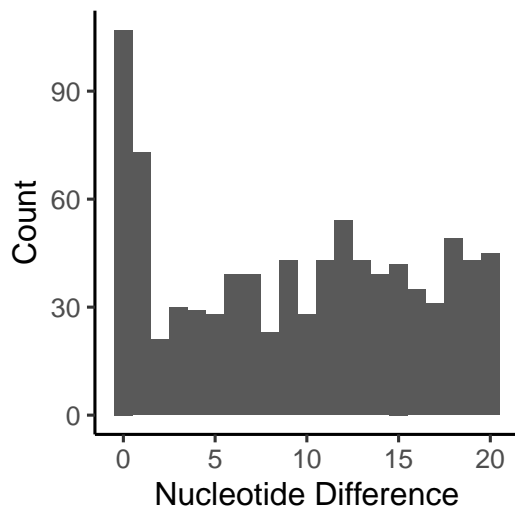


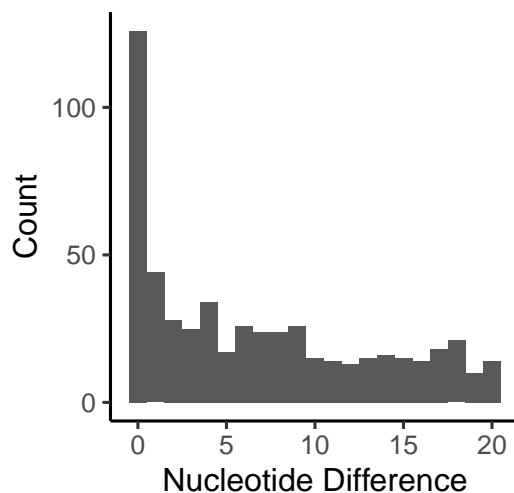
## IGHV1-2\*02

1492 sequences assigned  
107 (7.2%) exact matches, in which:  
99 unique CDR3  
5 unique J



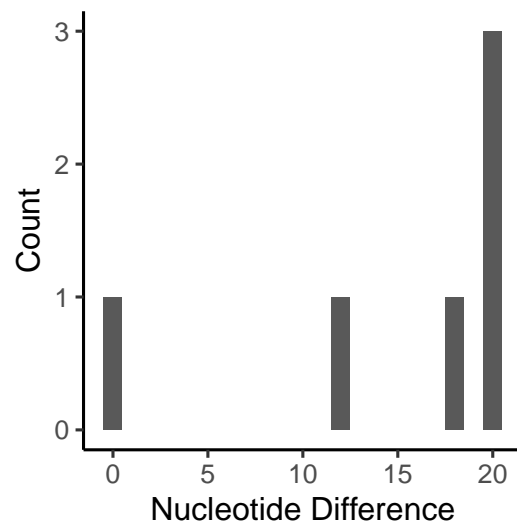
## IGHV1-8\*01

658 sequences assigned  
126 (19.1%) exact matches, in which:  
122 unique CDR3  
6 unique J



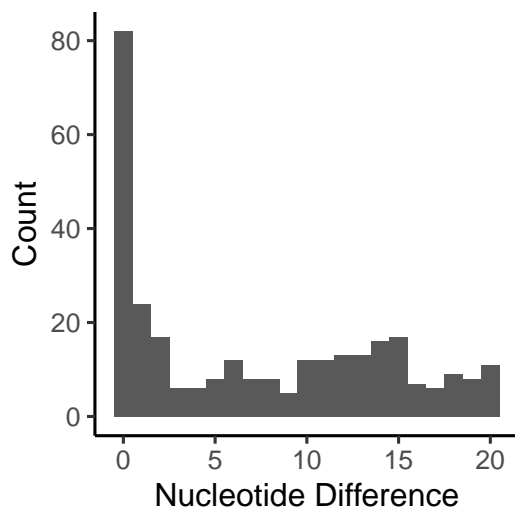
## IGHV1-45\*02

40 sequences assigned  
1 (2.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



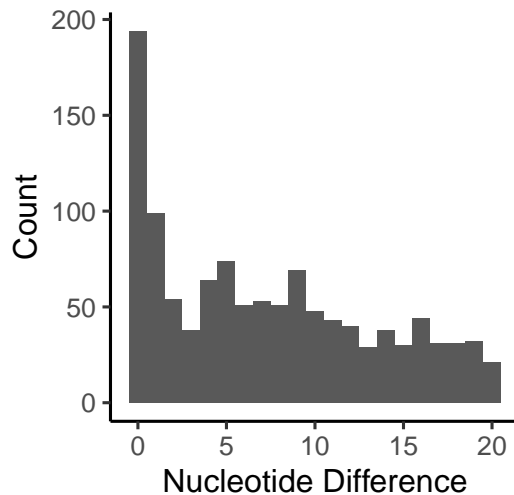
## IGHV1-3\*01

418 sequences assigned  
82 (19.6%) exact matches, in which:  
61 unique CDR3  
5 unique J



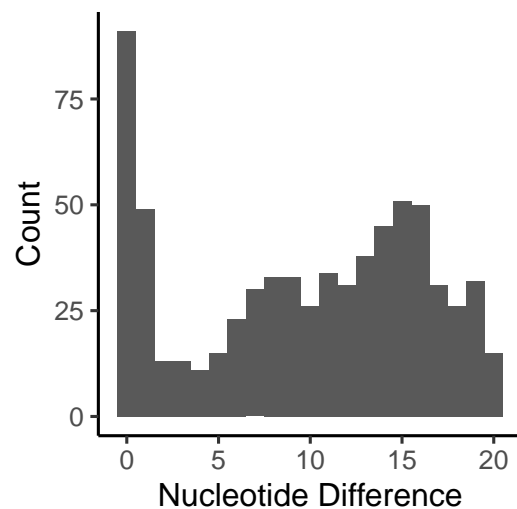
## IGHV1-18\*01

1713 sequences assigned  
194 (11.3%) exact matches, in which:  
172 unique CDR3  
6 unique J



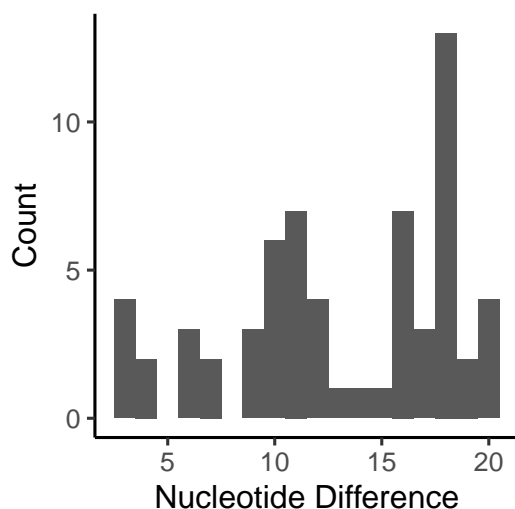
## IGHV1-46\*01

993 sequences assigned  
91 (9.2%) exact matches, in which:  
89 unique CDR3  
5 unique J



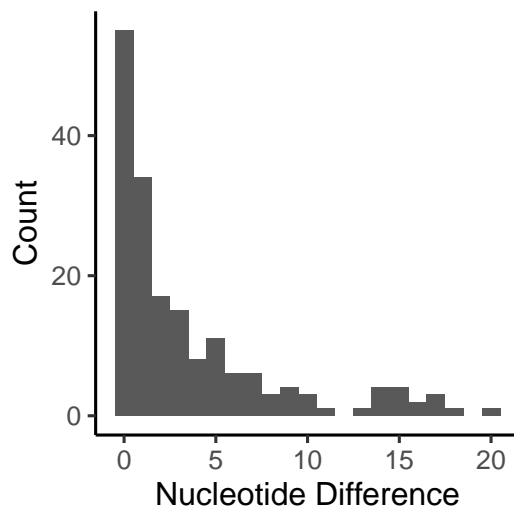
## IGHV1-3\*04

106 sequences assigned  
No exact matches.



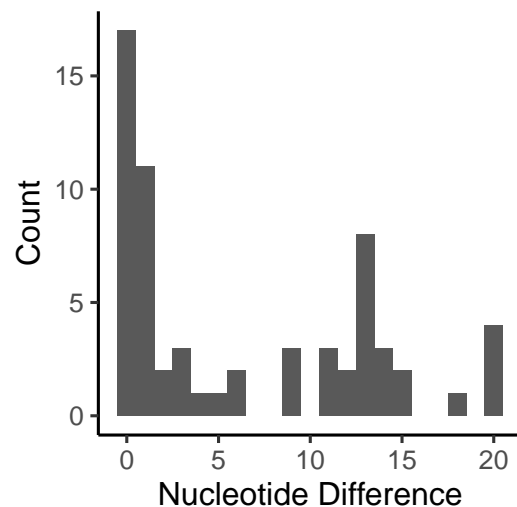
## IGHV1-24\*01

208 sequences assigned  
55 (26.4%) exact matches, in which:  
51 unique CDR3  
5 unique J



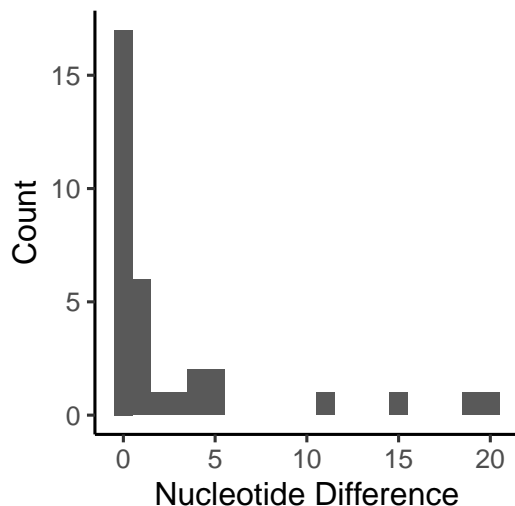
## IGHV1-58\*01

82 sequences assigned  
17 (20.7%) exact matches, in which:  
17 unique CDR3  
4 unique J



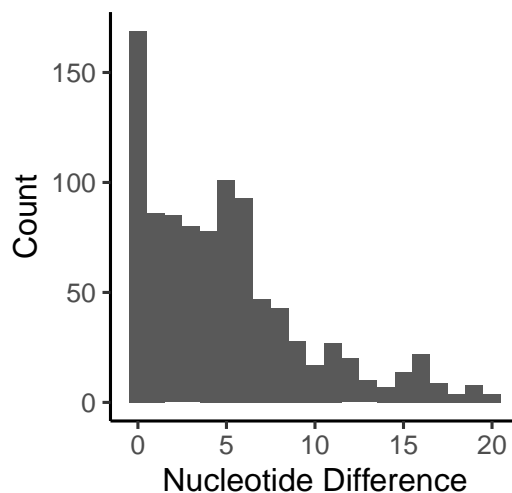
## IGHV1-69-2\*01

53 sequences assigned  
17 (32.1%) exact matches, in which:  
16 unique CDR3  
3 unique J



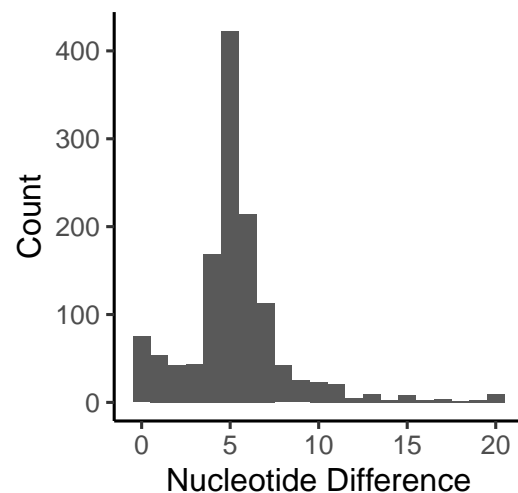
## IGHV2-5\*01

1040 sequences assigned  
169 (16.2%) exact matches, in which:  
133 unique CDR3  
6 unique J



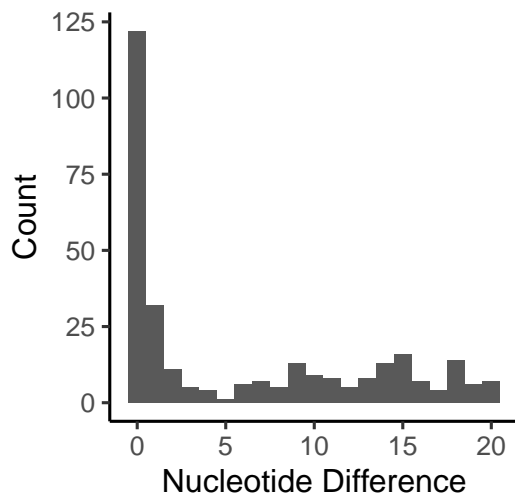
## IGHV2-70\*01

1332 sequences assigned  
75 (5.6%) exact matches, in which:  
72 unique CDR3  
5 unique J



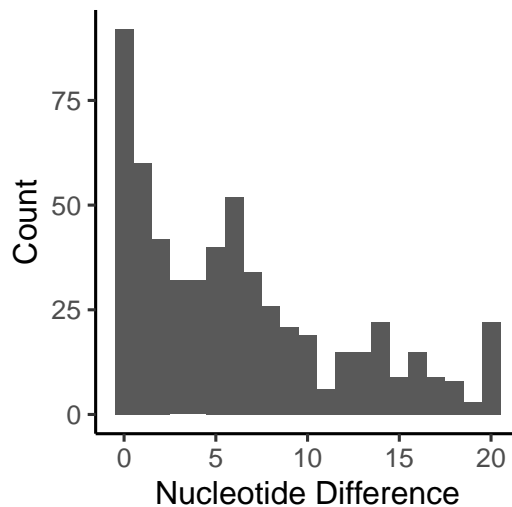
## IGHV1-69\*06

492 sequences assigned  
122 (24.8%) exact matches, in which:  
120 unique CDR3  
5 unique J



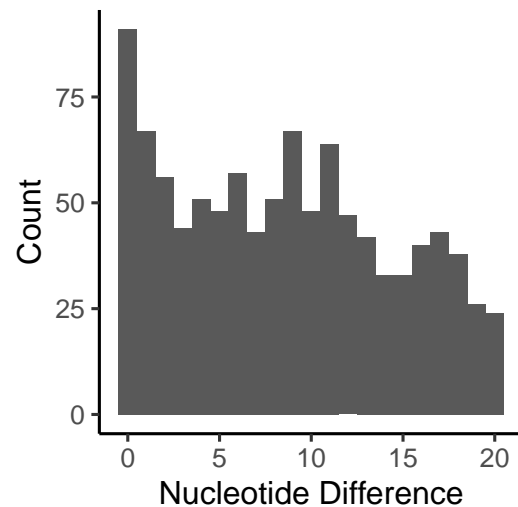
## IGHV2-5\*02

726 sequences assigned  
92 (12.7%) exact matches, in which:  
79 unique CDR3  
6 unique J



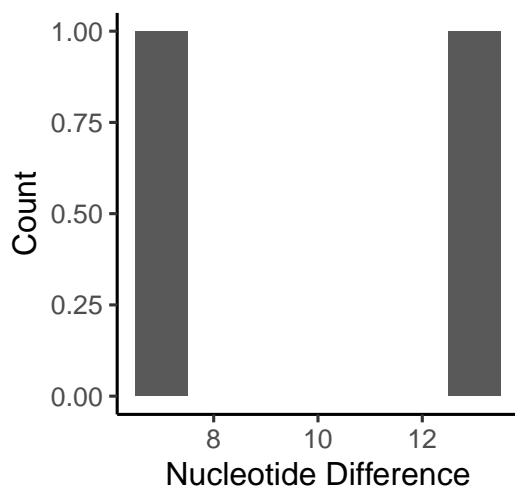
## IGHV3-7\*01

1207 sequences assigned  
91 (7.5%) exact matches, in which:  
74 unique CDR3  
5 unique J



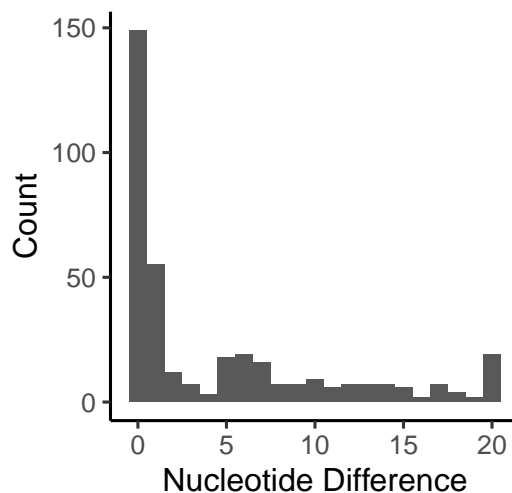
## IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



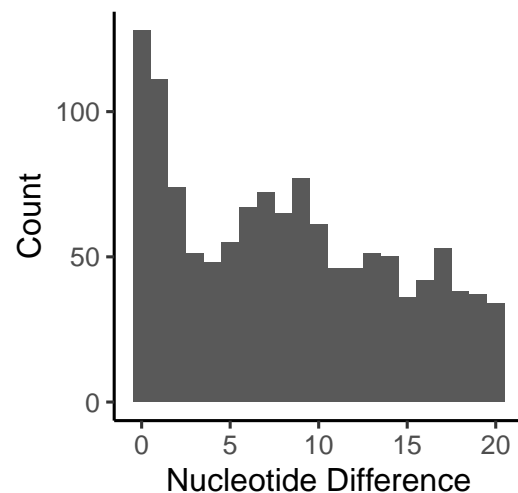
## IGHV2-26\*01

475 sequences assigned  
149 (31.4%) exact matches, in which:  
129 unique CDR3  
6 unique J



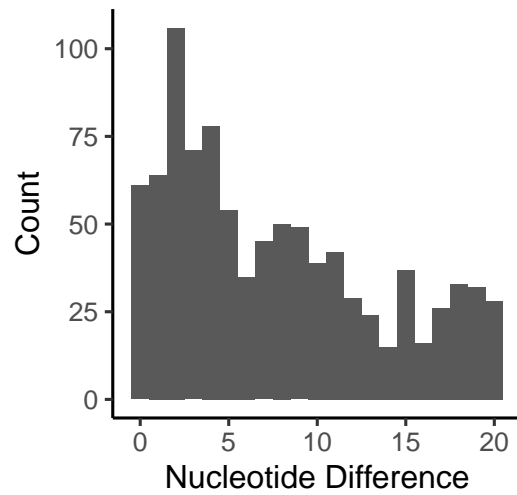
## IGHV3-9\*01

1532 sequences assigned  
128 (8.4%) exact matches, in which:  
107 unique CDR3  
5 unique J



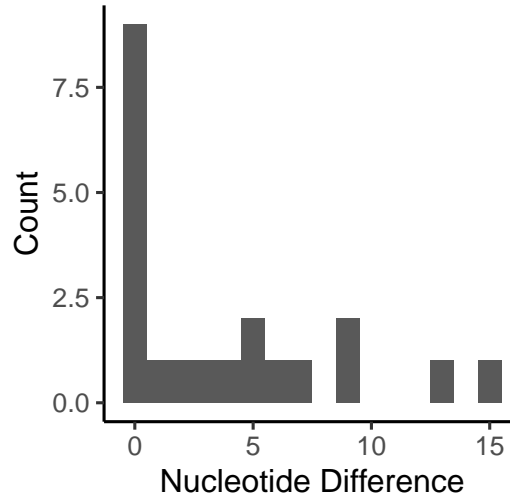
### IGHV3-11\*01

1245 sequences assigned  
61 (4.9%) exact matches, in which:  
58 unique CDR3  
5 unique J



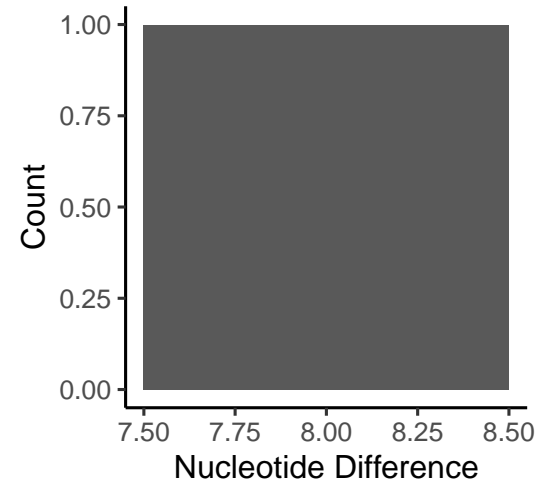
### IGHV3-20\*01

28 sequences assigned  
9 (32.1%) exact matches, in which:  
9 unique CDR3  
4 unique J



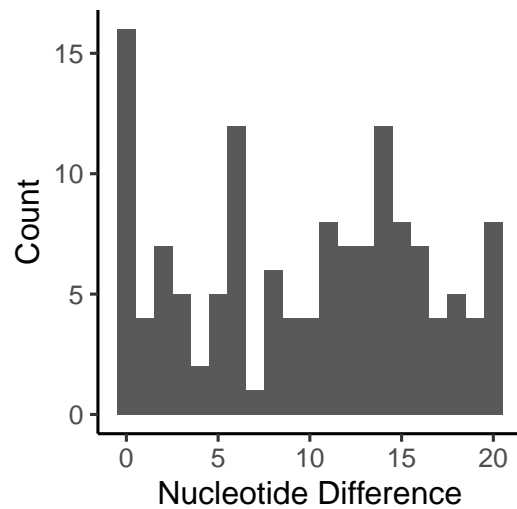
### IGHV3-30-3\*03

31 sequences assigned  
No exact matches.



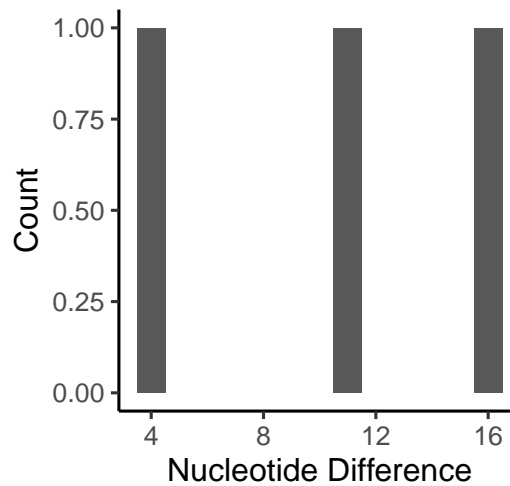
### IGHV3-13\*01

149 sequences assigned  
16 (10.7%) exact matches, in which:  
15 unique CDR3  
4 unique J



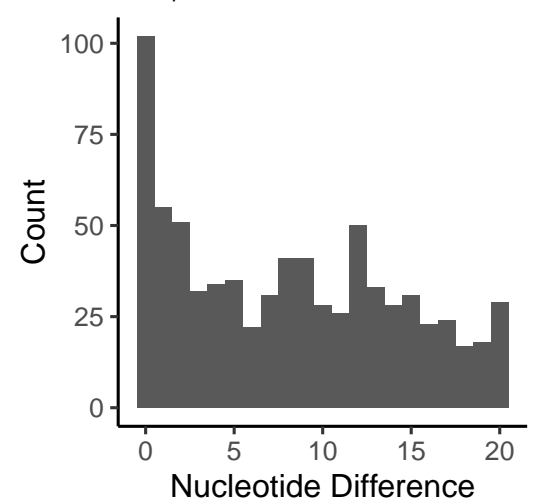
### IGHV3-20\*04

18 sequences assigned  
No exact matches.



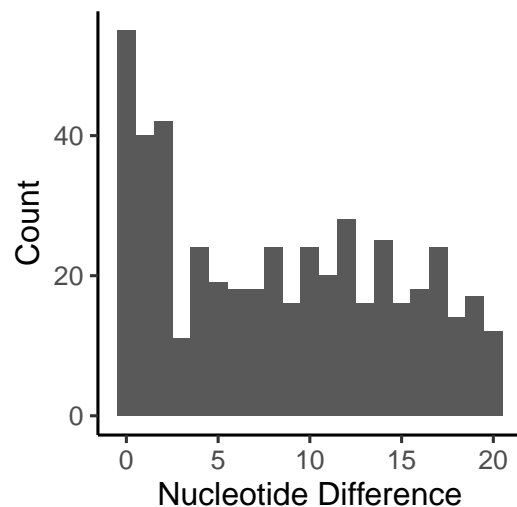
### IGHV3-33\*01

954 sequences assigned  
102 (10.7%) exact matches, in which:  
101 unique CDR3  
5 unique J



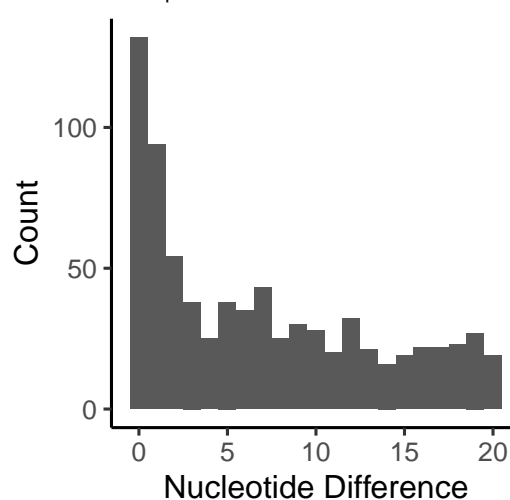
### IGHV3-15\*01

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



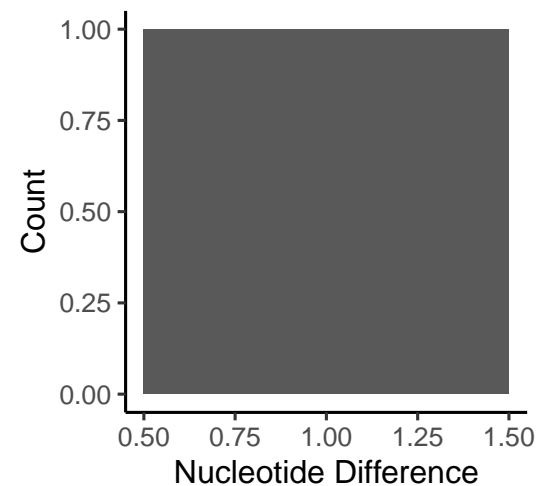
### IGHV3-21\*01

1000 sequences assigned  
132 (13.2%) exact matches, in which:  
116 unique CDR3  
6 unique J



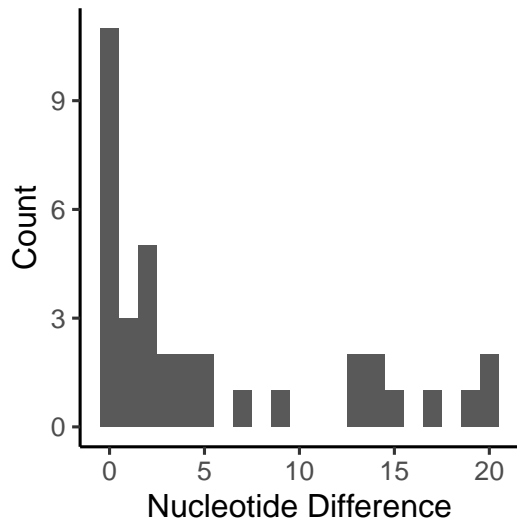
### IGHV3-35\*01

1 sequences assigned  
No exact matches.



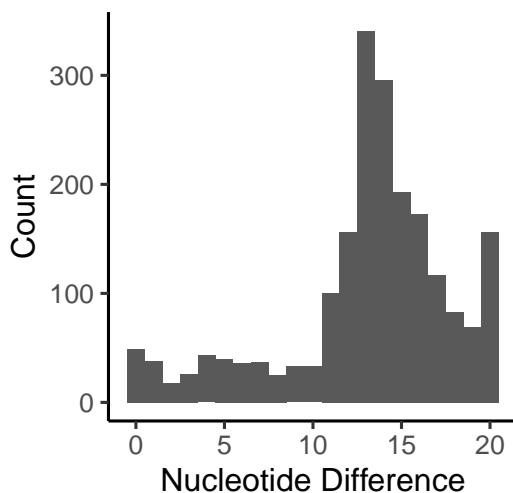
### IGHV3-43\*01

68 sequences assigned  
11 (16.2%) exact matches, in which:  
10 unique CDR3  
3 unique J



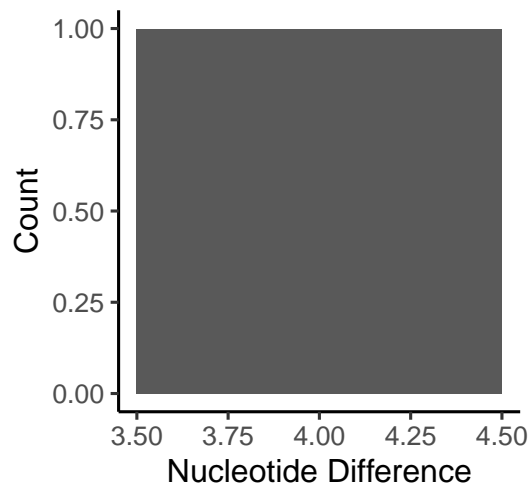
### IGHV3-53\*01

2772 sequences assigned  
49 (1.8%) exact matches, in which:  
44 unique CDR3  
5 unique J



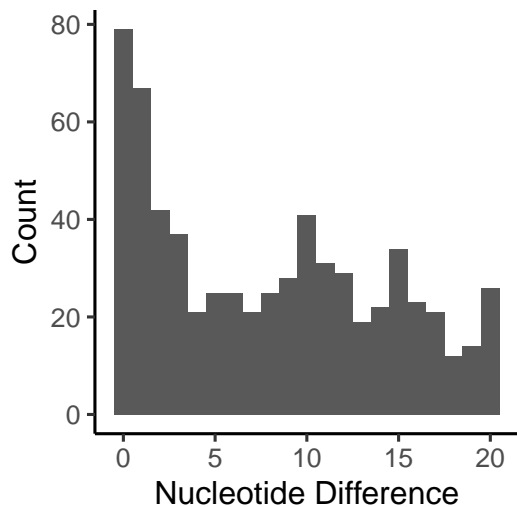
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



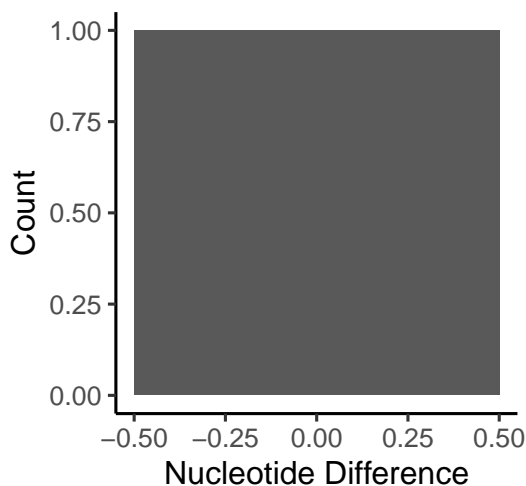
### IGHV3-48\*02

834 sequences assigned  
79 (9.5%) exact matches, in which:  
61 unique CDR3  
6 unique J



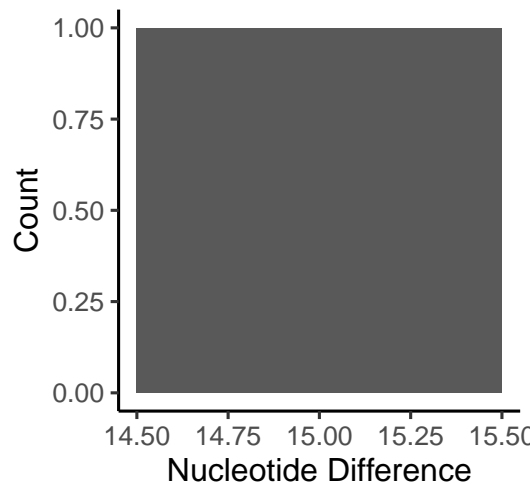
### IGHV3-64\*01

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



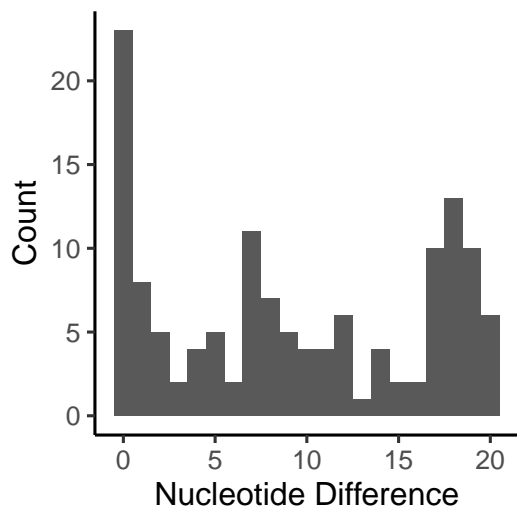
### IGHV3-69-1\*01

3 sequences assigned  
No exact matches.



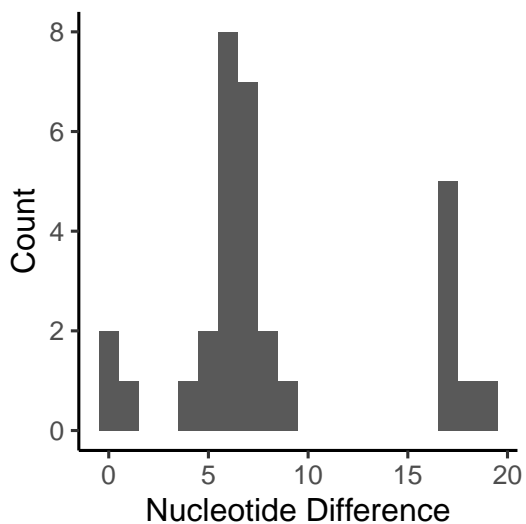
### IGHV3-49\*05

277 sequences assigned  
23 (8.3%) exact matches, in which:  
23 unique CDR3  
6 unique J



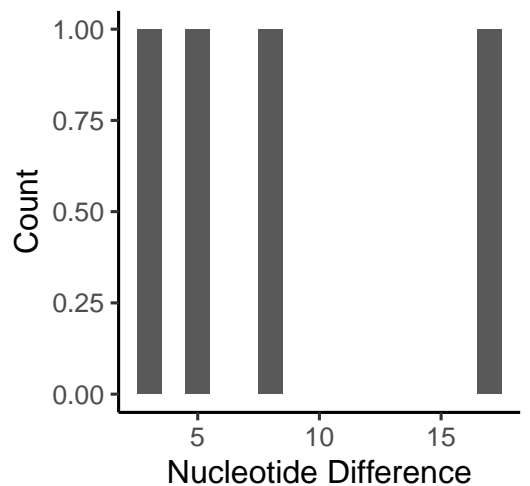
### IGHV3-64\*02

35 sequences assigned  
2 (5.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



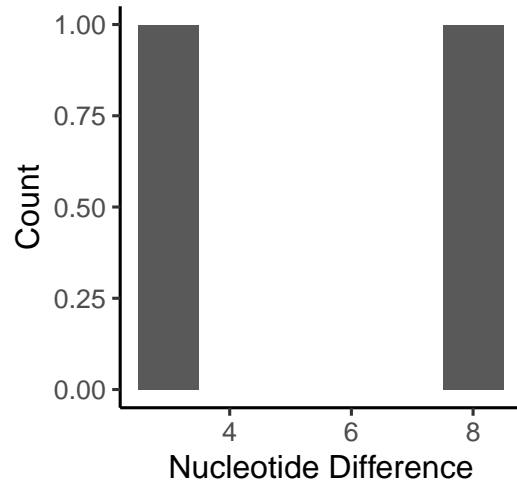
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



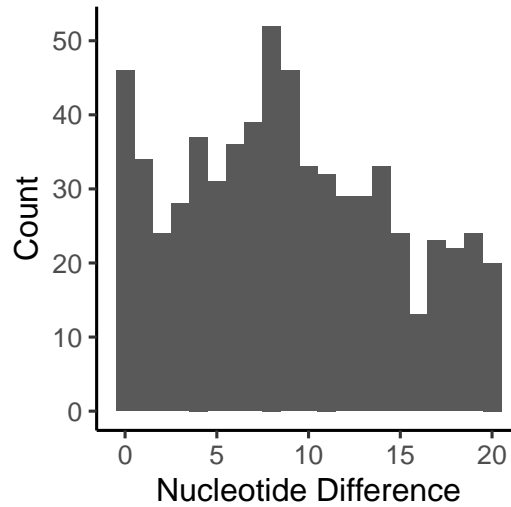
### IGHV3-71\*01

2 sequences assigned  
No exact matches.



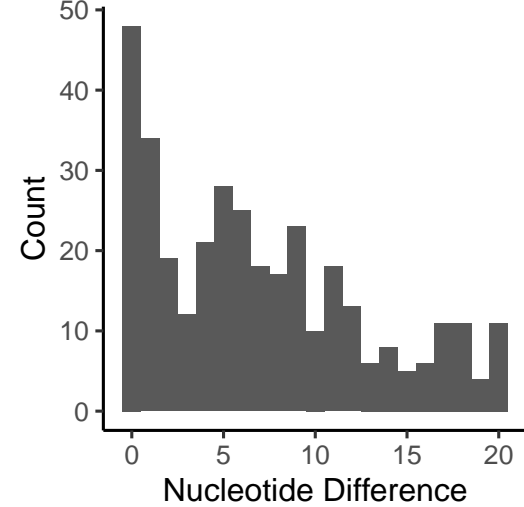
### IGHV3-74\*01

836 sequences assigned  
46 (5.5%) exact matches, in which:  
41 unique CDR3  
5 unique J



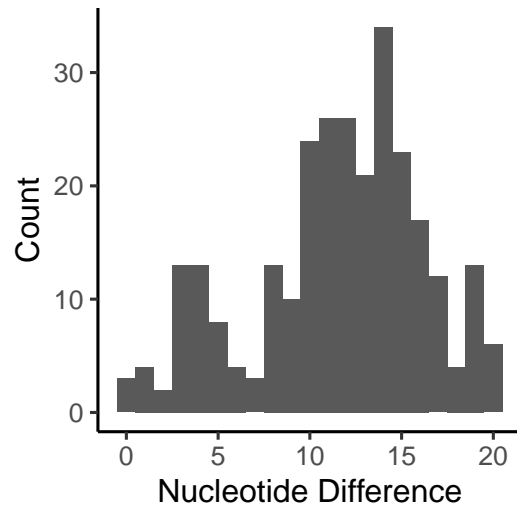
### IGHV4-4\*07

453 sequences assigned  
48 (10.6%) exact matches, in which:  
44 unique CDR3  
5 unique J



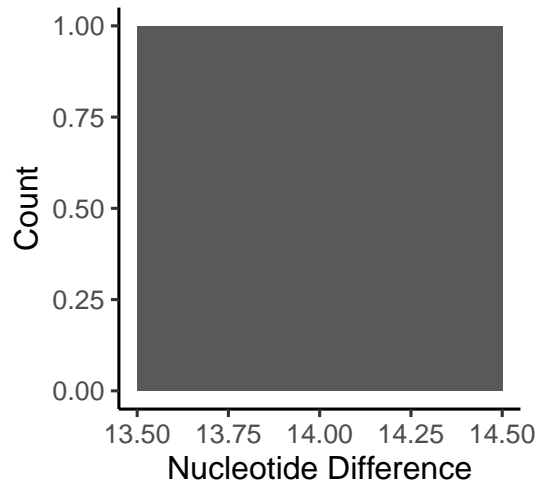
### IGHV3-72\*01

320 sequences assigned  
3 (0.9%) exact matches, in which:  
3 unique CDR3  
3 unique J



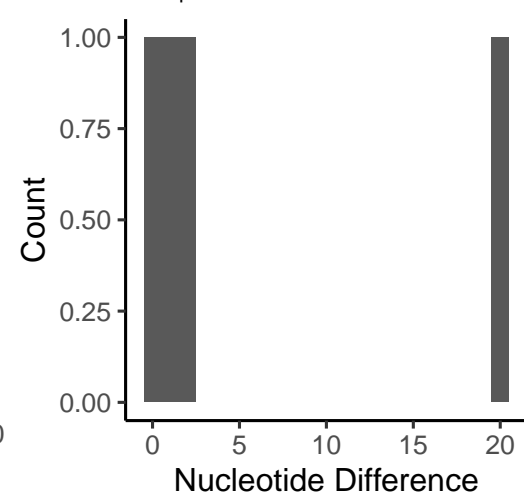
### IGHV3-43D\*04

2 sequences assigned  
No exact matches.



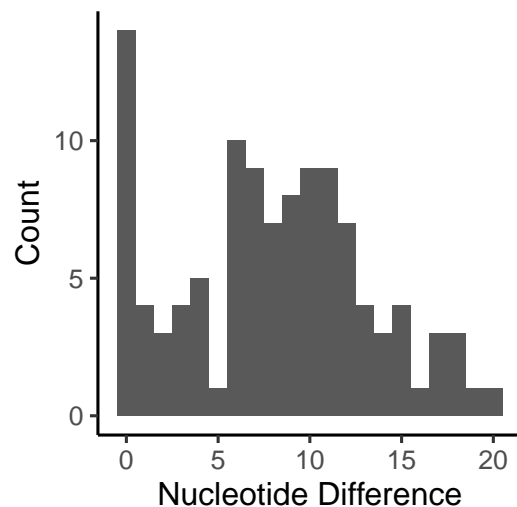
### IGHV4-28\*01

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



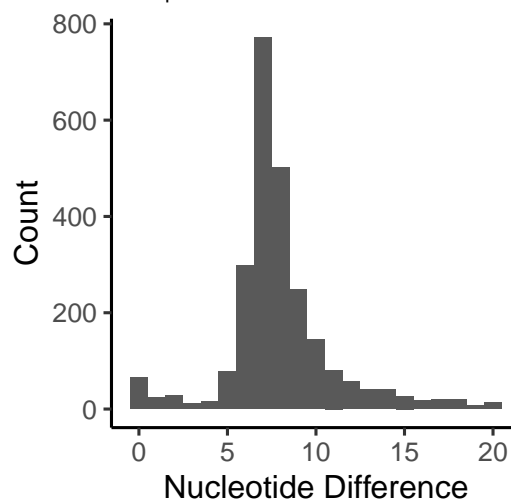
### IGHV3-73\*02

123 sequences assigned  
14 (11.4%) exact matches, in which:  
14 unique CDR3  
3 unique J



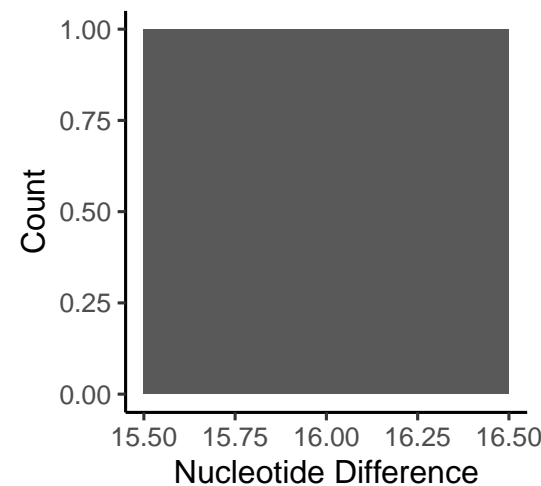
### IGHV4-4\*02

2640 sequences assigned  
65 (2.5%) exact matches, in which:  
45 unique CDR3  
5 unique J



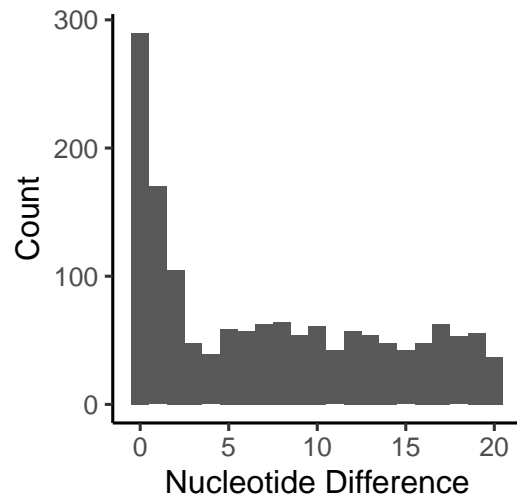
### IGHV4-30-4\*05

2 sequences assigned  
No exact matches.



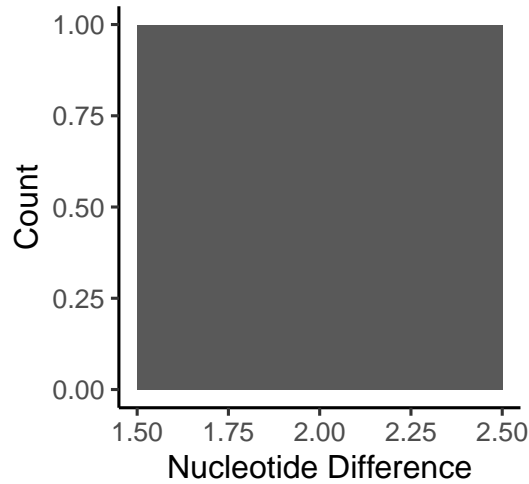
### IGHV4-31\*03

1930 sequences assigned  
290 (15%) exact matches, in which:  
243 unique CDR3  
6 unique J



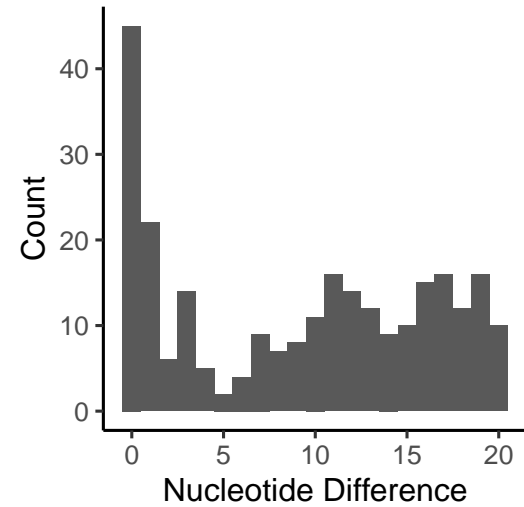
### IGHV4-55\*01

1 sequences assigned  
No exact matches.



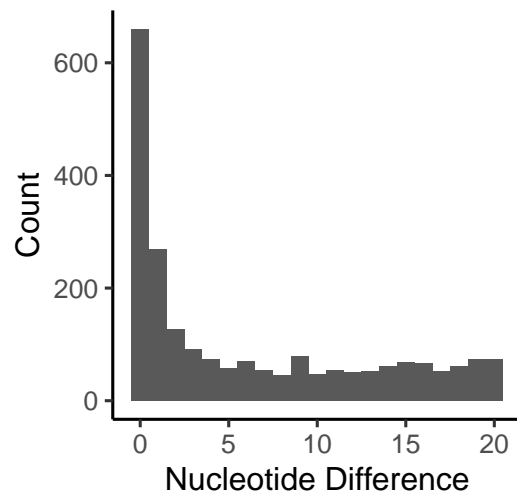
### IGHV4-61\*01

352 sequences assigned  
45 (12.8%) exact matches, in which:  
37 unique CDR3  
5 unique J



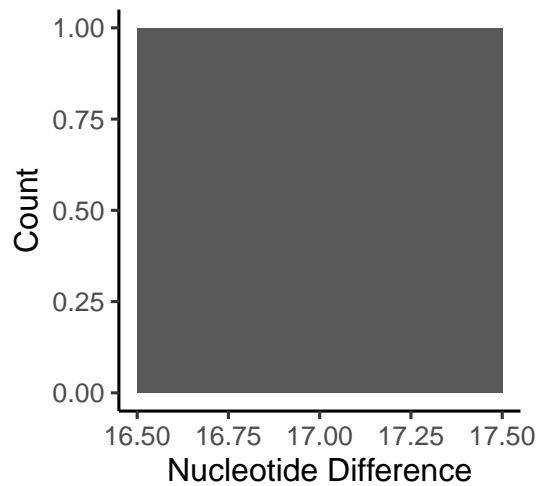
### IGHV4-34\*01

3530 sequences assigned  
660 (18.7%) exact matches, in which:  
630 unique CDR3  
6 unique J



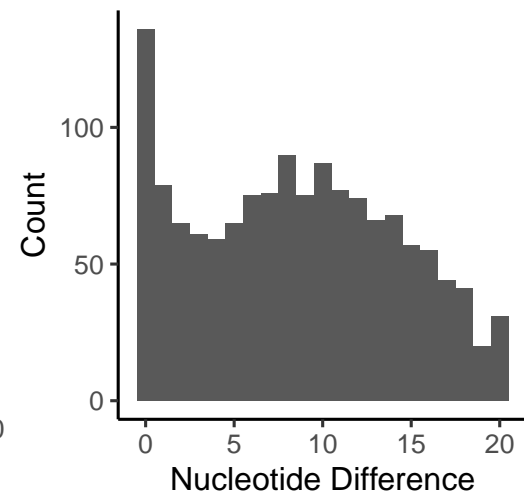
### IGHV4-55\*08

1 sequences assigned  
No exact matches.



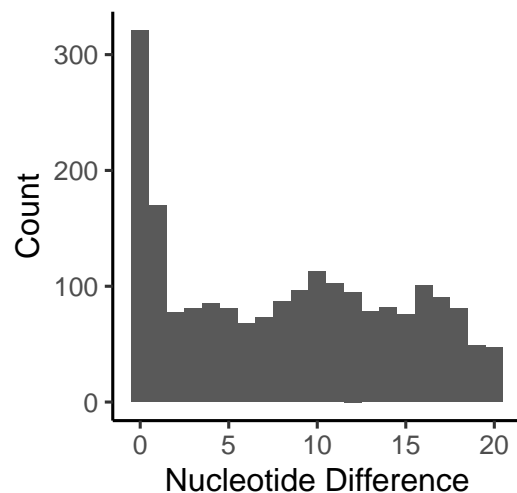
### IGHV5-51\*01

1644 sequences assigned  
136 (8.3%) exact matches, in which:  
123 unique CDR3  
5 unique J



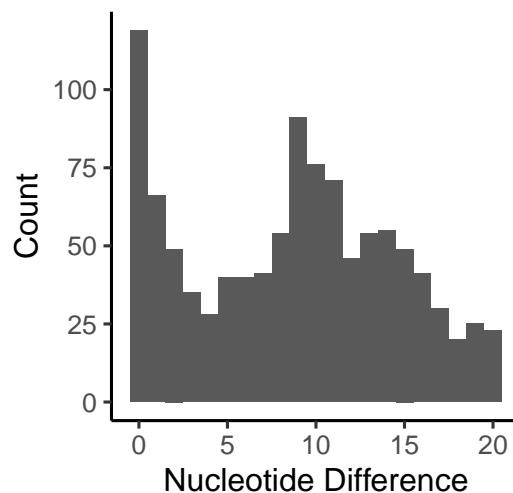
### IGHV4-39\*01

3671 sequences assigned  
321 (8.7%) exact matches, in which:  
288 unique CDR3  
6 unique J



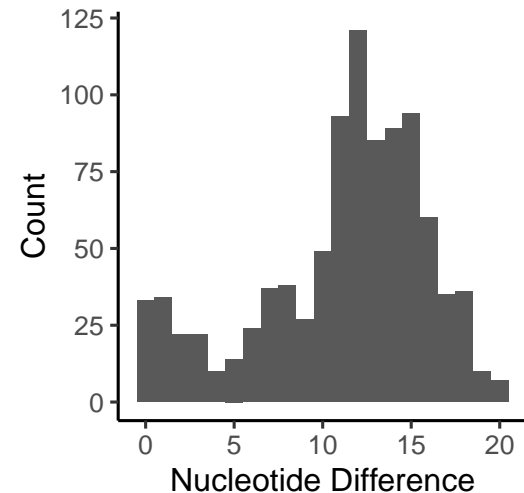
### IGHV4-59\*01

1242 sequences assigned  
119 (9.6%) exact matches, in which:  
103 unique CDR3  
5 unique J



### IGHV6-1\*01

993 sequences assigned  
33 (3.3%) exact matches, in which:  
26 unique CDR3  
5 unique J





[illegible]