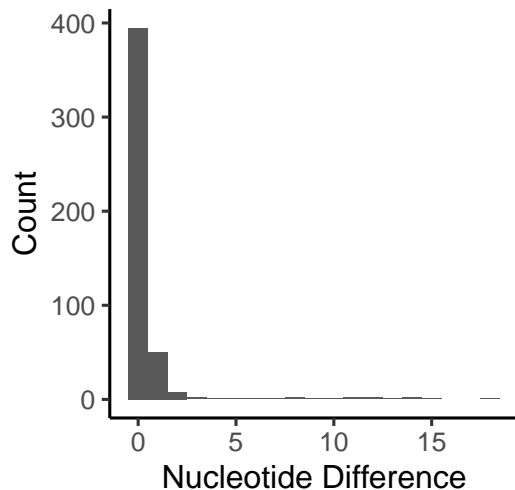


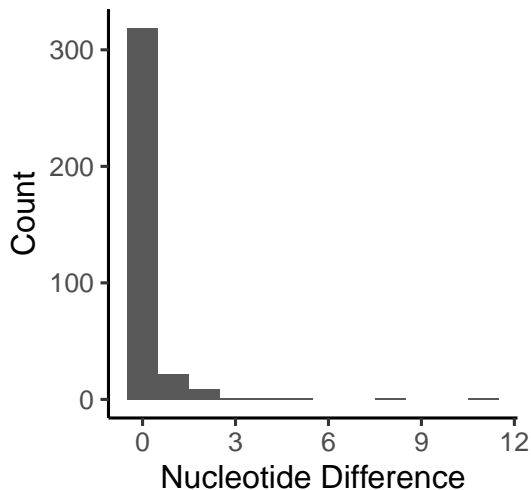
### IGHV1-2\*02

474 sequences assigned  
395 (83.3%) exact matches, in which:  
392 unique CDR3  
6 unique J



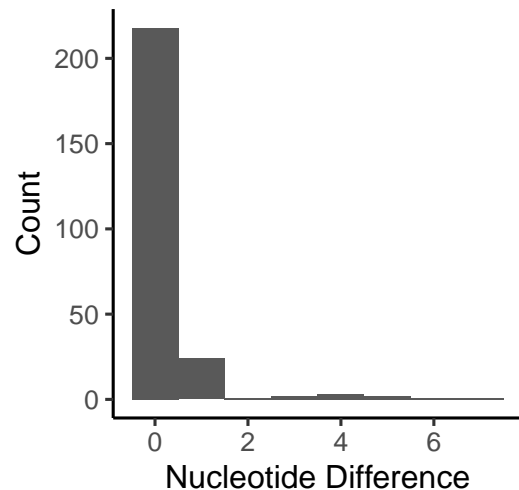
### IGHV1-8\*01

355 sequences assigned  
319 (89.9%) exact matches, in which:  
310 unique CDR3  
6 unique J



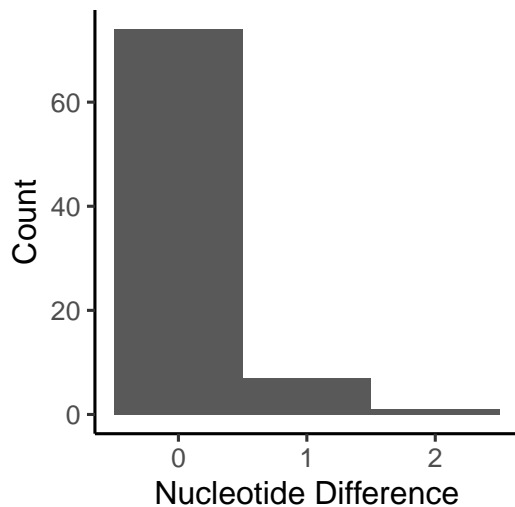
### IGHV1-46\*01

252 sequences assigned  
218 (86.5%) exact matches, in which:  
210 unique CDR3  
6 unique J



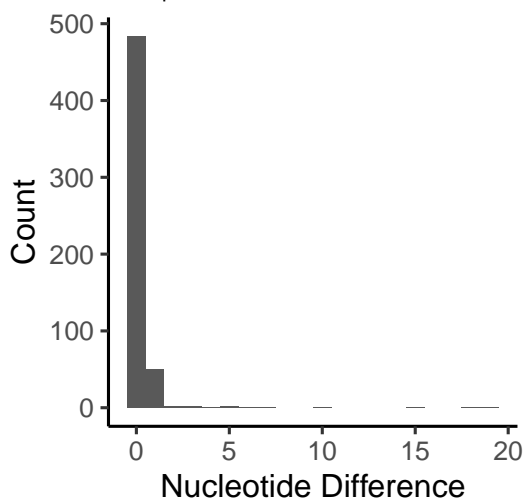
### IGHV1-2\*04

83 sequences assigned  
74 (89.2%) exact matches, in which:  
74 unique CDR3  
5 unique J



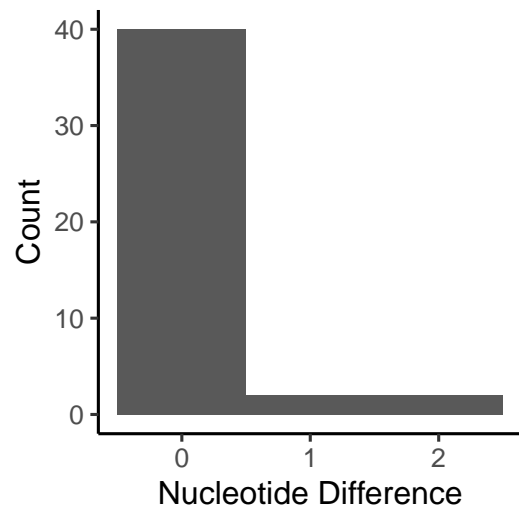
### IGHV1-18\*01

547 sequences assigned  
484 (88.5%) exact matches, in which:  
476 unique CDR3  
6 unique J



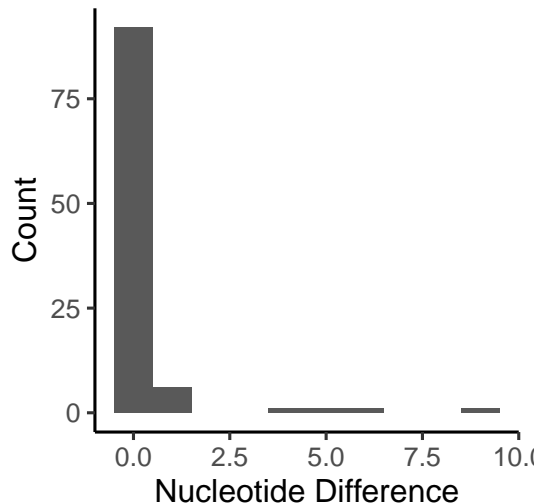
### IGHV1-58\*01

44 sequences assigned  
40 (90.9%) exact matches, in which:  
40 unique CDR3  
4 unique J



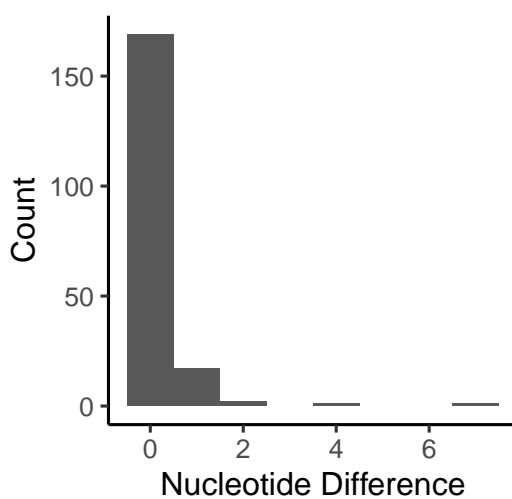
### IGHV1-3\*01

104 sequences assigned  
92 (88.5%) exact matches, in which:  
90 unique CDR3  
5 unique J



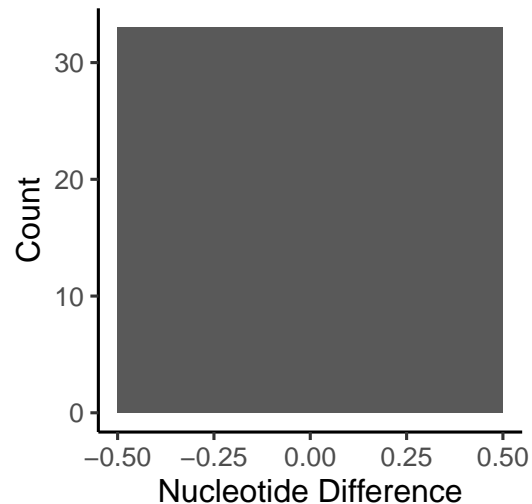
### IGHV1-24\*01

190 sequences assigned  
169 (88.9%) exact matches, in which:  
165 unique CDR3  
6 unique J



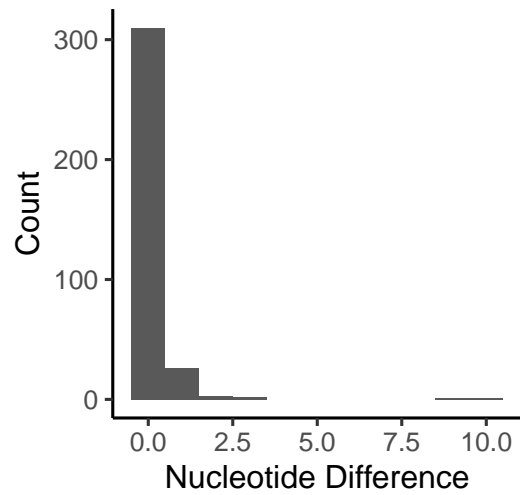
### IGHV1-69-2\*01

33 sequences assigned  
33 (100%) exact matches, in which:  
32 unique CDR3  
5 unique J



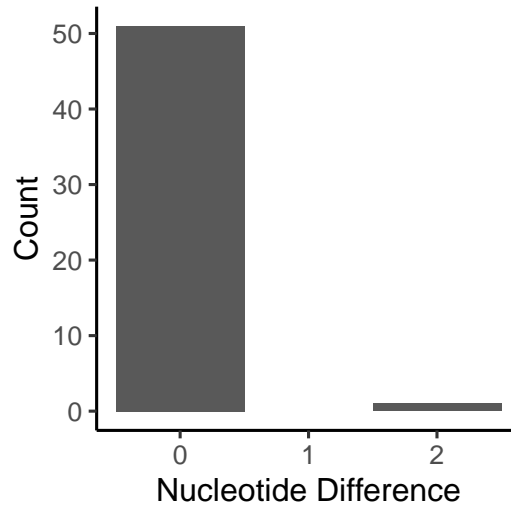
### IGHV1–69\*06

343 sequences assigned  
310 (90.4%) exact matches, in which:  
301 unique CDR3  
6 unique J



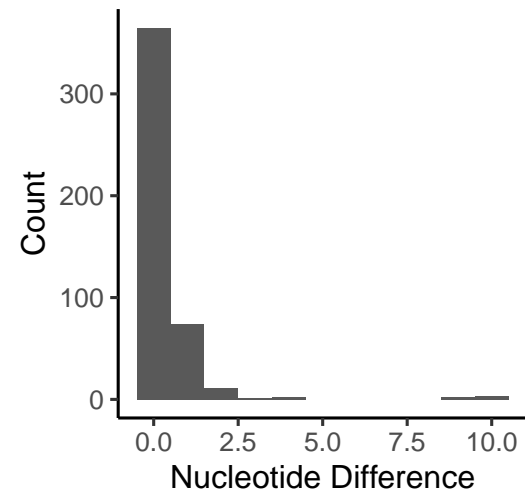
### IGHV2–70\*01

52 sequences assigned  
51 (98.1%) exact matches, in which:  
51 unique CDR3  
4 unique J



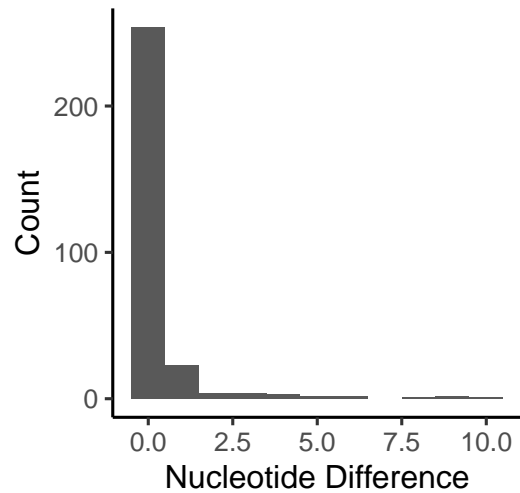
### IGHV3–11\*01

458 sequences assigned  
365 (79.7%) exact matches, in which:  
360 unique CDR3  
6 unique J



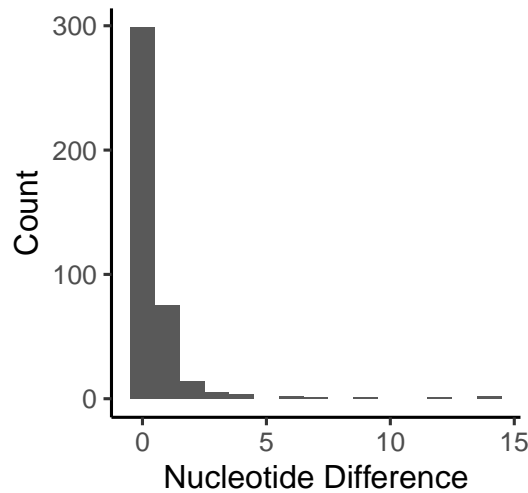
### IGHV2–5\*02

296 sequences assigned  
254 (85.8%) exact matches, in which:  
251 unique CDR3  
6 unique J



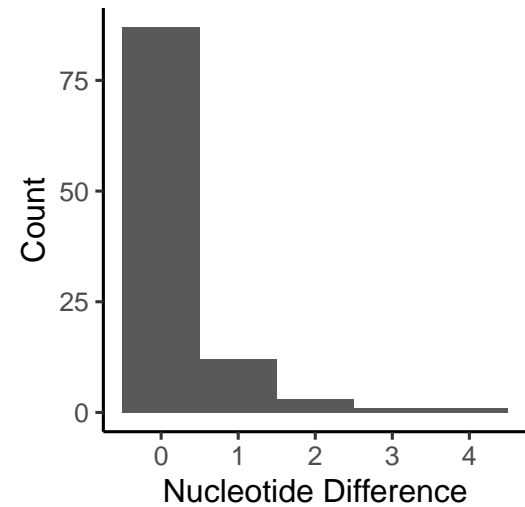
### IGHV3–7\*01

405 sequences assigned  
299 (73.8%) exact matches, in which:  
289 unique CDR3  
6 unique J



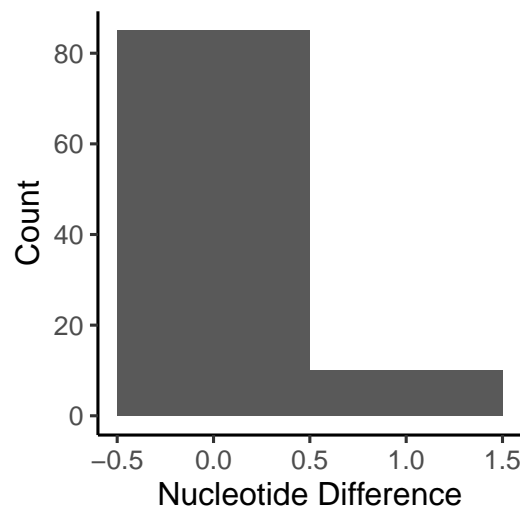
### IGHV3–13\*01

104 sequences assigned  
87 (83.7%) exact matches, in which:  
84 unique CDR3  
4 unique J



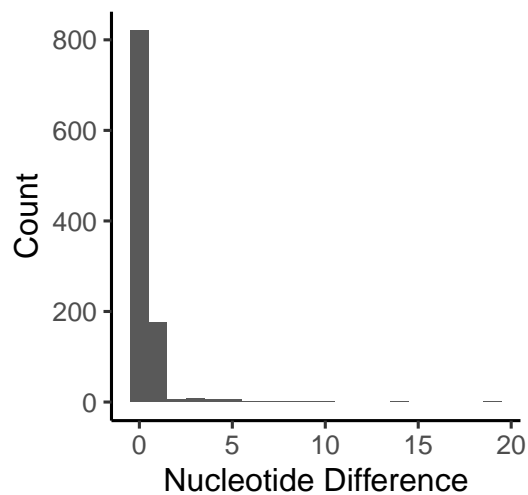
### IGHV2–26\*01

95 sequences assigned  
85 (89.5%) exact matches, in which:  
83 unique CDR3  
5 unique J



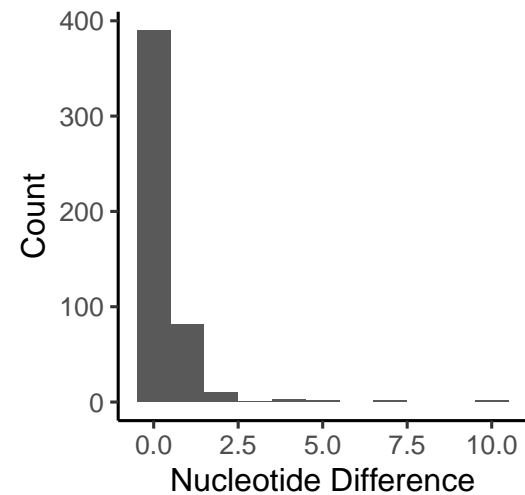
### IGHV3–9\*01

1029 sequences assigned  
821 (79.8%) exact matches, in which:  
790 unique CDR3  
6 unique J



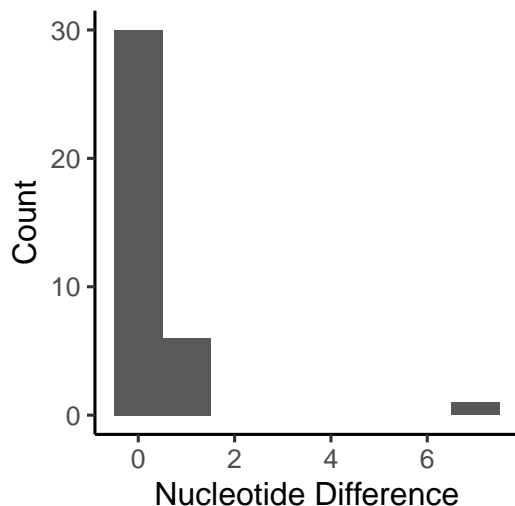
### IGHV3–15\*01

492 sequences assigned  
390 (79.3%) exact matches, in which:  
380 unique CDR3  
6 unique J



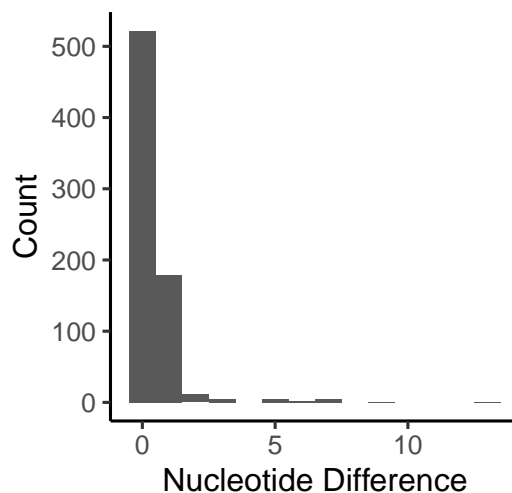
### IGHV3–20\*01

37 sequences assigned  
30 (81.1%) exact matches, in which:  
29 unique CDR3  
5 unique J



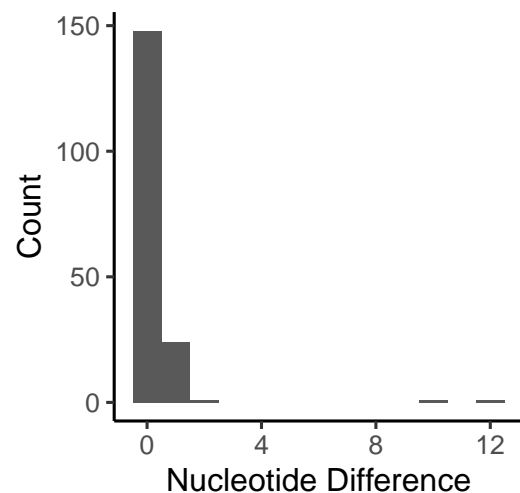
### IGHV3–33\*01

731 sequences assigned  
522 (71.4%) exact matches, in which:  
509 unique CDR3  
6 unique J



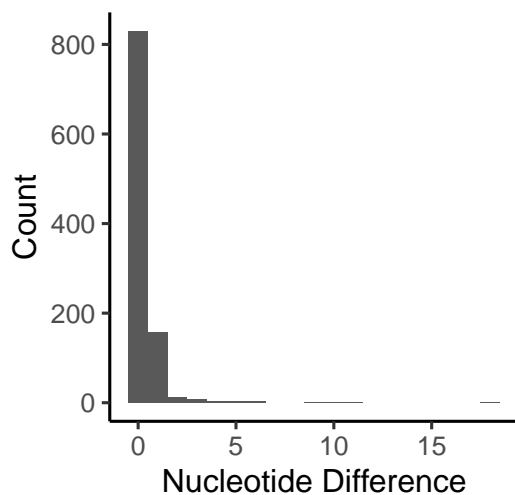
### IGHV3–53\*01

176 sequences assigned  
148 (84.1%) exact matches, in which:  
147 unique CDR3  
5 unique J



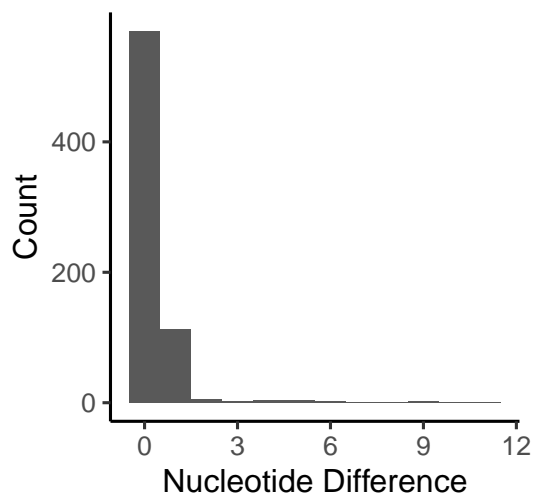
### IGHV3–21\*01

1021 sequences assigned  
830 (81.3%) exact matches, in which:  
803 unique CDR3  
6 unique J



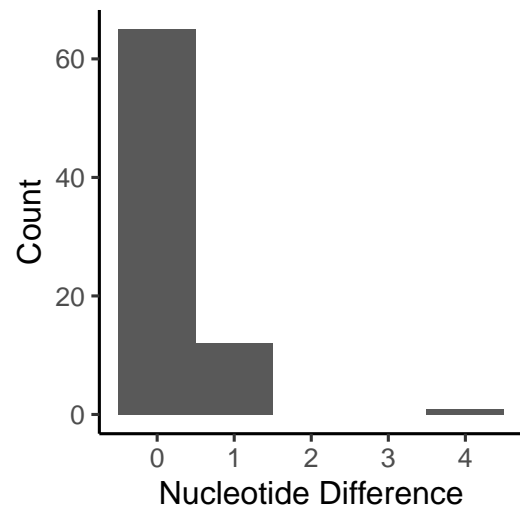
### IGHV3–48\*03

708 sequences assigned  
570 (80.5%) exact matches, in which:  
559 unique CDR3  
6 unique J



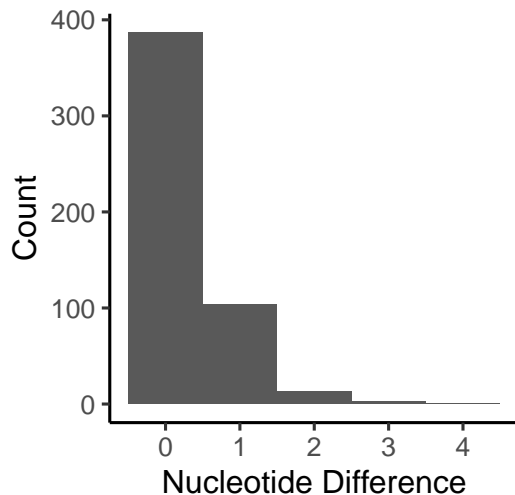
### IGHV3–53\*02

78 sequences assigned  
65 (83.3%) exact matches, in which:  
65 unique CDR3  
5 unique J



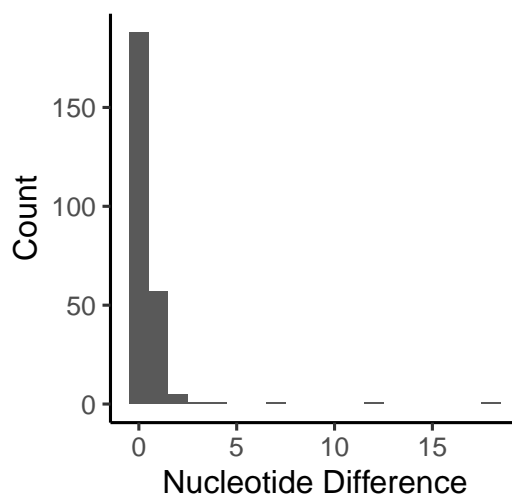
### IGHV3–30–3\*01

513 sequences assigned  
387 (75.4%) exact matches, in which:  
374 unique CDR3  
6 unique J



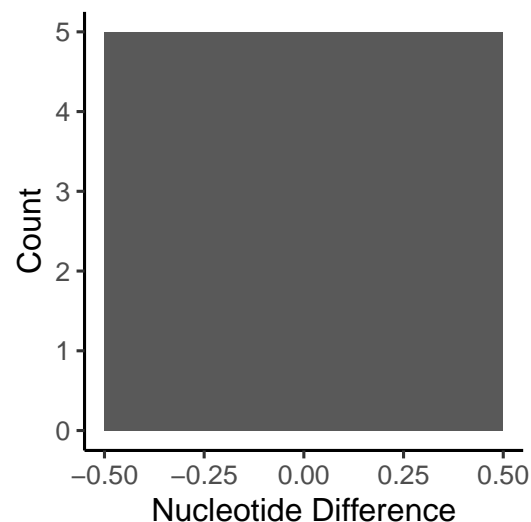
### IGHV3–49\*04

255 sequences assigned  
188 (73.7%) exact matches, in which:  
185 unique CDR3  
6 unique J



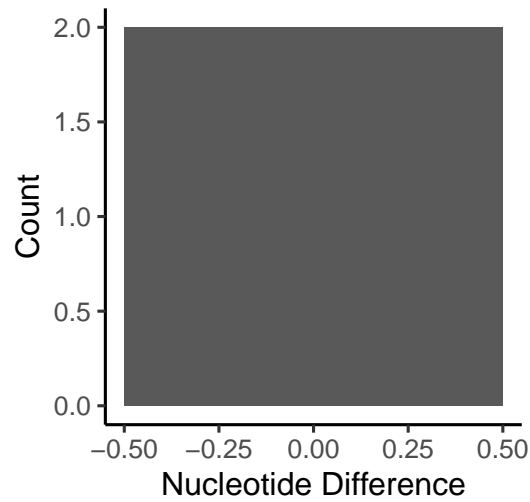
### IGHV3–64\*02

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



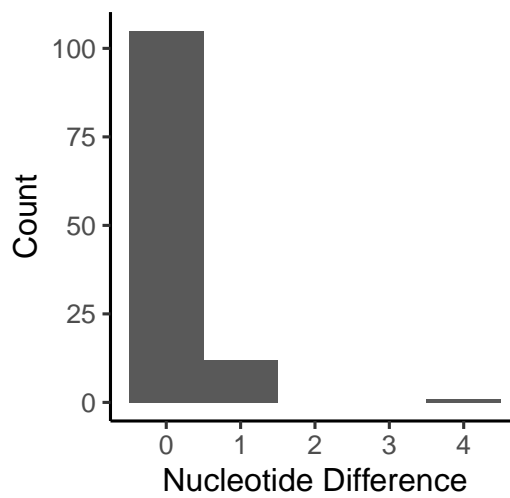
### IGHV3–66\*03

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



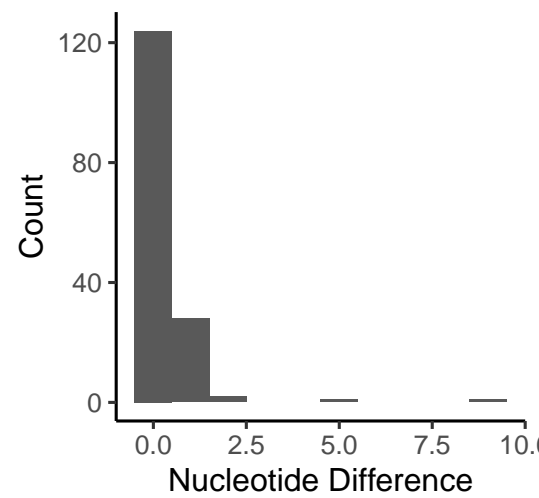
### IGHV3–74\*01

119 sequences assigned  
105 (88.2%) exact matches, in which:  
103 unique CDR3  
5 unique J



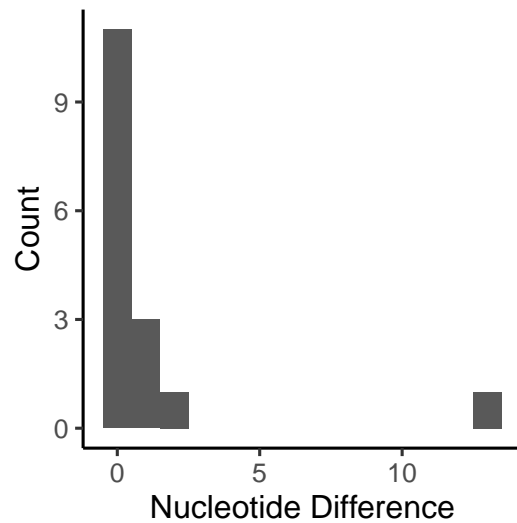
### IGHV4–4\*07

156 sequences assigned  
124 (79.5%) exact matches, in which:  
122 unique CDR3  
5 unique J



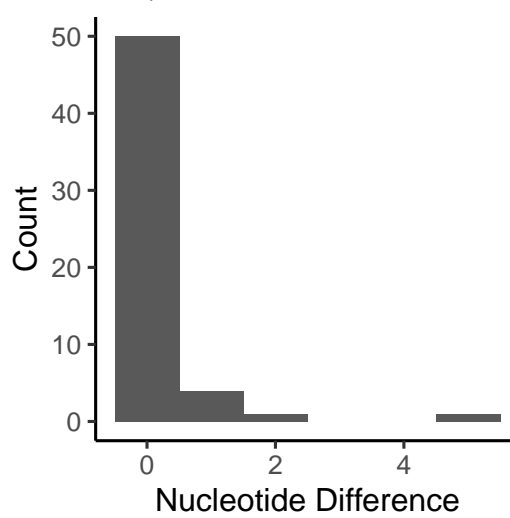
### IGHV3–72\*01

16 sequences assigned  
11 (68.8%) exact matches, in which:  
11 unique CDR3  
4 unique J



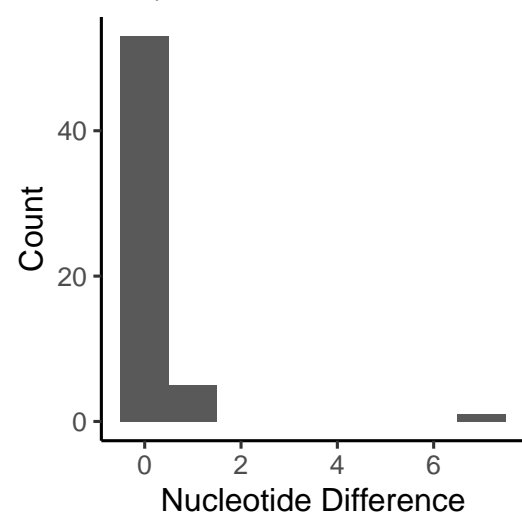
### IGHV3–43D\*04

56 sequences assigned  
50 (89.3%) exact matches, in which:  
50 unique CDR3  
5 unique J



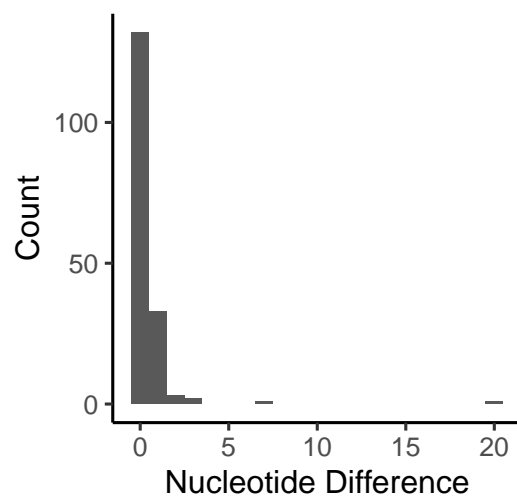
### IGHV4–30–2\*01

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



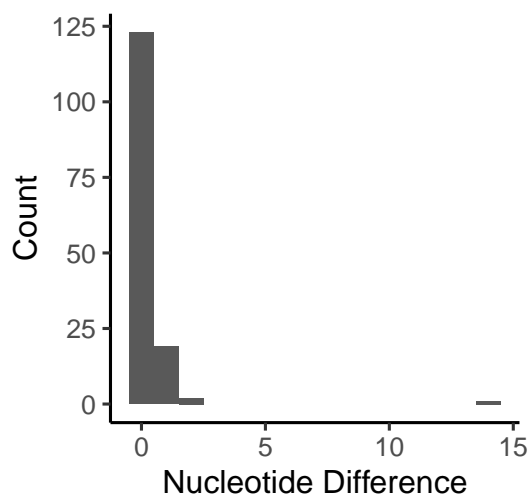
### IGHV3–73\*02

172 sequences assigned  
132 (76.7%) exact matches, in which:  
122 unique CDR3  
6 unique J



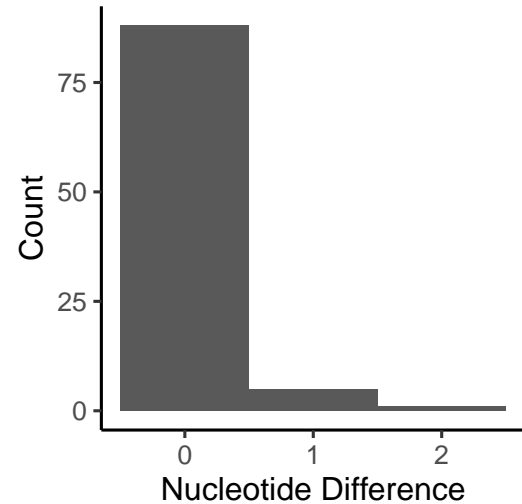
### IGHV4–4\*02

145 sequences assigned  
123 (84.8%) exact matches, in which:  
121 unique CDR3  
6 unique J



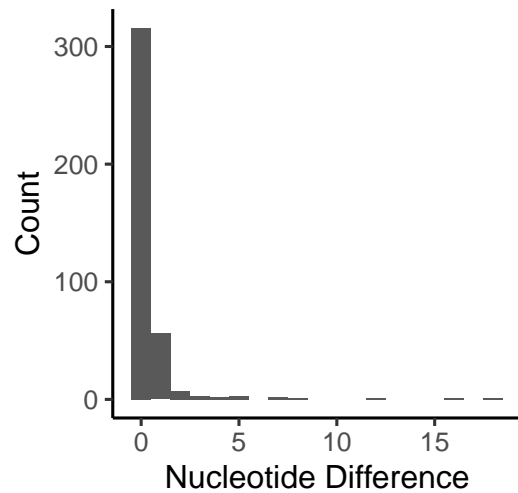
### IGHV4–30–4\*01

94 sequences assigned  
88 (93.6%) exact matches, in which:  
86 unique CDR3  
6 unique J



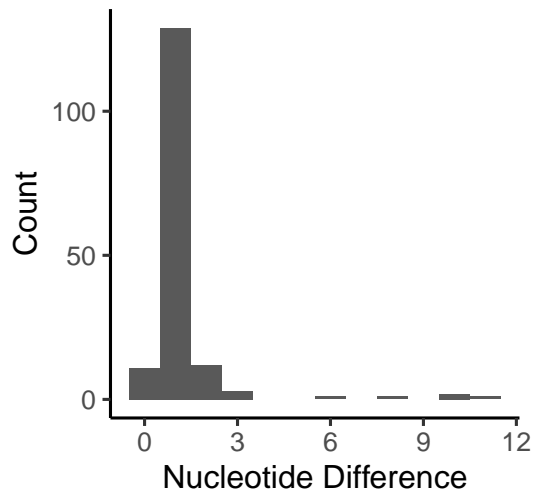
### IGHV4-31\*03

394 sequences assigned  
316 (80.2%) exact matches, in which:  
312 unique CDR3  
6 unique J



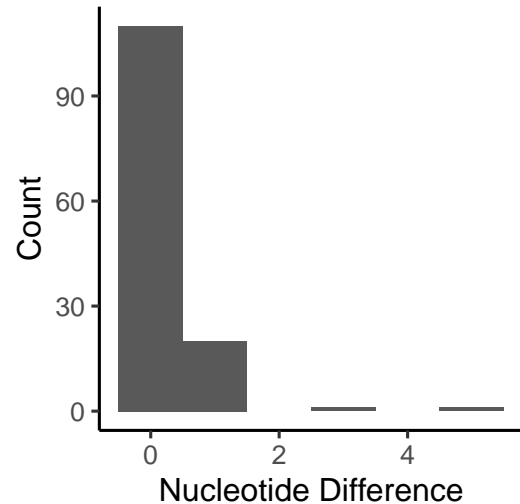
### IGHV4-38-2\*02

162 sequences assigned  
11 (6.8%) exact matches, in which:  
11 unique CDR3  
4 unique J



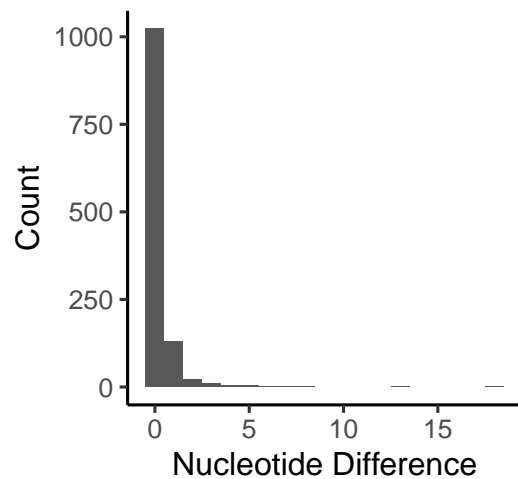
### IGHV4-61\*01

136 sequences assigned  
110 (80.9%) exact matches, in which:  
110 unique CDR3  
6 unique J



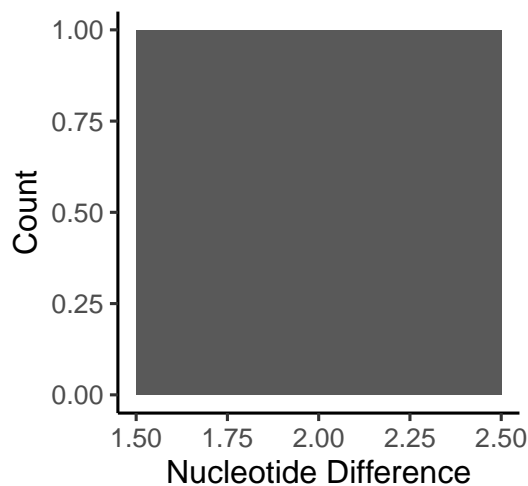
### IGHV4-34\*01

1202 sequences assigned  
1023 (85.1%) exact matches, in which:  
1000 unique CDR3  
6 unique J



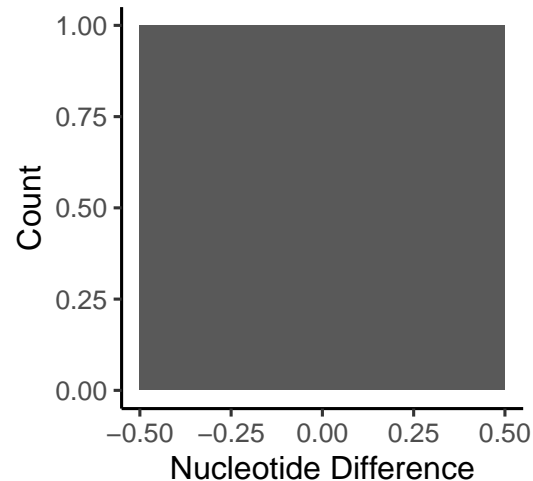
### IGHV4-39\*07

1 sequences assigned  
No exact matches.



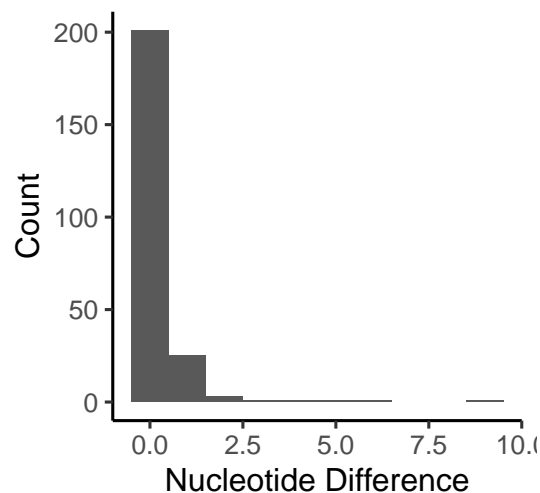
### IGHV1/OR15-2\*01

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



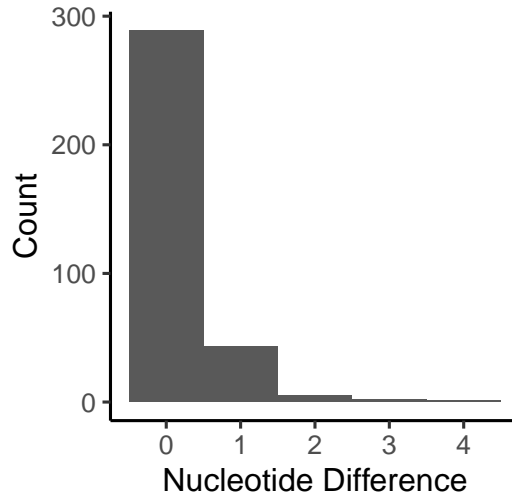
### IGHV4-38-2\*01

234 sequences assigned  
201 (85.9%) exact matches, in which:  
200 unique CDR3  
6 unique J



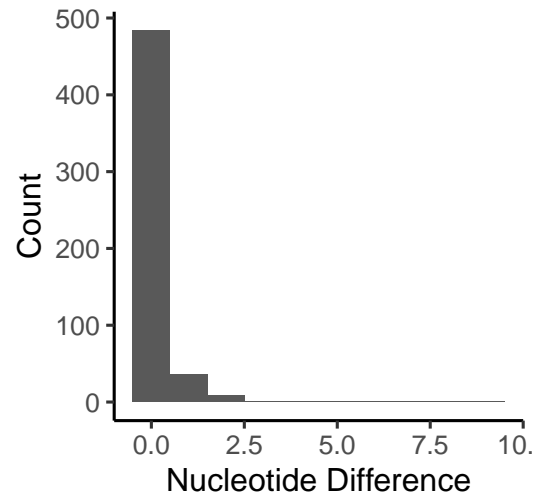
### IGHV4-59\*01

340 sequences assigned  
289 (85%) exact matches, in which:  
288 unique CDR3  
6 unique J



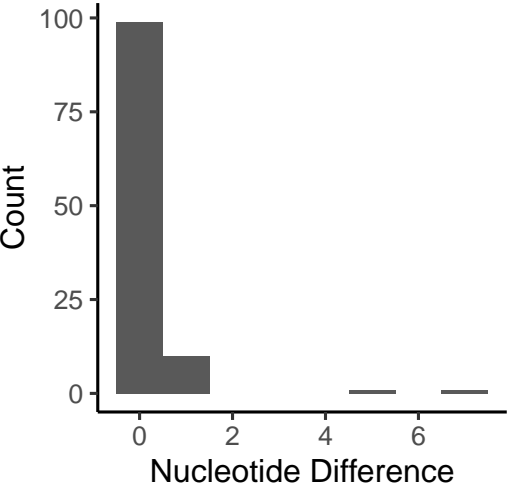
### IGHV5-51\*01

536 sequences assigned  
484 (90.3%) exact matches, in which:  
471 unique CDR3  
6 unique J



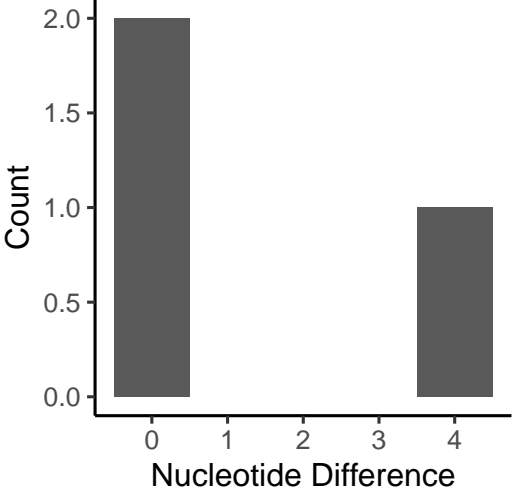
IGHV6-1\*01

111 sequences assigned  
99 (89.2%) exact matches, in which:  
96 unique CDR3  
5 unique J



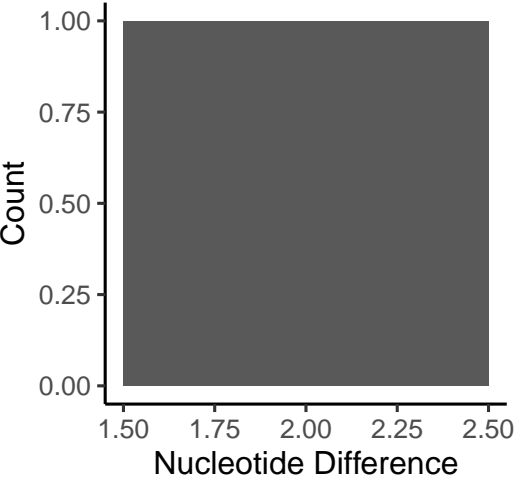
IGHV7-4-1\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



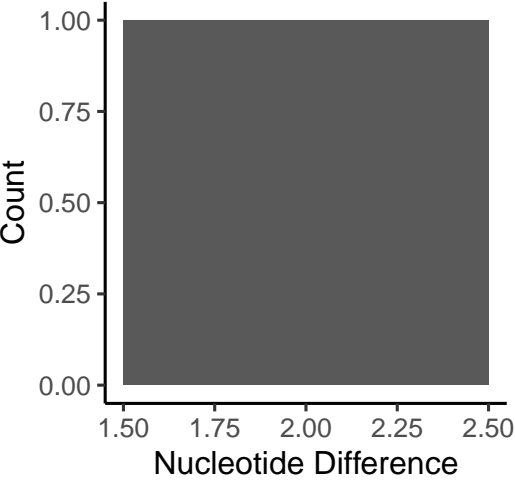
IGHV3/OR16-8\*01

1 sequences assigned  
No exact matches.



IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.