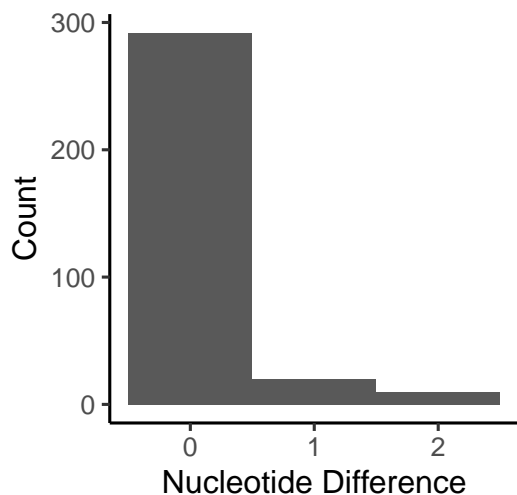


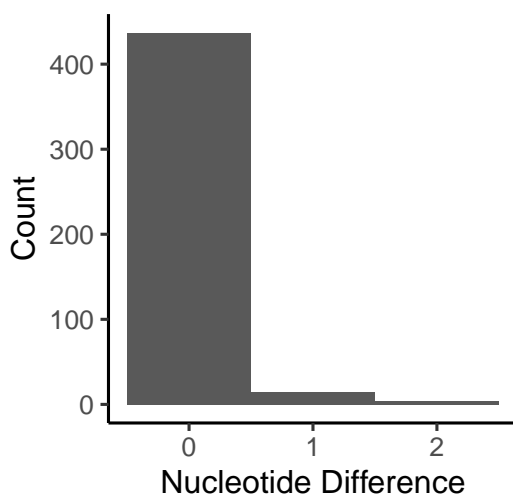
### IGHV1-2\*02

322 sequences assigned  
292 (90.7%) exact matches, in which:  
292 unique CDR3  
6 unique J



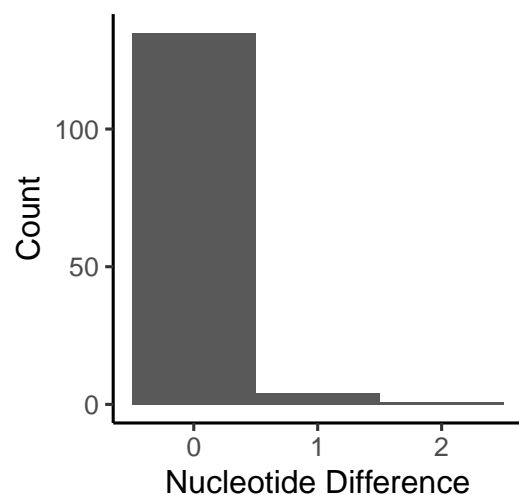
### IGHV1-8\*01

456 sequences assigned  
437 (95.8%) exact matches, in which:  
434 unique CDR3  
6 unique J



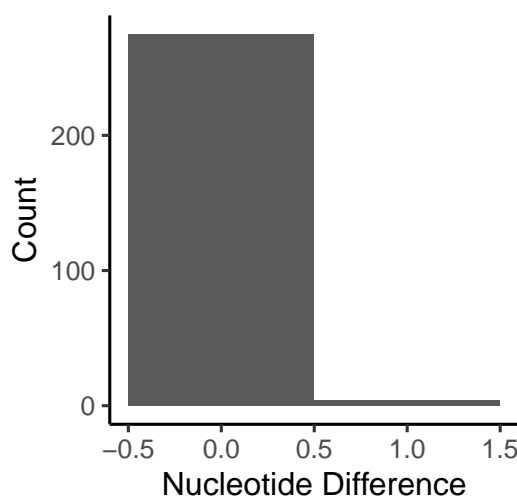
### IGHV1-46\*01

140 sequences assigned  
135 (96.4%) exact matches, in which:  
135 unique CDR3  
6 unique J



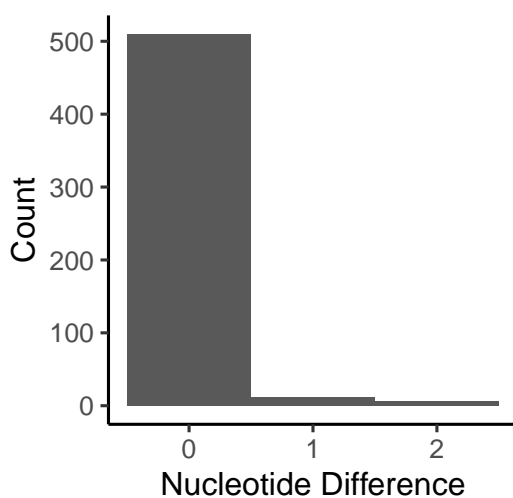
### IGHV1-2\*06

279 sequences assigned  
275 (98.6%) exact matches, in which:  
274 unique CDR3  
6 unique J



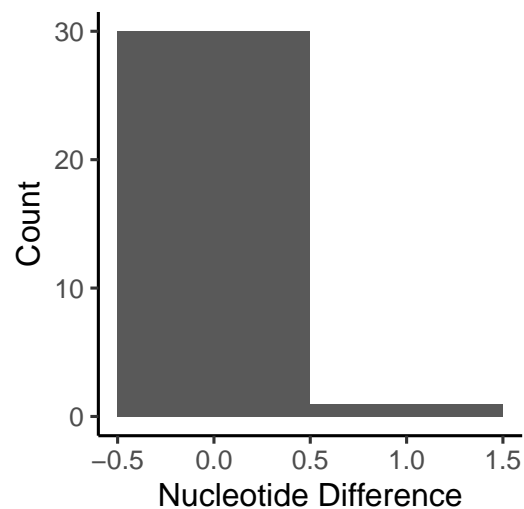
### IGHV1-18\*01

527 sequences assigned  
510 (96.8%) exact matches, in which:  
508 unique CDR3  
6 unique J



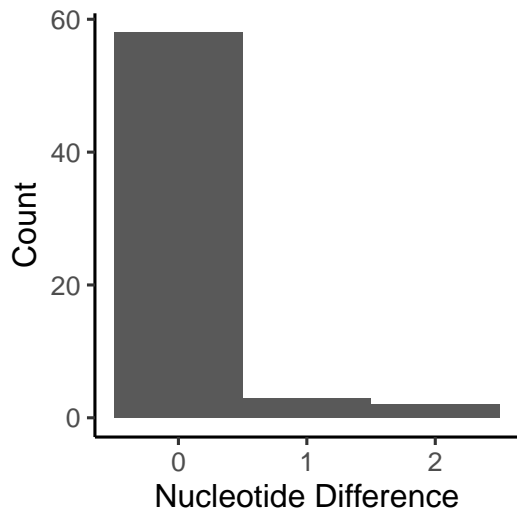
### IGHV1-58\*01\_03

31 sequences assigned  
30 (96.8%) exact matches, in which:  
30 unique CDR3  
5 unique J



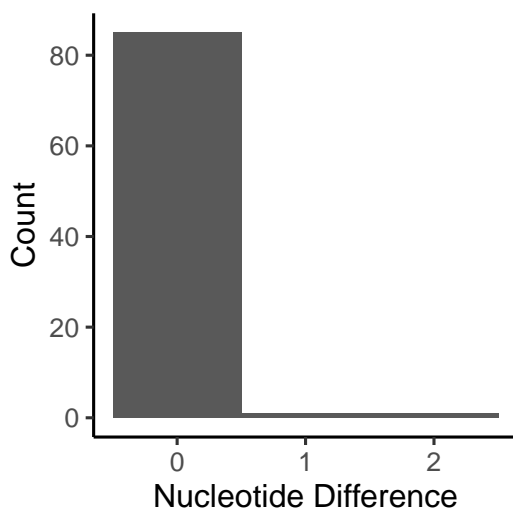
### IGHV1-3\*01\_05

63 sequences assigned  
58 (92.1%) exact matches, in which:  
58 unique CDR3  
6 unique J



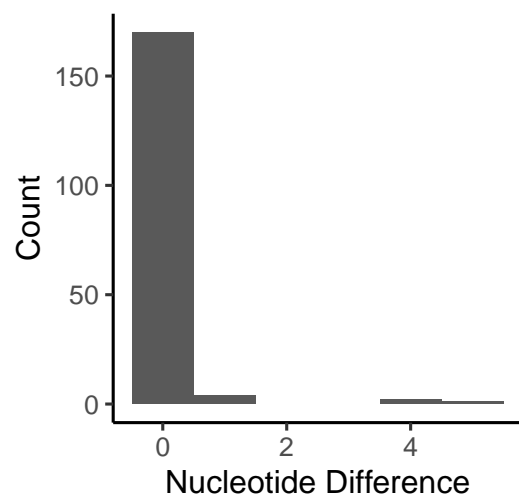
### IGHV1-24\*01

87 sequences assigned  
85 (97.7%) exact matches, in which:  
84 unique CDR3  
6 unique J



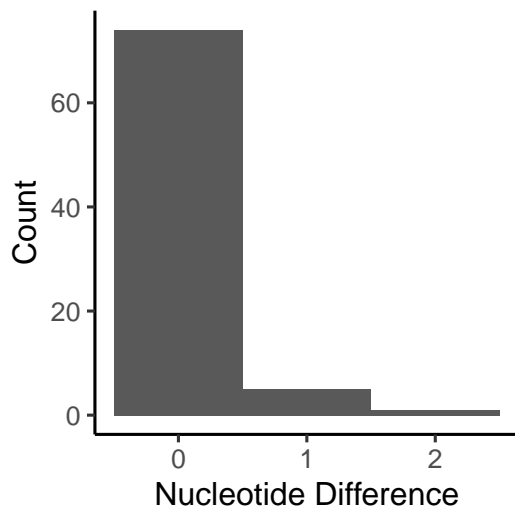
### IGHV1-69\*06\_14

177 sequences assigned  
170 (96%) exact matches, in which:  
170 unique CDR3  
6 unique J



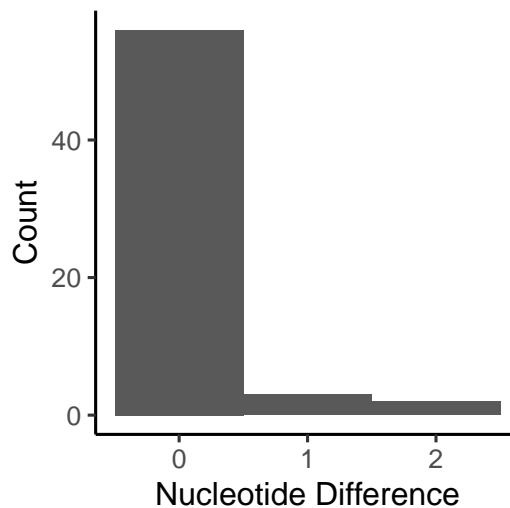
### IGHV2-5\*01

80 sequences assigned  
74 (92.5%) exact matches, in which:  
73 unique CDR3  
6 unique J



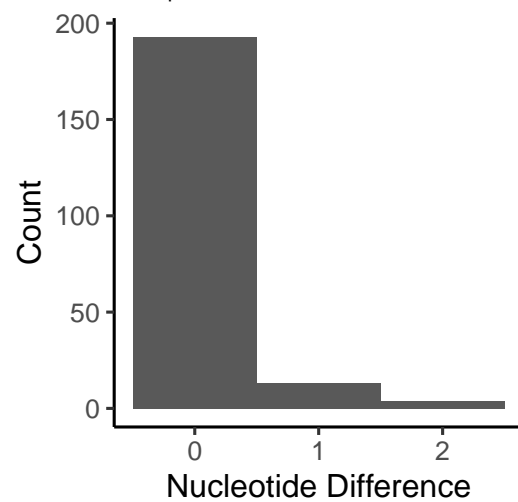
### IGHV2-70\*01

61 sequences assigned  
56 (91.8%) exact matches, in which:  
54 unique CDR3  
5 unique J



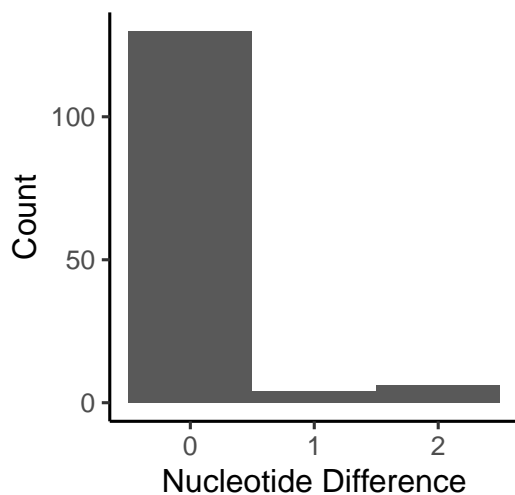
### IGHV3-11\*01

210 sequences assigned  
193 (91.9%) exact matches, in which:  
193 unique CDR3  
6 unique J



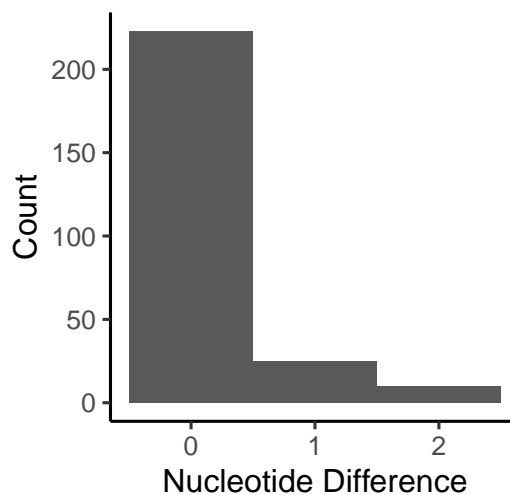
### IGHV2-5\*02

140 sequences assigned  
130 (92.9%) exact matches, in which:  
130 unique CDR3  
5 unique J



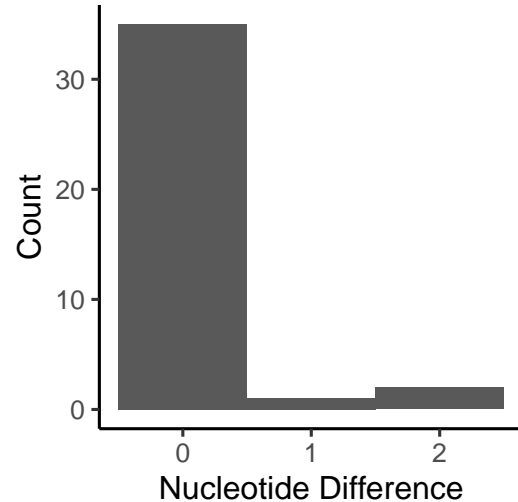
### IGHV3-7\*01

258 sequences assigned  
223 (86.4%) exact matches, in which:  
218 unique CDR3  
6 unique J



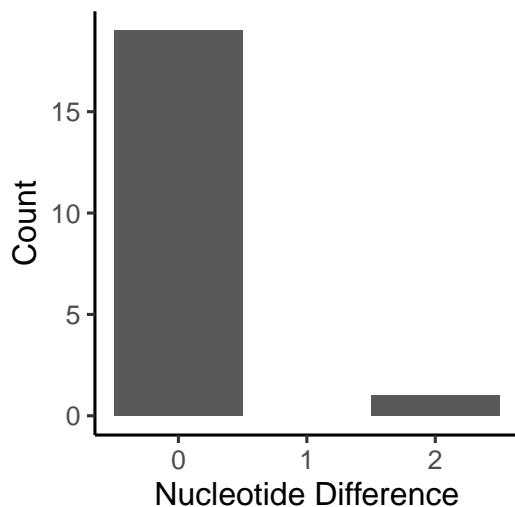
### IGHV3-13\*01

38 sequences assigned  
35 (92.1%) exact matches, in which:  
34 unique CDR3  
5 unique J



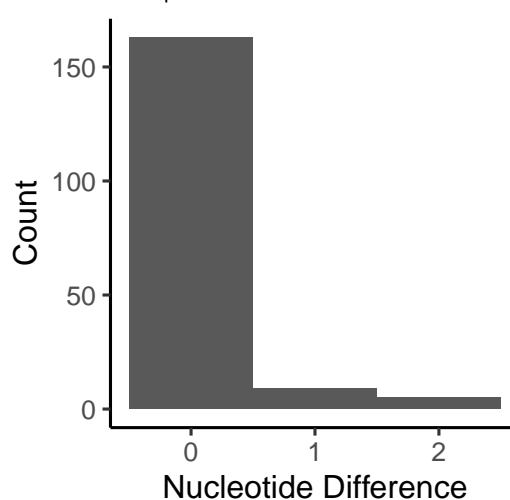
### IGHV2-26\*01

20 sequences assigned  
19 (95%) exact matches, in which:  
19 unique CDR3  
5 unique J



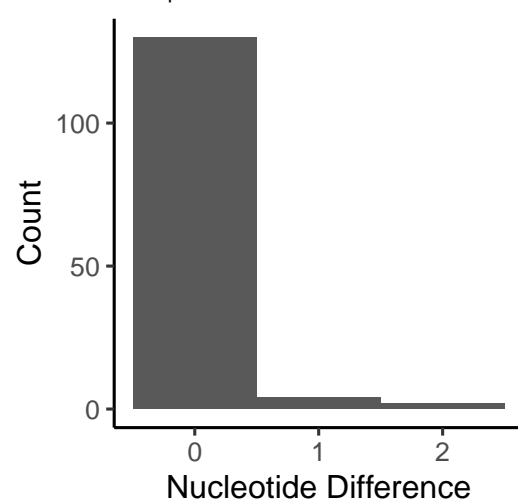
### IGHV3-9\*01

177 sequences assigned  
163 (92.1%) exact matches, in which:  
161 unique CDR3  
6 unique J



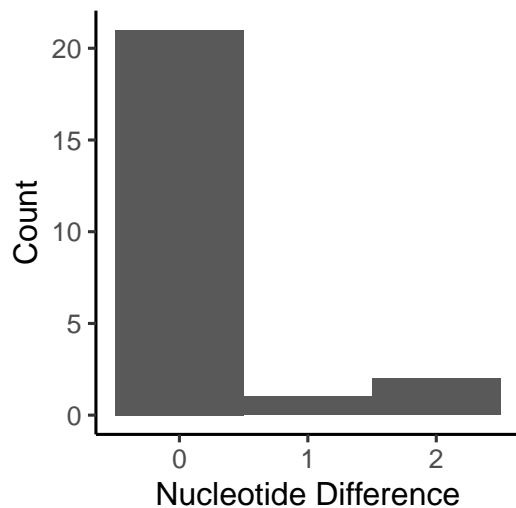
### IGHV3-15\*01\_02

136 sequences assigned  
130 (95.6%) exact matches, in which:  
127 unique CDR3  
6 unique J



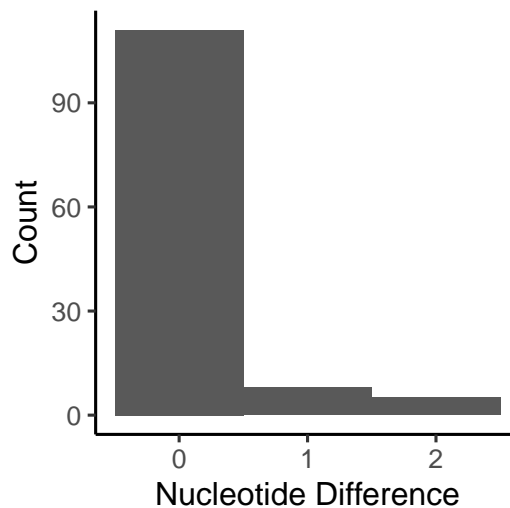
### IGHV3–20\*01\_02

24 sequences assigned  
21 (87.5%) exact matches, in which:  
21 unique CDR3  
5 unique J



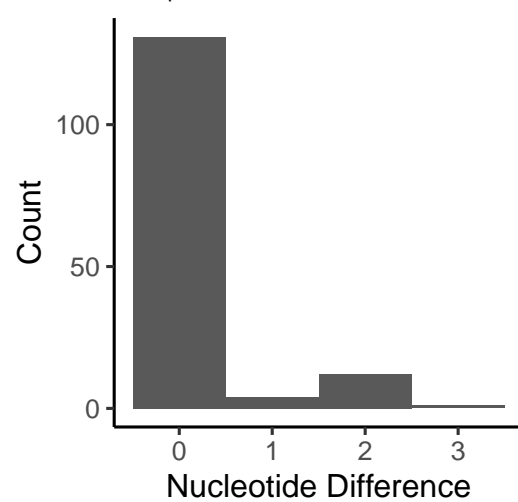
### IGHV3–33\*01

124 sequences assigned  
111 (89.5%) exact matches, in which:  
110 unique CDR3  
6 unique J



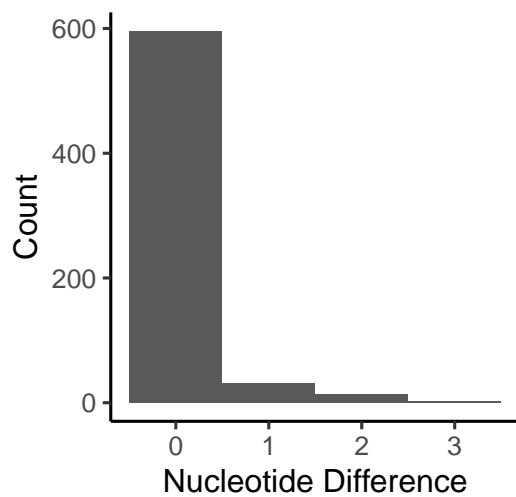
### IGHV3–48\*04

148 sequences assigned  
131 (88.5%) exact matches, in which:  
130 unique CDR3  
5 unique J



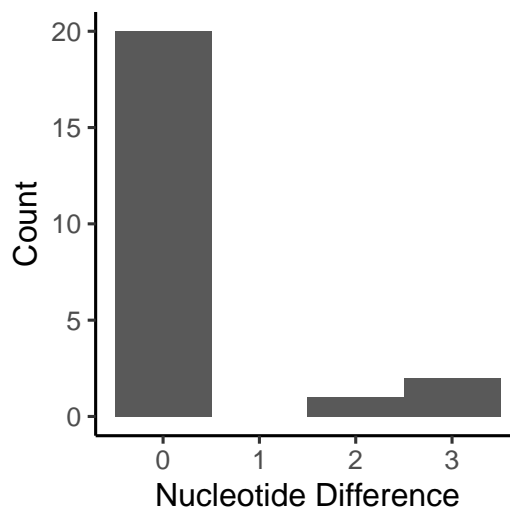
### IGHV3–21\*01\_02

643 sequences assigned  
596 (92.7%) exact matches, in which:  
580 unique CDR3  
6 unique J



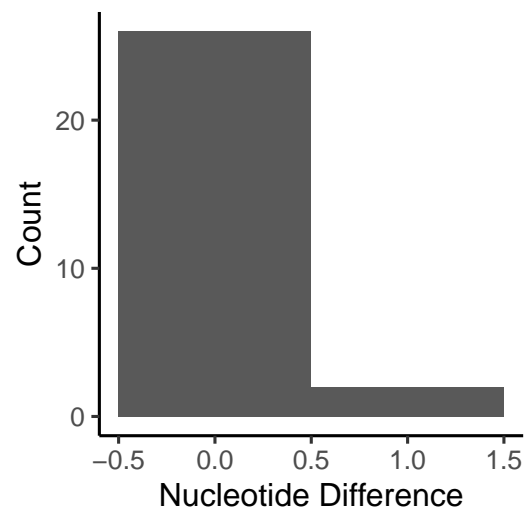
### IGHV3–43\*01

23 sequences assigned  
20 (87%) exact matches, in which:  
20 unique CDR3  
3 unique J



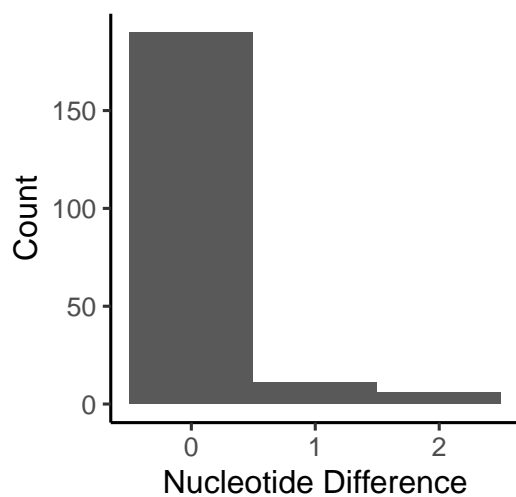
### IGHV3–49\*04

28 sequences assigned  
26 (92.9%) exact matches, in which:  
26 unique CDR3  
4 unique J



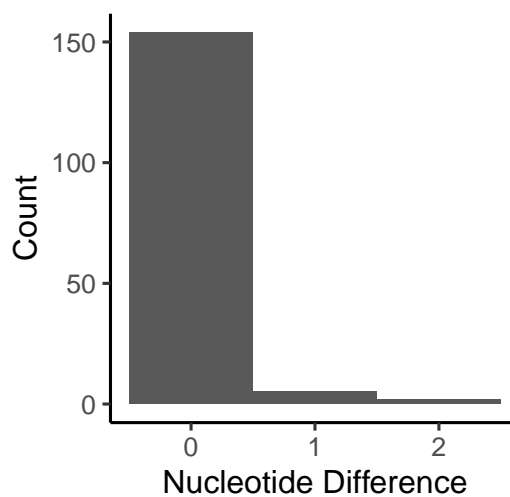
### IGHV3–30–3\*01

207 sequences assigned  
190 (91.8%) exact matches, in which:  
187 unique CDR3  
6 unique J



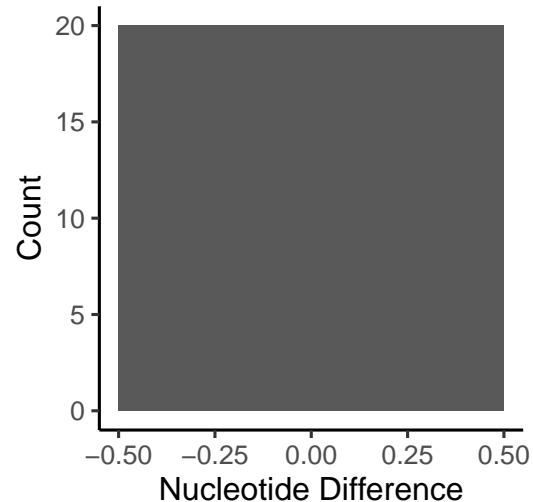
### IGHV3–48\*03

161 sequences assigned  
154 (95.7%) exact matches, in which:  
151 unique CDR3  
5 unique J



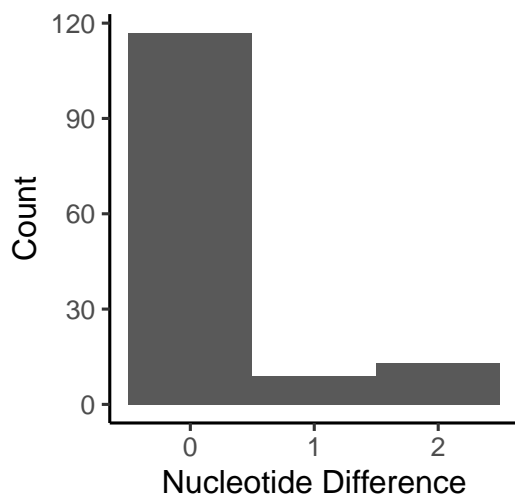
### IGHV3–49\*03\_05

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



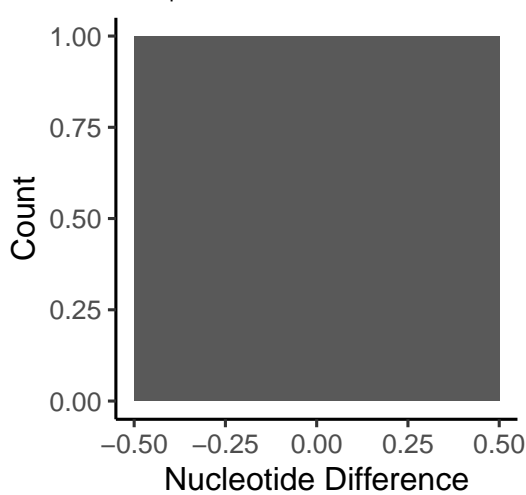
### IGHV3-53\*01\_02

139 sequences assigned  
117 (84.2%) exact matches, in which:  
113 unique CDR3  
6 unique J



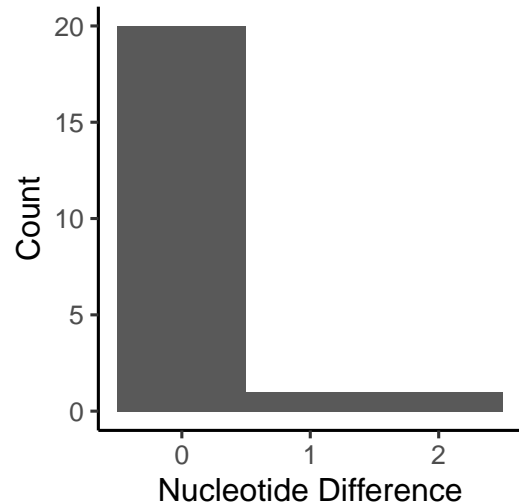
### IGHV3-66\*02

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



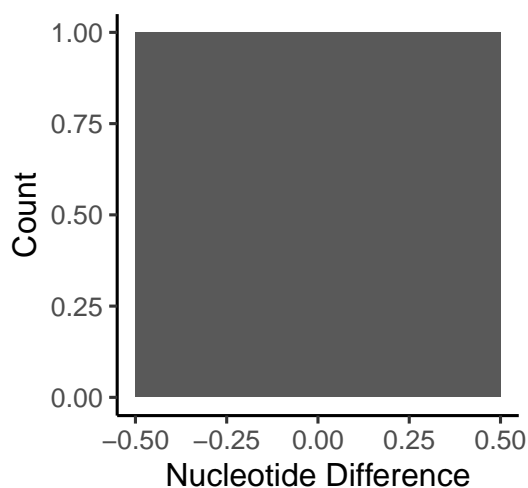
### IGHV3-73\*01\_02

22 sequences assigned  
20 (90.9%) exact matches, in which:  
20 unique CDR3  
4 unique J



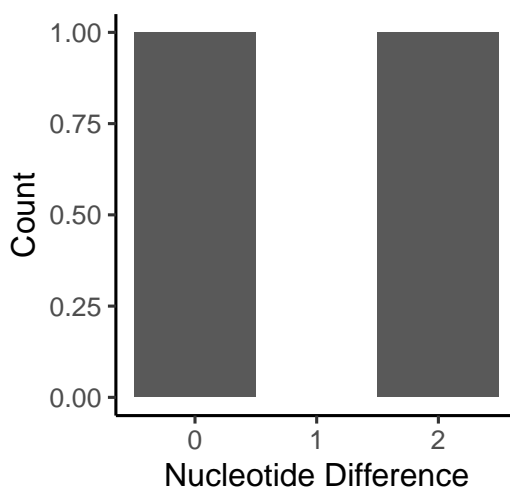
### IGHV3-64\*01

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



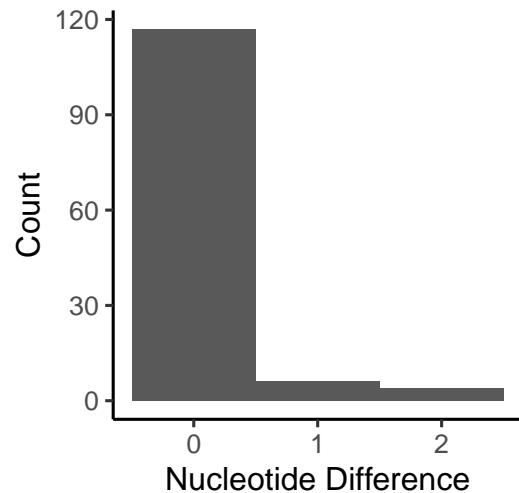
### IGHV3-69-1\*01

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



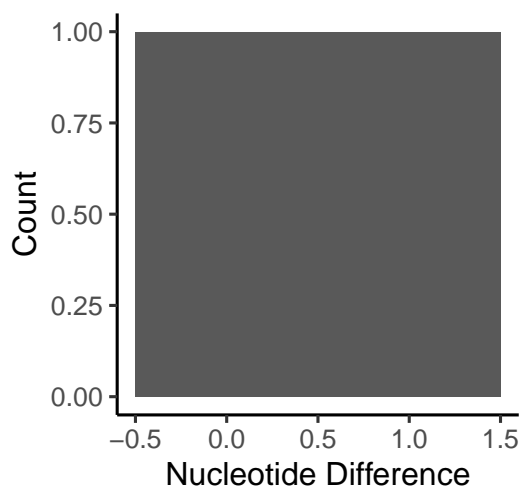
### IGHV3-74\*01\_02

127 sequences assigned  
117 (92.1%) exact matches, in which:  
116 unique CDR3  
6 unique J



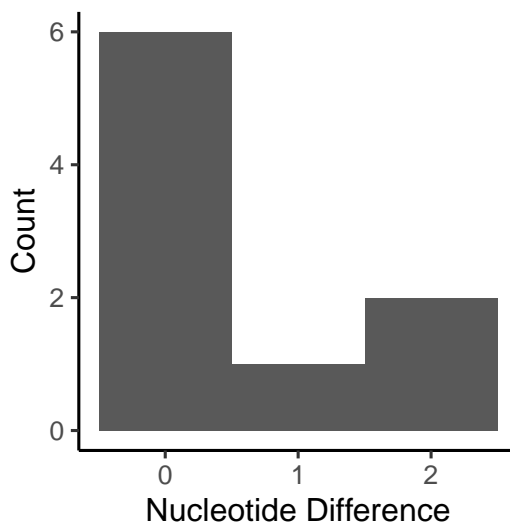
### IGHV3-64\*02\_07

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



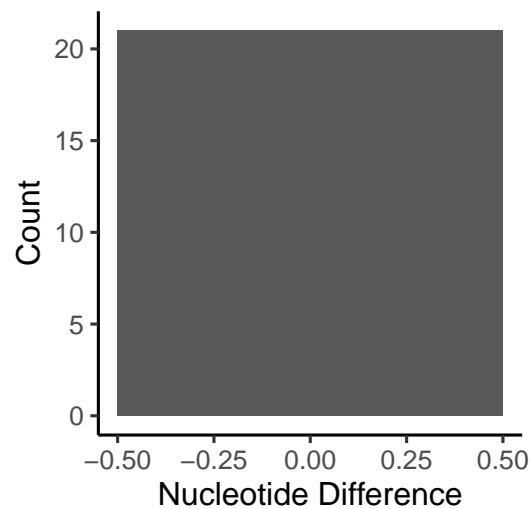
### IGHV3-72\*01

9 sequences assigned  
6 (66.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



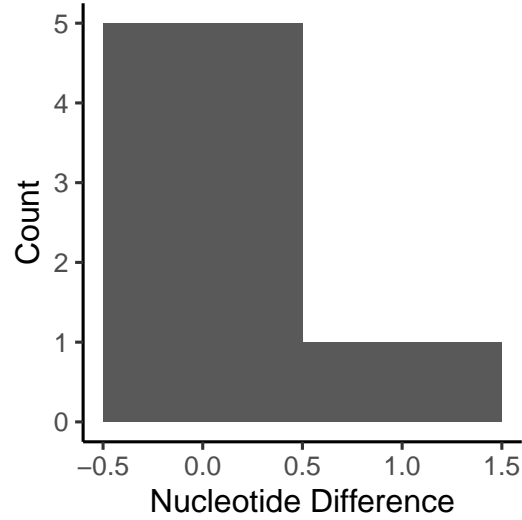
### IGHV3-43D\*03

21 sequences assigned  
21 (100%) exact matches, in which:  
21 unique CDR3  
4 unique J



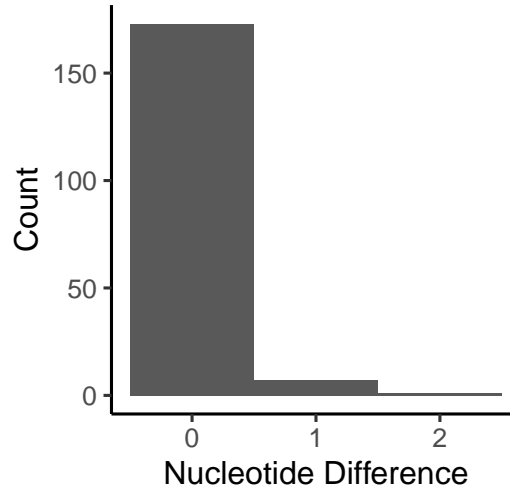
### IGHV3-43D\*04

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



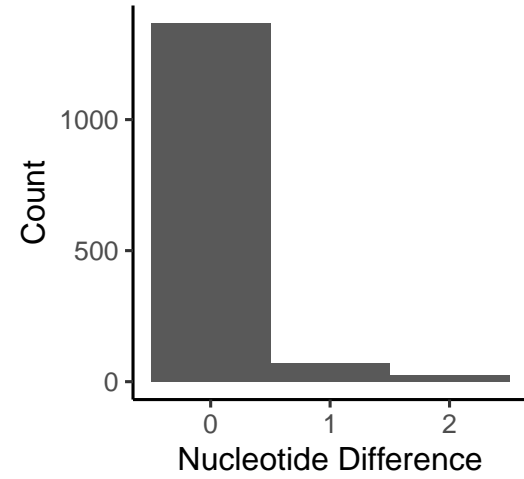
### IGHV4-30-4\*01

181 sequences assigned  
173 (95.6%) exact matches, in which:  
171 unique CDR3  
6 unique J



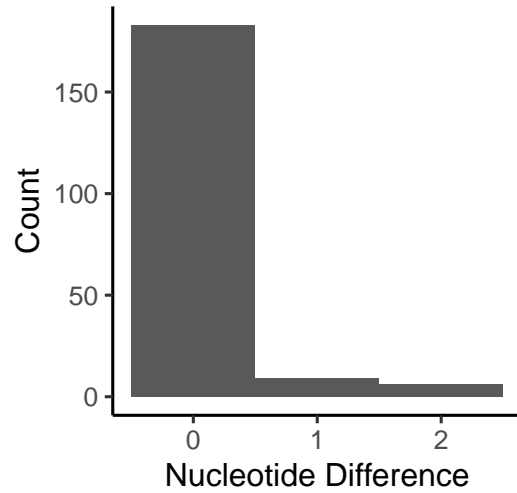
### IGHV4-34\*01\_02

1461 sequences assigned  
1367 (93.6%) exact matches, in which:  
1324 unique CDR3  
6 unique J



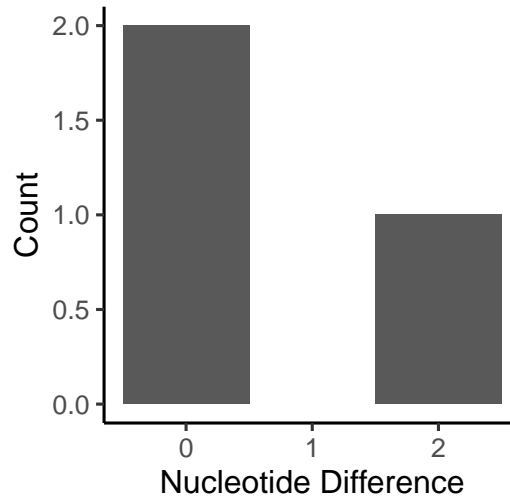
### IGHV4-4\*07

198 sequences assigned  
183 (92.4%) exact matches, in which:  
179 unique CDR3  
6 unique J



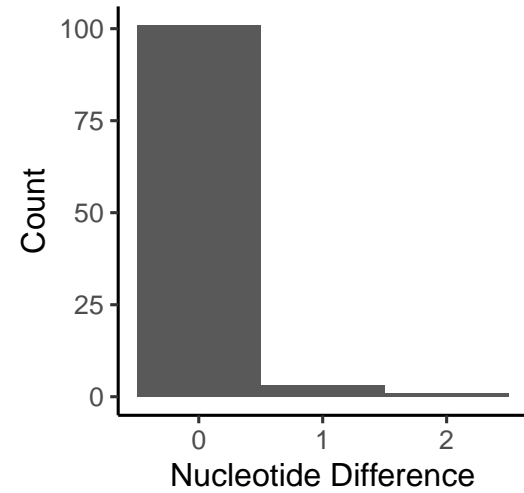
### IGHV4-30-2\*01

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



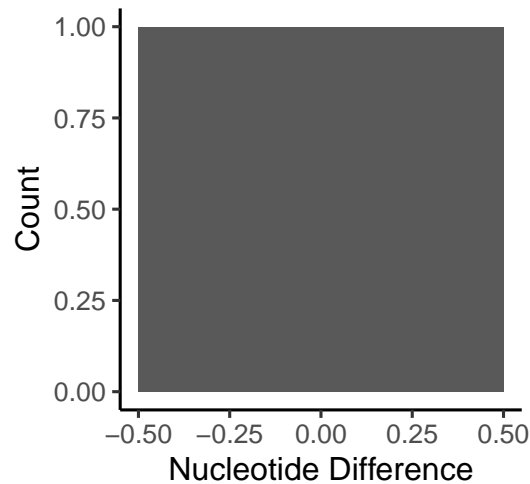
### IGHV4-38-2\*01

105 sequences assigned  
101 (96.2%) exact matches, in which:  
101 unique CDR3  
6 unique J



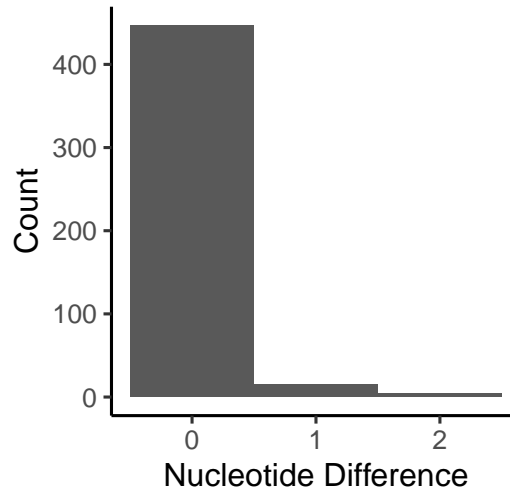
### IGHV4-28\*01\_07

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



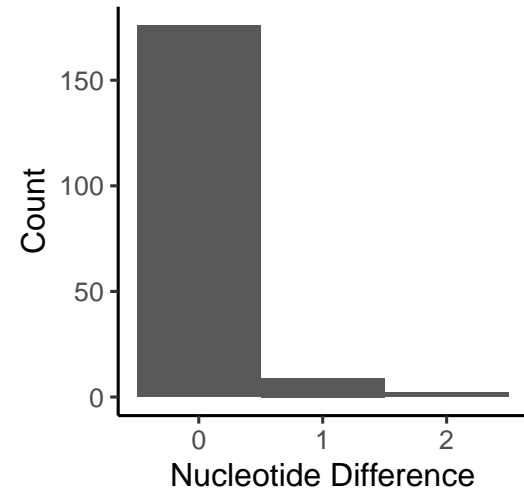
### IGHV4-31\*03\_04

466 sequences assigned  
447 (95.9%) exact matches, in which:  
438 unique CDR3  
6 unique J



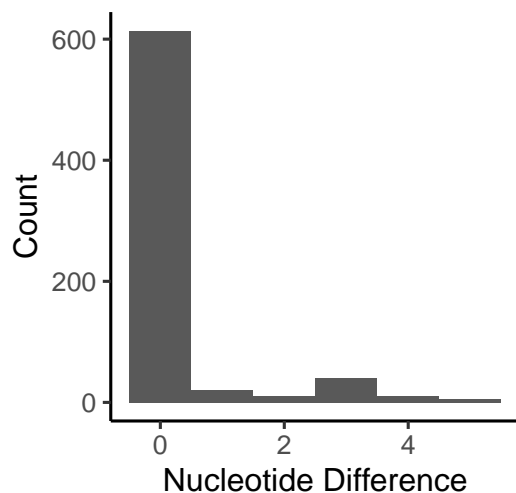
### IGHV4-38-2\*02

187 sequences assigned  
176 (94.1%) exact matches, in which:  
175 unique CDR3  
5 unique J



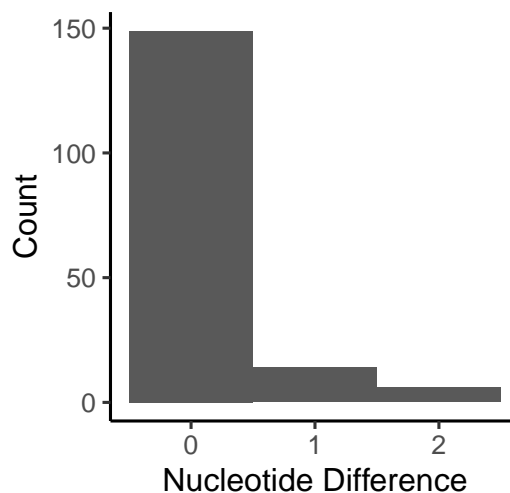
### IGHV4-39\*07

701 sequences assigned  
614 (87.6%) exact matches, in which:  
600 unique CDR3  
6 unique J



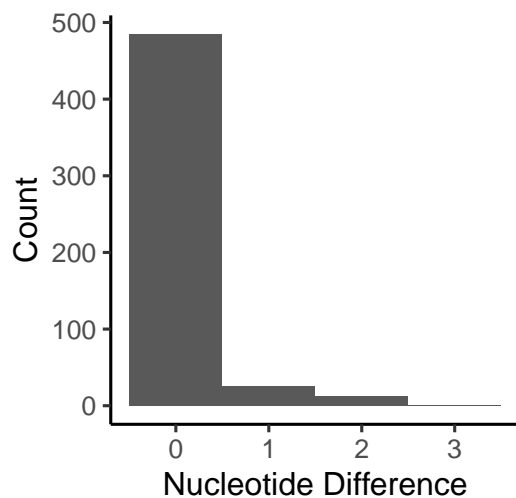
### IGHV5-51\*01\_03

169 sequences assigned  
149 (88.2%) exact matches, in which:  
148 unique CDR3  
5 unique J



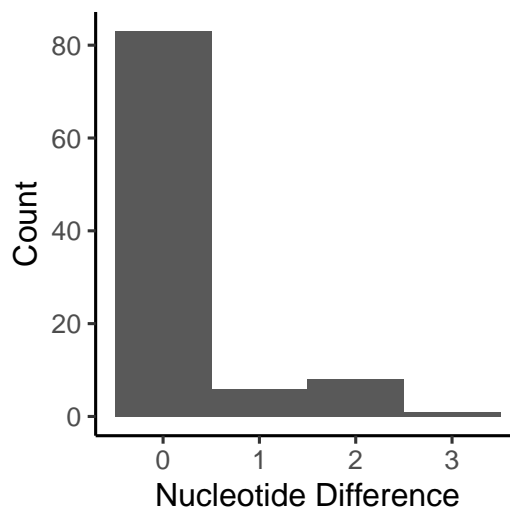
### IGHV4-59\*01\_07

524 sequences assigned  
485 (92.6%) exact matches, in which:  
470 unique CDR3  
6 unique J



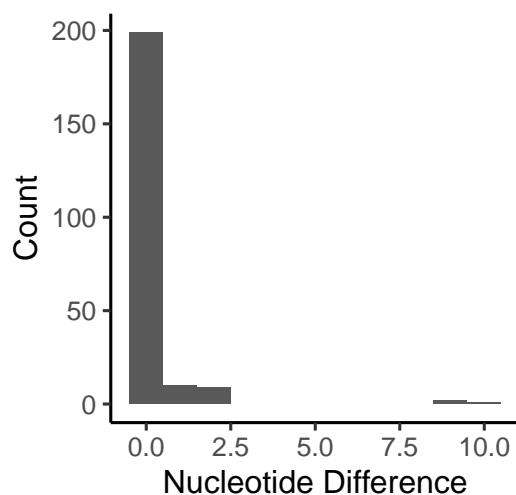
### IGHV6-1\*01\_02

98 sequences assigned  
83 (84.7%) exact matches, in which:  
83 unique CDR3  
6 unique J



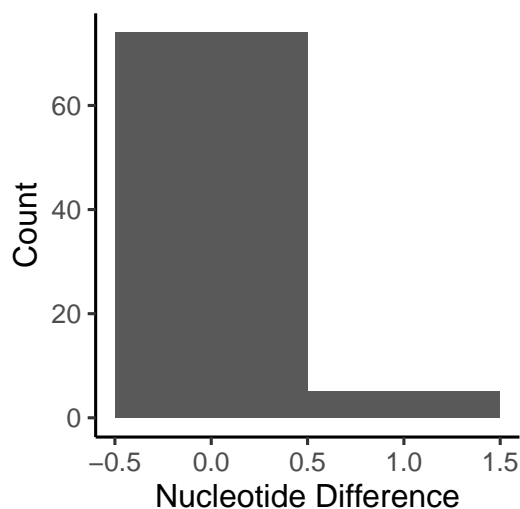
### IGHV4-61\*01

221 sequences assigned  
199 (90%) exact matches, in which:  
196 unique CDR3  
6 unique J



### IGHV7-4-1\*02

79 sequences assigned  
74 (93.7%) exact matches, in which:  
73 unique CDR3  
5 unique J





Novel sequence(s) IS11V4-53\_02\_GGGA IS11V5-51\_07\_ATGG are not listed in the genotype and will be ignored.