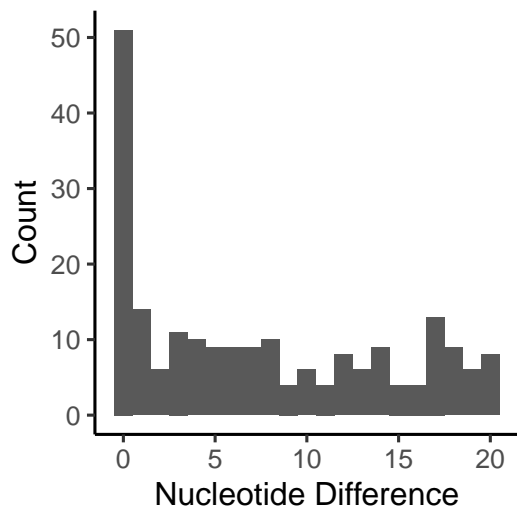


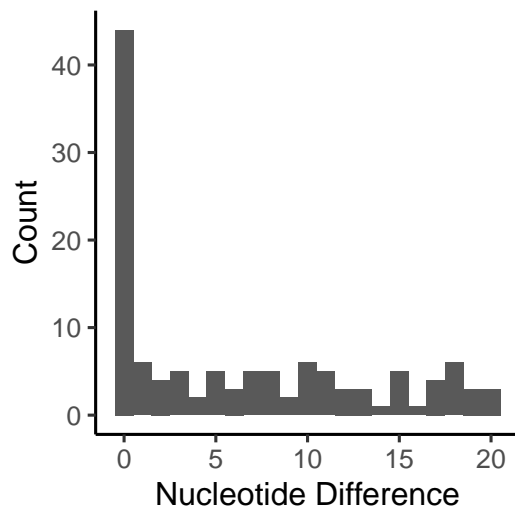
### IGHV1-2\*02

256 sequences assigned  
51 (19.9%) exact matches, in which:  
49 unique CDR3  
6 unique J



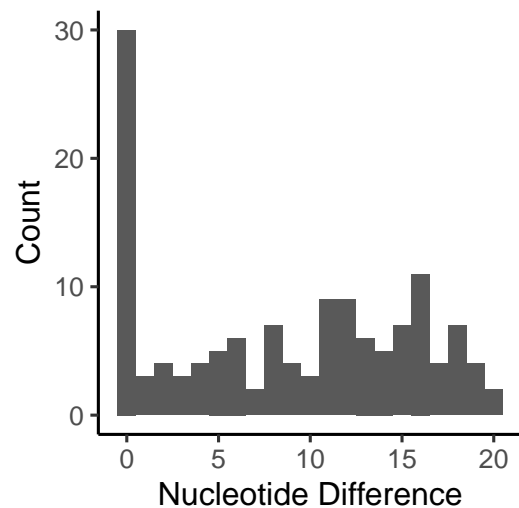
### IGHV1-8\*01

129 sequences assigned  
44 (34.1%) exact matches, in which:  
44 unique CDR3  
6 unique J



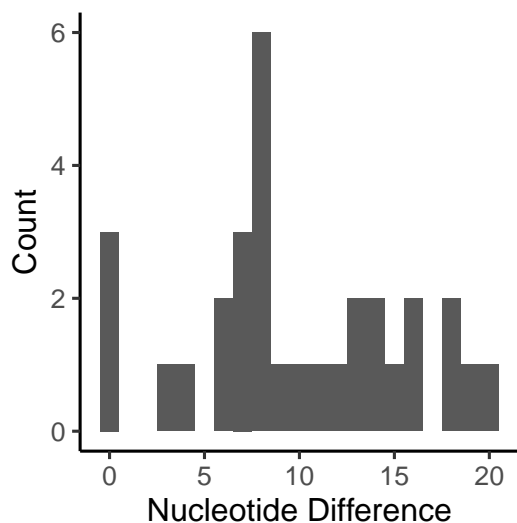
### IGHV1-46\*01

161 sequences assigned  
30 (18.6%) exact matches, in which:  
30 unique CDR3  
6 unique J



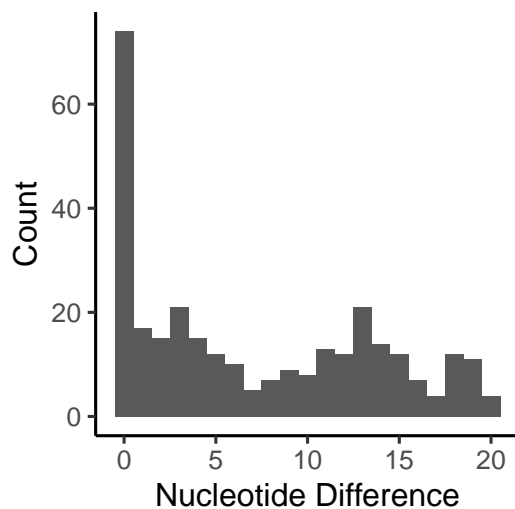
### IGHV1-3\*03

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



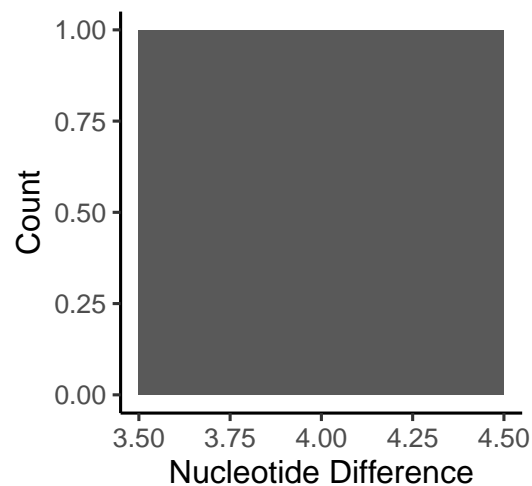
### IGHV1-18\*01

342 sequences assigned  
74 (21.6%) exact matches, in which:  
74 unique CDR3  
7 unique J



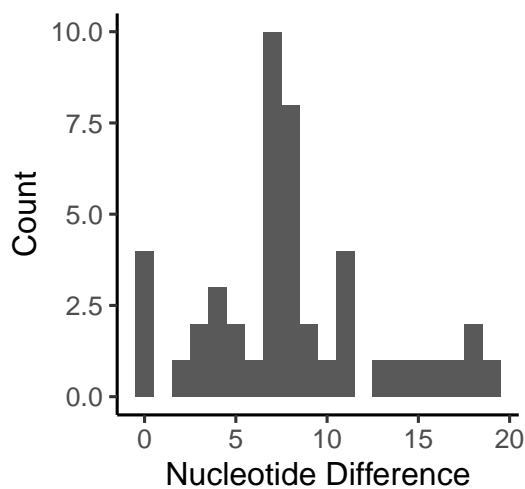
### IGHV1-58\*02

1 sequences assigned  
No exact matches.



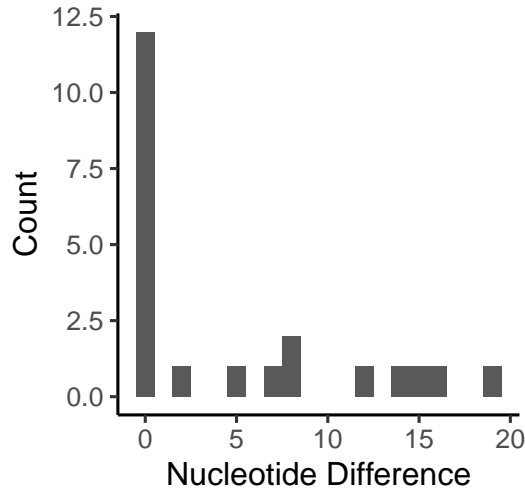
### IGHV1-3\*01\_05

52 sequences assigned  
4 (7.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



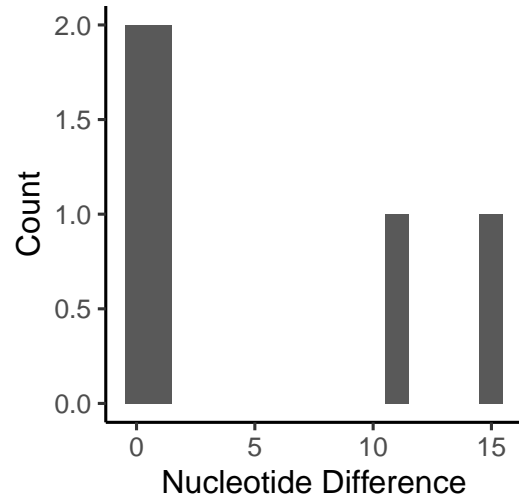
### IGHV1-24\*01

28 sequences assigned  
12 (42.9%) exact matches, in which:  
12 unique CDR3  
4 unique J



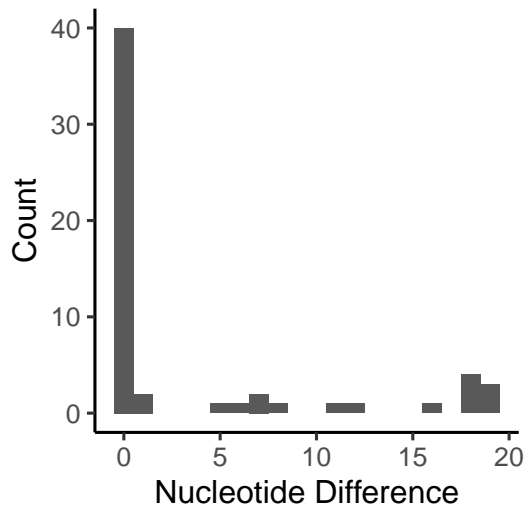
### IGHV1-69-2\*01

7 sequences assigned  
2 (28.6%) exact matches, in which:  
2 unique CDR3  
1 unique J



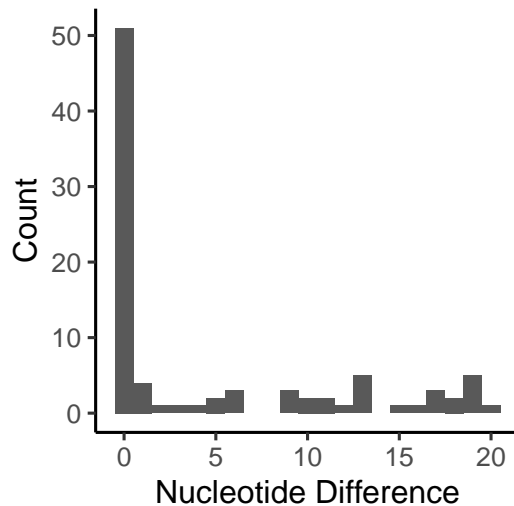
### IGHV1-69\*02

68 sequences assigned  
40 (58.8%) exact matches, in which:  
40 unique CDR3  
6 unique J



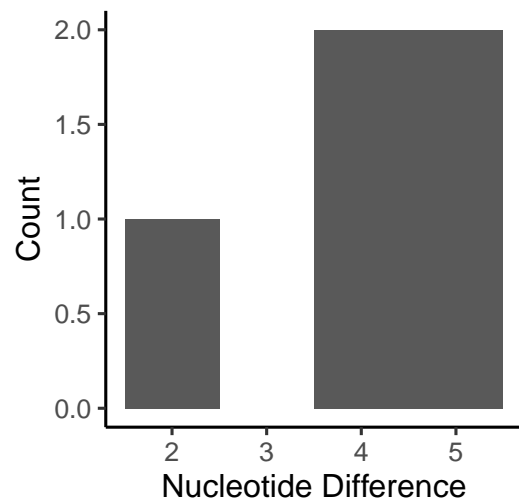
### IGHV1-69\*15\_18

112 sequences assigned  
51 (45.5%) exact matches, in which:  
51 unique CDR3  
6 unique J



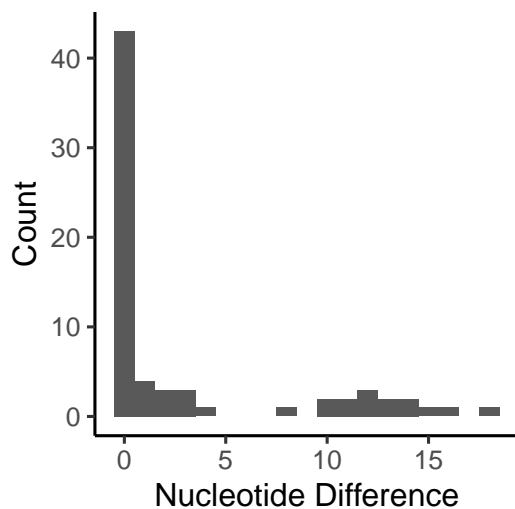
### IGHV2-26\*01

5 sequences assigned  
No exact matches.



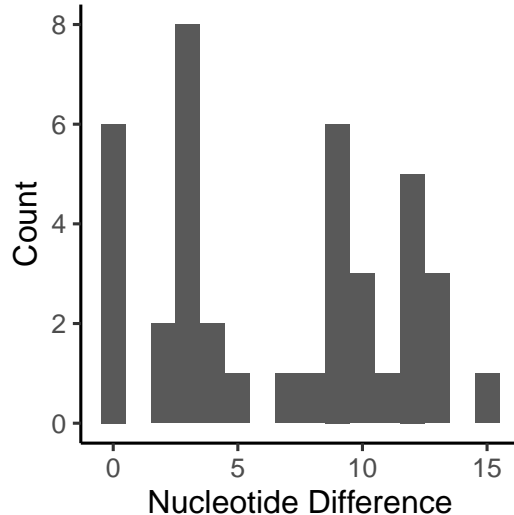
### IGHV1-69\*05

77 sequences assigned  
43 (55.8%) exact matches, in which:  
43 unique CDR3  
5 unique J



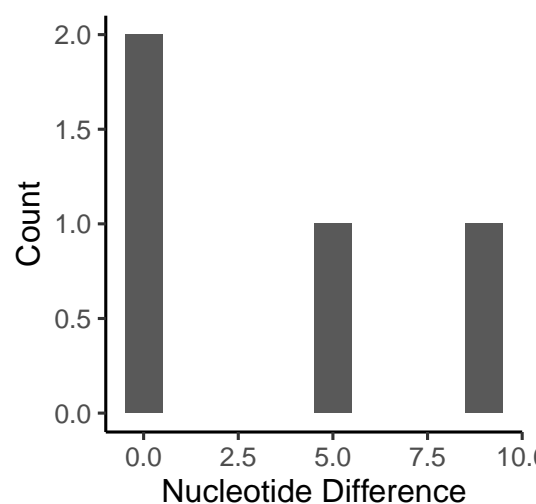
### IGHV2-5\*01

40 sequences assigned  
6 (15%) exact matches, in which:  
6 unique CDR3  
4 unique J



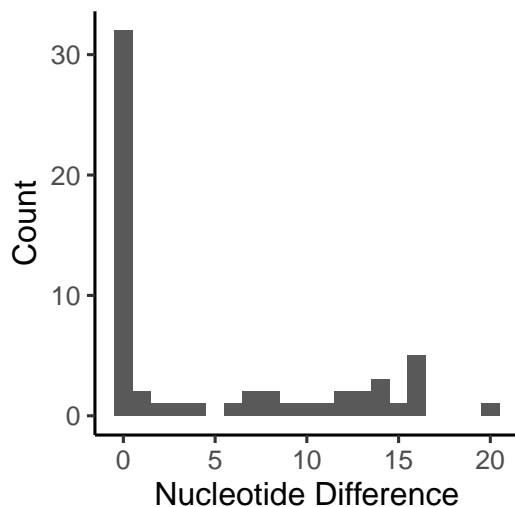
### IGHV2-70\*20

5 sequences assigned  
2 (40%) exact matches, in which:  
2 unique CDR3  
1 unique J



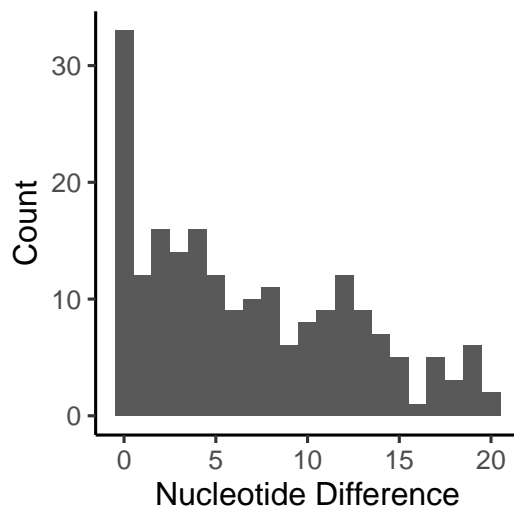
### IGHV1-69\*01\_12\_13

73 sequences assigned  
32 (43.8%) exact matches, in which:  
32 unique CDR3  
5 unique J



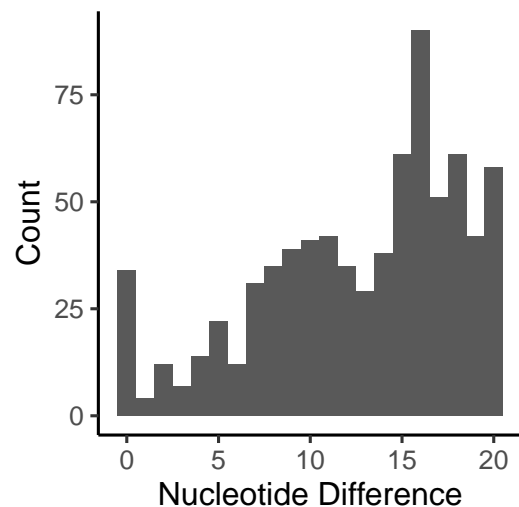
### IGHV2-5\*02

214 sequences assigned  
33 (15.4%) exact matches, in which:  
32 unique CDR3  
4 unique J



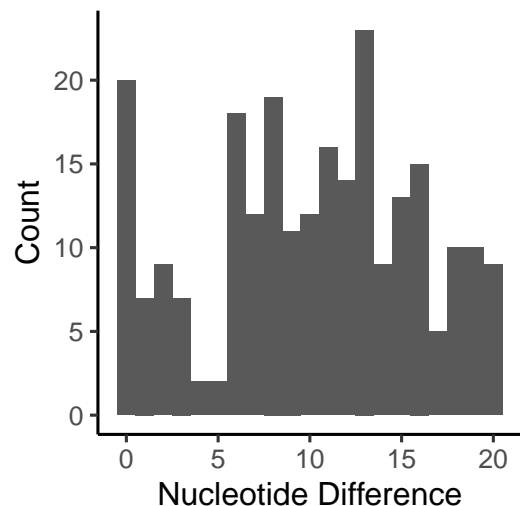
### IGHV3-7\*01

843 sequences assigned  
34 (4%) exact matches, in which:  
32 unique CDR3  
4 unique J



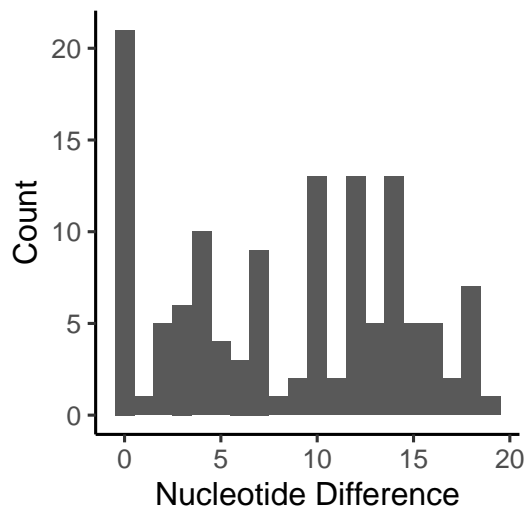
### IGHV3-7\*03

363 sequences assigned  
20 (5.5%) exact matches, in which:  
16 unique CDR3  
3 unique J



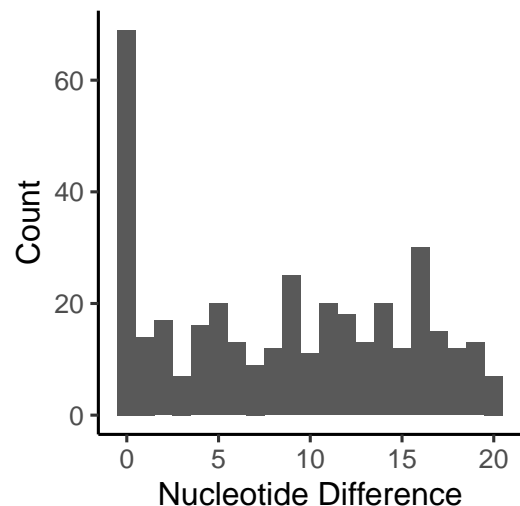
### IGHV3-11\*04

136 sequences assigned  
21 (15.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



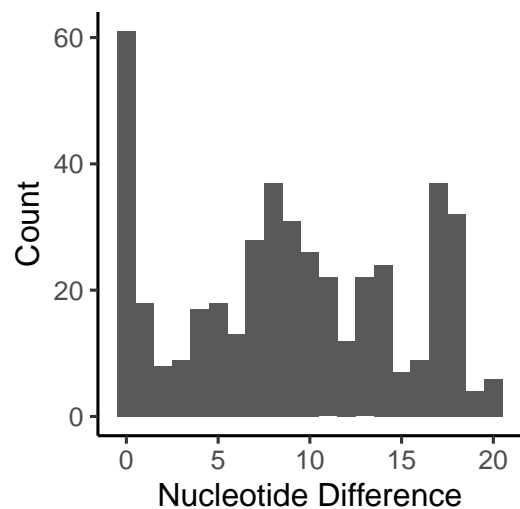
### IGHV3-21\*03

410 sequences assigned  
69 (16.8%) exact matches, in which:  
62 unique CDR3  
6 unique J



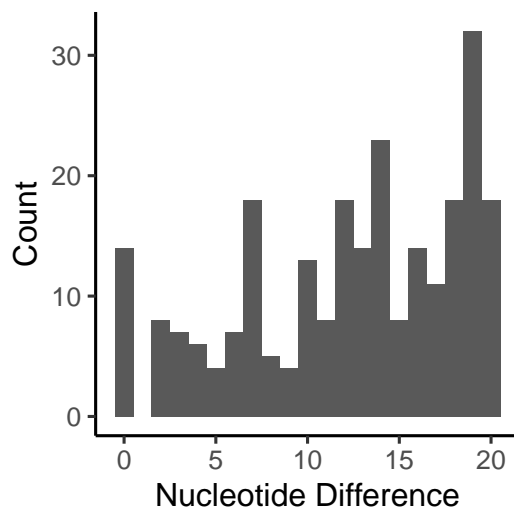
### IGHV3-9\*01

461 sequences assigned  
61 (13.2%) exact matches, in which:  
53 unique CDR3  
6 unique J



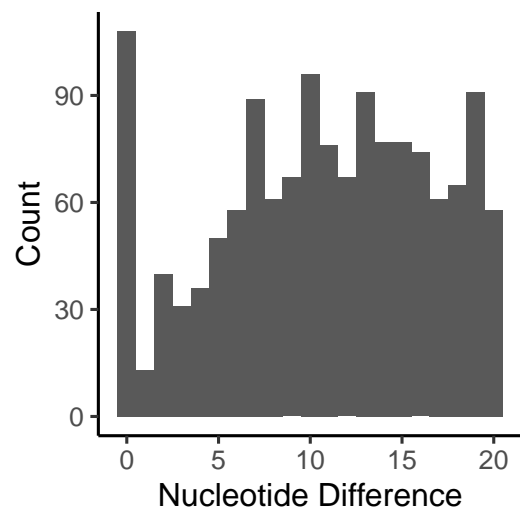
### IGHV3-15\*01\_02

293 sequences assigned  
14 (4.8%) exact matches, in which:  
13 unique CDR3  
4 unique J



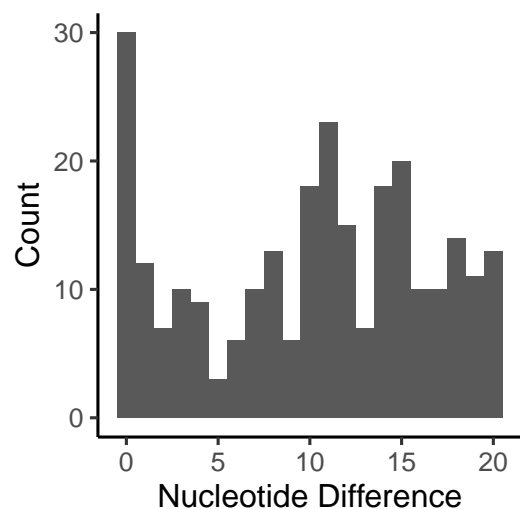
### IGHV3-23\*01\_04

1688 sequences assigned  
108 (6.4%) exact matches, in which:  
96 unique CDR3  
7 unique J



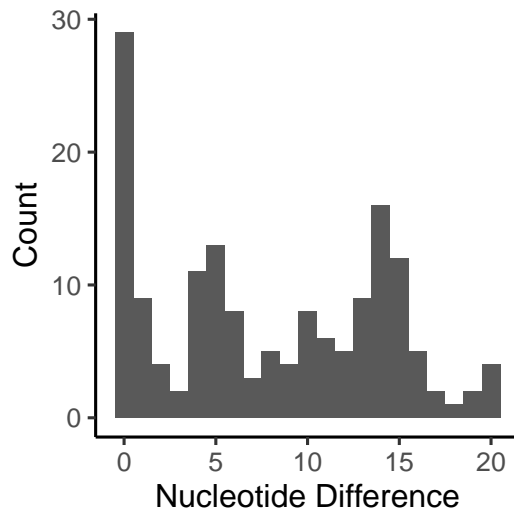
### IGHV3-11\*01

292 sequences assigned  
30 (10.3%) exact matches, in which:  
27 unique CDR3  
5 unique J



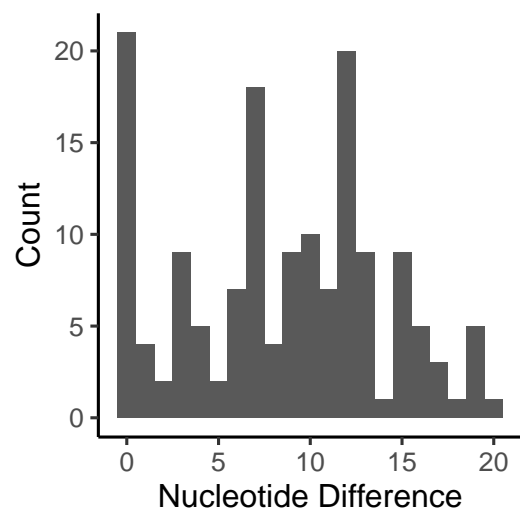
### IGHV3-20\*03\_04

170 sequences assigned  
29 (17.1%) exact matches, in which:  
28 unique CDR3  
6 unique J



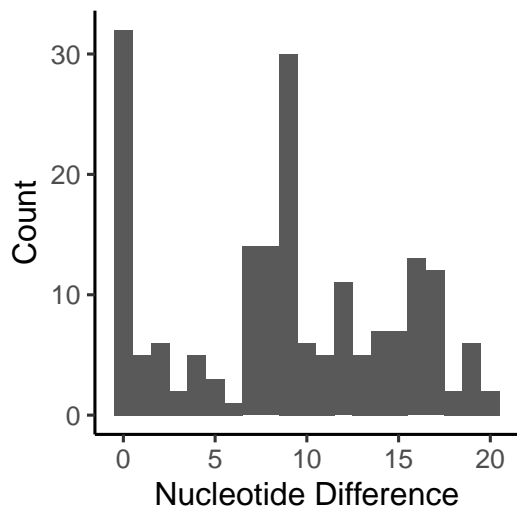
### IGHV3-33\*01

171 sequences assigned  
21 (12.3%) exact matches, in which:  
20 unique CDR3  
3 unique J



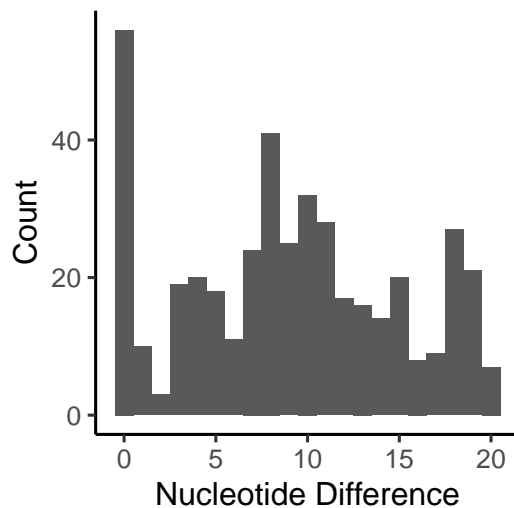
### IGHV3-33\*06\_C288T

218 sequences assigned  
32 (14.7%) exact matches, in which:  
31 unique CDR3  
4 unique J



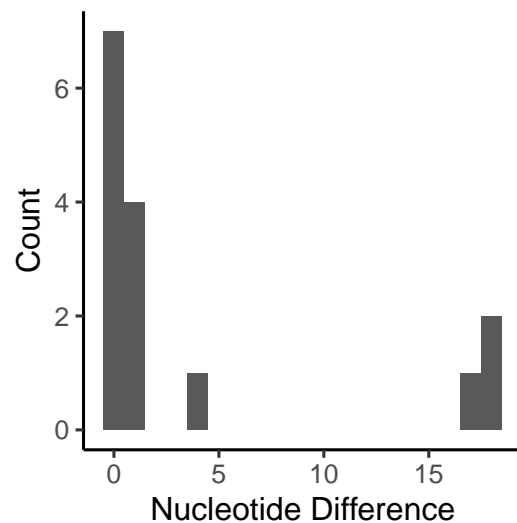
### IGHV3-48\*04

517 sequences assigned  
56 (10.8%) exact matches, in which:  
48 unique CDR3  
5 unique J



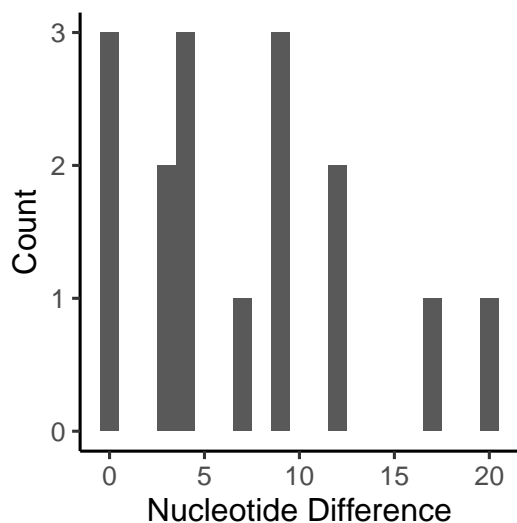
### IGHV3-53\*04

15 sequences assigned  
7 (46.7%) exact matches, in which:  
7 unique CDR3  
2 unique J



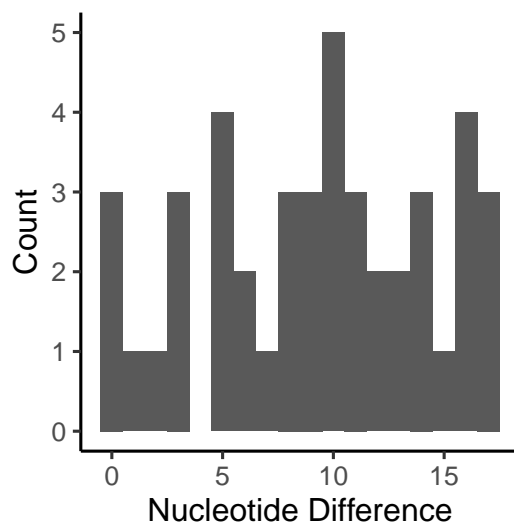
### IGHV3-43\*01

26 sequences assigned  
3 (11.5%) exact matches, in which:  
3 unique CDR3  
3 unique J



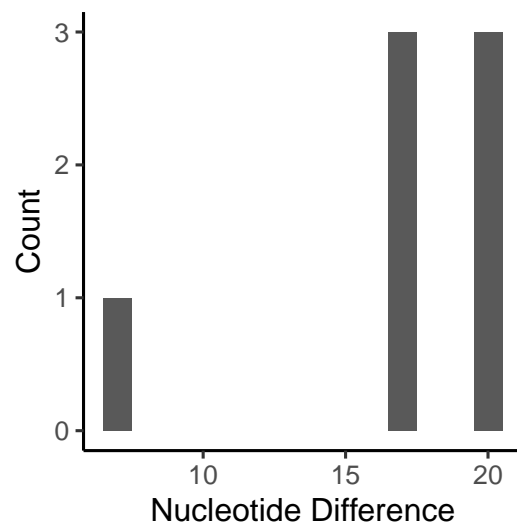
### IGHV3-49\*04

55 sequences assigned  
3 (5.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



### IGHV3-53\*05

34 sequences assigned  
No exact matches.



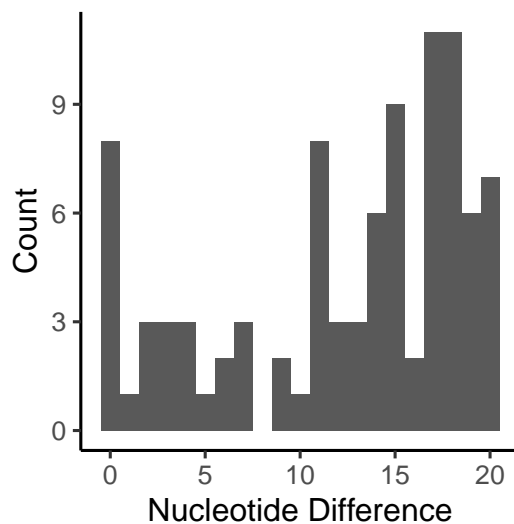
### IGHV3-47\*02

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



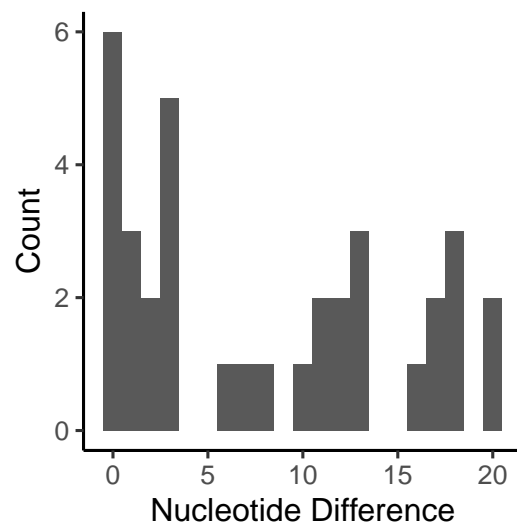
### IGHV3-49\*03\_05

118 sequences assigned  
8 (6.8%) exact matches, in which:  
5 unique CDR3  
4 unique J



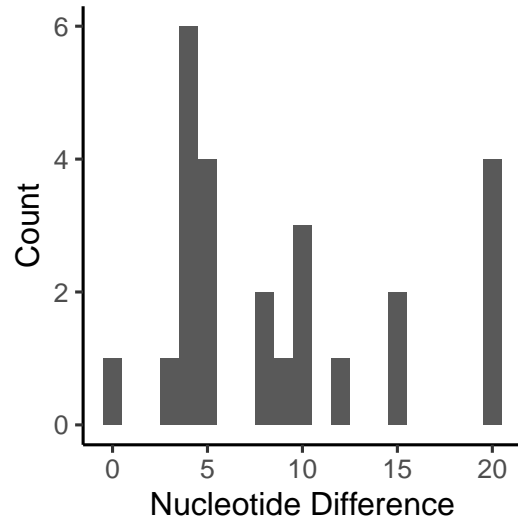
### IGHV3-53\*01\_02

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



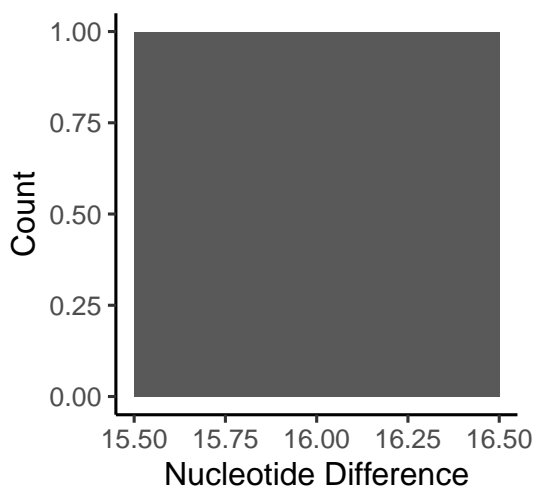
### IGHV3-64\*01

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



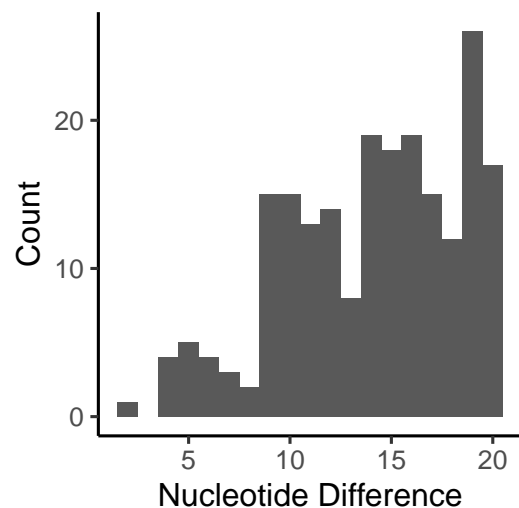
### IGHV3-69-1\*01

4 sequences assigned  
No exact matches.



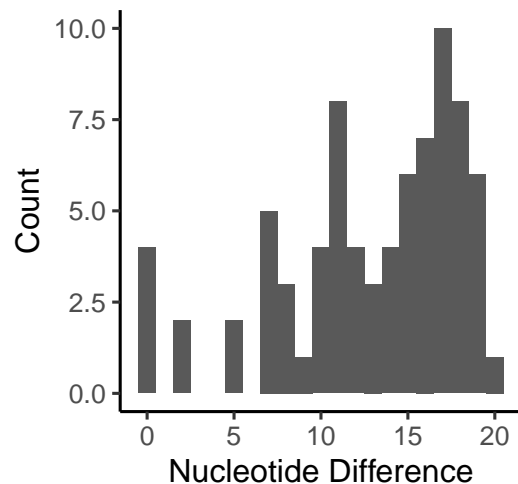
### IGHV3-74\*03

282 sequences assigned  
No exact matches.



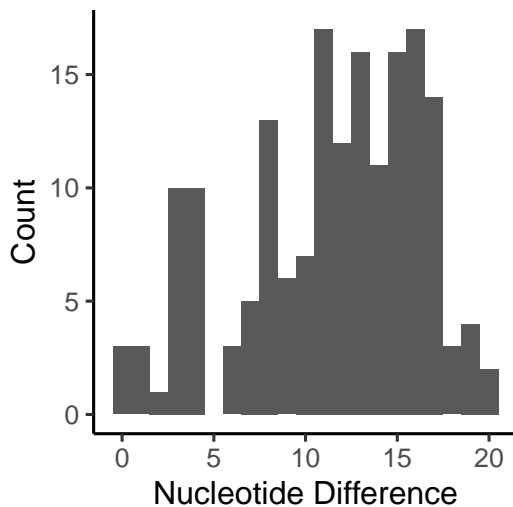
### IGHV3-64\*02\_07

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



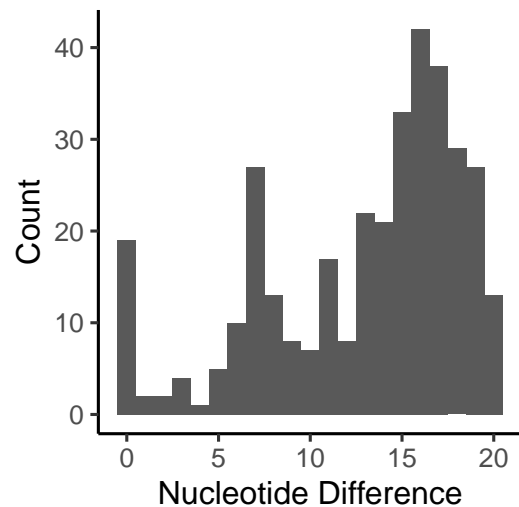
### IGHV3-72\*01

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



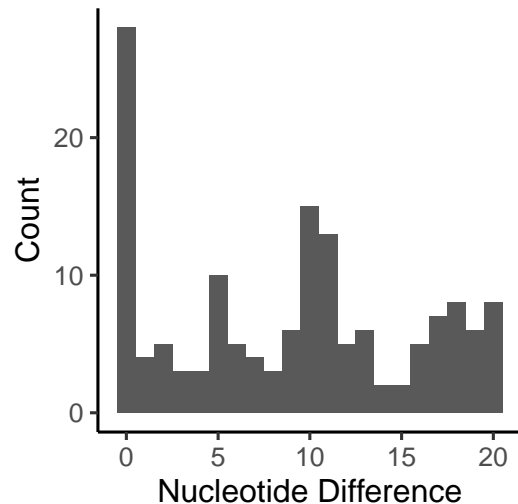
### IGHV3-74\*01\_02

370 sequences assigned  
19 (5.1%) exact matches, in which:  
15 unique CDR3  
5 unique J



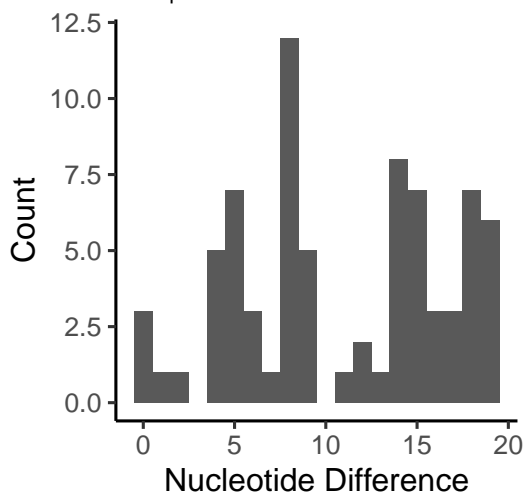
### IGHV3-66\*02

190 sequences assigned  
28 (14.7%) exact matches, in which:  
27 unique CDR3  
6 unique J



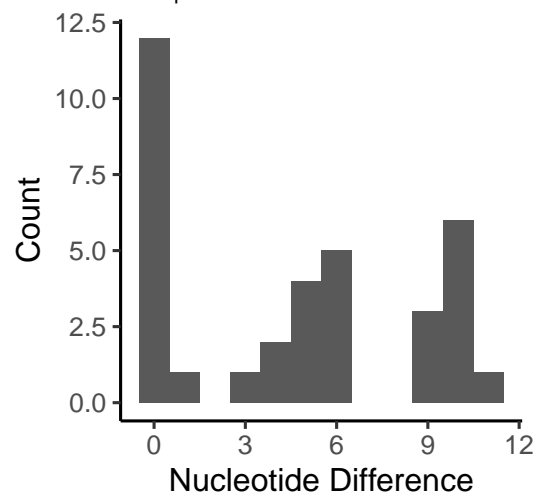
### IGHV3-73\*01\_02

81 sequences assigned  
3 (3.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



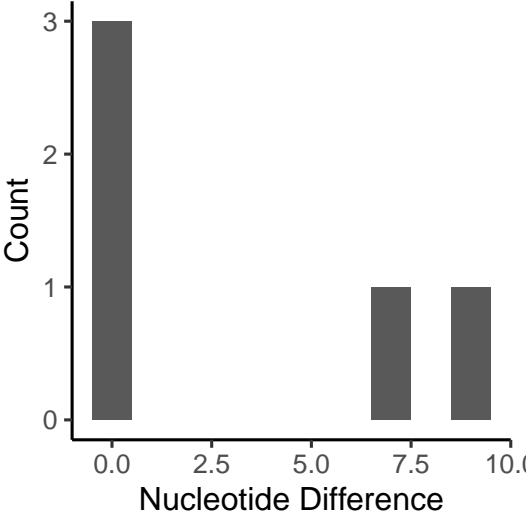
### IGHV3-43D\*03

37 sequences assigned  
12 (32.4%) exact matches, in which:  
8 unique CDR3  
4 unique J



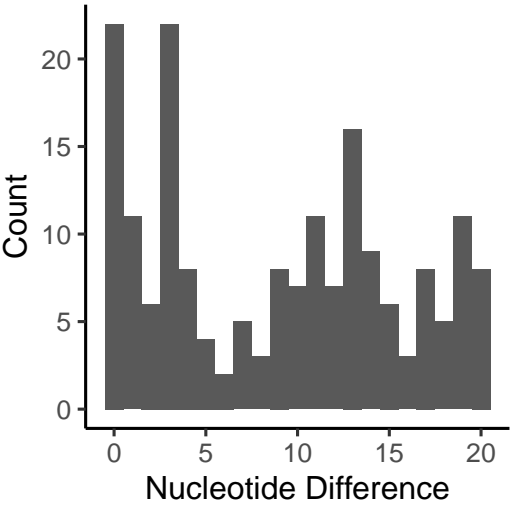
IGHV3-43D\*04

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
1 unique J



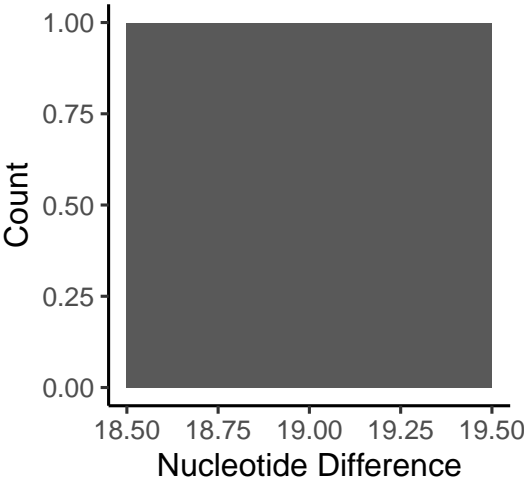
IGHV4-4\*02\_03

211 sequences assigned  
22 (10.4%) exact matches, in which:  
19 unique CDR3  
6 unique J



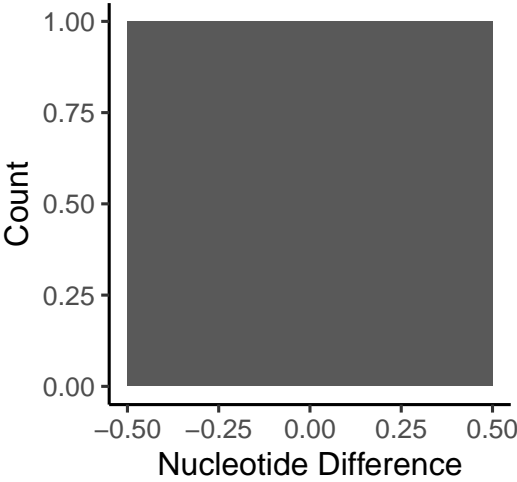
IGHV4-28\*02\_05

1 sequences assigned  
No exact matches.



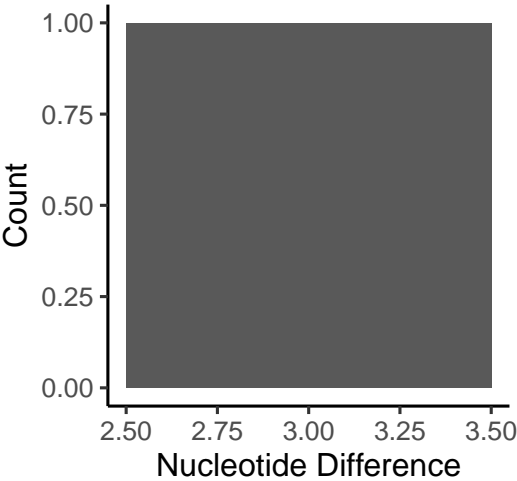
IGHV3-64D\*09

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



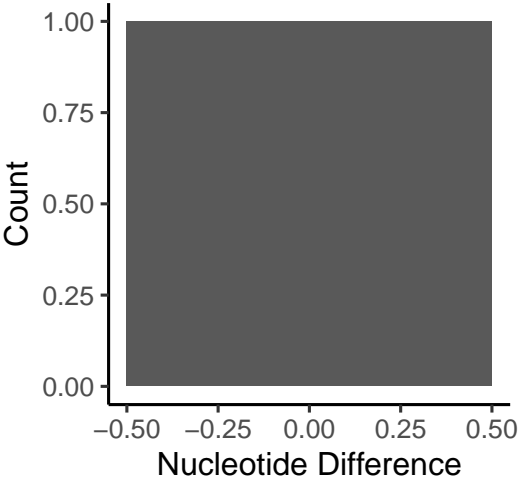
IGHV4-28\*03

1 sequences assigned  
No exact matches.



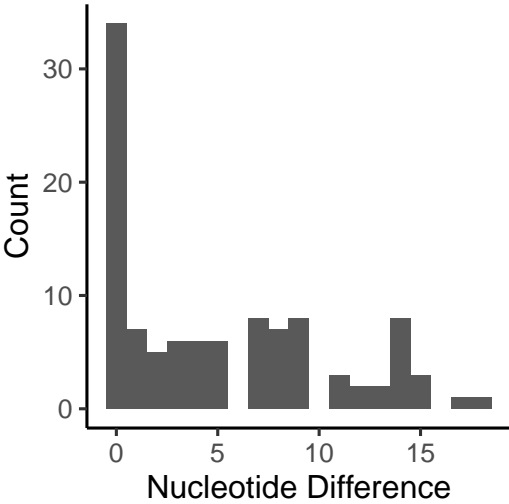
IGHV4-30-2\*01

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



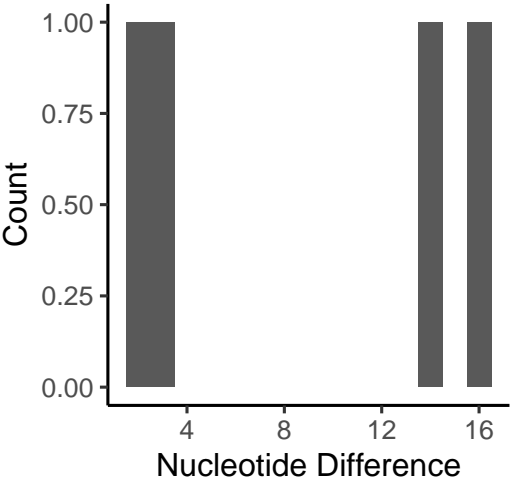
IGHV4-4\*09

115 sequences assigned  
34 (29.6%) exact matches, in which:  
29 unique CDR3  
6 unique J



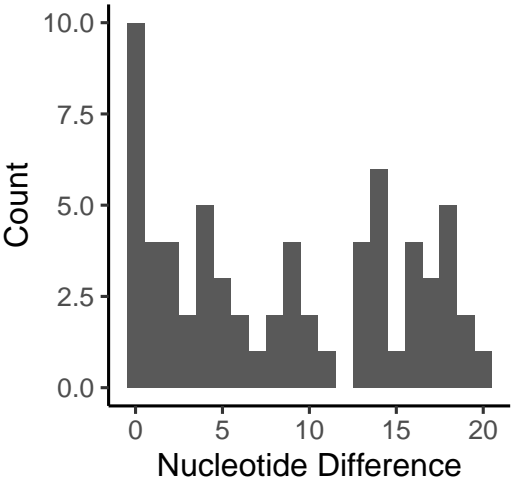
IGHV4-28\*01\_07

17 sequences assigned  
No exact matches.



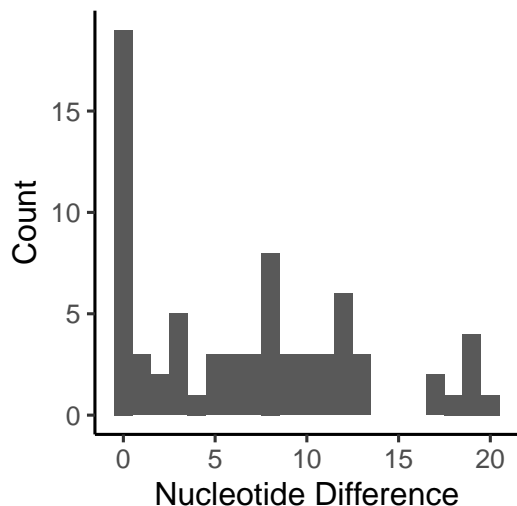
IGHV4-30-4\*08

82 sequences assigned  
10 (12.2%) exact matches, in which:  
9 unique CDR3  
4 unique J



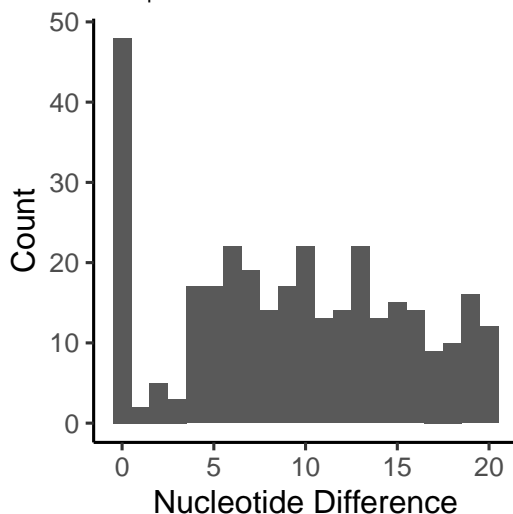
### IGHV4-31\*02

84 sequences assigned  
19 (22.6%) exact matches, in which:  
18 unique CDR3  
4 unique J



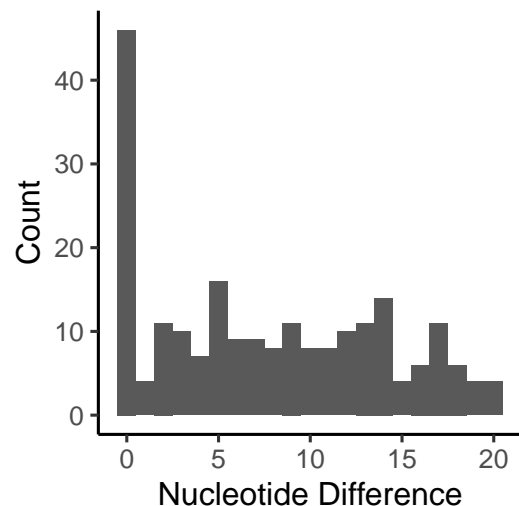
### IGHV4-38-2\*02

355 sequences assigned  
48 (13.5%) exact matches, in which:  
45 unique CDR3  
6 unique J



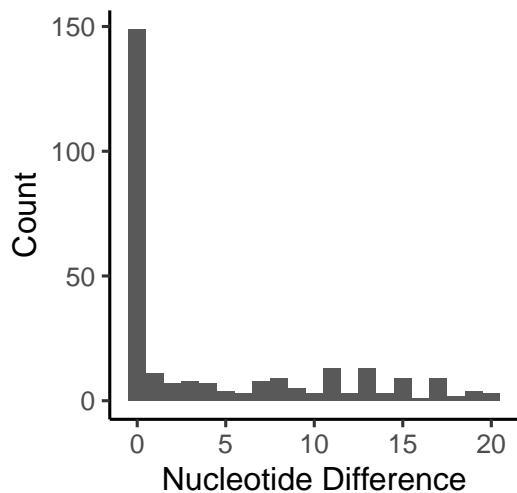
### IGHV4-61\*09\_C163T\_T16

243 sequences assigned  
46 (18.9%) exact matches, in which:  
40 unique CDR3  
4 unique J



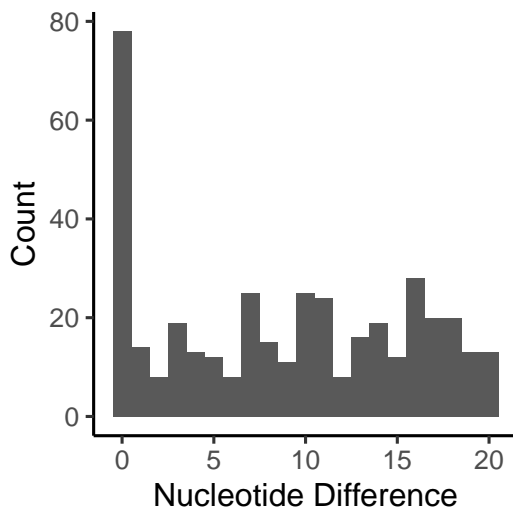
### IGHV4-34\*01\_02

303 sequences assigned  
149 (49.2%) exact matches, in which:  
142 unique CDR3  
7 unique J



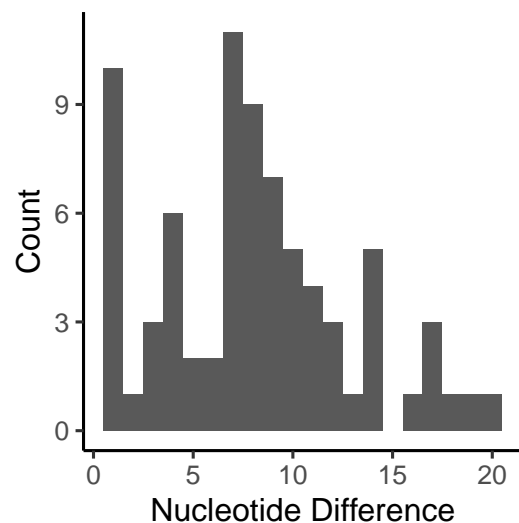
### IGHV4-39\*07

558 sequences assigned  
78 (14%) exact matches, in which:  
71 unique CDR3  
5 unique J



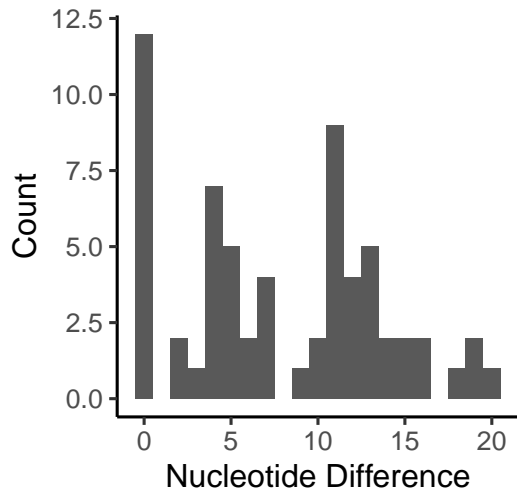
### IGHV5-51\*07

78 sequences assigned  
No exact matches.



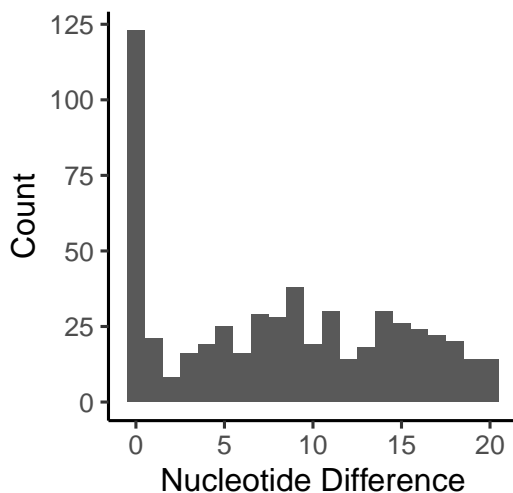
### IGHV4-38-2\*01

73 sequences assigned  
12 (16.4%) exact matches, in which:  
12 unique CDR3  
3 unique J



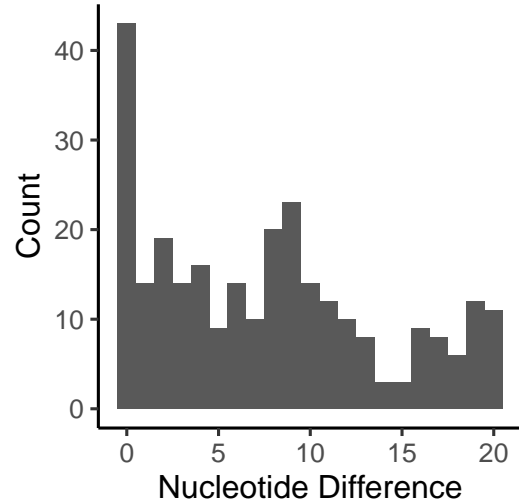
### IGHV4-59\*11

616 sequences assigned  
123 (20%) exact matches, in which:  
118 unique CDR3  
7 unique J



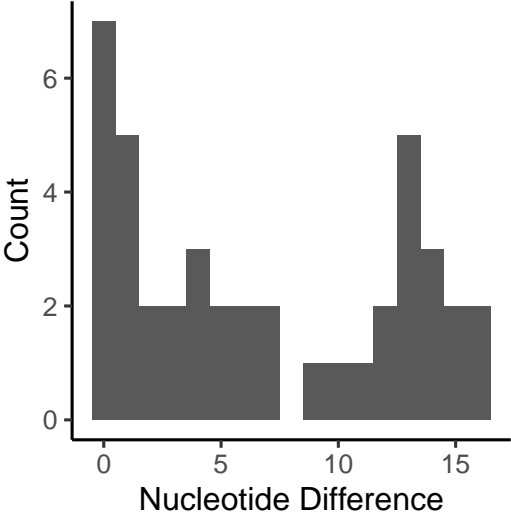
### IGHV5-51\*01\_03

329 sequences assigned  
43 (13.1%) exact matches, in which:  
42 unique CDR3  
6 unique J



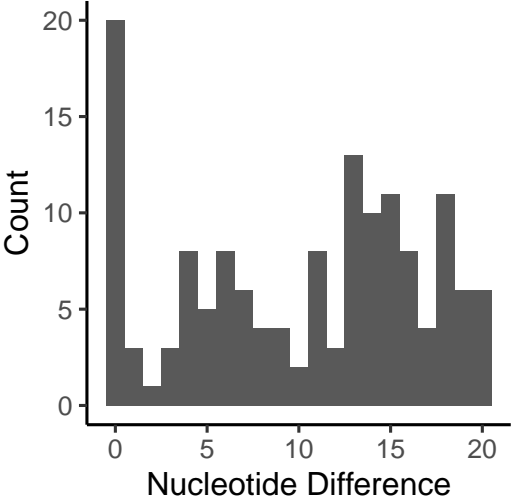
# IGHV6-1\*01\_02

44 sequences assigned  
7 (15.9%) exact matches, in which:  
7 unique CDR3  
4 unique J



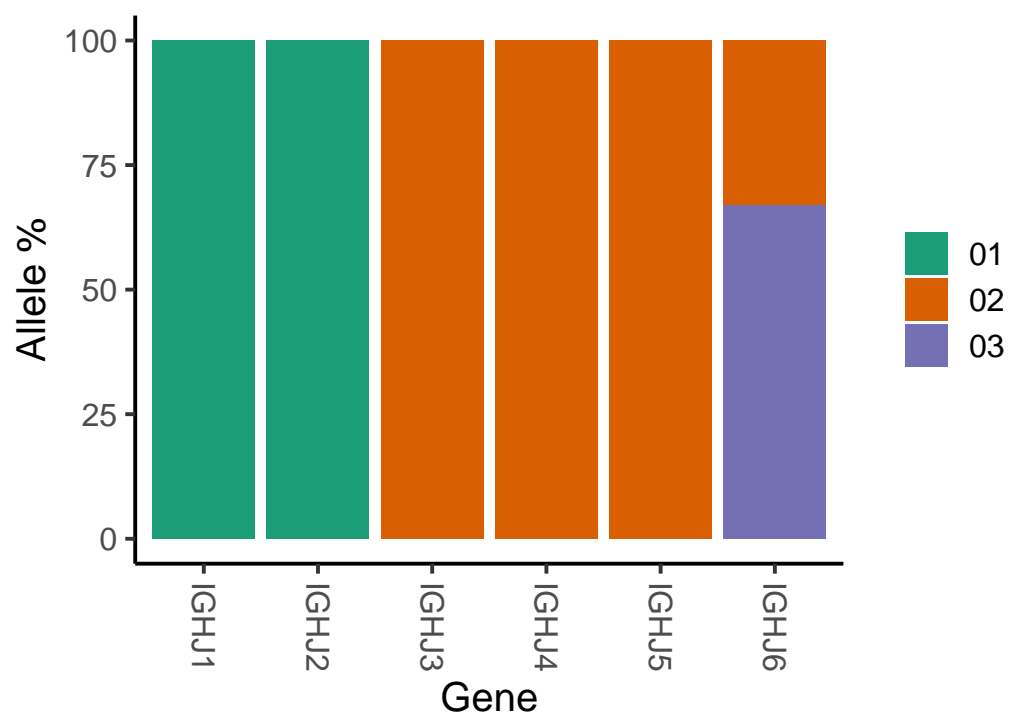
# IGHV7-4-1\*02

172 sequences assigned  
20 (11.6%) exact matches, in which:  
20 unique CDR3  
4 unique J

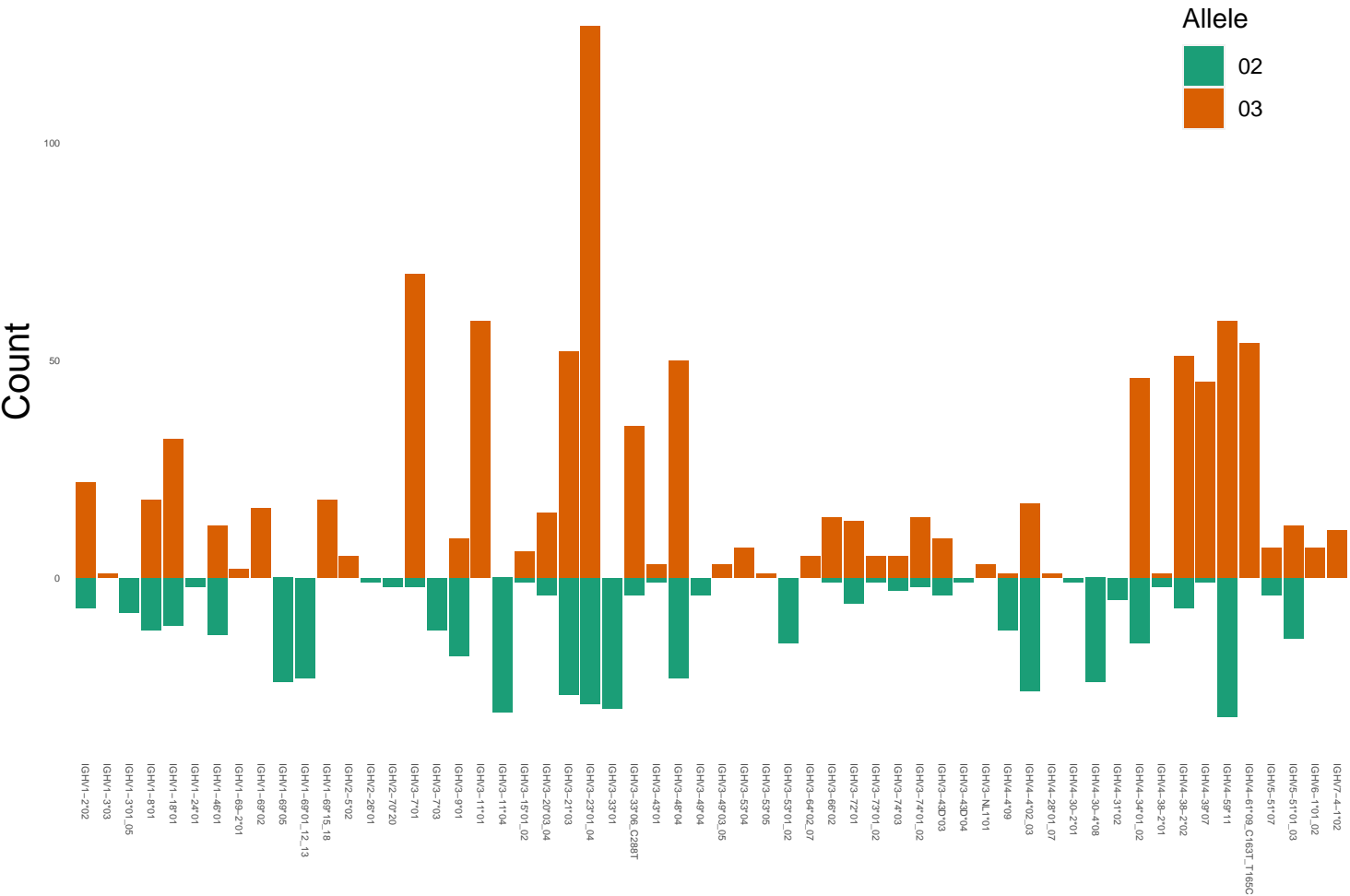




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.