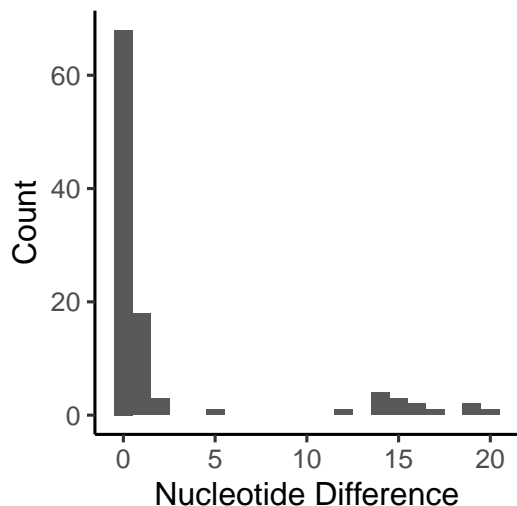


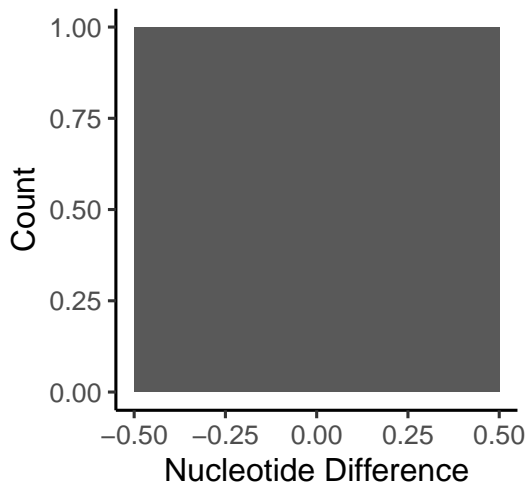
### IGHV1-2\*04

118 sequences assigned  
68 (57.6%) exact matches, in which:  
68 unique CDR3  
6 unique J



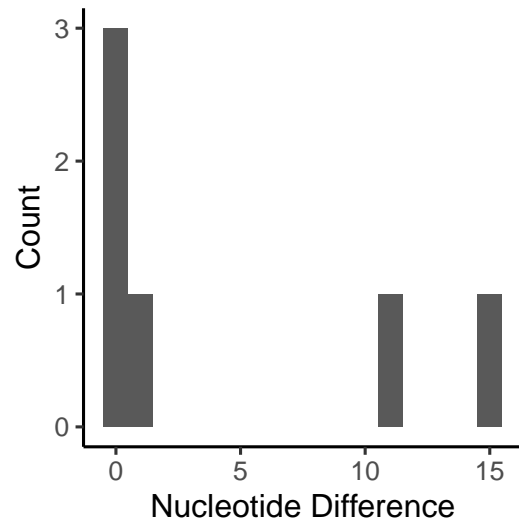
### IGHV1-8\*01

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



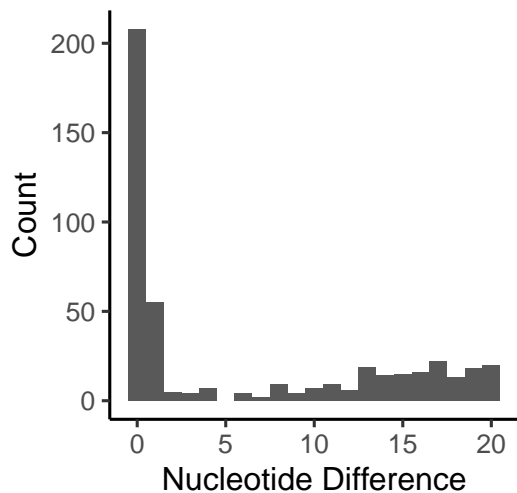
### IGHV1-45\*02

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



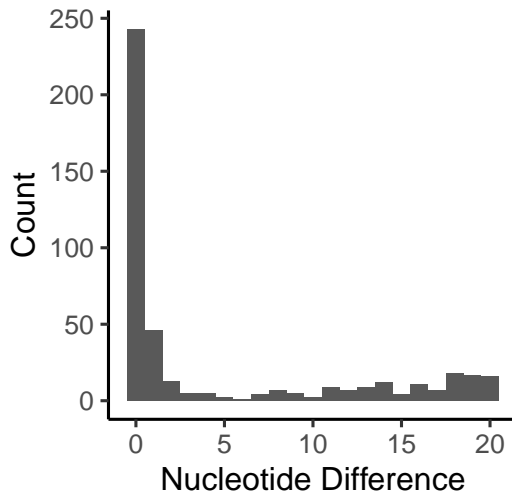
### IGHV1-2\*06

762 sequences assigned  
208 (27.3%) exact matches, in which:  
208 unique CDR3  
6 unique J



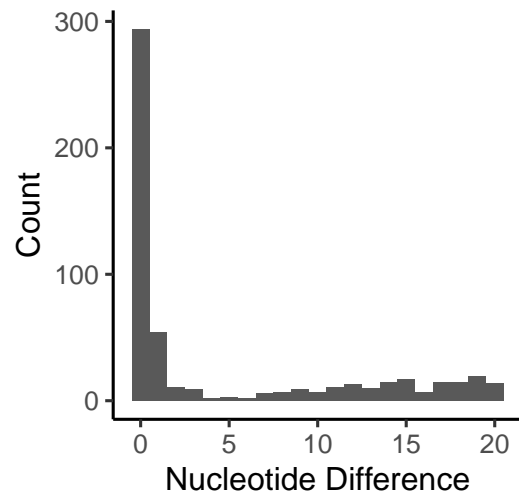
### IGHV1-18\*01

726 sequences assigned  
243 (33.5%) exact matches, in which:  
243 unique CDR3  
7 unique J



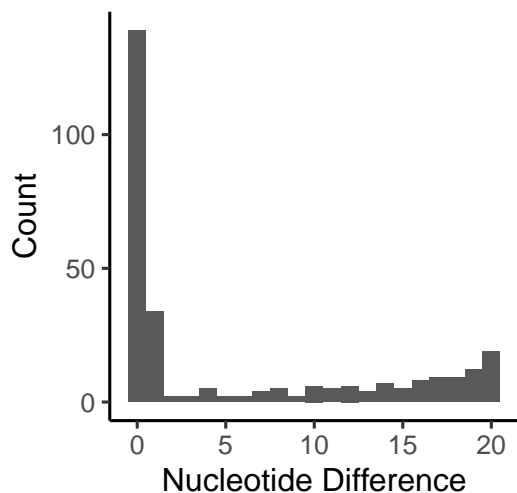
### IGHV1-46\*01

875 sequences assigned  
294 (33.6%) exact matches, in which:  
294 unique CDR3  
7 unique J



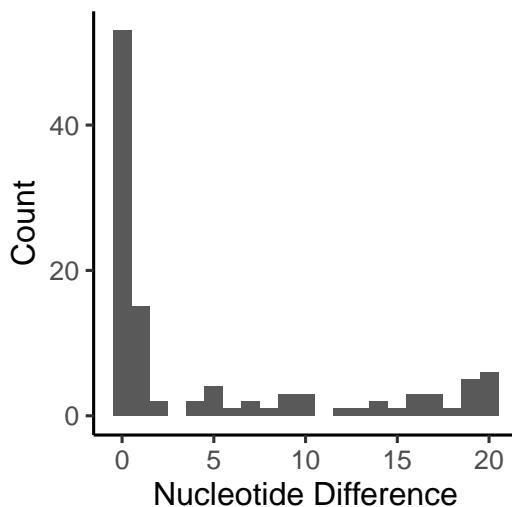
### IGHV1-3\*01

512 sequences assigned  
139 (27.1%) exact matches, in which:  
139 unique CDR3  
6 unique J



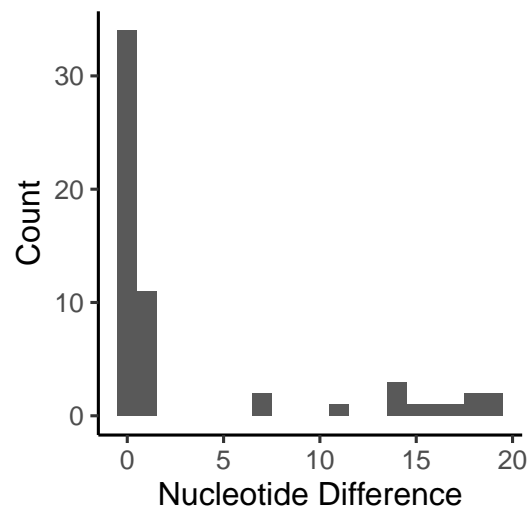
### IGHV1-24\*01

135 sequences assigned  
53 (39.3%) exact matches, in which:  
53 unique CDR3  
7 unique J



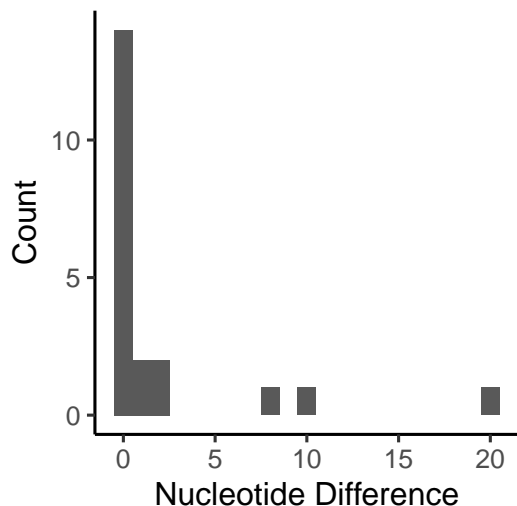
### IGHV1-58\*01

81 sequences assigned  
34 (42%) exact matches, in which:  
34 unique CDR3  
5 unique J



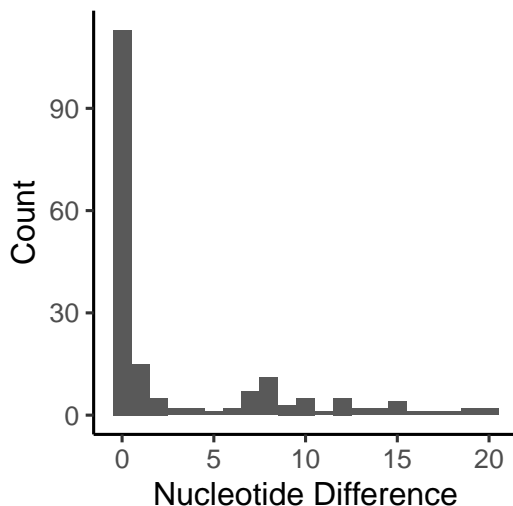
### IGHV1-69-2\*01

29 sequences assigned  
14 (48.3%) exact matches, in which:  
14 unique CDR3  
4 unique J



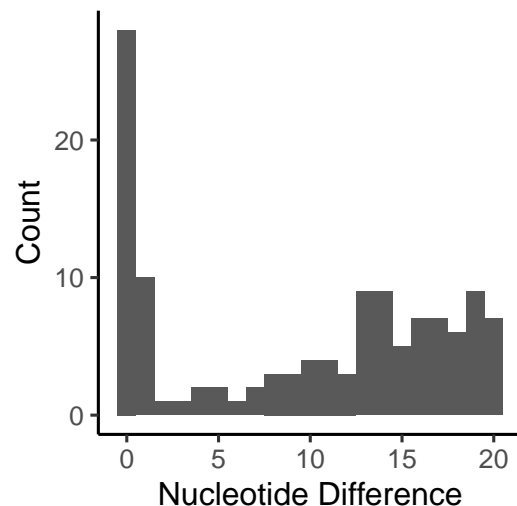
### IGHV2-26\*01

201 sequences assigned  
113 (56.2%) exact matches, in which:  
113 unique CDR3  
7 unique J



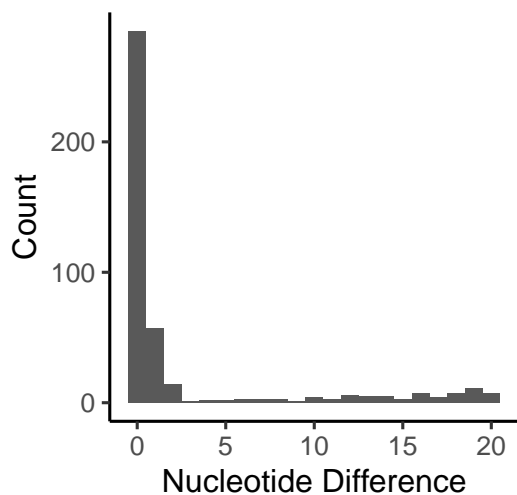
### IGHV3-7\*04

196 sequences assigned  
28 (14.3%) exact matches, in which:  
28 unique CDR3  
4 unique J



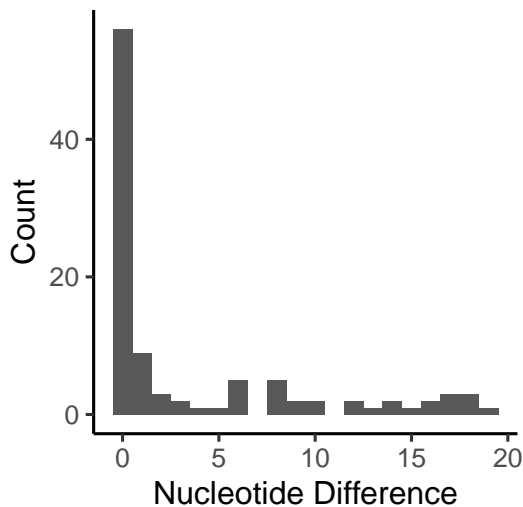
### IGHV1-69\*06

595 sequences assigned  
285 (47.9%) exact matches, in which:  
285 unique CDR3  
6 unique J



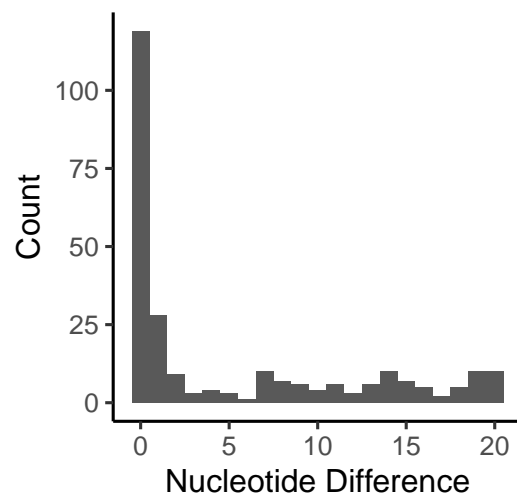
### IGHV2-70\*01

151 sequences assigned  
56 (37.1%) exact matches, in which:  
56 unique CDR3  
6 unique J



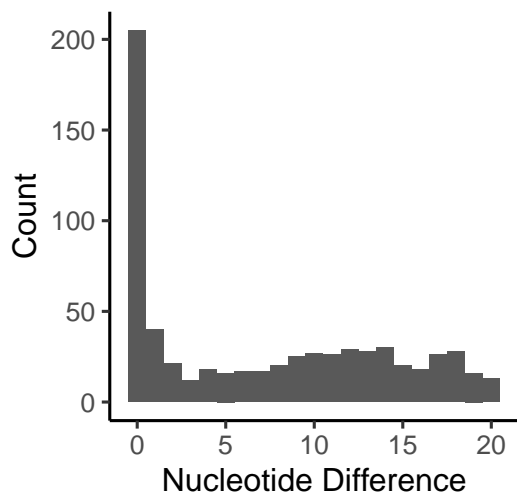
### IGHV3-11\*05

404 sequences assigned  
119 (29.5%) exact matches, in which:  
119 unique CDR3  
5 unique J



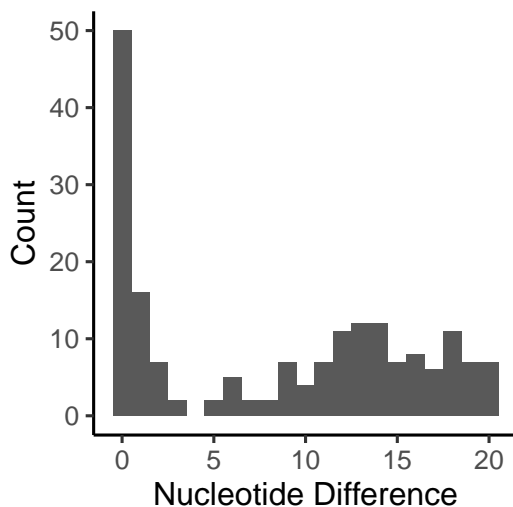
### IGHV2-5\*02

946 sequences assigned  
205 (21.7%) exact matches, in which:  
205 unique CDR3  
7 unique J



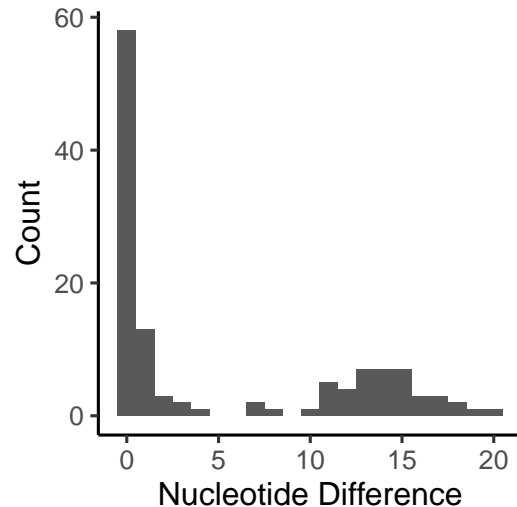
### IGHV3-7\*01

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



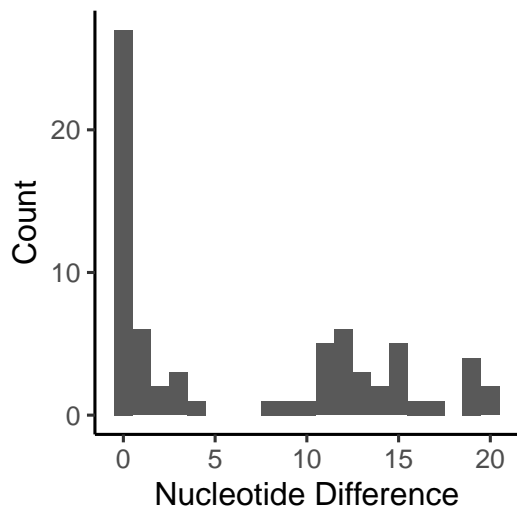
### IGHV3-11\*06

212 sequences assigned  
58 (27.4%) exact matches, in which:  
58 unique CDR3  
5 unique J



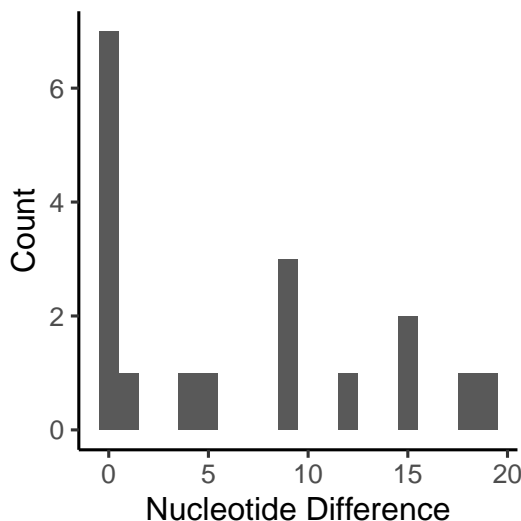
### IGHV3-13\*04

86 sequences assigned  
27 (31.4%) exact matches, in which:  
27 unique CDR3  
5 unique J



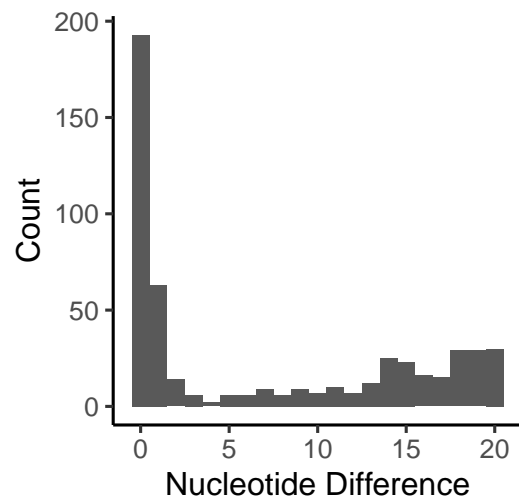
### IGHV3-20\*01

20 sequences assigned  
7 (35%) exact matches, in which:  
7 unique CDR3  
3 unique J



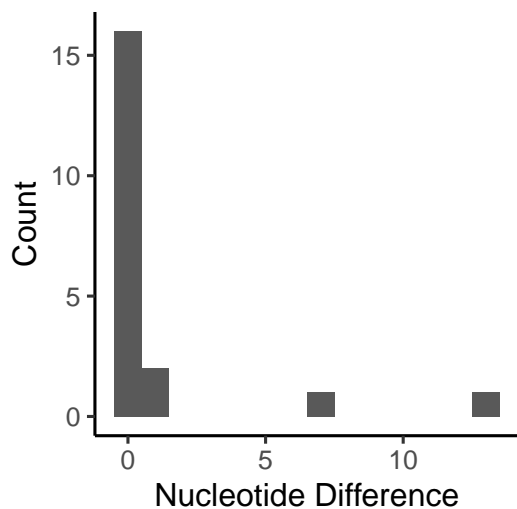
### IGHV3-30-3\*01

873 sequences assigned  
193 (22.1%) exact matches, in which:  
193 unique CDR3  
6 unique J



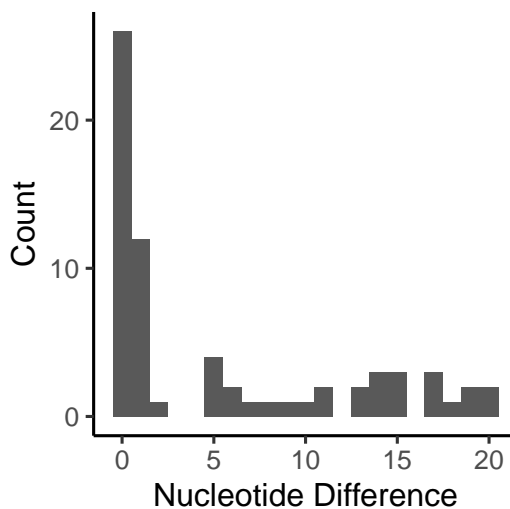
### IGHV3-13\*05

21 sequences assigned  
16 (76.2%) exact matches, in which:  
16 unique CDR3  
5 unique J



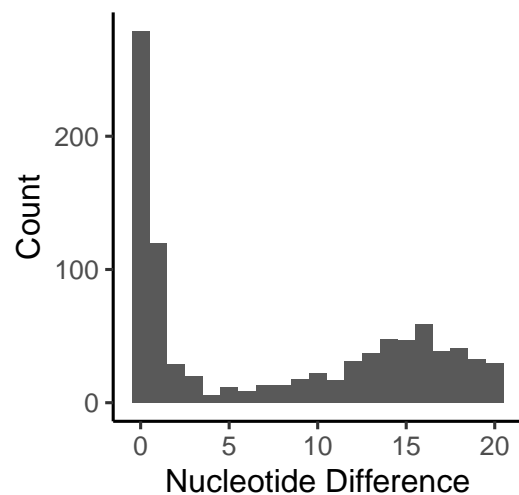
### IGHV3-20\*04

133 sequences assigned  
26 (19.5%) exact matches, in which:  
26 unique CDR3  
5 unique J



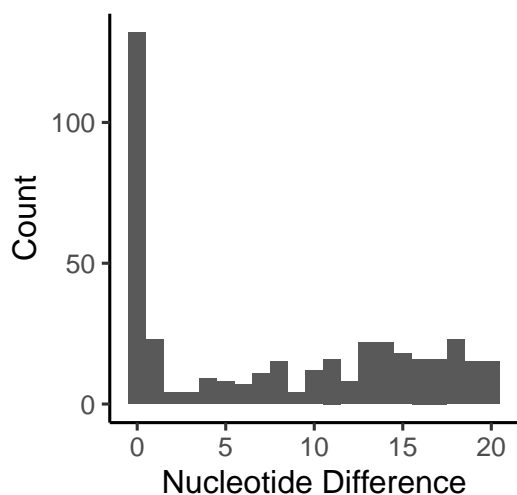
### IGHV3-33\*01

1494 sequences assigned  
279 (18.7%) exact matches, in which:  
277 unique CDR3  
7 unique J



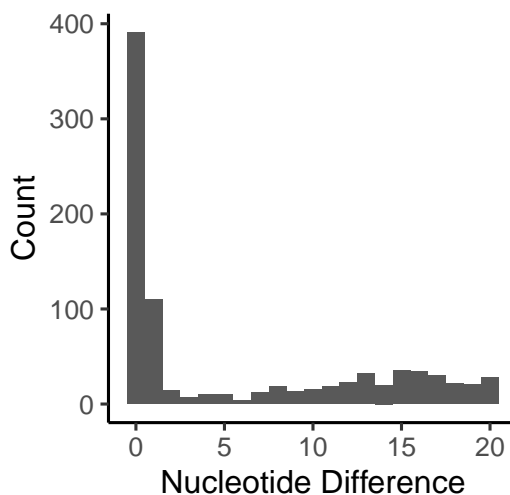
### IGHV3-15\*01

606 sequences assigned  
132 (21.8%) exact matches, in which:  
132 unique CDR3  
7 unique J



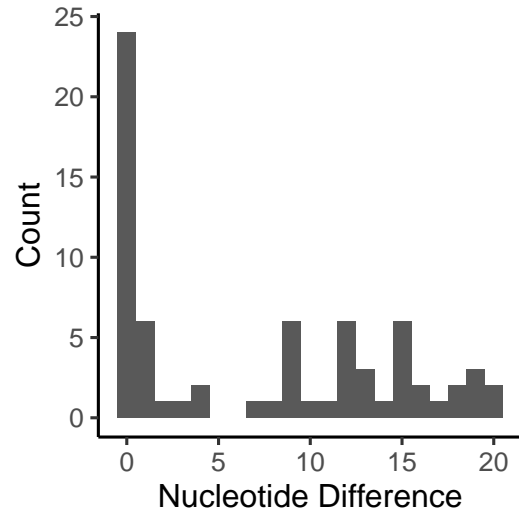
### IGHV3-21\*01

1230 sequences assigned  
391 (31.8%) exact matches, in which:  
391 unique CDR3  
7 unique J



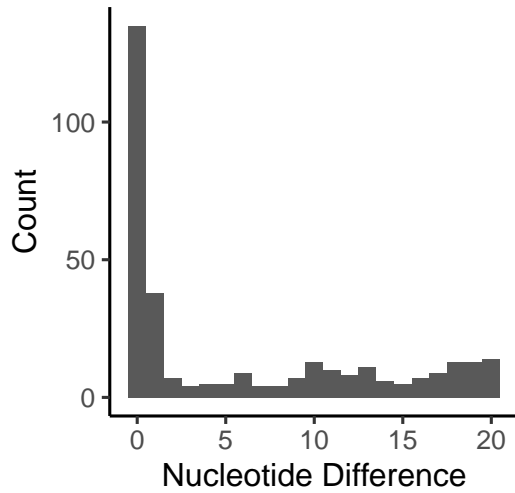
### IGHV3-43\*01

121 sequences assigned  
24 (19.8%) exact matches, in which:  
24 unique CDR3  
6 unique J



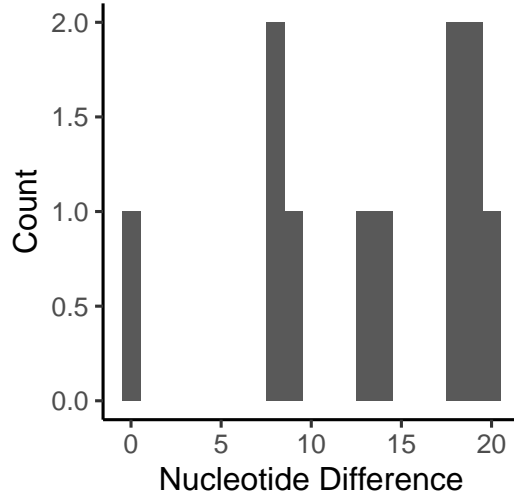
### IGHV3-48\*02

478 sequences assigned  
135 (28.2%) exact matches, in which:  
135 unique CDR3  
7 unique J



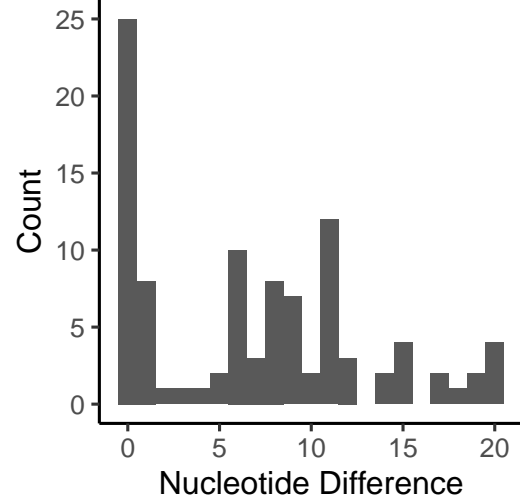
### IGHV3-64\*02

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



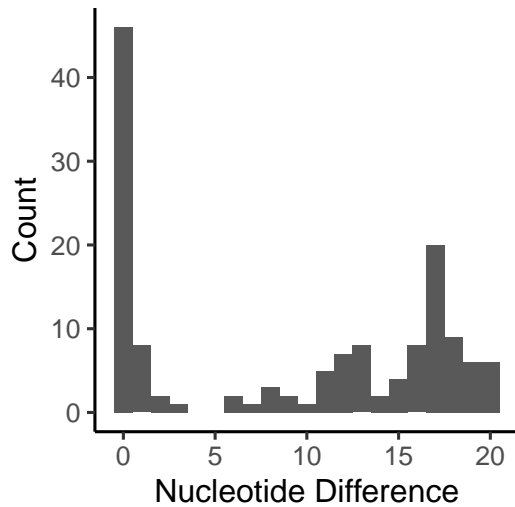
### IGHV3-73\*02

153 sequences assigned  
25 (16.3%) exact matches, in which:  
25 unique CDR3  
5 unique J



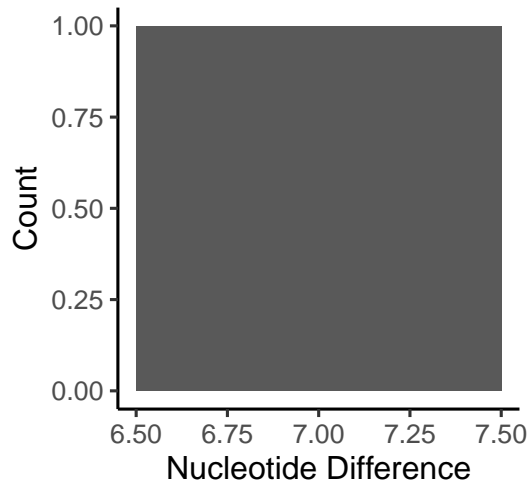
### IGHV3-49\*05

281 sequences assigned  
46 (16.4%) exact matches, in which:  
46 unique CDR3  
7 unique J



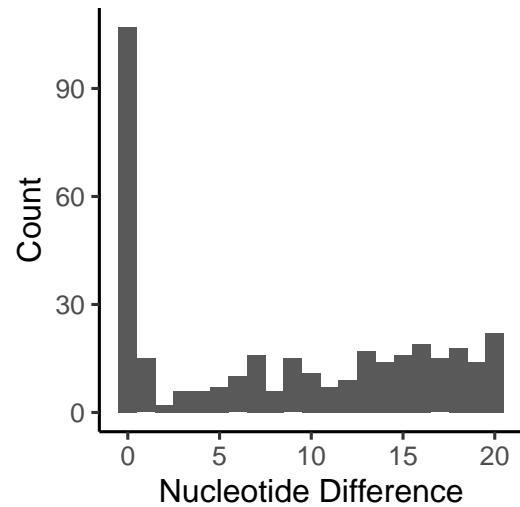
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



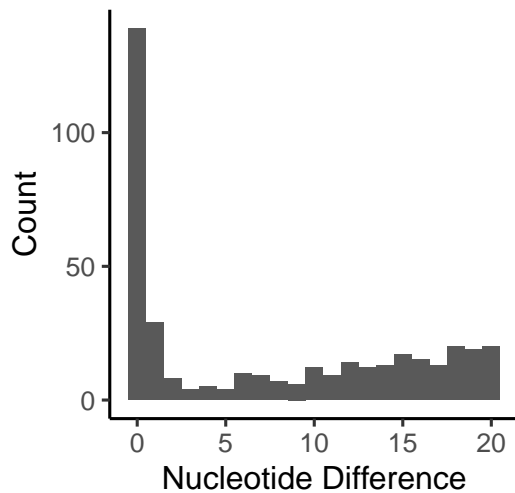
### IGHV3-74\*01

613 sequences assigned  
107 (17.5%) exact matches, in which:  
107 unique CDR3  
7 unique J



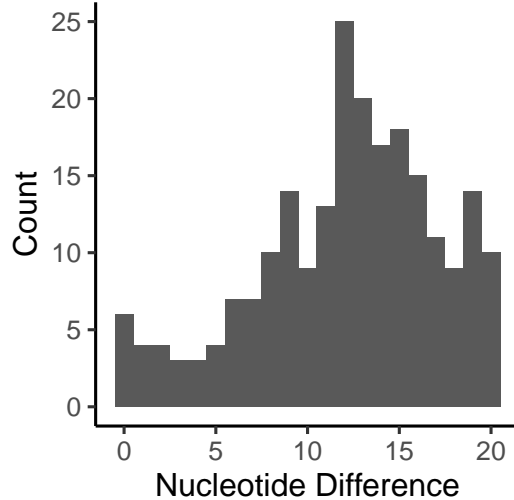
### IGHV3-53\*01

611 sequences assigned  
139 (22.7%) exact matches, in which:  
139 unique CDR3  
7 unique J



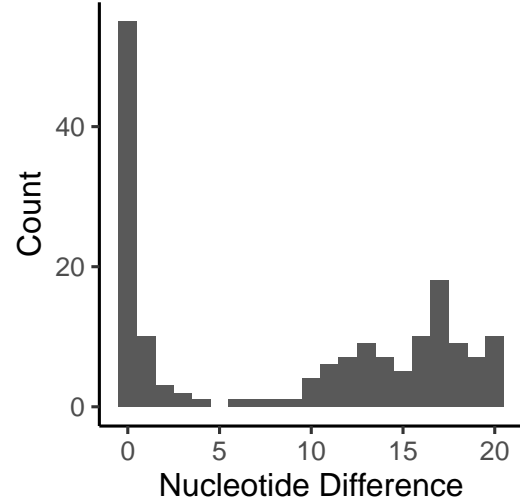
### IGHV3-72\*01

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



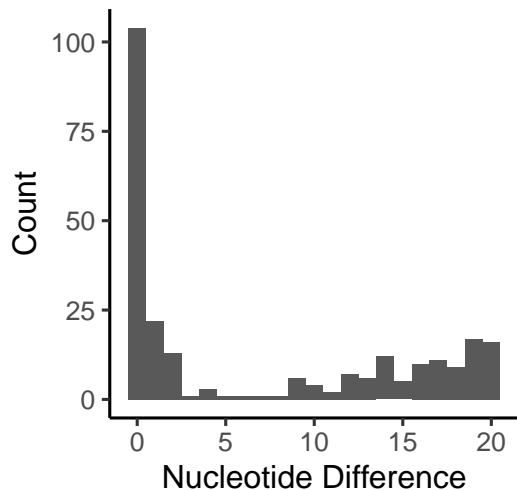
### IGHV3-64D\*06

280 sequences assigned  
55 (19.6%) exact matches, in which:  
55 unique CDR3  
7 unique J



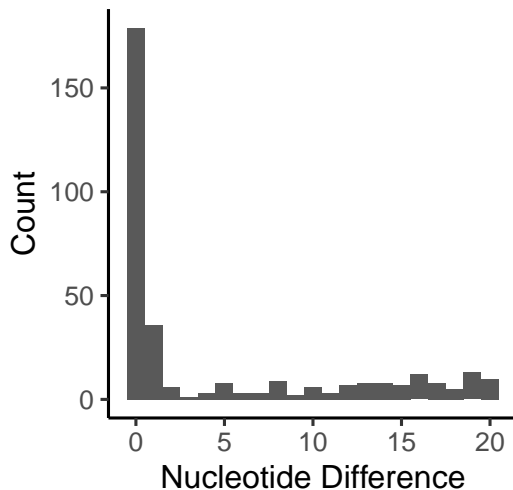
### IGHV4-4\*02

425 sequences assigned  
104 (24.5%) exact matches, in which:  
104 unique CDR3  
7 unique J



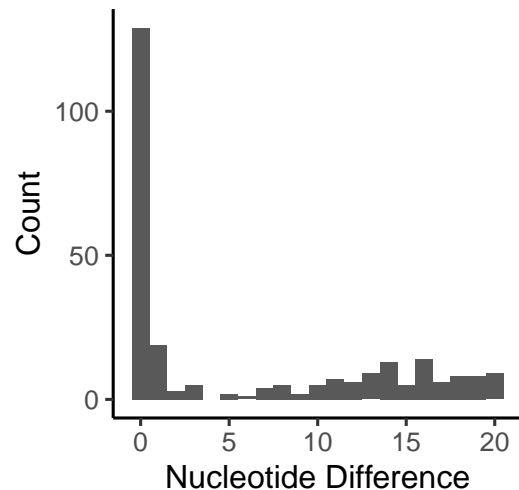
### IGHV4-31\*03

561 sequences assigned  
179 (31.9%) exact matches, in which:  
179 unique CDR3  
7 unique J



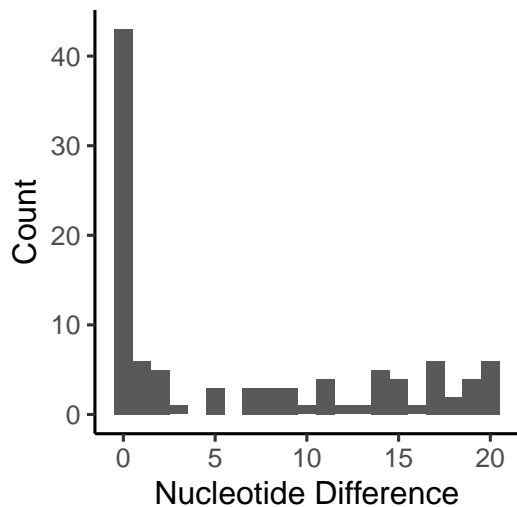
### IGHV4-59\*01

501 sequences assigned  
129 (25.7%) exact matches, in which:  
129 unique CDR3  
7 unique J



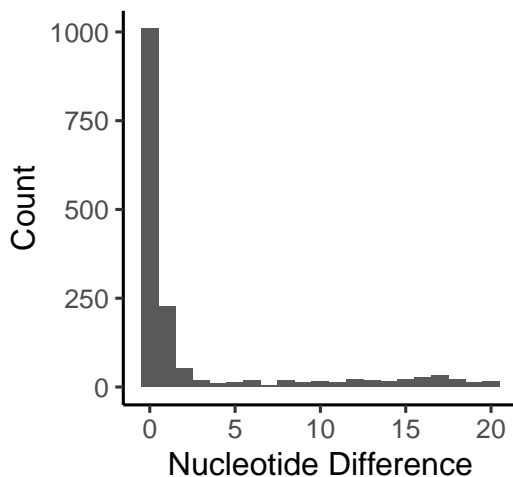
### IGHV4-30-4\*01

174 sequences assigned  
43 (24.7%) exact matches, in which:  
43 unique CDR3  
6 unique J



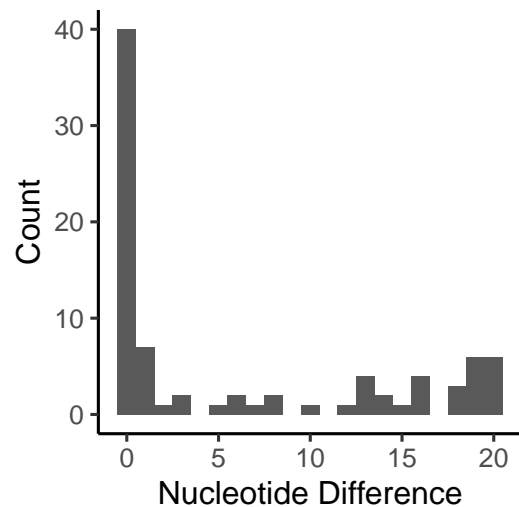
### IGHV4-34\*01

2046 sequences assigned  
1009 (49.3%) exact matches, in which:  
1007 unique CDR3  
7 unique J



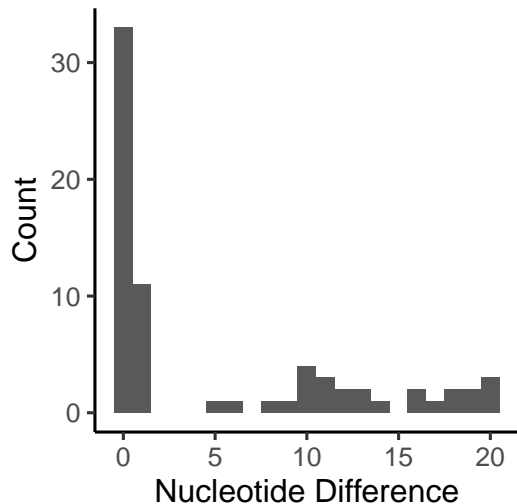
### IGHV4-61\*01

136 sequences assigned  
40 (29.4%) exact matches, in which:  
40 unique CDR3  
6 unique J



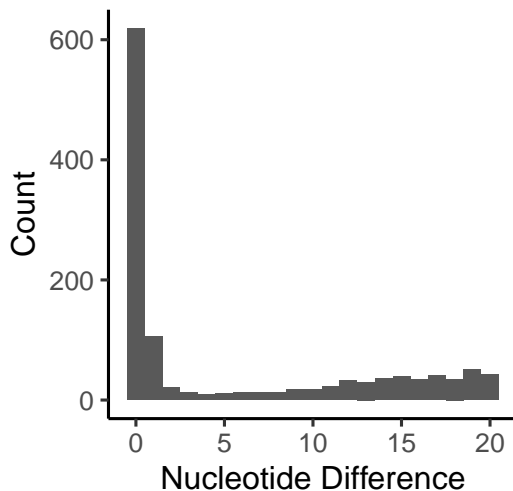
### IGHV4-30-2\*01

120 sequences assigned  
33 (27.5%) exact matches, in which:  
33 unique CDR3  
7 unique J



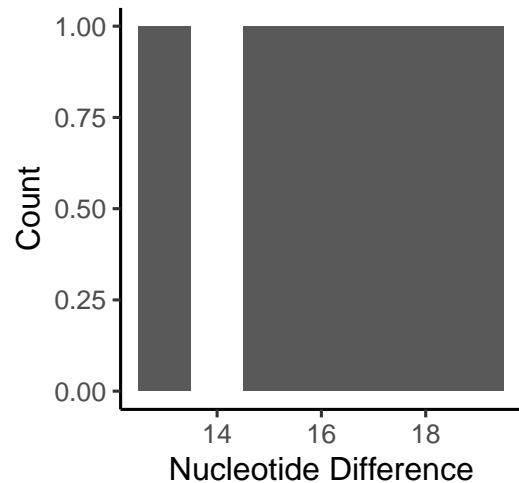
### IGHV4-39\*01

2086 sequences assigned  
619 (29.7%) exact matches, in which:  
618 unique CDR3  
7 unique J



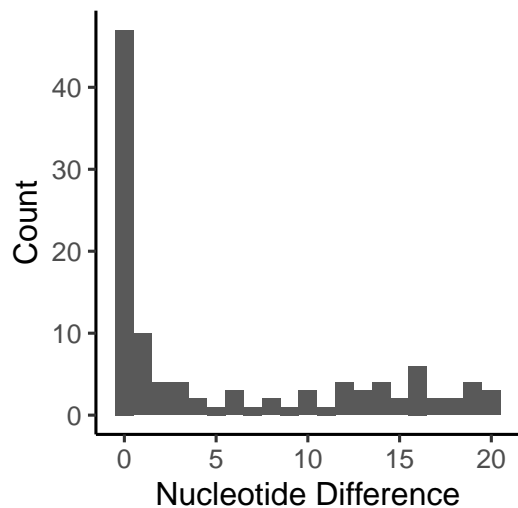
### IGHV4-61\*08

35 sequences assigned  
No exact matches.



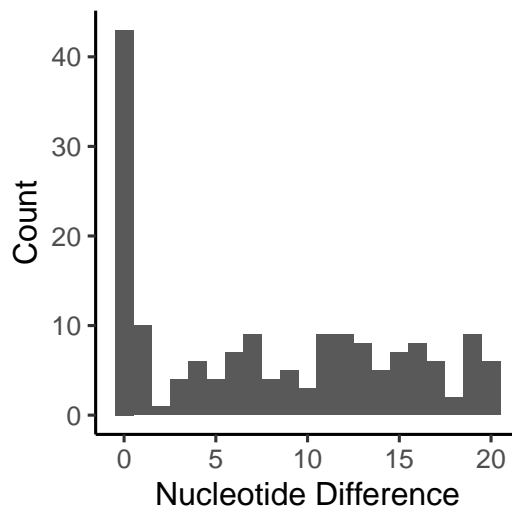
## IGHV5-10-1\*01

148 sequences assigned  
47 (31.8%) exact matches, in which:  
47 unique CDR3  
6 unique J



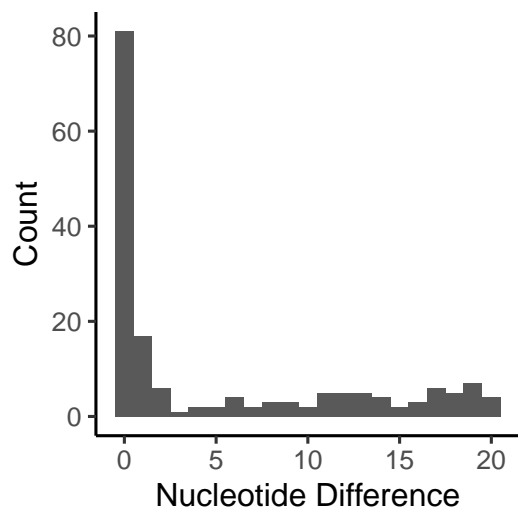
## IGHV6-1\*01

222 sequences assigned  
43 (19.4%) exact matches, in which:  
43 unique CDR3  
6 unique J



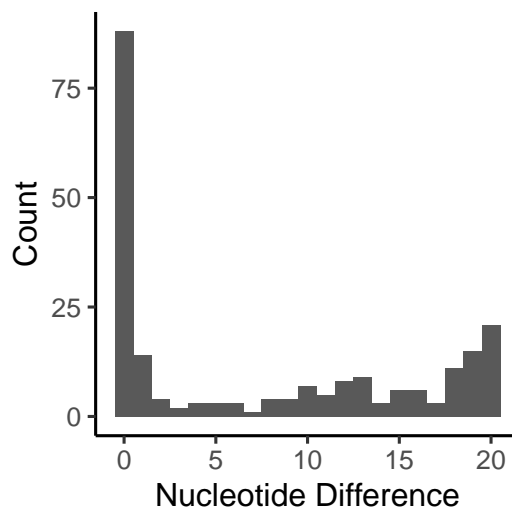
## IGHV5-10-1\*03

263 sequences assigned  
81 (30.8%) exact matches, in which:  
81 unique CDR3  
6 unique J



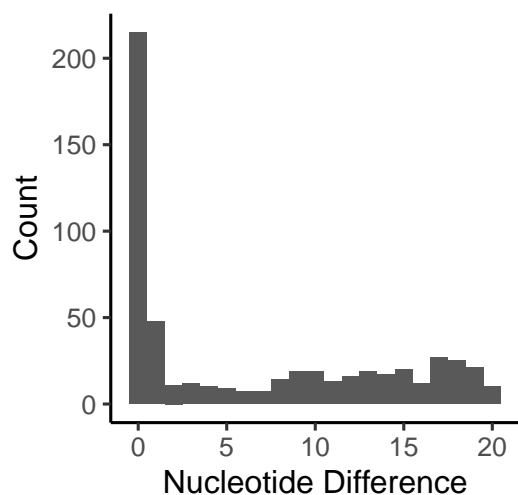
## IGHV7-4-1\*02

298 sequences assigned  
88 (29.5%) exact matches, in which:  
88 unique CDR3  
6 unique J

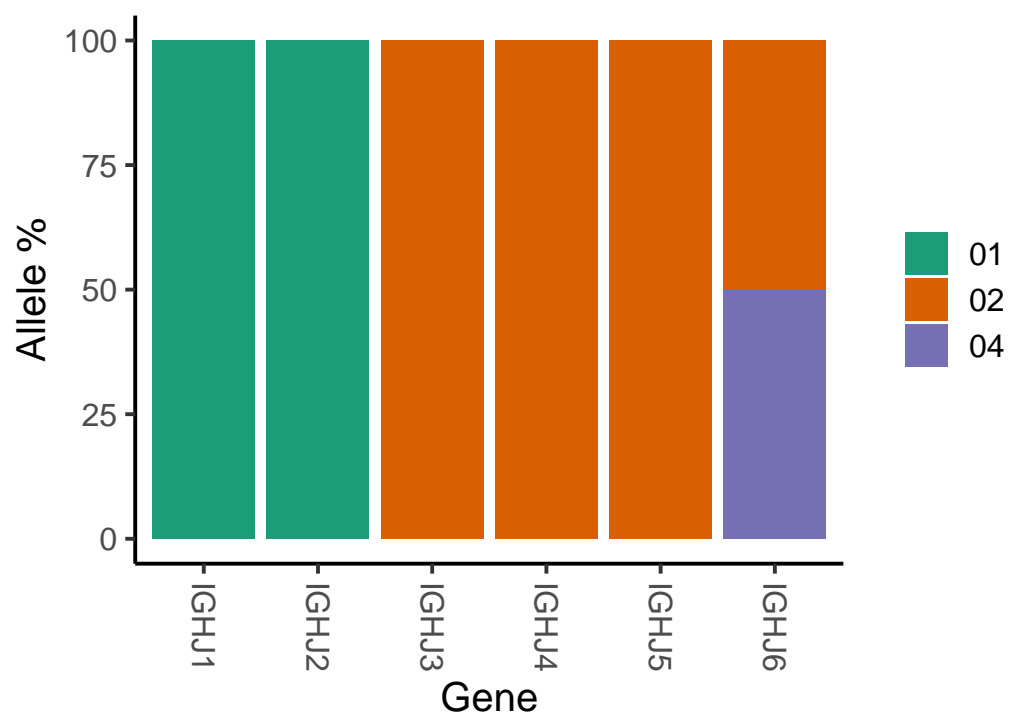


## IGHV5-51\*01

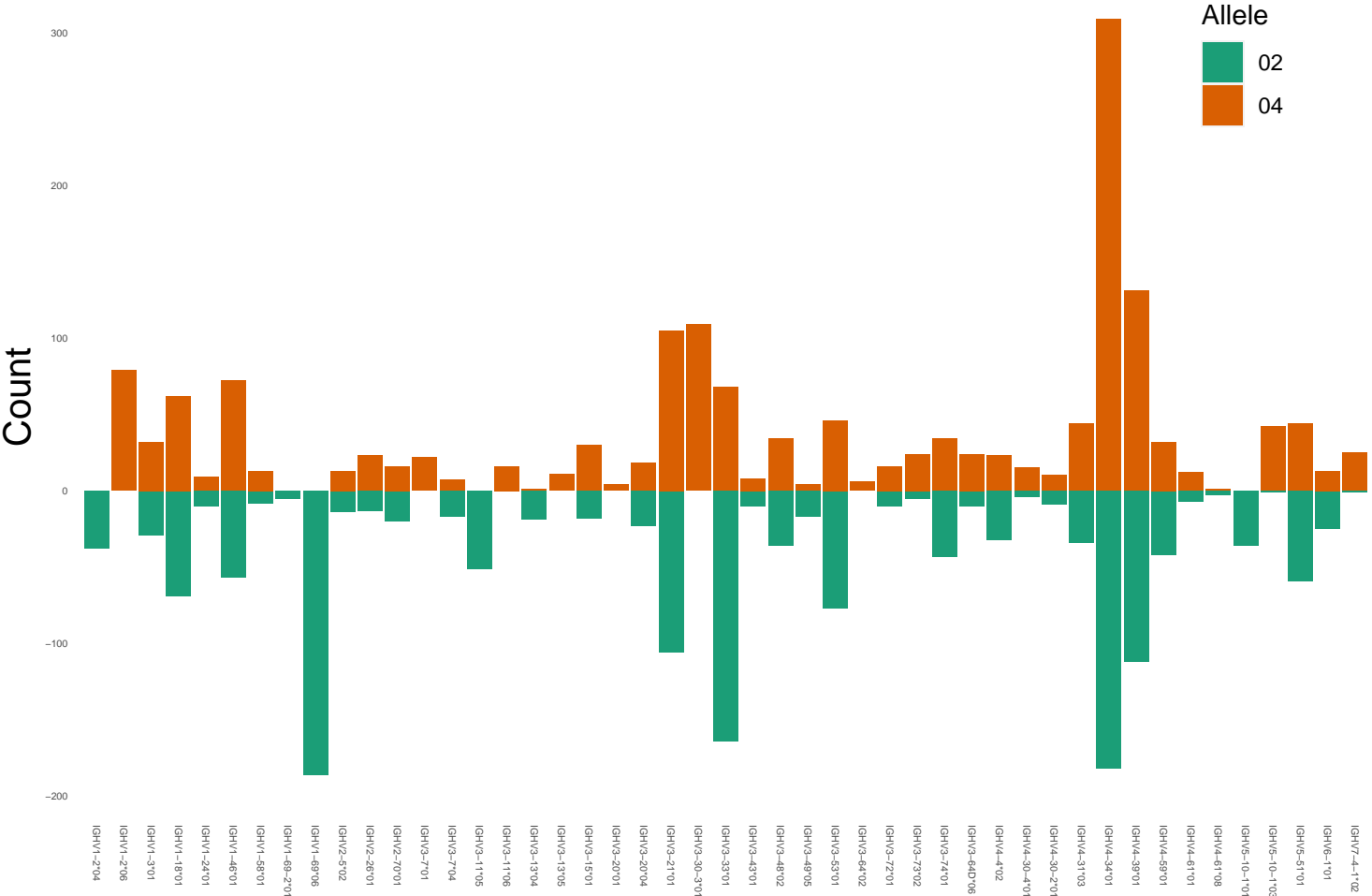
780 sequences assigned  
215 (27.6%) exact matches, in which:  
215 unique CDR3  
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.