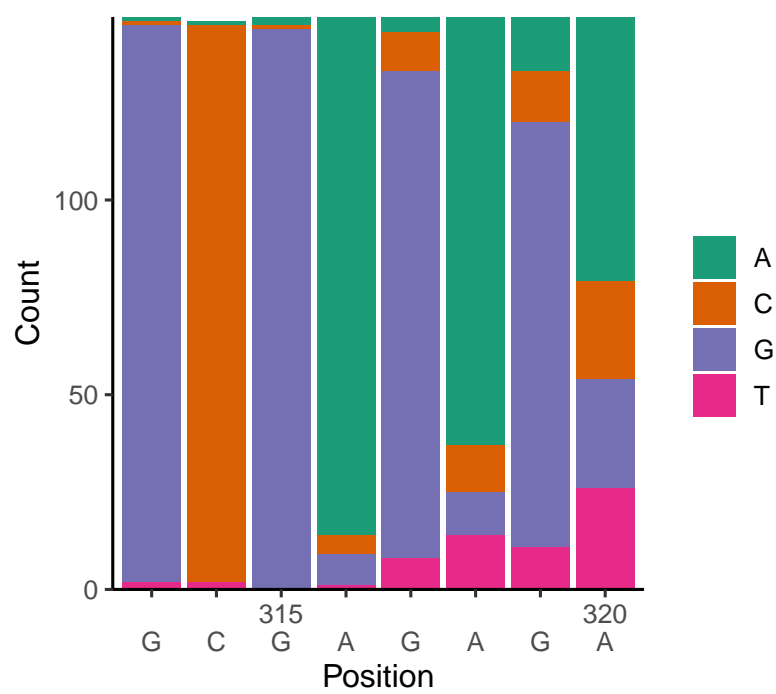
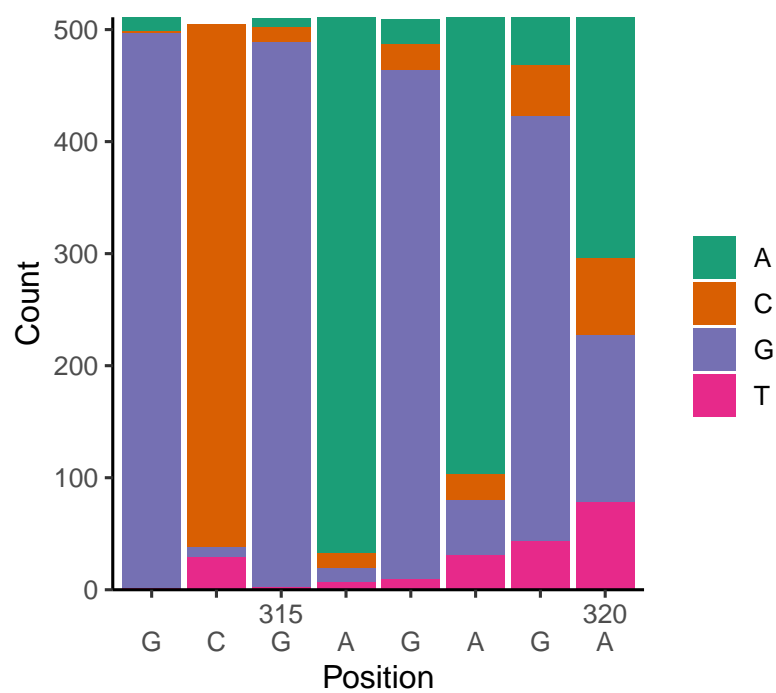


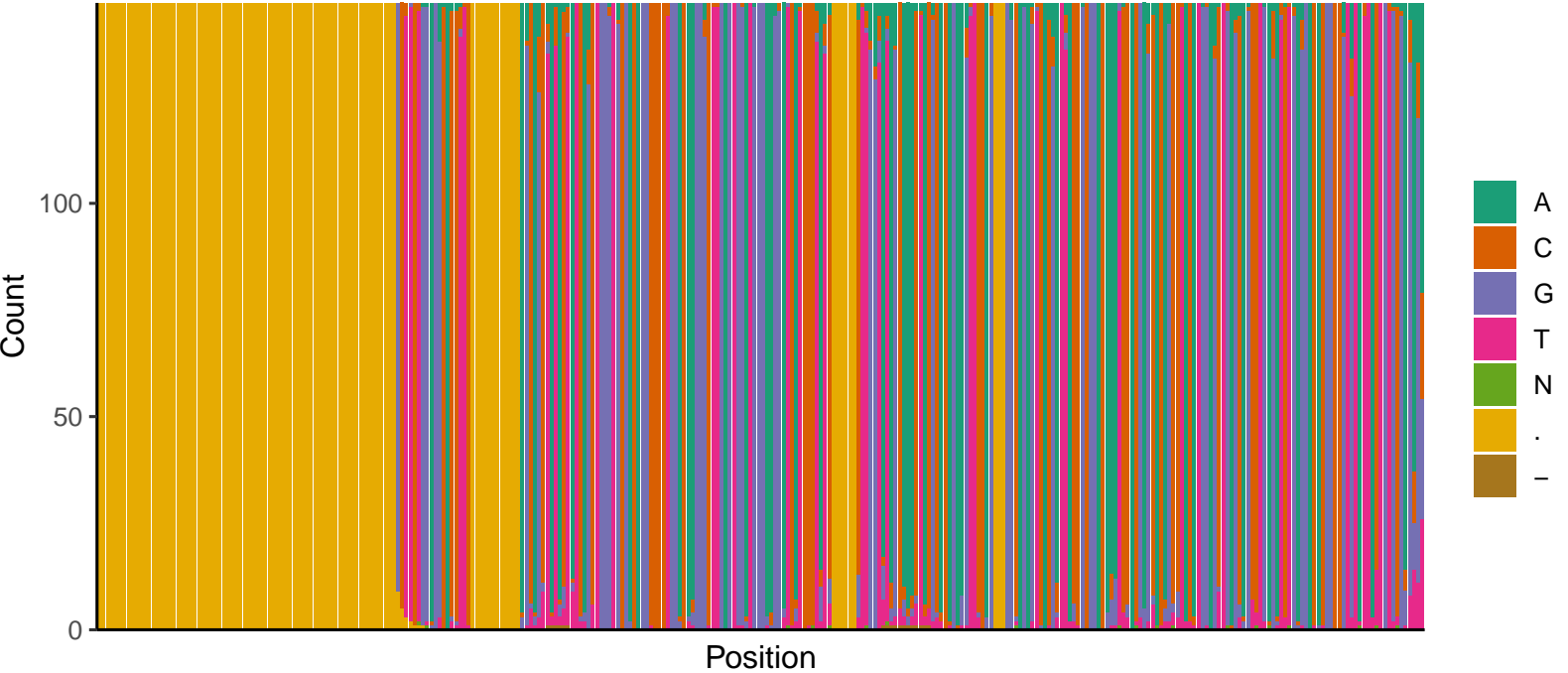
Gene IGHV1-69\*04\_09\_G112A



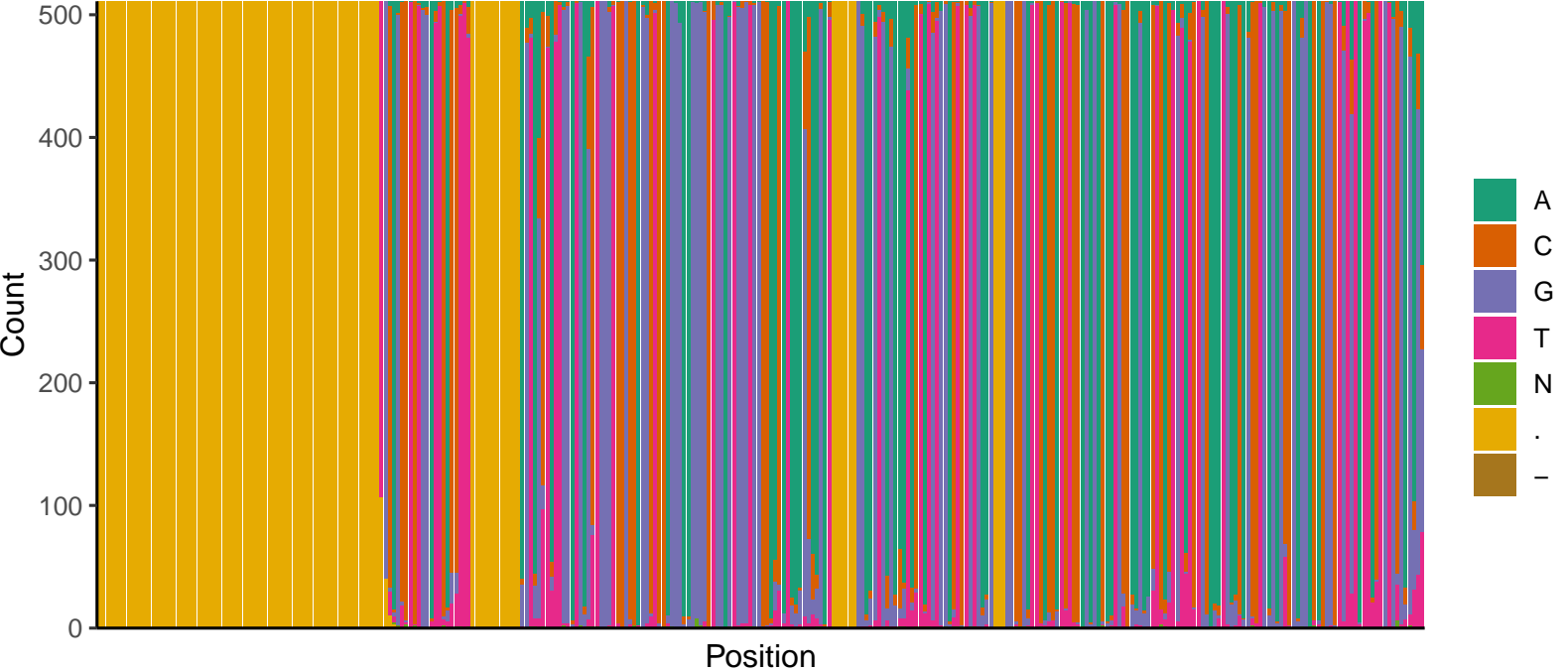
Gene IGHV3-7\*01\_C246T



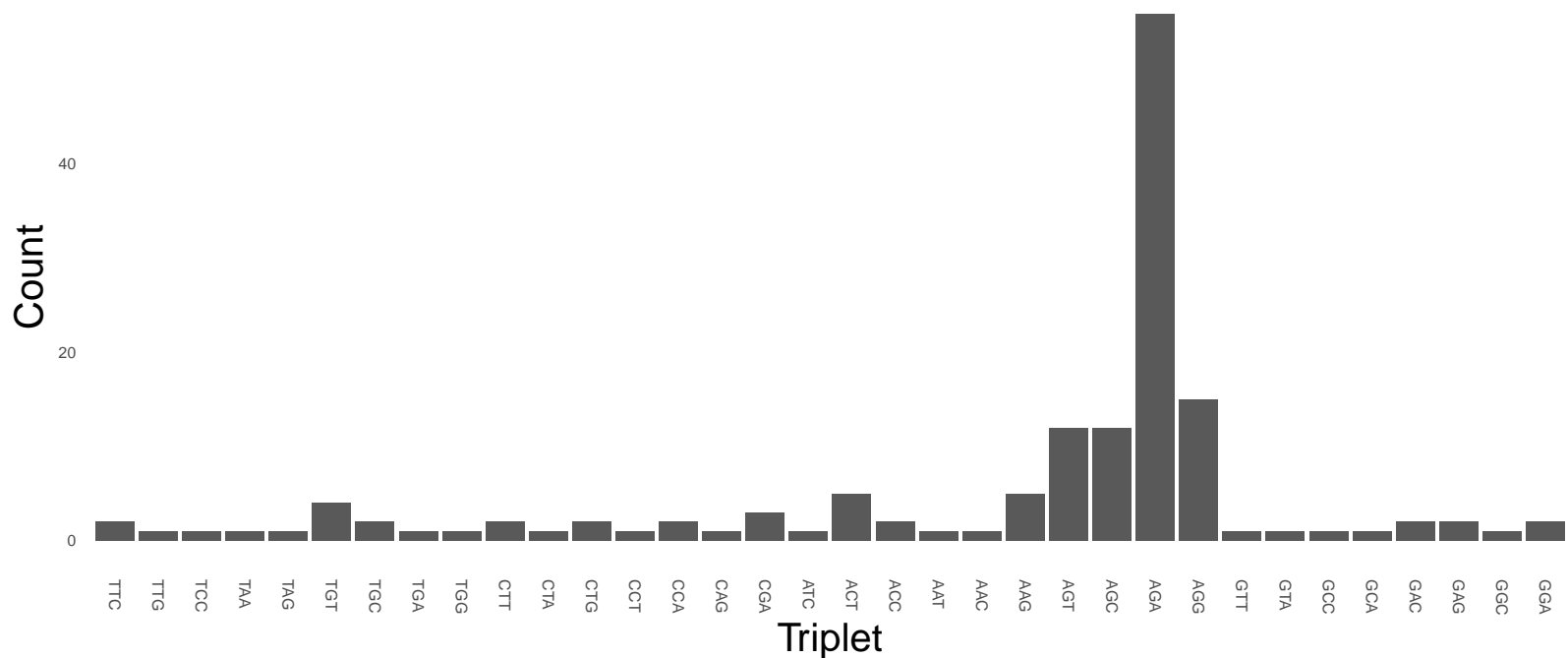
Gene IGHV1-69\*04\_09\_G112A



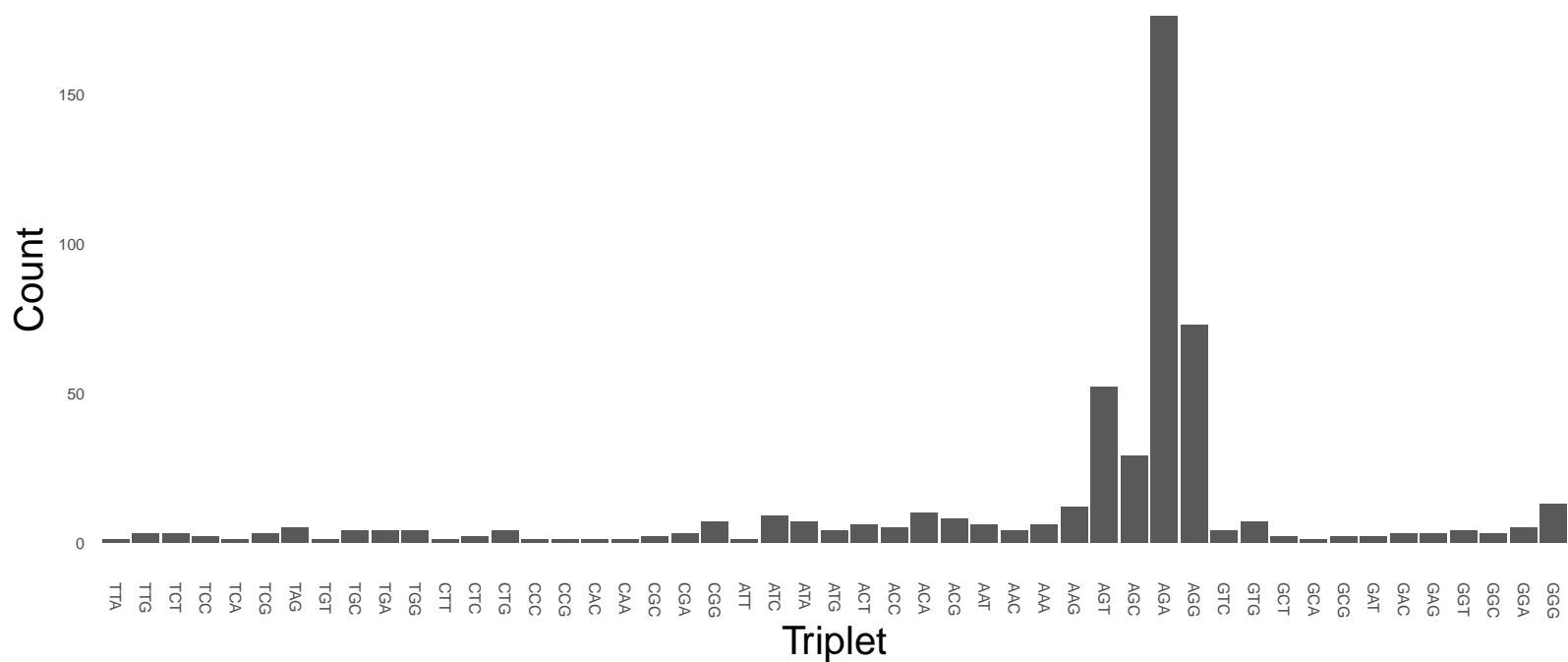
Gene IGHV3-7\*01\_C246T



IGHV1-69\*04\_09\_G112A- Final 3 nucleotides as a triplet

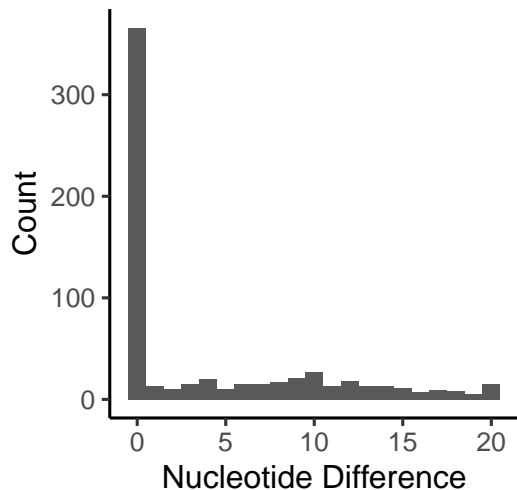


IGHV3-7\*01\_C246T- Final 3 nucleotides as a triplet



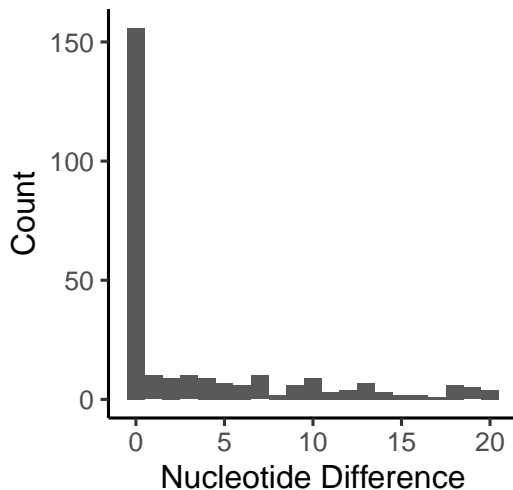
### IGHV1-2\*02

709 sequences assigned  
366 (51.6%) exact matches, in which:  
366 unique CDR3  
7 unique J



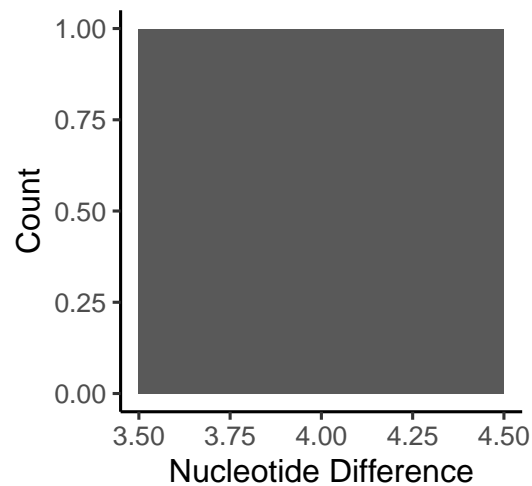
### IGHV1-8\*01

289 sequences assigned  
156 (54%) exact matches, in which:  
156 unique CDR3  
6 unique J



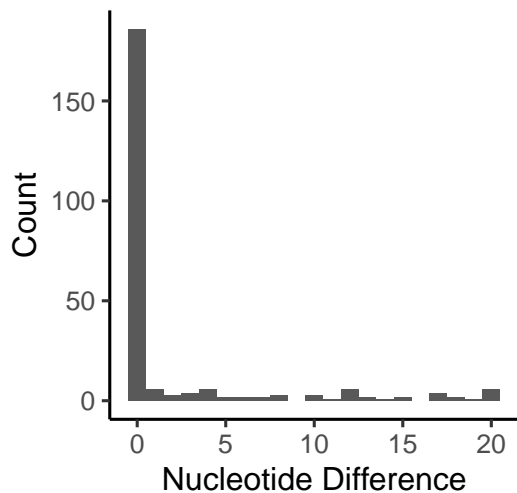
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



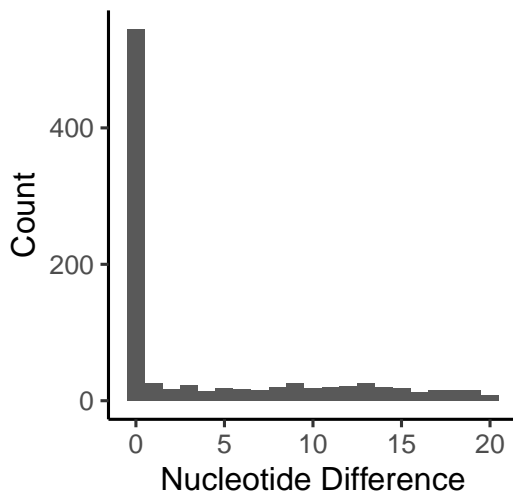
### IGHV1-2\*04

247 sequences assigned  
186 (75.3%) exact matches, in which:  
186 unique CDR3  
5 unique J



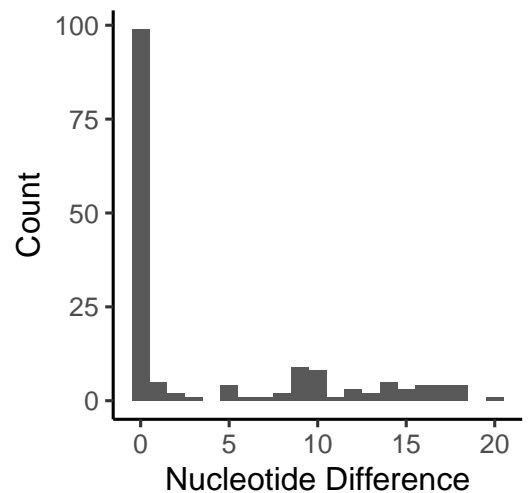
### IGHV1-18\*01

1030 sequences assigned  
545 (52.9%) exact matches, in which:  
544 unique CDR3  
7 unique J



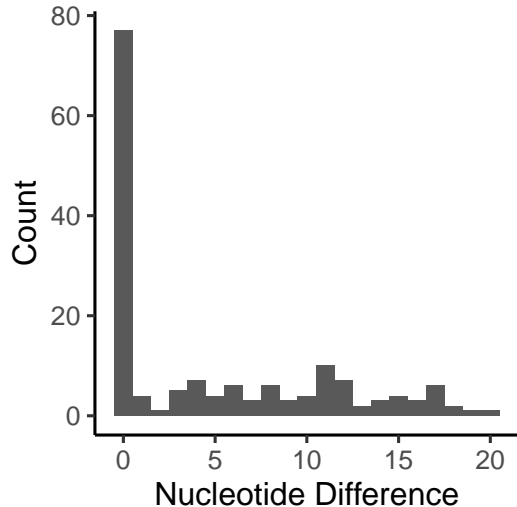
### IGHV1-46\*01

179 sequences assigned  
99 (55.3%) exact matches, in which:  
99 unique CDR3  
6 unique J



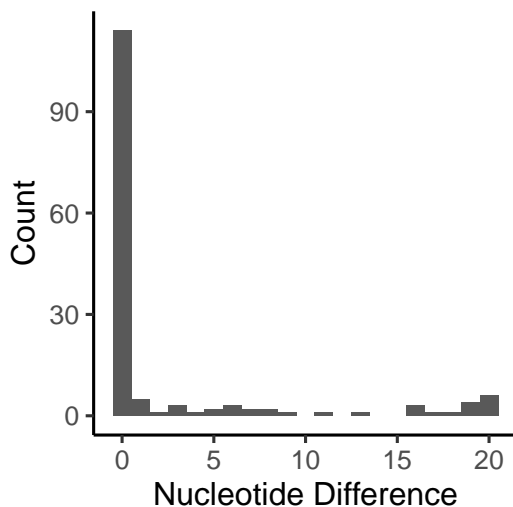
### IGHV1-3\*01\_05

176 sequences assigned  
77 (43.8%) exact matches, in which:  
77 unique CDR3  
4 unique J



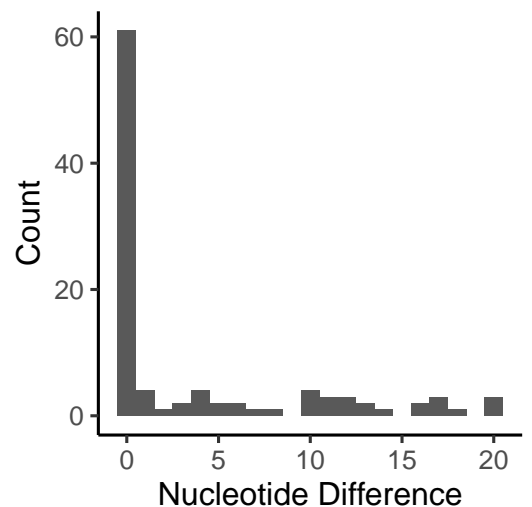
### IGHV1-24\*01

164 sequences assigned  
114 (69.5%) exact matches, in which:  
112 unique CDR3  
7 unique J



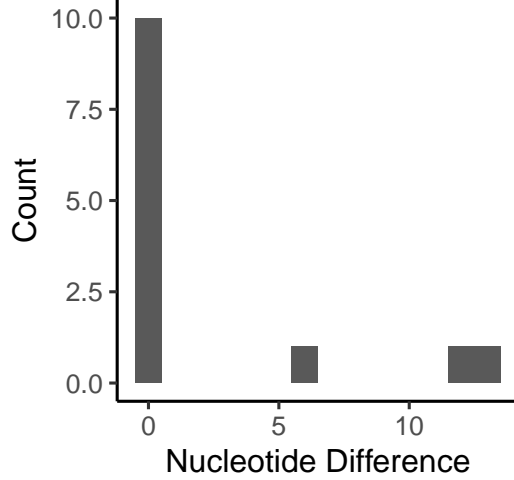
### IGHV1-46\*03

103 sequences assigned  
61 (59.2%) exact matches, in which:  
61 unique CDR3  
6 unique J



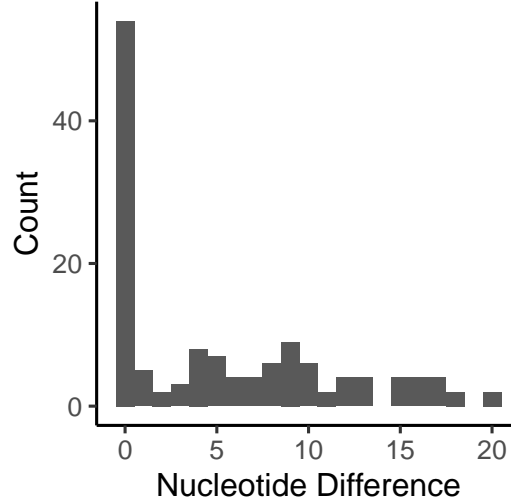
### IGHV1-58\*02

16 sequences assigned  
10 (62.5%) exact matches, in which:  
9 unique CDR3  
4 unique J



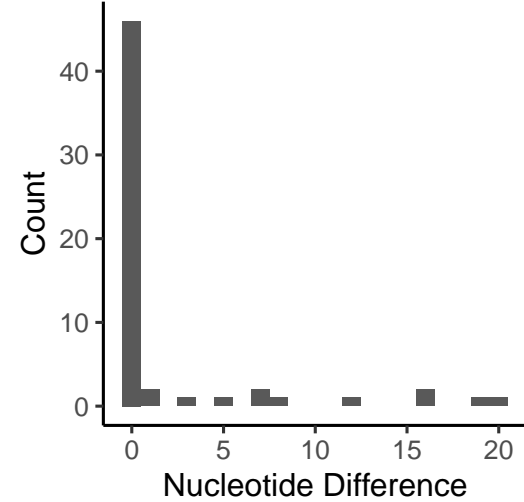
### IGHV2-5\*01

137 sequences assigned  
54 (39.4%) exact matches, in which:  
54 unique CDR3  
5 unique J



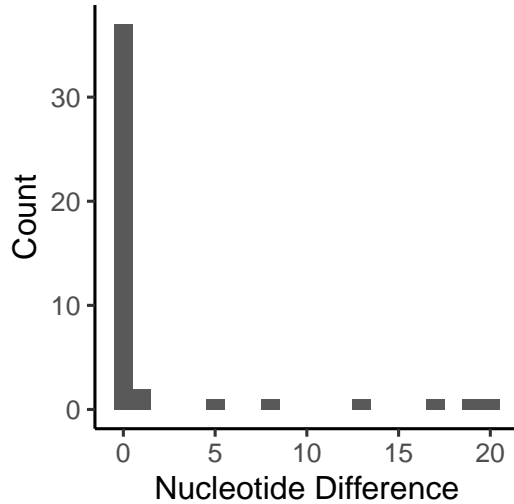
### IGHV2-70\*01

61 sequences assigned  
46 (75.4%) exact matches, in which:  
46 unique CDR3  
5 unique J



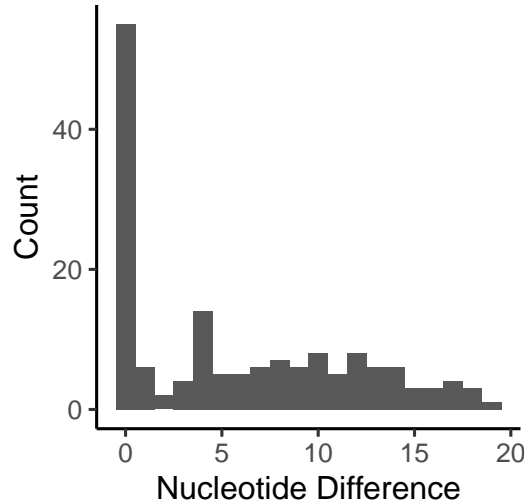
### IGHV1-58\*01\_03

49 sequences assigned  
37 (75.5%) exact matches, in which:  
37 unique CDR3  
5 unique J



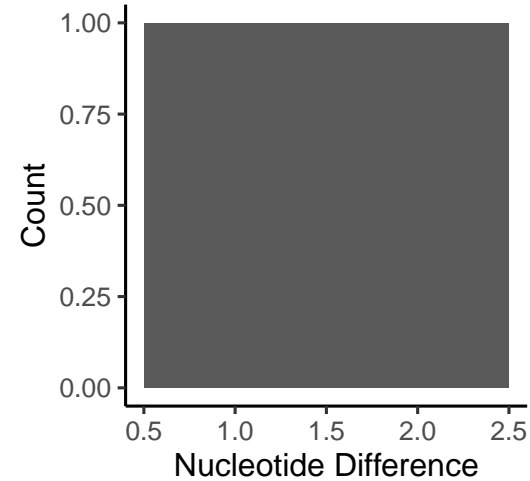
### IGHV2-5\*02

160 sequences assigned  
55 (34.4%) exact matches, in which:  
55 unique CDR3  
5 unique J



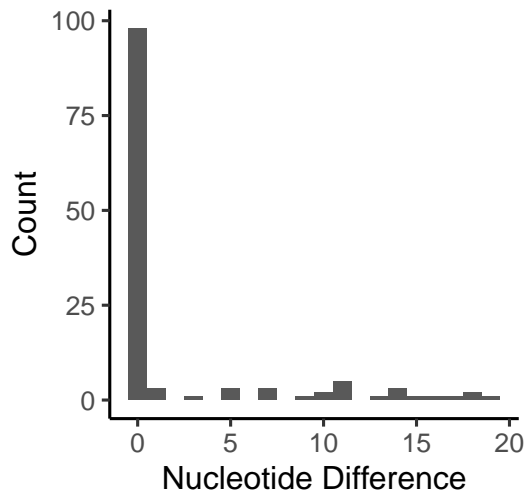
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



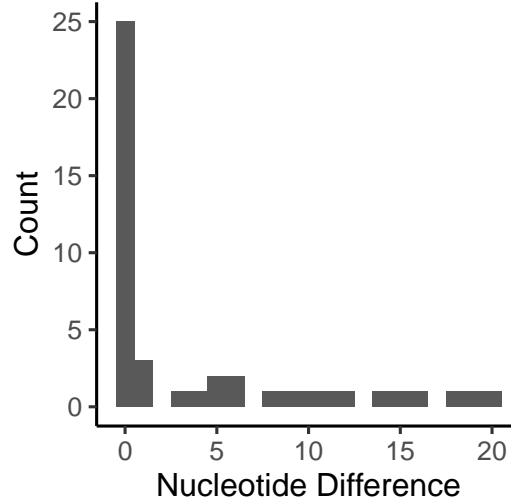
### IGHV1-69\*04\_09\_G112A

147 sequences assigned  
98 (66.7%) exact matches, in which:  
98 unique CDR3  
5 unique J



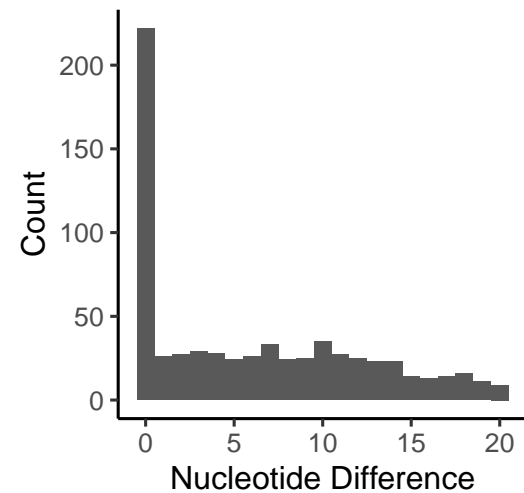
### IGHV2-26\*01

45 sequences assigned  
25 (55.6%) exact matches, in which:  
25 unique CDR3  
6 unique J



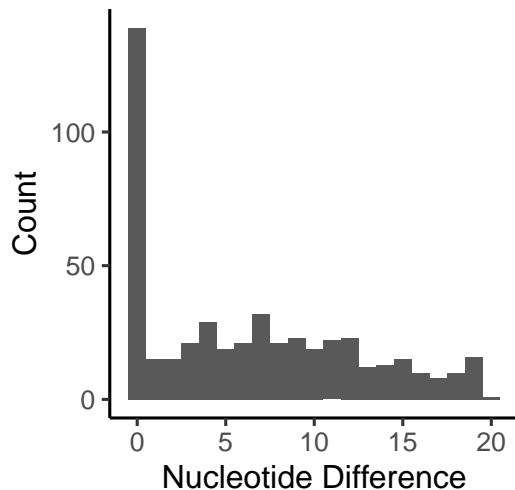
### IGHV3-7\*03

737 sequences assigned  
222 (30.1%) exact matches, in which:  
206 unique CDR3  
6 unique J



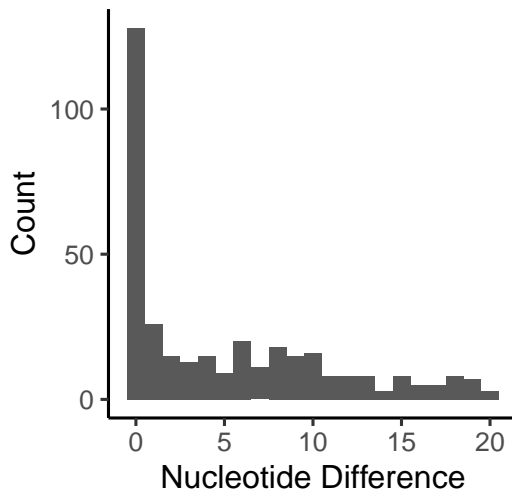
### IGHV3-7\*01\_C246T

511 sequences assigned  
139 (27.2%) exact matches, in which:  
132 unique CDR3  
7 unique J



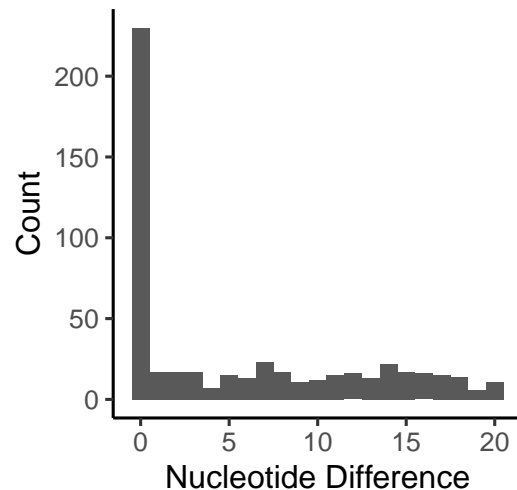
### IGHV3-11\*03\_05

397 sequences assigned  
128 (32.2%) exact matches, in which:  
123 unique CDR3  
6 unique J



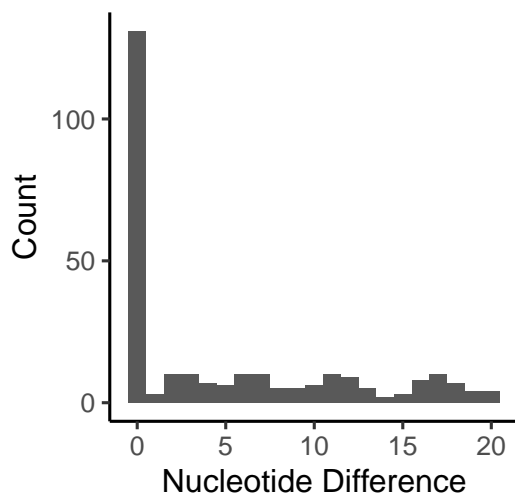
### IGHV3-15\*01\_02

584 sequences assigned  
230 (39.4%) exact matches, in which:  
225 unique CDR3  
7 unique J



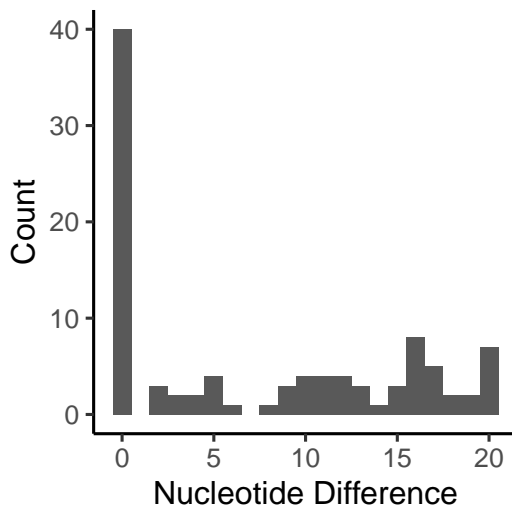
### IGHV3-9\*01

287 sequences assigned  
131 (45.6%) exact matches, in which:  
131 unique CDR3  
6 unique J



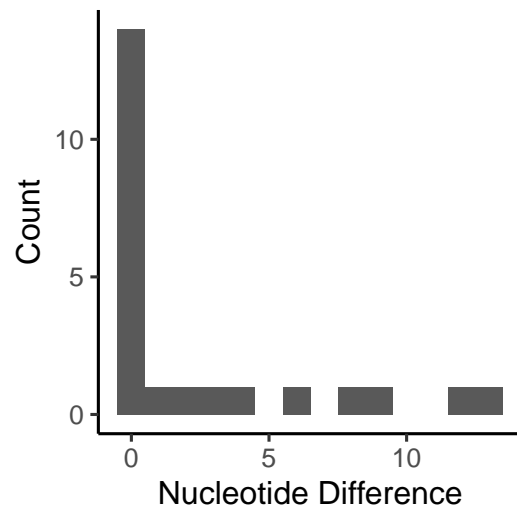
### IGHV3-13\*01

115 sequences assigned  
40 (34.8%) exact matches, in which:  
40 unique CDR3  
5 unique J



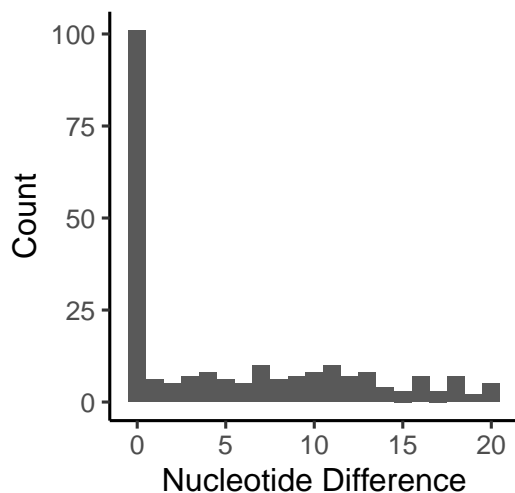
### IGHV3-20\*01\_02

25 sequences assigned  
14 (56%) exact matches, in which:  
14 unique CDR3  
5 unique J



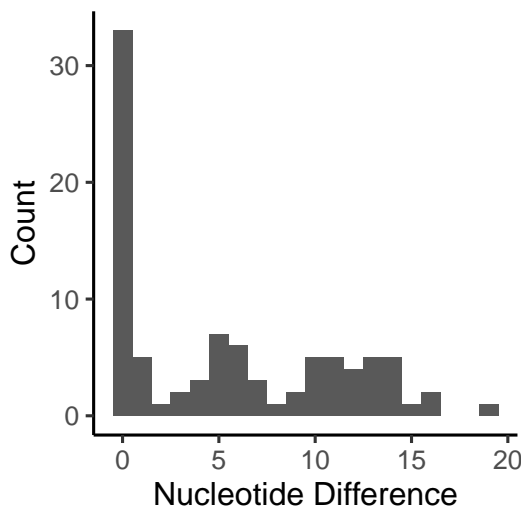
### IGHV3-11\*01

249 sequences assigned  
101 (40.6%) exact matches, in which:  
97 unique CDR3  
5 unique J



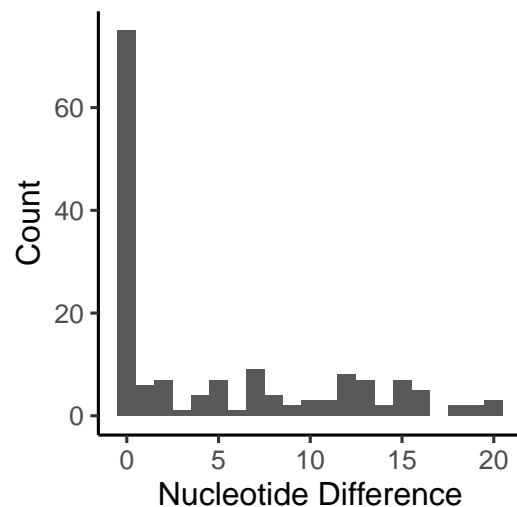
### IGHV3-13\*04

98 sequences assigned  
33 (33.7%) exact matches, in which:  
33 unique CDR3  
4 unique J



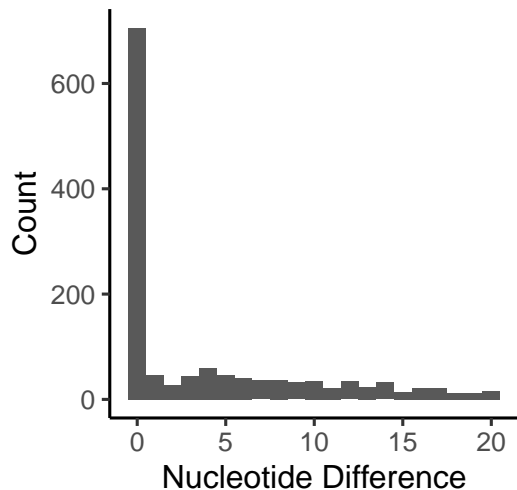
### IGHV3-20\*03\_04

169 sequences assigned  
75 (44.4%) exact matches, in which:  
74 unique CDR3  
5 unique J



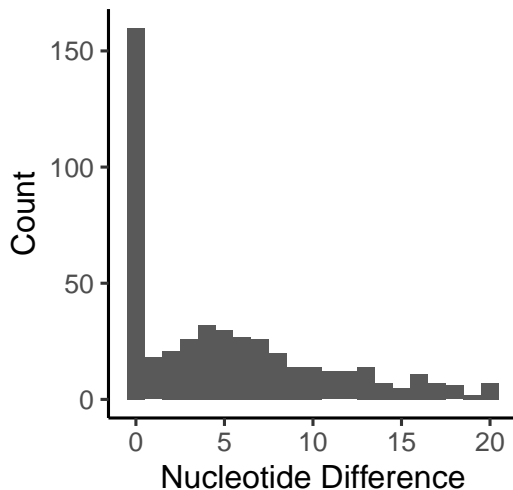
### IGHV3-21\*01\_02

1464 sequences assigned  
706 (48.2%) exact matches, in which:  
699 unique CDR3  
7 unique J



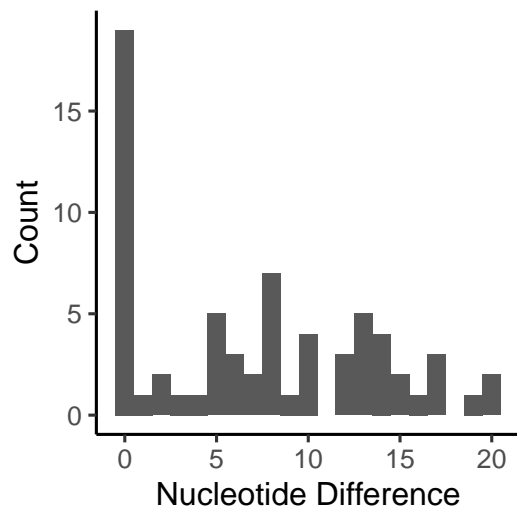
### IGHV3-48\*01

513 sequences assigned  
160 (31.2%) exact matches, in which:  
153 unique CDR3  
6 unique J



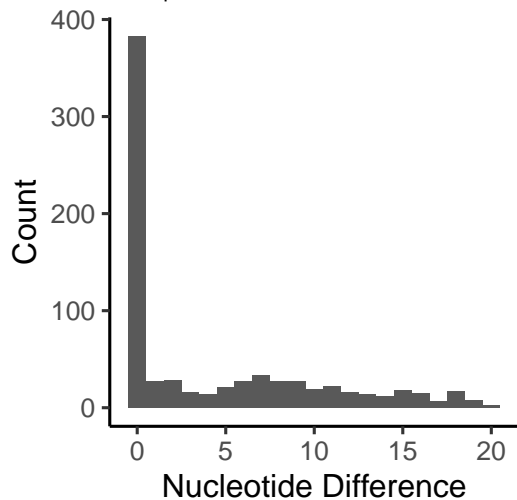
### IGHV3-49\*03\_05

75 sequences assigned  
19 (25.3%) exact matches, in which:  
19 unique CDR3  
4 unique J



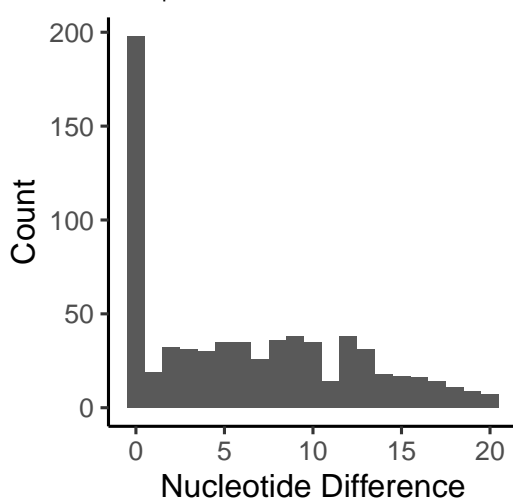
### IGHV3-33\*01

823 sequences assigned  
383 (46.5%) exact matches, in which:  
331 unique CDR3  
6 unique J



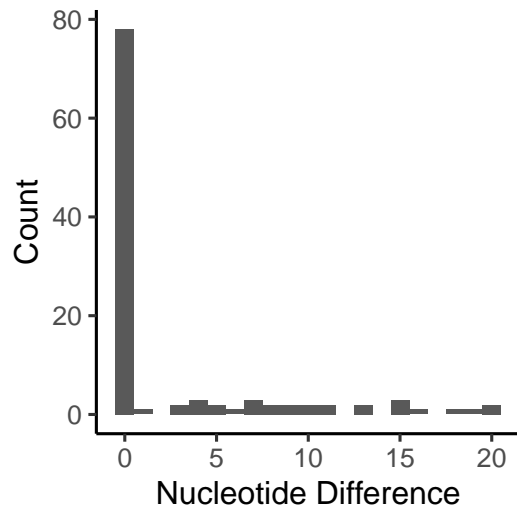
### IGHV3-48\*03

762 sequences assigned  
198 (26%) exact matches, in which:  
193 unique CDR3  
6 unique J



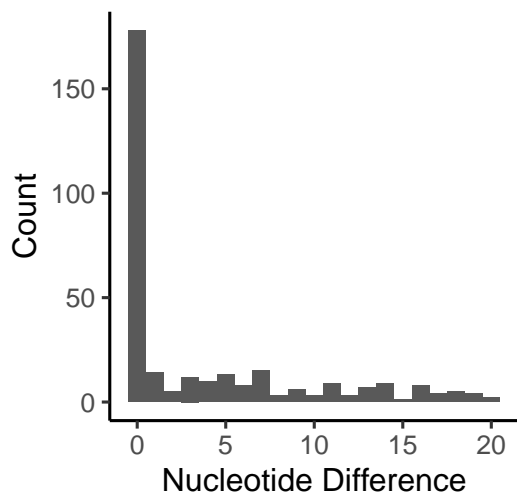
### IGHV3-53\*04

112 sequences assigned  
78 (69.6%) exact matches, in which:  
75 unique CDR3  
6 unique J



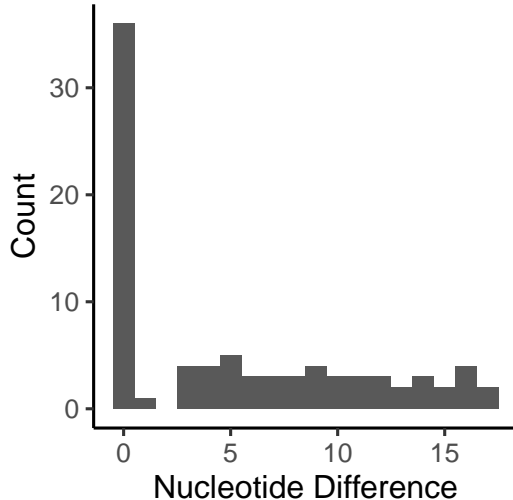
### IGHV3-43\*02

346 sequences assigned  
178 (51.4%) exact matches, in which:  
171 unique CDR3  
6 unique J



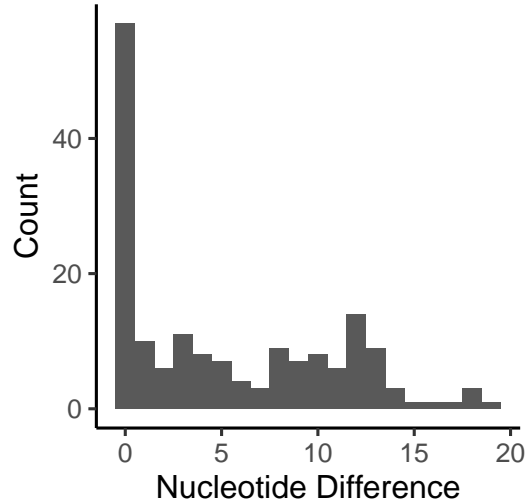
### IGHV3-49\*04

99 sequences assigned  
36 (36.4%) exact matches, in which:  
36 unique CDR3  
4 unique J



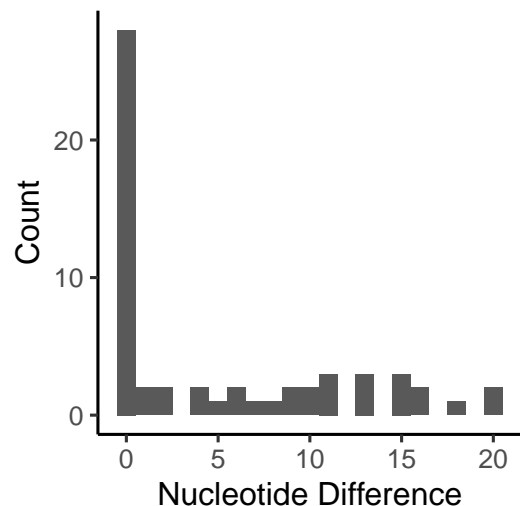
### IGHV3-53\*01\_02

185 sequences assigned  
57 (30.8%) exact matches, in which:  
56 unique CDR3  
5 unique J



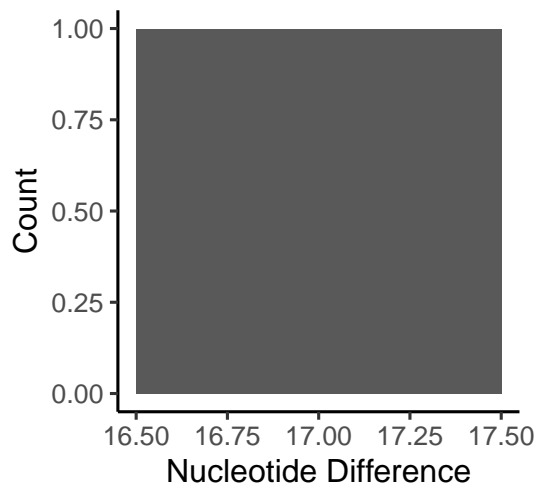
### IGHV3-64\*01

59 sequences assigned  
28 (47.5%) exact matches, in which:  
25 unique CDR3  
5 unique J



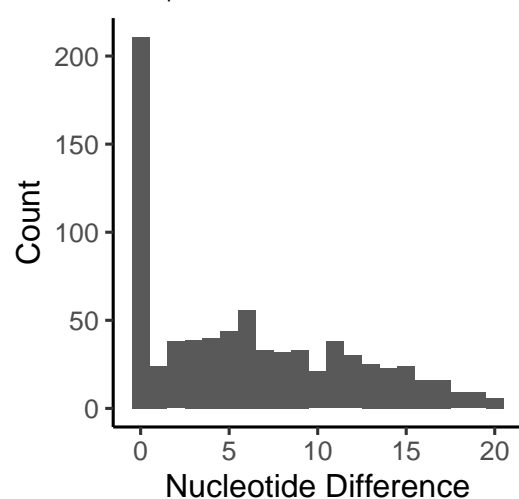
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



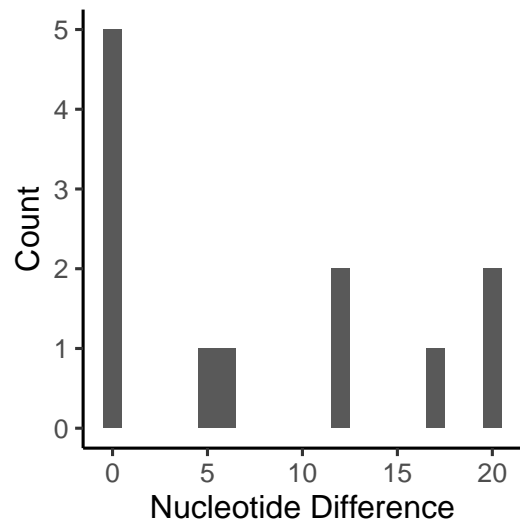
### IGHV3-74\*01\_02

815 sequences assigned  
211 (25.9%) exact matches, in which:  
202 unique CDR3  
7 unique J



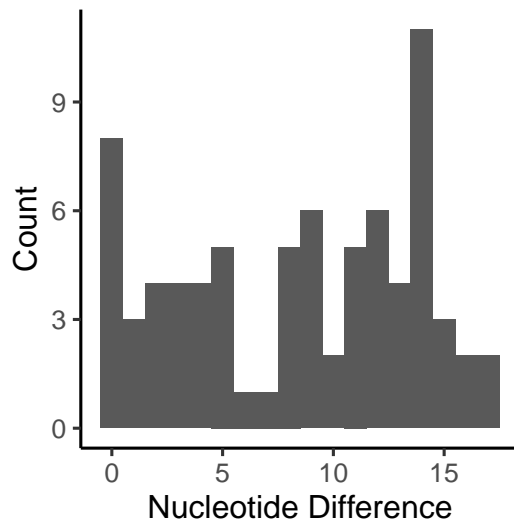
### IGHV3-64\*02\_07

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



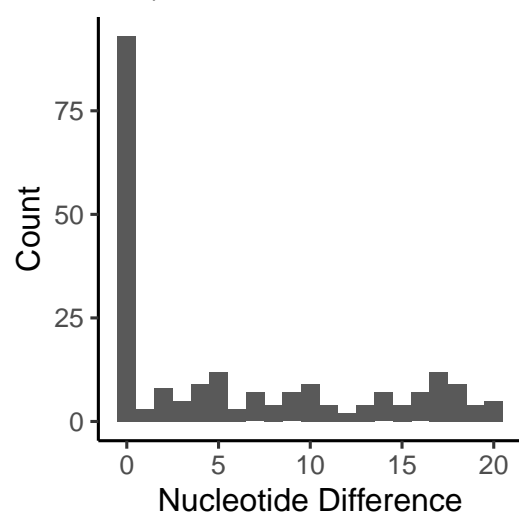
### IGHV3-72\*01

78 sequences assigned  
8 (10.3%) exact matches, in which:  
8 unique CDR3  
4 unique J



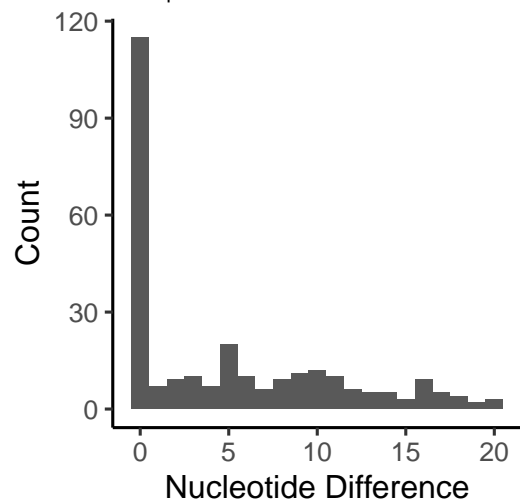
### IGHV3-64D\*06

281 sequences assigned  
93 (33.1%) exact matches, in which:  
88 unique CDR3  
5 unique J



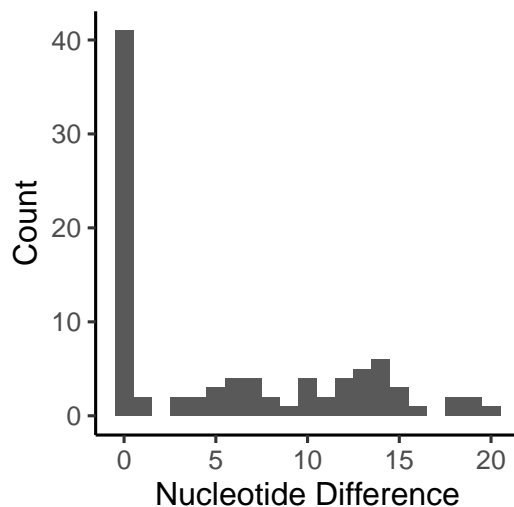
### IGHV3-66\*02

282 sequences assigned  
115 (40.8%) exact matches, in which:  
110 unique CDR3  
7 unique J



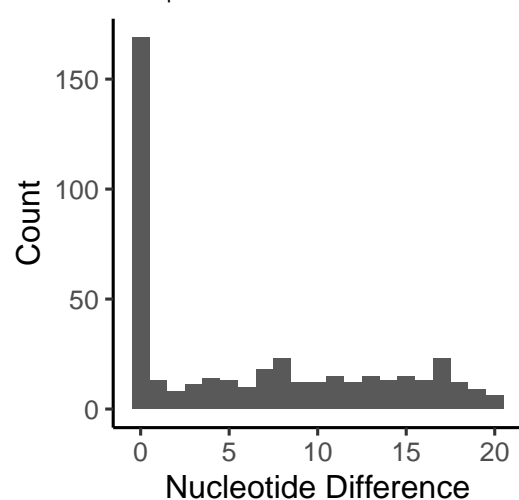
### IGHV3-73\*01\_02

99 sequences assigned  
41 (41.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



### IGHV4-4\*07

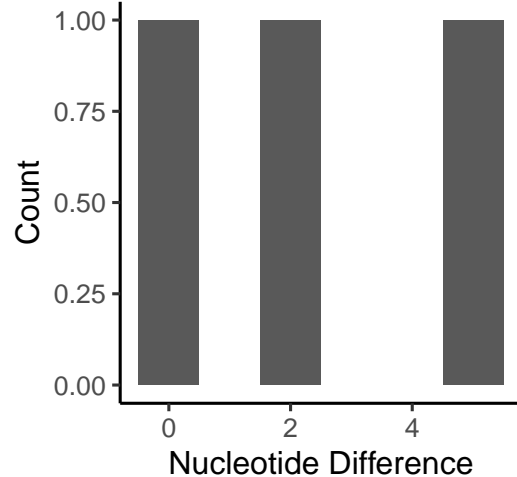
470 sequences assigned  
169 (36%) exact matches, in which:  
169 unique CDR3  
7 unique J





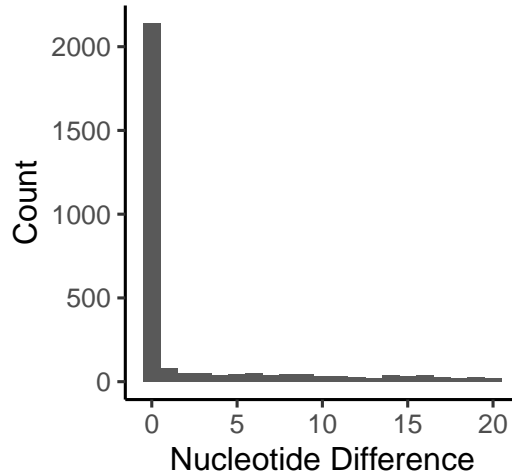
### IGHV4-28\*01\_07

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



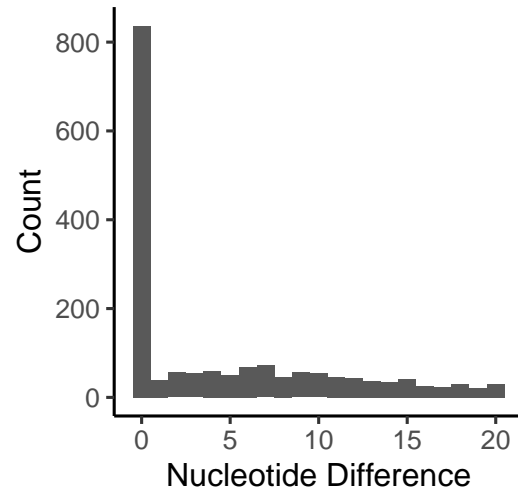
### IGHV4-34\*01\_02

3054 sequences assigned  
2139 (70%) exact matches, in which:  
2112 unique CDR3  
7 unique J



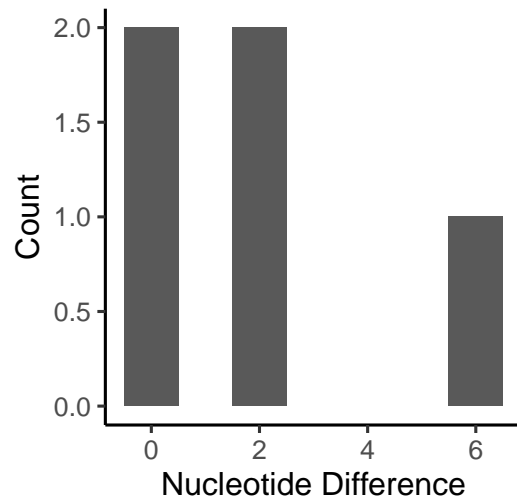
### IGHV4-59\*01\_07

1967 sequences assigned  
837 (42.6%) exact matches, in which:  
827 unique CDR3  
7 unique J



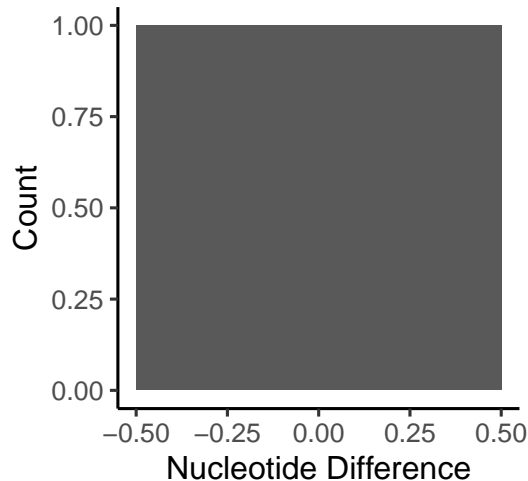
### IGHV4-28\*02\_05

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



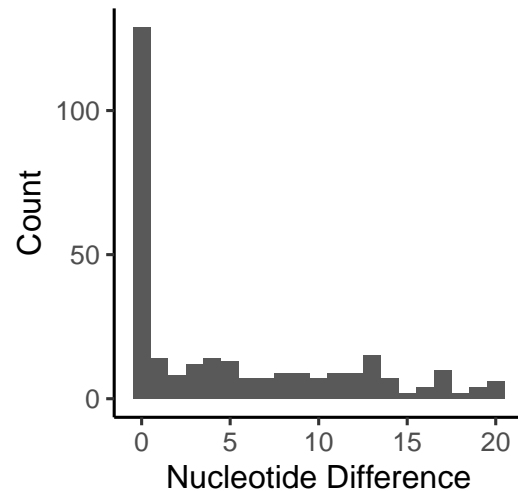
### IGHV4-38-2\*02

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



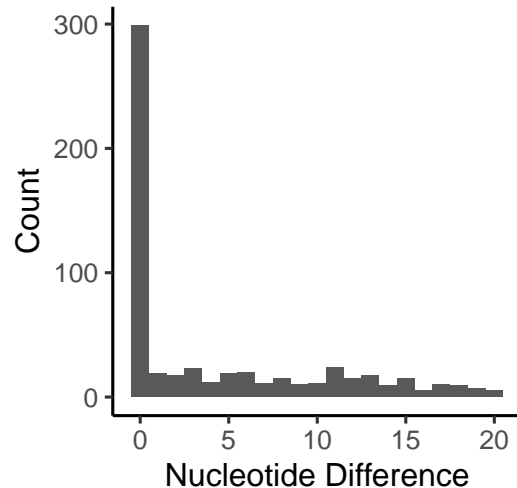
### IGHV4-61\*01

350 sequences assigned  
129 (36.9%) exact matches, in which:  
127 unique CDR3  
6 unique J



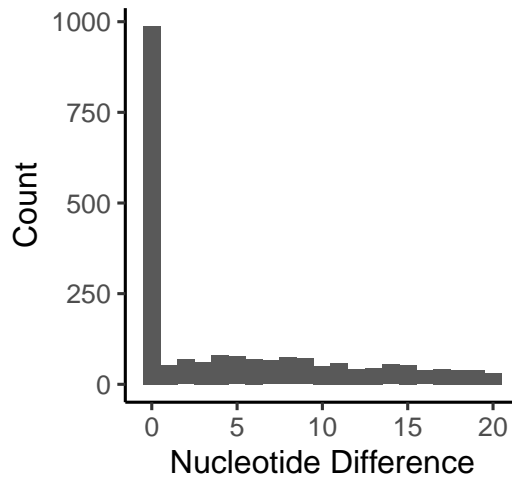
### IGHV4-31\*03\_04

647 sequences assigned  
299 (46.2%) exact matches, in which:  
298 unique CDR3  
6 unique J



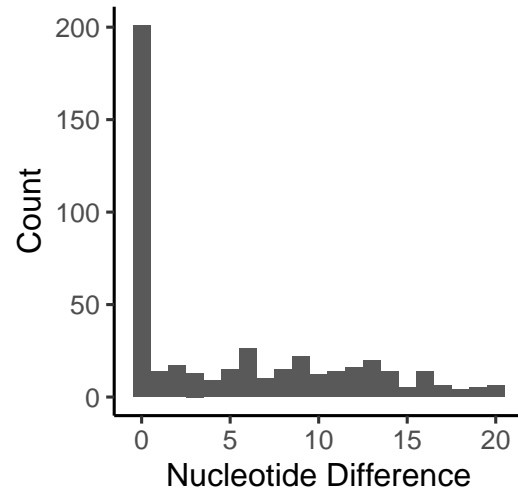
### IGHV4-39\*01\_05

2404 sequences assigned  
988 (41.1%) exact matches, in which:  
973 unique CDR3  
7 unique J



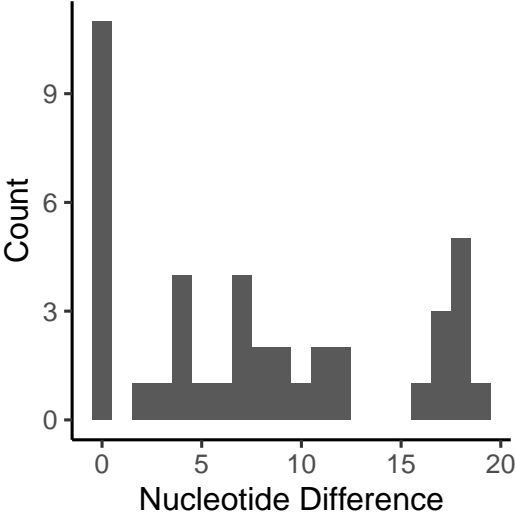
### IGHV4-61\*02

508 sequences assigned  
201 (39.6%) exact matches, in which:  
197 unique CDR3  
5 unique J



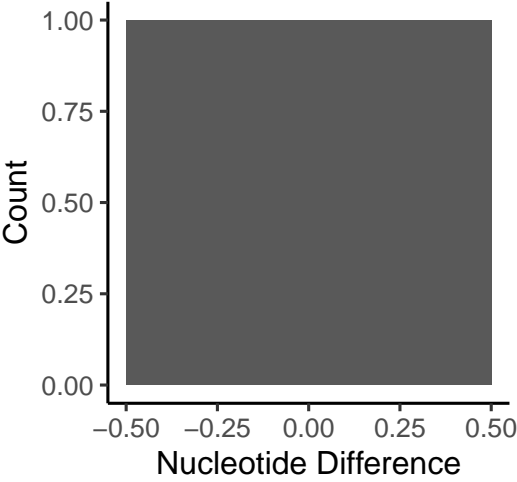
### IGHV5-10-1\*01\_03

51 sequences assigned  
11 (21.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



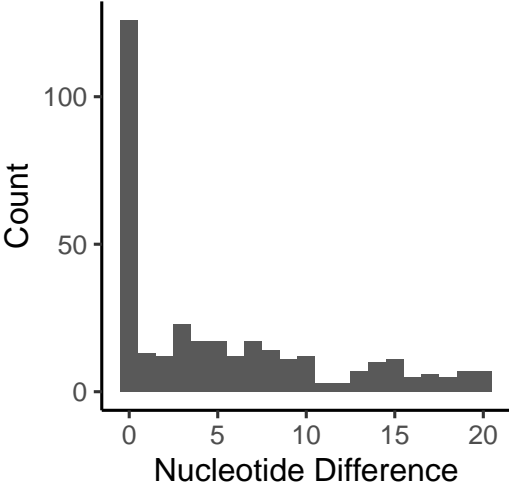
### IGHV7-4-1\*01

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



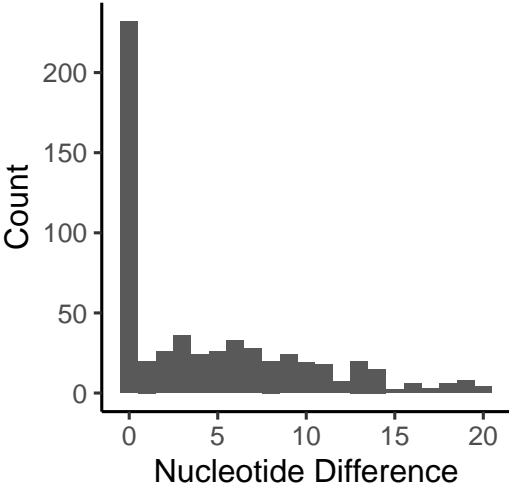
### IGHV5-51\*01\_03

351 sequences assigned  
126 (35.9%) exact matches, in which:  
125 unique CDR3  
6 unique J

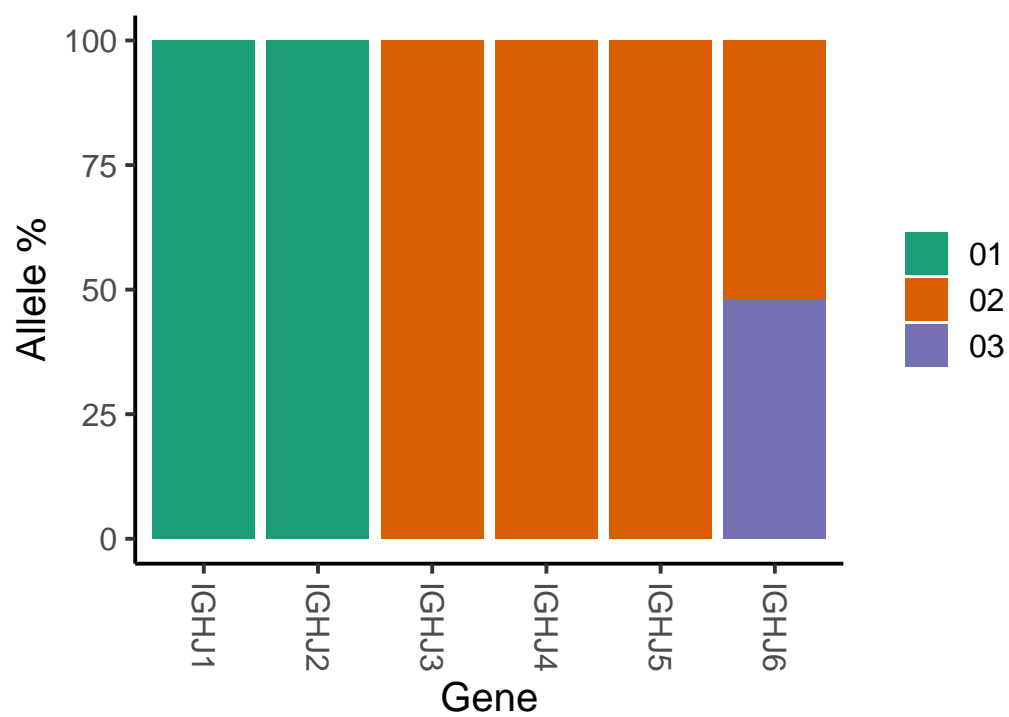


### IGHV6-1\*01\_02

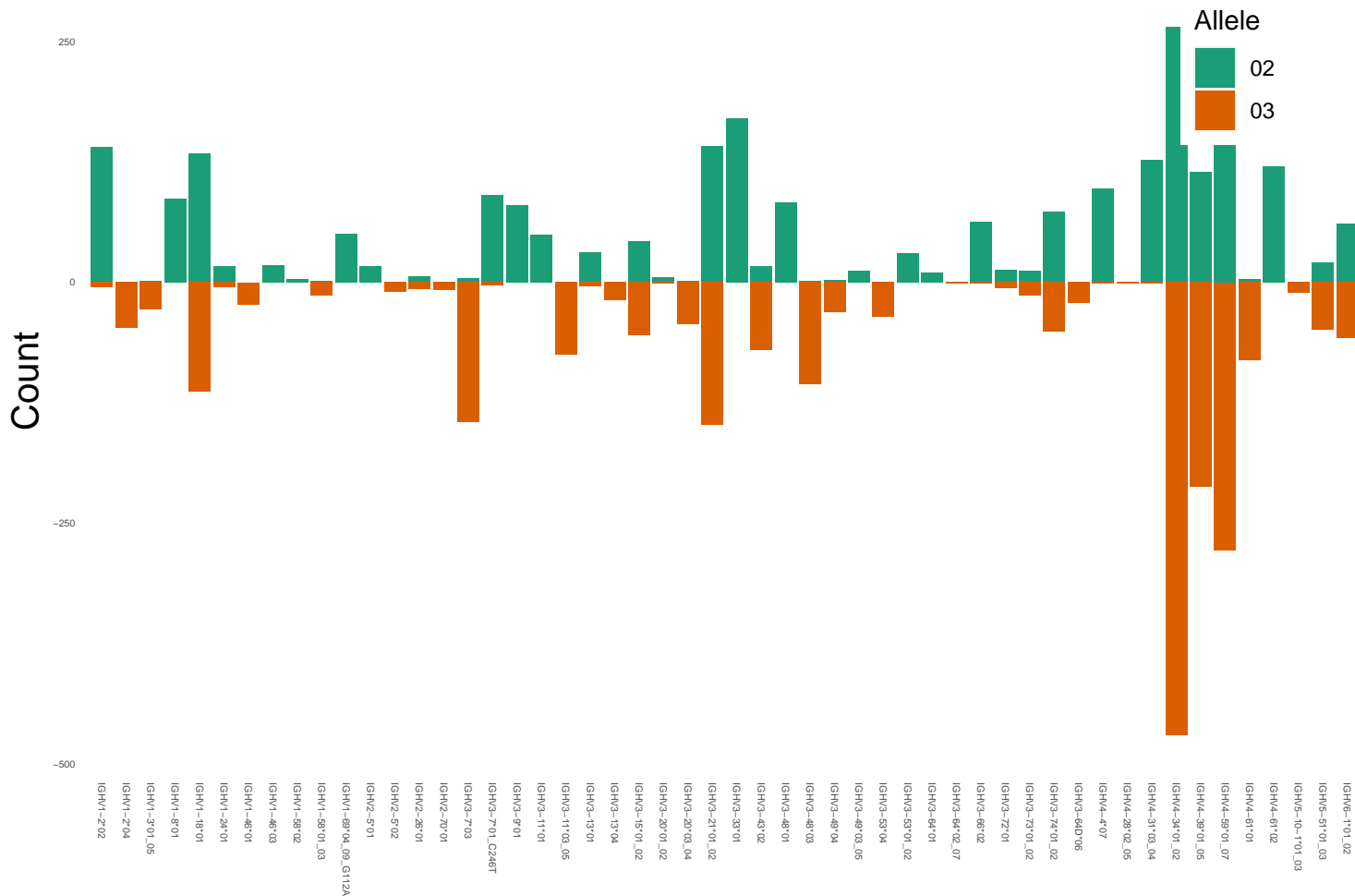
590 sequences assigned  
232 (39.3%) exact matches, in which:  
232 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.