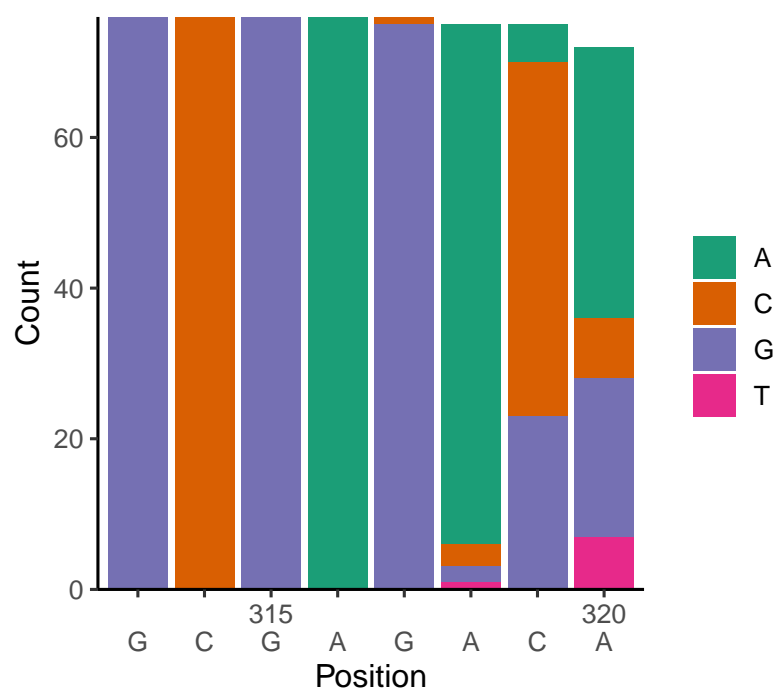
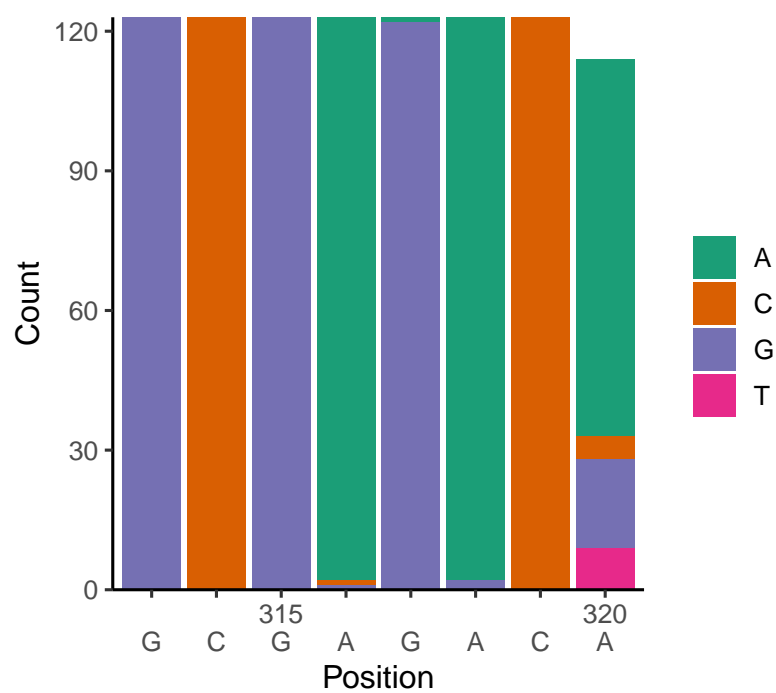


Gene IGHV4-39*01_A220G



Gene IGHV4-59*08_A291G



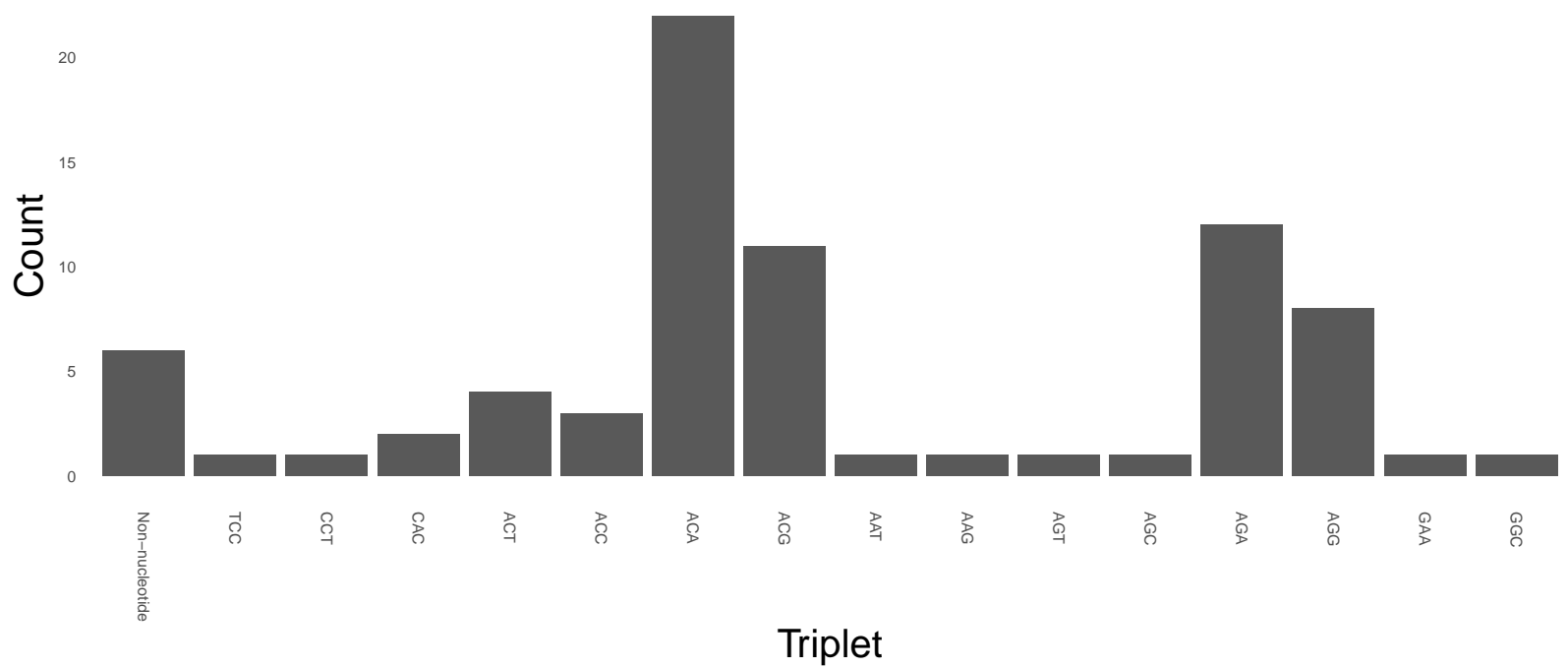
Gene IGHV4-39*01_A220G



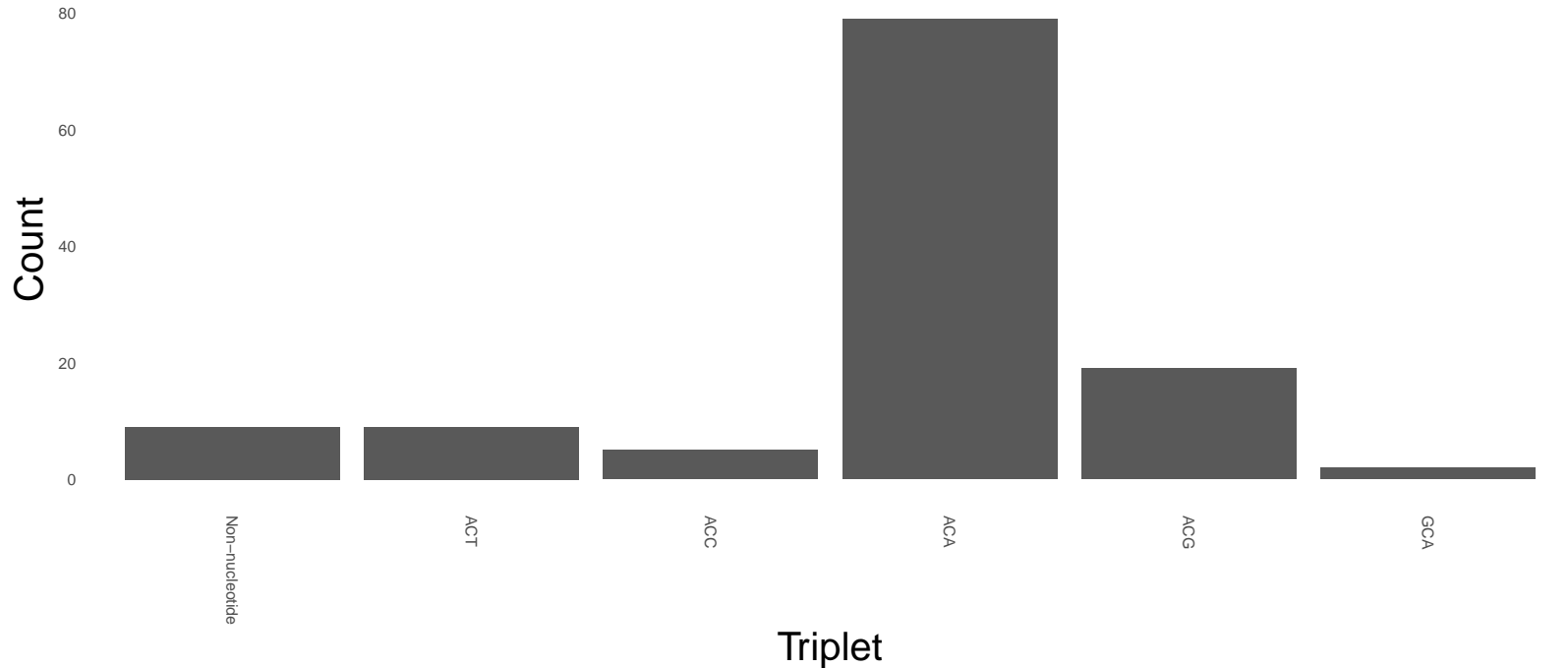
Gene IGHV4-59*08_A291G



IGHV4–39*01_A220G– Final 3 nucleotides as a triplet

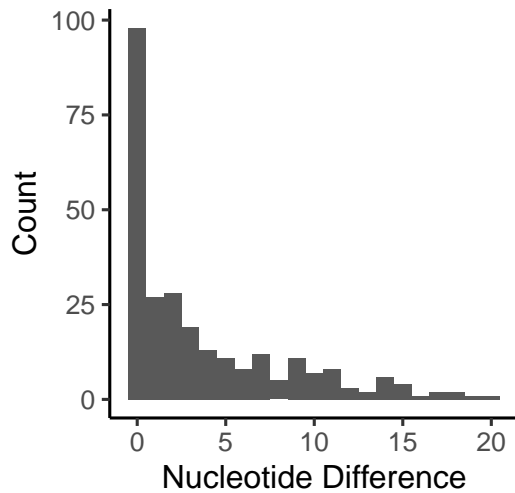


IGHV4–59*08_A291G– Final 3 nucleotides as a triplet



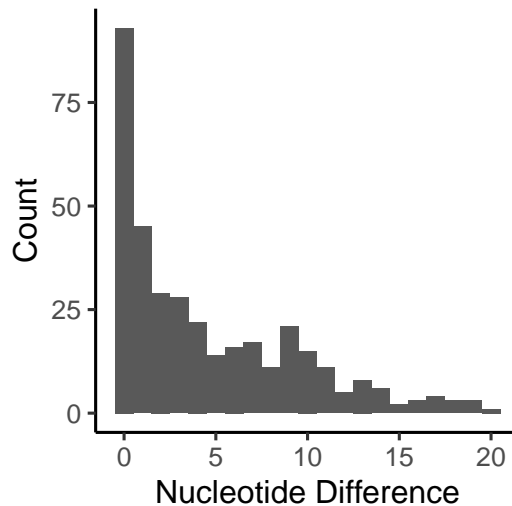
IGHV1-2*02

280 sequences assigned
98 (35%) exact matches, in which:
98 unique CDR3
7 unique J



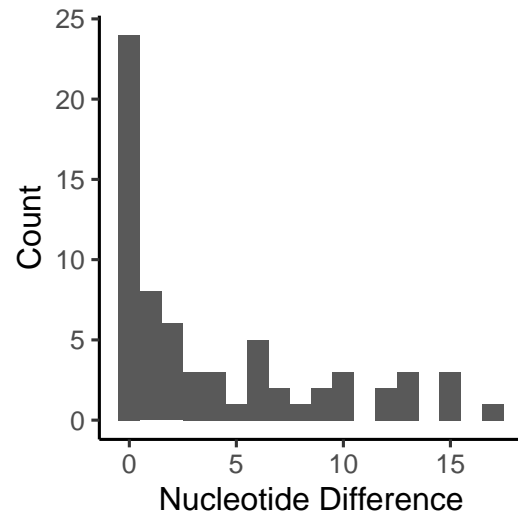
IGHV1-18*01

380 sequences assigned
93 (24.5%) exact matches, in which:
93 unique CDR3
7 unique J



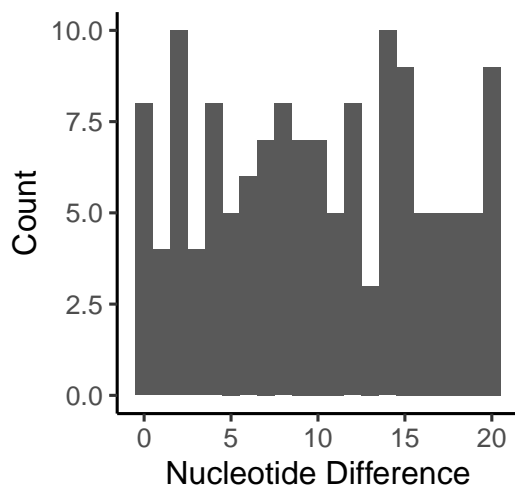
IGHV1-46*01

73 sequences assigned
24 (32.9%) exact matches, in which:
24 unique CDR3
5 unique J



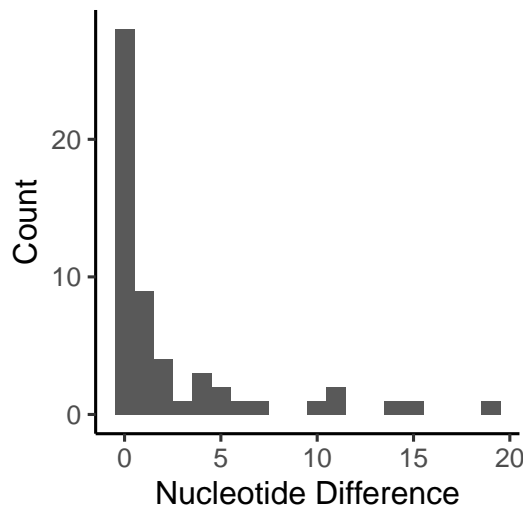
IGHV1-8*01

169 sequences assigned
8 (4.7%) exact matches, in which:
8 unique CDR3
3 unique J



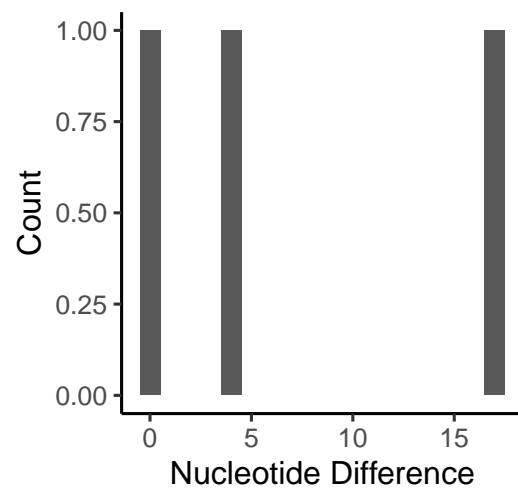
IGHV1-24*01

62 sequences assigned
28 (45.2%) exact matches, in which:
26 unique CDR3
6 unique J



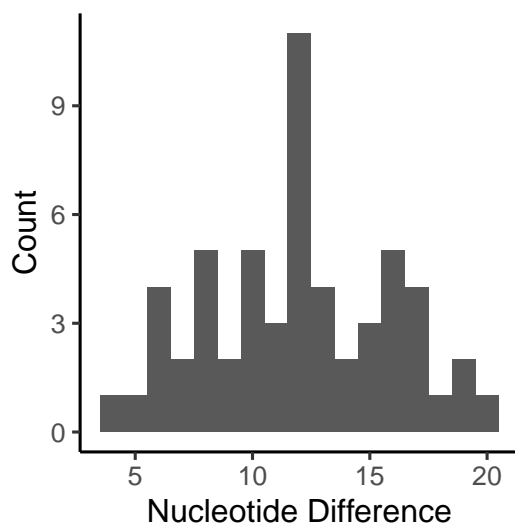
IGHV1-58*01

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



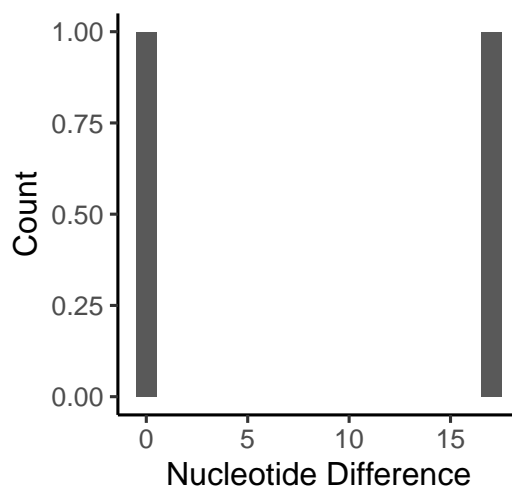
IGHV1-8*02

60 sequences assigned
No exact matches.



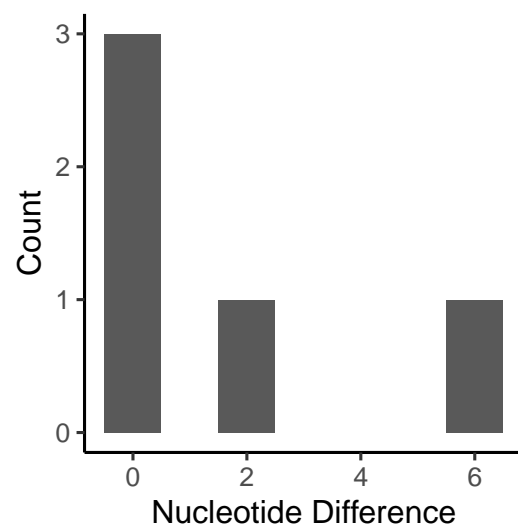
IGHV1-45*02

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



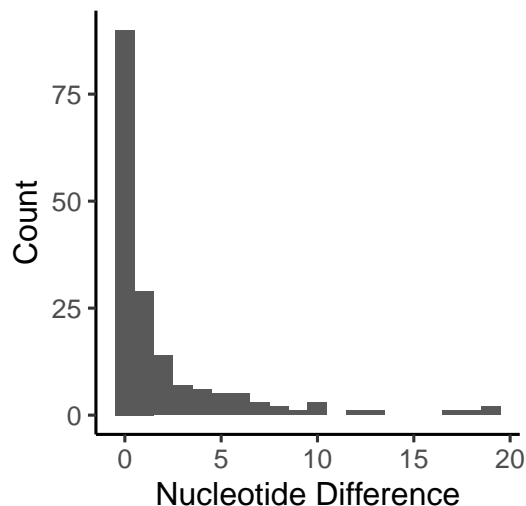
IGHV1-58*02

5 sequences assigned
3 (60%) exact matches, in which:
3 unique CDR3
2 unique J



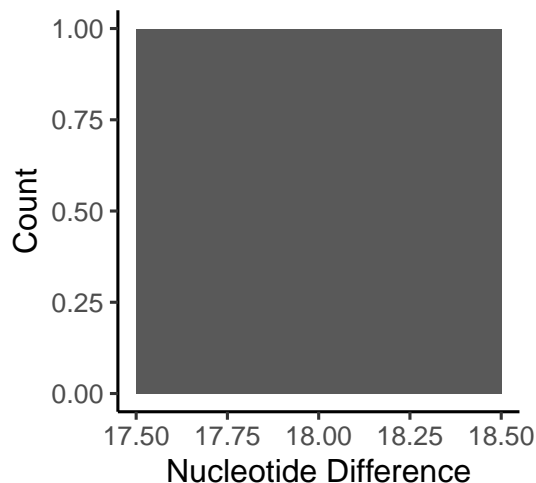
IGHV1-69*01

174 sequences assigned
90 (51.7%) exact matches, in which:
86 unique CDR3
7 unique J



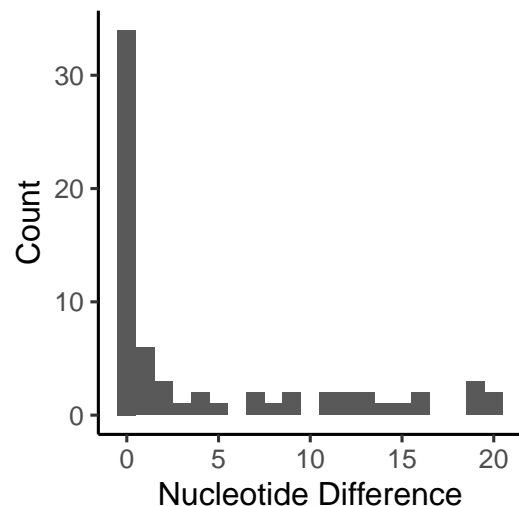
IGHV1-NL1*01

1 sequences assigned
No exact matches.



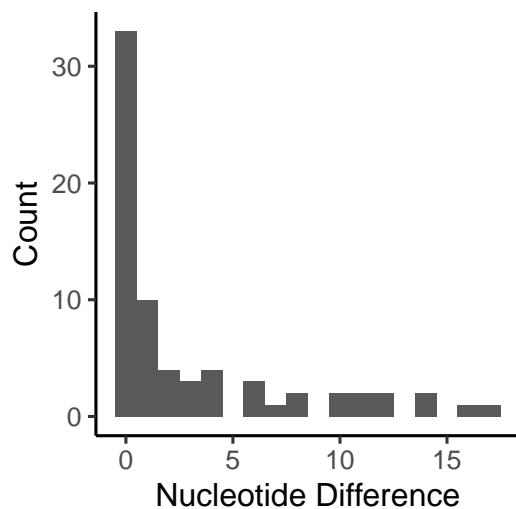
IGHV2-26*01

75 sequences assigned
34 (45.3%) exact matches, in which:
33 unique CDR3
6 unique J



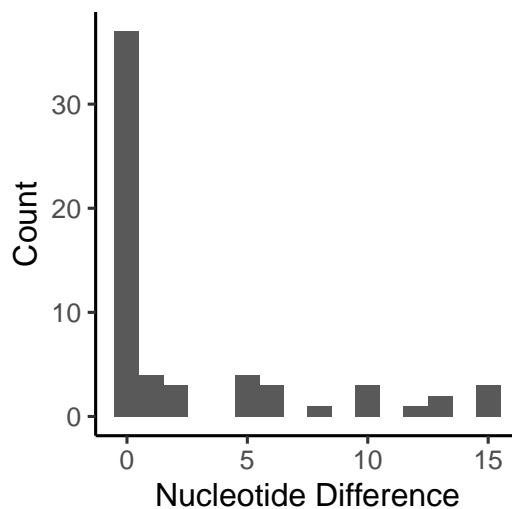
IGHV1-69*04

72 sequences assigned
33 (45.8%) exact matches, in which:
33 unique CDR3
5 unique J



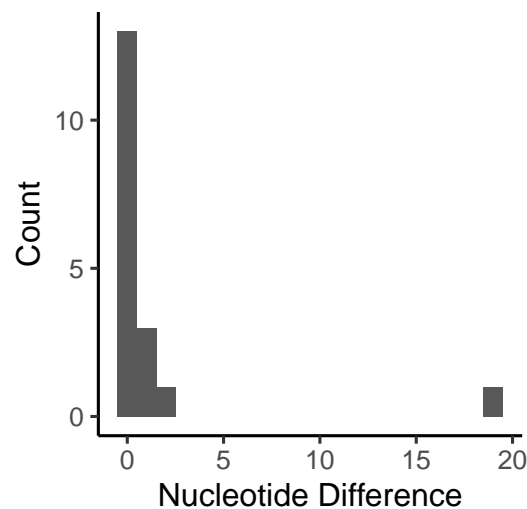
IGHV2-5*01

62 sequences assigned
37 (59.7%) exact matches, in which:
37 unique CDR3
6 unique J



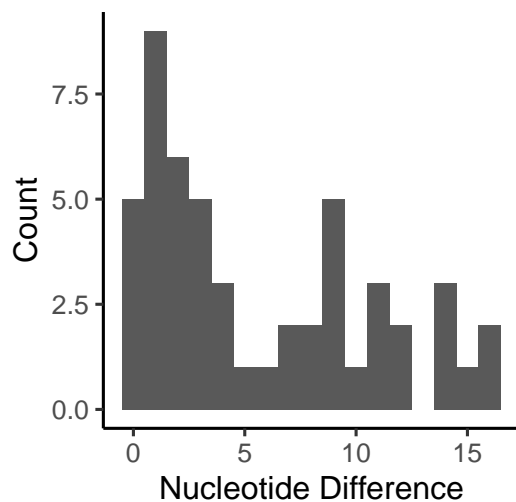
IGHV2-70*01

18 sequences assigned
13 (72.2%) exact matches, in which:
13 unique CDR3
4 unique J



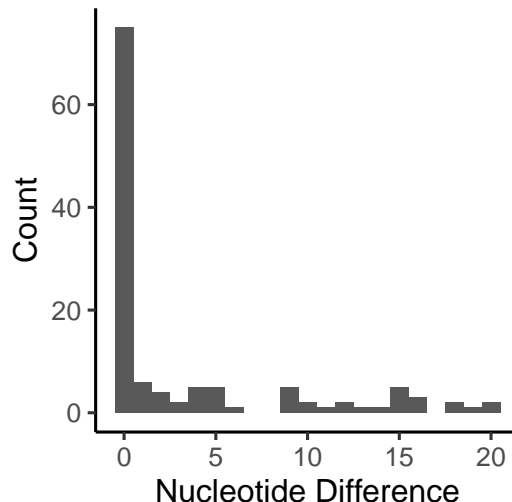
IGHV1-69*06

54 sequences assigned
5 (9.3%) exact matches, in which:
5 unique CDR3
4 unique J



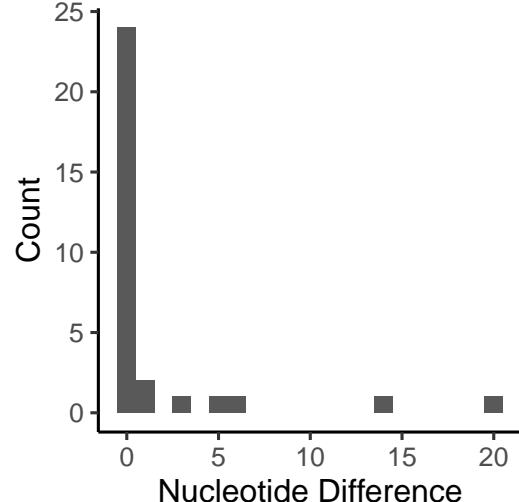
IGHV2-5*02

133 sequences assigned
75 (56.4%) exact matches, in which:
74 unique CDR3
6 unique J



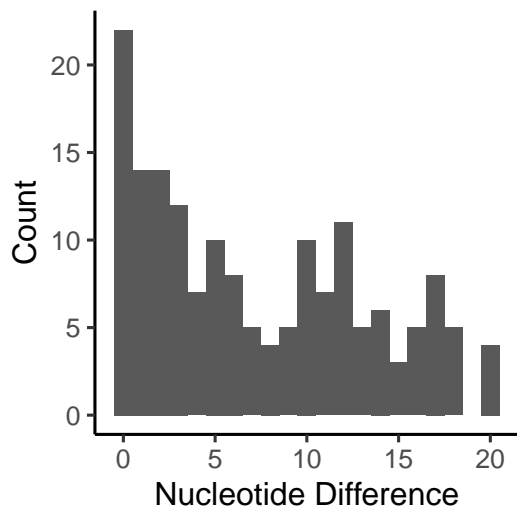
IGHV2-70*15

31 sequences assigned
24 (77.4%) exact matches, in which:
24 unique CDR3
4 unique J



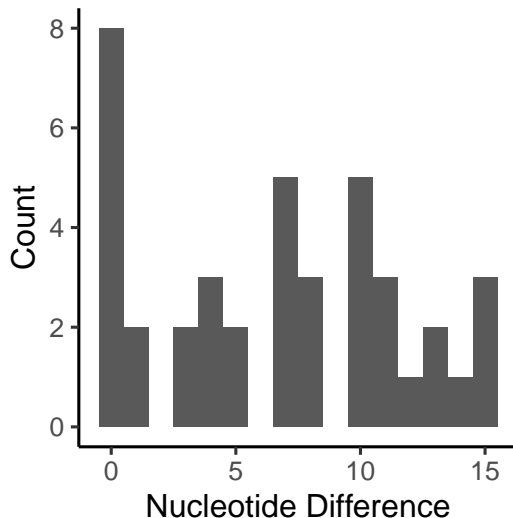
IGHV3-7*01

181 sequences assigned
22 (12.2%) exact matches, in which:
21 unique CDR3
4 unique J



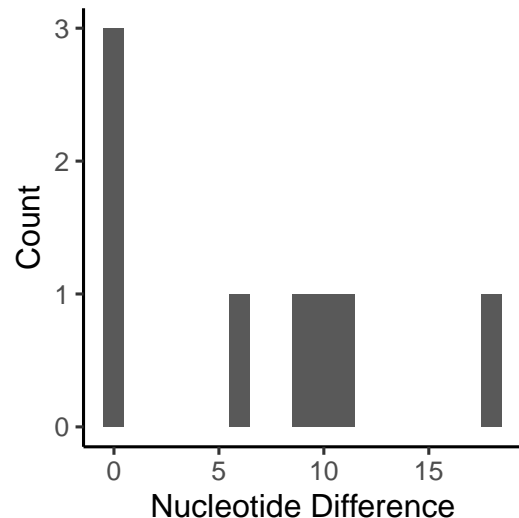
IGHV3-11*01

41 sequences assigned
8 (19.5%) exact matches, in which:
8 unique CDR3
4 unique J



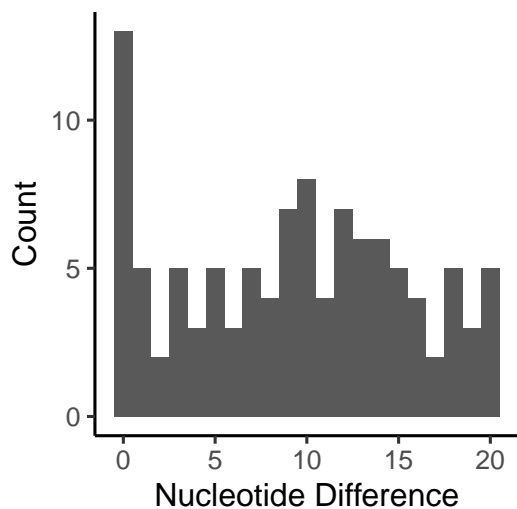
IGHV3-11*06

11 sequences assigned
3 (27.3%) exact matches, in which:
3 unique CDR3
3 unique J



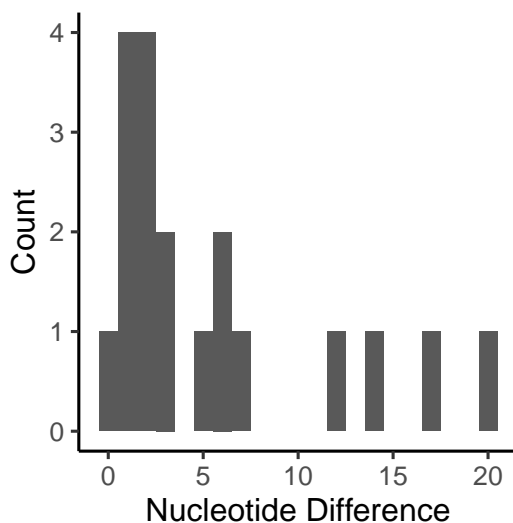
IGHV3-7*04

125 sequences assigned
13 (10.4%) exact matches, in which:
13 unique CDR3
3 unique J



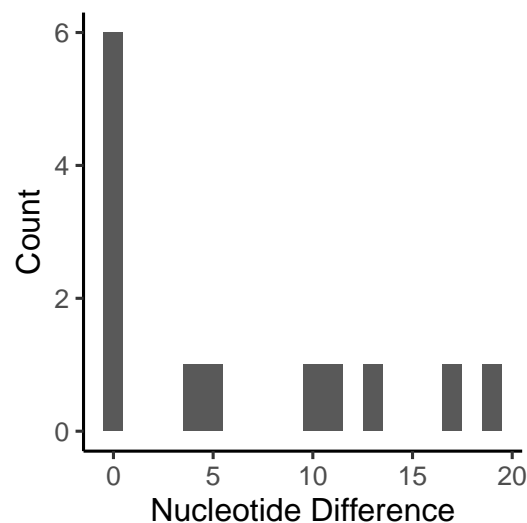
IGHV3-11*04

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



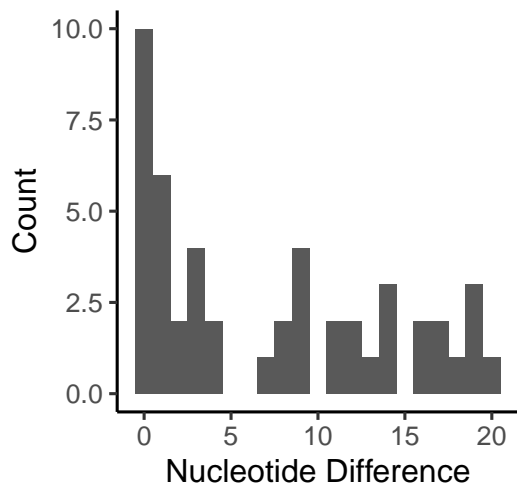
IGHV3-13*01

13 sequences assigned
6 (46.2%) exact matches, in which:
6 unique CDR3
3 unique J



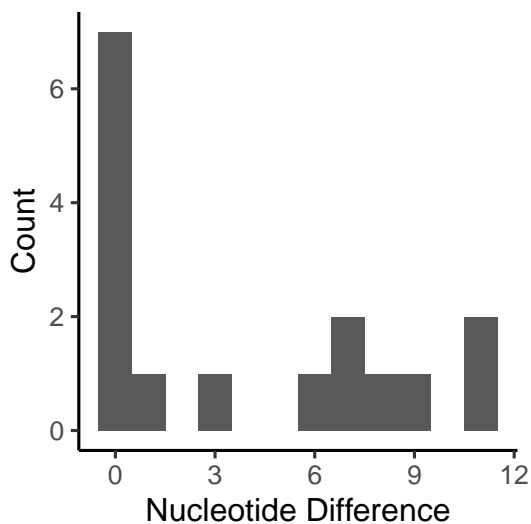
IGHV3-9*01

48 sequences assigned
10 (20.8%) exact matches, in which:
9 unique CDR3
3 unique J



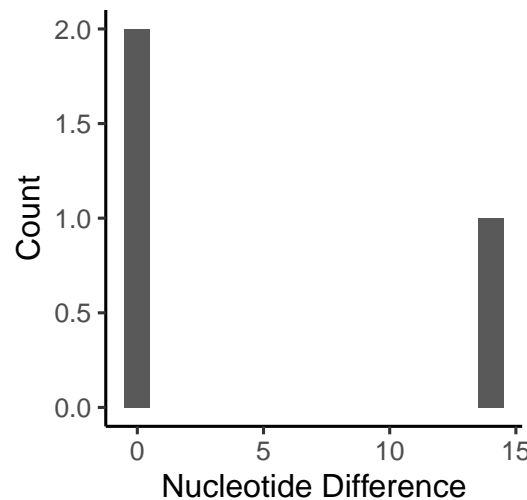
IGHV3-11*05

17 sequences assigned
7 (41.2%) exact matches, in which:
7 unique CDR3
3 unique J



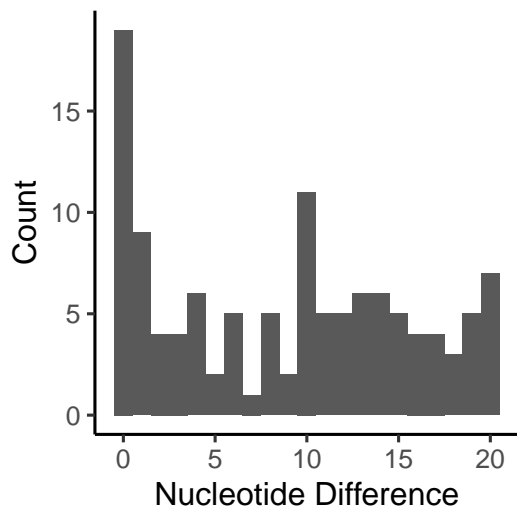
IGHV3-13*04

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



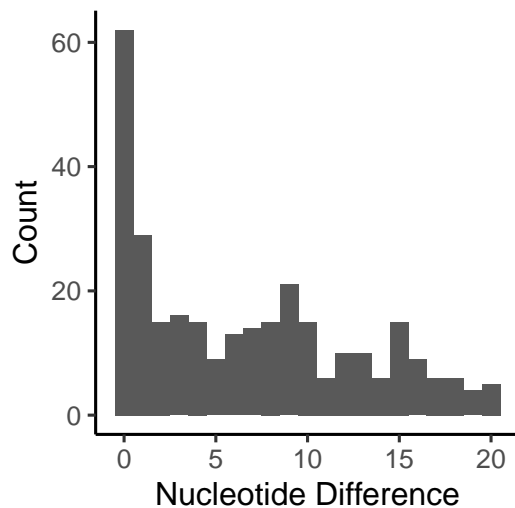
IGHV3-15*01

145 sequences assigned
19 (13.1%) exact matches, in which:
19 unique CDR3
6 unique J



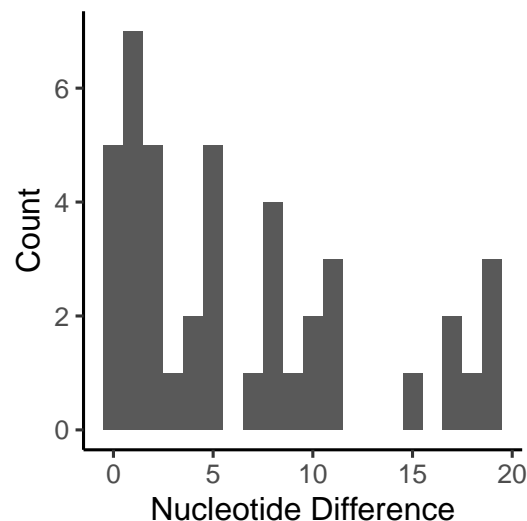
IGHV3-23*01

328 sequences assigned
62 (18.9%) exact matches, in which:
60 unique CDR3
7 unique J



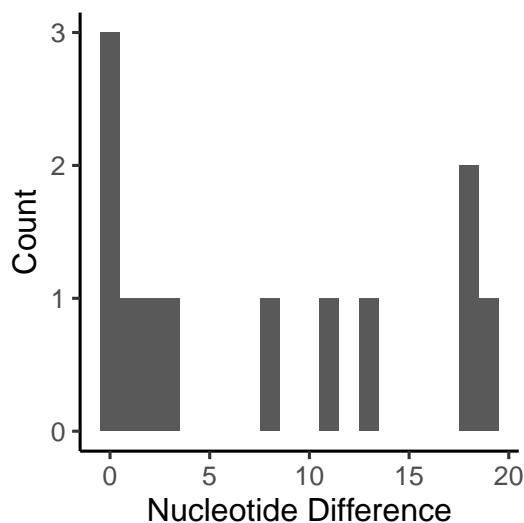
IGHV3-30*03

46 sequences assigned
5 (10.9%) exact matches, in which:
5 unique CDR3
2 unique J



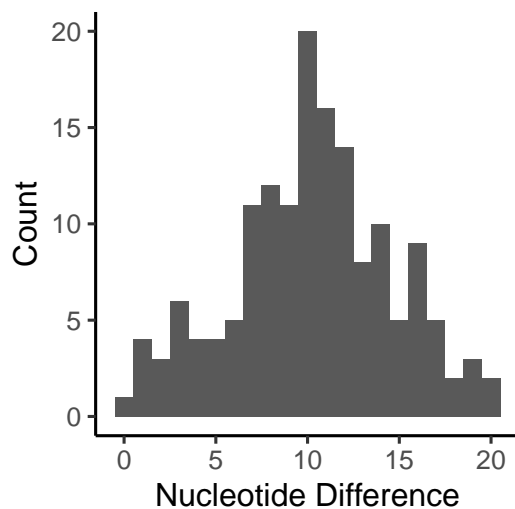
IGHV3-20*04

15 sequences assigned
3 (20%) exact matches, in which:
3 unique CDR3
2 unique J



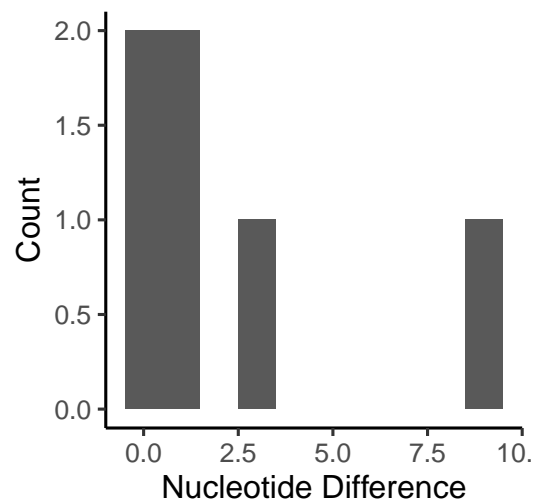
IGHV3-23*04

165 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



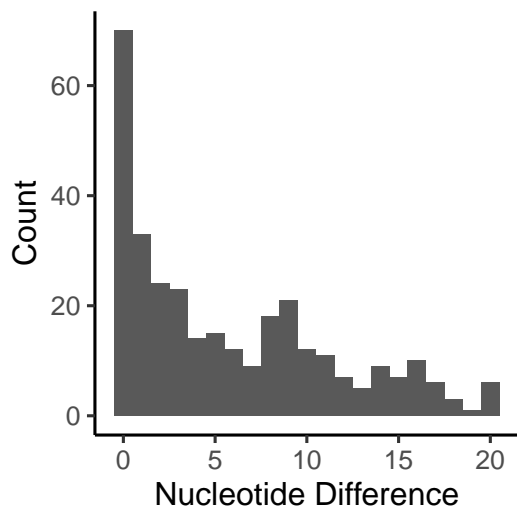
IGHV3-30*07

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



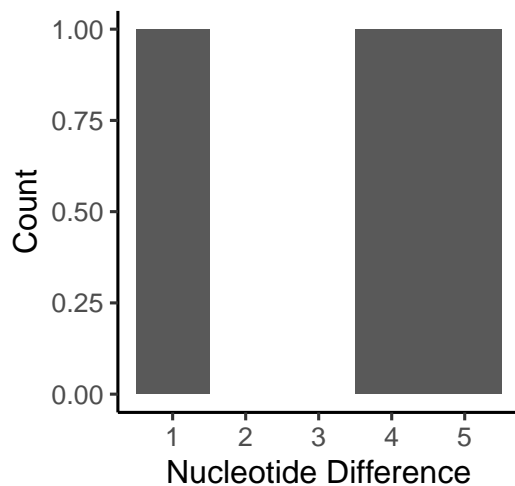
IGHV3-21*01

353 sequences assigned
70 (19.8%) exact matches, in which:
66 unique CDR3
6 unique J



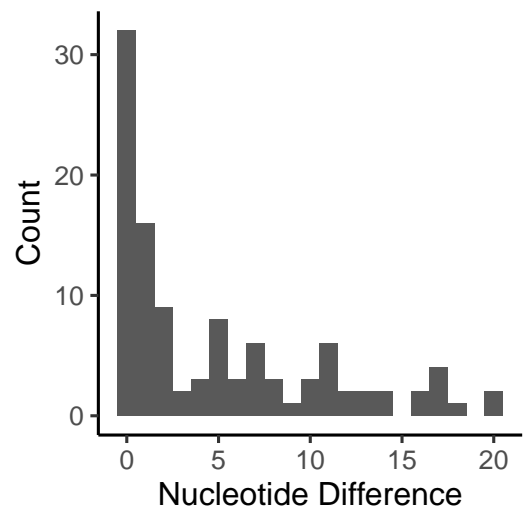
IGHV3-30-3*02

3 sequences assigned
No exact matches.



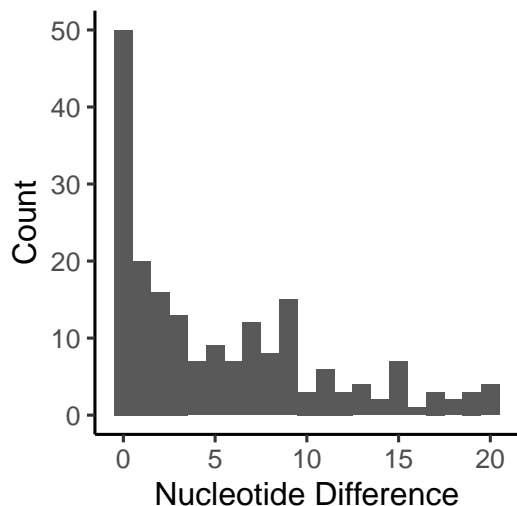
IGHV3-30*18

122 sequences assigned
32 (26.2%) exact matches, in which:
31 unique CDR3
6 unique J



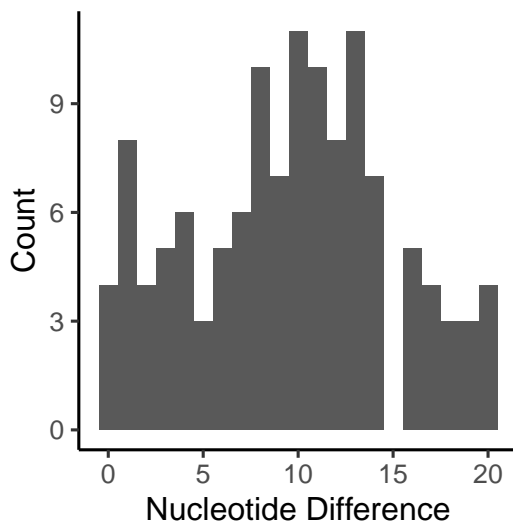
IGHV3-33*01

204 sequences assigned
50 (24.5%) exact matches, in which:
50 unique CDR3
5 unique J



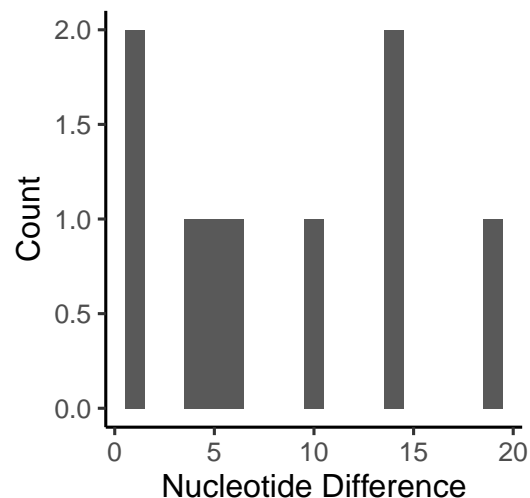
IGHV3-48*01

141 sequences assigned
4 (2.8%) exact matches, in which:
4 unique CDR3
1 unique J



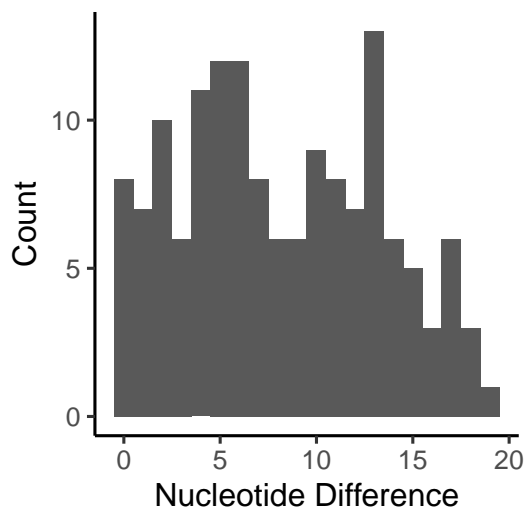
IGHV3-49*03

12 sequences assigned
No exact matches.



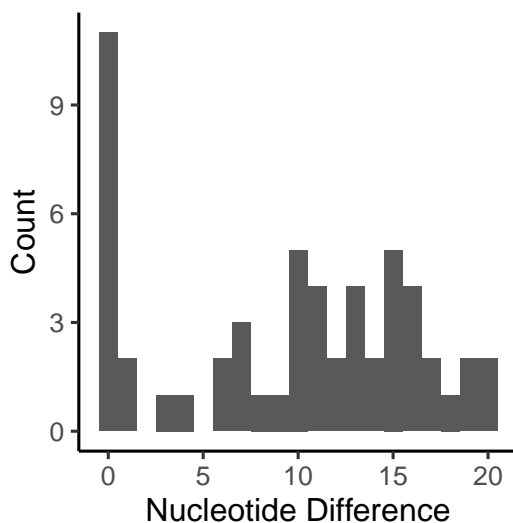
IGHV3-33*08

152 sequences assigned
8 (5.3%) exact matches, in which:
8 unique CDR3
3 unique J



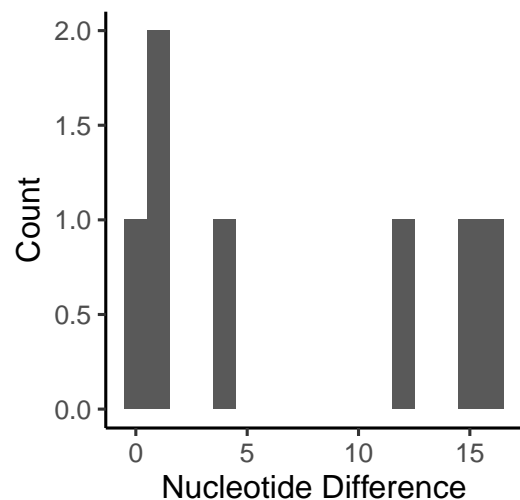
IGHV3-48*02

60 sequences assigned
11 (18.3%) exact matches, in which:
11 unique CDR3
4 unique J



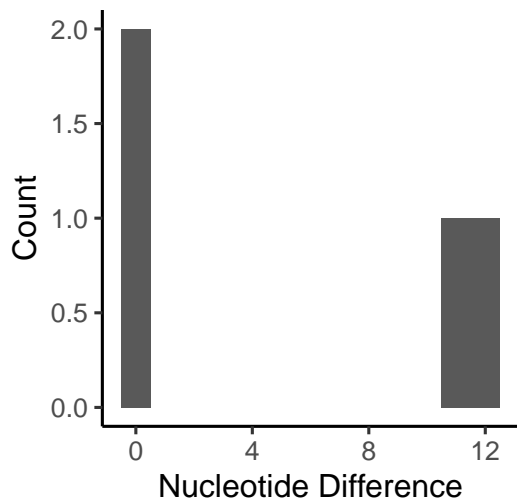
IGHV3-49*05

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



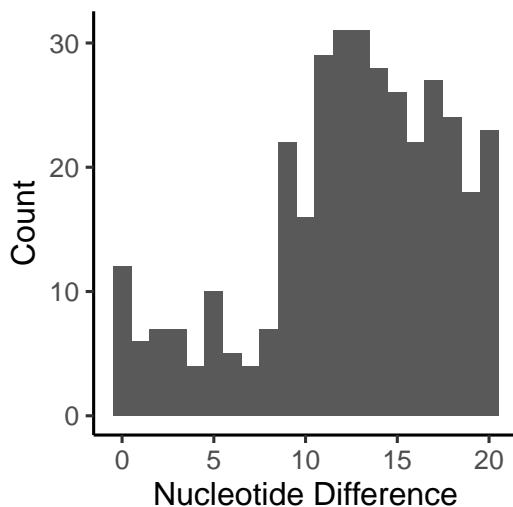
IGHV3-43*01

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
2 unique J



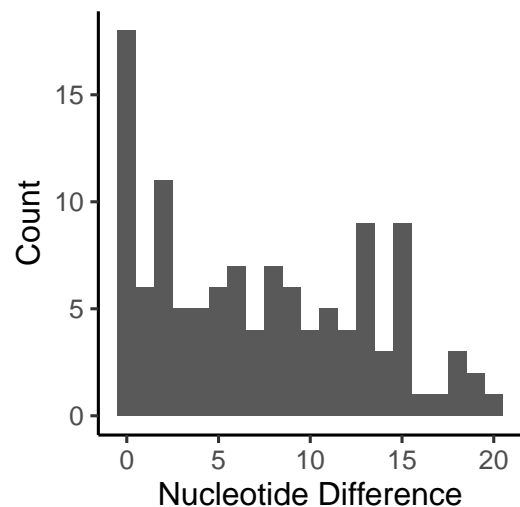
IGHV3-48*04

513 sequences assigned
12 (2.3%) exact matches, in which:
12 unique CDR3
5 unique J



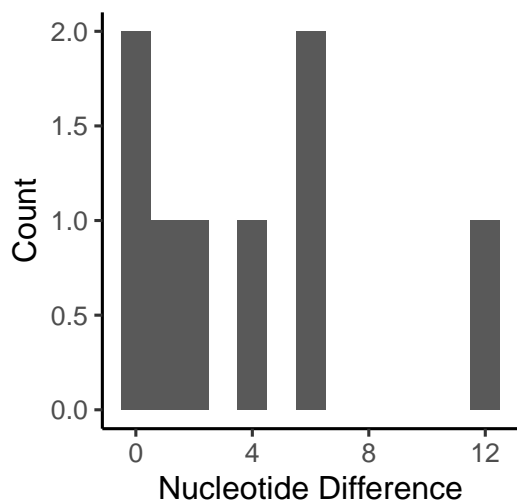
IGHV3-53*01

125 sequences assigned
18 (14.4%) exact matches, in which:
18 unique CDR3
6 unique J



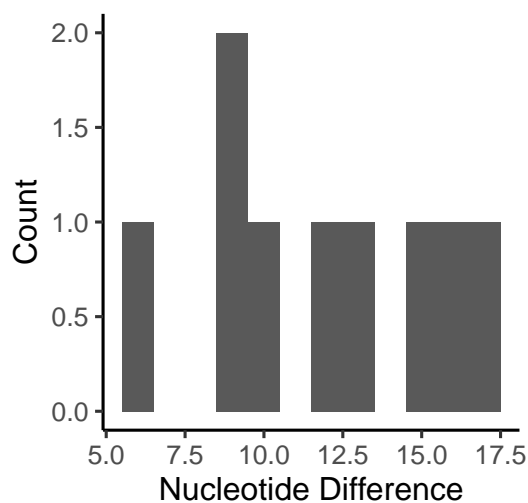
IGHV3-64*01

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



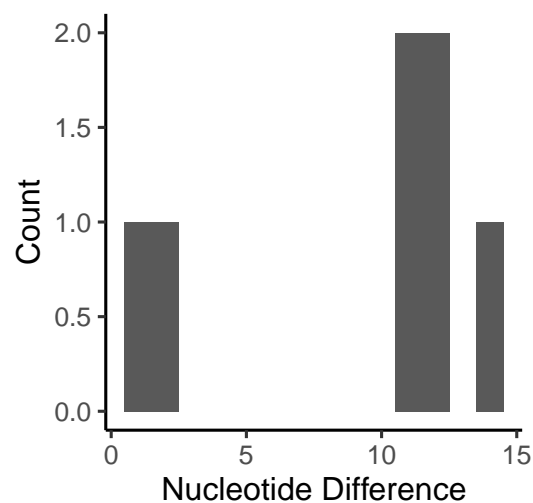
IGHV3-69-1*01

14 sequences assigned
No exact matches.



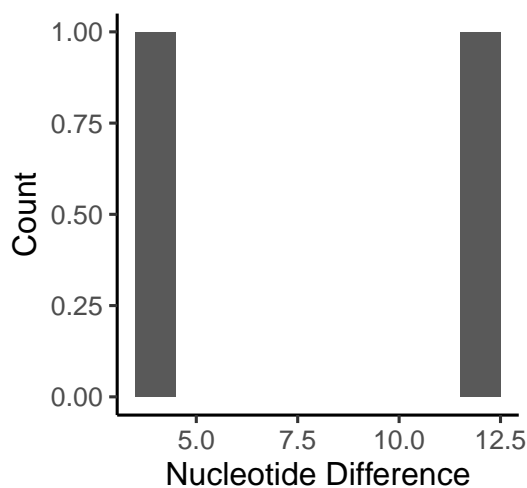
IGHV3-73*02

8 sequences assigned
No exact matches.



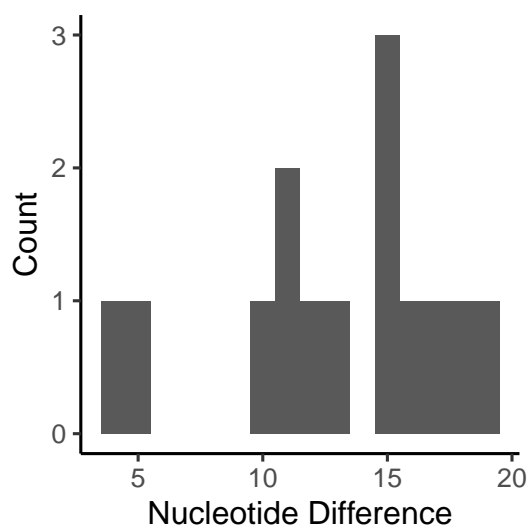
IGHV3-64*04

2 sequences assigned
No exact matches.



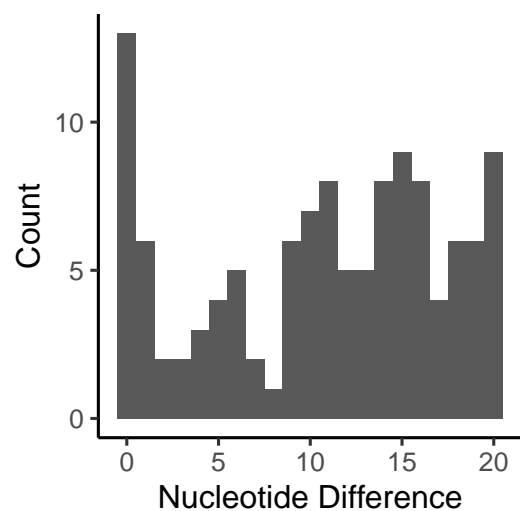
IGHV3-72*01

14 sequences assigned
No exact matches.



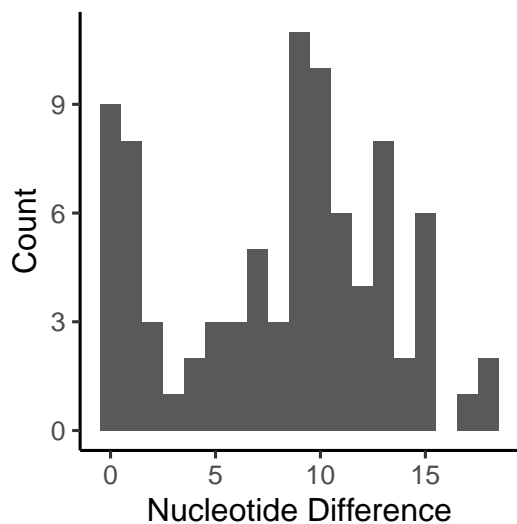
IGHV3-74*01

132 sequences assigned
13 (9.8%) exact matches, in which:
12 unique CDR3
5 unique J



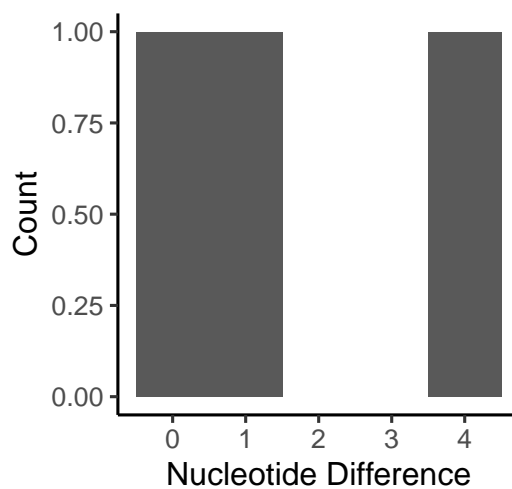
IGHV3-66*01

94 sequences assigned
9 (9.6%) exact matches, in which:
9 unique CDR3
4 unique J



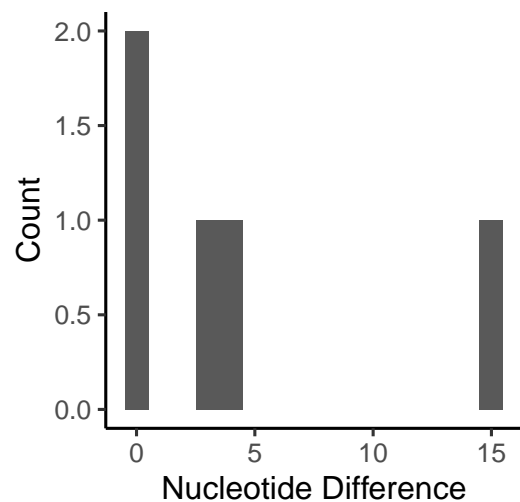
IGHV3-73*01

4 sequences assigned
1 (25%) exact matches, in which:
1 unique CDR3
1 unique J



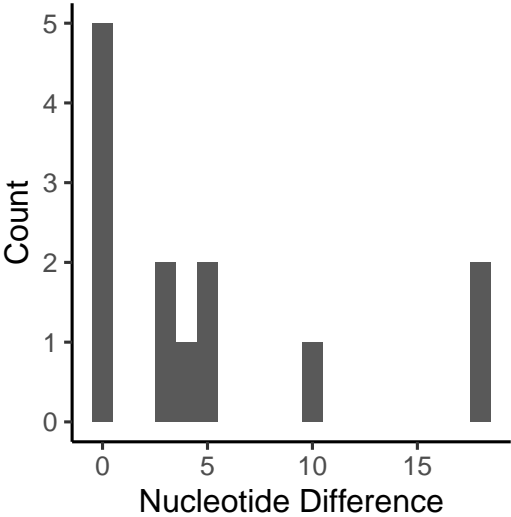
IGHV3-43D*03

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
1 unique J



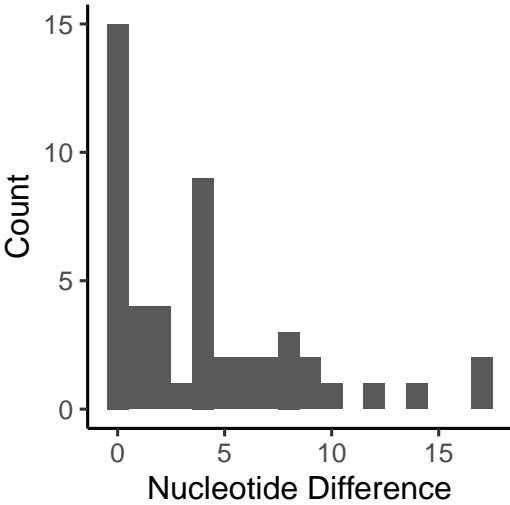
IGHV3-64D*06

14 sequences assigned
5 (35.7%) exact matches, in which:
5 unique CDR3
3 unique J



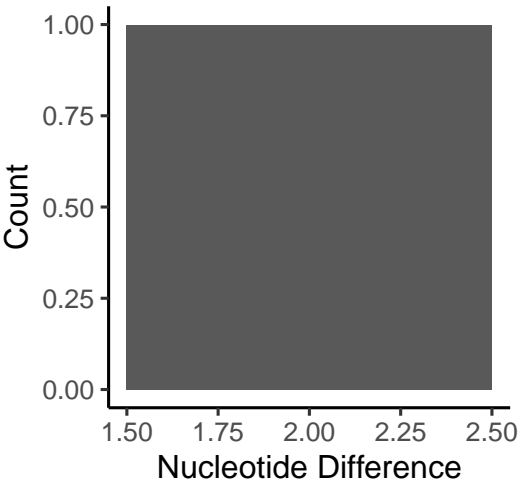
IGHV4-4*02

51 sequences assigned
15 (29.4%) exact matches, in which:
15 unique CDR3
3 unique J



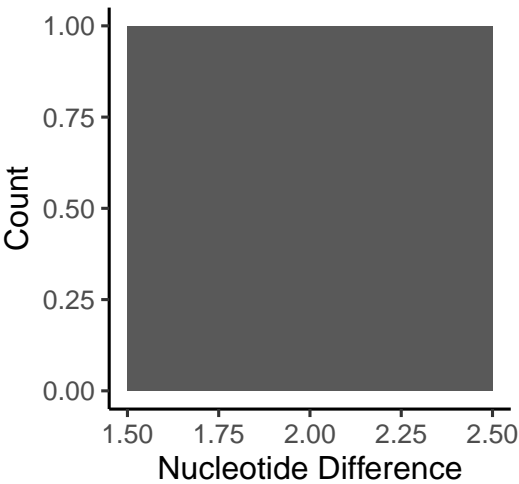
IGHV4-30-2*04

1 sequences assigned
No exact matches.



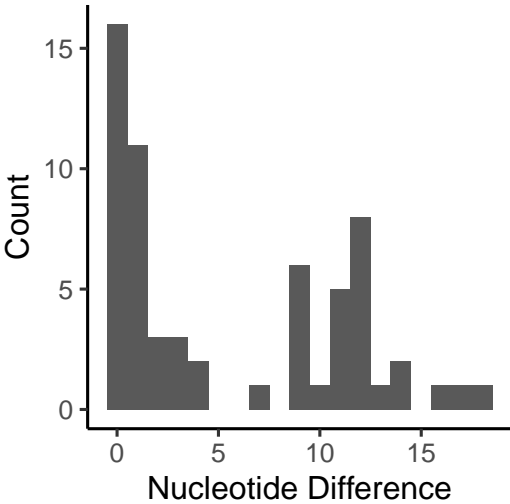
IGHV3-64D*08

1 sequences assigned
No exact matches.



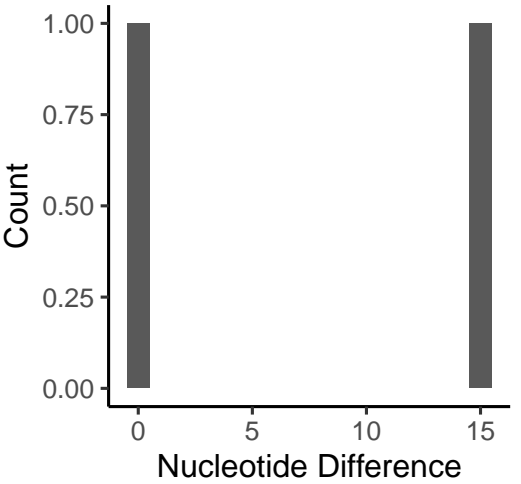
IGHV4-4*07

64 sequences assigned
16 (25%) exact matches, in which:
16 unique CDR3
4 unique J



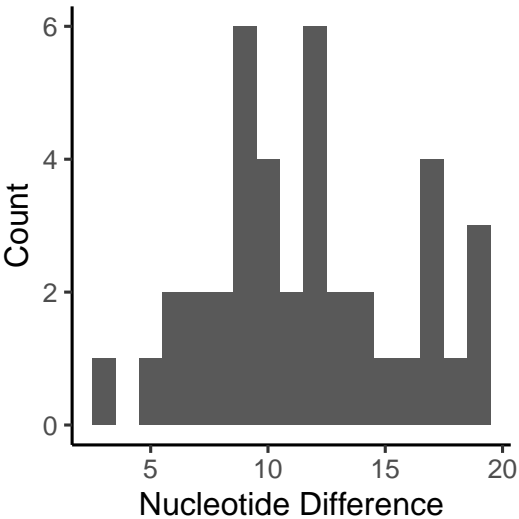
IGHV4-30-4*07

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



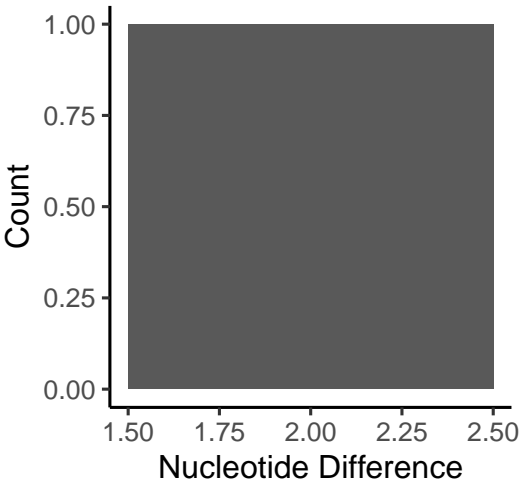
IGHV3-NL1*01

41 sequences assigned
No exact matches.



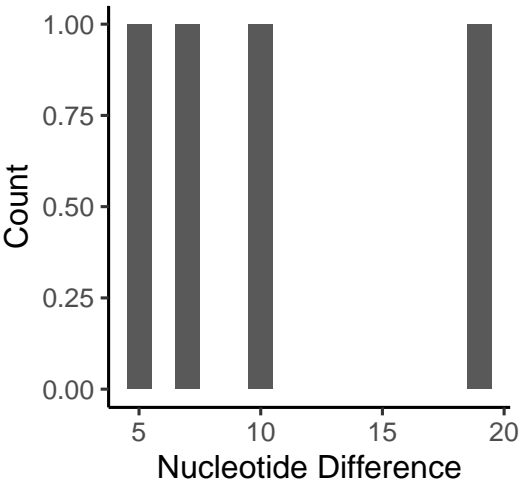
IGHV4-28*03

1 sequences assigned
No exact matches.



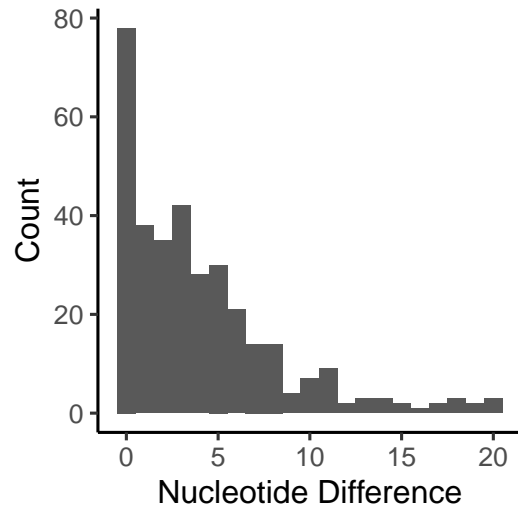
IGHV4-30-4*08

4 sequences assigned
No exact matches.



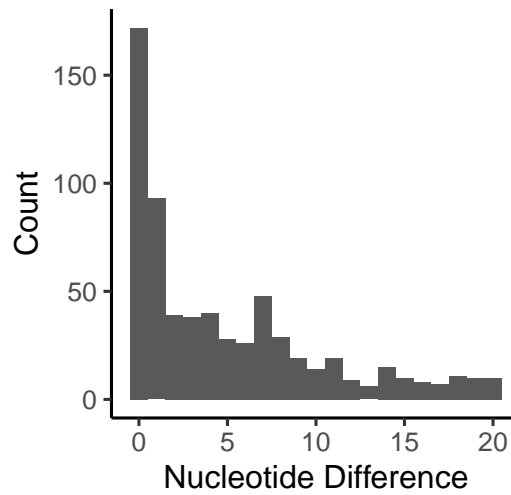
IGHV4-31*03

349 sequences assigned
78 (22.3%) exact matches, in which:
78 unique CDR3
5 unique J



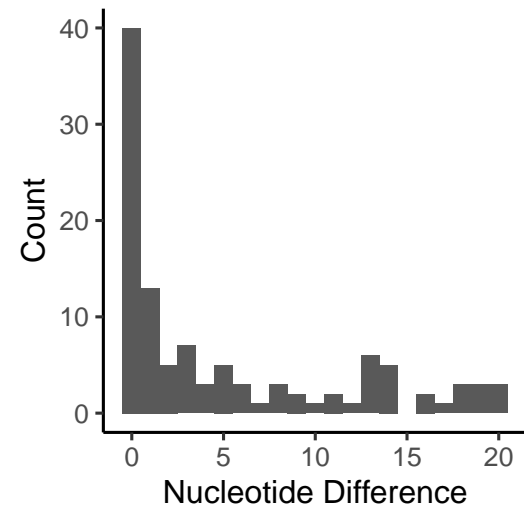
IGHV4-39*01

690 sequences assigned
172 (24.9%) exact matches, in which:
169 unique CDR3
6 unique J



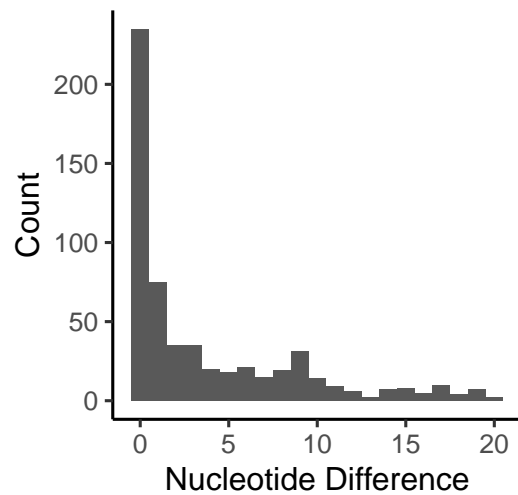
IGHV4-59*01

118 sequences assigned
40 (33.9%) exact matches, in which:
40 unique CDR3
6 unique J



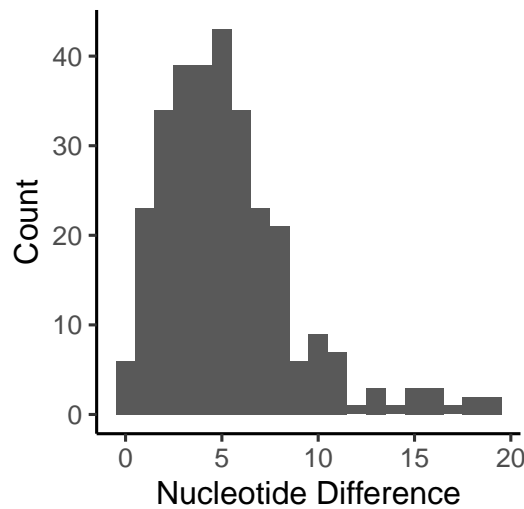
IGHV4-34*01

627 sequences assigned
235 (37.5%) exact matches, in which:
232 unique CDR3
6 unique J



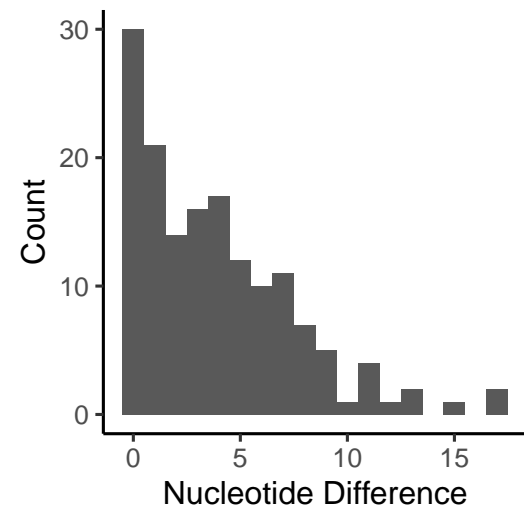
IGHV4-39*07

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



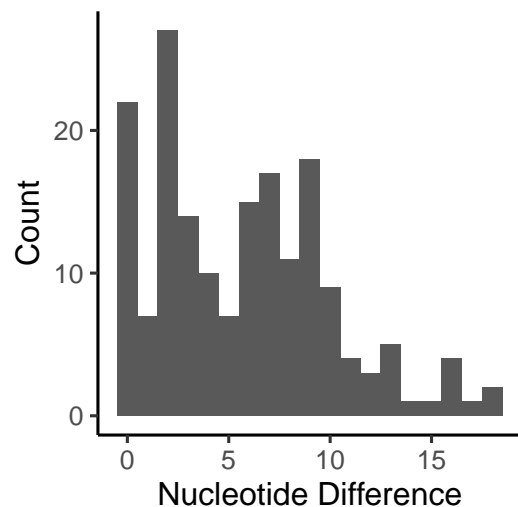
IGHV4-59*12

160 sequences assigned
30 (18.8%) exact matches, in which:
30 unique CDR3
5 unique J



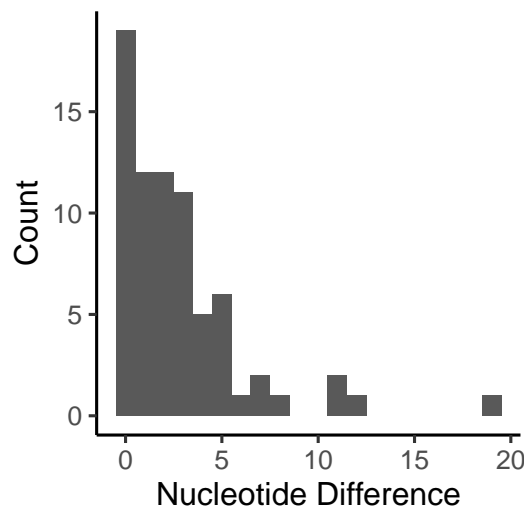
IGHV4-38-2*02

191 sequences assigned
22 (11.5%) exact matches, in which:
22 unique CDR3
5 unique J



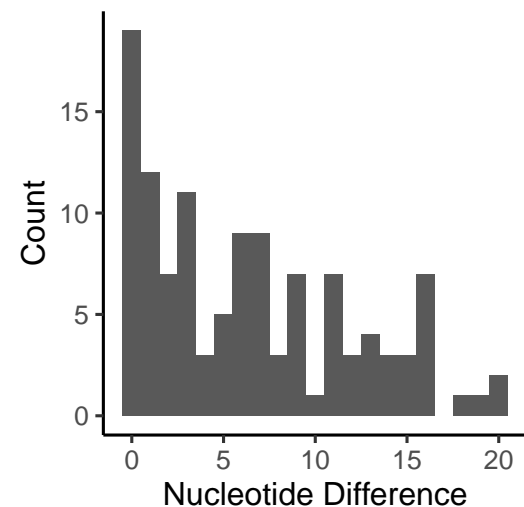
IGHV4-39*01_A220G

76 sequences assigned
19 (25%) exact matches, in which:
19 unique CDR3
4 unique J



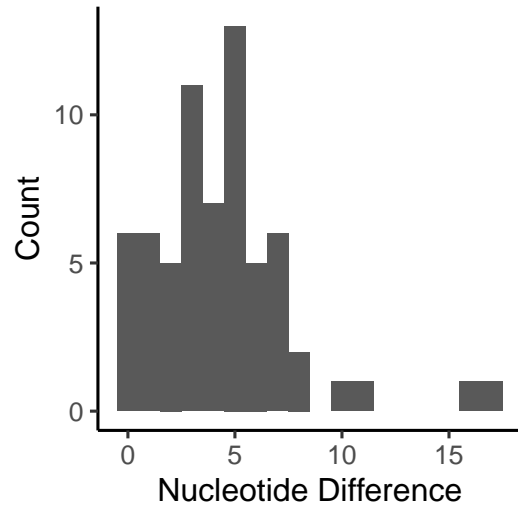
IGHV4-59*08_A291G

123 sequences assigned
19 (15.4%) exact matches, in which:
19 unique CDR3
4 unique J



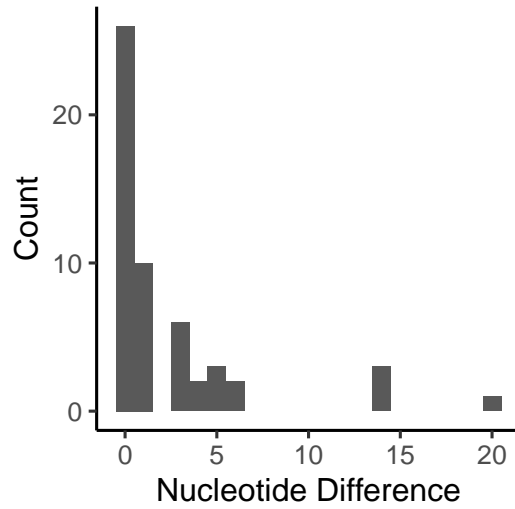
IGHV4-61*01

66 sequences assigned
6 (9.1%) exact matches, in which:
6 unique CDR3
2 unique J



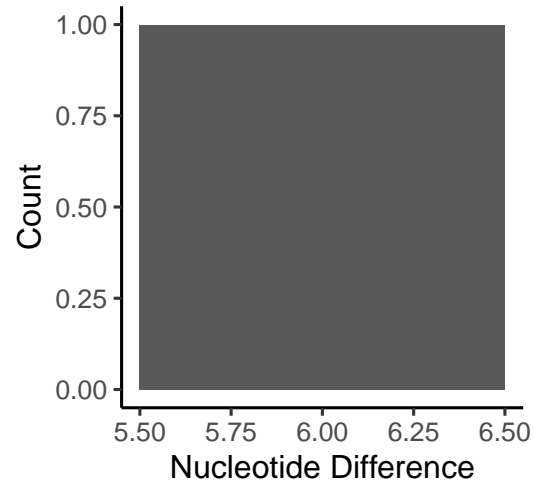
IGHV5-10-1*01

54 sequences assigned
26 (48.1%) exact matches, in which:
26 unique CDR3
7 unique J



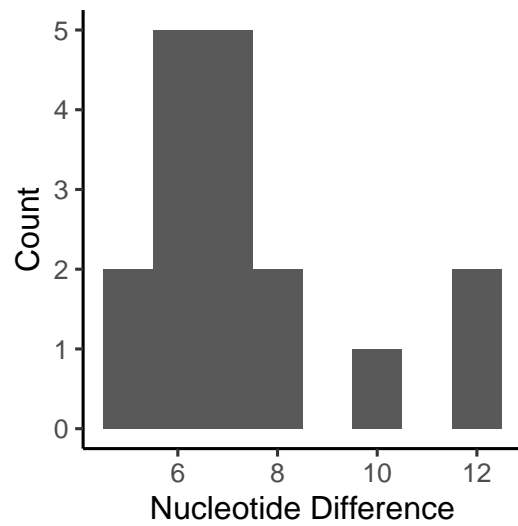
IGHV7-40*03

1 sequences assigned
No exact matches.



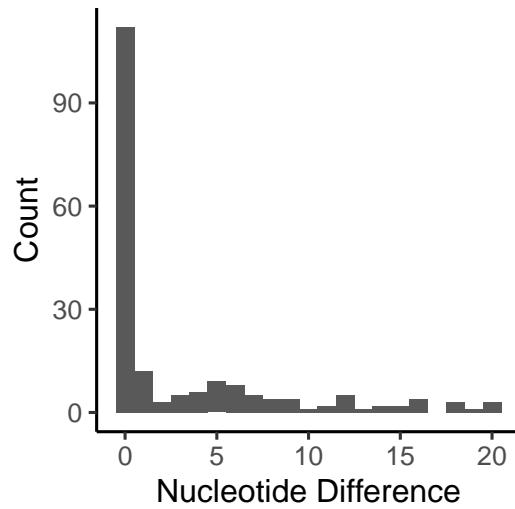
IGHV4-61*08

19 sequences assigned
No exact matches.



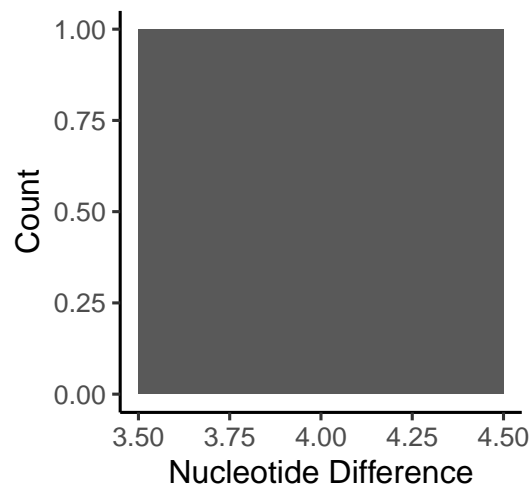
IGHV5-51*01

194 sequences assigned
112 (57.7%) exact matches, in which:
107 unique CDR3
7 unique J



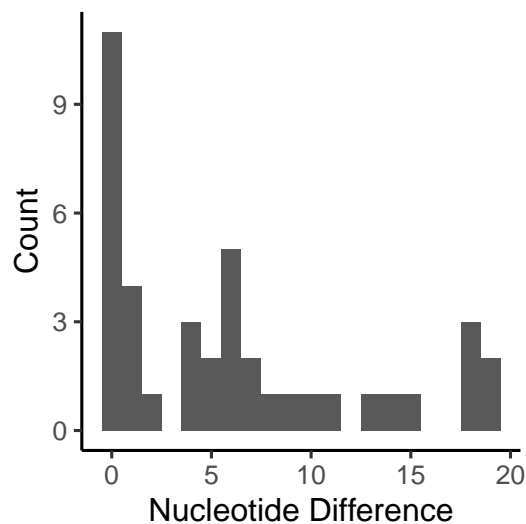
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.

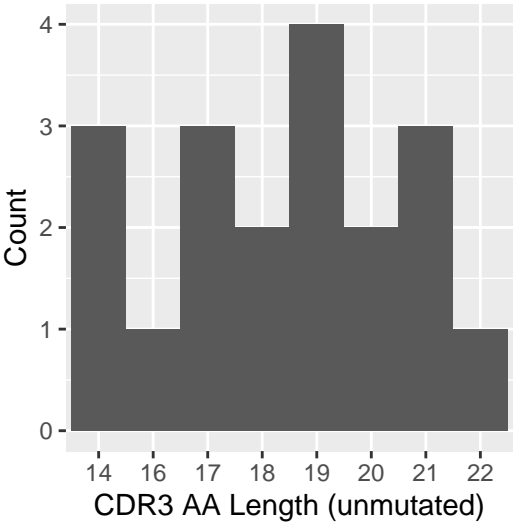


IGHV6-1*01

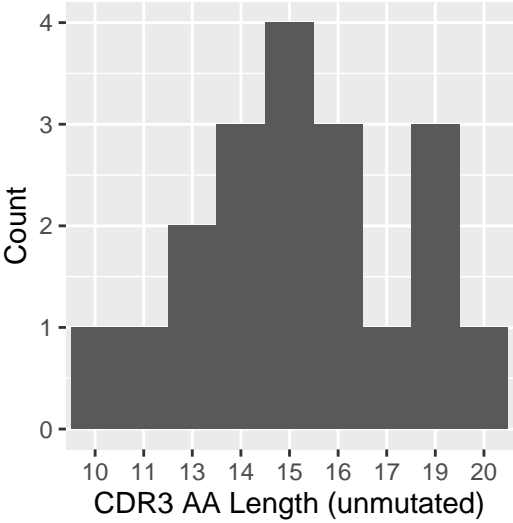
42 sequences assigned
11 (26.2%) exact matches, in which:
11 unique CDR3
5 unique J



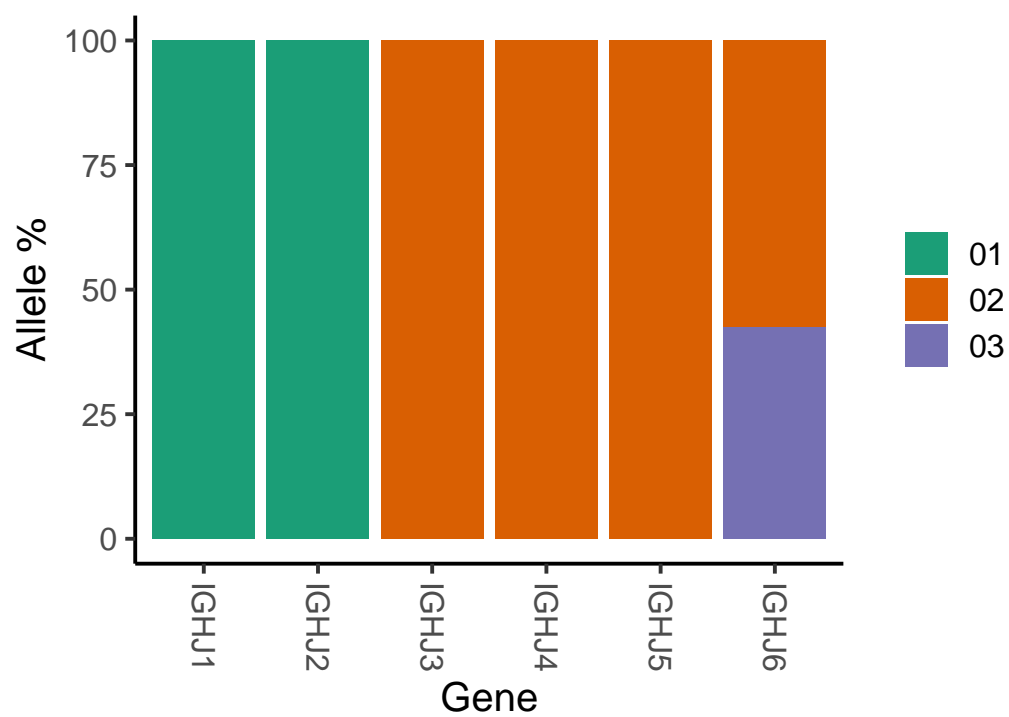
IGHV4-39*01_A220G



IGHV4-59*08_A291G



Allele Usage



Sequence Count by IGHJ6 allele usage

