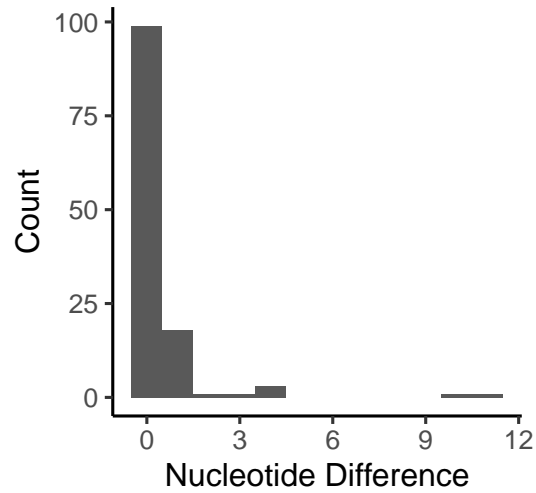


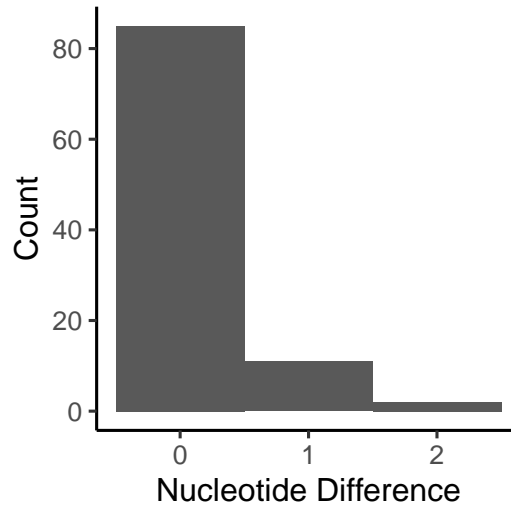
### IGHV1-2\*02

124 sequences assigned  
99 (79.8%) exact matches, in which:  
98 unique CDR3  
6 unique J



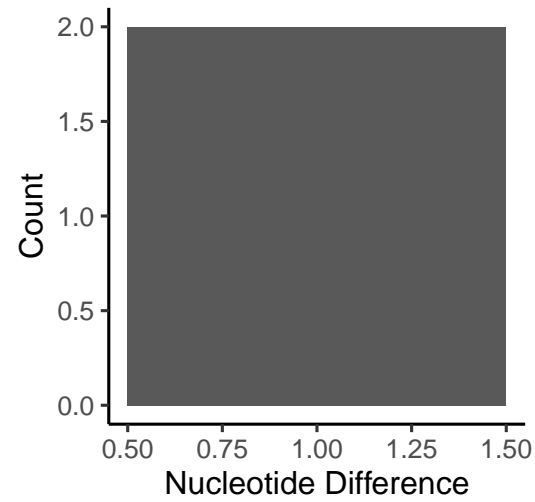
### IGHV1-8\*01

98 sequences assigned  
85 (86.7%) exact matches, in which:  
84 unique CDR3  
6 unique J



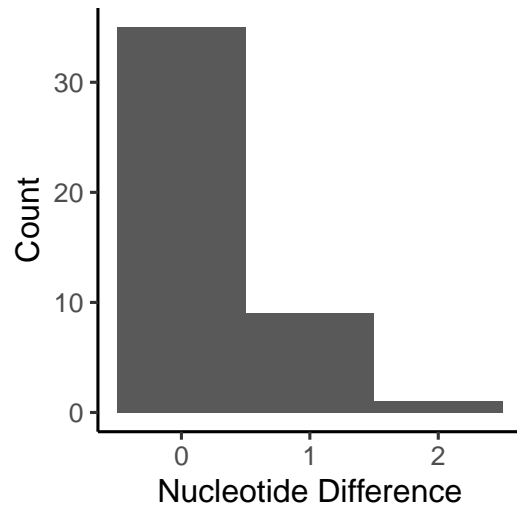
### IGHV1-45\*02

2 sequences assigned  
No exact matches.



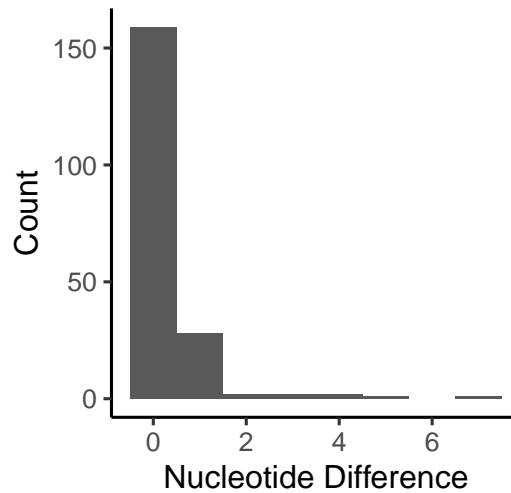
### IGHV1-2\*04

45 sequences assigned  
35 (77.8%) exact matches, in which:  
34 unique CDR3  
4 unique J



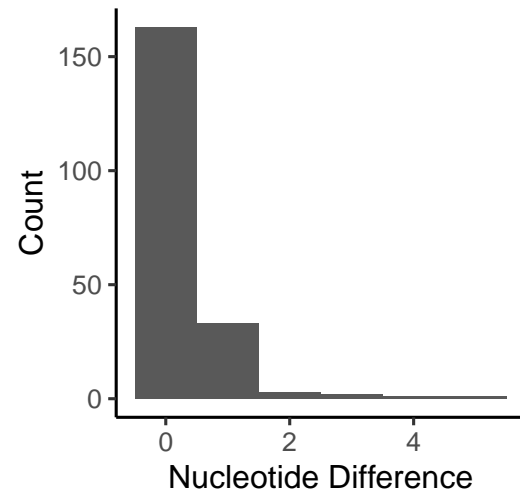
### IGHV1-18\*01

195 sequences assigned  
159 (81.5%) exact matches, in which:  
156 unique CDR3  
6 unique J



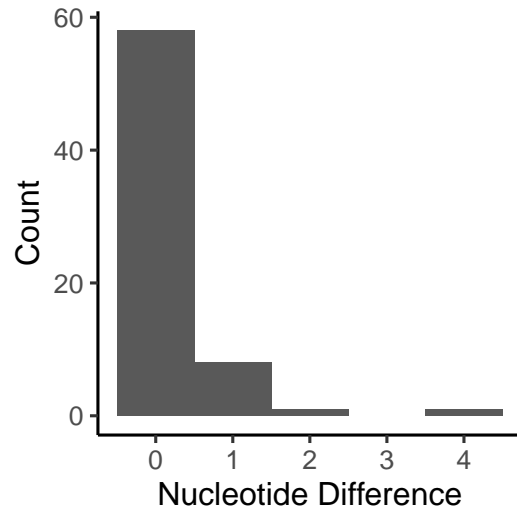
### IGHV1-46\*01

203 sequences assigned  
163 (80.3%) exact matches, in which:  
163 unique CDR3  
6 unique J



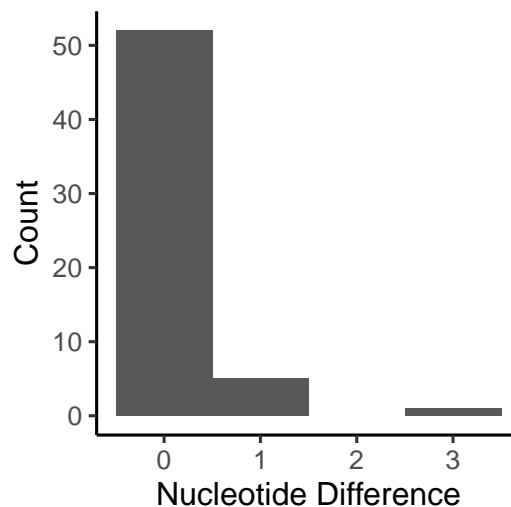
### IGHV1-3\*01

68 sequences assigned  
58 (85.3%) exact matches, in which:  
58 unique CDR3  
4 unique J



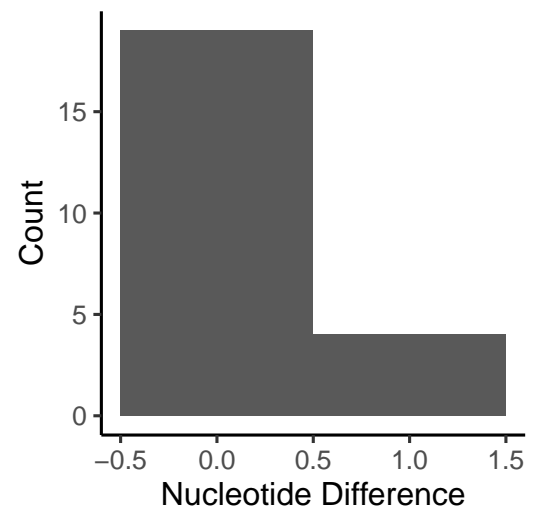
### IGHV1-24\*01

58 sequences assigned  
52 (89.7%) exact matches, in which:  
51 unique CDR3  
6 unique J



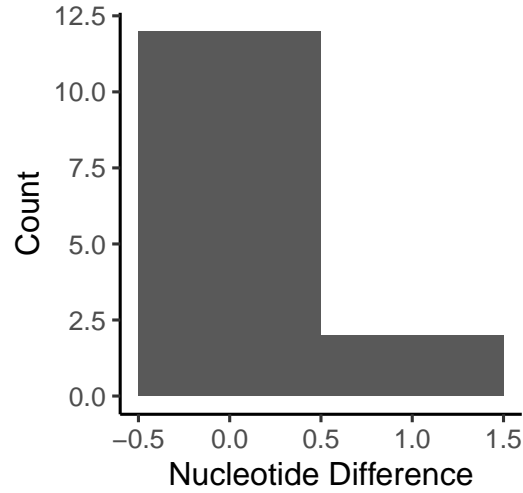
### IGHV1-58\*01

23 sequences assigned  
19 (82.6%) exact matches, in which:  
19 unique CDR3  
6 unique J



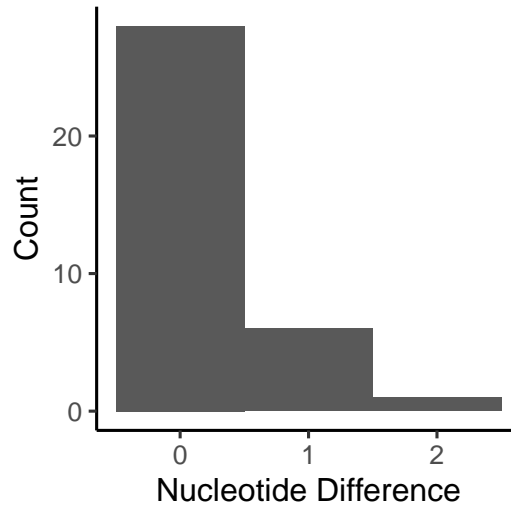
### IGHV1-69-2\*01

14 sequences assigned  
12 (85.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



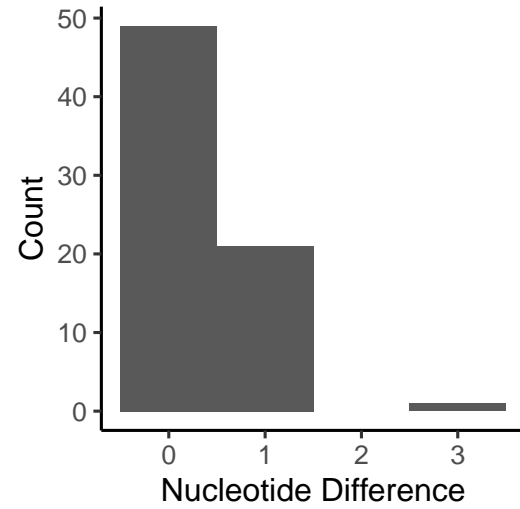
### IGHV2-26\*01

35 sequences assigned  
28 (80%) exact matches, in which:  
28 unique CDR3  
5 unique J



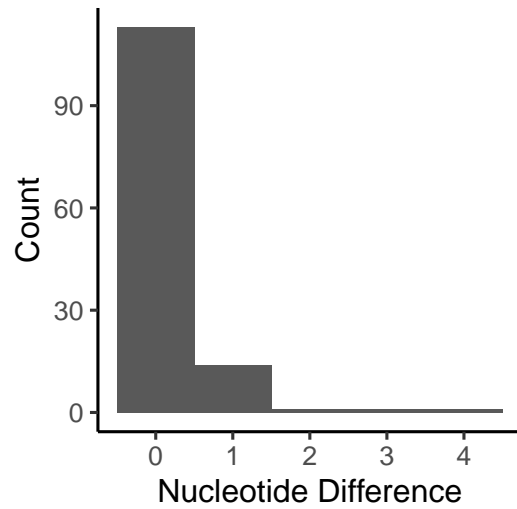
### IGHV3-7\*03

72 sequences assigned  
49 (68.1%) exact matches, in which:  
49 unique CDR3  
6 unique J



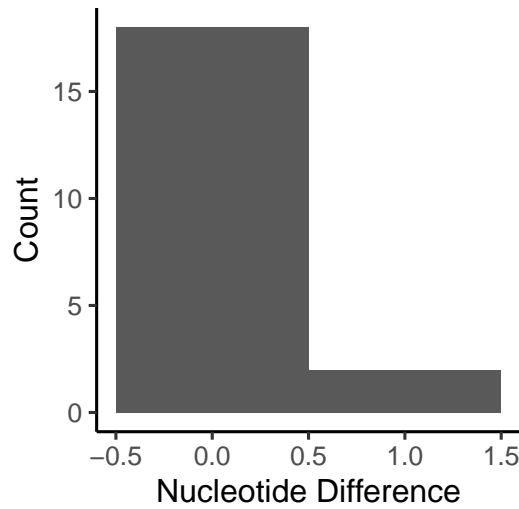
### IGHV1-69\*06

130 sequences assigned  
113 (86.9%) exact matches, in which:  
109 unique CDR3  
6 unique J



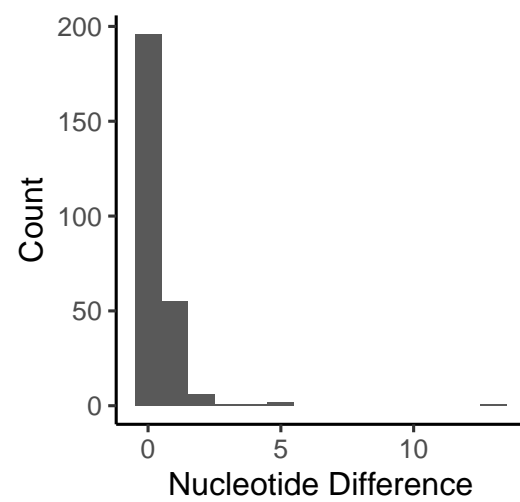
### IGHV2-70\*01

20 sequences assigned  
18 (90%) exact matches, in which:  
17 unique CDR3  
4 unique J



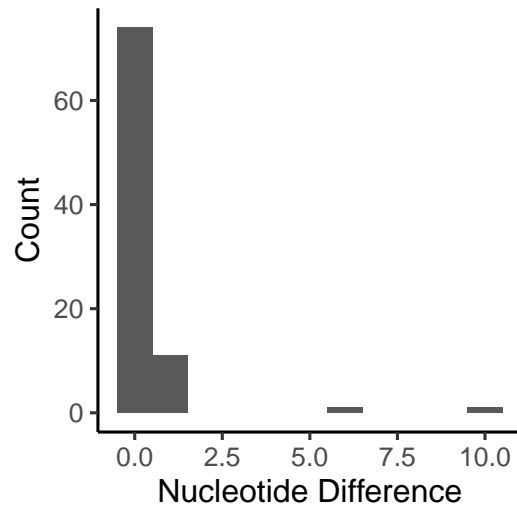
### IGHV3-9\*01

262 sequences assigned  
196 (74.8%) exact matches, in which:  
194 unique CDR3  
6 unique J



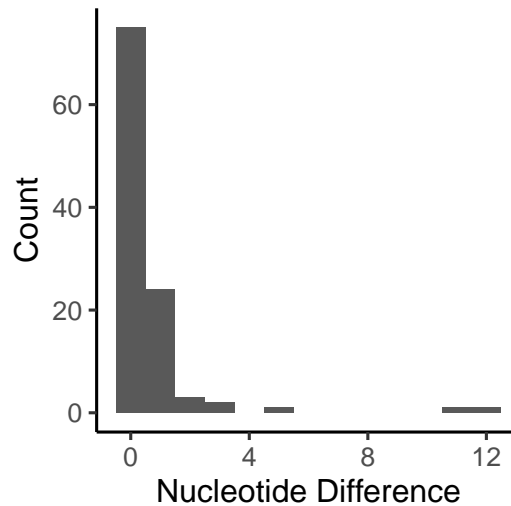
### IGHV2-5\*02

87 sequences assigned  
74 (85.1%) exact matches, in which:  
73 unique CDR3  
6 unique J



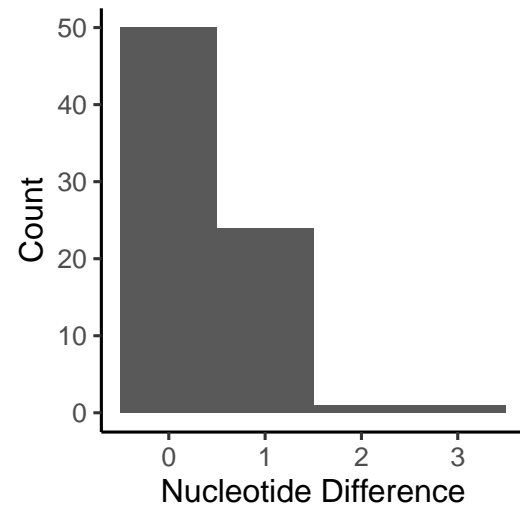
### IGHV3-7\*01

109 sequences assigned  
75 (68.8%) exact matches, in which:  
73 unique CDR3  
6 unique J



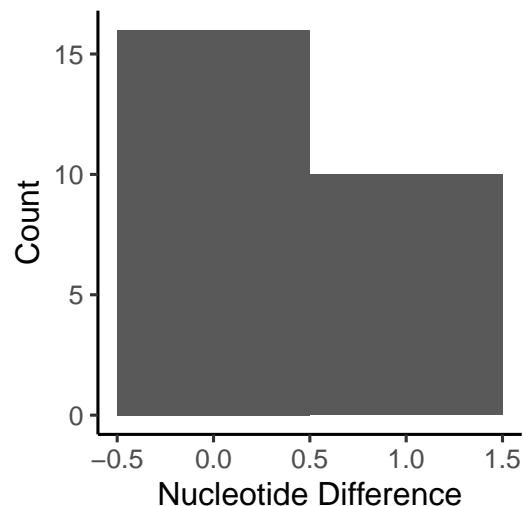
### IGHV3-11\*01

76 sequences assigned  
50 (65.8%) exact matches, in which:  
50 unique CDR3  
5 unique J



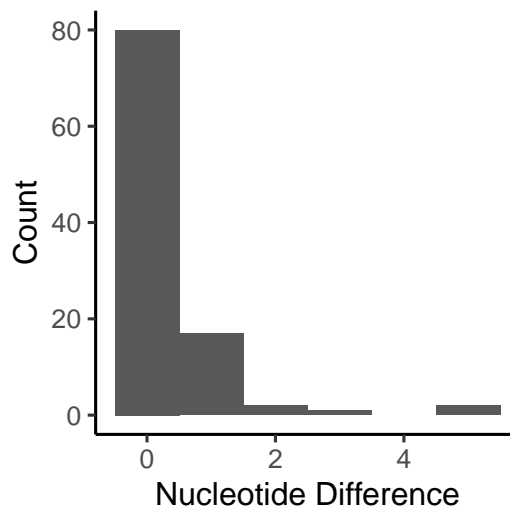
### IGHV3-11\*06

26 sequences assigned  
16 (61.5%) exact matches, in which:  
16 unique CDR3  
4 unique J



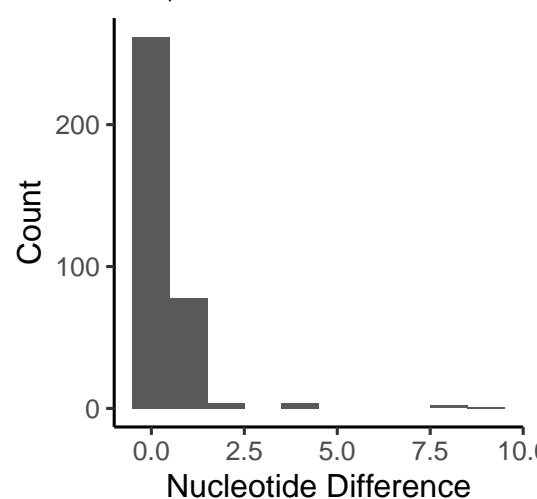
### IGHV3-15\*07

102 sequences assigned  
80 (78.4%) exact matches, in which:  
79 unique CDR3  
5 unique J



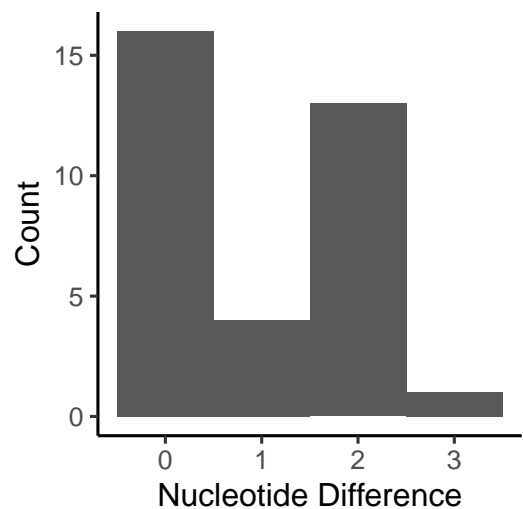
### IGHV3-21\*01

351 sequences assigned  
262 (74.6%) exact matches, in which:  
255 unique CDR3  
6 unique J



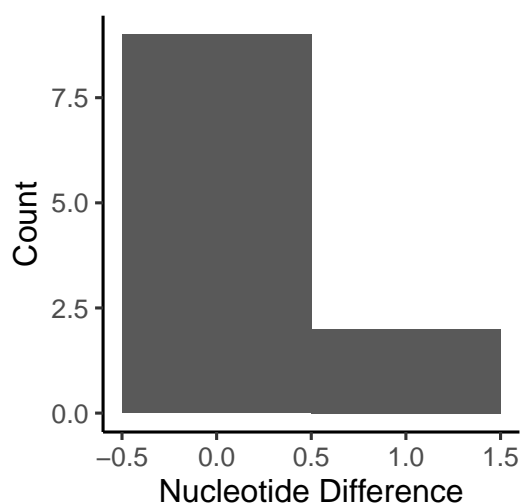
### IGHV3-13\*01

34 sequences assigned  
16 (47.1%) exact matches, in which:  
16 unique CDR3  
3 unique J



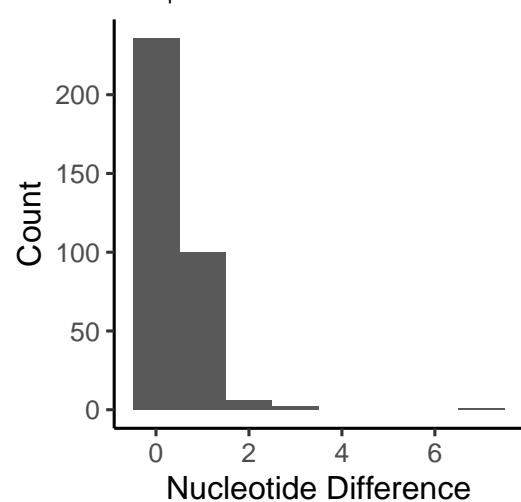
### IGHV3-20\*01

11 sequences assigned  
9 (81.8%) exact matches, in which:  
8 unique CDR3  
5 unique J



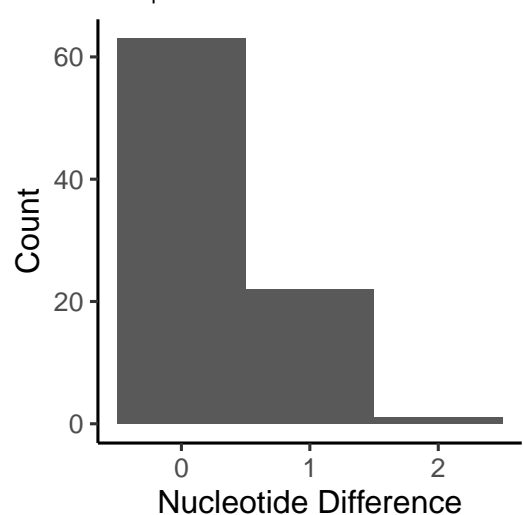
### IGHV3-33\*01

345 sequences assigned  
236 (68.4%) exact matches, in which:  
231 unique CDR3  
6 unique J



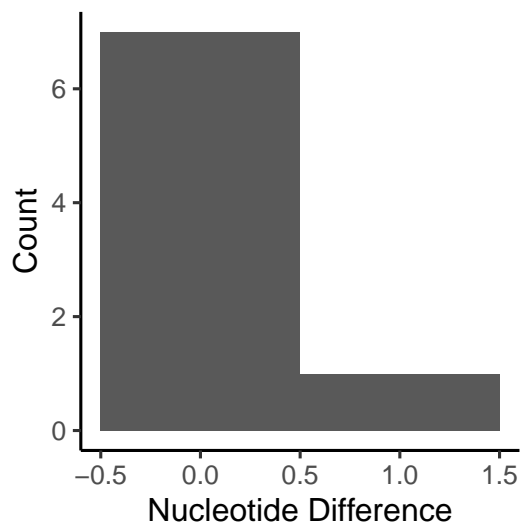
### IGHV3-15\*01

86 sequences assigned  
63 (73.3%) exact matches, in which:  
62 unique CDR3  
4 unique J



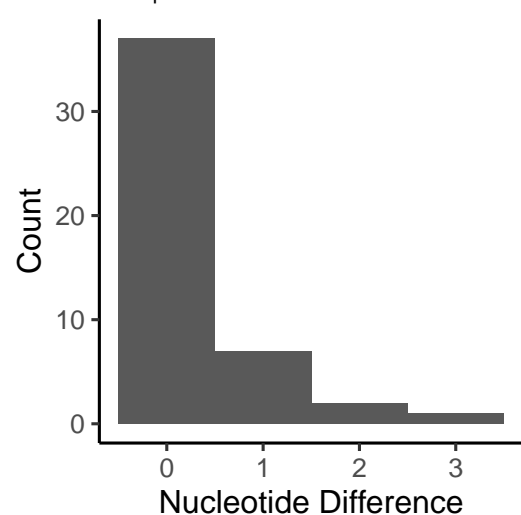
### IGHV3-20\*04

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
3 unique J



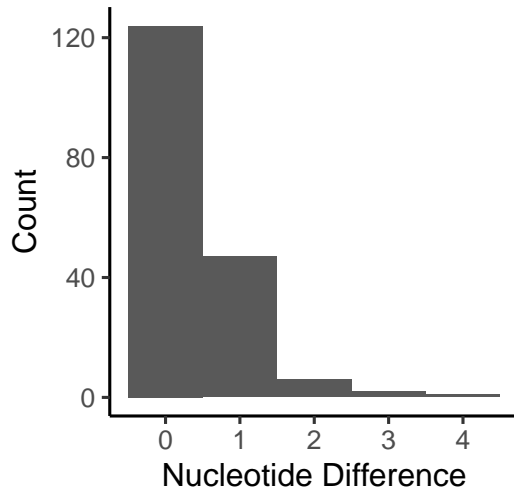
### IGHV3-43\*01

47 sequences assigned  
37 (78.7%) exact matches, in which:  
37 unique CDR3  
3 unique J



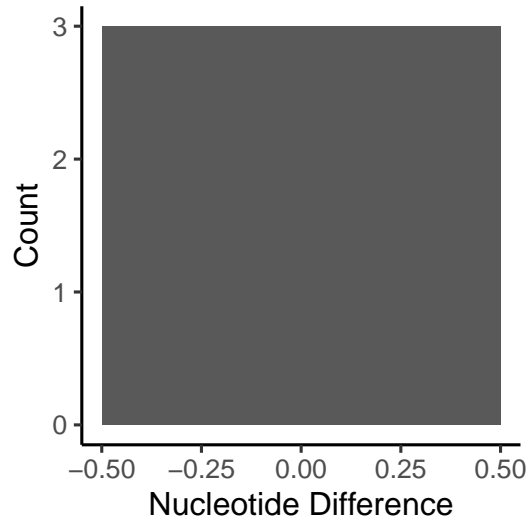
### IGHV3-48\*02

180 sequences assigned  
124 (68.9%) exact matches, in which:  
123 unique CDR3  
5 unique J



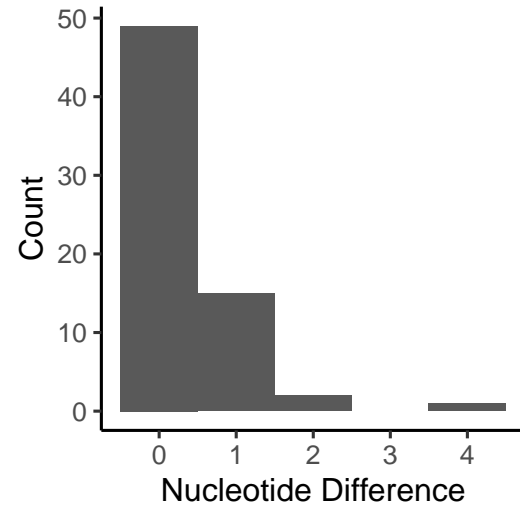
### IGHV3-64\*02

3 sequences assigned  
3 (100%) exact matches, in which:  
3 unique CDR3  
3 unique J



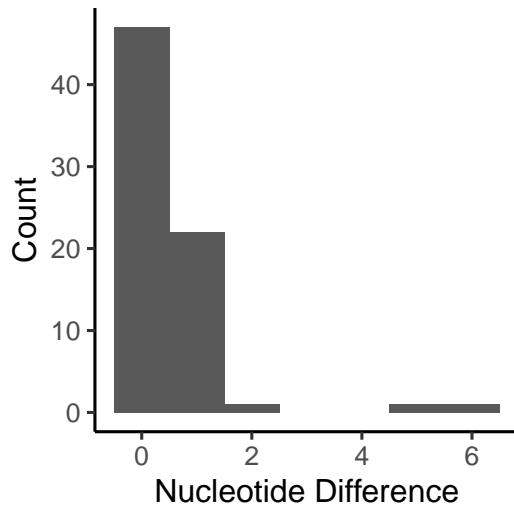
### IGHV3-73\*02

67 sequences assigned  
49 (73.1%) exact matches, in which:  
48 unique CDR3  
4 unique J



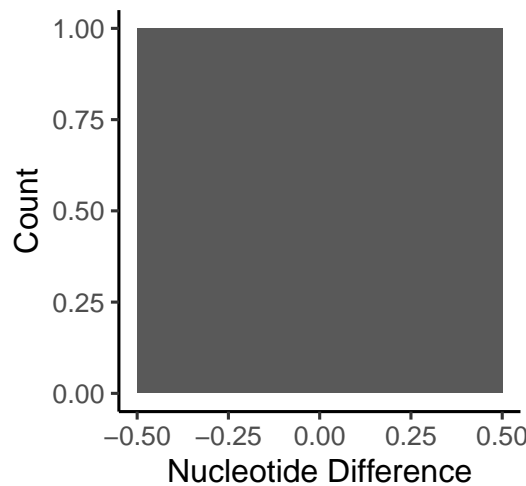
### IGHV3-49\*05

72 sequences assigned  
47 (65.3%) exact matches, in which:  
46 unique CDR3  
5 unique J



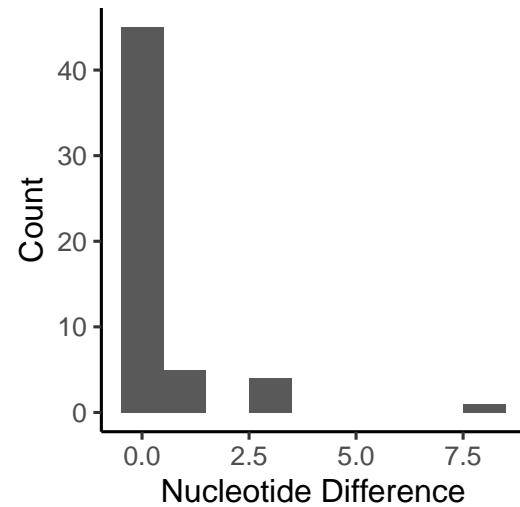
### IGHV3-66\*03

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



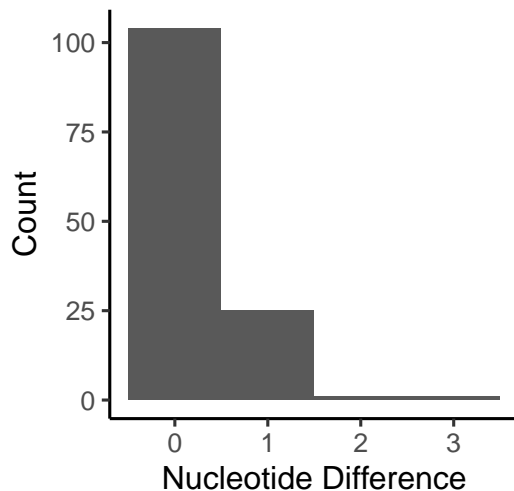
### IGHV3-74\*01

55 sequences assigned  
45 (81.8%) exact matches, in which:  
45 unique CDR3  
5 unique J



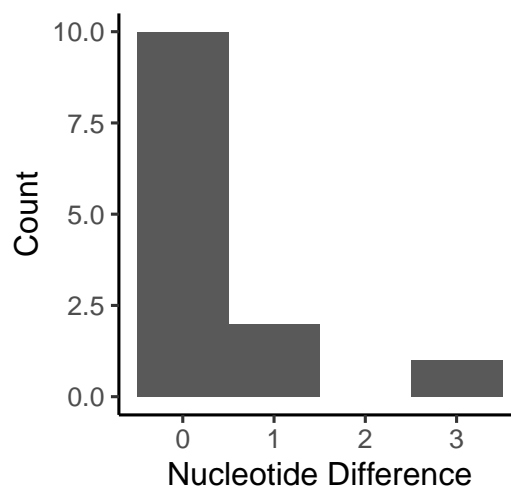
### IGHV3-53\*01

131 sequences assigned  
104 (79.4%) exact matches, in which:  
103 unique CDR3  
6 unique J



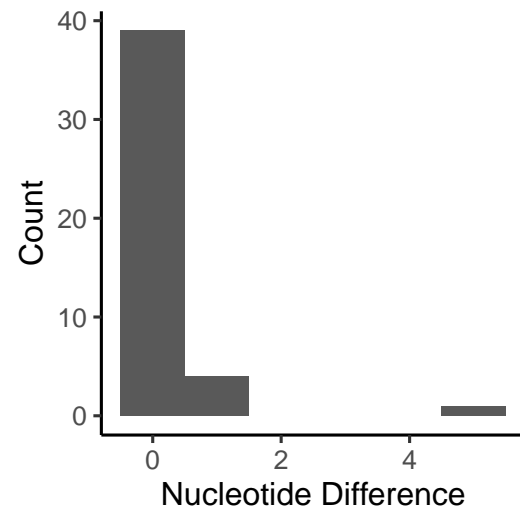
### IGHV3-72\*01

13 sequences assigned  
10 (76.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



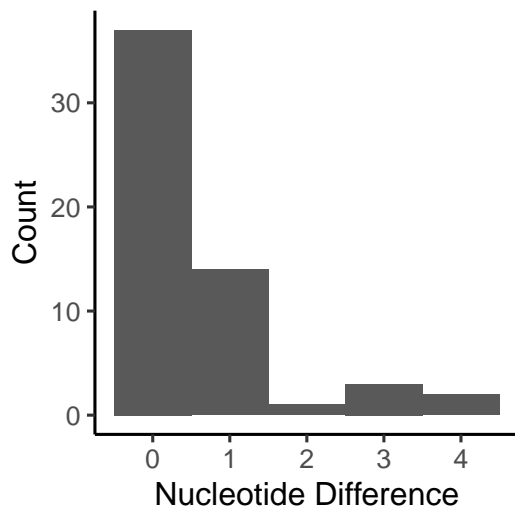
### IGHV3-64D\*06

44 sequences assigned  
39 (88.6%) exact matches, in which:  
38 unique CDR3  
6 unique J



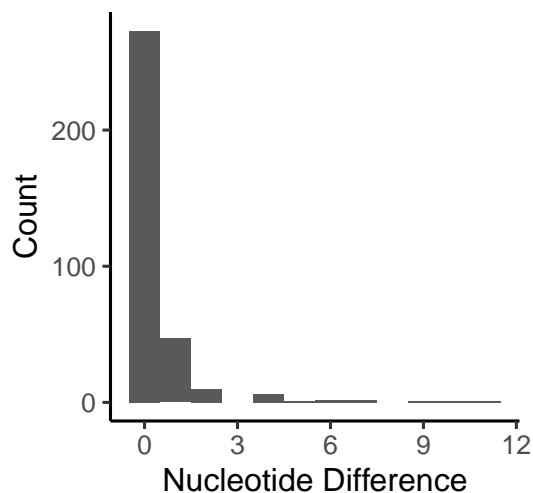
## IGHV4-4\*02

57 sequences assigned  
37 (64.9%) exact matches, in which:  
37 unique CDR3  
4 unique J



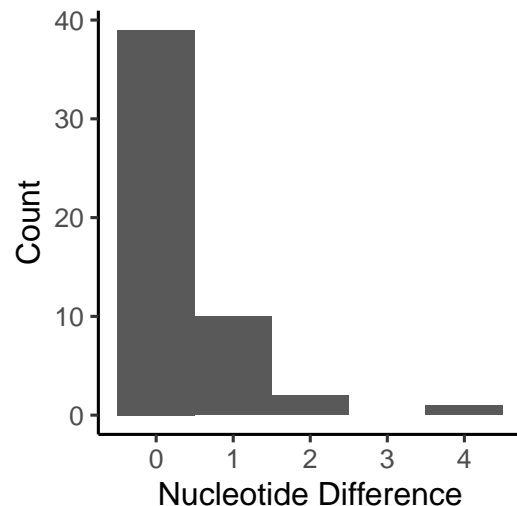
## IGHV4-34\*01

344 sequences assigned  
273 (79.4%) exact matches, in which:  
266 unique CDR3  
6 unique J



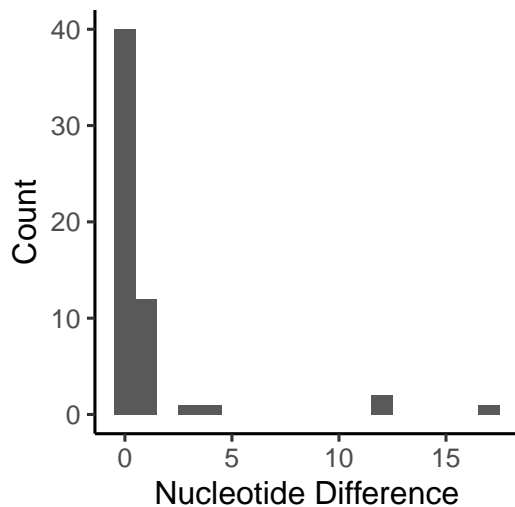
## IGHV4-61\*01

52 sequences assigned  
39 (75%) exact matches, in which:  
39 unique CDR3  
5 unique J



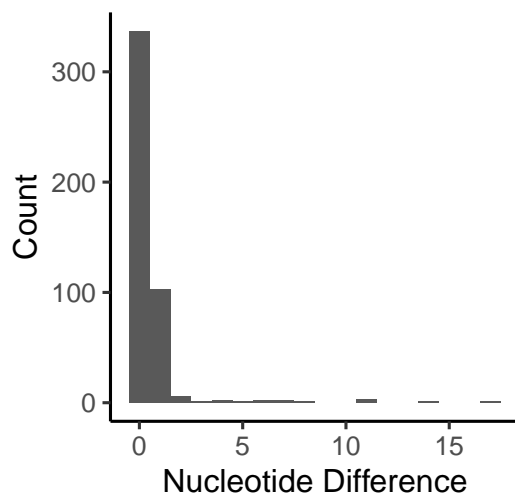
## IGHV4-4\*07

57 sequences assigned  
40 (70.2%) exact matches, in which:  
40 unique CDR3  
5 unique J



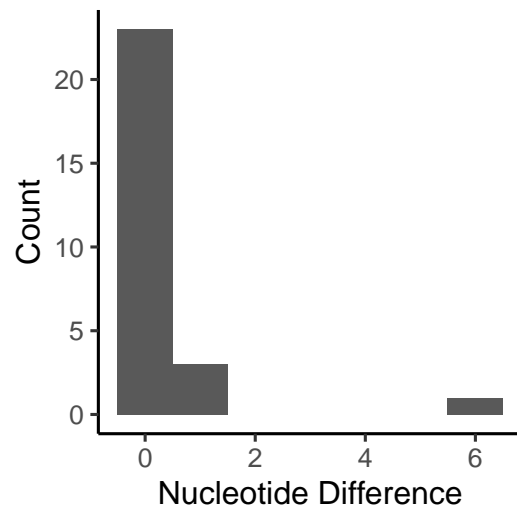
## IGHV4-39\*01

460 sequences assigned  
337 (73.3%) exact matches, in which:  
335 unique CDR3  
6 unique J



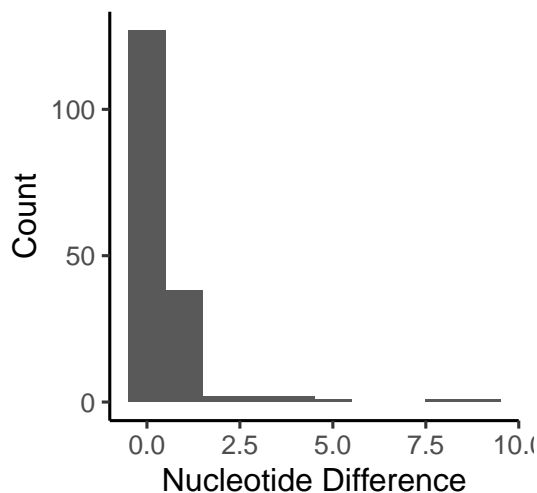
## IGHV5-10-1\*03

27 sequences assigned  
23 (85.2%) exact matches, in which:  
22 unique CDR3  
4 unique J



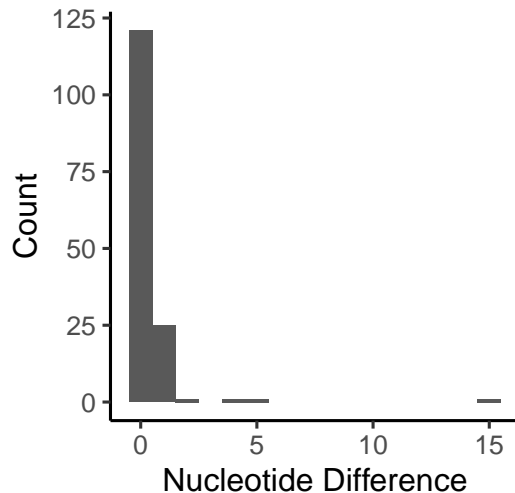
## IGHV4-31\*03

174 sequences assigned  
127 (73%) exact matches, in which:  
126 unique CDR3  
6 unique J



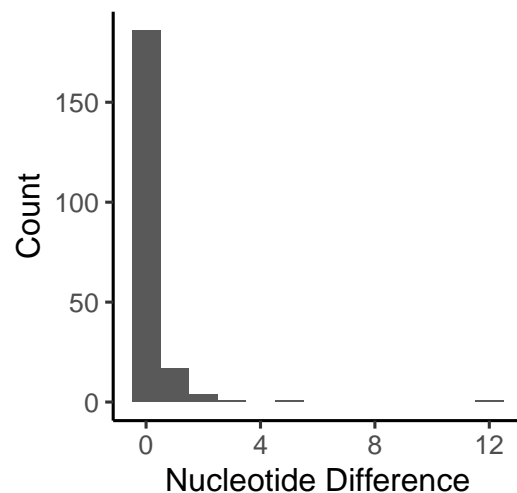
## IGHV4-59\*01

150 sequences assigned  
121 (80.7%) exact matches, in which:  
121 unique CDR3  
6 unique J



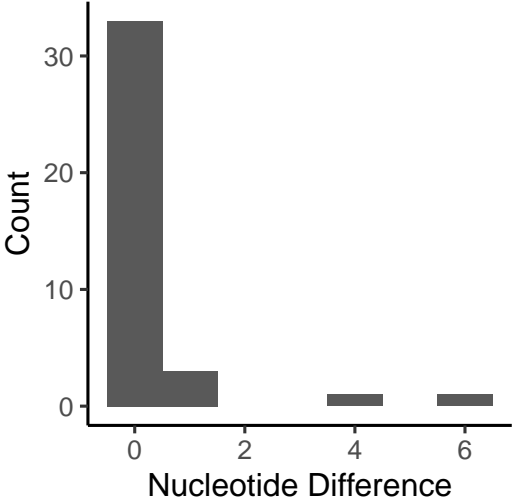
## IGHV5-51\*01

210 sequences assigned  
186 (88.6%) exact matches, in which:  
185 unique CDR3  
6 unique J



# IGHV6-1\*01

38 sequences assigned  
33 (86.8%) exact matches, in which:  
33 unique CDR3  
5 unique J





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.