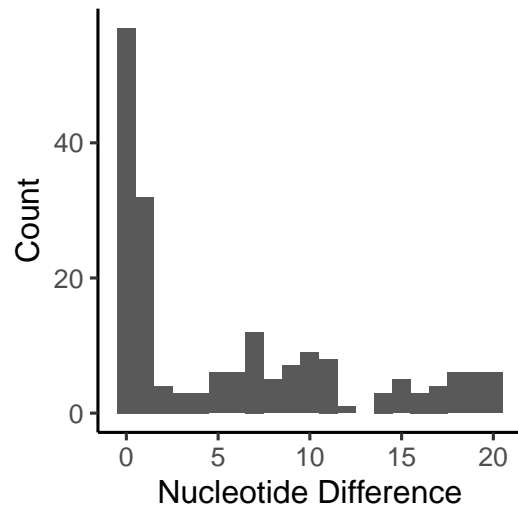


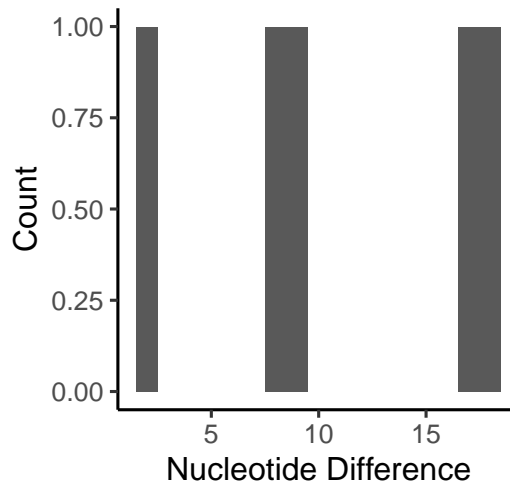
## IGHV1-2\*04

210 sequences assigned  
57 (27.1%) exact matches, in which:  
53 unique CDR3  
4 unique J



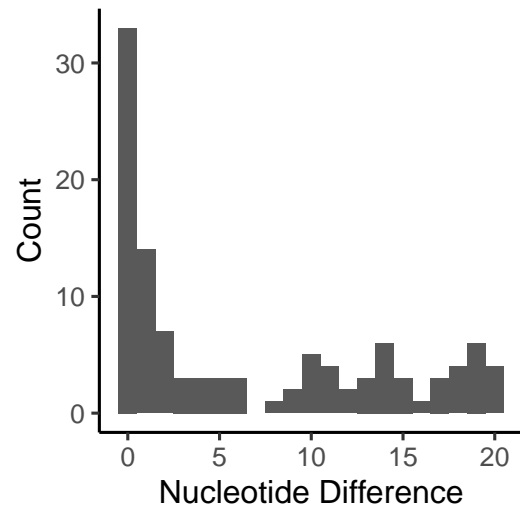
## IGHV1-8\*01

5 sequences assigned  
No exact matches.



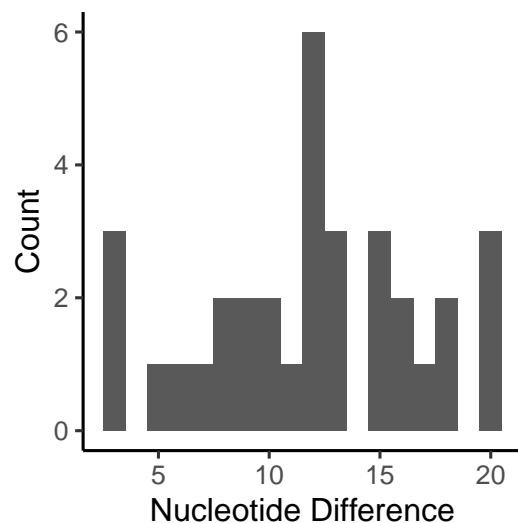
## IGHV1-24\*01

117 sequences assigned  
33 (28.2%) exact matches, in which:  
29 unique CDR3  
4 unique J



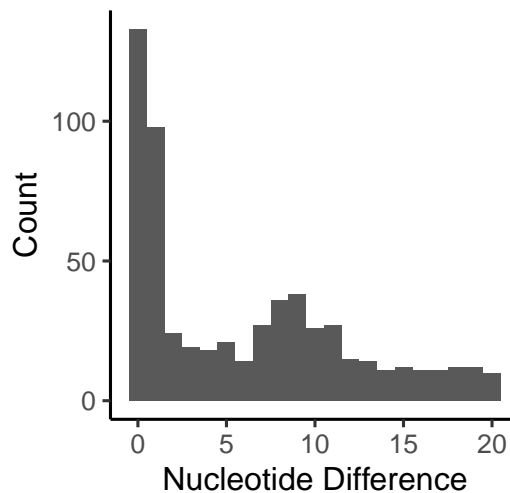
## IGHV1-3\*04

41 sequences assigned  
No exact matches.



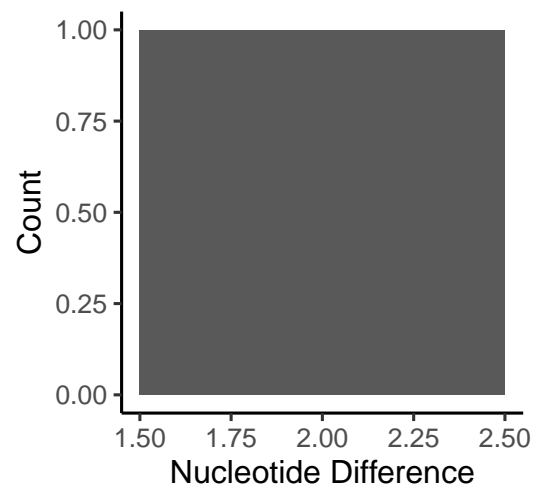
## IGHV1-18\*01

655 sequences assigned  
133 (20.3%) exact matches, in which:  
106 unique CDR3  
5 unique J



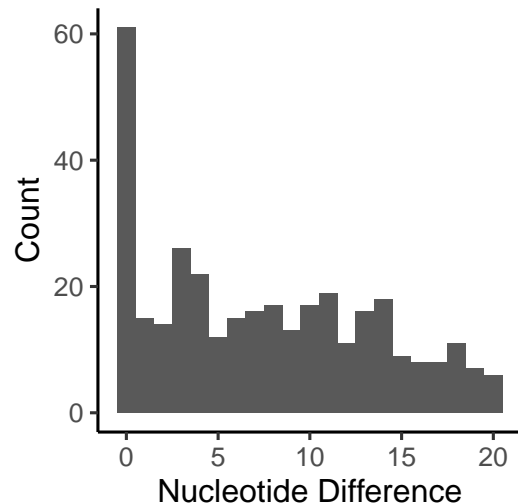
## IGHV1-45\*02

1 sequences assigned  
No exact matches.



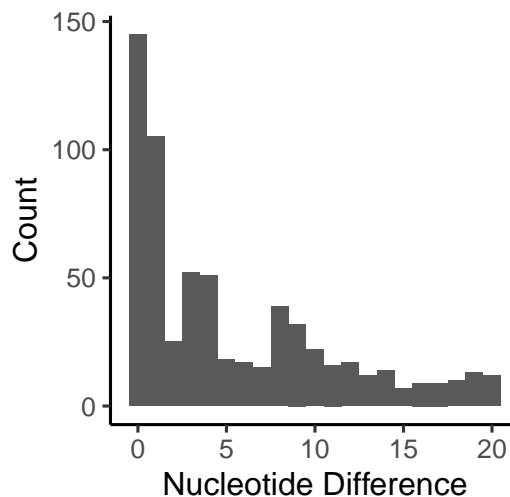
## IGHV1-3\*01\_05

366 sequences assigned  
61 (16.7%) exact matches, in which:  
59 unique CDR3  
5 unique J



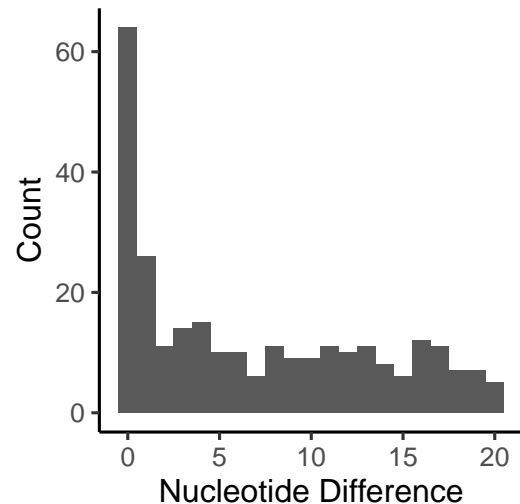
## IGHV1-18\*04

710 sequences assigned  
145 (20.4%) exact matches, in which:  
121 unique CDR3  
5 unique J



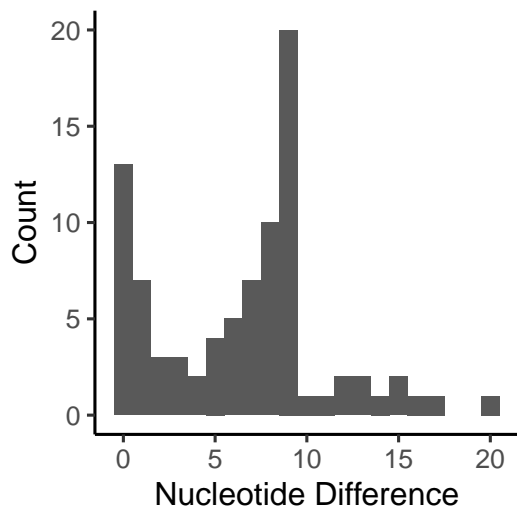
## IGHV1-46\*01

301 sequences assigned  
64 (21.3%) exact matches, in which:  
59 unique CDR3  
5 unique J



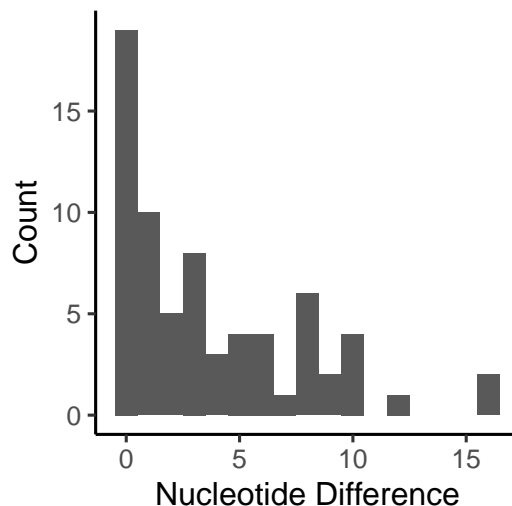
### IGHV1-58\*01\_03

96 sequences assigned  
13 (13.5%) exact matches, in which:  
12 unique CDR3  
3 unique J



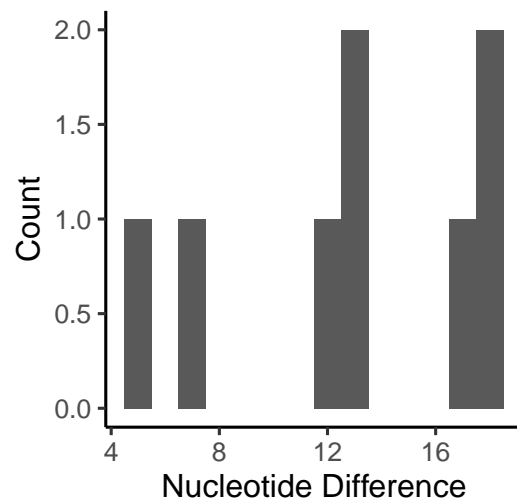
### IGHV2-26\*01

69 sequences assigned  
19 (27.5%) exact matches, in which:  
15 unique CDR3  
2 unique J



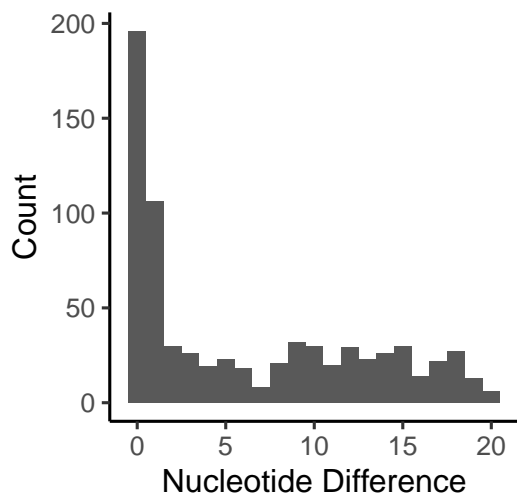
### IGHV3-9\*01

9 sequences assigned  
No exact matches.



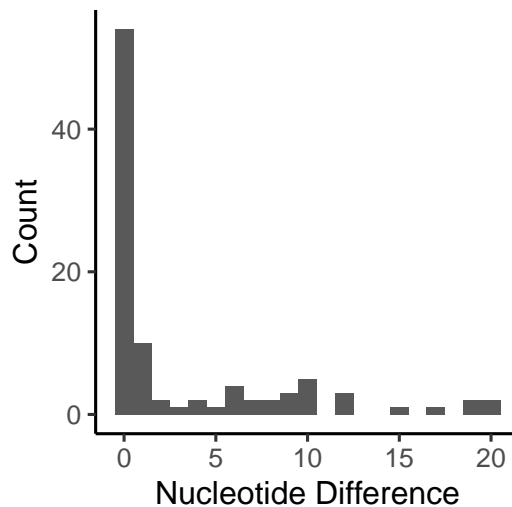
### IGHV1-69\*01\_12\_13

825 sequences assigned  
196 (23.8%) exact matches, in which:  
180 unique CDR3  
6 unique J



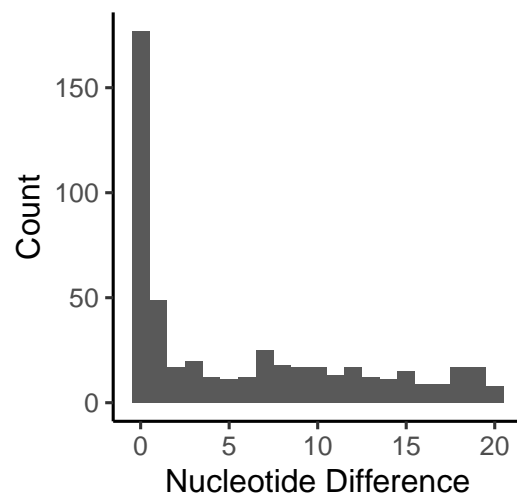
### IGHV2-70\*01

99 sequences assigned  
54 (54.5%) exact matches, in which:  
41 unique CDR3  
4 unique J



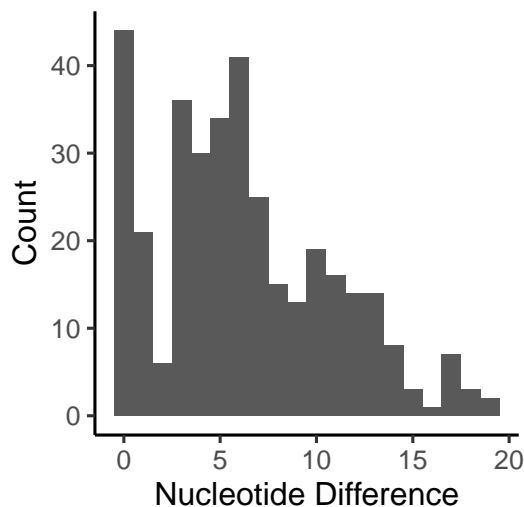
### IGHV3-11\*06

545 sequences assigned  
177 (32.5%) exact matches, in which:  
94 unique CDR3  
5 unique J



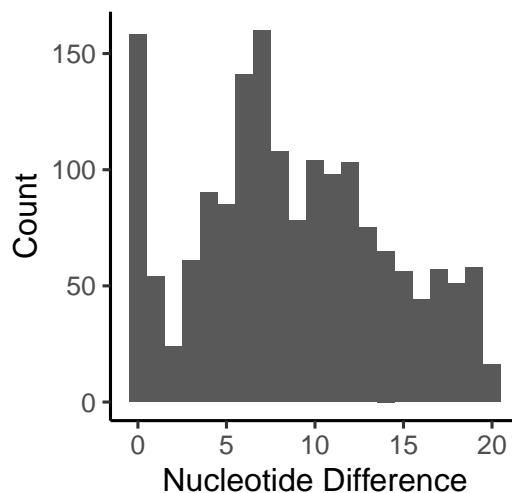
### IGHV2-5\*02

370 sequences assigned  
44 (11.9%) exact matches, in which:  
39 unique CDR3  
4 unique J



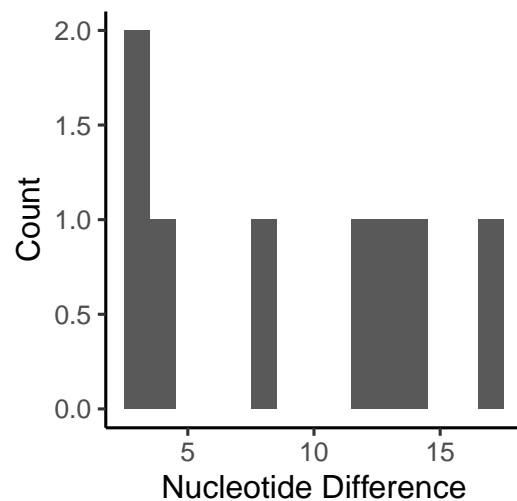
### IGHV3-7\*03

1857 sequences assigned  
158 (8.5%) exact matches, in which:  
78 unique CDR3  
6 unique J



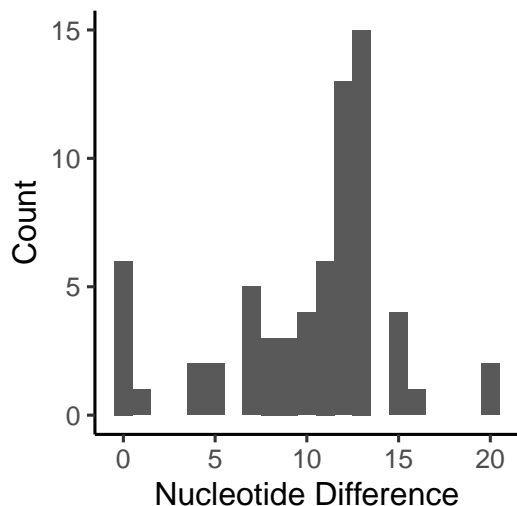
### IGHV3-13\*01

10 sequences assigned  
No exact matches.



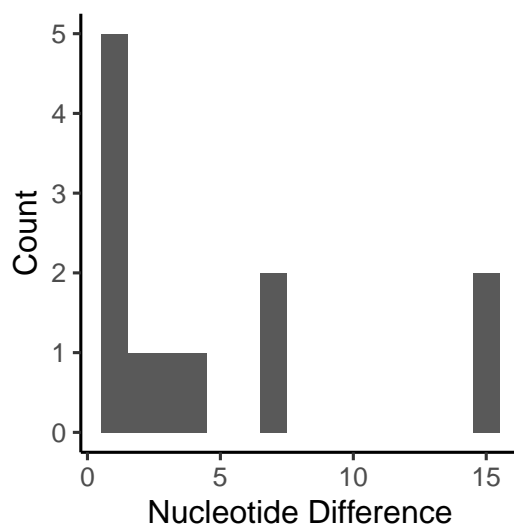
### IGHV3-13\*05

79 sequences assigned  
6 (7.6%) exact matches, in which:  
6 unique CDR3  
2 unique J



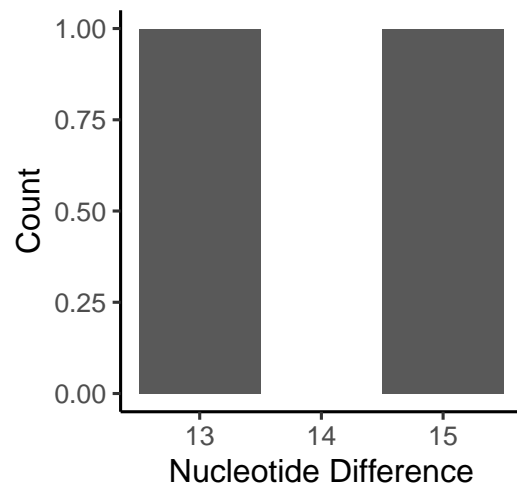
### IGHV3-20\*03\_04

12 sequences assigned  
No exact matches.



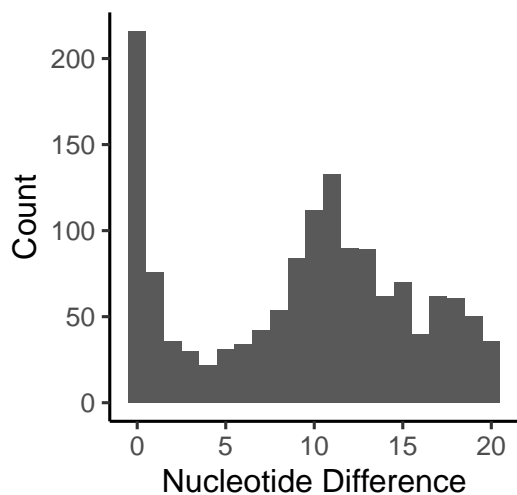
### IGHV3-30-3\*01

4 sequences assigned  
No exact matches.



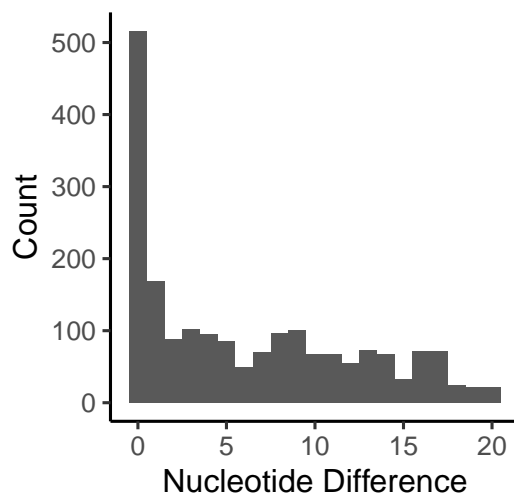
### IGHV3-15\*01\_02

1605 sequences assigned  
216 (13.5%) exact matches, in which:  
117 unique CDR3  
4 unique J



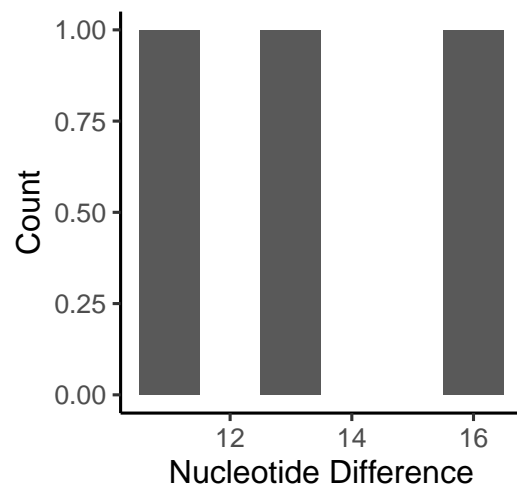
### IGHV3-21\*01\_02

2012 sequences assigned  
516 (25.6%) exact matches, in which:  
273 unique CDR3  
6 unique J



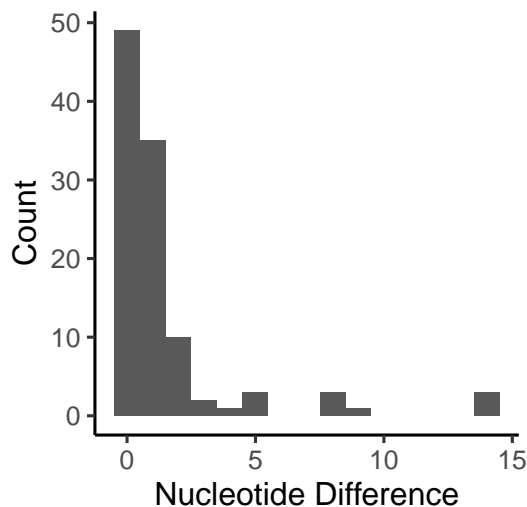
### IGHV3-30-3\*03

4 sequences assigned  
No exact matches.



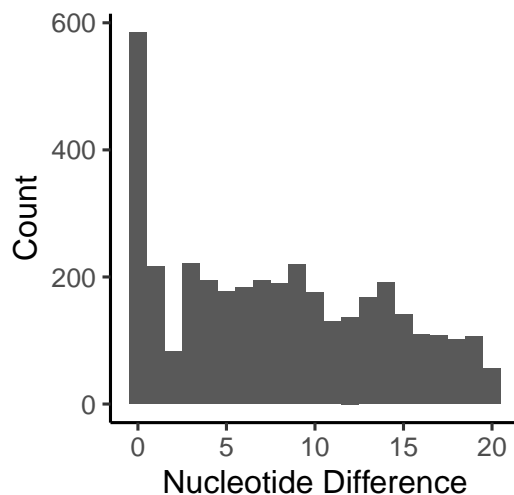
### IGHV3-20\*01\_02

107 sequences assigned  
49 (45.8%) exact matches, in which:  
21 unique CDR3  
5 unique J



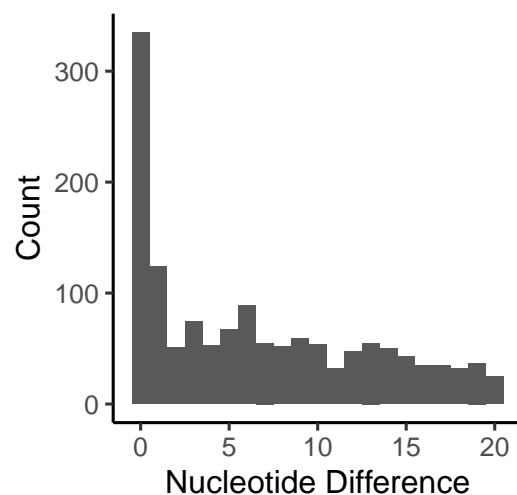
### IGHV3-23\*01\_04

4163 sequences assigned  
585 (14.1%) exact matches, in which:  
316 unique CDR3  
6 unique J



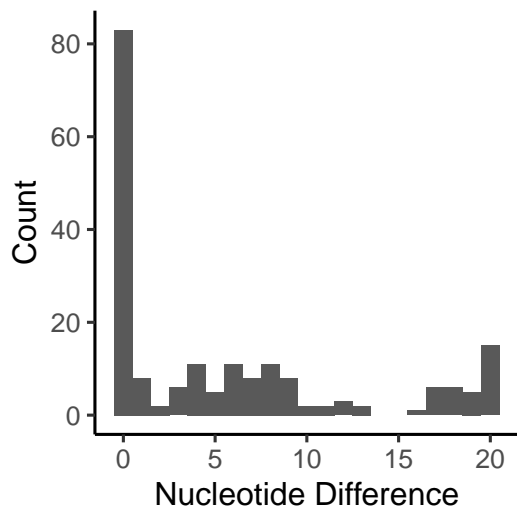
### IGHV3-33\*01

1560 sequences assigned  
335 (21.5%) exact matches, in which:  
162 unique CDR3  
6 unique J



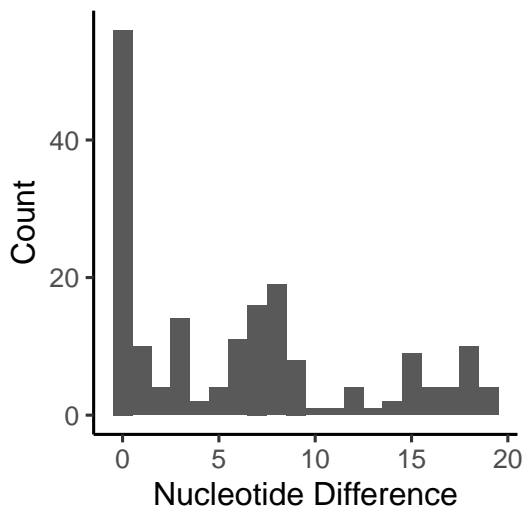
### IGHV3-43\*01

210 sequences assigned  
83 (39.5%) exact matches, in which:  
43 unique CDR3  
4 unique J



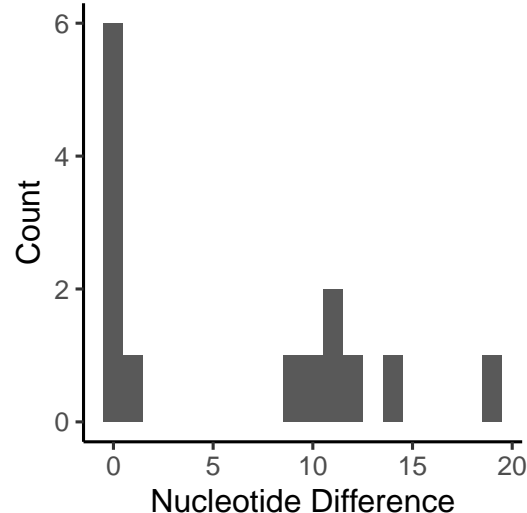
### IGHV3-49\*03\_05

200 sequences assigned  
56 (28%) exact matches, in which:  
34 unique CDR3  
4 unique J



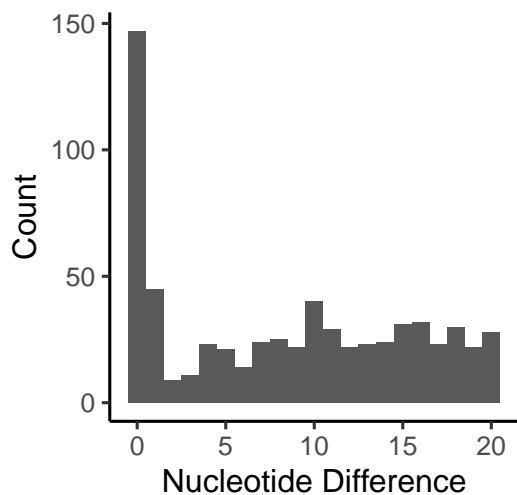
### IGHV3-64\*02\_07

14 sequences assigned  
6 (42.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



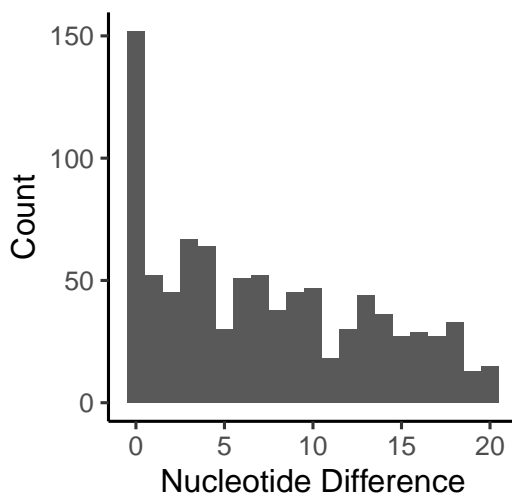
### IGHV3-48\*02

812 sequences assigned  
147 (18.1%) exact matches, in which:  
66 unique CDR3  
5 unique J



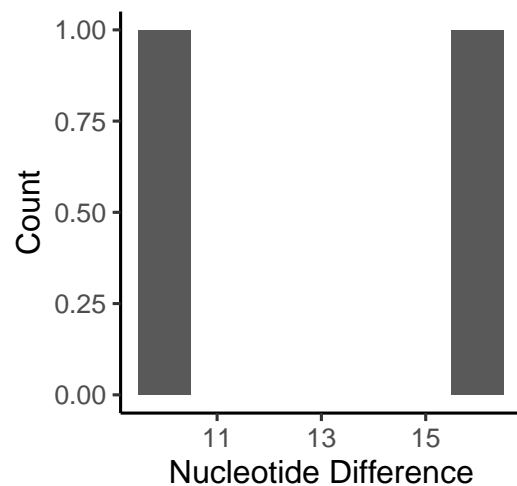
### IGHV3-53\*01\_02

1002 sequences assigned  
152 (15.2%) exact matches, in which:  
80 unique CDR3  
4 unique J



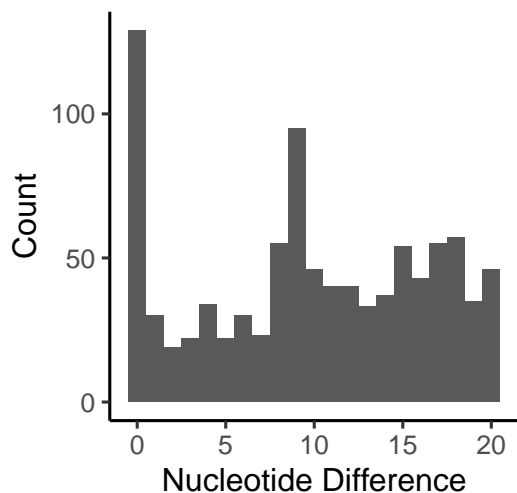
### IGHV3-66\*04

3 sequences assigned  
No exact matches.



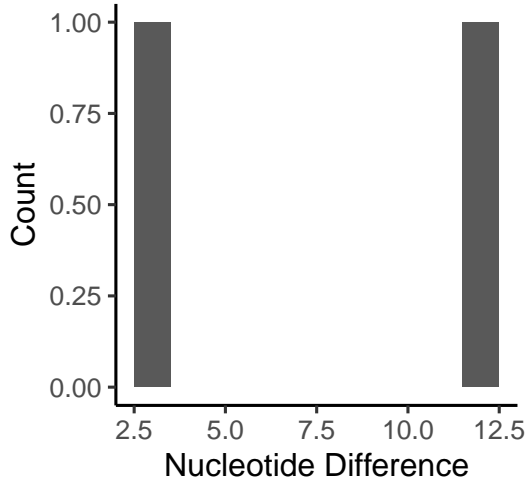
### IGHV3-48\*04

1196 sequences assigned  
129 (10.8%) exact matches, in which:  
65 unique CDR3  
5 unique J



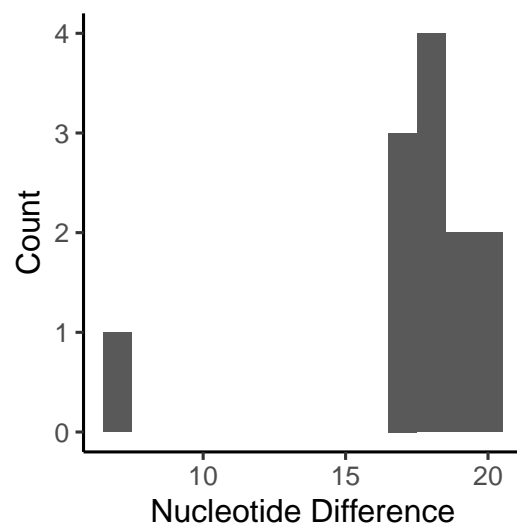
### IGHV3-64\*04

2 sequences assigned  
No exact matches.



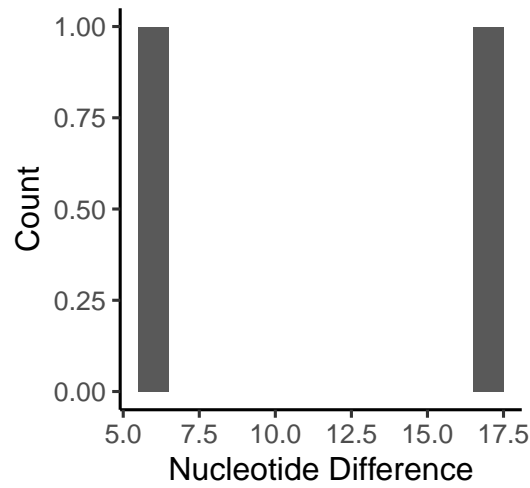
### IGHV3-69-1\*01

22 sequences assigned  
No exact matches.



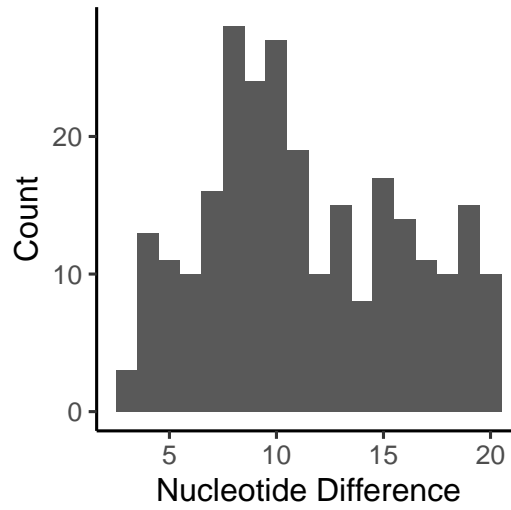
### IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



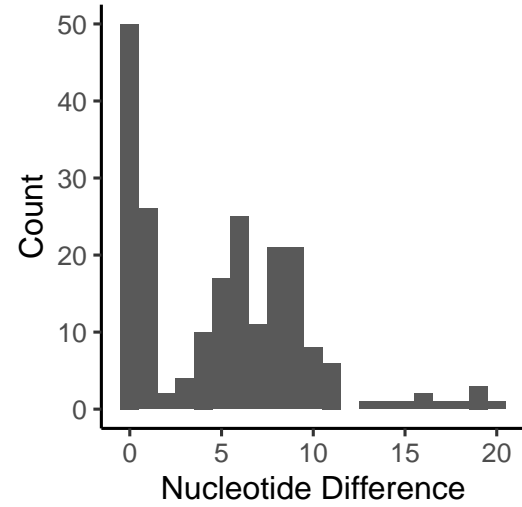
### IGHV3-74\*03

315 sequences assigned  
No exact matches.



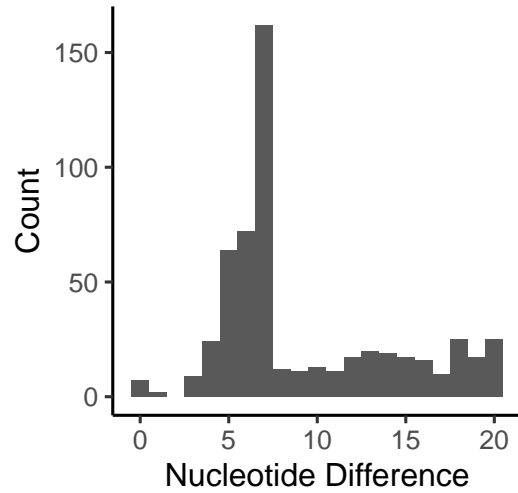
### IGHV3-64D\*06

224 sequences assigned  
50 (22.3%) exact matches, in which:  
31 unique CDR3  
4 unique J



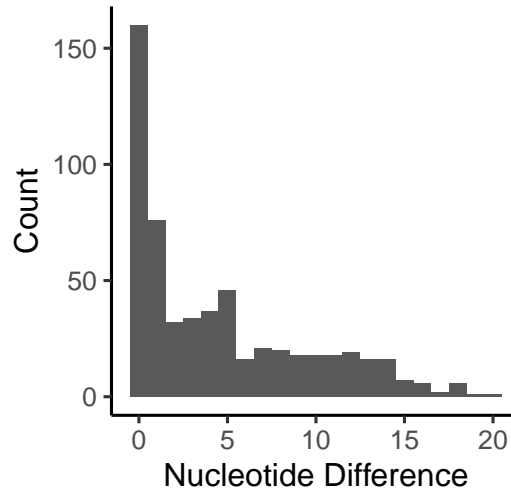
### IGHV3-72\*01

585 sequences assigned  
7 (1.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



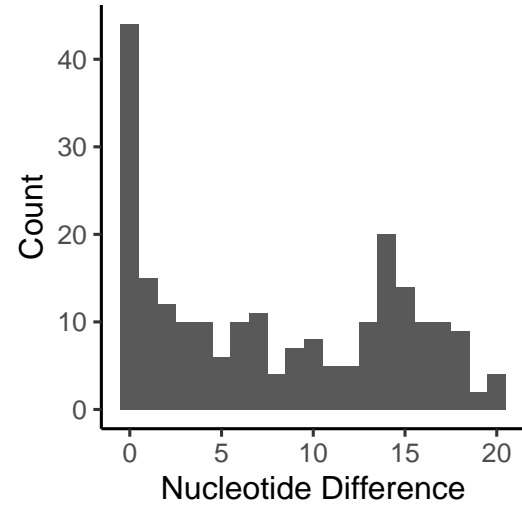
### IGHV3-74\*01\_02

593 sequences assigned  
160 (27%) exact matches, in which:  
76 unique CDR3  
4 unique J



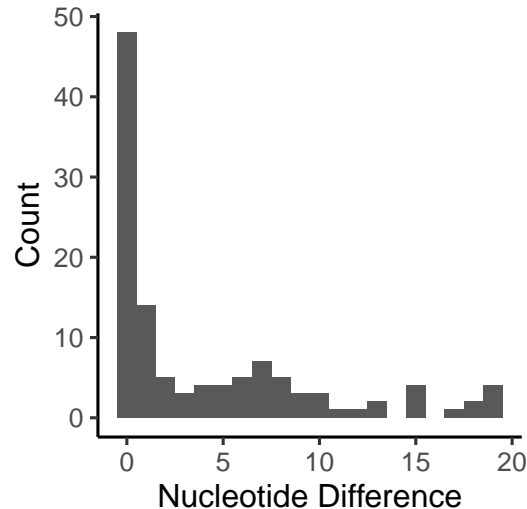
### IGHV3-64D\*08

239 sequences assigned  
44 (18.4%) exact matches, in which:  
24 unique CDR3  
5 unique J



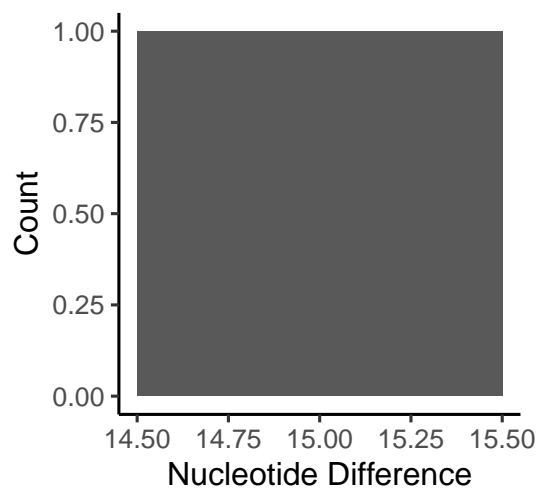
### IGHV3-73\*01\_02

121 sequences assigned  
48 (39.7%) exact matches, in which:  
27 unique CDR3  
4 unique J



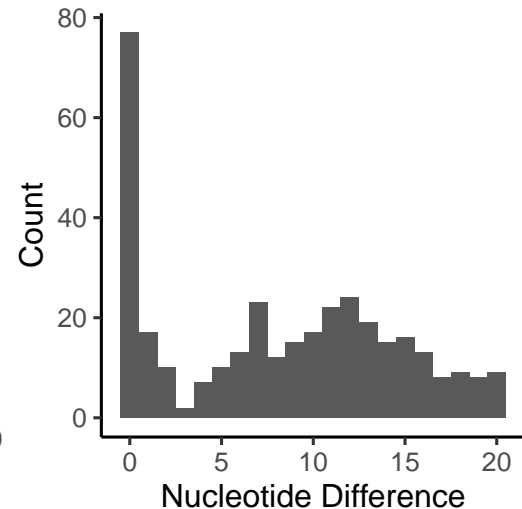
### IGHV3-43D\*03

1 sequences assigned  
No exact matches.



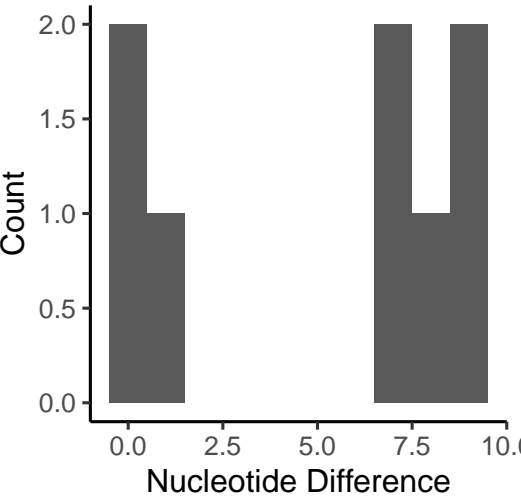
### IGHV4-4\*02\_03

404 sequences assigned  
77 (19.1%) exact matches, in which:  
49 unique CDR3  
4 unique J



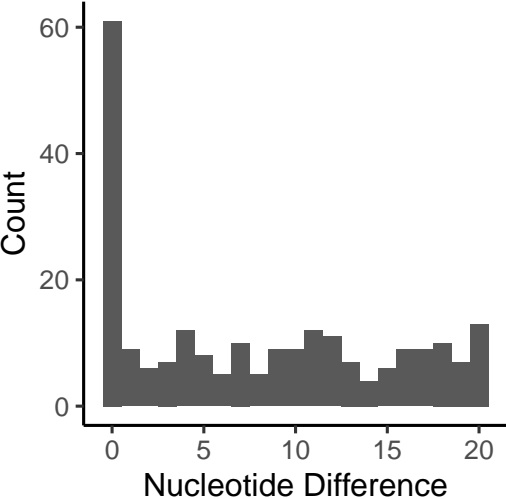
### IGHV4-28\*01\_07

8 sequences assigned  
2 (25%) exact matches, in which:  
2 unique CDR3  
2 unique J



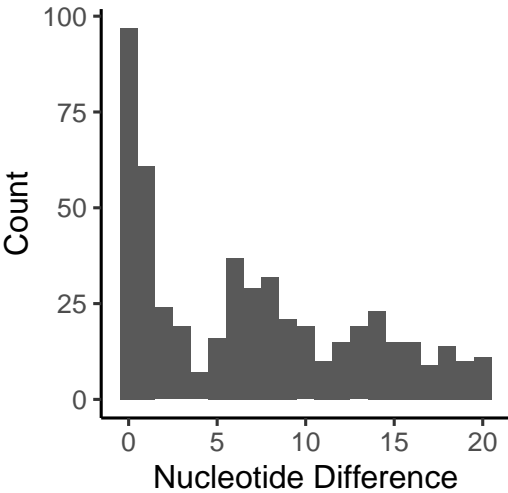
### IGHV4-31\*02

352 sequences assigned  
61 (17.3%) exact matches, in which:  
44 unique CDR3  
4 unique J



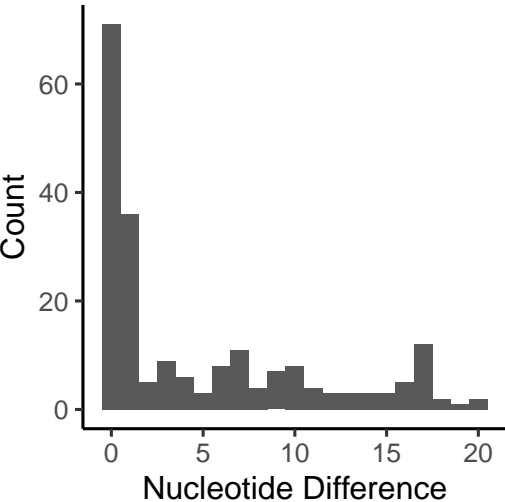
### IGHV4-39\*07

588 sequences assigned  
97 (16.5%) exact matches, in which:  
70 unique CDR3  
5 unique J



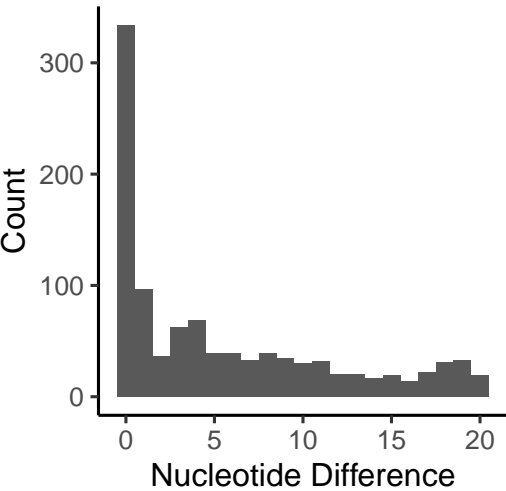
### IGHV4-30-2\*01

213 sequences assigned  
71 (33.3%) exact matches, in which:  
45 unique CDR3  
5 unique J



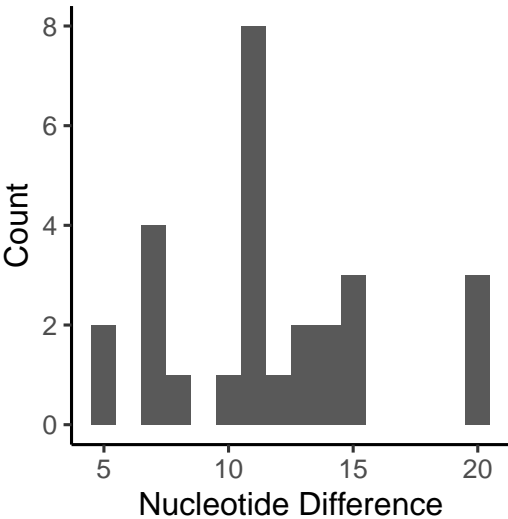
### IGHV4-34\*01\_02

1248 sequences assigned  
334 (26.8%) exact matches, in which:  
188 unique CDR3  
6 unique J



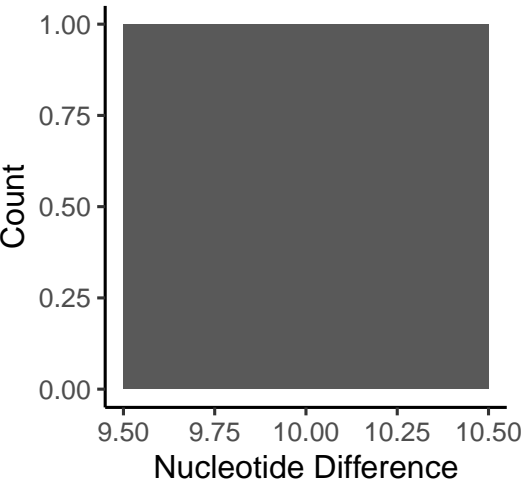
### IGHV4-59\*02

51 sequences assigned  
No exact matches.



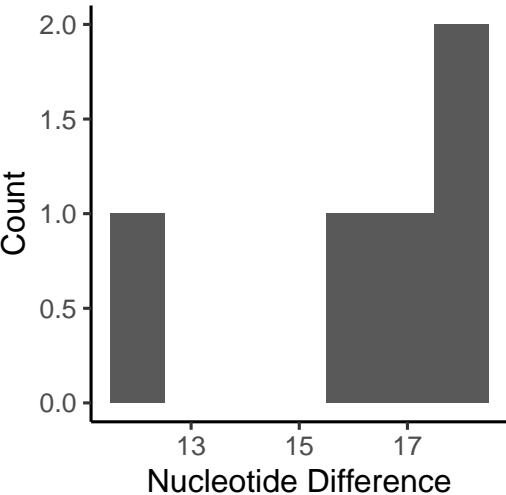
### IGHV4-30-4\*08

2 sequences assigned  
No exact matches.



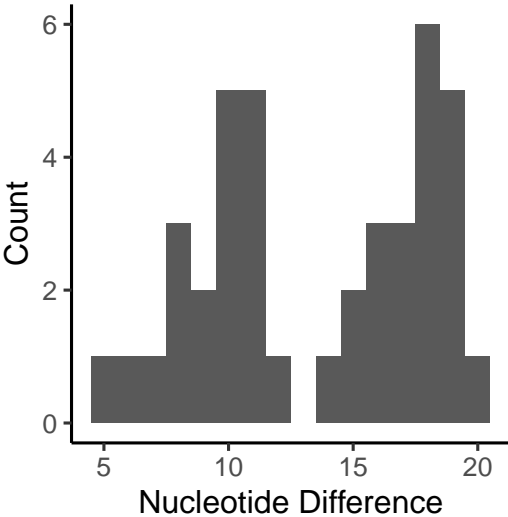
### IGHV4-38-2\*02

5 sequences assigned  
No exact matches.



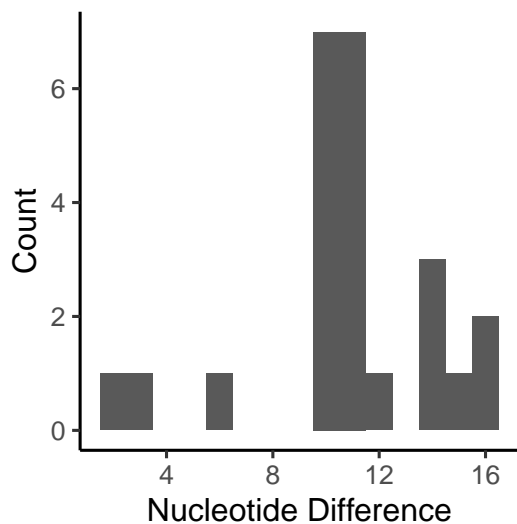
### IGHV4-59\*11

61 sequences assigned  
No exact matches.



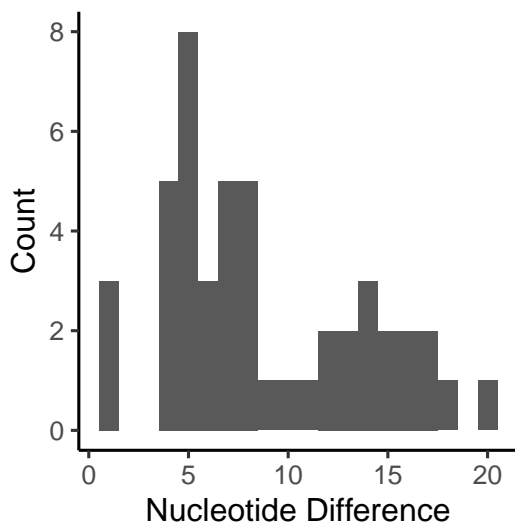
### IGHV4-59\*12

29 sequences assigned  
No exact matches.



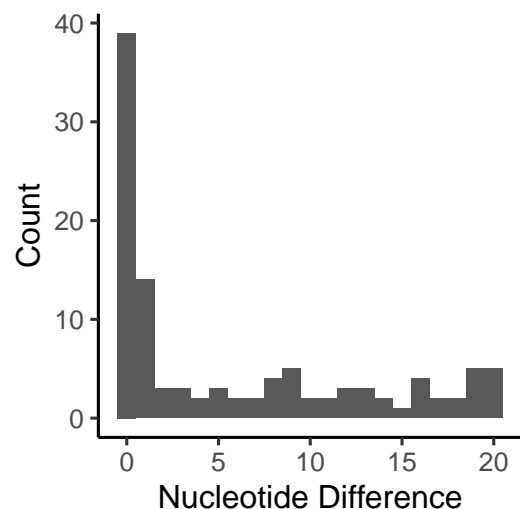
### IGHV4-61\*08

71 sequences assigned  
No exact matches.



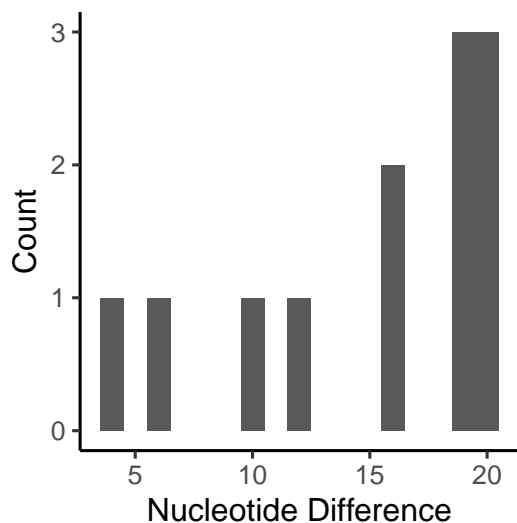
### IGHV5-10-1\*01\_03

122 sequences assigned  
39 (32%) exact matches, in which:  
38 unique CDR3  
5 unique J



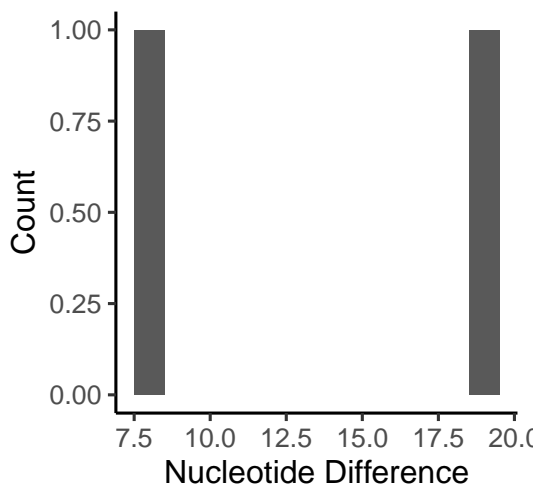
### IGHV4-59\*13

17 sequences assigned  
No exact matches.



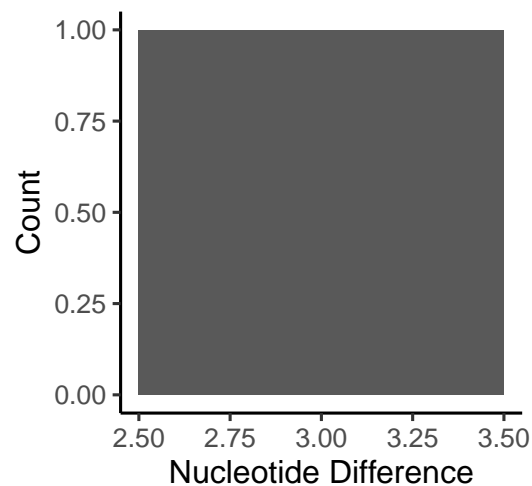
### IGHV4/OR15-8\*01

5 sequences assigned  
No exact matches.



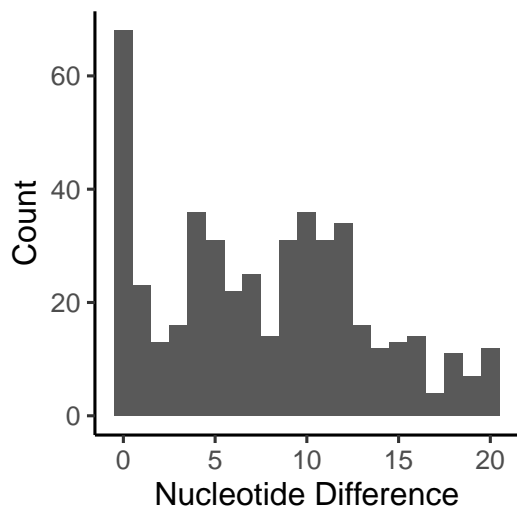
### IGHV5-51\*07

1 sequences assigned  
No exact matches.



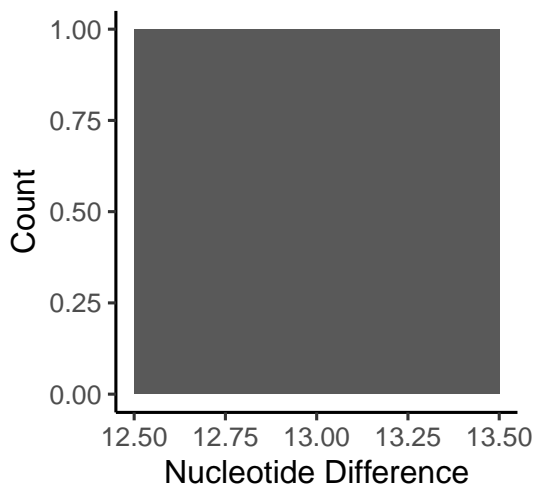
### IGHV4-61\*01

522 sequences assigned  
68 (13%) exact matches, in which:  
47 unique CDR3  
5 unique J



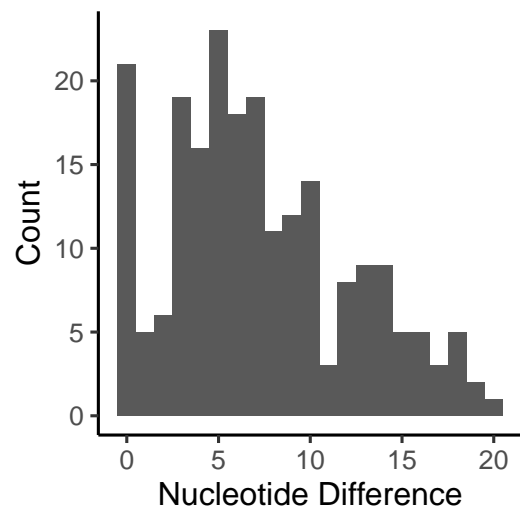
### IGHV1/OR15-9\*01

1 sequences assigned  
No exact matches.



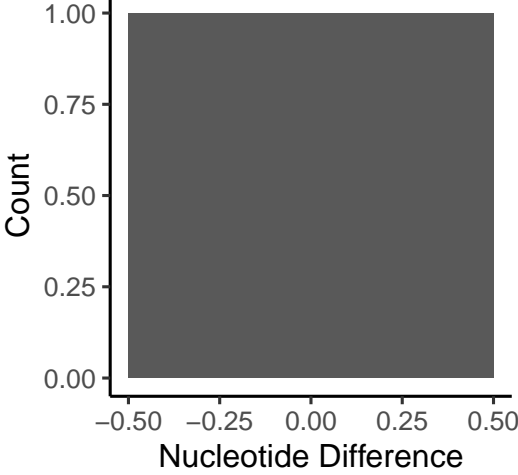
### IGHV6-1\*01\_02

227 sequences assigned  
21 (9.3%) exact matches, in which:  
15 unique CDR3  
5 unique J



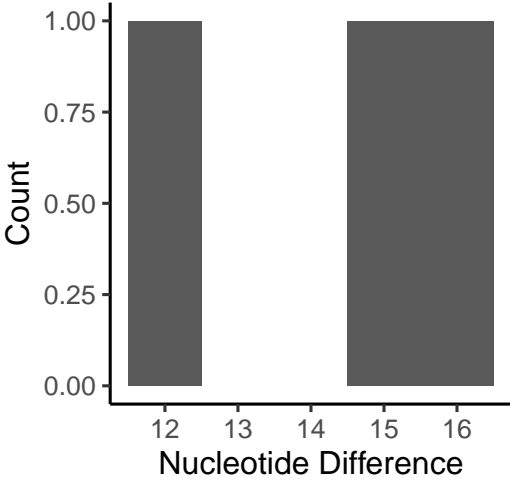
IGHV7-4-1\*01

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



IGHV7-4-1\*02

3 sequences assigned  
No exact matches.







[illegible]