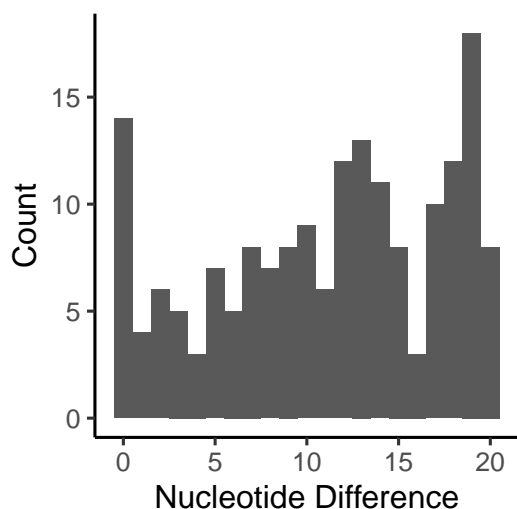


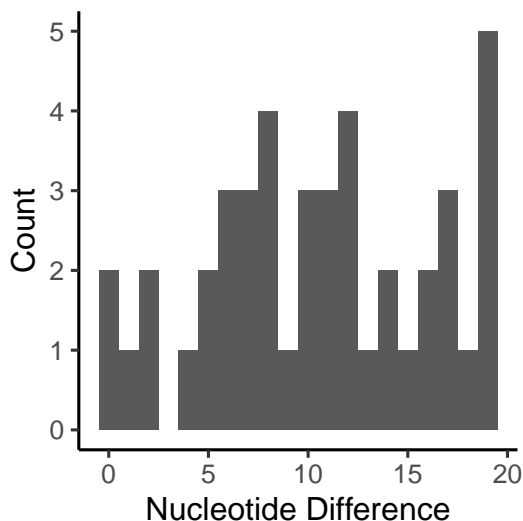
IGHV1-2*02

243 sequences assigned
14 (5.8%) exact matches, in which:
14 unique CDR3
4 unique J



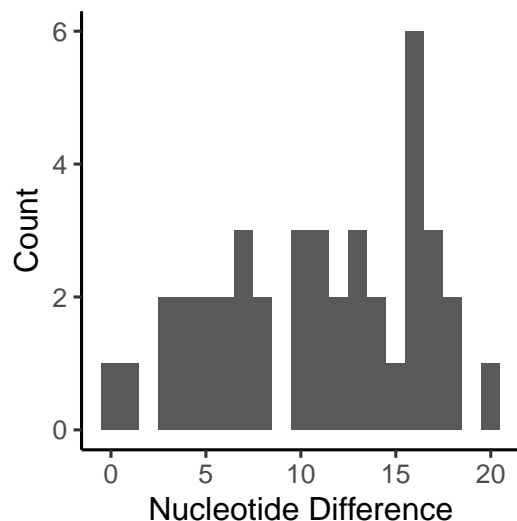
IGHV1-8*03

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



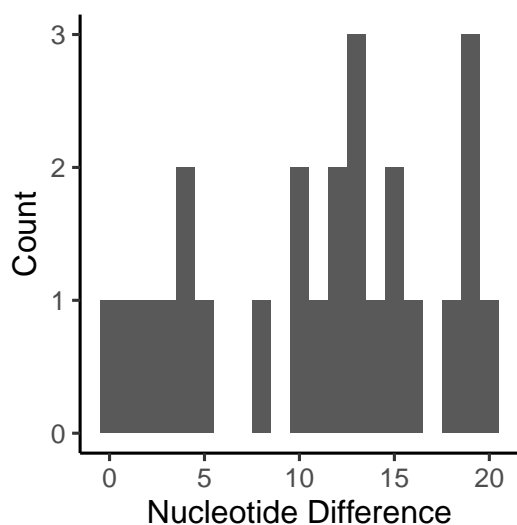
IGHV1-46*03

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



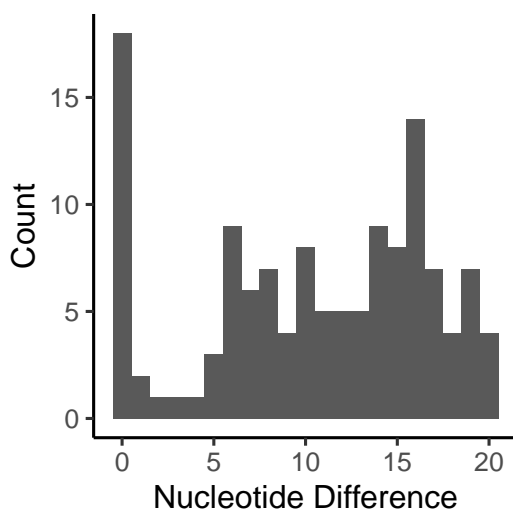
IGHV1-3*01

31 sequences assigned
1 (3.2%) exact matches, in which:
1 unique CDR3
1 unique J



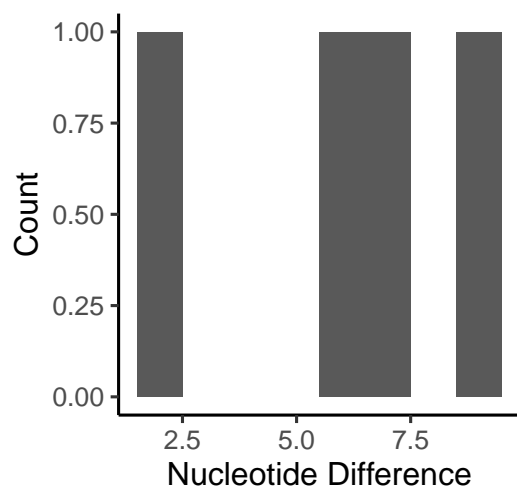
IGHV1-18*01

198 sequences assigned
18 (9.1%) exact matches, in which:
18 unique CDR3
4 unique J



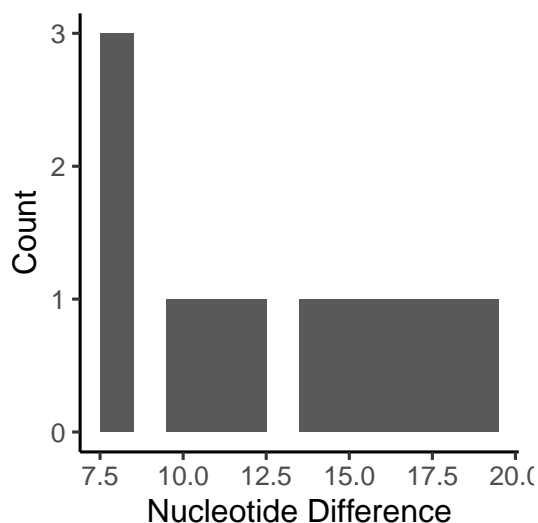
IGHV1-58*02

8 sequences assigned
No exact matches.



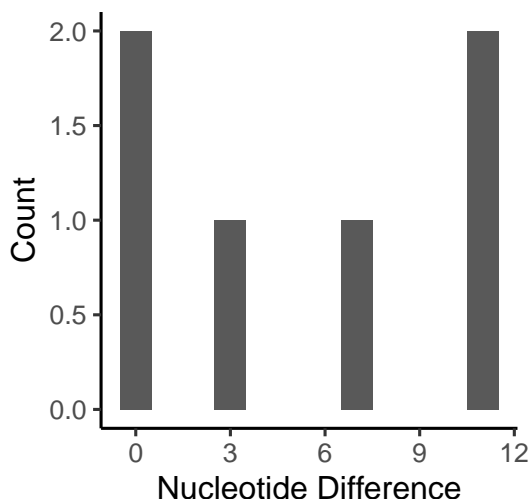
IGHV1-3*04

14 sequences assigned
No exact matches.



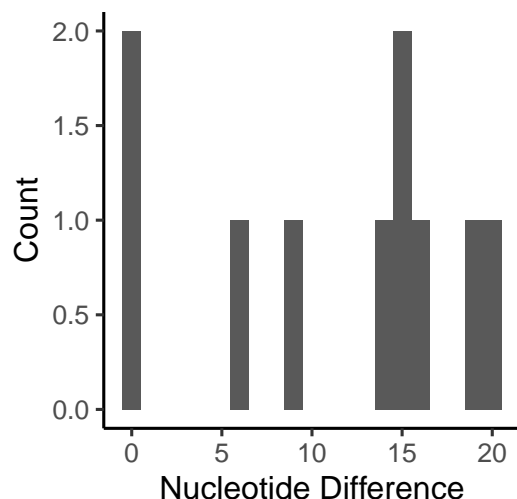
IGHV1-24*01

11 sequences assigned
2 (18.2%) exact matches, in which:
2 unique CDR3
1 unique J



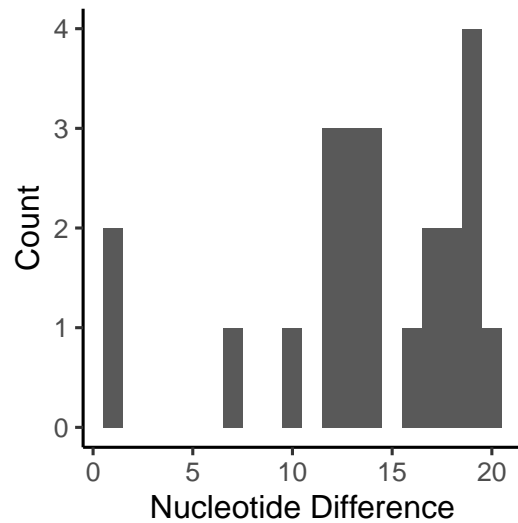
IGHV1-69-2*01

28 sequences assigned
2 (7.1%) exact matches, in which:
2 unique CDR3
2 unique J



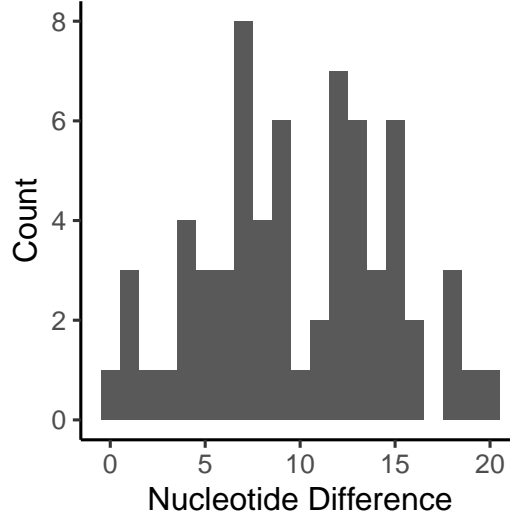
IGHV1-69*02

43 sequences assigned
No exact matches.



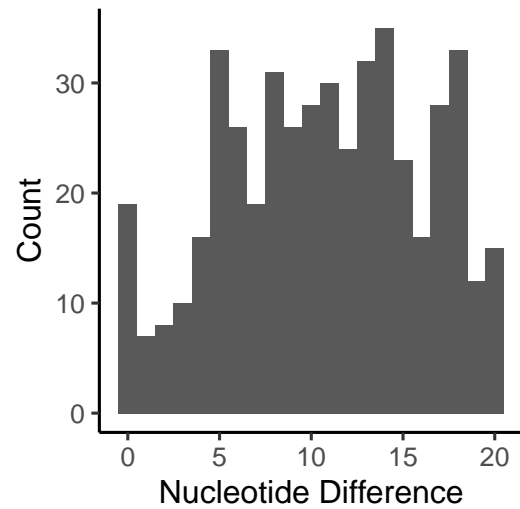
IGHV2-5*01

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



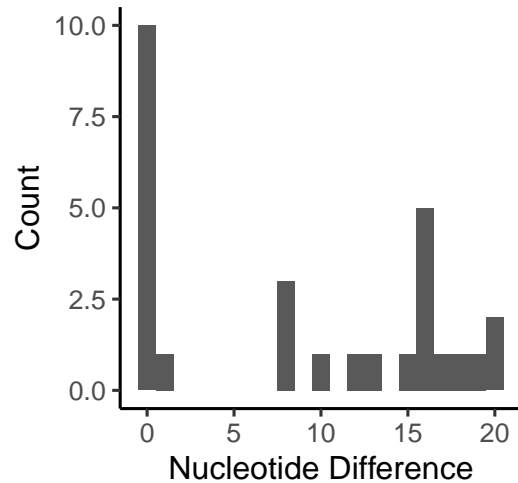
IGHV3-7*01

607 sequences assigned
19 (3.1%) exact matches, in which:
19 unique CDR3
4 unique J



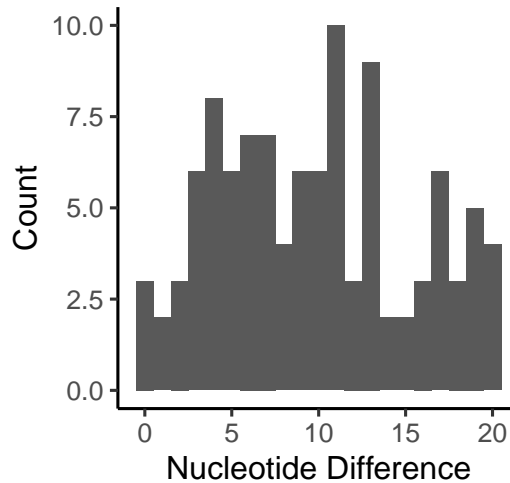
IGHV1-69*10

41 sequences assigned
10 (24.4%) exact matches, in which:
10 unique CDR3
4 unique J



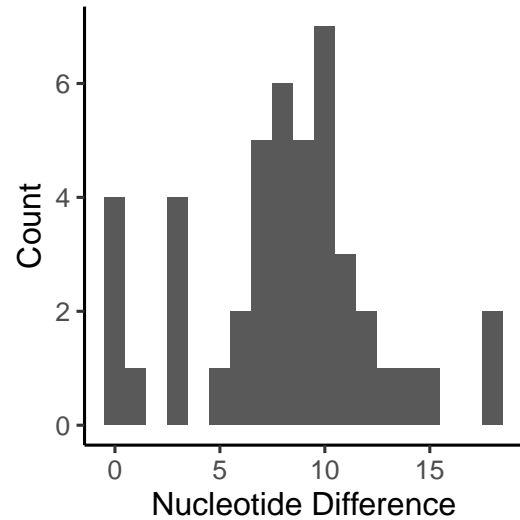
IGHV2-5*02

125 sequences assigned
3 (2.4%) exact matches, in which:
3 unique CDR3
3 unique J



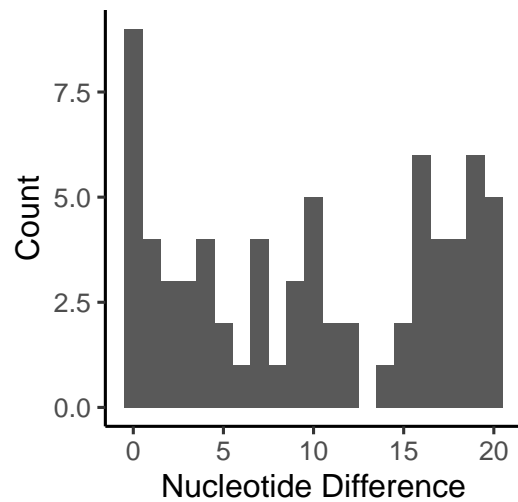
IGHV3-9*03

52 sequences assigned
4 (7.7%) exact matches, in which:
4 unique CDR3
2 unique J



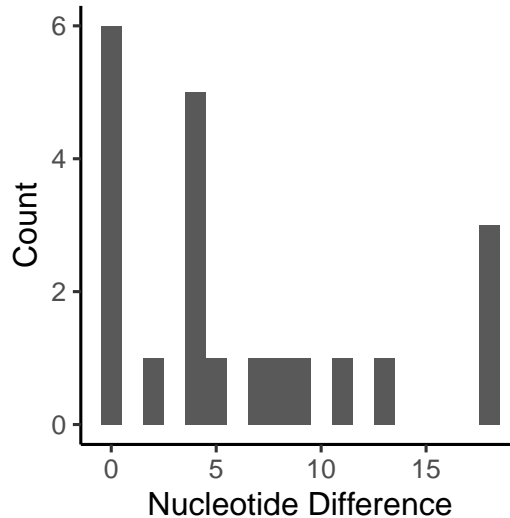
IGHV1-69*12

141 sequences assigned
9 (6.4%) exact matches, in which:
9 unique CDR3
4 unique J



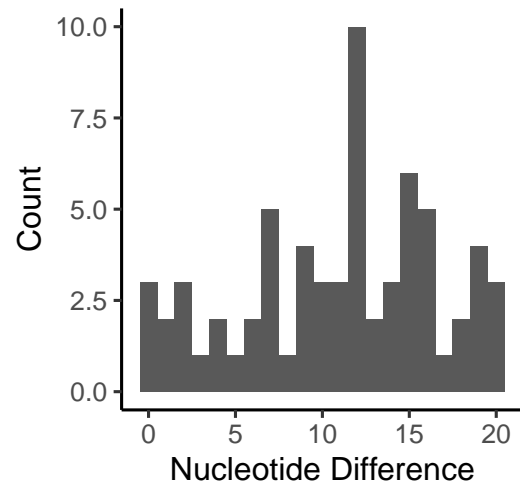
IGHV2-26*01

26 sequences assigned
6 (23.1%) exact matches, in which:
6 unique CDR3
2 unique J



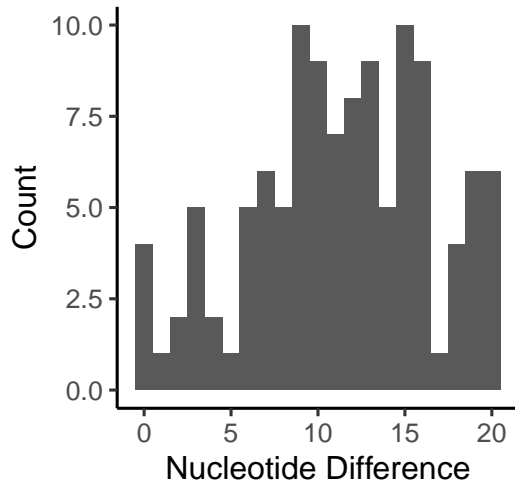
IGHV3-11*04

82 sequences assigned
3 (3.7%) exact matches, in which:
3 unique CDR3
2 unique J



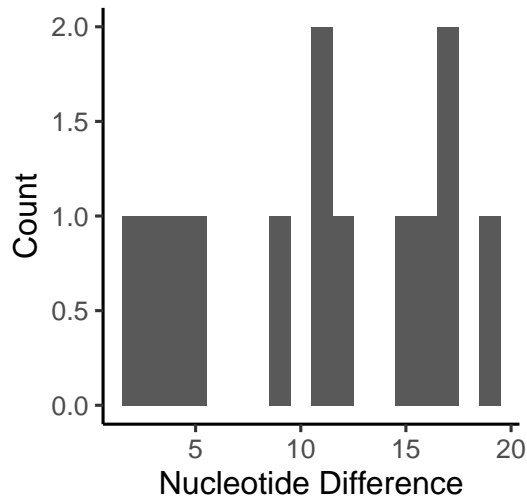
IGHV3-15*01

147 sequences assigned
4 (2.7%) exact matches, in which:
4 unique CDR3
2 unique J



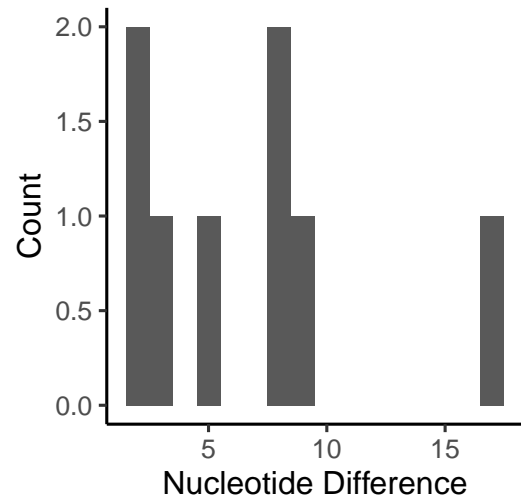
IGHV3-21*02

18 sequences assigned
No exact matches.



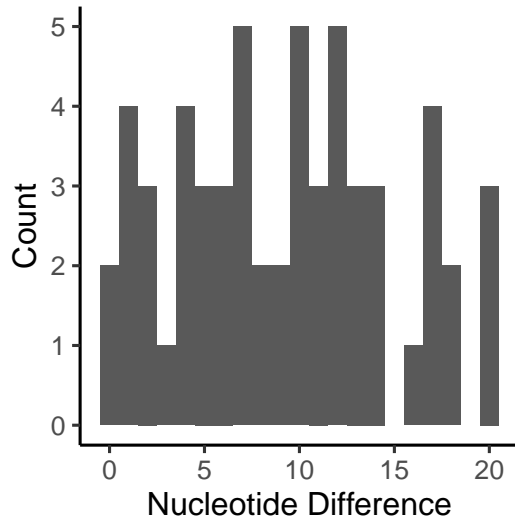
IGHV3-43*01

11 sequences assigned
No exact matches.



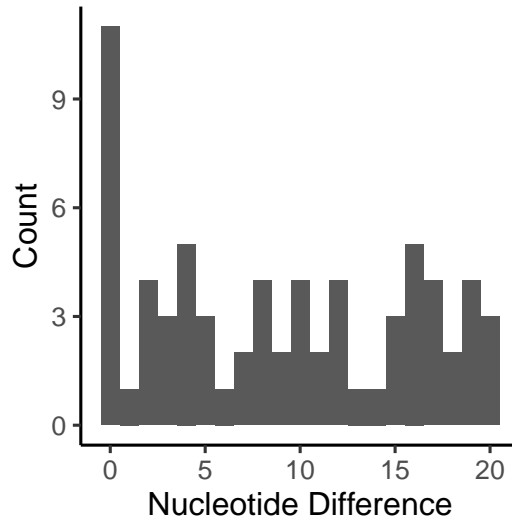
IGHV3-20*04

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



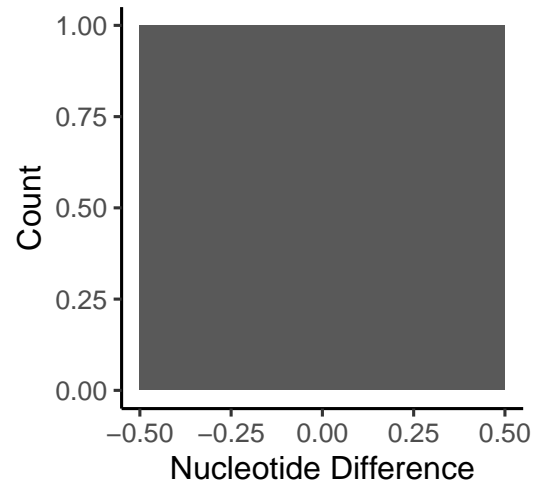
IGHV3-21*03

80 sequences assigned
11 (13.8%) exact matches, in which:
11 unique CDR3
4 unique J



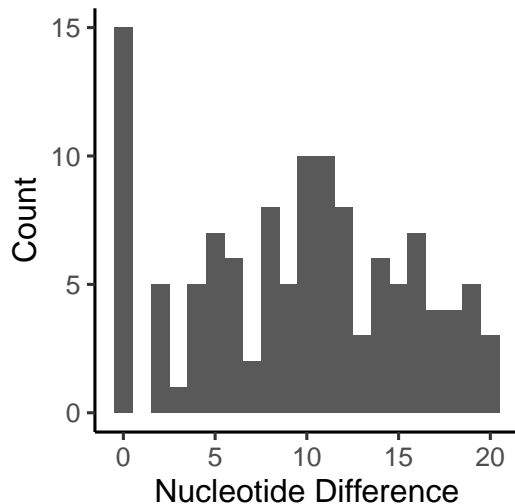
IGHV3-47*02

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



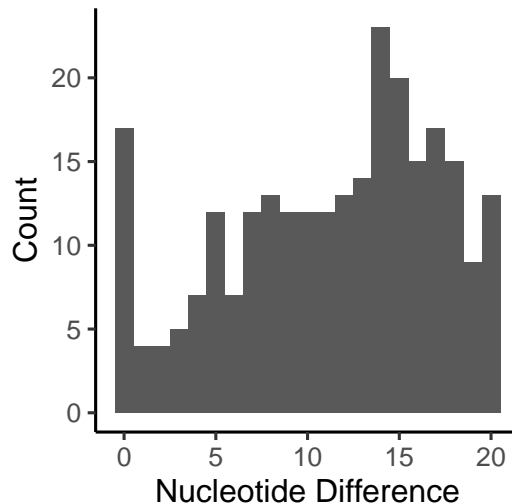
IGHV3-21*01

141 sequences assigned
15 (10.6%) exact matches, in which:
15 unique CDR3
4 unique J



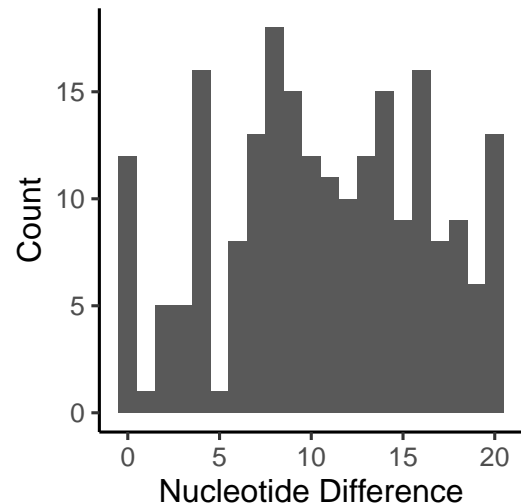
IGHV3-23*04

327 sequences assigned
17 (5.2%) exact matches, in which:
17 unique CDR3
4 unique J



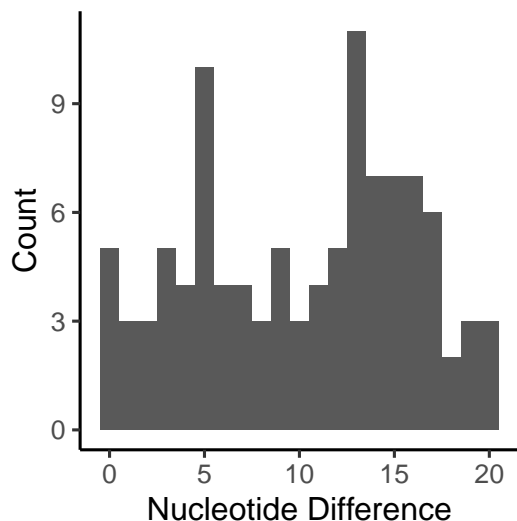
IGHV3-48*01

272 sequences assigned
12 (4.4%) exact matches, in which:
12 unique CDR3
4 unique J



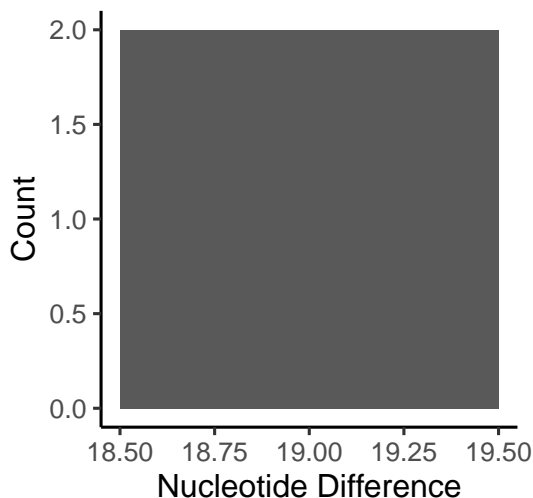
IGHV3-49*04

127 sequences assigned
5 (3.9%) exact matches, in which:
5 unique CDR3
2 unique J



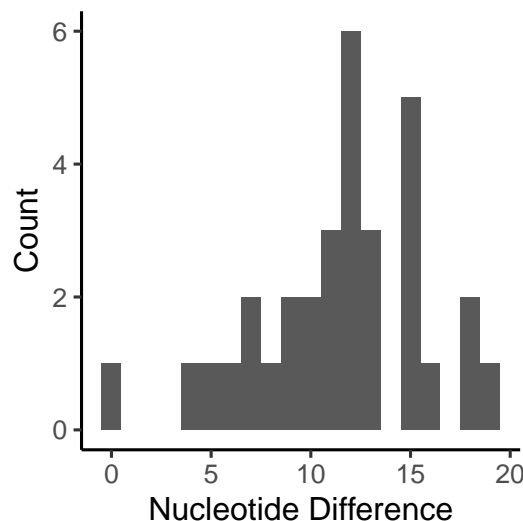
IGHV3-66*03

4 sequences assigned
No exact matches.



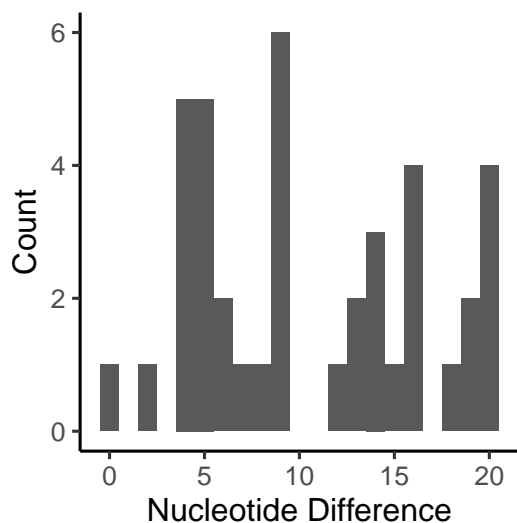
IGHV3-73*01

32 sequences assigned
1 (3.1%) exact matches, in which:
1 unique CDR3
1 unique J



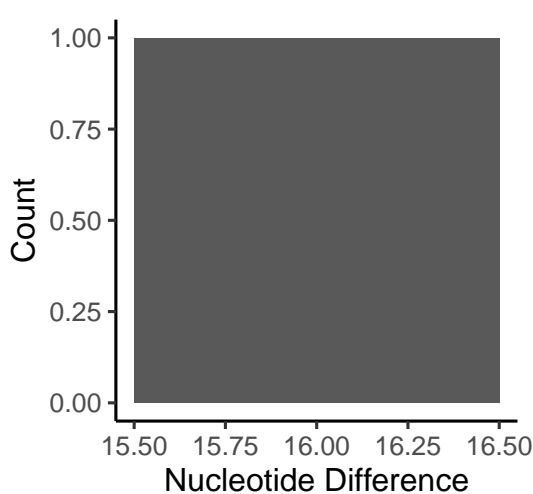
IGHV3-64*01

54 sequences assigned
1 (1.9%) exact matches, in which:
1 unique CDR3
1 unique J



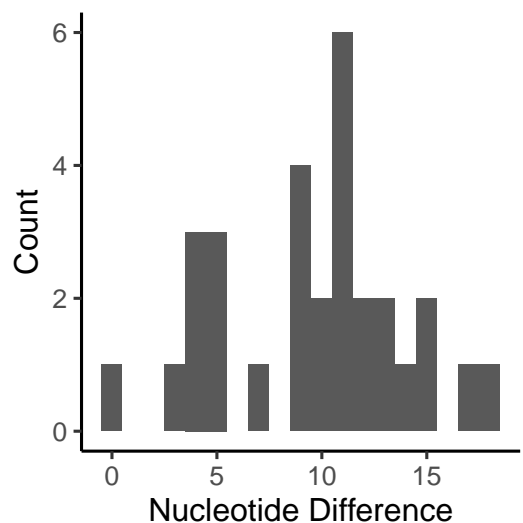
IGHV3-69-1*02

1 sequences assigned
No exact matches.



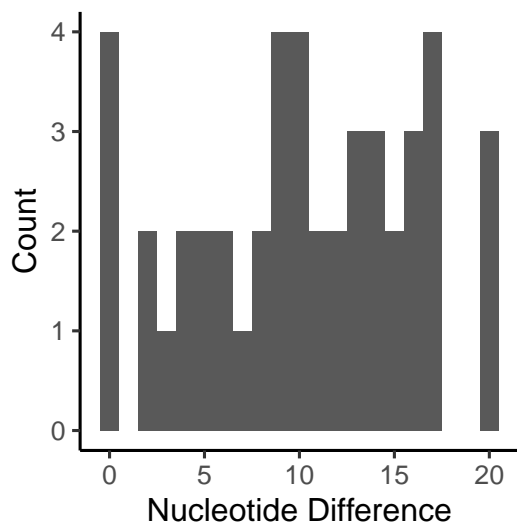
IGHV3-73*02

37 sequences assigned
1 (2.7%) exact matches, in which:
1 unique CDR3
1 unique J



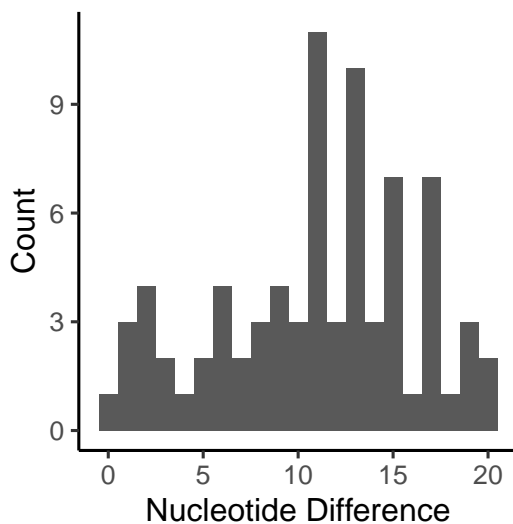
IGHV3-66*02

73 sequences assigned
4 (5.5%) exact matches, in which:
4 unique CDR3
2 unique J



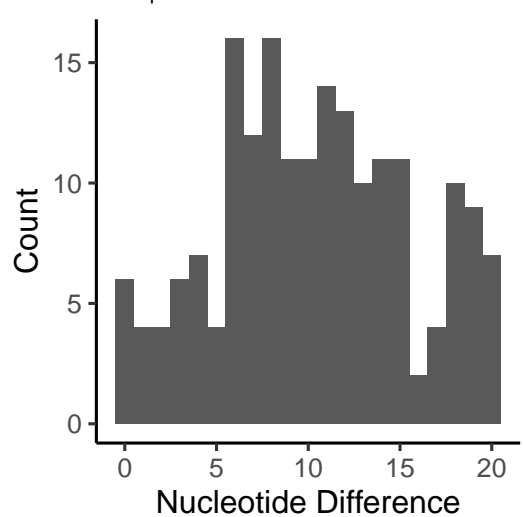
IGHV3-72*01

86 sequences assigned
1 (1.2%) exact matches, in which:
1 unique CDR3
1 unique J



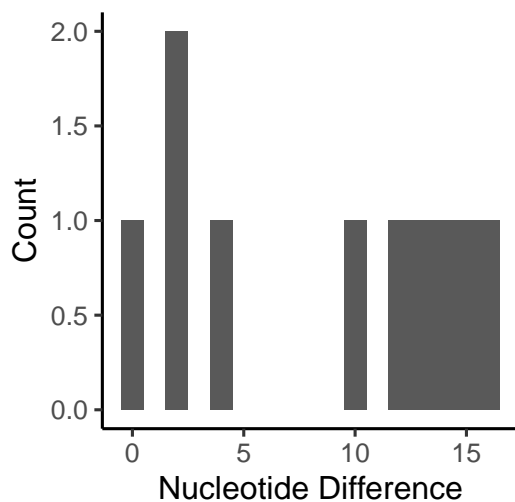
IGHV3-74*01

225 sequences assigned
6 (2.7%) exact matches, in which:
6 unique CDR3
3 unique J



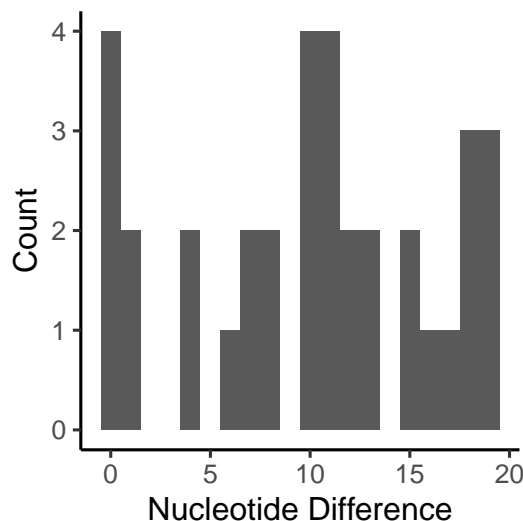
IGHV3-43D*03

15 sequences assigned
1 (6.7%) exact matches, in which:
1 unique CDR3
1 unique J



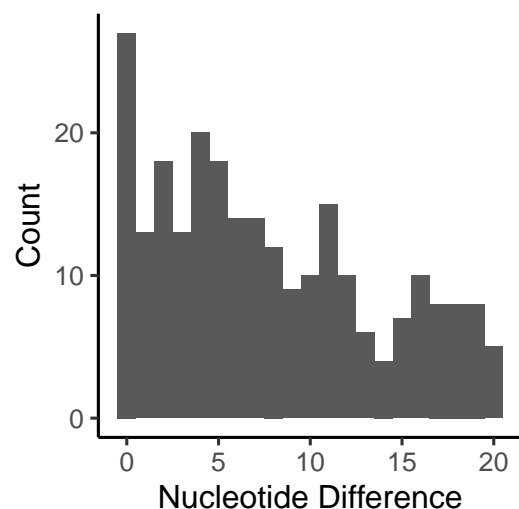
IGHV4-4*07

49 sequences assigned
4 (8.2%) exact matches, in which:
4 unique CDR3
3 unique J



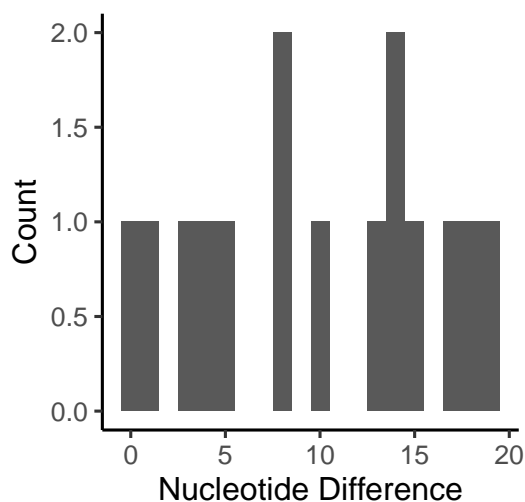
IGHV4-34*01

284 sequences assigned
27 (9.5%) exact matches, in which:
27 unique CDR3
4 unique J



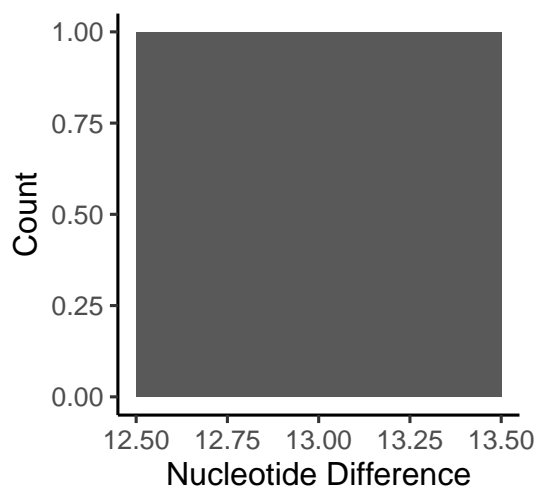
IGHV3-43D*04

17 sequences assigned
1 (5.9%) exact matches, in which:
1 unique CDR3
1 unique J



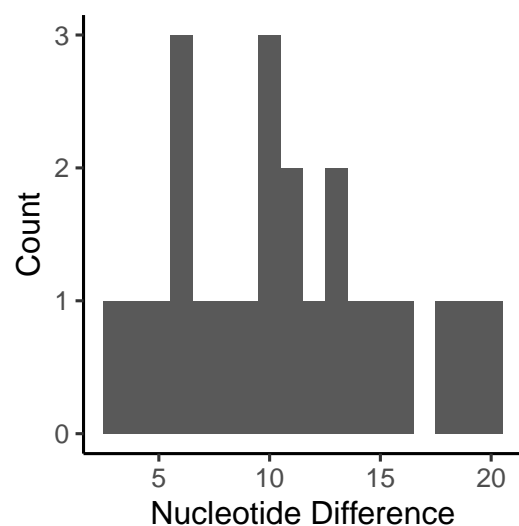
IGHV4-28*05

1 sequences assigned
No exact matches.



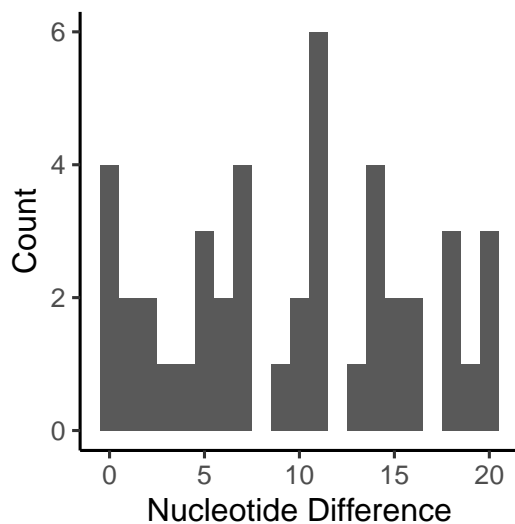
IGHV4-34*02

42 sequences assigned
No exact matches.



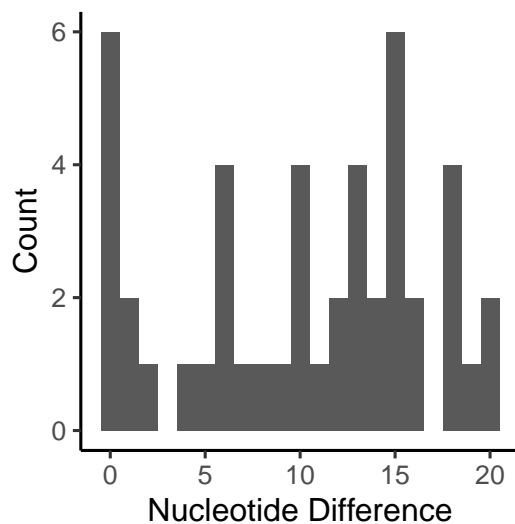
IGHV4-4*02

56 sequences assigned
4 (7.1%) exact matches, in which:
4 unique CDR3
1 unique J



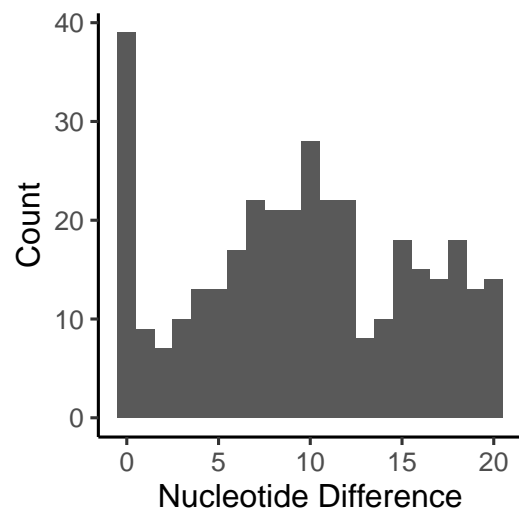
IGHV4-30-4*08

65 sequences assigned
6 (9.2%) exact matches, in which:
6 unique CDR3
2 unique J



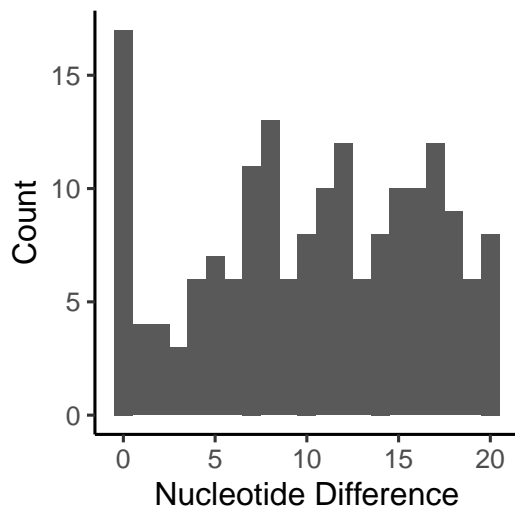
IGHV4-38-2*01

457 sequences assigned
39 (8.5%) exact matches, in which:
38 unique CDR3
5 unique J



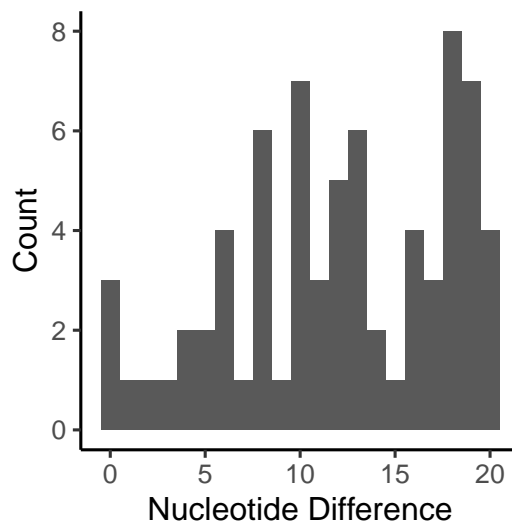
IGHV4-38-2*02

245 sequences assigned
17 (6.9%) exact matches, in which:
17 unique CDR3
4 unique J



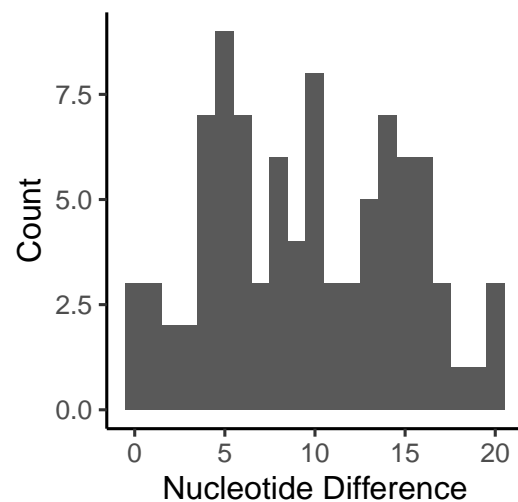
IGHV4-59*08

89 sequences assigned
3 (3.4%) exact matches, in which:
3 unique CDR3
2 unique J



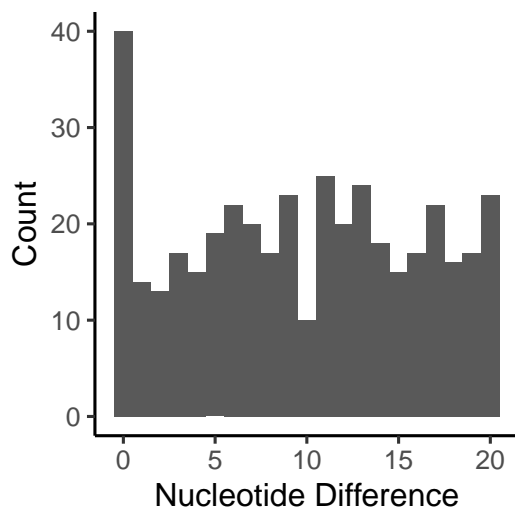
IGHV6-1*01

96 sequences assigned
3 (3.1%) exact matches, in which:
3 unique CDR3
3 unique J



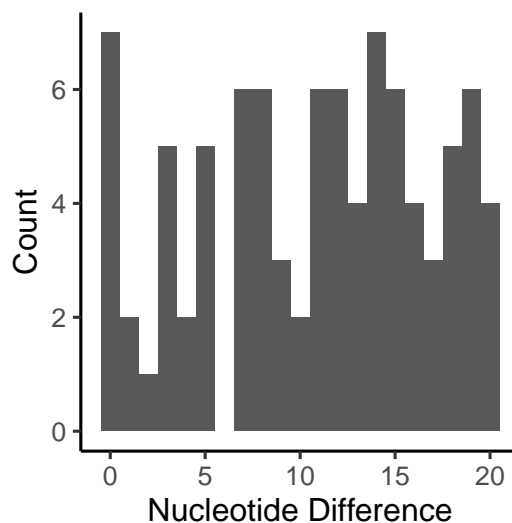
IGHV4-39*01

598 sequences assigned
40 (6.7%) exact matches, in which:
40 unique CDR3
5 unique J



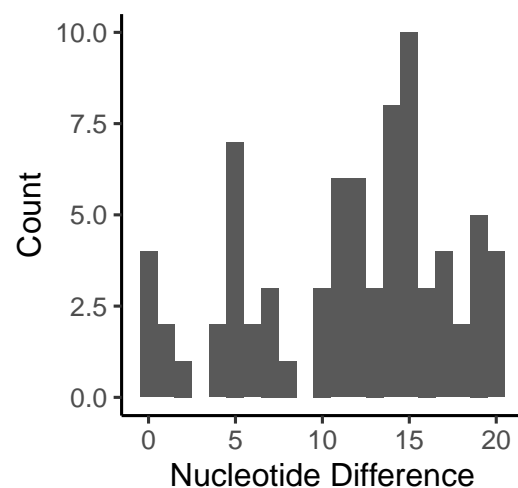
IGHV4-61*02

120 sequences assigned
7 (5.8%) exact matches, in which:
7 unique CDR3
3 unique J



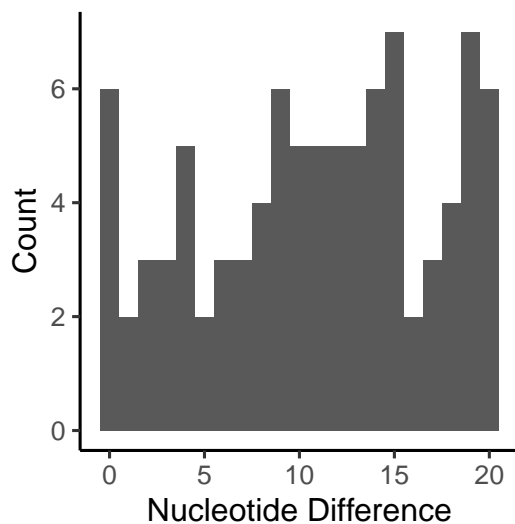
IGHV7-4-1*02

92 sequences assigned
4 (4.3%) exact matches, in which:
4 unique CDR3
3 unique J



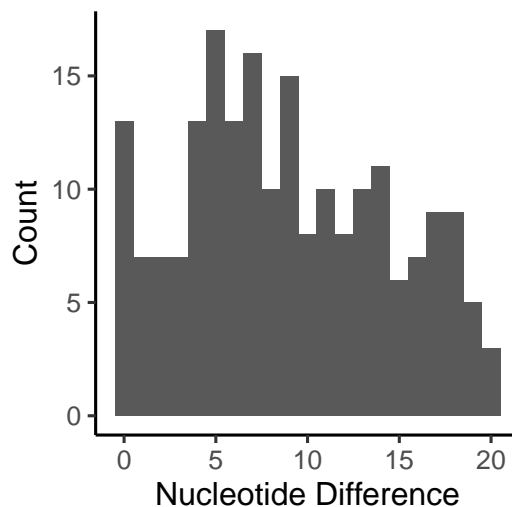
IGHV4-59*01

138 sequences assigned
6 (4.3%) exact matches, in which:
6 unique CDR3
4 unique J



IGHV5-51*01

253 sequences assigned
13 (5.1%) exact matches, in which:
13 unique CDR3
4 unique J



Allele Usage

