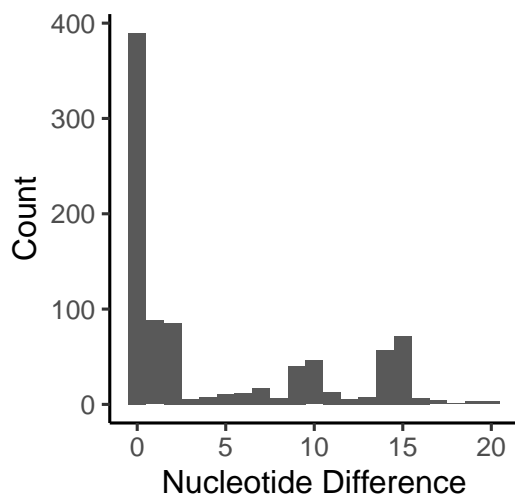


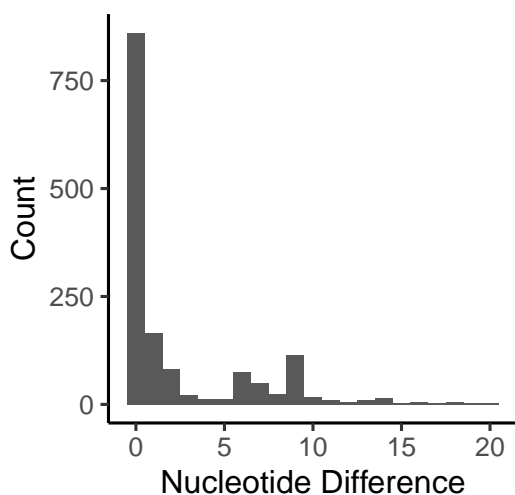
### IGHV1-2\*02

955 sequences assigned  
390 (40.8%) exact matches, in which:  
372 unique CDR3  
6 unique J



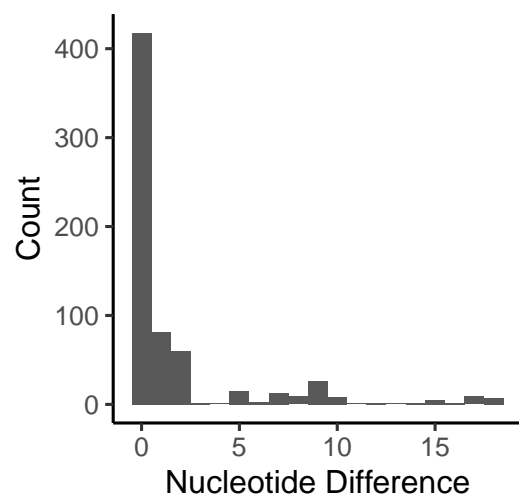
### IGHV1-18\*01

1768 sequences assigned  
861 (48.7%) exact matches, in which:  
811 unique CDR3  
6 unique J



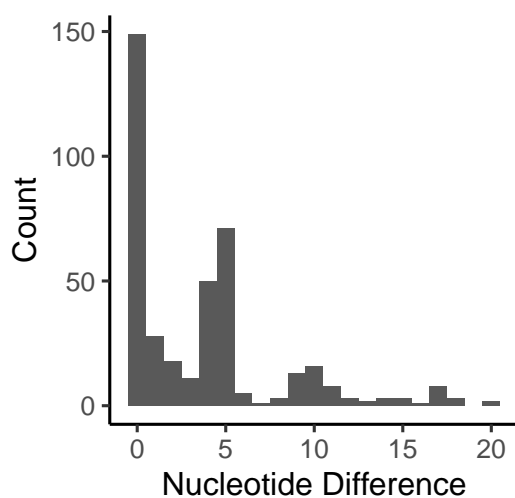
### IGHV1-46\*01

673 sequences assigned  
418 (62.1%) exact matches, in which:  
398 unique CDR3  
5 unique J



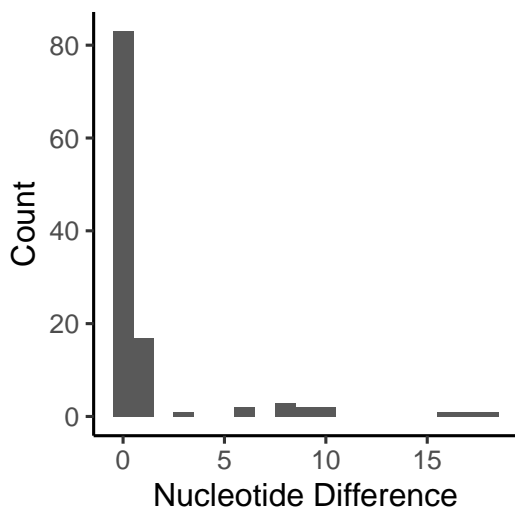
### IGHV1-3\*01\_05

411 sequences assigned  
149 (36.3%) exact matches, in which:  
143 unique CDR3  
5 unique J



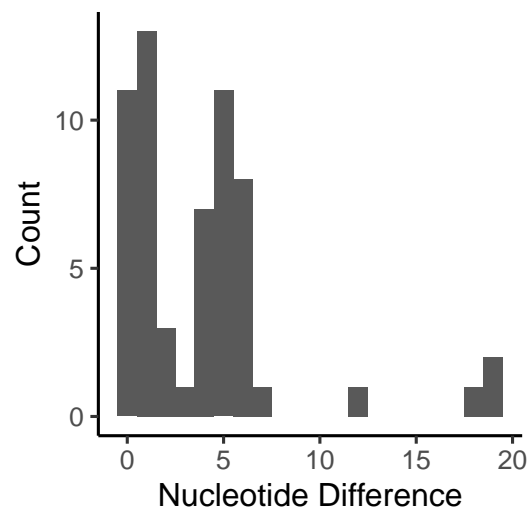
### IGHV1-24\*01

116 sequences assigned  
83 (71.6%) exact matches, in which:  
81 unique CDR3  
6 unique J



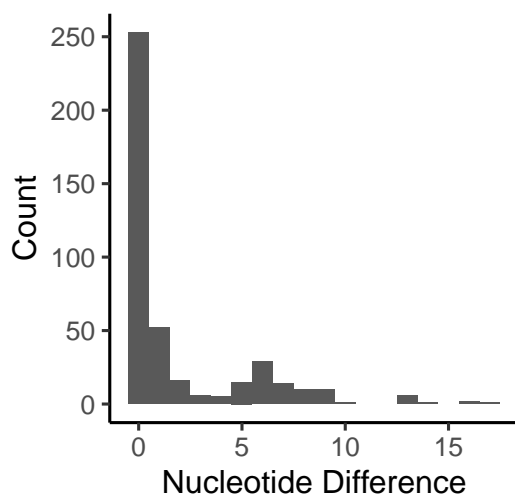
### IGHV1-46\*01\_G291C

666 sequences assigned  
11 (1.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



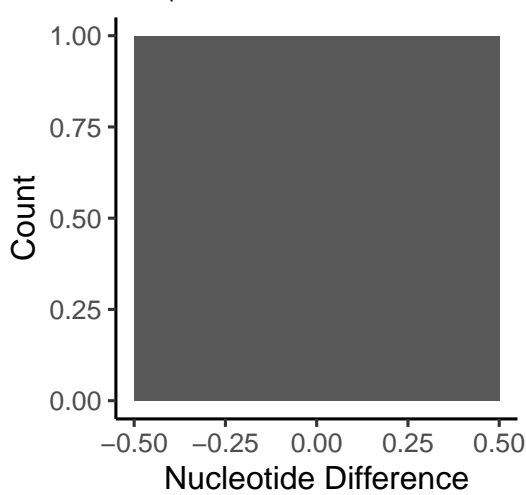
### IGHV1-8\*01

433 sequences assigned  
253 (58.4%) exact matches, in which:  
245 unique CDR3  
6 unique J



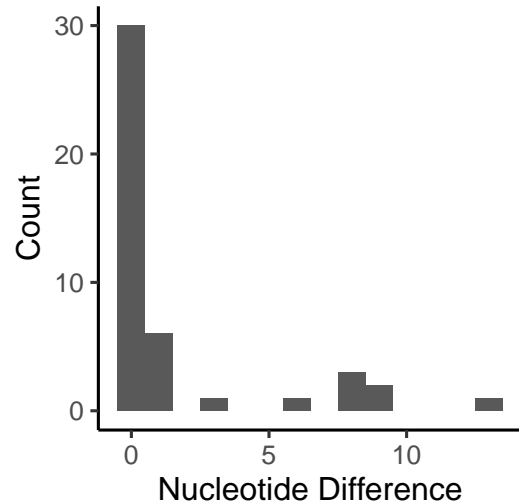
### IGHV1-45\*03

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



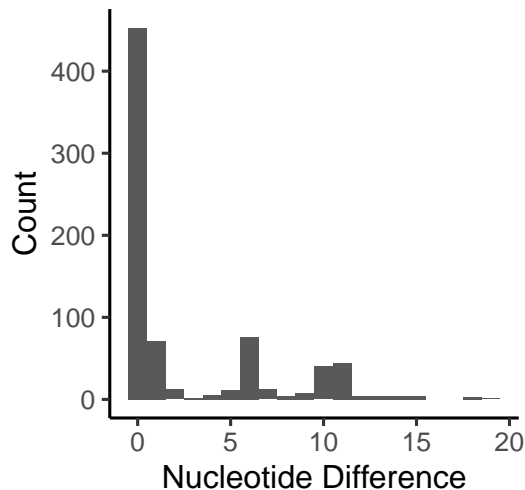
### IGHV1-58\*02

46 sequences assigned  
30 (65.2%) exact matches, in which:  
26 unique CDR3  
4 unique J



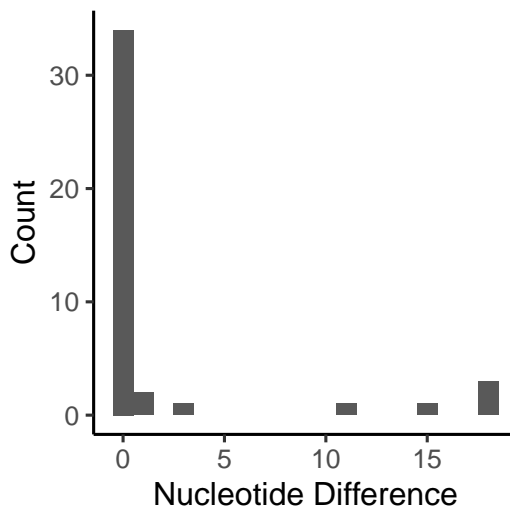
### IGHV1-69\*04\_09

769 sequences assigned  
453 (58.9%) exact matches, in which:  
436 unique CDR3  
6 unique J



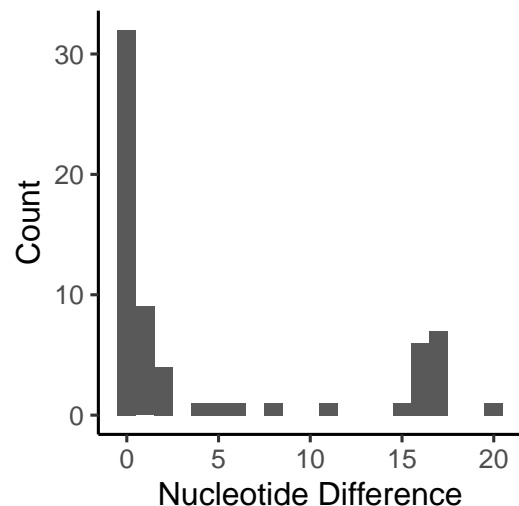
### IGHV2-5\*01

44 sequences assigned  
34 (77.3%) exact matches, in which:  
33 unique CDR3  
6 unique J



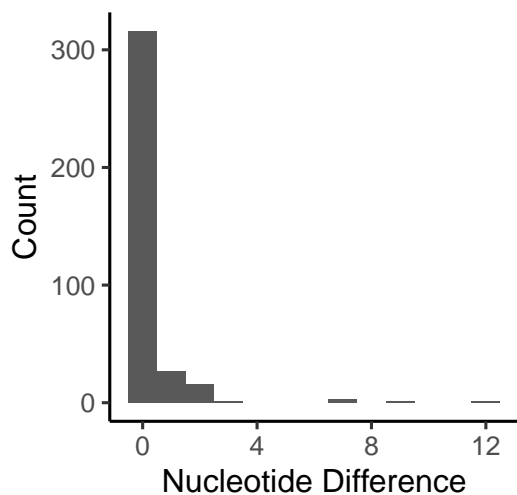
### IGHV2-70\*11\_15

201 sequences assigned  
32 (15.9%) exact matches, in which:  
32 unique CDR3  
4 unique J



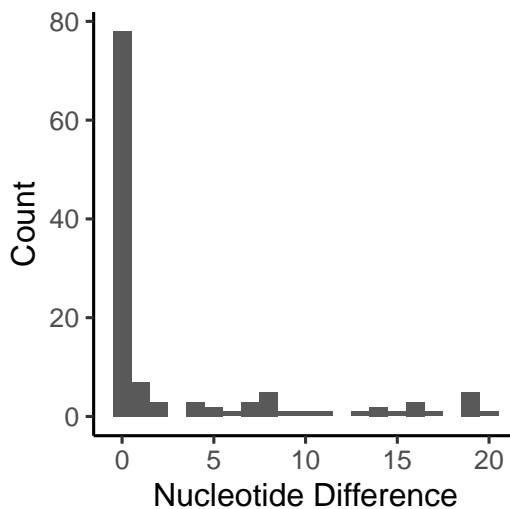
### IGHV1-69\*04\_09\_G112A

381 sequences assigned  
316 (82.9%) exact matches, in which:  
308 unique CDR3  
6 unique J



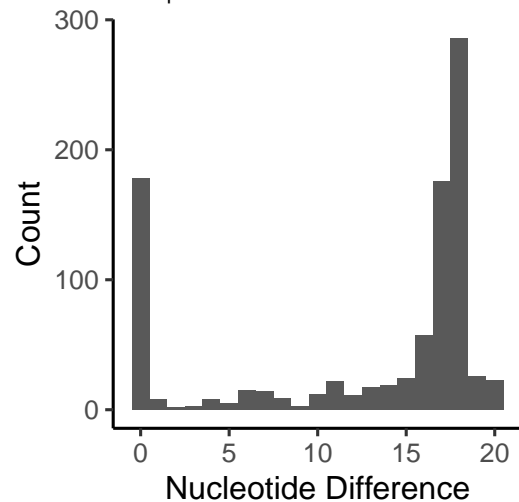
### IGHV2-5\*02

149 sequences assigned  
78 (52.3%) exact matches, in which:  
74 unique CDR3  
6 unique J



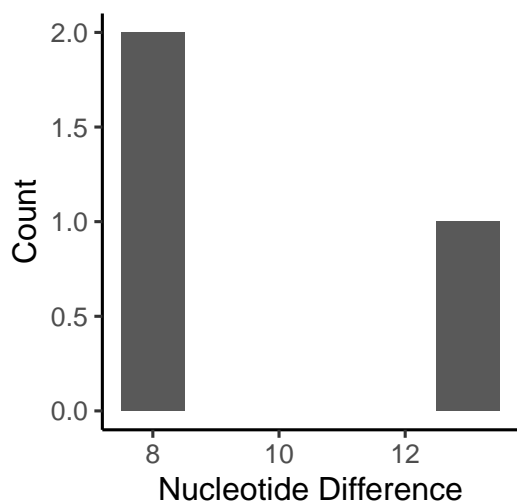
### IGHV3-7\*01

1226 sequences assigned  
178 (14.5%) exact matches, in which:  
102 unique CDR3  
5 unique J



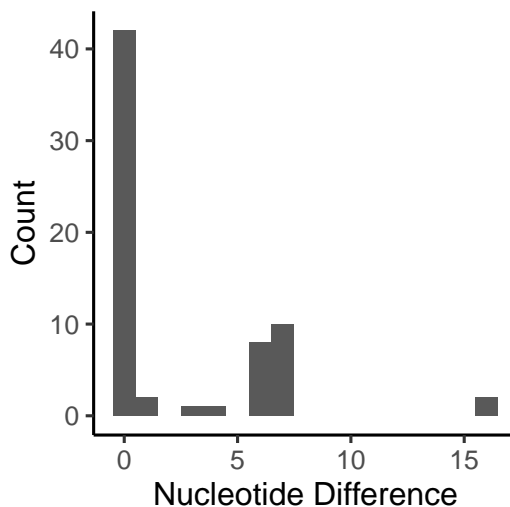
### IGHV1-NL1\*01

3 sequences assigned  
No exact matches.



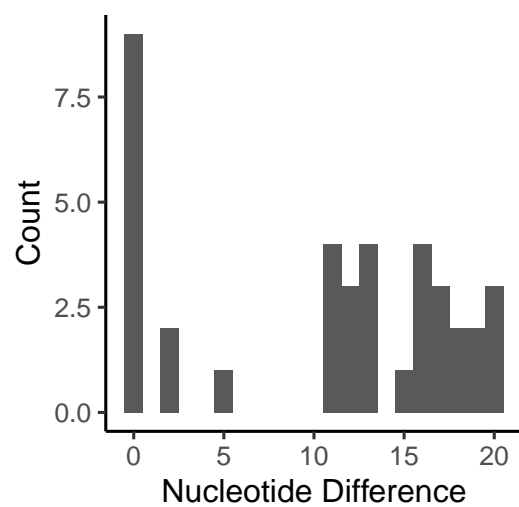
### IGHV2-26\*01

66 sequences assigned  
42 (63.6%) exact matches, in which:  
41 unique CDR3  
5 unique J



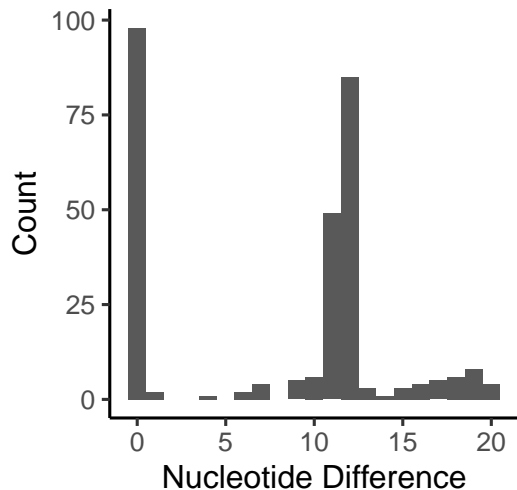
### IGHV3-7\*03

72 sequences assigned  
9 (12.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



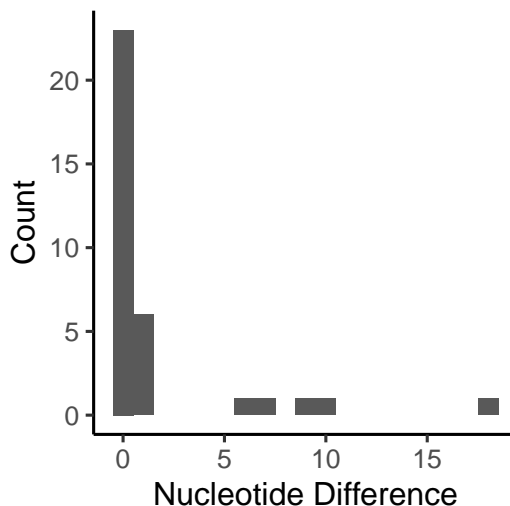
### IGHV3-7\*05

303 sequences assigned  
98 (32.3%) exact matches, in which:  
53 unique CDR3  
6 unique J



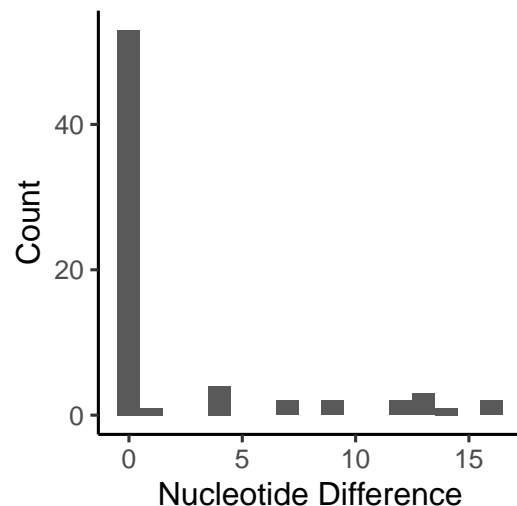
### IGHV3-11\*04\_G240A\_G3

42 sequences assigned  
23 (54.8%) exact matches, in which:  
21 unique CDR3  
4 unique J



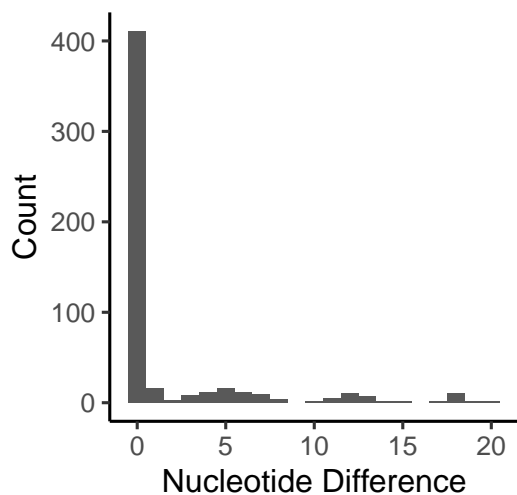
### IGHV3-13\*04

73 sequences assigned  
53 (72.6%) exact matches, in which:  
32 unique CDR3  
6 unique J



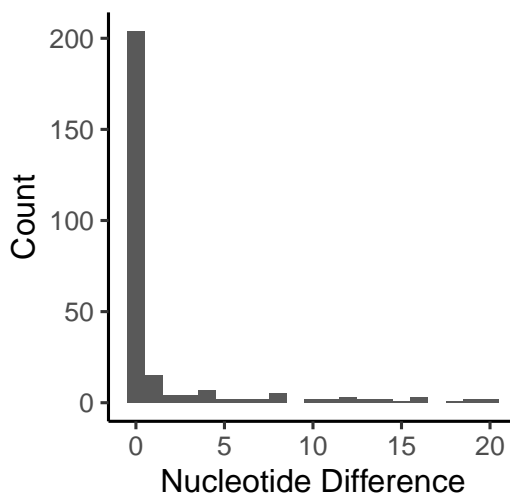
### IGHV3-9\*01

558 sequences assigned  
411 (73.7%) exact matches, in which:  
232 unique CDR3  
6 unique J



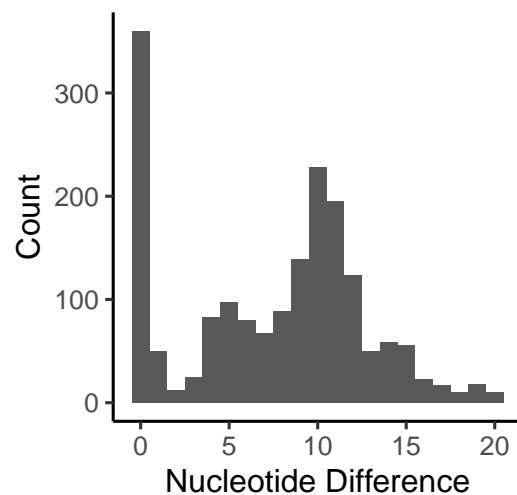
### IGHV3-11\*06\_T300C

287 sequences assigned  
204 (71.1%) exact matches, in which:  
120 unique CDR3  
5 unique J



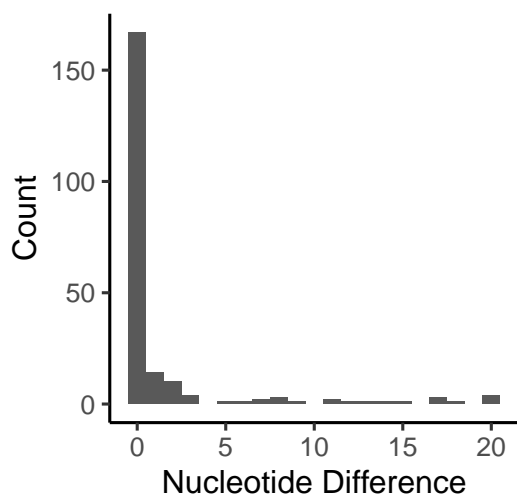
### IGHV3-15\*01\_02

1887 sequences assigned  
360 (19.1%) exact matches, in which:  
216 unique CDR3  
6 unique J



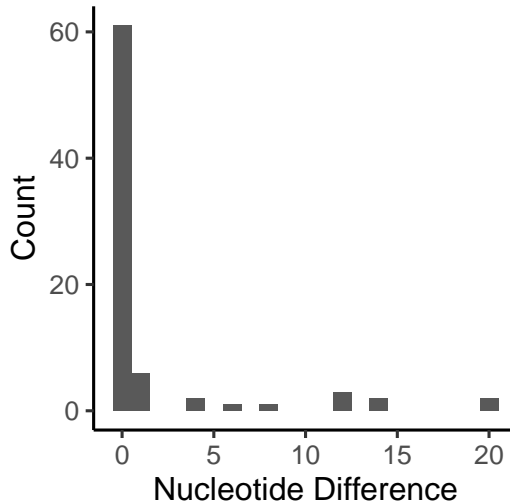
### IGHV3-11\*01

343 sequences assigned  
167 (48.7%) exact matches, in which:  
101 unique CDR3  
6 unique J



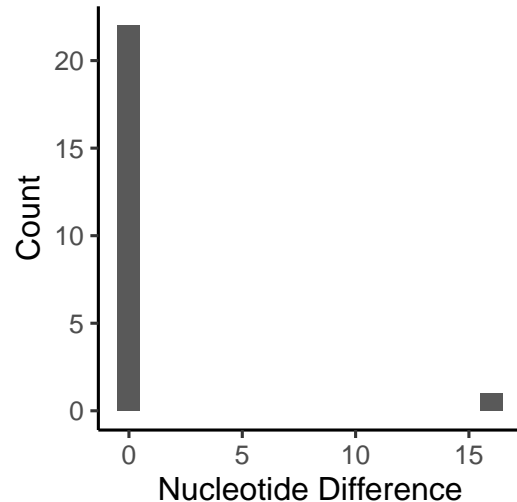
### IGHV3-13\*01

124 sequences assigned  
61 (49.2%) exact matches, in which:  
34 unique CDR3  
5 unique J



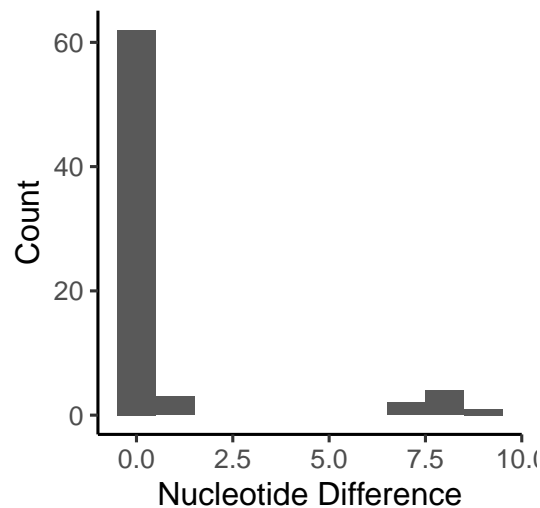
### IGHV3-20\*01\_02

24 sequences assigned  
22 (91.7%) exact matches, in which:  
13 unique CDR3  
4 unique J



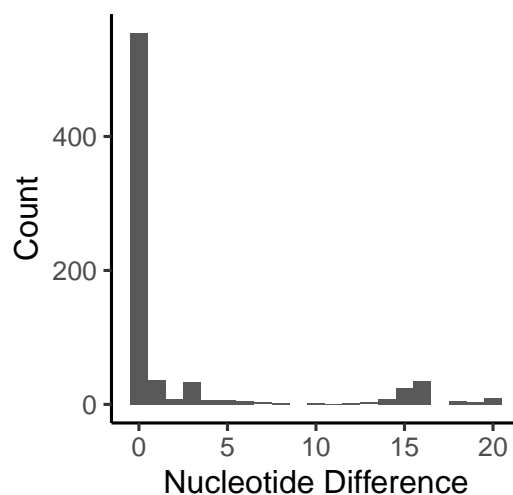
### IGHV3-20\*03\_04

90 sequences assigned  
62 (68.9%) exact matches, in which:  
32 unique CDR3  
4 unique J



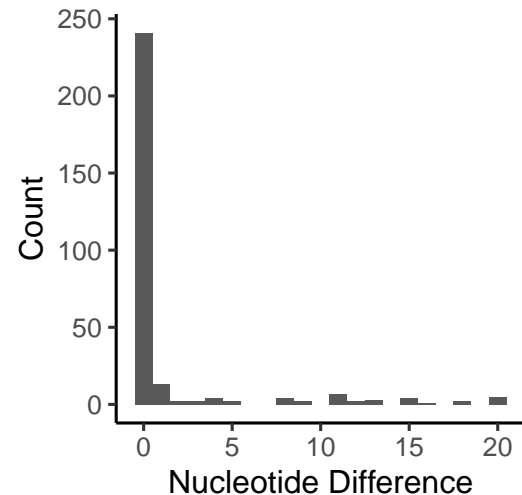
### IGHV3-30-3\*01

801 sequences assigned  
555 (69.3%) exact matches, in which:  
348 unique CDR3  
6 unique J



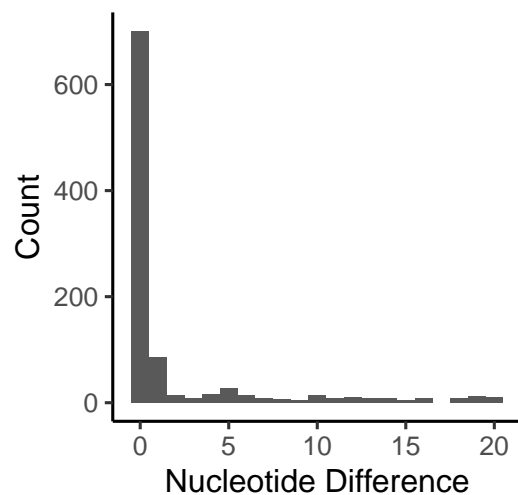
### IGHV3-43\*02

319 sequences assigned  
241 (75.5%) exact matches, in which:  
135 unique CDR3  
6 unique J



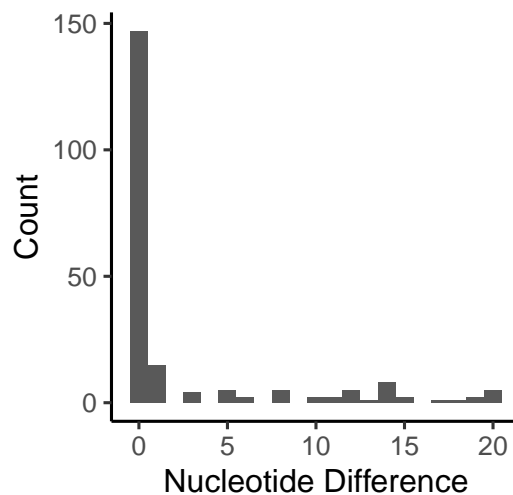
### IGHV3-21\*01\_02

1148 sequences assigned  
701 (61.1%) exact matches, in which:  
414 unique CDR3  
5 unique J



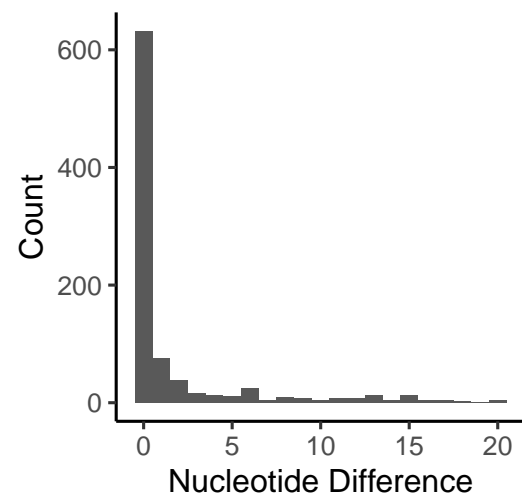
### IGHV3-30\*18\_C75G

230 sequences assigned  
147 (63.9%) exact matches, in which:  
93 unique CDR3  
5 unique J



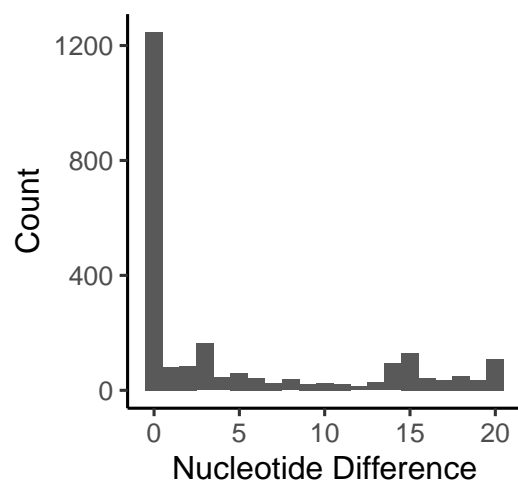
### IGHV3-48\*03

984 sequences assigned  
632 (64.2%) exact matches, in which:  
356 unique CDR3  
6 unique J



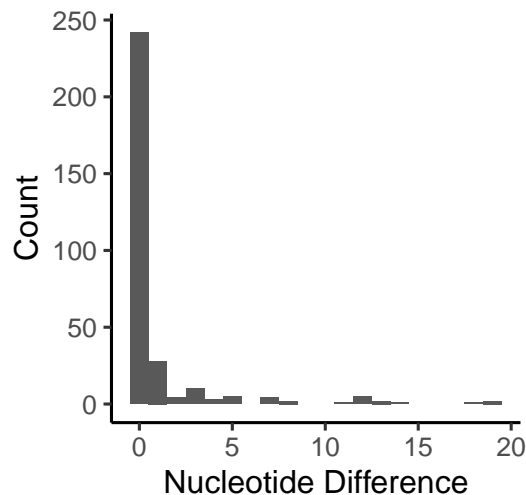
### IGHV3-23\*01\_04

2985 sequences assigned  
1247 (41.8%) exact matches, in which:  
695 unique CDR3  
6 unique J



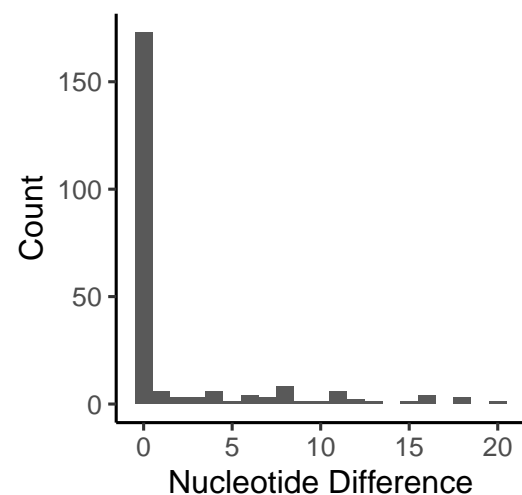
### IGHV3-33\*01

378 sequences assigned  
242 (64%) exact matches, in which:  
147 unique CDR3  
5 unique J



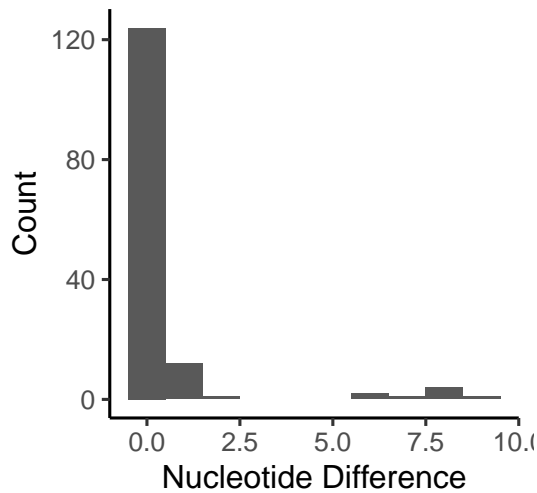
### IGHV3-49\*04

432 sequences assigned  
173 (40%) exact matches, in which:  
105 unique CDR3  
6 unique J



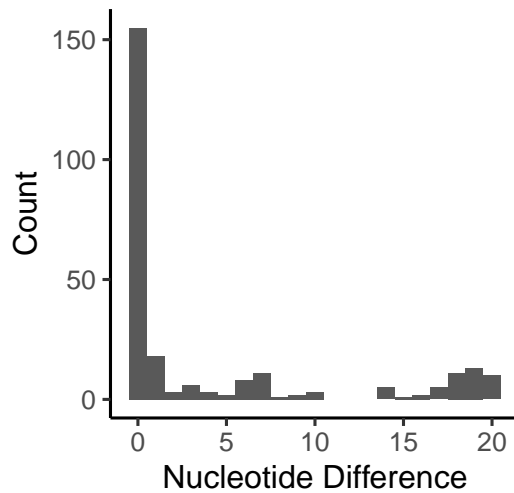
### IGHV3–53\*04

152 sequences assigned  
124 (81.6%) exact matches, in which:  
70 unique CDR3  
5 unique J



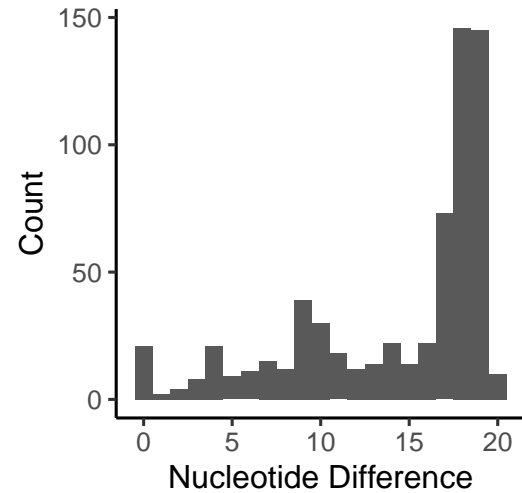
### IGHV3–66\*01

917 sequences assigned  
155 (16.9%) exact matches, in which:  
83 unique CDR3  
5 unique J



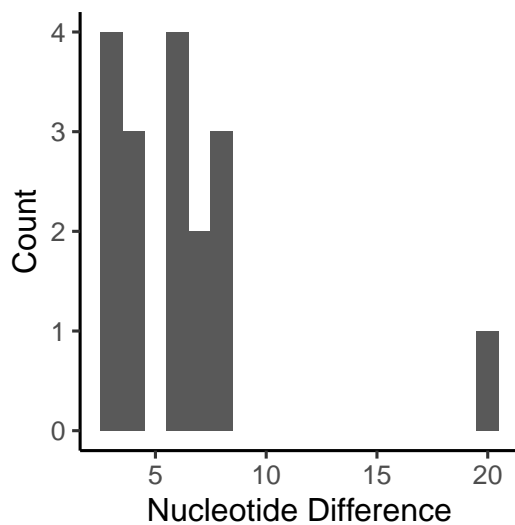
### IGHV3–72\*01

817 sequences assigned  
21 (2.6%) exact matches, in which:  
12 unique CDR3  
3 unique J



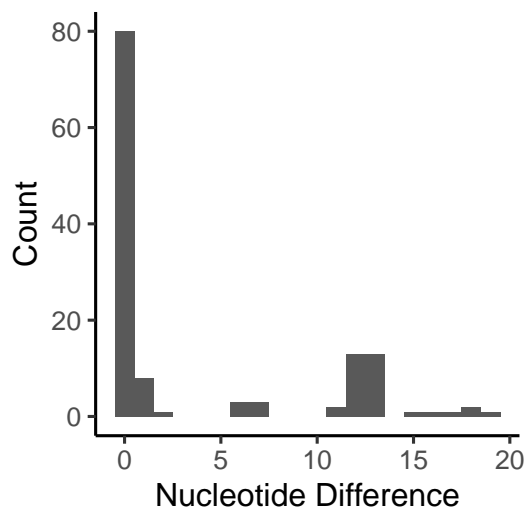
### IGHV3–53\*01\_02

20 sequences assigned  
No exact matches.



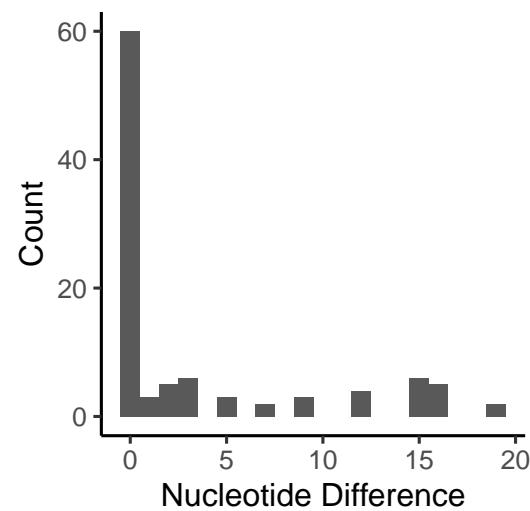
### IGHV3–66\*02

153 sequences assigned  
80 (52.3%) exact matches, in which:  
45 unique CDR3  
4 unique J



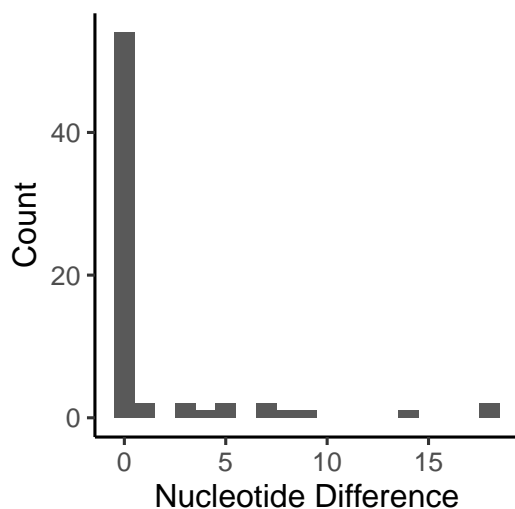
### IGHV3–73\*01\_02

126 sequences assigned  
60 (47.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



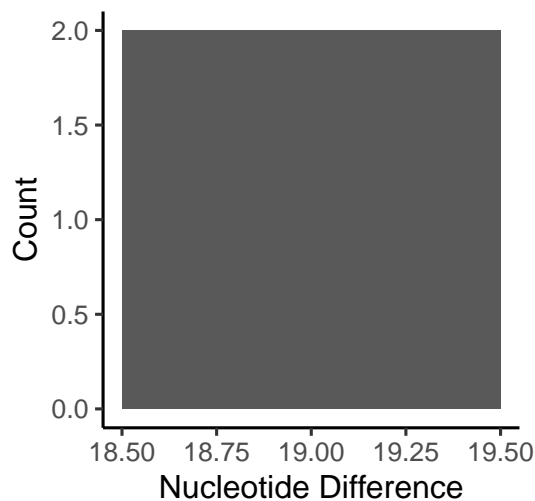
### IGHV3–64\*01

70 sequences assigned  
54 (77.1%) exact matches, in which:  
33 unique CDR3  
4 unique J



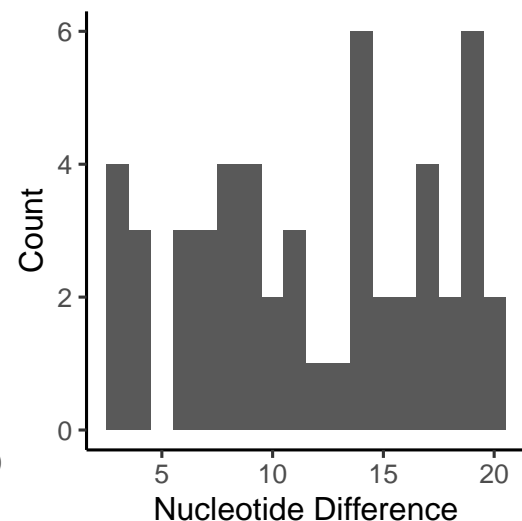
### IGHV3–69–1\*02

2 sequences assigned  
No exact matches.



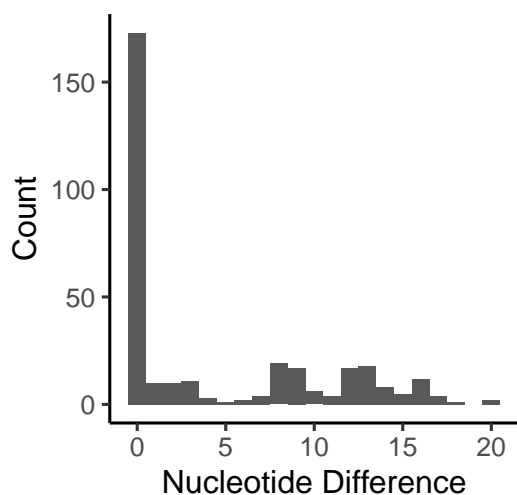
### IGHV3–74\*03

240 sequences assigned  
No exact matches.



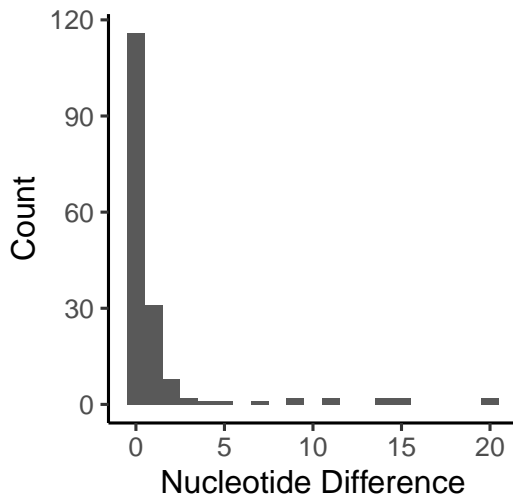
### IGHV3-74\*01\_02

374 sequences assigned  
173 (46.3%) exact matches, in which:  
102 unique CDR3  
5 unique J



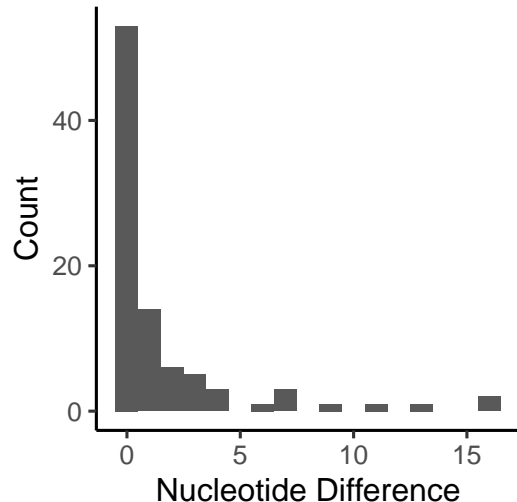
### IGHV4-4\*07

187 sequences assigned  
116 (62%) exact matches, in which:  
110 unique CDR3  
6 unique J



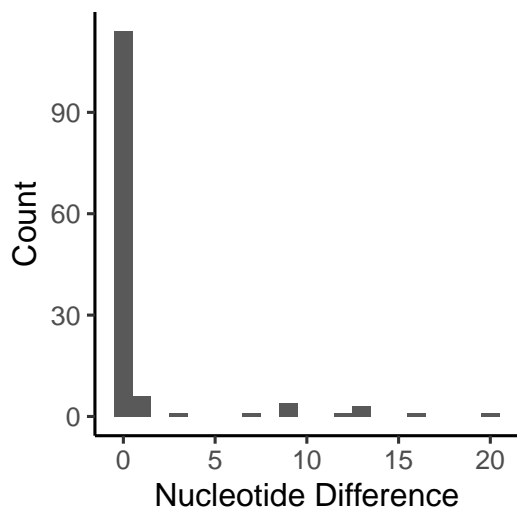
### IGHV4-30-4\*01

115 sequences assigned  
53 (46.1%) exact matches, in which:  
51 unique CDR3  
4 unique J



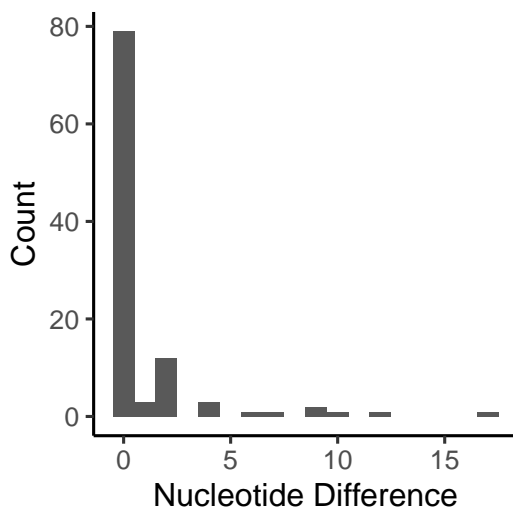
### IGHV3-64D\*09

155 sequences assigned  
114 (73.5%) exact matches, in which:  
51 unique CDR3  
5 unique J



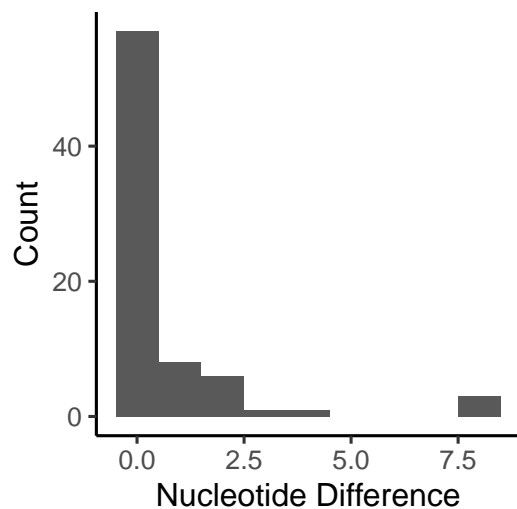
### IGHV4-4\*07\_G234A\_G29

104 sequences assigned  
79 (76%) exact matches, in which:  
78 unique CDR3  
6 unique J



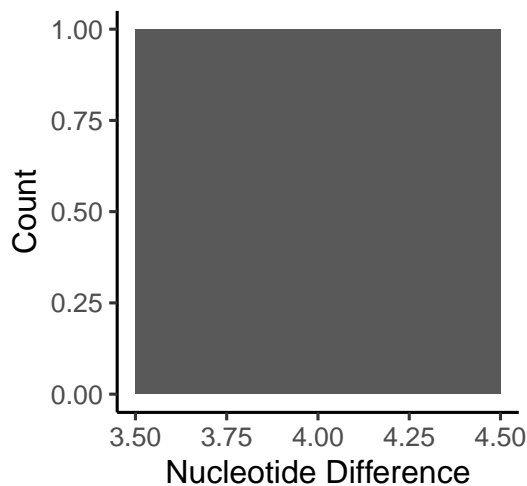
### IGHV4-30-2\*01

268 sequences assigned  
57 (21.3%) exact matches, in which:  
41 unique CDR3  
4 unique J



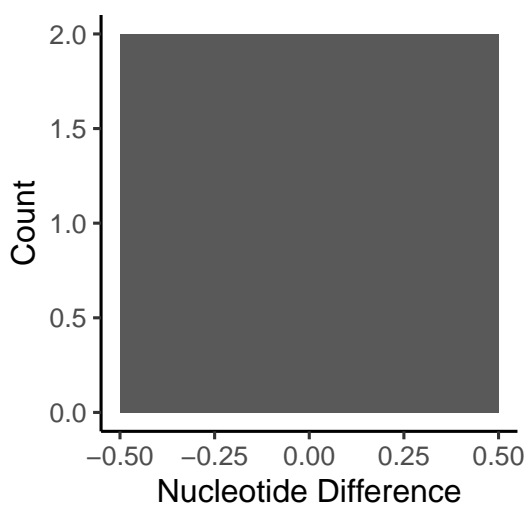
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



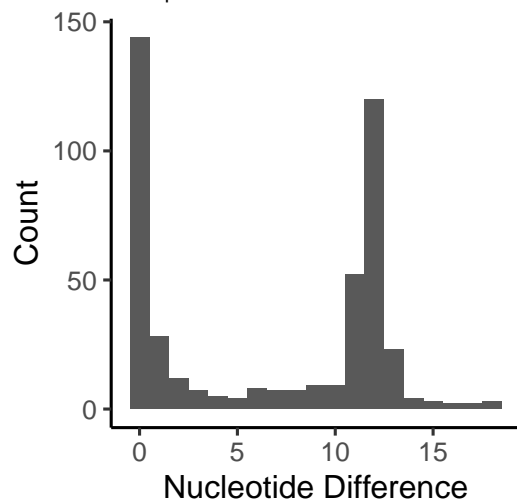
### IGHV4-28\*02\_05

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



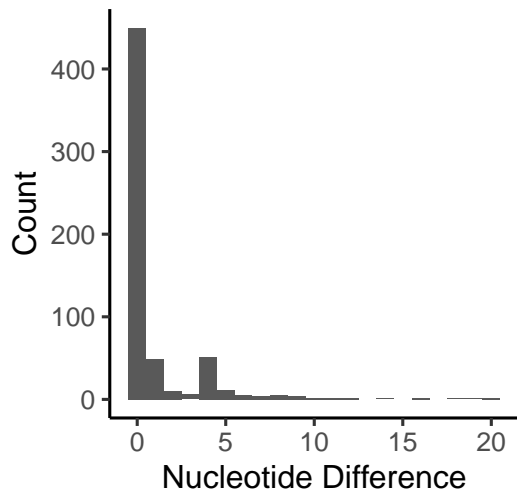
### IGHV4-31\*02

459 sequences assigned  
144 (31.4%) exact matches, in which:  
137 unique CDR3  
5 unique J



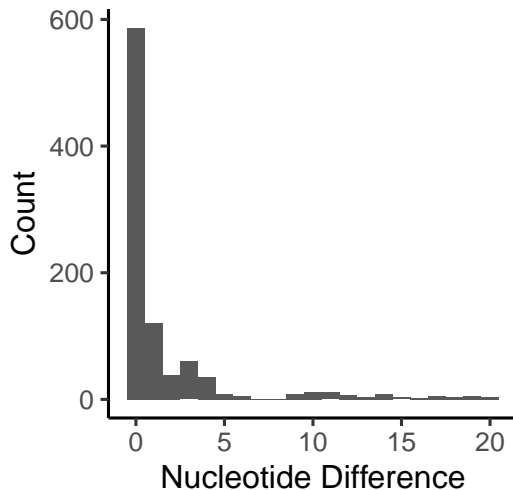
### IGHV4-34\*01\_02

641 sequences assigned  
450 (70.2%) exact matches, in which:  
379 unique CDR3  
6 unique J



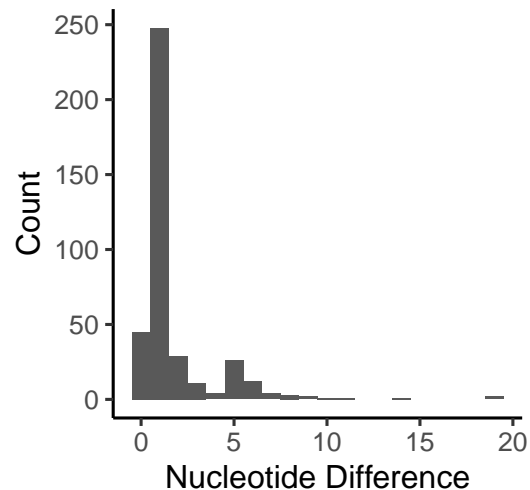
### IGHV4-39\*02\_C258G

1283 sequences assigned  
587 (45.8%) exact matches, in which:  
506 unique CDR3  
6 unique J



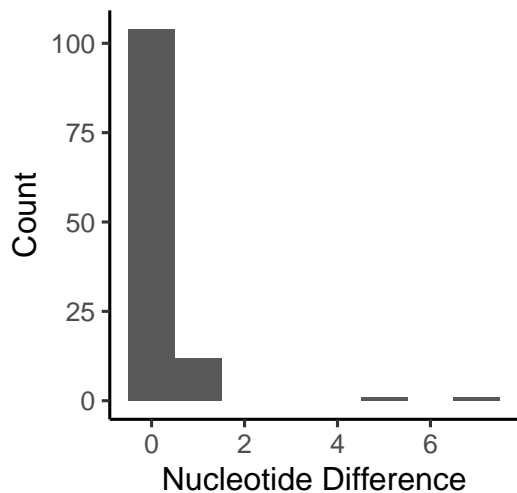
### IGHV4-59\*12

399 sequences assigned  
45 (11.3%) exact matches, in which:  
45 unique CDR3  
5 unique J



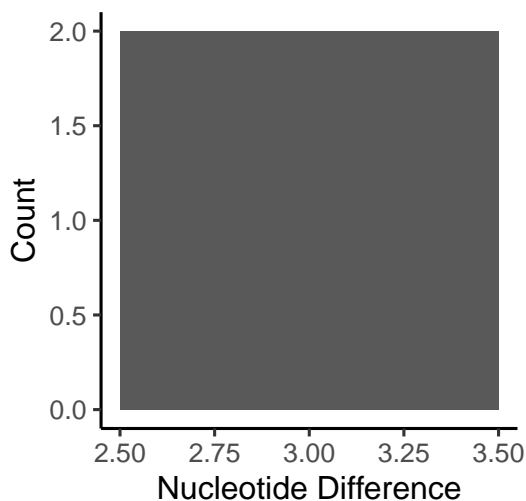
### IGHV4-34\*01\_02\_C288T

119 sequences assigned  
104 (87.4%) exact matches, in which:  
104 unique CDR3  
5 unique J



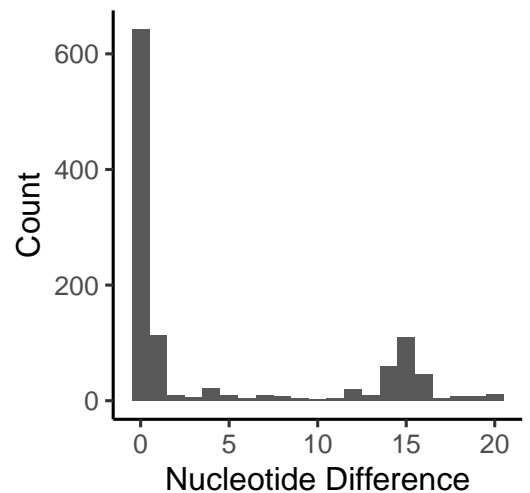
### IGHV4-55\*09

2 sequences assigned  
No exact matches.



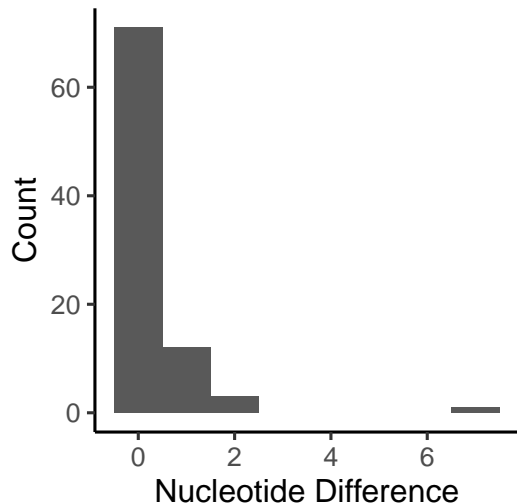
### IGHV4-59\*02\_G88A

1565 sequences assigned  
643 (41.1%) exact matches, in which:  
602 unique CDR3  
6 unique J



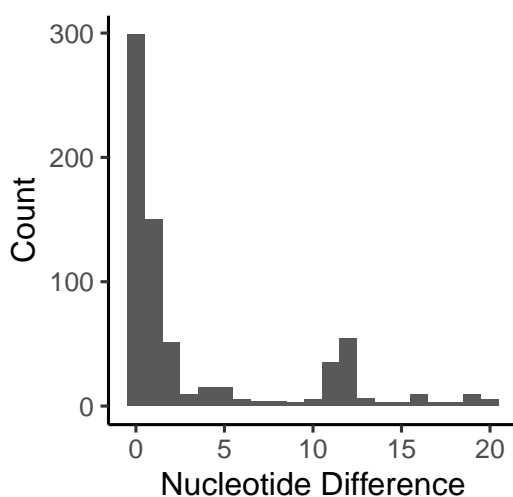
### IGHV4-34\*01\_02\_G291A\_

87 sequences assigned  
71 (81.6%) exact matches, in which:  
71 unique CDR3  
6 unique J



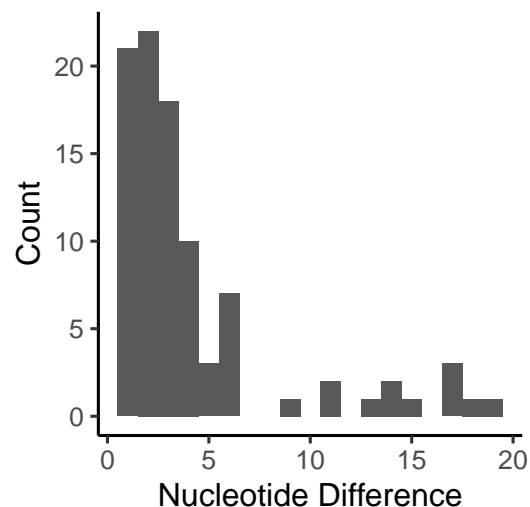
### IGHV4-59\*08

741 sequences assigned  
299 (40.4%) exact matches, in which:  
277 unique CDR3  
6 unique J



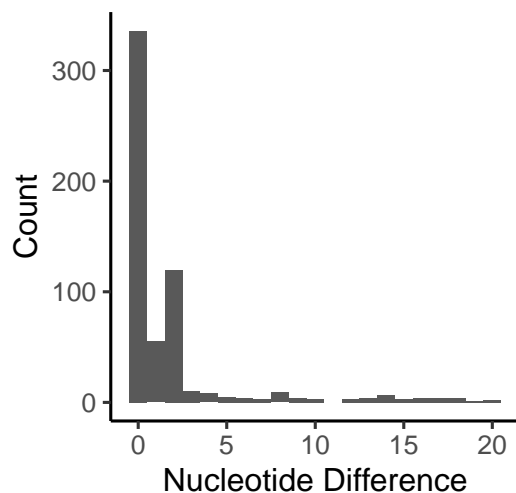
### IGHV4-61\*01

98 sequences assigned  
No exact matches.



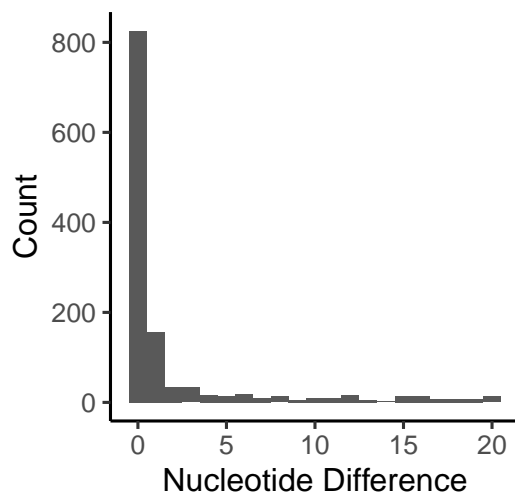
### IGHV4–61\*02

617 sequences assigned  
336 (54.5%) exact matches, in which:  
330 unique CDR3  
6 unique J



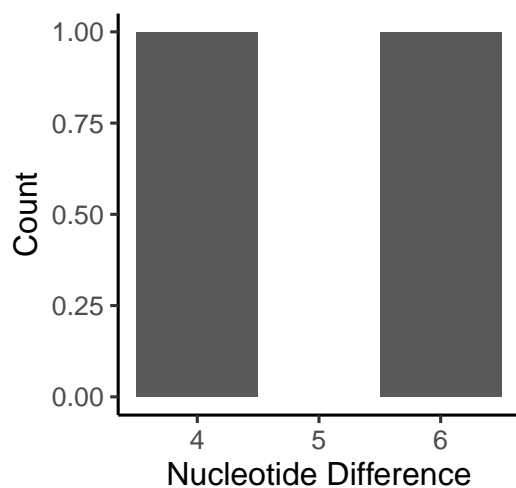
### IGHV5–51\*07\_A128G

1736 sequences assigned  
826 (47.6%) exact matches, in which:  
490 unique CDR3  
5 unique J



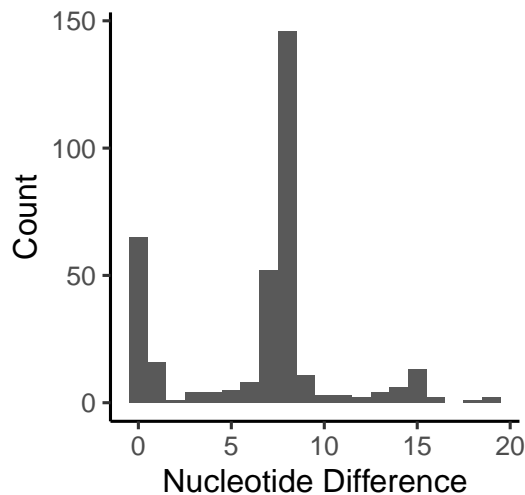
### IGHV4/OR15–8\*01

2 sequences assigned  
No exact matches.



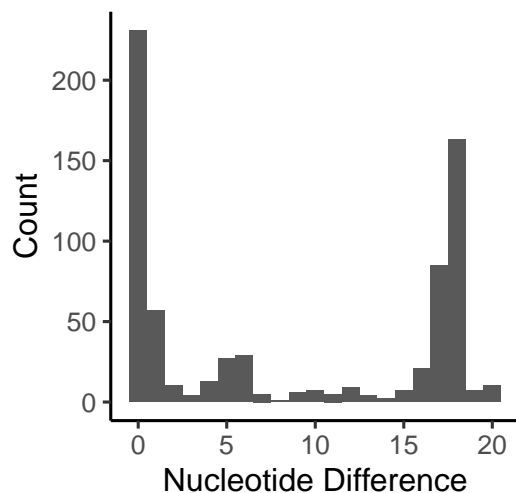
### IGHV6–1\*01\_02

373 sequences assigned  
65 (17.4%) exact matches, in which:  
62 unique CDR3  
5 unique J



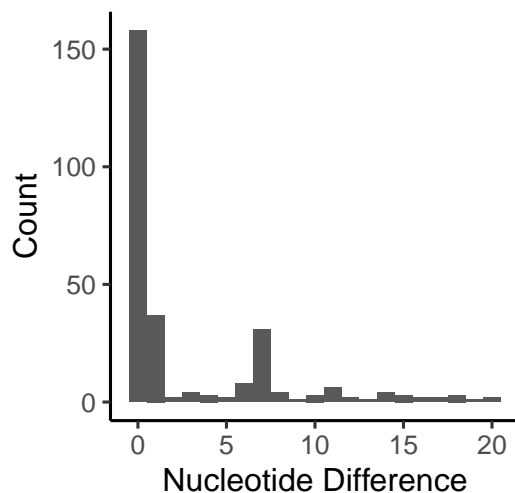
### IGHV5–10–1\*01\_03

738 sequences assigned  
231 (31.3%) exact matches, in which:  
160 unique CDR3  
5 unique J



### IGHV7–4–1\*02

381 sequences assigned  
158 (41.5%) exact matches, in which:  
151 unique CDR3  
6 unique J







Warning – no inferred sequences found.