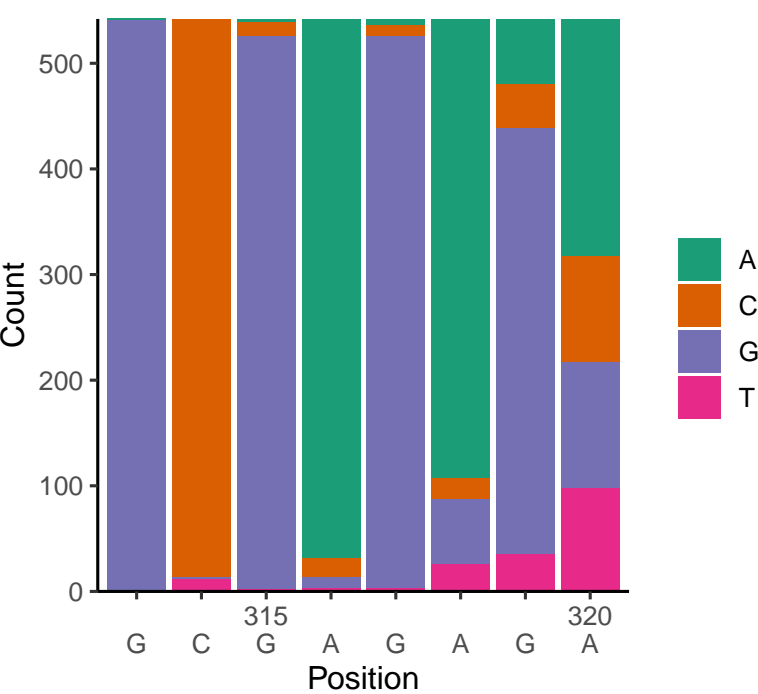
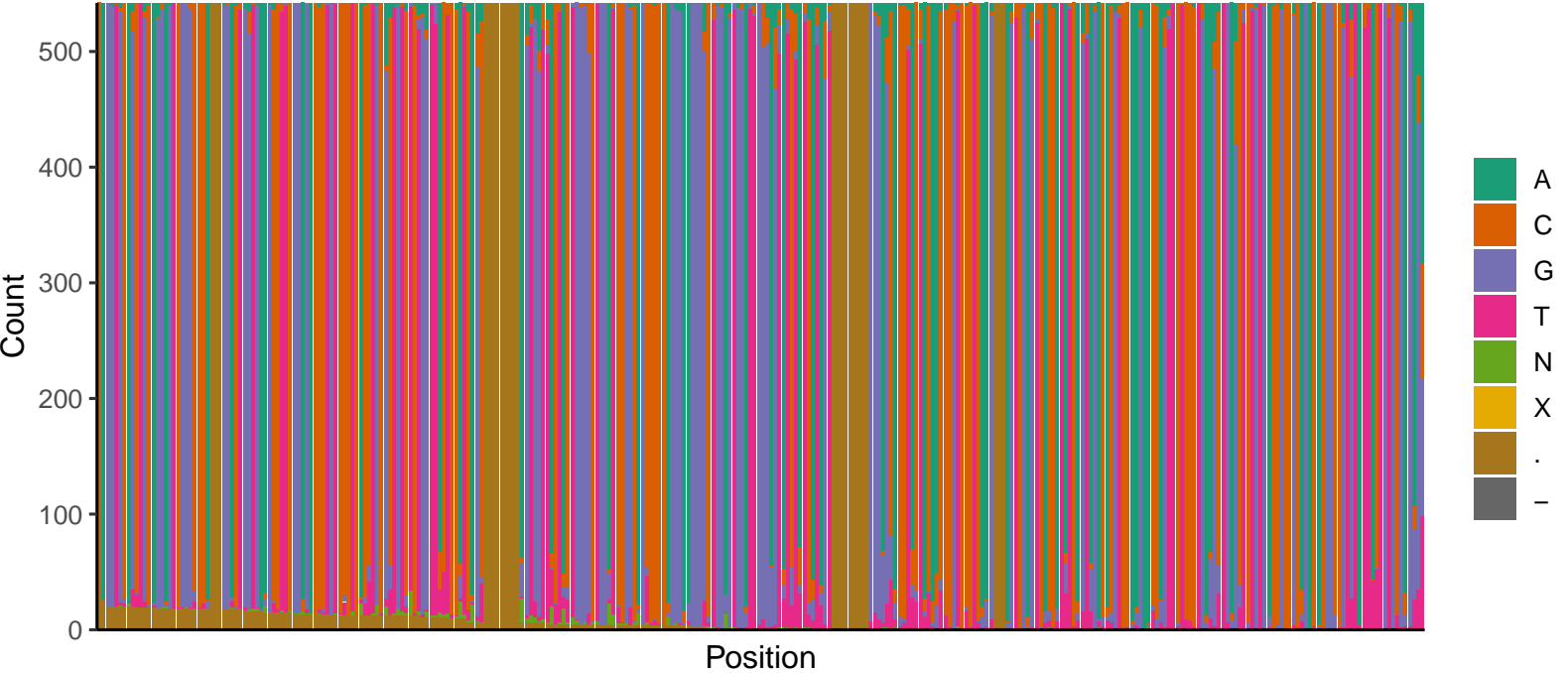


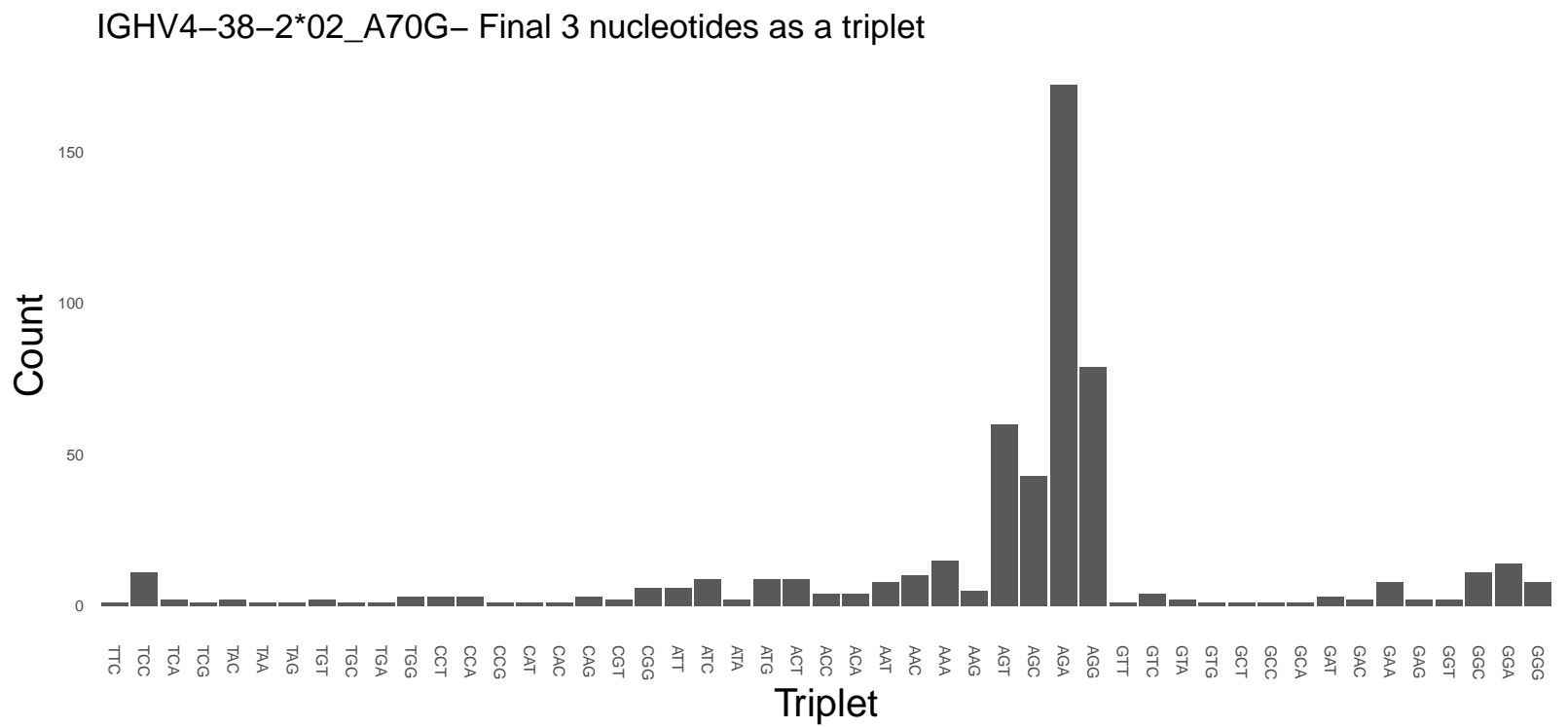
Gene IGHV4-38-2\*02\_A70G



Gene IGHV4-38-2\*02\_A70G

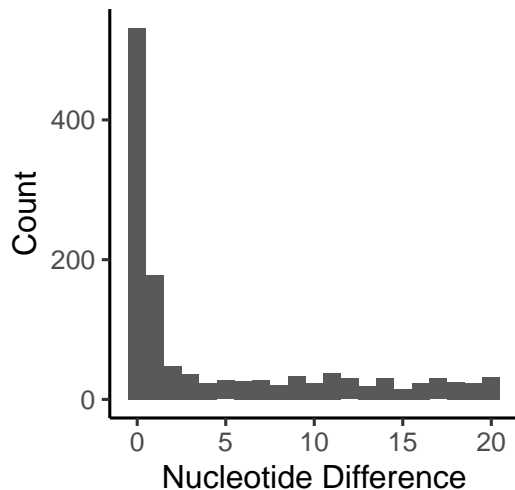


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



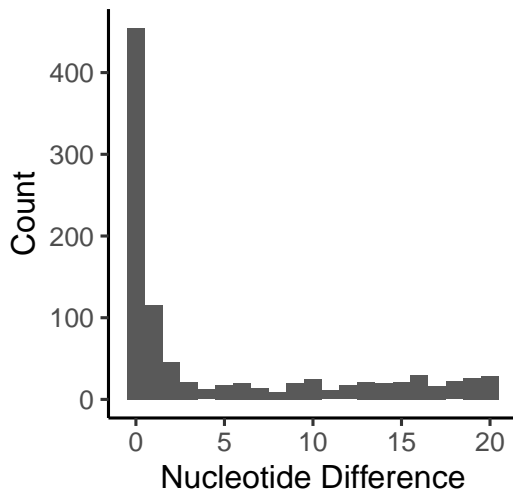
### IGHV1-2\*06

1625 sequences assigned  
532 (32.7%) exact matches, in which:  
522 unique CDR3  
6 unique J



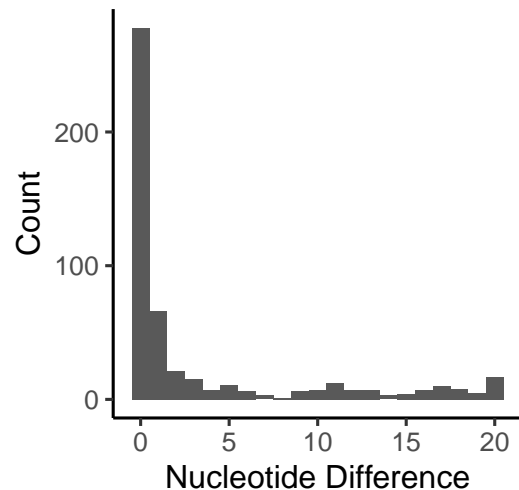
### IGHV1-18\*01

1293 sequences assigned  
455 (35.2%) exact matches, in which:  
450 unique CDR3  
6 unique J



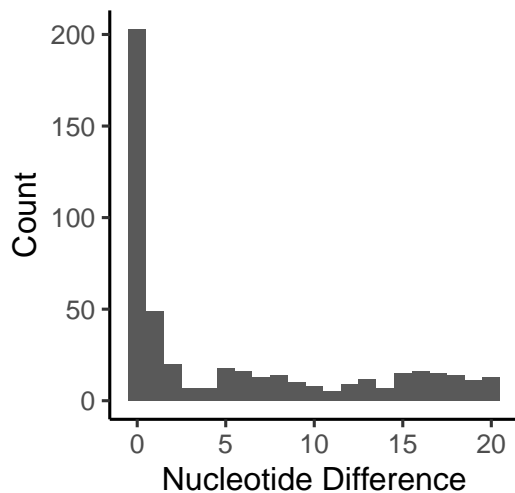
### IGHV1-46\*01

666 sequences assigned  
278 (41.7%) exact matches, in which:  
274 unique CDR3  
6 unique J



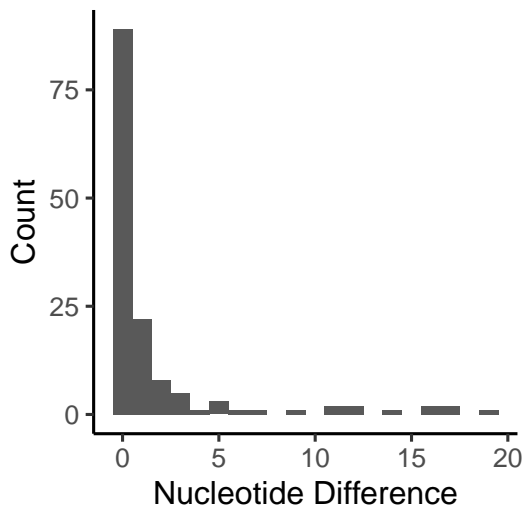
### IGHV1-3\*01

657 sequences assigned  
203 (30.9%) exact matches, in which:  
200 unique CDR3  
6 unique J



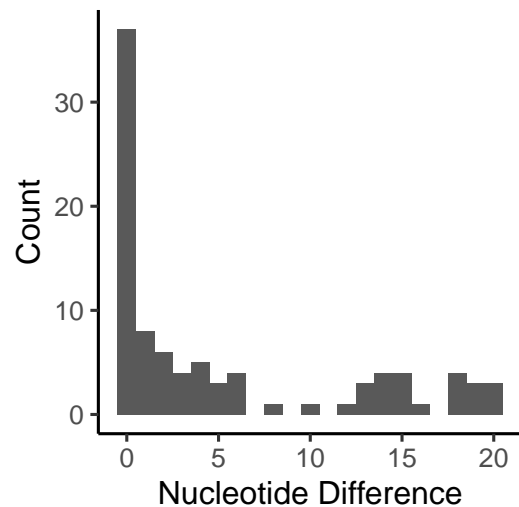
### IGHV1-24\*01

165 sequences assigned  
89 (53.9%) exact matches, in which:  
88 unique CDR3  
6 unique J



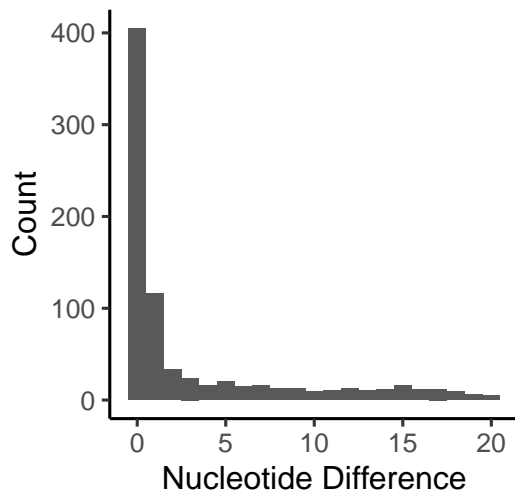
### IGHV1-58\*01

111 sequences assigned  
37 (33.3%) exact matches, in which:  
35 unique CDR3  
4 unique J



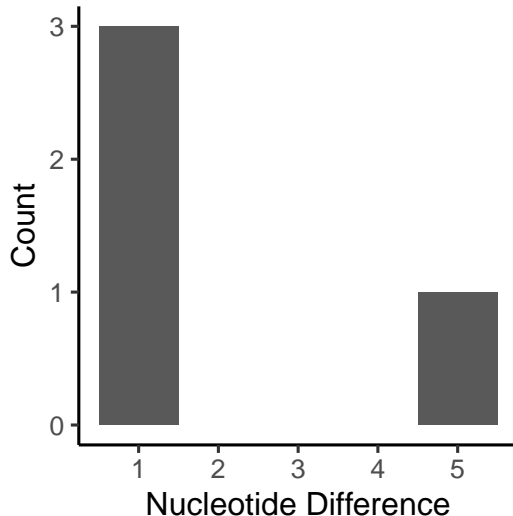
### IGHV1-8\*01

895 sequences assigned  
405 (45.3%) exact matches, in which:  
397 unique CDR3  
6 unique J



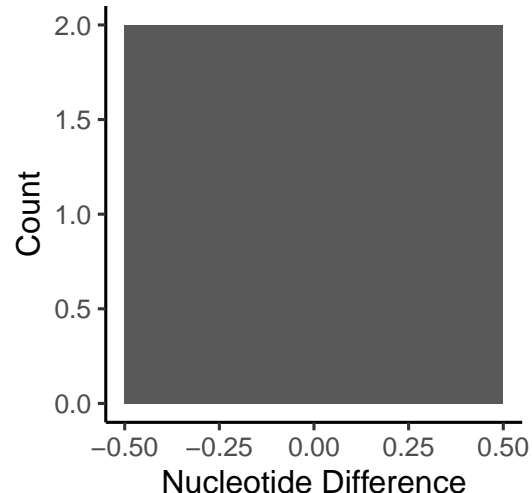
### IGHV1-45\*02

10 sequences assigned  
No exact matches.



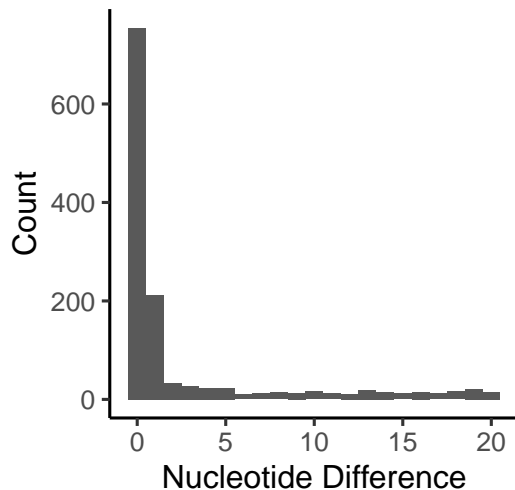
### IGHV1-68\*02

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



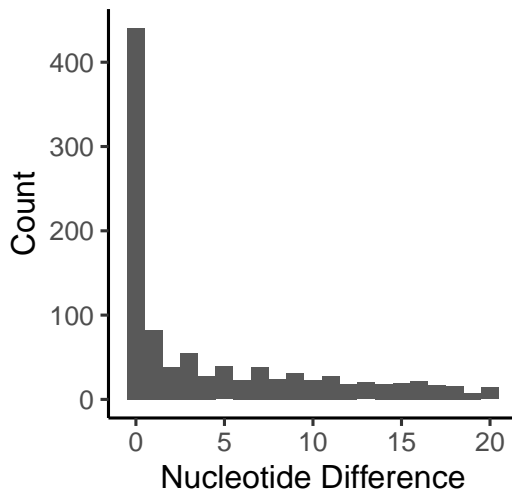
### IGHV1–69\*01

1513 sequences assigned  
755 (49.9%) exact matches, in which:  
738 unique CDR3  
6 unique J



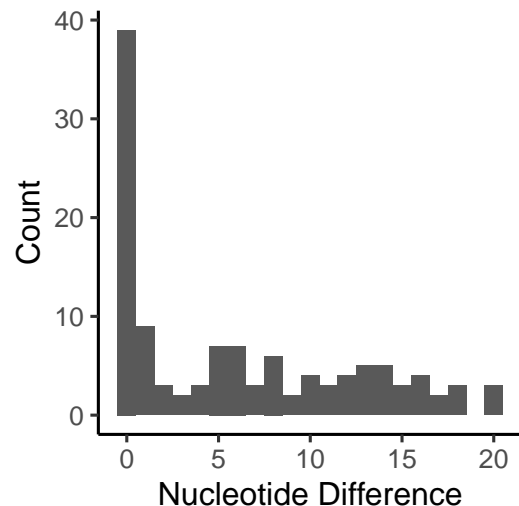
### IGHV2–5\*02

1156 sequences assigned  
441 (38.1%) exact matches, in which:  
435 unique CDR3  
6 unique J



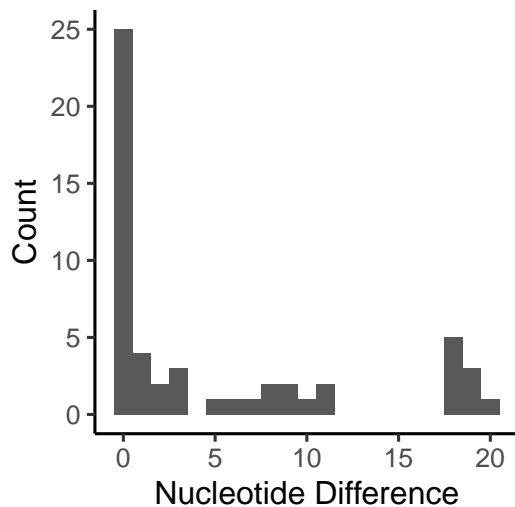
### IGHV2–70\*04

124 sequences assigned  
39 (31.5%) exact matches, in which:  
39 unique CDR3  
4 unique J



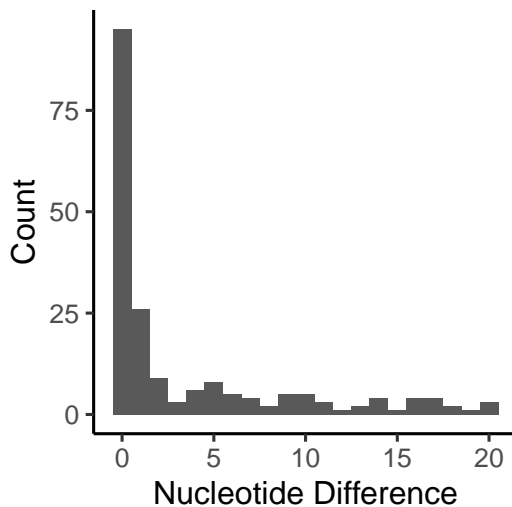
### IGHV1–69–2\*01

81 sequences assigned  
25 (30.9%) exact matches, in which:  
25 unique CDR3  
4 unique J



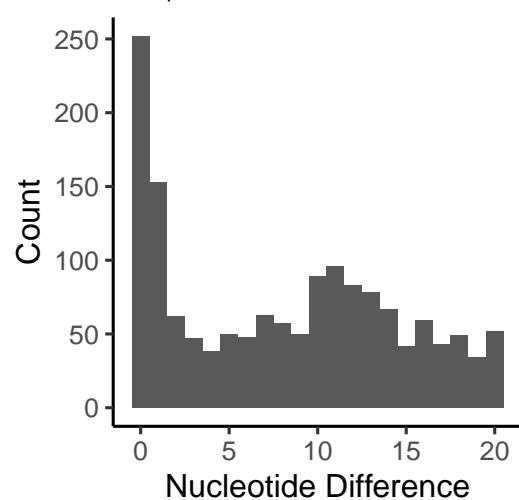
### IGHV2–26\*01

211 sequences assigned  
95 (45%) exact matches, in which:  
95 unique CDR3  
5 unique J



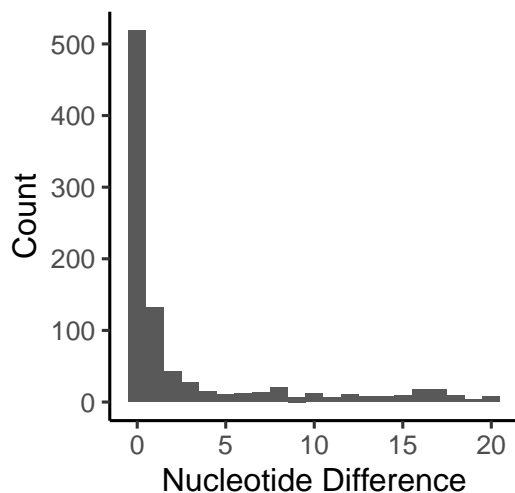
### IGHV3–7\*01

1874 sequences assigned  
252 (13.4%) exact matches, in which:  
242 unique CDR3  
6 unique J



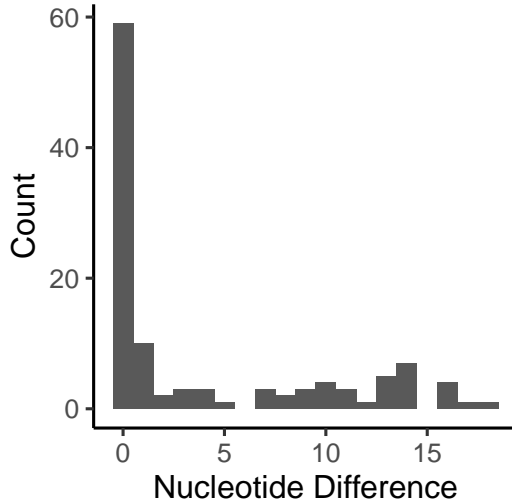
### IGHV1–69\*06

1096 sequences assigned  
519 (47.4%) exact matches, in which:  
515 unique CDR3  
6 unique J



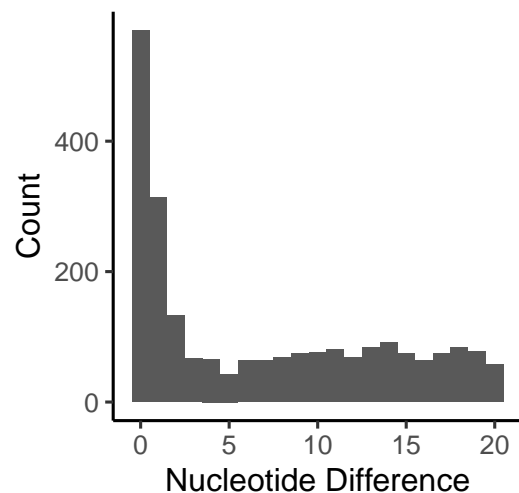
### IGHV2–70\*01

119 sequences assigned  
59 (49.6%) exact matches, in which:  
59 unique CDR3  
5 unique J



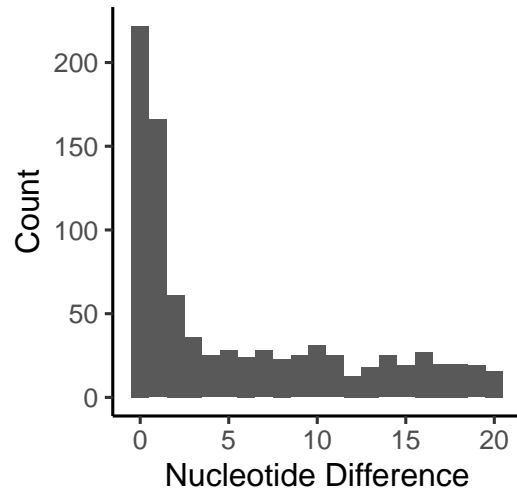
### IGHV3–9\*01

2820 sequences assigned  
570 (20.2%) exact matches, in which:  
554 unique CDR3  
6 unique J



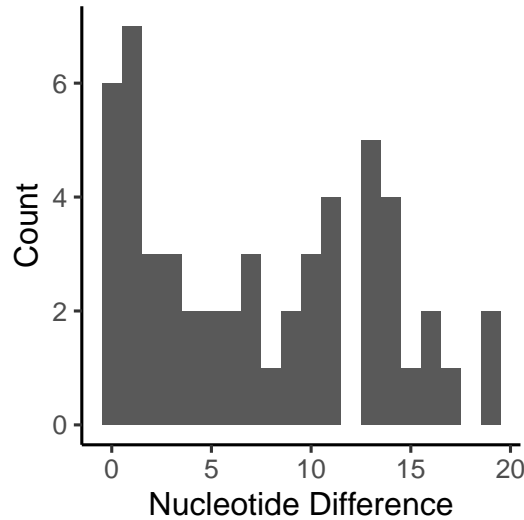
### IGHV3-11\*01

1110 sequences assigned  
222 (20%) exact matches, in which:  
219 unique CDR3  
6 unique J



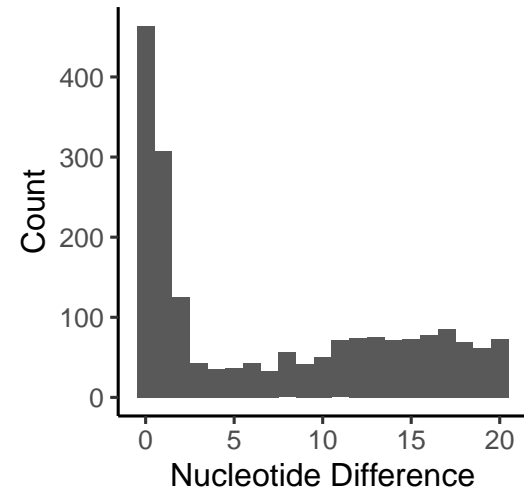
### IGHV3-20\*01

56 sequences assigned  
6 (10.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



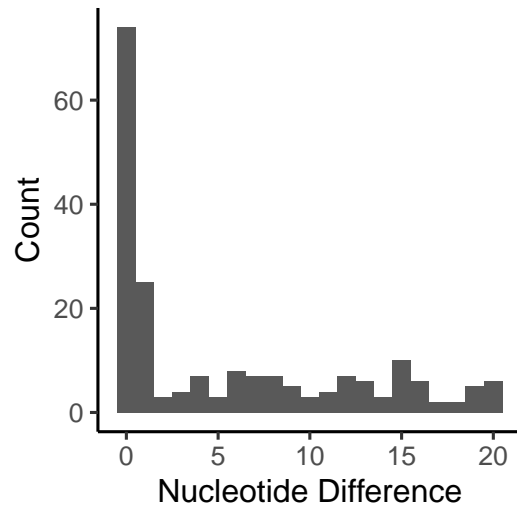
### IGHV3-23\*01

2563 sequences assigned  
464 (18.1%) exact matches, in which:  
452 unique CDR3  
6 unique J



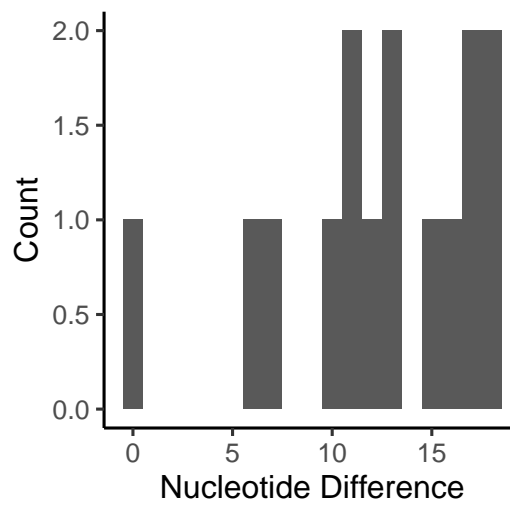
### IGHV3-13\*01

235 sequences assigned  
74 (31.5%) exact matches, in which:  
72 unique CDR3  
4 unique J



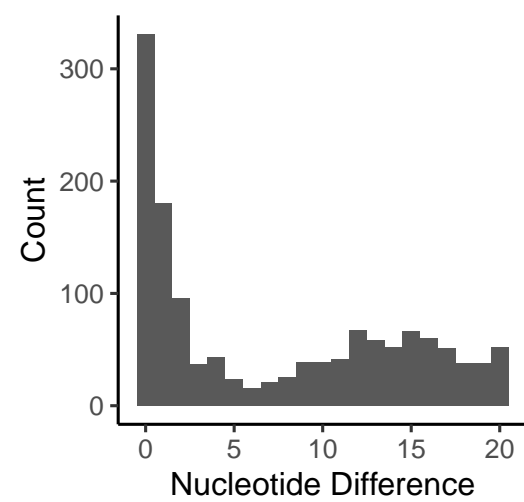
### IGHV3-20\*04

18 sequences assigned  
1 (5.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



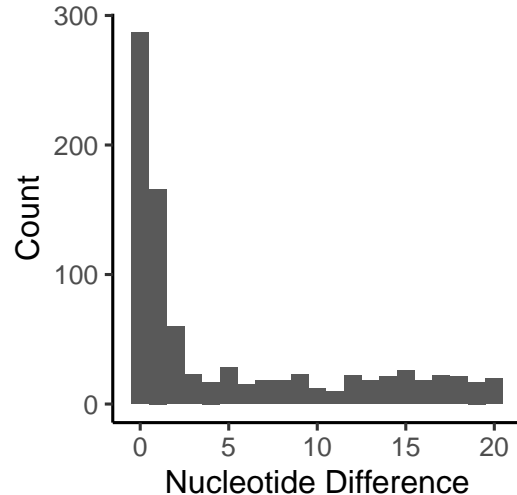
### IGHV3-23\*04

1800 sequences assigned  
331 (18.4%) exact matches, in which:  
325 unique CDR3  
6 unique J



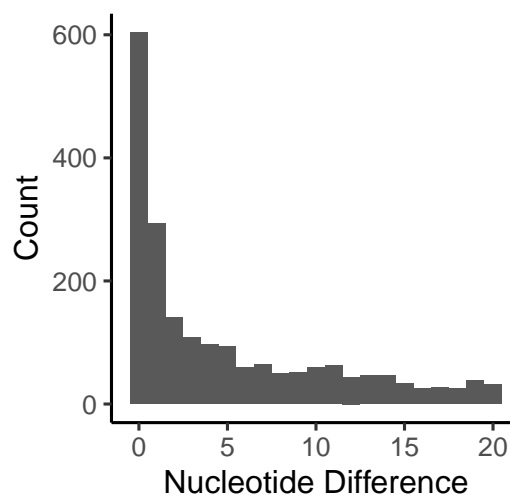
### IGHV3-15\*01

1139 sequences assigned  
287 (25.2%) exact matches, in which:  
280 unique CDR3  
6 unique J



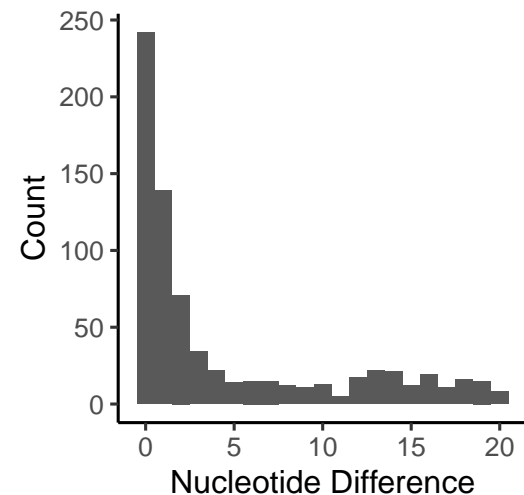
### IGHV3-21\*01

2493 sequences assigned  
604 (24.2%) exact matches, in which:  
589 unique CDR3  
6 unique J



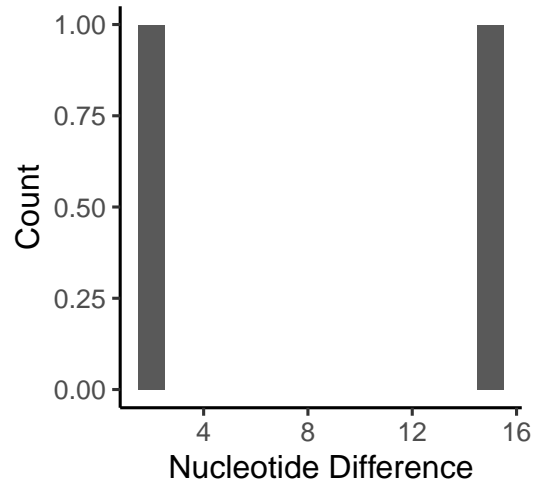
### IGHV3-30\*01

962 sequences assigned  
242 (25.2%) exact matches, in which:  
235 unique CDR3  
6 unique J



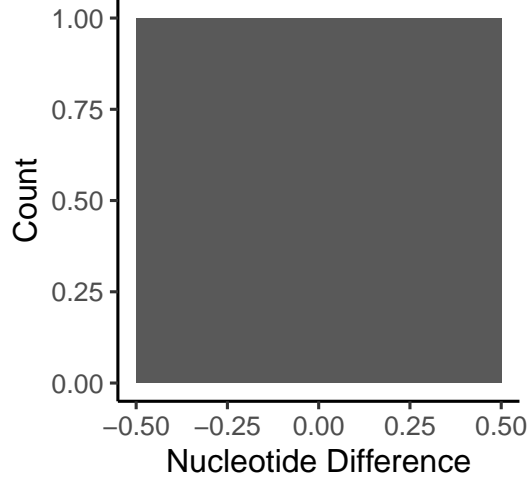
### IGHV3-30-3\*01

7 sequences assigned  
No exact matches.



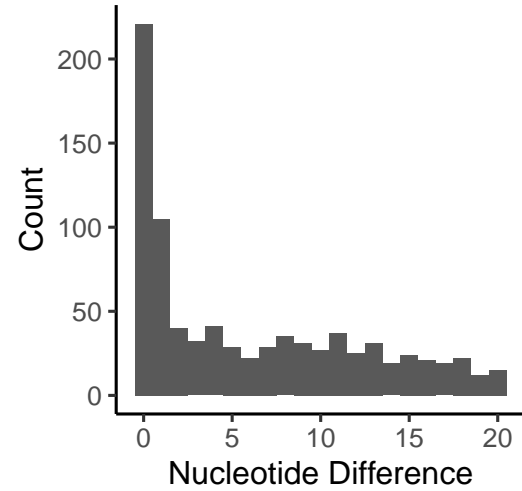
### IGHV3-35\*01

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



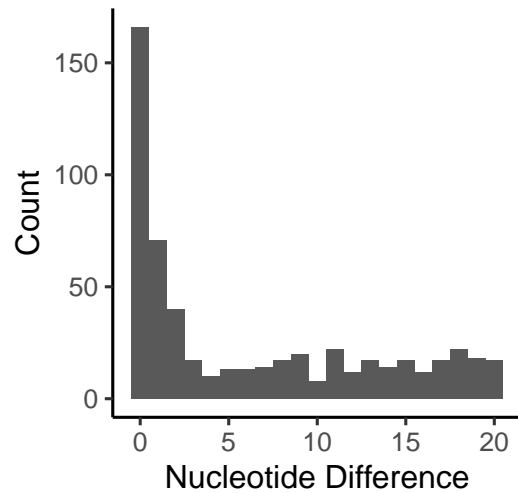
### IGHV3-48\*03

999 sequences assigned  
221 (22.1%) exact matches, in which:  
212 unique CDR3  
6 unique J



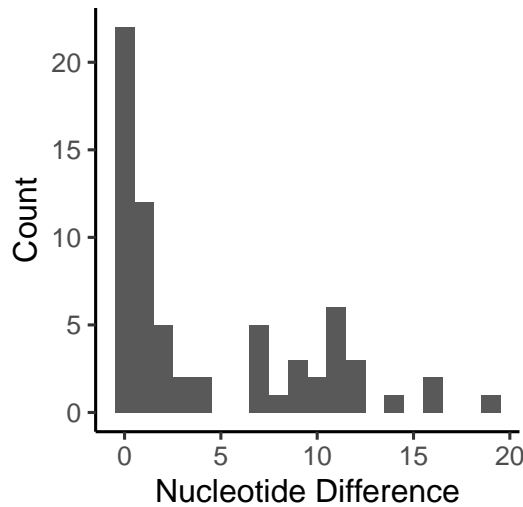
### IGHV3-30\*18

781 sequences assigned  
166 (21.3%) exact matches, in which:  
163 unique CDR3  
6 unique J



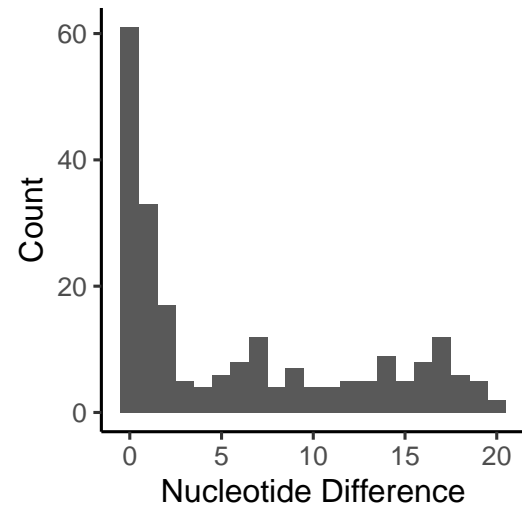
### IGHV3-43\*01

80 sequences assigned  
22 (27.5%) exact matches, in which:  
19 unique CDR3  
3 unique J



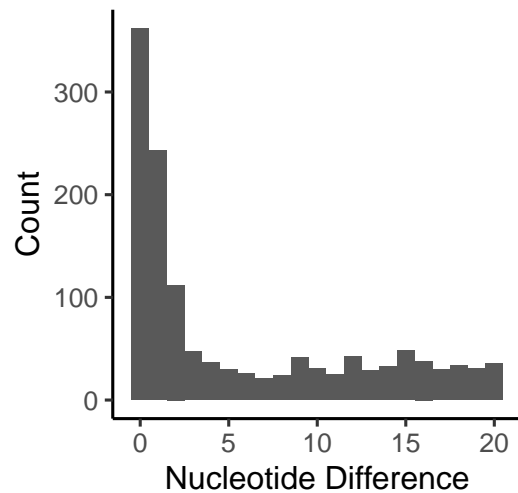
### IGHV3-49\*04

287 sequences assigned  
61 (21.3%) exact matches, in which:  
59 unique CDR3  
5 unique J



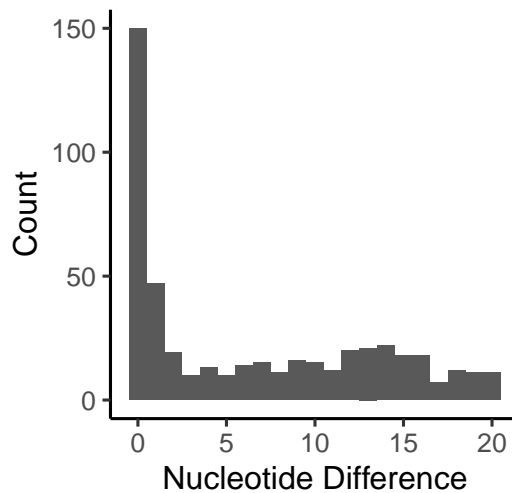
### IGHV3-33\*01

1597 sequences assigned  
362 (22.7%) exact matches, in which:  
357 unique CDR3  
6 unique J



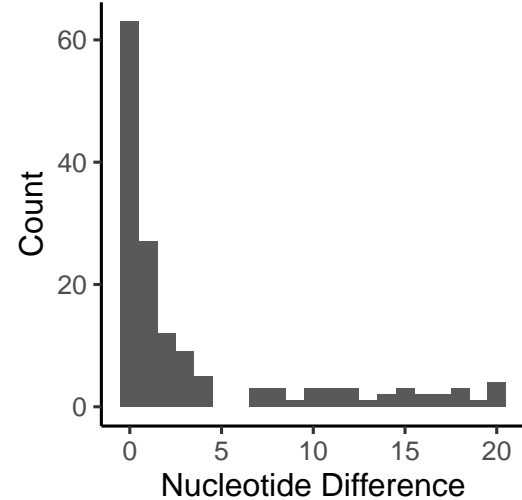
### IGHV3-48\*02

579 sequences assigned  
150 (25.9%) exact matches, in which:  
147 unique CDR3  
6 unique J



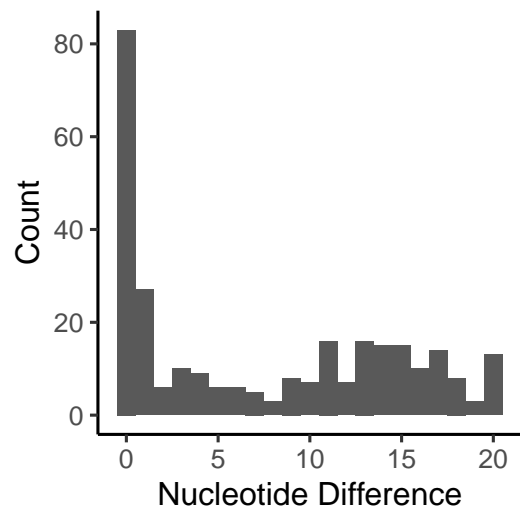
### IGHV3-49\*05

185 sequences assigned  
63 (34.1%) exact matches, in which:  
60 unique CDR3  
4 unique J



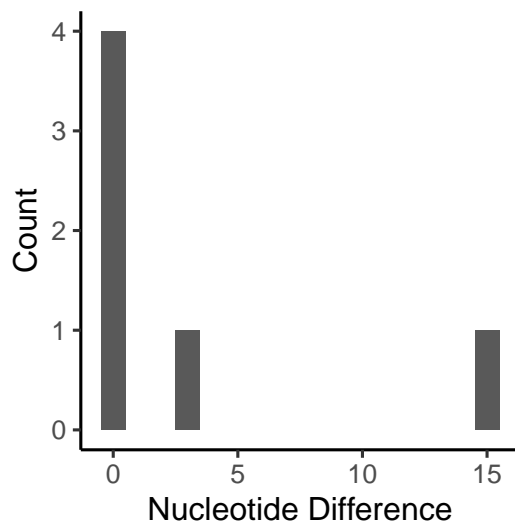
### IGHV3-53\*01

379 sequences assigned  
83 (21.9%) exact matches, in which:  
81 unique CDR3  
6 unique J



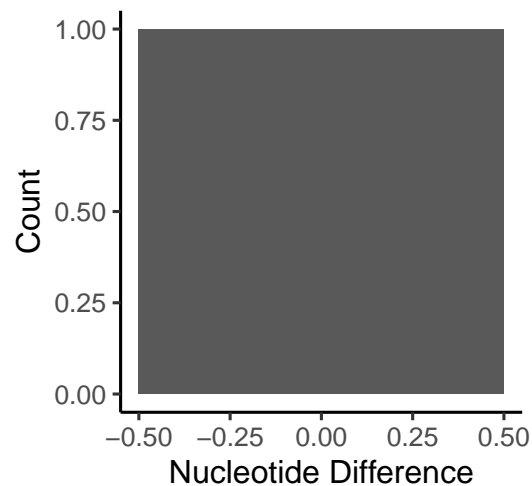
### IGHV3-64\*02

6 sequences assigned  
4 (66.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



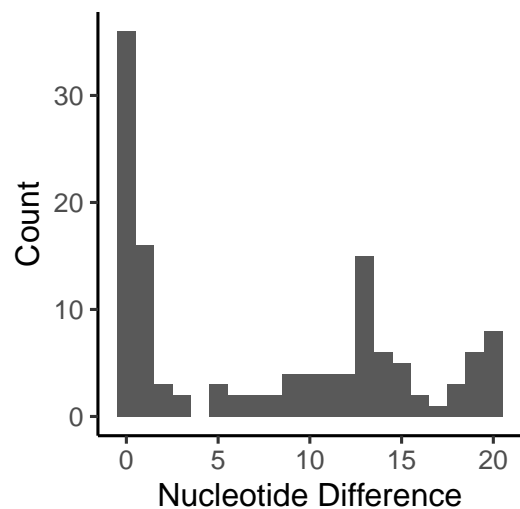
### IGHV3-69-1\*01

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



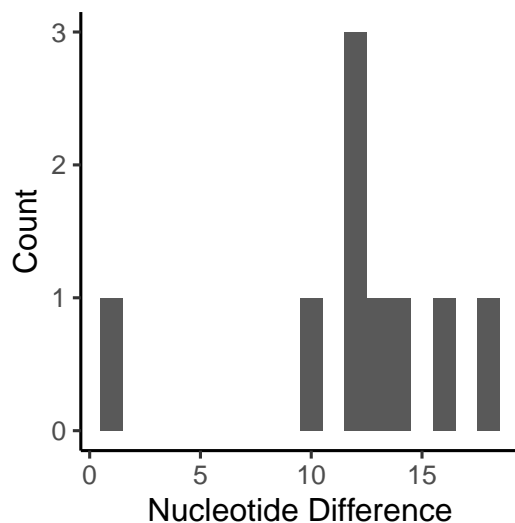
### IGHV3-53\*02

181 sequences assigned  
36 (19.9%) exact matches, in which:  
34 unique CDR3  
6 unique J



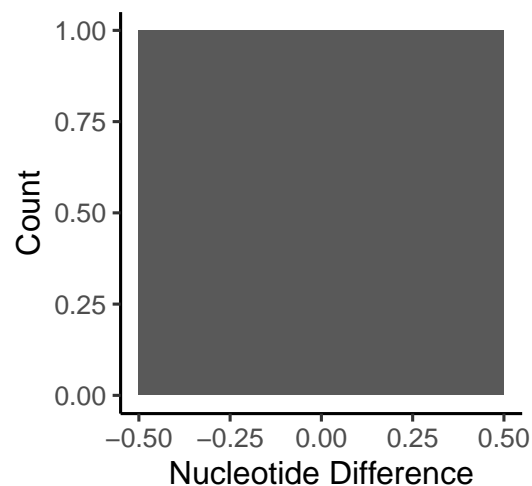
### IGHV3-66\*03

9 sequences assigned  
No exact matches.



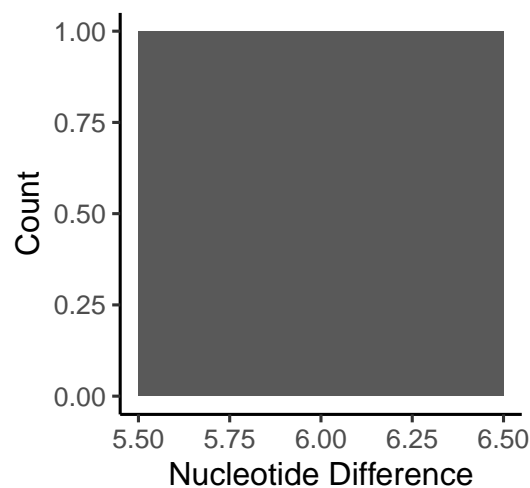
### IGHV3-71\*03

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



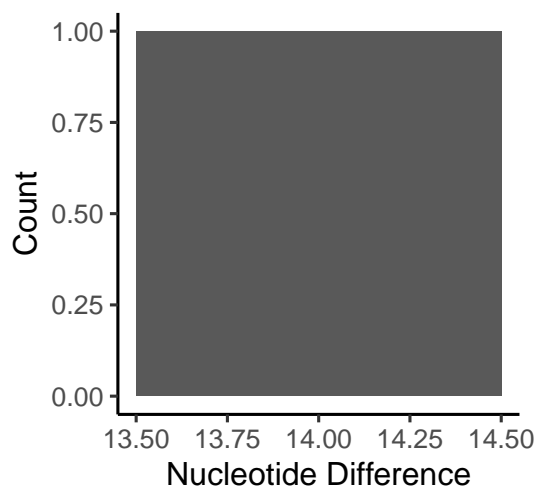
### IGHV3-62\*04

1 sequences assigned  
No exact matches.



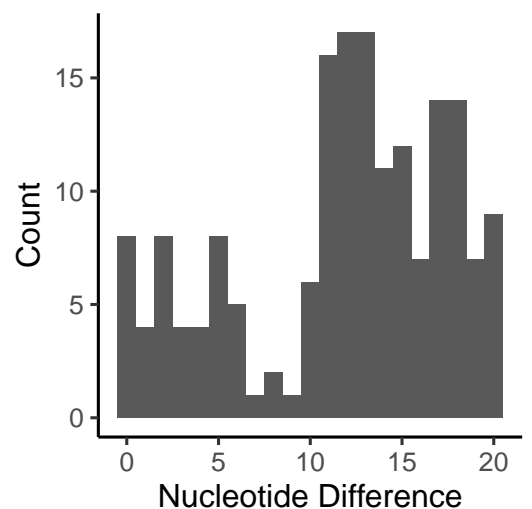
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



### IGHV3-72\*01

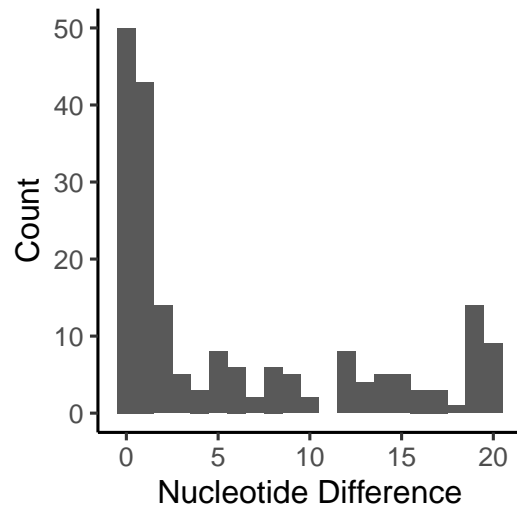
245 sequences assigned  
8 (3.3%) exact matches, in which:  
8 unique CDR3  
4 unique J





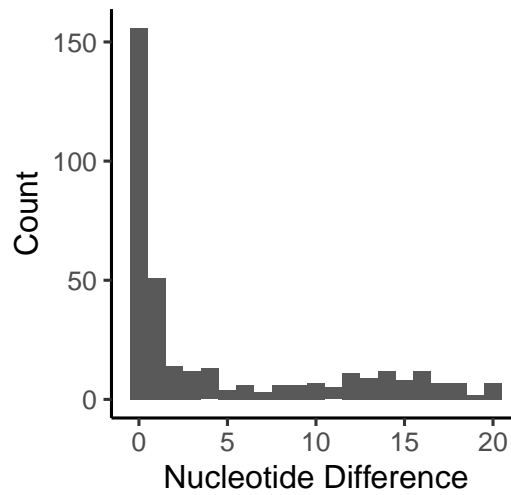
### IGHV3-73\*02

235 sequences assigned  
50 (21.3%) exact matches, in which:  
49 unique CDR3  
5 unique J



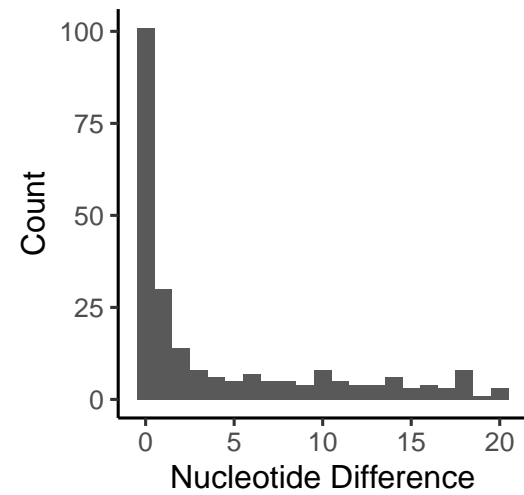
### IGHV4-4\*02

454 sequences assigned  
156 (34.4%) exact matches, in which:  
153 unique CDR3  
6 unique J



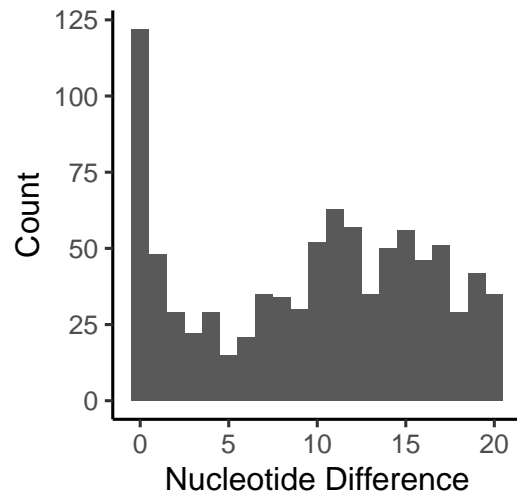
### IGHV4-31\*03

290 sequences assigned  
101 (34.8%) exact matches, in which:  
101 unique CDR3  
5 unique J



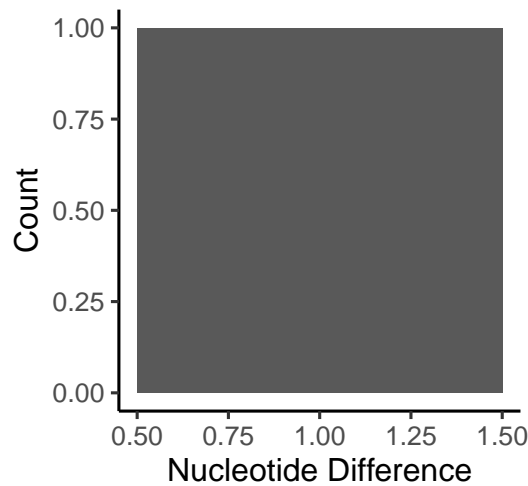
### IGHV3-74\*01

1248 sequences assigned  
122 (9.8%) exact matches, in which:  
119 unique CDR3  
6 unique J



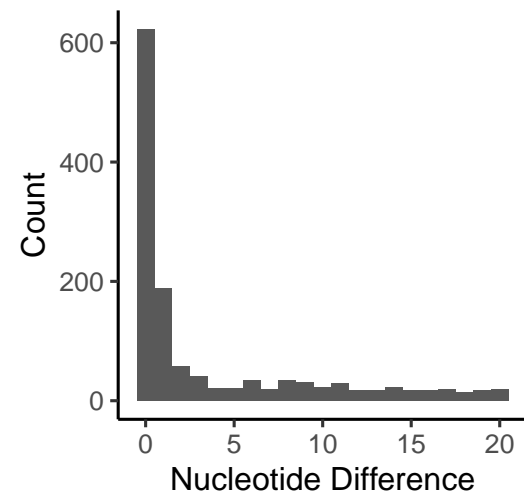
### IGHV4-28\*01

1 sequences assigned  
No exact matches.



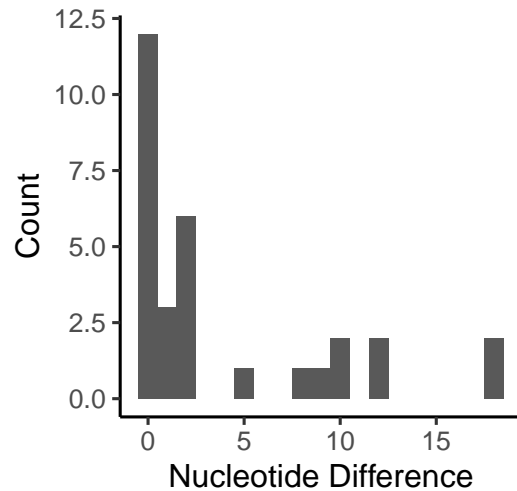
### IGHV4-34\*01

1465 sequences assigned  
623 (42.5%) exact matches, in which:  
610 unique CDR3  
6 unique J



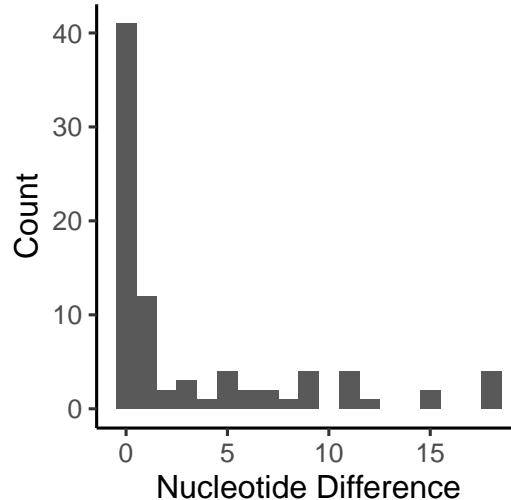
### IGHV3-43D\*04

31 sequences assigned  
12 (38.7%) exact matches, in which:  
11 unique CDR3  
3 unique J



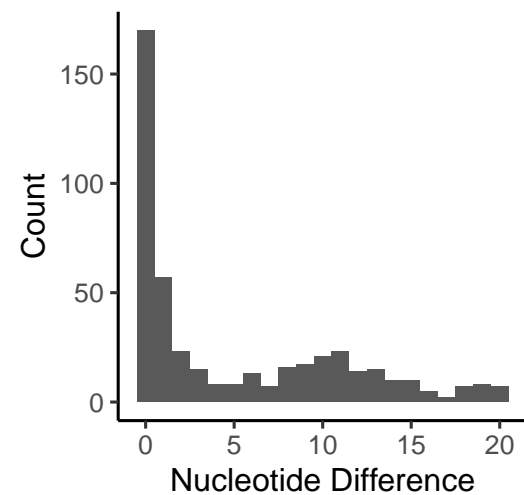
### IGHV4-31\*01

89 sequences assigned  
41 (46.1%) exact matches, in which:  
41 unique CDR3  
5 unique J



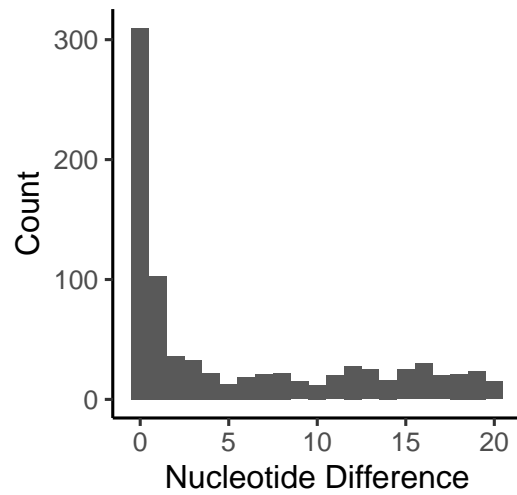
### IGHV4-38-2\*02\_A70G

542 sequences assigned  
170 (31.4%) exact matches, in which:  
166 unique CDR3  
6 unique J



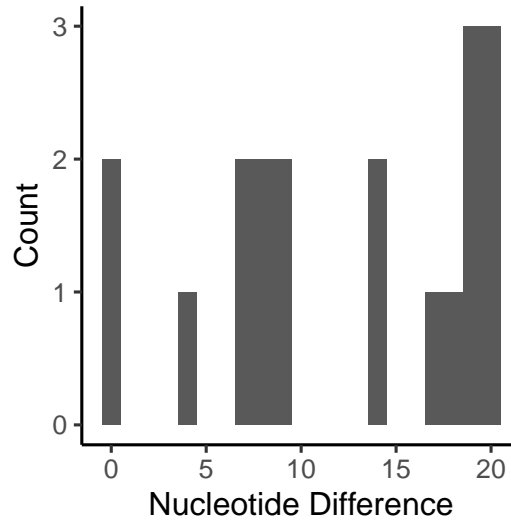
### IGHV4-39\*01

1110 sequences assigned  
310 (27.9%) exact matches, in which:  
304 unique CDR3  
5 unique J



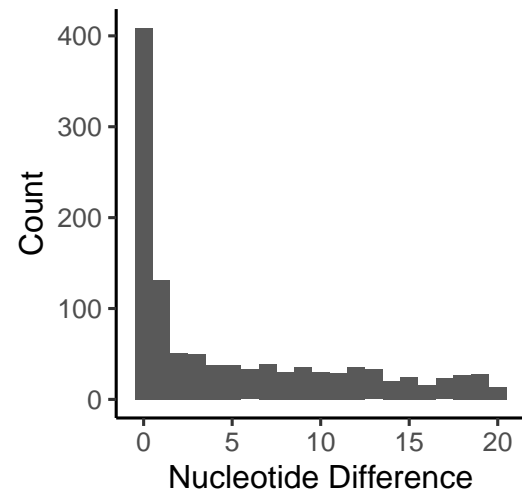
### IGHV4-61\*08

46 sequences assigned  
2 (4.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



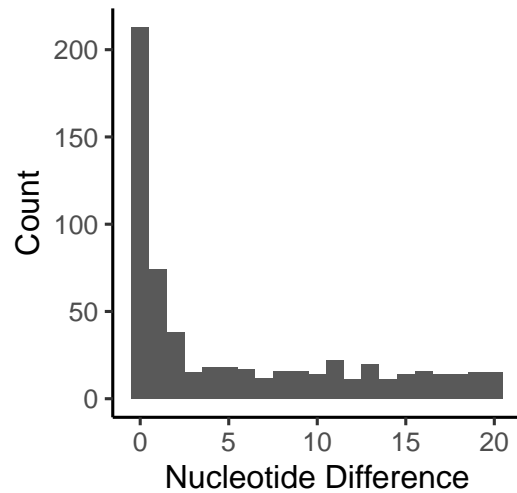
### IGHV5-51\*01

1297 sequences assigned  
409 (31.5%) exact matches, in which:  
399 unique CDR3  
6 unique J



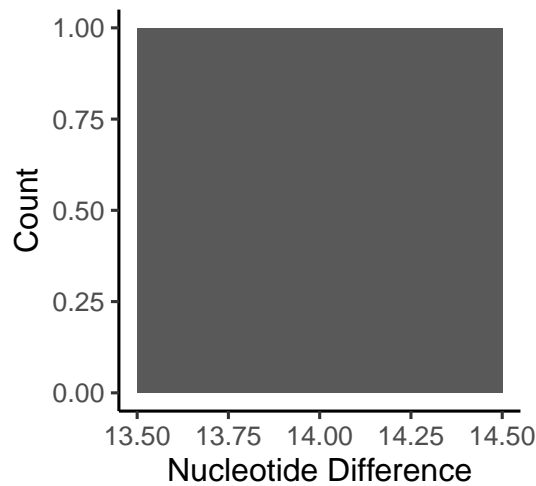
### IGHV4-59\*01

740 sequences assigned  
213 (28.8%) exact matches, in which:  
206 unique CDR3  
6 unique J



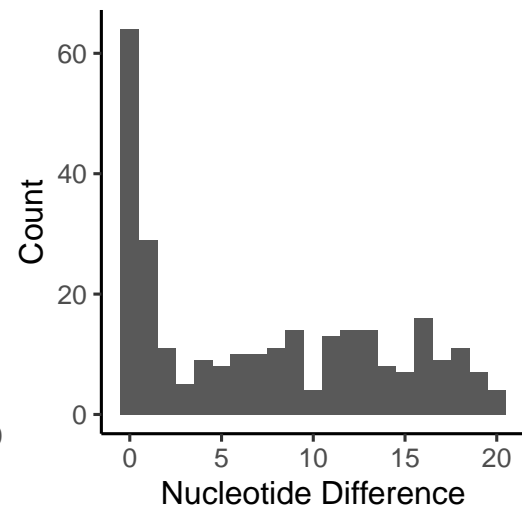
### IGHV1/OR15-1\*04

3 sequences assigned  
No exact matches.



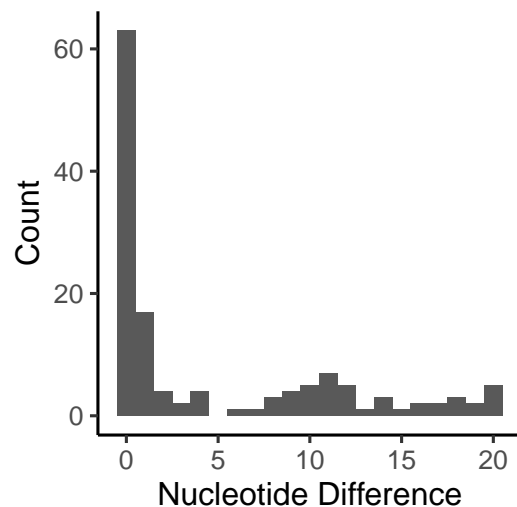
### IGHV6-1\*01

314 sequences assigned  
64 (20.4%) exact matches, in which:  
63 unique CDR3  
5 unique J



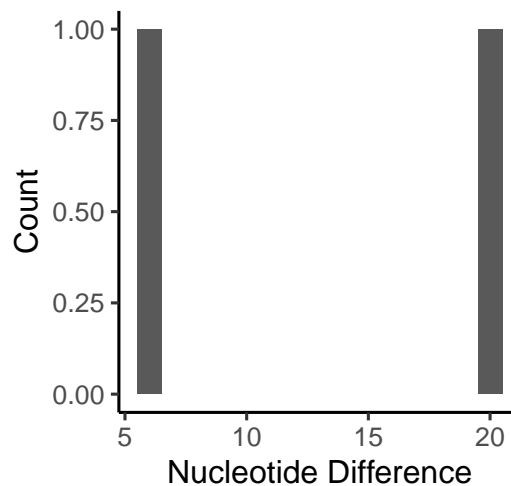
### IGHV4-61\*01

187 sequences assigned  
63 (33.7%) exact matches, in which:  
63 unique CDR3  
5 unique J



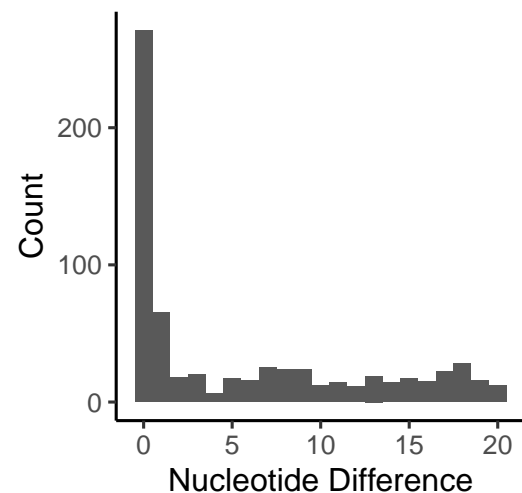
### IGHV4/OR15-8\*02

3 sequences assigned  
No exact matches.



### IGHV7-4-1\*02

815 sequences assigned  
271 (33.3%) exact matches, in which:  
266 unique CDR3  
6 unique J



IGHV4-38-2\*02\_A70G

