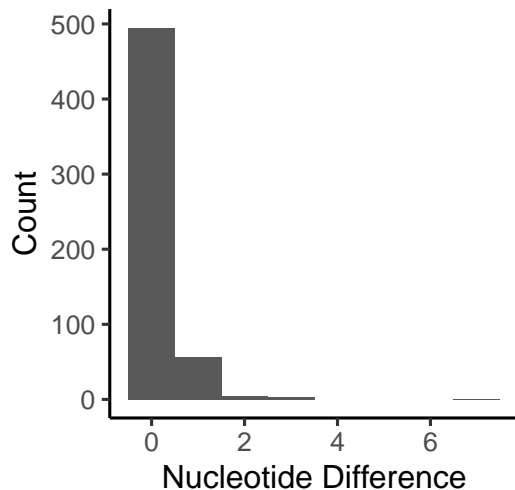


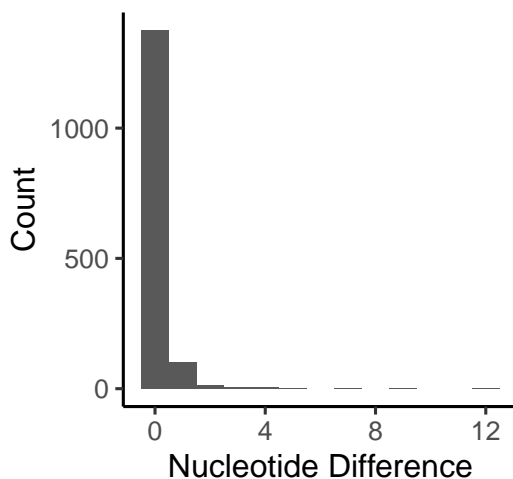
### IGHV1-2\*04

560 sequences assigned  
495 (88.4%) exact matches, in which:  
460 unique CDR3  
6 unique J



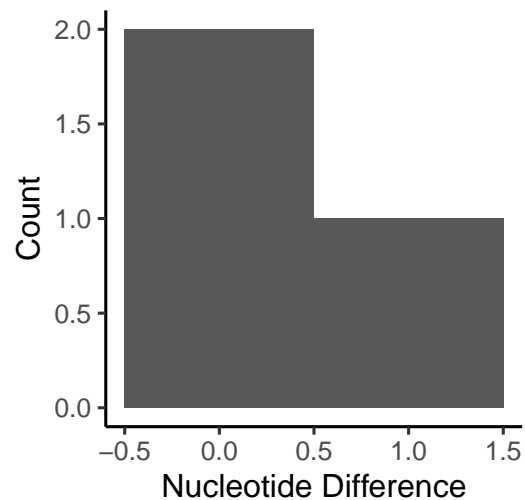
### IGHV1-8\*01

1504 sequences assigned  
1375 (91.4%) exact matches, in which:  
1268 unique CDR3  
6 unique J



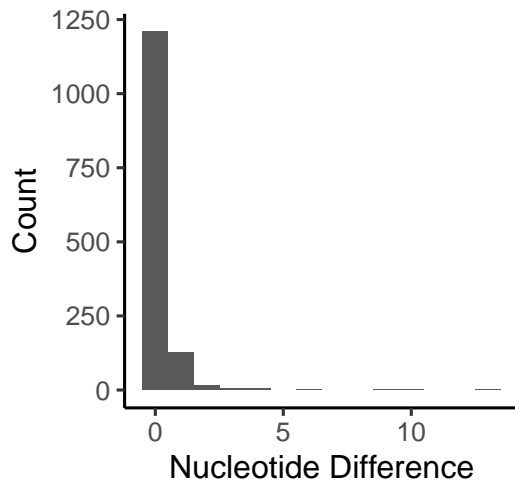
### IGHV1-45\*03

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



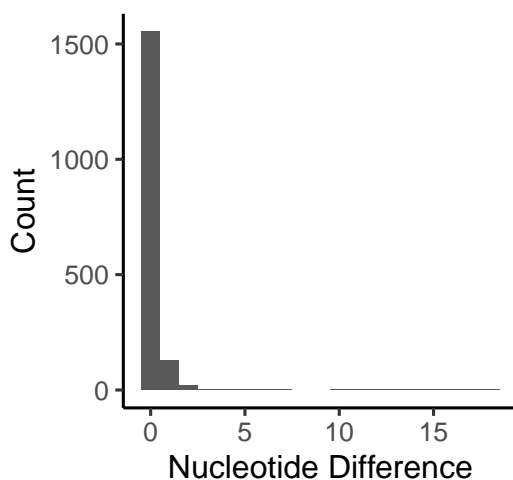
### IGHV1-2\*06

1367 sequences assigned  
1209 (88.4%) exact matches, in which:  
1118 unique CDR3  
6 unique J



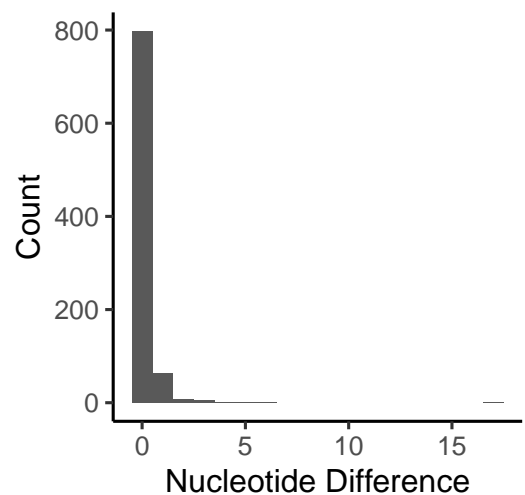
### IGHV1-18\*01

1719 sequences assigned  
1553 (90.3%) exact matches, in which:  
1460 unique CDR3  
6 unique J



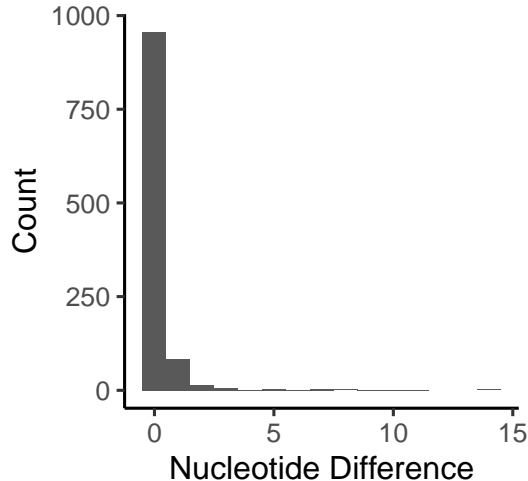
### IGHV1-46\*01

879 sequences assigned  
798 (90.8%) exact matches, in which:  
743 unique CDR3  
6 unique J



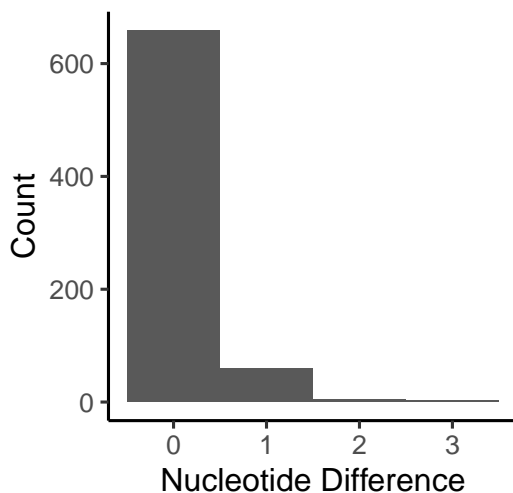
### IGHV1-3\*01

1076 sequences assigned  
956 (88.8%) exact matches, in which:  
911 unique CDR3  
6 unique J



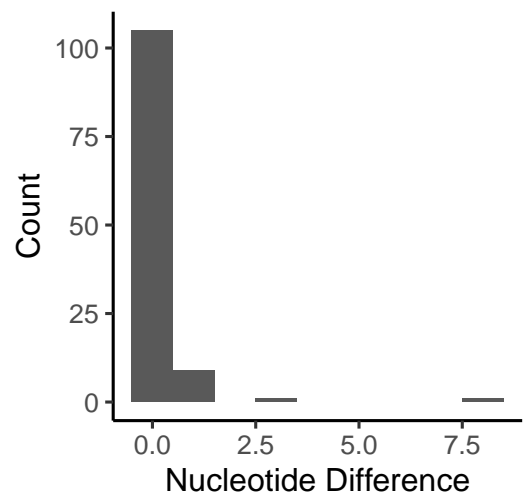
### IGHV1-24\*01

726 sequences assigned  
659 (90.8%) exact matches, in which:  
610 unique CDR3  
6 unique J



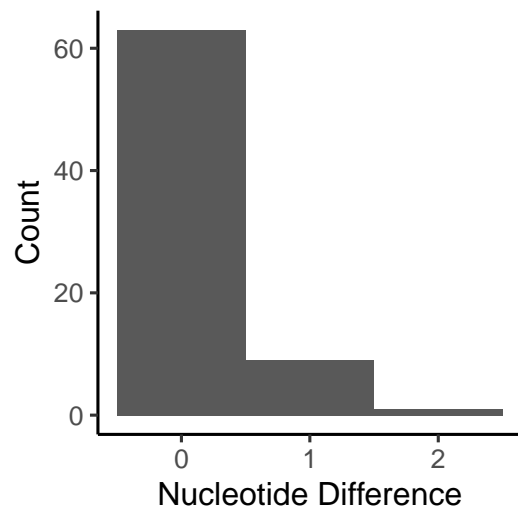
### IGHV1-58\*01

117 sequences assigned  
105 (89.7%) exact matches, in which:  
94 unique CDR3  
5 unique J



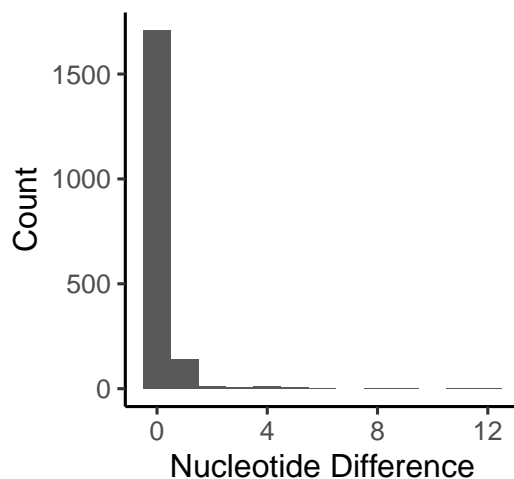
### IGHV1–58\*02

73 sequences assigned  
63 (86.3%) exact matches, in which:  
58 unique CDR3  
4 unique J



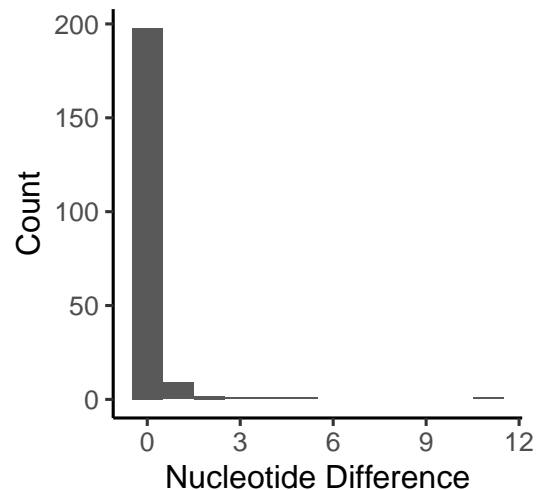
### IGHV2–5\*02

1894 sequences assigned  
1708 (90.2%) exact matches, in which:  
1600 unique CDR3  
6 unique J



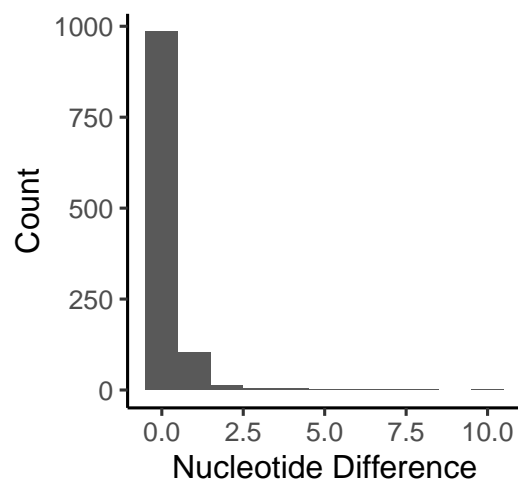
### IGHV2–70\*15

213 sequences assigned  
198 (93%) exact matches, in which:  
190 unique CDR3  
6 unique J



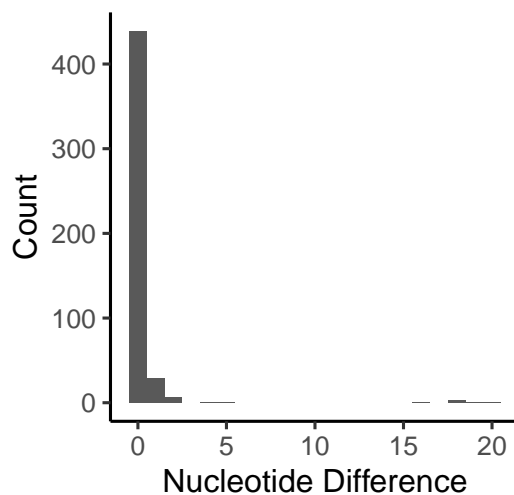
### IGHV1–69\*04

1115 sequences assigned  
985 (88.3%) exact matches, in which:  
905 unique CDR3  
6 unique J



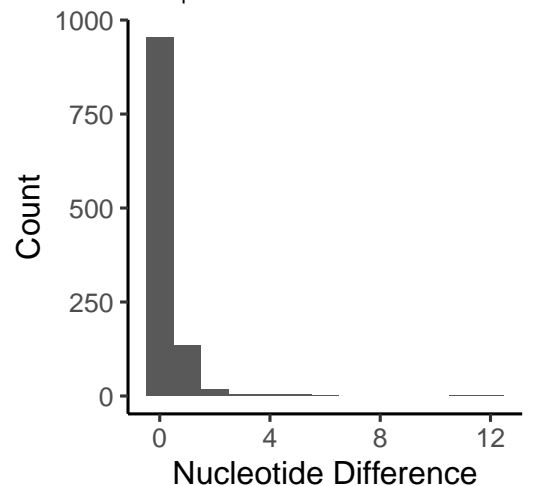
### IGHV2–26\*01

483 sequences assigned  
439 (90.9%) exact matches, in which:  
413 unique CDR3  
6 unique J



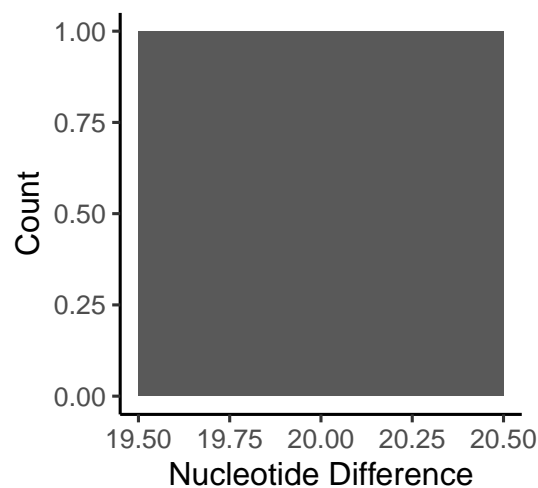
### IGHV3–7\*01

1117 sequences assigned  
953 (85.3%) exact matches, in which:  
898 unique CDR3  
6 unique J



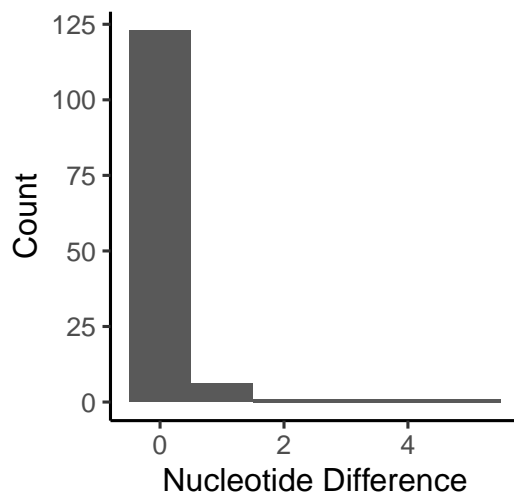
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



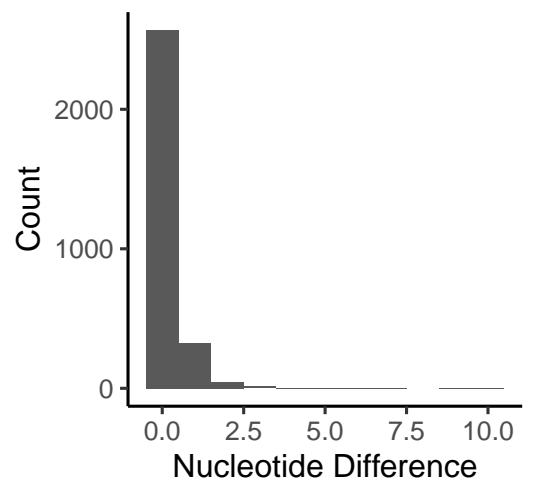
### IGHV2–70\*01

133 sequences assigned  
123 (92.5%) exact matches, in which:  
117 unique CDR3  
6 unique J



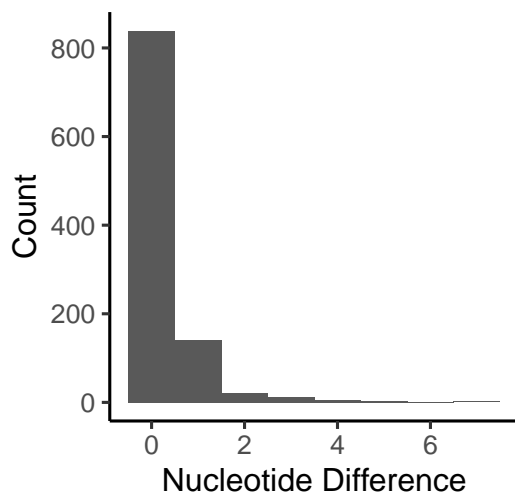
### IGHV3–9\*01

2960 sequences assigned  
2568 (86.8%) exact matches, in which:  
2300 unique CDR3  
6 unique J



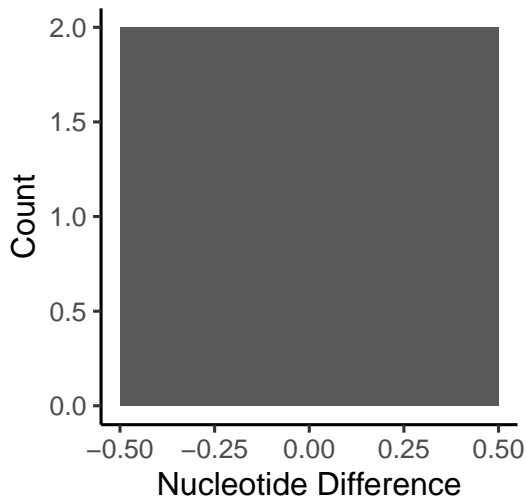
### IGHV3-11\*01

1025 sequences assigned  
839 (81.9%) exact matches, in which:  
787 unique CDR3  
6 unique J



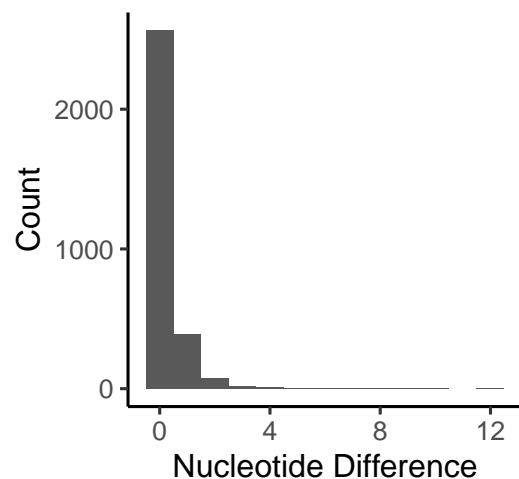
### IGHV3-19\*01

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



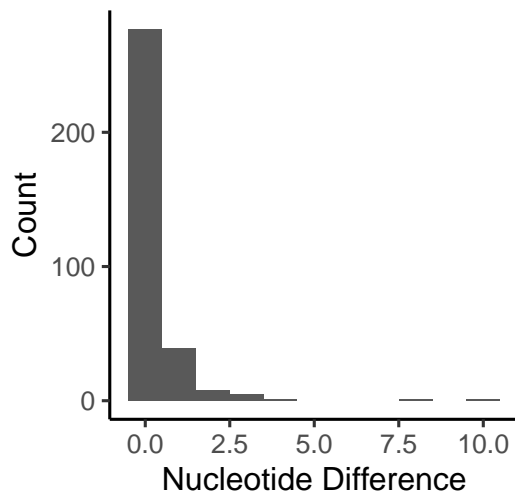
### IGHV3-30-3\*01

3081 sequences assigned  
2564 (83.2%) exact matches, in which:  
2350 unique CDR3  
6 unique J



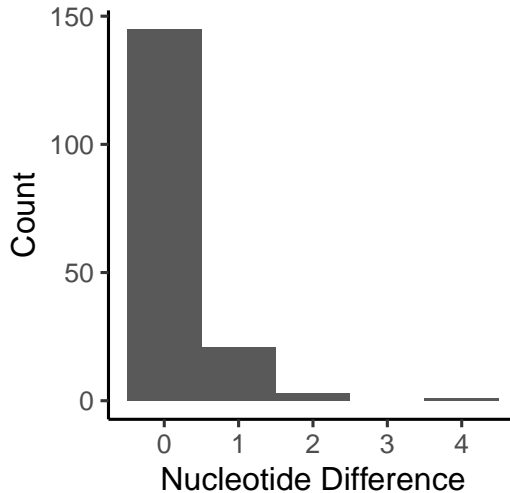
### IGHV3-13\*01

332 sequences assigned  
277 (83.4%) exact matches, in which:  
254 unique CDR3  
5 unique J



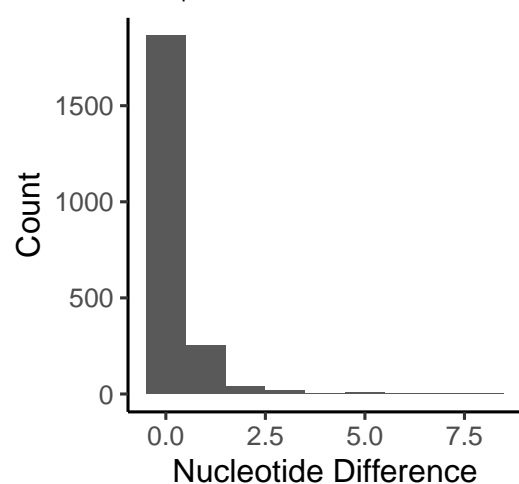
### IGHV3-20\*01

170 sequences assigned  
145 (85.3%) exact matches, in which:  
127 unique CDR3  
5 unique J



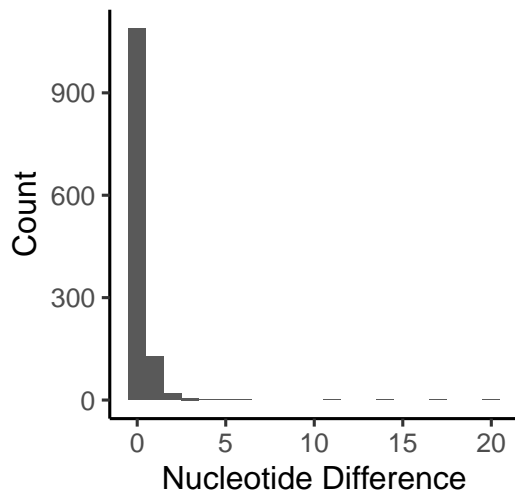
### IGHV3-33\*01

2192 sequences assigned  
1864 (85%) exact matches, in which:  
1715 unique CDR3  
6 unique J



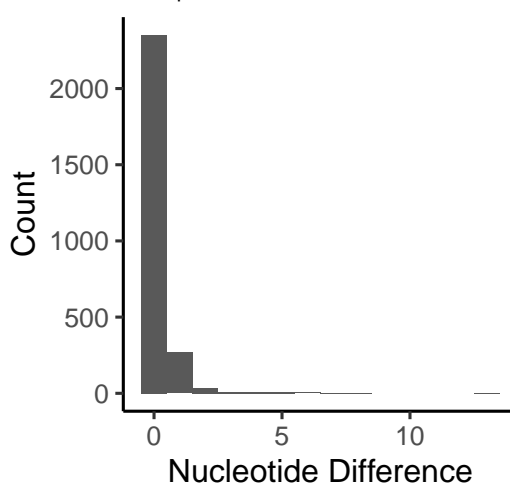
### IGHV3-15\*01

1253 sequences assigned  
1089 (86.9%) exact matches, in which:  
997 unique CDR3  
6 unique J



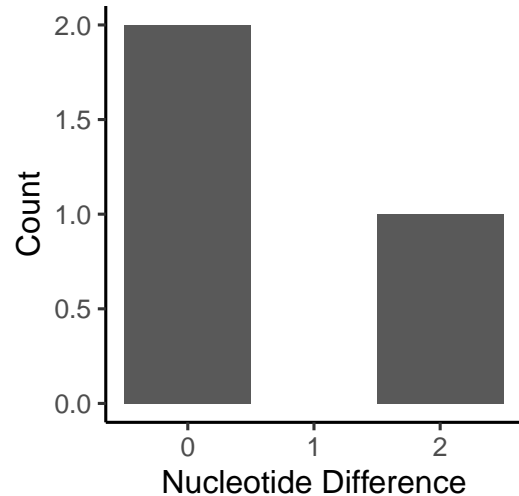
### IGHV3-21\*01

2692 sequences assigned  
2351 (87.3%) exact matches, in which:  
2143 unique CDR3  
6 unique J



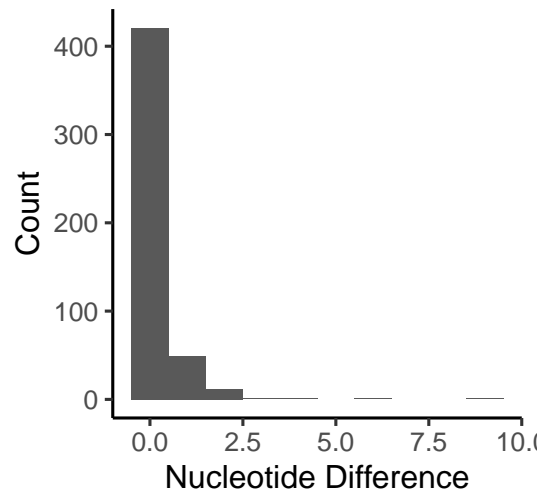
### IGHV3-35\*01

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



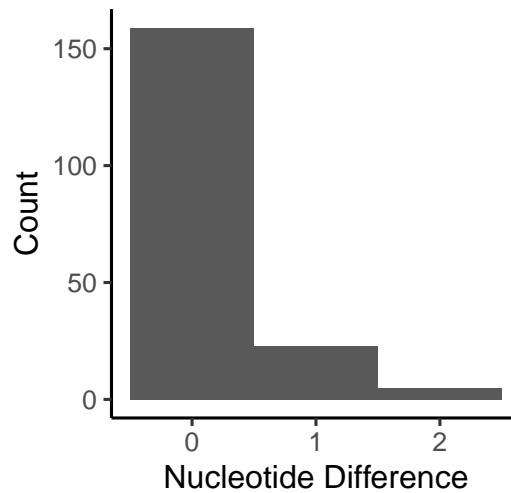
### IGHV3-43\*02

486 sequences assigned  
421 (86.6%) exact matches, in which:  
388 unique CDR3  
6 unique J



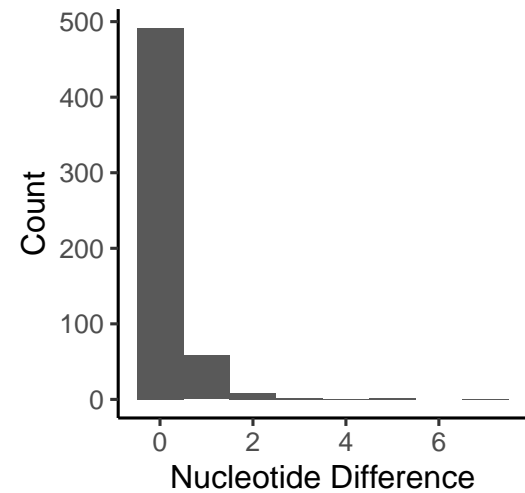
### IGHV3-53\*02

187 sequences assigned  
159 (85%) exact matches, in which:  
150 unique CDR3  
6 unique J



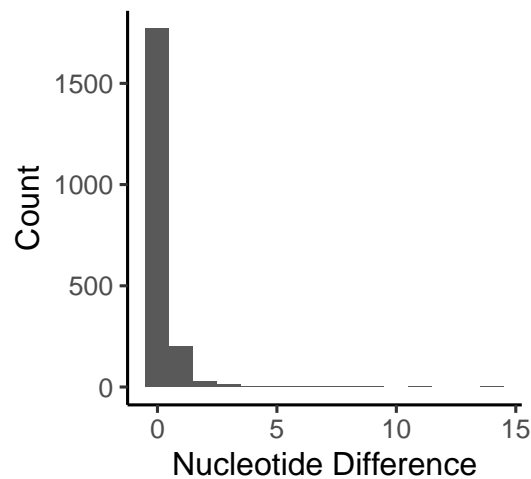
### IGHV3-66\*01

565 sequences assigned  
492 (87.1%) exact matches, in which:  
449 unique CDR3  
6 unique J



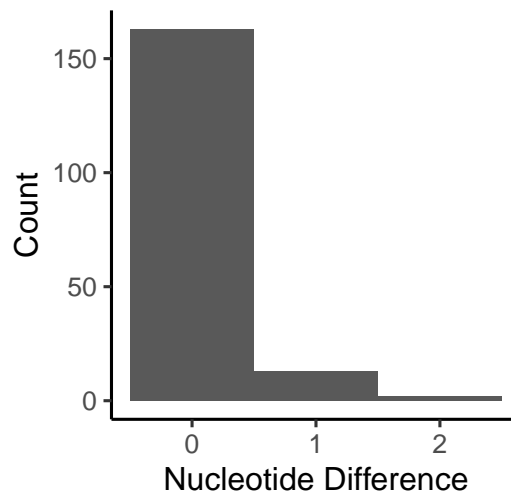
### IGHV3-48\*03

2024 sequences assigned  
1770 (87.5%) exact matches, in which:  
1636 unique CDR3  
6 unique J



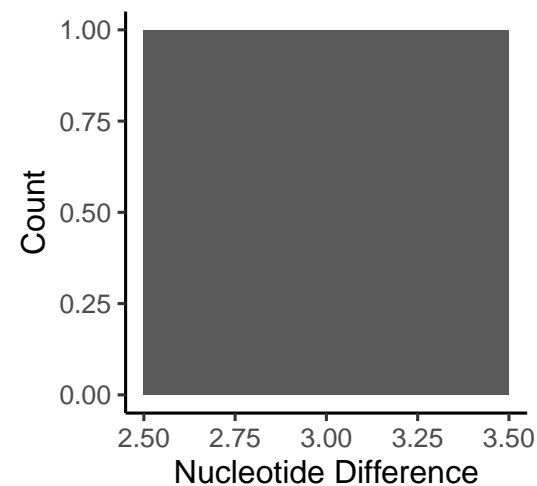
### IGHV3-53\*04

178 sequences assigned  
163 (91.6%) exact matches, in which:  
152 unique CDR3  
5 unique J



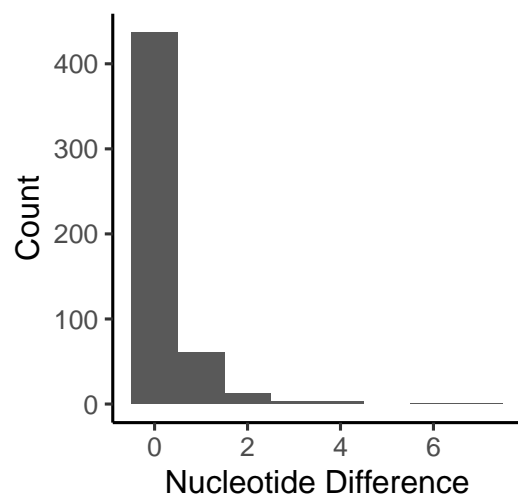
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



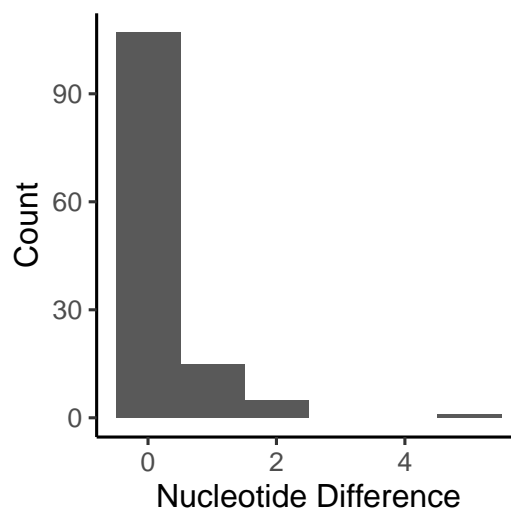
### IGHV3-49\*04

518 sequences assigned  
437 (84.4%) exact matches, in which:  
402 unique CDR3  
6 unique J



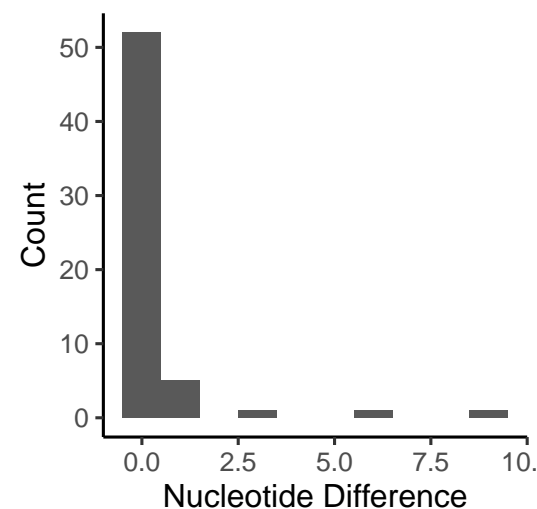
### IGHV3-64\*01

128 sequences assigned  
107 (83.6%) exact matches, in which:  
96 unique CDR3  
6 unique J



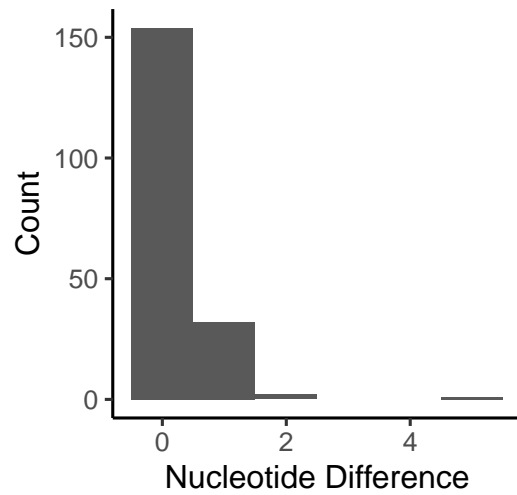
### IGHV3-72\*01

60 sequences assigned  
52 (86.7%) exact matches, in which:  
48 unique CDR3  
5 unique J



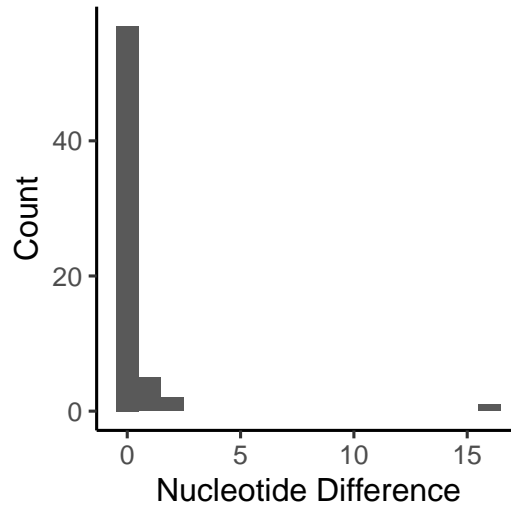
### IGHV3-73\*01

189 sequences assigned  
154 (81.5%) exact matches, in which:  
144 unique CDR3  
5 unique J



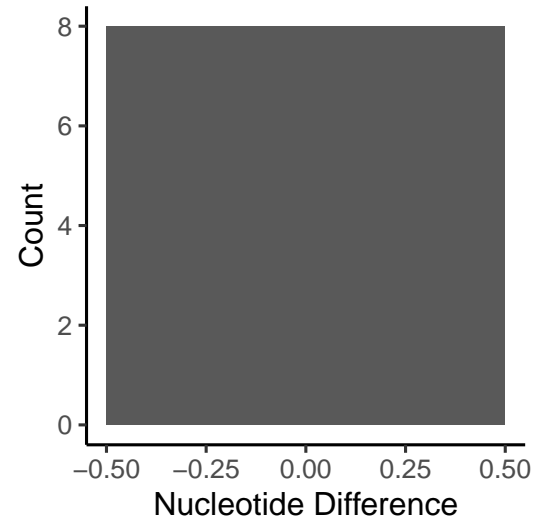
### IGHV3-43D\*04

65 sequences assigned  
57 (87.7%) exact matches, in which:  
53 unique CDR3  
6 unique J



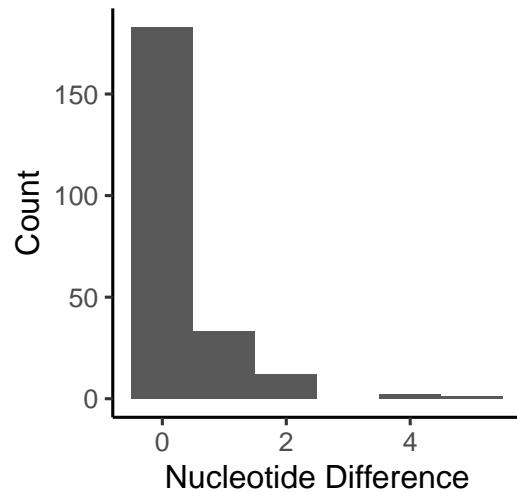
### IGHV4-28\*03

8 sequences assigned  
8 (100%) exact matches, in which:  
6 unique CDR3  
3 unique J



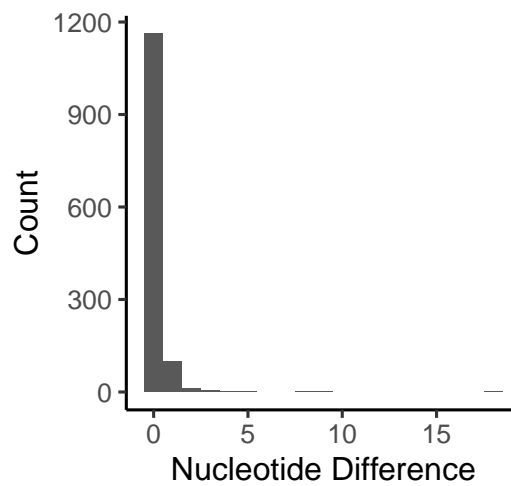
### IGHV3-73\*02

231 sequences assigned  
183 (79.2%) exact matches, in which:  
157 unique CDR3  
6 unique J



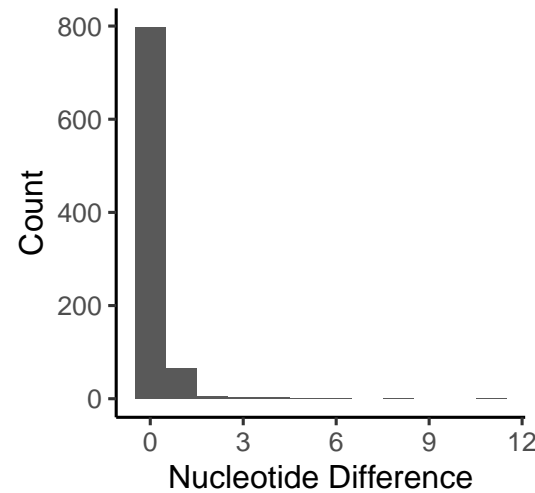
### IGHV4-4\*02

1287 sequences assigned  
1162 (90.3%) exact matches, in which:  
1093 unique CDR3  
6 unique J



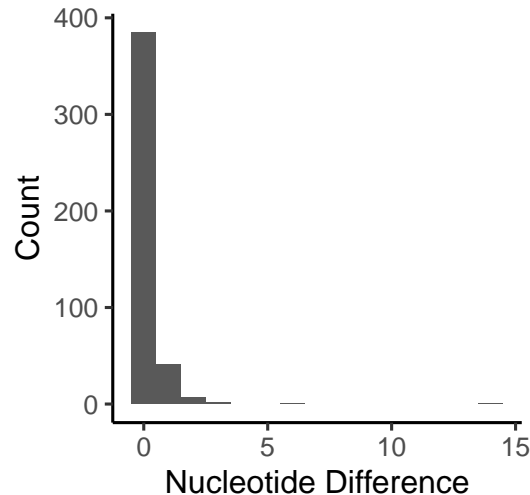
### IGHV4-30-4\*01

881 sequences assigned  
798 (90.6%) exact matches, in which:  
751 unique CDR3  
6 unique J



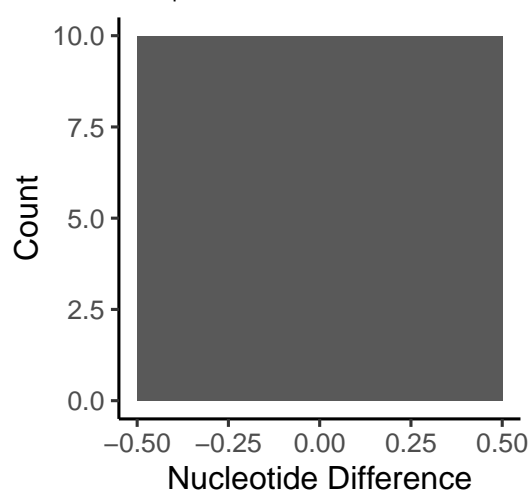
### IGHV3-74\*01

437 sequences assigned  
385 (88.1%) exact matches, in which:  
366 unique CDR3  
6 unique J



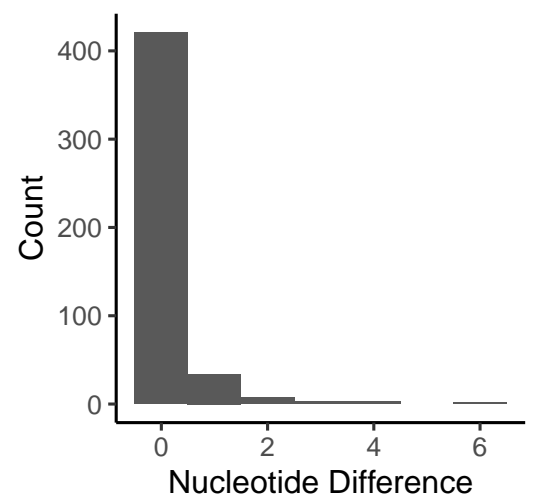
### IGHV4-28\*01

10 sequences assigned  
10 (100%) exact matches, in which:  
10 unique CDR3  
5 unique J



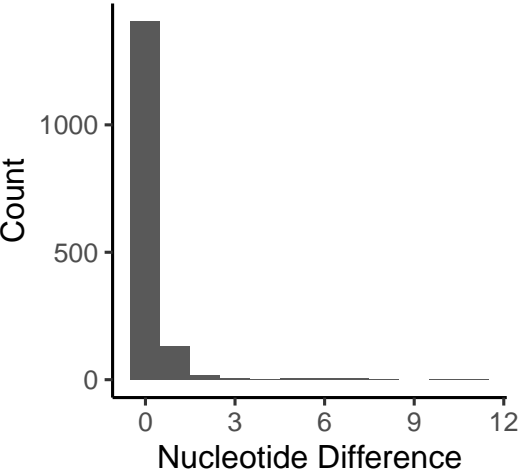
### IGHV4-30-2\*01

470 sequences assigned  
421 (89.6%) exact matches, in which:  
392 unique CDR3  
6 unique J



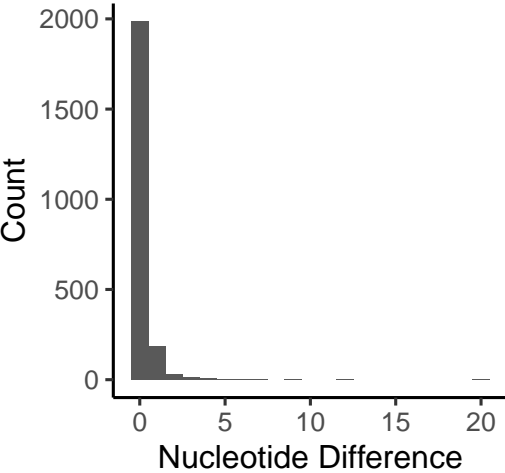
IGHV4-31\*03

1581 sequences assigned  
1406 (88.9%) exact matches, in which:  
1333 unique CDR3  
6 unique J



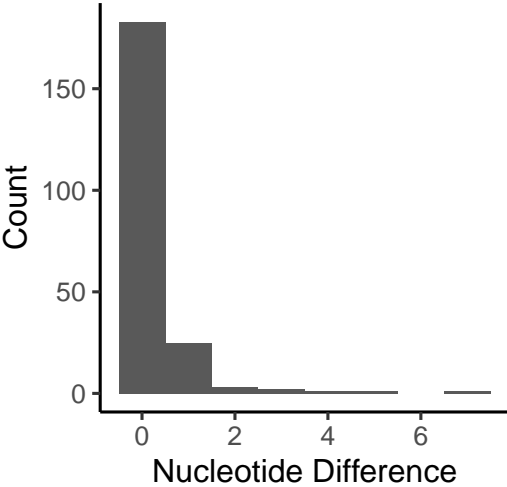
IGHV4-39\*01

2229 sequences assigned  
1986 (89.1%) exact matches, in which:  
1775 unique CDR3  
6 unique J



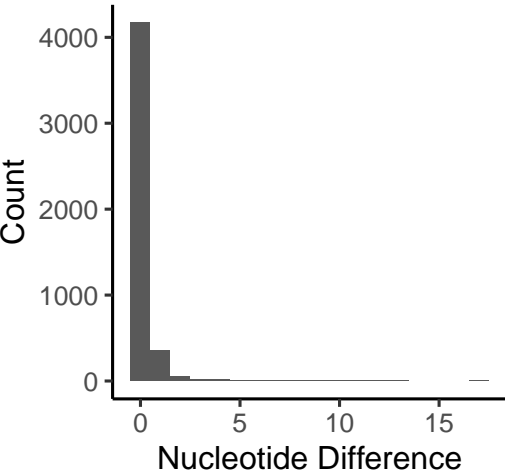
IGHV4-61\*01

216 sequences assigned  
183 (84.7%) exact matches, in which:  
173 unique CDR3  
6 unique J



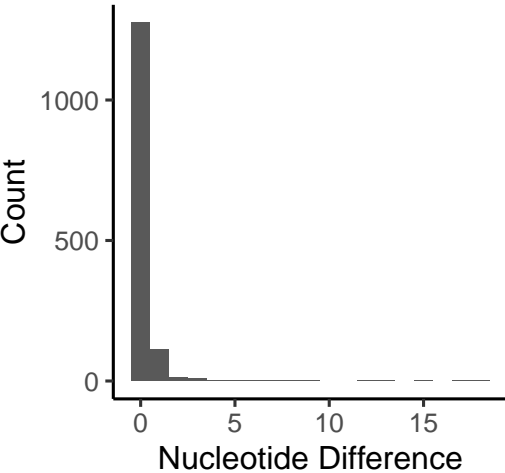
IGHV4-34\*01

4628 sequences assigned  
4170 (90.1%) exact matches, in which:  
3767 unique CDR3  
6 unique J



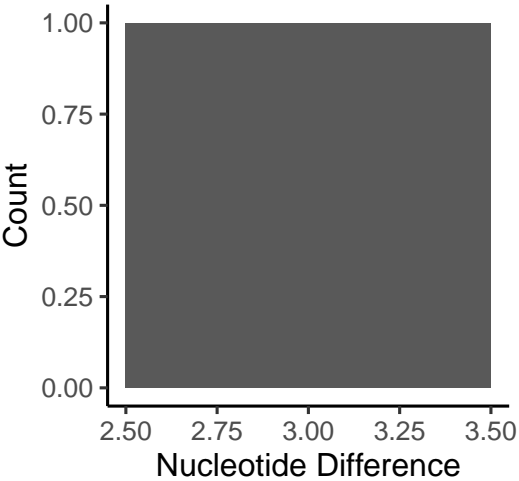
IGHV4-59\*01

1423 sequences assigned  
1275 (89.6%) exact matches, in which:  
1223 unique CDR3  
6 unique J



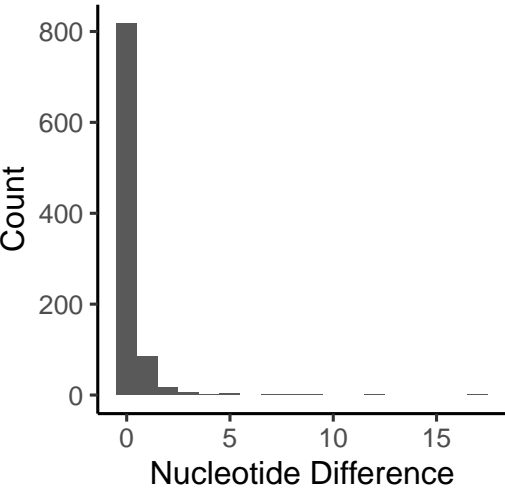
IGHV4/OR15-8\*03

1 sequences assigned  
No exact matches.



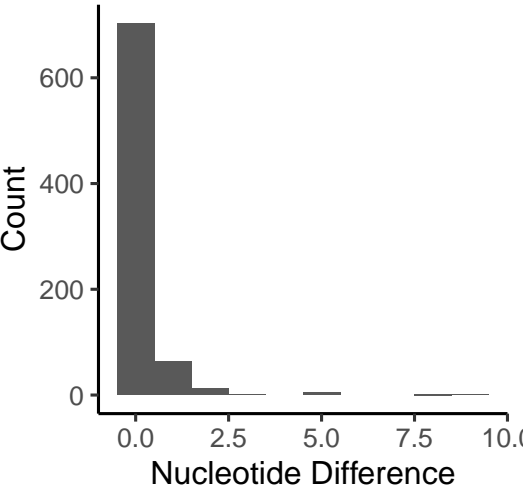
IGHV4-38-2\*02\_A70G

934 sequences assigned  
818 (87.6%) exact matches, in which:  
734 unique CDR3  
6 unique J



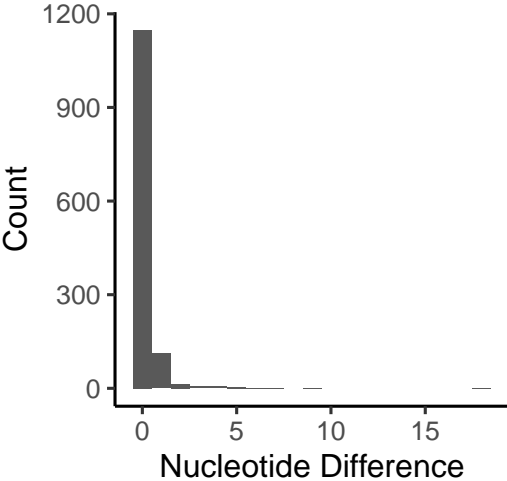
IGHV4-59\*08

786 sequences assigned  
703 (89.4%) exact matches, in which:  
664 unique CDR3  
6 unique J



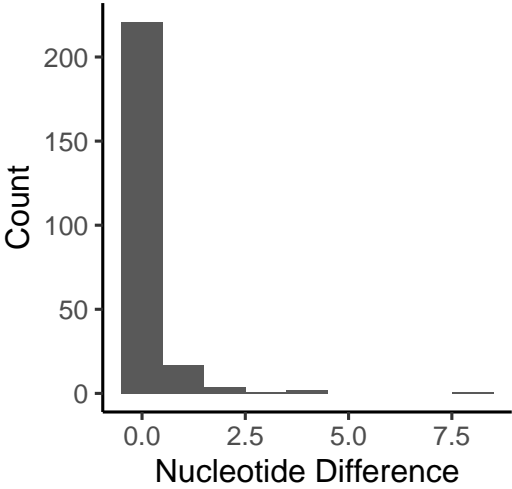
IGHV5-51\*01

1295 sequences assigned  
1148 (88.6%) exact matches, in which:  
1064 unique CDR3  
6 unique J



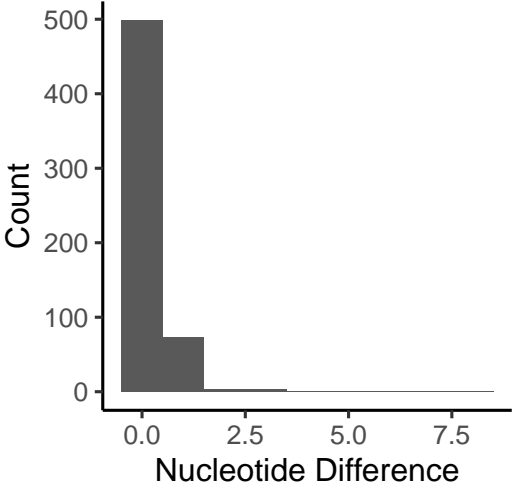
IGHV6-1\*01

246 sequences assigned  
221 (89.8%) exact matches, in which:  
205 unique CDR3  
6 unique J



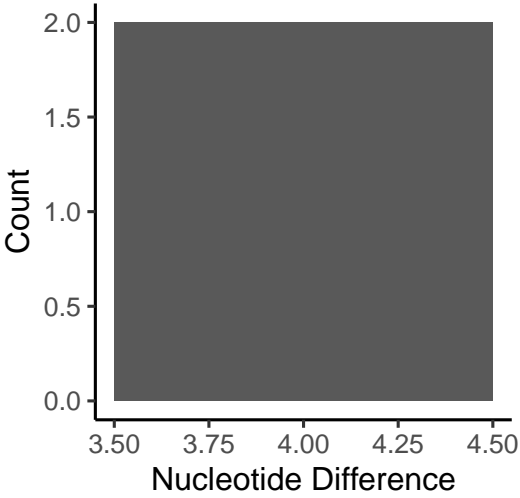
IGHV7-4-1\*02

584 sequences assigned  
499 (85.4%) exact matches, in which:  
478 unique CDR3  
6 unique J



IGHV7-81\*01

2 sequences assigned  
No exact matches.







Warning – no inferred sequences found.