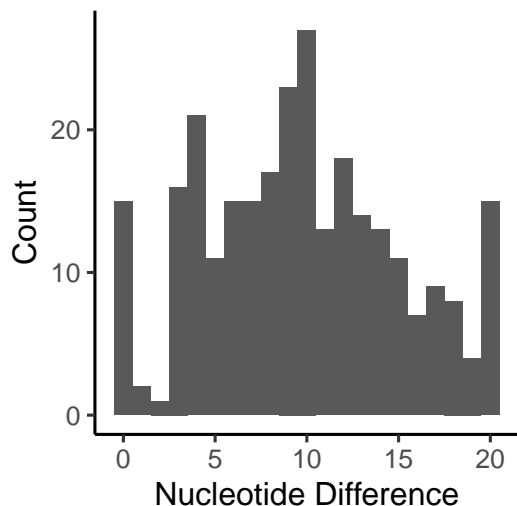


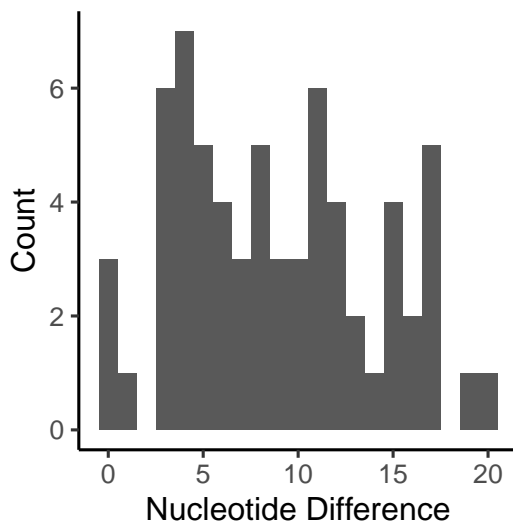
## IGHV1-2\*02

343 sequences assigned  
15 (4.4%) exact matches, in which:  
15 unique CDR3  
5 unique J



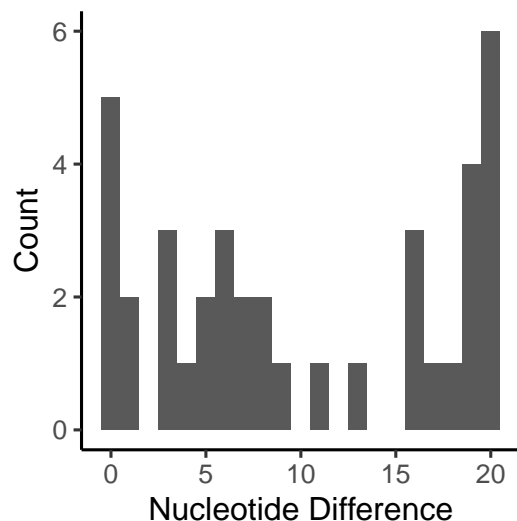
## IGHV1-3\*01\_05

77 sequences assigned  
3 (3.9%) exact matches, in which:  
3 unique CDR3  
3 unique J



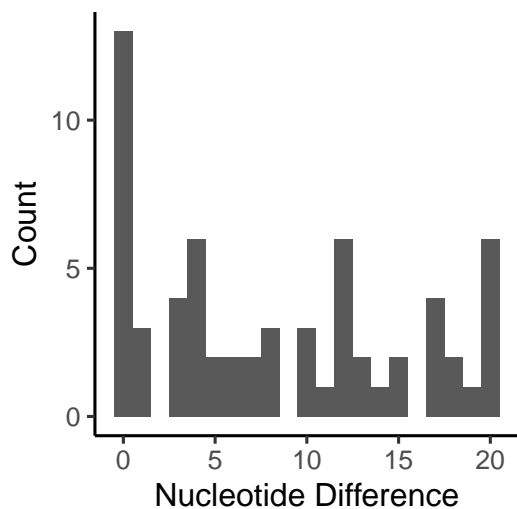
## IGHV1-24\*01

51 sequences assigned  
5 (9.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



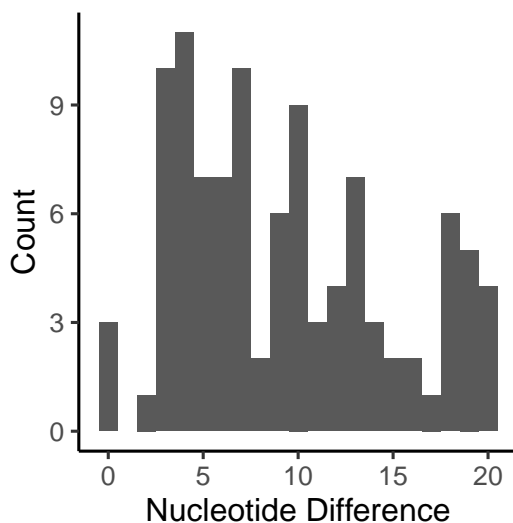
## IGHV1-2\*04

68 sequences assigned  
13 (19.1%) exact matches, in which:  
13 unique CDR3  
4 unique J



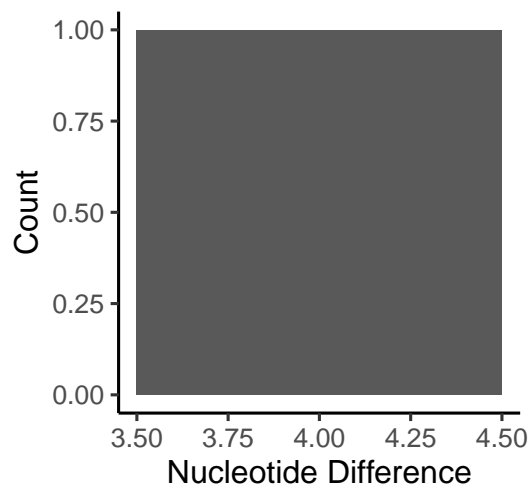
## IGHV1-8\*01

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



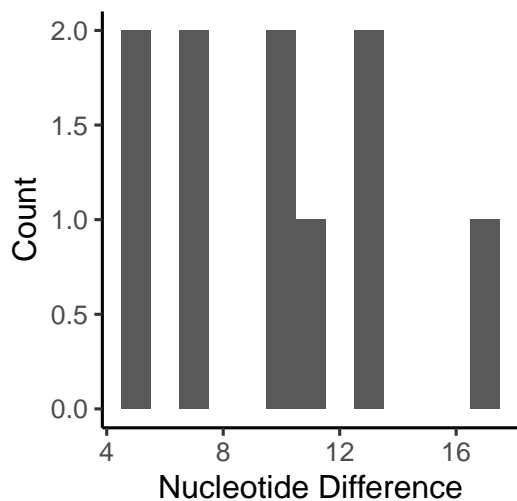
## IGHV1-45\*02

1 sequences assigned  
No exact matches.



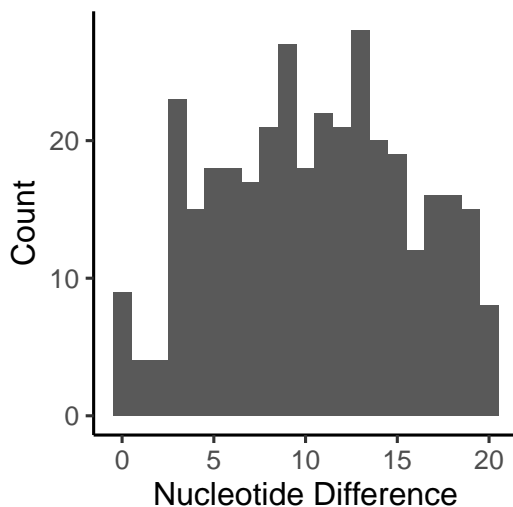
## IGHV1-3\*04

11 sequences assigned  
No exact matches.



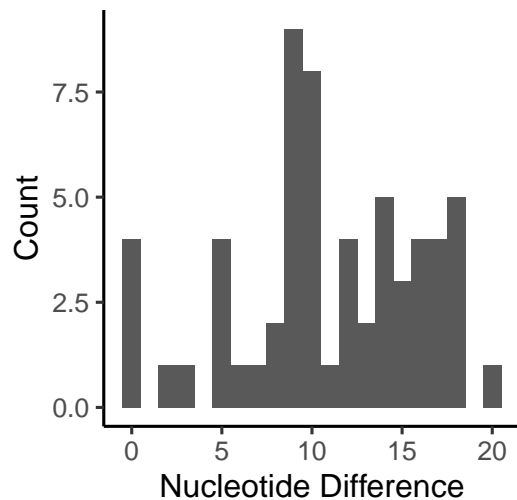
## IGHV1-18\*01

470 sequences assigned  
9 (1.9%) exact matches, in which:  
9 unique CDR3  
4 unique J



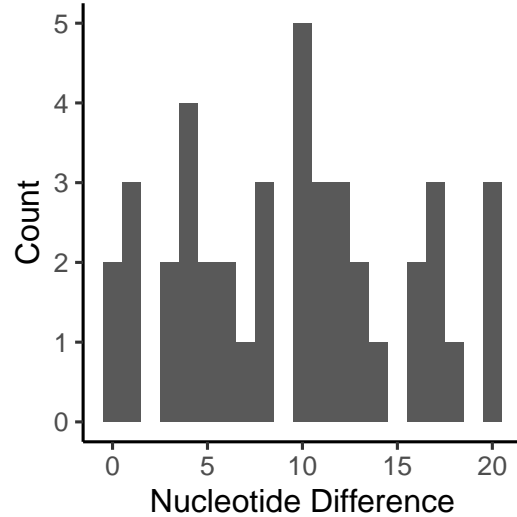
## IGHV1-46\*01

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



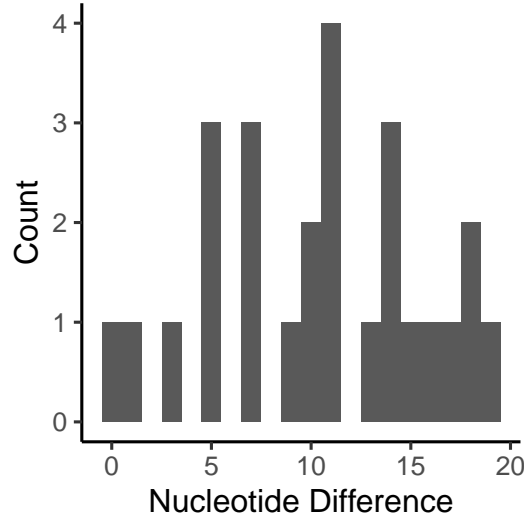
### IGHV1-46\*03

45 sequences assigned  
2 (4.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



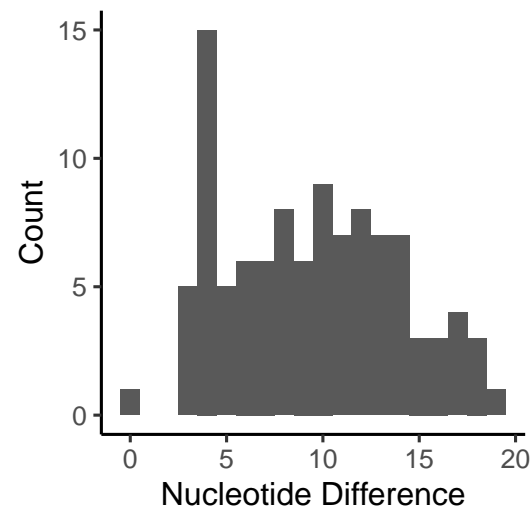
### IGHV1-69\*02

46 sequences assigned  
1 (2.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



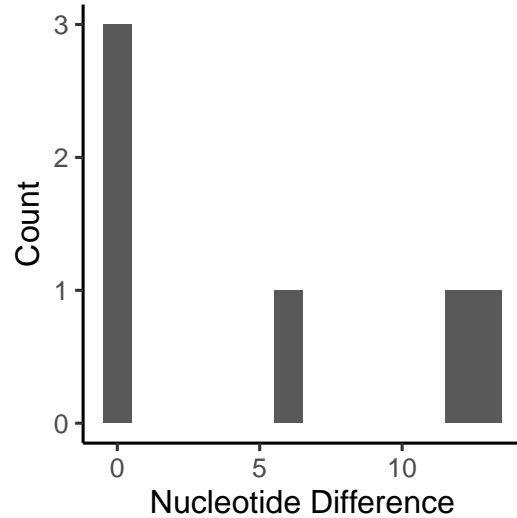
### IGHV2-5\*02

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



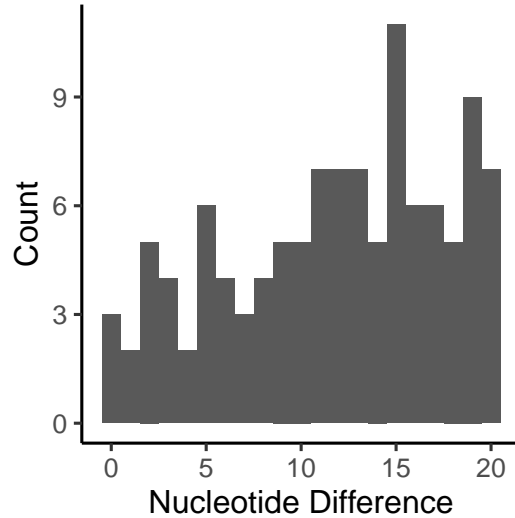
### IGHV1-58\*02

10 sequences assigned  
3 (30%) exact matches, in which:  
2 unique CDR3  
2 unique J



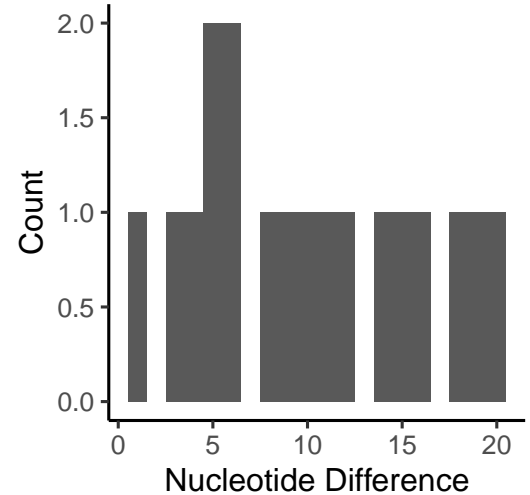
### IGHV1-69\*01\_12\_13

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



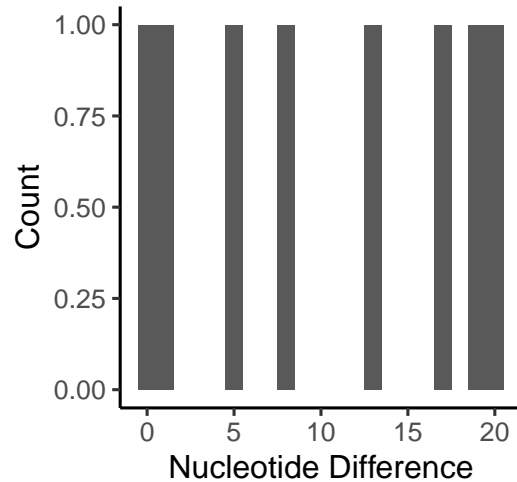
### IGHV2-26\*01

18 sequences assigned  
No exact matches.



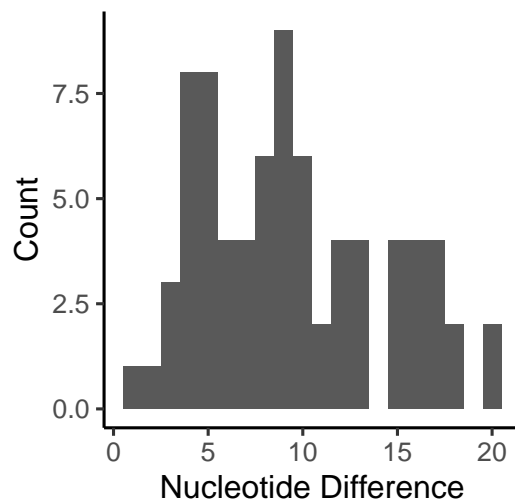
### IGHV1-58\*01\_03

12 sequences assigned  
1 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



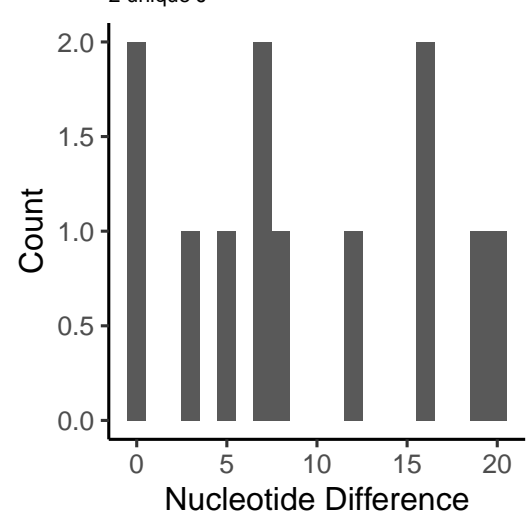
### IGHV2-5\*01

79 sequences assigned  
No exact matches.



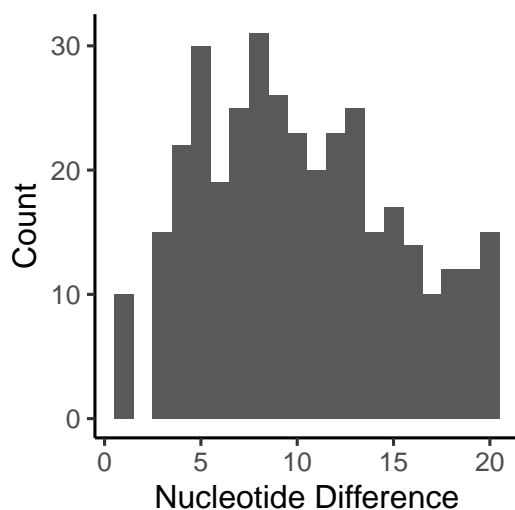
### IGHV2-70\*01

14 sequences assigned  
2 (14.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



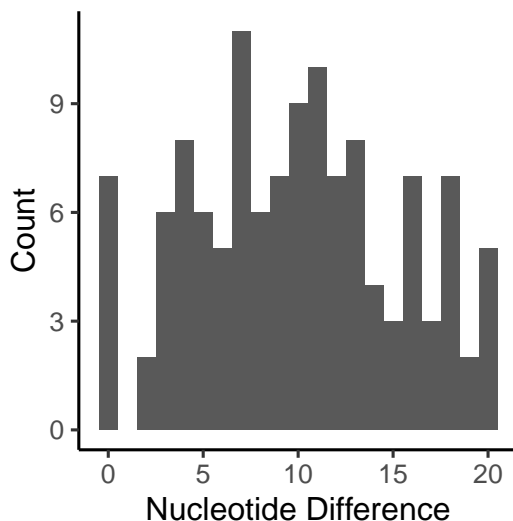
### IGHV3-7\*01

392 sequences assigned  
No exact matches.



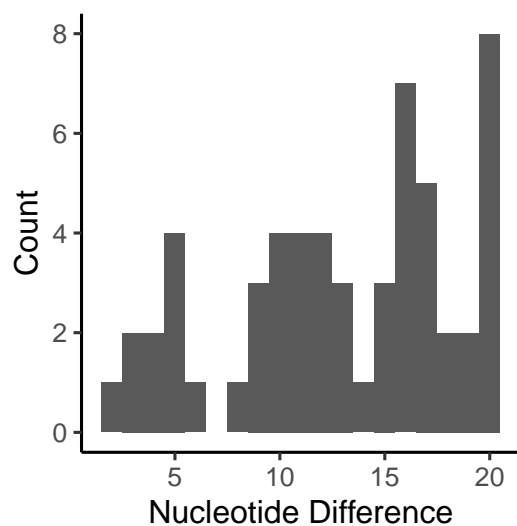
### IGHV3-11\*01

147 sequences assigned  
7 (4.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



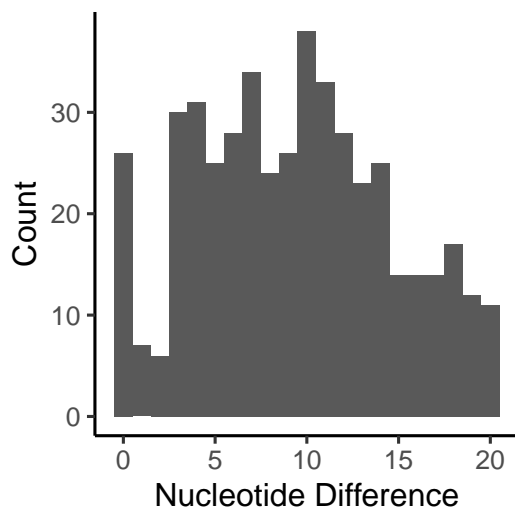
### IGHV3-13\*01

73 sequences assigned  
No exact matches.



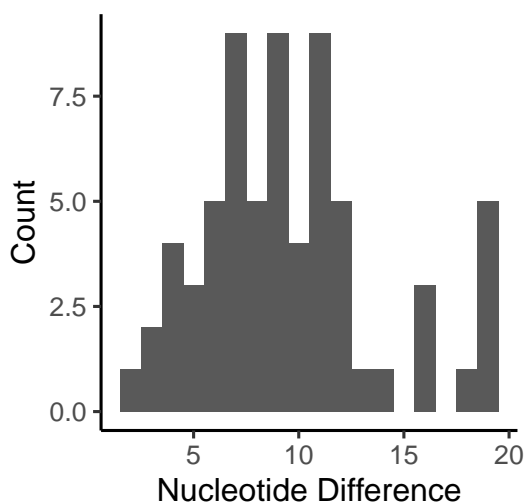
### IGHV3-7\*03

535 sequences assigned  
26 (4.9%) exact matches, in which:  
15 unique CDR3  
3 unique J



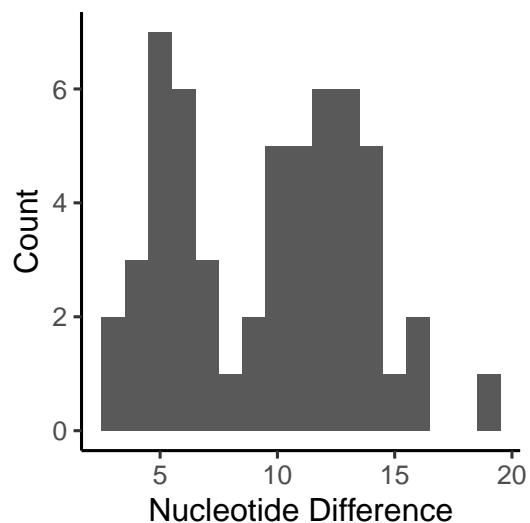
### IGHV3-11\*06

76 sequences assigned  
No exact matches.



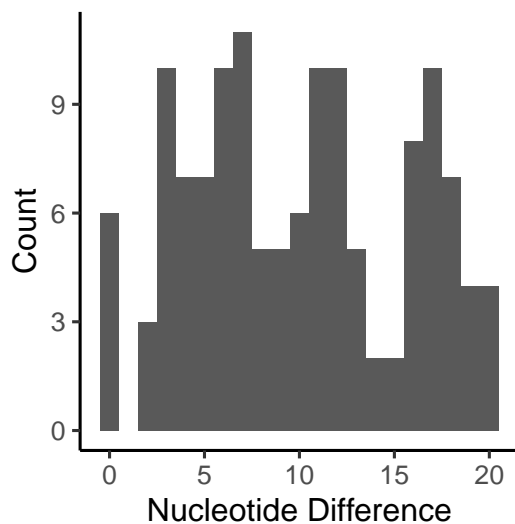
### IGHV3-13\*04

62 sequences assigned  
No exact matches.



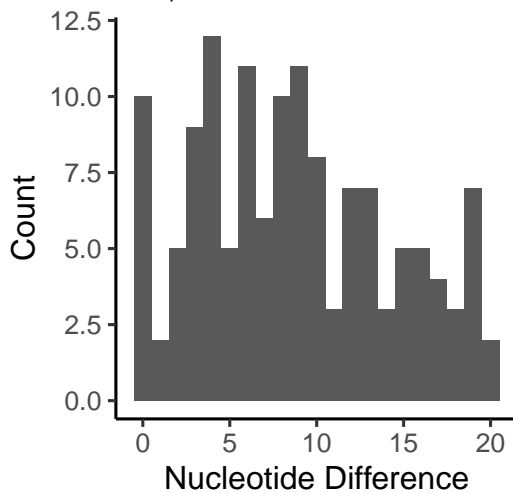
### IGHV3-9\*01

154 sequences assigned  
6 (3.9%) exact matches, in which:  
5 unique CDR3  
3 unique J



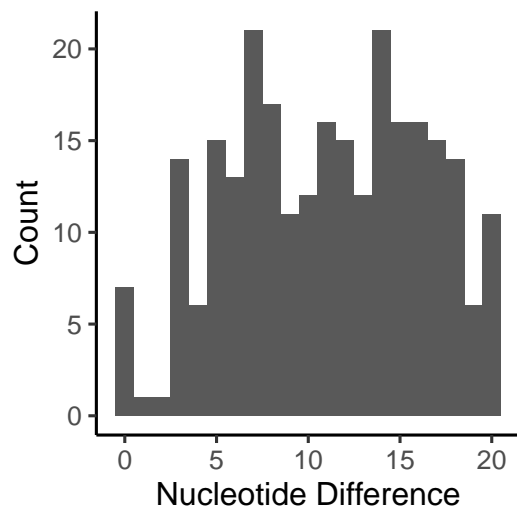
### IGHV3-11\*03\_05

174 sequences assigned  
10 (5.7%) exact matches, in which:  
8 unique CDR3  
4 unique J



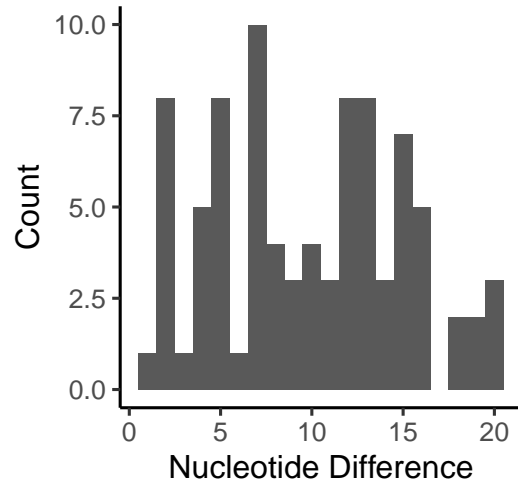
### IGHV3-15\*01\_02

319 sequences assigned  
7 (2.2%) exact matches, in which:  
5 unique CDR3  
2 unique J



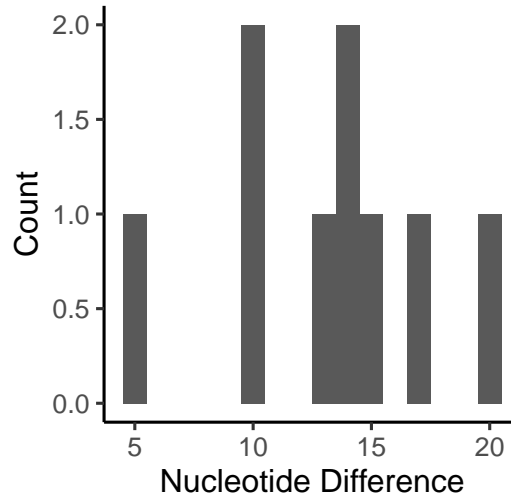
### IGHV3-20\*03\_04

100 sequences assigned  
No exact matches.



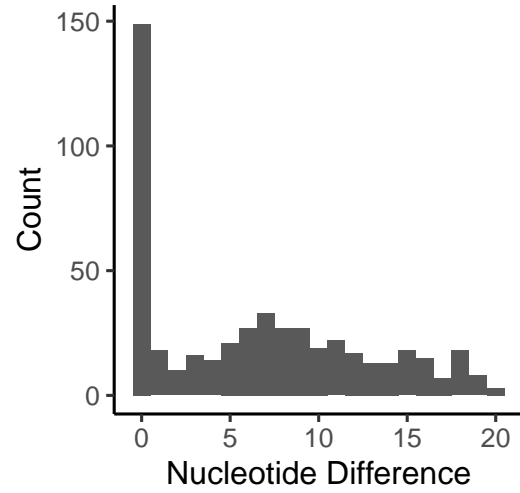
### IGHV3-30-3\*01

16 sequences assigned  
No exact matches.



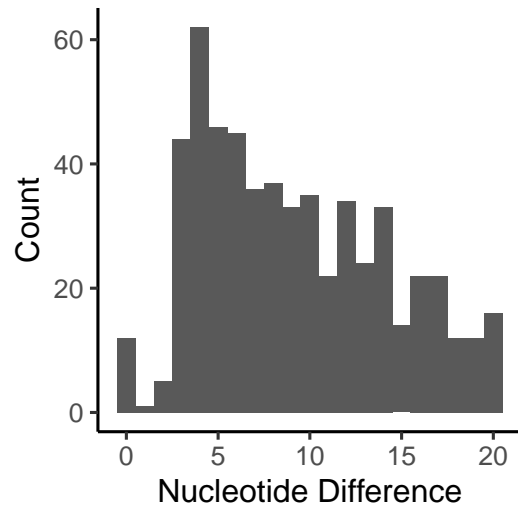
### IGHV3-33\*01

565 sequences assigned  
149 (26.4%) exact matches, in which:  
107 unique CDR3  
6 unique J



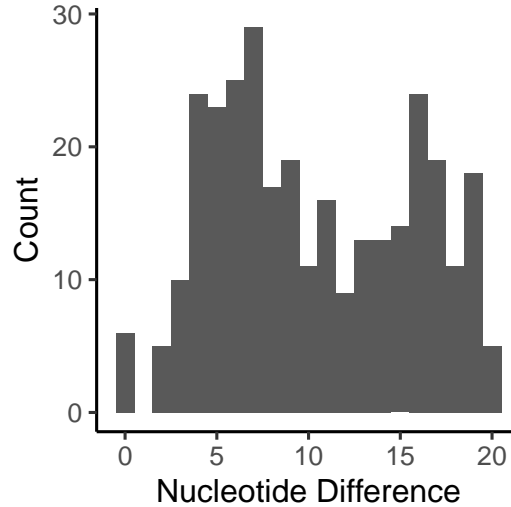
### IGHV3-21\*01\_02

712 sequences assigned  
12 (1.7%) exact matches, in which:  
9 unique CDR3  
4 unique J



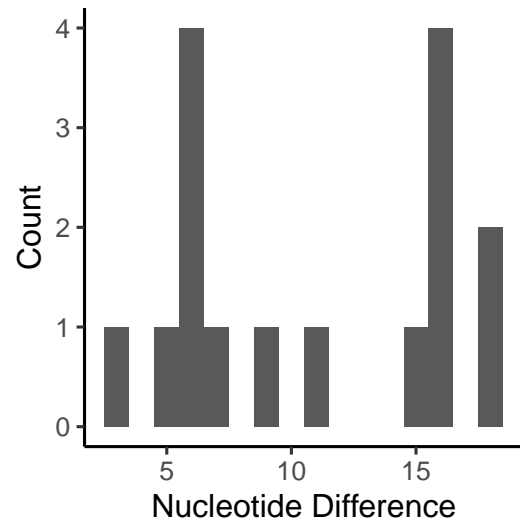
### IGHV3-30\*04

380 sequences assigned  
6 (1.6%) exact matches, in which:  
5 unique CDR3  
3 unique J



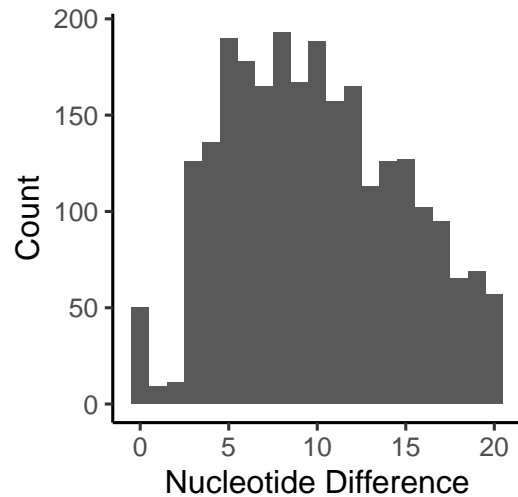
### IGHV3-43\*01

18 sequences assigned  
No exact matches.



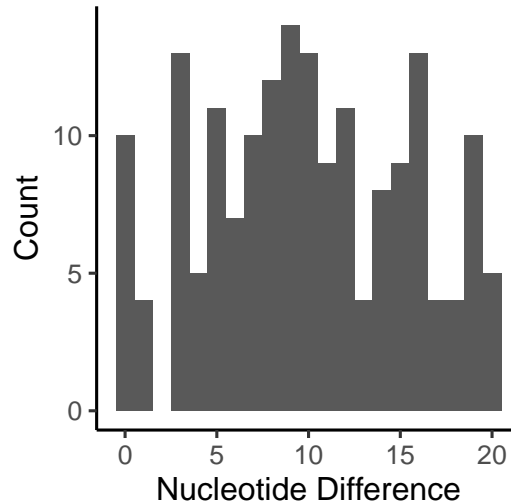
### IGHV3-23\*01\_04

2990 sequences assigned  
50 (1.7%) exact matches, in which:  
35 unique CDR3  
5 unique J



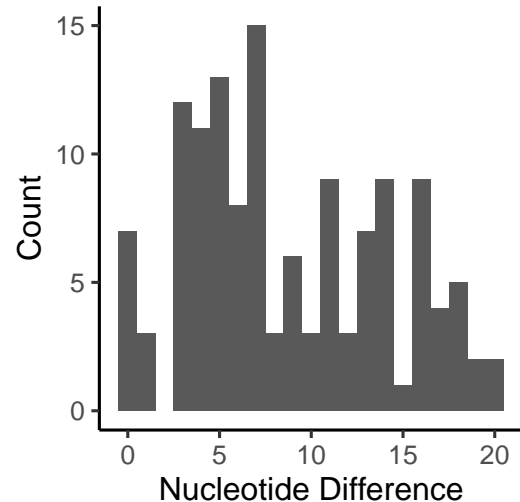
### IGHV3-30\*18

208 sequences assigned  
10 (4.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



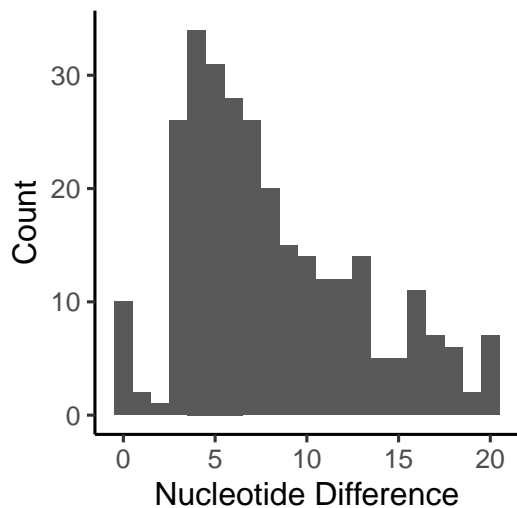
### IGHV3-43\*02

157 sequences assigned  
7 (4.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



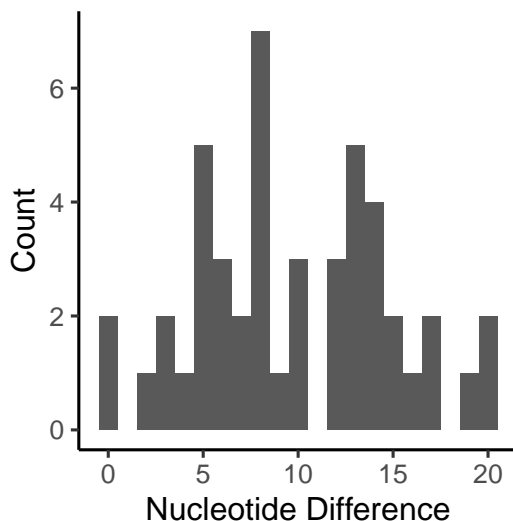
### IGHV3-48\*01

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



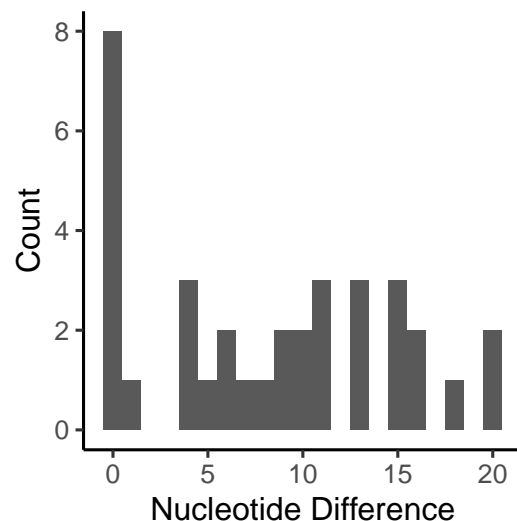
### IGHV3-49\*03\_05

55 sequences assigned  
2 (3.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



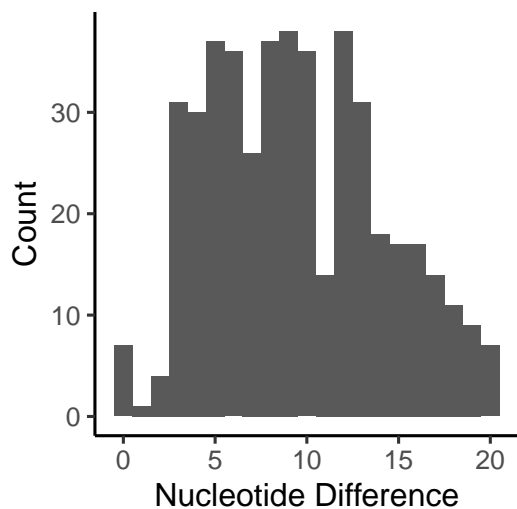
### IGHV3-64\*01

37 sequences assigned  
8 (21.6%) exact matches, in which:  
5 unique CDR3  
1 unique J



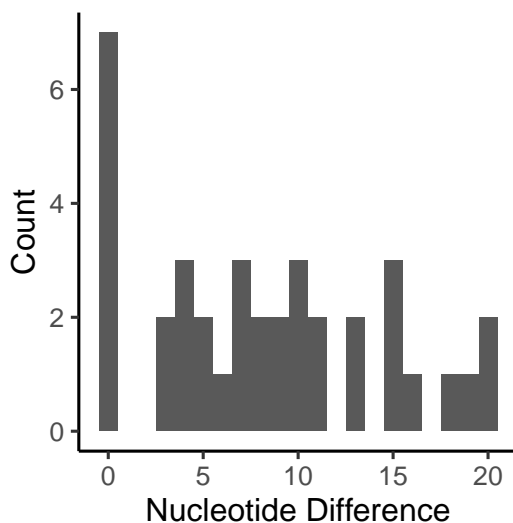
### IGHV3-48\*03

532 sequences assigned  
7 (1.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



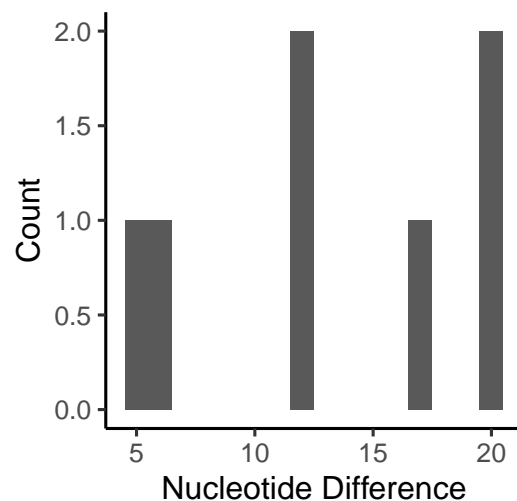
### IGHV3-53\*04

41 sequences assigned  
7 (17.1%) exact matches, in which:  
5 unique CDR3  
2 unique J



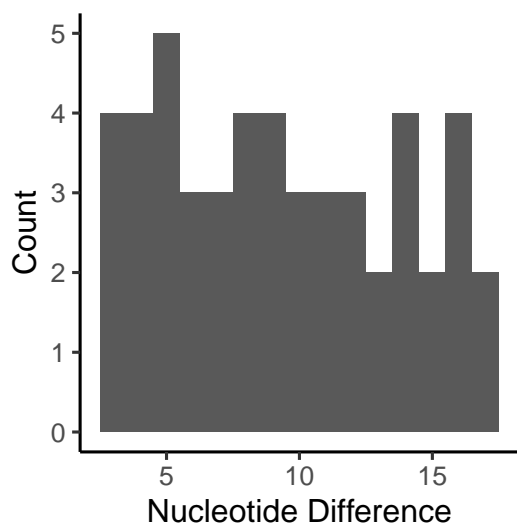
### IGHV3-64\*02\_07

8 sequences assigned  
No exact matches.



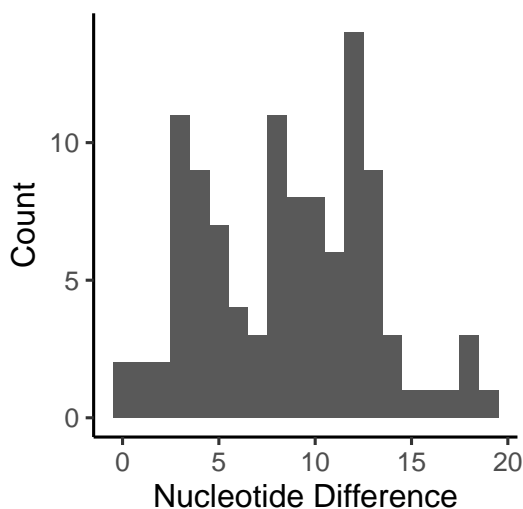
### IGHV3-49\*04

64 sequences assigned  
No exact matches.



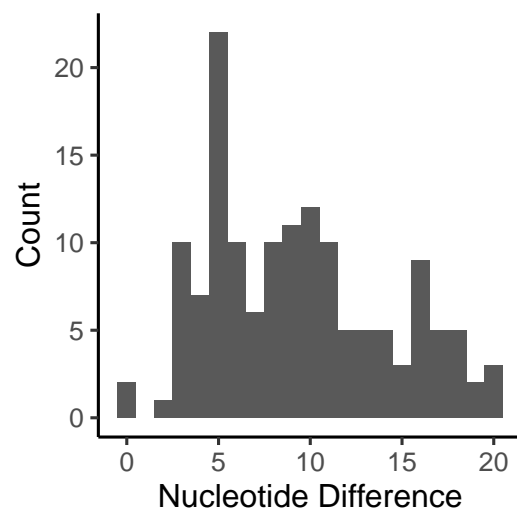
### IGHV3-53\*01\_02

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



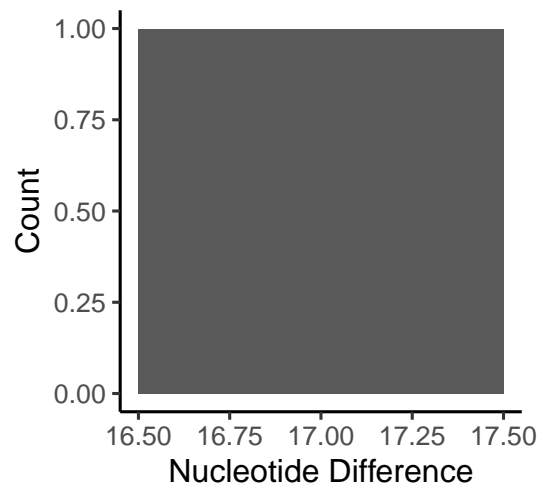
### IGHV3-66\*02

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



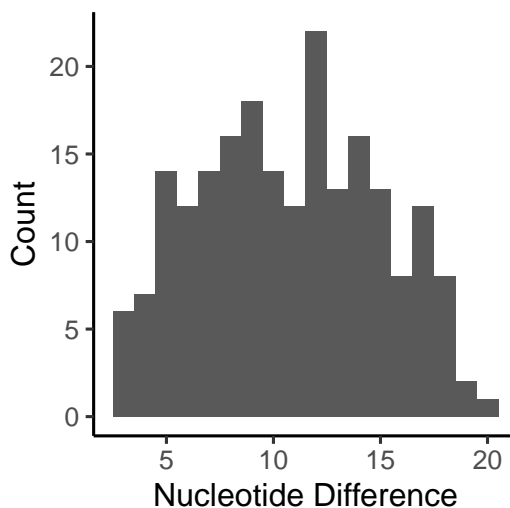
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



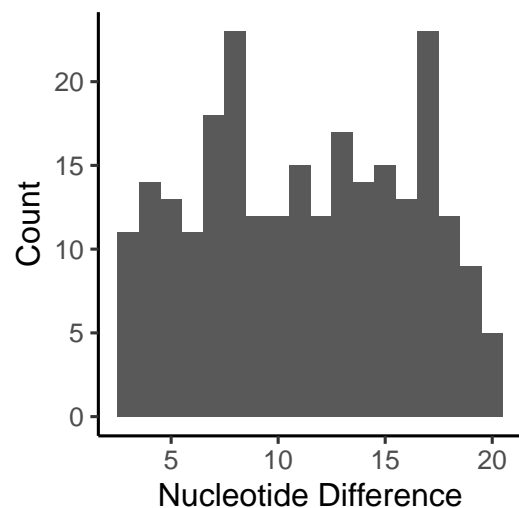
### IGHV3-74\*03

232 sequences assigned  
No exact matches.



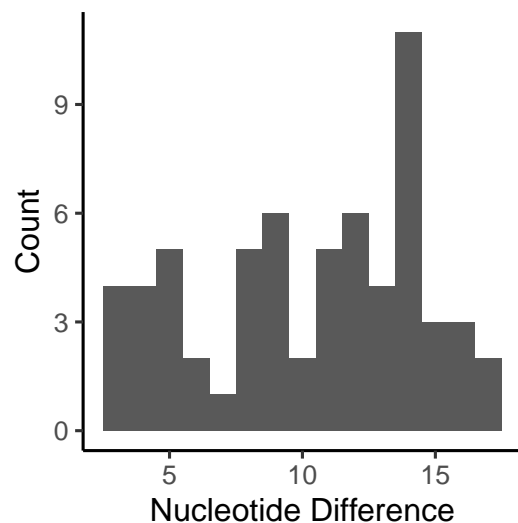
### IGHV4-4\*07

284 sequences assigned  
No exact matches.



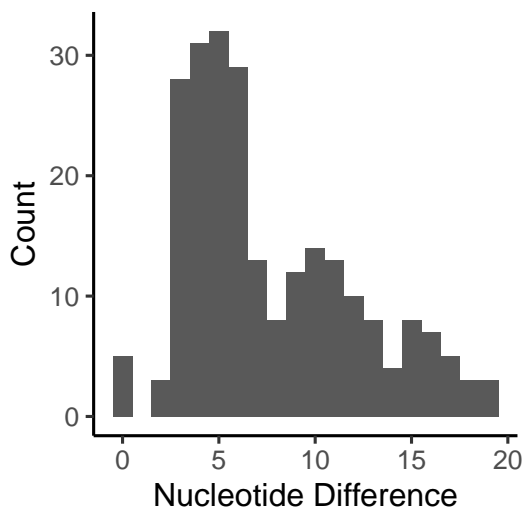
### IGHV3-72\*01

65 sequences assigned  
No exact matches.



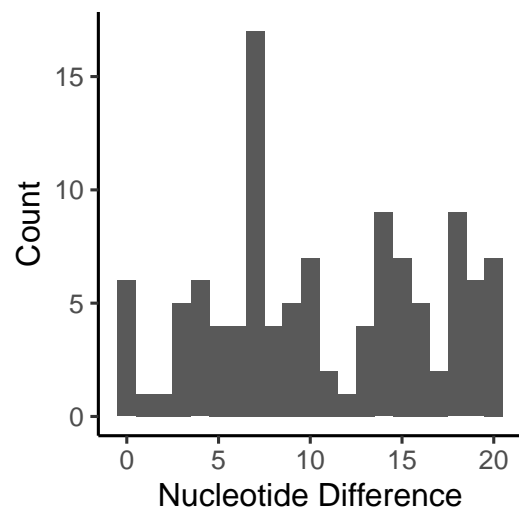
### IGHV3-74\*01\_02

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



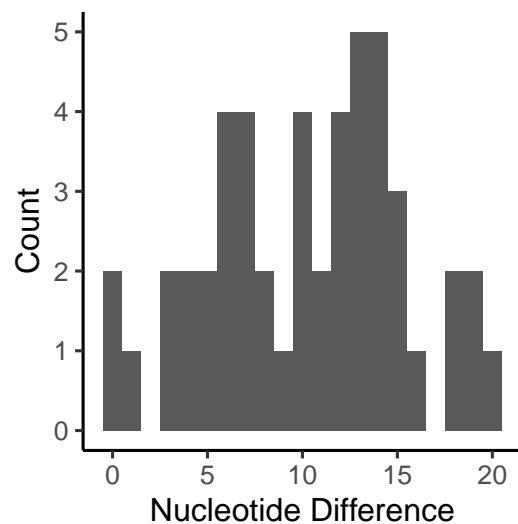
### IGHV4-4\*02\_03

142 sequences assigned  
6 (4.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



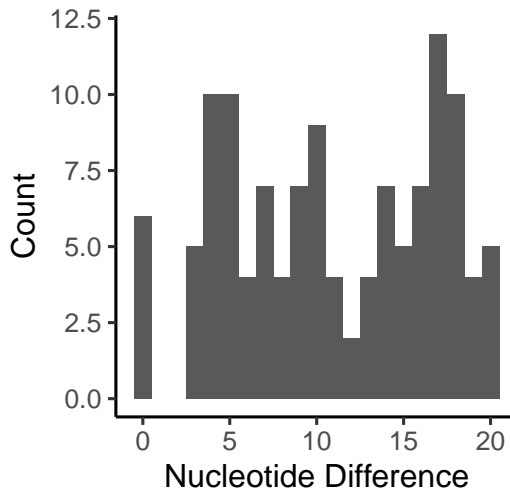
### IGHV3-73\*01\_02

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



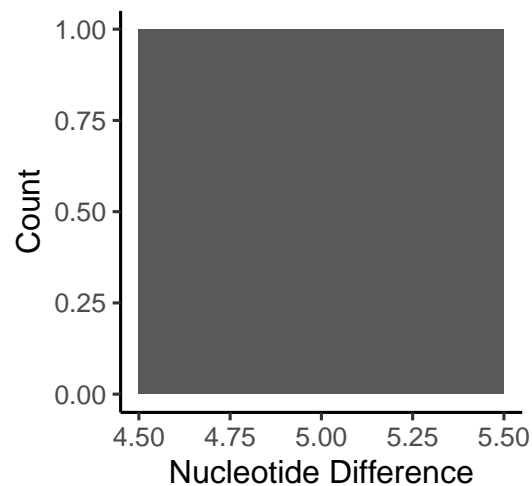
### IGHV3-64D\*06

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



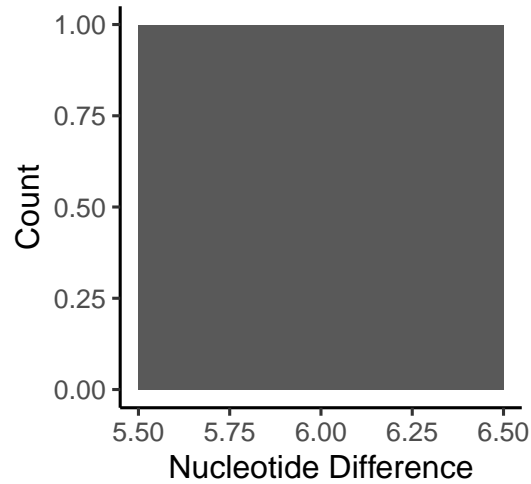
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



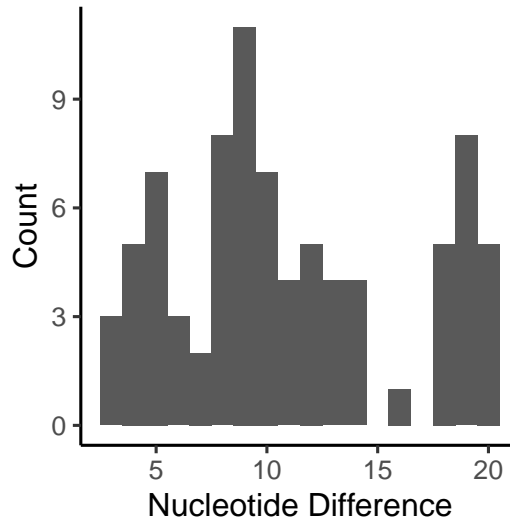
### IGHV4-28\*02\_05

2 sequences assigned  
No exact matches.



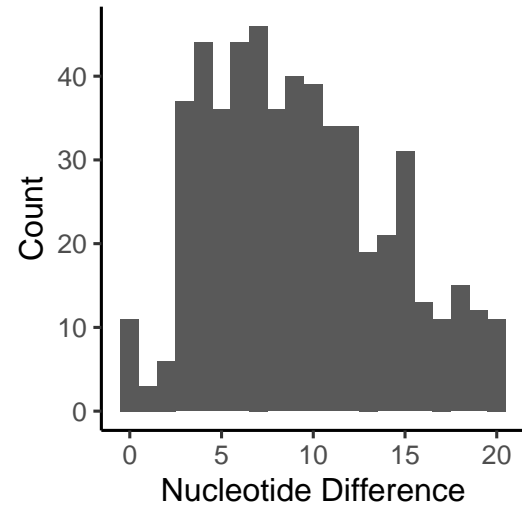
### IGHV4-39\*02

113 sequences assigned  
No exact matches.



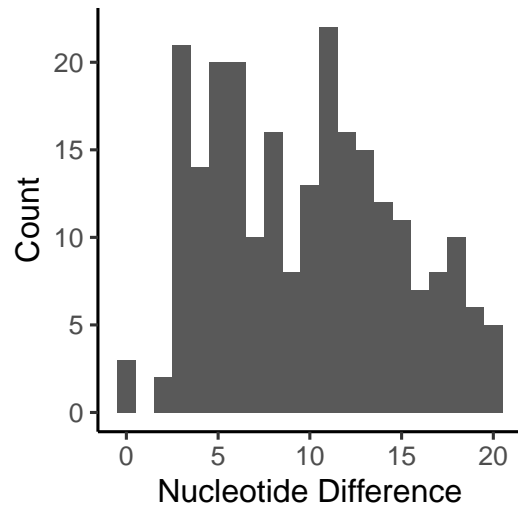
### IGHV4-59\*01\_07

650 sequences assigned  
11 (1.7%) exact matches, in which:  
7 unique CDR3  
3 unique J



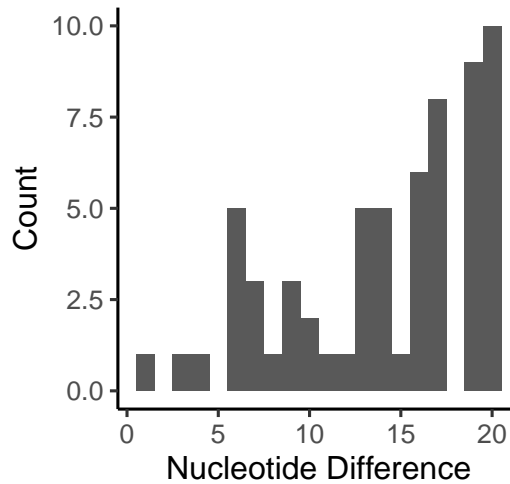
### IGHV4-31\*02

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



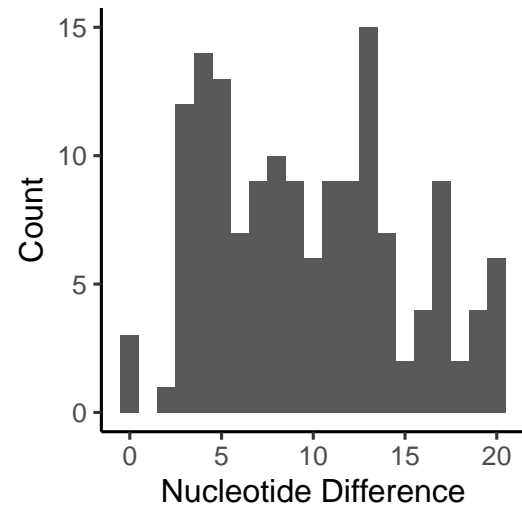
### IGHV4-59\*02

117 sequences assigned  
No exact matches.



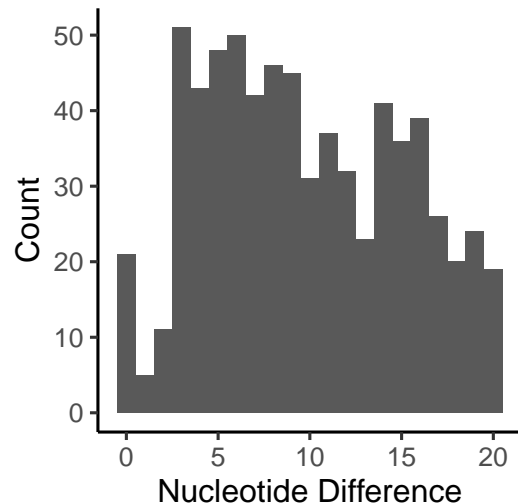
### IGHV4-61\*01

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



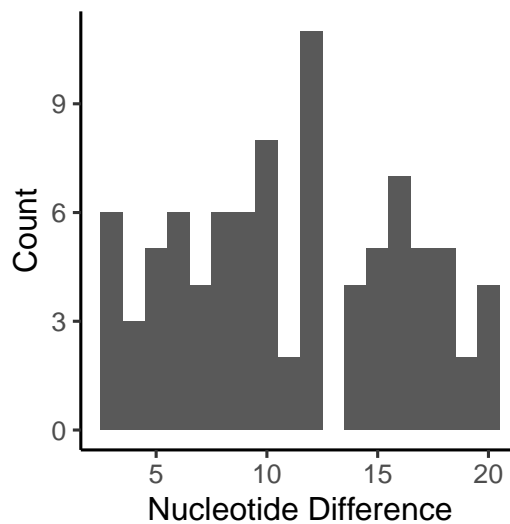
### IGHV4-34\*01\_02

827 sequences assigned  
21 (2.5%) exact matches, in which:  
13 unique CDR3  
5 unique J



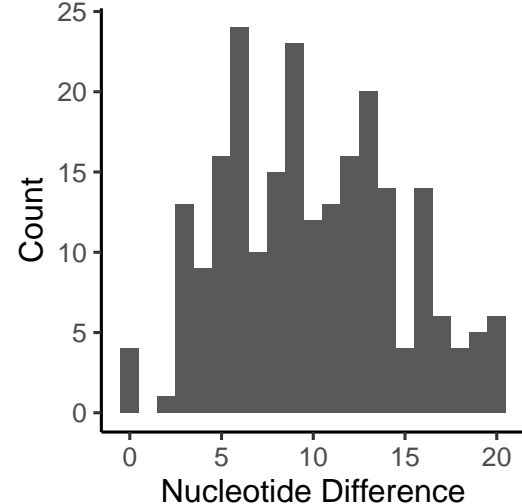
### IGHV4-59\*11

118 sequences assigned  
No exact matches.



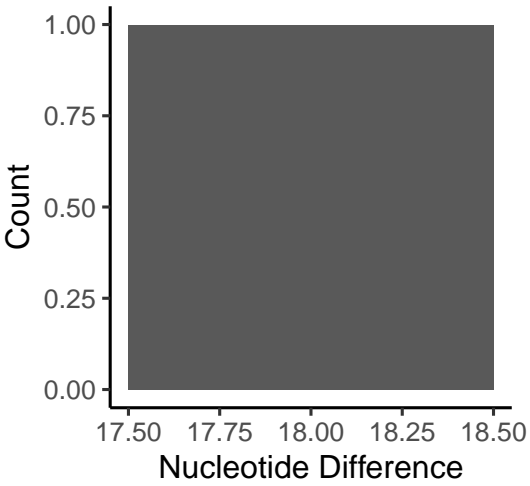
### IGHV4-61\*02

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



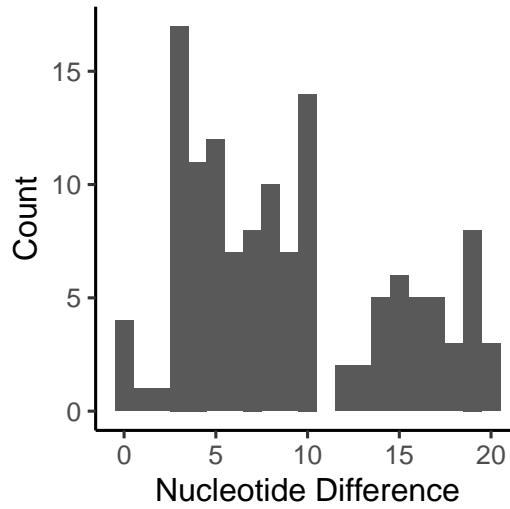
### IGHV4/OR15-8\*01

2 sequences assigned  
No exact matches.



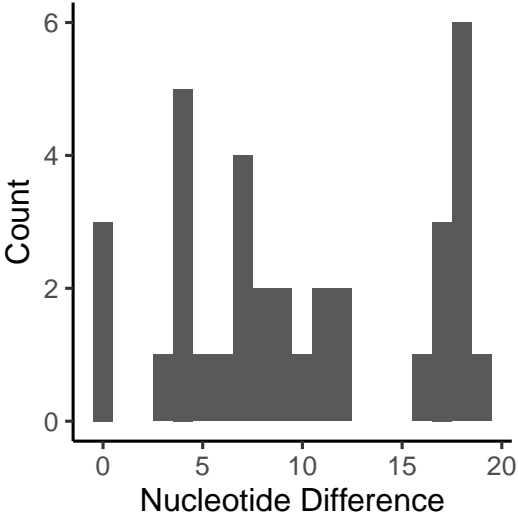
### IGHV5-51\*01\_03

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



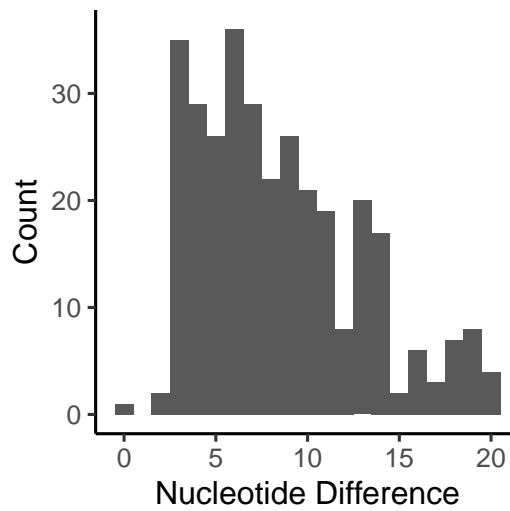
### IGHV5-10-1\*01\_03

46 sequences assigned  
3 (6.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



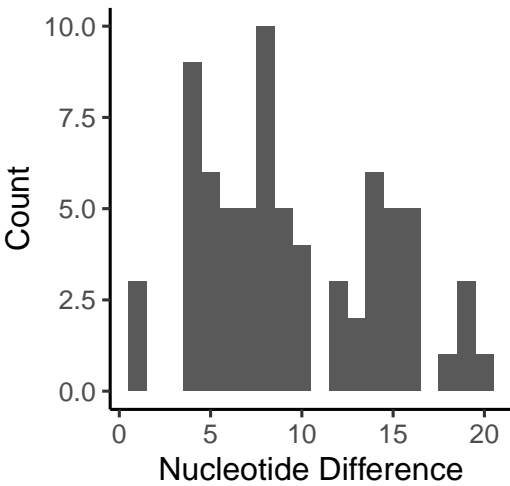
### IGHV6-1\*01\_02

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



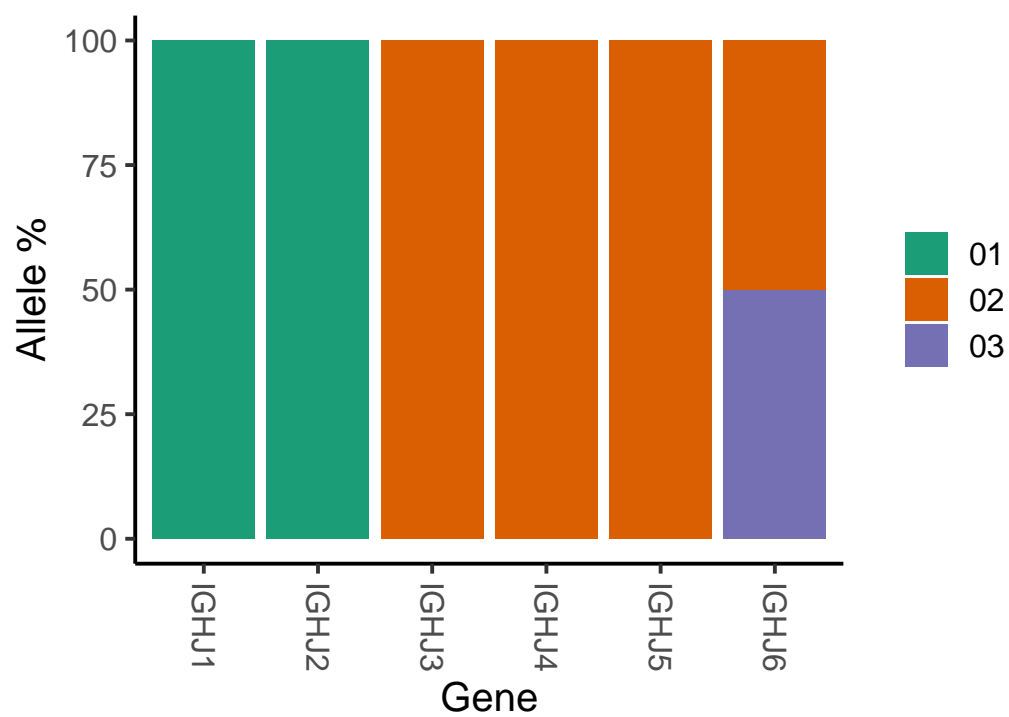
### IGHV5-51\*07

81 sequences assigned  
No exact matches.

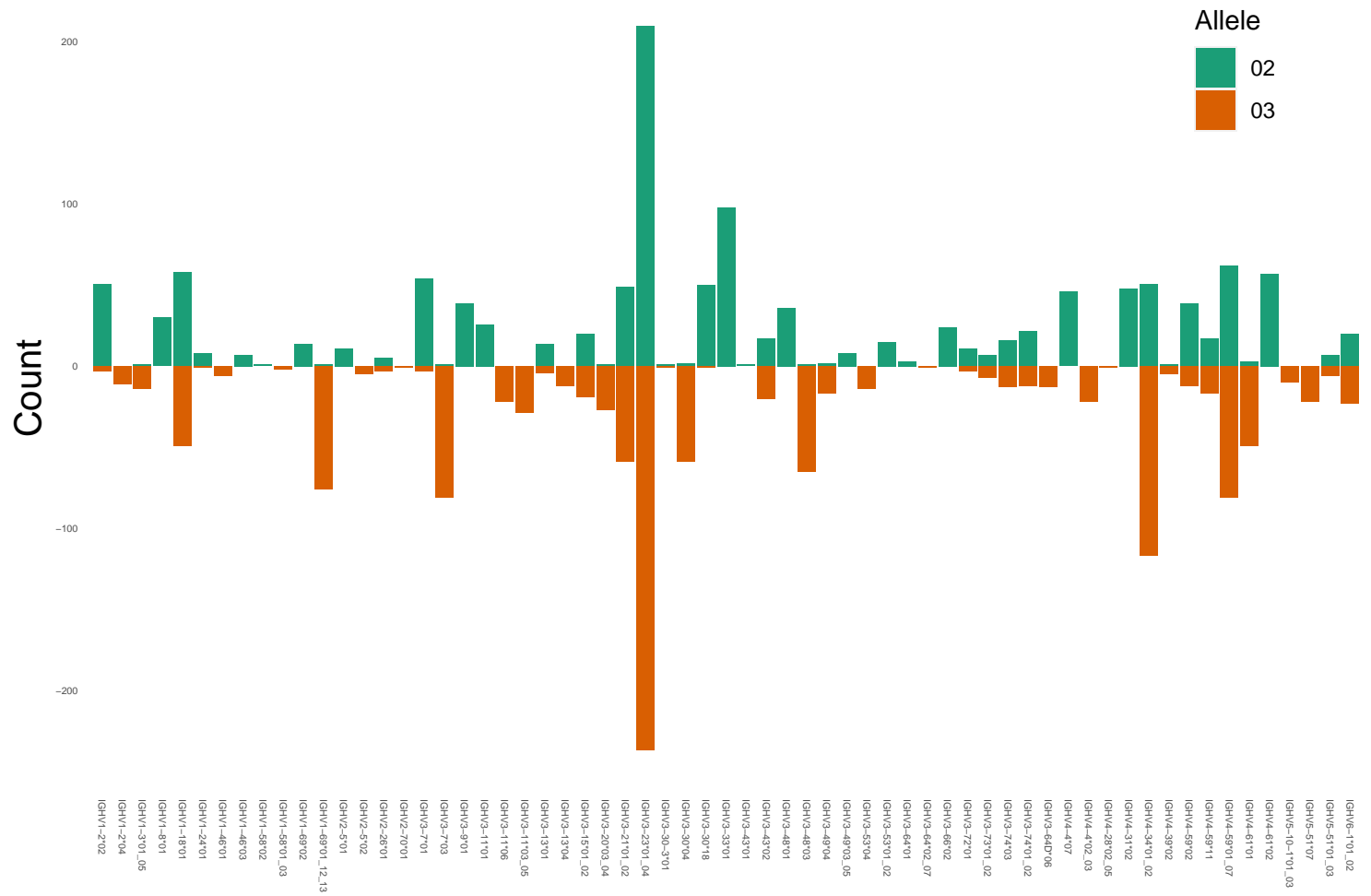




Allele Usage



## Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.