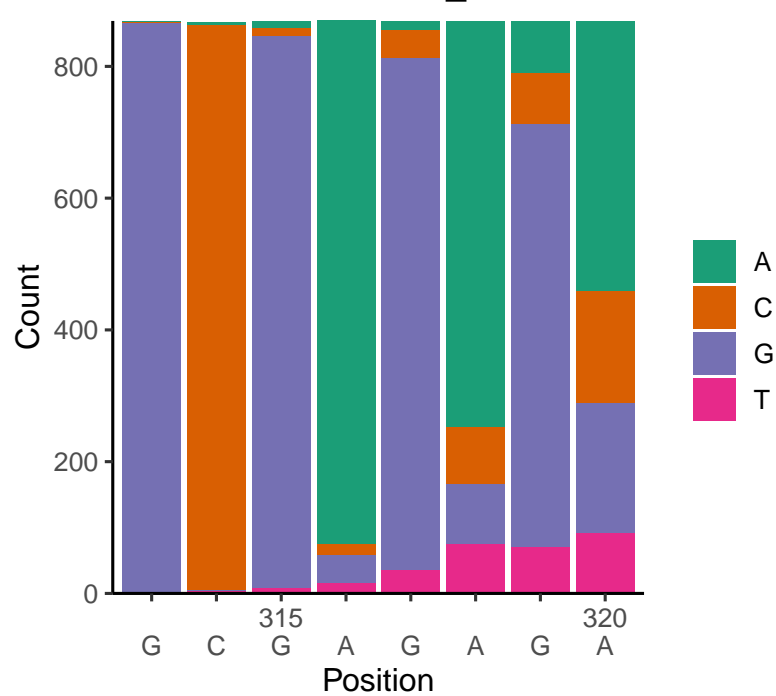
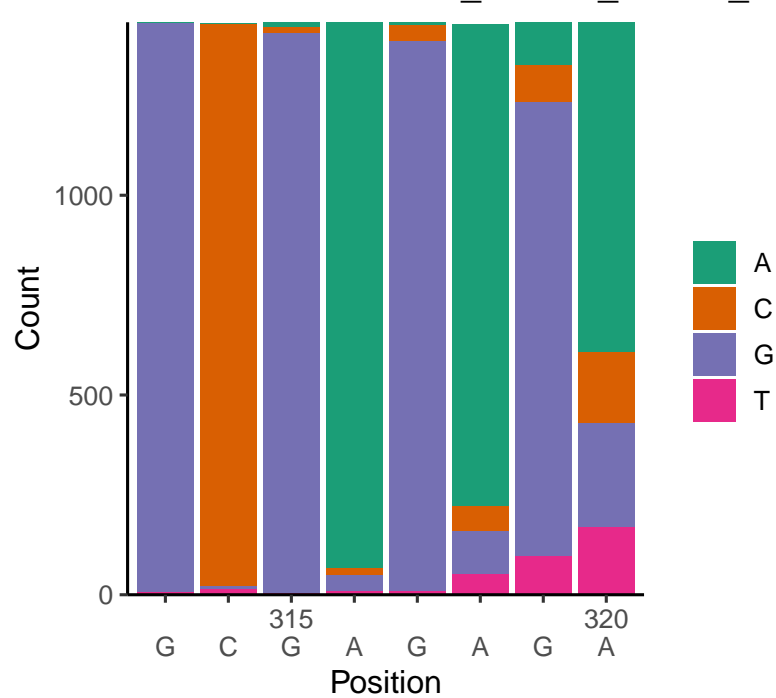


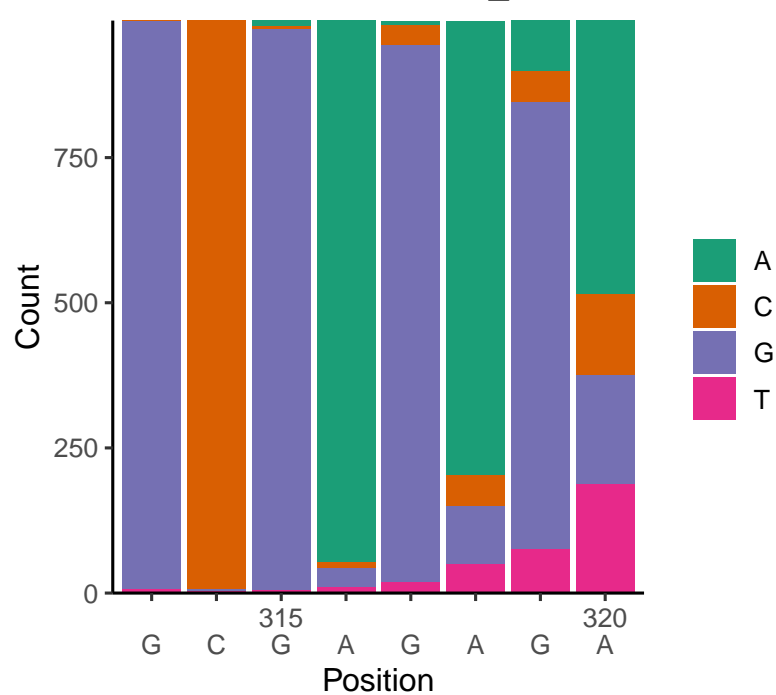
Gene IGHV1-69*08_C191T



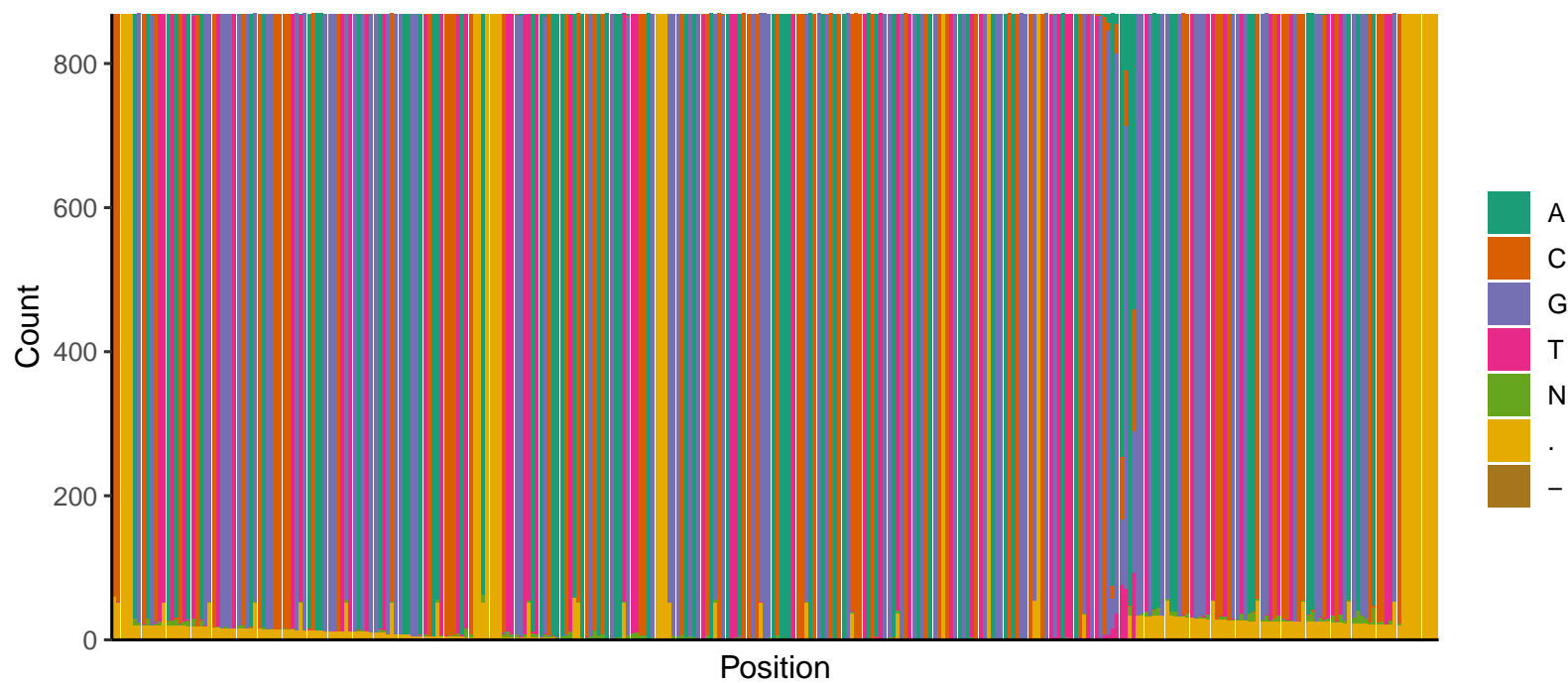
Gene IGHV3-21*01_A184G_T190A_A191C



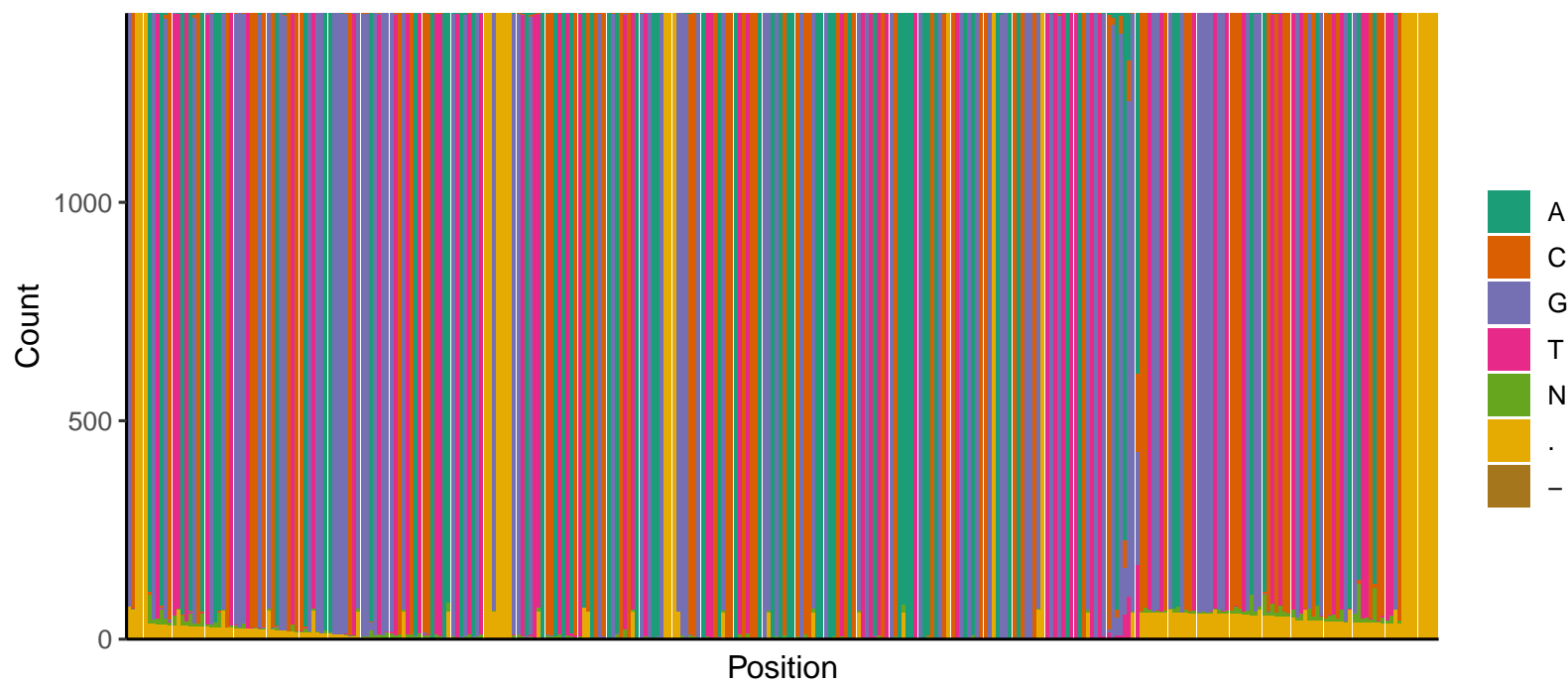
Gene IGHV4-38-2*02_A70G



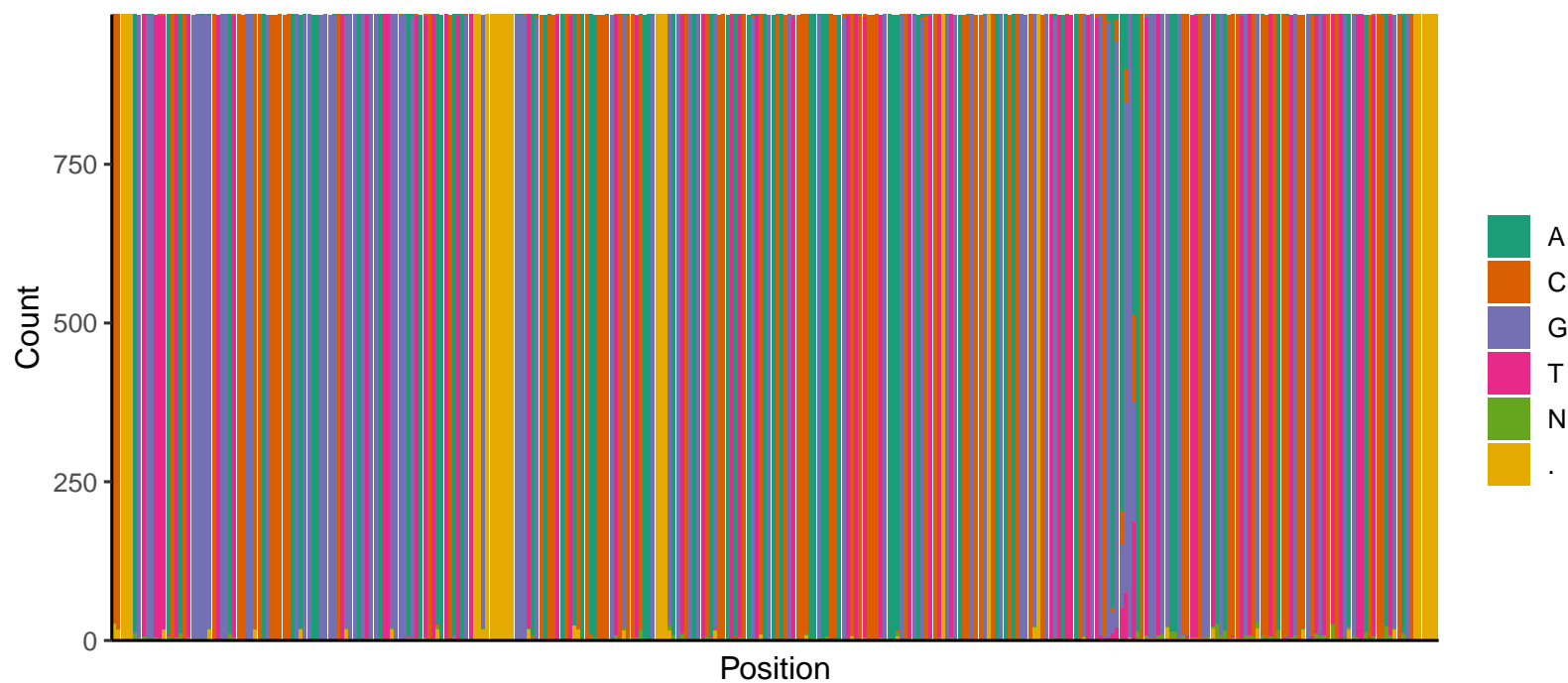
Gene IGHV1-69*08_C191T



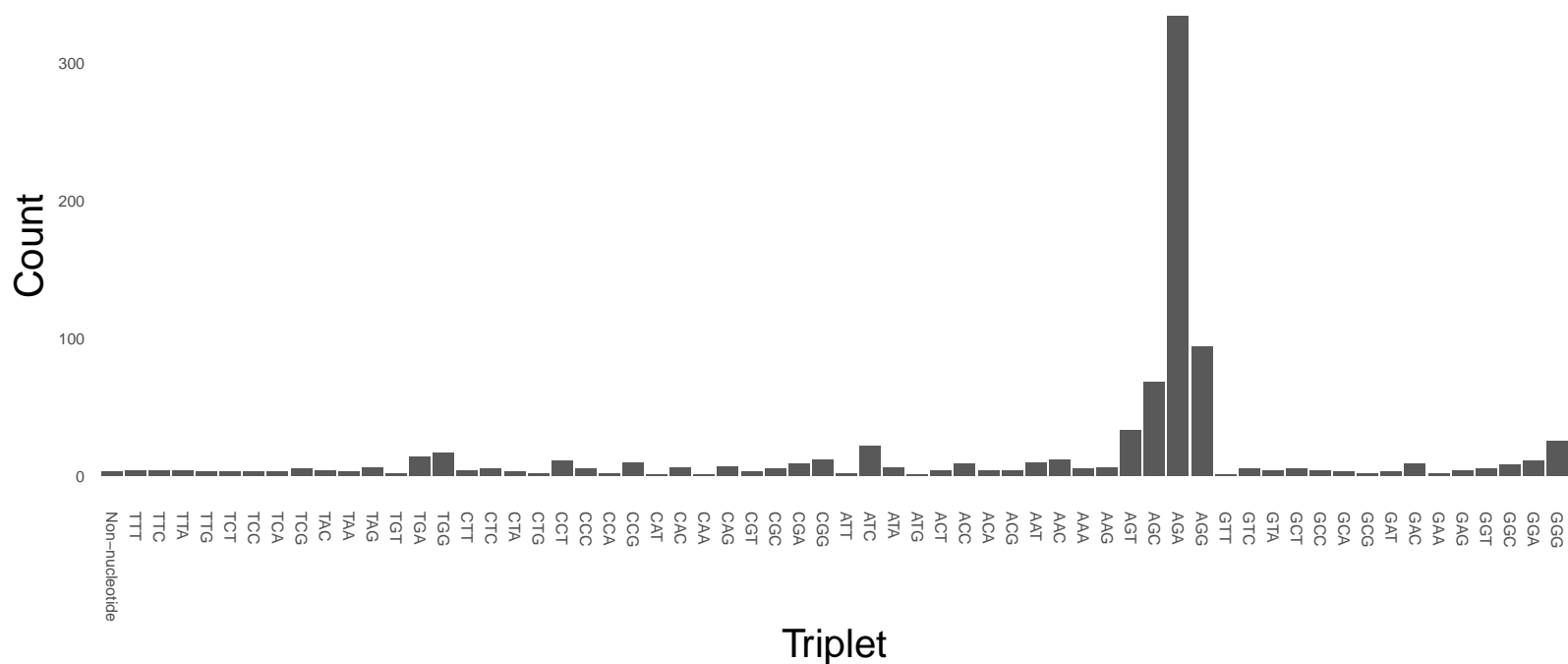
Gene IGHV3-21*01_A184G_T190A_A191C



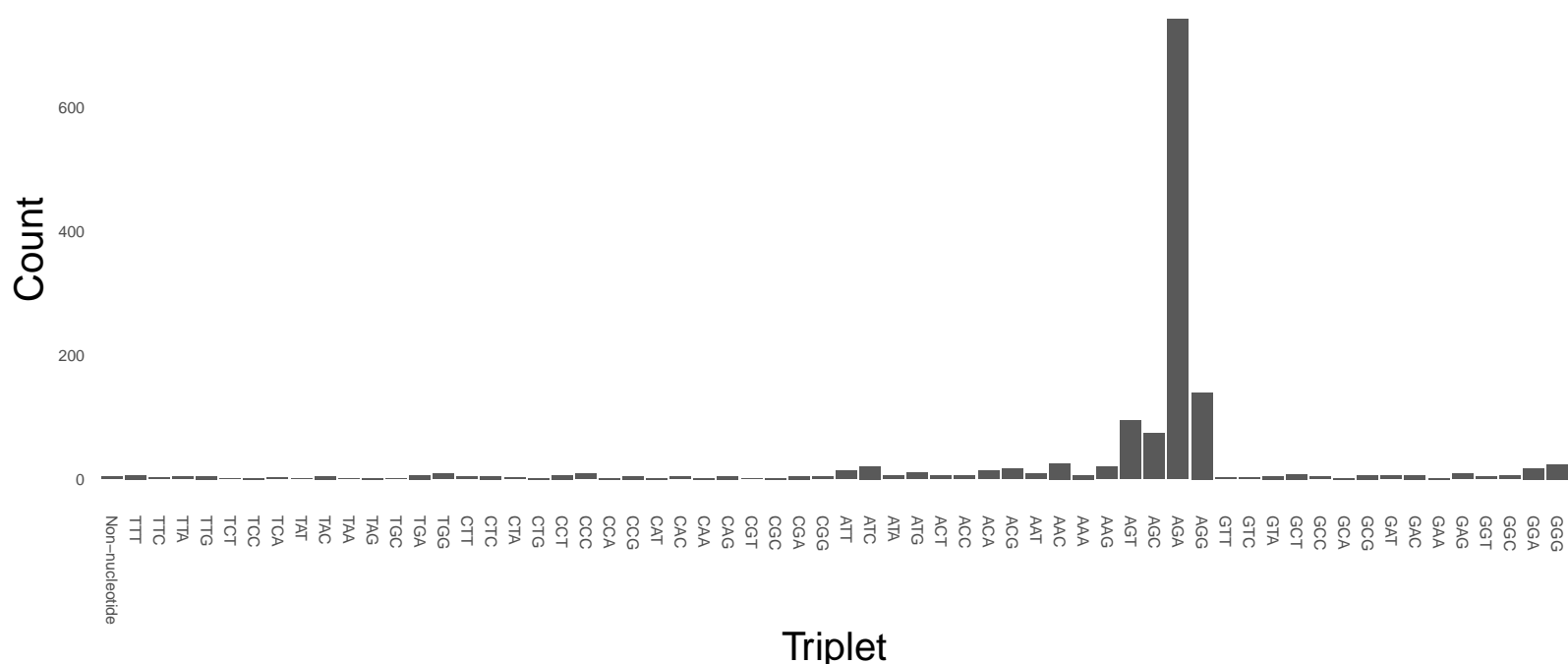
Gene IGHV4-38-2*02_A70G



IGHV1-69*08_C191T- Final 3 nucleotides as a triplet



IGHV3-21*01_A184G_T190A_A191C- Final 3 nucleotides as a triplet

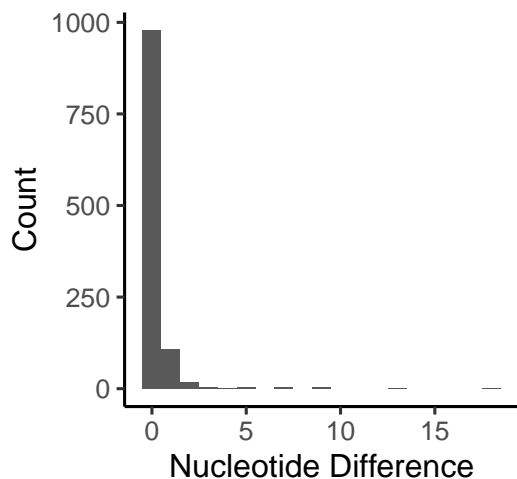


IGHV4-38-2*02_A70G- Final 3 nucleotides as a triplet



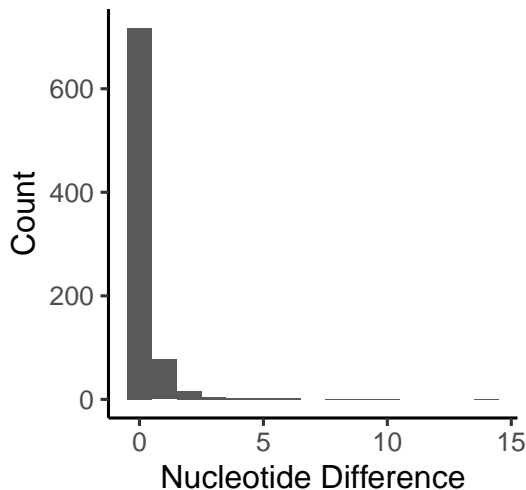
IGHV1-2*04

1127 sequences assigned
978 (86.8%) exact matches, in which:
871 unique CDR3
6 unique J



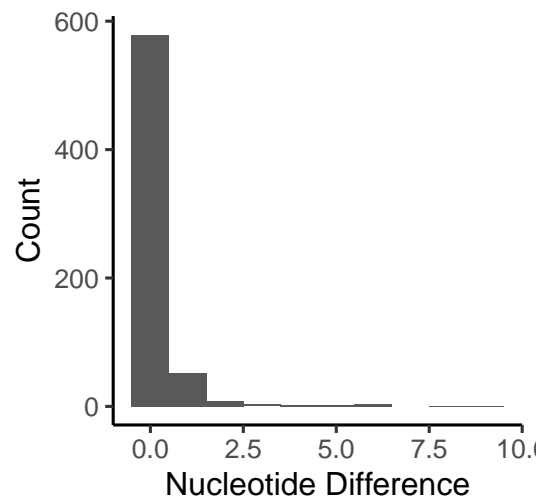
IGHV1-18*04

827 sequences assigned
718 (86.8%) exact matches, in which:
664 unique CDR3
6 unique J



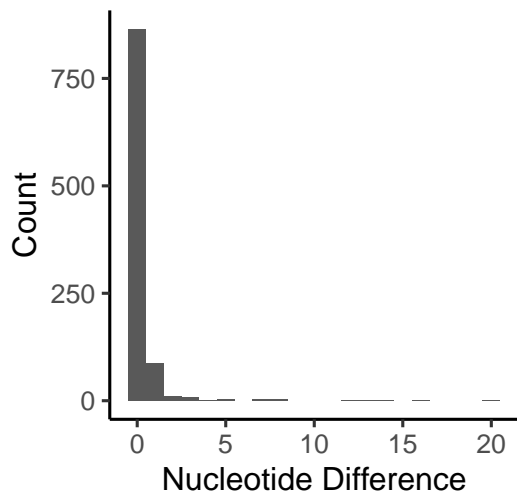
IGHV1-46*01

652 sequences assigned
579 (88.8%) exact matches, in which:
505 unique CDR3
6 unique J



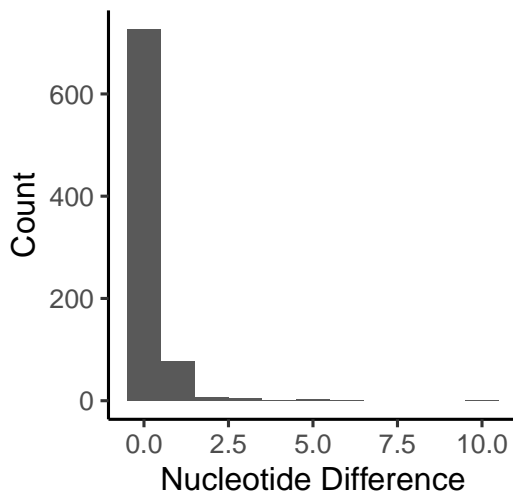
IGHV1-3*01

988 sequences assigned
865 (87.6%) exact matches, in which:
795 unique CDR3
6 unique J



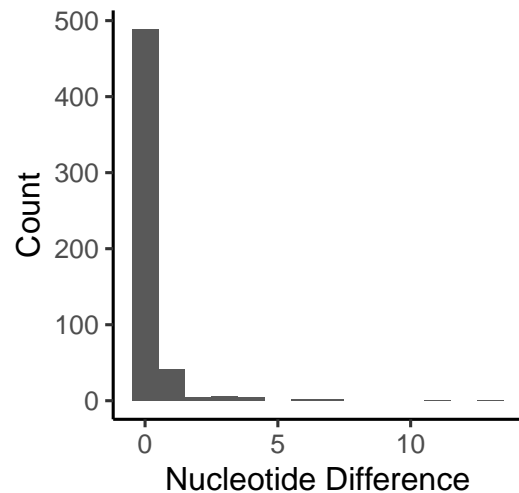
IGHV1-24*01

820 sequences assigned
727 (88.7%) exact matches, in which:
649 unique CDR3
6 unique J



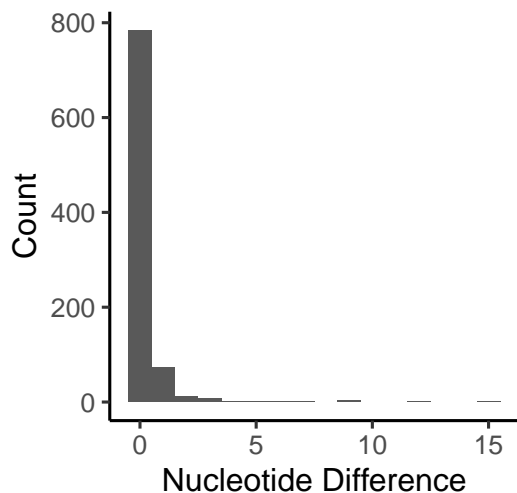
IGHV1-46*03

554 sequences assigned
489 (88.3%) exact matches, in which:
429 unique CDR3
6 unique J



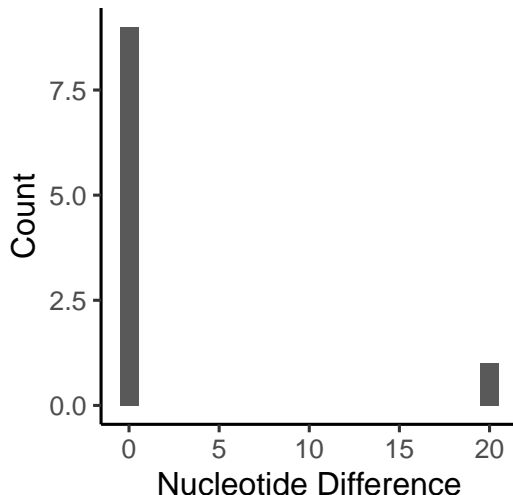
IGHV1-18*01

889 sequences assigned
784 (88.2%) exact matches, in which:
735 unique CDR3
6 unique J



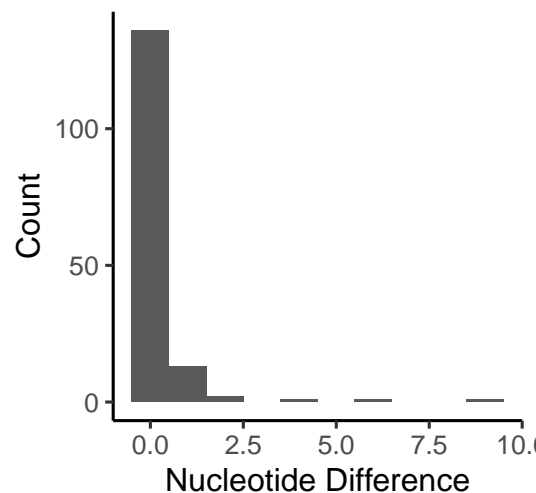
IGHV1-45*02

10 sequences assigned
9 (90%) exact matches, in which:
8 unique CDR3
4 unique J



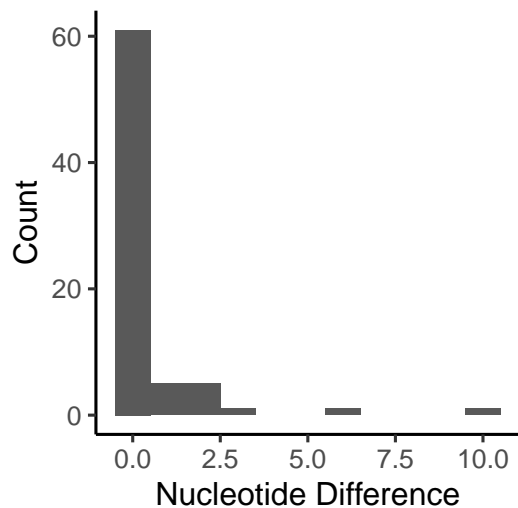
IGHV1-58*01

154 sequences assigned
136 (88.3%) exact matches, in which:
127 unique CDR3
5 unique J



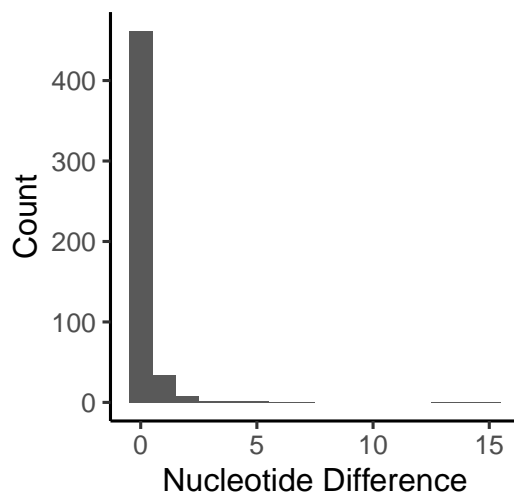
IGHV1-58*02

74 sequences assigned
61 (82.4%) exact matches, in which:
56 unique CDR3
5 unique J



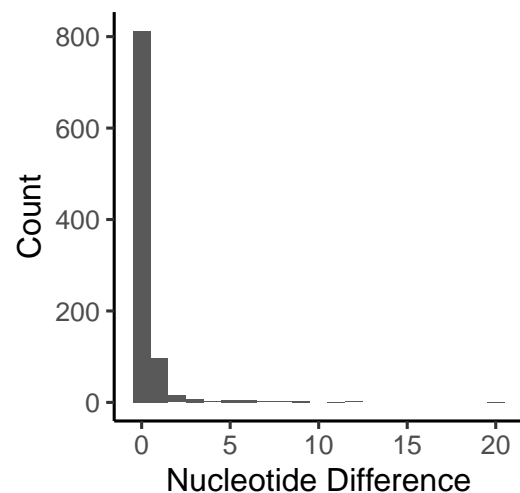
IGHV2-26*01

515 sequences assigned
462 (89.7%) exact matches, in which:
435 unique CDR3
6 unique J



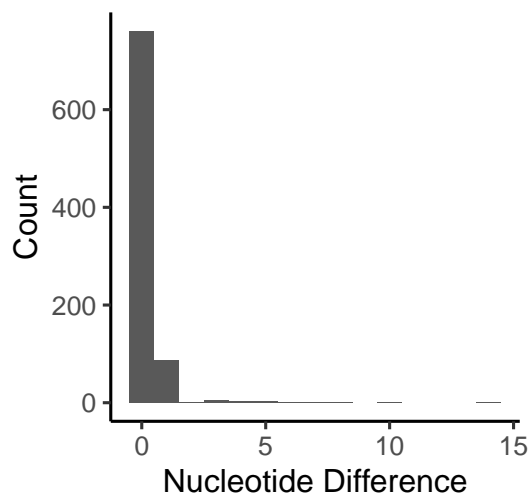
IGHV3-7*03

959 sequences assigned
813 (84.8%) exact matches, in which:
746 unique CDR3
6 unique J



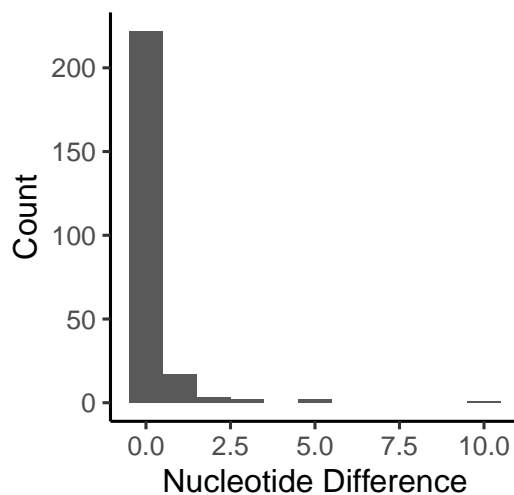
IGHV1-69*08_C191T

869 sequences assigned
761 (87.6%) exact matches, in which:
683 unique CDR3
6 unique J



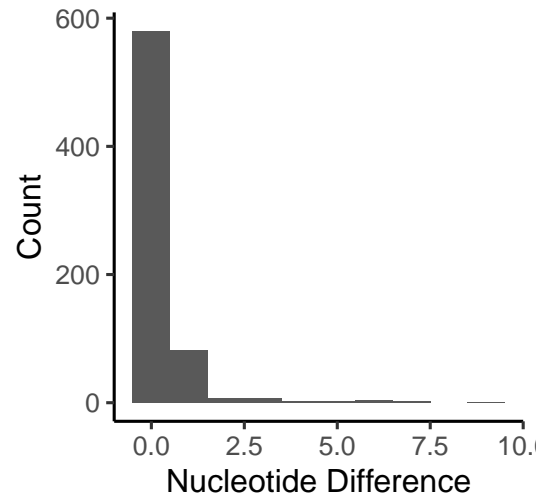
IGHV2-70*01

247 sequences assigned
222 (89.9%) exact matches, in which:
211 unique CDR3
5 unique J



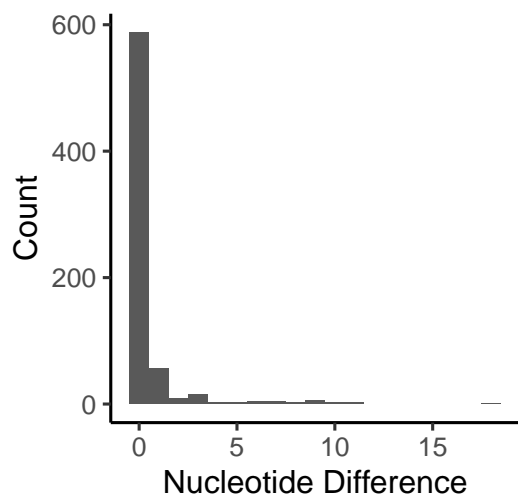
IGHV3-11*06

691 sequences assigned
580 (83.9%) exact matches, in which:
531 unique CDR3
6 unique J



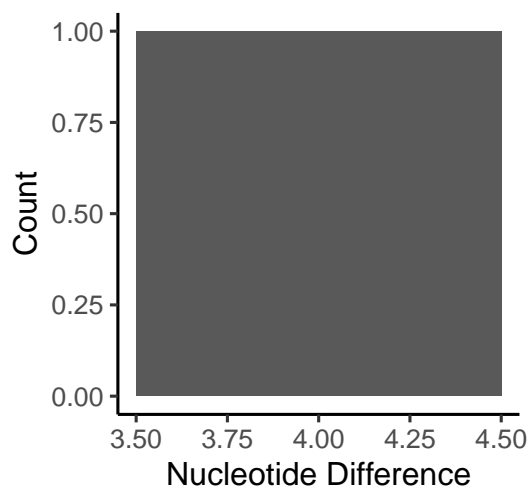
IGHV2-5*02

695 sequences assigned
588 (84.6%) exact matches, in which:
541 unique CDR3
6 unique J



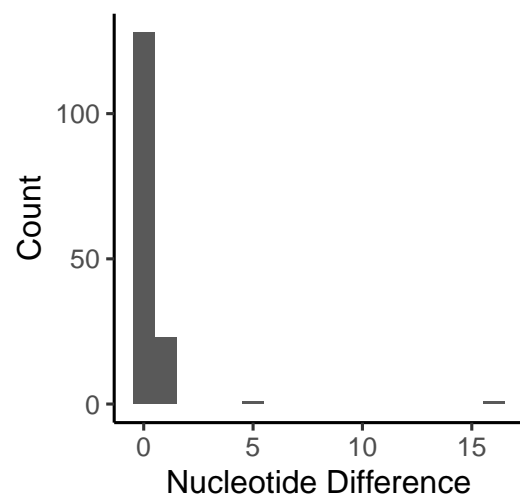
IGHV2-70D*04

1 sequences assigned
No exact matches.



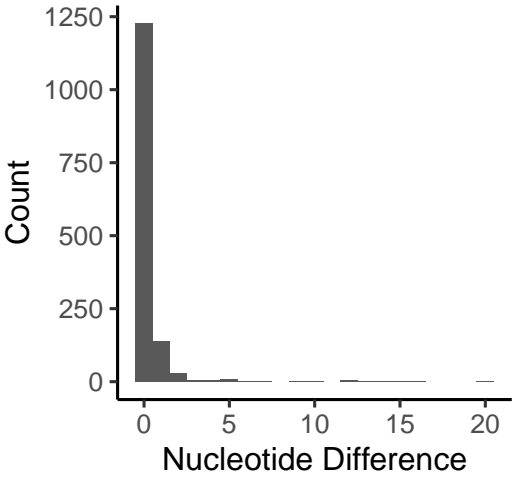
IGHV3-13*05

153 sequences assigned
128 (83.7%) exact matches, in which:
115 unique CDR3
5 unique J



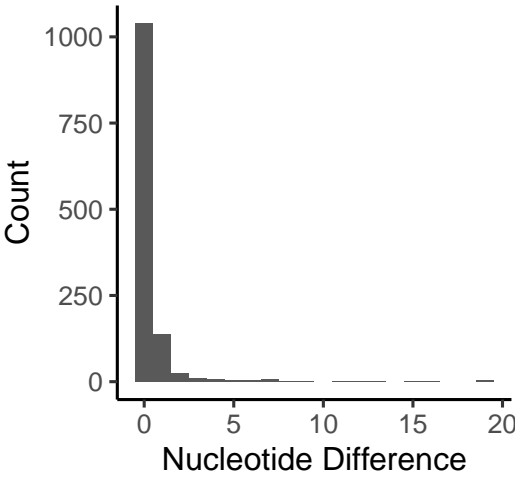
IGHV3-15*01

1432 sequences assigned
1227 (85.7%) exact matches, in which:
1129 unique CDR3
6 unique J



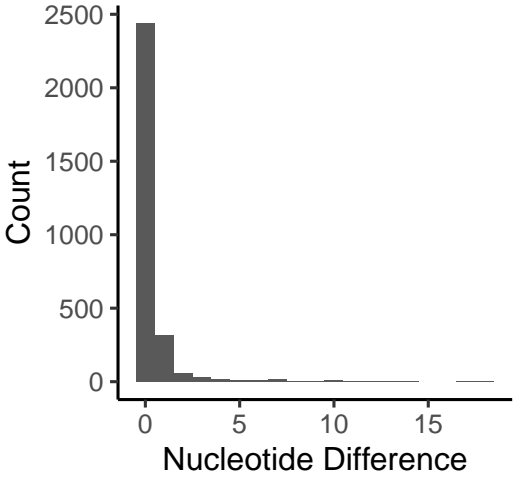
IGHV3-21*01

1244 sequences assigned
1039 (83.5%) exact matches, in which:
938 unique CDR3
6 unique J



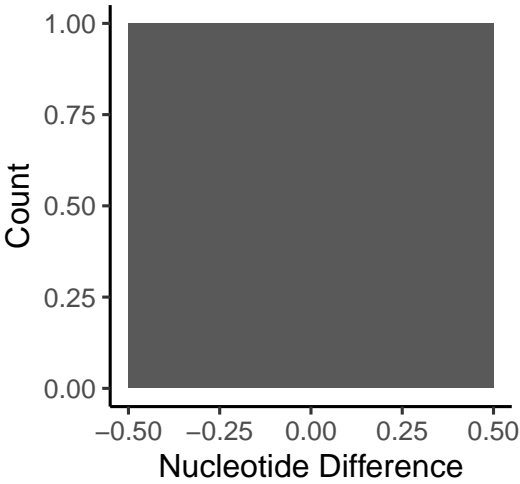
IGHV3-30*01

2919 sequences assigned
2438 (83.5%) exact matches, in which:
2257 unique CDR3
6 unique J



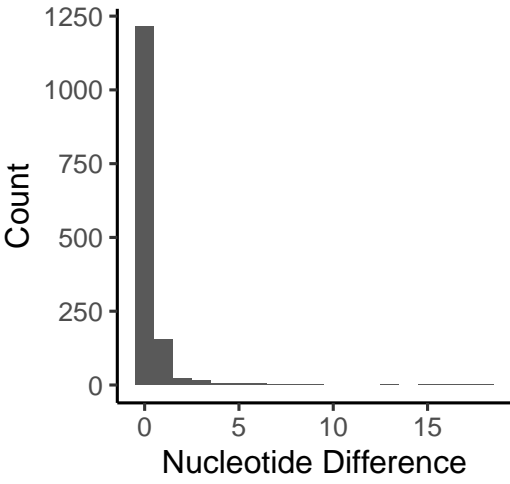
IGHV3-19*01

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



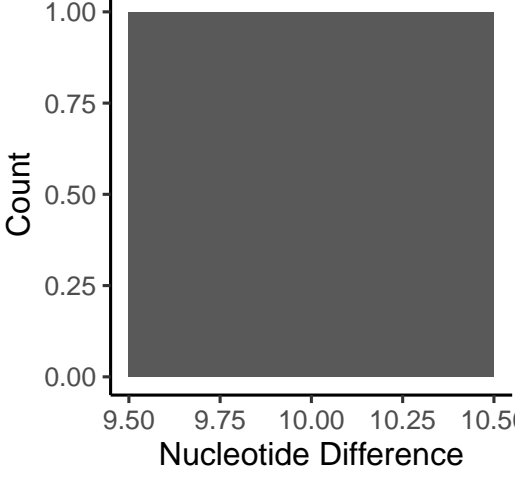
IGHV3-21*01_A184G_T

1433 sequences assigned
1214 (84.7%) exact matches, in which:
1079 unique CDR3
6 unique J



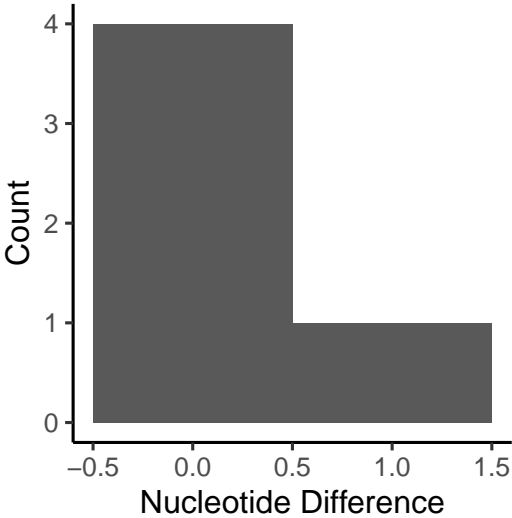
IGHV3-30-3*01

1 sequences assigned
No exact matches.



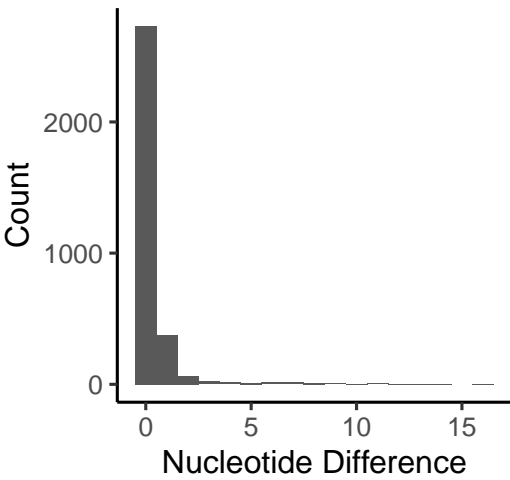
IGHV3-20*02

5 sequences assigned
4 (80%) exact matches, in which:
4 unique CDR3
2 unique J



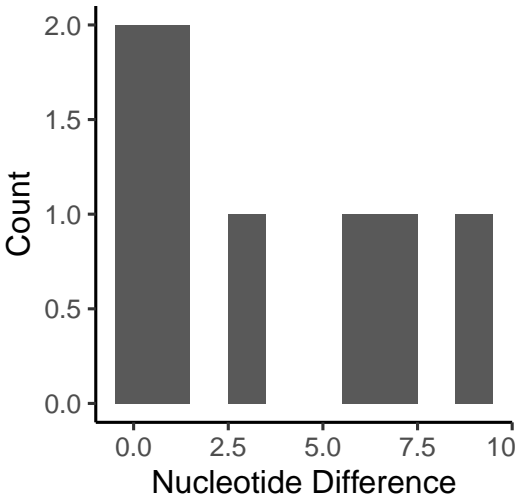
IGHV3-23*04

3285 sequences assigned
2731 (83.1%) exact matches, in which:
2483 unique CDR3
6 unique J



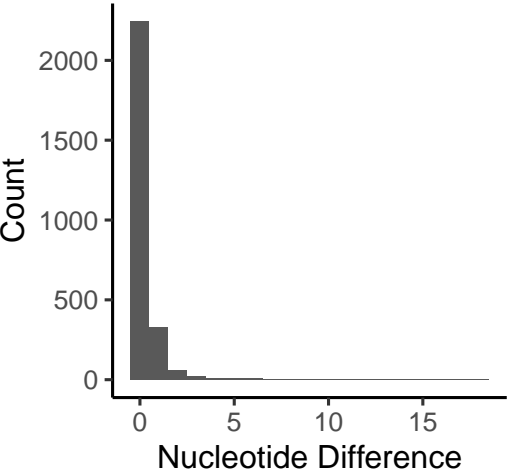
IGHV3-30-3*03

8 sequences assigned
2 (25%) exact matches, in which:
2 unique CDR3
2 unique J



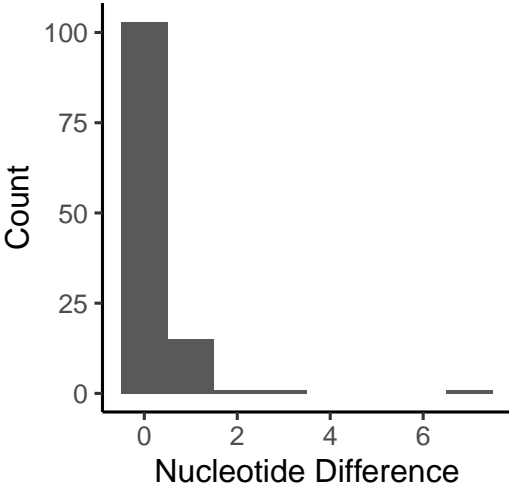
IGHV3-33*01

2712 sequences assigned
2244 (82.7%) exact matches, in which:
2019 unique CDR3
6 unique J



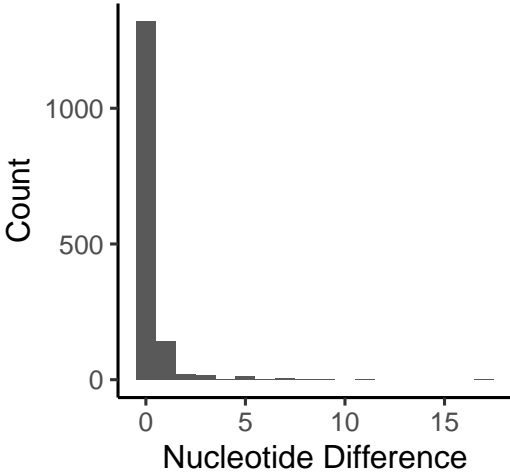
IGHV3-43*01

121 sequences assigned
103 (85.1%) exact matches, in which:
96 unique CDR3
6 unique J



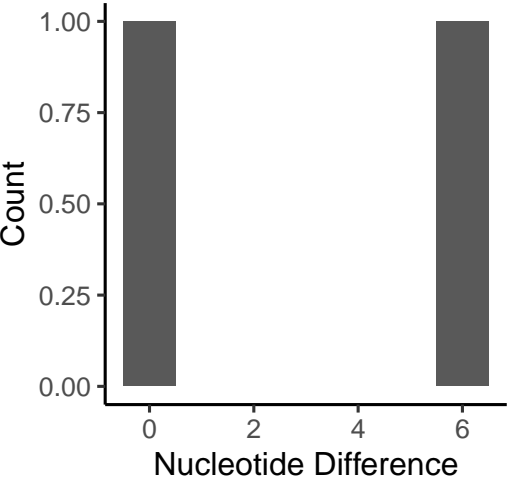
IGHV3-48*03

1526 sequences assigned
1320 (86.5%) exact matches, in which:
1212 unique CDR3
6 unique J



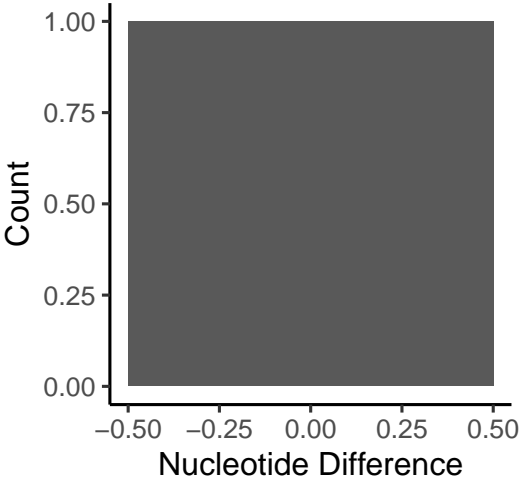
IGHV3-35*01

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



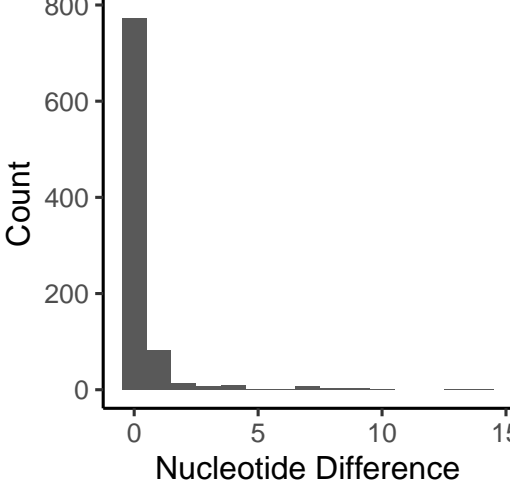
IGHV3-47*02

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



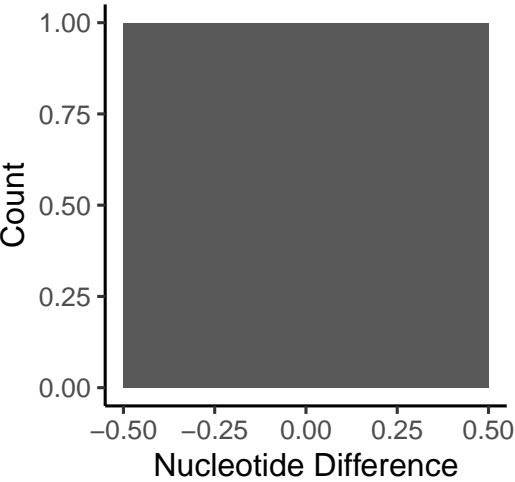
IGHV3-49*04

908 sequences assigned
773 (85.1%) exact matches, in which:
682 unique CDR3
6 unique J



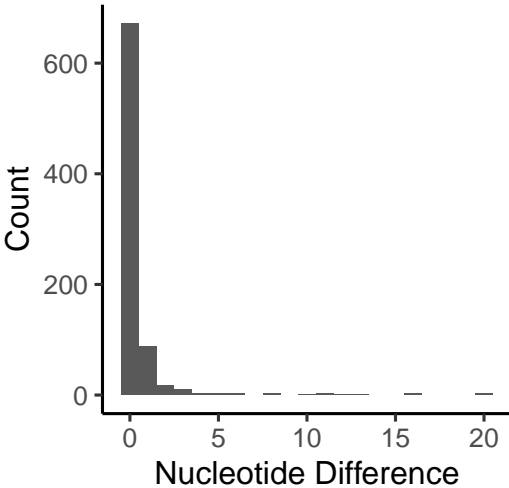
IGHV3-38-3*01

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



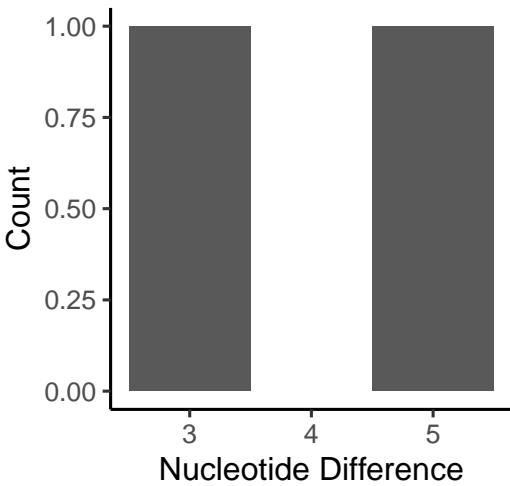
IGHV3-48*02

806 sequences assigned
672 (83.4%) exact matches, in which:
614 unique CDR3
6 unique J



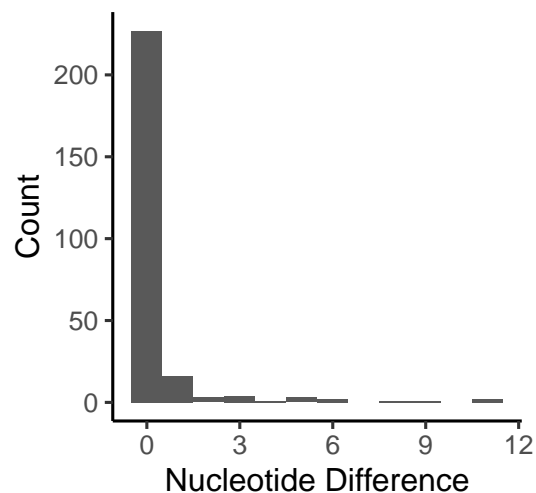
IGHV3-52*01

3 sequences assigned
No exact matches.



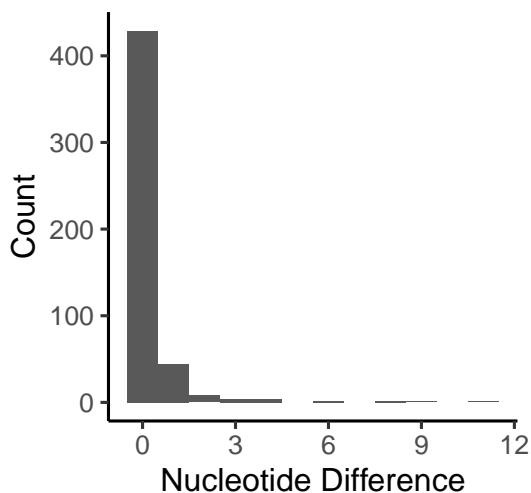
IGHV3–53*02

260 sequences assigned
227 (87.3%) exact matches, in which:
206 unique CDR3
5 unique J



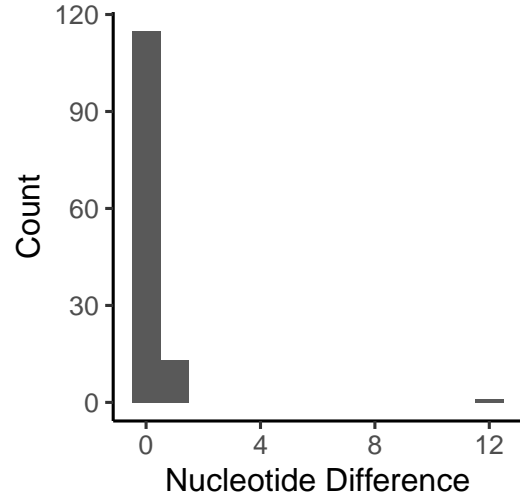
IGHV3–66*02

495 sequences assigned
429 (86.7%) exact matches, in which:
378 unique CDR3
6 unique J



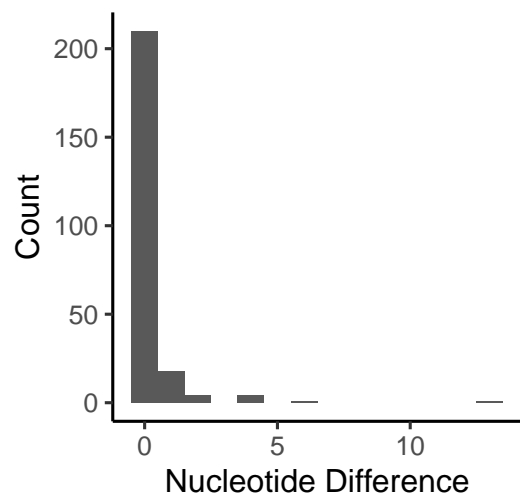
IGHV3–73*02

129 sequences assigned
115 (89.1%) exact matches, in which:
106 unique CDR3
5 unique J



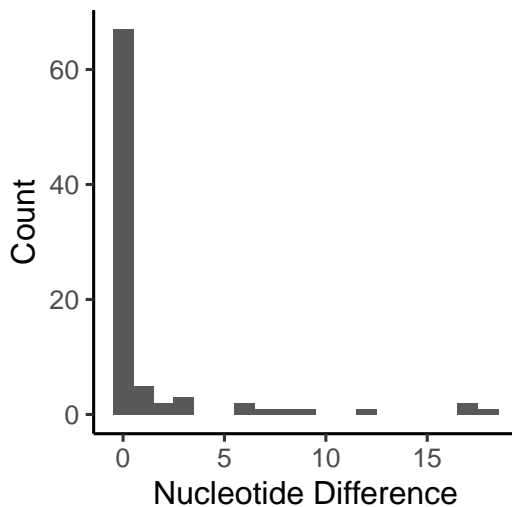
IGHV3–53*04

238 sequences assigned
210 (88.2%) exact matches, in which:
193 unique CDR3
6 unique J



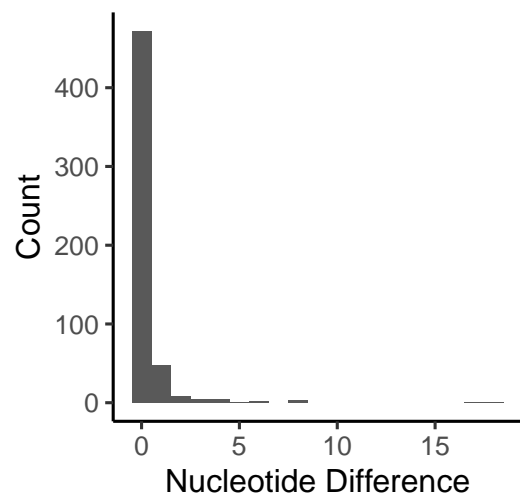
IGHV3–72*01

87 sequences assigned
67 (77%) exact matches, in which:
61 unique CDR3
5 unique J



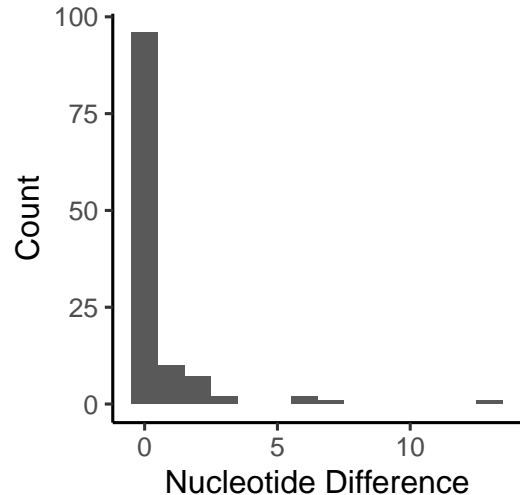
IGHV3–74*01

548 sequences assigned
472 (86.1%) exact matches, in which:
435 unique CDR3
6 unique J



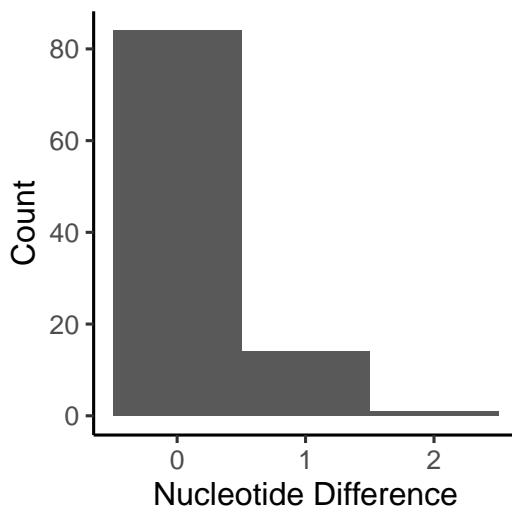
IGHV3–64*01

119 sequences assigned
96 (80.7%) exact matches, in which:
85 unique CDR3
6 unique J



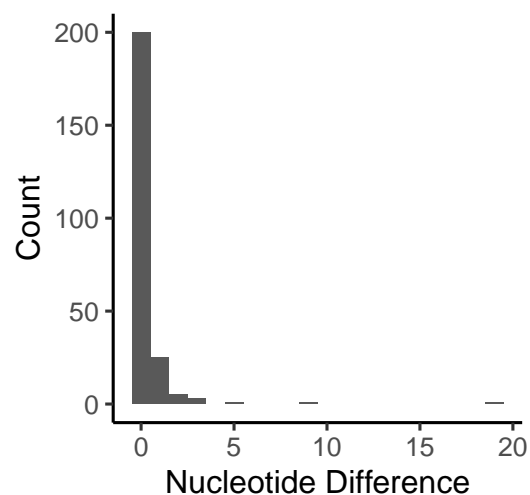
IGHV3–73*01

99 sequences assigned
84 (84.8%) exact matches, in which:
79 unique CDR3
5 unique J



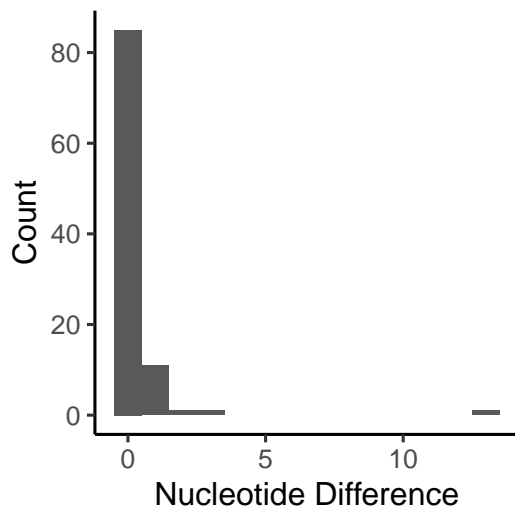
IGHV3–43D*03

240 sequences assigned
200 (83.3%) exact matches, in which:
182 unique CDR3
6 unique J



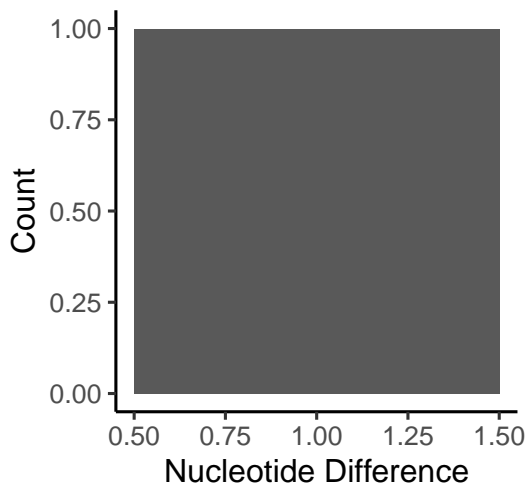
IGHV3-43D*04

99 sequences assigned
85 (85.9%) exact matches, in which:
77 unique CDR3
5 unique J



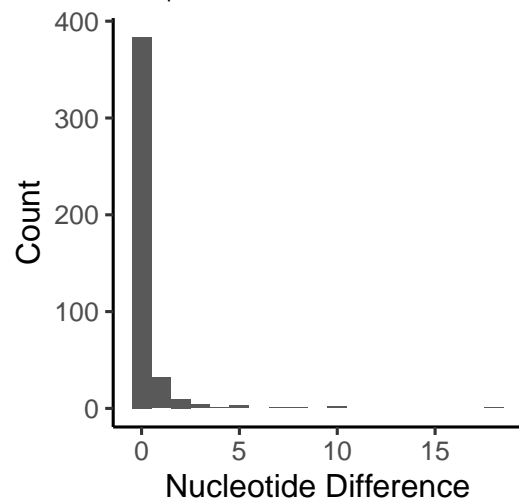
IGHV4-28*04

1 sequences assigned
No exact matches.



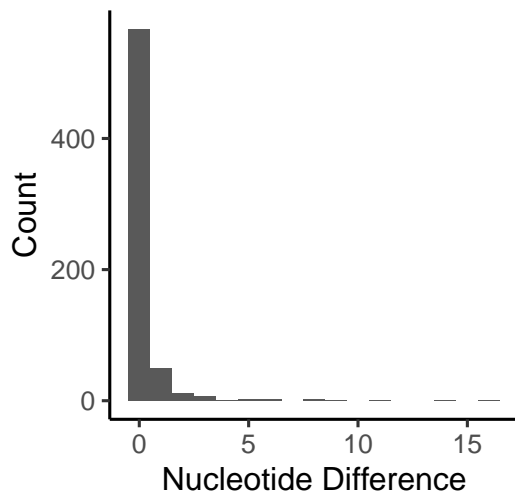
IGHV4-31*01

439 sequences assigned
384 (87.5%) exact matches, in which:
351 unique CDR3
6 unique J



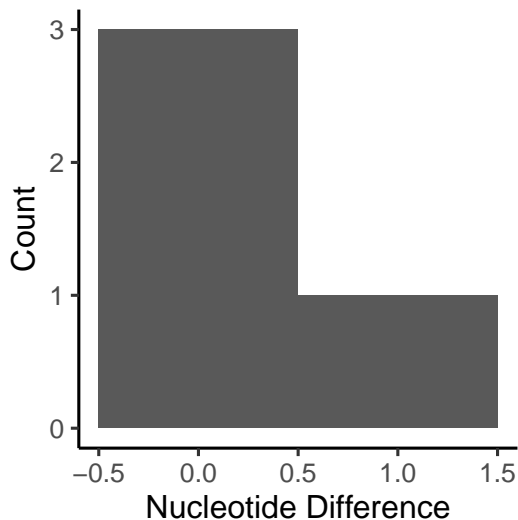
IGHV3-64D*06

649 sequences assigned
567 (87.4%) exact matches, in which:
501 unique CDR3
6 unique J



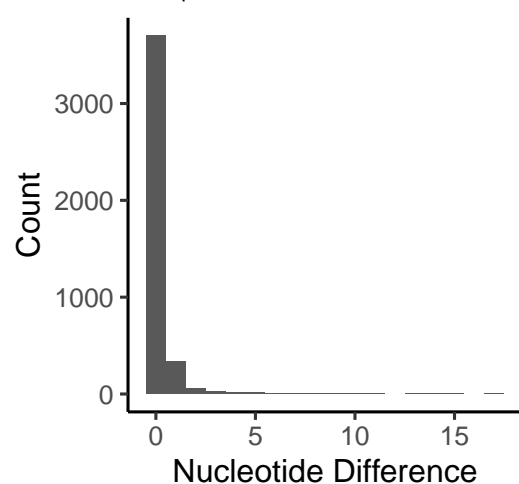
IGHV4-28*06

4 sequences assigned
3 (75%) exact matches, in which:
3 unique CDR3
3 unique J



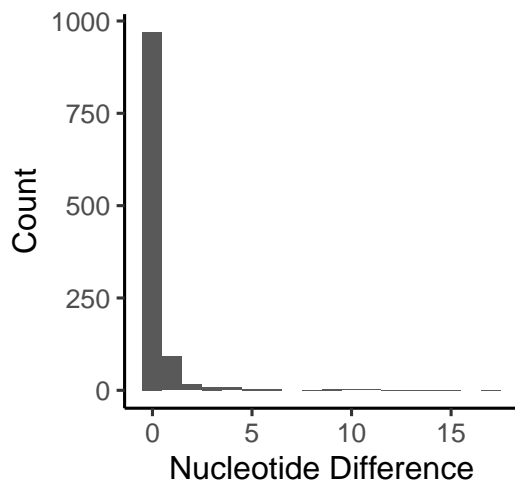
IGHV4-34*01

4171 sequences assigned
3700 (88.7%) exact matches, in which:
3286 unique CDR3
6 unique J



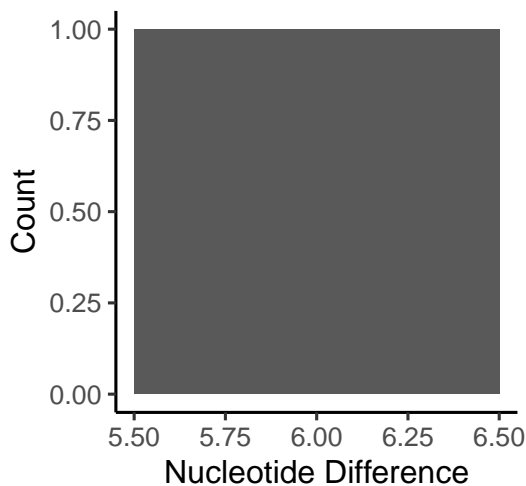
IGHV4-4*02

1117 sequences assigned
970 (86.8%) exact matches, in which:
907 unique CDR3
6 unique J



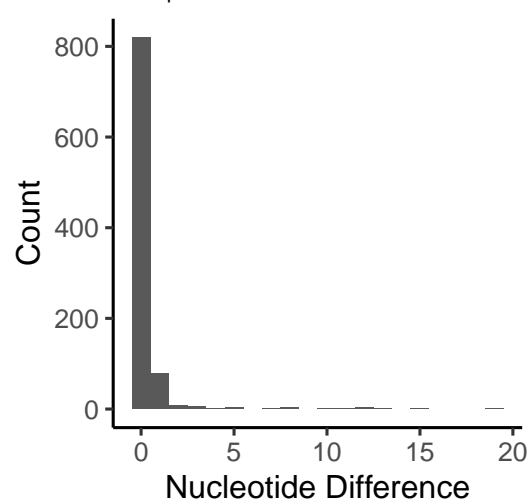
IGHV4-30-2*04

1 sequences assigned
No exact matches.



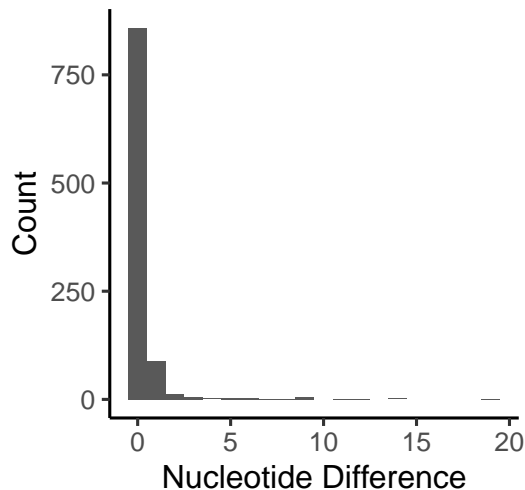
IGHV4-38-2*02

933 sequences assigned
820 (87.9%) exact matches, in which:
735 unique CDR3
6 unique J



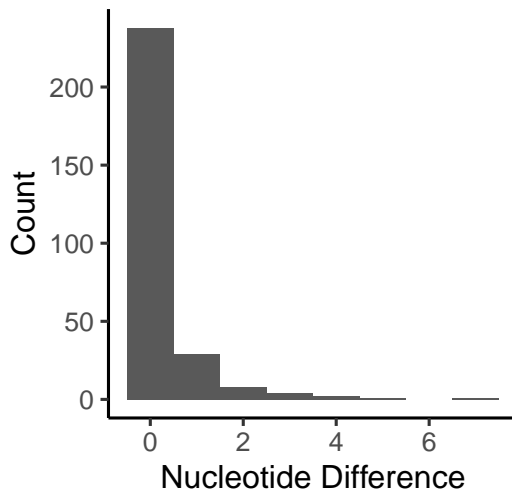
IGHV4–38–2*02_A70G

986 sequences assigned
859 (87.1%) exact matches, in which:
765 unique CDR3
6 unique J



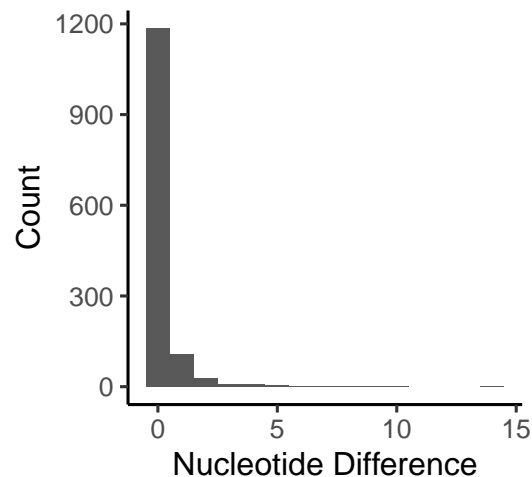
IGHV4–61*01

283 sequences assigned
238 (84.1%) exact matches, in which:
223 unique CDR3
6 unique J



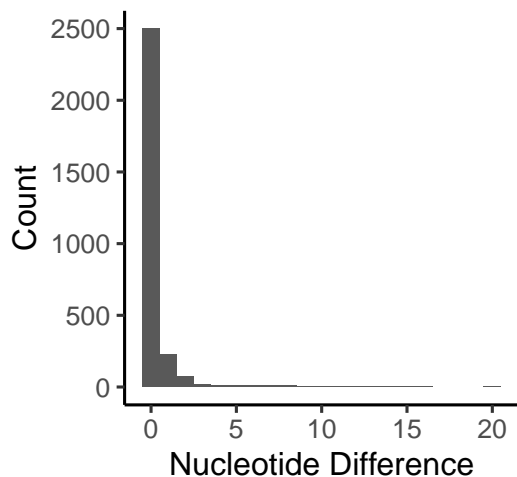
IGHV5–10–1*03

1349 sequences assigned
1185 (87.8%) exact matches, in which:
1088 unique CDR3
6 unique J



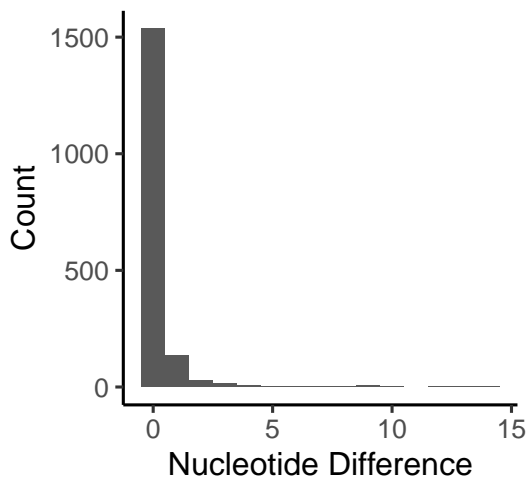
IGHV4–39*01

2887 sequences assigned
2499 (86.6%) exact matches, in which:
2218 unique CDR3
6 unique J



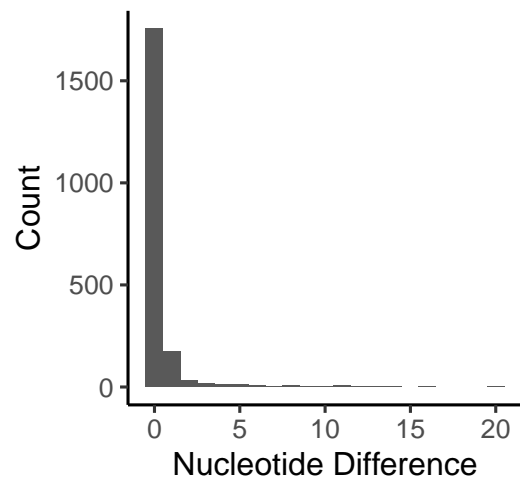
IGHV4–61*02

1743 sequences assigned
1536 (88.1%) exact matches, in which:
1417 unique CDR3
6 unique J



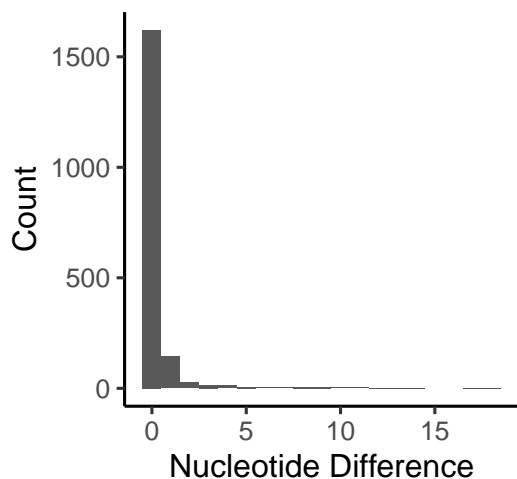
IGHV5–51*01

2042 sequences assigned
1755 (85.9%) exact matches, in which:
1585 unique CDR3
6 unique J



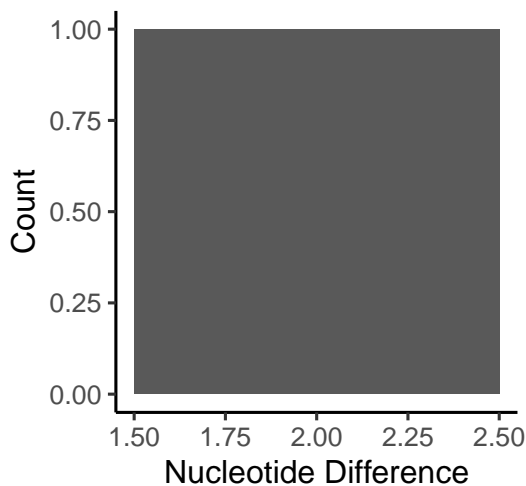
IGHV4–59*01

1857 sequences assigned
1621 (87.3%) exact matches, in which:
1522 unique CDR3
6 unique J



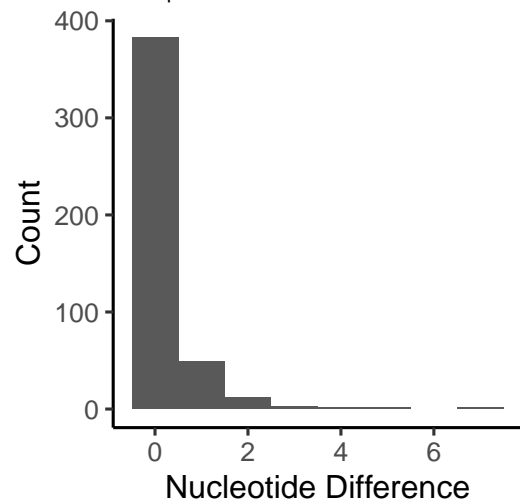
IGHV1/OR15–1*03

1 sequences assigned
No exact matches.



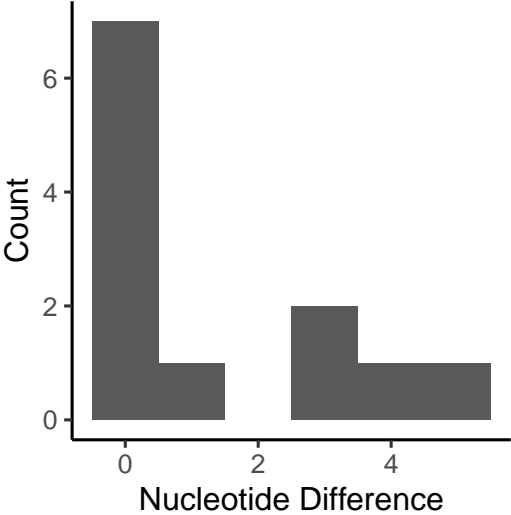
IGHV6–1*01

453 sequences assigned
383 (84.5%) exact matches, in which:
360 unique CDR3
6 unique J

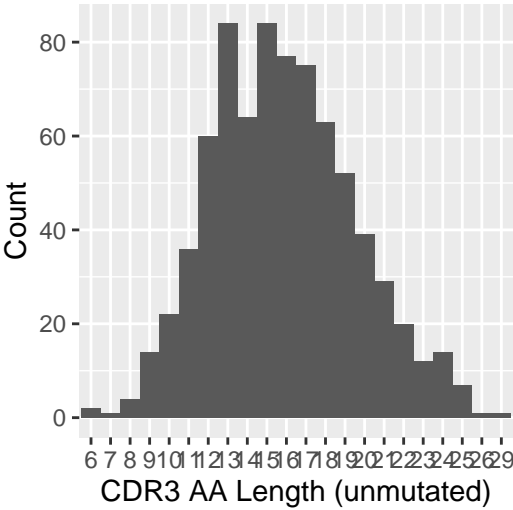


IGHV7-4-1*01

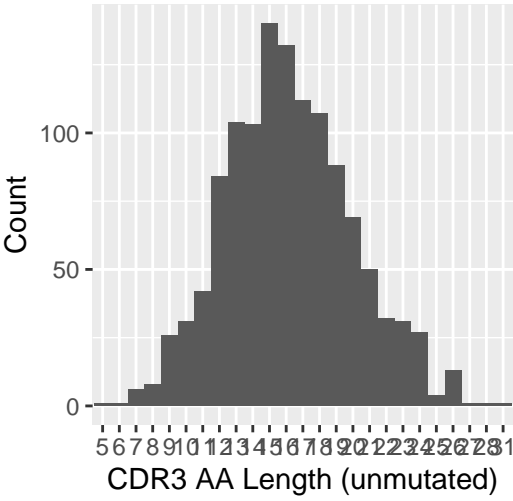
12 sequences assigned
7 (58.3%) exact matches, in which:
6 unique CDR3
4 unique J



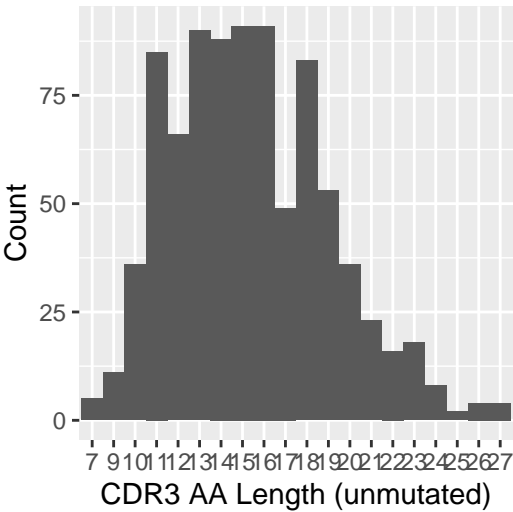
IGHV1-69*08_C191T



IGHV3-21*01_A184G_T190A_A191C



IGHV4-38-2*02_A70G





[illegible]