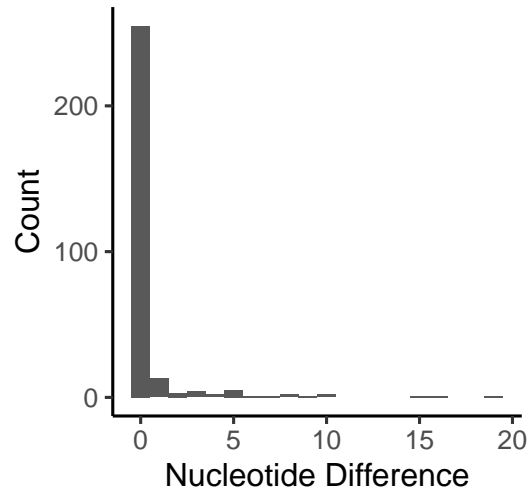


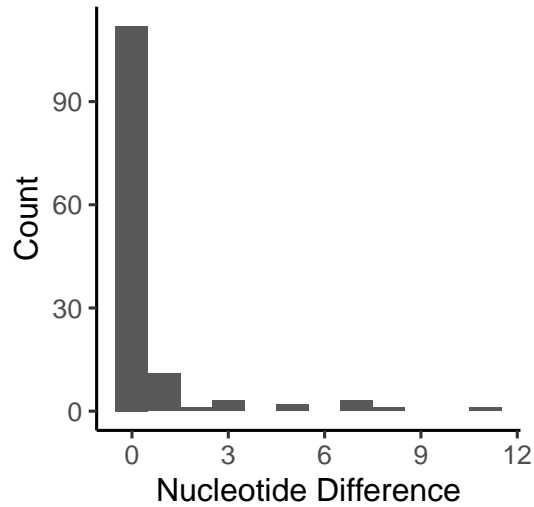
### IGHV1-2\*02

293 sequences assigned  
255 (87%) exact matches, in which:  
255 unique CDR3  
7 unique J



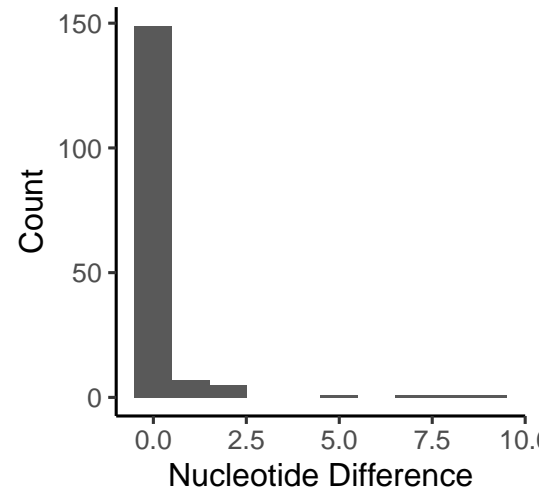
### IGHV1-8\*01

134 sequences assigned  
112 (83.6%) exact matches, in which:  
112 unique CDR3  
7 unique J



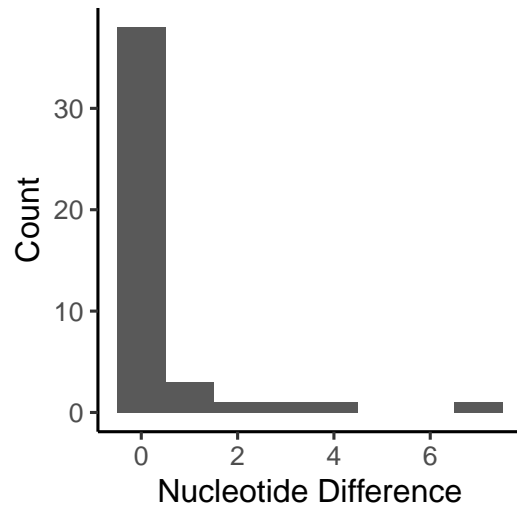
### IGHV1-24\*01

165 sequences assigned  
149 (90.3%) exact matches, in which:  
149 unique CDR3  
7 unique J



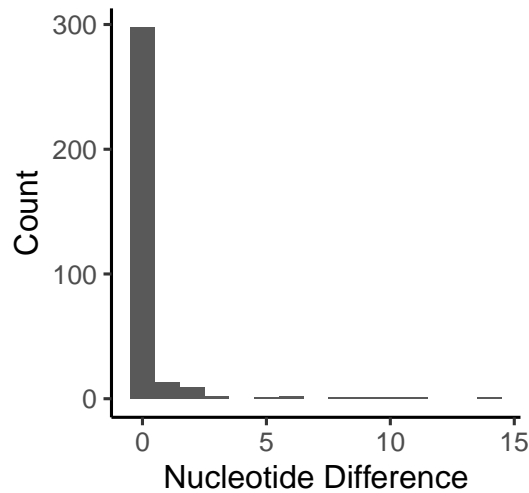
### IGHV1-2\*04

45 sequences assigned  
38 (84.4%) exact matches, in which:  
38 unique CDR3  
4 unique J



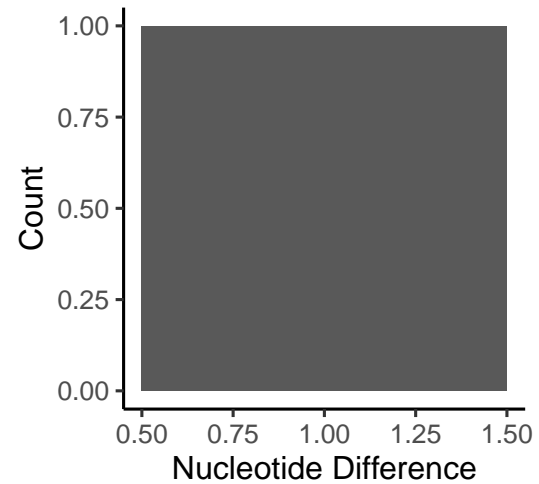
### IGHV1-18\*01

330 sequences assigned  
298 (90.3%) exact matches, in which:  
298 unique CDR3  
7 unique J



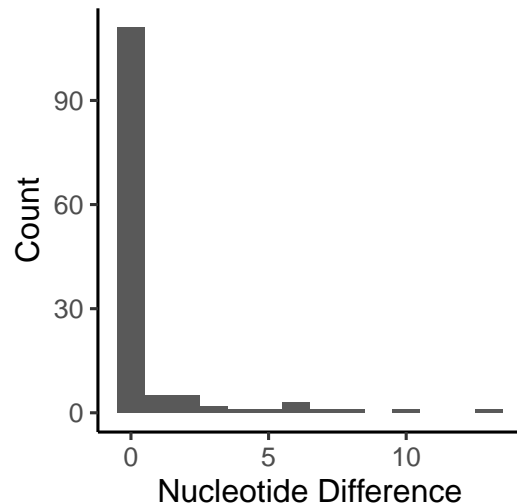
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



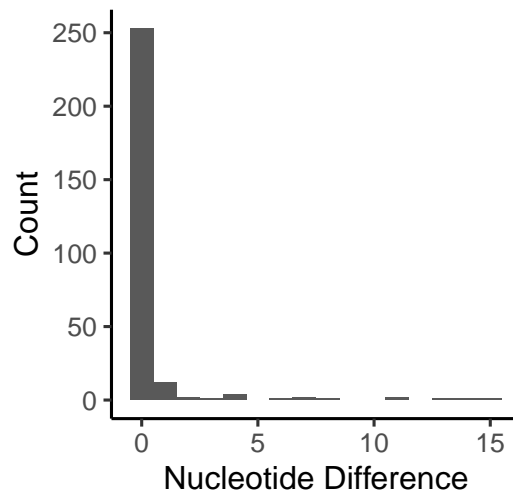
### IGHV1-3\*01

132 sequences assigned  
111 (84.1%) exact matches, in which:  
111 unique CDR3  
6 unique J



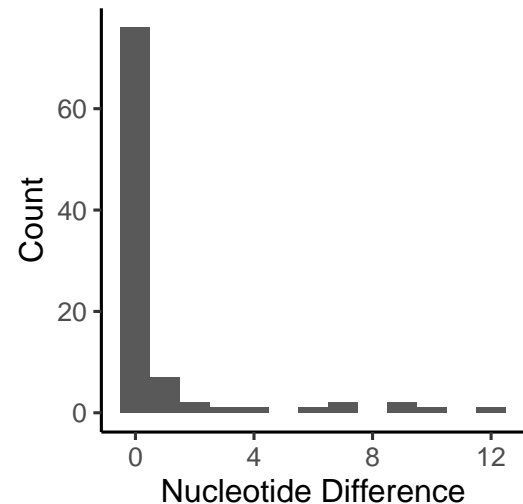
### IGHV1-18\*04

281 sequences assigned  
253 (90%) exact matches, in which:  
253 unique CDR3  
7 unique J



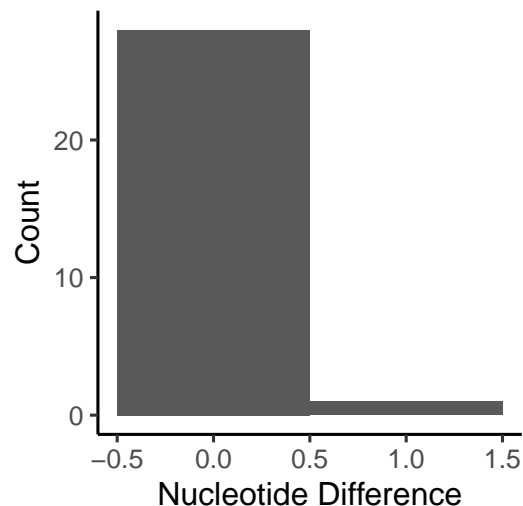
### IGHV1-46\*01

95 sequences assigned  
76 (80%) exact matches, in which:  
76 unique CDR3  
7 unique J



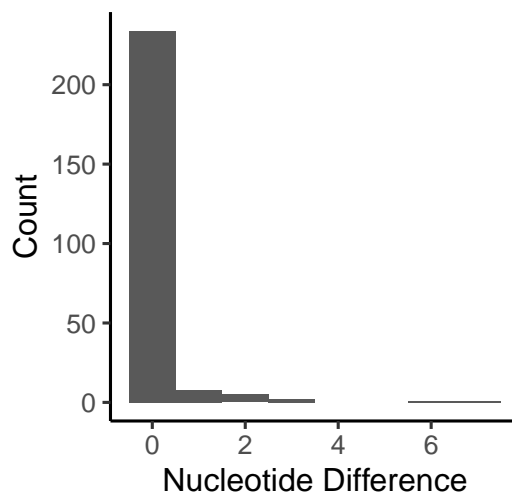
### IGHV1-46\*03

29 sequences assigned  
28 (96.6%) exact matches, in which:  
28 unique CDR3  
6 unique J



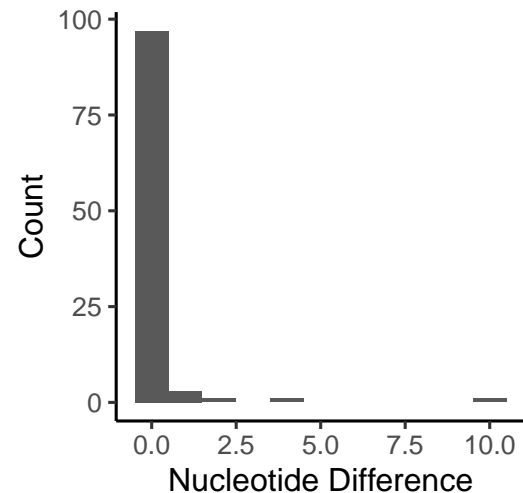
### IGHV1-69\*06

251 sequences assigned  
234 (93.2%) exact matches, in which:  
234 unique CDR3  
7 unique J



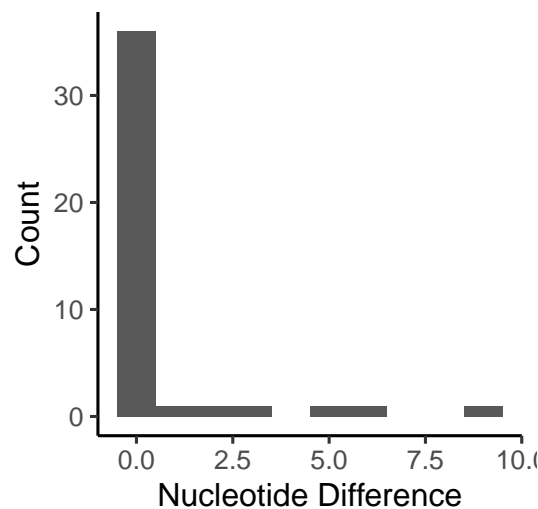
### IGHV2-26\*01

103 sequences assigned  
97 (94.2%) exact matches, in which:  
97 unique CDR3  
6 unique J



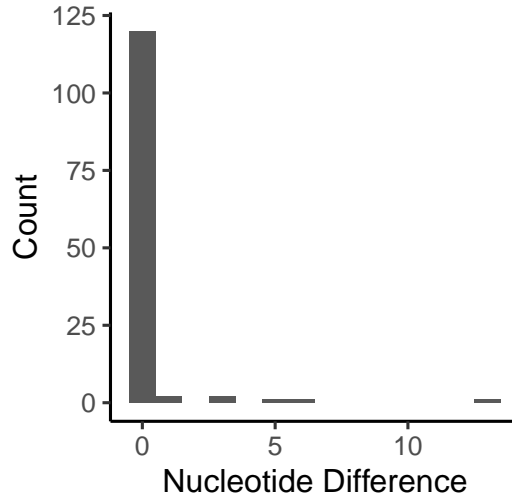
### IGHV1-58\*01

42 sequences assigned  
36 (85.7%) exact matches, in which:  
36 unique CDR3  
5 unique J



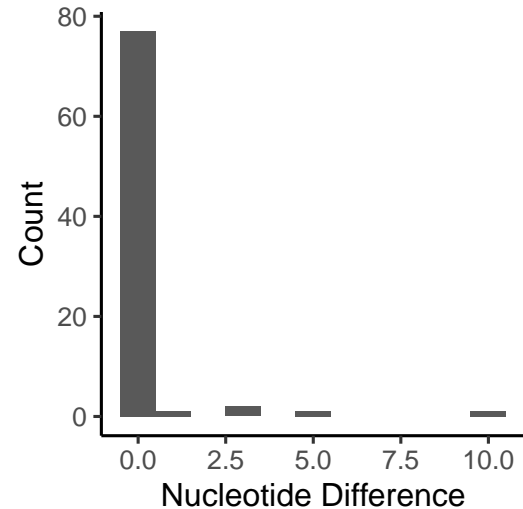
### IGHV2-5\*01

129 sequences assigned  
120 (93%) exact matches, in which:  
120 unique CDR3  
6 unique J



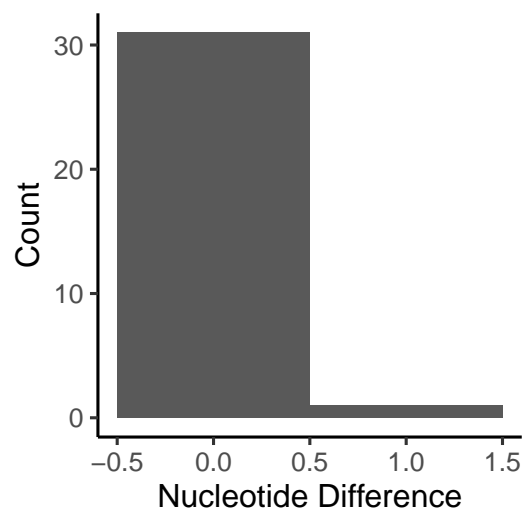
### IGHV2-70\*01

82 sequences assigned  
77 (93.9%) exact matches, in which:  
77 unique CDR3  
6 unique J



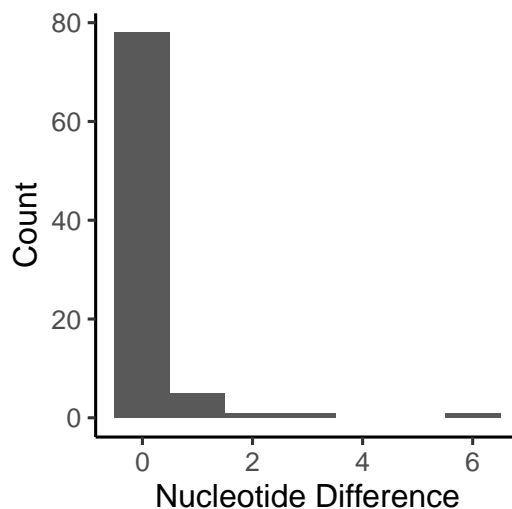
### IGHV1-69-2\*01

32 sequences assigned  
31 (96.9%) exact matches, in which:  
31 unique CDR3  
5 unique J



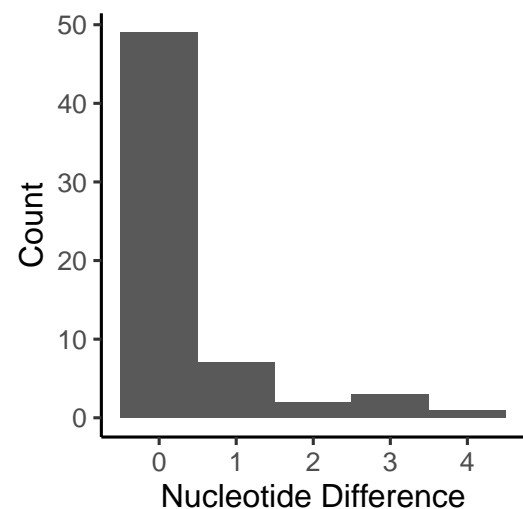
### IGHV2-5\*02

86 sequences assigned  
78 (90.7%) exact matches, in which:  
78 unique CDR3  
6 unique J



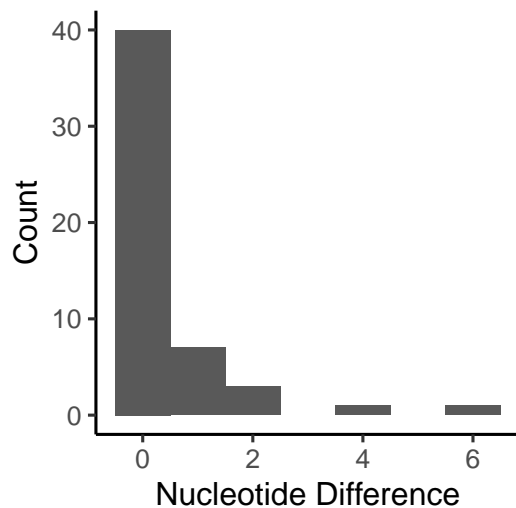
### IGHV3-7\*01

62 sequences assigned  
49 (79%) exact matches, in which:  
49 unique CDR3  
6 unique J



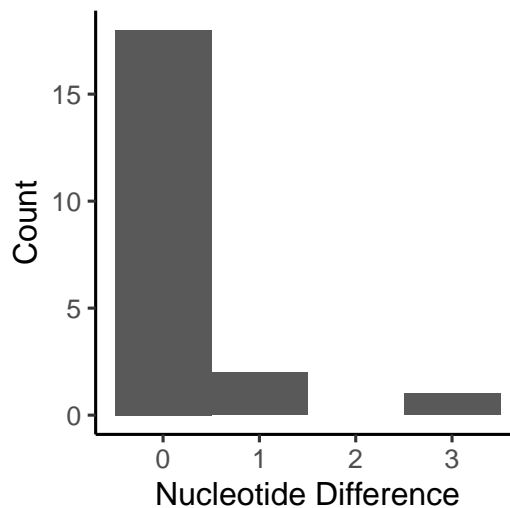
### IGHV3-7\*03

53 sequences assigned  
40 (75.5%) exact matches, in which:  
40 unique CDR3  
5 unique J



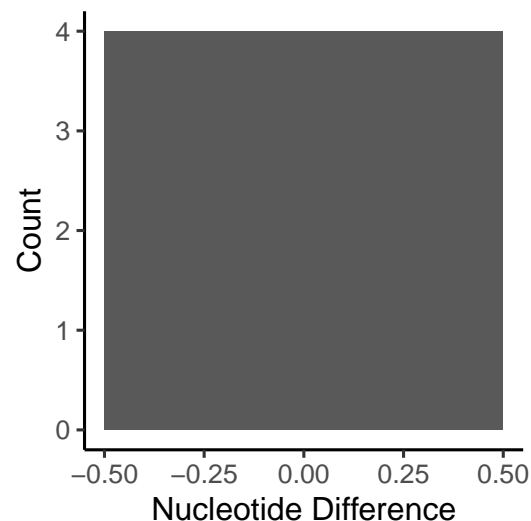
### IGHV3-11\*06

21 sequences assigned  
18 (85.7%) exact matches, in which:  
18 unique CDR3  
5 unique J



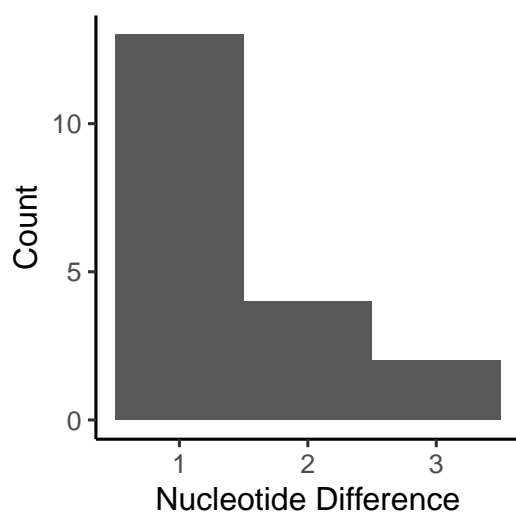
### IGHV3-20\*01

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
3 unique J



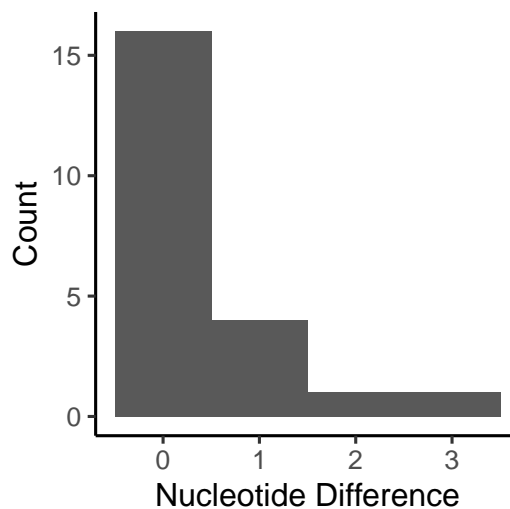
### IGHV3-9\*01

19 sequences assigned  
No exact matches.



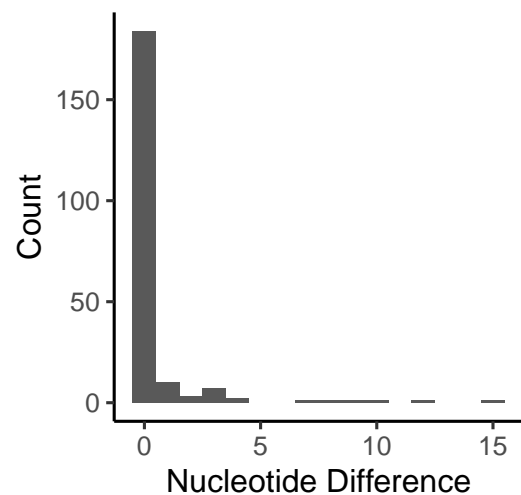
### IGHV3-13\*01

22 sequences assigned  
16 (72.7%) exact matches, in which:  
16 unique CDR3  
5 unique J



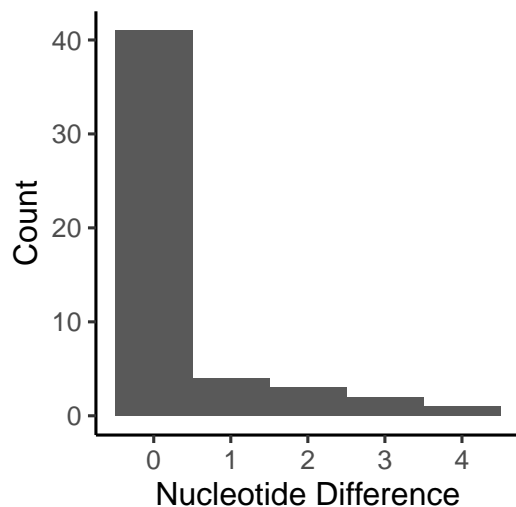
### IGHV3-21\*01

212 sequences assigned  
184 (86.8%) exact matches, in which:  
184 unique CDR3  
7 unique J



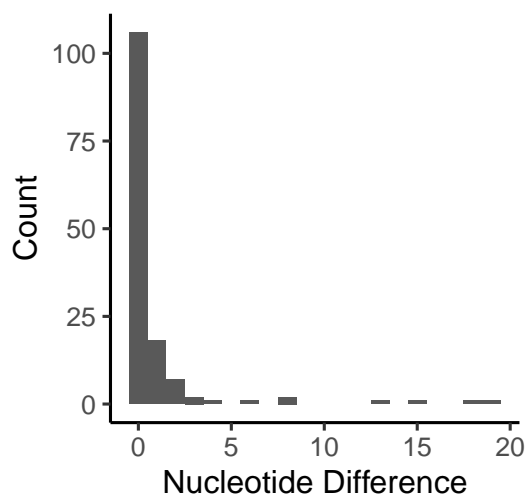
### IGHV3-11\*01

51 sequences assigned  
41 (80.4%) exact matches, in which:  
41 unique CDR3  
6 unique J



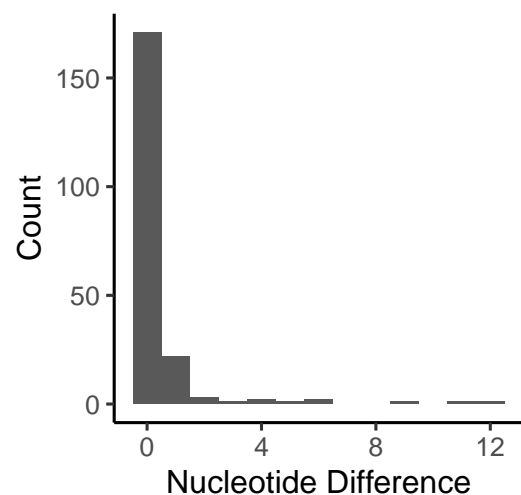
### IGHV3-15\*01

142 sequences assigned  
106 (74.6%) exact matches, in which:  
106 unique CDR3  
7 unique J



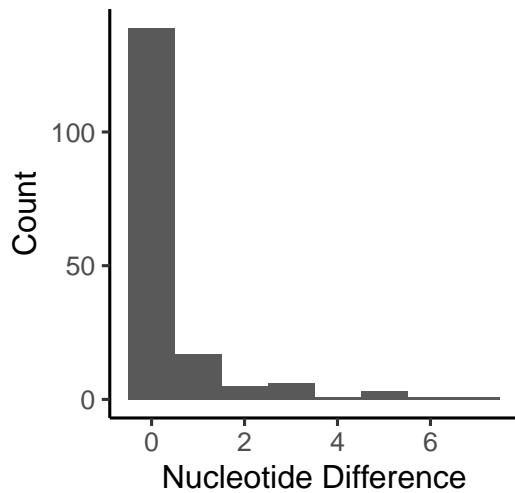
### IGHV3-30-3\*01

208 sequences assigned  
171 (82.2%) exact matches, in which:  
171 unique CDR3  
7 unique J



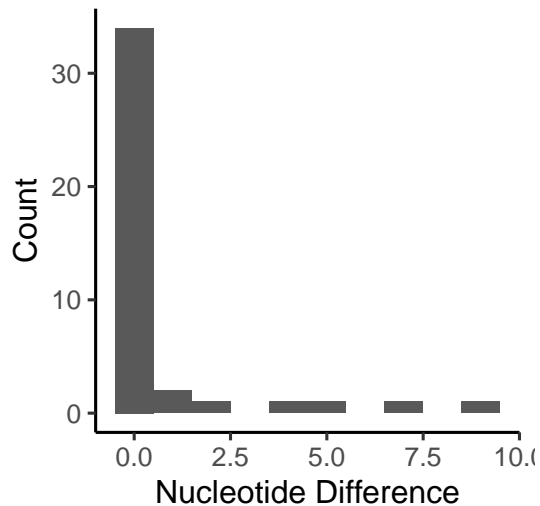
### IGHV3–33\*01

173 sequences assigned  
139 (80.3%) exact matches, in which:  
139 unique CDR3  
6 unique J



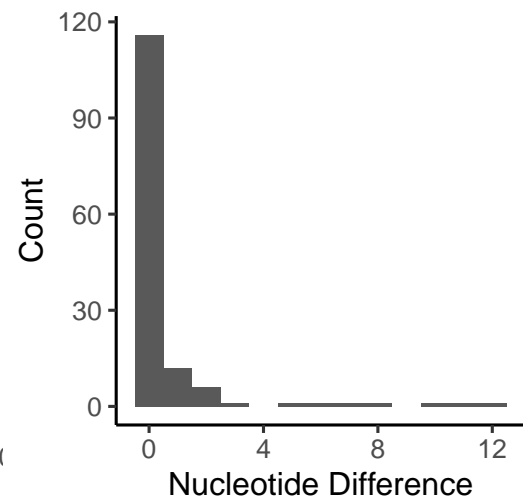
### IGHV3–48\*02

41 sequences assigned  
34 (82.9%) exact matches, in which:  
34 unique CDR3  
6 unique J



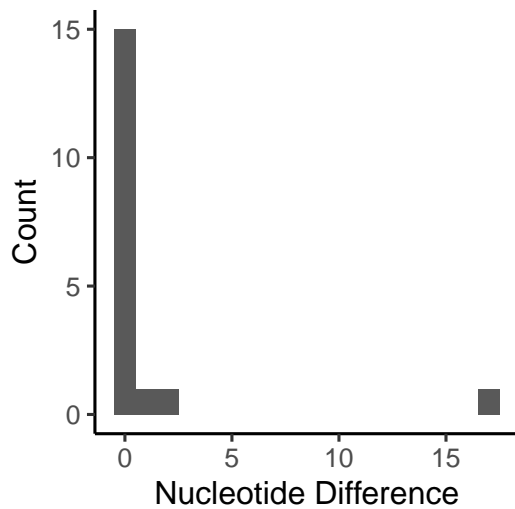
### IGHV3–53\*01

143 sequences assigned  
116 (81.1%) exact matches, in which:  
116 unique CDR3  
7 unique J



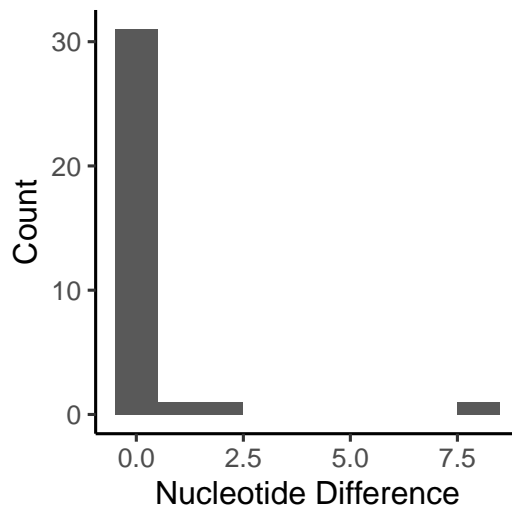
### IGHV3–43\*01

18 sequences assigned  
15 (83.3%) exact matches, in which:  
15 unique CDR3  
4 unique J



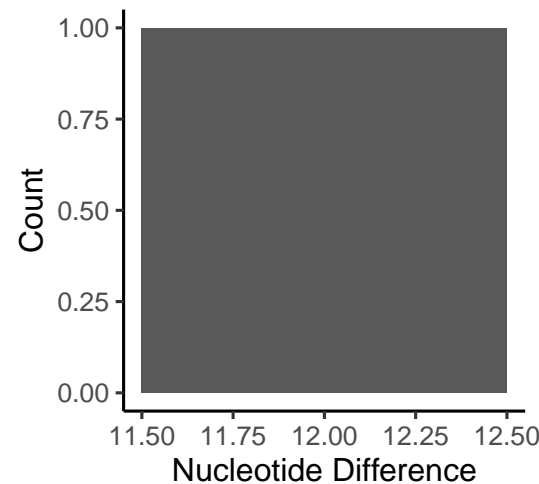
### IGHV3–49\*03

34 sequences assigned  
31 (91.2%) exact matches, in which:  
31 unique CDR3  
6 unique J



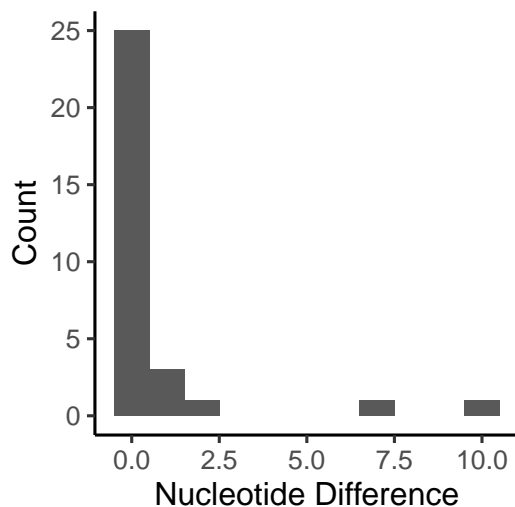
### IGHV3–66\*01

1 sequences assigned  
No exact matches.



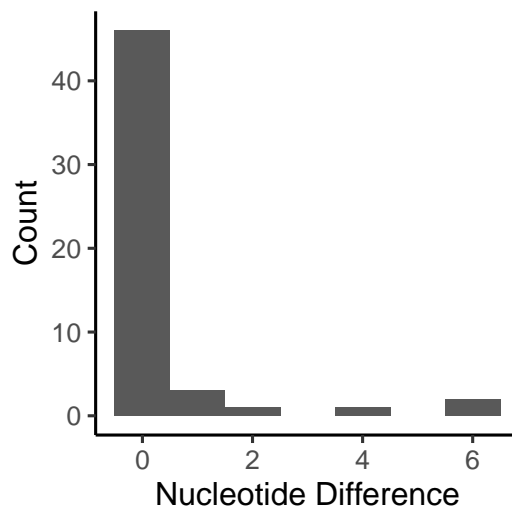
### IGHV3–48\*01

31 sequences assigned  
25 (80.6%) exact matches, in which:  
25 unique CDR3  
4 unique J



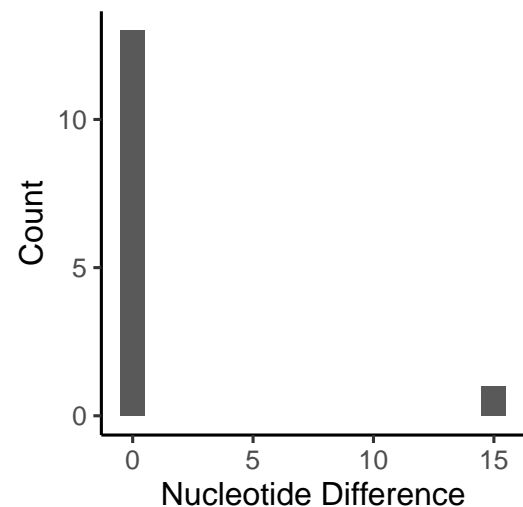
### IGHV3–49\*05

53 sequences assigned  
46 (86.8%) exact matches, in which:  
46 unique CDR3  
5 unique J



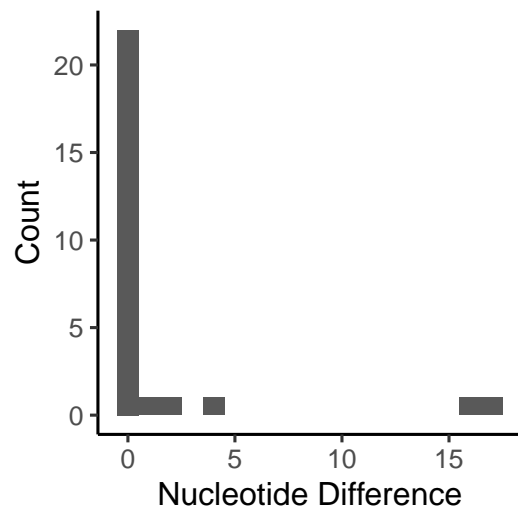
### IGHV3–72\*01

14 sequences assigned  
13 (92.9%) exact matches, in which:  
13 unique CDR3  
5 unique J



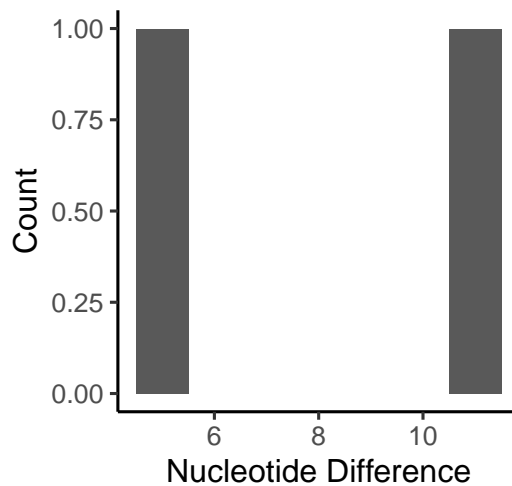
### IGHV3-73\*02

27 sequences assigned  
22 (81.5%) exact matches, in which:  
22 unique CDR3  
6 unique J



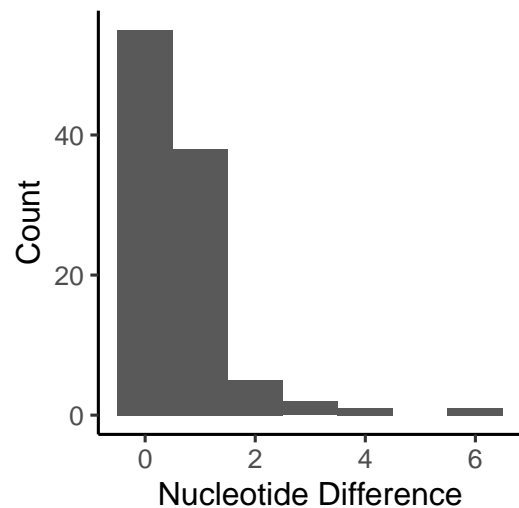
### IGHV3-NL1\*01

2 sequences assigned  
No exact matches.



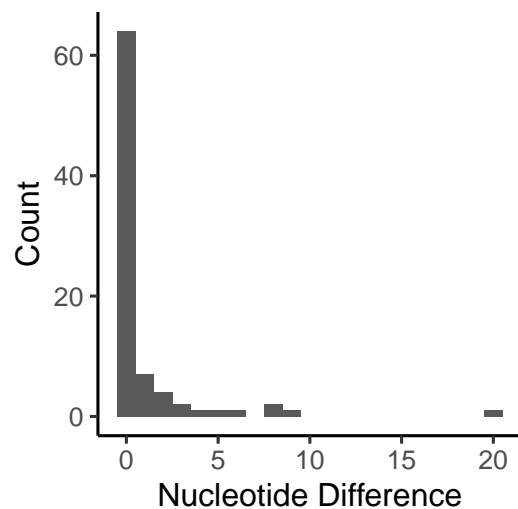
### IGHV4-30-4\*01

102 sequences assigned  
55 (53.9%) exact matches, in which:  
55 unique CDR3  
6 unique J



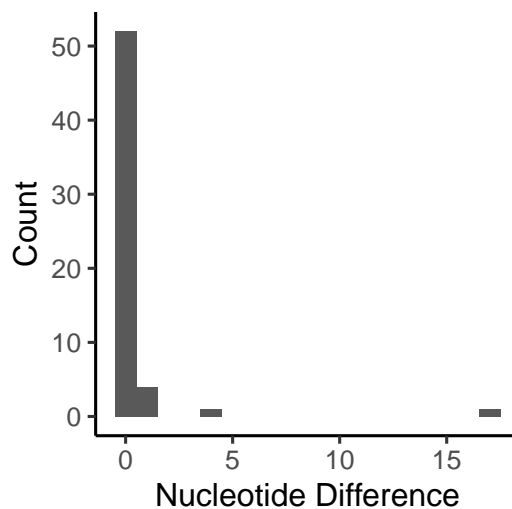
### IGHV3-74\*01

84 sequences assigned  
64 (76.2%) exact matches, in which:  
64 unique CDR3  
6 unique J



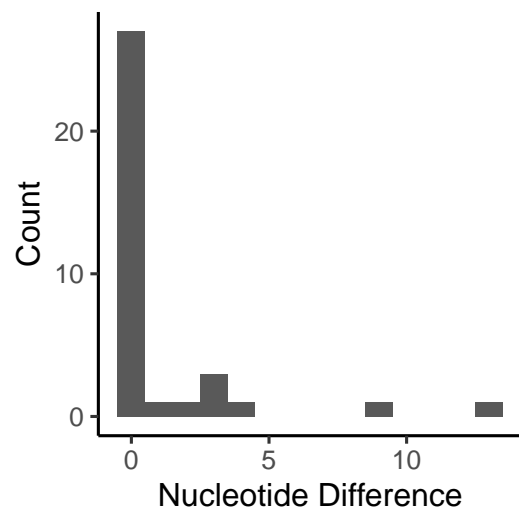
### IGHV4-4\*02

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



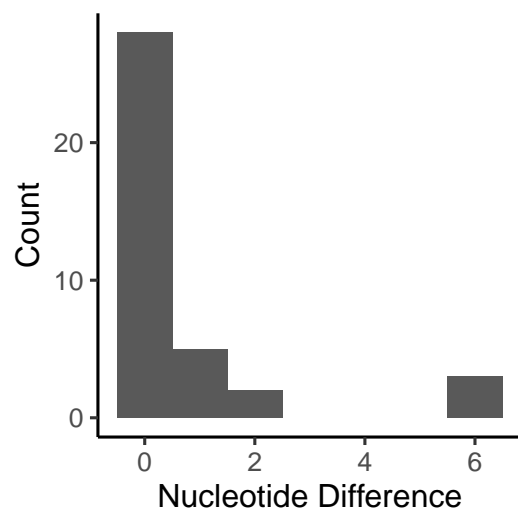
### IGHV4-30-2\*01

35 sequences assigned  
27 (77.1%) exact matches, in which:  
27 unique CDR3  
5 unique J



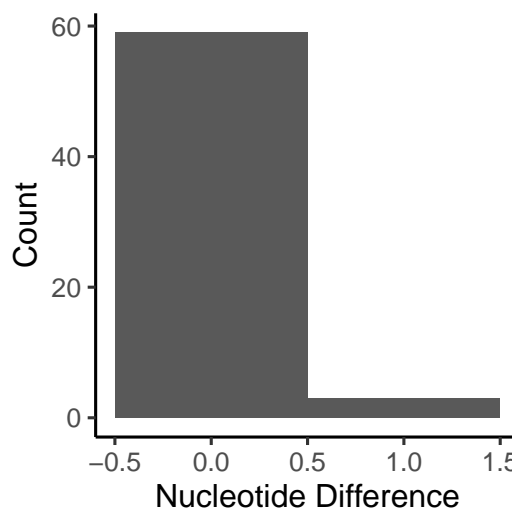
### IGHV3-64D\*09

38 sequences assigned  
28 (73.7%) exact matches, in which:  
28 unique CDR3  
5 unique J



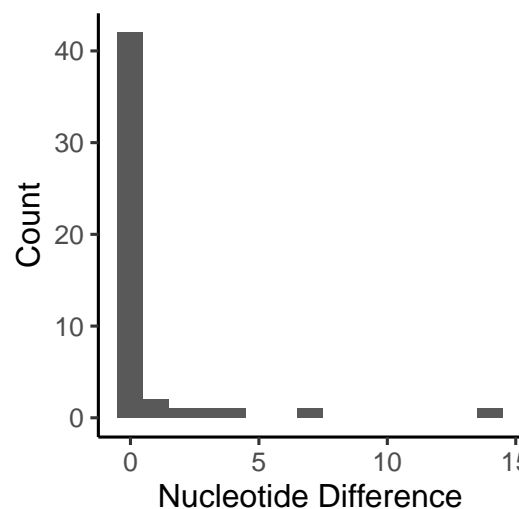
### IGHV4-4\*07

62 sequences assigned  
59 (95.2%) exact matches, in which:  
59 unique CDR3  
5 unique J



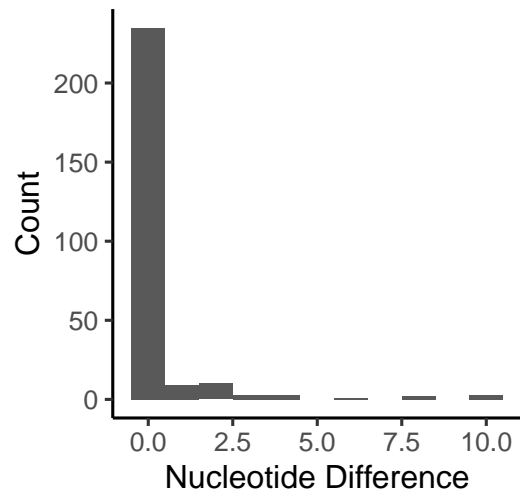
### IGHV4-30-2\*01\_C285T

49 sequences assigned  
42 (85.7%) exact matches, in which:  
42 unique CDR3  
4 unique J



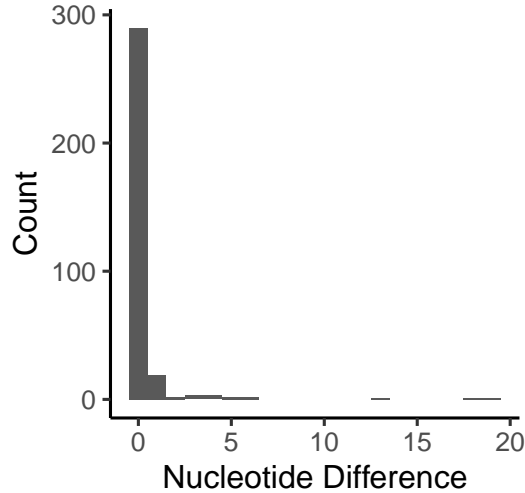
### IGHV4-31\*03

266 sequences assigned  
235 (88.3%) exact matches, in which:  
235 unique CDR3  
6 unique J



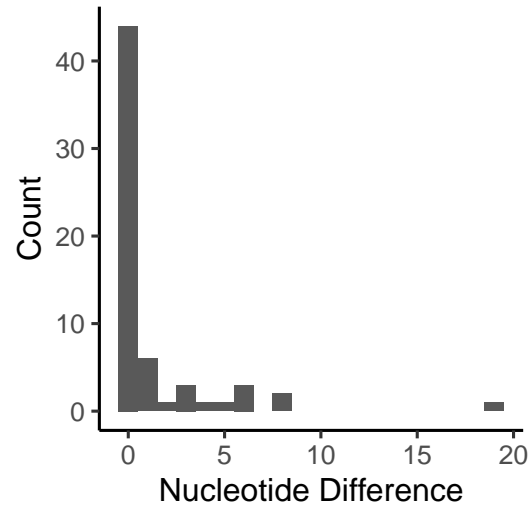
### IGHV4-39\*01

326 sequences assigned  
290 (89%) exact matches, in which:  
288 unique CDR3  
7 unique J



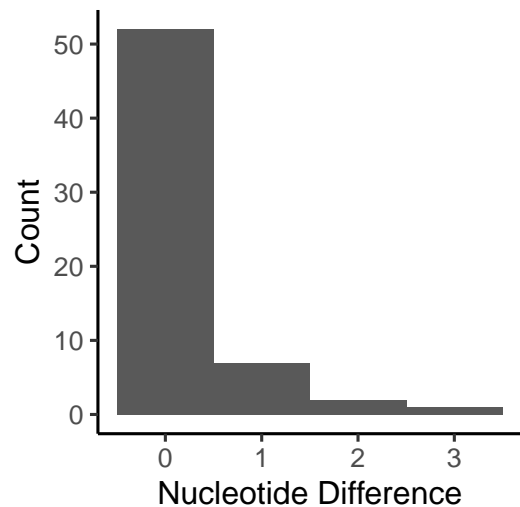
### IGHV4-61\*01

62 sequences assigned  
44 (71%) exact matches, in which:  
44 unique CDR3  
6 unique J



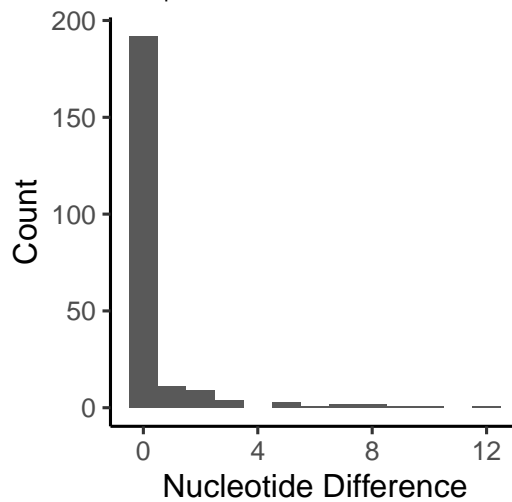
### IGHV4-31\*11\_G4C\_G21C

62 sequences assigned  
52 (83.9%) exact matches, in which:  
52 unique CDR3  
5 unique J



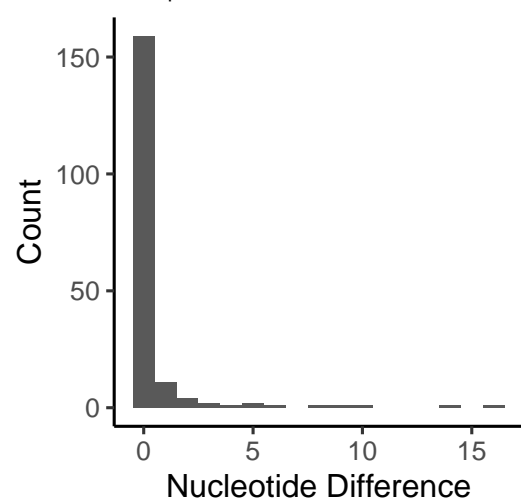
### IGHV4-39\*07

227 sequences assigned  
192 (84.6%) exact matches, in which:  
191 unique CDR3  
7 unique J



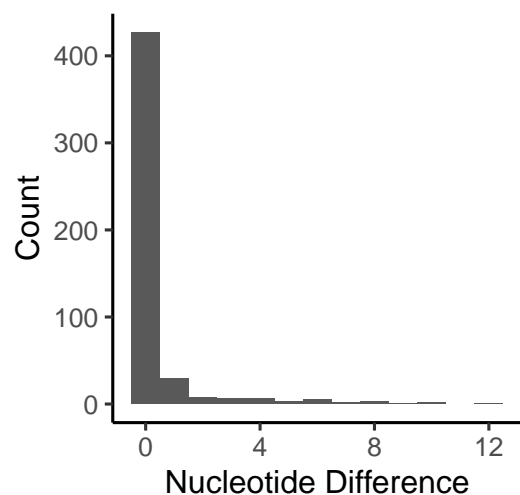
### IGHV5-10-1\*03

185 sequences assigned  
159 (85.9%) exact matches, in which:  
159 unique CDR3  
6 unique J



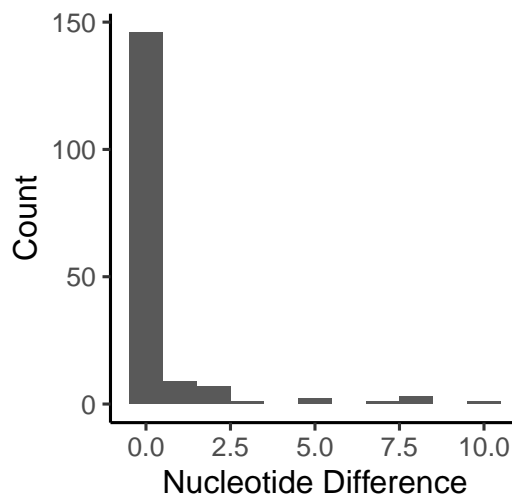
### IGHV4-34\*01

492 sequences assigned  
427 (86.8%) exact matches, in which:  
427 unique CDR3  
7 unique J



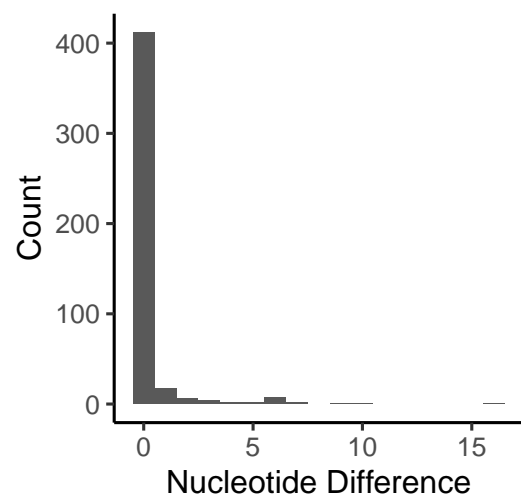
### IGHV4-59\*01

170 sequences assigned  
146 (85.9%) exact matches, in which:  
146 unique CDR3  
7 unique J



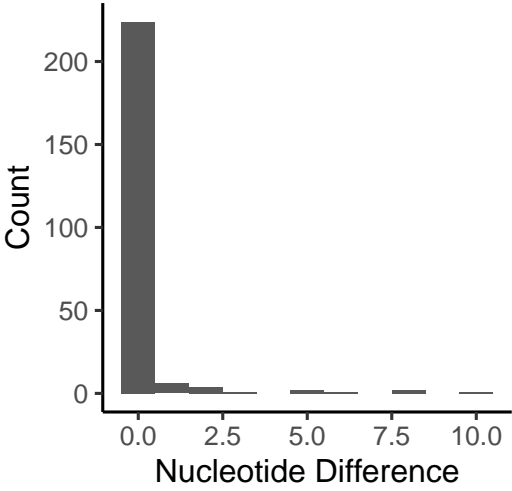
### IGHV5-51\*01

455 sequences assigned  
412 (90.5%) exact matches, in which:  
412 unique CDR3  
7 unique J



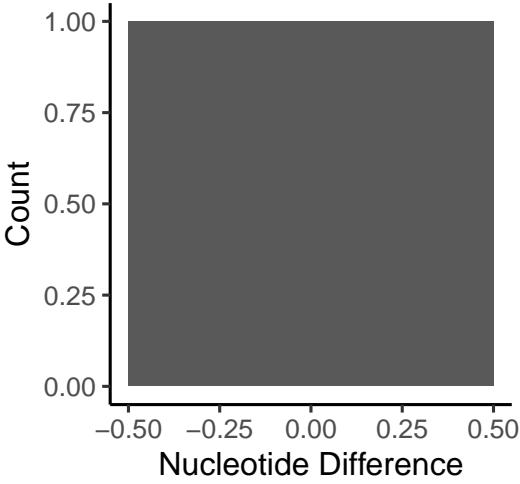
IGHV6-1\*01

241 sequences assigned  
224 (92.9%) exact matches, in which:  
224 unique CDR3  
7 unique J

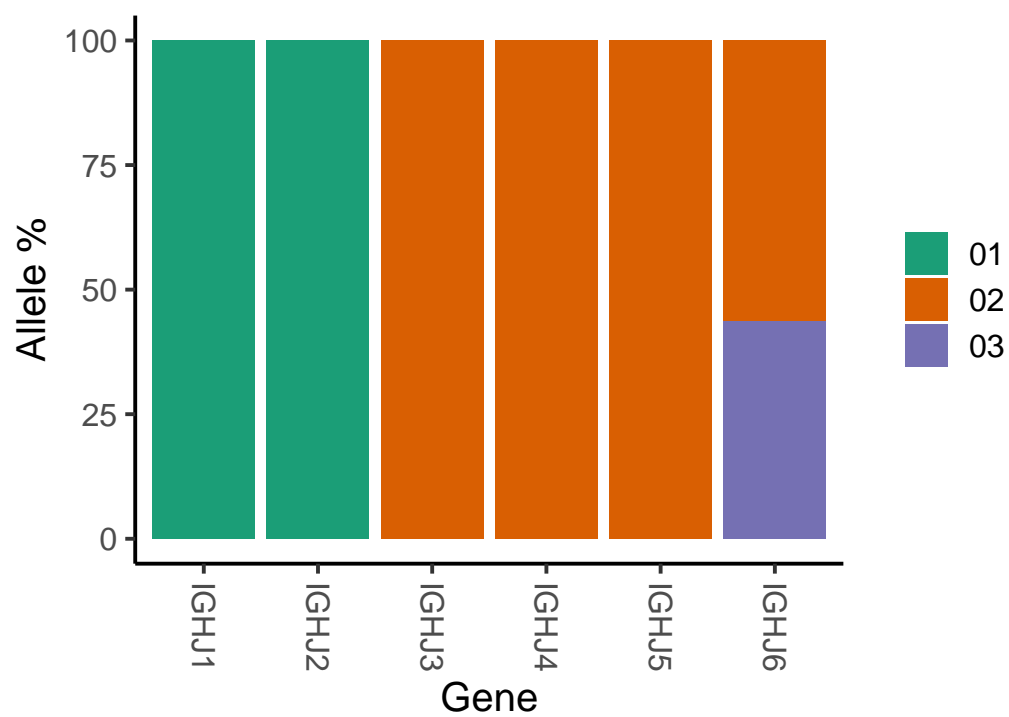


IGHV7-4-1\*01

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

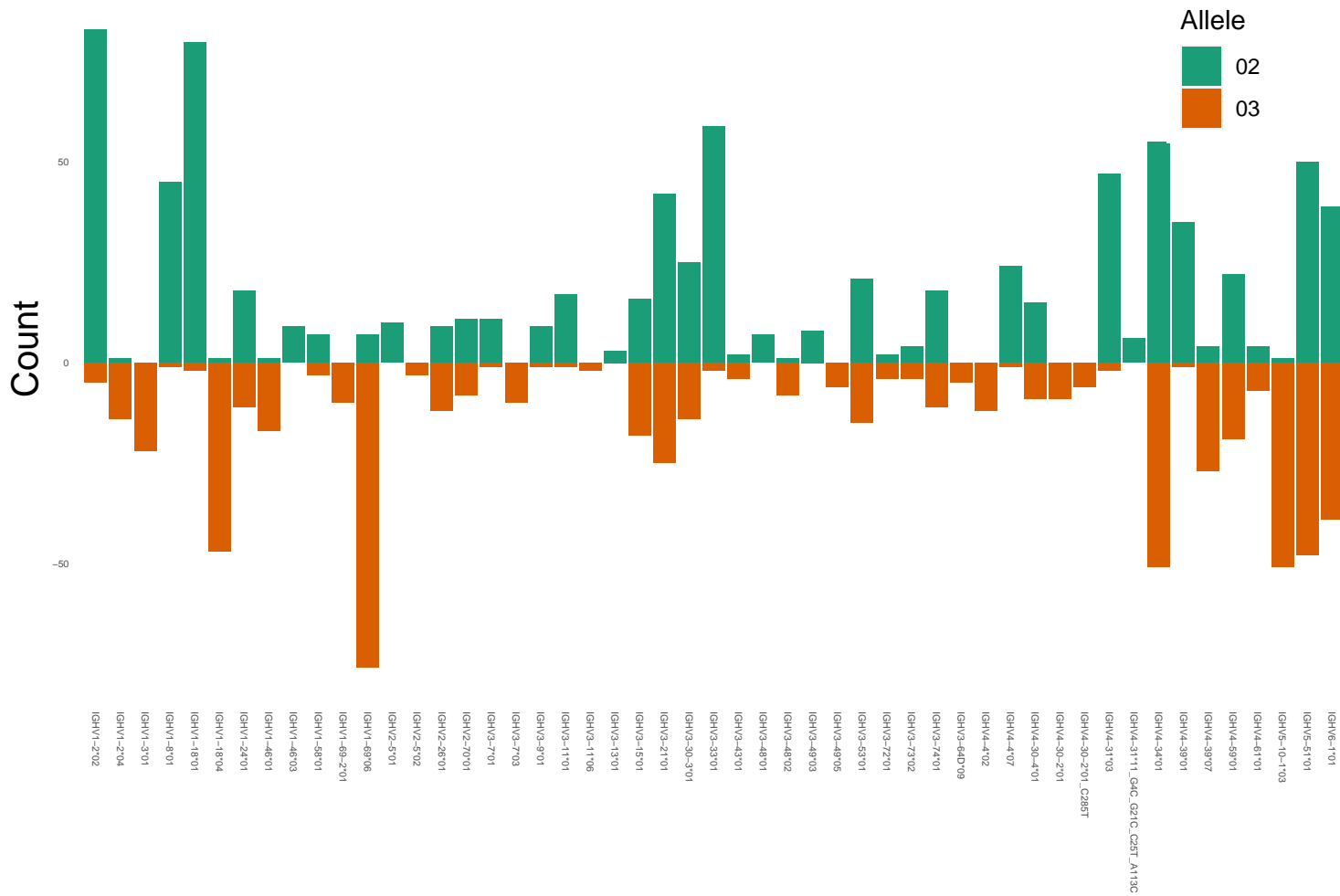


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.