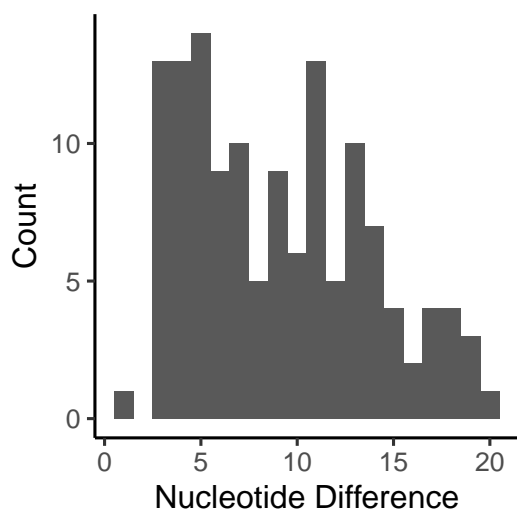


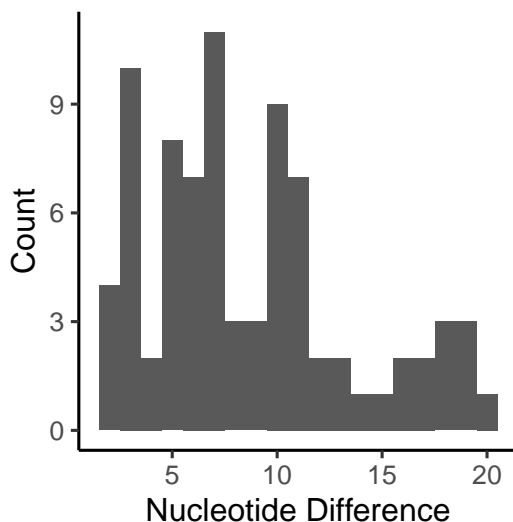
### IGHV1-2\*02

142 sequences assigned  
No exact matches.



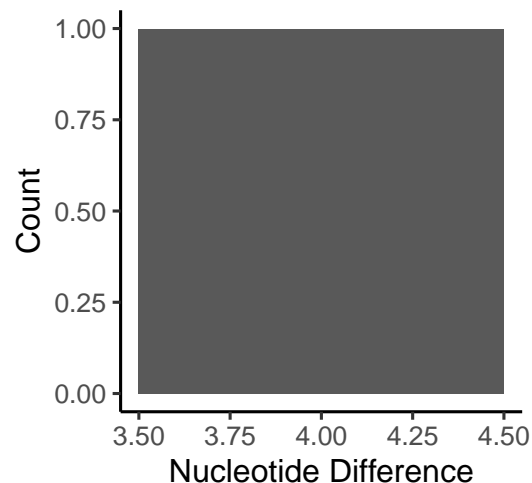
### IGHV1-8\*03

86 sequences assigned  
No exact matches.



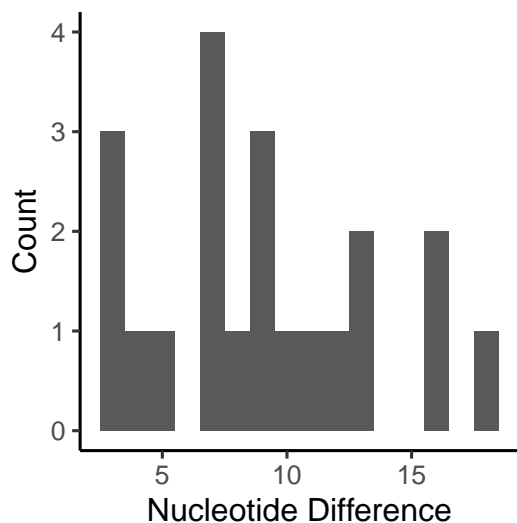
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



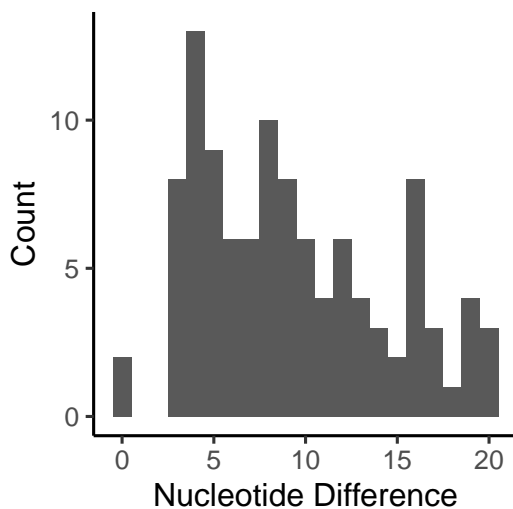
### IGHV1-2\*04

25 sequences assigned  
No exact matches.



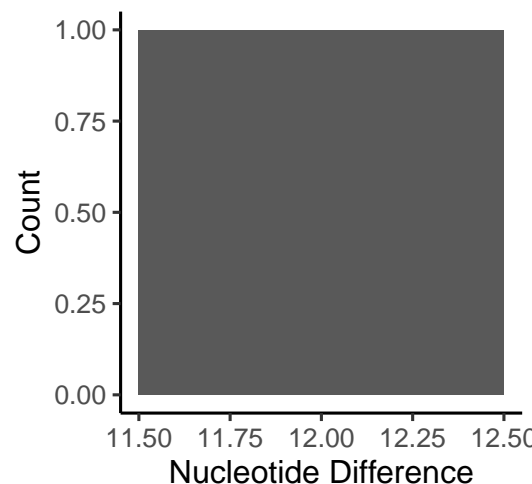
### IGHV1-18\*01

135 sequences assigned  
2 (1.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



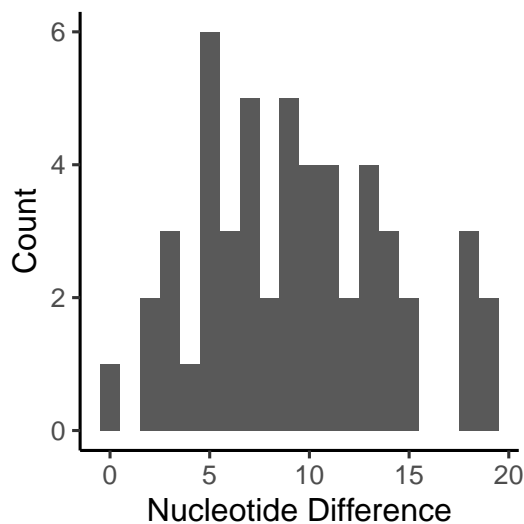
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



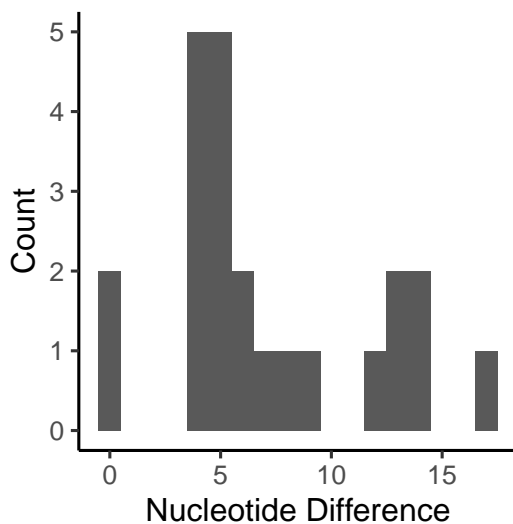
### IGHV1-3\*01\_05

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



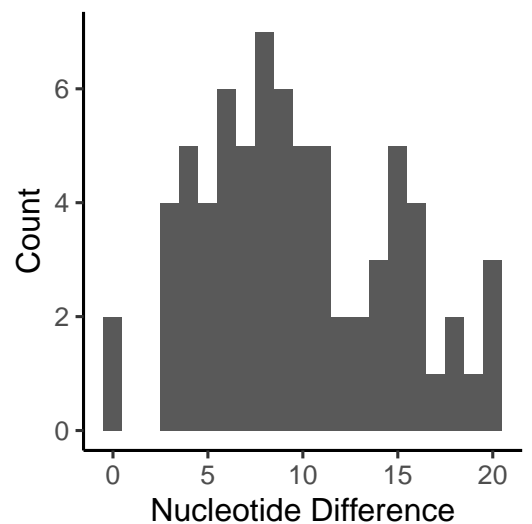
### IGHV1-24\*01

25 sequences assigned  
2 (8%) exact matches, in which:  
2 unique CDR3  
1 unique J



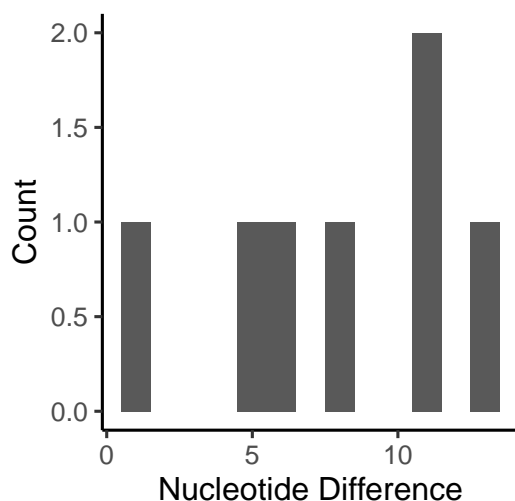
### IGHV1-46\*01

82 sequences assigned  
2 (2.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



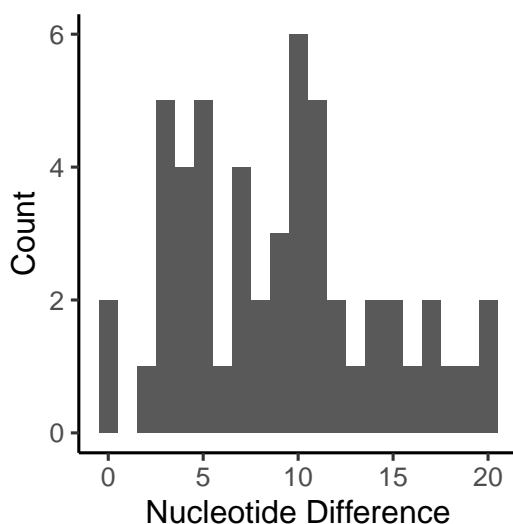
### IGHV1-58\*01\_03

7 sequences assigned  
No exact matches.



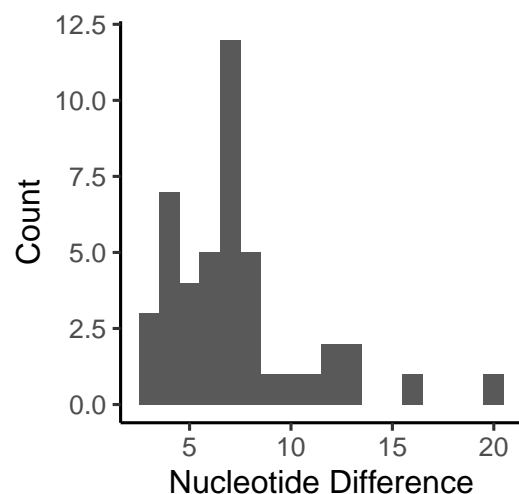
### IGHV1-69\*06\_14

65 sequences assigned  
2 (3.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



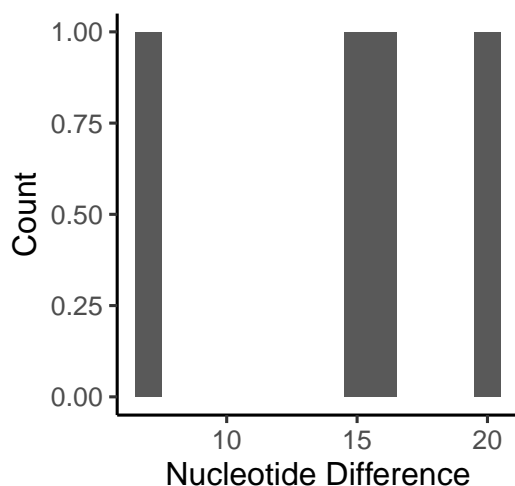
### IGHV2-5\*02

48 sequences assigned  
No exact matches.



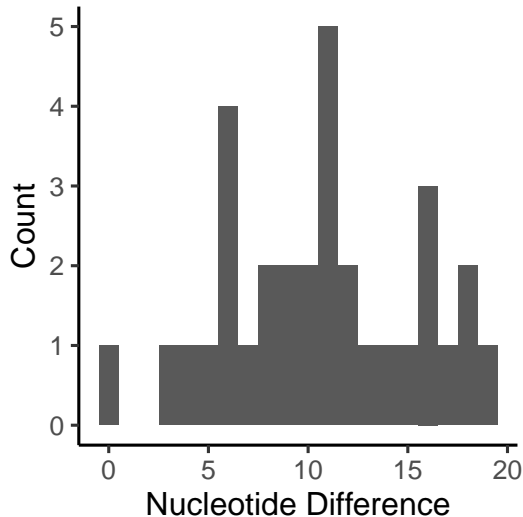
### IGHV1-69-2\*01

6 sequences assigned  
No exact matches.



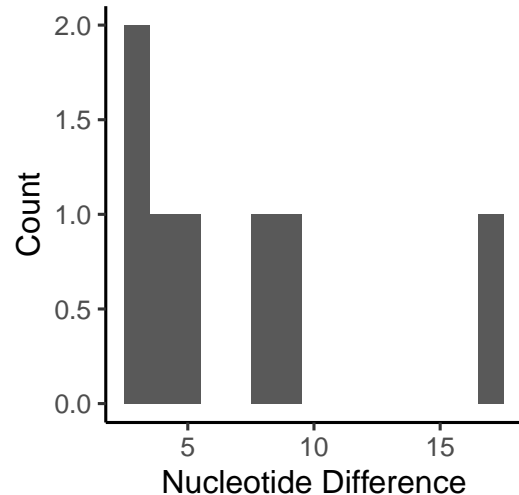
### IGHV1-69\*15\_18

38 sequences assigned  
1 (2.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



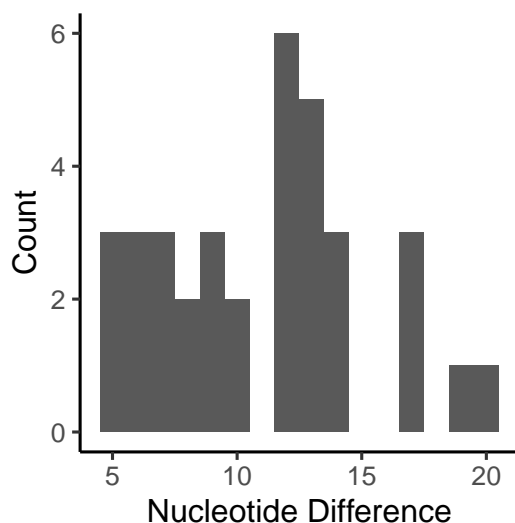
### IGHV2-26\*01

7 sequences assigned  
No exact matches.



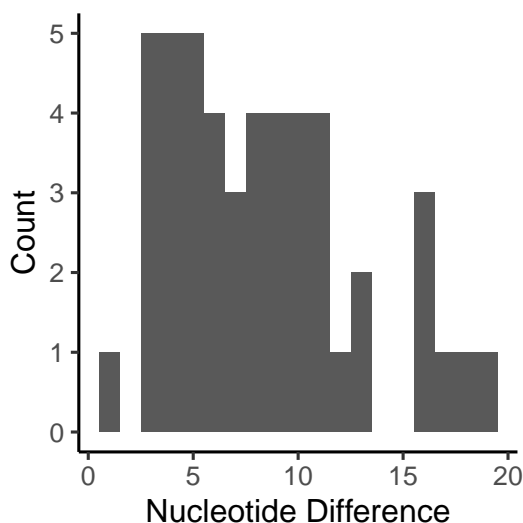
### IGHV1-69\*01\_12\_13

50 sequences assigned  
No exact matches.



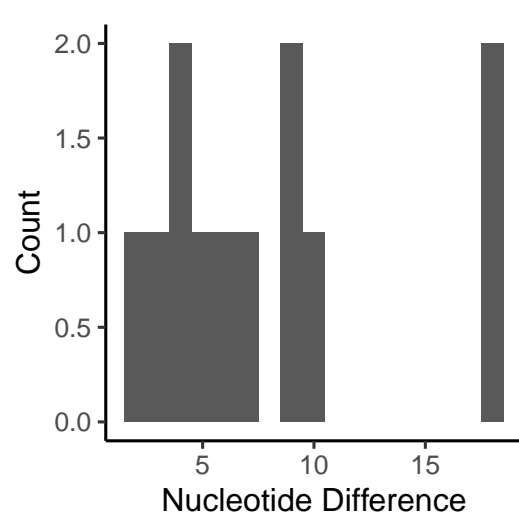
### IGHV2-5\*01

55 sequences assigned  
No exact matches.



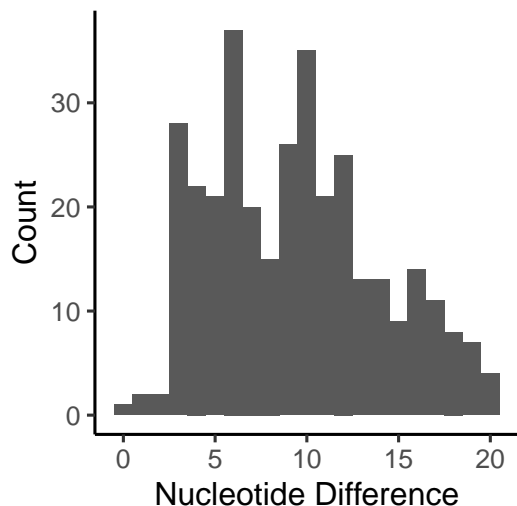
### IGHV2-70\*01

14 sequences assigned  
No exact matches.



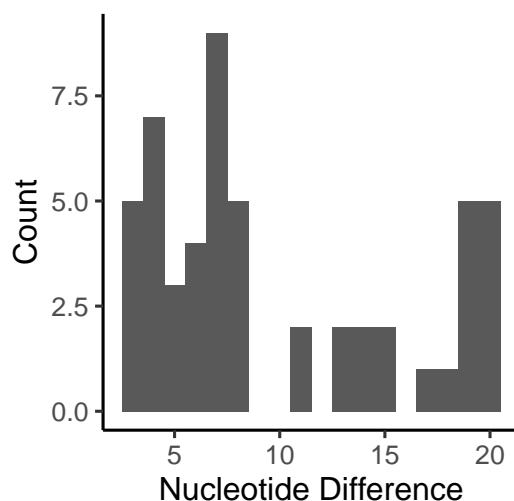
### IGHV3-7\*01

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



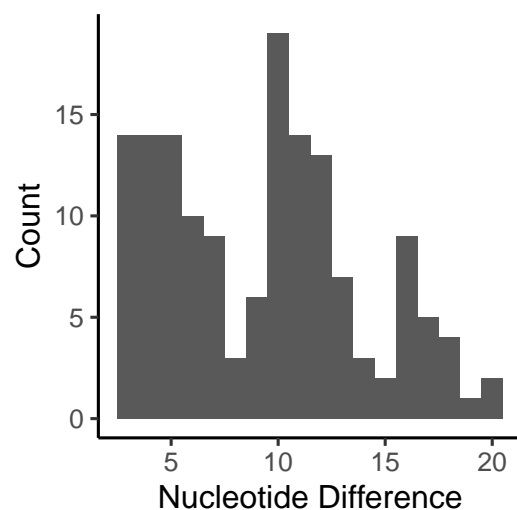
### IGHV3-11\*04

68 sequences assigned  
No exact matches.



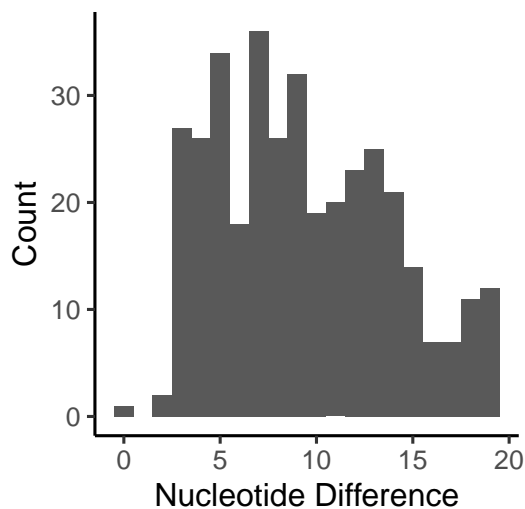
### IGHV3-21\*01\_02

168 sequences assigned  
No exact matches.



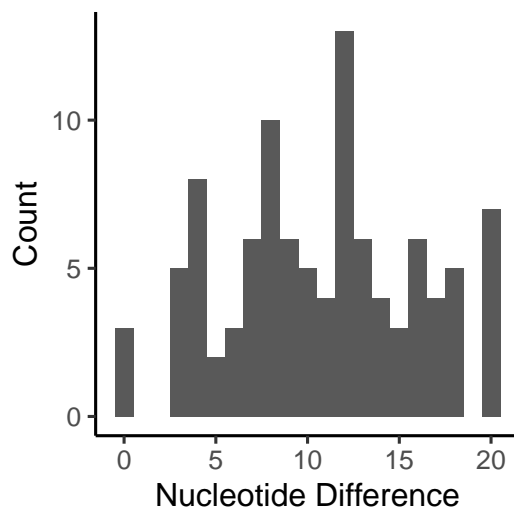
### IGHV3-7\*03

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



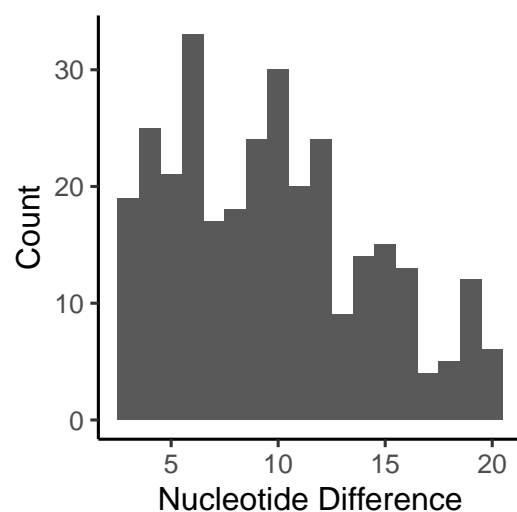
### IGHV3-15\*01\_02

112 sequences assigned  
3 (2.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



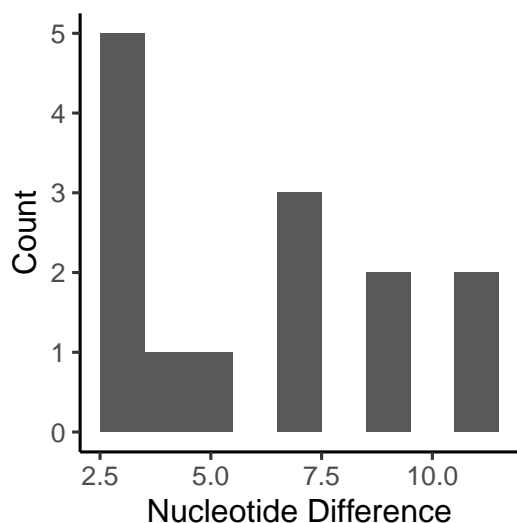
### IGHV3-23\*01\_04

341 sequences assigned  
No exact matches.



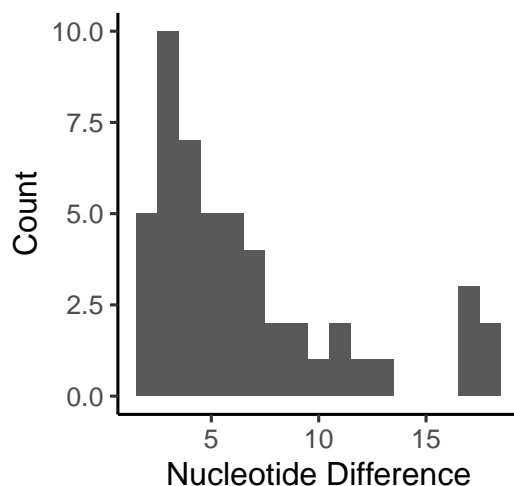
### IGHV3-9\*03

14 sequences assigned  
No exact matches.



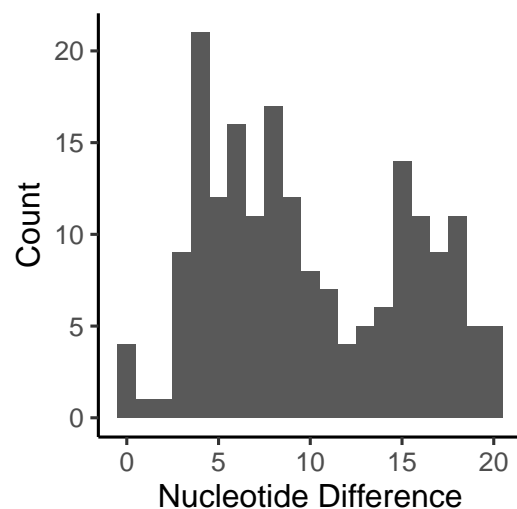
### IGHV3-20\*03\_04

51 sequences assigned  
No exact matches.



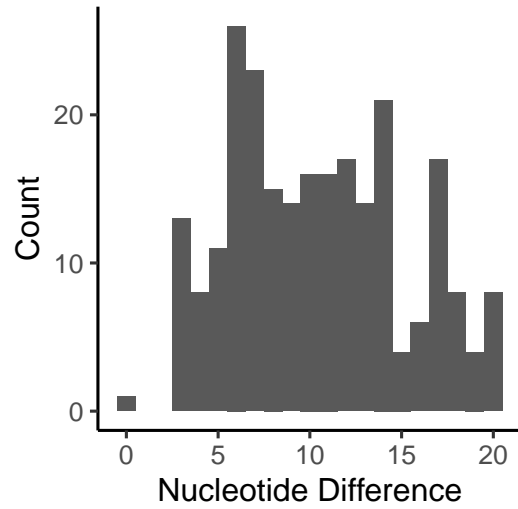
### IGHV3-30-3\*01

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



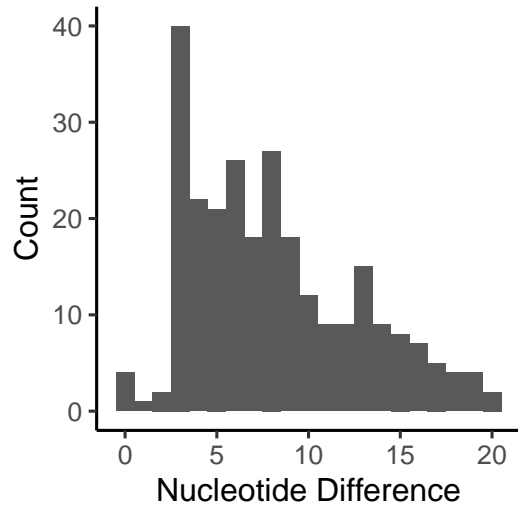
### IGHV3-33\*01

264 sequences assigned  
1 (0.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



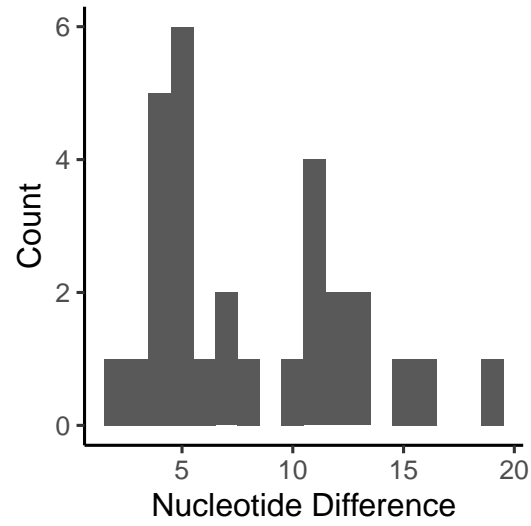
### IGHV3-48\*03

278 sequences assigned  
4 (1.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



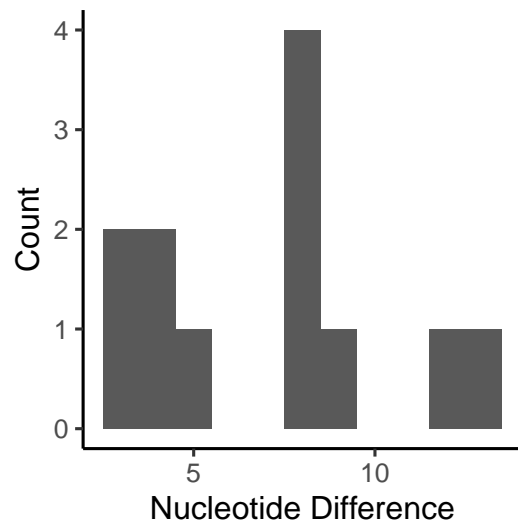
### IGHV3-49\*03\_05

33 sequences assigned  
No exact matches.



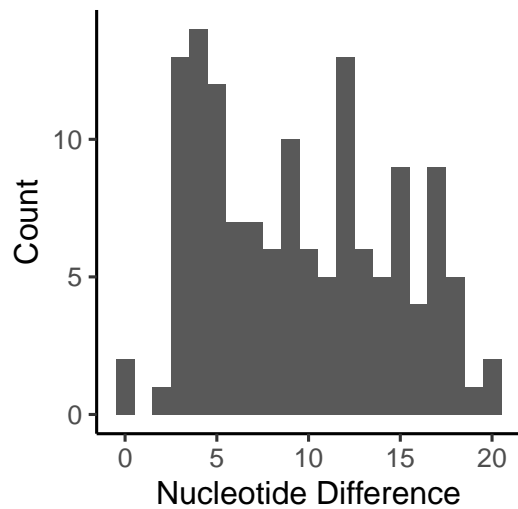
### IGHV3-43\*01

14 sequences assigned  
No exact matches.



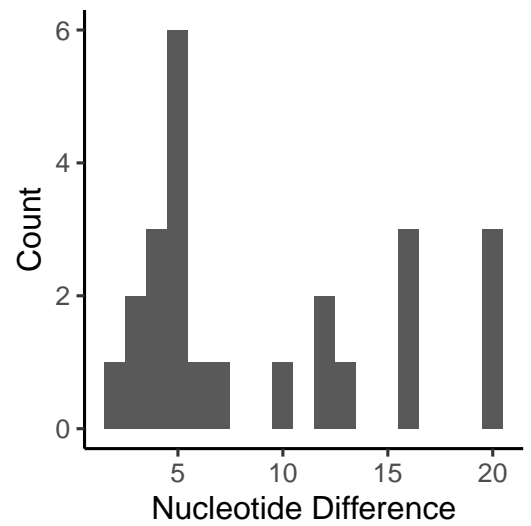
### IGHV3-48\*04

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



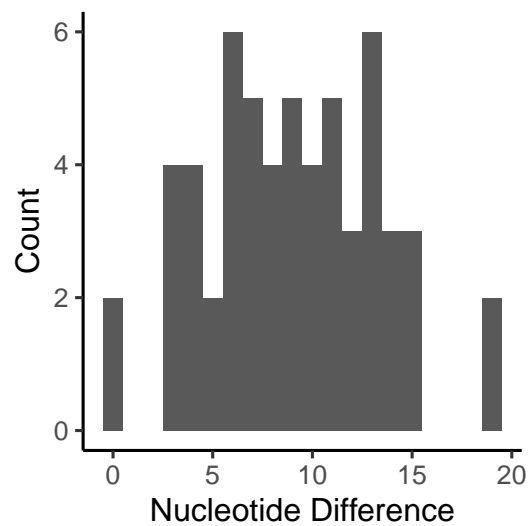
### IGHV3-53\*04

39 sequences assigned  
No exact matches.



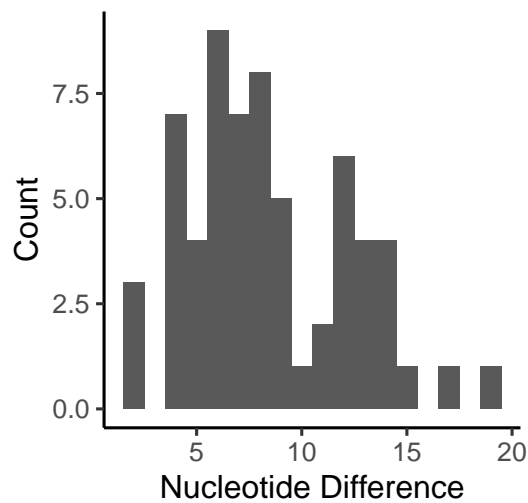
### IGHV3-43\*02

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



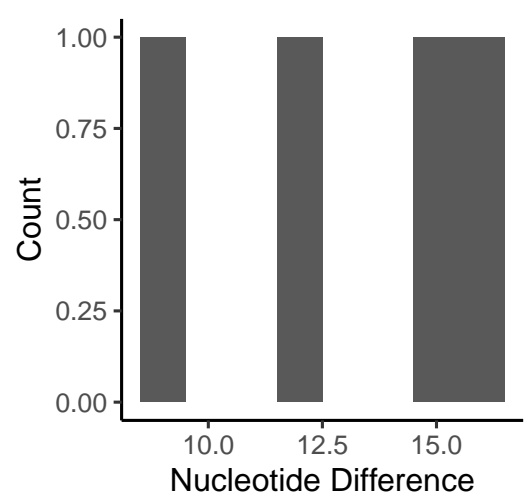
### IGHV3-49\*04

70 sequences assigned  
No exact matches.



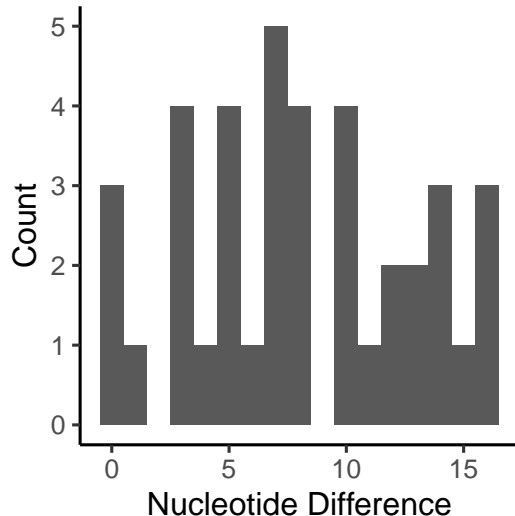
### IGHV3-53\*05

6 sequences assigned  
No exact matches.



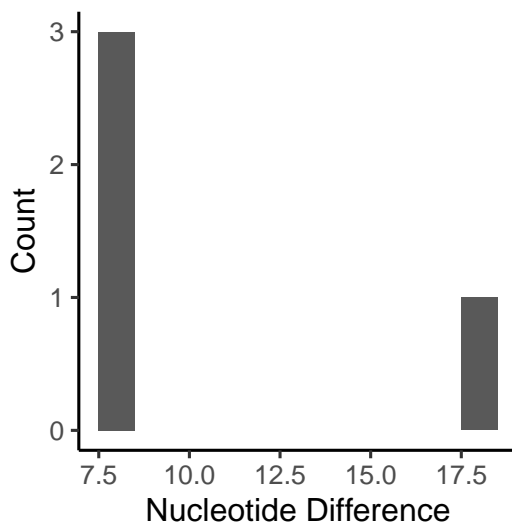
### IGHV3-64\*01

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



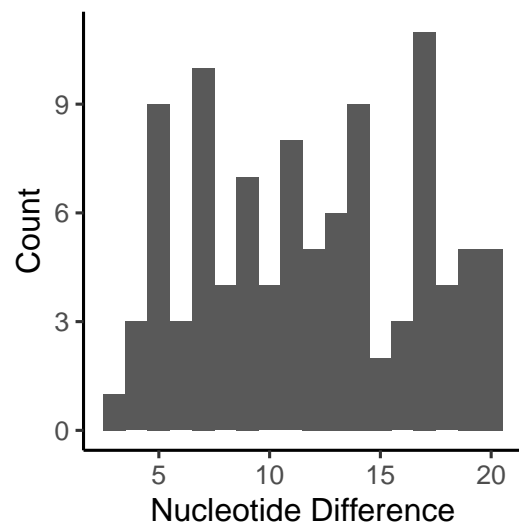
### IGHV3-69-1\*01

5 sequences assigned  
No exact matches.



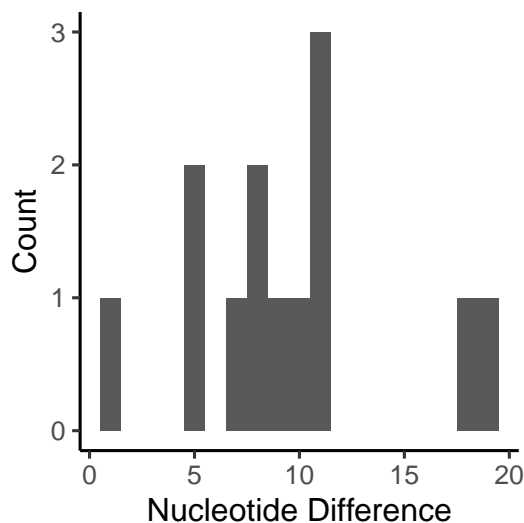
### IGHV3-74\*03

117 sequences assigned  
No exact matches.



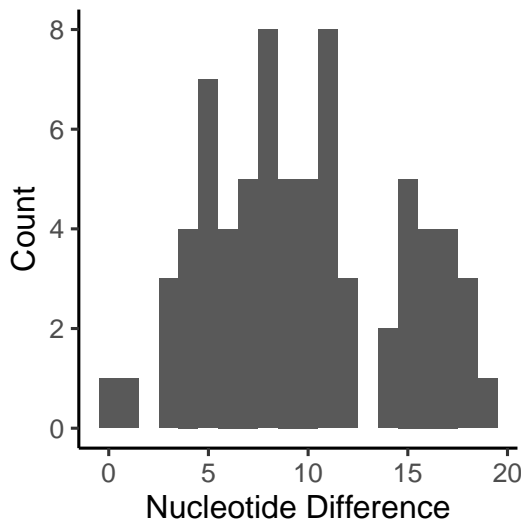
### IGHV3-64\*02\_07

14 sequences assigned  
No exact matches.



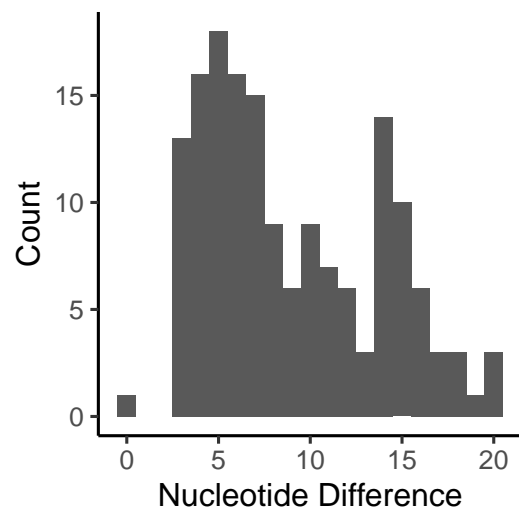
### IGHV3-72\*01

84 sequences assigned  
1 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



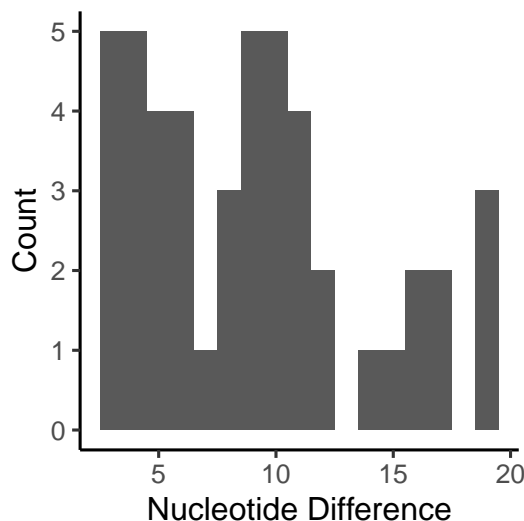
### IGHV3-74\*01\_02

168 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



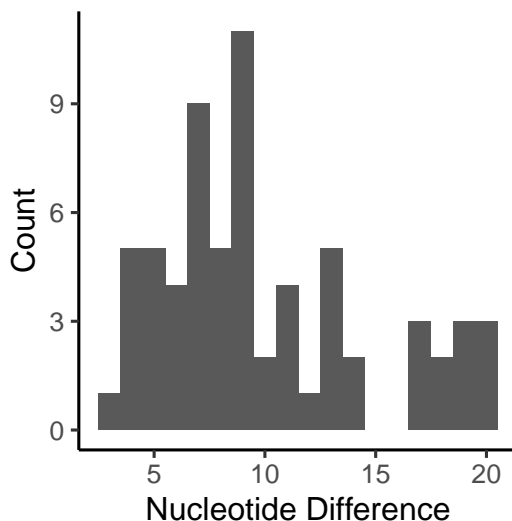
### IGHV3-66\*02

50 sequences assigned  
No exact matches.



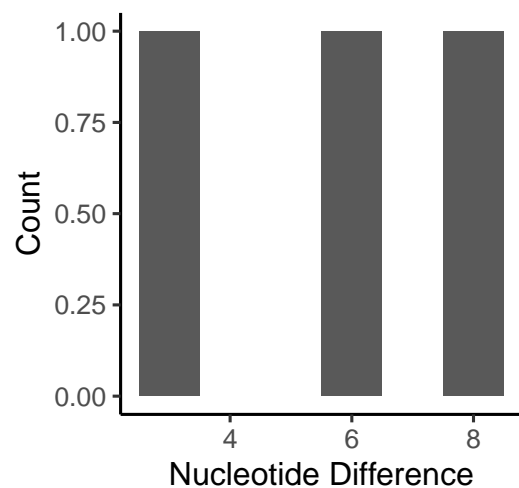
### IGHV3-73\*01\_02

69 sequences assigned  
No exact matches.



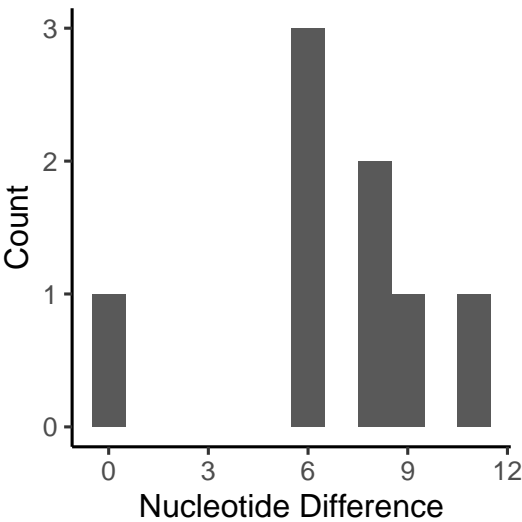
### IGHV3-43D\*03

4 sequences assigned  
No exact matches.



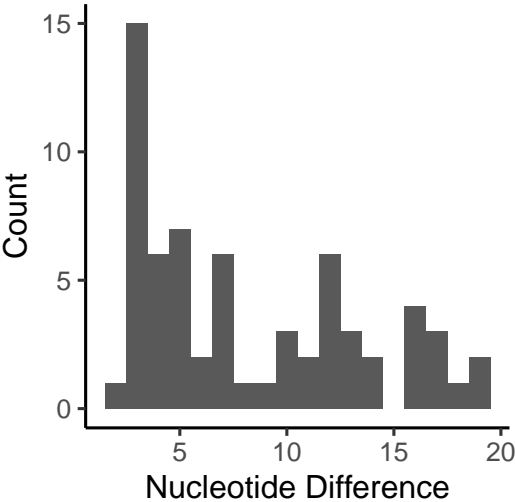
IGHV3-43D\*04

8 sequences assigned  
1 (12.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



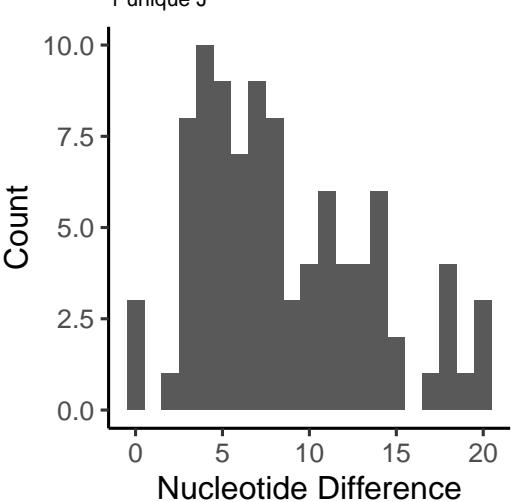
IGHV4-30-4\*01

83 sequences assigned  
No exact matches.



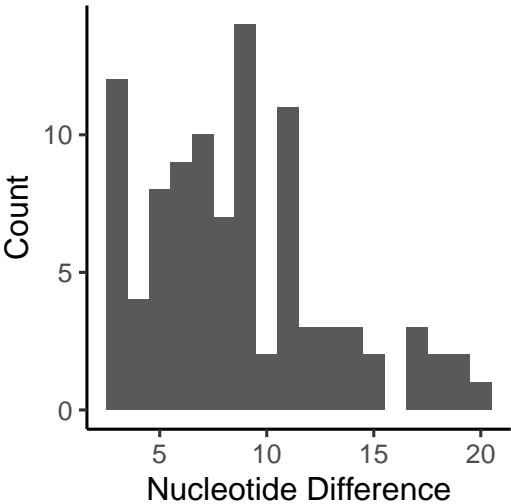
IGHV4-31\*02

111 sequences assigned  
3 (2.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



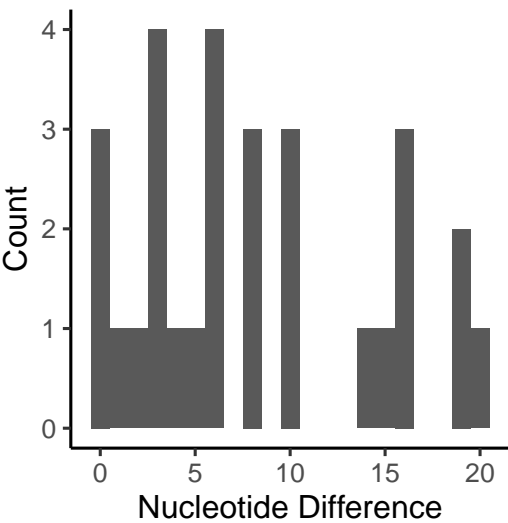
IGHV4-4\*07

103 sequences assigned  
No exact matches.



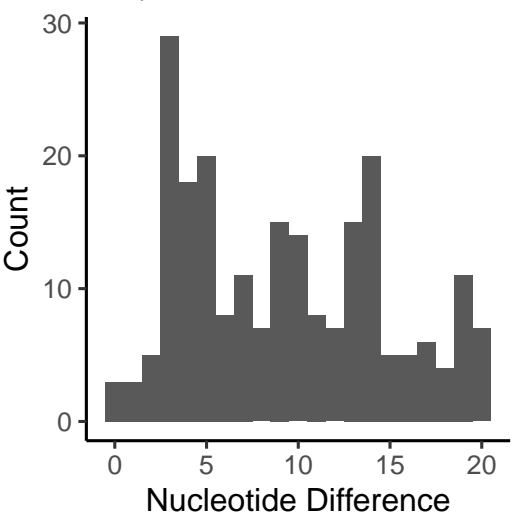
IGHV4-30-2\*01

38 sequences assigned  
3 (7.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



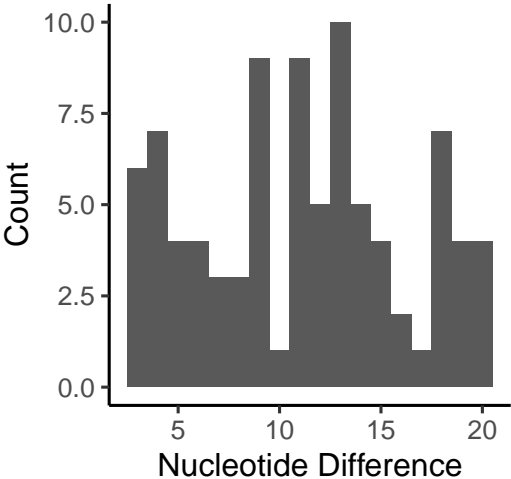
IGHV4-34\*01\_02

255 sequences assigned  
3 (1.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



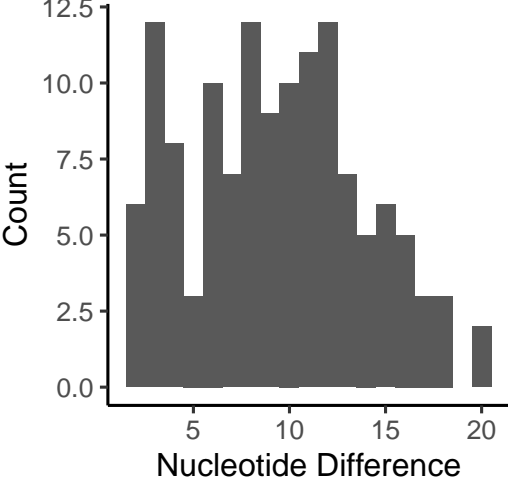
IGHV4-4\*02\_03

100 sequences assigned  
No exact matches.



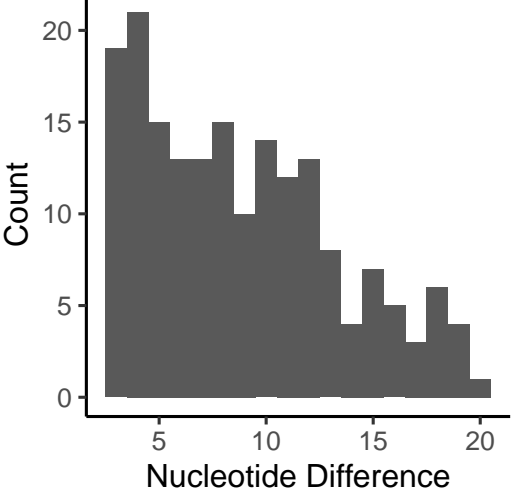
IGHV4-30-4\*08

145 sequences assigned  
No exact matches.



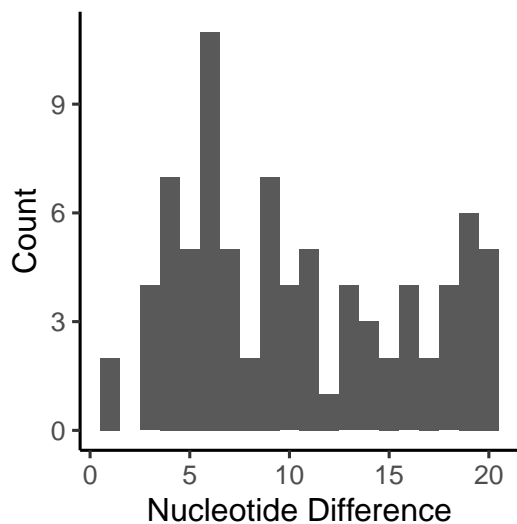
IGHV4-38-2\*01

196 sequences assigned  
No exact matches.



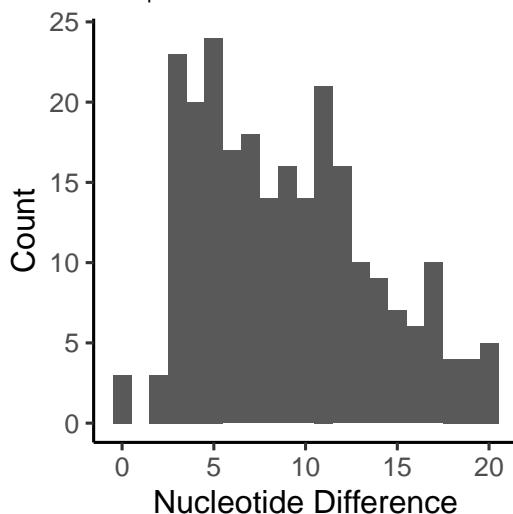
### IGHV4-38-2\*02

96 sequences assigned  
No exact matches.



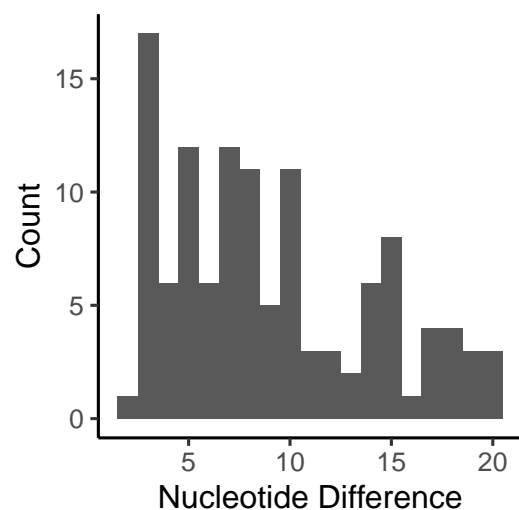
### IGHV4-59\*01\_07

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



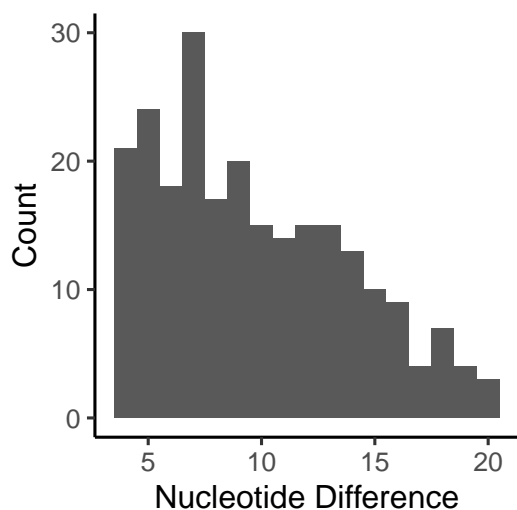
### IGHV4-61\*02

141 sequences assigned  
No exact matches.



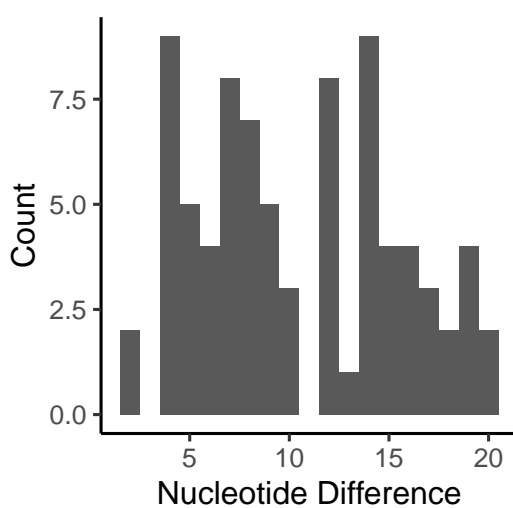
### IGHV4-39\*02

278 sequences assigned  
No exact matches.



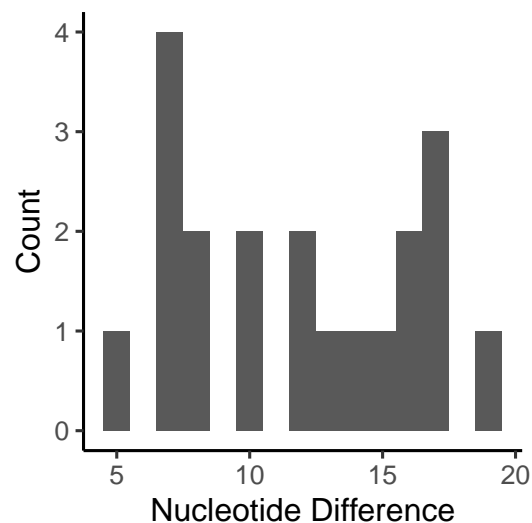
### IGHV4-59\*11

99 sequences assigned  
No exact matches.



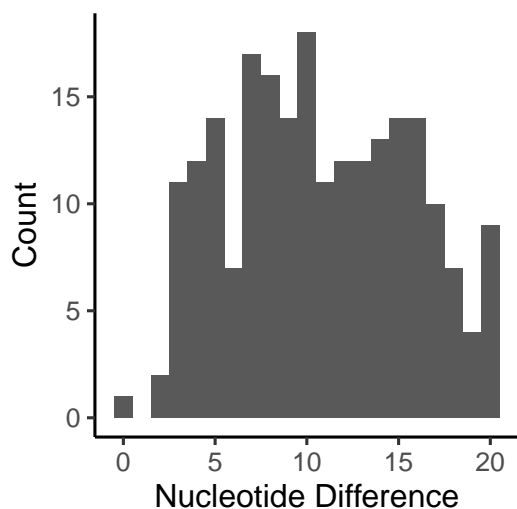
### IGHV4-61\*08

22 sequences assigned  
No exact matches.



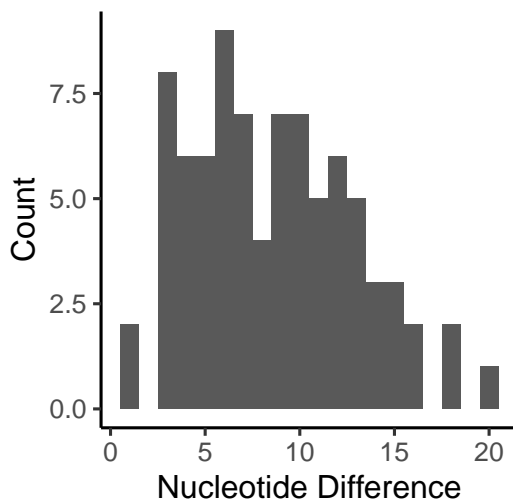
### IGHV4-39\*07

244 sequences assigned  
1 (0.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



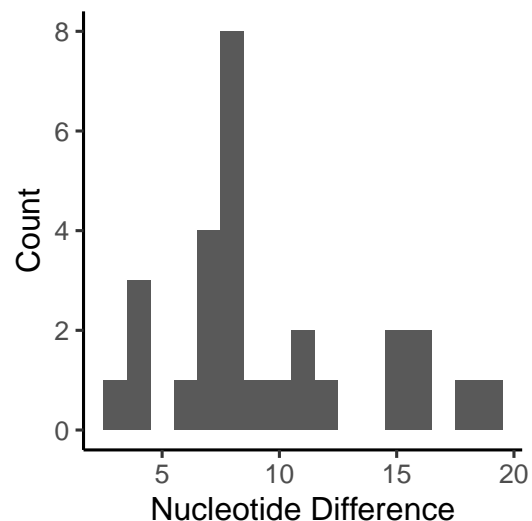
### IGHV4-61\*01

92 sequences assigned  
No exact matches.



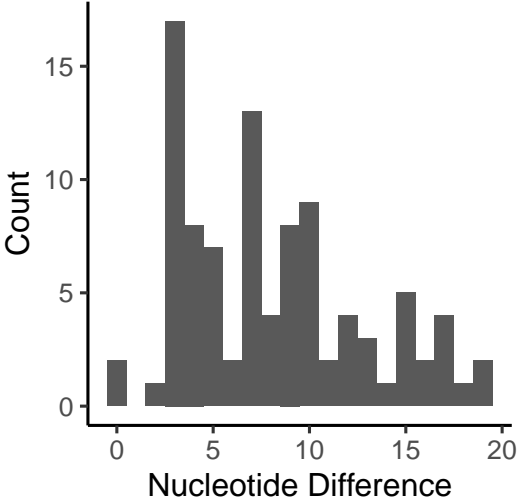
### IGHV5-51\*07

29 sequences assigned  
No exact matches.



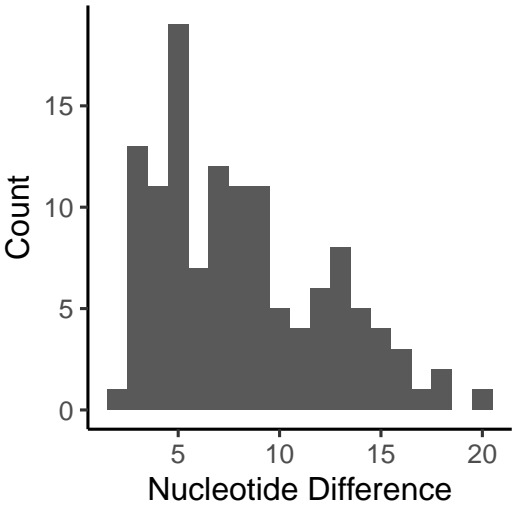
# IGHV5-51\*01\_03

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



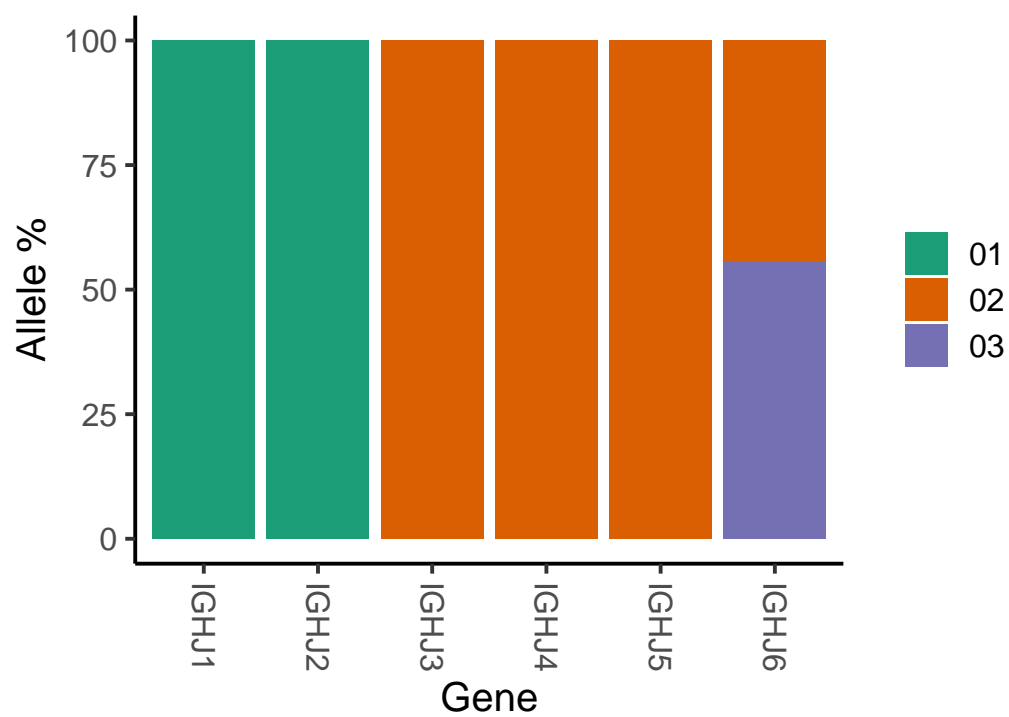
# IGHV6-1\*01\_02

126 sequences assigned  
No exact matches.





Allele Usage



Sequence Count by IGHJ6 allele usage

