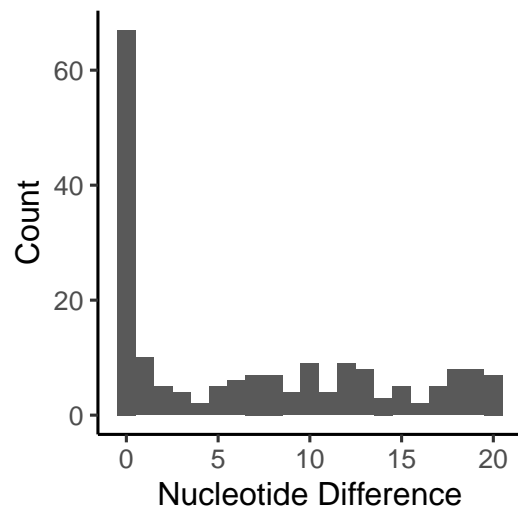


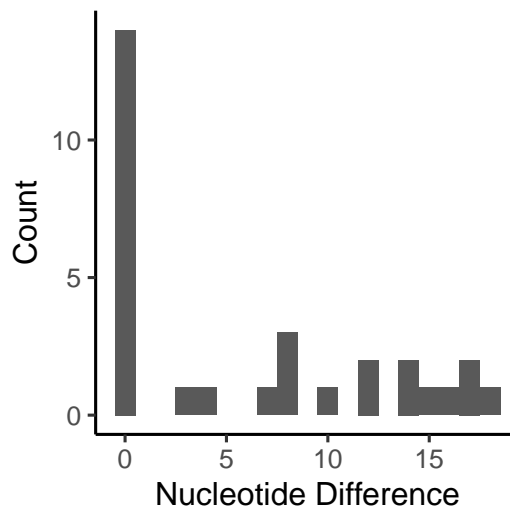
## IGHV1-2\*02

264 sequences assigned  
67 (25.4%) exact matches, in which:  
67 unique CDR3  
6 unique J



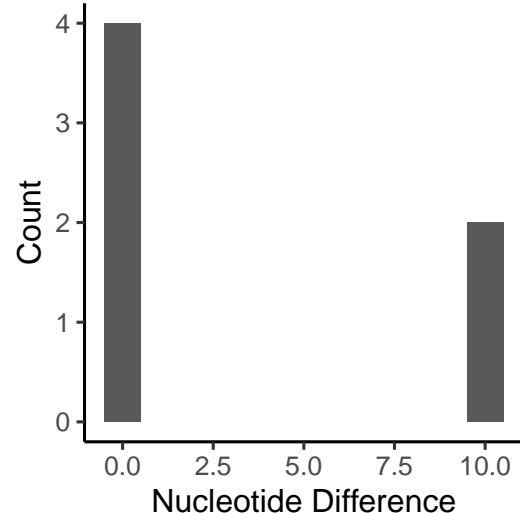
## IGHV1-24\*01

38 sequences assigned  
14 (36.8%) exact matches, in which:  
14 unique CDR3  
3 unique J



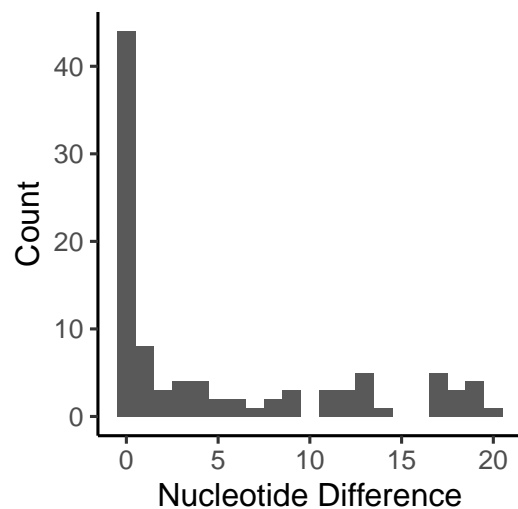
## IGHV1-69-2\*01

7 sequences assigned  
4 (57.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



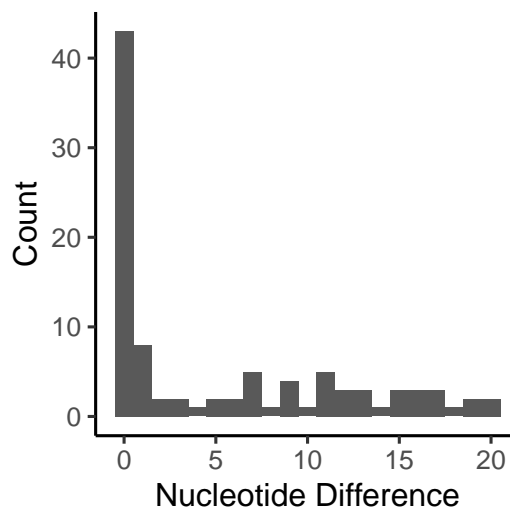
## IGHV1-8\*01

107 sequences assigned  
44 (41.1%) exact matches, in which:  
44 unique CDR3  
4 unique J



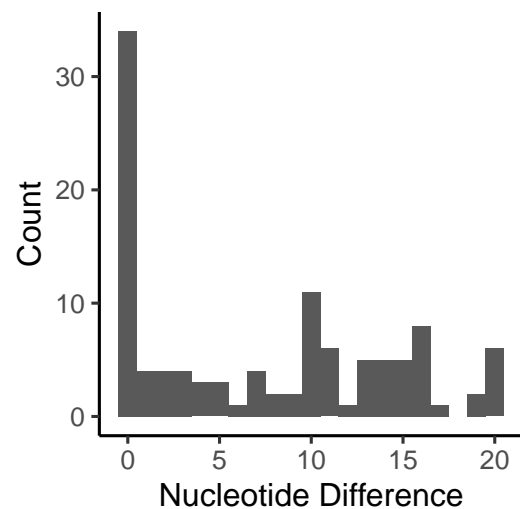
## IGHV1-46\*01

127 sequences assigned  
43 (33.9%) exact matches, in which:  
43 unique CDR3  
5 unique J



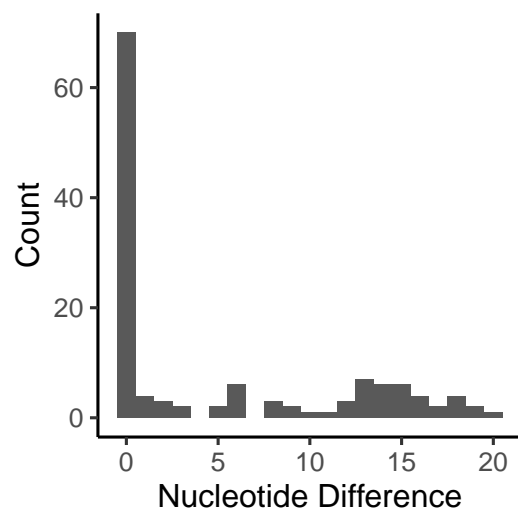
## IGHV2-5\*01

123 sequences assigned  
34 (27.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



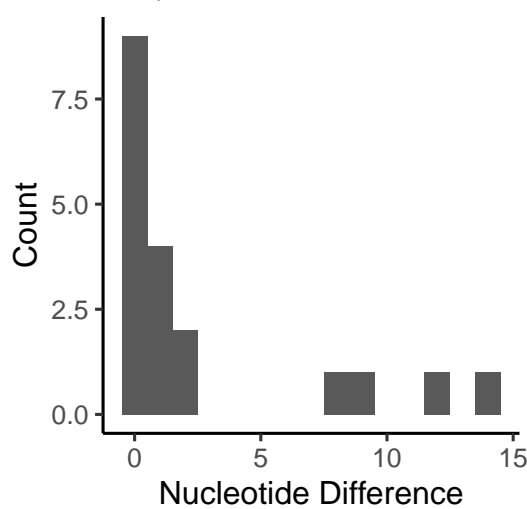
## IGHV1-18\*01

173 sequences assigned  
70 (40.5%) exact matches, in which:  
69 unique CDR3  
5 unique J



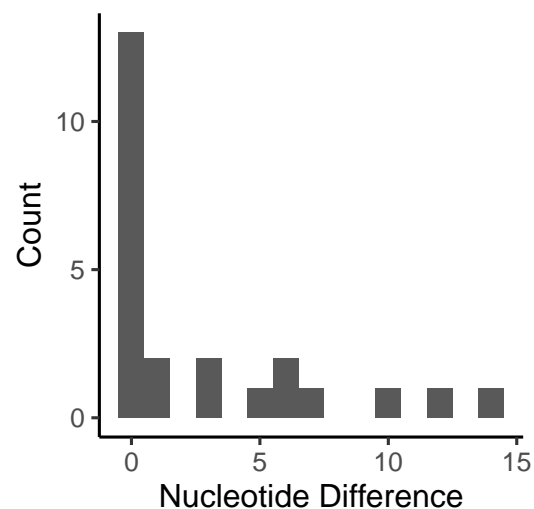
## IGHV1-58\*01

21 sequences assigned  
9 (42.9%) exact matches, in which:  
9 unique CDR3  
3 unique J



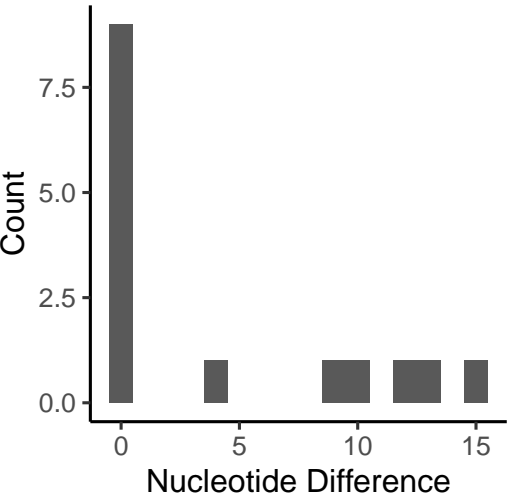
## IGHV2-26\*01

27 sequences assigned  
13 (48.1%) exact matches, in which:  
13 unique CDR3  
4 unique J



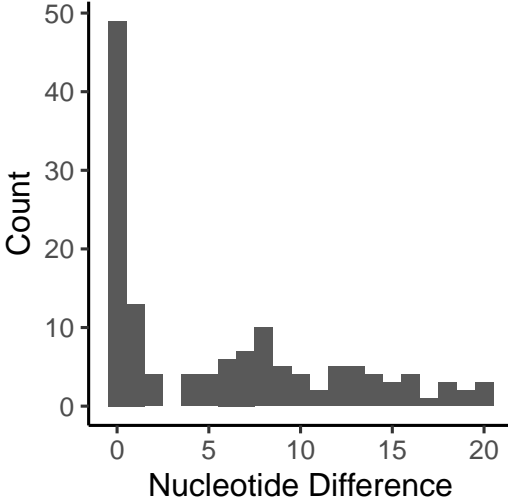
### IGHV2-70\*01

17 sequences assigned  
9 (52.9%) exact matches, in which:  
9 unique CDR3  
4 unique J



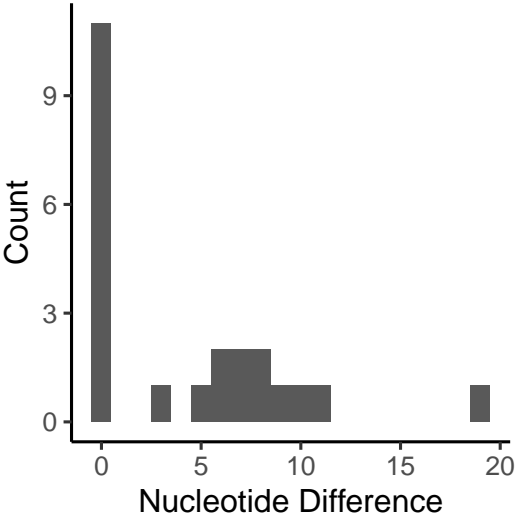
### IGHV3-11\*01

167 sequences assigned  
49 (29.3%) exact matches, in which:  
49 unique CDR3  
6 unique J



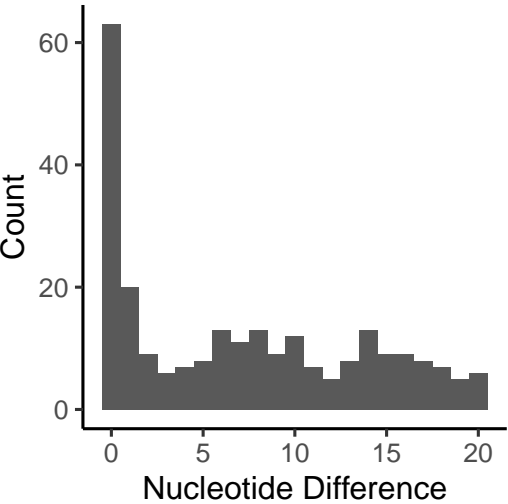
### IGHV3-20\*01

23 sequences assigned  
11 (47.8%) exact matches, in which:  
11 unique CDR3  
4 unique J



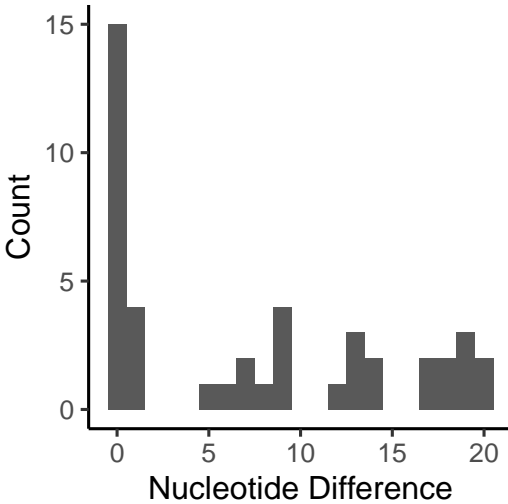
### IGHV3-7\*01

292 sequences assigned  
63 (21.6%) exact matches, in which:  
63 unique CDR3  
5 unique J



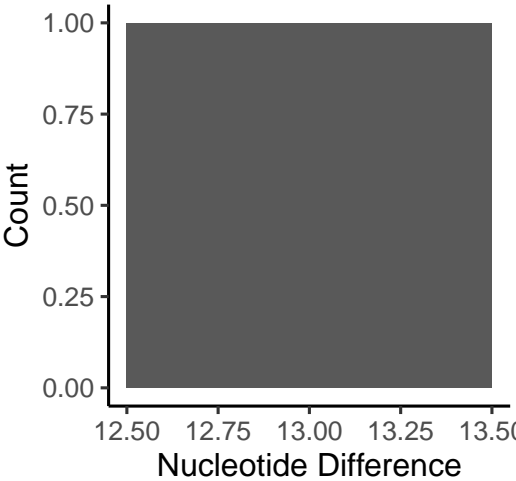
### IGHV3-13\*01

60 sequences assigned  
15 (25%) exact matches, in which:  
15 unique CDR3  
3 unique J



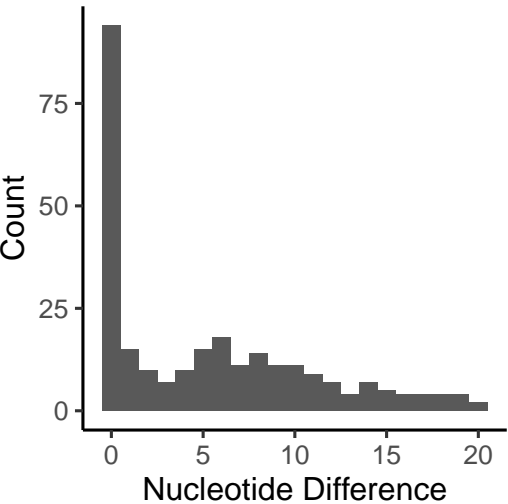
### IGHV3-20\*04

5 sequences assigned  
No exact matches.



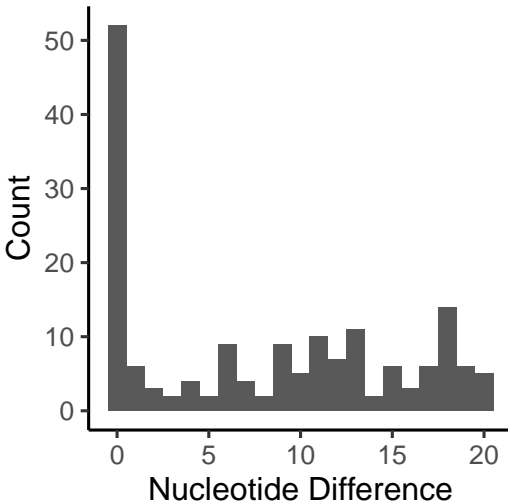
### IGHV3-9\*01

308 sequences assigned  
94 (30.5%) exact matches, in which:  
94 unique CDR3  
6 unique J



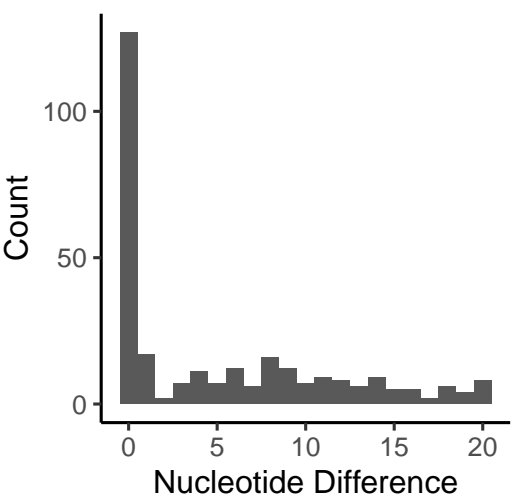
### IGHV3-15\*01

206 sequences assigned  
52 (25.2%) exact matches, in which:  
51 unique CDR3  
4 unique J



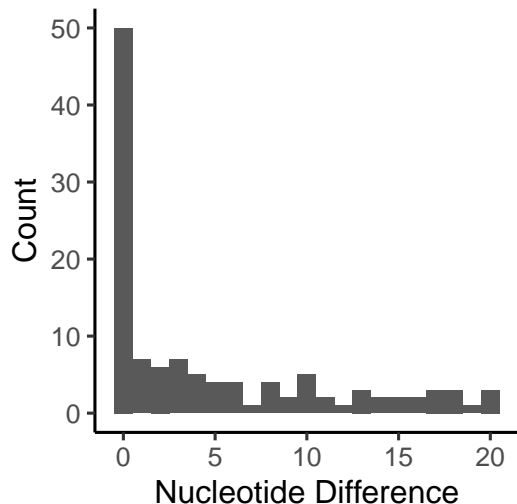
### IGHV3-21\*01

315 sequences assigned  
127 (40.3%) exact matches, in which:  
127 unique CDR3  
6 unique J



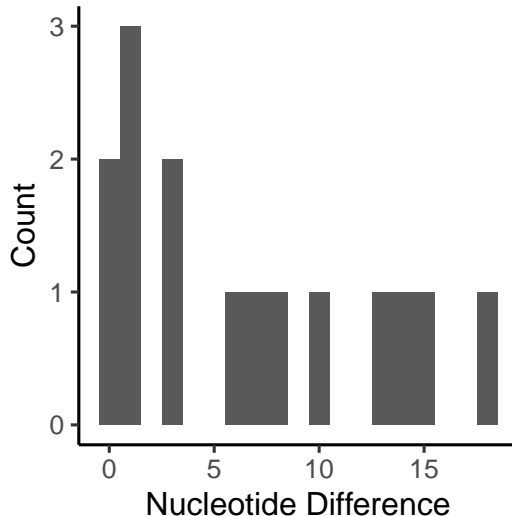
### IGHV3-30\*01

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



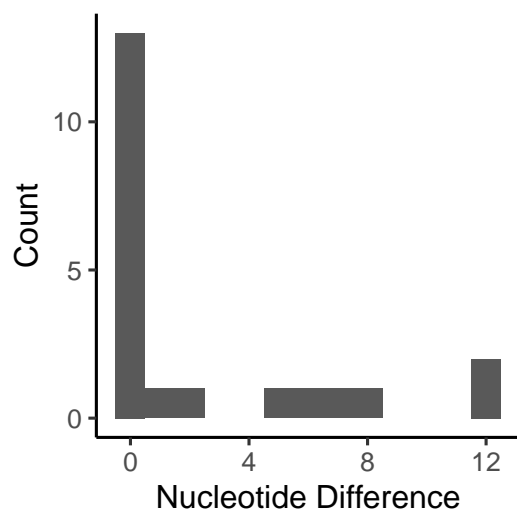
### IGHV3-43\*01

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



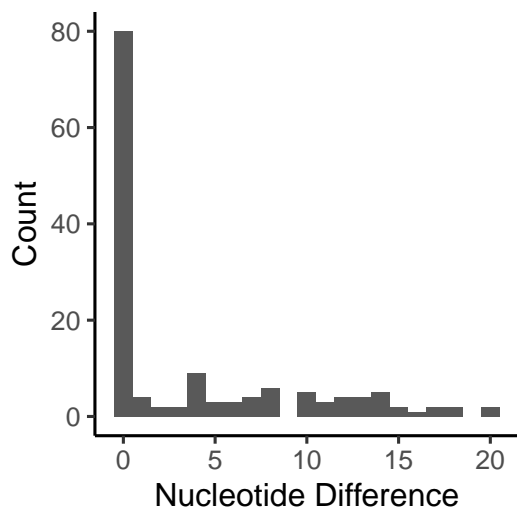
### IGHV3-49\*05

21 sequences assigned  
13 (61.9%) exact matches, in which:  
13 unique CDR3  
2 unique J



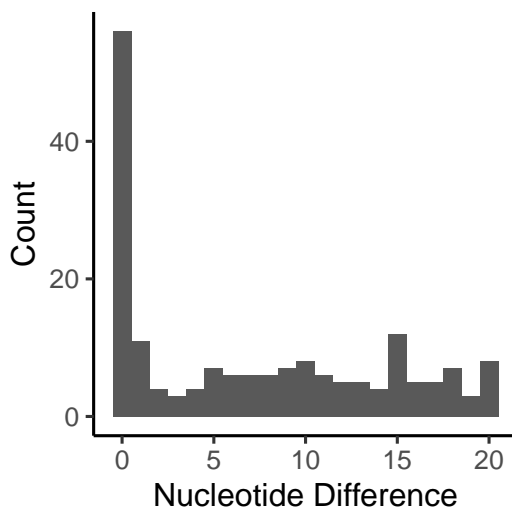
### IGHV3-30-3\*01

170 sequences assigned  
80 (47.1%) exact matches, in which:  
80 unique CDR3  
6 unique J



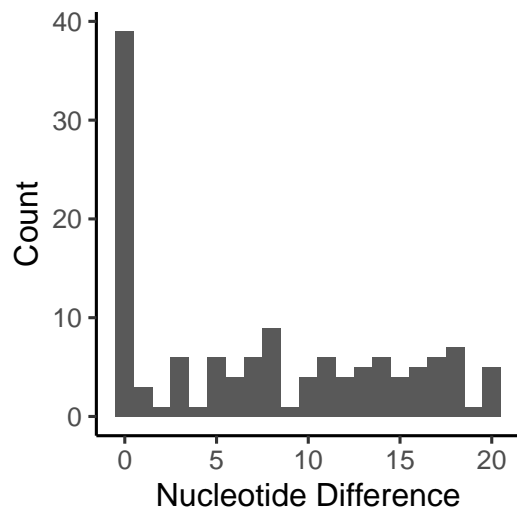
### IGHV3-48\*02

204 sequences assigned  
56 (27.5%) exact matches, in which:  
56 unique CDR3  
6 unique J



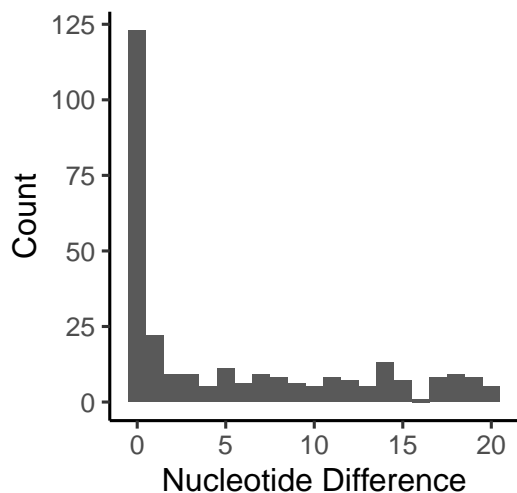
### IGHV3-53\*01

170 sequences assigned  
39 (22.9%) exact matches, in which:  
39 unique CDR3  
5 unique J



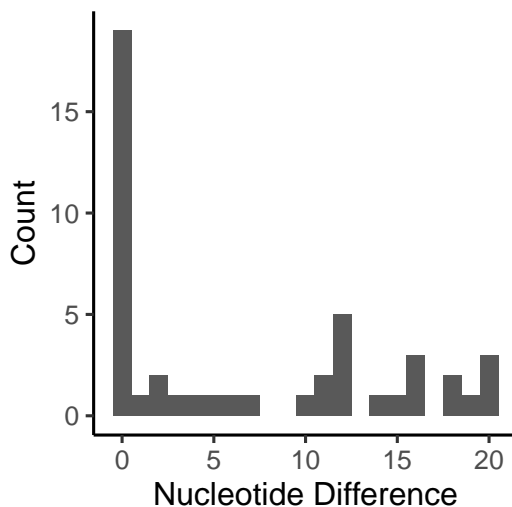
### IGHV3-33\*01

365 sequences assigned  
123 (33.7%) exact matches, in which:  
123 unique CDR3  
6 unique J



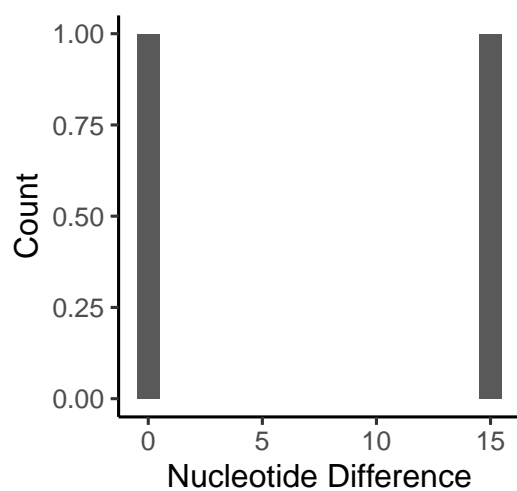
### IGHV3-49\*03

67 sequences assigned  
19 (28.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



### IGHV3-64\*02

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



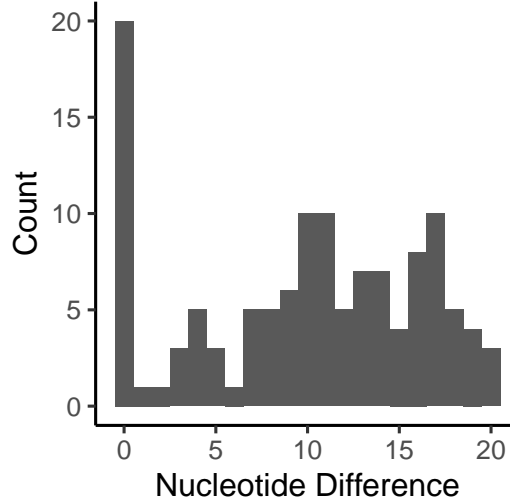
### IGHV3-69-1\*01

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



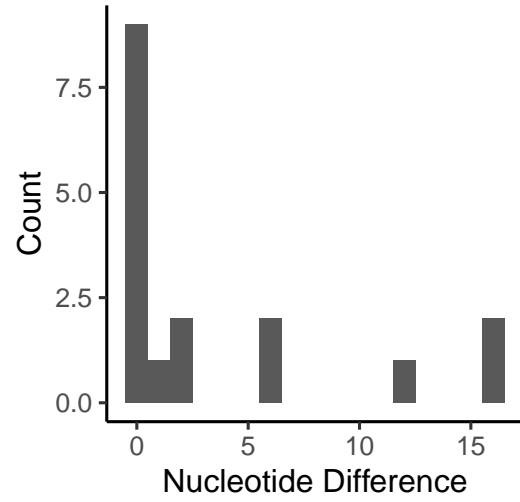
### IGHV3-74\*01

142 sequences assigned  
20 (14.1%) exact matches, in which:  
20 unique CDR3  
4 unique J



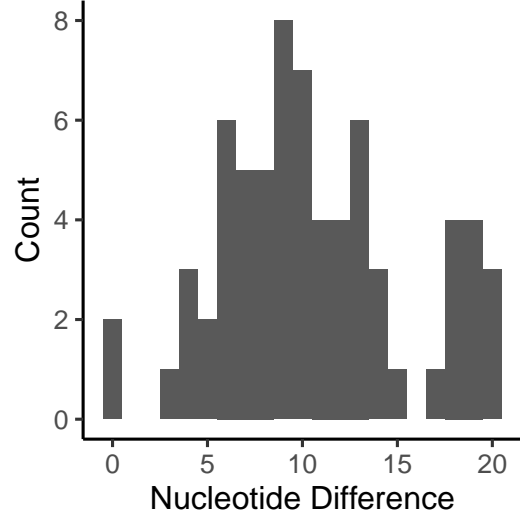
### IGHV4-30-2\*01

30 sequences assigned  
9 (30%) exact matches, in which:  
9 unique CDR3  
4 unique J



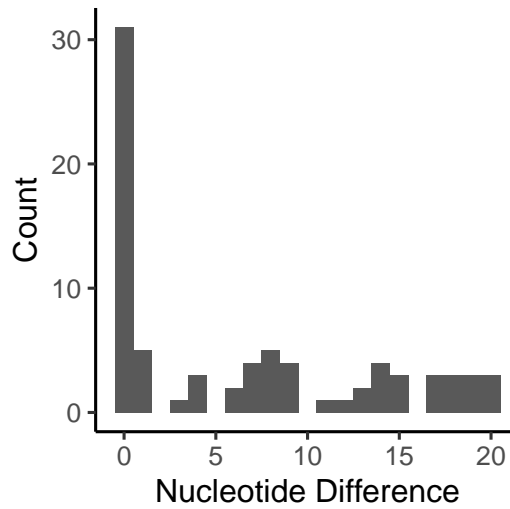
### IGHV3-72\*01

80 sequences assigned  
2 (2.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



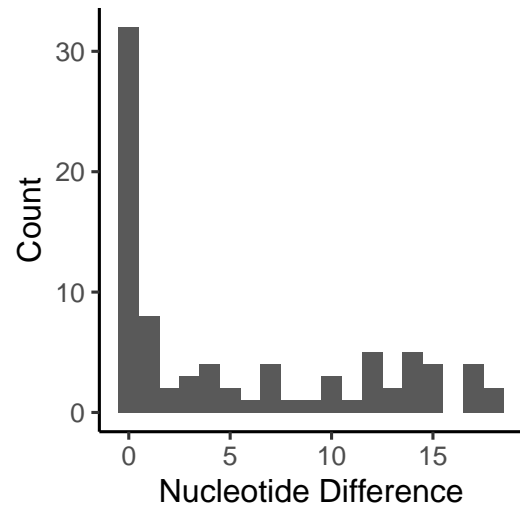
### IGHV4-4\*07

92 sequences assigned  
31 (33.7%) exact matches, in which:  
31 unique CDR3  
4 unique J



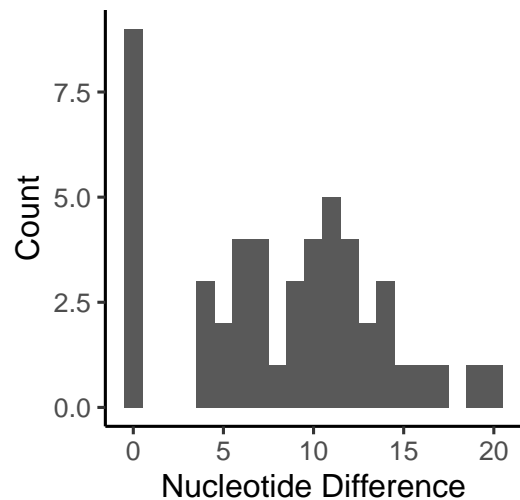
### IGHV4-31\*03

104 sequences assigned  
32 (30.8%) exact matches, in which:  
32 unique CDR3  
5 unique J



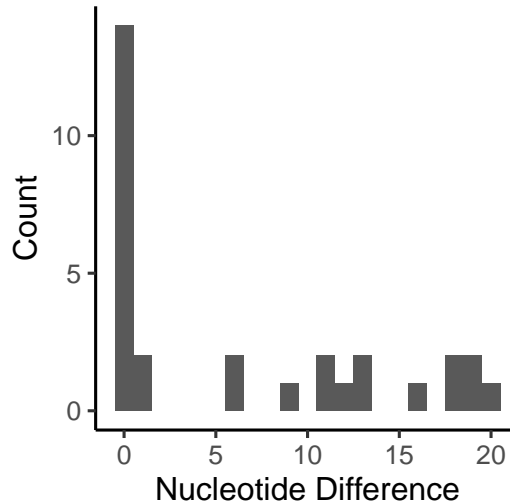
### IGHV3-73\*02

59 sequences assigned  
9 (15.3%) exact matches, in which:  
9 unique CDR3  
4 unique J



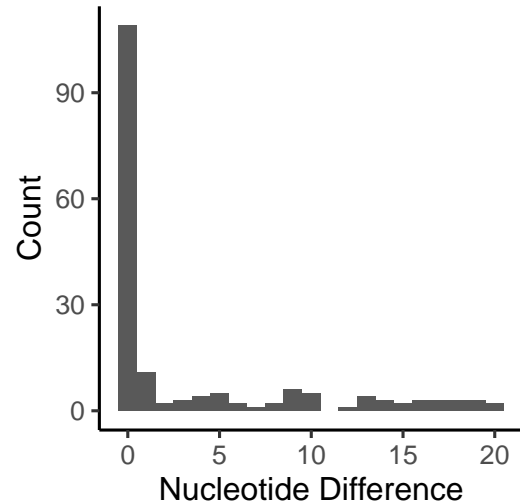
### IGHV4-30-4\*01

37 sequences assigned  
14 (37.8%) exact matches, in which:  
13 unique CDR3  
4 unique J



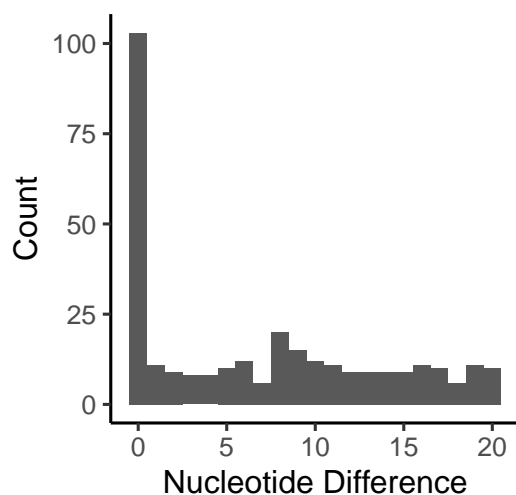
### IGHV4-34\*01

197 sequences assigned  
109 (55.3%) exact matches, in which:  
108 unique CDR3  
6 unique J



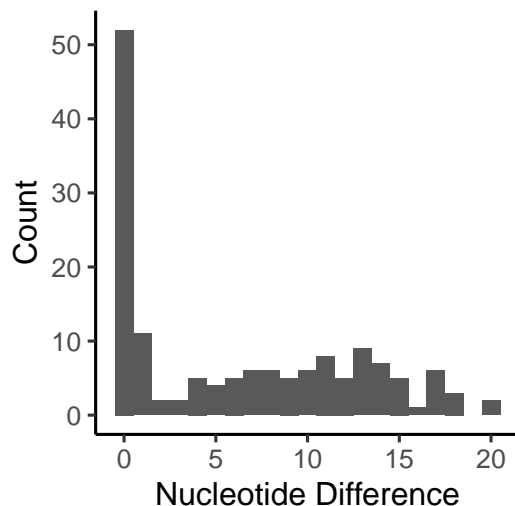
## IGHV4–39\*01

371 sequences assigned  
103 (27.8%) exact matches, in which:  
103 unique CDR3  
6 unique J



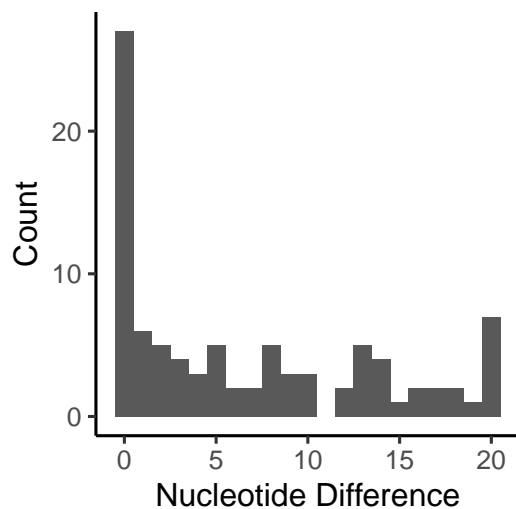
## IGHV5–51\*01

175 sequences assigned  
52 (29.7%) exact matches, in which:  
52 unique CDR3  
5 unique J



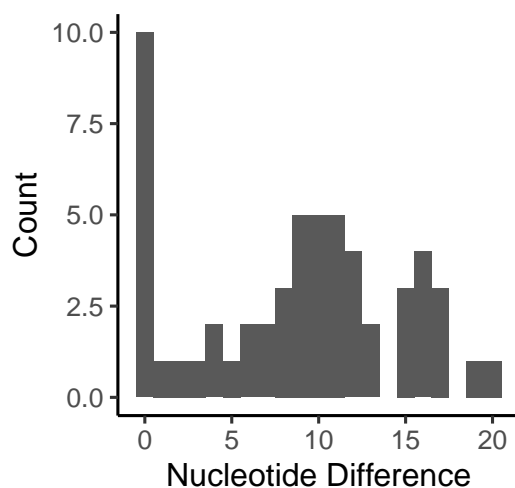
## IGHV4–59\*01

110 sequences assigned  
27 (24.5%) exact matches, in which:  
26 unique CDR3  
6 unique J



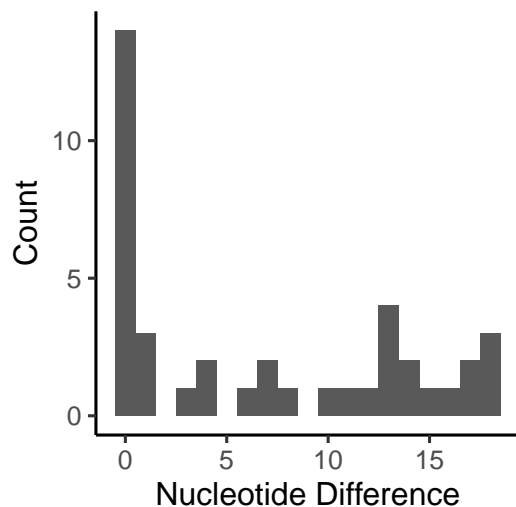
## IGHV6–1\*01

64 sequences assigned  
10 (15.6%) exact matches, in which:  
10 unique CDR3  
3 unique J



## IGHV4–61\*01

53 sequences assigned  
14 (26.4%) exact matches, in which:  
14 unique CDR3  
3 unique J





Warning – no inferred sequences found.