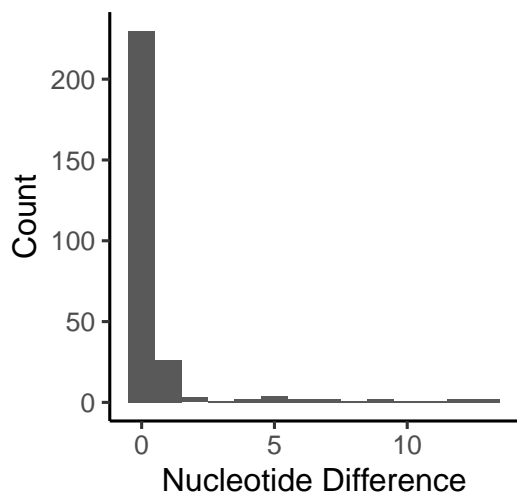


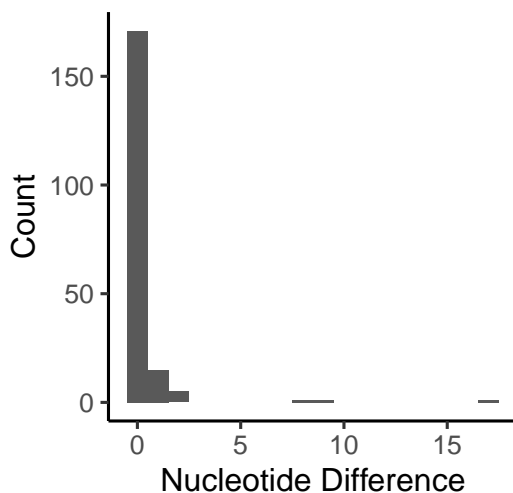
### IGHV1-2\*02

279 sequences assigned  
230 (82.4%) exact matches, in which:  
230 unique CDR3  
6 unique J



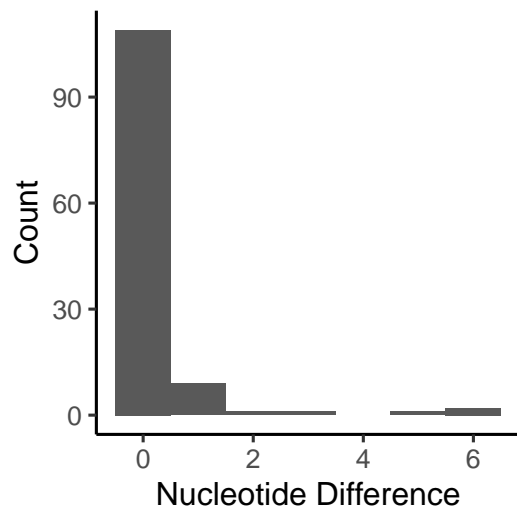
### IGHV1-8\*03

195 sequences assigned  
171 (87.7%) exact matches, in which:  
170 unique CDR3  
5 unique J



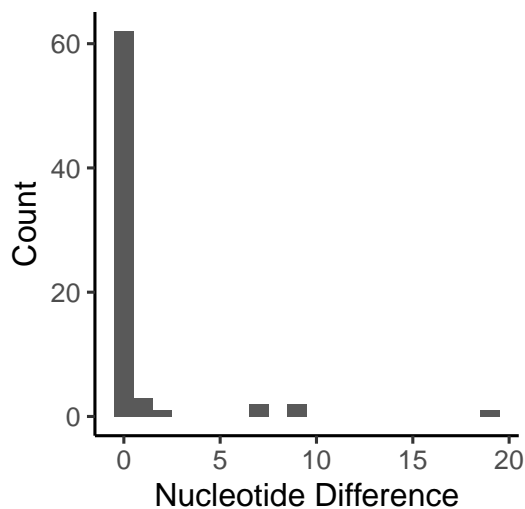
### IGHV1-46\*03

123 sequences assigned  
109 (88.6%) exact matches, in which:  
109 unique CDR3  
5 unique J



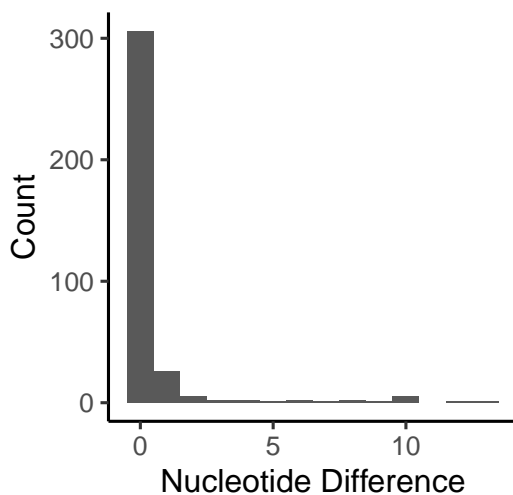
### IGHV1-2\*04

71 sequences assigned  
62 (87.3%) exact matches, in which:  
62 unique CDR3  
5 unique J



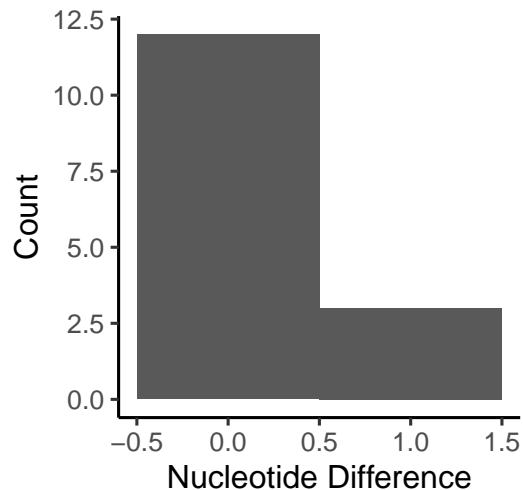
### IGHV1-18\*01

355 sequences assigned  
306 (86.2%) exact matches, in which:  
305 unique CDR3  
6 unique J



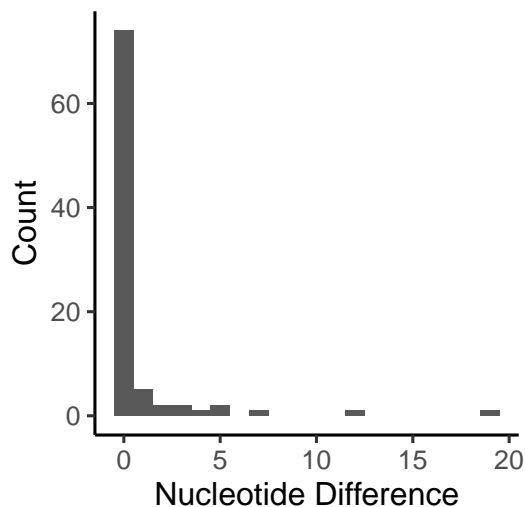
### IGHV1-58\*02

15 sequences assigned  
12 (80%) exact matches, in which:  
11 unique CDR3  
4 unique J



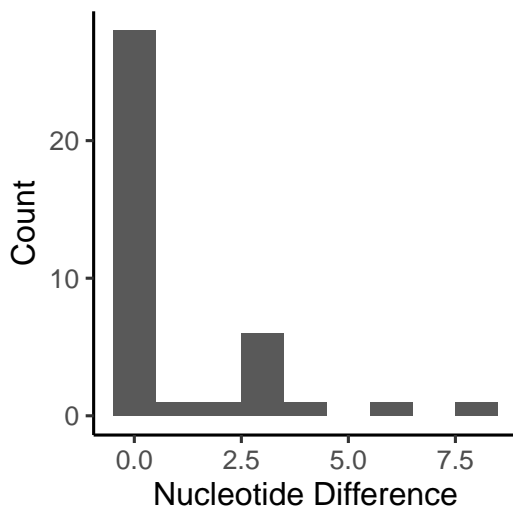
### IGHV1-3\*01

89 sequences assigned  
74 (83.1%) exact matches, in which:  
74 unique CDR3  
5 unique J



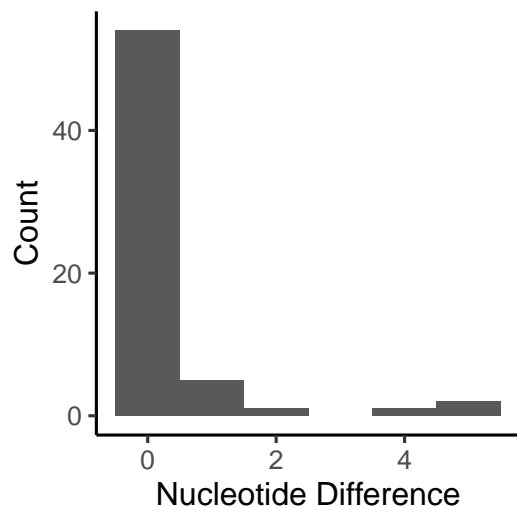
### IGHV1-24\*01

39 sequences assigned  
28 (71.8%) exact matches, in which:  
28 unique CDR3  
5 unique J



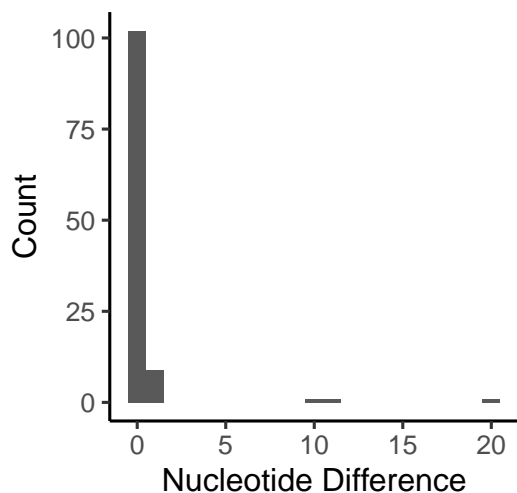
### IGHV1-69-2\*01

63 sequences assigned  
54 (85.7%) exact matches, in which:  
54 unique CDR3  
4 unique J



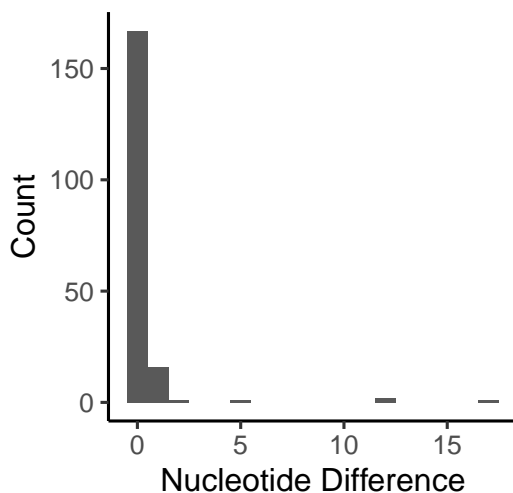
### IGHV1-69\*10

114 sequences assigned  
102 (89.5%) exact matches, in which:  
102 unique CDR3  
6 unique J



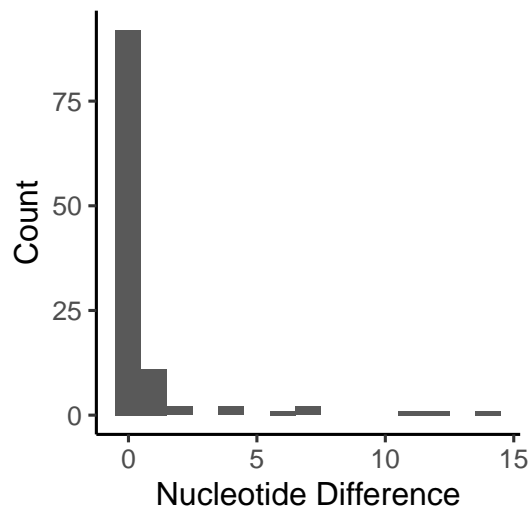
### IGHV1-69\*12\_G48A

188 sequences assigned  
167 (88.8%) exact matches, in which:  
167 unique CDR3  
6 unique J



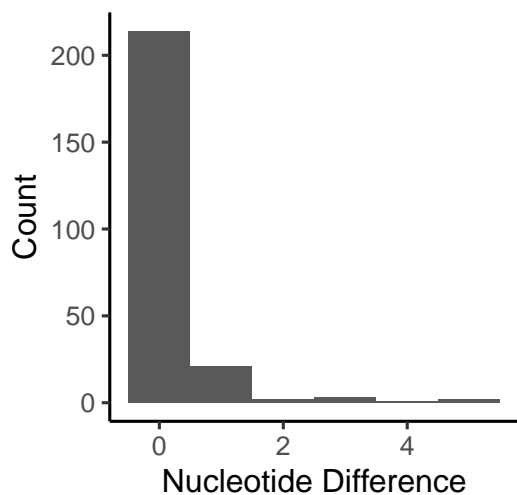
### IGHV2-5\*02

115 sequences assigned  
92 (80%) exact matches, in which:  
92 unique CDR3  
5 unique J



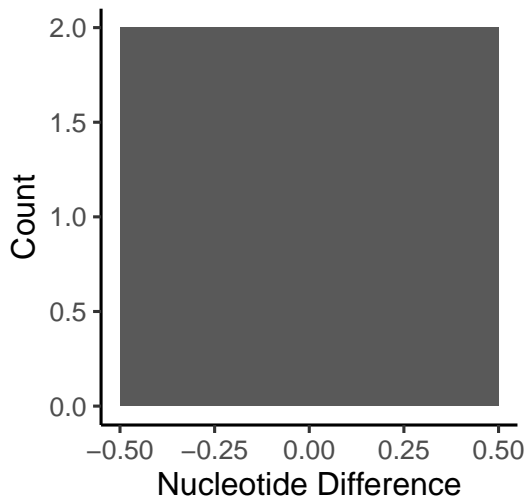
### IGHV1-69\*12

243 sequences assigned  
214 (88.1%) exact matches, in which:  
214 unique CDR3  
6 unique J



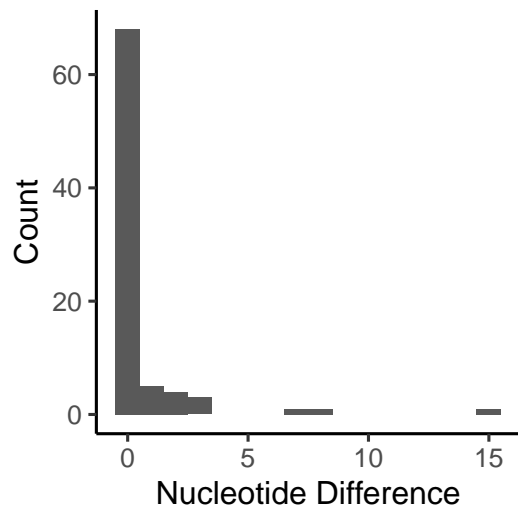
### IGHV1-69D\*01

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



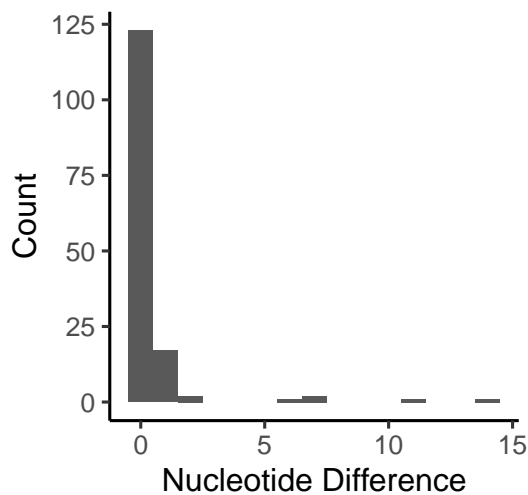
### IGHV2-26\*01

83 sequences assigned  
68 (81.9%) exact matches, in which:  
68 unique CDR3  
5 unique J



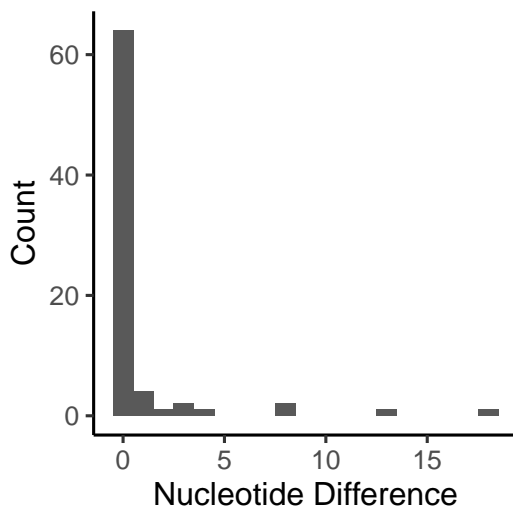
### IGHV1-69\*08\_C191T

147 sequences assigned  
123 (83.7%) exact matches, in which:  
123 unique CDR3  
6 unique J



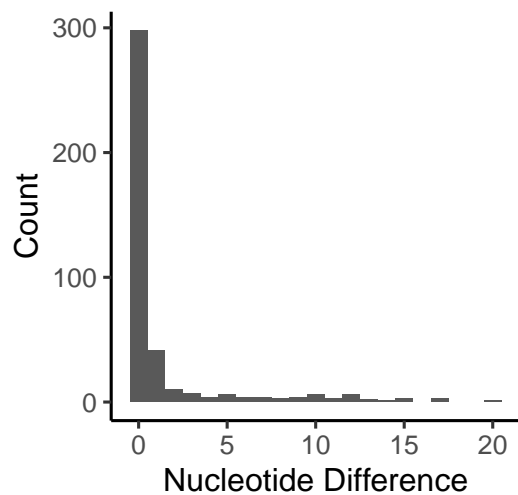
### IGHV2-5\*01

76 sequences assigned  
64 (84.2%) exact matches, in which:  
64 unique CDR3  
5 unique J



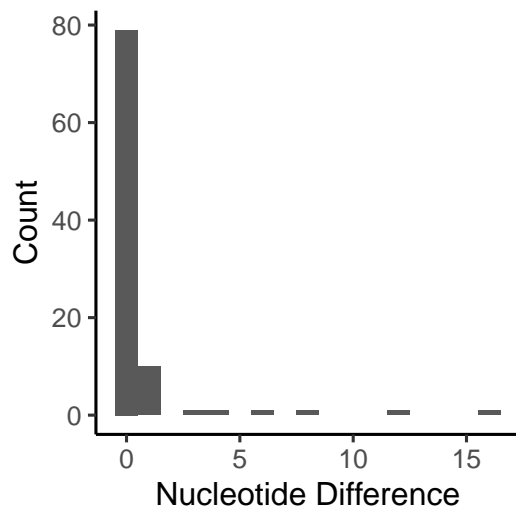
### IGHV3-7\*01

411 sequences assigned  
298 (72.5%) exact matches, in which:  
298 unique CDR3  
6 unique J



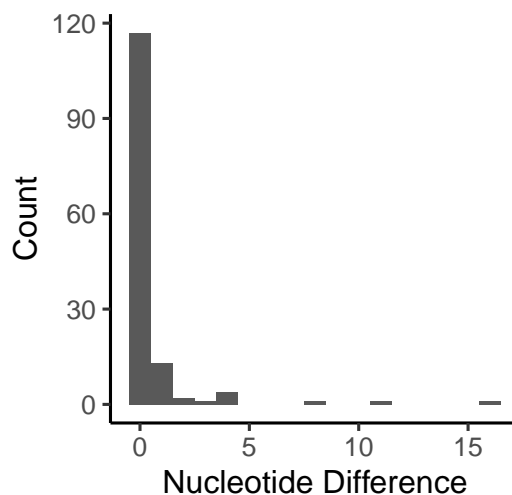
### IGHV3-9\*03

95 sequences assigned  
79 (83.2%) exact matches, in which:  
78 unique CDR3  
4 unique J



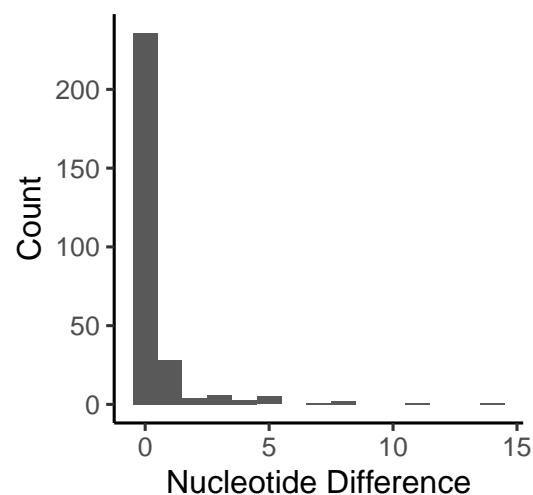
### IGHV3-15\*01

141 sequences assigned  
117 (83%) exact matches, in which:  
117 unique CDR3  
6 unique J



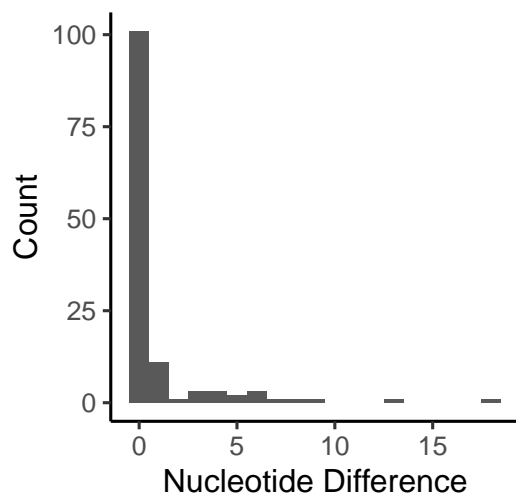
### IGHV3-21\*03

288 sequences assigned  
236 (81.9%) exact matches, in which:  
236 unique CDR3  
6 unique J



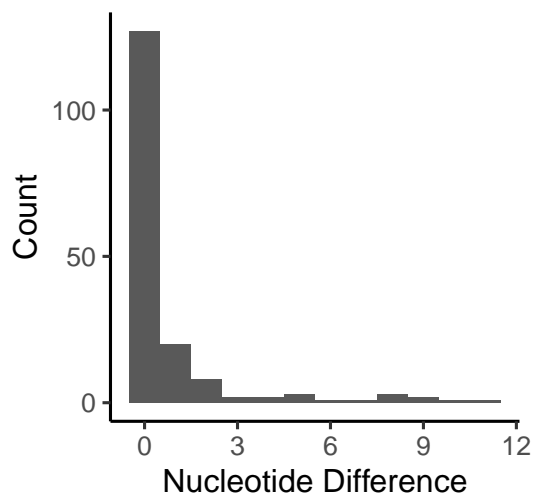
### IGHV3-11\*04

130 sequences assigned  
101 (77.7%) exact matches, in which:  
101 unique CDR3  
6 unique J



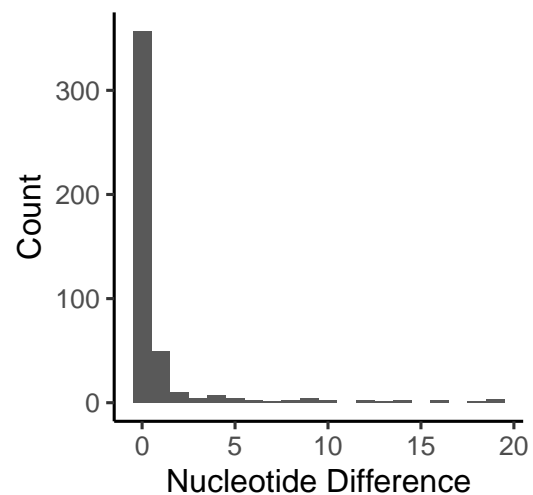
### IGHV3-20\*04

172 sequences assigned  
127 (73.8%) exact matches, in which:  
126 unique CDR3  
6 unique J



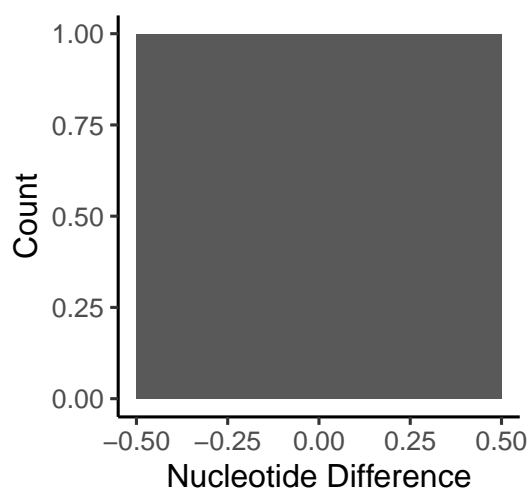
### IGHV3-23\*04

456 sequences assigned  
357 (78.3%) exact matches, in which:  
356 unique CDR3  
6 unique J



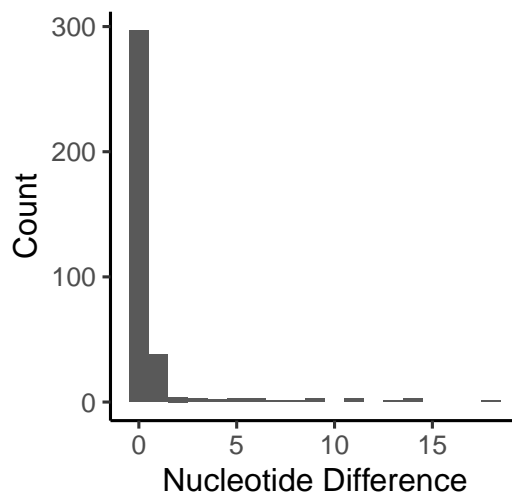
### IGHV3-13\*03

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



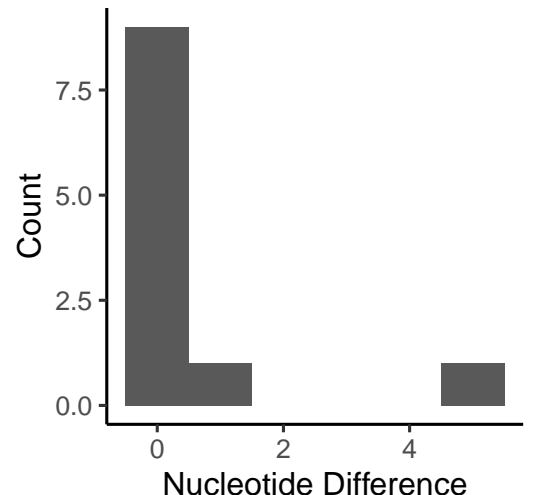
### IGHV3-21\*01

364 sequences assigned  
297 (81.6%) exact matches, in which:  
296 unique CDR3  
6 unique J



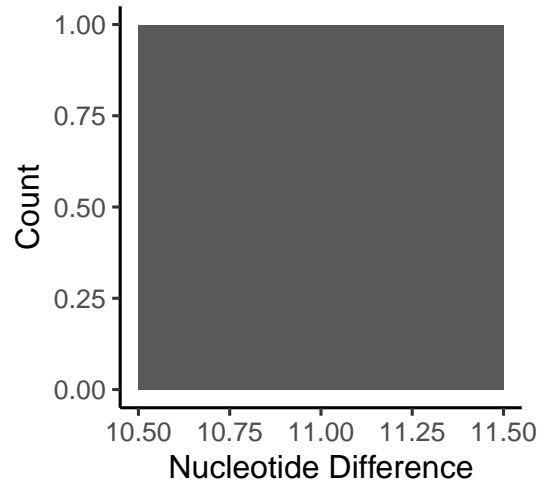
### IGHV3-30-3\*01

11 sequences assigned  
9 (81.8%) exact matches, in which:  
9 unique CDR3  
4 unique J



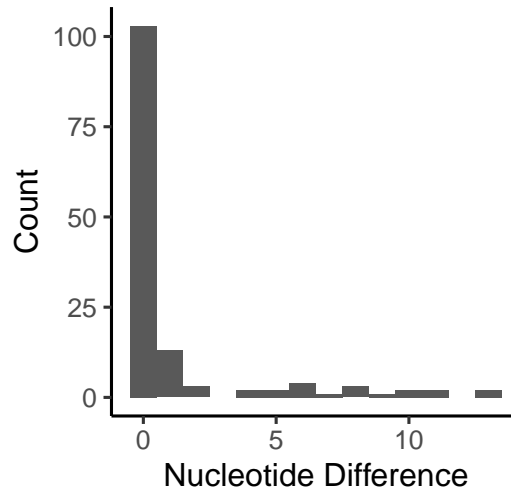
### IGHV3–33\*05

1 sequences assigned  
No exact matches.



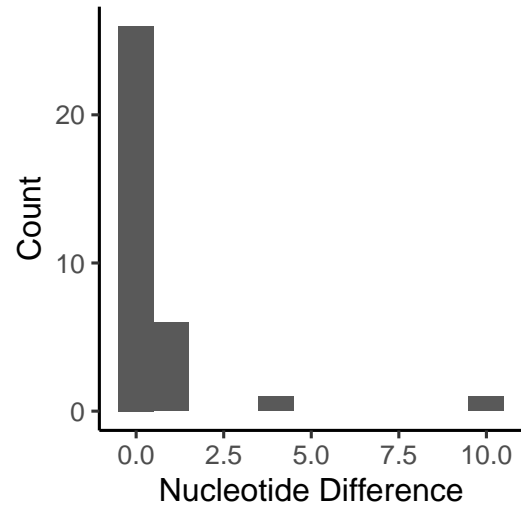
### IGHV3–48\*01

139 sequences assigned  
103 (74.1%) exact matches, in which:  
103 unique CDR3  
5 unique J



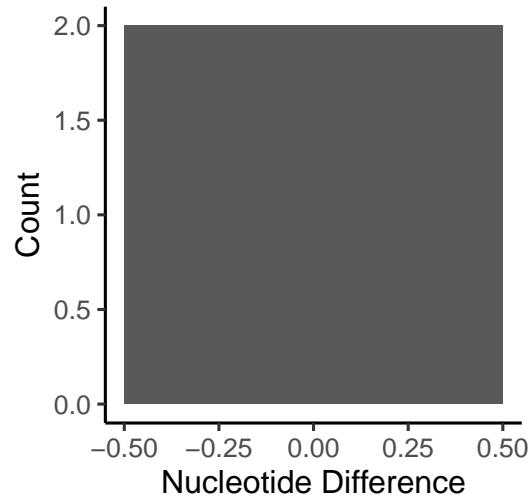
### IGHV3–53\*04\_C241G\_G2

35 sequences assigned  
26 (74.3%) exact matches, in which:  
26 unique CDR3  
5 unique J



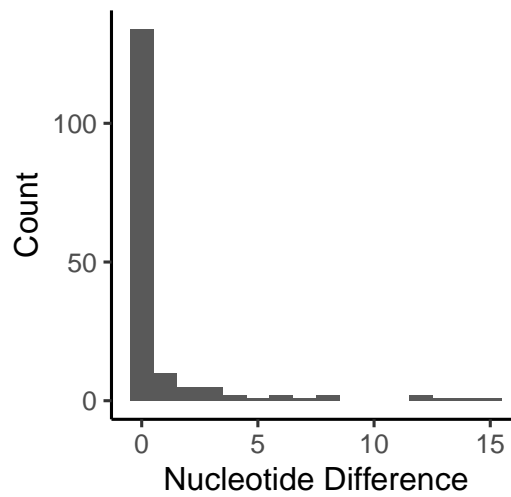
### IGHV3–38–3\*01

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



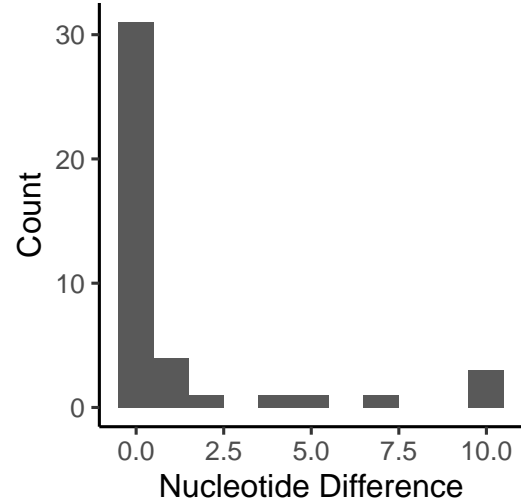
### IGHV3–48\*01\_A39C

167 sequences assigned  
134 (80.2%) exact matches, in which:  
134 unique CDR3  
6 unique J



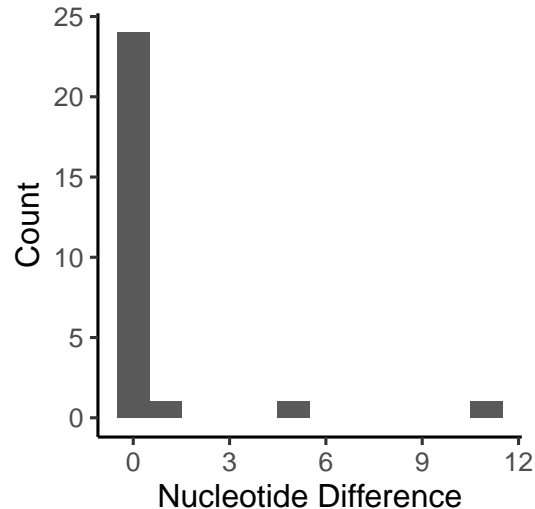
### IGHV3–64\*01

43 sequences assigned  
31 (72.1%) exact matches, in which:  
31 unique CDR3  
5 unique J



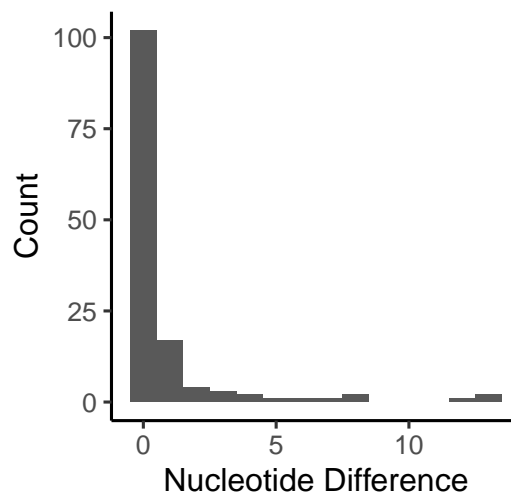
### IGHV3–43\*01

27 sequences assigned  
24 (88.9%) exact matches, in which:  
24 unique CDR3  
5 unique J



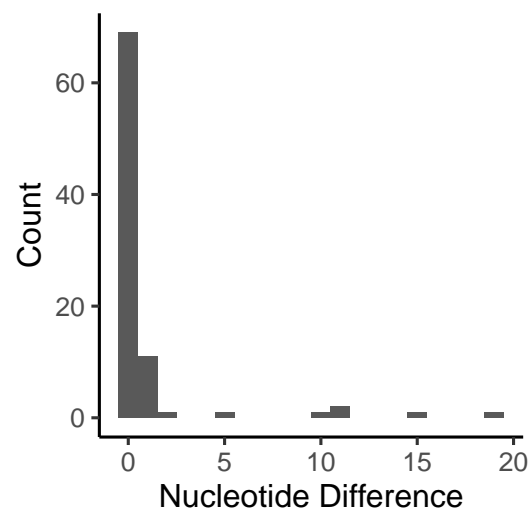
### IGHV3–49\*04

137 sequences assigned  
102 (74.5%) exact matches, in which:  
102 unique CDR3  
5 unique J



### IGHV3–66\*02

88 sequences assigned  
69 (78.4%) exact matches, in which:  
69 unique CDR3  
5 unique J



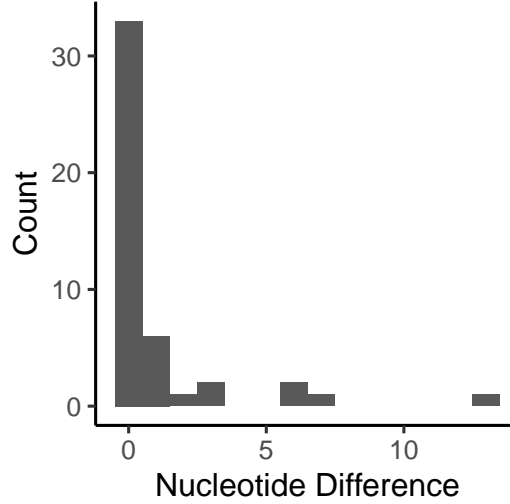
### IGHV3-69-1\*02

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



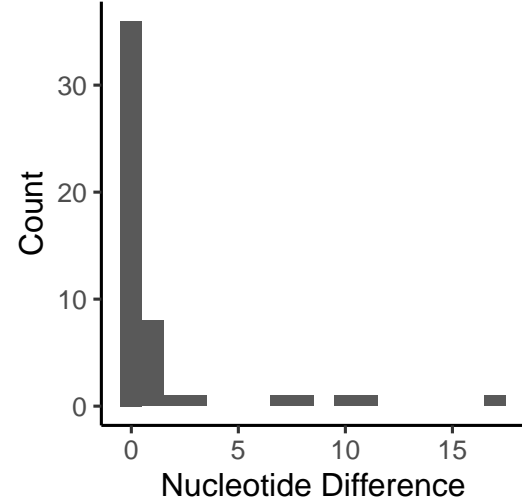
### IGHV3-73\*02

46 sequences assigned  
33 (71.7%) exact matches, in which:  
33 unique CDR3  
4 unique J



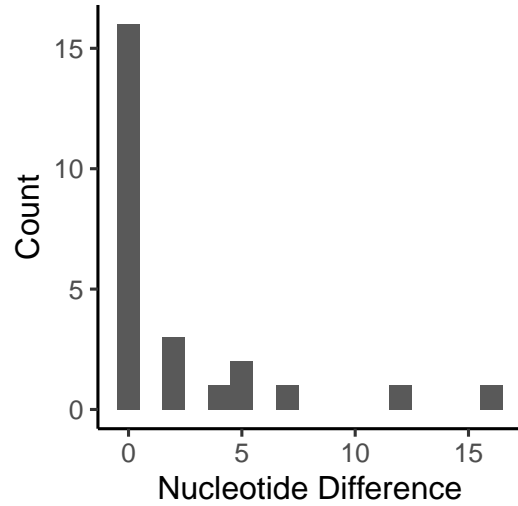
### IGHV3-43D\*04

51 sequences assigned  
36 (70.6%) exact matches, in which:  
36 unique CDR3  
6 unique J



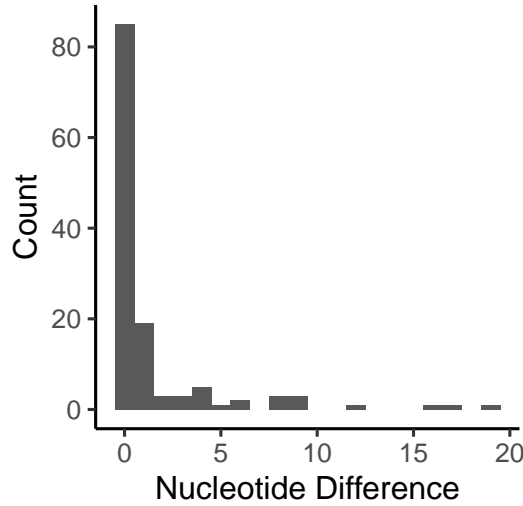
### IGHV3-72\*01

25 sequences assigned  
16 (64%) exact matches, in which:  
16 unique CDR3  
3 unique J



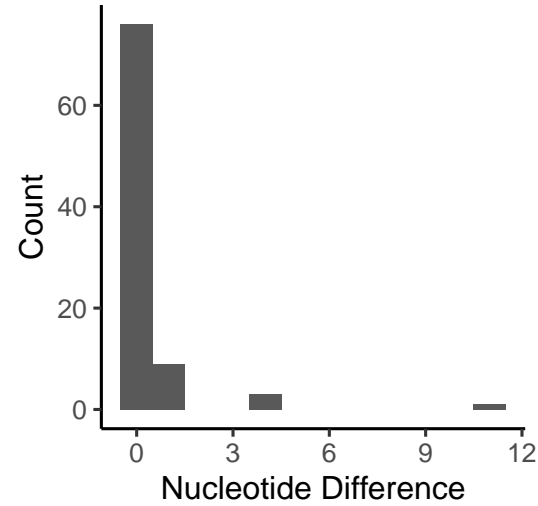
### IGHV3-74\*01

129 sequences assigned  
85 (65.9%) exact matches, in which:  
85 unique CDR3  
6 unique J



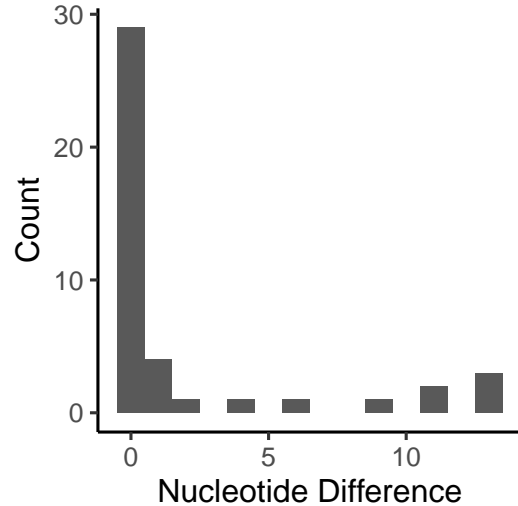
### IGHV4-4\*02

89 sequences assigned  
76 (85.4%) exact matches, in which:  
76 unique CDR3  
5 unique J



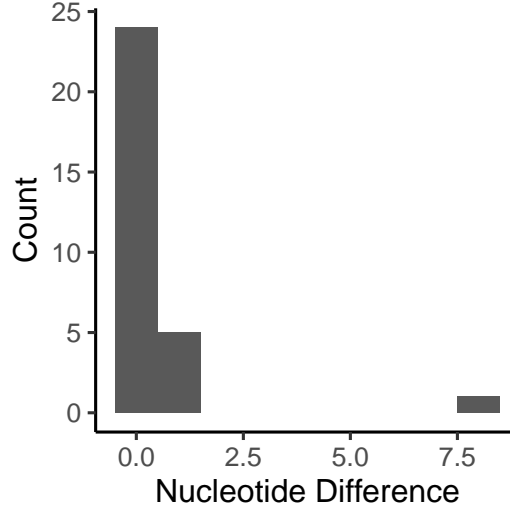
### IGHV3-73\*01

42 sequences assigned  
29 (69%) exact matches, in which:  
29 unique CDR3  
5 unique J



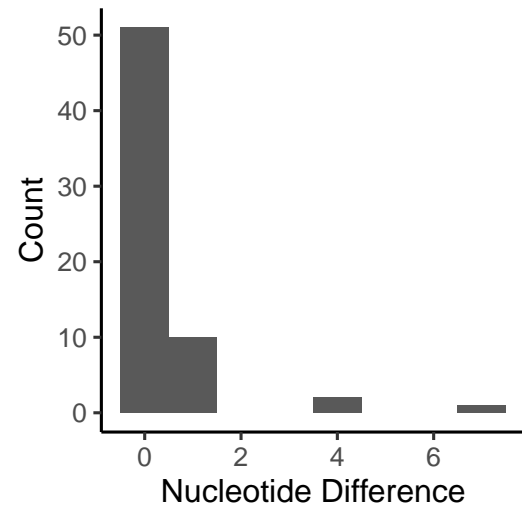
### IGHV3-43D\*03

30 sequences assigned  
24 (80%) exact matches, in which:  
24 unique CDR3  
5 unique J



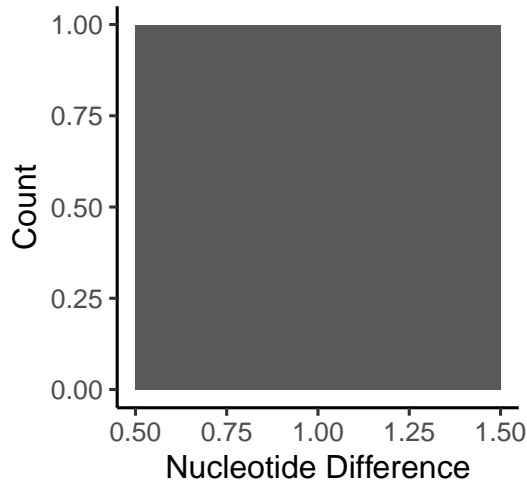
### IGHV4-4\*07

64 sequences assigned  
51 (79.7%) exact matches, in which:  
51 unique CDR3  
5 unique J



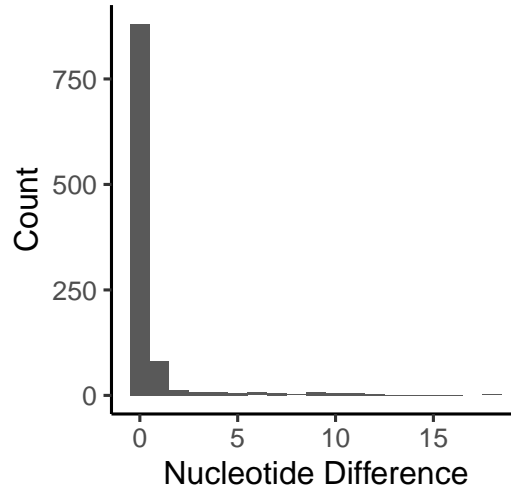
### IGHV4-30-2\*05

1 sequences assigned  
No exact matches.



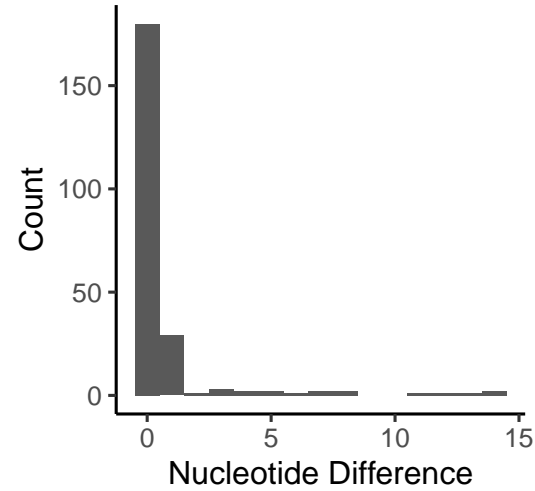
### IGHV4-38-2\*01

1042 sequences assigned  
881 (84.5%) exact matches, in which:  
881 unique CDR3  
6 unique J



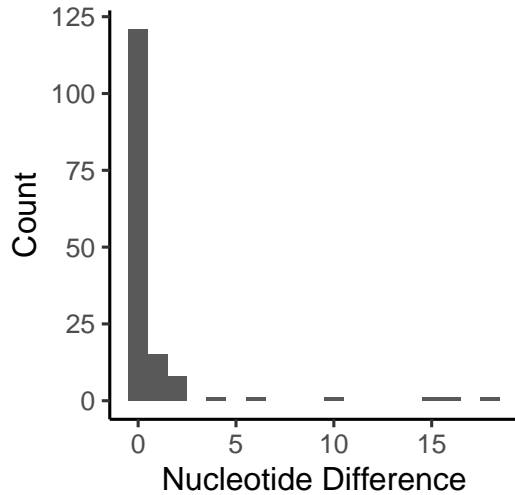
### IGHV4-59\*01

227 sequences assigned  
180 (79.3%) exact matches, in which:  
178 unique CDR3  
6 unique J



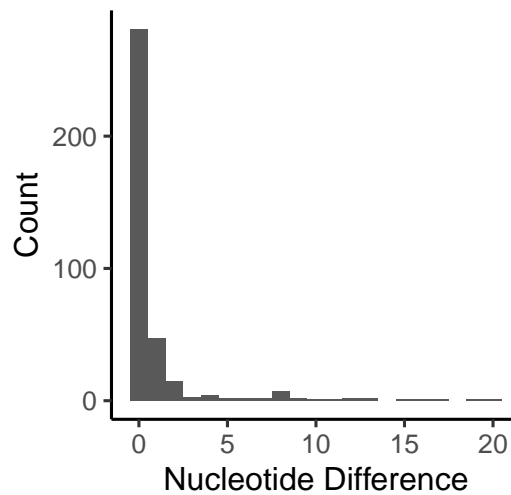
### IGHV4-30-4\*08

150 sequences assigned  
121 (80.7%) exact matches, in which:  
121 unique CDR3  
6 unique J



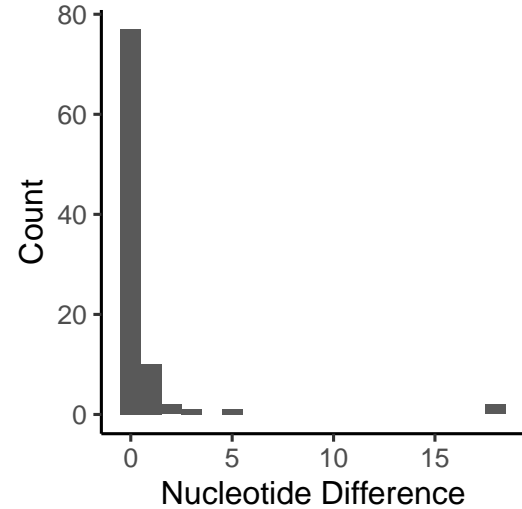
### IGHV4-38-2\*02

376 sequences assigned  
281 (74.7%) exact matches, in which:  
279 unique CDR3  
6 unique J



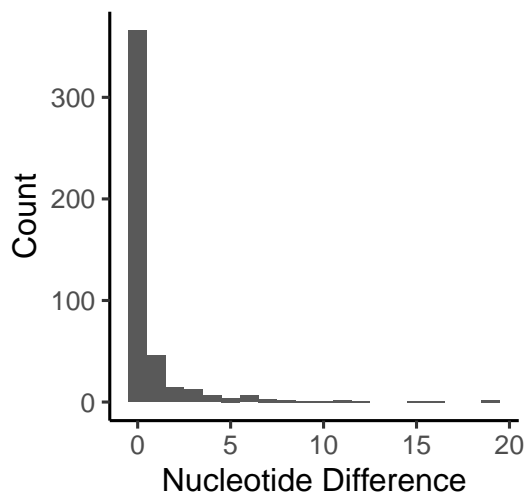
### IGHV4-59\*08

94 sequences assigned  
77 (81.9%) exact matches, in which:  
77 unique CDR3  
6 unique J



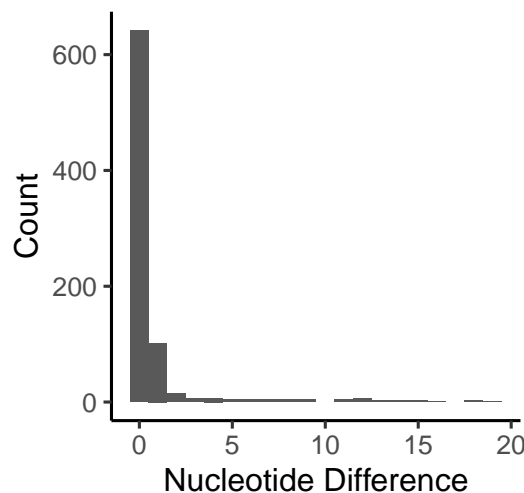
### IGHV4-34\*01

470 sequences assigned  
366 (77.9%) exact matches, in which:  
363 unique CDR3  
6 unique J



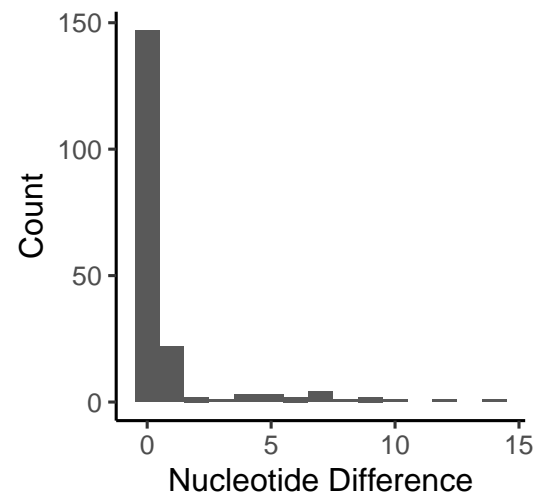
### IGHV4-39\*01

816 sequences assigned  
642 (78.7%) exact matches, in which:  
641 unique CDR3  
6 unique J



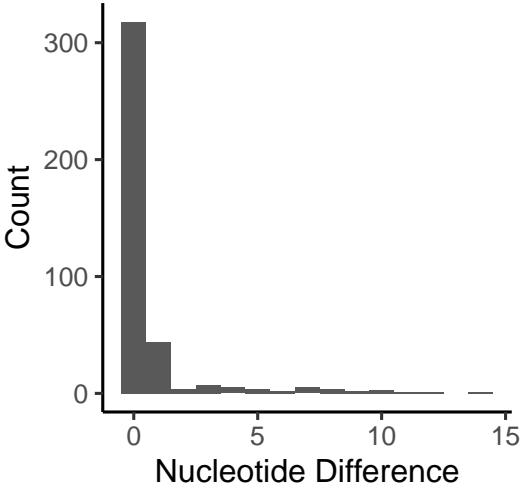
### IGHV4-61\*02

193 sequences assigned  
147 (76.2%) exact matches, in which:  
147 unique CDR3  
6 unique J



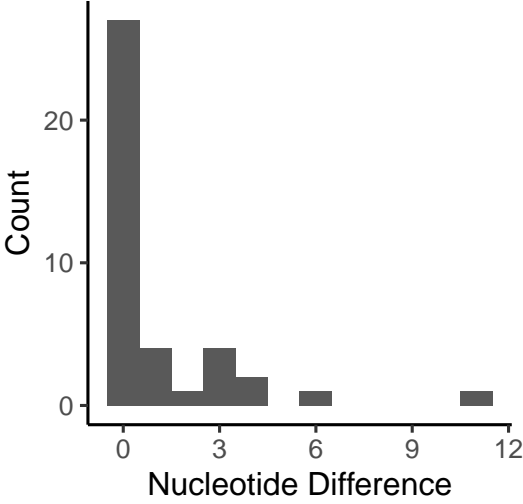
IGHV5–51\*01

405 sequences assigned  
318 (78.5%) exact matches, in which:  
318 unique CDR3  
6 unique J



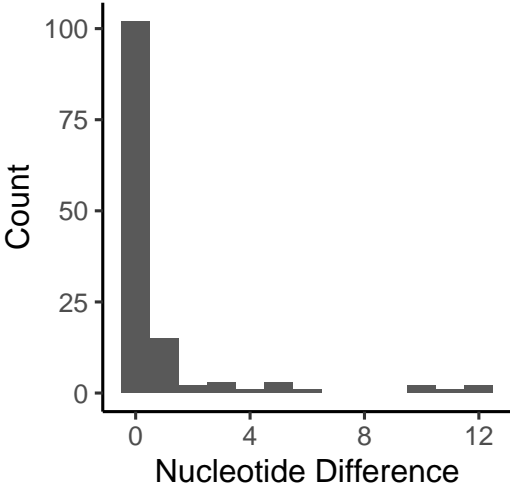
IGHV6–1\*01

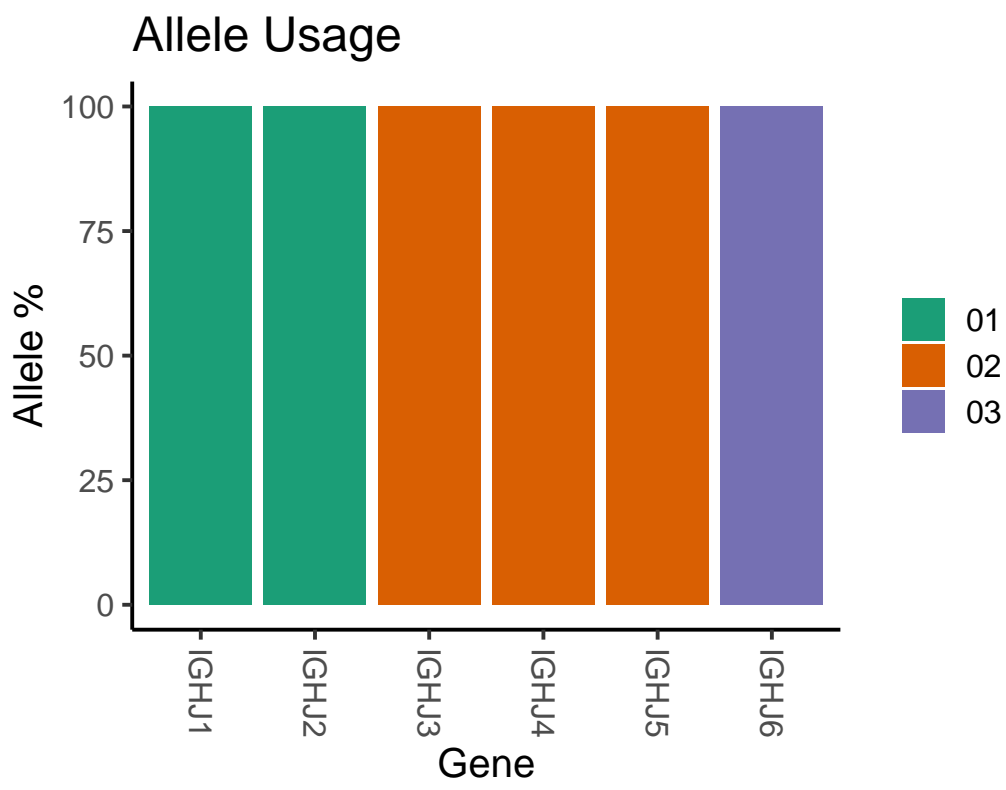
41 sequences assigned  
27 (65.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



IGHV7–4–1\*02

132 sequences assigned  
102 (77.3%) exact matches, in which:  
102 unique CDR3  
6 unique J







Warning – no inferred sequences found.