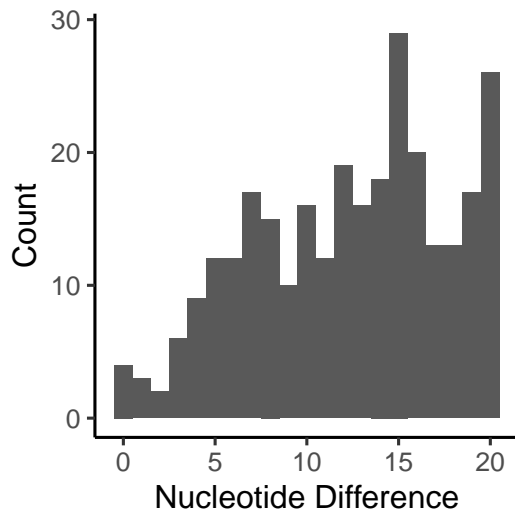


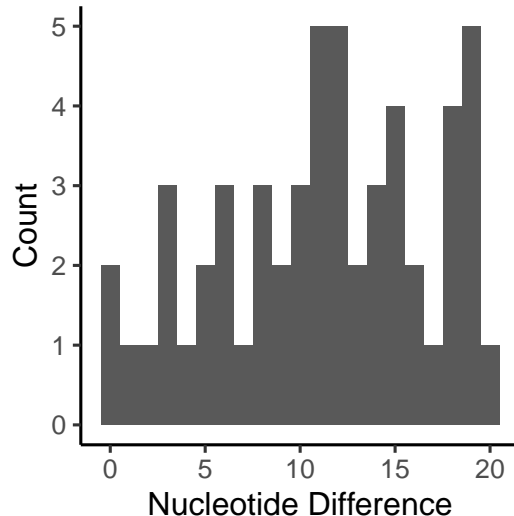
### IGHV1-2\*02

460 sequences assigned  
4 (0.9%) exact matches, in which:  
4 unique CDR3  
2 unique J



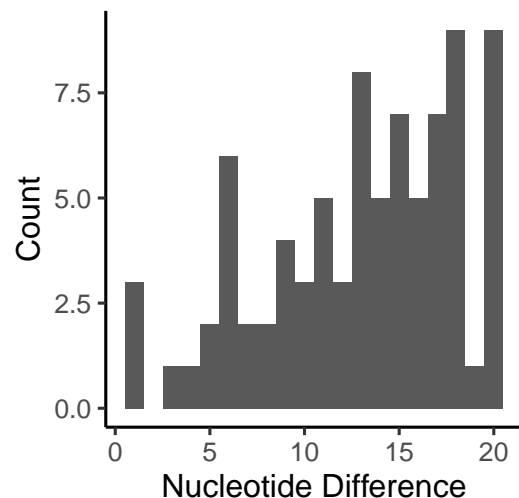
### IGHV1-3\*01\_05

111 sequences assigned  
2 (1.8%) exact matches, in which:  
2 unique CDR3  
2 unique J



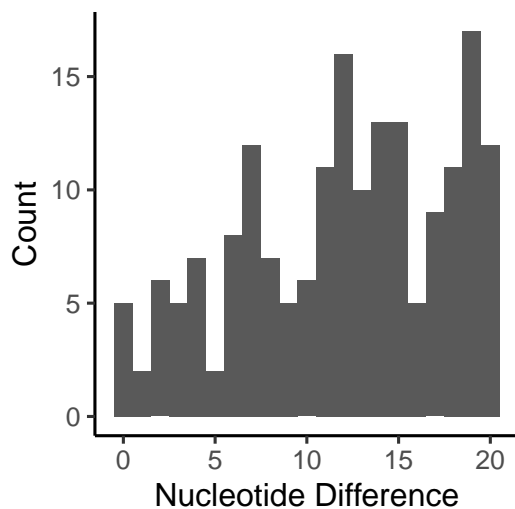
### IGHV1-24\*01

198 sequences assigned  
No exact matches.



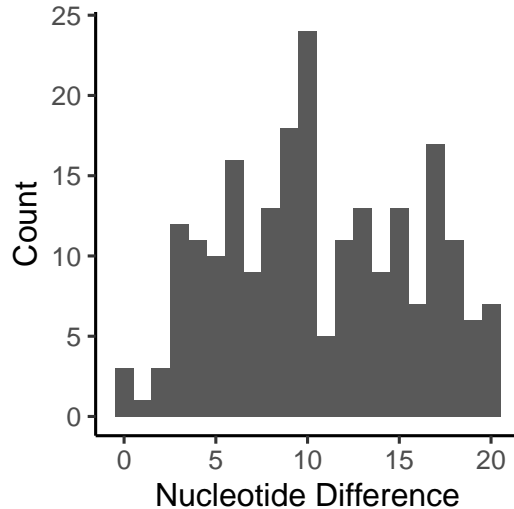
### IGHV1-2\*06

342 sequences assigned  
5 (1.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



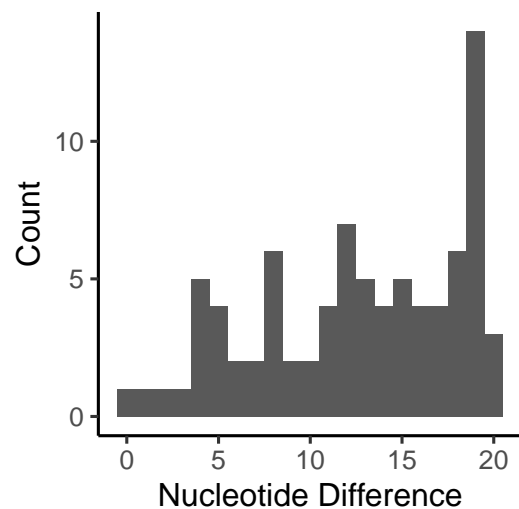
### IGHV1-8\*01

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



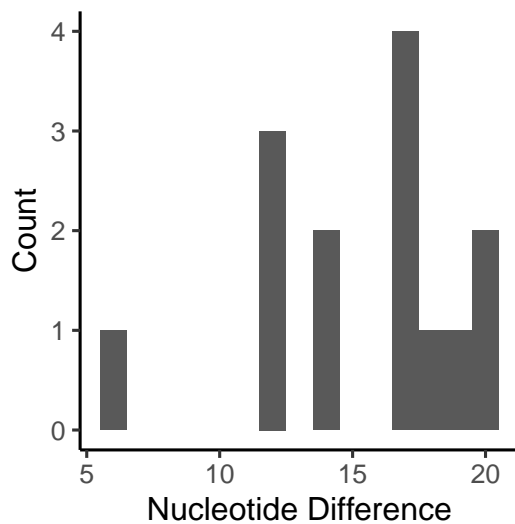
### IGHV1-46\*01

146 sequences assigned  
1 (0.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



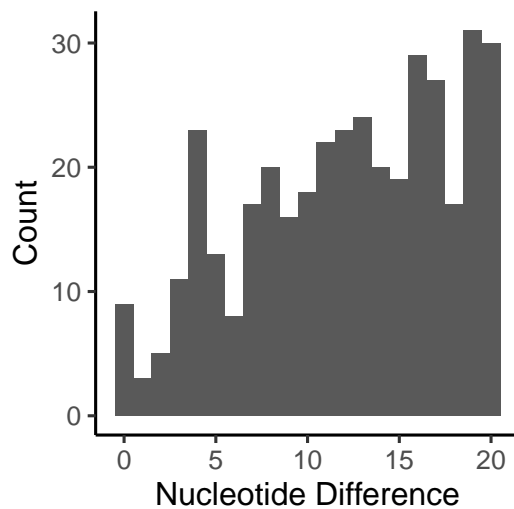
### IGHV1-3\*04

24 sequences assigned  
No exact matches.



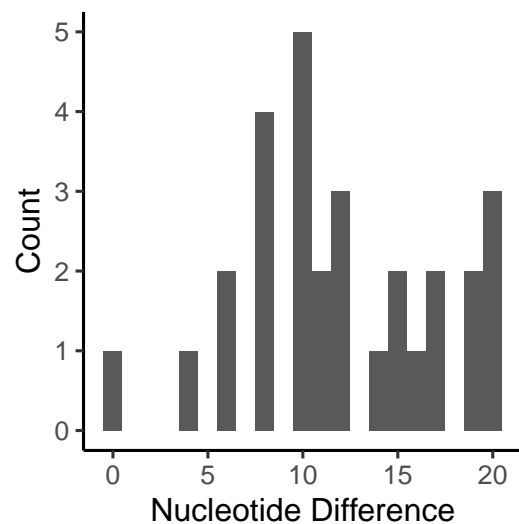
### IGHV1-18\*01

691 sequences assigned  
9 (1.3%) exact matches, in which:  
9 unique CDR3  
3 unique J



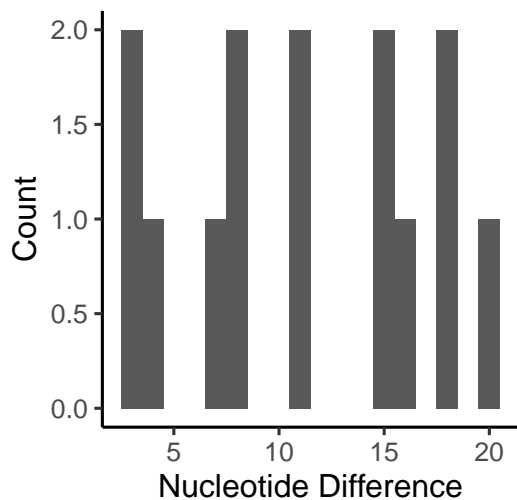
### IGHV1-46\*03

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



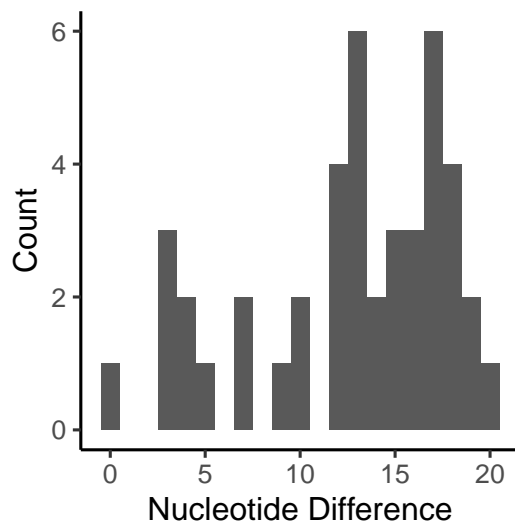
### IGHV1-58\*02

23 sequences assigned  
No exact matches.



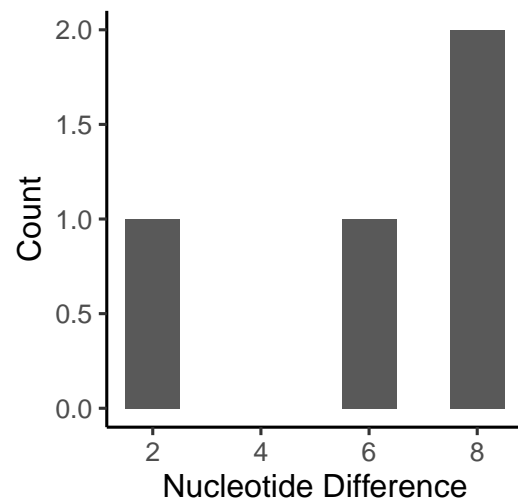
### IGHV1-69\*04\_09

118 sequences assigned  
1 (0.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



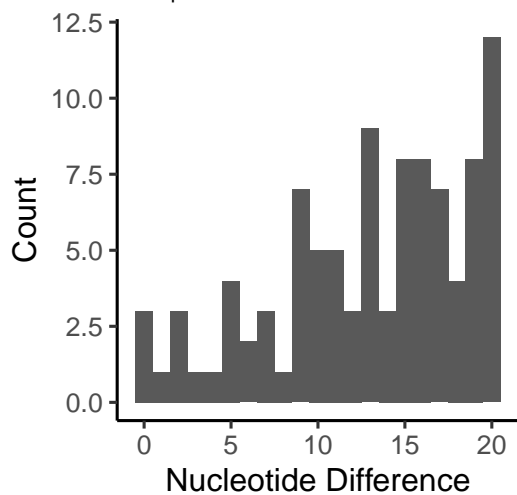
### IGHV2-26\*02

7 sequences assigned  
No exact matches.



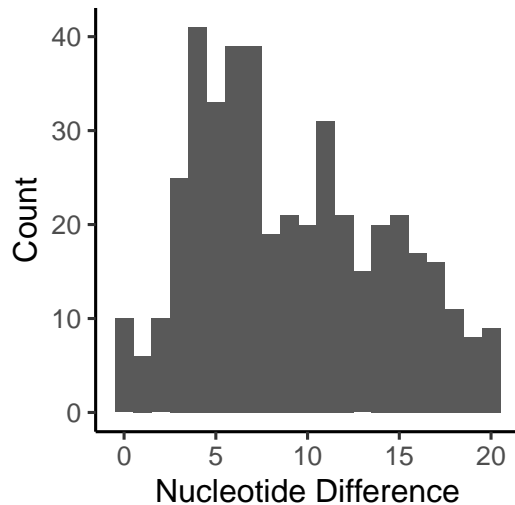
### IGHV1-69\*05

221 sequences assigned  
3 (1.4%) exact matches, in which:  
3 unique CDR3  
3 unique J



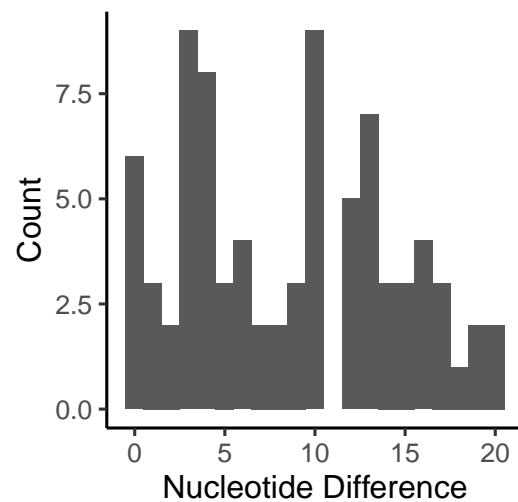
### IGHV2-5\*02

535 sequences assigned  
10 (1.9%) exact matches, in which:  
10 unique CDR3  
3 unique J



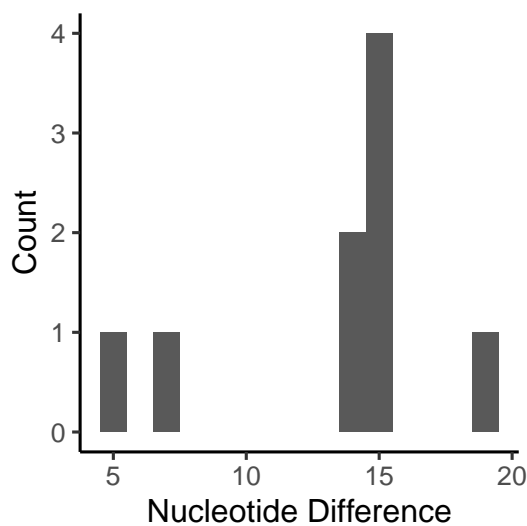
### IGHV2-70\*11\_15

96 sequences assigned  
6 (6.2%) exact matches, in which:  
6 unique CDR3  
4 unique J



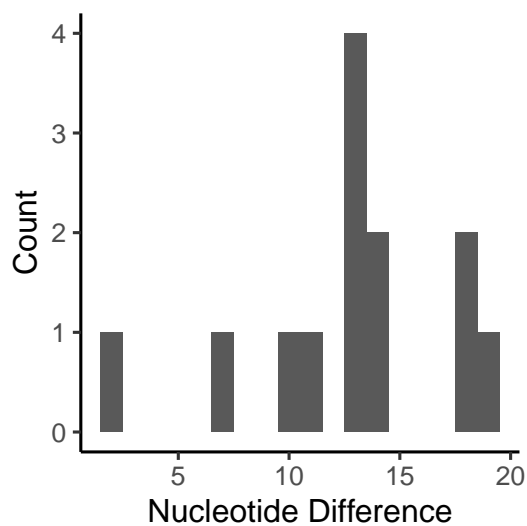
### IGHV1-69\*01\_12\_13

39 sequences assigned  
No exact matches.



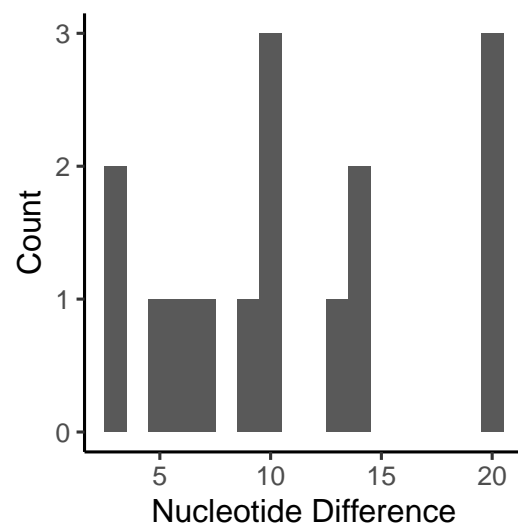
### IGHV2-26\*01

15 sequences assigned  
No exact matches.



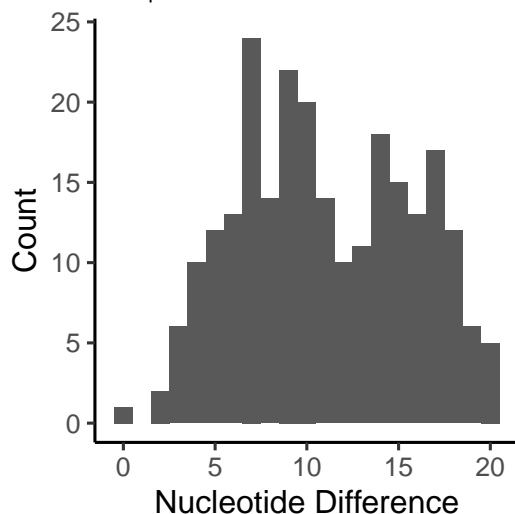
### IGHV2-70\*16\_17

20 sequences assigned  
No exact matches.



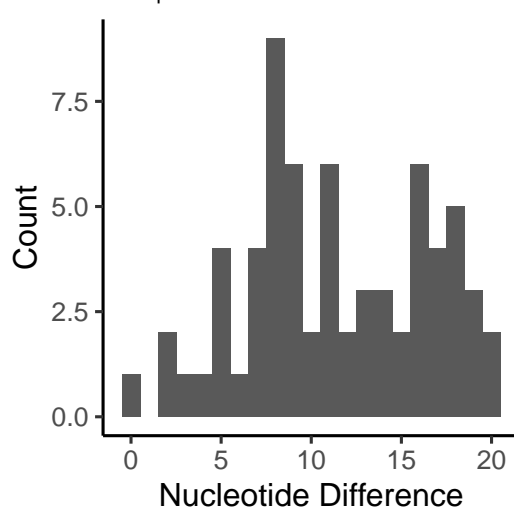
### IGHV3-7\*01

307 sequences assigned  
1 (0.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



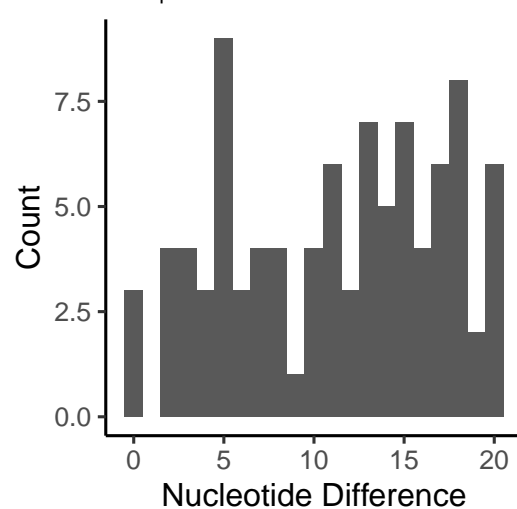
### IGHV3-11\*01

136 sequences assigned  
1 (0.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



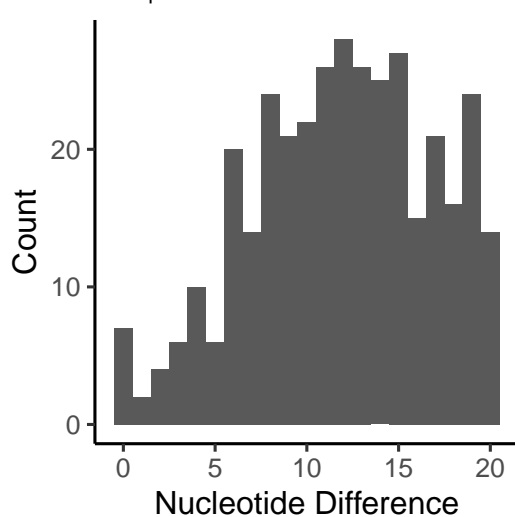
### IGHV3-20\*03\_04

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



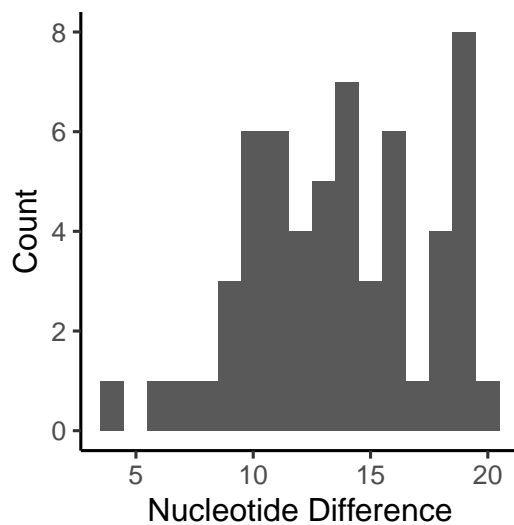
### IGHV3-7\*03

434 sequences assigned  
7 (1.6%) exact matches, in which:  
6 unique CDR3  
4 unique J



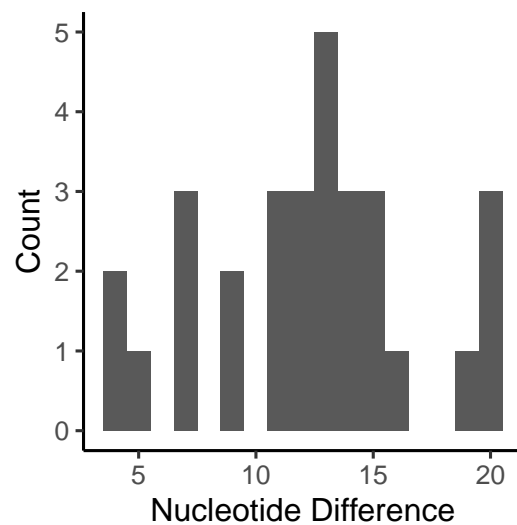
### IGHV3-13\*01

89 sequences assigned  
No exact matches.



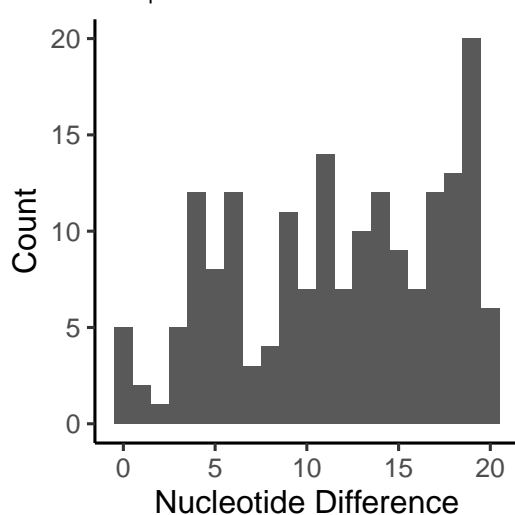
### IGHV3-21\*06

67 sequences assigned  
No exact matches.



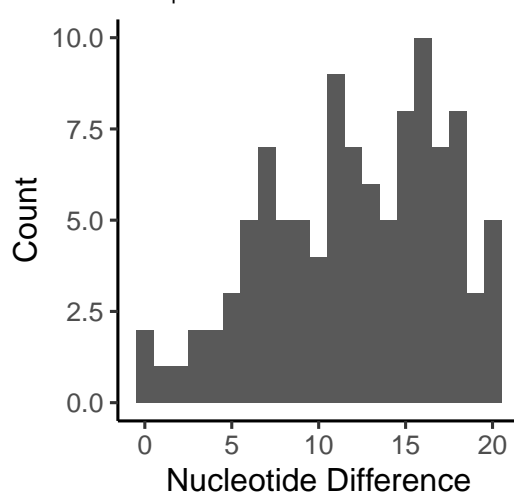
### IGHV3-9\*01

277 sequences assigned  
5 (1.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



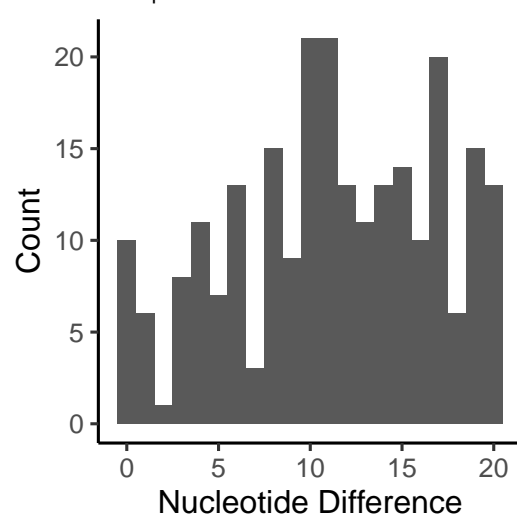
### IGHV3-15\*01\_02

161 sequences assigned  
2 (1.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



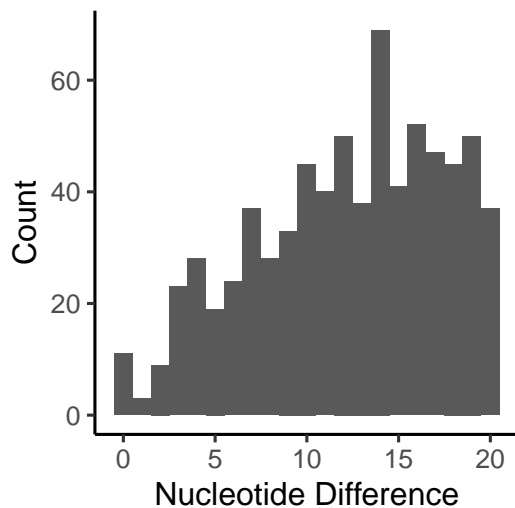
### IGHV3-21\*01\_02

350 sequences assigned  
10 (2.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



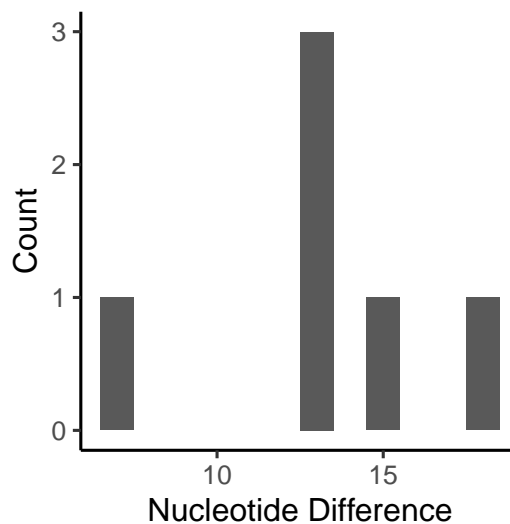
### IGHV3-23\*01\_04

1210 sequences assigned  
11 (0.9%) exact matches, in which:  
11 unique CDR3  
4 unique J



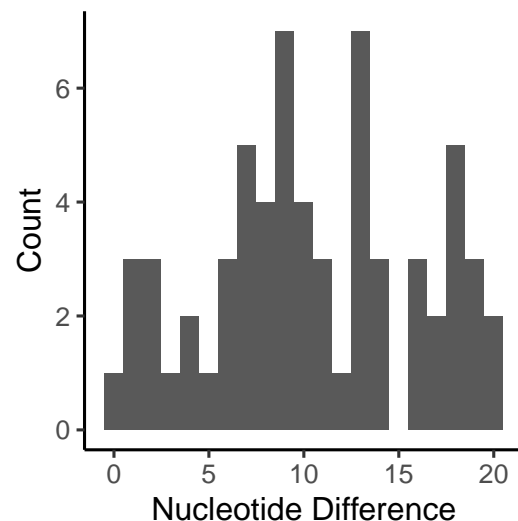
### IGHV3-33\*06

10 sequences assigned  
No exact matches.



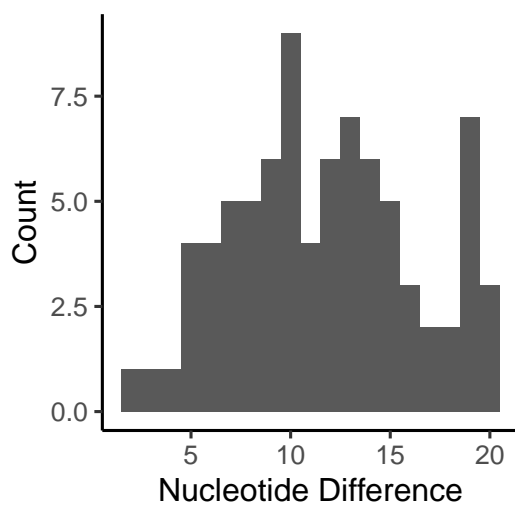
### IGHV3-49\*03\_05

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



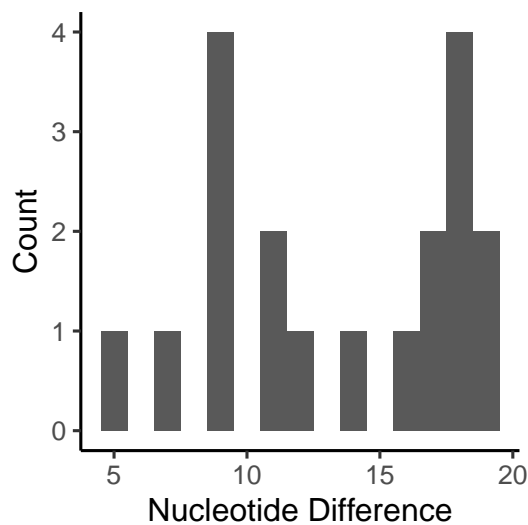
### IGHV3-33\*01

129 sequences assigned  
No exact matches.



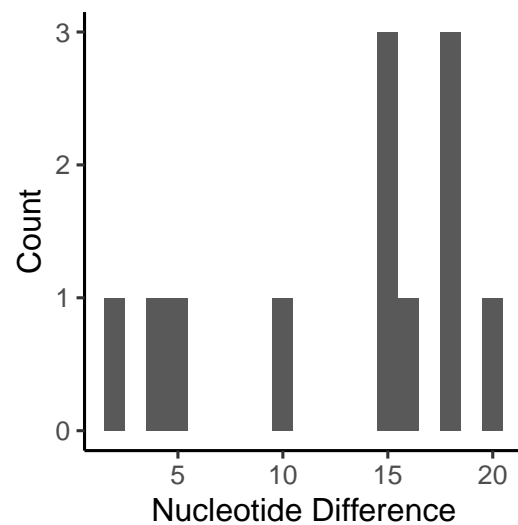
### IGHV3-43\*01

33 sequences assigned  
No exact matches.



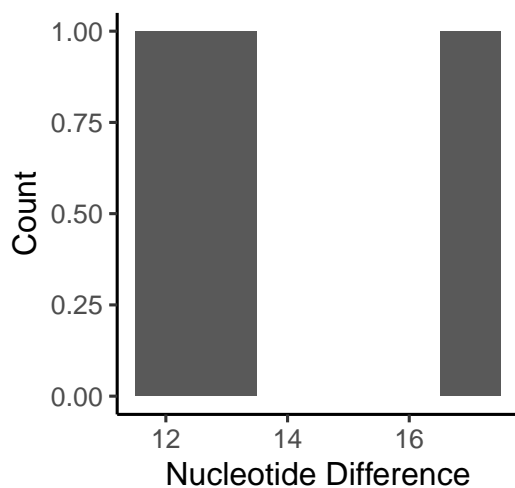
### IGHV3-53\*04

21 sequences assigned  
No exact matches.



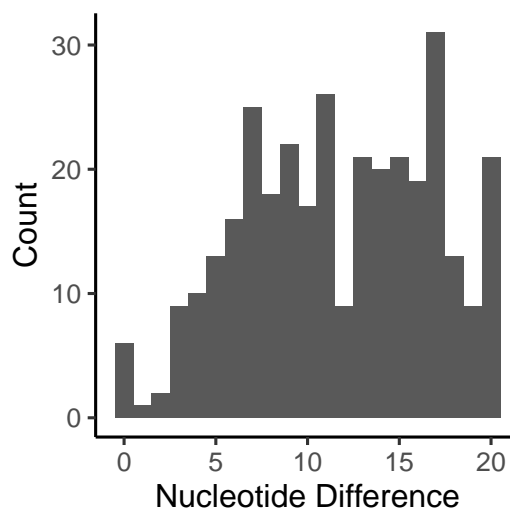
### IGHV3-33\*03

12 sequences assigned  
No exact matches.



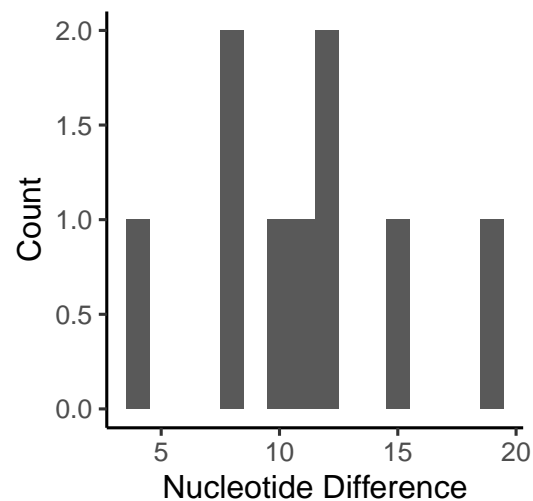
### IGHV3-48\*01

538 sequences assigned  
6 (1.1%) exact matches, in which:  
6 unique CDR3  
4 unique J



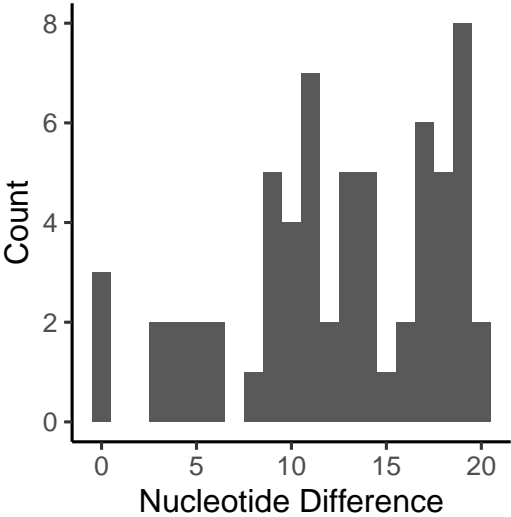
### IGHV3-53\*01\_02

13 sequences assigned  
No exact matches.



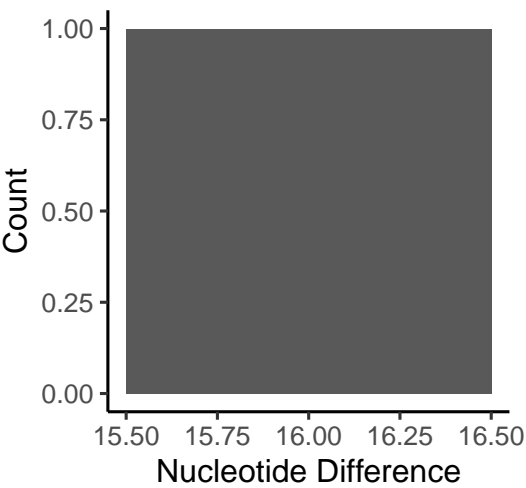
IGHV3-64\*01

88 sequences assigned  
3 (3.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



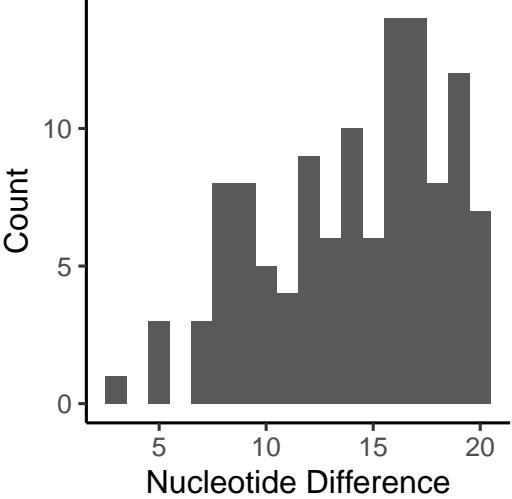
IGHV3-69-1\*01

3 sequences assigned  
No exact matches.



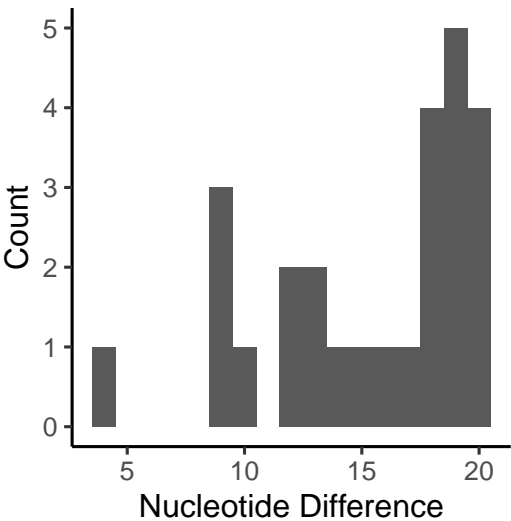
IGHV3-74\*03

191 sequences assigned  
No exact matches.



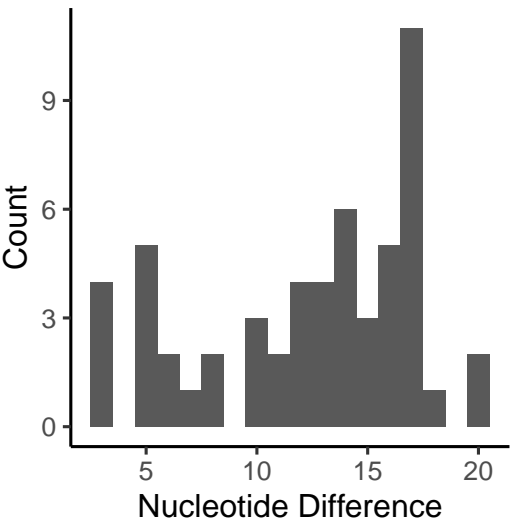
IGHV3-64\*02\_07

38 sequences assigned  
No exact matches.



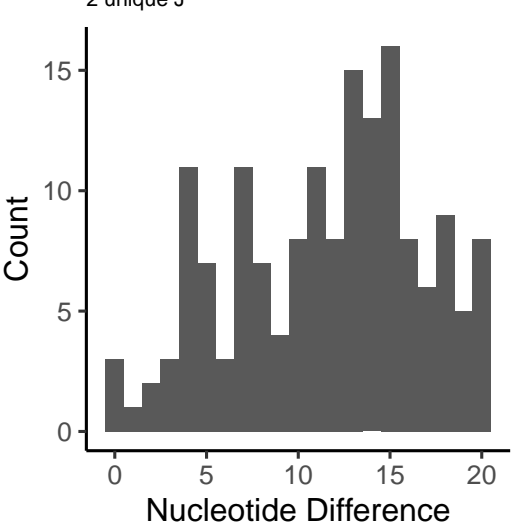
IGHV3-72\*01

71 sequences assigned  
No exact matches.



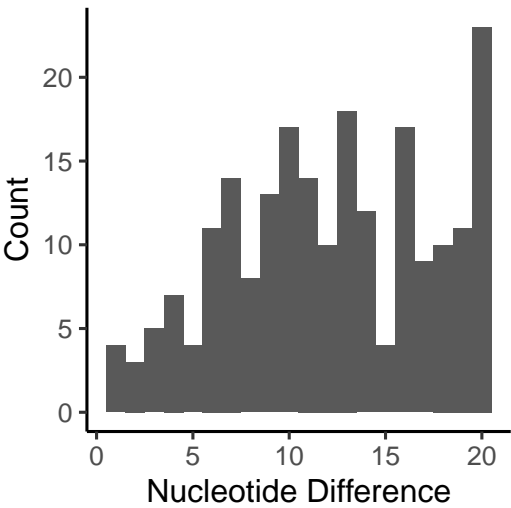
IGHV3-74\*01\_02

210 sequences assigned  
3 (1.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



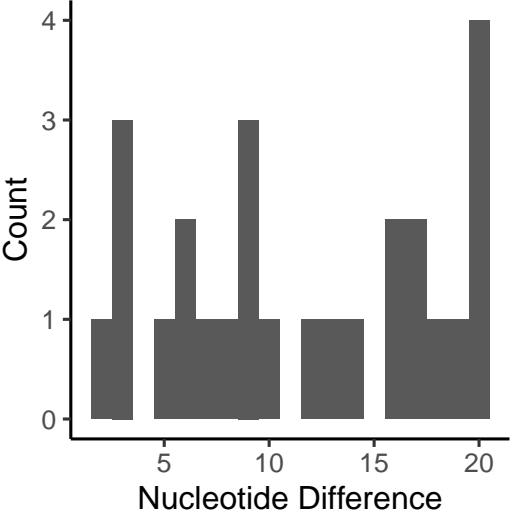
IGHV3-66\*01

343 sequences assigned  
No exact matches.



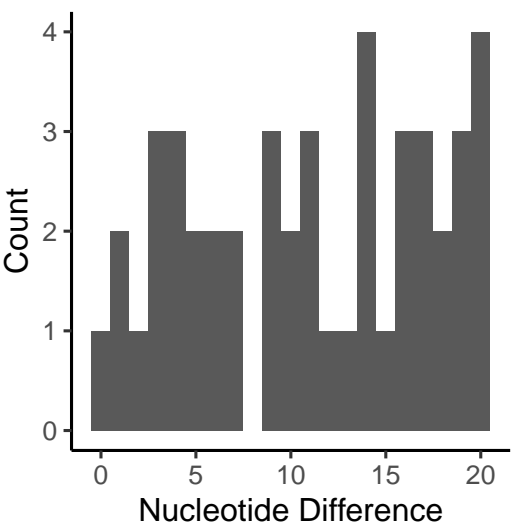
IGHV3-73\*01\_02

40 sequences assigned  
No exact matches.



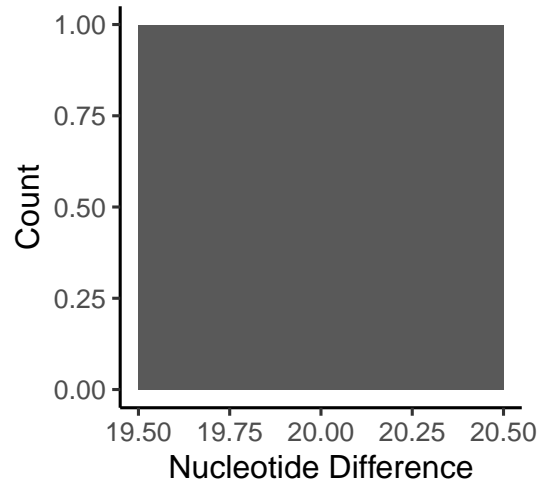
IGHV3-43D\*04

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



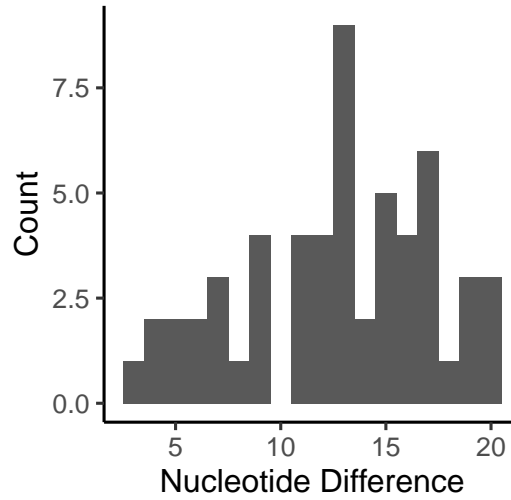
### IGHV3-64D\*06

1 sequences assigned  
No exact matches.



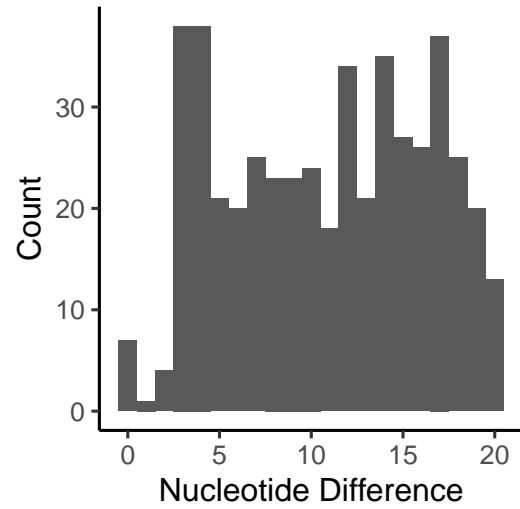
### IGHV4-4\*02\_03

177 sequences assigned  
No exact matches.



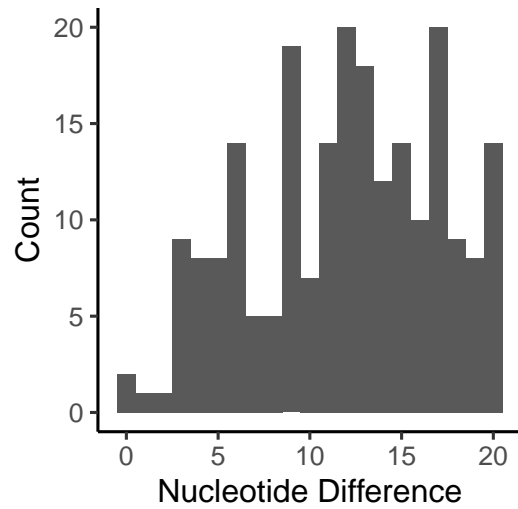
### IGHV4-34\*01\_02

736 sequences assigned  
7 (1%) exact matches, in which:  
7 unique CDR3  
2 unique J



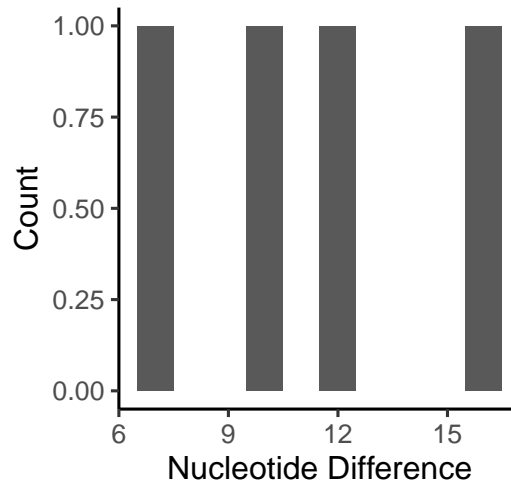
### IGHV4-4\*07

373 sequences assigned  
2 (0.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



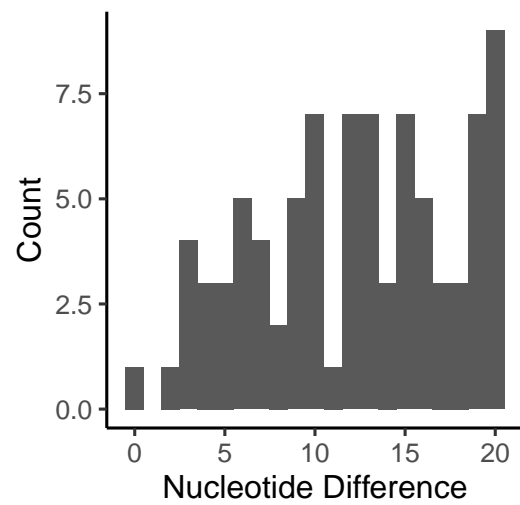
### IGHV4-28\*06

5 sequences assigned  
No exact matches.



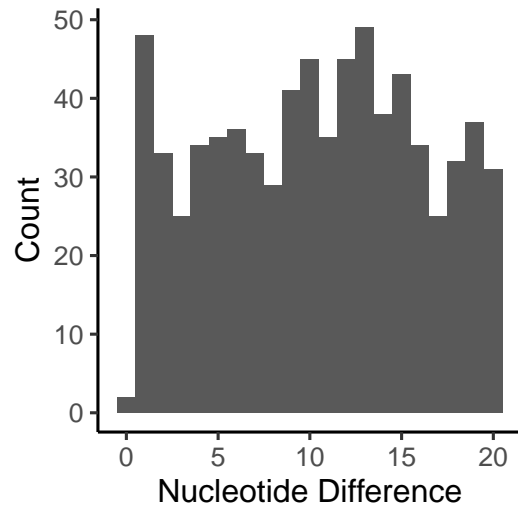
### IGHV4-38-2\*01

131 sequences assigned  
1 (0.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



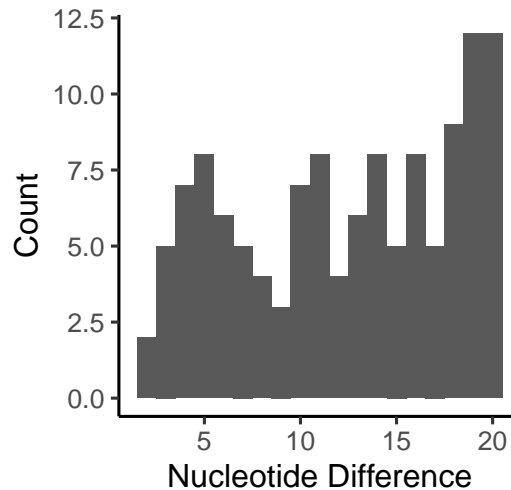
### IGHV4-4\*09

1102 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



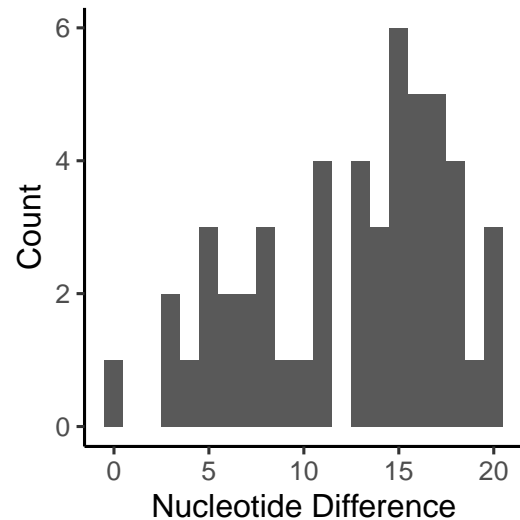
### IGHV4-31\*02

276 sequences assigned  
No exact matches.



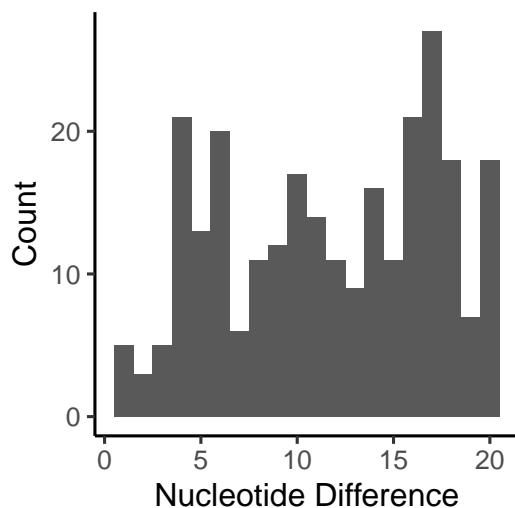
### IGHV4-38-2\*02

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



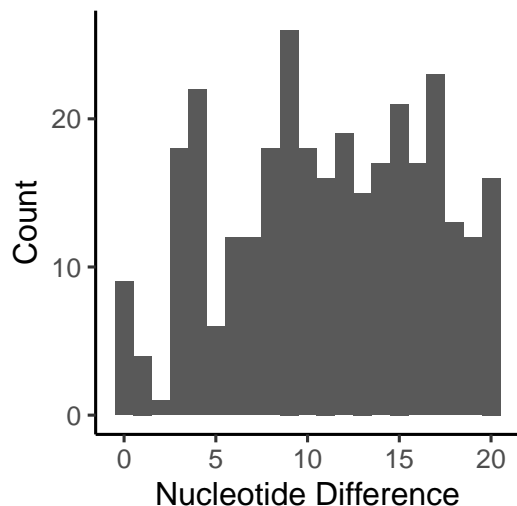
### IGHV4-39\*02

520 sequences assigned  
No exact matches.



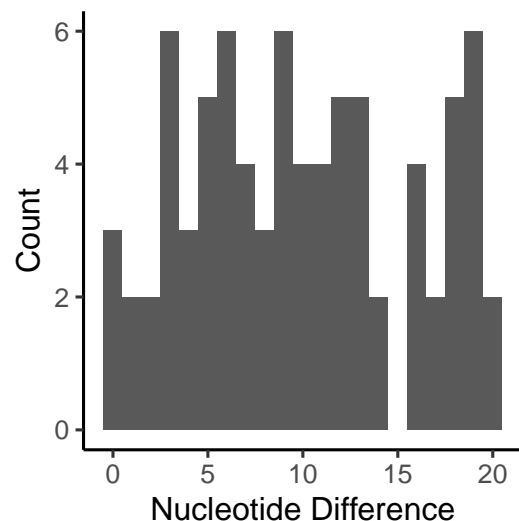
### IGHV4-59\*01\_07

554 sequences assigned  
9 (1.6%) exact matches, in which:  
6 unique CDR3  
1 unique J



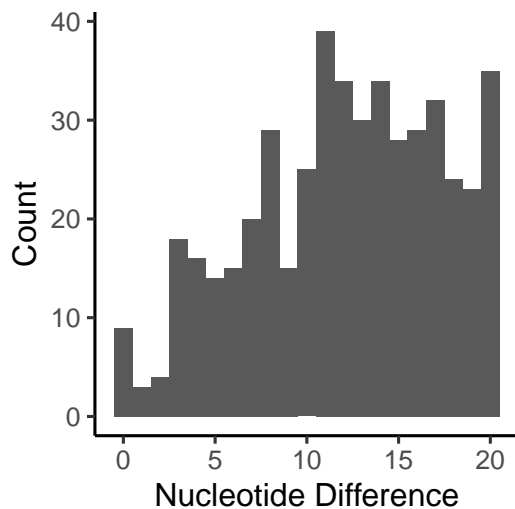
### IGHV5-51\*01\_03

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



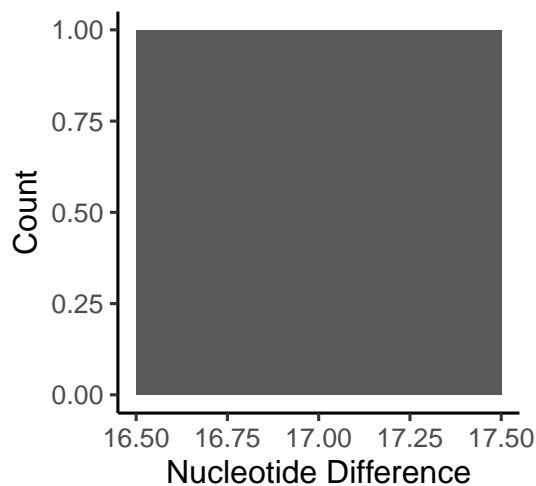
### IGHV4-39\*07

830 sequences assigned  
9 (1.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



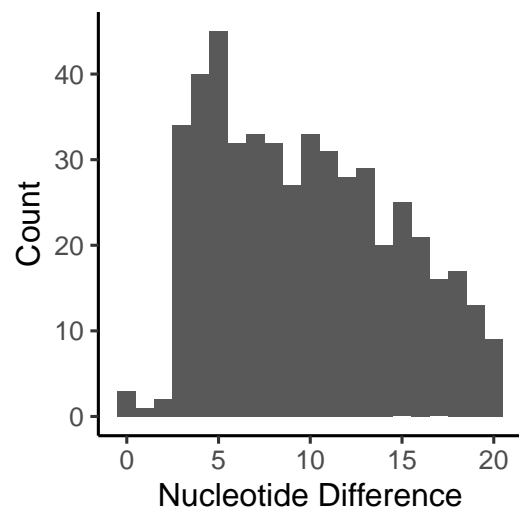
### IGHV1/OR15-1\*04

2 sequences assigned  
No exact matches.



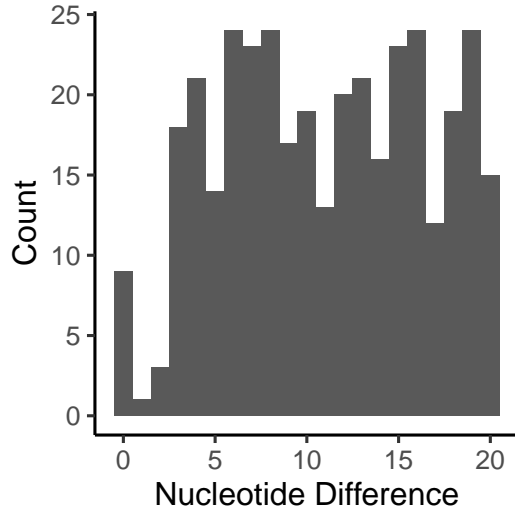
### IGHV6-1\*01\_02

545 sequences assigned  
3 (0.6%) exact matches, in which:  
3 unique CDR3  
3 unique J



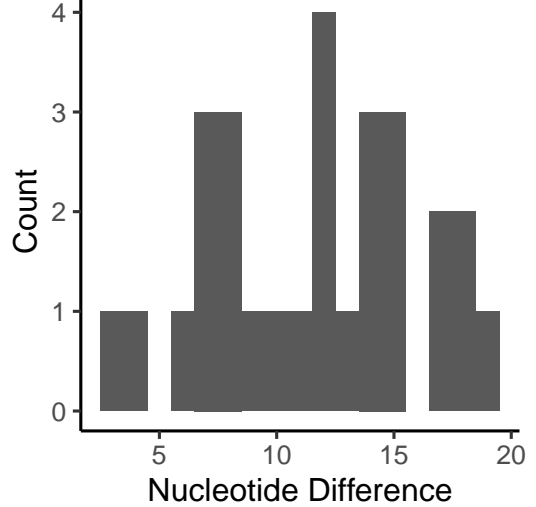
### IGHV4-59\*08

610 sequences assigned  
9 (1.5%) exact matches, in which:  
5 unique CDR3  
2 unique J



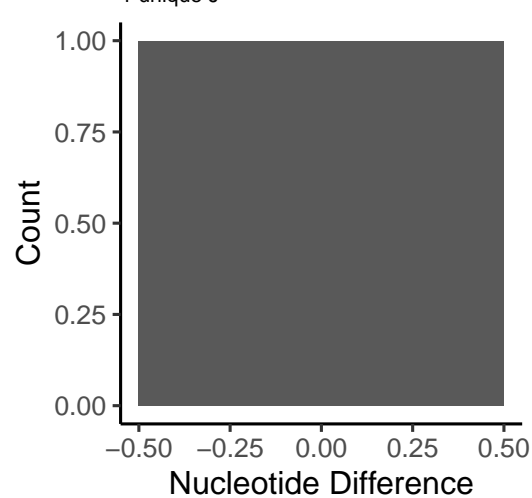
### IGHV5-51\*07

46 sequences assigned  
No exact matches.

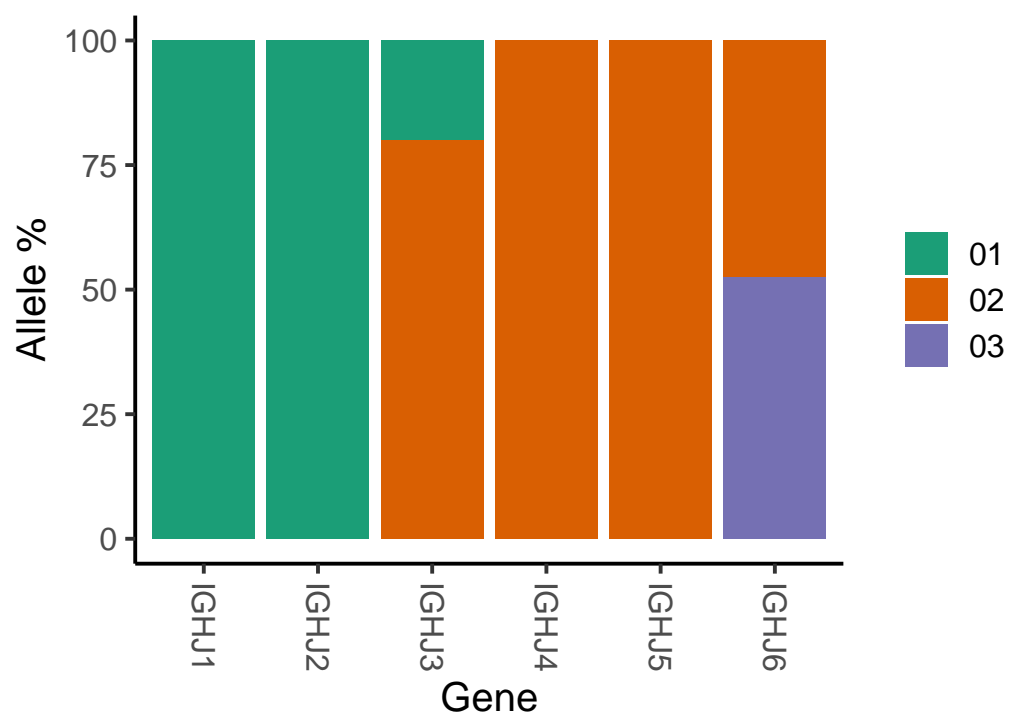


### IGHV7-4-1\*01

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

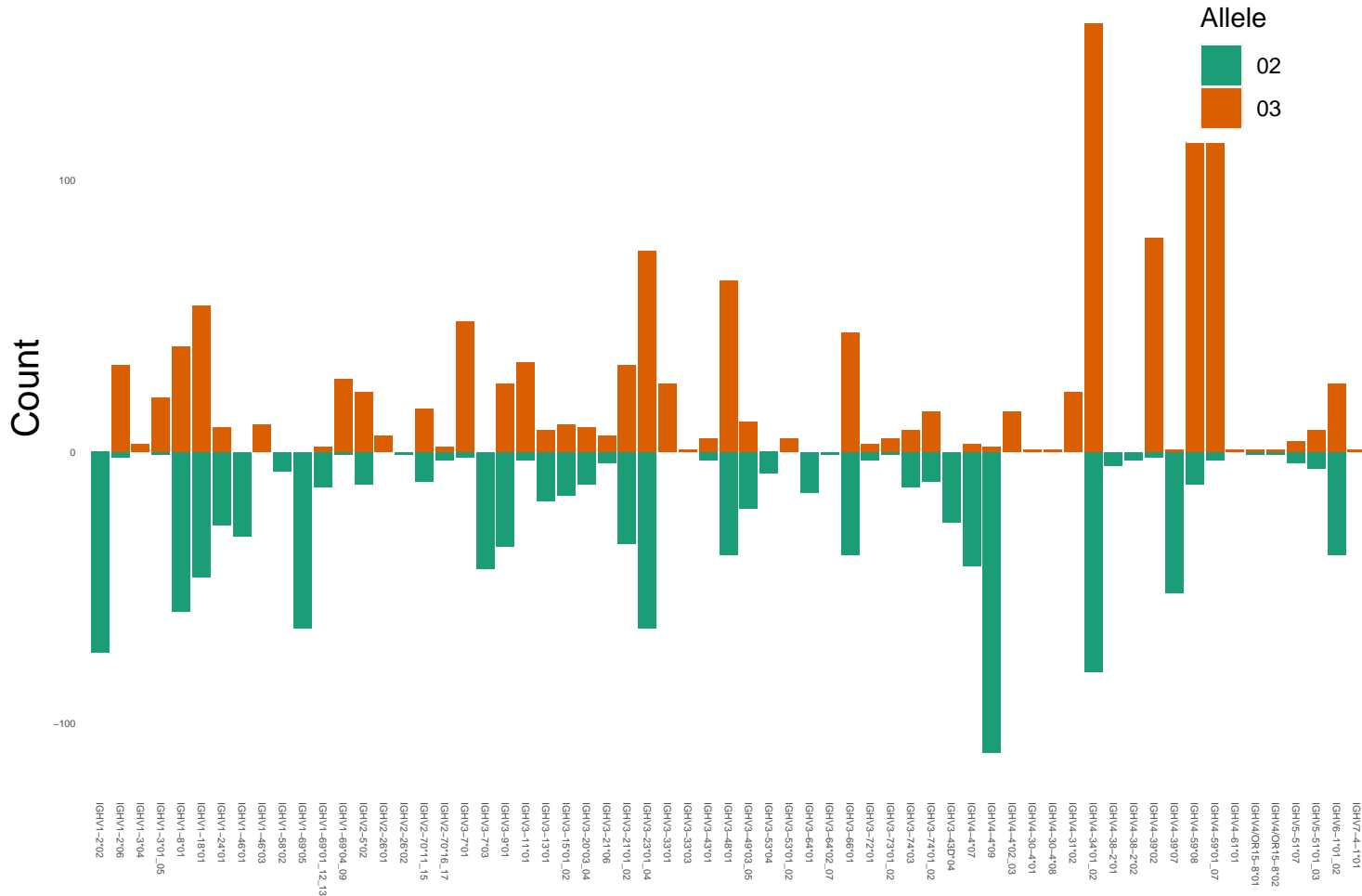


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

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