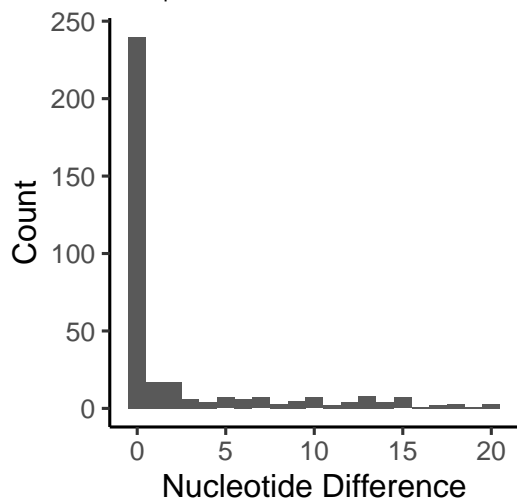


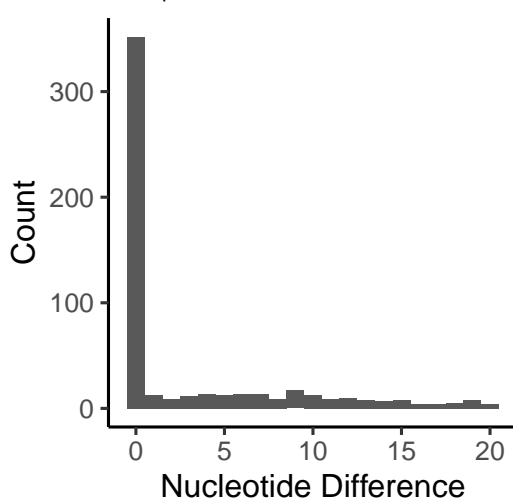
### IGHV1-2\*04

369 sequences assigned  
240 (65%) exact matches, in which:  
240 unique CDR3  
5 unique J



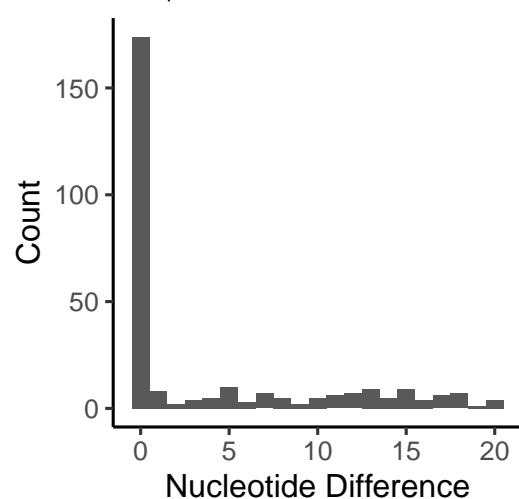
### IGHV1-18\*01

611 sequences assigned  
352 (57.6%) exact matches, in which:  
349 unique CDR3  
6 unique J



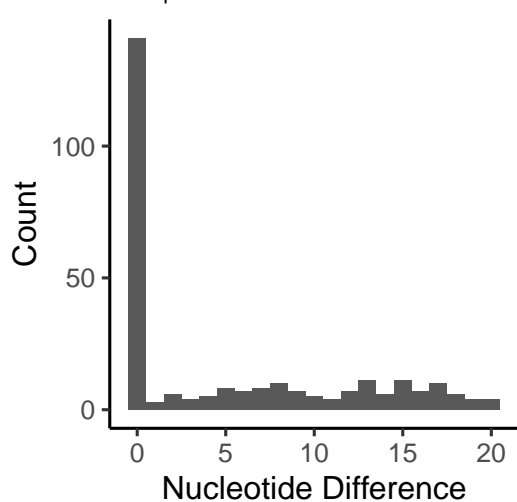
### IGHV1-46\*01

310 sequences assigned  
174 (56.1%) exact matches, in which:  
174 unique CDR3  
5 unique J



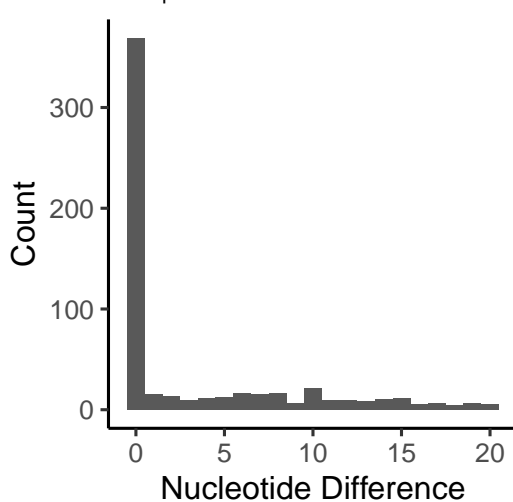
### IGHV1-3\*01\_05

310 sequences assigned  
141 (45.5%) exact matches, in which:  
141 unique CDR3  
6 unique J



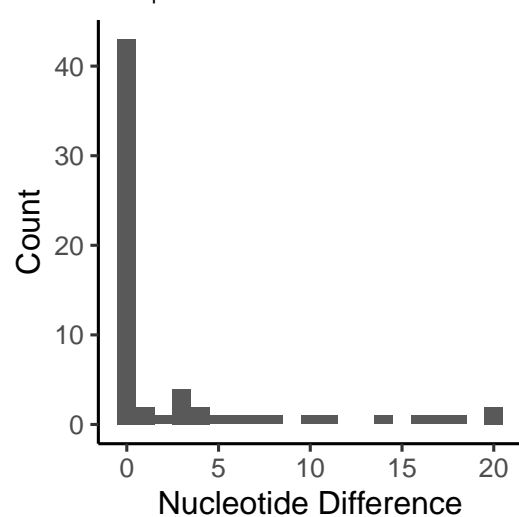
### IGHV1-18\*04

633 sequences assigned  
369 (58.3%) exact matches, in which:  
368 unique CDR3  
6 unique J



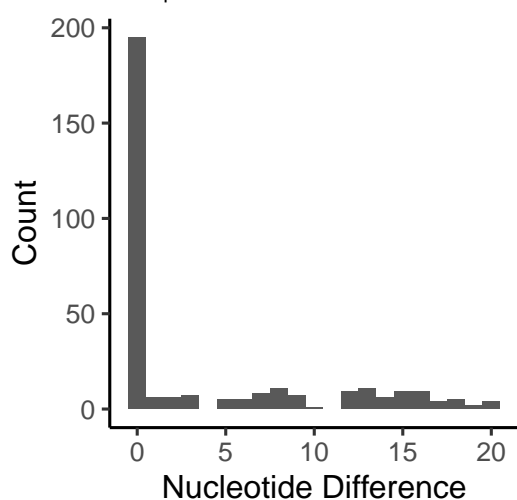
### IGHV1-58\*01\_03

69 sequences assigned  
43 (62.3%) exact matches, in which:  
43 unique CDR3  
4 unique J



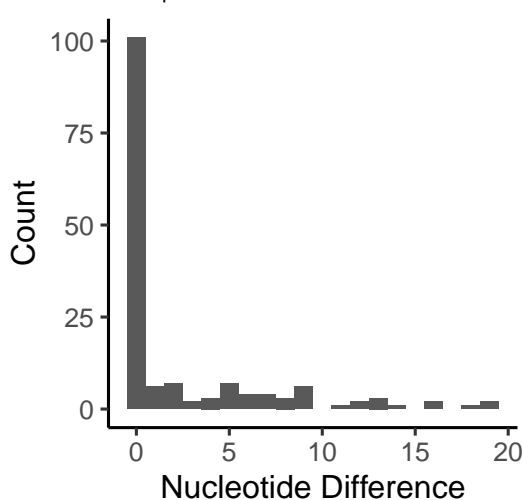
### IGHV1-8\*01

336 sequences assigned  
195 (58%) exact matches, in which:  
195 unique CDR3  
6 unique J



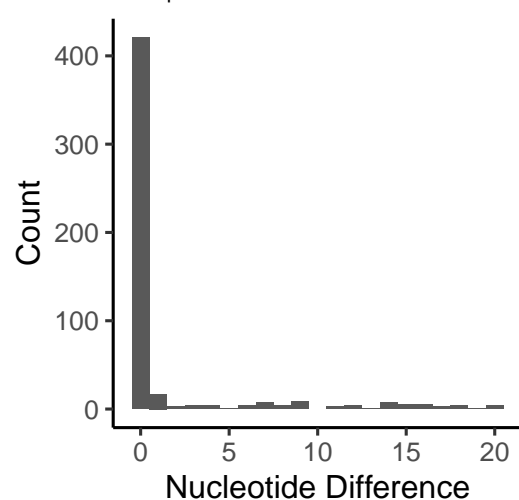
### IGHV1-24\*01

178 sequences assigned  
101 (56.7%) exact matches, in which:  
101 unique CDR3  
6 unique J



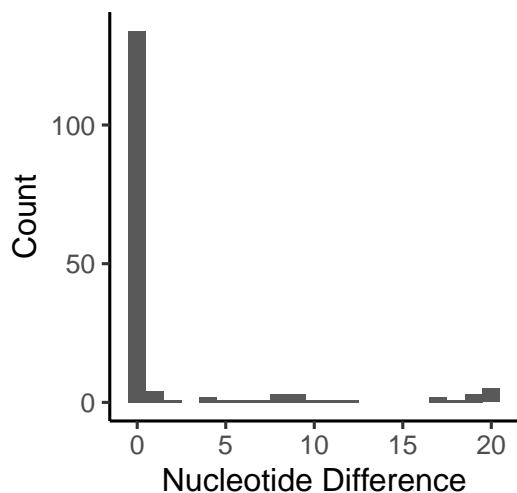
### IGHV1-69\*01\_12\_13

538 sequences assigned  
421 (78.3%) exact matches, in which:  
421 unique CDR3  
6 unique J



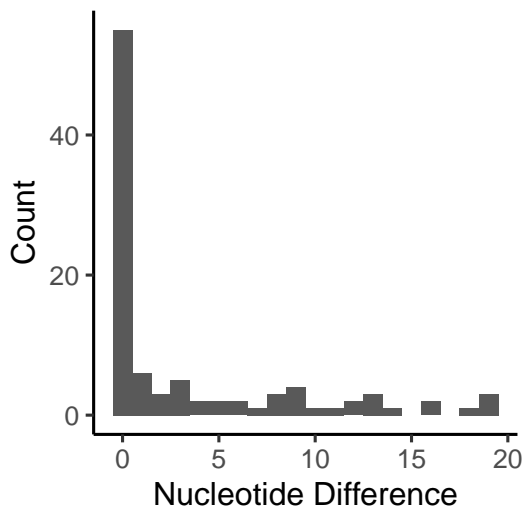
### IGHV1–69\*06\_14

186 sequences assigned  
134 (72%) exact matches, in which:  
134 unique CDR3  
5 unique J



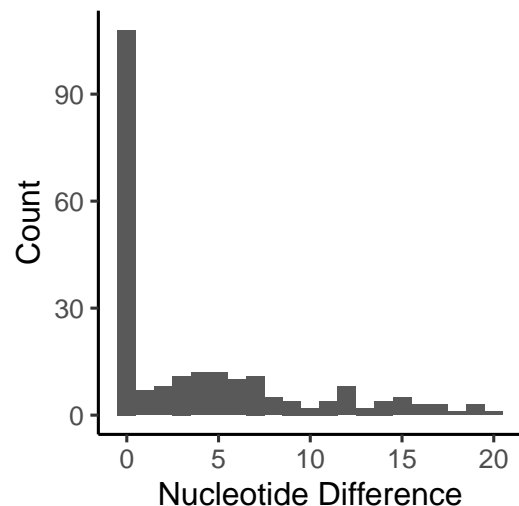
### IGHV2–70\*01

106 sequences assigned  
55 (51.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



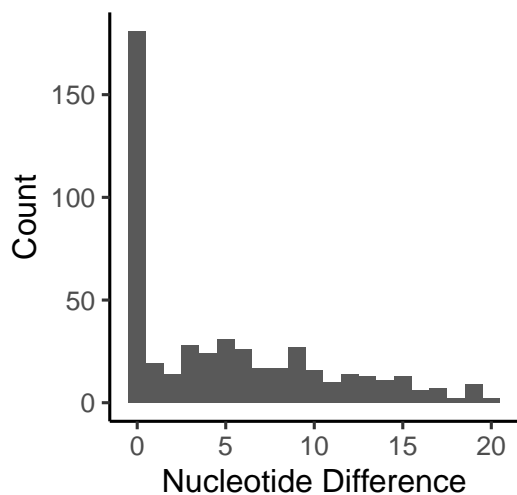
### IGHV3–9\*01

238 sequences assigned  
108 (45.4%) exact matches, in which:  
108 unique CDR3  
5 unique J



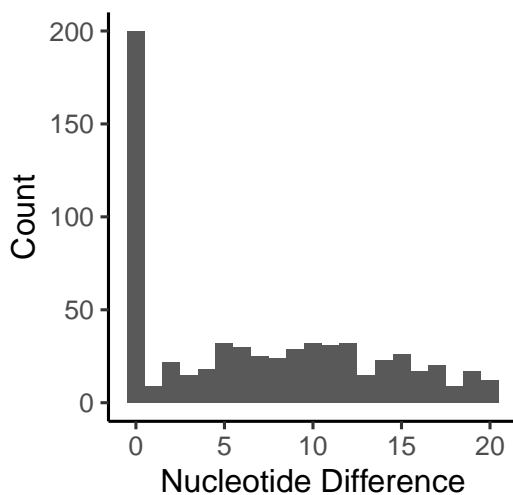
### IGHV2–5\*02

518 sequences assigned  
181 (34.9%) exact matches, in which:  
180 unique CDR3  
6 unique J



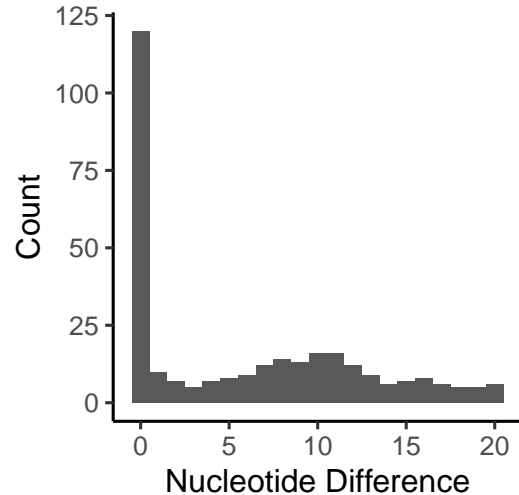
### IGHV3–7\*01

699 sequences assigned  
200 (28.6%) exact matches, in which:  
198 unique CDR3  
6 unique J



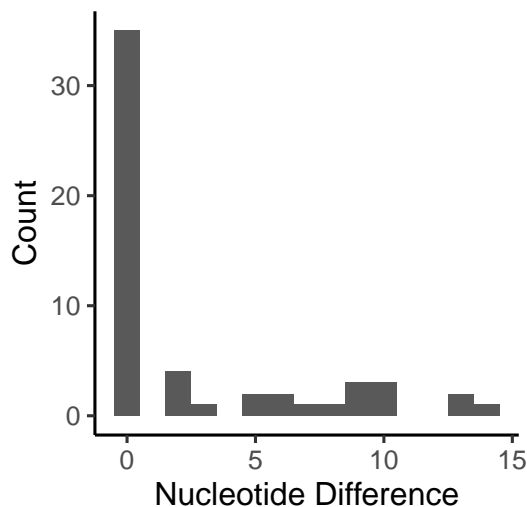
### IGHV3–11\*01

326 sequences assigned  
120 (36.8%) exact matches, in which:  
119 unique CDR3  
5 unique J



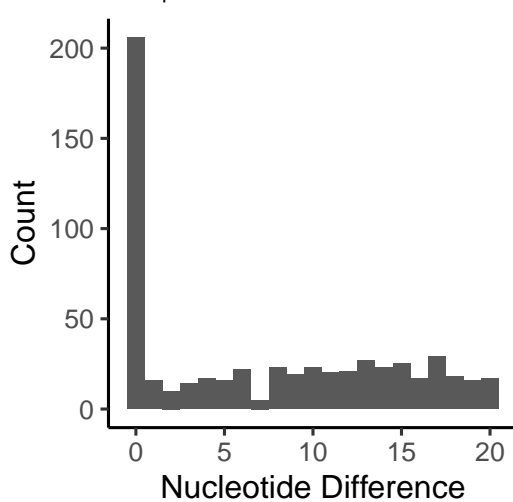
### IGHV2–26\*01

60 sequences assigned  
35 (58.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



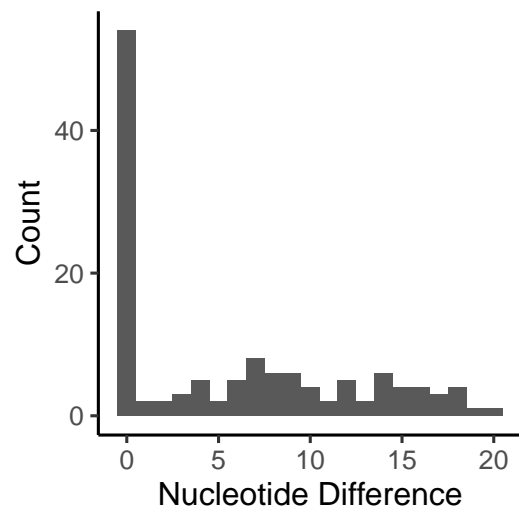
### IGHV3–7\*03

671 sequences assigned  
206 (30.7%) exact matches, in which:  
204 unique CDR3  
5 unique J



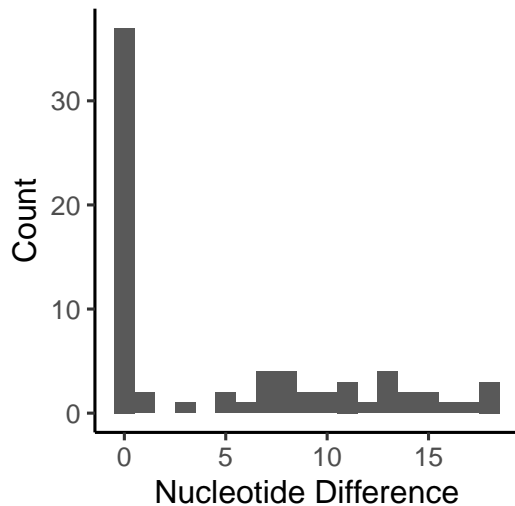
### IGHV3–11\*06

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



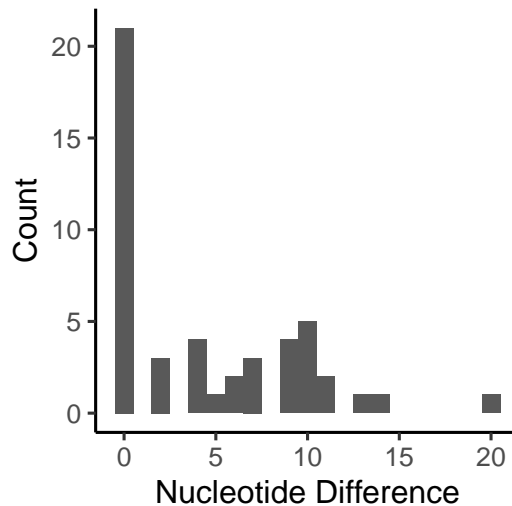
### IGHV3-13\*01

81 sequences assigned  
37 (45.7%) exact matches, in which:  
37 unique CDR3  
5 unique J



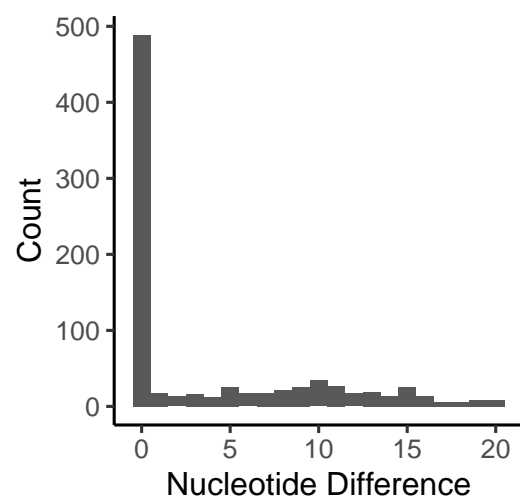
### IGHV3-20\*01\_02

48 sequences assigned  
21 (43.8%) exact matches, in which:  
21 unique CDR3  
5 unique J



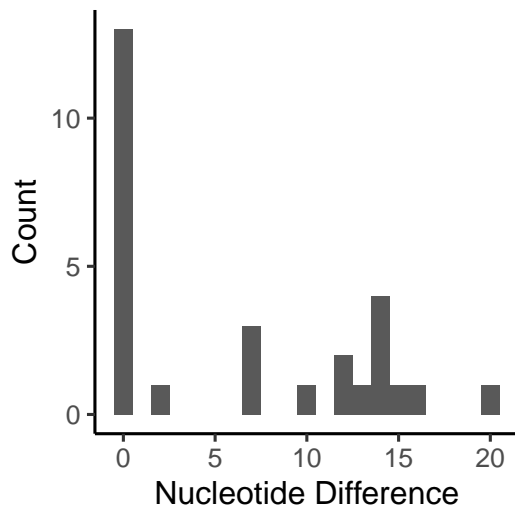
### IGHV3-30-3\*01

913 sequences assigned  
489 (53.6%) exact matches, in which:  
486 unique CDR3  
6 unique J



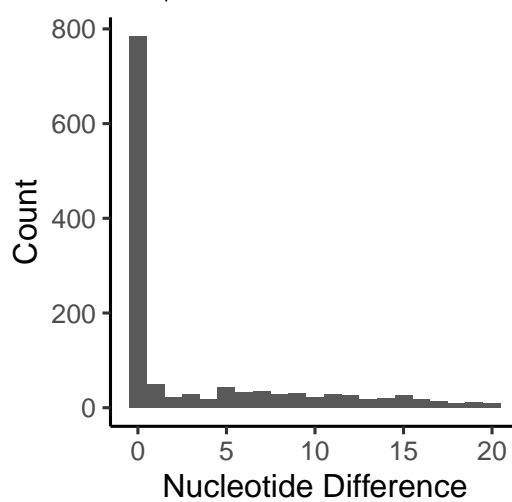
### IGHV3-13\*05

30 sequences assigned  
13 (43.3%) exact matches, in which:  
13 unique CDR3  
4 unique J



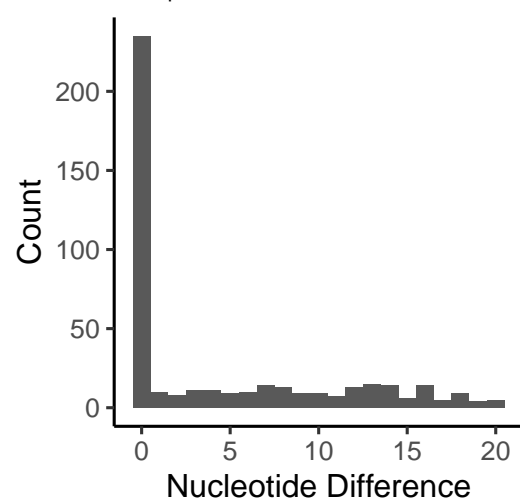
### IGHV3-21\*01\_02

1382 sequences assigned  
785 (56.8%) exact matches, in which:  
777 unique CDR3  
6 unique J



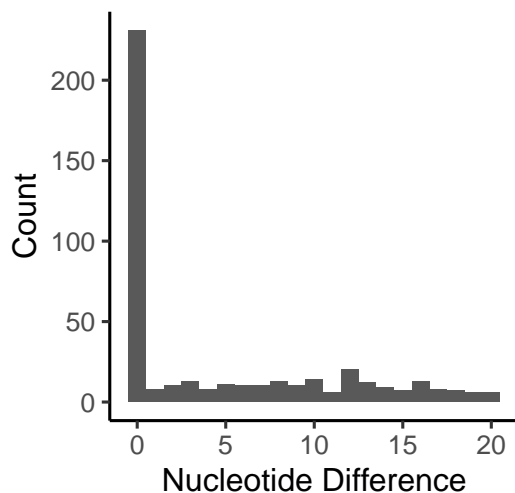
### IGHV3-33\*01

463 sequences assigned  
235 (50.8%) exact matches, in which:  
235 unique CDR3  
6 unique J



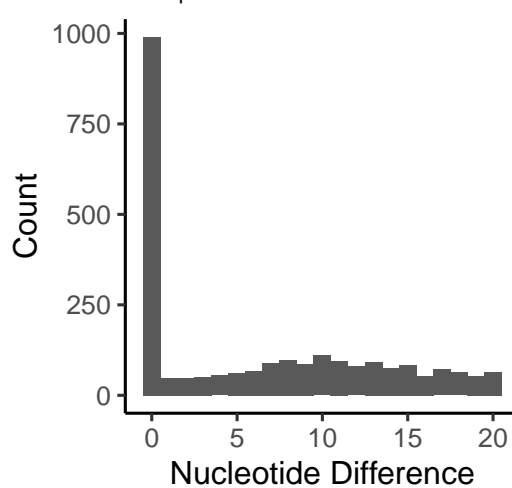
### IGHV3-15\*01\_02

489 sequences assigned  
231 (47.2%) exact matches, in which:  
231 unique CDR3  
6 unique J



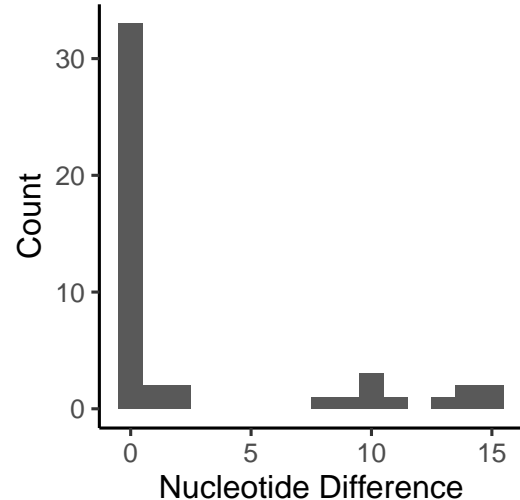
### IGHV3-23\*01\_04

2788 sequences assigned  
990 (35.5%) exact matches, in which:  
984 unique CDR3  
6 unique J



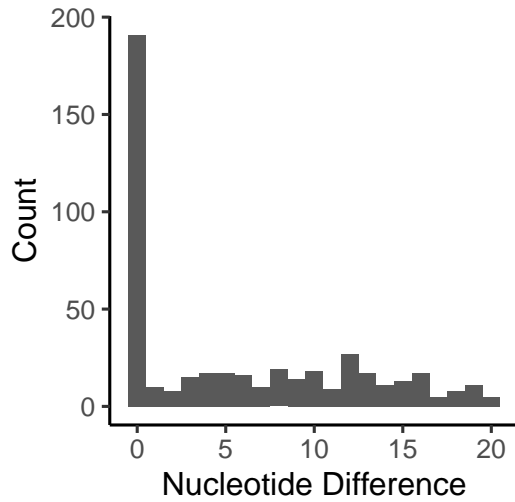
### IGHV3-43\*01

53 sequences assigned  
33 (62.3%) exact matches, in which:  
32 unique CDR3  
4 unique J



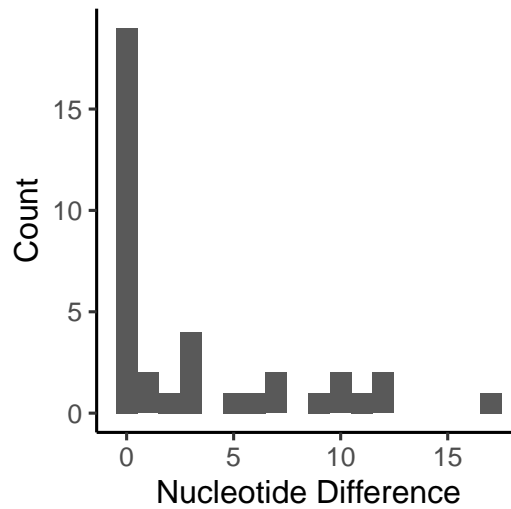
### IGHV3-48\*02

495 sequences assigned  
191 (38.6%) exact matches, in which:  
189 unique CDR3  
6 unique J



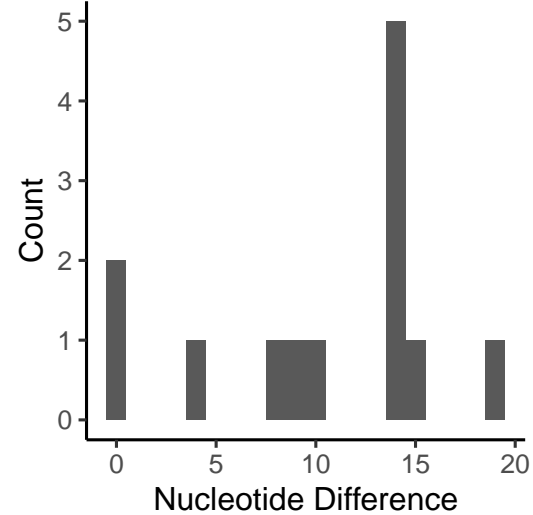
### IGHV3-49\*03\_05

45 sequences assigned  
19 (42.2%) exact matches, in which:  
19 unique CDR3  
4 unique J



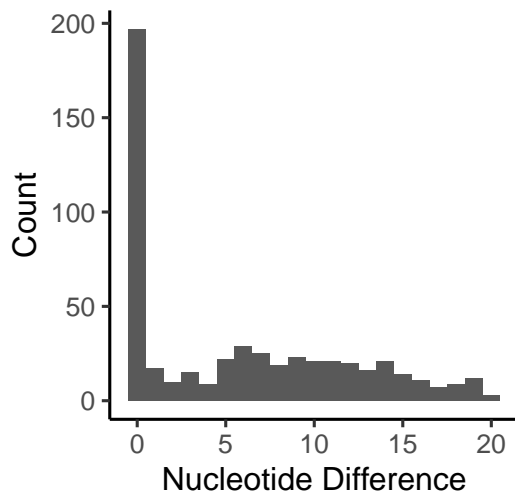
### IGHV3-64\*02\_07

14 sequences assigned  
2 (14.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



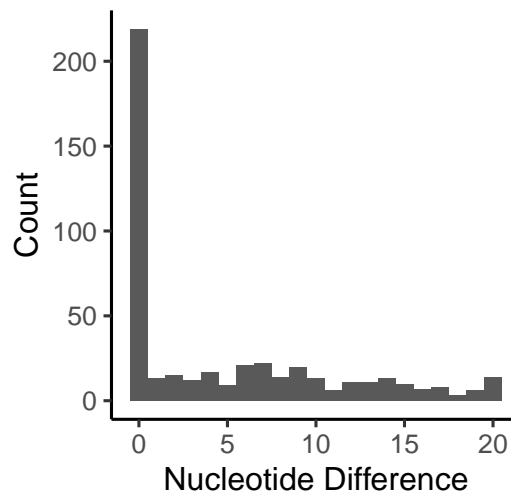
### IGHV3-48\*03

566 sequences assigned  
197 (34.8%) exact matches, in which:  
195 unique CDR3  
6 unique J



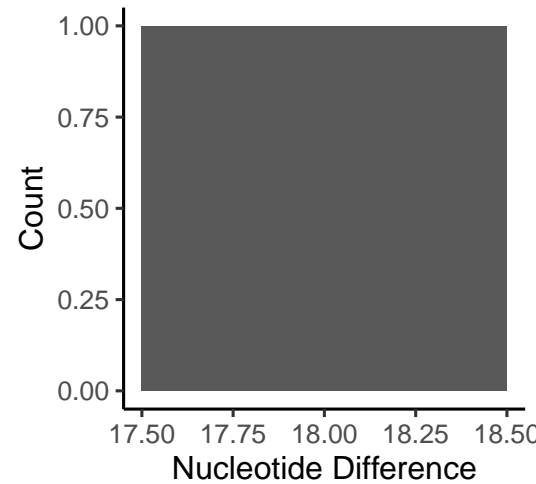
### IGHV3-53\*01\_02

517 sequences assigned  
219 (42.4%) exact matches, in which:  
219 unique CDR3  
6 unique J



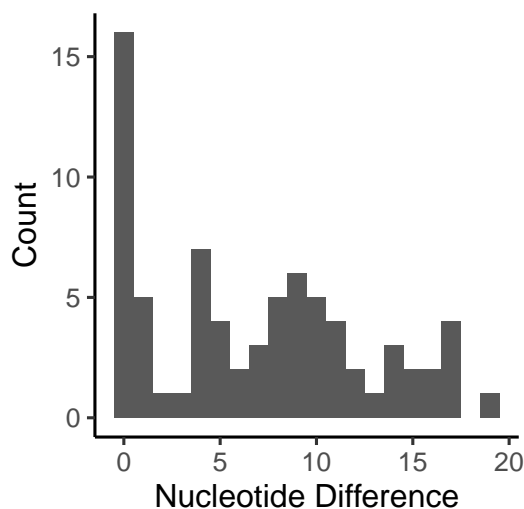
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



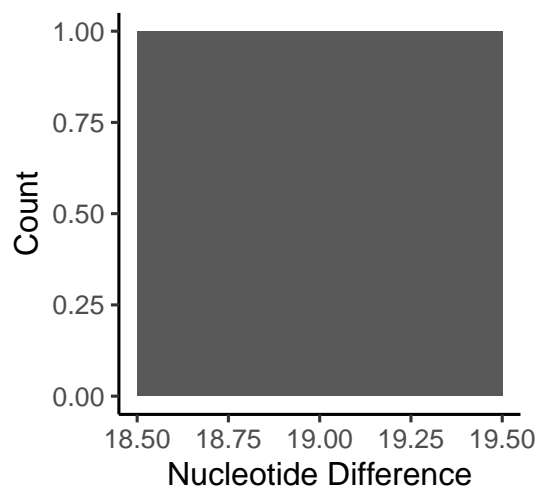
### IGHV3-49\*04

91 sequences assigned  
16 (17.6%) exact matches, in which:  
16 unique CDR3  
4 unique J



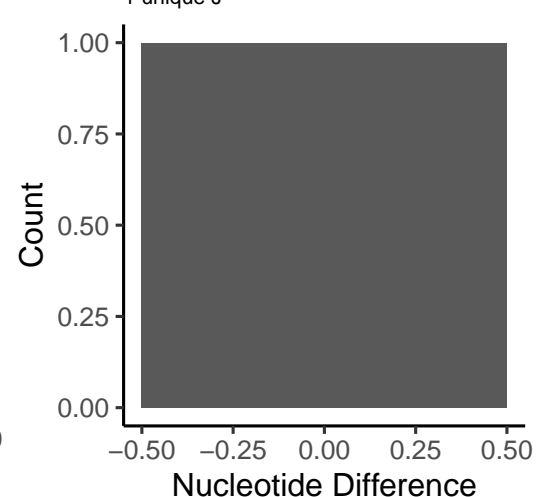
### IGHV3-64\*05

1 sequences assigned  
No exact matches.



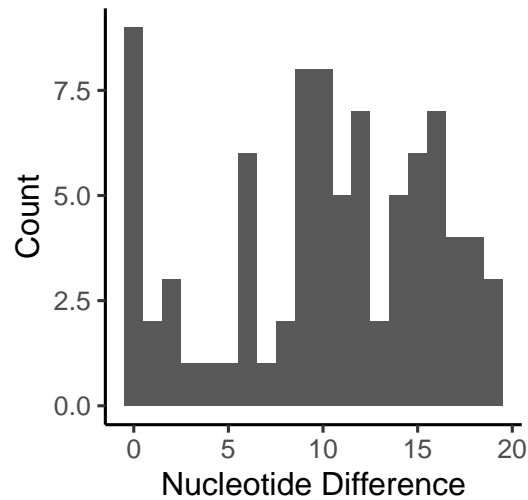
### IGHV3-69-1\*02

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



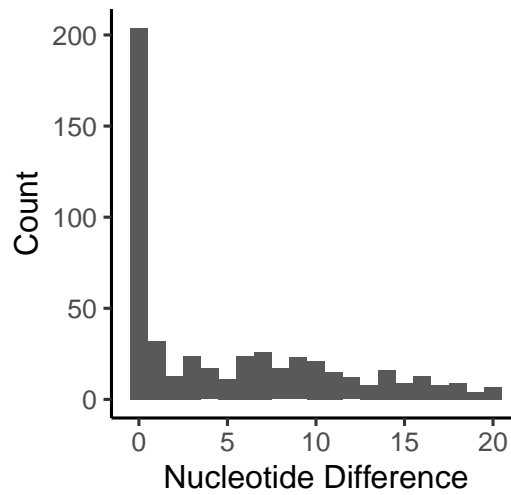
### IGHV3-72\*01

96 sequences assigned  
9 (9.4%) exact matches, in which:  
9 unique CDR3  
3 unique J



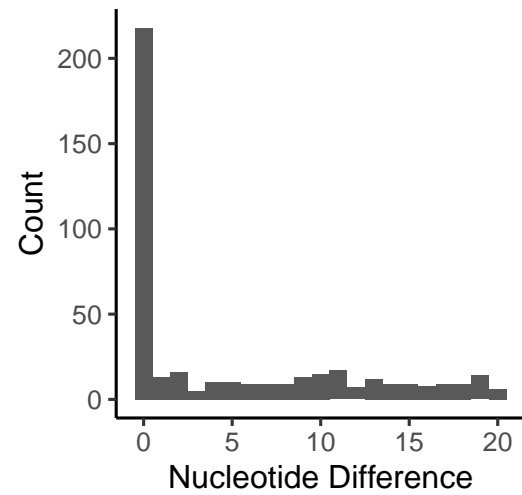
### IGHV3-74\*01\_02

557 sequences assigned  
204 (36.6%) exact matches, in which:  
200 unique CDR3  
6 unique J



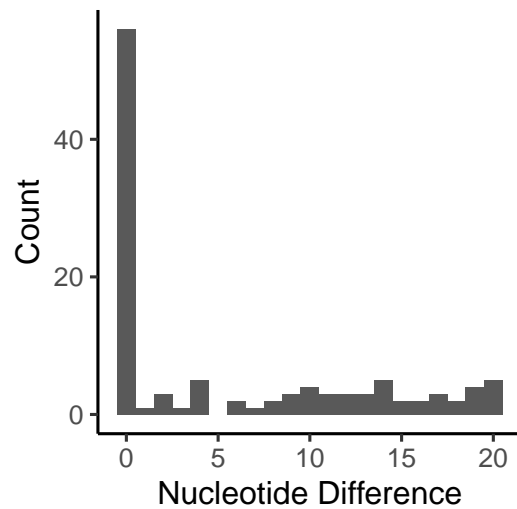
### IGHV4-4\*02\_03

504 sequences assigned  
218 (43.3%) exact matches, in which:  
218 unique CDR3  
6 unique J



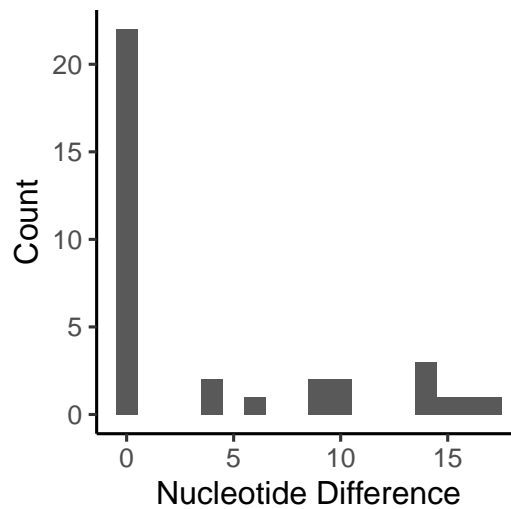
### IGHV3-73\*01\_02

117 sequences assigned  
56 (47.9%) exact matches, in which:  
56 unique CDR3  
5 unique J



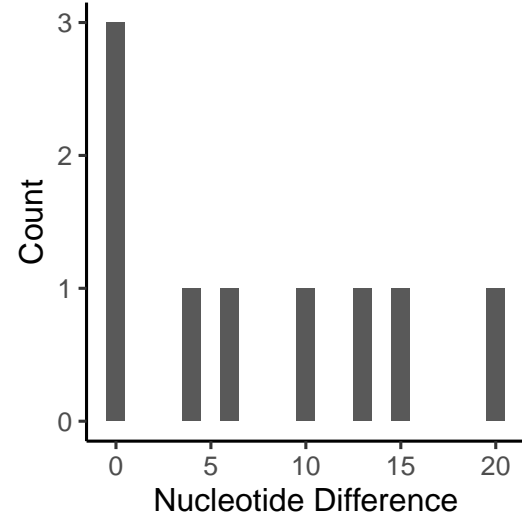
### IGHV3-43D\*04

37 sequences assigned  
22 (59.5%) exact matches, in which:  
22 unique CDR3  
4 unique J



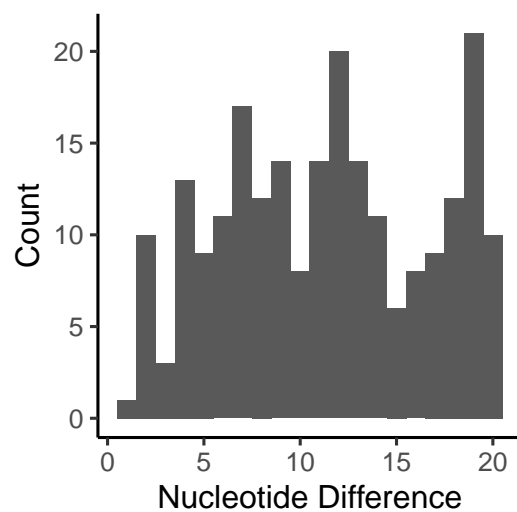
### IGHV4-28\*01\_07

10 sequences assigned  
3 (30%) exact matches, in which:  
3 unique CDR3  
2 unique J



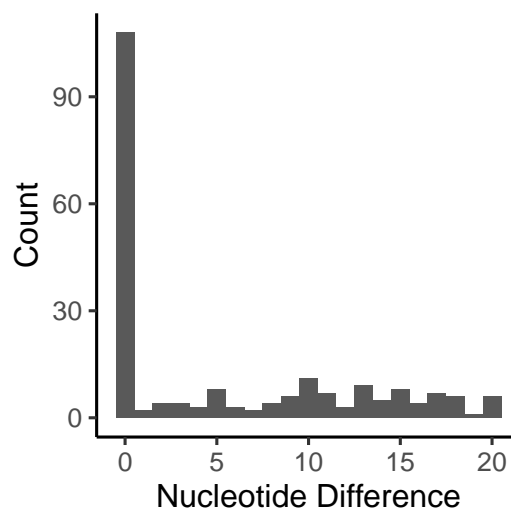
### IGHV3-74\*03

258 sequences assigned  
No exact matches.



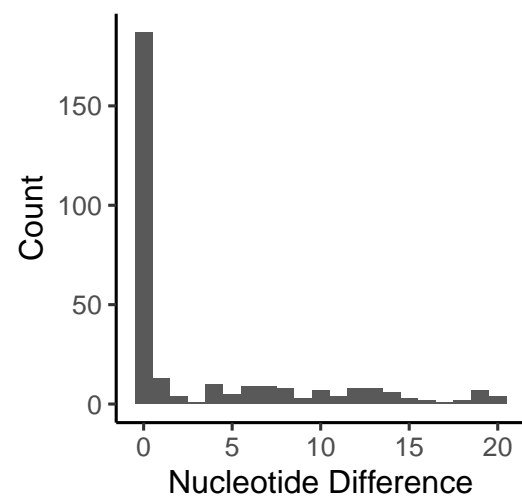
### IGHV3-64D\*06

234 sequences assigned  
108 (46.2%) exact matches, in which:  
108 unique CDR3  
6 unique J



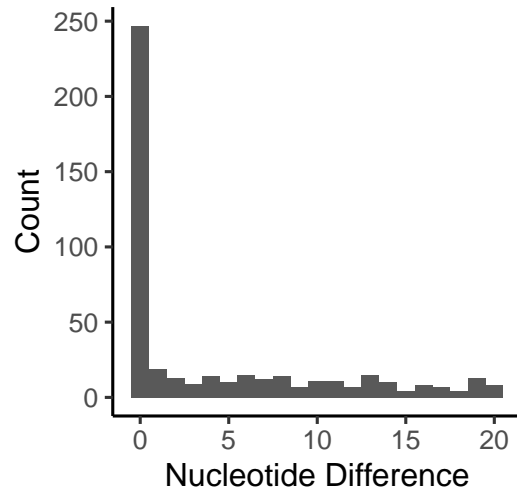
### IGHV4-30-2\*01

331 sequences assigned  
187 (56.5%) exact matches, in which:  
187 unique CDR3  
6 unique J



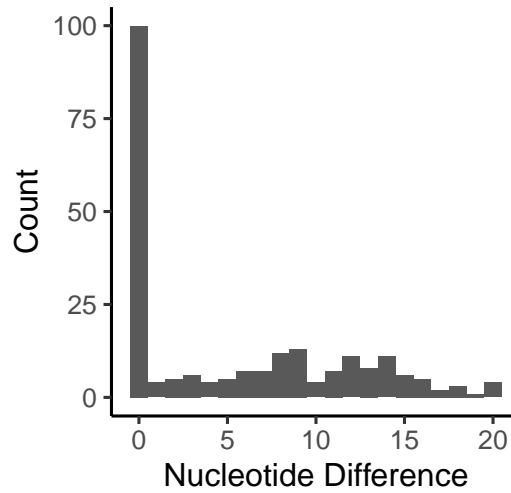
### IGHV4-30-4\*01

507 sequences assigned  
247 (48.7%) exact matches, in which:  
246 unique CDR3  
5 unique J



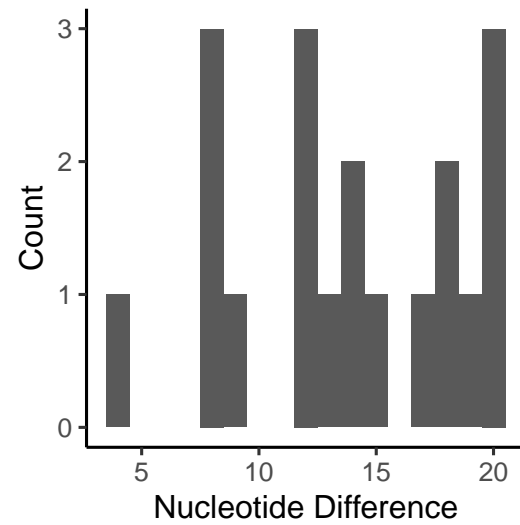
### IGHV4-38-2\*01

241 sequences assigned  
100 (41.5%) exact matches, in which:  
99 unique CDR3  
5 unique J



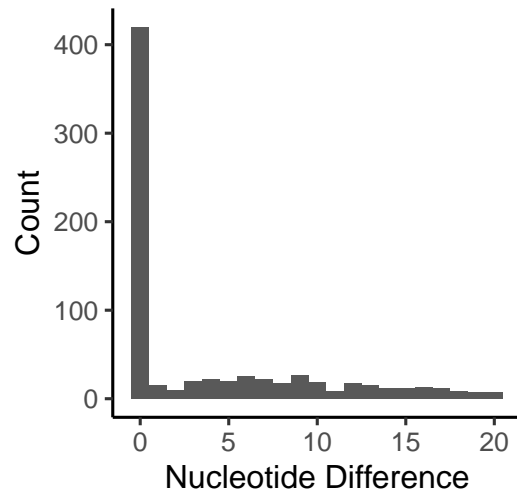
### IGHV4-59\*02

28 sequences assigned  
No exact matches.



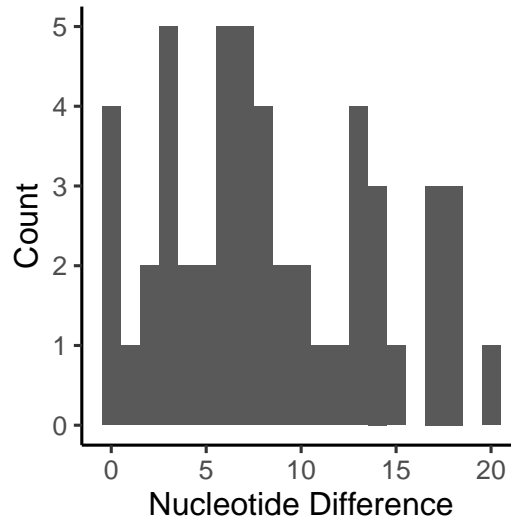
### IGHV4-31\*02

801 sequences assigned  
420 (52.4%) exact matches, in which:  
418 unique CDR3  
6 unique J



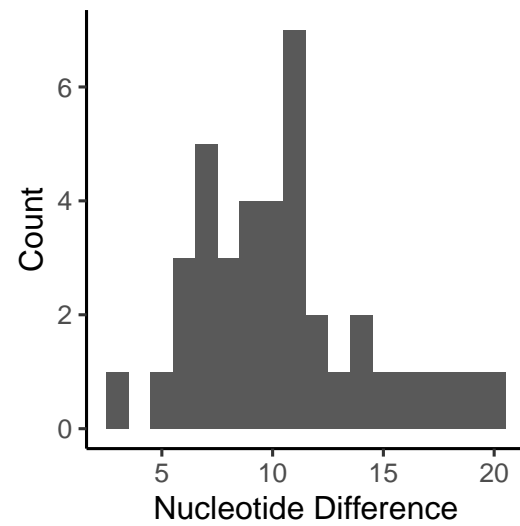
### IGHV4-38-2\*02

70 sequences assigned  
4 (5.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



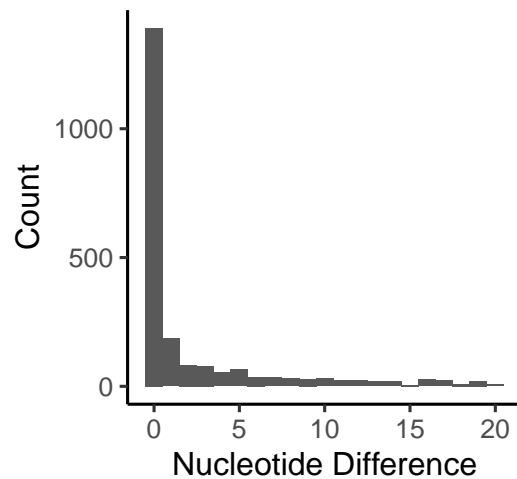
### IGHV4-59\*11

41 sequences assigned  
No exact matches.



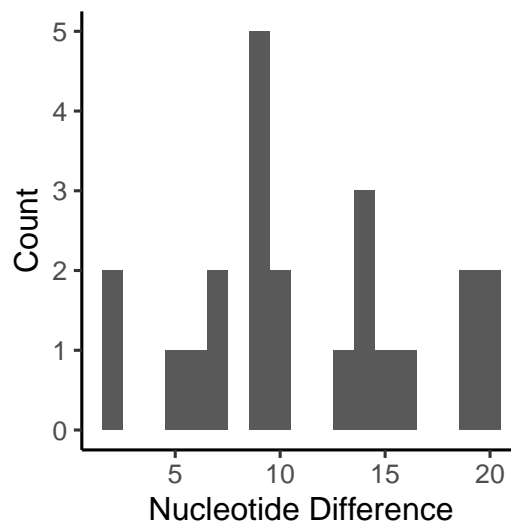
### IGHV4-34\*01\_02

2420 sequences assigned  
1391 (57.5%) exact matches, in which:  
1374 unique CDR3  
6 unique J



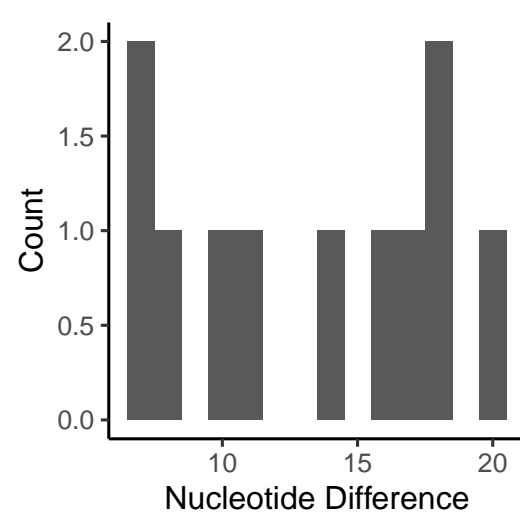
### IGHV4-39\*02

39 sequences assigned  
No exact matches.



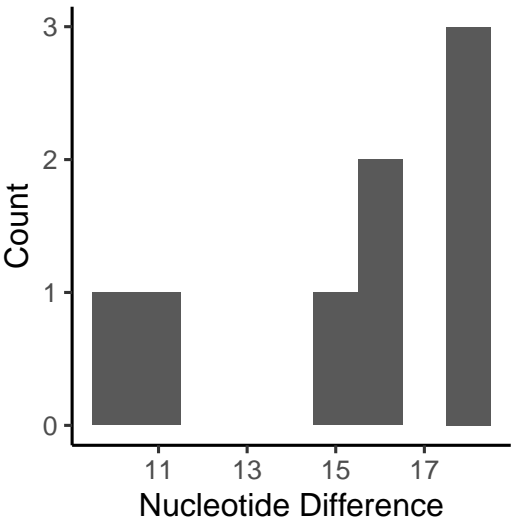
### IGHV4-59\*12

16 sequences assigned  
No exact matches.



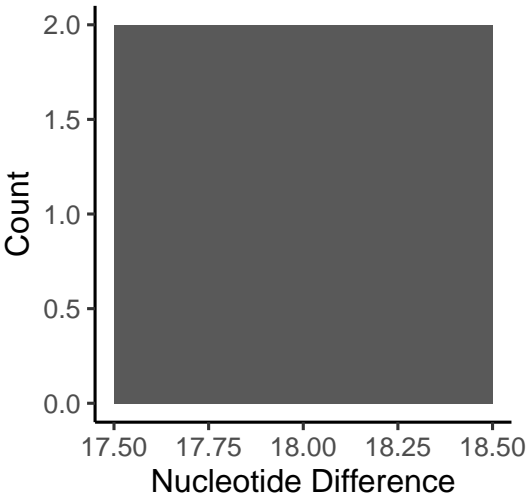
IGHV4-59\*13

12 sequences assigned  
No exact matches.



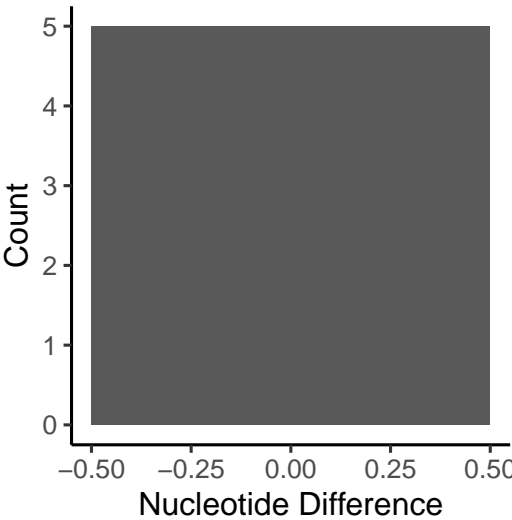
IGHV4/OR15-8\*02

6 sequences assigned  
No exact matches.



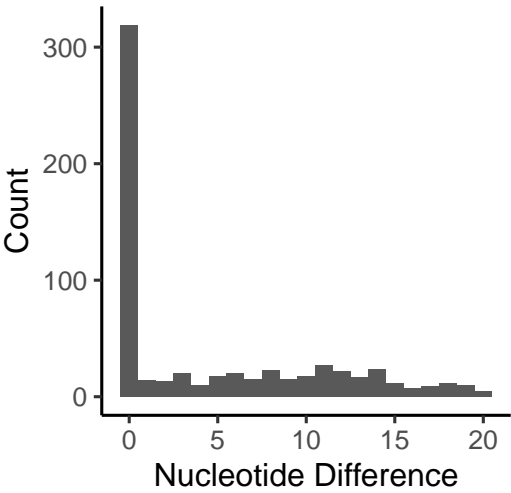
IGHV7-4-1\*01

5 sequences assigned  
5 (100%) exact matches, in which:  
5 unique CDR3  
2 unique J



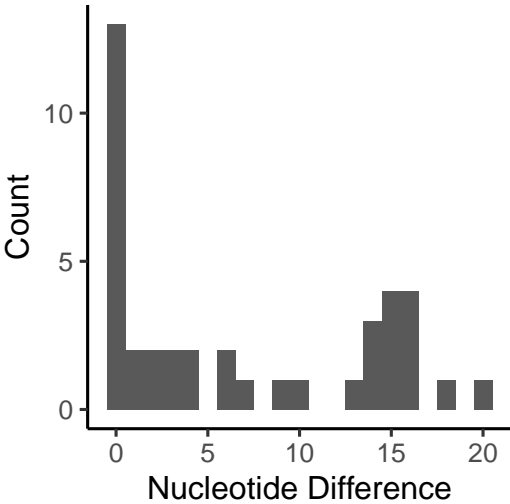
IGHV4-61\*01

729 sequences assigned  
319 (43.8%) exact matches, in which:  
319 unique CDR3  
6 unique J



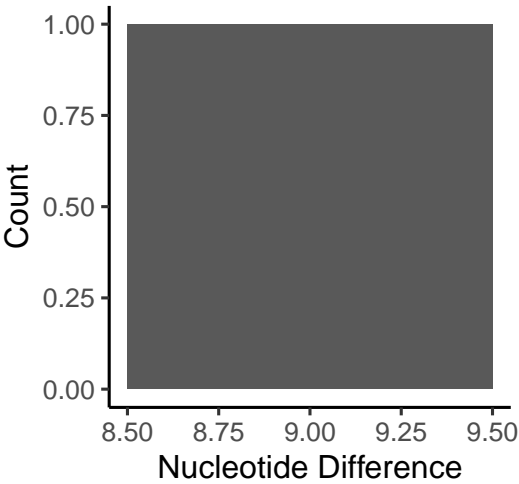
IGHV5-10-1\*01\_03

45 sequences assigned  
13 (28.9%) exact matches, in which:  
13 unique CDR3  
4 unique J



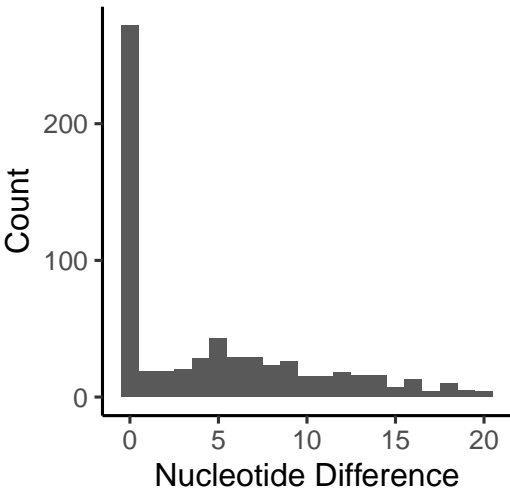
IGHV4/OR15-8\*01

3 sequences assigned  
No exact matches.



IGHV6-1\*01\_02

675 sequences assigned  
272 (40.3%) exact matches, in which:  
272 unique CDR3  
6 unique J







[illegible]