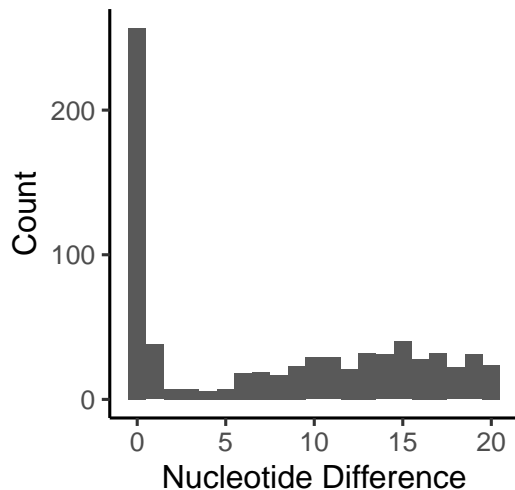


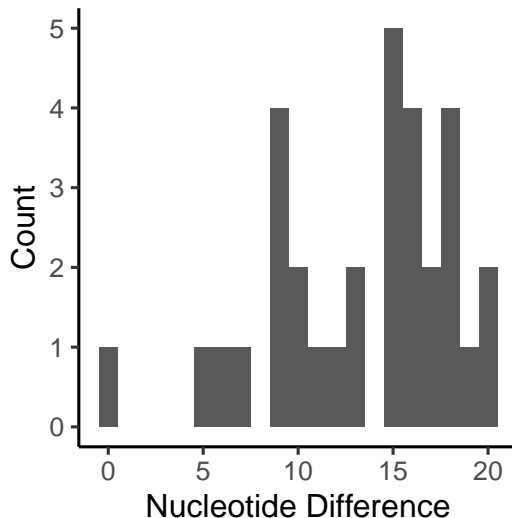
### IGHV1-2\*02

981 sequences assigned  
257 (26.2%) exact matches, in which:  
257 unique CDR3  
6 unique J



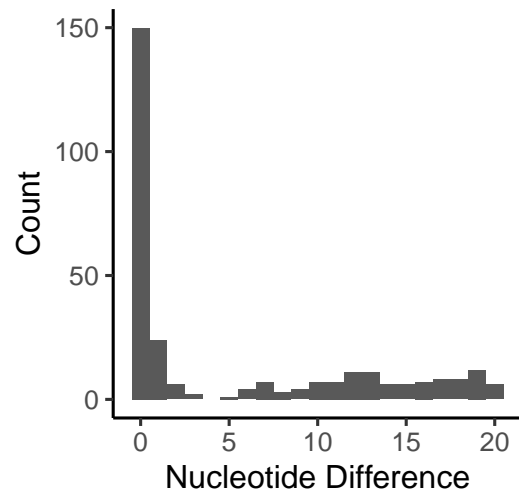
### IGHV1-3\*04

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



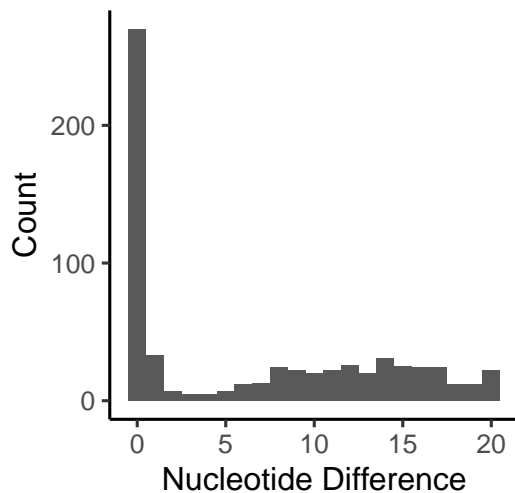
### IGHV1-18\*01\_A196G

404 sequences assigned  
150 (37.1%) exact matches, in which:  
150 unique CDR3  
6 unique J



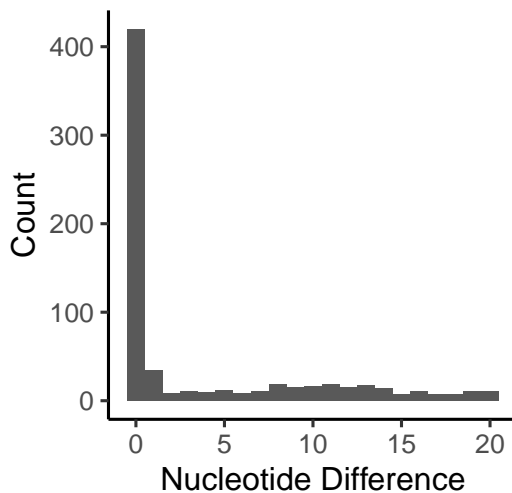
### IGHV1-2\*06

874 sequences assigned  
270 (30.9%) exact matches, in which:  
270 unique CDR3  
6 unique J



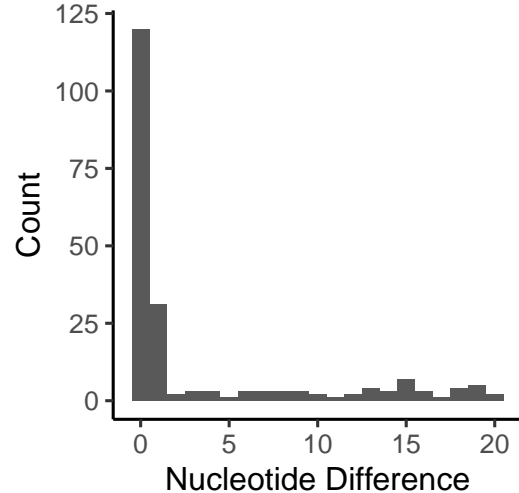
### IGHV1-8\*01

785 sequences assigned  
420 (53.5%) exact matches, in which:  
419 unique CDR3  
7 unique J



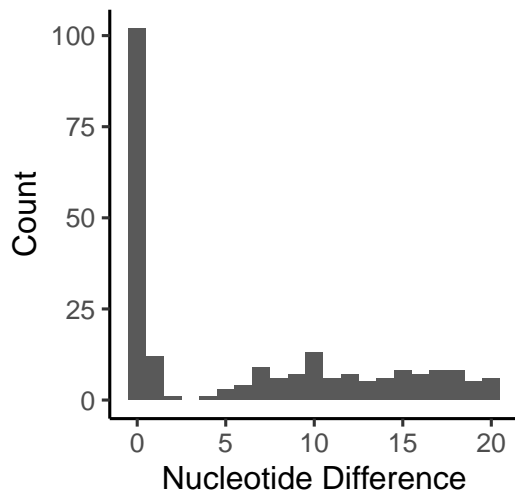
### IGHV1-24\*01

253 sequences assigned  
120 (47.4%) exact matches, in which:  
119 unique CDR3  
7 unique J



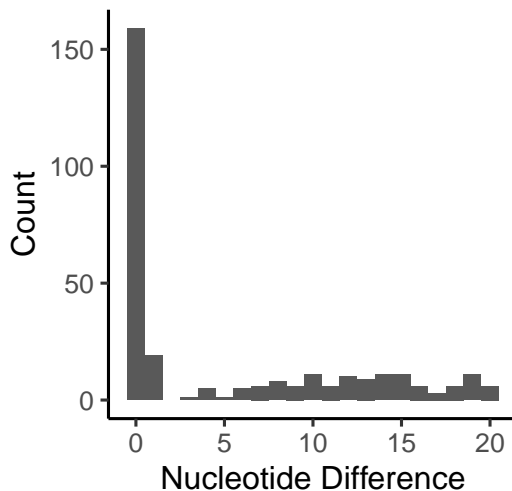
### IGHV1-3\*01

269 sequences assigned  
102 (37.9%) exact matches, in which:  
101 unique CDR3  
6 unique J



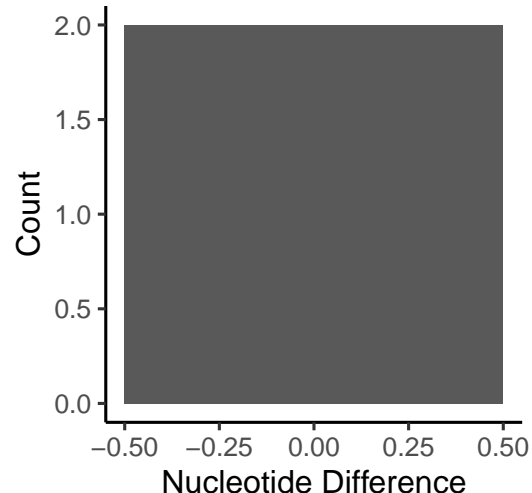
### IGHV1-18\*01

398 sequences assigned  
159 (39.9%) exact matches, in which:  
159 unique CDR3  
7 unique J



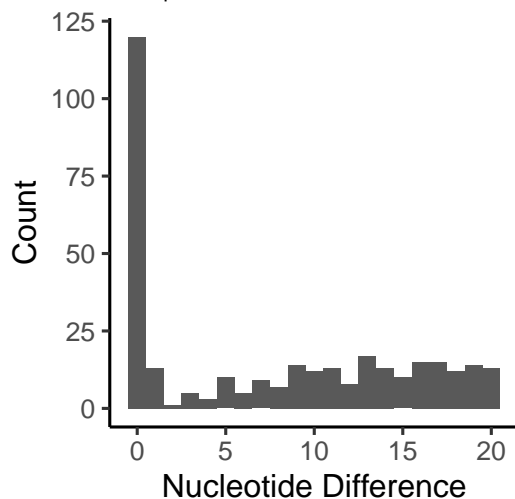
### IGHV1-45\*02

4 sequences assigned  
2 (50%) exact matches, in which:  
2 unique CDR3  
1 unique J



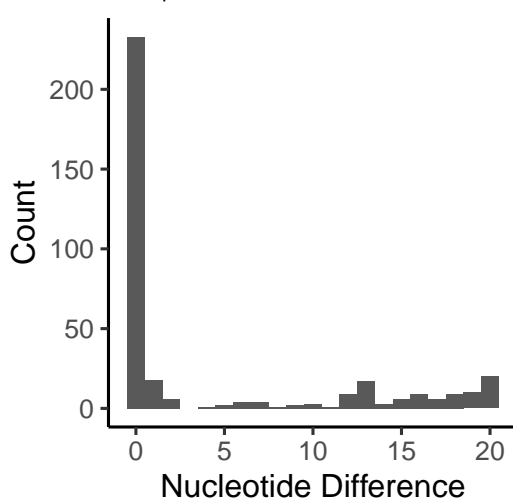
### IGHV1-46\*01

436 sequences assigned  
120 (27.5%) exact matches, in which:  
120 unique CDR3  
7 unique J



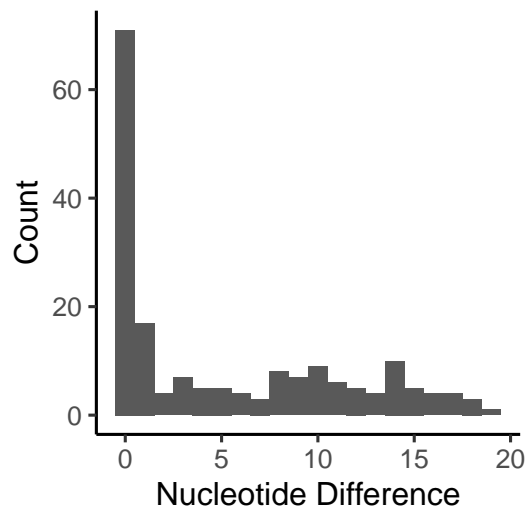
### IGHV1-69\*06

559 sequences assigned  
233 (41.7%) exact matches, in which:  
232 unique CDR3  
6 unique J



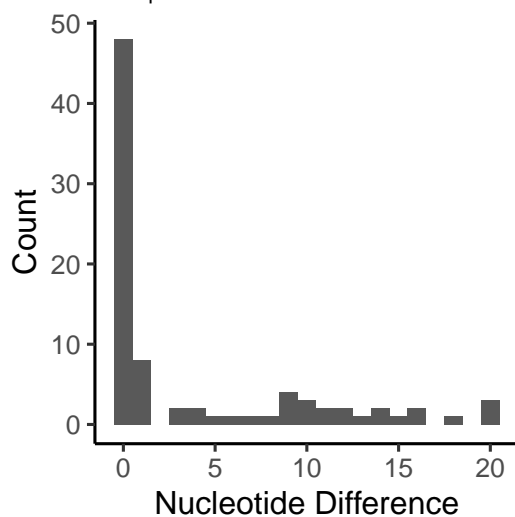
### IGHV2-26\*01

203 sequences assigned  
71 (35%) exact matches, in which:  
71 unique CDR3  
5 unique J



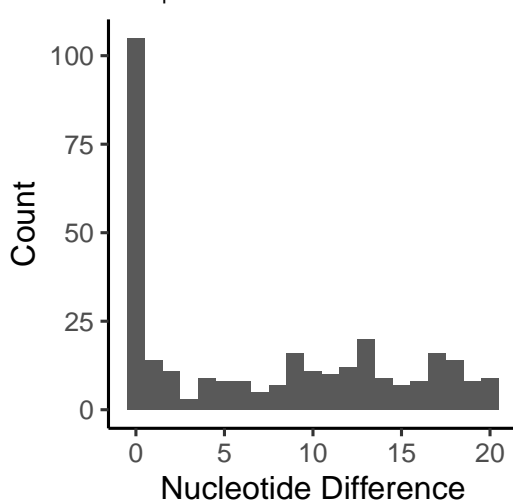
### IGHV1-58\*01

124 sequences assigned  
48 (38.7%) exact matches, in which:  
48 unique CDR3  
7 unique J



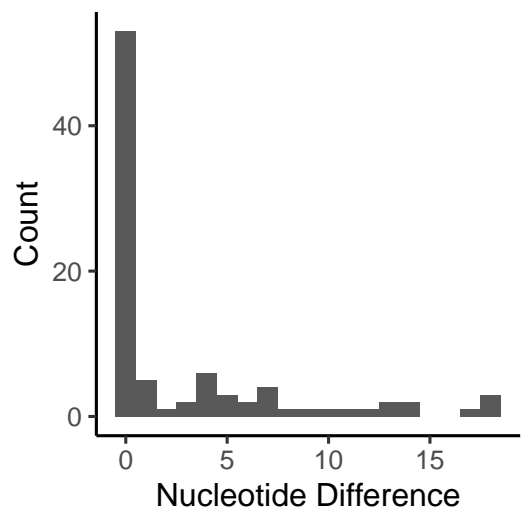
### IGHV2-5\*01

349 sequences assigned  
105 (30.1%) exact matches, in which:  
105 unique CDR3  
6 unique J



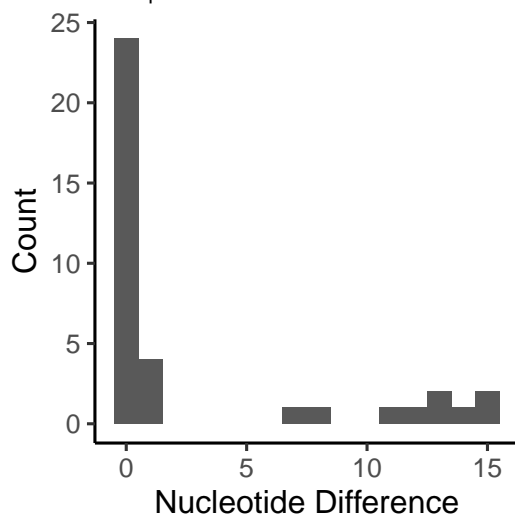
### IGHV2-70\*01

106 sequences assigned  
53 (50%) exact matches, in which:  
53 unique CDR3  
5 unique J



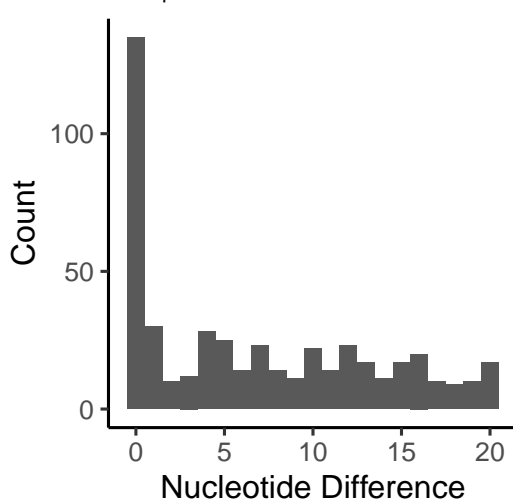
### IGHV1-69-2\*01

46 sequences assigned  
24 (52.2%) exact matches, in which:  
24 unique CDR3  
5 unique J



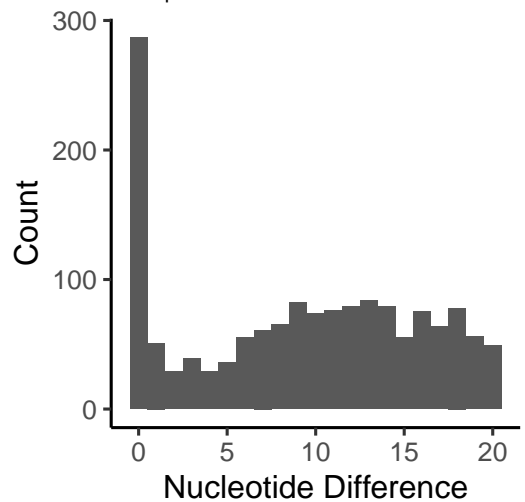
### IGHV2-5\*02

628 sequences assigned  
135 (21.5%) exact matches, in which:  
135 unique CDR3  
6 unique J



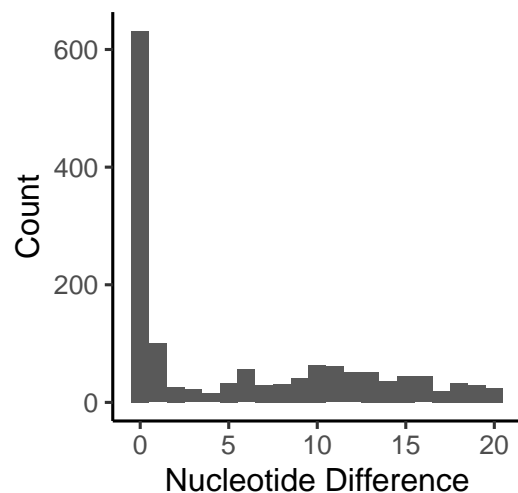
### IGHV3-7\*01

1810 sequences assigned  
287 (15.9%) exact matches, in which:  
287 unique CDR3  
7 unique J



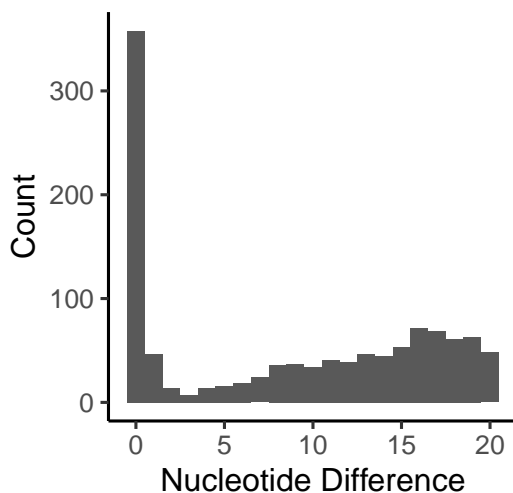
### IGHV3-9\*01

1668 sequences assigned  
632 (37.9%) exact matches, in which:  
629 unique CDR3  
7 unique J



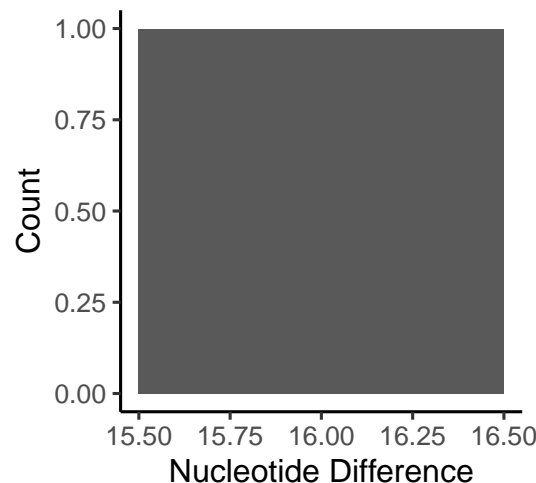
### IGHV3-15\*01

1497 sequences assigned  
358 (23.9%) exact matches, in which:  
358 unique CDR3  
7 unique J



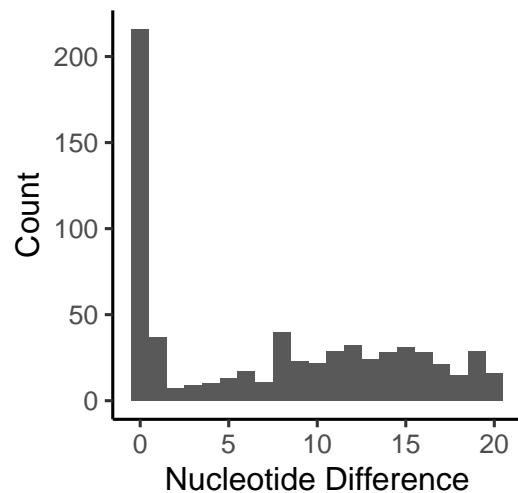
### IGHV3-20\*04

5 sequences assigned  
No exact matches.



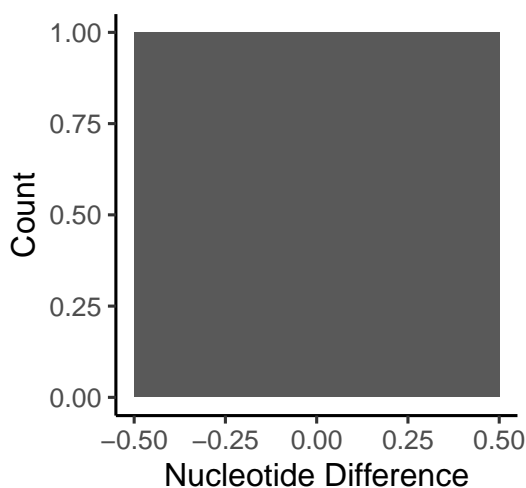
### IGHV3-11\*01

767 sequences assigned  
216 (28.2%) exact matches, in which:  
216 unique CDR3  
7 unique J



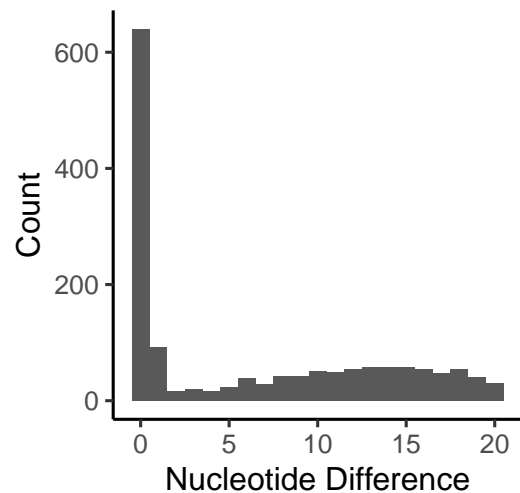
### IGHV3-19\*01

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



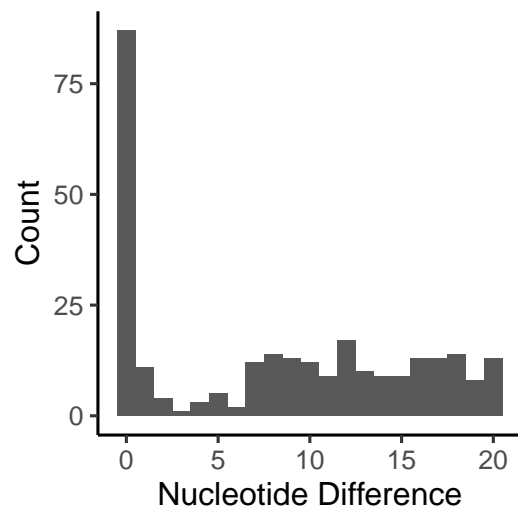
### IGHV3-21\*01

1813 sequences assigned  
640 (35.3%) exact matches, in which:  
639 unique CDR3  
7 unique J



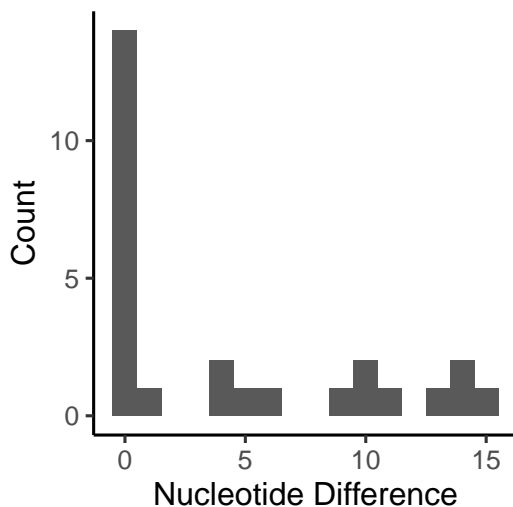
### IGHV3-13\*01

343 sequences assigned  
87 (25.4%) exact matches, in which:  
87 unique CDR3  
6 unique J



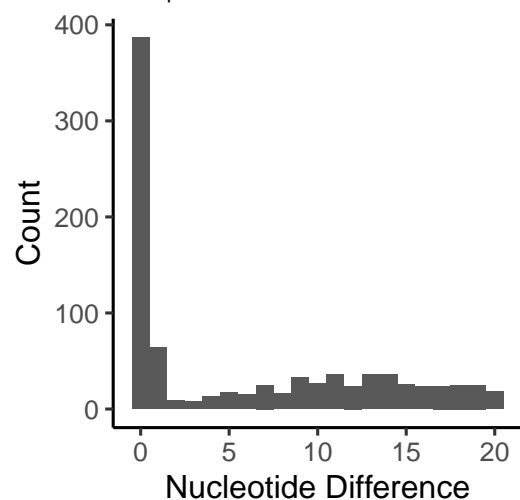
### IGHV3-20\*01

31 sequences assigned  
14 (45.2%) exact matches, in which:  
13 unique CDR3  
5 unique J



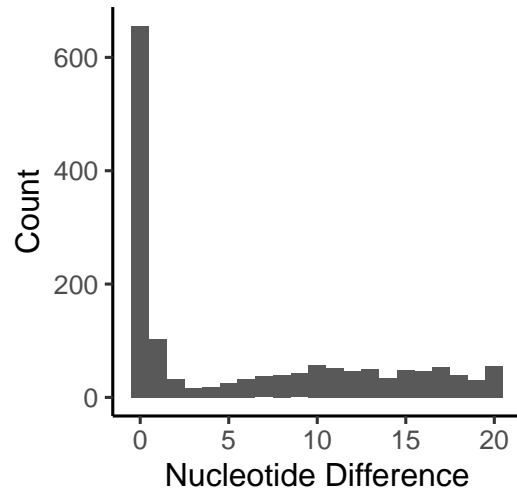
### IGHV3-30-3\*01

1134 sequences assigned  
387 (34.1%) exact matches, in which:  
384 unique CDR3  
6 unique J



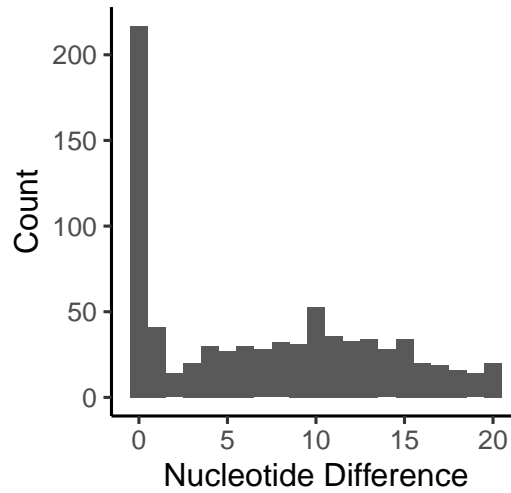
### IGHV3-33\*01

1816 sequences assigned  
656 (36.1%) exact matches, in which:  
654 unique CDR3  
7 unique J



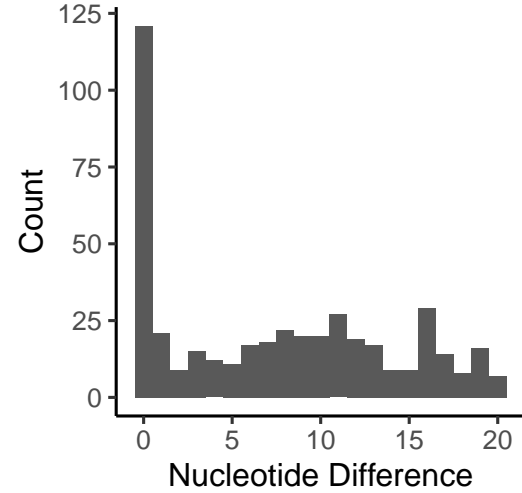
### IGHV3-48\*03

922 sequences assigned  
217 (23.5%) exact matches, in which:  
217 unique CDR3  
6 unique J



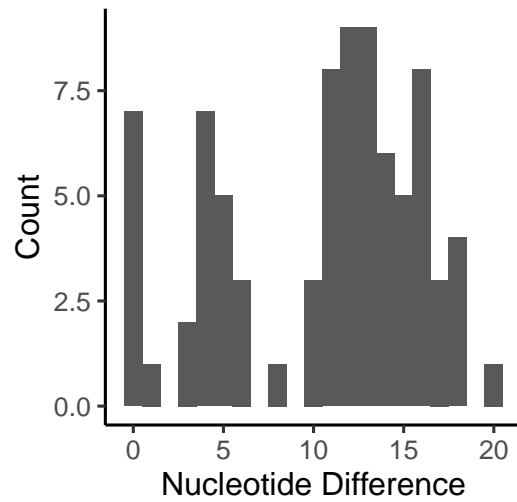
### IGHV3-53\*01

556 sequences assigned  
121 (21.8%) exact matches, in which:  
121 unique CDR3  
7 unique J



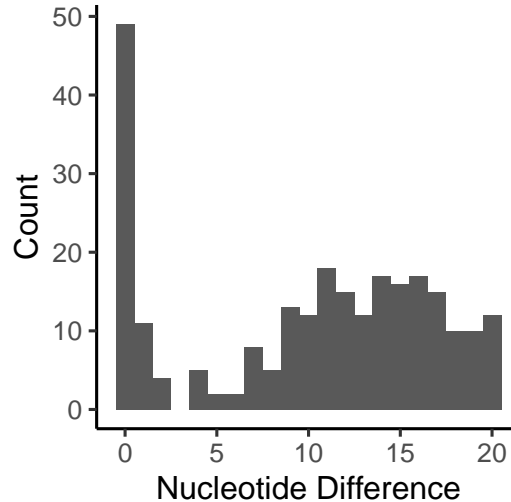
### IGHV3-43\*01\_T177A

93 sequences assigned  
7 (7.5%) exact matches, in which:  
7 unique CDR3  
3 unique J



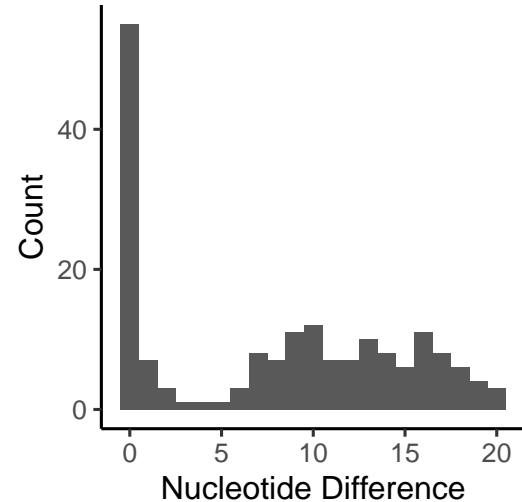
### IGHV3-49\*04

330 sequences assigned  
49 (14.8%) exact matches, in which:  
49 unique CDR3  
4 unique J



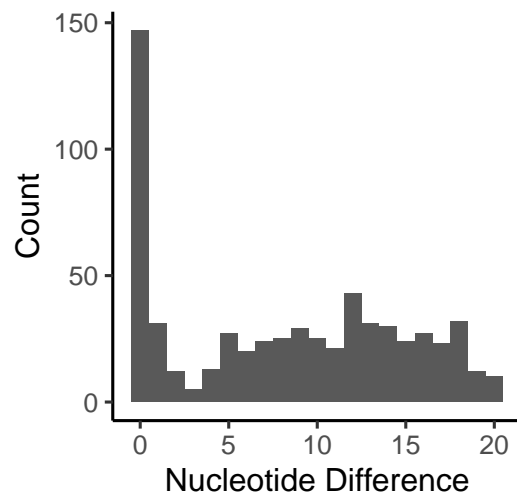
### IGHV3-53\*02

235 sequences assigned  
55 (23.4%) exact matches, in which:  
54 unique CDR3  
6 unique J



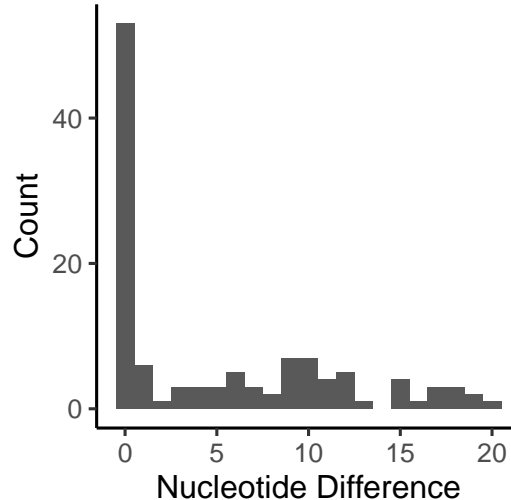
### IGHV3-48\*02

715 sequences assigned  
147 (20.6%) exact matches, in which:  
147 unique CDR3  
6 unique J



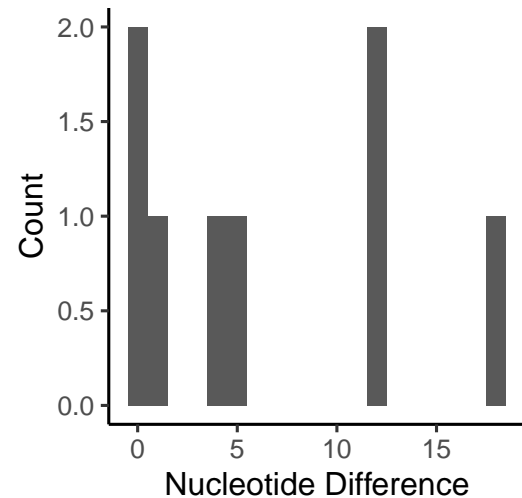
### IGHV3-49\*05

153 sequences assigned  
53 (34.6%) exact matches, in which:  
53 unique CDR3  
5 unique J



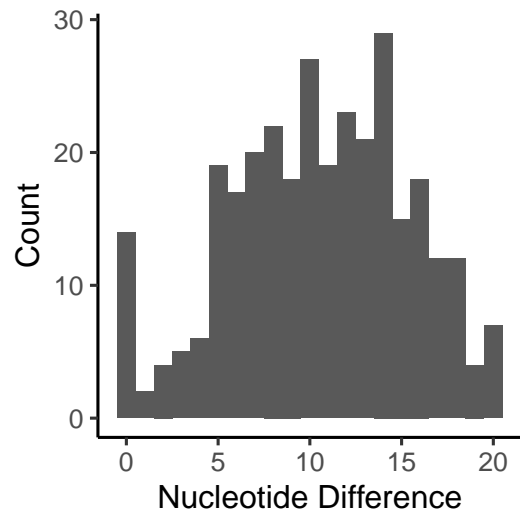
### IGHV3-64\*02

13 sequences assigned  
2 (15.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



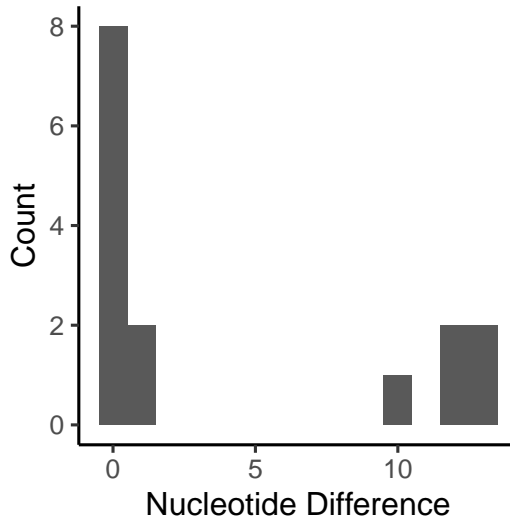
### IGHV3-72\*01

341 sequences assigned  
14 (4.1%) exact matches, in which:  
14 unique CDR3  
4 unique J



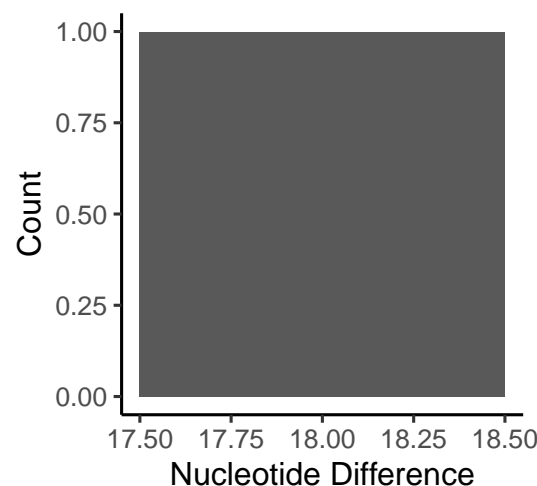
### IGHV3-43D\*04

27 sequences assigned  
8 (29.6%) exact matches, in which:  
8 unique CDR3  
3 unique J



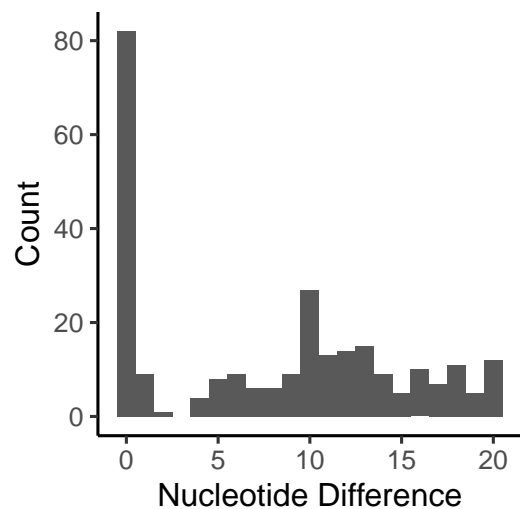
### IGHV4-28\*01

1 sequences assigned  
No exact matches.



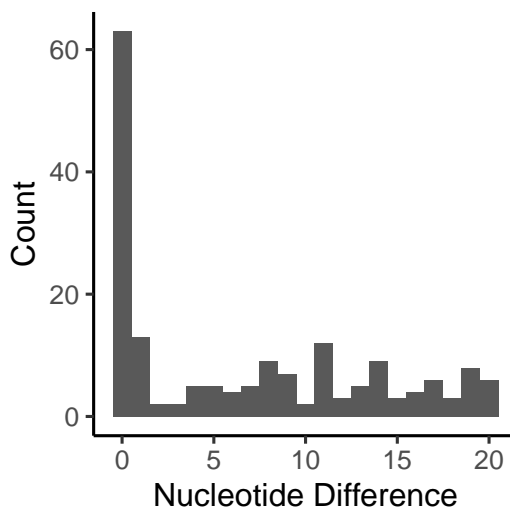
### IGHV3-73\*02

300 sequences assigned  
82 (27.3%) exact matches, in which:  
82 unique CDR3  
6 unique J



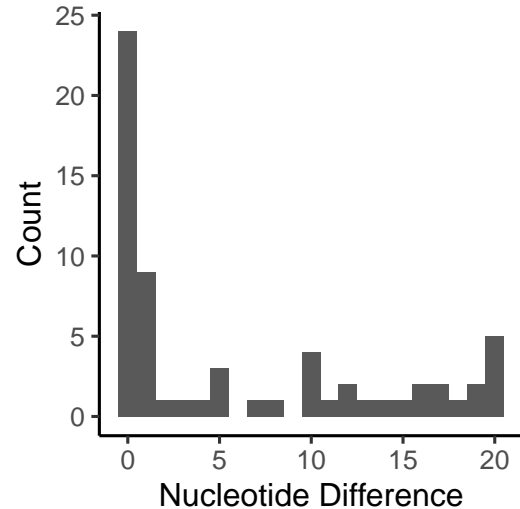
### IGHV4-4\*02

243 sequences assigned  
63 (25.9%) exact matches, in which:  
63 unique CDR3  
6 unique J



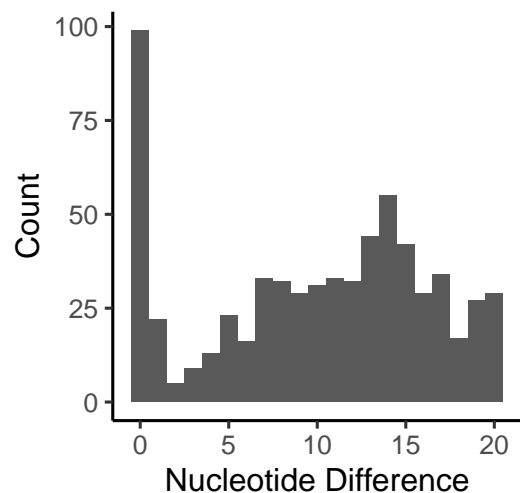
### IGHV4-30-2\*01

90 sequences assigned  
24 (26.7%) exact matches, in which:  
24 unique CDR3  
5 unique J



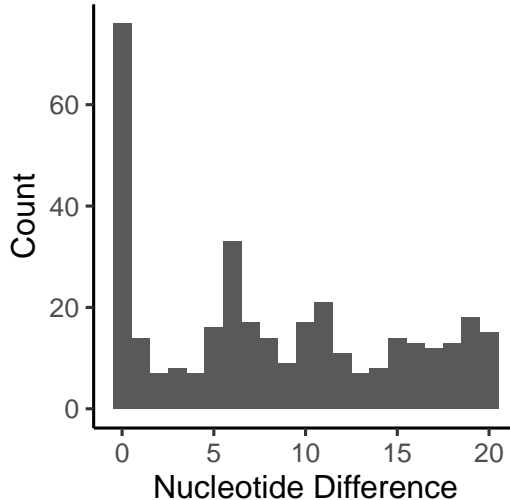
### IGHV3-74\*01

813 sequences assigned  
99 (12.2%) exact matches, in which:  
99 unique CDR3  
7 unique J



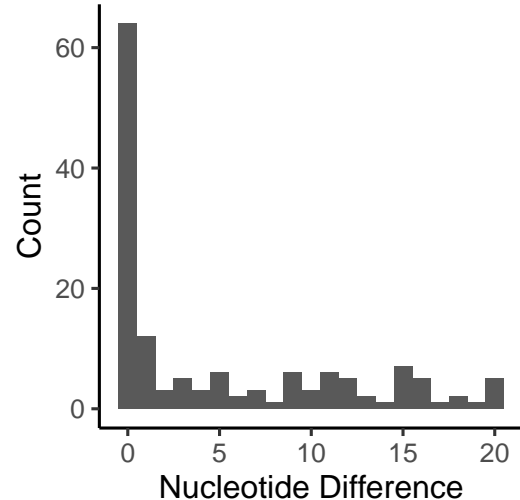
### IGHV4-4\*07

433 sequences assigned  
76 (17.6%) exact matches, in which:  
76 unique CDR3  
5 unique J



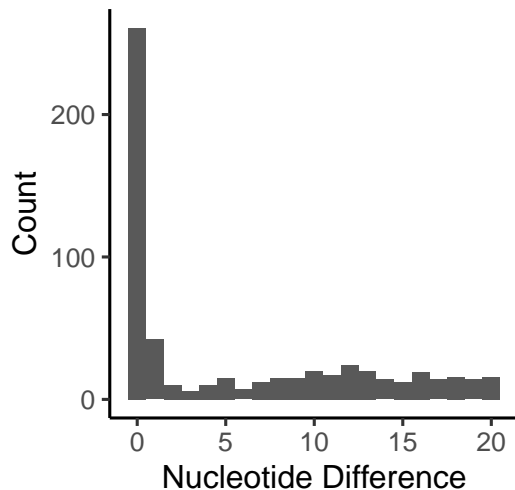
### IGHV4-30-4\*01

187 sequences assigned  
64 (34.2%) exact matches, in which:  
64 unique CDR3  
6 unique J



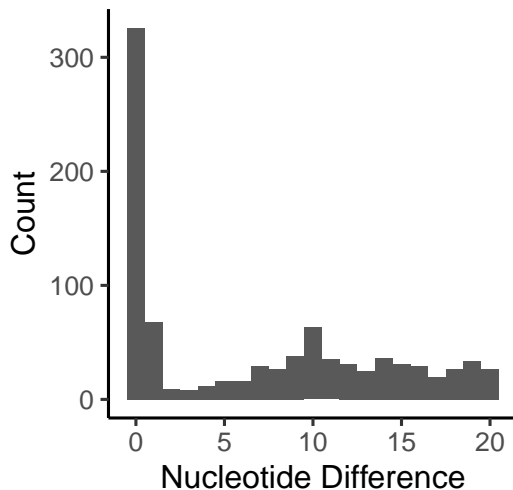
### IGHV4-31\*03

826 sequences assigned  
261 (31.6%) exact matches, in which:  
260 unique CDR3  
7 unique J



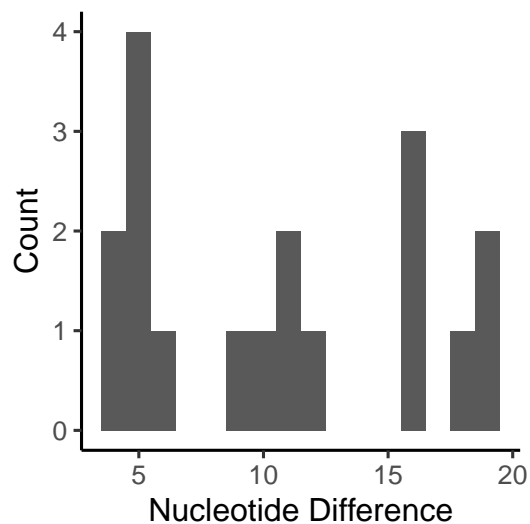
### IGHV4-39\*01

1259 sequences assigned  
326 (25.9%) exact matches, in which:  
325 unique CDR3  
6 unique J



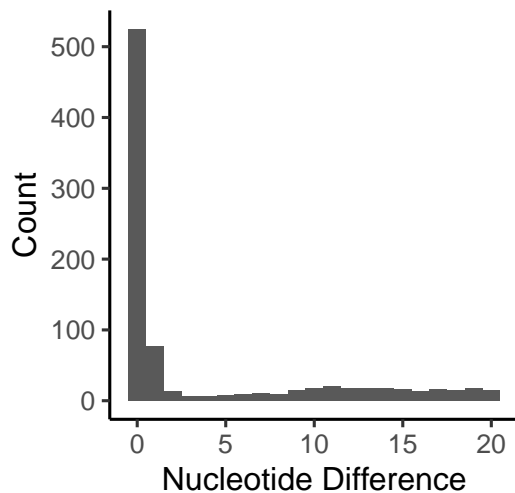
### IGHV4-61\*08

33 sequences assigned  
No exact matches.



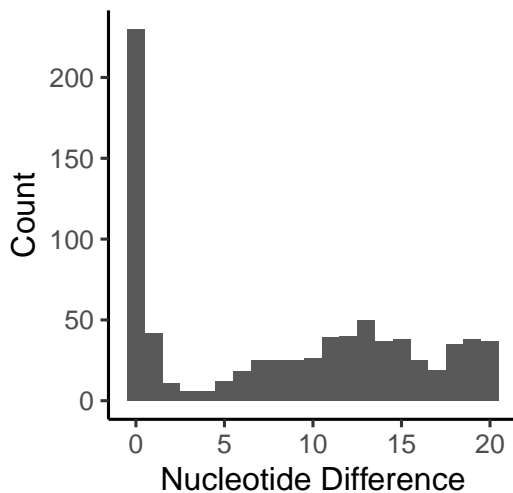
### IGHV4-34\*01

1029 sequences assigned  
525 (51%) exact matches, in which:  
522 unique CDR3  
7 unique J



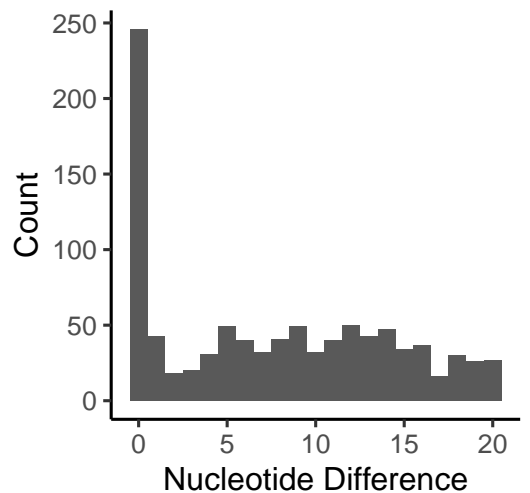
### IGHV4-59\*01

1095 sequences assigned  
230 (21%) exact matches, in which:  
230 unique CDR3  
7 unique J



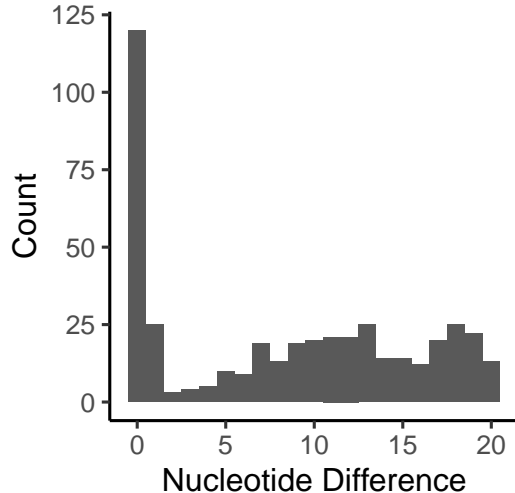
### IGHV5-51\*01

1134 sequences assigned  
246 (21.7%) exact matches, in which:  
245 unique CDR3  
7 unique J



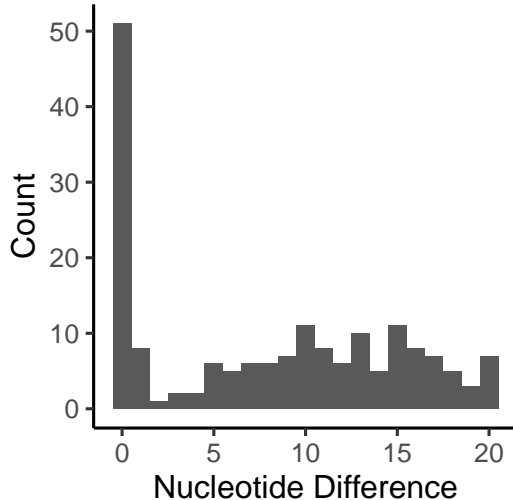
### IGHV4-38-2\*02\_A70G

581 sequences assigned  
120 (20.7%) exact matches, in which:  
120 unique CDR3  
6 unique J



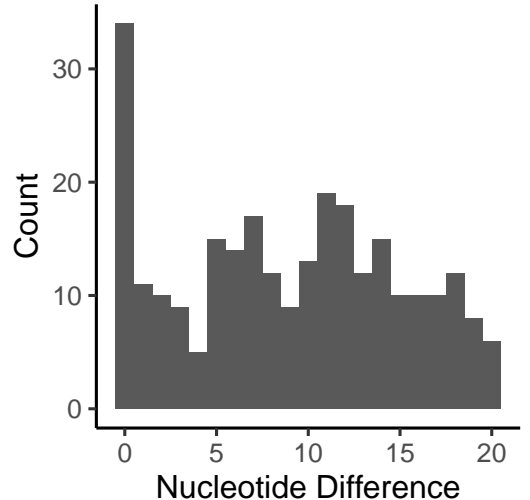
### IGHV4-61\*01

227 sequences assigned  
51 (22.5%) exact matches, in which:  
51 unique CDR3  
6 unique J



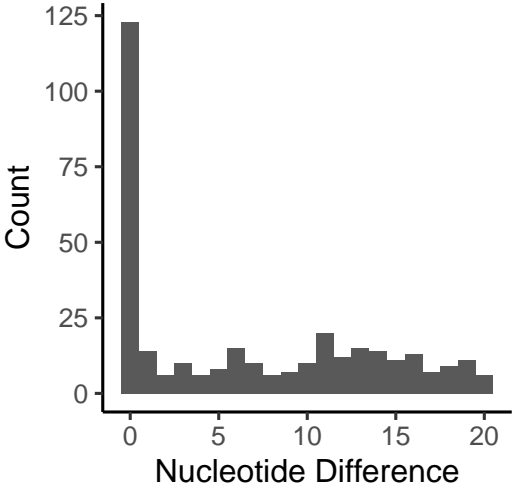
### IGHV6-1\*01

301 sequences assigned  
34 (11.3%) exact matches, in which:  
34 unique CDR3  
6 unique J

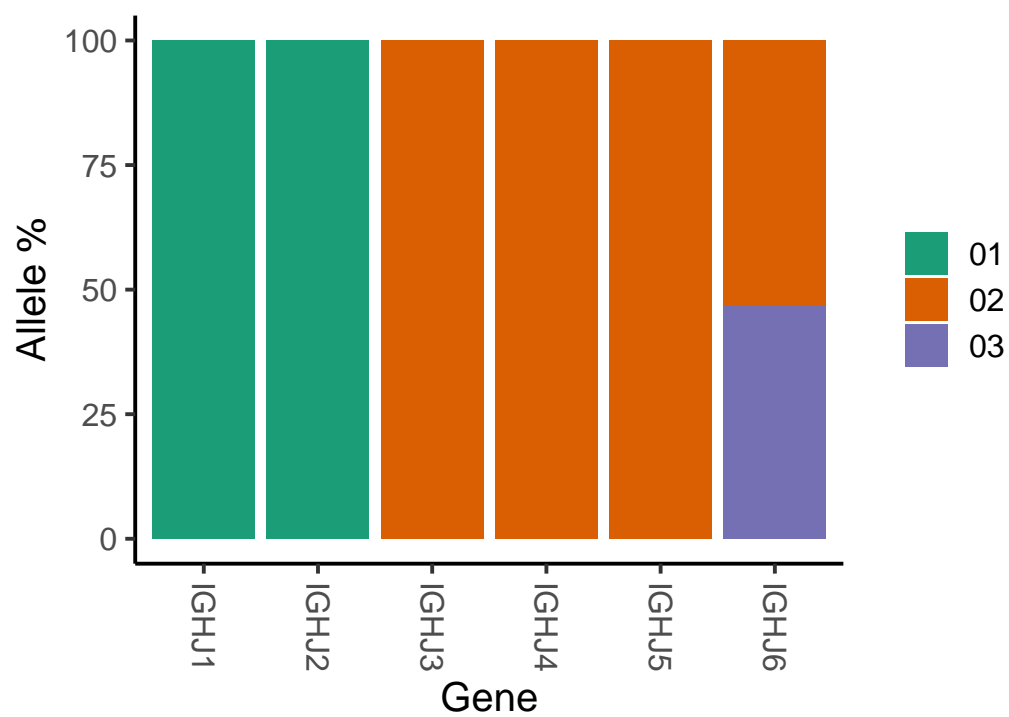


# IGHV7-4-1\*02

389 sequences assigned  
123 (31.6%) exact matches, in which:  
123 unique CDR3  
7 unique J

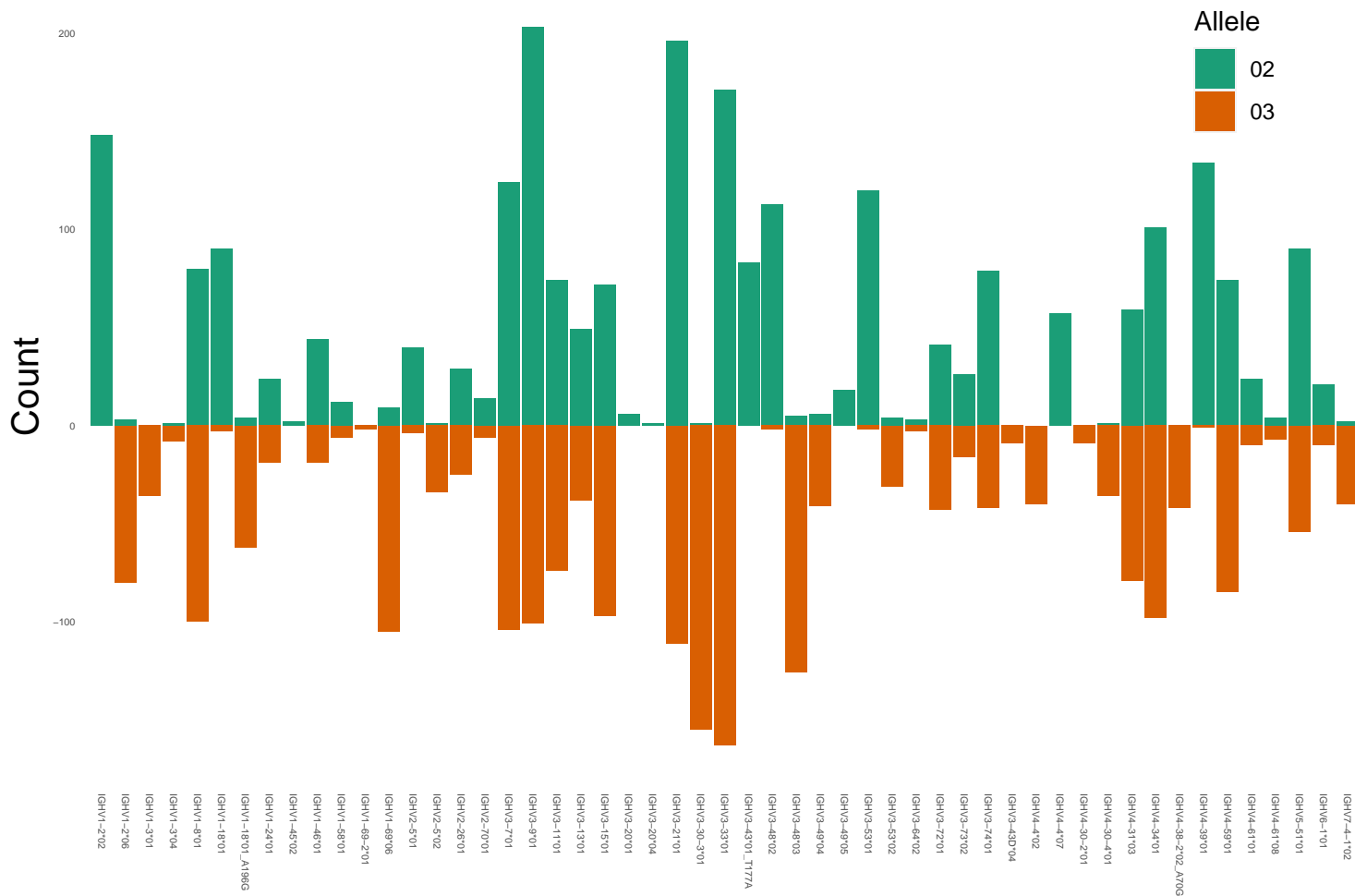


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.