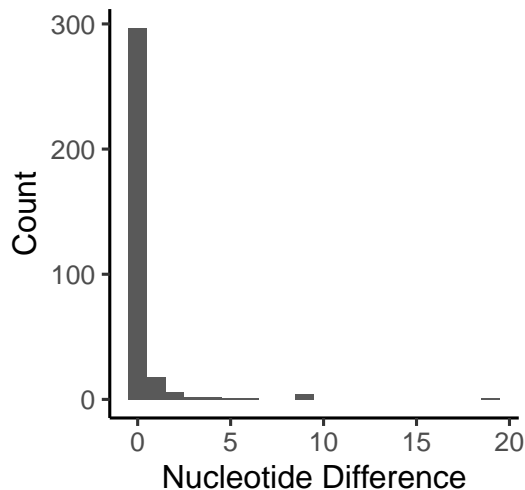


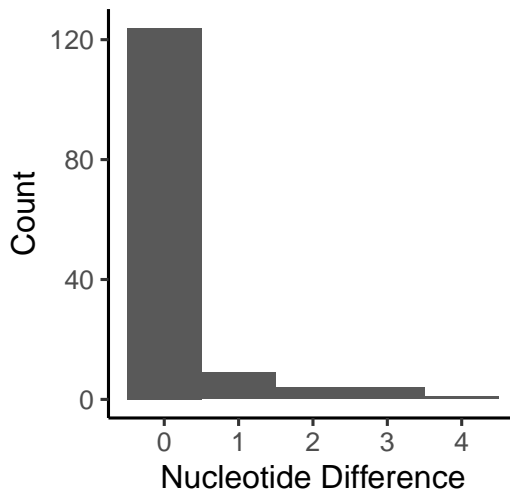
### IGHV1-2\*02

332 sequences assigned  
297 (89.5%) exact matches, in which:  
297 unique CDR3  
6 unique J



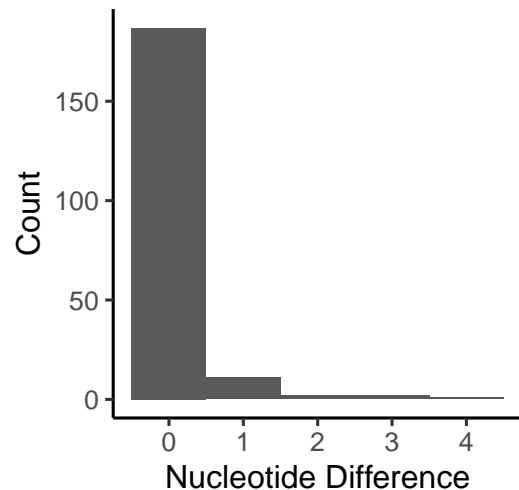
### IGHV1-8\*01

142 sequences assigned  
124 (87.3%) exact matches, in which:  
124 unique CDR3  
5 unique J



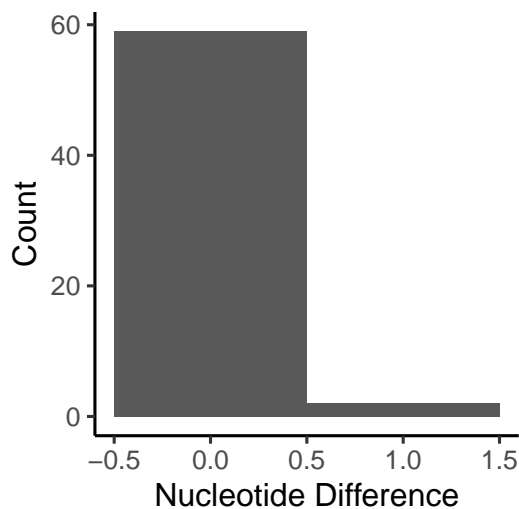
### IGHV1-24\*01

203 sequences assigned  
187 (92.1%) exact matches, in which:  
187 unique CDR3  
6 unique J



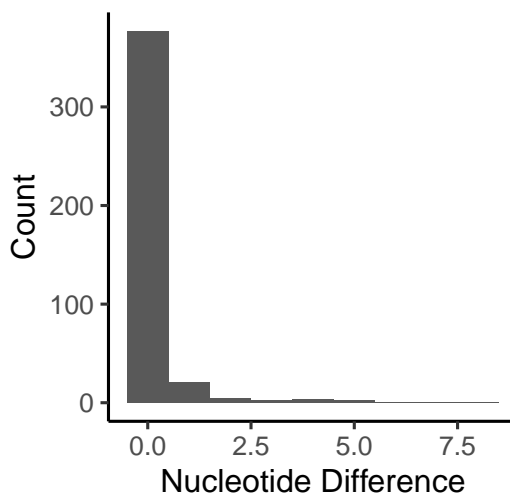
### IGHV1-2\*04

61 sequences assigned  
59 (96.7%) exact matches, in which:  
59 unique CDR3  
6 unique J



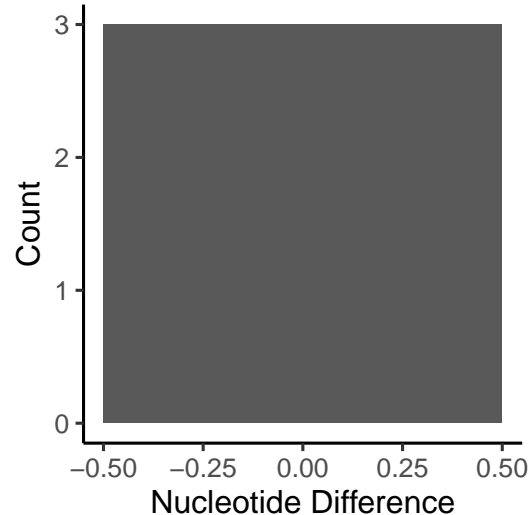
### IGHV1-18\*01

416 sequences assigned  
377 (90.6%) exact matches, in which:  
377 unique CDR3  
6 unique J



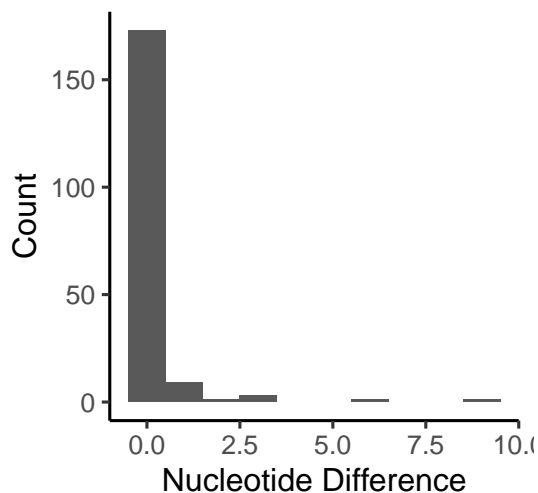
### IGHV1-45\*02

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



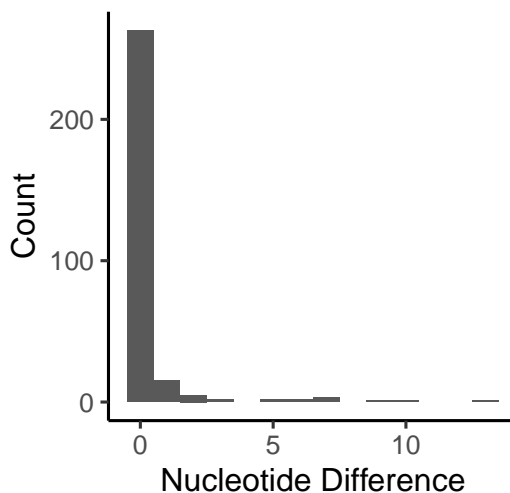
### IGHV1-3\*01

190 sequences assigned  
173 (91.1%) exact matches, in which:  
173 unique CDR3  
6 unique J



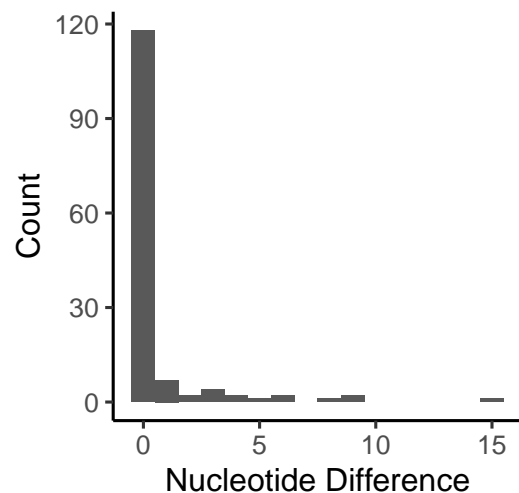
### IGHV1-18\*04

295 sequences assigned  
263 (89.2%) exact matches, in which:  
263 unique CDR3  
6 unique J



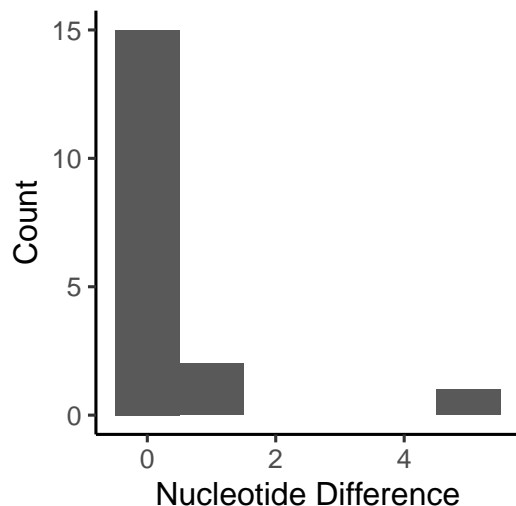
### IGHV1-46\*01

140 sequences assigned  
118 (84.3%) exact matches, in which:  
118 unique CDR3  
6 unique J



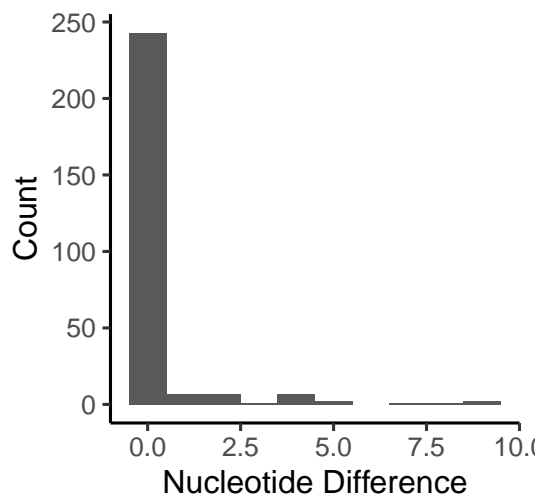
### IGHV1–58\*02

18 sequences assigned  
15 (83.3%) exact matches, in which:  
15 unique CDR3  
5 unique J



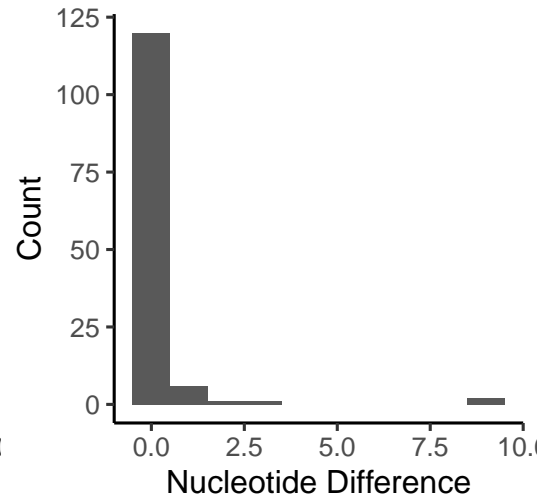
### IGHV2–5\*01

271 sequences assigned  
243 (89.7%) exact matches, in which:  
243 unique CDR3  
6 unique J



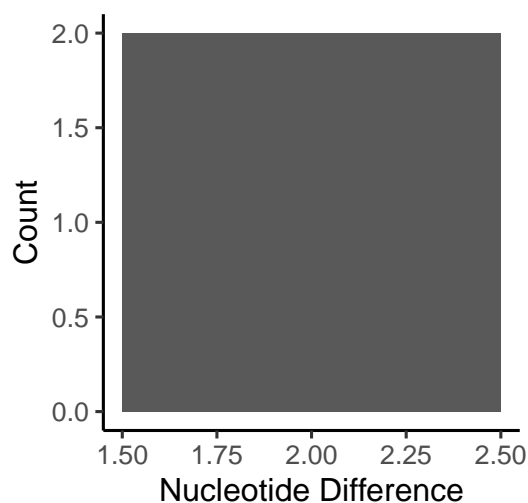
### IGHV2–70\*15

130 sequences assigned  
120 (92.3%) exact matches, in which:  
120 unique CDR3  
5 unique J



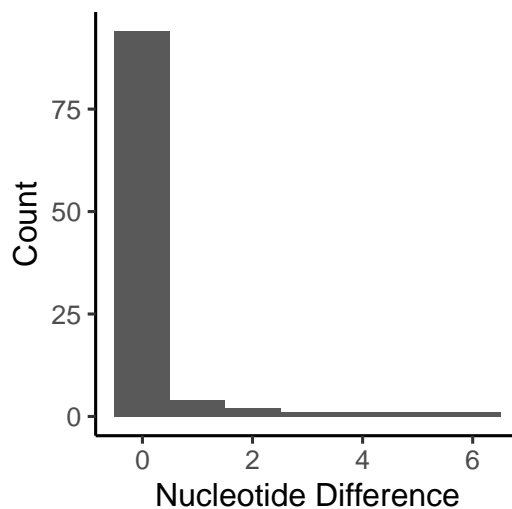
### IGHV1–68\*02

2 sequences assigned  
No exact matches.



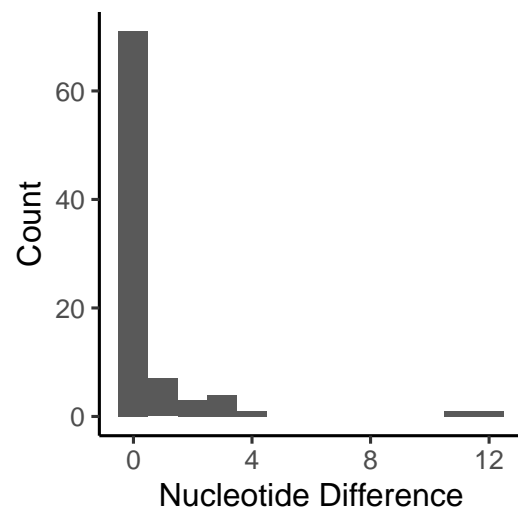
### IGHV2–5\*02

104 sequences assigned  
94 (90.4%) exact matches, in which:  
94 unique CDR3  
6 unique J



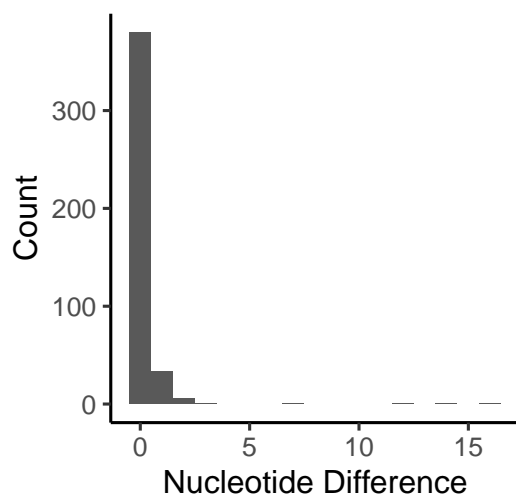
### IGHV3–7\*01

90 sequences assigned  
71 (78.9%) exact matches, in which:  
71 unique CDR3  
5 unique J



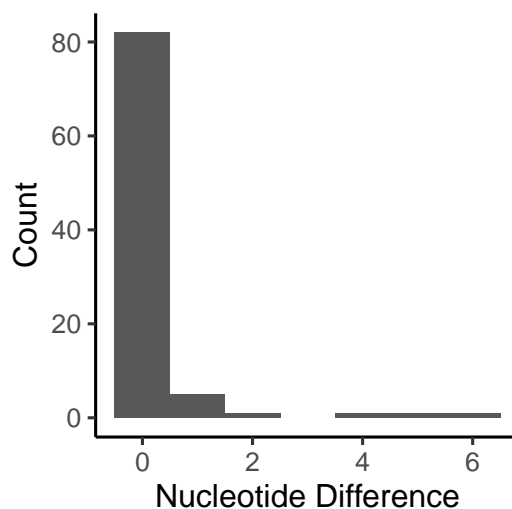
### IGHV1–69\*04

424 sequences assigned  
380 (89.6%) exact matches, in which:  
380 unique CDR3  
6 unique J



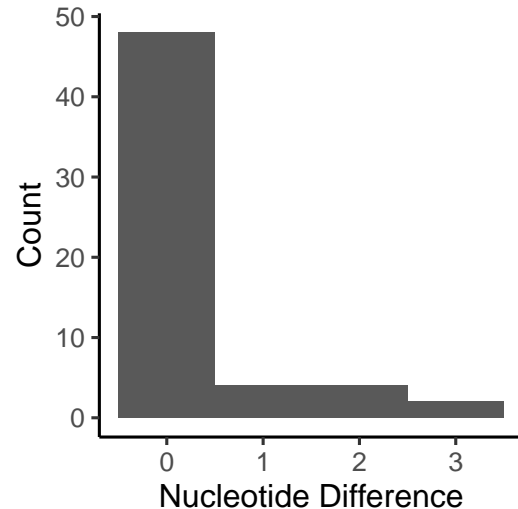
### IGHV2–26\*01

91 sequences assigned  
82 (90.1%) exact matches, in which:  
82 unique CDR3  
5 unique J



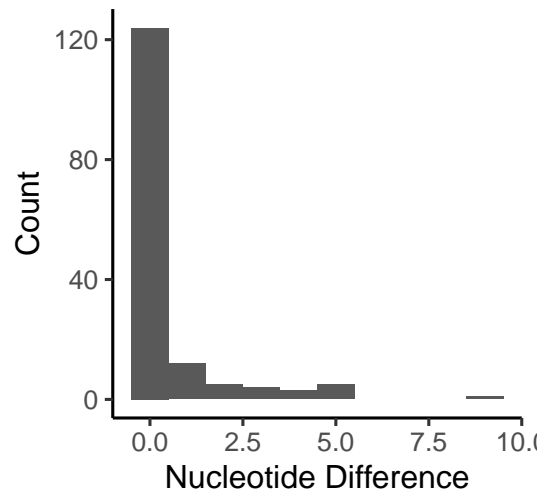
### IGHV3–7\*03

58 sequences assigned  
48 (82.8%) exact matches, in which:  
48 unique CDR3  
5 unique J



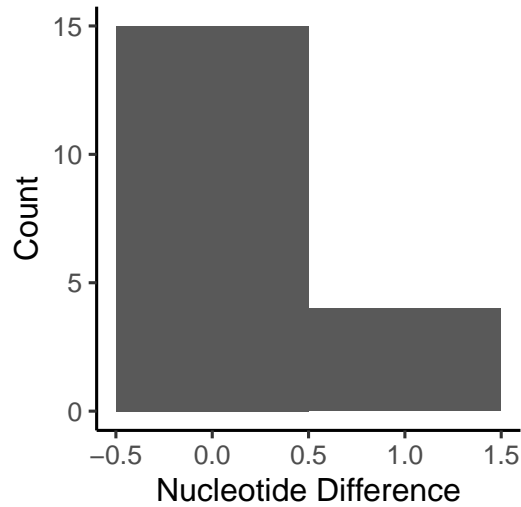
### IGHV3-9\*01

154 sequences assigned  
124 (80.5%) exact matches, in which:  
124 unique CDR3  
6 unique J



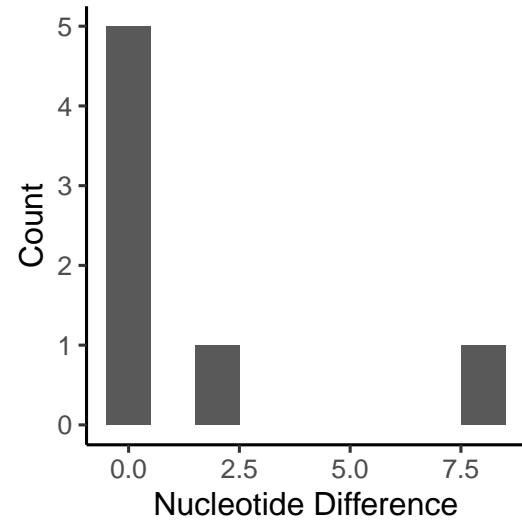
### IGHV3-13\*01

19 sequences assigned  
15 (78.9%) exact matches, in which:  
15 unique CDR3  
4 unique J



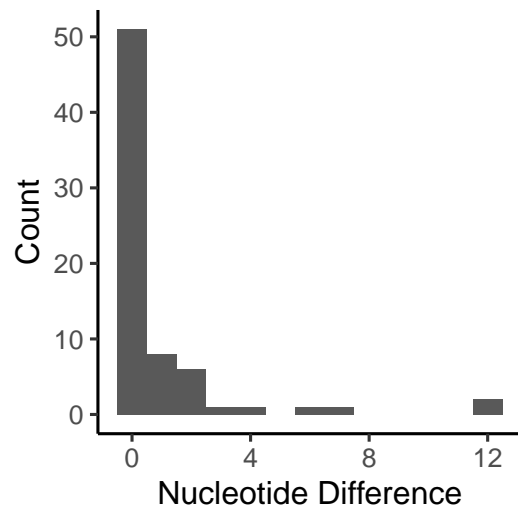
### IGHV3-20\*01

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



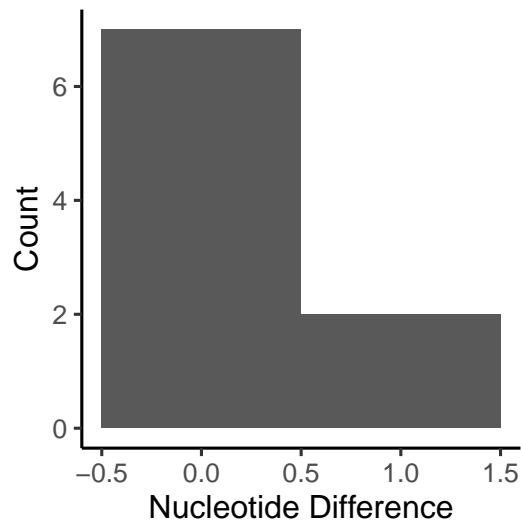
### IGHV3-11\*01

71 sequences assigned  
51 (71.8%) exact matches, in which:  
51 unique CDR3  
6 unique J



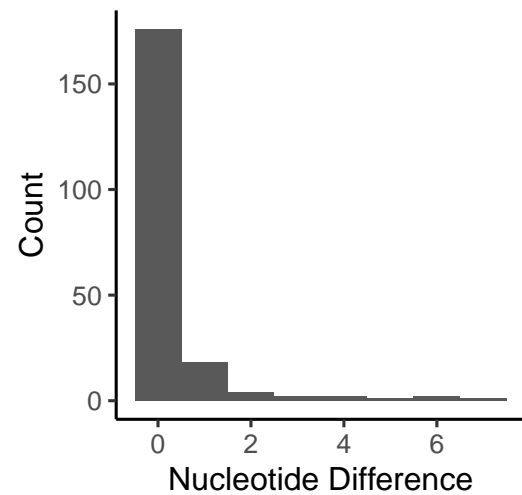
### IGHV3-13\*05

9 sequences assigned  
7 (77.8%) exact matches, in which:  
7 unique CDR3  
4 unique J



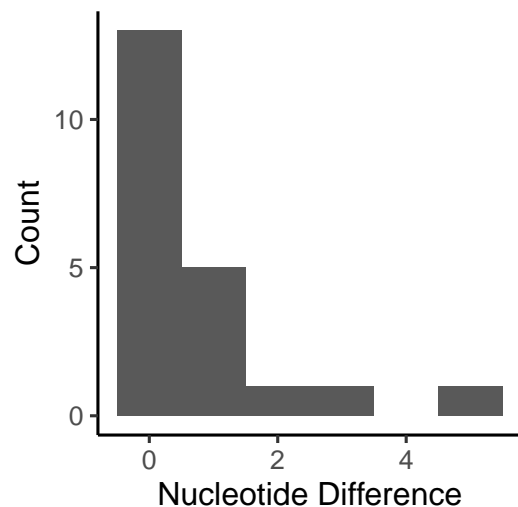
### IGHV3-21\*01

206 sequences assigned  
176 (85.4%) exact matches, in which:  
176 unique CDR3  
6 unique J



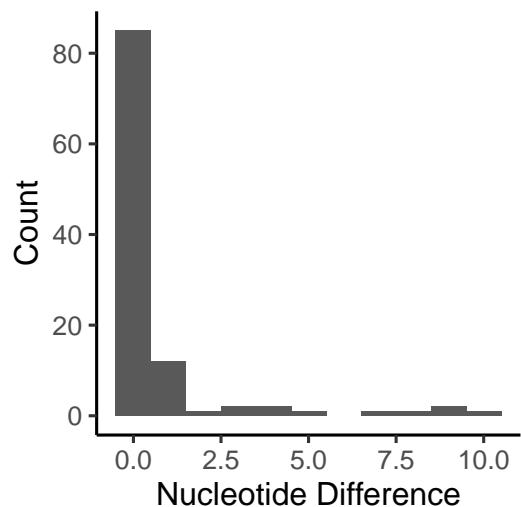
### IGHV3-11\*06

22 sequences assigned  
13 (59.1%) exact matches, in which:  
13 unique CDR3  
3 unique J



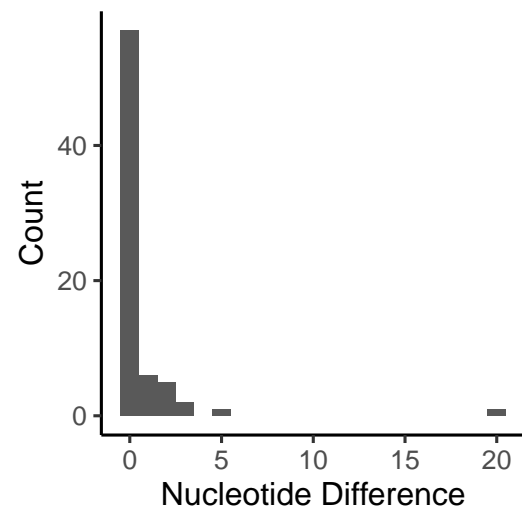
### IGHV3-15\*01

108 sequences assigned  
85 (78.7%) exact matches, in which:  
85 unique CDR3  
6 unique J



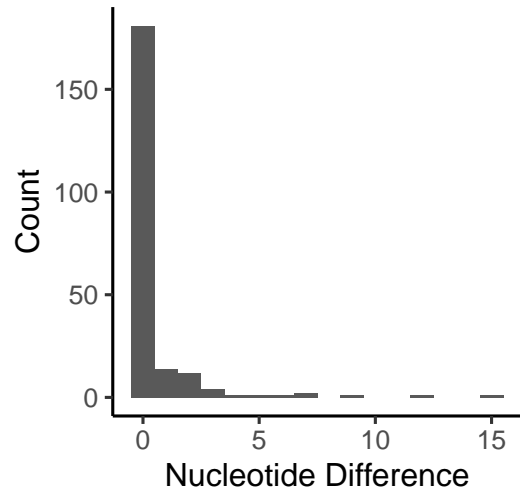
### IGHV3-30-3\*01

72 sequences assigned  
57 (79.2%) exact matches, in which:  
57 unique CDR3  
4 unique J



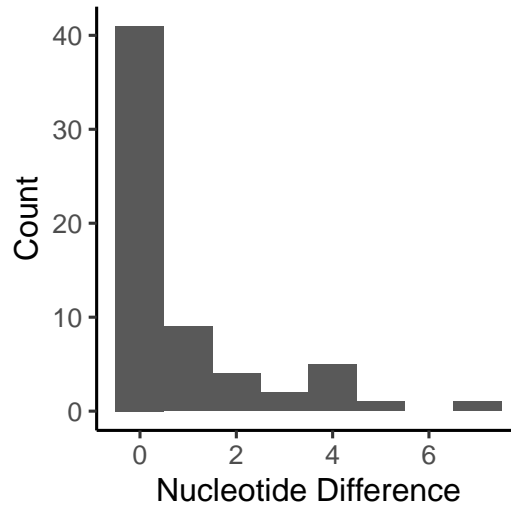
### IGHV3-30\*03

220 sequences assigned  
181 (82.3%) exact matches, in which:  
181 unique CDR3  
6 unique J



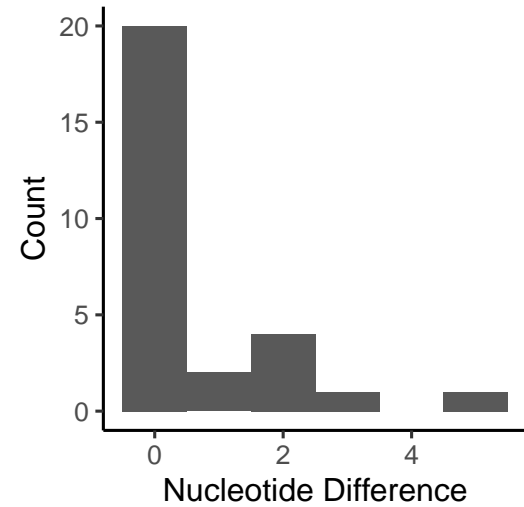
### IGHV3-48\*01

63 sequences assigned  
41 (65.1%) exact matches, in which:  
41 unique CDR3  
5 unique J



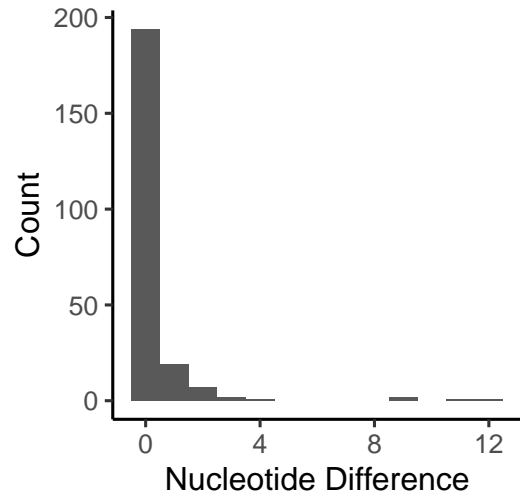
### IGHV3-49\*05

28 sequences assigned  
20 (71.4%) exact matches, in which:  
20 unique CDR3  
4 unique J



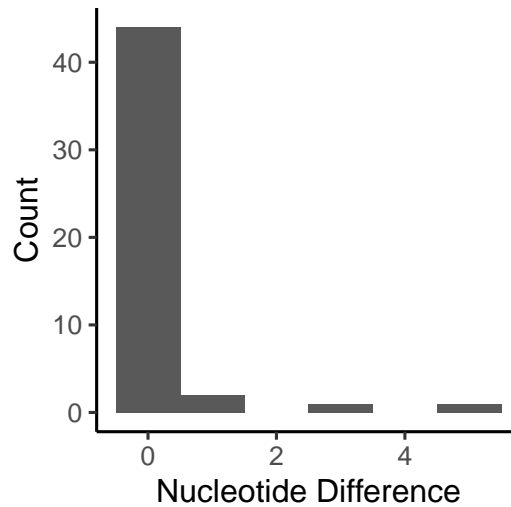
### IGHV3-33\*01

228 sequences assigned  
194 (85.1%) exact matches, in which:  
194 unique CDR3  
6 unique J



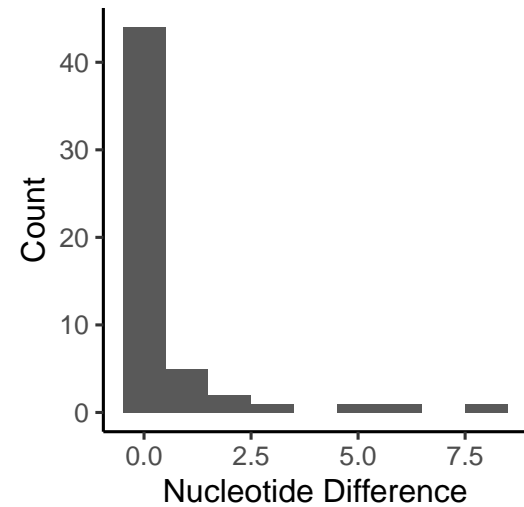
### IGHV3-48\*02

48 sequences assigned  
44 (91.7%) exact matches, in which:  
44 unique CDR3  
5 unique J



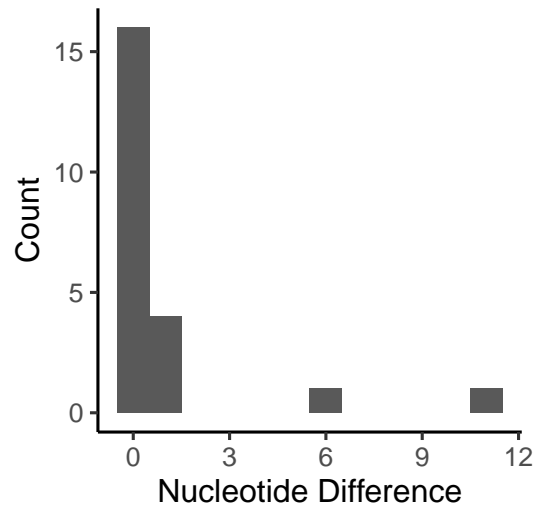
### IGHV3-53\*01

55 sequences assigned  
44 (80%) exact matches, in which:  
44 unique CDR3  
6 unique J



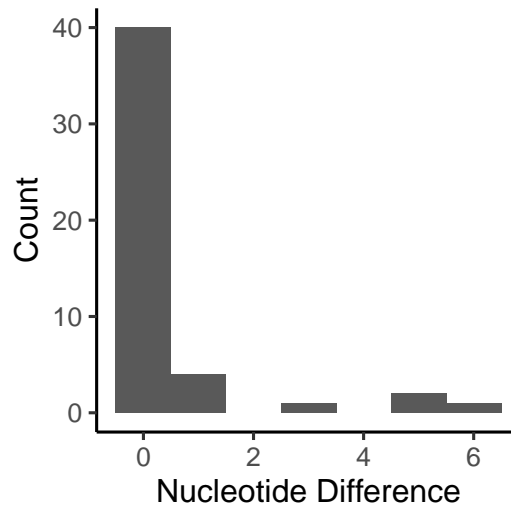
### IGHV3-43\*01

22 sequences assigned  
16 (72.7%) exact matches, in which:  
16 unique CDR3  
4 unique J



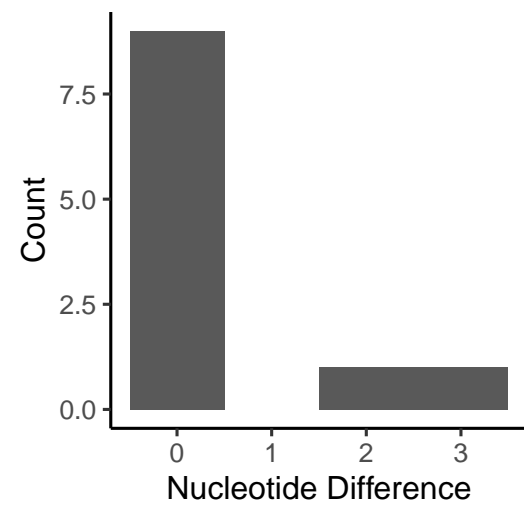
### IGHV3-49\*03

48 sequences assigned  
40 (83.3%) exact matches, in which:  
40 unique CDR3  
5 unique J



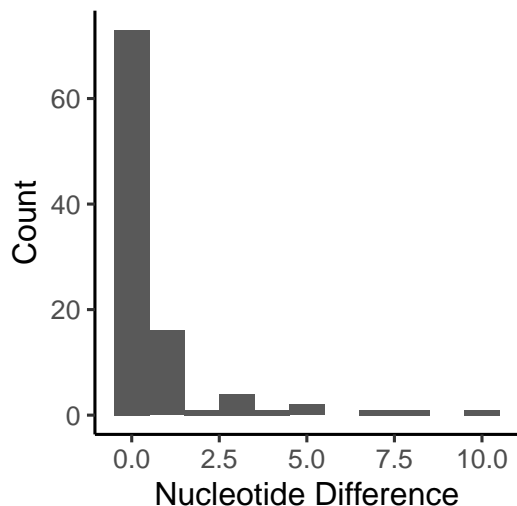
### IGHV3-64\*01

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



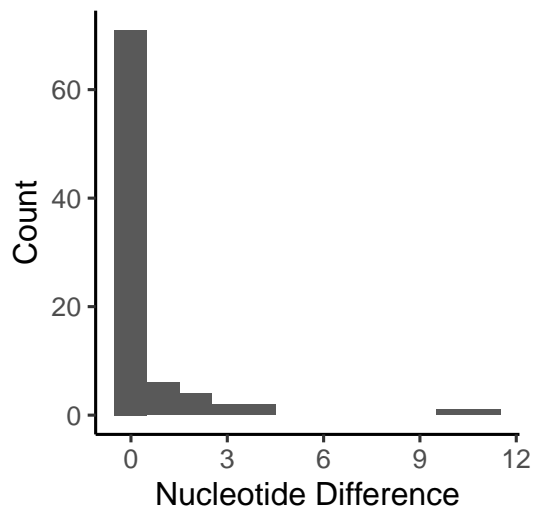
### IGHV3-66\*01

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



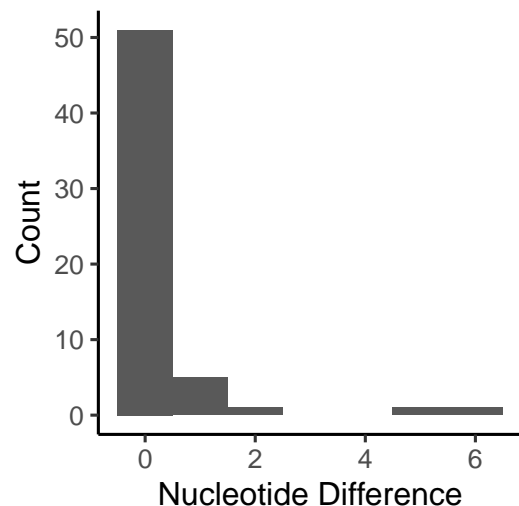
### IGHV3-74\*01

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



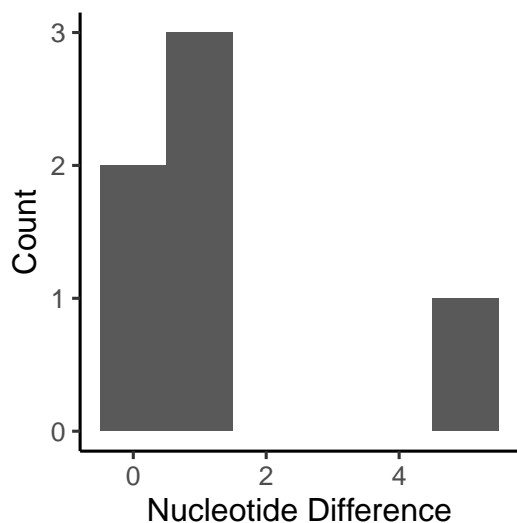
### IGHV4-4\*02

59 sequences assigned  
51 (86.4%) exact matches, in which:  
51 unique CDR3  
4 unique J



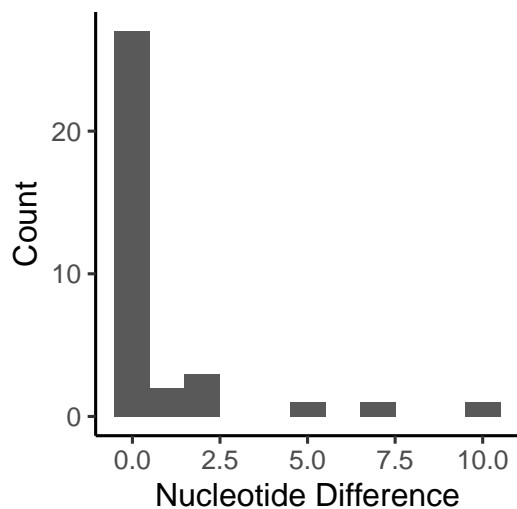
### IGHV3-72\*01

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



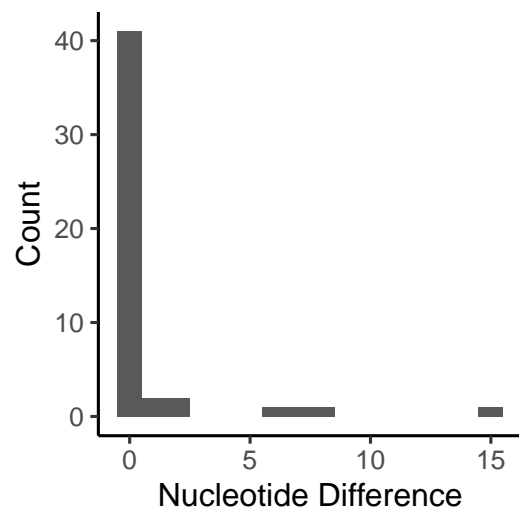
### IGHV3-64D\*06

35 sequences assigned  
27 (77.1%) exact matches, in which:  
27 unique CDR3  
5 unique J



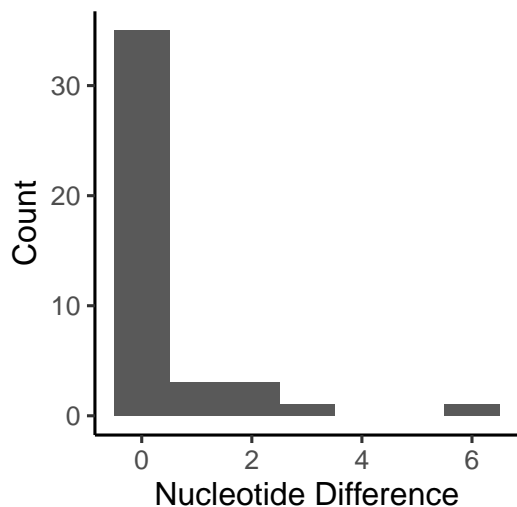
### IGHV4-4\*07

49 sequences assigned  
41 (83.7%) exact matches, in which:  
41 unique CDR3  
5 unique J



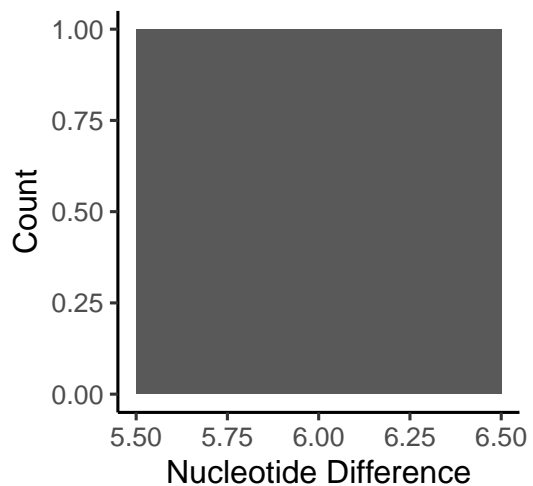
### IGHV3-73\*01

43 sequences assigned  
35 (81.4%) exact matches, in which:  
35 unique CDR3  
6 unique J



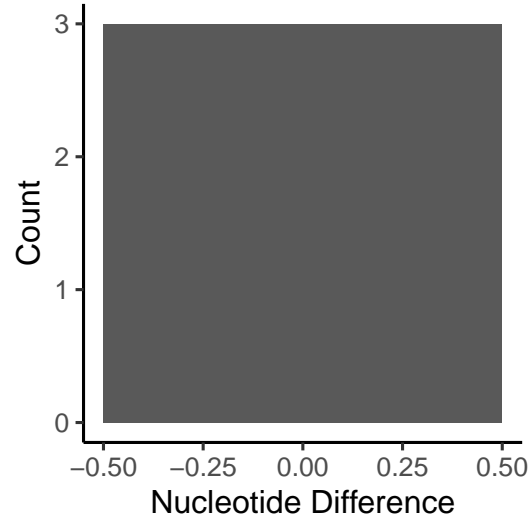
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



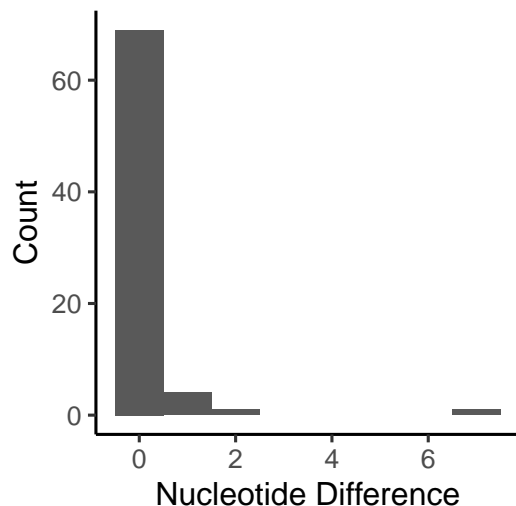
### IGHV4-28\*03

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



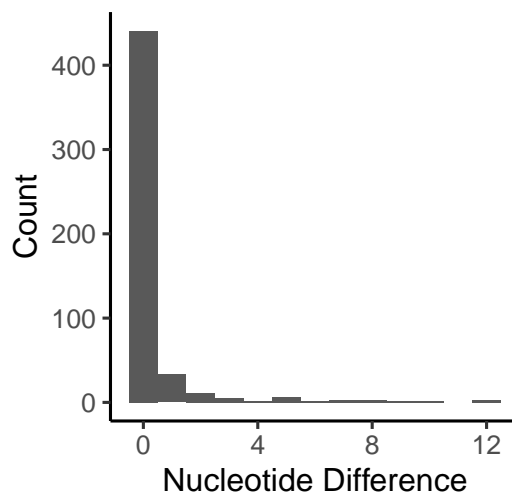
### IGHV4-30-2\*01

75 sequences assigned  
69 (92%) exact matches, in which:  
69 unique CDR3  
6 unique J



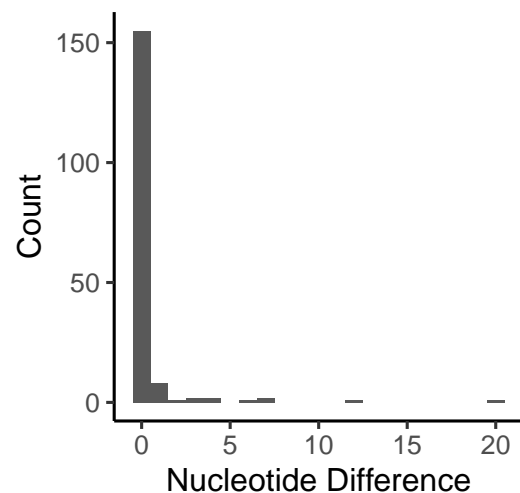
### IGHV4-34\*01

513 sequences assigned  
441 (86%) exact matches, in which:  
438 unique CDR3  
6 unique J



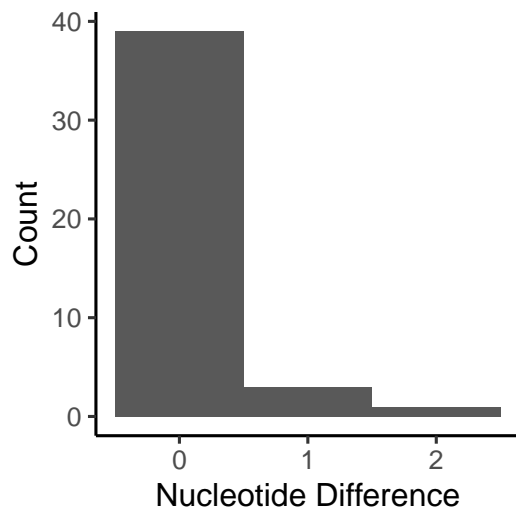
### IGHV4-59\*08

173 sequences assigned  
155 (89.6%) exact matches, in which:  
155 unique CDR3  
6 unique J



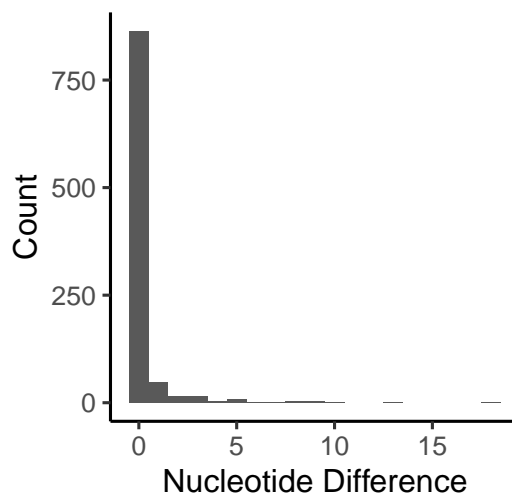
### IGHV4-30-4\*01

43 sequences assigned  
39 (90.7%) exact matches, in which:  
39 unique CDR3  
5 unique J



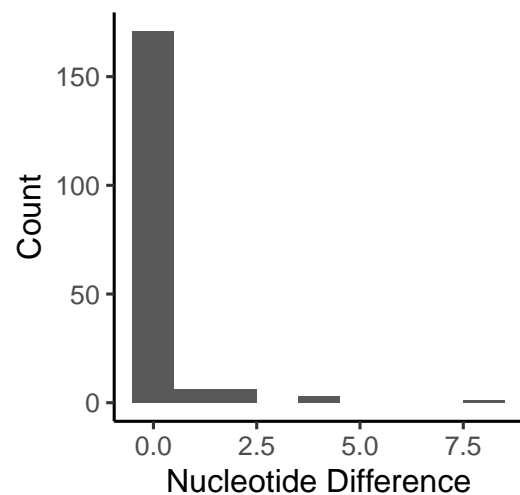
### IGHV4-39\*01

967 sequences assigned  
864 (89.3%) exact matches, in which:  
864 unique CDR3  
6 unique J



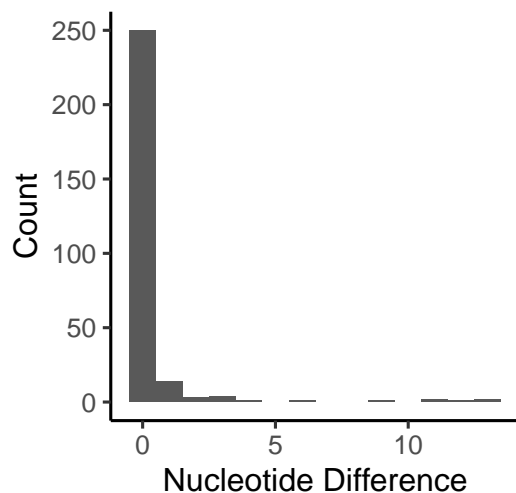
### IGHV5-10-1\*03

189 sequences assigned  
171 (90.5%) exact matches, in which:  
171 unique CDR3  
6 unique J



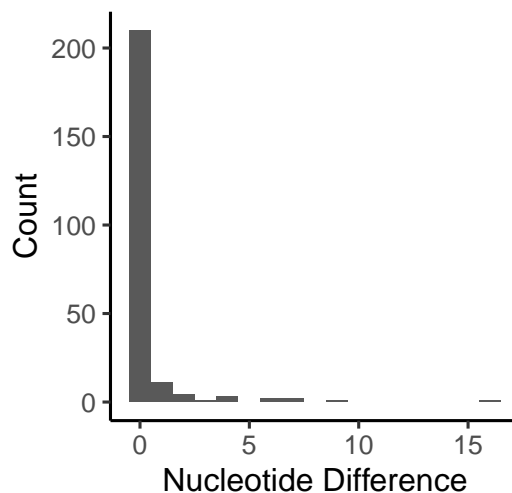
### IGHV4-31\*03

279 sequences assigned  
250 (89.6%) exact matches, in which:  
250 unique CDR3  
6 unique J



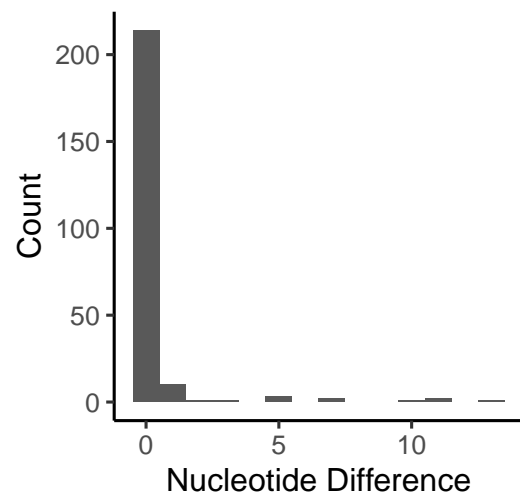
### IGHV4-59\*01

235 sequences assigned  
210 (89.4%) exact matches, in which:  
210 unique CDR3  
6 unique J



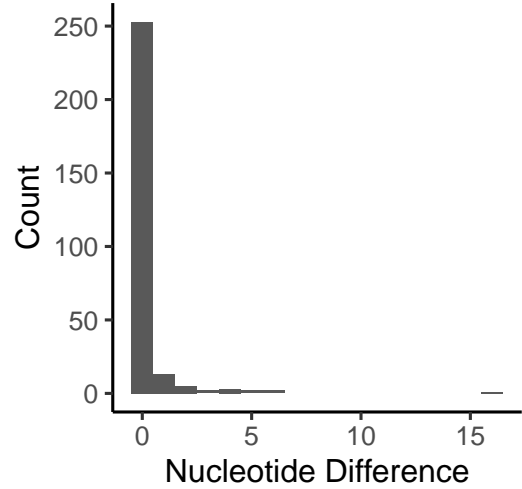
### IGHV5-51\*01

235 sequences assigned  
214 (91.1%) exact matches, in which:  
214 unique CDR3  
6 unique J



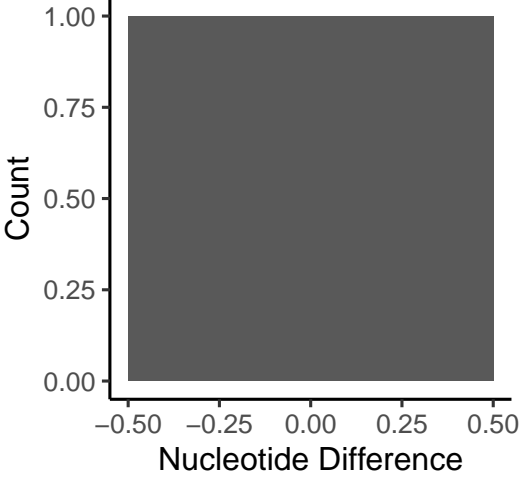
IGHV5-51\*01\_C45G

281 sequences assigned  
253 (90%) exact matches, in which:  
252 unique CDR3  
5 unique J



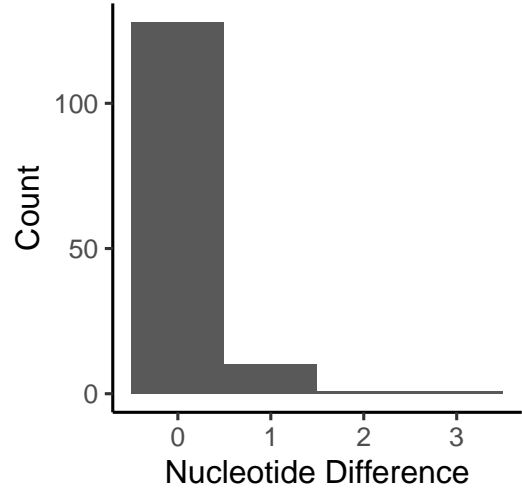
IGHV7-81\*01

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



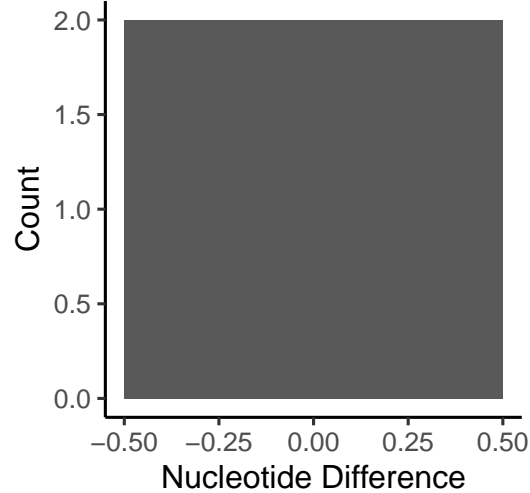
IGHV6-1\*01

140 sequences assigned  
128 (91.4%) exact matches, in which:  
128 unique CDR3  
6 unique J



IGHV7-4-1\*01

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







Warning – no inferred sequences found.