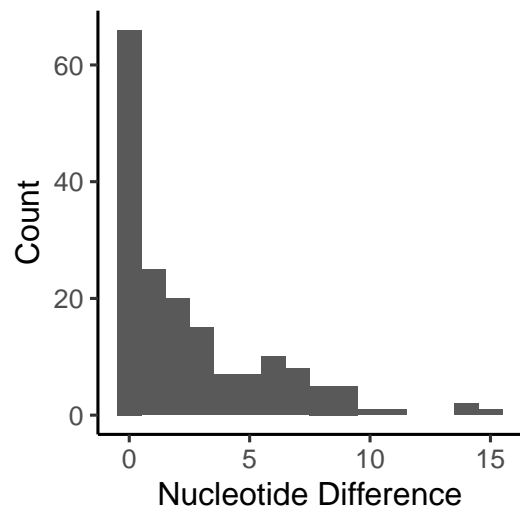


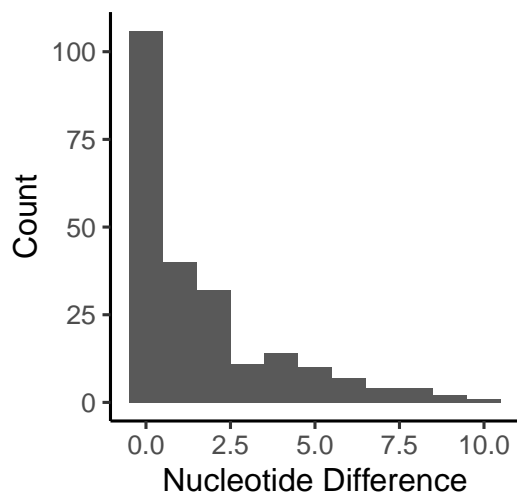
### IGHV1-2\*02

173 sequences assigned  
66 (38.2%) exact matches, in which:  
66 unique CDR3  
4 unique J



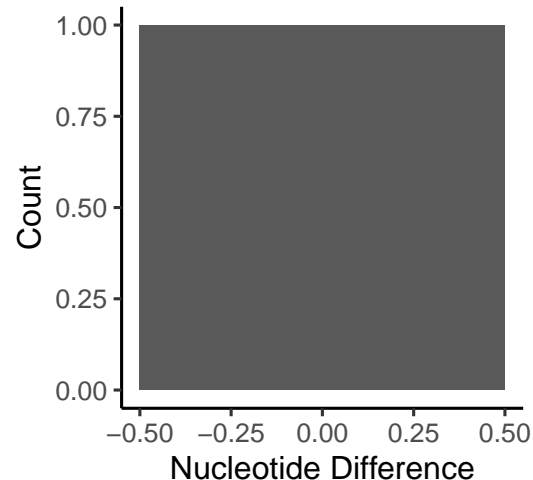
### IGHV1-8\*01

231 sequences assigned  
106 (45.9%) exact matches, in which:  
102 unique CDR3  
7 unique J



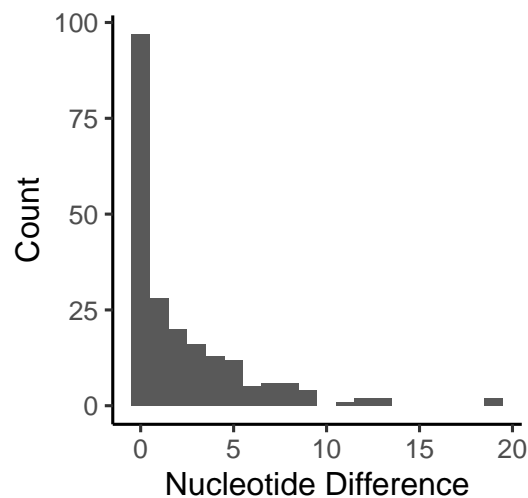
### IGHV1-45\*02

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



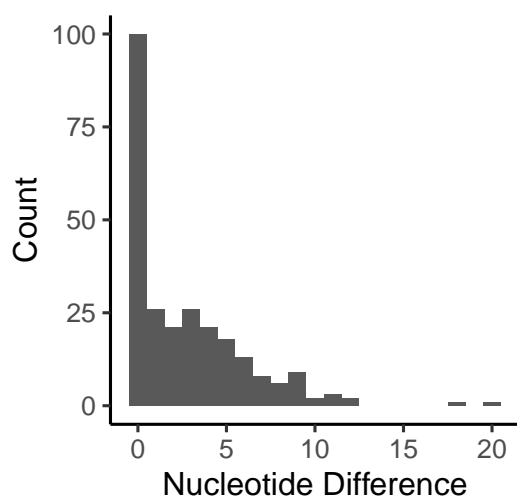
### IGHV1-2\*06

214 sequences assigned  
97 (45.3%) exact matches, in which:  
92 unique CDR3  
6 unique J



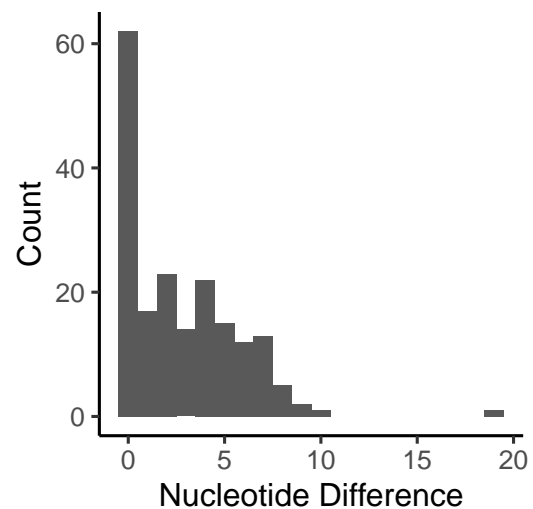
### IGHV1-18\*01

257 sequences assigned  
100 (38.9%) exact matches, in which:  
98 unique CDR3  
7 unique J



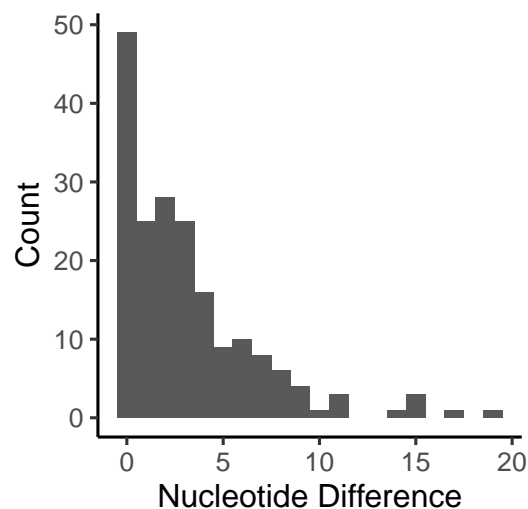
### IGHV1-46\*01

189 sequences assigned  
62 (32.8%) exact matches, in which:  
59 unique CDR3  
5 unique J



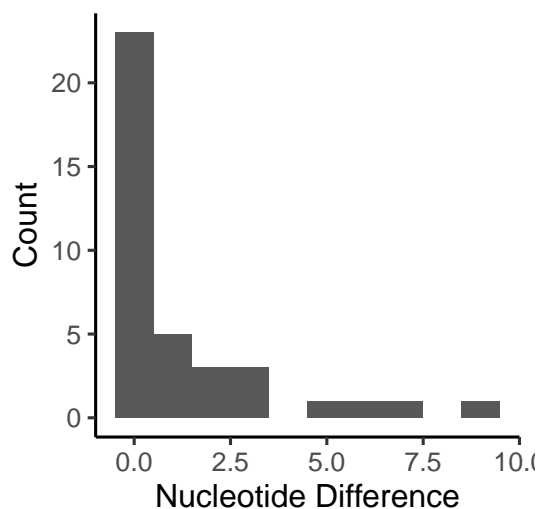
### IGHV1-3\*01

190 sequences assigned  
49 (25.8%) exact matches, in which:  
48 unique CDR3  
5 unique J



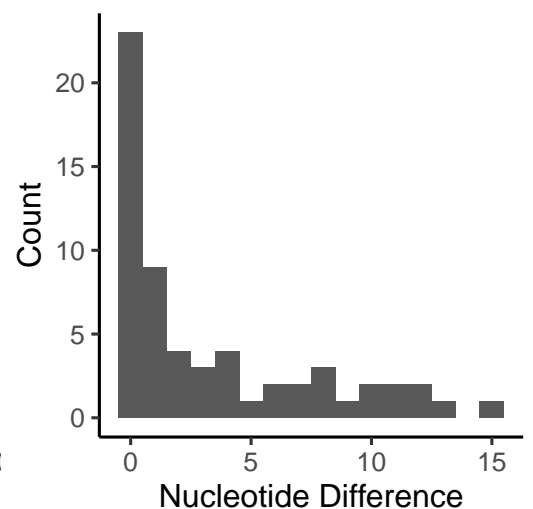
### IGHV1-24\*01

38 sequences assigned  
23 (60.5%) exact matches, in which:  
22 unique CDR3  
5 unique J



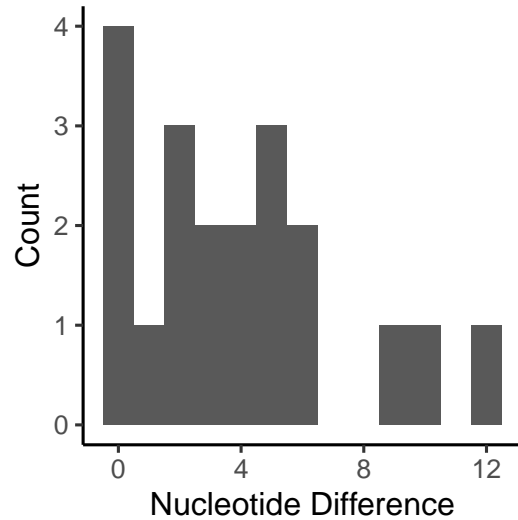
### IGHV1-46\*03

60 sequences assigned  
23 (38.3%) exact matches, in which:  
22 unique CDR3  
5 unique J



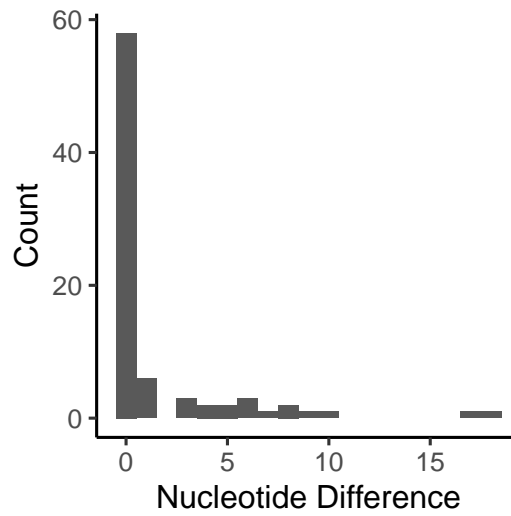
### IGHV1-58\*02

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



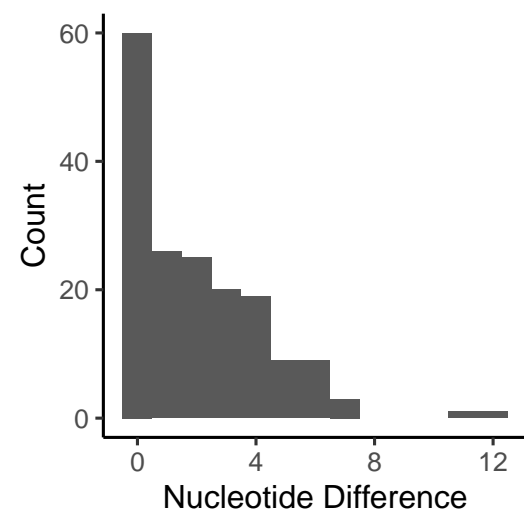
### IGHV1-69\*08\_C191T

81 sequences assigned  
58 (71.6%) exact matches, in which:  
58 unique CDR3  
6 unique J



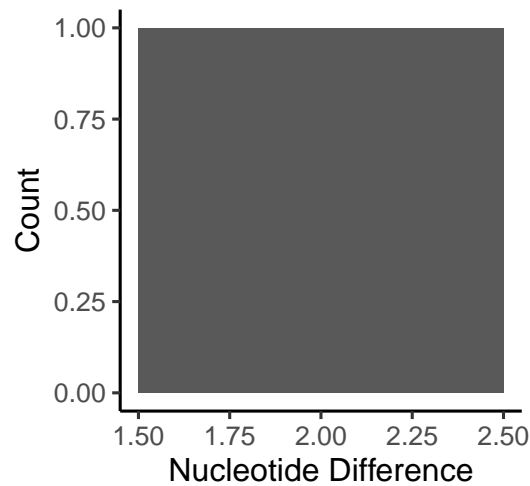
### IGHV2-5\*02

173 sequences assigned  
60 (34.7%) exact matches, in which:  
59 unique CDR3  
6 unique J



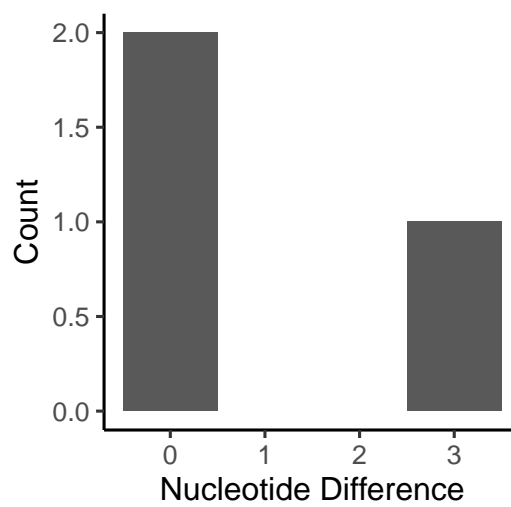
### IGHV1-68\*02

1 sequences assigned  
No exact matches.



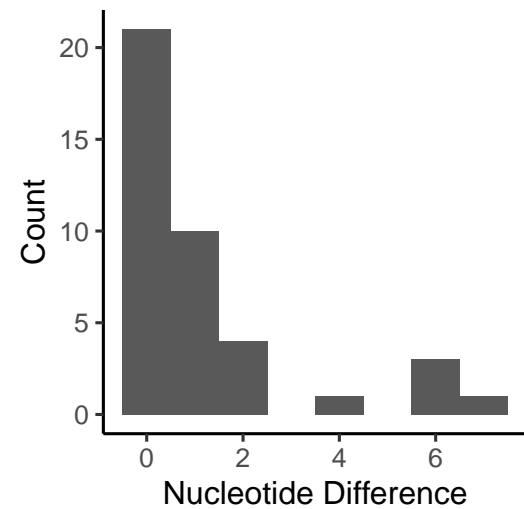
### IGHV1-69D\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



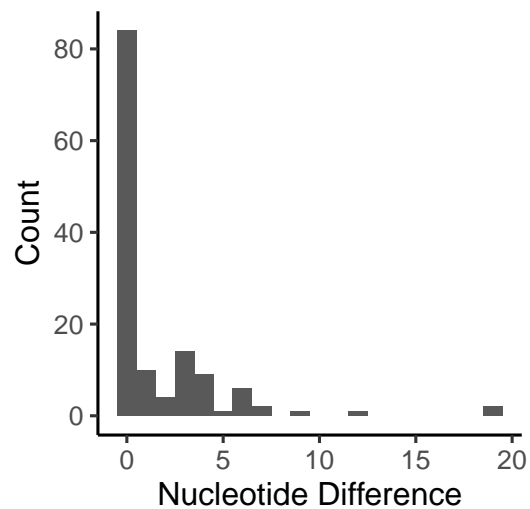
### IGHV2-26\*01

40 sequences assigned  
21 (52.5%) exact matches, in which:  
20 unique CDR3  
5 unique J



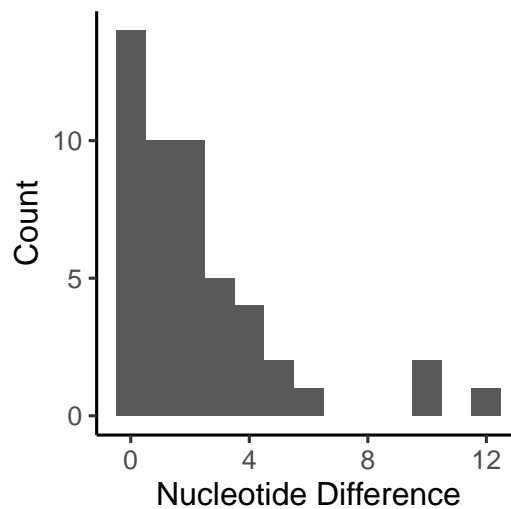
### IGHV1-69\*10

136 sequences assigned  
84 (61.8%) exact matches, in which:  
84 unique CDR3  
6 unique J



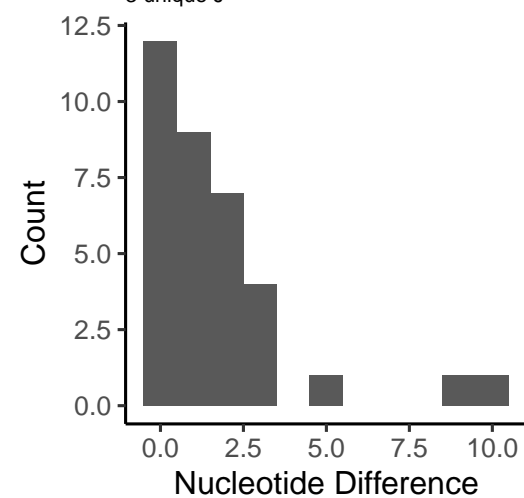
### IGHV2-5\*01

49 sequences assigned  
14 (28.6%) exact matches, in which:  
14 unique CDR3  
5 unique J



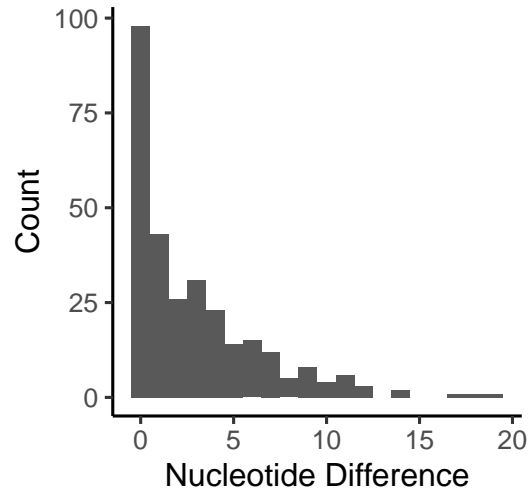
### IGHV2-70\*15

35 sequences assigned  
12 (34.3%) exact matches, in which:  
12 unique CDR3  
3 unique J



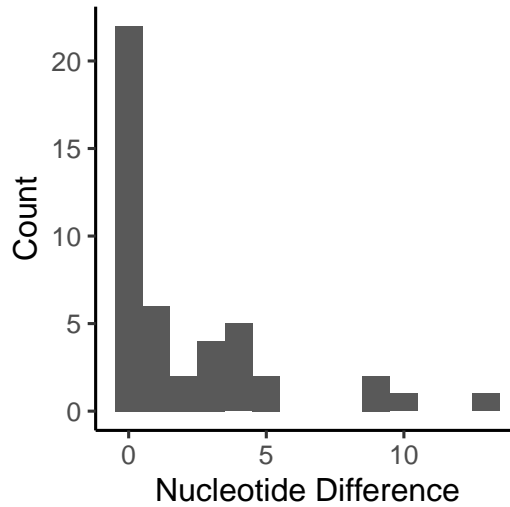
### IGHV3-7\*01

294 sequences assigned  
98 (33.3%) exact matches, in which:  
97 unique CDR3  
7 unique J



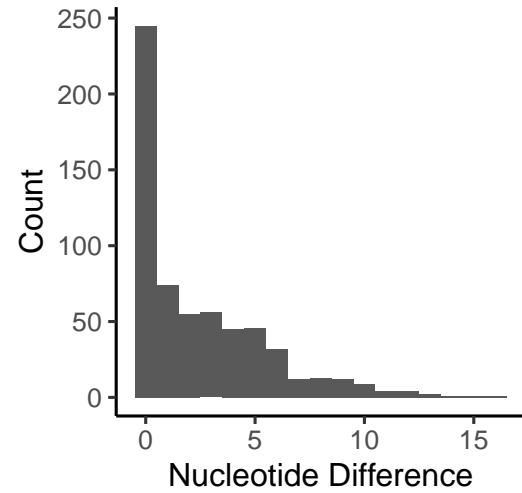
### IGHV3-13\*01

45 sequences assigned  
22 (48.9%) exact matches, in which:  
22 unique CDR3  
5 unique J



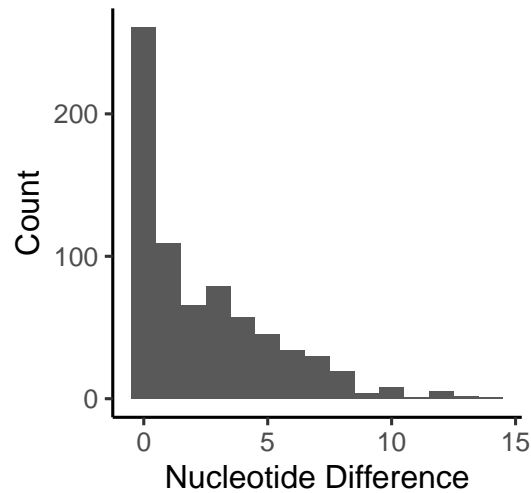
### IGHV3-21\*01

613 sequences assigned  
245 (40%) exact matches, in which:  
241 unique CDR3  
7 unique J



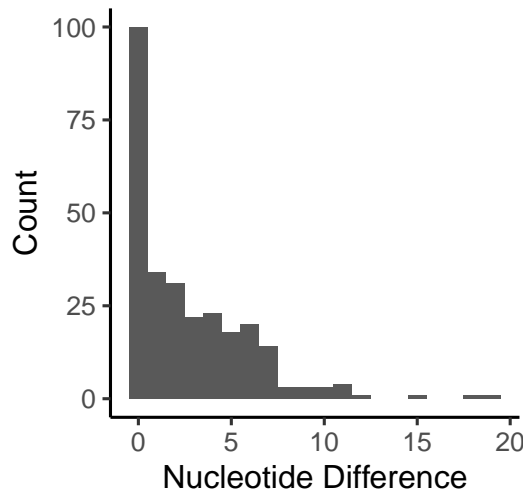
### IGHV3-9\*01

721 sequences assigned  
261 (36.2%) exact matches, in which:  
248 unique CDR3  
7 unique J



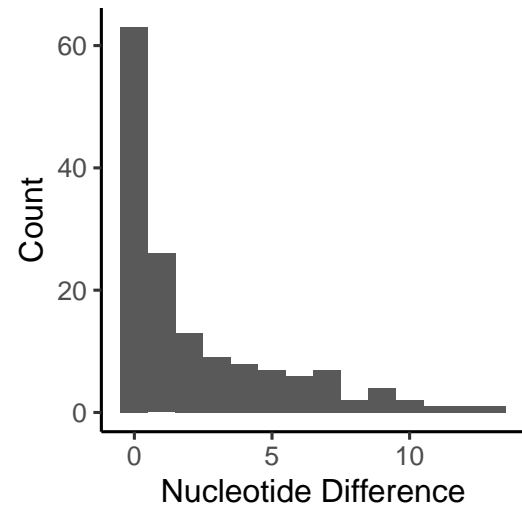
### IGHV3-15\*01

280 sequences assigned  
100 (35.7%) exact matches, in which:  
97 unique CDR3  
7 unique J



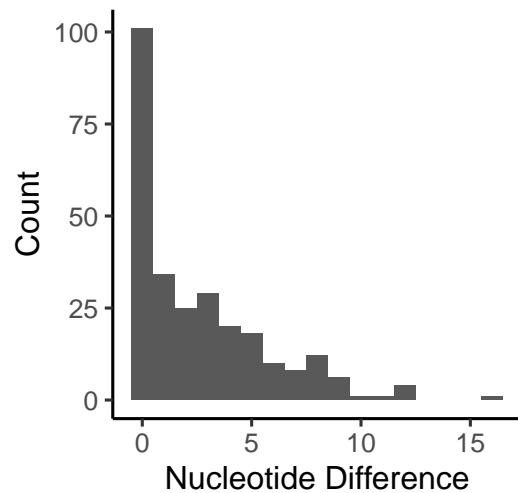
### IGHV3-30-3\*01

150 sequences assigned  
63 (42%) exact matches, in which:  
62 unique CDR3  
5 unique J



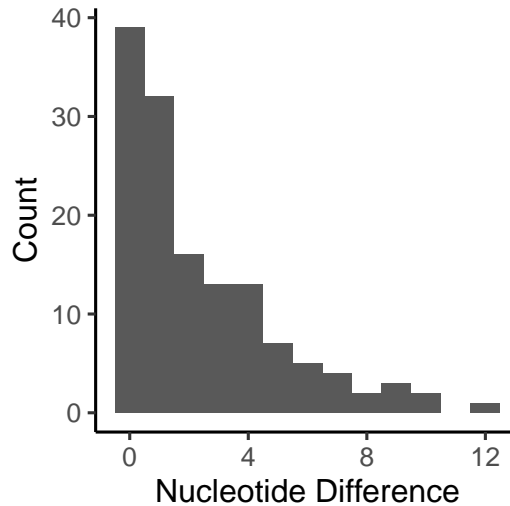
### IGHV3-11\*01

270 sequences assigned  
101 (37.4%) exact matches, in which:  
99 unique CDR3  
7 unique J



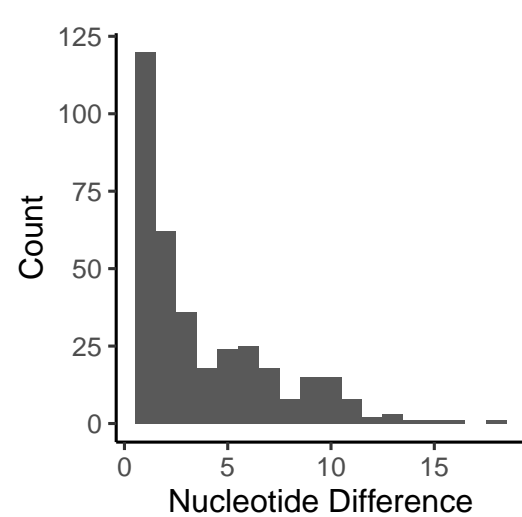
### IGHV3-20\*01

137 sequences assigned  
39 (28.5%) exact matches, in which:  
34 unique CDR3  
6 unique J



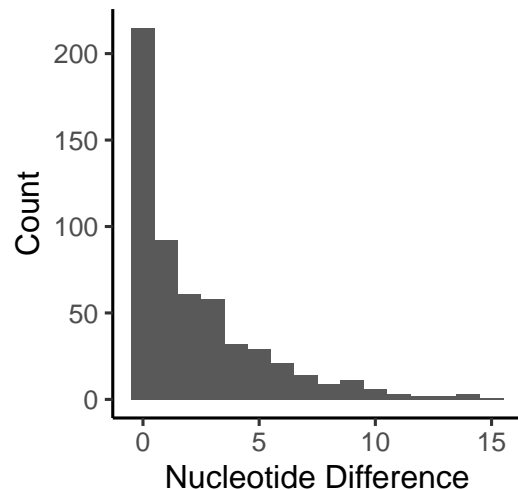
### IGHV3-30\*19

363 sequences assigned  
No exact matches.



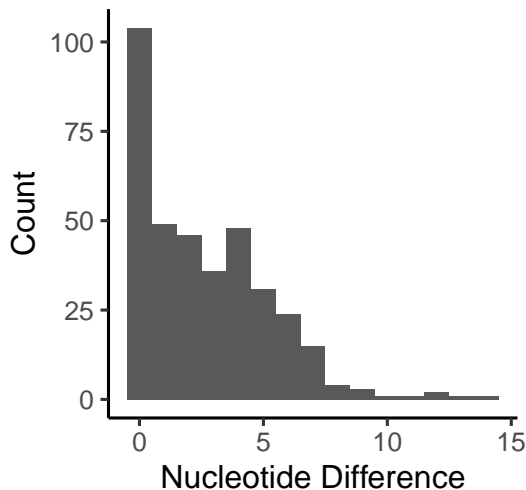
### IGHV3–33\*01

560 sequences assigned  
215 (38.4%) exact matches, in which:  
202 unique CDR3  
7 unique J



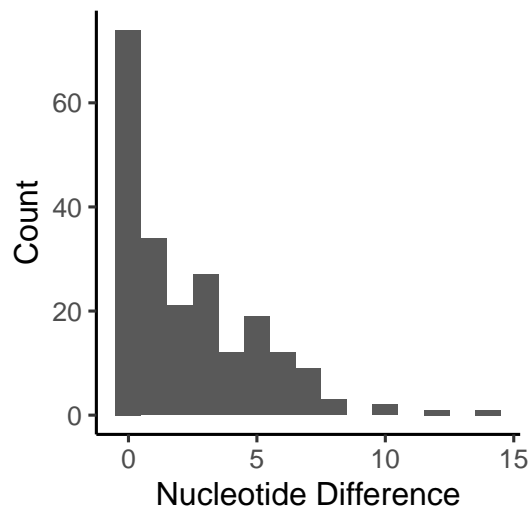
### IGHV3–48\*03

367 sequences assigned  
104 (28.3%) exact matches, in which:  
99 unique CDR3  
5 unique J



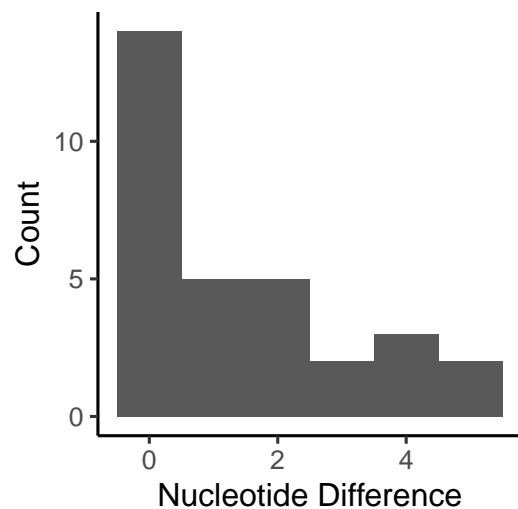
### IGHV3–53\*01

215 sequences assigned  
74 (34.4%) exact matches, in which:  
71 unique CDR3  
7 unique J



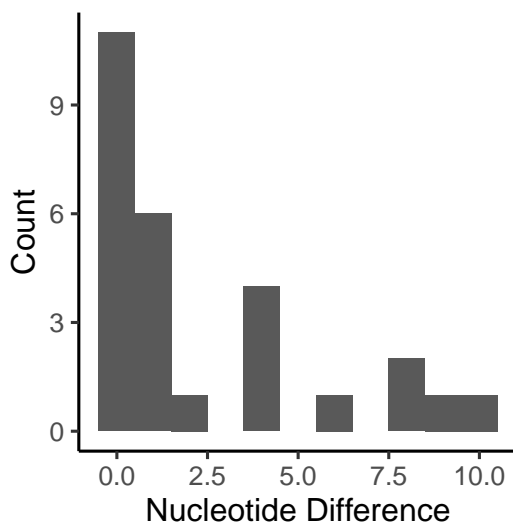
### IGHV3–43\*01

31 sequences assigned  
14 (45.2%) exact matches, in which:  
13 unique CDR3  
4 unique J



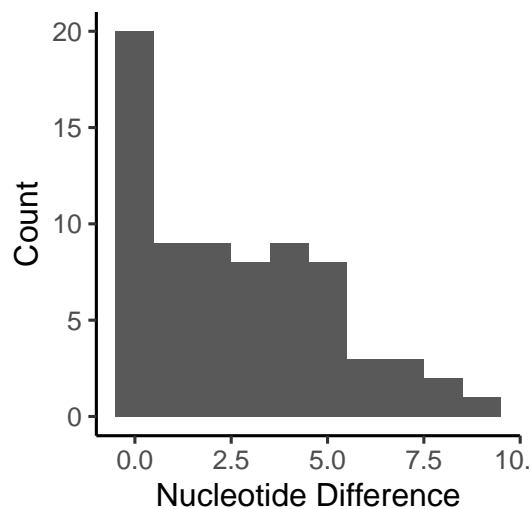
### IGHV3–49\*03

27 sequences assigned  
11 (40.7%) exact matches, in which:  
11 unique CDR3  
2 unique J



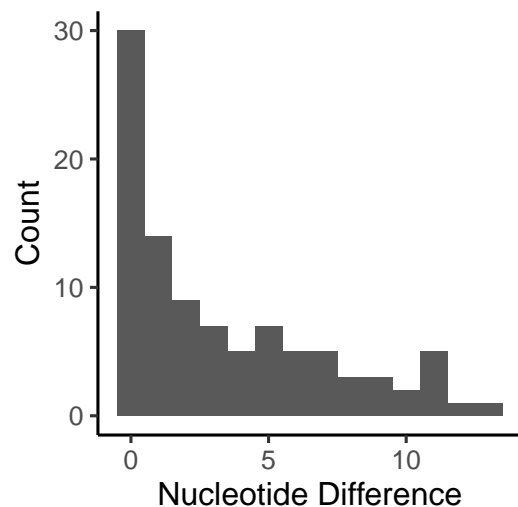
### IGHV3–64\*01

72 sequences assigned  
20 (27.8%) exact matches, in which:  
20 unique CDR3  
7 unique J



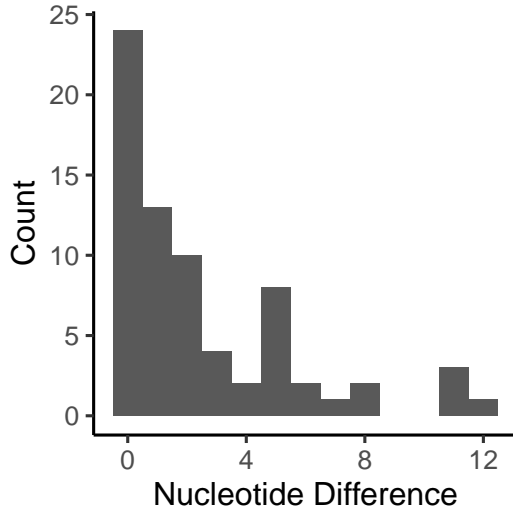
### IGHV3–48\*01

98 sequences assigned  
30 (30.6%) exact matches, in which:  
30 unique CDR3  
6 unique J



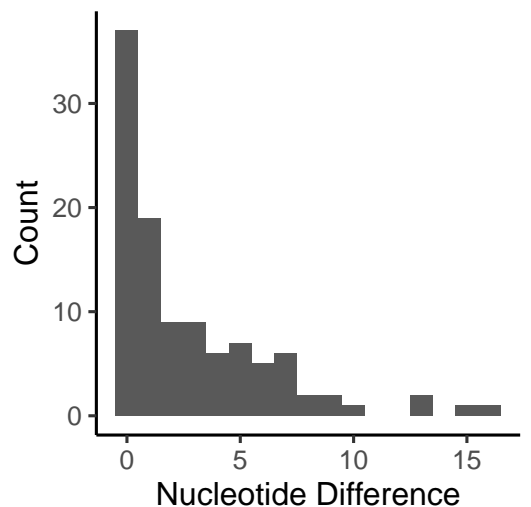
### IGHV3–49\*04

71 sequences assigned  
24 (33.8%) exact matches, in which:  
24 unique CDR3  
4 unique J



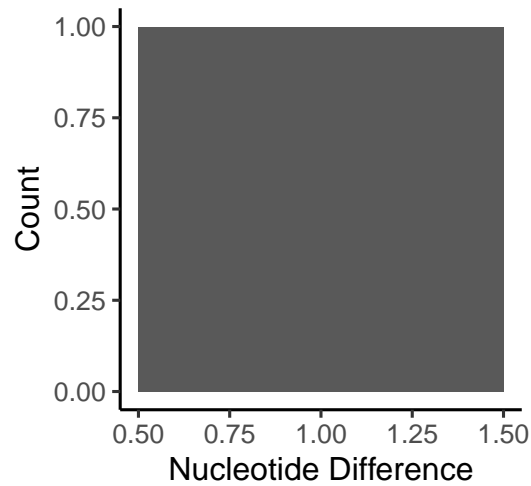
### IGHV3–66\*01

107 sequences assigned  
37 (34.6%) exact matches, in which:  
35 unique CDR3  
5 unique J



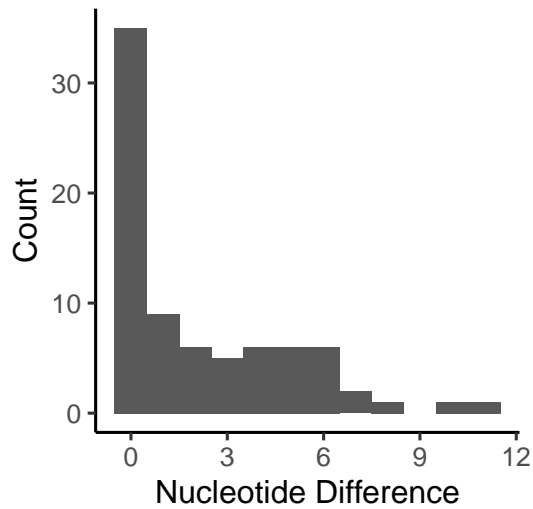
### IGHV3-71\*02

1 sequences assigned  
No exact matches.



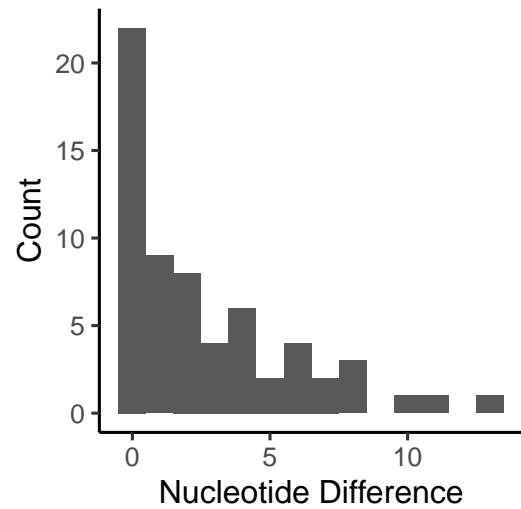
### IGHV3-73\*01

78 sequences assigned  
35 (44.9%) exact matches, in which:  
34 unique CDR3  
5 unique J



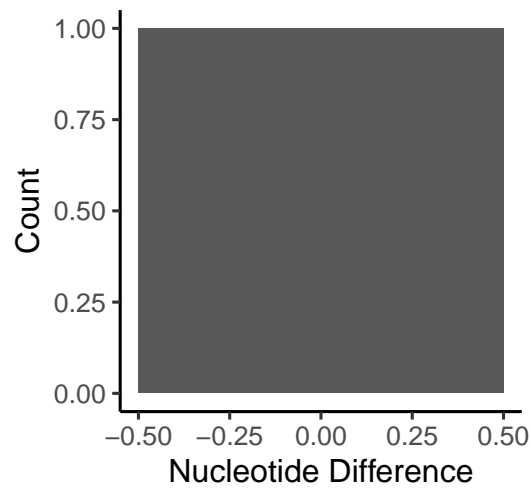
### IGHV4-4\*07

63 sequences assigned  
22 (34.9%) exact matches, in which:  
20 unique CDR3  
4 unique J



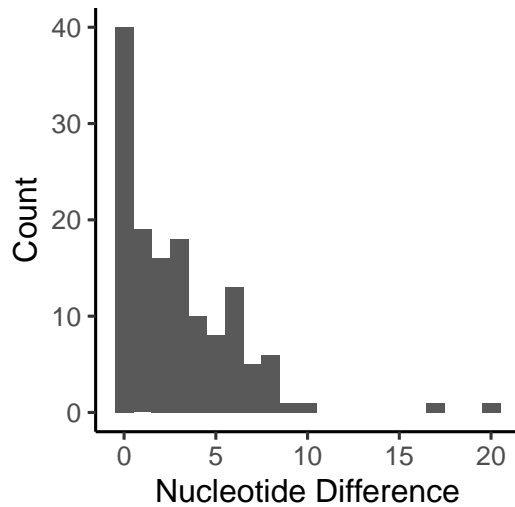
### IGHV3-71\*03

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



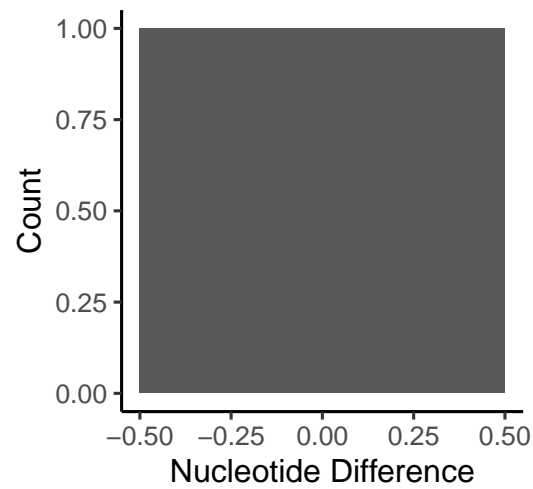
### IGHV3-74\*01

140 sequences assigned  
40 (28.6%) exact matches, in which:  
40 unique CDR3  
6 unique J



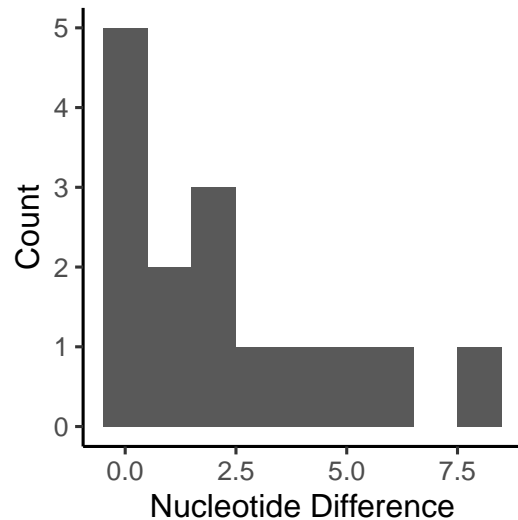
### IGHV4-28\*01

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



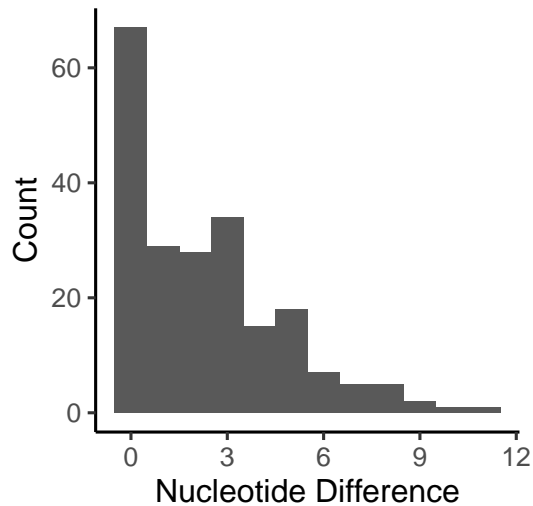
### IGHV3-72\*01

16 sequences assigned  
5 (31.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



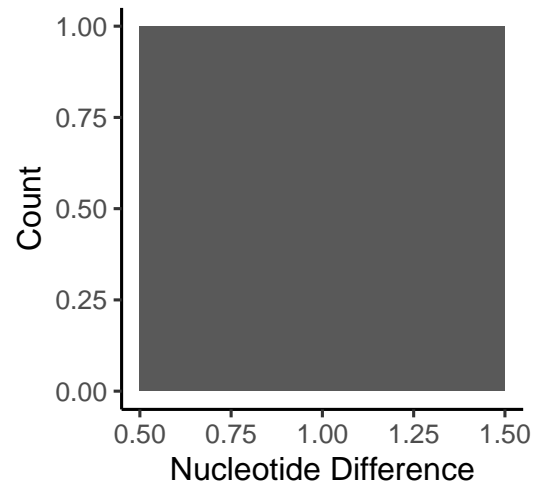
### IGHV4-4\*02

213 sequences assigned  
67 (31.5%) exact matches, in which:  
67 unique CDR3  
5 unique J



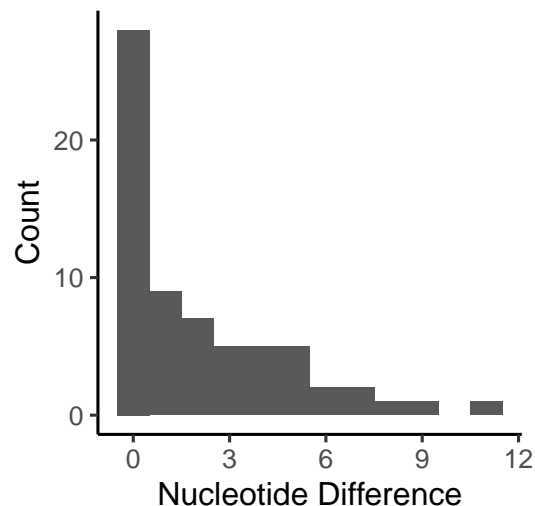
### IGHV4-28\*03

1 sequences assigned  
No exact matches.



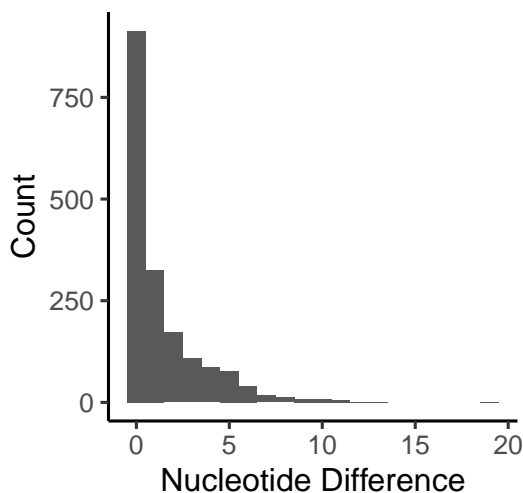
## IGHV4-30-2\*01

66 sequences assigned  
28 (42.4%) exact matches, in which:  
27 unique CDR3  
5 unique J



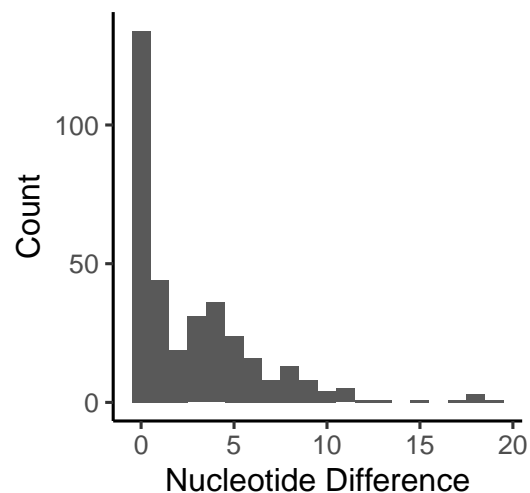
## IGHV4-34\*01

1787 sequences assigned  
914 (51.1%) exact matches, in which:  
845 unique CDR3  
7 unique J



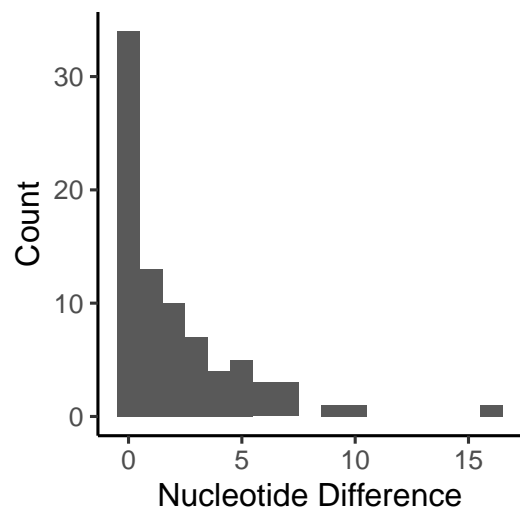
## IGHV4-59\*01

350 sequences assigned  
134 (38.3%) exact matches, in which:  
133 unique CDR3  
7 unique J



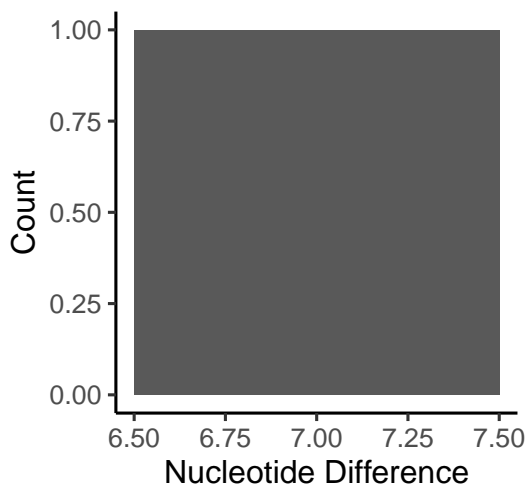
## IGHV4-30-4\*01\_A70G\_A107C

82 sequences assigned  
34 (41.5%) exact matches, in which:  
34 unique CDR3  
5 unique J



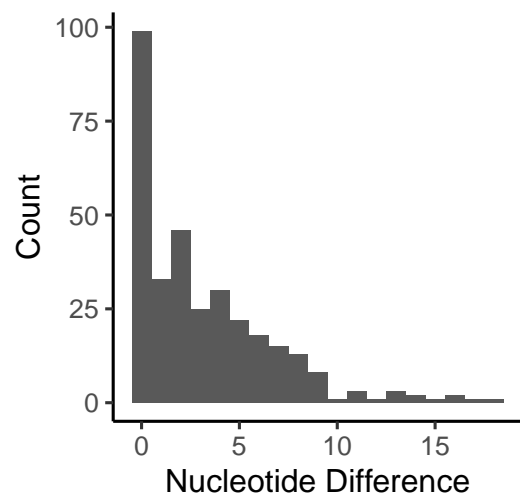
## IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



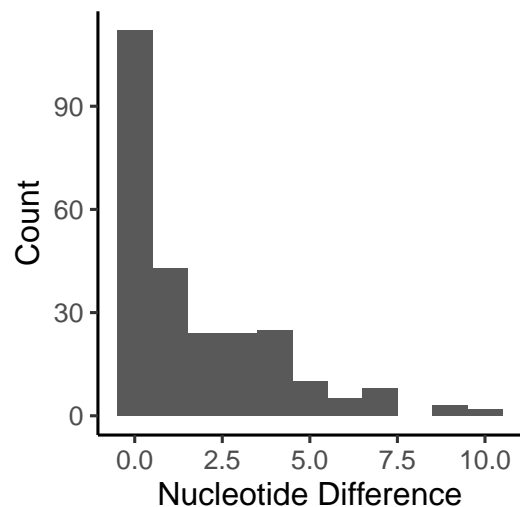
## IGHV4-59\*08

325 sequences assigned  
99 (30.5%) exact matches, in which:  
97 unique CDR3  
6 unique J



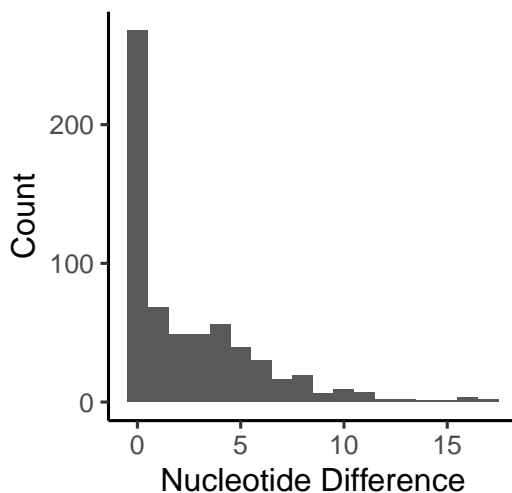
## IGHV4-31\*03

257 sequences assigned  
112 (43.6%) exact matches, in which:  
111 unique CDR3  
7 unique J



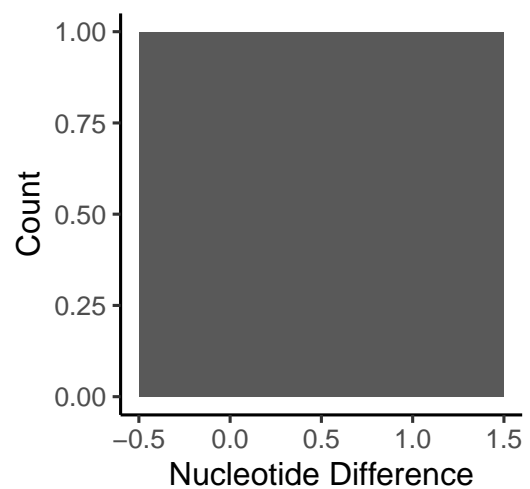
## IGHV4-39\*01

630 sequences assigned  
268 (42.5%) exact matches, in which:  
258 unique CDR3  
7 unique J



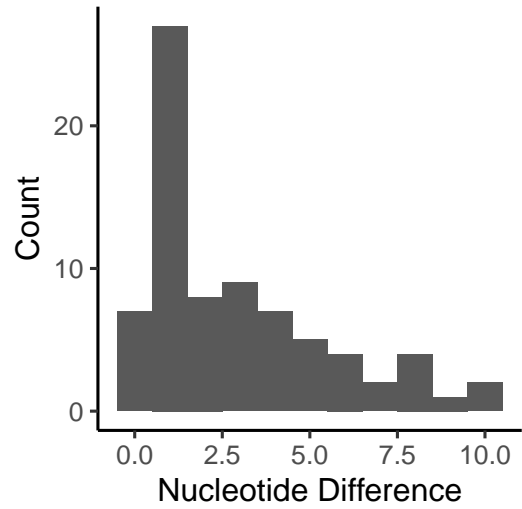
## IGHV4-61\*07

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



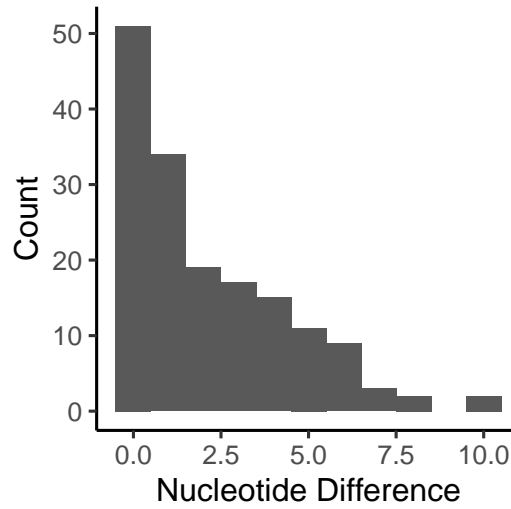
## IGHV5-51\*01

76 sequences assigned  
7 (9.2%) exact matches, in which:  
7 unique CDR3  
4 unique J



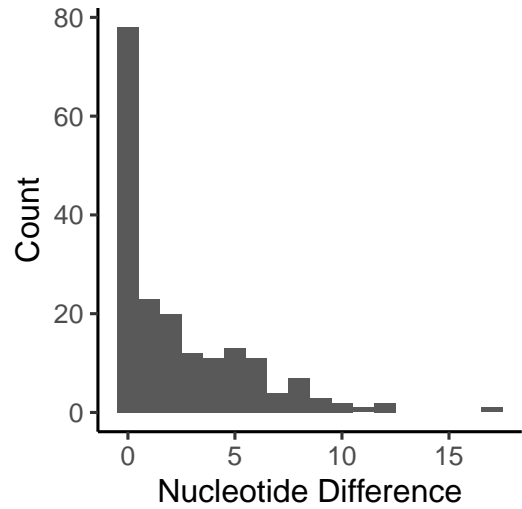
## IGHV7-4-1\*02

163 sequences assigned  
51 (31.3%) exact matches, in which:  
50 unique CDR3  
6 unique J



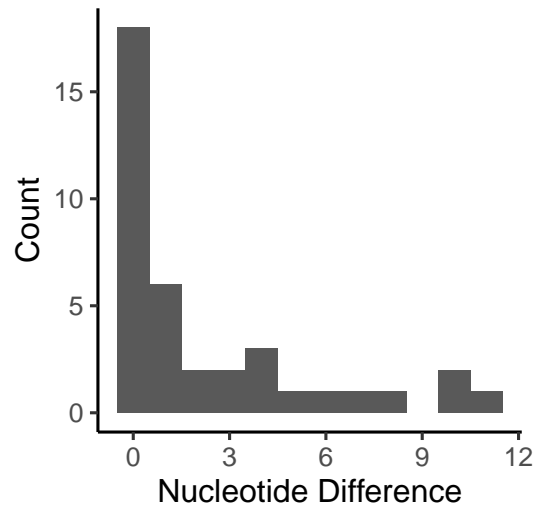
## IGHV5-51\*03

190 sequences assigned  
78 (41.1%) exact matches, in which:  
77 unique CDR3  
6 unique J

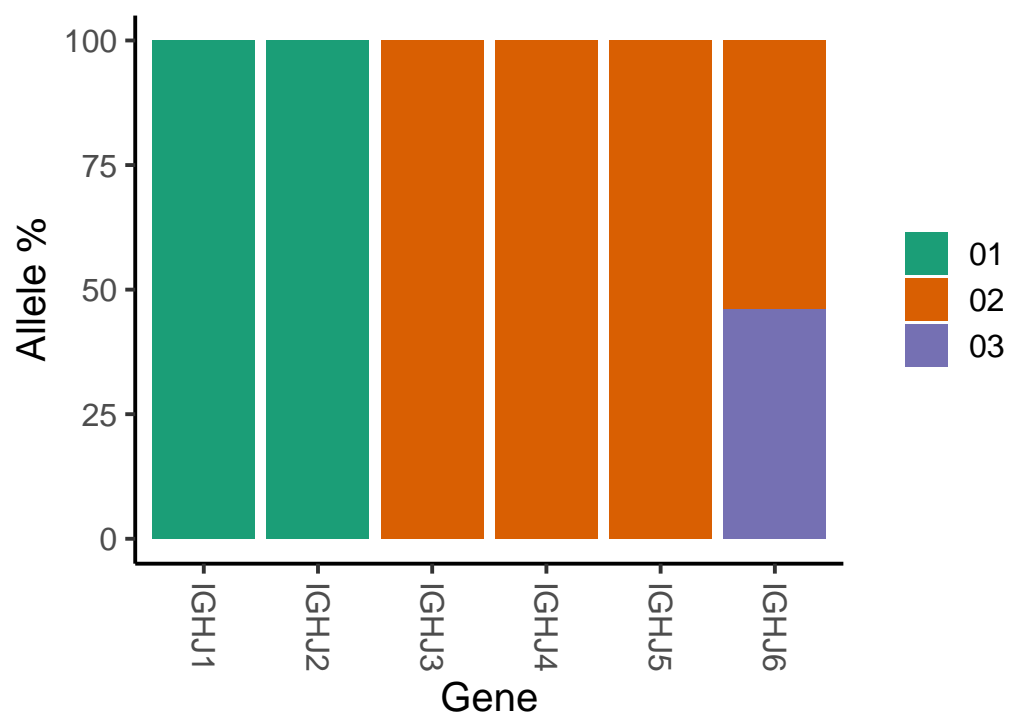


## IGHV6-1\*01

38 sequences assigned  
18 (47.4%) exact matches, in which:  
17 unique CDR3  
6 unique J

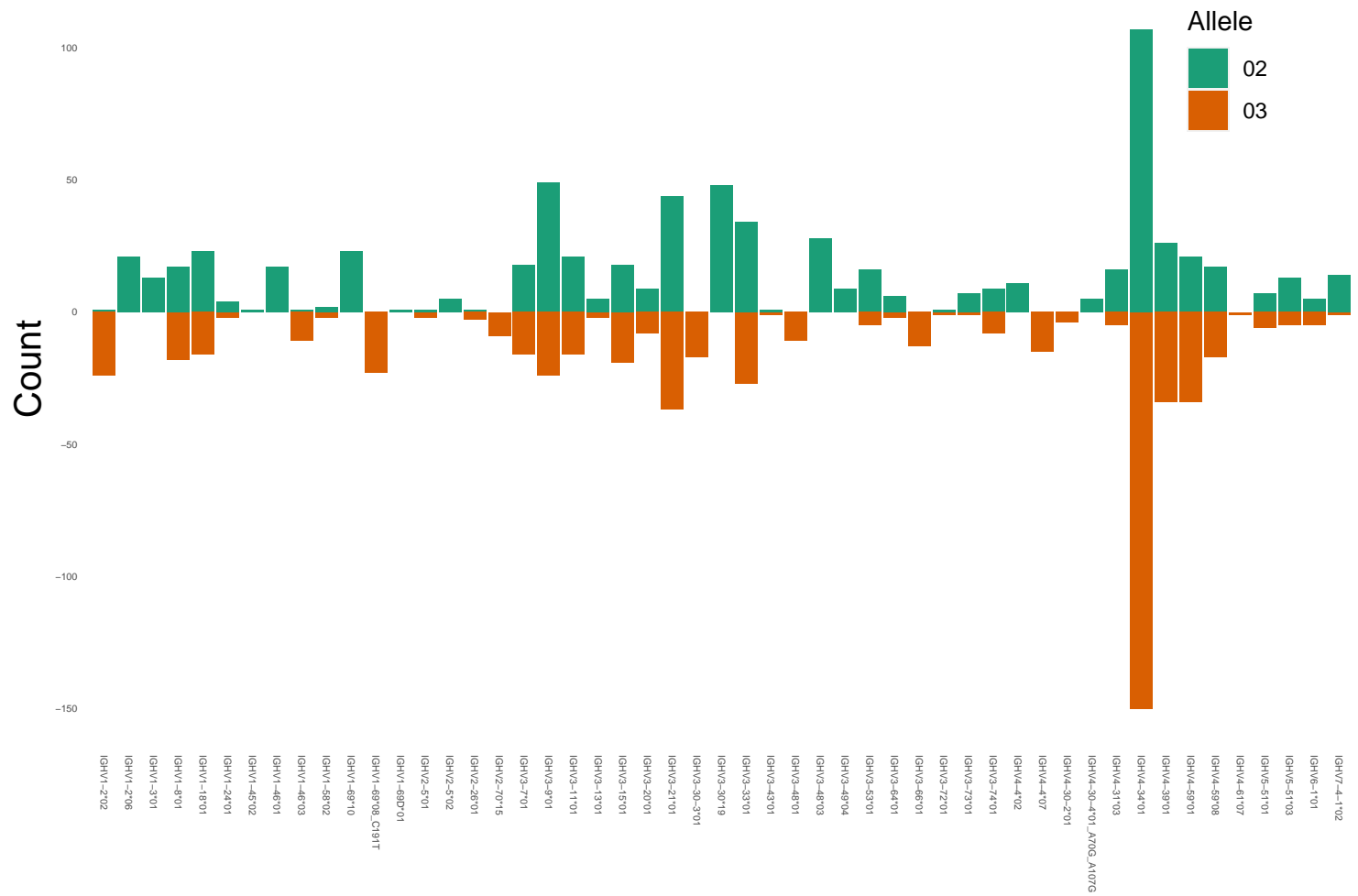


Allele Usage





## Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.