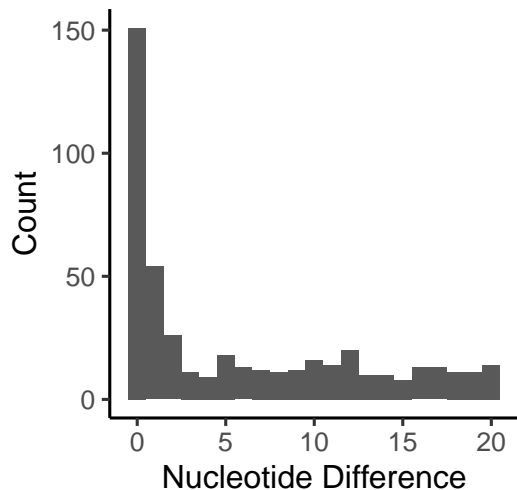


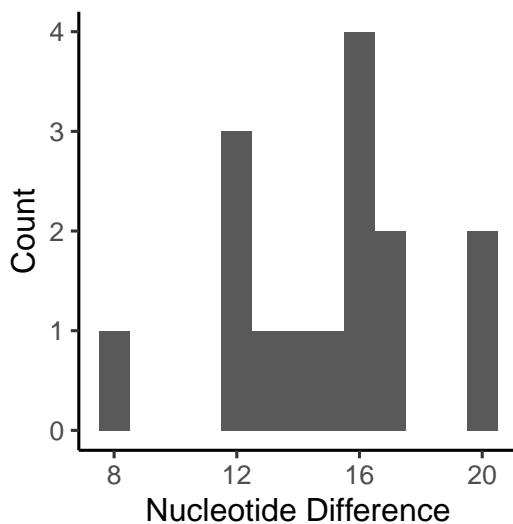
### IGHV1-2\*02

602 sequences assigned  
151 (25.1%) exact matches, in which:  
150 unique CDR3  
6 unique J



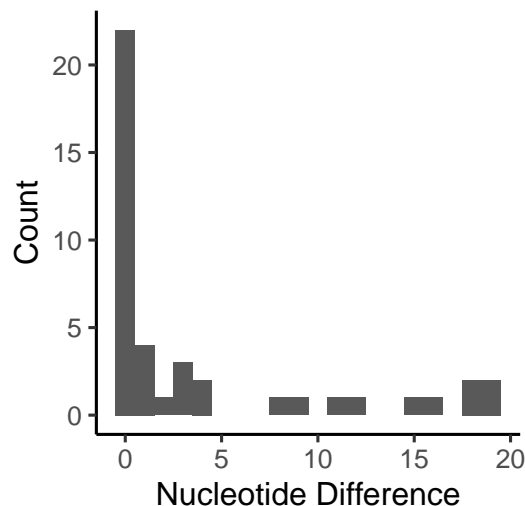
### IGHV1-3\*04

25 sequences assigned  
No exact matches.



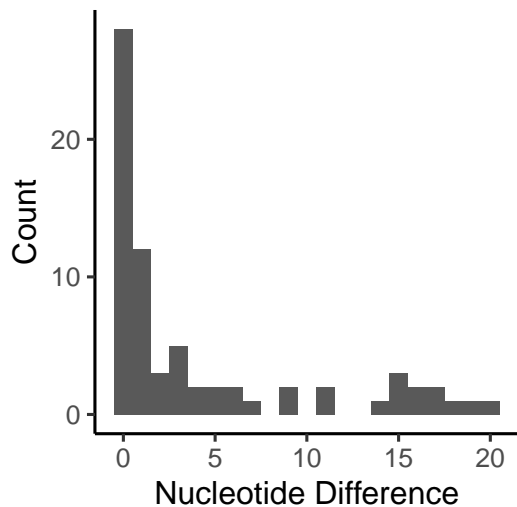
### IGHV1-24\*01

49 sequences assigned  
22 (44.9%) exact matches, in which:  
22 unique CDR3  
5 unique J



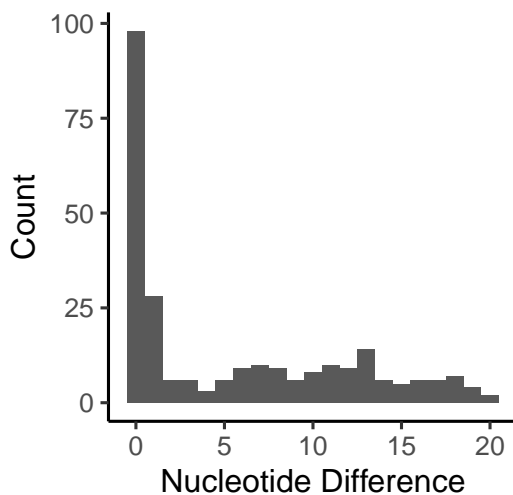
### IGHV1-2\*04

79 sequences assigned  
28 (35.4%) exact matches, in which:  
28 unique CDR3  
4 unique J



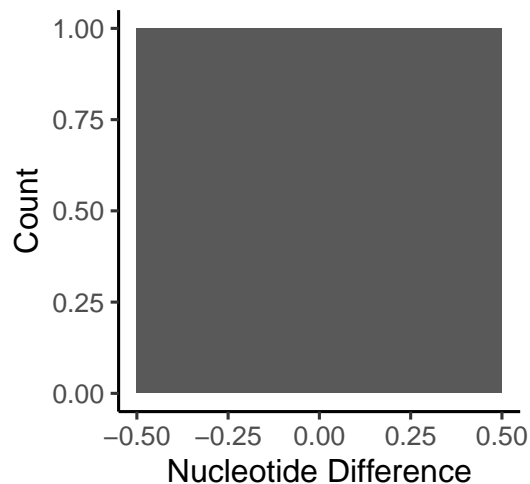
### IGHV1-18\*01

344 sequences assigned  
98 (28.5%) exact matches, in which:  
98 unique CDR3  
5 unique J



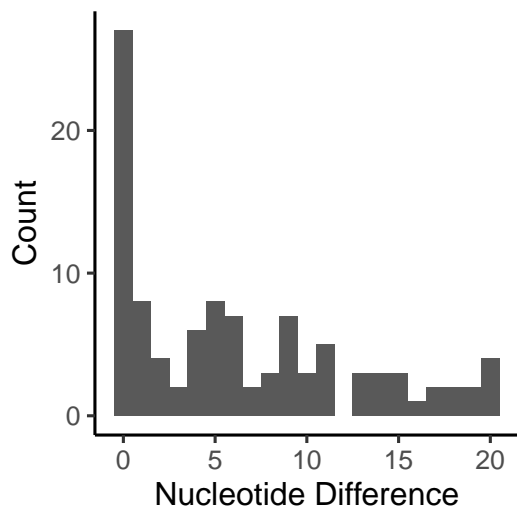
### IGHV1-45\*02

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



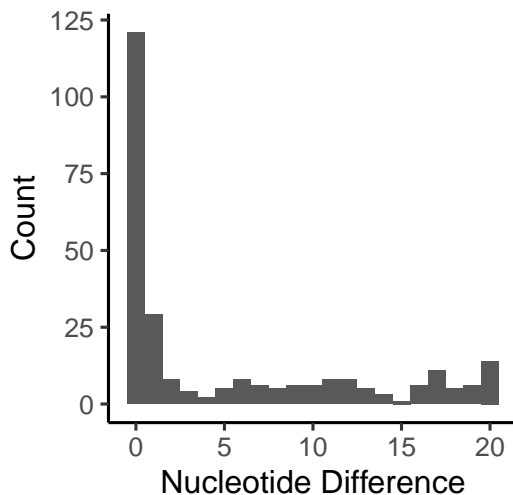
### IGHV1-3\*01

148 sequences assigned  
27 (18.2%) exact matches, in which:  
27 unique CDR3  
3 unique J



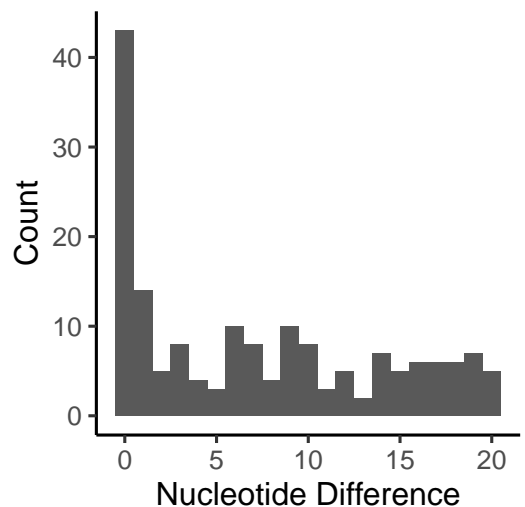
### IGHV1-18\*04

328 sequences assigned  
121 (36.9%) exact matches, in which:  
120 unique CDR3  
4 unique J



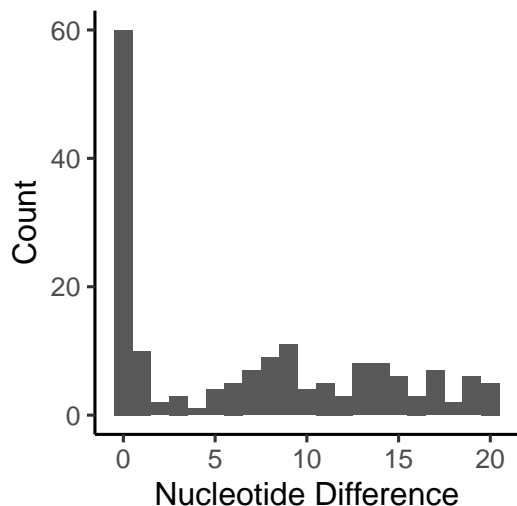
### IGHV1-46\*01

213 sequences assigned  
43 (20.2%) exact matches, in which:  
43 unique CDR3  
5 unique J



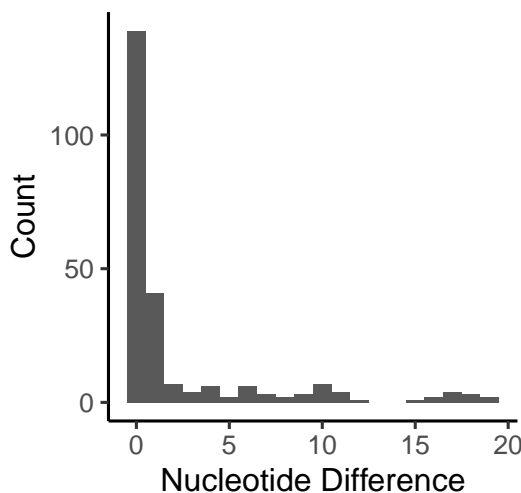
### IGHV1-46\*03

227 sequences assigned  
60 (26.4%) exact matches, in which:  
60 unique CDR3  
5 unique J



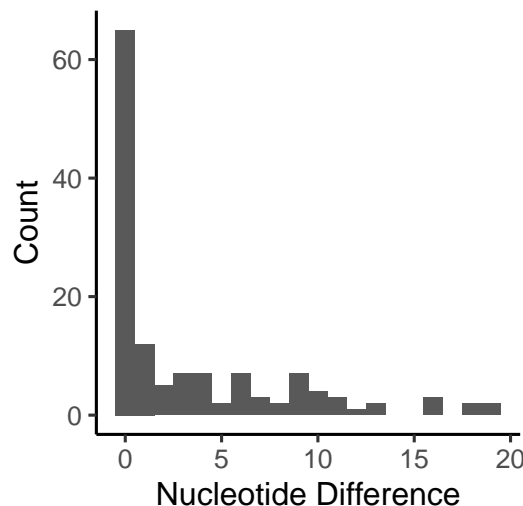
### IGHV1-69\*06

319 sequences assigned  
139 (43.6%) exact matches, in which:  
139 unique CDR3  
6 unique J



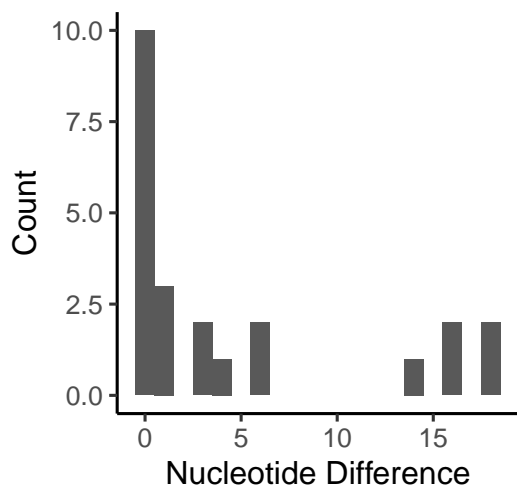
### IGHV2-26\*01

146 sequences assigned  
65 (44.5%) exact matches, in which:  
65 unique CDR3  
5 unique J



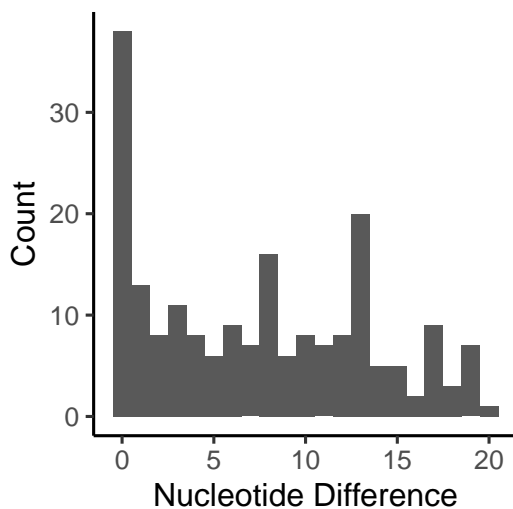
### IGHV1-58\*01

25 sequences assigned  
10 (40%) exact matches, in which:  
10 unique CDR3  
3 unique J



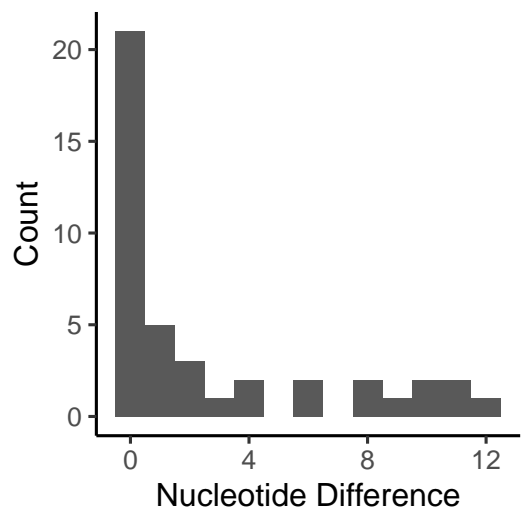
### IGHV2-5\*01

214 sequences assigned  
38 (17.8%) exact matches, in which:  
38 unique CDR3  
5 unique J



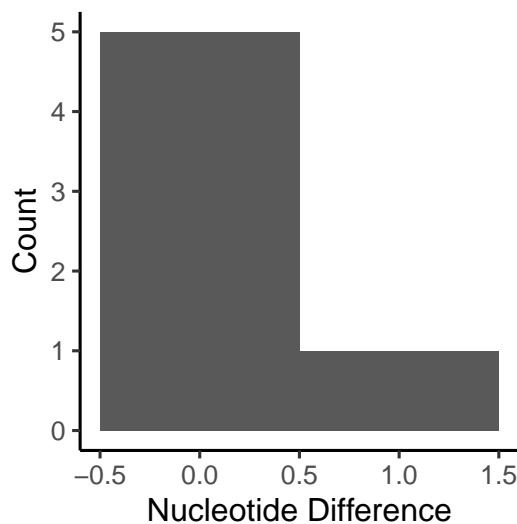
### IGHV2-70\*01

42 sequences assigned  
21 (50%) exact matches, in which:  
21 unique CDR3  
4 unique J



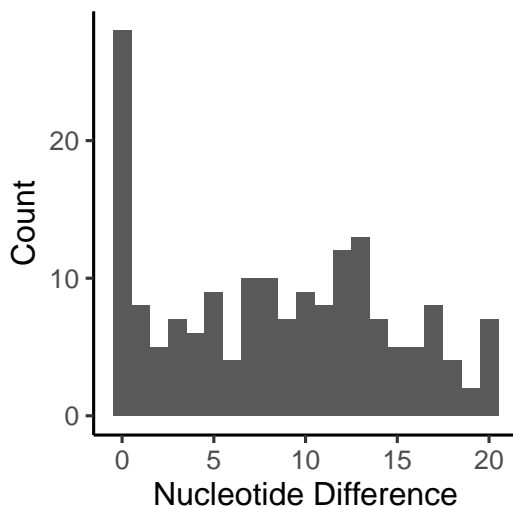
### IGHV1-69-2\*01

15 sequences assigned  
5 (33.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



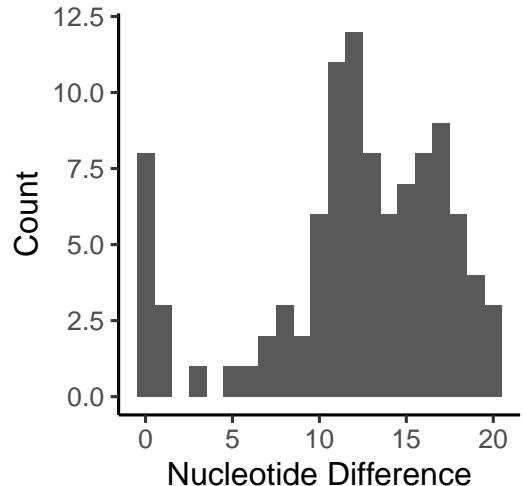
### IGHV2-5\*02

217 sequences assigned  
28 (12.9%) exact matches, in which:  
28 unique CDR3  
4 unique J



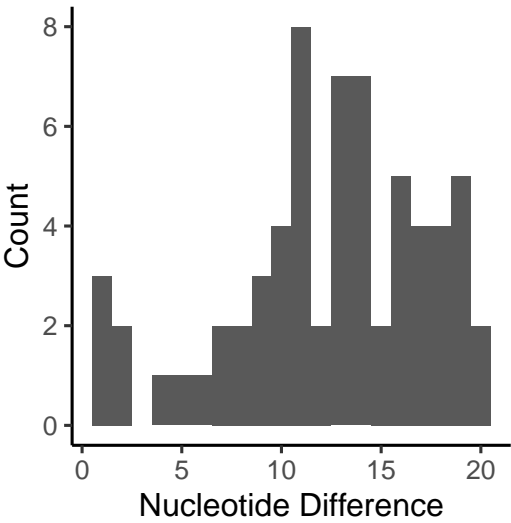
### IGHV3-7\*01

136 sequences assigned  
8 (5.9%) exact matches, in which:  
8 unique CDR3  
6 unique J



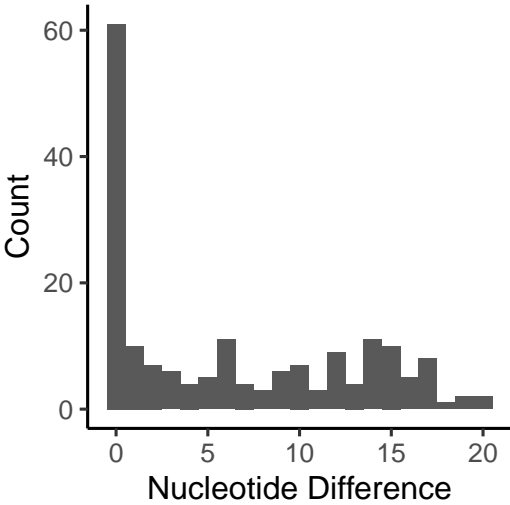
IGHV3-7\*04

94 sequences assigned  
No exact matches.



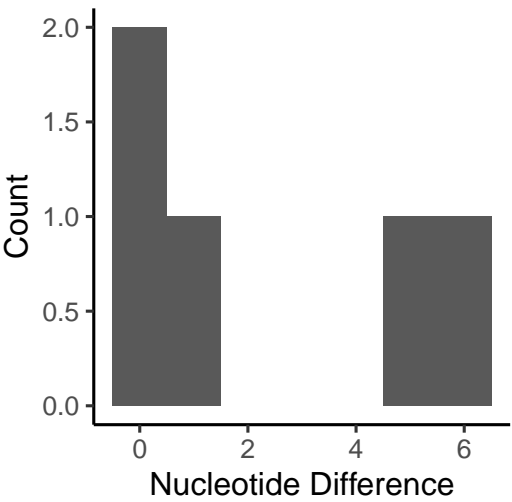
IGHV3-11\*05

236 sequences assigned  
61 (25.8%) exact matches, in which:  
61 unique CDR3  
5 unique J



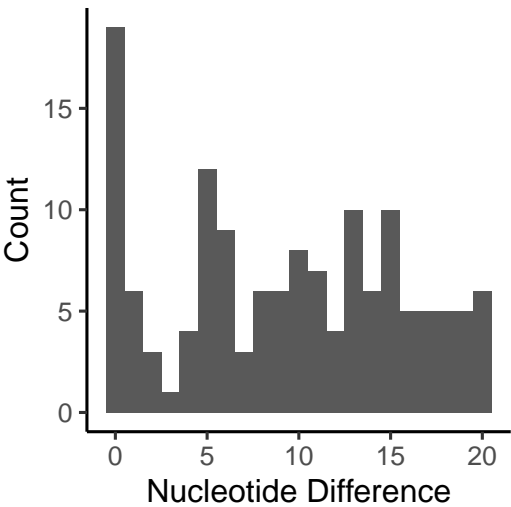
IGHV3-13\*05

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



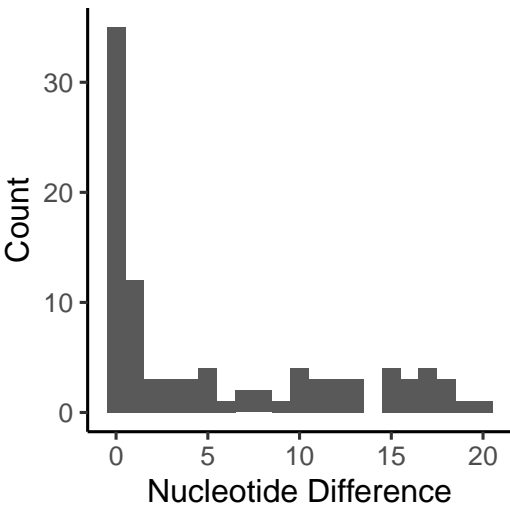
IGHV3-7\*05

177 sequences assigned  
19 (10.7%) exact matches, in which:  
19 unique CDR3  
3 unique J



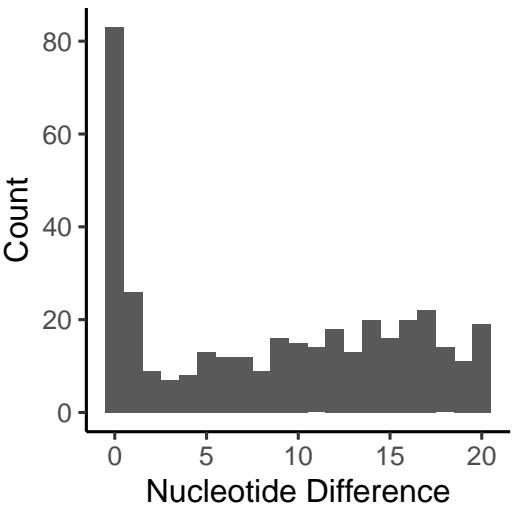
IGHV3-11\*06

132 sequences assigned  
35 (26.5%) exact matches, in which:  
35 unique CDR3  
5 unique J



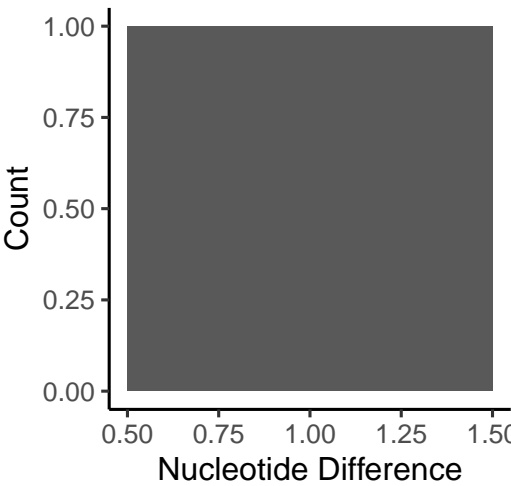
IGHV3-15\*01

502 sequences assigned  
83 (16.5%) exact matches, in which:  
83 unique CDR3  
5 unique J



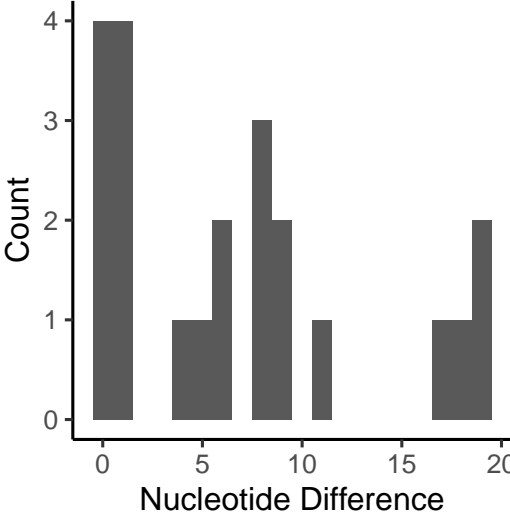
IGHV3-9\*01

1 sequences assigned  
No exact matches.



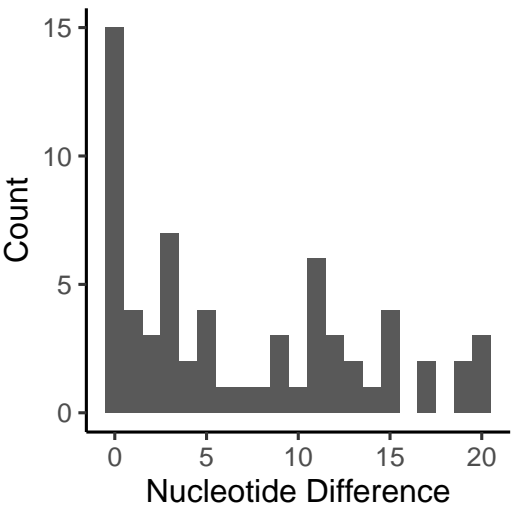
IGHV3-13\*04

30 sequences assigned  
4 (13.3%) exact matches, in which:  
4 unique CDR3  
3 unique J



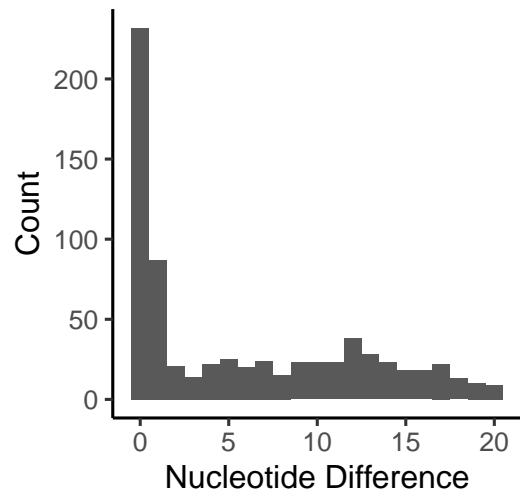
IGHV3-20\*04

82 sequences assigned  
15 (18.3%) exact matches, in which:  
15 unique CDR3  
3 unique J



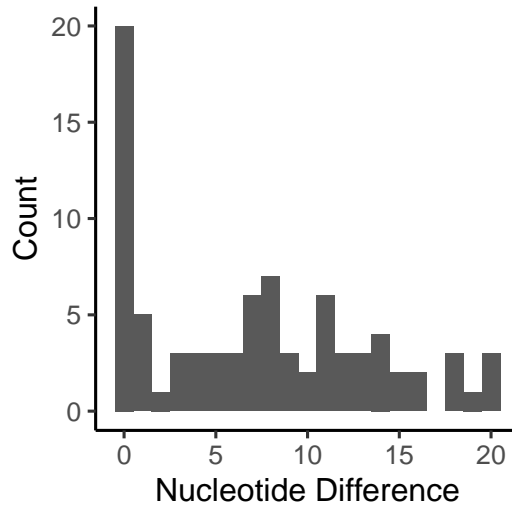
### IGHV3-21\*01

853 sequences assigned  
232 (27.2%) exact matches, in which:  
232 unique CDR3  
6 unique J



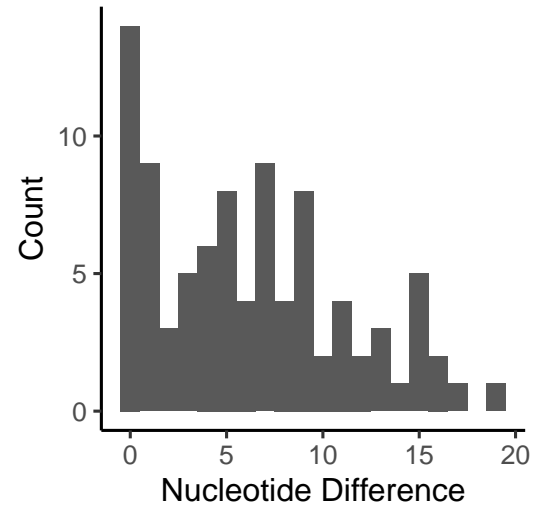
### IGHV3-43\*02

123 sequences assigned  
20 (16.3%) exact matches, in which:  
20 unique CDR3  
4 unique J



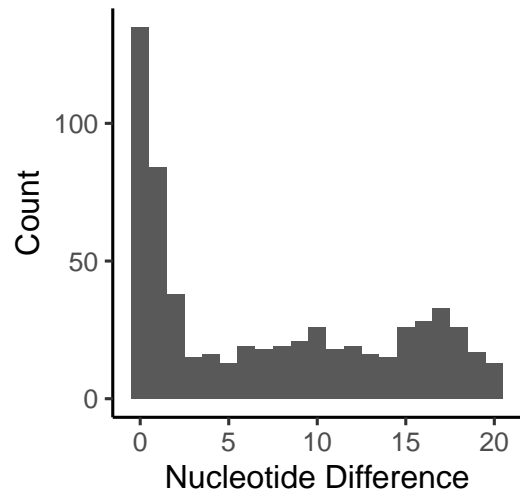
### IGHV3-49\*03

127 sequences assigned  
14 (11%) exact matches, in which:  
14 unique CDR3  
4 unique J



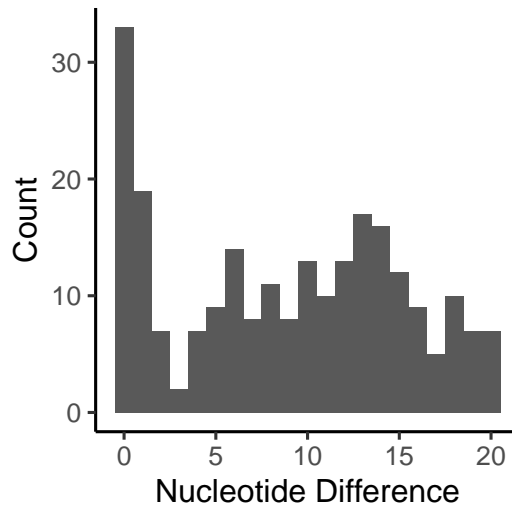
### IGHV3-33\*01

818 sequences assigned  
135 (16.5%) exact matches, in which:  
135 unique CDR3  
6 unique J



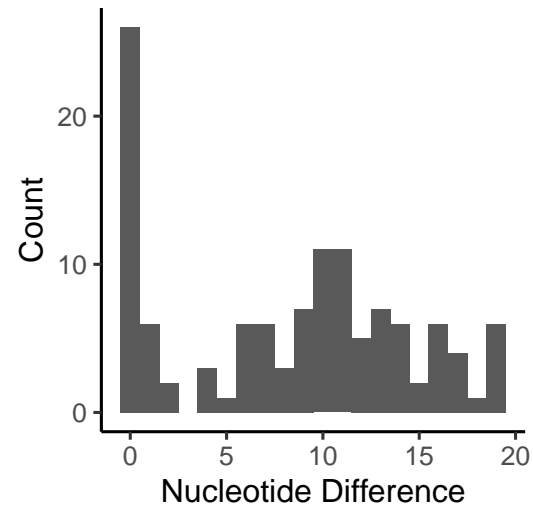
### IGHV3-48\*01

295 sequences assigned  
33 (11.2%) exact matches, in which:  
32 unique CDR3  
5 unique J



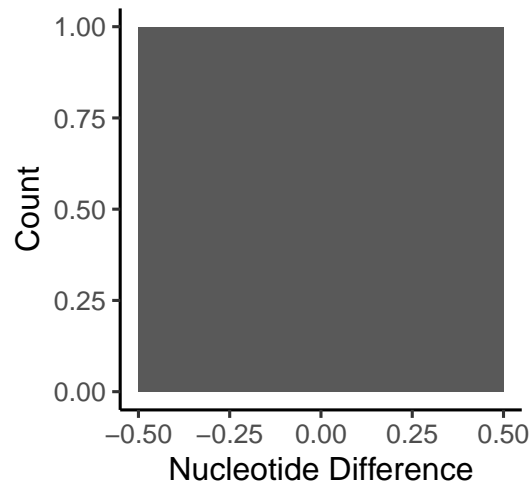
### IGHV3-49\*04

151 sequences assigned  
26 (17.2%) exact matches, in which:  
26 unique CDR3  
3 unique J



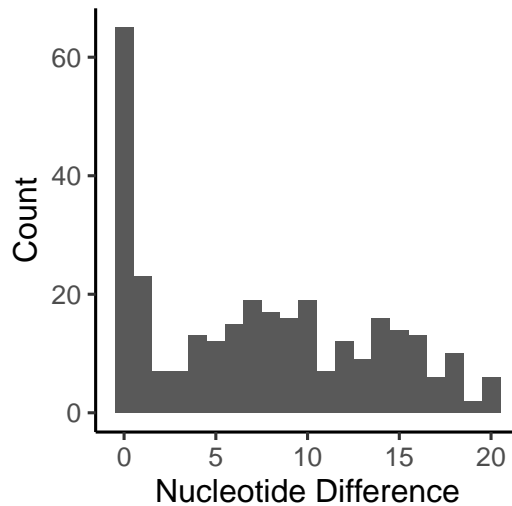
### IGHV3-35\*01

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



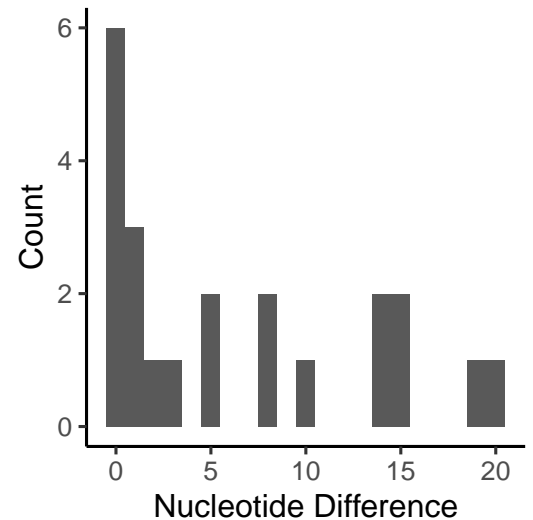
### IGHV3-48\*03

363 sequences assigned  
65 (17.9%) exact matches, in which:  
65 unique CDR3  
4 unique J



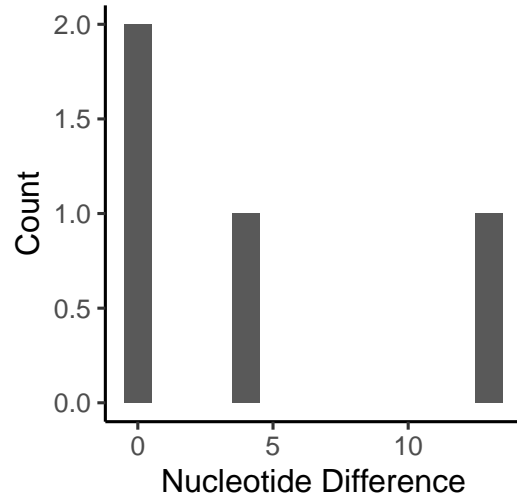
### IGHV3-53\*04

31 sequences assigned  
6 (19.4%) exact matches, in which:  
6 unique CDR3  
4 unique J



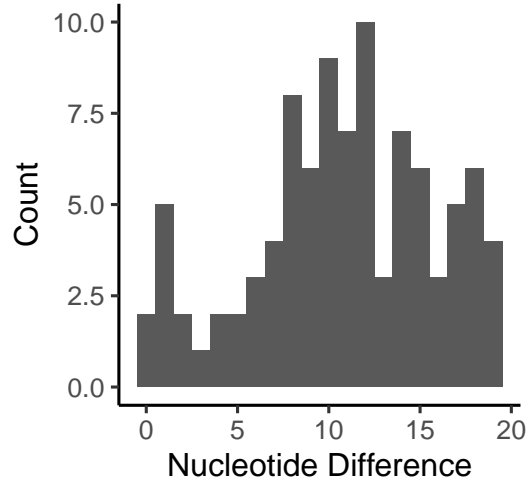
### IGHV3-64\*02

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



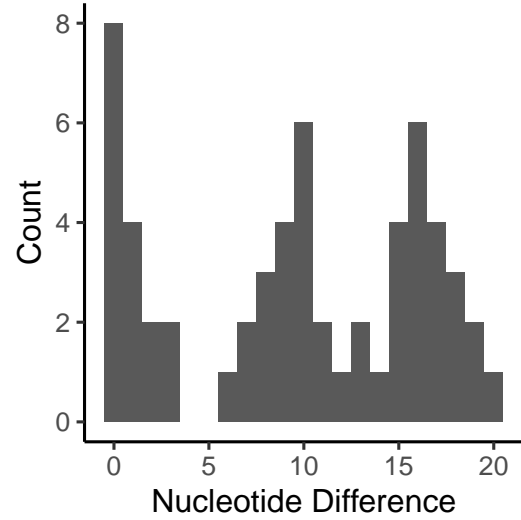
### IGHV3-72\*01

110 sequences assigned  
2 (1.8%) exact matches, in which:  
2 unique CDR3  
1 unique J



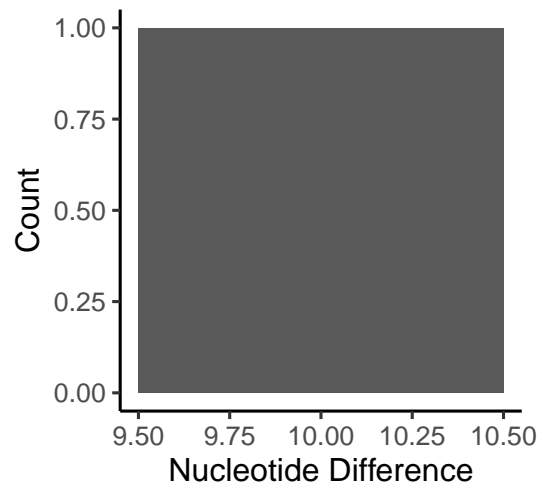
### IGHV3-64D\*06

69 sequences assigned  
8 (11.6%) exact matches, in which:  
8 unique CDR3  
2 unique J



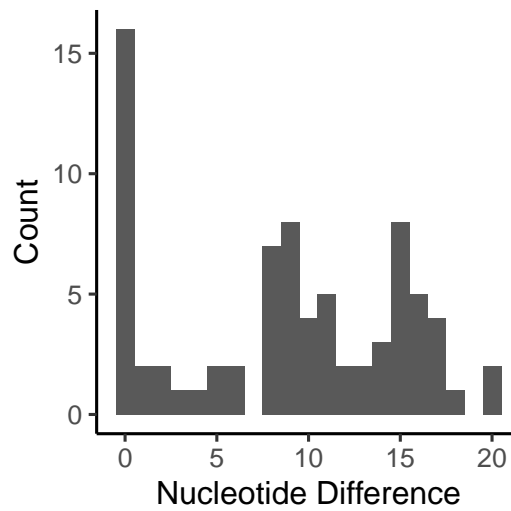
### IGHV3-66\*03

1 sequences assigned  
No exact matches.



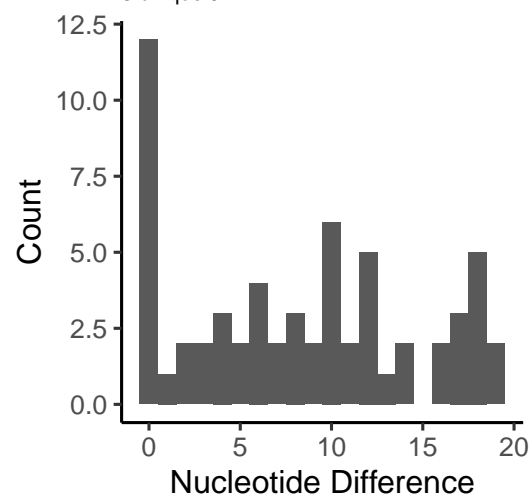
### IGHV3-73\*02

88 sequences assigned  
16 (18.2%) exact matches, in which:  
16 unique CDR3  
4 unique J



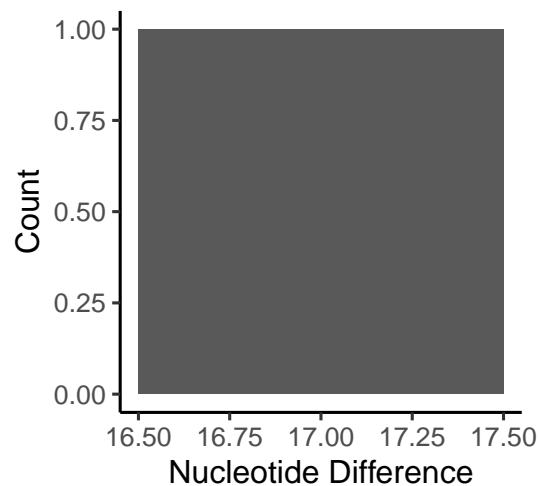
### IGHV3-64D\*08

79 sequences assigned  
12 (15.2%) exact matches, in which:  
12 unique CDR3  
3 unique J



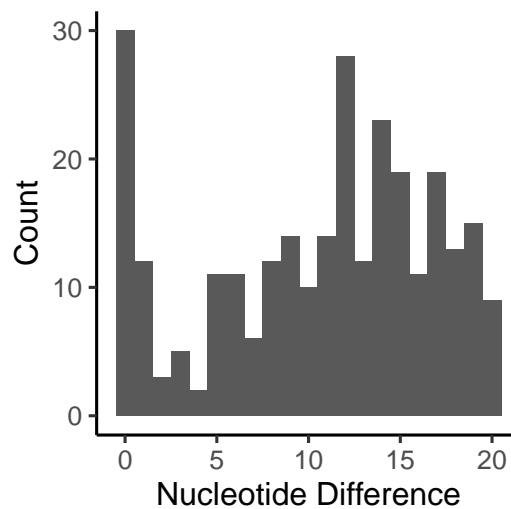
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



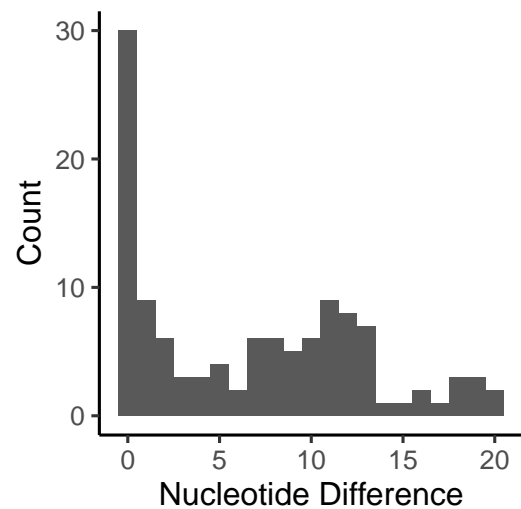
### IGHV3-74\*01

352 sequences assigned  
30 (8.5%) exact matches, in which:  
30 unique CDR3  
5 unique J



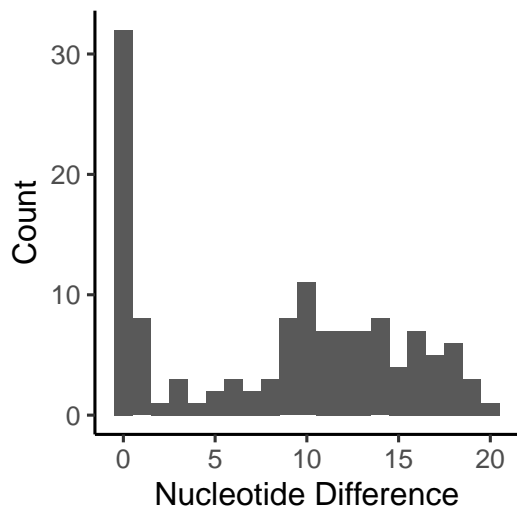
### IGHV4-4\*02

169 sequences assigned  
30 (17.8%) exact matches, in which:  
30 unique CDR3  
5 unique J



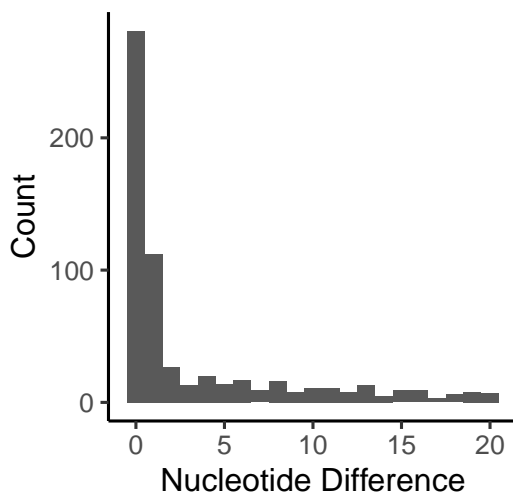
### IGHV4-4\*07

148 sequences assigned  
32 (21.6%) exact matches, in which:  
32 unique CDR3  
5 unique J



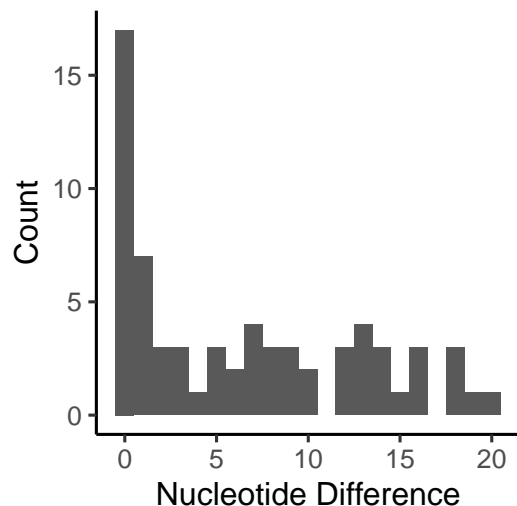
### IGHV4-34\*01

701 sequences assigned  
281 (40.1%) exact matches, in which:  
279 unique CDR3  
6 unique J



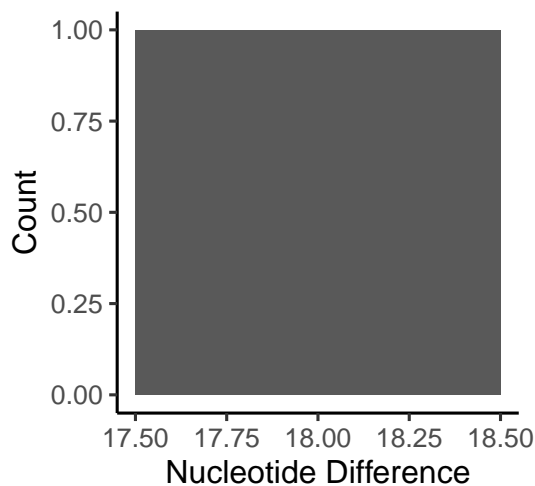
### IGHV4-61\*01

95 sequences assigned  
17 (17.9%) exact matches, in which:  
17 unique CDR3  
4 unique J



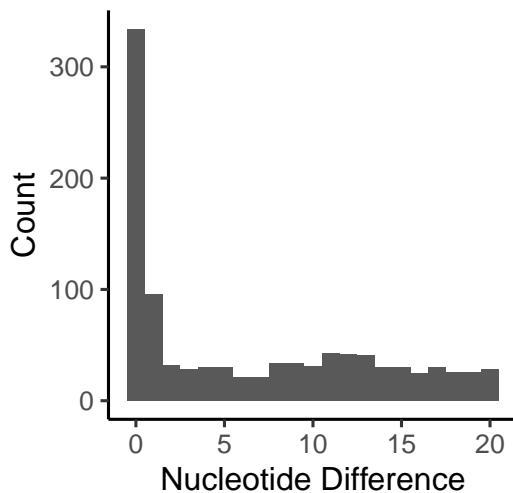
### IGHV4-30-4\*08

1 sequences assigned  
No exact matches.



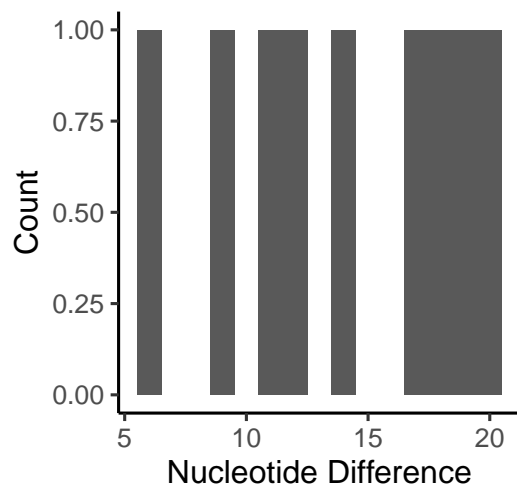
### IGHV4-39\*01

1291 sequences assigned  
334 (25.9%) exact matches, in which:  
334 unique CDR3  
6 unique J



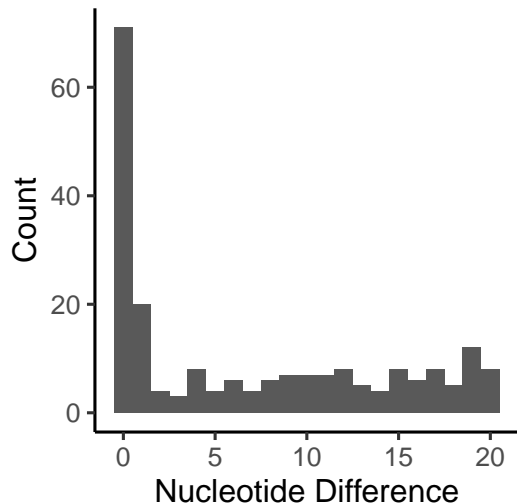
### IGHV4-61\*08

13 sequences assigned  
No exact matches.



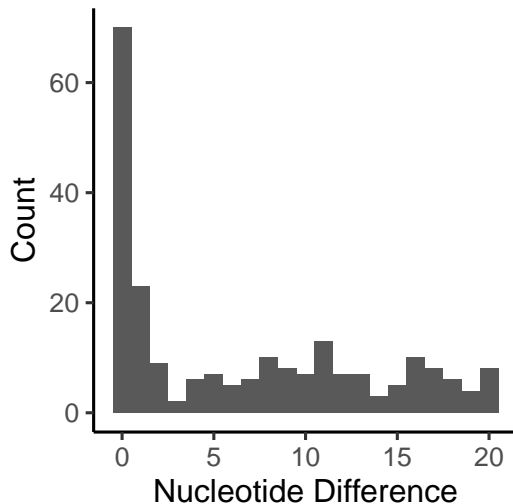
### IGHV4-31\*03

272 sequences assigned  
71 (26.1%) exact matches, in which:  
71 unique CDR3  
5 unique J



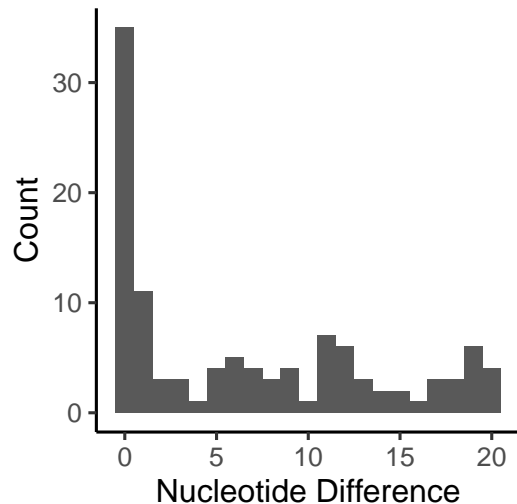
### IGHV4-59\*01

303 sequences assigned  
70 (23.1%) exact matches, in which:  
70 unique CDR3  
6 unique J



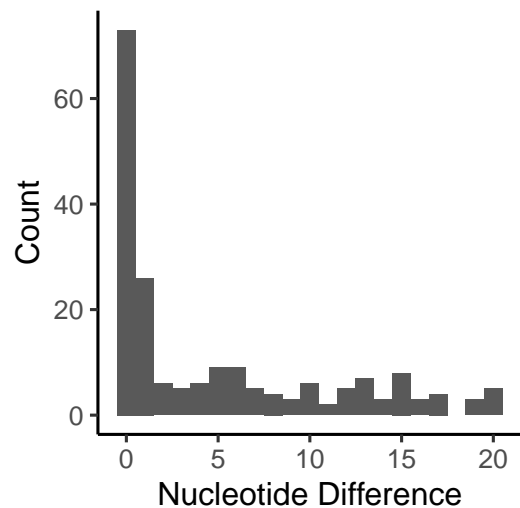
### IGHV5-10-1\*01

134 sequences assigned  
35 (26.1%) exact matches, in which:  
35 unique CDR3  
5 unique J



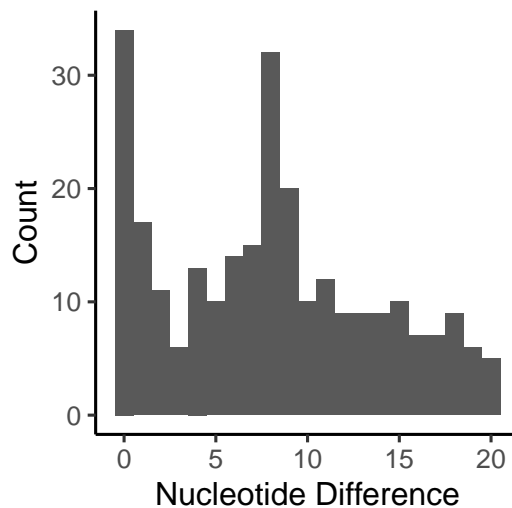
## IGHV5-10-1\*03

227 sequences assigned  
73 (32.2%) exact matches, in which:  
73 unique CDR3  
4 unique J



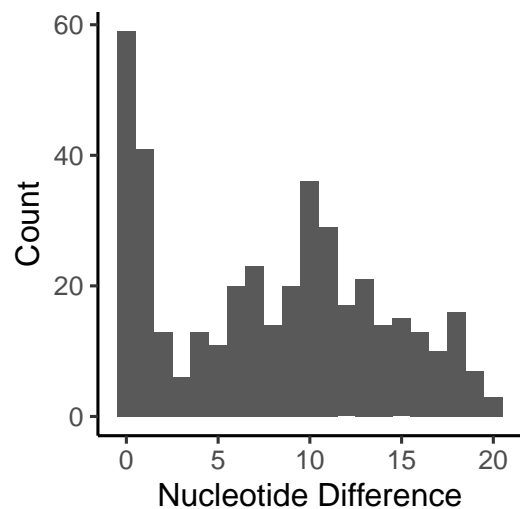
## IGHV6-1\*01

291 sequences assigned  
34 (11.7%) exact matches, in which:  
33 unique CDR3  
5 unique J



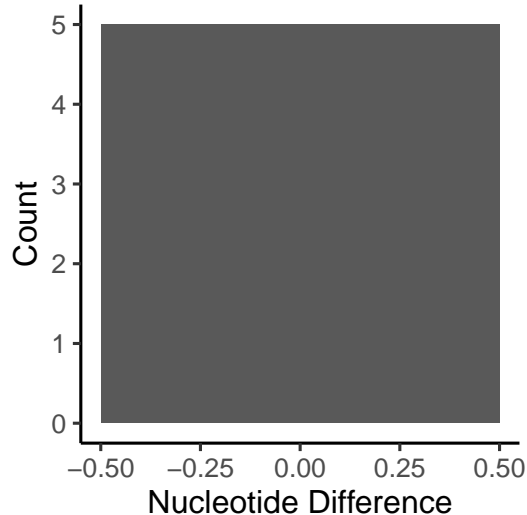
## IGHV5-51\*01

484 sequences assigned  
59 (12.2%) exact matches, in which:  
59 unique CDR3  
6 unique J



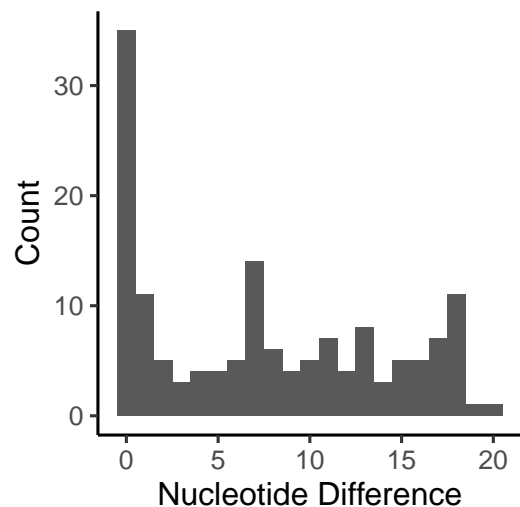
## IGHV7-4-1\*01

5 sequences assigned  
5 (100%) exact matches, in which:  
5 unique CDR3  
3 unique J



## IGHV5-51\*03

175 sequences assigned  
35 (20%) exact matches, in which:  
35 unique CDR3  
5 unique J







Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

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