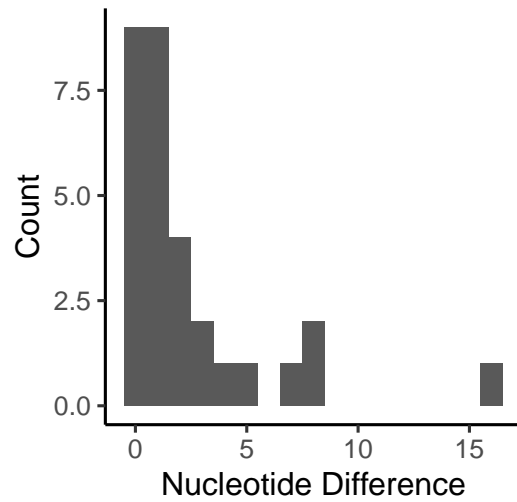


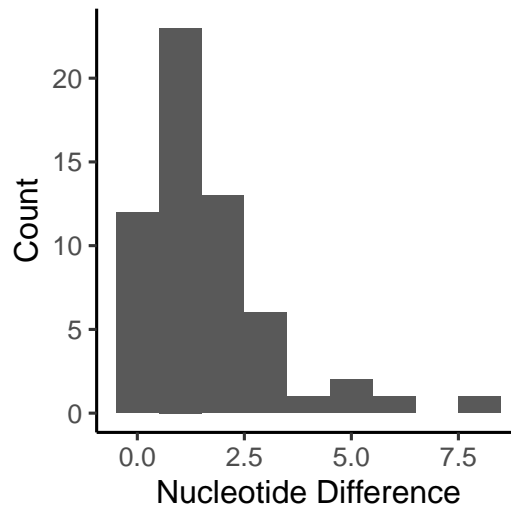
IGHV1-60*01_S7772

31 sequences assigned
9 (29%) exact matches, in which:
2 unique CDR3
1 unique J



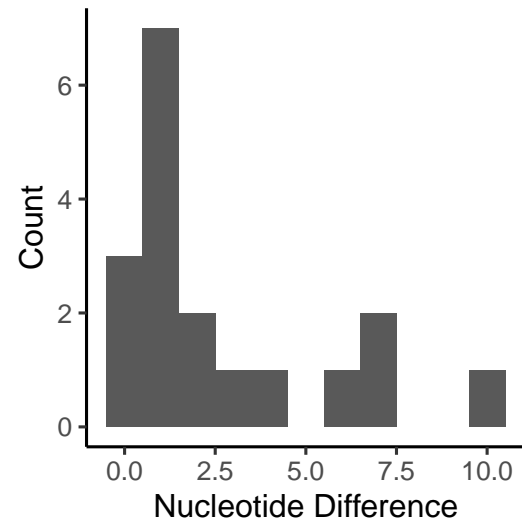
IGHV1-138*01_S3445

60 sequences assigned
12 (20%) exact matches, in which:
6 unique CDR3
1 unique J



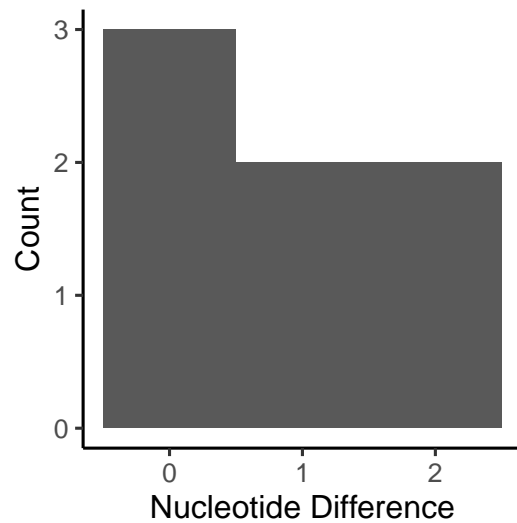
IGHV2-69*01_S2332

18 sequences assigned
3 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



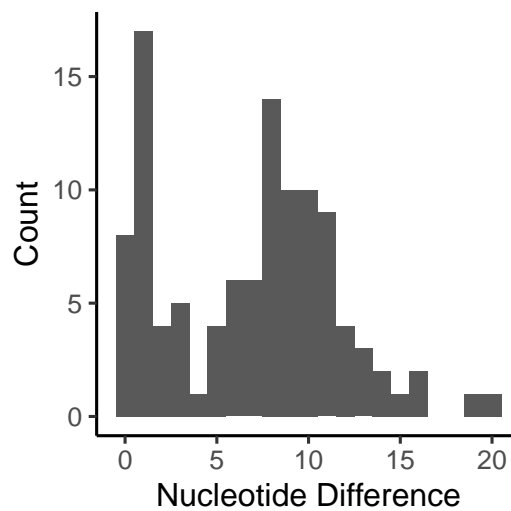
IGHV1-84*01_S4663

7 sequences assigned
3 (42.9%) exact matches, in which:
1 unique CDR3
1 unique J



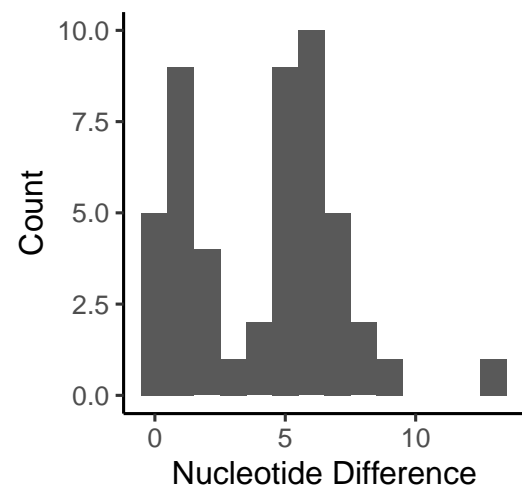
IGHV1-NL_1*01_S2052

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



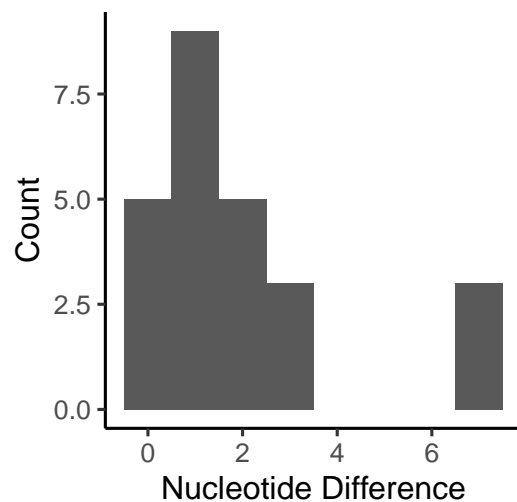
IGHV2-69*01_S2408

50 sequences assigned
5 (10%) exact matches, in which:
2 unique CDR3
1 unique J



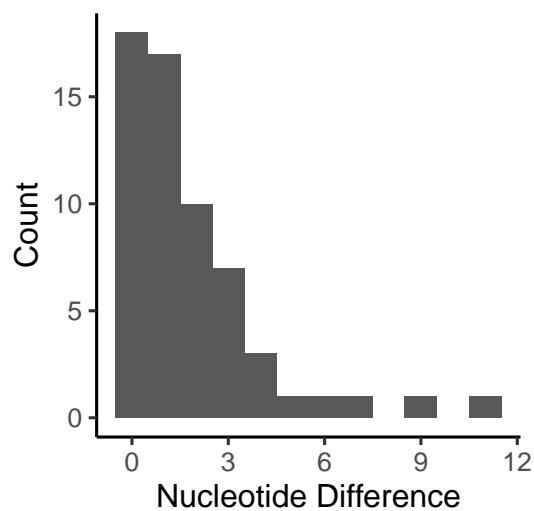
IGHV1-84*01_S9366

53 sequences assigned
5 (9.4%) exact matches, in which:
3 unique CDR3
1 unique J



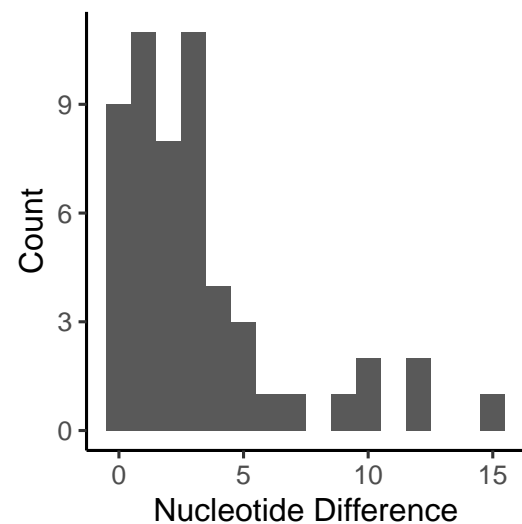
IGHV2-7*02_S4285

60 sequences assigned
18 (30%) exact matches, in which:
7 unique CDR3
1 unique J



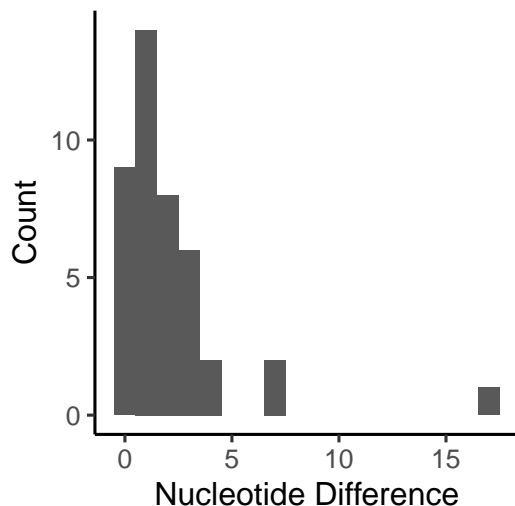
IGHV2-69*01_S5121

54 sequences assigned
9 (16.7%) exact matches, in which:
5 unique CDR3
1 unique J



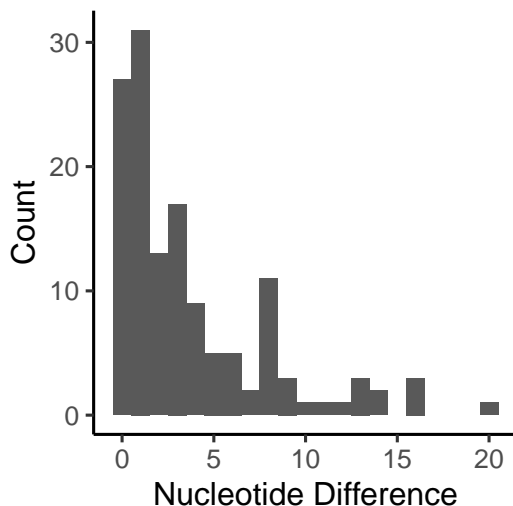
IGHV2-118*01_S2768

42 sequences assigned
9 (21.4%) exact matches, in which:
1 unique CDR3
1 unique J



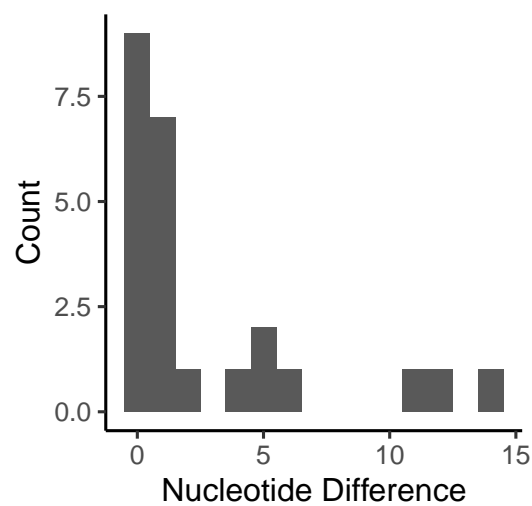
IGHV3-50*01_S1524

137 sequences assigned
27 (19.7%) exact matches, in which:
14 unique CDR3
1 unique J



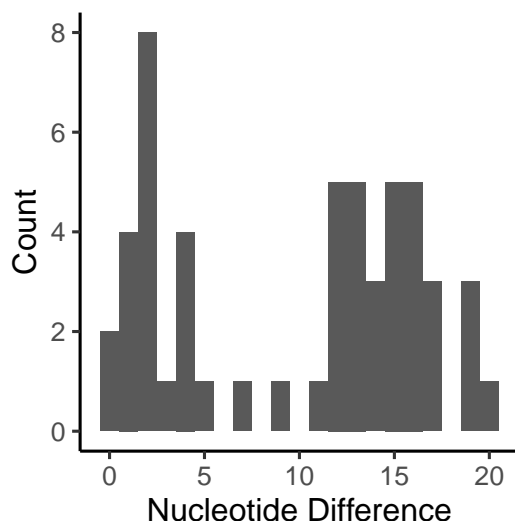
IGHV3-53*01_S7463

24 sequences assigned
9 (37.5%) exact matches, in which:
4 unique CDR3
1 unique J



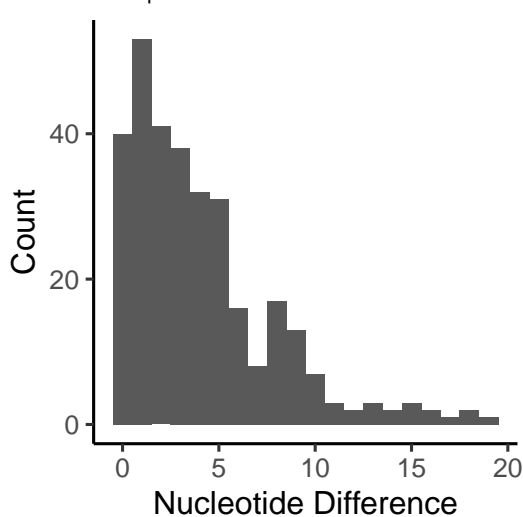
IGHV2-118*01_S6364

57 sequences assigned
2 (3.5%) exact matches, in which:
2 unique CDR3
1 unique J



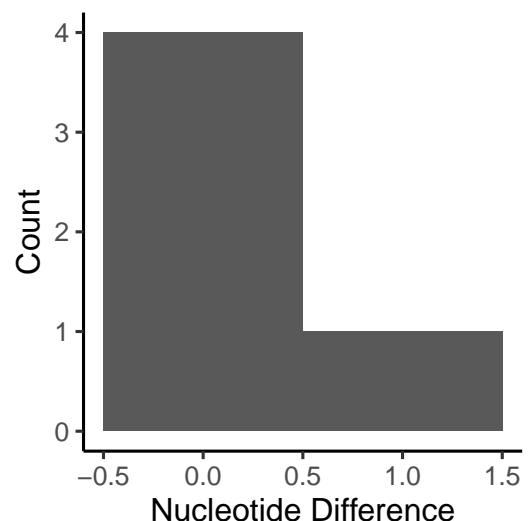
IGHV3-50*01_S1879

321 sequences assigned
40 (12.5%) exact matches, in which:
21 unique CDR3
1 unique J



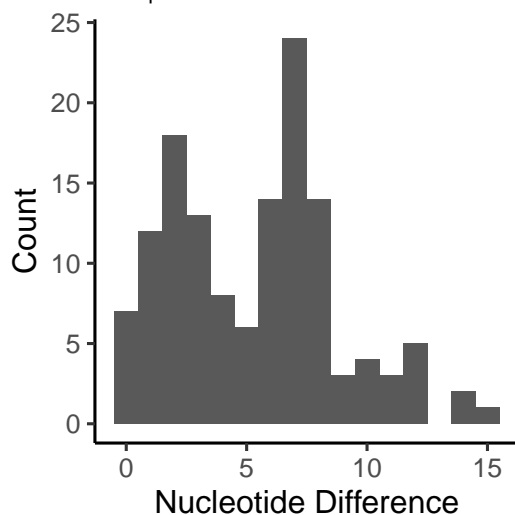
IGHV3-73*01_S6942

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



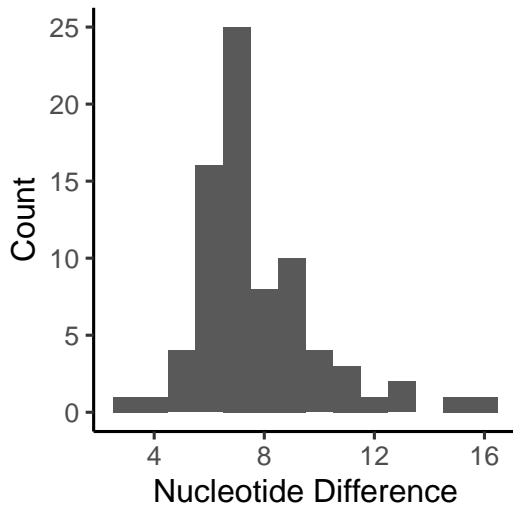
IGHV2-NL_1*01_S7874

135 sequences assigned
7 (5.2%) exact matches, in which:
2 unique CDR3
1 unique J



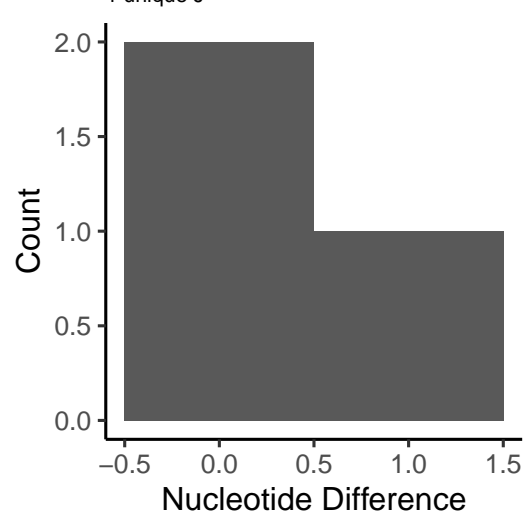
IGHV3-53*01_S2000

79 sequences assigned
No exact matches.



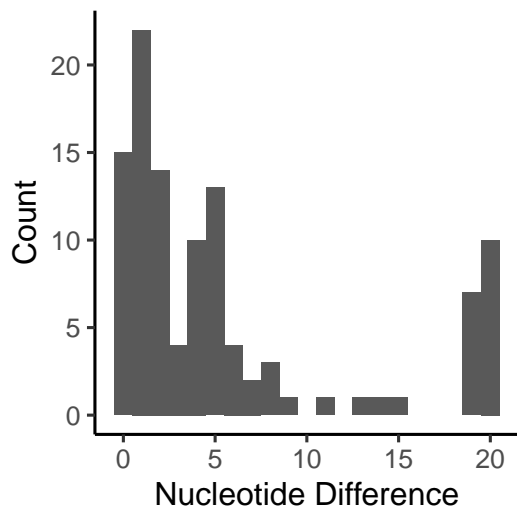
IGHV3-73*02_S5005

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



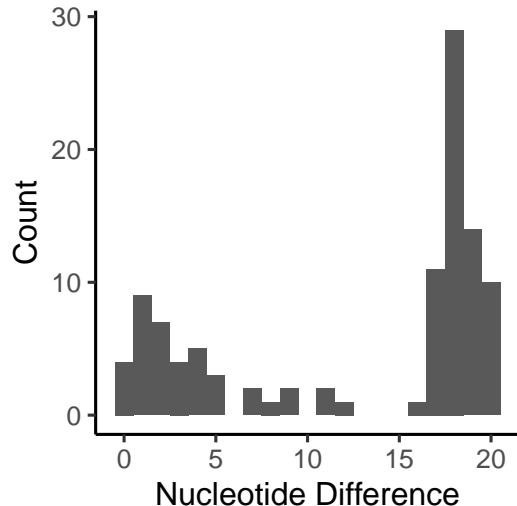
IGHV3-76*01_S4285

123 sequences assigned
15 (12.2%) exact matches, in which:
7 unique CDR3
1 unique J



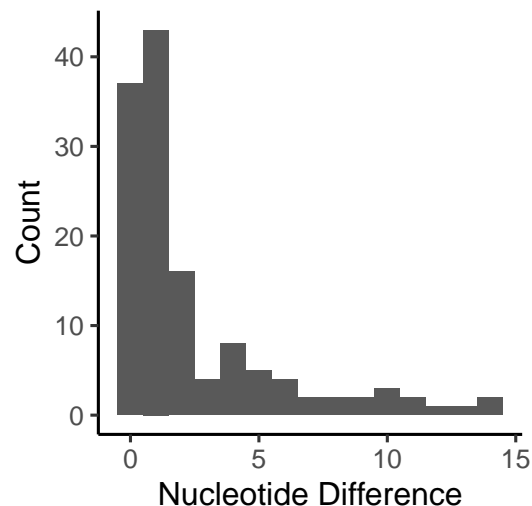
IGHV3-88*01_S9470

175 sequences assigned
4 (2.3%) exact matches, in which:
2 unique CDR3
1 unique J



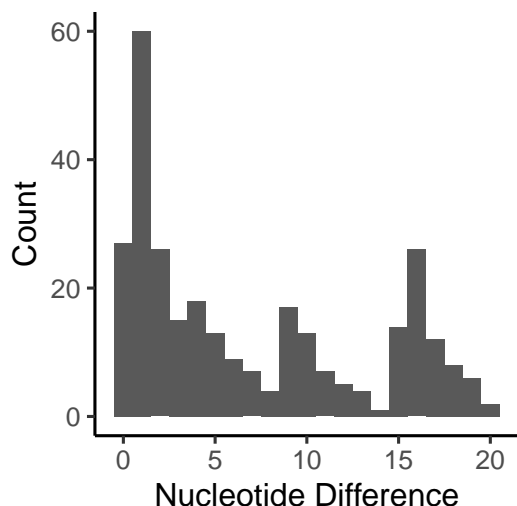
IGHV3-122*01_S5299

134 sequences assigned
37 (27.6%) exact matches, in which:
12 unique CDR3
1 unique J



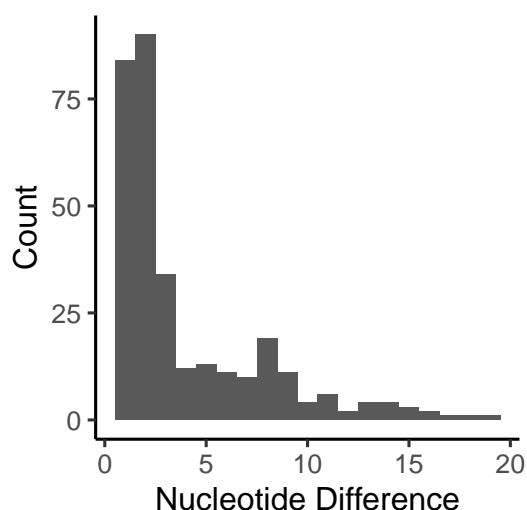
IGHV3-76*02_S4190

315 sequences assigned
27 (8.6%) exact matches, in which:
9 unique CDR3
1 unique J



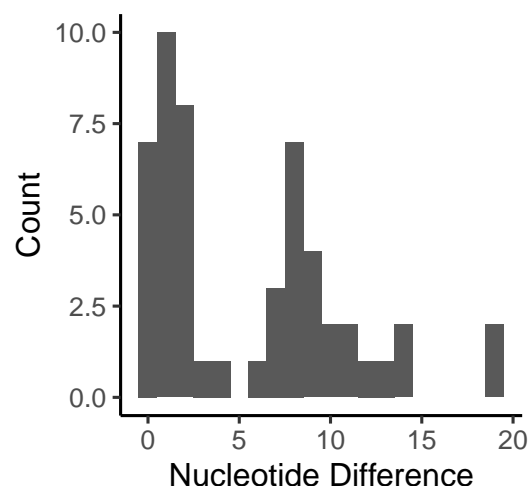
IGHV3-94*01_S4458

321 sequences assigned
No exact matches.



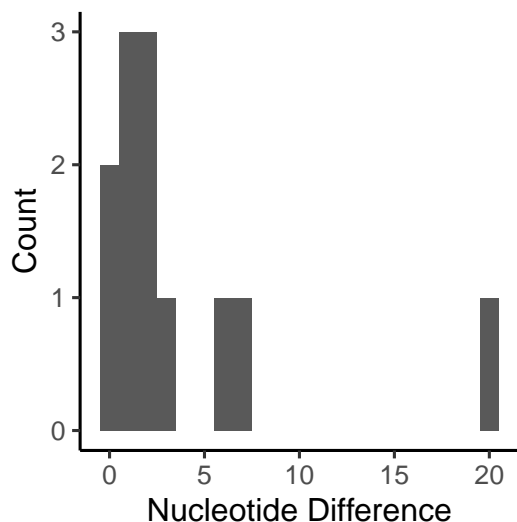
IGHV3-127*01_S5510

52 sequences assigned
7 (13.5%) exact matches, in which:
1 unique CDR3
1 unique J



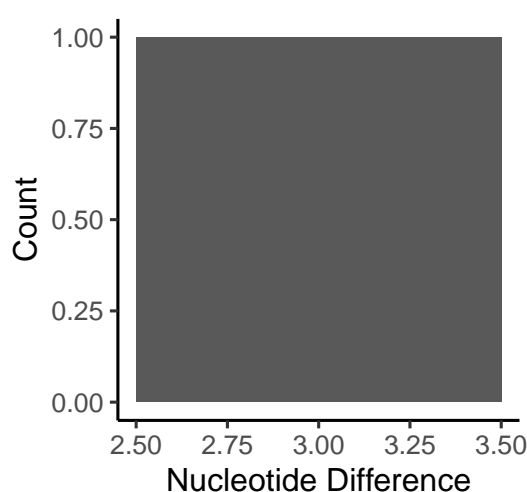
IGHV3-88*01_S9155

16 sequences assigned
2 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



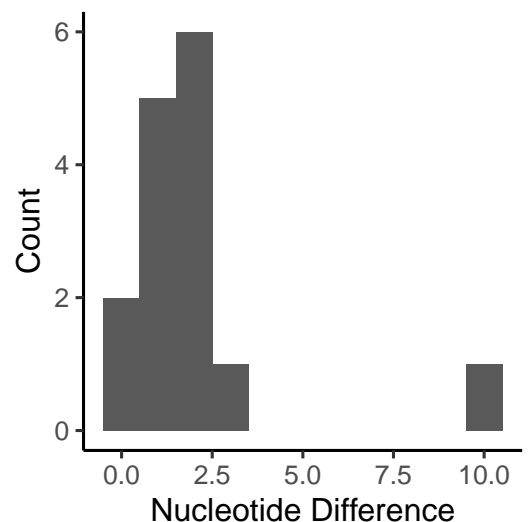
IGHV3-120*01_S4231

1 sequences assigned
No exact matches.



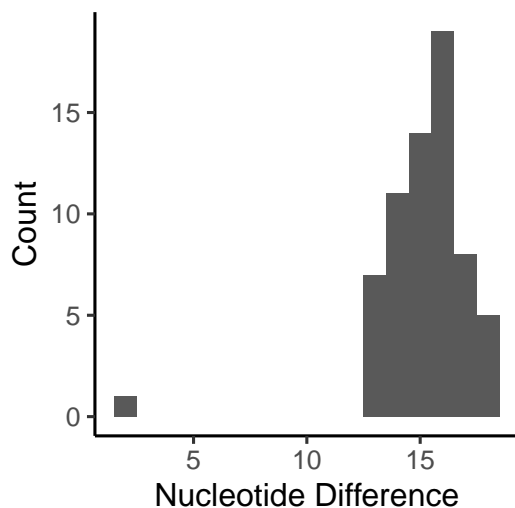
IGHV3-141*01_S3493

15 sequences assigned
2 (13.3%) exact matches, in which:
2 unique CDR3
1 unique J



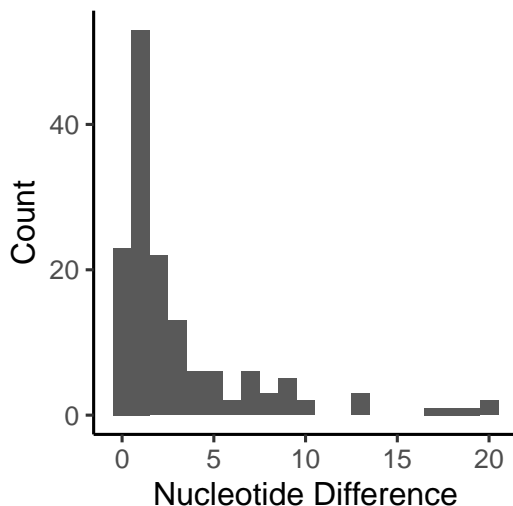
IGHV3-141*01_S6168

72 sequences assigned
No exact matches.



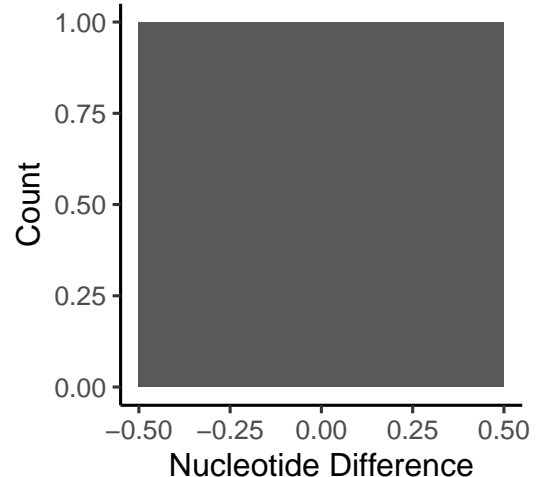
IGHV3-NL_1*01_S9854

173 sequences assigned
23 (13.3%) exact matches, in which:
9 unique CDR3
1 unique J



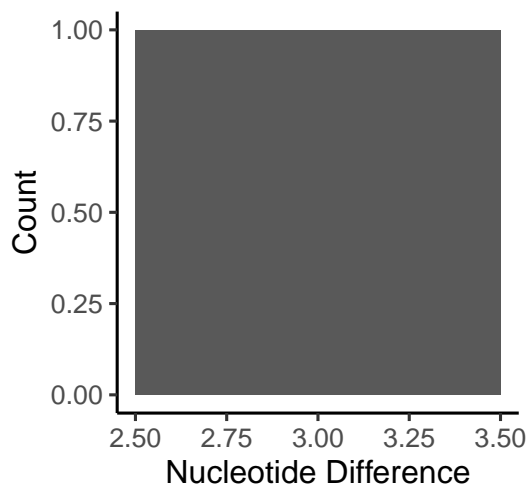
IGHV3-NL_12*02_S5864

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



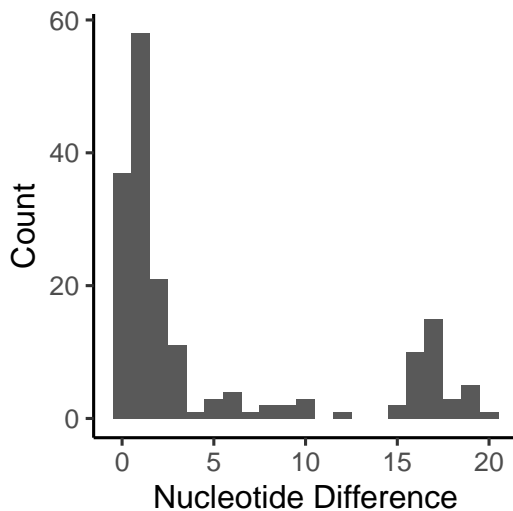
IGHV3-172*01_S8488

1 sequences assigned
No exact matches.



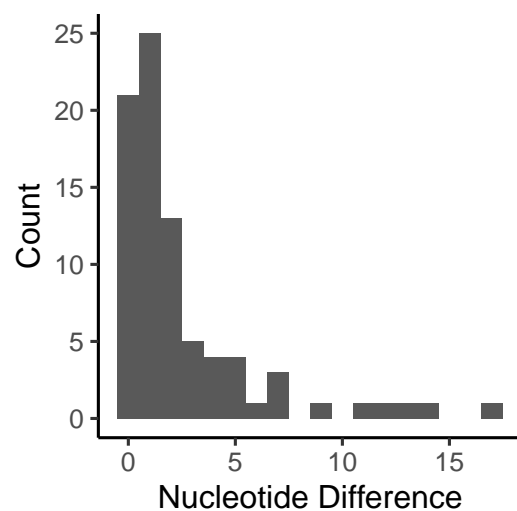
IGHV3-NL_10*02_S1970

184 sequences assigned
37 (20.1%) exact matches, in which:
18 unique CDR3
1 unique J



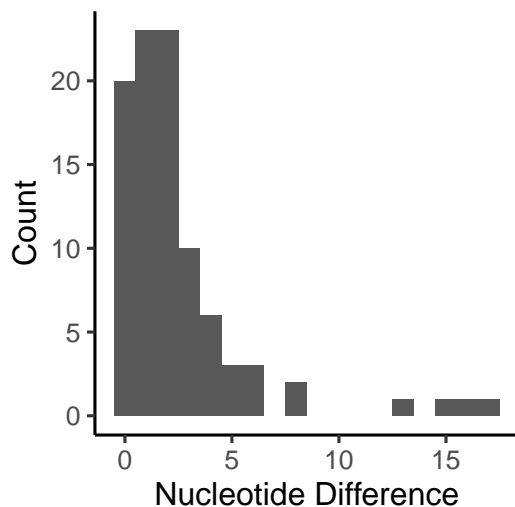
IGHV3-NL_14*01_S0218

83 sequences assigned
21 (25.3%) exact matches, in which:
7 unique CDR3
1 unique J



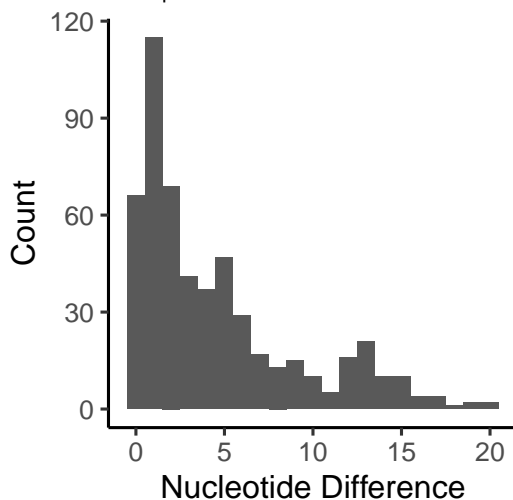
IGHV3-187*01_S4259

96 sequences assigned
20 (20.8%) exact matches, in which:
7 unique CDR3
1 unique J



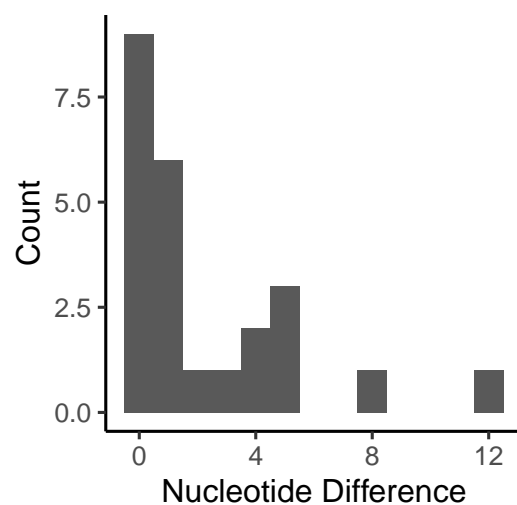
IGHV3-NL_11*01_S2687

539 sequences assigned
66 (12.2%) exact matches, in which:
31 unique CDR3
1 unique J



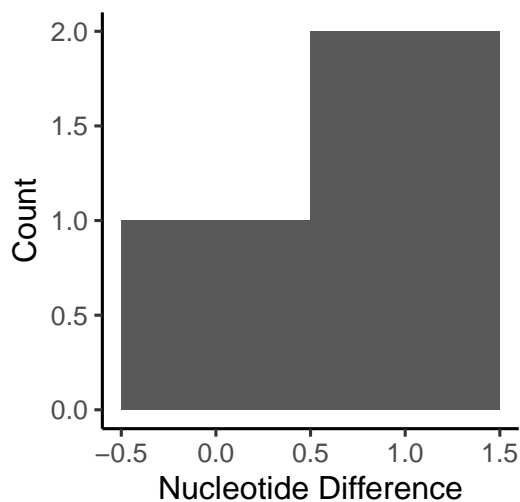
IGHV3-NL_15*01_S7302

24 sequences assigned
9 (37.5%) exact matches, in which:
6 unique CDR3
1 unique J



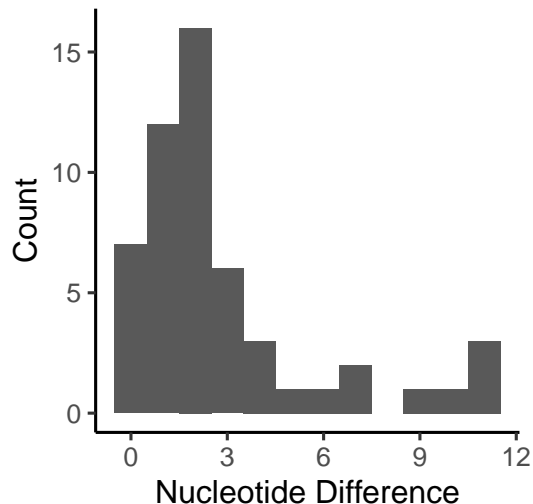
IGHV3–NL_2*01_S3900

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



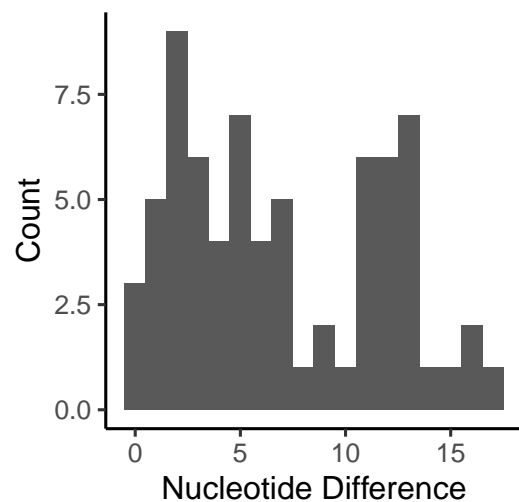
IGHV4–93*01_S5203

53 sequences assigned
7 (13.2%) exact matches, in which:
4 unique CDR3
1 unique J



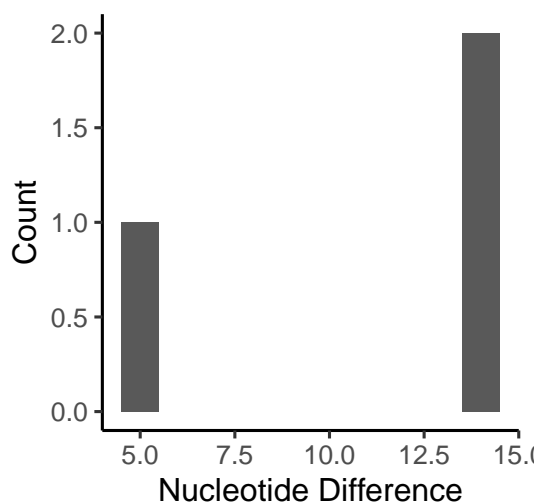
IGHV4–144*01_S8596

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



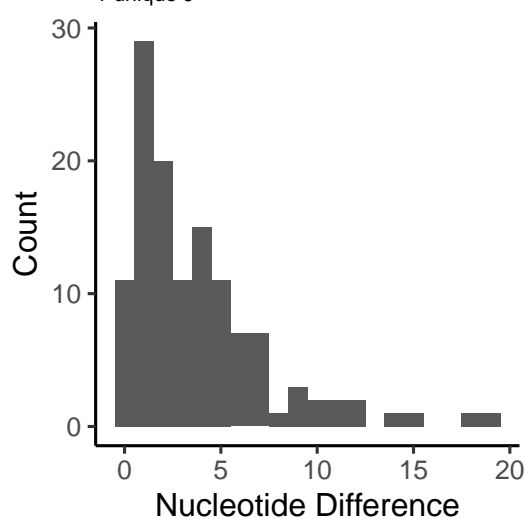
IGHV4–79*02_S9501

3 sequences assigned
No exact matches.



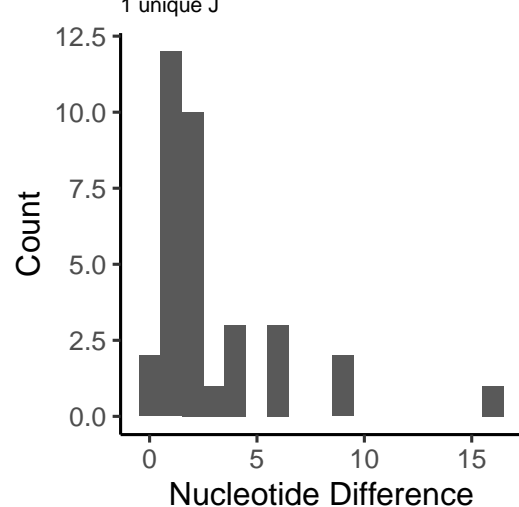
IGHV4–117*01_S0312

127 sequences assigned
11 (8.7%) exact matches, in which:
7 unique CDR3
1 unique J



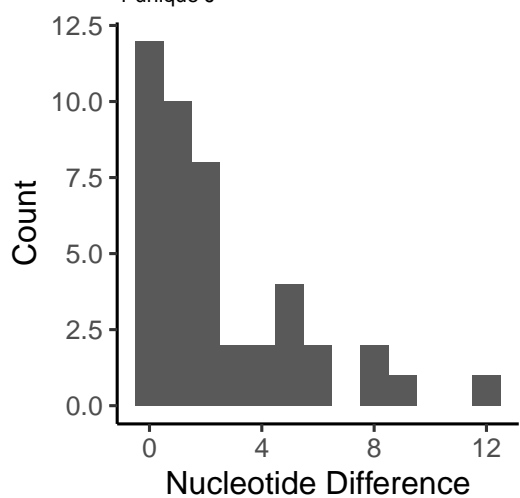
IGHV4–149*02_S6878

34 sequences assigned
2 (5.9%) exact matches, in which:
2 unique CDR3
1 unique J



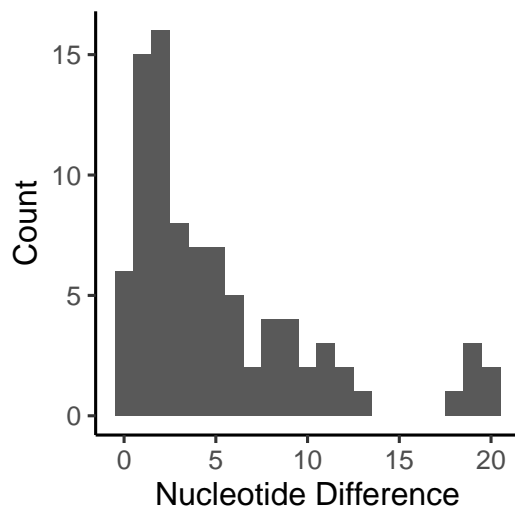
IGHV4–93*01_S0054

45 sequences assigned
12 (26.7%) exact matches, in which:
7 unique CDR3
1 unique J



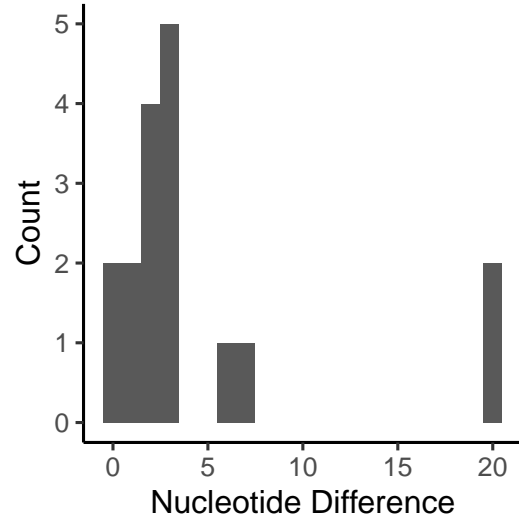
IGHV4–117*01_S0992

93 sequences assigned
6 (6.5%) exact matches, in which:
5 unique CDR3
1 unique J



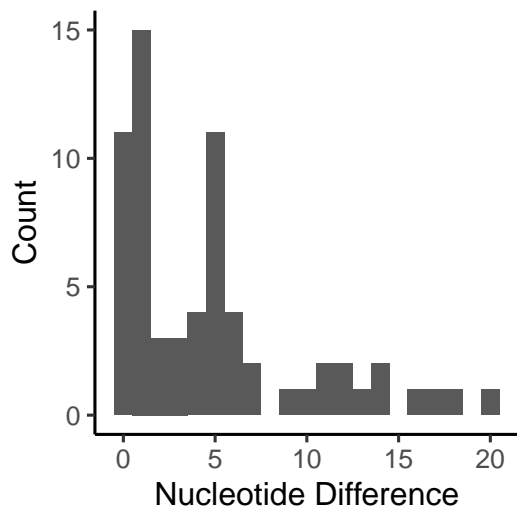
IGHV4–150*01_S6885

17 sequences assigned
2 (11.8%) exact matches, in which:
1 unique CDR3
1 unique J



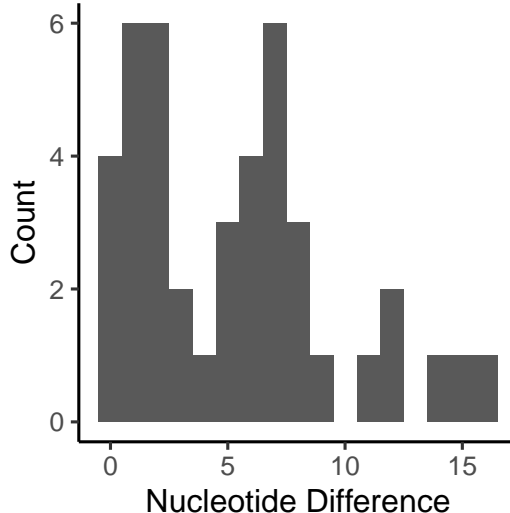
IGHV4–NL_1*01_S1593

67 sequences assigned
11 (16.4%) exact matches, in which:
6 unique CDR3
1 unique J



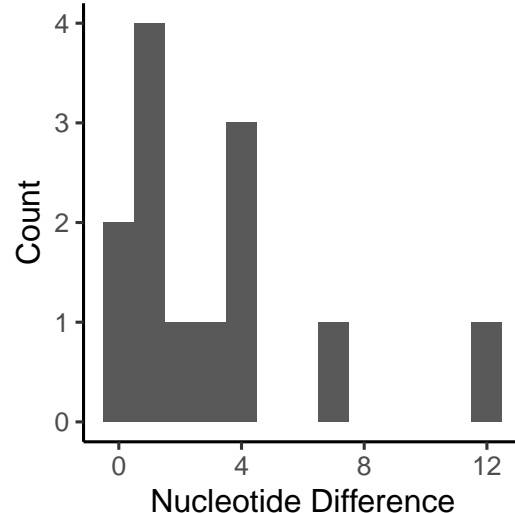
IGHV4–NL_17*01_S4004

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



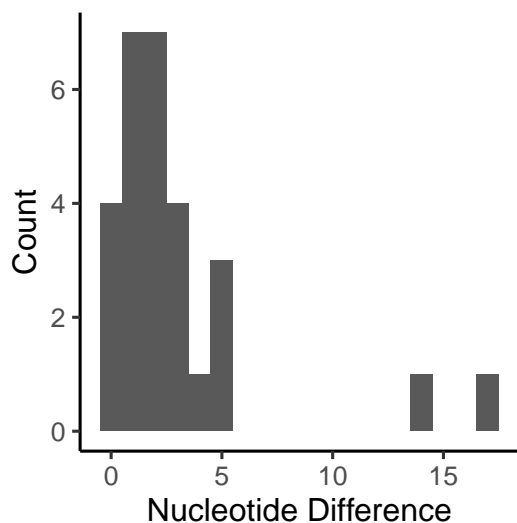
IGHV4–NL_21*01_S6308

13 sequences assigned
2 (15.4%) exact matches, in which:
1 unique CDR3
1 unique J



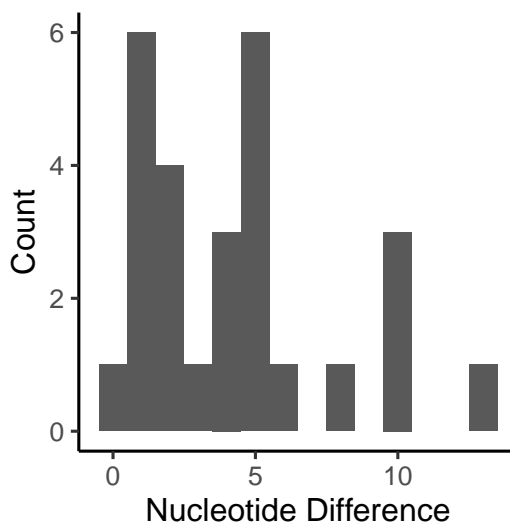
IGHV4–NL_13*01_S9744

28 sequences assigned
4 (14.3%) exact matches, in which:
3 unique CDR3
1 unique J



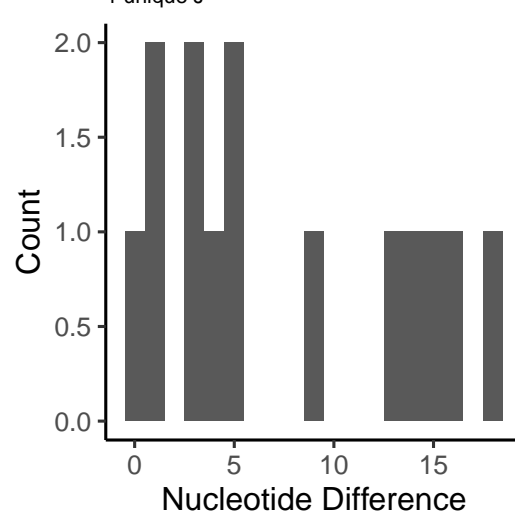
IGHV4–NL_20*01_S6186

28 sequences assigned
1 (3.6%) exact matches, in which:
1 unique CDR3
1 unique J



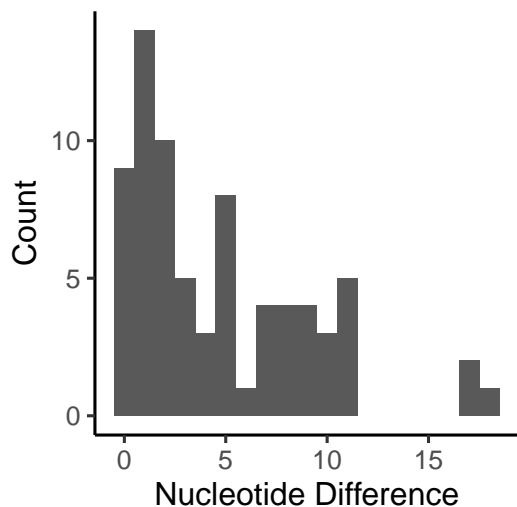
IGHV4–NL_22*01_S6977

27 sequences assigned
1 (3.7%) exact matches, in which:
1 unique CDR3
1 unique J



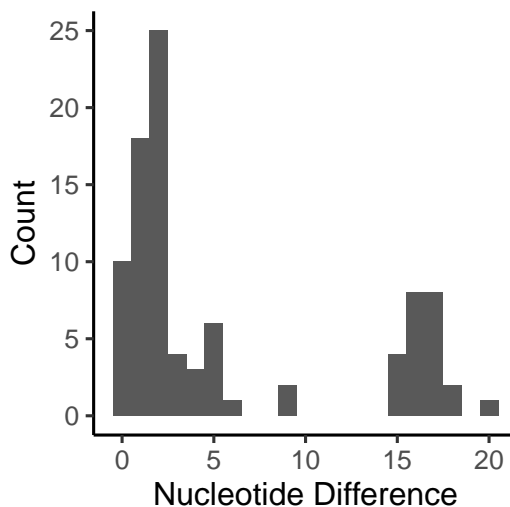
IGHV4–NL_17*01_S0936

74 sequences assigned
9 (12.2%) exact matches, in which:
6 unique CDR3
1 unique J



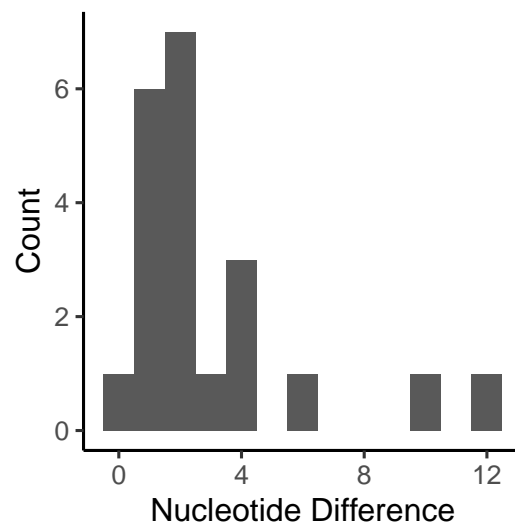
IGHV4–NL_21*01_S0138

93 sequences assigned
10 (10.8%) exact matches, in which:
8 unique CDR3
1 unique J



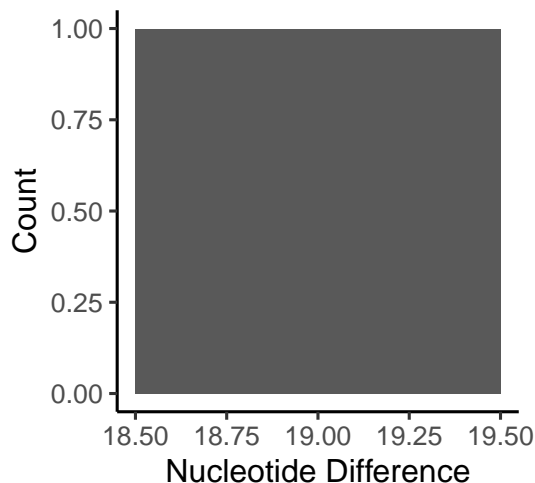
IGHV4–NL_24*01_S5697

21 sequences assigned
1 (4.8%) exact matches, in which:
1 unique CDR3
1 unique J



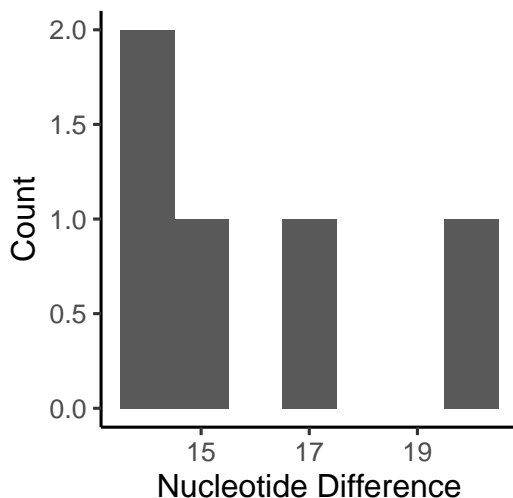
IGHV4-NL_25*01_S6960

1 sequences assigned
No exact matches.



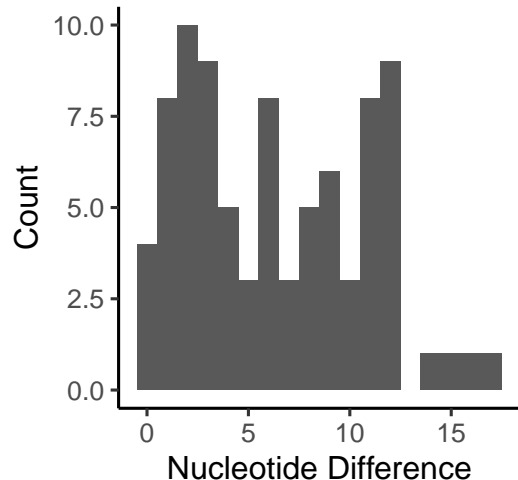
IGHV4-NL_27*01_S7431

6 sequences assigned
No exact matches.



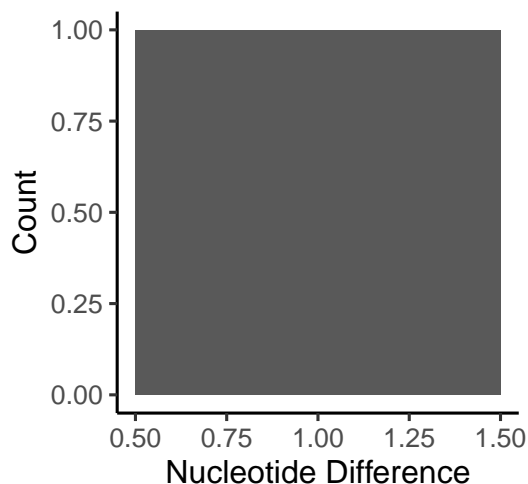
IGHV4-NL_3*01_S7576

86 sequences assigned
4 (4.7%) exact matches, in which:
3 unique CDR3
1 unique J



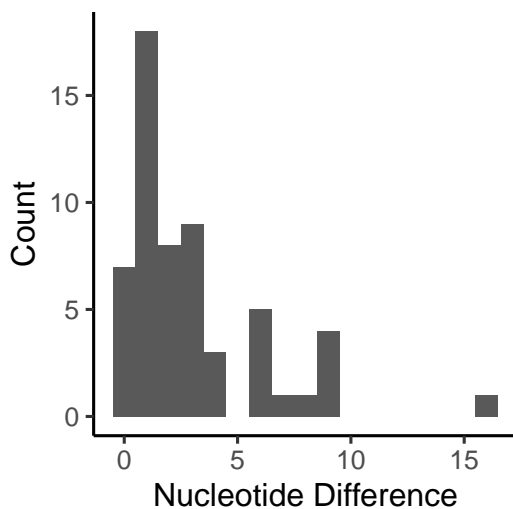
IGHV4-NL_25*01_S9955

1 sequences assigned
No exact matches.



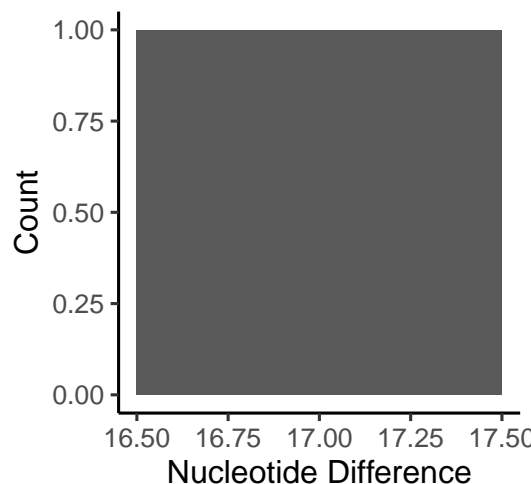
IGHV4-NL_28*01_S2610

57 sequences assigned
7 (12.3%) exact matches, in which:
5 unique CDR3
1 unique J



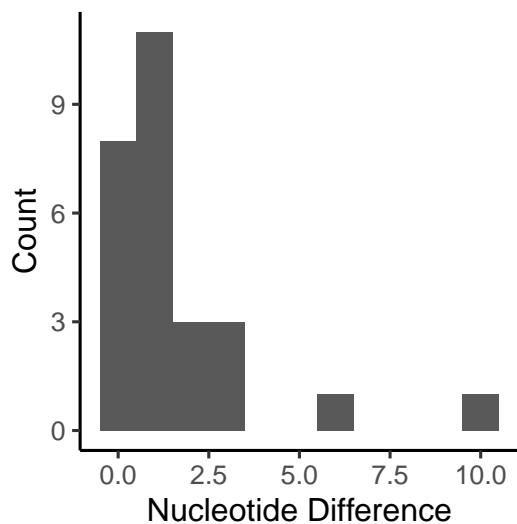
IGHV4-NL_33*01_S5330

1 sequences assigned
No exact matches.



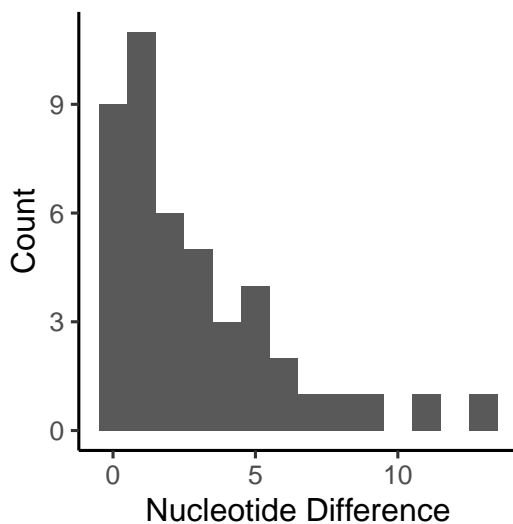
IGHV4-NL_27*01_S0673

27 sequences assigned
8 (29.6%) exact matches, in which:
4 unique CDR3
1 unique J



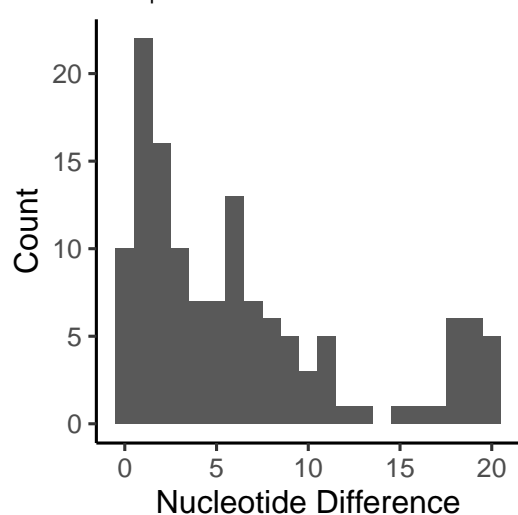
IGHV4-NL_29*01_S9610

46 sequences assigned
9 (19.6%) exact matches, in which:
4 unique CDR3
1 unique J



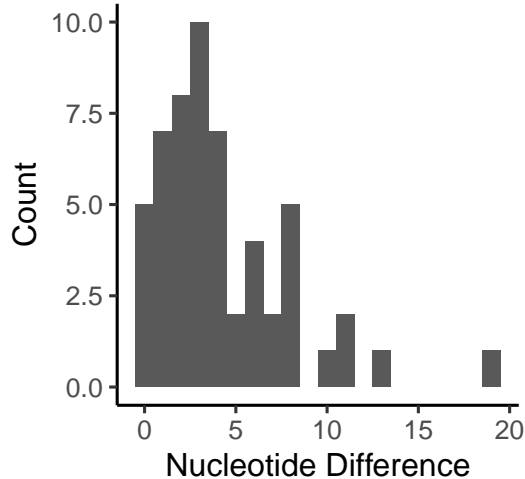
IGHV4-NL_34*01_S4749

140 sequences assigned
10 (7.1%) exact matches, in which:
5 unique CDR3
1 unique J



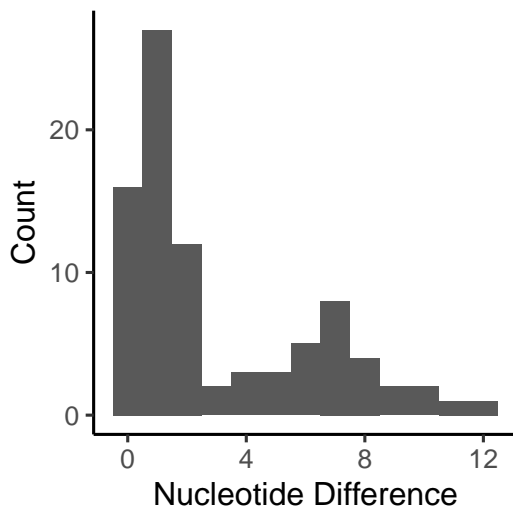
IGHV4–NL_36*01_S0936

55 sequences assigned
5 (9.1%) exact matches, in which:
3 unique CDR3
1 unique J



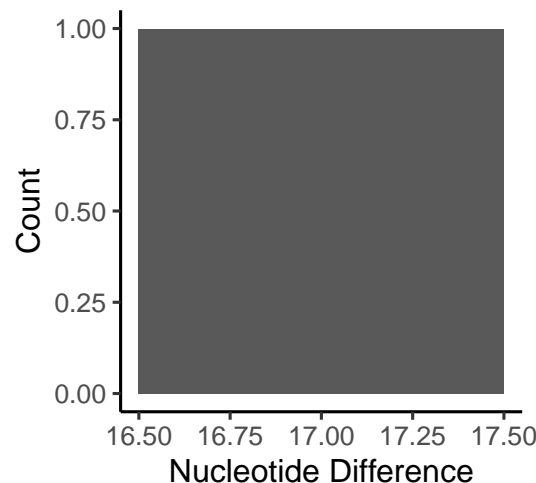
IGHV4–NL_36*01_S9644

87 sequences assigned
16 (18.4%) exact matches, in which:
9 unique CDR3
1 unique J



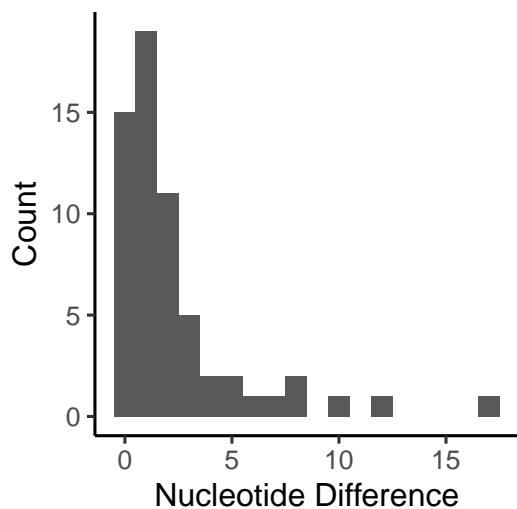
IGHV4–NL_9*01_S1435

1 sequences assigned
No exact matches.



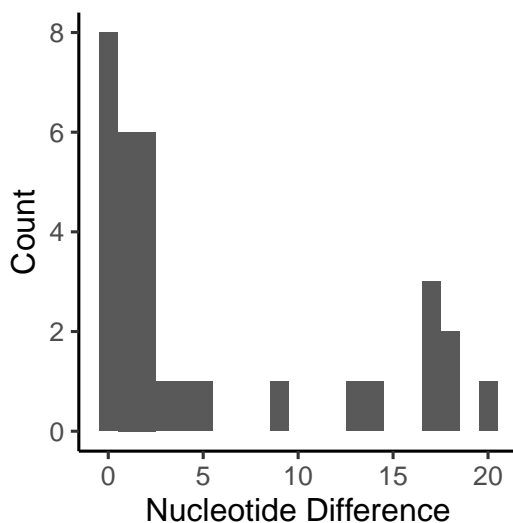
IGHV4–NL_36*01_S5319

61 sequences assigned
15 (24.6%) exact matches, in which:
7 unique CDR3
1 unique J



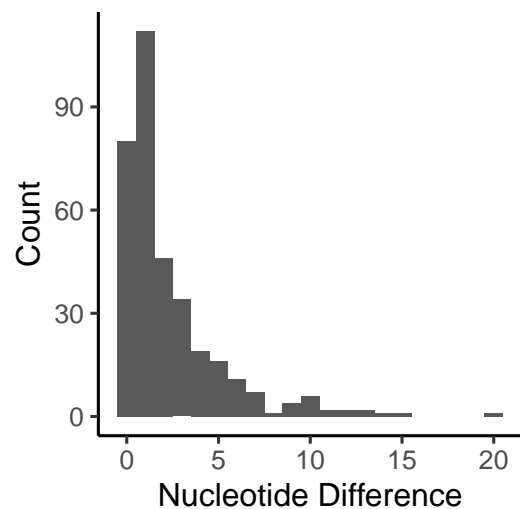
IGHV4–NL_5*01_S5158

36 sequences assigned
8 (22.2%) exact matches, in which:
5 unique CDR3
1 unique J



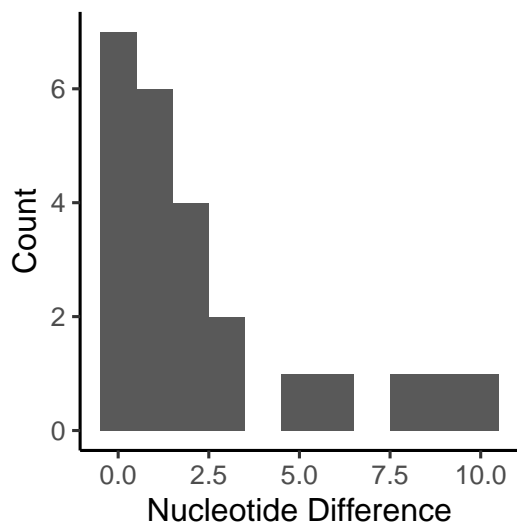
IGHV5–15*01_S6979

348 sequences assigned
80 (23%) exact matches, in which:
32 unique CDR3
1 unique J



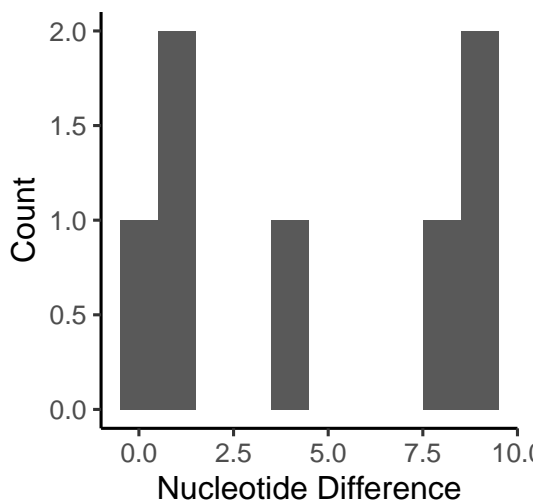
IGHV4–NL_36*01_S5847

24 sequences assigned
7 (29.2%) exact matches, in which:
3 unique CDR3
1 unique J



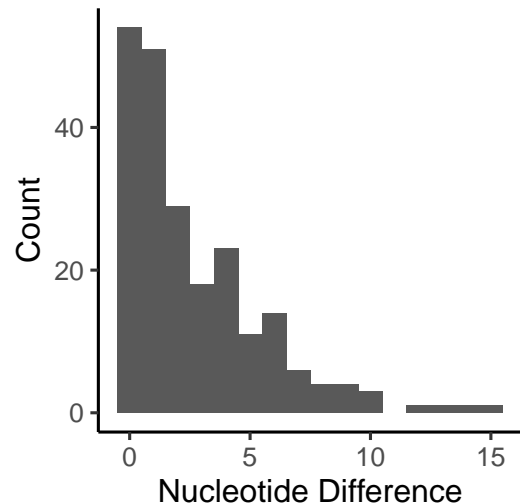
IGHV4–NL_5*01_S8913

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



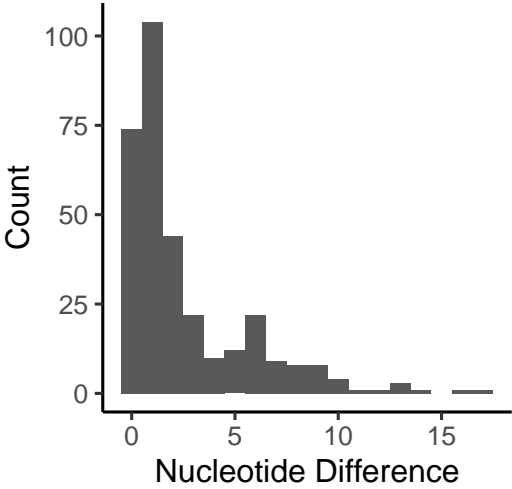
IGHV5–157*01_S5960

221 sequences assigned
54 (24.4%) exact matches, in which:
19 unique CDR3
1 unique J



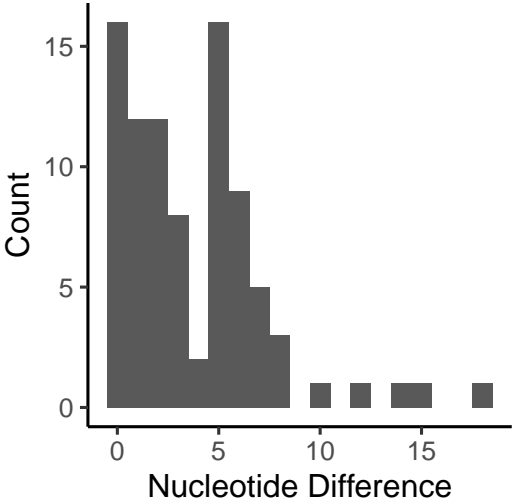
IGHV5–157*01_S6479

329 sequences assigned
74 (22.5%) exact matches, in which:
29 unique CDR3
1 unique J



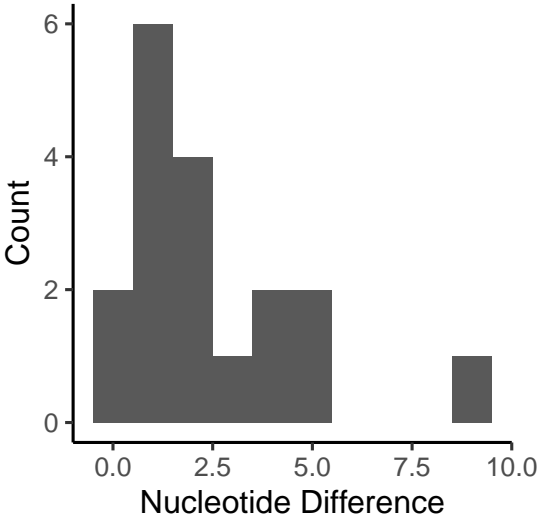
IGHV7–86*01_S9209

88 sequences assigned
16 (18.2%) exact matches, in which:
7 unique CDR3
1 unique J

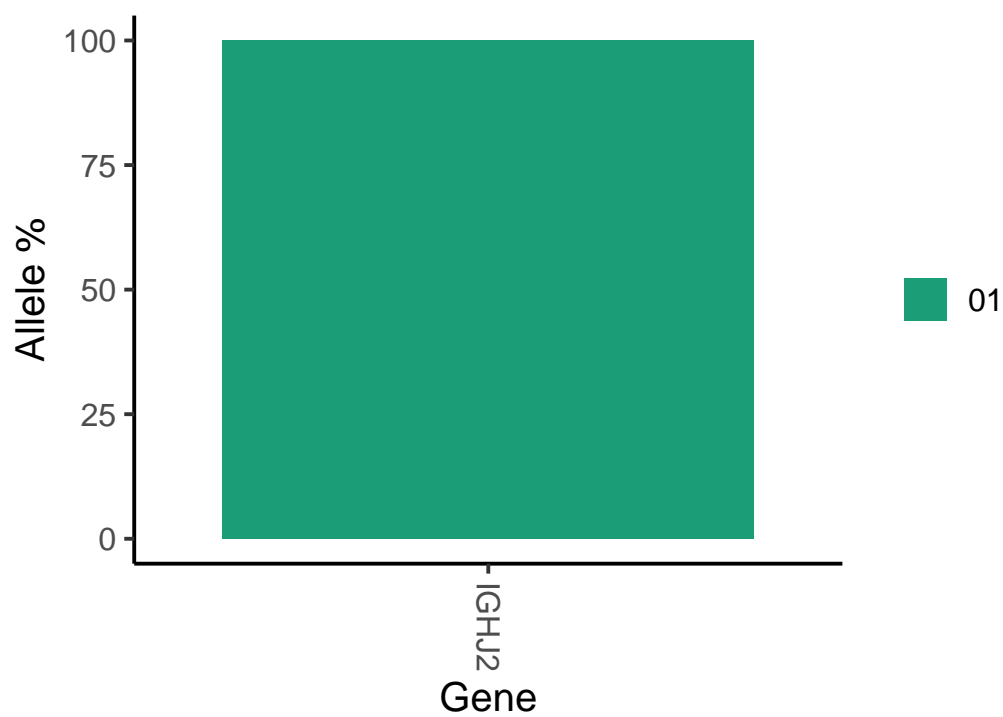


IGHV7–135*01_S9086

18 sequences assigned
2 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



Allele Usage



Warning – no inferred sequences found.