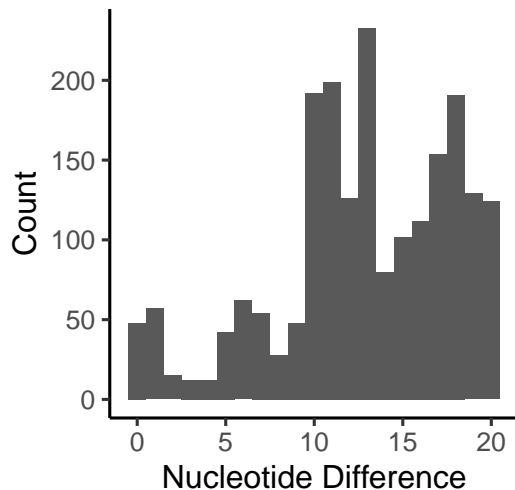


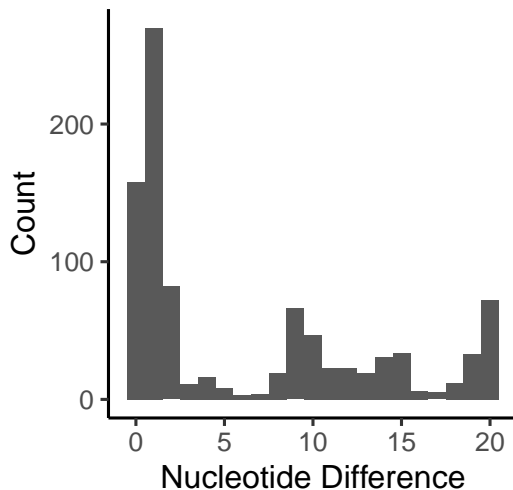
### IGHV1-2\*02

3035 sequences assigned  
48 (1.6%) exact matches, in which:  
33 unique CDR3  
4 unique J



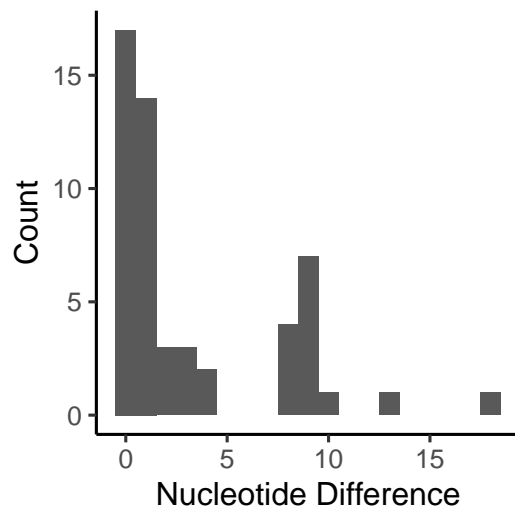
### IGHV1-18\*01

1028 sequences assigned  
158 (15.4%) exact matches, in which:  
99 unique CDR3  
7 unique J



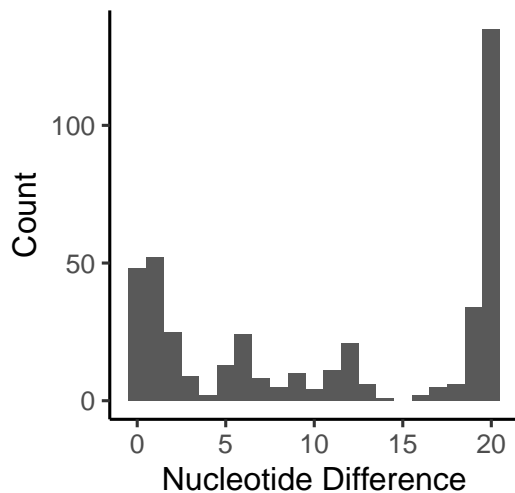
### IGHV1-46\*03

130 sequences assigned  
17 (13.1%) exact matches, in which:  
10 unique CDR3  
2 unique J



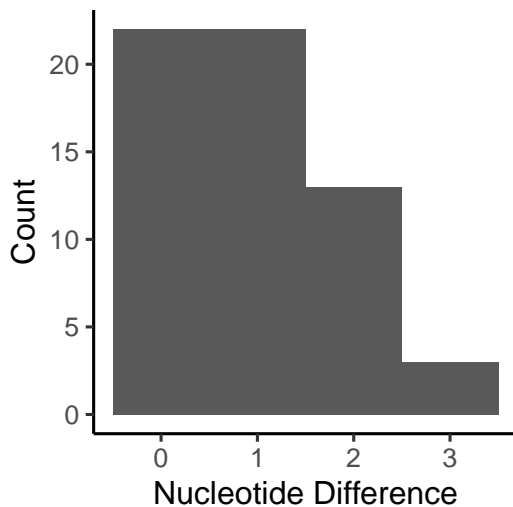
### IGHV1-3\*01

613 sequences assigned  
48 (7.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



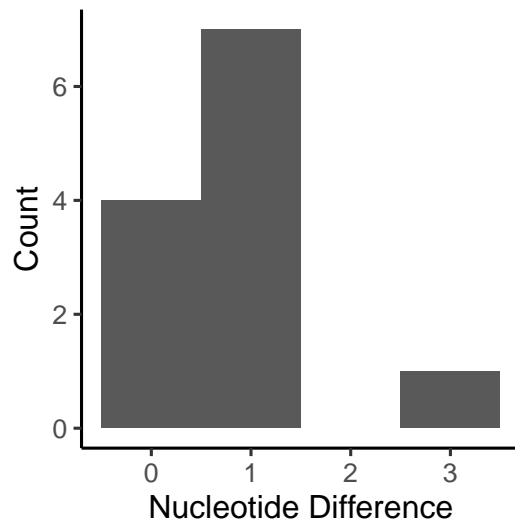
### IGHV1-24\*01

201 sequences assigned  
22 (10.9%) exact matches, in which:  
20 unique CDR3  
5 unique J



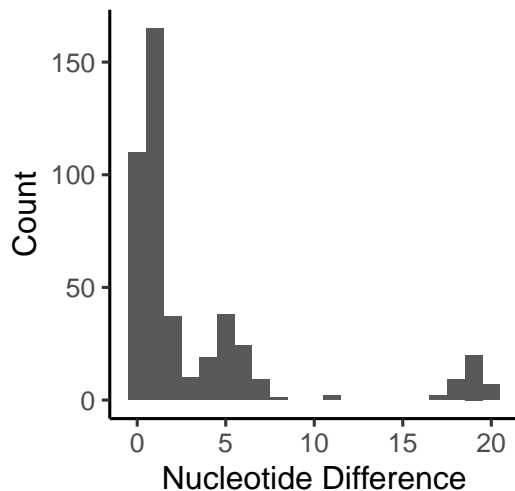
### IGHV1-58\*01

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



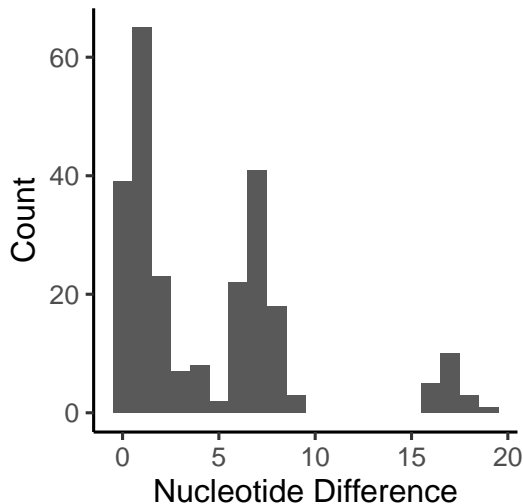
### IGHV1-8\*01

710 sequences assigned  
110 (15.5%) exact matches, in which:  
81 unique CDR3  
6 unique J



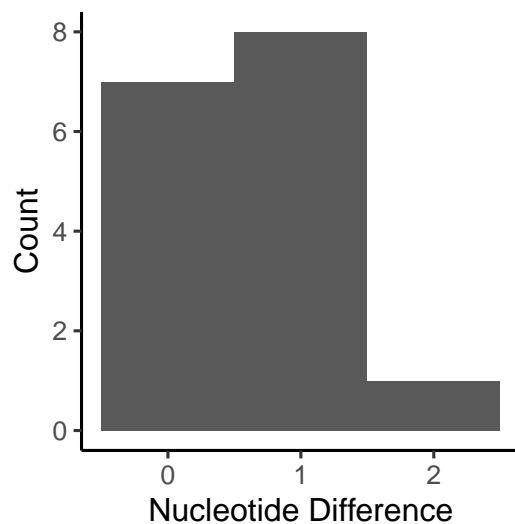
### IGHV1-46\*01

361 sequences assigned  
39 (10.8%) exact matches, in which:  
24 unique CDR3  
5 unique J



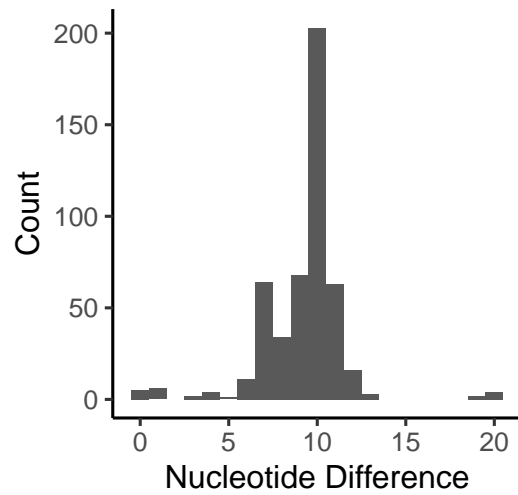
### IGHV1-58\*02

16 sequences assigned  
7 (43.8%) exact matches, in which:  
4 unique CDR3  
3 unique J



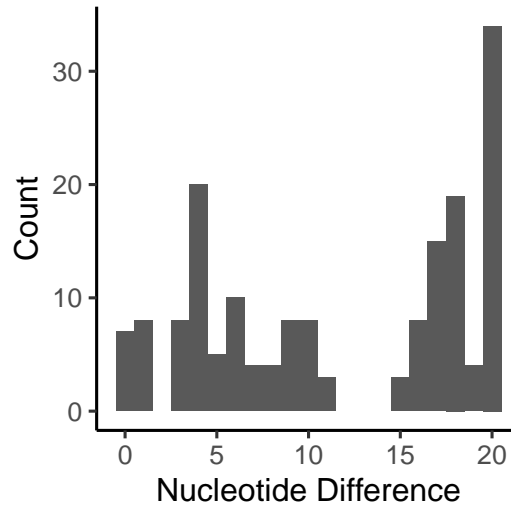
### IGHV1-69-2\*01

589 sequences assigned  
5 (0.8%) exact matches, in which:  
5 unique CDR3  
1 unique J



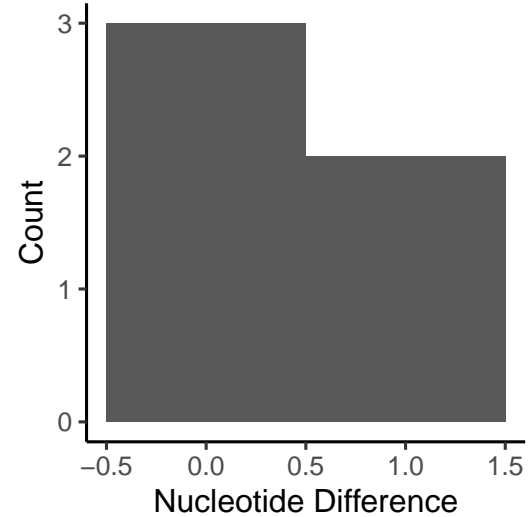
### IGHV2-5\*01

308 sequences assigned  
7 (2.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



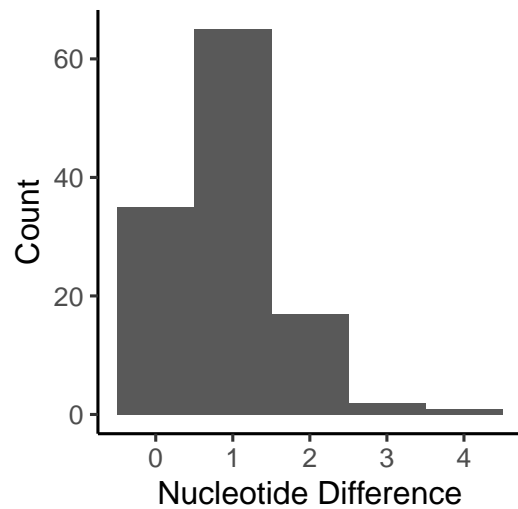
### IGHV2-70\*01

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



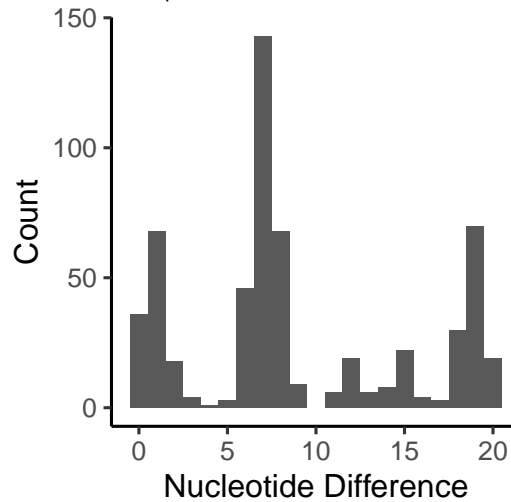
### IGHV1-69\*02

120 sequences assigned  
35 (29.2%) exact matches, in which:  
29 unique CDR3  
4 unique J



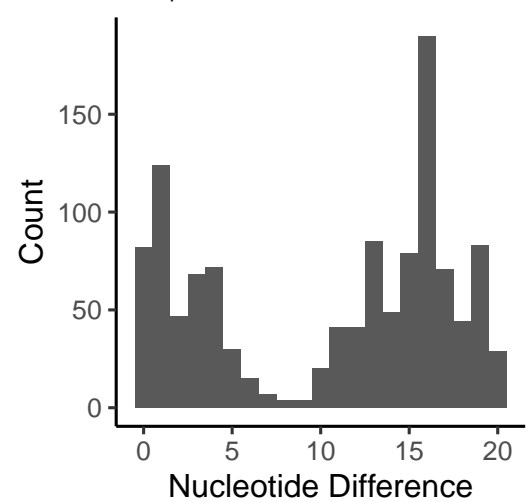
### IGHV2-5\*02

592 sequences assigned  
36 (6.1%) exact matches, in which:  
22 unique CDR3  
3 unique J



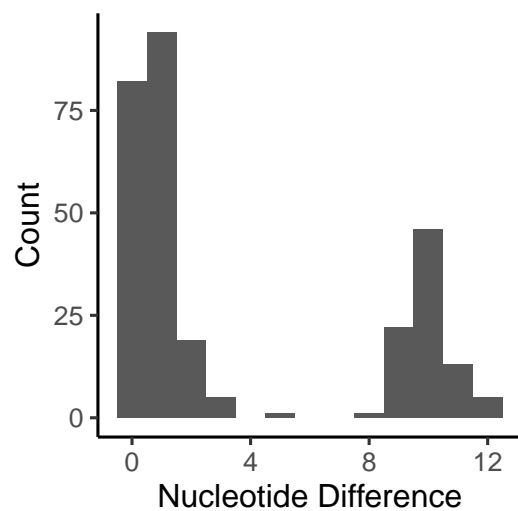
### IGHV3-7\*01

1301 sequences assigned  
82 (6.3%) exact matches, in which:  
64 unique CDR3  
7 unique J



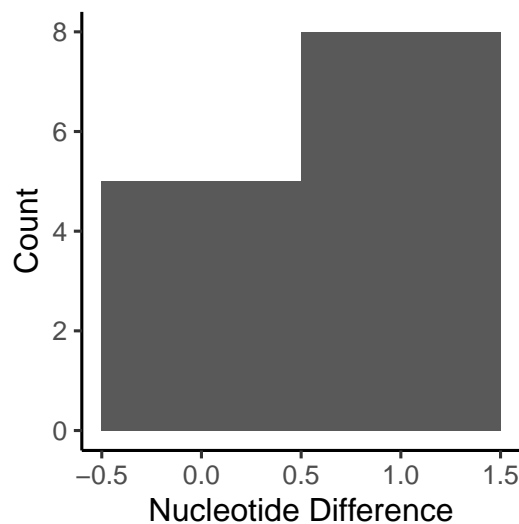
### IGHV1-69\*04\_C184T

301 sequences assigned  
82 (27.2%) exact matches, in which:  
66 unique CDR3  
6 unique J



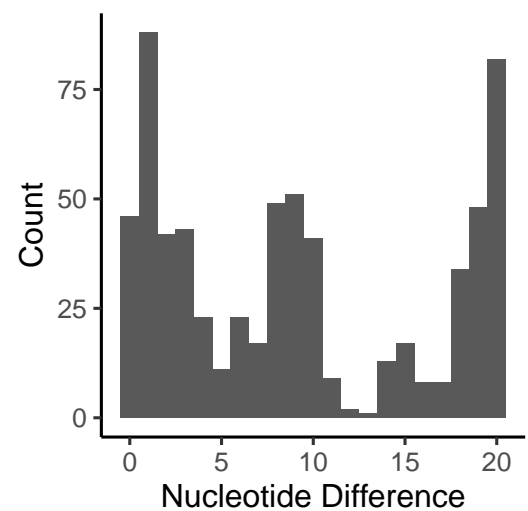
### IGHV2-26\*01

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



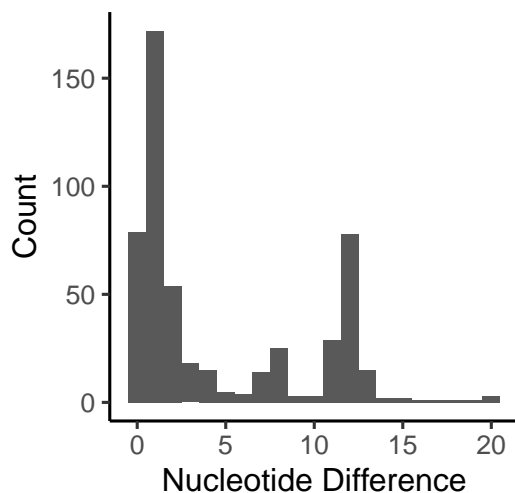
### IGHV3-9\*01

1069 sequences assigned  
46 (4.3%) exact matches, in which:  
36 unique CDR3  
5 unique J



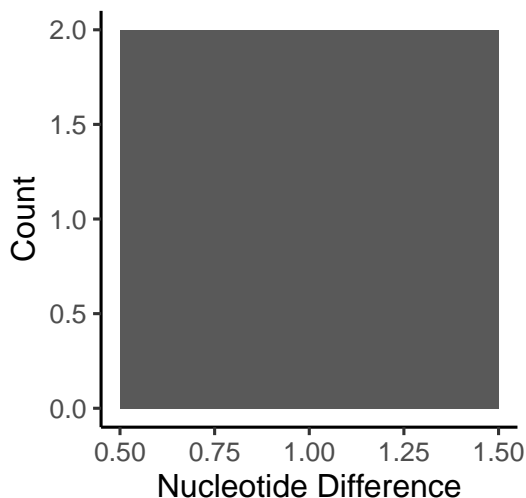
### IGHV3-11\*01

578 sequences assigned  
79 (13.7%) exact matches, in which:  
54 unique CDR3  
5 unique J



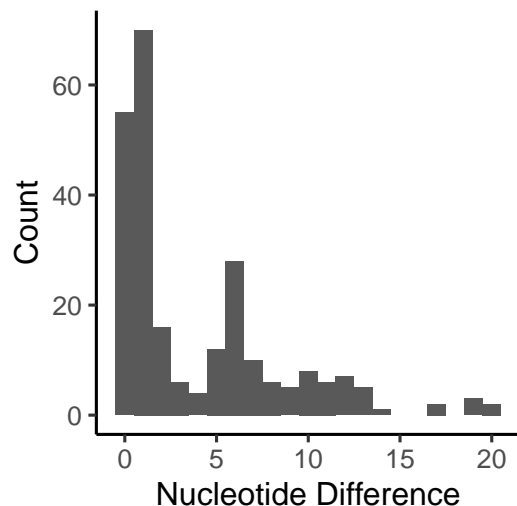
### IGHV3-20\*01

2 sequences assigned  
No exact matches.



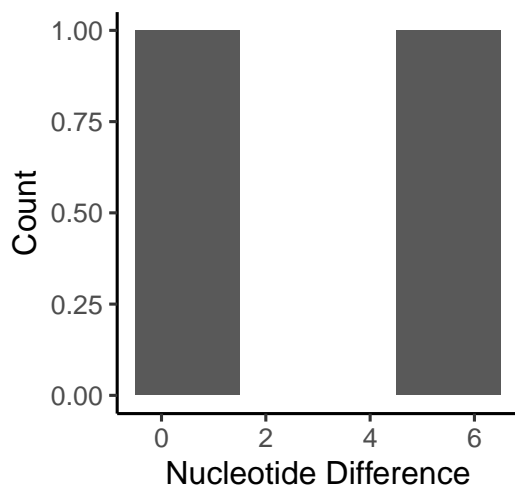
### IGHV3-33\*01

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



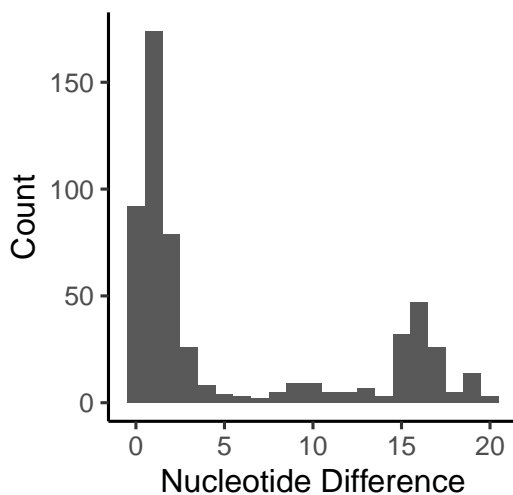
### IGHV3-13\*01

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



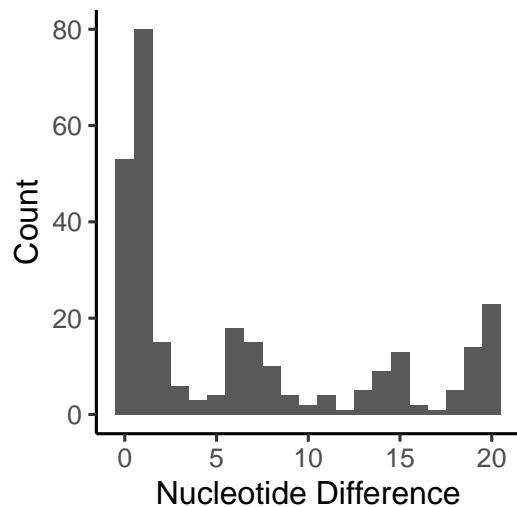
### IGHV3-21\*01

764 sequences assigned  
92 (12%) exact matches, in which:  
57 unique CDR3  
6 unique J



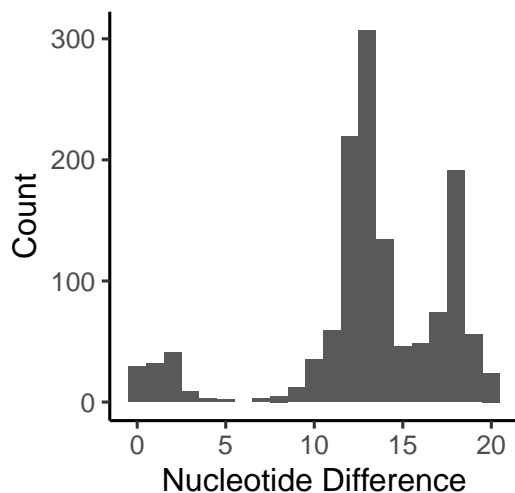
### IGHV3-33\*08

666 sequences assigned  
53 (8%) exact matches, in which:  
42 unique CDR3  
4 unique J



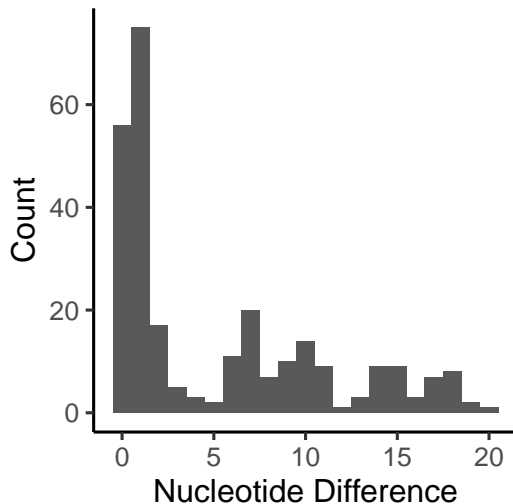
### IGHV3-15\*01

1362 sequences assigned  
29 (2.1%) exact matches, in which:  
26 unique CDR3  
4 unique J



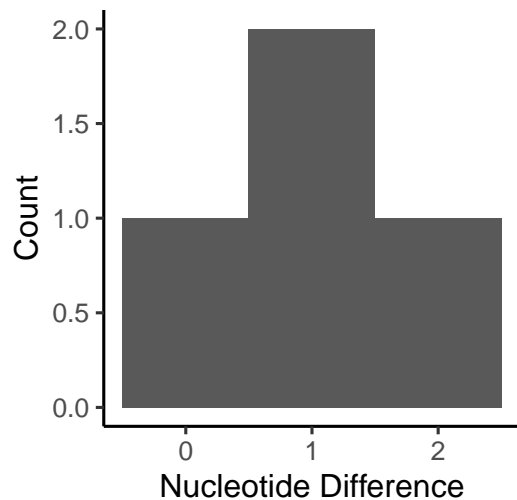
### IGHV3-30-3\*01

469 sequences assigned  
56 (11.9%) exact matches, in which:  
36 unique CDR3  
6 unique J



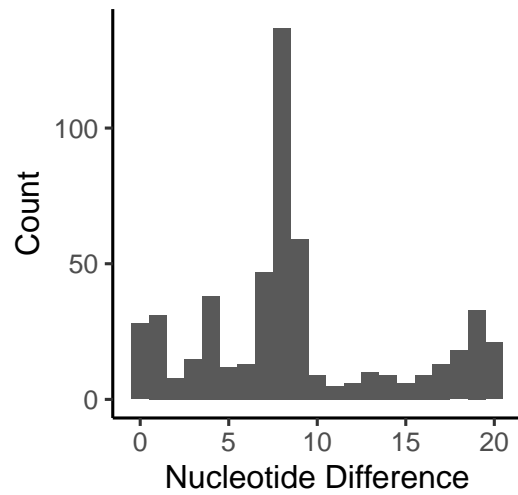
### IGHV3-43\*01

23 sequences assigned  
1 (4.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



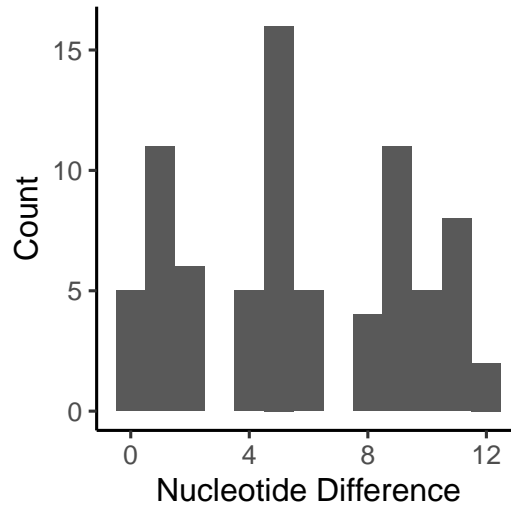
### IGHV3-48\*01

529 sequences assigned  
28 (5.3%) exact matches, in which:  
19 unique CDR3  
4 unique J



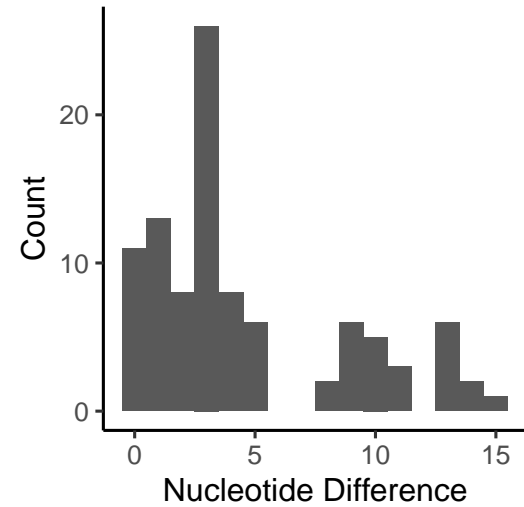
### IGHV3-49\*05

78 sequences assigned  
5 (6.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



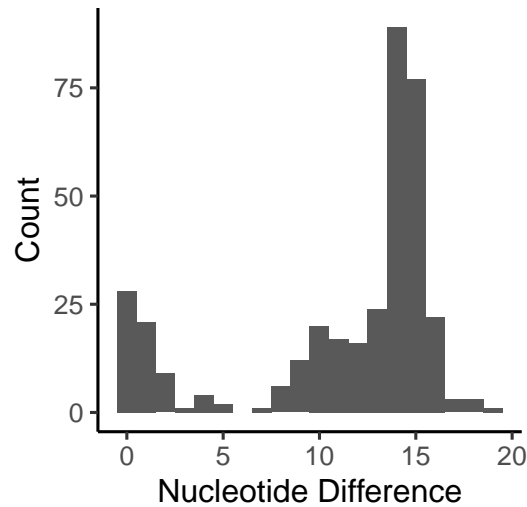
### IGHV3-66\*02

103 sequences assigned  
11 (10.7%) exact matches, in which:  
10 unique CDR3  
5 unique J



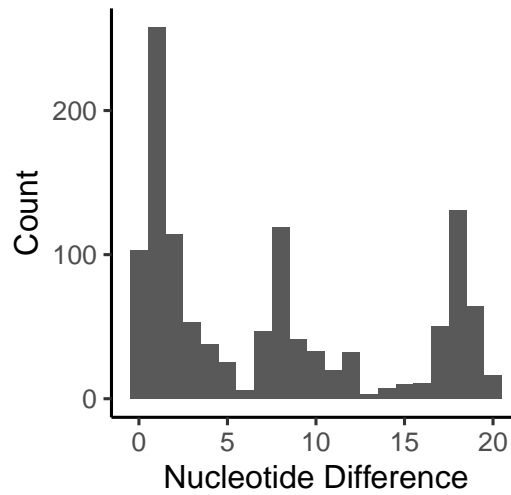
### IGHV3-48\*02

407 sequences assigned  
28 (6.9%) exact matches, in which:  
19 unique CDR3  
6 unique J



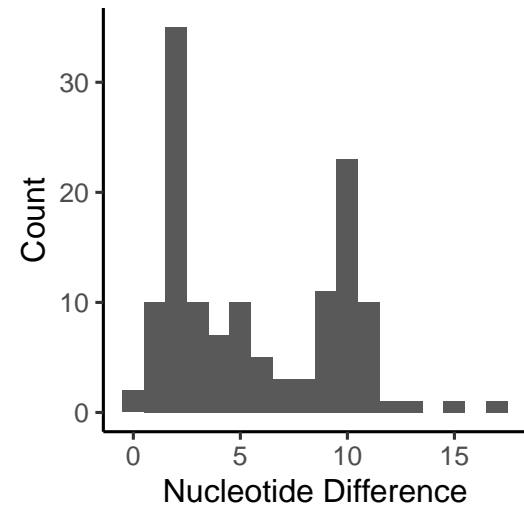
### IGHV3-53\*01

1547 sequences assigned  
103 (6.7%) exact matches, in which:  
74 unique CDR3  
6 unique J



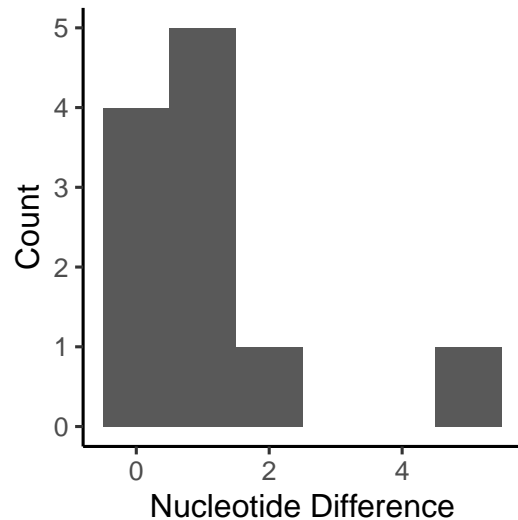
### IGHV3-72\*01

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



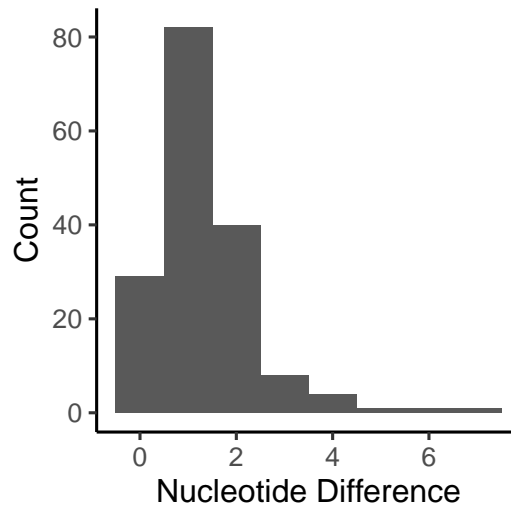
### IGHV3-49\*03

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



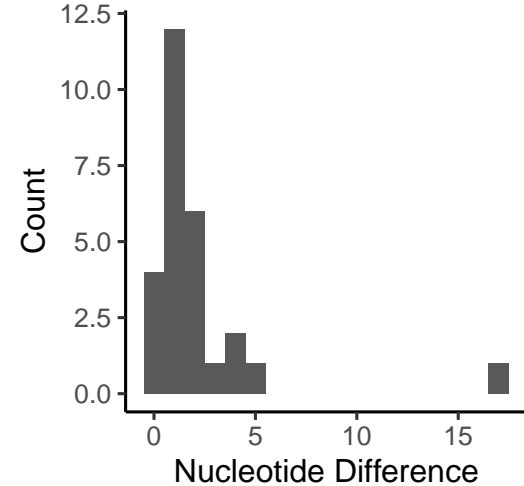
### IGHV3-64\*01

166 sequences assigned  
29 (17.5%) exact matches, in which:  
19 unique CDR3  
2 unique J



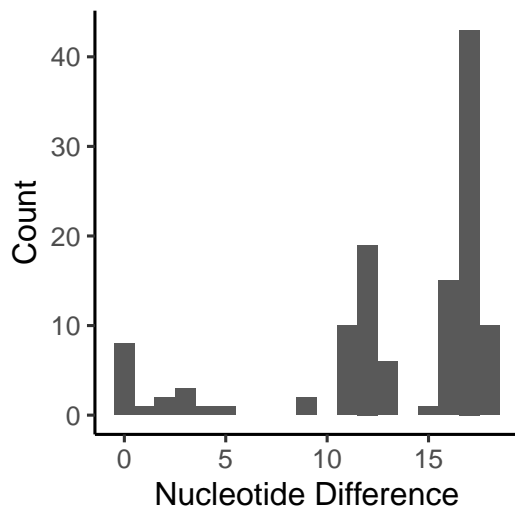
### IGHV3-73\*01

27 sequences assigned  
4 (14.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



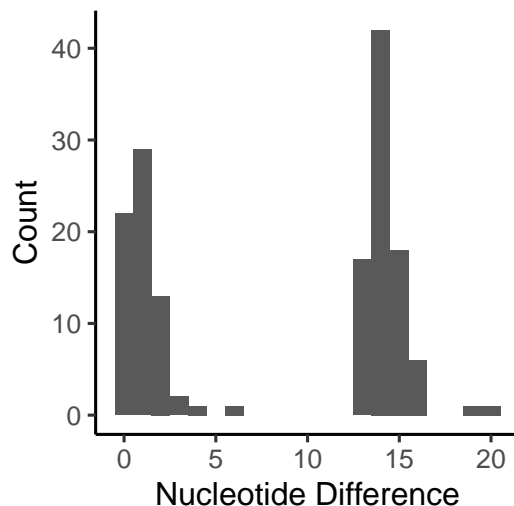
### IGHV3-73\*02

123 sequences assigned  
8 (6.5%) exact matches, in which:  
7 unique CDR3  
2 unique J



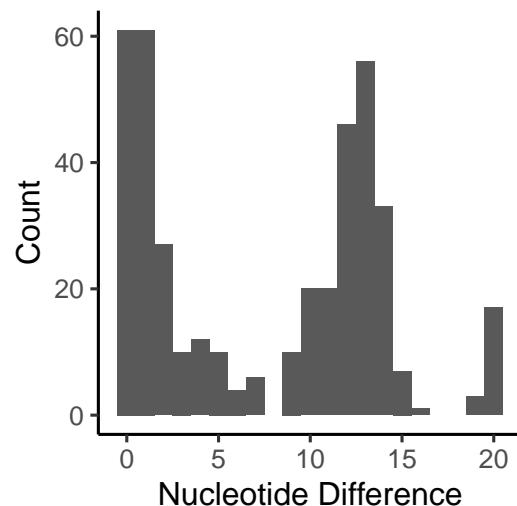
### IGHV4-30-4\*01

251 sequences assigned  
22 (8.8%) exact matches, in which:  
16 unique CDR3  
3 unique J



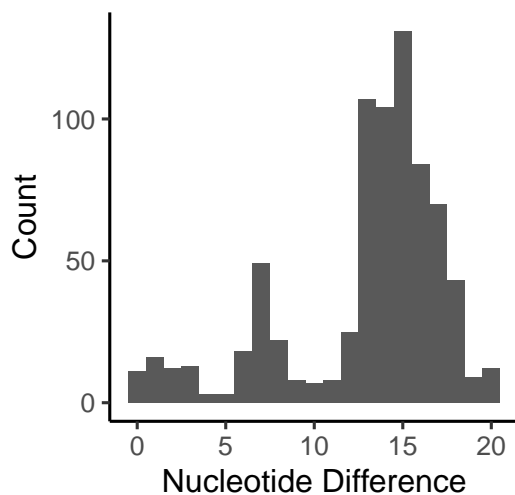
### IGHV4-34\*01

897 sequences assigned  
61 (6.8%) exact matches, in which:  
56 unique CDR3  
6 unique J



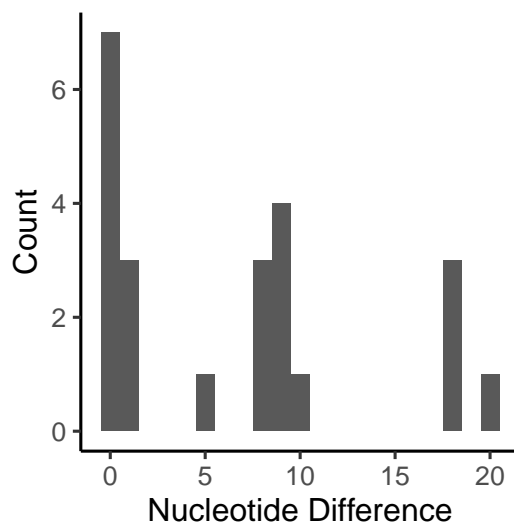
### IGHV3-74\*01

964 sequences assigned  
11 (1.1%) exact matches, in which:  
10 unique CDR3  
4 unique J



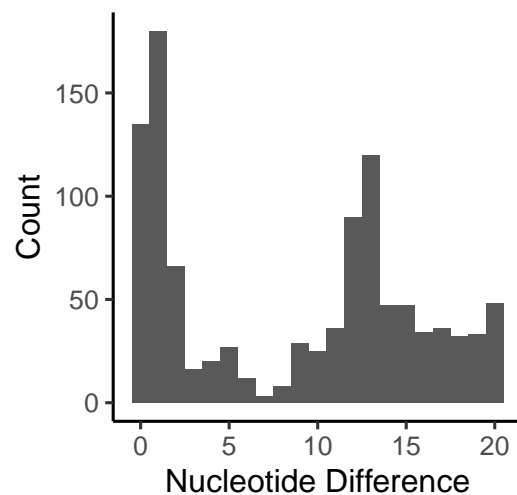
### IGHV4-30-2\*01

25 sequences assigned  
7 (28%) exact matches, in which:  
5 unique CDR3  
3 unique J



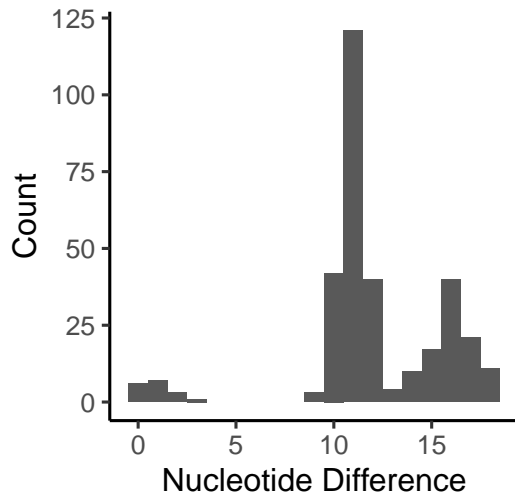
### IGHV4-39\*01

1706 sequences assigned  
135 (7.9%) exact matches, in which:  
102 unique CDR3  
7 unique J



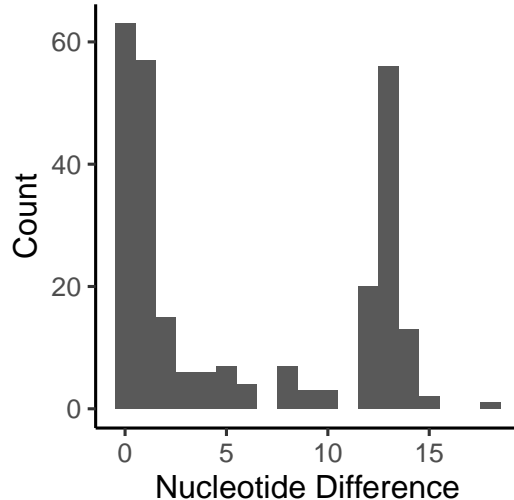
### IGHV4-4\*07

469 sequences assigned  
6 (1.3%) exact matches, in which:  
4 unique CDR3  
3 unique J



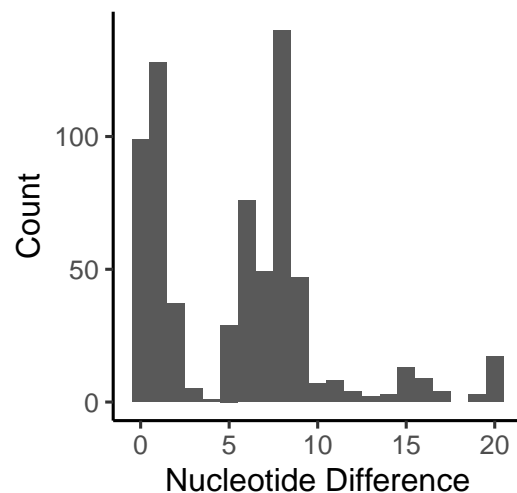
### IGHV4-31\*03

276 sequences assigned  
63 (22.8%) exact matches, in which:  
35 unique CDR3  
5 unique J



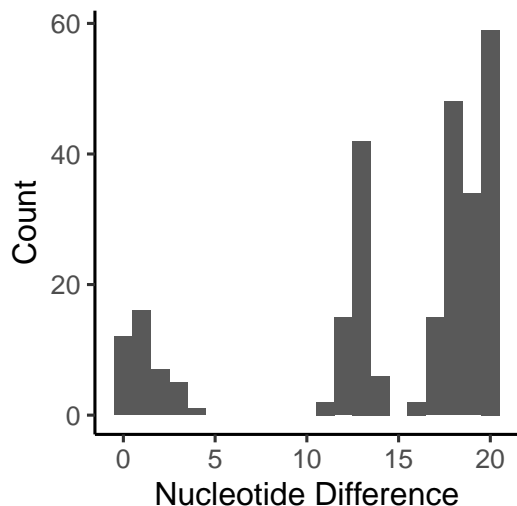
### IGHV4-59\*01

1275 sequences assigned  
99 (7.8%) exact matches, in which:  
68 unique CDR3  
5 unique J



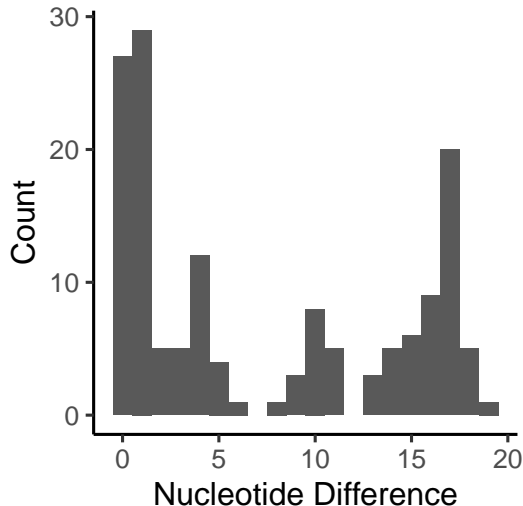
### IGHV4-61\*01

279 sequences assigned  
12 (4.3%) exact matches, in which:  
7 unique CDR3  
2 unique J



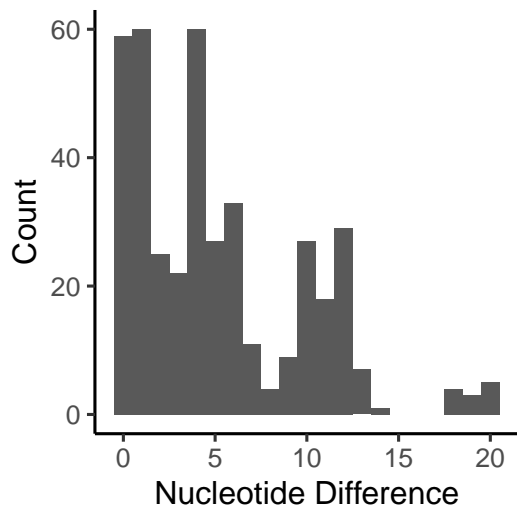
### IGHV5-51\*03

192 sequences assigned  
27 (14.1%) exact matches, in which:  
23 unique CDR3  
4 unique J



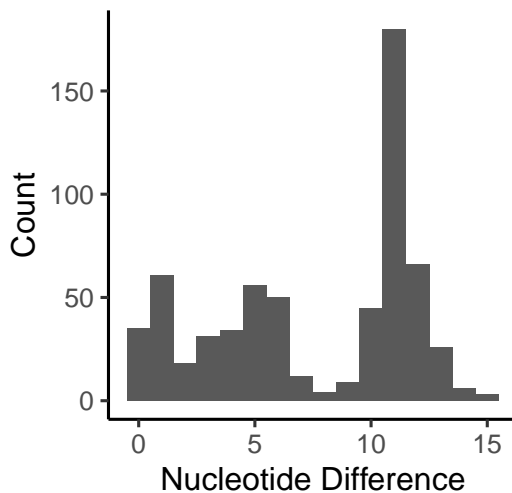
### IGHV4-61\*02

536 sequences assigned  
59 (11%) exact matches, in which:  
34 unique CDR3  
6 unique J



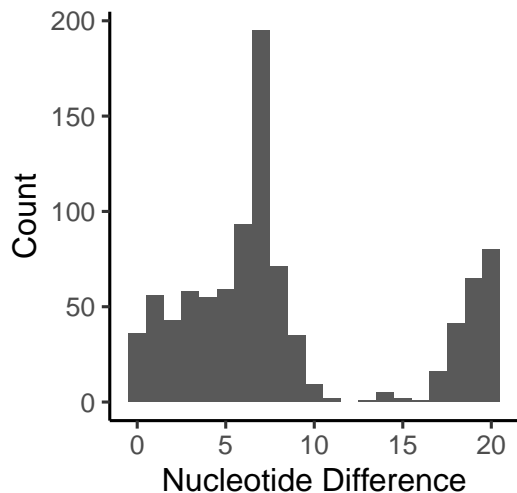
### IGHV6-1\*01

636 sequences assigned  
35 (5.5%) exact matches, in which:  
18 unique CDR3  
4 unique J



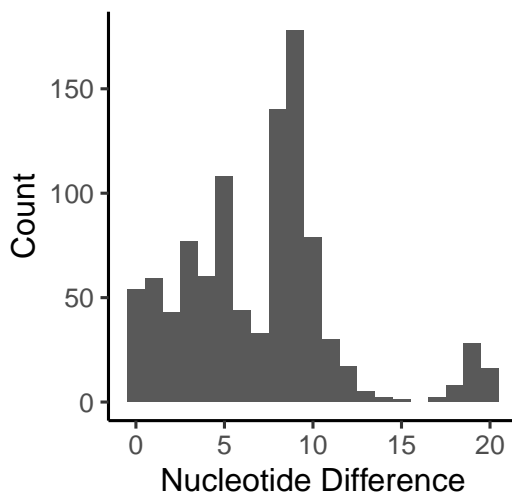
### IGHV5-51\*01

1168 sequences assigned  
36 (3.1%) exact matches, in which:  
32 unique CDR3  
4 unique J

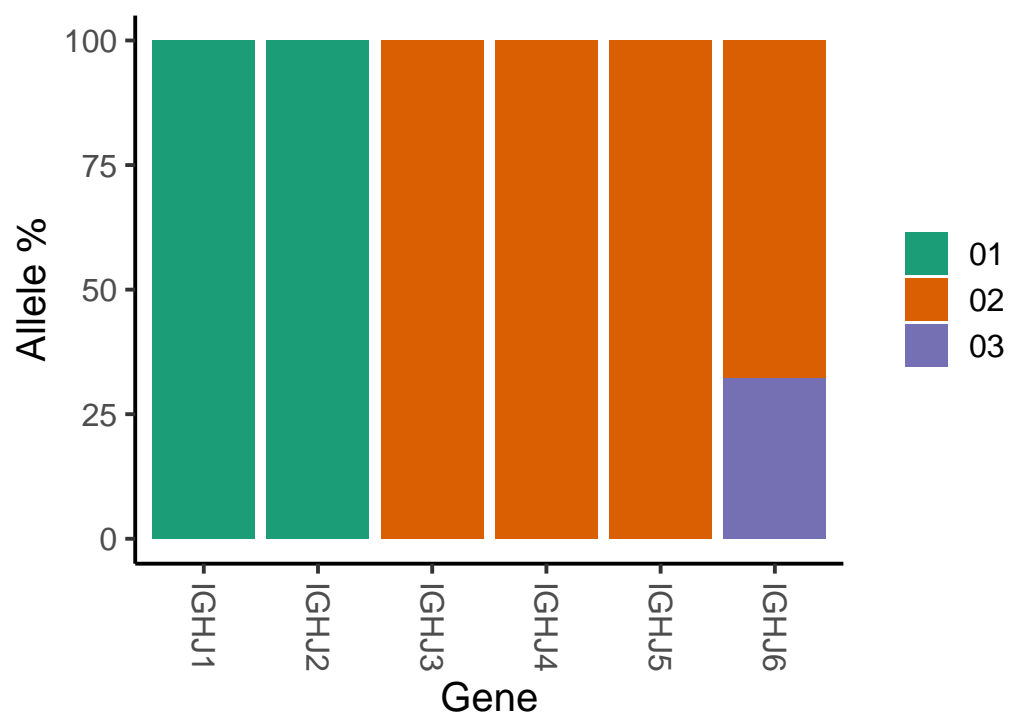


### IGHV7-4-1\*02

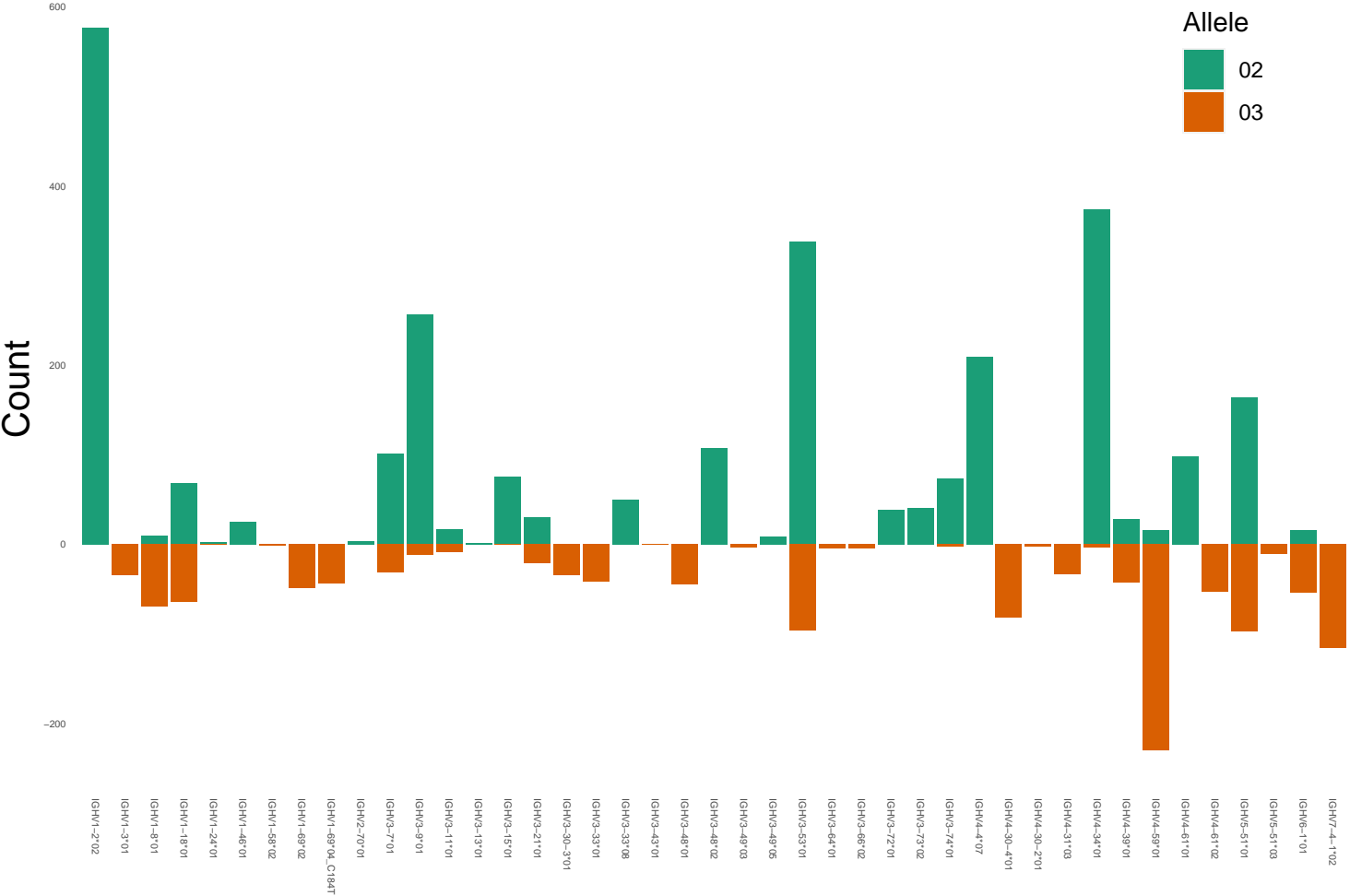
1044 sequences assigned  
54 (5.2%) exact matches, in which:  
32 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.