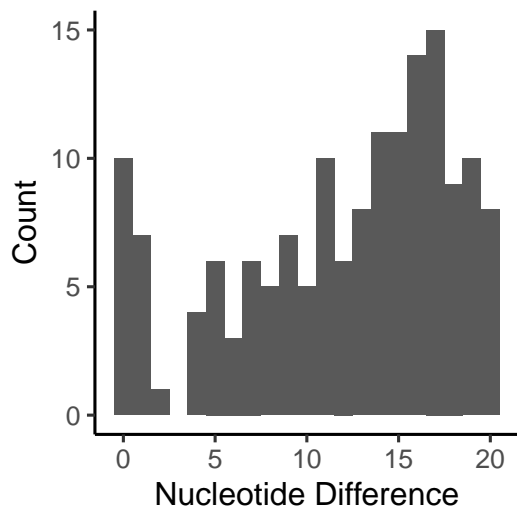


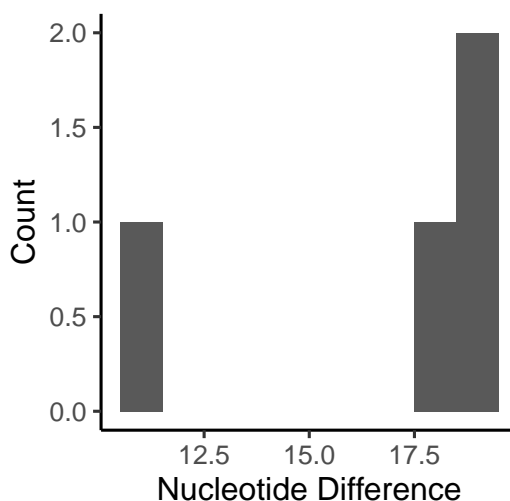
### IGHV1-2\*02

373 sequences assigned  
10 (2.7%) exact matches, in which:  
10 unique CDR3  
4 unique J



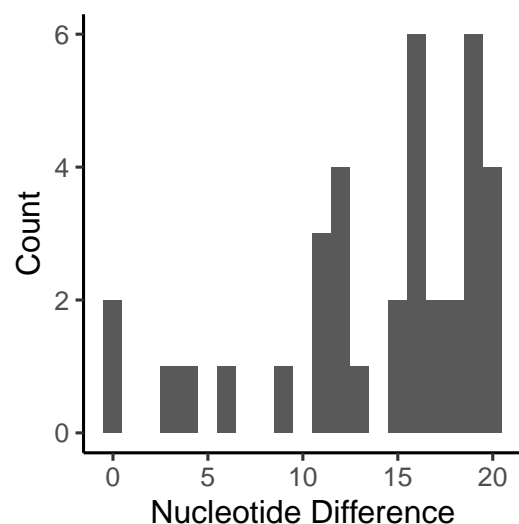
### IGHV1-8\*02

5 sequences assigned  
No exact matches.



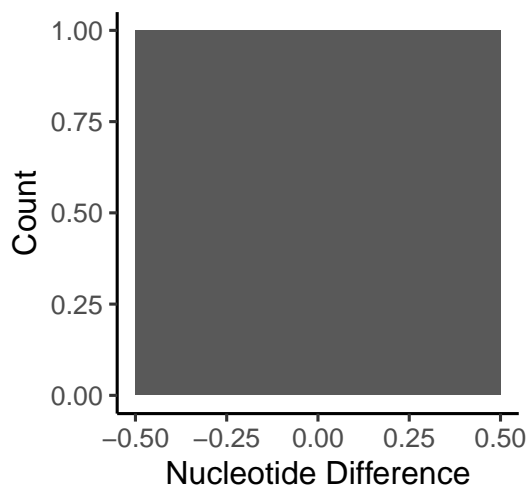
### IGHV1-46\*01

94 sequences assigned  
2 (2.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



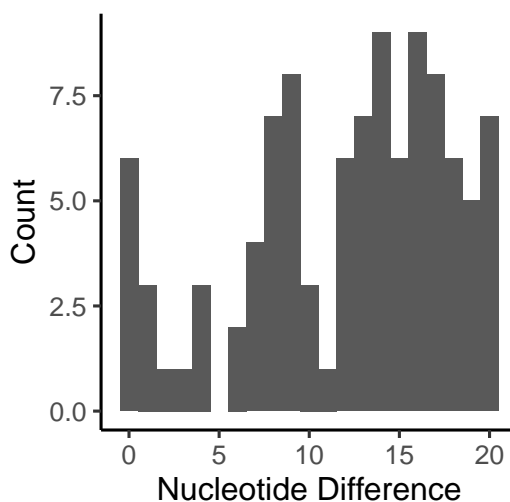
### IGHV1-3\*01

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



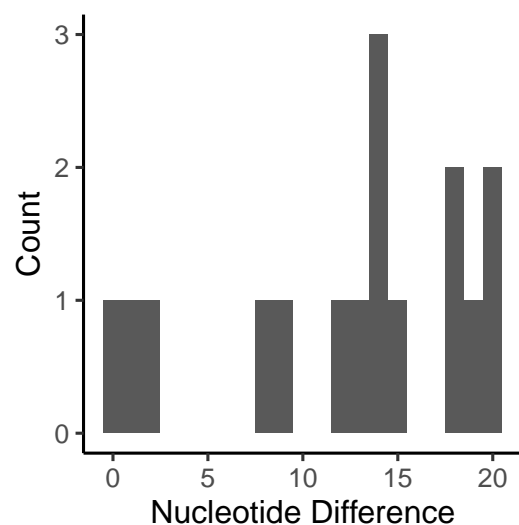
### IGHV1-18\*01

232 sequences assigned  
6 (2.6%) exact matches, in which:  
6 unique CDR3  
4 unique J



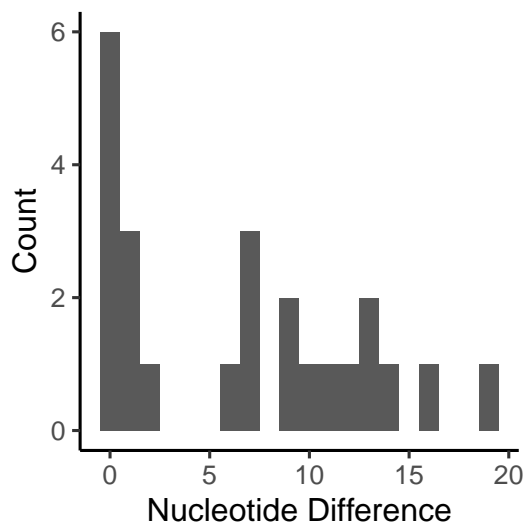
### IGHV1-46\*03

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



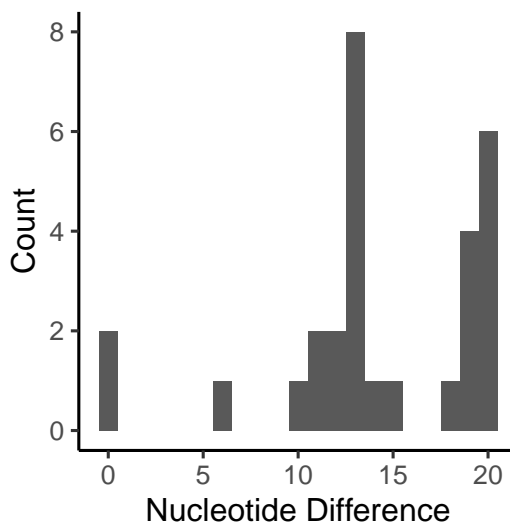
### IGHV1-8\*01

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



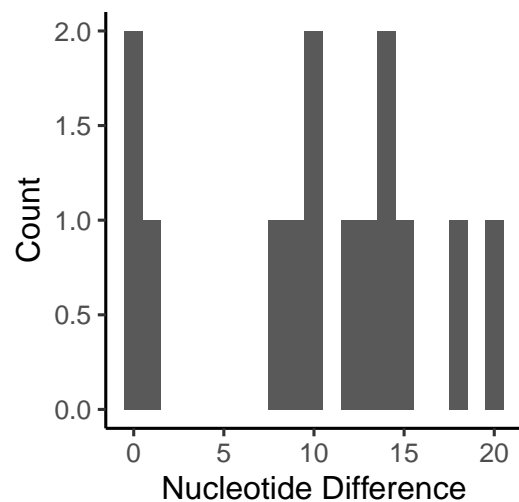
### IGHV1-24\*01

43 sequences assigned  
2 (4.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



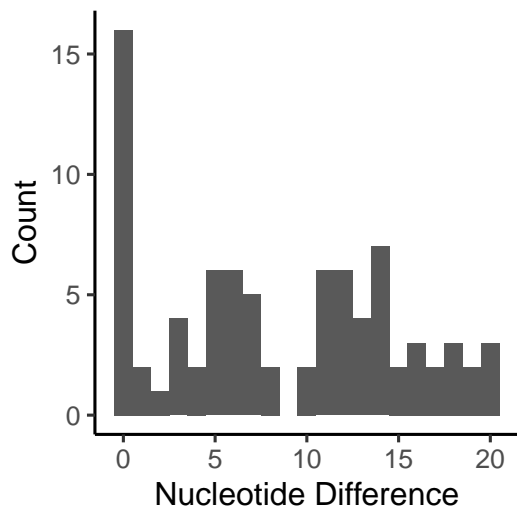
### IGHV1-58\*01

16 sequences assigned  
2 (12.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



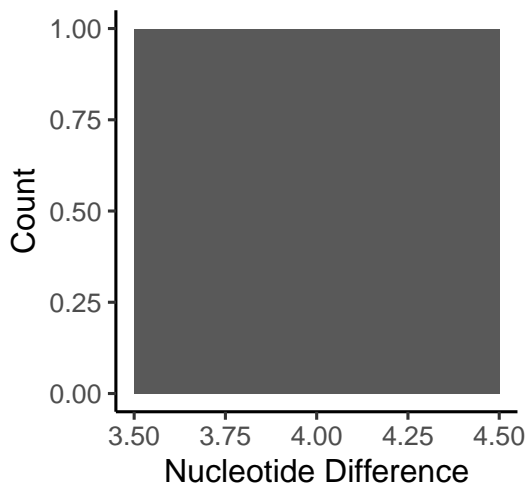
### IGHV2-5\*01

210 sequences assigned  
16 (7.6%) exact matches, in which:  
16 unique CDR3  
4 unique J



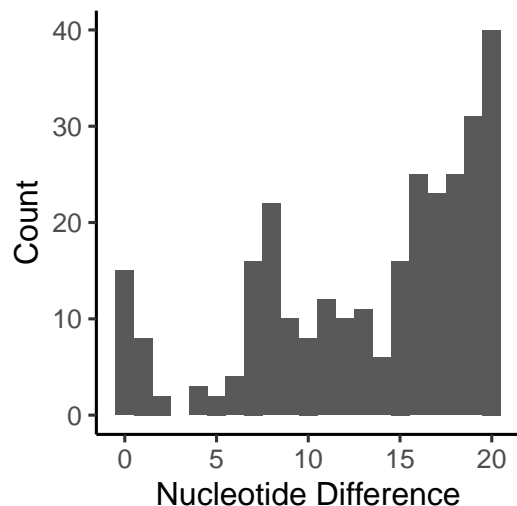
### IGHV2-70\*13

10 sequences assigned  
No exact matches.



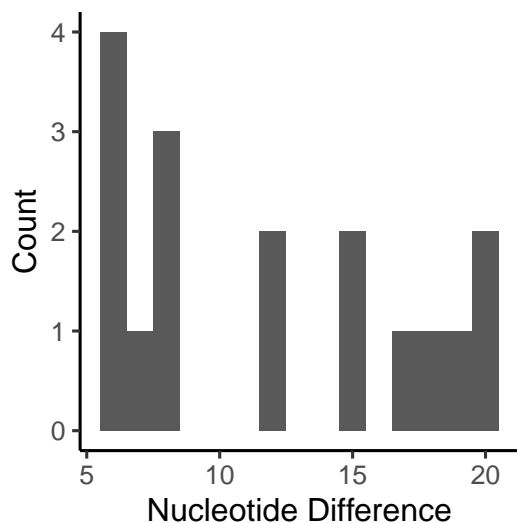
### IGHV3-9\*01

572 sequences assigned  
15 (2.6%) exact matches, in which:  
15 unique CDR3  
5 unique J



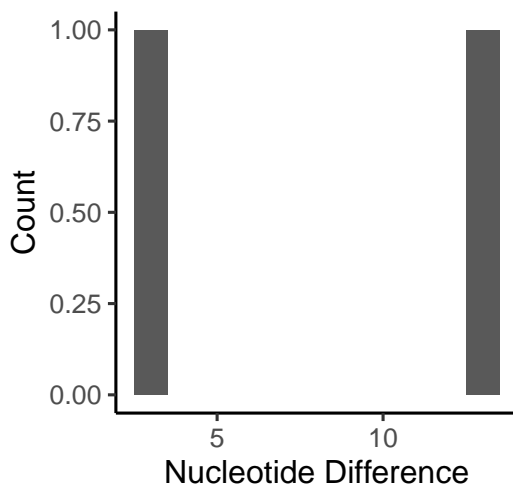
### IGHV2-26\*01

45 sequences assigned  
No exact matches.



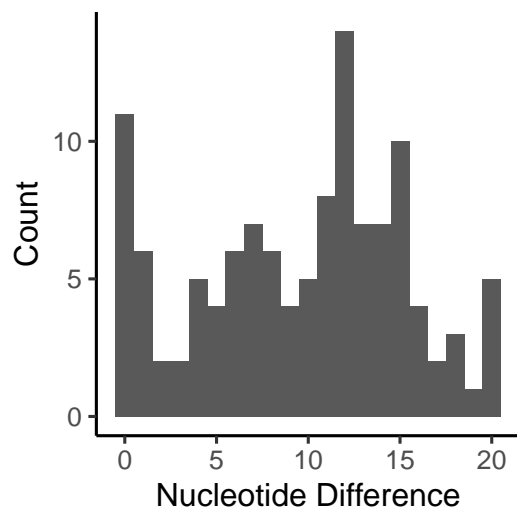
### IGHV2-70\*20

5 sequences assigned  
No exact matches.



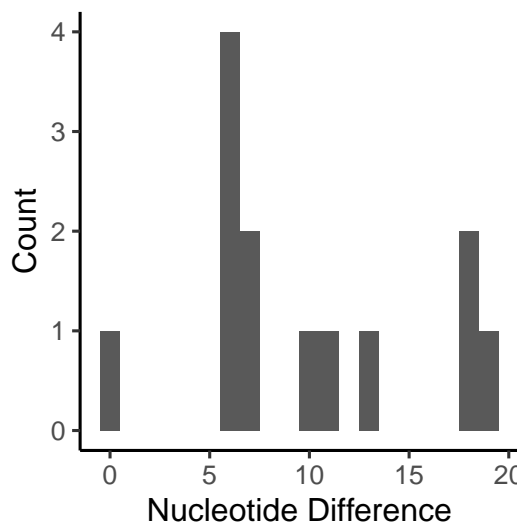
### IGHV3-11\*01

265 sequences assigned  
11 (4.2%) exact matches, in which:  
11 unique CDR3  
4 unique J



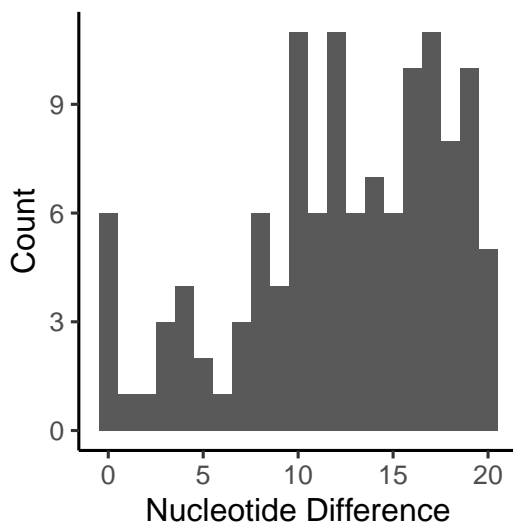
### IGHV2-70\*01

22 sequences assigned  
1 (4.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



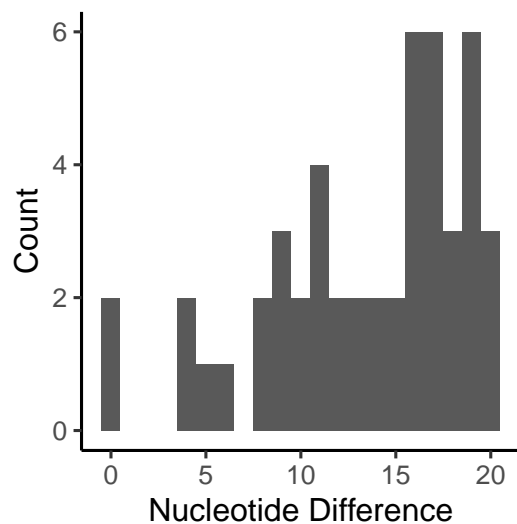
### IGHV3-7\*01

186 sequences assigned  
6 (3.2%) exact matches, in which:  
6 unique CDR3  
4 unique J



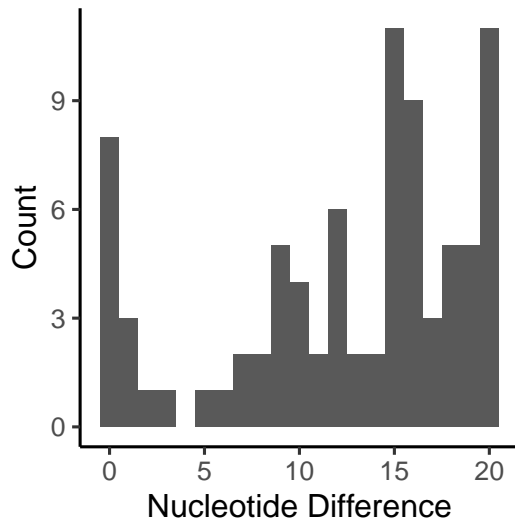
### IGHV3-13\*01

61 sequences assigned  
2 (3.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



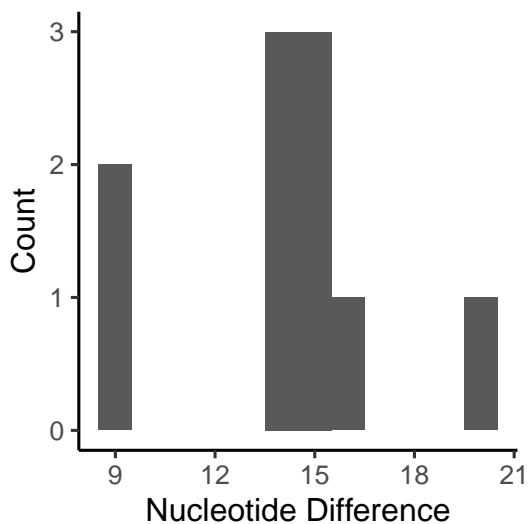
### IGHV3-15\*01

258 sequences assigned  
8 (3.1%) exact matches, in which:  
7 unique CDR3  
2 unique J



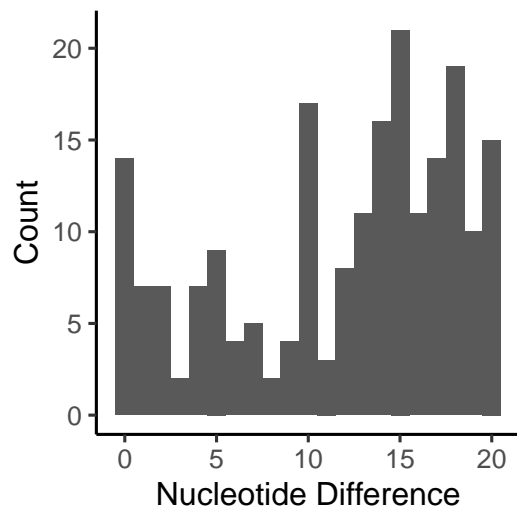
### IGHV3-21\*02

25 sequences assigned  
No exact matches.



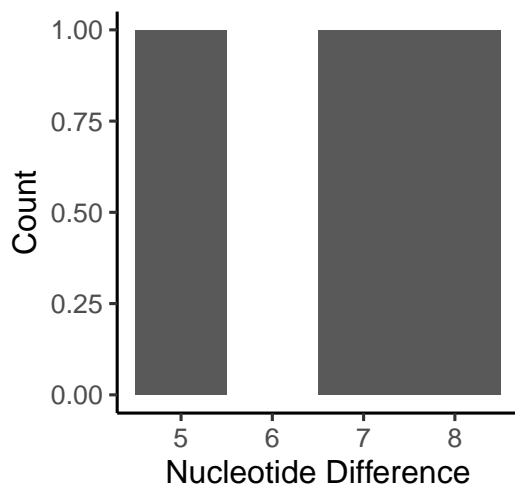
### IGHV3-33\*01

402 sequences assigned  
14 (3.5%) exact matches, in which:  
14 unique CDR3  
5 unique J



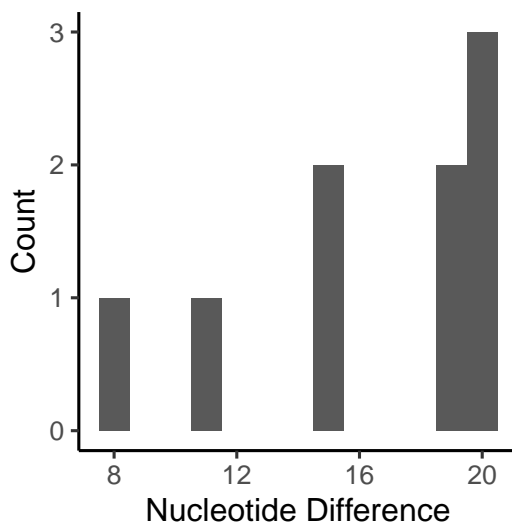
### IGHV3-20\*01

3 sequences assigned  
No exact matches.



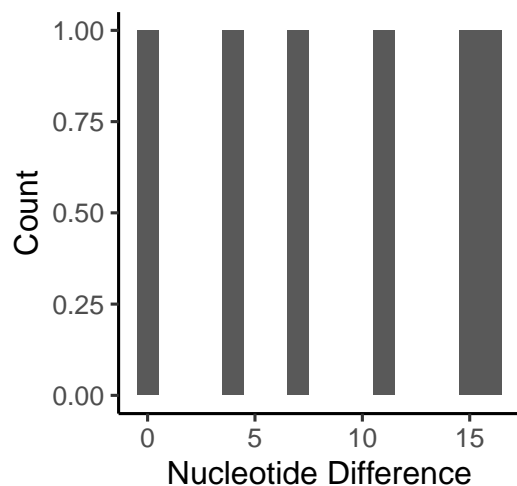
### IGHV3-21\*06

69 sequences assigned  
No exact matches.



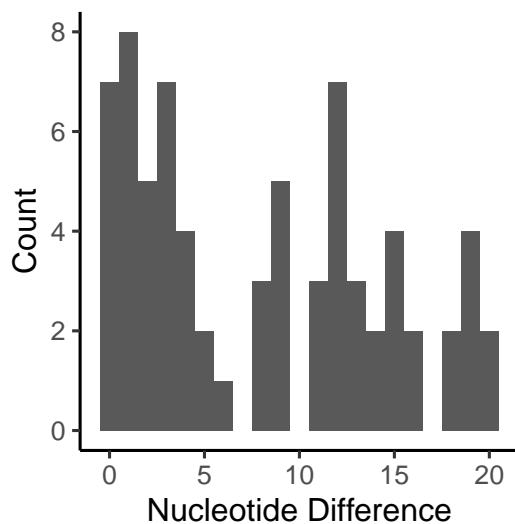
### IGHV3-43\*01

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



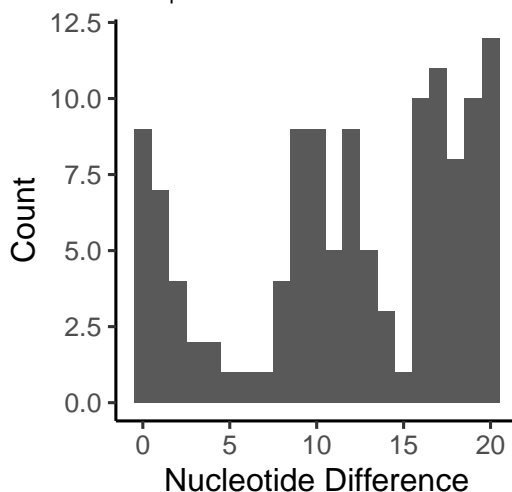
### IGHV3-21\*01

106 sequences assigned  
7 (6.6%) exact matches, in which:  
7 unique CDR3  
2 unique J



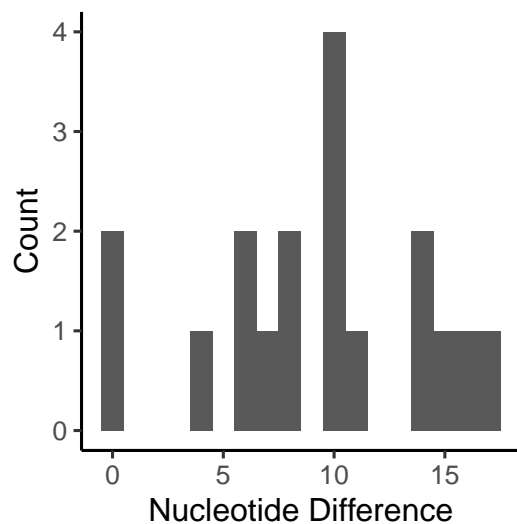
### IGHV3-30-3\*01

335 sequences assigned  
9 (2.7%) exact matches, in which:  
9 unique CDR3  
4 unique J



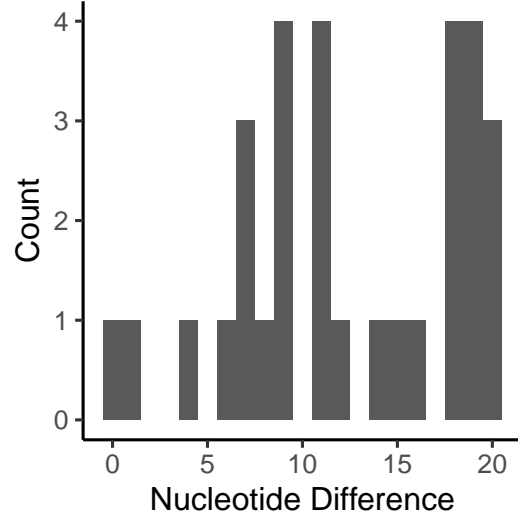
### IGHV3-48\*01

28 sequences assigned  
2 (7.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



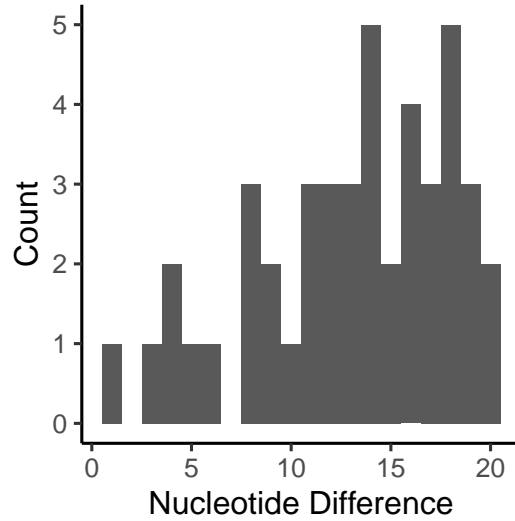
### IGHV3-48\*02

44 sequences assigned  
1 (2.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



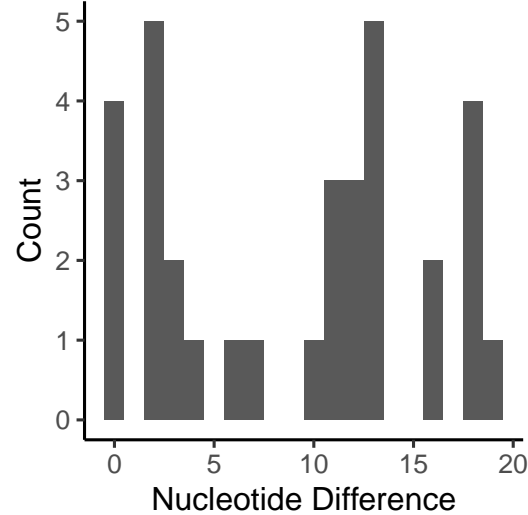
### IGHV3-53\*01

85 sequences assigned  
No exact matches.



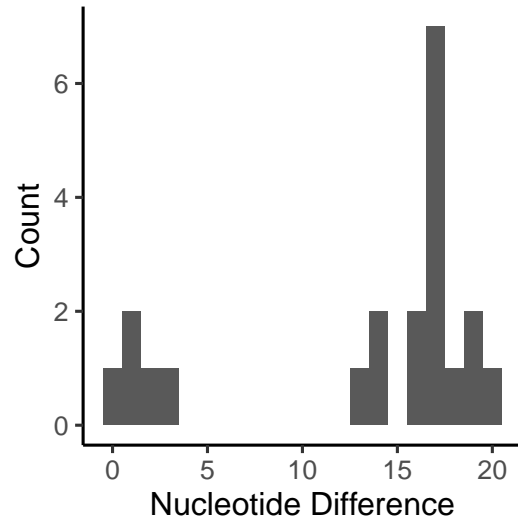
### IGHV3-73\*02

114 sequences assigned  
4 (3.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



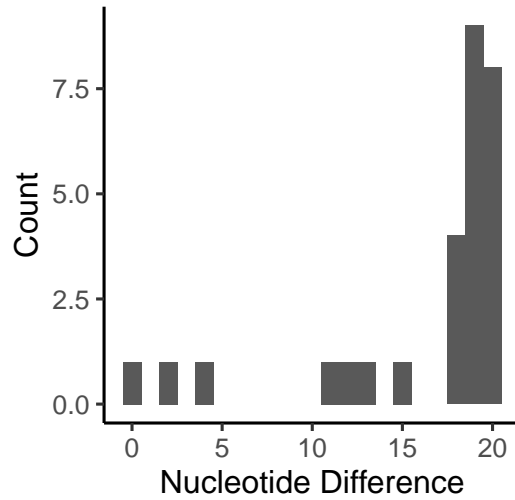
### IGHV3-49\*03

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



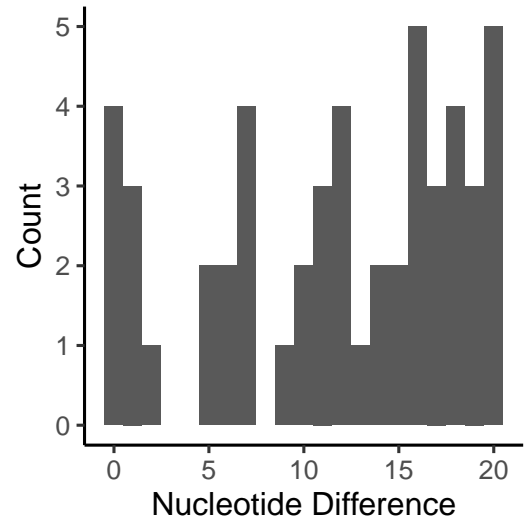
### IGHV3-53\*02

78 sequences assigned  
1 (1.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



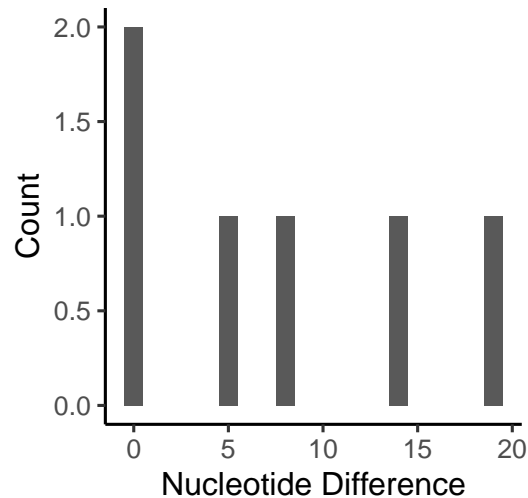
### IGHV3-74\*01

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



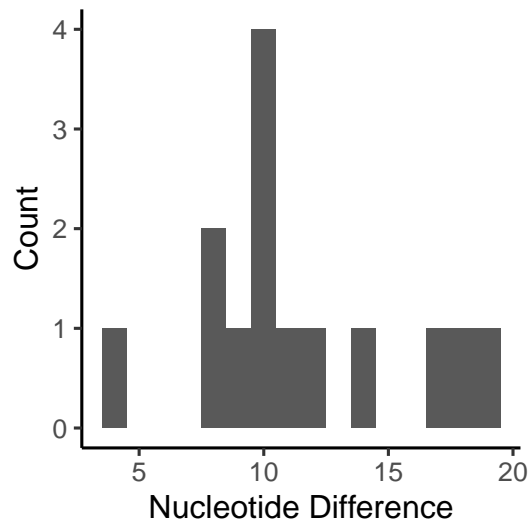
### IGHV3-49\*05

20 sequences assigned  
2 (10%) exact matches, in which:  
2 unique CDR3  
1 unique J



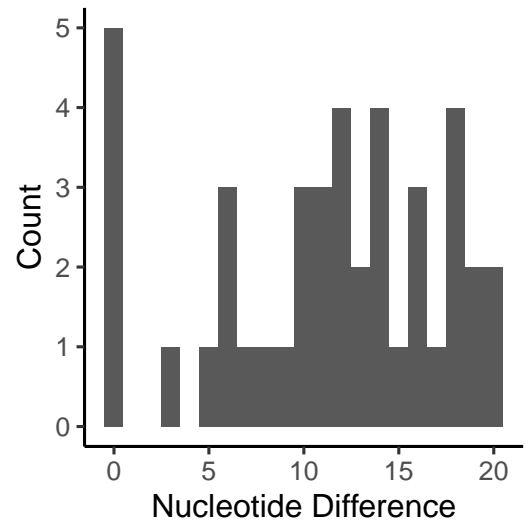
### IGHV3-72\*01

27 sequences assigned  
No exact matches.



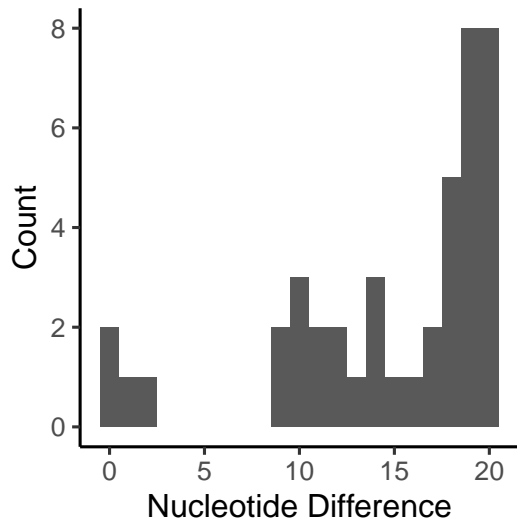
### IGHV4-4\*07

102 sequences assigned  
5 (4.9%) exact matches, in which:  
5 unique CDR3  
2 unique J



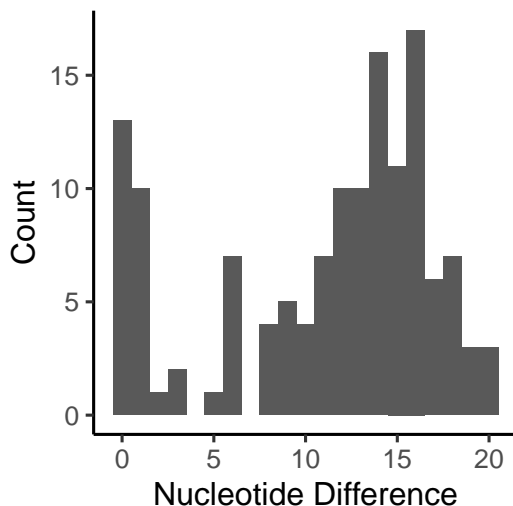
### IGHV4-30-4\*01

156 sequences assigned  
2 (1.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



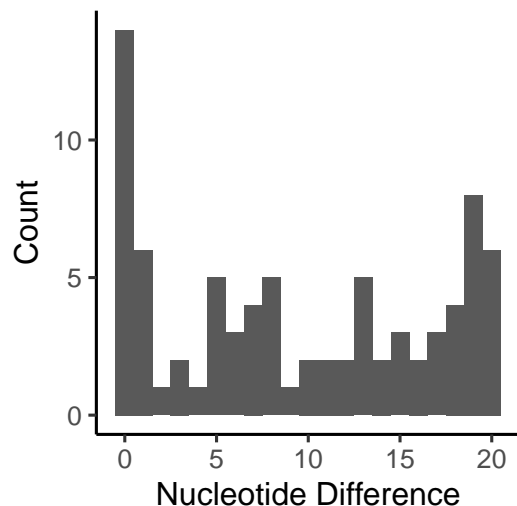
### IGHV4-34\*01

253 sequences assigned  
13 (5.1%) exact matches, in which:  
13 unique CDR3  
4 unique J



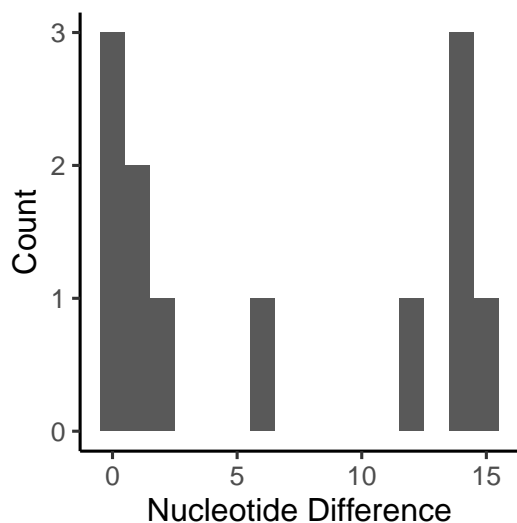
### IGHV4-59\*01

137 sequences assigned  
14 (10.2%) exact matches, in which:  
14 unique CDR3  
5 unique J



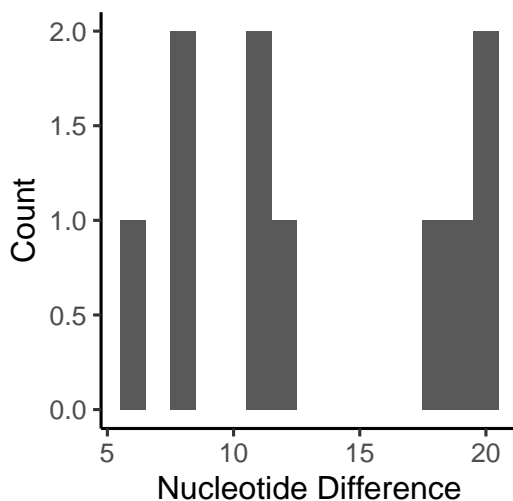
### IGHV4-30-2\*01

48 sequences assigned  
3 (6.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



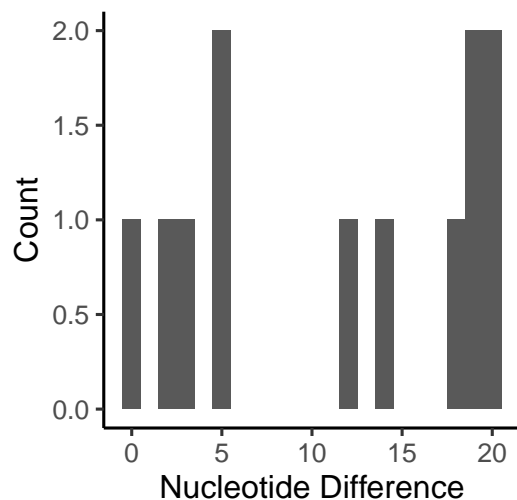
### IGHV4-34\*02

66 sequences assigned  
No exact matches.



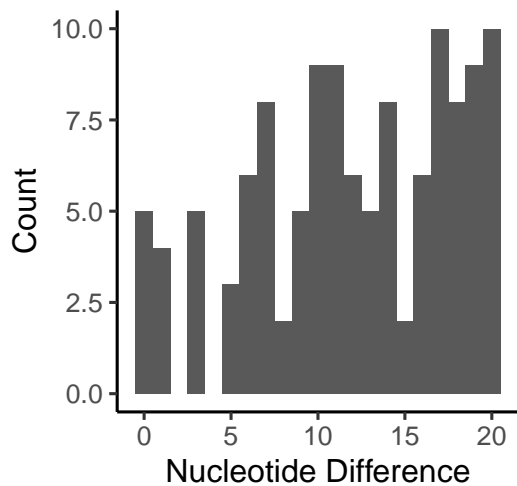
### IGHV4-61\*01

26 sequences assigned  
1 (3.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



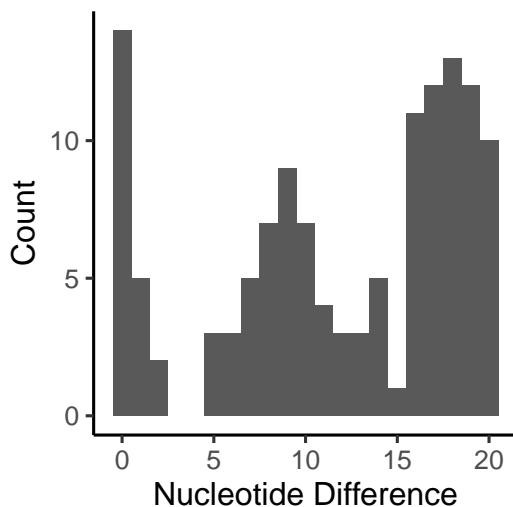
### IGHV4-31\*03

247 sequences assigned  
5 (2%) exact matches, in which:  
4 unique CDR3  
2 unique J



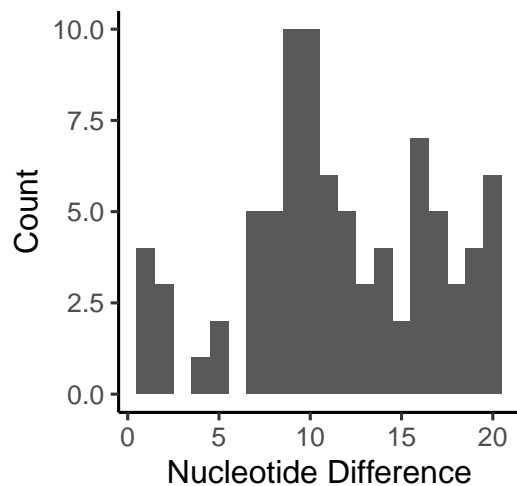
### IGHV4-39\*01

456 sequences assigned  
14 (3.1%) exact matches, in which:  
12 unique CDR3  
4 unique J



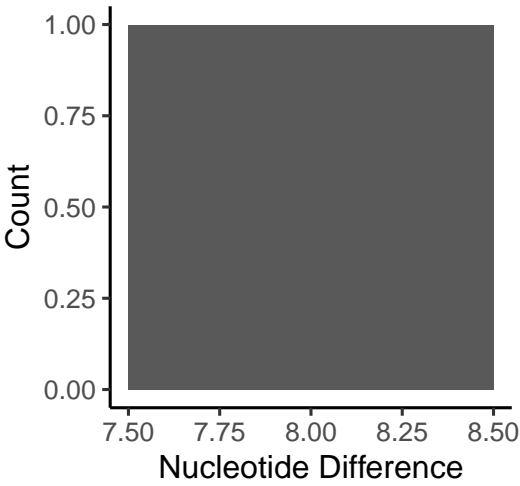
### IGHV4-61\*02

141 sequences assigned  
No exact matches.



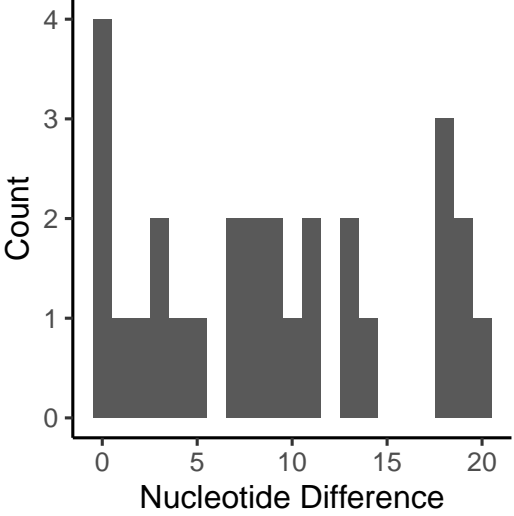
IGHV5-10-1\*03

2 sequences assigned  
No exact matches.



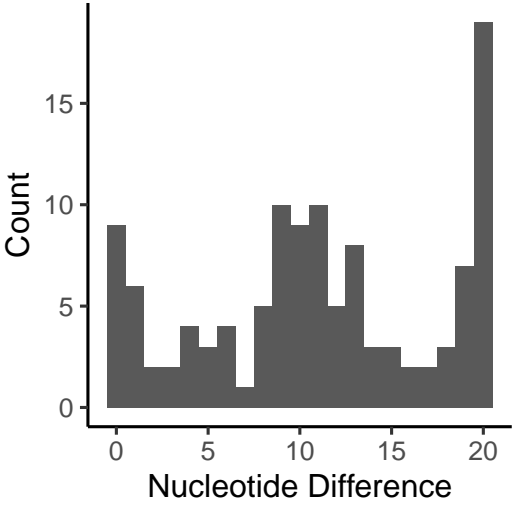
IGHV6-1\*01

31 sequences assigned  
4 (12.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



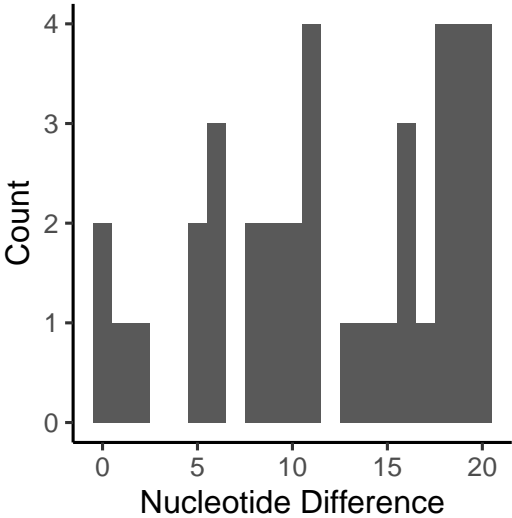
IGHV5-51\*01

176 sequences assigned  
9 (5.1%) exact matches, in which:  
8 unique CDR3  
3 unique J

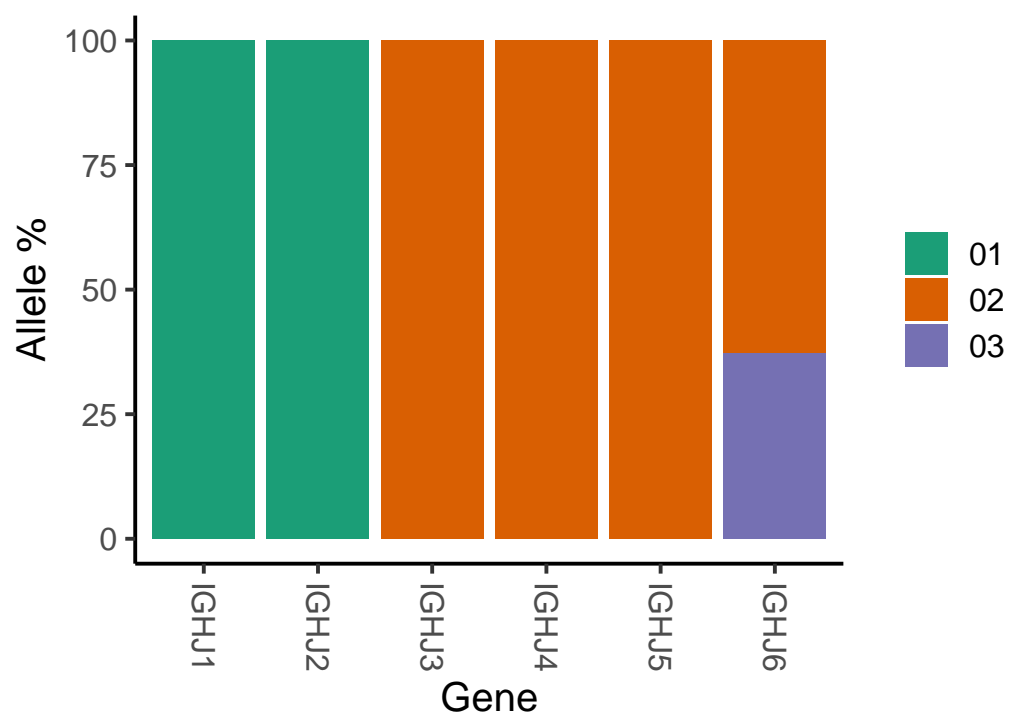


IGHV5-51\*03

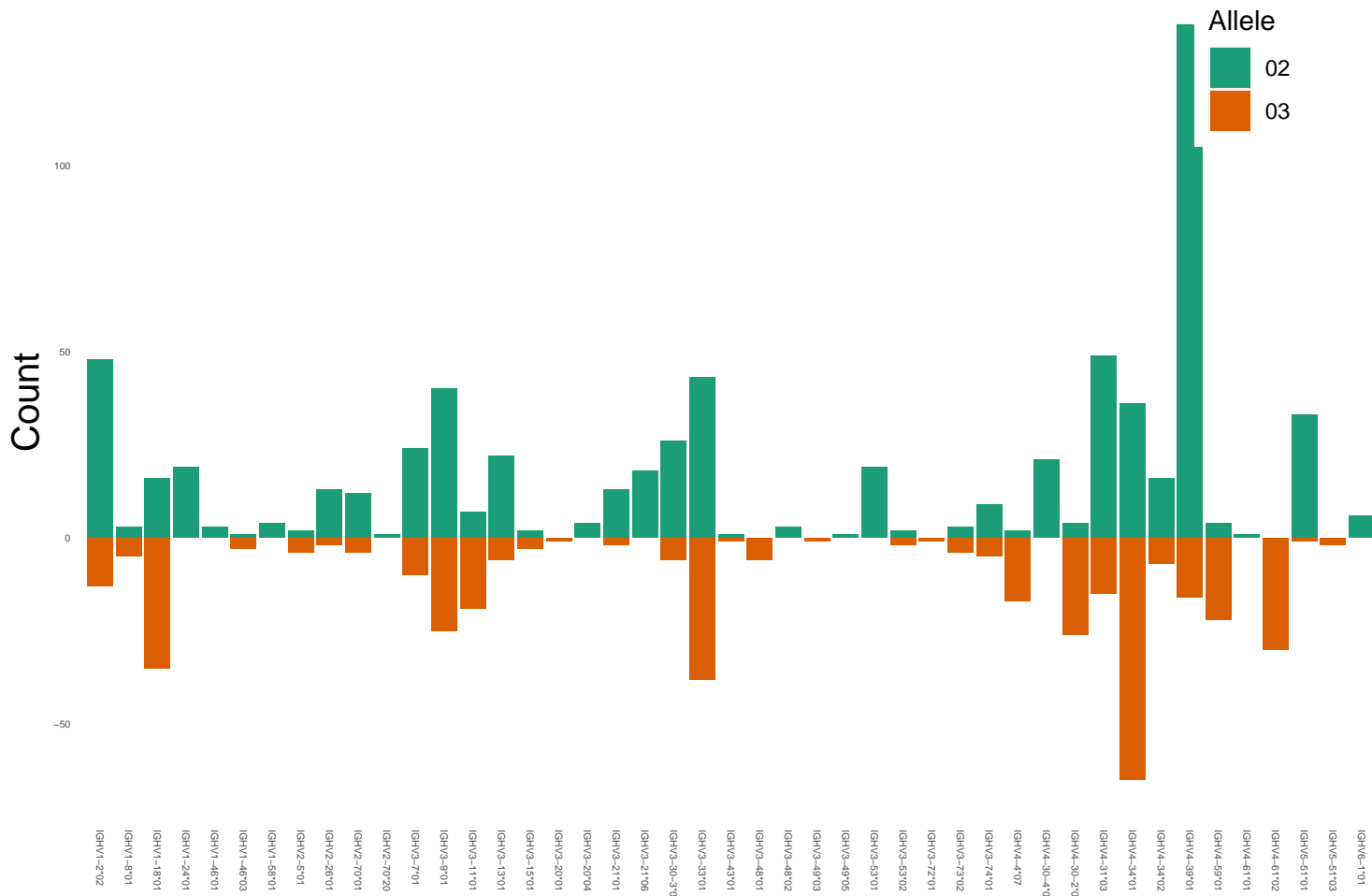
58 sequences assigned  
2 (3.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.