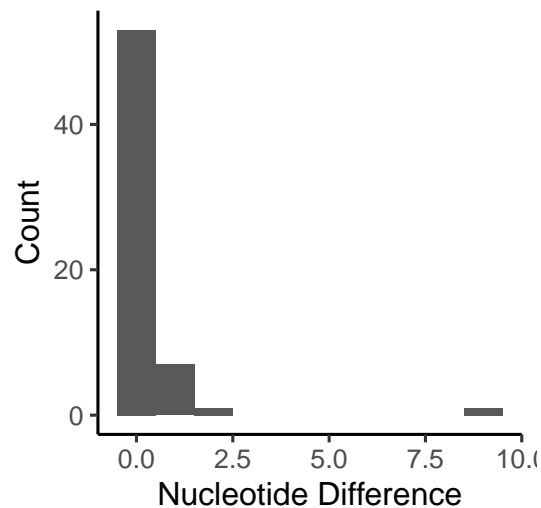


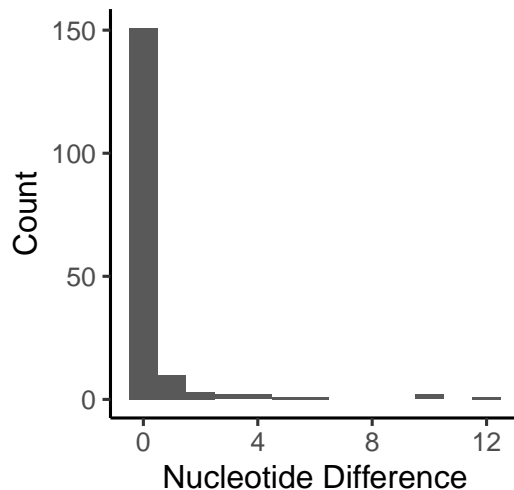
### IGHV1-2\*04

62 sequences assigned  
53 (85.5%) exact matches, in which:  
53 unique CDR3  
5 unique J



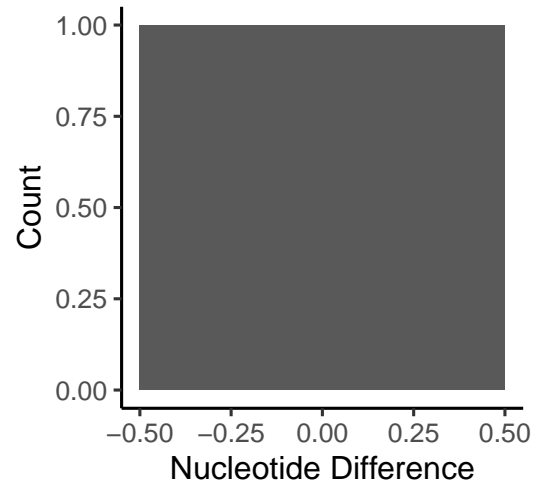
### IGHV1-8\*01

173 sequences assigned  
151 (87.3%) exact matches, in which:  
151 unique CDR3  
6 unique J



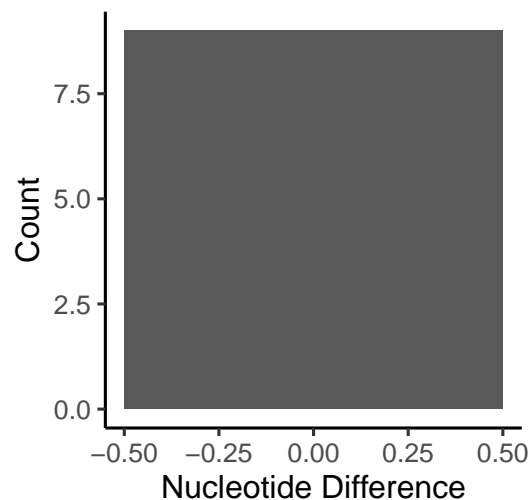
### IGHV1-45\*02

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



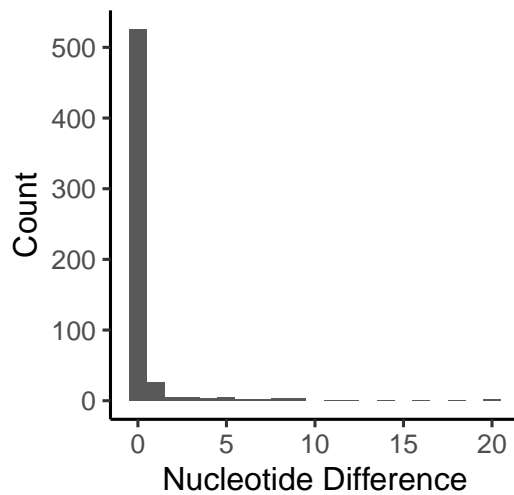
### IGHV1-2\*05

9 sequences assigned  
9 (100%) exact matches, in which:  
9 unique CDR3  
3 unique J



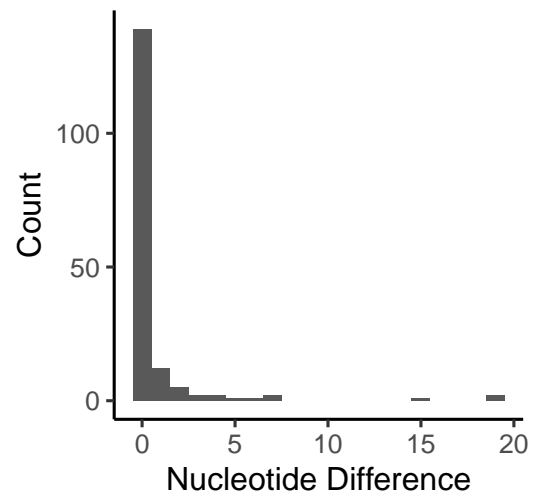
### IGHV1-18\*01

589 sequences assigned  
526 (89.3%) exact matches, in which:  
526 unique CDR3  
6 unique J



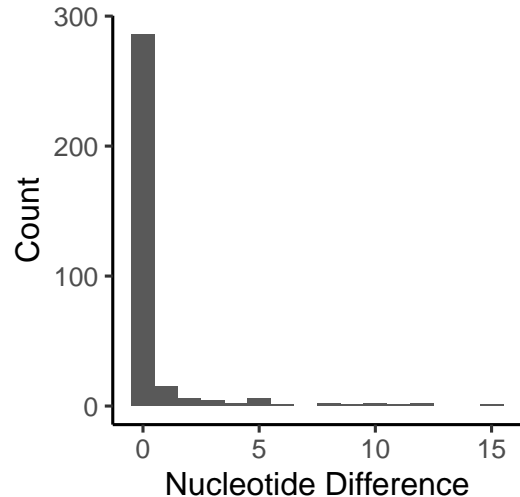
### IGHV1-46\*01

167 sequences assigned  
139 (83.2%) exact matches, in which:  
139 unique CDR3  
6 unique J



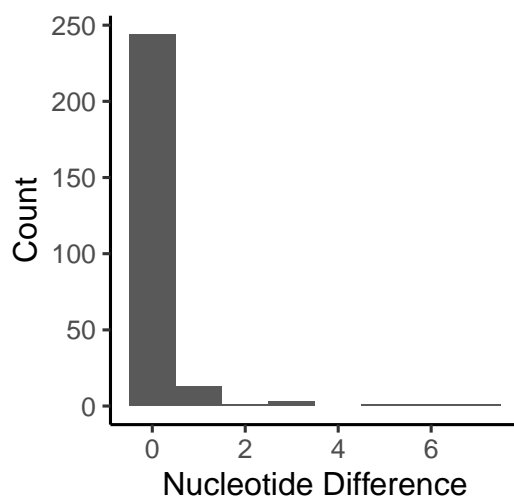
### IGHV1-3\*01

329 sequences assigned  
286 (86.9%) exact matches, in which:  
286 unique CDR3  
6 unique J



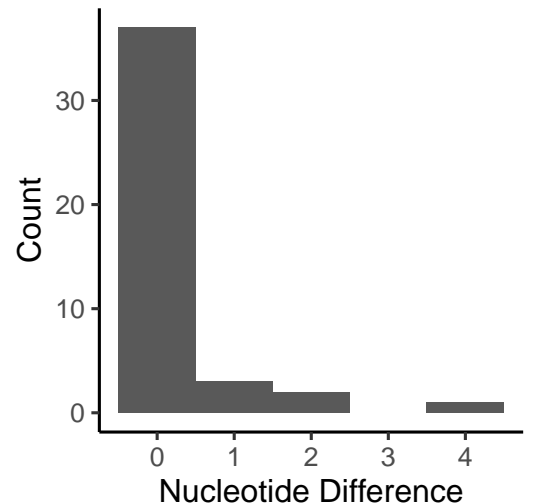
### IGHV1-24\*01

264 sequences assigned  
244 (92.4%) exact matches, in which:  
244 unique CDR3  
6 unique J



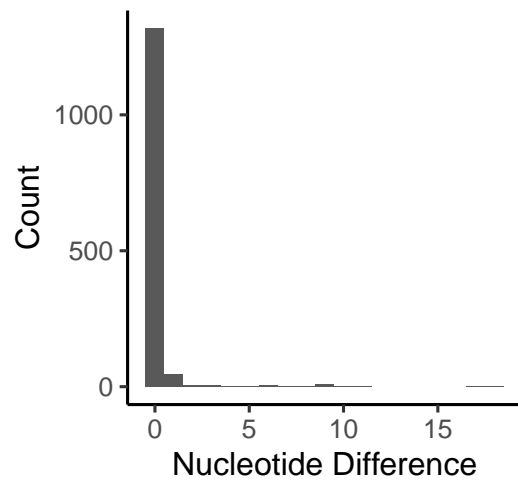
### IGHV1-58\*01

43 sequences assigned  
37 (86%) exact matches, in which:  
37 unique CDR3  
4 unique J



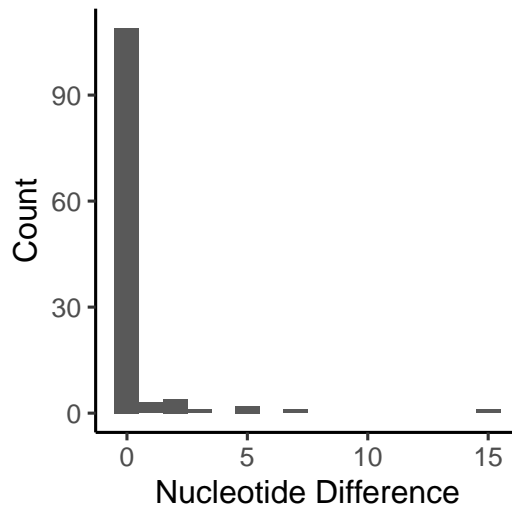
### IGHV1-69\*01

1404 sequences assigned  
1318 (93.9%) exact matches, in which:  
1318 unique CDR3  
6 unique J



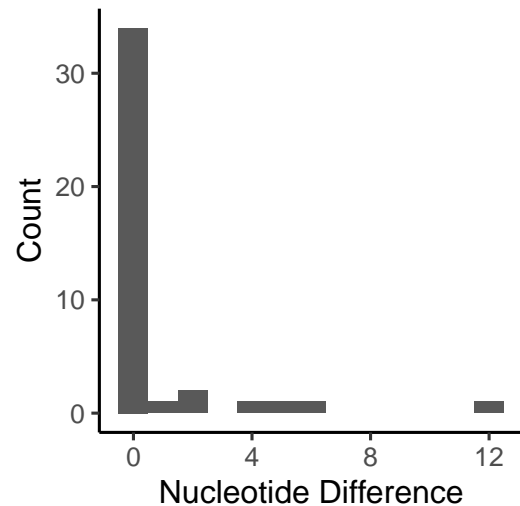
### IGHV2-5\*01

121 sequences assigned  
109 (90.1%) exact matches, in which:  
109 unique CDR3  
6 unique J



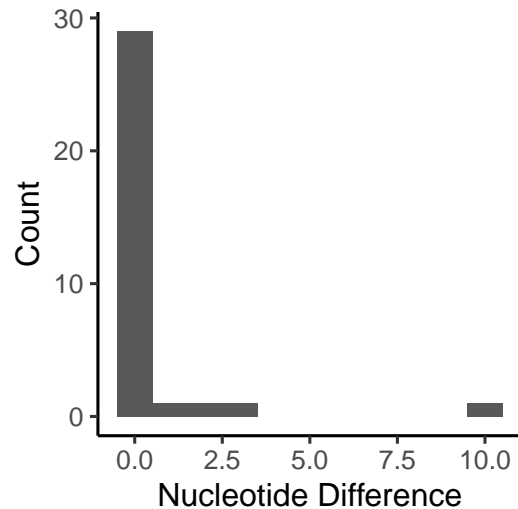
### IGHV2-70\*01

41 sequences assigned  
34 (82.9%) exact matches, in which:  
34 unique CDR3  
5 unique J



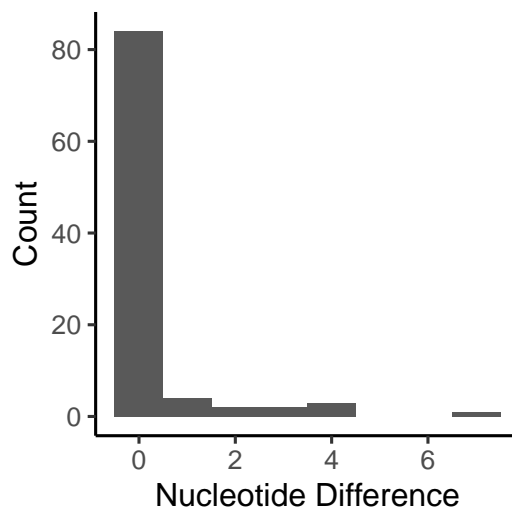
### IGHV1-69-2\*01

33 sequences assigned  
29 (87.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



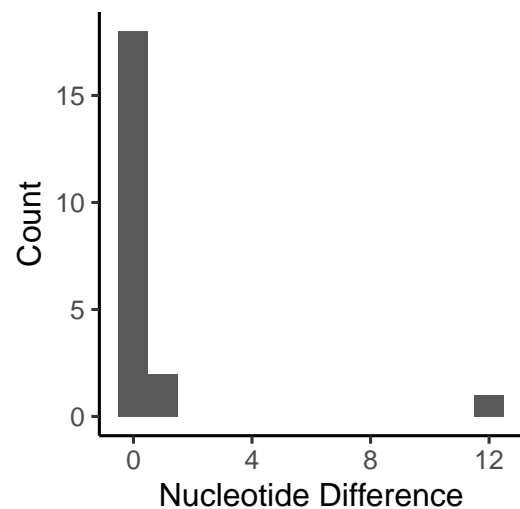
### IGHV2-5\*02

96 sequences assigned  
84 (87.5%) exact matches, in which:  
84 unique CDR3  
6 unique J



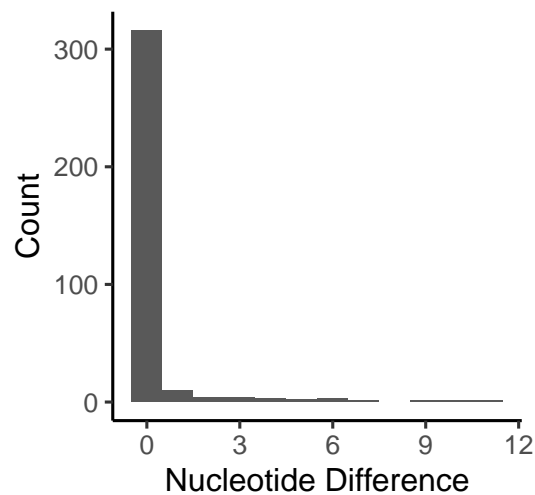
### IGHV2-70\*04

21 sequences assigned  
18 (85.7%) exact matches, in which:  
18 unique CDR3  
4 unique J



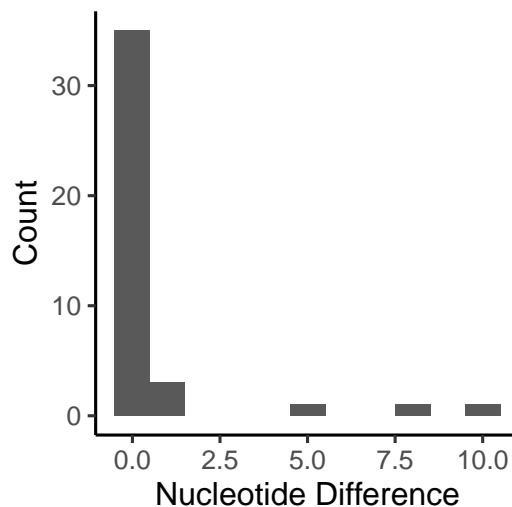
### IGHV1-69\*06

347 sequences assigned  
316 (91.1%) exact matches, in which:  
316 unique CDR3  
6 unique J



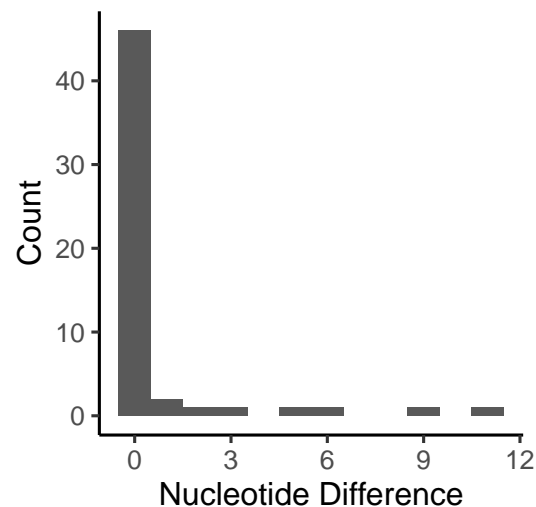
### IGHV2-26\*01

41 sequences assigned  
35 (85.4%) exact matches, in which:  
35 unique CDR3  
5 unique J



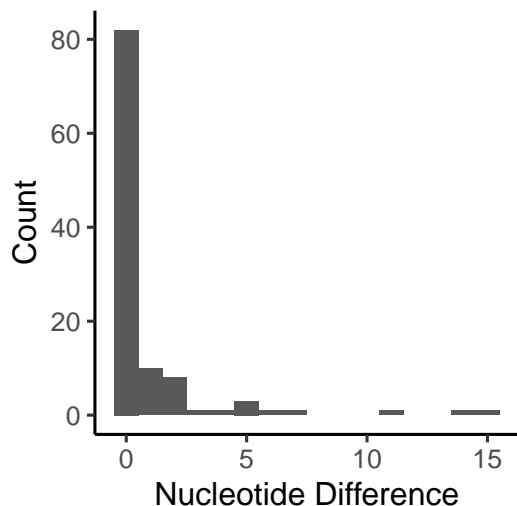
### IGHV2-70\*15

54 sequences assigned  
46 (85.2%) exact matches, in which:  
46 unique CDR3  
4 unique J



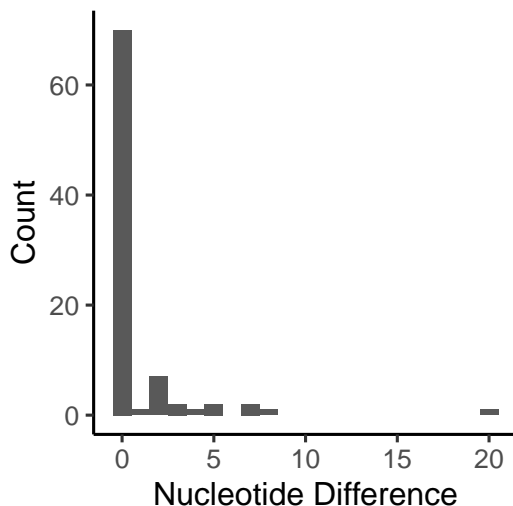
### IGHV3-7\*01

110 sequences assigned  
82 (74.5%) exact matches, in which:  
82 unique CDR3  
5 unique J



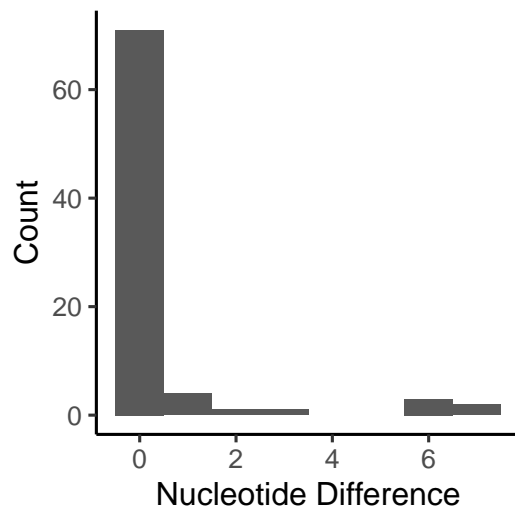
### IGHV3-11\*01

87 sequences assigned  
70 (80.5%) exact matches, in which:  
70 unique CDR3  
6 unique J



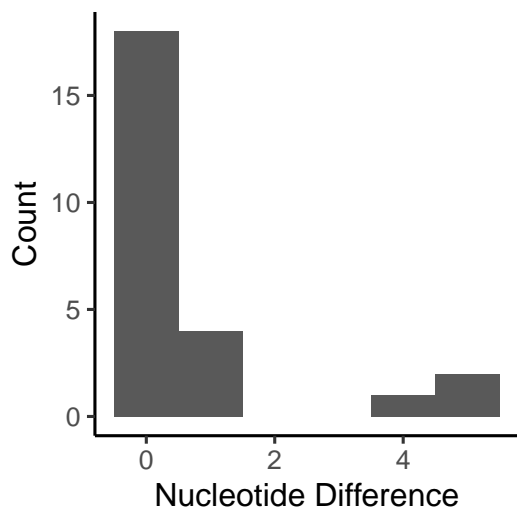
### IGHV3-15\*01

82 sequences assigned  
71 (86.6%) exact matches, in which:  
70 unique CDR3  
5 unique J



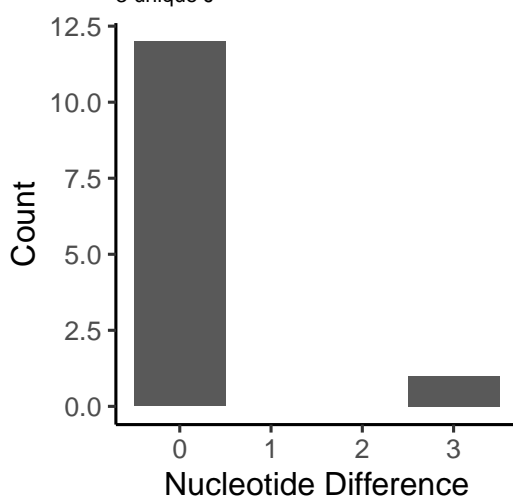
### IGHV3-7\*04

25 sequences assigned  
18 (72%) exact matches, in which:  
18 unique CDR3  
4 unique J



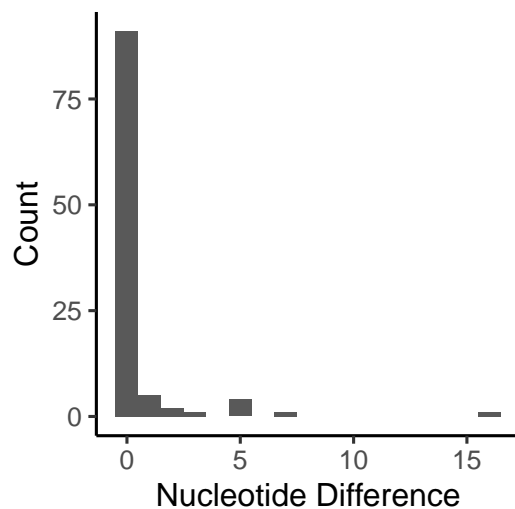
### IGHV3-11\*06

13 sequences assigned  
12 (92.3%) exact matches, in which:  
12 unique CDR3  
3 unique J



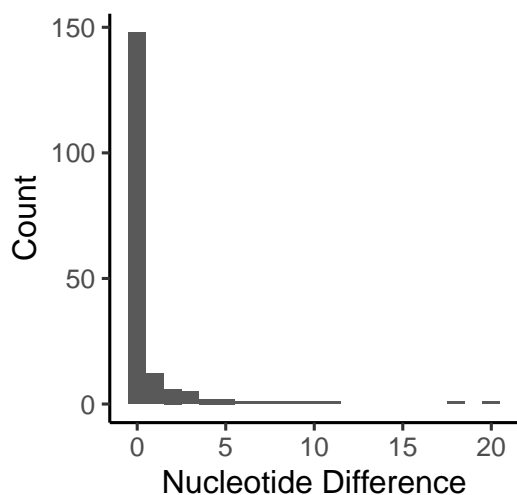
### IGHV3-15\*07

105 sequences assigned  
91 (86.7%) exact matches, in which:  
91 unique CDR3  
5 unique J



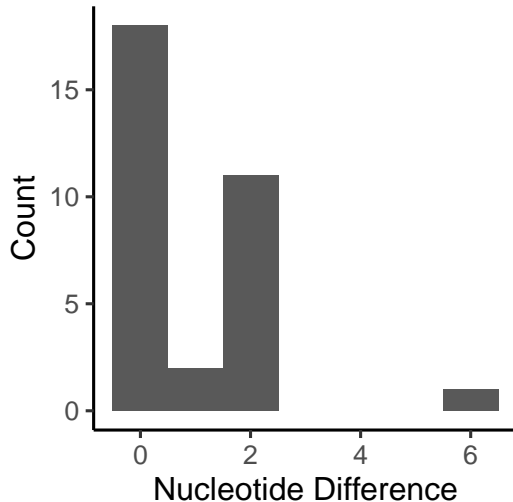
### IGHV3-9\*01

183 sequences assigned  
148 (80.9%) exact matches, in which:  
148 unique CDR3  
6 unique J



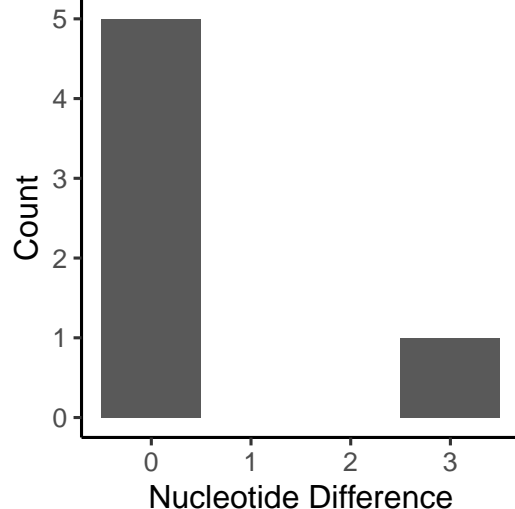
### IGHV3-13\*01

33 sequences assigned  
18 (54.5%) exact matches, in which:  
18 unique CDR3  
5 unique J



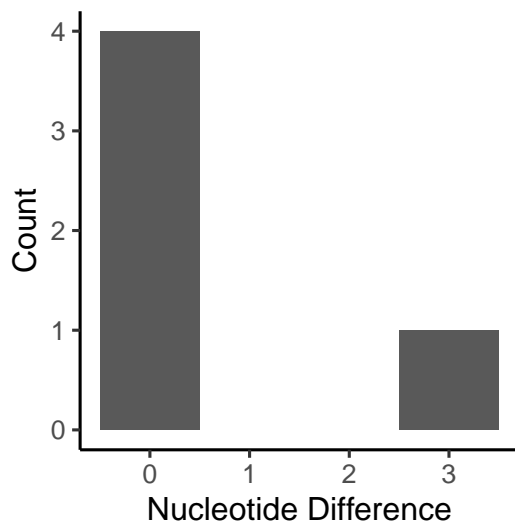
### IGHV3-20\*01

6 sequences assigned  
5 (83.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



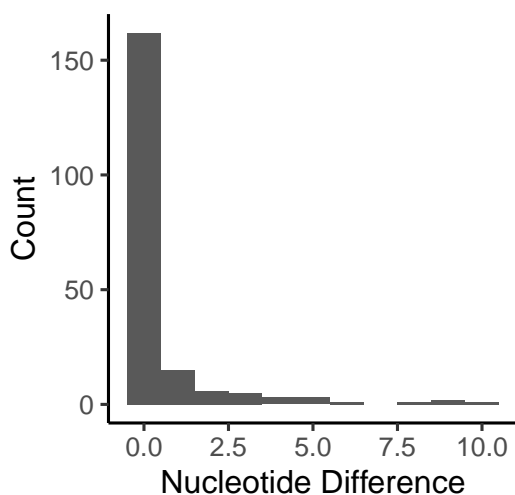
### IGHV3-20\*04

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
2 unique J



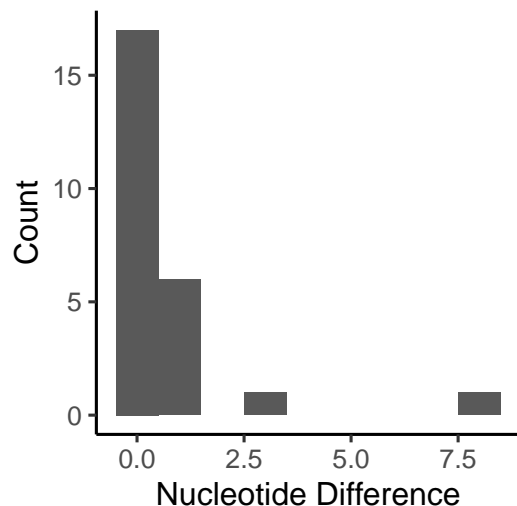
### IGHV3-30-3\*01

200 sequences assigned  
162 (81%) exact matches, in which:  
162 unique CDR3  
6 unique J



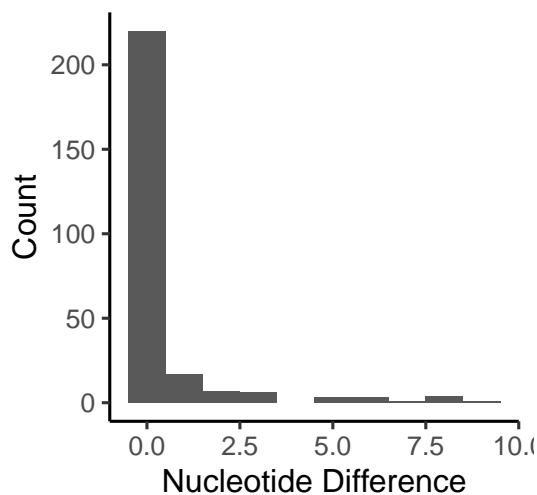
### IGHV3-43\*01

25 sequences assigned  
17 (68%) exact matches, in which:  
17 unique CDR3  
5 unique J



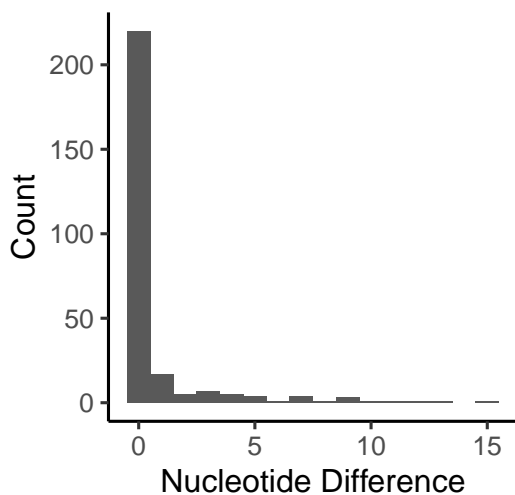
### IGHV3-21\*01

264 sequences assigned  
220 (83.3%) exact matches, in which:  
220 unique CDR3  
6 unique J



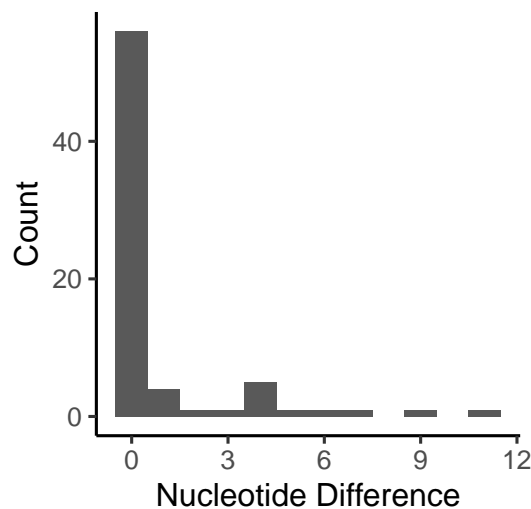
### IGHV3-30\*18

272 sequences assigned  
220 (80.9%) exact matches, in which:  
219 unique CDR3  
6 unique J



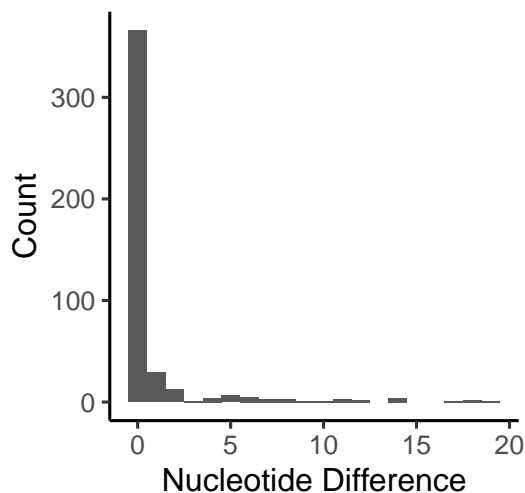
### IGHV3-48\*01

72 sequences assigned  
56 (77.8%) exact matches, in which:  
56 unique CDR3  
4 unique J



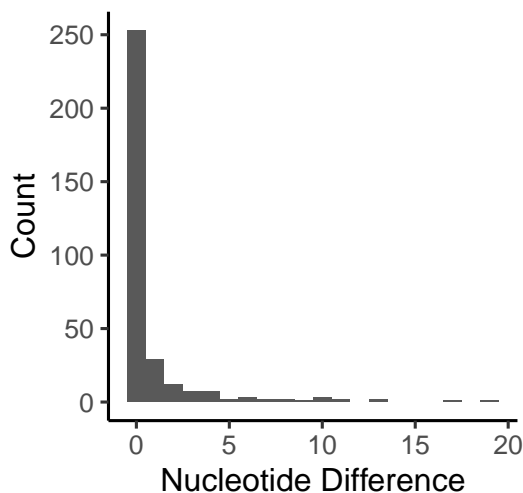
### IGHV3-23\*01

448 sequences assigned  
366 (81.7%) exact matches, in which:  
366 unique CDR3  
6 unique J



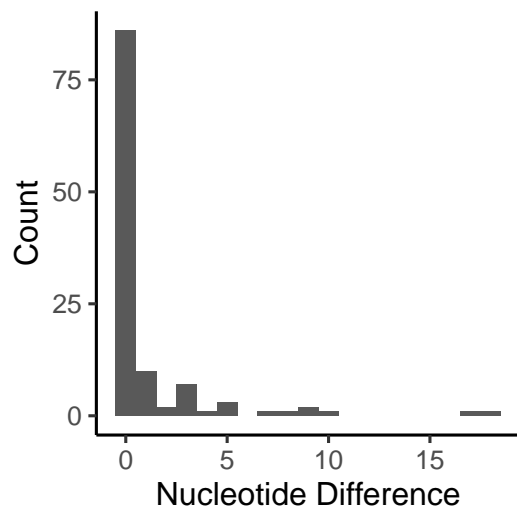
### IGHV3-33\*01

327 sequences assigned  
253 (77.4%) exact matches, in which:  
253 unique CDR3  
6 unique J



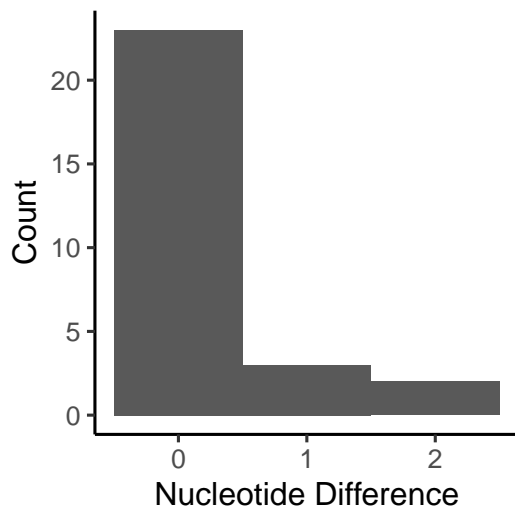
### IGHV3-48\*02

116 sequences assigned  
86 (74.1%) exact matches, in which:  
86 unique CDR3  
5 unique J



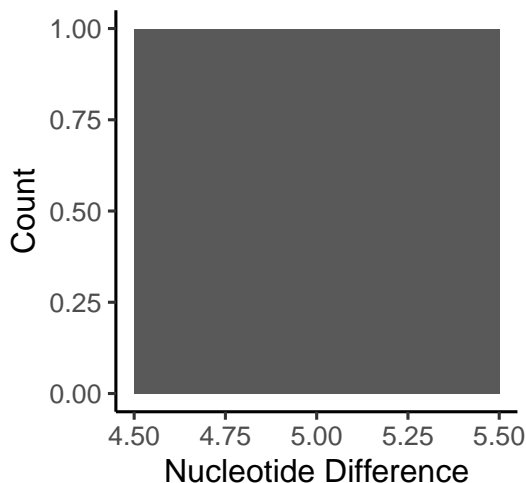
### IGHV3-49\*03

28 sequences assigned  
23 (82.1%) exact matches, in which:  
23 unique CDR3  
5 unique J



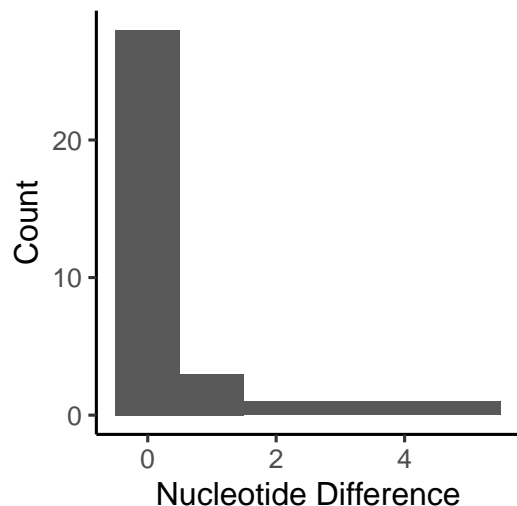
### IGHV3-64\*02

1 sequences assigned  
No exact matches.



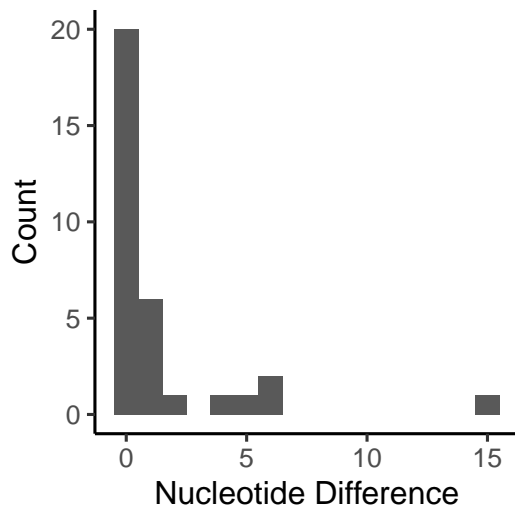
### IGHV3-73\*02

35 sequences assigned  
28 (80%) exact matches, in which:  
28 unique CDR3  
5 unique J



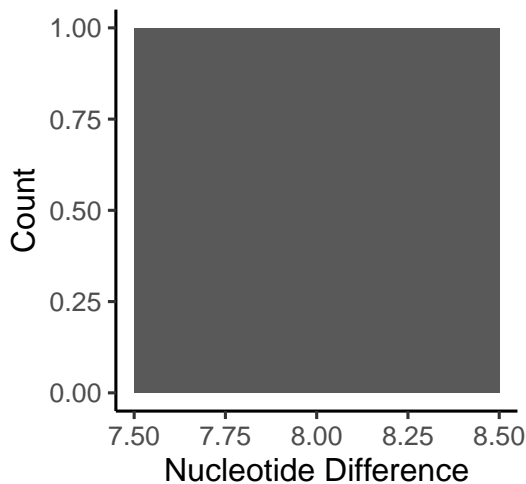
### IGHV3-49\*05

32 sequences assigned  
20 (62.5%) exact matches, in which:  
20 unique CDR3  
5 unique J



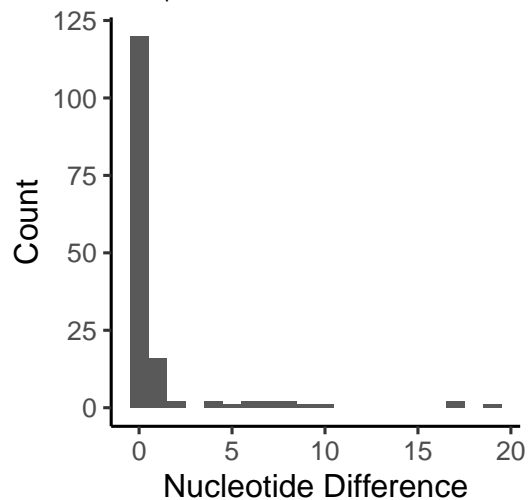
### IGHV3-66\*01

1 sequences assigned  
No exact matches.



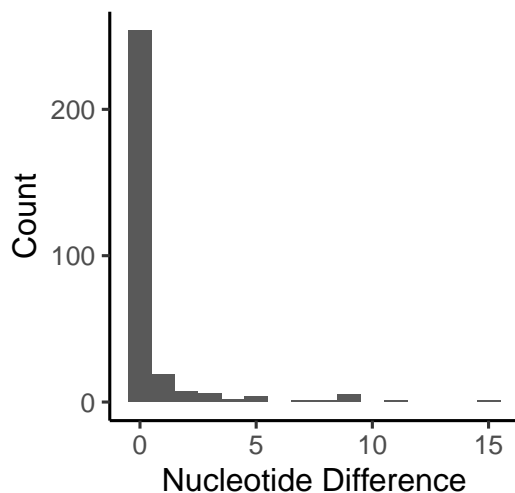
### IGHV3-74\*01

153 sequences assigned  
120 (78.4%) exact matches, in which:  
120 unique CDR3  
5 unique J



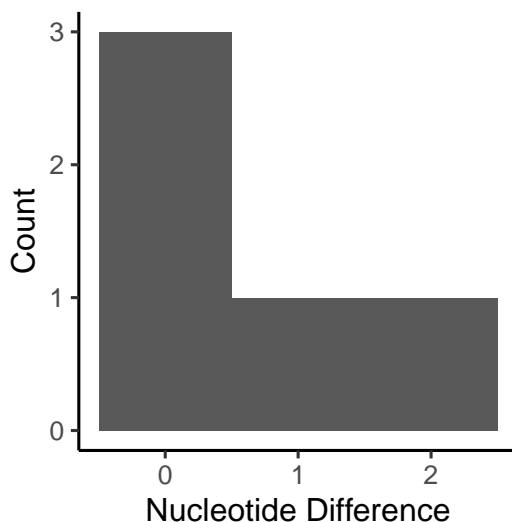
### IGHV3-53\*01

302 sequences assigned  
254 (84.1%) exact matches, in which:  
253 unique CDR3  
5 unique J



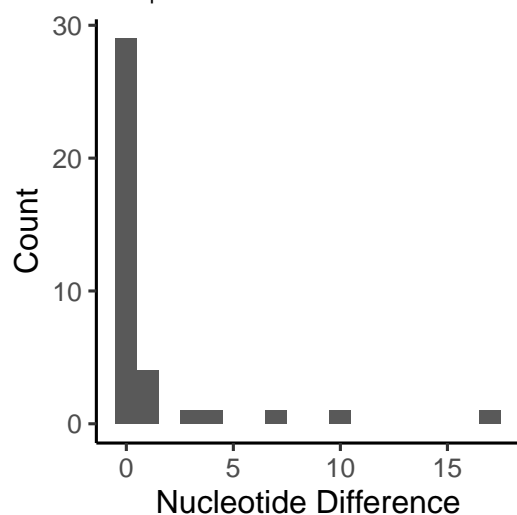
### IGHV3-72\*01

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
3 unique J



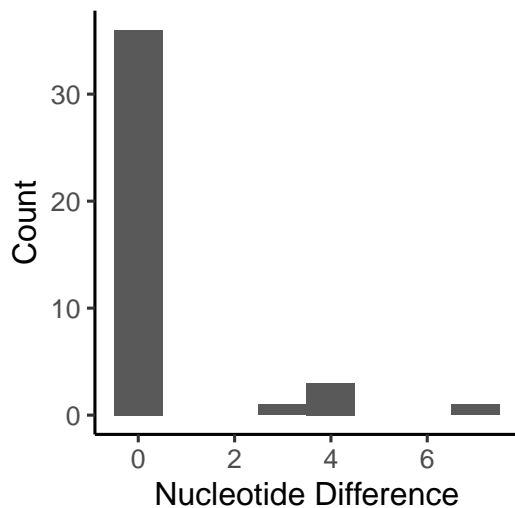
### IGHV3-64D\*06

38 sequences assigned  
29 (76.3%) exact matches, in which:  
29 unique CDR3  
6 unique J



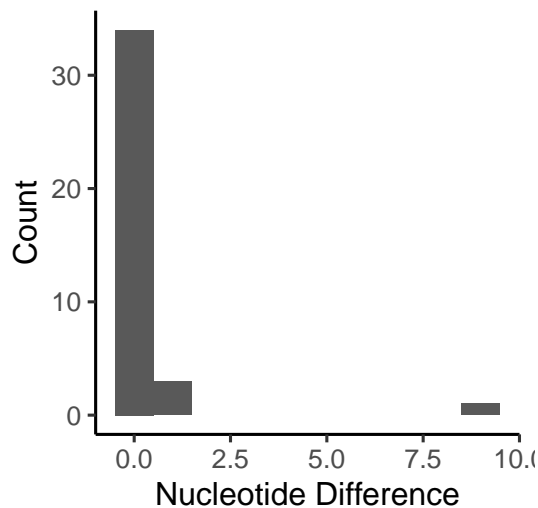
### IGHV4-4\*02

41 sequences assigned  
36 (87.8%) exact matches, in which:  
36 unique CDR3  
5 unique J



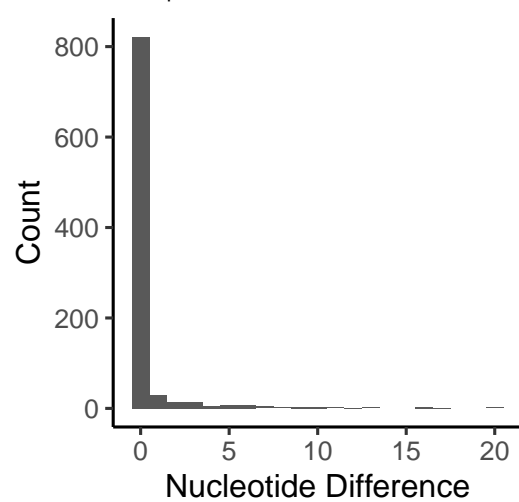
### IGHV4-30-2\*01

38 sequences assigned  
34 (89.5%) exact matches, in which:  
34 unique CDR3  
4 unique J



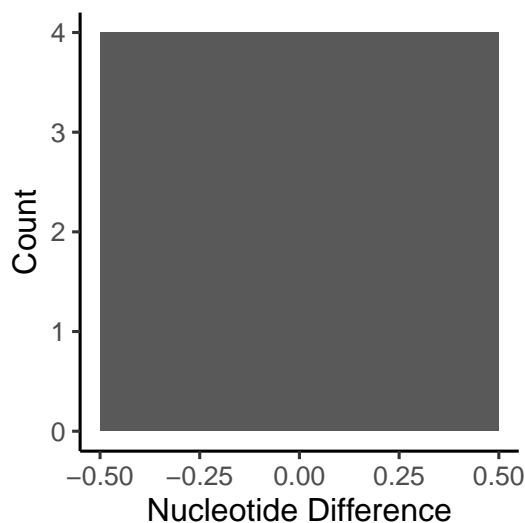
### IGHV4-39\*01

929 sequences assigned  
822 (88.5%) exact matches, in which:  
822 unique CDR3  
6 unique J



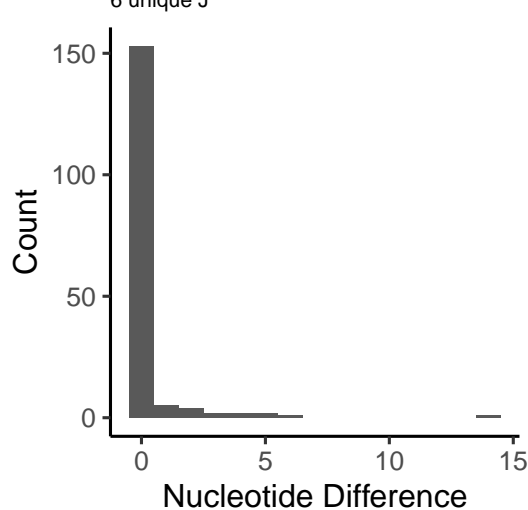
### IGHV4-28\*01

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
4 unique J



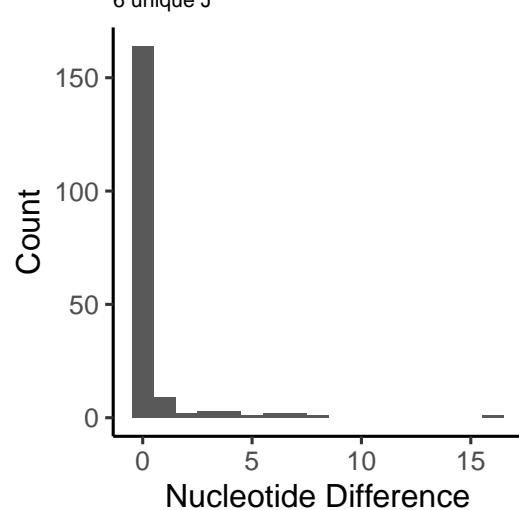
### IGHV4-31\*03

170 sequences assigned  
153 (90%) exact matches, in which:  
153 unique CDR3  
6 unique J



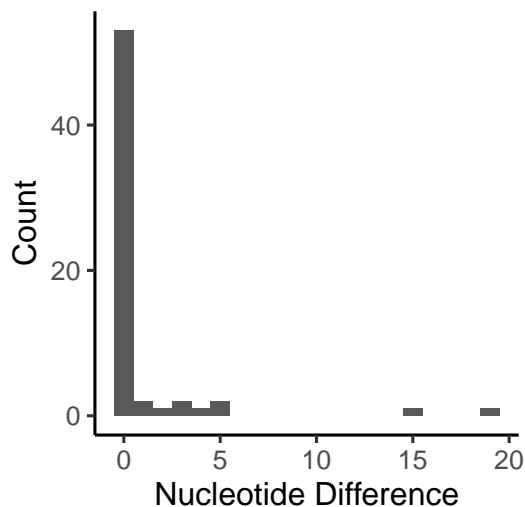
### IGHV4-59\*01

188 sequences assigned  
164 (87.2%) exact matches, in which:  
164 unique CDR3  
6 unique J



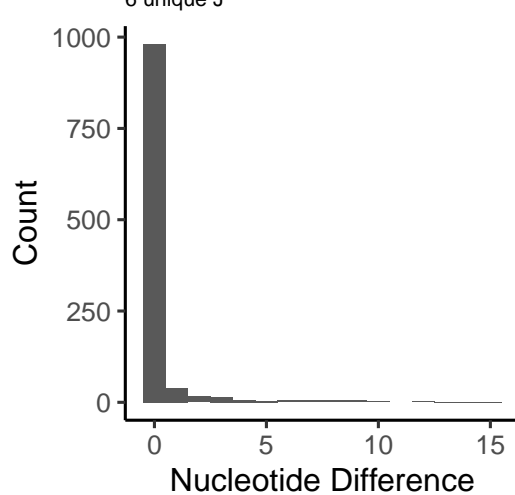
### IGHV4-30-4\*01

63 sequences assigned  
53 (84.1%) exact matches, in which:  
53 unique CDR3  
6 unique J



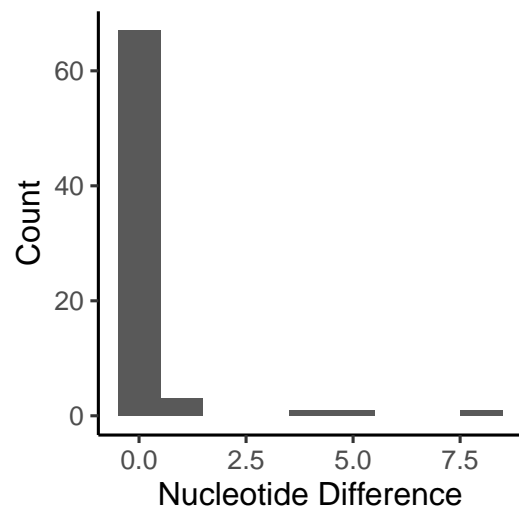
### IGHV4-34\*01

1089 sequences assigned  
981 (90.1%) exact matches, in which:  
979 unique CDR3  
6 unique J



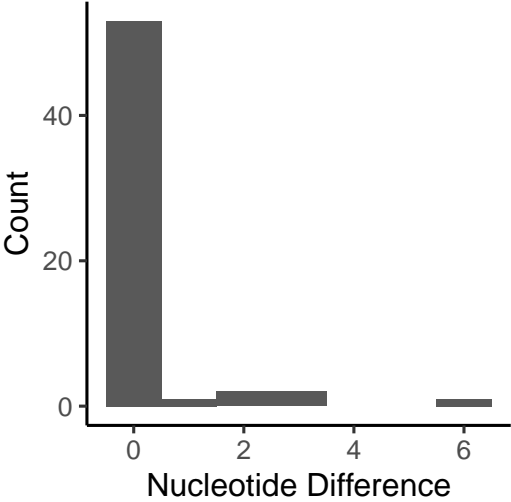
### IGHV4-61\*01

73 sequences assigned  
67 (91.8%) exact matches, in which:  
67 unique CDR3  
5 unique J



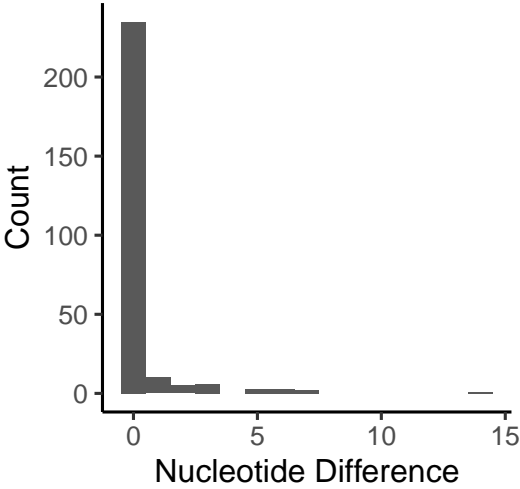
### IGHV5-10-1\*03

59 sequences assigned  
53 (89.8%) exact matches, in which:  
53 unique CDR3  
5 unique J



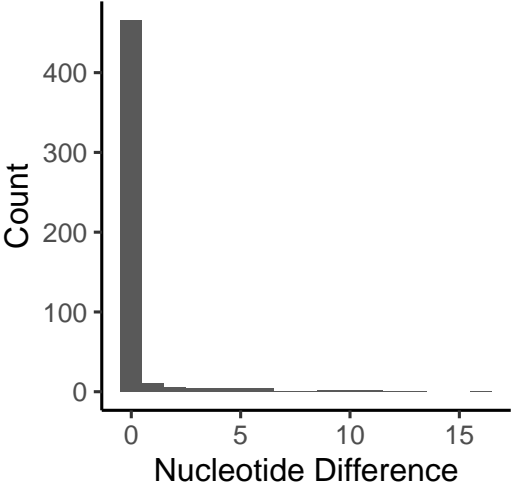
### IGHV7-4-1\*02

265 sequences assigned  
235 (88.7%) exact matches, in which:  
235 unique CDR3  
6 unique J



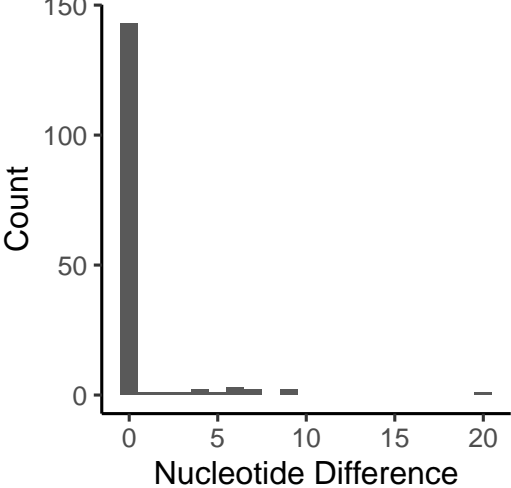
### IGHV5-51\*01

511 sequences assigned  
466 (91.2%) exact matches, in which:  
466 unique CDR3  
6 unique J



### IGHV6-1\*01

157 sequences assigned  
143 (91.1%) exact matches, in which:  
143 unique CDR3  
6 unique J







Warning – no inferred sequences found.