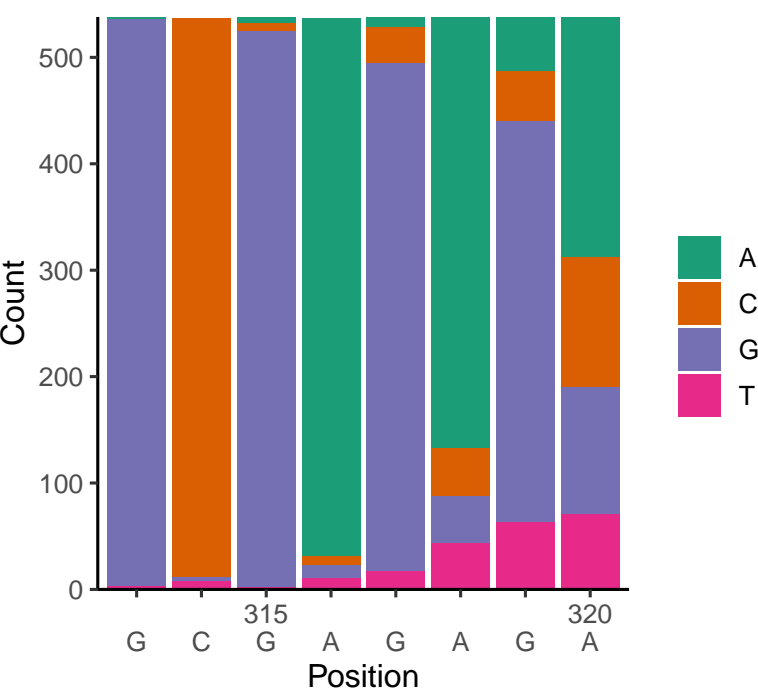
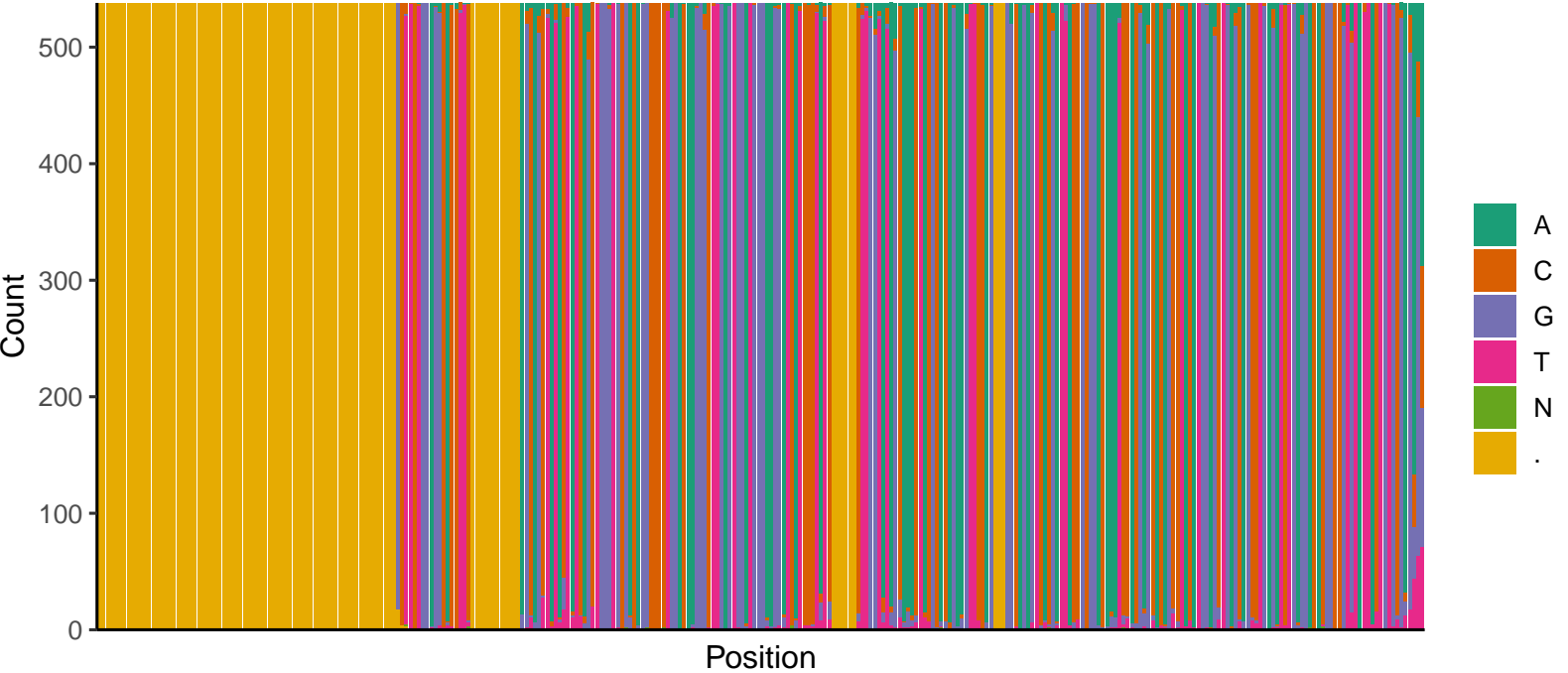


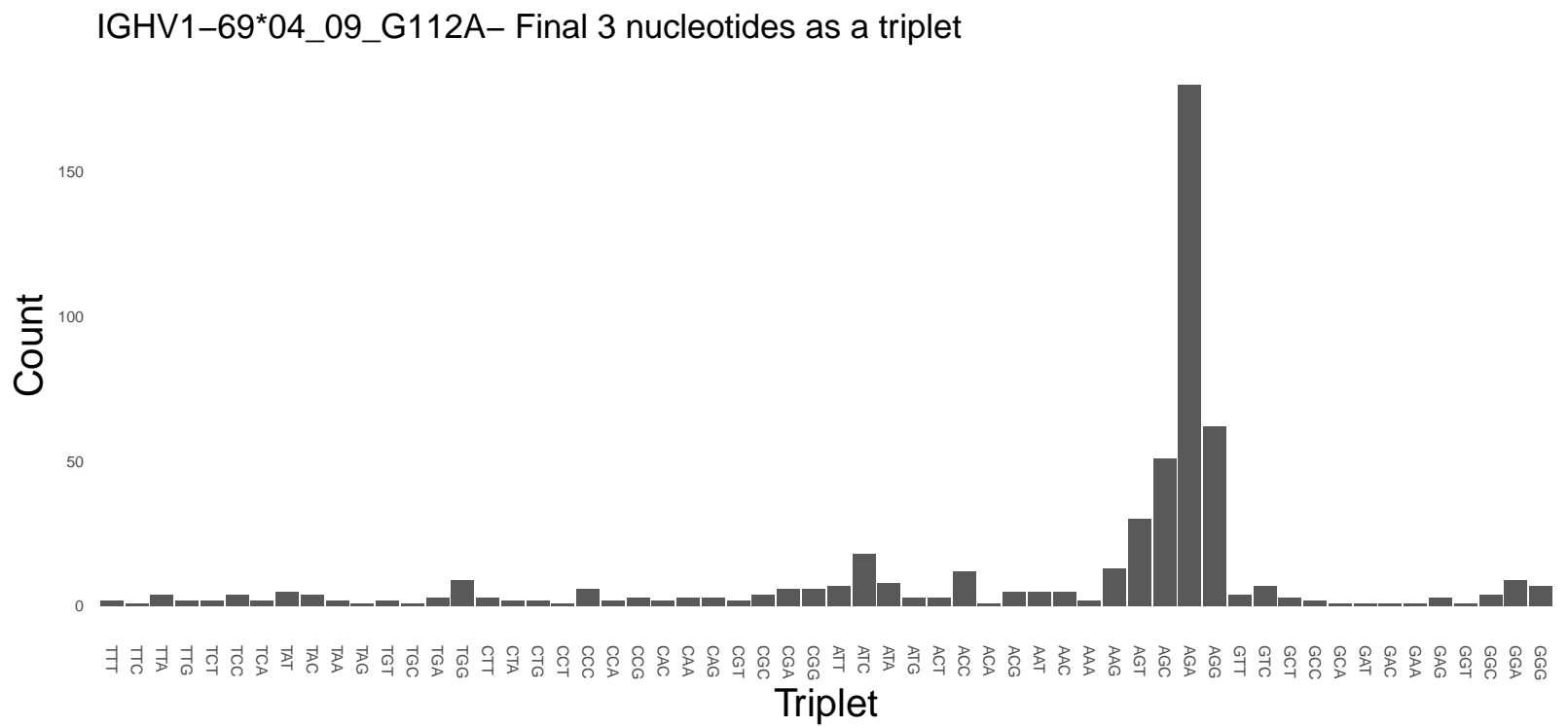
Gene IGHV1-69*04_09_G112A



Gene IGHV1-69*04_09_G112A

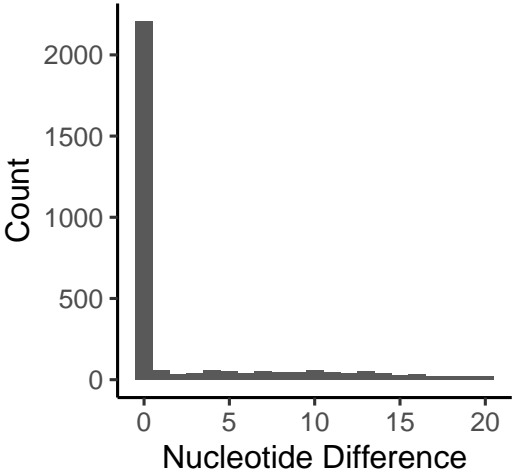


IGHV1-69*04_09_G112A- Final 3 nucleotides as a triplet



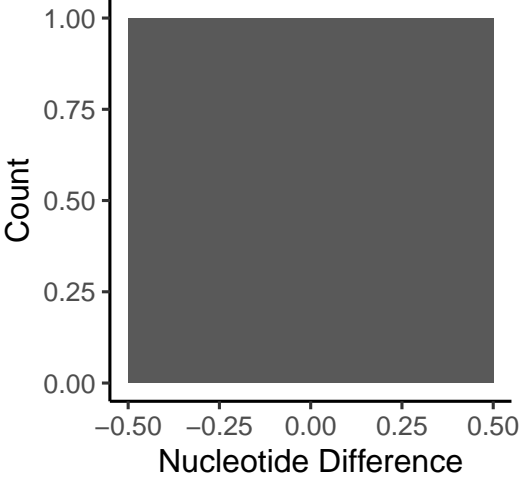
IGHV1-2*02

3164 sequences assigned
2206 (69.7%) exact matches, in which:
2198 unique CDR3
6 unique J



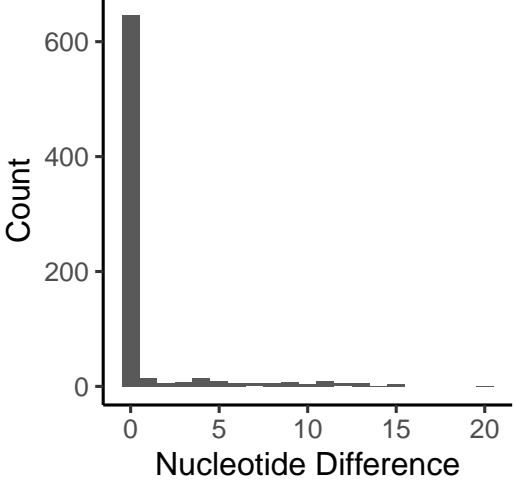
IGHV1-3*01_05

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



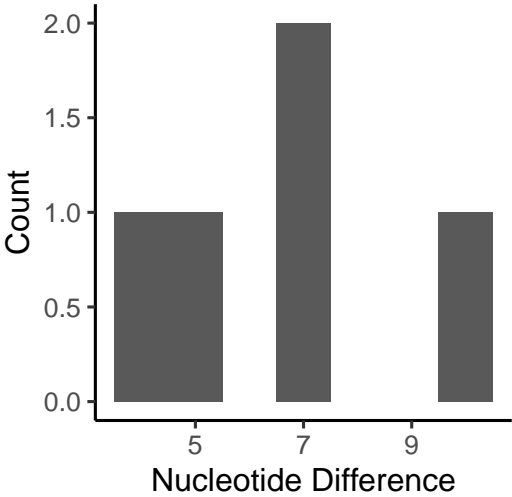
IGHV1-24*01

758 sequences assigned
647 (85.4%) exact matches, in which:
647 unique CDR3
6 unique J



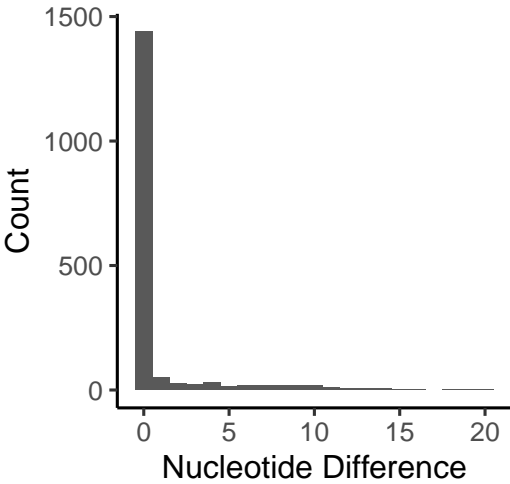
IGHV1-3*02

5 sequences assigned
No exact matches.



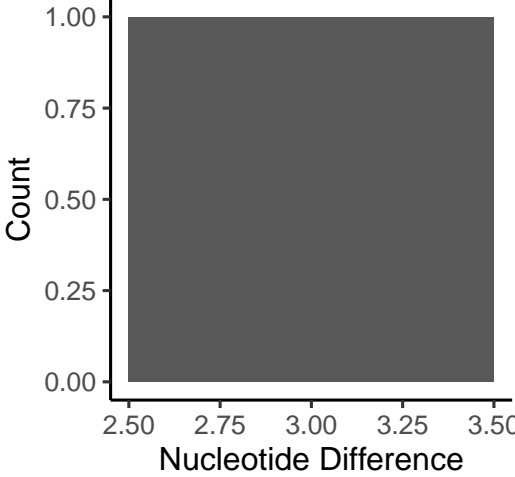
IGHV1-8*01

1730 sequences assigned
1439 (83.2%) exact matches, in which:
1435 unique CDR3
6 unique J



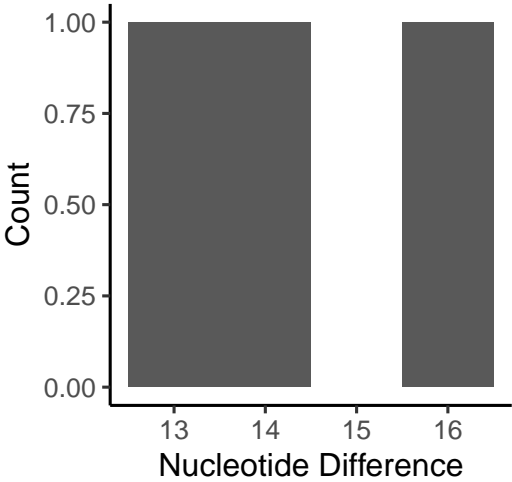
IGHV1-38-4*01

1 sequences assigned
No exact matches.



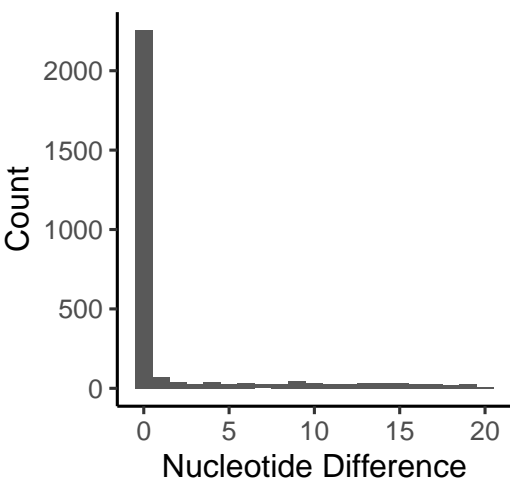
IGHV1-3*03

3 sequences assigned
No exact matches.



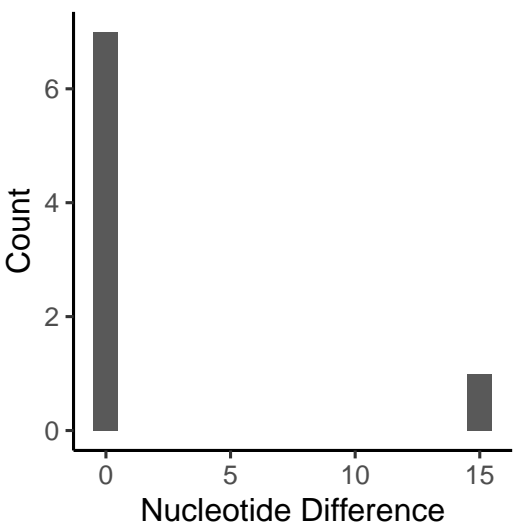
IGHV1-18*01

3036 sequences assigned
2256 (74.3%) exact matches, in which:
2250 unique CDR3
6 unique J



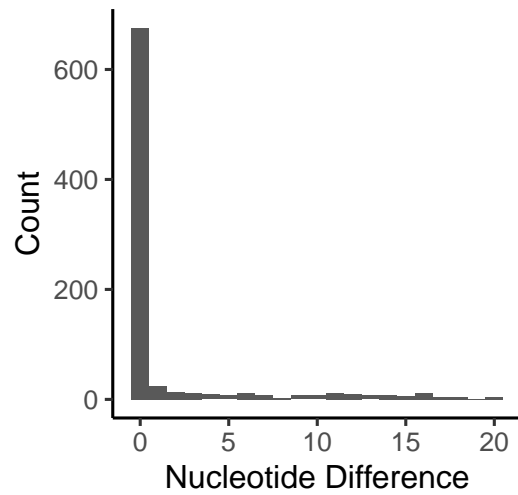
IGHV1-45*02

9 sequences assigned
7 (77.8%) exact matches, in which:
7 unique CDR3
4 unique J



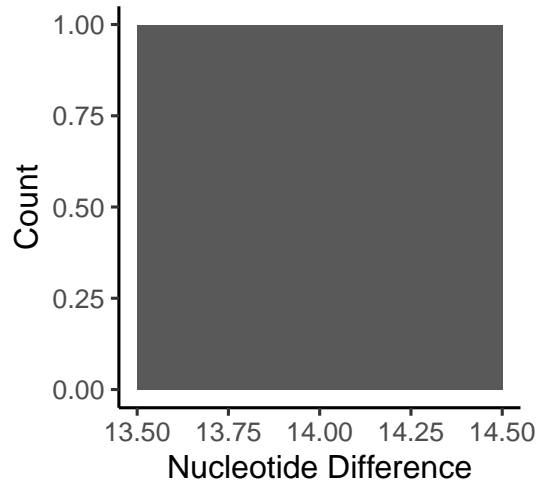
IGHV1-46*01

885 sequences assigned
676 (76.4%) exact matches, in which:
675 unique CDR3
6 unique J



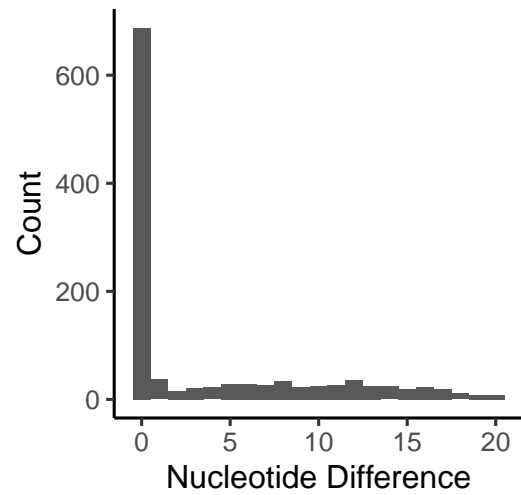
IGHV1-69-2*01

1 sequences assigned
No exact matches.



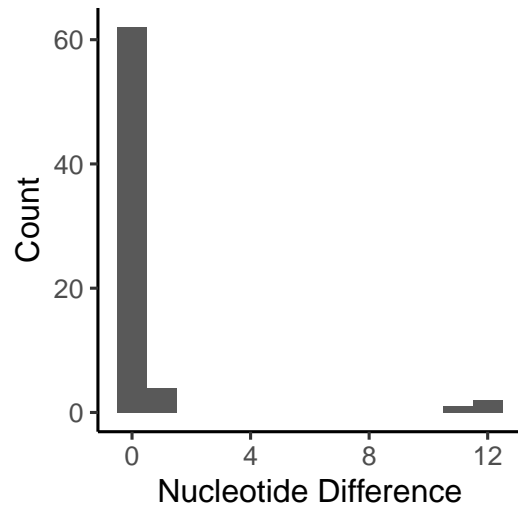
IGHV2-5*01

1308 sequences assigned
688 (52.6%) exact matches, in which:
687 unique CDR3
6 unique J



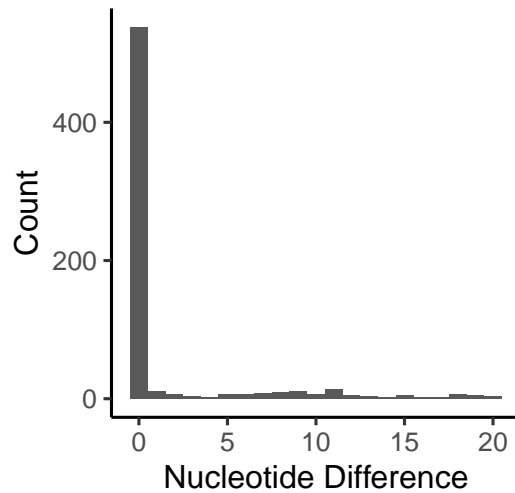
IGHV1-58*02

73 sequences assigned
62 (84.9%) exact matches, in which:
62 unique CDR3
4 unique J



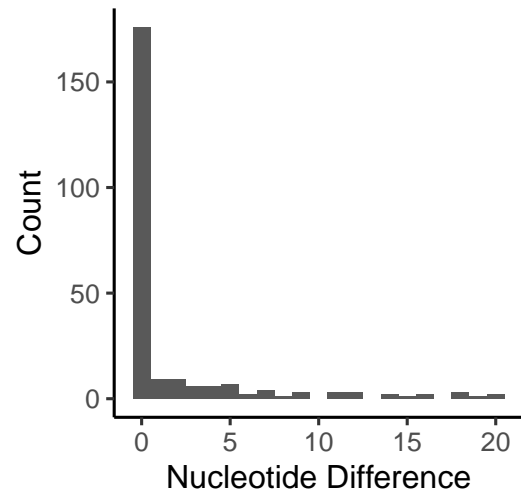
IGHV1-69*17

673 sequences assigned
538 (79.9%) exact matches, in which:
537 unique CDR3
6 unique J



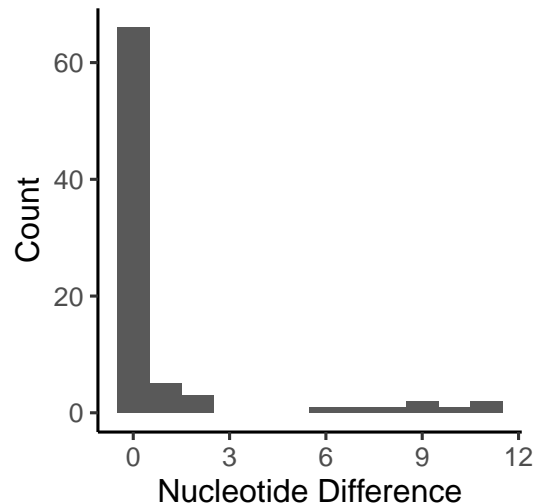
IGHV2-26*01

241 sequences assigned
176 (73%) exact matches, in which:
173 unique CDR3
5 unique J



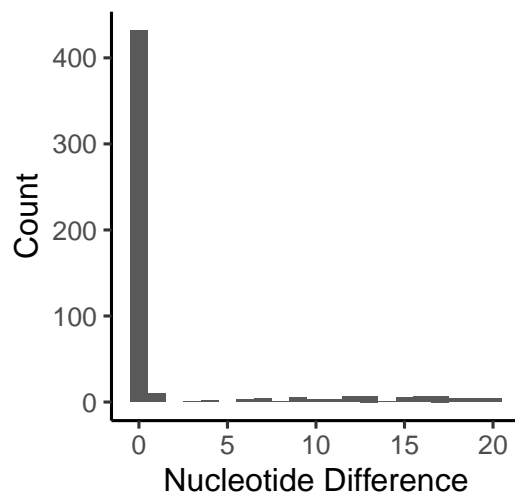
IGHV1-58*01_03

85 sequences assigned
66 (77.6%) exact matches, in which:
66 unique CDR3
6 unique J



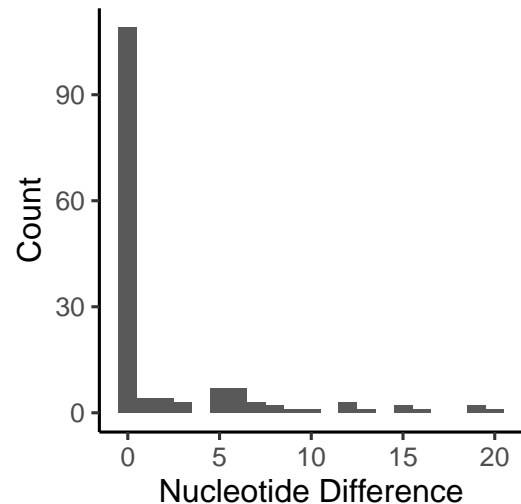
IGHV1-69*04_09_G112A

538 sequences assigned
432 (80.3%) exact matches, in which:
432 unique CDR3
6 unique J



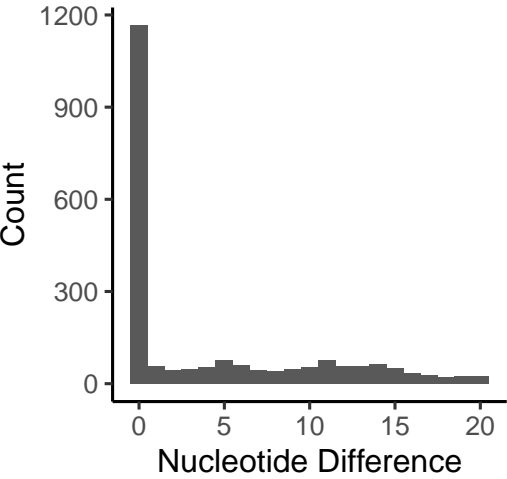
IGHV2-70*01

154 sequences assigned
109 (70.8%) exact matches, in which:
109 unique CDR3
6 unique J



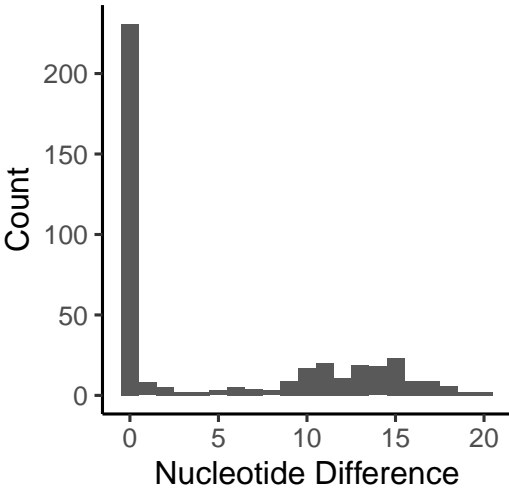
IGHV3-7*01

2191 sequences assigned
1166 (53.2%) exact matches, in which:
1107 unique CDR3
6 unique J



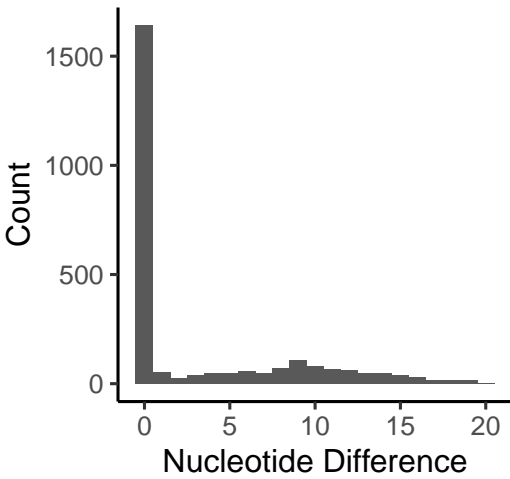
IGHV3-13*01

439 sequences assigned
231 (52.6%) exact matches, in which:
219 unique CDR3
6 unique J



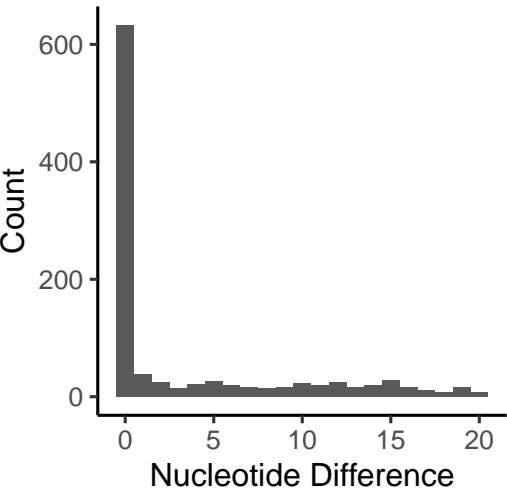
IGHV3-21*01_02

2655 sequences assigned
1641 (61.8%) exact matches, in which:
1527 unique CDR3
6 unique J



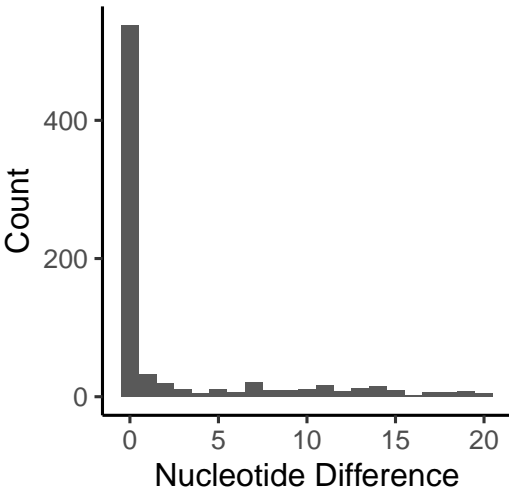
IGHV3-9*01

1054 sequences assigned
633 (60.1%) exact matches, in which:
603 unique CDR3
6 unique J



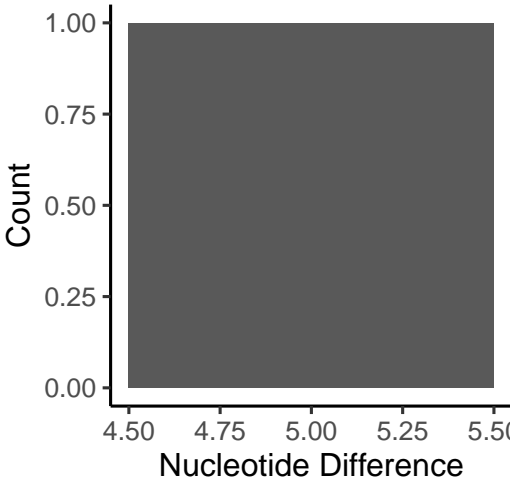
IGHV3-15*01_02

779 sequences assigned
538 (69.1%) exact matches, in which:
497 unique CDR3
6 unique J



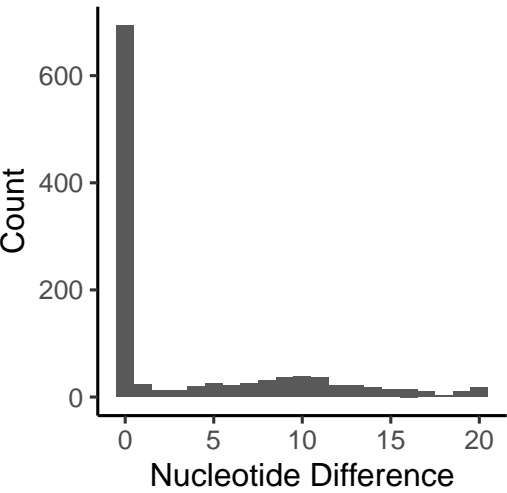
IGHV3-30-3*02

1 sequences assigned
No exact matches.



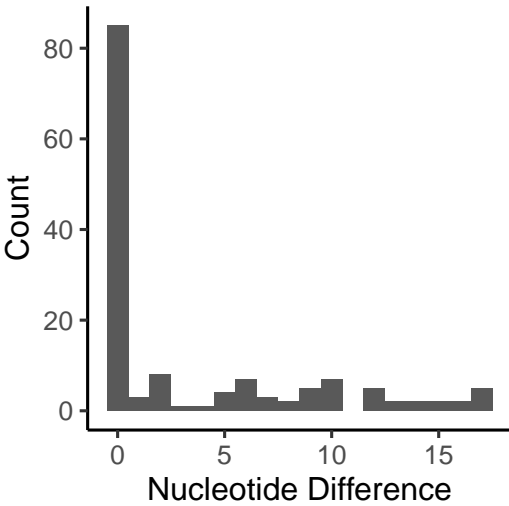
IGHV3-11*01

1148 sequences assigned
694 (60.5%) exact matches, in which:
655 unique CDR3
6 unique J



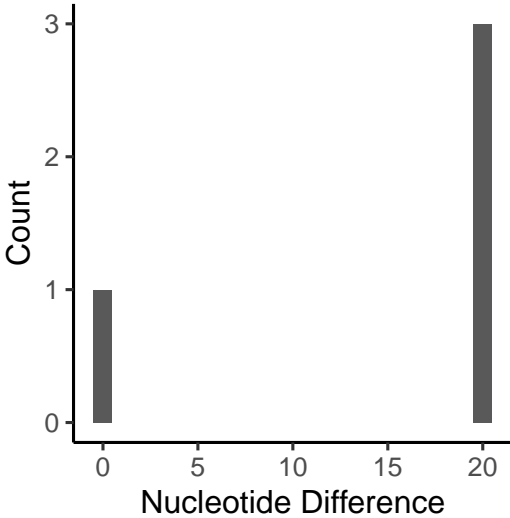
IGHV3-20*01_02

144 sequences assigned
85 (59%) exact matches, in which:
80 unique CDR3
6 unique J



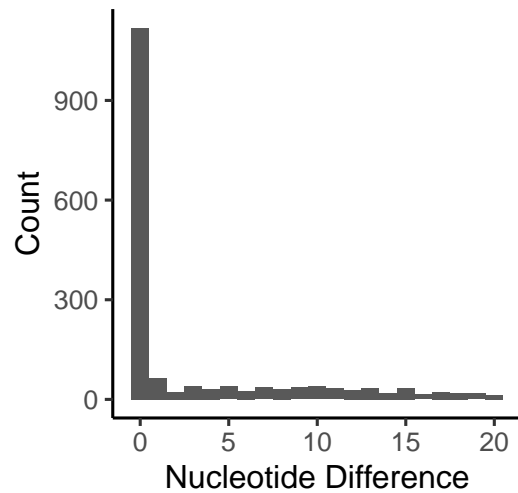
IGHV3-30-3*03

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



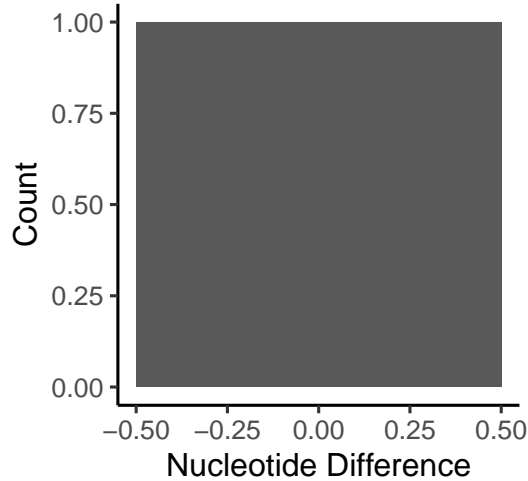
IGHV3–33*01

1804 sequences assigned
1119 (62%) exact matches, in which:
1032 unique CDR3
6 unique J



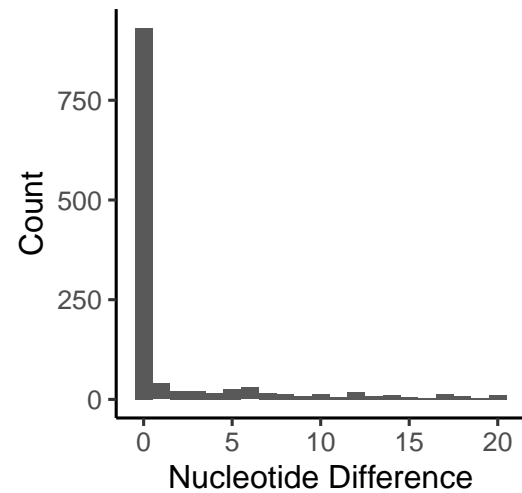
IGHV3–47*02

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



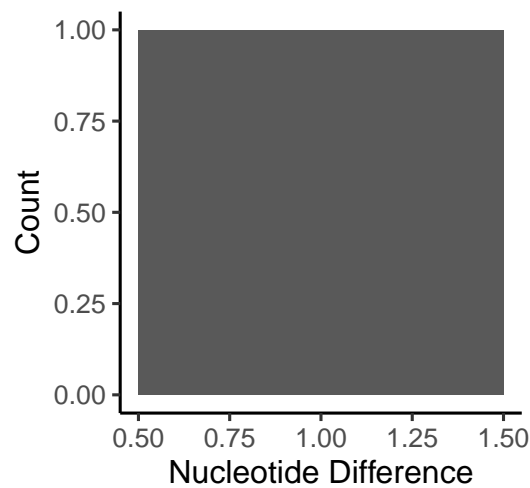
IGHV3–53*01_02

1248 sequences assigned
932 (74.7%) exact matches, in which:
892 unique CDR3
6 unique J



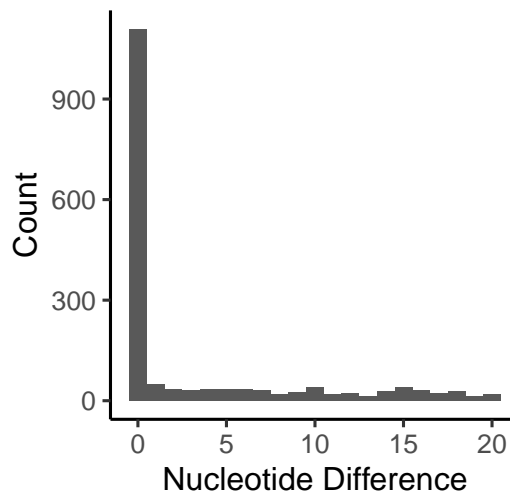
IGHV3–35*01

1 sequences assigned
No exact matches.



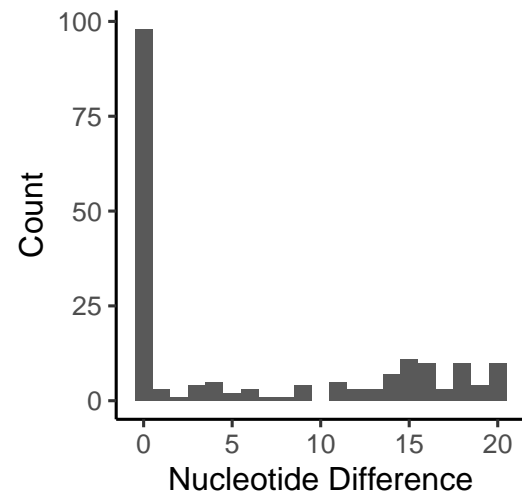
IGHV3–48*02

1743 sequences assigned
1109 (63.6%) exact matches, in which:
1037 unique CDR3
6 unique J



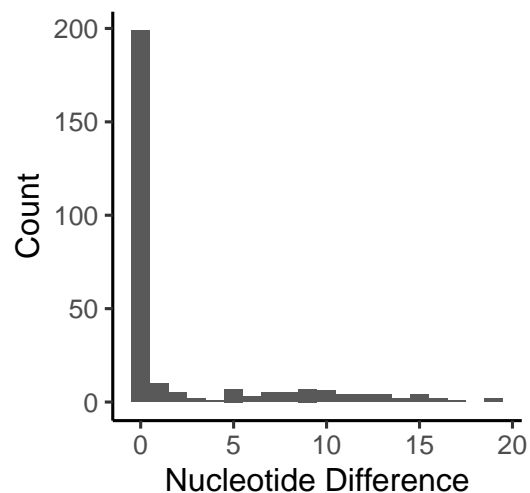
IGHV3–64*01

273 sequences assigned
98 (35.9%) exact matches, in which:
84 unique CDR3
6 unique J



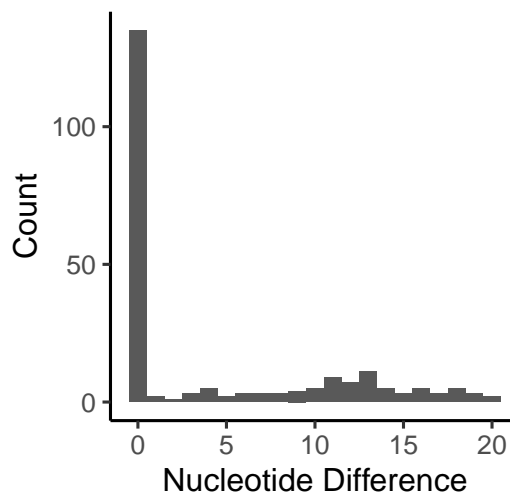
IGHV3–43*01

283 sequences assigned
199 (70.3%) exact matches, in which:
189 unique CDR3
6 unique J



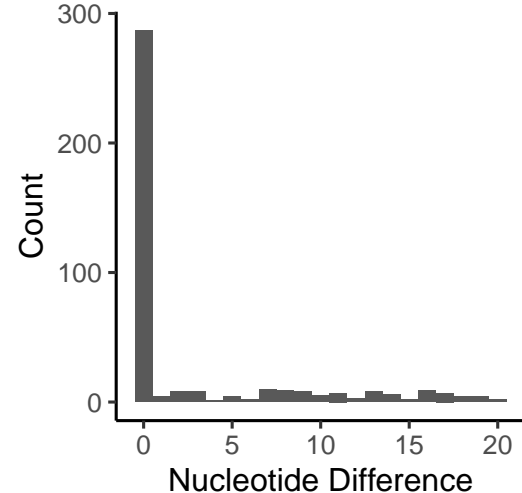
IGHV3–49*03_05

257 sequences assigned
135 (52.5%) exact matches, in which:
133 unique CDR3
5 unique J



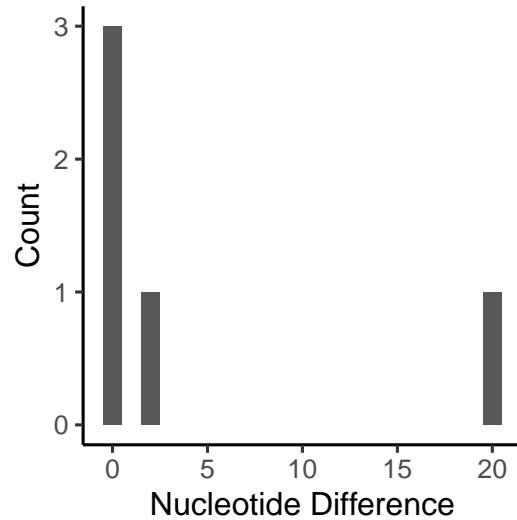
IGHV3–66*02

409 sequences assigned
287 (70.2%) exact matches, in which:
275 unique CDR3
6 unique J



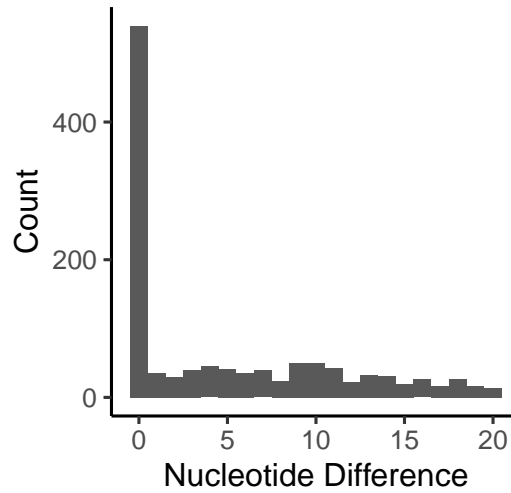
IGHV3-69-1*01

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



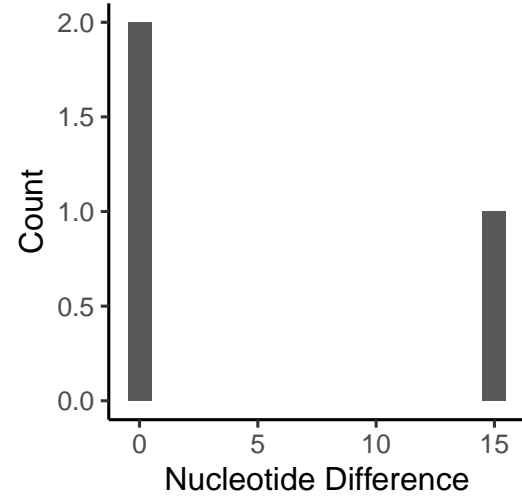
IGHV3-74*01_02

1211 sequences assigned
540 (44.6%) exact matches, in which:
500 unique CDR3
6 unique J



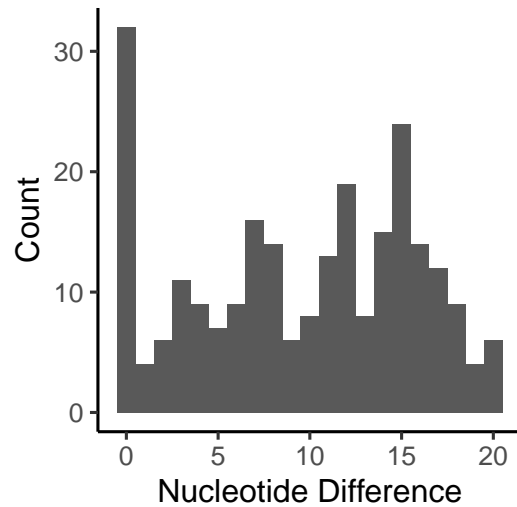
IGHV4-28*03

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



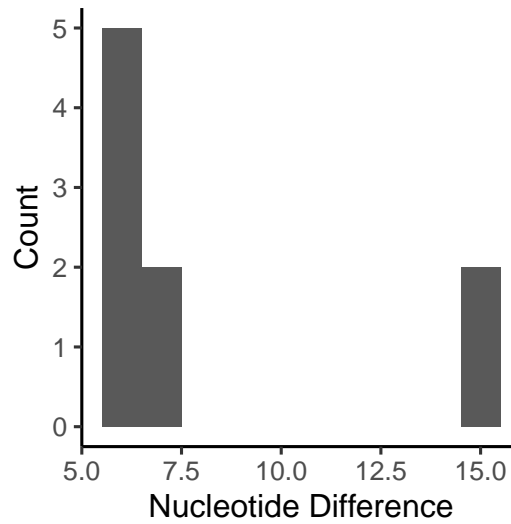
IGHV3-72*01

260 sequences assigned
32 (12.3%) exact matches, in which:
30 unique CDR3
4 unique J



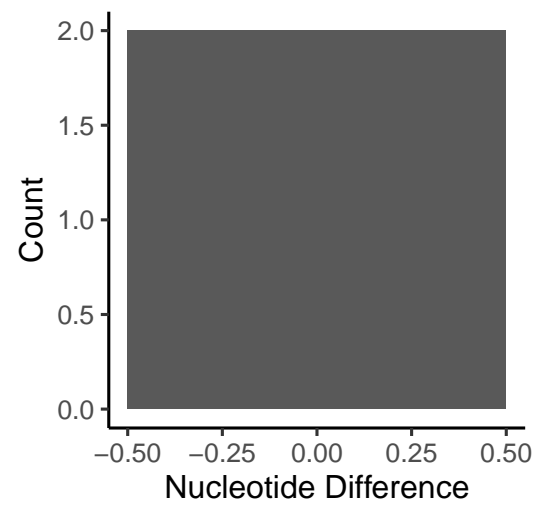
IGHV3-43D*04

9 sequences assigned
No exact matches.



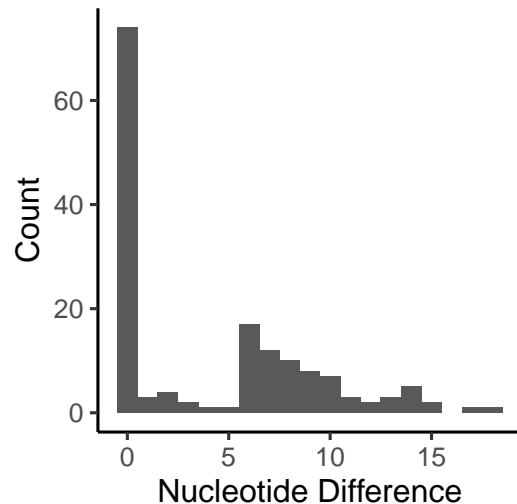
IGHV4-28*01_07

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



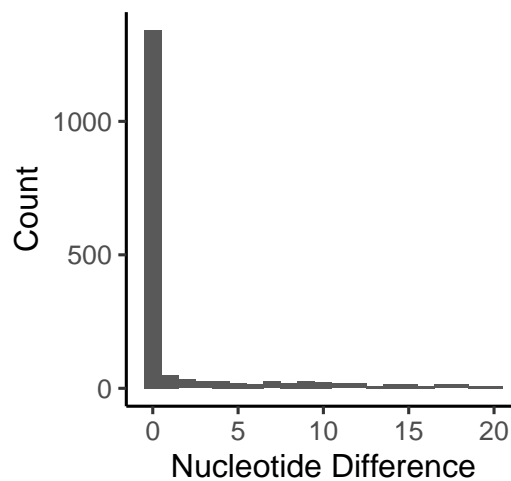
IGHV3-73*01_02

163 sequences assigned
74 (45.4%) exact matches, in which:
70 unique CDR3
5 unique J



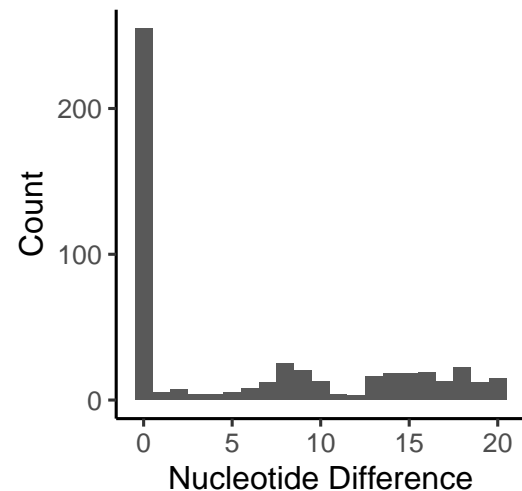
IGHV4-4*07

1805 sequences assigned
1342 (74.3%) exact matches, in which:
1305 unique CDR3
6 unique J



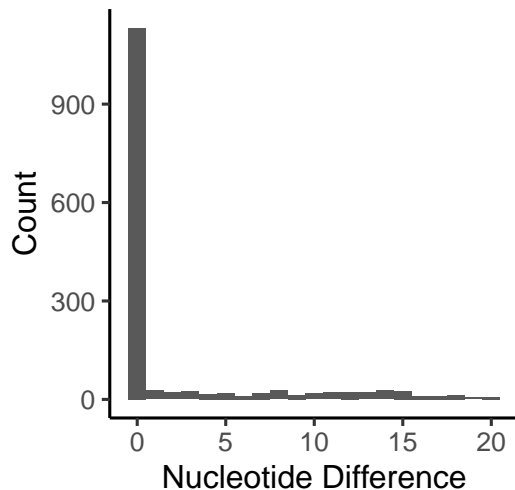
IGHV4-30-2*01

861 sequences assigned
255 (29.6%) exact matches, in which:
246 unique CDR3
6 unique J



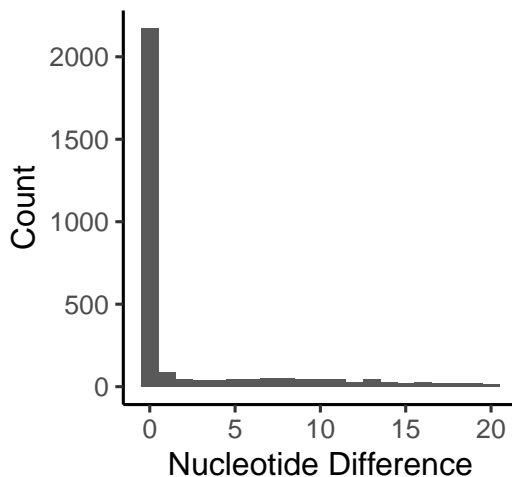
IGHV4-31*03_04

1650 sequences assigned
1133 (68.7%) exact matches, in which:
1102 unique CDR3
6 unique J



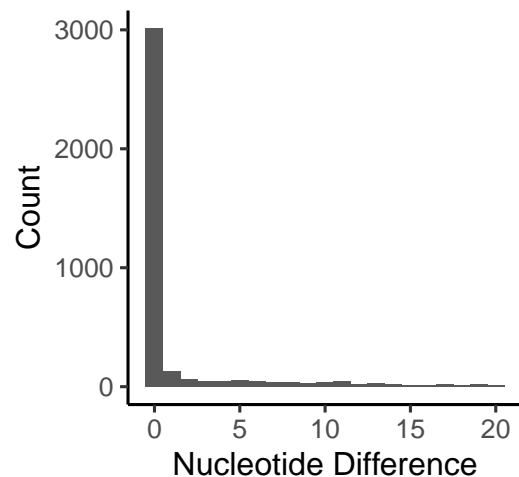
IGHV4-39*01_05

3053 sequences assigned
2172 (71.1%) exact matches, in which:
2068 unique CDR3
6 unique J



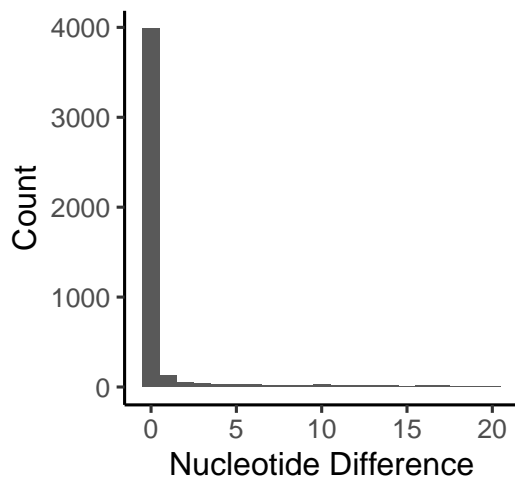
IGHV4-59*01_07

3834 sequences assigned
3012 (78.6%) exact matches, in which:
2886 unique CDR3
6 unique J



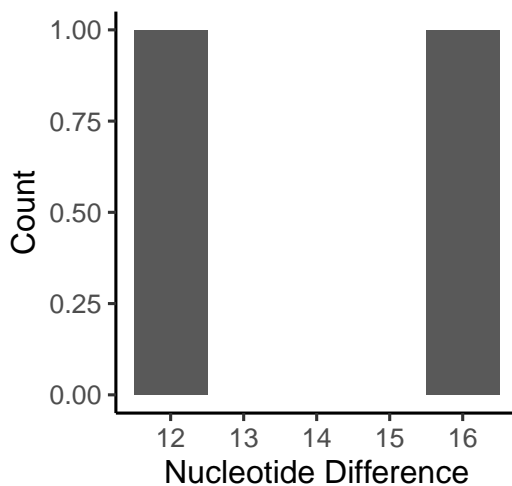
IGHV4-34*01_02

4587 sequences assigned
3985 (86.9%) exact matches, in which:
3860 unique CDR3
6 unique J



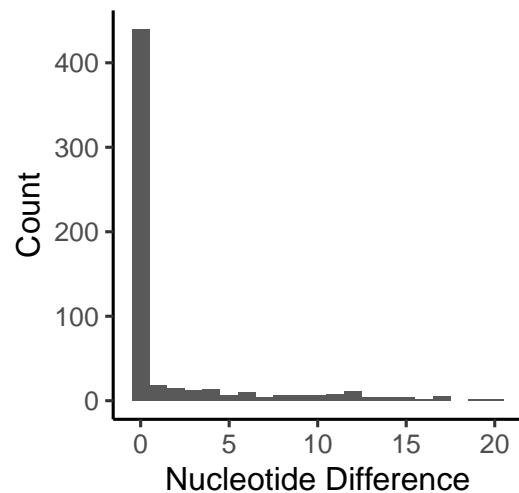
IGHV4-55*02_04_08

2 sequences assigned
No exact matches.



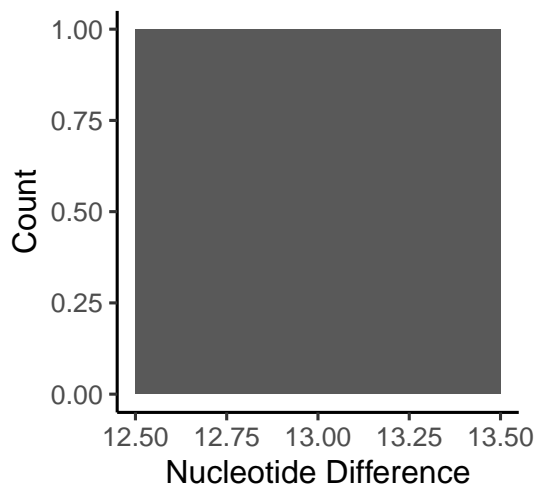
IGHV4-61*01

615 sequences assigned
440 (71.5%) exact matches, in which:
426 unique CDR3
6 unique J



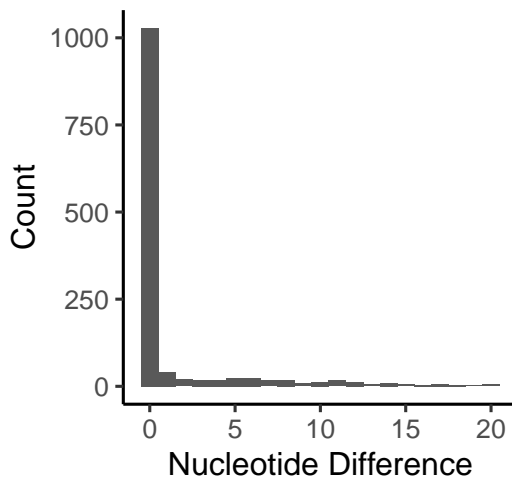
IGHV4-38-2*02

1 sequences assigned
No exact matches.



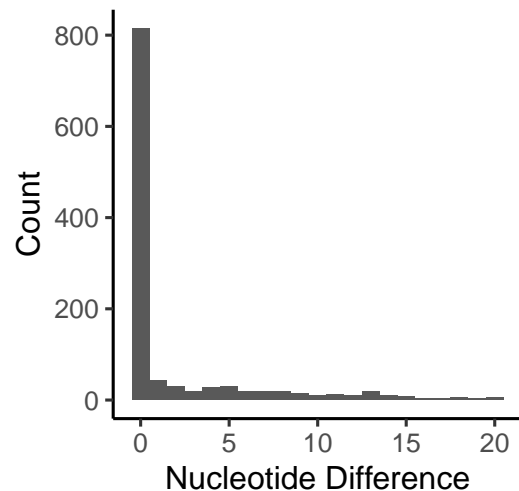
IGHV4-59*08

1333 sequences assigned
1028 (77.1%) exact matches, in which:
991 unique CDR3
6 unique J



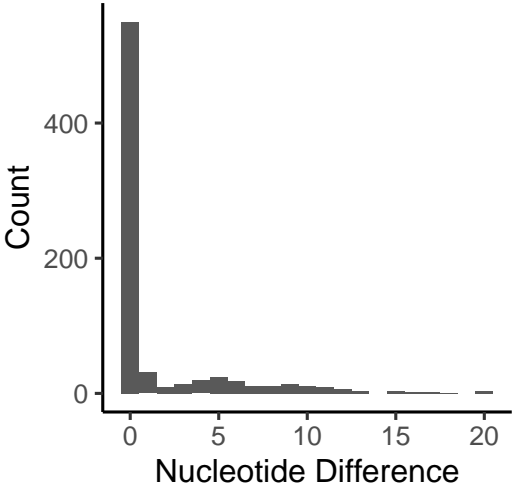
IGHV5-51*01_03

1146 sequences assigned
815 (71.1%) exact matches, in which:
810 unique CDR3
6 unique J



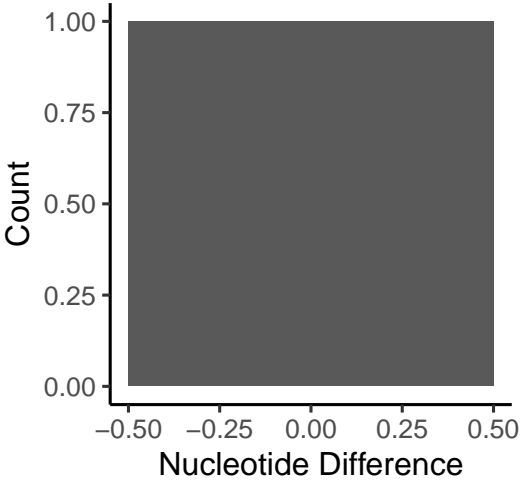
IGHV6-1*01_02

805 sequences assigned
550 (68.3%) exact matches, in which:
547 unique CDR3
6 unique J



IGHV7-4-1*01

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





Novel sequence(s)IGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.