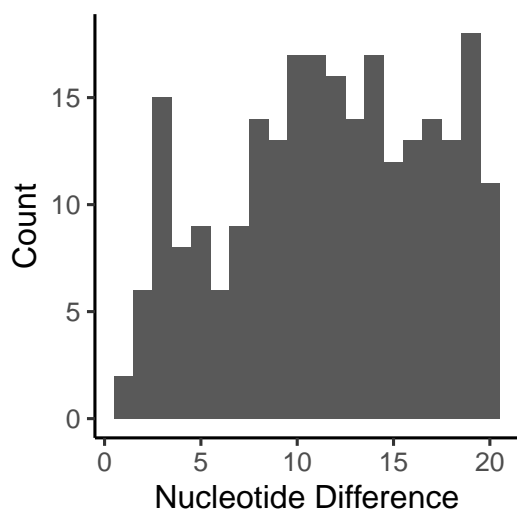


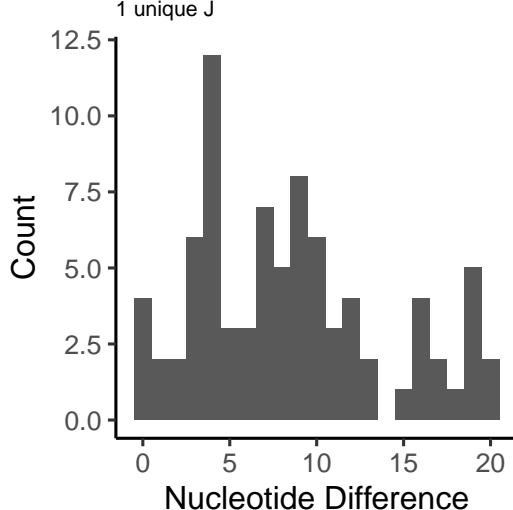
### IGHV1-2\*02

317 sequences assigned  
No exact matches.



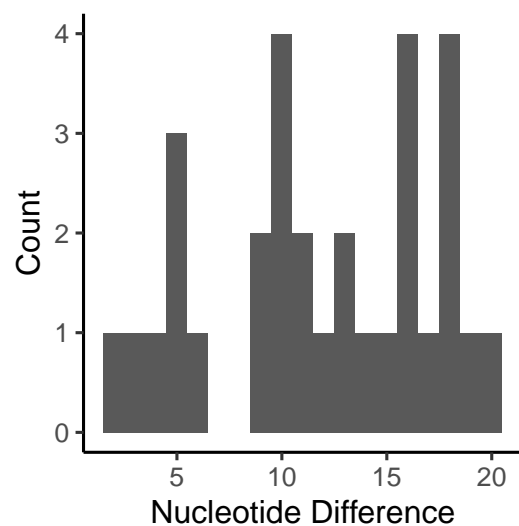
### IGHV1-8\*01

102 sequences assigned  
4 (3.9%) exact matches, in which:  
2 unique CDR3  
1 unique J



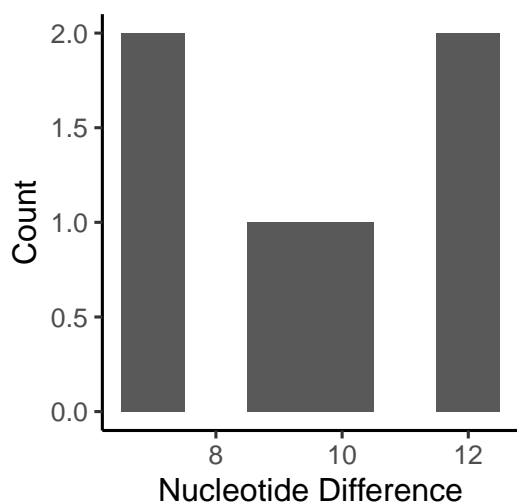
### IGHV1-24\*01

48 sequences assigned  
No exact matches.



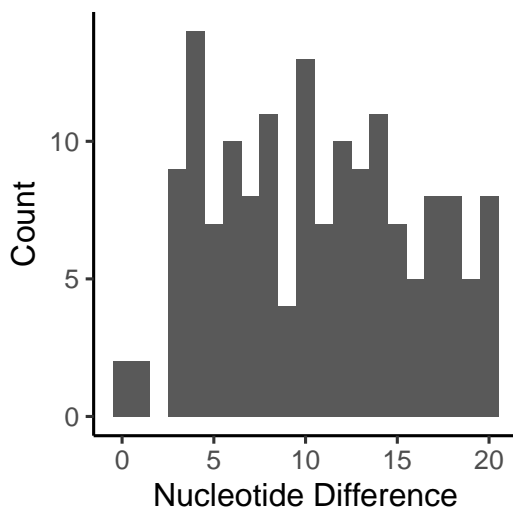
### IGHV1-3\*04

8 sequences assigned  
No exact matches.



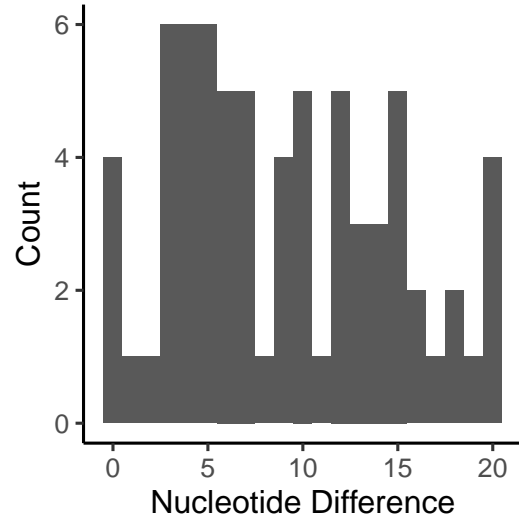
### IGHV1-18\*01

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



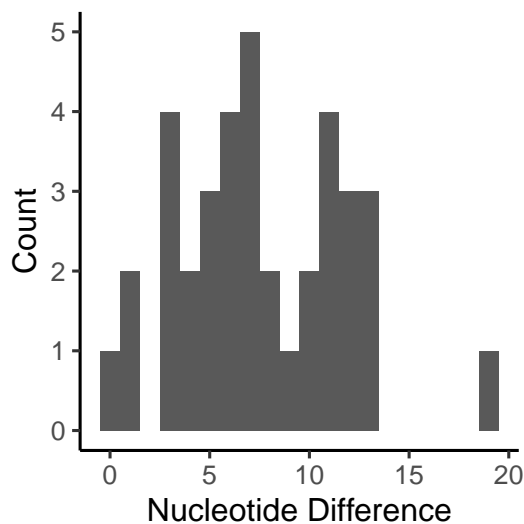
### IGHV1-46\*01

96 sequences assigned  
4 (4.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



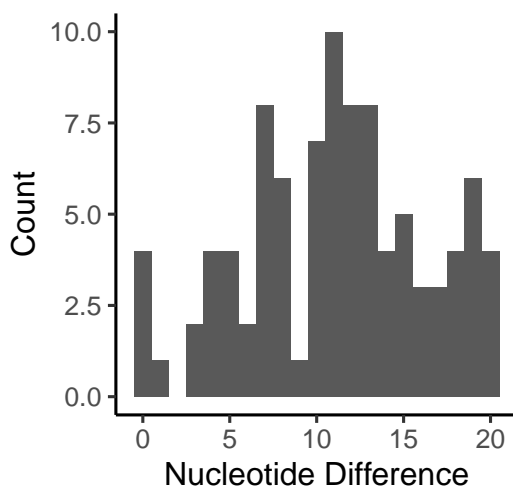
### IGHV1-3\*01\_05

54 sequences assigned  
1 (1.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



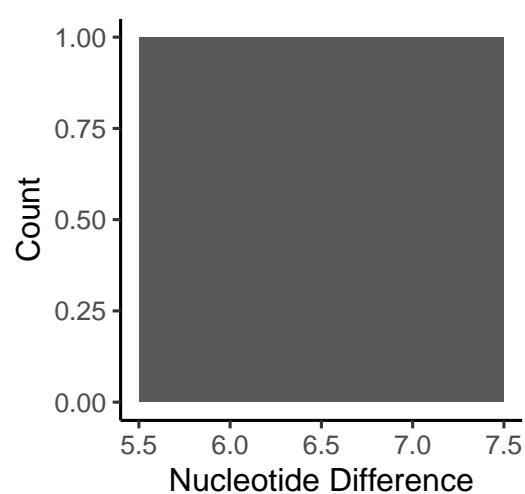
### IGHV1-18\*04

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



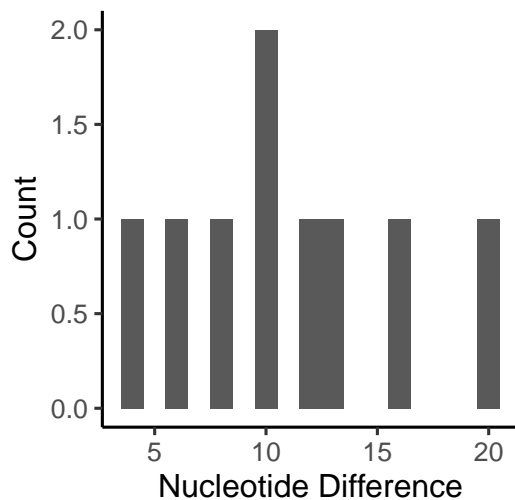
### IGHV1-58\*02

5 sequences assigned  
No exact matches.



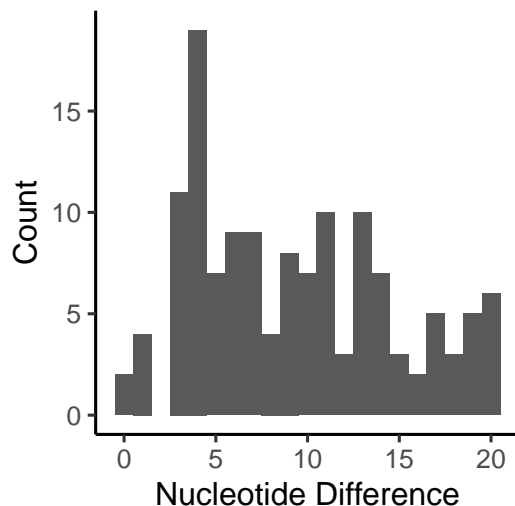
### IGHV1-58\*01\_03

13 sequences assigned  
No exact matches.



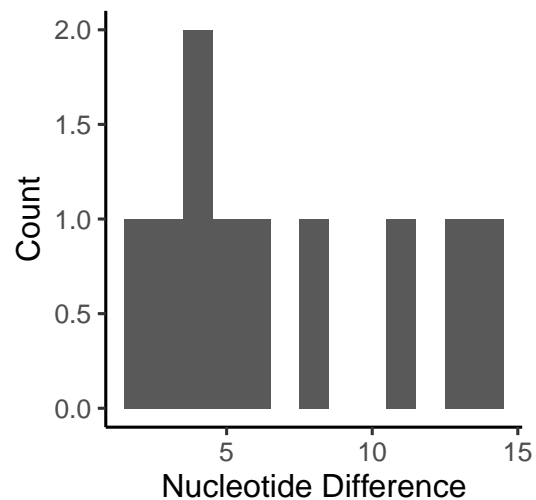
### IGHV2-5\*01

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



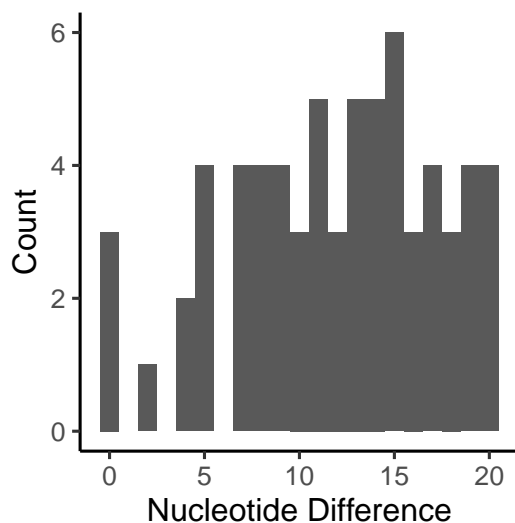
### IGHV2-70\*01

13 sequences assigned  
No exact matches.



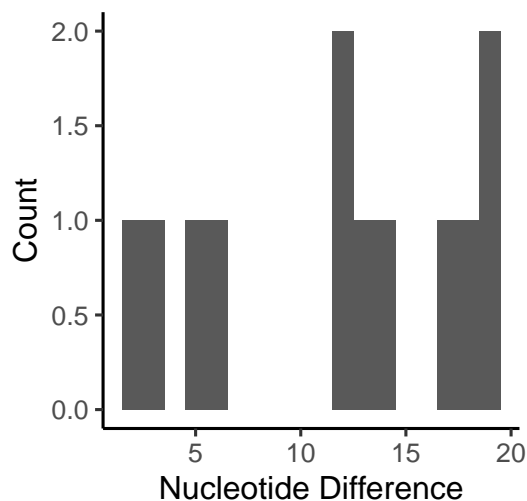
### IGHV1-69\*01\_12\_13

118 sequences assigned  
3 (2.5%) exact matches, in which:  
3 unique CDR3  
3 unique J



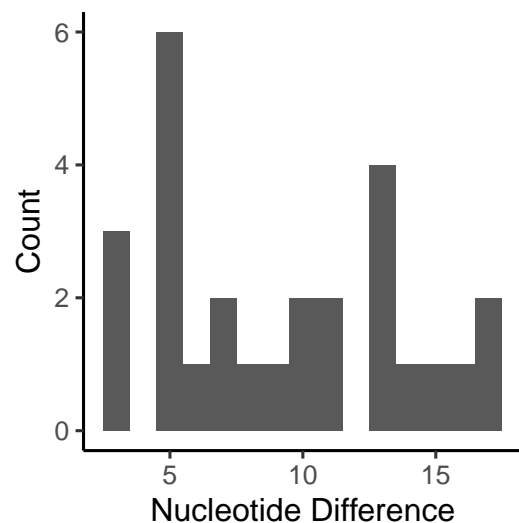
### IGHV2-26\*01

16 sequences assigned  
No exact matches.



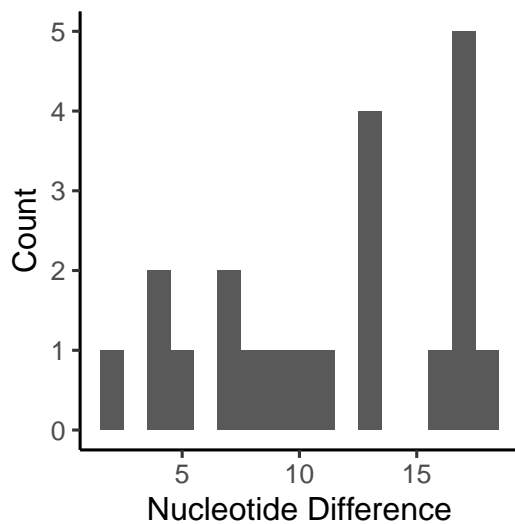
### IGHV2-70\*11\_15

28 sequences assigned  
No exact matches.



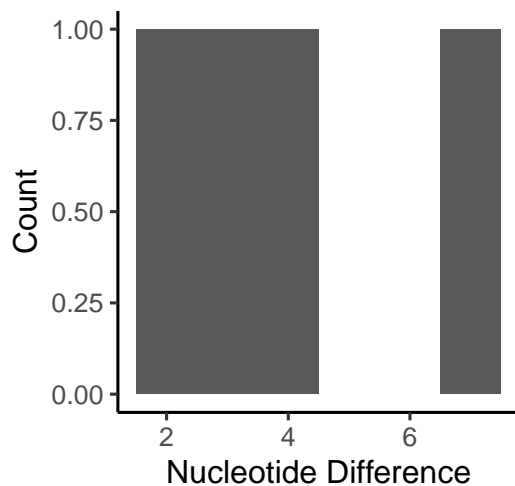
### IGHV1-69\*04\_09

29 sequences assigned  
No exact matches.



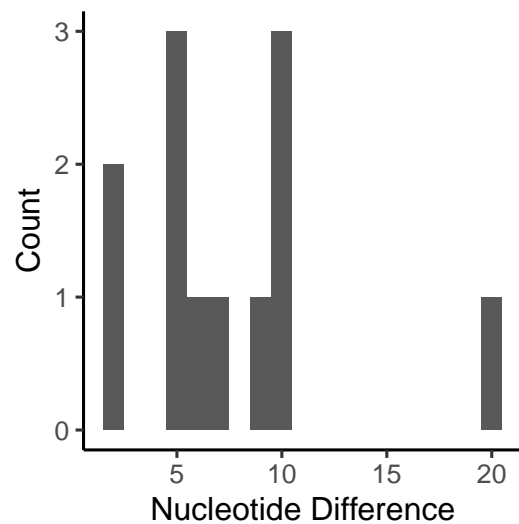
### IGHV2-26\*04

4 sequences assigned  
No exact matches.



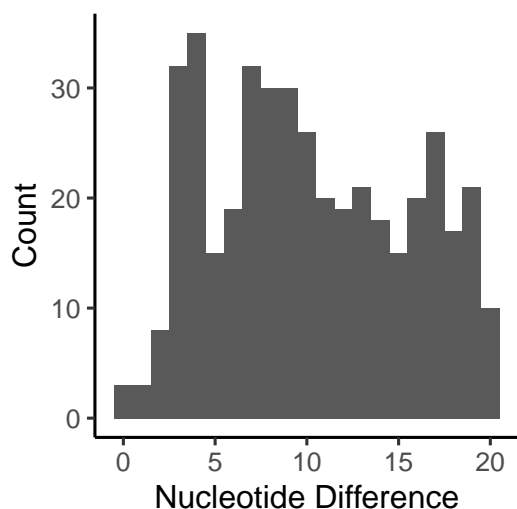
### IGHV2-70\*16\_17

12 sequences assigned  
No exact matches.



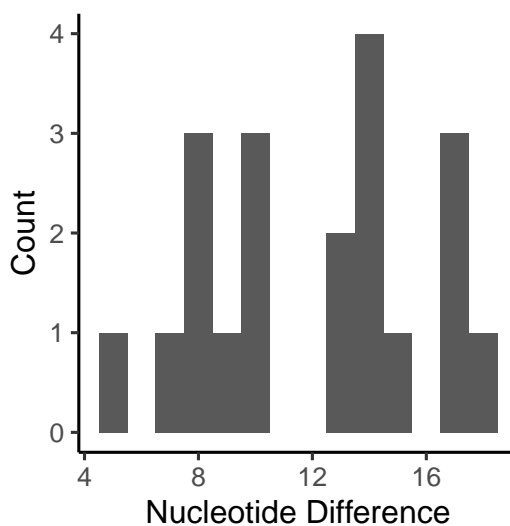
### IGHV3-7\*01

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



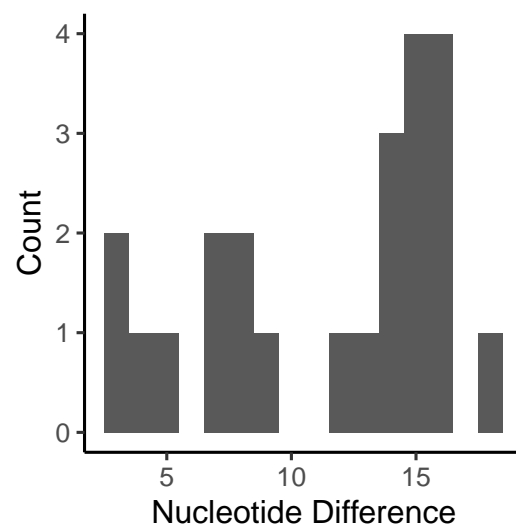
### IGHV3-11\*06

25 sequences assigned  
No exact matches.



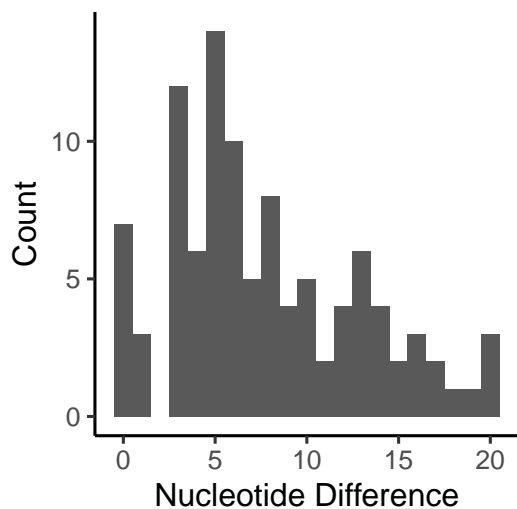
### IGHV3-13\*04

28 sequences assigned  
No exact matches.



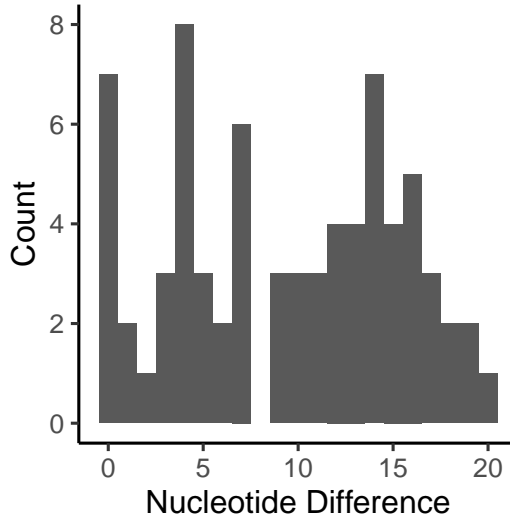
### IGHV3-9\*01

113 sequences assigned  
7 (6.2%) exact matches, in which:  
4 unique CDR3  
4 unique J



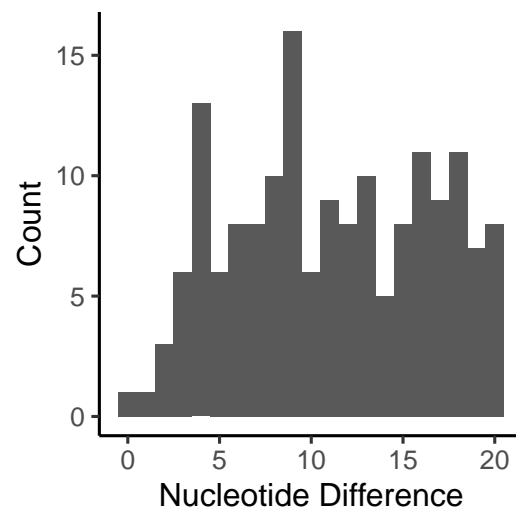
### IGHV3-11\*03\_05

88 sequences assigned  
7 (8%) exact matches, in which:  
4 unique CDR3  
2 unique J



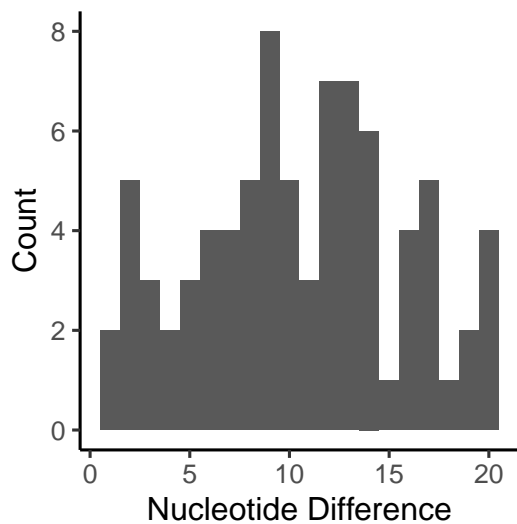
### IGHV3-15\*01\_02

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



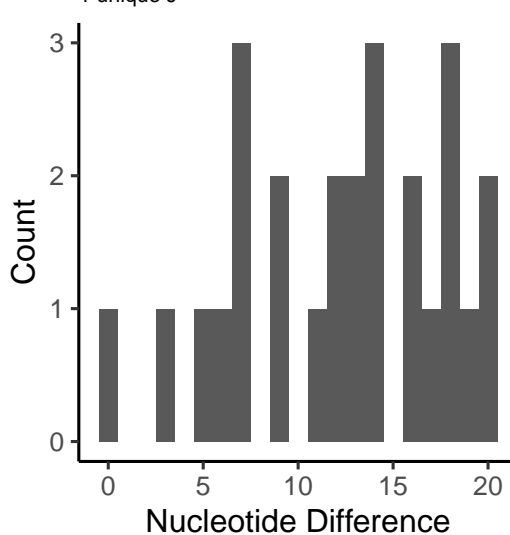
### IGHV3-11\*01

97 sequences assigned  
No exact matches.



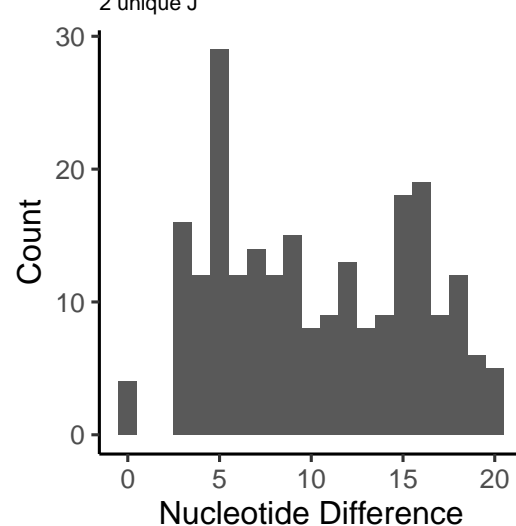
### IGHV3-13\*01

30 sequences assigned  
1 (3.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



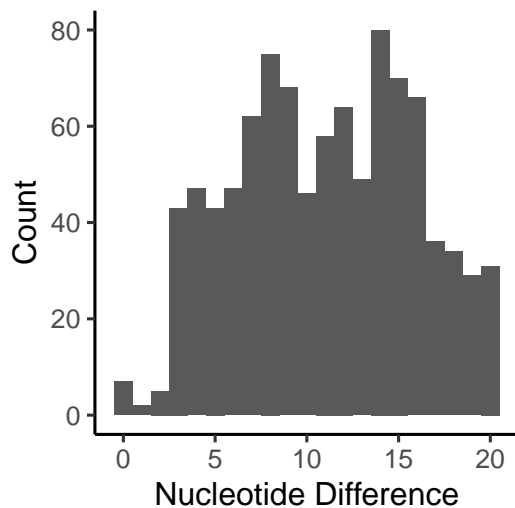
### IGHV3-21\*01\_02

268 sequences assigned  
4 (1.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



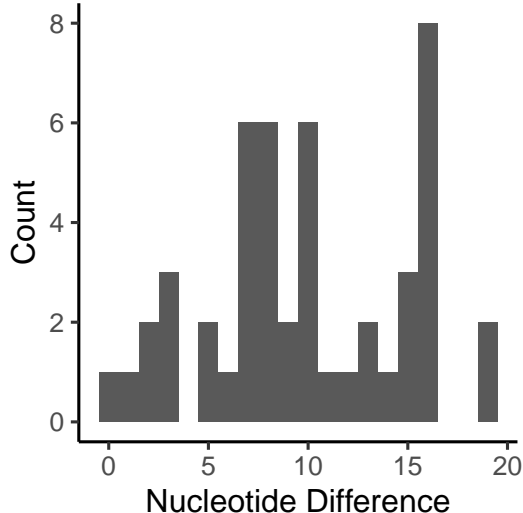
### IGHV3-23\*01\_04

1172 sequences assigned  
7 (0.6%) exact matches, in which:  
5 unique CDR3  
2 unique J



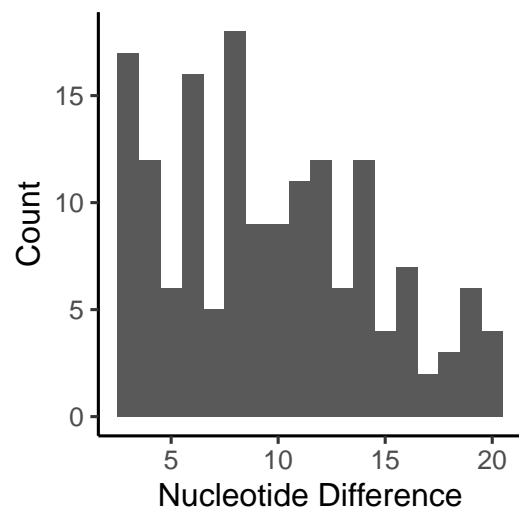
### IGHV3-33\*01

57 sequences assigned  
1 (1.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



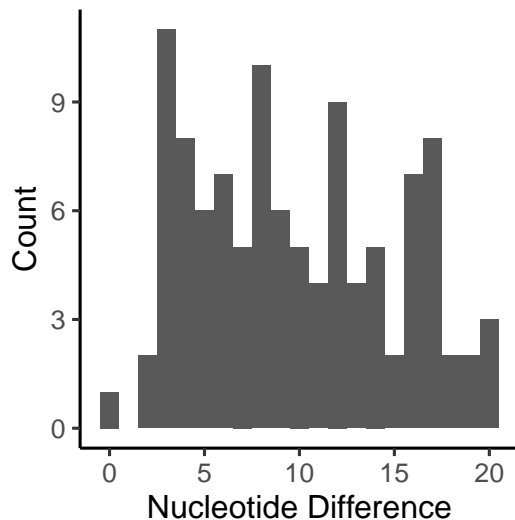
### IGHV3-48\*02

191 sequences assigned  
No exact matches.



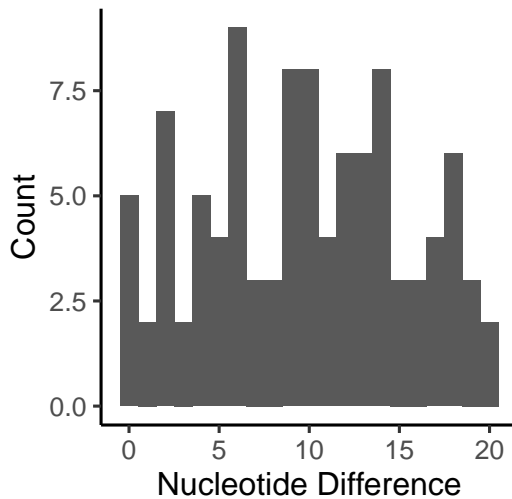
### IGHV3-30-3\*01

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



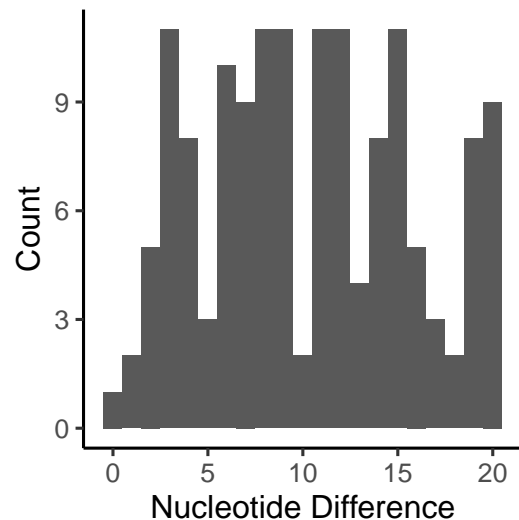
### IGHV3-33\*08

118 sequences assigned  
5 (4.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



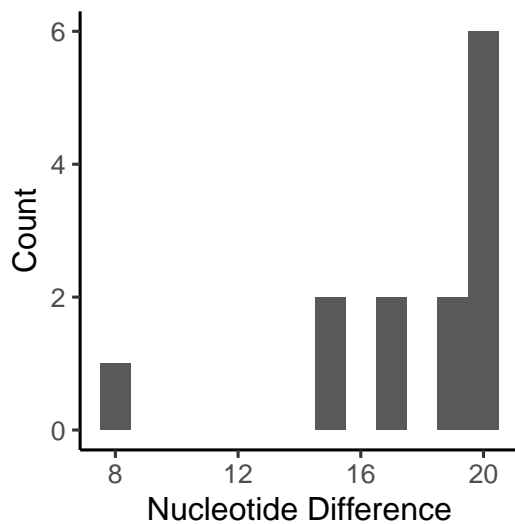
### IGHV3-48\*03

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



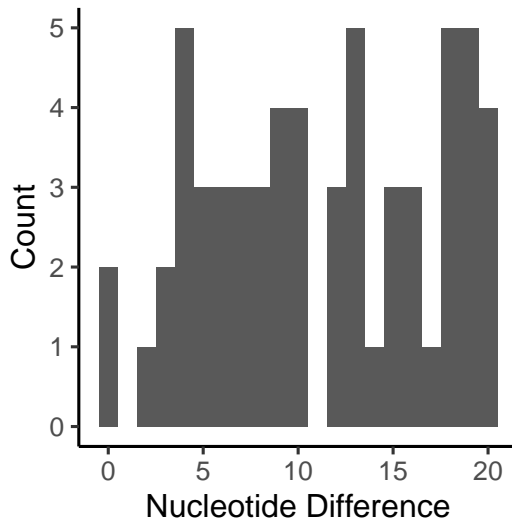
### IGHV3-30\*04

21 sequences assigned  
No exact matches.



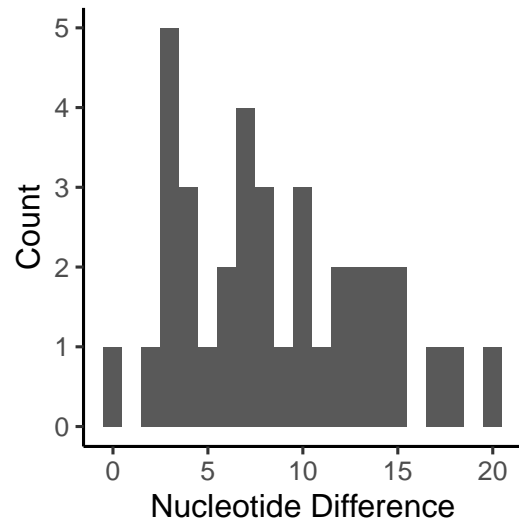
### IGHV3-43\*02

80 sequences assigned  
2 (2.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



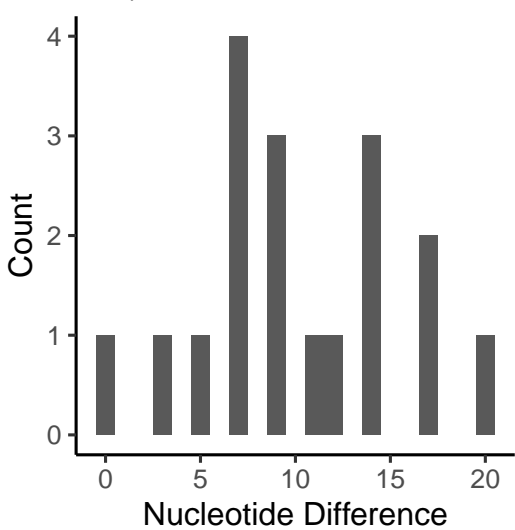
### IGHV3-49\*04

52 sequences assigned  
1 (1.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



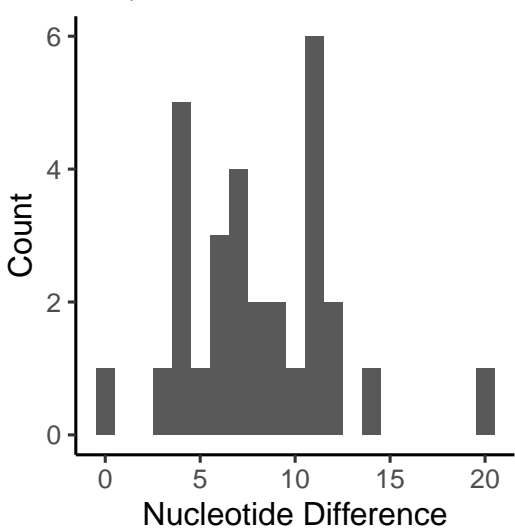
IGHV3-49\*03\_05

24 sequences assigned  
1 (4.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



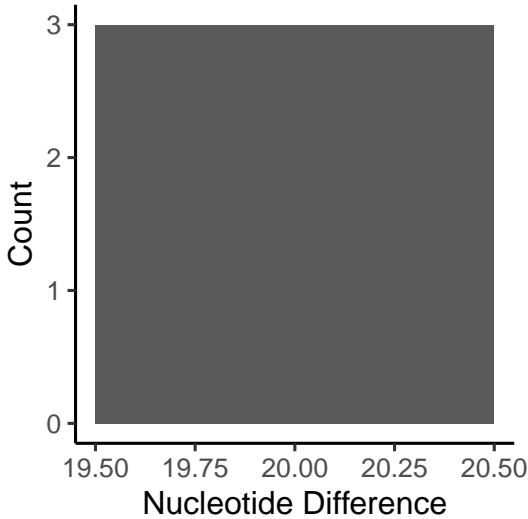
IGHV3-64\*01

30 sequences assigned  
1 (3.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



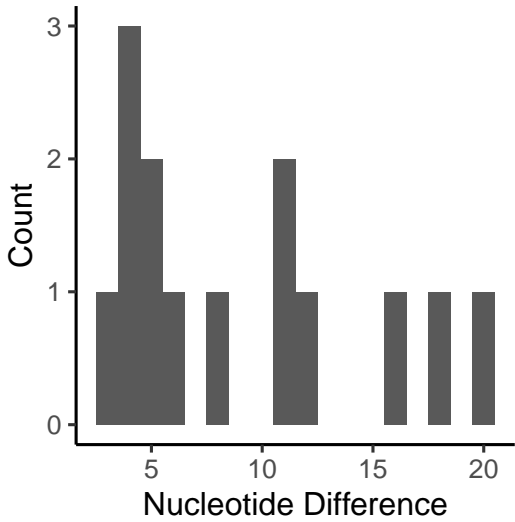
IGHV3-69-1\*01

10 sequences assigned  
No exact matches.



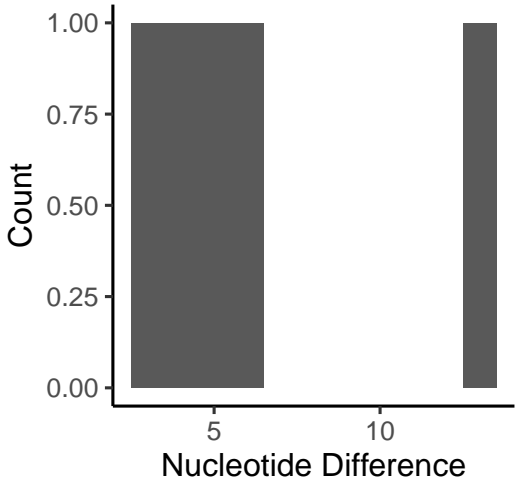
IGHV3-53\*04

19 sequences assigned  
No exact matches.



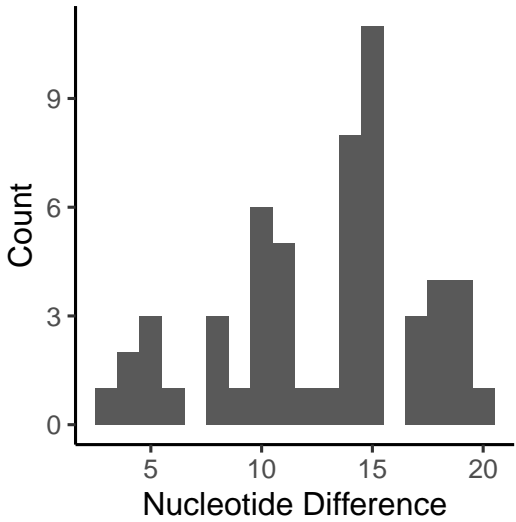
IGHV3-64\*02\_07

9 sequences assigned  
No exact matches.



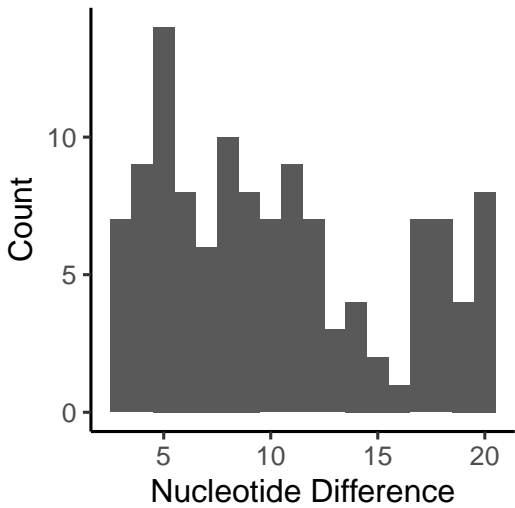
IGHV3-72\*01

61 sequences assigned  
No exact matches.



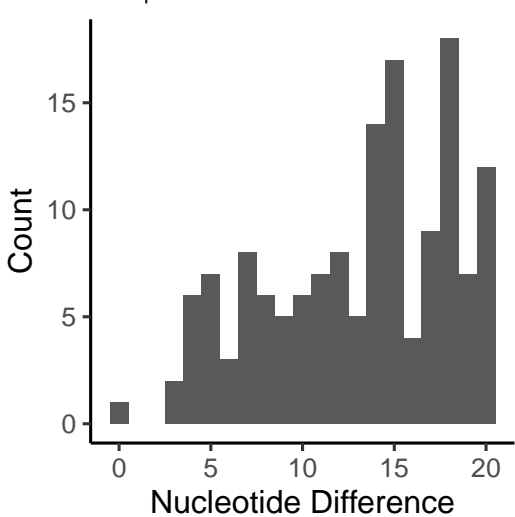
IGHV3-53\*01\_02

144 sequences assigned  
No exact matches.



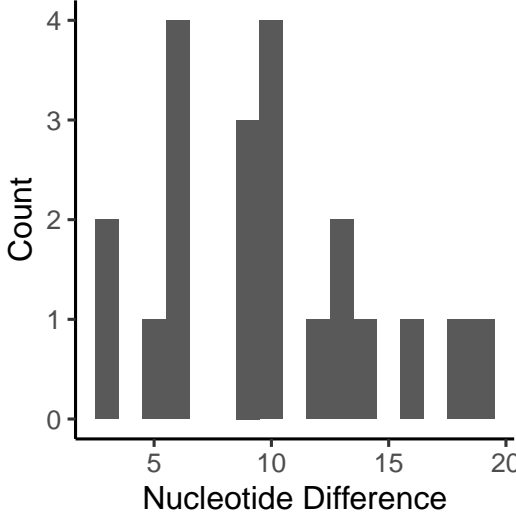
IGHV3-66\*01

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



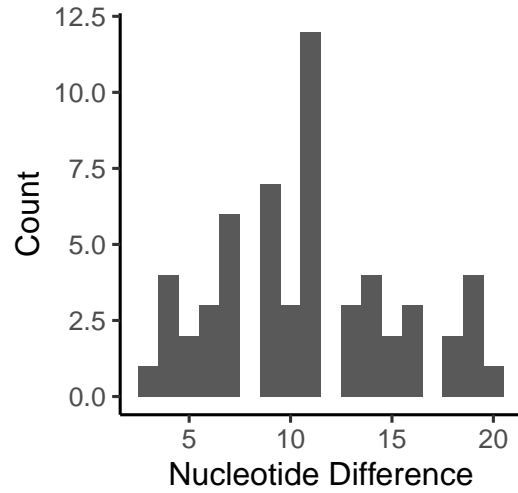
IGHV3-73\*01\_02

27 sequences assigned  
No exact matches.



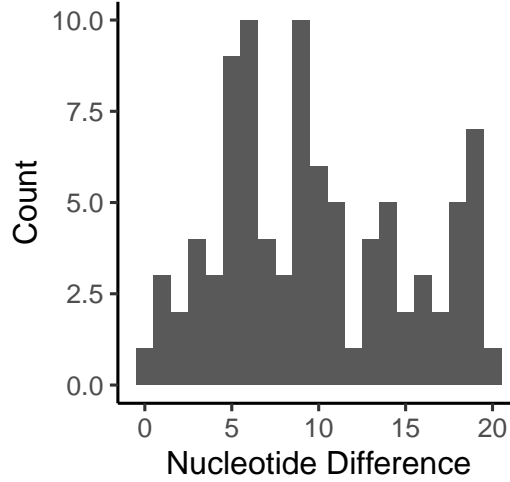
### IGHV3-74\*03

84 sequences assigned  
No exact matches.



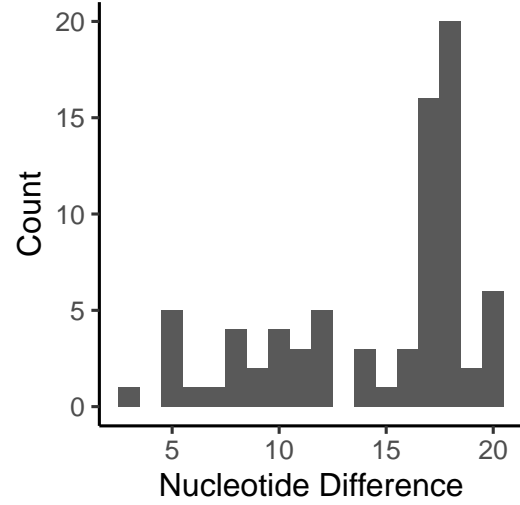
### IGHV4-4\*07

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



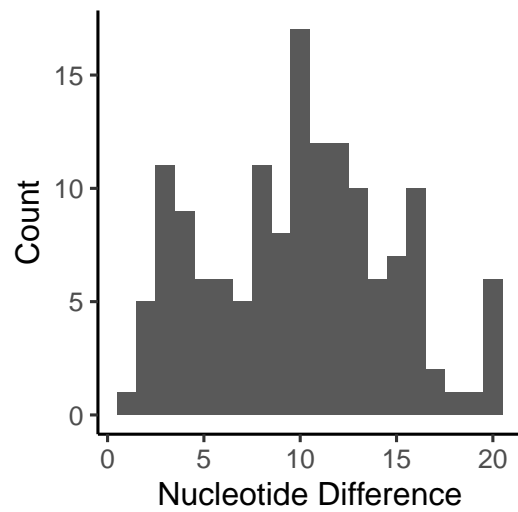
### IGHV4-30-2\*01

90 sequences assigned  
No exact matches.



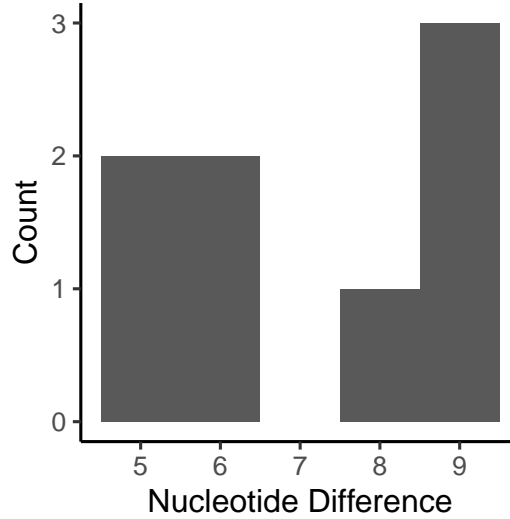
### IGHV3-74\*01\_02

171 sequences assigned  
No exact matches.



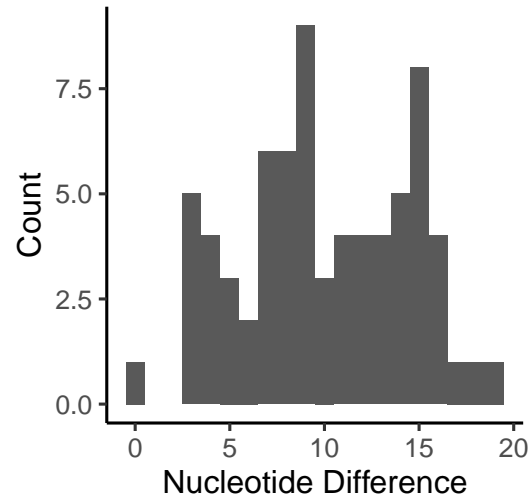
### IGHV4-28\*01\_07

8 sequences assigned  
No exact matches.



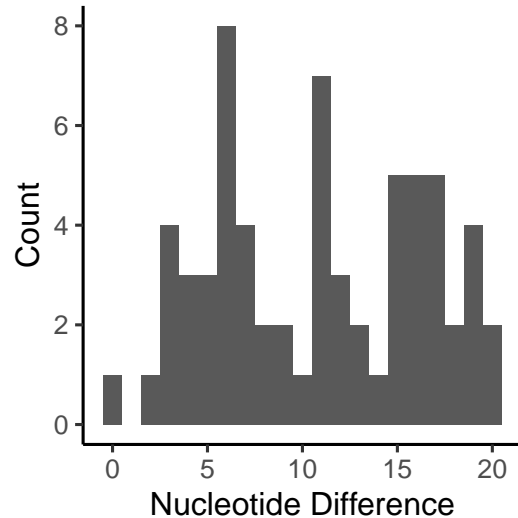
### IGHV4-31\*02

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



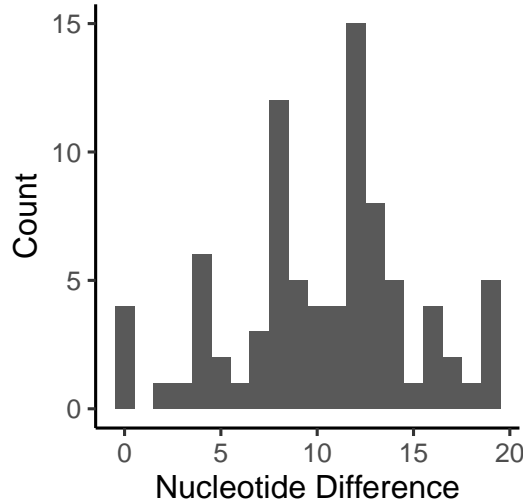
### IGHV3-64D\*09

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



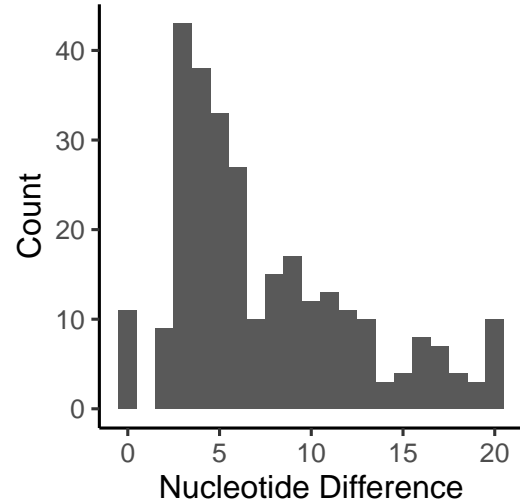
### IGHV4-30-4\*01

108 sequences assigned  
4 (3.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



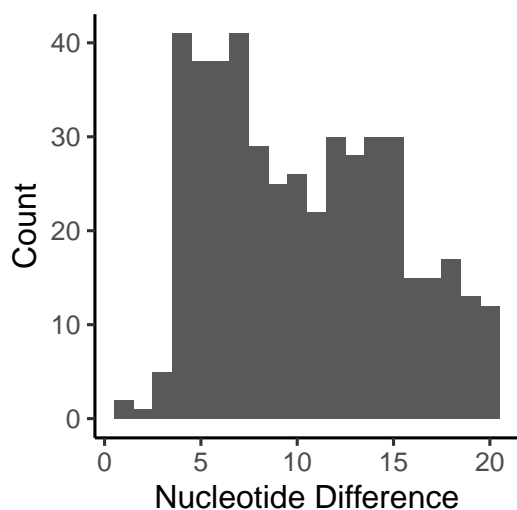
### IGHV4-34\*01\_02

334 sequences assigned  
11 (3.3%) exact matches, in which:  
7 unique CDR3  
4 unique J



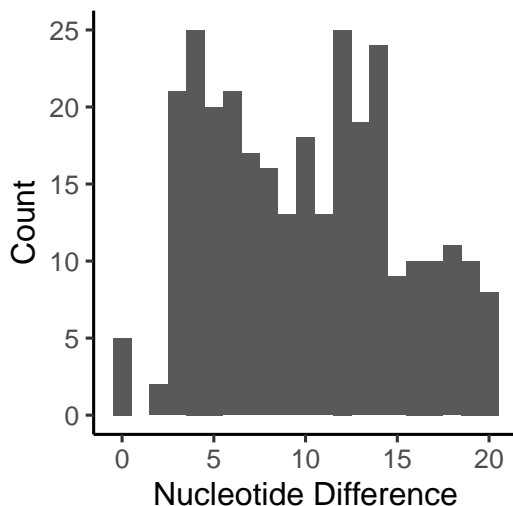
### IGHV4–39\*02

573 sequences assigned  
No exact matches.



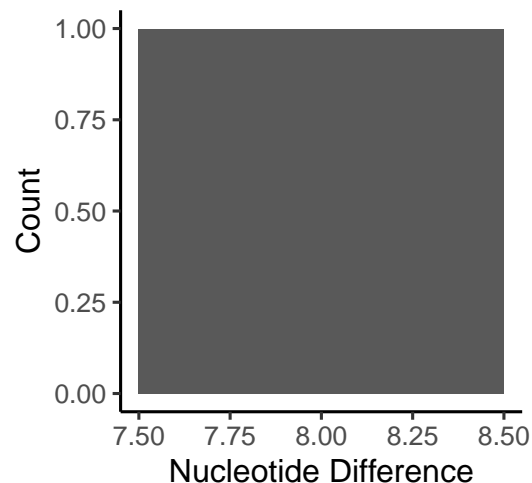
### IGHV4–59\*01\_07

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



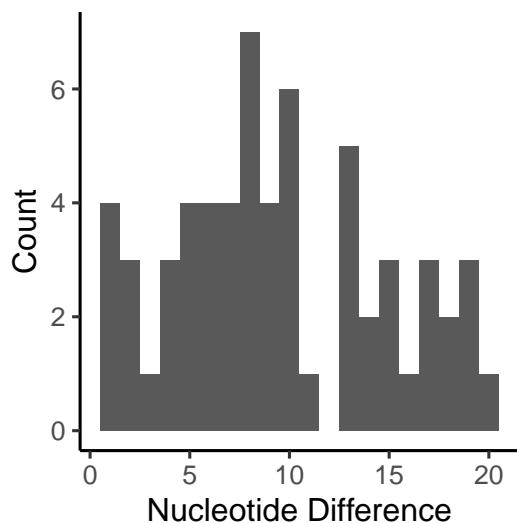
### IGHV4/OR15–8\*01

2 sequences assigned  
No exact matches.



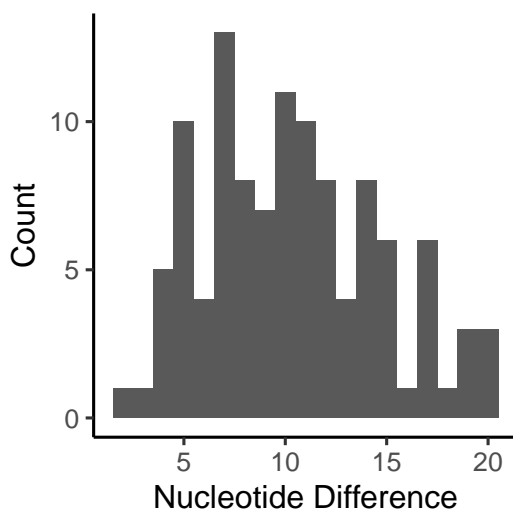
### IGHV4–39\*01\_05

82 sequences assigned  
No exact matches.



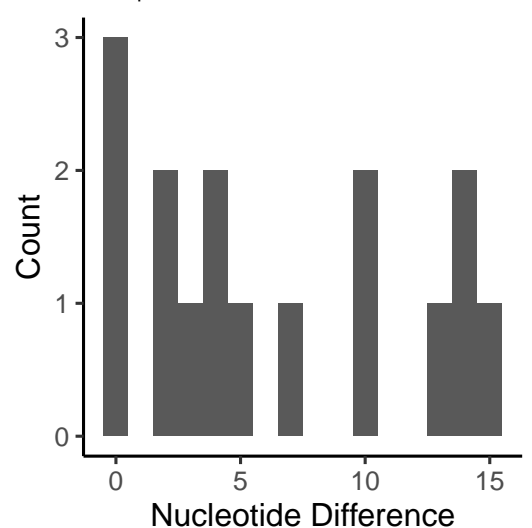
### IGHV4–59\*11

147 sequences assigned  
No exact matches.



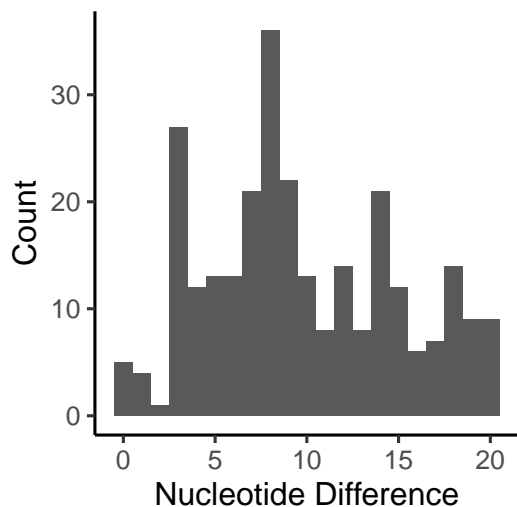
### IGHV5–10–1\*01\_03

23 sequences assigned  
3 (13%) exact matches, in which:  
2 unique CDR3  
1 unique J



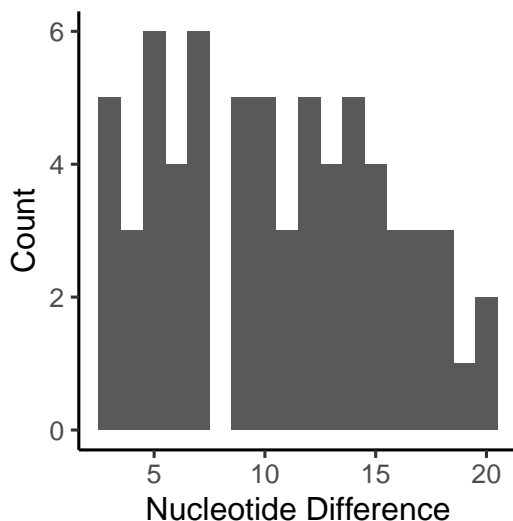
### IGHV4–59\*08

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



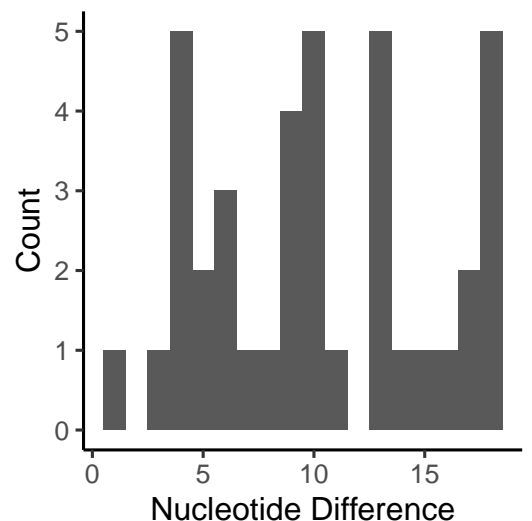
### IGHV4–61\*01

91 sequences assigned  
No exact matches.



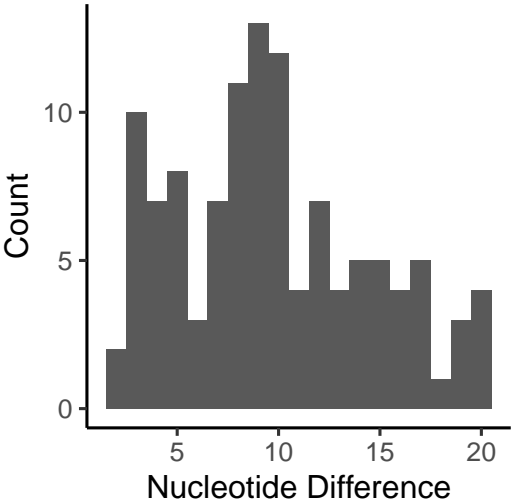
### IGHV5–51\*07

45 sequences assigned  
No exact matches.



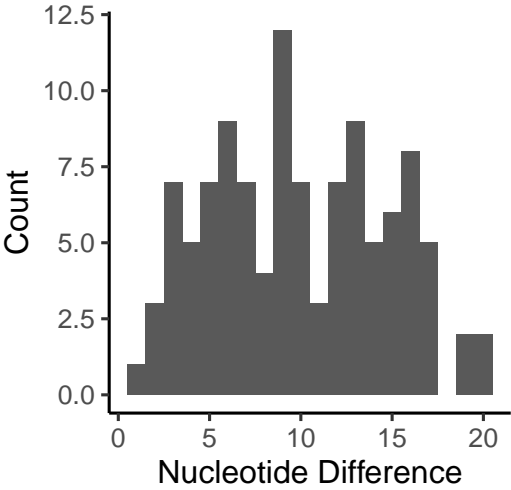
IGHV5-51\*01\_03

126 sequences assigned  
No exact matches.

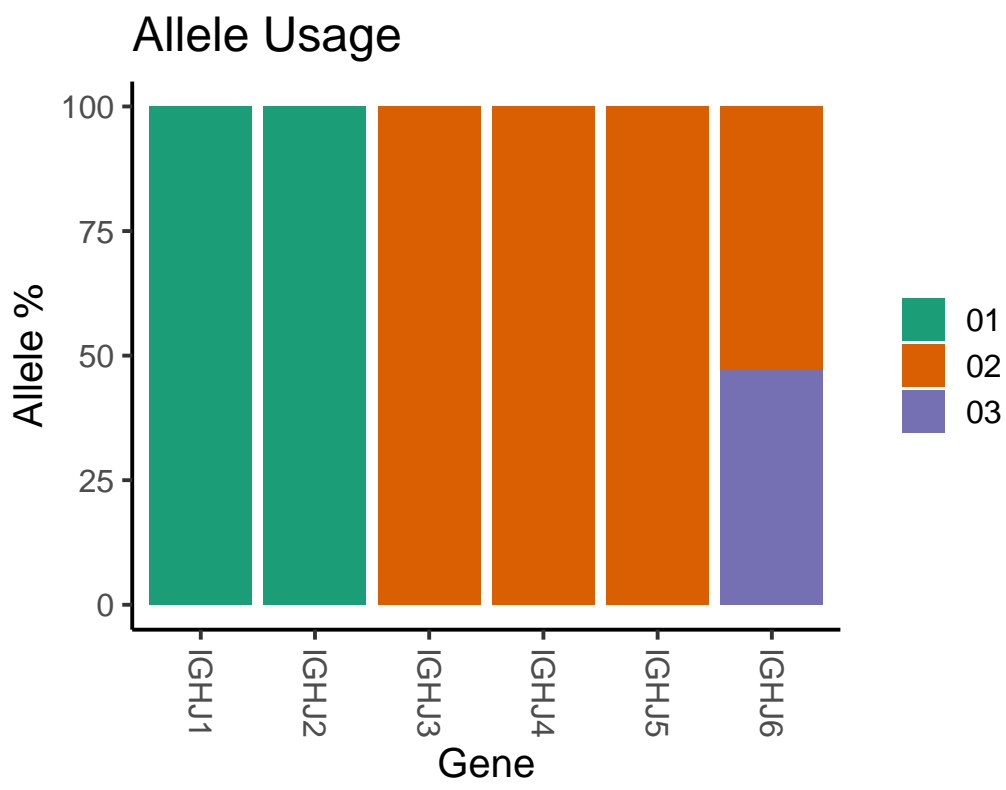


IGHV6-1\*01\_02

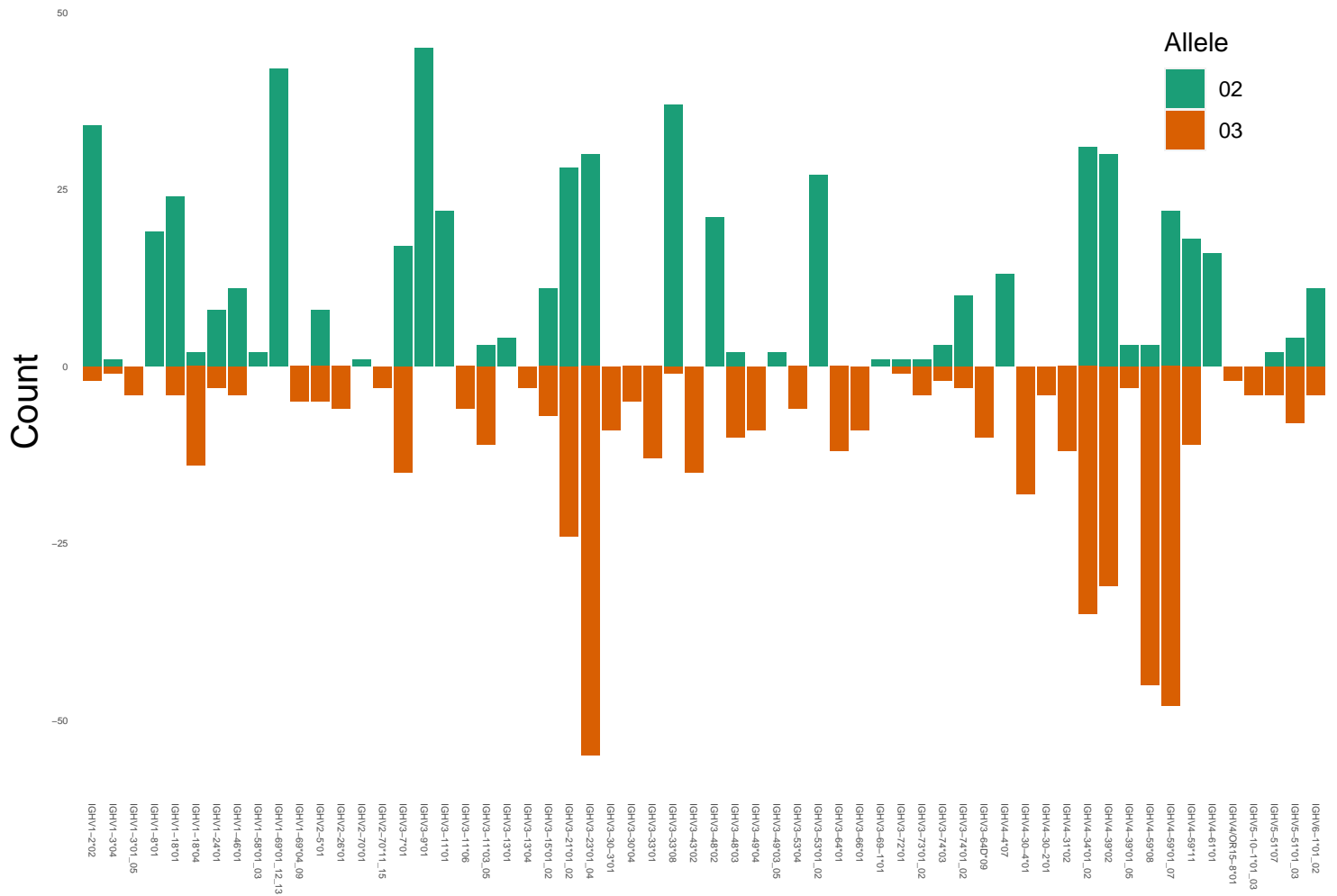
122 sequences assigned  
No exact matches.







### Sequence Count byIGHJ6 allele usage



[illegible]