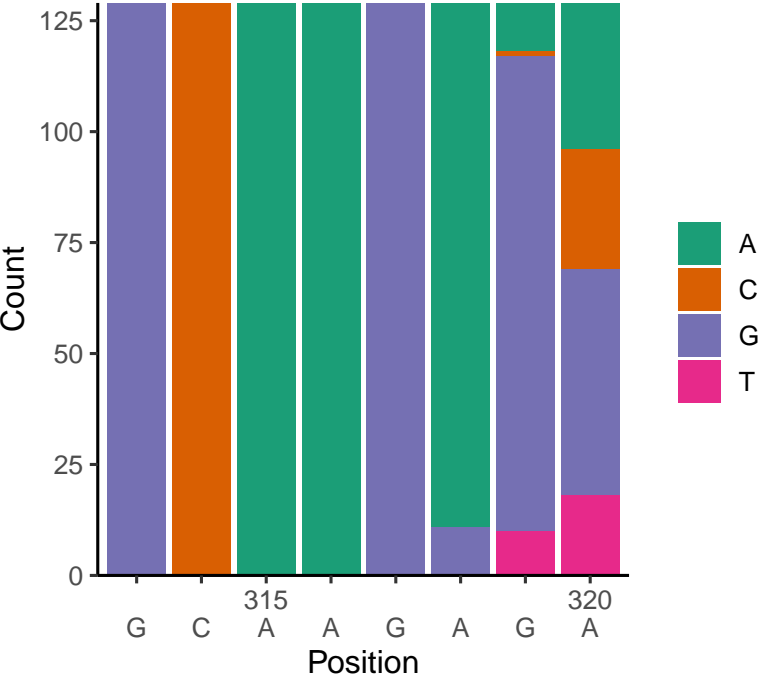
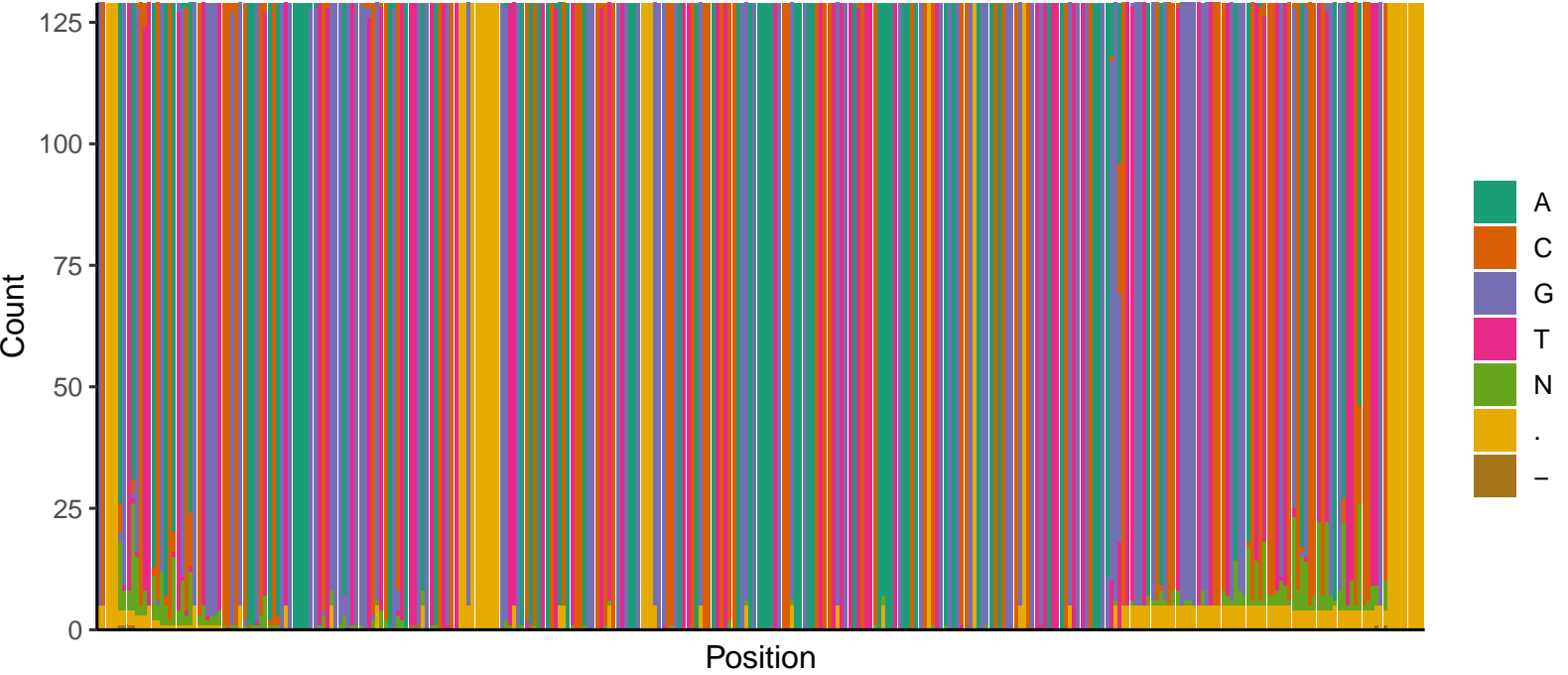


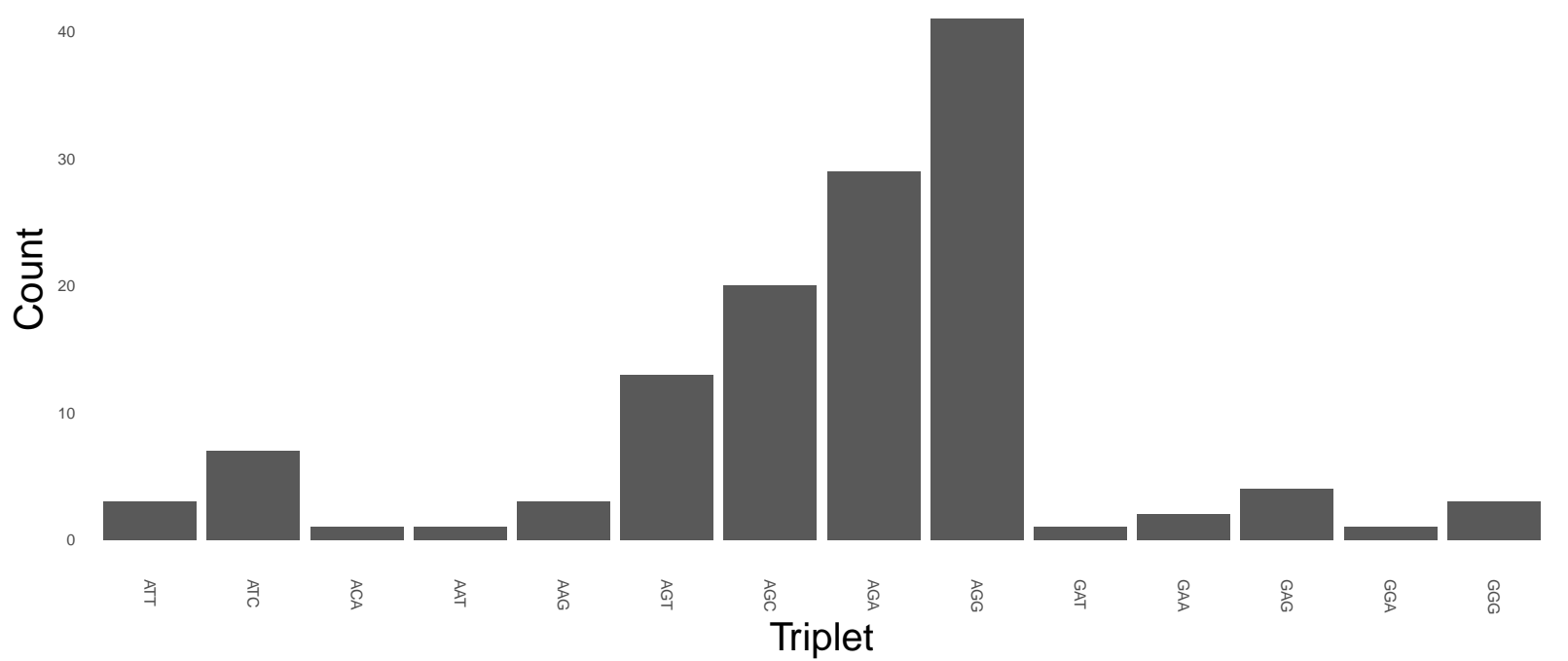
Gene IGHV3-13\*01\_G290A\_T300C



Gene IGHV3-13\*01\_G290A\_T300C

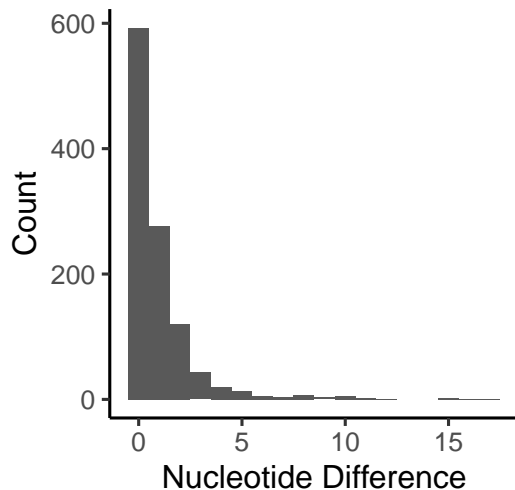


IGHV3-13\*01\_G290A\_T300C- Final 3 nucleotides as a triplet



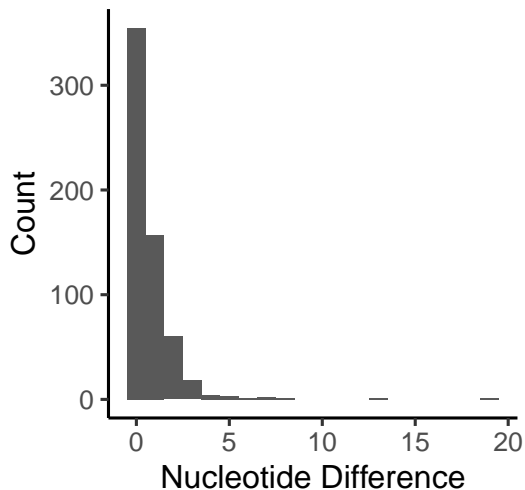
### IGHV1-2\*04

1099 sequences assigned  
593 (54%) exact matches, in which:  
492 unique CDR3  
6 unique J



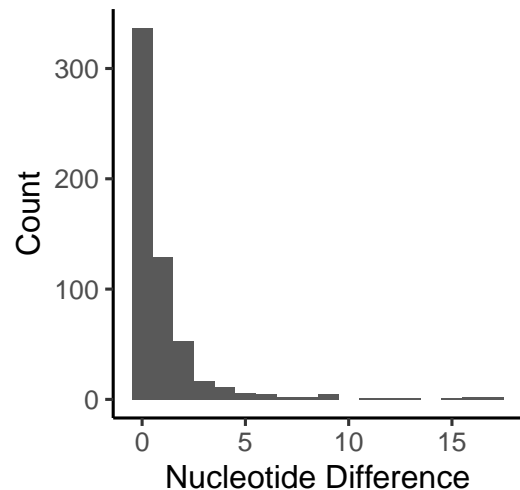
### IGHV1-24\*01

603 sequences assigned  
355 (58.9%) exact matches, in which:  
304 unique CDR3  
6 unique J



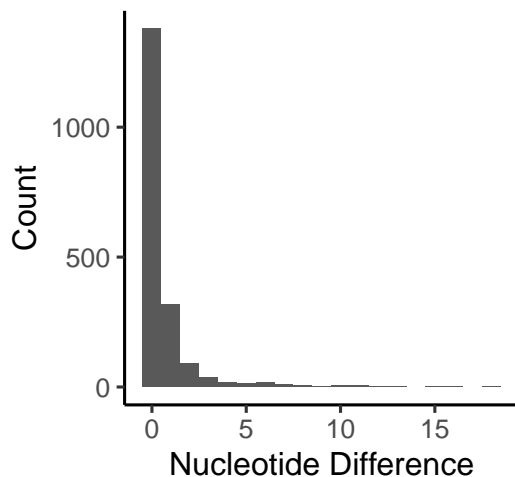
### IGHV1-46\*03

575 sequences assigned  
337 (58.6%) exact matches, in which:  
284 unique CDR3  
6 unique J



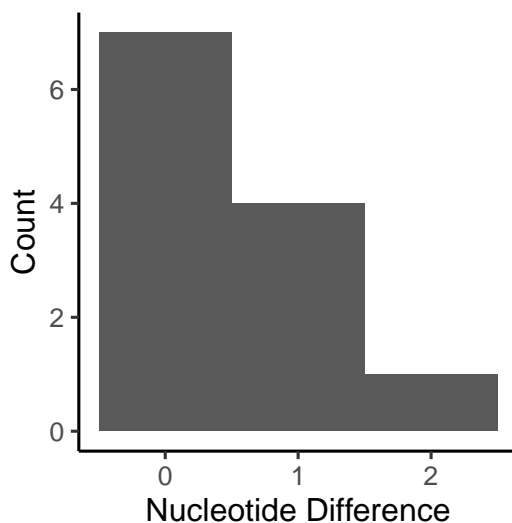
### IGHV1-3\*01

1905 sequences assigned  
1379 (72.4%) exact matches, in which:  
1145 unique CDR3  
6 unique J



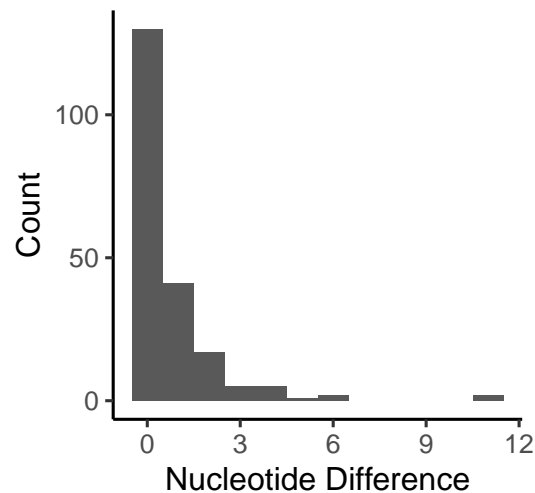
### IGHV1-45\*02

12 sequences assigned  
7 (58.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



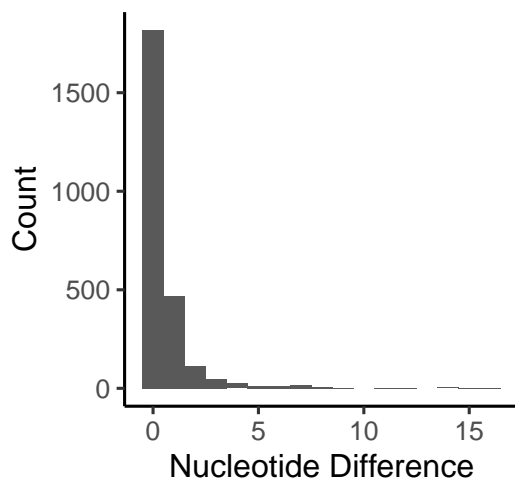
### IGHV1-58\*01

203 sequences assigned  
130 (64%) exact matches, in which:  
105 unique CDR3  
5 unique J



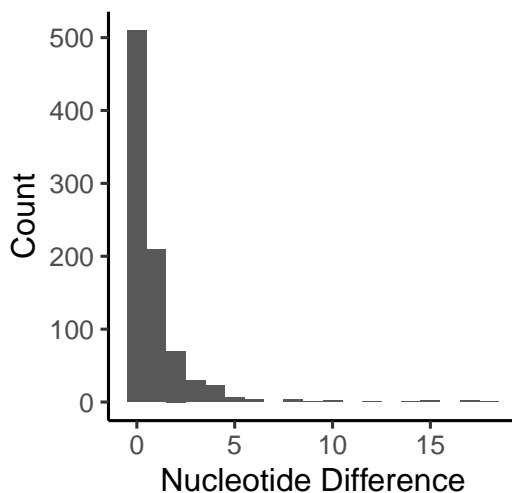
### IGHV1-18\*01

2531 sequences assigned  
1818 (71.8%) exact matches, in which:  
1527 unique CDR3  
6 unique J



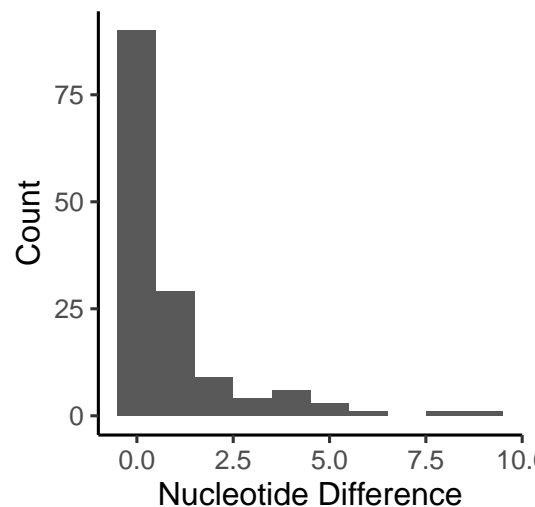
### IGHV1-46\*01

867 sequences assigned  
510 (58.8%) exact matches, in which:  
423 unique CDR3  
6 unique J



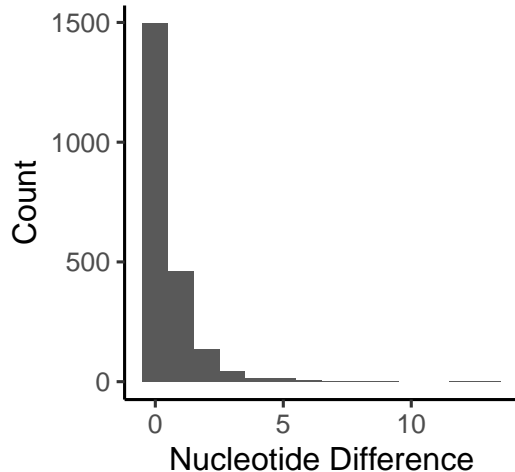
### IGHV1-58\*02

144 sequences assigned  
90 (62.5%) exact matches, in which:  
77 unique CDR3  
5 unique J



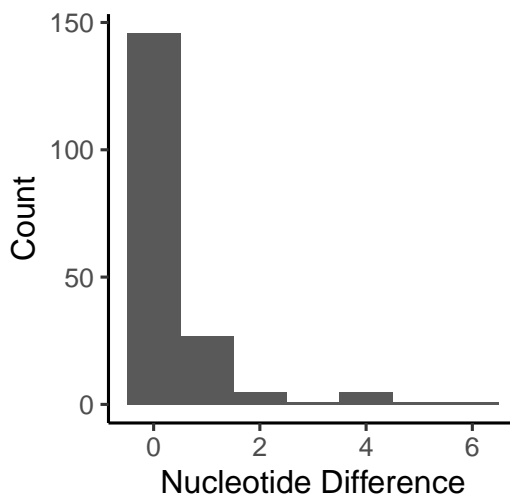
### IGHV1-69\*04

2187 sequences assigned  
1496 (68.4%) exact matches, in which:  
1135 unique CDR3  
6 unique J



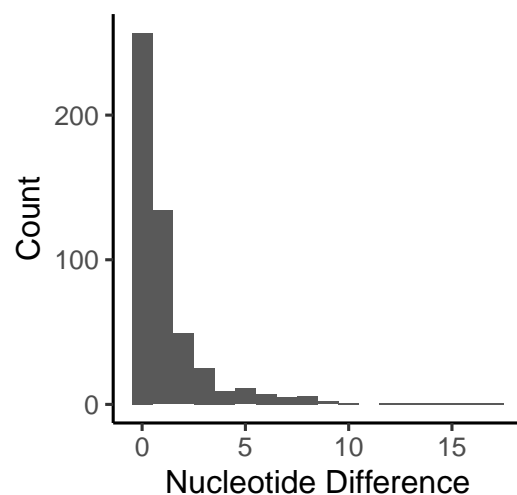
### IGHV2-70\*01

186 sequences assigned  
146 (78.5%) exact matches, in which:  
135 unique CDR3  
5 unique J



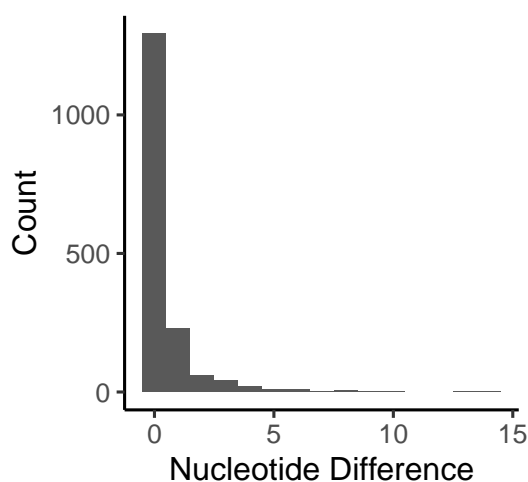
### IGHV3-7\*04

517 sequences assigned  
257 (49.7%) exact matches, in which:  
233 unique CDR3  
6 unique J



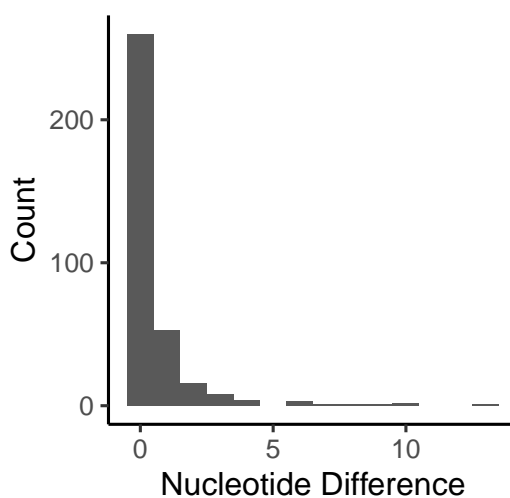
### IGHV2-5\*02

1673 sequences assigned  
1293 (77.3%) exact matches, in which:  
1067 unique CDR3  
6 unique J



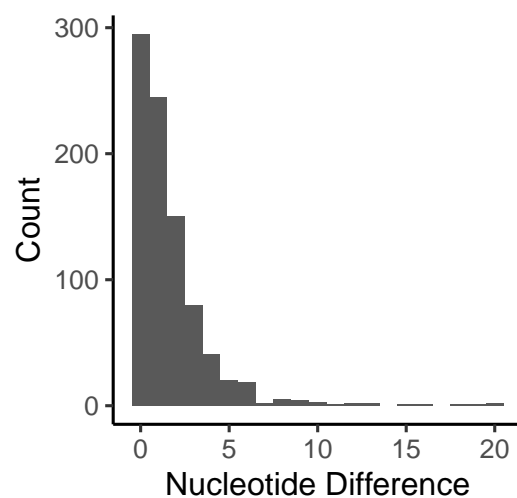
### IGHV2-70\*15

350 sequences assigned  
260 (74.3%) exact matches, in which:  
245 unique CDR3  
6 unique J



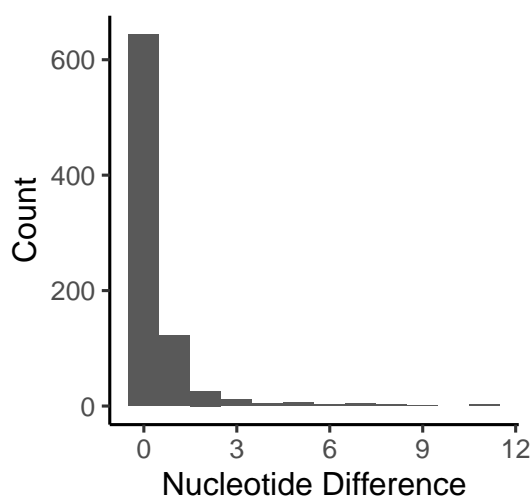
### IGHV3-11\*05

876 sequences assigned  
295 (33.7%) exact matches, in which:  
263 unique CDR3  
6 unique J



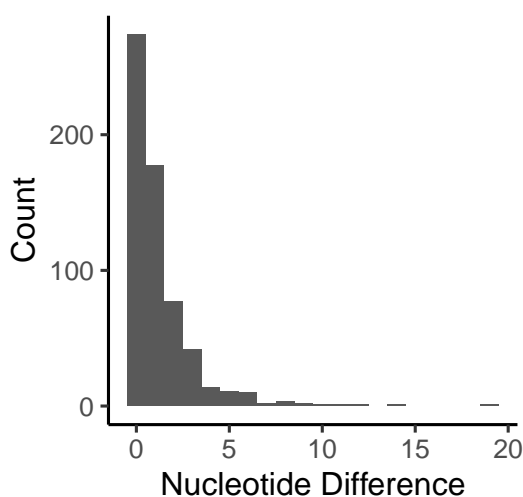
### IGHV2-26\*01

826 sequences assigned  
644 (78%) exact matches, in which:  
546 unique CDR3  
6 unique J



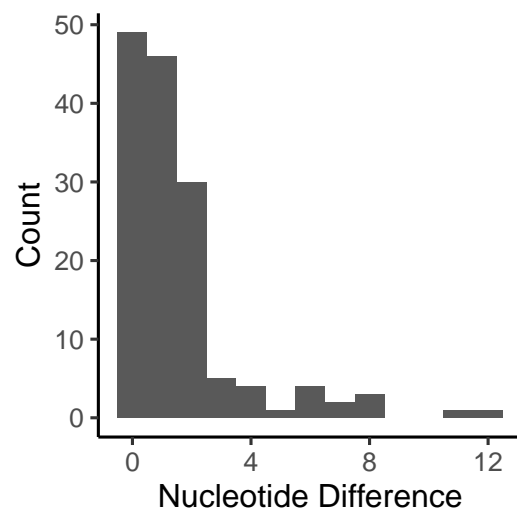
### IGHV3-7\*03

618 sequences assigned  
274 (44.3%) exact matches, in which:  
248 unique CDR3  
6 unique J



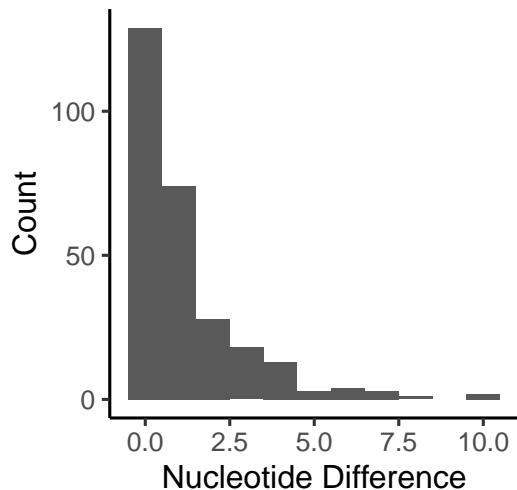
### IGHV3-11\*06

146 sequences assigned  
49 (33.6%) exact matches, in which:  
45 unique CDR3  
5 unique J



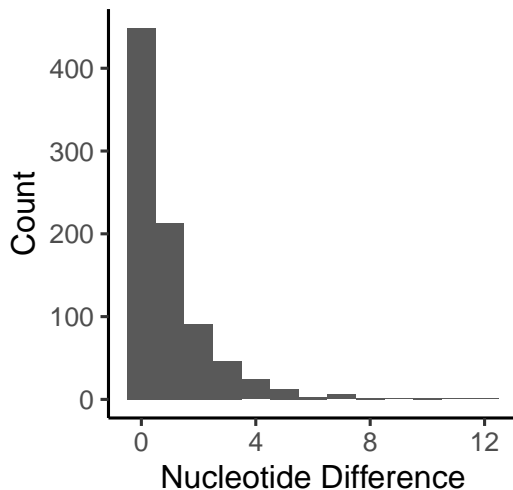
### IGHV3-13\*04

275 sequences assigned  
129 (46.9%) exact matches, in which:  
114 unique CDR3  
5 unique J



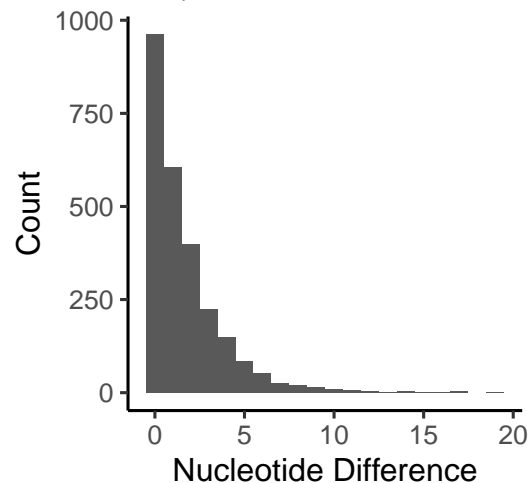
### IGHV3-15\*07

852 sequences assigned  
449 (52.7%) exact matches, in which:  
404 unique CDR3  
6 unique J



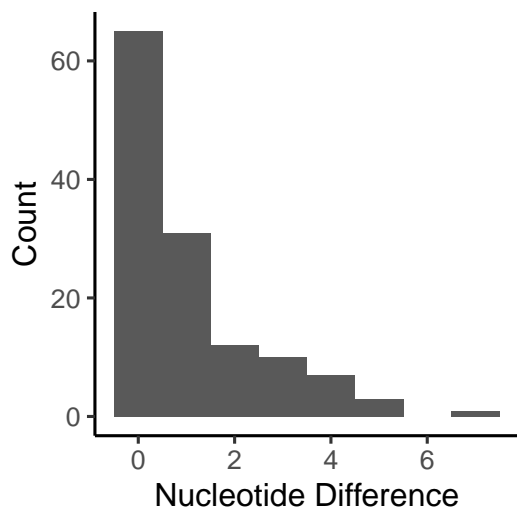
### IGHV3-33\*01

2573 sequences assigned  
962 (37.4%) exact matches, in which:  
875 unique CDR3  
6 unique J



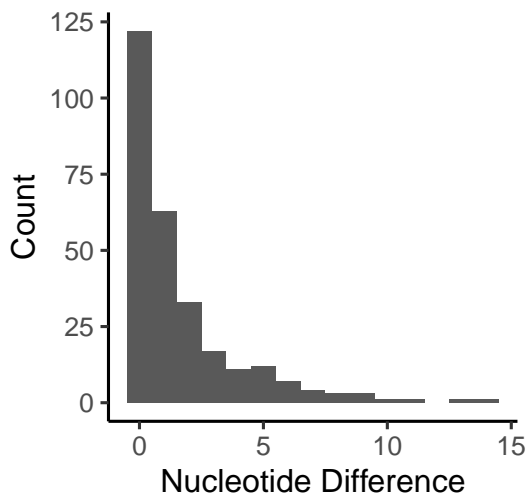
### IGHV3-13\*01\_G290A\_T3I

129 sequences assigned  
65 (50.4%) exact matches, in which:  
56 unique CDR3  
5 unique J



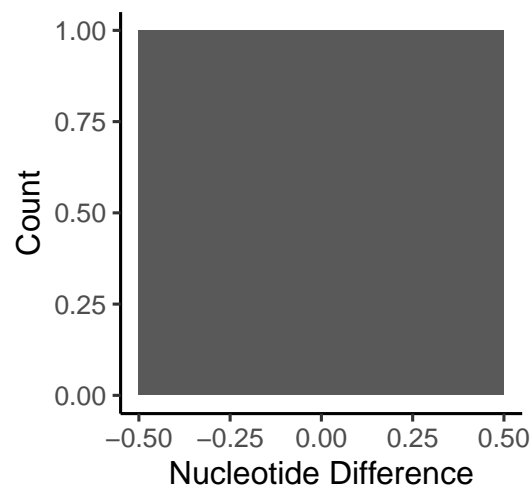
### IGHV3-20\*04

280 sequences assigned  
122 (43.6%) exact matches, in which:  
110 unique CDR3  
5 unique J



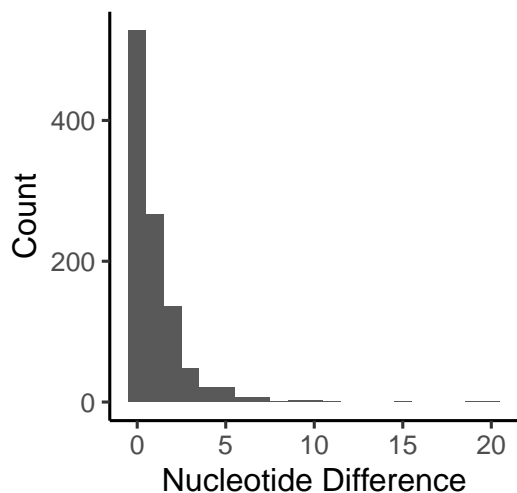
### IGHV3-47\*02

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



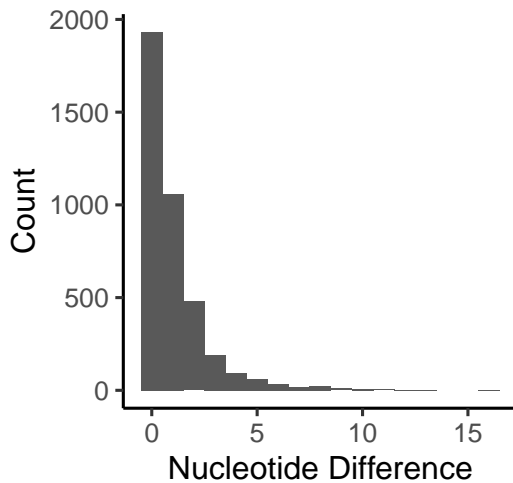
### IGHV3-15\*01

1043 sequences assigned  
528 (50.6%) exact matches, in which:  
478 unique CDR3  
6 unique J



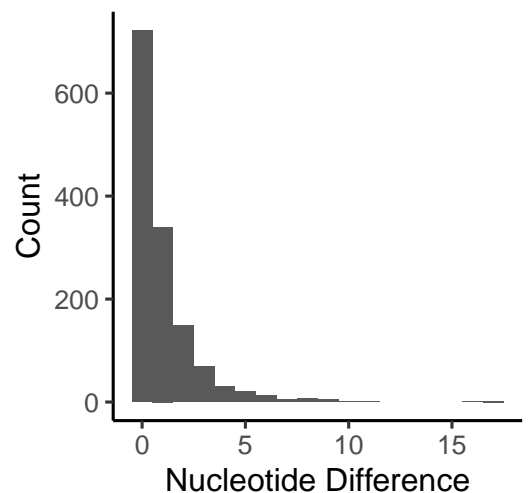
### IGHV3-21\*01

3915 sequences assigned  
1932 (49.3%) exact matches, in which:  
1667 unique CDR3  
6 unique J



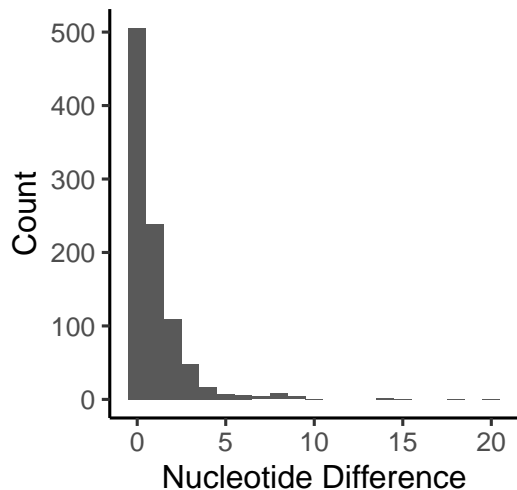
### IGHV3-48\*01

1365 sequences assigned  
722 (52.9%) exact matches, in which:  
638 unique CDR3  
6 unique J



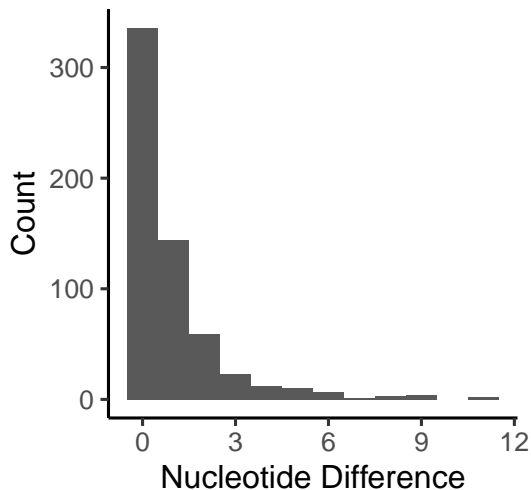
### IGHV3-48\*02

957 sequences assigned  
506 (52.9%) exact matches, in which:  
461 unique CDR3  
6 unique J



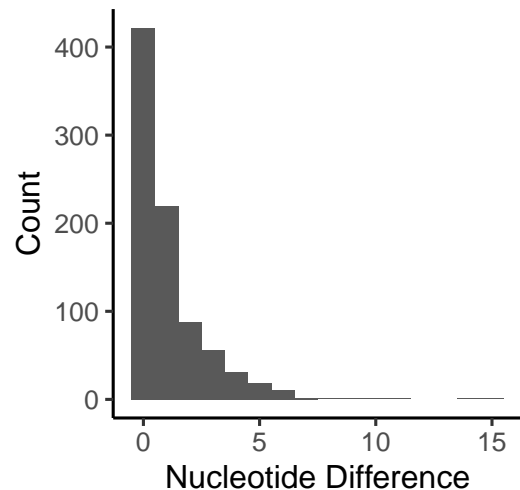
### IGHV3-53\*01

601 sequences assigned  
336 (55.9%) exact matches, in which:  
295 unique CDR3  
6 unique J



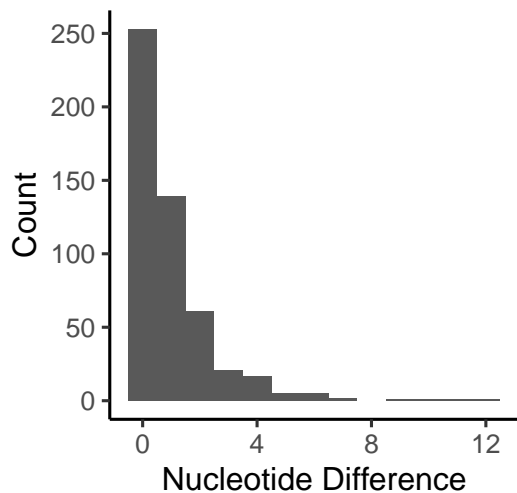
### IGHV3-66\*01

855 sequences assigned  
422 (49.4%) exact matches, in which:  
360 unique CDR3  
6 unique J



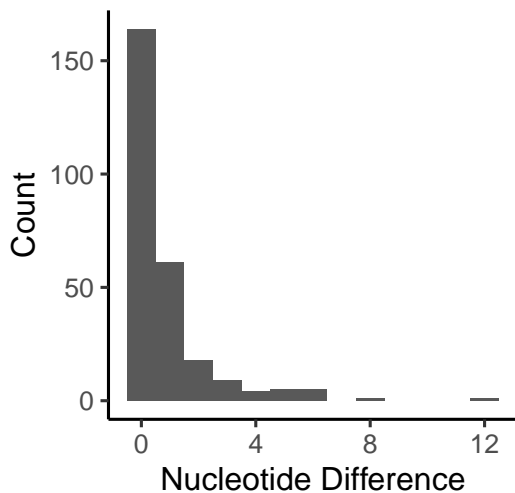
### IGHV3-49\*03

507 sequences assigned  
253 (49.9%) exact matches, in which:  
224 unique CDR3  
6 unique J



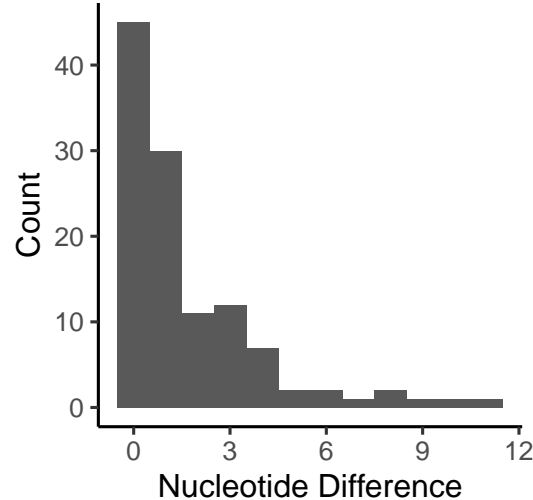
### IGHV3-53\*04

268 sequences assigned  
164 (61.2%) exact matches, in which:  
151 unique CDR3  
6 unique J



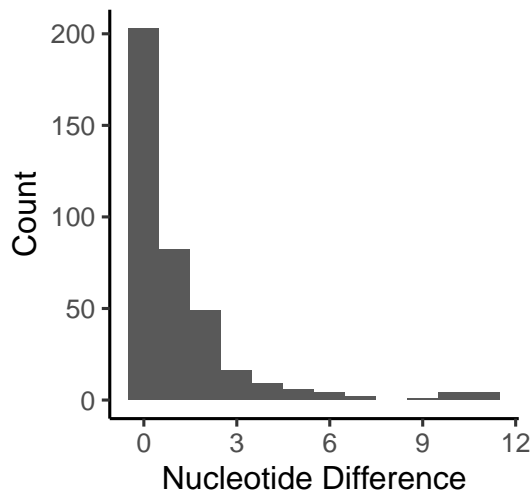
### IGHV3-72\*01

116 sequences assigned  
45 (38.8%) exact matches, in which:  
40 unique CDR3  
4 unique J



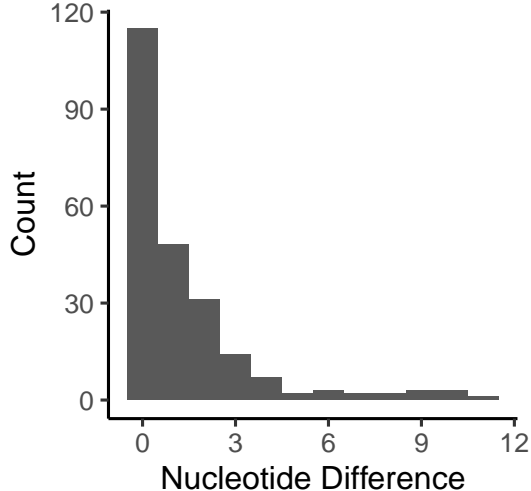
### IGHV3-49\*05

380 sequences assigned  
203 (53.4%) exact matches, in which:  
181 unique CDR3  
5 unique J



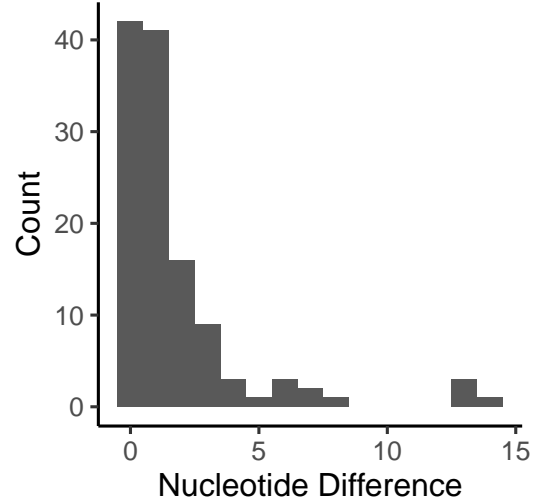
### IGHV3-64\*01

231 sequences assigned  
115 (49.8%) exact matches, in which:  
102 unique CDR3  
6 unique J



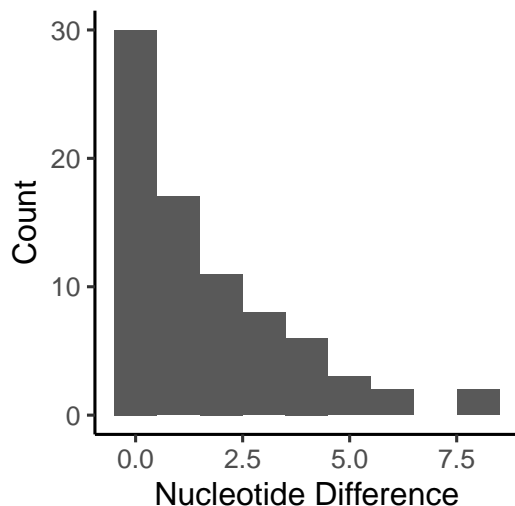
### IGHV3-73\*01

122 sequences assigned  
42 (34.4%) exact matches, in which:  
40 unique CDR3  
4 unique J



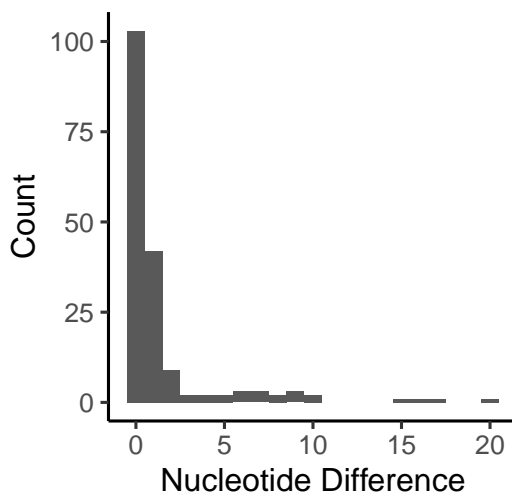
### IGHV3-73\*02

79 sequences assigned  
30 (38%) exact matches, in which:  
26 unique CDR3  
4 unique J



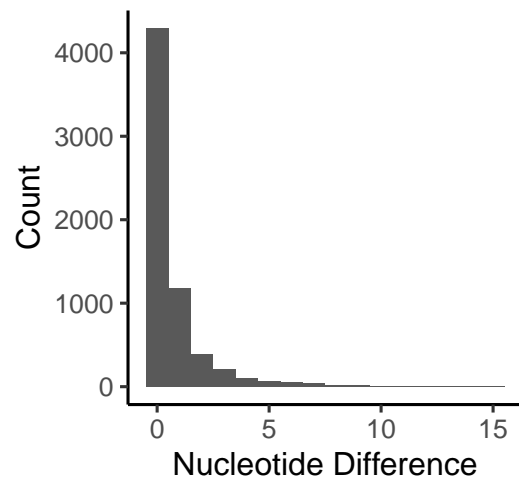
### IGHV4-4\*02

178 sequences assigned  
103 (57.9%) exact matches, in which:  
95 unique CDR3  
6 unique J



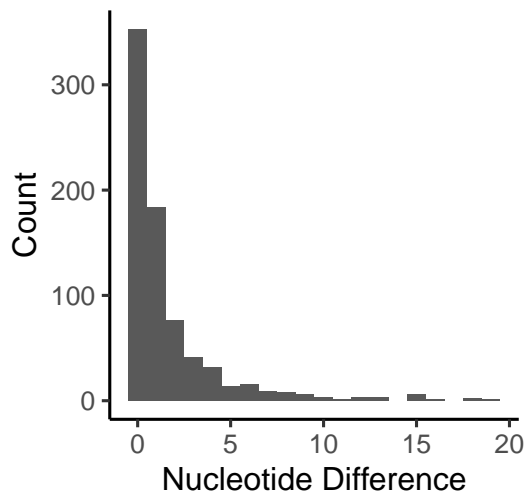
### IGHV4-34\*01

6387 sequences assigned  
4292 (67.2%) exact matches, in which:  
3342 unique CDR3  
6 unique J



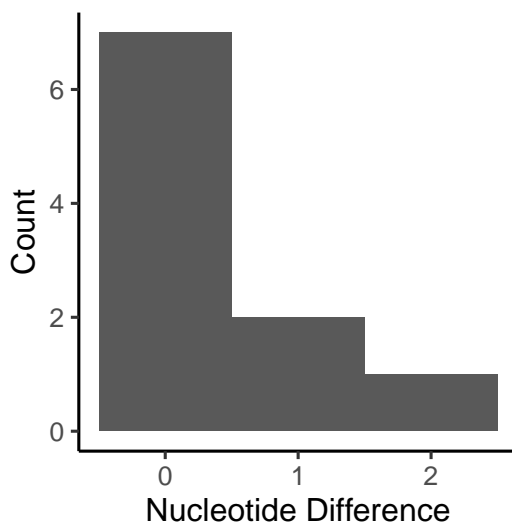
### IGHV3-74\*01

760 sequences assigned  
353 (46.4%) exact matches, in which:  
315 unique CDR3  
6 unique J



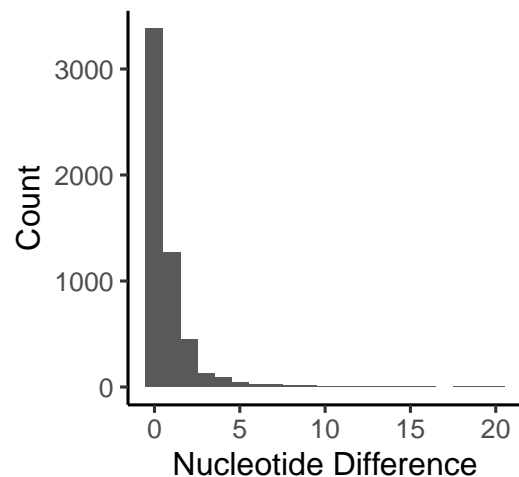
### IGHV4-28\*01

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



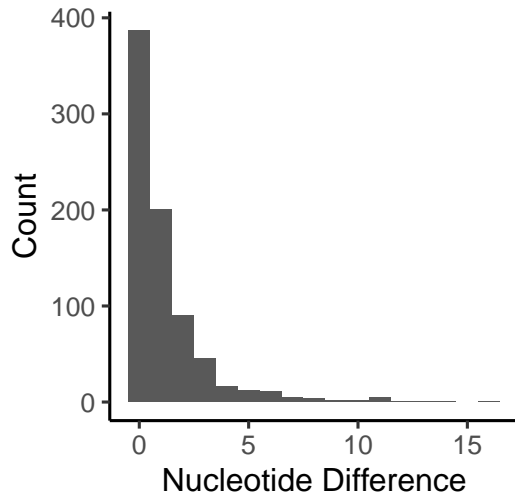
### IGHV4-39\*01

5483 sequences assigned  
3380 (61.6%) exact matches, in which:  
2750 unique CDR3  
6 unique J



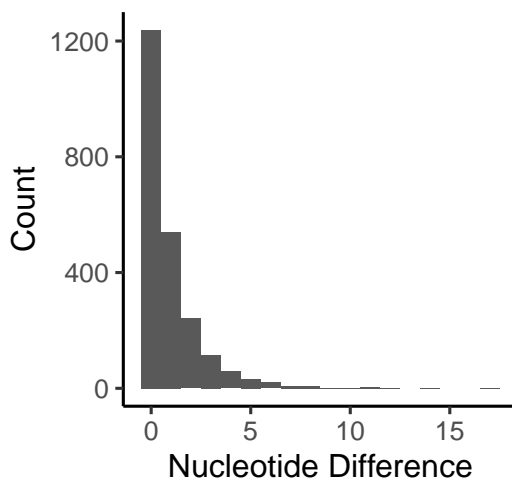
### IGHV3-64D\*06

786 sequences assigned  
387 (49.2%) exact matches, in which:  
342 unique CDR3  
6 unique J



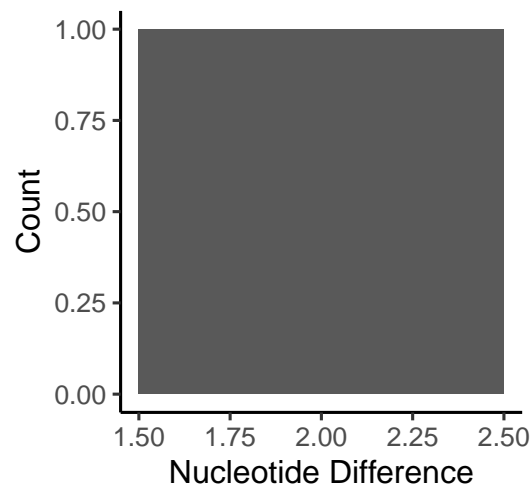
### IGHV4-31\*03

2269 sequences assigned  
1238 (54.6%) exact matches, in which:  
1056 unique CDR3  
6 unique J



### IGHV4-55\*02

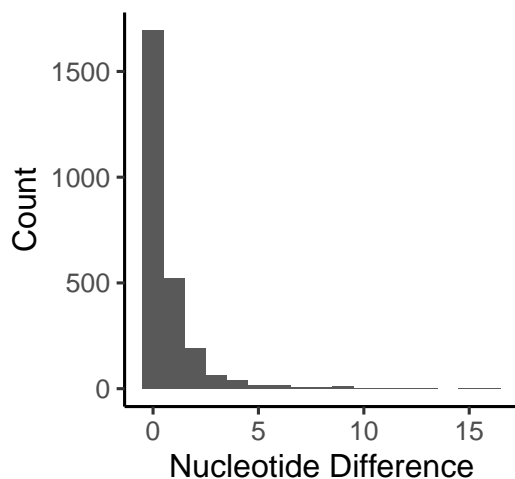
1 sequences assigned  
No exact matches.





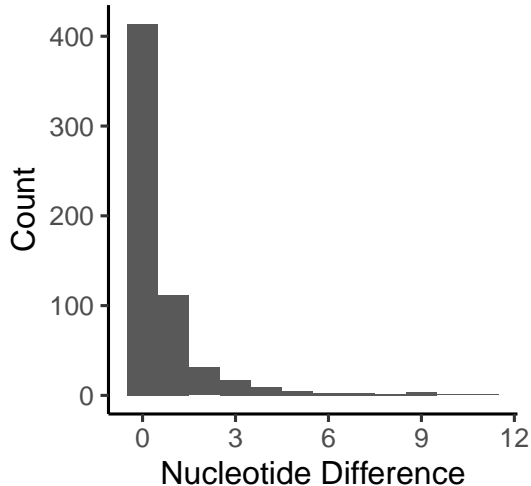
### IGHV4-59\*01

2588 sequences assigned  
1694 (65.5%) exact matches, in which:  
1434 unique CDR3  
6 unique J



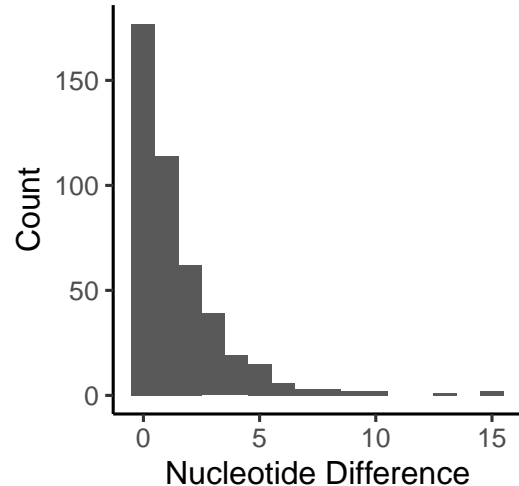
### IGHV5-10-1\*01

602 sequences assigned  
414 (68.8%) exact matches, in which:  
364 unique CDR3  
6 unique J



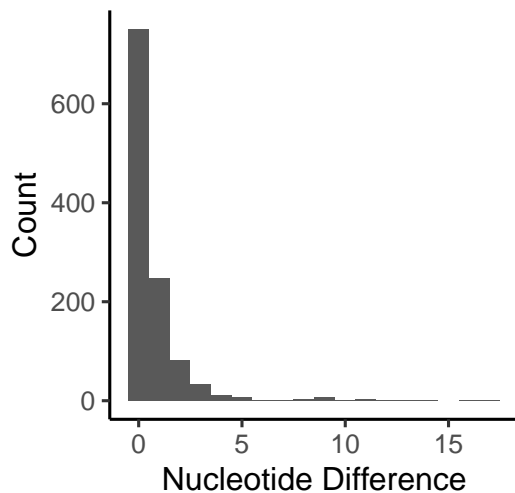
### IGHV6-1\*01

445 sequences assigned  
177 (39.8%) exact matches, in which:  
161 unique CDR3  
6 unique J



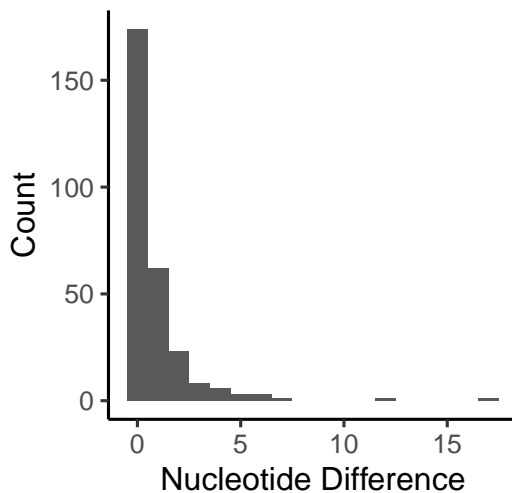
### IGHV4-59\*08

1161 sequences assigned  
751 (64.7%) exact matches, in which:  
649 unique CDR3  
6 unique J



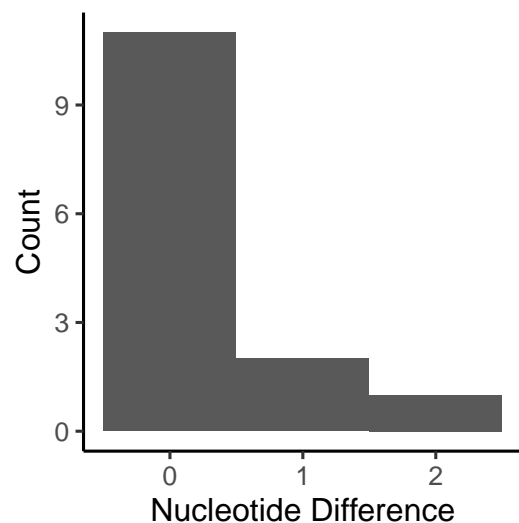
### IGHV5-10-1\*03

283 sequences assigned  
174 (61.5%) exact matches, in which:  
149 unique CDR3  
6 unique J



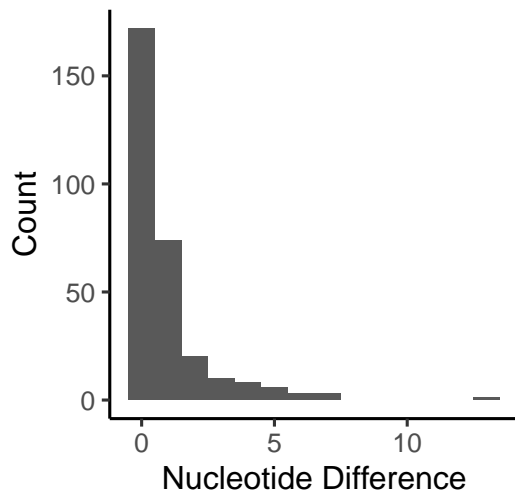
### IGHV7-4-1\*01

14 sequences assigned  
11 (78.6%) exact matches, in which:  
9 unique CDR3  
3 unique J



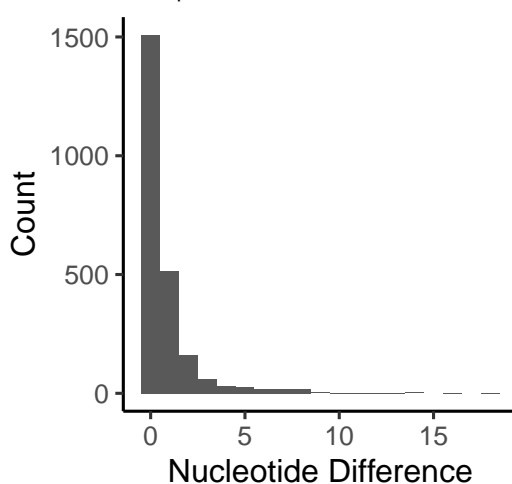
### IGHV4-61\*01

297 sequences assigned  
172 (57.9%) exact matches, in which:  
152 unique CDR3  
5 unique J



### IGHV5-51\*01

2375 sequences assigned  
1508 (63.5%) exact matches, in which:  
1279 unique CDR3  
6 unique J



IGHV3-13\*01\_G290A\_T300C

