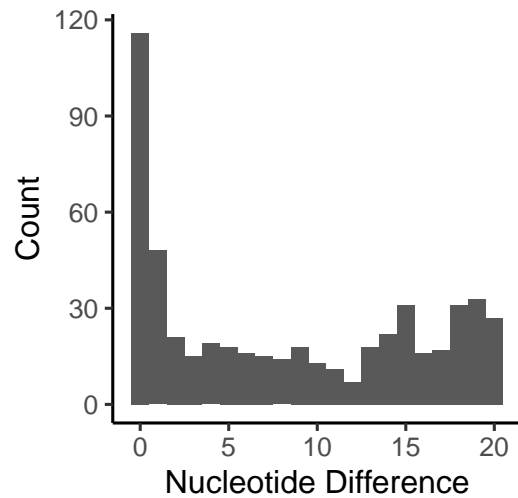


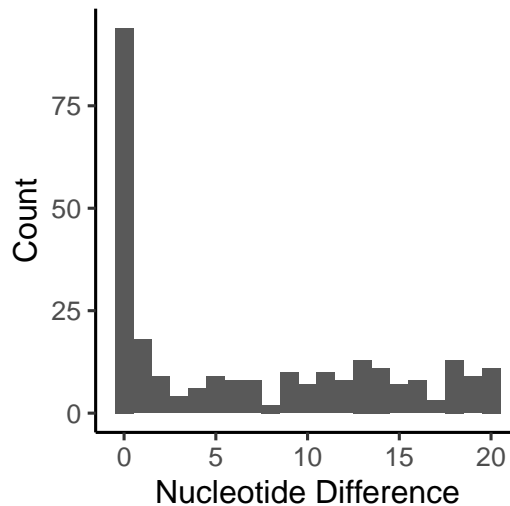
### IGHV1-2\*02

902 sequences assigned  
116 (12.9%) exact matches, in which:  
116 unique CDR3  
7 unique J



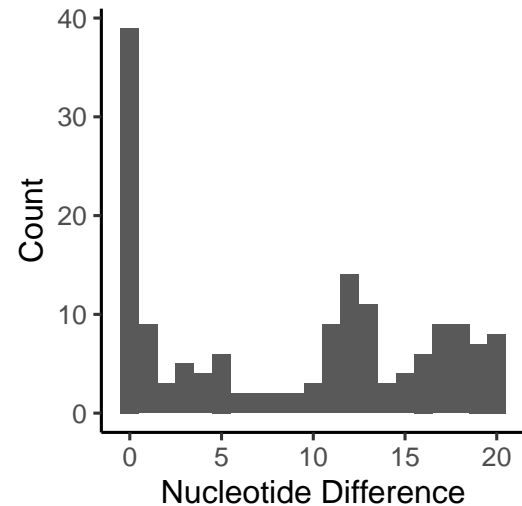
### IGHV1-18\*01

566 sequences assigned  
94 (16.6%) exact matches, in which:  
94 unique CDR3  
6 unique J



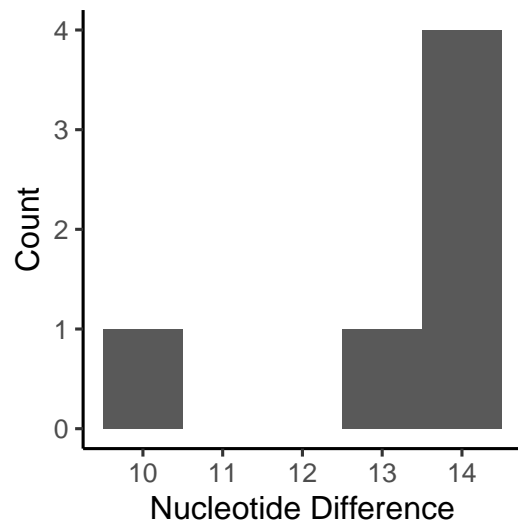
### IGHV1-46\*03

322 sequences assigned  
39 (12.1%) exact matches, in which:  
38 unique CDR3  
6 unique J



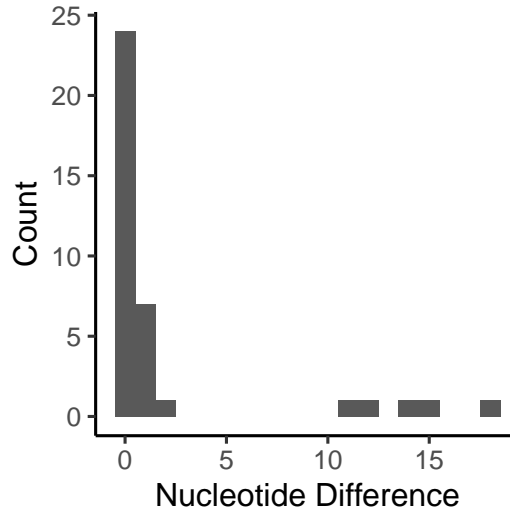
### IGHV1-3\*02

9 sequences assigned  
No exact matches.



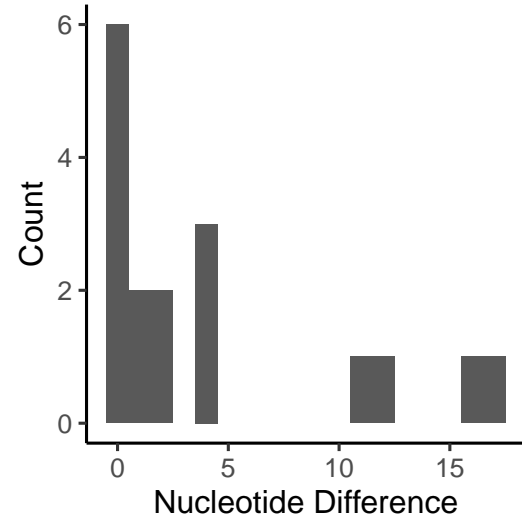
### IGHV1-24\*01

63 sequences assigned  
24 (38.1%) exact matches, in which:  
24 unique CDR3  
5 unique J



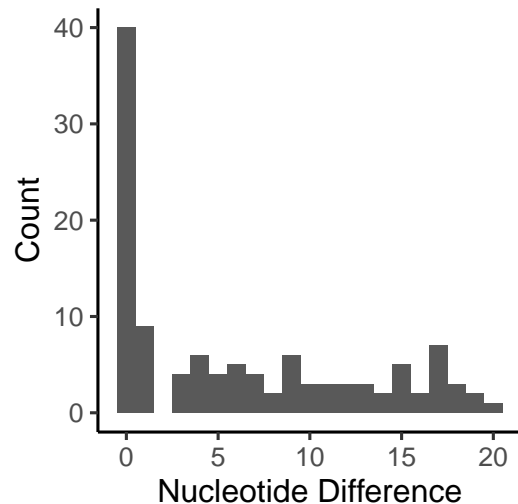
### IGHV1-58\*02

32 sequences assigned  
6 (18.8%) exact matches, in which:  
6 unique CDR3  
2 unique J



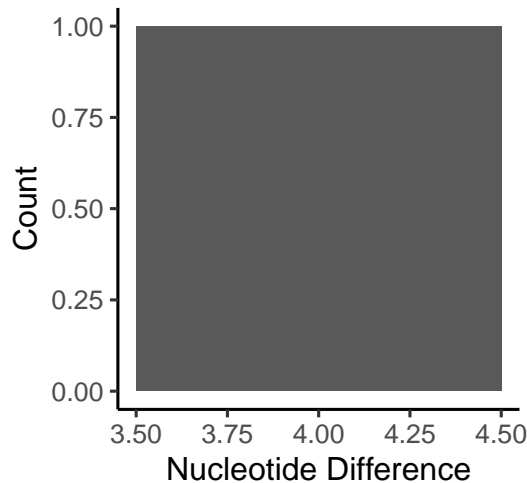
### IGHV1-8\*01

185 sequences assigned  
40 (21.6%) exact matches, in which:  
40 unique CDR3  
7 unique J



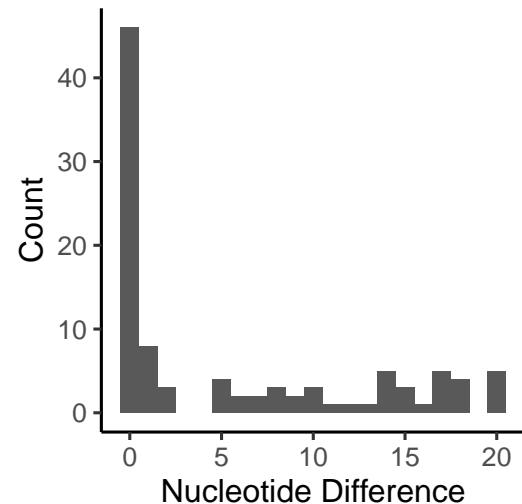
### IGHV1-45\*02

13 sequences assigned  
No exact matches.



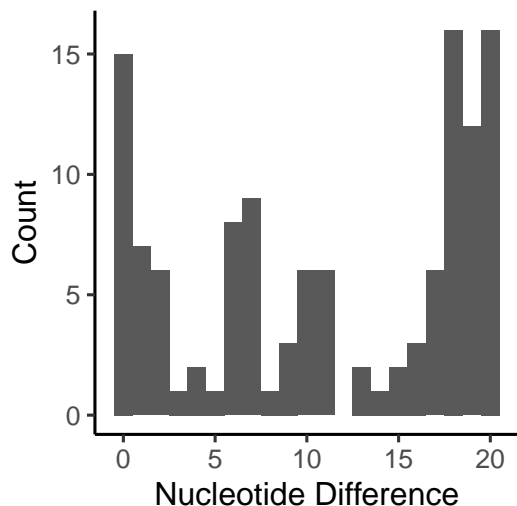
### IGHV1-69\*08\_C191T

220 sequences assigned  
46 (20.9%) exact matches, in which:  
46 unique CDR3  
6 unique J



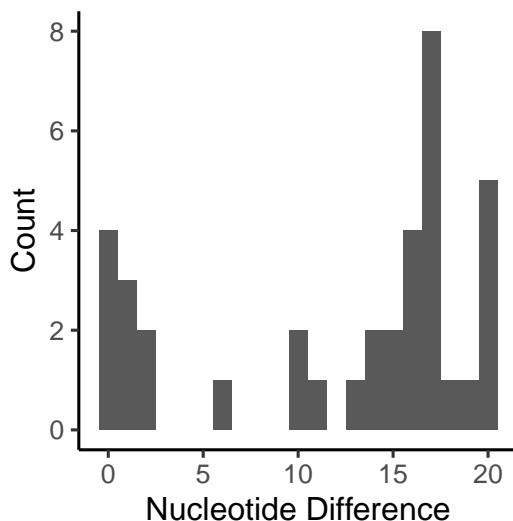
### IGHV2-5\*01

204 sequences assigned  
15 (7.4%) exact matches, in which:  
15 unique CDR3  
4 unique J



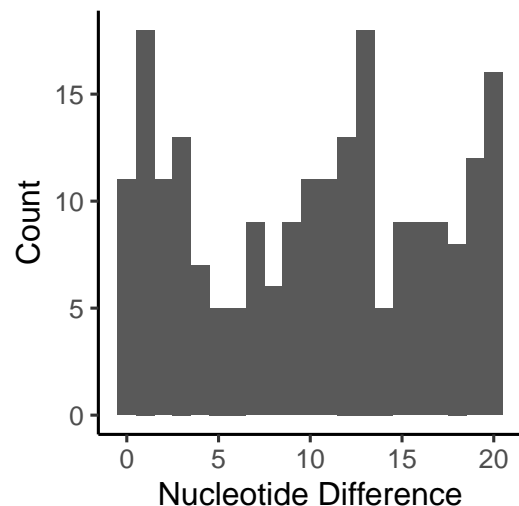
### IGHV2-70\*01

66 sequences assigned  
4 (6.1%) exact matches, in which:  
4 unique CDR3  
3 unique J



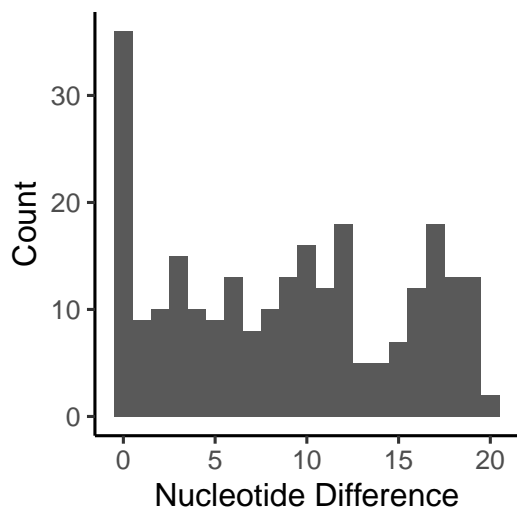
### IGHV3-7\*01

453 sequences assigned  
11 (2.4%) exact matches, in which:  
11 unique CDR3  
4 unique J



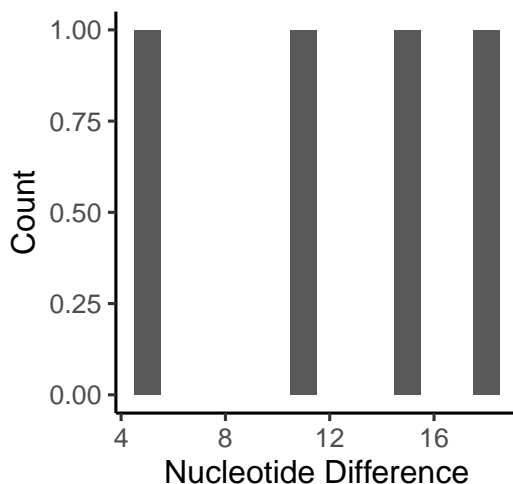
### IGHV2-5\*02

470 sequences assigned  
36 (7.7%) exact matches, in which:  
36 unique CDR3  
5 unique J



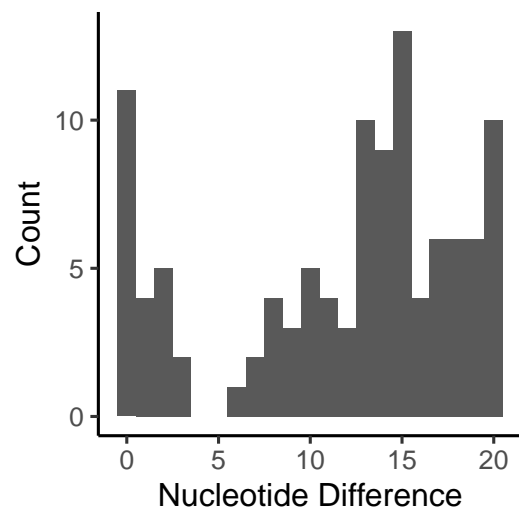
### IGHV2-70\*20

4 sequences assigned  
No exact matches.



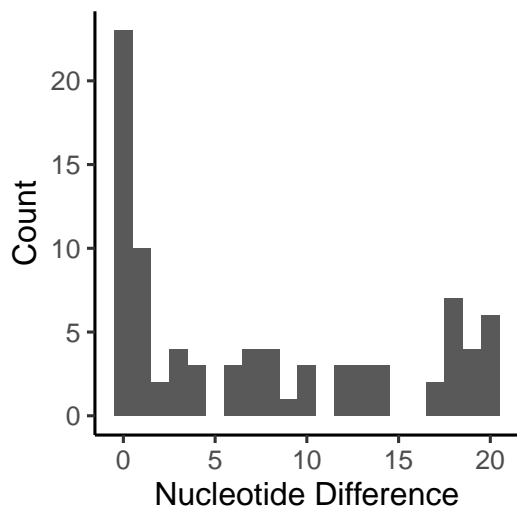
### IGHV3-7\*04

184 sequences assigned  
11 (6%) exact matches, in which:  
11 unique CDR3  
3 unique J



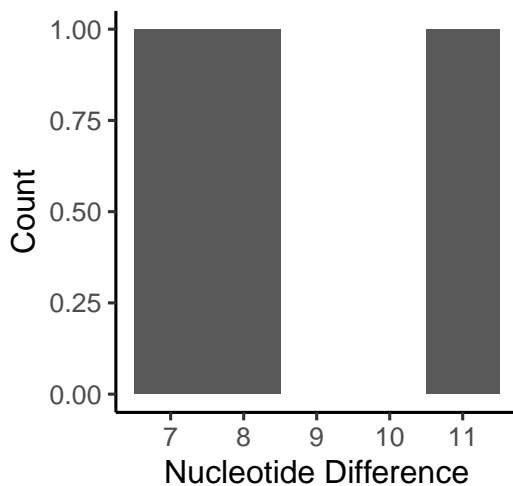
### IGHV2-26\*01

128 sequences assigned  
23 (18%) exact matches, in which:  
23 unique CDR3  
6 unique J



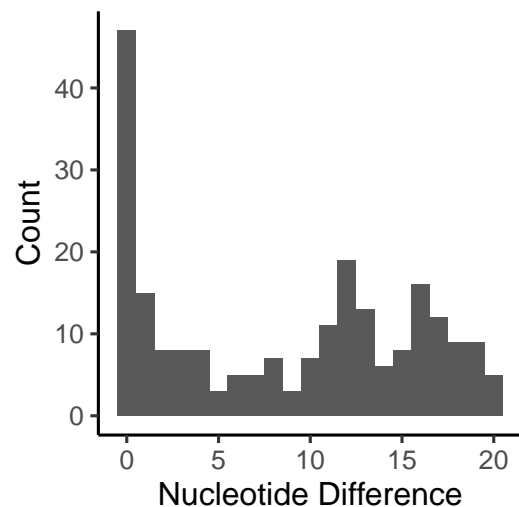
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



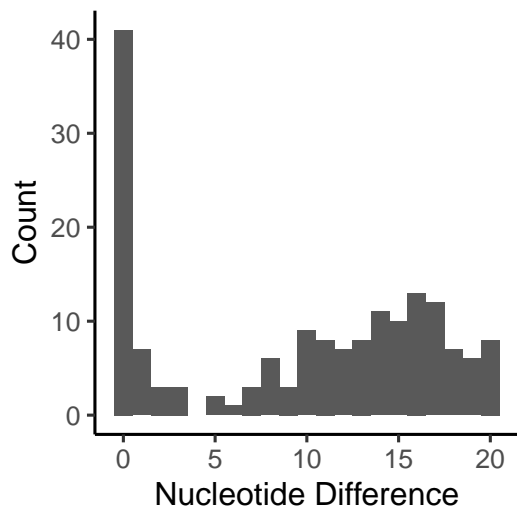
### IGHV3-9\*01

570 sequences assigned  
47 (8.2%) exact matches, in which:  
47 unique CDR3  
5 unique J



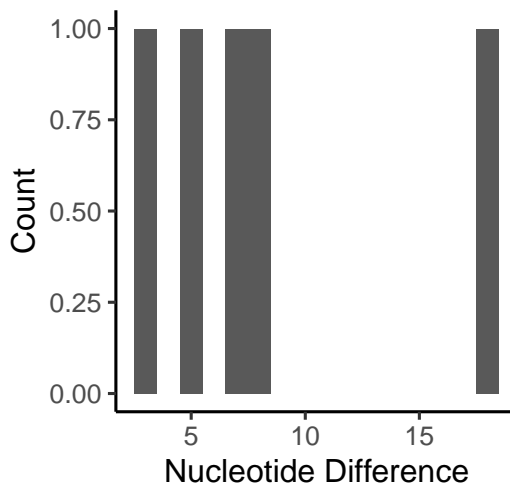
### IGHV3-11\*01

429 sequences assigned  
41 (9.6%) exact matches, in which:  
41 unique CDR3  
5 unique J



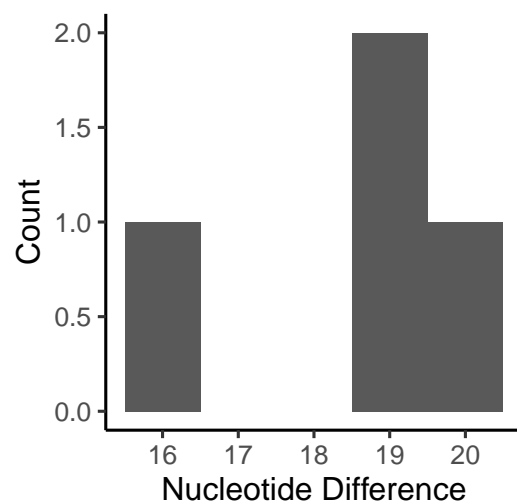
### IGHV3-13\*05

6 sequences assigned  
No exact matches.



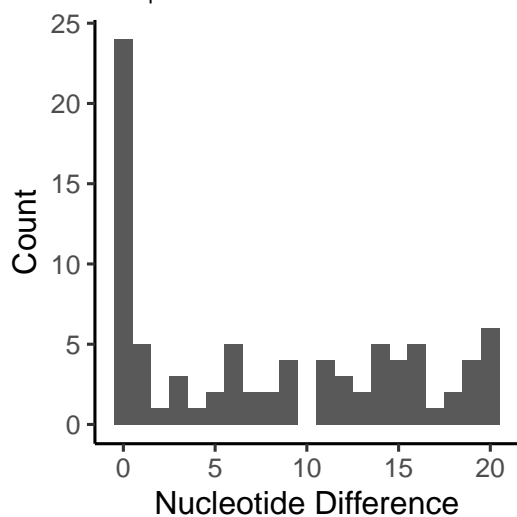
### IGHV3-20\*04

79 sequences assigned  
No exact matches.



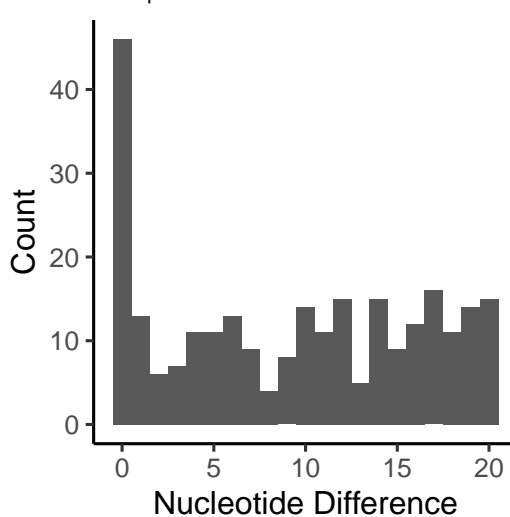
### IGHV3-11\*06

179 sequences assigned  
24 (13.4%) exact matches, in which:  
24 unique CDR3  
4 unique J



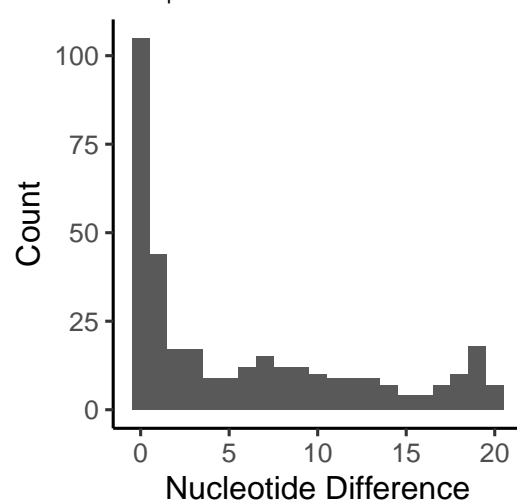
### IGHV3-15\*01

563 sequences assigned  
46 (8.2%) exact matches, in which:  
46 unique CDR3  
6 unique J



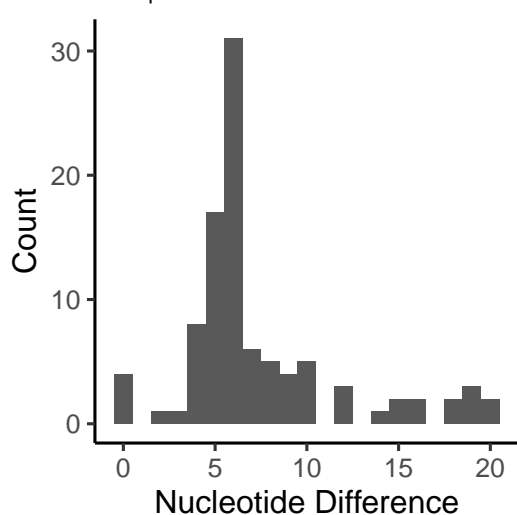
### IGHV3-21\*01

474 sequences assigned  
105 (22.2%) exact matches, in which:  
105 unique CDR3  
5 unique J



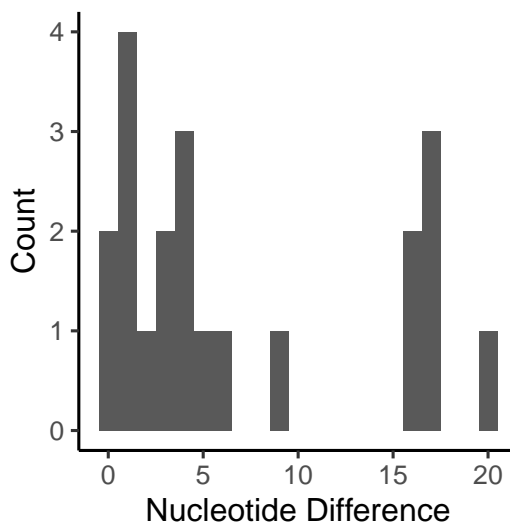
### IGHV3-13\*01

108 sequences assigned  
4 (3.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



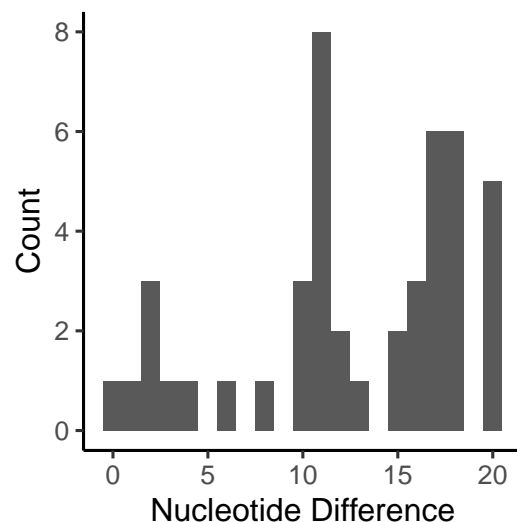
### IGHV3-20\*01

23 sequences assigned  
2 (8.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



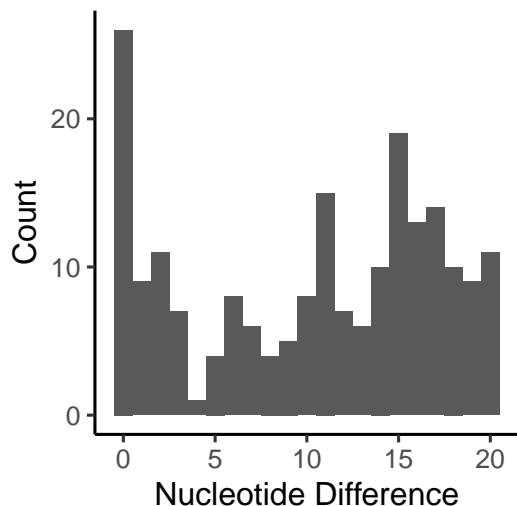
### IGHV3-21\*02

213 sequences assigned  
1 (0.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



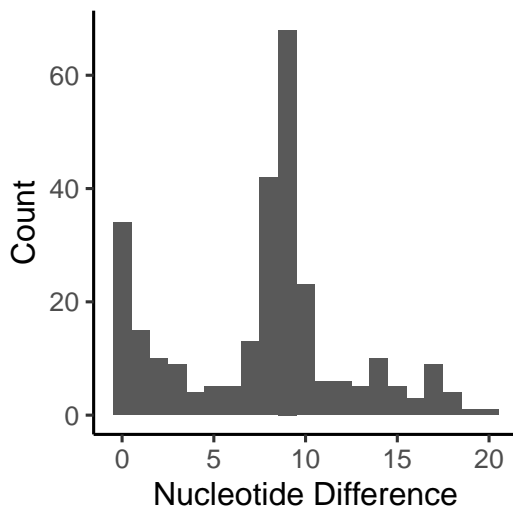
### IGHV3-30-3\*01

509 sequences assigned  
26 (5.1%) exact matches, in which:  
26 unique CDR3  
5 unique J



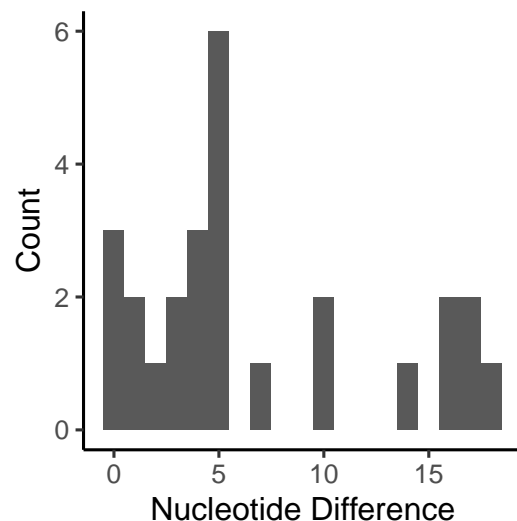
### IGHV3-48\*01

461 sequences assigned  
34 (7.4%) exact matches, in which:  
32 unique CDR3  
6 unique J



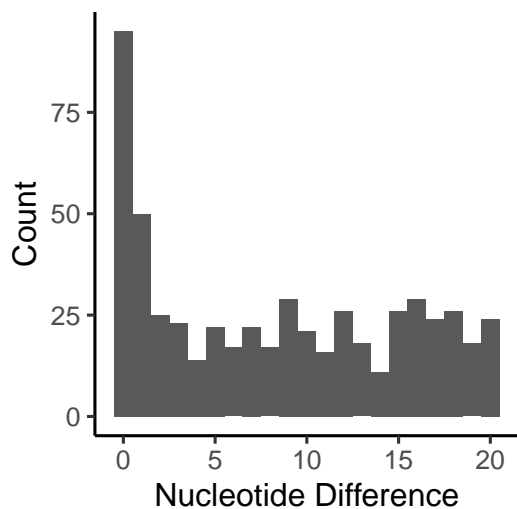
### IGHV3-64\*01

37 sequences assigned  
3 (8.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



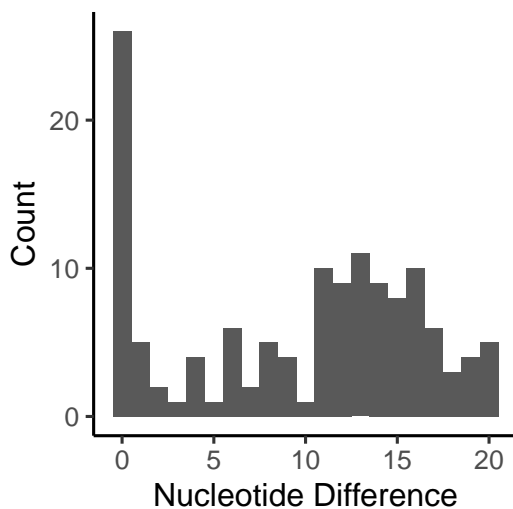
### IGHV3-33\*01

1804 sequences assigned  
95 (5.3%) exact matches, in which:  
94 unique CDR3  
7 unique J



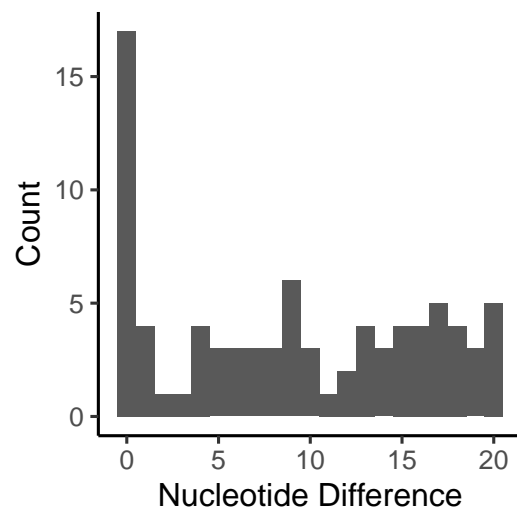
### IGHV3-49\*03

212 sequences assigned  
26 (12.3%) exact matches, in which:  
26 unique CDR3  
6 unique J



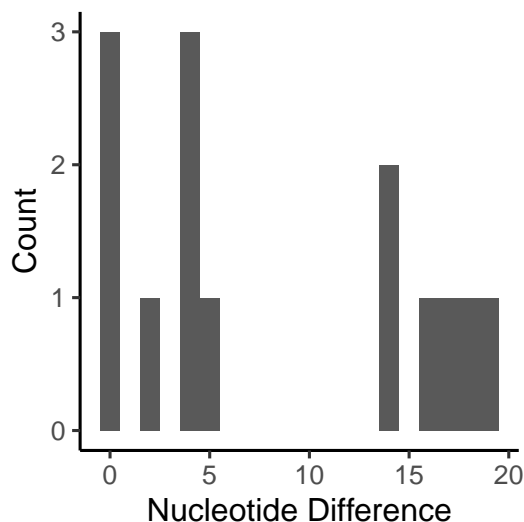
### IGHV3-66\*02

231 sequences assigned  
17 (7.4%) exact matches, in which:  
17 unique CDR3  
4 unique J



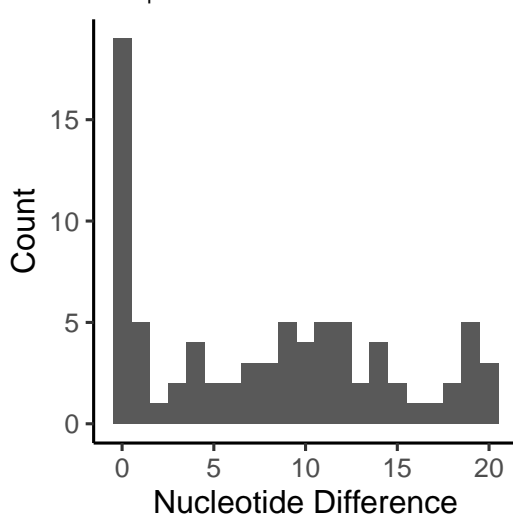
### IGHV3-43\*01

18 sequences assigned  
3 (16.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



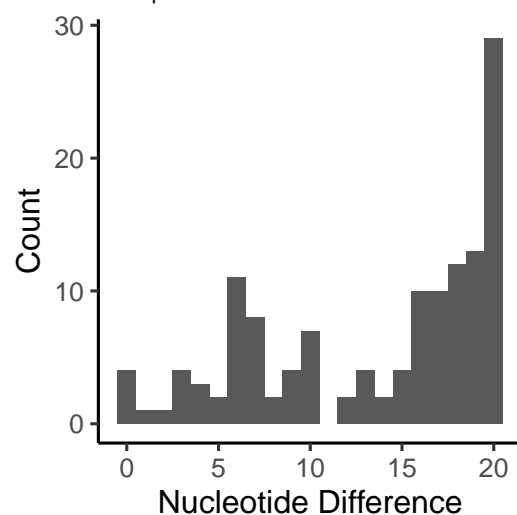
### IGHV3-53\*02

147 sequences assigned  
19 (12.9%) exact matches, in which:  
19 unique CDR3  
5 unique J



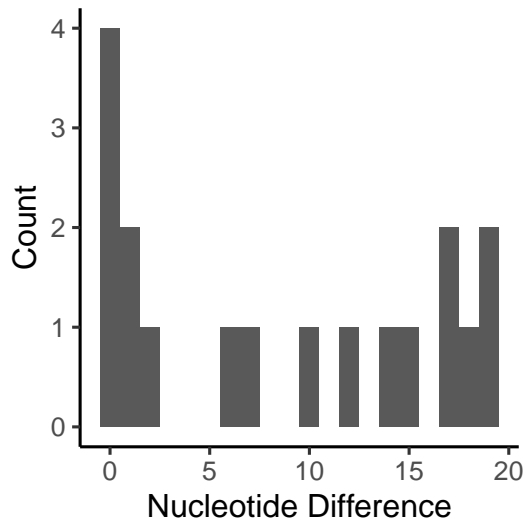
### IGHV3-72\*01

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



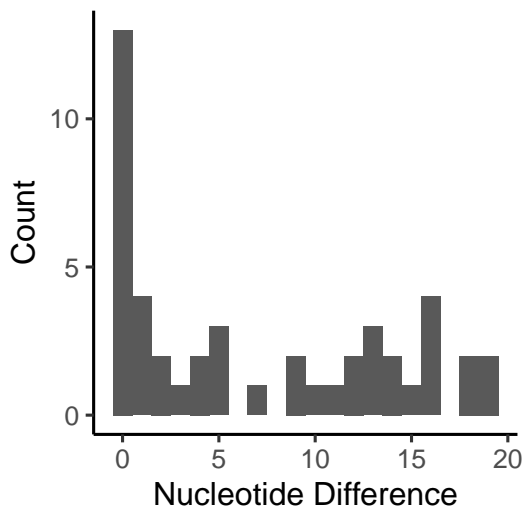
### IGHV3-73\*01

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



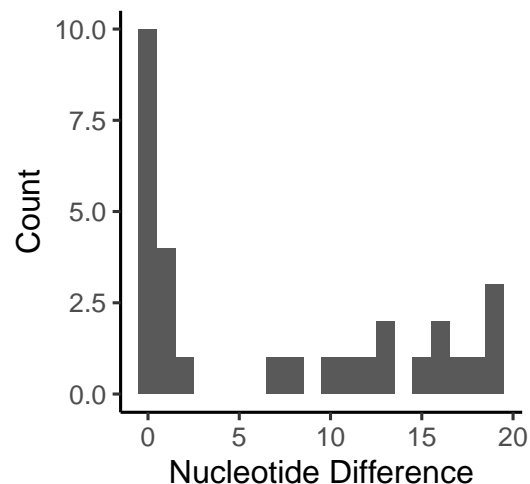
### IGHV3-64D\*06

158 sequences assigned  
13 (8.2%) exact matches, in which:  
13 unique CDR3  
5 unique J



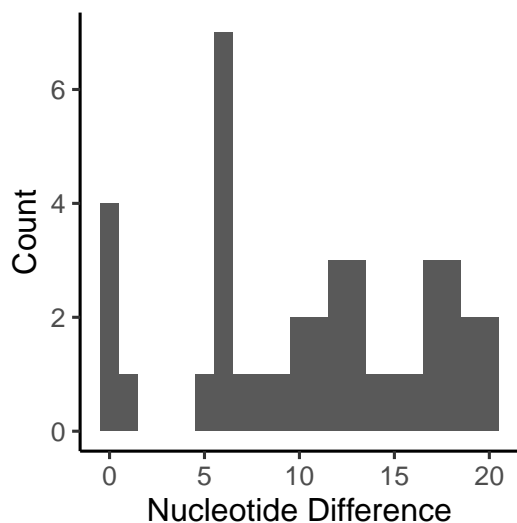
### IGHV4-30-4\*01

122 sequences assigned  
10 (8.2%) exact matches, in which:  
10 unique CDR3  
4 unique J



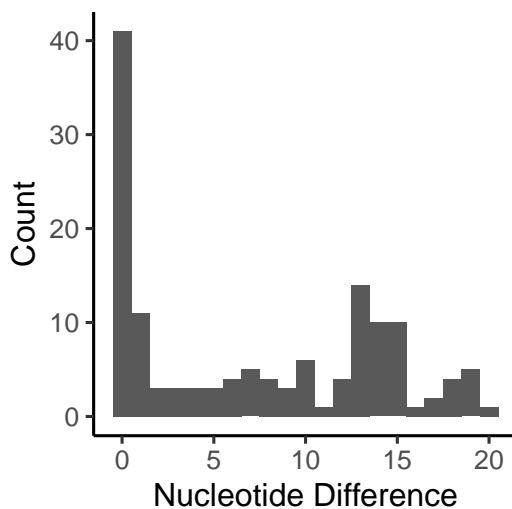
### IGHV3-73\*02

75 sequences assigned  
4 (5.3%) exact matches, in which:  
4 unique CDR3  
2 unique J



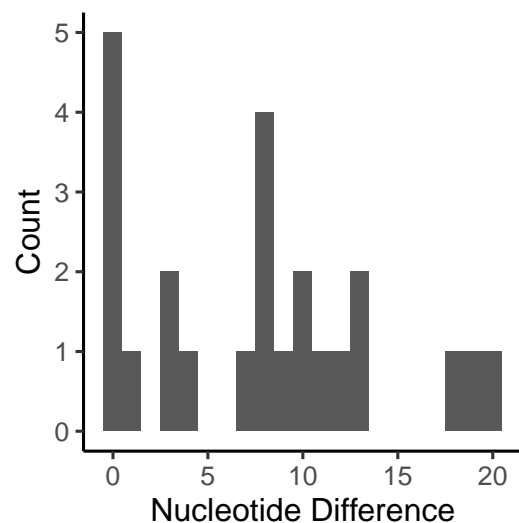
### IGHV4-4\*07

299 sequences assigned  
41 (13.7%) exact matches, in which:  
41 unique CDR3  
7 unique J



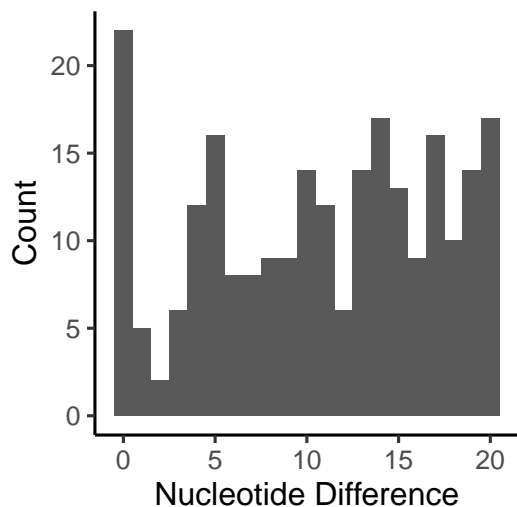
### IGHV4-30-2\*01

47 sequences assigned  
5 (10.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



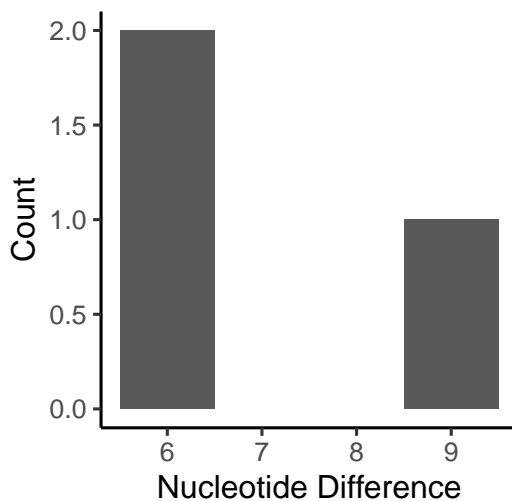
### IGHV3-74\*01

409 sequences assigned  
22 (5.4%) exact matches, in which:  
22 unique CDR3  
5 unique J



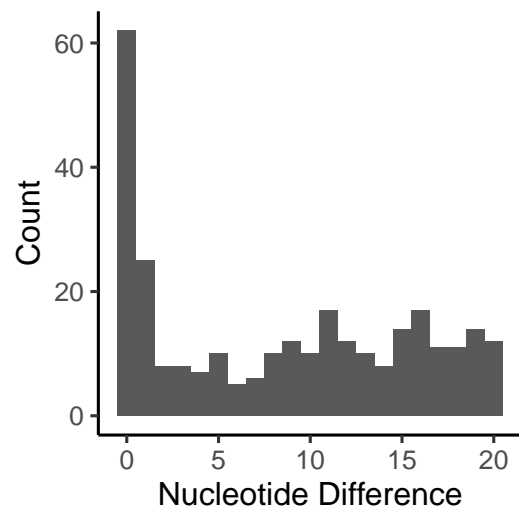
### IGHV4-28\*01

3 sequences assigned  
No exact matches.



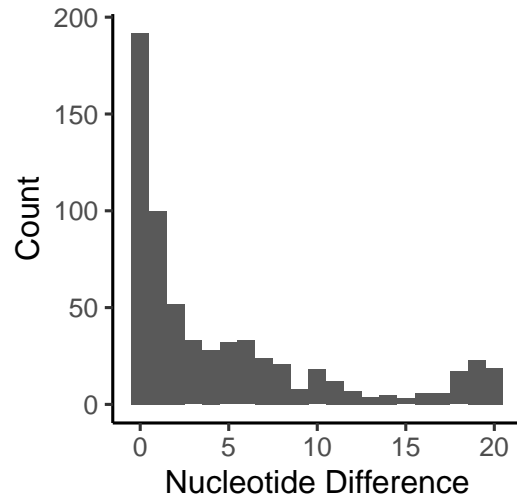
### IGHV4-31\*03

580 sequences assigned  
62 (10.7%) exact matches, in which:  
62 unique CDR3  
6 unique J



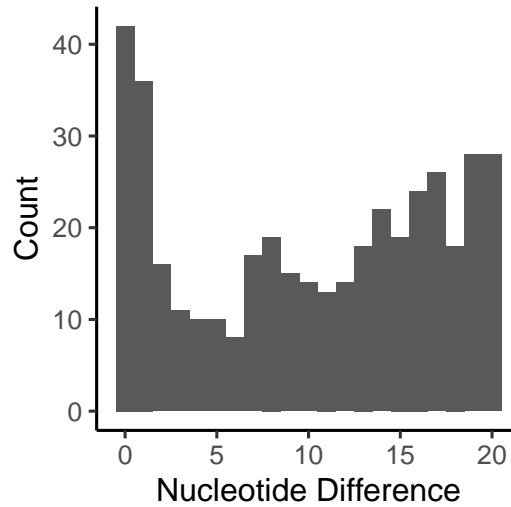
### IGHV4-34\*01

1148 sequences assigned  
192 (16.7%) exact matches, in which:  
189 unique CDR3  
7 unique J



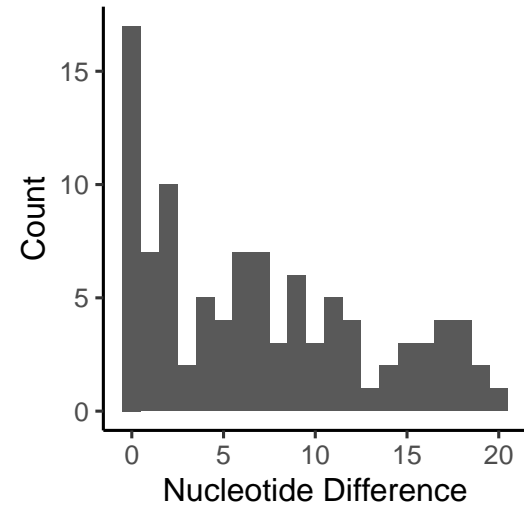
### IGHV4-61\*02

1144 sequences assigned  
42 (3.7%) exact matches, in which:  
42 unique CDR3  
6 unique J



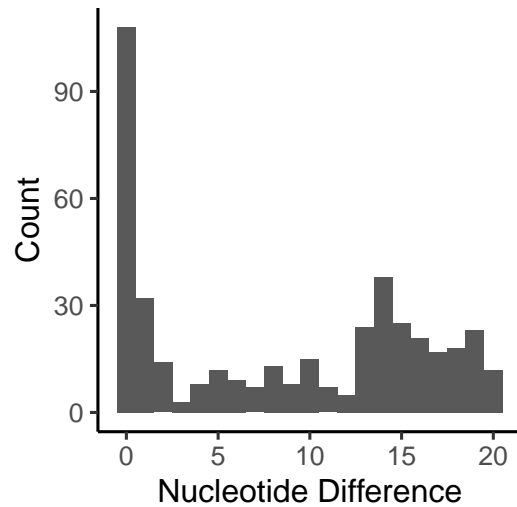
### IGHV6-1\*01

137 sequences assigned  
17 (12.4%) exact matches, in which:  
17 unique CDR3  
4 unique J



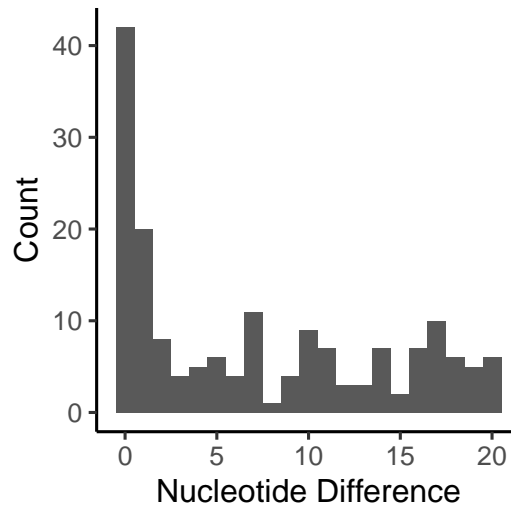
### IGHV4-39\*01

1037 sequences assigned  
108 (10.4%) exact matches, in which:  
108 unique CDR3  
6 unique J



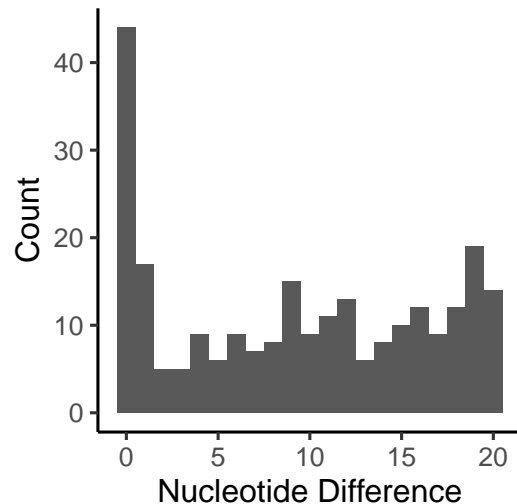
### IGHV5-10-1\*03

372 sequences assigned  
42 (11.3%) exact matches, in which:  
42 unique CDR3  
4 unique J



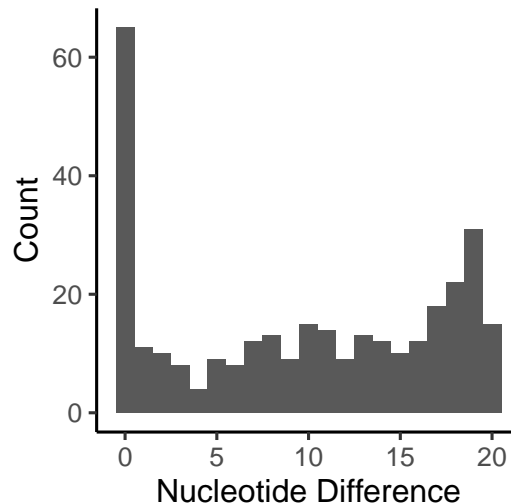
### IGHV4-59\*01

475 sequences assigned  
44 (9.3%) exact matches, in which:  
44 unique CDR3  
6 unique J

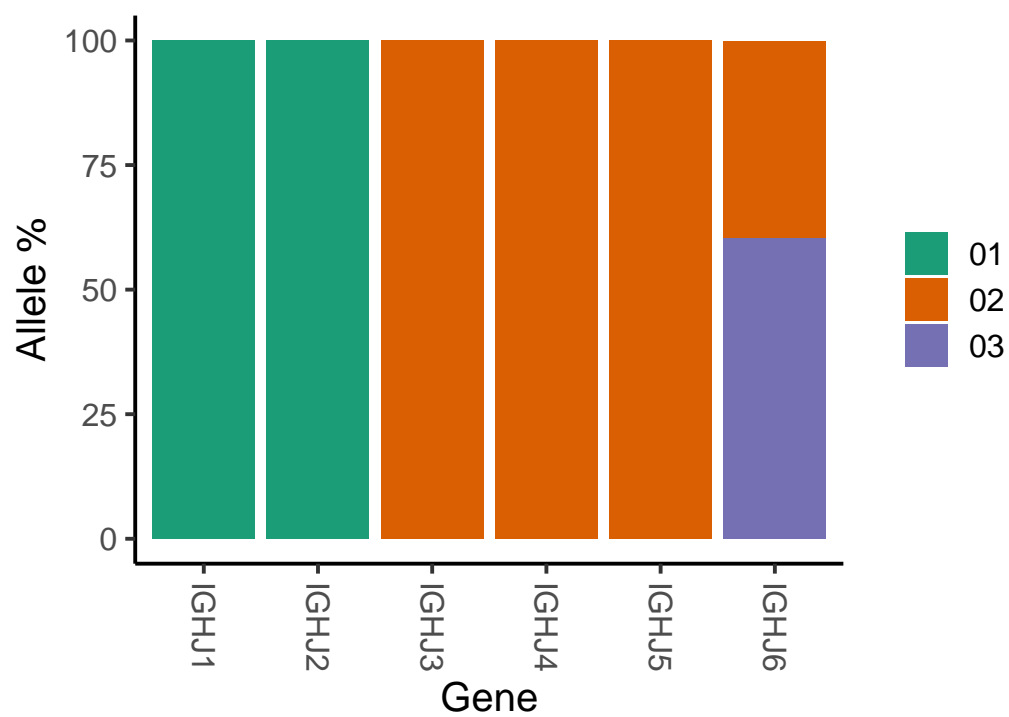


### IGHV5-51\*01\_C45G

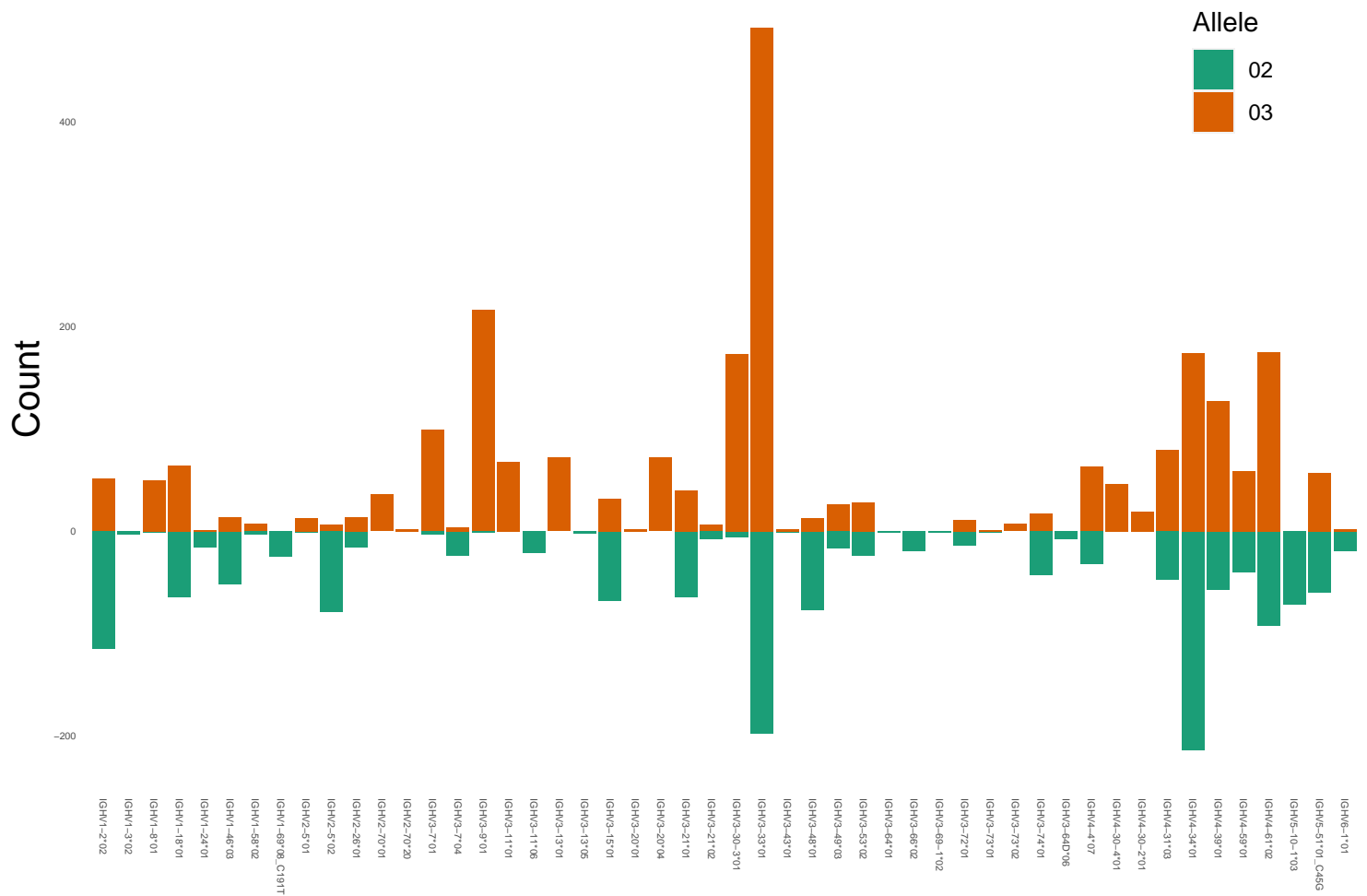
548 sequences assigned  
65 (11.9%) exact matches, in which:  
65 unique CDR3  
7 unique J



Allele Usage



## Sequence Count byIGHJ6 allele usage





Warning – no inferred sequences found.