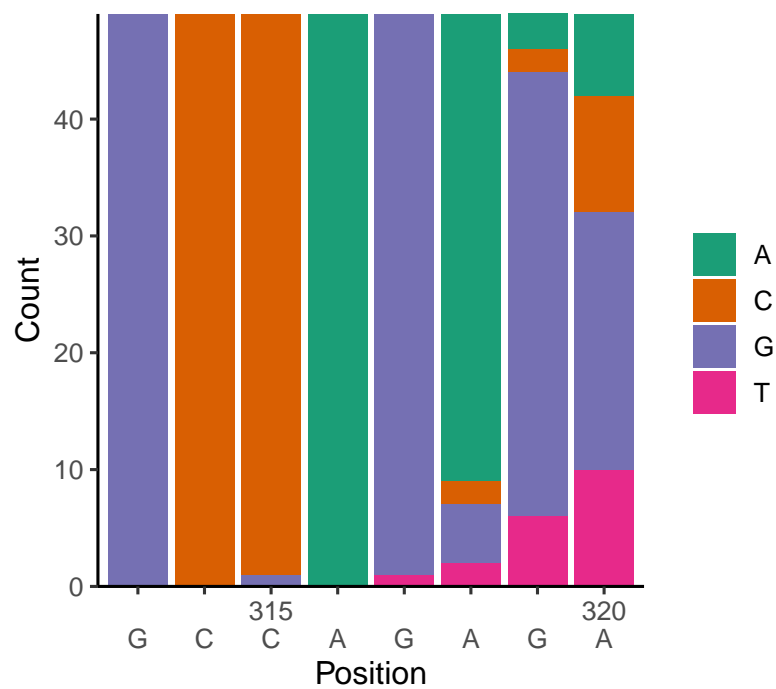
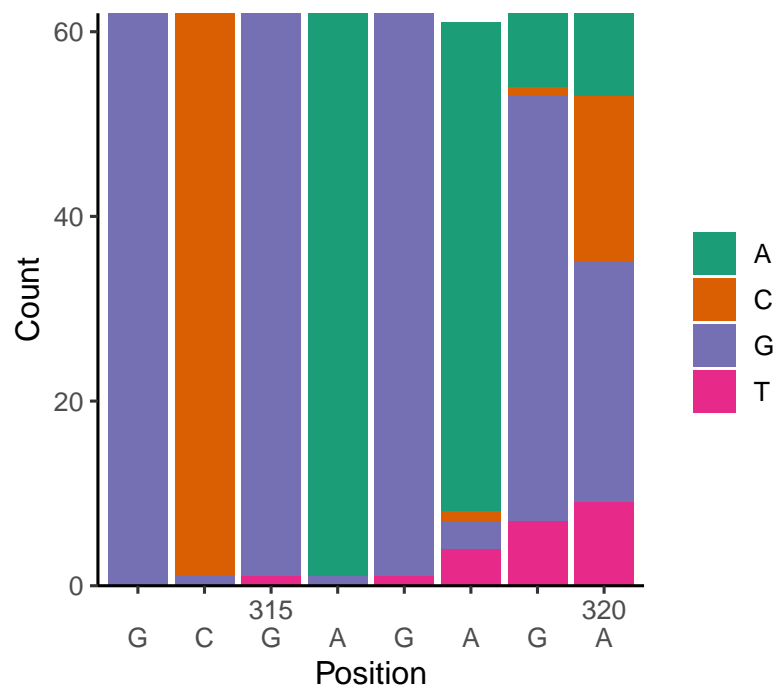


Gene IGHV4-30-2*01_C285T



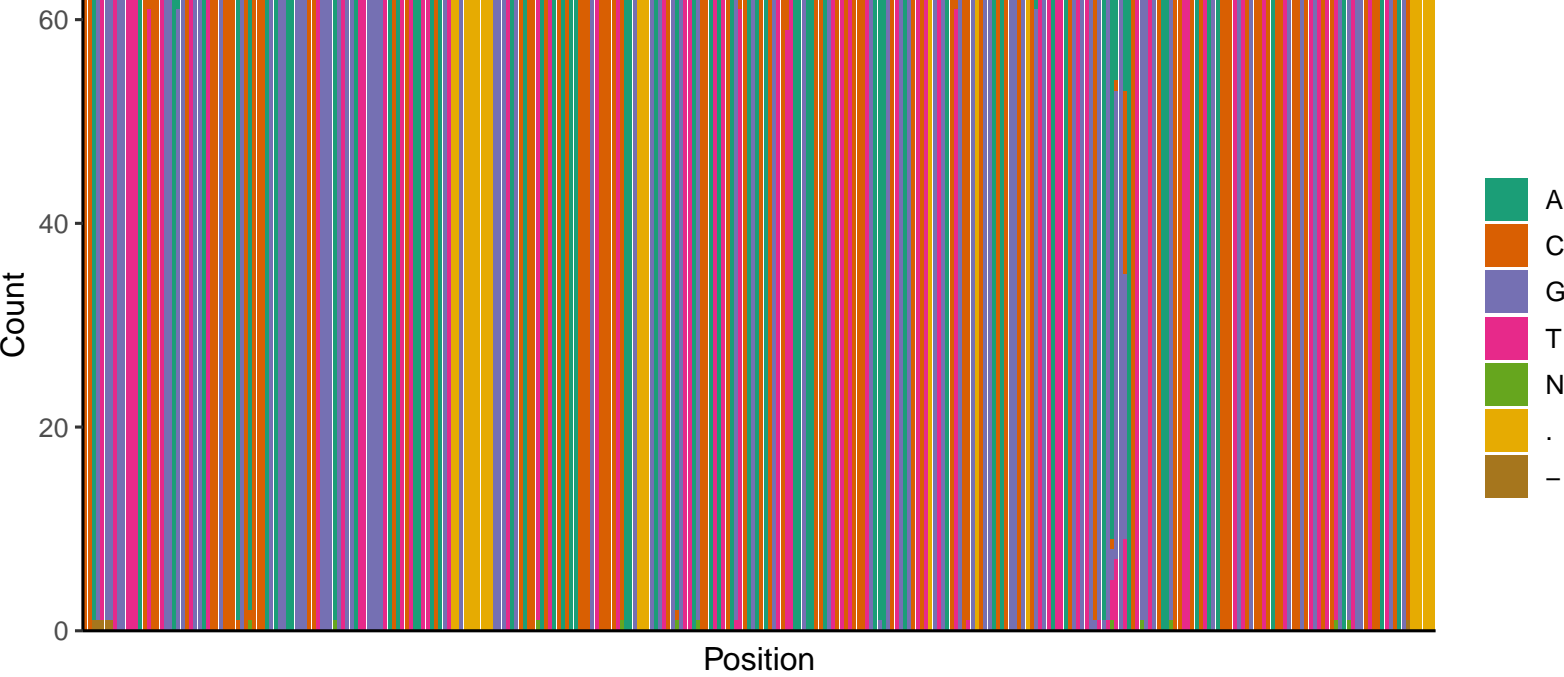
Gene IGHV4-31*11_G4C_G21C_C25T_A113C



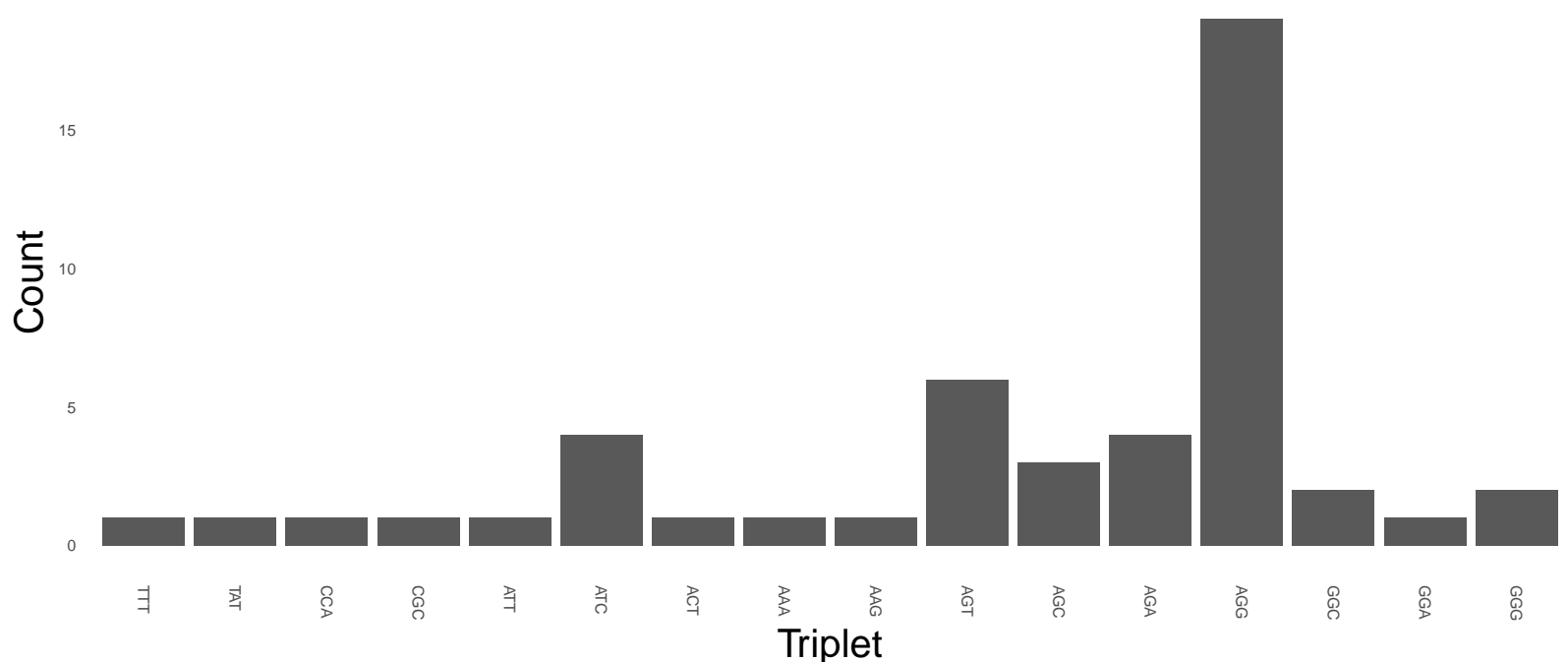
Gene IGHV4-30-2*01_C285T



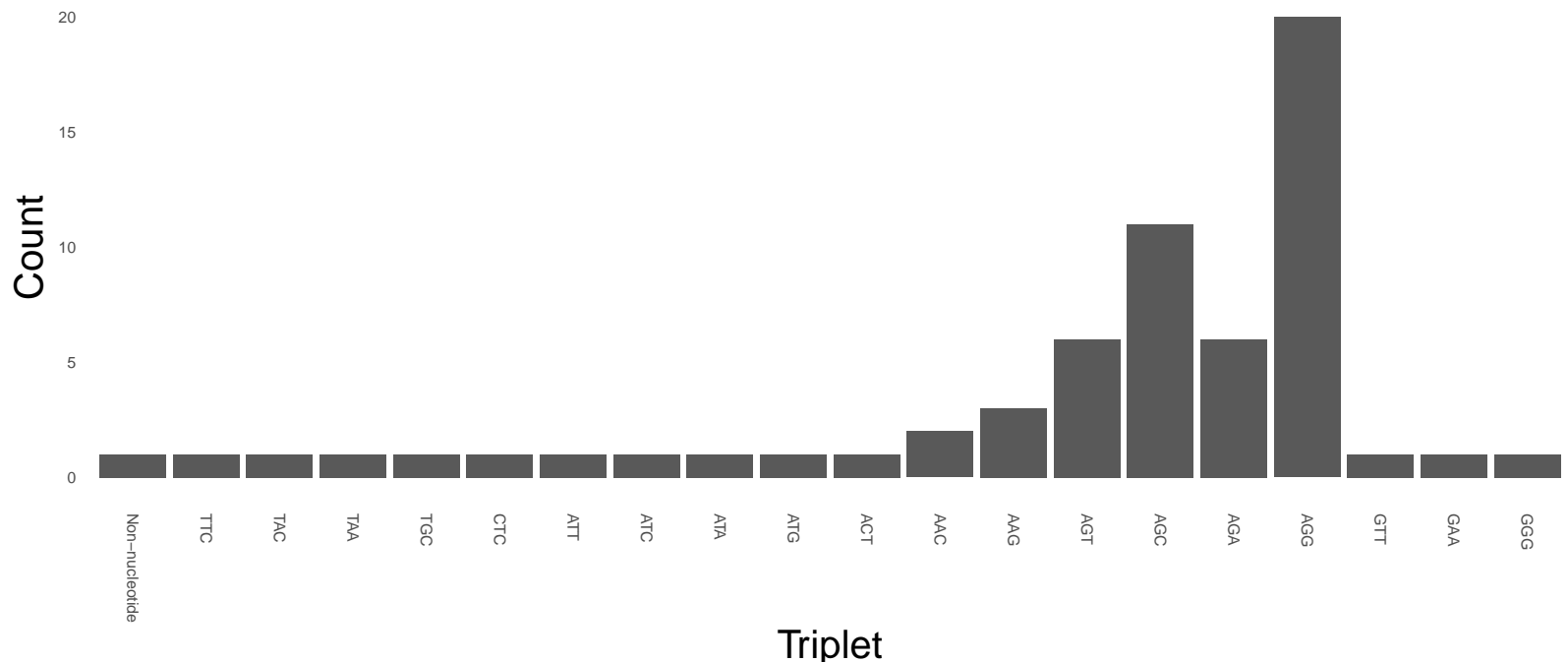
Gene IGHV4-31*11_G4C_G21C_C25T_A113C



IGHV4-30-2*01_C285T- Final 3 nucleotides as a triplet

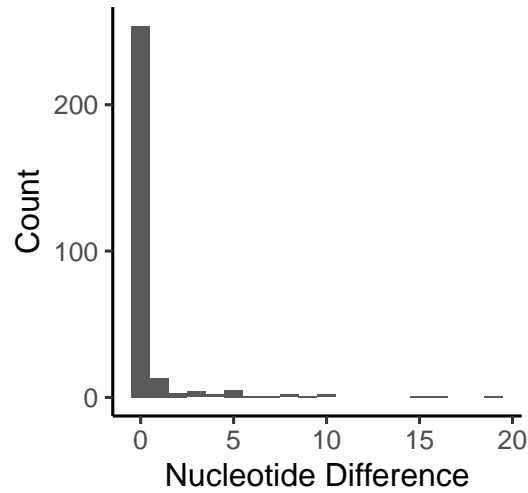


IGHV4-31*11_G4C_G21C_C25T_A113C- Final 3 nucleotides as a triplet



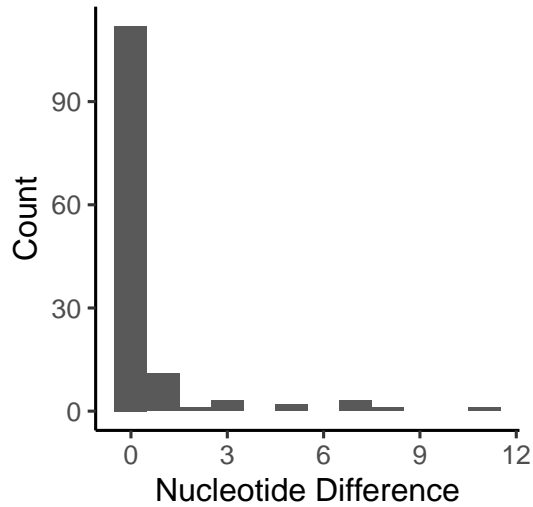
IGHV1-2*02

292 sequences assigned
254 (87%) exact matches, in which:
254 unique CDR3
7 unique J



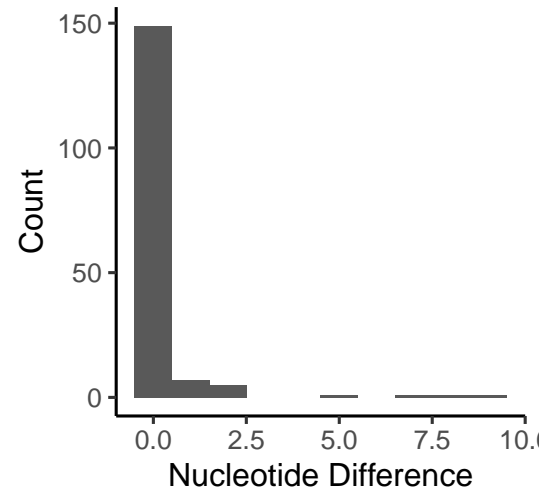
IGHV1-8*01

134 sequences assigned
112 (83.6%) exact matches, in which:
112 unique CDR3
7 unique J



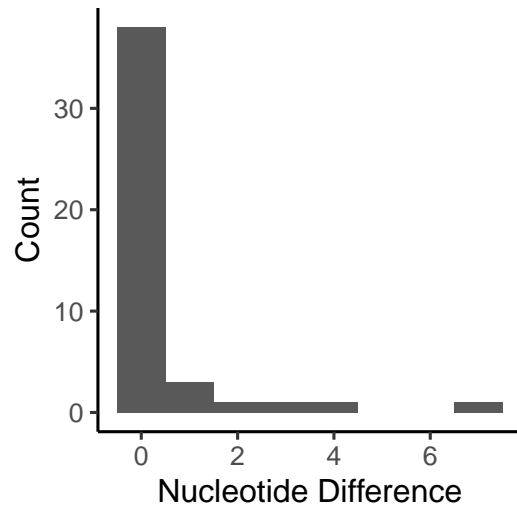
IGHV1-24*01

165 sequences assigned
149 (90.3%) exact matches, in which:
149 unique CDR3
7 unique J



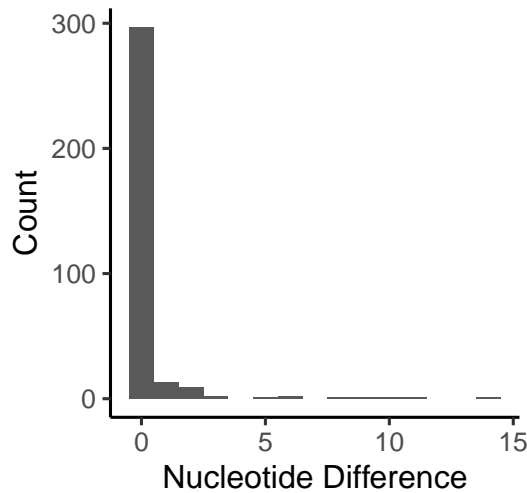
IGHV1-2*04

45 sequences assigned
38 (84.4%) exact matches, in which:
38 unique CDR3
4 unique J



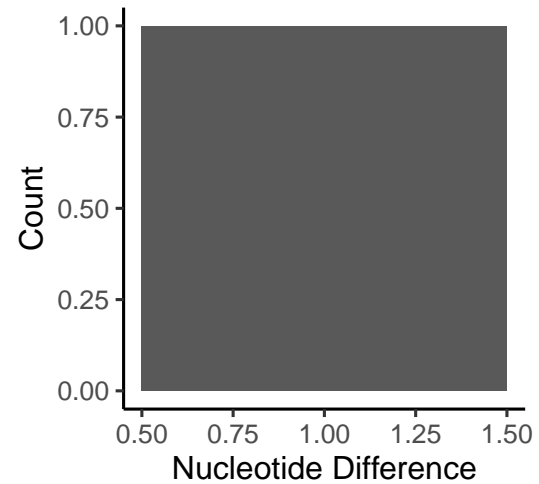
IGHV1-18*01

329 sequences assigned
297 (90.3%) exact matches, in which:
297 unique CDR3
7 unique J



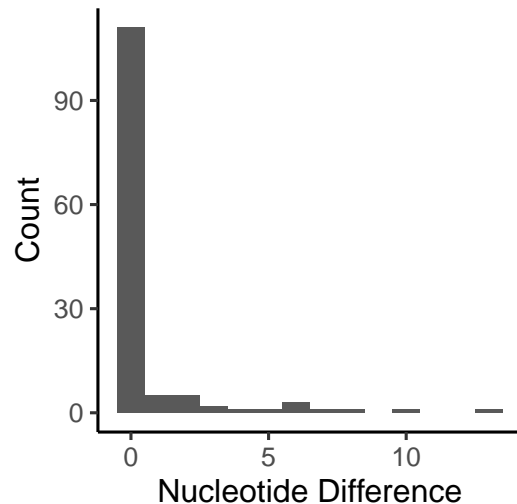
IGHV1-45*02

1 sequences assigned
No exact matches.



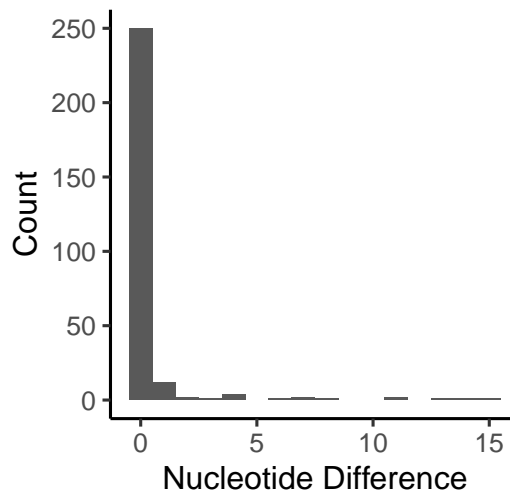
IGHV1-3*01

132 sequences assigned
111 (84.1%) exact matches, in which:
111 unique CDR3
6 unique J



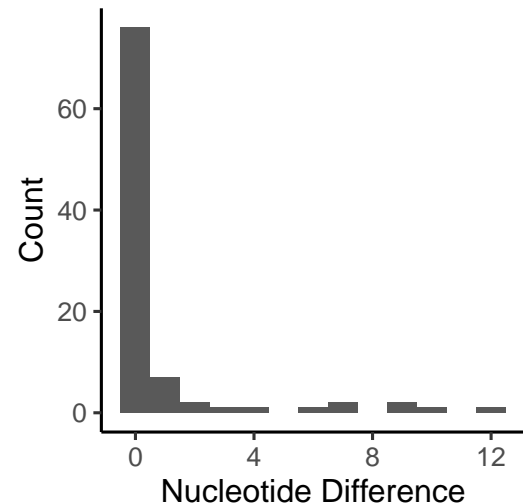
IGHV1-18*04

278 sequences assigned
250 (89.9%) exact matches, in which:
250 unique CDR3
7 unique J



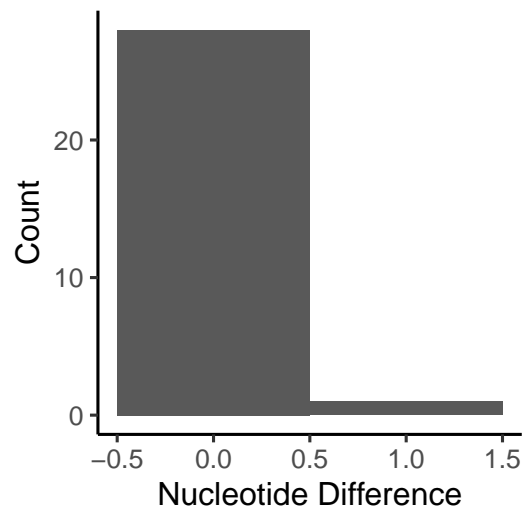
IGHV1-46*01

95 sequences assigned
76 (80%) exact matches, in which:
76 unique CDR3
7 unique J



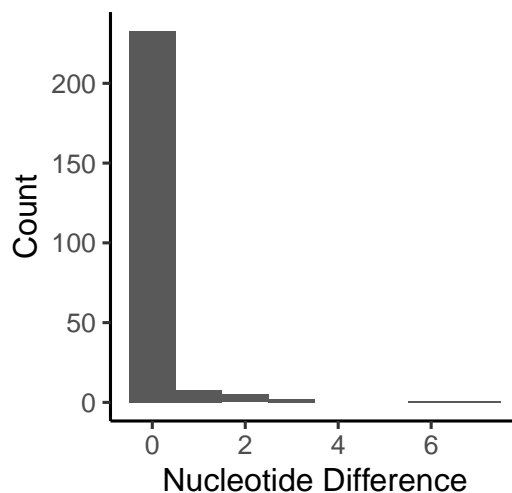
IGHV1-46*03

29 sequences assigned
28 (96.6%) exact matches, in which:
28 unique CDR3
6 unique J



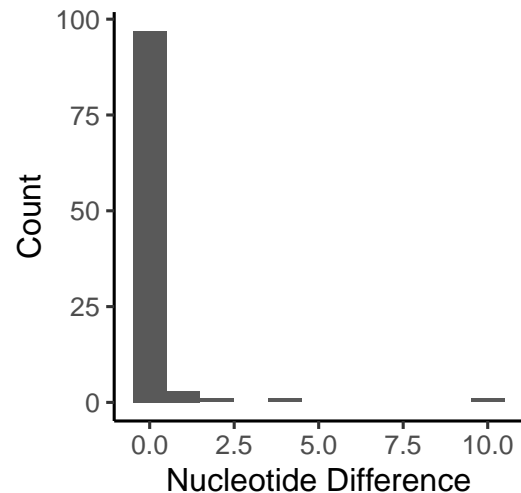
IGHV1-69*06

250 sequences assigned
233 (93.2%) exact matches, in which:
233 unique CDR3
7 unique J



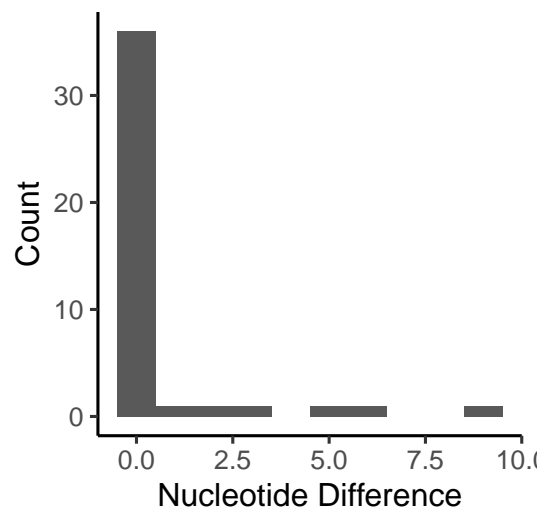
IGHV2-26*01

103 sequences assigned
97 (94.2%) exact matches, in which:
97 unique CDR3
6 unique J



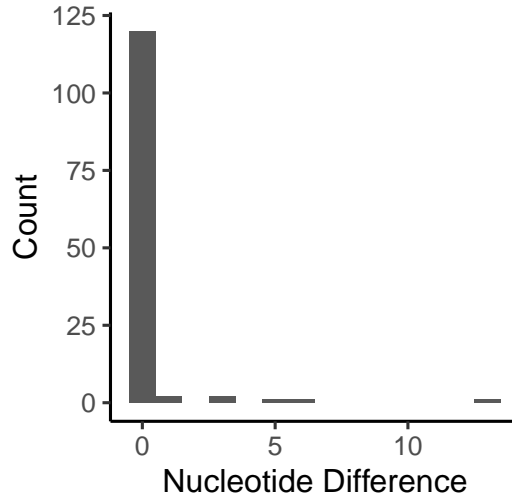
IGHV1-58*01

42 sequences assigned
36 (85.7%) exact matches, in which:
36 unique CDR3
5 unique J



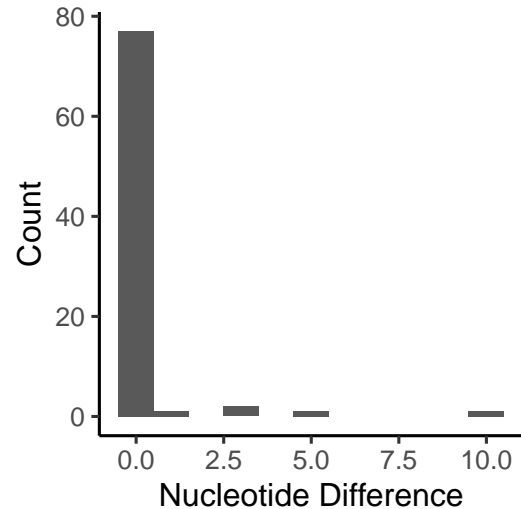
IGHV2-5*01

129 sequences assigned
120 (93%) exact matches, in which:
120 unique CDR3
6 unique J



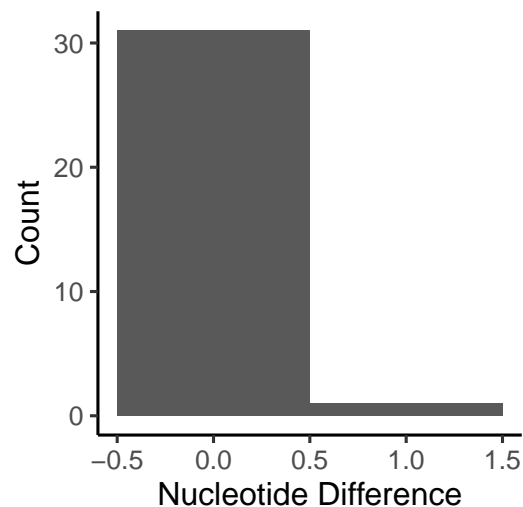
IGHV2-70*01

82 sequences assigned
77 (93.9%) exact matches, in which:
77 unique CDR3
6 unique J



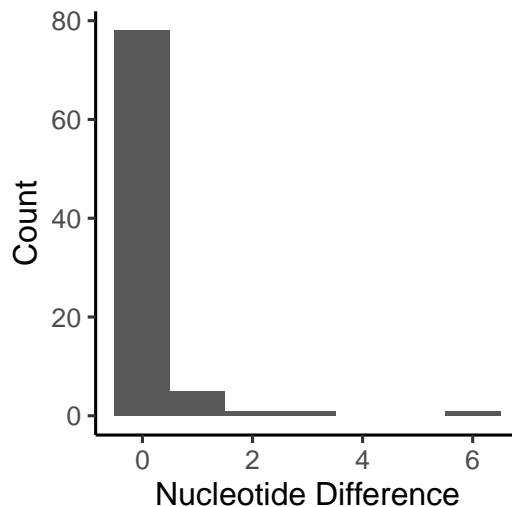
IGHV1-69-2*01

32 sequences assigned
31 (96.9%) exact matches, in which:
31 unique CDR3
5 unique J



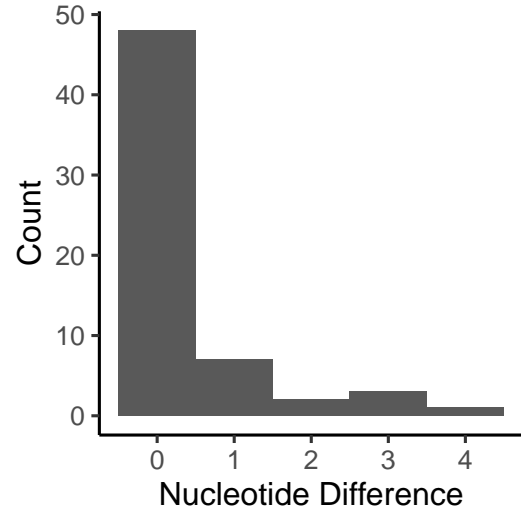
IGHV2-5*02

86 sequences assigned
78 (90.7%) exact matches, in which:
78 unique CDR3
6 unique J



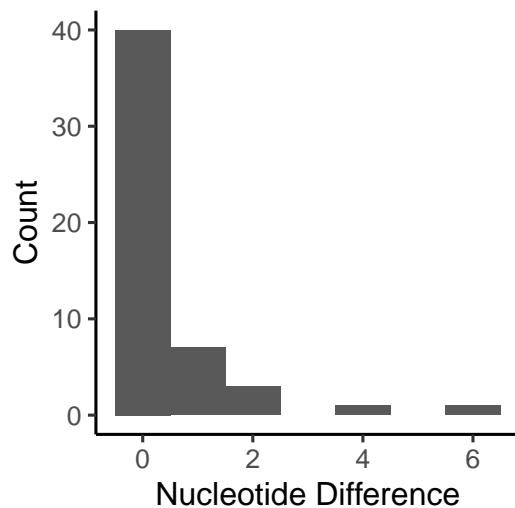
IGHV3-7*01

61 sequences assigned
48 (78.7%) exact matches, in which:
48 unique CDR3
6 unique J



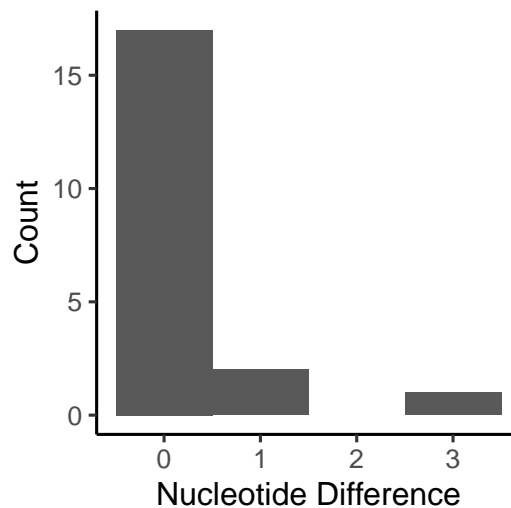
IGHV3-7*03

53 sequences assigned
40 (75.5%) exact matches, in which:
40 unique CDR3
5 unique J



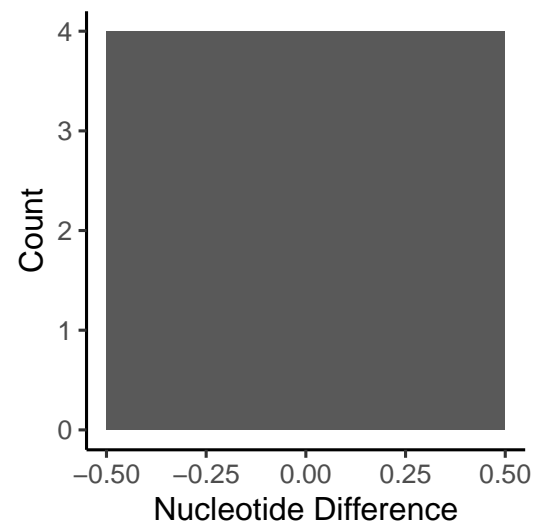
IGHV3-11*06

20 sequences assigned
17 (85%) exact matches, in which:
17 unique CDR3
5 unique J



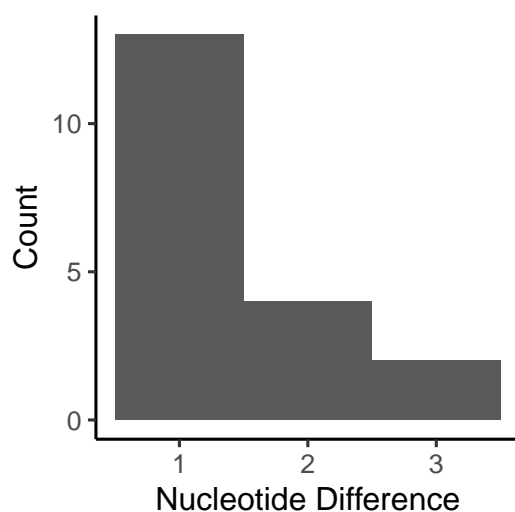
IGHV3-20*01

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



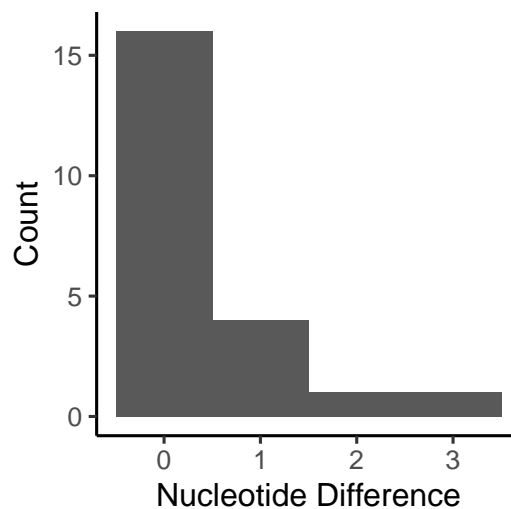
IGHV3-9*01

19 sequences assigned
No exact matches.



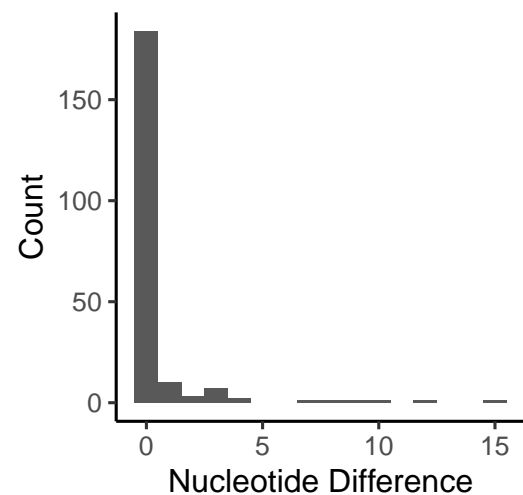
IGHV3-13*01

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



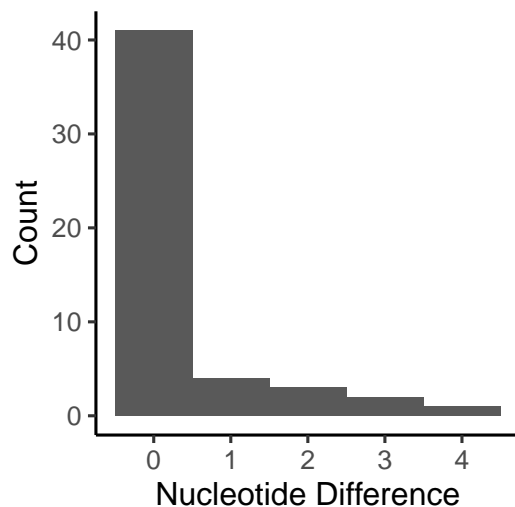
IGHV3-21*01

212 sequences assigned
184 (86.8%) exact matches, in which:
184 unique CDR3
7 unique J



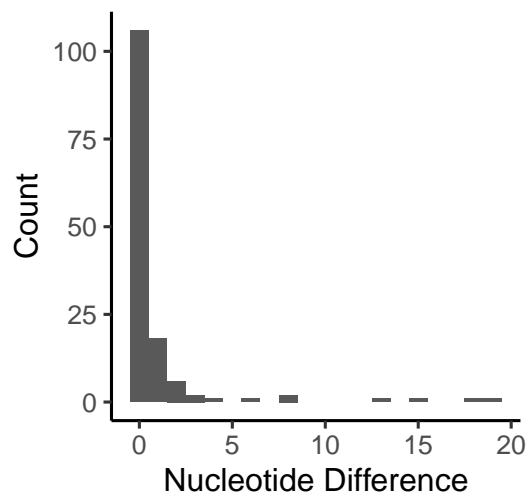
IGHV3-11*01

51 sequences assigned
41 (80.4%) exact matches, in which:
41 unique CDR3
6 unique J



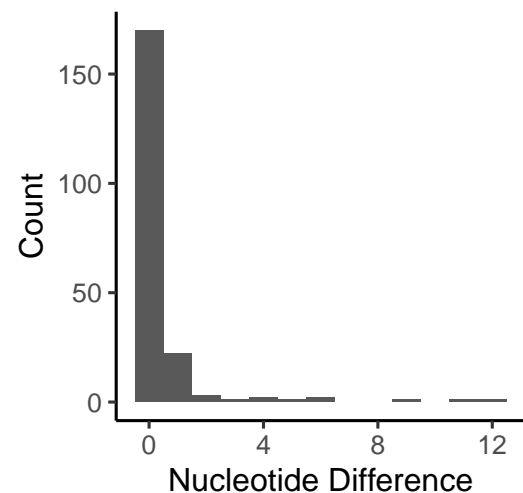
IGHV3-15*01

141 sequences assigned
106 (75.2%) exact matches, in which:
106 unique CDR3
7 unique J



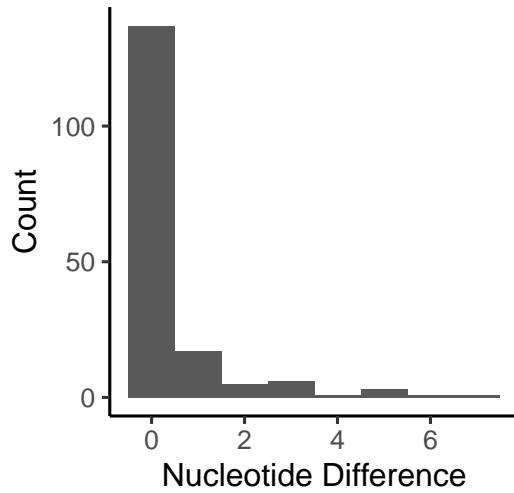
IGHV3-30-3*01

207 sequences assigned
170 (82.1%) exact matches, in which:
170 unique CDR3
7 unique J



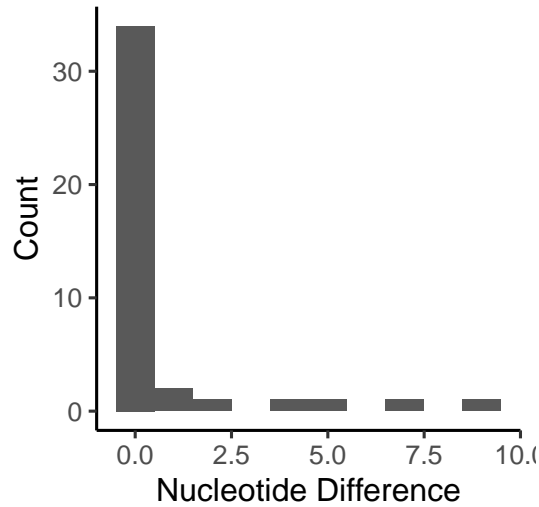
IGHV3–33*01

171 sequences assigned
137 (80.1%) exact matches, in which:
137 unique CDR3
6 unique J



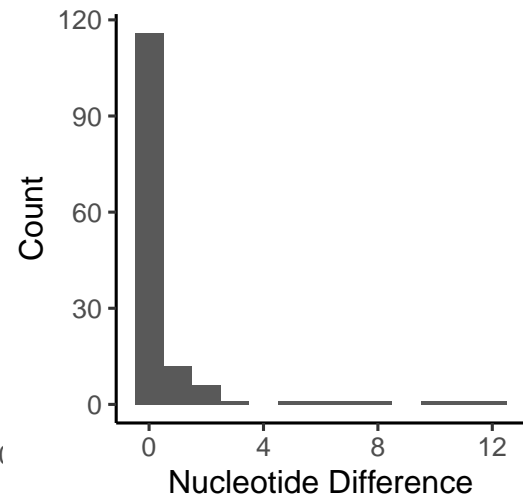
IGHV3–48*02

41 sequences assigned
34 (82.9%) exact matches, in which:
34 unique CDR3
6 unique J



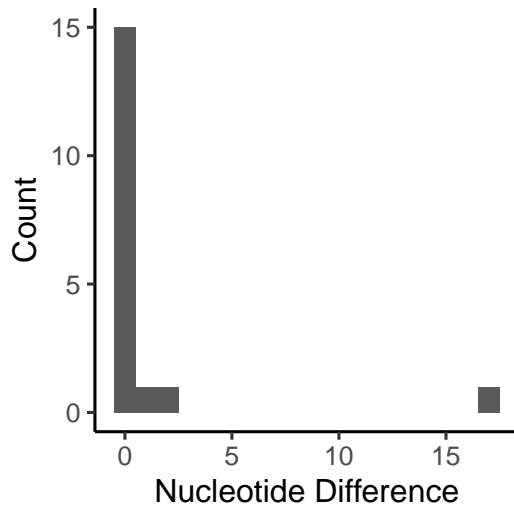
IGHV3–53*01

143 sequences assigned
116 (81.1%) exact matches, in which:
116 unique CDR3
7 unique J



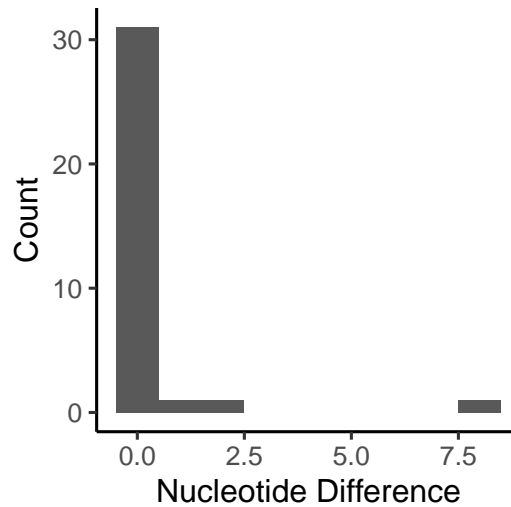
IGHV3–43*01

18 sequences assigned
15 (83.3%) exact matches, in which:
15 unique CDR3
4 unique J



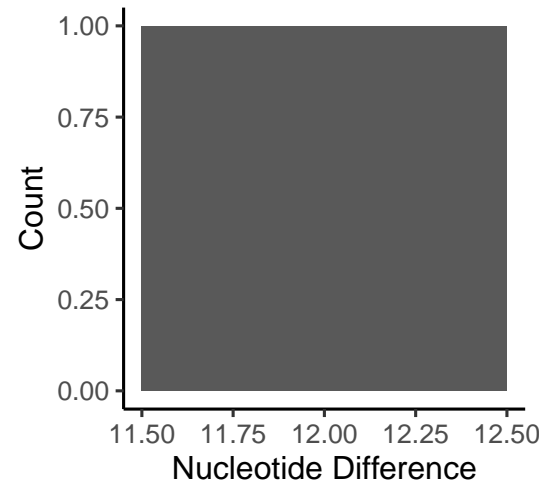
IGHV3–49*03

34 sequences assigned
31 (91.2%) exact matches, in which:
31 unique CDR3
6 unique J



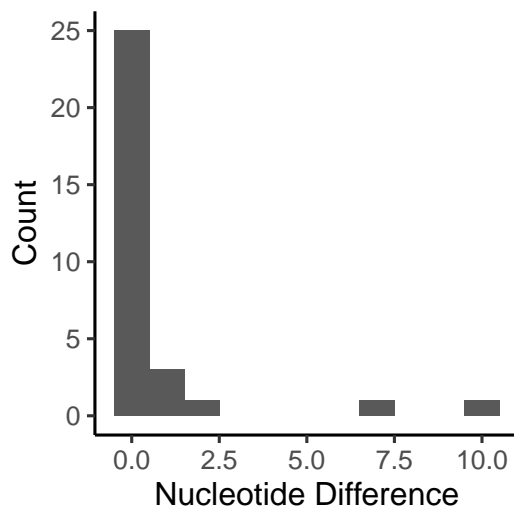
IGHV3–66*01

1 sequences assigned
No exact matches.



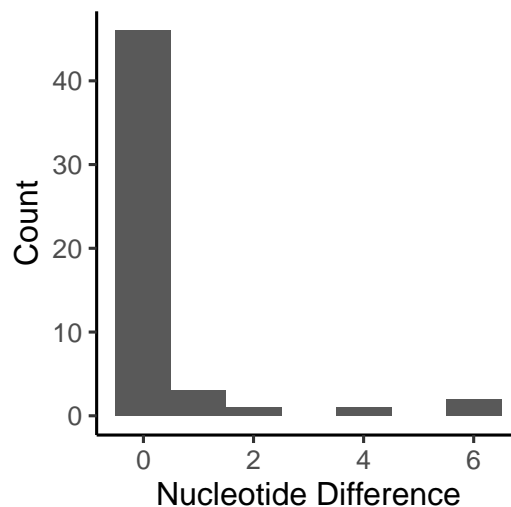
IGHV3–48*01

31 sequences assigned
25 (80.6%) exact matches, in which:
25 unique CDR3
4 unique J



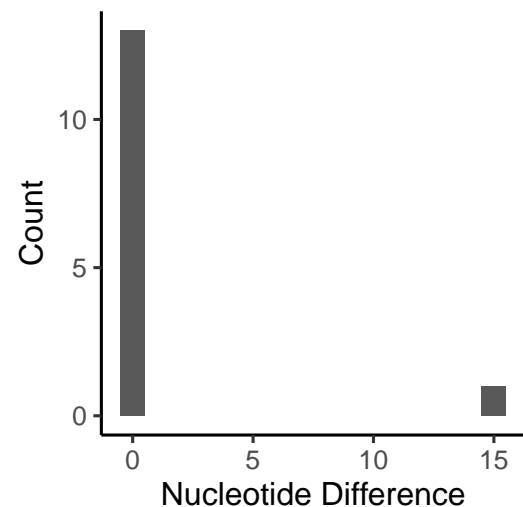
IGHV3–49*05

53 sequences assigned
46 (86.8%) exact matches, in which:
46 unique CDR3
5 unique J



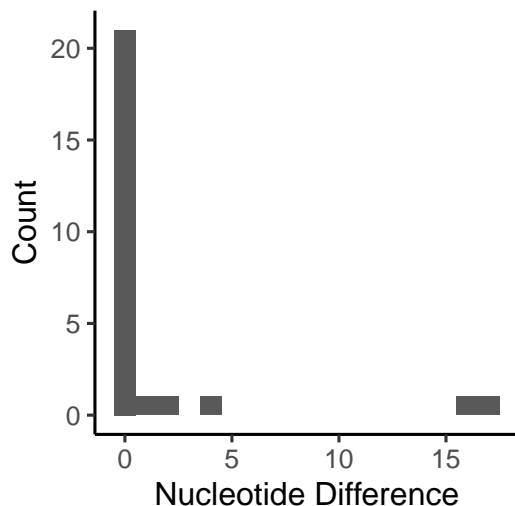
IGHV3–72*01

14 sequences assigned
13 (92.9%) exact matches, in which:
13 unique CDR3
5 unique J



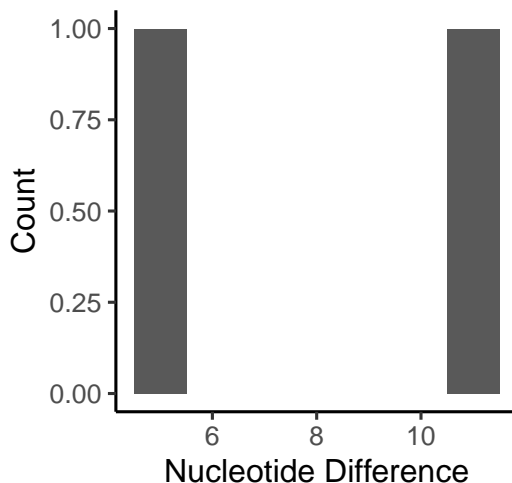
IGHV3-73*02

26 sequences assigned
21 (80.8%) exact matches, in which:
21 unique CDR3
6 unique J



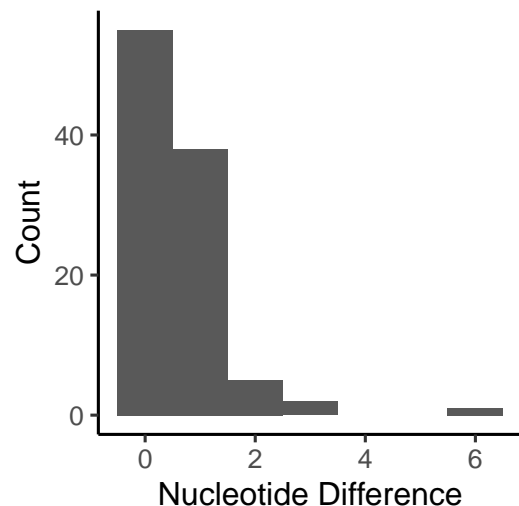
IGHV3-NL1*01

2 sequences assigned
No exact matches.



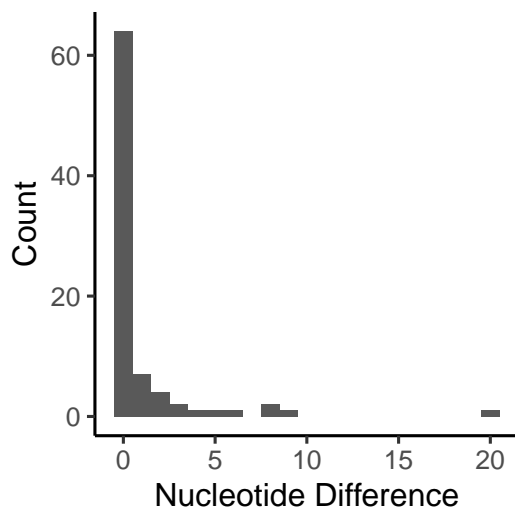
IGHV4-30-4*01

101 sequences assigned
55 (54.5%) exact matches, in which:
55 unique CDR3
6 unique J



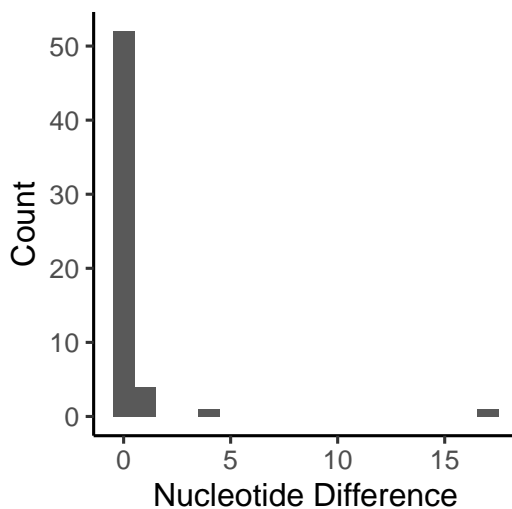
IGHV3-74*01

84 sequences assigned
64 (76.2%) exact matches, in which:
64 unique CDR3
6 unique J



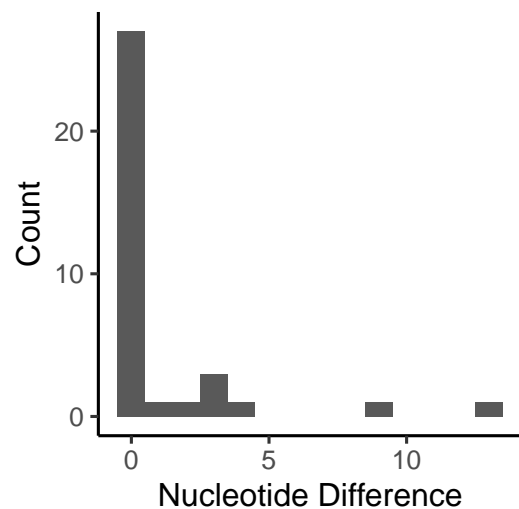
IGHV4-4*02

58 sequences assigned
52 (89.7%) exact matches, in which:
52 unique CDR3
6 unique J



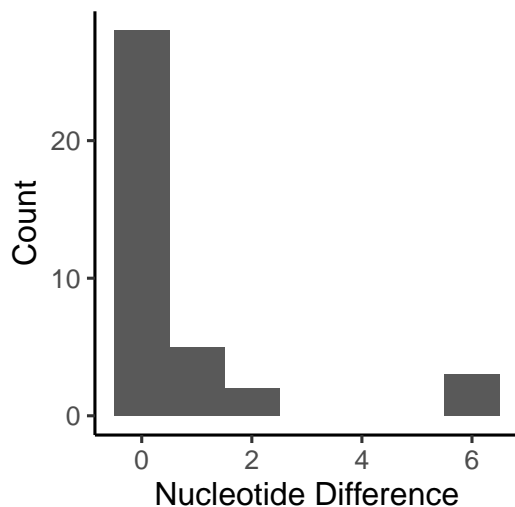
IGHV4-30-2*01

35 sequences assigned
27 (77.1%) exact matches, in which:
27 unique CDR3
5 unique J



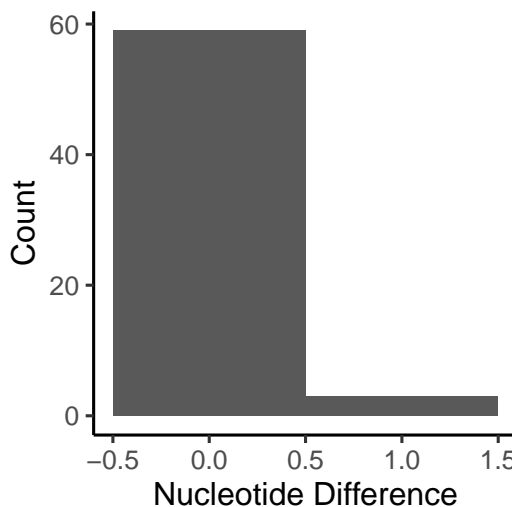
IGHV3-64D*09

38 sequences assigned
28 (73.7%) exact matches, in which:
28 unique CDR3
5 unique J



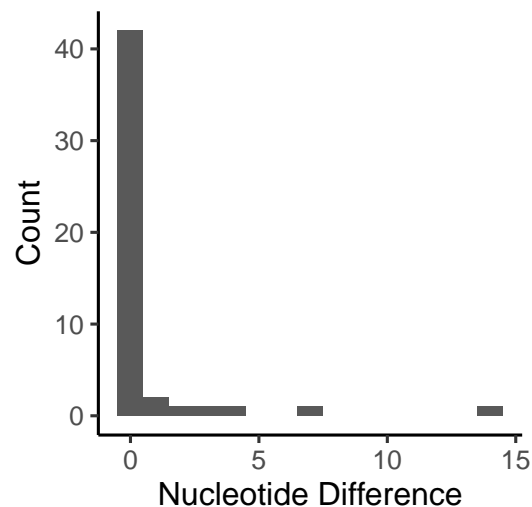
IGHV4-4*07

62 sequences assigned
59 (95.2%) exact matches, in which:
59 unique CDR3
5 unique J



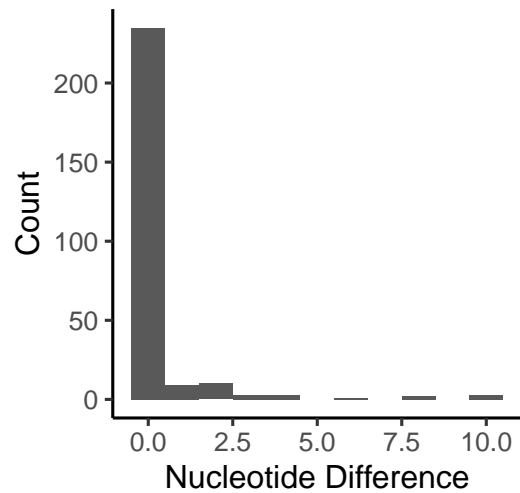
IGHV4-30-2*01_C285T

49 sequences assigned
42 (85.7%) exact matches, in which:
42 unique CDR3
4 unique J



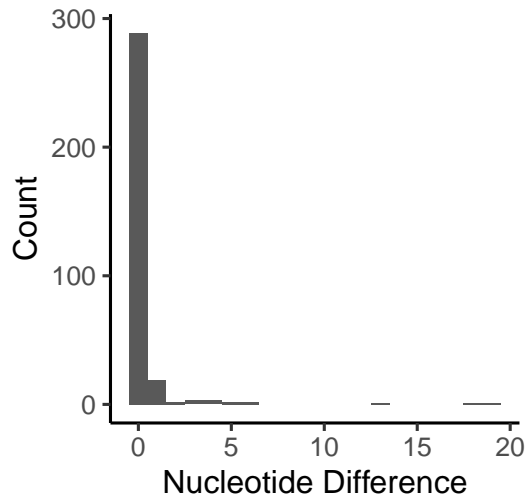
IGHV4-31*03

266 sequences assigned
235 (88.3%) exact matches, in which:
235 unique CDR3
6 unique J



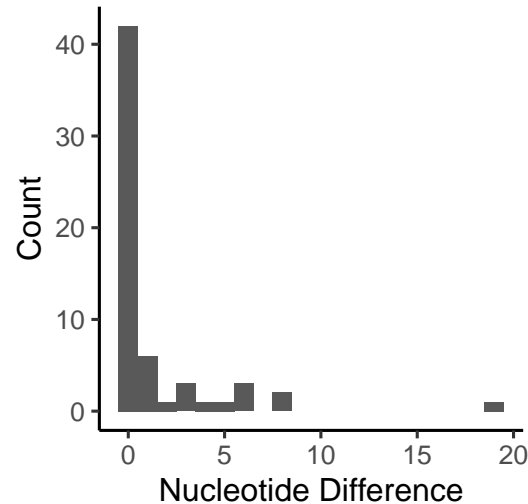
IGHV4-39*01

325 sequences assigned
289 (88.9%) exact matches, in which:
287 unique CDR3
7 unique J



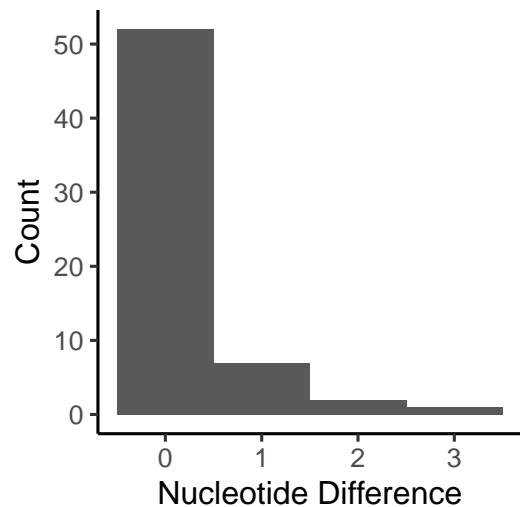
IGHV4-61*01

60 sequences assigned
42 (70%) exact matches, in which:
42 unique CDR3
6 unique J



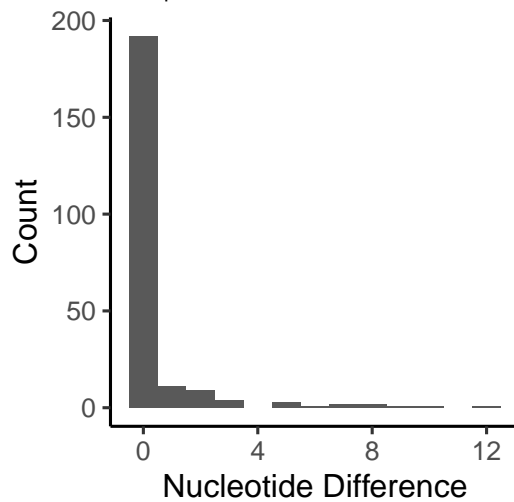
IGHV4-31*11_G4C_G21C

62 sequences assigned
52 (83.9%) exact matches, in which:
52 unique CDR3
5 unique J



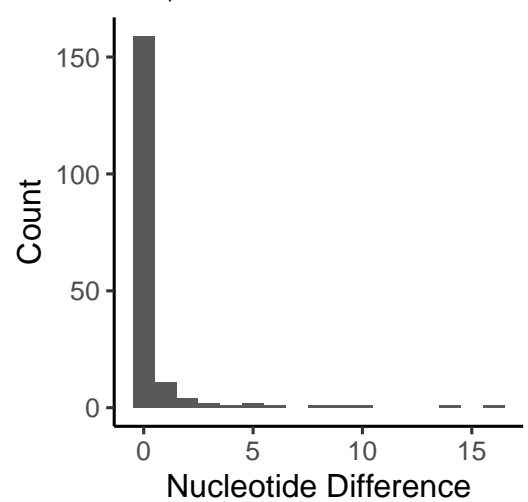
IGHV4-39*07

227 sequences assigned
192 (84.6%) exact matches, in which:
191 unique CDR3
7 unique J



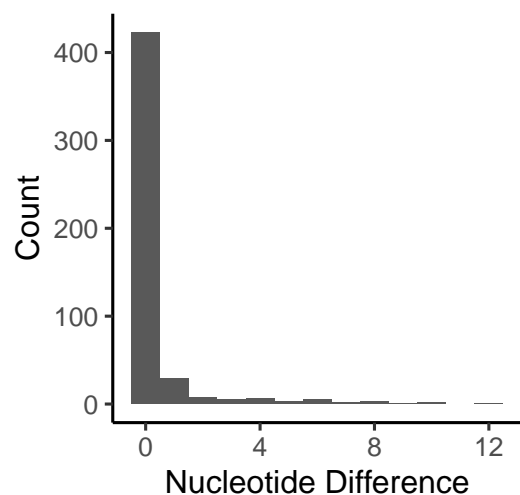
IGHV5-10-1*03

185 sequences assigned
159 (85.9%) exact matches, in which:
159 unique CDR3
6 unique J



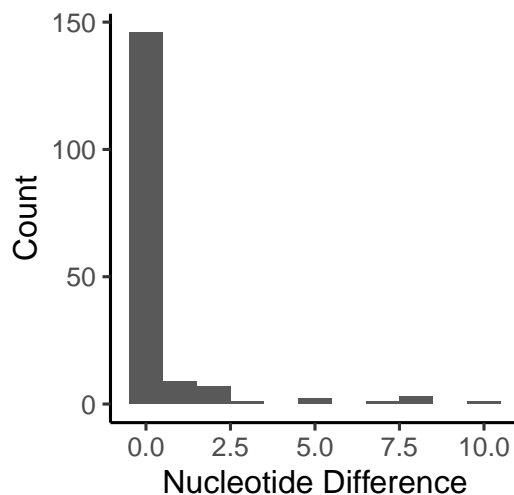
IGHV4-34*01

487 sequences assigned
423 (86.9%) exact matches, in which:
423 unique CDR3
7 unique J



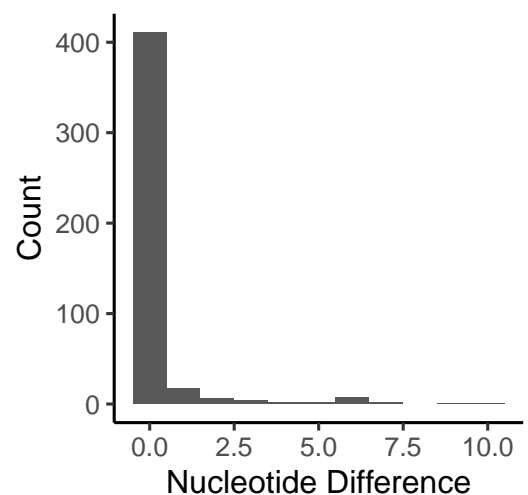
IGHV4-59*01

170 sequences assigned
146 (85.9%) exact matches, in which:
146 unique CDR3
7 unique J



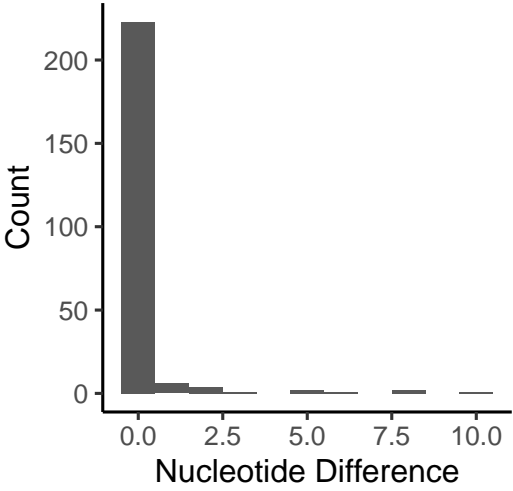
IGHV5-51*01

453 sequences assigned
411 (90.7%) exact matches, in which:
411 unique CDR3
7 unique J



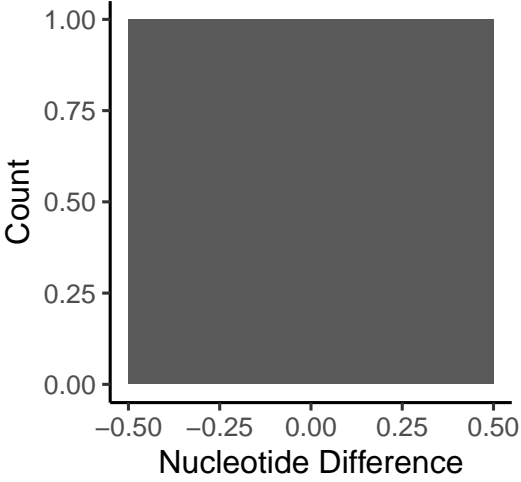
IGHV6-1*01

240 sequences assigned
223 (92.9%) exact matches, in which:
223 unique CDR3
7 unique J

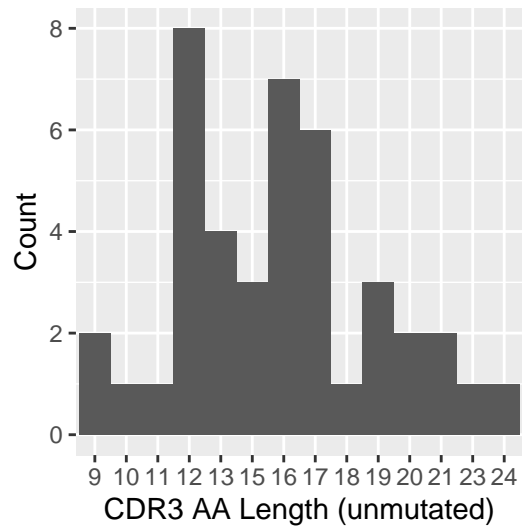


IGHV7-4-1*01

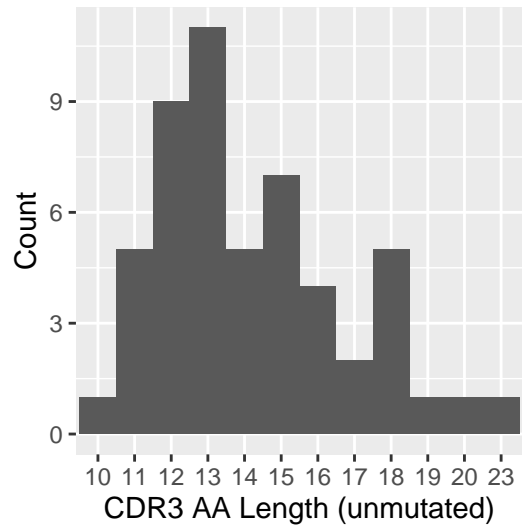
1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J

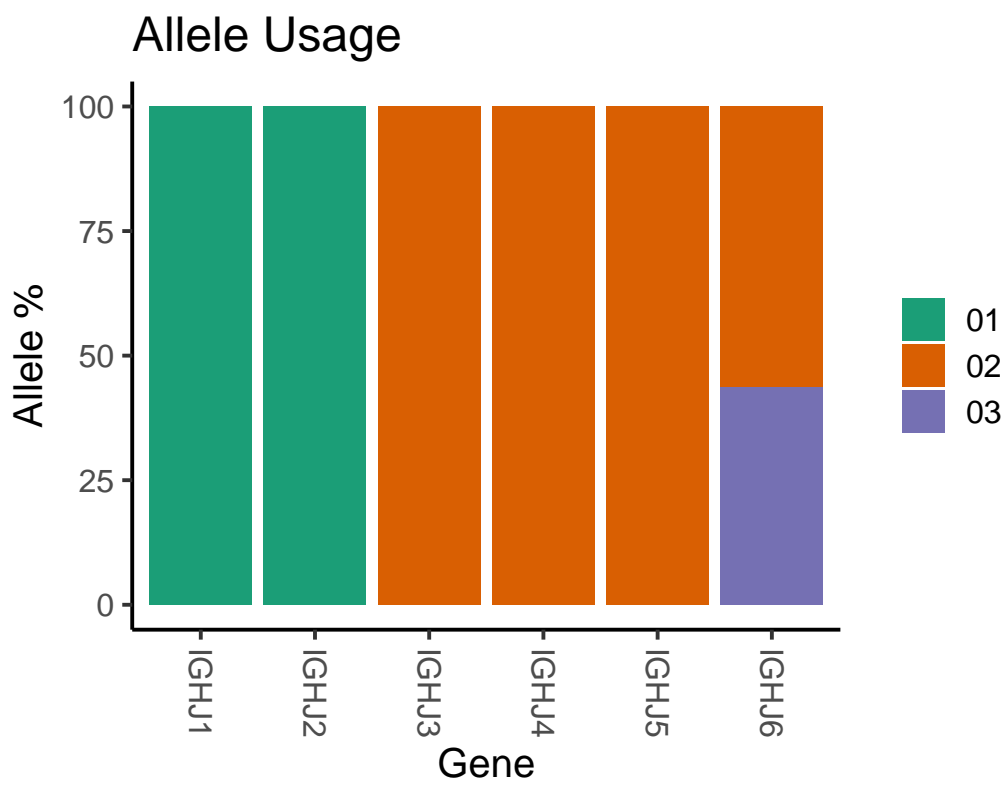


IGHV4-30-2*01_C285T

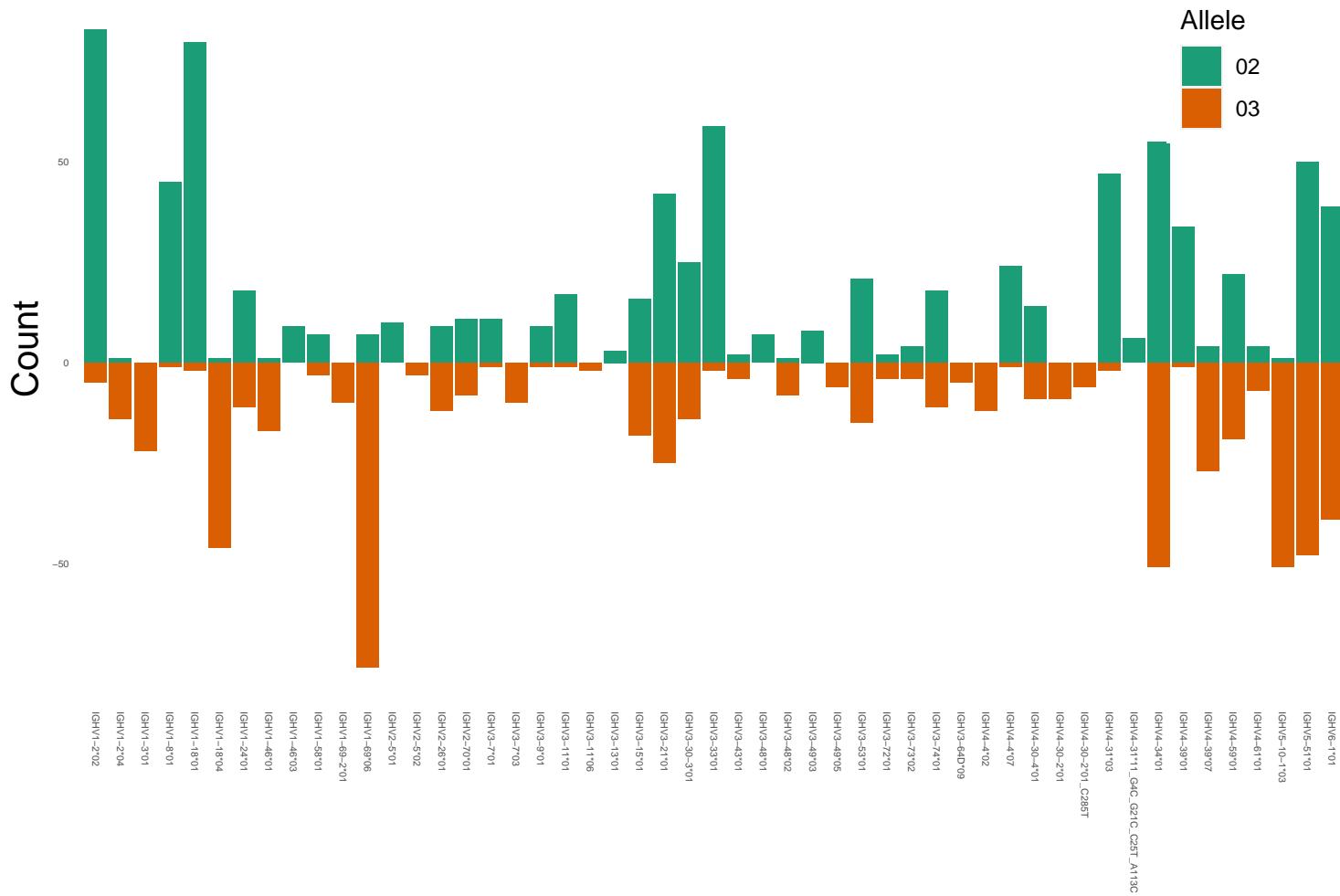


IGHV4-31*11_G4C_G21C_C25T_A113C





Sequence Count by IGHJ6 allele usage



[illegible]