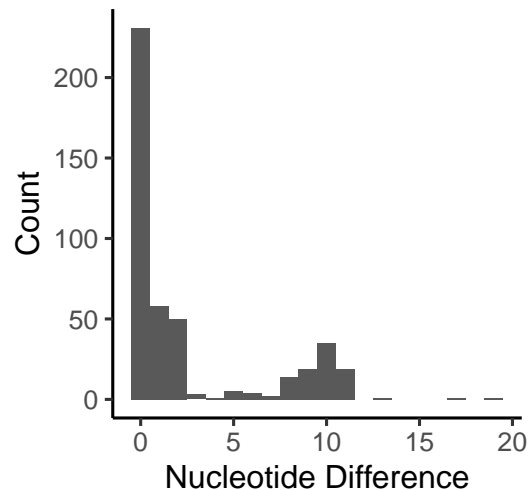


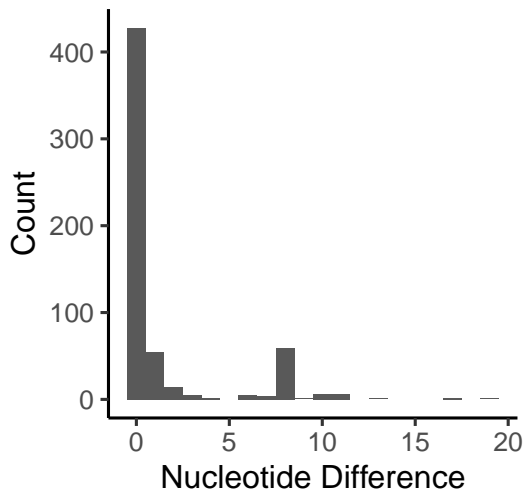
### IGHV1-2\*04

445 sequences assigned  
231 (51.9%) exact matches, in which:  
214 unique CDR3  
6 unique J



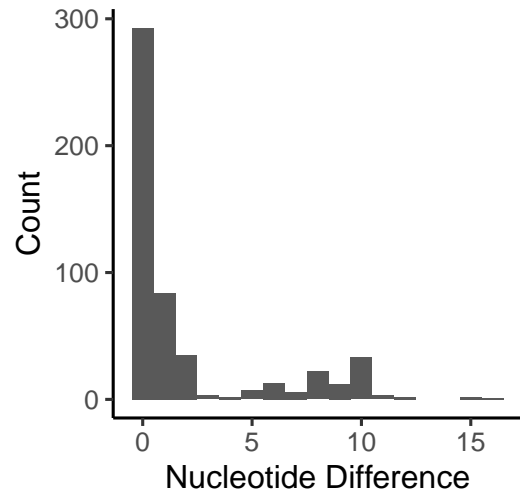
### IGHV1-18\*04

591 sequences assigned  
428 (72.4%) exact matches, in which:  
405 unique CDR3  
6 unique J



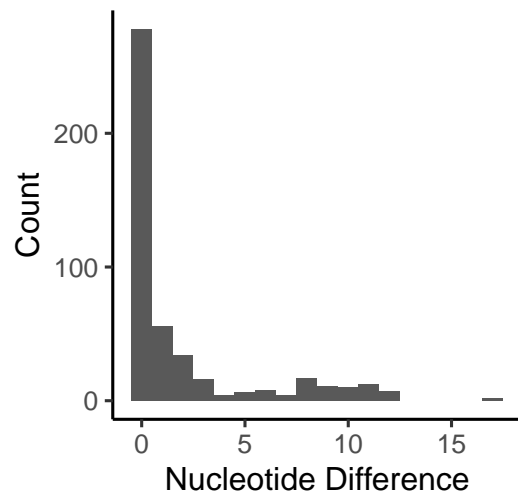
### IGHV1-46\*01

518 sequences assigned  
293 (56.6%) exact matches, in which:  
286 unique CDR3  
6 unique J



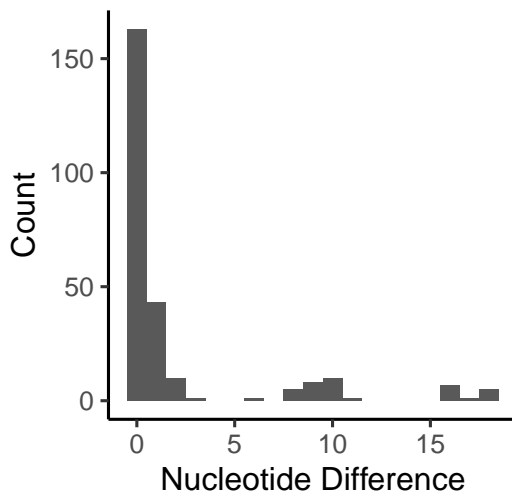
### IGHV1-3\*01\_05

465 sequences assigned  
278 (59.8%) exact matches, in which:  
258 unique CDR3  
6 unique J



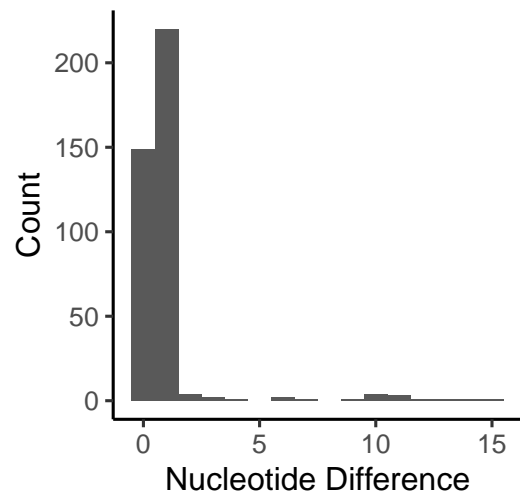
### IGHV1-24\*01

255 sequences assigned  
163 (63.9%) exact matches, in which:  
151 unique CDR3  
6 unique J



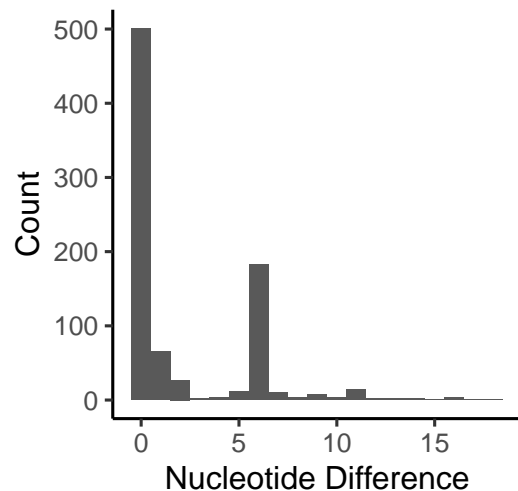
### IGHV1-58\*01\_03

391 sequences assigned  
149 (38.1%) exact matches, in which:  
108 unique CDR3  
6 unique J



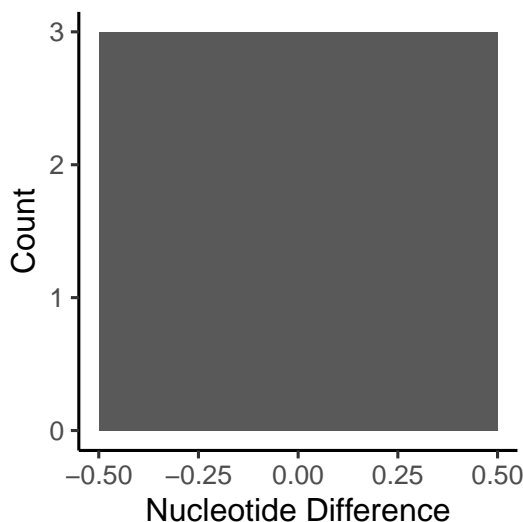
### IGHV1-18\*01

842 sequences assigned  
501 (59.5%) exact matches, in which:  
482 unique CDR3  
6 unique J



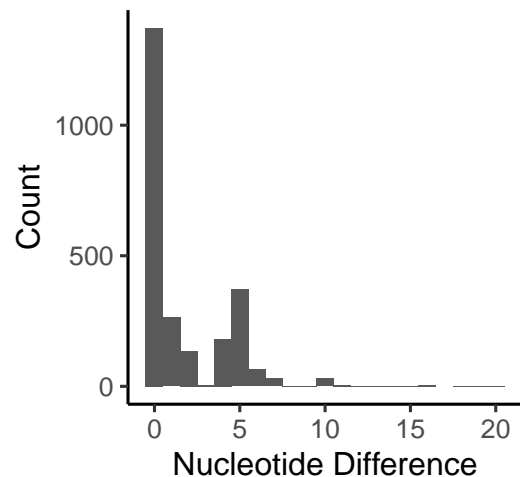
### IGHV1-45\*02

3 sequences assigned  
3 (100%) exact matches, in which:  
3 unique CDR3  
2 unique J



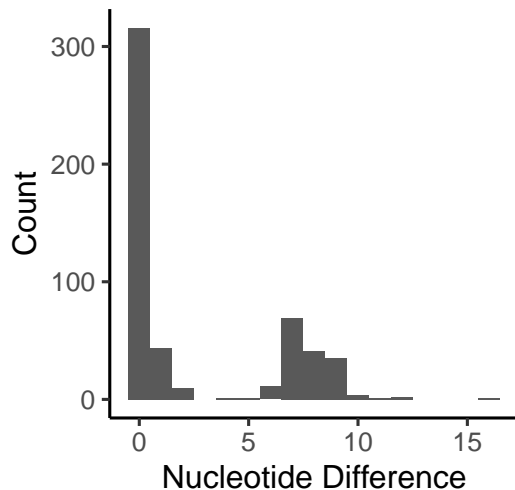
### IGHV1-69\*01\_12\_13

2483 sequences assigned  
1372 (55.3%) exact matches, in which:  
1325 unique CDR3  
6 unique J



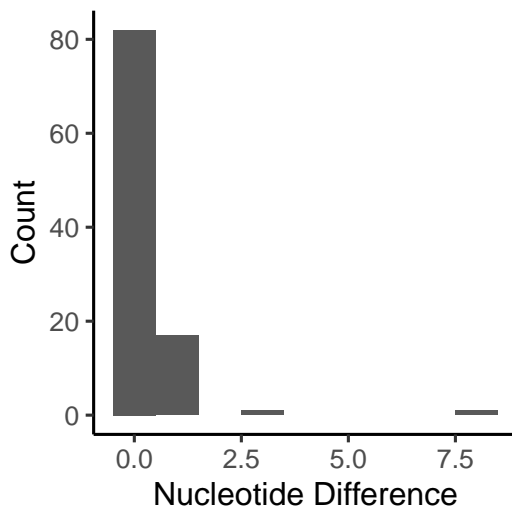
### IGHV1–69\*06\_14

536 sequences assigned  
316 (59%) exact matches, in which:  
309 unique CDR3  
6 unique J



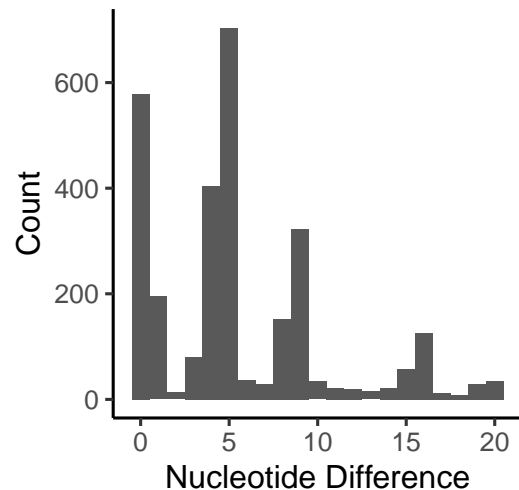
### IGHV2–70\*01

101 sequences assigned  
82 (81.2%) exact matches, in which:  
75 unique CDR3  
5 unique J



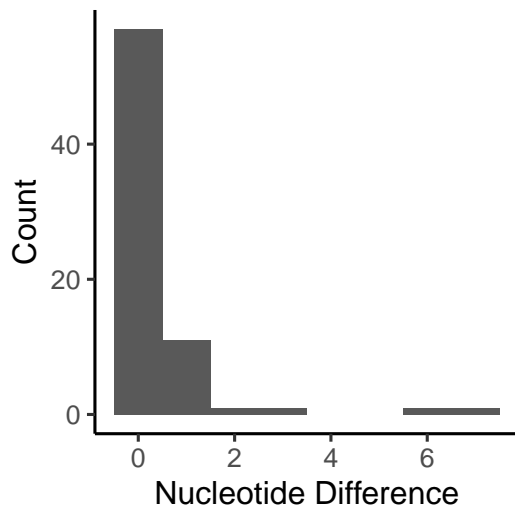
### IGHV3–7\*03

3050 sequences assigned  
578 (19%) exact matches, in which:  
315 unique CDR3  
6 unique J



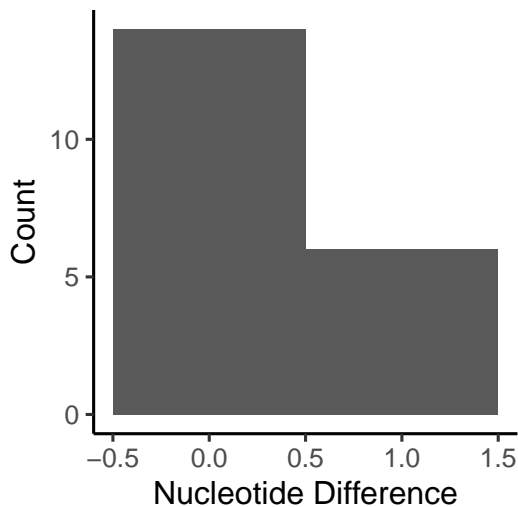
### IGHV2–5\*02

73 sequences assigned  
57 (78.1%) exact matches, in which:  
54 unique CDR3  
5 unique J



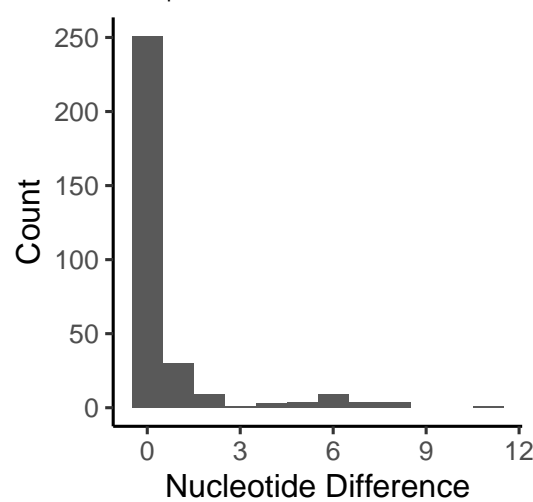
### IGHV2–70D\*04

20 sequences assigned  
14 (70%) exact matches, in which:  
12 unique CDR3  
3 unique J



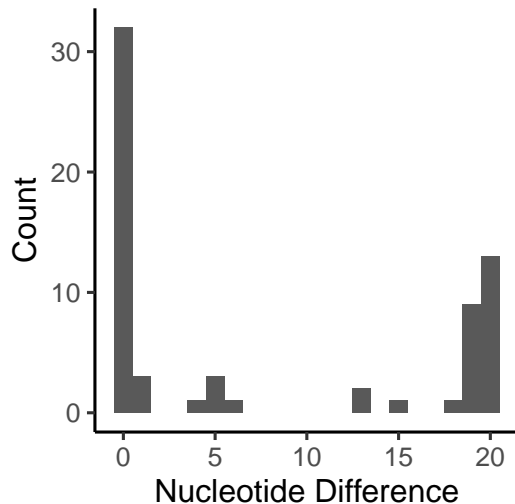
### IGHV3–11\*06

316 sequences assigned  
251 (79.4%) exact matches, in which:  
161 unique CDR3  
5 unique J



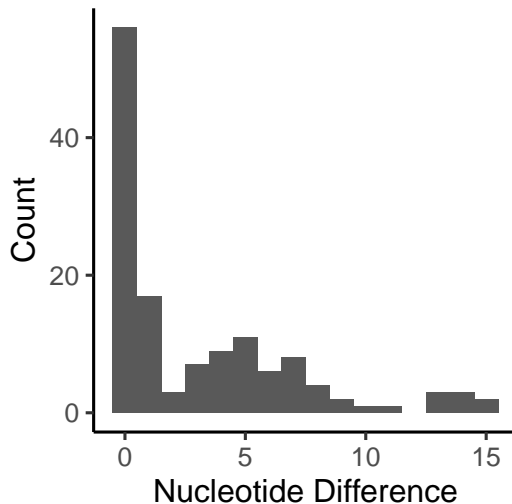
### IGHV2–26\*01

66 sequences assigned  
32 (48.5%) exact matches, in which:  
30 unique CDR3  
5 unique J



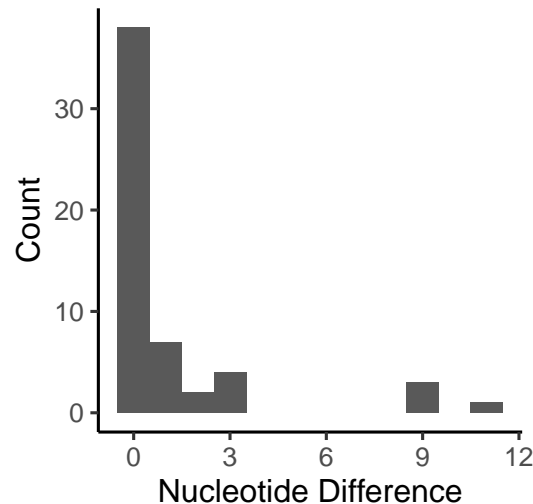
### IGHV3–7\*01

133 sequences assigned  
56 (42.1%) exact matches, in which:  
52 unique CDR3  
6 unique J



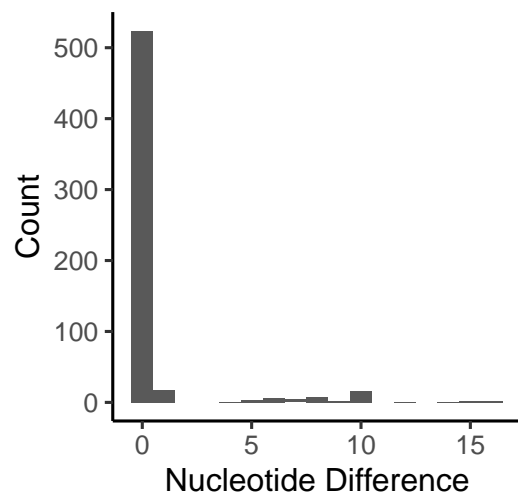
### IGHV3–13\*05

58 sequences assigned  
38 (65.5%) exact matches, in which:  
18 unique CDR3  
4 unique J



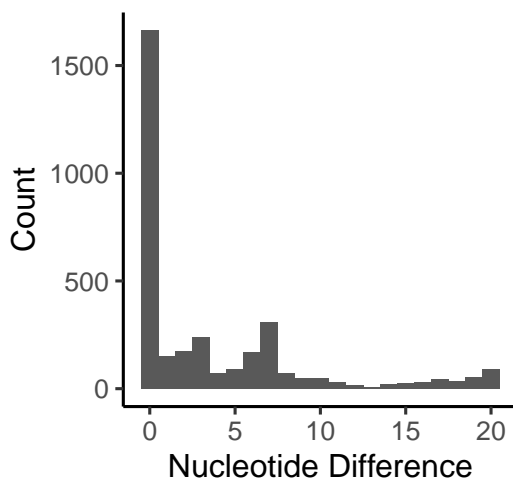
### IGHV3-15\*01\_02

595 sequences assigned  
524 (88.1%) exact matches, in which:  
313 unique CDR3  
6 unique J



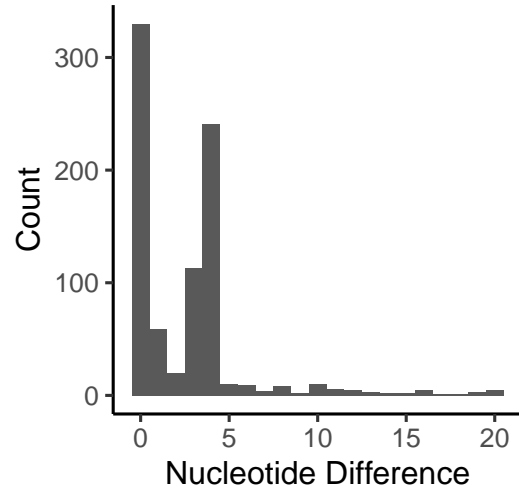
### IGHV3-23\*01\_04

5085 sequences assigned  
1663 (32.7%) exact matches, in which:  
937 unique CDR3  
6 unique J



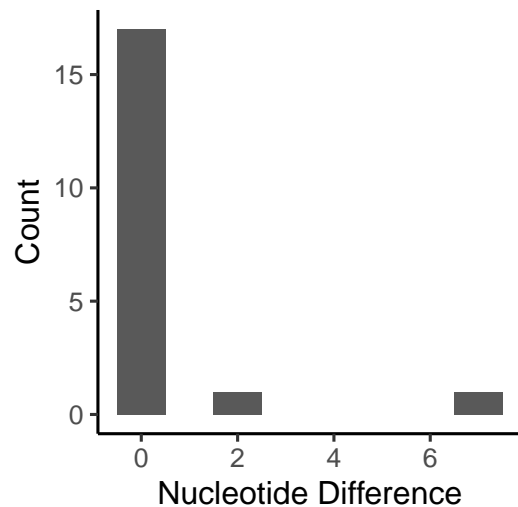
### IGHV3-33\*01

1401 sequences assigned  
330 (23.6%) exact matches, in which:  
205 unique CDR3  
6 unique J



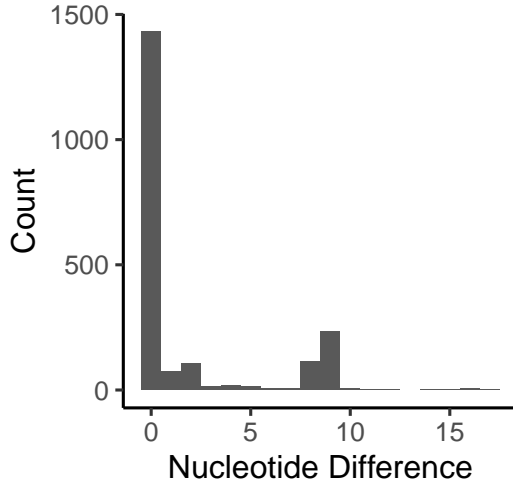
### IGHV3-20\*01\_02

19 sequences assigned  
17 (89.5%) exact matches, in which:  
9 unique CDR3  
3 unique J



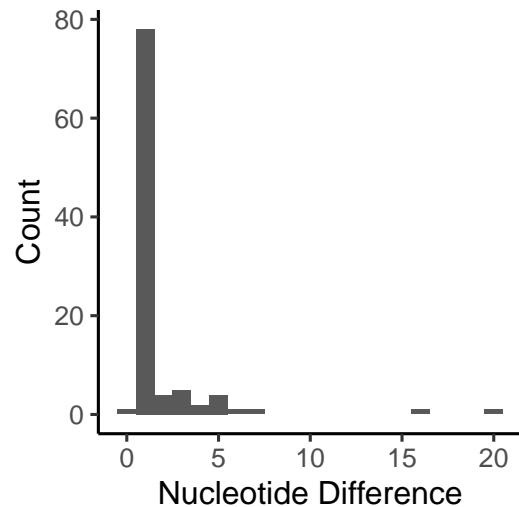
### IGHV3-30-3\*01

2053 sequences assigned  
1431 (69.7%) exact matches, in which:  
847 unique CDR3  
6 unique J



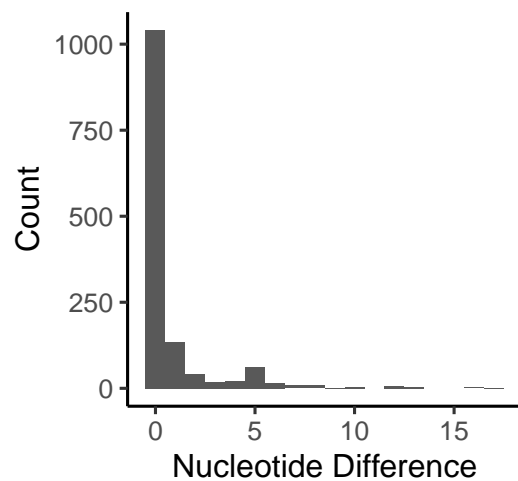
### IGHV3-33\*05

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



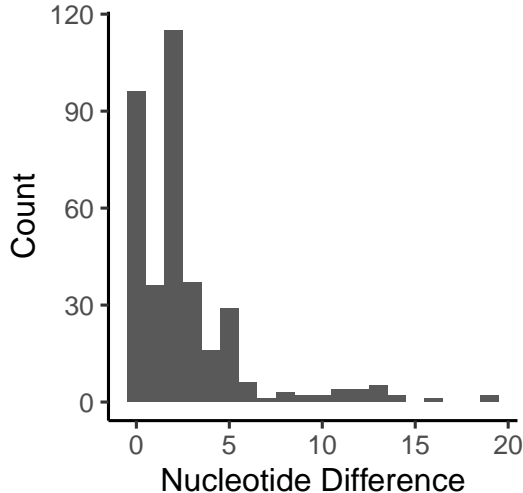
### IGHV3-21\*01\_02

1370 sequences assigned  
1041 (76%) exact matches, in which:  
611 unique CDR3  
6 unique J



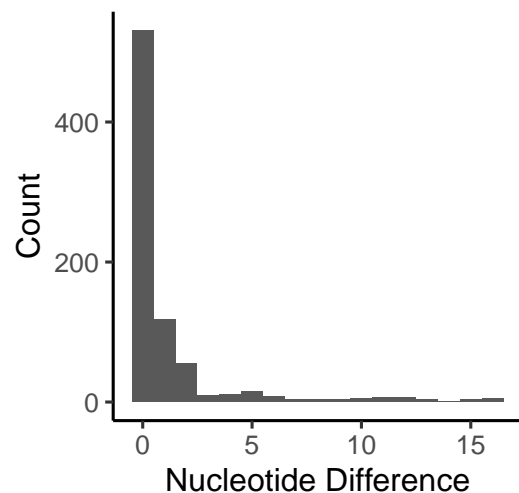
### IGHV3-30-3\*01\_T288C

363 sequences assigned  
96 (26.4%) exact matches, in which:  
84 unique CDR3  
6 unique J



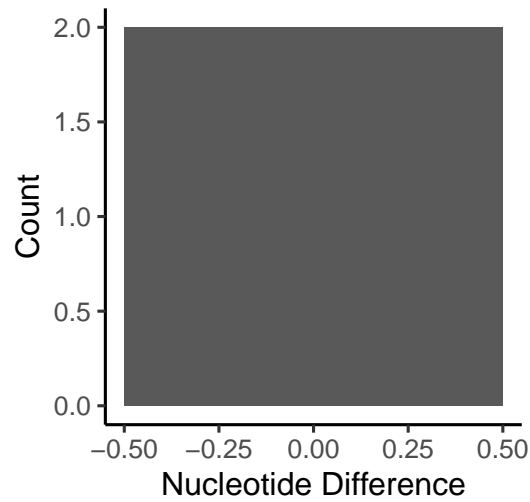
### IGHV3-33\*08

815 sequences assigned  
531 (65.2%) exact matches, in which:  
342 unique CDR3  
6 unique J



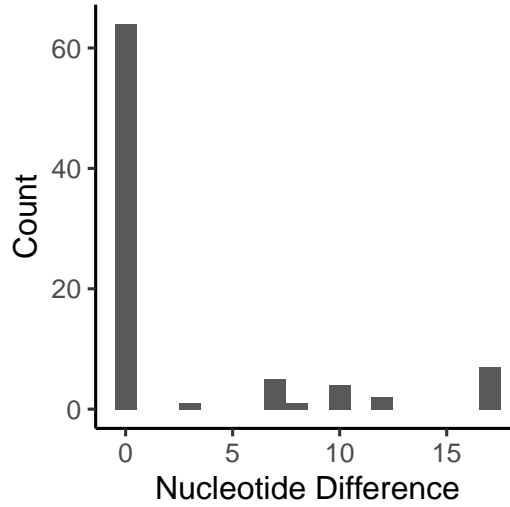
### IGHV3-47\*02

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



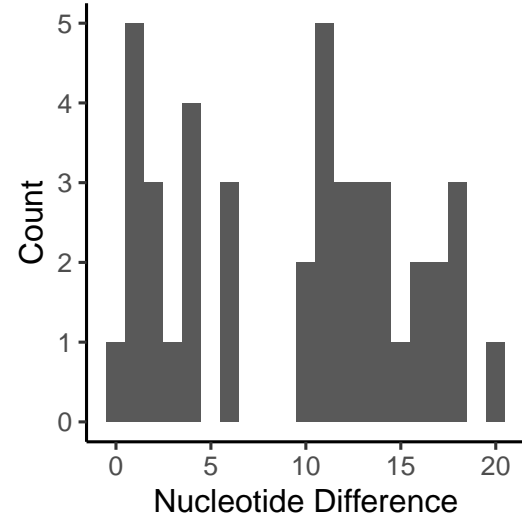
### IGHV3-49\*04

84 sequences assigned  
64 (76.2%) exact matches, in which:  
38 unique CDR3  
5 unique J



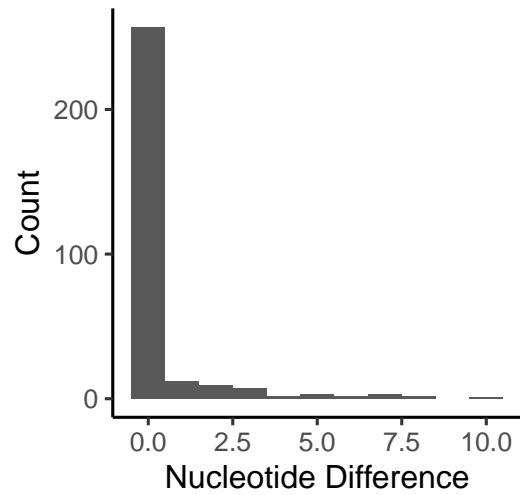
### IGHV3-64\*04

43 sequences assigned  
1 (2.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



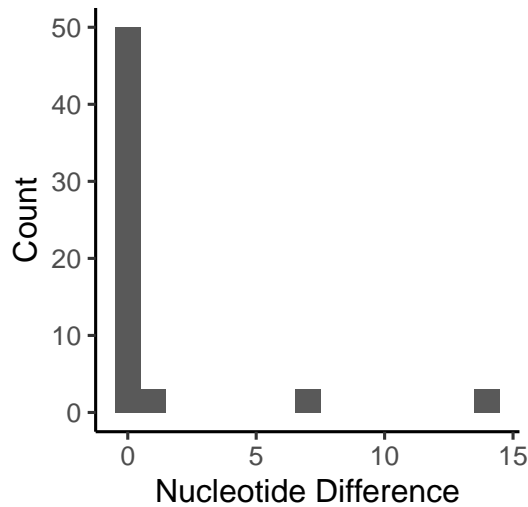
### IGHV3-48\*02

298 sequences assigned  
257 (86.2%) exact matches, in which:  
147 unique CDR3  
6 unique J



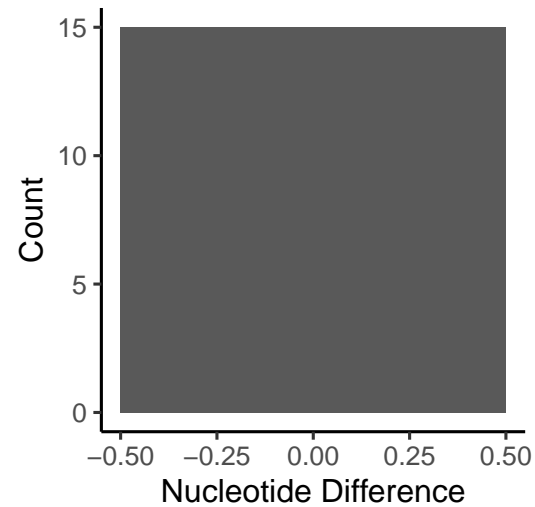
### IGHV3-49\*03\_05

59 sequences assigned  
50 (84.7%) exact matches, in which:  
30 unique CDR3  
4 unique J



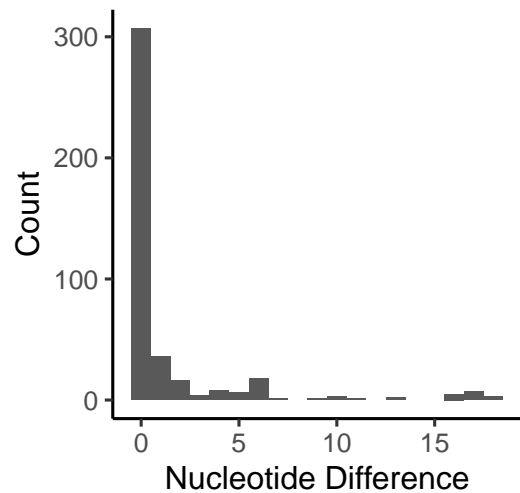
### IGHV3-64\*02\_07

15 sequences assigned  
15 (100%) exact matches, in which:  
8 unique CDR3  
3 unique J



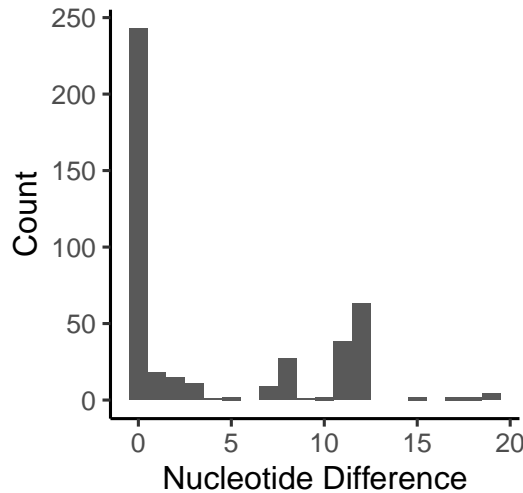
### IGHV3-48\*03

452 sequences assigned  
307 (67.9%) exact matches, in which:  
181 unique CDR3  
6 unique J



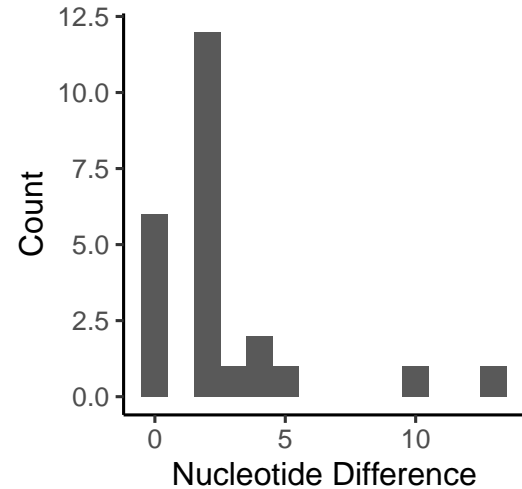
### IGHV3-53\*01\_02

986 sequences assigned  
243 (24.6%) exact matches, in which:  
148 unique CDR3  
6 unique J



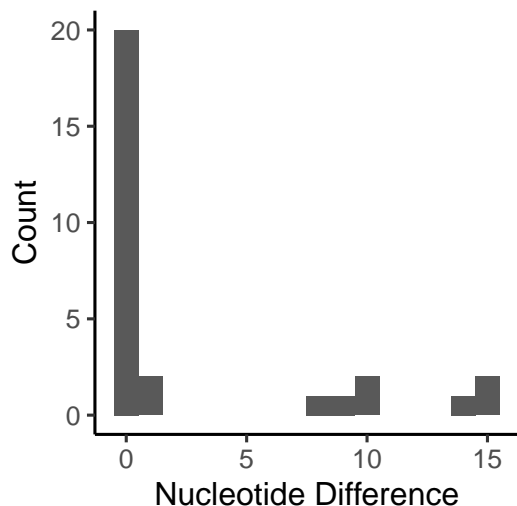
### IGHV3-66\*03

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



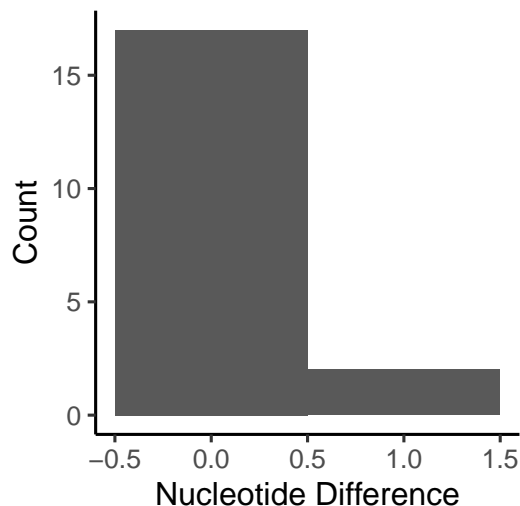
### IGHV3-72\*01

51 sequences assigned  
20 (39.2%) exact matches, in which:  
11 unique CDR3  
3 unique J



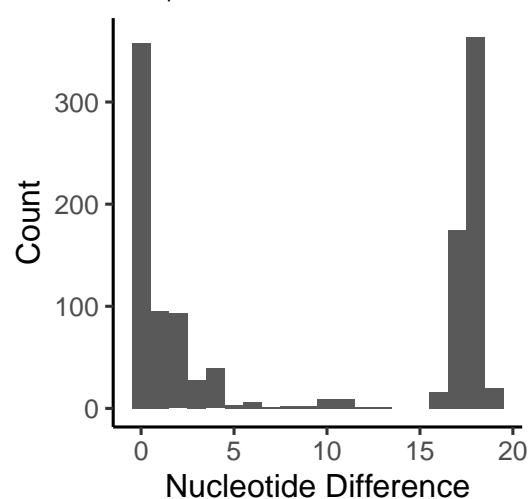
### IGHV3-43D\*04

19 sequences assigned  
17 (89.5%) exact matches, in which:  
10 unique CDR3  
2 unique J



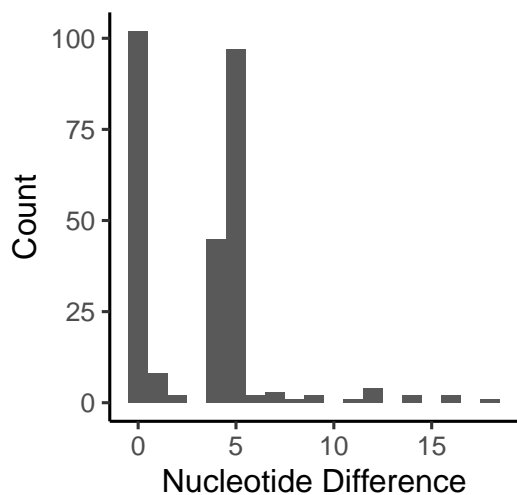
### IGHV4-4\*02\_03

1243 sequences assigned  
358 (28.8%) exact matches, in which:  
266 unique CDR3  
6 unique J



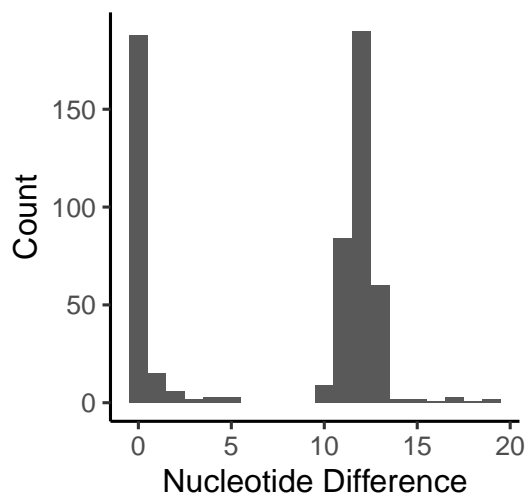
### IGHV3-73\*01\_02

272 sequences assigned  
102 (37.5%) exact matches, in which:  
61 unique CDR3  
4 unique J



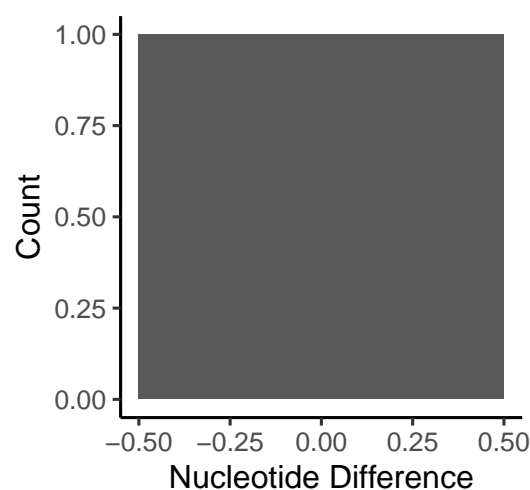
### IGHV3-64D\*06

572 sequences assigned  
188 (32.9%) exact matches, in which:  
90 unique CDR3  
6 unique J



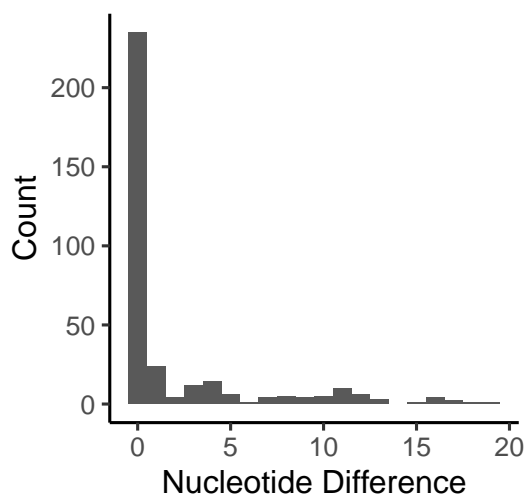
### IGHV4-28\*01\_07

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



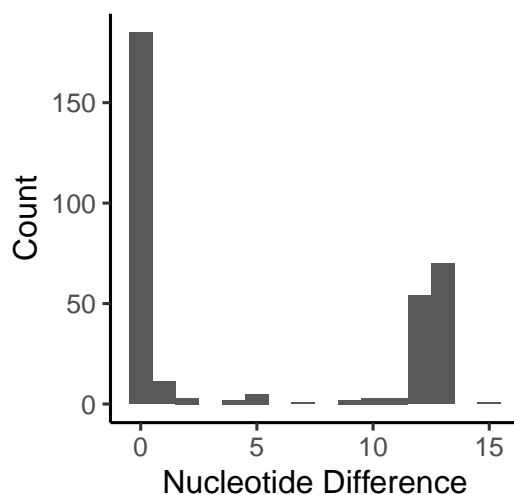
### IGHV3-74\*01\_02

342 sequences assigned  
235 (68.7%) exact matches, in which:  
128 unique CDR3  
5 unique J



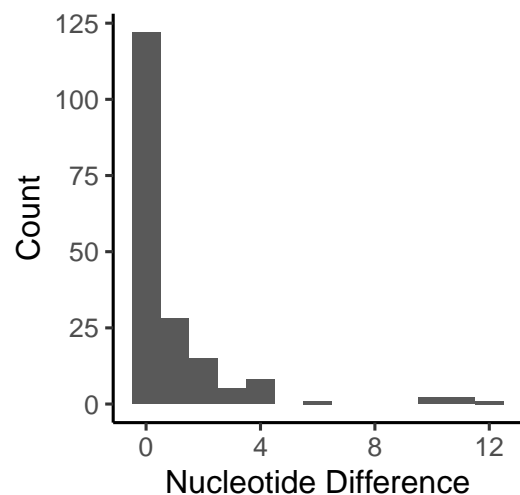
### IGHV3-64D\*09

340 sequences assigned  
185 (54.4%) exact matches, in which:  
93 unique CDR3  
6 unique J



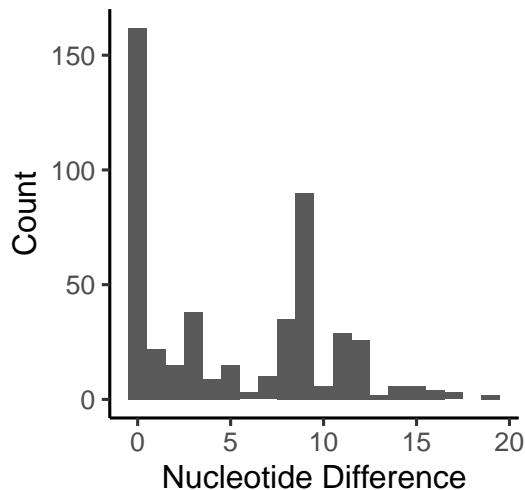
### IGHV4-30-2\*01

184 sequences assigned  
122 (66.3%) exact matches, in which:  
84 unique CDR3  
5 unique J



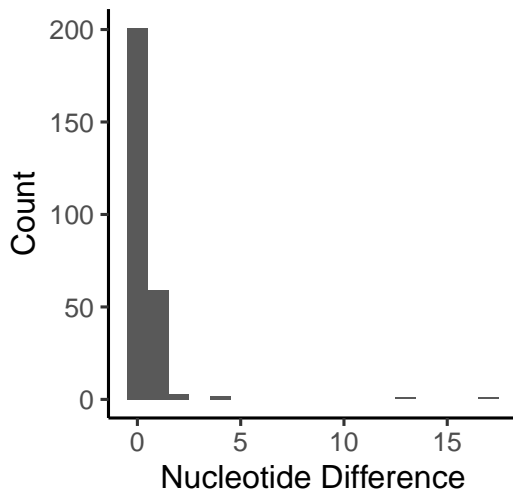
### IGHV4-30-4\*01

483 sequences assigned  
162 (33.5%) exact matches, in which:  
157 unique CDR3  
5 unique J



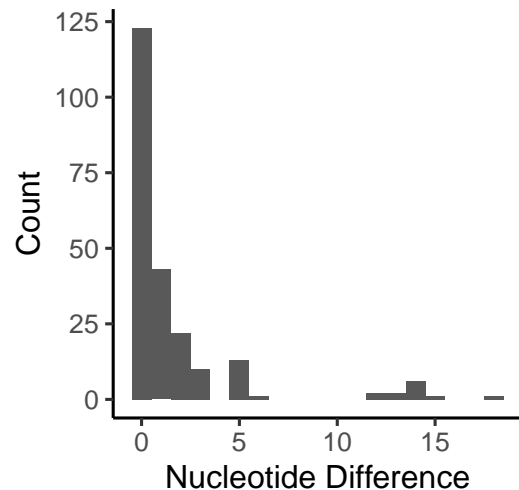
### IGHV4-34\*01\_02\_C288T

269 sequences assigned  
201 (74.7%) exact matches, in which:  
197 unique CDR3  
6 unique J



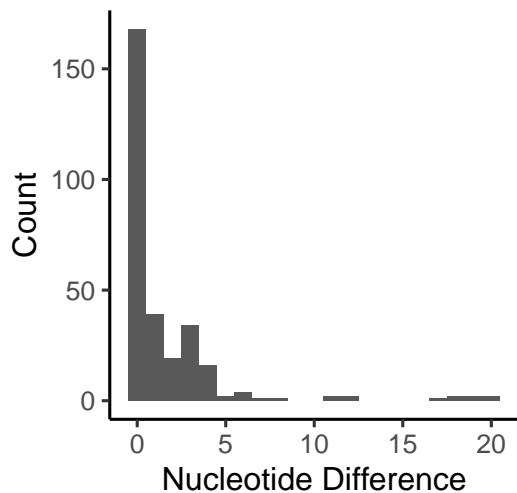
### IGHV4-38-2\*02\_A70G

852 sequences assigned  
123 (14.4%) exact matches, in which:  
87 unique CDR3  
5 unique J



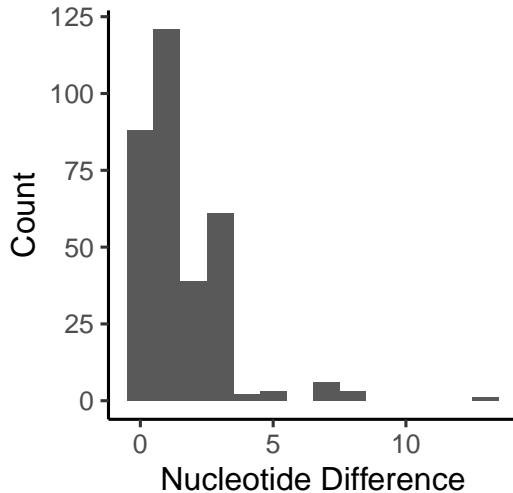
### IGHV4-31\*02

350 sequences assigned  
168 (48%) exact matches, in which:  
158 unique CDR3  
5 unique J



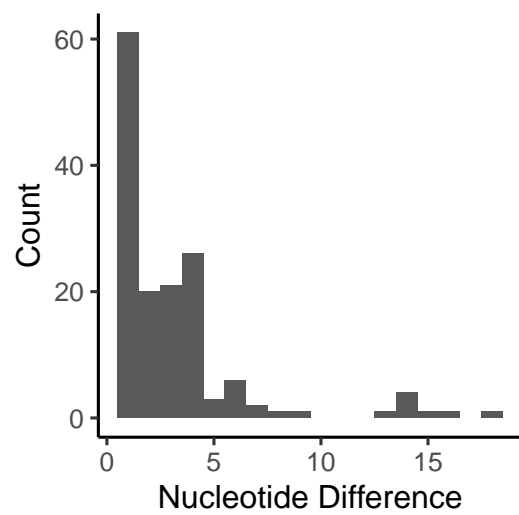
### IGHV4-34\*01\_02\_T300C

325 sequences assigned  
88 (27.1%) exact matches, in which:  
87 unique CDR3  
5 unique J



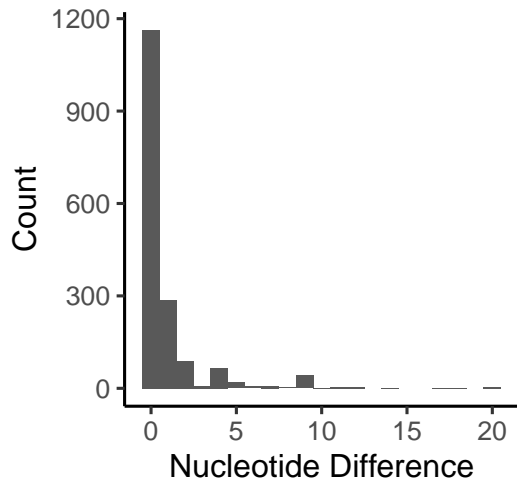
### IGHV4-39\*07

152 sequences assigned  
No exact matches.



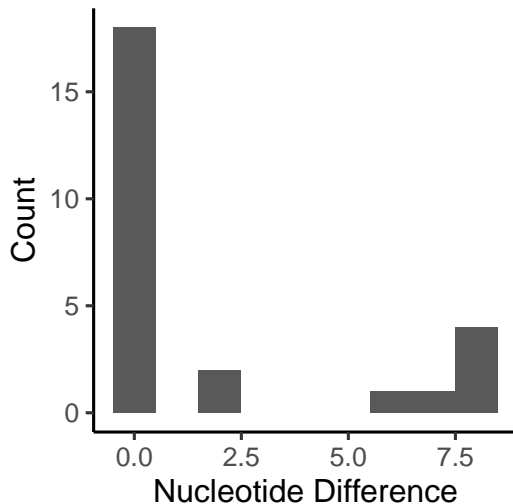
### IGHV4-34\*01\_02

1716 sequences assigned  
1163 (67.8%) exact matches, in which:  
824 unique CDR3  
6 unique J



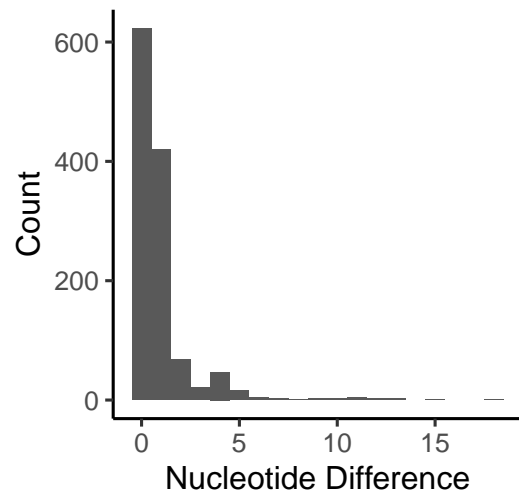
### IGHV4-38-2\*01\_A291G\_()

27 sequences assigned  
18 (66.7%) exact matches, in which:  
18 unique CDR3  
4 unique J



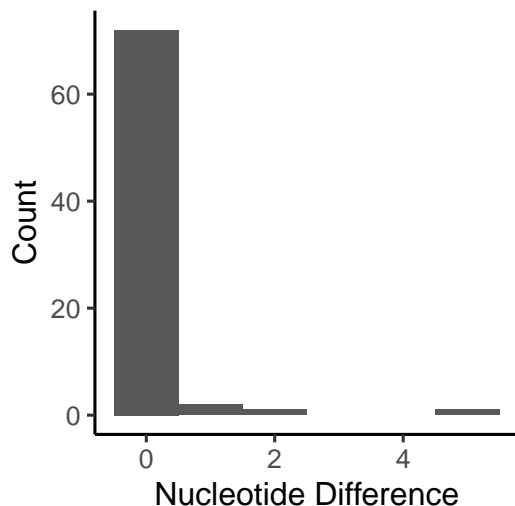
### IGHV4-39\*02\_C258G

1397 sequences assigned  
623 (44.6%) exact matches, in which:  
516 unique CDR3  
6 unique J



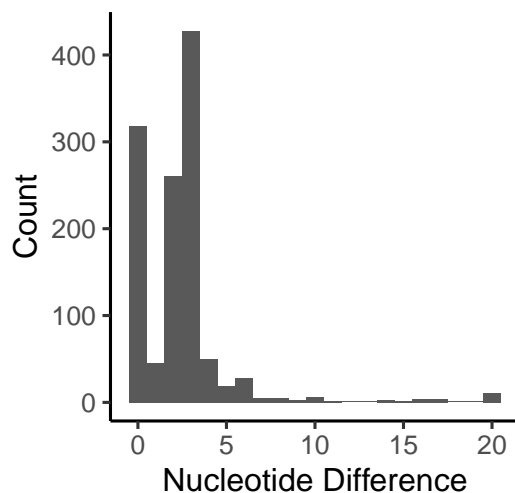
## IGHV4–39\*02\_C258G\_A2

76 sequences assigned  
72 (94.7%) exact matches, in which:  
72 unique CDR3  
4 unique J



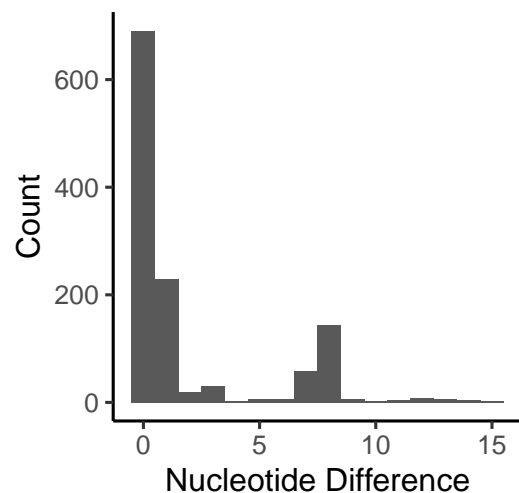
## IGHV4–61\*01

1231 sequences assigned  
318 (25.8%) exact matches, in which:  
304 unique CDR3  
6 unique J



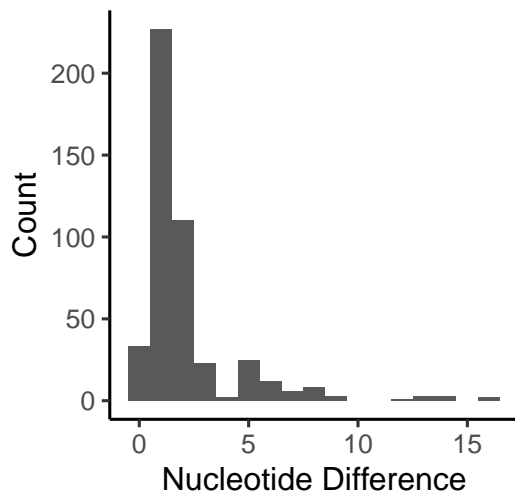
## IGHV5–10–1\*01\_03

1221 sequences assigned  
691 (56.6%) exact matches, in which:  
459 unique CDR3  
6 unique J



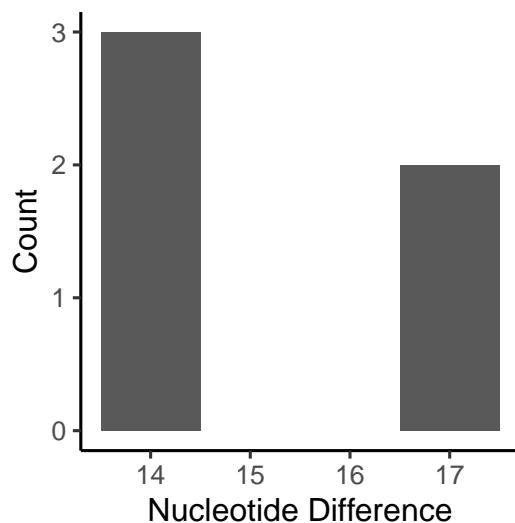
## IGHV4–59\*12

462 sequences assigned  
33 (7.1%) exact matches, in which:  
33 unique CDR3  
5 unique J



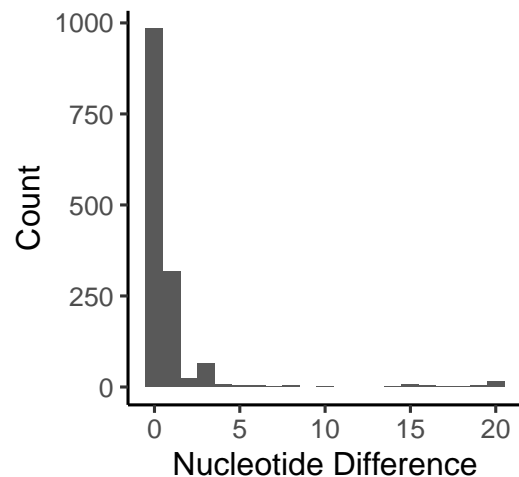
## IGHV4/OR15–8\*01

5 sequences assigned  
No exact matches.



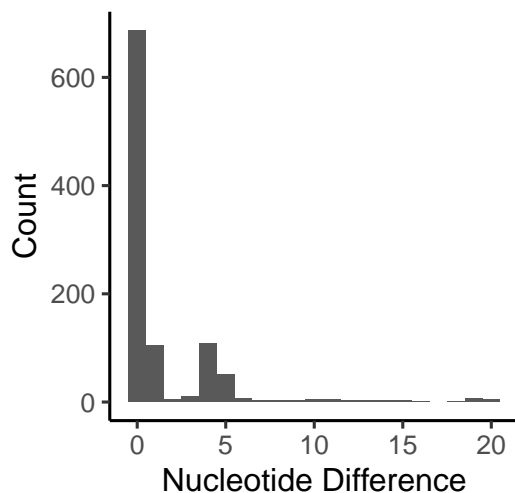
## IGHV5–51\*07\_A128G

1478 sequences assigned  
984 (66.6%) exact matches, in which:  
608 unique CDR3  
6 unique J



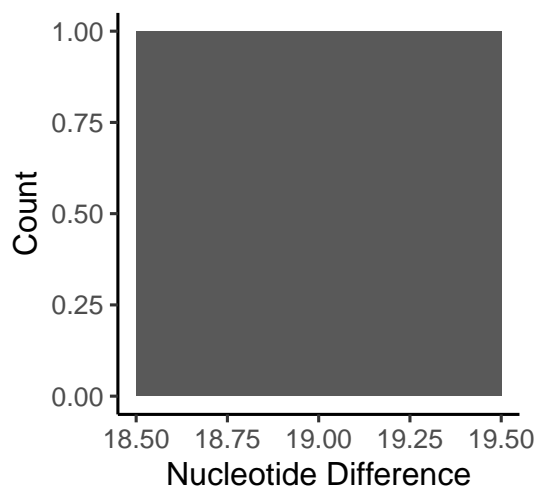
## IGHV4–59\*02\_G88A

1858 sequences assigned  
687 (37%) exact matches, in which:  
632 unique CDR3  
6 unique J



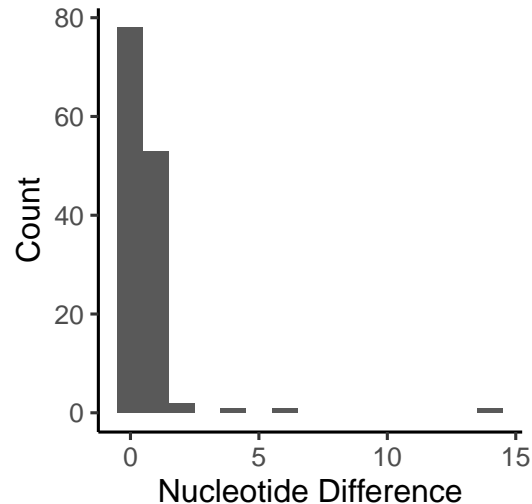
## IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



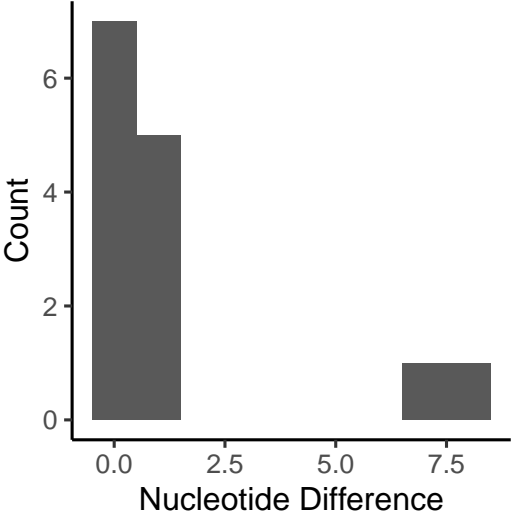
## IGHV6–1\*01\_02

144 sequences assigned  
78 (54.2%) exact matches, in which:  
75 unique CDR3  
5 unique J



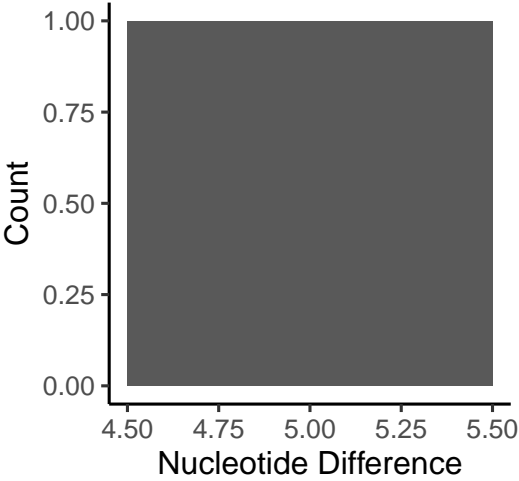
# IGHV7-4-1\*01

14 sequences assigned  
7 (50%) exact matches, in which:  
6 unique CDR3  
3 unique J



# IGHV7-4-1\*02

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.