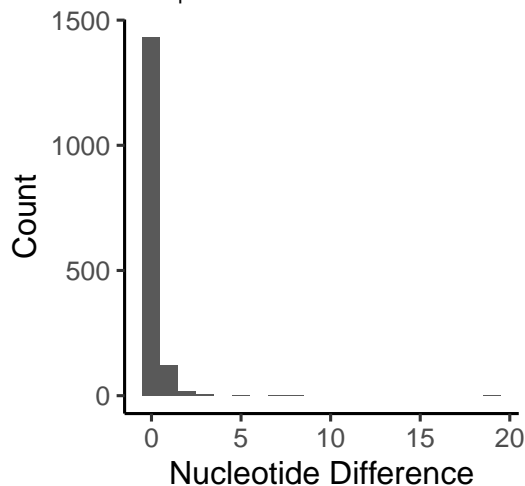


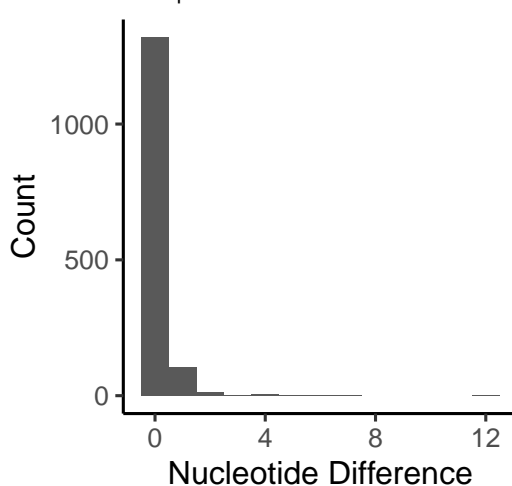
### IGHV1-2\*02

1582 sequences assigned  
1431 (90.5%) exact matches, in which:  
1382 unique CDR3  
6 unique J



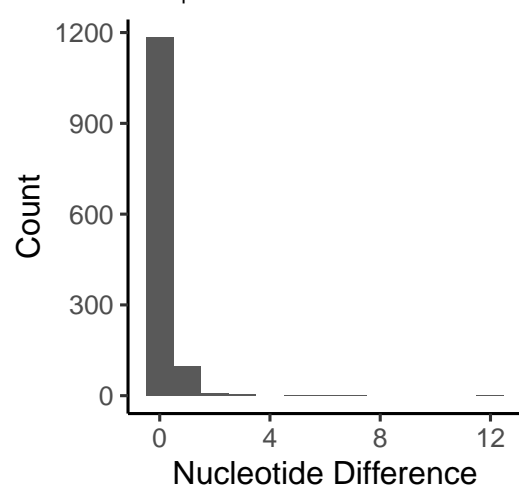
### IGHV1-18\*01

1449 sequences assigned  
1319 (91%) exact matches, in which:  
1278 unique CDR3  
6 unique J



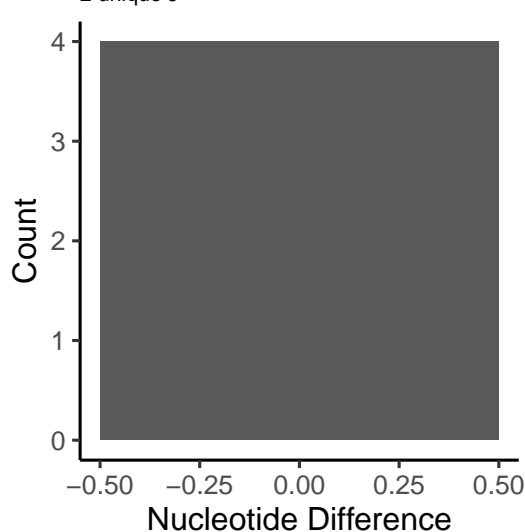
### IGHV1-46\*01

1303 sequences assigned  
1184 (90.9%) exact matches, in which:  
1141 unique CDR3  
6 unique J



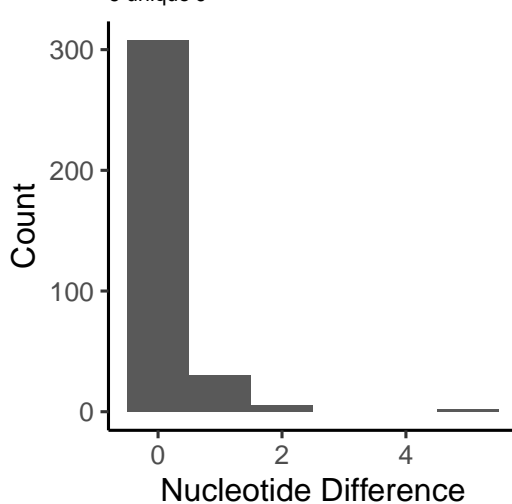
### IGHV1-3\*02

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



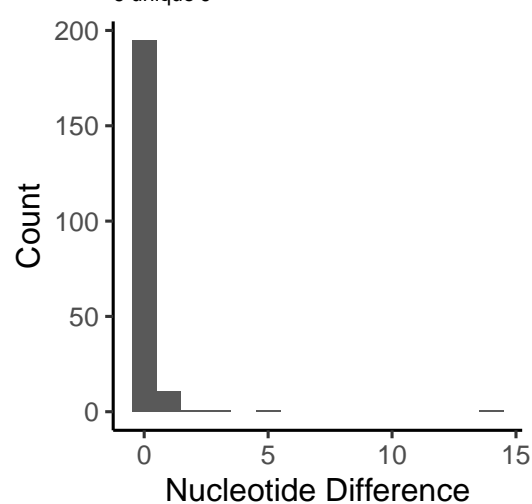
### IGHV1-24\*01

345 sequences assigned  
308 (89.3%) exact matches, in which:  
294 unique CDR3  
6 unique J



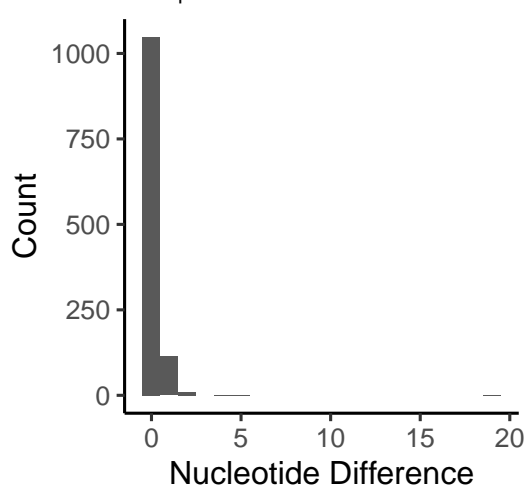
### IGHV1-58\*01

210 sequences assigned  
195 (92.9%) exact matches, in which:  
190 unique CDR3  
6 unique J



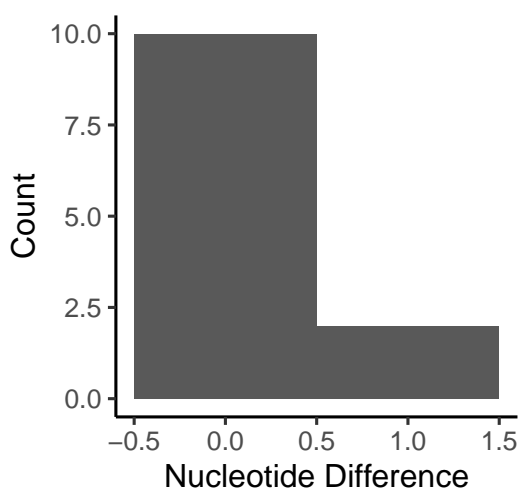
### IGHV1-8\*01

1174 sequences assigned  
1048 (89.3%) exact matches, in which:  
1007 unique CDR3  
6 unique J



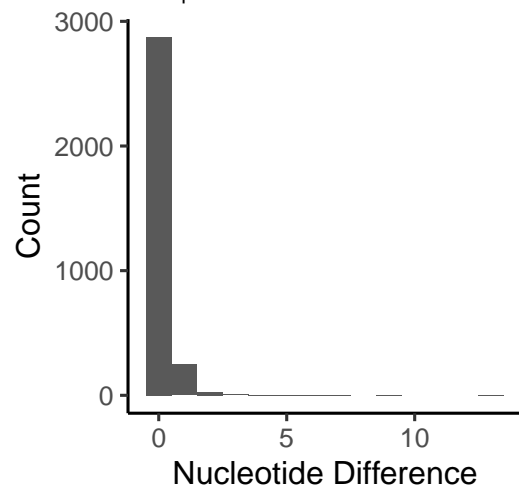
### IGHV1-45\*02

12 sequences assigned  
10 (83.3%) exact matches, in which:  
9 unique CDR3  
3 unique J



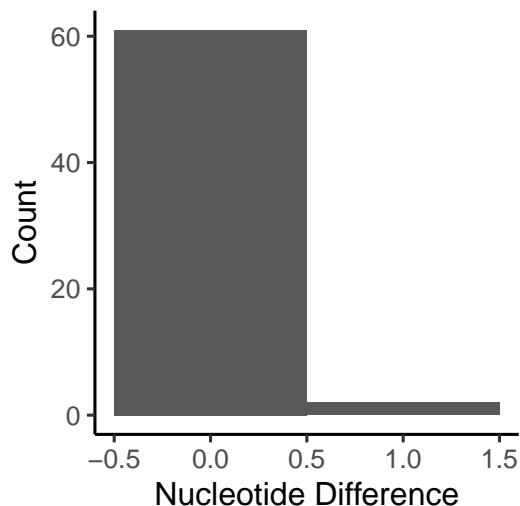
### IGHV1-69\*01

3166 sequences assigned  
2874 (90.8%) exact matches, in which:  
2747 unique CDR3  
6 unique J



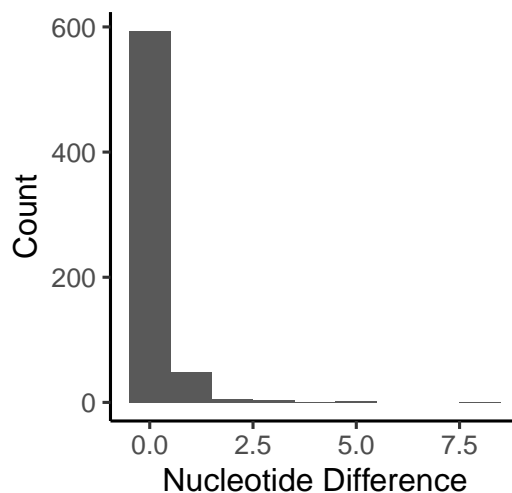
### IGHV1-69-2\*01

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



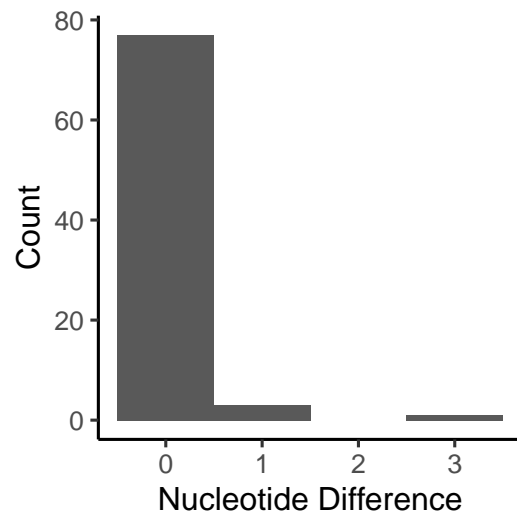
### IGHV2-5\*02

656 sequences assigned  
594 (90.5%) exact matches, in which:  
567 unique CDR3  
6 unique J



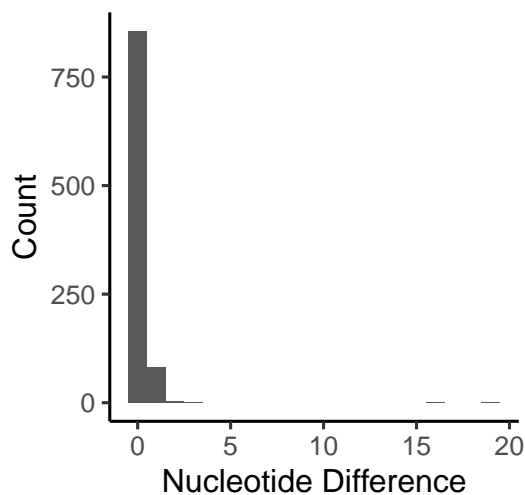
### IGHV2-70\*04

81 sequences assigned  
77 (95.1%) exact matches, in which:  
75 unique CDR3  
6 unique J



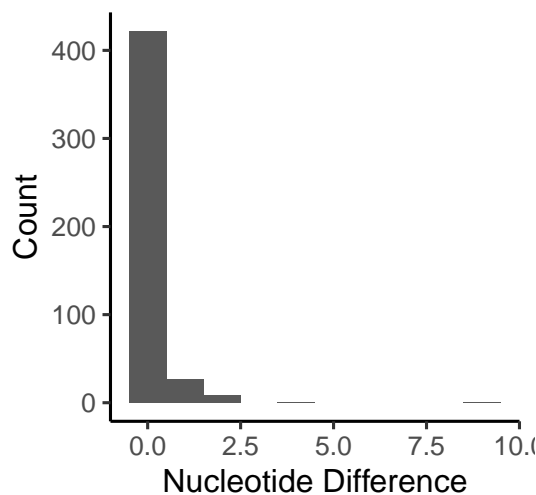
### IGHV1-69\*06

945 sequences assigned  
856 (90.6%) exact matches, in which:  
810 unique CDR3  
6 unique J



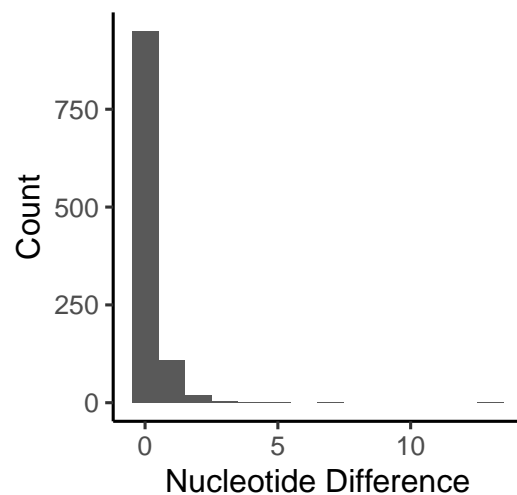
### IGHV2-26\*01

459 sequences assigned  
422 (91.9%) exact matches, in which:  
411 unique CDR3  
6 unique J



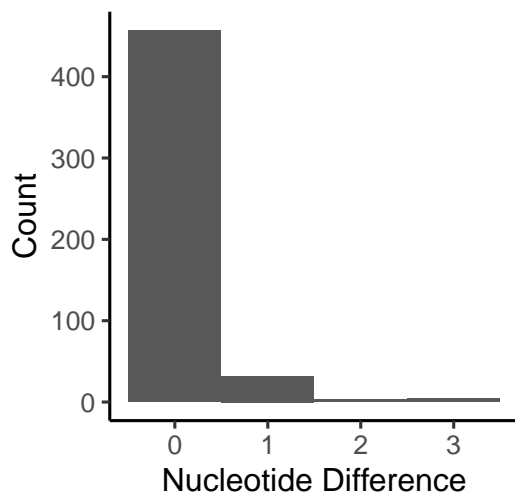
### IGHV3-7\*01

1086 sequences assigned  
950 (87.5%) exact matches, in which:  
924 unique CDR3  
6 unique J



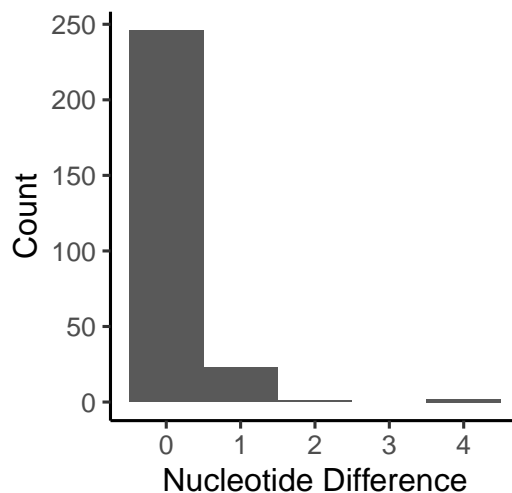
### IGHV2-5\*01

496 sequences assigned  
457 (92.1%) exact matches, in which:  
436 unique CDR3  
6 unique J



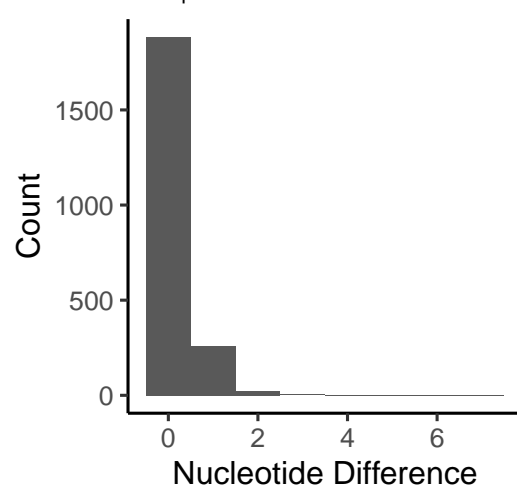
### IGHV2-70\*01

272 sequences assigned  
246 (90.4%) exact matches, in which:  
240 unique CDR3  
6 unique J



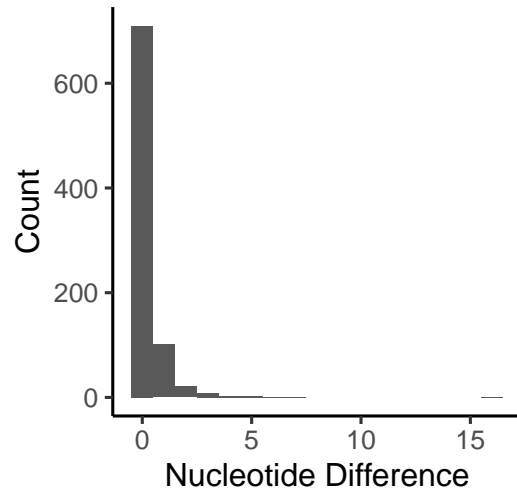
### IGHV3-9\*01

2183 sequences assigned  
1883 (86.3%) exact matches, in which:  
1785 unique CDR3  
6 unique J



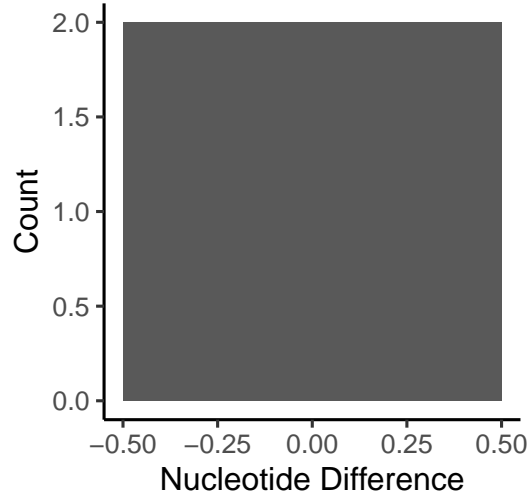
### IGHV3-11\*01

849 sequences assigned  
710 (83.6%) exact matches, in which:  
689 unique CDR3  
6 unique J



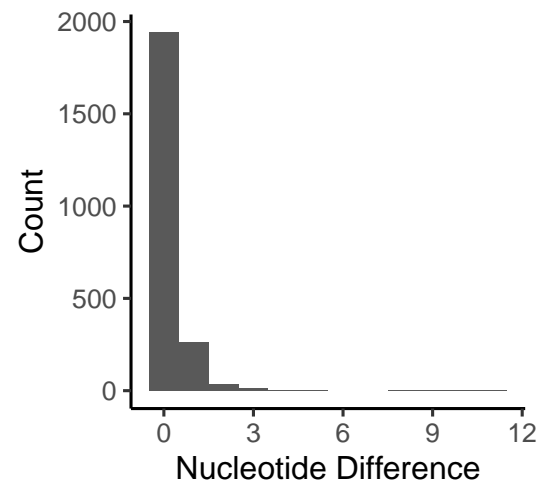
### IGHV3-19\*01

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



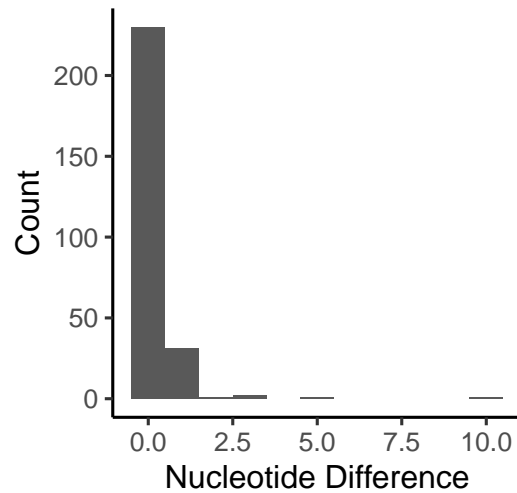
### IGHV3-23\*01

2272 sequences assigned  
1941 (85.4%) exact matches, in which:  
1861 unique CDR3  
6 unique J



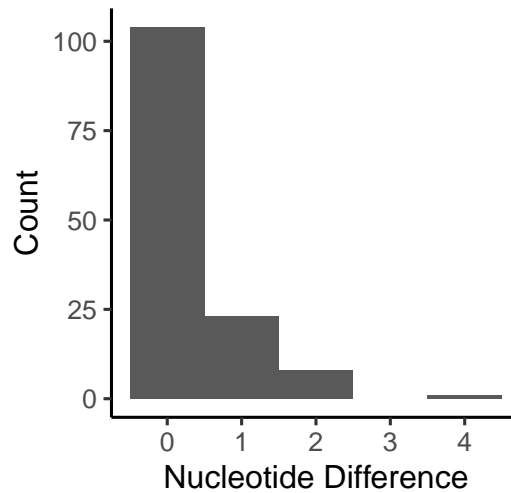
### IGHV3-13\*01

266 sequences assigned  
230 (86.5%) exact matches, in which:  
225 unique CDR3  
6 unique J



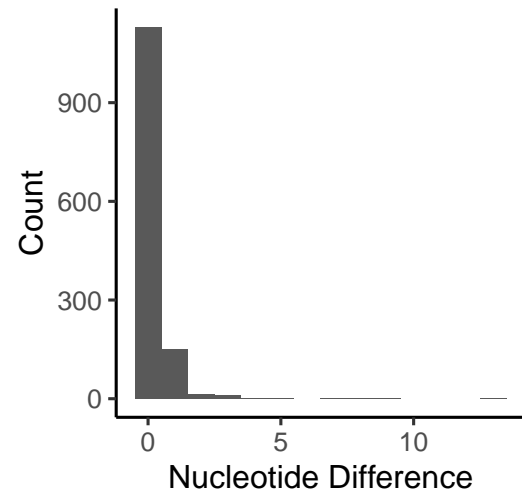
### IGHV3-20\*01

136 sequences assigned  
104 (76.5%) exact matches, in which:  
98 unique CDR3  
5 unique J



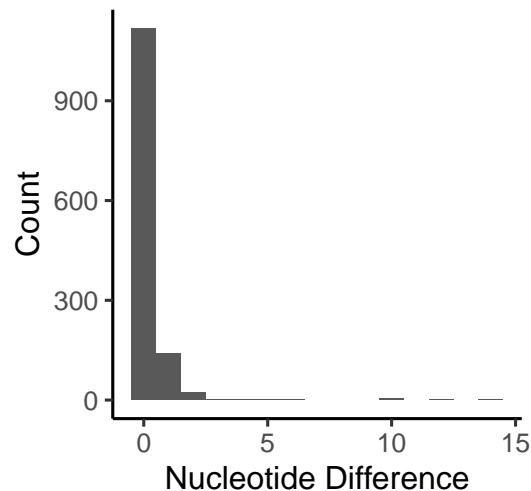
### IGHV3-23\*04

1316 sequences assigned  
1130 (85.9%) exact matches, in which:  
1092 unique CDR3  
6 unique J



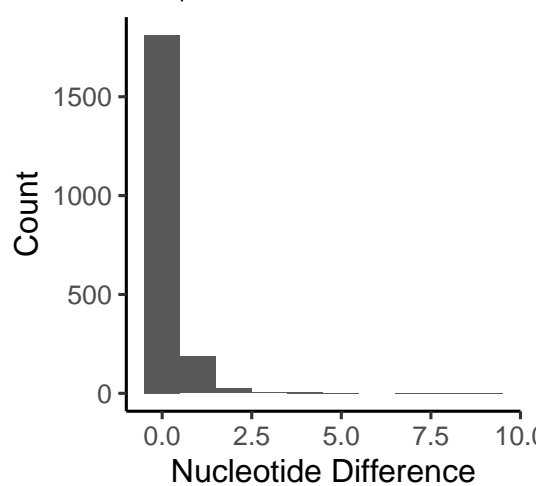
### IGHV3-15\*01

1296 sequences assigned  
1118 (86.3%) exact matches, in which:  
1081 unique CDR3  
6 unique J



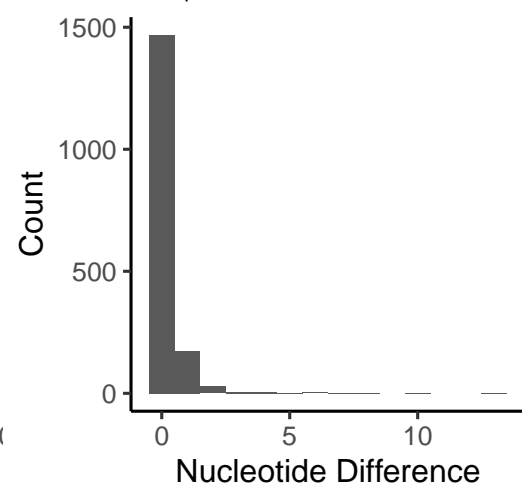
### IGHV3-21\*01

2037 sequences assigned  
1812 (89%) exact matches, in which:  
1736 unique CDR3  
6 unique J



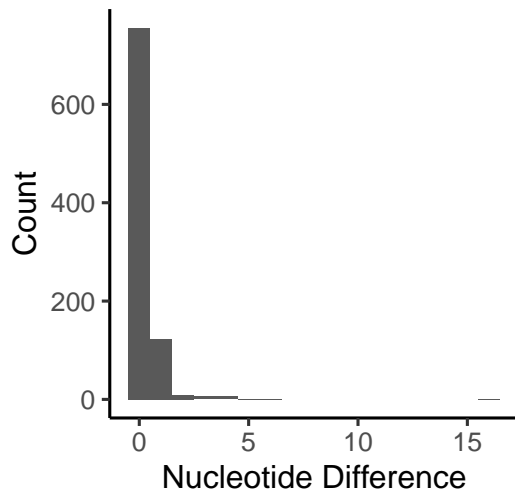
### IGHV3-30\*04

1691 sequences assigned  
1468 (86.8%) exact matches, in which:  
1418 unique CDR3  
6 unique J



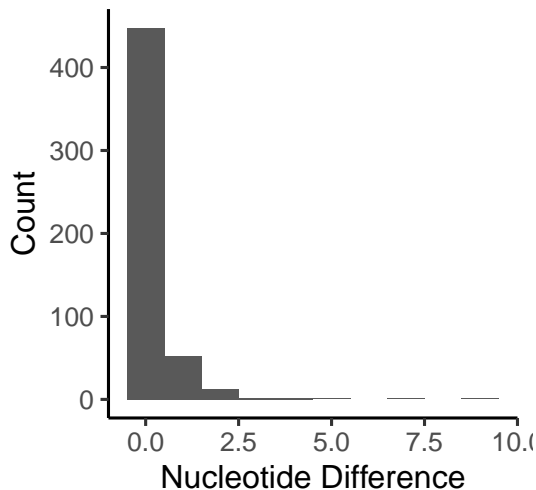
### IGHV3–33\*01

903 sequences assigned  
756 (83.7%) exact matches, in which:  
724 unique CDR3  
6 unique J



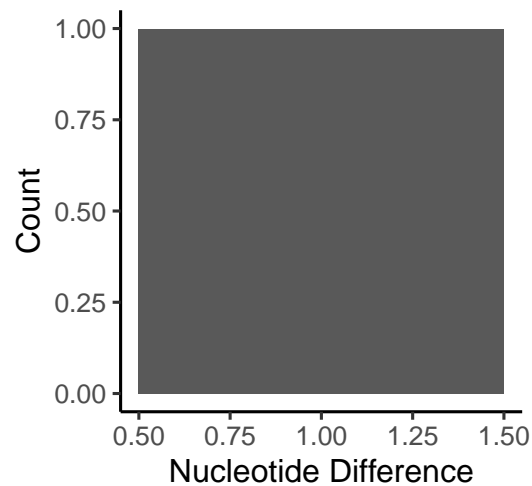
### IGHV3–49\*05

520 sequences assigned  
448 (86.2%) exact matches, in which:  
427 unique CDR3  
6 unique J



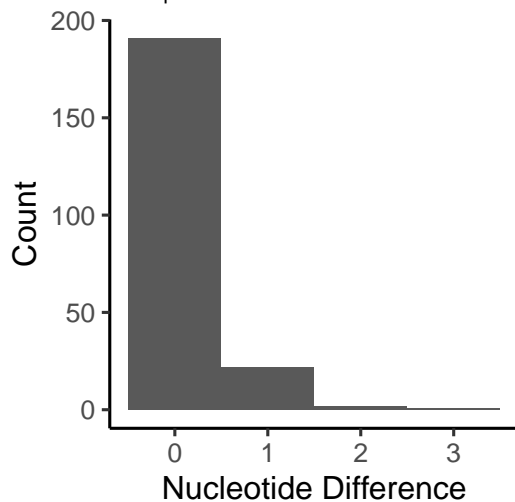
### IGHV3–64\*04

1 sequences assigned  
No exact matches.



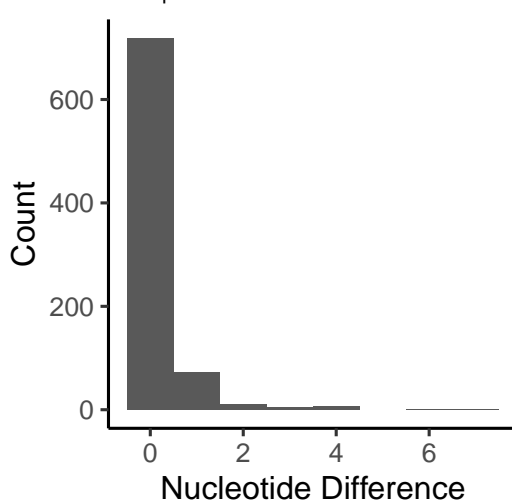
### IGHV3–43\*01

216 sequences assigned  
191 (88.4%) exact matches, in which:  
187 unique CDR3  
6 unique J



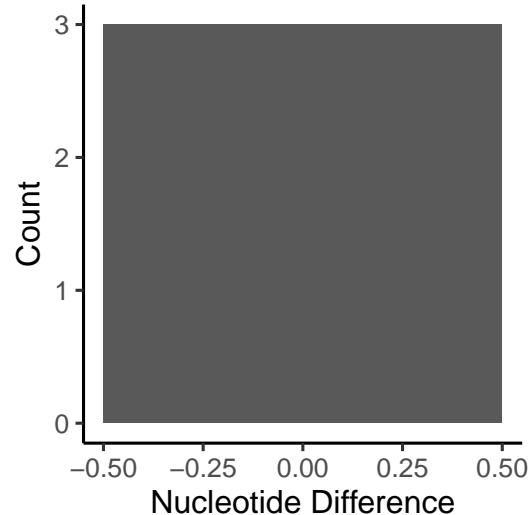
### IGHV3–53\*01

813 sequences assigned  
719 (88.4%) exact matches, in which:  
691 unique CDR3  
6 unique J



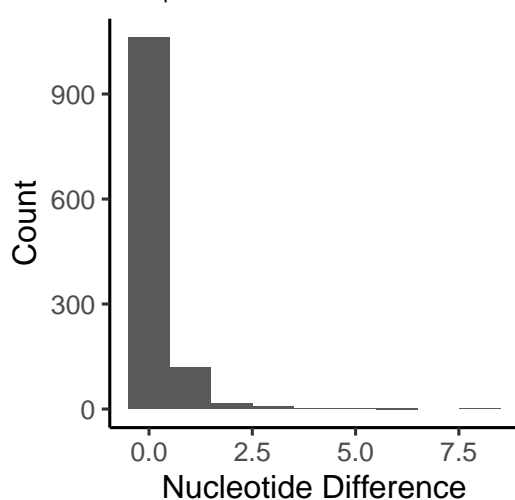
### IGHV3–66\*03

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



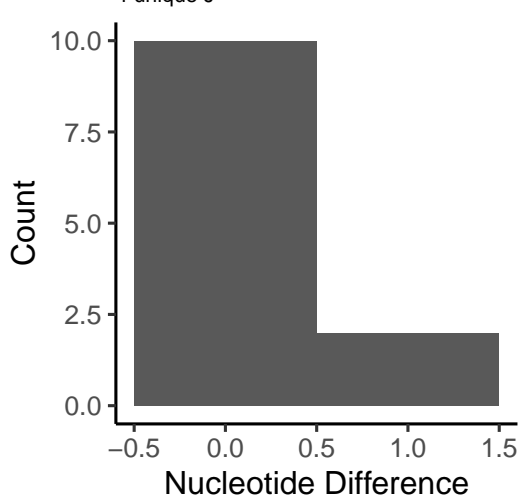
### IGHV3–48\*02

1213 sequences assigned  
1062 (87.6%) exact matches, in which:  
1032 unique CDR3  
6 unique J



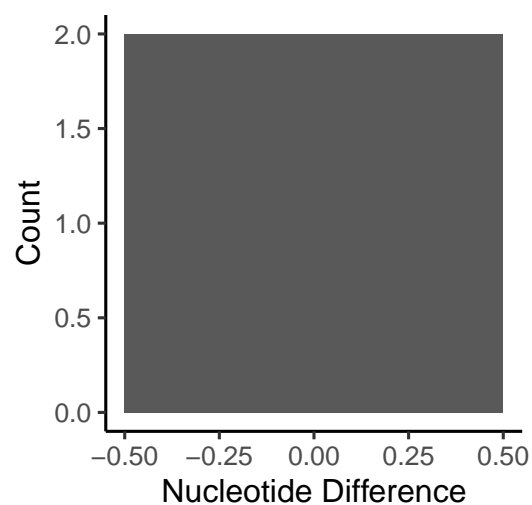
### IGHV3–64\*02

12 sequences assigned  
10 (83.3%) exact matches, in which:  
10 unique CDR3  
4 unique J



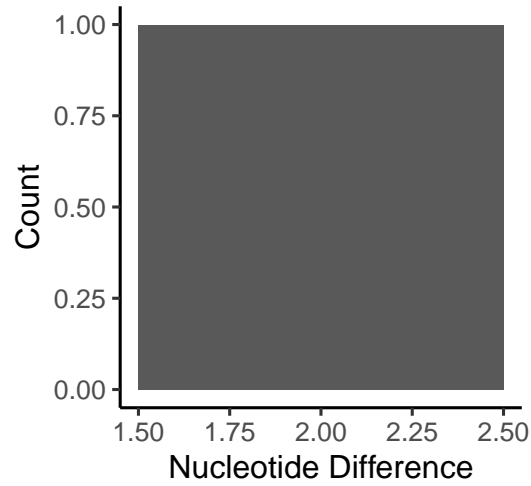
### IGHV3–66\*04

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



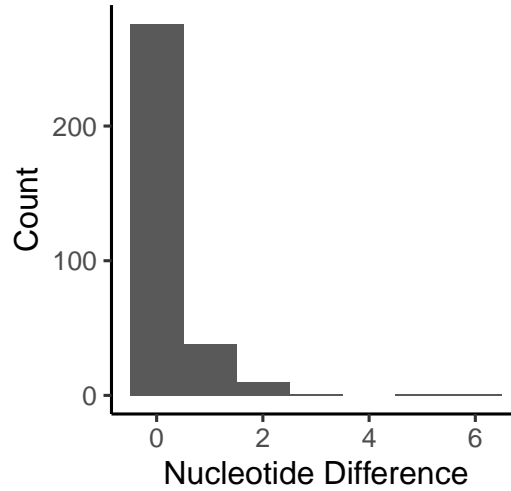
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



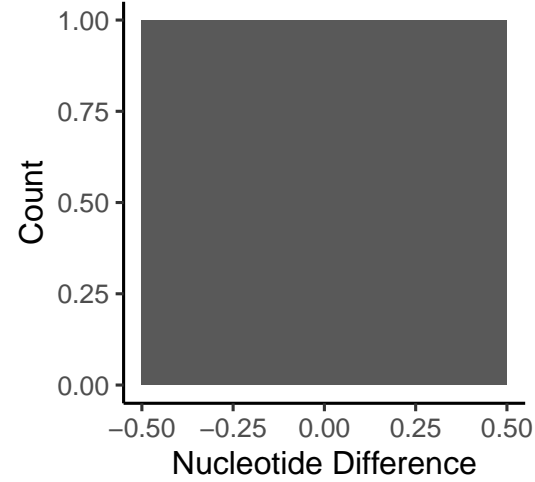
### IGHV3-73\*02

327 sequences assigned  
276 (84.4%) exact matches, in which:  
264 unique CDR3  
5 unique J



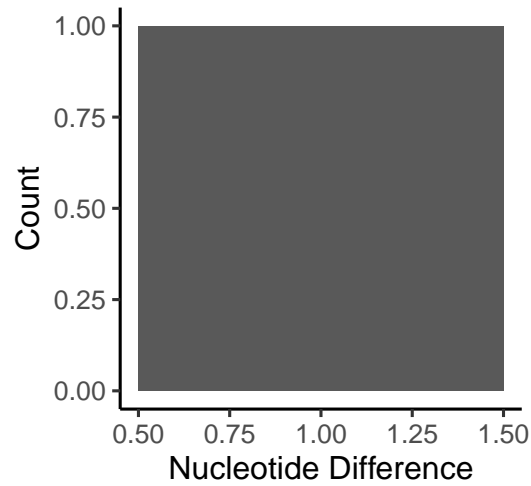
### IGHV3-NL1\*01

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



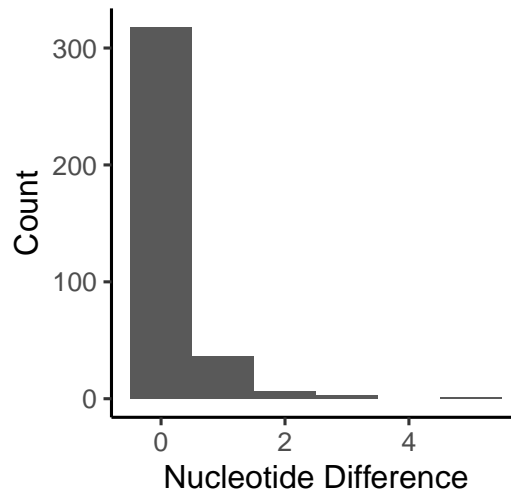
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



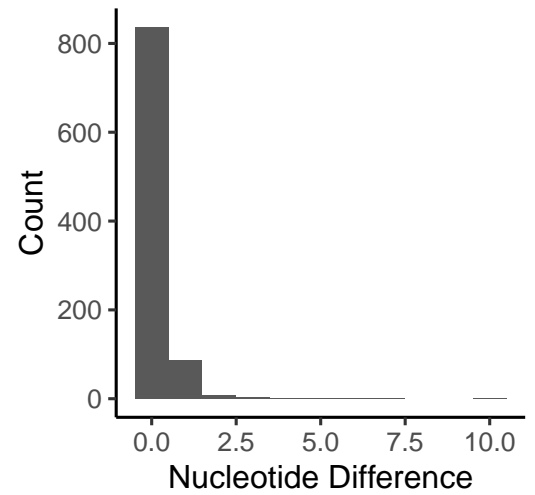
### IGHV3-74\*01

364 sequences assigned  
318 (87.4%) exact matches, in which:  
309 unique CDR3  
6 unique J



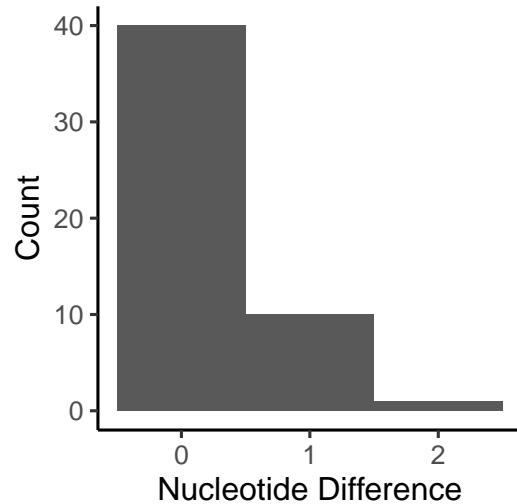
### IGHV4-4\*07

943 sequences assigned  
837 (88.8%) exact matches, in which:  
812 unique CDR3  
6 unique J



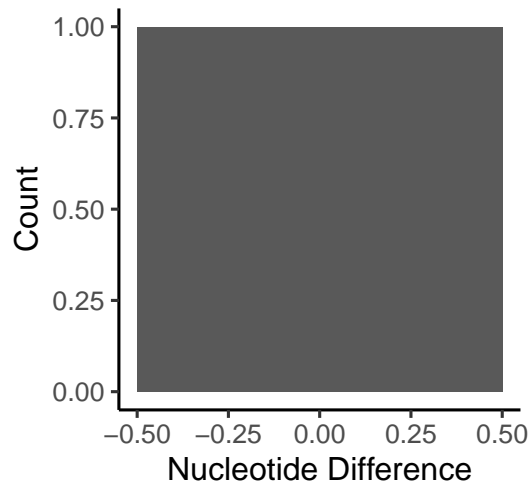
### IGHV3-72\*01

51 sequences assigned  
40 (78.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



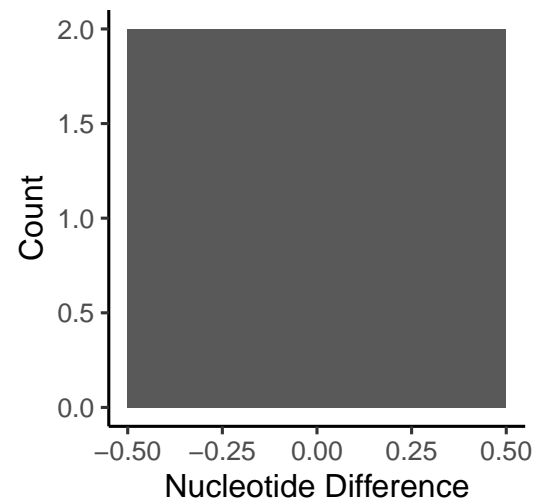
### IGHV3-64D\*06

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



### IGHV4-28\*01

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



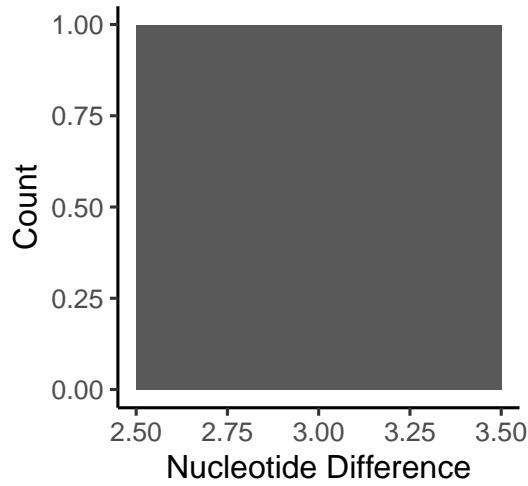
### IGHV4-28\*03

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



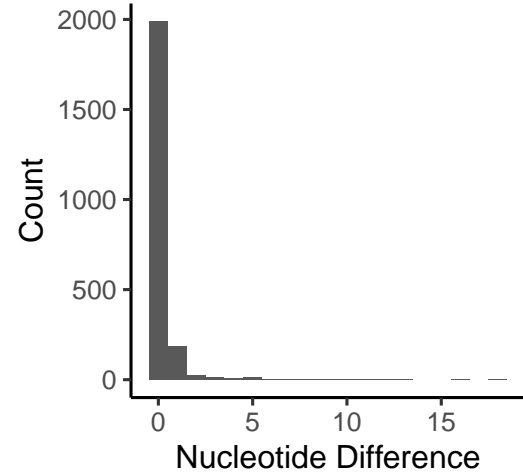
### IGHV4-30-4\*01

1 sequences assigned  
No exact matches.



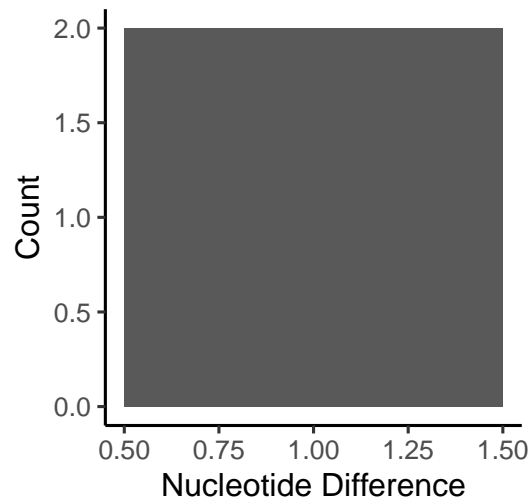
### IGHV4-34\*01

2264 sequences assigned  
1989 (87.9%) exact matches, in which:  
1880 unique CDR3  
6 unique J



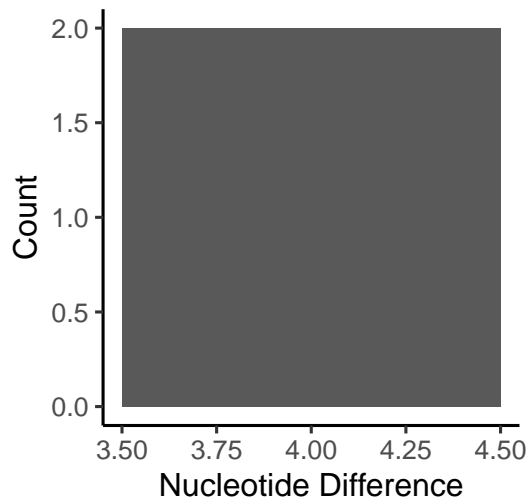
### IGHV4-28\*04

2 sequences assigned  
No exact matches.



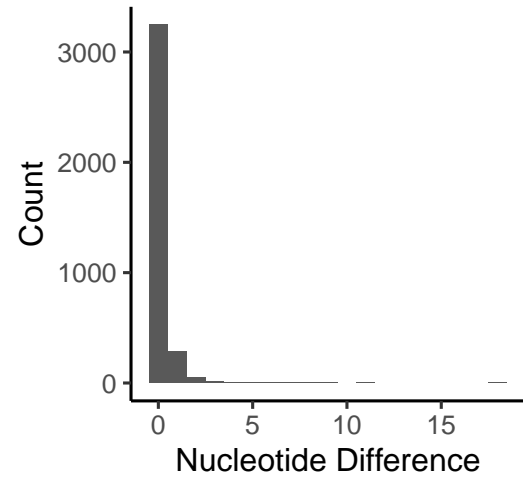
### IGHV4-30-2\*03

3 sequences assigned  
No exact matches.



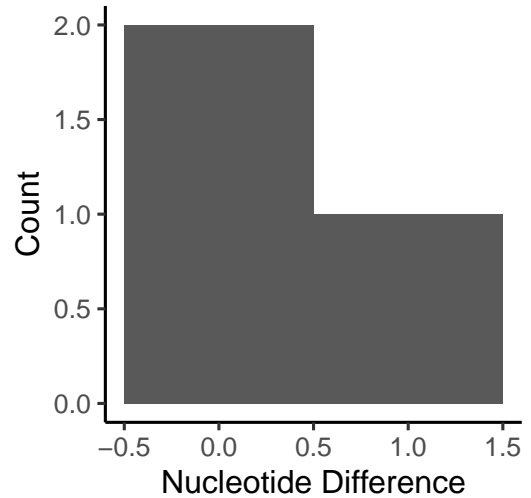
### IGHV4-39\*01

3616 sequences assigned  
3247 (89.8%) exact matches, in which:  
3112 unique CDR3  
6 unique J



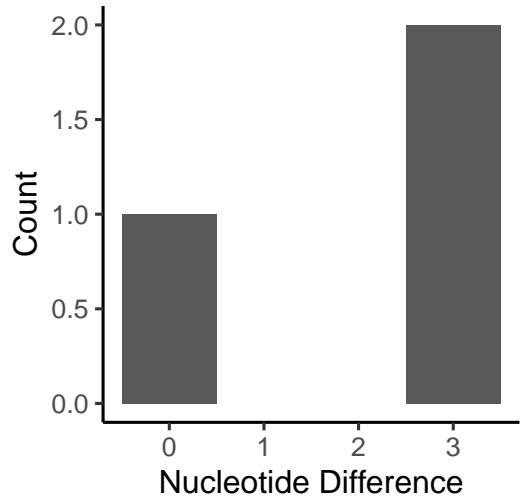
### IGHV4-28\*05

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



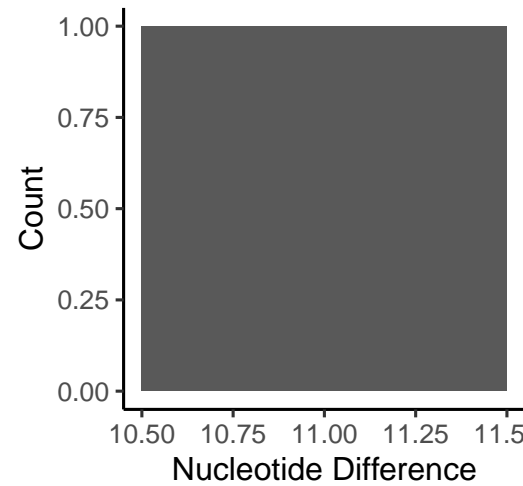
### IGHV4-31\*03

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



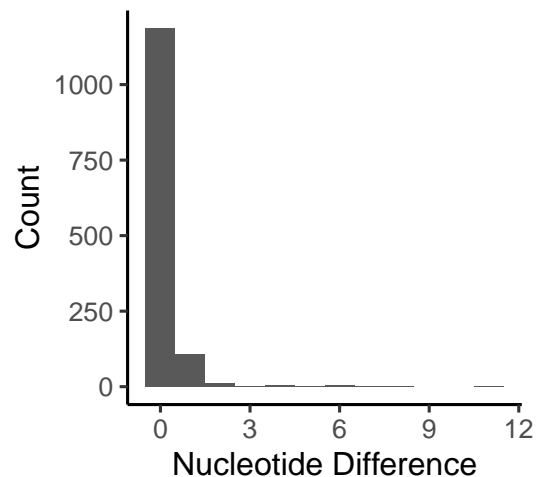
### IGHV4-55\*08

1 sequences assigned  
No exact matches.



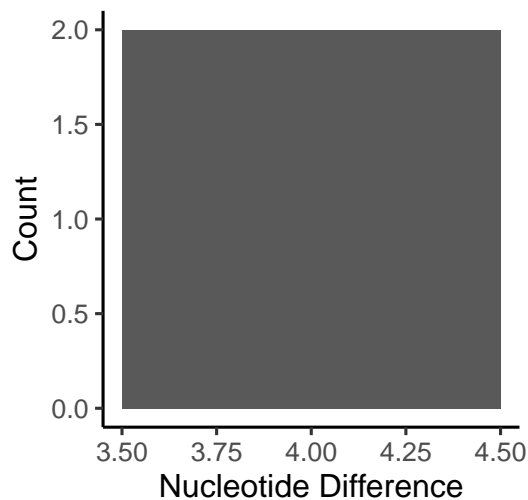
### IGHV4–59\*01

1319 sequences assigned  
1186 (89.9%) exact matches, in which:  
1163 unique CDR3  
6 unique J



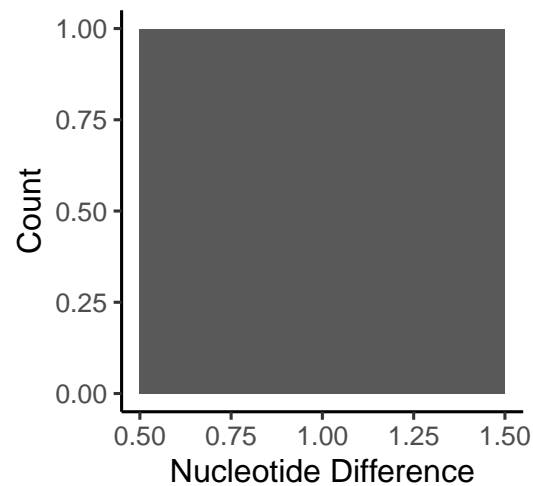
### IGHV4/OR15–8\*01

2 sequences assigned  
No exact matches.



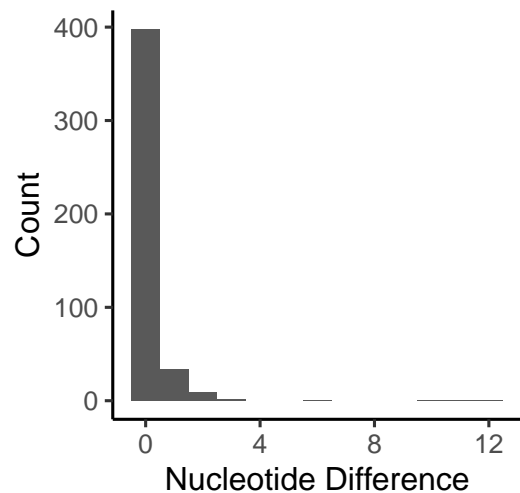
### IGHV3/OR16–6\*02

1 sequences assigned  
No exact matches.



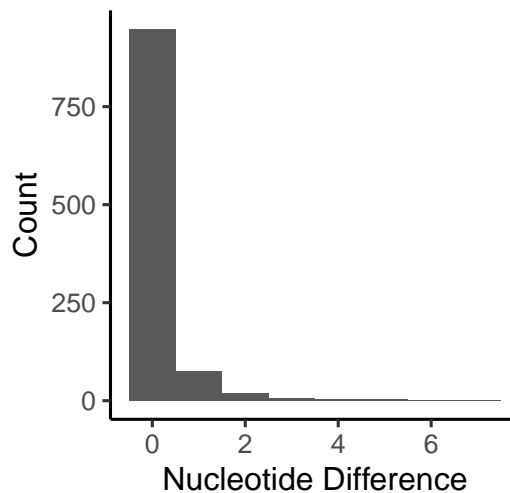
### IGHV4–61\*01

447 sequences assigned  
398 (89%) exact matches, in which:  
392 unique CDR3  
6 unique J



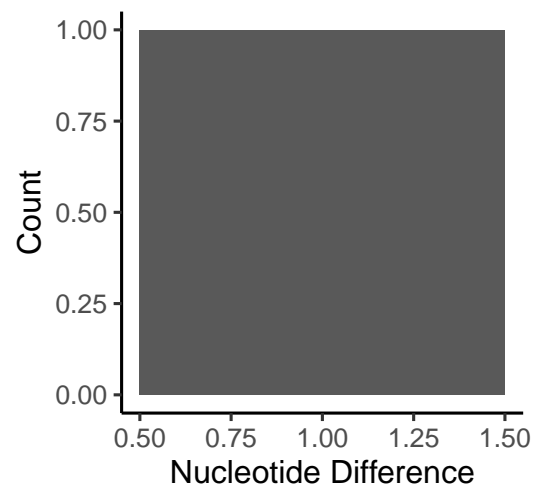
### IGHV5–51\*01

1060 sequences assigned  
948 (89.4%) exact matches, in which:  
911 unique CDR3  
6 unique J



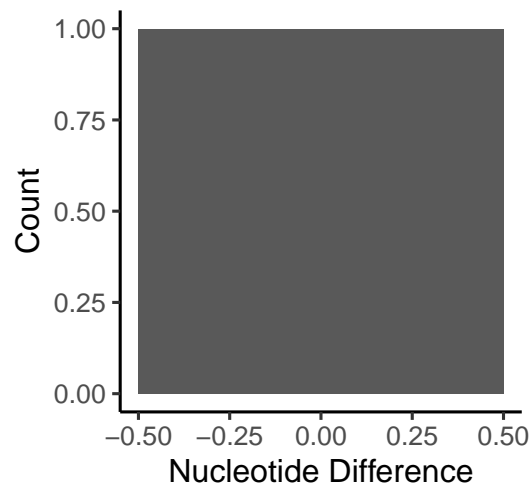
### IGHV3/OR16–9\*01

1 sequences assigned  
No exact matches.



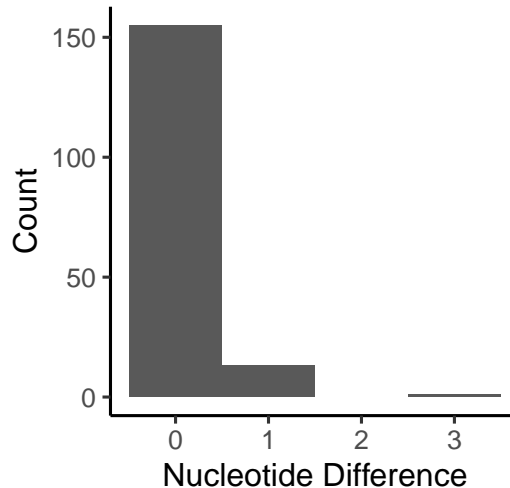
### IGHV1/OR15–2\*01

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



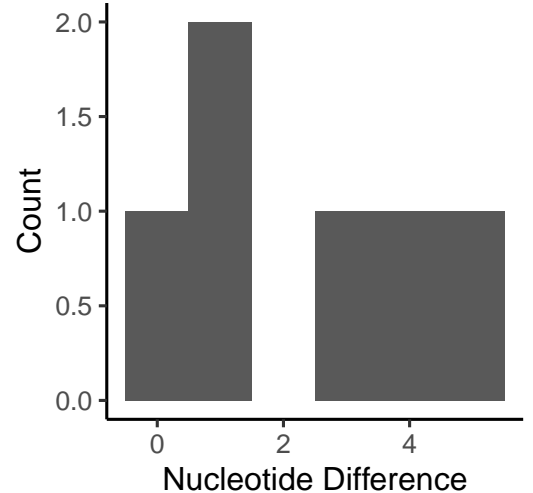
### IGHV6–1\*01

169 sequences assigned  
155 (91.7%) exact matches, in which:  
146 unique CDR3  
5 unique J



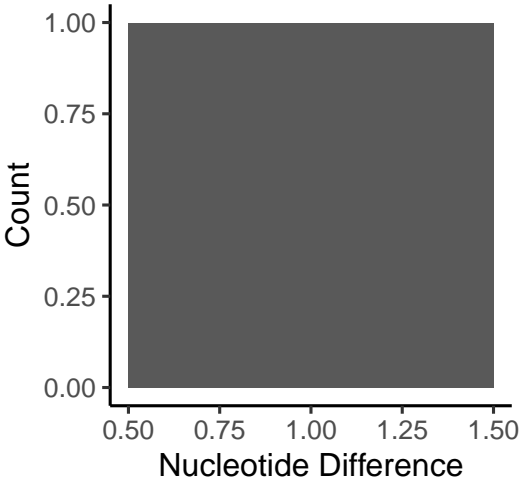
### IGHV7–4–1\*02

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



# IGHV7-34-1\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.