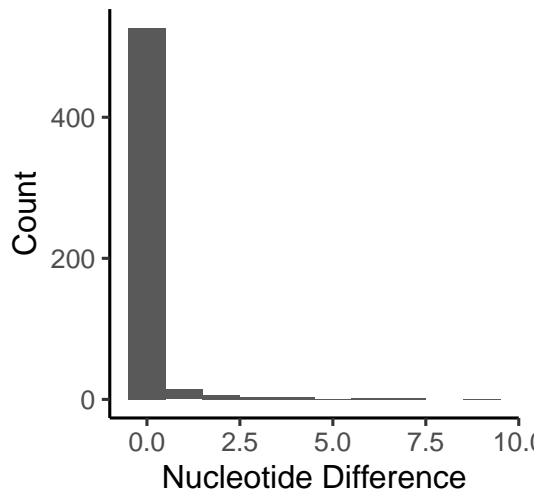


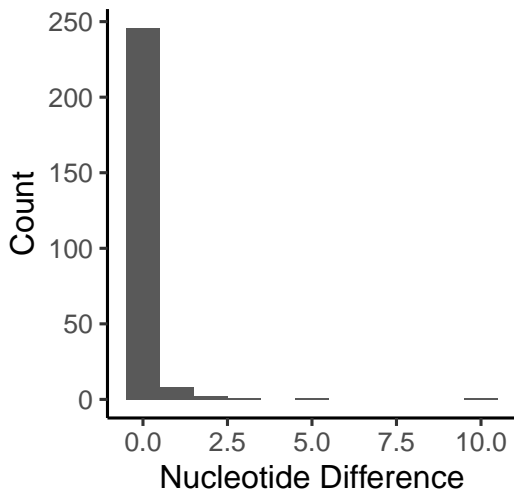
### IGHV1-2\*02

559 sequences assigned  
527 (94.3%) exact matches, in which:  
527 unique CDR3  
6 unique J



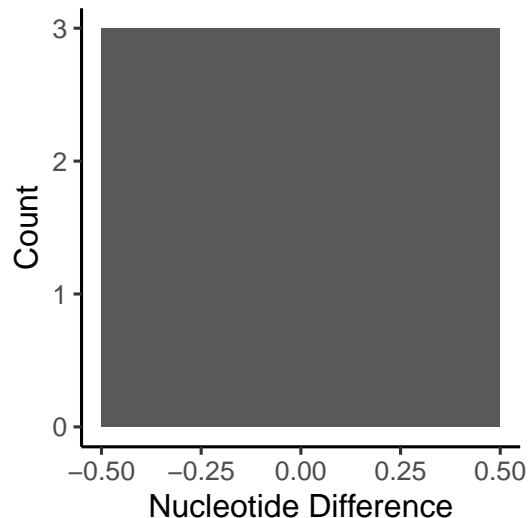
### IGHV1-8\*01

259 sequences assigned  
246 (95%) exact matches, in which:  
246 unique CDR3  
5 unique J



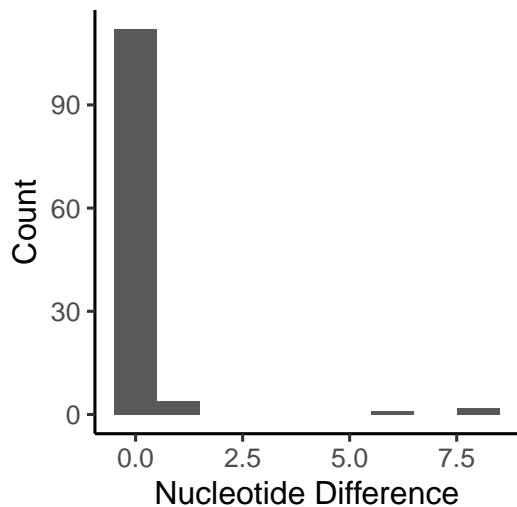
### IGHV1-45\*02

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



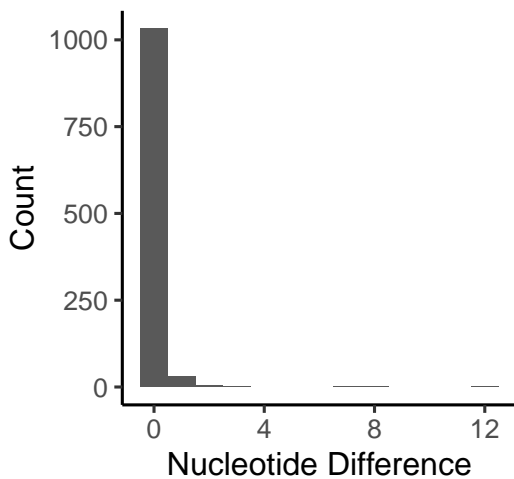
### IGHV1-2\*04

119 sequences assigned  
112 (94.1%) exact matches, in which:  
111 unique CDR3  
5 unique J



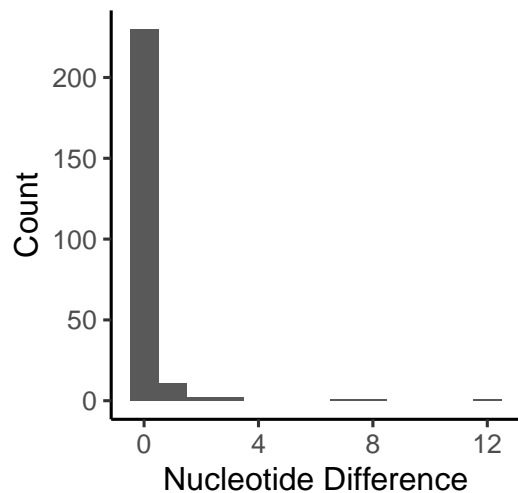
### IGHV1-18\*01

1070 sequences assigned  
1032 (96.4%) exact matches, in which:  
1030 unique CDR3  
6 unique J



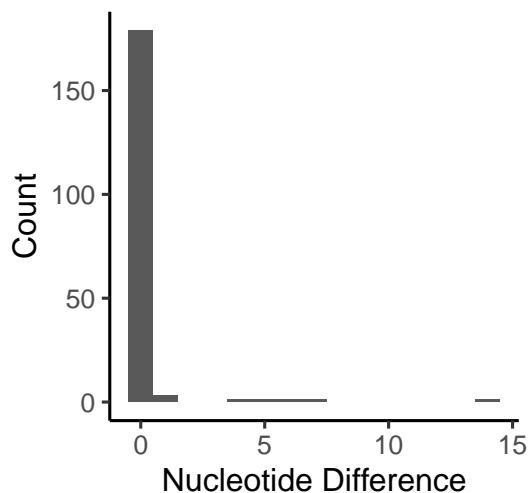
### IGHV1-46\*01

248 sequences assigned  
230 (92.7%) exact matches, in which:  
230 unique CDR3  
6 unique J



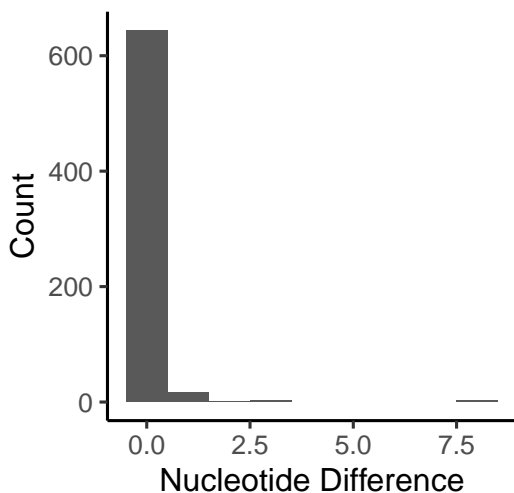
### IGHV1-3\*01

188 sequences assigned  
179 (95.2%) exact matches, in which:  
179 unique CDR3  
6 unique J



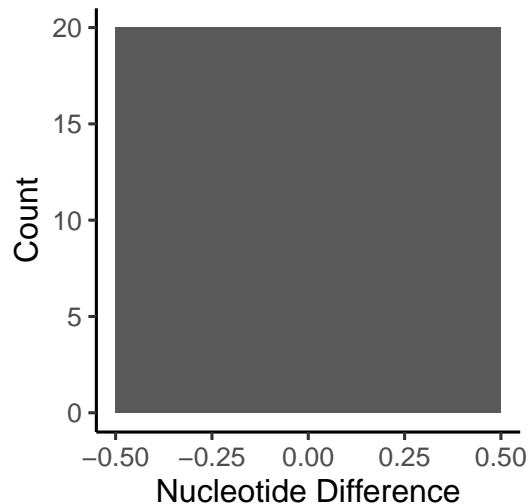
### IGHV1-24\*01

666 sequences assigned  
644 (96.7%) exact matches, in which:  
644 unique CDR3  
6 unique J



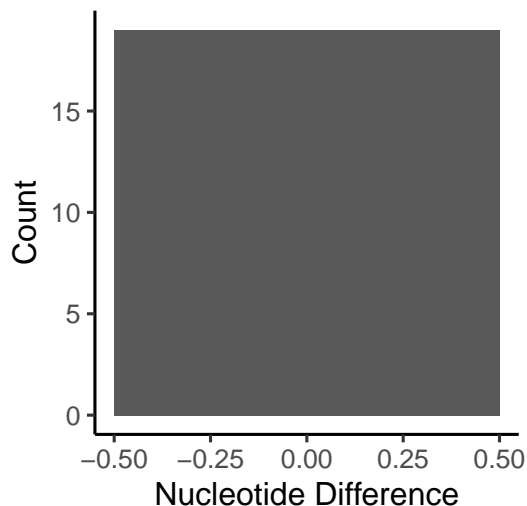
### IGHV1-58\*01

20 sequences assigned  
20 (100%) exact matches, in which:  
20 unique CDR3  
4 unique J



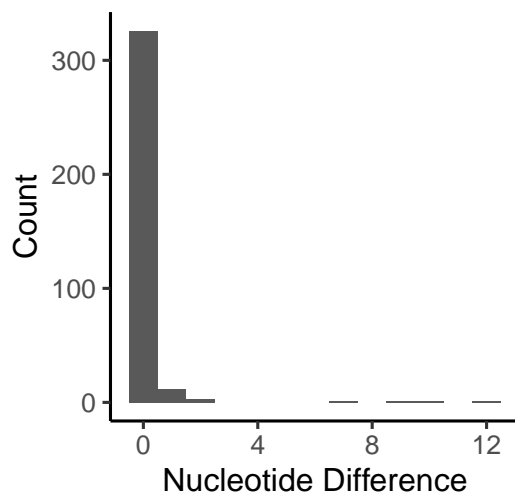
### IGHV1-58\*02

19 sequences assigned  
19 (100%) exact matches, in which:  
19 unique CDR3  
5 unique J



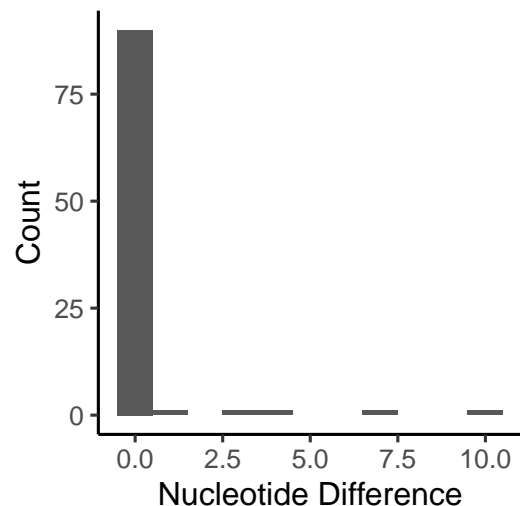
### IGHV1-69\*06

345 sequences assigned  
326 (94.5%) exact matches, in which:  
326 unique CDR3  
6 unique J



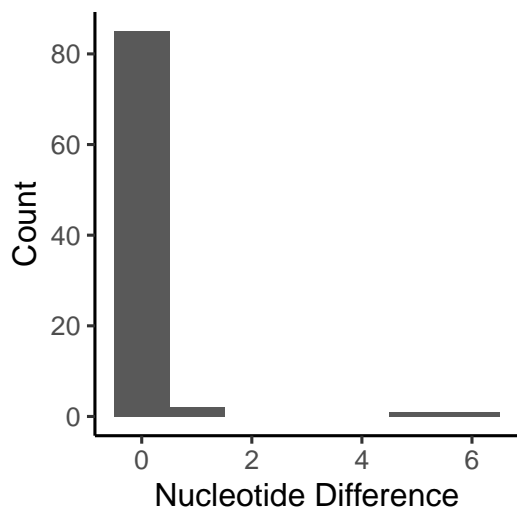
### IGHV2-5\*02

95 sequences assigned  
90 (94.7%) exact matches, in which:  
90 unique CDR3  
6 unique J



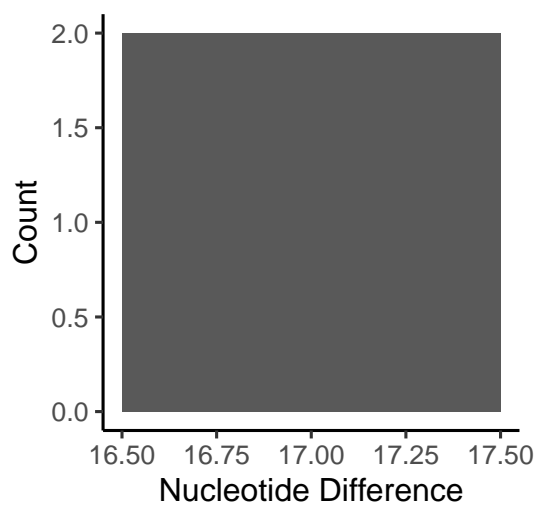
### IGHV1-69-2\*01

89 sequences assigned  
85 (95.5%) exact matches, in which:  
84 unique CDR3  
4 unique J



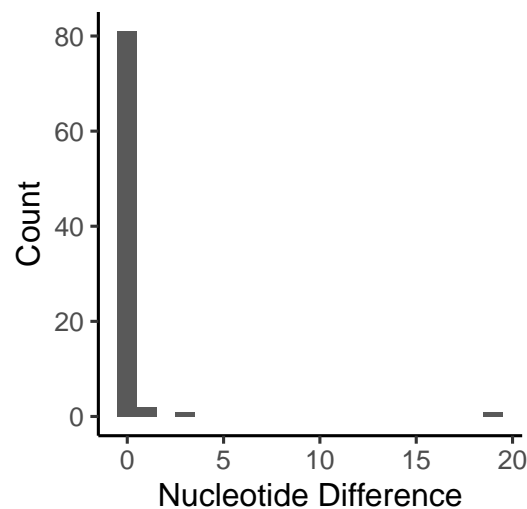
### IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



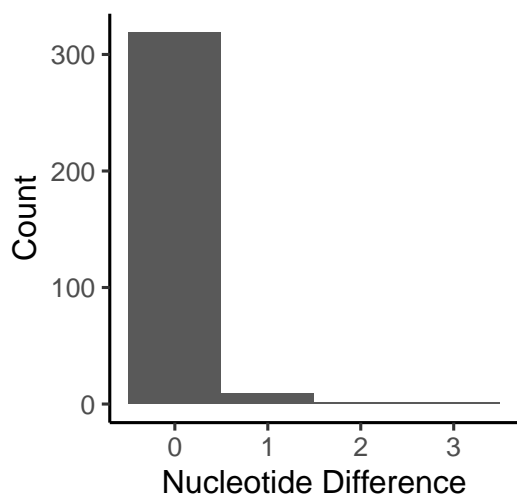
### IGHV2-26\*01

85 sequences assigned  
81 (95.3%) exact matches, in which:  
81 unique CDR3  
6 unique J



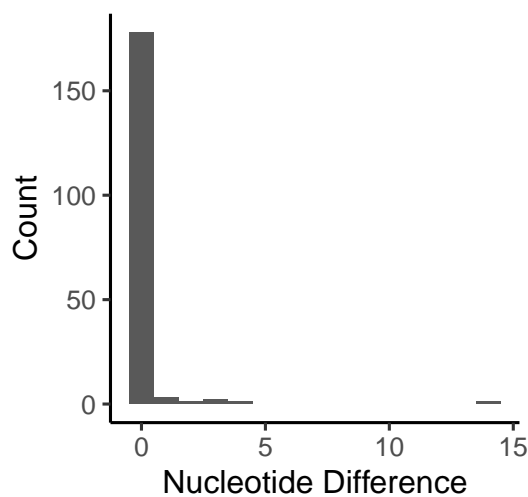
### IGHV1-69\*04

330 sequences assigned  
319 (96.7%) exact matches, in which:  
318 unique CDR3  
6 unique J



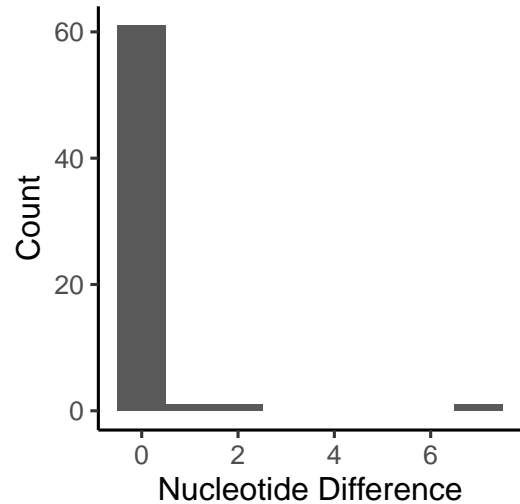
### IGHV2-5\*01

186 sequences assigned  
178 (95.7%) exact matches, in which:  
178 unique CDR3  
6 unique J



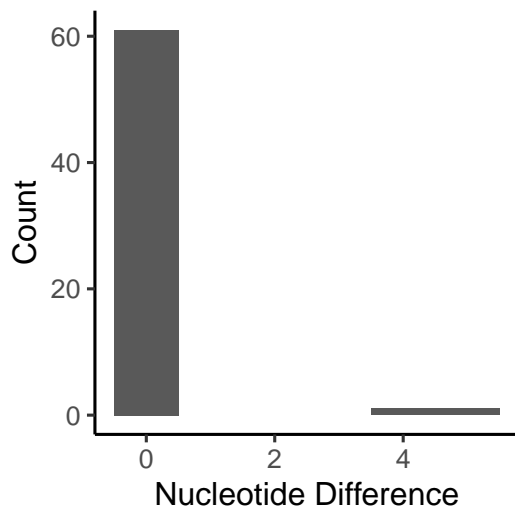
### IGHV2-70\*01

64 sequences assigned  
61 (95.3%) exact matches, in which:  
61 unique CDR3  
5 unique J



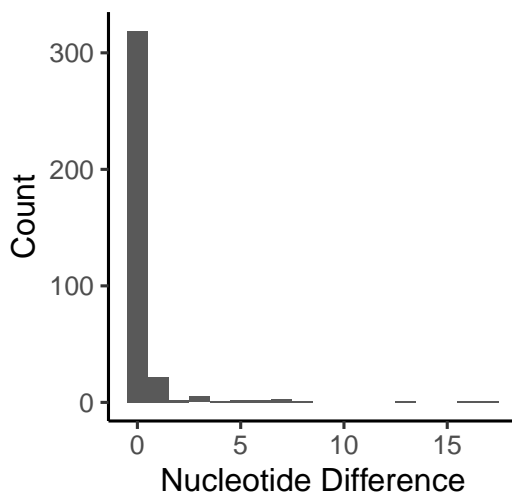
### IGHV2-70\*15

63 sequences assigned  
61 (96.8%) exact matches, in which:  
61 unique CDR3  
5 unique J



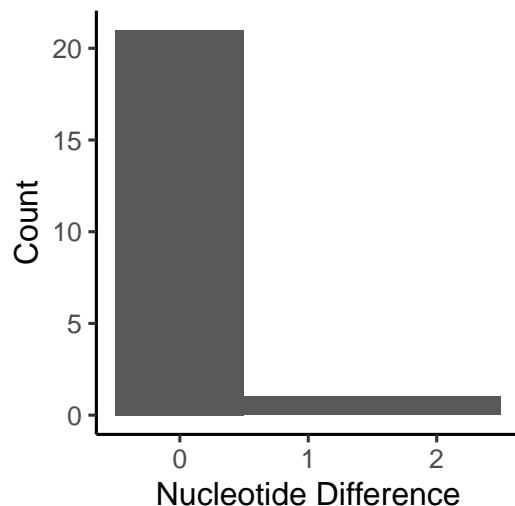
### IGHV3-9\*01

360 sequences assigned  
319 (88.6%) exact matches, in which:  
319 unique CDR3  
6 unique J



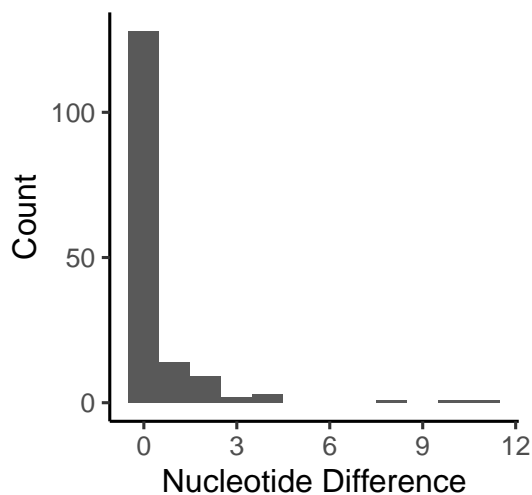
### IGHV3-13\*01

23 sequences assigned  
21 (91.3%) exact matches, in which:  
21 unique CDR3  
4 unique J



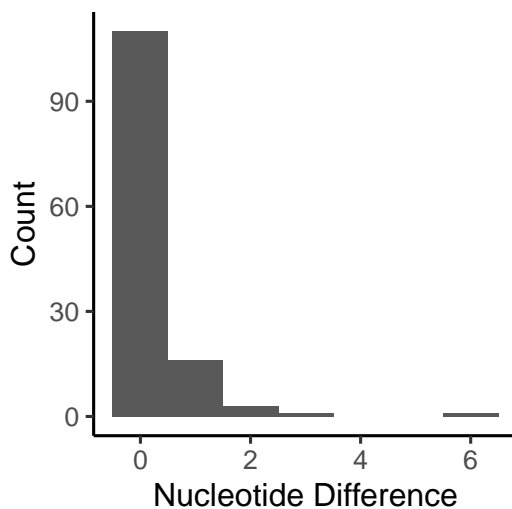
### IGHV3-7\*01

161 sequences assigned  
128 (79.5%) exact matches, in which:  
127 unique CDR3  
5 unique J



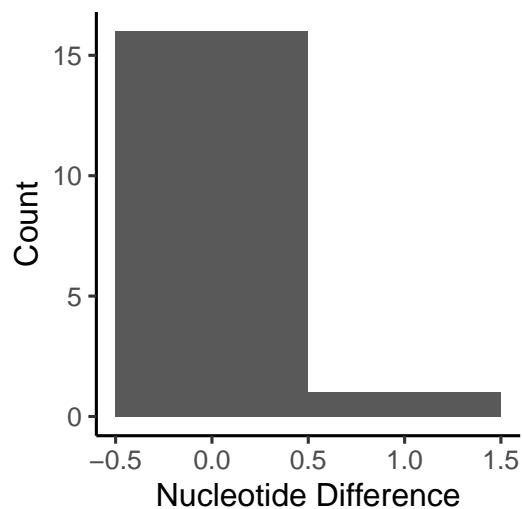
### IGHV3-11\*01

131 sequences assigned  
110 (84%) exact matches, in which:  
110 unique CDR3  
6 unique J



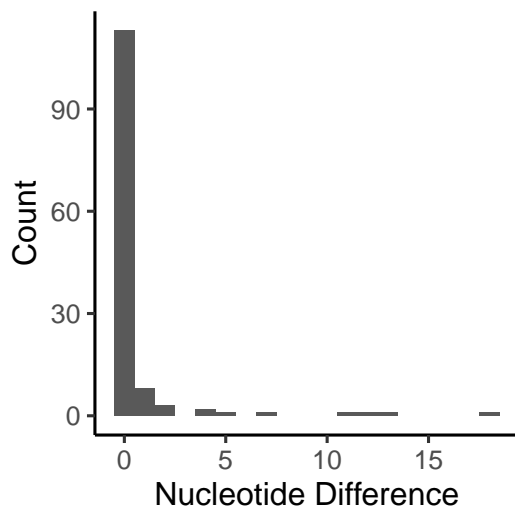
### IGHV3-13\*05

17 sequences assigned  
16 (94.1%) exact matches, in which:  
16 unique CDR3  
4 unique J



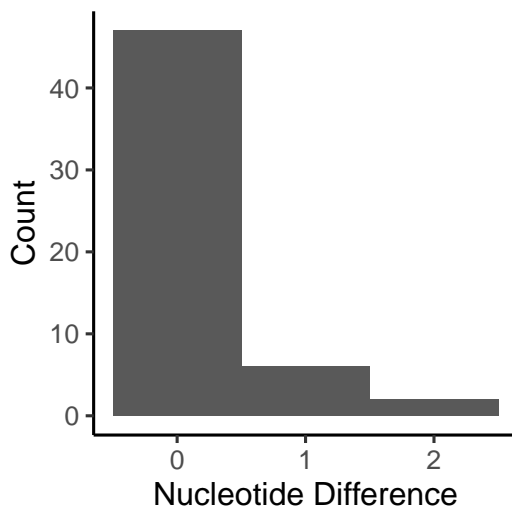
### IGHV3-7\*03

133 sequences assigned  
113 (85%) exact matches, in which:  
113 unique CDR3  
6 unique J



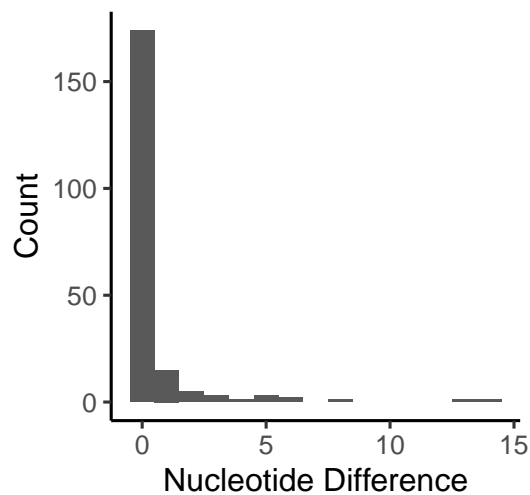
### IGHV3-11\*06

55 sequences assigned  
47 (85.5%) exact matches, in which:  
47 unique CDR3  
6 unique J



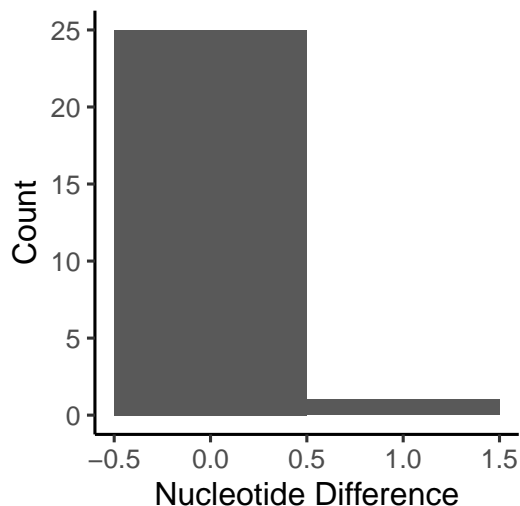
### IGHV3-15\*01

206 sequences assigned  
174 (84.5%) exact matches, in which:  
174 unique CDR3  
6 unique J



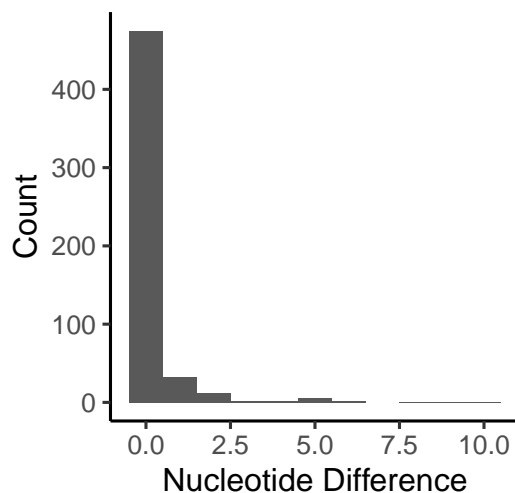
### IGHV3–20\*01

26 sequences assigned  
25 (96.2%) exact matches, in which:  
25 unique CDR3  
5 unique J



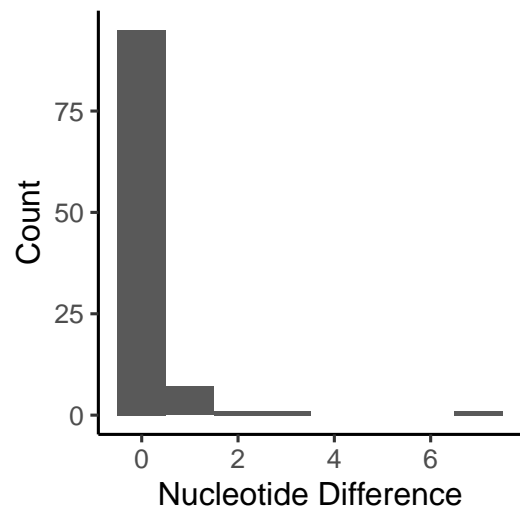
### IGHV3–33\*01

534 sequences assigned  
475 (89%) exact matches, in which:  
475 unique CDR3  
6 unique J



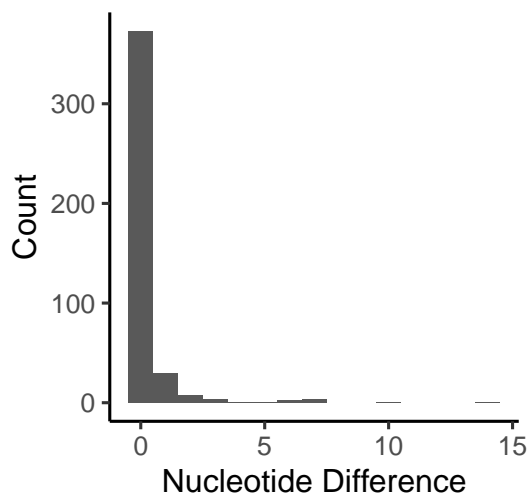
### IGHV3–49\*03

105 sequences assigned  
95 (90.5%) exact matches, in which:  
94 unique CDR3  
5 unique J



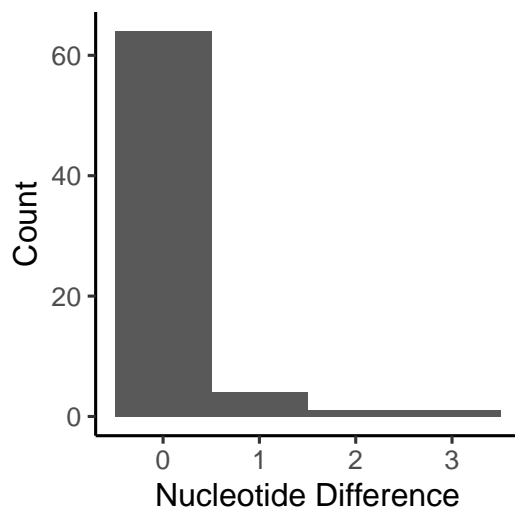
### IGHV3–21\*01

426 sequences assigned  
373 (87.6%) exact matches, in which:  
373 unique CDR3  
6 unique J



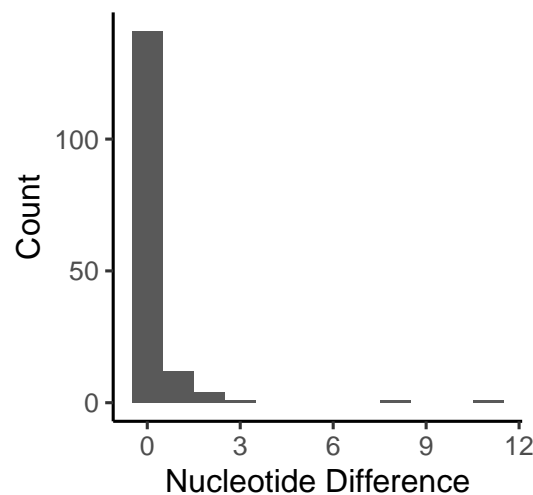
### IGHV3–43\*01

70 sequences assigned  
64 (91.4%) exact matches, in which:  
64 unique CDR3  
5 unique J



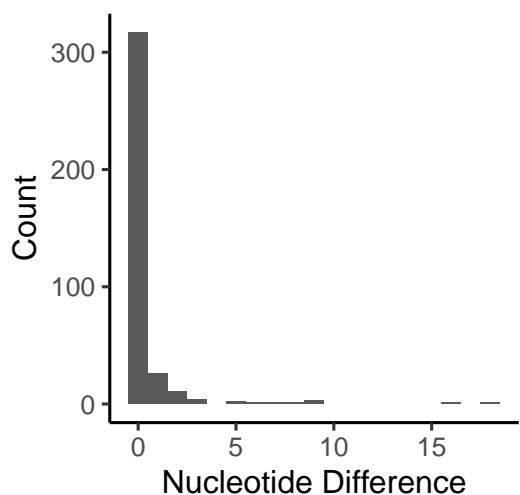
### IGHV3–53\*01

160 sequences assigned  
141 (88.1%) exact matches, in which:  
141 unique CDR3  
6 unique J



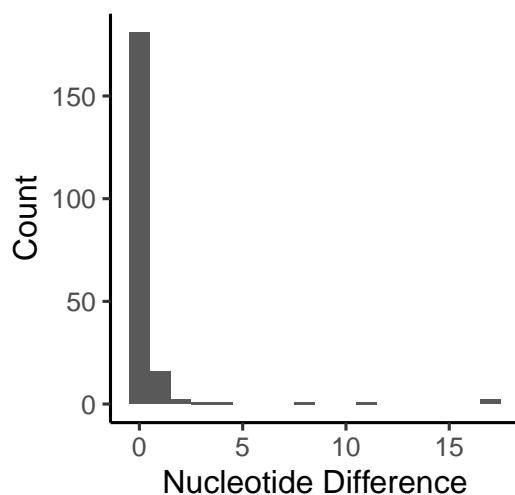
### IGHV3–30–3\*01

368 sequences assigned  
317 (86.1%) exact matches, in which:  
317 unique CDR3  
6 unique J



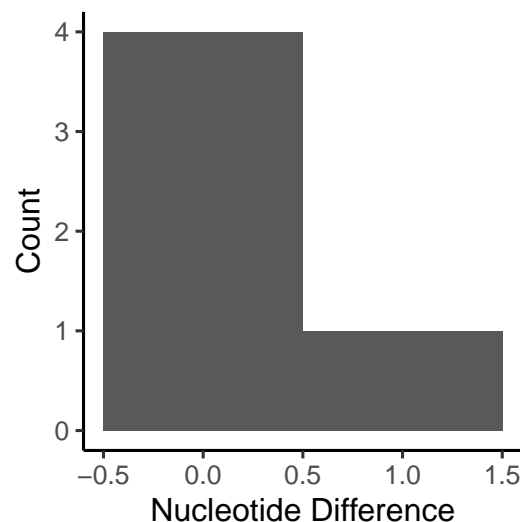
### IGHV3–48\*01

206 sequences assigned  
181 (87.9%) exact matches, in which:  
180 unique CDR3  
6 unique J



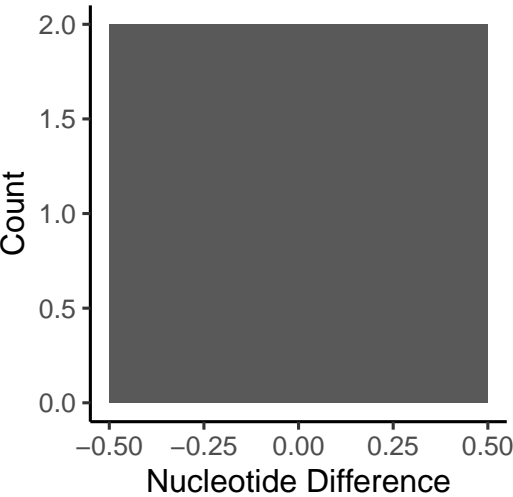
### IGHV3–64\*01

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



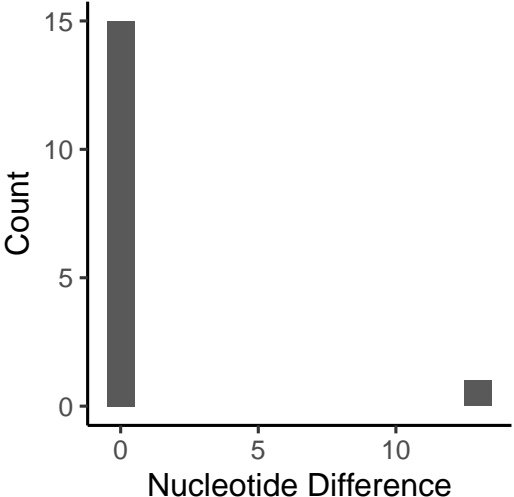
IGHV3-64\*02

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



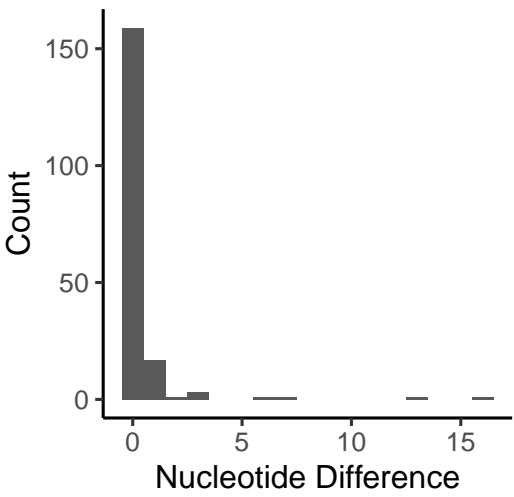
IGHV3-72\*01

16 sequences assigned  
15 (93.8%) exact matches, in which:  
15 unique CDR3  
3 unique J



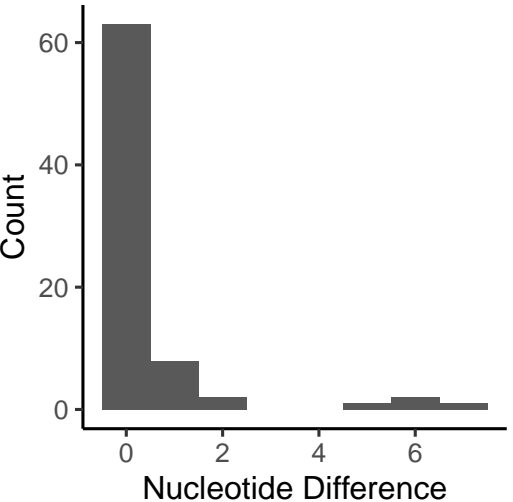
IGHV3-74\*01

184 sequences assigned  
159 (86.4%) exact matches, in which:  
159 unique CDR3  
6 unique J



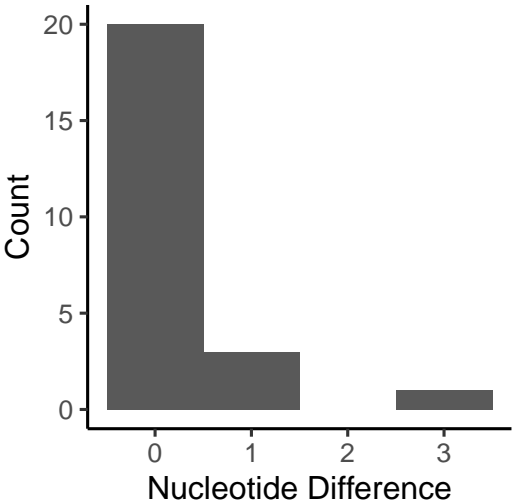
IGHV3-66\*01

78 sequences assigned  
63 (80.8%) exact matches, in which:  
63 unique CDR3  
6 unique J



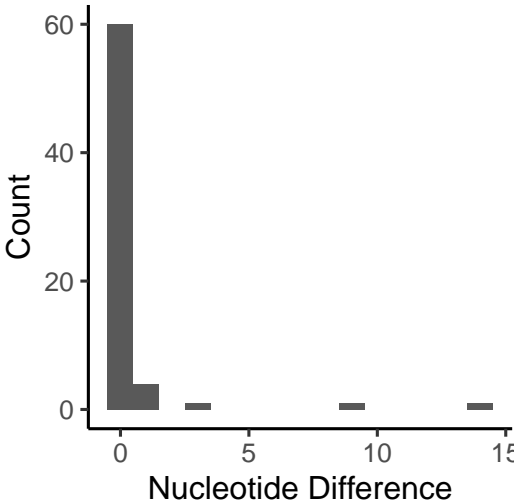
IGHV3-73\*01

24 sequences assigned  
20 (83.3%) exact matches, in which:  
20 unique CDR3  
4 unique J



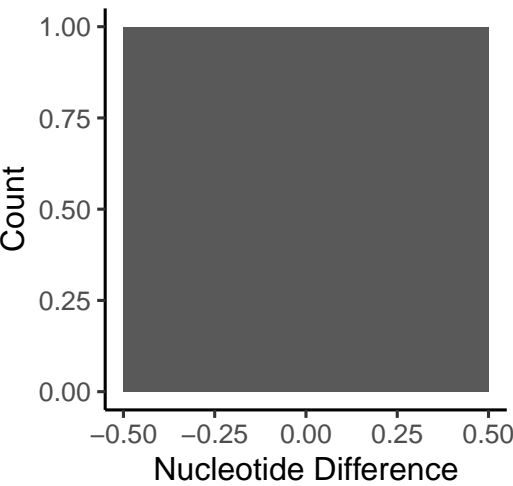
IGHV3-64D\*09

67 sequences assigned  
60 (89.6%) exact matches, in which:  
60 unique CDR3  
6 unique J



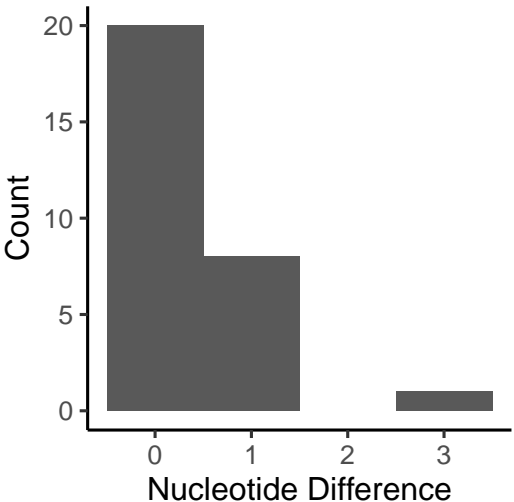
IGHV3-69-1\*01

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



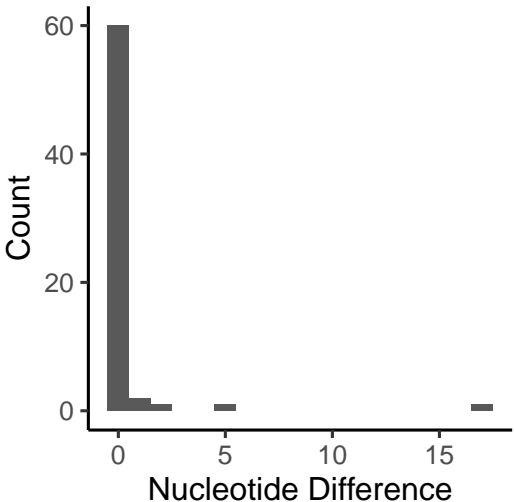
IGHV3-73\*02

29 sequences assigned  
20 (69%) exact matches, in which:  
20 unique CDR3  
4 unique J



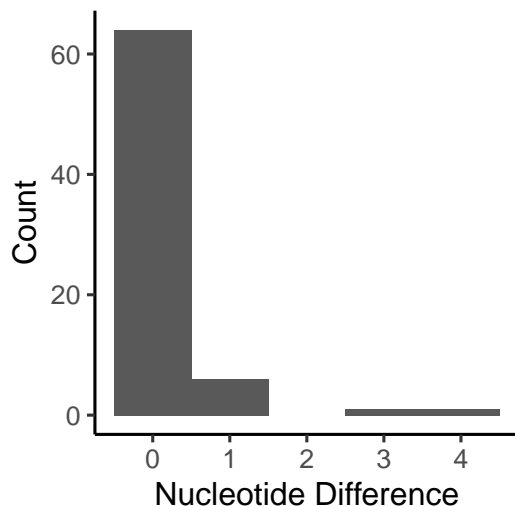
IGHV4-4\*02

65 sequences assigned  
60 (92.3%) exact matches, in which:  
60 unique CDR3  
5 unique J



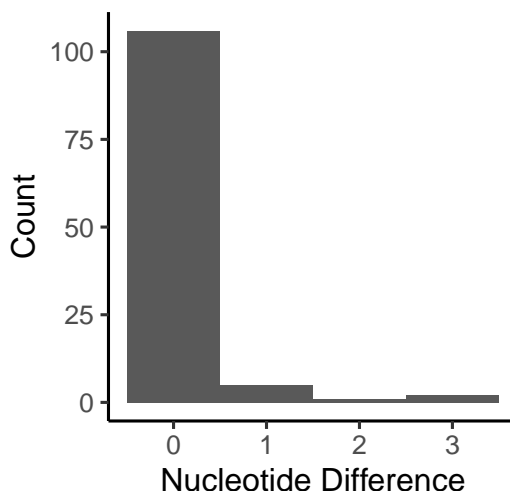
### IGHV4-4\*07

72 sequences assigned  
64 (88.9%) exact matches, in which:  
64 unique CDR3  
5 unique J



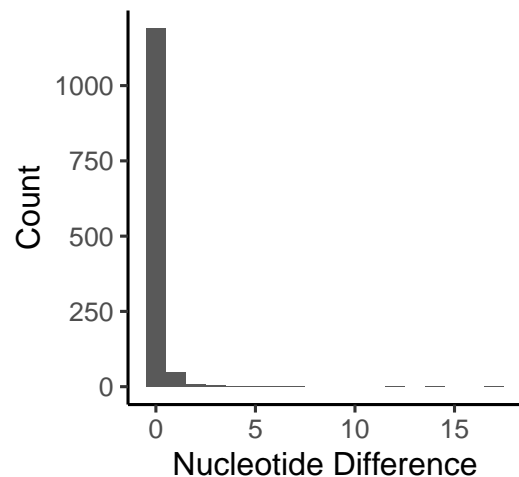
### IGHV4-30-4\*01

114 sequences assigned  
106 (93%) exact matches, in which:  
106 unique CDR3  
6 unique J



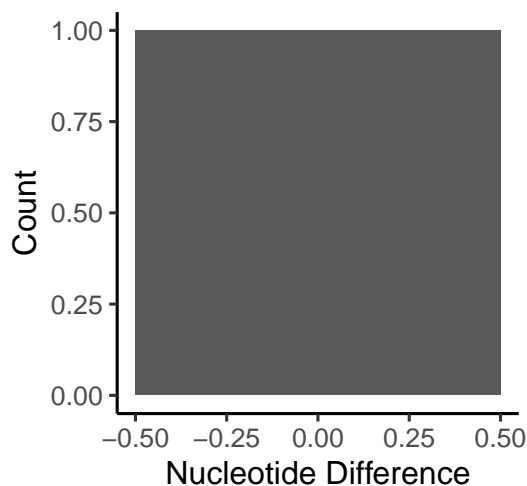
### IGHV4-39\*01

1263 sequences assigned  
1190 (94.2%) exact matches, in which:  
1189 unique CDR3  
6 unique J



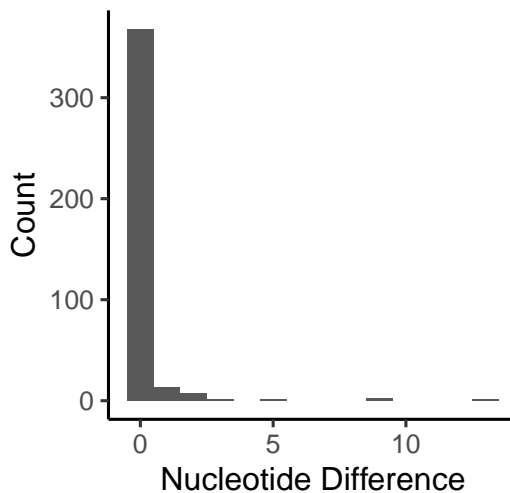
### IGHV4-28\*01

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



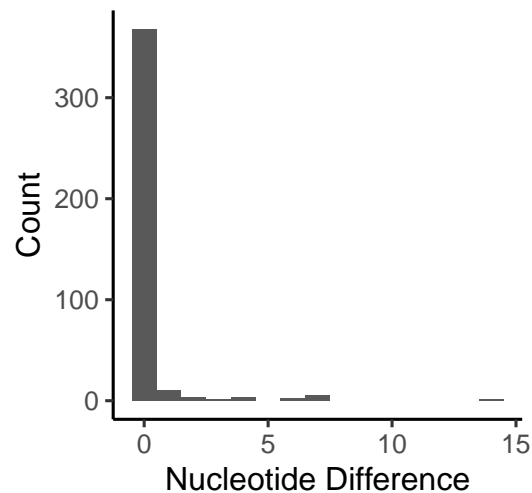
### IGHV4-31\*03

393 sequences assigned  
368 (93.6%) exact matches, in which:  
367 unique CDR3  
6 unique J



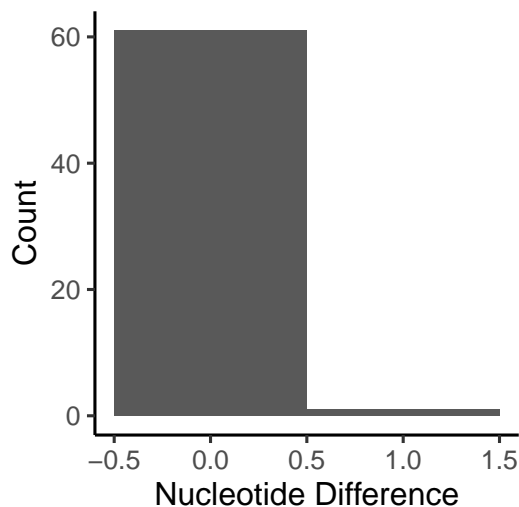
### IGHV4-59\*01

394 sequences assigned  
368 (93.4%) exact matches, in which:  
367 unique CDR3  
6 unique J



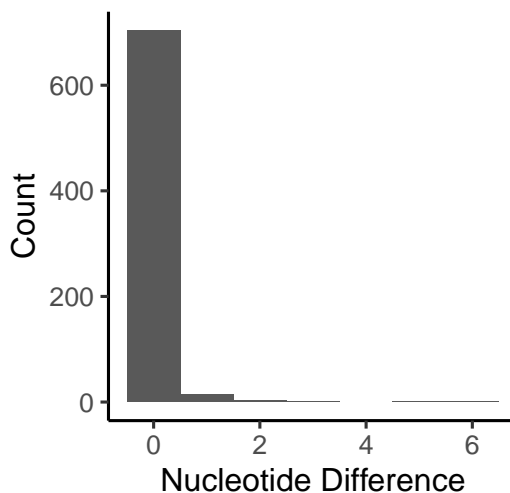
### IGHV4-30-2\*01

62 sequences assigned  
61 (98.4%) exact matches, in which:  
61 unique CDR3  
6 unique J



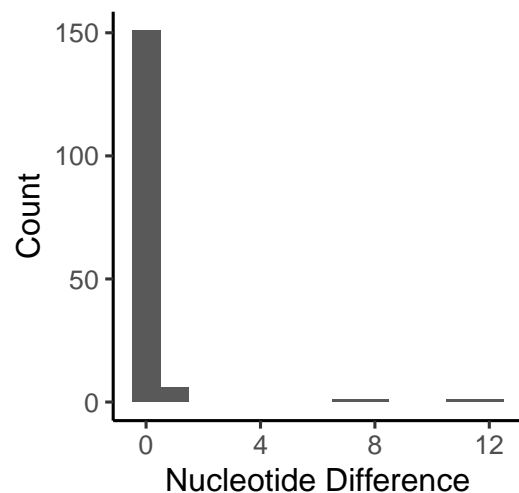
### IGHV4-34\*01

725 sequences assigned  
704 (97.1%) exact matches, in which:  
704 unique CDR3  
6 unique J



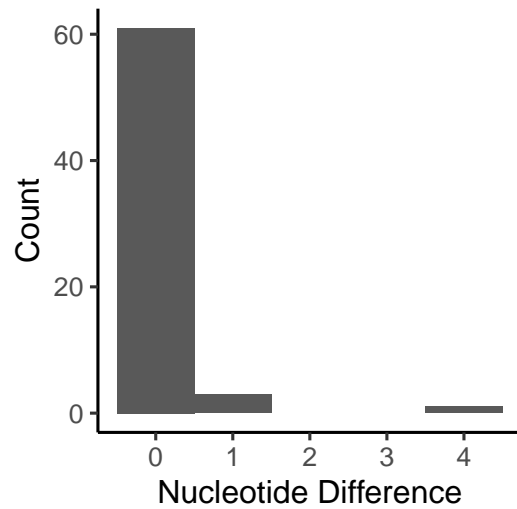
### IGHV4-59\*08

161 sequences assigned  
151 (93.8%) exact matches, in which:  
151 unique CDR3  
6 unique J



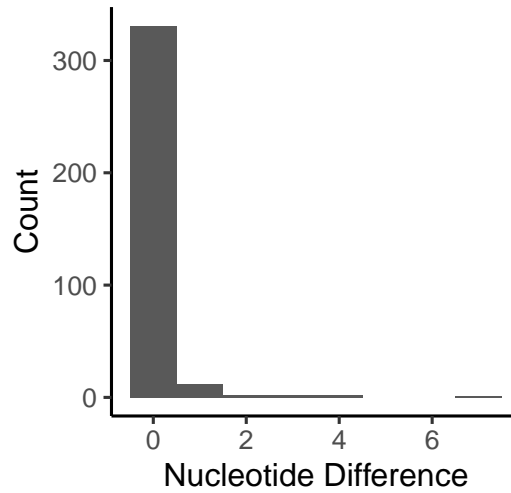
## IGHV4-61\*01

65 sequences assigned  
61 (93.8%) exact matches, in which:  
61 unique CDR3  
5 unique J



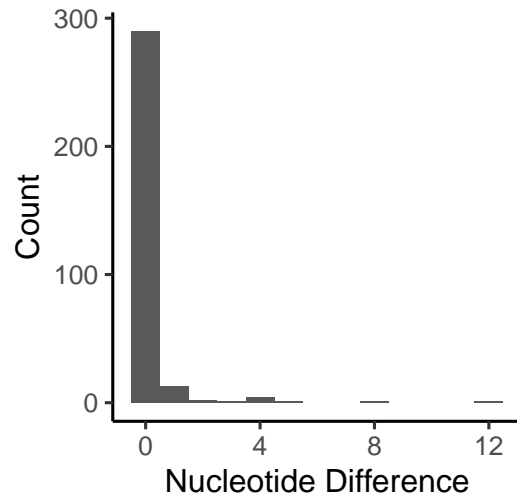
## IGHV5-51\*01\_C45G

351 sequences assigned  
331 (94.3%) exact matches, in which:  
329 unique CDR3  
6 unique J



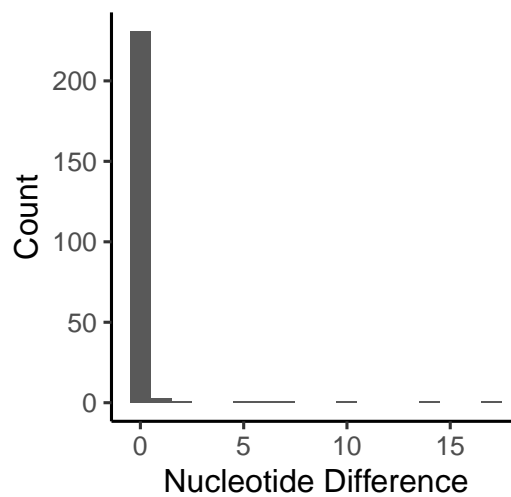
## IGHV5-10-1\*03

314 sequences assigned  
290 (92.4%) exact matches, in which:  
288 unique CDR3  
6 unique J



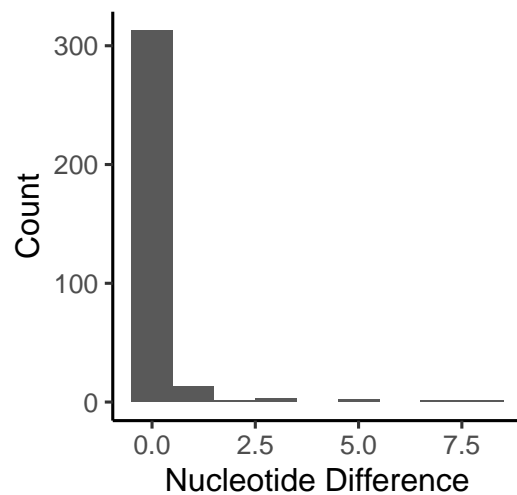
## IGHV6-1\*01

241 sequences assigned  
231 (95.9%) exact matches, in which:  
230 unique CDR3  
6 unique J



## IGHV5-51\*01

335 sequences assigned  
313 (93.4%) exact matches, in which:  
313 unique CDR3  
6 unique J







Warning – no inferred sequences found.