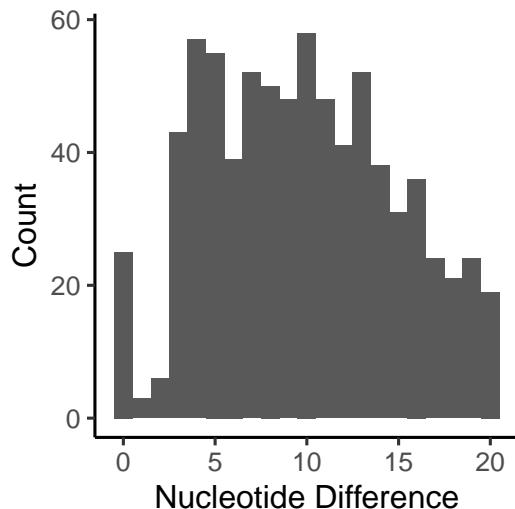


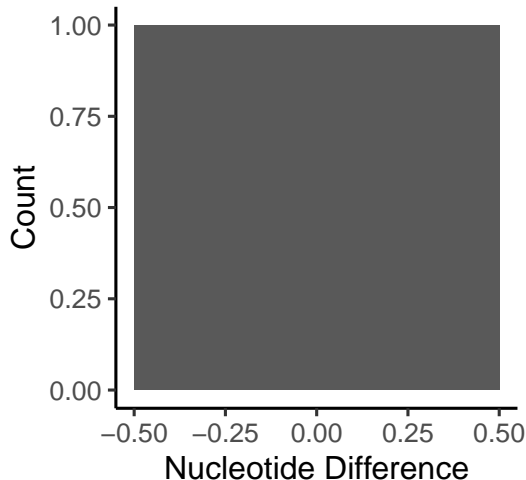
### IGHV1-2\*02

908 sequences assigned  
25 (2.8%) exact matches, in which:  
24 unique CDR3  
3 unique J



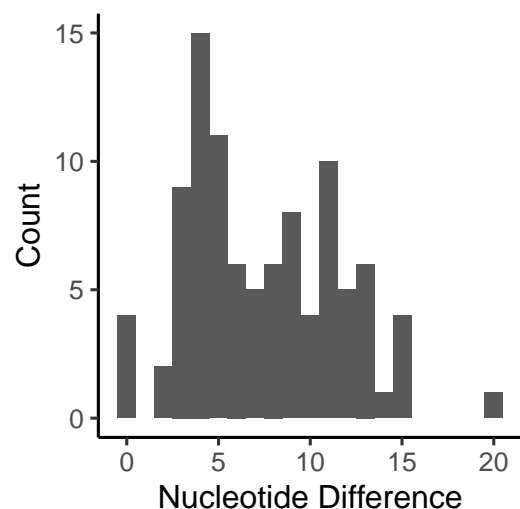
### IGHV1-3\*01\_05

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



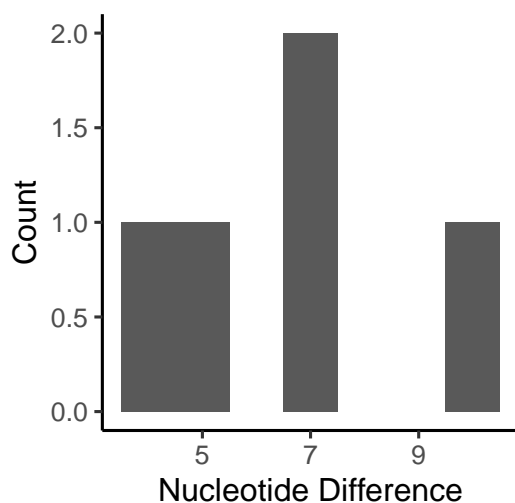
### IGHV1-24\*01

98 sequences assigned  
4 (4.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



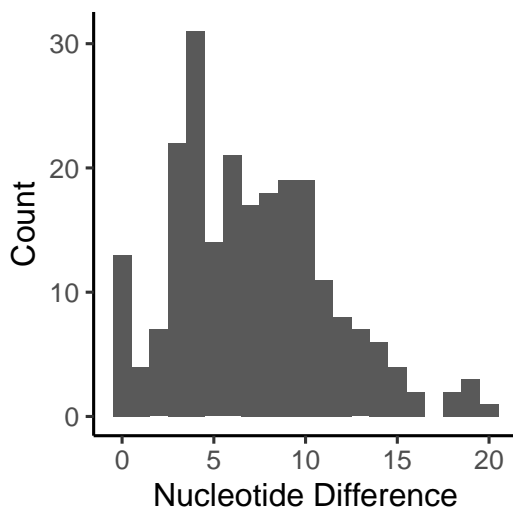
### IGHV1-3\*02

5 sequences assigned  
No exact matches.



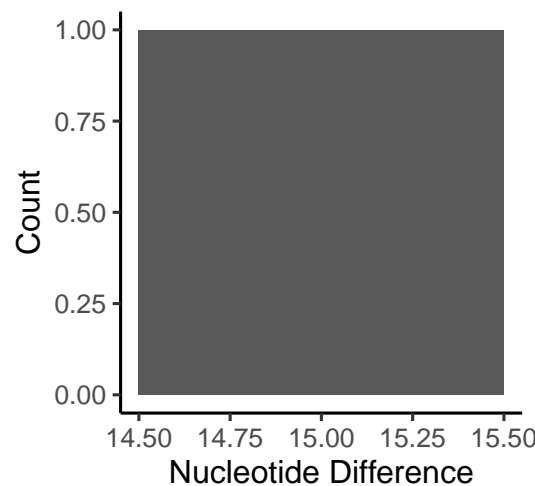
### IGHV1-8\*01

241 sequences assigned  
13 (5.4%) exact matches, in which:  
12 unique CDR3  
5 unique J



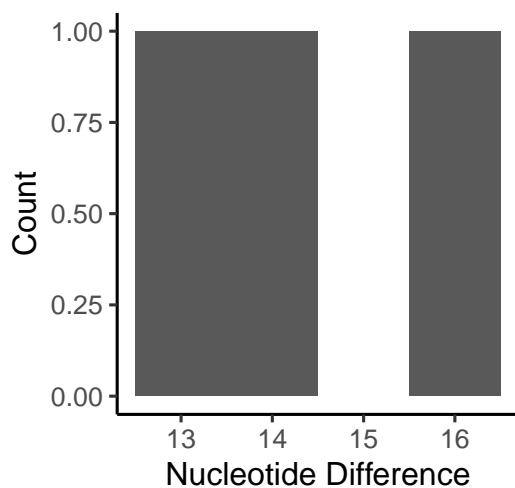
### IGHV1-45\*02

2 sequences assigned  
No exact matches.



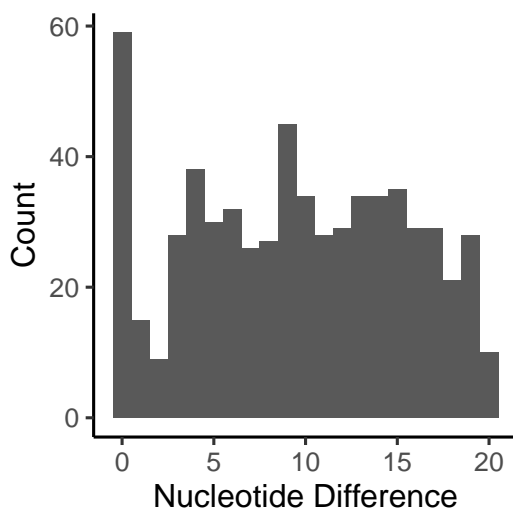
### IGHV1-3\*03

3 sequences assigned  
No exact matches.



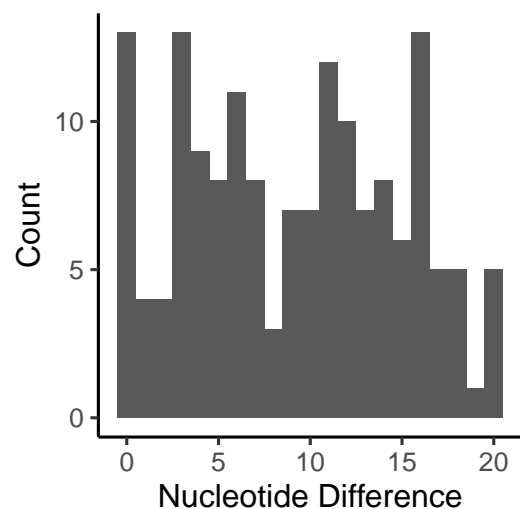
### IGHV1-18\*01

761 sequences assigned  
59 (7.8%) exact matches, in which:  
50 unique CDR3  
6 unique J



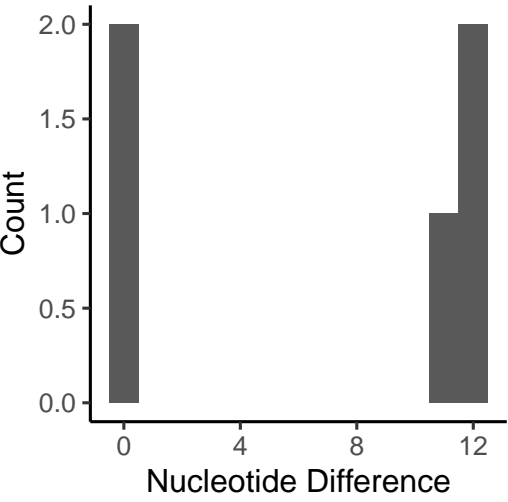
### IGHV1-46\*01

196 sequences assigned  
13 (6.6%) exact matches, in which:  
13 unique CDR3  
4 unique J



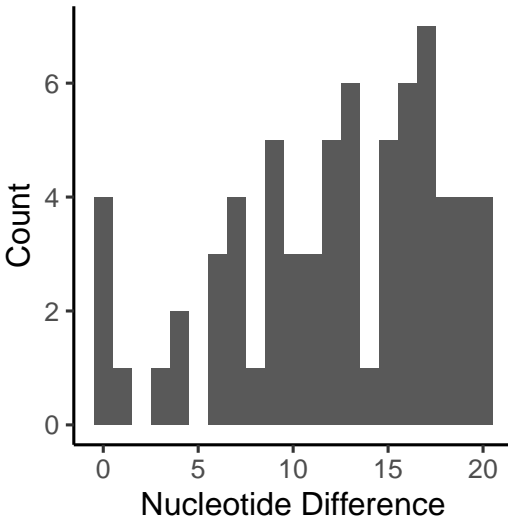
IGHV1-58\*02

9 sequences assigned  
2 (22.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



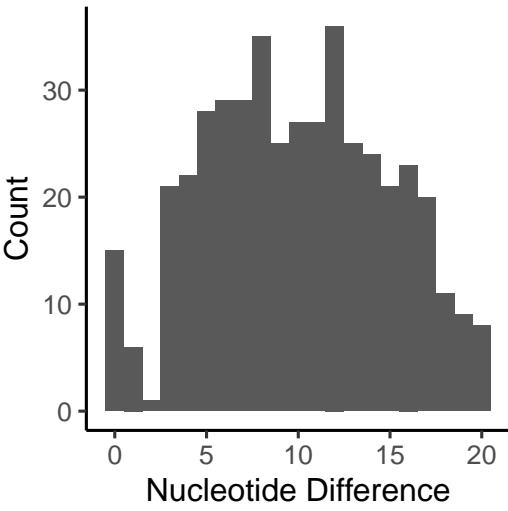
IGHV1-69\*02

98 sequences assigned  
4 (4.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



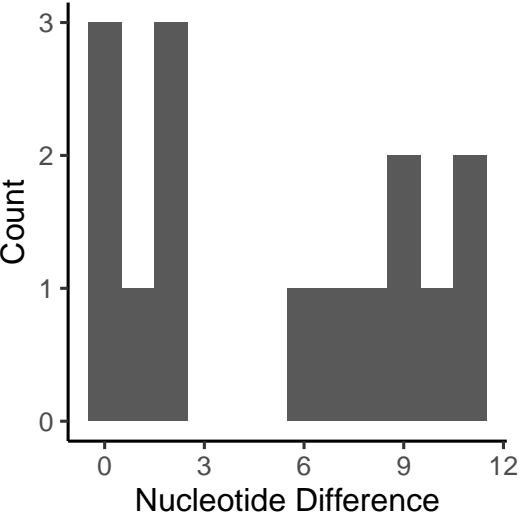
IGHV2-5\*01

602 sequences assigned  
15 (2.5%) exact matches, in which:  
15 unique CDR3  
5 unique J



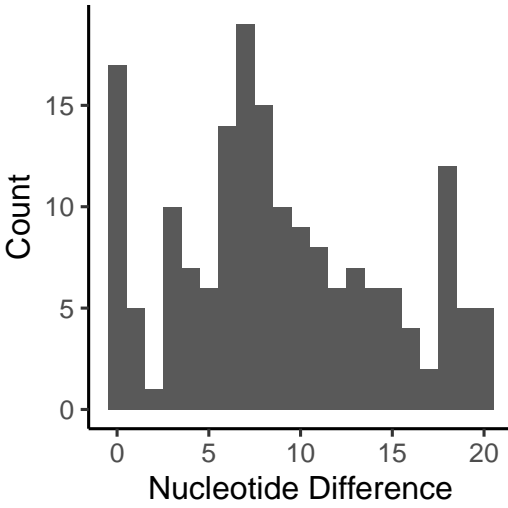
IGHV1-58\*01\_03

18 sequences assigned  
3 (16.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



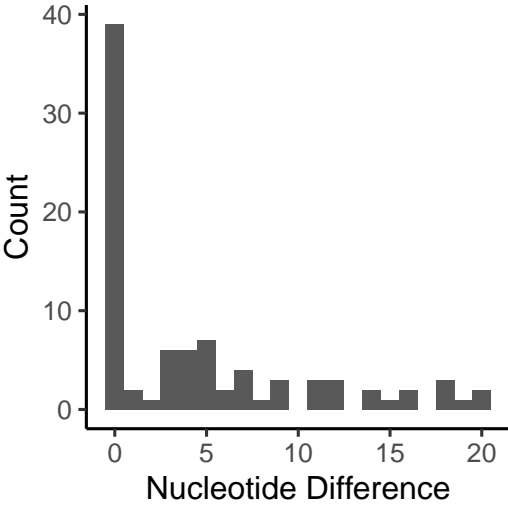
IGHV1-69\*01\_12\_13

197 sequences assigned  
17 (8.6%) exact matches, in which:  
16 unique CDR3  
5 unique J



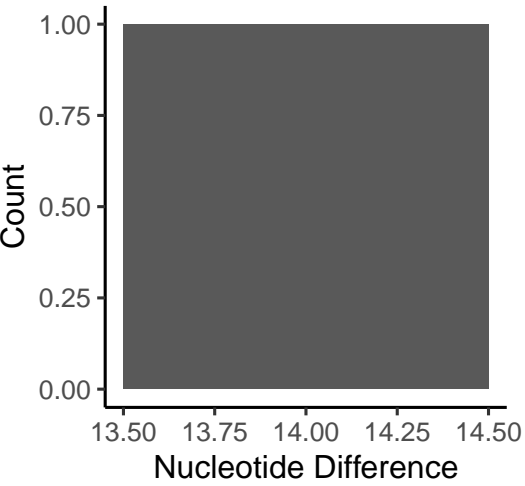
IGHV2-26\*01

89 sequences assigned  
39 (43.8%) exact matches, in which:  
36 unique CDR3  
5 unique J



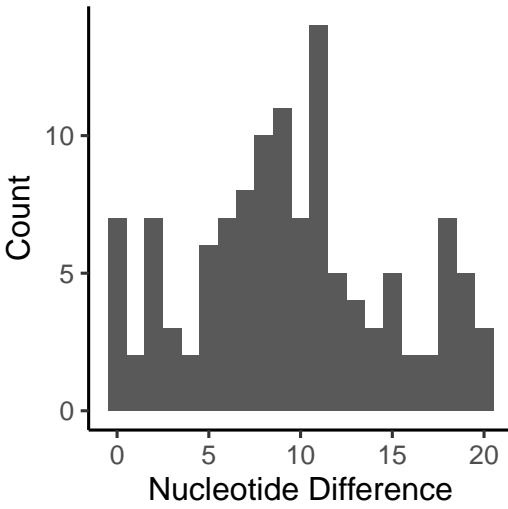
IGHV1-69-2\*01

1 sequences assigned  
No exact matches.



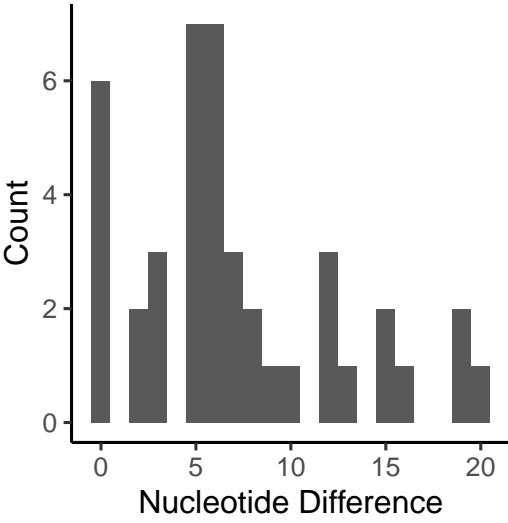
IGHV1-69\*17

136 sequences assigned  
7 (5.1%) exact matches, in which:  
7 unique CDR3  
3 unique J



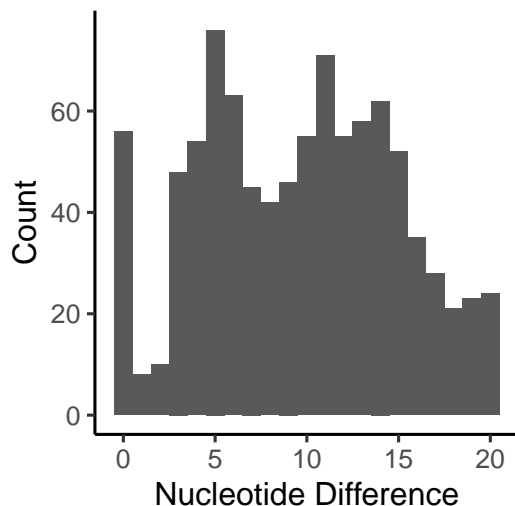
IGHV2-70\*01

45 sequences assigned  
6 (13.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



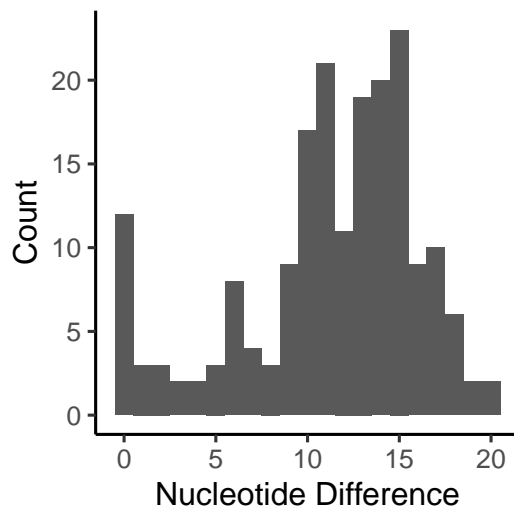
### IGHV3-7\*01

1006 sequences assigned  
56 (5.6%) exact matches, in which:  
31 unique CDR3  
5 unique J



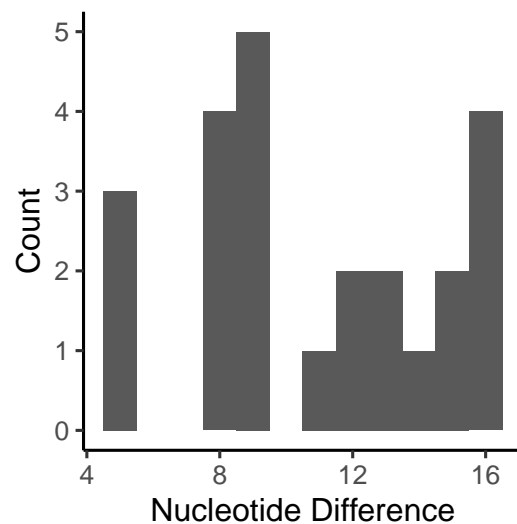
### IGHV3-13\*01

221 sequences assigned  
12 (5.4%) exact matches, in which:  
5 unique CDR3  
2 unique J



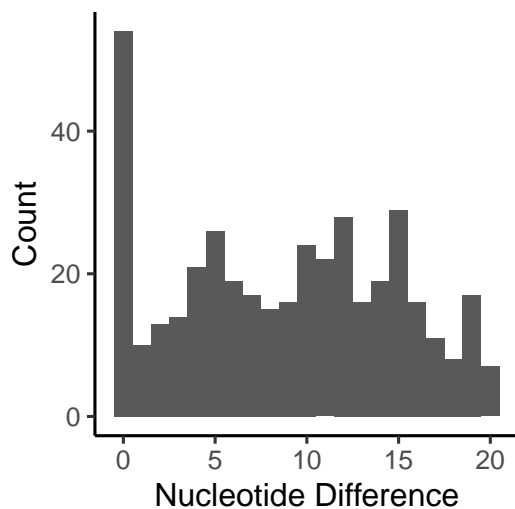
### IGHV3-20\*03\_04

24 sequences assigned  
No exact matches.



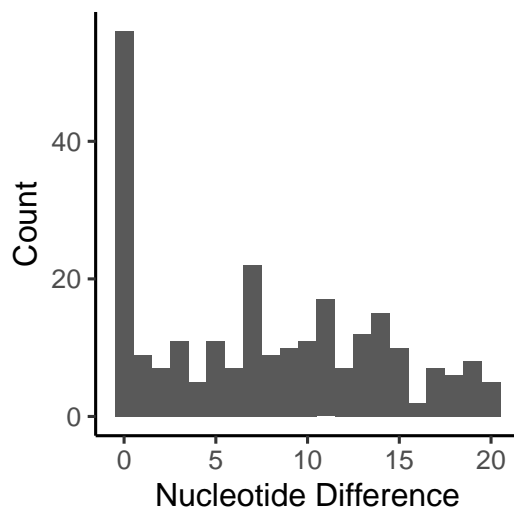
### IGHV3-9\*01

444 sequences assigned  
54 (12.2%) exact matches, in which:  
32 unique CDR3  
3 unique J



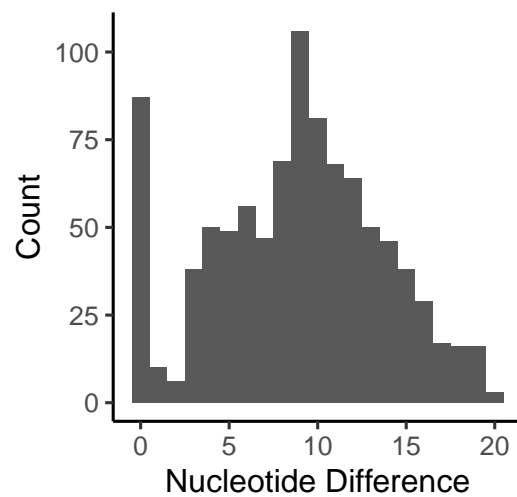
### IGHV3-15\*01\_02

259 sequences assigned  
56 (21.6%) exact matches, in which:  
29 unique CDR3  
5 unique J



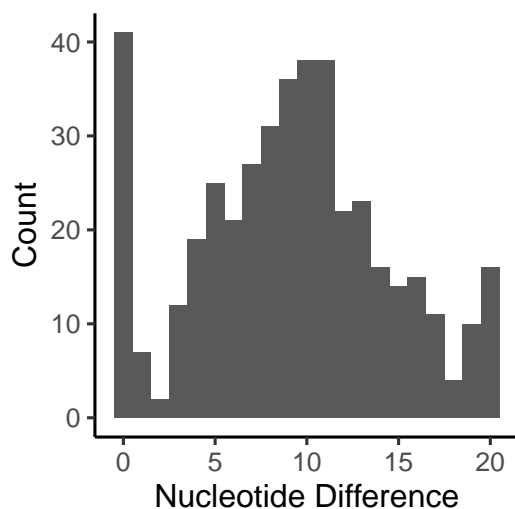
### IGHV3-21\*01\_02

1052 sequences assigned  
87 (8.3%) exact matches, in which:  
44 unique CDR3  
5 unique J



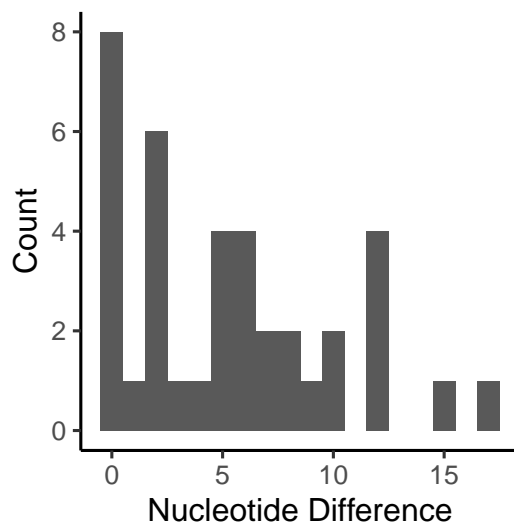
### IGHV3-11\*01

469 sequences assigned  
41 (8.7%) exact matches, in which:  
23 unique CDR3  
5 unique J



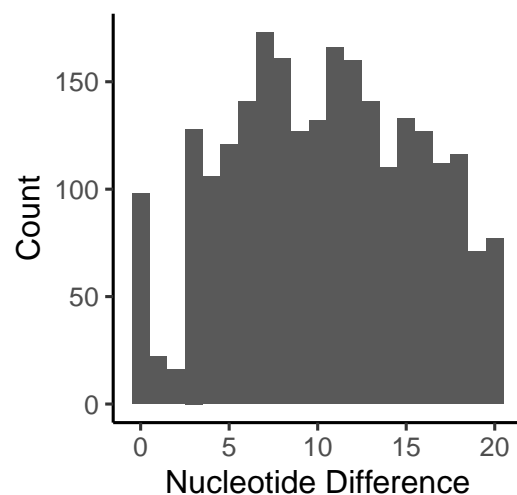
### IGHV3-20\*01\_02

38 sequences assigned  
8 (21.1%) exact matches, in which:  
5 unique CDR3  
3 unique J



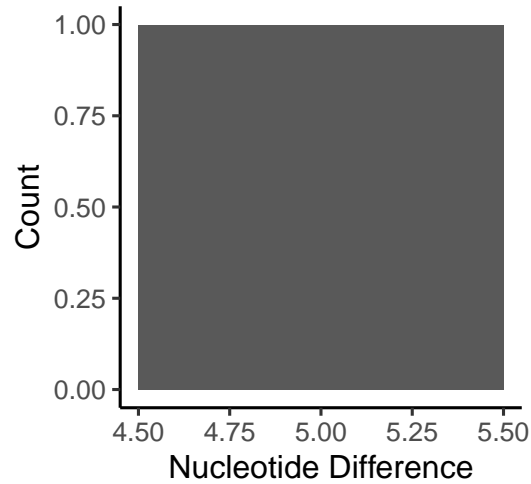
### IGHV3-23\*01\_04

2748 sequences assigned  
98 (3.6%) exact matches, in which:  
51 unique CDR3  
5 unique J



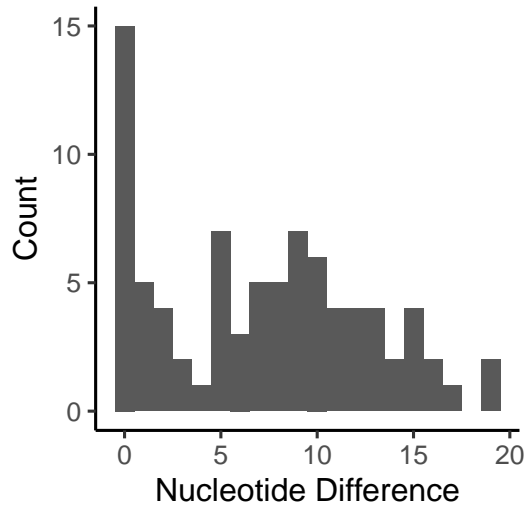
### IGHV3-30-3\*02

1 sequences assigned  
No exact matches.



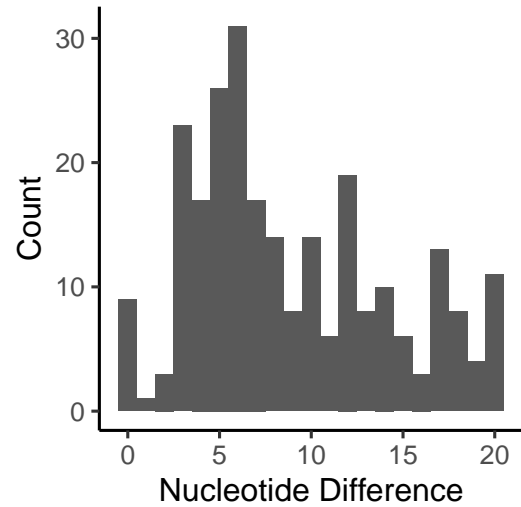
### IGHV3-43\*01

94 sequences assigned  
15 (16%) exact matches, in which:  
7 unique CDR3  
2 unique J



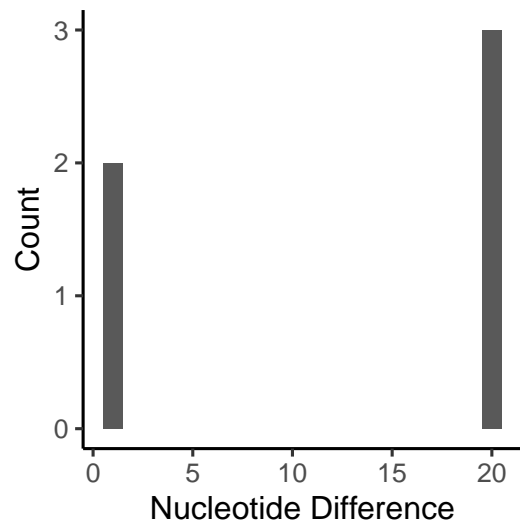
### IGHV3-53\*01\_02

269 sequences assigned  
9 (3.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



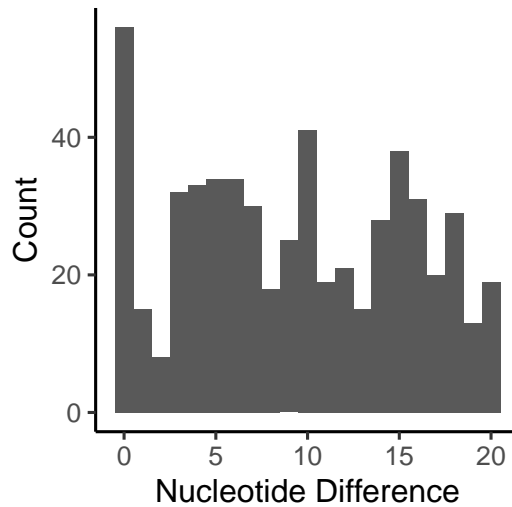
### IGHV3-30-3\*03

6 sequences assigned  
No exact matches.



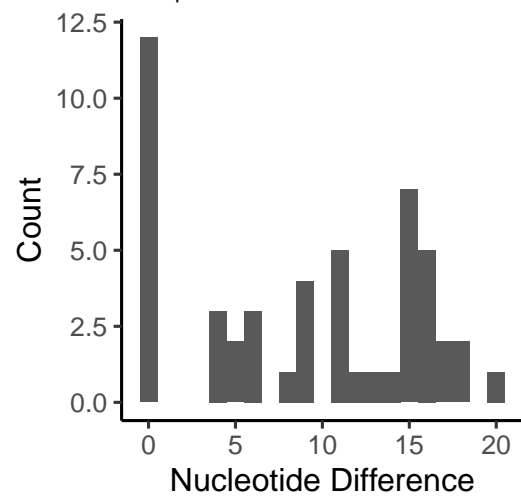
### IGHV3-48\*02

627 sequences assigned  
56 (8.9%) exact matches, in which:  
22 unique CDR3  
4 unique J



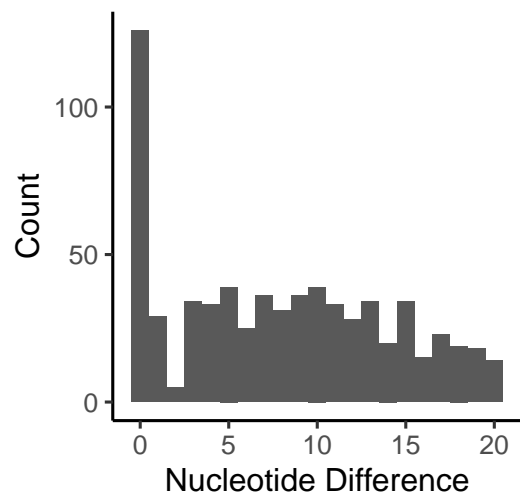
### IGHV3-64\*01

59 sequences assigned  
12 (20.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



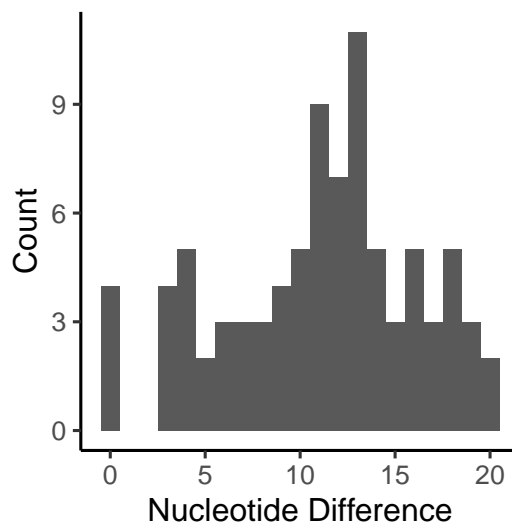
### IGHV3-33\*01

758 sequences assigned  
126 (16.6%) exact matches, in which:  
69 unique CDR3  
5 unique J



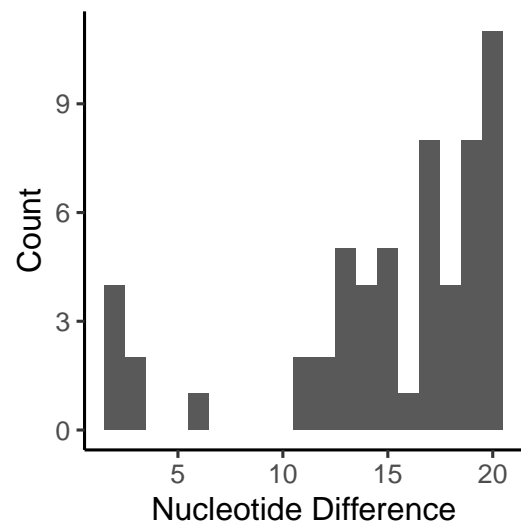
### IGHV3-49\*03\_05

124 sequences assigned  
4 (3.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



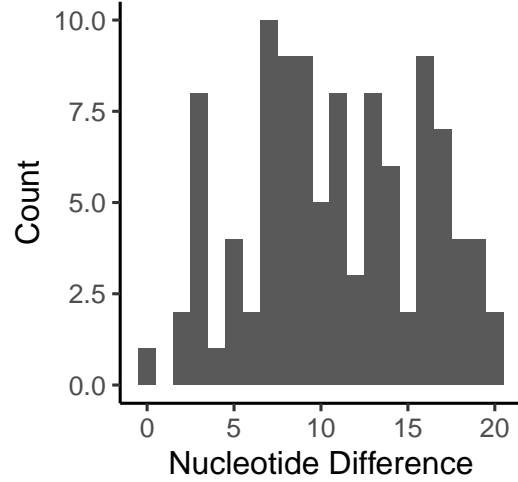
### IGHV3-64\*02\_07

124 sequences assigned  
No exact matches.



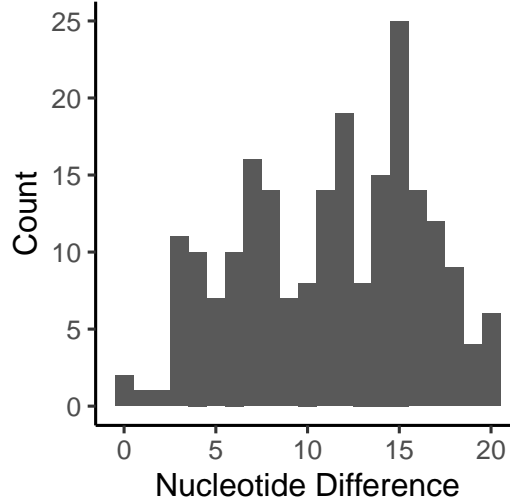
### IGHV3-66\*02

115 sequences assigned  
1 (0.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



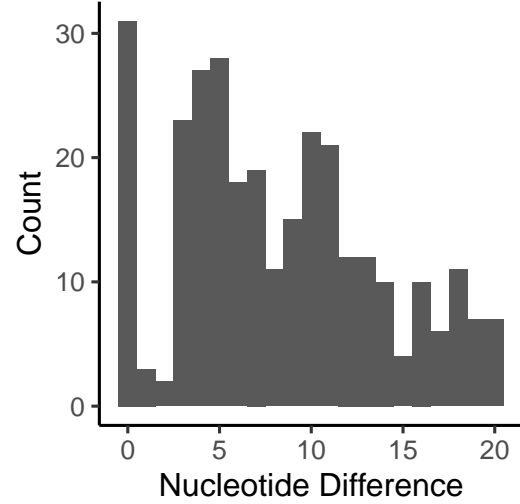
### IGHV3-72\*01

227 sequences assigned  
2 (0.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



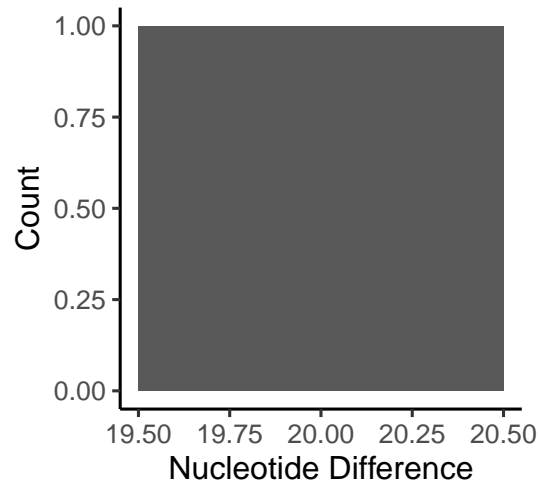
### IGHV3-74\*01\_02

307 sequences assigned  
31 (10.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



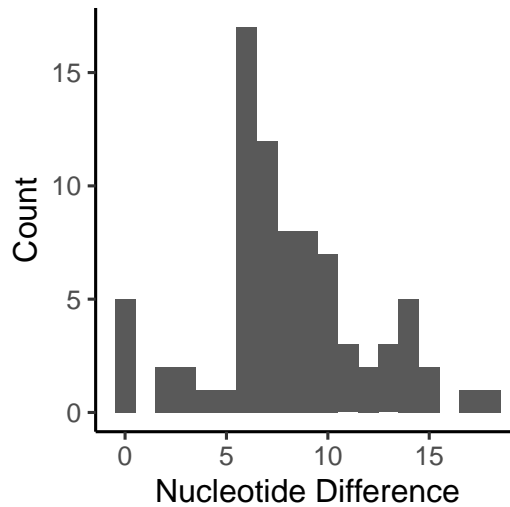
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



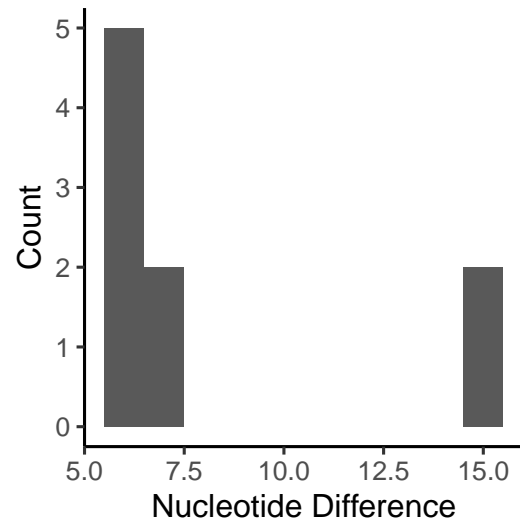
### IGHV3-73\*01\_02

87 sequences assigned  
5 (5.7%) exact matches, in which:  
4 unique CDR3  
4 unique J



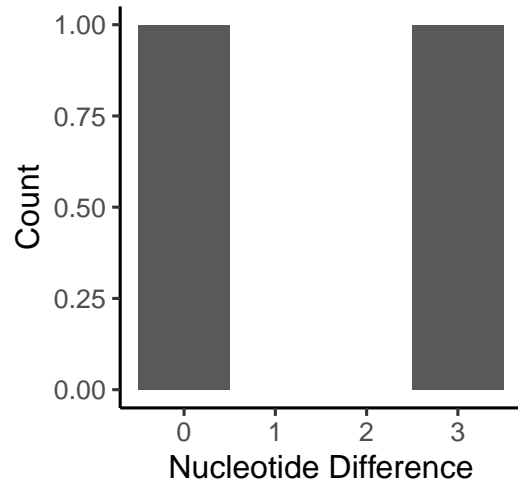
### IGHV3-43D\*04

9 sequences assigned  
No exact matches.



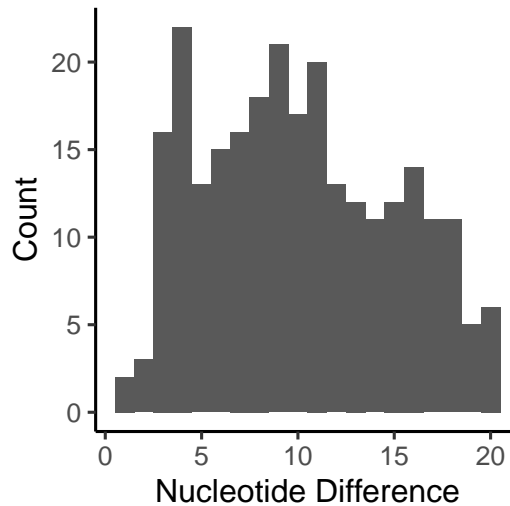
### IGHV3-69-1\*02

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



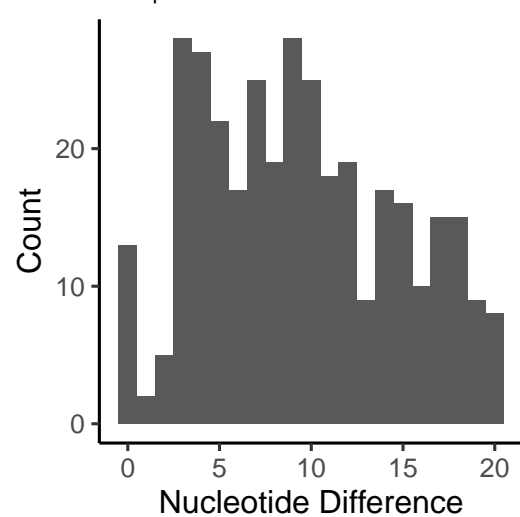
### IGHV3-74\*03

272 sequences assigned  
No exact matches.



### IGHV4-4\*07

408 sequences assigned  
13 (3.2%) exact matches, in which:  
9 unique CDR3  
4 unique J



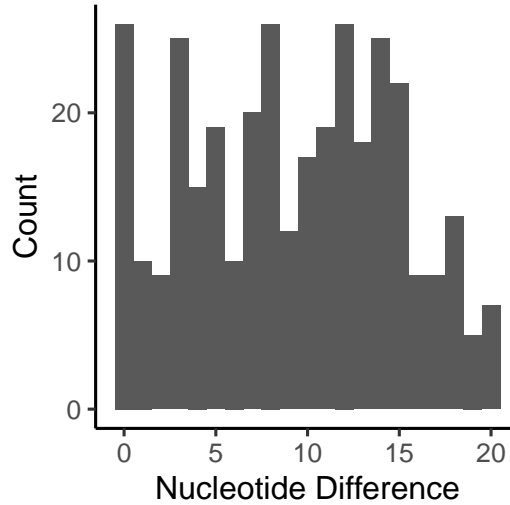
### IGHV4-28\*03

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



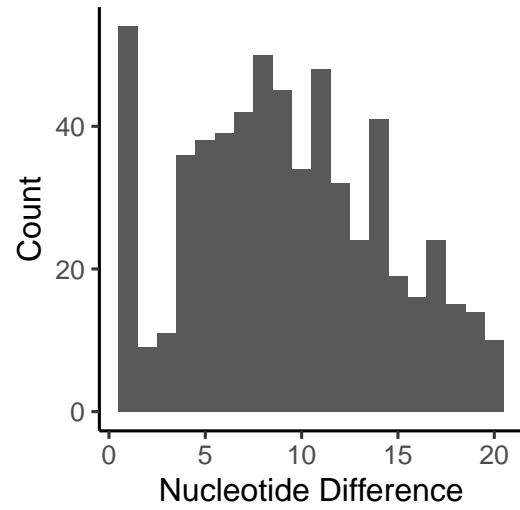
### IGHV4-31\*02

492 sequences assigned  
26 (5.3%) exact matches, in which:  
19 unique CDR3  
4 unique J



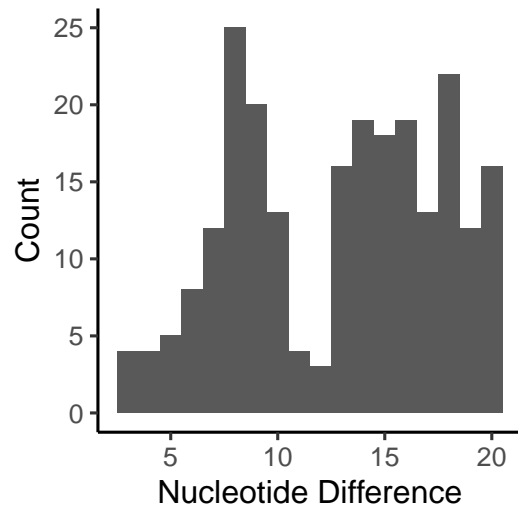
### IGHV4-39\*02

714 sequences assigned  
No exact matches.



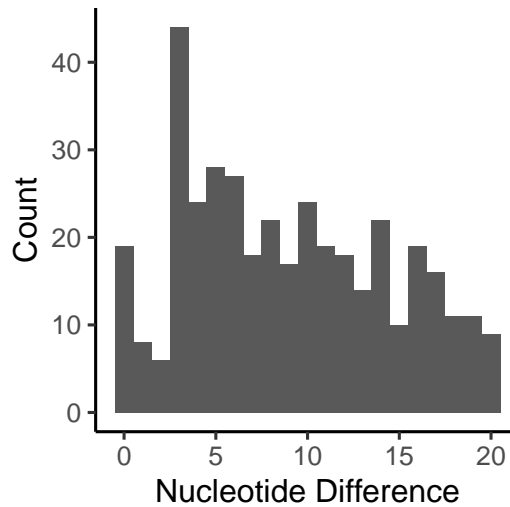
### IGHV4-30-2\*01

604 sequences assigned  
No exact matches.



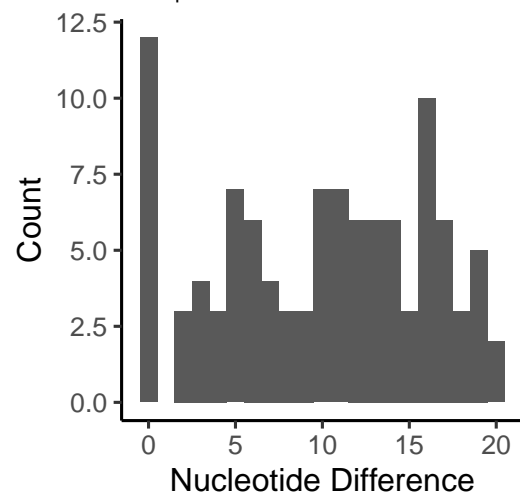
### IGHV4-34\*01\_02

464 sequences assigned  
19 (4.1%) exact matches, in which:  
11 unique CDR3  
4 unique J



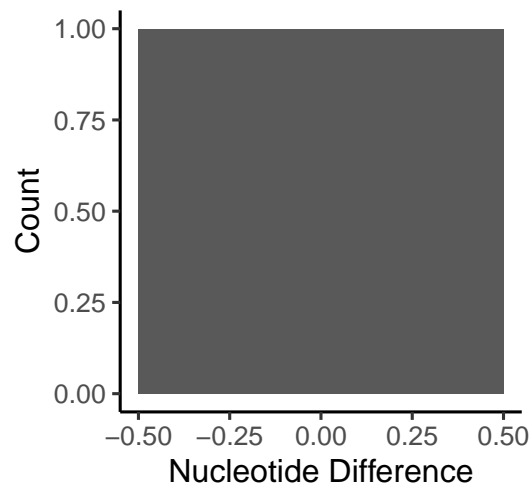
### IGHV4-39\*01\_05

124 sequences assigned  
12 (9.7%) exact matches, in which:  
7 unique CDR3  
2 unique J



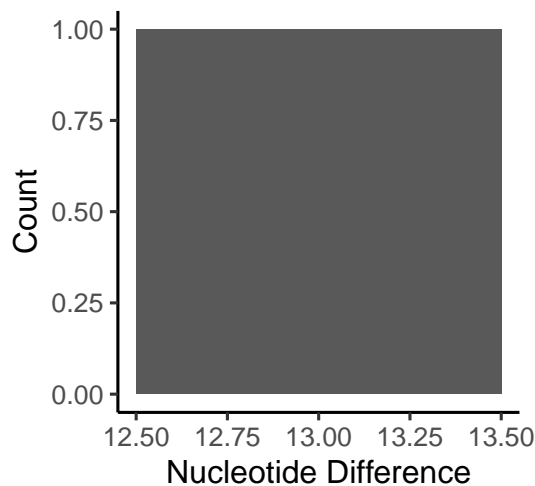
### IGHV4-30-4\*01

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



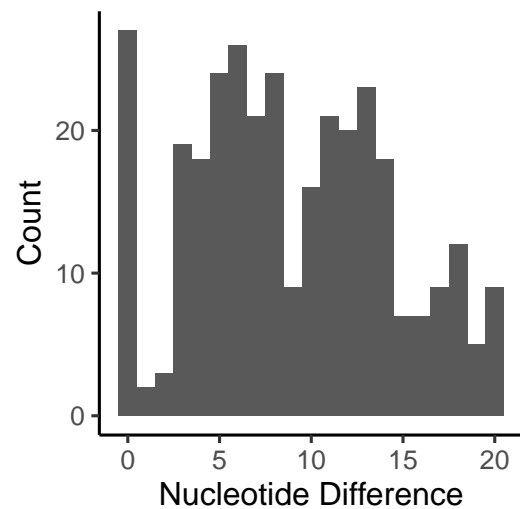
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



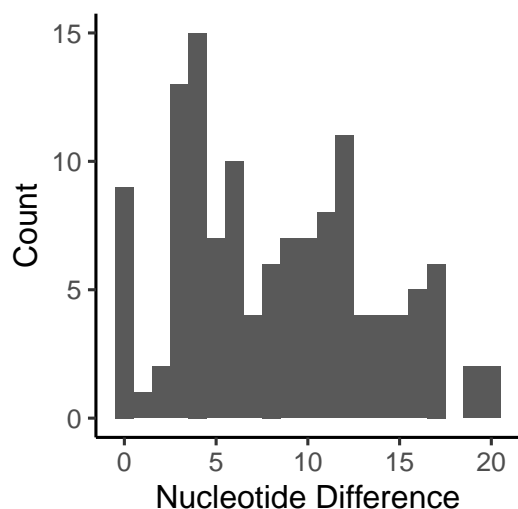
### IGHV4-59\*08

384 sequences assigned  
27 (7%) exact matches, in which:  
17 unique CDR3  
3 unique J



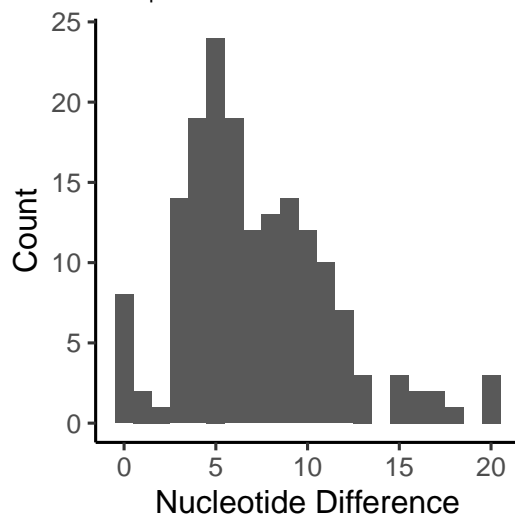
## IGHV4-61\*01

160 sequences assigned  
9 (5.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



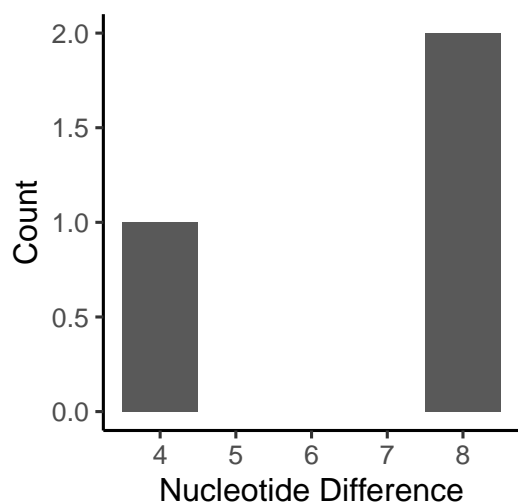
## IGHV6-1\*01\_02

236 sequences assigned  
8 (3.4%) exact matches, in which:  
8 unique CDR3  
4 unique J



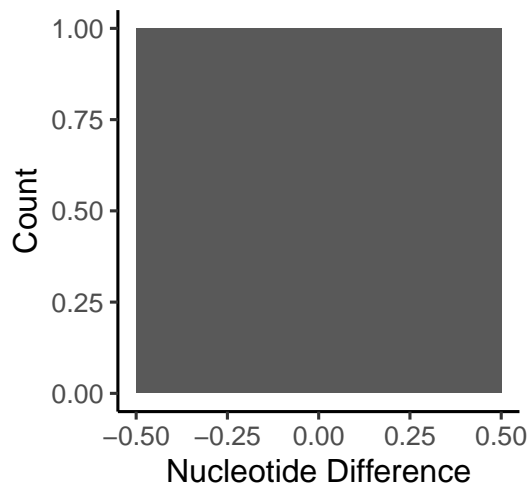
## IGHV4/OR15-8\*01

3 sequences assigned  
No exact matches.



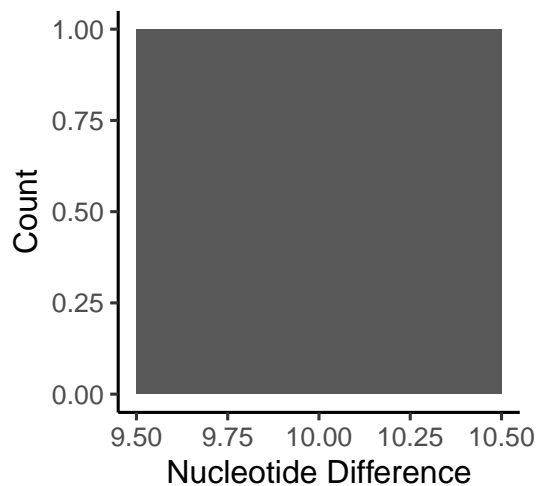
## IGHV7-4-1\*01

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



## IGHV5-51\*07

1 sequences assigned  
No exact matches.







[illegible]