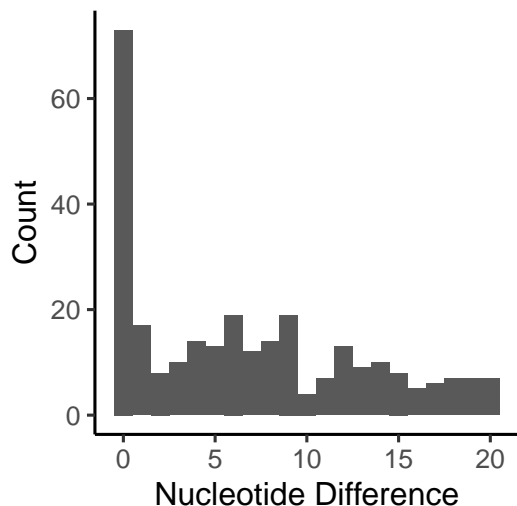


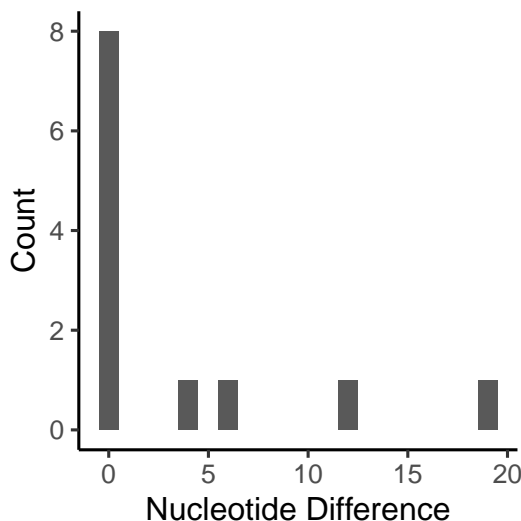
## IGHV1-2\*02

327 sequences assigned  
73 (22.3%) exact matches, in which:  
73 unique CDR3  
5 unique J



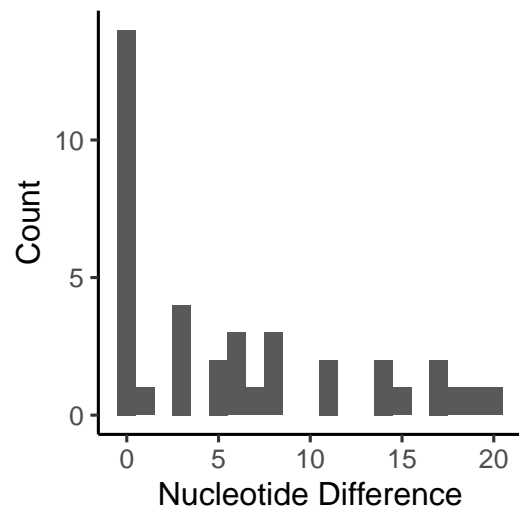
## IGHV1-24\*01

15 sequences assigned  
8 (53.3%) exact matches, in which:  
8 unique CDR3  
3 unique J



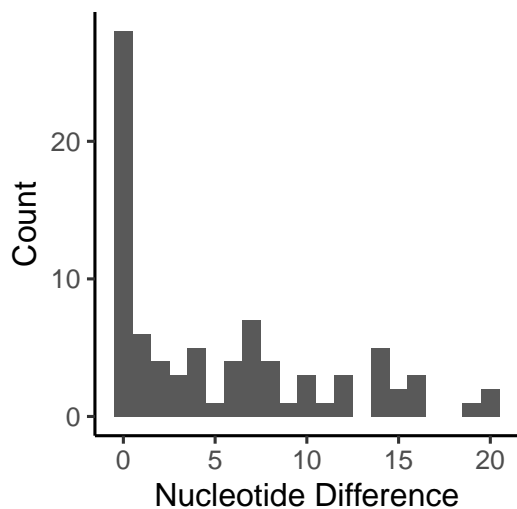
## IGHV1-46\*03

39 sequences assigned  
14 (35.9%) exact matches, in which:  
14 unique CDR3  
4 unique J



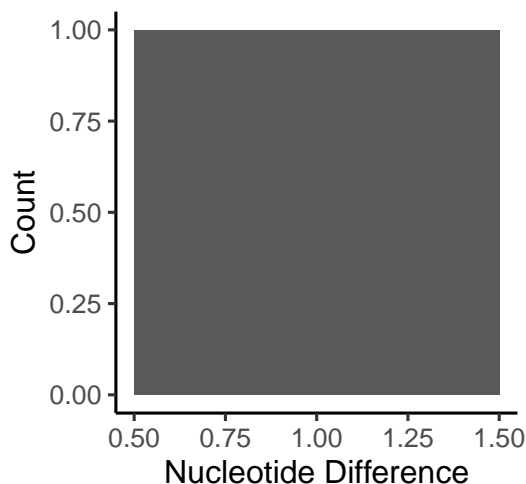
## IGHV1-8\*01

95 sequences assigned  
28 (29.5%) exact matches, in which:  
28 unique CDR3  
4 unique J



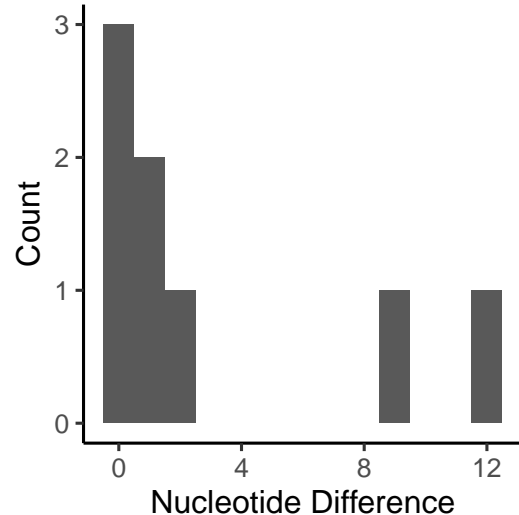
## IGHV1-45\*02

1 sequences assigned  
No exact matches.



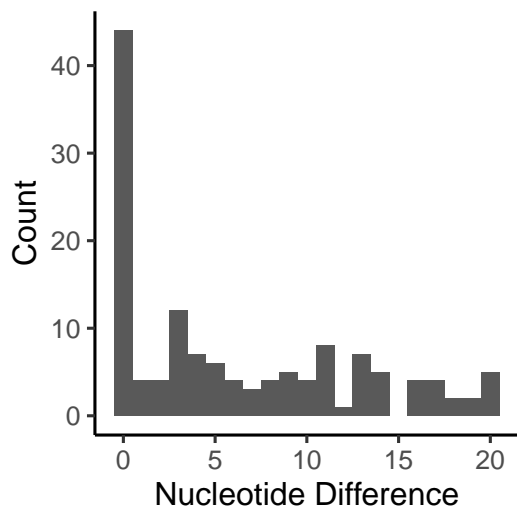
## IGHV1-58\*01

8 sequences assigned  
3 (37.5%) exact matches, in which:  
3 unique CDR3  
3 unique J



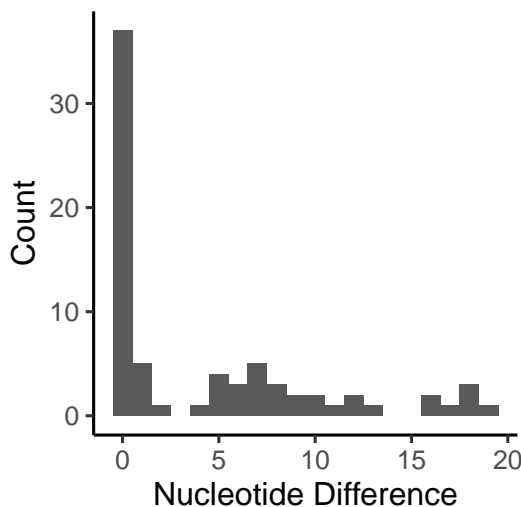
## IGHV1-18\*01

166 sequences assigned  
44 (26.5%) exact matches, in which:  
44 unique CDR3  
4 unique J



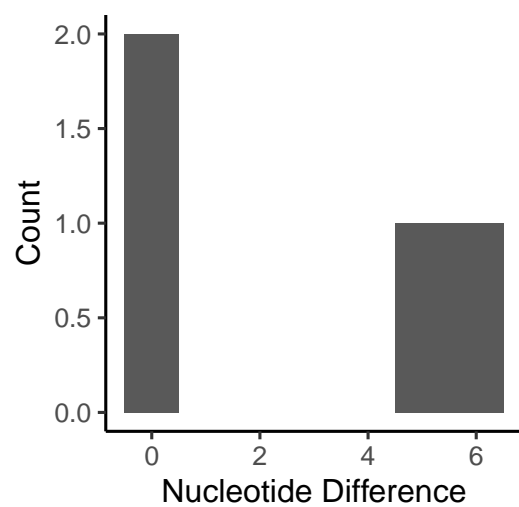
## IGHV1-46\*01

80 sequences assigned  
37 (46.2%) exact matches, in which:  
36 unique CDR3  
5 unique J



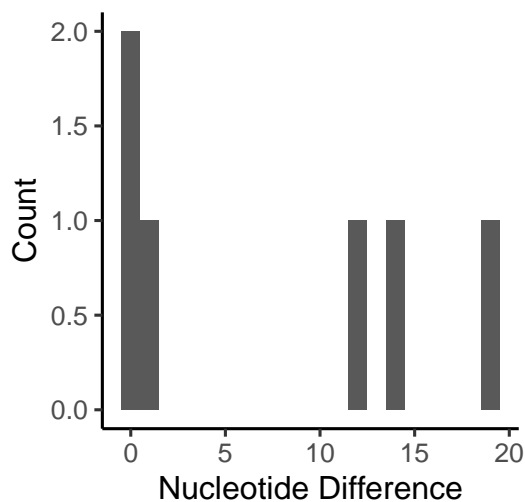
## IGHV1-58\*02

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



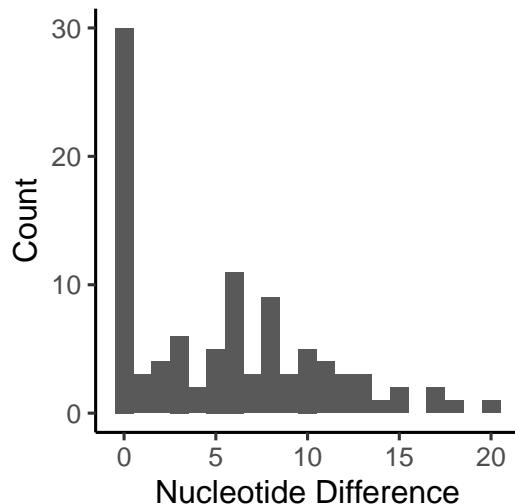
### IGHV1-69-2\*01

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



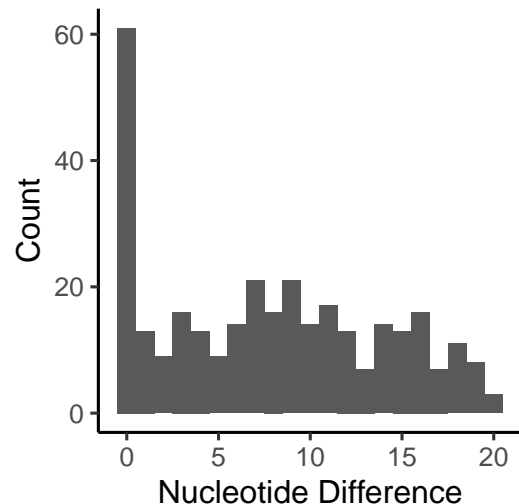
### IGHV2-5\*01

104 sequences assigned  
30 (28.8%) exact matches, in which:  
29 unique CDR3  
5 unique J



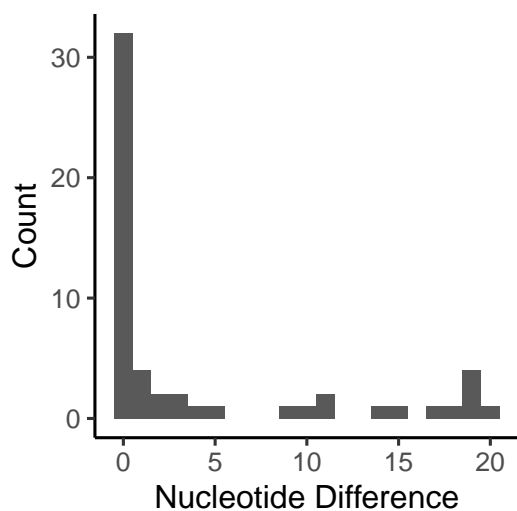
### IGHV3-7\*01

337 sequences assigned  
61 (18.1%) exact matches, in which:  
60 unique CDR3  
6 unique J



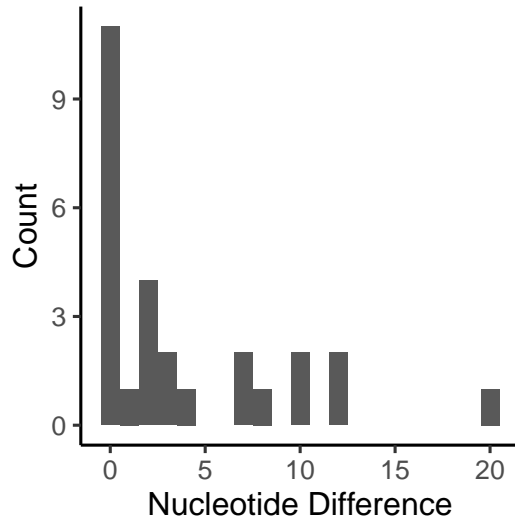
### IGHV1-69\*06

74 sequences assigned  
32 (43.2%) exact matches, in which:  
32 unique CDR3  
4 unique J



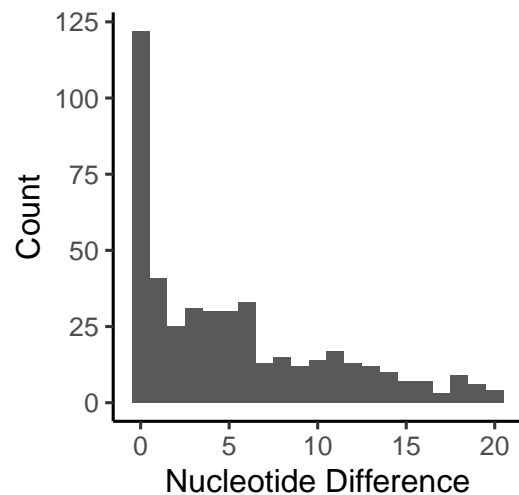
### IGHV2-26\*01

28 sequences assigned  
11 (39.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



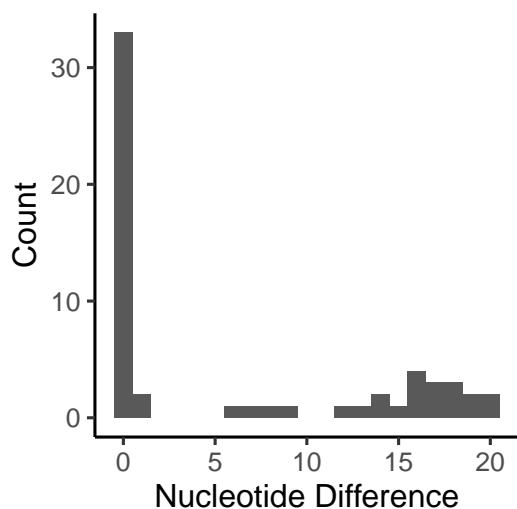
### IGHV3-9\*01

468 sequences assigned  
122 (26.1%) exact matches, in which:  
122 unique CDR3  
6 unique J



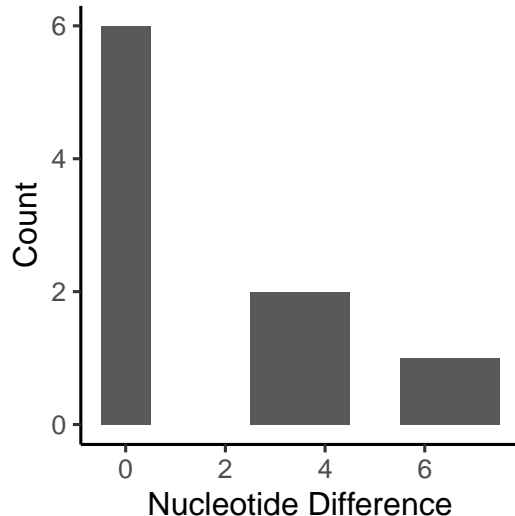
### IGHV1-69\*10

71 sequences assigned  
33 (46.5%) exact matches, in which:  
33 unique CDR3  
5 unique J



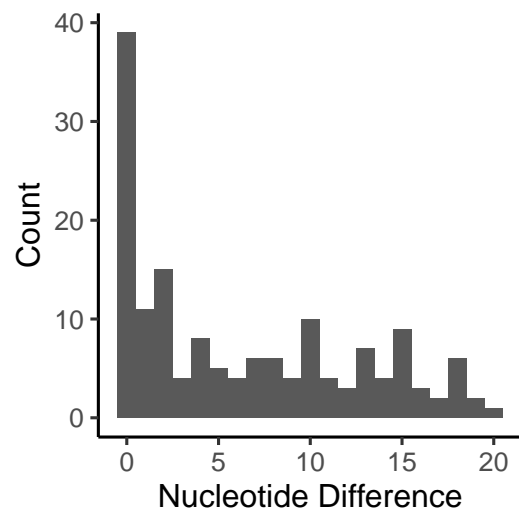
### IGHV2-70\*01

13 sequences assigned  
6 (46.2%) exact matches, in which:  
6 unique CDR3  
2 unique J



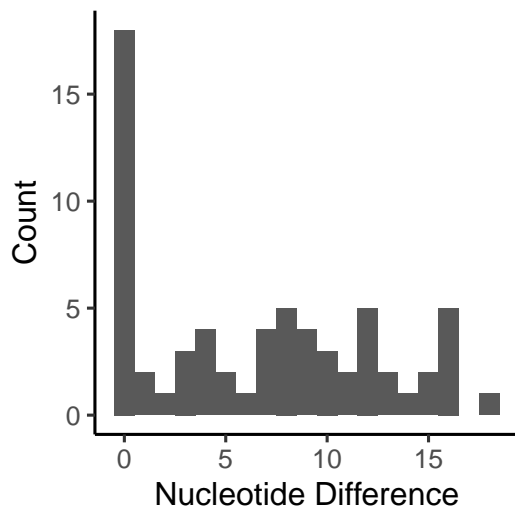
### IGHV3-11\*01

161 sequences assigned  
39 (24.2%) exact matches, in which:  
39 unique CDR3  
6 unique J



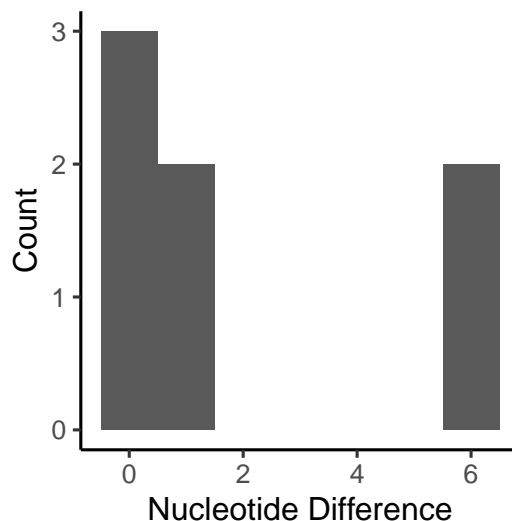
### IGHV3-13\*01

71 sequences assigned  
18 (25.4%) exact matches, in which:  
18 unique CDR3  
4 unique J



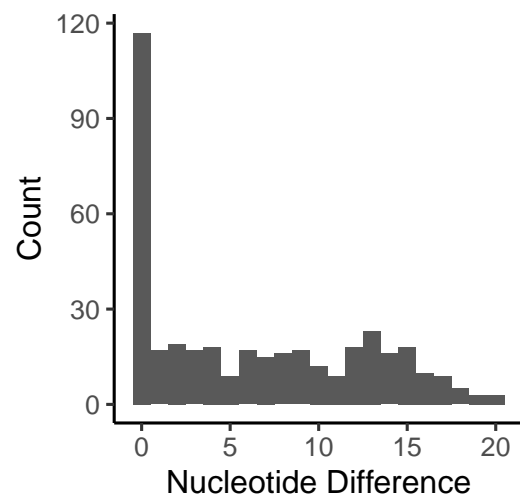
### IGHV3-20\*01

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



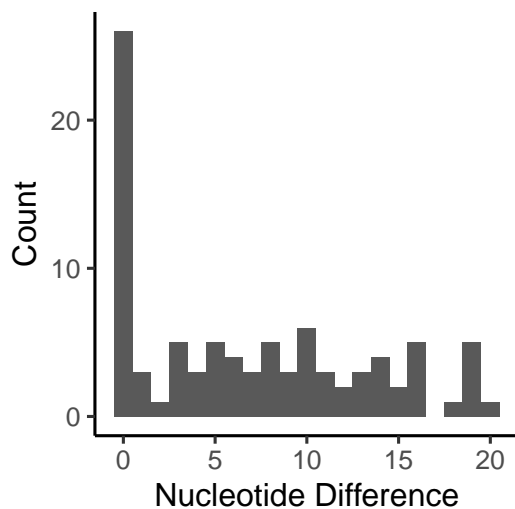
### IGHV3-33\*01

416 sequences assigned  
117 (28.1%) exact matches, in which:  
117 unique CDR3  
6 unique J



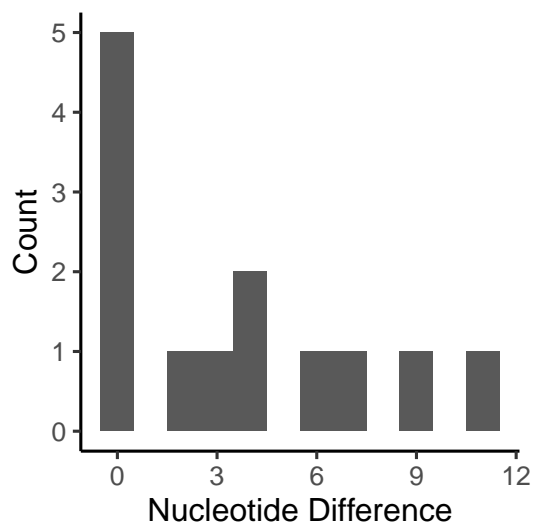
### IGHV3-15\*01

102 sequences assigned  
26 (25.5%) exact matches, in which:  
26 unique CDR3  
4 unique J



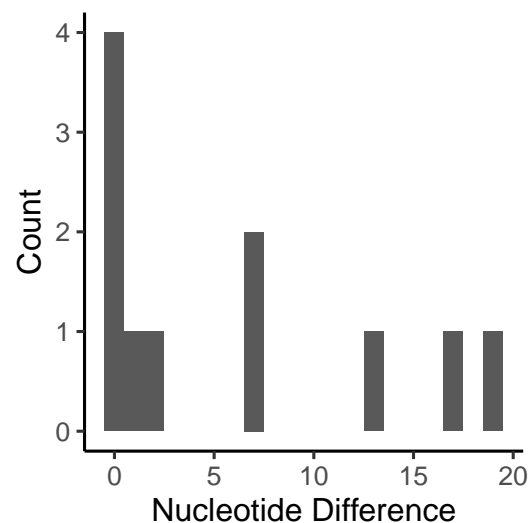
### IGHV3-20\*04

15 sequences assigned  
5 (33.3%) exact matches, in which:  
5 unique CDR3  
2 unique J



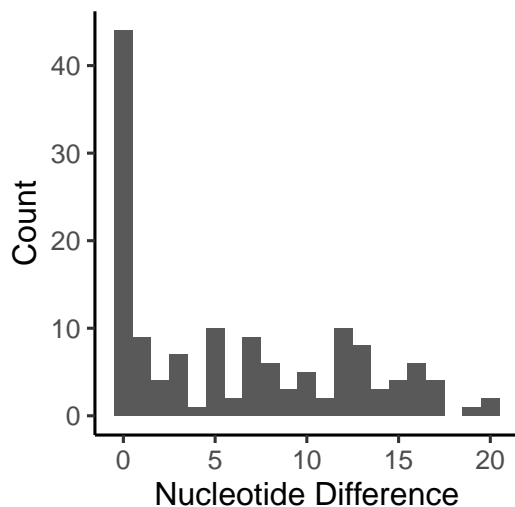
### IGHV3-43\*01

11 sequences assigned  
4 (36.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



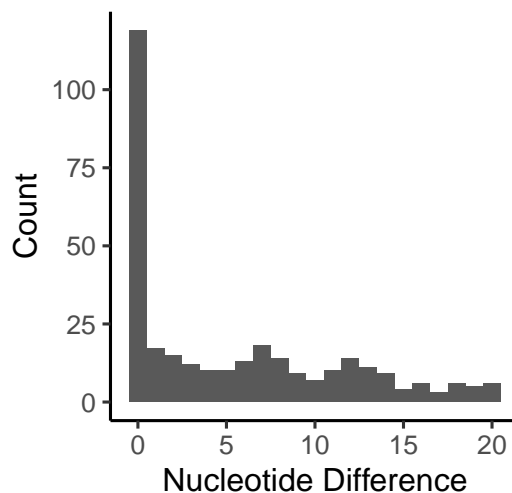
### IGHV3-15\*07

161 sequences assigned  
44 (27.3%) exact matches, in which:  
44 unique CDR3  
4 unique J



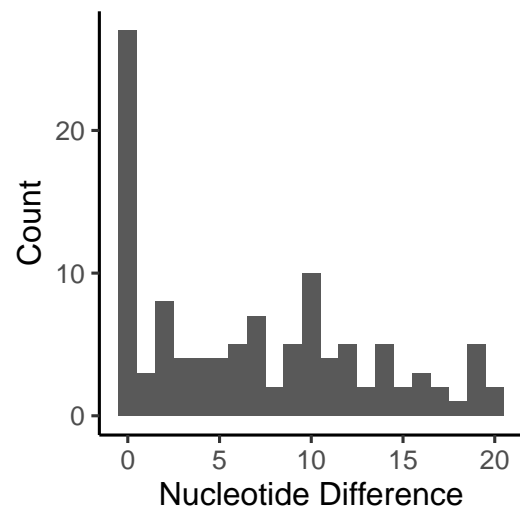
### IGHV3-21\*01

350 sequences assigned  
119 (34%) exact matches, in which:  
119 unique CDR3  
6 unique J



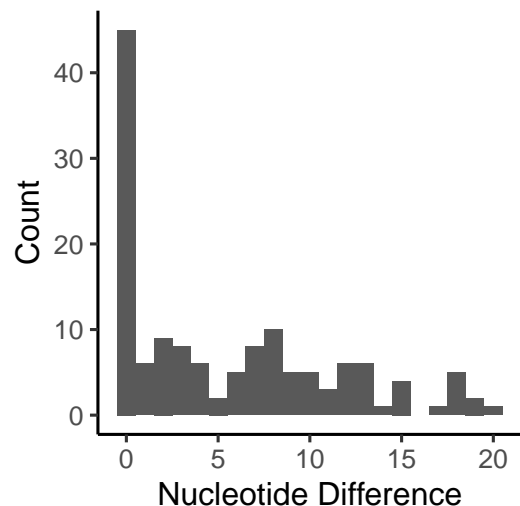
### IGHV3-48\*01

118 sequences assigned  
27 (22.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



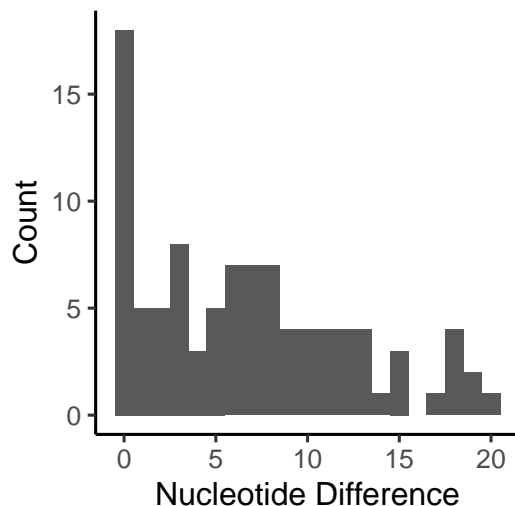
### IGHV3-48\*02

147 sequences assigned  
45 (30.6%) exact matches, in which:  
45 unique CDR3  
6 unique J



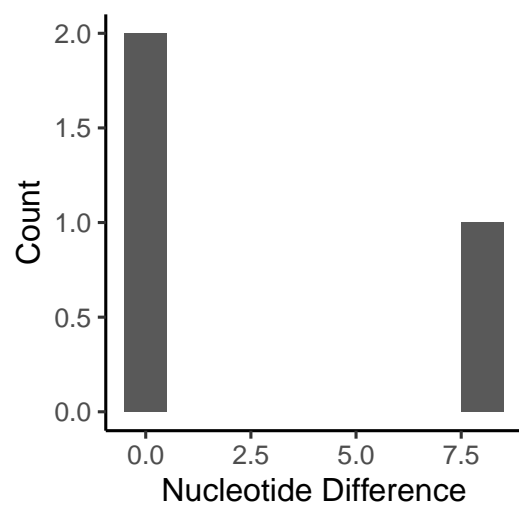
### IGHV3-53\*01

113 sequences assigned  
18 (15.9%) exact matches, in which:  
18 unique CDR3  
5 unique J



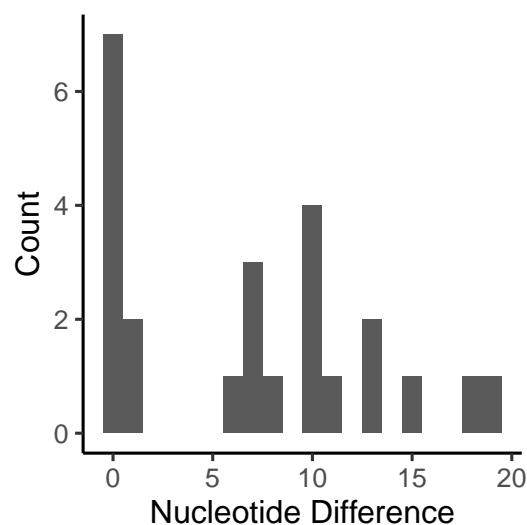
### IGHV3-64\*02

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



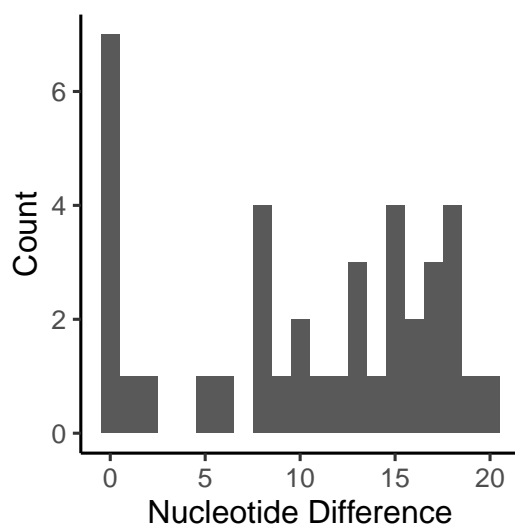
### IGHV3-49\*03

29 sequences assigned  
7 (24.1%) exact matches, in which:  
7 unique CDR3  
3 unique J



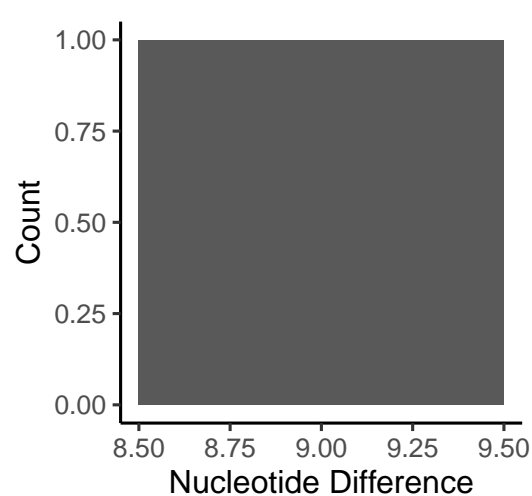
### IGHV3-53\*02

44 sequences assigned  
7 (15.9%) exact matches, in which:  
7 unique CDR3  
3 unique J



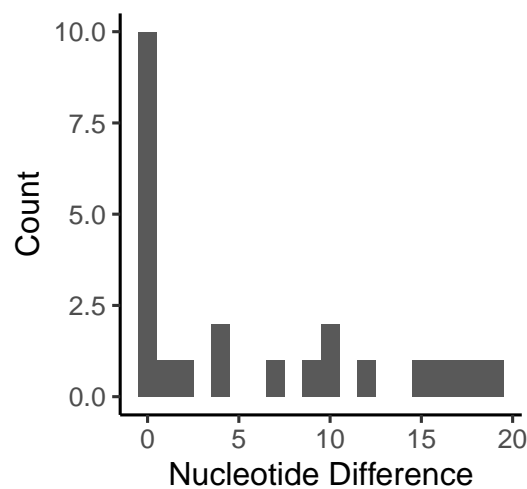
### IGHV3-66\*03

1 sequences assigned  
No exact matches.



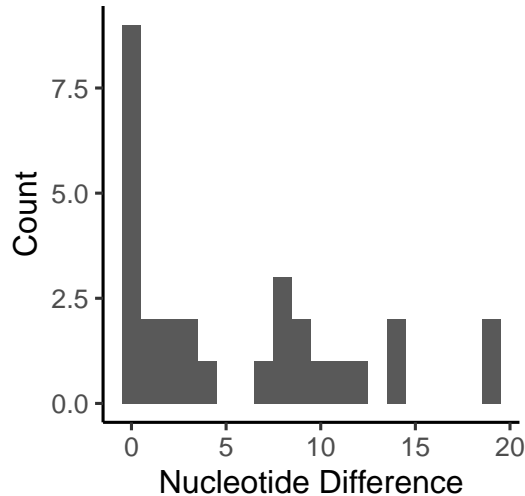
### IGHV3-49\*05

27 sequences assigned  
10 (37%) exact matches, in which:  
10 unique CDR3  
3 unique J



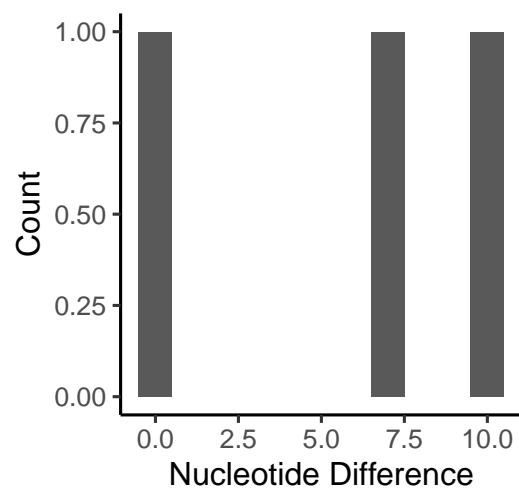
### IGHV3-64\*01

34 sequences assigned  
9 (26.5%) exact matches, in which:  
9 unique CDR3  
3 unique J



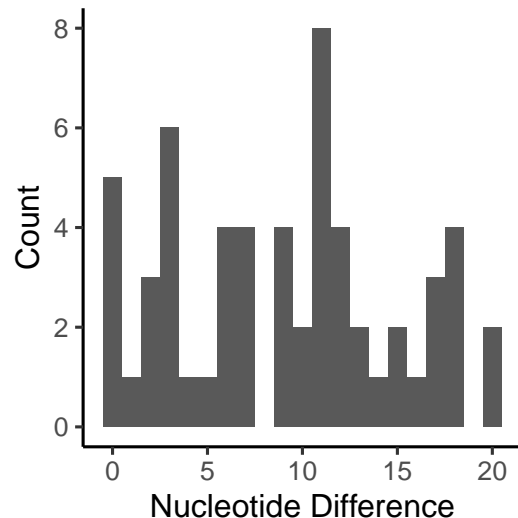
### IGHV3-69-1\*01

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



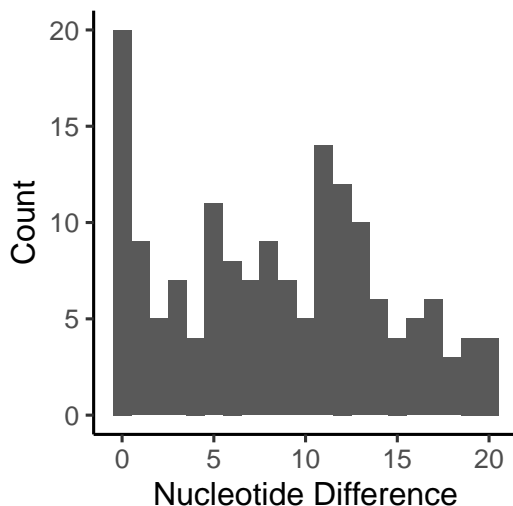
### IGHV3-72\*01

69 sequences assigned  
5 (7.2%) exact matches, in which:  
5 unique CDR3  
2 unique J



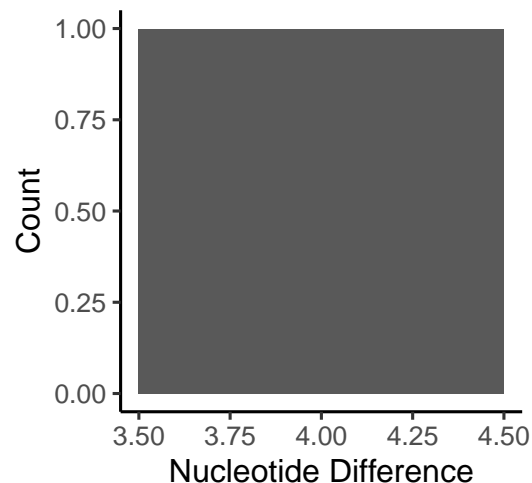
### IGHV3-74\*01

175 sequences assigned  
20 (11.4%) exact matches, in which:  
20 unique CDR3  
4 unique J



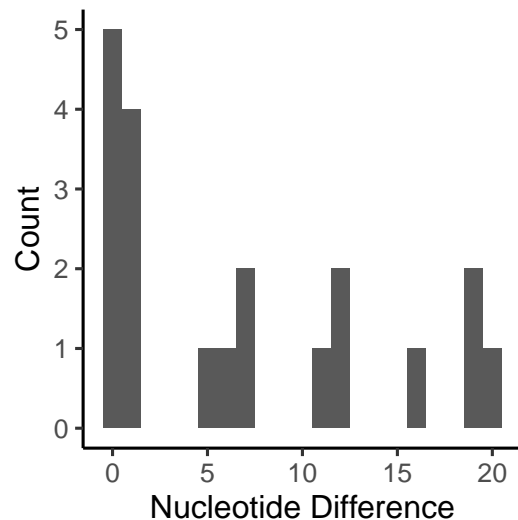
### IGHV4-28\*03

2 sequences assigned  
No exact matches.



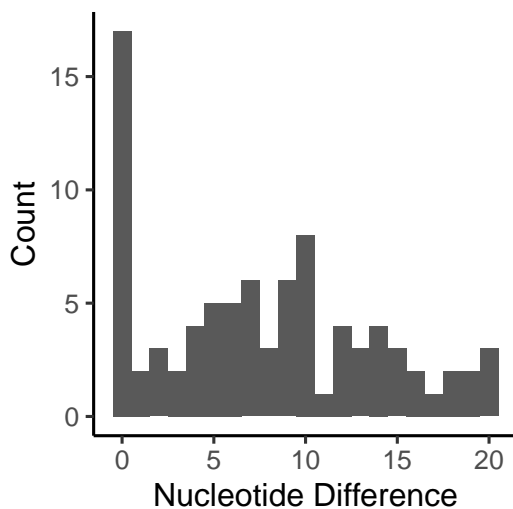
### IGHV3-73\*01

22 sequences assigned  
5 (22.7%) exact matches, in which:  
5 unique CDR3  
4 unique J



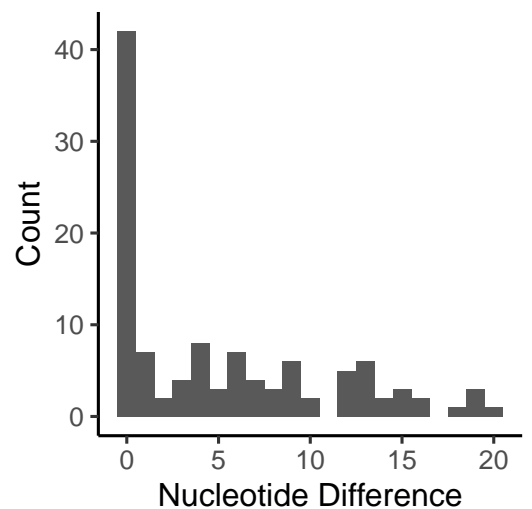
### IGHV4-4\*07

96 sequences assigned  
17 (17.7%) exact matches, in which:  
17 unique CDR3  
5 unique J



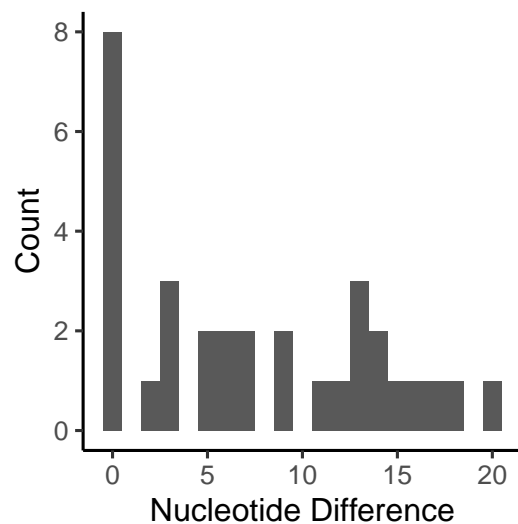
### IGHV4-31\*03

124 sequences assigned  
42 (33.9%) exact matches, in which:  
42 unique CDR3  
5 unique J



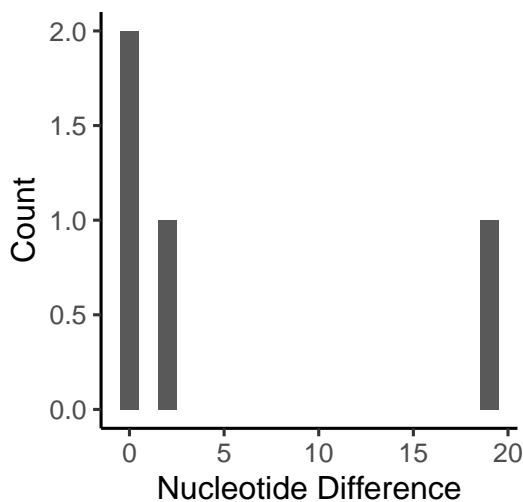
### IGHV3-73\*02

34 sequences assigned  
8 (23.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



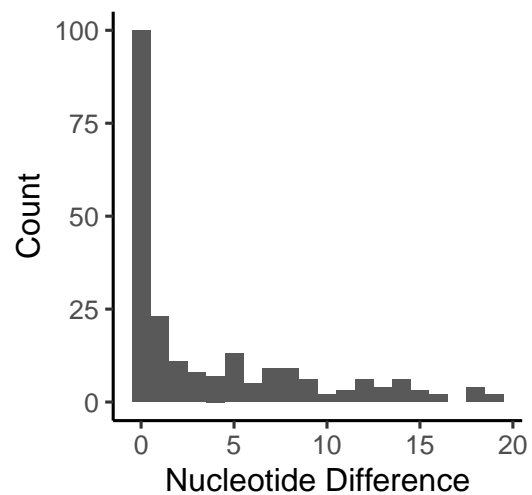
### IGHV4-28\*01

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



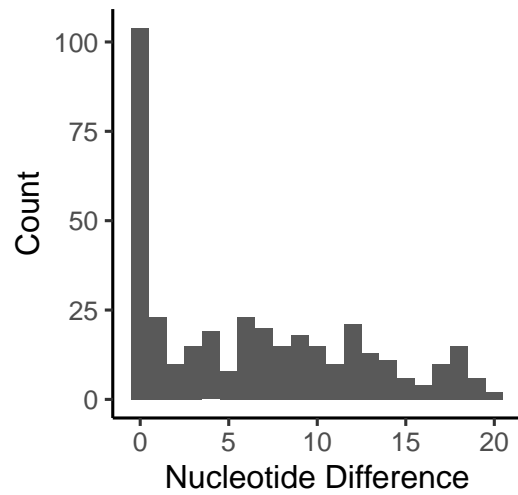
### IGHV4-34\*01

242 sequences assigned  
100 (41.3%) exact matches, in which:  
100 unique CDR3  
6 unique J



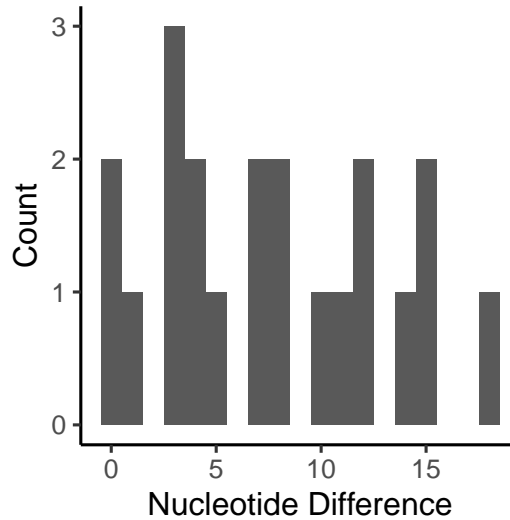
### IGHV4-39\*01

421 sequences assigned  
104 (24.7%) exact matches, in which:  
104 unique CDR3  
6 unique J



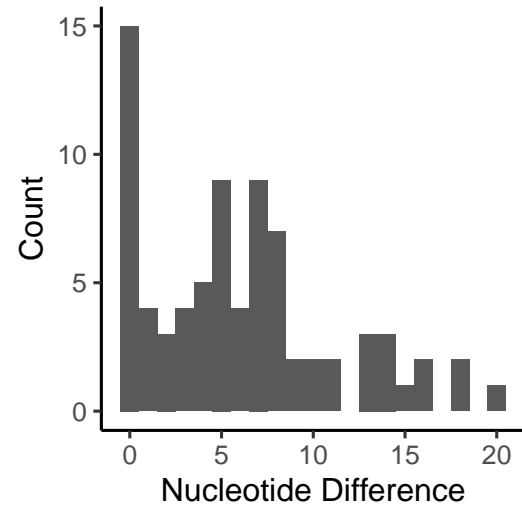
### IGHV4-61\*01

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



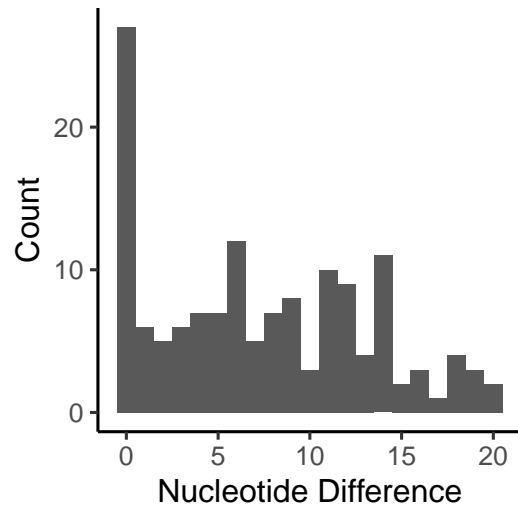
### IGHV6-1\*01

82 sequences assigned  
15 (18.3%) exact matches, in which:  
15 unique CDR3  
4 unique J



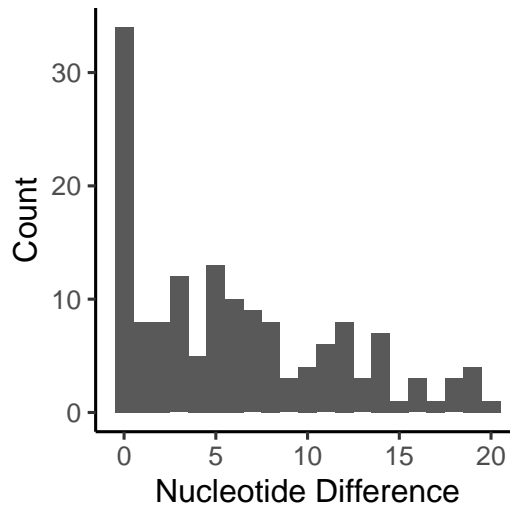
### IGHV4-59\*01

160 sequences assigned  
27 (16.9%) exact matches, in which:  
27 unique CDR3  
5 unique J



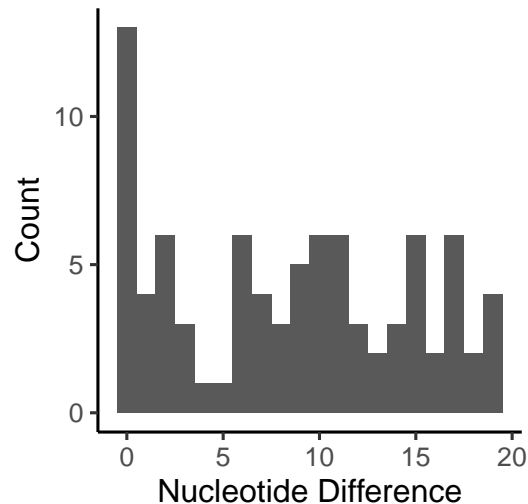
### IGHV5-51\*01

158 sequences assigned  
34 (21.5%) exact matches, in which:  
34 unique CDR3  
6 unique J



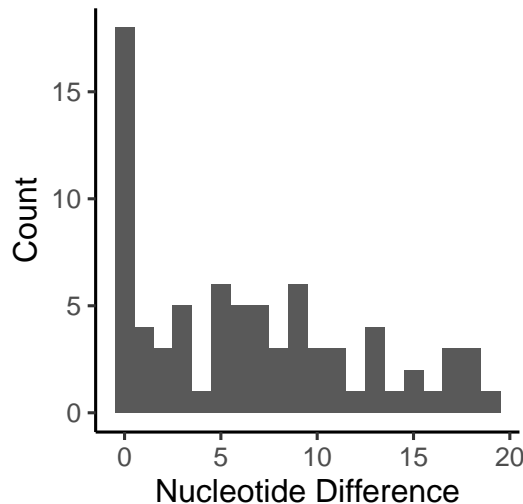
### IGHV4-59\*08

93 sequences assigned  
13 (14%) exact matches, in which:  
13 unique CDR3  
5 unique J



### IGHV5-51\*03

84 sequences assigned  
18 (21.4%) exact matches, in which:  
18 unique CDR3  
4 unique J





[illegible]