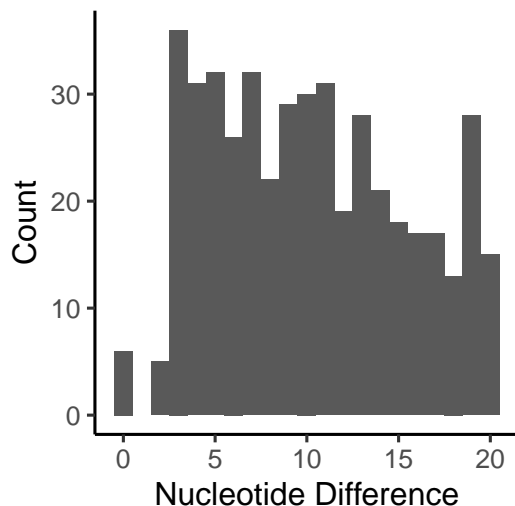


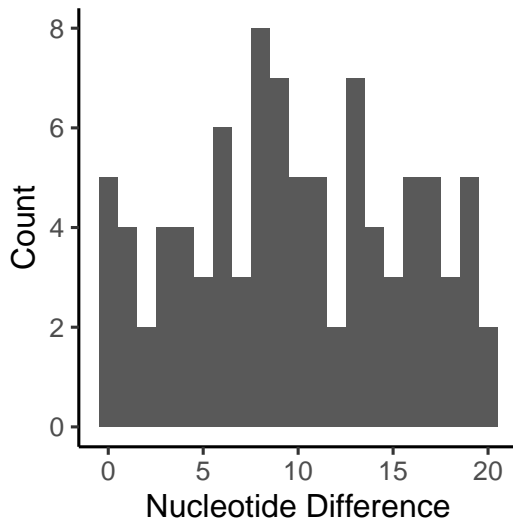
IGHV1-2*02

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



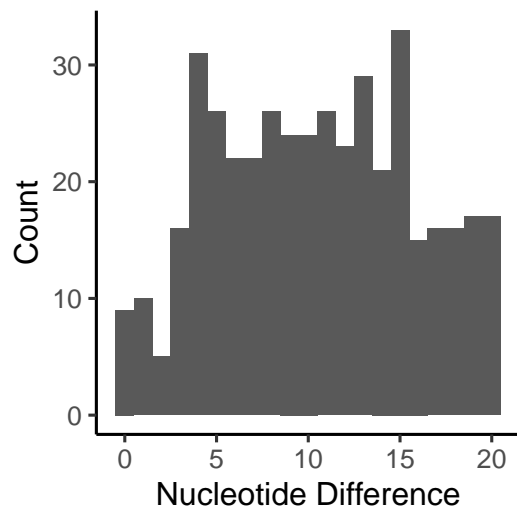
IGHV1-3*01_05

121 sequences assigned
5 (4.1%) exact matches, in which:
5 unique CDR3
2 unique J



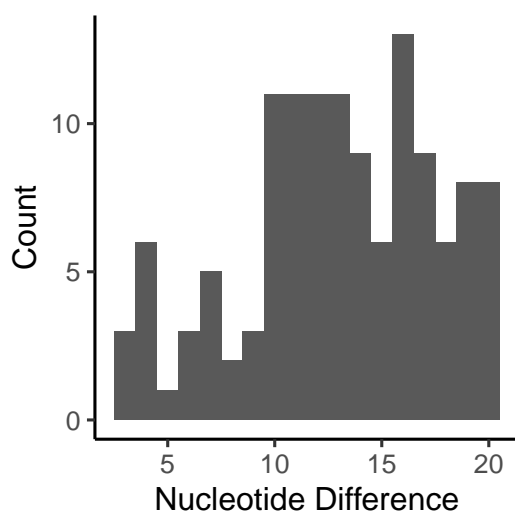
IGHV1-18*01

568 sequences assigned
9 (1.6%) exact matches, in which:
9 unique CDR3
5 unique J



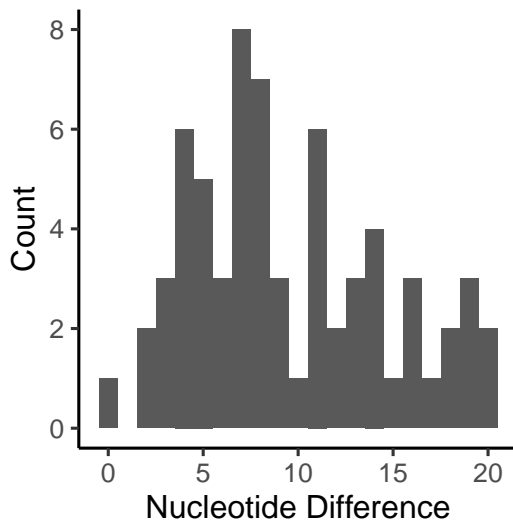
IGHV1-2*06

199 sequences assigned
No exact matches.



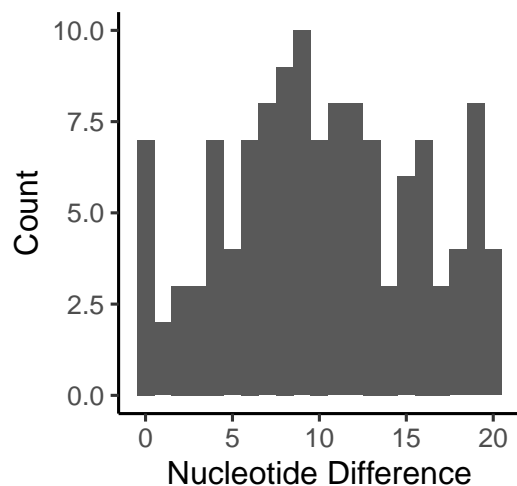
IGHV1-8*01

78 sequences assigned
1 (1.3%) exact matches, in which:
1 unique CDR3
1 unique J



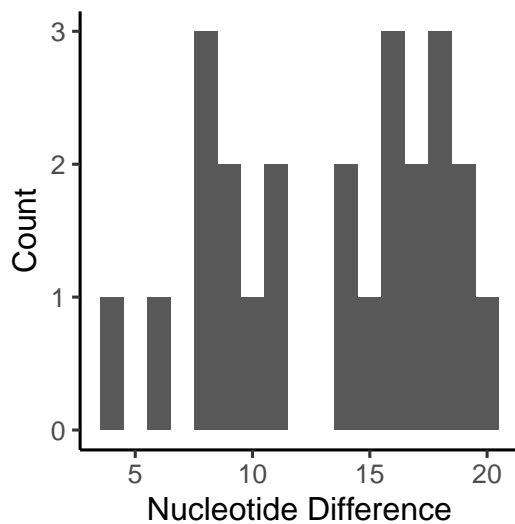
IGHV1-18*04

208 sequences assigned
7 (3.4%) exact matches, in which:
7 unique CDR3
4 unique J



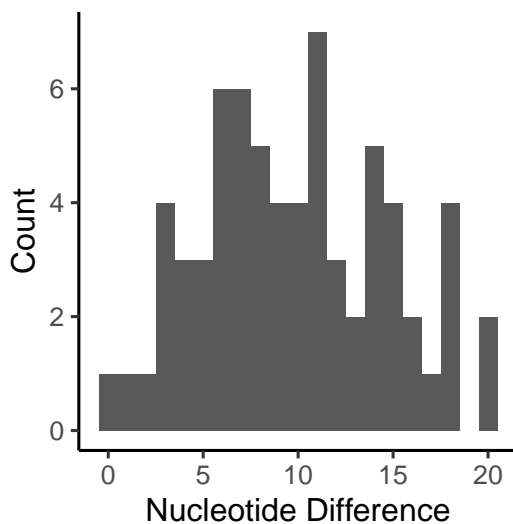
IGHV1-3*04

32 sequences assigned
No exact matches.



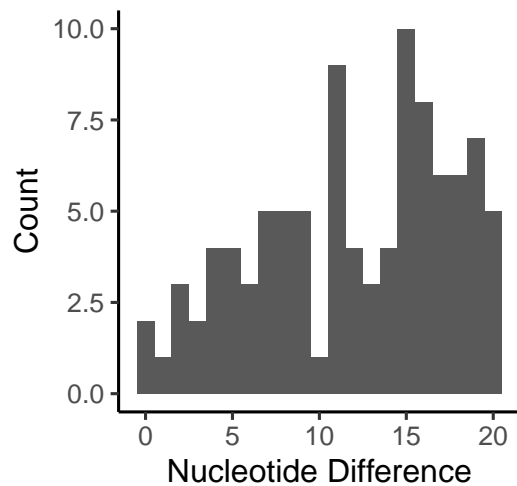
IGHV1-8*02

91 sequences assigned
1 (1.1%) exact matches, in which:
1 unique CDR3
1 unique J



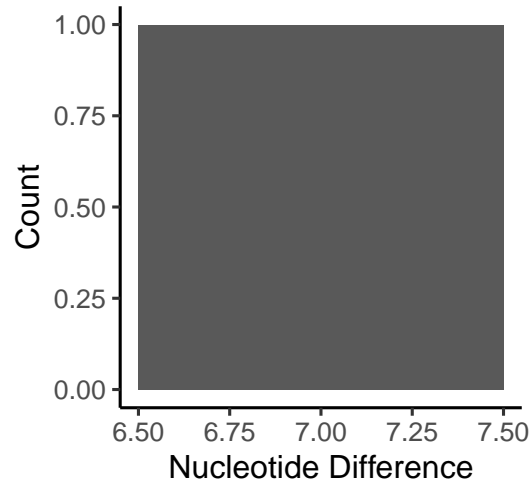
IGHV1-24*01

120 sequences assigned
2 (1.7%) exact matches, in which:
2 unique CDR3
2 unique J



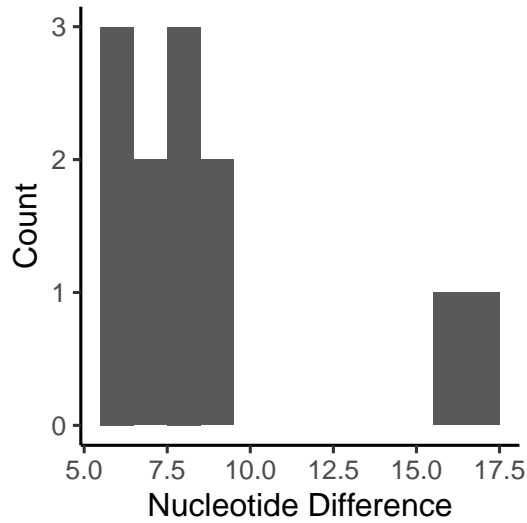
IGHV1-45*02

1 sequences assigned
No exact matches.



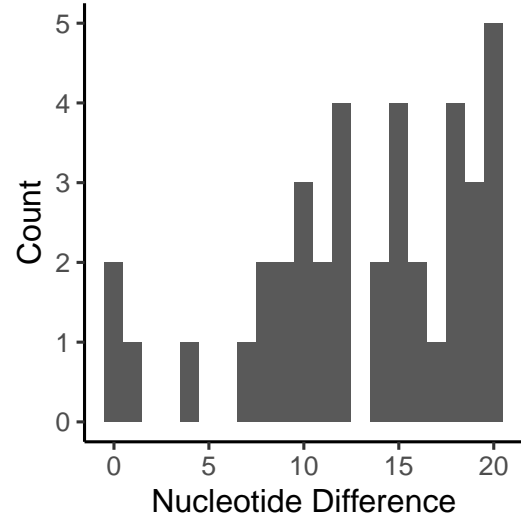
IGHV1-58*02

16 sequences assigned
No exact matches.



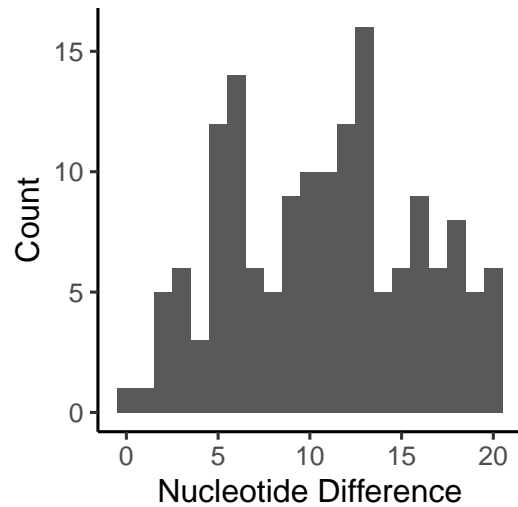
IGHV1-69*02

82 sequences assigned
2 (2.4%) exact matches, in which:
2 unique CDR3
2 unique J



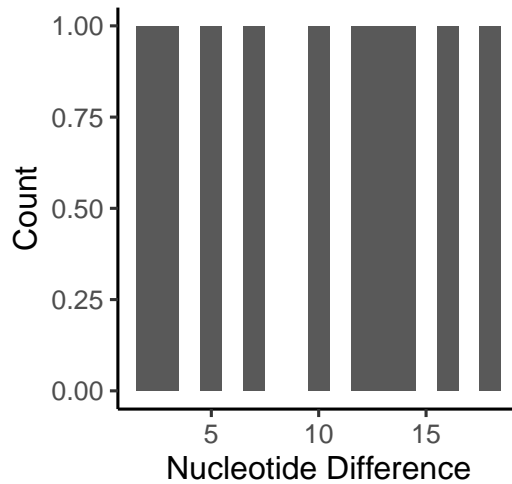
IGHV1-46*01

199 sequences assigned
1 (0.5%) exact matches, in which:
1 unique CDR3
1 unique J



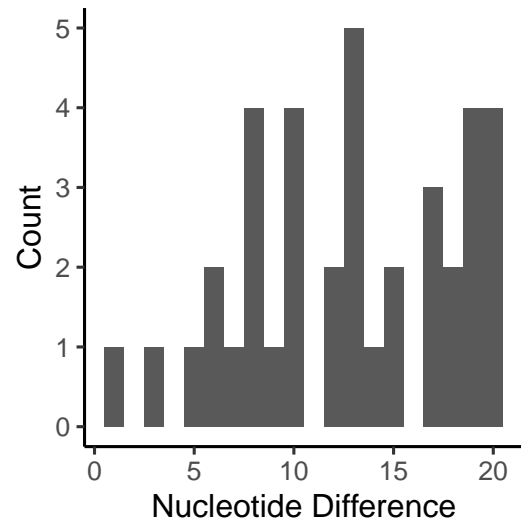
IGHV1-58*01_03

12 sequences assigned
No exact matches.



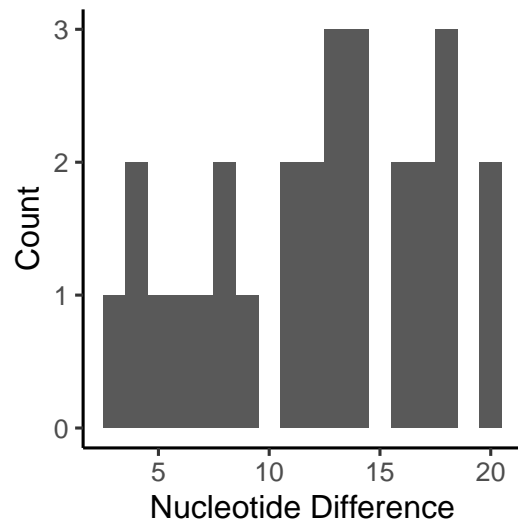
IGHV1-69*08

65 sequences assigned
No exact matches.



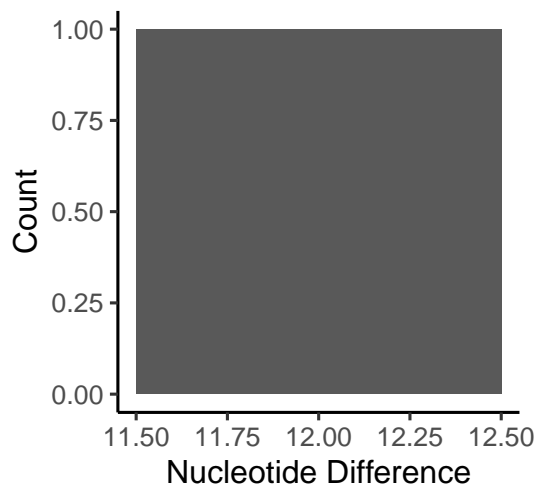
IGHV1-46*03

45 sequences assigned
No exact matches.



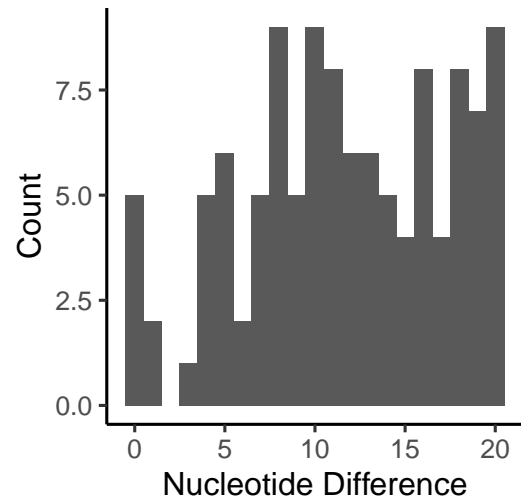
IGHV1-69-2*01

2 sequences assigned
No exact matches.



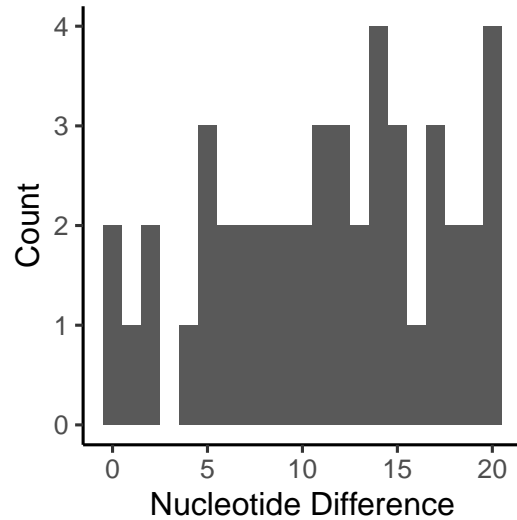
IGHV1-69*01_12_13

194 sequences assigned
5 (2.6%) exact matches, in which:
5 unique CDR3
4 unique J



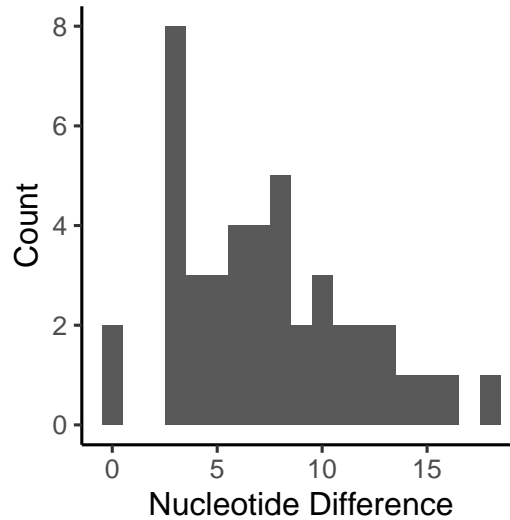
IGHV1-69*06_14

85 sequences assigned
2 (2.4%) exact matches, in which:
2 unique CDR3
2 unique J



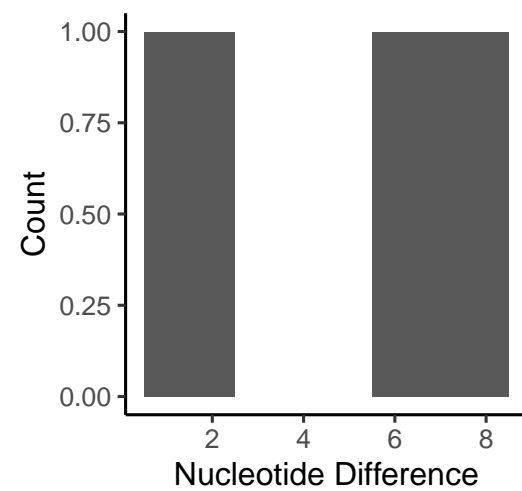
IGHV2-5*05_09

49 sequences assigned
2 (4.1%) exact matches, in which:
2 unique CDR3
1 unique J



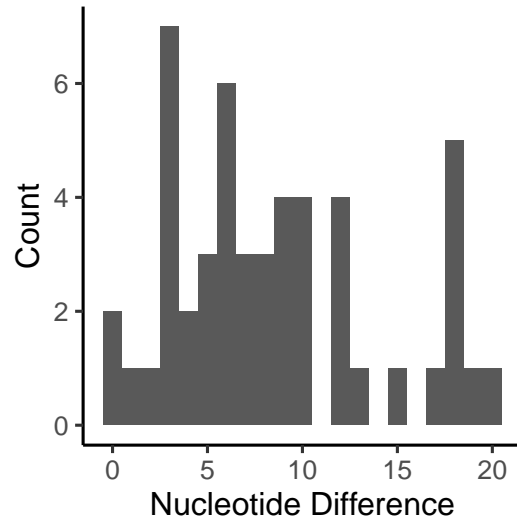
IGHV2-70*04

6 sequences assigned
No exact matches.



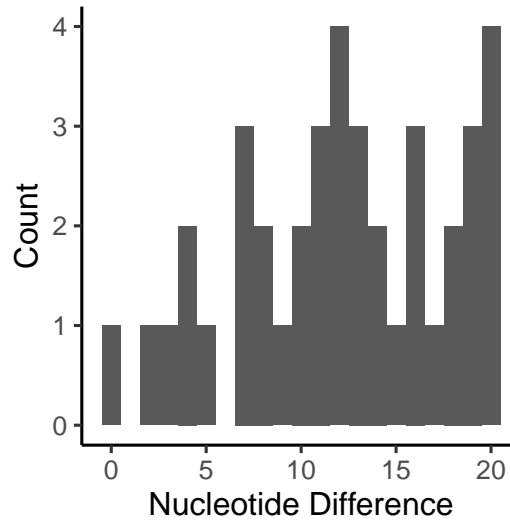
IGHV2-5*01

58 sequences assigned
2 (3.4%) exact matches, in which:
2 unique CDR3
1 unique J



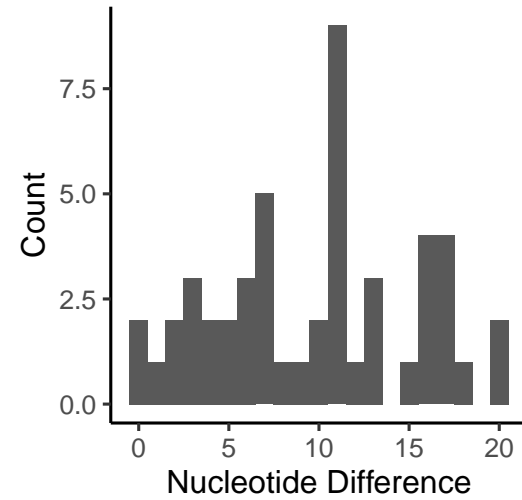
IGHV2-26*01

46 sequences assigned
1 (2.2%) exact matches, in which:
1 unique CDR3
1 unique J



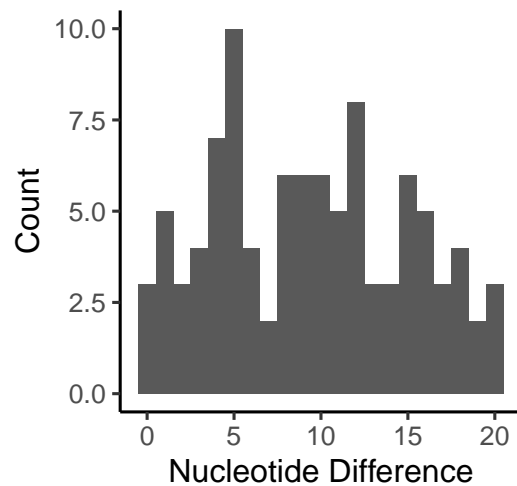
IGHV2-70*11_15

52 sequences assigned
2 (3.8%) exact matches, in which:
2 unique CDR3
2 unique J



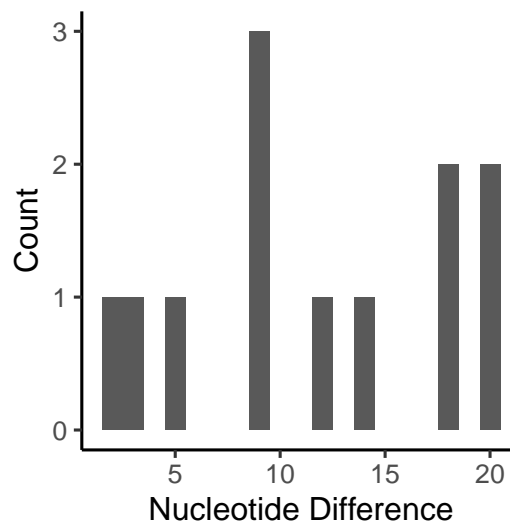
IGHV2-5*02

118 sequences assigned
3 (2.5%) exact matches, in which:
3 unique CDR3
2 unique J



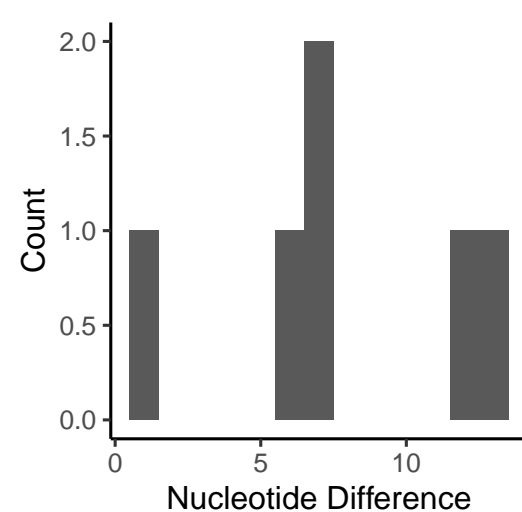
IGHV2-70*01

15 sequences assigned
No exact matches.



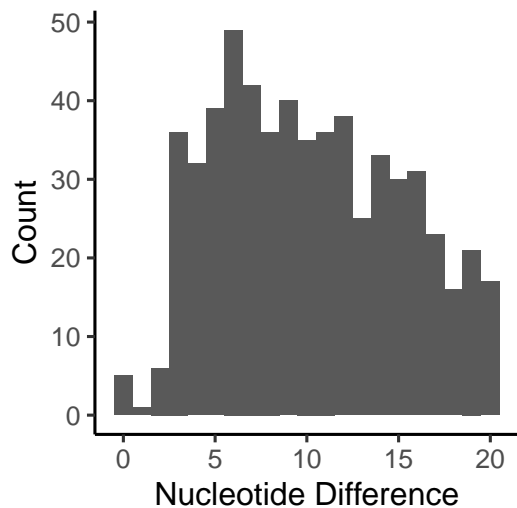
IGHV2-70*16_17

8 sequences assigned
No exact matches.



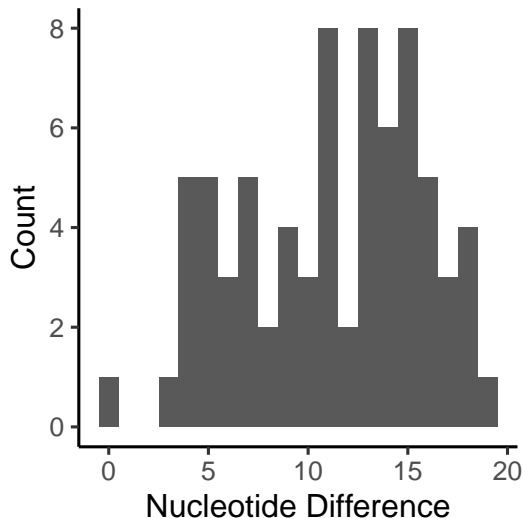
IGHV3-7*01

734 sequences assigned
5 (0.7%) exact matches, in which:
5 unique CDR3
1 unique J



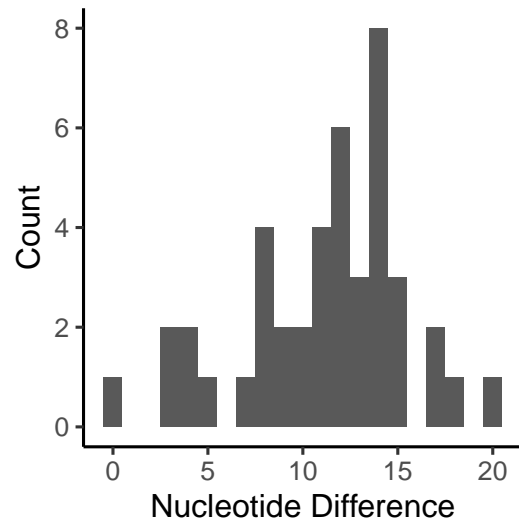
IGHV3-11*01

109 sequences assigned
1 (0.9%) exact matches, in which:
1 unique CDR3
1 unique J



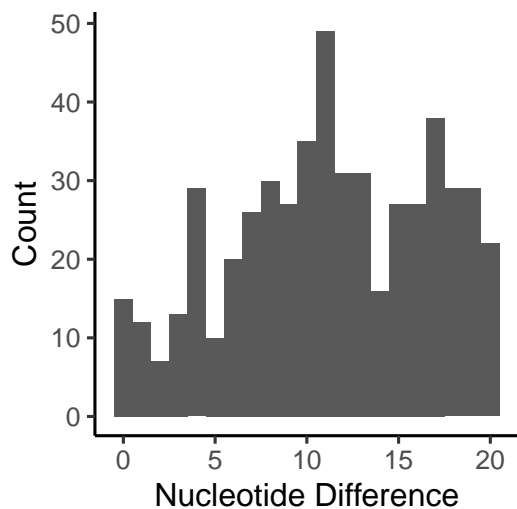
IGHV3-13*01

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



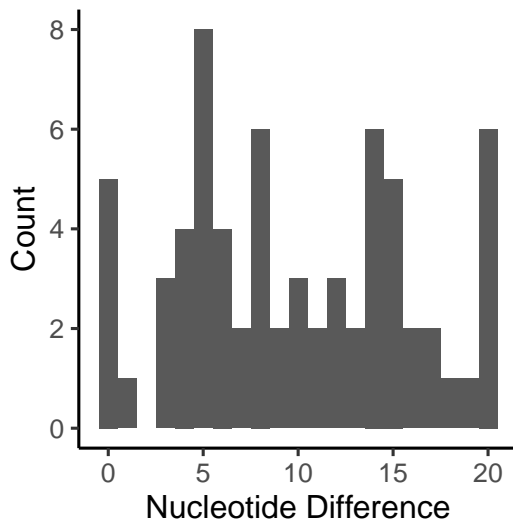
IGHV3-7*03

653 sequences assigned
15 (2.3%) exact matches, in which:
11 unique CDR3
5 unique J



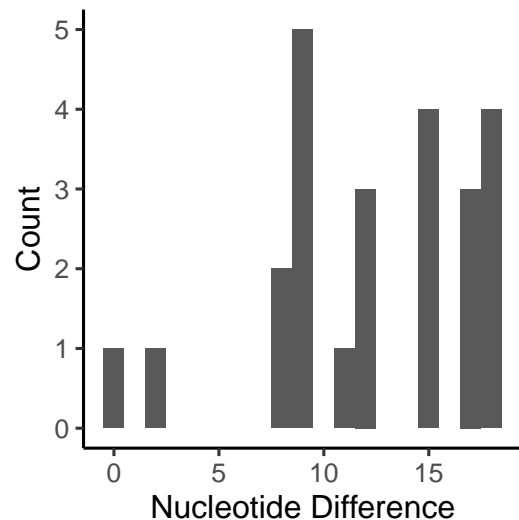
IGHV3-11*04

85 sequences assigned
5 (5.9%) exact matches, in which:
4 unique CDR3
2 unique J



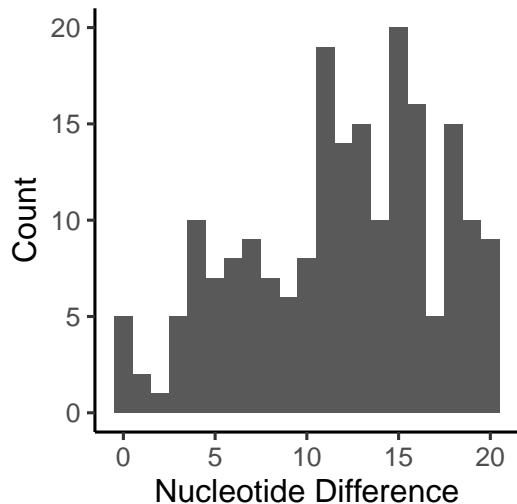
IGHV3-13*05

24 sequences assigned
1 (4.2%) exact matches, in which:
1 unique CDR3
1 unique J



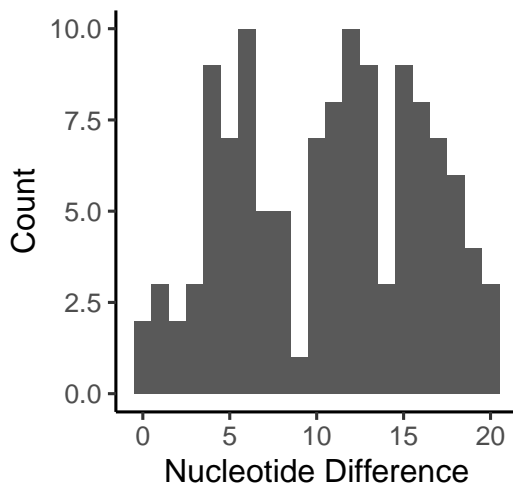
IGHV3-9*01

234 sequences assigned
5 (2.1%) exact matches, in which:
3 unique CDR3
2 unique J



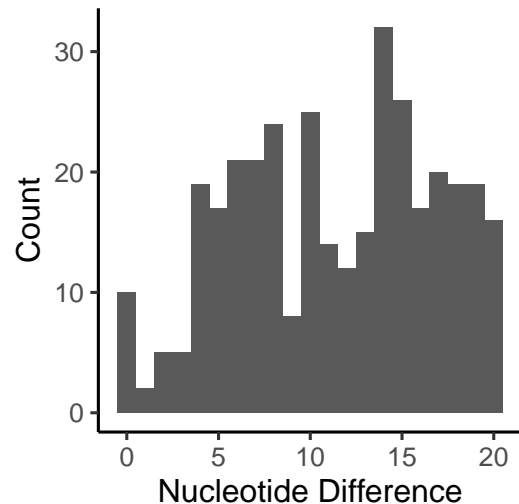
IGHV3-11*06

180 sequences assigned
2 (1.1%) exact matches, in which:
2 unique CDR3
2 unique J



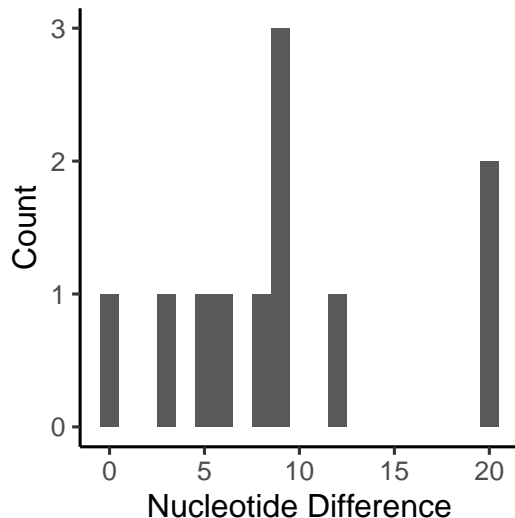
IGHV3-15*01_02

447 sequences assigned
10 (2.2%) exact matches, in which:
7 unique CDR3
3 unique J



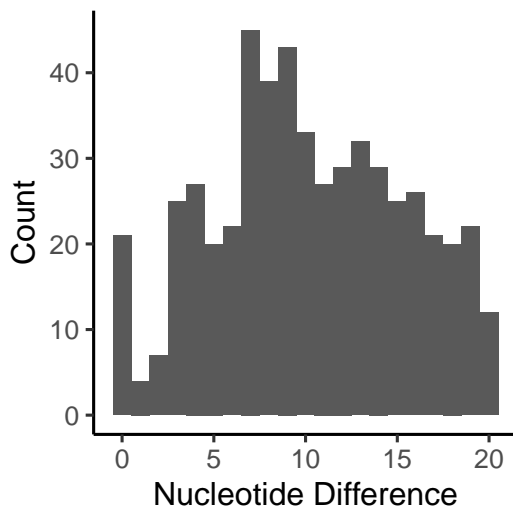
IGHV3-20*01_02

11 sequences assigned
1 (9.1%) exact matches, in which:
1 unique CDR3
1 unique J



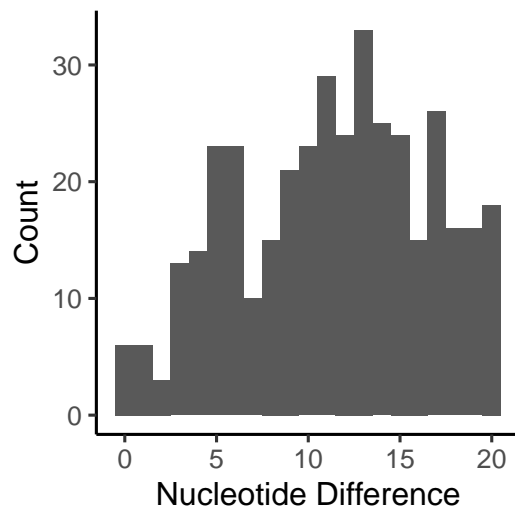
IGHV3-21*01_02

653 sequences assigned
21 (3.2%) exact matches, in which:
17 unique CDR3
5 unique J



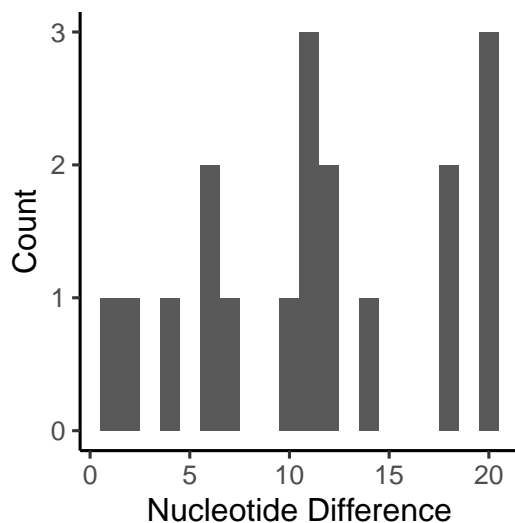
IGHV3-30*02

554 sequences assigned
6 (1.1%) exact matches, in which:
4 unique CDR3
2 unique J



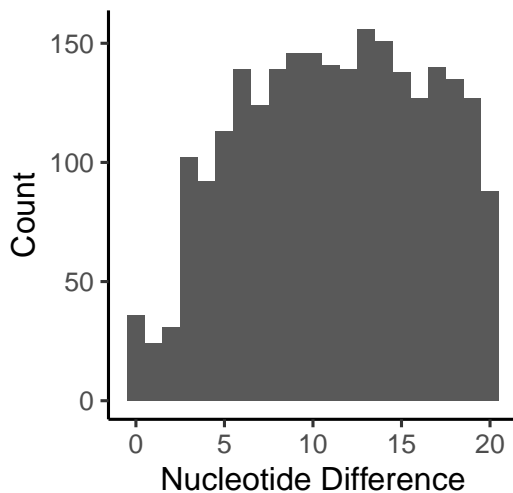
IGHV3-20*03_04

21 sequences assigned
No exact matches.



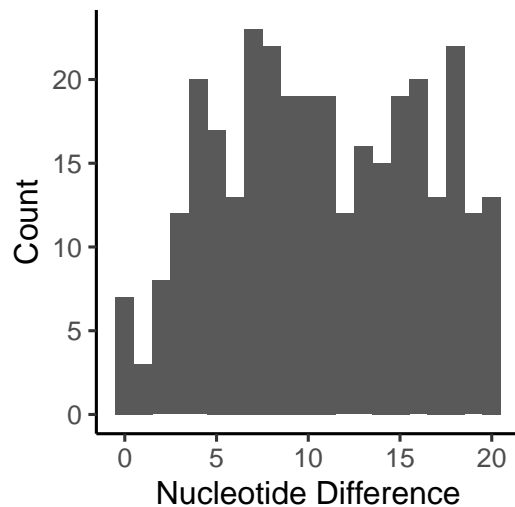
IGHV3-23*01_04

3335 sequences assigned
36 (1.1%) exact matches, in which:
32 unique CDR3
6 unique J



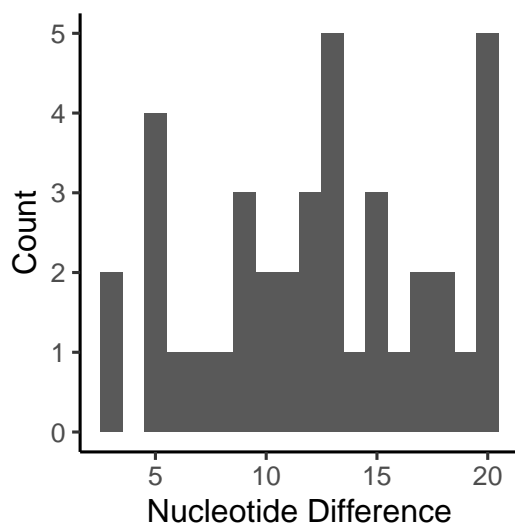
IGHV3-30*04

443 sequences assigned
7 (1.6%) exact matches, in which:
6 unique CDR3
3 unique J



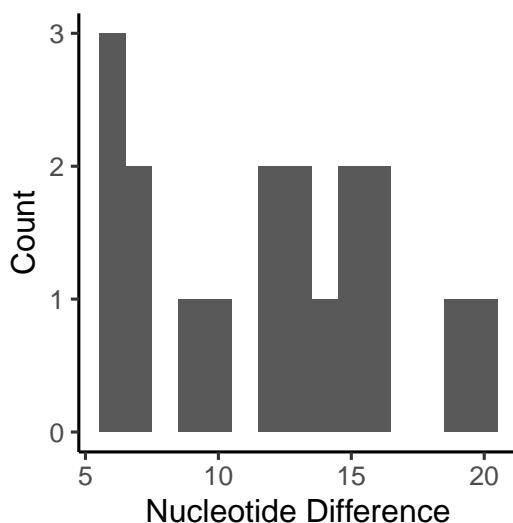
IGHV3-21*06

94 sequences assigned
No exact matches.



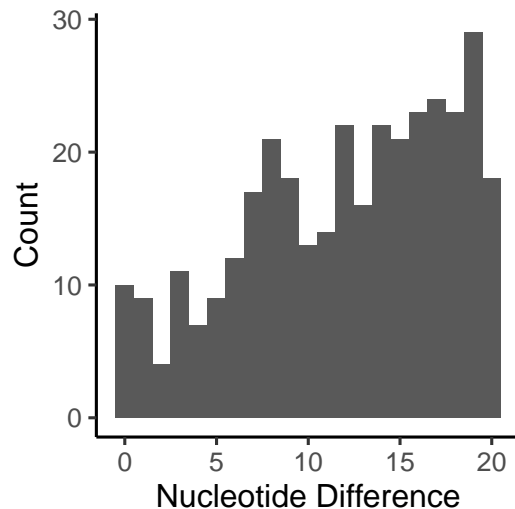
IGHV3-30-3*01

39 sequences assigned
No exact matches.



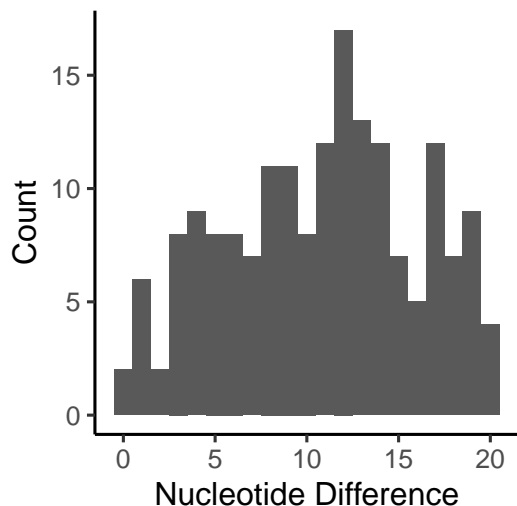
IGHV3-30*18

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



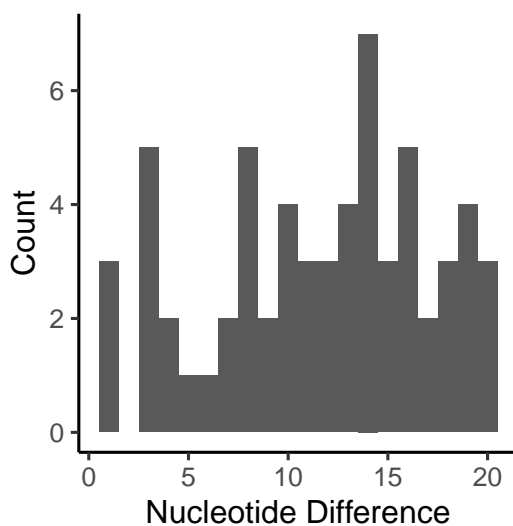
IGHV3-33*01

240 sequences assigned
2 (0.8%) exact matches, in which:
2 unique CDR3
1 unique J



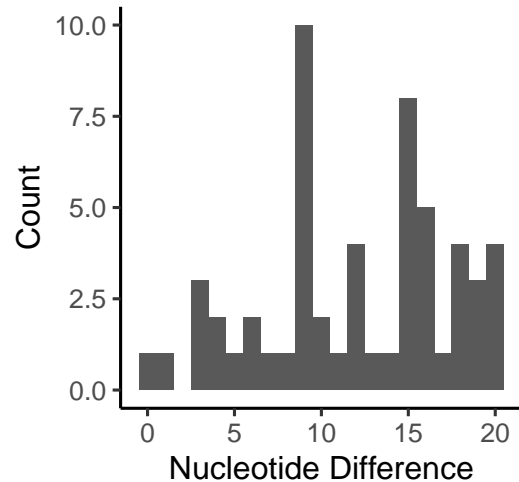
IGHV3-49*04

74 sequences assigned
No exact matches.



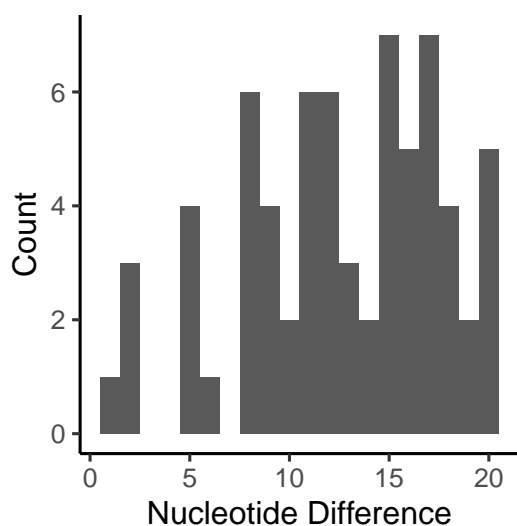
IGHV3-64*01

87 sequences assigned
1 (1.1%) exact matches, in which:
1 unique CDR3
1 unique J



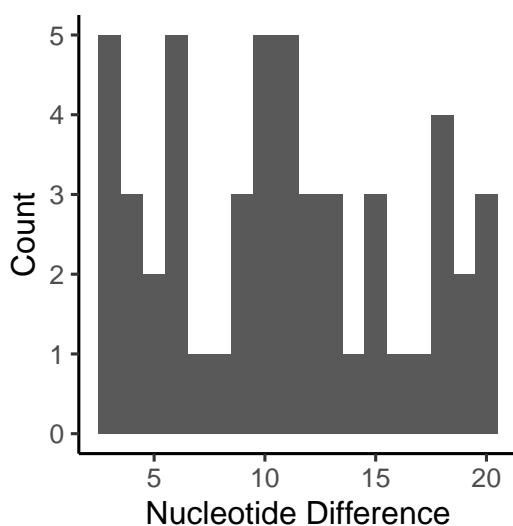
IGHV3-43*01

89 sequences assigned
No exact matches.



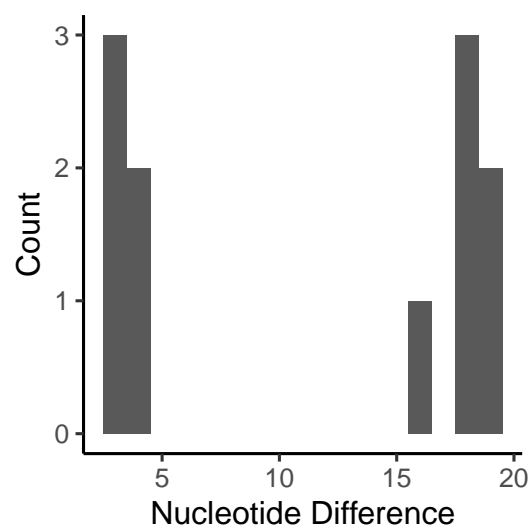
IGHV3-49*03_05

67 sequences assigned
No exact matches.



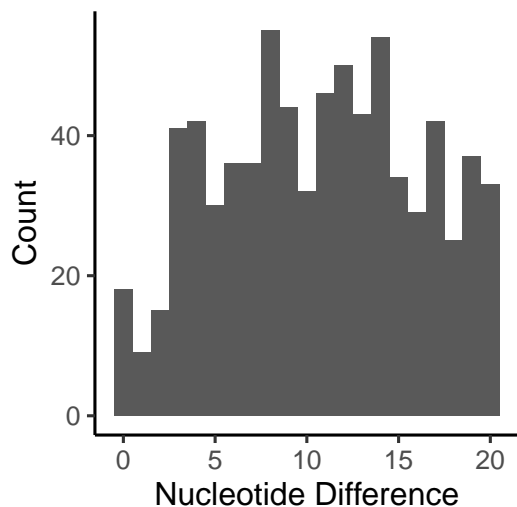
IGHV3-64*02_07

18 sequences assigned
No exact matches.



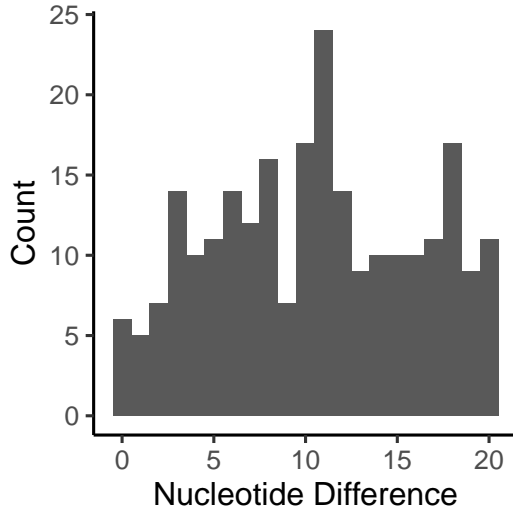
IGHV3-48*02

951 sequences assigned
18 (1.9%) exact matches, in which:
15 unique CDR3
5 unique J



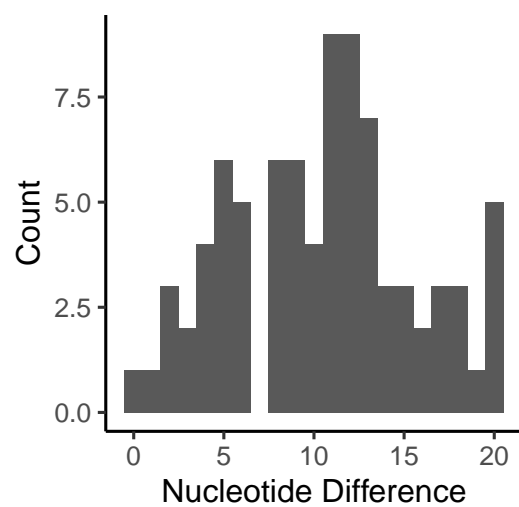
IGHV3-53*01_02

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



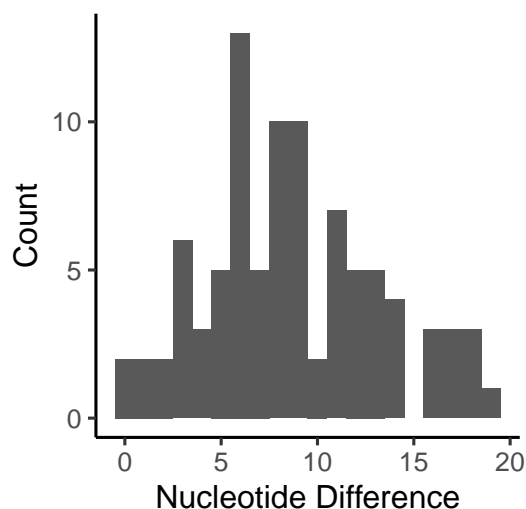
IGHV3-66*01

126 sequences assigned
1 (0.8%) exact matches, in which:
1 unique CDR3
1 unique J



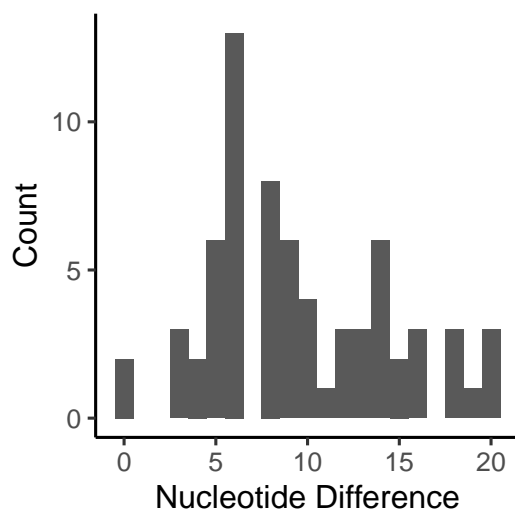
IGHV3-66*02

109 sequences assigned
2 (1.8%) exact matches, in which:
2 unique CDR3
2 unique J



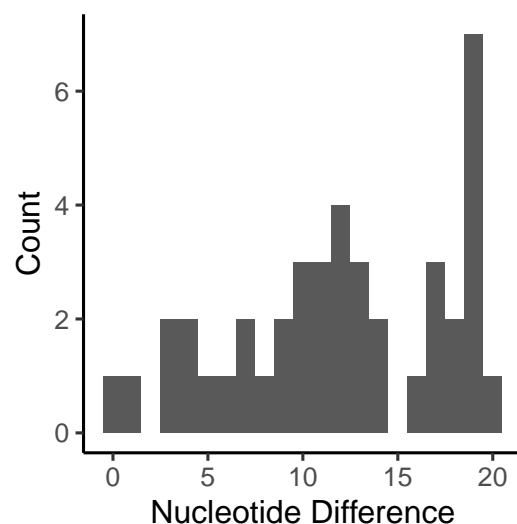
IGHV3-73*01_02

94 sequences assigned
2 (2.1%) exact matches, in which:
2 unique CDR3
2 unique J



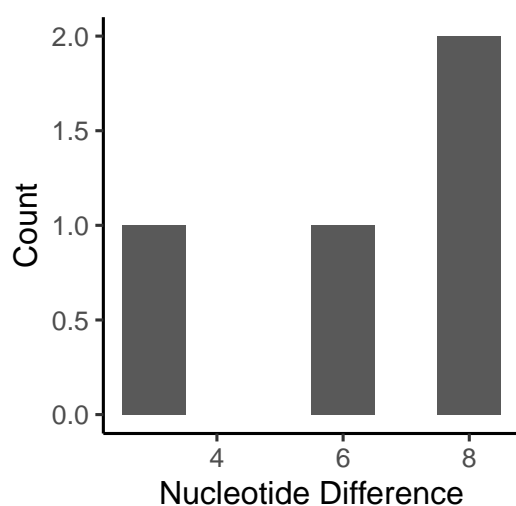
IGHV3-43D*03

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



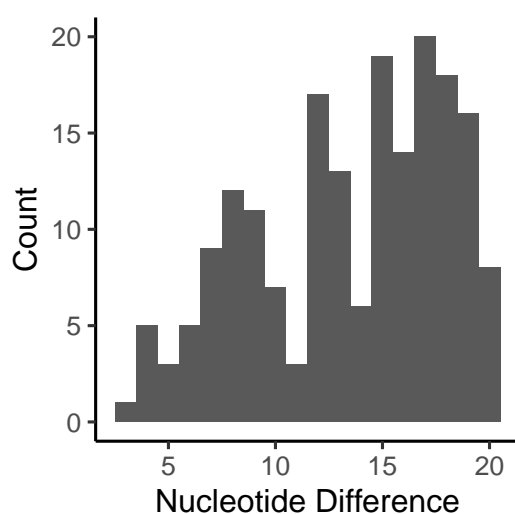
IGHV3-69-1*02

4 sequences assigned
No exact matches.



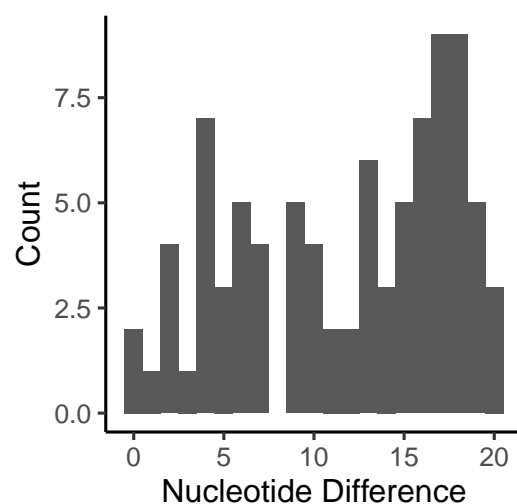
IGHV3-74*03

258 sequences assigned
No exact matches.



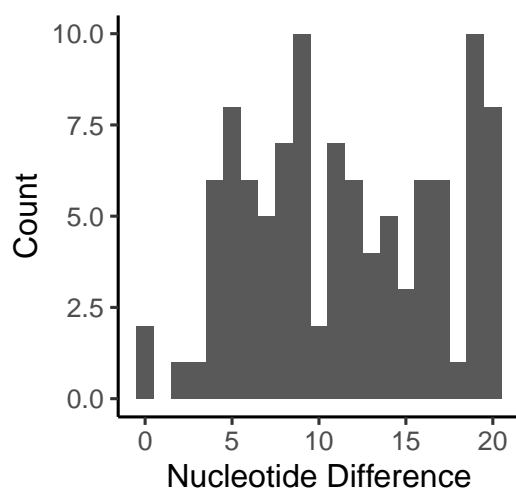
IGHV3-64D*06

144 sequences assigned
2 (1.4%) exact matches, in which:
2 unique CDR3
2 unique J



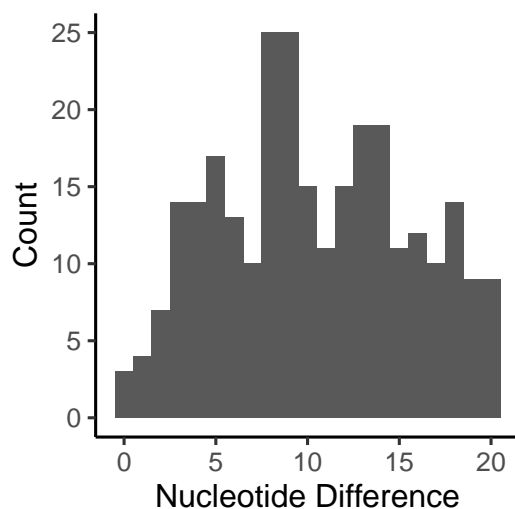
IGHV3-72*01

130 sequences assigned
2 (1.5%) exact matches, in which:
1 unique CDR3
1 unique J



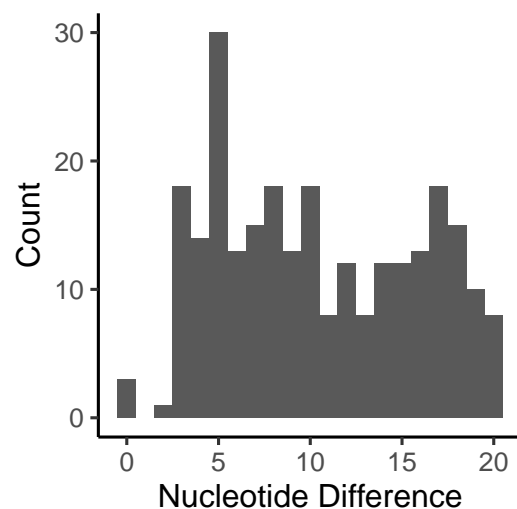
IGHV3-74*01_02

352 sequences assigned
3 (0.9%) exact matches, in which:
2 unique CDR3
2 unique J



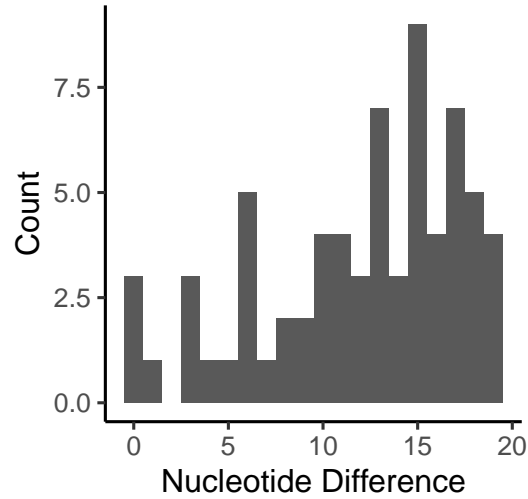
IGHV4-4*07

350 sequences assigned
3 (0.9%) exact matches, in which:
3 unique CDR3
3 unique J



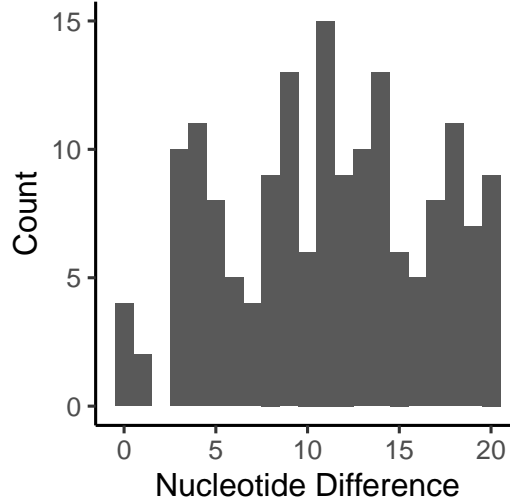
IGHV4-4*02_03

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



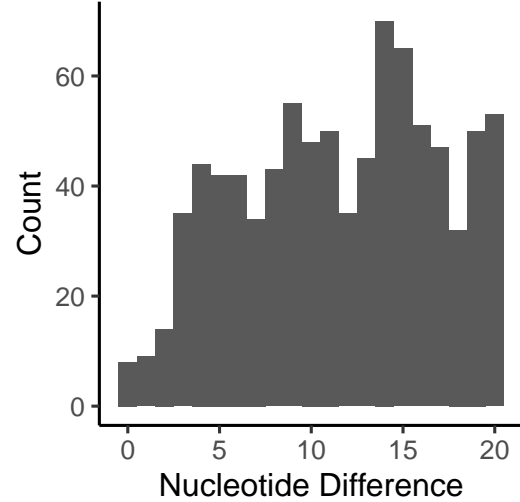
IGHV4-30-2*01

250 sequences assigned
4 (1.6%) exact matches, in which:
4 unique CDR3
3 unique J



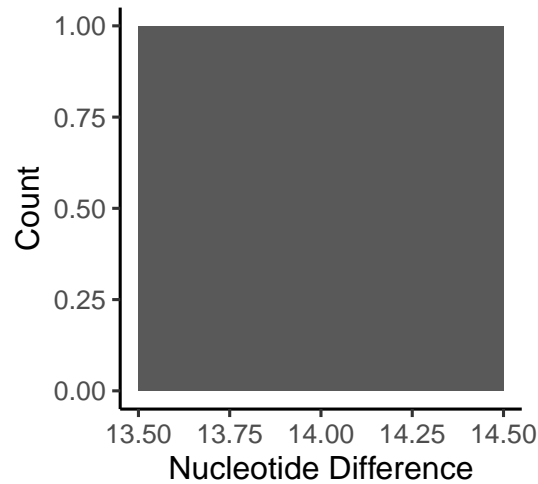
IGHV4-34*01_02

1203 sequences assigned
8 (0.7%) exact matches, in which:
7 unique CDR3
5 unique J



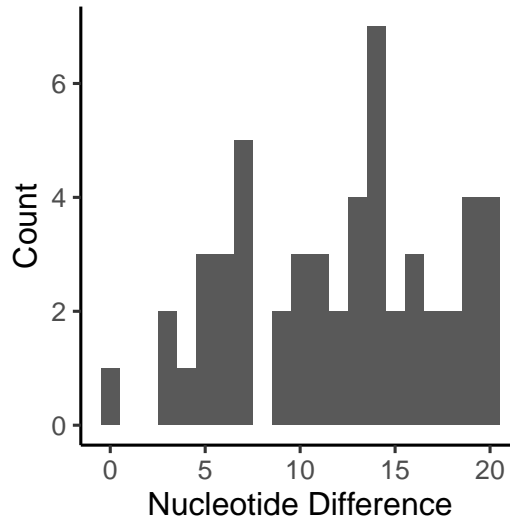
IGHV4-28*03

1 sequences assigned
No exact matches.



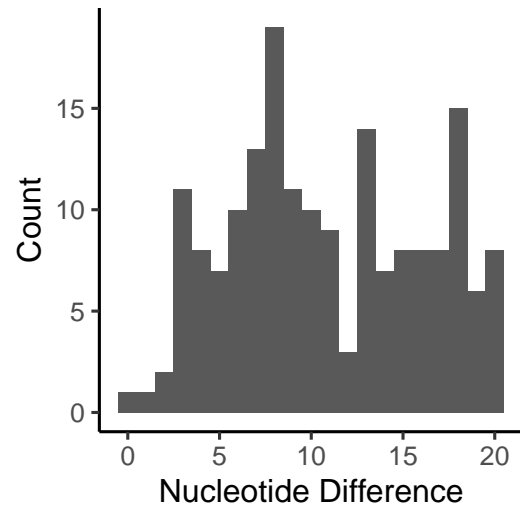
IGHV4-30-4*07

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



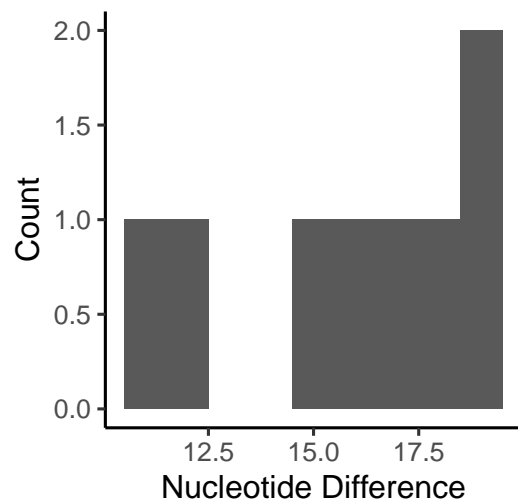
IGHV4-38-2*02

245 sequences assigned
1 (0.4%) exact matches, in which:
1 unique CDR3
1 unique J



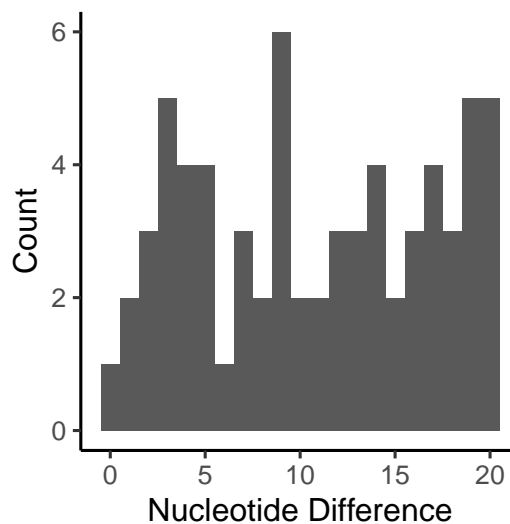
IGHV4-28*01_07

9 sequences assigned
No exact matches.



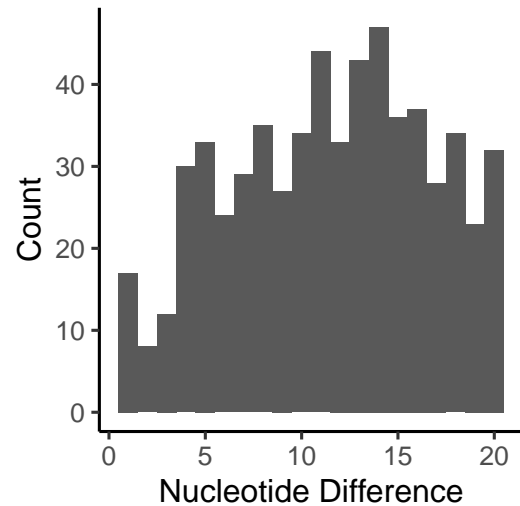
IGHV4-31*02

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



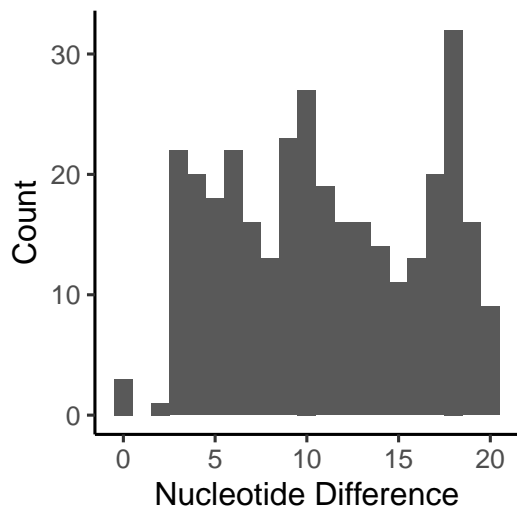
IGHV4-39*02

914 sequences assigned
No exact matches.



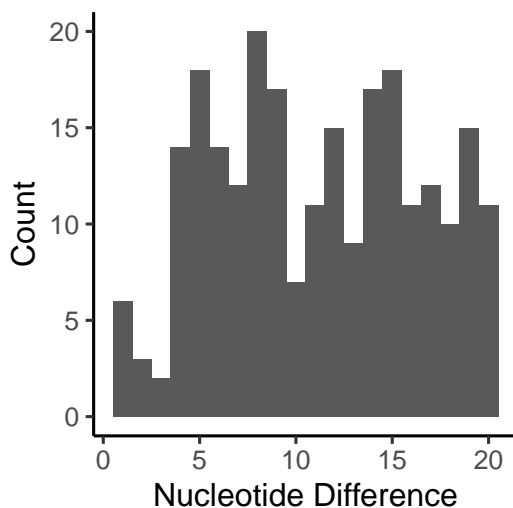
IGHV4-39*07

462 sequences assigned
3 (0.6%) exact matches, in which:
3 unique CDR3
2 unique J



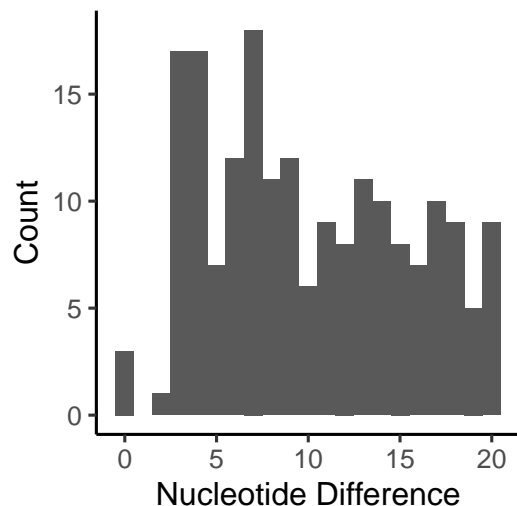
IGHV4-59*11

338 sequences assigned
No exact matches.



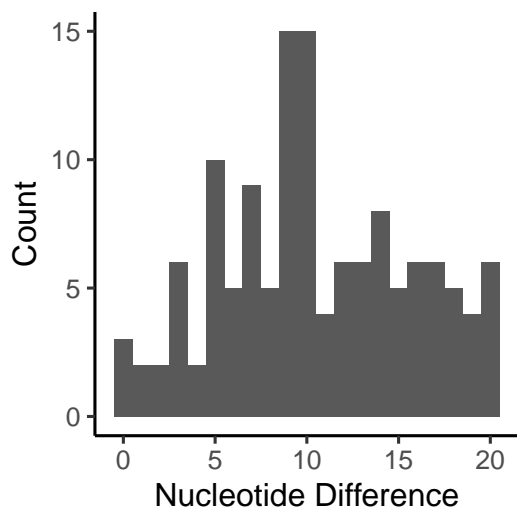
IGHV4-61*02

237 sequences assigned
3 (1.3%) exact matches, in which:
2 unique CDR3
1 unique J



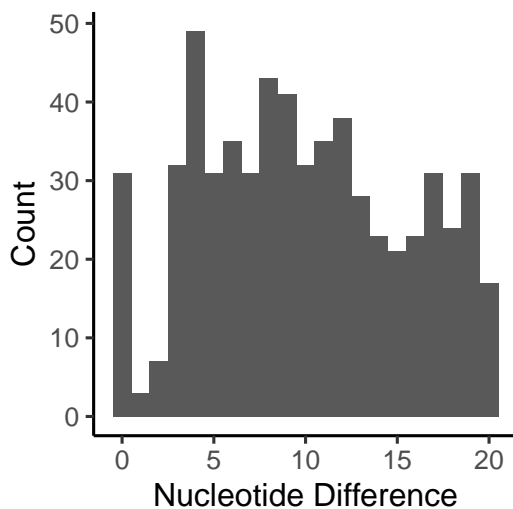
IGHV4-39*01_05

198 sequences assigned
3 (1.5%) exact matches, in which:
3 unique CDR3
3 unique J



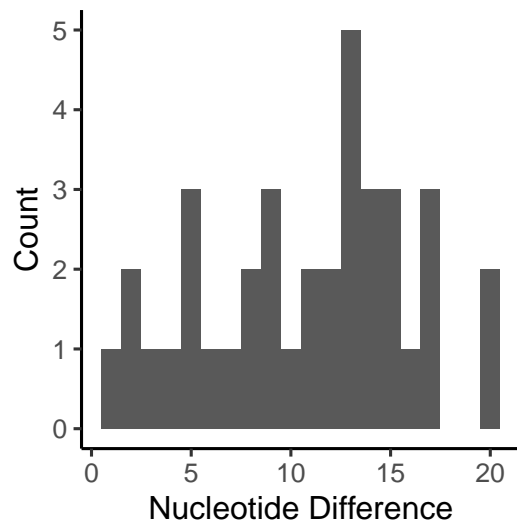
IGHV4-59*01_07

771 sequences assigned
31 (4%) exact matches, in which:
26 unique CDR3
6 unique J



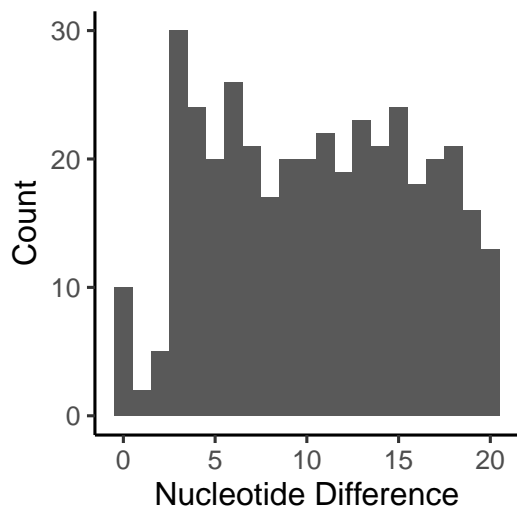
IGHV5-10-1*01_03

56 sequences assigned
No exact matches.



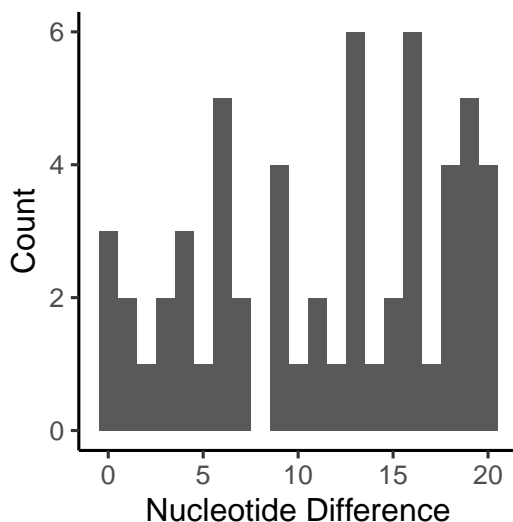
IGHV4-59*08

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



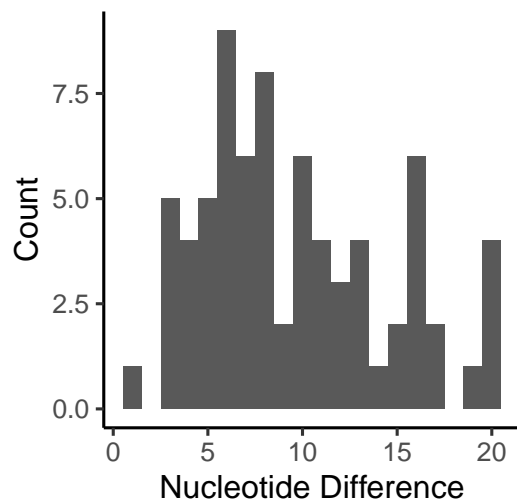
IGHV4-61*01

84 sequences assigned
3 (3.6%) exact matches, in which:
3 unique CDR3
3 unique J



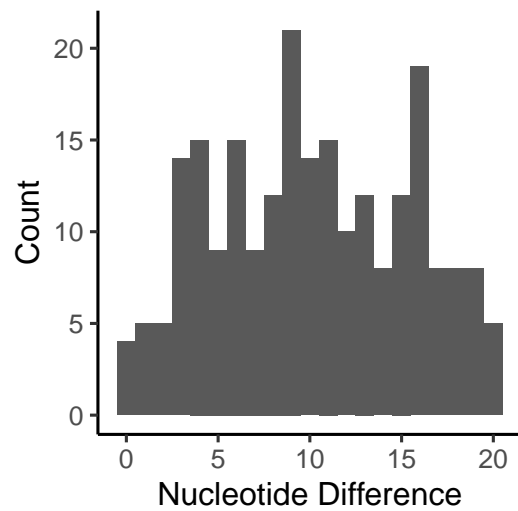
IGHV5-51*07

89 sequences assigned
No exact matches.



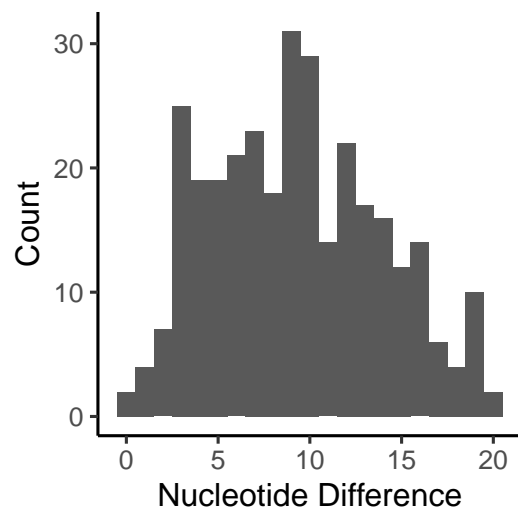
IGHV5-51*01_03

266 sequences assigned
4 (1.5%) exact matches, in which:
4 unique CDR3
2 unique J



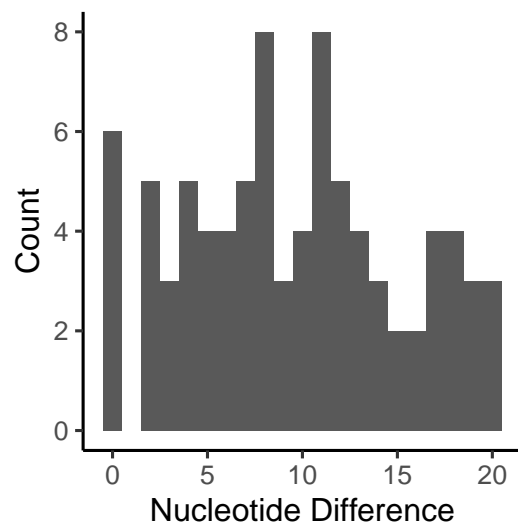
IGHV6-1*01_02

346 sequences assigned
2 (0.6%) exact matches, in which:
2 unique CDR3
1 unique J

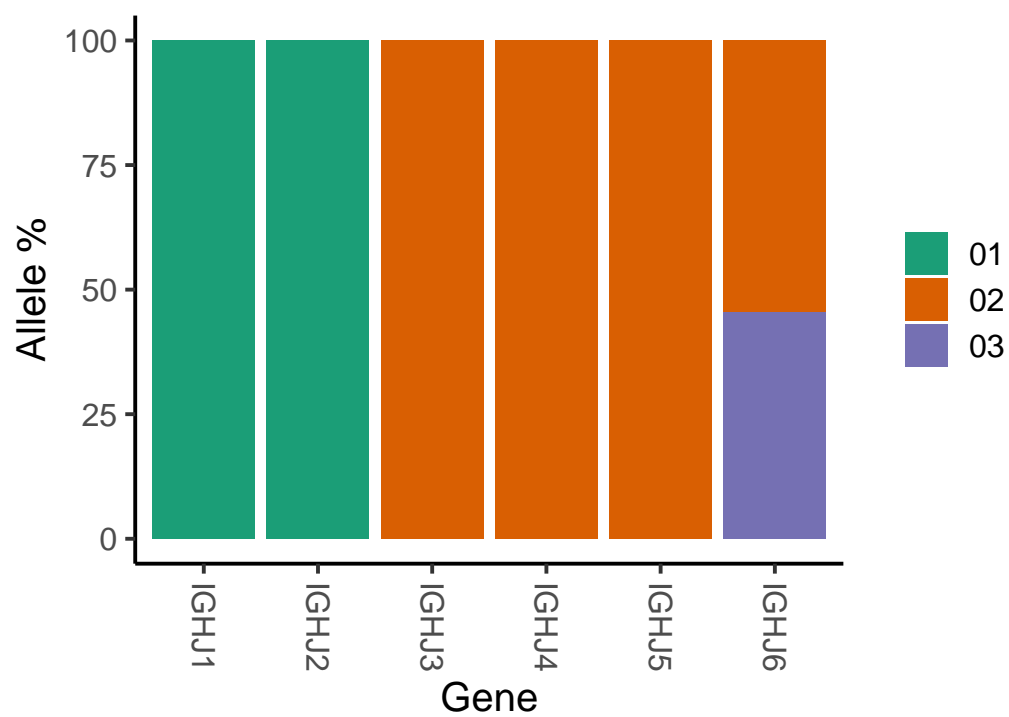


IGHV7-4-1*02

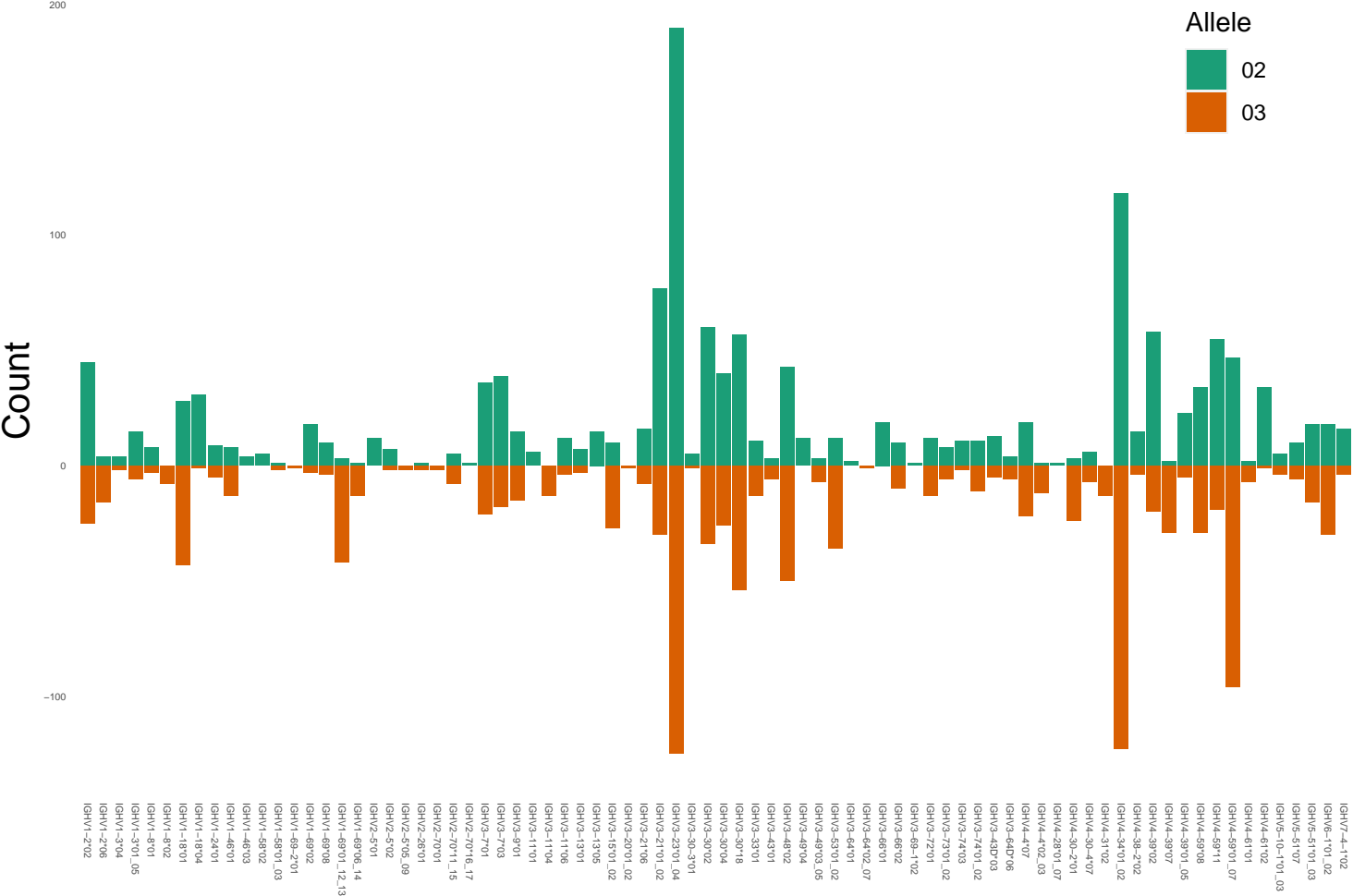
131 sequences assigned
6 (4.6%) exact matches, in which:
6 unique CDR3
1 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.