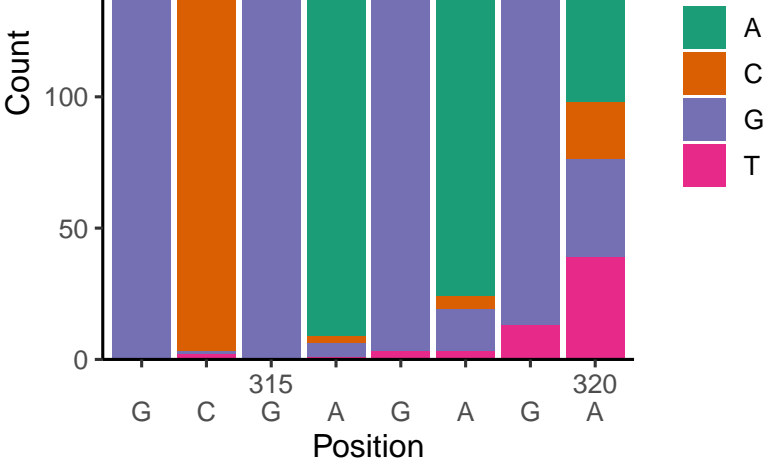
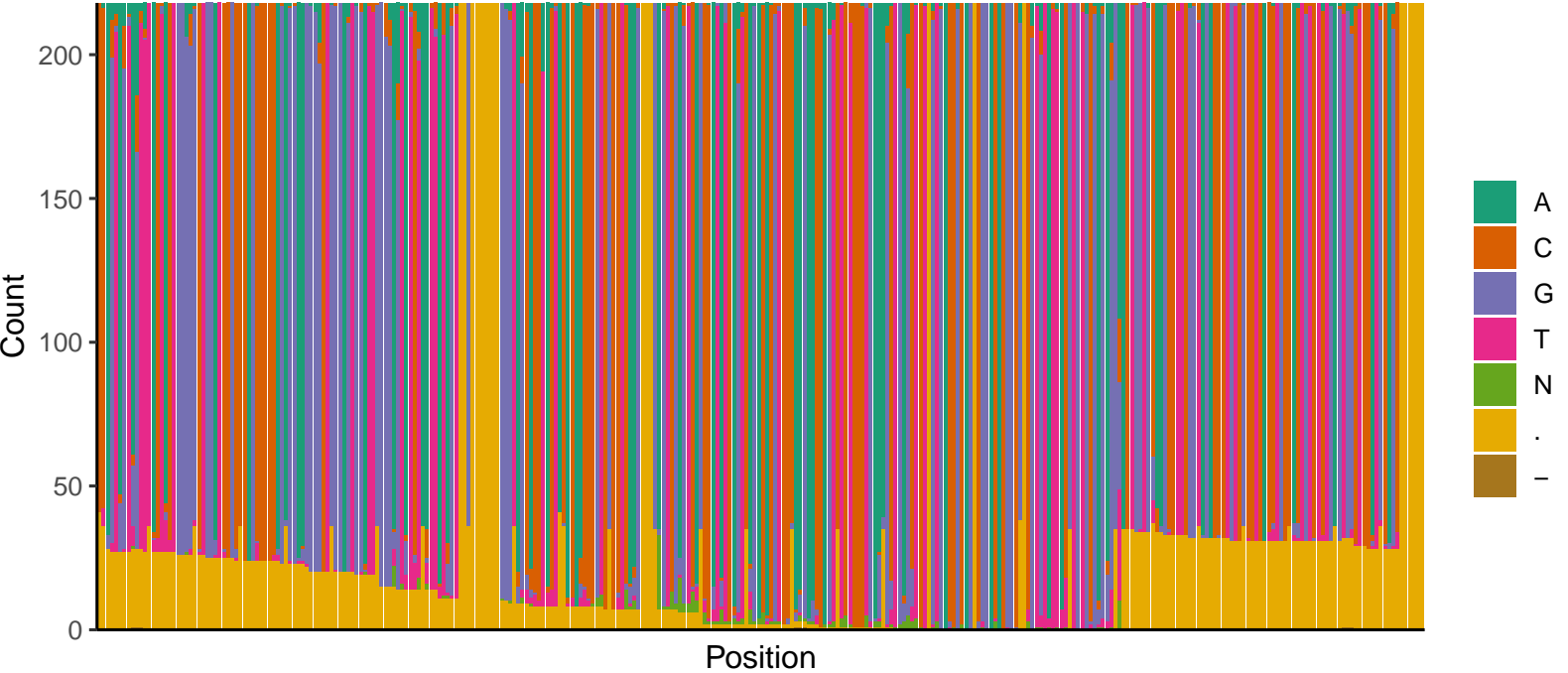


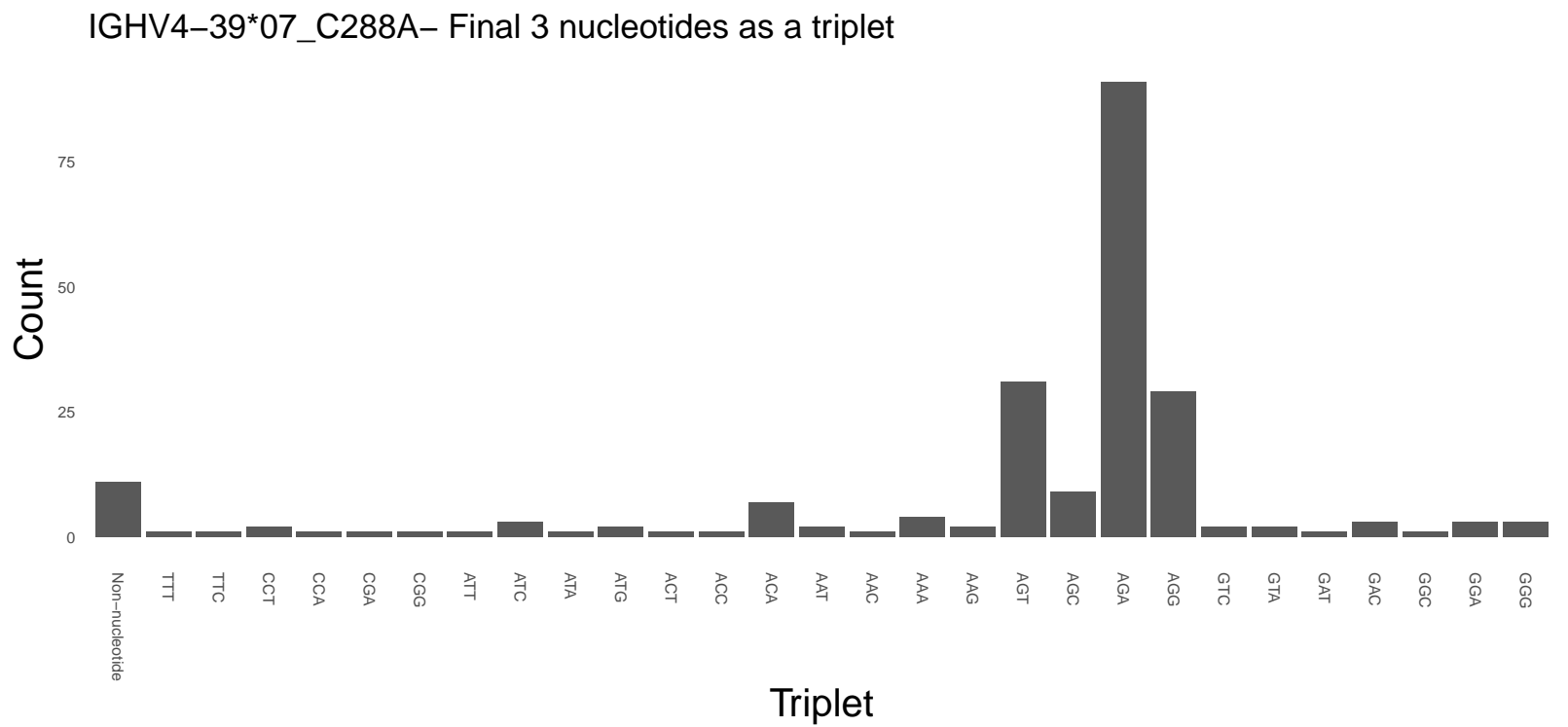
Gene IGHV4-39\*07\_C288A



Gene IGHV4-39\*07\_C288A

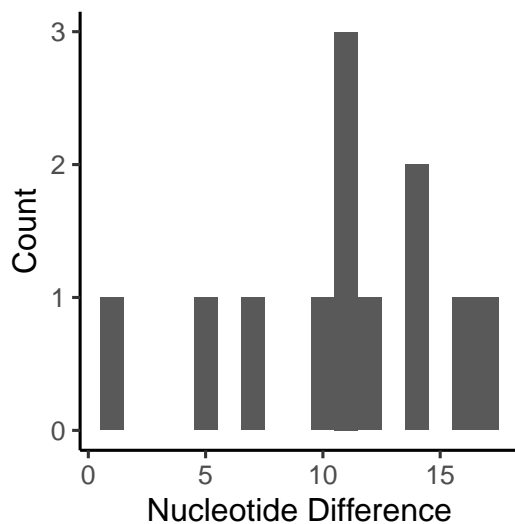


IGHV4-39\*07\_C288A- Final 3 nucleotides as a triplet



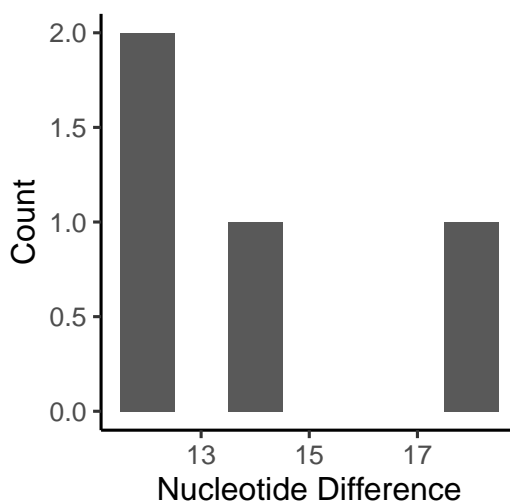
### IGHV1-2\*02

13 sequences assigned  
No exact matches.



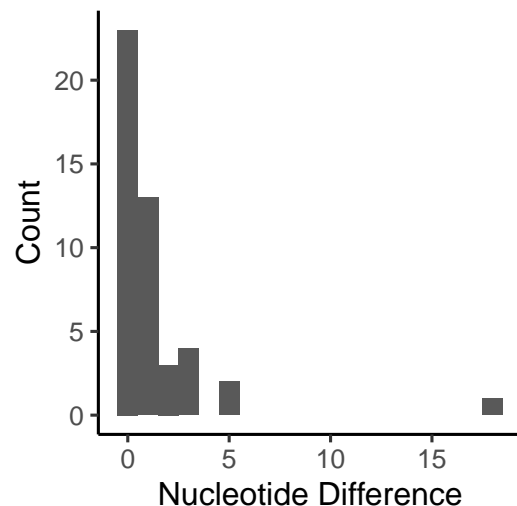
### IGHV1-8\*02

4 sequences assigned  
No exact matches.



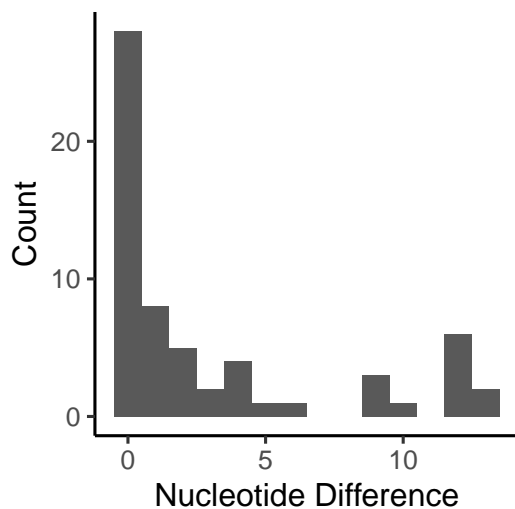
### IGHV1-24\*01

48 sequences assigned  
23 (47.9%) exact matches, in which:  
22 unique CDR3  
3 unique J



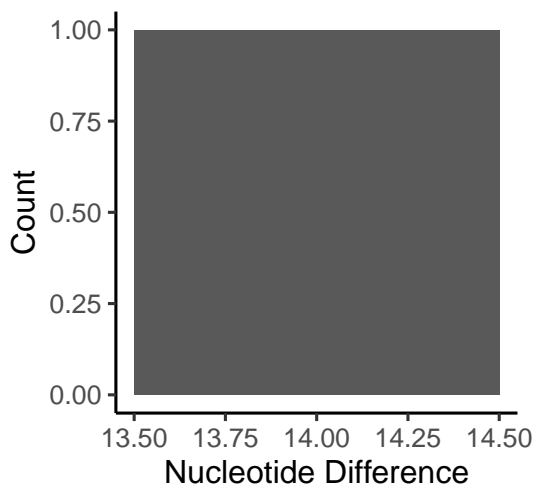
### IGHV1-2\*04

61 sequences assigned  
28 (45.9%) exact matches, in which:  
28 unique CDR3  
4 unique J



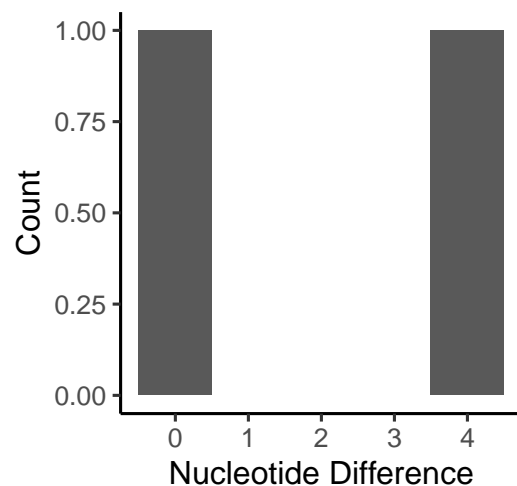
### IGHV1-8\*03

1 sequences assigned  
No exact matches.



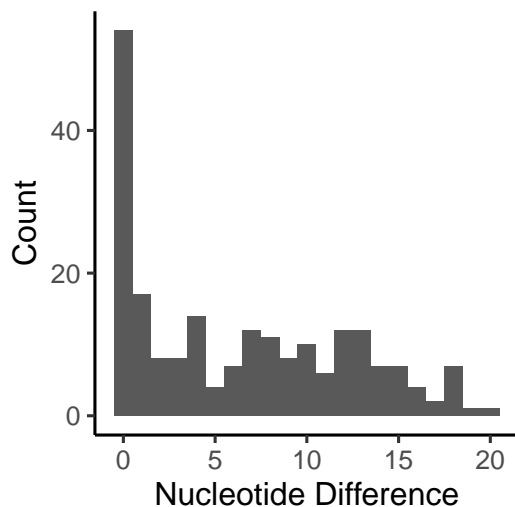
### IGHV1-45\*02

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



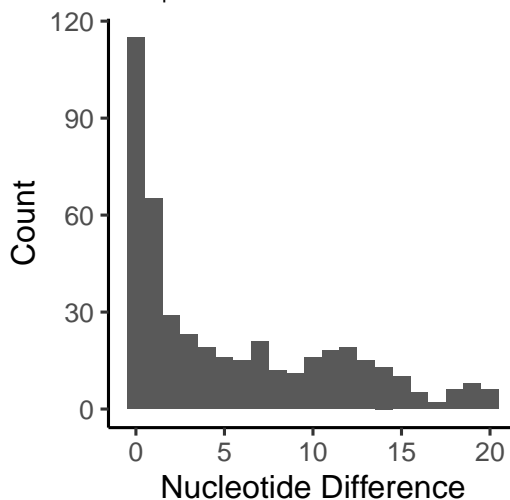
### IGHV1-3\*01

221 sequences assigned  
54 (24.4%) exact matches, in which:  
51 unique CDR3  
5 unique J



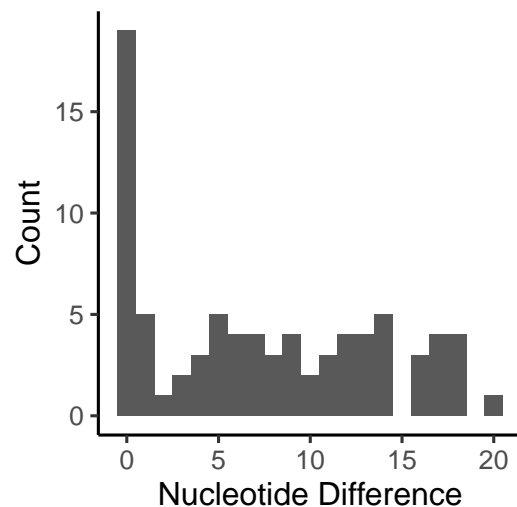
### IGHV1-18\*01

463 sequences assigned  
115 (24.8%) exact matches, in which:  
114 unique CDR3  
5 unique J



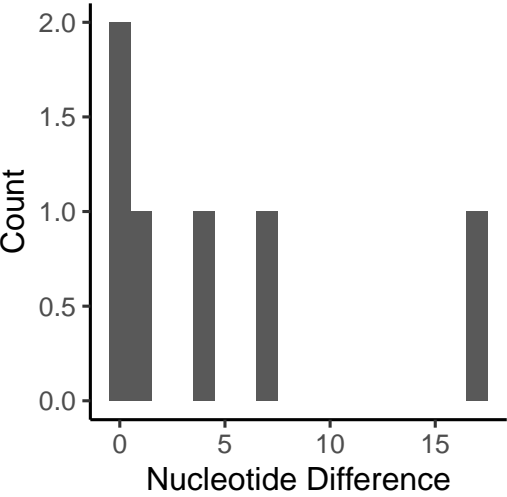
### IGHV1-46\*01

103 sequences assigned  
19 (18.4%) exact matches, in which:  
18 unique CDR3  
5 unique J



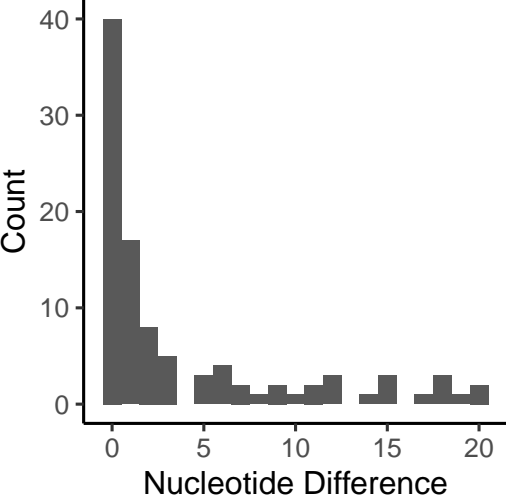
IGHV1-58\*01

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



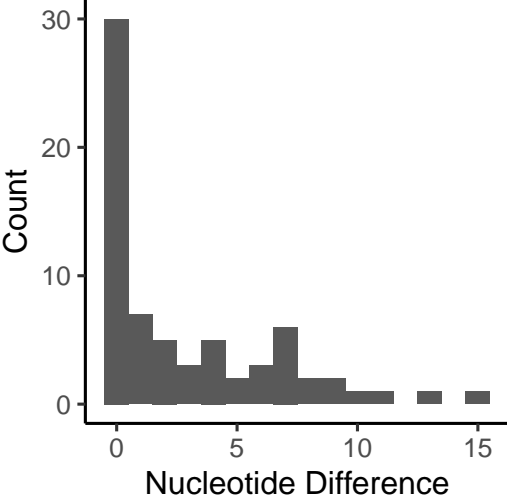
IGHV1-69\*04

104 sequences assigned  
40 (38.5%) exact matches, in which:  
40 unique CDR3  
5 unique J



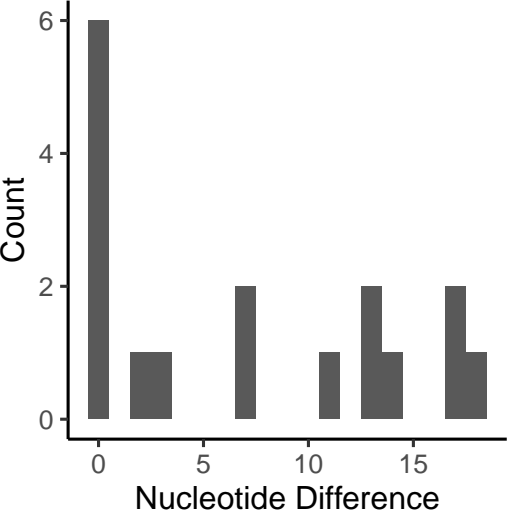
IGHV2-5\*02

70 sequences assigned  
30 (42.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



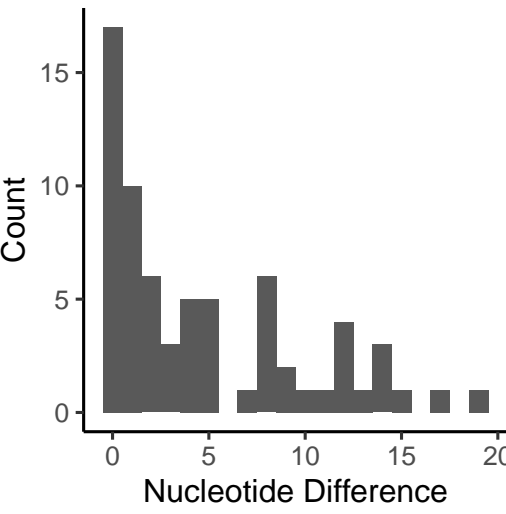
IGHV1-58\*02

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



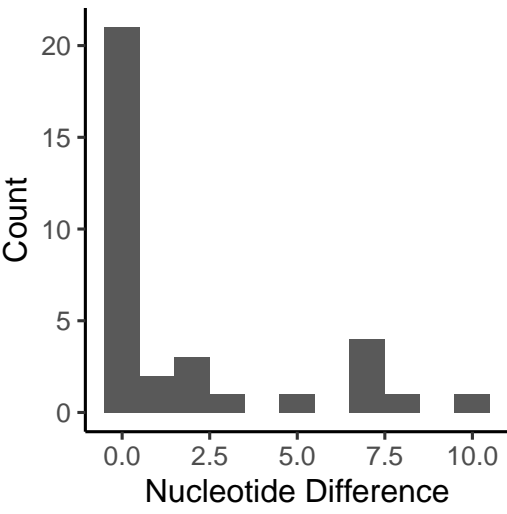
IGHV1-69\*06

73 sequences assigned  
17 (23.3%) exact matches, in which:  
17 unique CDR3  
3 unique J



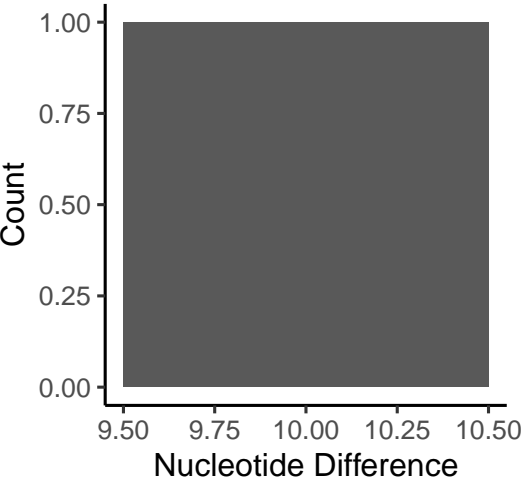
IGHV2-26\*01

34 sequences assigned  
21 (61.8%) exact matches, in which:  
21 unique CDR3  
5 unique J



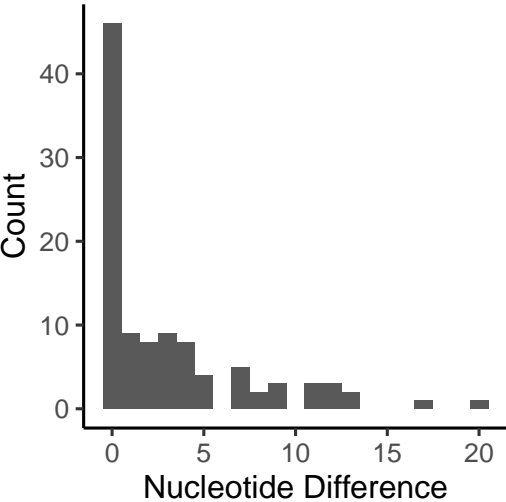
IGHV1-69-2\*01

1 sequences assigned  
No exact matches.



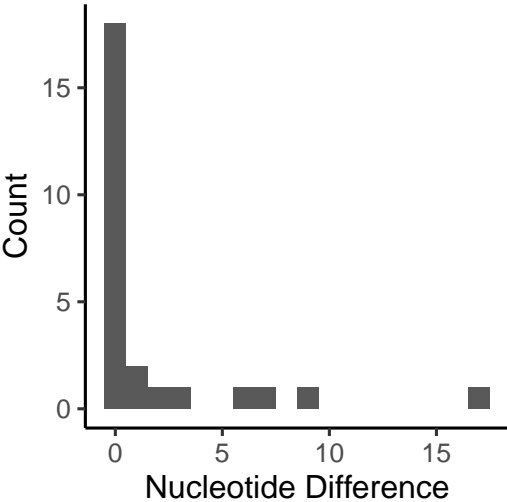
IGHV2-5\*01

105 sequences assigned  
46 (43.8%) exact matches, in which:  
46 unique CDR3  
4 unique J



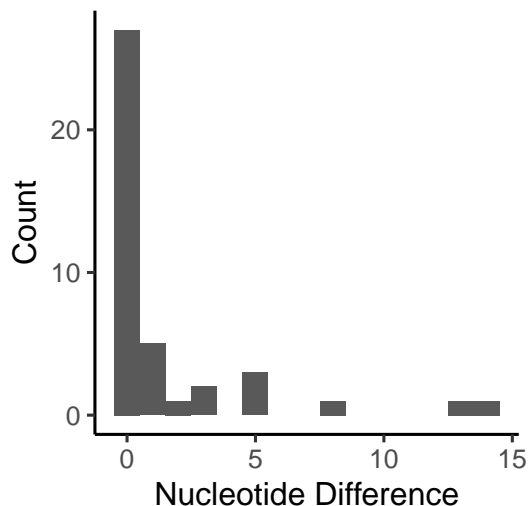
IGHV2-70\*01

26 sequences assigned  
18 (69.2%) exact matches, in which:  
18 unique CDR3  
5 unique J



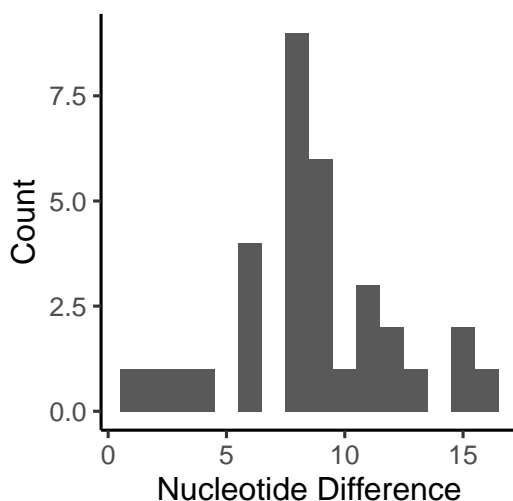
## IGHV2-70\*15

41 sequences assigned  
27 (65.9%) exact matches, in which:  
26 unique CDR3  
5 unique J



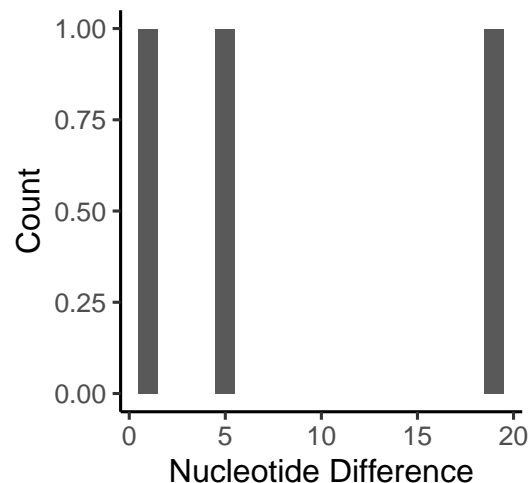
## IGHV3-7\*05

34 sequences assigned  
No exact matches.



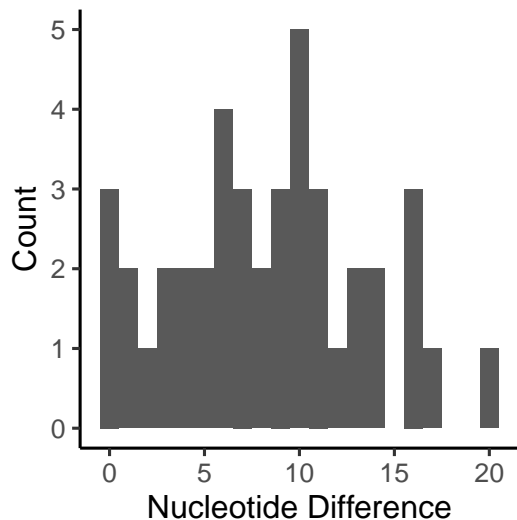
## IGHV3-11\*06

4 sequences assigned  
No exact matches.



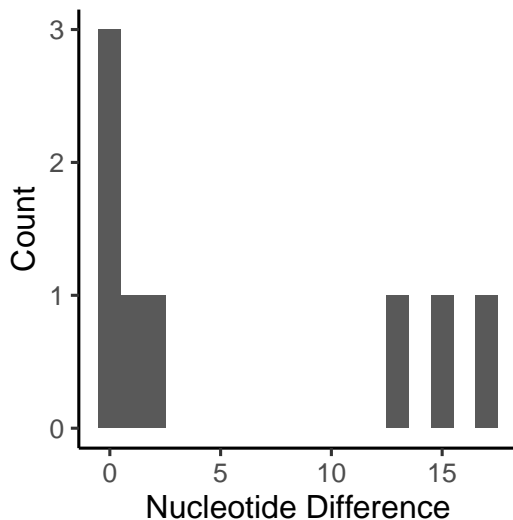
## IGHV3-7\*01

44 sequences assigned  
3 (6.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



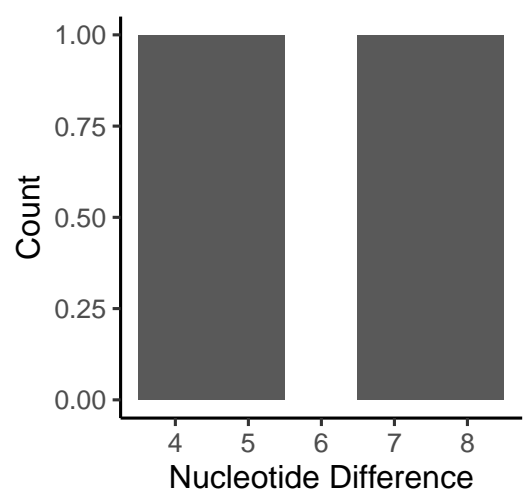
## IGHV3-11\*01

8 sequences assigned  
3 (37.5%) exact matches, in which:  
3 unique CDR3  
1 unique J



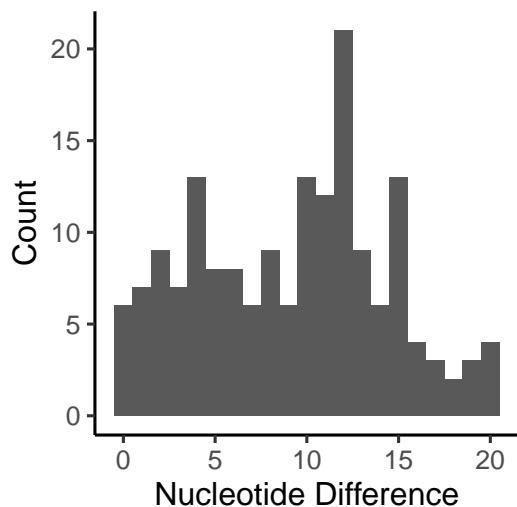
## IGHV3-13\*01

4 sequences assigned  
No exact matches.



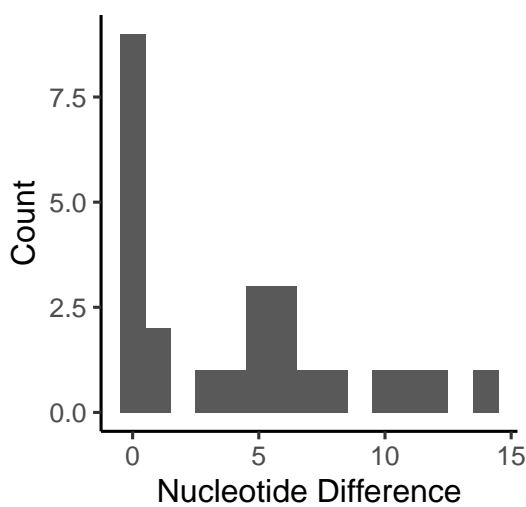
## IGHV3-7\*03

186 sequences assigned  
6 (3.2%) exact matches, in which:  
6 unique CDR3  
4 unique J



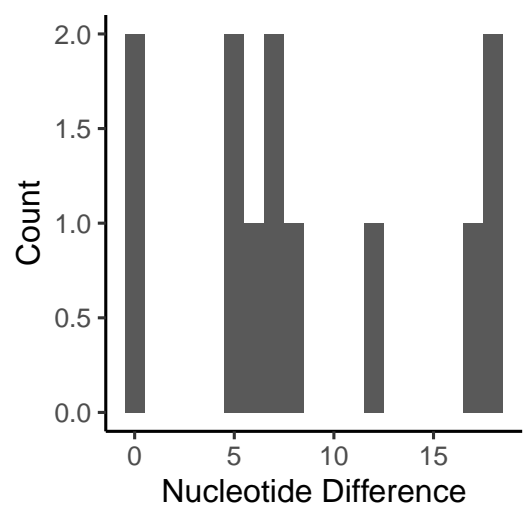
## IGHV3-11\*05

25 sequences assigned  
9 (36%) exact matches, in which:  
9 unique CDR3  
4 unique J



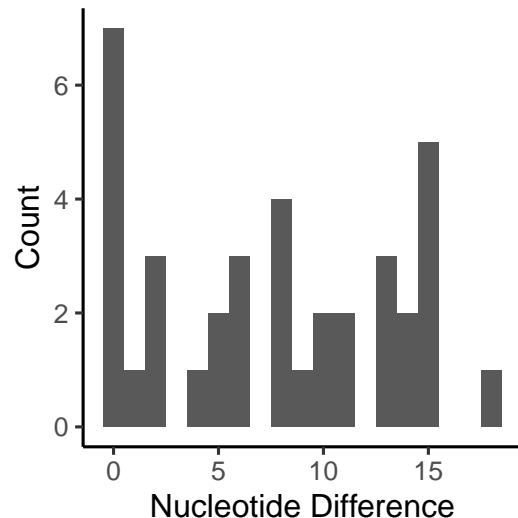
## IGHV3-13\*04

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



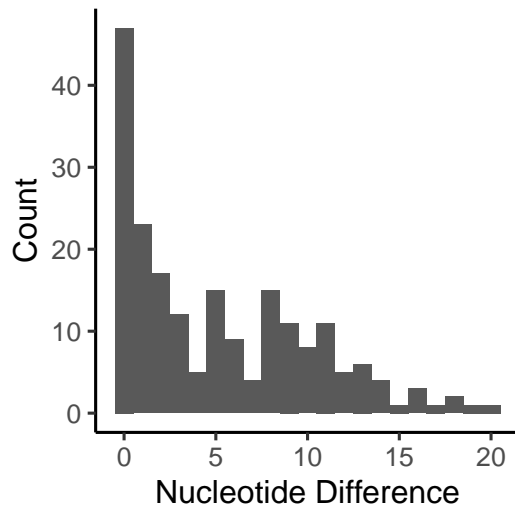
### IGHV3-15\*01

43 sequences assigned  
7 (16.3%) exact matches, in which:  
7 unique CDR3  
4 unique J



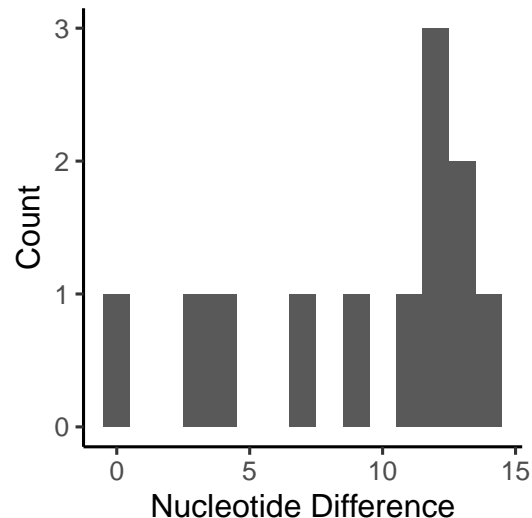
### IGHV3-21\*01

201 sequences assigned  
47 (23.4%) exact matches, in which:  
44 unique CDR3  
4 unique J



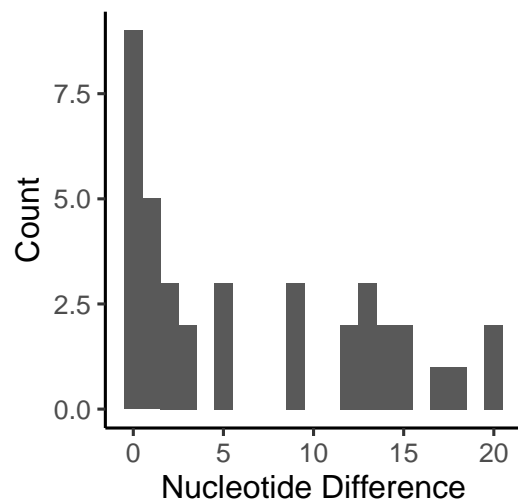
### IGHV3-33\*01

12 sequences assigned  
1 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



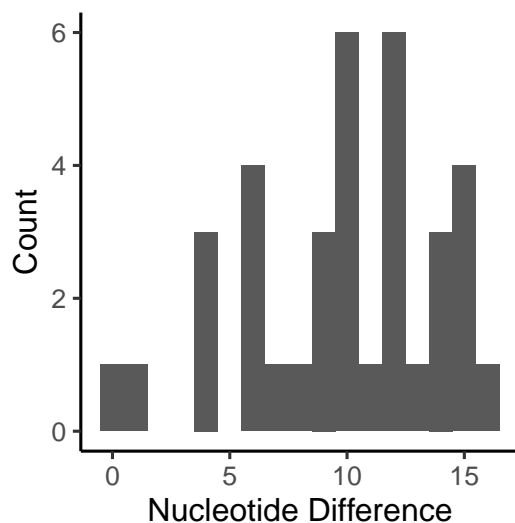
### IGHV3-15\*07

40 sequences assigned  
9 (22.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



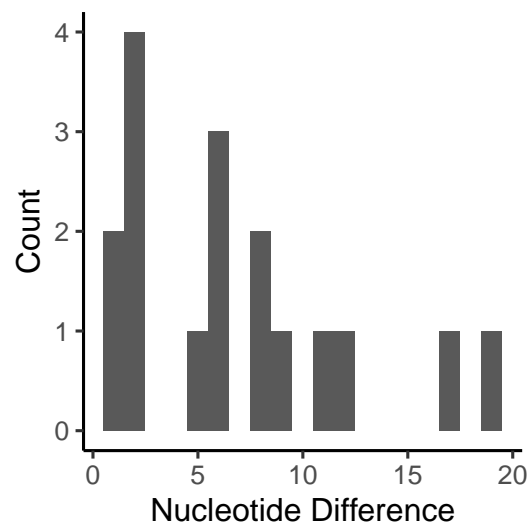
### IGHV3-21\*04

40 sequences assigned  
1 (2.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



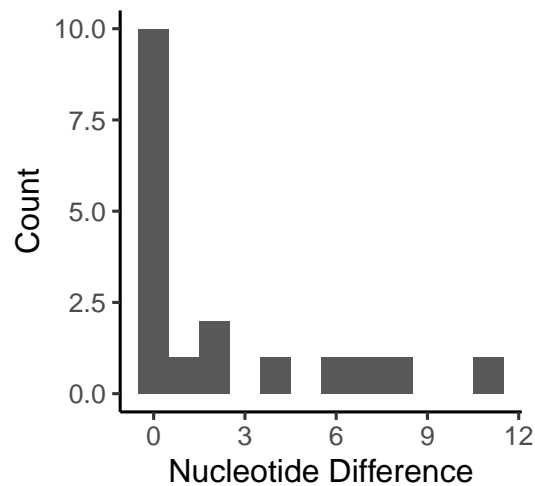
### IGHV3-33\*05

21 sequences assigned  
No exact matches.



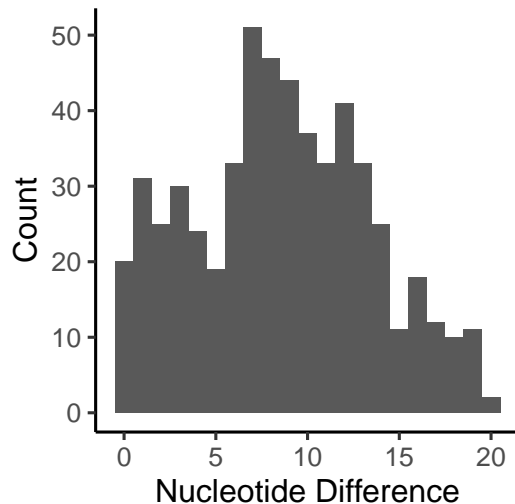
### IGHV3-20\*04

18 sequences assigned  
10 (55.6%) exact matches, in which:  
9 unique CDR3  
2 unique J



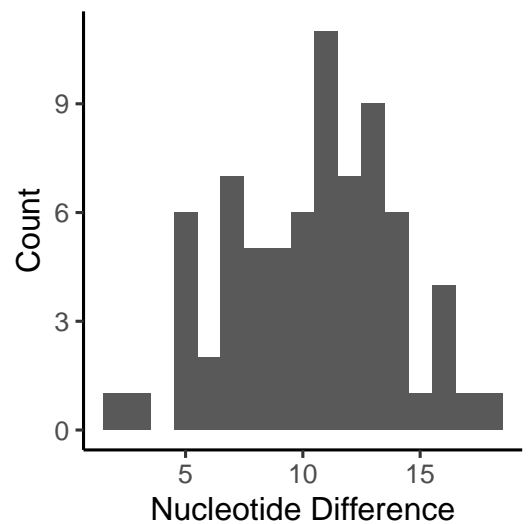
### IGHV3-23\*04

571 sequences assigned  
20 (3.5%) exact matches, in which:  
20 unique CDR3  
3 unique J



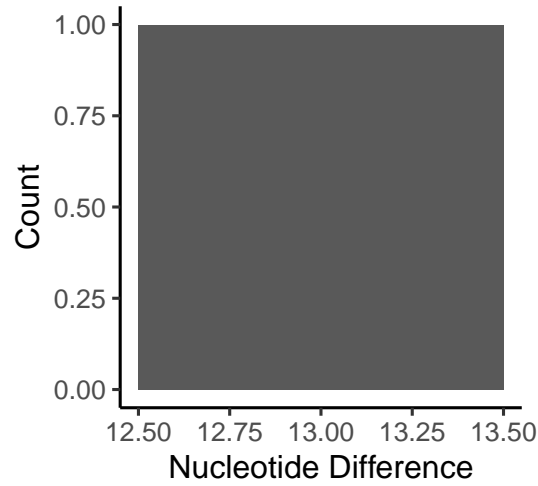
### IGHV3-33\*08

76 sequences assigned  
No exact matches.



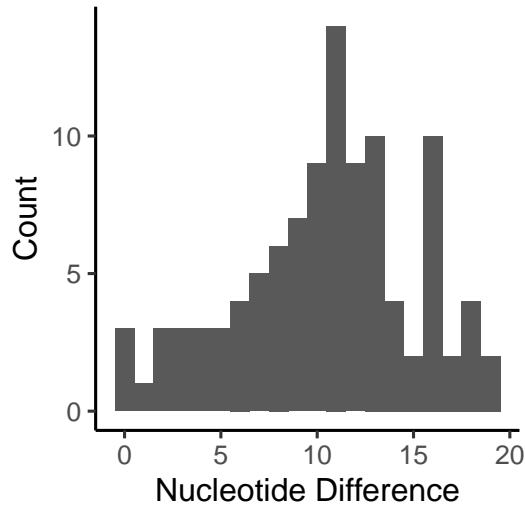
### IGHV3-38-3\*01

1 sequences assigned  
No exact matches.



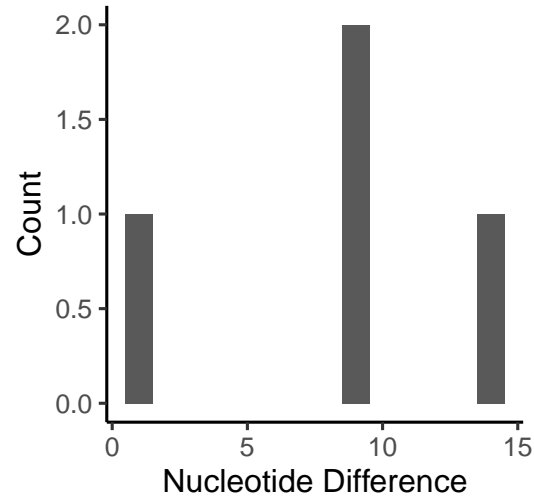
### IGHV3-48\*01

107 sequences assigned  
3 (2.8%) exact matches, in which:  
3 unique CDR3  
1 unique J



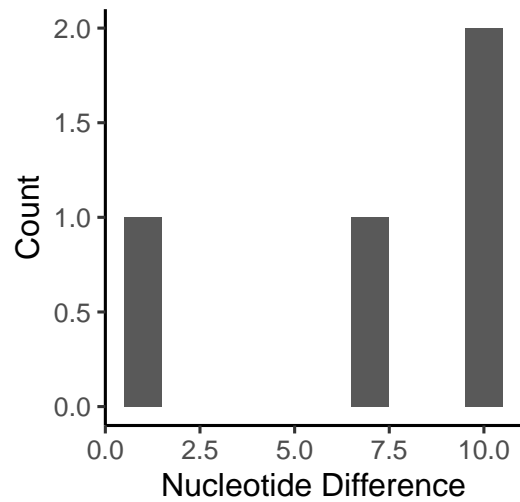
### IGHV3-49\*03

5 sequences assigned  
No exact matches.



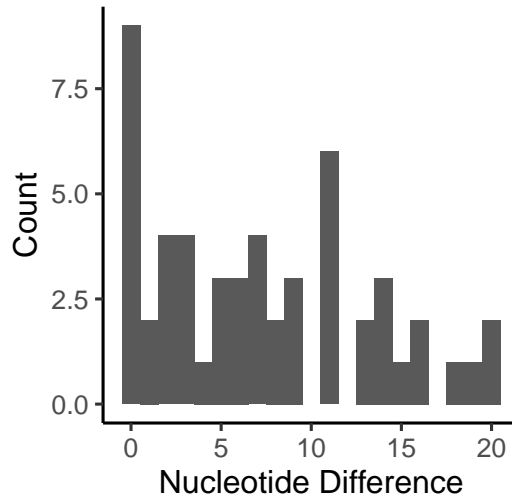
### IGHV3-43\*01

4 sequences assigned  
No exact matches.



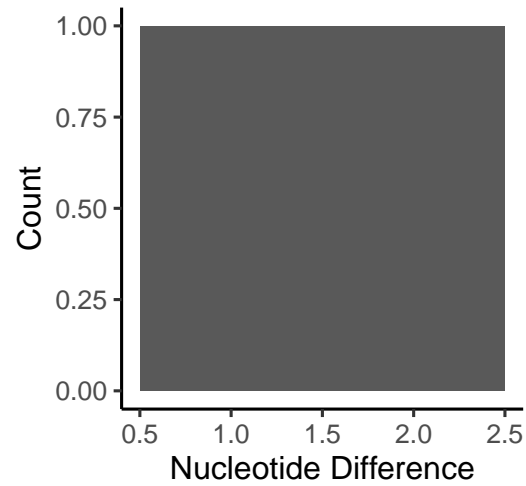
### IGHV3-48\*02

56 sequences assigned  
9 (16.1%) exact matches, in which:  
9 unique CDR3  
3 unique J



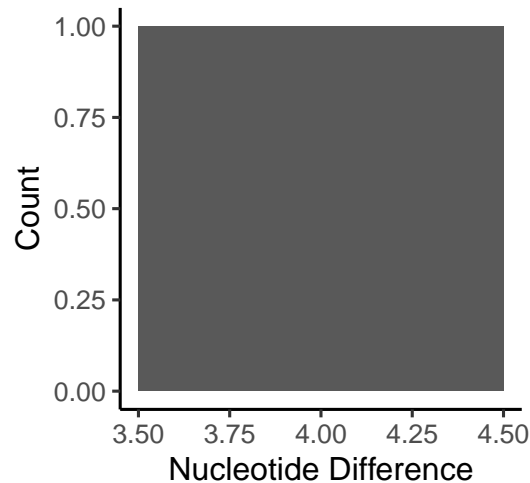
### IGHV3-49\*05

2 sequences assigned  
No exact matches.



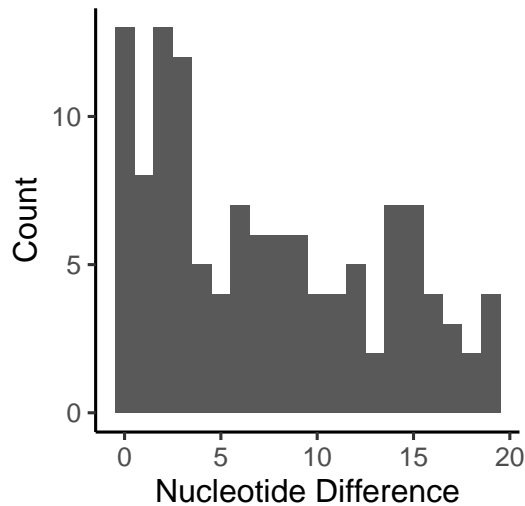
### IGHV3-43\*02

1 sequences assigned  
No exact matches.



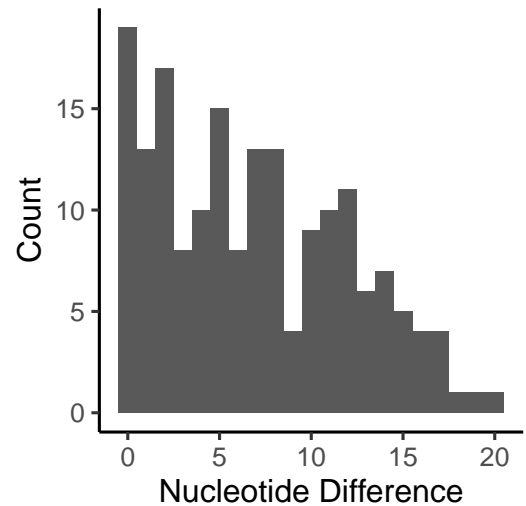
### IGHV3-48\*04

127 sequences assigned  
13 (10.2%) exact matches, in which:  
13 unique CDR3  
4 unique J



### IGHV3-53\*01

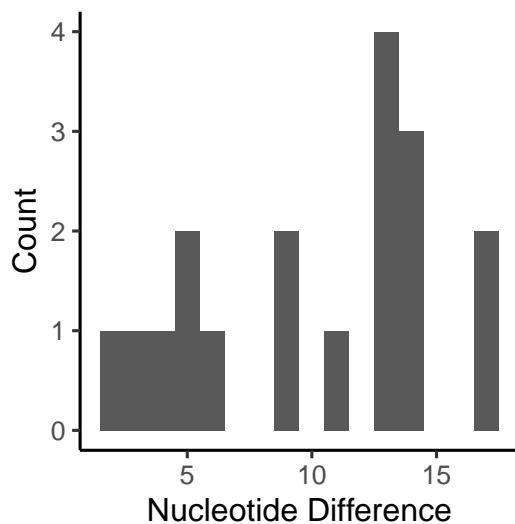
180 sequences assigned  
19 (10.6%) exact matches, in which:  
18 unique CDR3  
3 unique J





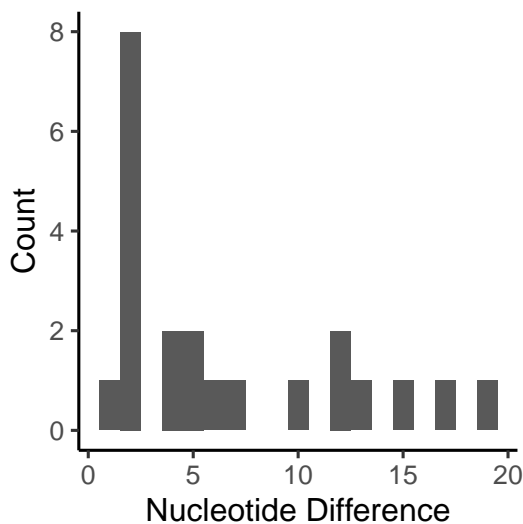
### IGHV3-64\*04

18 sequences assigned  
No exact matches.



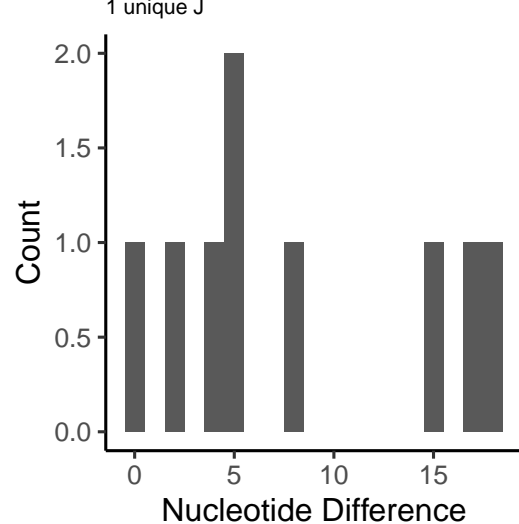
### IGHV3-72\*01

23 sequences assigned  
No exact matches.



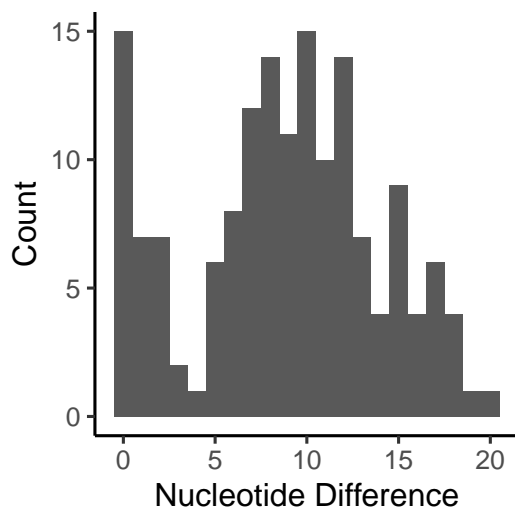
### IGHV3-64D\*06

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



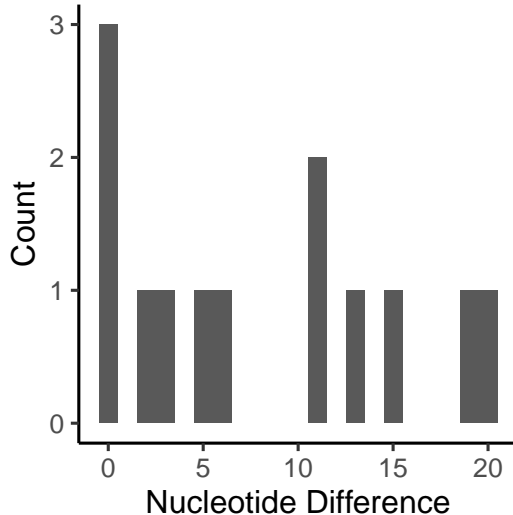
### IGHV3-66\*01

164 sequences assigned  
15 (9.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



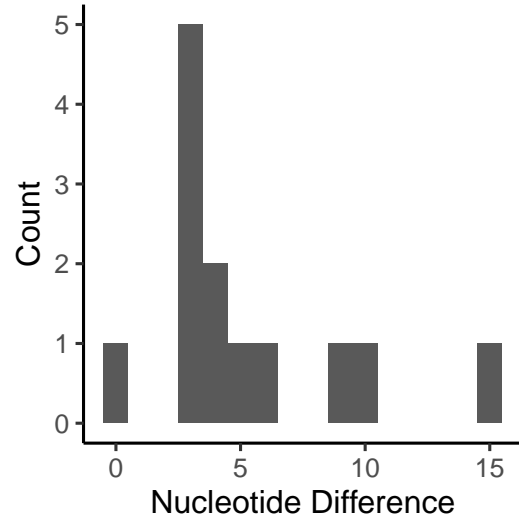
### IGHV3-73\*01

14 sequences assigned  
3 (21.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



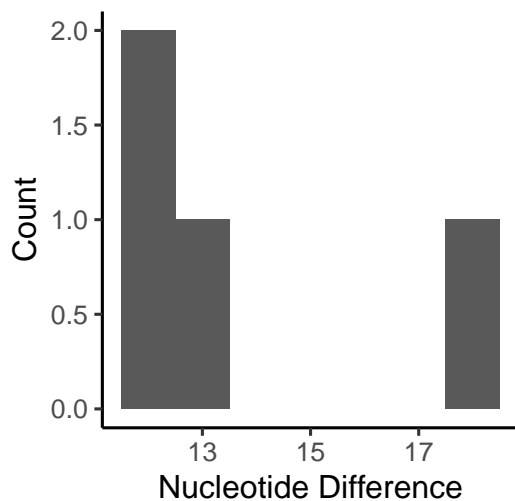
### IGHV3-64D\*09

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



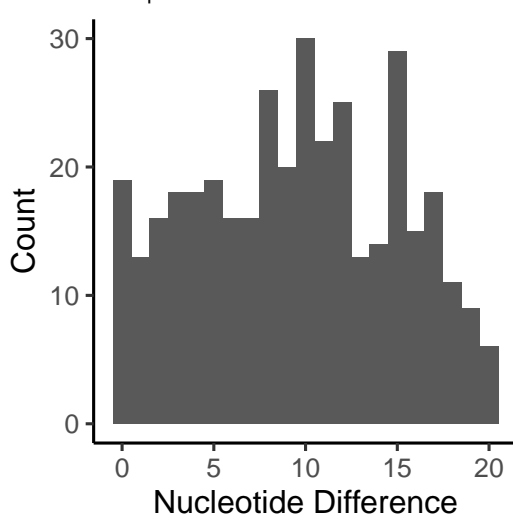
### IGHV3-69-1\*01

4 sequences assigned  
No exact matches.



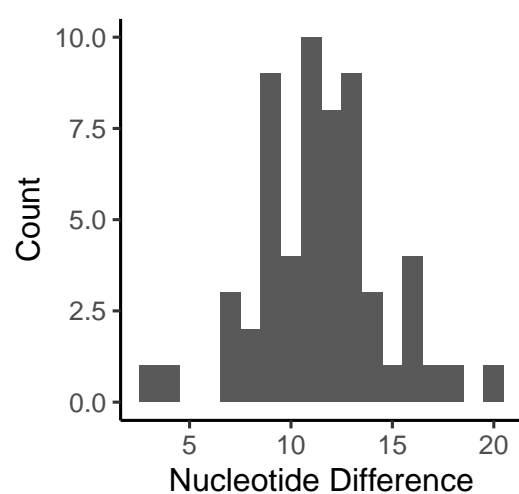
### IGHV3-74\*01

391 sequences assigned  
19 (4.9%) exact matches, in which:  
18 unique CDR3  
3 unique J



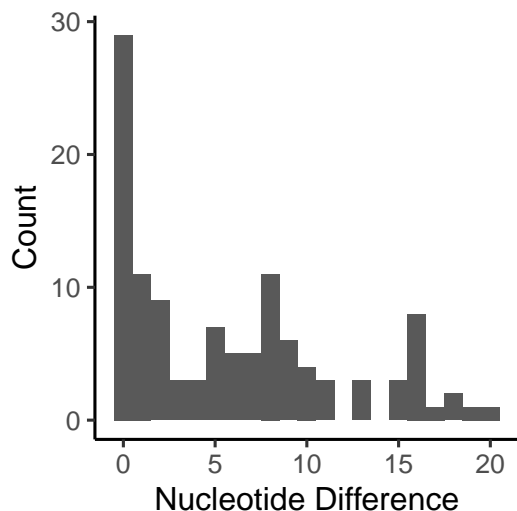
### IGHV3-NL1\*01

61 sequences assigned  
No exact matches.



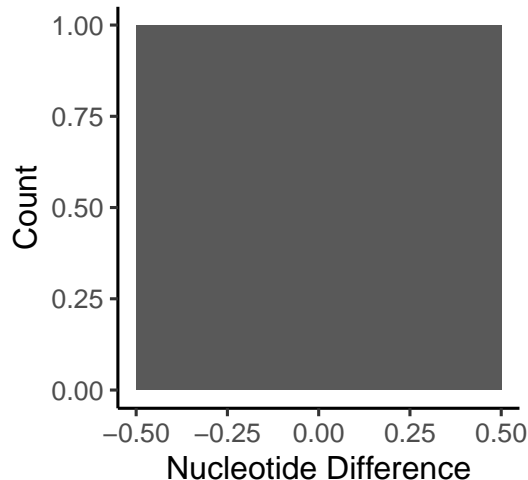
## IGHV4-4\*02

125 sequences assigned  
29 (23.2%) exact matches, in which:  
28 unique CDR3  
4 unique J



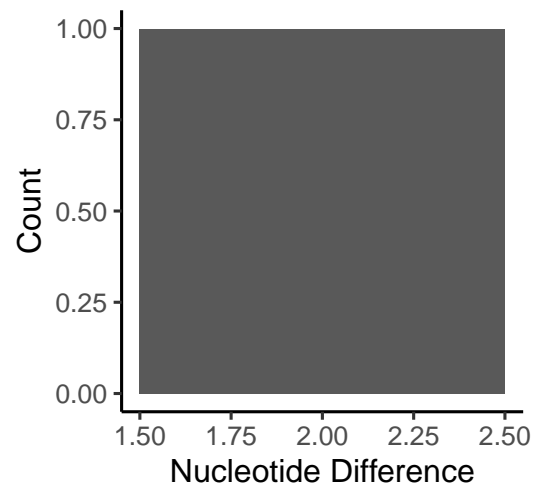
## IGHV4-30-2\*02

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



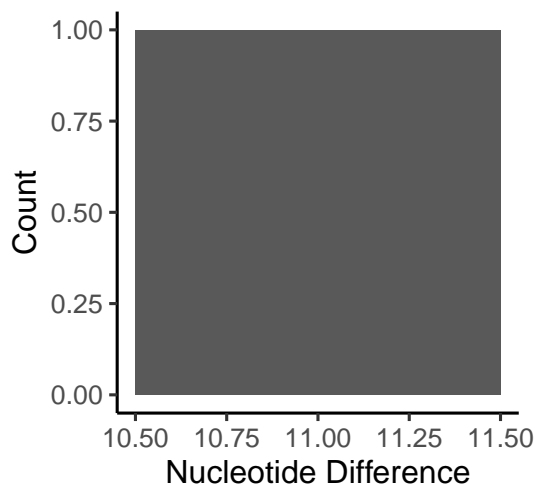
## IGHV4-38-2\*02

2 sequences assigned  
No exact matches.



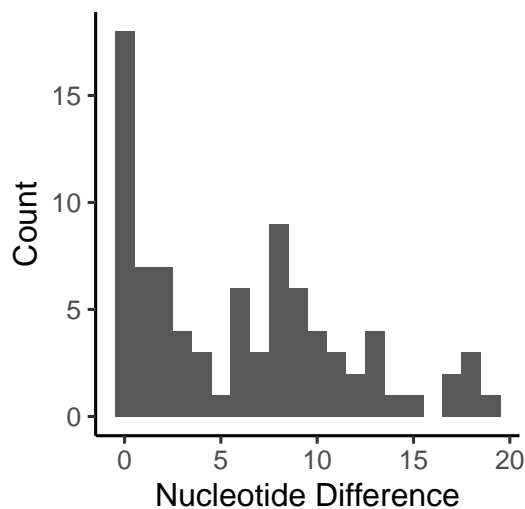
## IGHV4-28\*05

1 sequences assigned  
No exact matches.



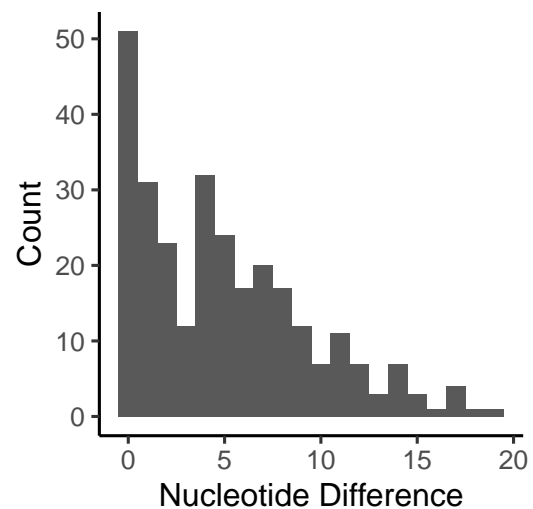
## IGHV4-30-4\*07

86 sequences assigned  
18 (20.9%) exact matches, in which:  
18 unique CDR3  
4 unique J



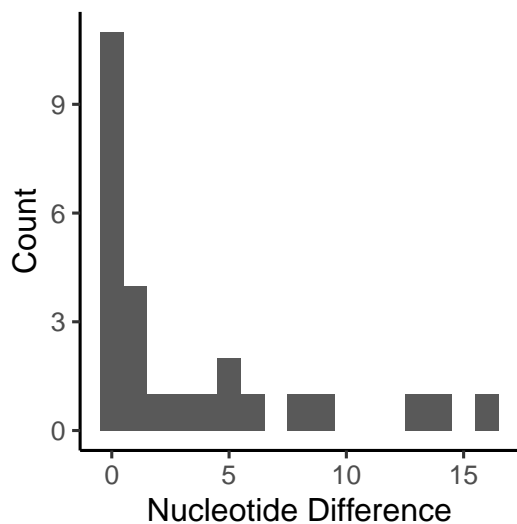
## IGHV4-39\*01

293 sequences assigned  
51 (17.4%) exact matches, in which:  
51 unique CDR3  
5 unique J



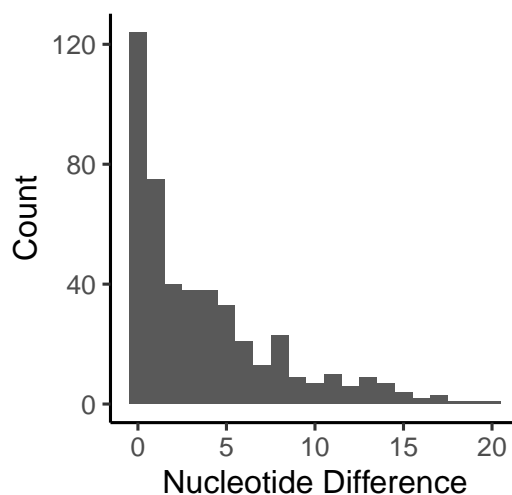
## IGHV4-30-2\*01

26 sequences assigned  
11 (42.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



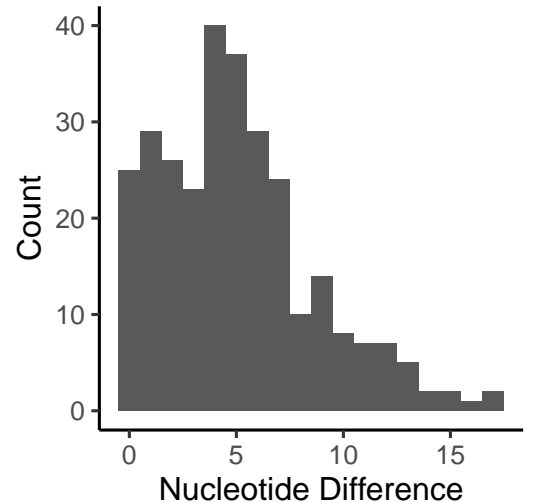
## IGHV4-34\*01

478 sequences assigned  
124 (25.9%) exact matches, in which:  
121 unique CDR3  
5 unique J



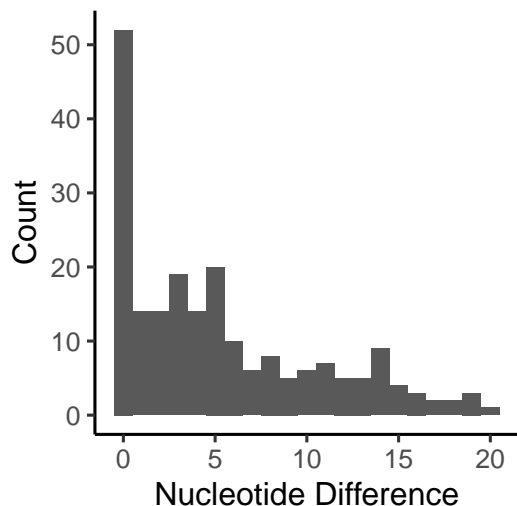
## IGHV4-39\*07

297 sequences assigned  
25 (8.4%) exact matches, in which:  
25 unique CDR3  
3 unique J



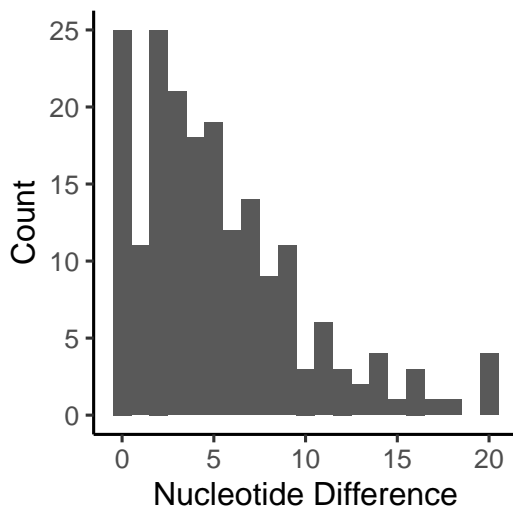
## IGHV4-39\*07\_C288A

218 sequences assigned  
52 (23.9%) exact matches, in which:  
52 unique CDR3  
5 unique J



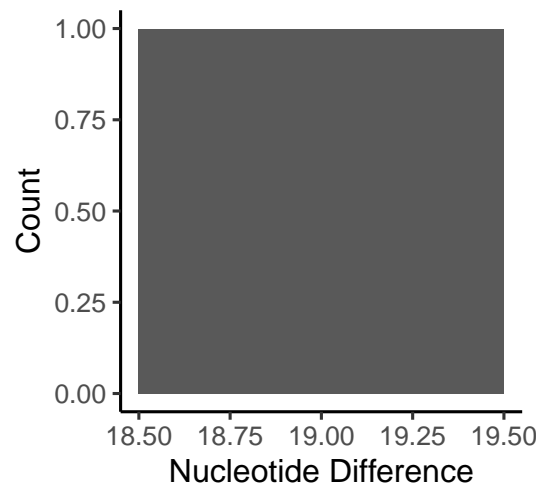
## IGHV4-59\*12

196 sequences assigned  
25 (12.8%) exact matches, in which:  
25 unique CDR3  
4 unique J



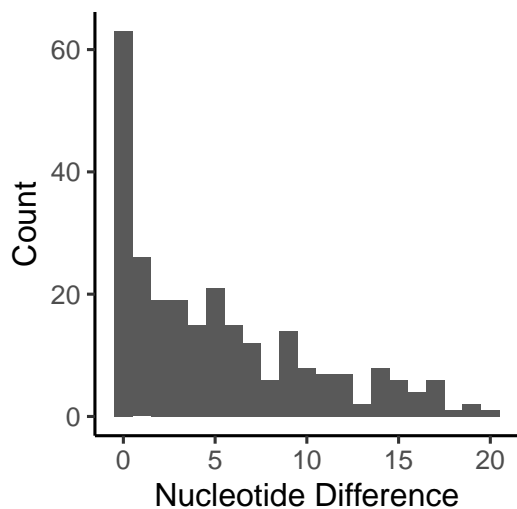
## IGHV4/OR15-8\*02

1 sequences assigned  
No exact matches.



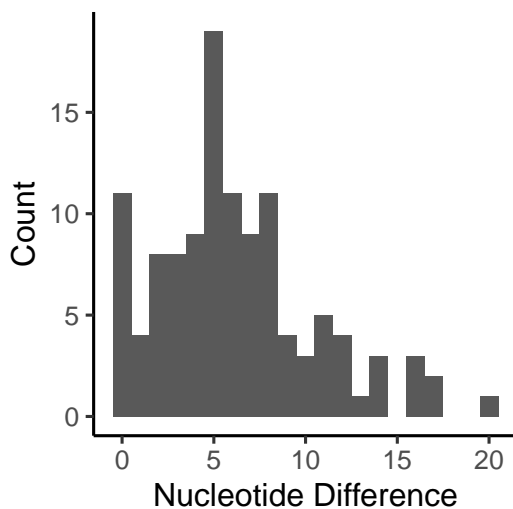
## IGHV4-59\*01

264 sequences assigned  
63 (23.9%) exact matches, in which:  
62 unique CDR3  
6 unique J



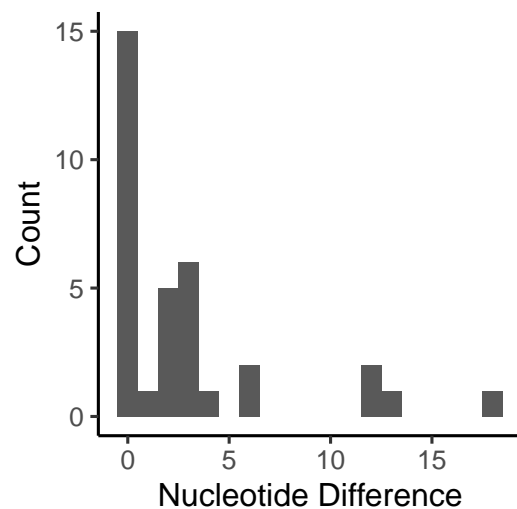
## IGHV4-61\*01

117 sequences assigned  
11 (9.4%) exact matches, in which:  
9 unique CDR3  
3 unique J



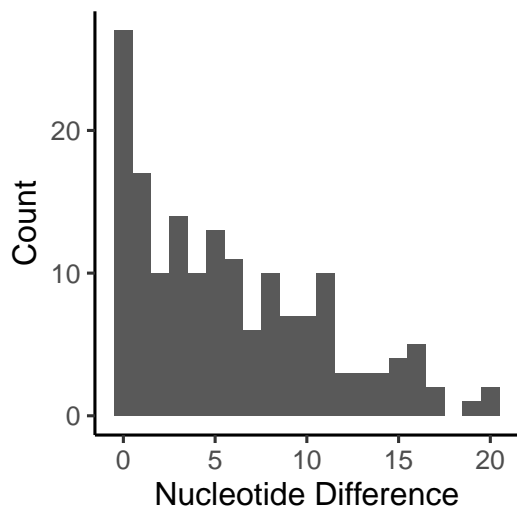
## IGHV5-10-1\*01

35 sequences assigned  
15 (42.9%) exact matches, in which:  
13 unique CDR3  
5 unique J



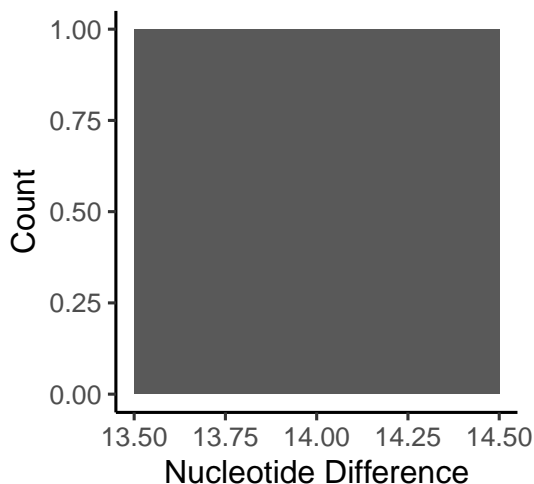
## IGHV4-59\*08

179 sequences assigned  
27 (15.1%) exact matches, in which:  
25 unique CDR3  
4 unique J



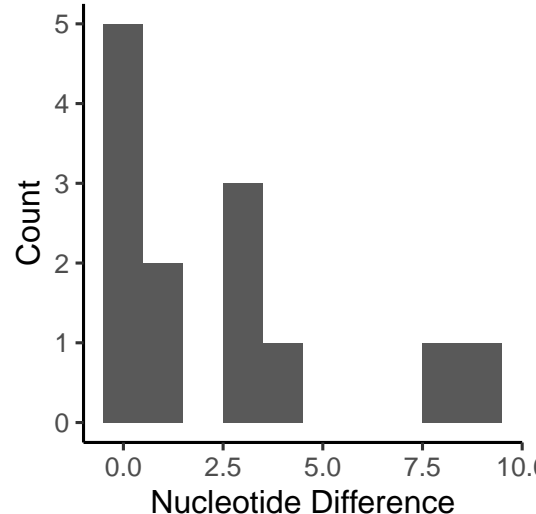
## IGHV1/OR15-2\*02

1 sequences assigned  
No exact matches.



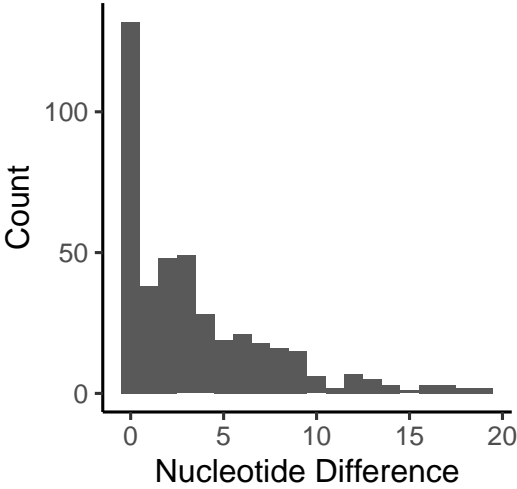
## IGHV5-10-1\*03

13 sequences assigned  
5 (38.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



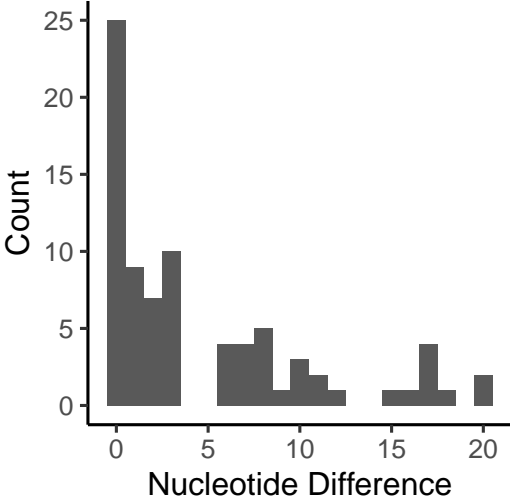
IGHV5–51\*01

431 sequences assigned  
132 (30.6%) exact matches, in which:  
115 unique CDR3  
5 unique J



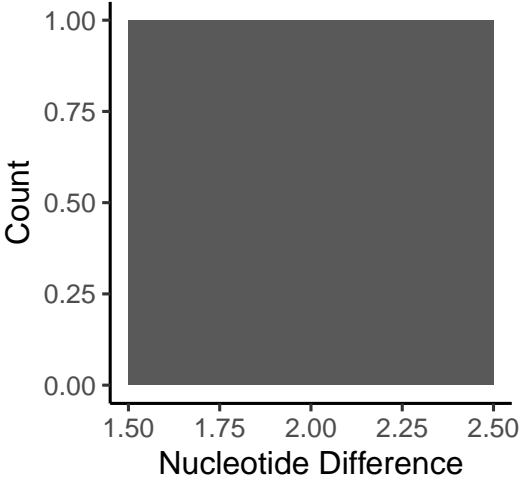
IGHV6–1\*01

81 sequences assigned  
25 (30.9%) exact matches, in which:  
18 unique CDR3  
6 unique J

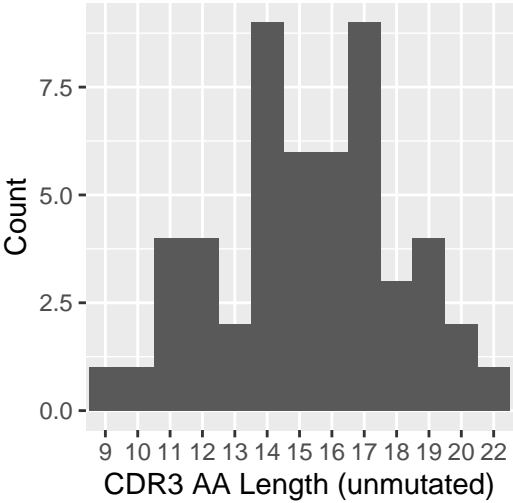


IGHV3/OR16–6\*02

1 sequences assigned  
No exact matches.



IGHV4-39\*07\_C288A





[illegible]