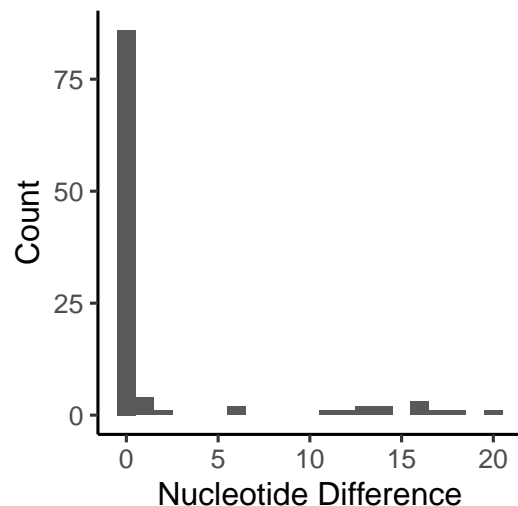


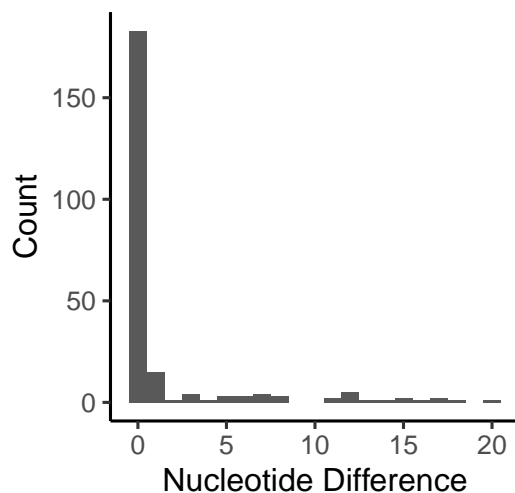
### IGHV1-2\*04

109 sequences assigned  
86 (78.9%) exact matches, in which:  
85 unique CDR3  
6 unique J



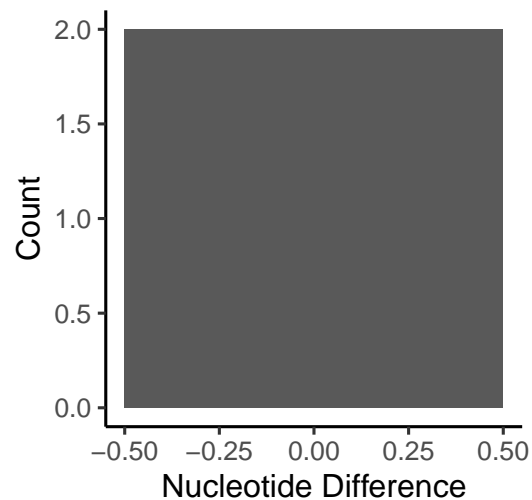
### IGHV1-8\*01

243 sequences assigned  
183 (75.3%) exact matches, in which:  
182 unique CDR3  
5 unique J



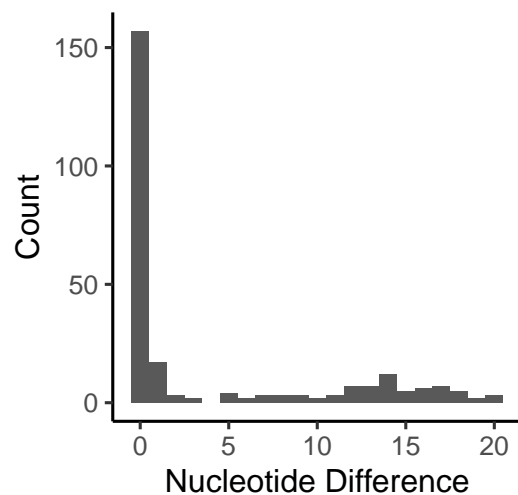
### IGHV1-45\*02

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



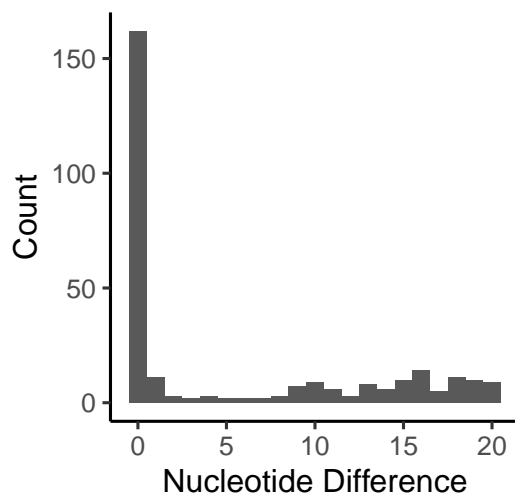
### IGHV1-2\*06

293 sequences assigned  
157 (53.6%) exact matches, in which:  
156 unique CDR3  
6 unique J



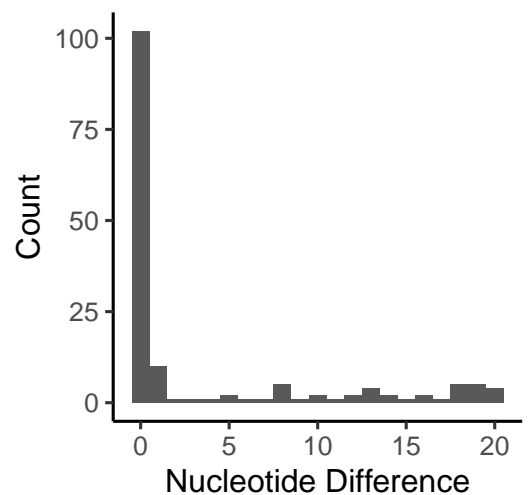
### IGHV1-18\*01

344 sequences assigned  
162 (47.1%) exact matches, in which:  
162 unique CDR3  
6 unique J



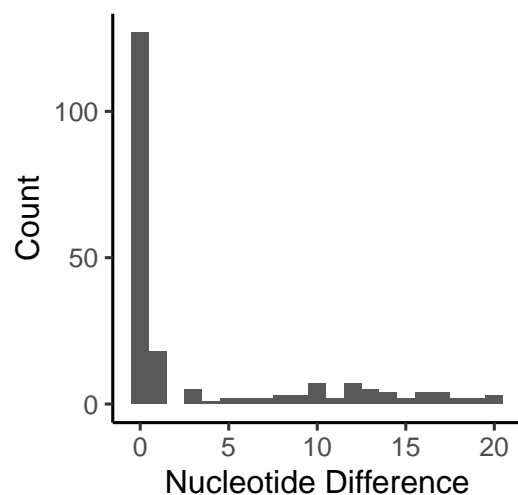
### IGHV1-46\*01

180 sequences assigned  
102 (56.7%) exact matches, in which:  
102 unique CDR3  
6 unique J



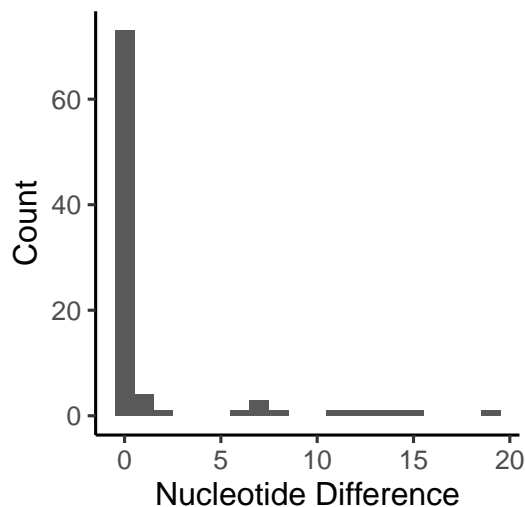
### IGHV1-3\*01

226 sequences assigned  
127 (56.2%) exact matches, in which:  
127 unique CDR3  
6 unique J



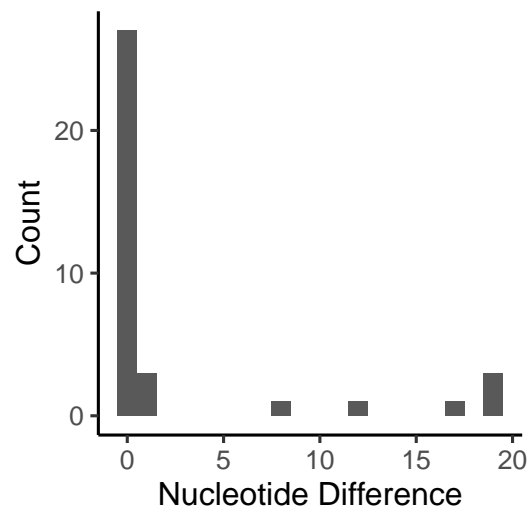
### IGHV1-24\*01

95 sequences assigned  
73 (76.8%) exact matches, in which:  
73 unique CDR3  
5 unique J



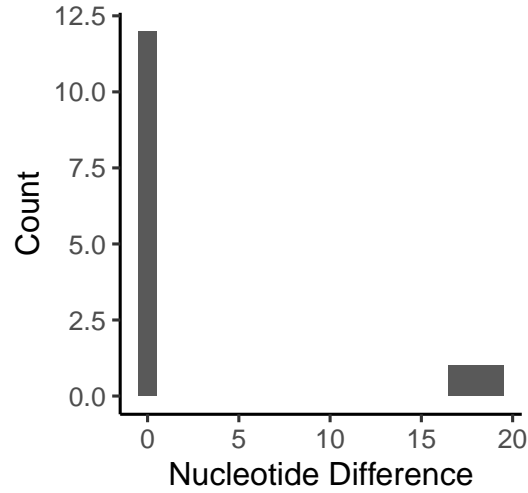
### IGHV1-58\*01

36 sequences assigned  
27 (75%) exact matches, in which:  
27 unique CDR3  
4 unique J



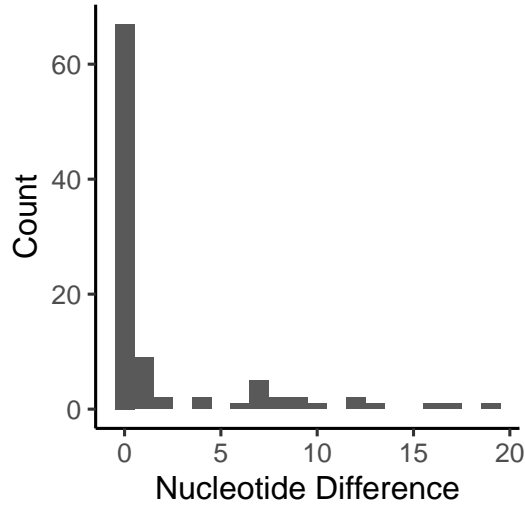
### IGHV1-69-2\*01

15 sequences assigned  
12 (80%) exact matches, in which:  
12 unique CDR3  
3 unique J



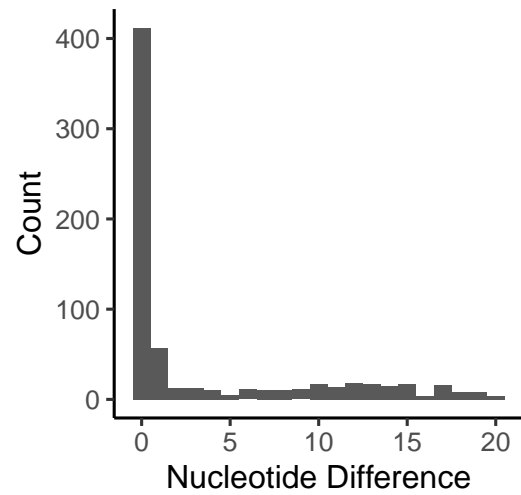
### IGHV2-26\*01

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



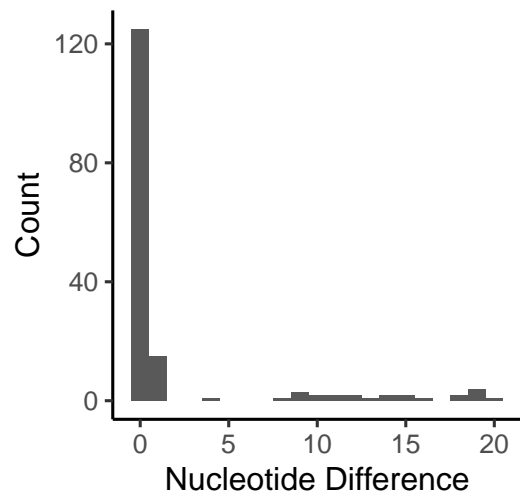
### IGHV3-9\*01

734 sequences assigned  
412 (56.1%) exact matches, in which:  
410 unique CDR3  
6 unique J



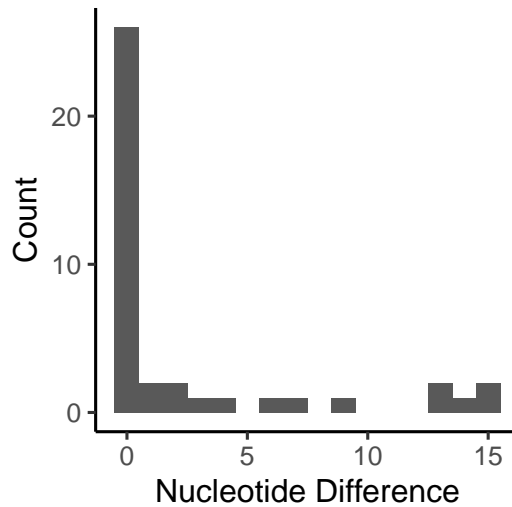
### IGHV1-69\*06

201 sequences assigned  
125 (62.2%) exact matches, in which:  
124 unique CDR3  
5 unique J



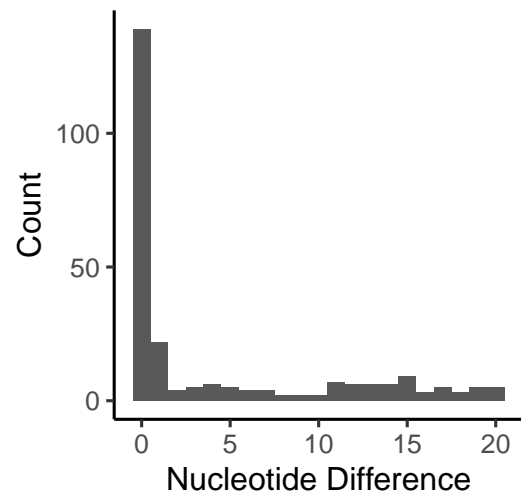
### IGHV2-70\*01

43 sequences assigned  
26 (60.5%) exact matches, in which:  
26 unique CDR3  
5 unique J



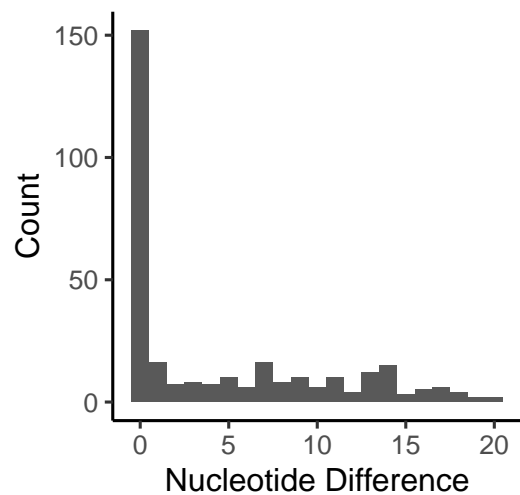
### IGHV3-11\*01

276 sequences assigned  
139 (50.4%) exact matches, in which:  
138 unique CDR3  
6 unique J



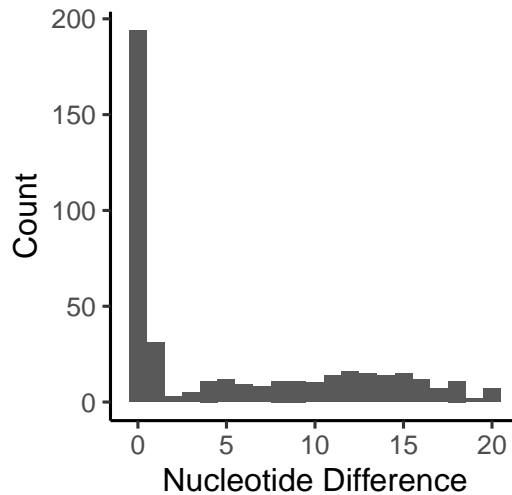
### IGHV2-5\*02

344 sequences assigned  
152 (44.2%) exact matches, in which:  
151 unique CDR3  
5 unique J



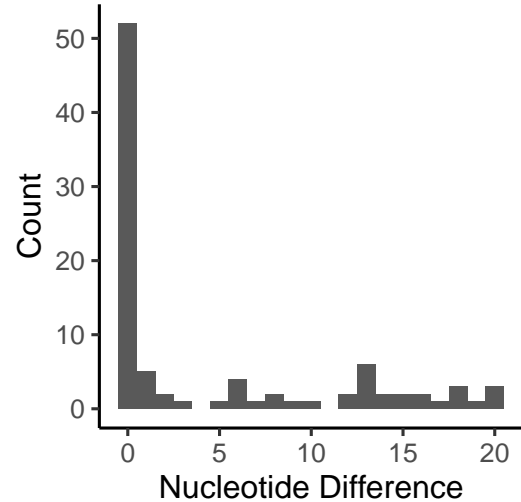
### IGHV3-7\*01

451 sequences assigned  
194 (43%) exact matches, in which:  
192 unique CDR3  
6 unique J



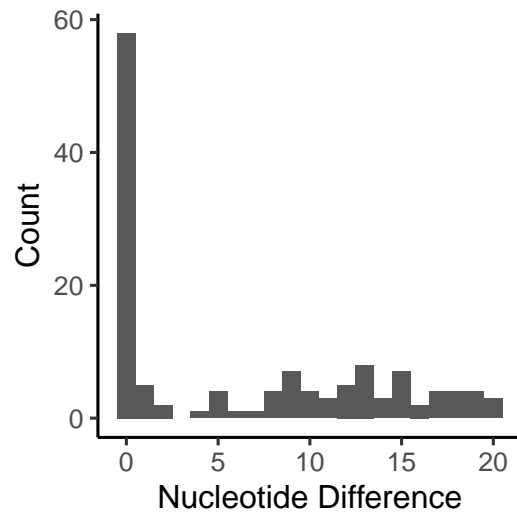
### IGHV3-13\*01

99 sequences assigned  
52 (52.5%) exact matches, in which:  
52 unique CDR3  
5 unique J



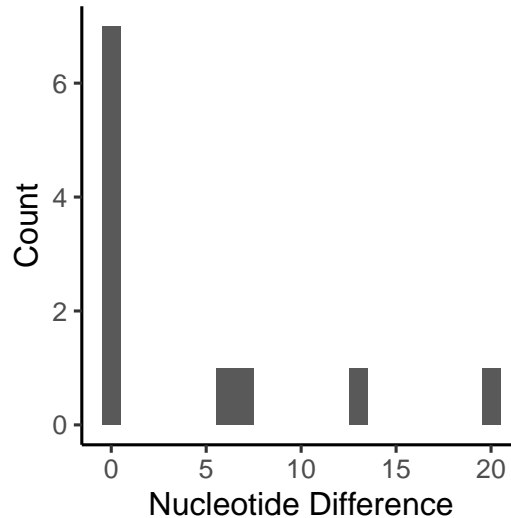
### IGHV3-15\*01

147 sequences assigned  
58 (39.5%) exact matches, in which:  
58 unique CDR3  
5 unique J



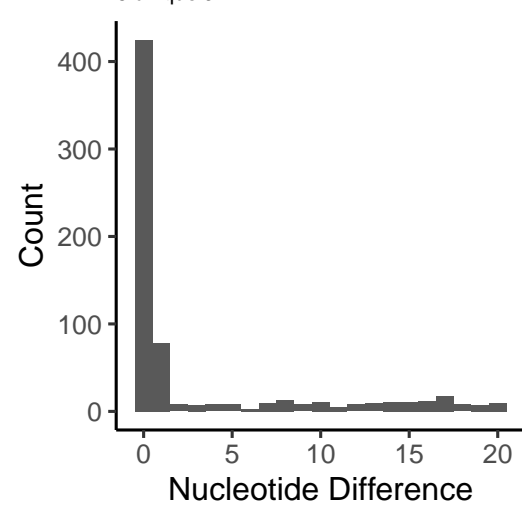
### IGHV3-20\*04

12 sequences assigned  
7 (58.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



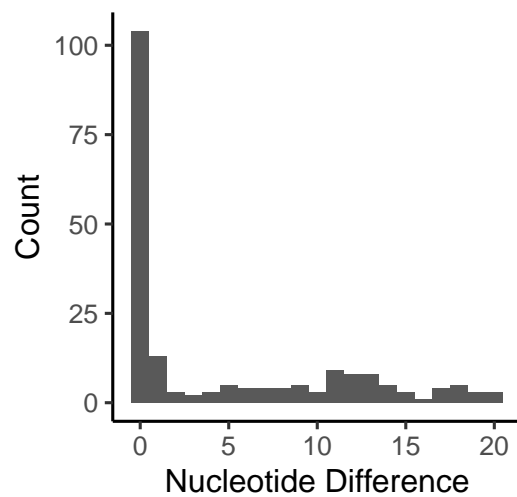
### IGHV3-33\*01

729 sequences assigned  
425 (58.3%) exact matches, in which:  
422 unique CDR3  
6 unique J



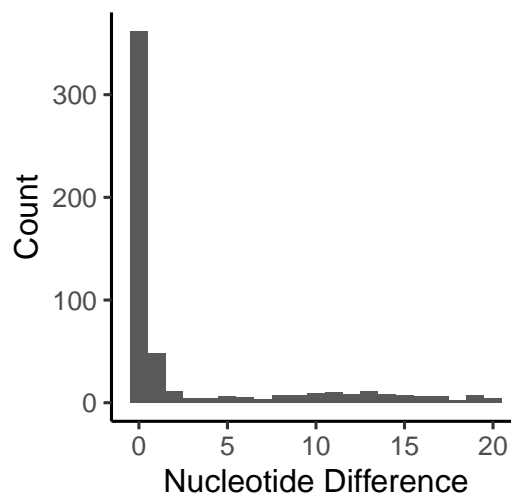
### IGHV3-15\*07

221 sequences assigned  
104 (47.1%) exact matches, in which:  
103 unique CDR3  
6 unique J



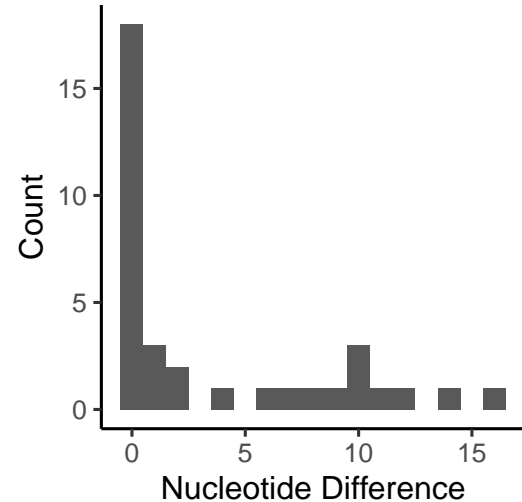
### IGHV3-21\*01

561 sequences assigned  
362 (64.5%) exact matches, in which:  
359 unique CDR3  
6 unique J



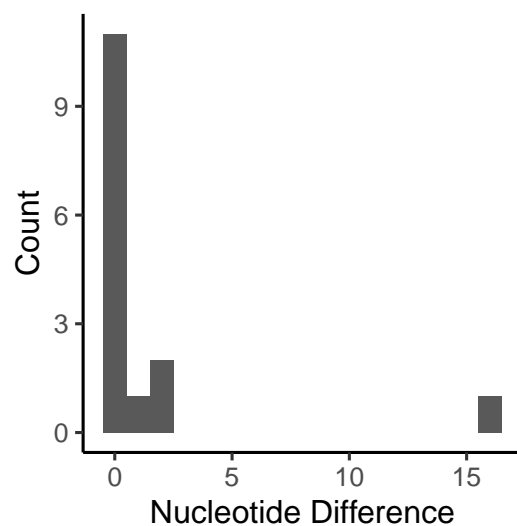
### IGHV3-43\*01

36 sequences assigned  
18 (50%) exact matches, in which:  
18 unique CDR3  
3 unique J



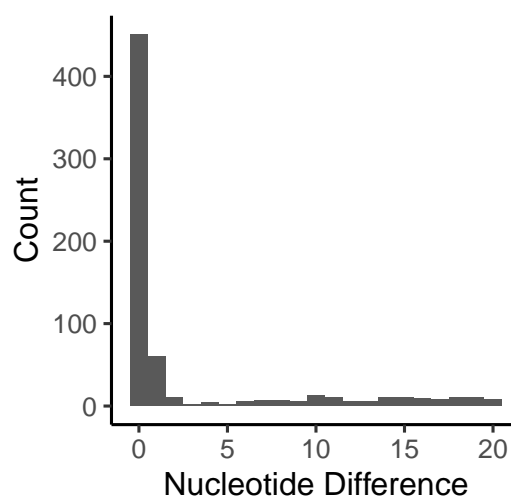
### IGHV3-20\*01

16 sequences assigned  
11 (68.8%) exact matches, in which:  
11 unique CDR3  
3 unique J



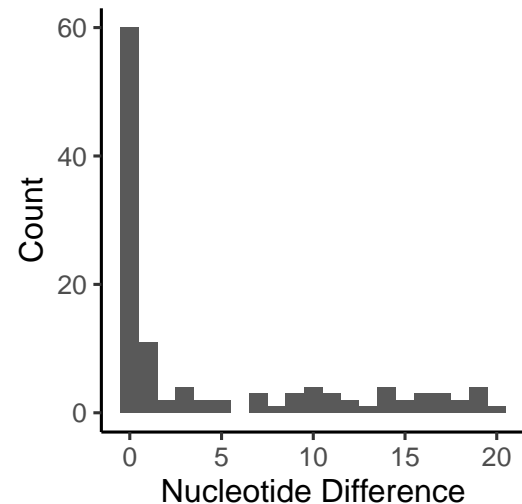
### IGHV3-30-3\*01

716 sequences assigned  
451 (63%) exact matches, in which:  
447 unique CDR3  
6 unique J



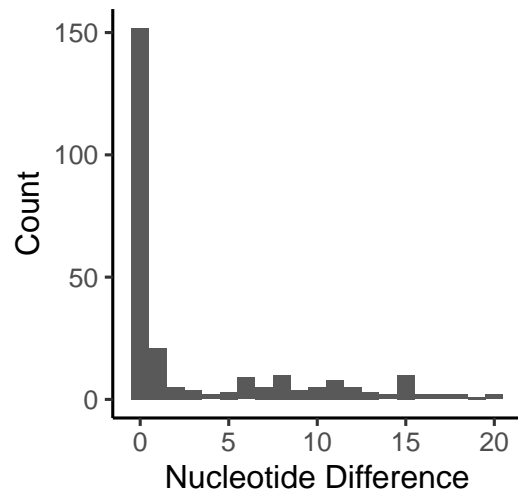
### IGHV3-48\*02

123 sequences assigned  
60 (48.8%) exact matches, in which:  
59 unique CDR3  
4 unique J



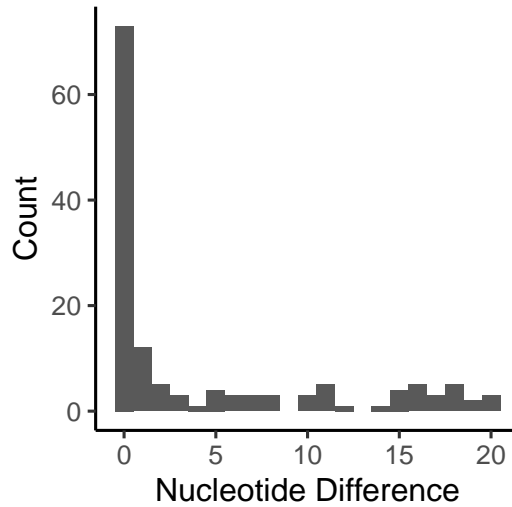
### IGHV3-48\*03

277 sequences assigned  
152 (54.9%) exact matches, in which:  
152 unique CDR3  
6 unique J



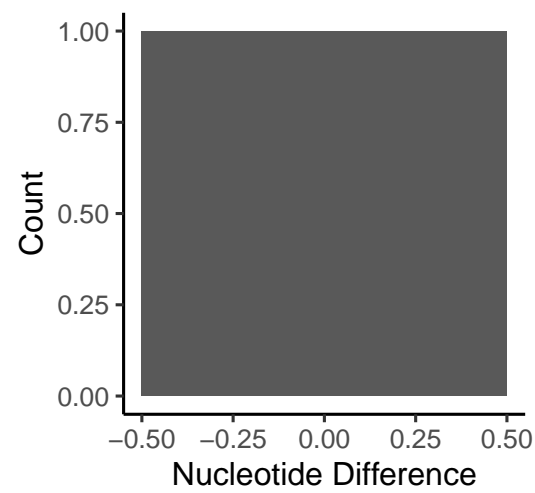
### IGHV3-53\*01

153 sequences assigned  
73 (47.7%) exact matches, in which:  
73 unique CDR3  
5 unique J



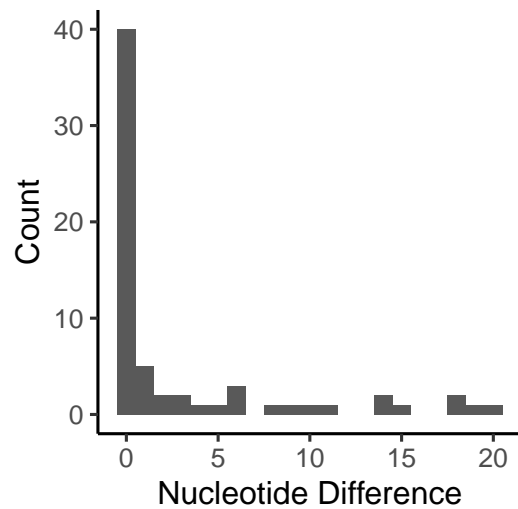
### IGHV3-69-1\*02

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



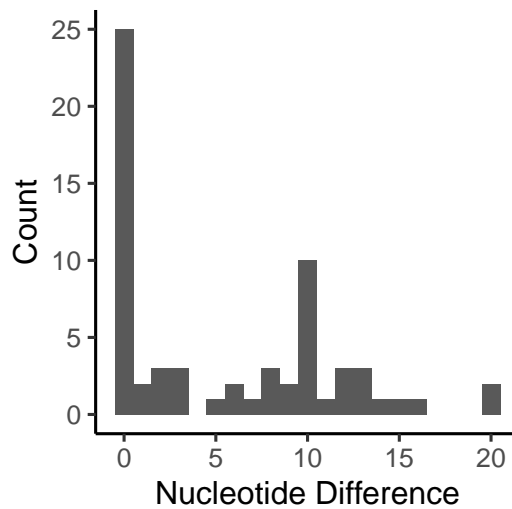
### IGHV3-49\*04

72 sequences assigned  
40 (55.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



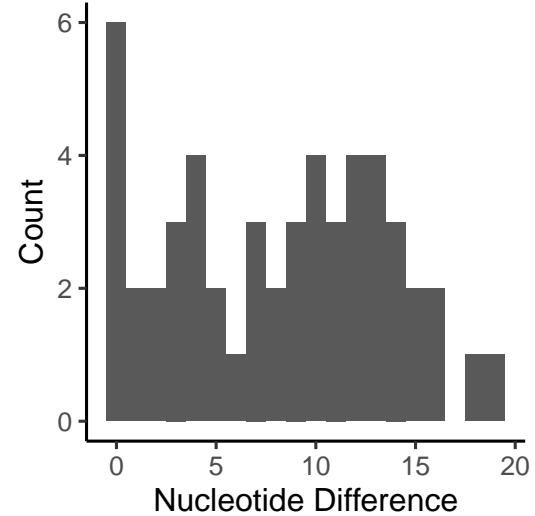
### IGHV3-53\*02

77 sequences assigned  
25 (32.5%) exact matches, in which:  
25 unique CDR3  
5 unique J



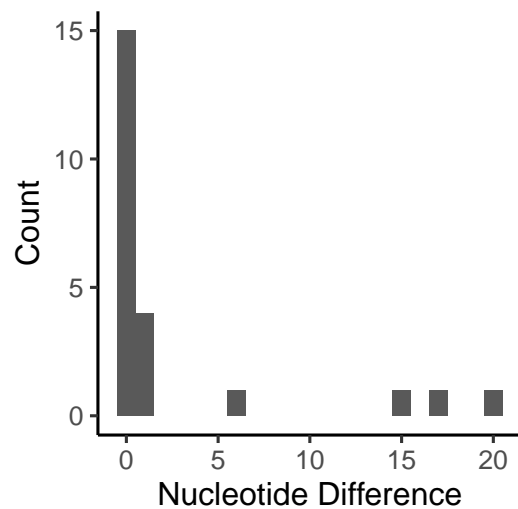
### IGHV3-72\*01

60 sequences assigned  
6 (10%) exact matches, in which:  
6 unique CDR3  
3 unique J



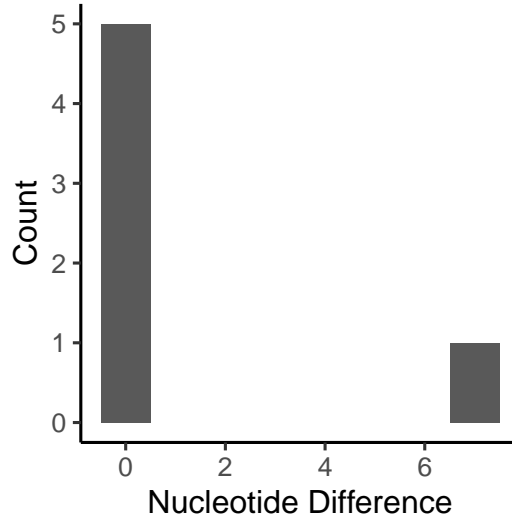
### IGHV3-49\*05

27 sequences assigned  
15 (55.6%) exact matches, in which:  
15 unique CDR3  
3 unique J



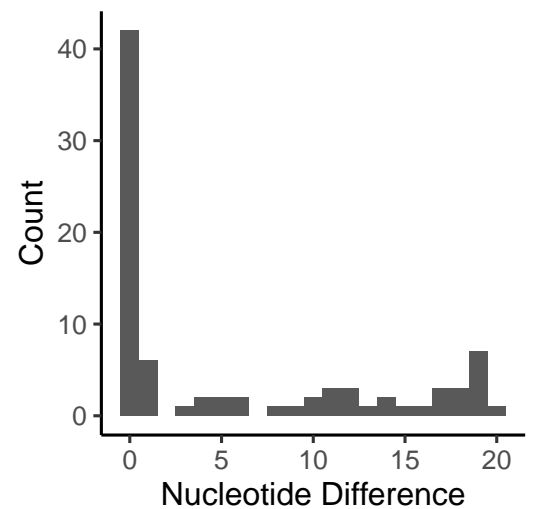
### IGHV3-64\*02

6 sequences assigned  
5 (83.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



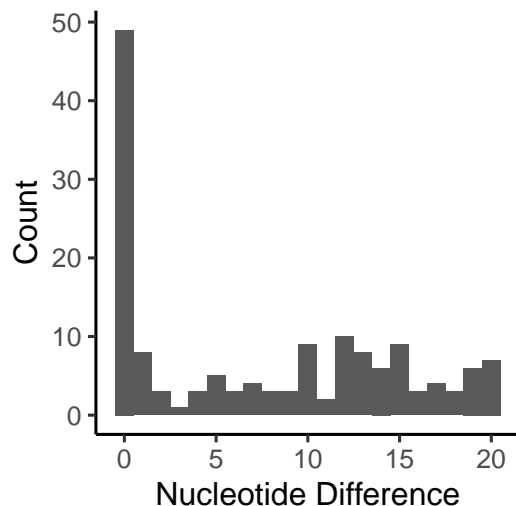
### IGHV3-73\*02

87 sequences assigned  
42 (48.3%) exact matches, in which:  
42 unique CDR3  
5 unique J



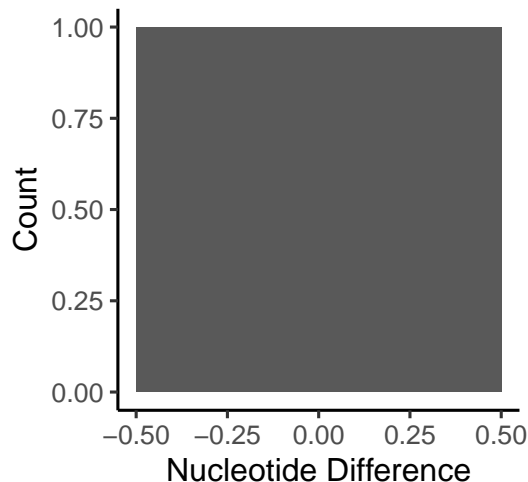
### IGHV3-74\*01

169 sequences assigned  
49 (29%) exact matches, in which:  
49 unique CDR3  
4 unique J



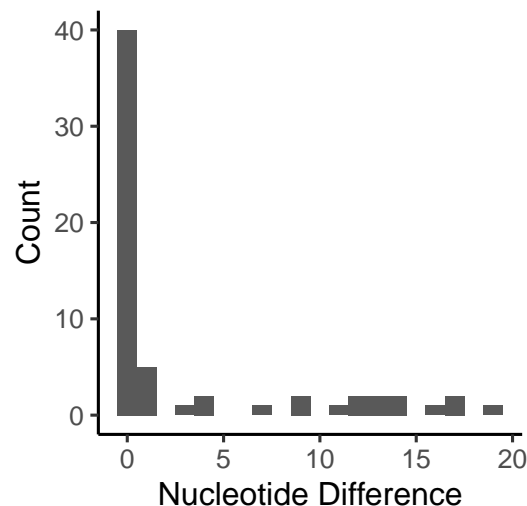
### IGHV4-28\*01

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



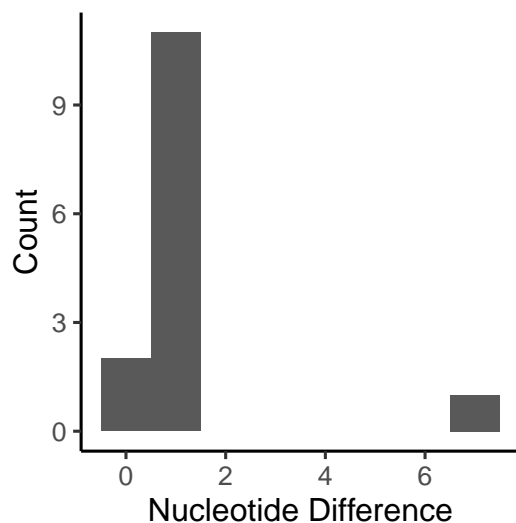
### IGHV4-30-4\*01

71 sequences assigned  
40 (56.3%) exact matches, in which:  
40 unique CDR3  
4 unique J



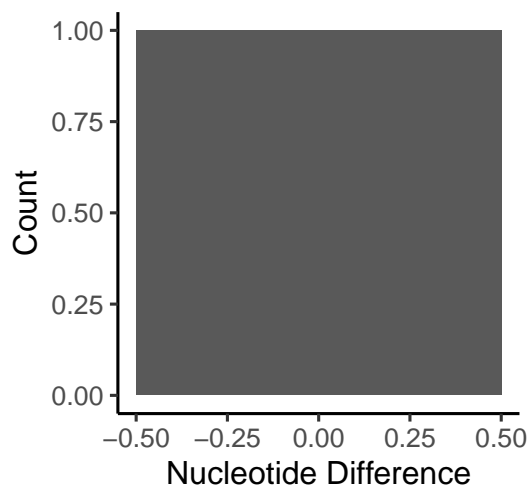
### IGHV3-43D\*04

14 sequences assigned  
2 (14.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



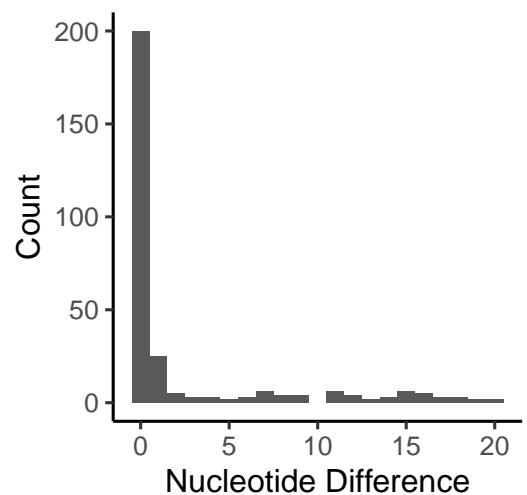
### IGHV4-28\*03

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



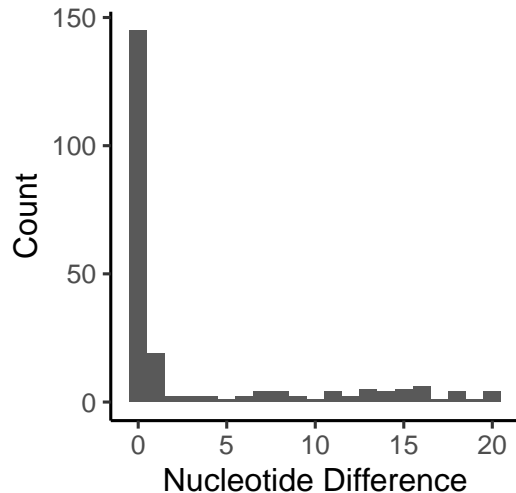
### IGHV4-31\*03

323 sequences assigned  
200 (61.9%) exact matches, in which:  
199 unique CDR3  
6 unique J



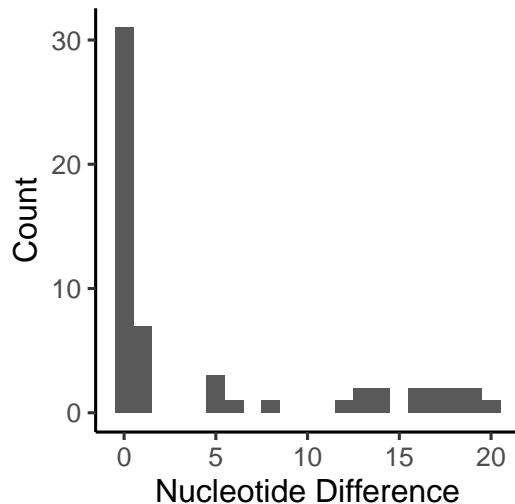
### IGHV4-4\*02

232 sequences assigned  
145 (62.5%) exact matches, in which:  
145 unique CDR3  
6 unique J



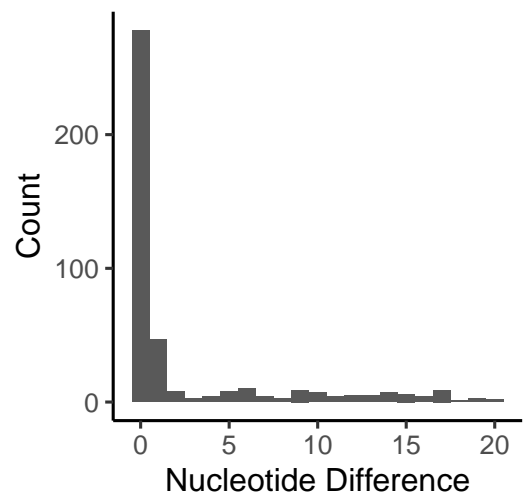
### IGHV4-30-2\*01

61 sequences assigned  
31 (50.8%) exact matches, in which:  
31 unique CDR3  
5 unique J



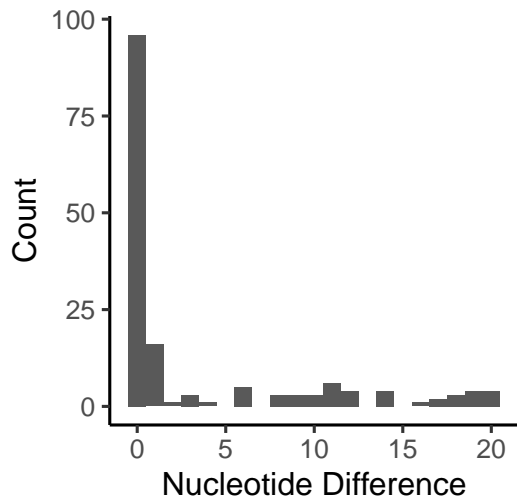
### IGHV4-34\*01

454 sequences assigned  
278 (61.2%) exact matches, in which:  
277 unique CDR3  
6 unique J



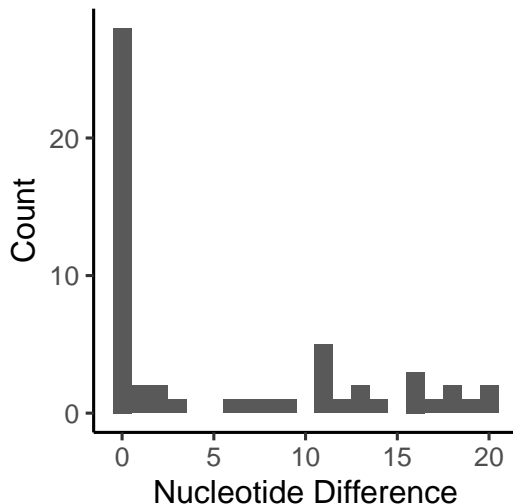
### IGHV4-38-2\*02\_A70G

178 sequences assigned  
96 (53.9%) exact matches, in which:  
96 unique CDR3  
6 unique J



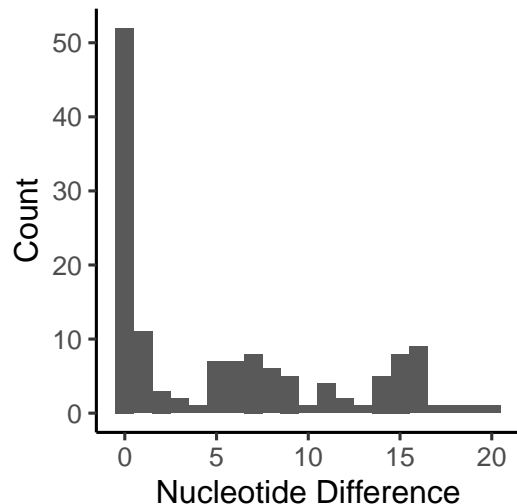
### IGHV4-61\*01

62 sequences assigned  
28 (45.2%) exact matches, in which:  
28 unique CDR3  
5 unique J



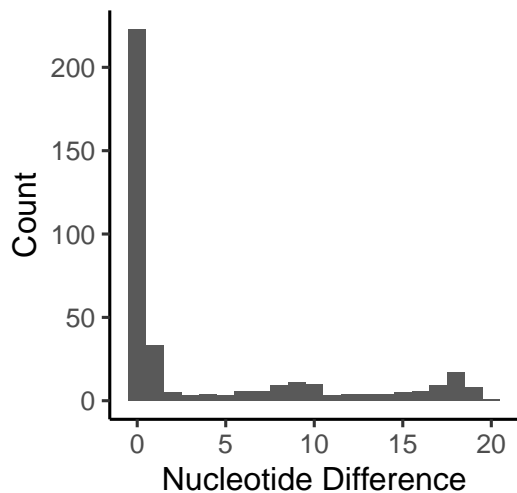
### IGHV7-4-1\*02

142 sequences assigned  
52 (36.6%) exact matches, in which:  
52 unique CDR3  
5 unique J



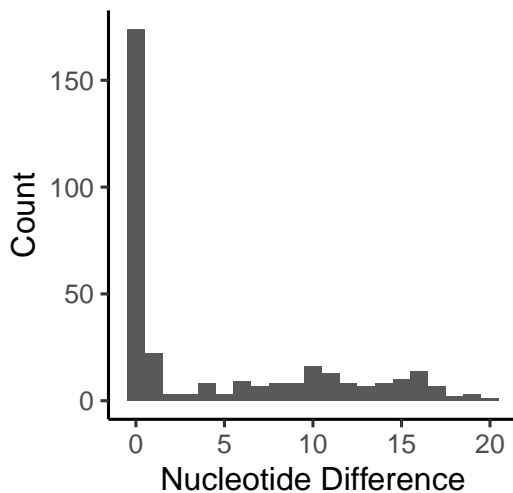
### IGHV4-39\*01

456 sequences assigned  
223 (48.9%) exact matches, in which:  
222 unique CDR3  
6 unique J



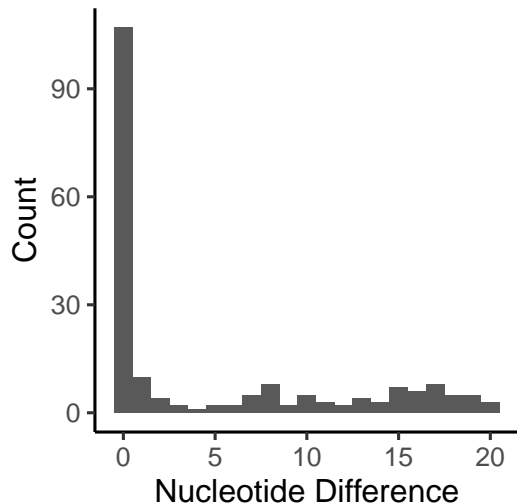
### IGHV5-51\*01

365 sequences assigned  
174 (47.7%) exact matches, in which:  
174 unique CDR3  
6 unique J



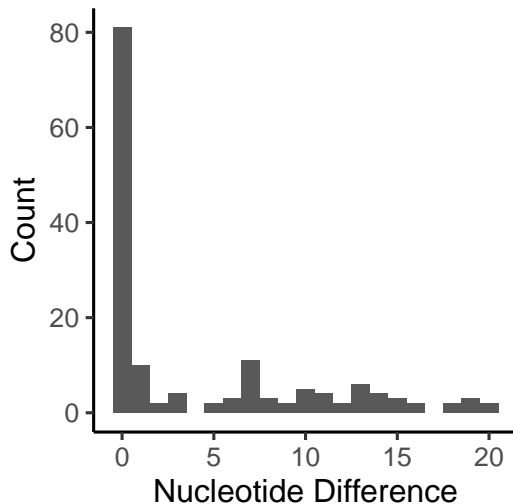
### IGHV4-59\*01

232 sequences assigned  
107 (46.1%) exact matches, in which:  
106 unique CDR3  
6 unique J



### IGHV6-1\*01

158 sequences assigned  
81 (51.3%) exact matches, in which:  
80 unique CDR3  
5 unique J





Warning – no inferred sequences found.