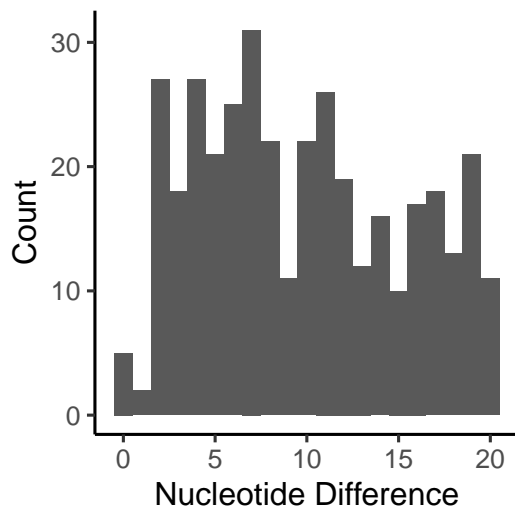


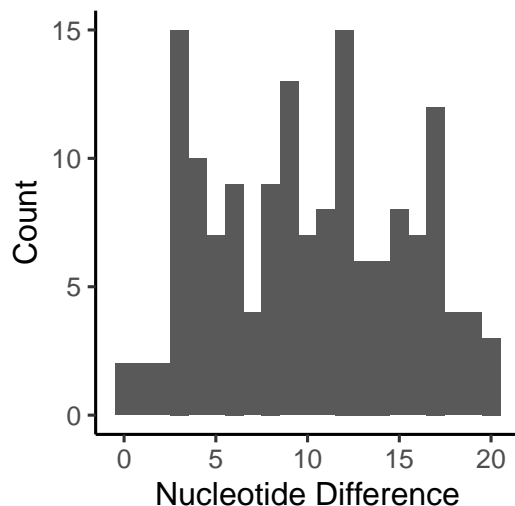
### IGHV1-2\*06

482 sequences assigned  
5 (1%) exact matches, in which:  
5 unique CDR3  
3 unique J



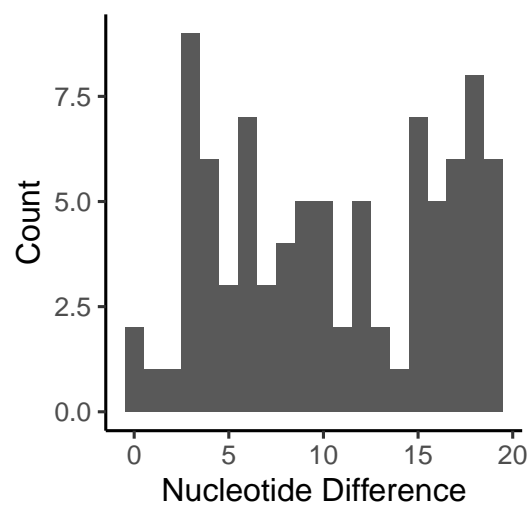
### IGHV1-8\*01

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



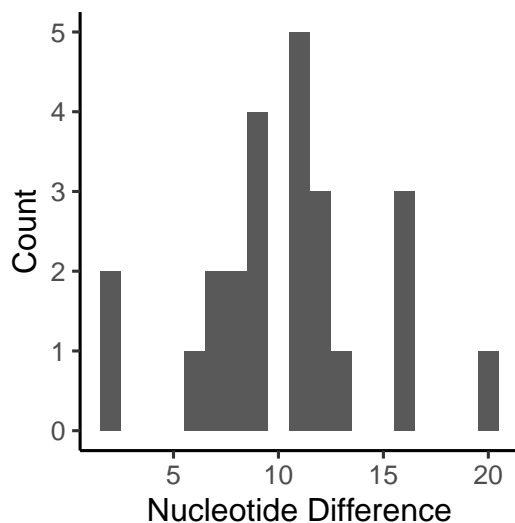
### IGHV1-24\*01

107 sequences assigned  
2 (1.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



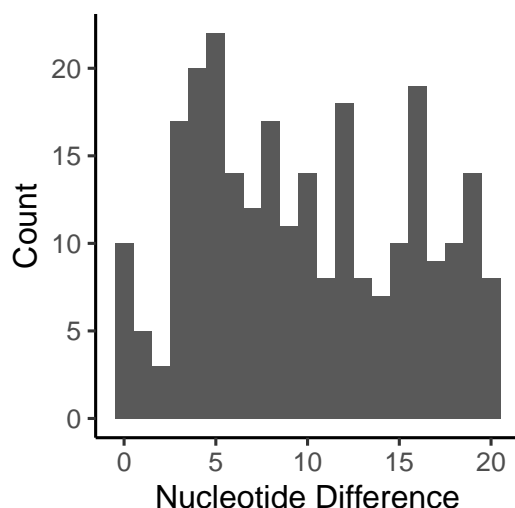
### IGHV1-3\*04

35 sequences assigned  
No exact matches.



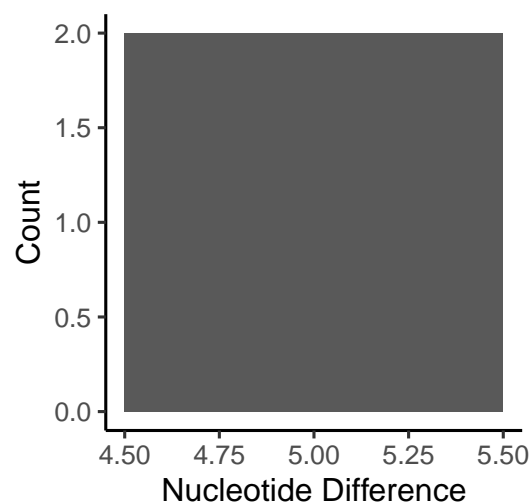
### IGHV1-18\*01

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



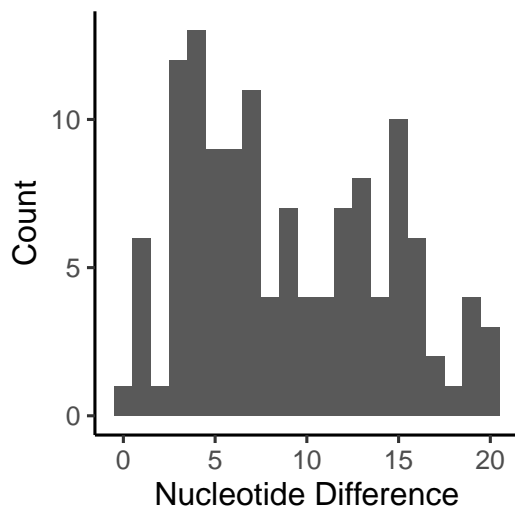
### IGHV1-45\*02

3 sequences assigned  
No exact matches.



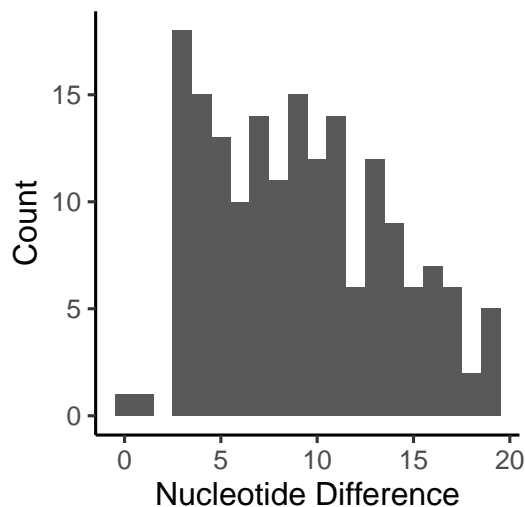
### IGHV1-3\*01\_05

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



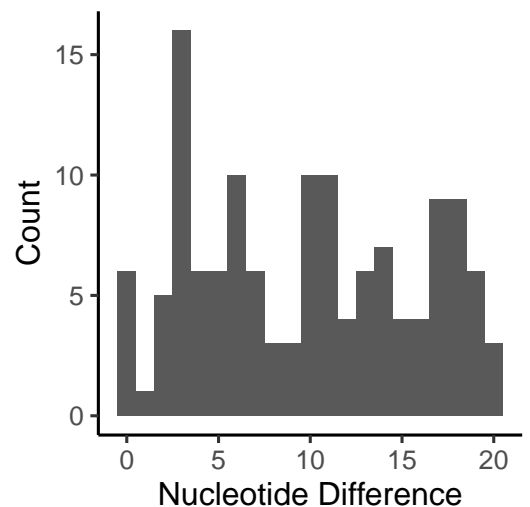
### IGHV1-18\*04

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



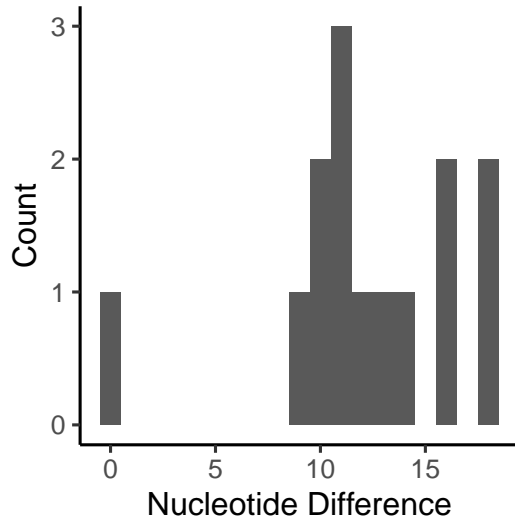
### IGHV1-46\*03

177 sequences assigned  
6 (3.4%) exact matches, in which:  
6 unique CDR3  
4 unique J



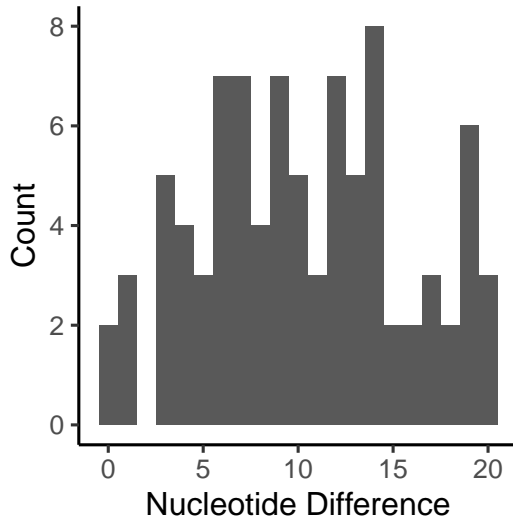
### IGHV1-58\*02

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



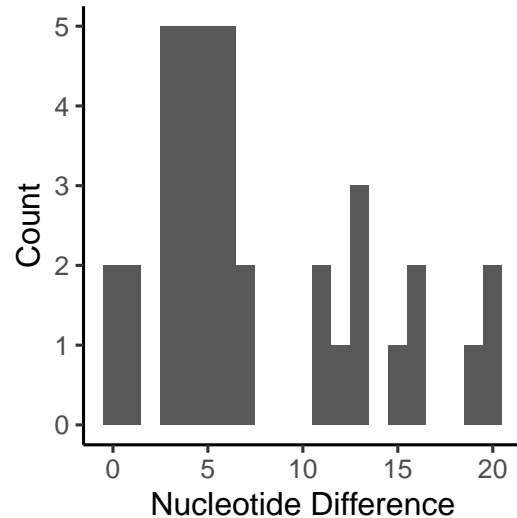
### IGHV1-69\*04\_09

126 sequences assigned  
2 (1.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



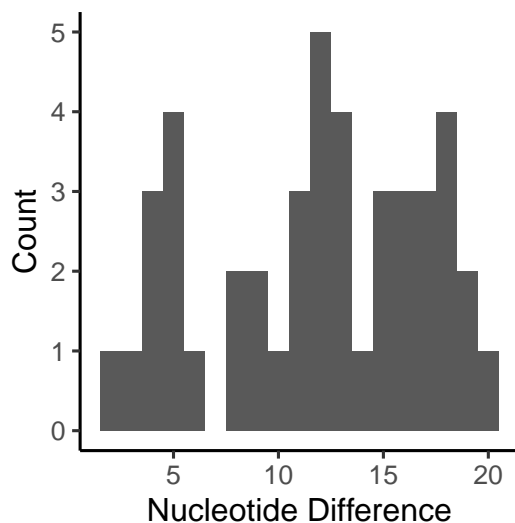
### IGHV2-70\*01

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



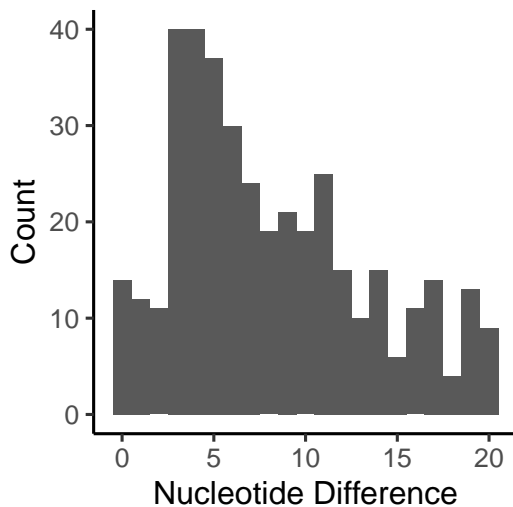
### IGHV1-58\*01\_03

80 sequences assigned  
No exact matches.



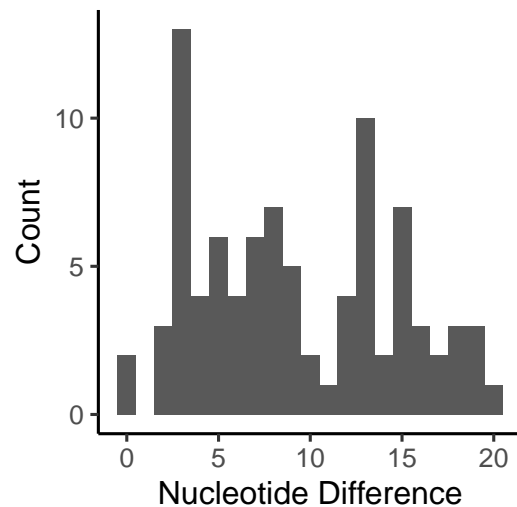
### IGHV2-5\*02

441 sequences assigned  
14 (3.2%) exact matches, in which:  
13 unique CDR3  
3 unique J



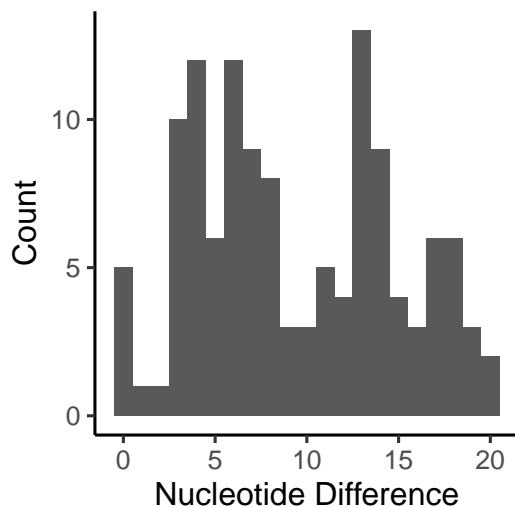
### IGHV2-70\*11\_15

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



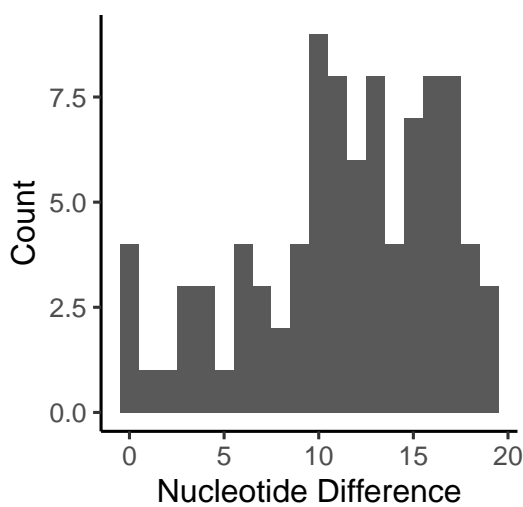
### IGHV1-69\*01\_12\_13

181 sequences assigned  
5 (2.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



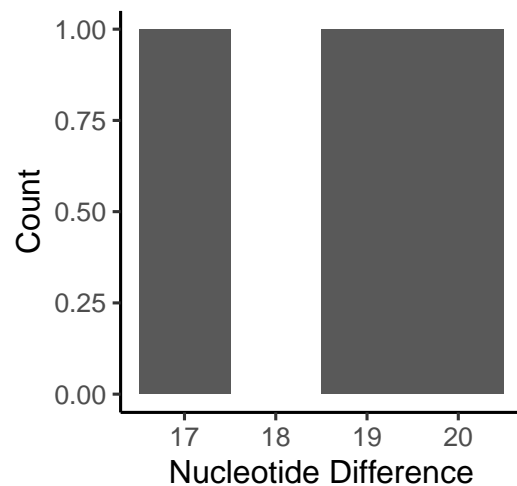
### IGHV2-26\*01

106 sequences assigned  
4 (3.8%) exact matches, in which:  
4 unique CDR3  
4 unique J



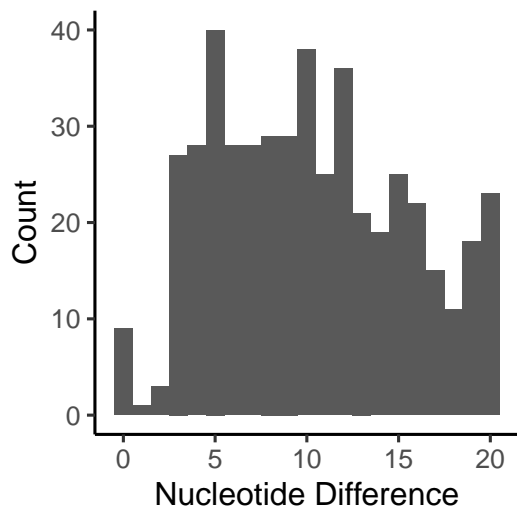
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



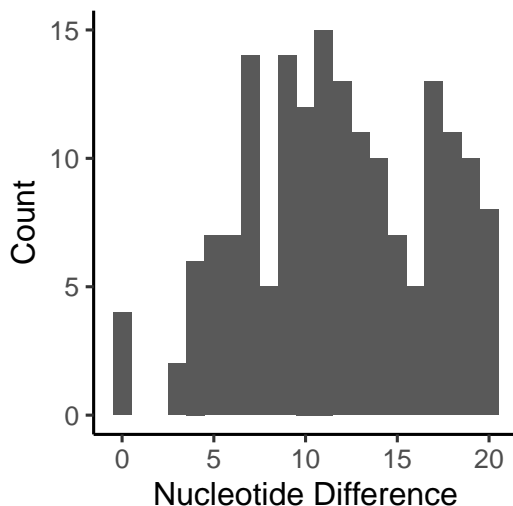
### IGHV3-7\*01

589 sequences assigned  
9 (1.5%) exact matches, in which:  
6 unique CDR3  
3 unique J



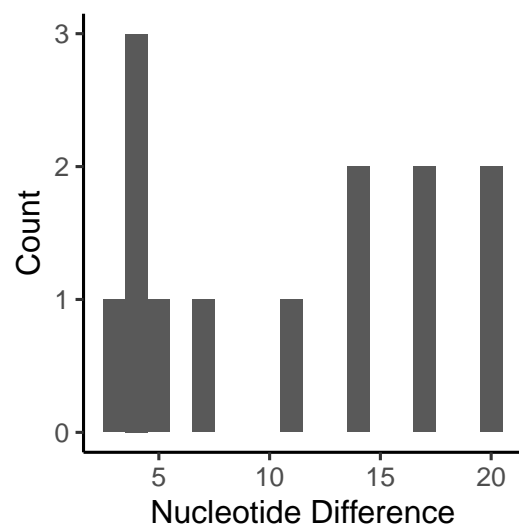
### IGHV3-11\*01

224 sequences assigned  
4 (1.8%) exact matches, in which:  
3 unique CDR3  
1 unique J



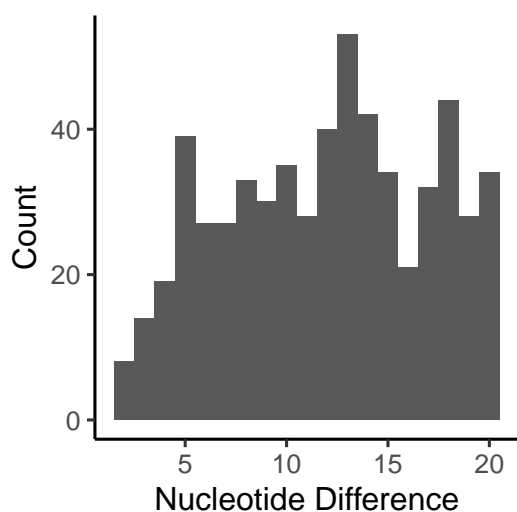
### IGHV3-13\*05

23 sequences assigned  
No exact matches.



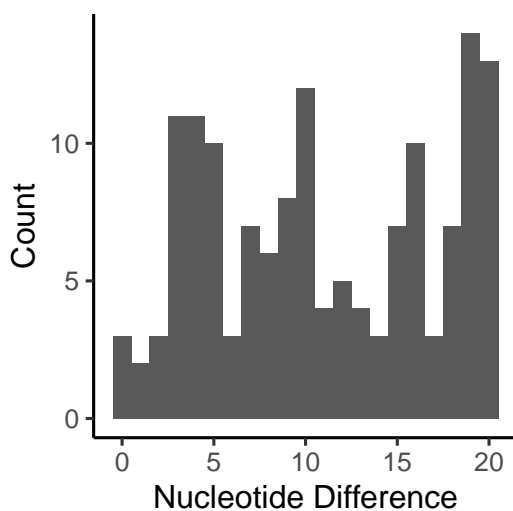
### IGHV3-7\*03

769 sequences assigned  
No exact matches.



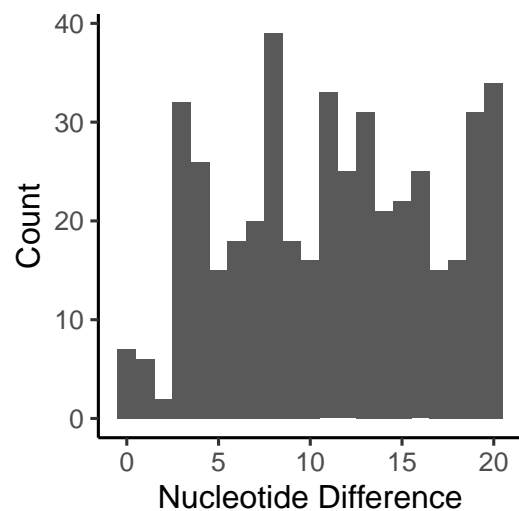
### IGHV3-11\*06

189 sequences assigned  
3 (1.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



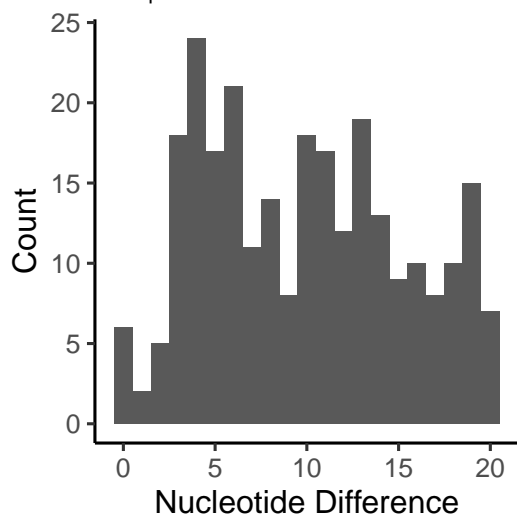
### IGHV3-15\*01\_02

578 sequences assigned  
7 (1.2%) exact matches, in which:  
4 unique CDR3  
1 unique J



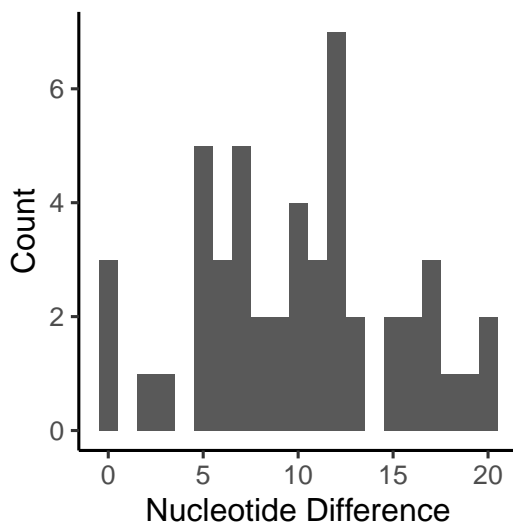
### IGHV3-9\*01

309 sequences assigned  
6 (1.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



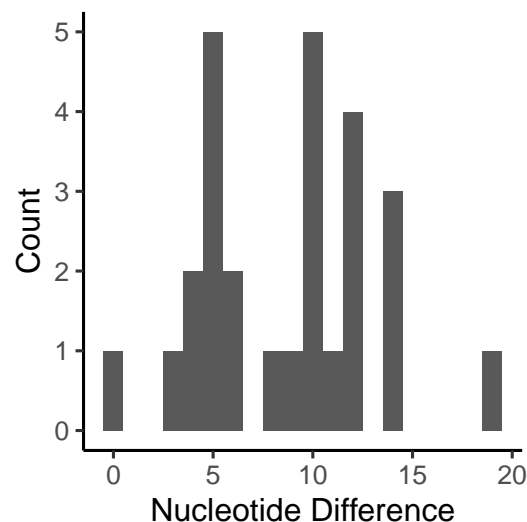
### IGHV3-13\*01

56 sequences assigned  
3 (5.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



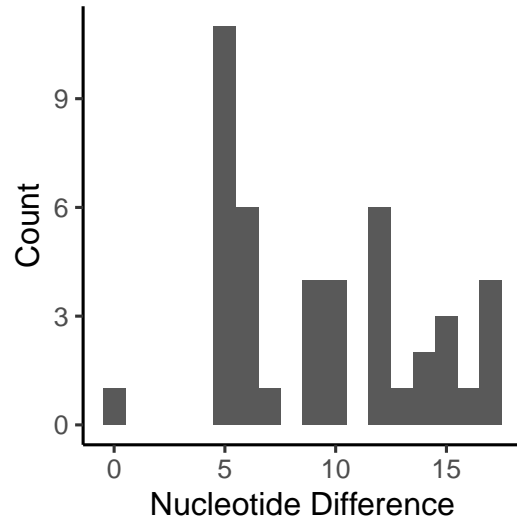
### IGHV3-20\*01\_02

28 sequences assigned  
1 (3.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



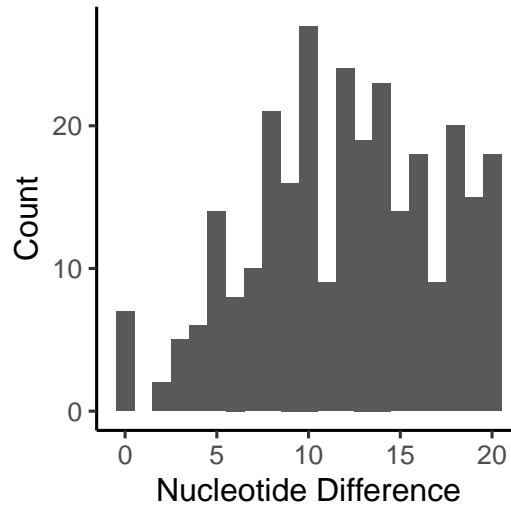
### IGHV3-20\*03\_04

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



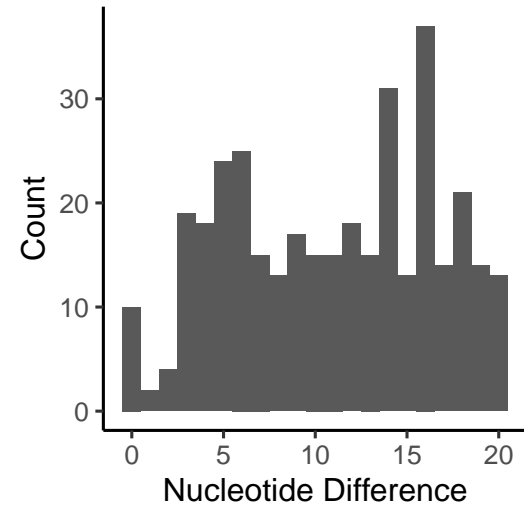
### IGHV3-33\*01

383 sequences assigned  
7 (1.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



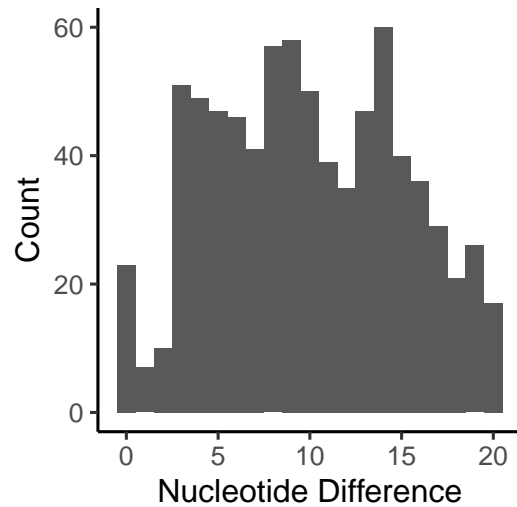
### IGHV3-48\*02

455 sequences assigned  
10 (2.2%) exact matches, in which:  
9 unique CDR3  
4 unique J



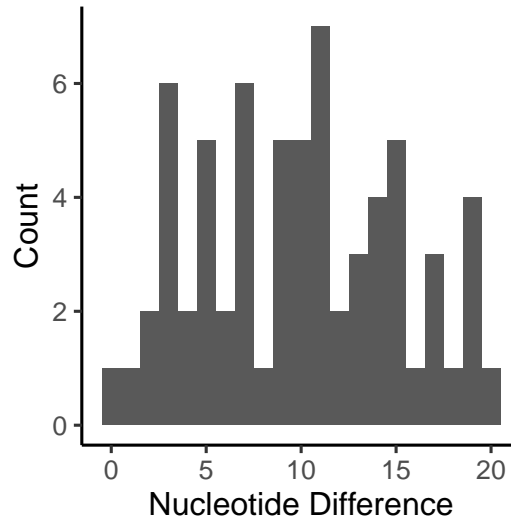
### IGHV3-21\*01\_02

926 sequences assigned  
23 (2.5%) exact matches, in which:  
12 unique CDR3  
5 unique J



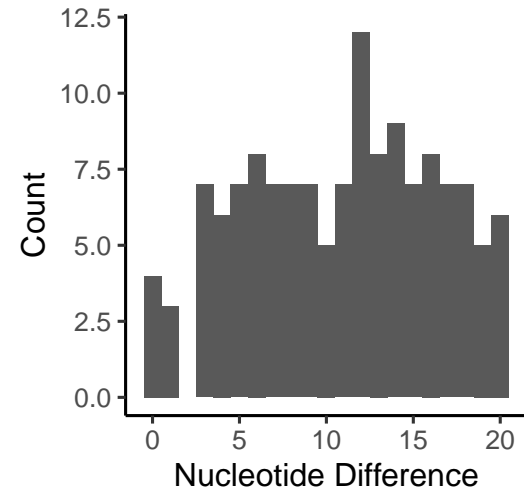
### IGHV3-43\*01

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



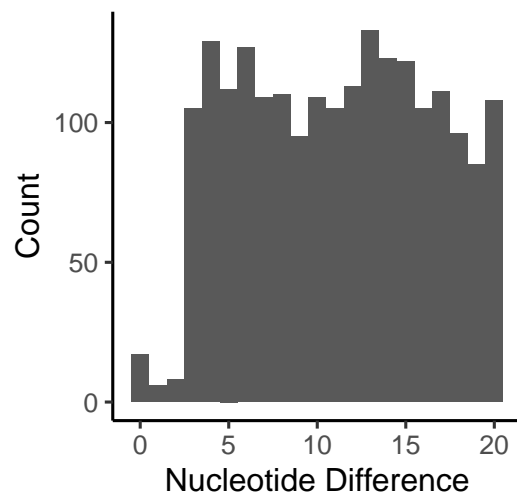
### IGHV3-49\*03\_05

169 sequences assigned  
4 (2.4%) exact matches, in which:  
4 unique CDR3  
2 unique J



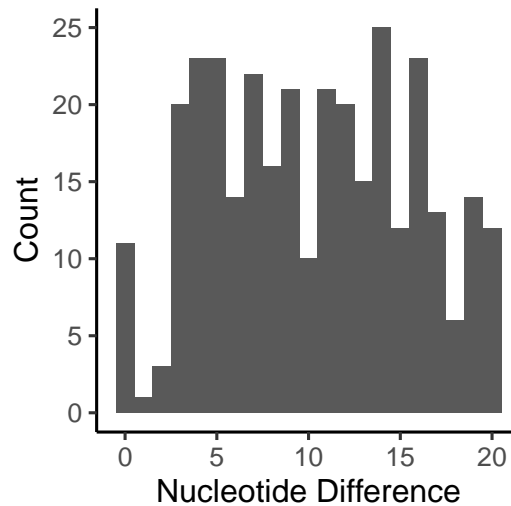
### IGHV3-23\*01\_04

2656 sequences assigned  
17 (0.6%) exact matches, in which:  
12 unique CDR3  
5 unique J



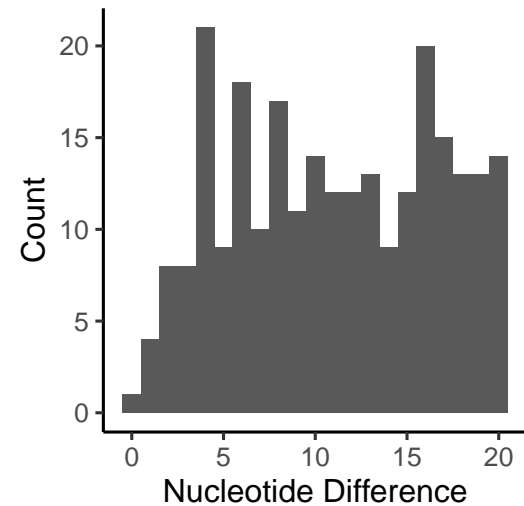
### IGHV3-48\*01

400 sequences assigned  
11 (2.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



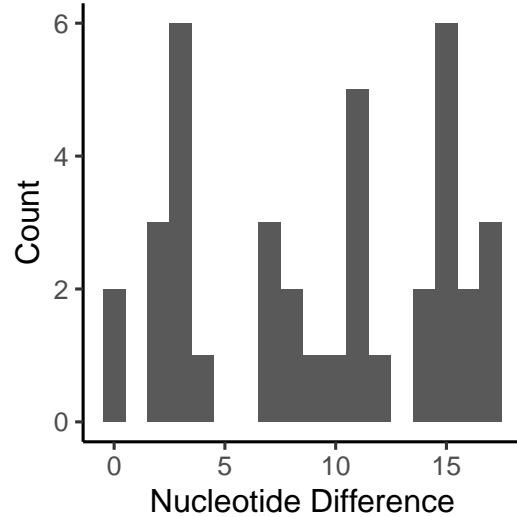
### IGHV3-53\*01\_02

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



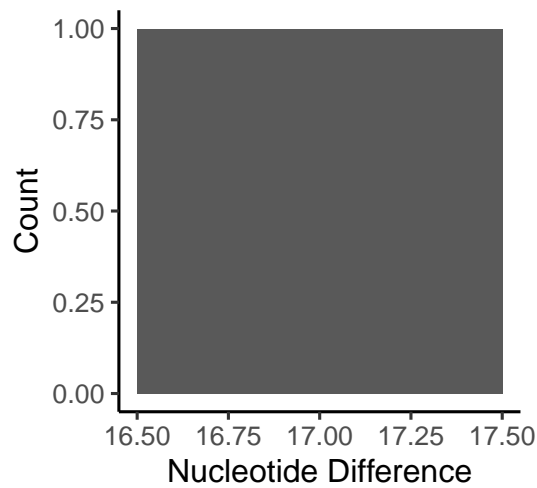
### IGHV3-64\*01

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



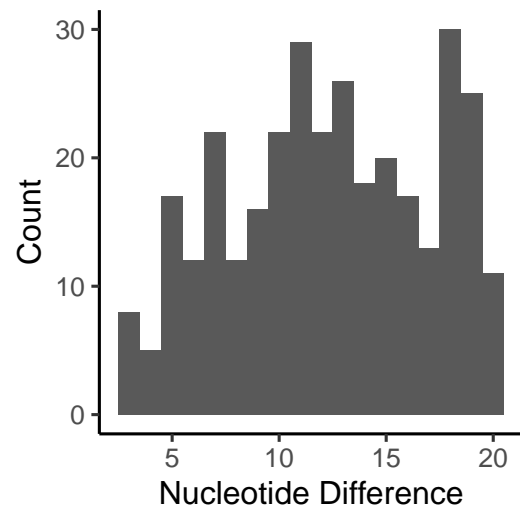
### IGHV3-69-1\*02

2 sequences assigned  
No exact matches.



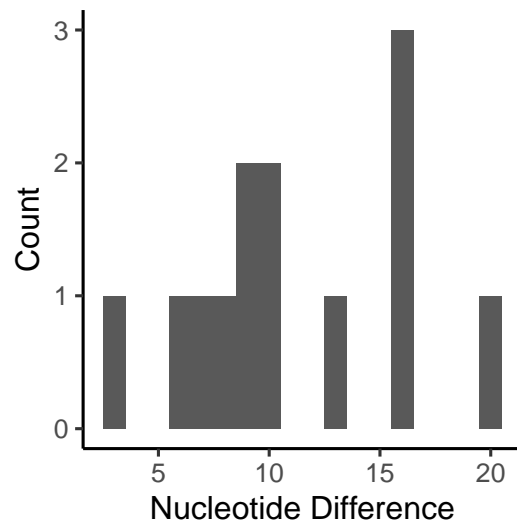
### IGHV3-74\*03

423 sequences assigned  
No exact matches.



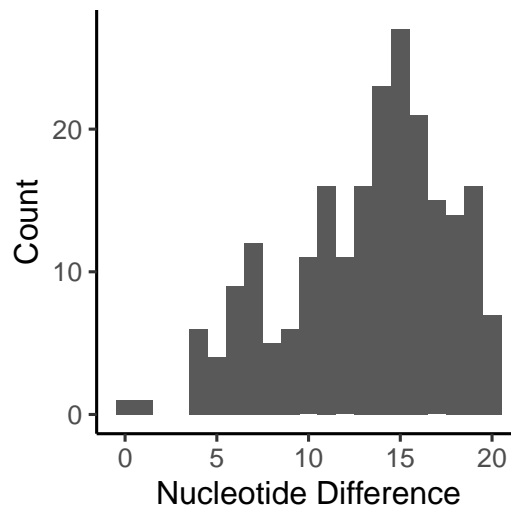
### IGHV3-64\*02\_07

16 sequences assigned  
No exact matches.



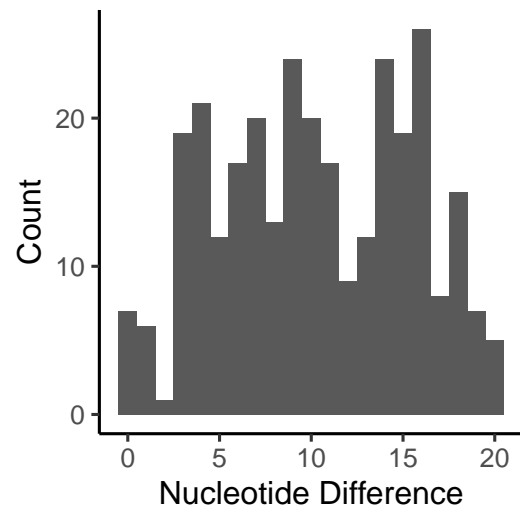
### IGHV3-72\*01

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



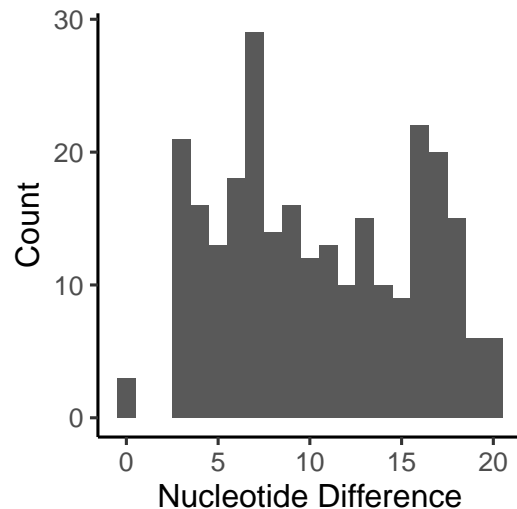
### IGHV3-74\*01\_02

330 sequences assigned  
7 (2.1%) exact matches, in which:  
5 unique CDR3  
2 unique J



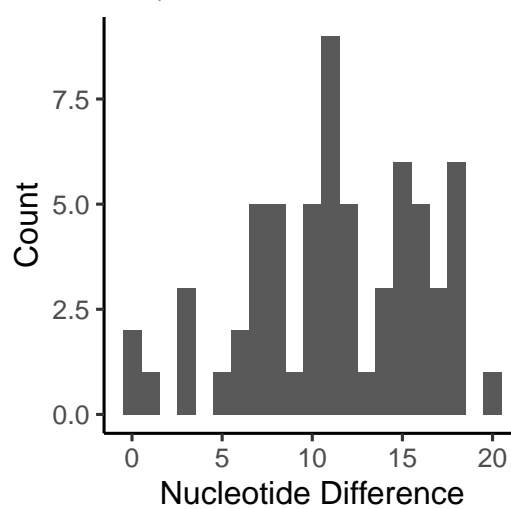
### IGHV3-66\*01

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



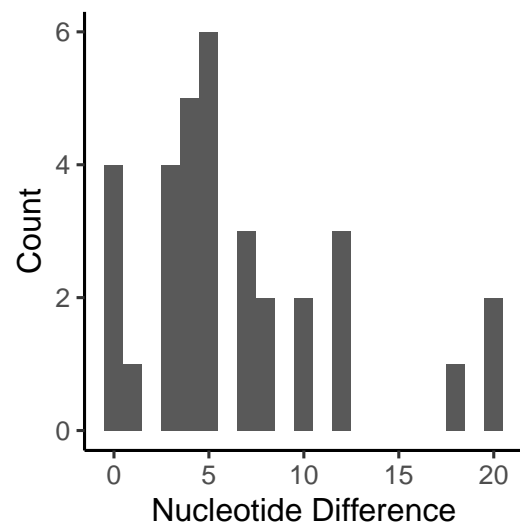
### IGHV3-73\*01\_02

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



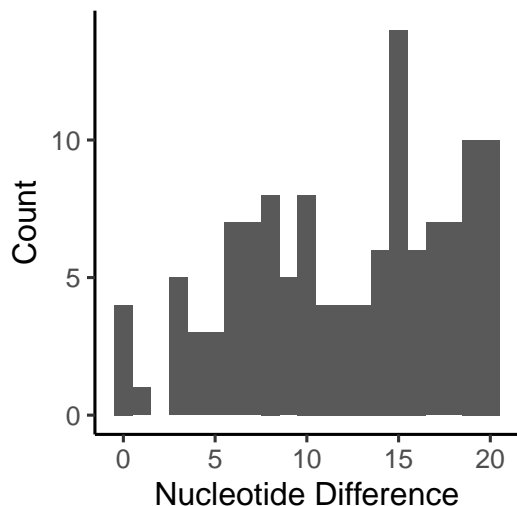
### IGHV3-43D\*03

42 sequences assigned  
4 (9.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



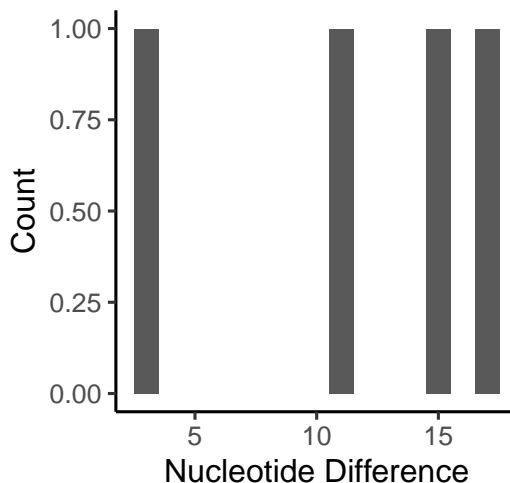
### IGHV3-64D\*06

170 sequences assigned  
4 (2.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



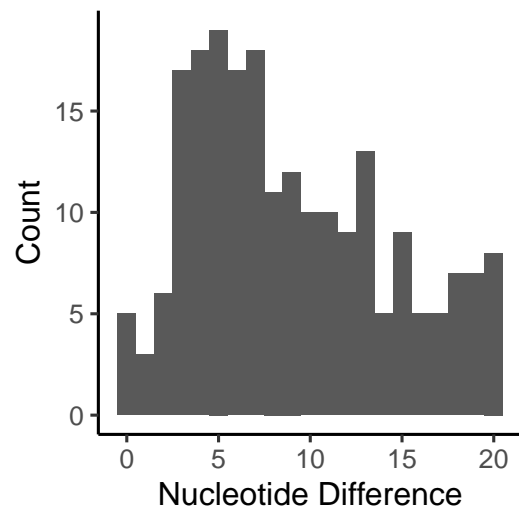
### IGHV4-28\*02\_05

6 sequences assigned  
No exact matches.



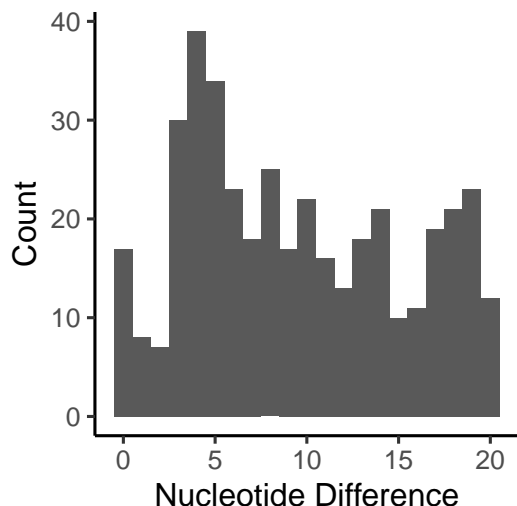
### IGHV4-31\*02

286 sequences assigned  
5 (1.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



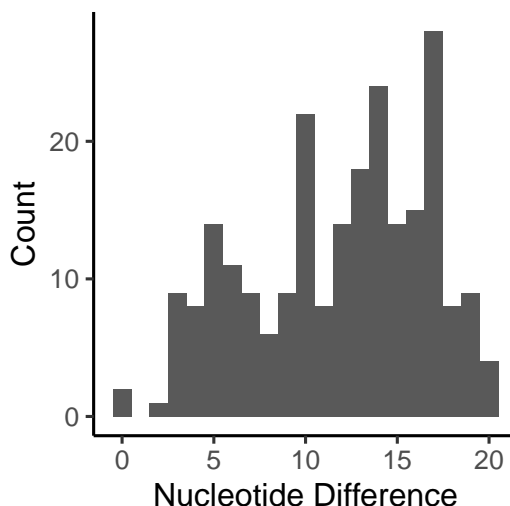
### IGHV4-4\*02\_03

529 sequences assigned  
17 (3.2%) exact matches, in which:  
11 unique CDR3  
4 unique J



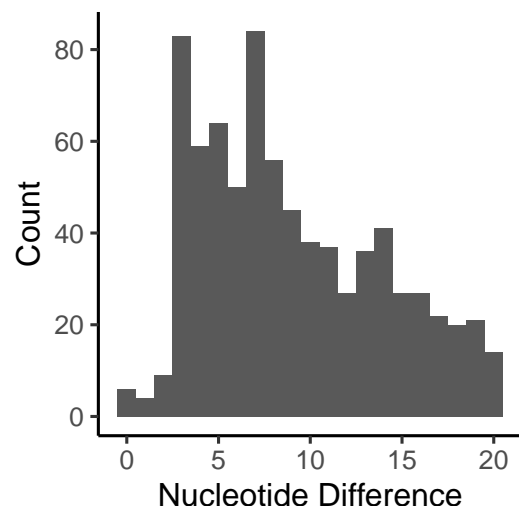
### IGHV4-30-2\*01

270 sequences assigned  
2 (0.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



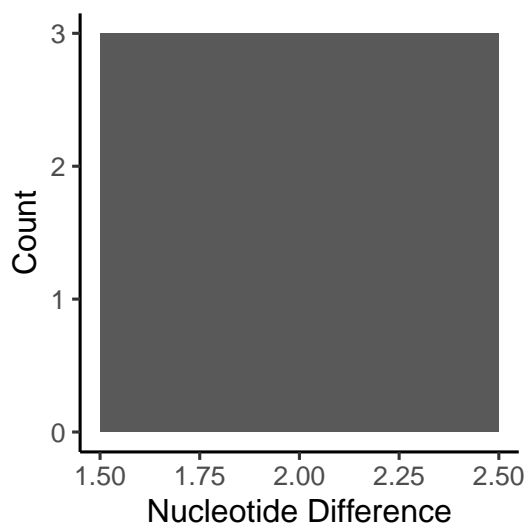
### IGHV4-34\*01\_02

979 sequences assigned  
6 (0.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



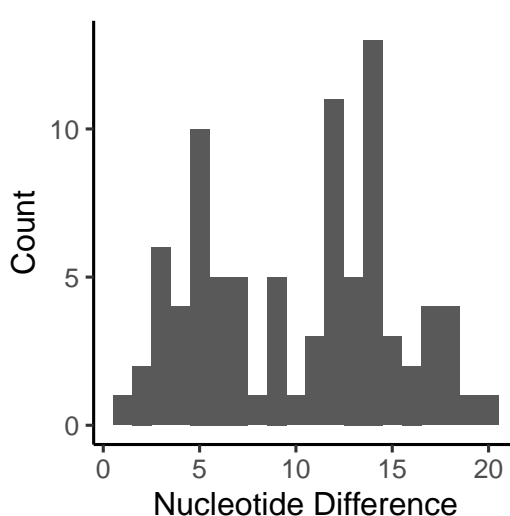
### IGHV4-28\*01\_07

4 sequences assigned  
No exact matches.



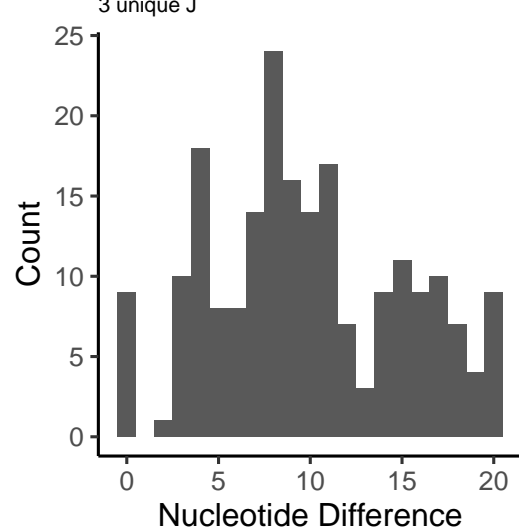
### IGHV4-30-4\*07

108 sequences assigned  
No exact matches.



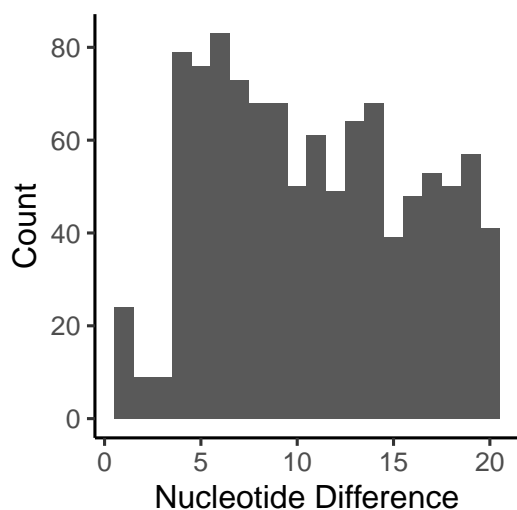
### IGHV4-38-2\*02

279 sequences assigned  
9 (3.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



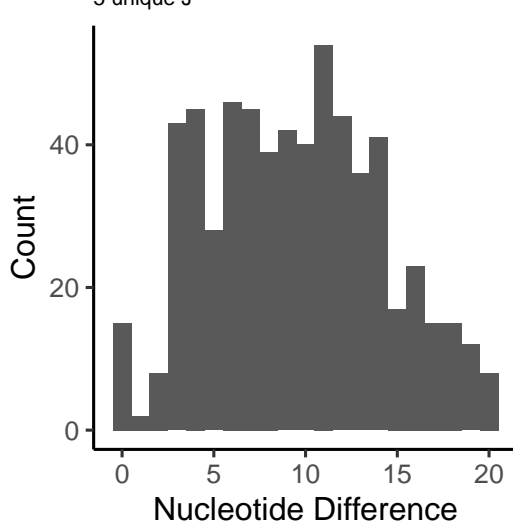
### IGHV4–39\*02

1468 sequences assigned  
No exact matches.



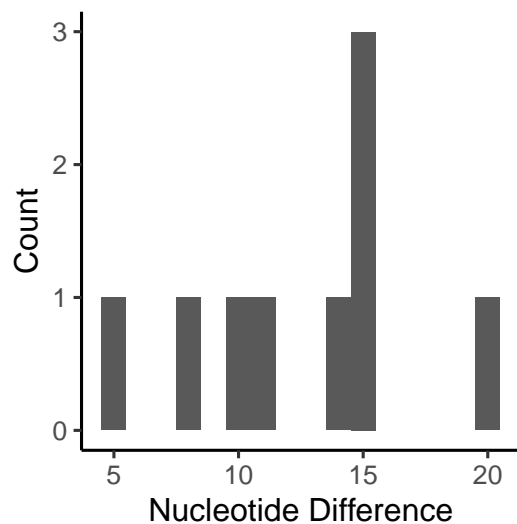
### IGHV4–59\*01\_07

719 sequences assigned  
15 (2.1%) exact matches, in which:  
11 unique CDR3  
5 unique J



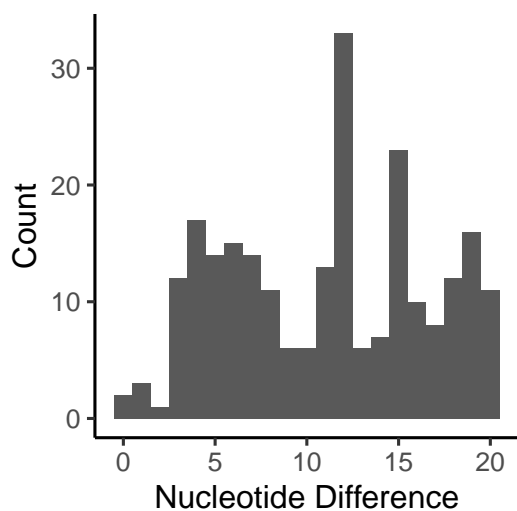
### IGHV4–61\*08

19 sequences assigned  
No exact matches.



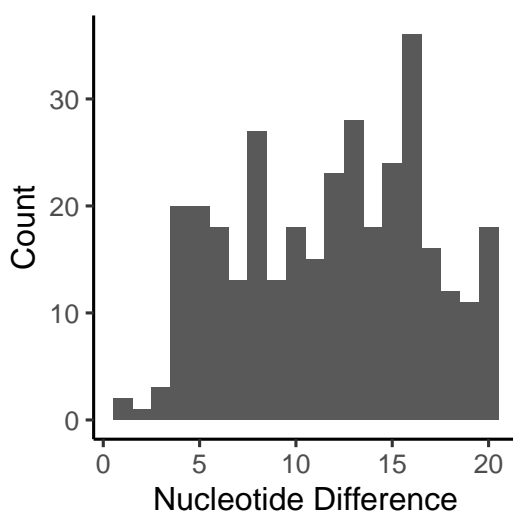
### IGHV4–39\*01\_05

299 sequences assigned  
2 (0.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



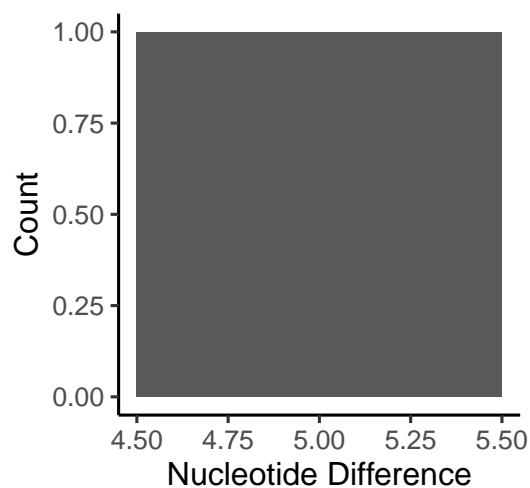
### IGHV4–59\*11

412 sequences assigned  
No exact matches.



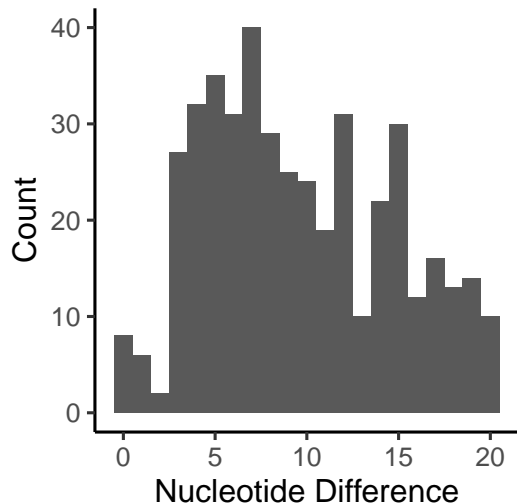
### IGHV4/OR15–8\*01

14 sequences assigned  
No exact matches.



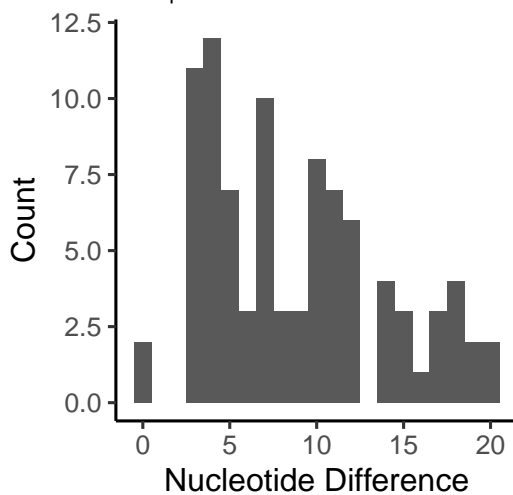
### IGHV4–59\*08

525 sequences assigned  
8 (1.5%) exact matches, in which:  
7 unique CDR3  
4 unique J



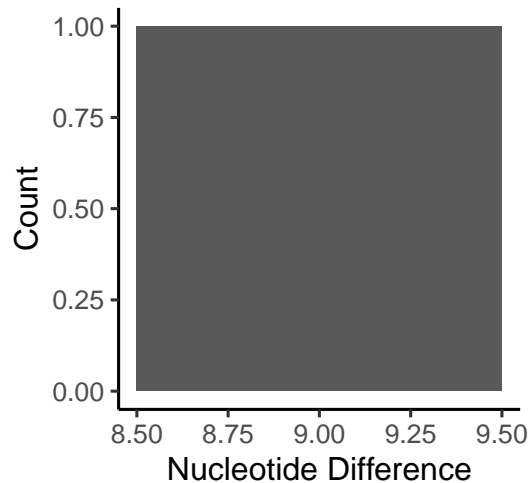
### IGHV4–61\*01

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



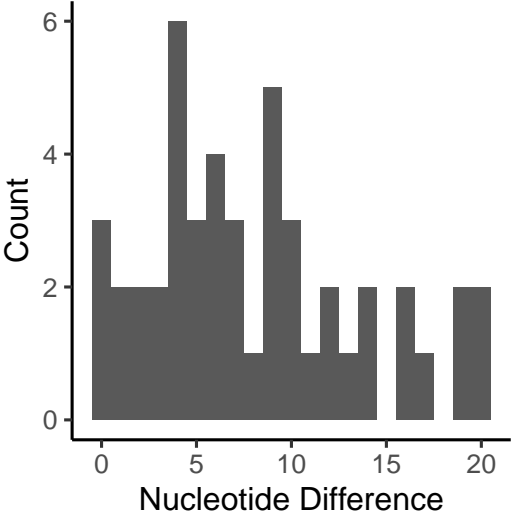
### IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



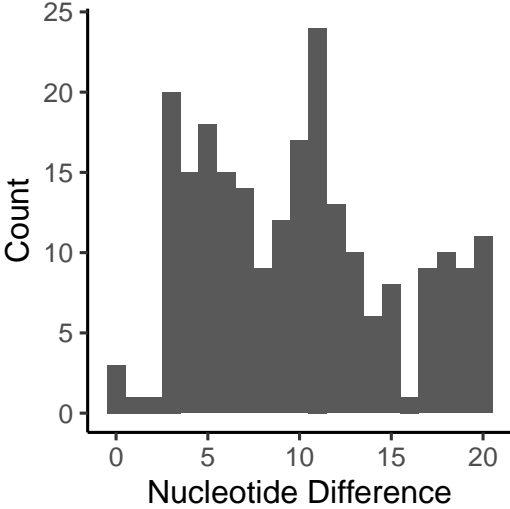
IGHV5-10-1\*01\_03

54 sequences assigned  
3 (5.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



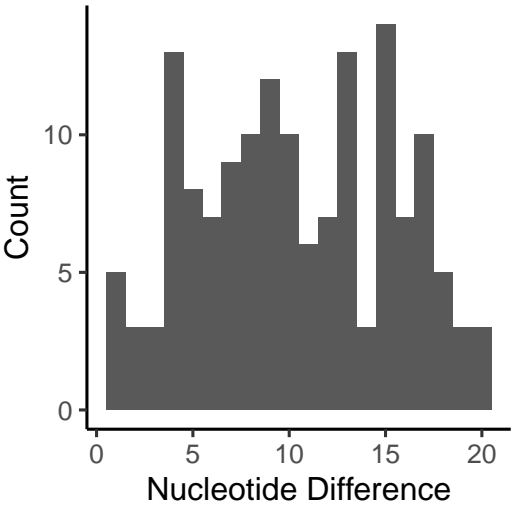
IGHV6-1\*01\_02

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



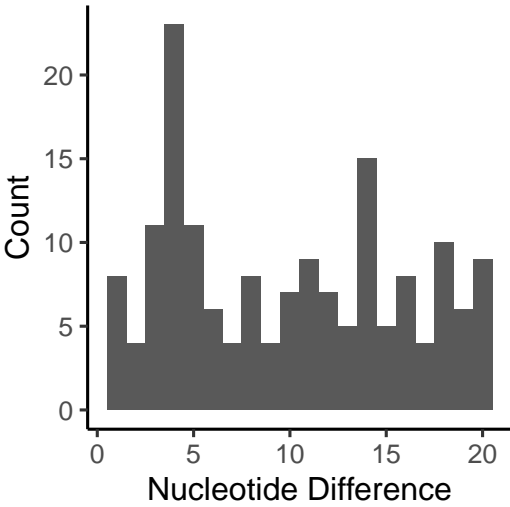
IGHV5-51\*07

174 sequences assigned  
No exact matches.



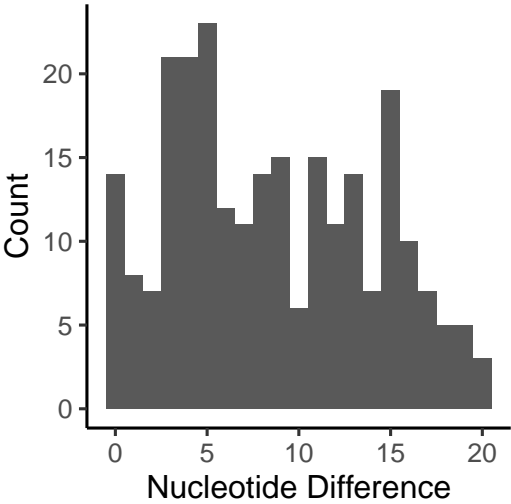
IGHV7-4-1\*02

202 sequences assigned  
No exact matches.

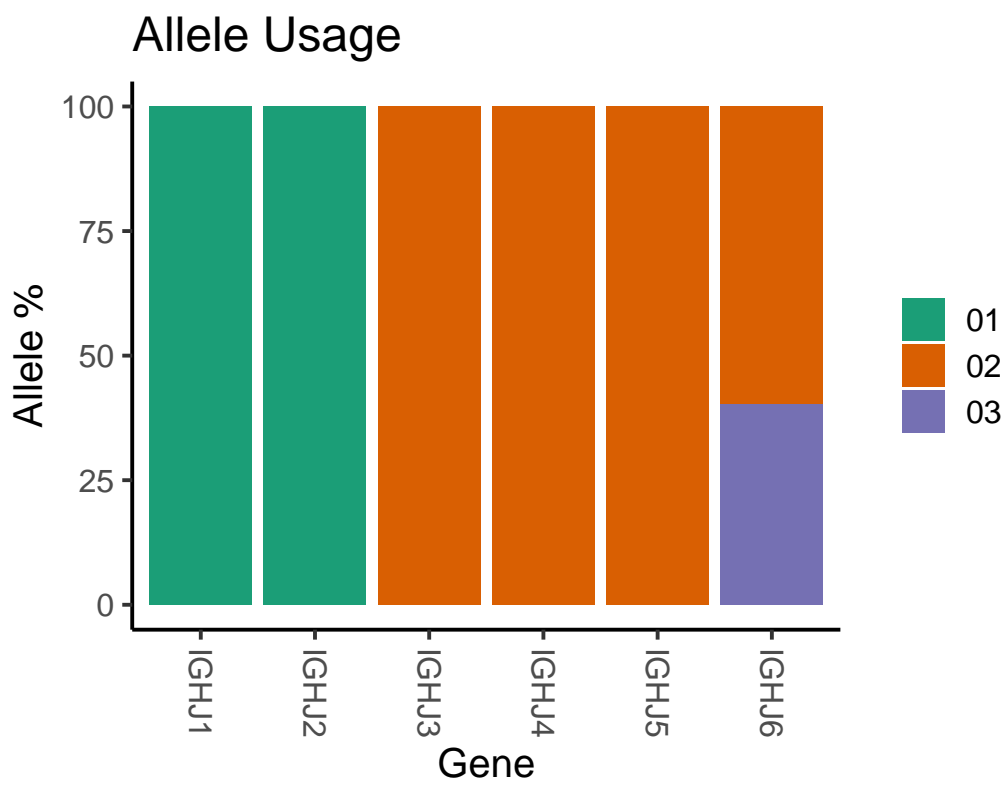


IGHV5-51\*01\_03

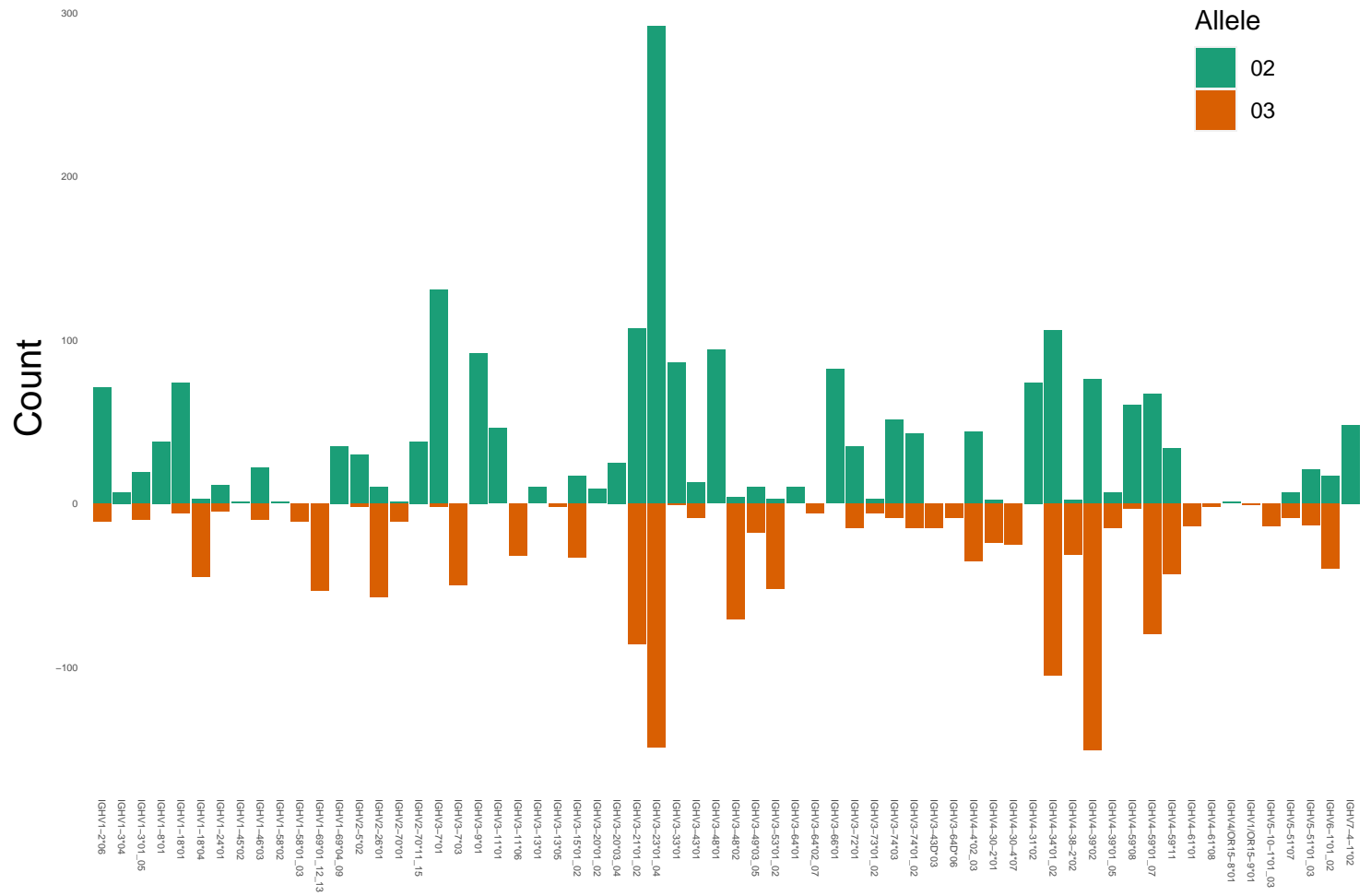
270 sequences assigned  
14 (5.2%) exact matches, in which:  
14 unique CDR3  
4 unique J







## Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.