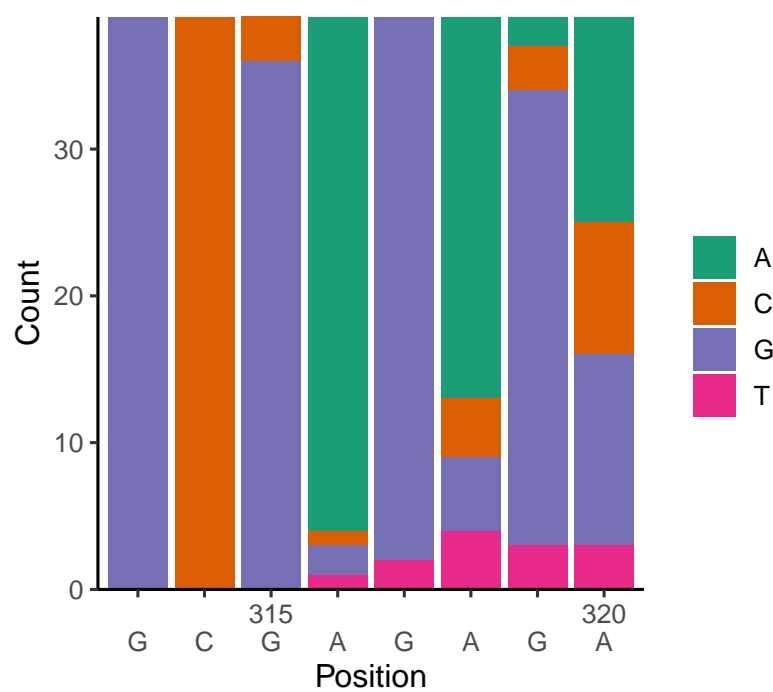
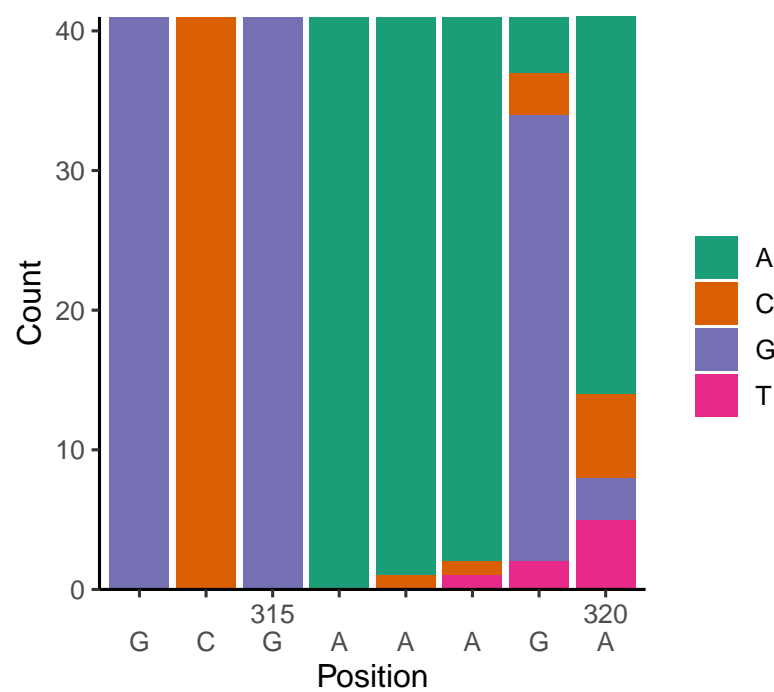


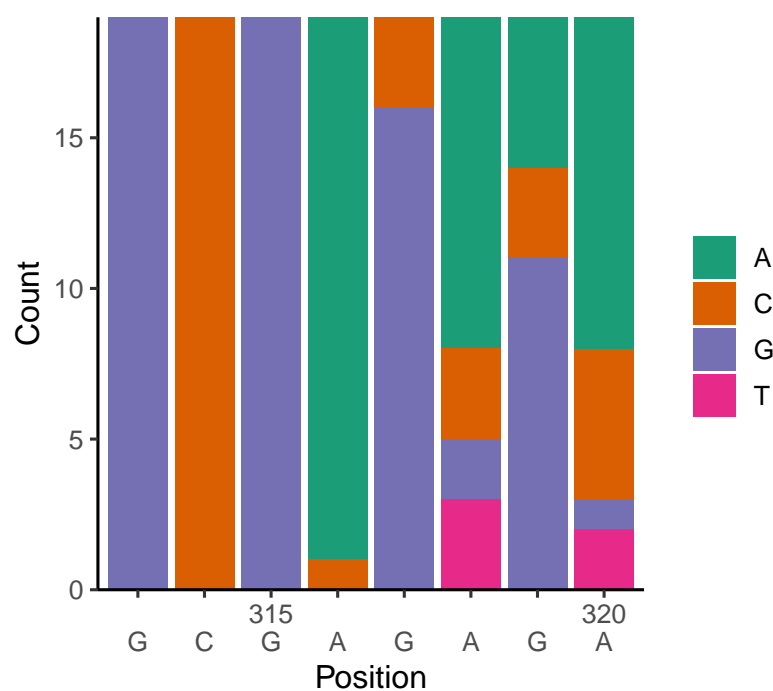
Gene IGHV1-69*01_C26T



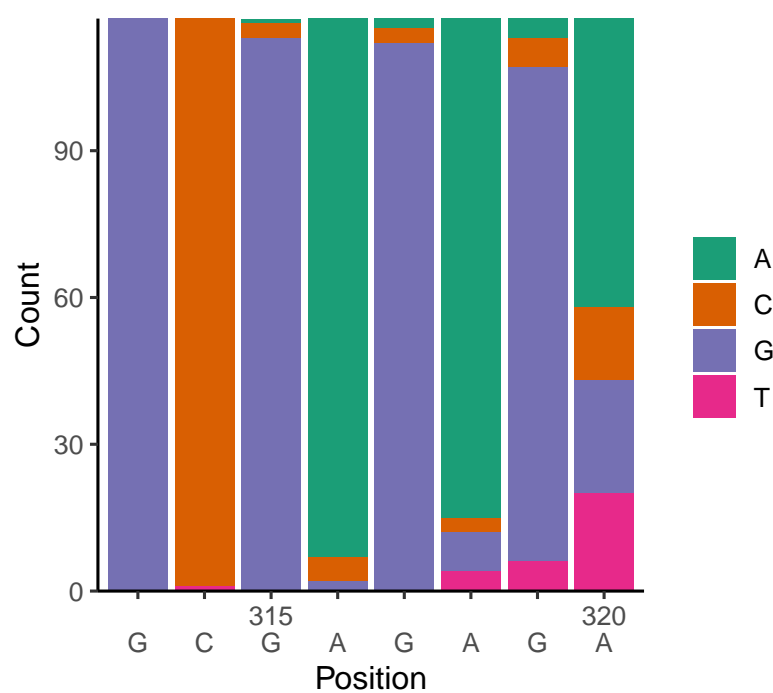
Gene IGHV3-30*02_G49A



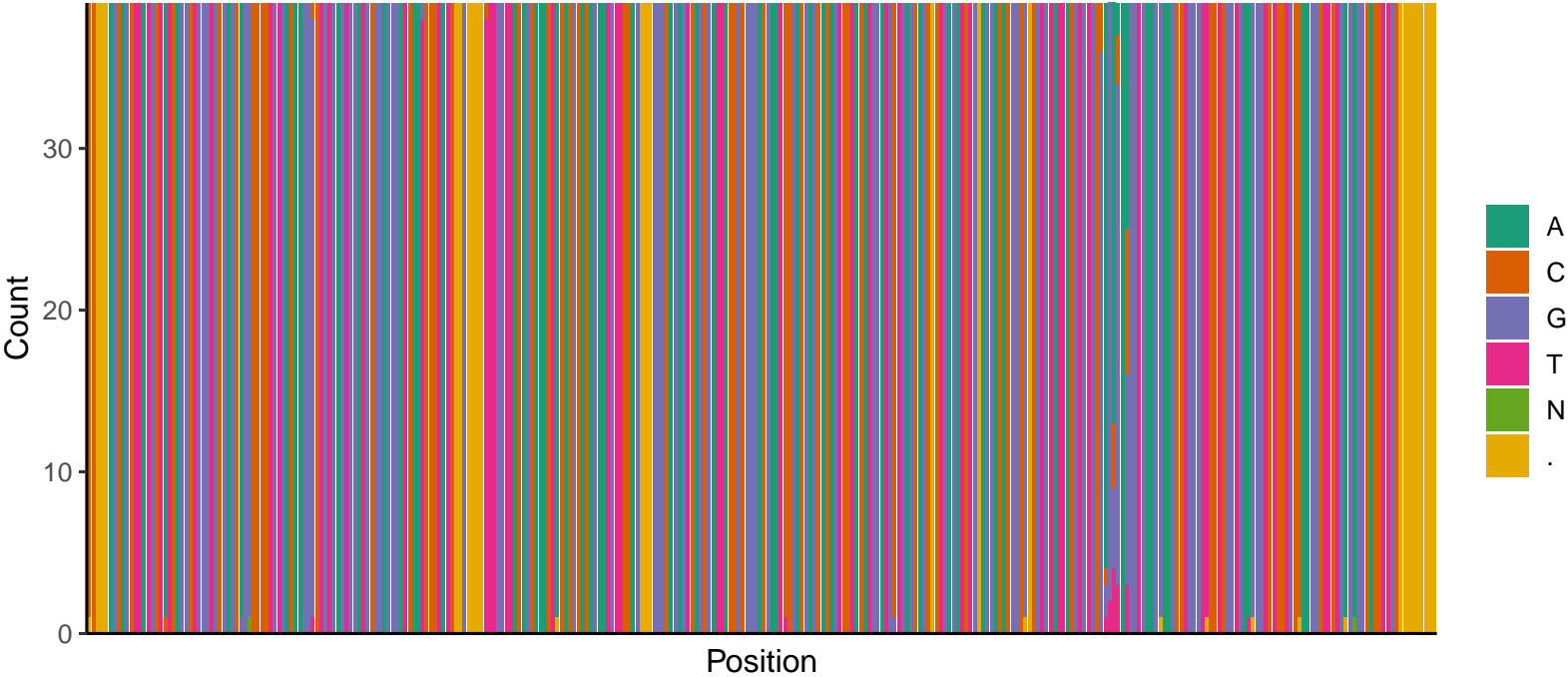
Gene IGHV3-53*02_G88A



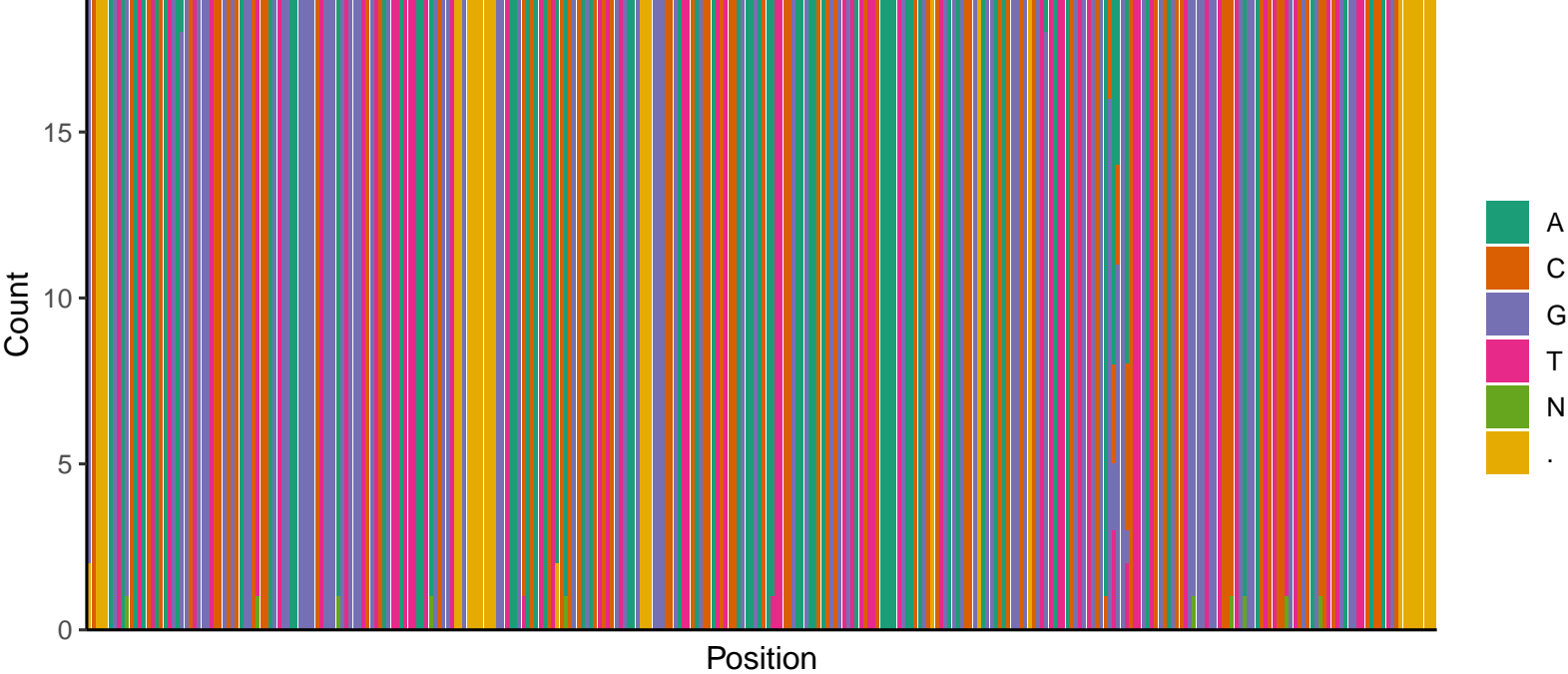
Gene IGHV4-39*07_C288A



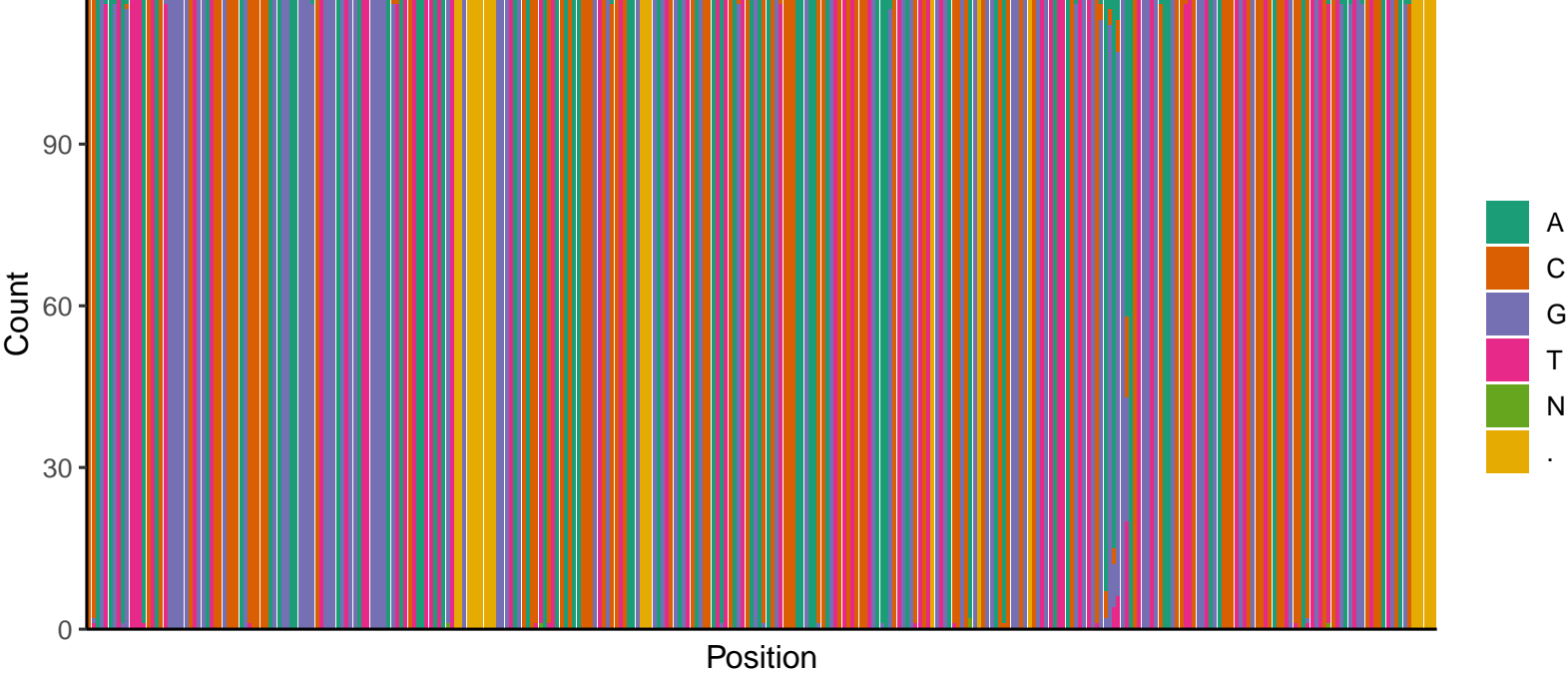
Gene IGHV1-69*01_C26T



Gene IGHV3-53*02_G88A



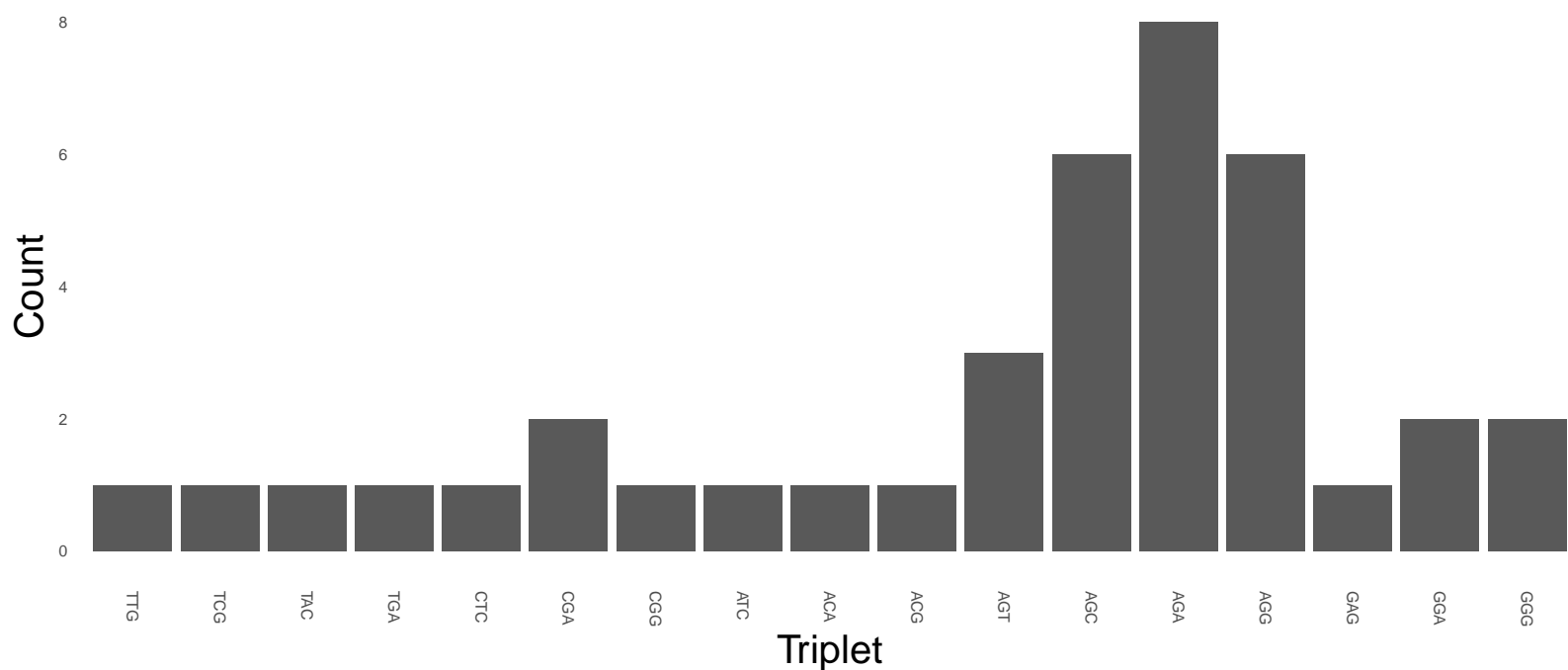
Gene IGHV4-39*07_C288A



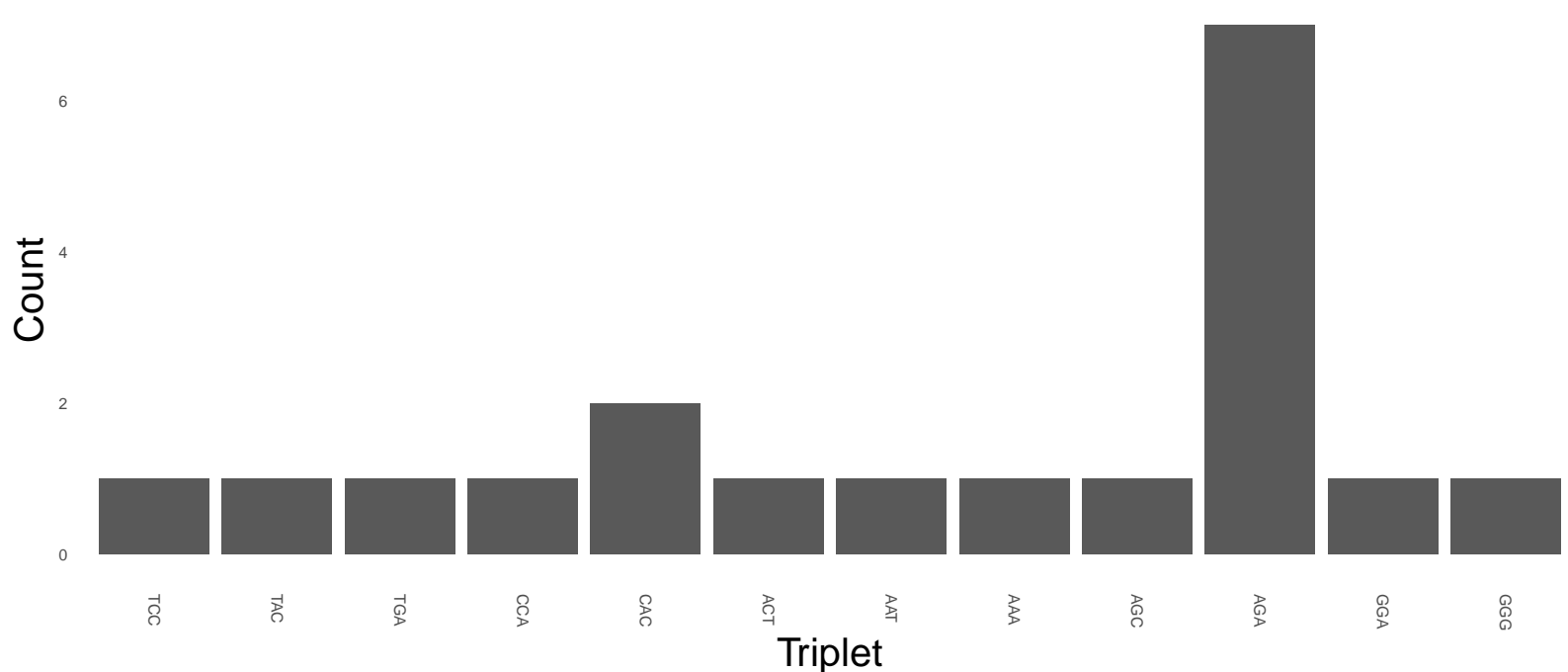
Gene IGHV3-30*02_G49A



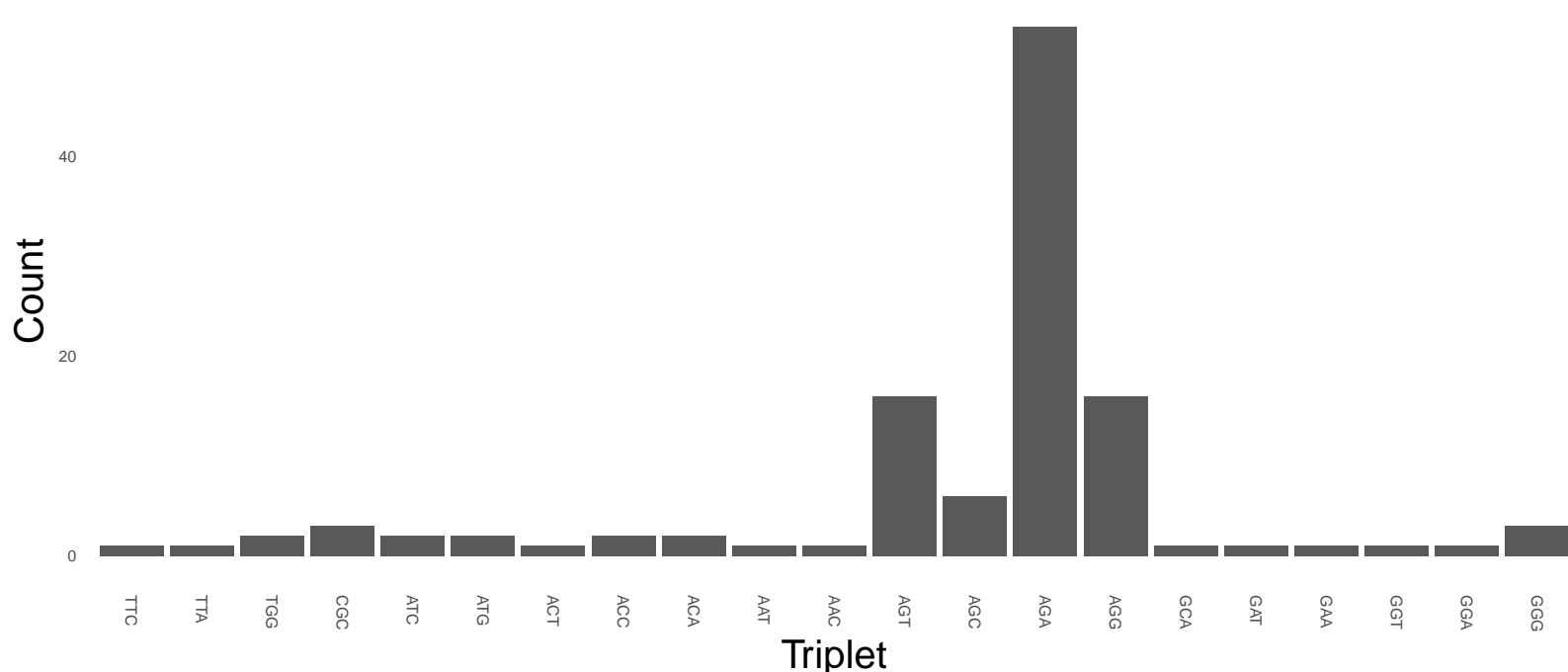
IGHV1-69*01_C26T- Final 3 nucleotides as a triplet



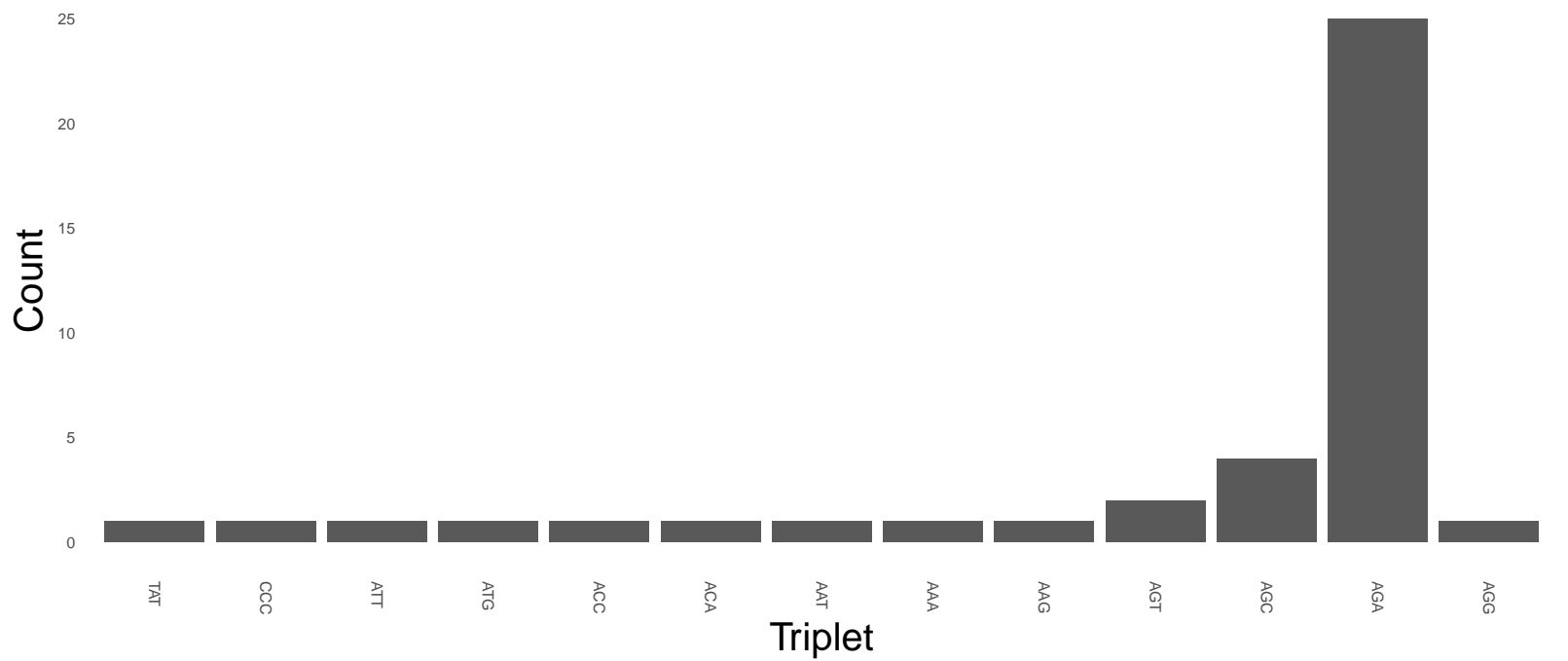
IGHV3-53*02_G88A- Final 3 nucleotides as a triplet



IGHV4-39*07_C288A- Final 3 nucleotides as a triplet

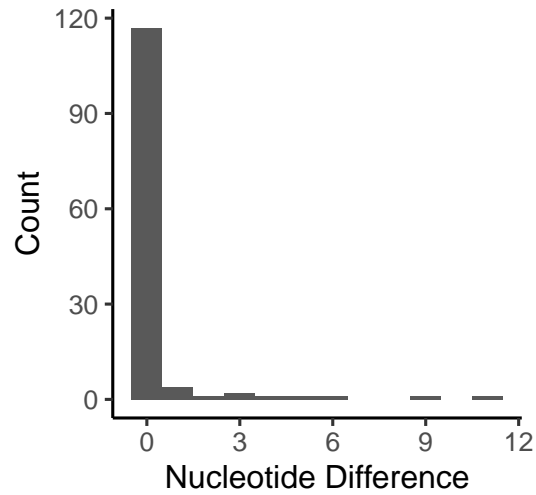


IGHV3-30*02_G49A- Final 3 nucleotides as a triplet



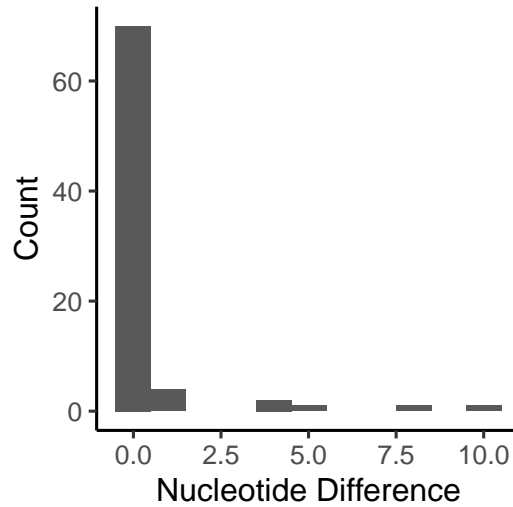
IGHV1-2*02

129 sequences assigned
117 (90.7%) exact matches, in which:
117 unique CDR3
5 unique J



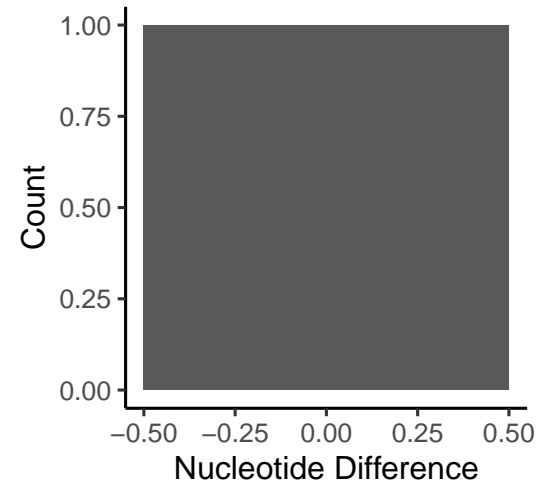
IGHV1-18*01

80 sequences assigned
70 (87.5%) exact matches, in which:
70 unique CDR3
4 unique J



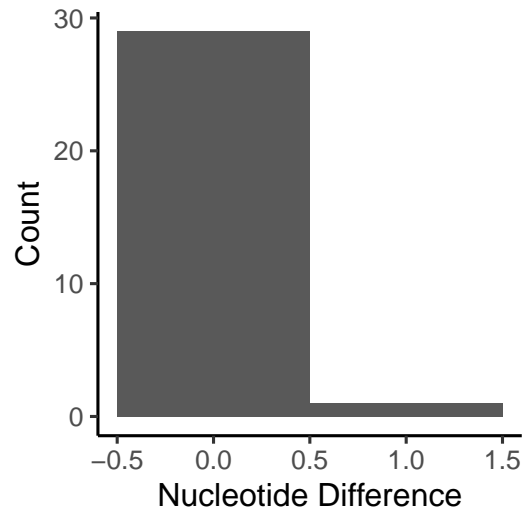
IGHV1-38-4*01

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



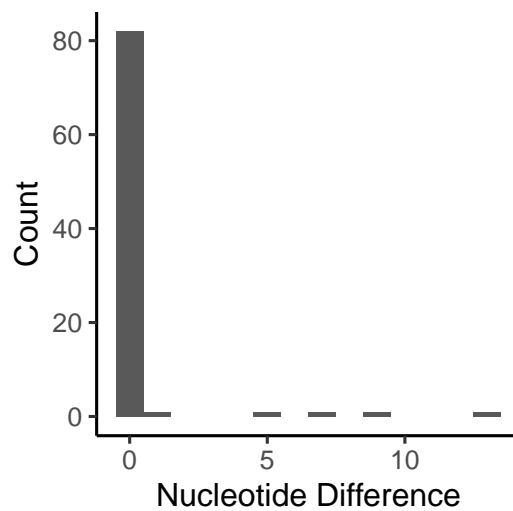
IGHV1-2*04

30 sequences assigned
29 (96.7%) exact matches, in which:
29 unique CDR3
5 unique J



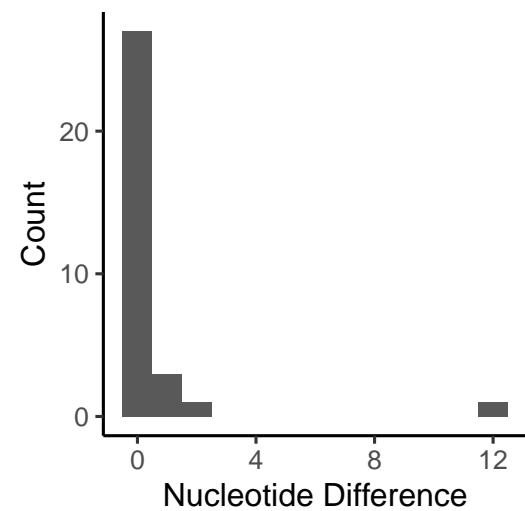
IGHV1-18*04

87 sequences assigned
82 (94.3%) exact matches, in which:
82 unique CDR3
5 unique J



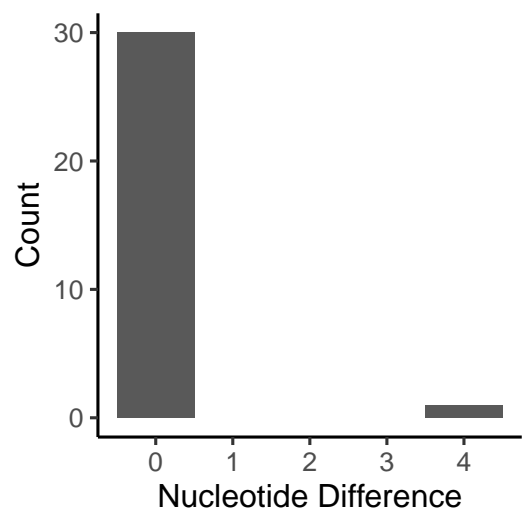
IGHV1-46*01

32 sequences assigned
27 (84.4%) exact matches, in which:
27 unique CDR3
4 unique J



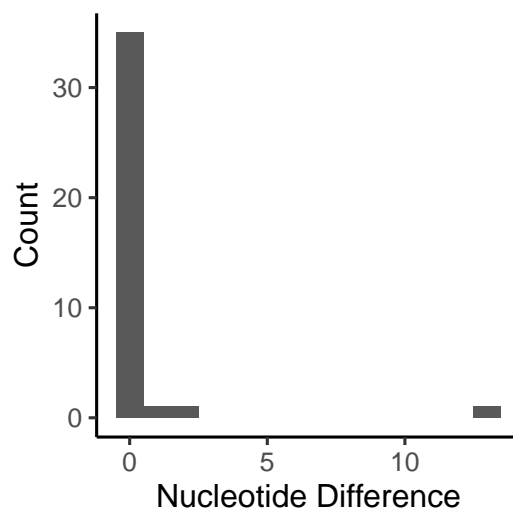
IGHV1-8*01

31 sequences assigned
30 (96.8%) exact matches, in which:
29 unique CDR3
5 unique J



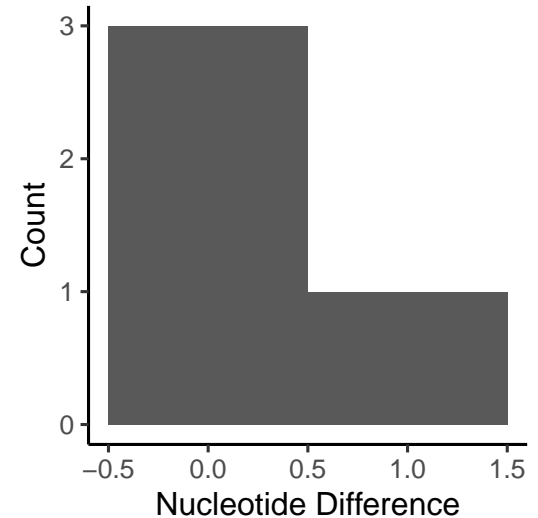
IGHV1-24*01

38 sequences assigned
35 (92.1%) exact matches, in which:
35 unique CDR3
5 unique J



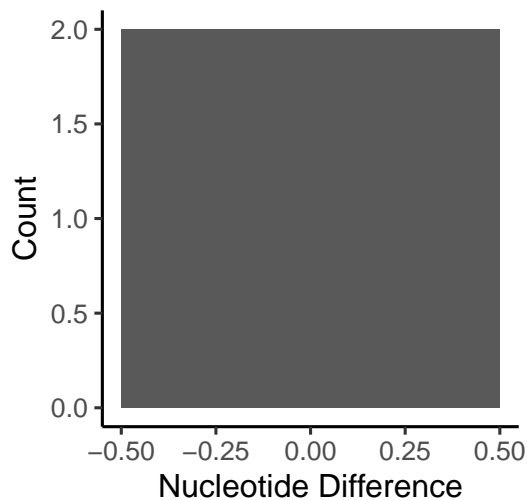
IGHV1-58*01

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



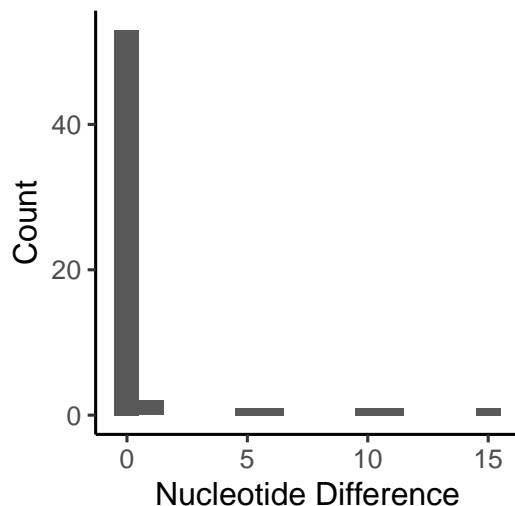
IGHV1-58*02

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



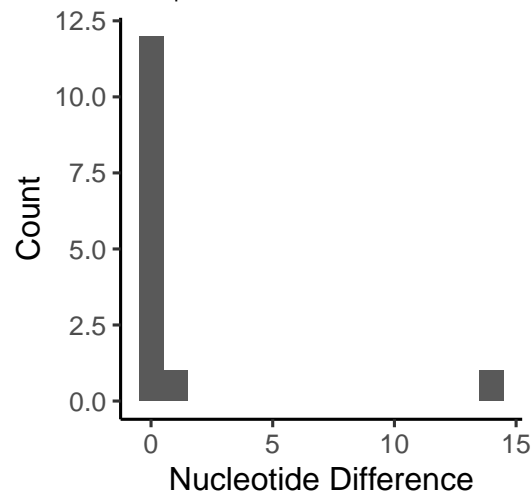
IGHV1-69*06

60 sequences assigned
53 (88.3%) exact matches, in which:
53 unique CDR3
6 unique J



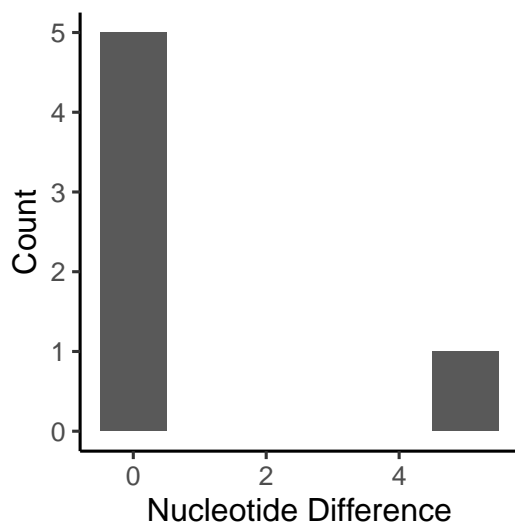
IGHV2-26*01

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



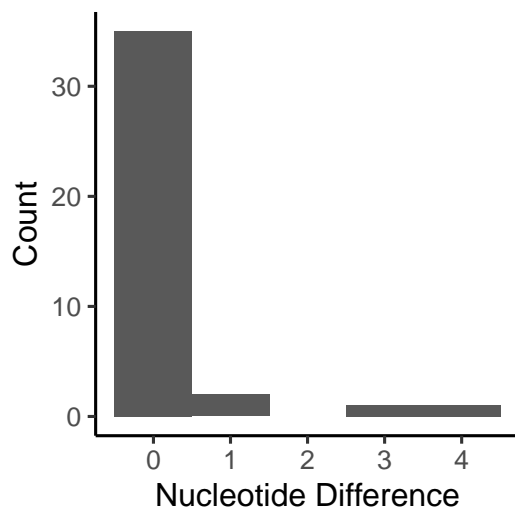
IGHV1-69-2*01

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



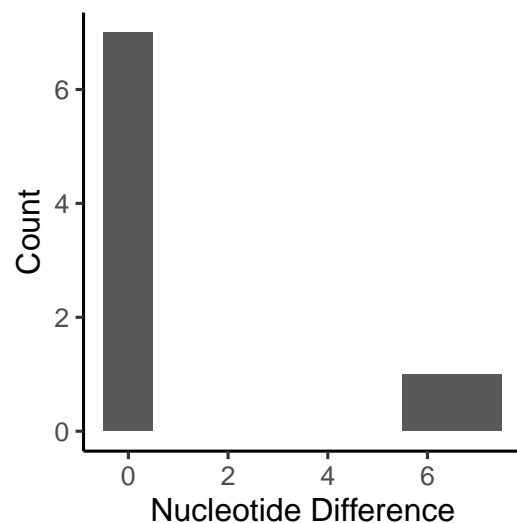
IGHV1-69*01_C26T

39 sequences assigned
35 (89.7%) exact matches, in which:
35 unique CDR3
6 unique J



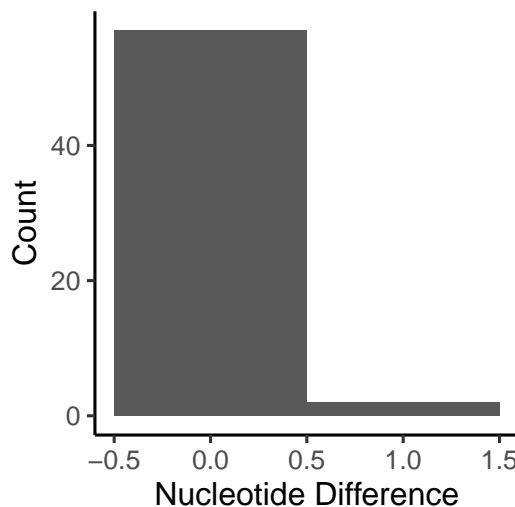
IGHV2-70*01

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



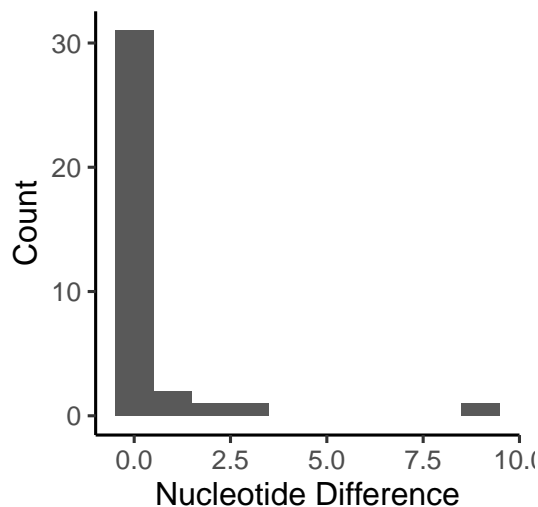
IGHV1-69*04

59 sequences assigned
57 (96.6%) exact matches, in which:
57 unique CDR3
6 unique J



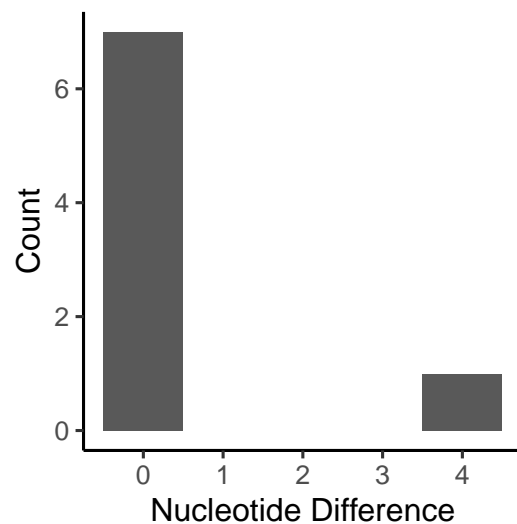
IGHV2-5*01

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



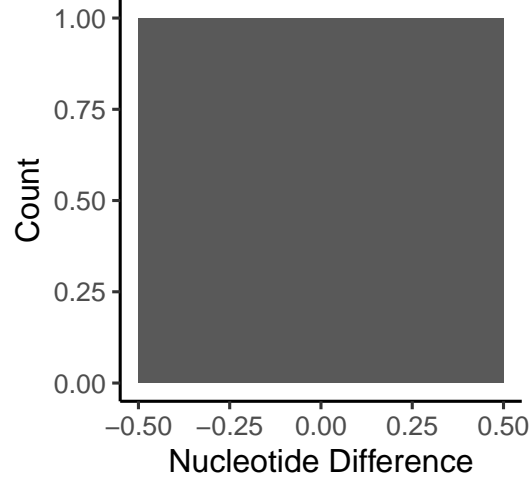
IGHV2-70*15

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



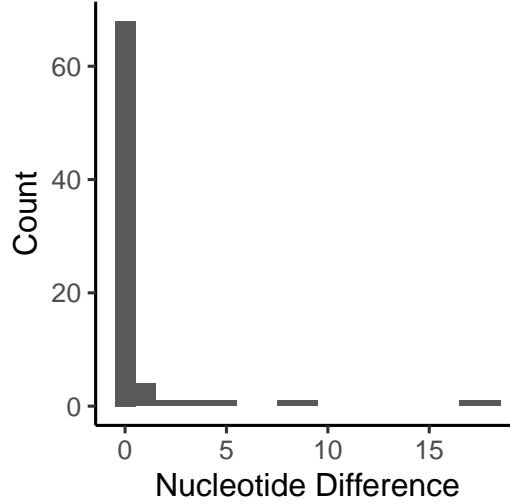
IGHV2-70D*04

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



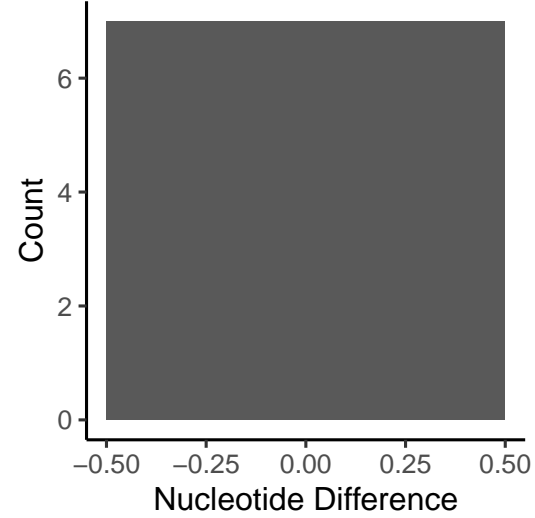
IGHV3-9*01

82 sequences assigned
68 (82.9%) exact matches, in which:
68 unique CDR3
5 unique J



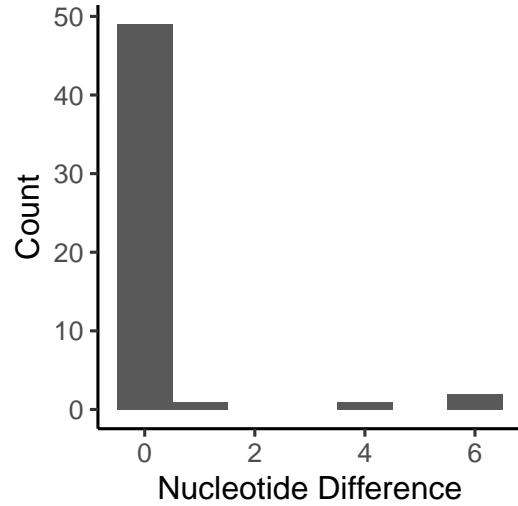
IGHV3-13*01

7 sequences assigned
7 (100%) exact matches, in which:
7 unique CDR3
5 unique J



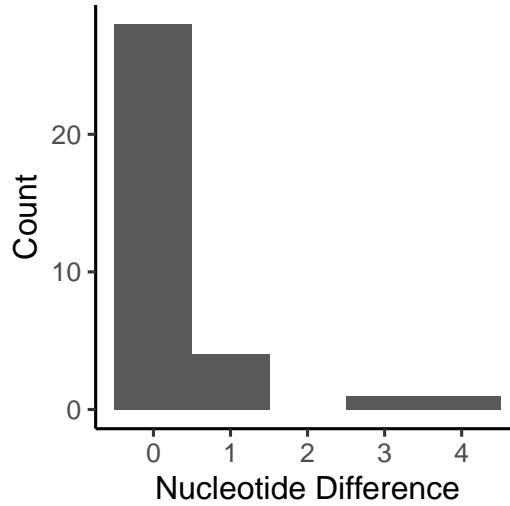
IGHV3-7*01

53 sequences assigned
49 (92.5%) exact matches, in which:
49 unique CDR3
5 unique J



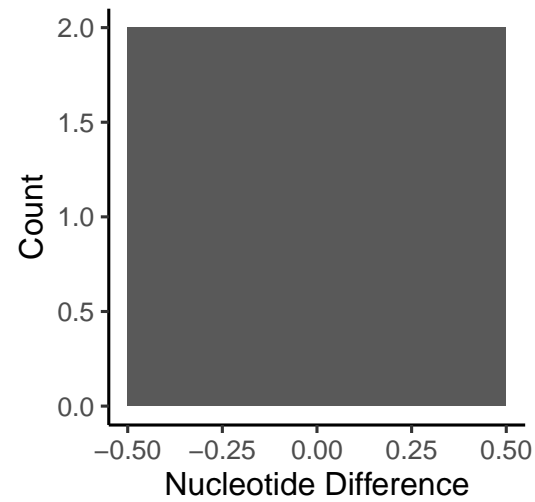
IGHV3-11*01

35 sequences assigned
28 (80%) exact matches, in which:
28 unique CDR3
5 unique J



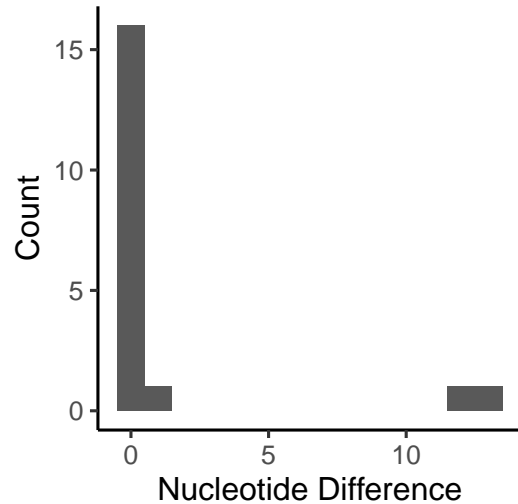
IGHV3-13*05

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



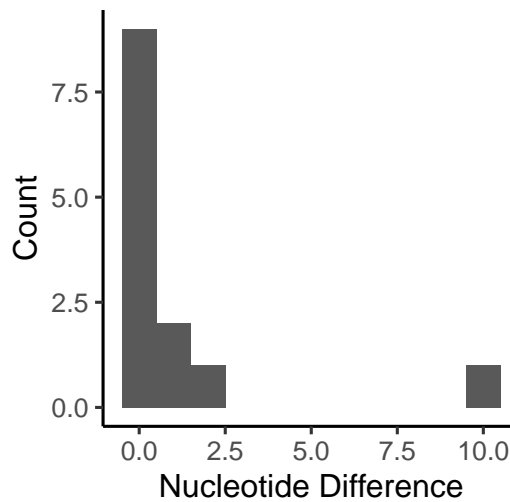
IGHV3-7*05

19 sequences assigned
16 (84.2%) exact matches, in which:
16 unique CDR3
4 unique J



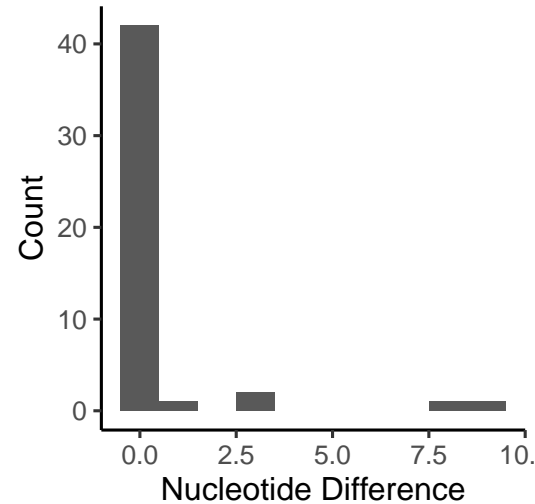
IGHV3-11*06

13 sequences assigned
9 (69.2%) exact matches, in which:
9 unique CDR3
4 unique J



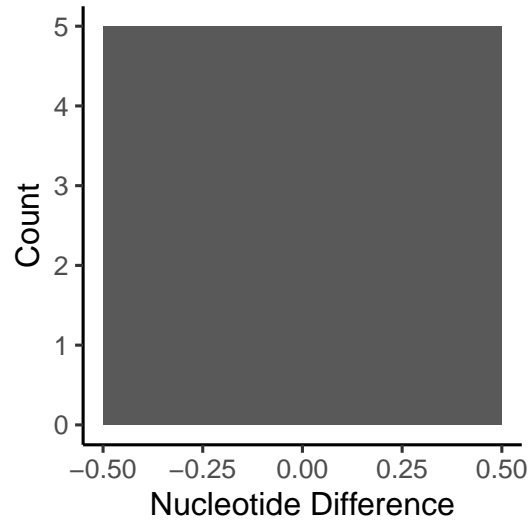
IGHV3-15*01

47 sequences assigned
42 (89.4%) exact matches, in which:
42 unique CDR3
5 unique J



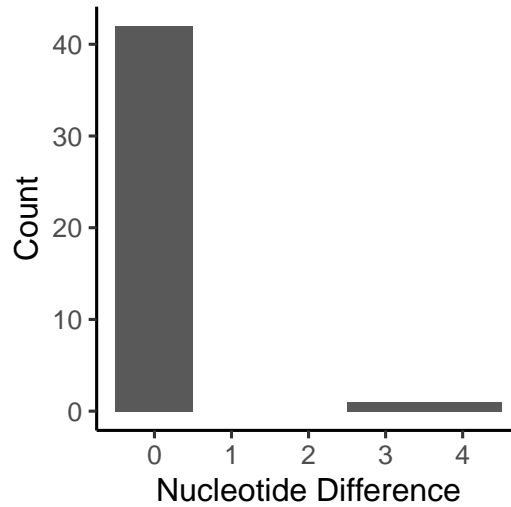
IGHV3–20*01

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



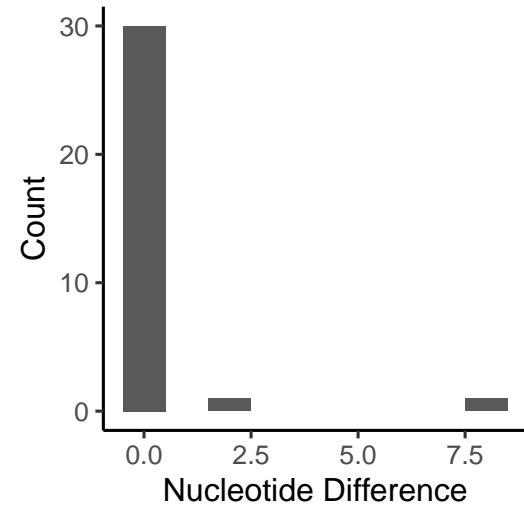
IGHV3–33*01

44 sequences assigned
42 (95.5%) exact matches, in which:
42 unique CDR3
5 unique J



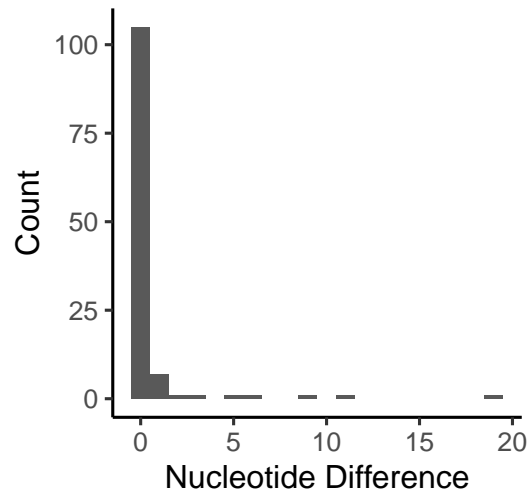
IGHV3–48*04

32 sequences assigned
30 (93.8%) exact matches, in which:
30 unique CDR3
5 unique J



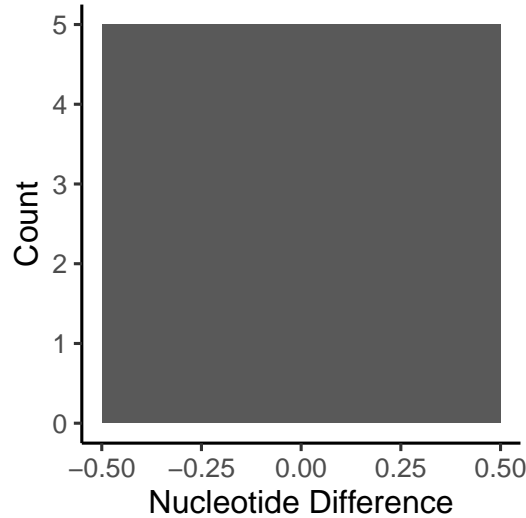
IGHV3–21*01

119 sequences assigned
105 (88.2%) exact matches, in which:
105 unique CDR3
6 unique J



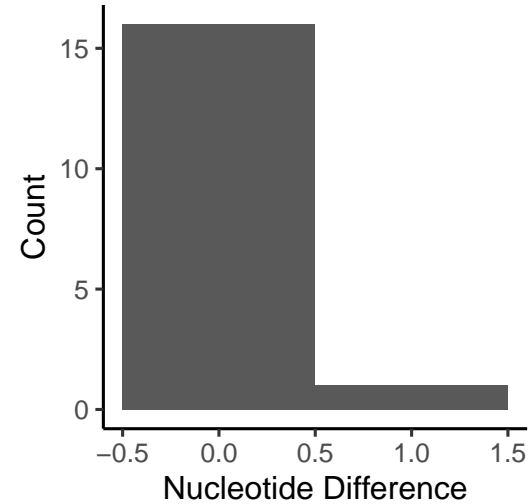
IGHV3–43*01

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



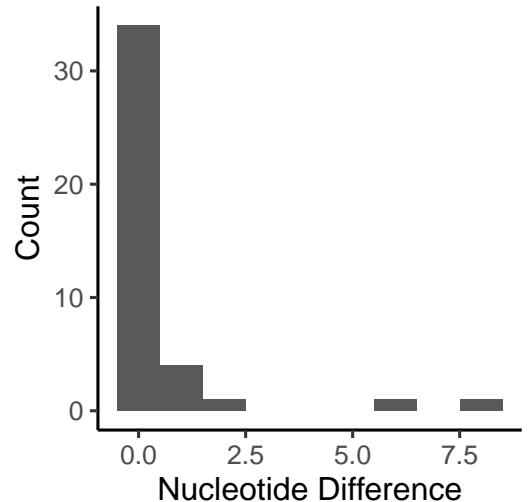
IGHV3–49*03

17 sequences assigned
16 (94.1%) exact matches, in which:
16 unique CDR3
4 unique J



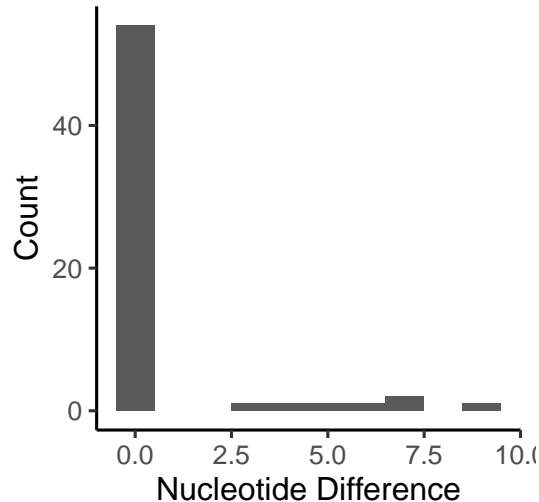
IGHV3–30*02_G49A

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



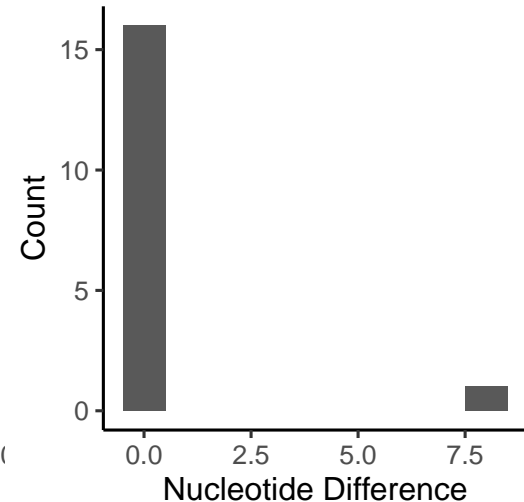
IGHV3–48*03

61 sequences assigned
54 (88.5%) exact matches, in which:
54 unique CDR3
4 unique J



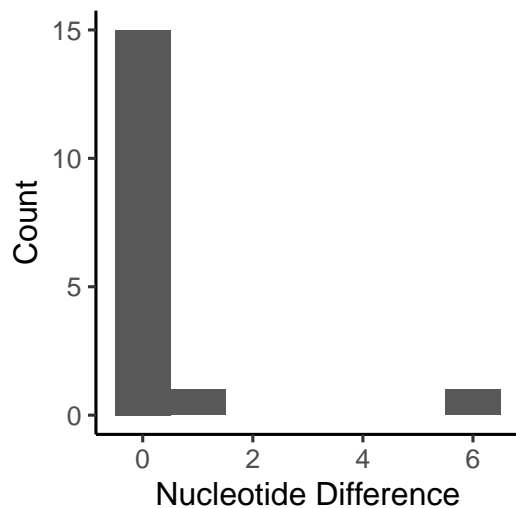
IGHV3–49*04

17 sequences assigned
16 (94.1%) exact matches, in which:
16 unique CDR3
3 unique J



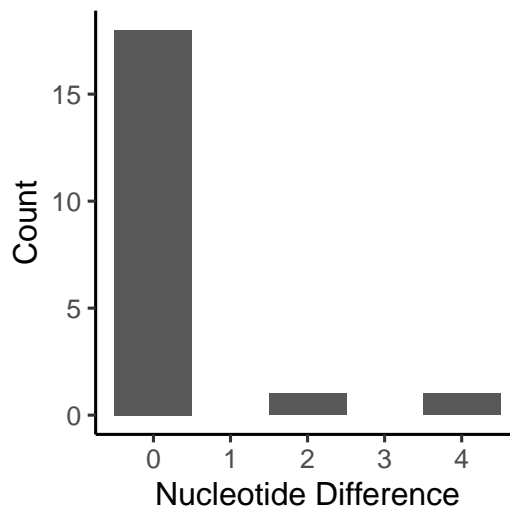
IGHV3-53*04

17 sequences assigned
15 (88.2%) exact matches, in which:
15 unique CDR3
3 unique J



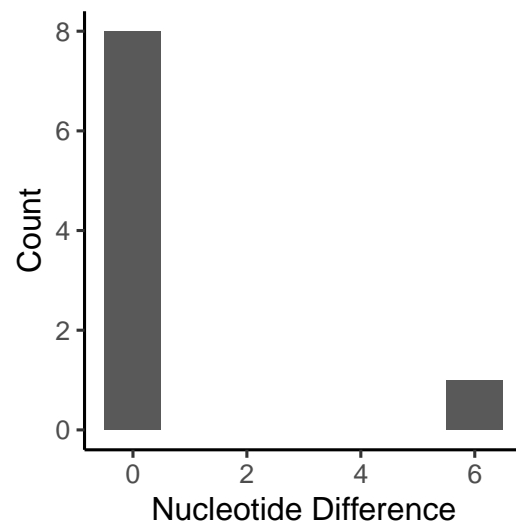
IGHV3-66*01

20 sequences assigned
18 (90%) exact matches, in which:
18 unique CDR3
4 unique J



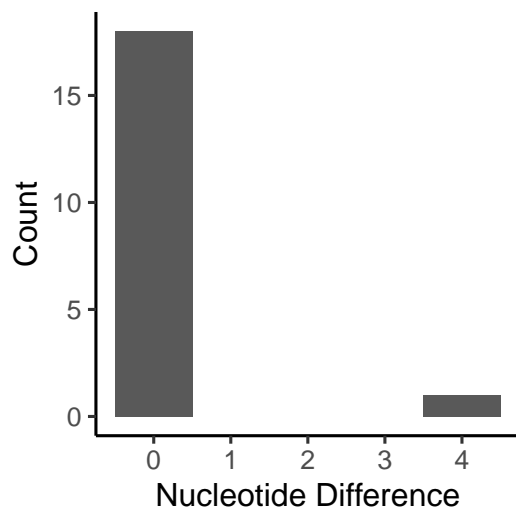
IGHV3-73*02

9 sequences assigned
8 (88.9%) exact matches, in which:
8 unique CDR3
4 unique J



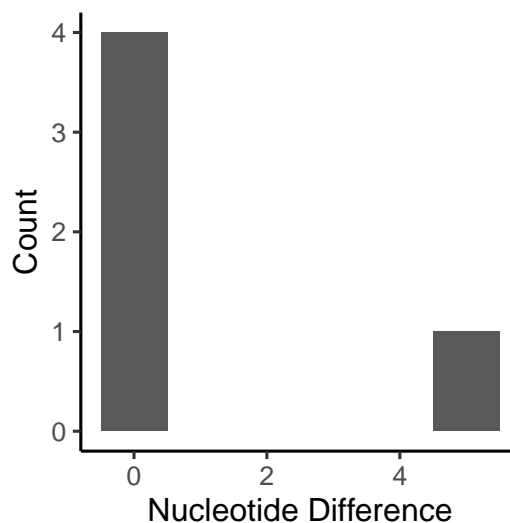
IGHV3-53*02_G88A

19 sequences assigned
18 (94.7%) exact matches, in which:
18 unique CDR3
5 unique J



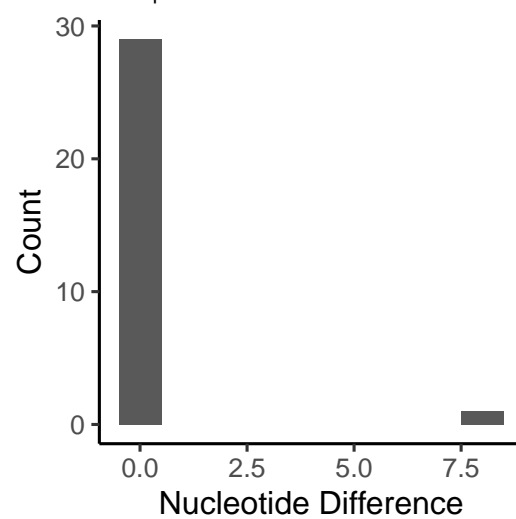
IGHV3-72*01

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



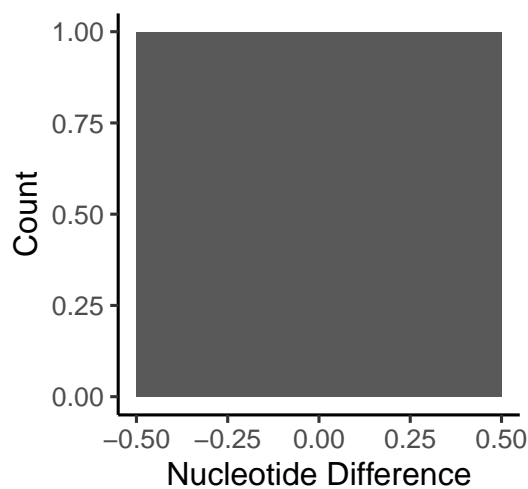
IGHV3-74*01

31 sequences assigned
29 (93.5%) exact matches, in which:
29 unique CDR3
5 unique J



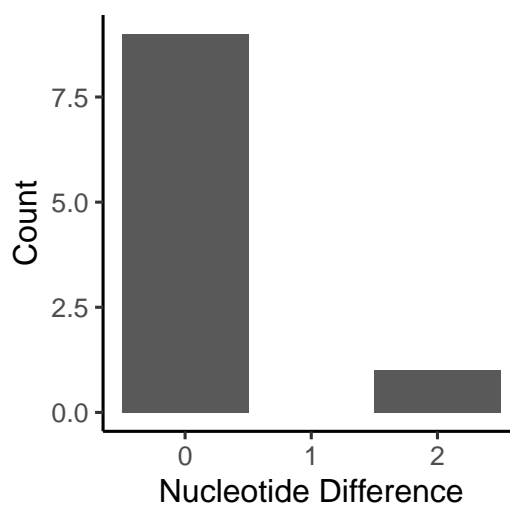
IGHV3-64*01

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



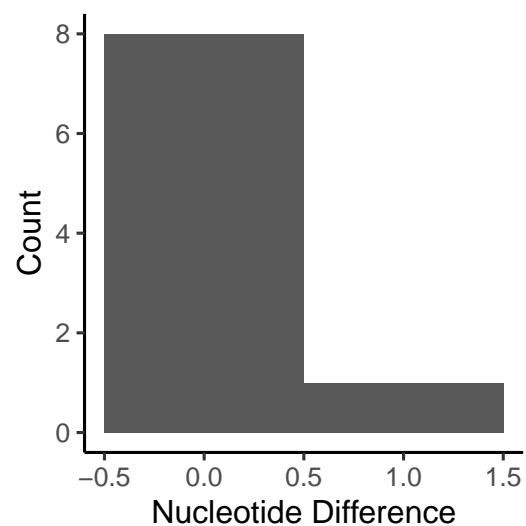
IGHV3-73*01

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



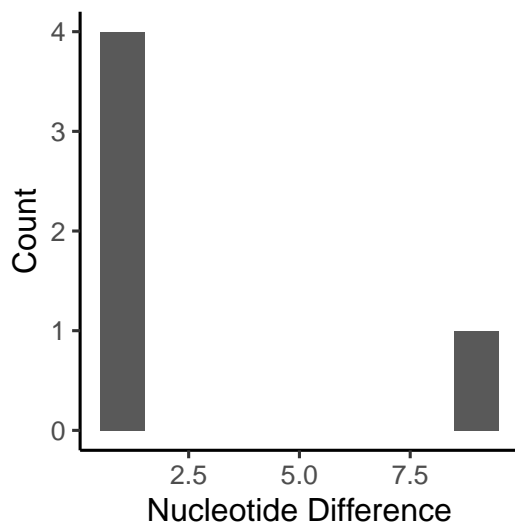
IGHV3-43D*03

9 sequences assigned
8 (88.9%) exact matches, in which:
8 unique CDR3
2 unique J



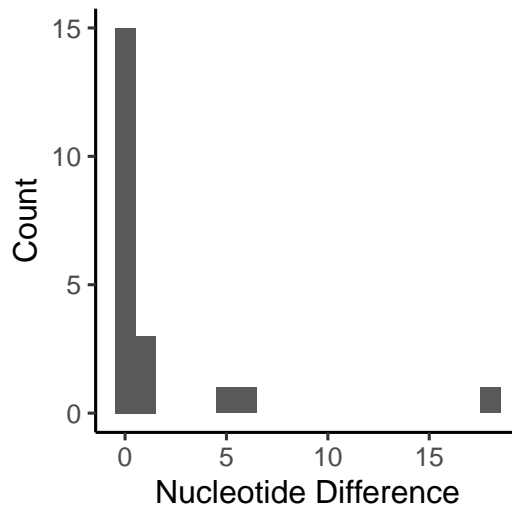
IGHV3-43D*04

5 sequences assigned
No exact matches.



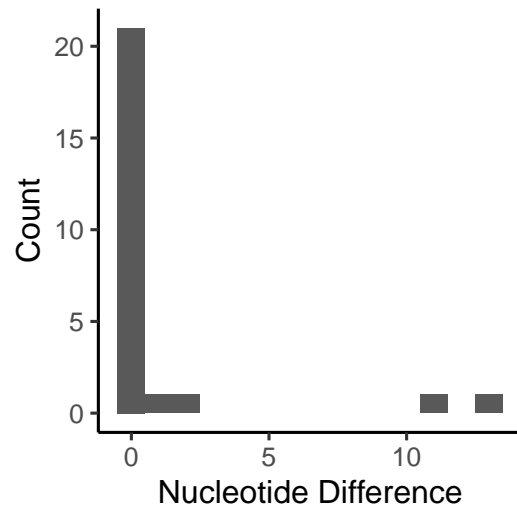
IGHV4-30-4*01

21 sequences assigned
15 (71.4%) exact matches, in which:
15 unique CDR3
4 unique J



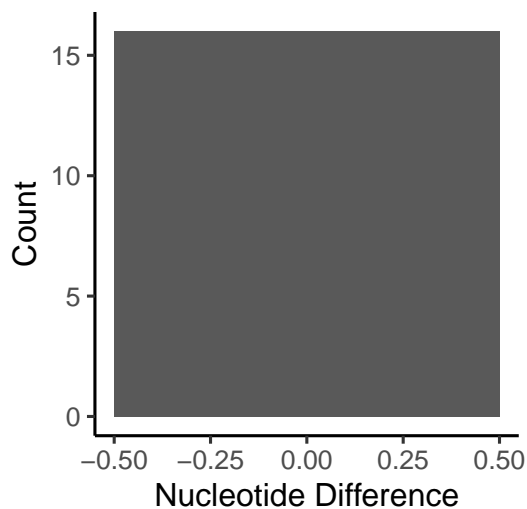
IGHV4-31*03

25 sequences assigned
21 (84%) exact matches, in which:
21 unique CDR3
5 unique J



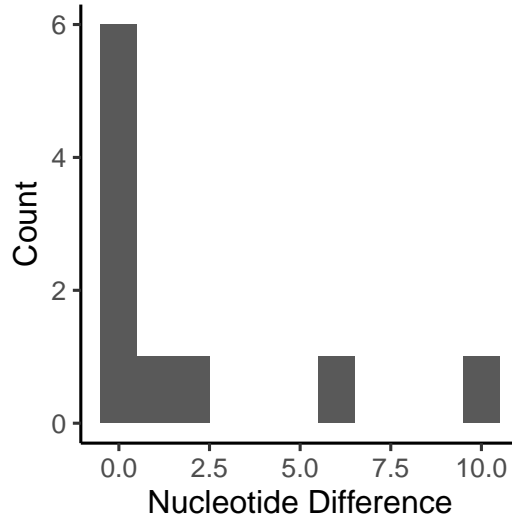
IGHV3-64D*09

16 sequences assigned
16 (100%) exact matches, in which:
16 unique CDR3
3 unique J



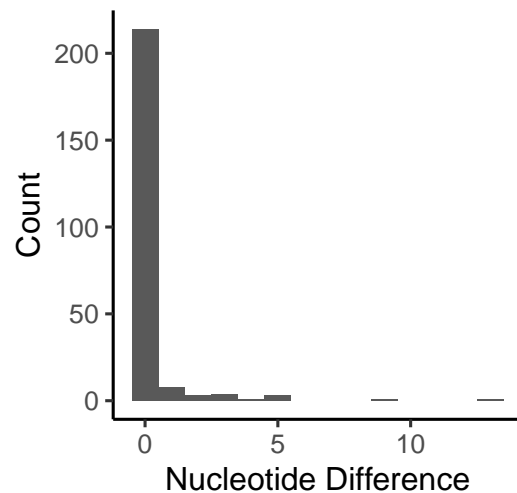
IGHV4-30-2*01

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



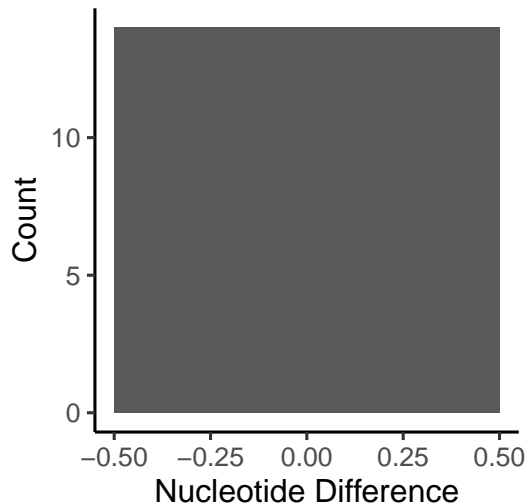
IGHV4-34*01

235 sequences assigned
214 (91.1%) exact matches, in which:
214 unique CDR3
6 unique J



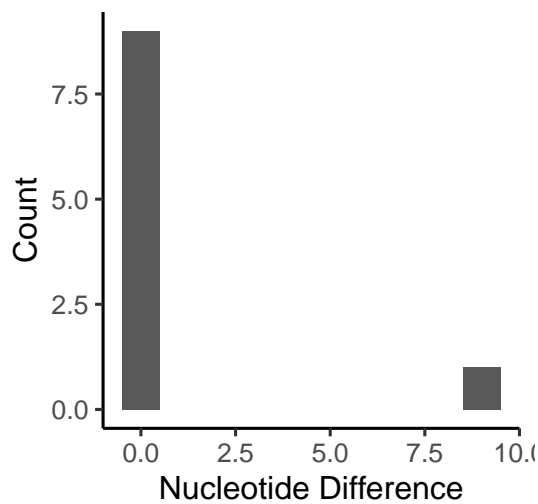
IGHV4-4*07

14 sequences assigned
14 (100%) exact matches, in which:
14 unique CDR3
6 unique J



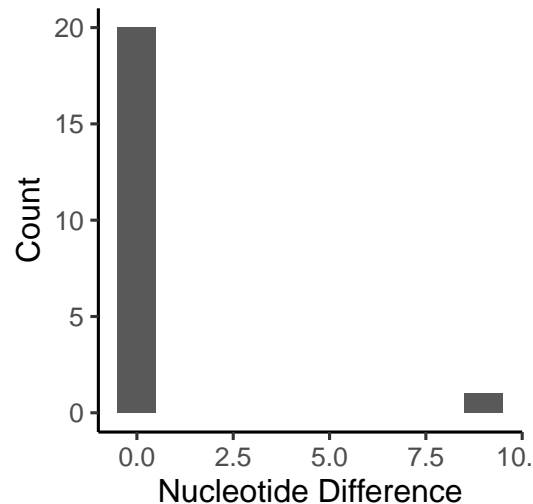
IGHV4-30-4*07

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



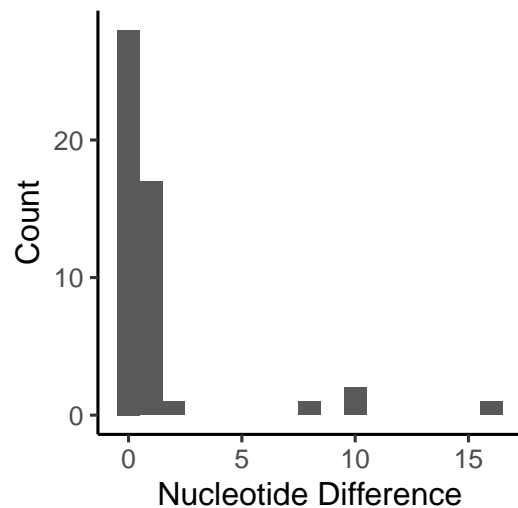
IGHV4-38-2*01

21 sequences assigned
20 (95.2%) exact matches, in which:
20 unique CDR3
4 unique J



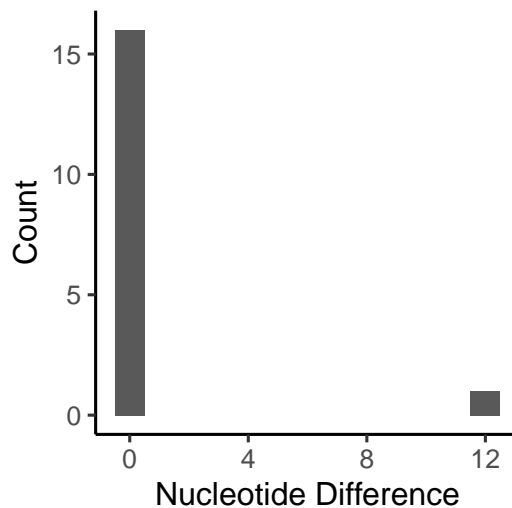
IGHV4–38–2*02

50 sequences assigned
28 (56%) exact matches, in which:
28 unique CDR3
5 unique J



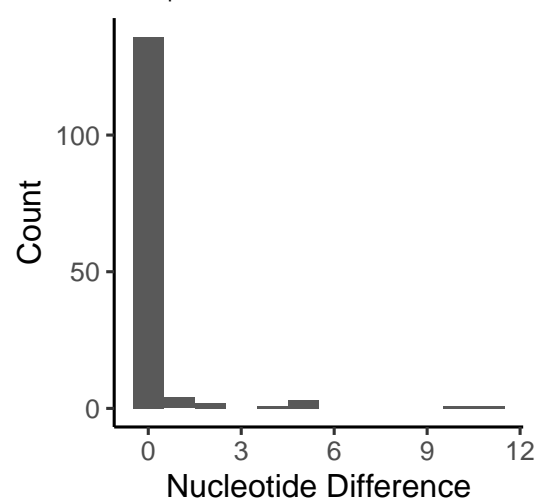
IGHV4–59*08

17 sequences assigned
16 (94.1%) exact matches, in which:
16 unique CDR3
5 unique J



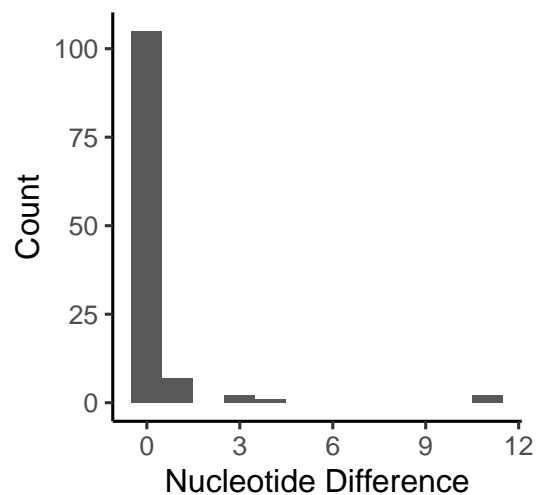
IGHV5–51*01

148 sequences assigned
136 (91.9%) exact matches, in which:
135 unique CDR3
6 unique J



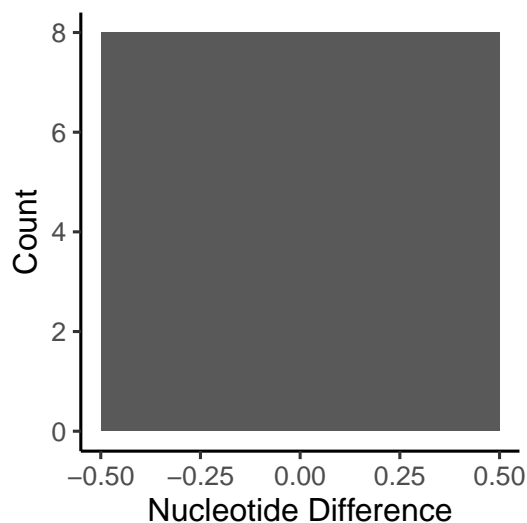
IGHV4–39*07_C288A

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



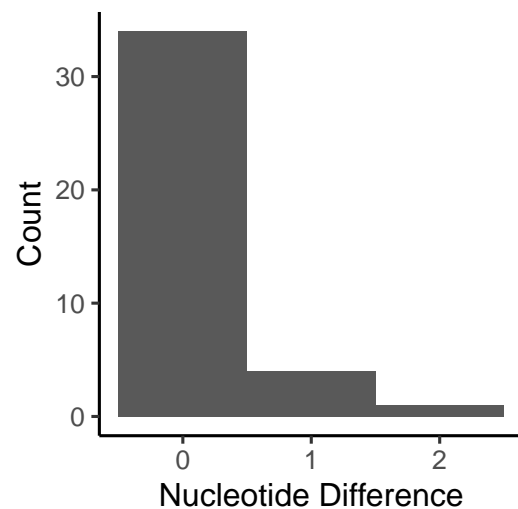
IGHV4–61*01

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



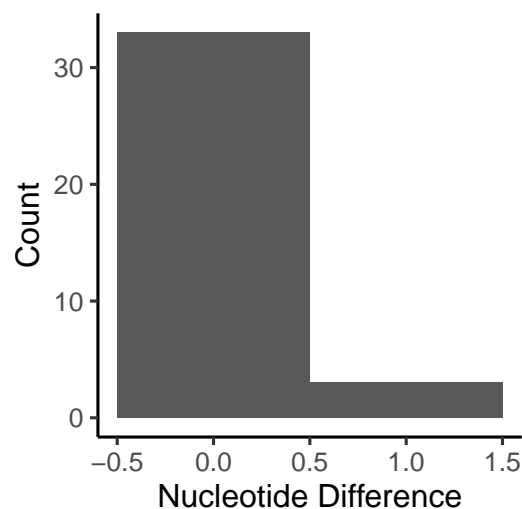
IGHV6–1*01

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



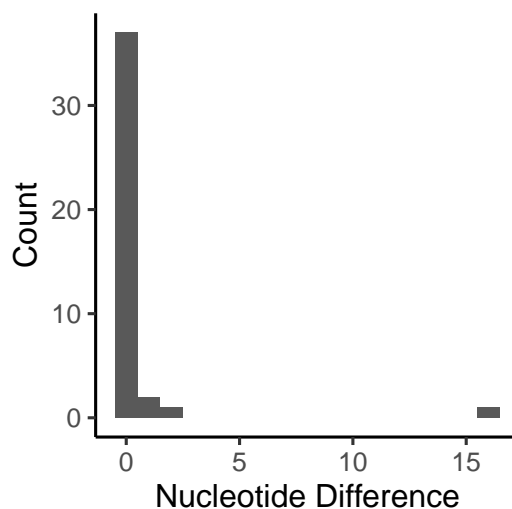
IGHV4–59*01

36 sequences assigned
33 (91.7%) exact matches, in which:
33 unique CDR3
5 unique J

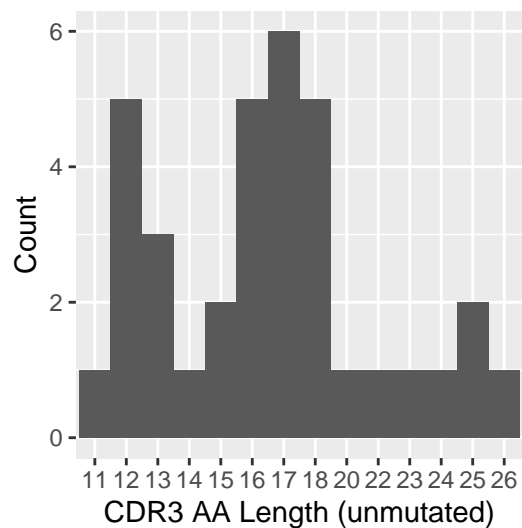


IGHV5–10–1*03

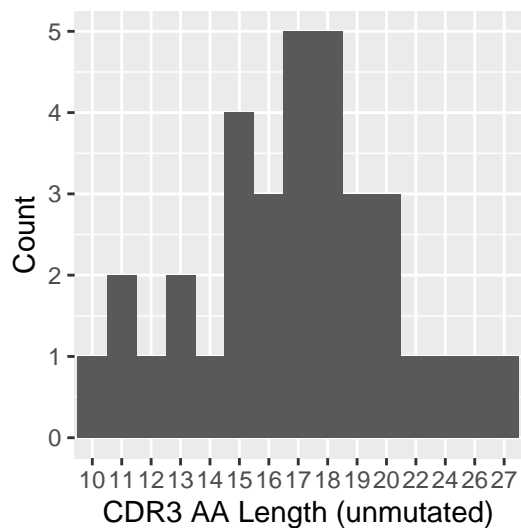
41 sequences assigned
37 (90.2%) exact matches, in which:
37 unique CDR3
6 unique J



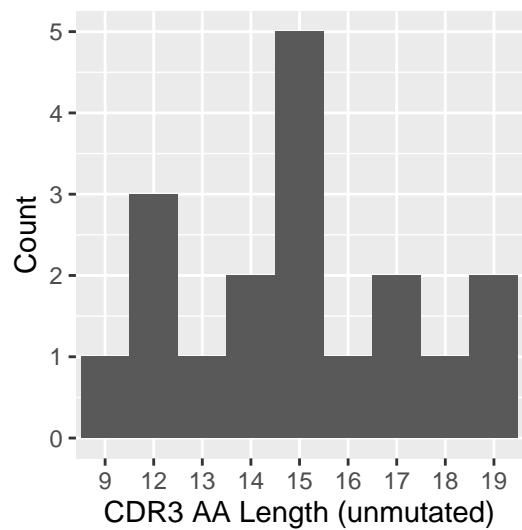
IGHV1-69*01_C26T



IGHV3-30*02_G49A



IGHV3-53*02_G88A



IGHV4-39*07_C288A

