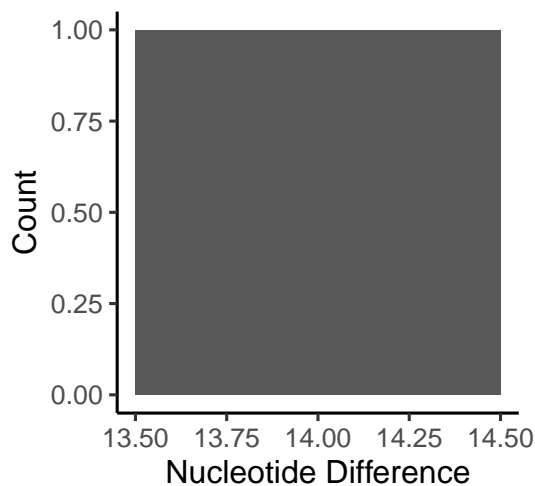
### IGHV5-51\*01\_03

8470 sequences assigned  
1594 (18.8%) exact matches, in which:  
818 unique CDR3  
5 unique J



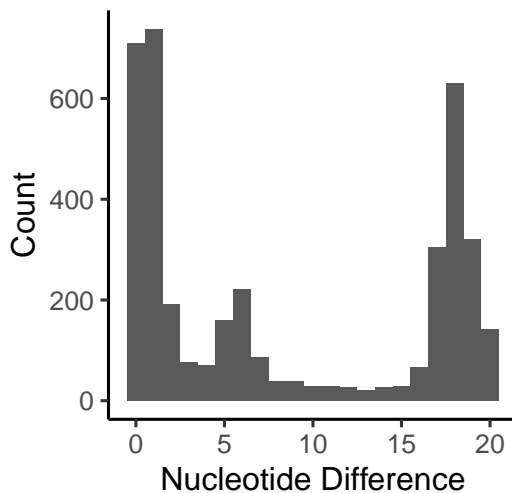
### IGHV1/OR15-4\*01

1 sequences assigned  
No exact matches.



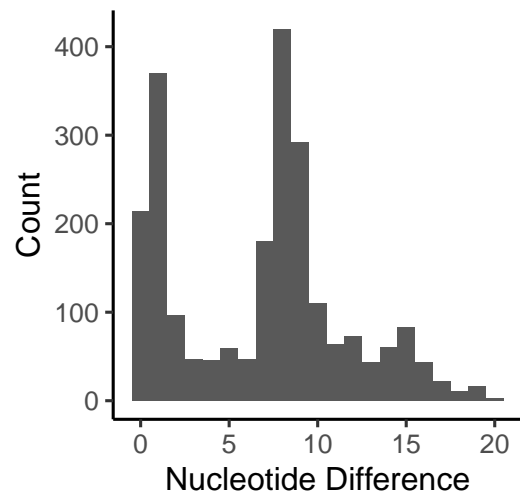
### IGHV5-10-1\*01\_03

4376 sequences assigned  
710 (16.2%) exact matches, in which:  
468 unique CDR3  
5 unique J



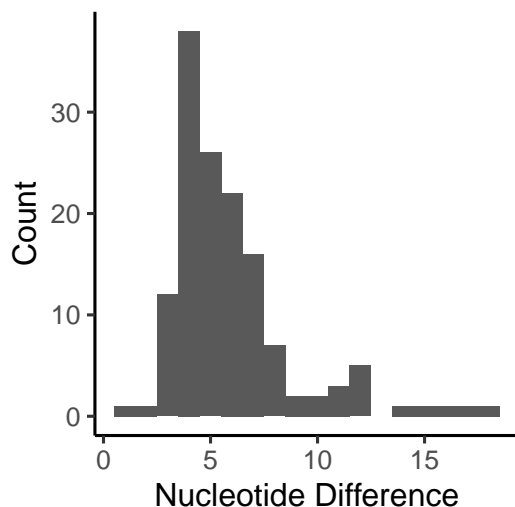
### IGHV6-1\*01\_02

2493 sequences assigned  
214 (8.6%) exact matches, in which:  
158 unique CDR3  
6 unique J



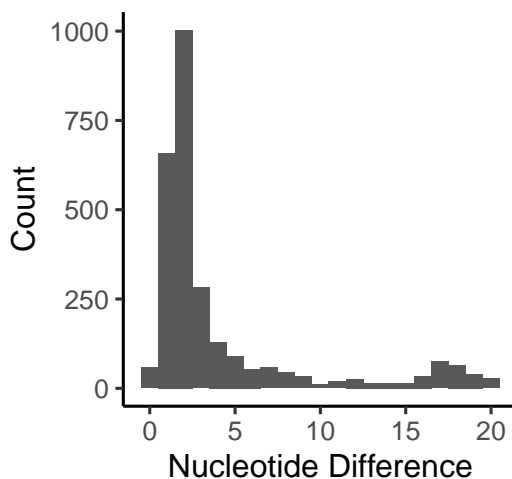
### IGHV4/OR15-8\*01

144 sequences assigned  
No exact matches.



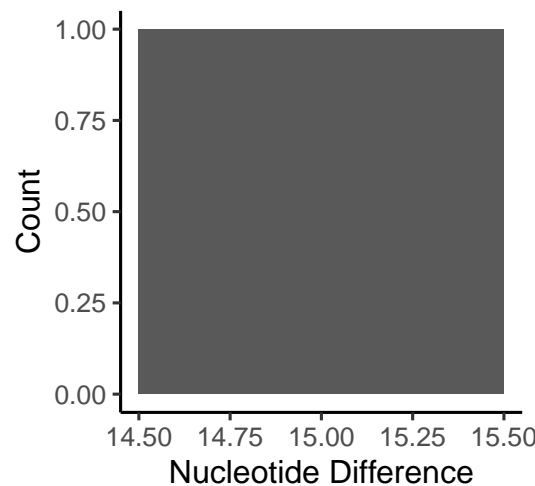
### IGHV5-51\*07

4002 sequences assigned  
58 (1.4%) exact matches, in which:  
47 unique CDR3  
4 unique J



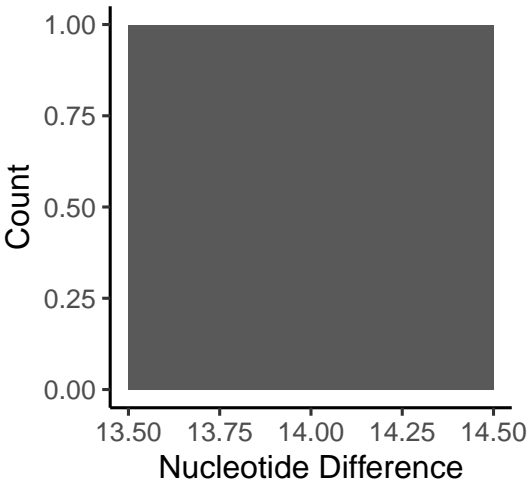
### IGHV3/OR16-6\*02

4 sequences assigned  
No exact matches.



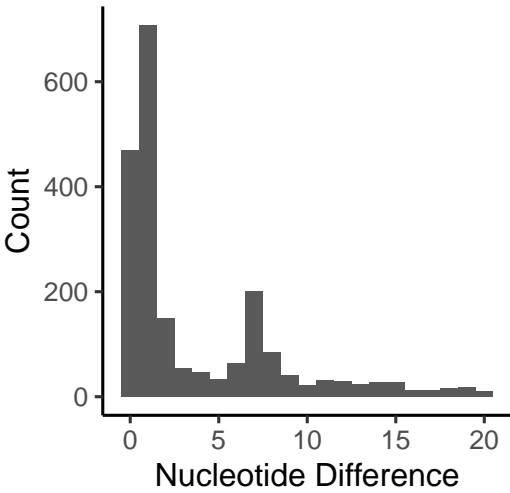
IGHV3/OR16-13\*01

1 sequences assigned  
No exact matches.



IGHV7-4-1\*02

2654 sequences assigned  
470 (17.7%) exact matches, in which:  
360 unique CDR3  
6 unique J



IGHV7-81\*01

2 sequences assigned  
No exact matches.

