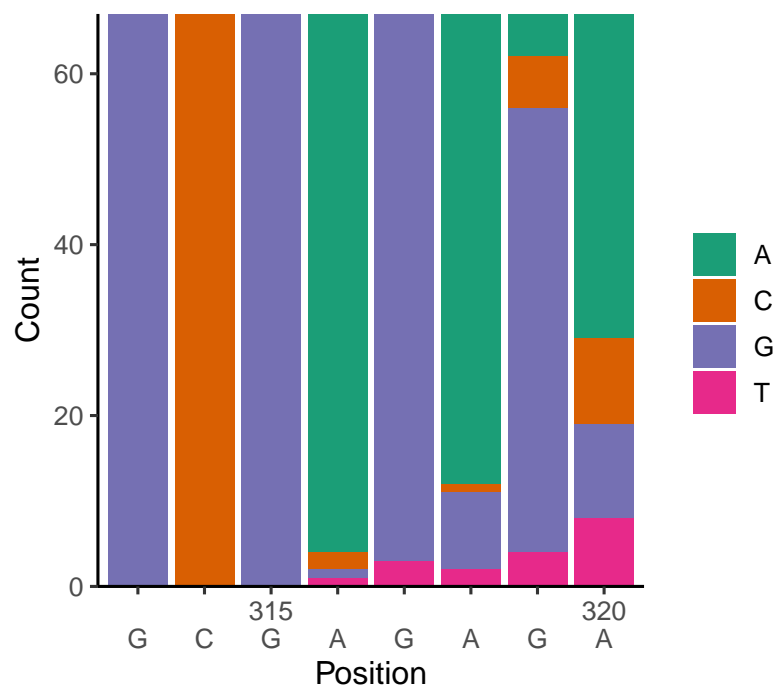
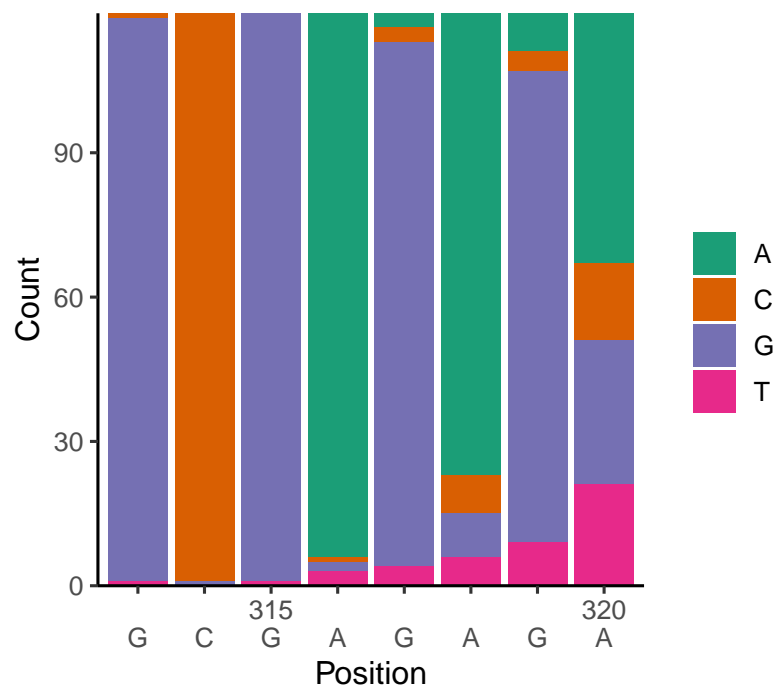


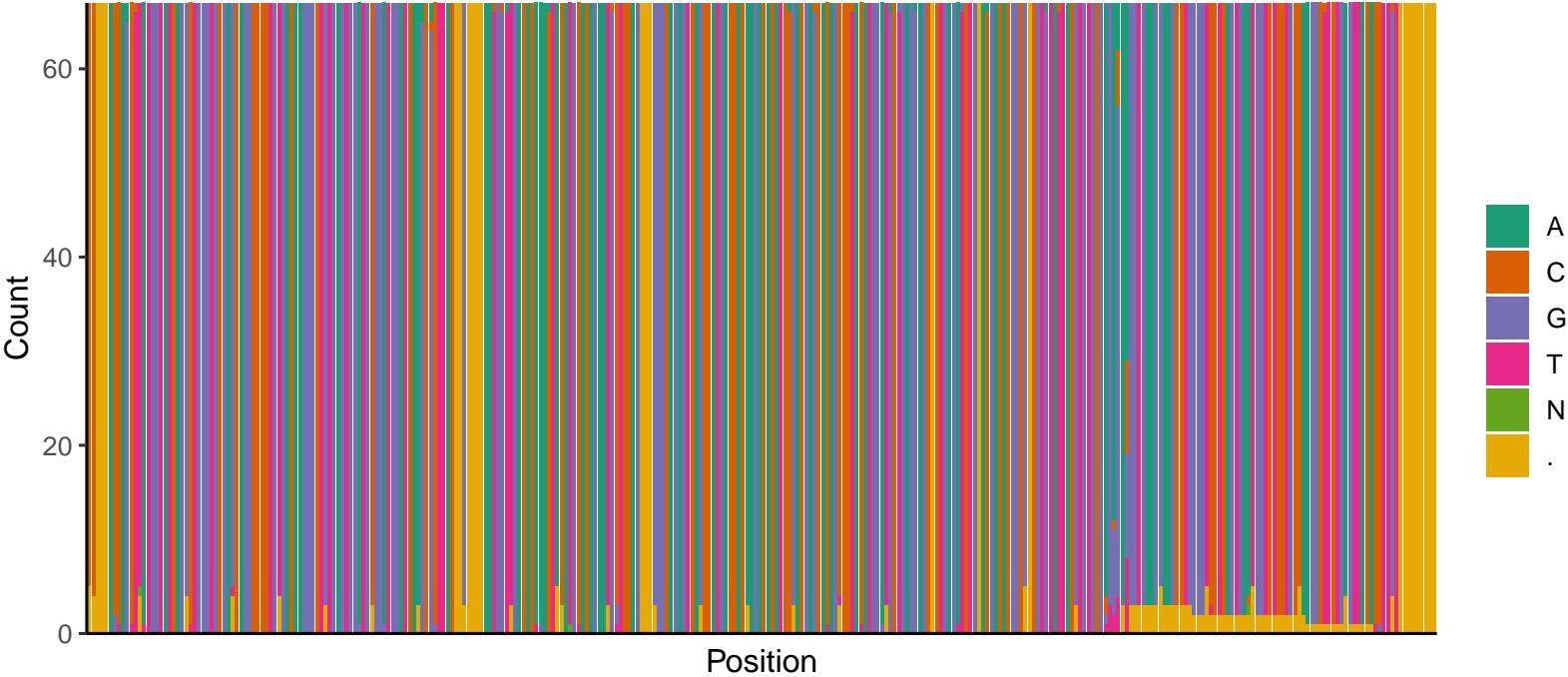
Gene IGHV1-18*01_A190G



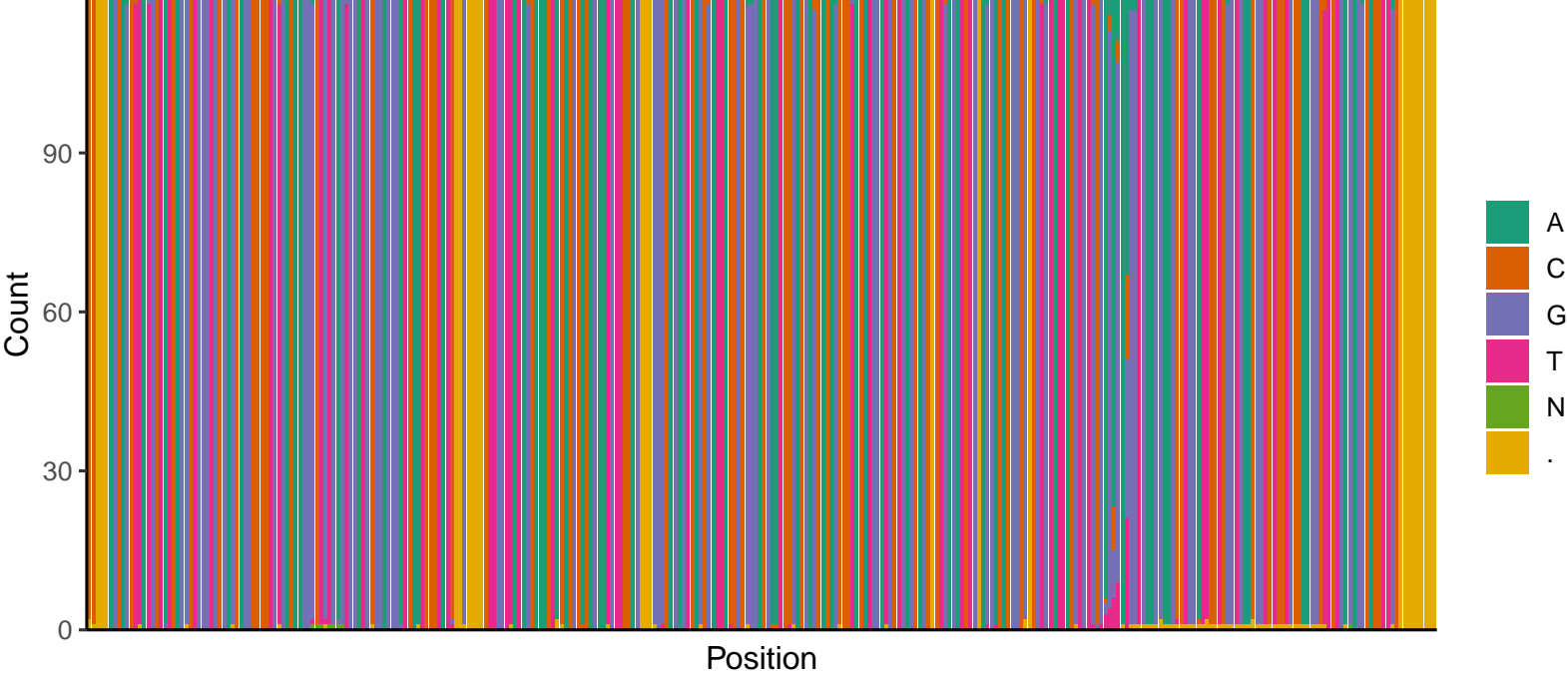
Gene IGHV1-69*04_G48A_A163G_A244G



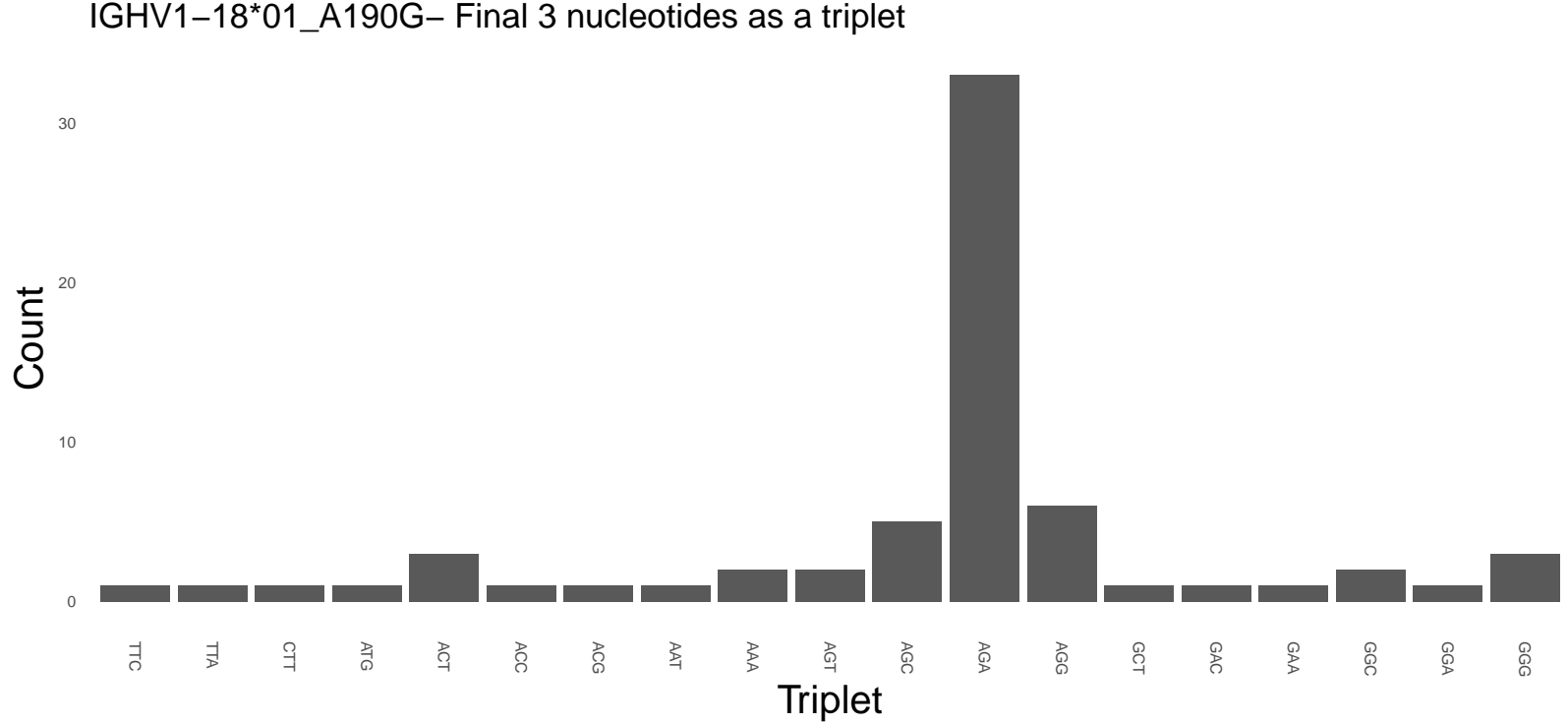
Gene IGHV1-18*01_A190G



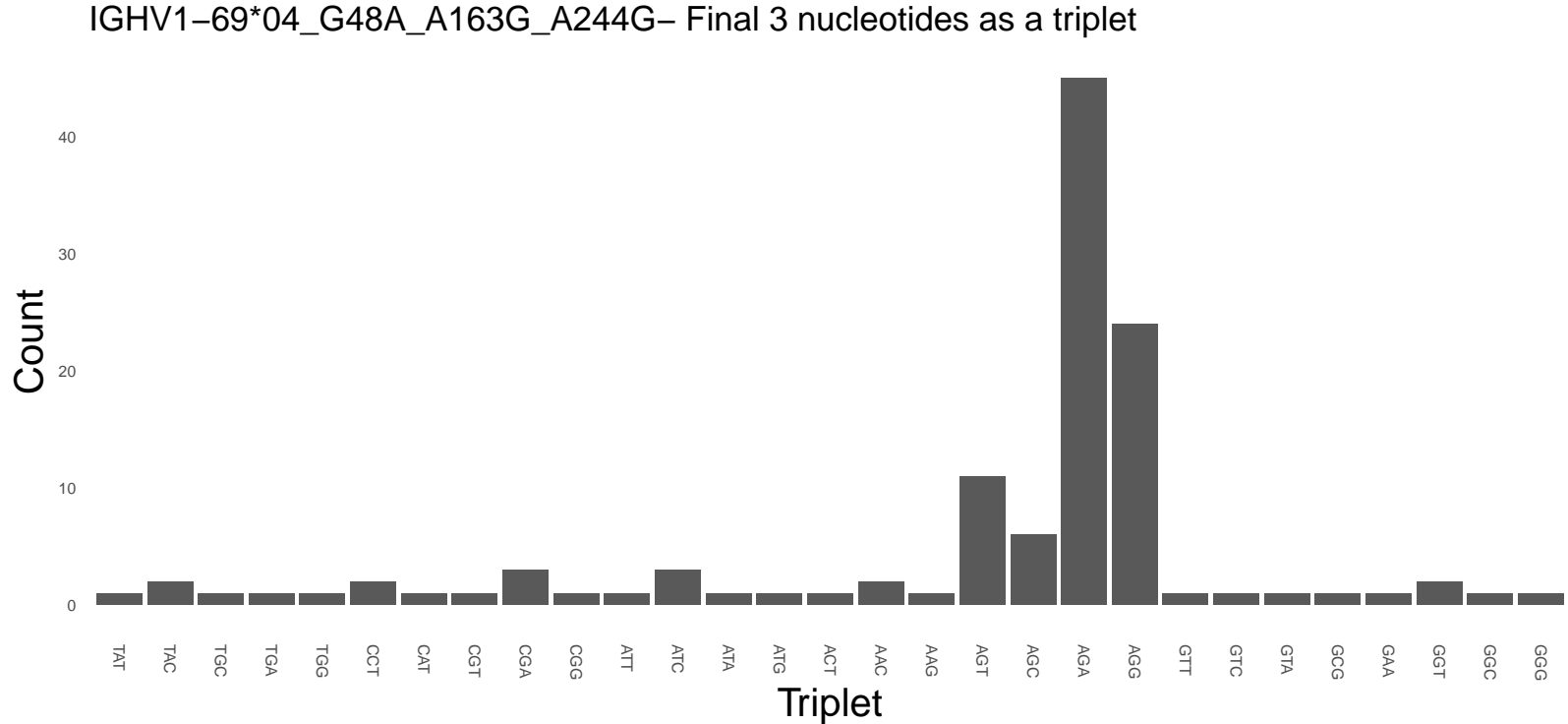
Gene IGHV1-69*04_G48A_A163G_A244G



IGHV1-18*01_A190G- Final 3 nucleotides as a triplet

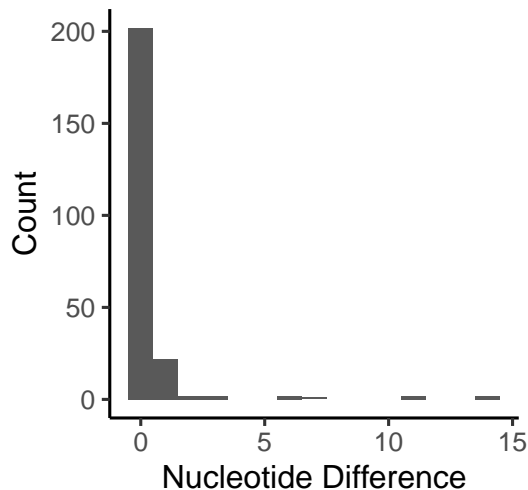


IGHV1-69*04_G48A_A163G_A244G- Final 3 nucleotides as a triplet



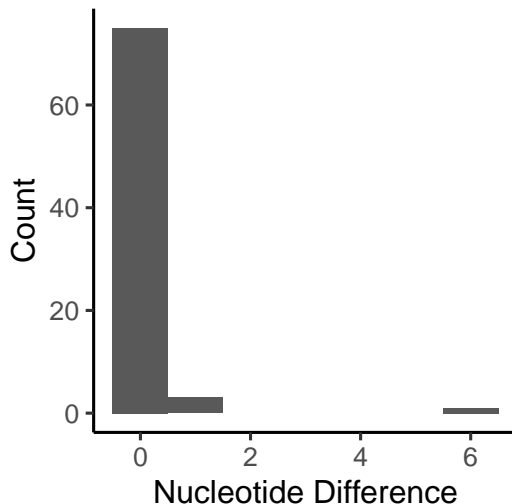
IGHV1-2*02

235 sequences assigned
202 (86%) exact matches, in which:
202 unique CDR3
6 unique J



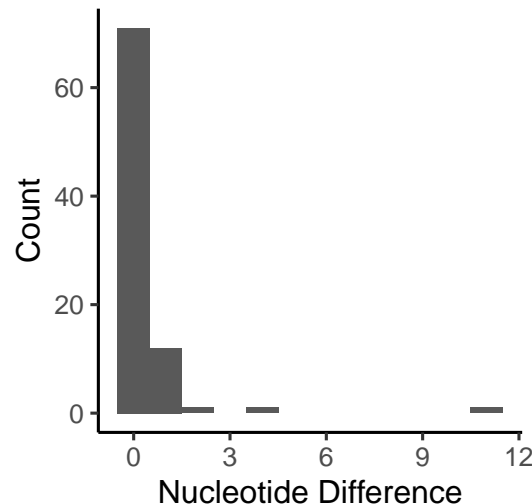
IGHV1-18*01

79 sequences assigned
75 (94.9%) exact matches, in which:
74 unique CDR3
5 unique J



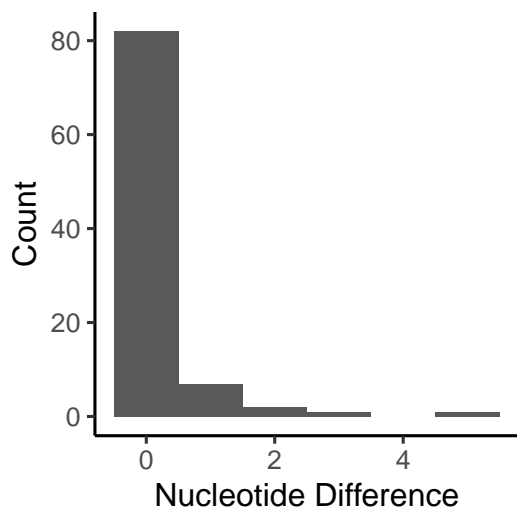
IGHV1-46*01

86 sequences assigned
71 (82.6%) exact matches, in which:
71 unique CDR3
7 unique J



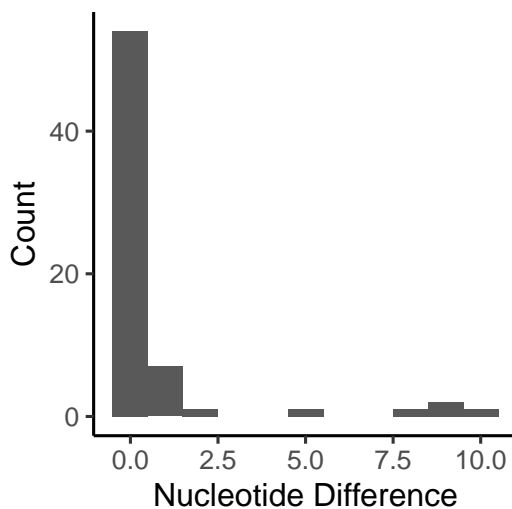
IGHV1-8*01

93 sequences assigned
82 (88.2%) exact matches, in which:
80 unique CDR3
7 unique J



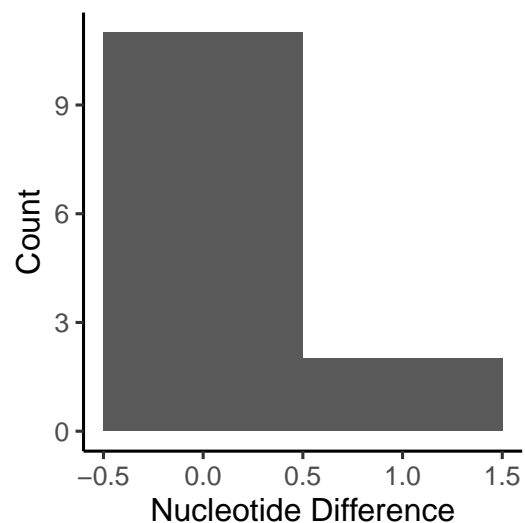
IGHV1-18*01_A190G

67 sequences assigned
54 (80.6%) exact matches, in which:
54 unique CDR3
5 unique J



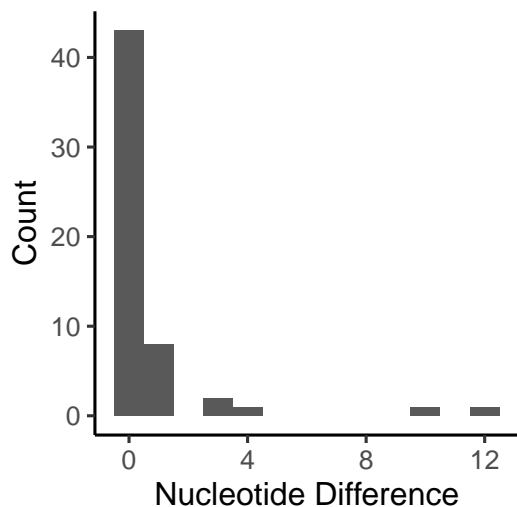
IGHV1-58*02

13 sequences assigned
11 (84.6%) exact matches, in which:
11 unique CDR3
5 unique J



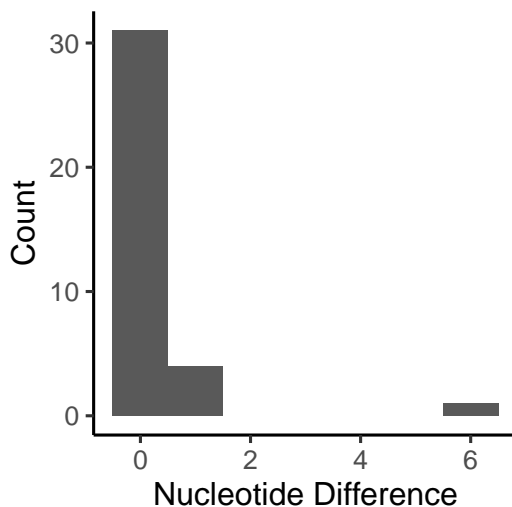
IGHV1-8*02

56 sequences assigned
43 (76.8%) exact matches, in which:
43 unique CDR3
6 unique J



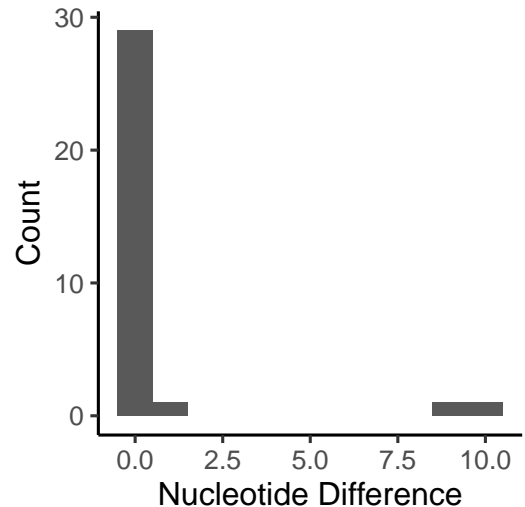
IGHV1-24*01

36 sequences assigned
31 (86.1%) exact matches, in which:
31 unique CDR3
6 unique J



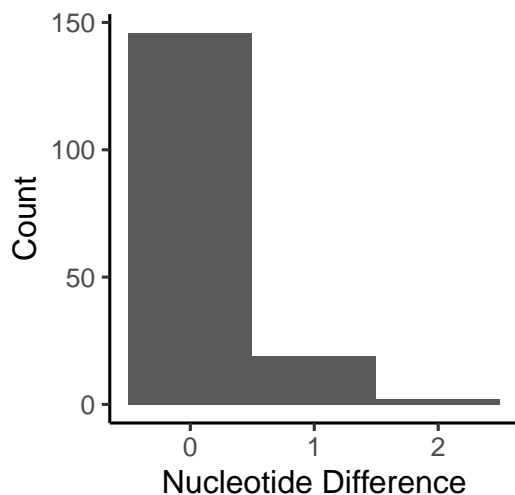
IGHV1-69-2*01

32 sequences assigned
29 (90.6%) exact matches, in which:
29 unique CDR3
5 unique J



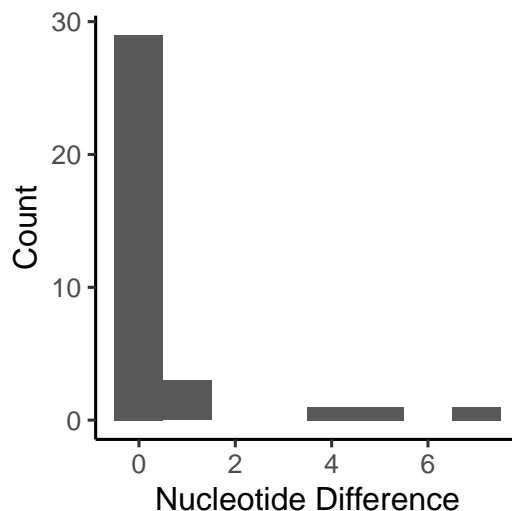
IGHV1–69*04

167 sequences assigned
146 (87.4%) exact matches, in which:
144 unique CDR3
6 unique J



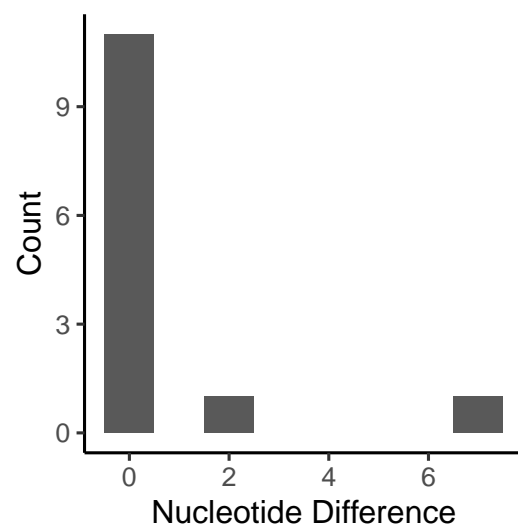
IGHV2–5*02

35 sequences assigned
29 (82.9%) exact matches, in which:
29 unique CDR3
4 unique J



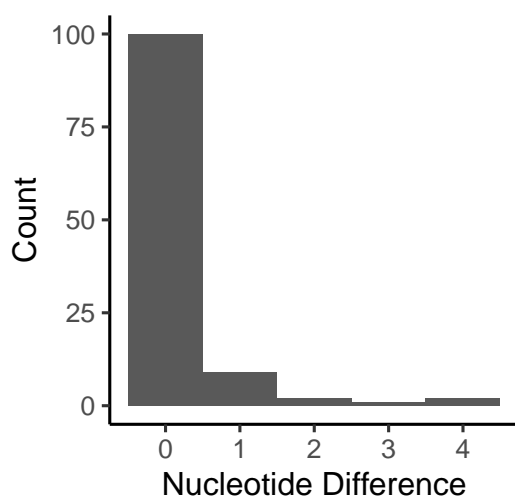
IGHV2–70*15

13 sequences assigned
11 (84.6%) exact matches, in which:
11 unique CDR3
4 unique J



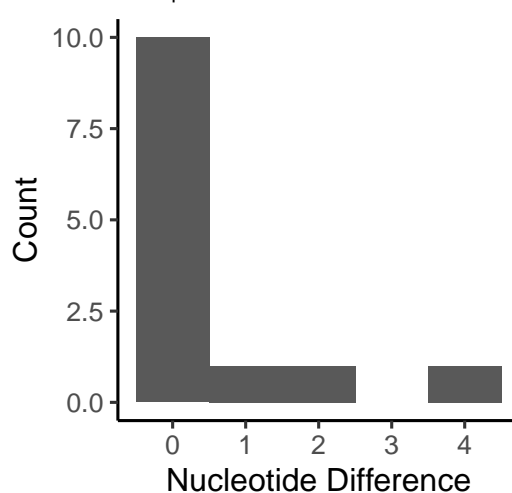
IGHV1–69*10

114 sequences assigned
100 (87.7%) exact matches, in which:
96 unique CDR3
6 unique J



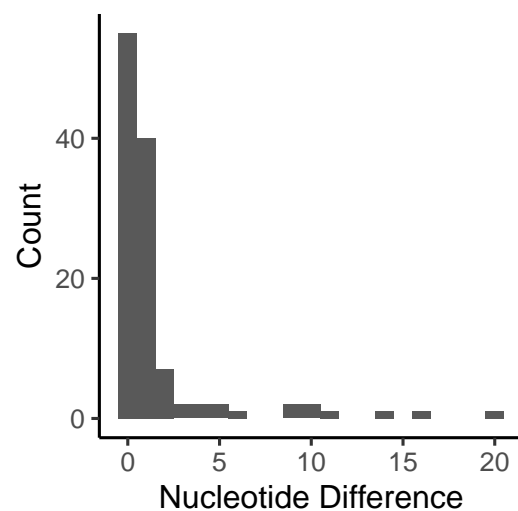
IGHV2–5*05

14 sequences assigned
10 (71.4%) exact matches, in which:
10 unique CDR3
4 unique J



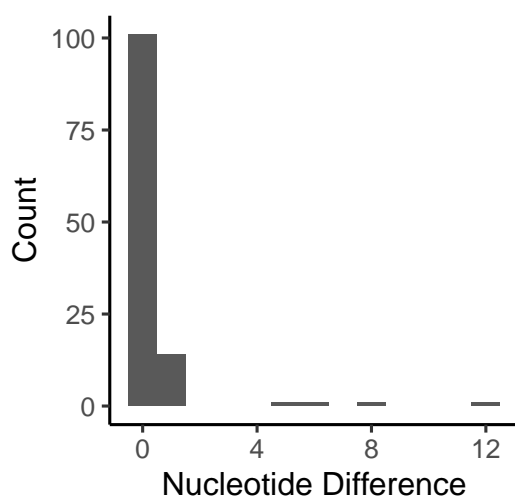
IGHV3–7*01

118 sequences assigned
55 (46.6%) exact matches, in which:
55 unique CDR3
6 unique J



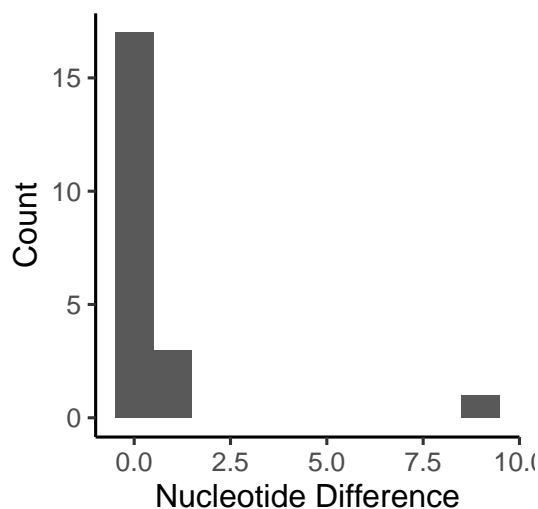
IGHV1–69*04_G48A_A16

119 sequences assigned
101 (84.9%) exact matches, in which:
101 unique CDR3
5 unique J



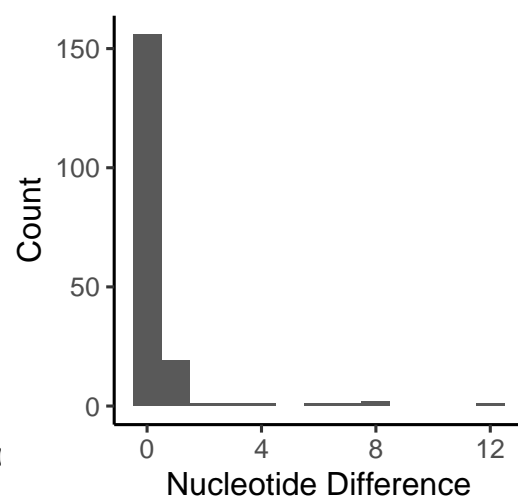
IGHV2–26*01

21 sequences assigned
17 (81%) exact matches, in which:
17 unique CDR3
6 unique J



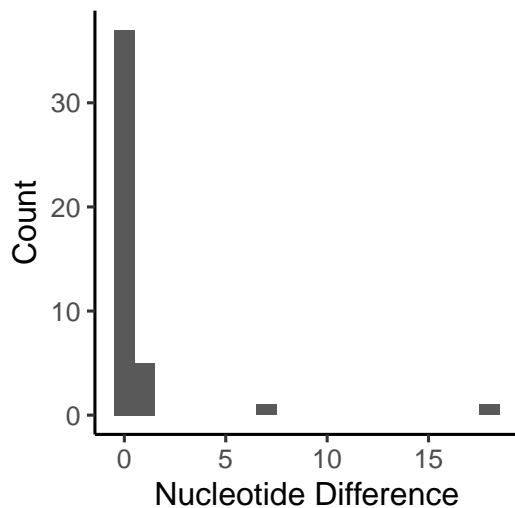
IGHV3–9*01

185 sequences assigned
156 (84.3%) exact matches, in which:
154 unique CDR3
7 unique J



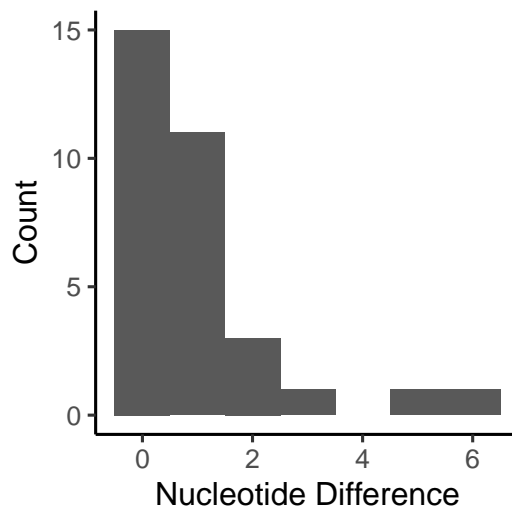
IGHV3-11*01

44 sequences assigned
37 (84.1%) exact matches, in which:
37 unique CDR3
5 unique J



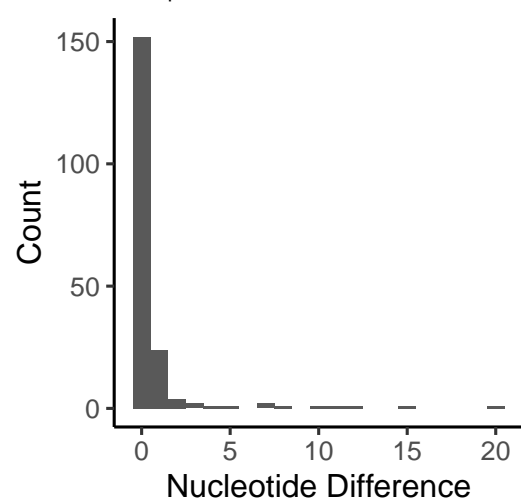
IGHV3-15*01

32 sequences assigned
15 (46.9%) exact matches, in which:
15 unique CDR3
3 unique J



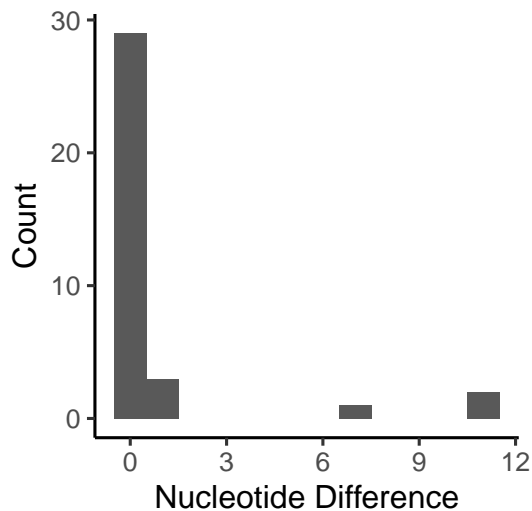
IGHV3-21*01

192 sequences assigned
152 (79.2%) exact matches, in which:
152 unique CDR3
7 unique J



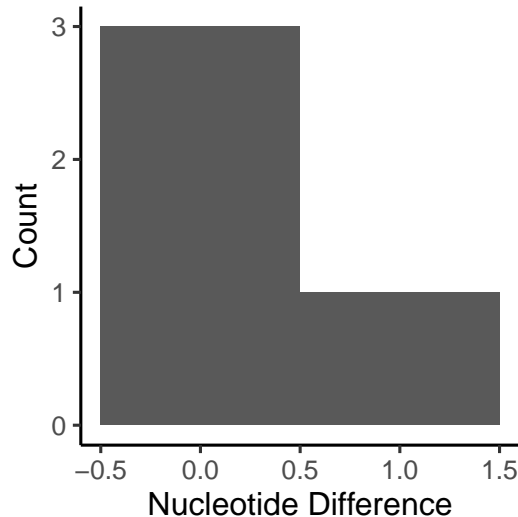
IGHV3-11*04

36 sequences assigned
29 (80.6%) exact matches, in which:
29 unique CDR3
5 unique J



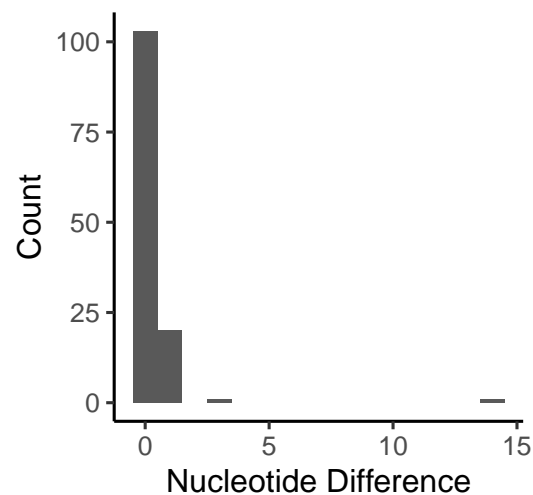
IGHV3-20*01

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



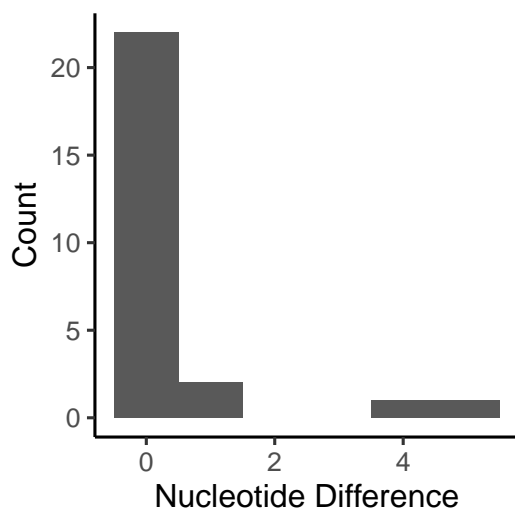
IGHV3-33*06

126 sequences assigned
103 (81.7%) exact matches, in which:
103 unique CDR3
7 unique J



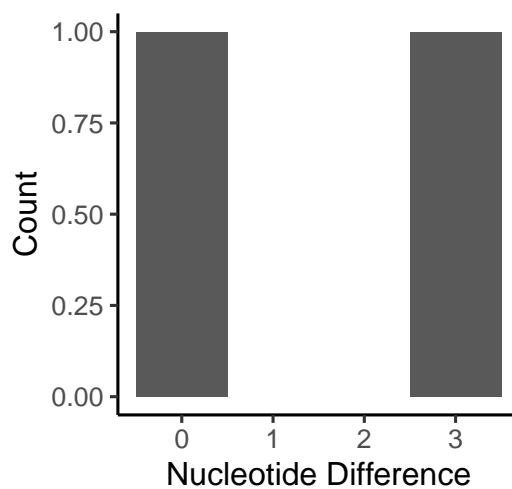
IGHV3-13*01

26 sequences assigned
22 (84.6%) exact matches, in which:
22 unique CDR3
6 unique J



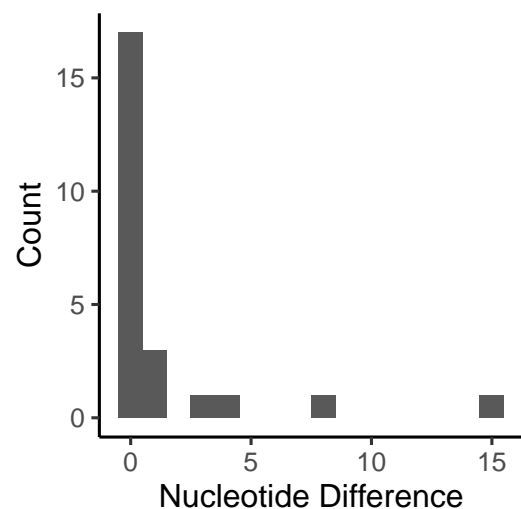
IGHV3-20*04

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



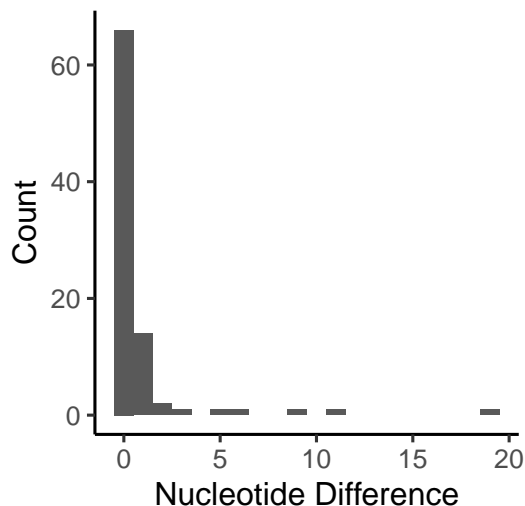
IGHV3-43*01

26 sequences assigned
17 (65.4%) exact matches, in which:
17 unique CDR3
5 unique J



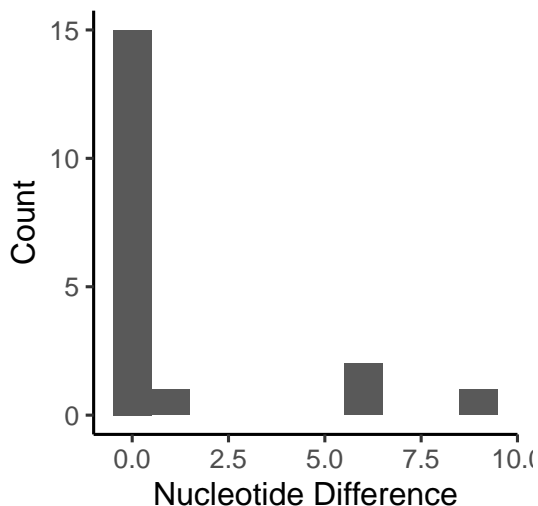
IGHV3-48*03

88 sequences assigned
66 (75%) exact matches, in which:
65 unique CDR3
5 unique J



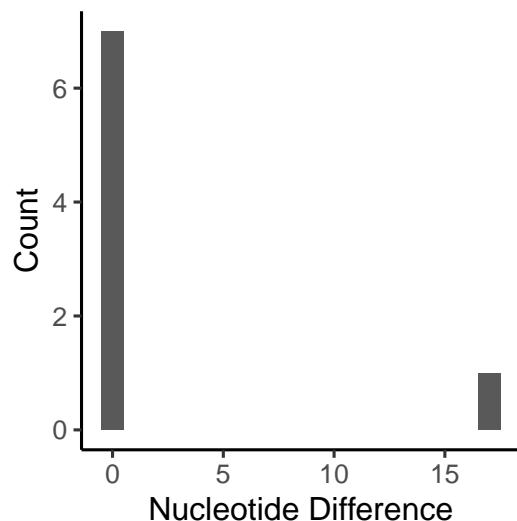
IGHV3-49*04

19 sequences assigned
15 (78.9%) exact matches, in which:
15 unique CDR3
4 unique J



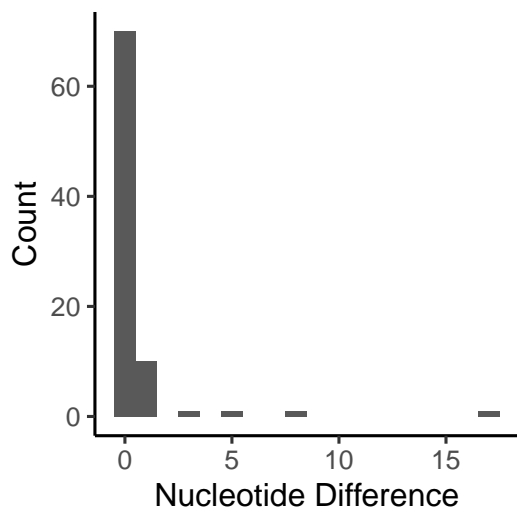
IGHV3-64*01

8 sequences assigned
7 (87.5%) exact matches, in which:
7 unique CDR3
5 unique J



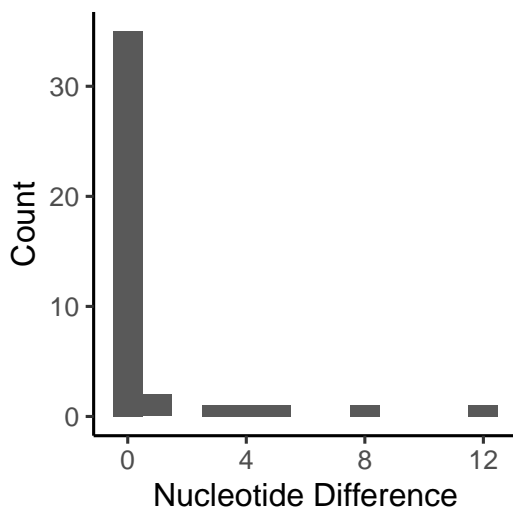
IGHV3-48*04

84 sequences assigned
70 (83.3%) exact matches, in which:
68 unique CDR3
6 unique J



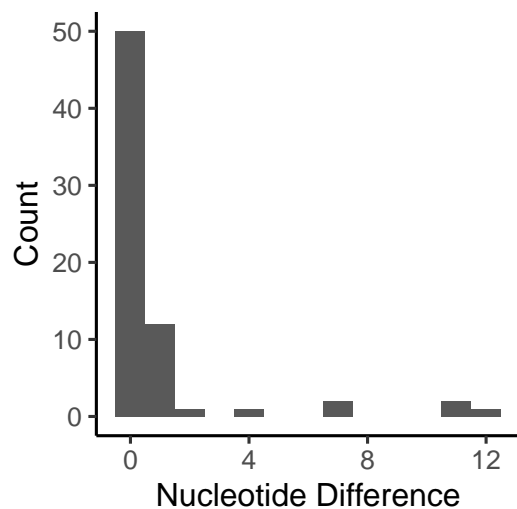
IGHV3-53*01

42 sequences assigned
35 (83.3%) exact matches, in which:
35 unique CDR3
5 unique J



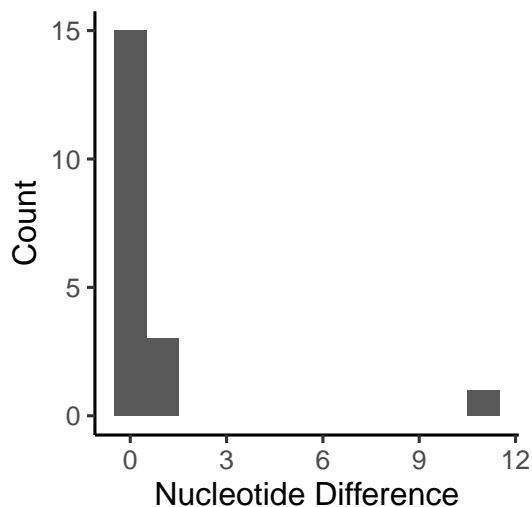
IGHV3-66*01

69 sequences assigned
50 (72.5%) exact matches, in which:
50 unique CDR3
4 unique J



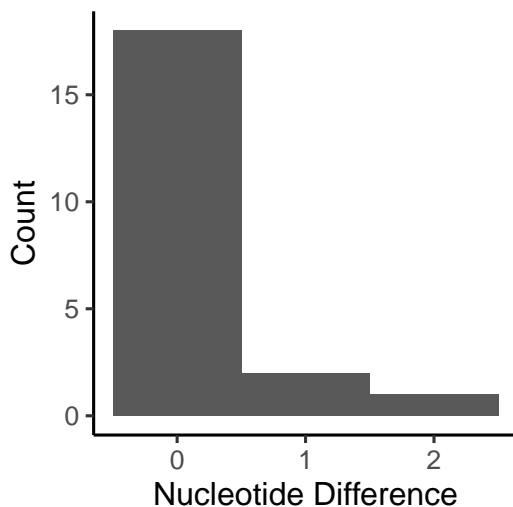
IGHV3-49*03

19 sequences assigned
15 (78.9%) exact matches, in which:
15 unique CDR3
3 unique J



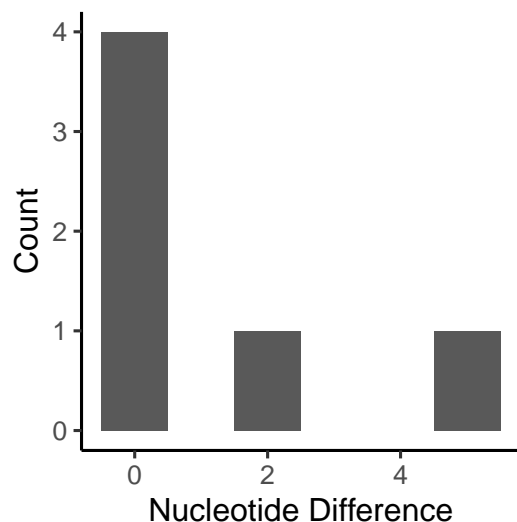
IGHV3-53*04

21 sequences assigned
18 (85.7%) exact matches, in which:
18 unique CDR3
5 unique J



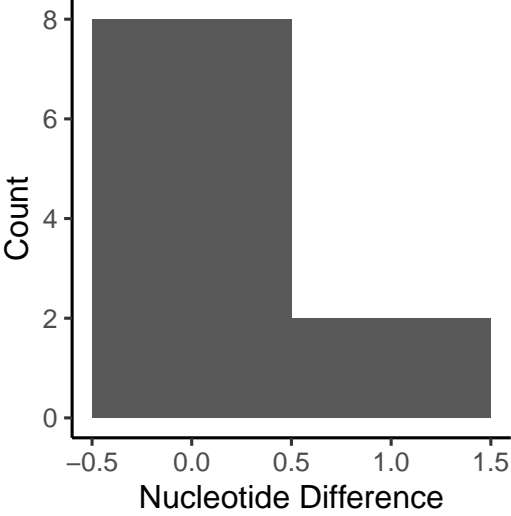
IGHV3-72*01

6 sequences assigned
4 (66.7%) exact matches, in which:
4 unique CDR3
3 unique J



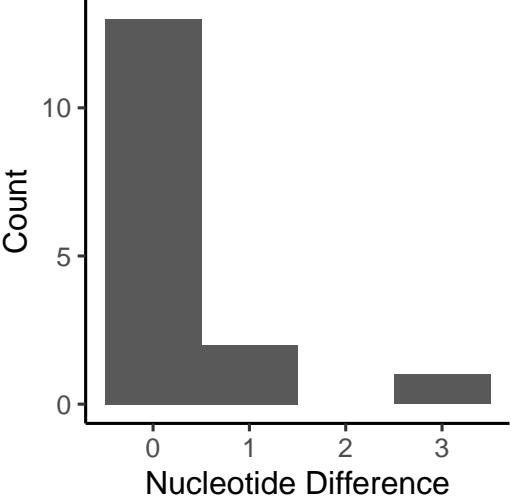
IGHV3-73*01

10 sequences assigned
8 (80%) exact matches, in which:
8 unique CDR3
2 unique J



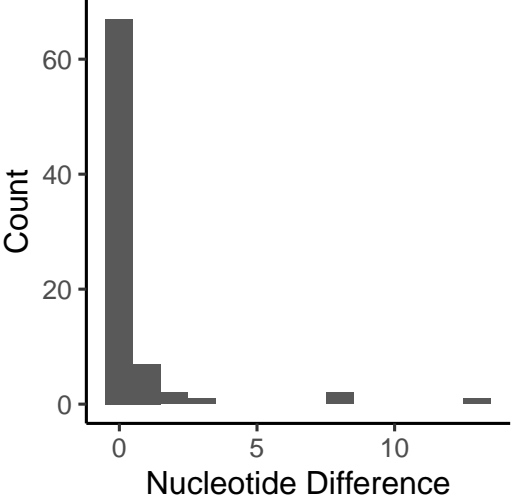
IGHV3-43D*03

16 sequences assigned
13 (81.2%) exact matches, in which:
13 unique CDR3
4 unique J



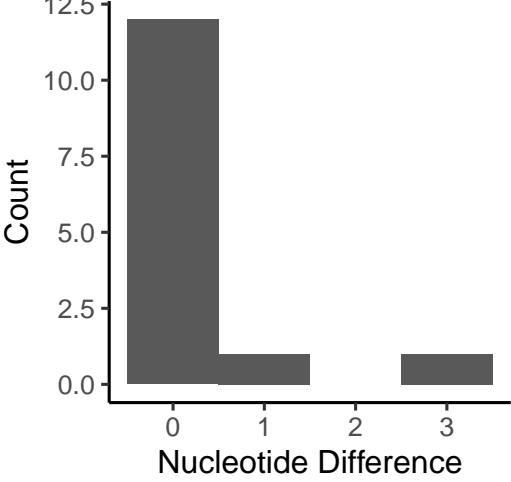
IGHV4-31*03

80 sequences assigned
67 (83.8%) exact matches, in which:
67 unique CDR3
6 unique J



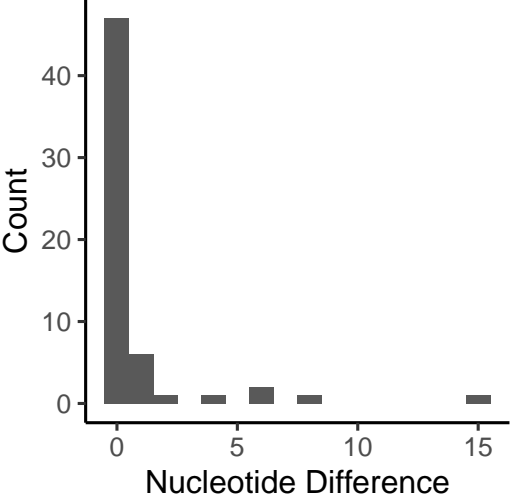
IGHV3-73*02

14 sequences assigned
12 (85.7%) exact matches, in which:
12 unique CDR3
3 unique J



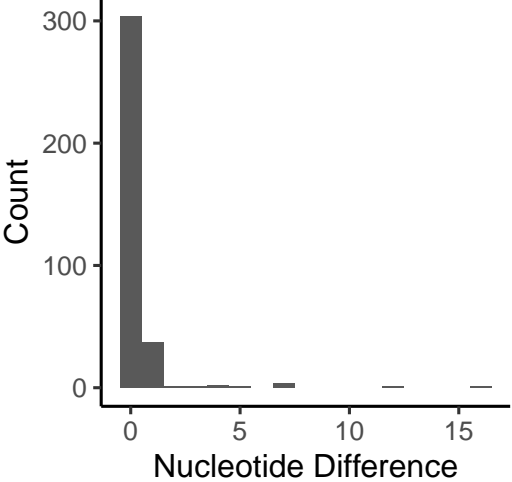
IGHV4-4*07

59 sequences assigned
47 (79.7%) exact matches, in which:
45 unique CDR3
6 unique J



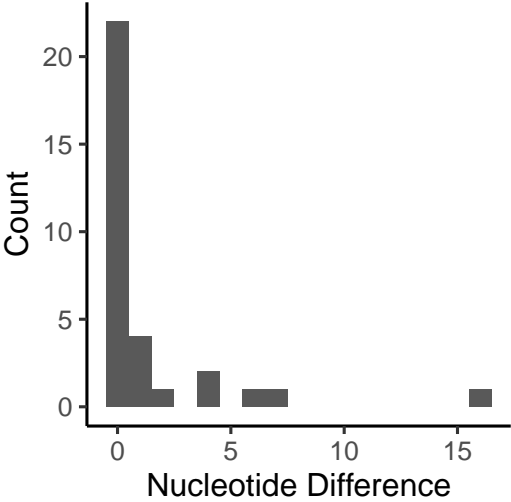
IGHV4-34*01

356 sequences assigned
304 (85.4%) exact matches, in which:
303 unique CDR3
7 unique J



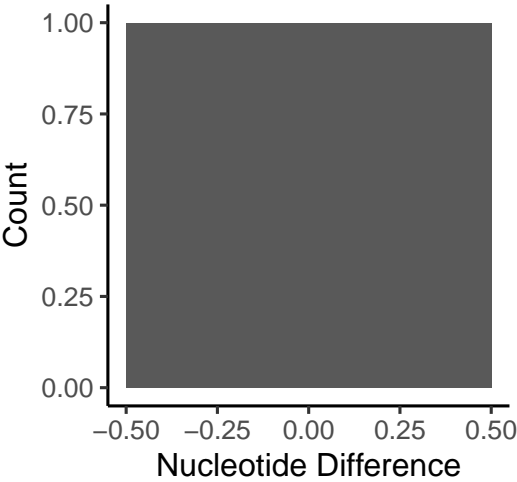
IGHV3-74*01

33 sequences assigned
22 (66.7%) exact matches, in which:
22 unique CDR3
4 unique J



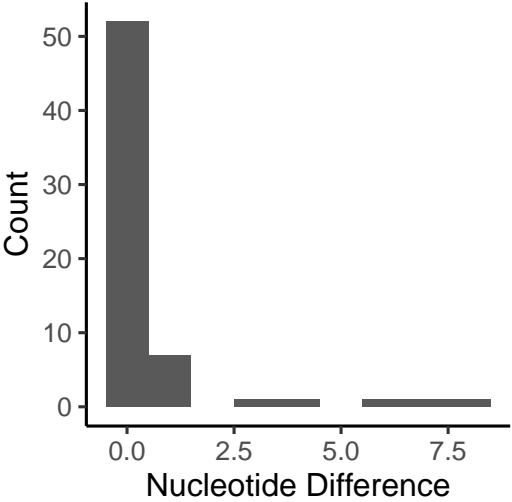
IGHV4-28*01

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



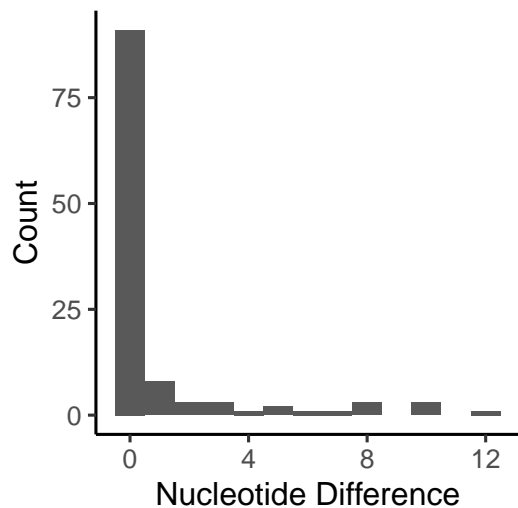
IGHV4-38-2*02

64 sequences assigned
52 (81.2%) exact matches, in which:
52 unique CDR3
6 unique J



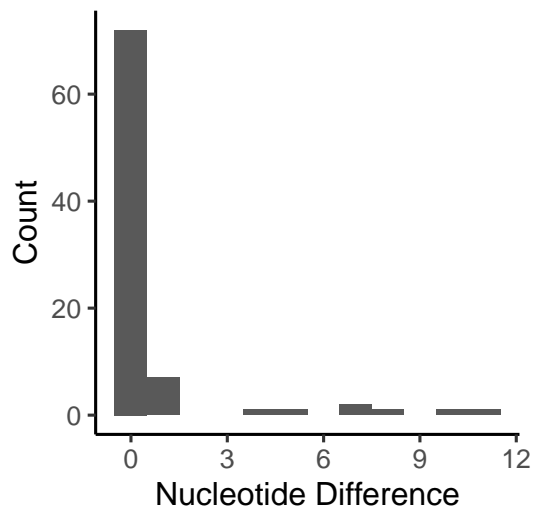
IGHV4-39*01

117 sequences assigned
91 (77.8%) exact matches, in which:
90 unique CDR3
6 unique J



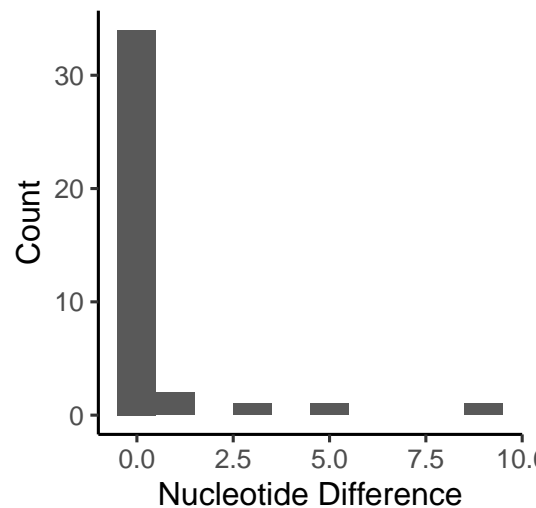
IGHV4-59*08

87 sequences assigned
72 (82.8%) exact matches, in which:
72 unique CDR3
6 unique J



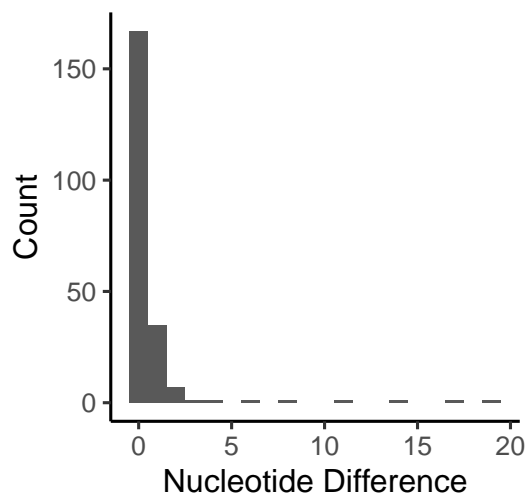
IGHV6-1*01

39 sequences assigned
34 (87.2%) exact matches, in which:
34 unique CDR3
6 unique J



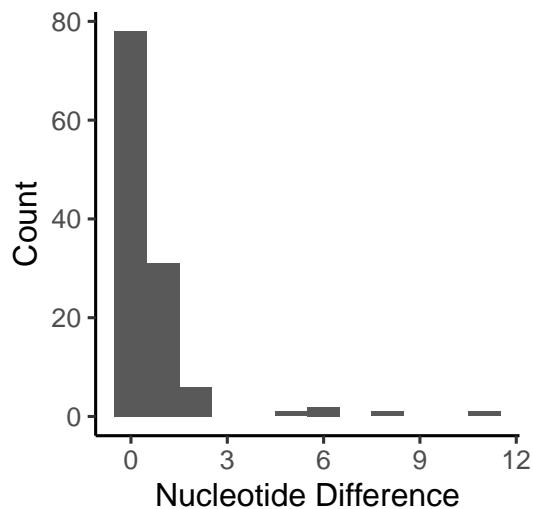
IGHV4-39*07

218 sequences assigned
167 (76.6%) exact matches, in which:
166 unique CDR3
6 unique J



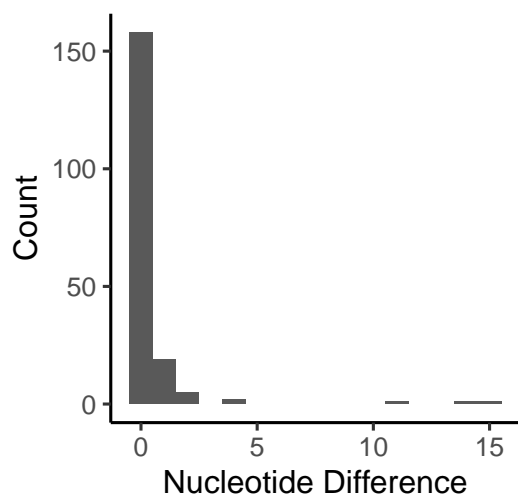
IGHV5-51*01

121 sequences assigned
78 (64.5%) exact matches, in which:
77 unique CDR3
6 unique J



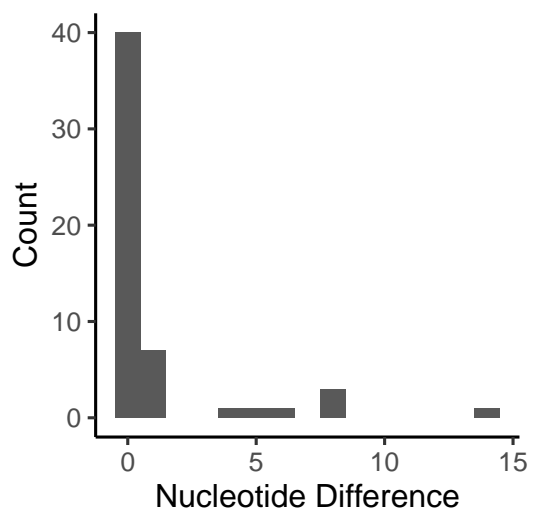
IGHV4-59*01

187 sequences assigned
158 (84.5%) exact matches, in which:
156 unique CDR3
7 unique J

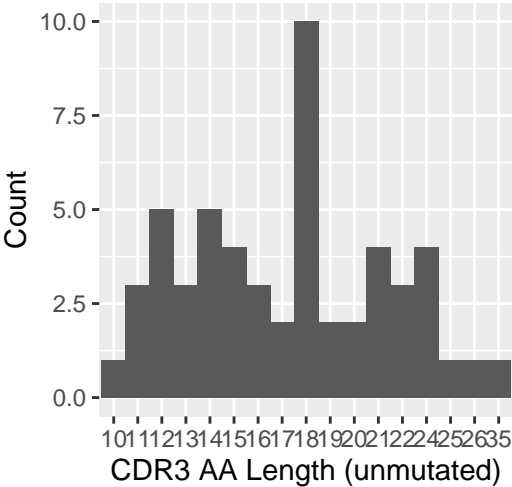


IGHV5-51*03

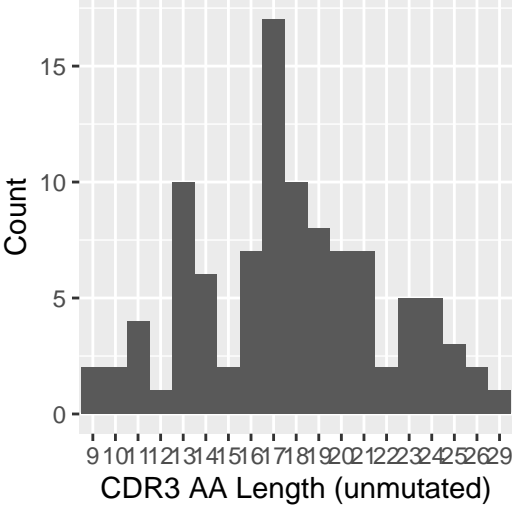
54 sequences assigned
40 (74.1%) exact matches, in which:
40 unique CDR3
5 unique J



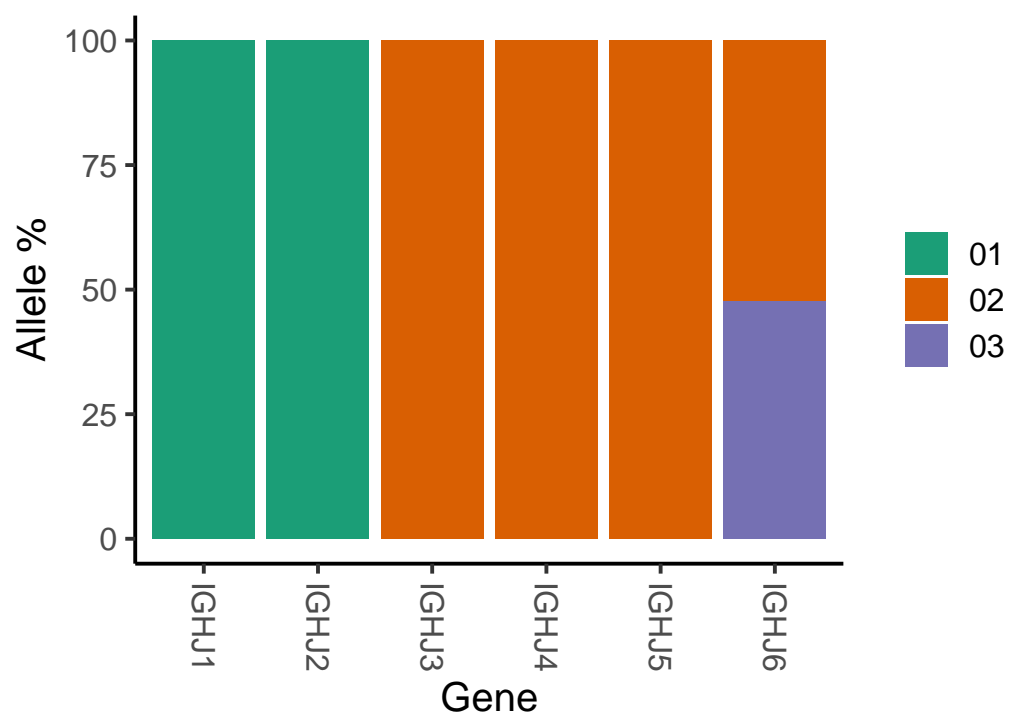
IGHV1-18*01_A190G



IGHV1-69*04_G48A_A163G_A244G



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]