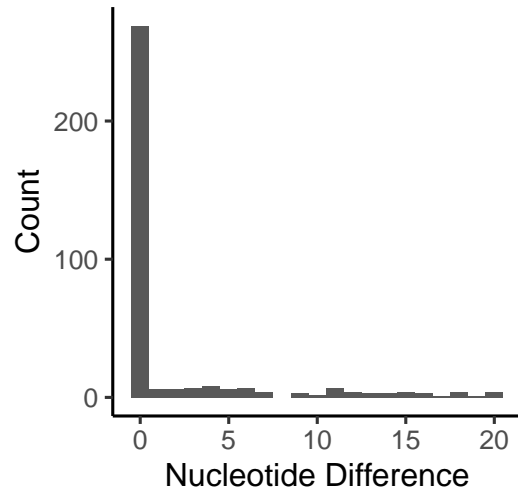


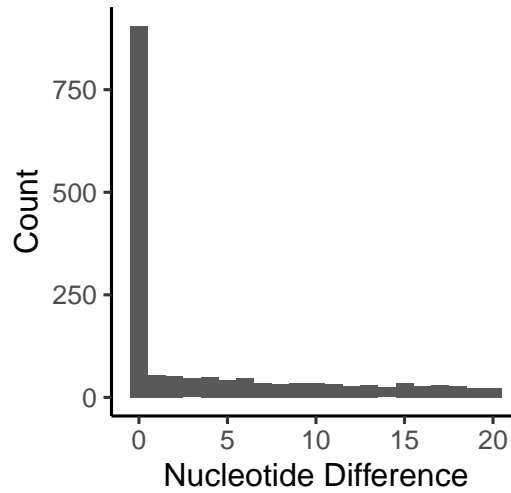
### IGHV1-2\*04

376 sequences assigned  
269 (71.5%) exact matches, in which:  
268 unique CDR3  
5 unique J



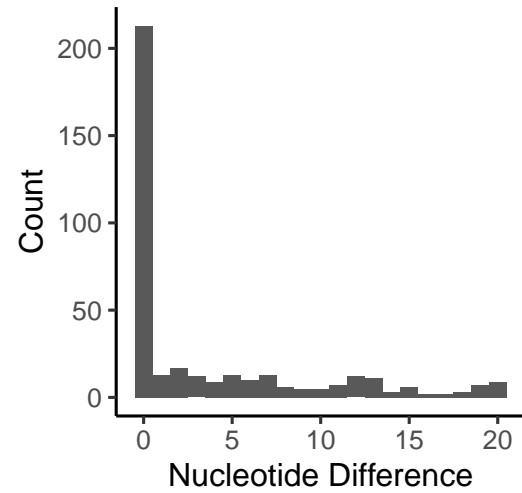
### IGHV1-18\*04

1971 sequences assigned  
906 (46%) exact matches, in which:  
899 unique CDR3  
6 unique J



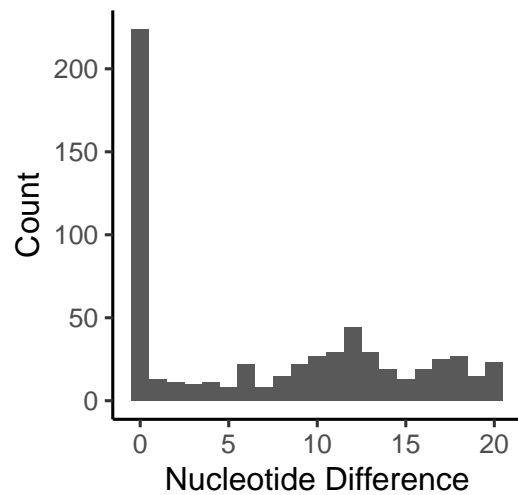
### IGHV1-46\*01

462 sequences assigned  
213 (46.1%) exact matches, in which:  
213 unique CDR3  
6 unique J



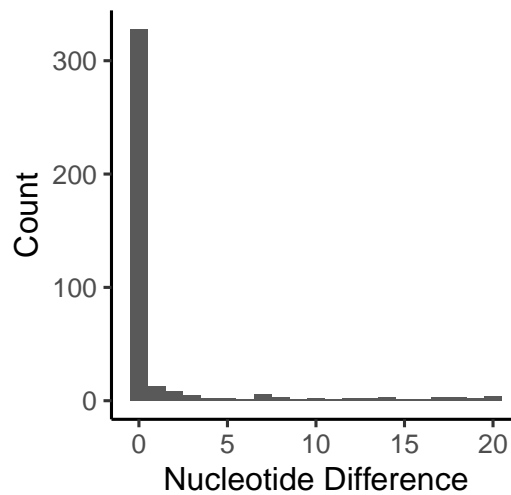
### IGHV1-3\*01\_05

715 sequences assigned  
224 (31.3%) exact matches, in which:  
224 unique CDR3  
6 unique J



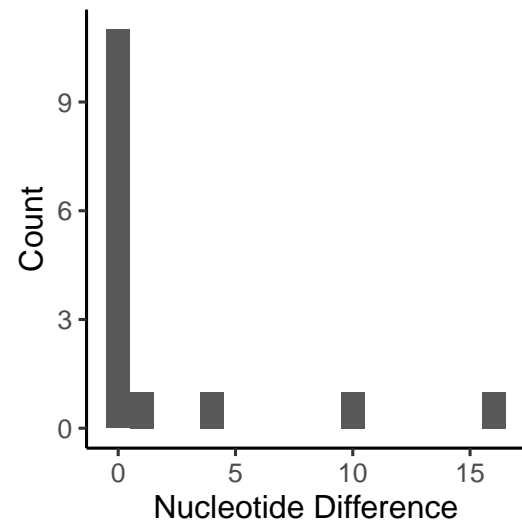
### IGHV1-24\*01

404 sequences assigned  
328 (81.2%) exact matches, in which:  
324 unique CDR3  
6 unique J



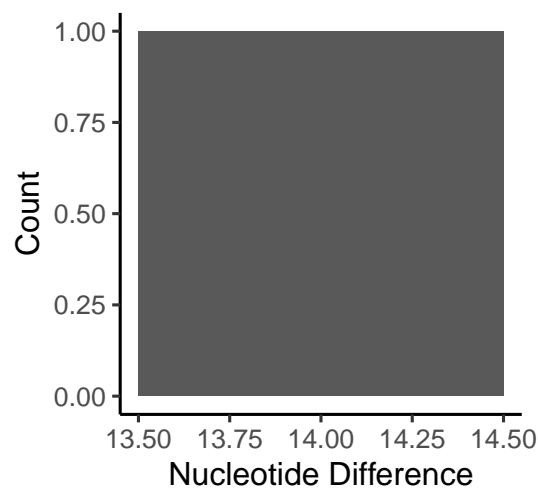
### IGHV1-58\*02

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



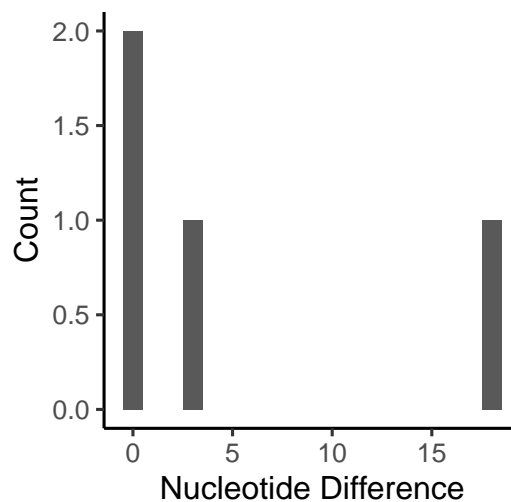
### IGHV1-8\*01

1 sequences assigned  
No exact matches.



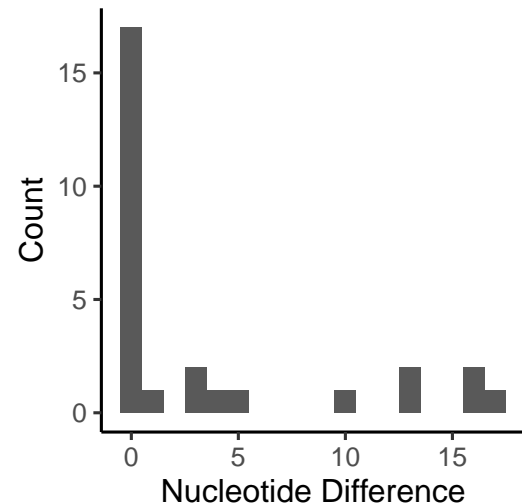
### IGHV1-45\*02

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



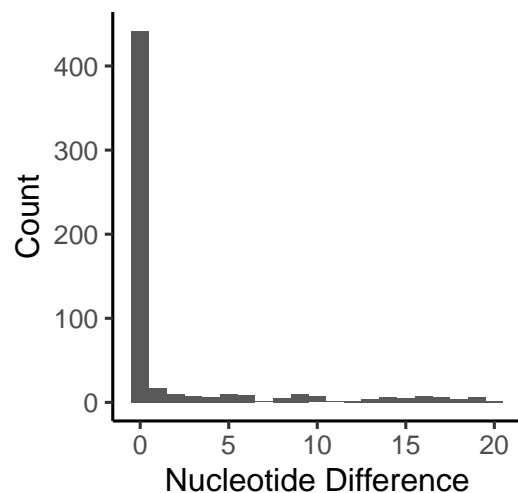
### IGHV1-58\*01\_03

31 sequences assigned  
17 (54.8%) exact matches, in which:  
17 unique CDR3  
4 unique J



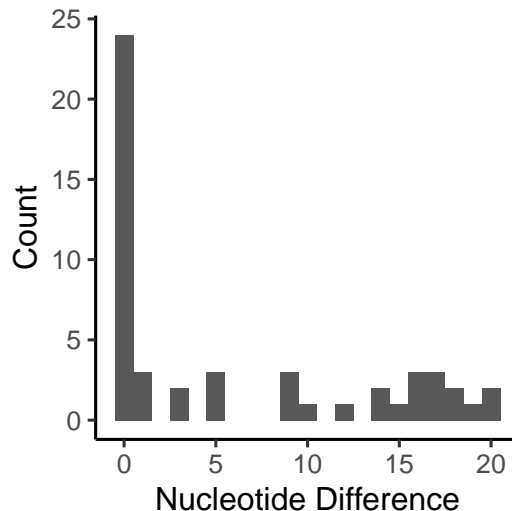
### IGHV1-69\*01\_12\_13

607 sequences assigned  
442 (72.8%) exact matches, in which:  
441 unique CDR3  
6 unique J



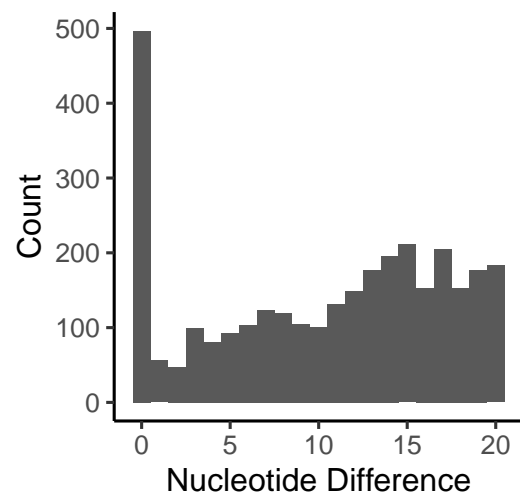
### IGHV2-26\*01

52 sequences assigned  
24 (46.2%) exact matches, in which:  
24 unique CDR3  
5 unique J



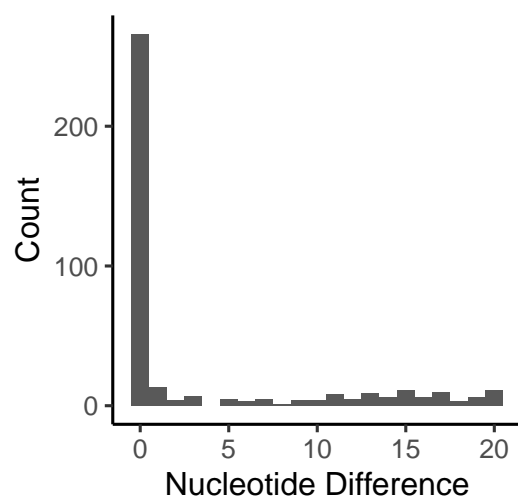
### IGHV3-7\*03

4283 sequences assigned  
497 (11.6%) exact matches, in which:  
488 unique CDR3  
6 unique J



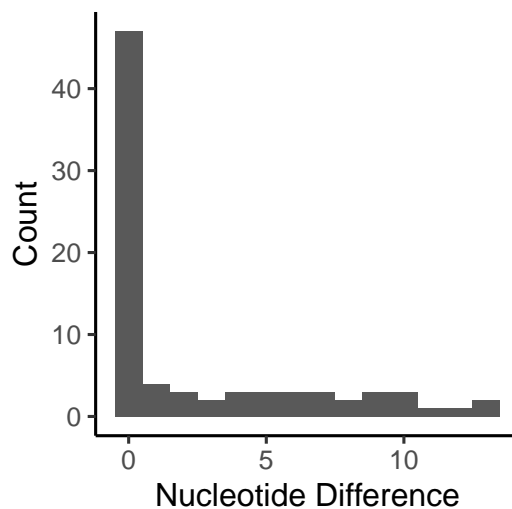
### IGHV1-69\*04\_09

463 sequences assigned  
266 (57.5%) exact matches, in which:  
265 unique CDR3  
6 unique J



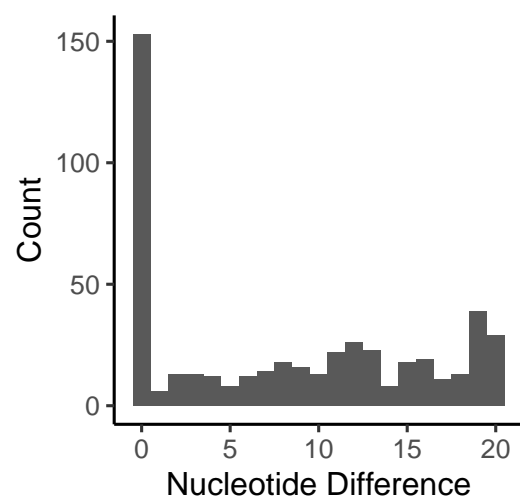
### IGHV2-70\*01

85 sequences assigned  
47 (55.3%) exact matches, in which:  
46 unique CDR3  
6 unique J



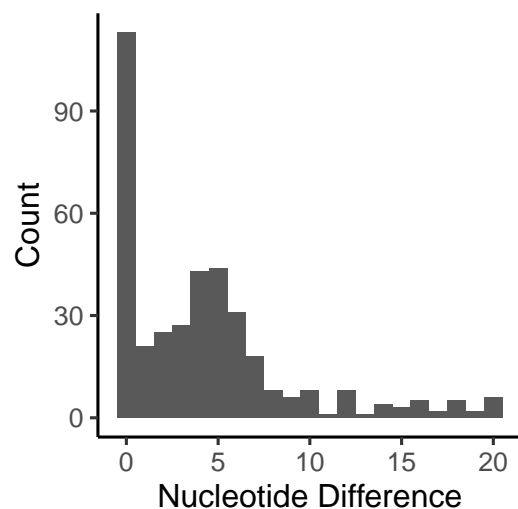
### IGHV3-11\*06

664 sequences assigned  
153 (23%) exact matches, in which:  
148 unique CDR3  
6 unique J



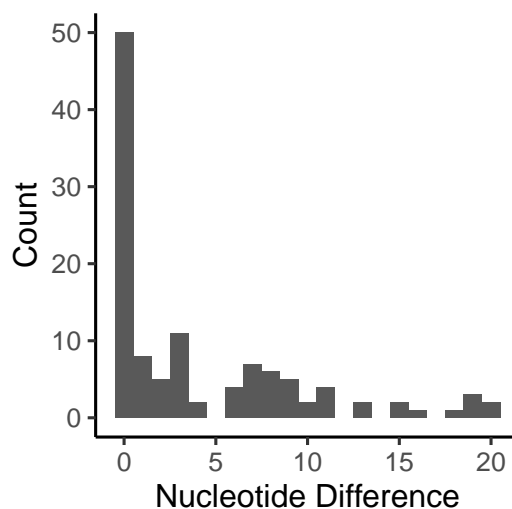
### IGHV2-5\*02

397 sequences assigned  
113 (28.5%) exact matches, in which:  
111 unique CDR3  
6 unique J



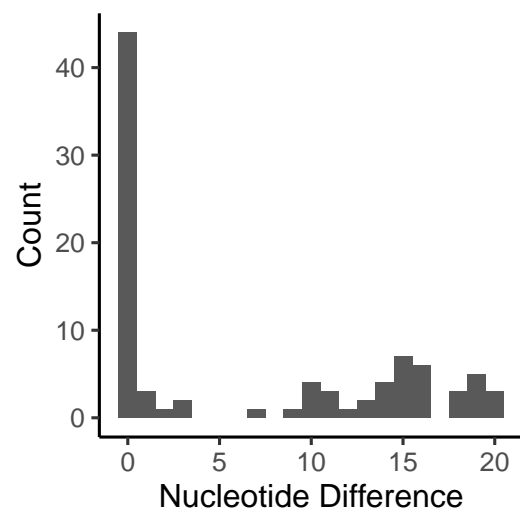
### IGHV2-70\*11\_15

123 sequences assigned  
50 (40.7%) exact matches, in which:  
49 unique CDR3  
5 unique J



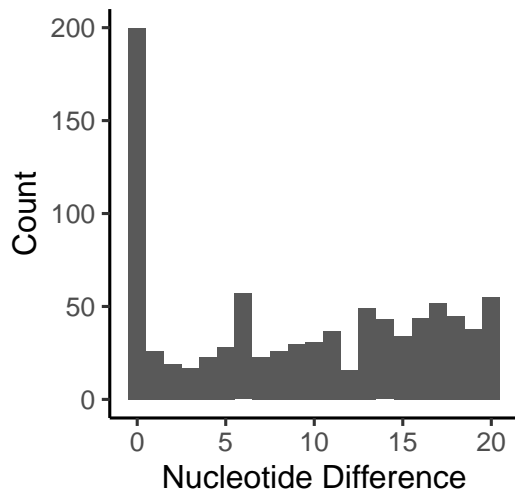
### IGHV3-13\*05

111 sequences assigned  
44 (39.6%) exact matches, in which:  
42 unique CDR3  
5 unique J



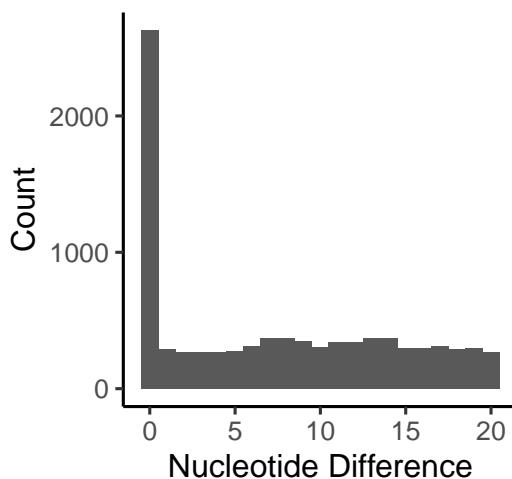
### IGHV3-15\*01\_02

1270 sequences assigned  
200 (15.7%) exact matches, in which:  
193 unique CDR3  
6 unique J



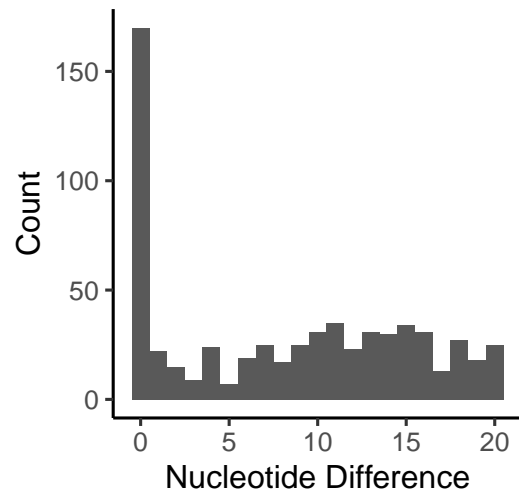
### IGHV3-23\*01\_04

11192 sequences assigned  
2627 (23.5%) exact matches, in which:  
2567 unique CDR3  
6 unique J



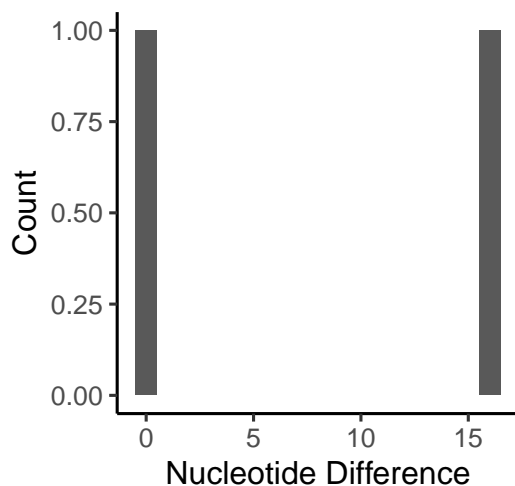
### IGHV3-33\*01

788 sequences assigned  
170 (21.6%) exact matches, in which:  
164 unique CDR3  
6 unique J



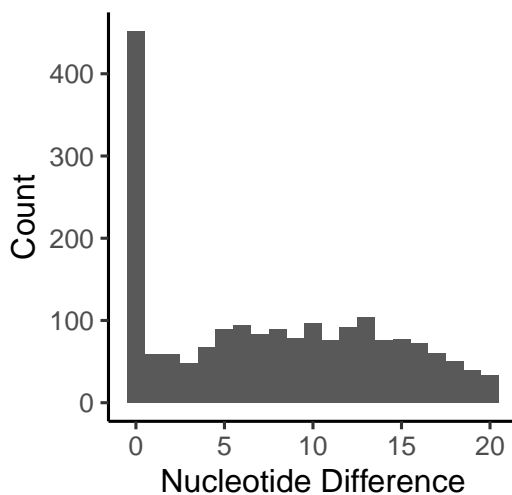
### IGHV3-20\*01\_02

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



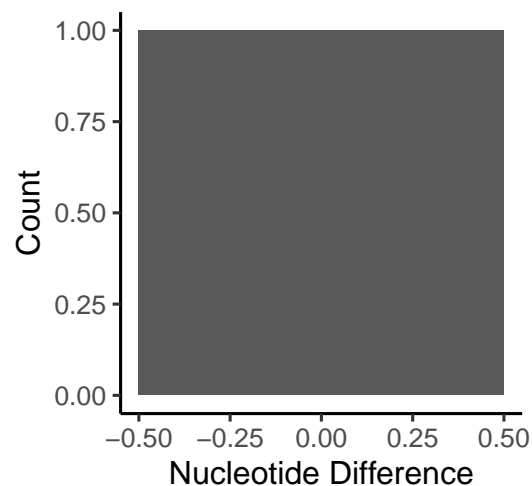
### IGHV3-30-3\*01

2087 sequences assigned  
452 (21.7%) exact matches, in which:  
446 unique CDR3  
6 unique J



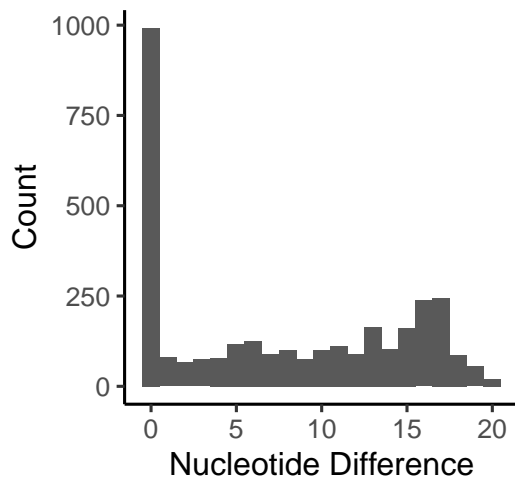
### IGHV3-38-3\*01

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



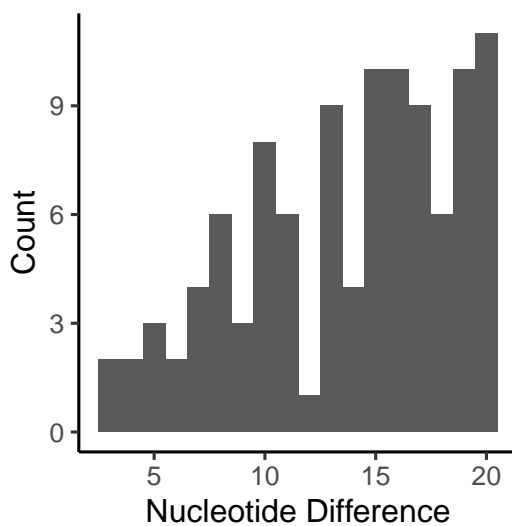
### IGHV3-21\*01\_02

3354 sequences assigned  
992 (29.6%) exact matches, in which:  
945 unique CDR3  
6 unique J



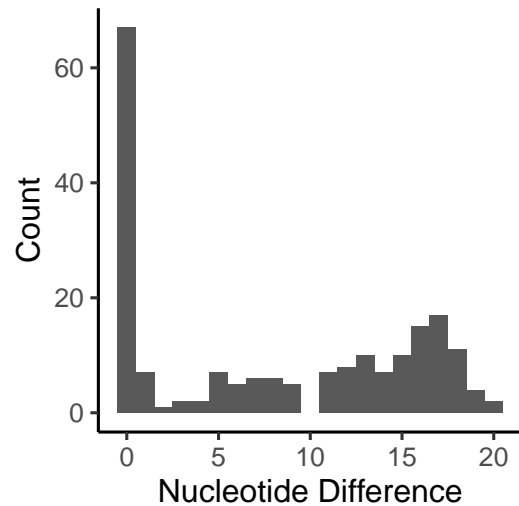
### IGHV3-30\*04

142 sequences assigned  
No exact matches.



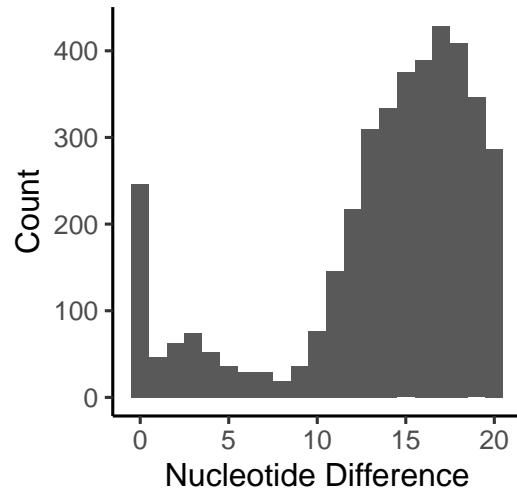
### IGHV3-43\*01

217 sequences assigned  
67 (30.9%) exact matches, in which:  
65 unique CDR3  
5 unique J



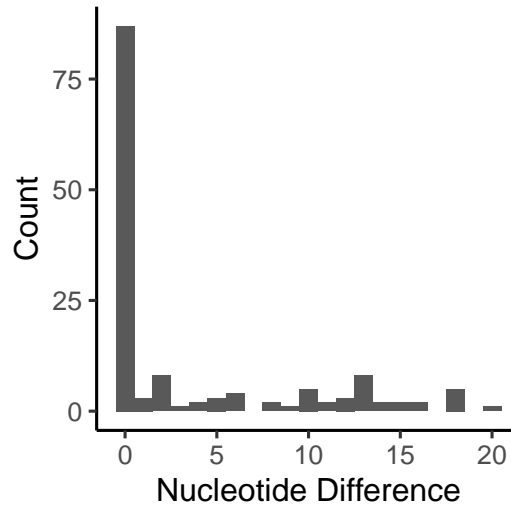
### IGHV3-48\*02

5291 sequences assigned  
246 (4.6%) exact matches, in which:  
235 unique CDR3  
6 unique J



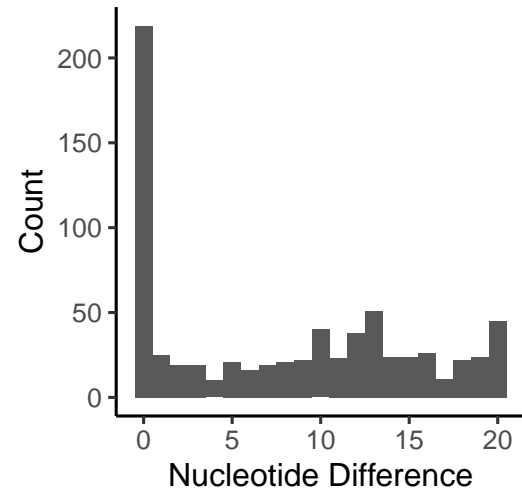
### IGHV3-53\*04

198 sequences assigned  
87 (43.9%) exact matches, in which:  
85 unique CDR3  
6 unique J



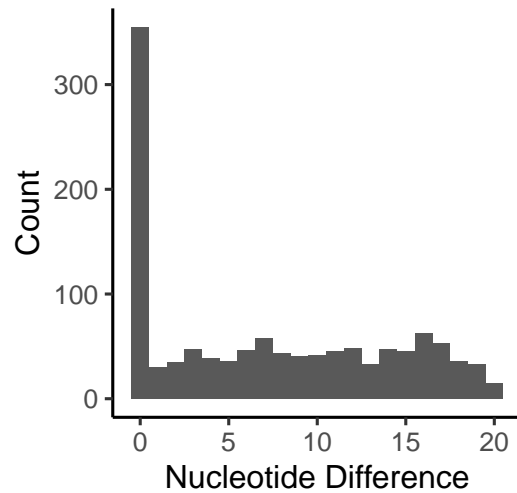
### IGHV3-66\*01

935 sequences assigned  
219 (23.4%) exact matches, in which:  
214 unique CDR3  
6 unique J



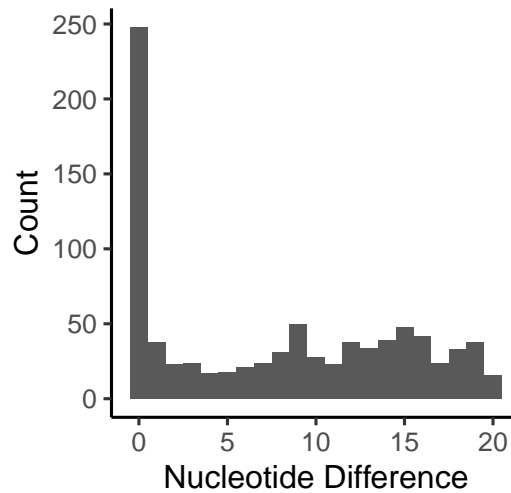
### IGHV3-48\*04

1376 sequences assigned  
355 (25.8%) exact matches, in which:  
340 unique CDR3  
6 unique J



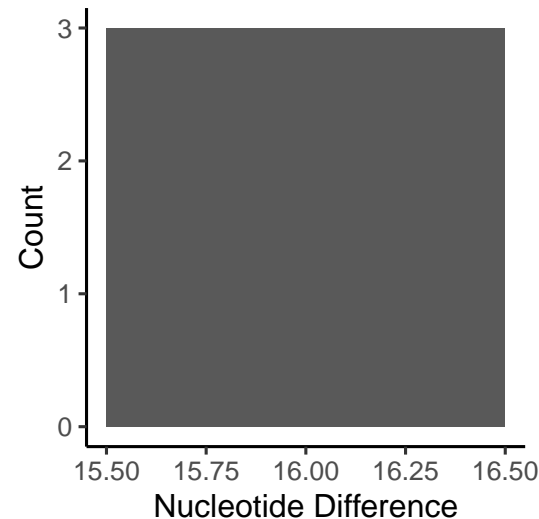
### IGHV3-53\*01\_02

951 sequences assigned  
248 (26.1%) exact matches, in which:  
244 unique CDR3  
6 unique J



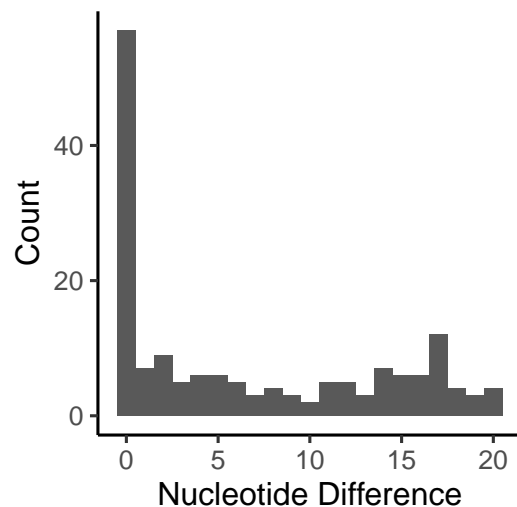
### IGHV3-69-1\*02

6 sequences assigned  
No exact matches.



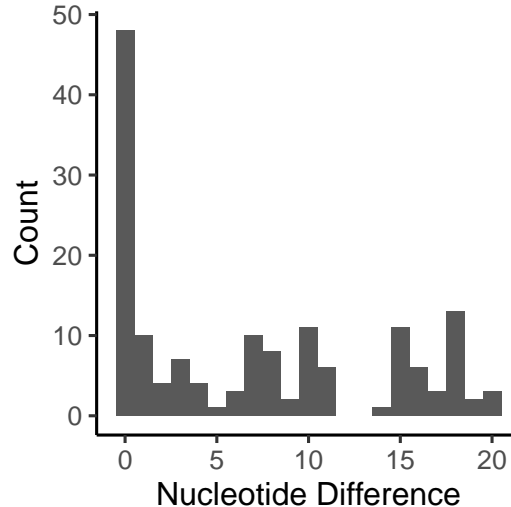
### IGHV3-49\*03\_05

186 sequences assigned  
57 (30.6%) exact matches, in which:  
56 unique CDR3  
5 unique J



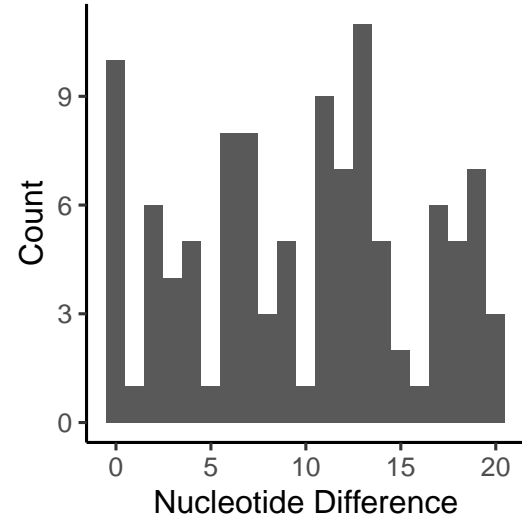
### IGHV3-64\*01

195 sequences assigned  
48 (24.6%) exact matches, in which:  
47 unique CDR3  
5 unique J



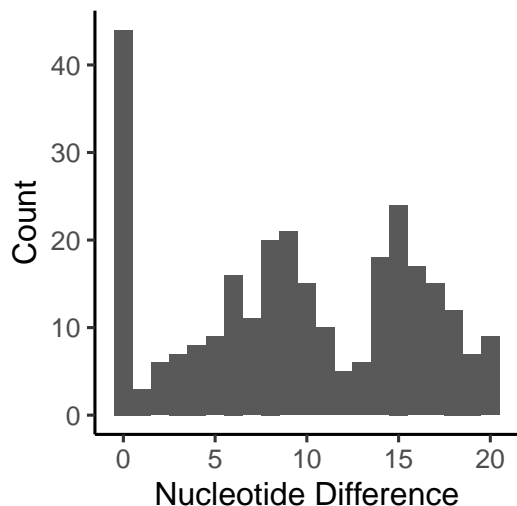
### IGHV3-72\*01

135 sequences assigned  
10 (7.4%) exact matches, in which:  
10 unique CDR3  
4 unique J



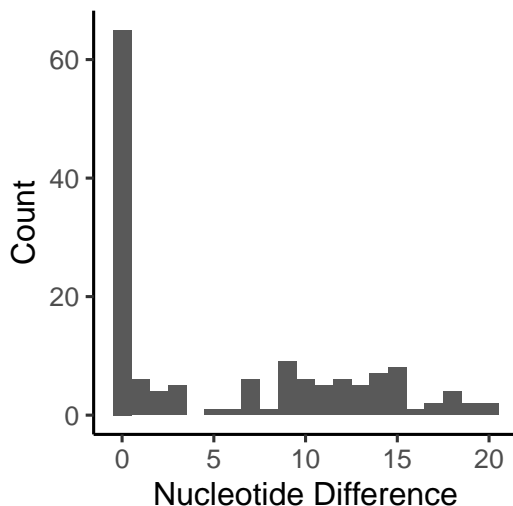
### IGHV3-73\*01\_02

290 sequences assigned  
44 (15.2%) exact matches, in which:  
43 unique CDR3  
4 unique J



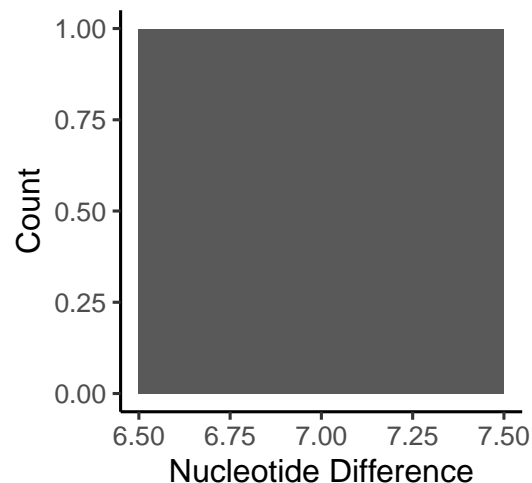
### IGHV3-43D\*03

155 sequences assigned  
65 (41.9%) exact matches, in which:  
62 unique CDR3  
5 unique J



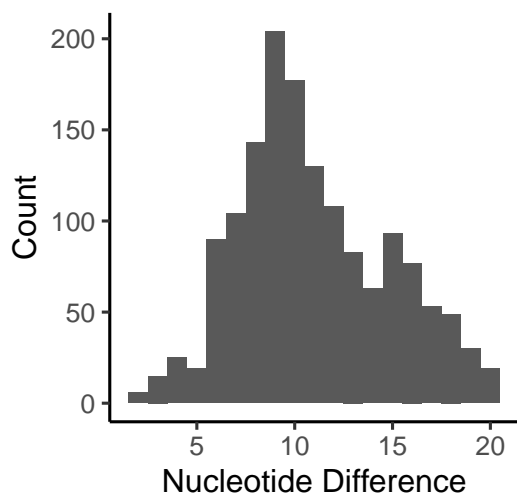
### IGHV3-NL1\*01

3 sequences assigned  
No exact matches.



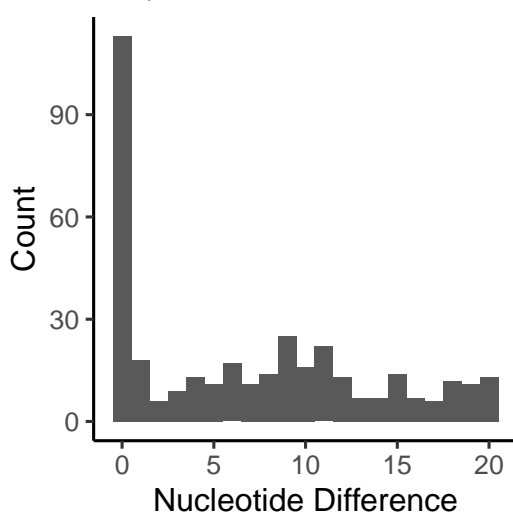
### IGHV3-74\*03

1566 sequences assigned  
No exact matches.



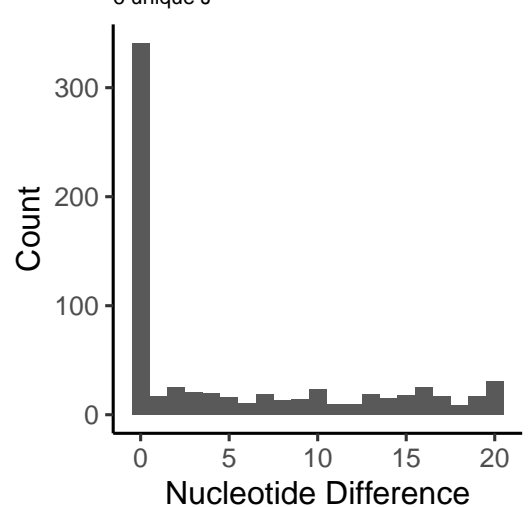
### IGHV3-64D\*06

606 sequences assigned  
113 (18.6%) exact matches, in which:  
111 unique CDR3  
6 unique J



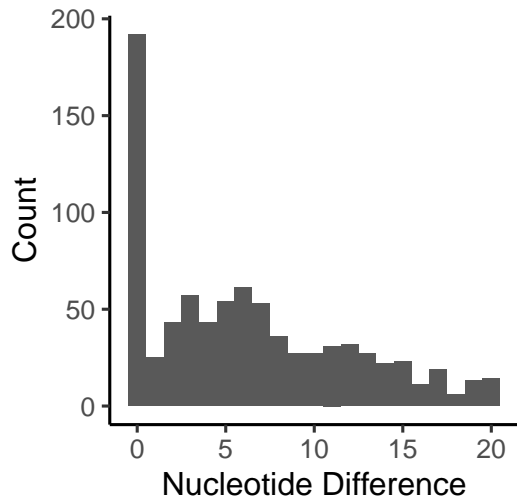
### IGHV4-4\*02\_03

817 sequences assigned  
341 (41.7%) exact matches, in which:  
333 unique CDR3  
6 unique J



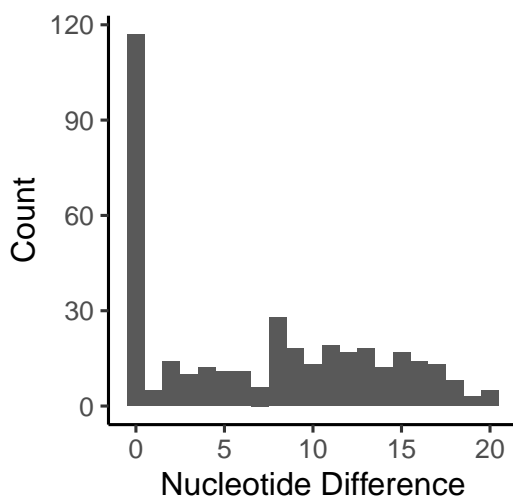
### IGHV3-74\*01\_02

861 sequences assigned  
192 (22.3%) exact matches, in which:  
178 unique CDR3  
6 unique J



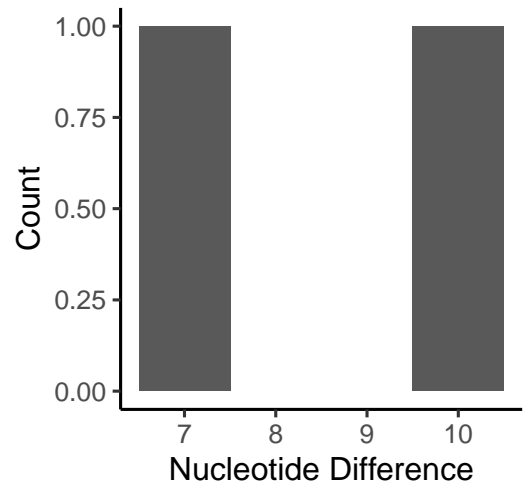
### IGHV3-64D\*09

413 sequences assigned  
117 (28.3%) exact matches, in which:  
115 unique CDR3  
5 unique J



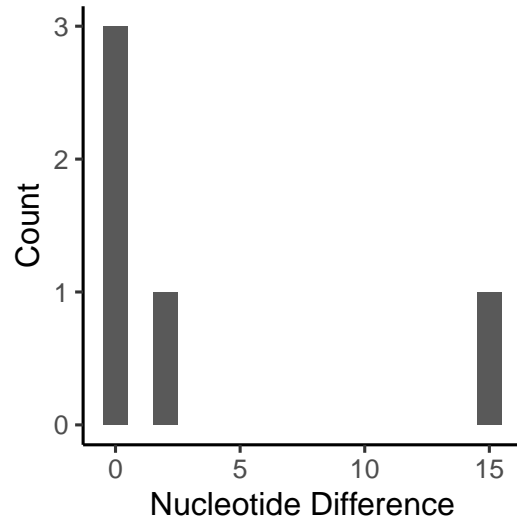
### IGHV4-28\*03

2 sequences assigned  
No exact matches.



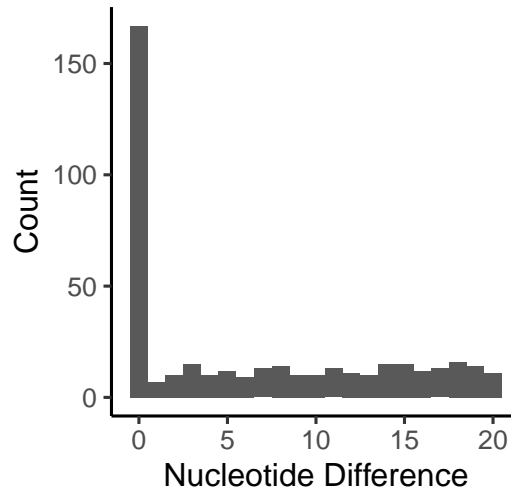
### IGHV4-28\*01\_07

6 sequences assigned  
3 (50%) exact matches, in which:  
3 unique CDR3  
2 unique J



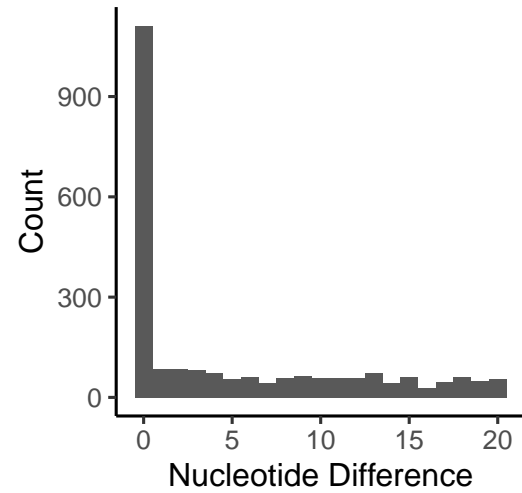
### IGHV4-31\*02

500 sequences assigned  
167 (33.4%) exact matches, in which:  
165 unique CDR3  
6 unique J



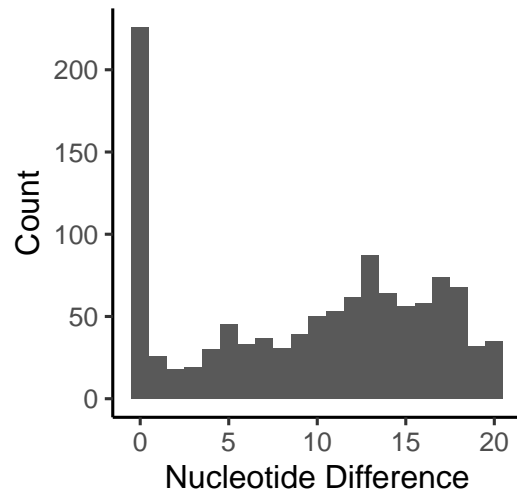
### IGHV4-39\*07

2798 sequences assigned  
1112 (39.7%) exact matches, in which:  
1089 unique CDR3  
6 unique J



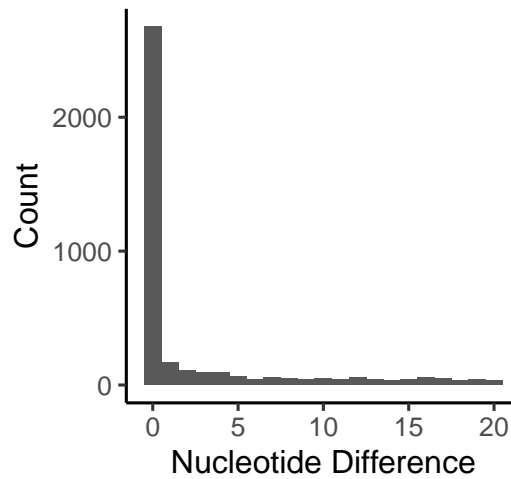
### IGHV4-30-4\*01

1241 sequences assigned  
226 (18.2%) exact matches, in which:  
223 unique CDR3  
6 unique J



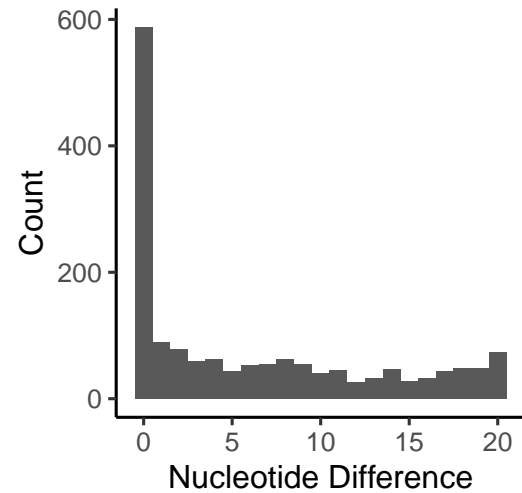
### IGHV4-34\*01\_02

4359 sequences assigned  
2676 (61.4%) exact matches, in which:  
2615 unique CDR3  
6 unique J



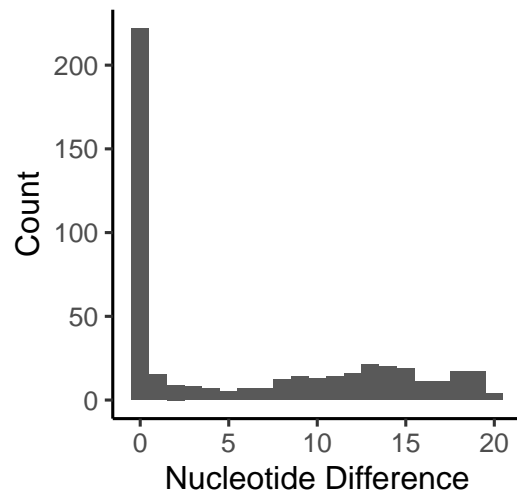
### IGHV4-59\*08

2244 sequences assigned  
588 (26.2%) exact matches, in which:  
565 unique CDR3  
6 unique J



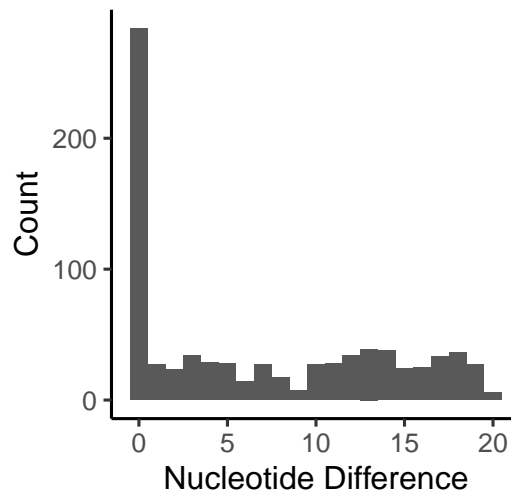
### IGHV4-30-2\*01

555 sequences assigned  
222 (40%) exact matches, in which:  
218 unique CDR3  
6 unique J



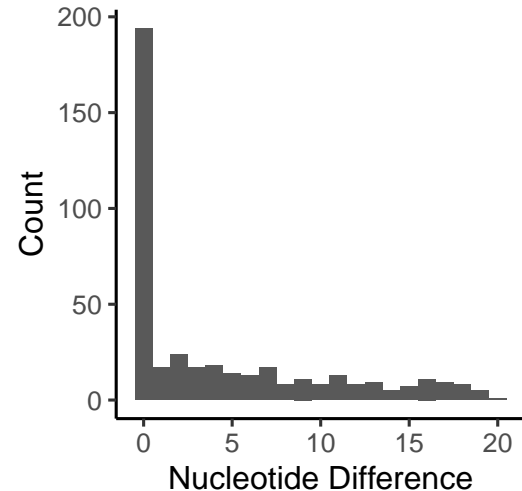
### IGHV4-38-2\*02

954 sequences assigned  
284 (29.8%) exact matches, in which:  
279 unique CDR3  
6 unique J



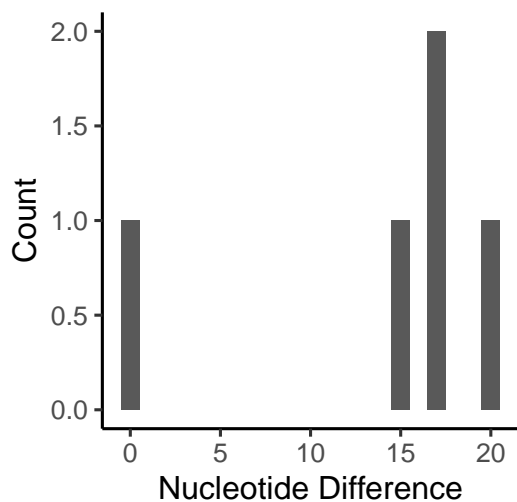
### IGHV4-61\*01

493 sequences assigned  
194 (39.4%) exact matches, in which:  
190 unique CDR3  
6 unique J



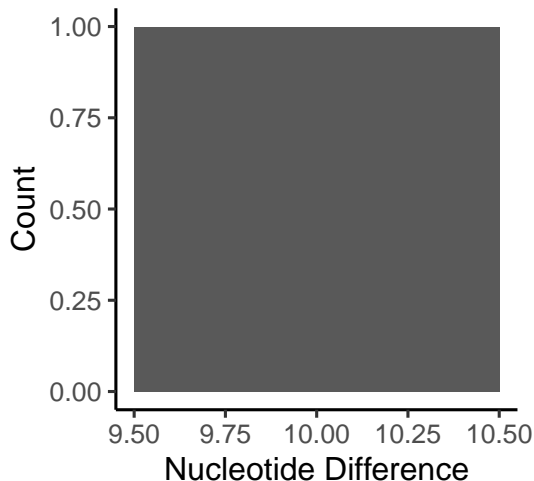
### IGHV4/OR15-8\*01

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



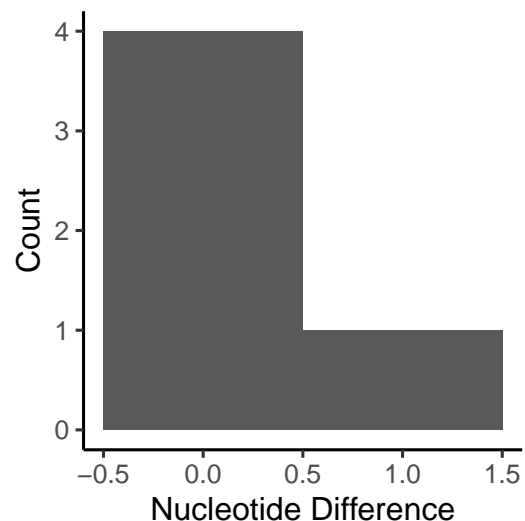
### IGHV5-51\*06

1 sequences assigned  
No exact matches.



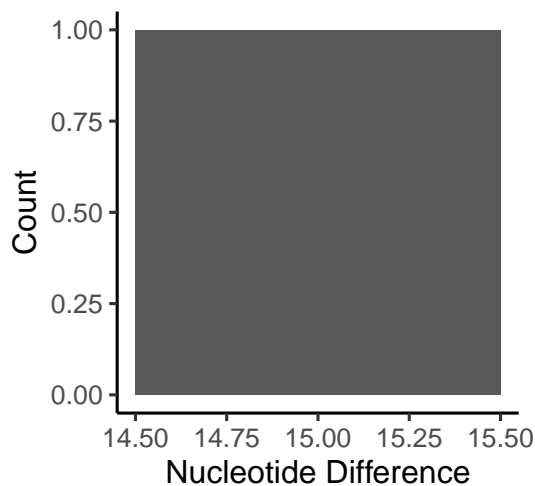
### IGHV7-4-1\*01

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
2 unique J



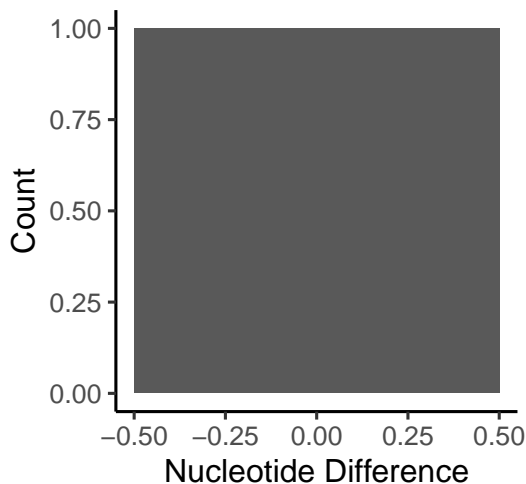
### IGHV4/OR15-8\*02

14 sequences assigned  
No exact matches.



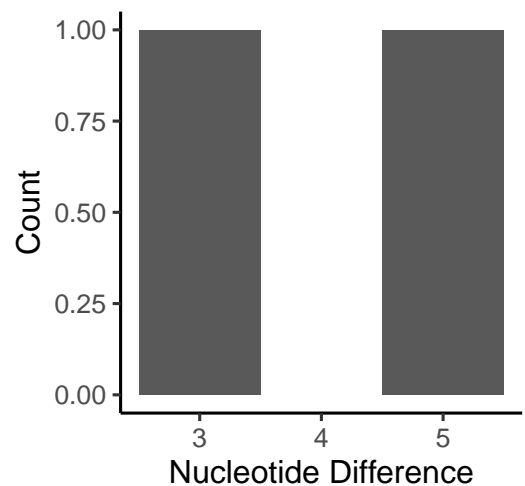
### IGHV5-51\*01\_03

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



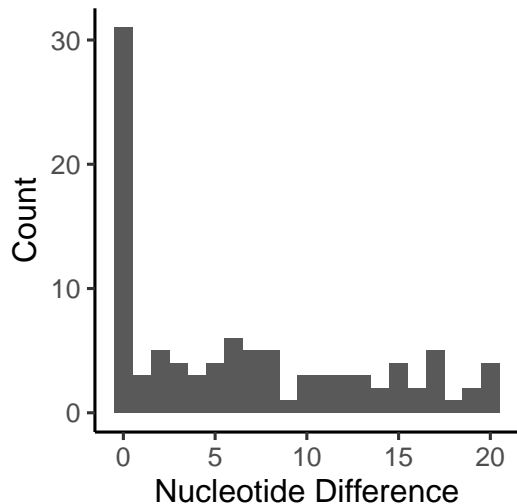
### IGHV7-4-1\*02

2 sequences assigned  
No exact matches.



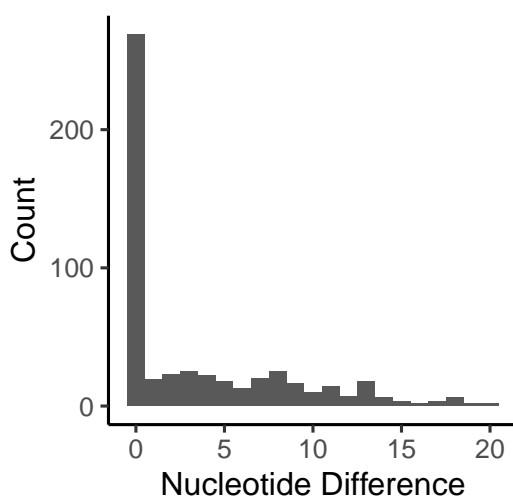
### IGHV5-10-1\*01\_03

113 sequences assigned  
31 (27.4%) exact matches, in which:  
30 unique CDR3  
5 unique J



### IGHV6-1\*01\_02

537 sequences assigned  
269 (50.1%) exact matches, in which:  
264 unique CDR3  
6 unique J







[illegible]