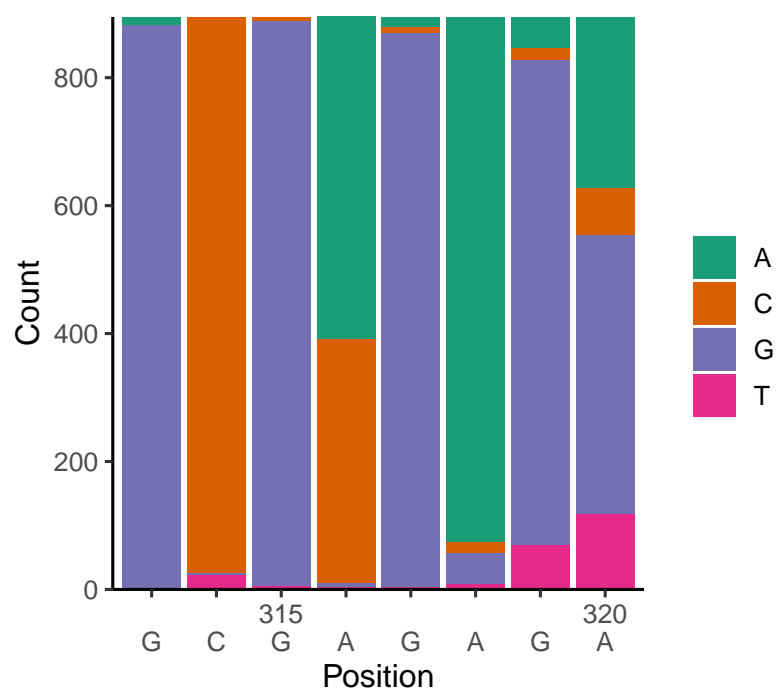
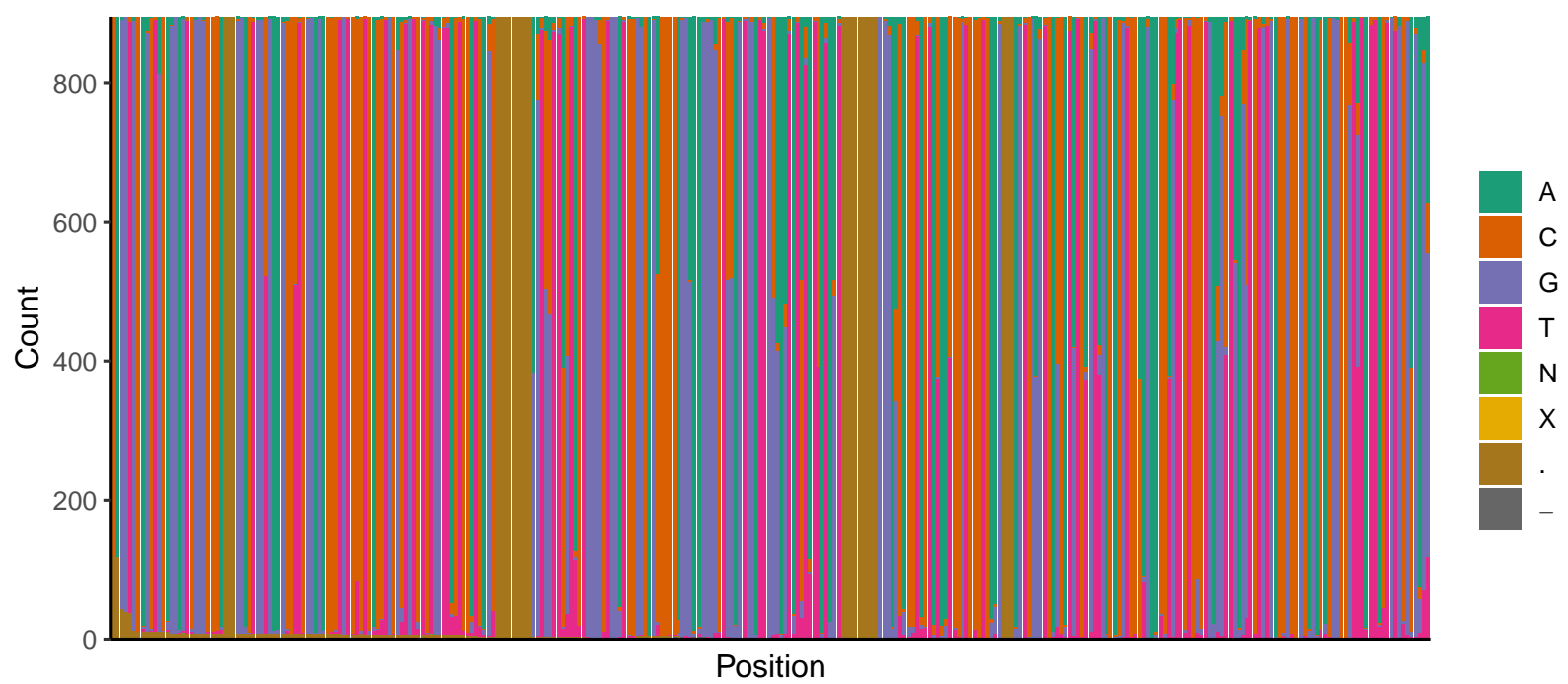


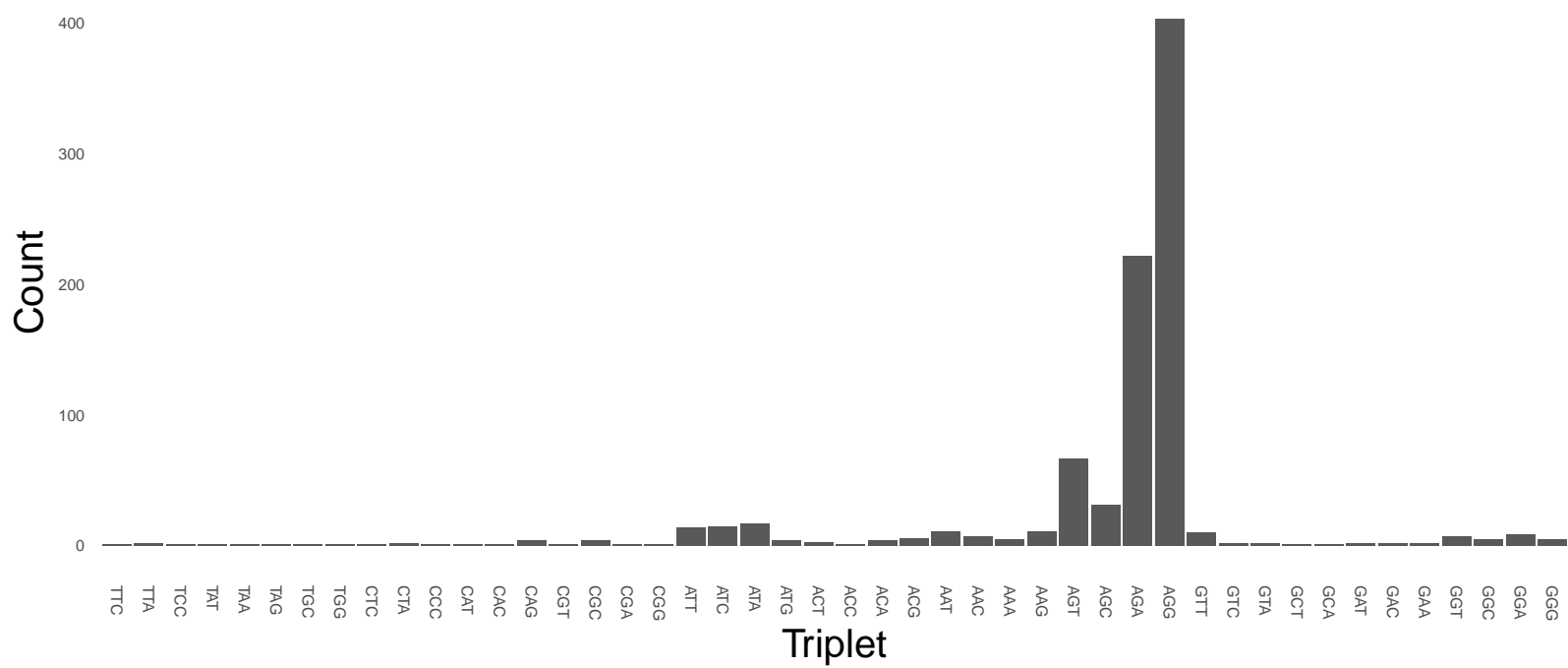
Gene IGHV4-38-2\*02\_A70G



Gene IGHV4-38-2\*02\_A70G

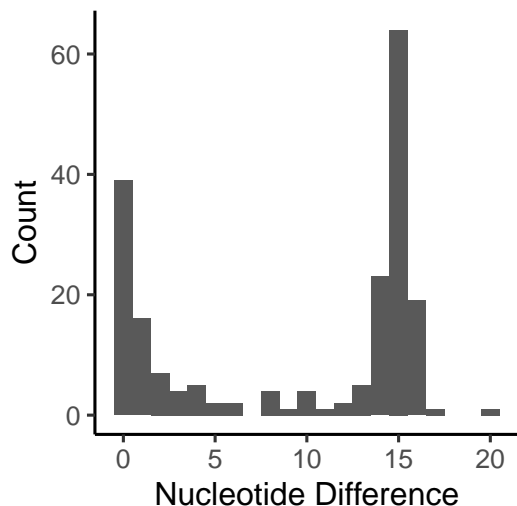


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



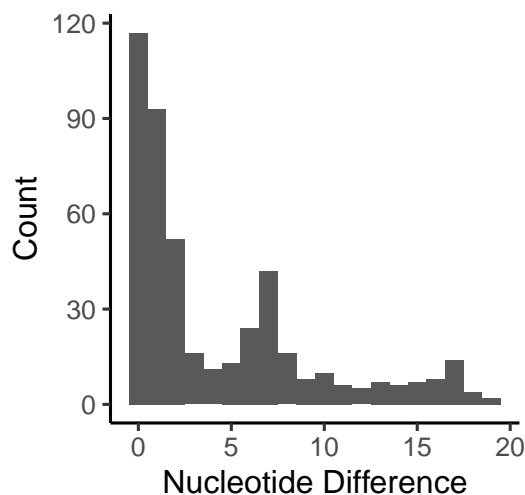
### IGHV1-2\*04

209 sequences assigned  
39 (18.7%) exact matches, in which:  
34 unique CDR3  
5 unique J



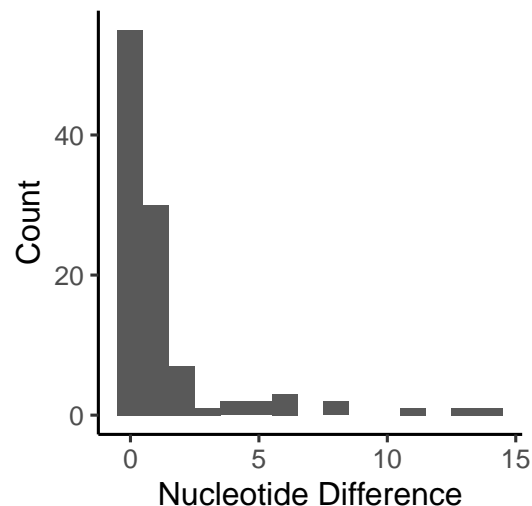
### IGHV1-8\*01

465 sequences assigned  
117 (25.2%) exact matches, in which:  
96 unique CDR3  
4 unique J



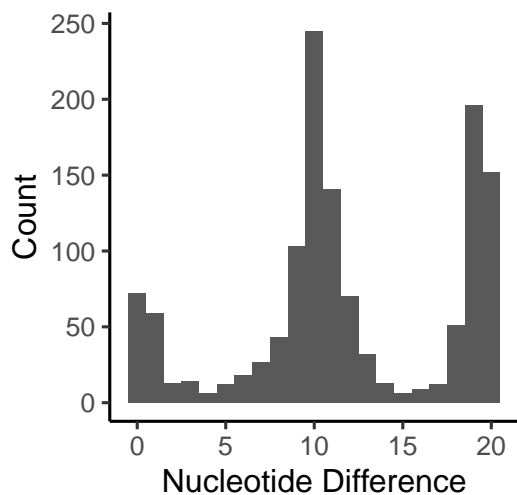
### IGHV1-24\*01

105 sequences assigned  
55 (52.4%) exact matches, in which:  
51 unique CDR3  
5 unique J



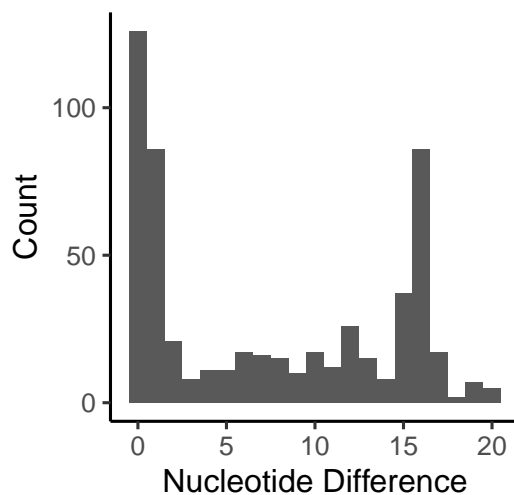
### IGHV1-2\*06

1365 sequences assigned  
72 (5.3%) exact matches, in which:  
66 unique CDR3  
4 unique J



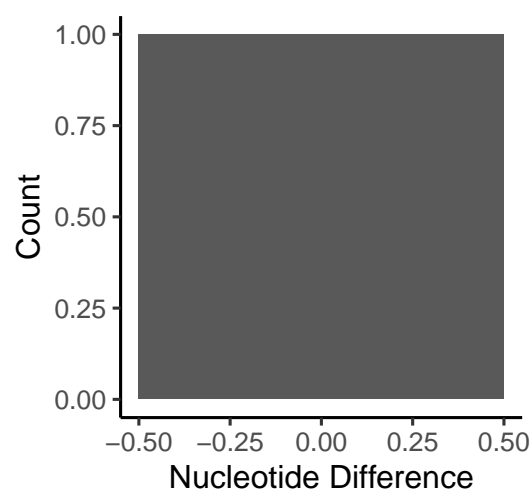
### IGHV1-18\*01

612 sequences assigned  
126 (20.6%) exact matches, in which:  
117 unique CDR3  
4 unique J



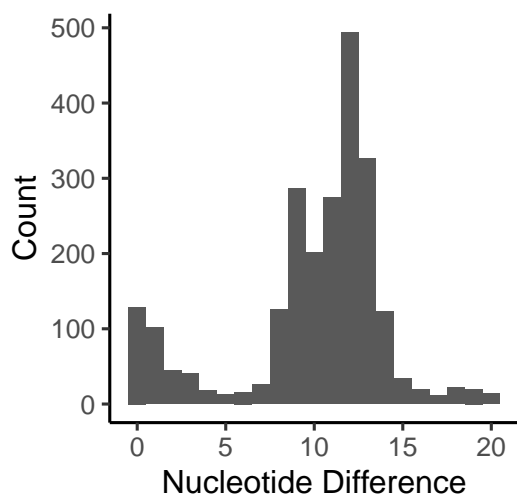
### IGHV1-45\*02

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



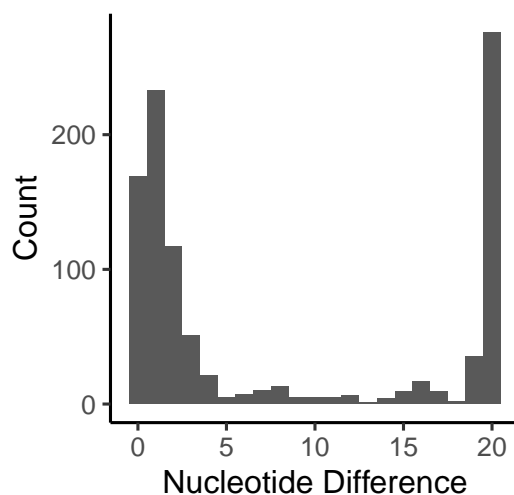
### IGHV1-3\*01

2404 sequences assigned  
129 (5.4%) exact matches, in which:  
122 unique CDR3  
5 unique J



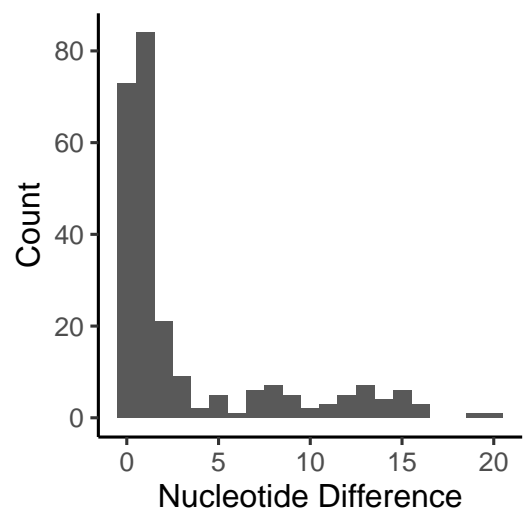
### IGHV1-18\*04

2536 sequences assigned  
169 (6.7%) exact matches, in which:  
129 unique CDR3  
6 unique J



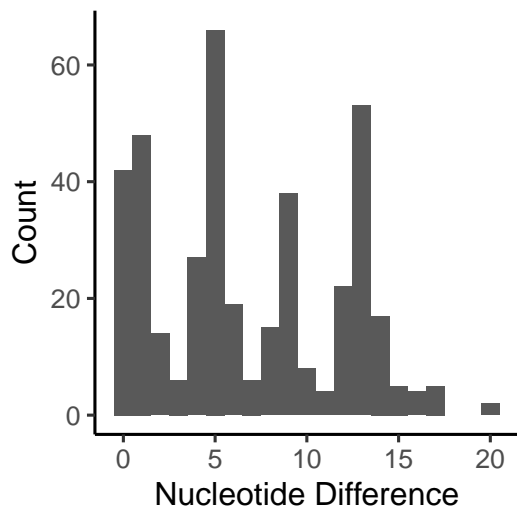
### IGHV1-46\*01

485 sequences assigned  
73 (15.1%) exact matches, in which:  
63 unique CDR3  
4 unique J



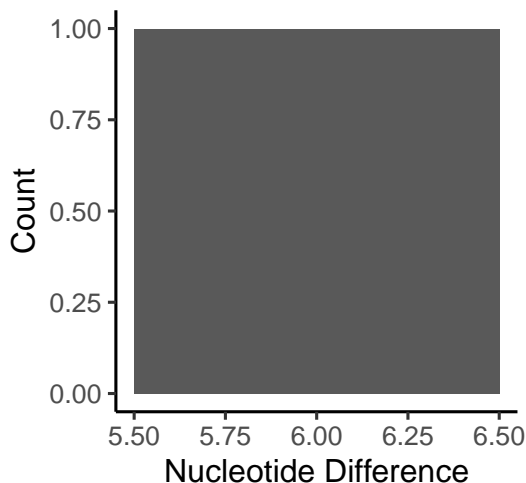
### IGHV1-46\*03

408 sequences assigned  
42 (10.3%) exact matches, in which:  
28 unique CDR3  
5 unique J



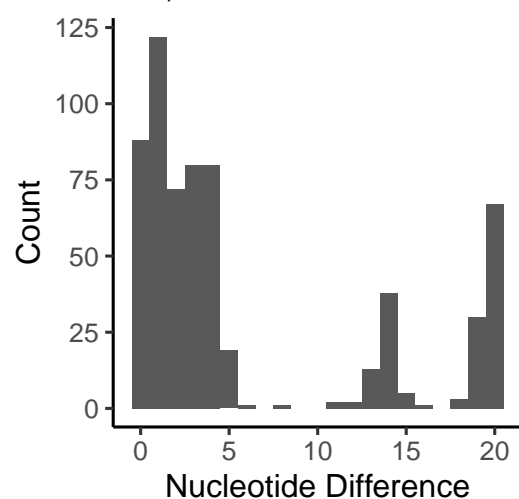
### IGHV1-68\*02

1 sequences assigned  
No exact matches.



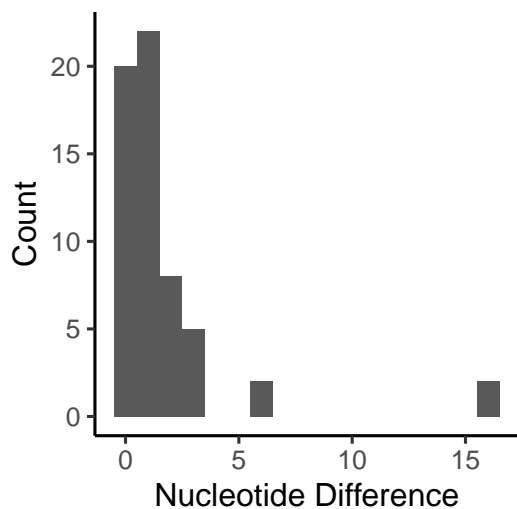
### IGHV1-69\*02

664 sequences assigned  
88 (13.3%) exact matches, in which:  
71 unique CDR3  
6 unique J



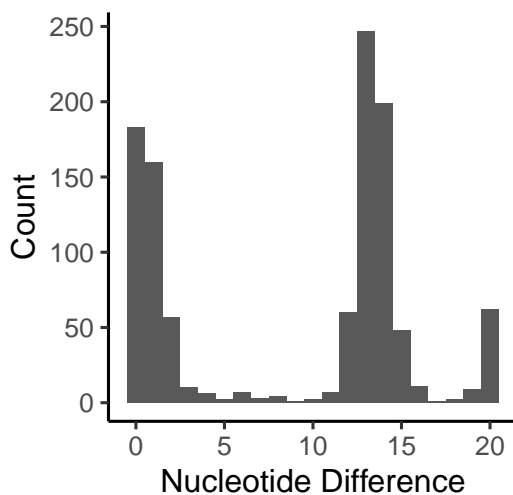
### IGHV1-58\*01

61 sequences assigned  
20 (32.8%) exact matches, in which:  
14 unique CDR3  
3 unique J



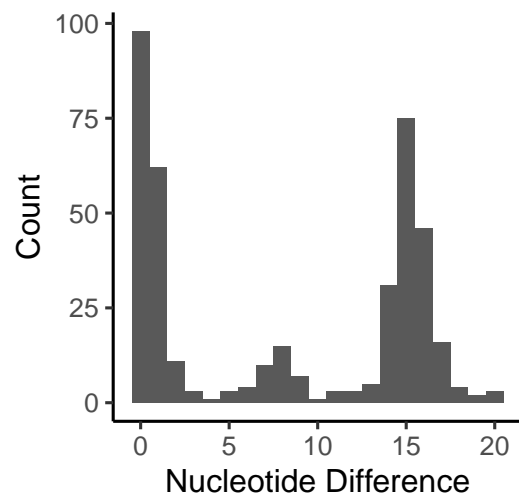
### IGHV1-69\*01

1623 sequences assigned  
183 (11.3%) exact matches, in which:  
159 unique CDR3  
5 unique J



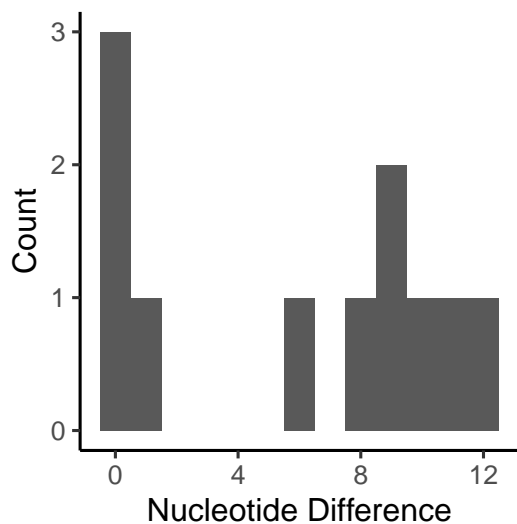
### IGHV1-69\*06

409 sequences assigned  
98 (24%) exact matches, in which:  
92 unique CDR3  
4 unique J



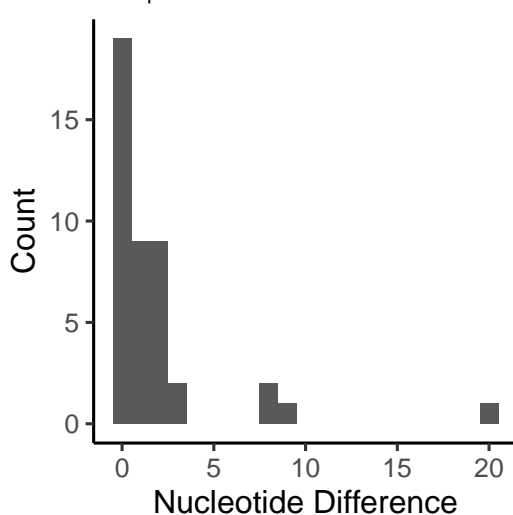
### IGHV1-58\*02

11 sequences assigned  
3 (27.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



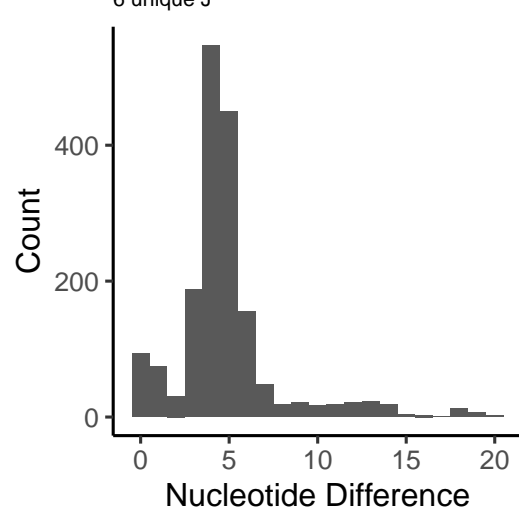
### IGHV1-69-2\*01

44 sequences assigned  
19 (43.2%) exact matches, in which:  
19 unique CDR3  
4 unique J



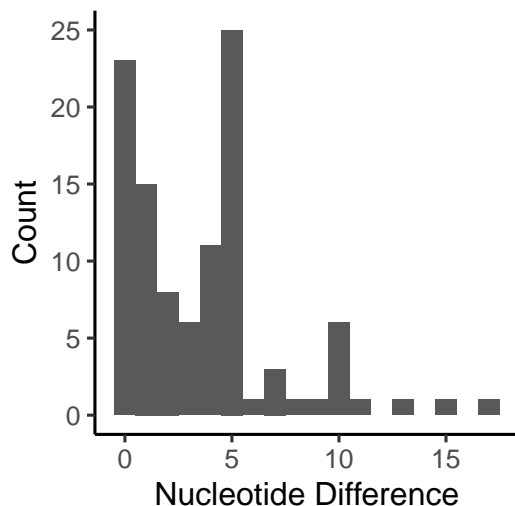
### IGHV2-5\*02

2013 sequences assigned  
93 (4.6%) exact matches, in which:  
85 unique CDR3  
6 unique J



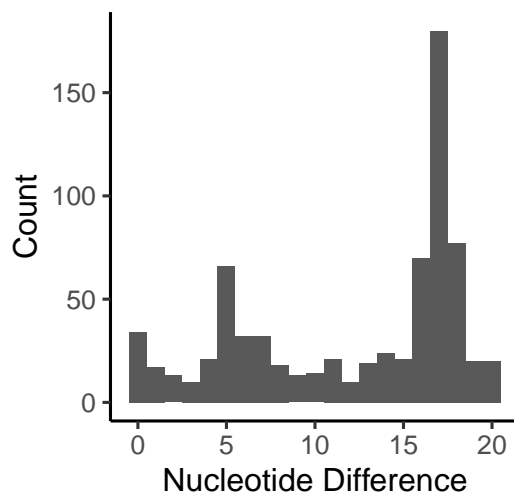
### IGHV2-26\*01

104 sequences assigned  
23 (22.1%) exact matches, in which:  
20 unique CDR3  
4 unique J



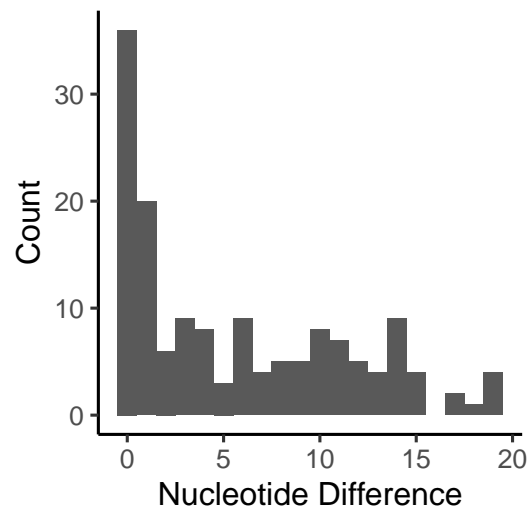
### IGHV3-7\*01

803 sequences assigned  
34 (4.2%) exact matches, in which:  
34 unique CDR3  
4 unique J



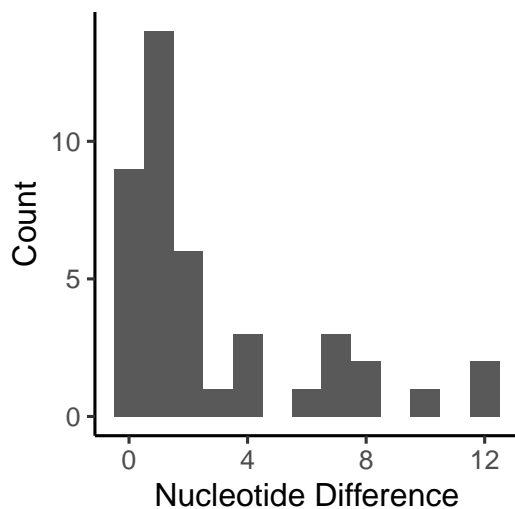
### IGHV3-11\*01

164 sequences assigned  
36 (22%) exact matches, in which:  
35 unique CDR3  
5 unique J



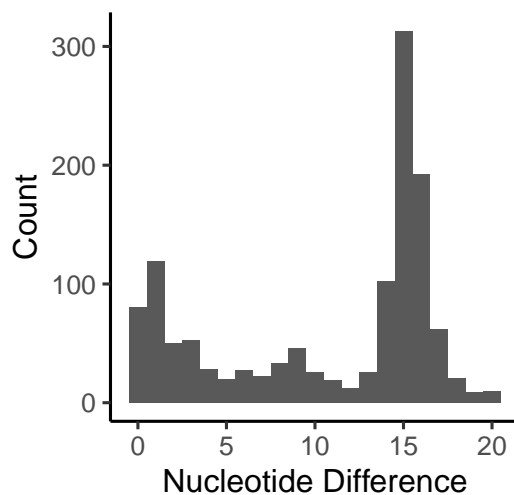
### IGHV2-70\*01

42 sequences assigned  
9 (21.4%) exact matches, in which:  
8 unique CDR3  
4 unique J



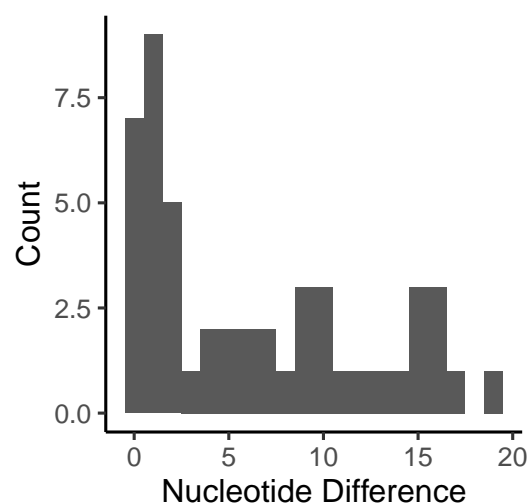
### IGHV3-7\*03

1302 sequences assigned  
80 (6.1%) exact matches, in which:  
65 unique CDR3  
5 unique J



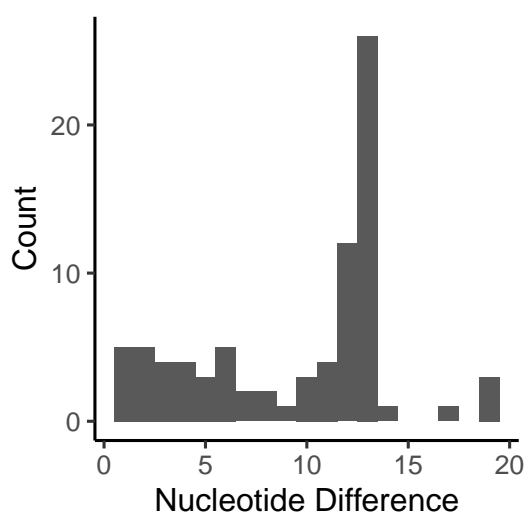
### IGHV3-11\*06

50 sequences assigned  
7 (14%) exact matches, in which:  
7 unique CDR3  
3 unique J



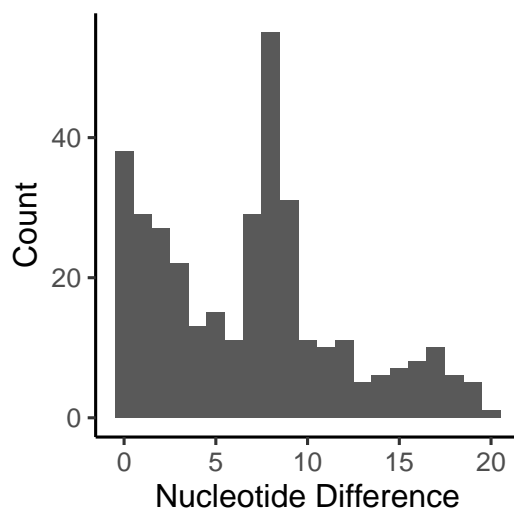
### IGHV2-70\*04

97 sequences assigned  
No exact matches.



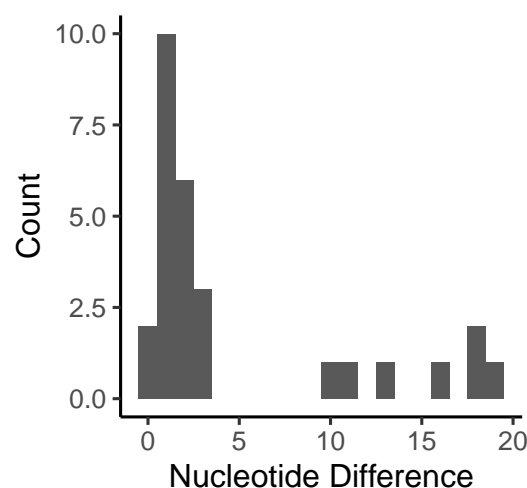
### IGHV3-9\*01

401 sequences assigned  
38 (9.5%) exact matches, in which:  
37 unique CDR3  
5 unique J



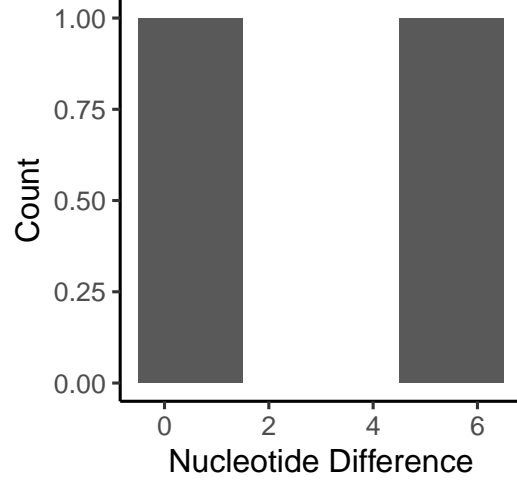
### IGHV3-13\*01

319 sequences assigned  
2 (0.6%) exact matches, in which:  
2 unique CDR3  
1 unique J



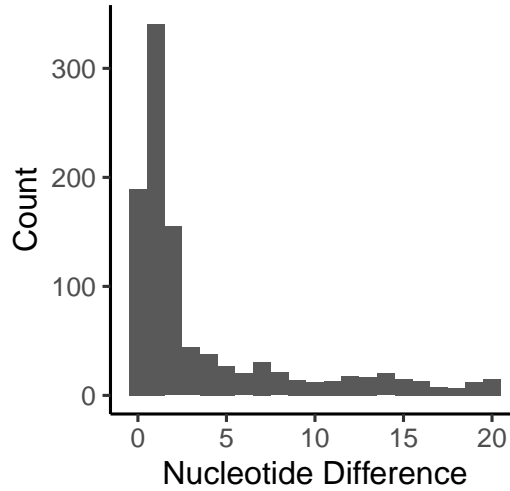
### IGHV3-13\*05

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



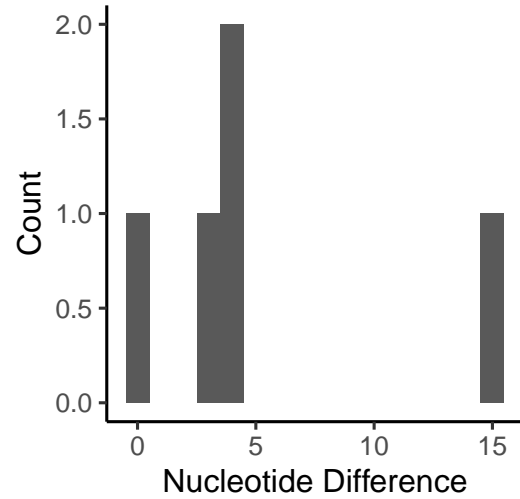
### IGHV3-21\*01

1513 sequences assigned  
189 (12.5%) exact matches, in which:  
127 unique CDR3  
6 unique J



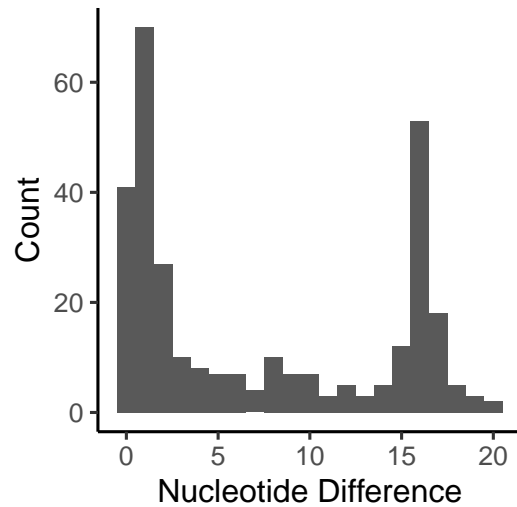
### IGHV3-30-3\*01

7 sequences assigned  
1 (14.3%) exact matches, in which:  
1 unique CDR3  
0 unique J



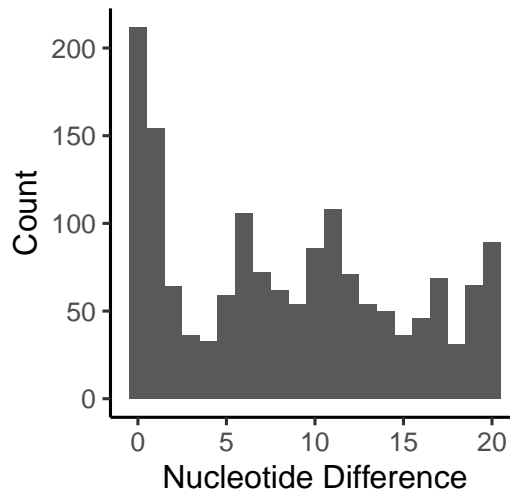
### IGHV3-15\*01

842 sequences assigned  
41 (4.9%) exact matches, in which:  
36 unique CDR3  
5 unique J



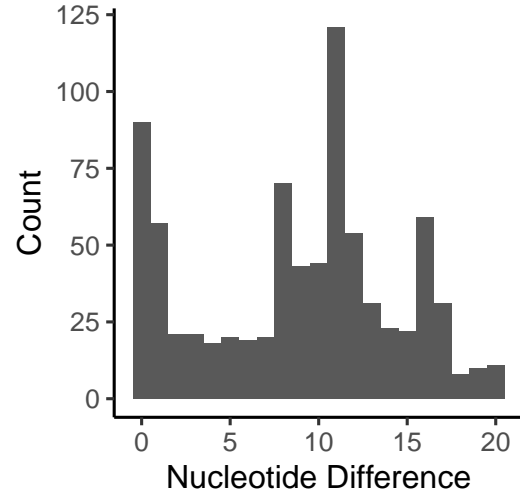
### IGHV3-23\*01

1768 sequences assigned  
212 (12%) exact matches, in which:  
203 unique CDR3  
6 unique J



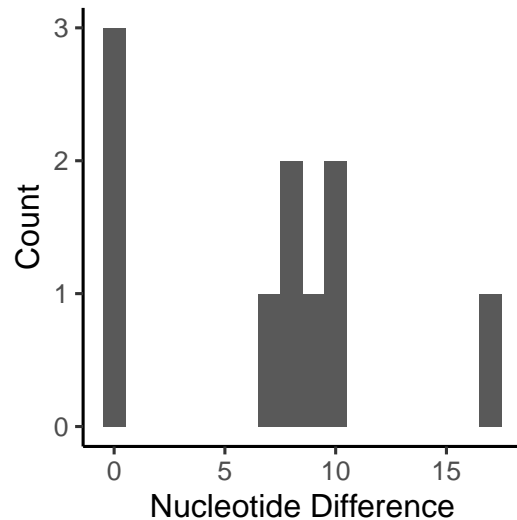
### IGHV3-30\*02

880 sequences assigned  
90 (10.2%) exact matches, in which:  
86 unique CDR3  
4 unique J



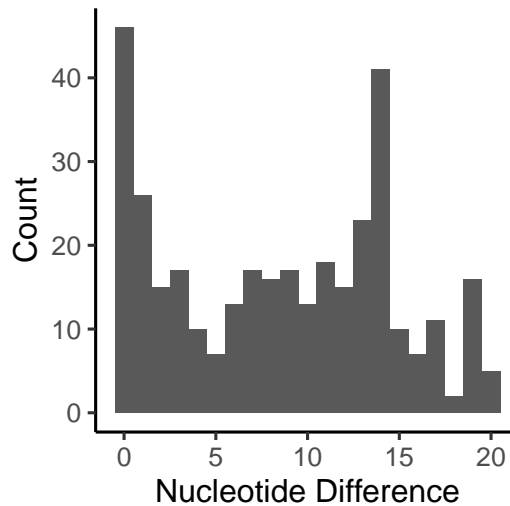
### IGHV3-20\*01

11 sequences assigned  
3 (27.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



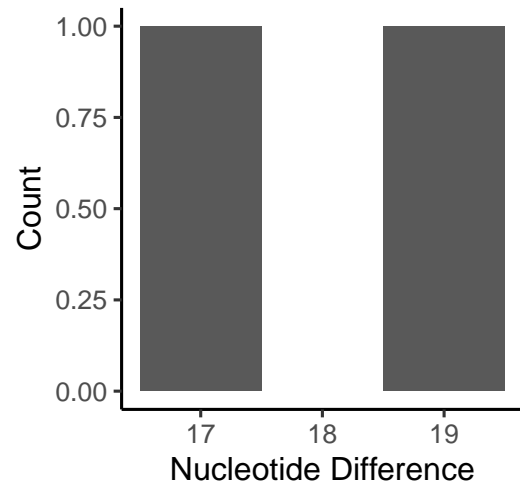
### IGHV3-23\*04

618 sequences assigned  
46 (7.4%) exact matches, in which:  
44 unique CDR3  
5 unique J



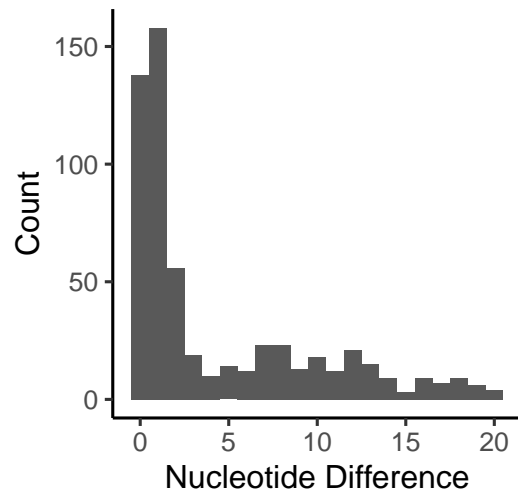
### IGHV3-30-3\*02

2 sequences assigned  
No exact matches.



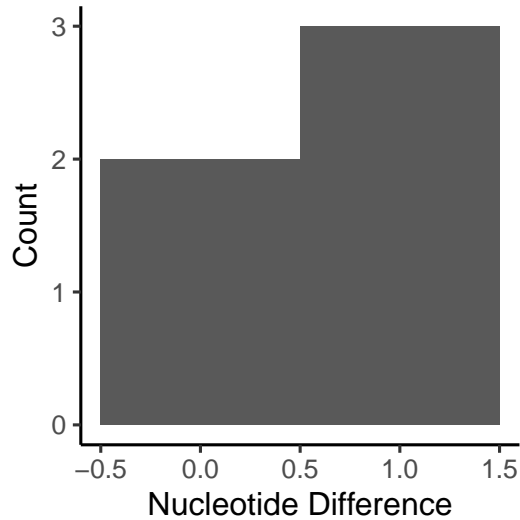
### IGHV3-30\*04

705 sequences assigned  
138 (19.6%) exact matches, in which:  
121 unique CDR3  
6 unique J



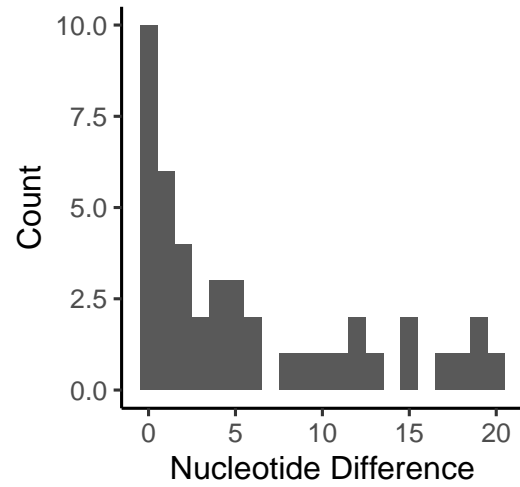
### IGHV3-43\*01

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



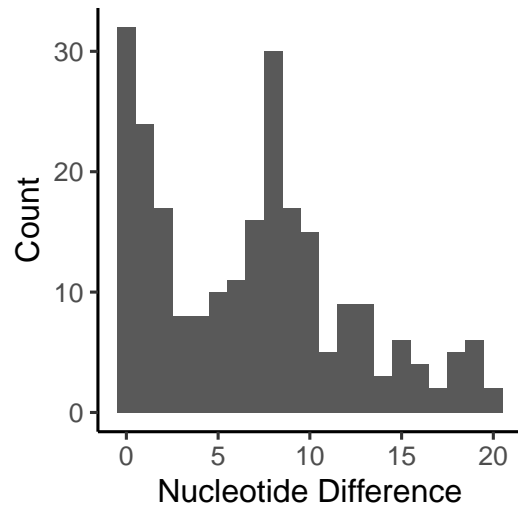
### IGHV3-49\*03

44 sequences assigned  
10 (22.7%) exact matches, in which:  
10 unique CDR3  
4 unique J



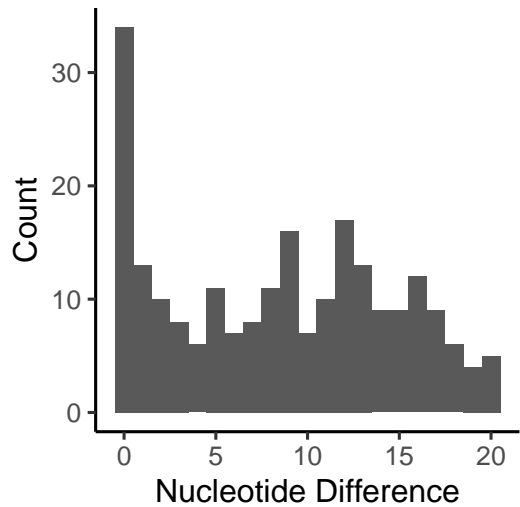
### IGHV3-30\*18

269 sequences assigned  
32 (11.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



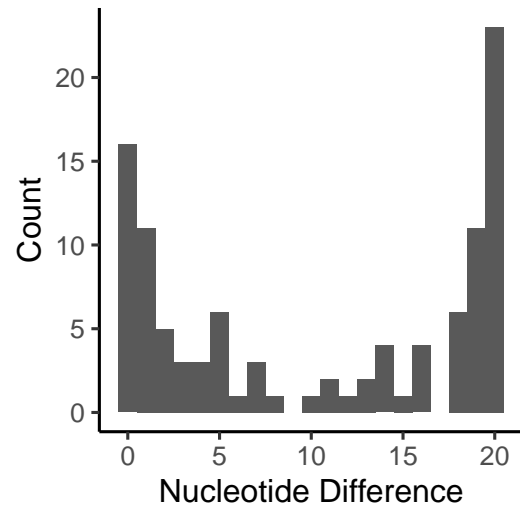
### IGHV3-48\*01

254 sequences assigned  
34 (13.4%) exact matches, in which:  
33 unique CDR3  
4 unique J



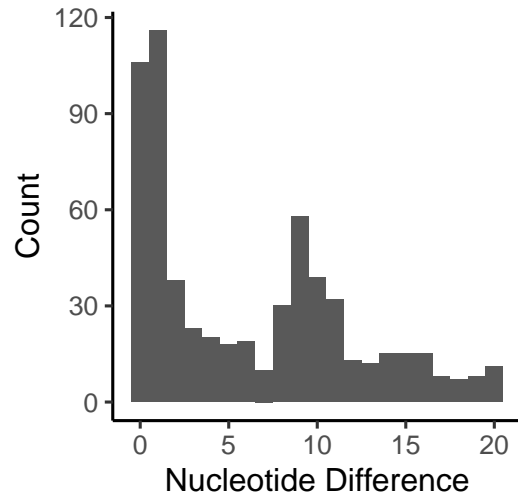
### IGHV3-49\*04

148 sequences assigned  
16 (10.8%) exact matches, in which:  
16 unique CDR3  
2 unique J



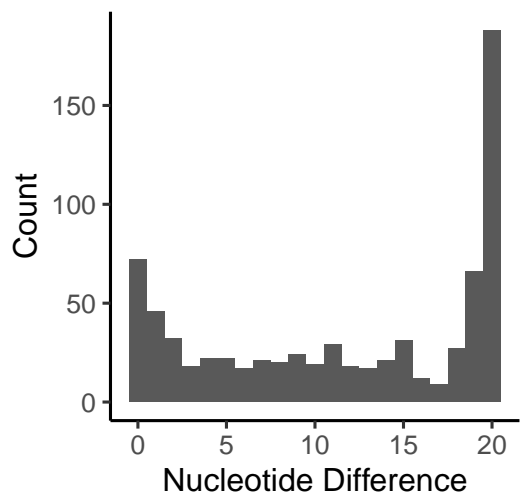
### IGHV3-33\*01

653 sequences assigned  
106 (16.2%) exact matches, in which:  
92 unique CDR3  
5 unique J



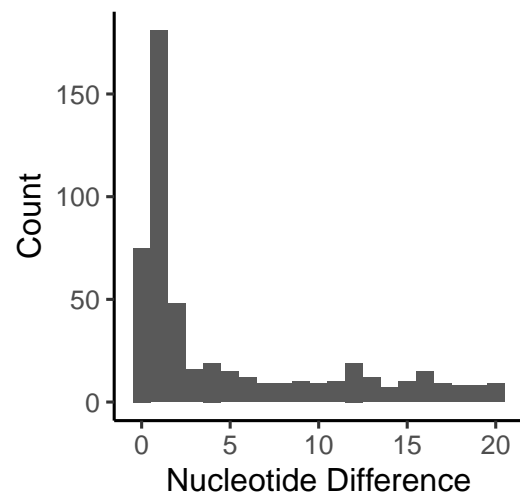
### IGHV3-48\*03

1013 sequences assigned  
72 (7.1%) exact matches, in which:  
72 unique CDR3  
6 unique J



### IGHV3-53\*02

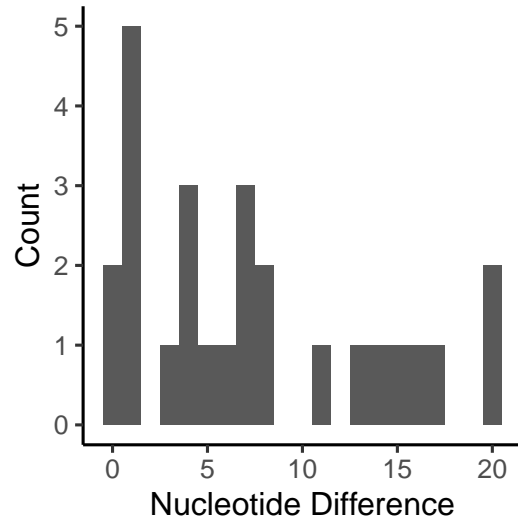
562 sequences assigned  
75 (13.3%) exact matches, in which:  
57 unique CDR3  
4 unique J





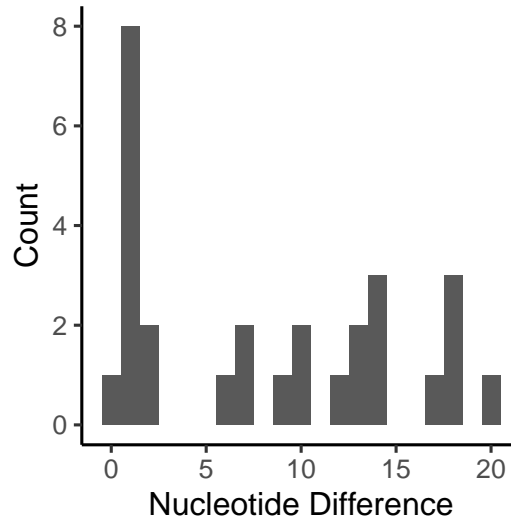
### IGHV3-64\*01

32 sequences assigned  
2 (6.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



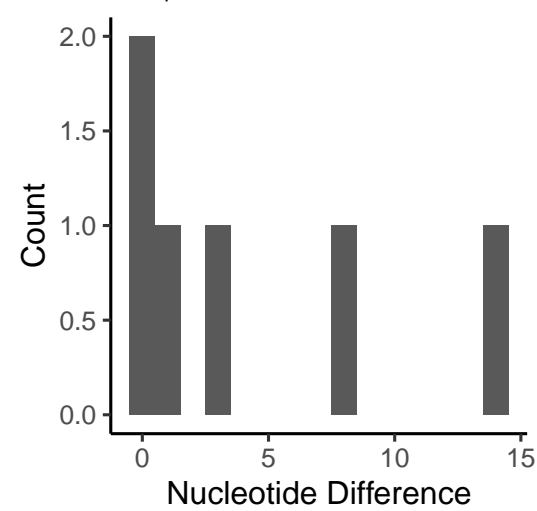
### IGHV3-73\*01

36 sequences assigned  
1 (2.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



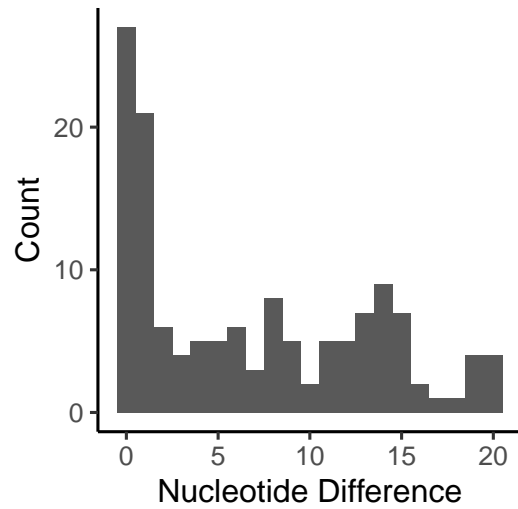
### IGHV3-43D\*04

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



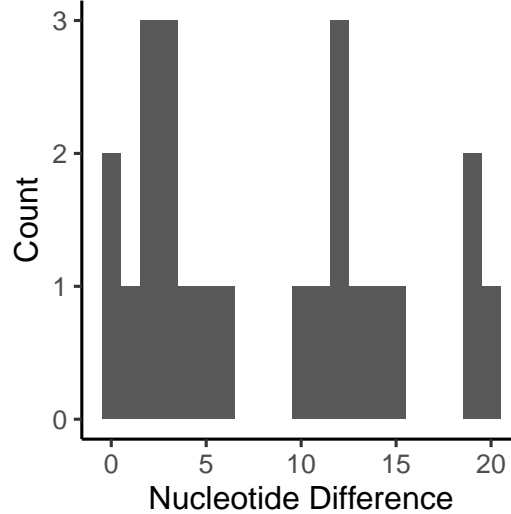
### IGHV3-66\*02

183 sequences assigned  
27 (14.8%) exact matches, in which:  
25 unique CDR3  
4 unique J



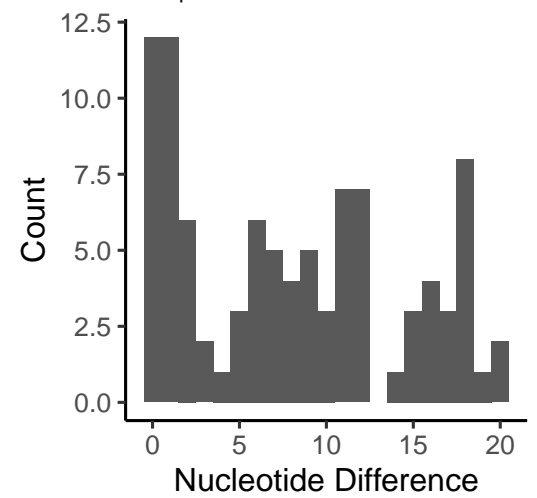
### IGHV3-73\*02

26 sequences assigned  
2 (7.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



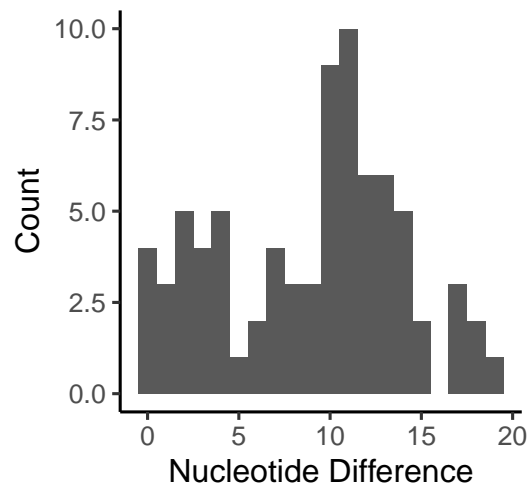
### IGHV3-64D\*06

114 sequences assigned  
12 (10.5%) exact matches, in which:  
12 unique CDR3  
2 unique J



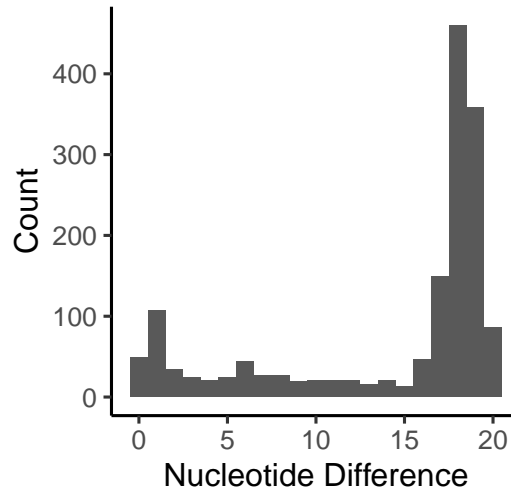
### IGHV3-72\*01

91 sequences assigned  
4 (4.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



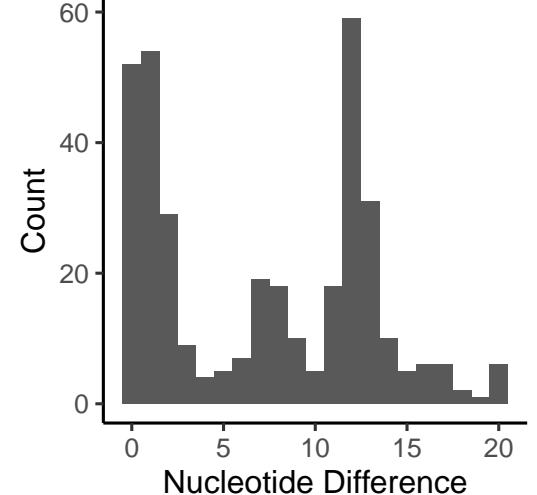
### IGHV3-74\*01

1892 sequences assigned  
49 (2.6%) exact matches, in which:  
39 unique CDR3  
5 unique J



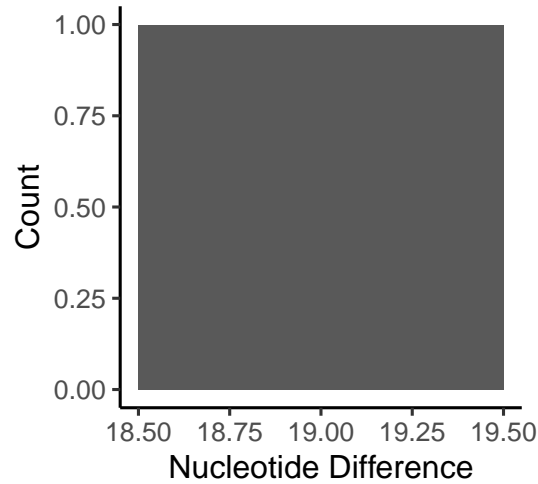
### IGHV4-4\*02

486 sequences assigned  
52 (10.7%) exact matches, in which:  
47 unique CDR3  
4 unique J



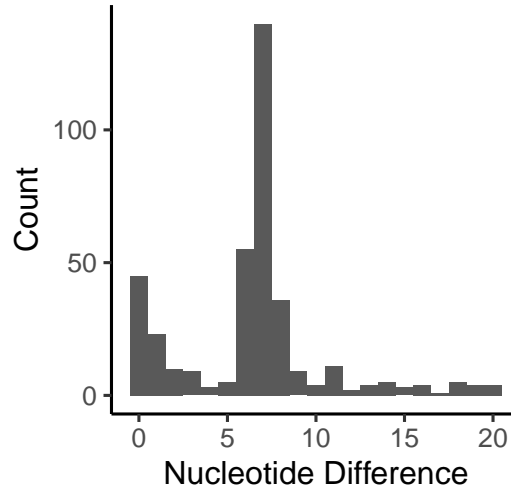
### IGHV4-28\*03

1 sequences assigned  
No exact matches.



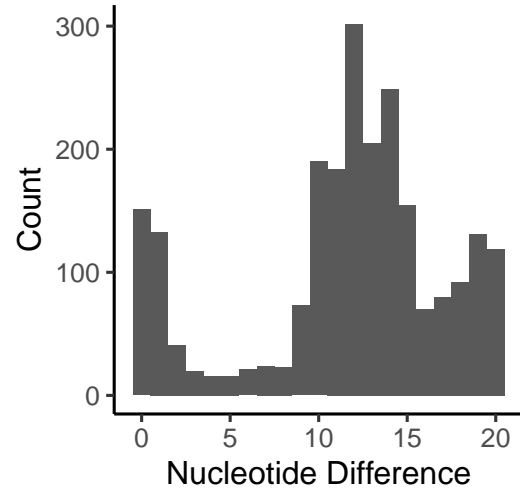
### IGHV4-31\*03

866 sequences assigned  
45 (5.2%) exact matches, in which:  
42 unique CDR3  
5 unique J



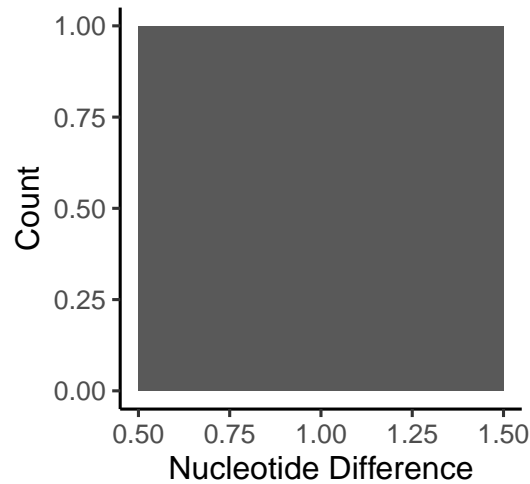
### IGHV4-39\*01

2515 sequences assigned  
151 (6%) exact matches, in which:  
138 unique CDR3  
6 unique J



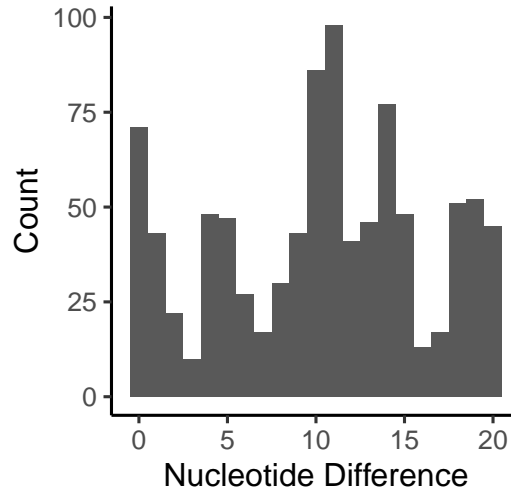
### IGHV4-28\*07

6 sequences assigned  
No exact matches.



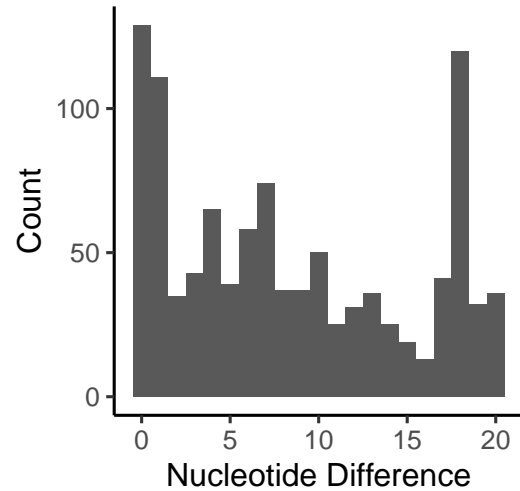
### IGHV4-34\*01

1305 sequences assigned  
71 (5.4%) exact matches, in which:  
71 unique CDR3  
5 unique J



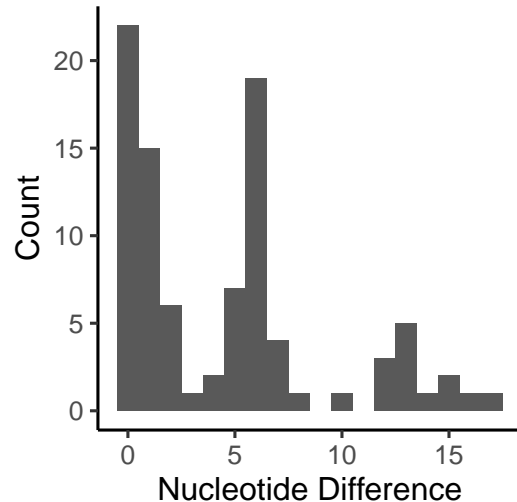
### IGHV4-59\*01

1391 sequences assigned  
129 (9.3%) exact matches, in which:  
111 unique CDR3  
6 unique J



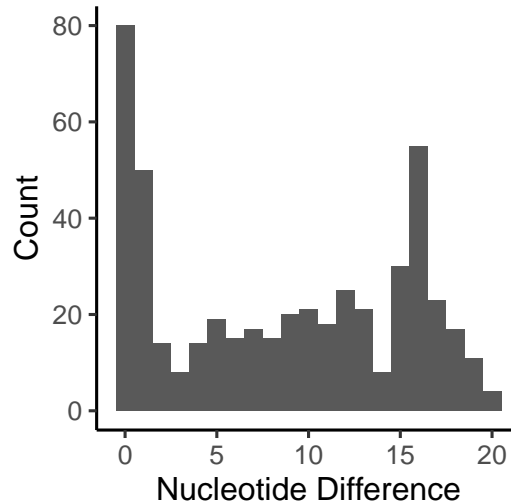
### IGHV4-30-2\*01

92 sequences assigned  
22 (23.9%) exact matches, in which:  
21 unique CDR3  
4 unique J



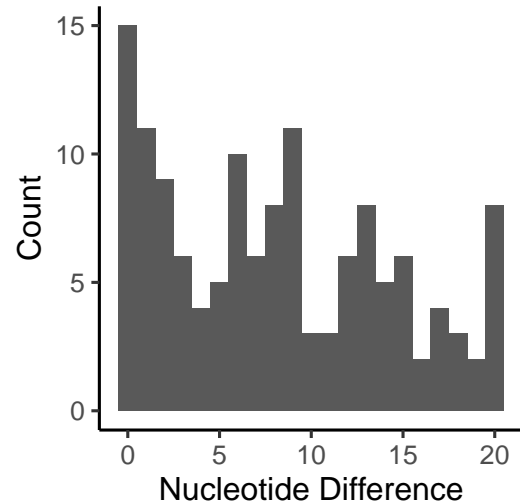
### IGHV4-38-2\*02\_A70G

895 sequences assigned  
80 (8.9%) exact matches, in which:  
71 unique CDR3  
5 unique J



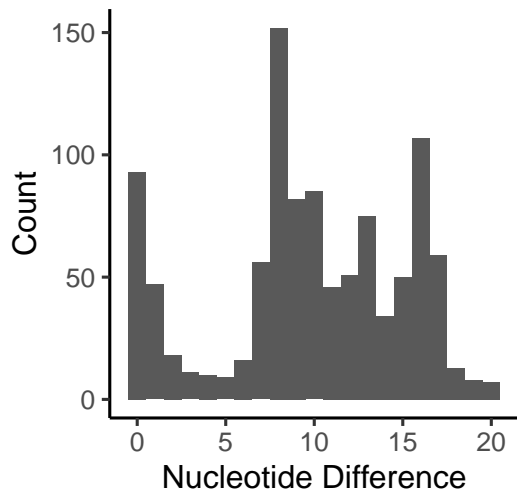
### IGHV4-61\*01

287 sequences assigned  
15 (5.2%) exact matches, in which:  
14 unique CDR3  
4 unique J



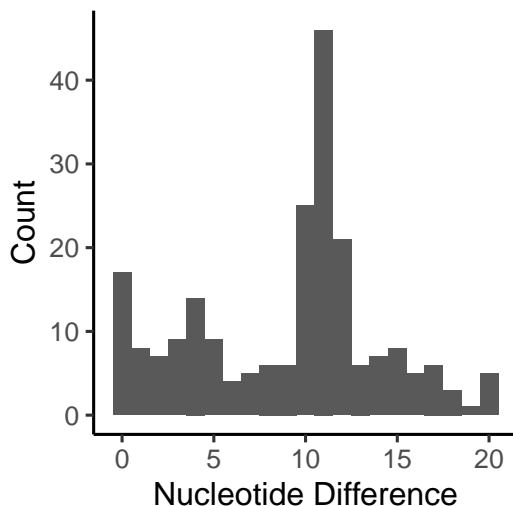
### IGHV4-61\*02

1361 sequences assigned  
93 (6.8%) exact matches, in which:  
84 unique CDR3  
6 unique J



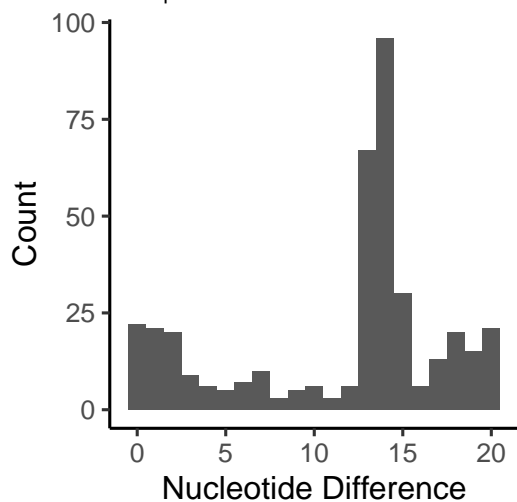
### IGHV5-51\*03

280 sequences assigned  
17 (6.1%) exact matches, in which:  
17 unique CDR3  
4 unique J



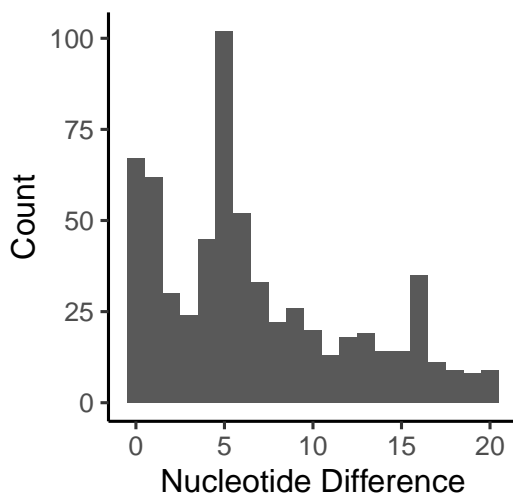
### IGHV5-10-1\*03

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



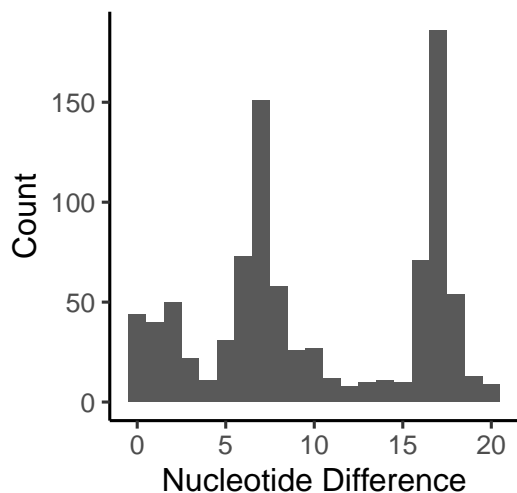
### IGHV6-1\*01

653 sequences assigned  
67 (10.3%) exact matches, in which:  
57 unique CDR3  
6 unique J



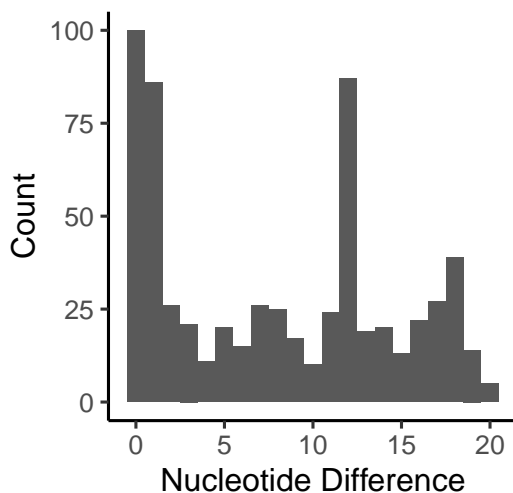
### IGHV5-51\*01

987 sequences assigned  
44 (4.5%) exact matches, in which:  
41 unique CDR3  
5 unique J



### IGHV7-4-1\*02

658 sequences assigned  
100 (15.2%) exact matches, in which:  
87 unique CDR3  
6 unique J



IGHV4-38-2\*02\_A70G

