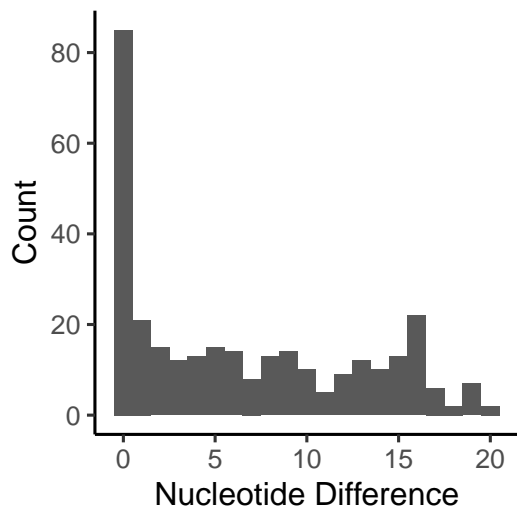


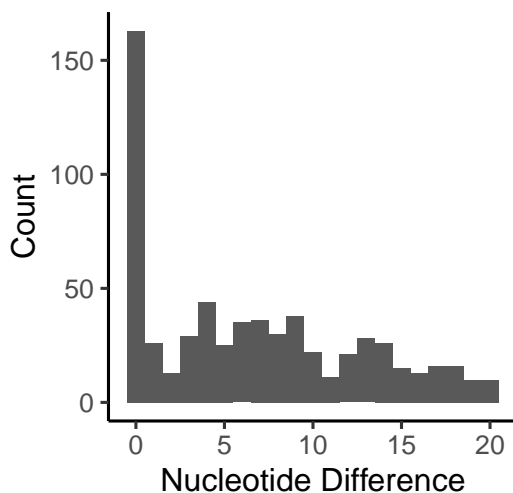
### IGHV1-2\*04

326 sequences assigned  
85 (26.1%) exact matches, in which:  
81 unique CDR3  
6 unique J



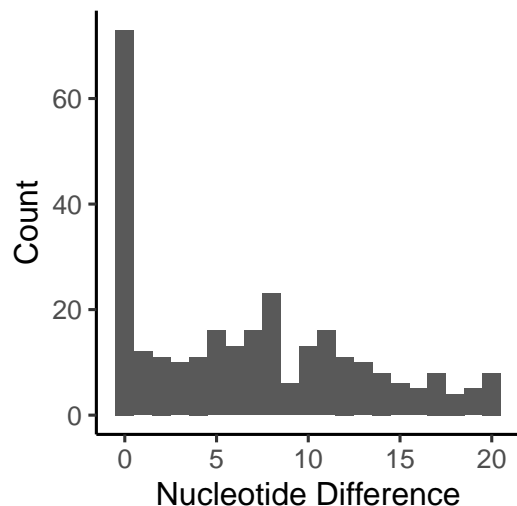
### IGHV1-18\*01

902 sequences assigned  
163 (18.1%) exact matches, in which:  
159 unique CDR3  
7 unique J



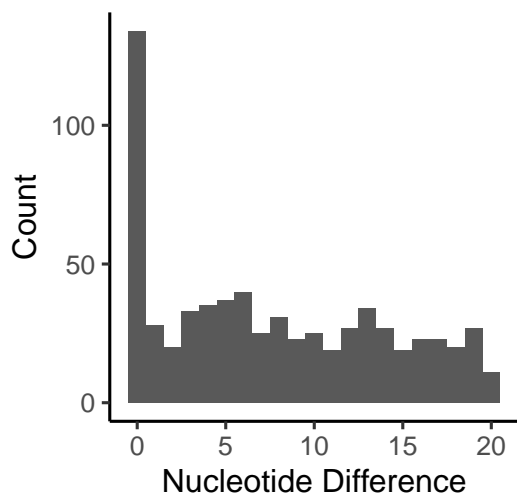
### IGHV1-46\*01

432 sequences assigned  
73 (16.9%) exact matches, in which:  
70 unique CDR3  
7 unique J



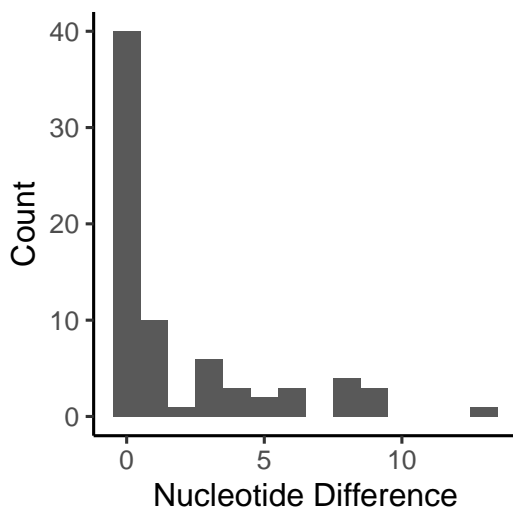
### IGHV1-3\*01\_05

705 sequences assigned  
134 (19%) exact matches, in which:  
130 unique CDR3  
7 unique J



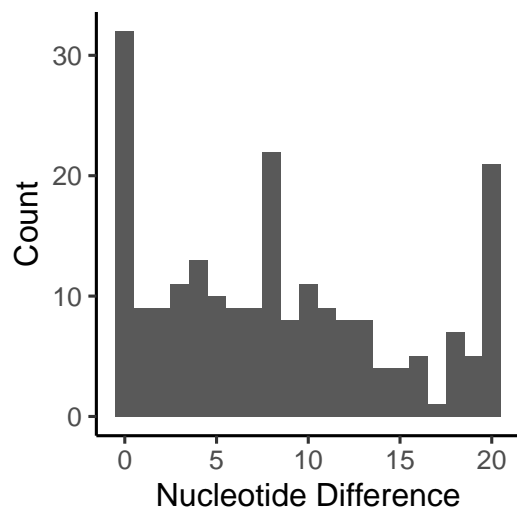
### IGHV1-24\*01

89 sequences assigned  
40 (44.9%) exact matches, in which:  
40 unique CDR3  
6 unique J



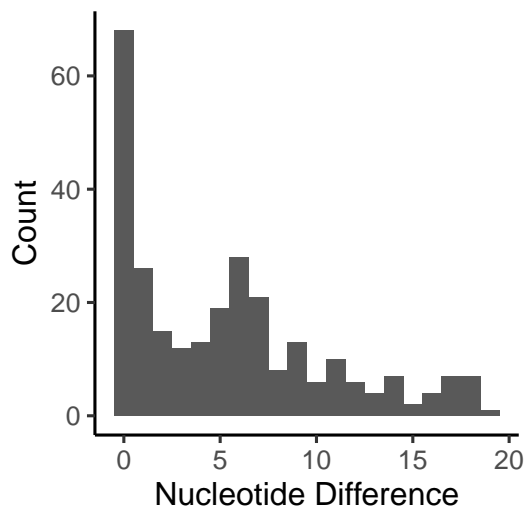
### IGHV1-46\*03

222 sequences assigned  
32 (14.4%) exact matches, in which:  
32 unique CDR3  
6 unique J



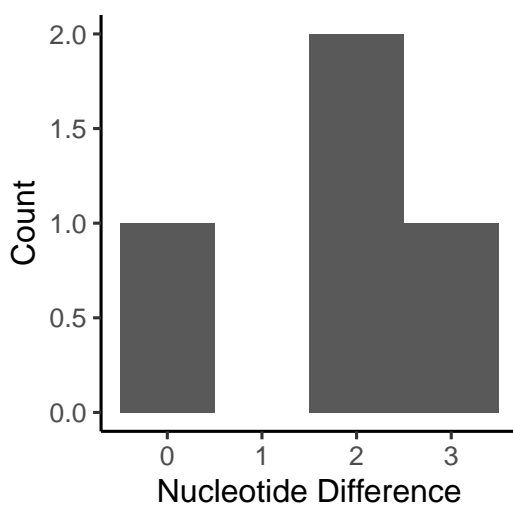
### IGHV1-8\*01

334 sequences assigned  
68 (20.4%) exact matches, in which:  
68 unique CDR3  
5 unique J



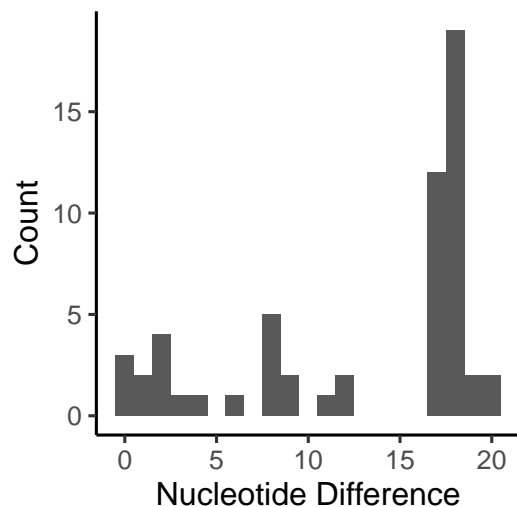
### IGHV1-45\*02

10 sequences assigned  
1 (10%) exact matches, in which:  
1 unique CDR3  
1 unique J



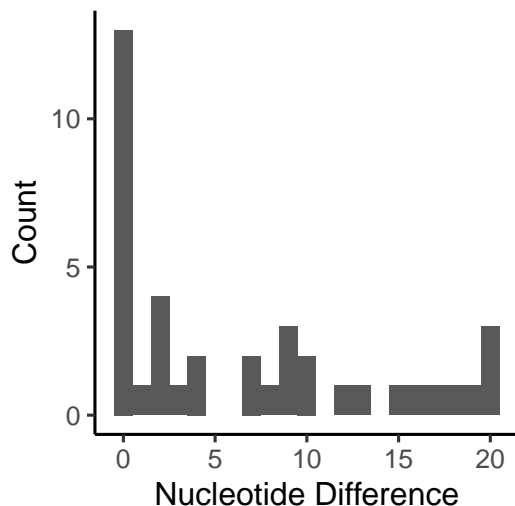
### IGHV1-58\*02

57 sequences assigned  
3 (5.3%) exact matches, in which:  
3 unique CDR3  
3 unique J



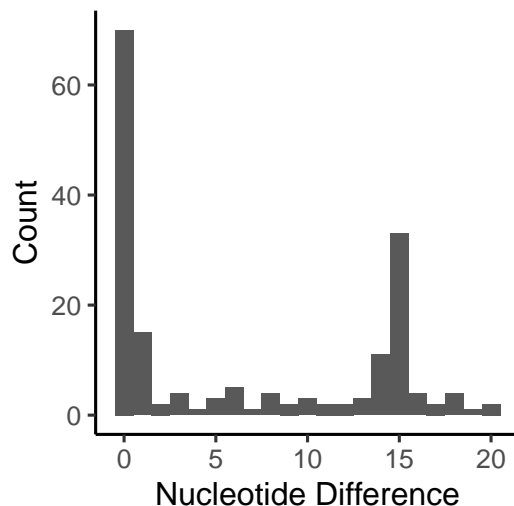
### IGHV1-58\*01\_03

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



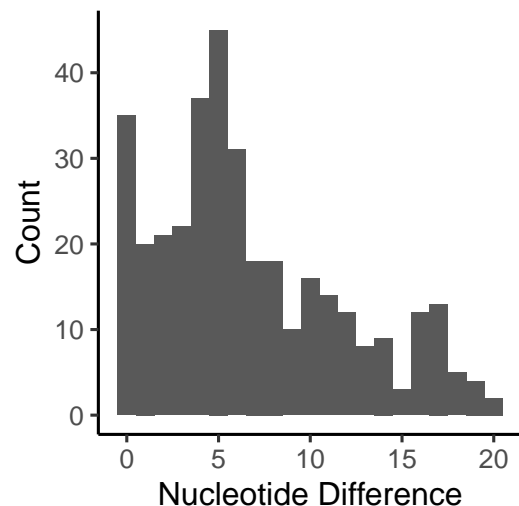
### IGHV1-69\*04\_09

184 sequences assigned  
70 (38%) exact matches, in which:  
70 unique CDR3  
7 unique J



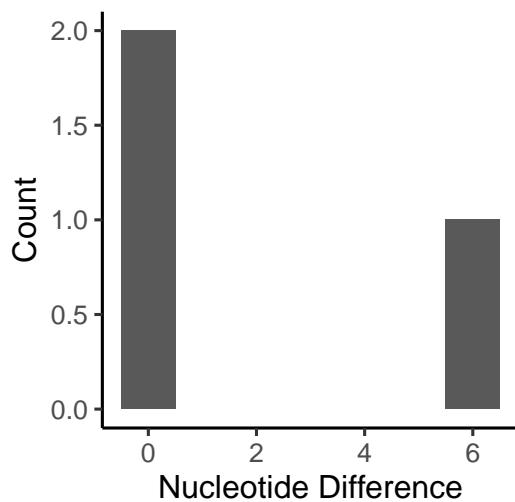
### IGHV2-5\*02

390 sequences assigned  
35 (9%) exact matches, in which:  
30 unique CDR3  
4 unique J



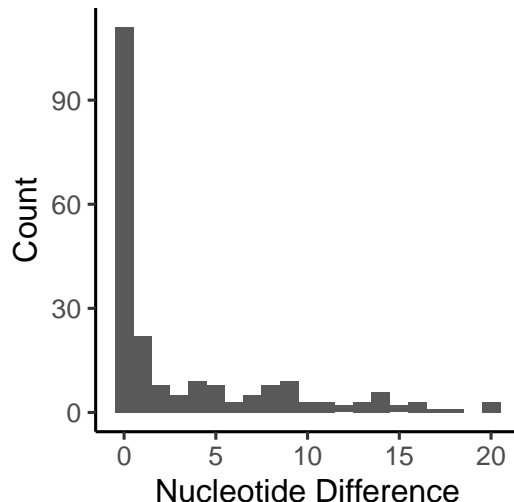
### IGHV1-69-2\*01

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



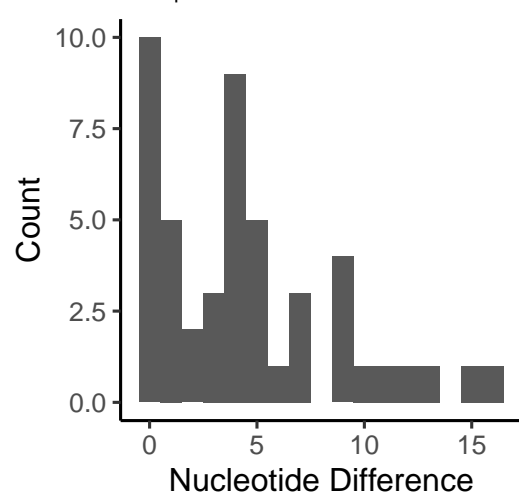
### IGHV1-69\*06\_14

227 sequences assigned  
111 (48.9%) exact matches, in which:  
109 unique CDR3  
7 unique J



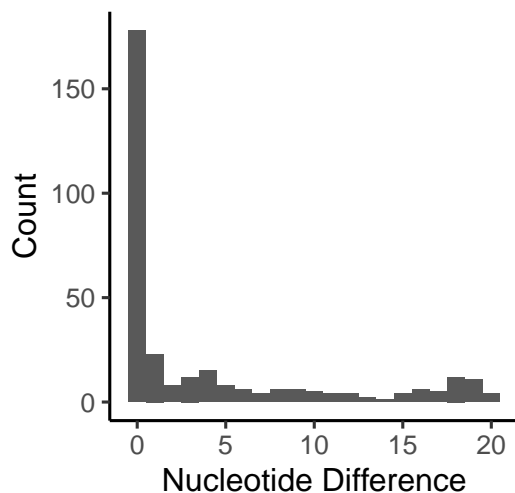
### IGHV2-26\*01

48 sequences assigned  
10 (20.8%) exact matches, in which:  
9 unique CDR3  
3 unique J



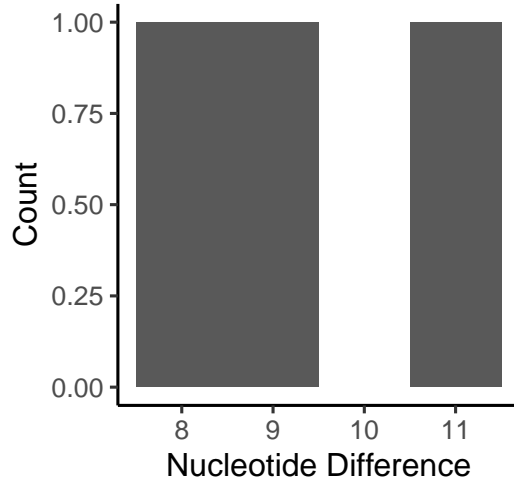
### IGHV1-69\*01\_12\_13

448 sequences assigned  
178 (39.7%) exact matches, in which:  
177 unique CDR3  
6 unique J



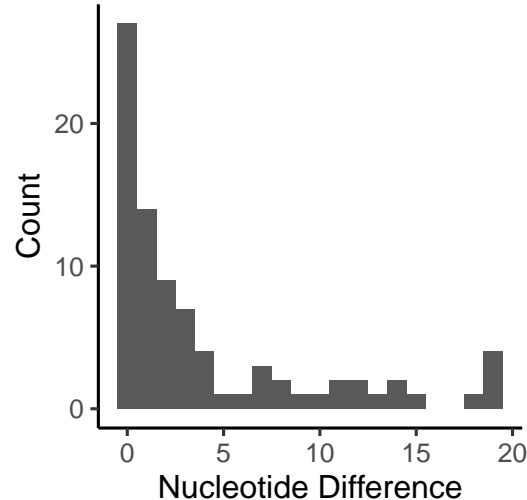
### IGHV1-NL1\*01

3 sequences assigned  
No exact matches.



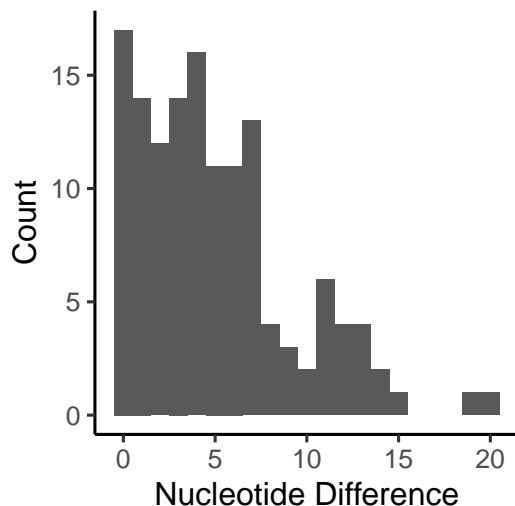
### IGHV2-70\*01

100 sequences assigned  
27 (27%) exact matches, in which:  
26 unique CDR3  
3 unique J



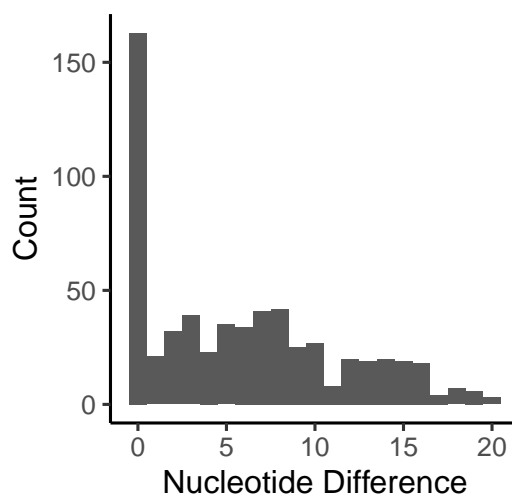
### IGHV2-70\*11\_15

170 sequences assigned  
17 (10%) exact matches, in which:  
17 unique CDR3  
6 unique J



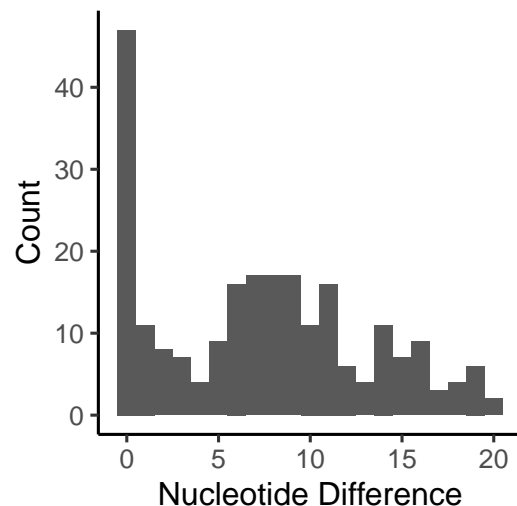
### IGHV3-9\*01

693 sequences assigned  
163 (23.5%) exact matches, in which:  
91 unique CDR3  
6 unique J



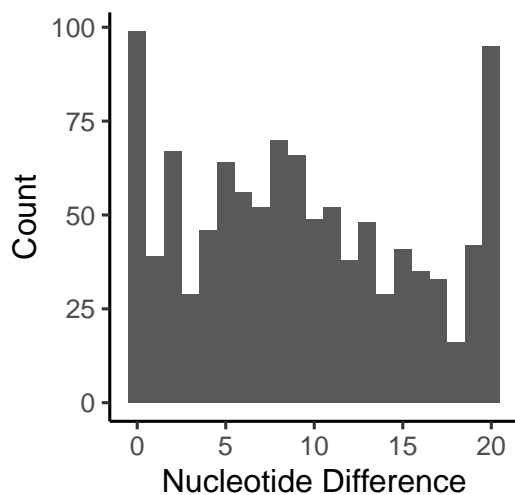
### IGHV3-11\*03\_05

265 sequences assigned  
47 (17.7%) exact matches, in which:  
25 unique CDR3  
4 unique J



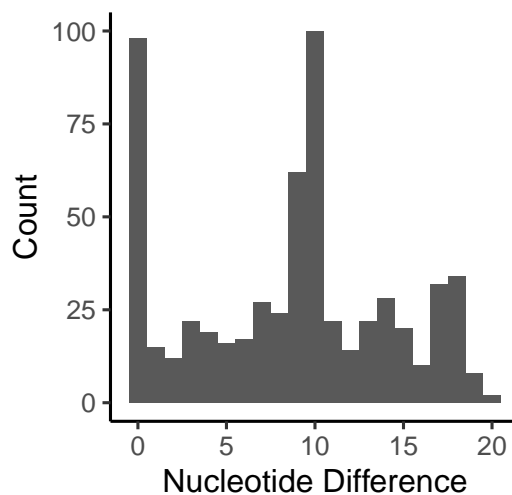
### IGHV3-7\*01

1196 sequences assigned  
99 (8.3%) exact matches, in which:  
52 unique CDR3  
4 unique J



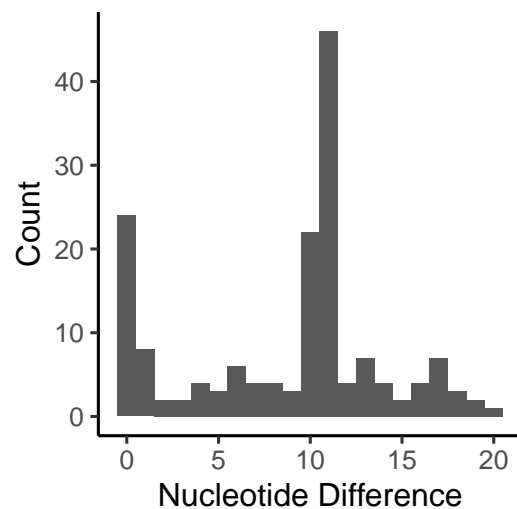
### IGHV3-11\*01

670 sequences assigned  
98 (14.6%) exact matches, in which:  
56 unique CDR3  
5 unique J



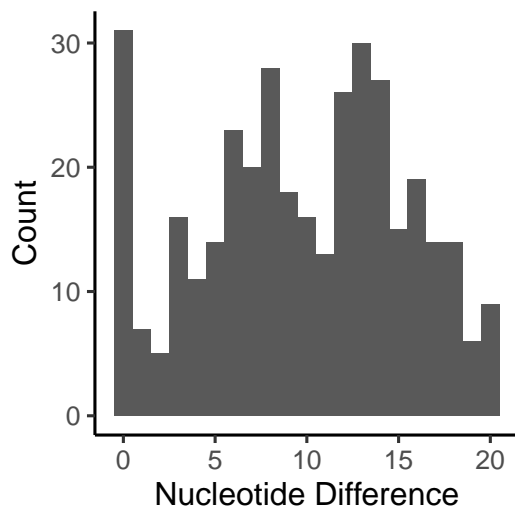
### IGHV3-13\*01

192 sequences assigned  
24 (12.5%) exact matches, in which:  
12 unique CDR3  
3 unique J



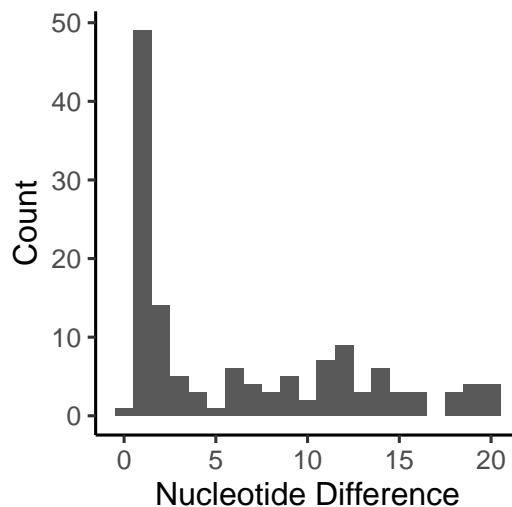
### IGHV3-7\*04

447 sequences assigned  
31 (6.9%) exact matches, in which:  
17 unique CDR3  
4 unique J



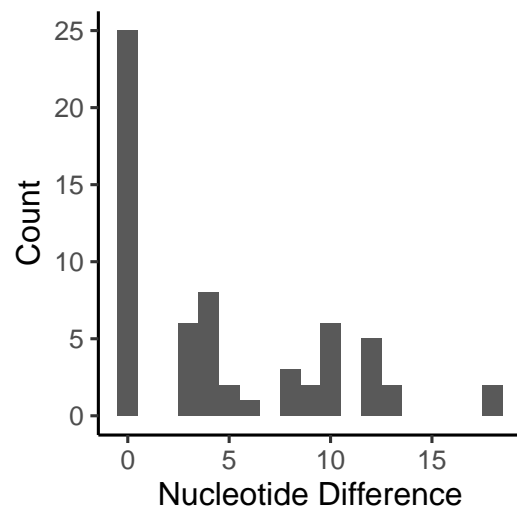
### IGHV3-11\*06

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



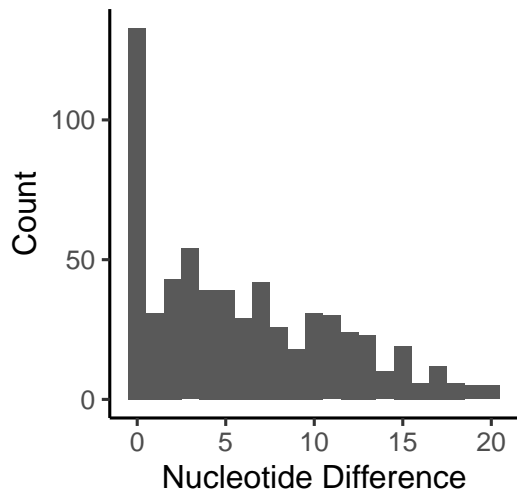
### IGHV3-13\*04

65 sequences assigned  
25 (38.5%) exact matches, in which:  
13 unique CDR3  
4 unique J



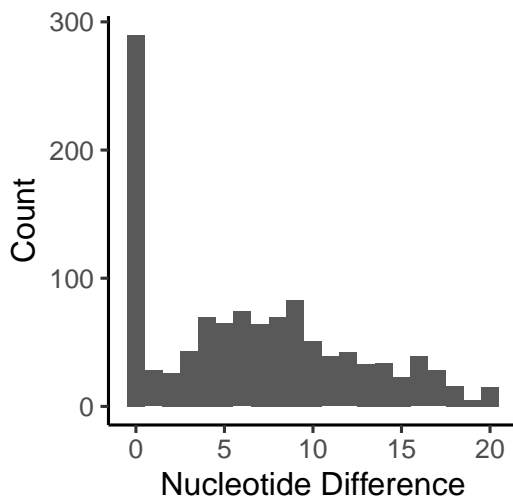
### IGHV3-15\*07

757 sequences assigned  
133 (17.6%) exact matches, in which:  
79 unique CDR3  
6 unique J



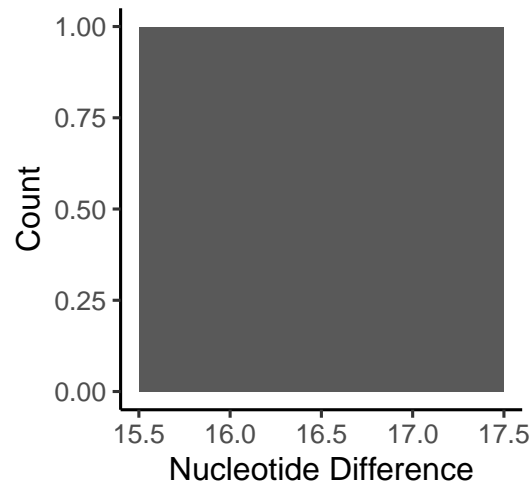
### IGHV3-21\*01\_02

1260 sequences assigned  
290 (23%) exact matches, in which:  
157 unique CDR3  
7 unique J



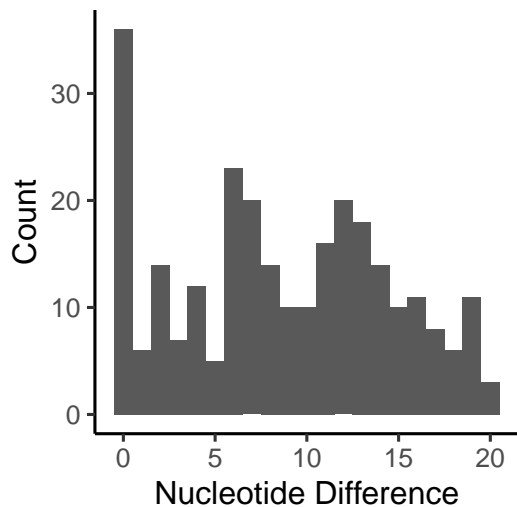
### IGHV3-30-3\*01

2 sequences assigned  
No exact matches.



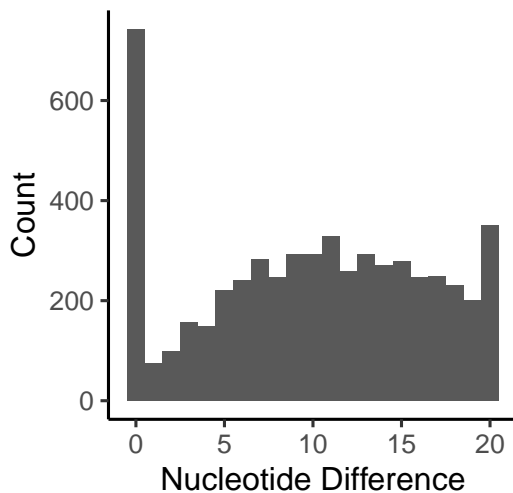
### IGHV3-15\*01\_02

305 sequences assigned  
36 (11.8%) exact matches, in which:  
24 unique CDR3  
6 unique J



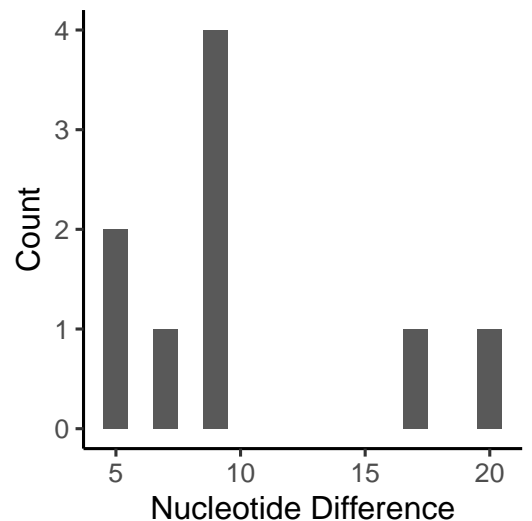
### IGHV3-23\*01\_04

7286 sequences assigned  
743 (10.2%) exact matches, in which:  
406 unique CDR3  
6 unique J



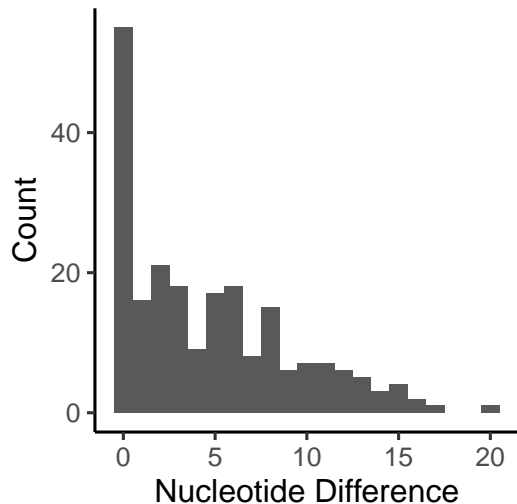
### IGHV3-30-3\*03

24 sequences assigned  
No exact matches.



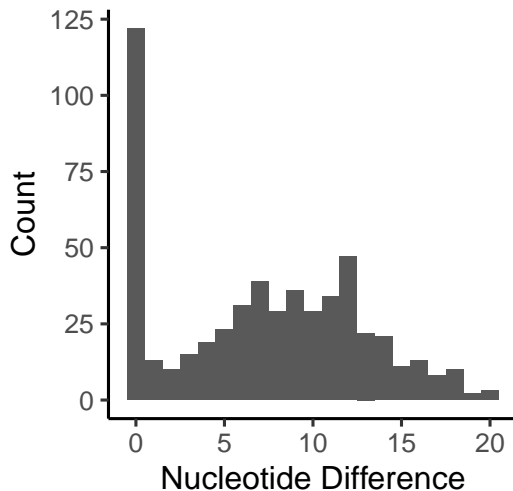
### IGHV3-20\*03\_04

236 sequences assigned  
55 (23.3%) exact matches, in which:  
28 unique CDR3  
4 unique J



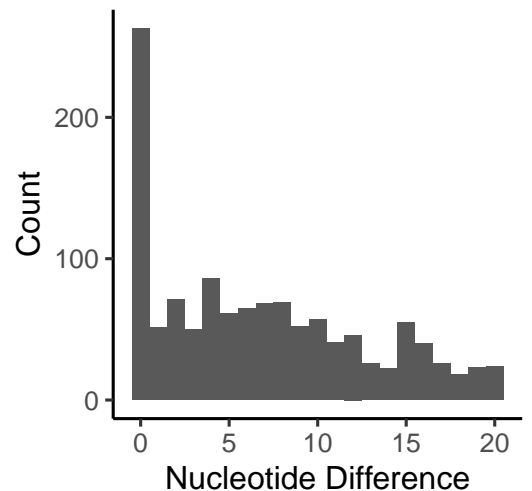
### IGHV3-30\*01

638 sequences assigned  
122 (19.1%) exact matches, in which:  
72 unique CDR3  
5 unique J



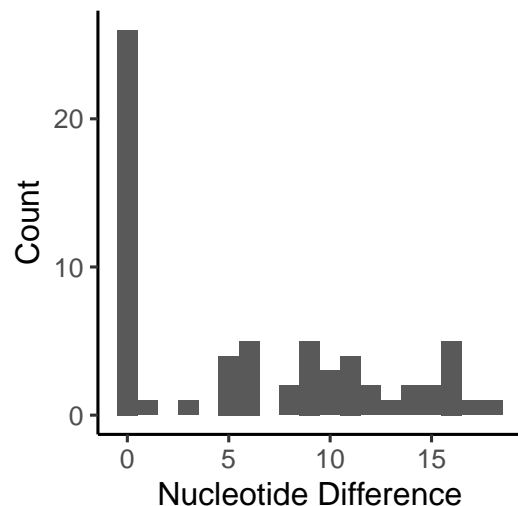
### IGHV3-33\*01

1495 sequences assigned  
263 (17.6%) exact matches, in which:  
151 unique CDR3  
5 unique J



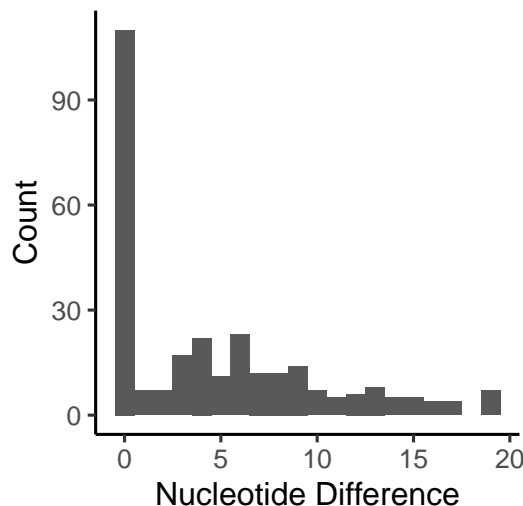
### IGHV3-43\*01

72 sequences assigned  
26 (36.1%) exact matches, in which:  
17 unique CDR3  
5 unique J



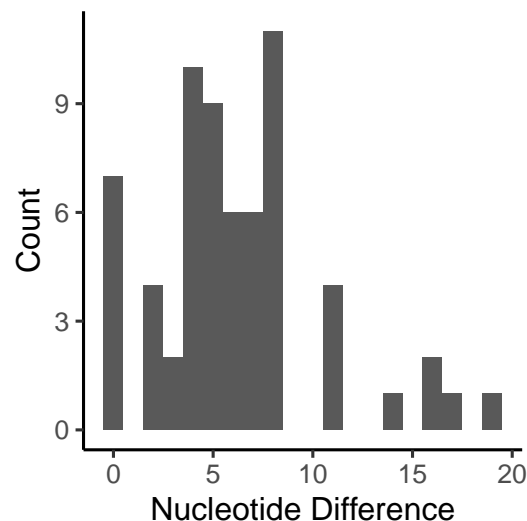
### IGHV3-49\*03\_05

308 sequences assigned  
110 (35.7%) exact matches, in which:  
63 unique CDR3  
5 unique J



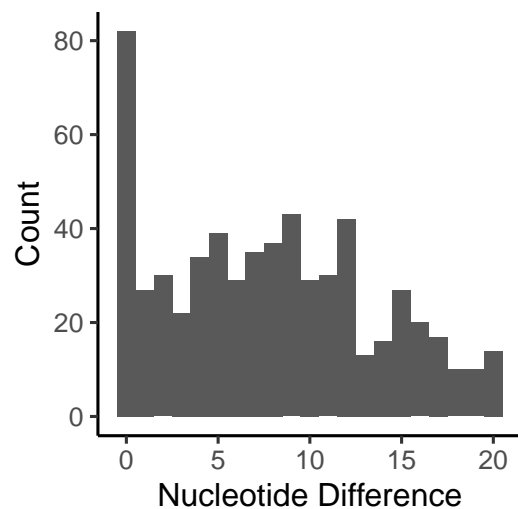
### IGHV3-64\*01

68 sequences assigned  
7 (10.3%) exact matches, in which:  
4 unique CDR3  
3 unique J



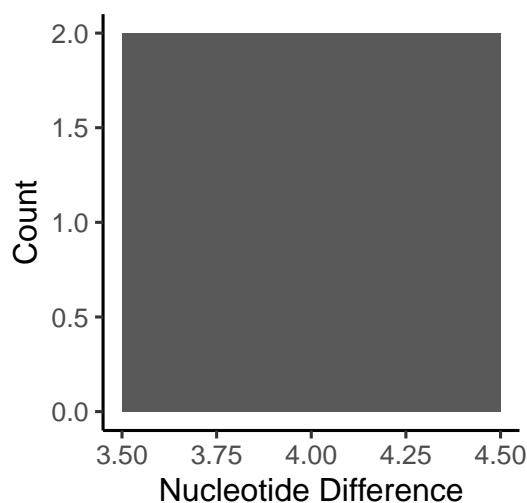
### IGHV3-48\*01

647 sequences assigned  
82 (12.7%) exact matches, in which:  
46 unique CDR3  
5 unique J



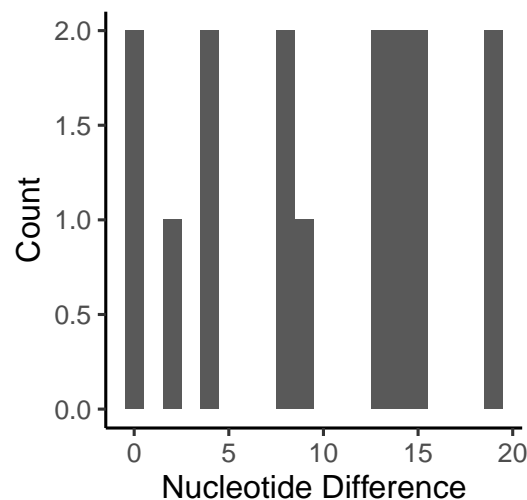
### IGHV3-52\*02

2 sequences assigned  
No exact matches.



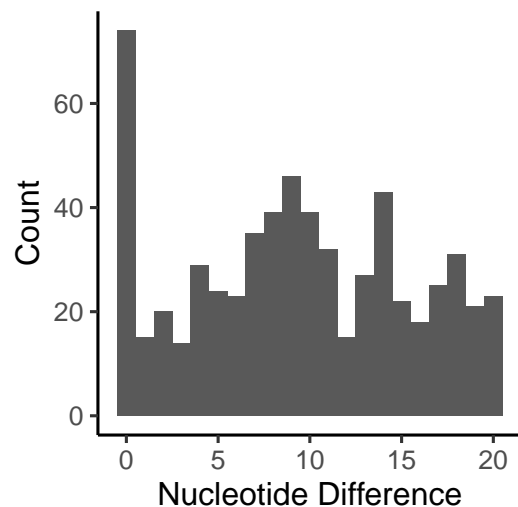
### IGHV3-64\*02\_07

18 sequences assigned  
2 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



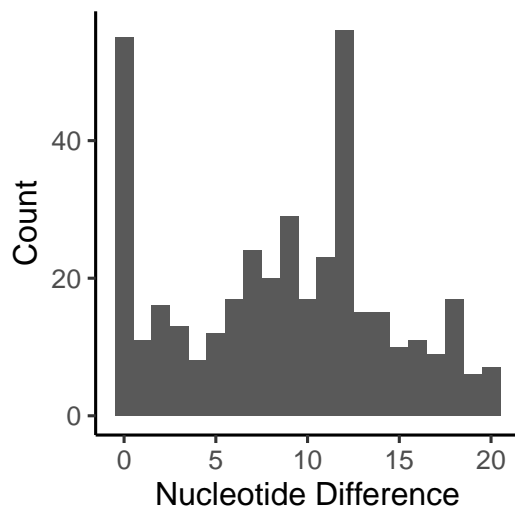
### IGHV3-48\*02

740 sequences assigned  
74 (10%) exact matches, in which:  
38 unique CDR3  
6 unique J



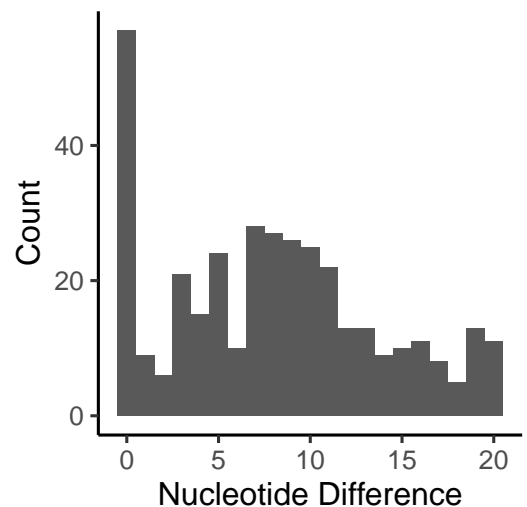
### IGHV3-53\*01\_02

423 sequences assigned  
55 (13%) exact matches, in which:  
31 unique CDR3  
6 unique J



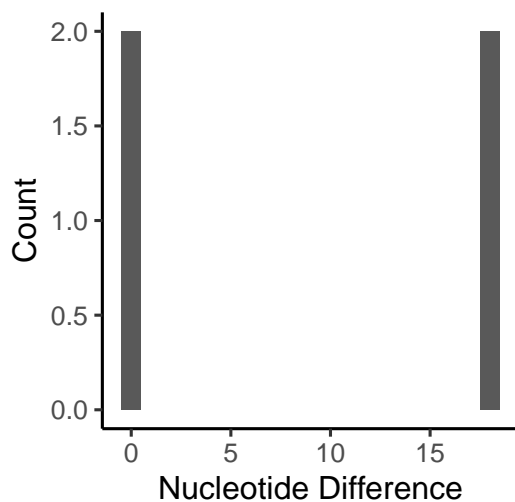
### IGHV3-66\*01

514 sequences assigned  
57 (11.1%) exact matches, in which:  
32 unique CDR3  
5 unique J



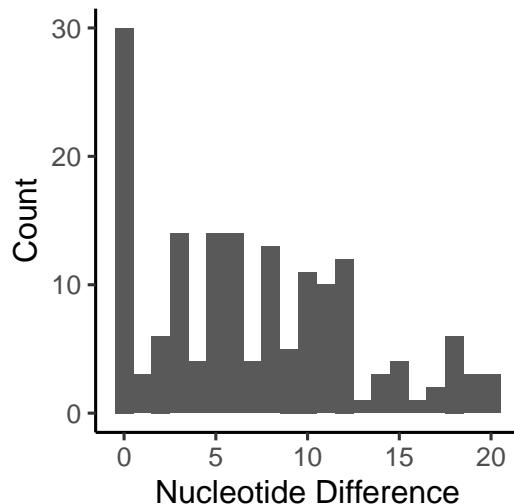
### IGHV3-69-1\*01

30 sequences assigned  
2 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



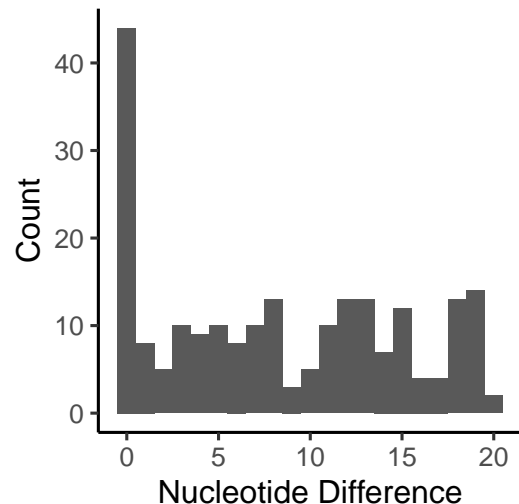
### IGHV3-73\*01\_02

215 sequences assigned  
30 (14%) exact matches, in which:  
16 unique CDR3  
4 unique J



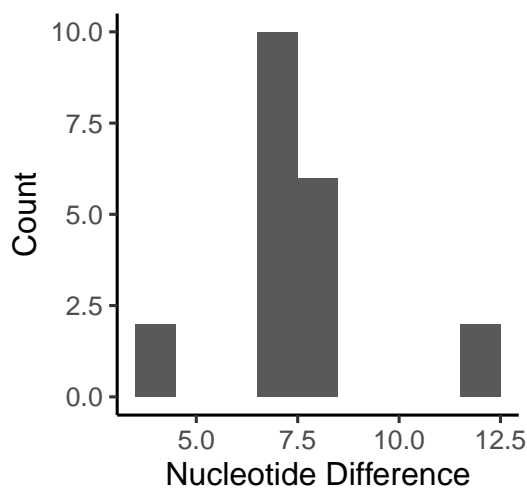
### IGHV3-64D\*06

312 sequences assigned  
44 (14.1%) exact matches, in which:  
24 unique CDR3  
4 unique J



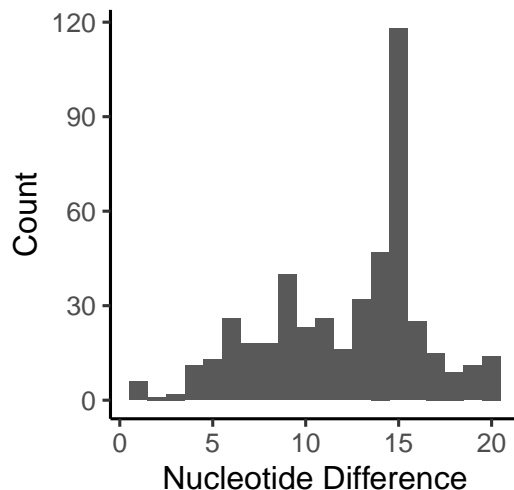
### IGHV3-69-1\*02

27 sequences assigned  
No exact matches.



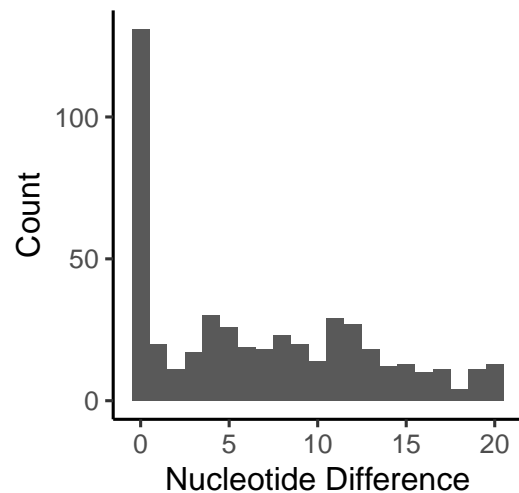
### IGHV3-74\*03

541 sequences assigned  
No exact matches.



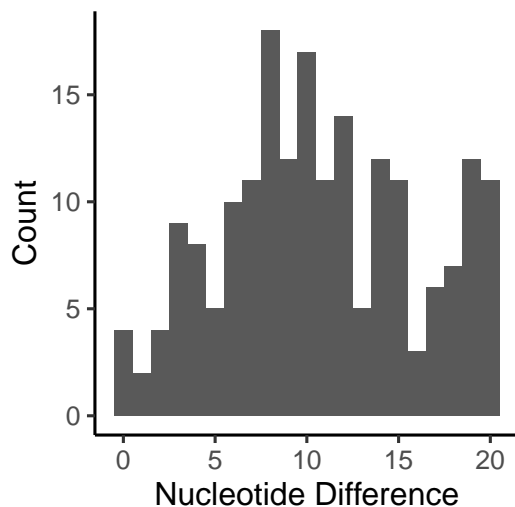
### IGHV4-4\*02\_03

581 sequences assigned  
131 (22.5%) exact matches, in which:  
122 unique CDR3  
7 unique J



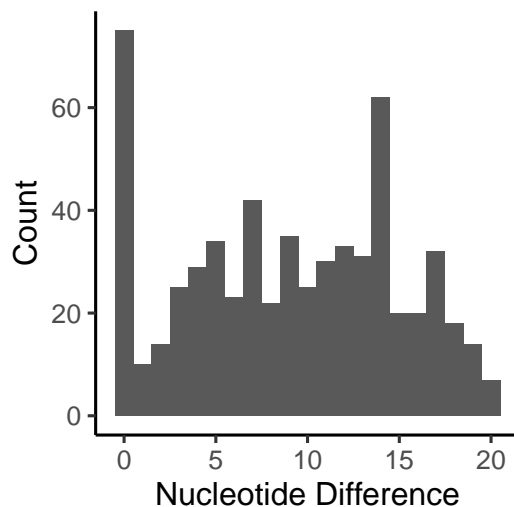
### IGHV3-72\*01

257 sequences assigned  
4 (1.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



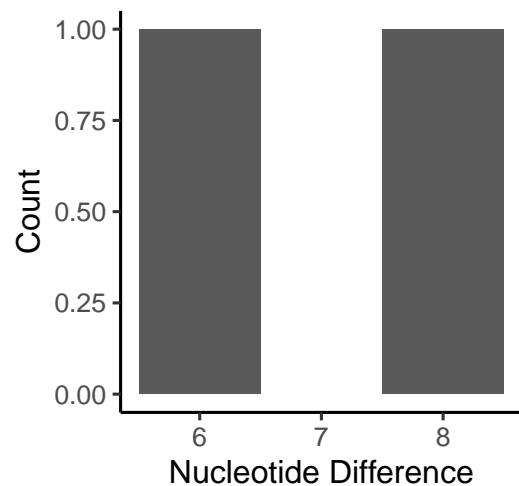
### IGHV3-74\*01\_02

717 sequences assigned  
75 (10.5%) exact matches, in which:  
38 unique CDR3  
6 unique J



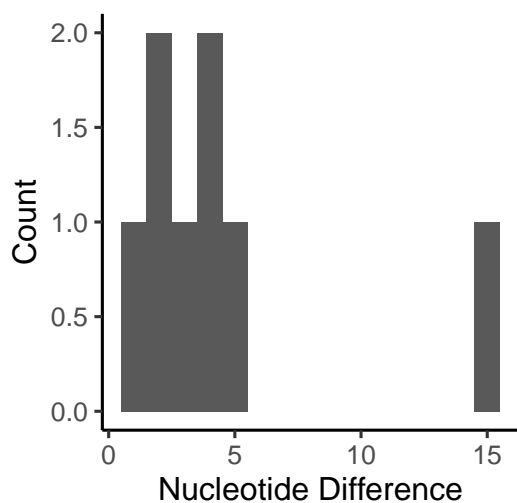
### IGHV4-28\*02\_05

2 sequences assigned  
No exact matches.



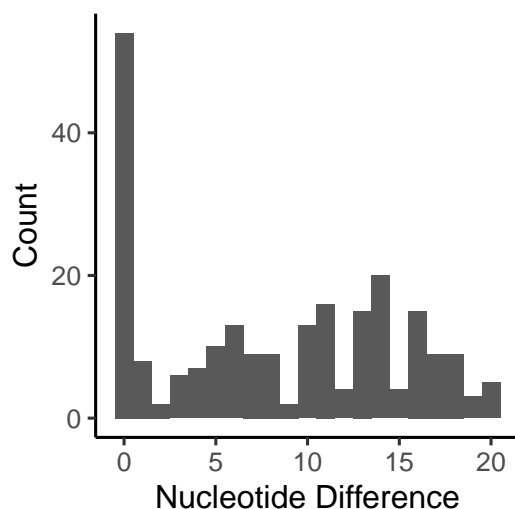
### IGHV4-30-2\*03

10 sequences assigned  
No exact matches.



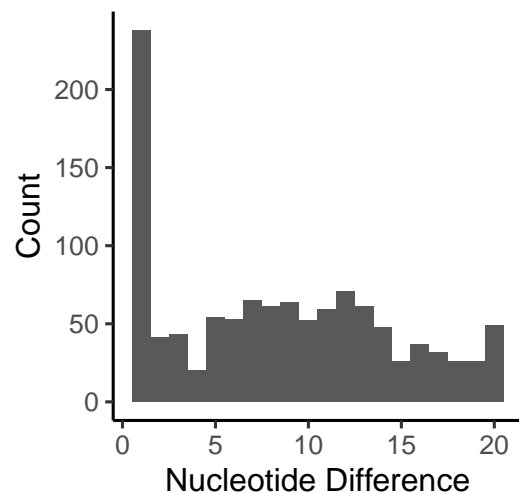
### IGHV4-31\*02

359 sequences assigned  
54 (15%) exact matches, in which:  
53 unique CDR3  
6 unique J



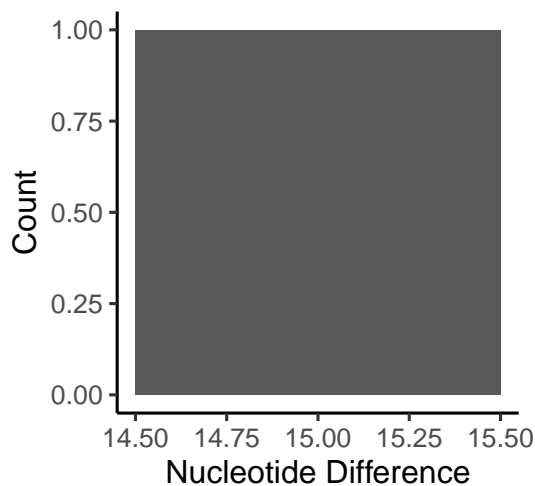
### IGHV4-39\*02

1645 sequences assigned  
No exact matches.



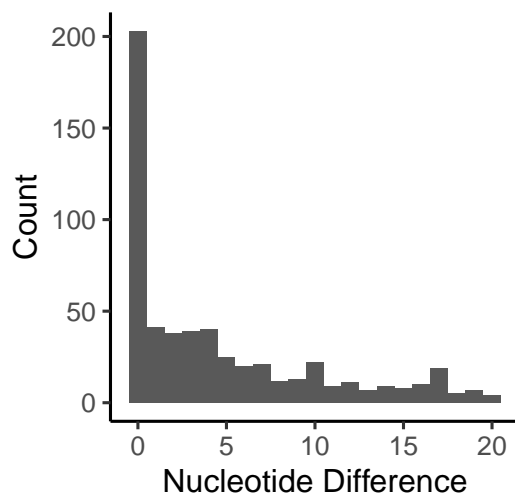
### IGHV4-30-4\*08

1 sequences assigned  
No exact matches.



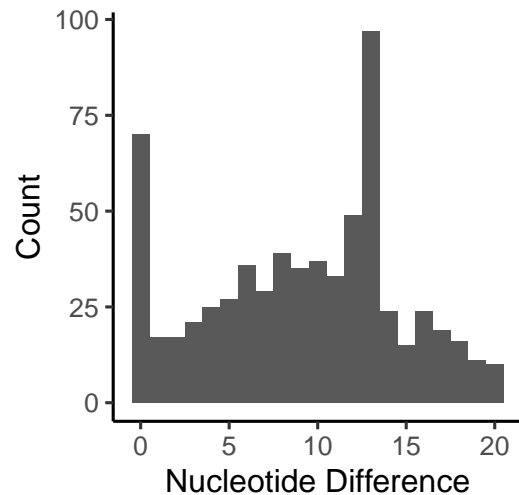
### IGHV4-34\*01\_02

619 sequences assigned  
203 (32.8%) exact matches, in which:  
183 unique CDR3  
7 unique J



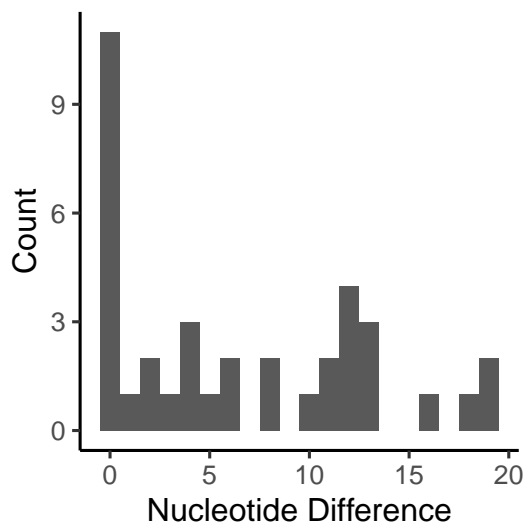
### IGHV4-59\*08

904 sequences assigned  
70 (7.7%) exact matches, in which:  
67 unique CDR3  
5 unique J



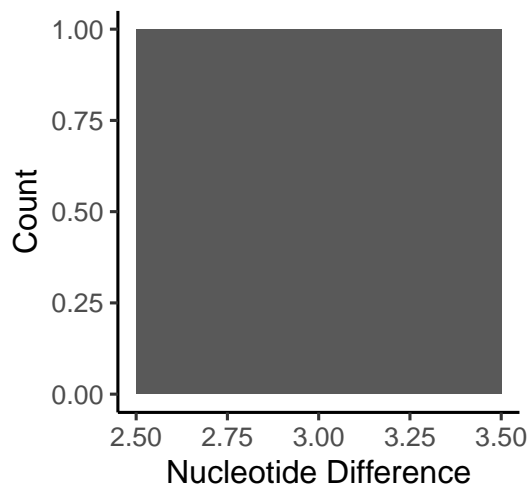
### IGHV4-31\*01

158 sequences assigned  
11 (7%) exact matches, in which:  
11 unique CDR3  
4 unique J



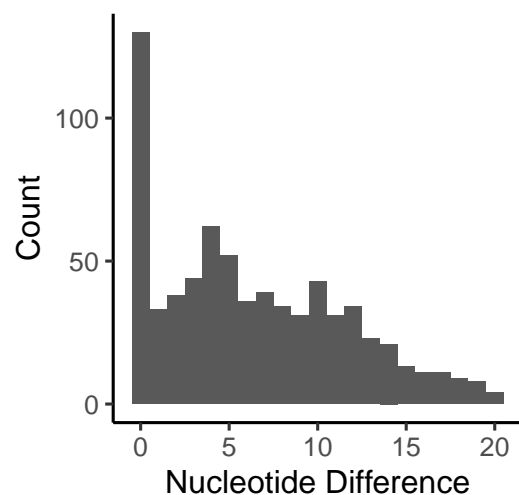
### IGHV4-38-2\*02

3 sequences assigned  
No exact matches.



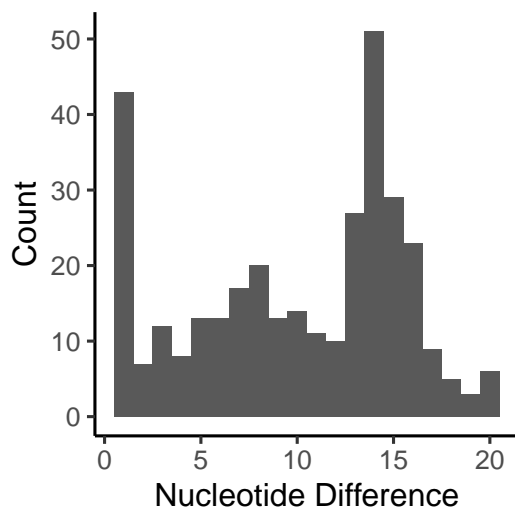
### IGHV4-59\*01\_07

833 sequences assigned  
130 (15.6%) exact matches, in which:  
126 unique CDR3  
6 unique J



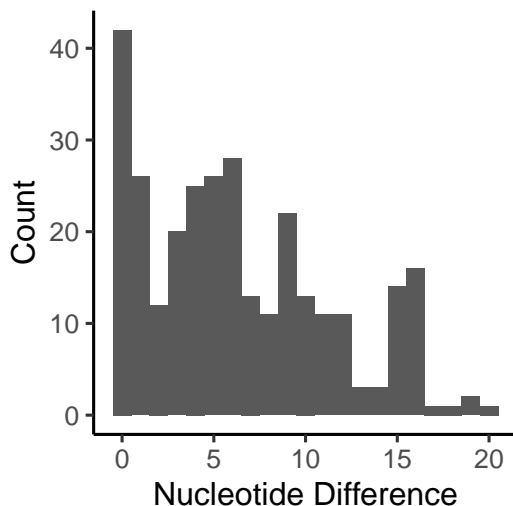
### IGHV4–59\*11

372 sequences assigned  
No exact matches.



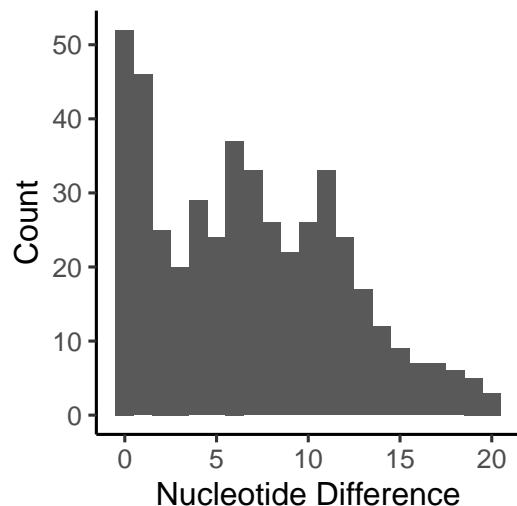
### IGHV5–10–1\*01\_03

344 sequences assigned  
42 (12.2%) exact matches, in which:  
32 unique CDR3  
5 unique J



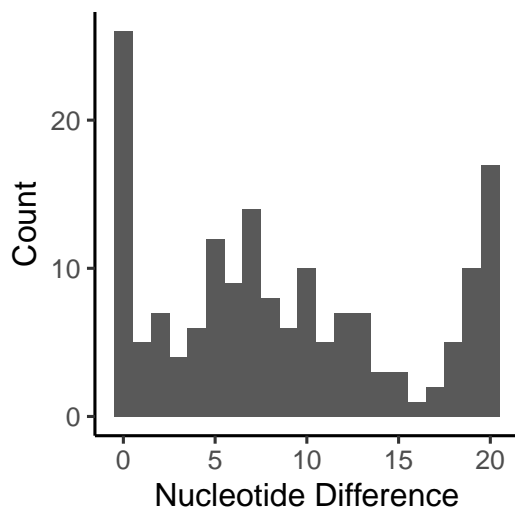
### IGHV6–1\*01\_02

490 sequences assigned  
52 (10.6%) exact matches, in which:  
45 unique CDR3  
5 unique J



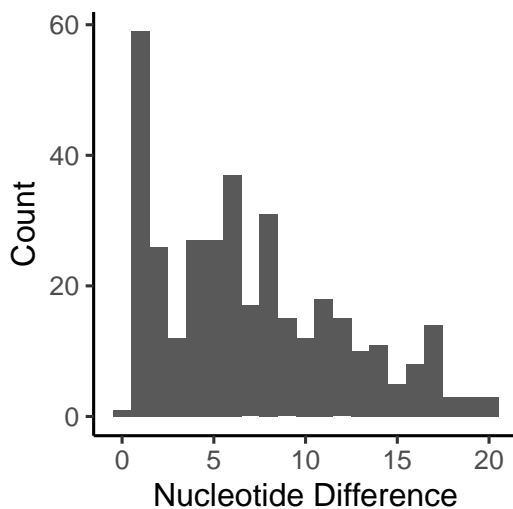
### IGHV4–61\*01

276 sequences assigned  
26 (9.4%) exact matches, in which:  
26 unique CDR3  
4 unique J



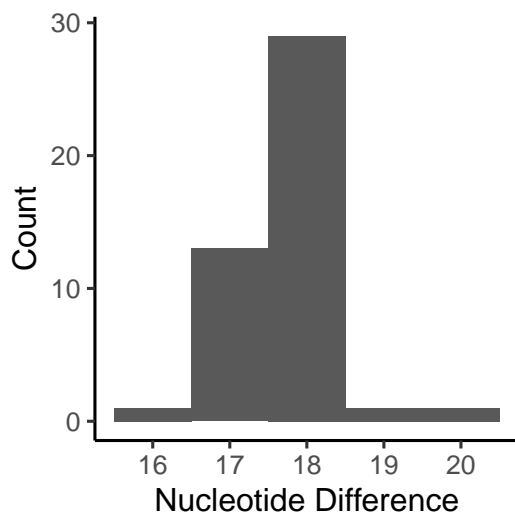
### IGHV5–51\*07

449 sequences assigned  
1 (0.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



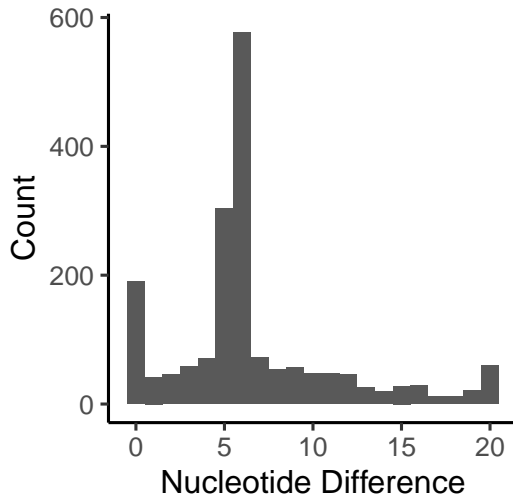
### IGHV4/OR15–8\*01

46 sequences assigned  
No exact matches.



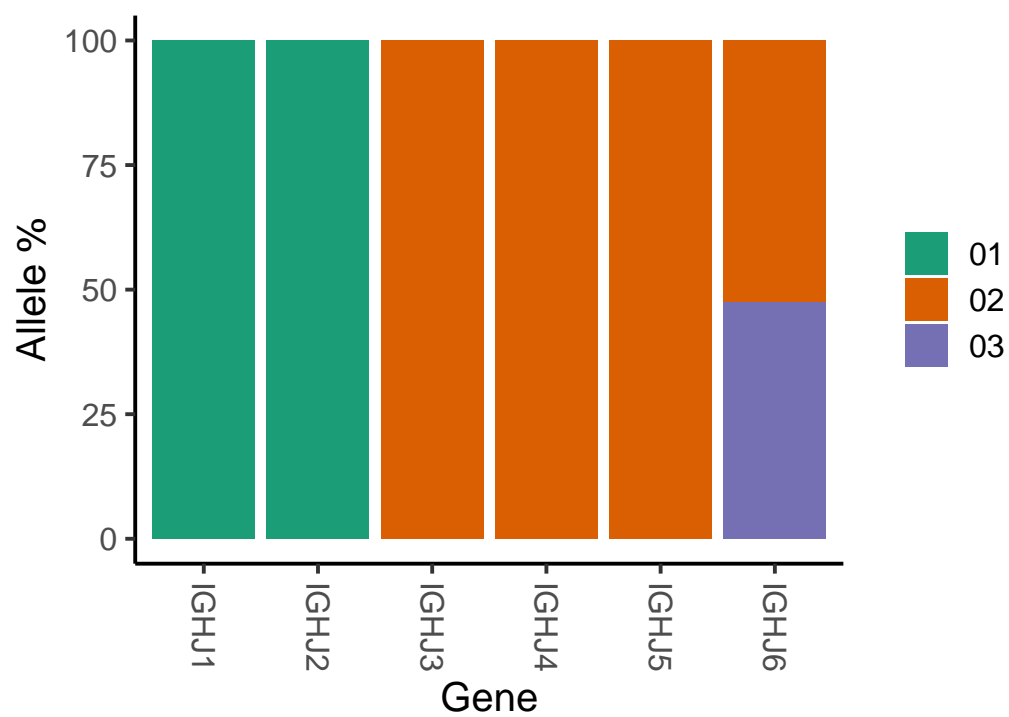
### IGHV5–51\*01\_03

2034 sequences assigned  
190 (9.3%) exact matches, in which:  
133 unique CDR3  
7 unique J

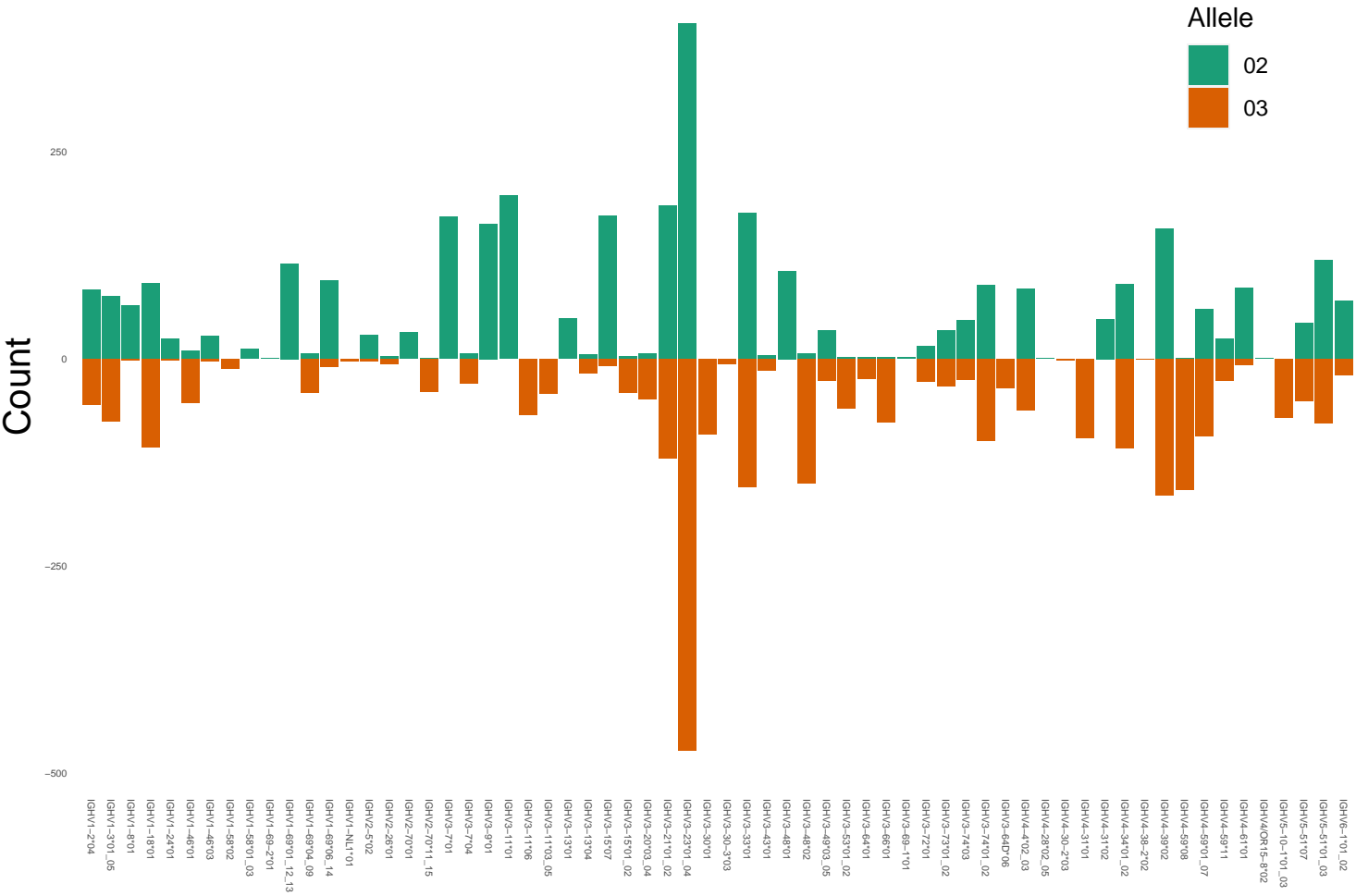




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.