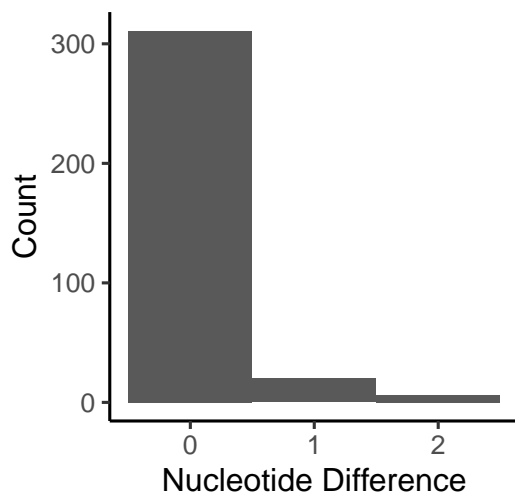


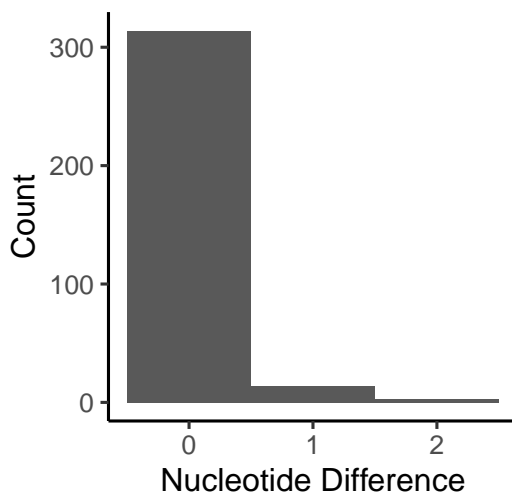
### IGHV1–2\*02

337 sequences assigned  
311 (92.3%) exact matches, in which:  
308 unique CDR3  
6 unique J



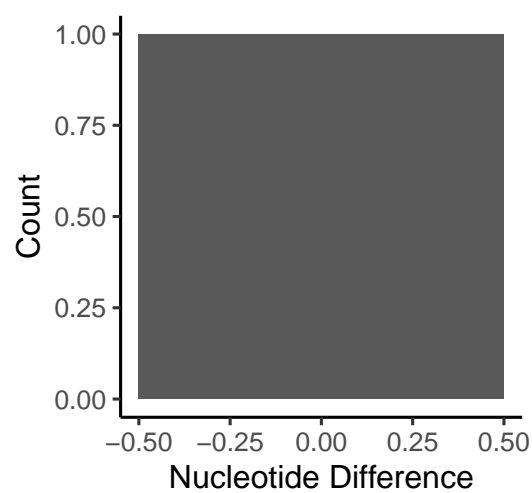
### IGHV1–18\*01

331 sequences assigned  
314 (94.9%) exact matches, in which:  
313 unique CDR3  
6 unique J



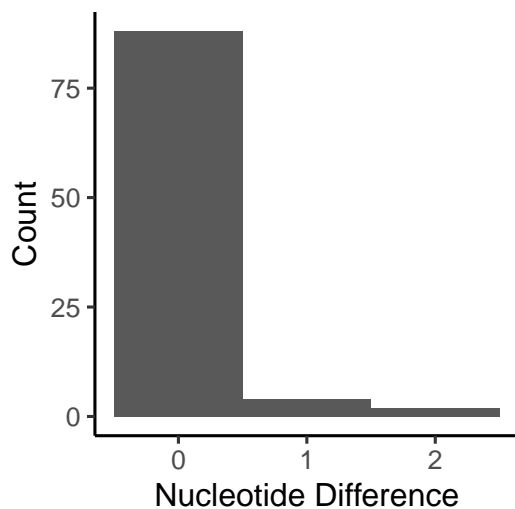
### IGHV1–45\*02

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



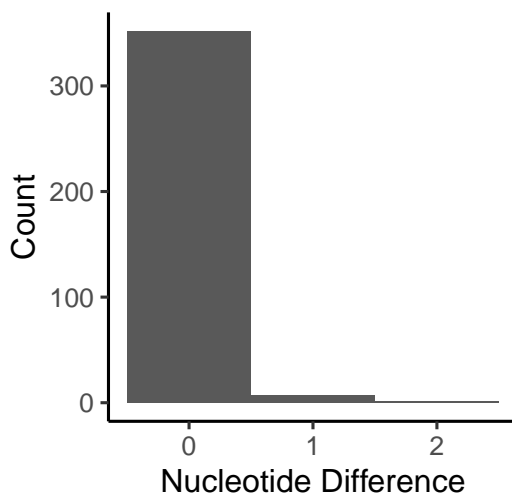
### IGHV1–2\*04

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



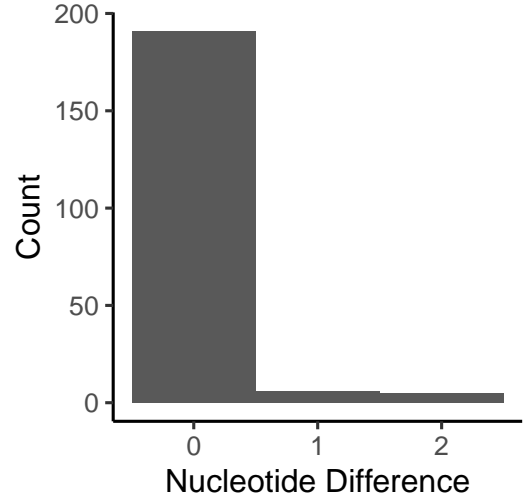
### IGHV1–18\*04

360 sequences assigned  
352 (97.8%) exact matches, in which:  
351 unique CDR3  
6 unique J



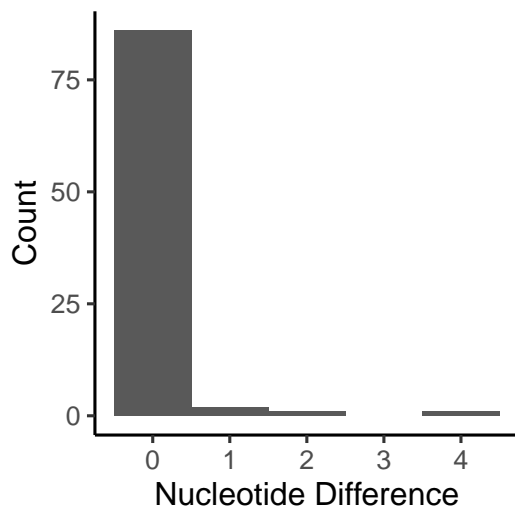
### IGHV1–46\*01

202 sequences assigned  
191 (94.6%) exact matches, in which:  
190 unique CDR3  
6 unique J



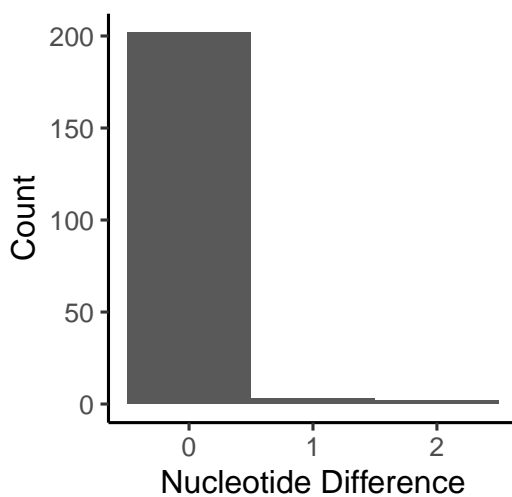
### IGHV1–3\*01\_05

90 sequences assigned  
86 (95.6%) exact matches, in which:  
86 unique CDR3  
6 unique J



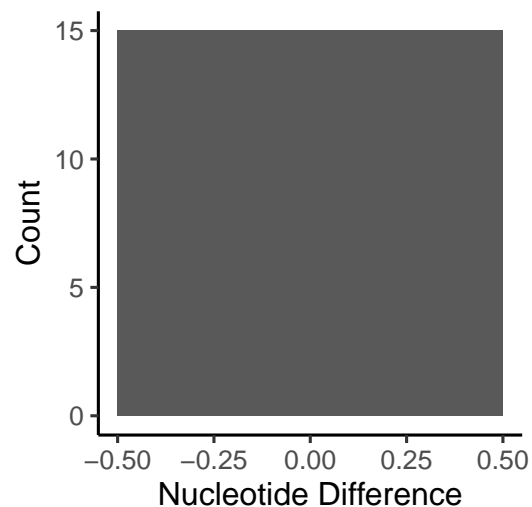
### IGHV1–24\*01

207 sequences assigned  
202 (97.6%) exact matches, in which:  
202 unique CDR3  
6 unique J



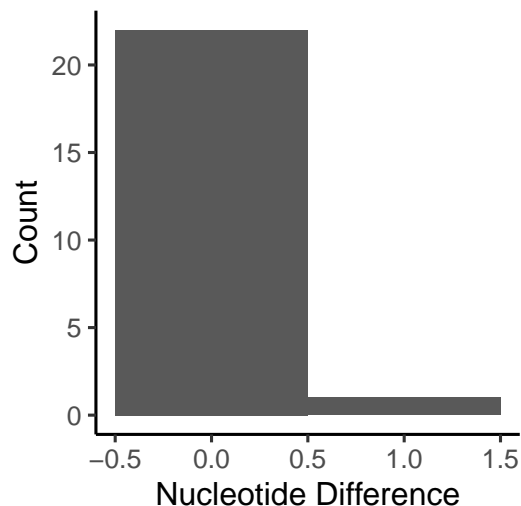
### IGHV1–58\*02

15 sequences assigned  
15 (100%) exact matches, in which:  
15 unique CDR3  
5 unique J



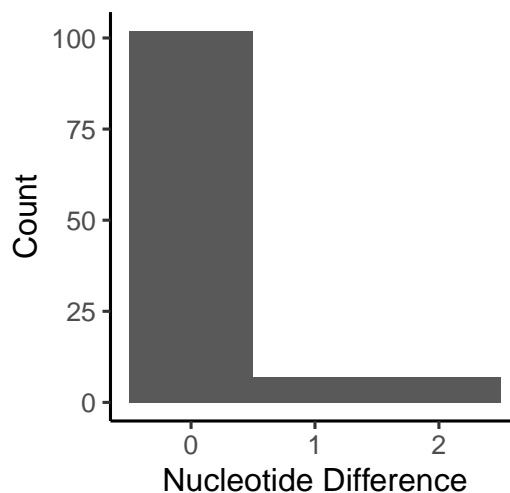
### IGHV1–58\*01\_03

23 sequences assigned  
22 (95.7%) exact matches, in which:  
22 unique CDR3  
5 unique J



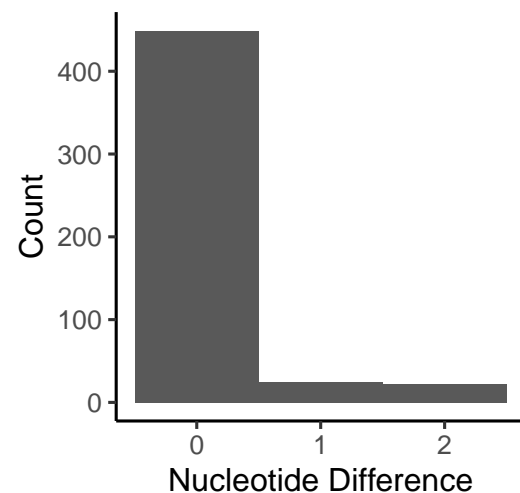
### IGHV2–5\*02

116 sequences assigned  
102 (87.9%) exact matches, in which:  
101 unique CDR3  
6 unique J



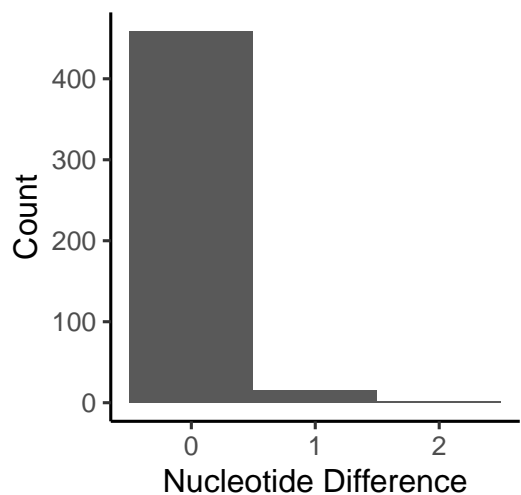
### IGHV3–7\*03

496 sequences assigned  
449 (90.5%) exact matches, in which:  
436 unique CDR3  
6 unique J



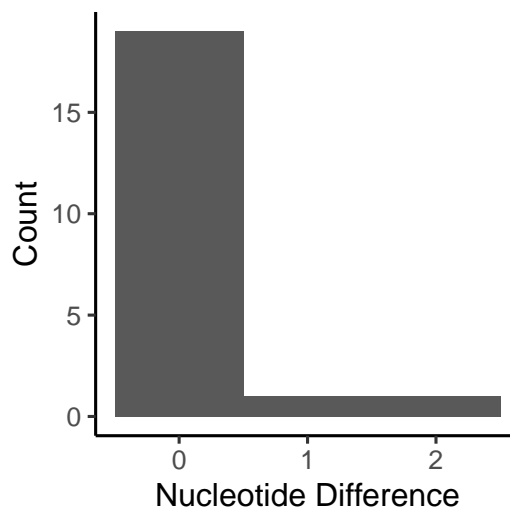
### IGHV1–69\*01\_12\_13

476 sequences assigned  
459 (96.4%) exact matches, in which:  
459 unique CDR3  
6 unique J



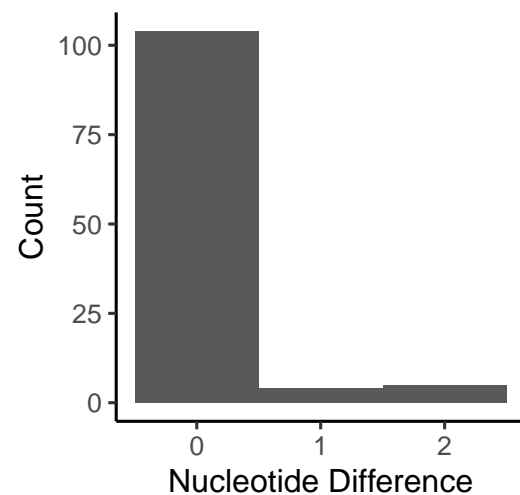
### IGHV2–26\*01

21 sequences assigned  
19 (90.5%) exact matches, in which:  
19 unique CDR3  
5 unique J



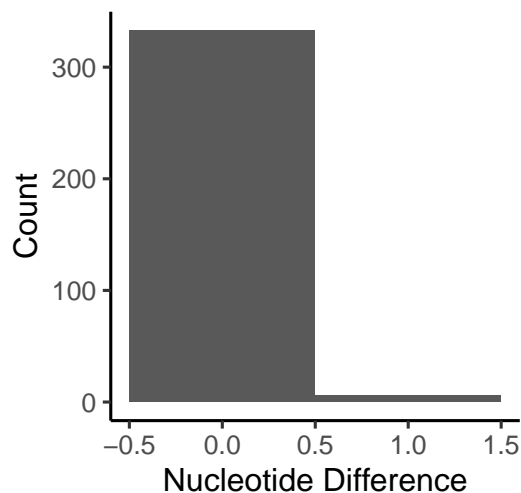
### IGHV3–11\*06

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



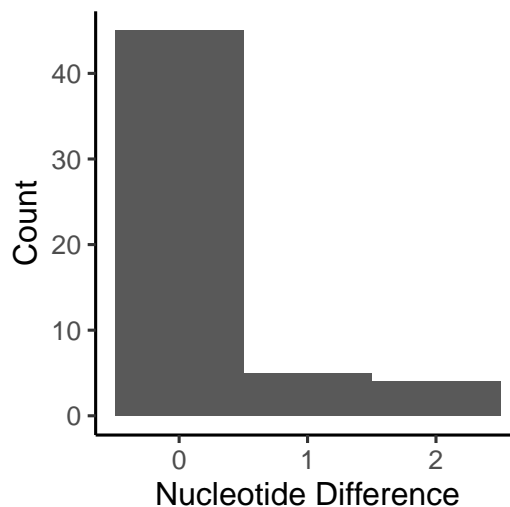
### IGHV1–69\*06\_14

339 sequences assigned  
333 (98.2%) exact matches, in which:  
333 unique CDR3  
6 unique J



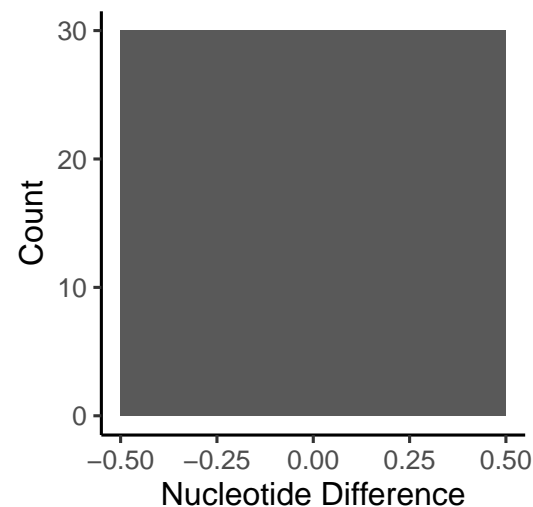
### IGHV2–70\*01

54 sequences assigned  
45 (83.3%) exact matches, in which:  
44 unique CDR3  
4 unique J



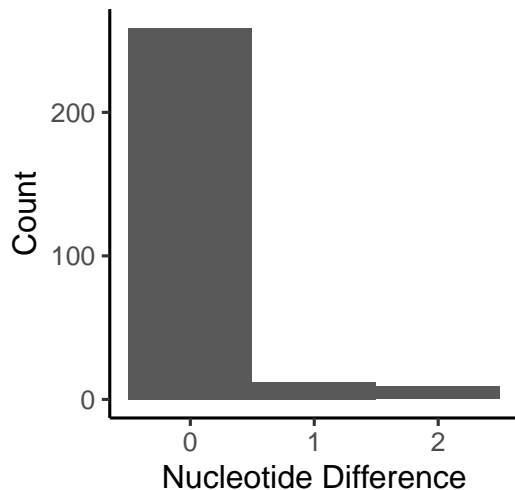
### IGHV3–13\*05

30 sequences assigned  
30 (100%) exact matches, in which:  
28 unique CDR3  
5 unique J



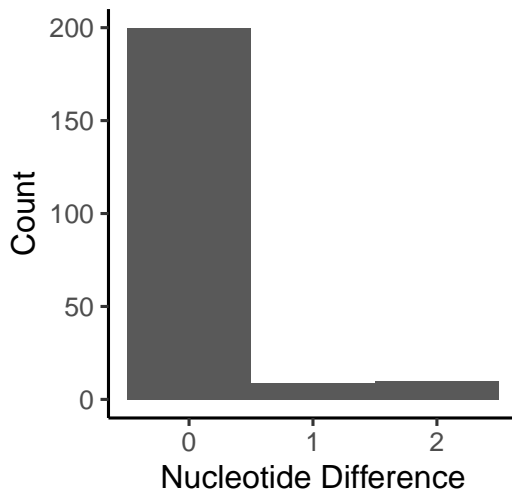
### IGHV3–15\*01\_02

280 sequences assigned  
259 (92.5%) exact matches, in which:  
251 unique CDR3  
6 unique J



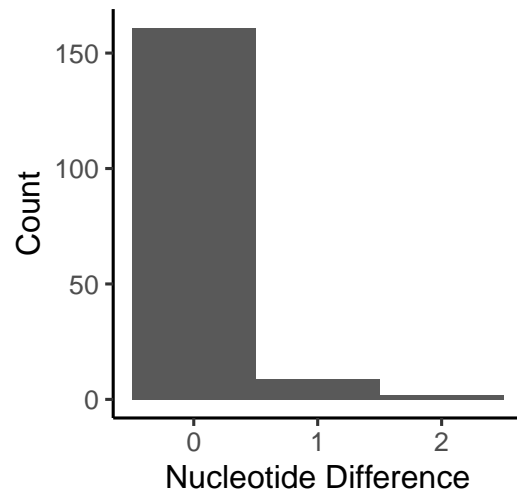
### IGHV3–30\*01

219 sequences assigned  
200 (91.3%) exact matches, in which:  
197 unique CDR3  
6 unique J



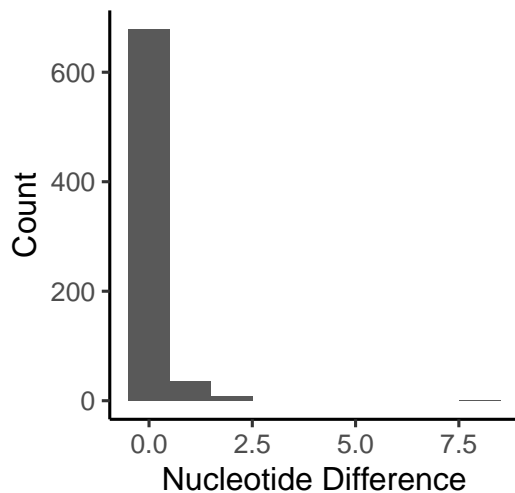
### IGHV3–48\*01

172 sequences assigned  
161 (93.6%) exact matches, in which:  
158 unique CDR3  
6 unique J



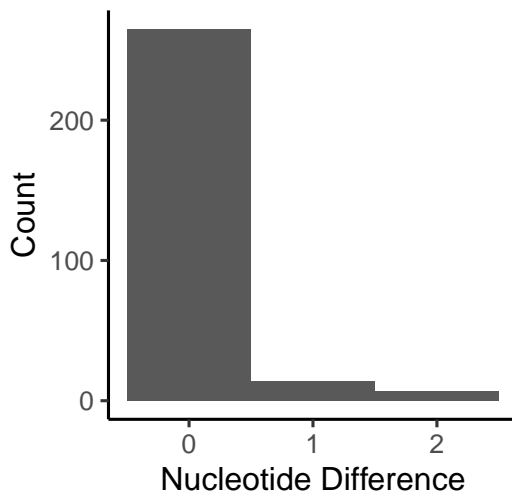
### IGHV3–21\*01\_02

724 sequences assigned  
679 (93.8%) exact matches, in which:  
665 unique CDR3  
6 unique J



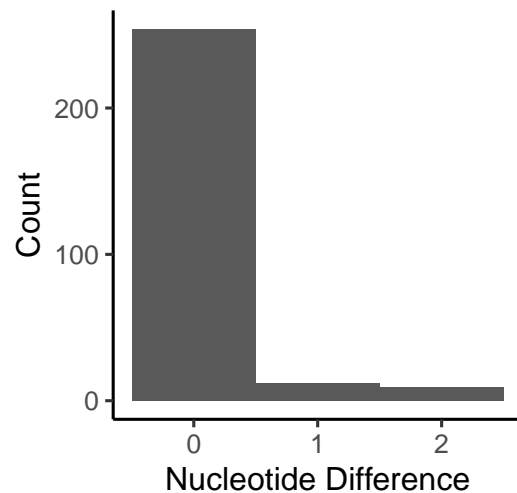
### IGHV3–33\*01

286 sequences assigned  
265 (92.7%) exact matches, in which:  
263 unique CDR3  
6 unique J



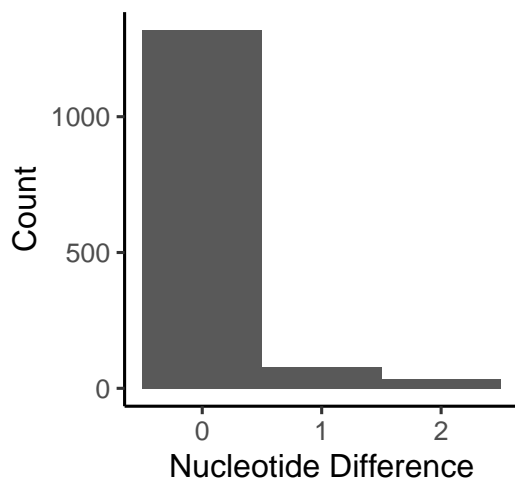
### IGHV3–48\*03

275 sequences assigned  
254 (92.4%) exact matches, in which:  
251 unique CDR3  
6 unique J



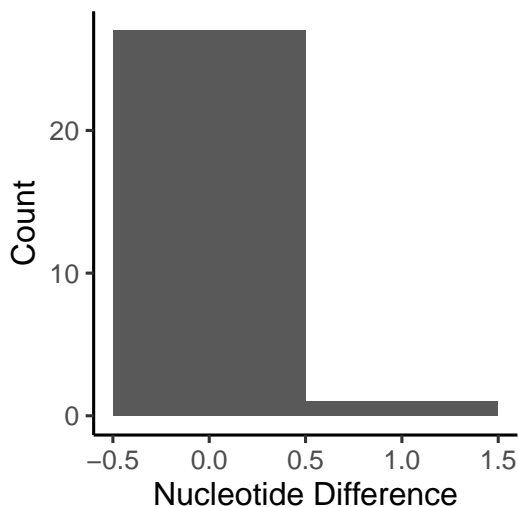
### IGHV3–23\*01\_04

1431 sequences assigned  
1319 (92.2%) exact matches, in which:  
1298 unique CDR3  
6 unique J



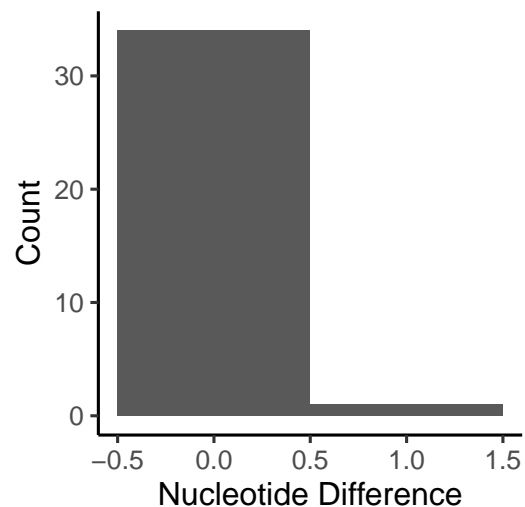
### IGHV3–43\*01

28 sequences assigned  
27 (96.4%) exact matches, in which:  
26 unique CDR3  
4 unique J



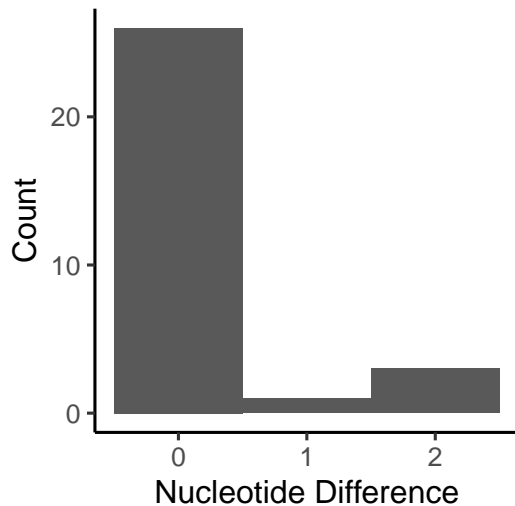
### IGHV3–49\*04

35 sequences assigned  
34 (97.1%) exact matches, in which:  
34 unique CDR3  
6 unique J



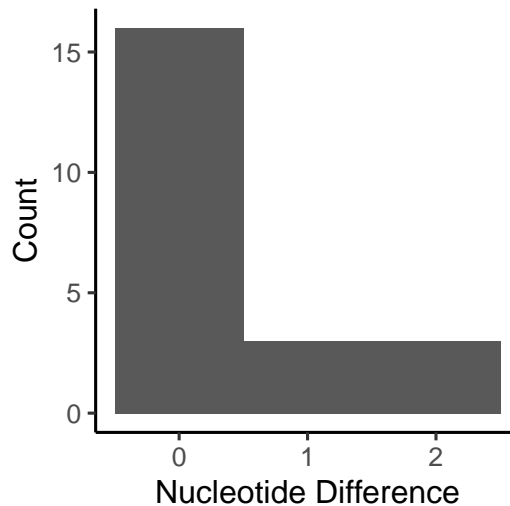
### IGHV3-49\*03\_05

30 sequences assigned  
26 (86.7%) exact matches, in which:  
26 unique CDR3  
4 unique J



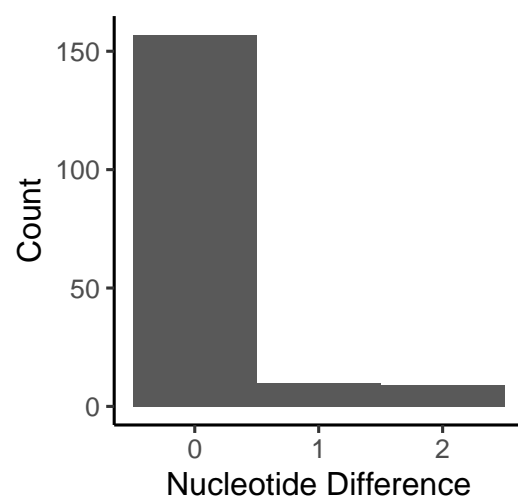
### IGHV3-64\*01

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



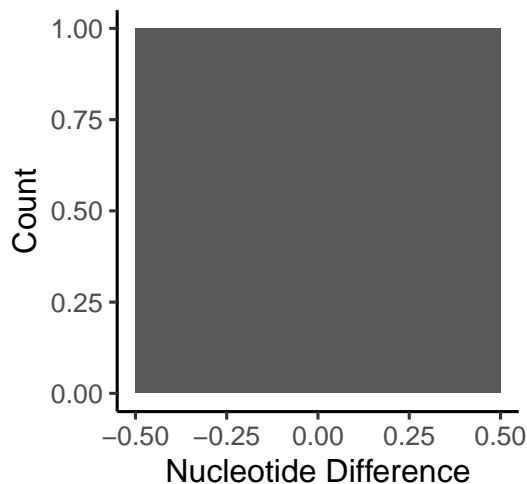
### IGHV3-74\*01\_02

176 sequences assigned  
157 (89.2%) exact matches, in which:  
146 unique CDR3  
6 unique J



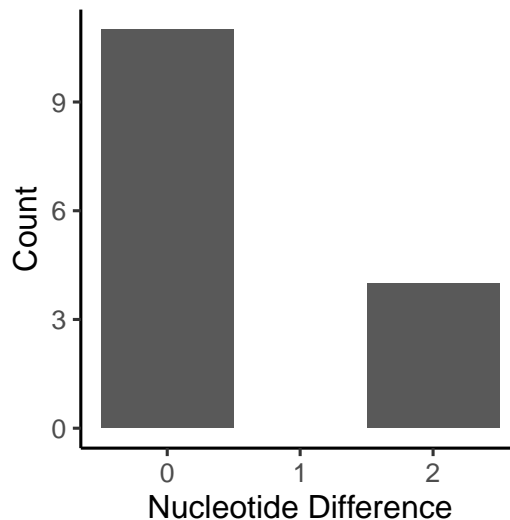
### IGHV3-52\*01\_03

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



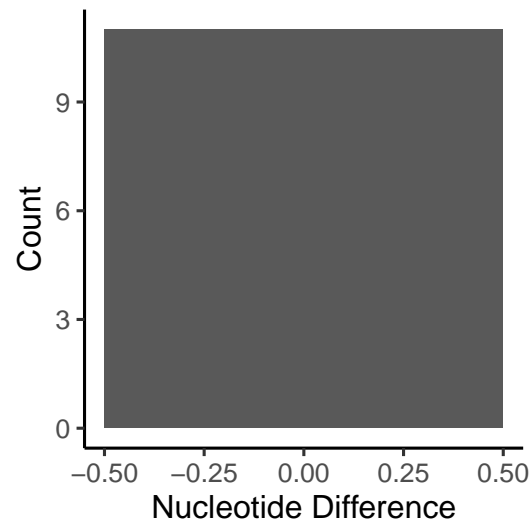
### IGHV3-72\*01

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



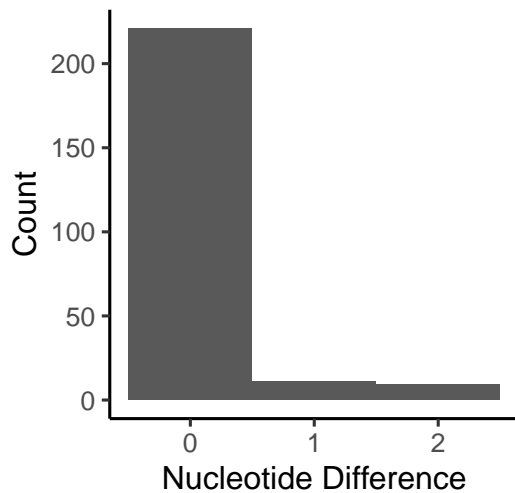
### IGHV3-43D\*04

11 sequences assigned  
11 (100%) exact matches, in which:  
11 unique CDR3  
3 unique J



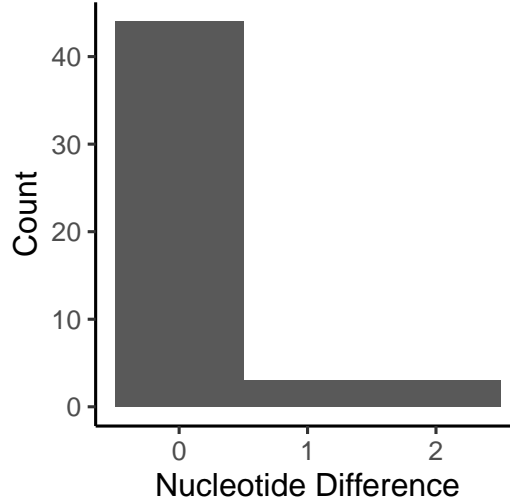
### IGHV3-53\*01\_02

241 sequences assigned  
221 (91.7%) exact matches, in which:  
213 unique CDR3  
6 unique J



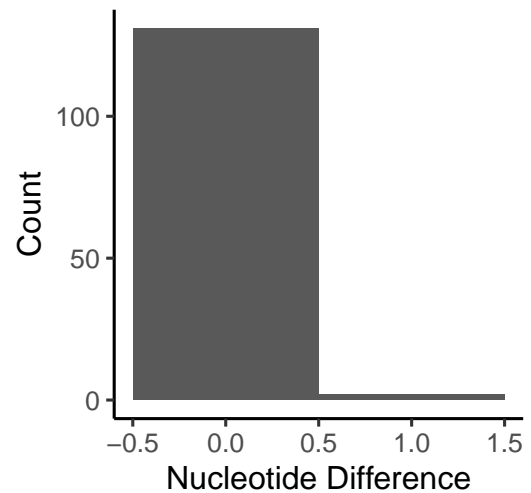
### IGHV3-73\*01\_02

50 sequences assigned  
44 (88%) exact matches, in which:  
40 unique CDR3  
4 unique J



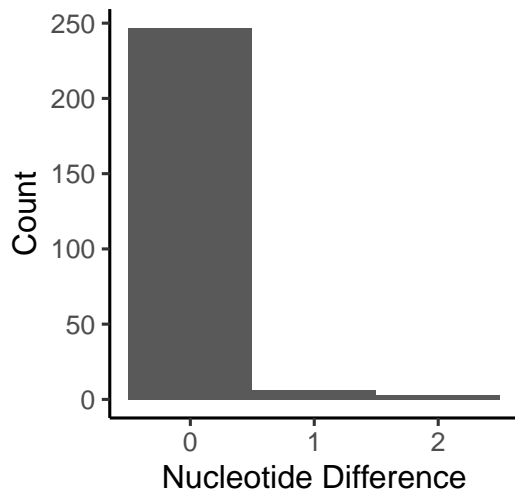
### IGHV3-64D\*06

133 sequences assigned  
131 (98.5%) exact matches, in which:  
130 unique CDR3  
6 unique J



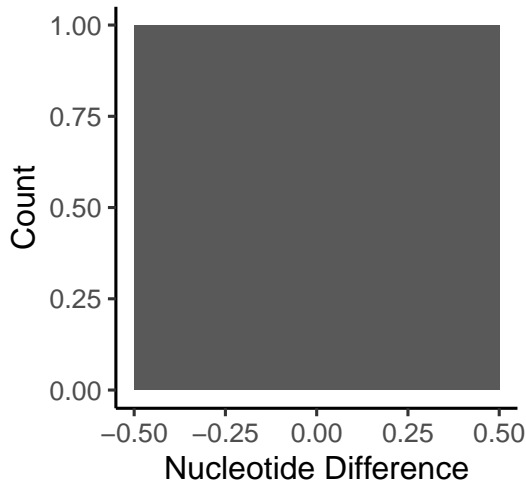
### IGHV4-4\*07

256 sequences assigned  
247 (96.5%) exact matches, in which:  
241 unique CDR3  
6 unique J



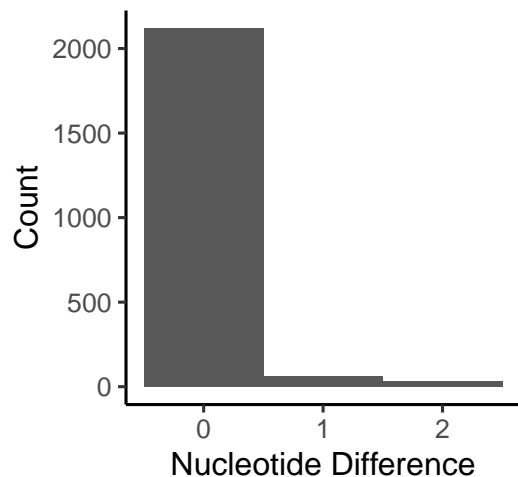
### IGHV4-28\*02\_05

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



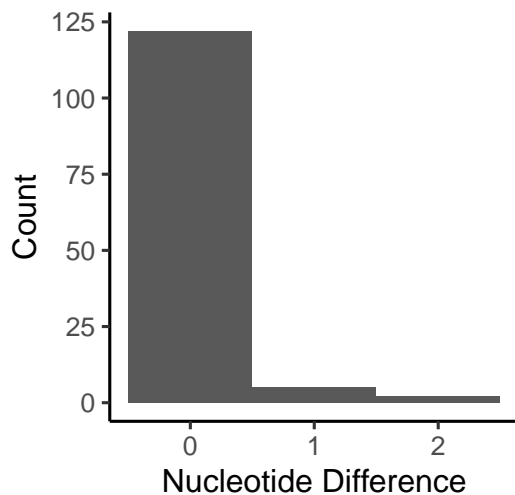
### IGHV4-34\*01\_02

2216 sequences assigned  
2119 (95.6%) exact matches, in which:  
2094 unique CDR3  
6 unique J



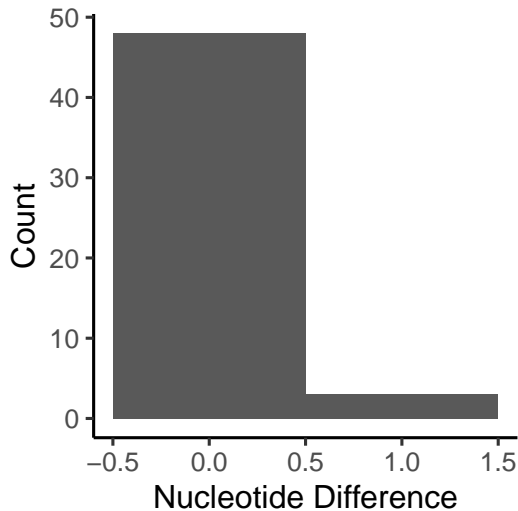
### IGHV4-4\*02\_03

129 sequences assigned  
122 (94.6%) exact matches, in which:  
120 unique CDR3  
6 unique J



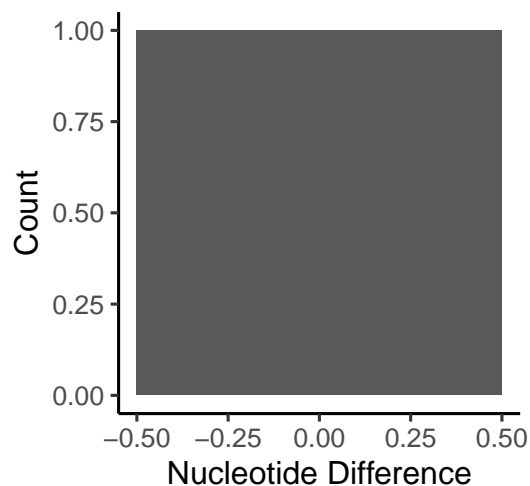
### IGHV4-31\*01

51 sequences assigned  
48 (94.1%) exact matches, in which:  
47 unique CDR3  
5 unique J



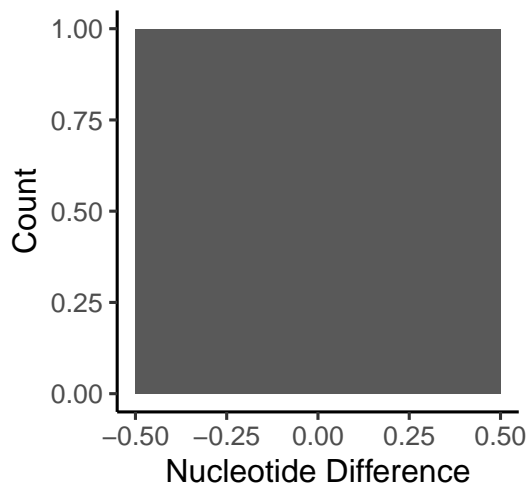
### IGHV4-38-2\*01

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



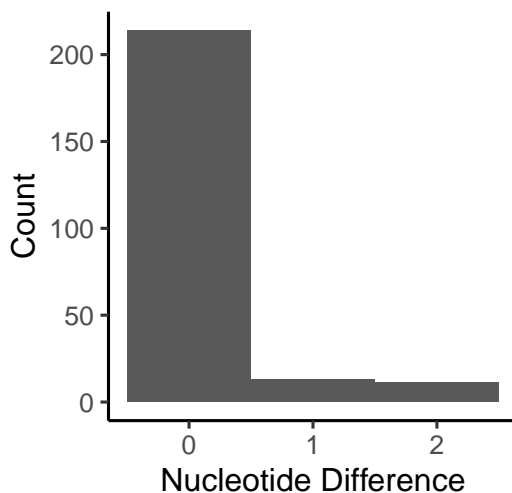
### IGHV4-28\*01\_07

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



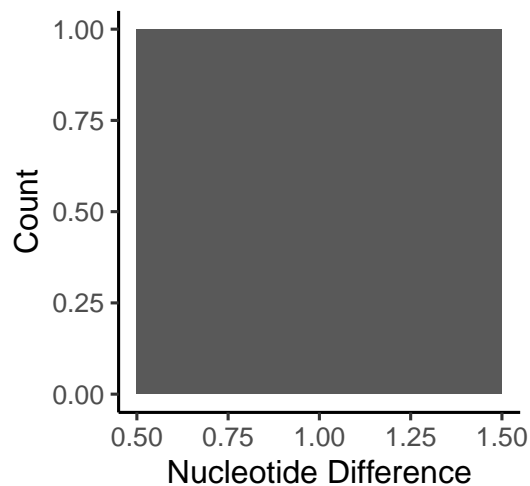
### IGHV4-31\*02

238 sequences assigned  
214 (89.9%) exact matches, in which:  
213 unique CDR3  
6 unique J



### IGHV4-59\*12

1 sequences assigned  
No exact matches.



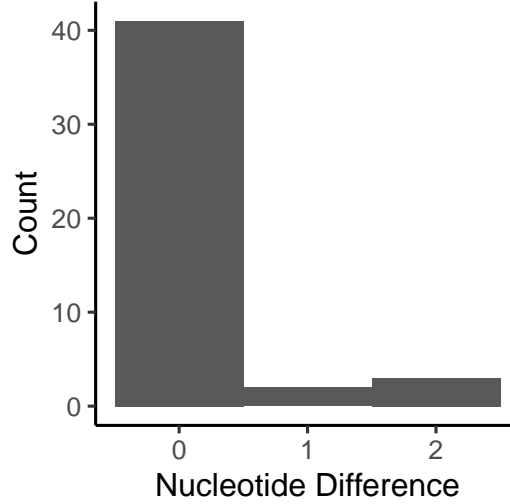
### IGHV4-59\*13

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



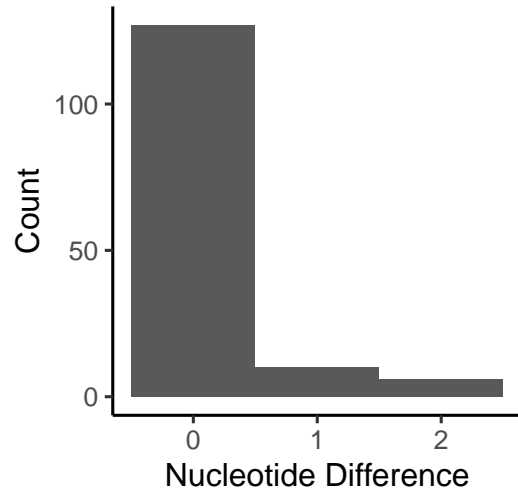
### IGHV5-10-1\*01\_03

46 sequences assigned  
41 (89.1%) exact matches, in which:  
41 unique CDR3  
5 unique J



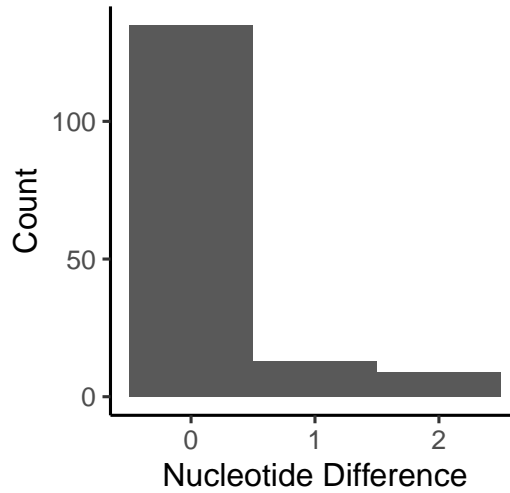
### IGHV4-61\*01

143 sequences assigned  
127 (88.8%) exact matches, in which:  
124 unique CDR3  
5 unique J



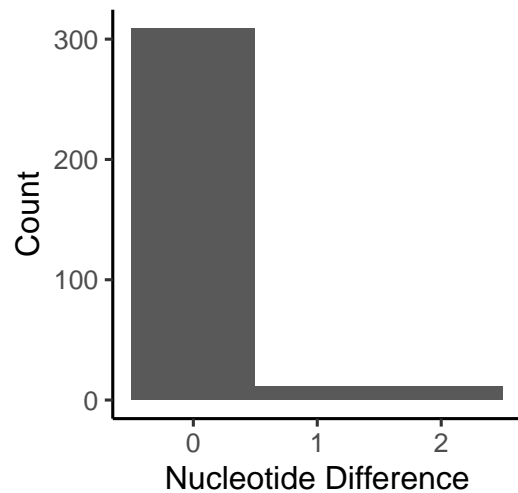
### IGHV6-1\*01\_02

157 sequences assigned  
135 (86%) exact matches, in which:  
134 unique CDR3  
6 unique J



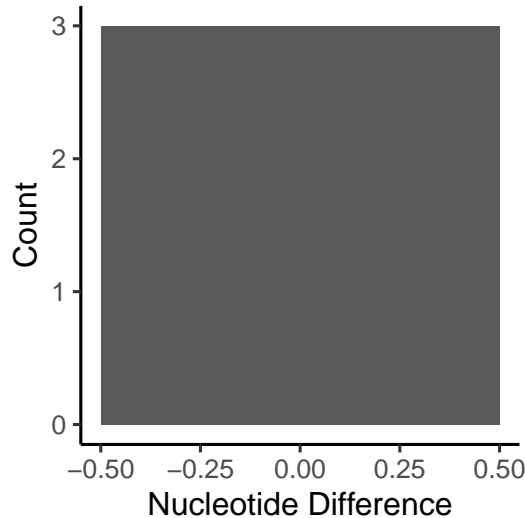
### IGHV4-61\*02

331 sequences assigned  
309 (93.4%) exact matches, in which:  
305 unique CDR3  
6 unique J



### IGHV7-4-1\*01

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





[illegible]