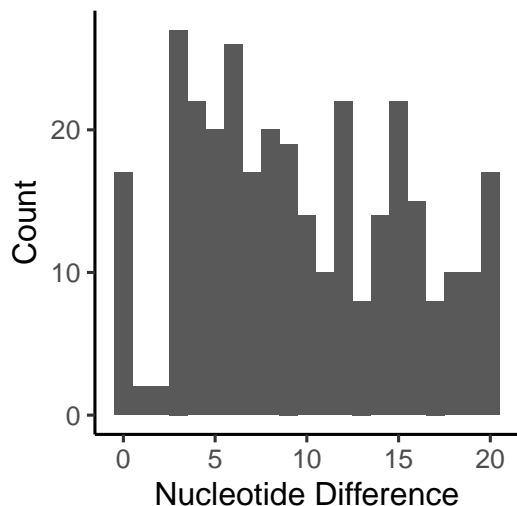


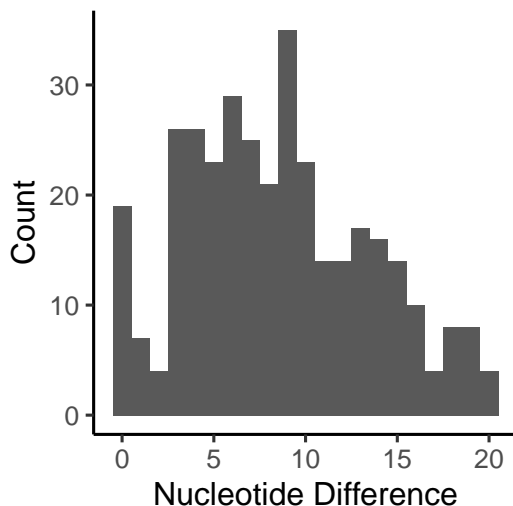
### IGHV1-2\*02

404 sequences assigned  
17 (4.2%) exact matches, in which:  
17 unique CDR3  
3 unique J



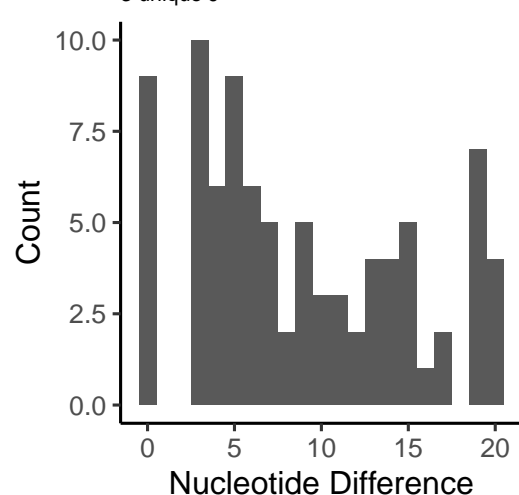
### IGHV1-18\*01

392 sequences assigned  
19 (4.8%) exact matches, in which:  
19 unique CDR3  
4 unique J



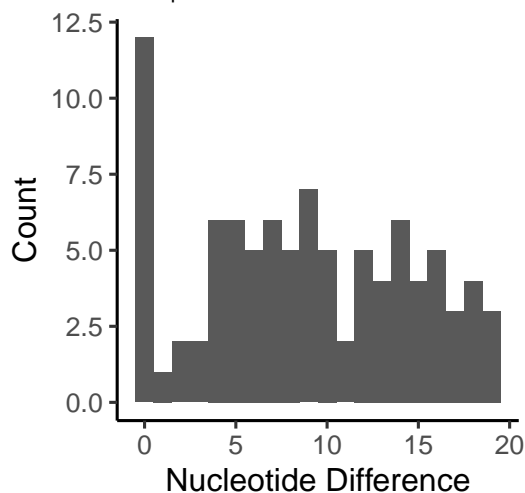
### IGHV1-46\*03

115 sequences assigned  
9 (7.8%) exact matches, in which:  
9 unique CDR3  
3 unique J



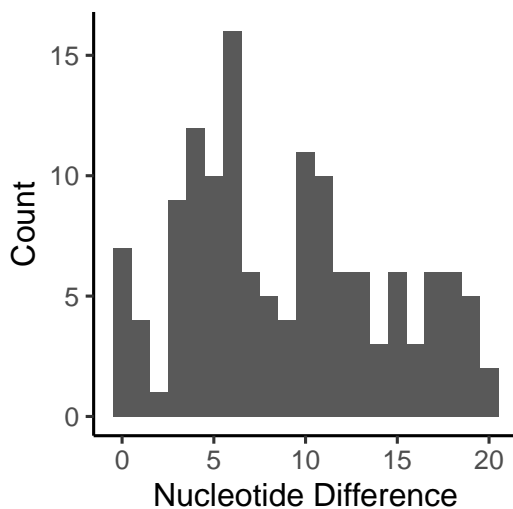
### IGHV1-3\*01\_05

106 sequences assigned  
12 (11.3%) exact matches, in which:  
10 unique CDR3  
3 unique J



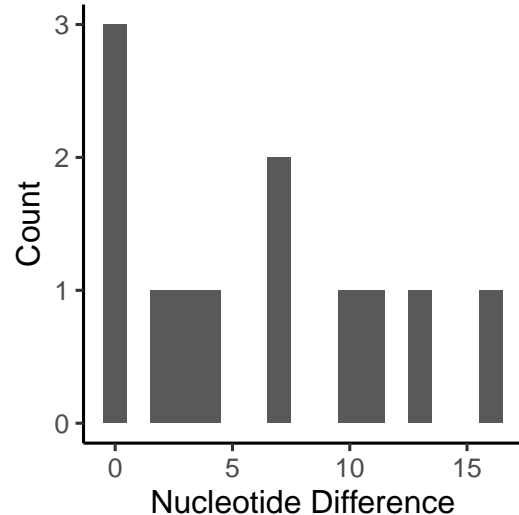
### IGHV1-18\*04

164 sequences assigned  
7 (4.3%) exact matches, in which:  
7 unique CDR3  
2 unique J



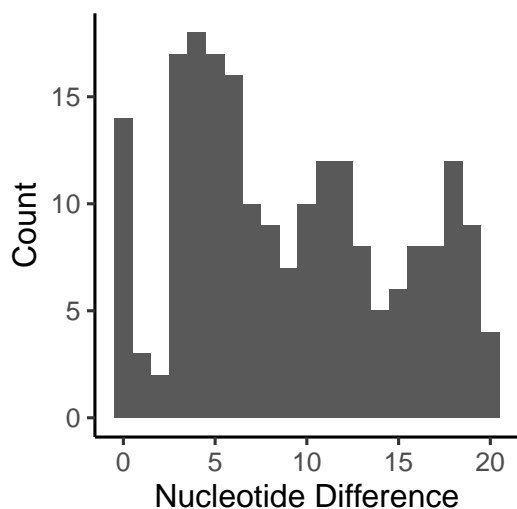
### IGHV1-58\*02

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



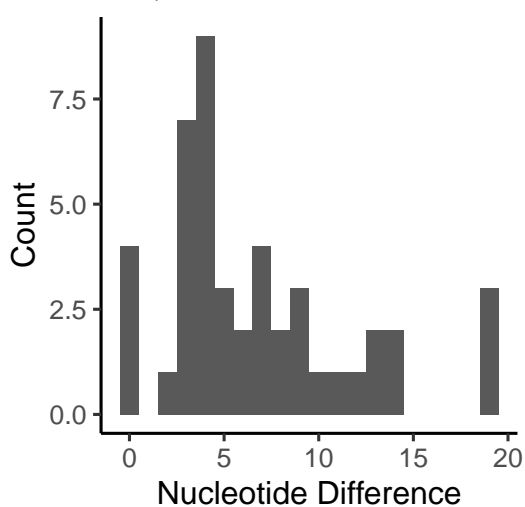
### IGHV1-8\*01

234 sequences assigned  
14 (6%) exact matches, in which:  
14 unique CDR3  
4 unique J



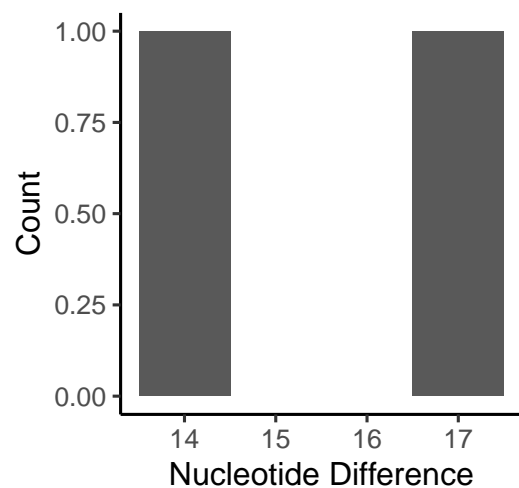
### IGHV1-24\*01

60 sequences assigned  
4 (6.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



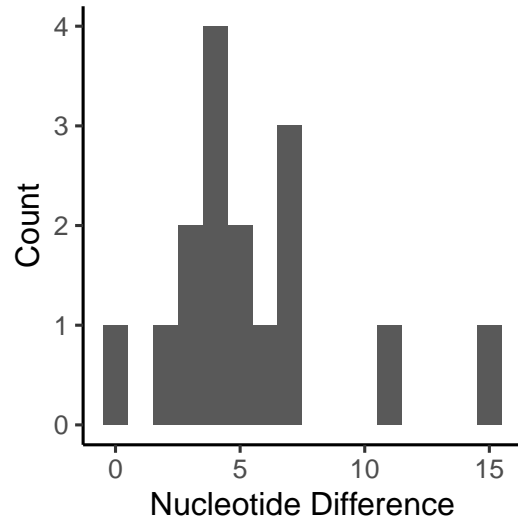
### IGHV1-58\*01\_03

4 sequences assigned  
No exact matches.



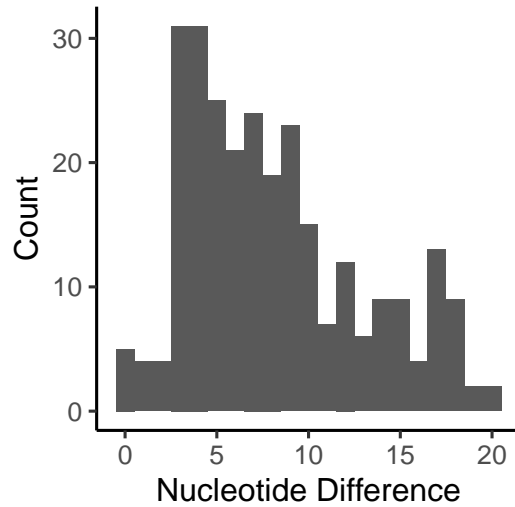
### IGHV1-69\*02

17 sequences assigned  
1 (5.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



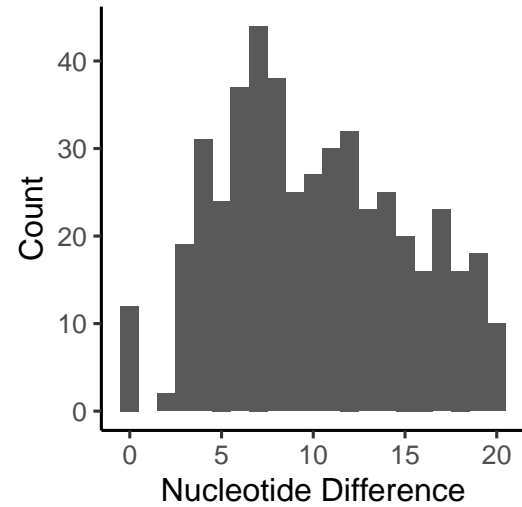
### IGHV2-5\*01

288 sequences assigned  
5 (1.7%) exact matches, in which:  
5 unique CDR3  
4 unique J



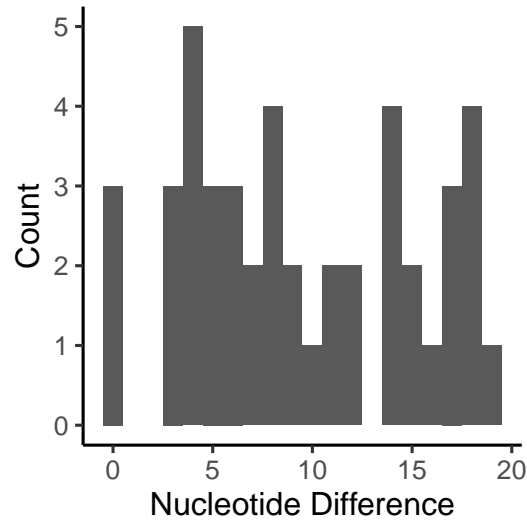
### IGHV3-7\*01

546 sequences assigned  
12 (2.2%) exact matches, in which:  
10 unique CDR3  
5 unique J



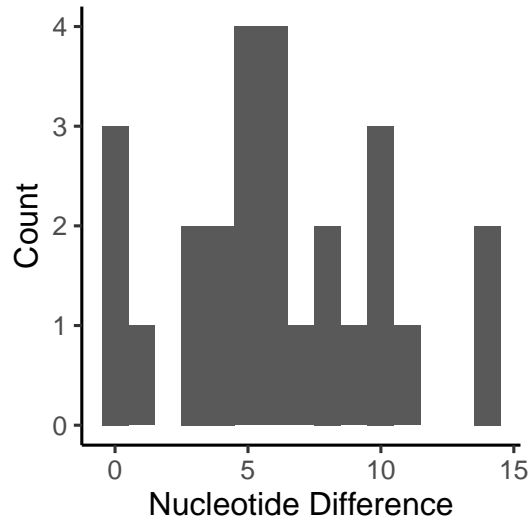
### IGHV1-69\*05

63 sequences assigned  
3 (4.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



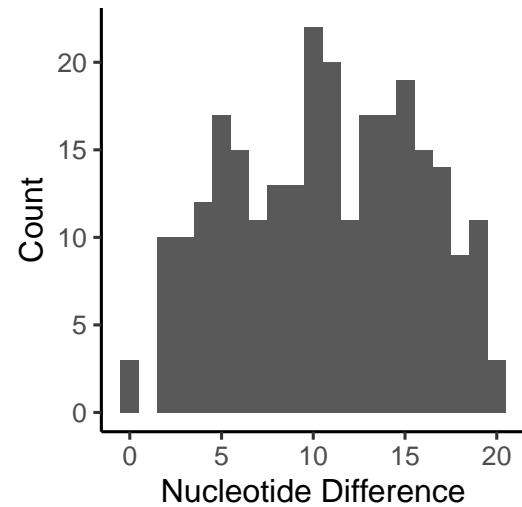
### IGHV2-26\*01

26 sequences assigned  
3 (11.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



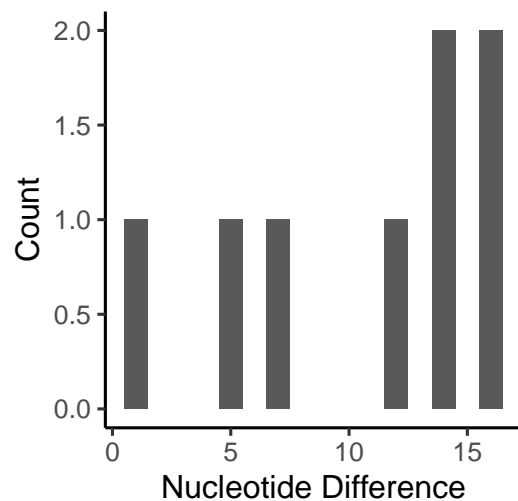
### IGHV3-7\*05

277 sequences assigned  
3 (1.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



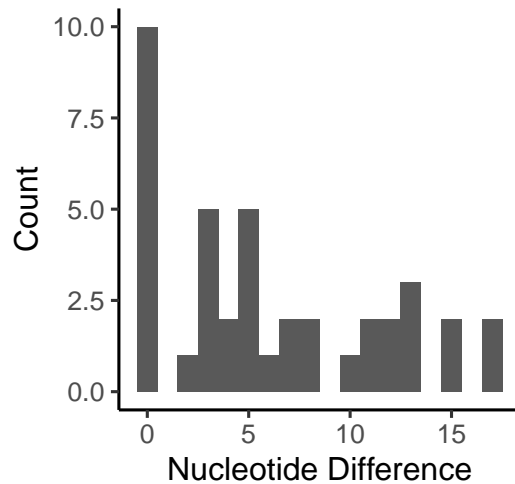
### IGHV1-69\*08

12 sequences assigned  
No exact matches.



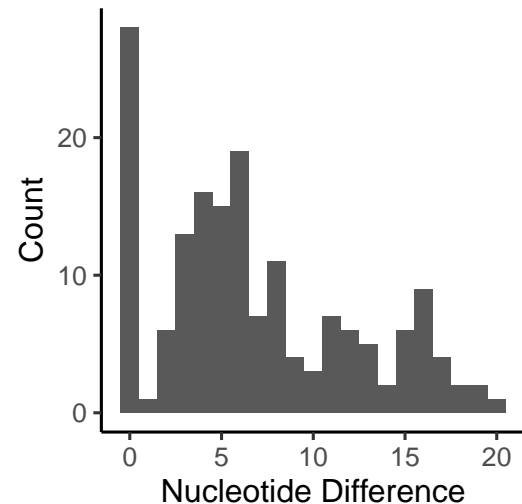
### IGHV2-70\*11\_15

41 sequences assigned  
10 (24.4%) exact matches, in which:  
10 unique CDR3  
3 unique J



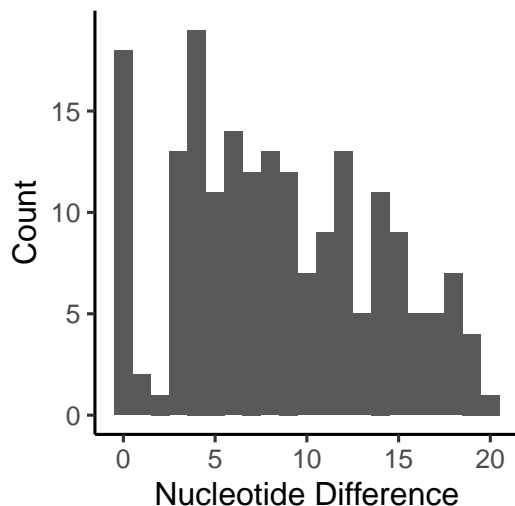
### IGHV3-9\*01

179 sequences assigned  
28 (15.6%) exact matches, in which:  
24 unique CDR3  
4 unique J



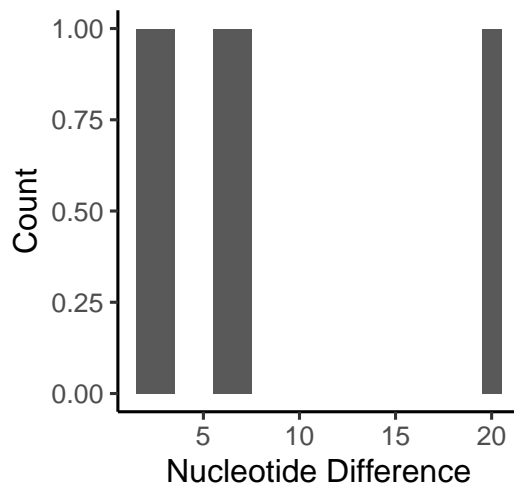
### IGHV3-11\*01

224 sequences assigned  
18 (8%) exact matches, in which:  
16 unique CDR3  
5 unique J



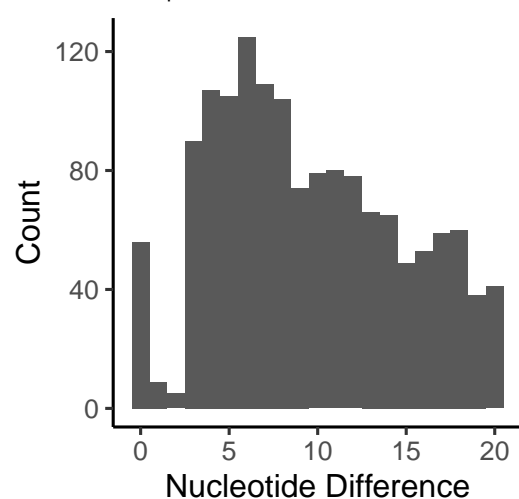
### IGHV3-20\*01\_02

5 sequences assigned  
No exact matches.



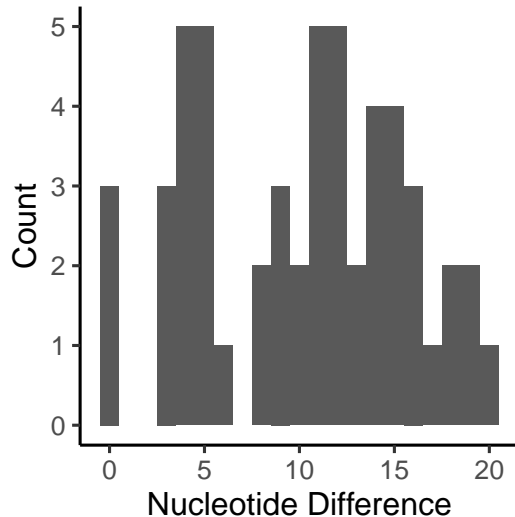
### IGHV3-23\*01\_04

1734 sequences assigned  
56 (3.2%) exact matches, in which:  
43 unique CDR3  
5 unique J



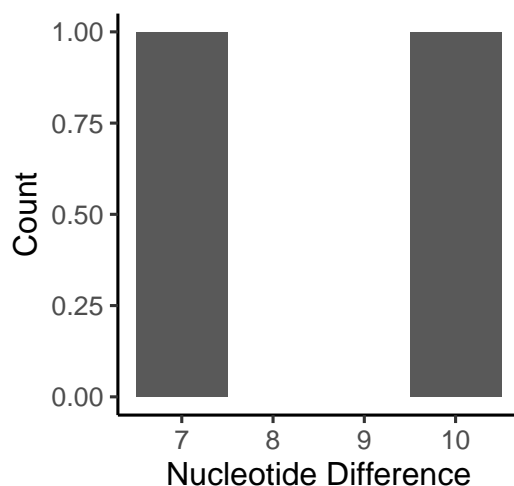
### IGHV3-13\*01

64 sequences assigned  
3 (4.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



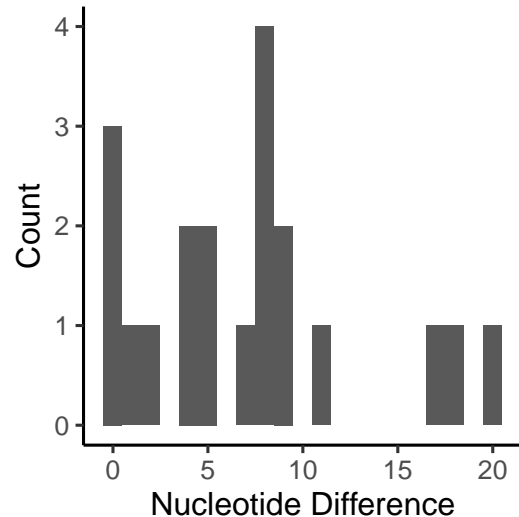
### IGHV3-20\*03\_04

2 sequences assigned  
No exact matches.



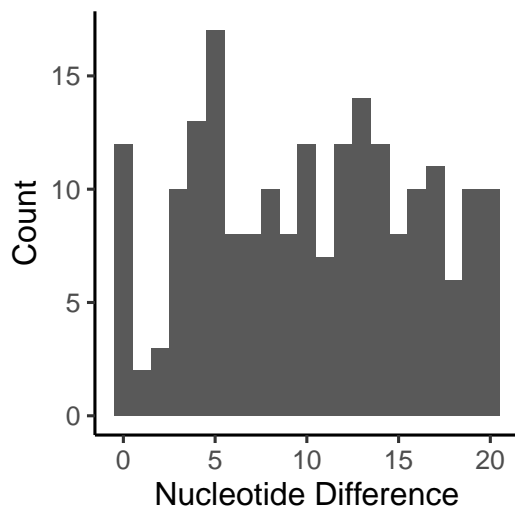
### IGHV3-43\*01

25 sequences assigned  
3 (12%) exact matches, in which:  
2 unique CDR3  
2 unique J



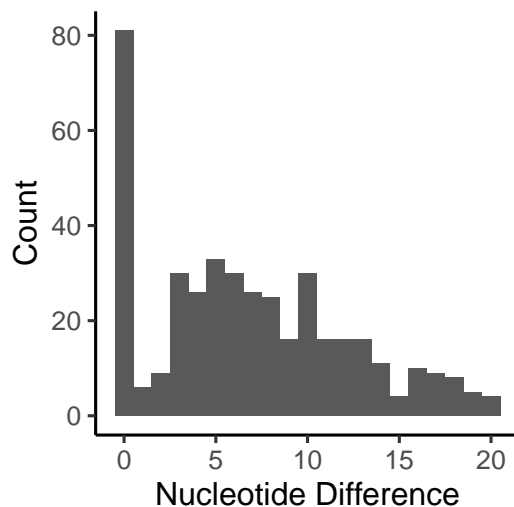
### IGHV3-15\*01\_02

272 sequences assigned  
12 (4.4%) exact matches, in which:  
12 unique CDR3  
4 unique J



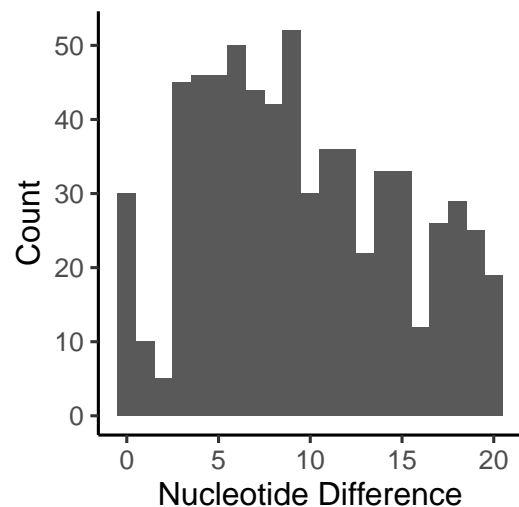
### IGHV3-21\*01\_02

474 sequences assigned  
81 (17.1%) exact matches, in which:  
63 unique CDR3  
5 unique J



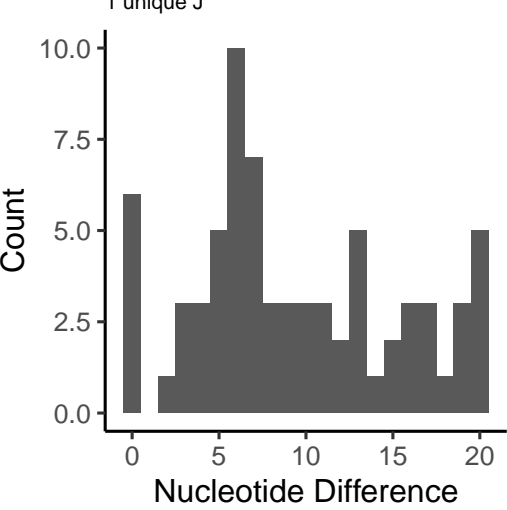
### IGHV3-48\*01

806 sequences assigned  
30 (3.7%) exact matches, in which:  
24 unique CDR3  
4 unique J



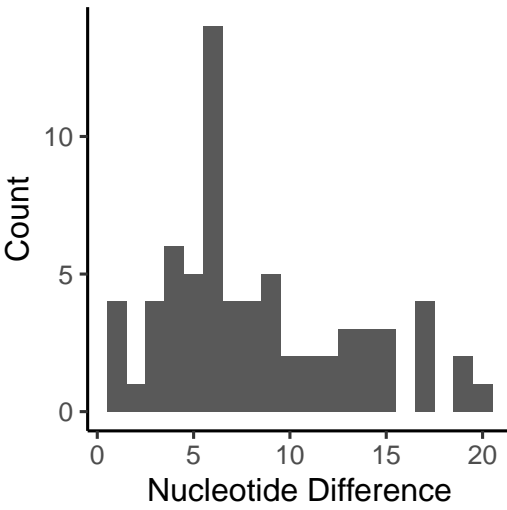
IGHV3-49\*03\_05

81 sequences assigned  
6 (7.4%) exact matches, in which:  
6 unique CDR3  
1 unique J



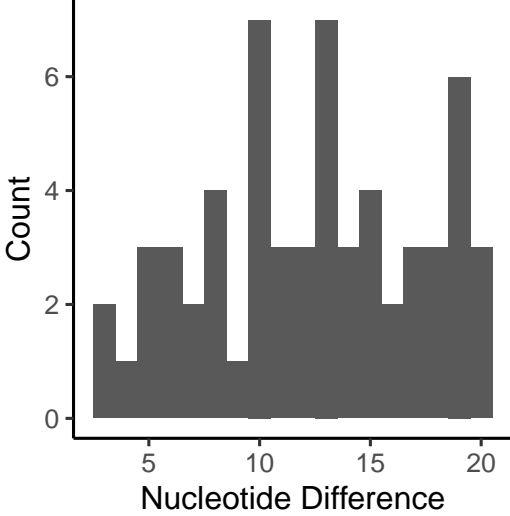
IGHV3-66\*01

93 sequences assigned  
No exact matches.



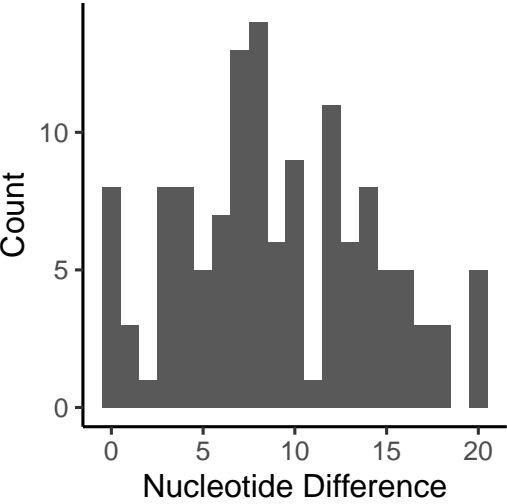
IGHV3-72\*01

64 sequences assigned  
No exact matches.



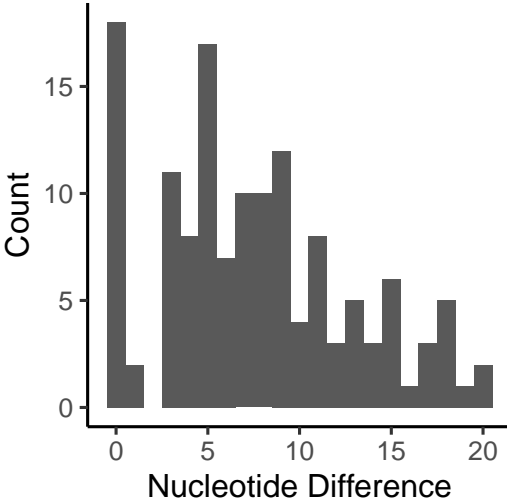
IGHV3-53\*01\_02

148 sequences assigned  
8 (5.4%) exact matches, in which:  
7 unique CDR3  
3 unique J



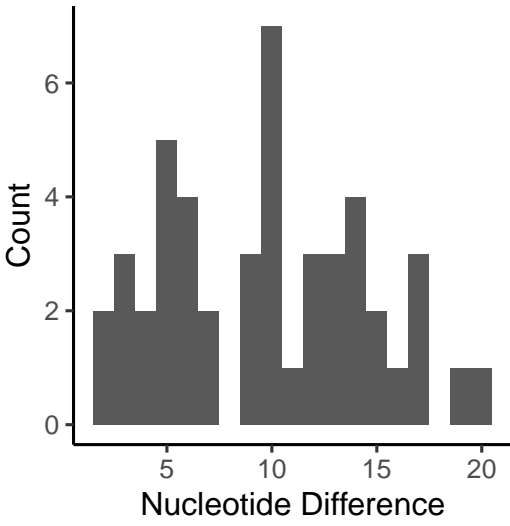
IGHV3-66\*02

154 sequences assigned  
18 (11.7%) exact matches, in which:  
14 unique CDR3  
5 unique J



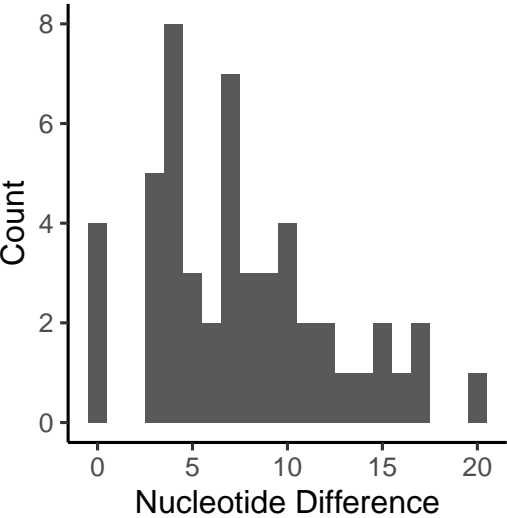
IGHV3-73\*01\_02

50 sequences assigned  
No exact matches.



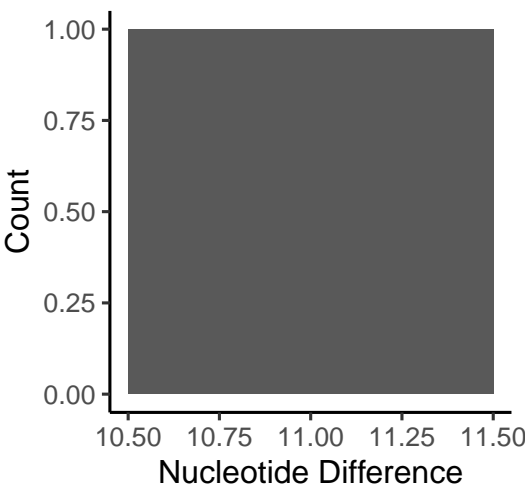
IGHV3-64\*01

52 sequences assigned  
4 (7.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



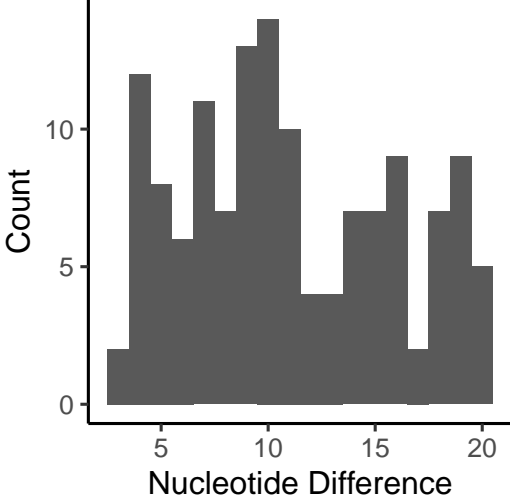
IGHV3-69-1\*02

1 sequences assigned  
No exact matches.



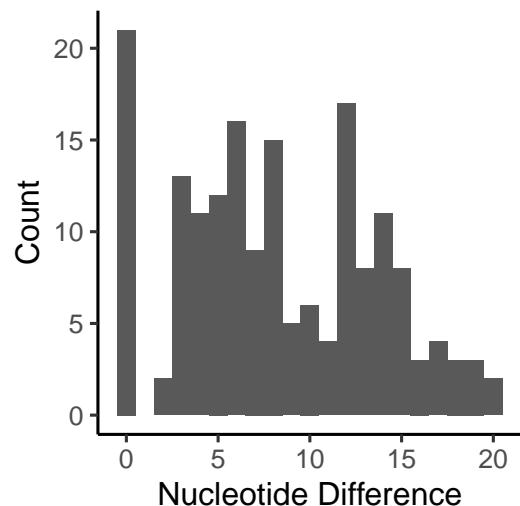
IGHV3-74\*03

161 sequences assigned  
No exact matches.



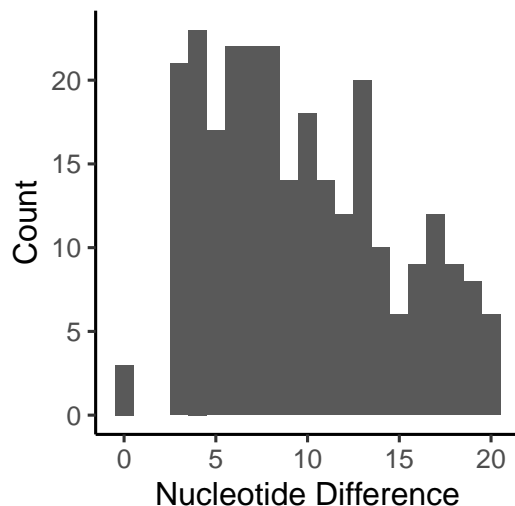
### IGHV3-74\*01\_02

193 sequences assigned  
21 (10.9%) exact matches, in which:  
17 unique CDR3  
5 unique J



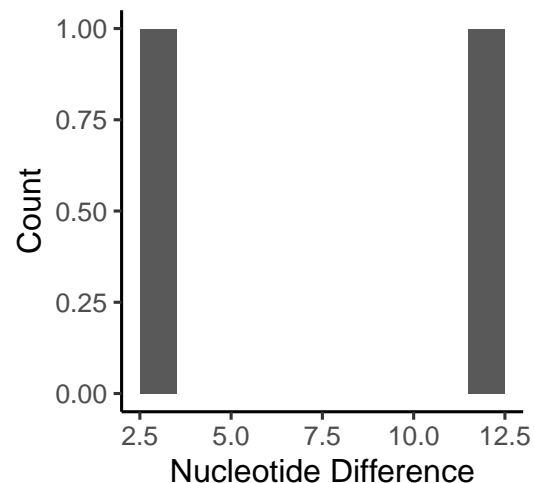
### IGHV4-4\*07

325 sequences assigned  
3 (0.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



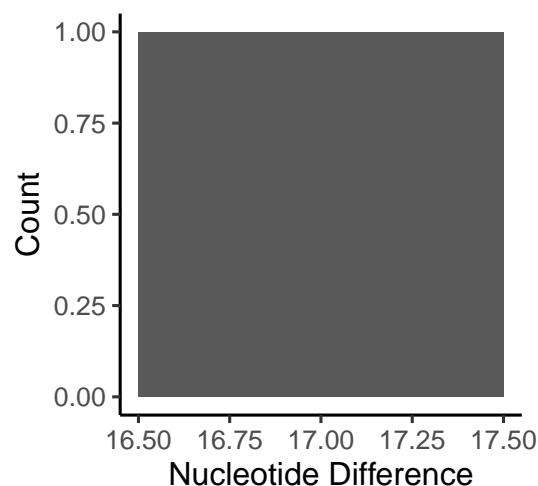
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



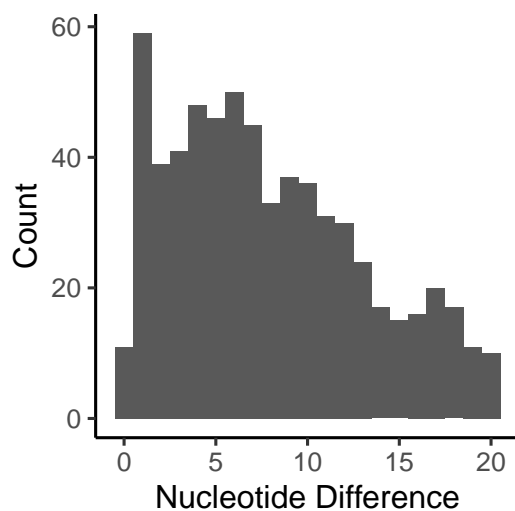
### IGHV3-43D\*03

4 sequences assigned  
No exact matches.



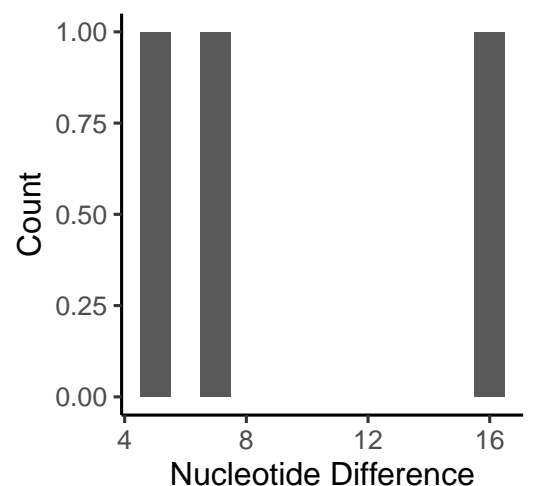
### IGHV4-4\*09

748 sequences assigned  
11 (1.5%) exact matches, in which:  
10 unique CDR3  
3 unique J



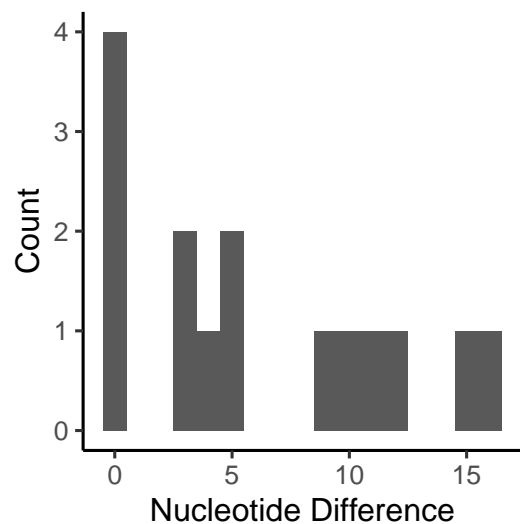
### IGHV4-28\*02\_05

3 sequences assigned  
No exact matches.



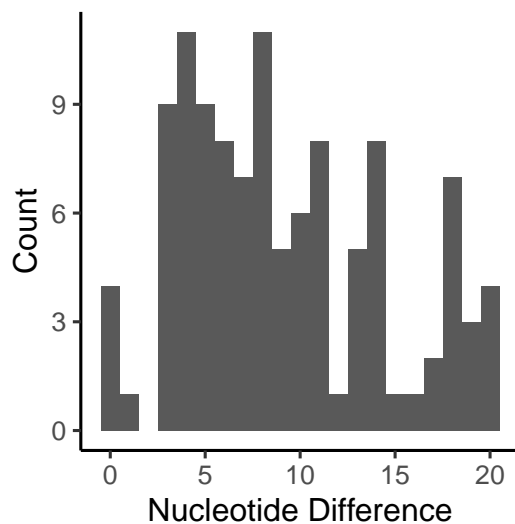
### IGHV3-43D\*04

18 sequences assigned  
4 (22.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



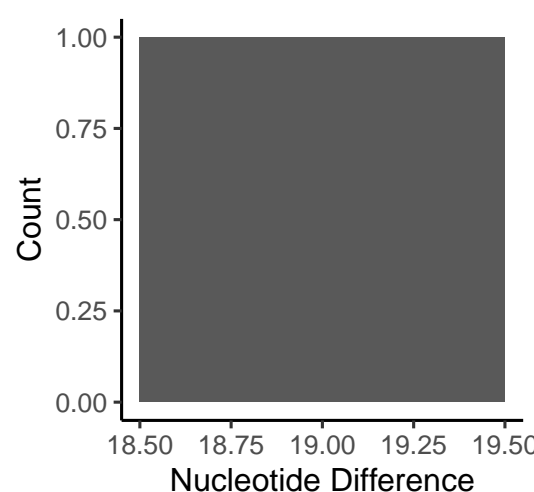
### IGHV4-4\*02\_03

156 sequences assigned  
4 (2.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



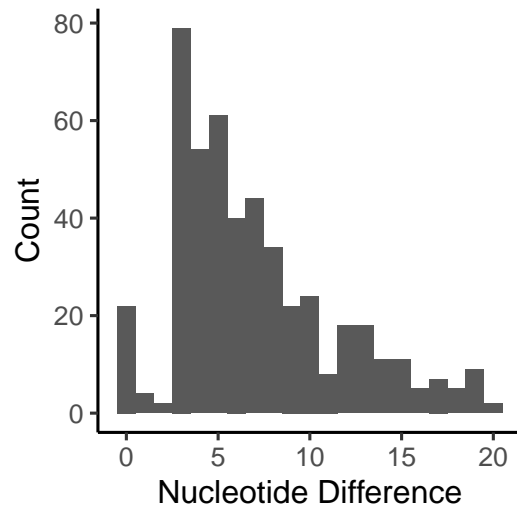
### IGHV4-31\*02

1 sequences assigned  
No exact matches.



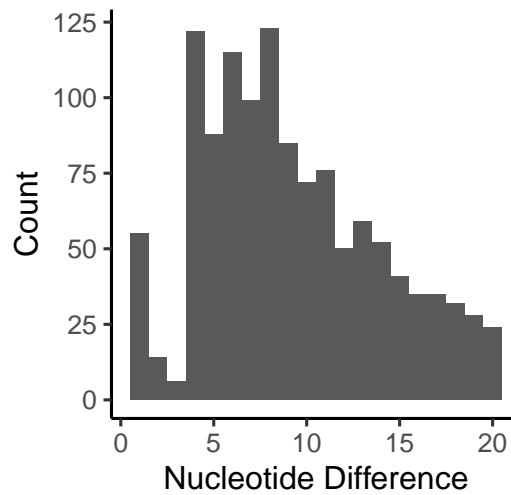
### IGHV4-34\*01\_02

520 sequences assigned  
22 (4.2%) exact matches, in which:  
15 unique CDR3  
5 unique J



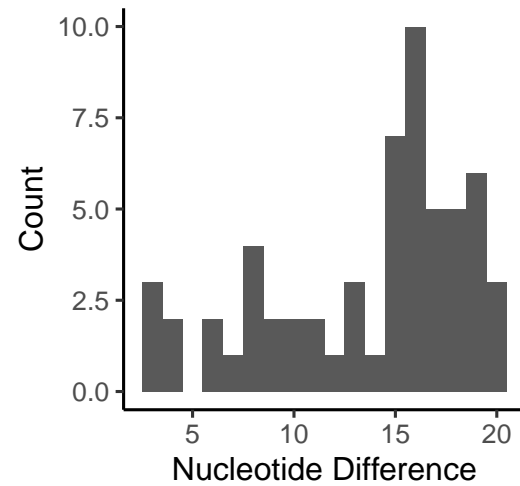
### IGHV4-39\*02

1423 sequences assigned  
No exact matches.



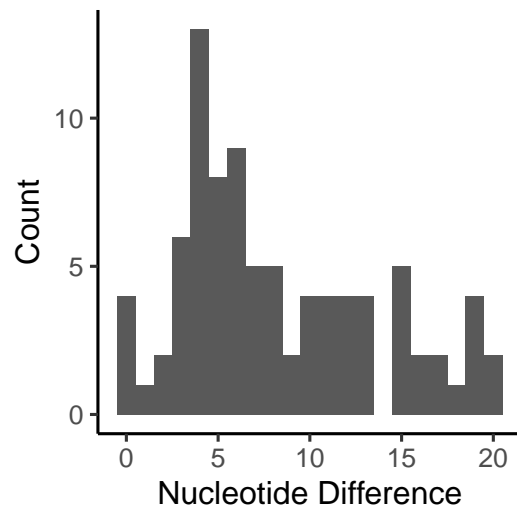
### IGHV4-59\*08

102 sequences assigned  
No exact matches.



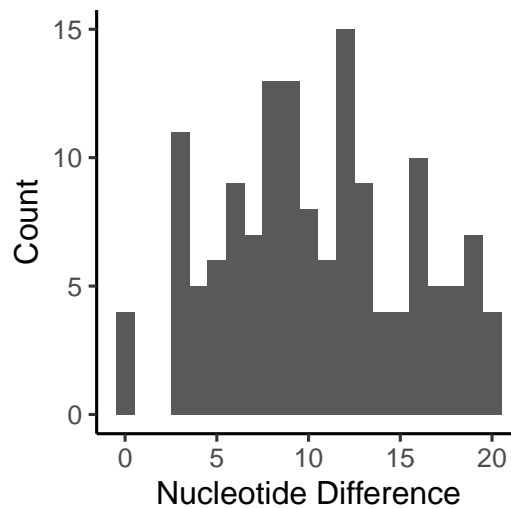
### IGHV4-38-2\*01

93 sequences assigned  
4 (4.3%) exact matches, in which:  
4 unique CDR3  
3 unique J



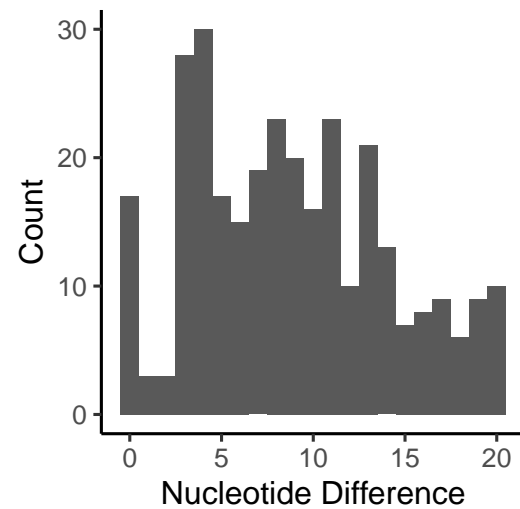
### IGHV4-39\*01\_05

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



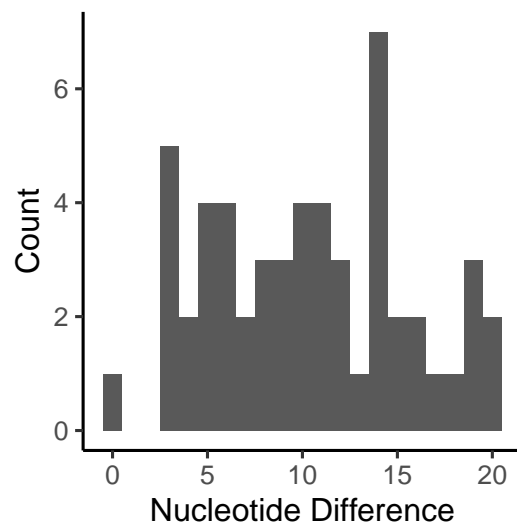
### IGHV4-59\*01\_07

364 sequences assigned  
17 (4.7%) exact matches, in which:  
10 unique CDR3  
3 unique J



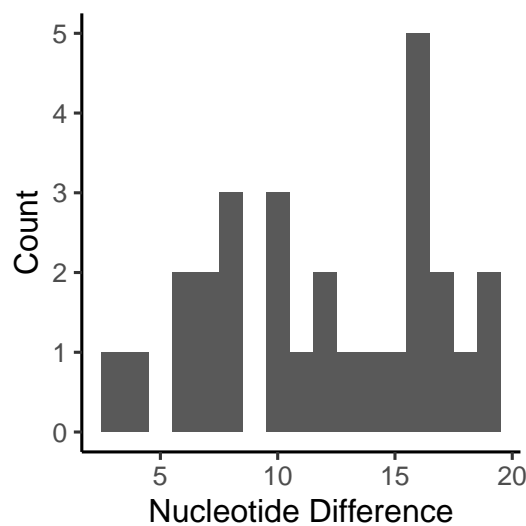
### IGHV4-38-2\*02

69 sequences assigned  
1 (1.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



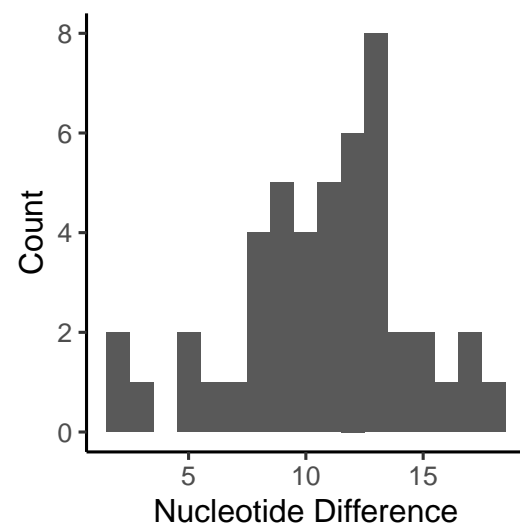
### IGHV4-59\*02

50 sequences assigned  
No exact matches.



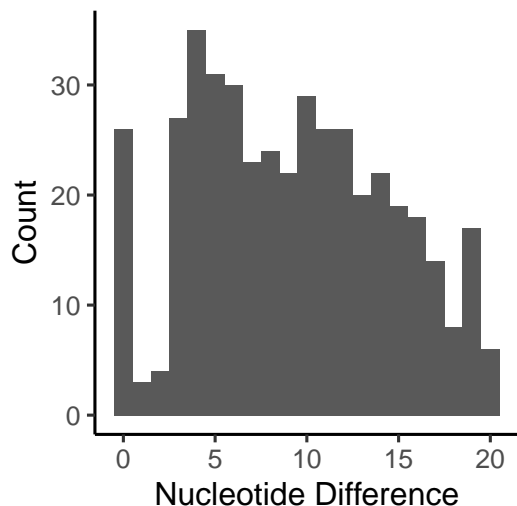
### IGHV4-59\*11

65 sequences assigned  
No exact matches.



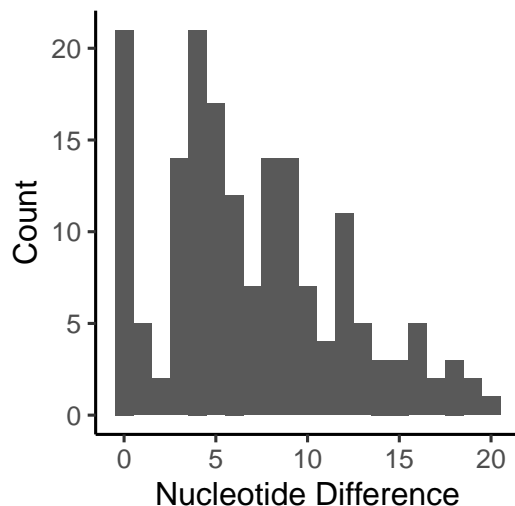
## IGHV4-61\*02

514 sequences assigned  
26 (5.1%) exact matches, in which:  
19 unique CDR3  
3 unique J



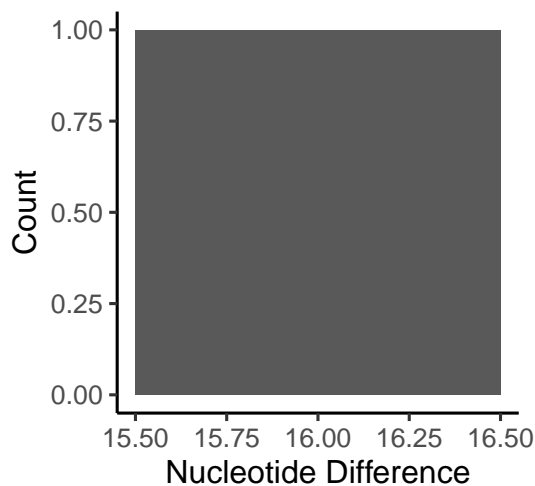
## IGHV5-51\*01\_03

193 sequences assigned  
21 (10.9%) exact matches, in which:  
21 unique CDR3  
5 unique J



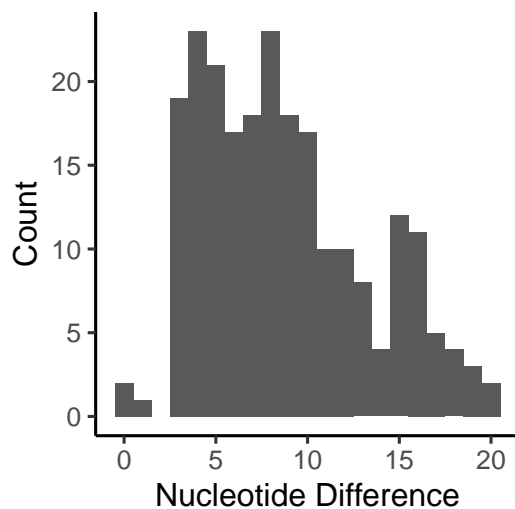
## IGHV4/OR15-8\*02

1 sequences assigned  
No exact matches.



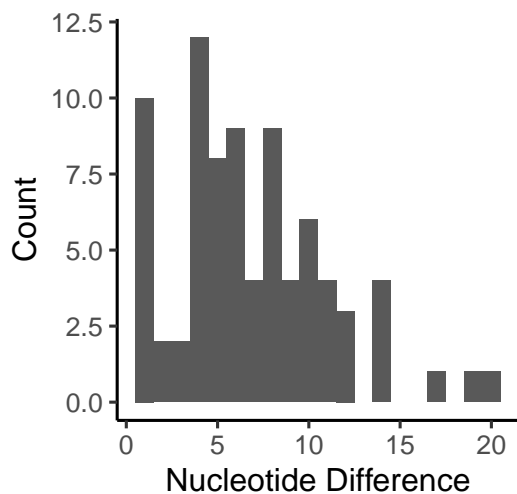
## IGHV6-1\*01\_02

240 sequences assigned  
2 (0.8%) exact matches, in which:  
2 unique CDR3  
2 unique J



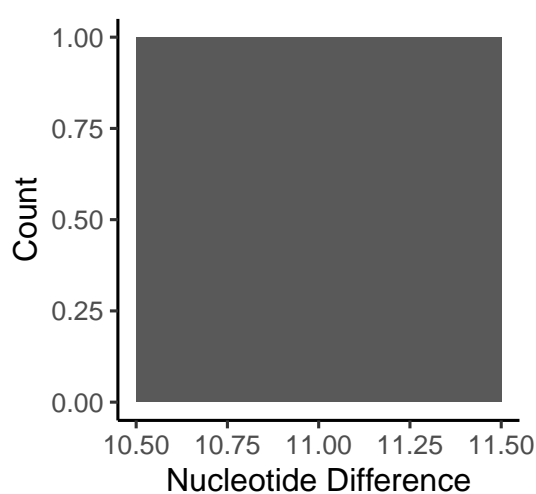
## IGHV5-51\*07

89 sequences assigned  
No exact matches.



## IGHV7-4-1\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.