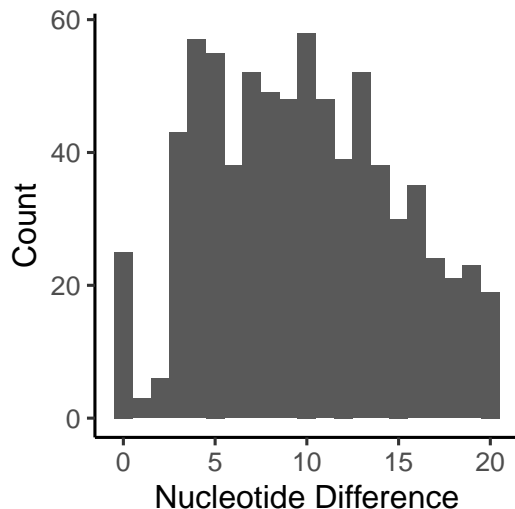


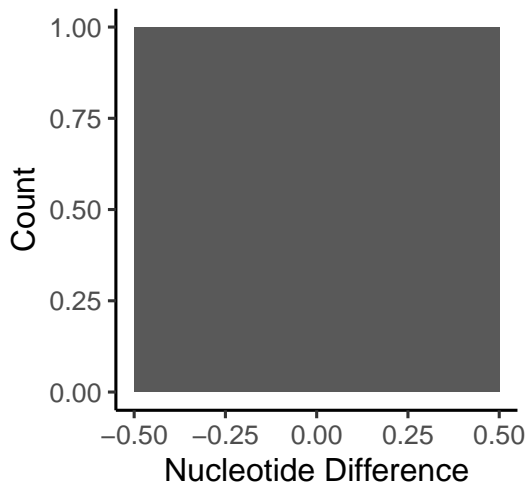
### IGHV1-2\*02

901 sequences assigned  
25 (2.8%) exact matches, in which:  
24 unique CDR3  
3 unique J



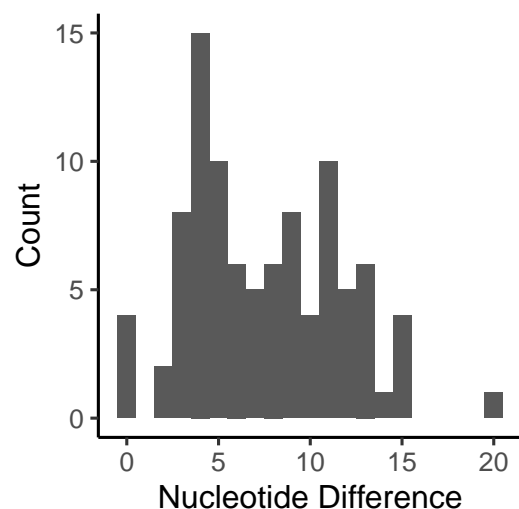
### IGHV1-3\*01\_05

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



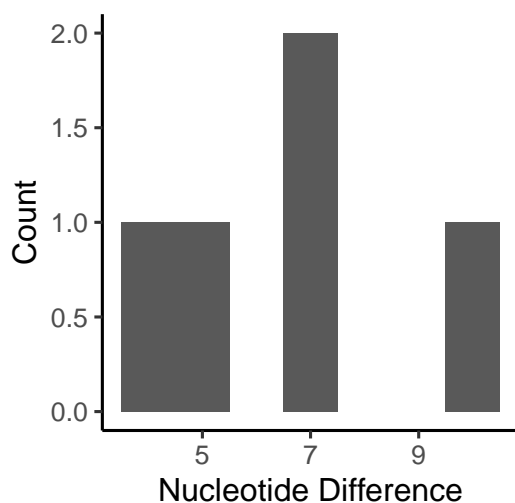
### IGHV1-24\*01

96 sequences assigned  
4 (4.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



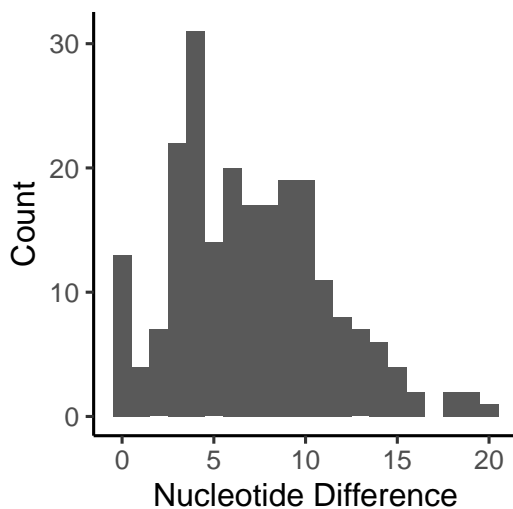
### IGHV1-3\*02

5 sequences assigned  
No exact matches.



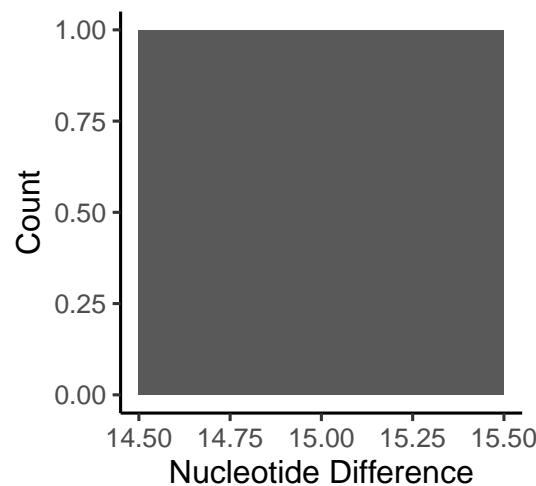
### IGHV1-8\*01

238 sequences assigned  
13 (5.5%) exact matches, in which:  
12 unique CDR3  
5 unique J



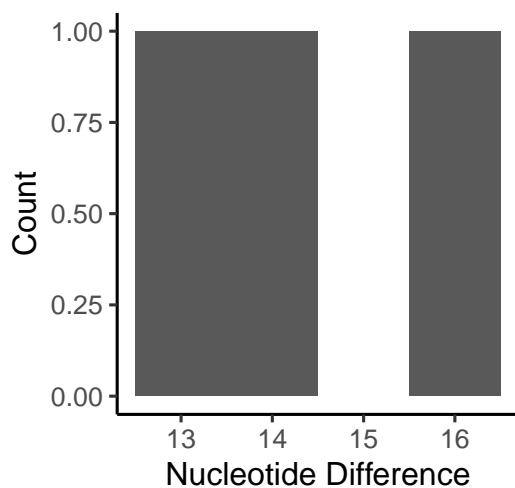
### IGHV1-45\*02

2 sequences assigned  
No exact matches.



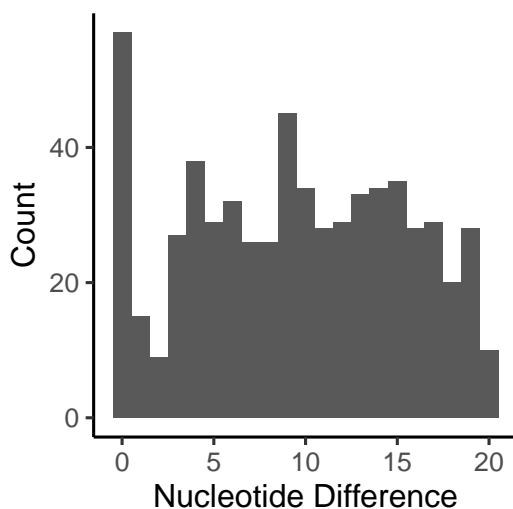
### IGHV1-3\*03

3 sequences assigned  
No exact matches.



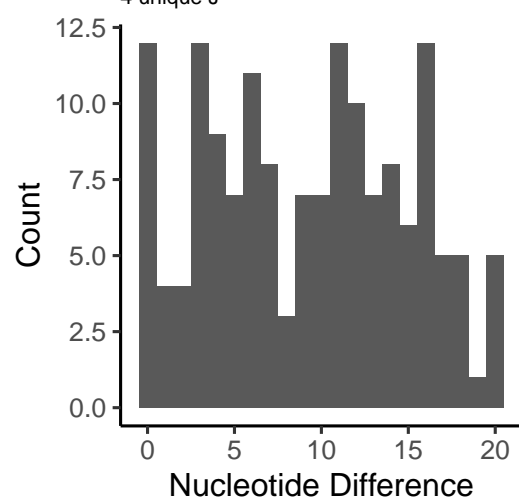
### IGHV1-18\*01

752 sequences assigned  
57 (7.6%) exact matches, in which:  
50 unique CDR3  
6 unique J



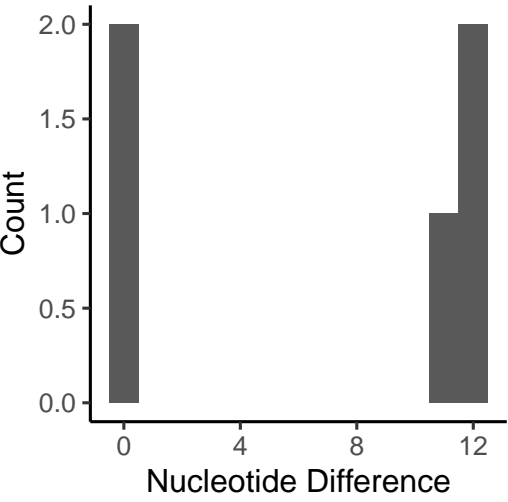
### IGHV1-46\*01

192 sequences assigned  
12 (6.2%) exact matches, in which:  
12 unique CDR3  
4 unique J



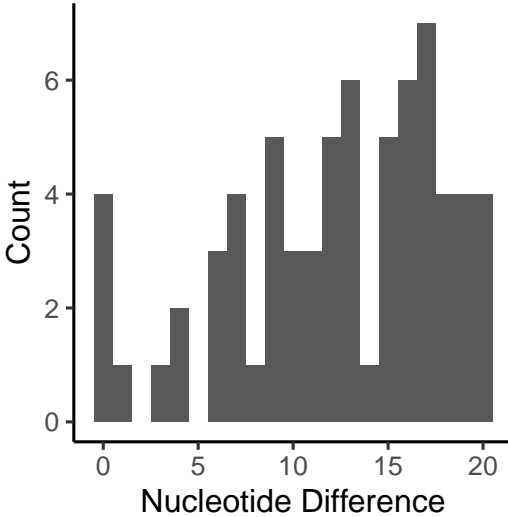
IGHV1-58\*02

9 sequences assigned  
2 (22.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



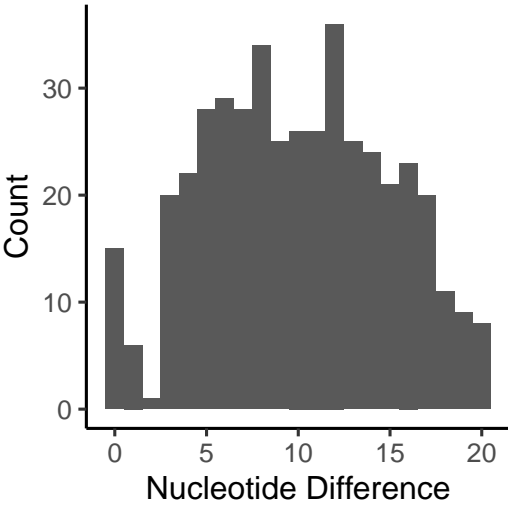
IGHV1-69\*02

98 sequences assigned  
4 (4.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



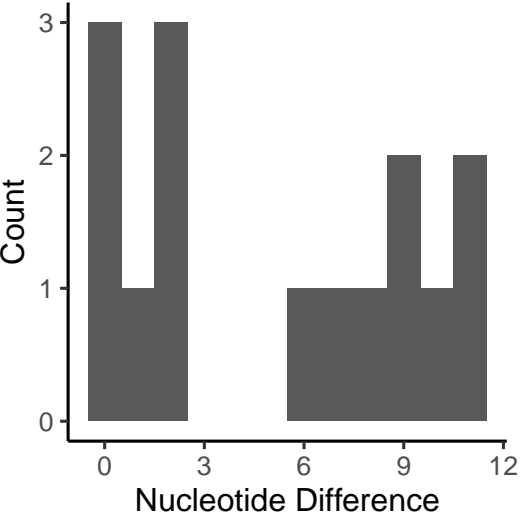
IGHV2-5\*01

596 sequences assigned  
15 (2.5%) exact matches, in which:  
15 unique CDR3  
5 unique J



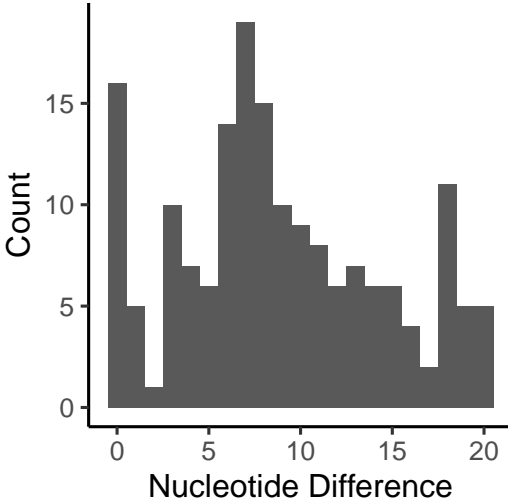
IGHV1-58\*01\_03

18 sequences assigned  
3 (16.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



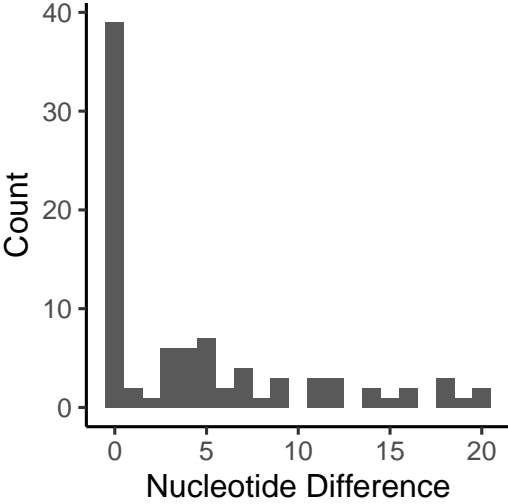
IGHV1-69\*01\_12\_13

194 sequences assigned  
16 (8.2%) exact matches, in which:  
16 unique CDR3  
5 unique J



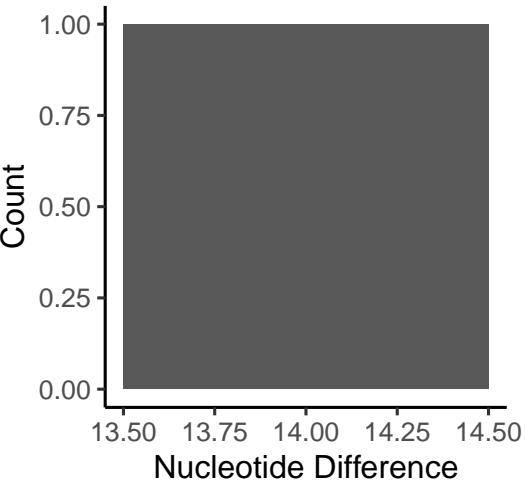
IGHV2-26\*01

89 sequences assigned  
39 (43.8%) exact matches, in which:  
36 unique CDR3  
5 unique J



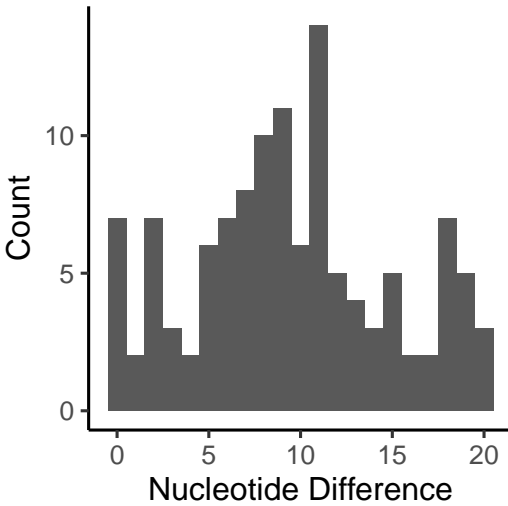
IGHV1-69-2\*01

1 sequences assigned  
No exact matches.



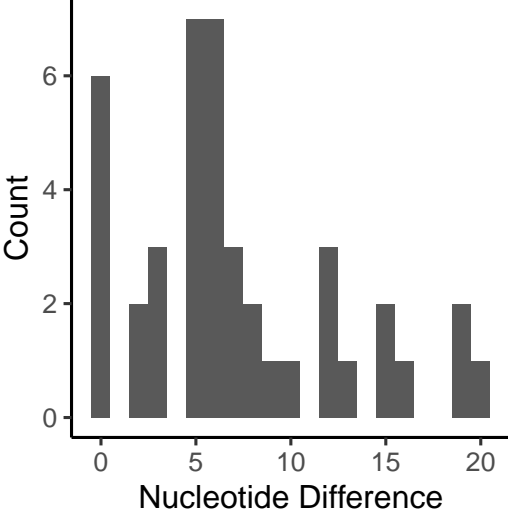
IGHV1-69\*17

135 sequences assigned  
7 (5.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



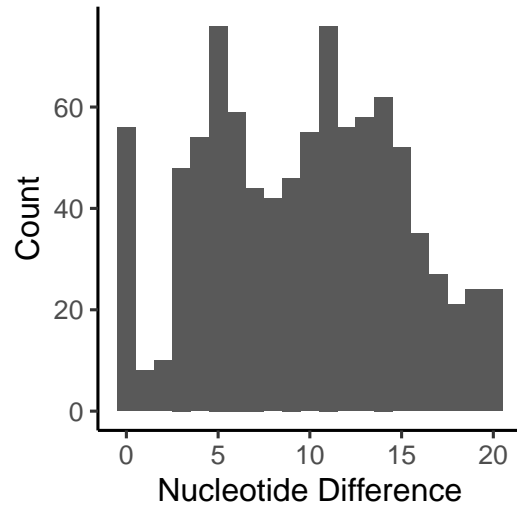
IGHV2-70\*01

45 sequences assigned  
6 (13.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



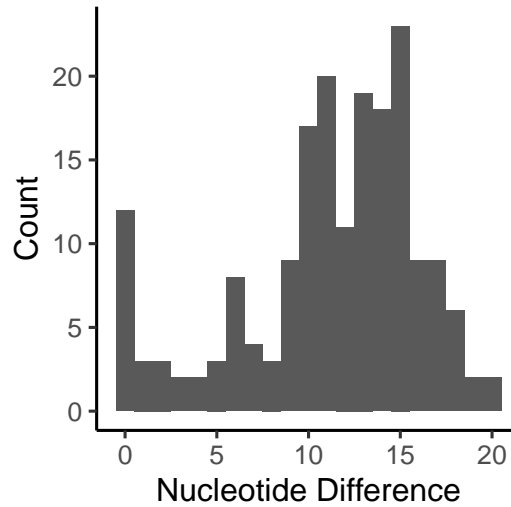
### IGHV3-7\*01

1006 sequences assigned  
56 (5.6%) exact matches, in which:  
31 unique CDR3  
5 unique J



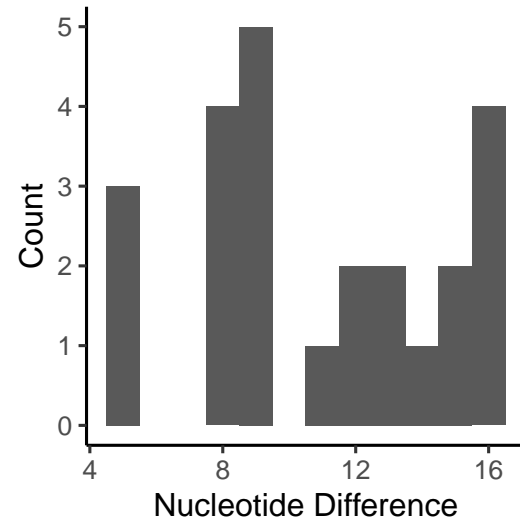
### IGHV3-13\*01

216 sequences assigned  
12 (5.6%) exact matches, in which:  
5 unique CDR3  
2 unique J



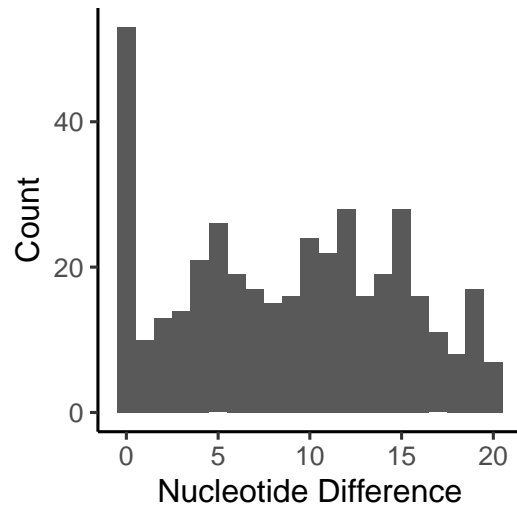
### IGHV3-20\*03\_04

24 sequences assigned  
No exact matches.



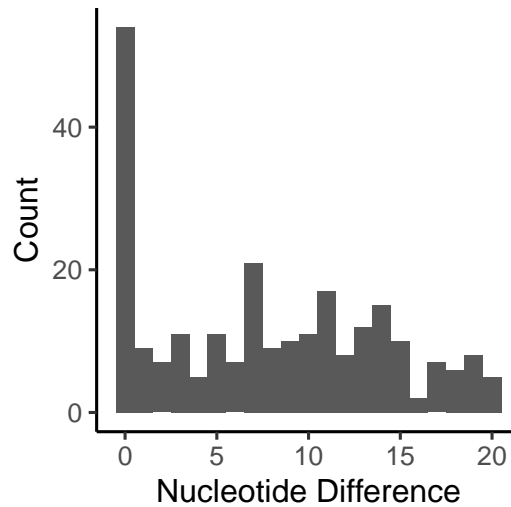
### IGHV3-9\*01

442 sequences assigned  
53 (12%) exact matches, in which:  
32 unique CDR3  
3 unique J



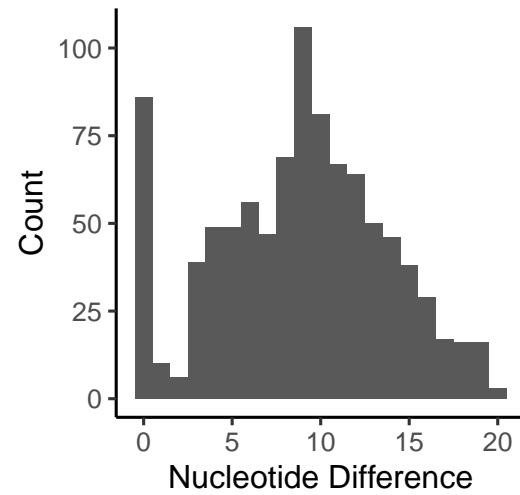
### IGHV3-15\*01\_02

259 sequences assigned  
54 (20.8%) exact matches, in which:  
27 unique CDR3  
5 unique J



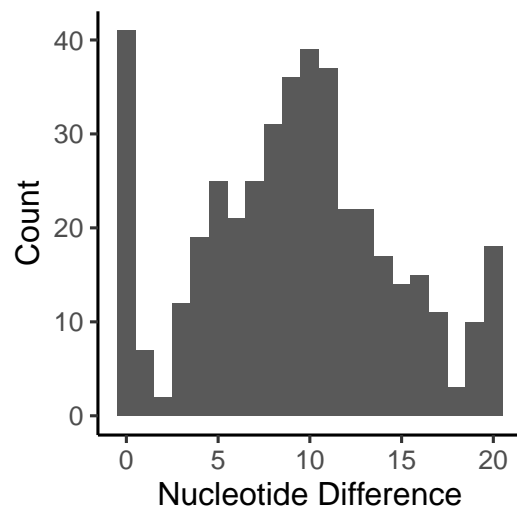
### IGHV3-21\*01\_02

1047 sequences assigned  
86 (8.2%) exact matches, in which:  
44 unique CDR3  
5 unique J



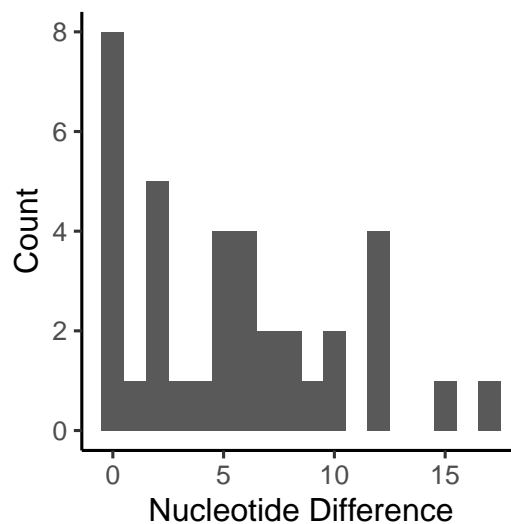
### IGHV3-11\*01

468 sequences assigned  
41 (8.8%) exact matches, in which:  
23 unique CDR3  
5 unique J



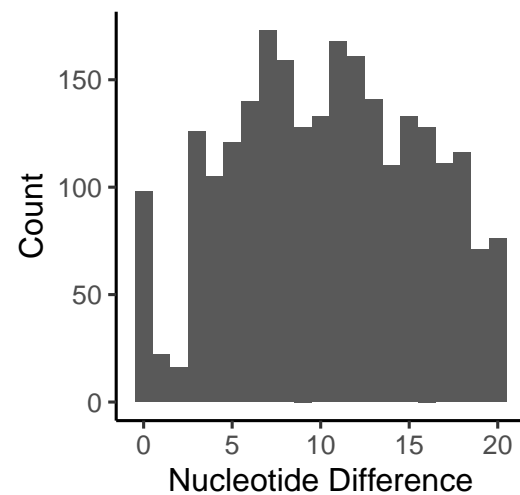
### IGHV3-20\*01\_02

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



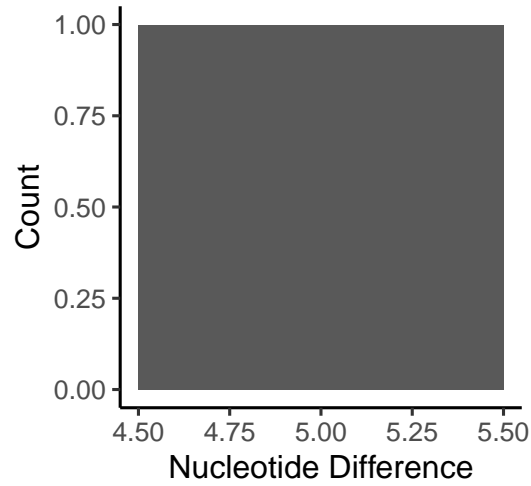
### IGHV3-23\*01\_04

2744 sequences assigned  
98 (3.6%) exact matches, in which:  
51 unique CDR3  
5 unique J



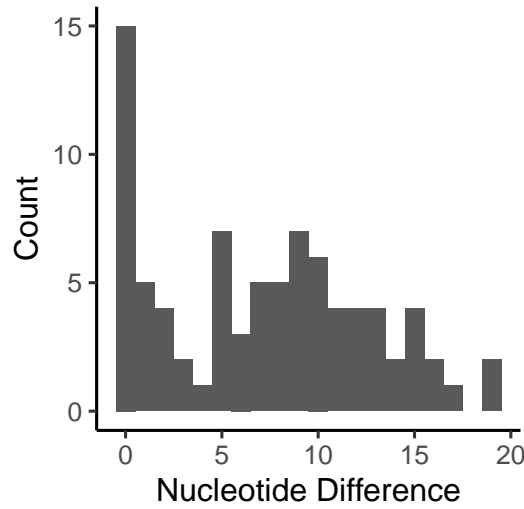
### IGHV3-30-3\*02

1 sequences assigned  
No exact matches.



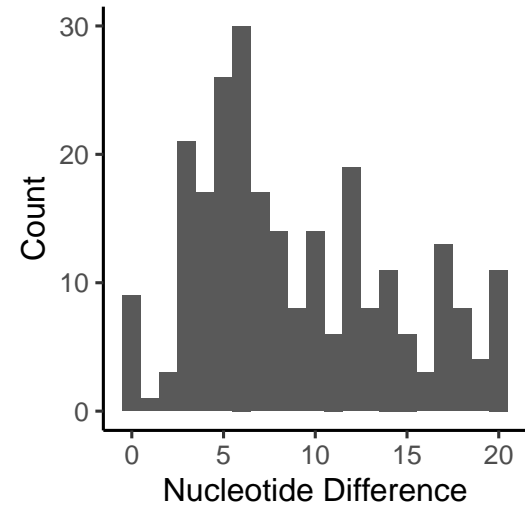
### IGHV3-43\*01

93 sequences assigned  
15 (16.1%) exact matches, in which:  
7 unique CDR3  
2 unique J



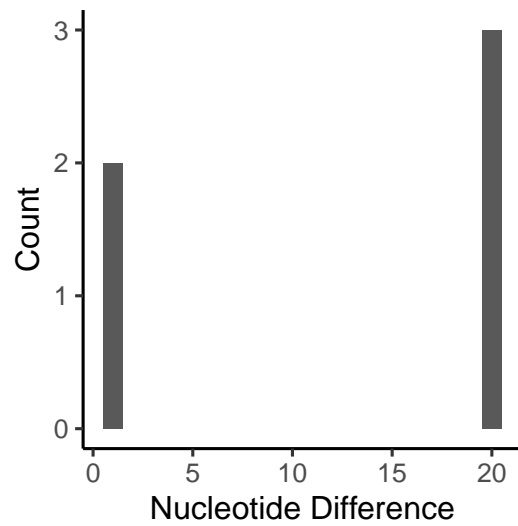
### IGHV3-53\*01\_02

267 sequences assigned  
9 (3.4%) exact matches, in which:  
6 unique CDR3  
3 unique J



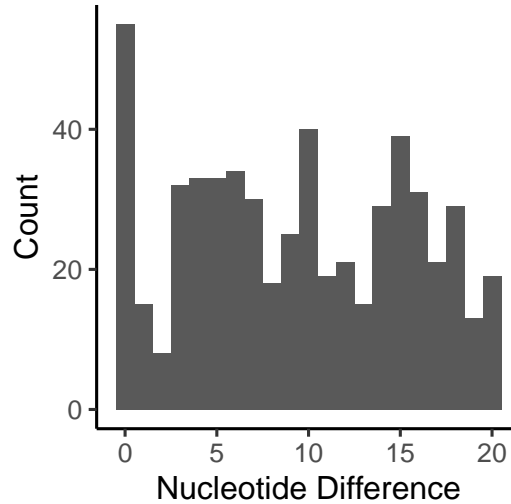
### IGHV3-30-3\*03

6 sequences assigned  
No exact matches.



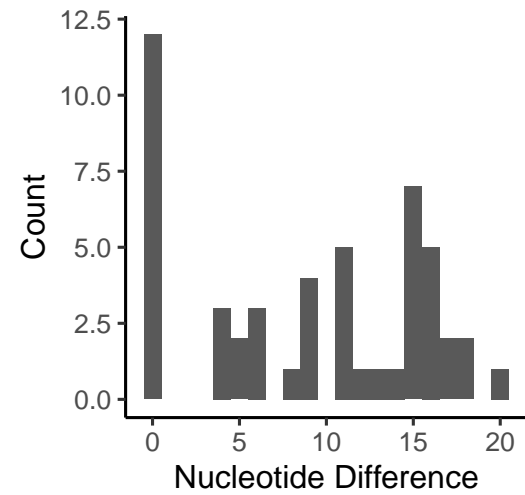
### IGHV3-48\*02

633 sequences assigned  
55 (8.7%) exact matches, in which:  
22 unique CDR3  
4 unique J



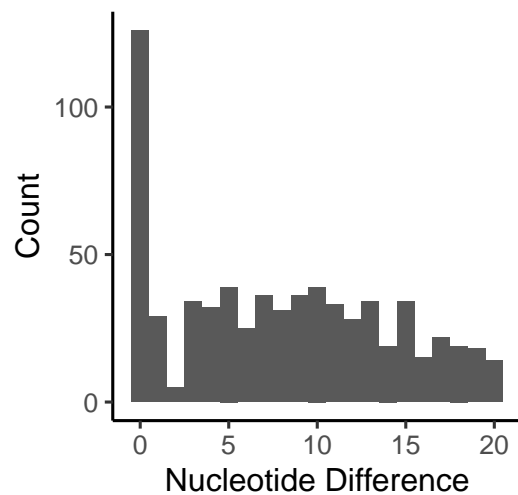
### IGHV3-64\*01

59 sequences assigned  
12 (20.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



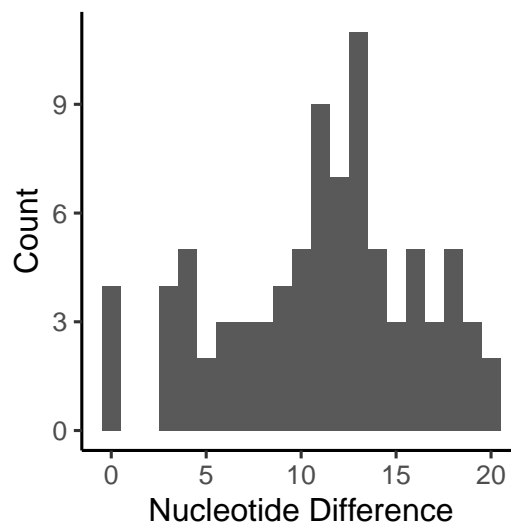
### IGHV3-33\*01

756 sequences assigned  
126 (16.7%) exact matches, in which:  
69 unique CDR3  
5 unique J



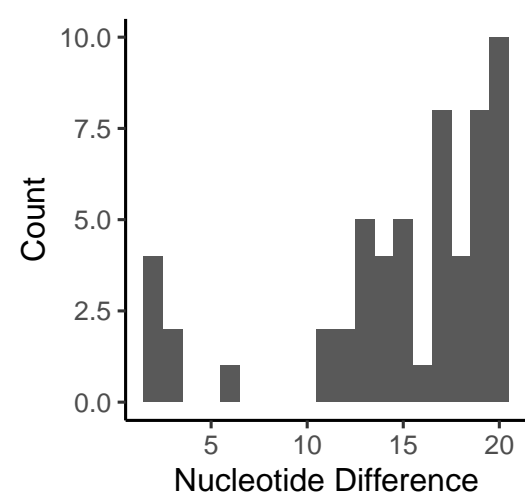
### IGHV3-49\*03\_05

124 sequences assigned  
4 (3.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



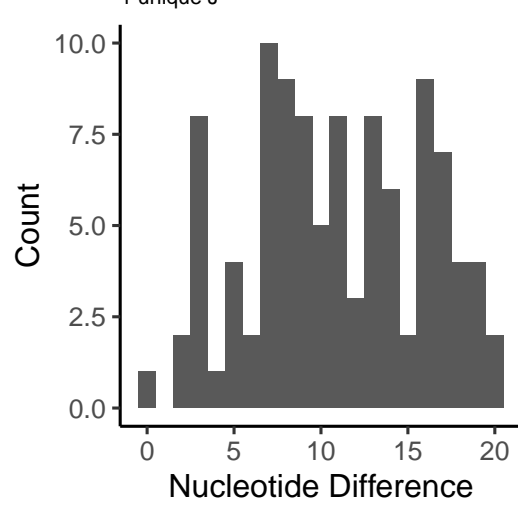
### IGHV3-64\*02\_07

122 sequences assigned  
No exact matches.



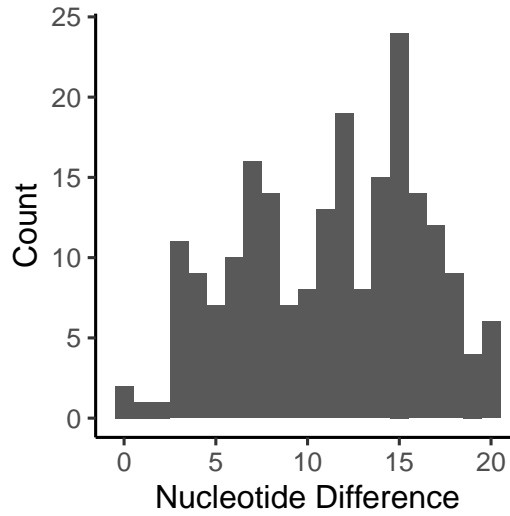
### IGHV3-66\*02

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



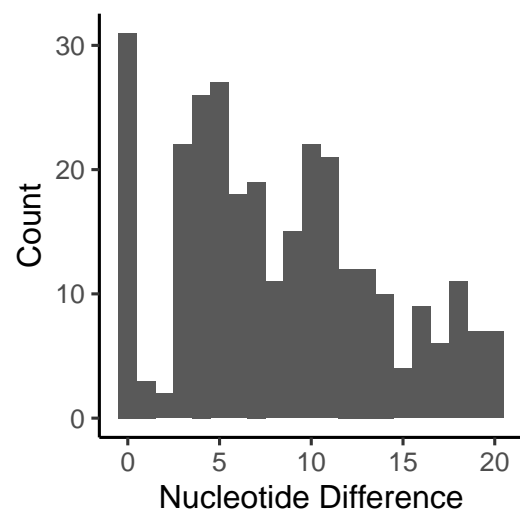
### IGHV3-72\*01

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



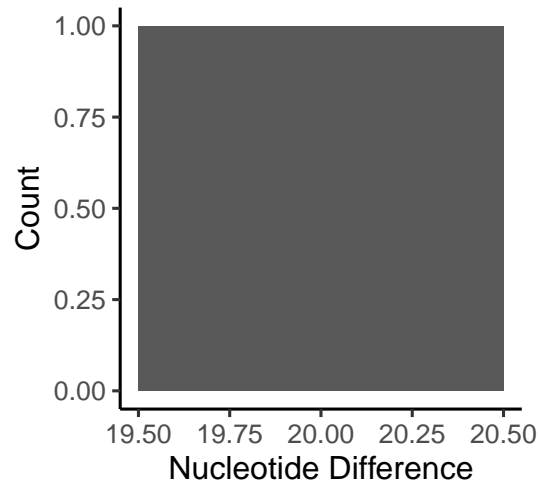
### IGHV3-74\*01\_02

303 sequences assigned  
31 (10.2%) exact matches, in which:  
15 unique CDR3  
4 unique J



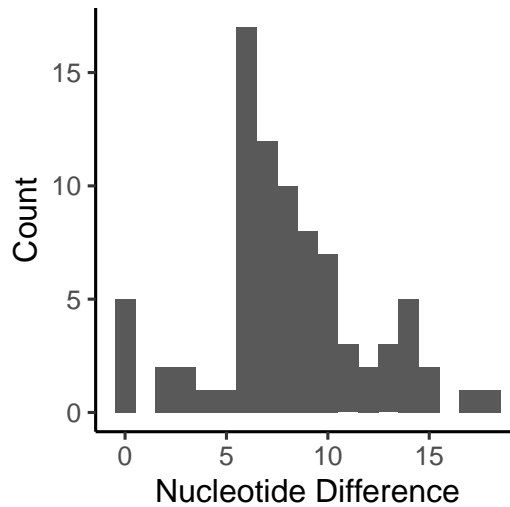
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



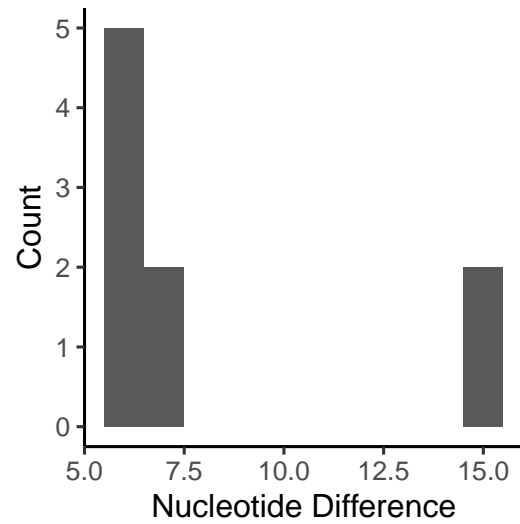
### IGHV3-73\*01\_02

89 sequences assigned  
5 (5.6%) exact matches, in which:  
4 unique CDR3  
4 unique J



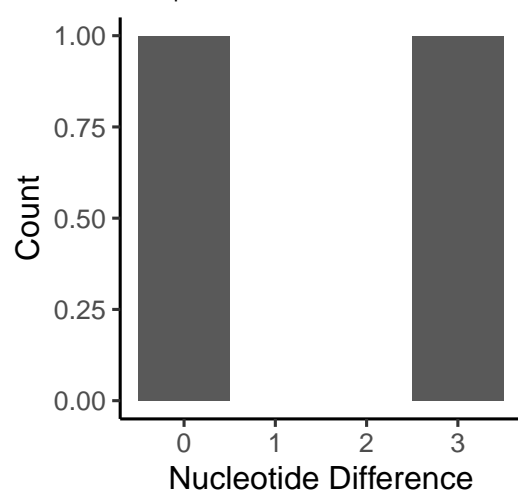
### IGHV3-43D\*04

9 sequences assigned  
No exact matches.



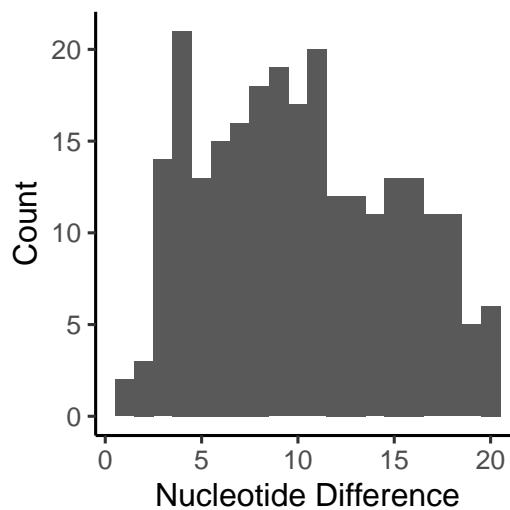
### IGHV3-69-1\*02

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



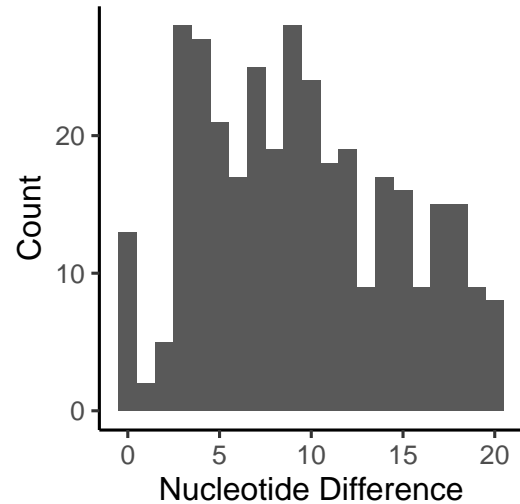
### IGHV3-74\*03

266 sequences assigned  
No exact matches.



### IGHV4-4\*07

403 sequences assigned  
13 (3.2%) exact matches, in which:  
9 unique CDR3  
4 unique J



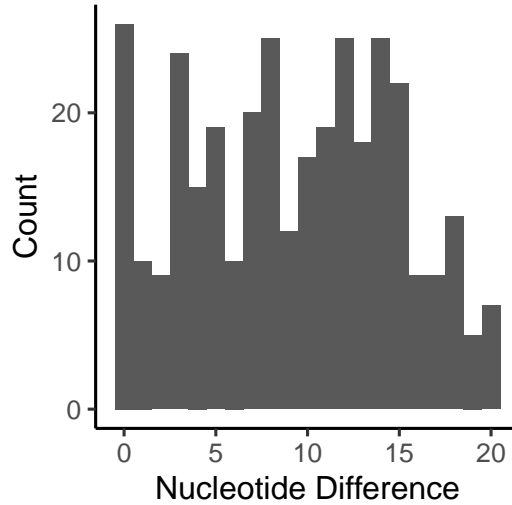
### IGHV4-28\*03

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



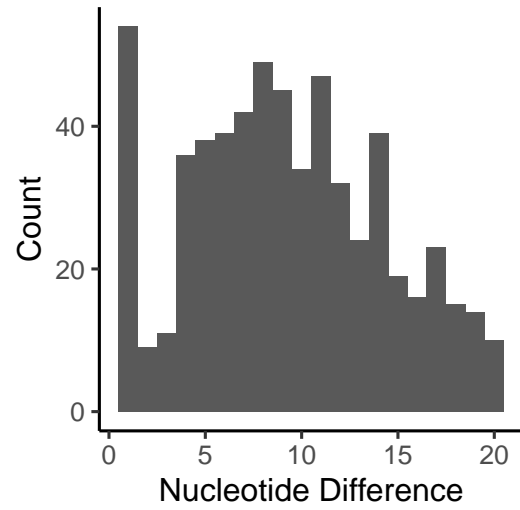
### IGHV4-31\*02

484 sequences assigned  
26 (5.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



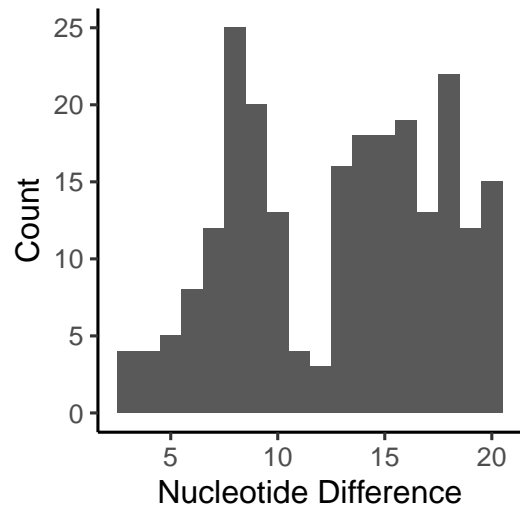
### IGHV4-39\*02

708 sequences assigned  
No exact matches.



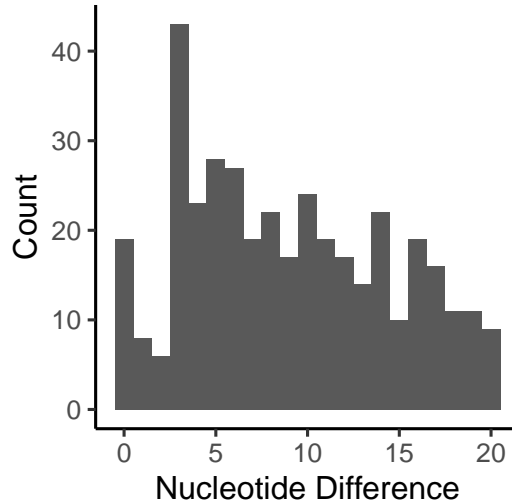
### IGHV4-30-2\*01

594 sequences assigned  
No exact matches.



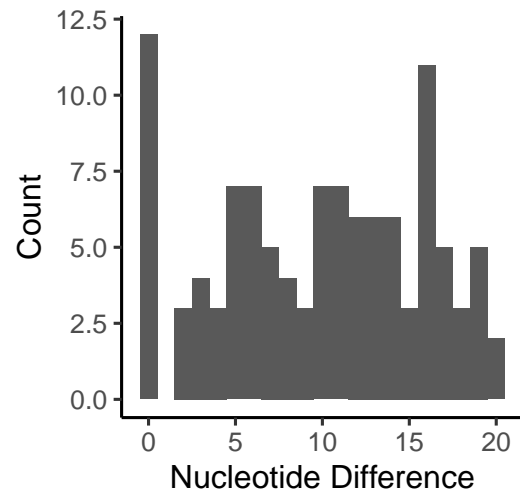
### IGHV4-34\*01\_02

460 sequences assigned  
19 (4.1%) exact matches, in which:  
11 unique CDR3  
4 unique J



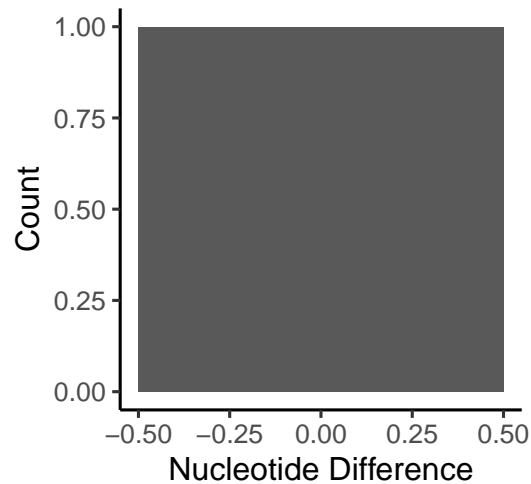
### IGHV4-39\*01\_05

127 sequences assigned  
12 (9.4%) exact matches, in which:  
7 unique CDR3  
2 unique J



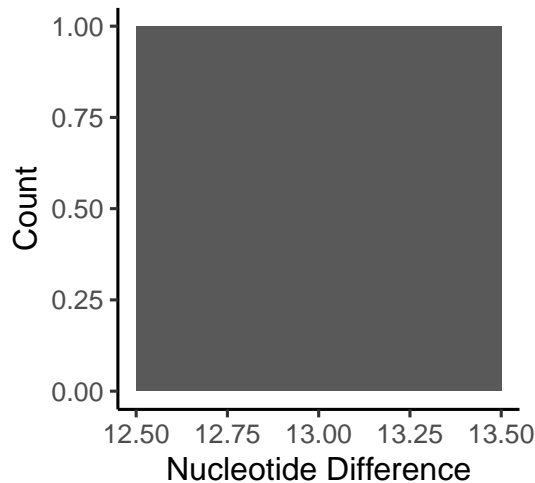
### IGHV4-30-4\*01

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



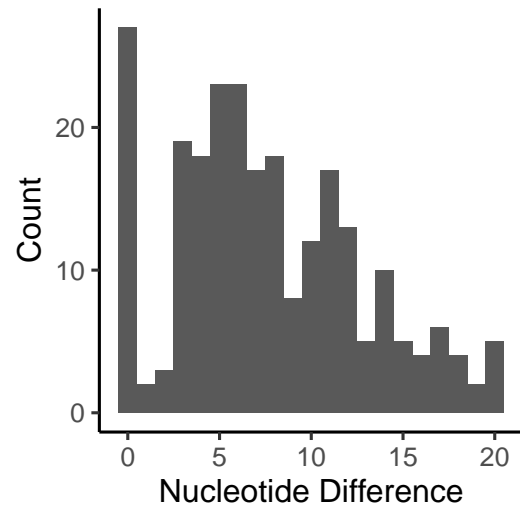
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



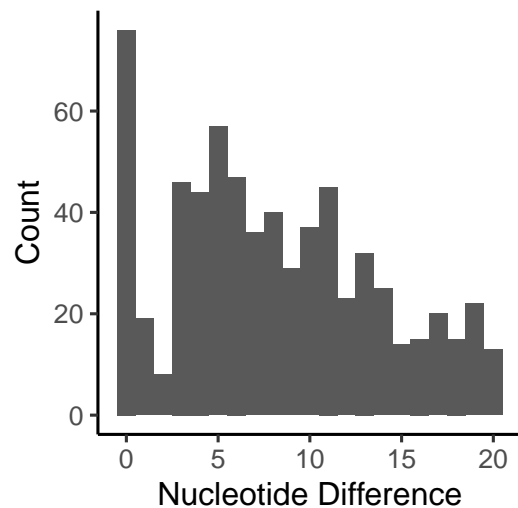
### IGHV4-59\*08

276 sequences assigned  
27 (9.8%) exact matches, in which:  
17 unique CDR3  
3 unique J



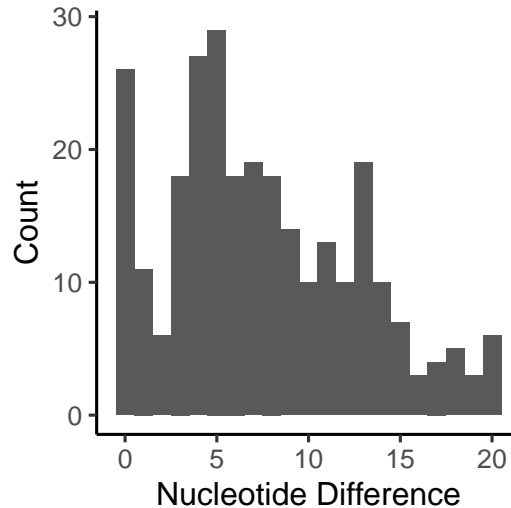
### IGHV4–59\*02\_G88A

739 sequences assigned  
76 (10.3%) exact matches, in which:  
40 unique CDR3  
5 unique J



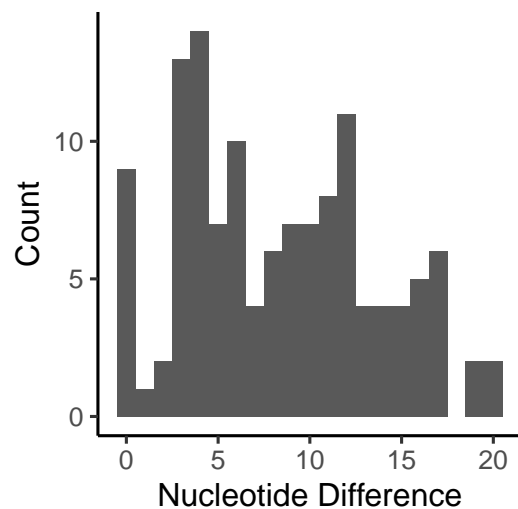
### IGHV5–51\*07\_A128G

303 sequences assigned  
26 (8.6%) exact matches, in which:  
21 unique CDR3  
5 unique J



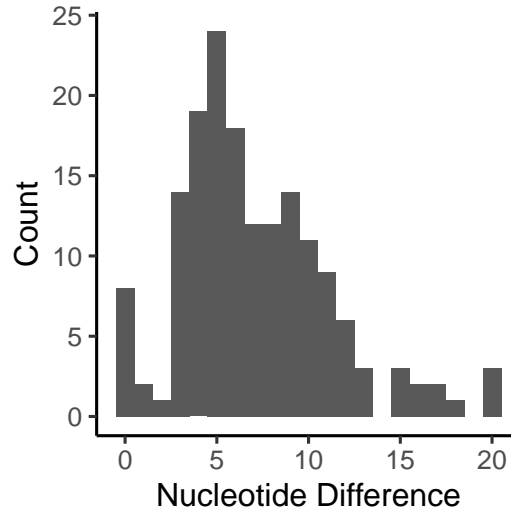
### IGHV4–61\*01

158 sequences assigned  
9 (5.7%) exact matches, in which:  
5 unique CDR3  
4 unique J



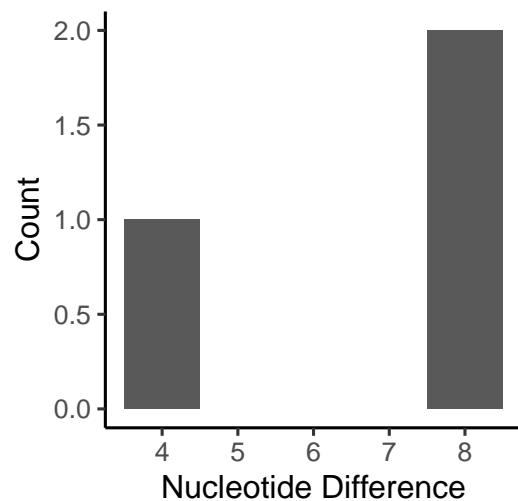
### IGHV6–1\*01\_02

230 sequences assigned  
8 (3.5%) exact matches, in which:  
8 unique CDR3  
4 unique J



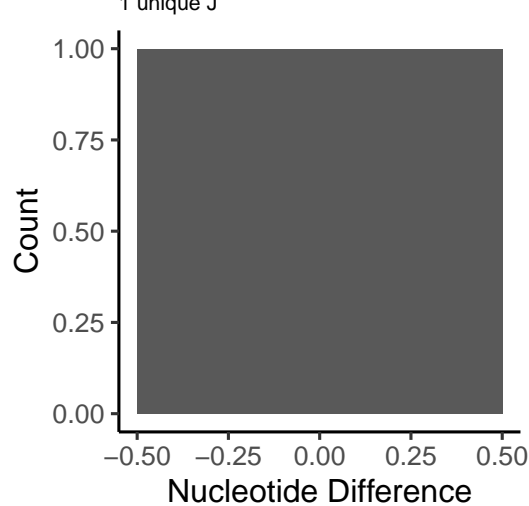
### IGHV4/OR15–8\*01

3 sequences assigned  
No exact matches.



### IGHV7–4–1\*01

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







Warning – no inferred sequences found.