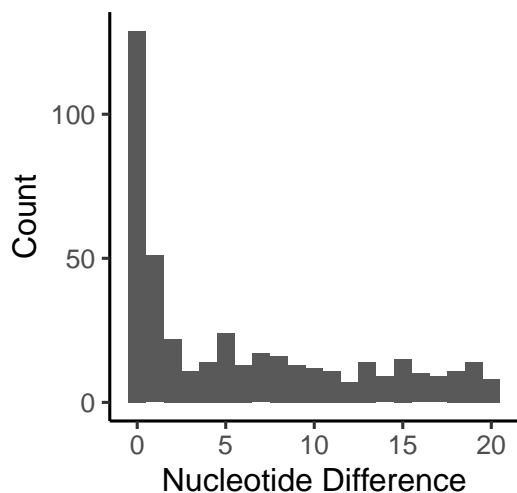


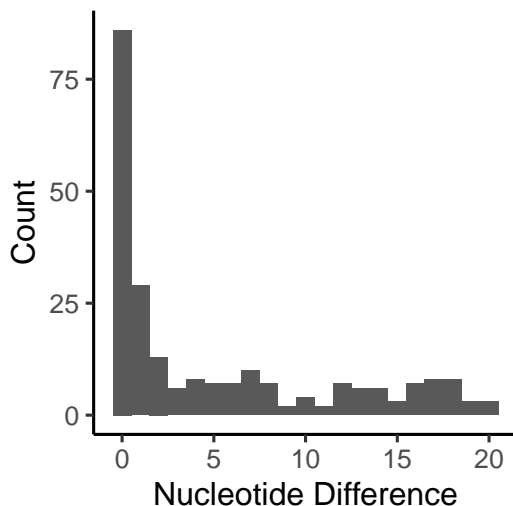
### IGHV1-2\*02

589 sequences assigned  
129 (21.9%) exact matches, in which:  
129 unique CDR3  
7 unique J



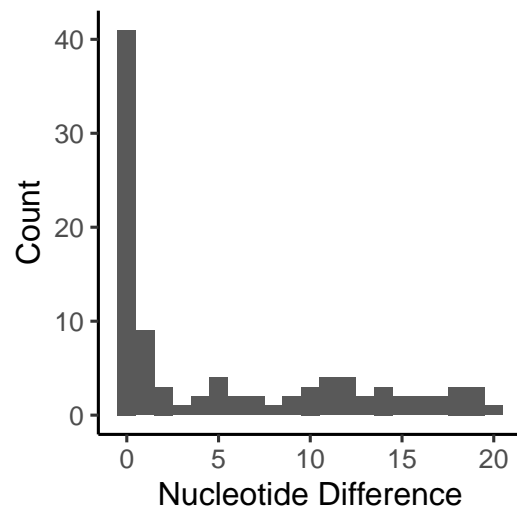
### IGHV1-18\*01

299 sequences assigned  
86 (28.8%) exact matches, in which:  
84 unique CDR3  
6 unique J



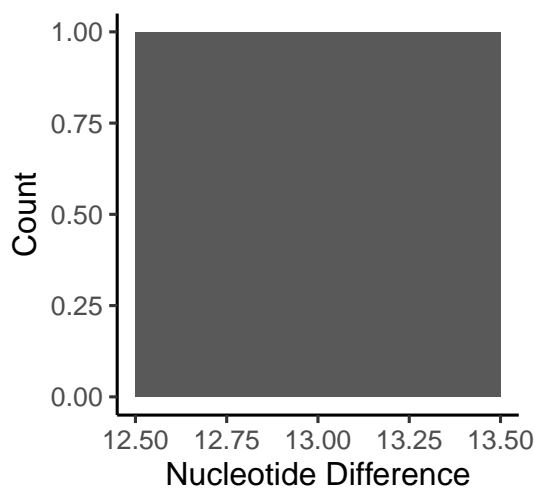
### IGHV1-46\*01

139 sequences assigned  
41 (29.5%) exact matches, in which:  
40 unique CDR3  
4 unique J



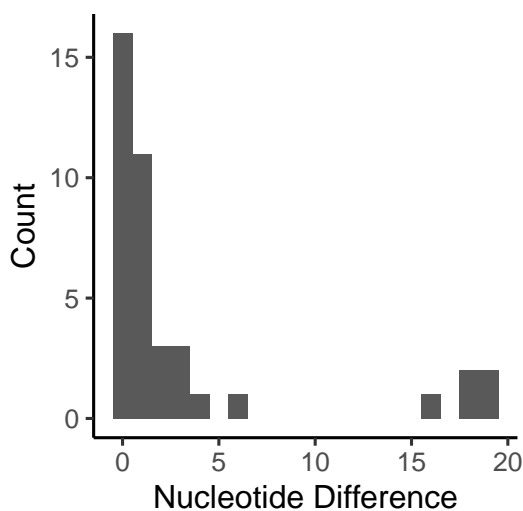
### IGHV1-3\*01

2 sequences assigned  
No exact matches.



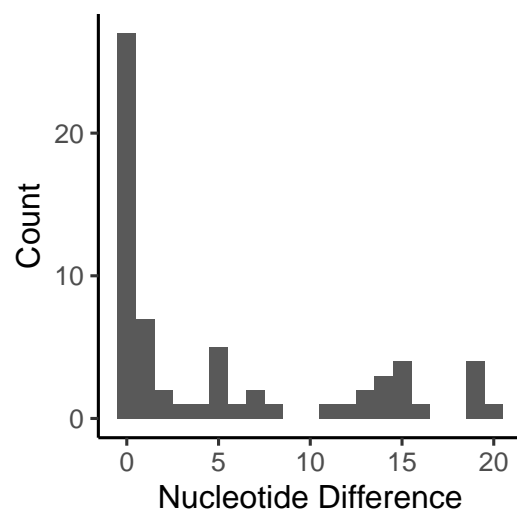
### IGHV1-24\*01

44 sequences assigned  
16 (36.4%) exact matches, in which:  
16 unique CDR3  
6 unique J



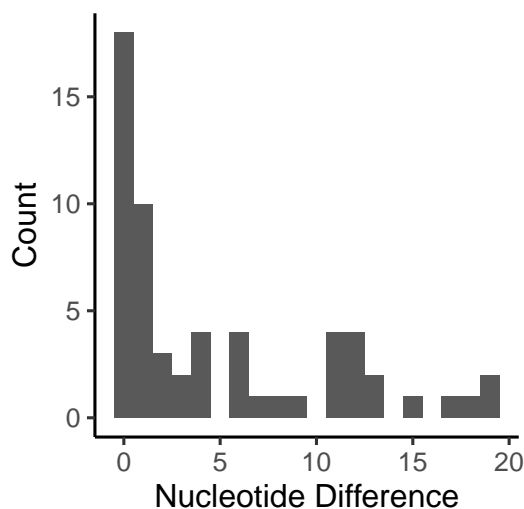
### IGHV1-46\*03

82 sequences assigned  
27 (32.9%) exact matches, in which:  
27 unique CDR3  
6 unique J



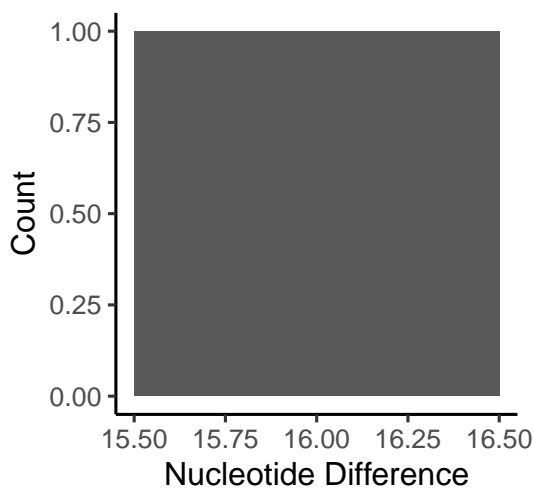
### IGHV1-8\*03

74 sequences assigned  
18 (24.3%) exact matches, in which:  
18 unique CDR3  
4 unique J



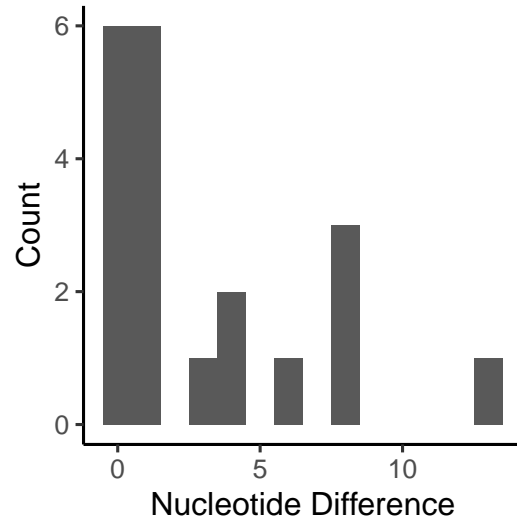
### IGHV1-45\*02

2 sequences assigned  
No exact matches.



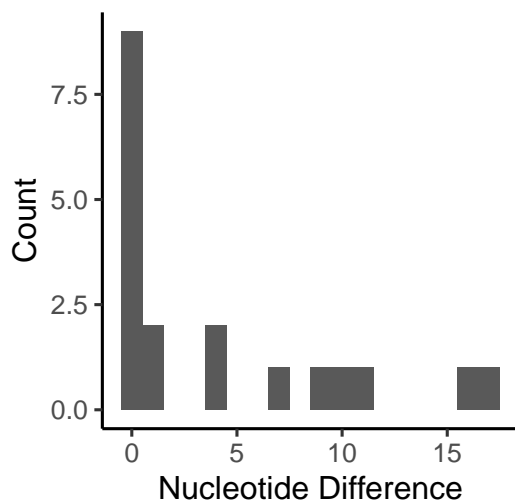
### IGHV1-58\*02

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



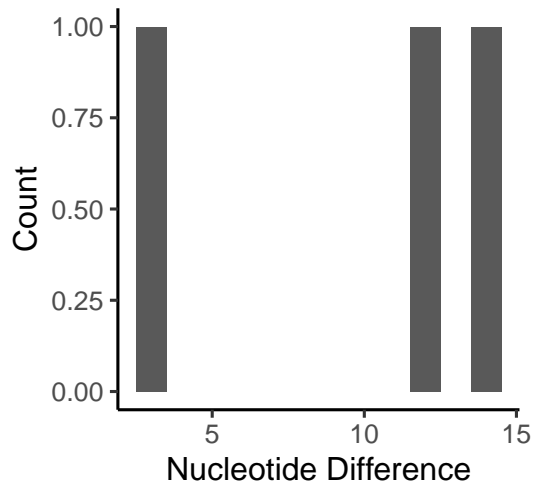
### IGHV1-69-2\*01

20 sequences assigned  
9 (45%) exact matches, in which:  
9 unique CDR3  
4 unique J



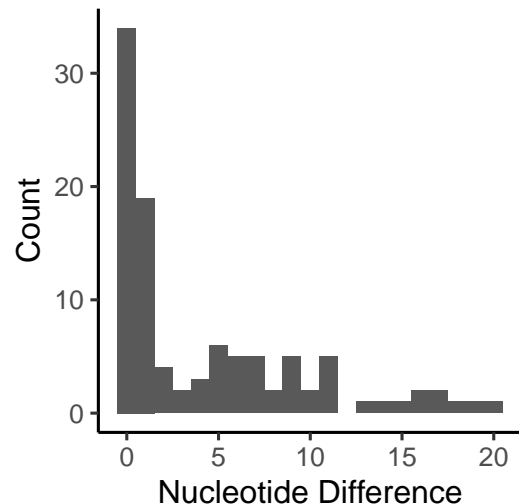
### IGHV1-69D\*01

6 sequences assigned  
No exact matches.



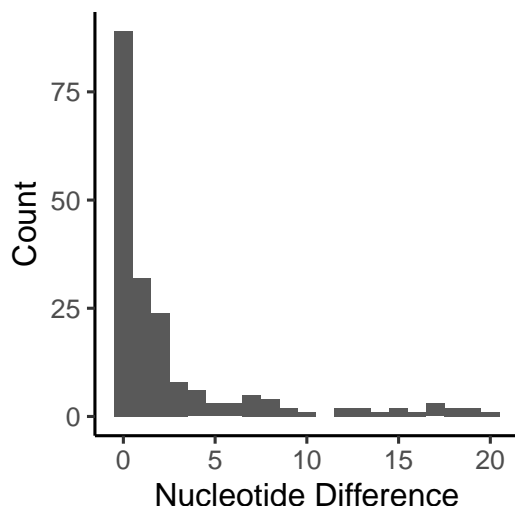
### IGHV2-26\*01

111 sequences assigned  
34 (30.6%) exact matches, in which:  
32 unique CDR3  
5 unique J



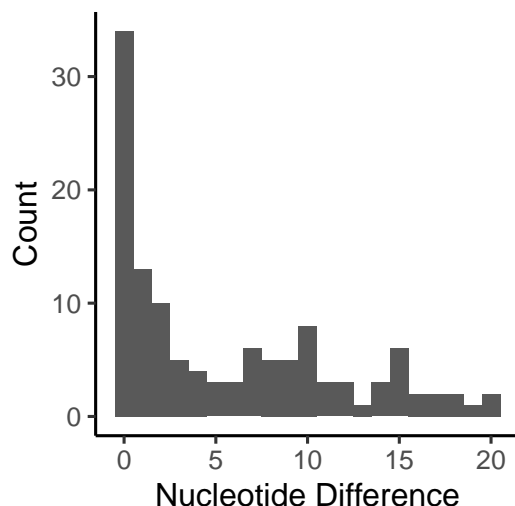
### IGHV1-69\*04

235 sequences assigned  
89 (37.9%) exact matches, in which:  
89 unique CDR3  
7 unique J



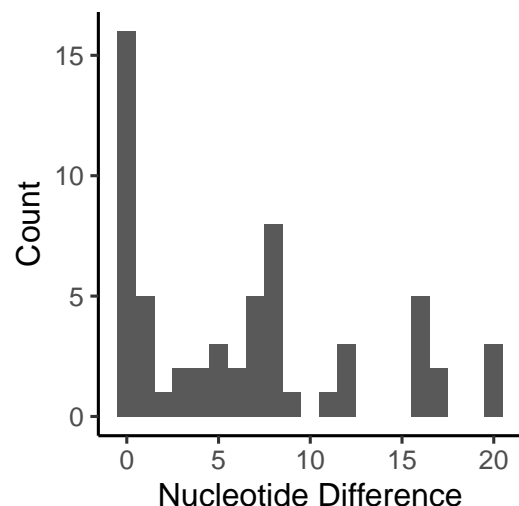
### IGHV2-5\*01

165 sequences assigned  
34 (20.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



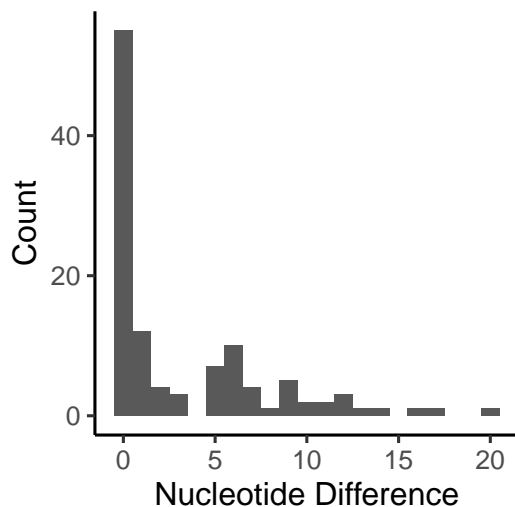
### IGHV2-70\*15

65 sequences assigned  
16 (24.6%) exact matches, in which:  
16 unique CDR3  
4 unique J



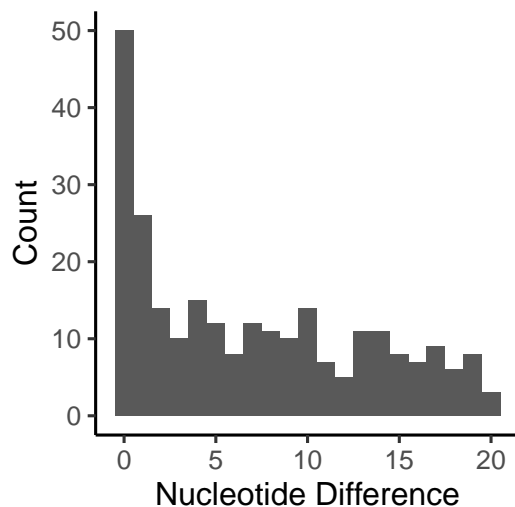
### IGHV1-69\*12

136 sequences assigned  
55 (40.4%) exact matches, in which:  
55 unique CDR3  
5 unique J



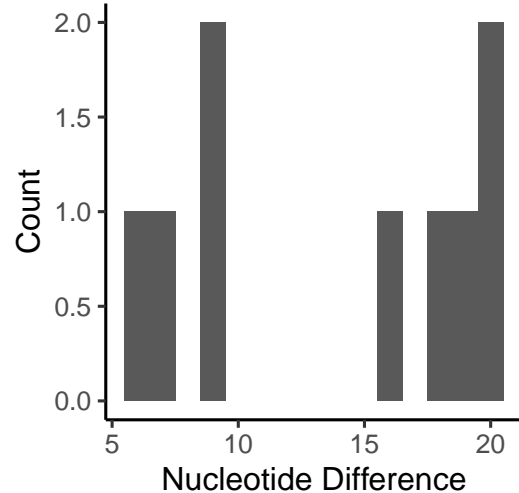
### IGHV2-5\*02

309 sequences assigned  
50 (16.2%) exact matches, in which:  
49 unique CDR3  
5 unique J



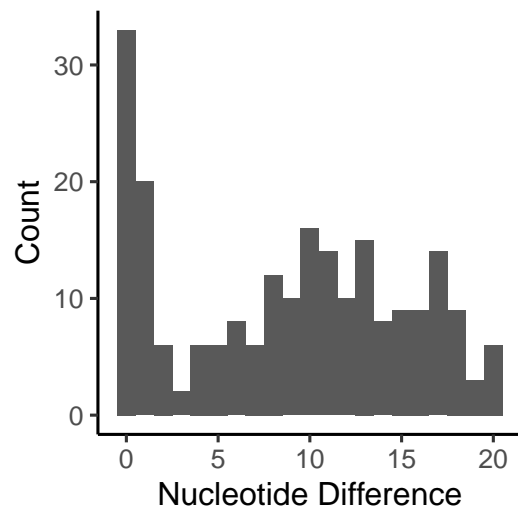
### IGHV2-70\*17

10 sequences assigned  
No exact matches.



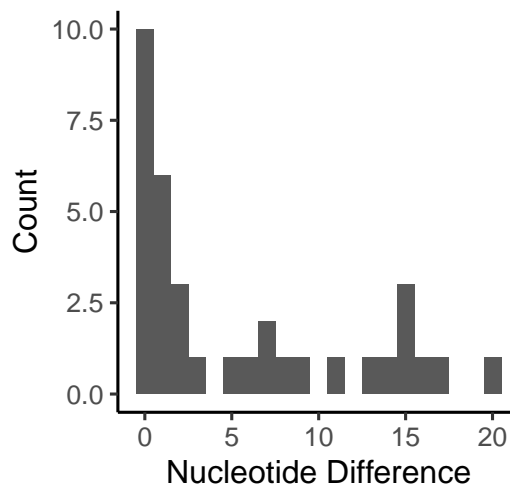
### IGHV3-7\*01

296 sequences assigned  
33 (11.1%) exact matches, in which:  
33 unique CDR3  
5 unique J



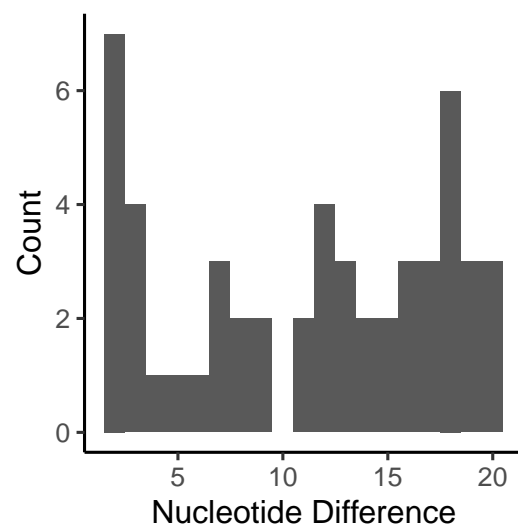
### IGHV3-9\*03

36 sequences assigned  
10 (27.8%) exact matches, in which:  
10 unique CDR3  
3 unique J



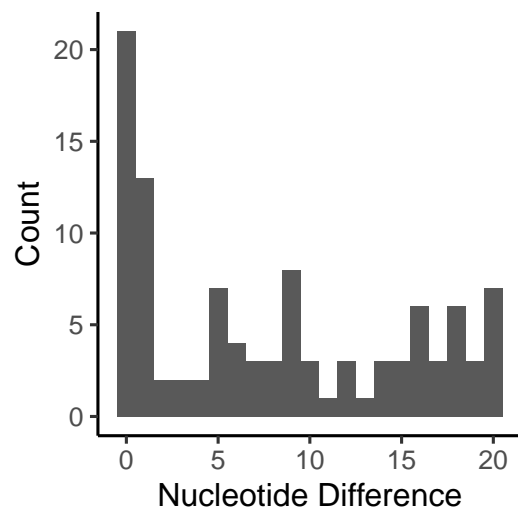
### IGHV3-13\*01

71 sequences assigned  
No exact matches.



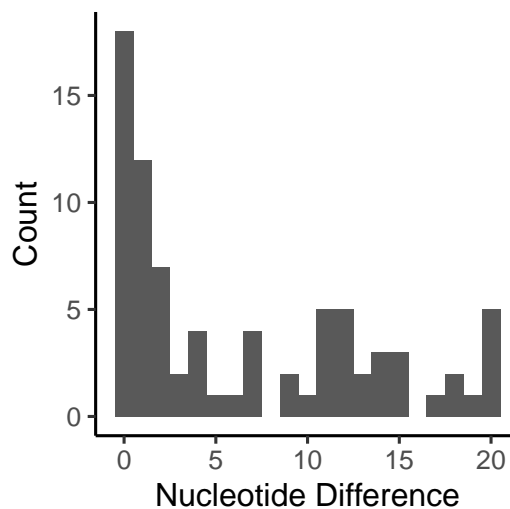
### IGHV3-7\*04

137 sequences assigned  
21 (15.3%) exact matches, in which:  
21 unique CDR3  
5 unique J



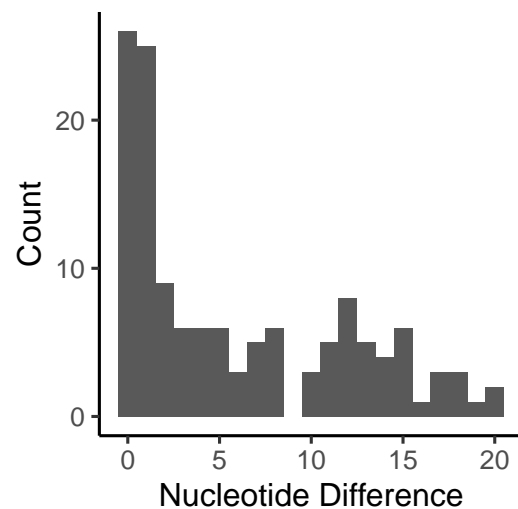
### IGHV3-11\*04

111 sequences assigned  
18 (16.2%) exact matches, in which:  
18 unique CDR3  
5 unique J



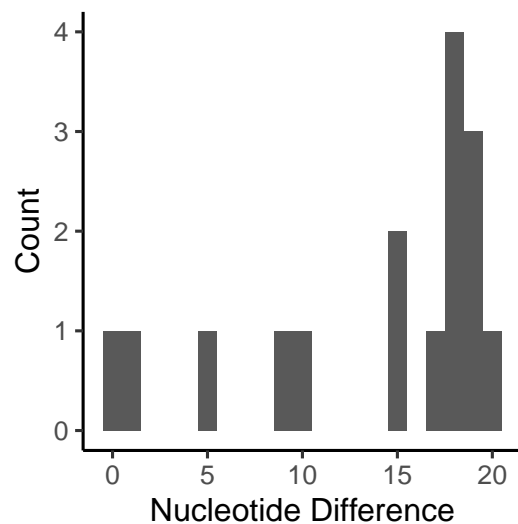
### IGHV3-15\*01

145 sequences assigned  
26 (17.9%) exact matches, in which:  
25 unique CDR3  
5 unique J



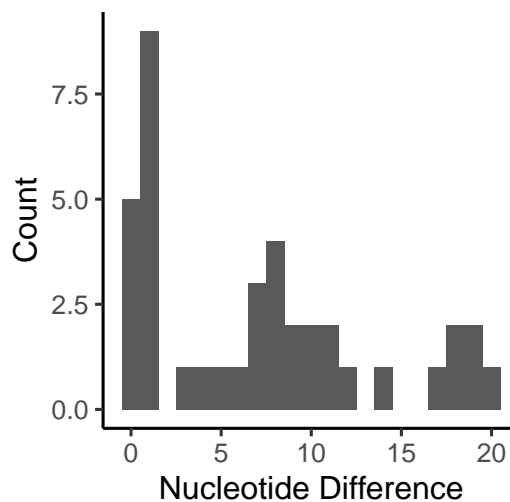
### IGHV3-9\*01

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



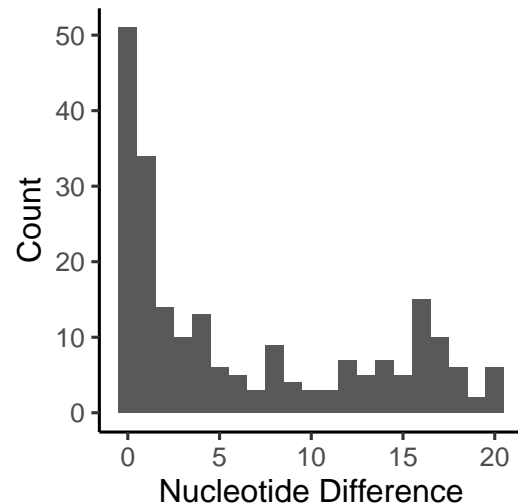
### IGHV3-11\*06

47 sequences assigned  
5 (10.6%) exact matches, in which:  
5 unique CDR3  
3 unique J



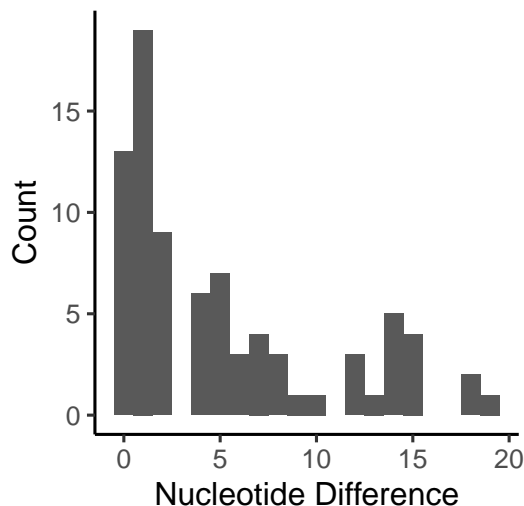
### IGHV3-15\*07

323 sequences assigned  
51 (15.8%) exact matches, in which:  
50 unique CDR3  
5 unique J



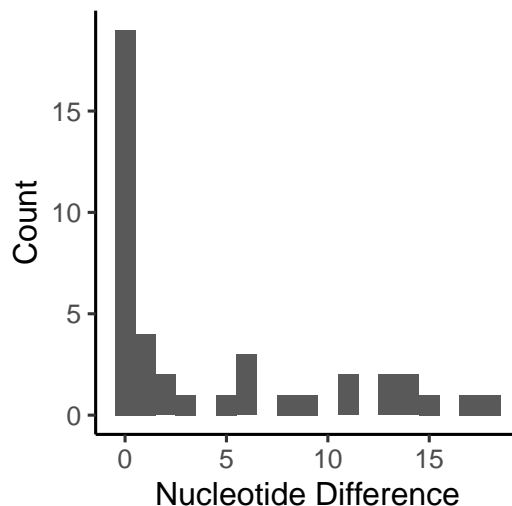
### IGHV3-20\*04

93 sequences assigned  
13 (14%) exact matches, in which:  
13 unique CDR3  
5 unique J



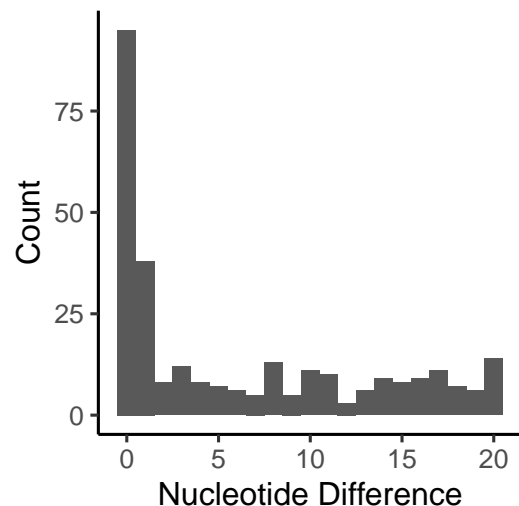
### IGHV3-21\*01\_T154G

48 sequences assigned  
19 (39.6%) exact matches, in which:  
19 unique CDR3  
5 unique J



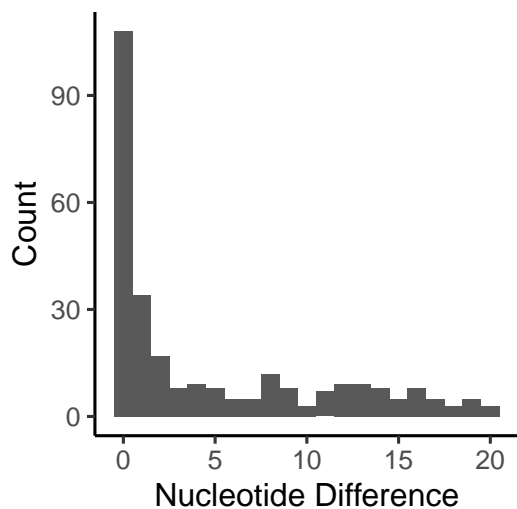
### IGHV3-33\*01

354 sequences assigned  
95 (26.8%) exact matches, in which:  
95 unique CDR3  
5 unique J



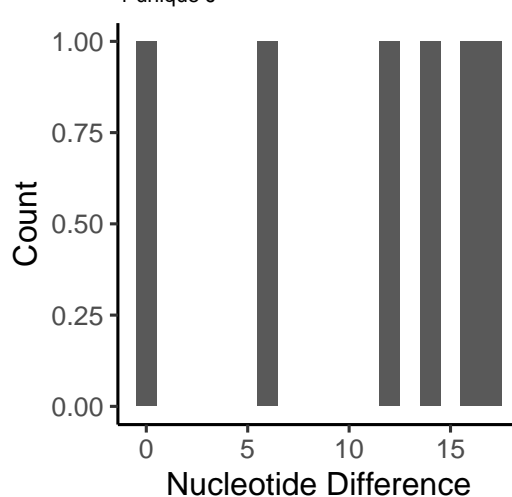
### IGHV3-21\*01

324 sequences assigned  
108 (33.3%) exact matches, in which:  
108 unique CDR3  
7 unique J



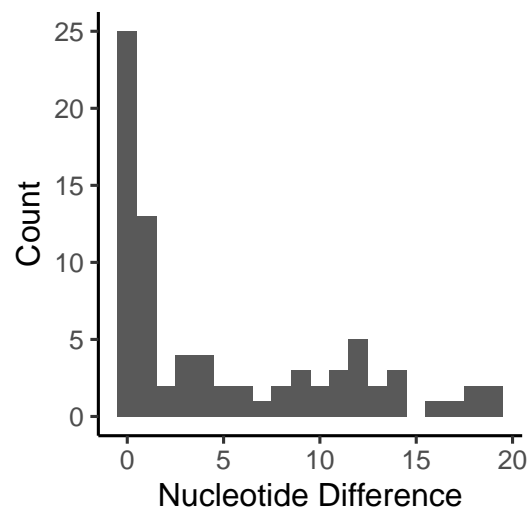
### IGHV3-30-3\*01

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



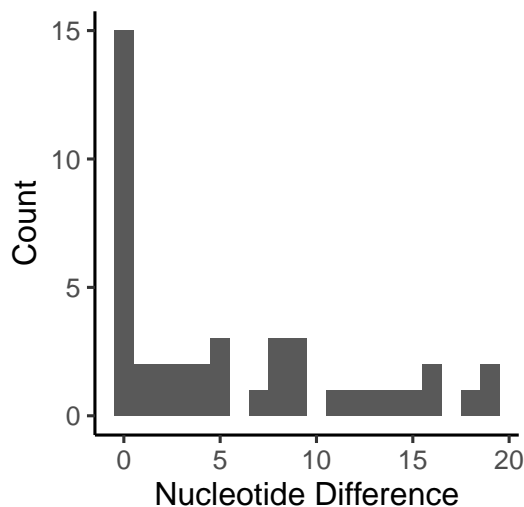
### IGHV3-33\*01\_A152G

95 sequences assigned  
25 (26.3%) exact matches, in which:  
25 unique CDR3  
5 unique J



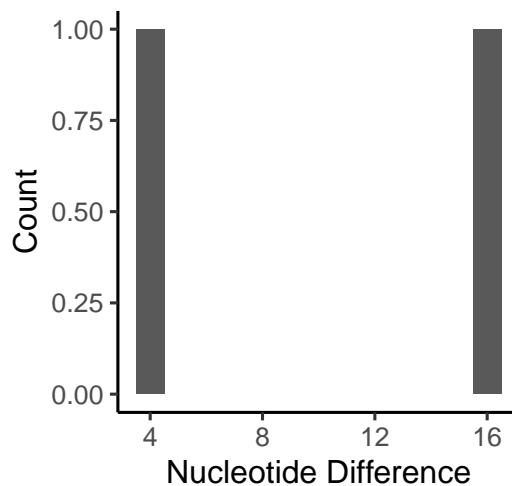
### IGHV3-21\*01\_A152G

51 sequences assigned  
15 (29.4%) exact matches, in which:  
15 unique CDR3  
5 unique J



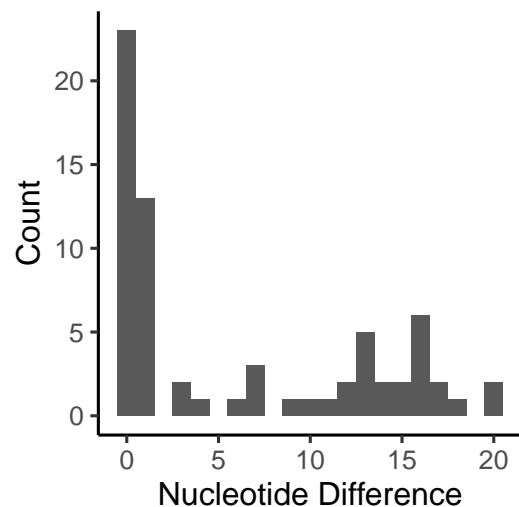
### IGHV3-30-3\*02

3 sequences assigned  
No exact matches.



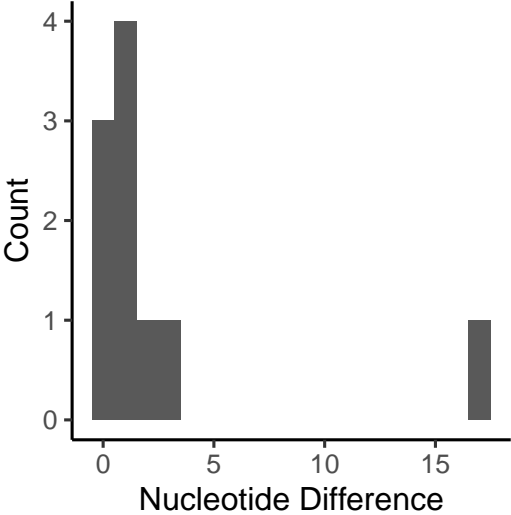
### IGHV3-33\*01\_T154G

81 sequences assigned  
23 (28.4%) exact matches, in which:  
23 unique CDR3  
5 unique J



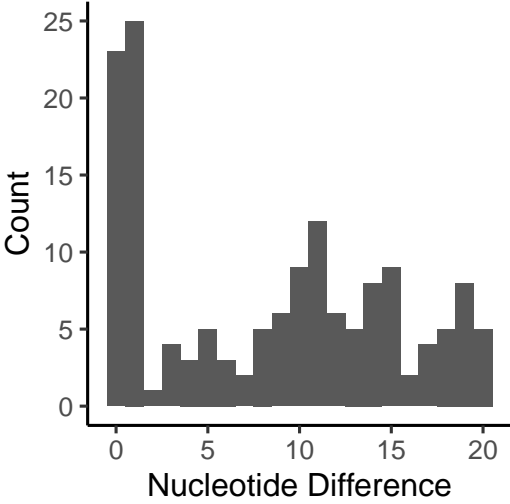
IGHV3-43\*01

13 sequences assigned  
3 (23.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



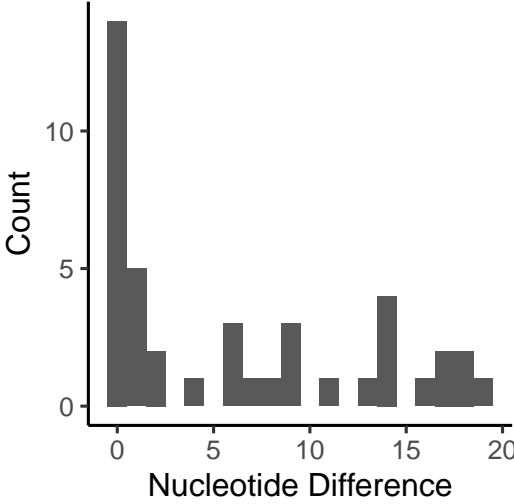
IGHV3-48\*01

191 sequences assigned  
23 (12%) exact matches, in which:  
23 unique CDR3  
4 unique J



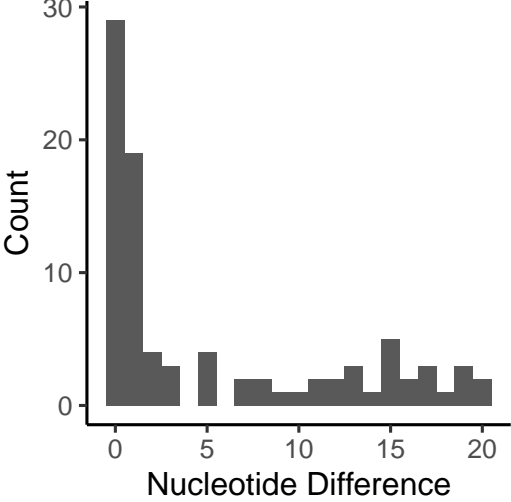
IGHV3-49\*04\_A152G

50 sequences assigned  
14 (28%) exact matches, in which:  
14 unique CDR3  
5 unique J



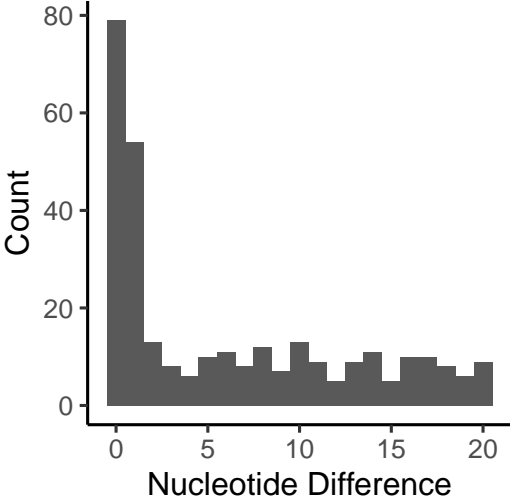
IGHV3-43\*02

107 sequences assigned  
29 (27.1%) exact matches, in which:  
28 unique CDR3  
4 unique J



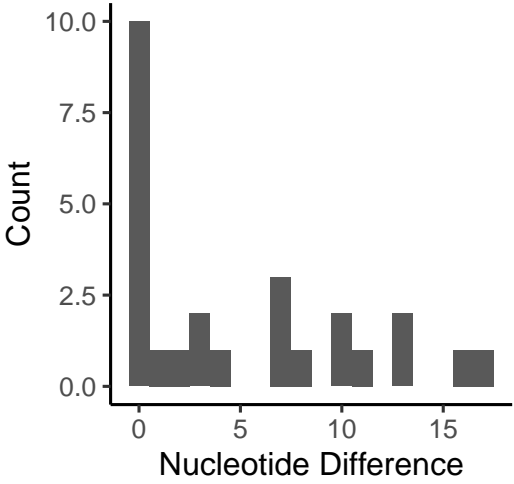
IGHV3-48\*03

361 sequences assigned  
79 (21.9%) exact matches, in which:  
79 unique CDR3  
5 unique J



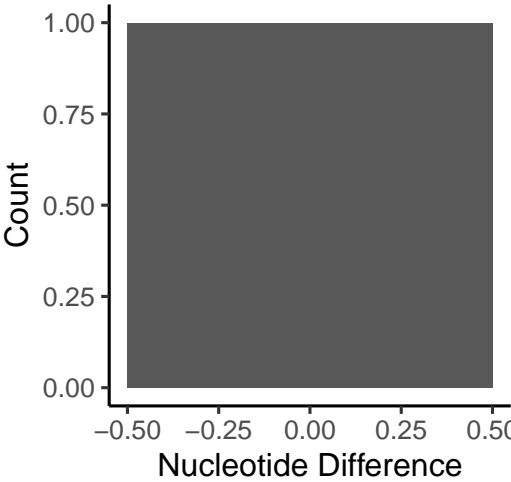
IGHV3-53\*04

29 sequences assigned  
10 (34.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



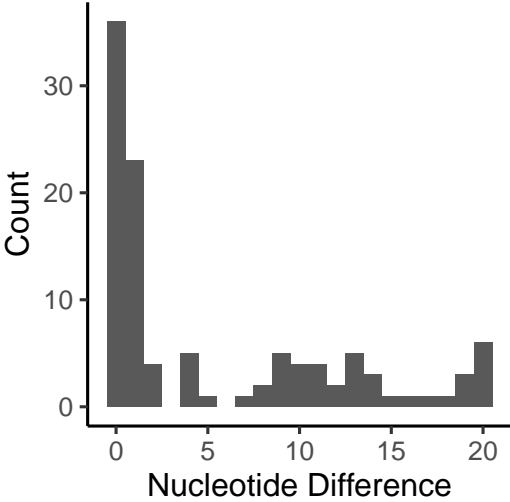
IGHV3-47\*02

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



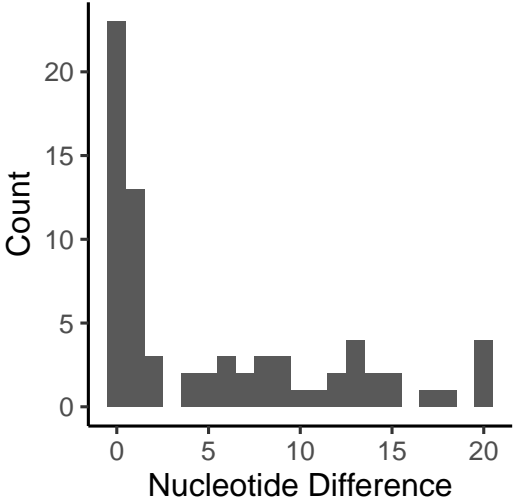
IGHV3-49\*04

124 sequences assigned  
36 (29%) exact matches, in which:  
36 unique CDR3  
6 unique J



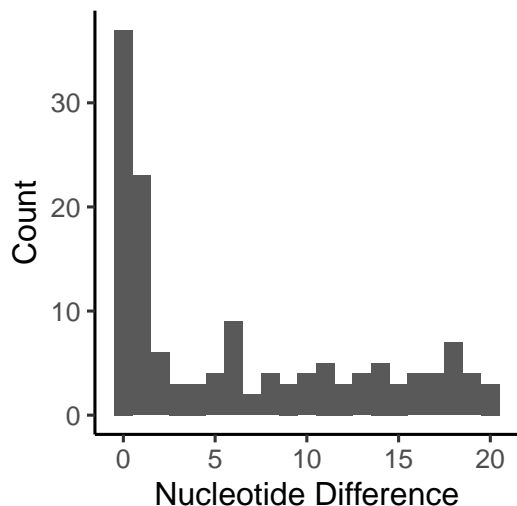
IGHV3-64\*01

80 sequences assigned  
23 (28.8%) exact matches, in which:  
23 unique CDR3  
5 unique J



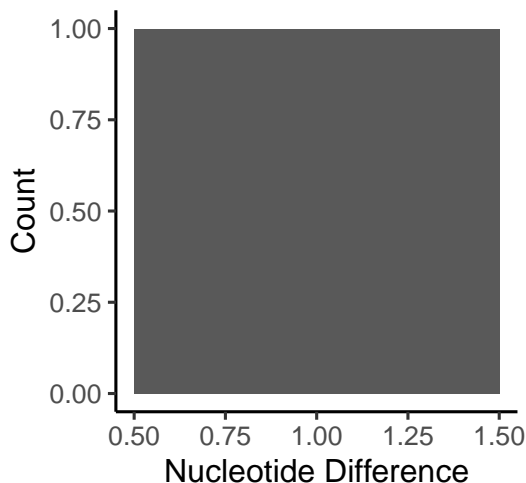
### IGHV3-66\*01

203 sequences assigned  
37 (18.2%) exact matches, in which:  
36 unique CDR3  
5 unique J



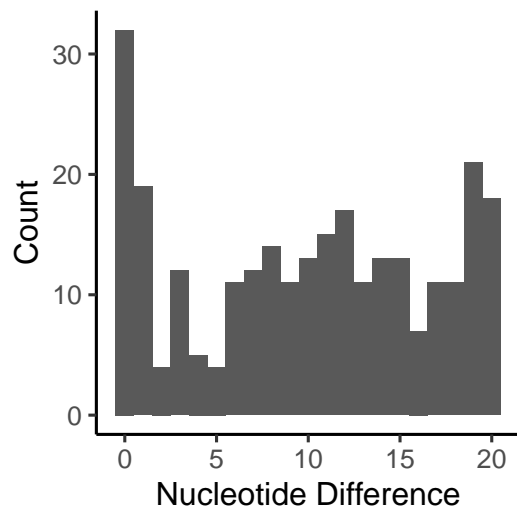
### IGHV3-71\*02

1 sequences assigned  
No exact matches.



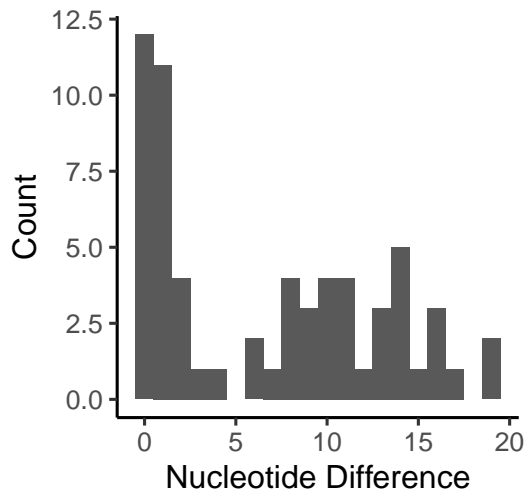
### IGHV3-74\*01

396 sequences assigned  
32 (8.1%) exact matches, in which:  
32 unique CDR3  
5 unique J



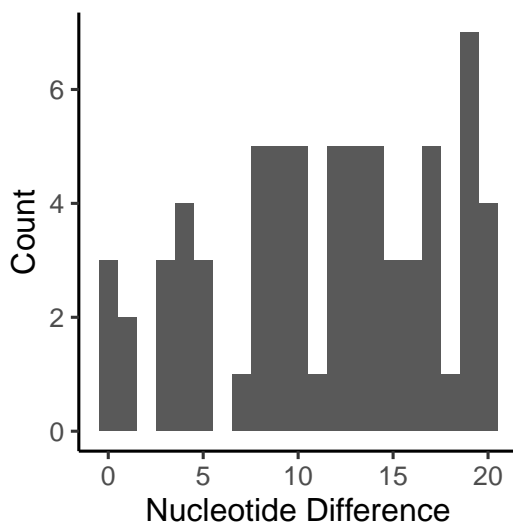
### IGHV3-66\*02

96 sequences assigned  
12 (12.5%) exact matches, in which:  
12 unique CDR3  
5 unique J



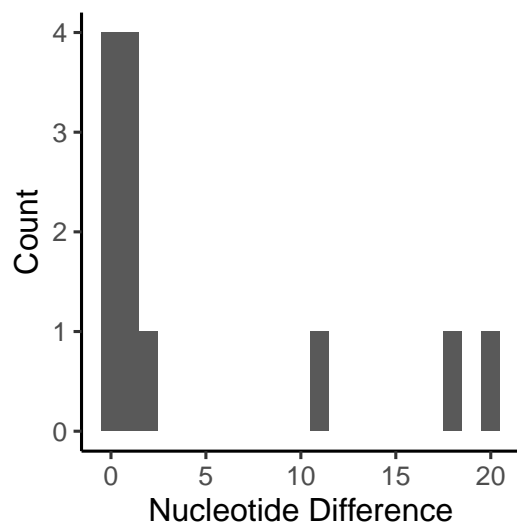
### IGHV3-72\*01

92 sequences assigned  
3 (3.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



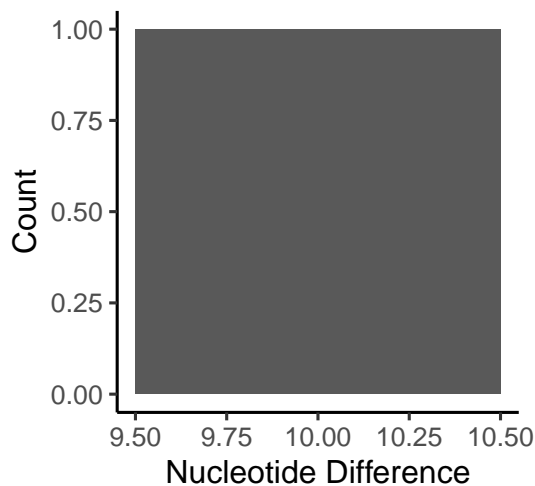
### IGHV3-43D\*03

12 sequences assigned  
4 (33.3%) exact matches, in which:  
4 unique CDR3  
2 unique J



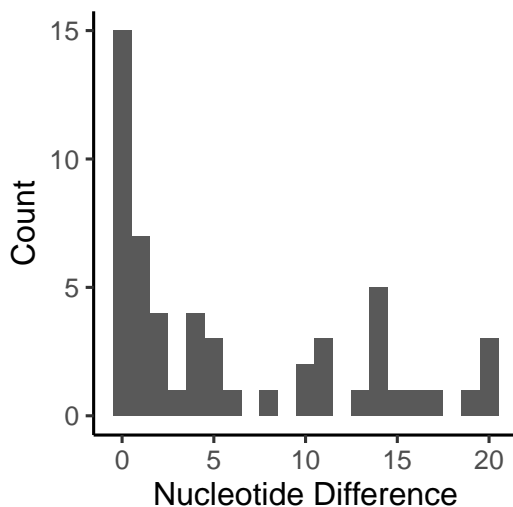
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



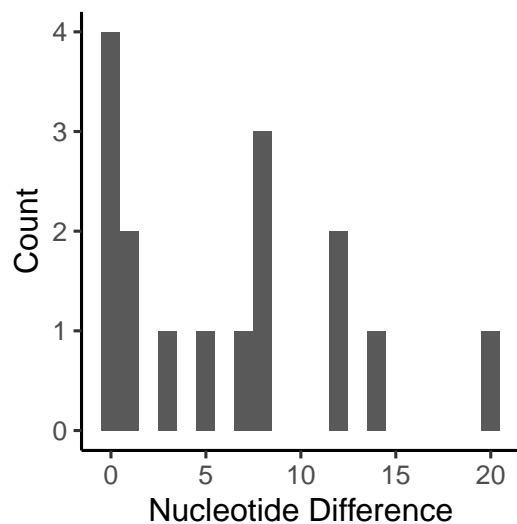
### IGHV3-73\*01

68 sequences assigned  
15 (22.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



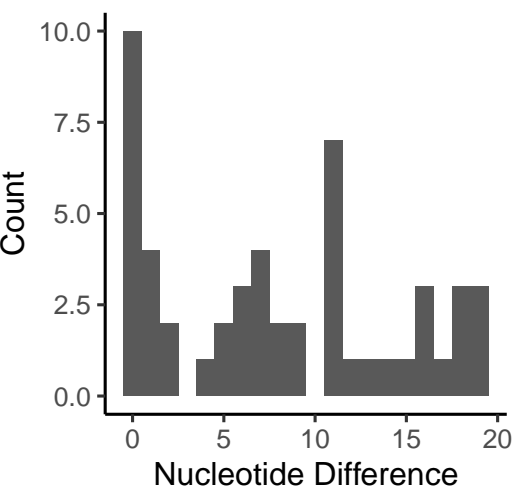
### IGHV3-43D\*04

19 sequences assigned  
4 (21.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



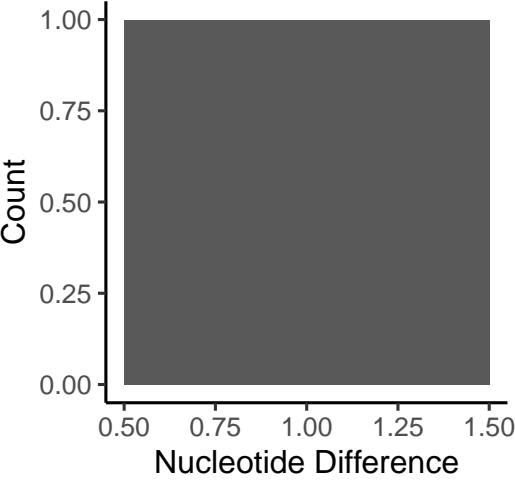
IGHV3-64D\*06

61 sequences assigned  
10 (16.4%) exact matches, in which:  
10 unique CDR3  
3 unique J



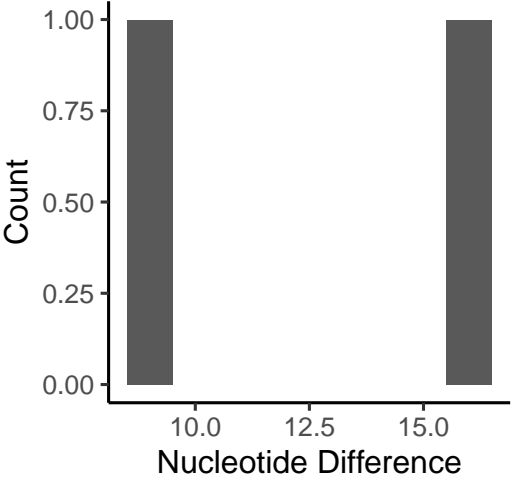
IGHV4-28\*03

2 sequences assigned  
No exact matches.



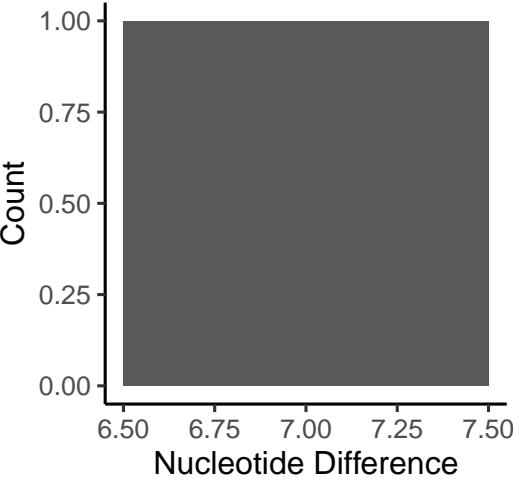
IGHV4-30-2\*05

4 sequences assigned  
No exact matches.



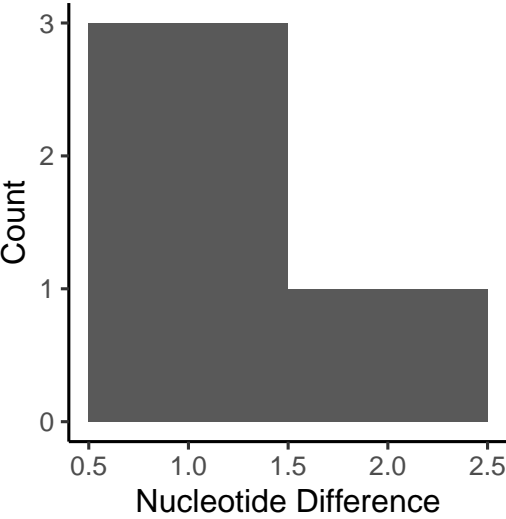
IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



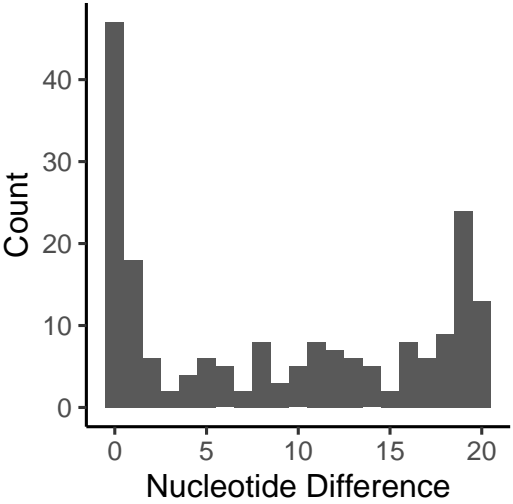
IGHV4-28\*04

4 sequences assigned  
No exact matches.



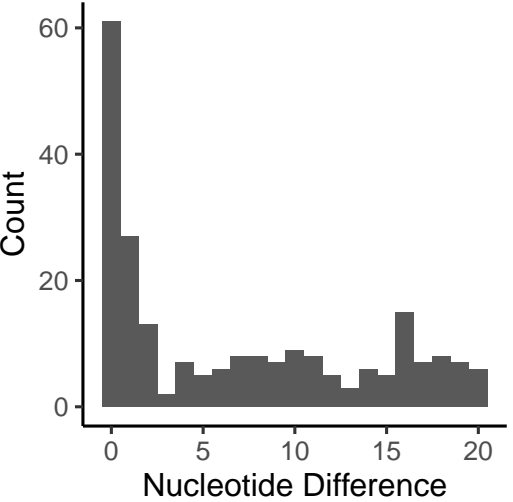
IGHV4-30-4\*08

422 sequences assigned  
47 (11.1%) exact matches, in which:  
47 unique CDR3  
4 unique J



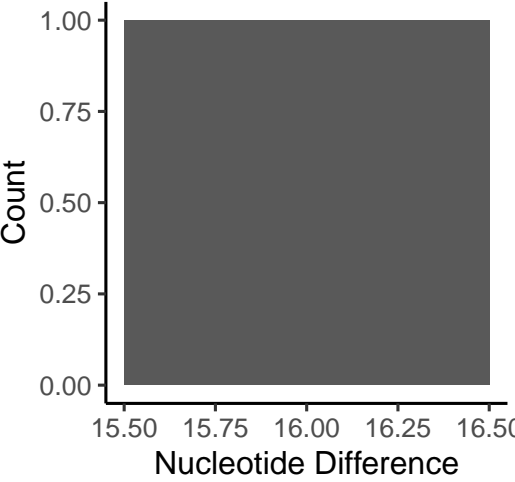
IGHV4-4\*07

474 sequences assigned  
61 (12.9%) exact matches, in which:  
59 unique CDR3  
7 unique J



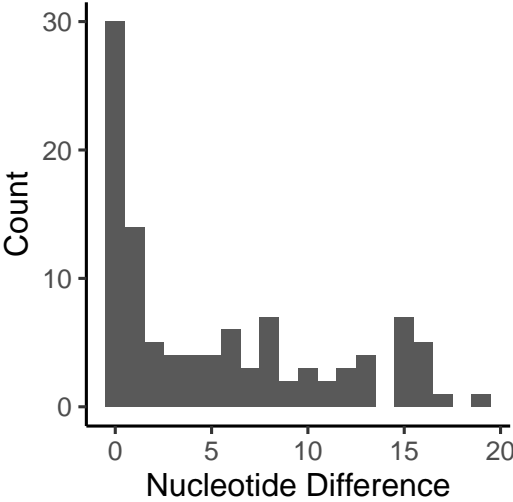
IGHV4-28\*06

1 sequences assigned  
No exact matches.



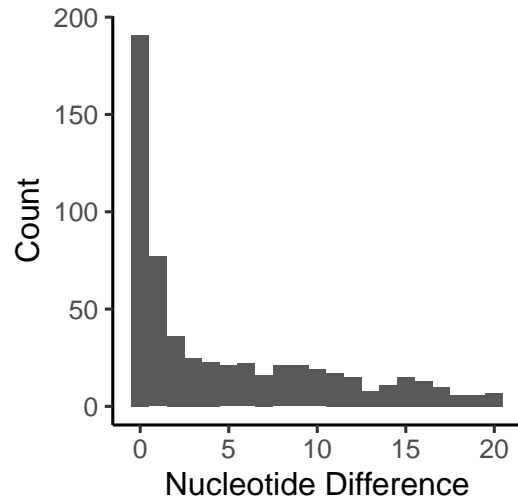
IGHV4-31\*03

139 sequences assigned  
30 (21.6%) exact matches, in which:  
30 unique CDR3  
6 unique J



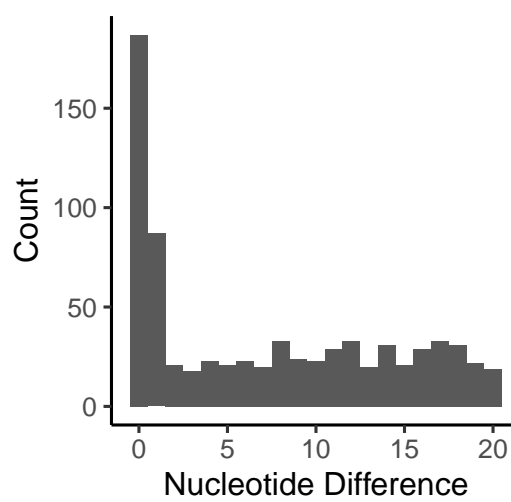
### IGHV4-34\*01

708 sequences assigned  
191 (27%) exact matches, in which:  
190 unique CDR3  
7 unique J



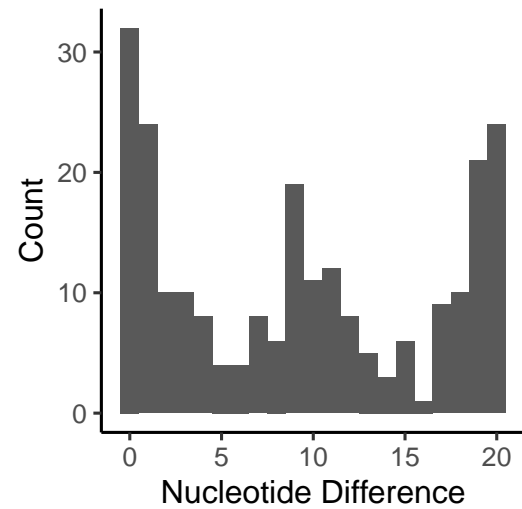
### IGHV4-39\*01

1030 sequences assigned  
187 (18.2%) exact matches, in which:  
187 unique CDR3  
7 unique J



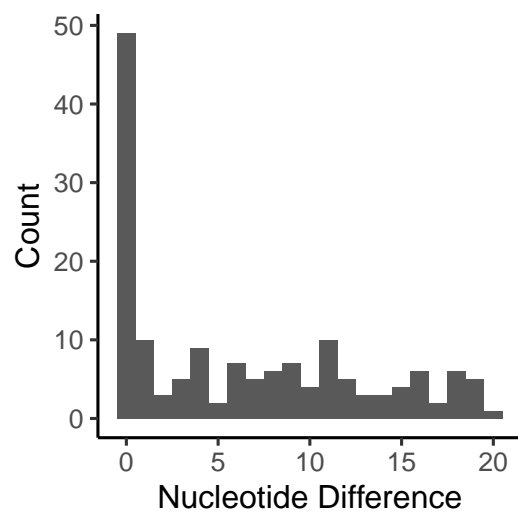
### IGHV4-61\*02

531 sequences assigned  
32 (6%) exact matches, in which:  
32 unique CDR3  
6 unique J



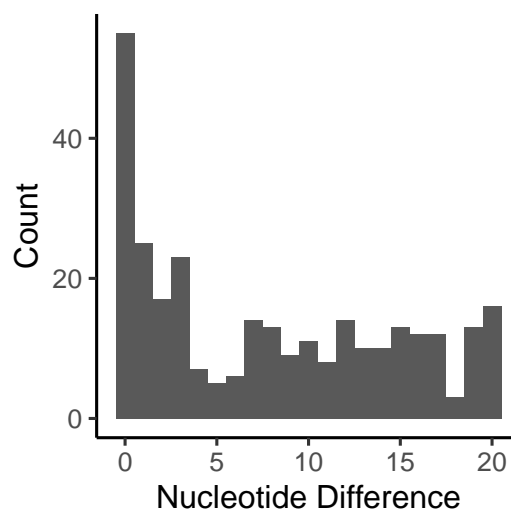
### IGHV4-38-2\*01

174 sequences assigned  
49 (28.2%) exact matches, in which:  
47 unique CDR3  
6 unique J



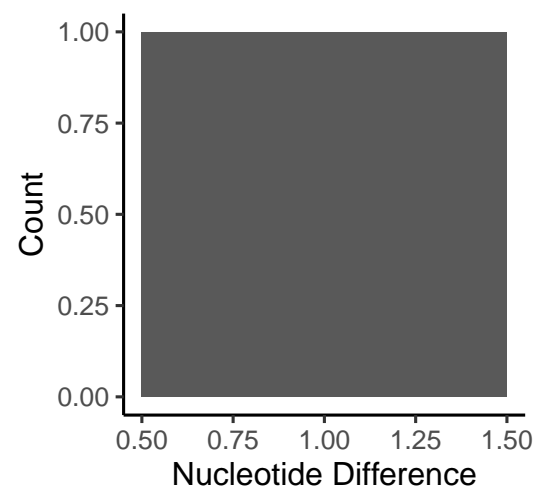
### IGHV4-59\*01

2947 sequences assigned  
55 (1.9%) exact matches, in which:  
55 unique CDR3  
7 unique J



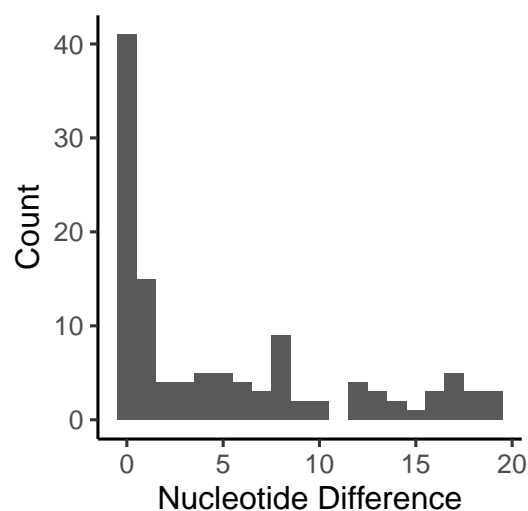
### IGHV1/OR15-2\*01

1 sequences assigned  
No exact matches.



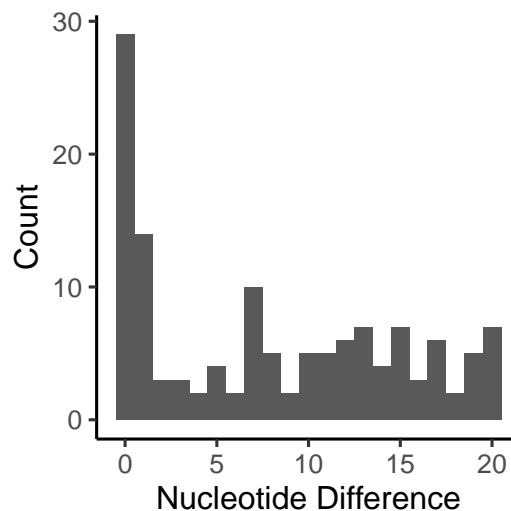
### IGHV4-38-2\*02

159 sequences assigned  
41 (25.8%) exact matches, in which:  
41 unique CDR3  
5 unique J



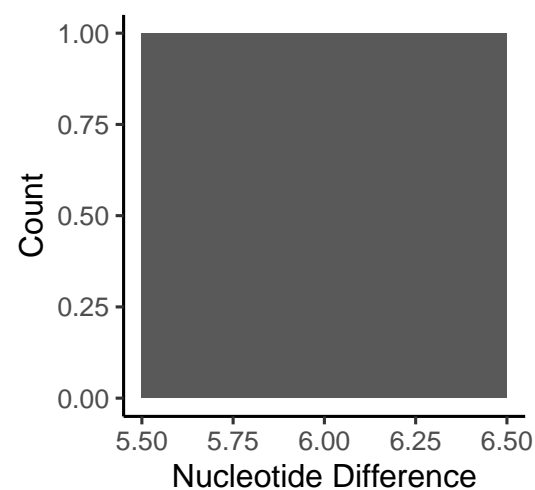
### IGHV4-59\*08

195 sequences assigned  
29 (14.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



### IGHV1/OR15-4\*01

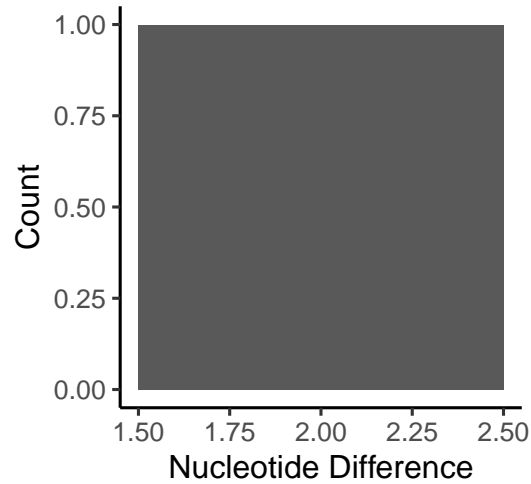
1 sequences assigned  
No exact matches.





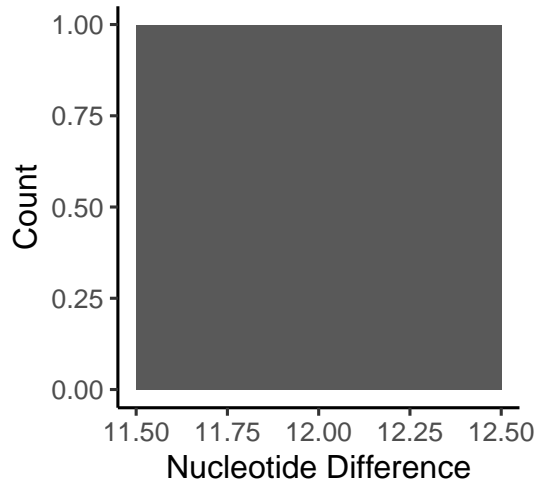
### IGHV3/OR15-7\*05

1 sequences assigned  
No exact matches.



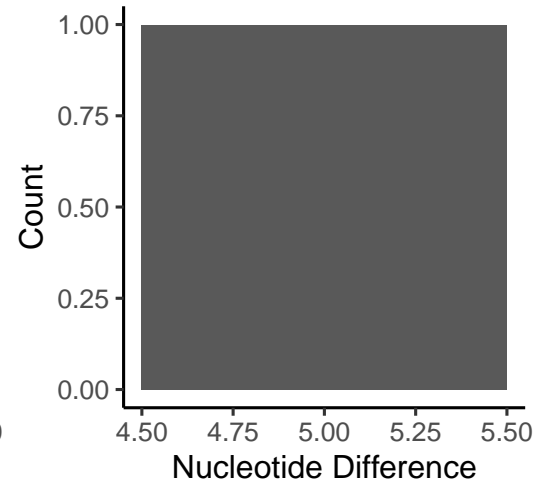
### IGHV5-78\*01

1 sequences assigned  
No exact matches.



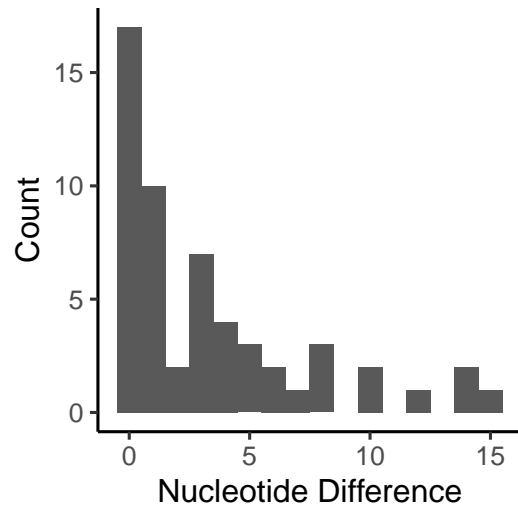
### IGHV3/OR16-9\*01

1 sequences assigned  
No exact matches.



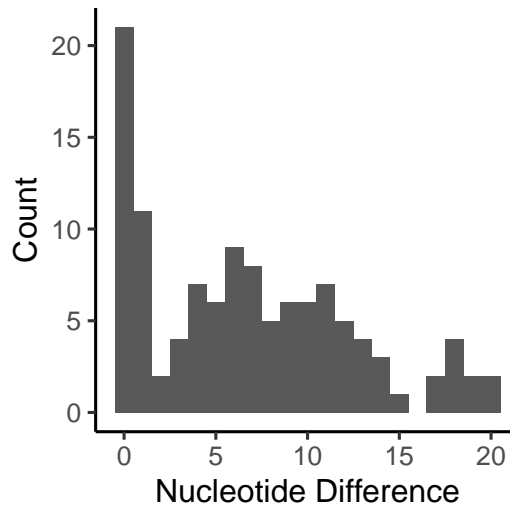
### IGHV5-10-1\*03

61 sequences assigned  
17 (27.9%) exact matches, in which:  
17 unique CDR3  
4 unique J



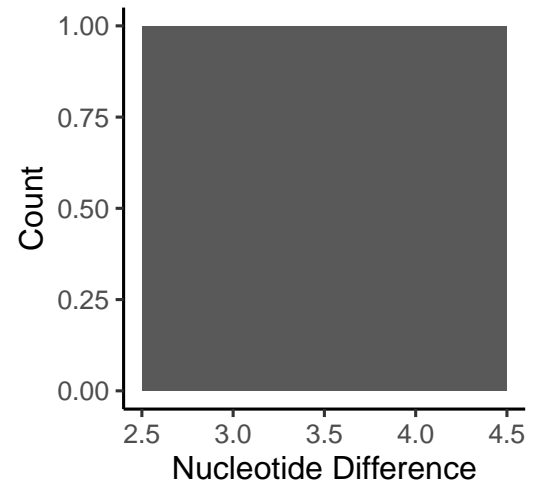
### IGHV6-1\*01

128 sequences assigned  
21 (16.4%) exact matches, in which:  
20 unique CDR3  
6 unique J



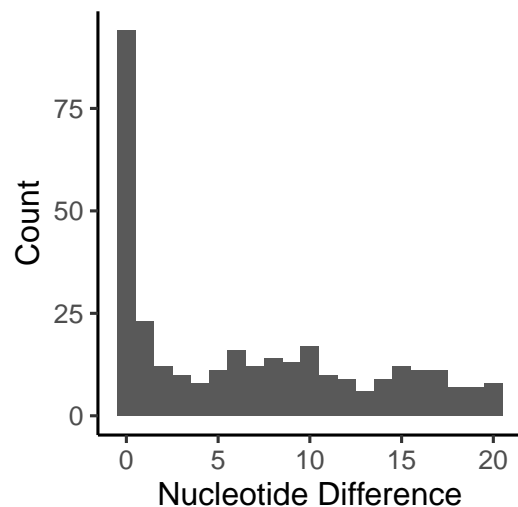
### IGHV7-81\*01

2 sequences assigned  
No exact matches.



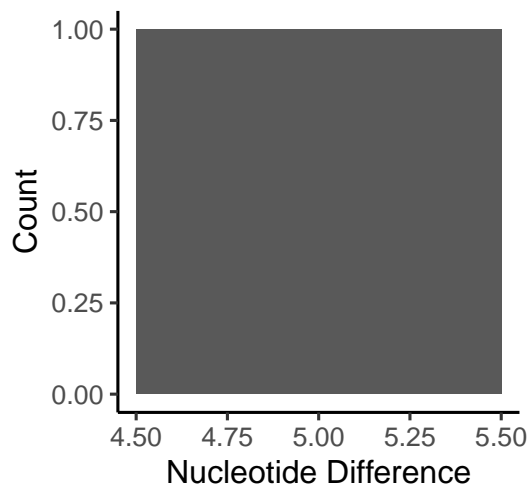
### IGHV5-51\*01

377 sequences assigned  
94 (24.9%) exact matches, in which:  
94 unique CDR3  
7 unique J

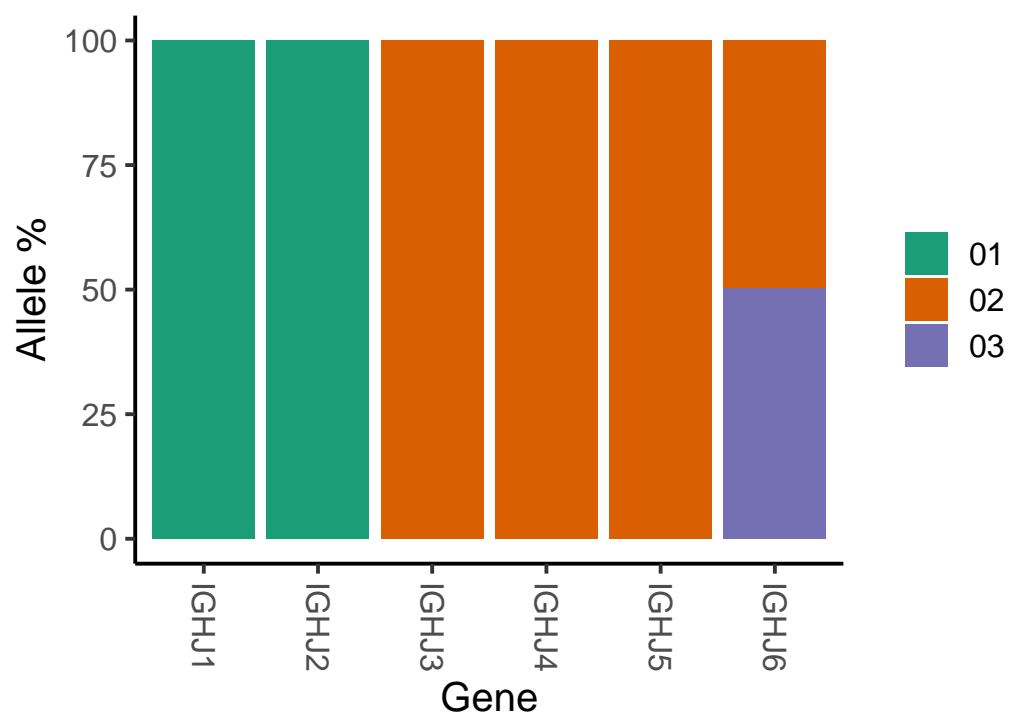


### IGHV3/OR16-6\*02

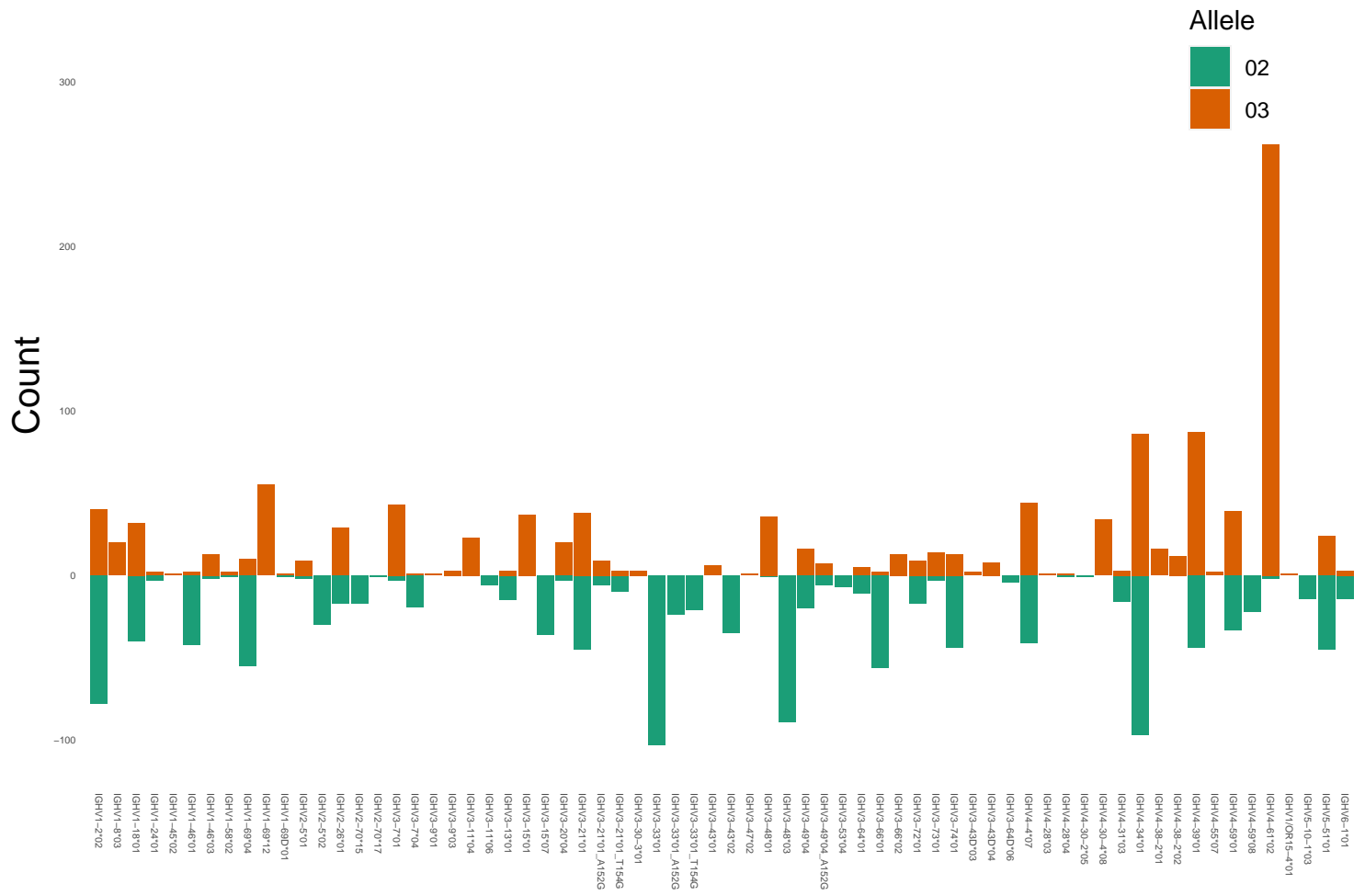
1 sequences assigned  
No exact matches.



Allele Usage



## Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.