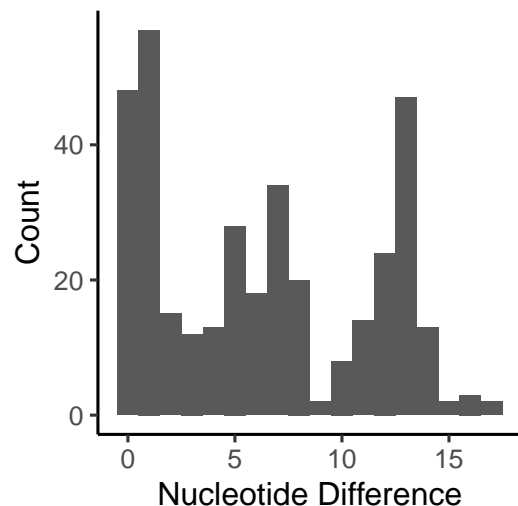


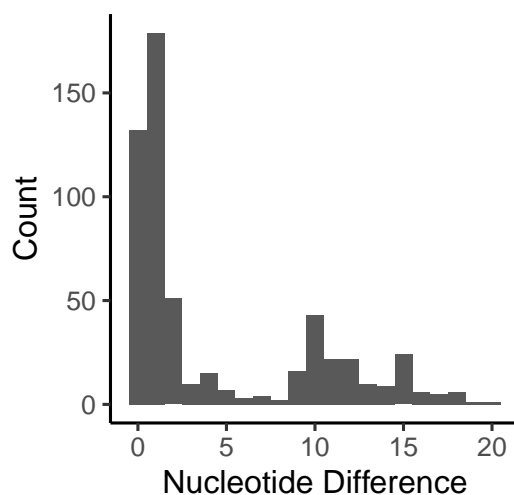
### IGHV1-2\*02

392 sequences assigned  
48 (12.2%) exact matches, in which:  
33 unique CDR3  
4 unique J



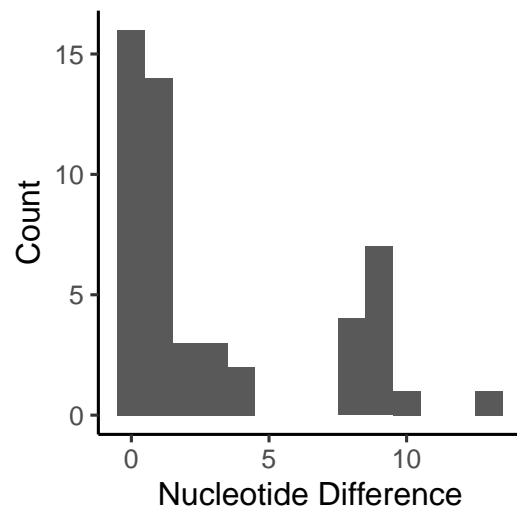
### IGHV1-18\*01

570 sequences assigned  
132 (23.2%) exact matches, in which:  
87 unique CDR3  
7 unique J



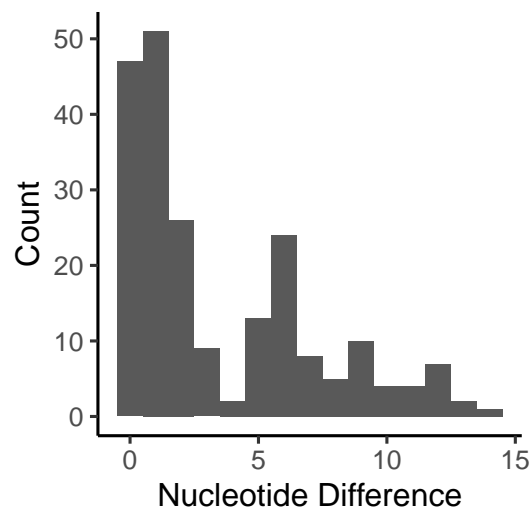
### IGHV1-46\*03

51 sequences assigned  
16 (31.4%) exact matches, in which:  
10 unique CDR3  
2 unique J



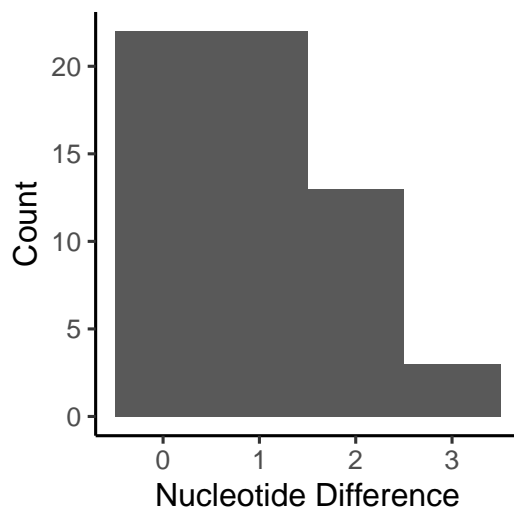
### IGHV1-3\*01

213 sequences assigned  
47 (22.1%) exact matches, in which:  
28 unique CDR3  
4 unique J



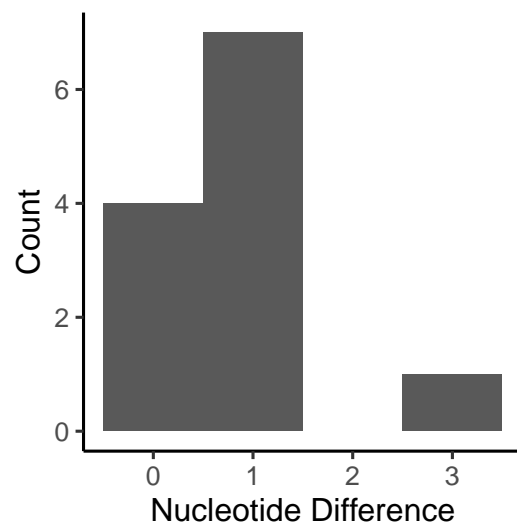
### IGHV1-24\*01

60 sequences assigned  
22 (36.7%) exact matches, in which:  
20 unique CDR3  
5 unique J



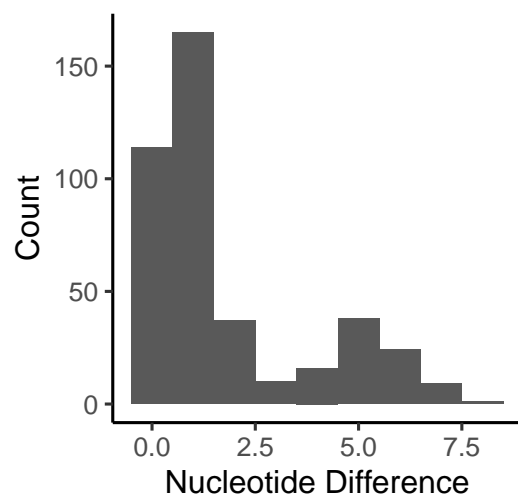
### IGHV1-58\*01

12 sequences assigned  
4 (33.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



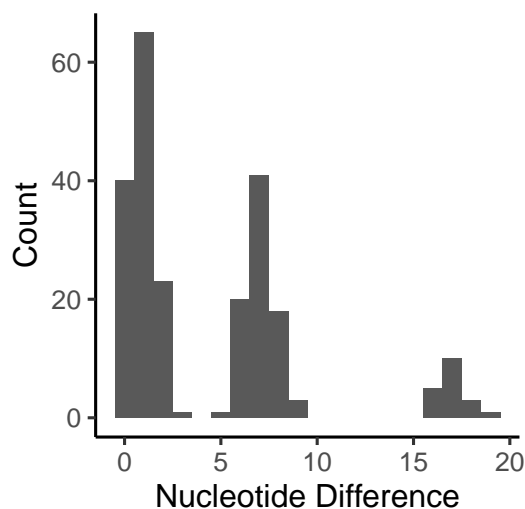
### IGHV1-8\*01

414 sequences assigned  
114 (27.5%) exact matches, in which:  
83 unique CDR3  
6 unique J



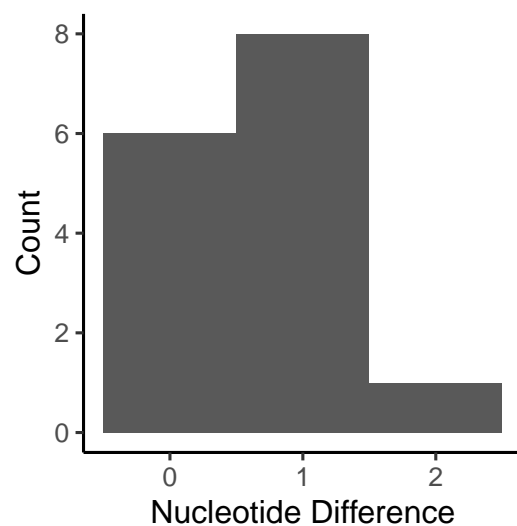
### IGHV1-46\*01

231 sequences assigned  
40 (17.3%) exact matches, in which:  
24 unique CDR3  
5 unique J



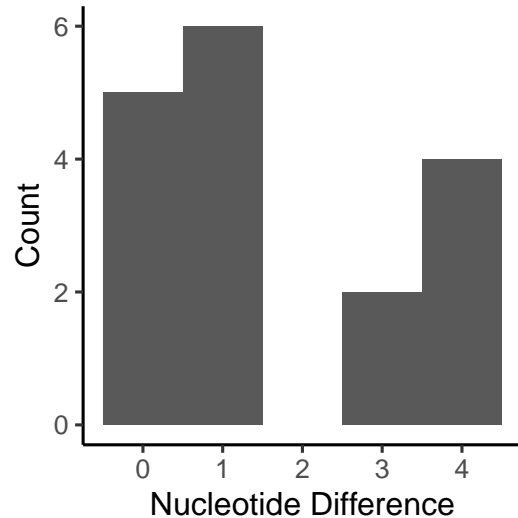
### IGHV1-58\*02

15 sequences assigned  
6 (40%) exact matches, in which:  
4 unique CDR3  
3 unique J



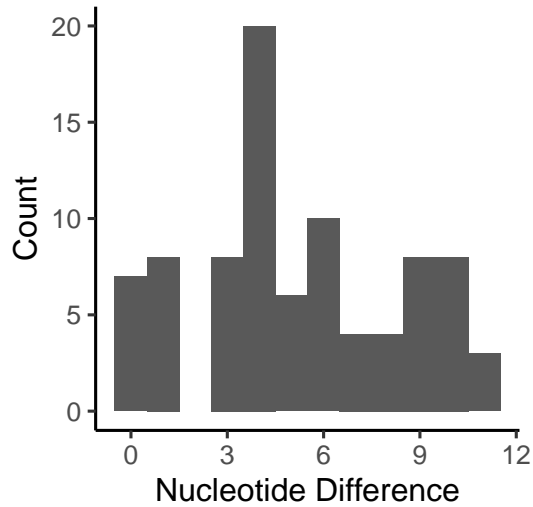
### IGHV1-69-2\*01

17 sequences assigned  
5 (29.4%) exact matches, in which:  
5 unique CDR3  
1 unique J



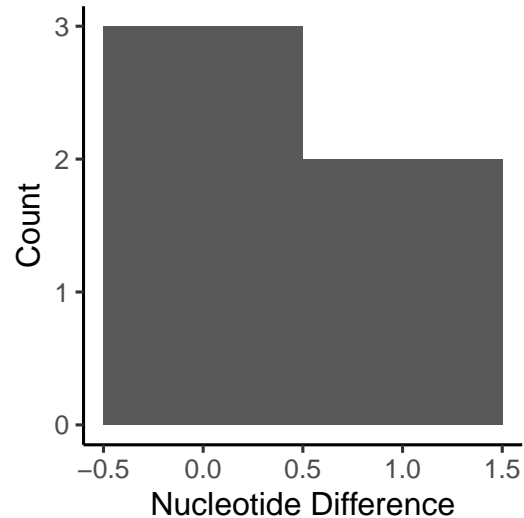
### IGHV2-5\*01

86 sequences assigned  
7 (8.1%) exact matches, in which:  
6 unique CDR3  
4 unique J



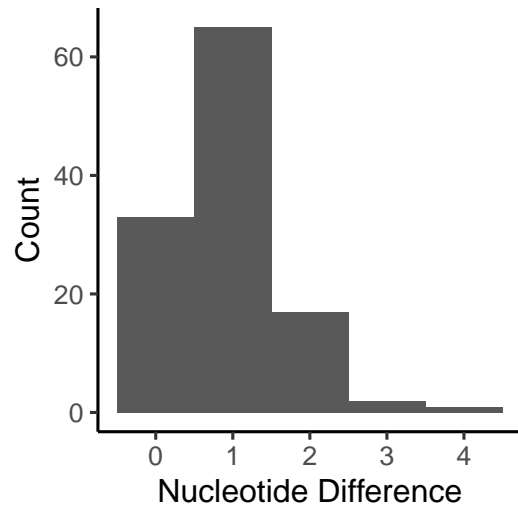
### IGHV2-70\*01

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



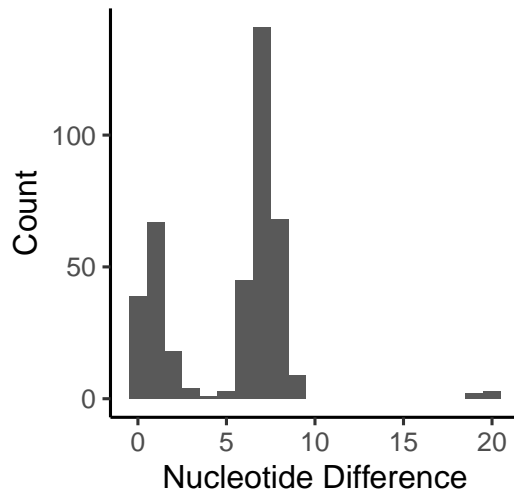
### IGHV1-69\*02

118 sequences assigned  
33 (28%) exact matches, in which:  
28 unique CDR3  
4 unique J



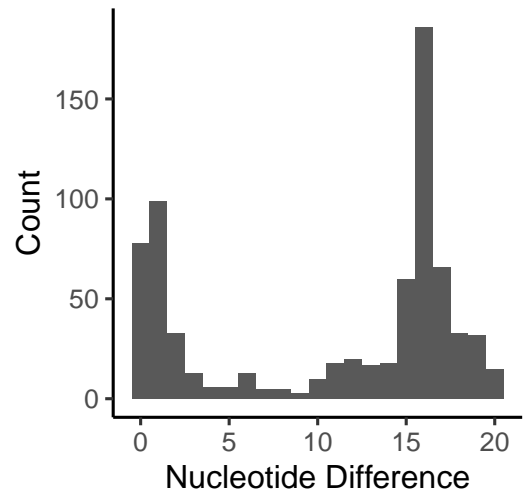
### IGHV2-5\*02

408 sequences assigned  
39 (9.6%) exact matches, in which:  
22 unique CDR3  
3 unique J



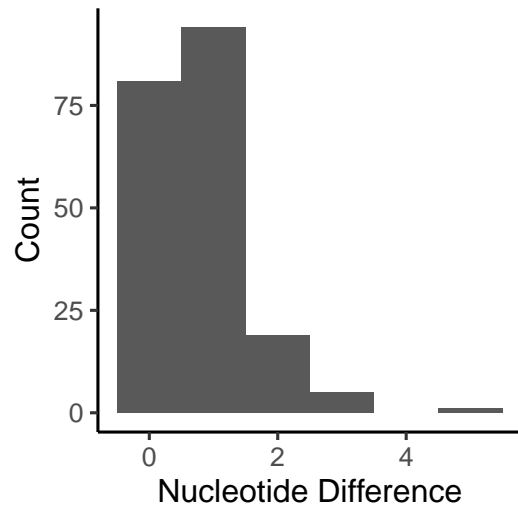
### IGHV3-7\*01

781 sequences assigned  
78 (10%) exact matches, in which:  
58 unique CDR3  
7 unique J



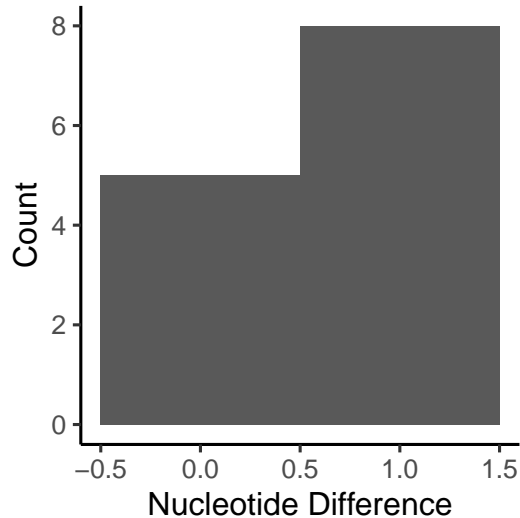
### IGHV1-69\*04\_C184T

200 sequences assigned  
81 (40.5%) exact matches, in which:  
66 unique CDR3  
6 unique J



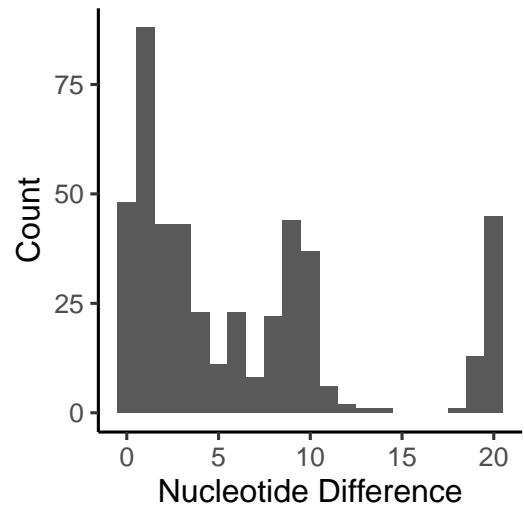
### IGHV2-26\*01

13 sequences assigned  
5 (38.5%) exact matches, in which:  
3 unique CDR3  
1 unique J



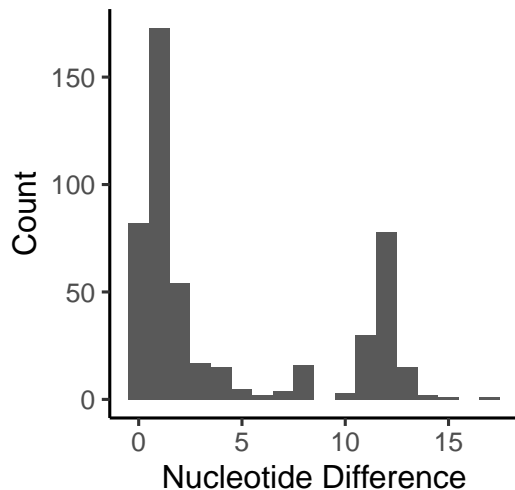
### IGHV3-9\*01

671 sequences assigned  
48 (7.2%) exact matches, in which:  
38 unique CDR3  
5 unique J



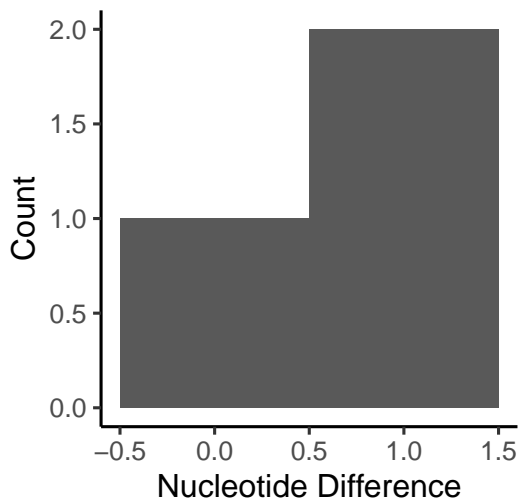
### IGHV3-11\*01

498 sequences assigned  
82 (16.5%) exact matches, in which:  
54 unique CDR3  
5 unique J



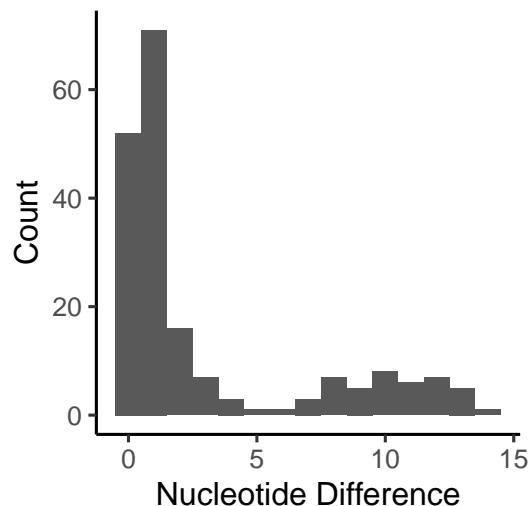
### IGHV3-20\*01

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



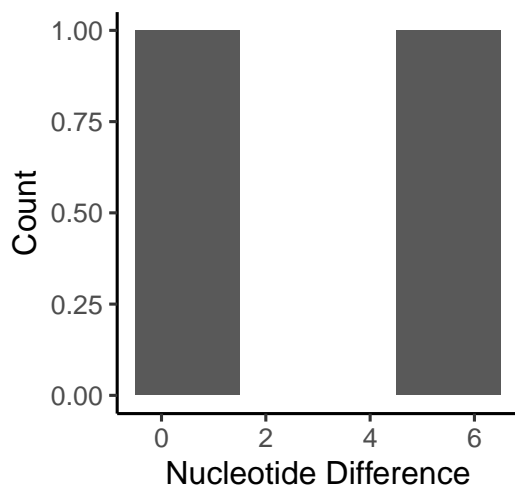
### IGHV3-33\*01

193 sequences assigned  
52 (26.9%) exact matches, in which:  
36 unique CDR3  
3 unique J



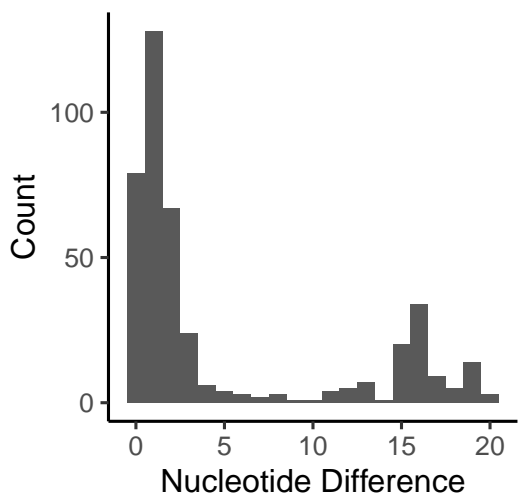
### IGHV3-13\*01

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



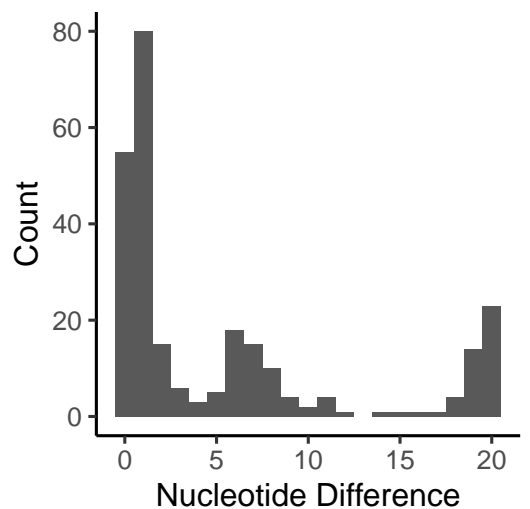
### IGHV3-21\*01

422 sequences assigned  
79 (18.7%) exact matches, in which:  
50 unique CDR3  
6 unique J



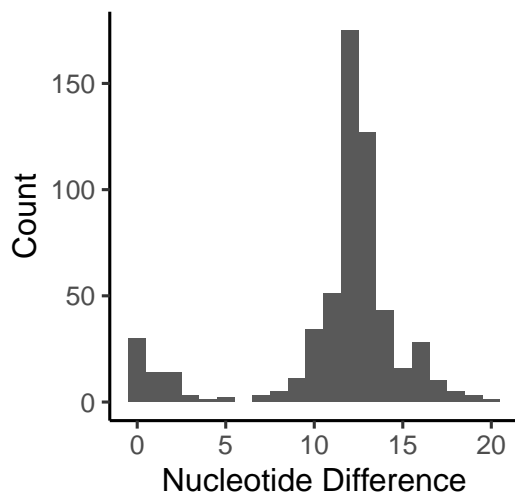
### IGHV3-33\*08

273 sequences assigned  
55 (20.1%) exact matches, in which:  
43 unique CDR3  
4 unique J



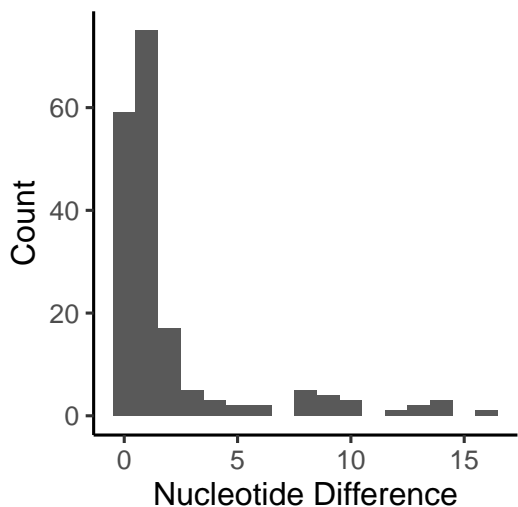
### IGHV3-15\*01

576 sequences assigned  
30 (5.2%) exact matches, in which:  
27 unique CDR3  
5 unique J



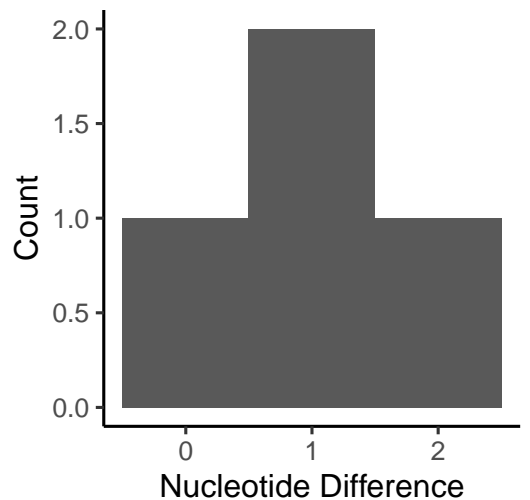
### IGHV3-30-3\*01

182 sequences assigned  
59 (32.4%) exact matches, in which:  
37 unique CDR3  
6 unique J



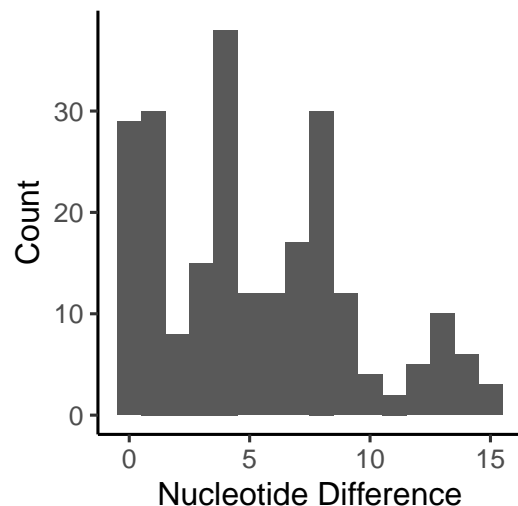
### IGHV3-43\*01

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



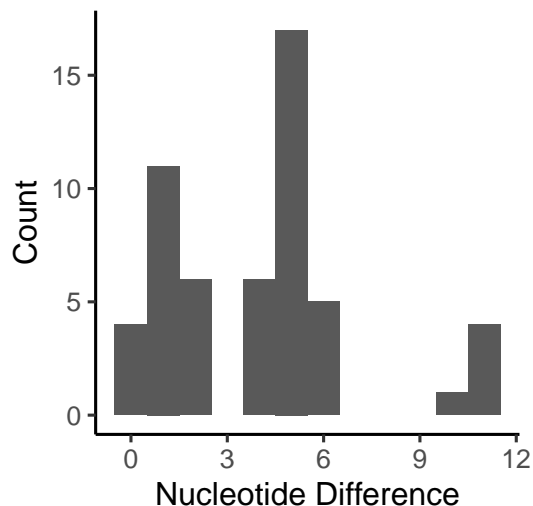
### IGHV3-48\*01

233 sequences assigned  
29 (12.4%) exact matches, in which:  
19 unique CDR3  
4 unique J



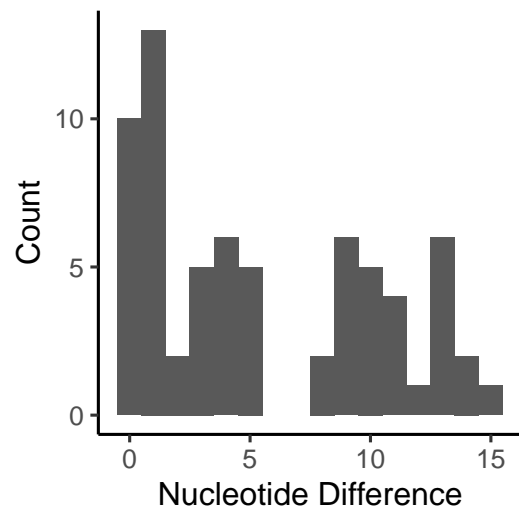
### IGHV3-49\*05

54 sequences assigned  
4 (7.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



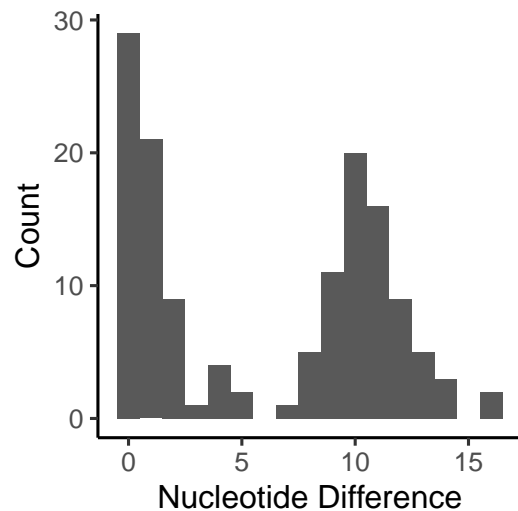
### IGHV3-66\*02

68 sequences assigned  
10 (14.7%) exact matches, in which:  
10 unique CDR3  
5 unique J



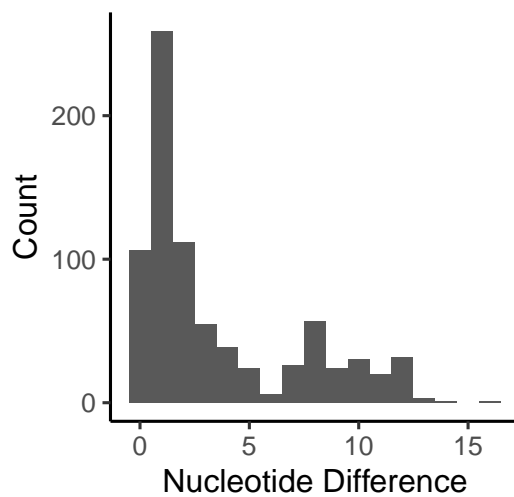
### IGHV3-48\*02

138 sequences assigned  
29 (21%) exact matches, in which:  
20 unique CDR3  
6 unique J



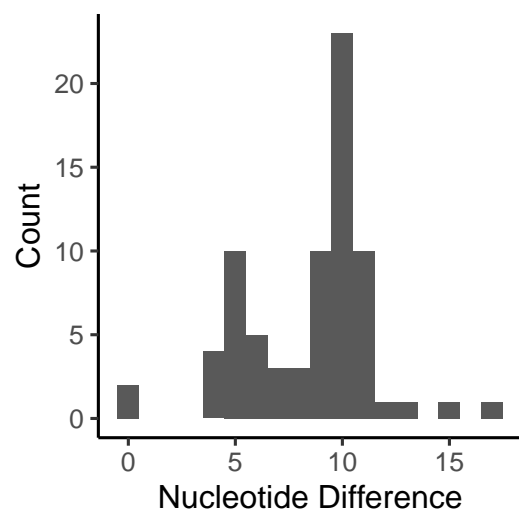
### IGHV3-53\*01

798 sequences assigned  
106 (13.3%) exact matches, in which:  
77 unique CDR3  
6 unique J



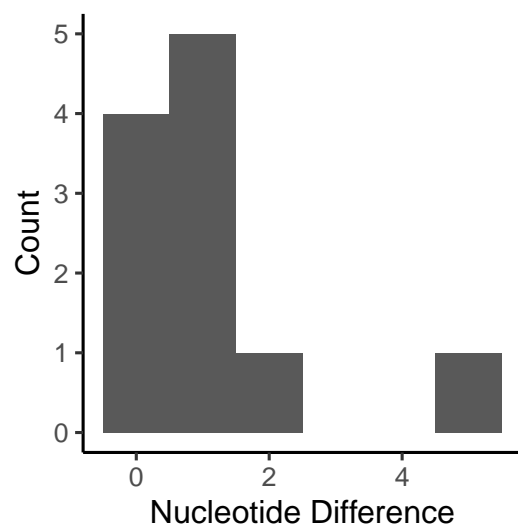
### IGHV3-72\*01

74 sequences assigned  
2 (2.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



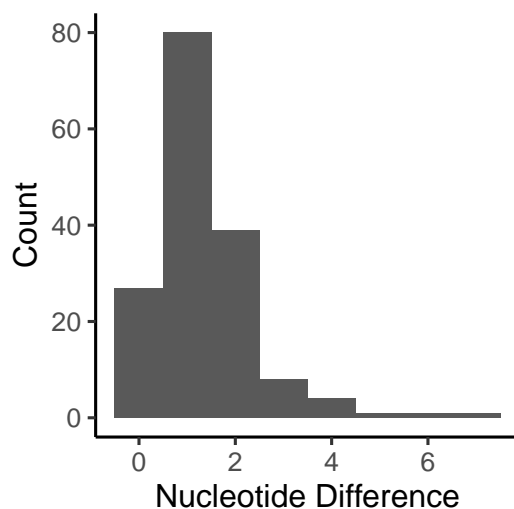
### IGHV3-49\*03

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



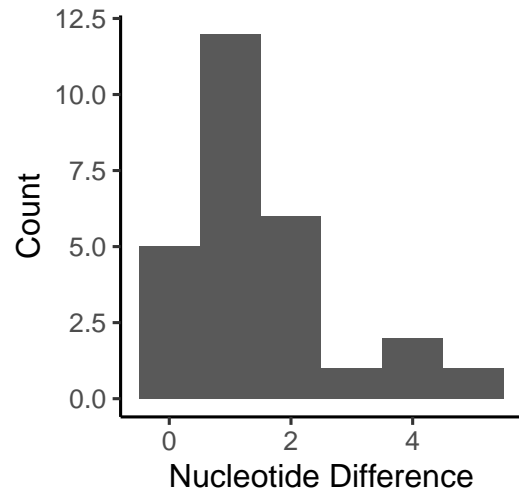
### IGHV3-64\*01

161 sequences assigned  
27 (16.8%) exact matches, in which:  
19 unique CDR3  
2 unique J



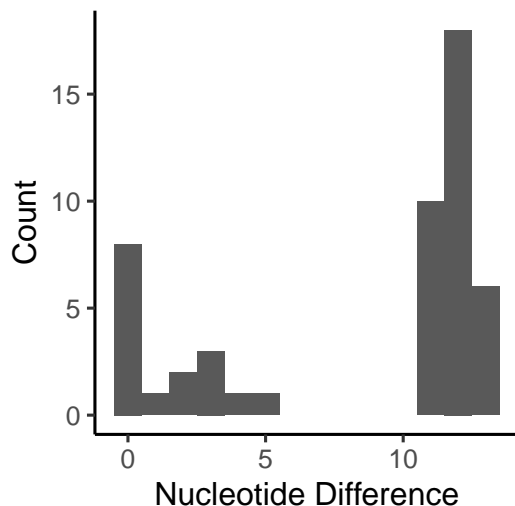
### IGHV3-73\*01

27 sequences assigned  
5 (18.5%) exact matches, in which:  
5 unique CDR3  
2 unique J



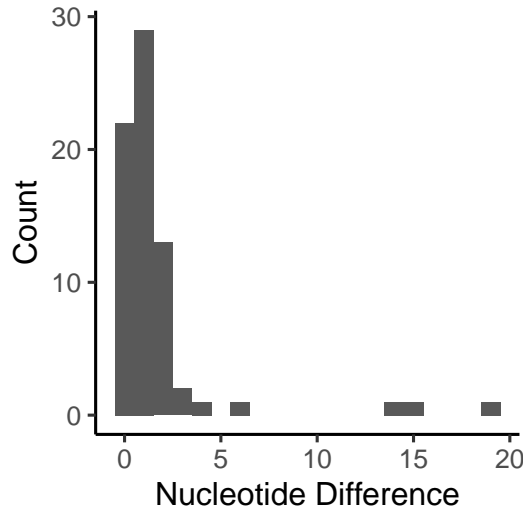
### IGHV3-73\*02

50 sequences assigned  
8 (16%) exact matches, in which:  
7 unique CDR3  
2 unique J



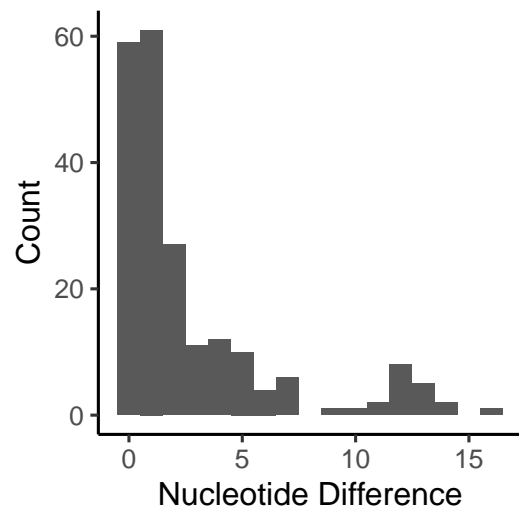
### IGHV4-30-4\*01

71 sequences assigned  
22 (31%) exact matches, in which:  
16 unique CDR3  
3 unique J



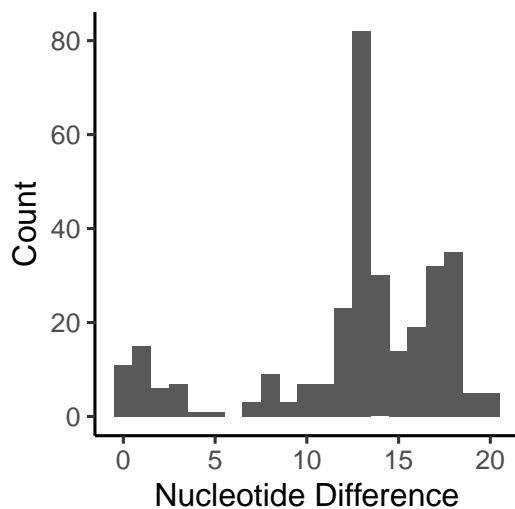
### IGHV4-34\*01

210 sequences assigned  
59 (28.1%) exact matches, in which:  
55 unique CDR3  
6 unique J



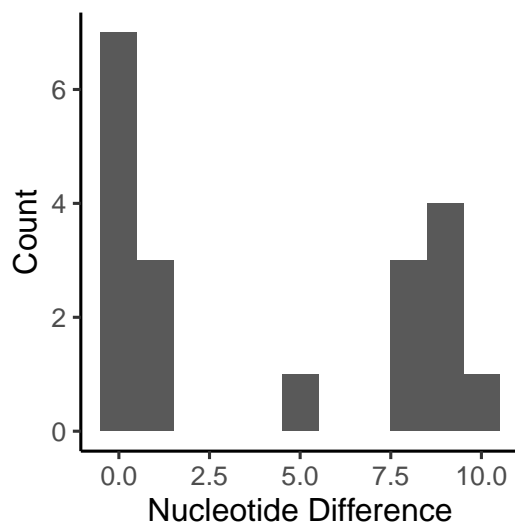
### IGHV3-74\*01

318 sequences assigned  
11 (3.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



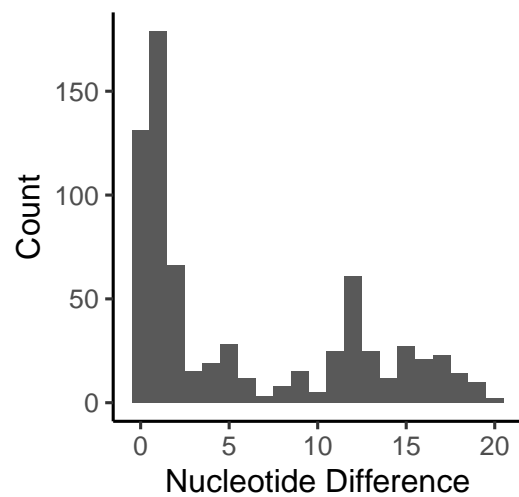
### IGHV4-30-2\*01

19 sequences assigned  
7 (36.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



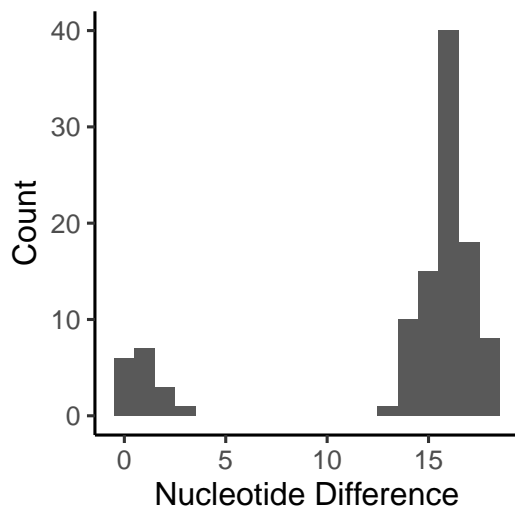
### IGHV4-39\*01

716 sequences assigned  
131 (18.3%) exact matches, in which:  
97 unique CDR3  
7 unique J



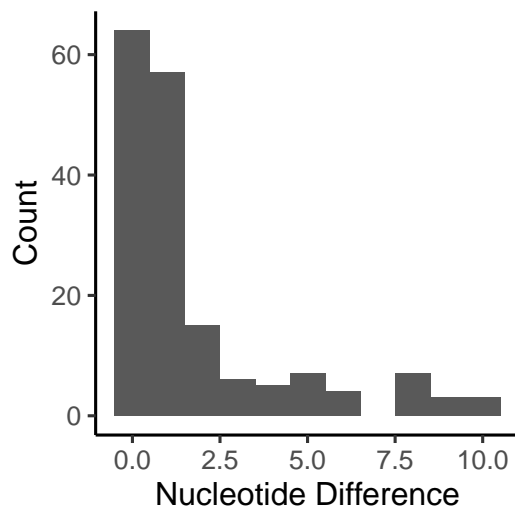
### IGHV4-4\*07

109 sequences assigned  
6 (5.5%) exact matches, in which:  
4 unique CDR3  
3 unique J



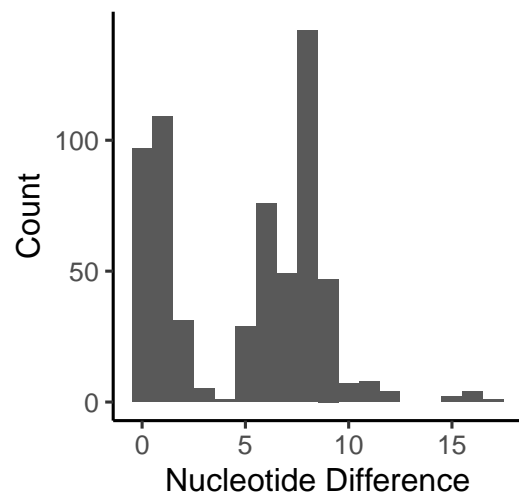
### IGHV4-31\*03

171 sequences assigned  
64 (37.4%) exact matches, in which:  
36 unique CDR3  
5 unique J



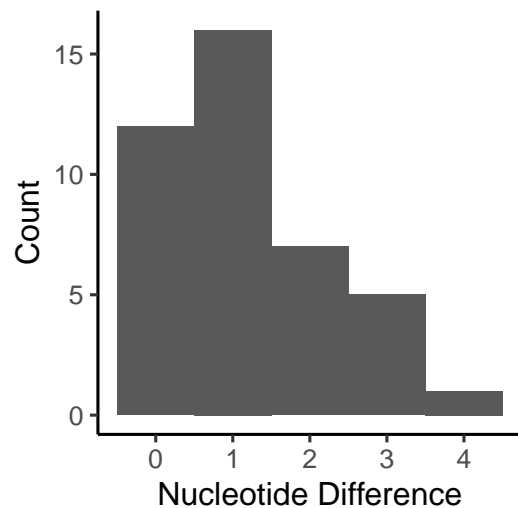
### IGHV4-59\*01

613 sequences assigned  
97 (15.8%) exact matches, in which:  
67 unique CDR3  
5 unique J



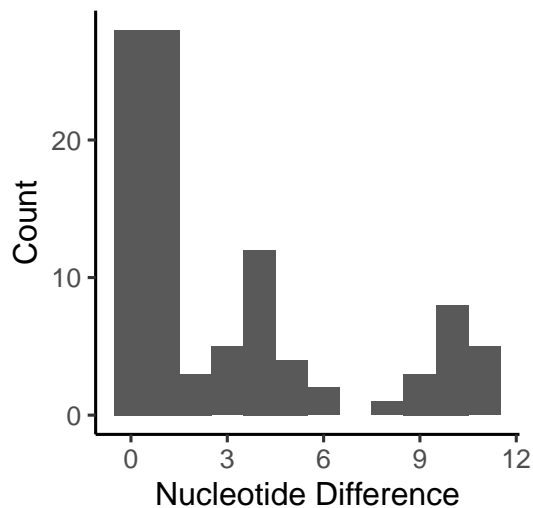
### IGHV4-61\*01

41 sequences assigned  
12 (29.3%) exact matches, in which:  
7 unique CDR3  
2 unique J



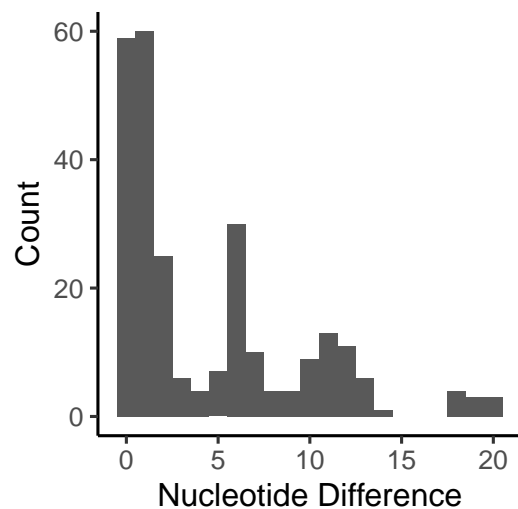
### IGHV5-51\*03

99 sequences assigned  
28 (28.3%) exact matches, in which:  
23 unique CDR3  
4 unique J



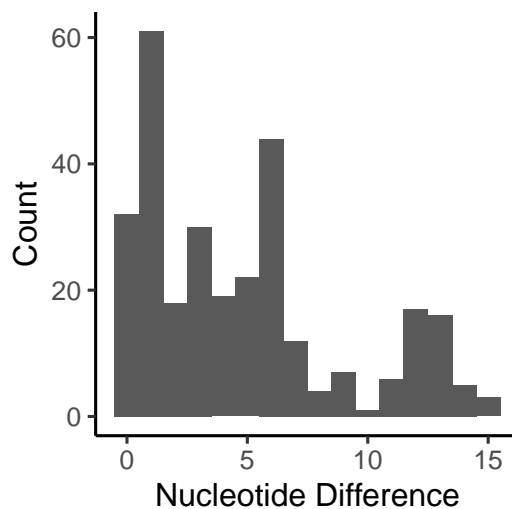
### IGHV4-61\*02

262 sequences assigned  
59 (22.5%) exact matches, in which:  
35 unique CDR3  
6 unique J



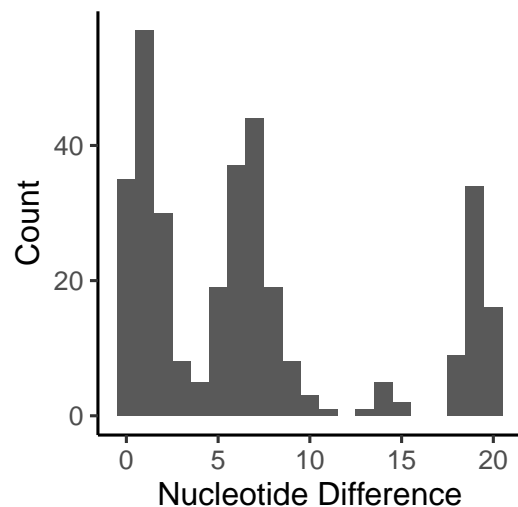
### IGHV6-1\*01

297 sequences assigned  
32 (10.8%) exact matches, in which:  
18 unique CDR3  
4 unique J



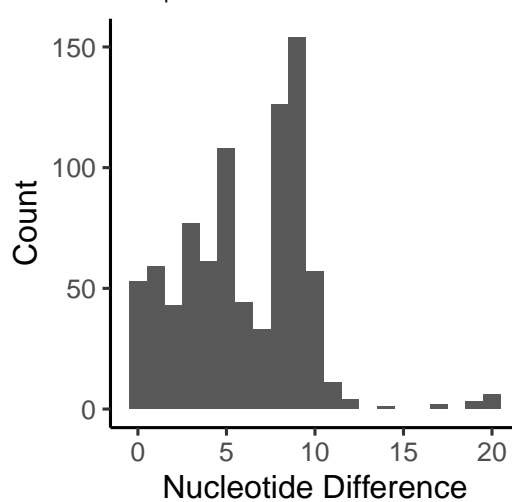
### IGHV5-51\*01

498 sequences assigned  
35 (7%) exact matches, in which:  
31 unique CDR3  
4 unique J

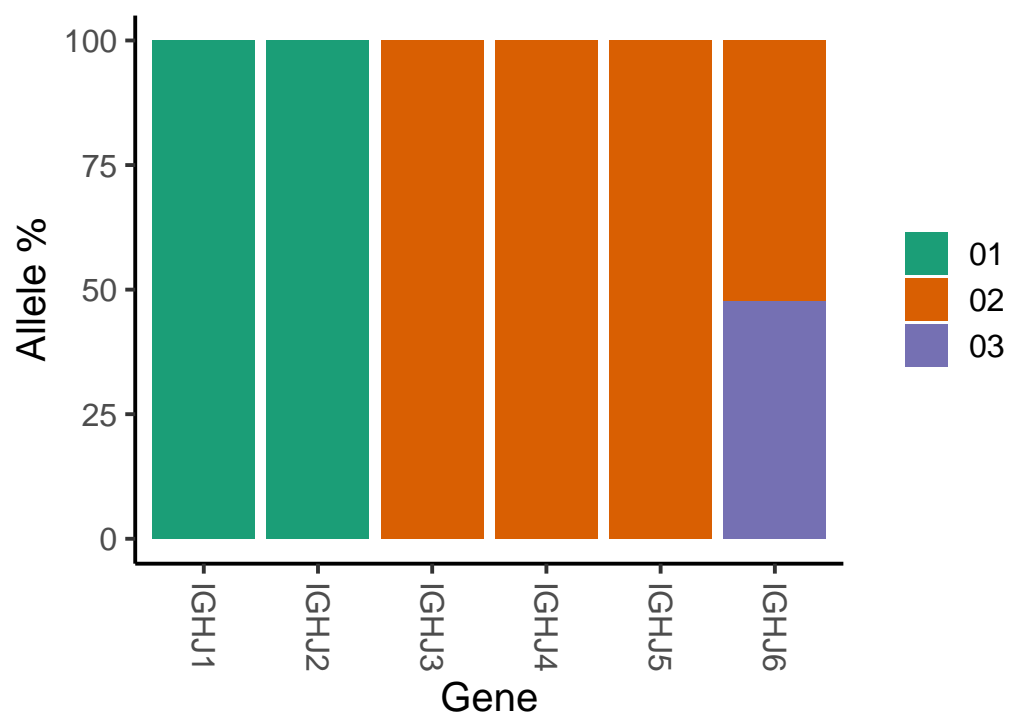


### IGHV7-4-1\*02

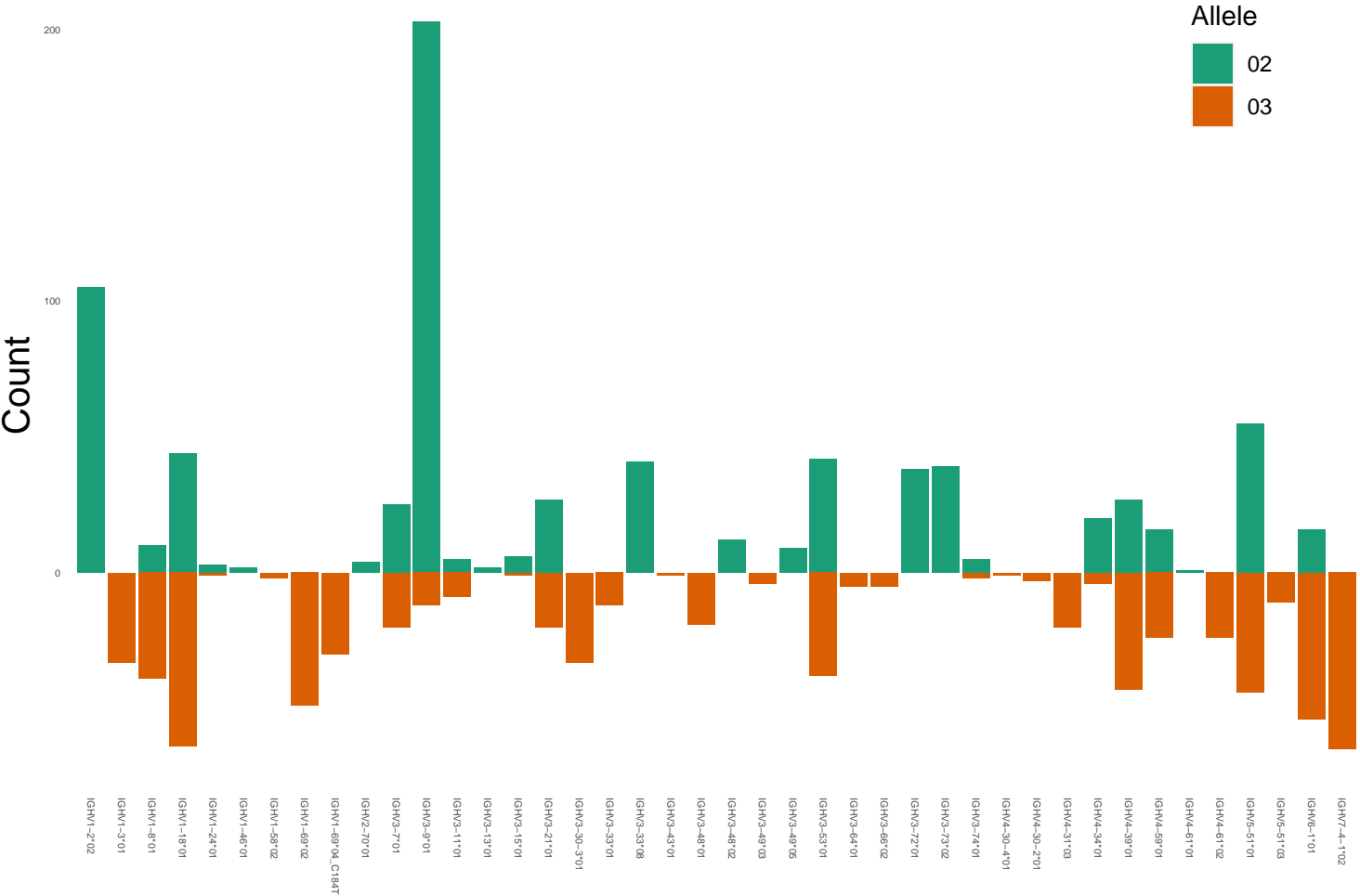
900 sequences assigned  
53 (5.9%) exact matches, in which:  
32 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.