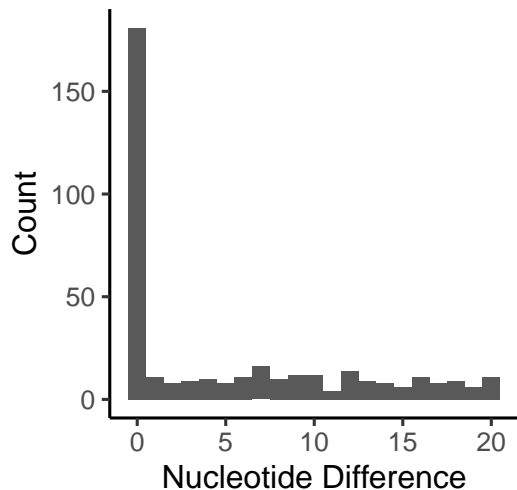


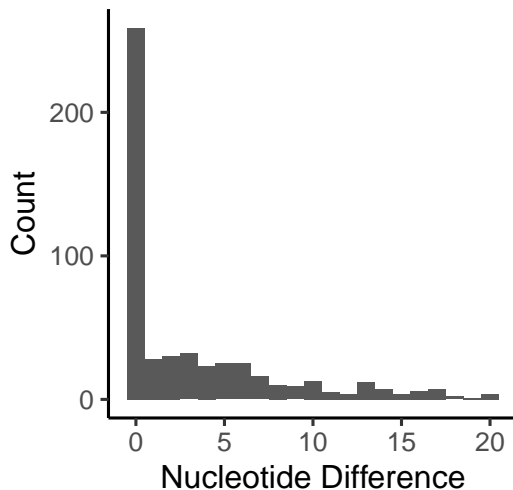
### IGHV1-2\*02

403 sequences assigned  
181 (44.9%) exact matches, in which:  
181 unique CDR3  
6 unique J



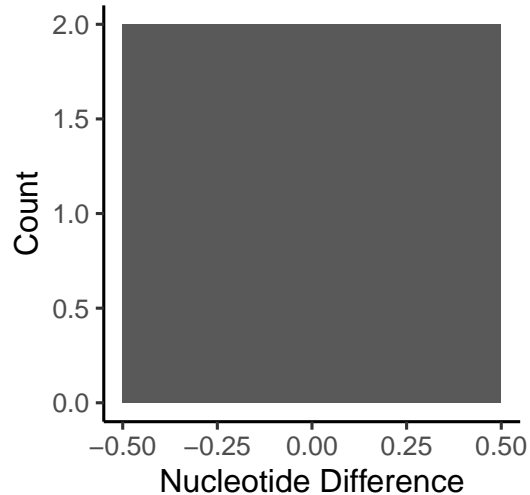
### IGHV1-8\*01

554 sequences assigned  
259 (46.8%) exact matches, in which:  
258 unique CDR3  
6 unique J



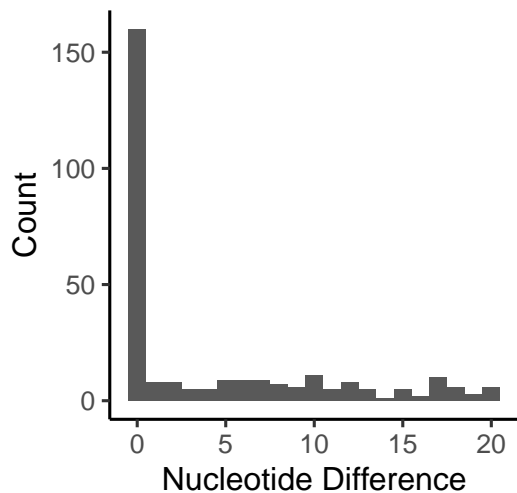
### IGHV1-45\*02

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



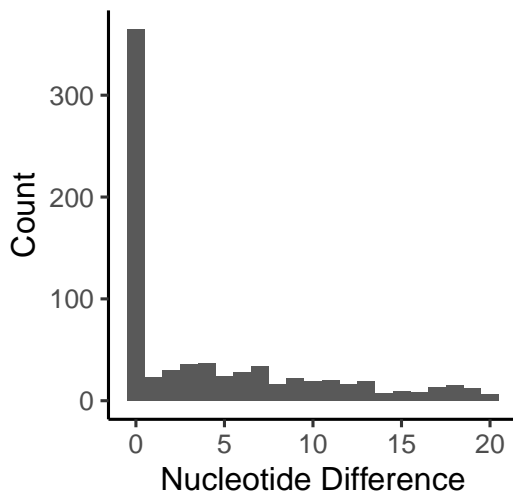
### IGHV1-2\*06

351 sequences assigned  
160 (45.6%) exact matches, in which:  
160 unique CDR3  
6 unique J



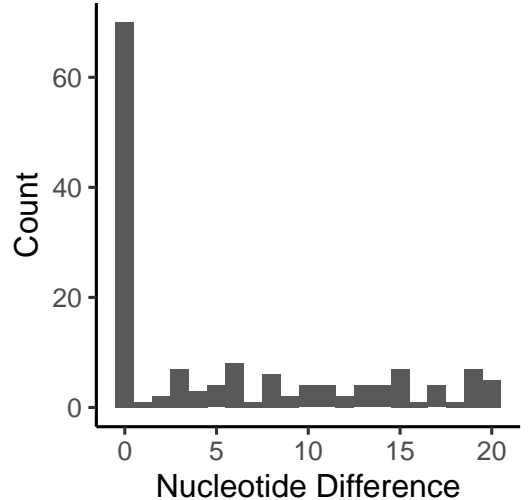
### IGHV1-18\*01

842 sequences assigned  
365 (43.3%) exact matches, in which:  
364 unique CDR3  
7 unique J



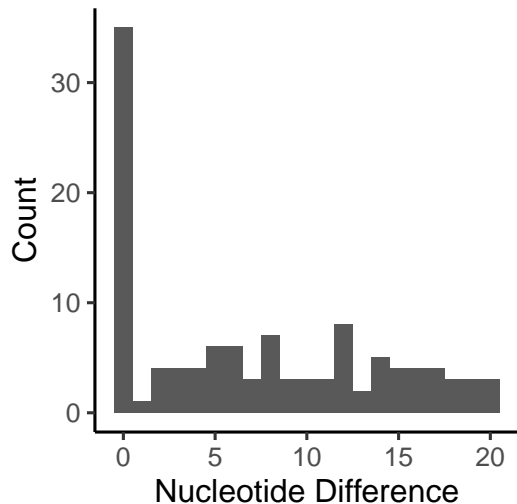
### IGHV1-46\*01

178 sequences assigned  
70 (39.3%) exact matches, in which:  
68 unique CDR3  
6 unique J



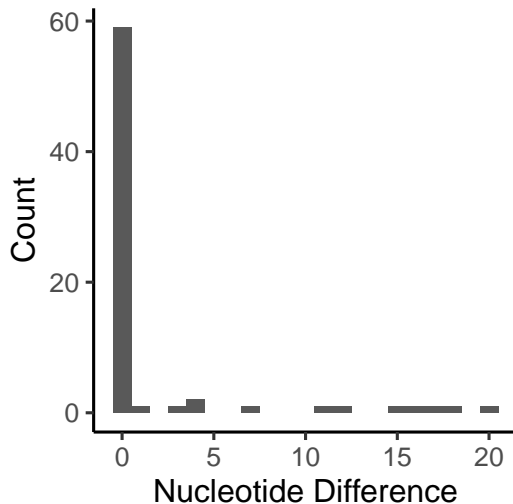
### IGHV1-3\*01\_05

135 sequences assigned  
35 (25.9%) exact matches, in which:  
34 unique CDR3  
4 unique J



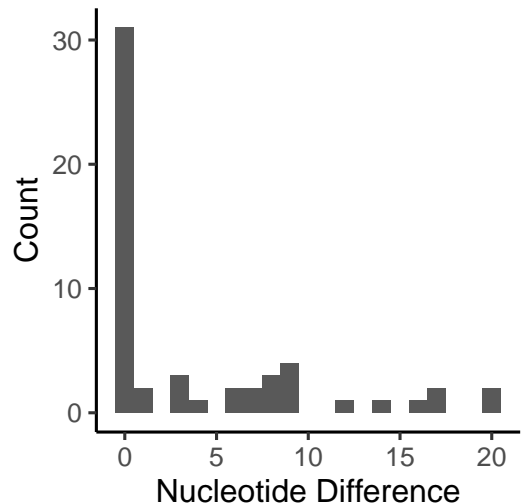
### IGHV1-24\*01

74 sequences assigned  
59 (79.7%) exact matches, in which:  
59 unique CDR3  
7 unique J



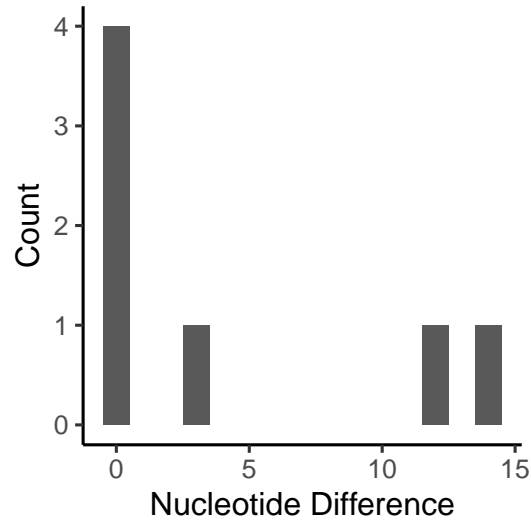
### IGHV1-46\*03

60 sequences assigned  
31 (51.7%) exact matches, in which:  
31 unique CDR3  
5 unique J



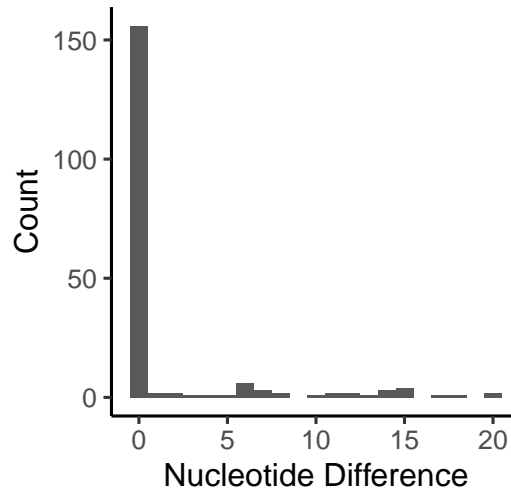
### IGHV1-58\*02

7 sequences assigned  
4 (57.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



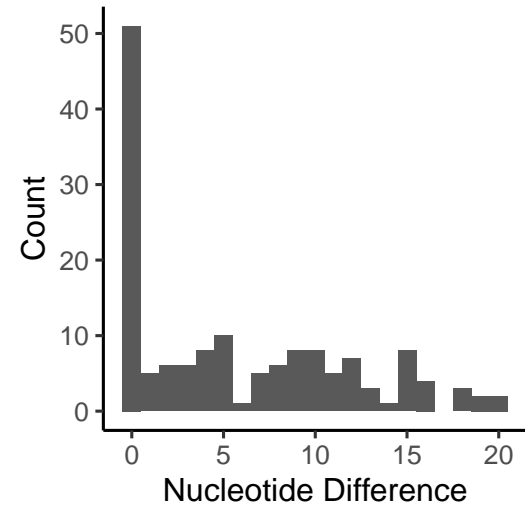
### IGHV1-69\*01\_12\_13

203 sequences assigned  
156 (76.8%) exact matches, in which:  
155 unique CDR3  
6 unique J



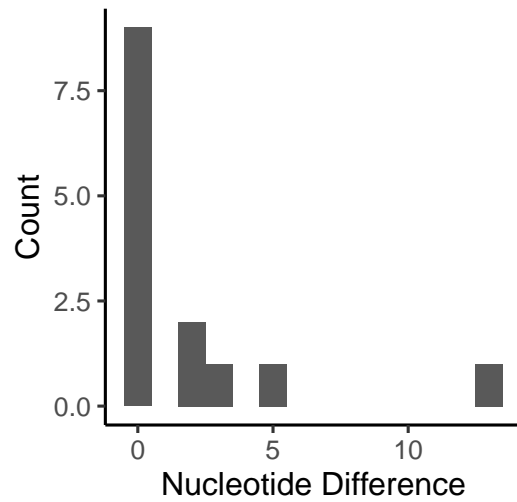
### IGHV2-5\*02

156 sequences assigned  
51 (32.7%) exact matches, in which:  
51 unique CDR3  
6 unique J



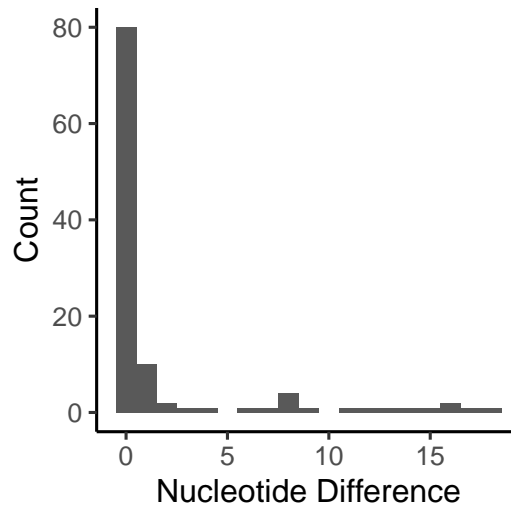
### IGHV1-58\*01\_03

14 sequences assigned  
9 (64.3%) exact matches, in which:  
9 unique CDR3  
3 unique J



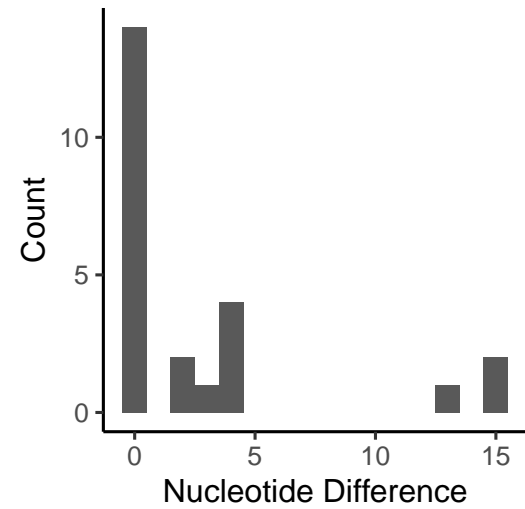
### IGHV1-69\*04\_09

117 sequences assigned  
80 (68.4%) exact matches, in which:  
80 unique CDR3  
6 unique J



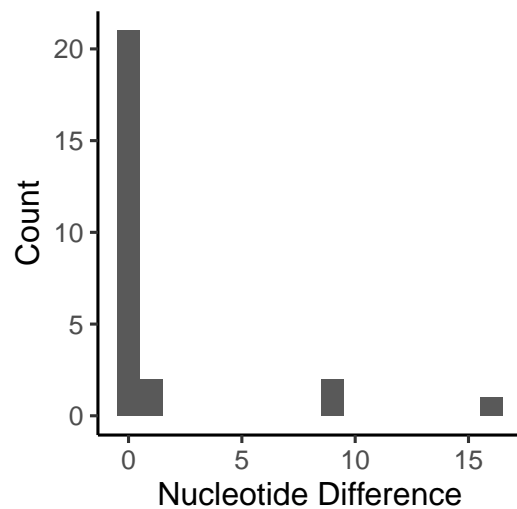
### IGHV2-26\*01

26 sequences assigned  
14 (53.8%) exact matches, in which:  
14 unique CDR3  
5 unique J



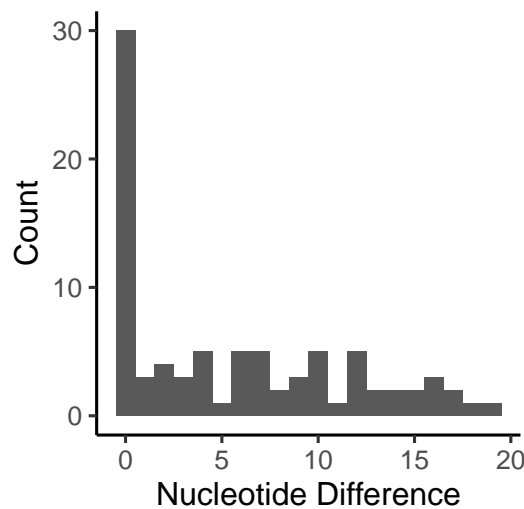
### IGHV1-69\*02

31 sequences assigned  
21 (67.7%) exact matches, in which:  
21 unique CDR3  
6 unique J



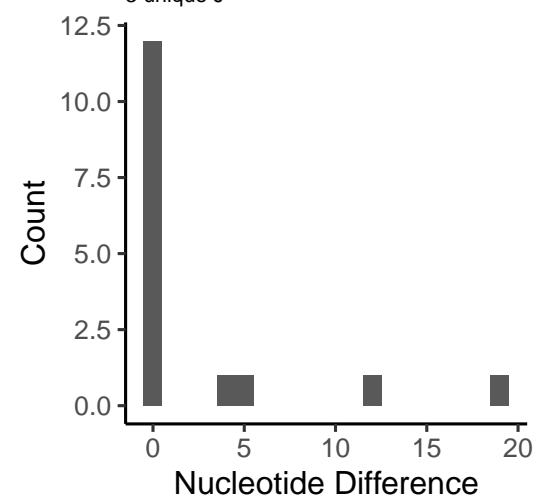
### IGHV2-5\*01

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



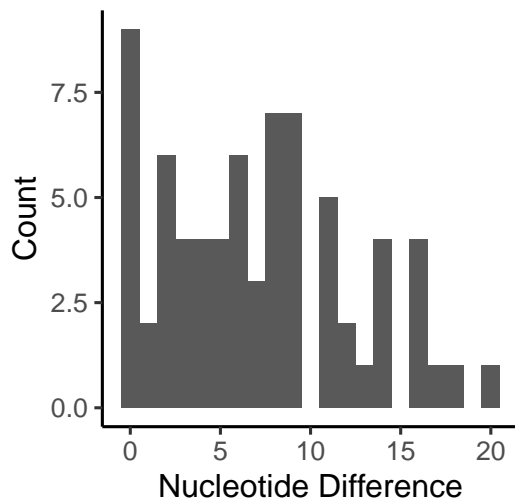
### IGHV2-70\*01

17 sequences assigned  
12 (70.6%) exact matches, in which:  
11 unique CDR3  
3 unique J



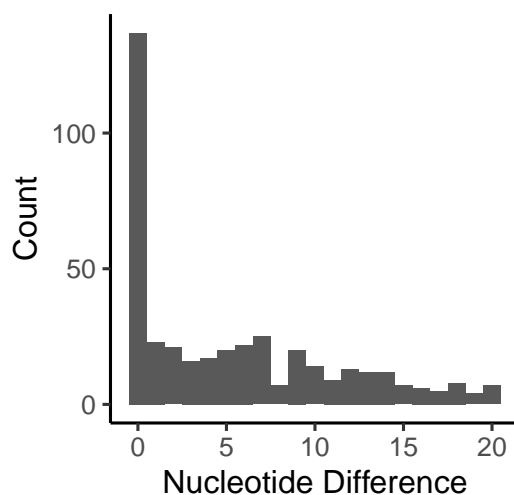
### IGHV2-70\*04

74 sequences assigned  
9 (12.2%) exact matches, in which:  
9 unique CDR3  
4 unique J



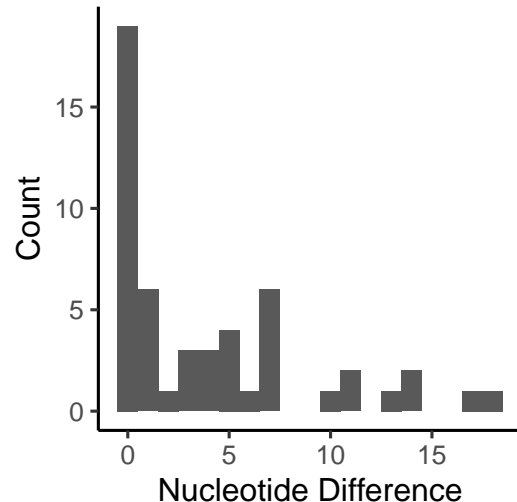
### IGHV3-11\*01

465 sequences assigned  
137 (29.5%) exact matches, in which:  
135 unique CDR3  
7 unique J



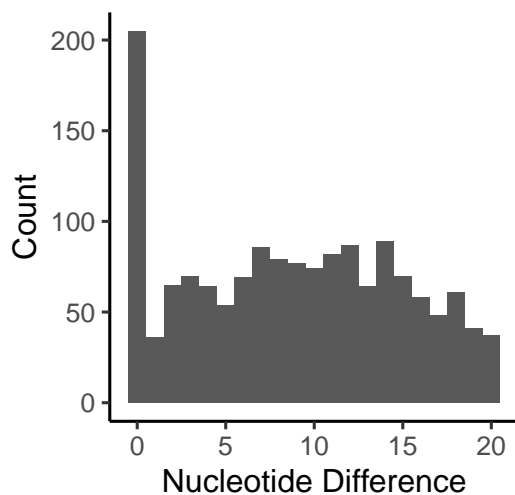
### IGHV3-20\*01\_02

53 sequences assigned  
19 (35.8%) exact matches, in which:  
19 unique CDR3  
6 unique J



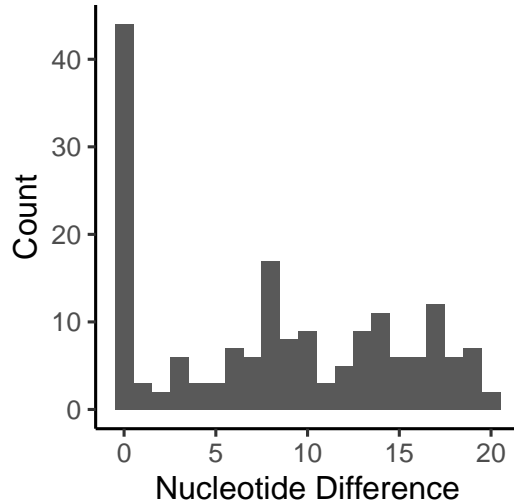
### IGHV3-7\*01

1699 sequences assigned  
205 (12.1%) exact matches, in which:  
198 unique CDR3  
7 unique J



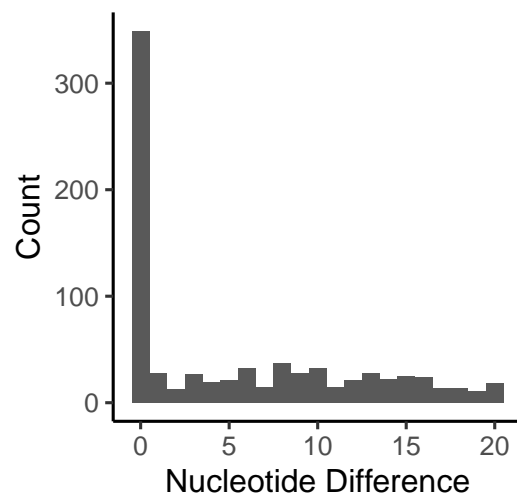
### IGHV3-13\*01

190 sequences assigned  
44 (23.2%) exact matches, in which:  
43 unique CDR3  
6 unique J



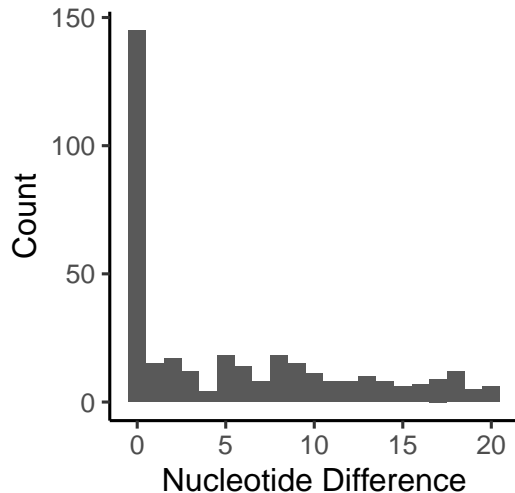
### IGHV3-21\*01\_02

871 sequences assigned  
349 (40.1%) exact matches, in which:  
342 unique CDR3  
7 unique J



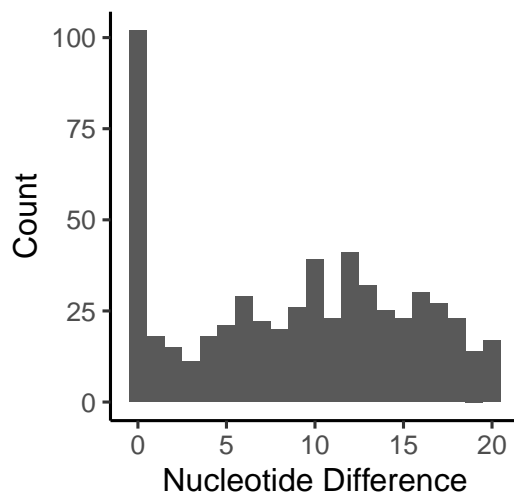
### IGHV3-9\*01

413 sequences assigned  
145 (35.1%) exact matches, in which:  
142 unique CDR3  
7 unique J



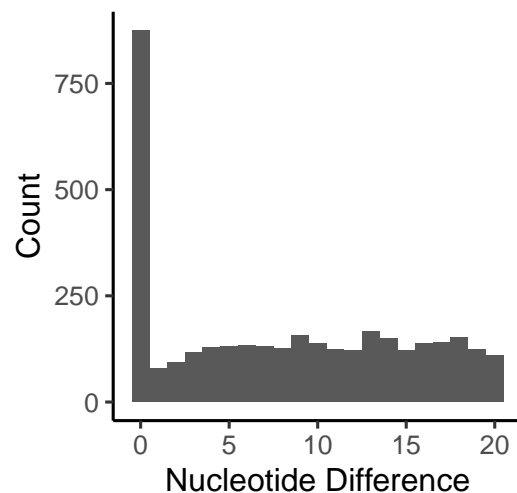
### IGHV3-15\*01\_02

656 sequences assigned  
102 (15.5%) exact matches, in which:  
100 unique CDR3  
7 unique J



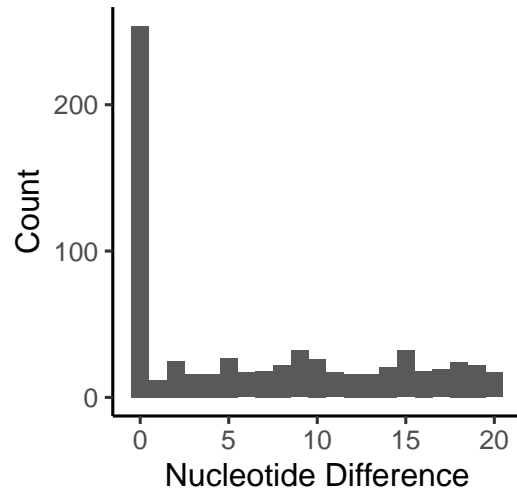
### IGHV3-23\*01\_04

4210 sequences assigned  
875 (20.8%) exact matches, in which:  
843 unique CDR3  
7 unique J



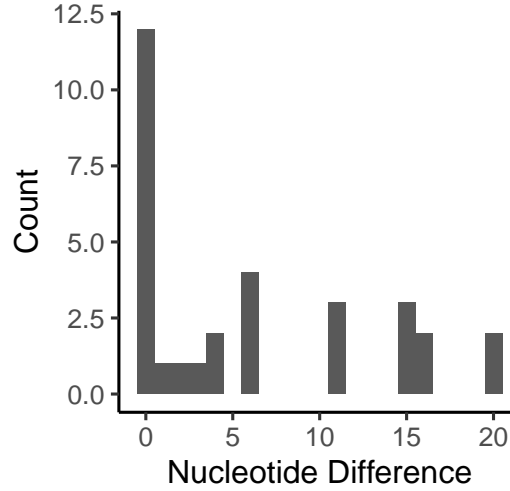
### IGHV3-30-3\*01

833 sequences assigned  
254 (30.5%) exact matches, in which:  
254 unique CDR3  
7 unique J



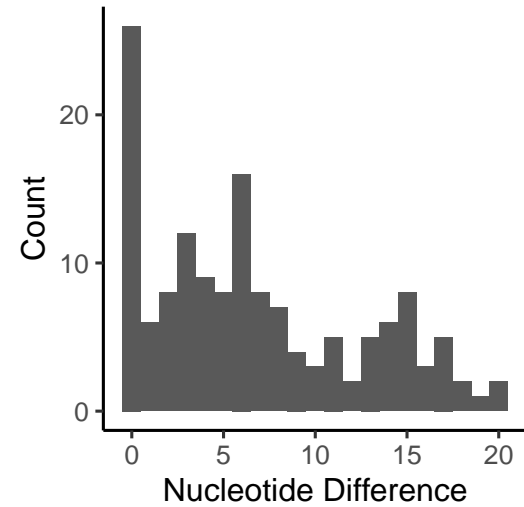
### IGHV3-43\*01

41 sequences assigned  
12 (29.3%) exact matches, in which:  
12 unique CDR3  
4 unique J



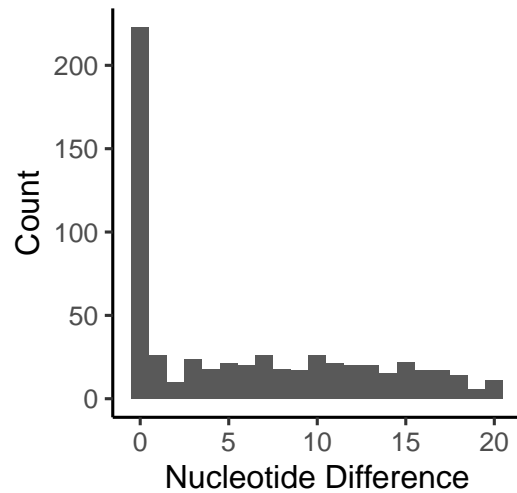
### IGHV3-49\*03\_05

169 sequences assigned  
26 (15.4%) exact matches, in which:  
26 unique CDR3  
5 unique J



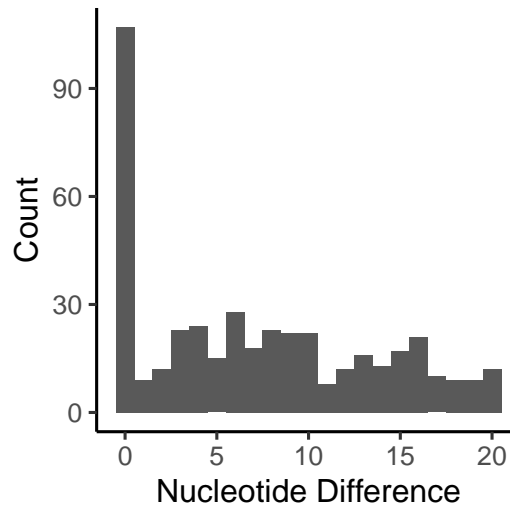
### IGHV3-30\*18

674 sequences assigned  
223 (33.1%) exact matches, in which:  
217 unique CDR3  
7 unique J



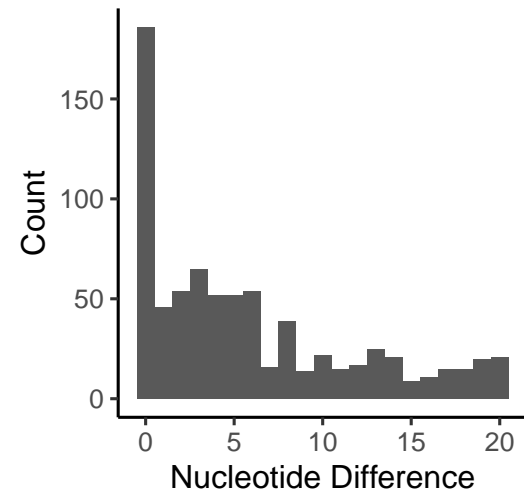
### IGHV3-48\*01

480 sequences assigned  
107 (22.3%) exact matches, in which:  
98 unique CDR3  
6 unique J



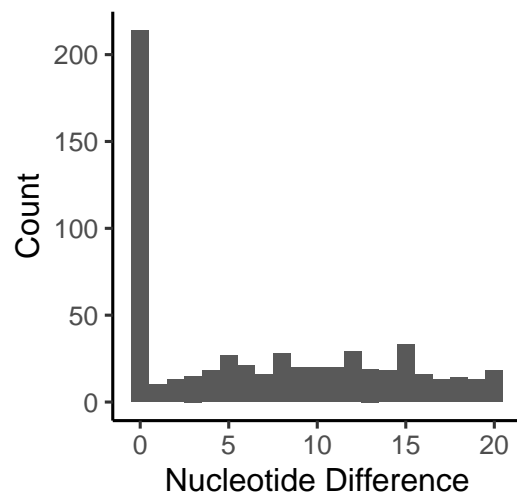
### IGHV3-53\*01\_02

854 sequences assigned  
186 (21.8%) exact matches, in which:  
176 unique CDR3  
6 unique J



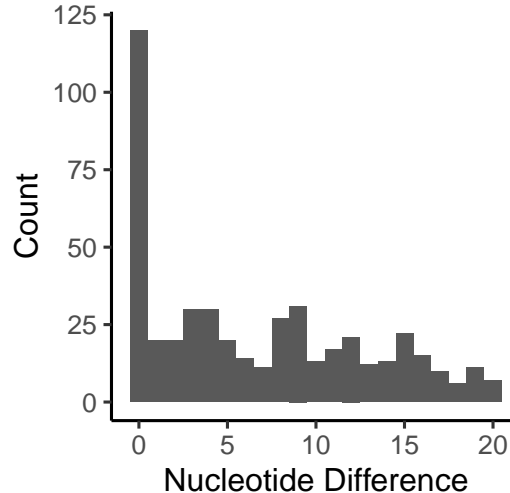
### IGHV3-33\*01

693 sequences assigned  
214 (30.9%) exact matches, in which:  
210 unique CDR3  
7 unique J



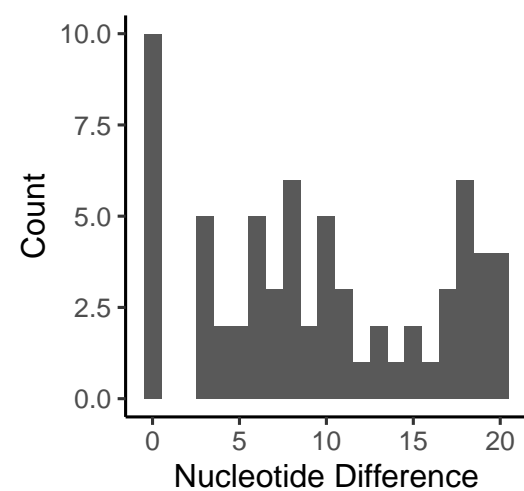
### IGHV3-48\*02

526 sequences assigned  
120 (22.8%) exact matches, in which:  
111 unique CDR3  
5 unique J



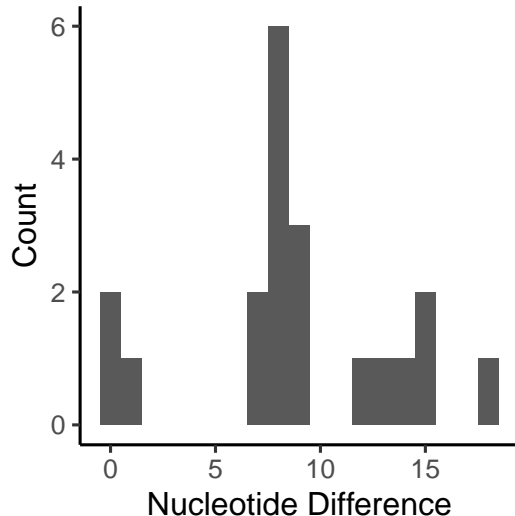
### IGHV3-64\*01

68 sequences assigned  
10 (14.7%) exact matches, in which:  
9 unique CDR3  
3 unique J



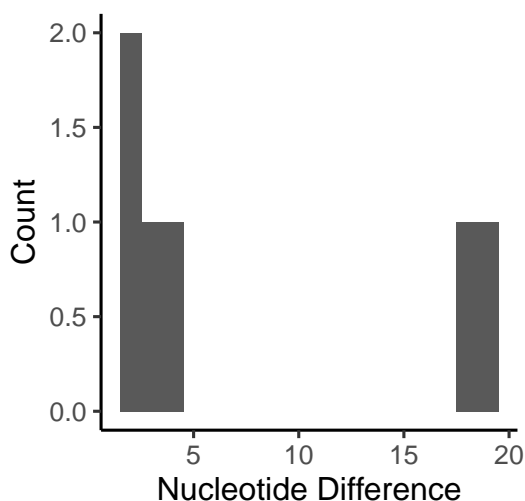
### IGHV3-64\*02\_07

22 sequences assigned  
2 (9.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



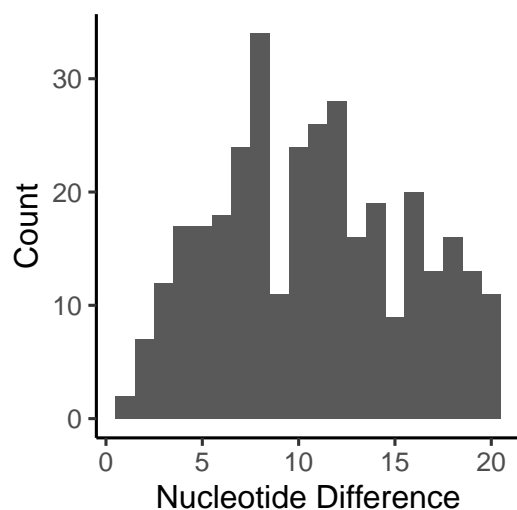
### IGHV3-69-1\*02

10 sequences assigned  
No exact matches.



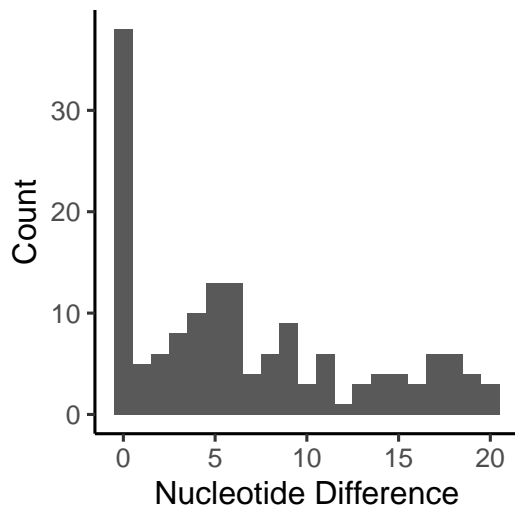
### IGHV3-74\*03

386 sequences assigned  
No exact matches.



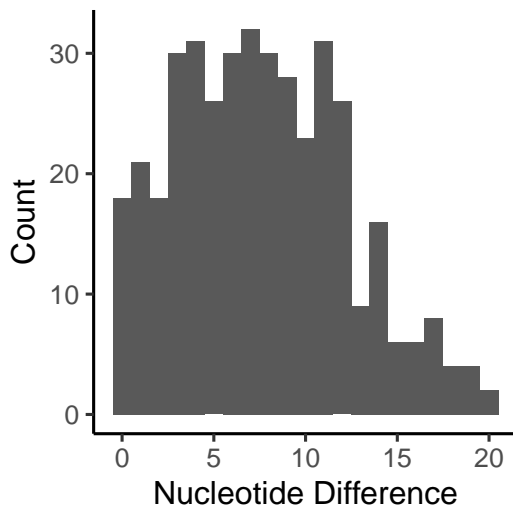
### IGHV3-66\*02

190 sequences assigned  
38 (20%) exact matches, in which:  
37 unique CDR3  
4 unique J



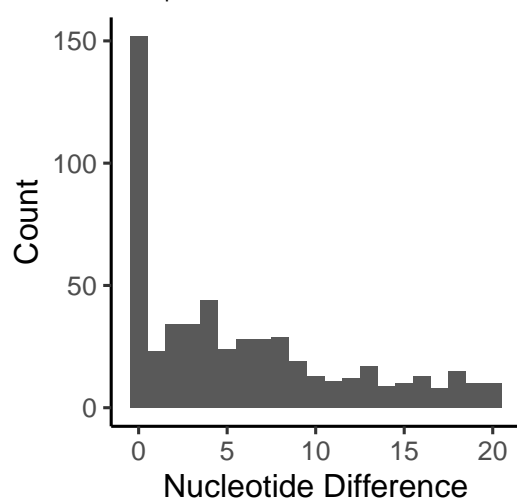
### IGHV3-72\*01

411 sequences assigned  
18 (4.4%) exact matches, in which:  
14 unique CDR3  
5 unique J



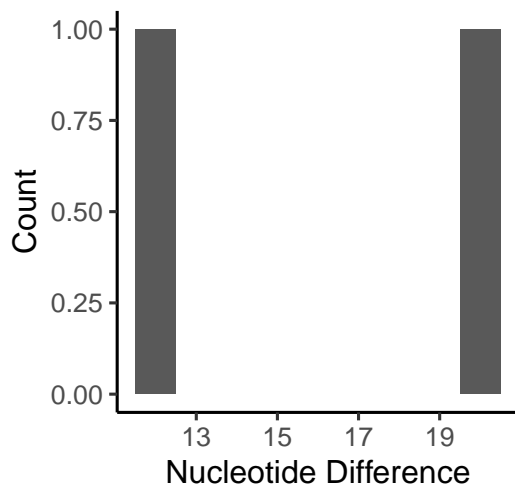
### IGHV3-74\*01\_02

593 sequences assigned  
152 (25.6%) exact matches, in which:  
142 unique CDR3  
7 unique J



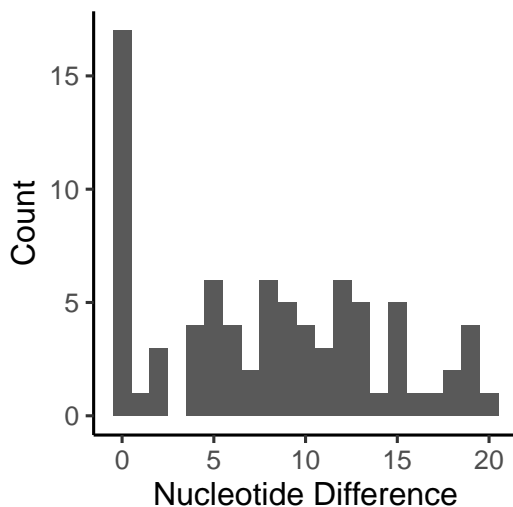
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



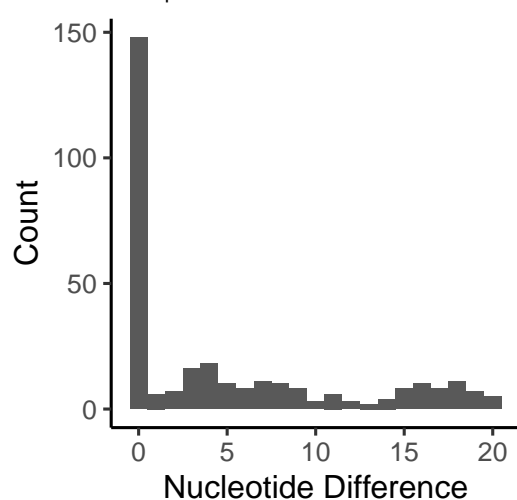
### IGHV3-73\*01\_02

89 sequences assigned  
17 (19.1%) exact matches, in which:  
17 unique CDR3  
3 unique J



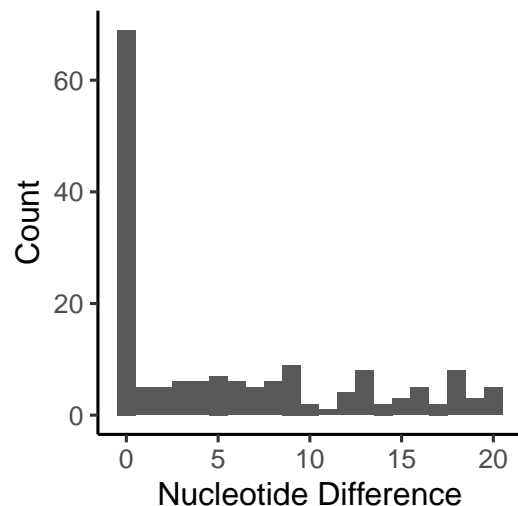
### IGHV4-4\*07

357 sequences assigned  
148 (41.5%) exact matches, in which:  
145 unique CDR3  
6 unique J



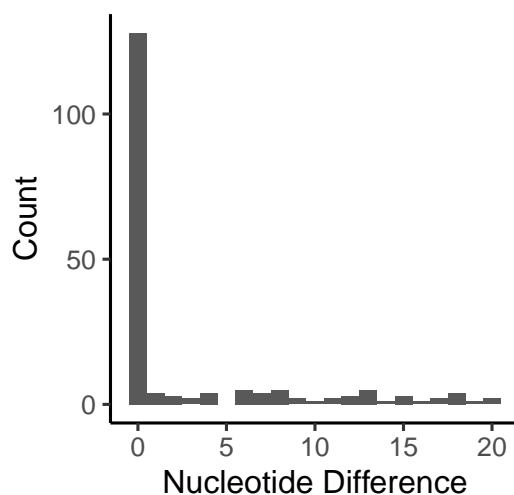
### IGHV4-4\*02\_03

236 sequences assigned  
69 (29.2%) exact matches, in which:  
69 unique CDR3  
4 unique J



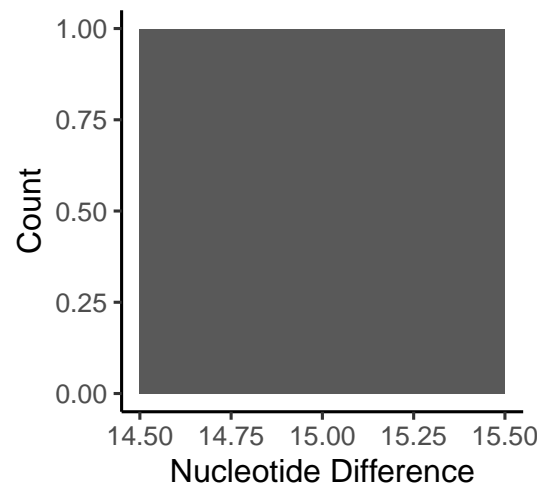
### IGHV4-30-2\*01

199 sequences assigned  
128 (64.3%) exact matches, in which:  
125 unique CDR3  
6 unique J



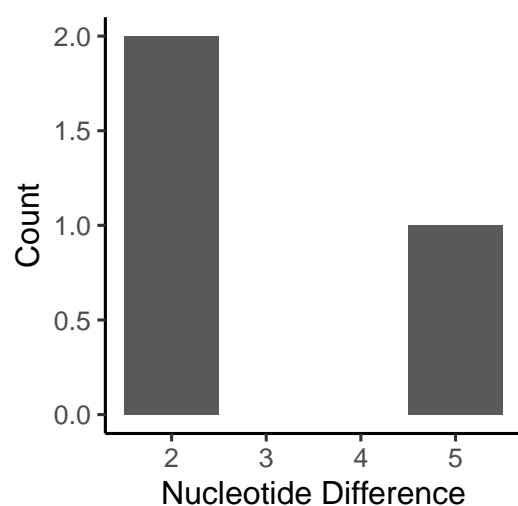
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



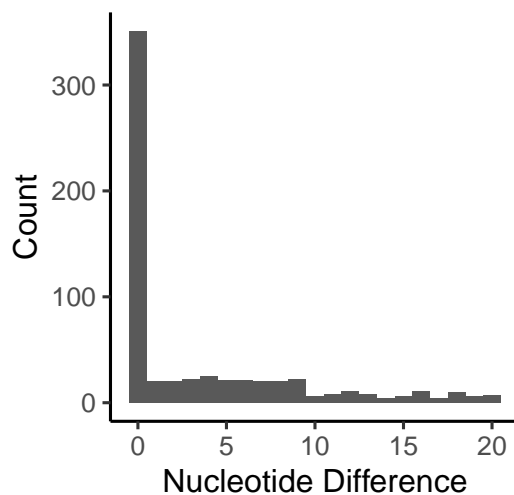
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



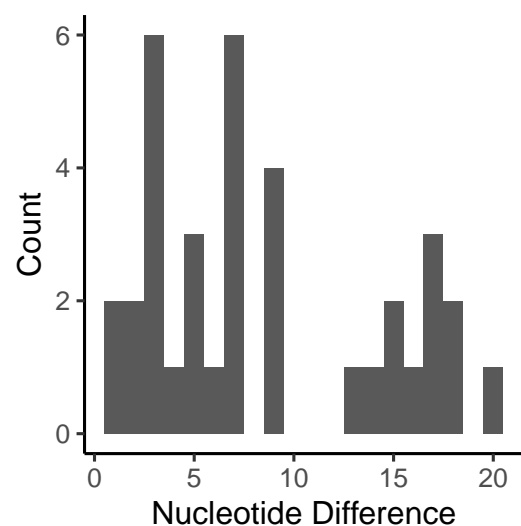
### IGHV4-31\*02

681 sequences assigned  
351 (51.5%) exact matches, in which:  
347 unique CDR3  
7 unique J



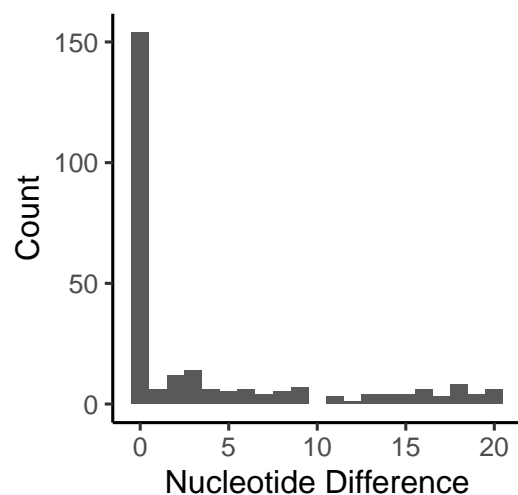
### IGHV4-39\*02

58 sequences assigned  
No exact matches.



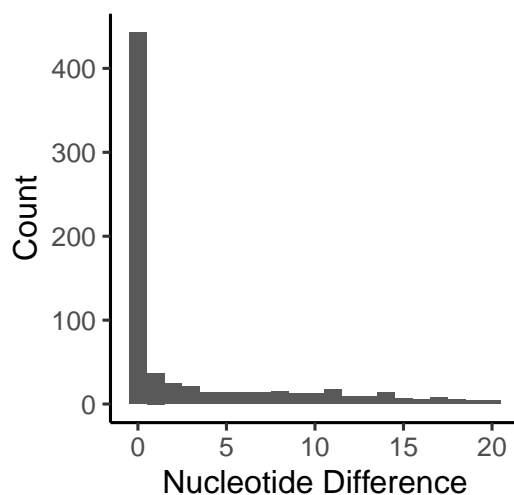
### IGHV4-30-4\*01

307 sequences assigned  
154 (50.2%) exact matches, in which:  
151 unique CDR3  
7 unique J



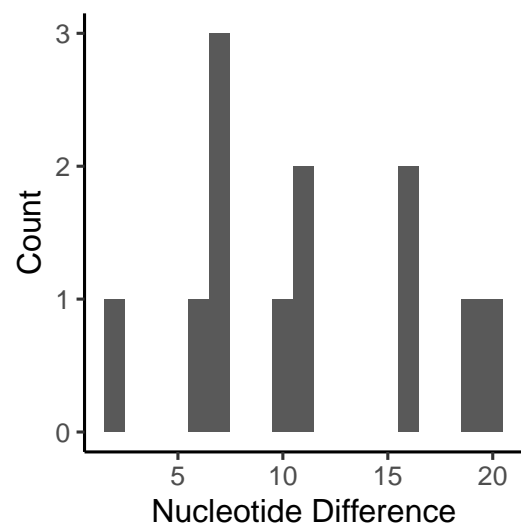
### IGHV4-34\*01\_02

754 sequences assigned  
443 (58.8%) exact matches, in which:  
441 unique CDR3  
7 unique J



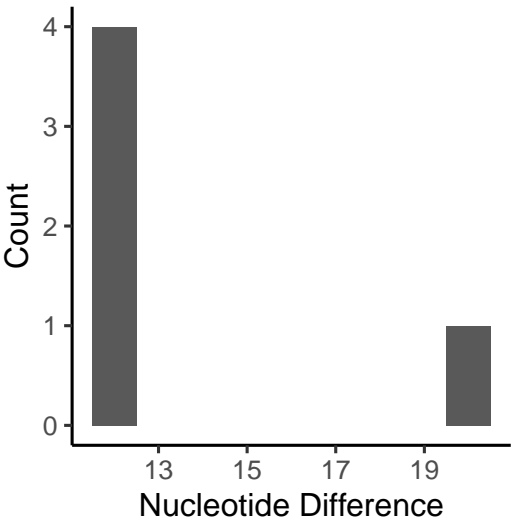
### IGHV4-59\*02

18 sequences assigned  
No exact matches.



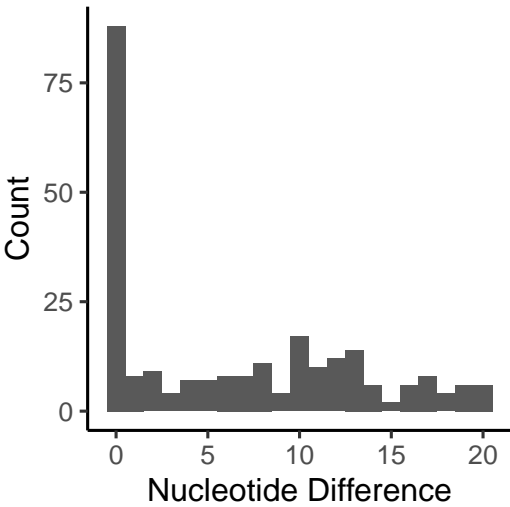
IGHV4–59\*03

8 sequences assigned  
No exact matches.



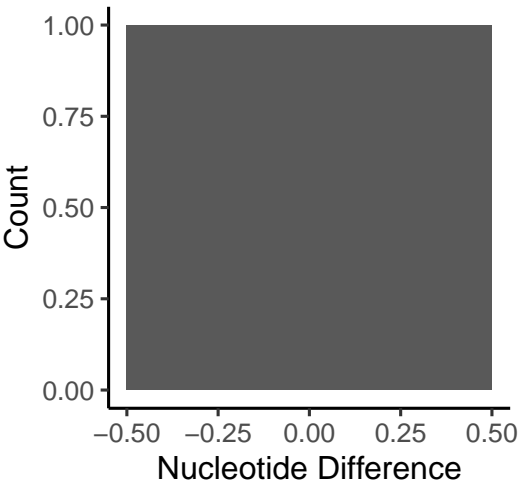
IGHV4–61\*01

278 sequences assigned  
88 (31.7%) exact matches, in which:  
85 unique CDR3  
5 unique J



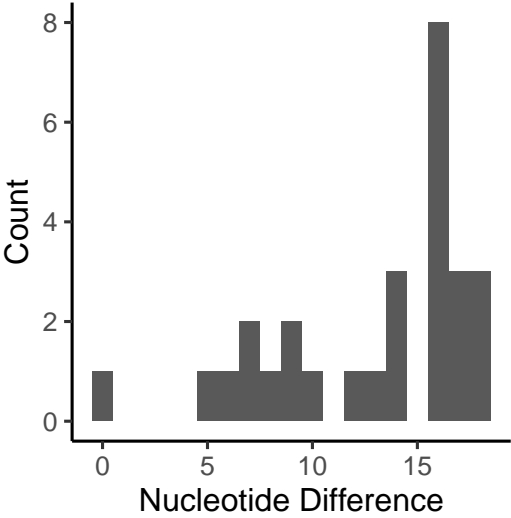
IGHV5–51\*07

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



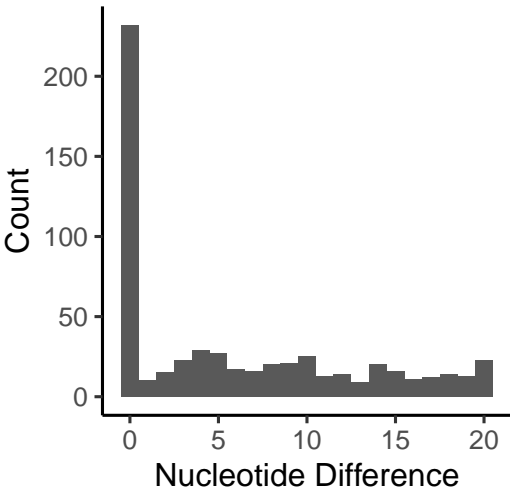
IGHV4–59\*11

38 sequences assigned  
1 (2.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



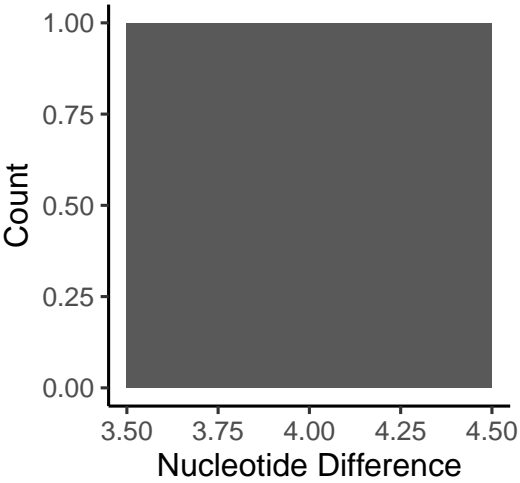
IGHV4–61\*02

669 sequences assigned  
232 (34.7%) exact matches, in which:  
226 unique CDR3  
6 unique J



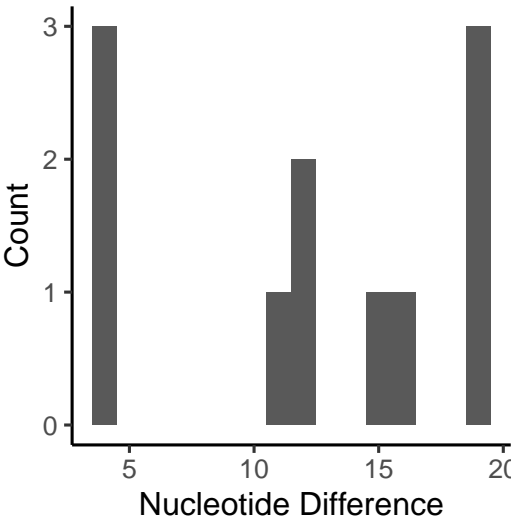
IGHV5–51\*01\_03

1 sequences assigned  
No exact matches.



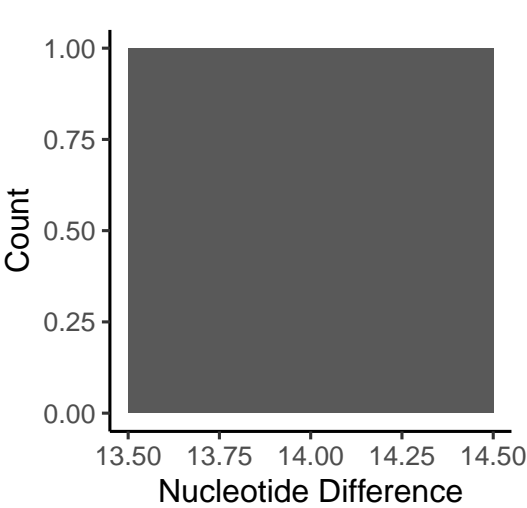
IGHV4–59\*13

13 sequences assigned  
No exact matches.



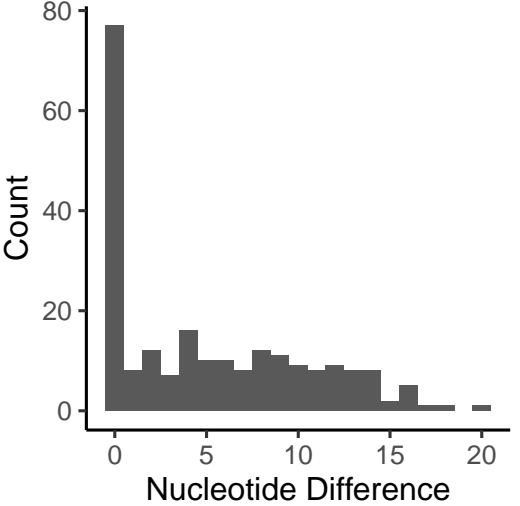
IGHV4/OR15–8\*02

3 sequences assigned  
No exact matches.



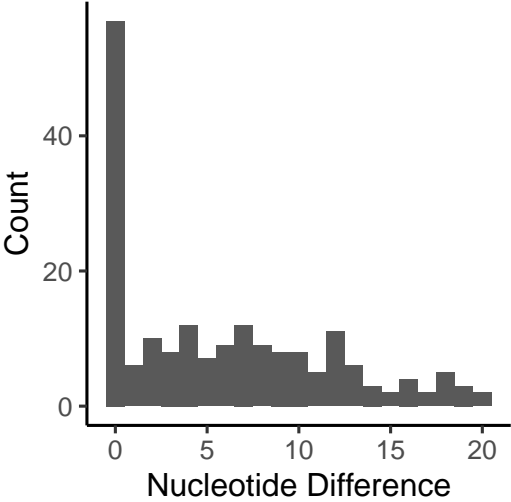
IGHV6–1\*01\_02

237 sequences assigned  
77 (32.5%) exact matches, in which:  
77 unique CDR3  
6 unique J

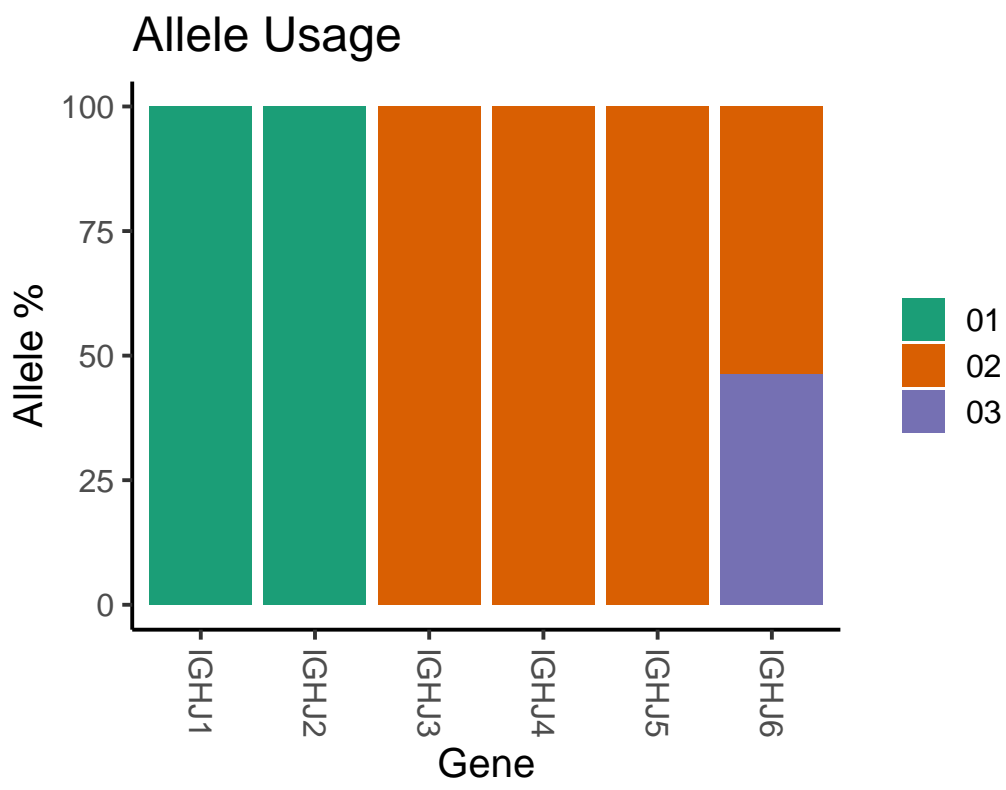


# IGHV7-4-1\*02

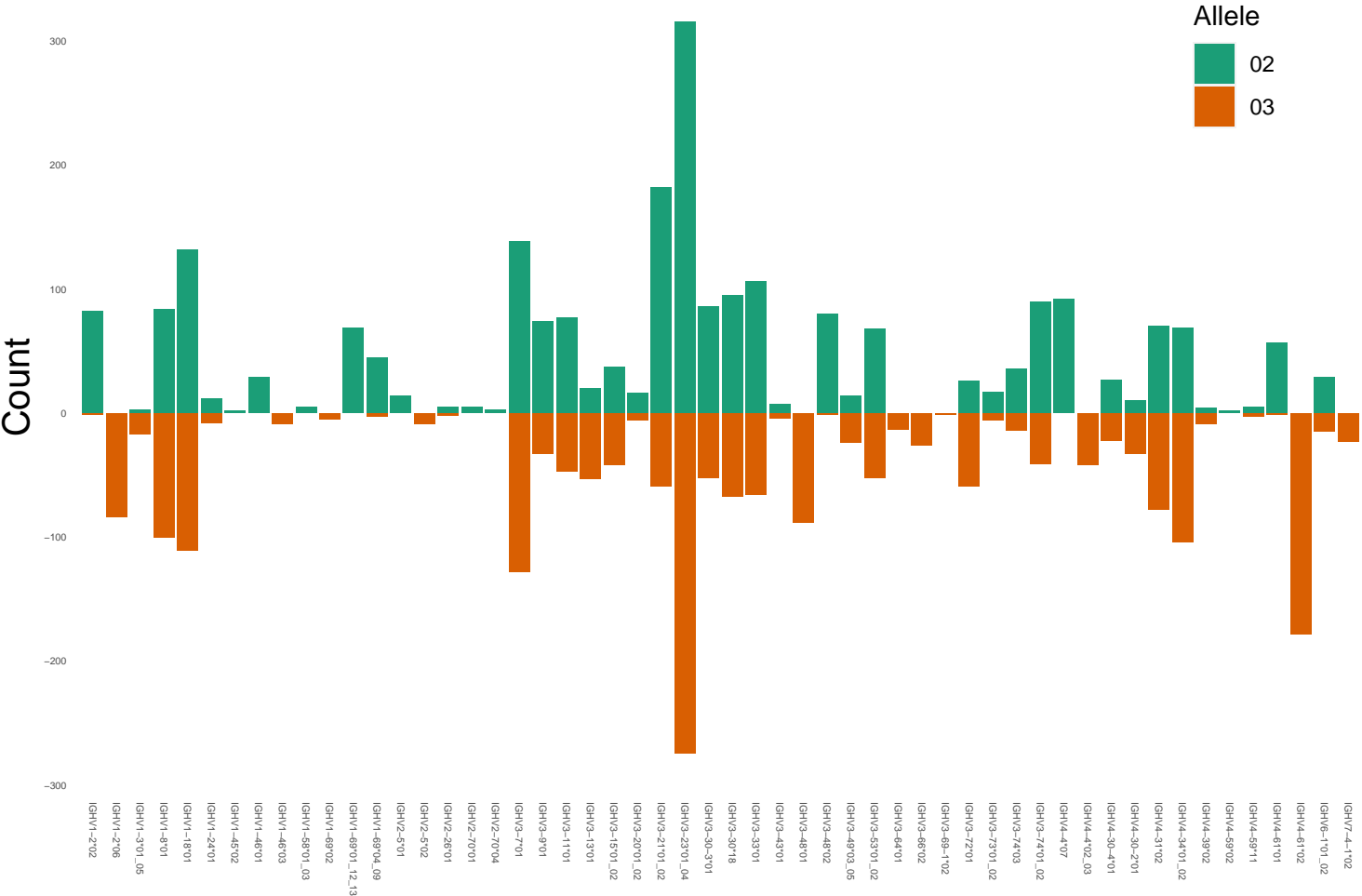
197 sequences assigned  
57 (28.9%) exact matches, in which:  
57 unique CDR3  
6 unique J







Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.