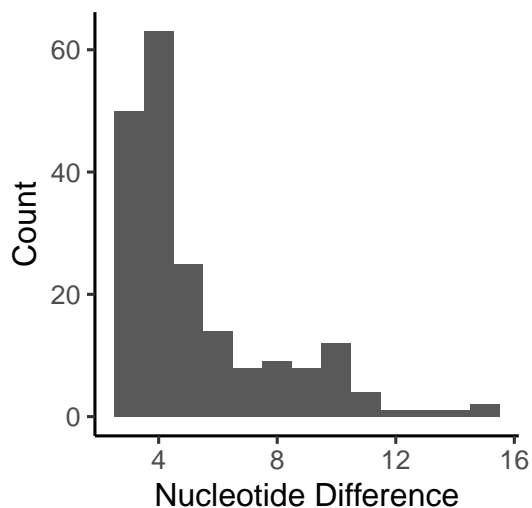


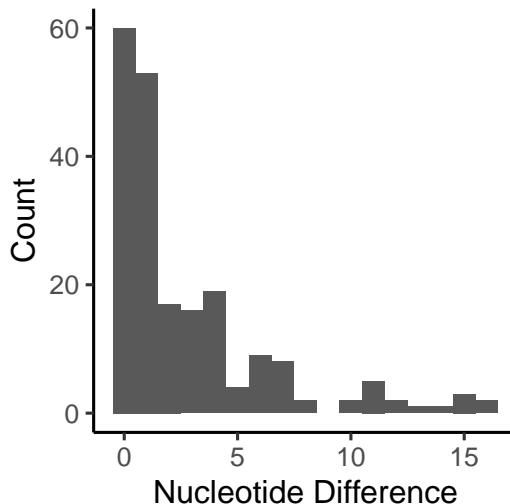
IGHV1-58*02

199 sequences assigned
No exact matches.



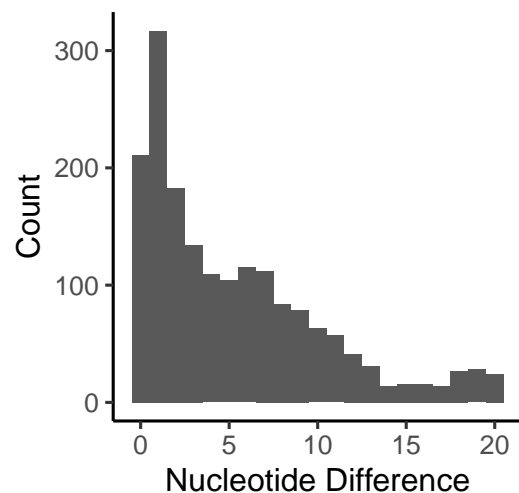
IGHV1-84*01_S9171

213 sequences assigned
60 (28.2%) exact matches, in which:
31 unique CDR3
4 unique J



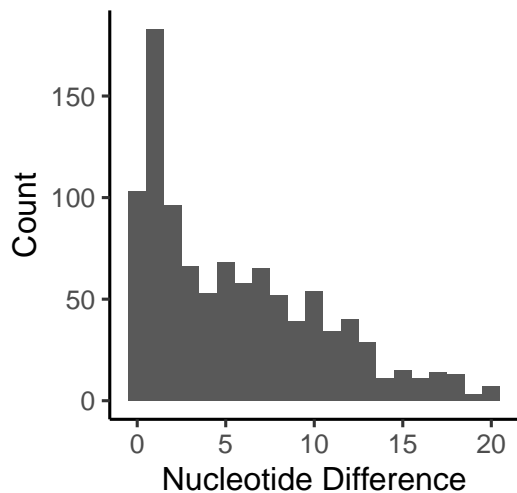
IGHV1-NL_1*01_S2052

1875 sequences assigned
211 (11.3%) exact matches, in which:
132 unique CDR3
7 unique J



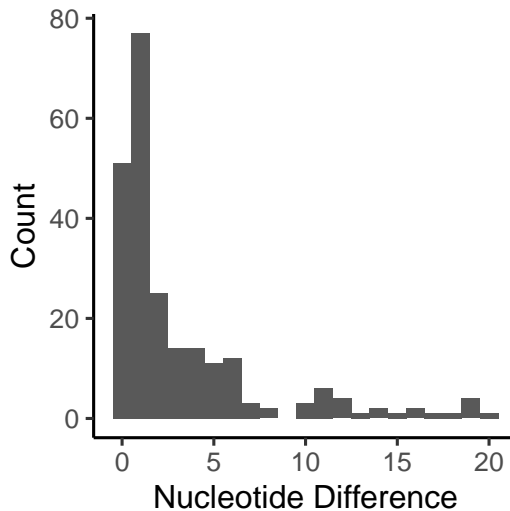
IGHV1-60*01_S7772

1068 sequences assigned
103 (9.6%) exact matches, in which:
71 unique CDR3
6 unique J



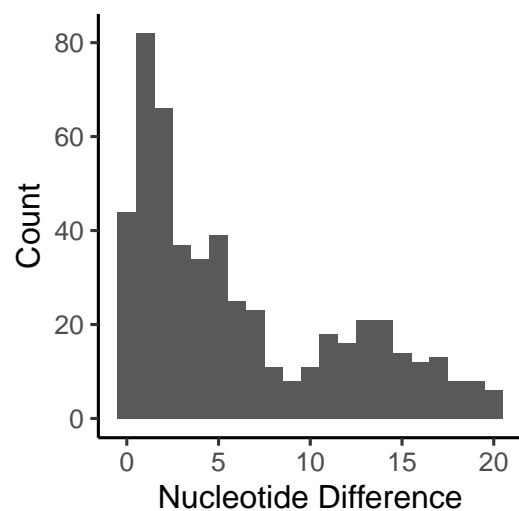
IGHV1-138*01_S3445

242 sequences assigned
51 (21.1%) exact matches, in which:
39 unique CDR3
6 unique J



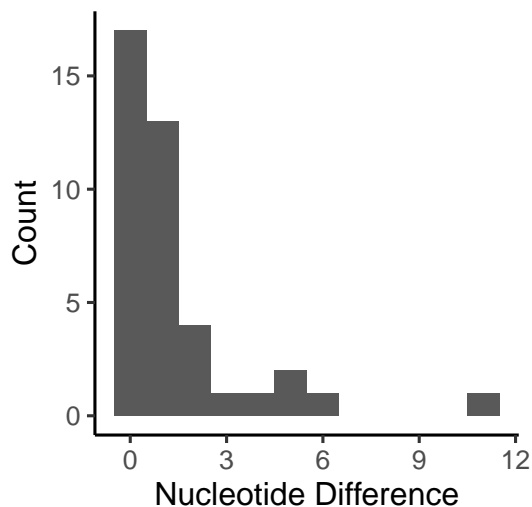
IGHV1-NL_1*01_S8523

588 sequences assigned
44 (7.5%) exact matches, in which:
35 unique CDR3
6 unique J



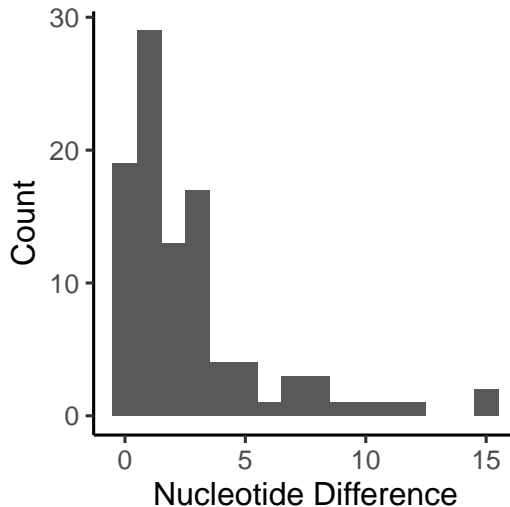
IGHV1-84*01_S0025

40 sequences assigned
17 (42.5%) exact matches, in which:
8 unique CDR3
3 unique J



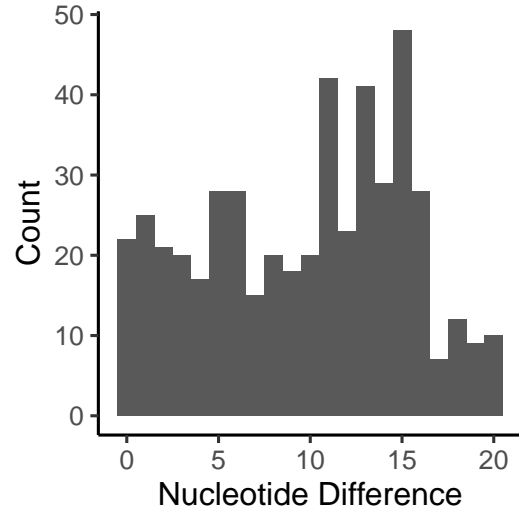
IGHV1-138*01_S9603

99 sequences assigned
19 (19.2%) exact matches, in which:
11 unique CDR3
3 unique J



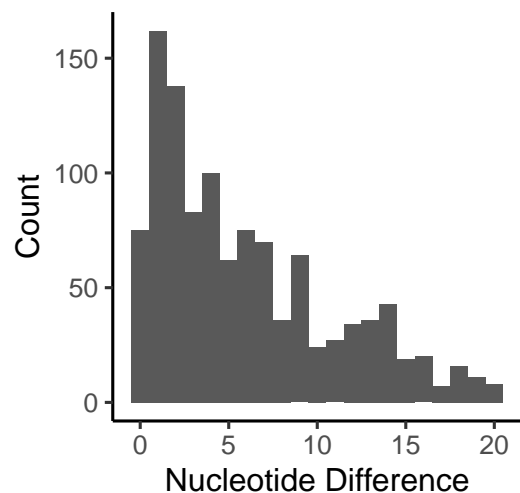
IGHV1-NL_2*01_S3568

518 sequences assigned
22 (4.2%) exact matches, in which:
13 unique CDR3
1 unique J



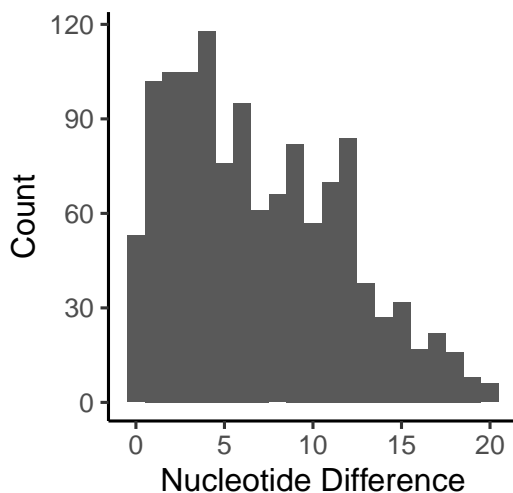
IGHV2-7*02_S1732

1137 sequences assigned
75 (6.6%) exact matches, in which:
39 unique CDR3
4 unique J



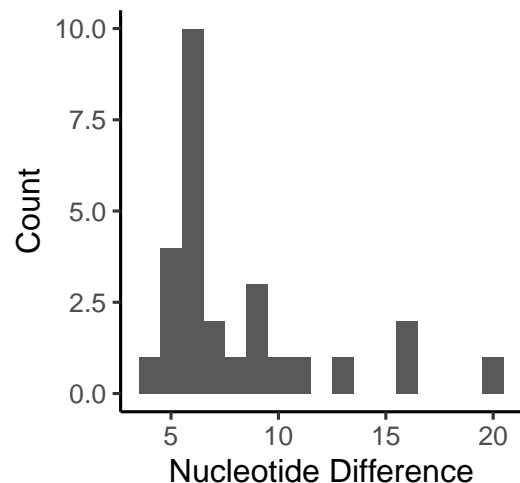
IGHV2-69*02_S0779

1271 sequences assigned
53 (4.2%) exact matches, in which:
36 unique CDR3
4 unique J



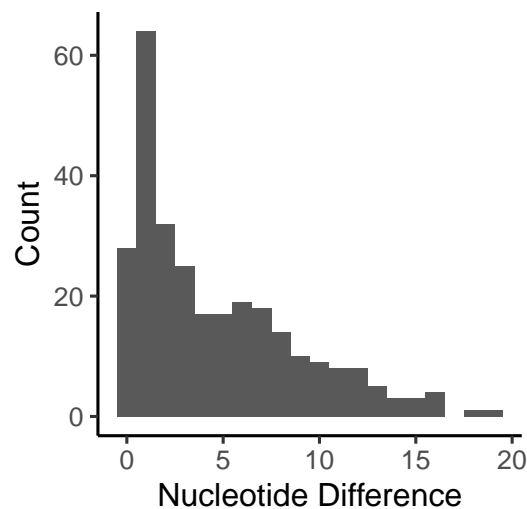
IGHV2-NL_1*01_S2133

28 sequences assigned
No exact matches.



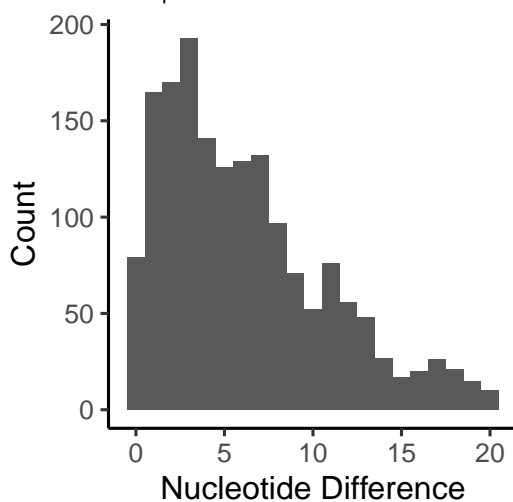
IGHV2-7*02_S4285

288 sequences assigned
28 (9.7%) exact matches, in which:
13 unique CDR3
3 unique J



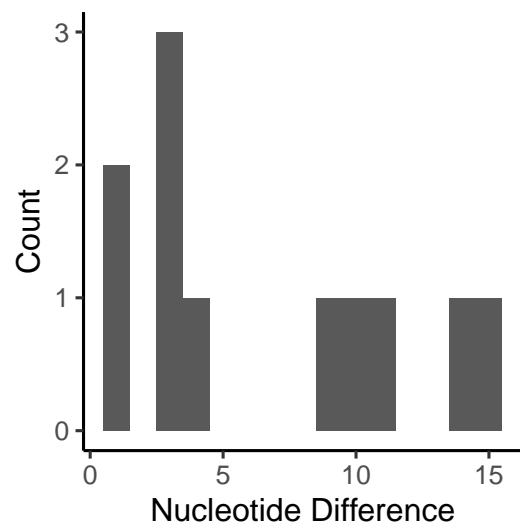
IGHV2-118*01_S4531

1848 sequences assigned
79 (4.3%) exact matches, in which:
50 unique CDR3
3 unique J



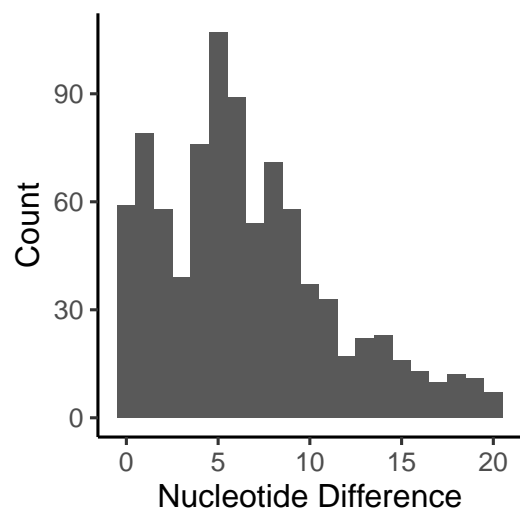
IGHV2-NL_1*01_S7874

13 sequences assigned
No exact matches.



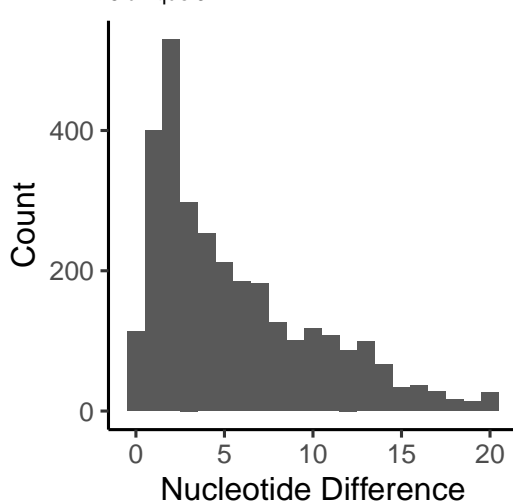
IGHV2-69*01_S2408

946 sequences assigned
59 (6.2%) exact matches, in which:
36 unique CDR3
5 unique J



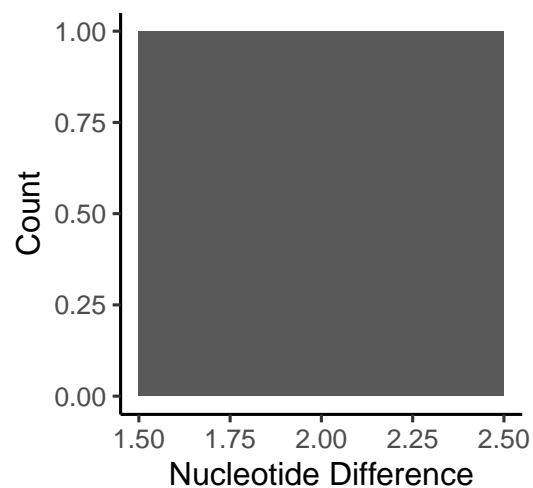
IGHV2-173*01_G289T

3377 sequences assigned
113 (3.3%) exact matches, in which:
105 unique CDR3
6 unique J



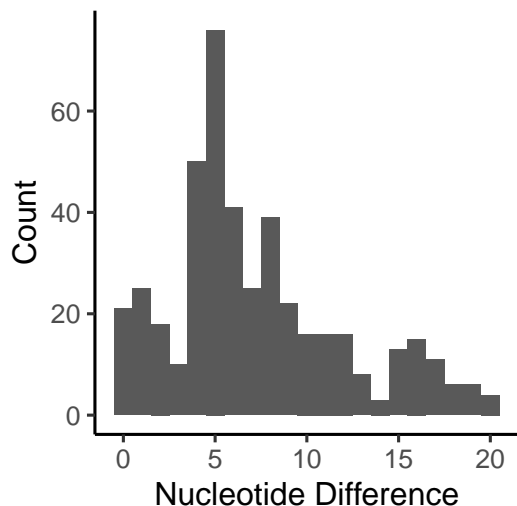
IGHV2-NL_2*01_S8873

1 sequences assigned
No exact matches.



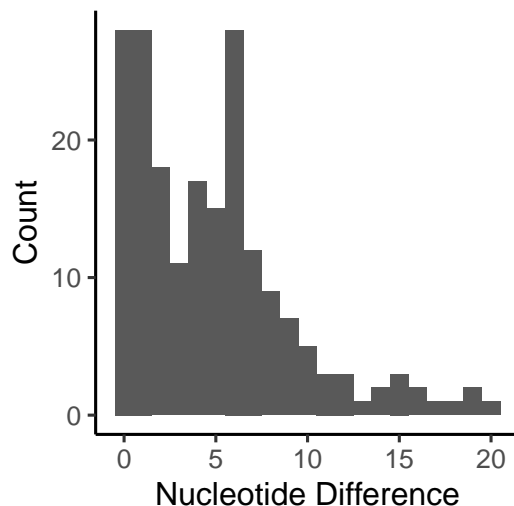
IGHV3-5*01_S0969

506 sequences assigned
21 (4.2%) exact matches, in which:
11 unique CDR3
4 unique J



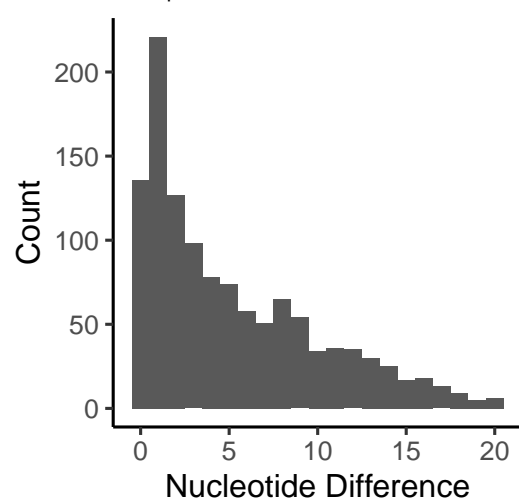
IGHV3-36*01_S9128

205 sequences assigned
28 (13.7%) exact matches, in which:
20 unique CDR3
2 unique J



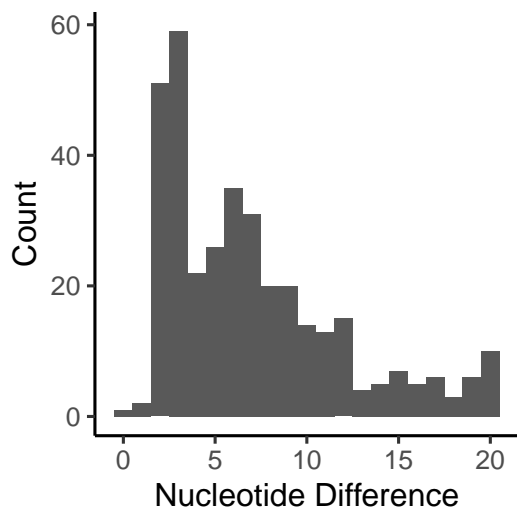
IGHV3-50*01_S9079

1208 sequences assigned
136 (11.3%) exact matches, in which:
99 unique CDR3
6 unique J



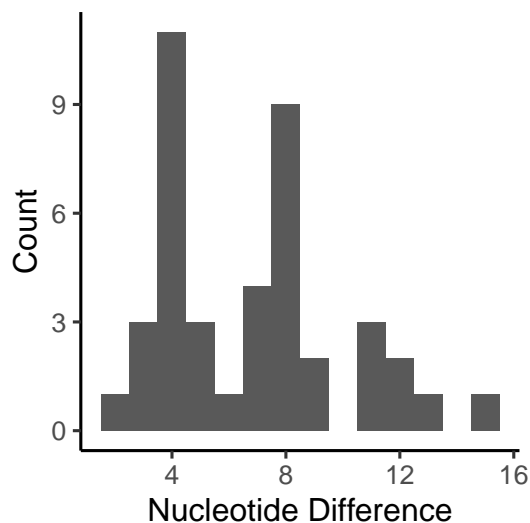
IGHV3-9*01_S8777

373 sequences assigned
1 (0.3%) exact matches, in which:
1 unique CDR3
1 unique J



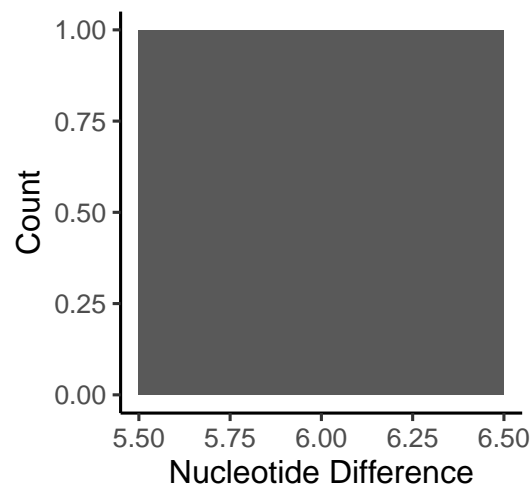
IGHV3-37*01_S6325

42 sequences assigned
No exact matches.



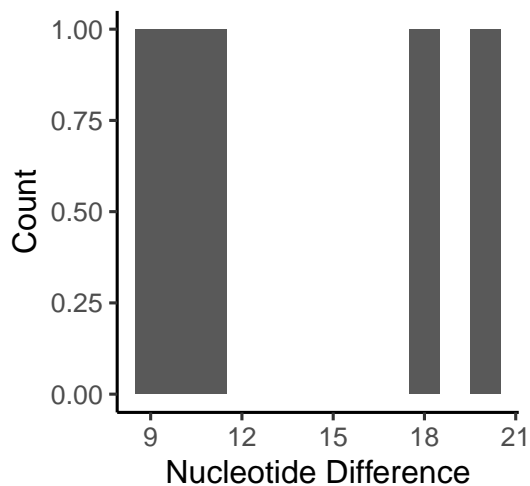
IGHV3-52*01_S8160

1 sequences assigned
No exact matches.



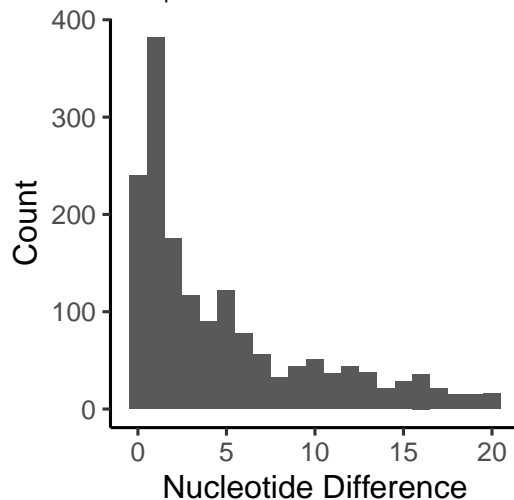
IGHV3-28*01_S3792

10 sequences assigned
No exact matches.



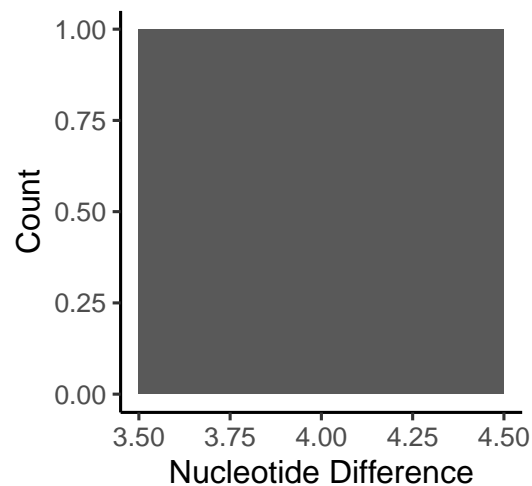
IGHV3-50*01_S1879

1738 sequences assigned
240 (13.8%) exact matches, in which:
160 unique CDR3
6 unique J



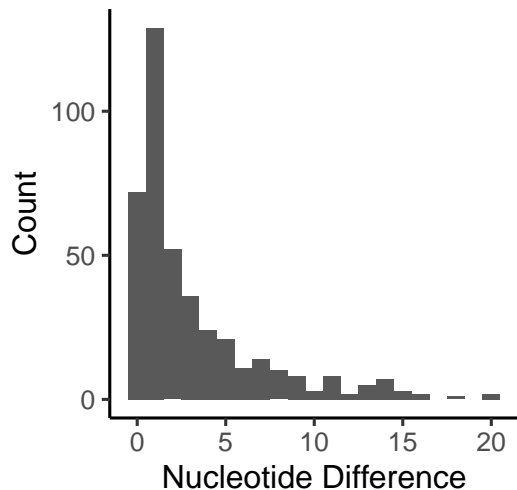
IGHV3-52*02_S4550

1 sequences assigned
No exact matches.



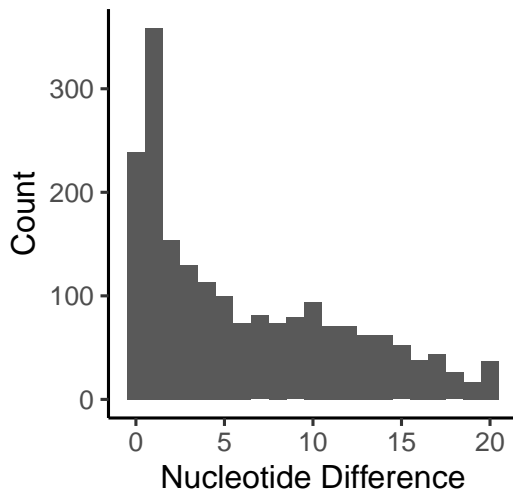
IGHV3-53*01_S1558

420 sequences assigned
72 (17.1%) exact matches, in which:
50 unique CDR3
5 unique J



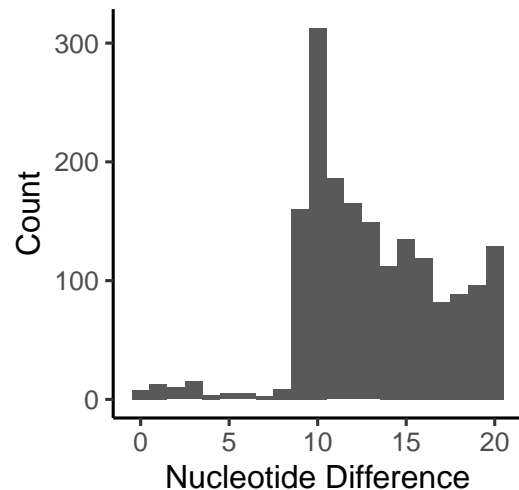
IGHV3-76*02_S2075

2209 sequences assigned
239 (10.8%) exact matches, in which:
162 unique CDR3
6 unique J



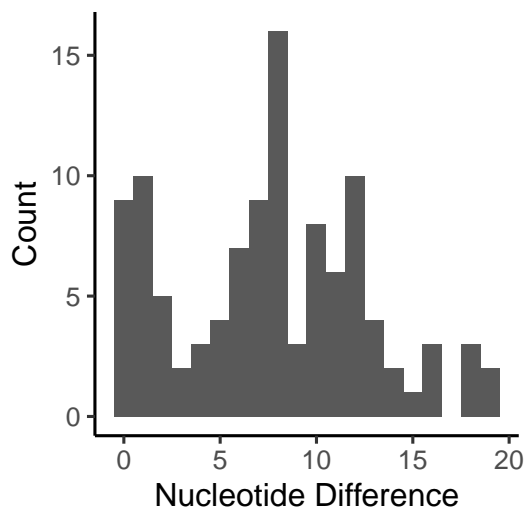
IGHV3-88*02_S7929

2498 sequences assigned
8 (0.3%) exact matches, in which:
7 unique CDR3
2 unique J



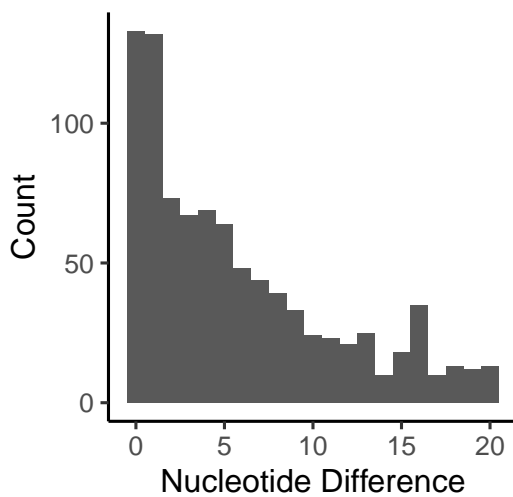
IGHV3-73*02_S5005

109 sequences assigned
9 (8.3%) exact matches, in which:
6 unique CDR3
3 unique J



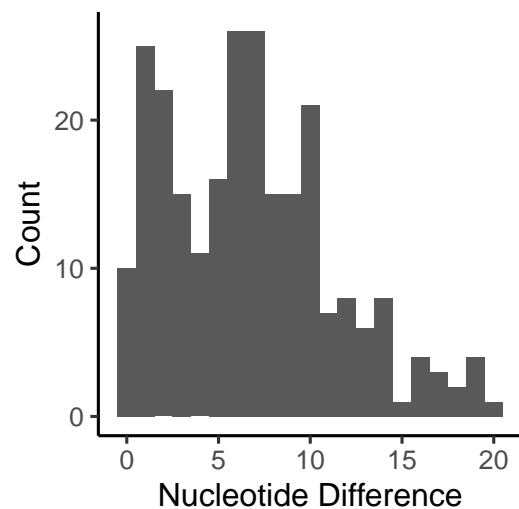
IGHV3-76*02_S2075_A2

1001 sequences assigned
133 (13.3%) exact matches, in which:
111 unique CDR3
6 unique J



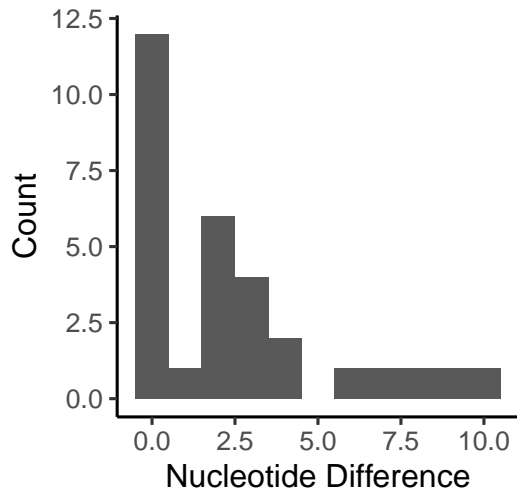
IGHV3-88*02_S9774

301 sequences assigned
10 (3.3%) exact matches, in which:
7 unique CDR3
3 unique J



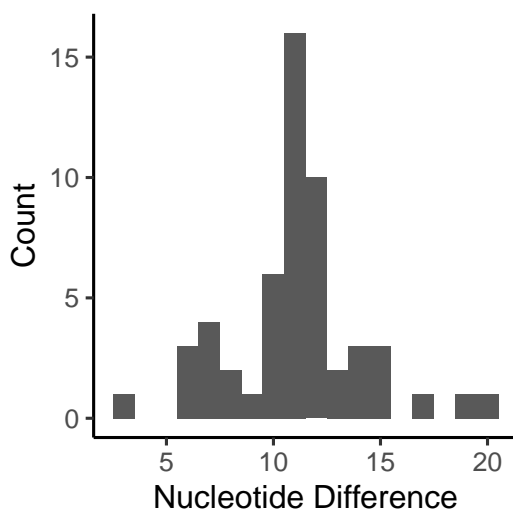
IGHV3-73*02_S7884

31 sequences assigned
12 (38.7%) exact matches, in which:
9 unique CDR3
2 unique J



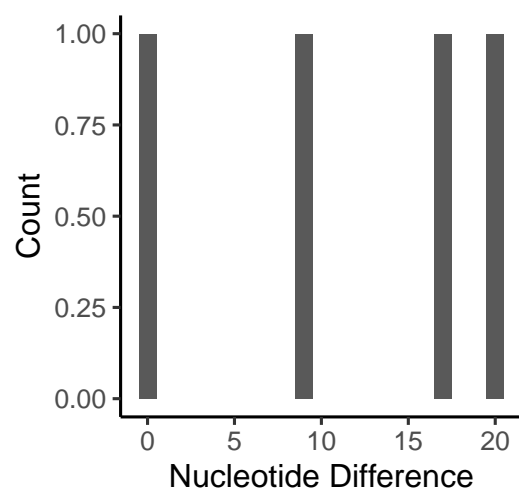
IGHV3-87*01_S6311

55 sequences assigned
No exact matches.



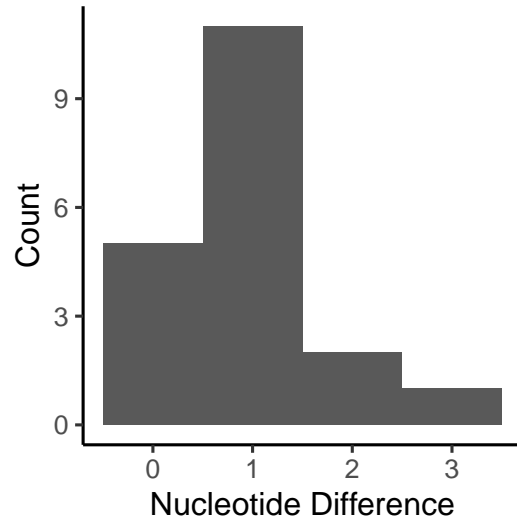
IGHV3-94*01_S3427

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



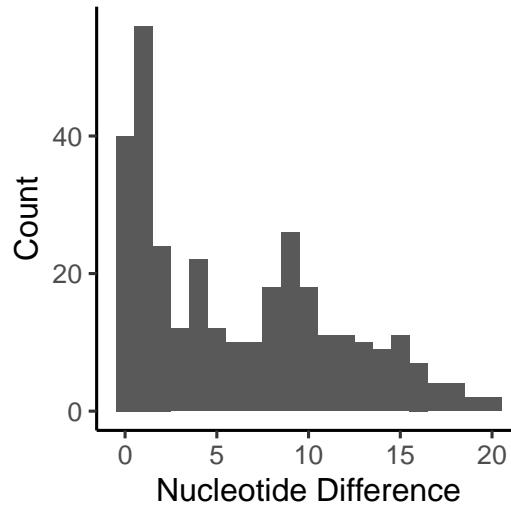
IGHV3-94*01_S5120

19 sequences assigned
5 (26.3%) exact matches, in which:
5 unique CDR3
2 unique J



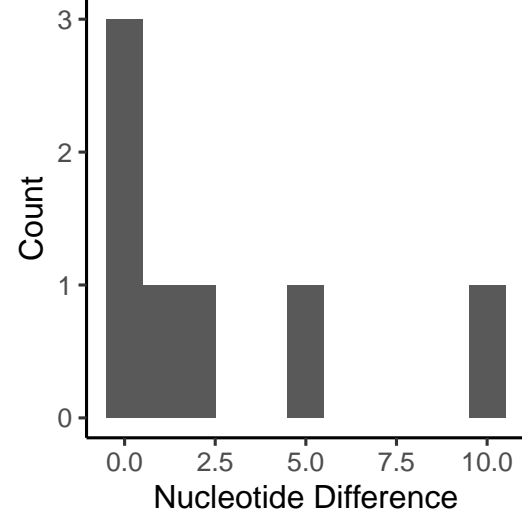
IGHV3-103*01_S2756

373 sequences assigned
40 (10.7%) exact matches, in which:
29 unique CDR3
3 unique J



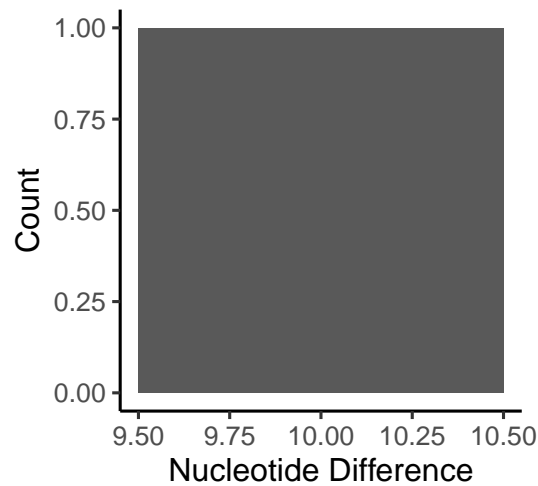
IGHV3-127*01_S5510

8 sequences assigned
3 (37.5%) exact matches, in which:
3 unique CDR3
1 unique J



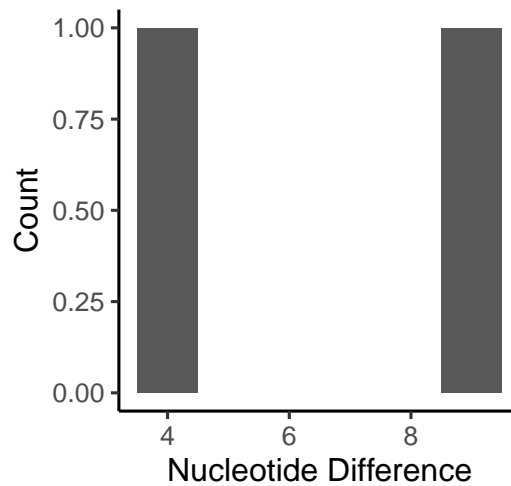
IGHV3-94*01_S7982

3 sequences assigned
No exact matches.



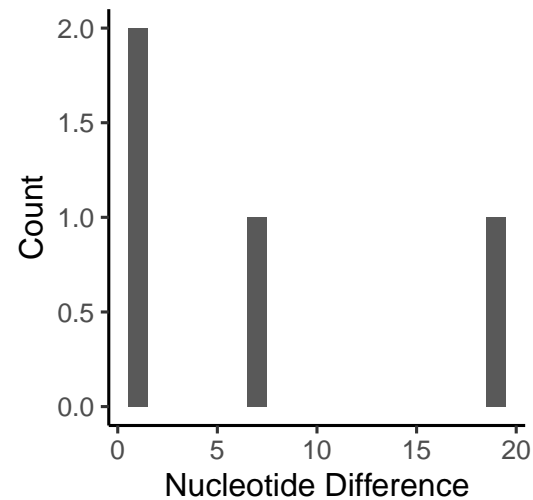
IGHV3-120*01_S4231

2 sequences assigned
No exact matches.



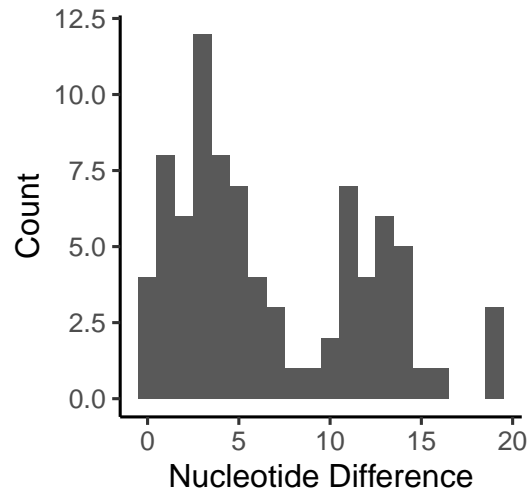
IGHV3-127*01_S6769

4 sequences assigned
No exact matches.



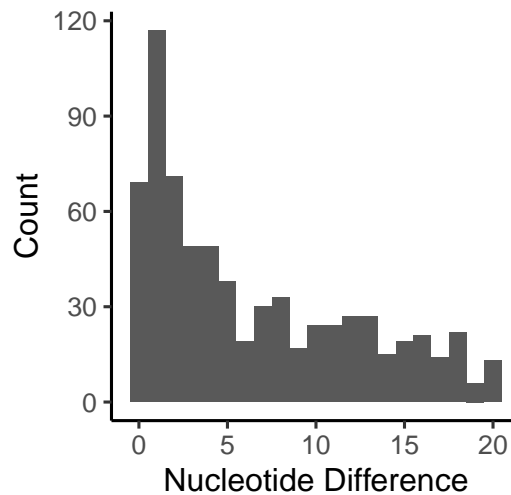
IGHV3-100*01_S4375

124 sequences assigned
4 (3.2%) exact matches, in which:
4 unique CDR3
2 unique J



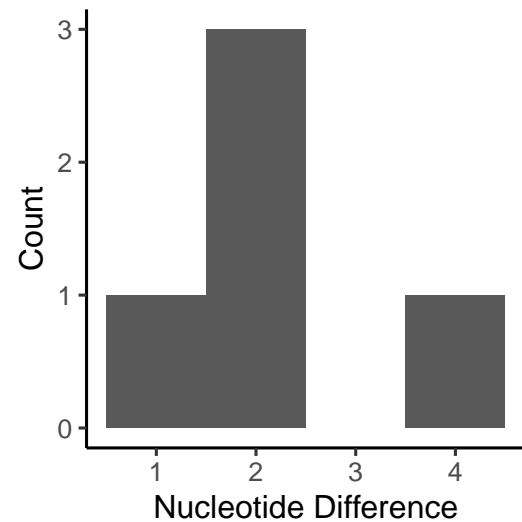
IGHV3-122*01_S8388

749 sequences assigned
69 (9.2%) exact matches, in which:
49 unique CDR3
3 unique J



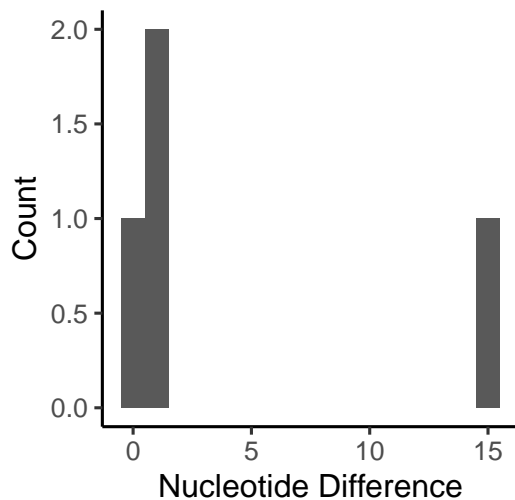
IGHV3-127*01_S7059

10 sequences assigned
No exact matches.



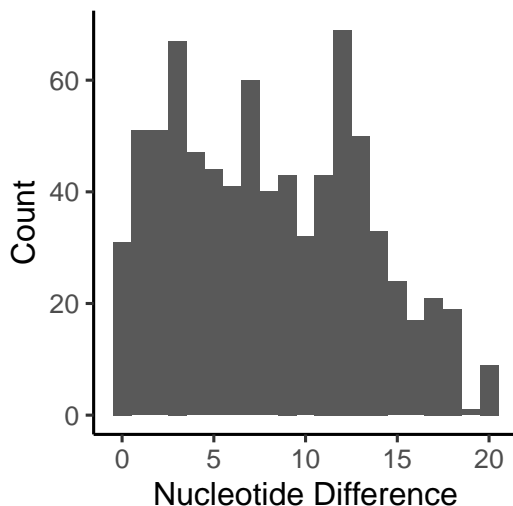
IGHV3-127*01_S9779

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



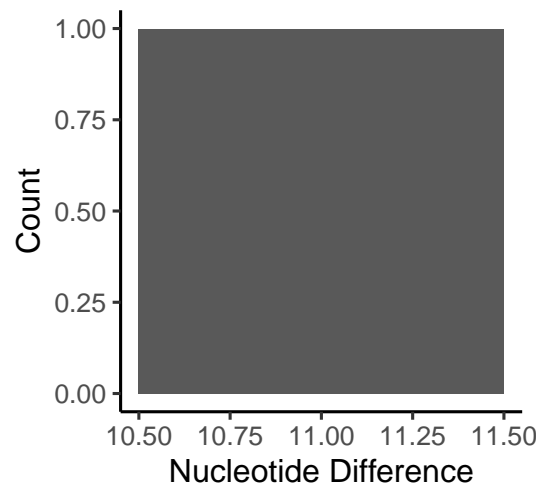
IGHV3-152*01_S5891

858 sequences assigned
31 (3.6%) exact matches, in which:
21 unique CDR3
3 unique J



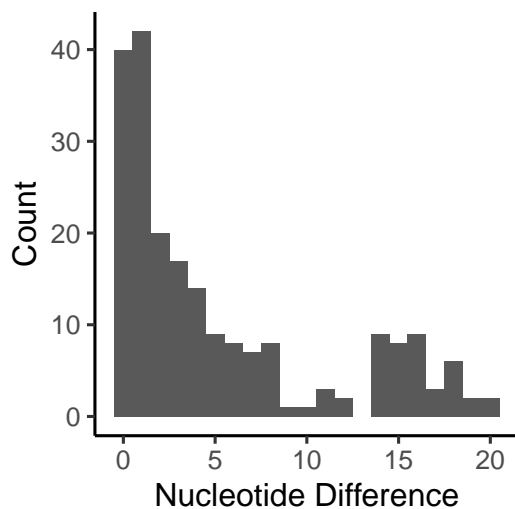
IGHV3-175*01_S1248

1 sequences assigned
No exact matches.



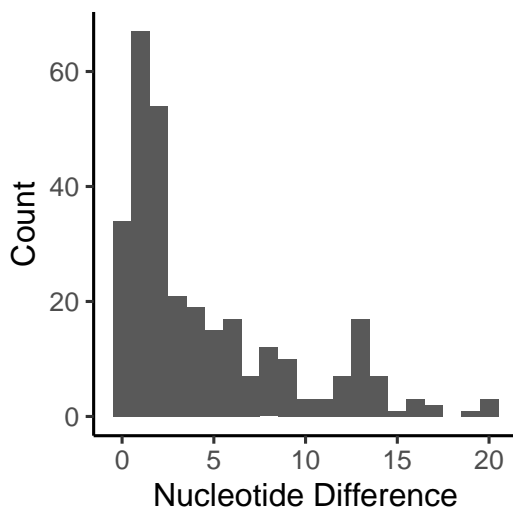
IGHV3-141*01_S5053

223 sequences assigned
40 (17.9%) exact matches, in which:
33 unique CDR3
5 unique J



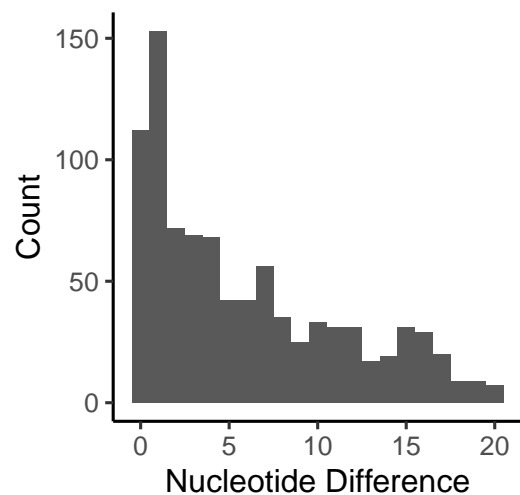
IGHV3-172*01_S0645

310 sequences assigned
34 (11%) exact matches, in which:
23 unique CDR3
5 unique J



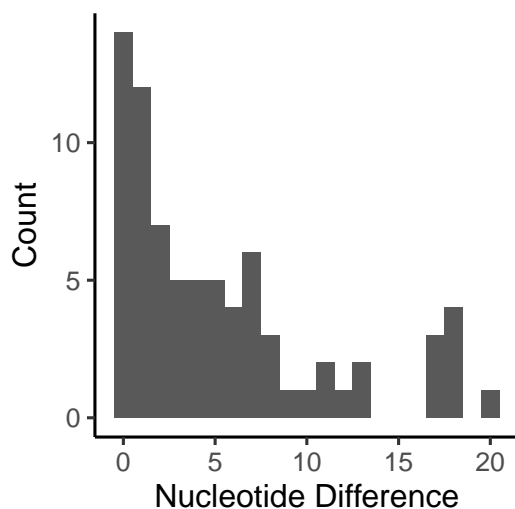
IGHV3-177*01_S5369

951 sequences assigned
112 (11.8%) exact matches, in which:
80 unique CDR3
6 unique J



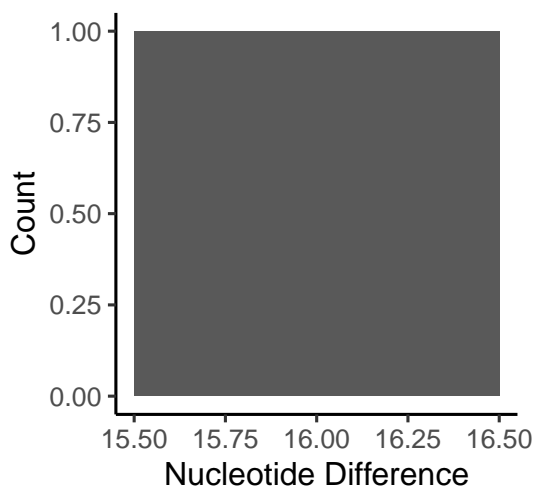
IGHV3-141*01_S8690

85 sequences assigned
14 (16.5%) exact matches, in which:
6 unique CDR3
2 unique J



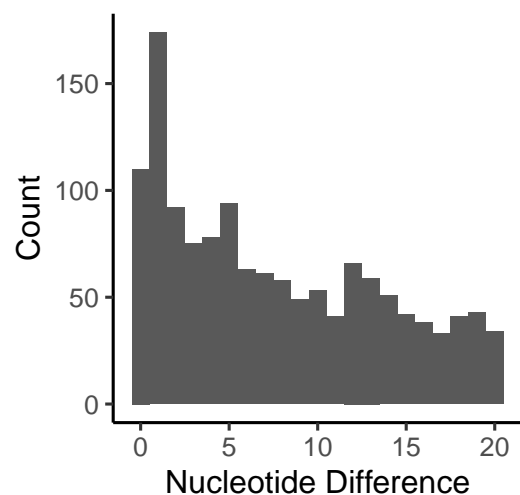
IGHV3-175*01

2 sequences assigned
No exact matches.



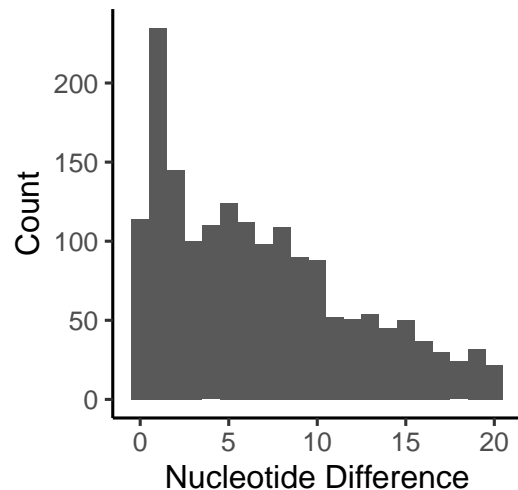
IGHV3-187*01_S1133

1656 sequences assigned
110 (6.6%) exact matches, in which:
65 unique CDR3
5 unique J



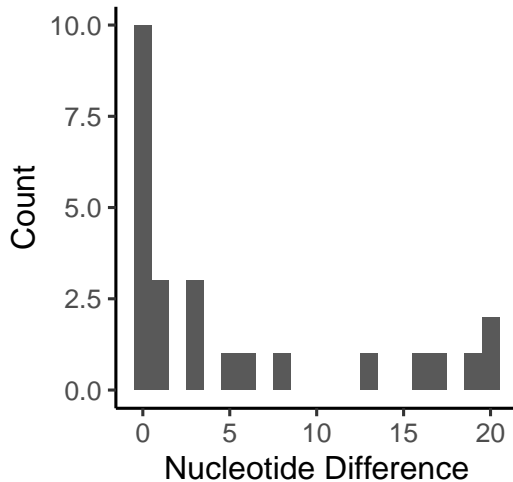
IGHV3-187*01_S6840

1857 sequences assigned
114 (6.1%) exact matches, in which:
78 unique CDR3
4 unique J



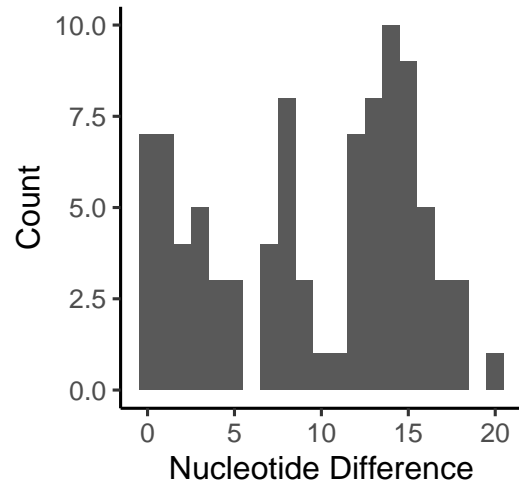
IGHV3-NL_10*02_S1970

30 sequences assigned
10 (33.3%) exact matches, in which:
10 unique CDR3
4 unique J



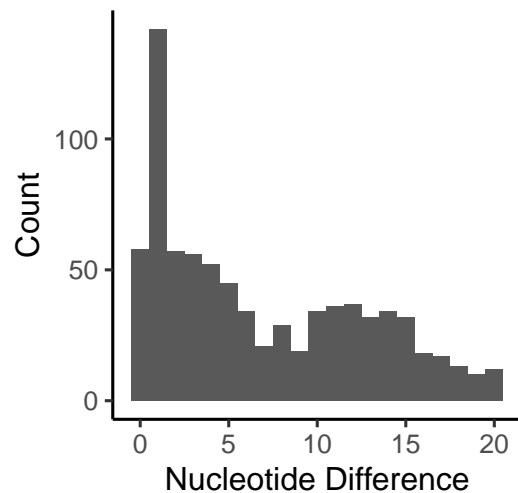
IGHV3-NL_12*02_S2468

101 sequences assigned
7 (6.9%) exact matches, in which:
6 unique CDR3
3 unique J



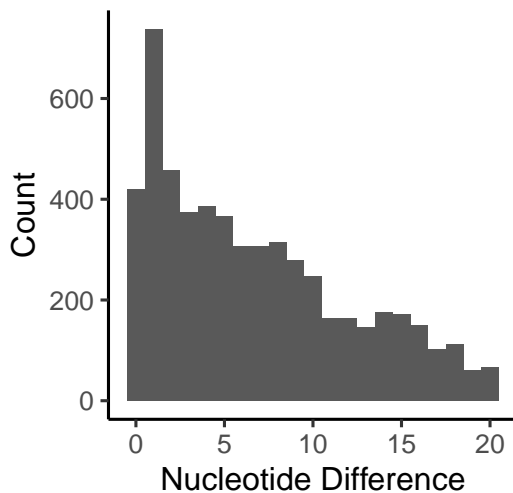
IGHV3-NL_1*01_S2788

820 sequences assigned
58 (7.1%) exact matches, in which:
39 unique CDR3
5 unique J



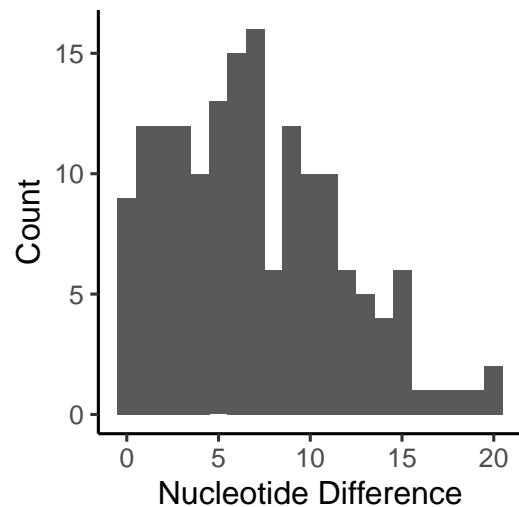
IGHV3-NL_11*01_S3736

6071 sequences assigned
419 (6.9%) exact matches, in which:
304 unique CDR3
7 unique J



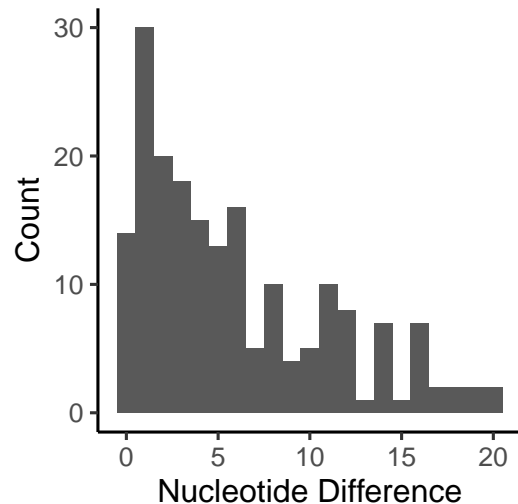
IGHV3-NL_13*01_S3277

173 sequences assigned
9 (5.2%) exact matches, in which:
5 unique CDR3
1 unique J



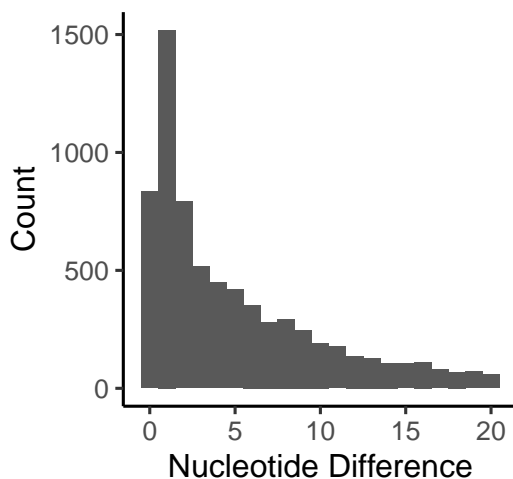
IGHV3-NL_1*01_S5238

282 sequences assigned
14 (5%) exact matches, in which:
9 unique CDR3
2 unique J



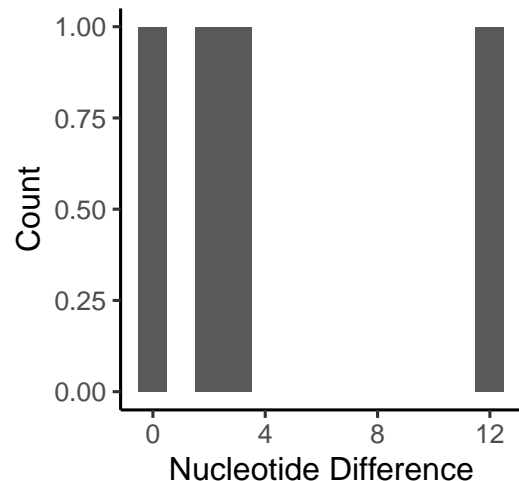
IGHV3-NL_11*01_S839

7746 sequences assigned
834 (10.8%) exact matches, in which:
564 unique CDR3
7 unique J



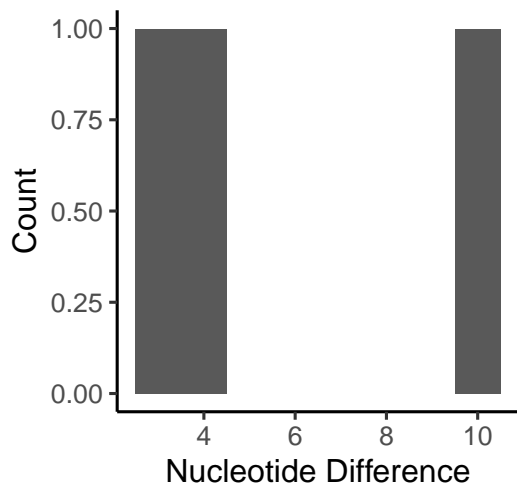
IGHV3-NL_14*01_S0218

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



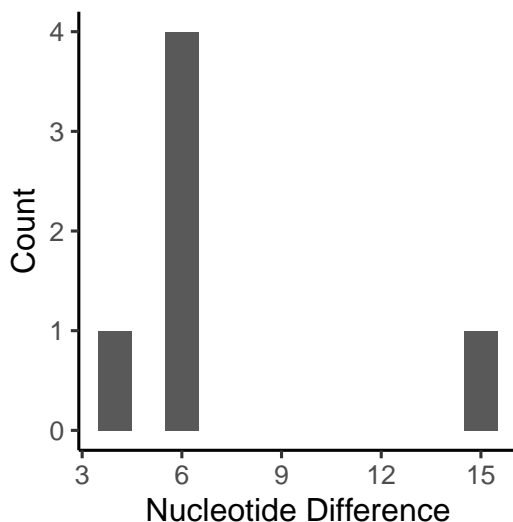
IGHV3–NL_14*01_S1113

3 sequences assigned
No exact matches.



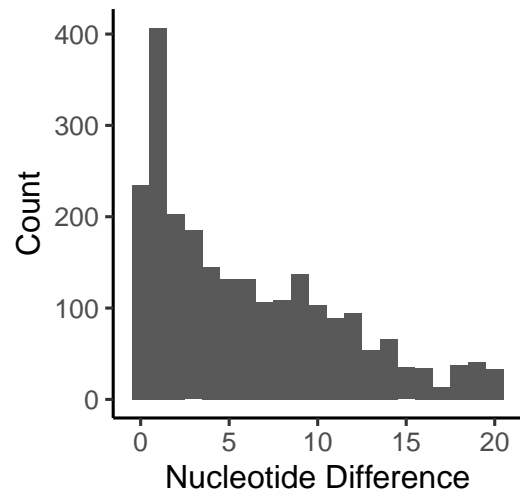
IGHV3–NL_16*01_S5133

7 sequences assigned
No exact matches.



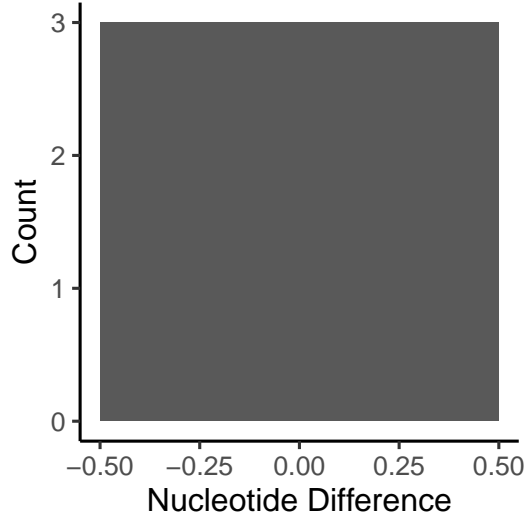
IGHV3–NL_17*01_S4736

2494 sequences assigned
235 (9.4%) exact matches, in which:
147 unique CDR3
5 unique J



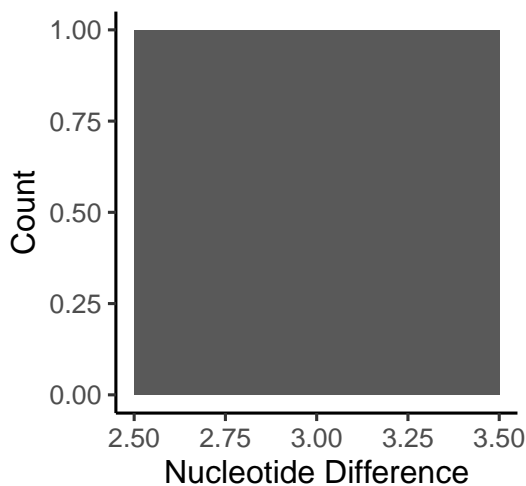
IGHV3–NL_14*01_S6089

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



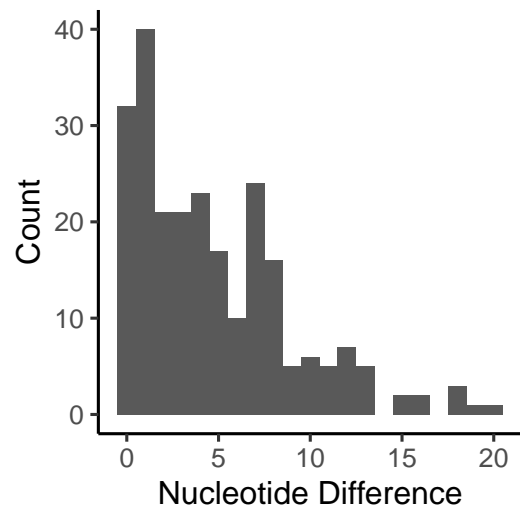
IGHV3–NL_16*01_S8234

1 sequences assigned
No exact matches.



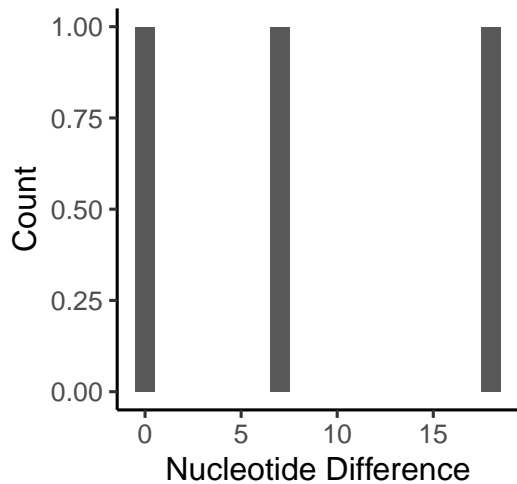
IGHV3–NL_18*01_S0984

243 sequences assigned
32 (13.2%) exact matches, in which:
25 unique CDR3
5 unique J



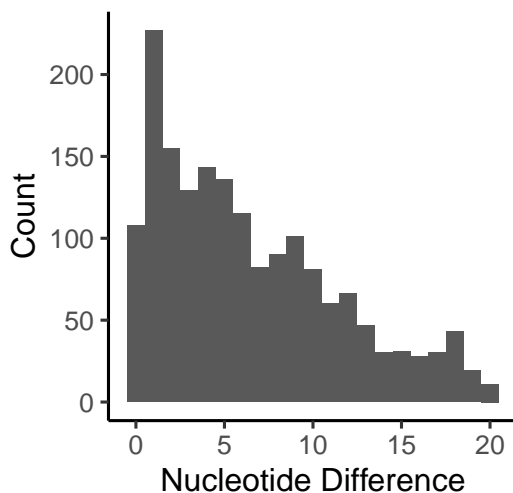
IGHV3–NL_14*01_S9823

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



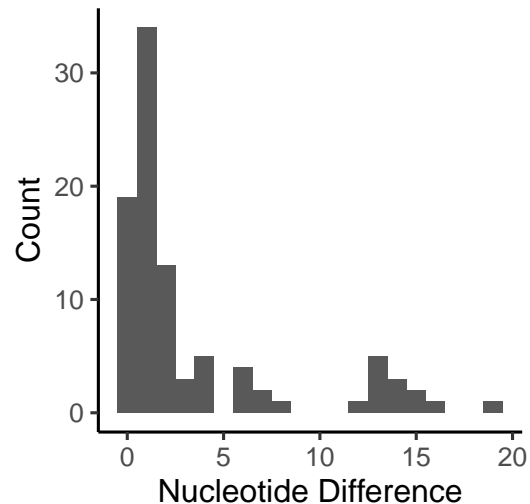
IGHV3–NL_17*01_S4257

1806 sequences assigned
108 (6%) exact matches, in which:
73 unique CDR3
4 unique J



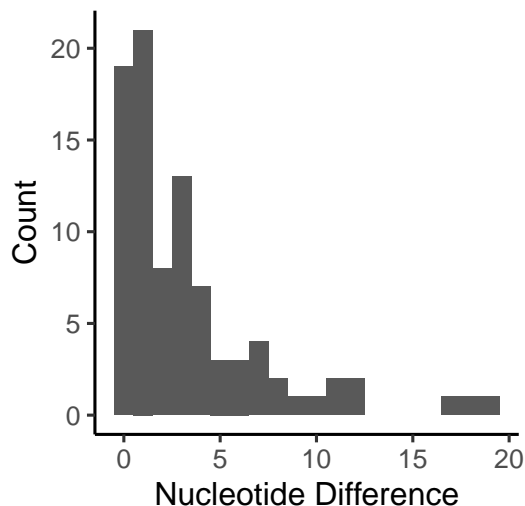
IGHV3–NL_4*01_S0257

115 sequences assigned
19 (16.5%) exact matches, in which:
12 unique CDR3
2 unique J



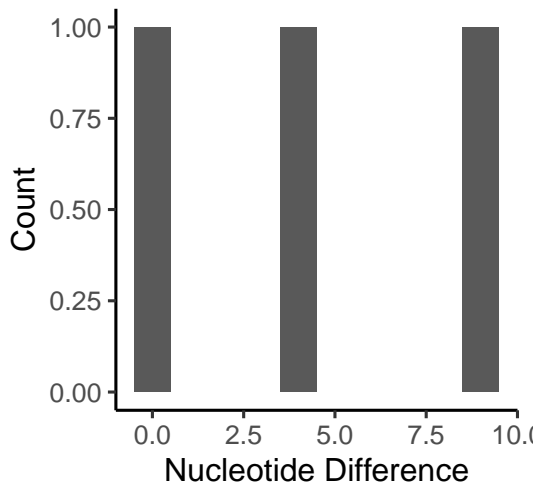
IGHV3–NL_4*01_S6405

91 sequences assigned
19 (20.9%) exact matches, in which:
10 unique CDR3
2 unique J



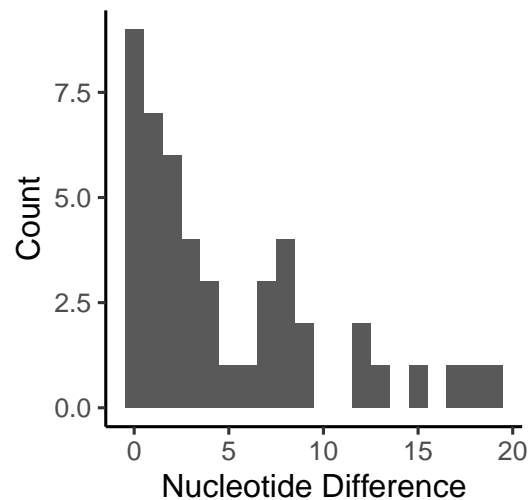
IGHV3–NL_7*01_S0199

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



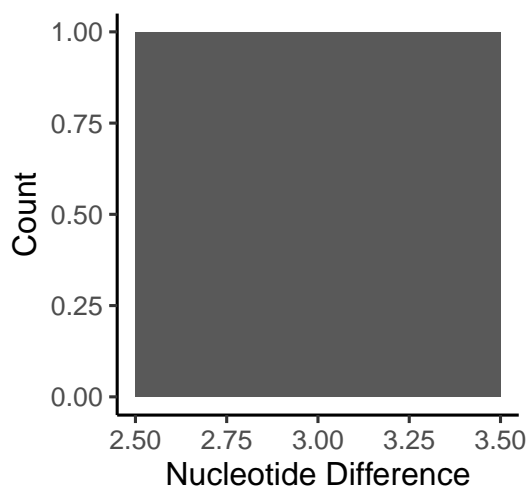
IGHV4–67*02_S6848

51 sequences assigned
9 (17.6%) exact matches, in which:
9 unique CDR3
3 unique J



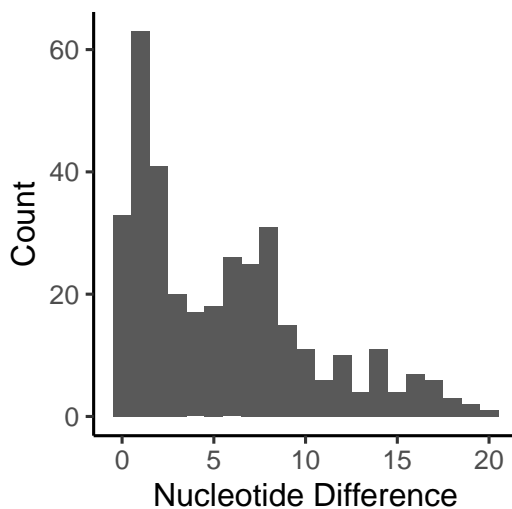
IGHV3–NL_5*01_S8361

3 sequences assigned
No exact matches.



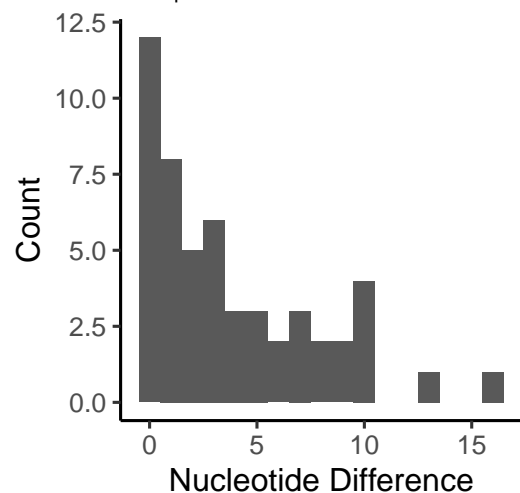
IGHV3–NL_8*01_S9578

385 sequences assigned
33 (8.6%) exact matches, in which:
26 unique CDR3
4 unique J



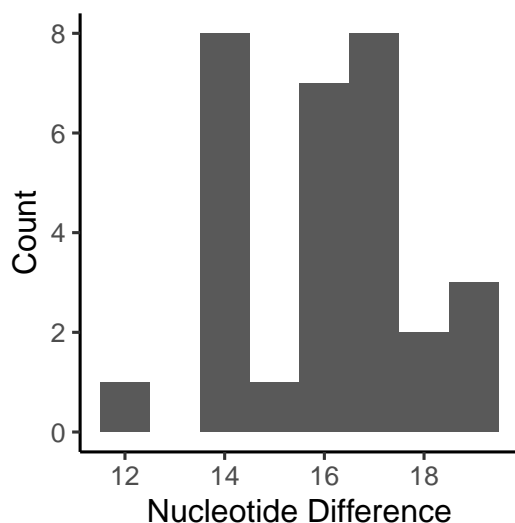
IGHV4–67*02_S7550

57 sequences assigned
12 (21.1%) exact matches, in which:
12 unique CDR3
5 unique J



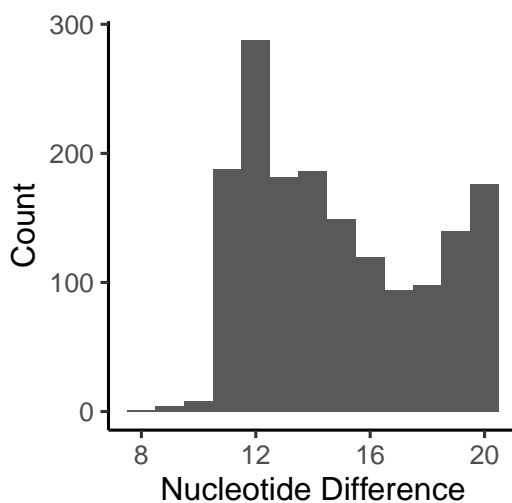
IGHV3–NL_6*02_S7808

39 sequences assigned
No exact matches.



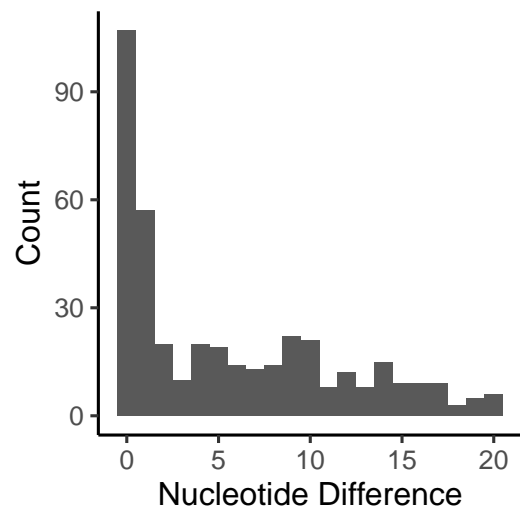
IGHV3–NL_9*01_S6098

2256 sequences assigned
No exact matches.



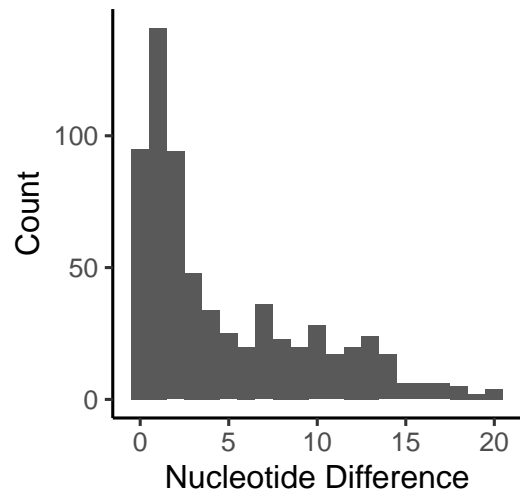
IGHV4–79*02_S9501

435 sequences assigned
107 (24.6%) exact matches, in which:
92 unique CDR3
5 unique J



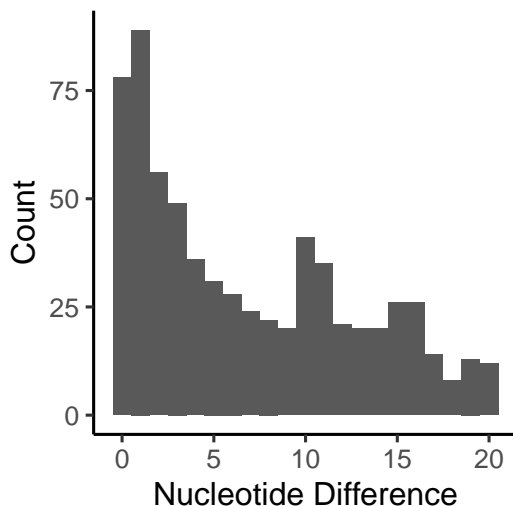
IGHV4-93*01_S5203

718 sequences assigned
95 (13.2%) exact matches, in which:
80 unique CDR3
5 unique J



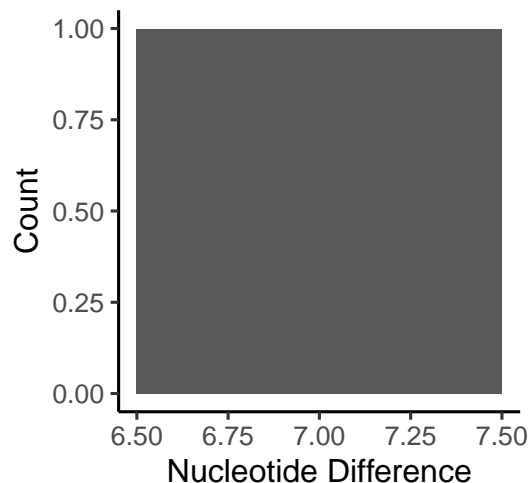
IGHV4-144*01_S3113

964 sequences assigned
78 (8.1%) exact matches, in which:
67 unique CDR3
5 unique J



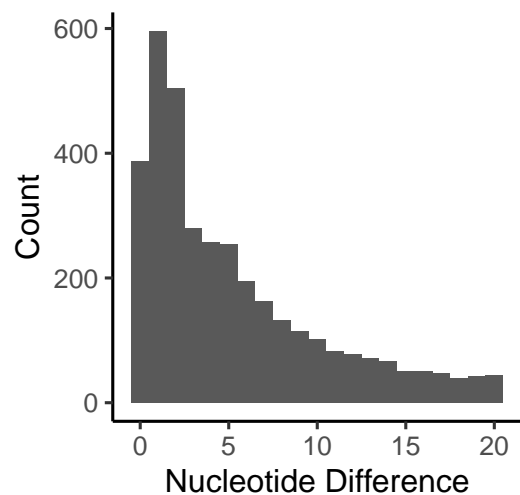
IGHV4-150*01_S9374

2 sequences assigned
No exact matches.



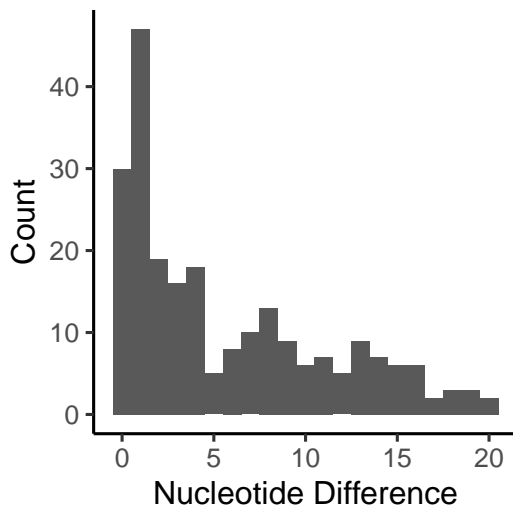
IGHV4-117*01_S0312

3762 sequences assigned
387 (10.3%) exact matches, in which:
326 unique CDR3
7 unique J



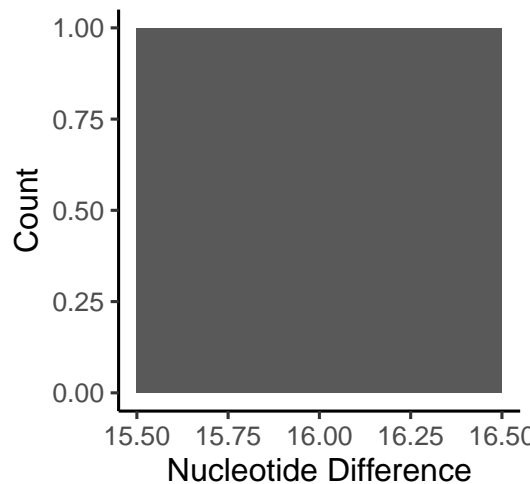
IGHV4-144*01_S3676

366 sequences assigned
30 (8.2%) exact matches, in which:
26 unique CDR3
6 unique J



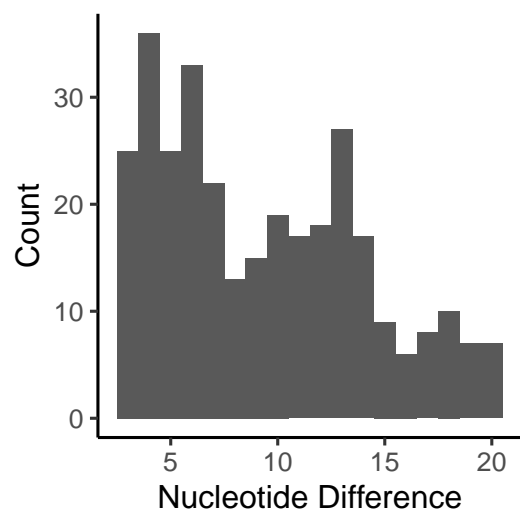
IGHV4-174*02_S5400

13 sequences assigned
No exact matches.



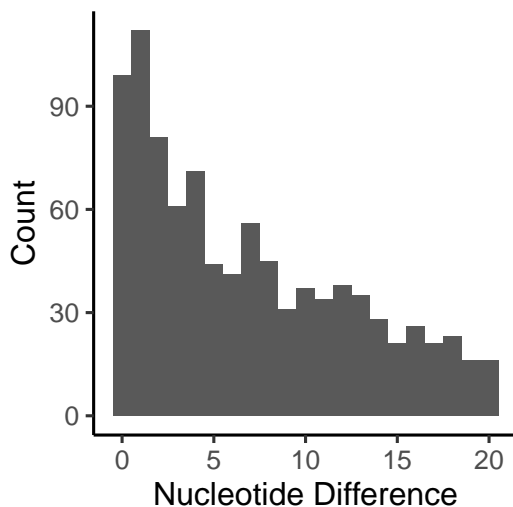
IGHV4-117*01_S3779

409 sequences assigned
No exact matches.



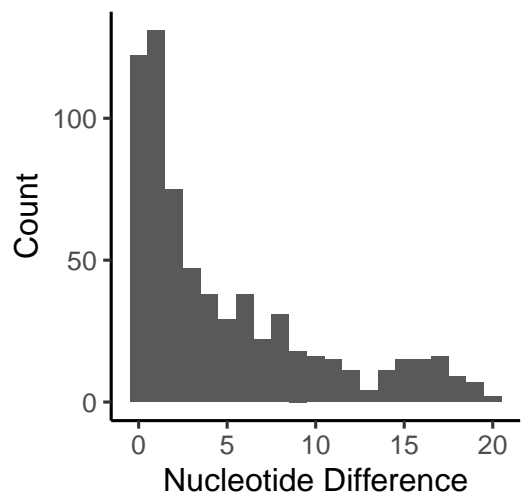
IGHV4-149*01_S1992

1175 sequences assigned
99 (8.4%) exact matches, in which:
84 unique CDR3
5 unique J



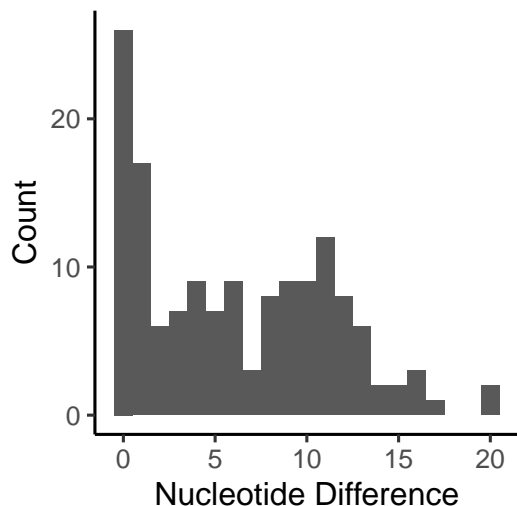
IGHV4-NL_1*01_S9508

714 sequences assigned
122 (17.1%) exact matches, in which:
103 unique CDR3
6 unique J



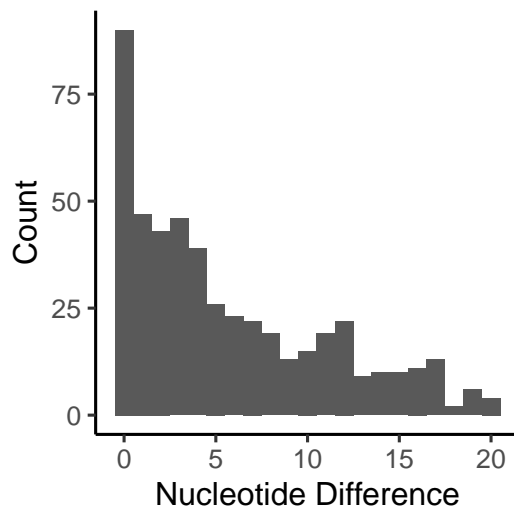
IGHV4–NL_1*02_S4188

149 sequences assigned
26 (17.4%) exact matches, in which:
23 unique CDR3
4 unique J



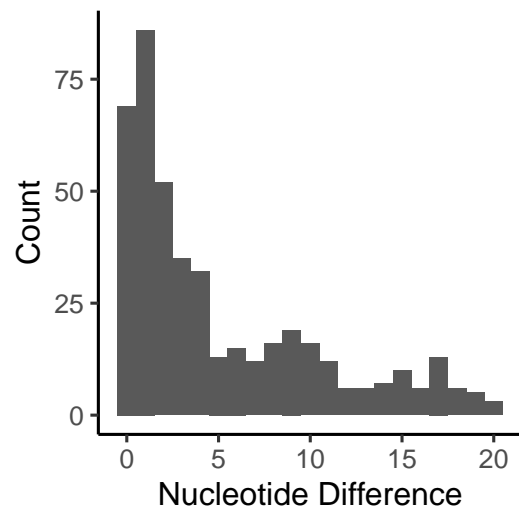
IGHV4–NL_10*01_S7684

512 sequences assigned
90 (17.6%) exact matches, in which:
82 unique CDR3
6 unique J



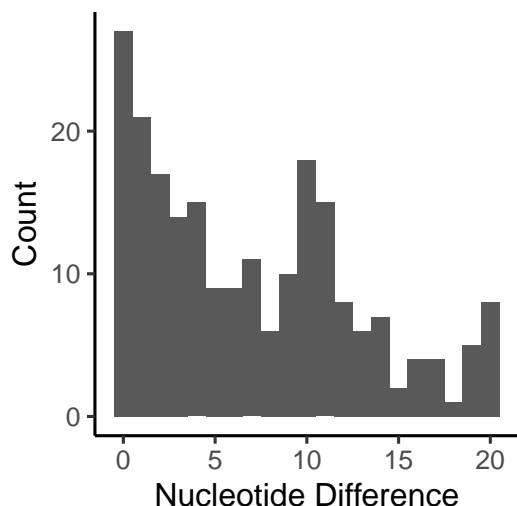
IGHV4–NL_15*01_S7687

467 sequences assigned
69 (14.8%) exact matches, in which:
64 unique CDR3
5 unique J



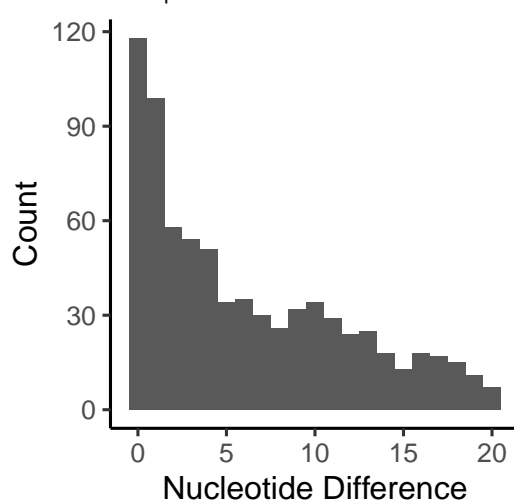
IGHV4–NL_1*02_S4188_1

228 sequences assigned
27 (11.8%) exact matches, in which:
25 unique CDR3
4 unique J



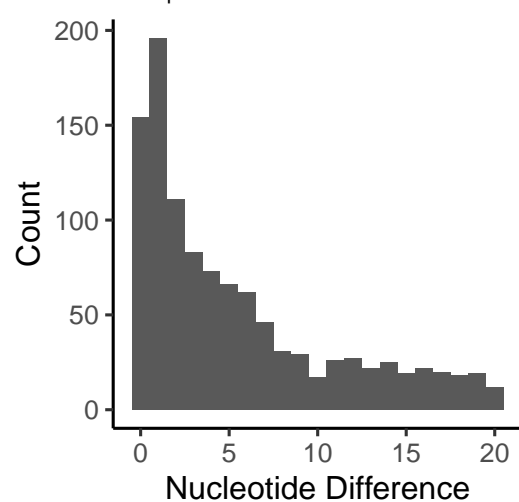
IGHV4–NL_10*01_S7684

814 sequences assigned
118 (14.5%) exact matches, in which:
111 unique CDR3
6 unique J



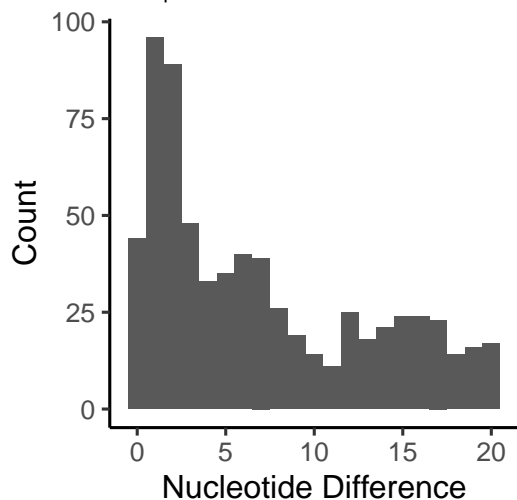
IGHV4–NL_16*01_S2138

1185 sequences assigned
154 (13%) exact matches, in which:
134 unique CDR3
5 unique J



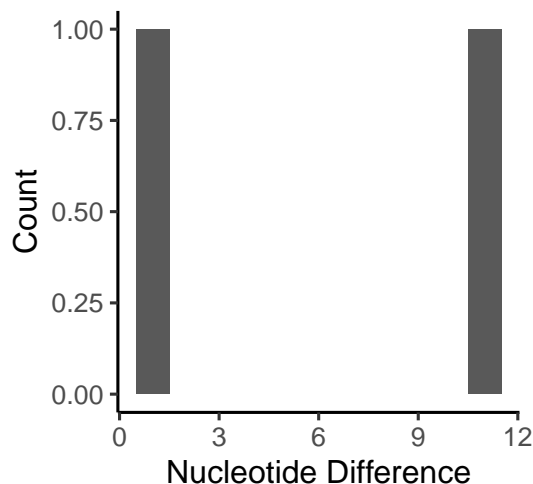
IGHV4–NL_10*01_S6744

796 sequences assigned
44 (5.5%) exact matches, in which:
40 unique CDR3
5 unique J



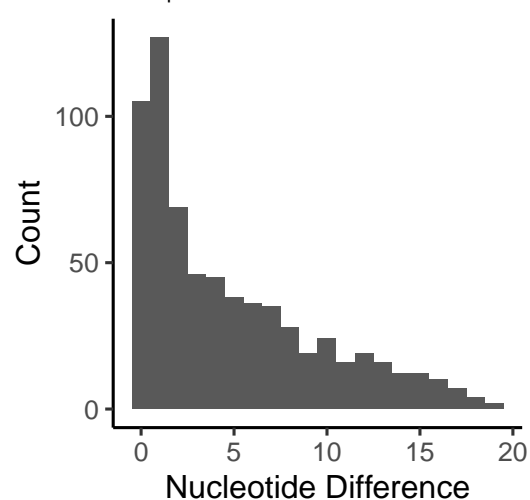
IGHV4–NL_12*01_S8068

4 sequences assigned
No exact matches.



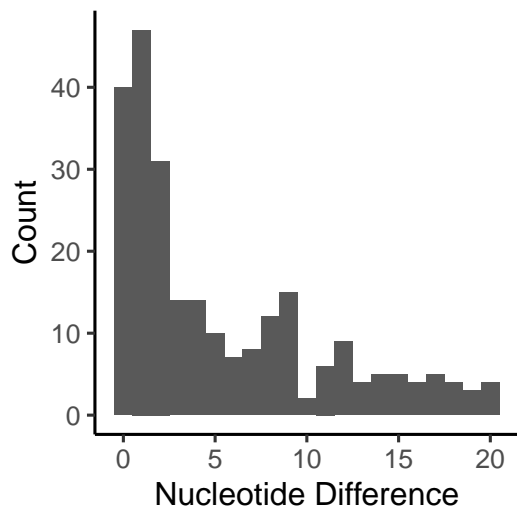
IGHV4–NL_17*01_S0936

798 sequences assigned
105 (13.2%) exact matches, in which:
91 unique CDR3
6 unique J



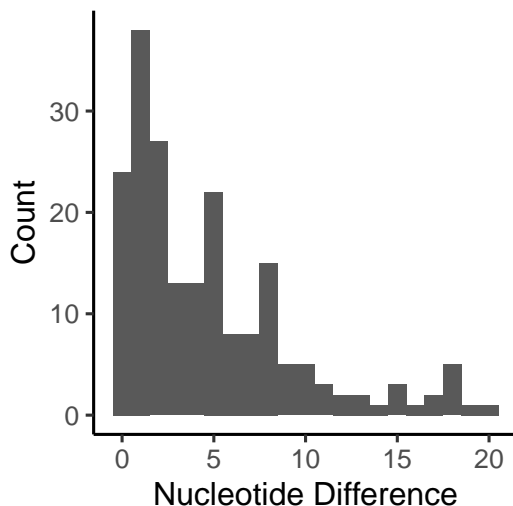
IGHV4–NL_17*01_S5431

264 sequences assigned
40 (15.2%) exact matches, in which:
33 unique CDR3
6 unique J



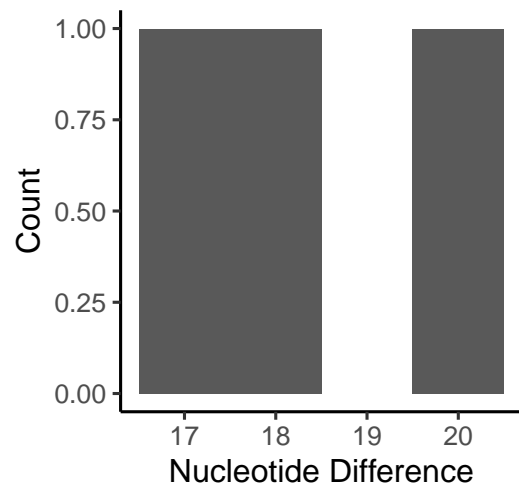
IGHV4–NL_20*01_S6186

202 sequences assigned
24 (11.9%) exact matches, in which:
21 unique CDR3
4 unique J



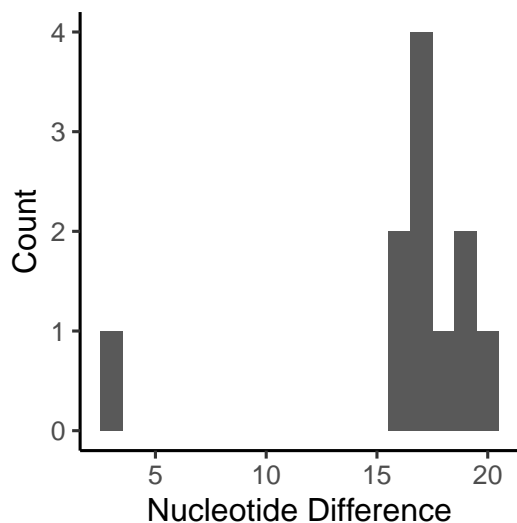
IGHV4–NL_21*01_S6308

5 sequences assigned
No exact matches.



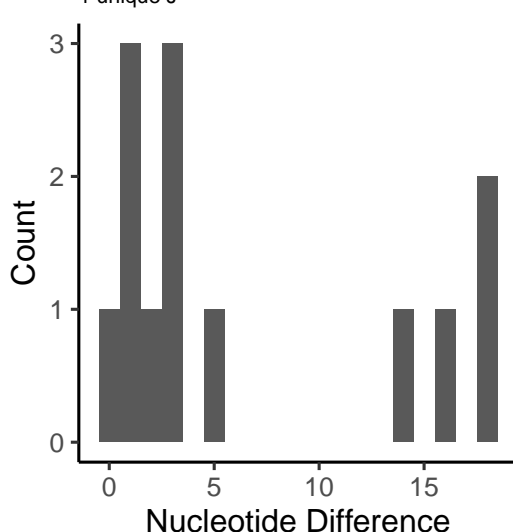
IGHV4–NL_19*01_S2661

15 sequences assigned
No exact matches.



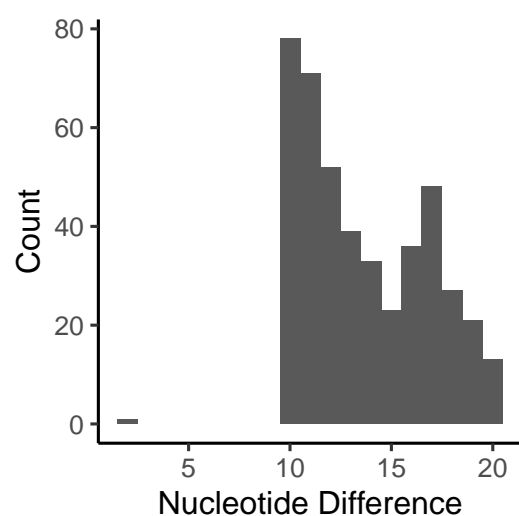
IGHV4–NL_21*01_S0138

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



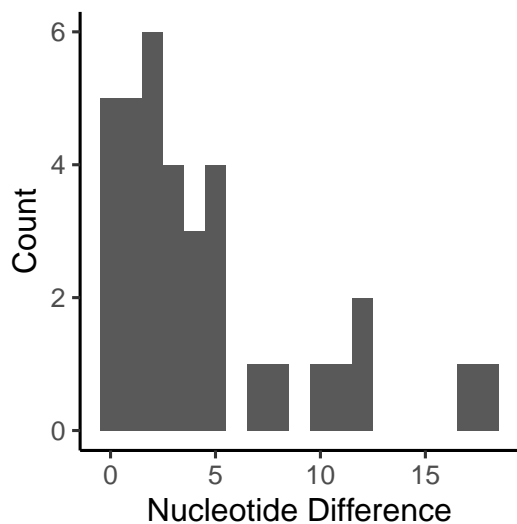
IGHV4–NL_21*01_S7469

551 sequences assigned
No exact matches.



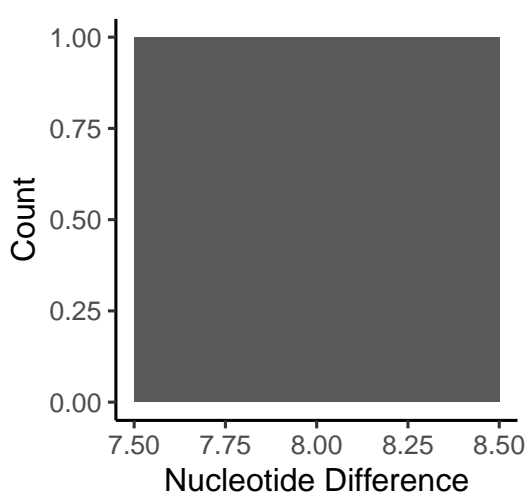
IGHV4–NL_19*01_S3005

36 sequences assigned
5 (13.9%) exact matches, in which:
4 unique CDR3
3 unique J



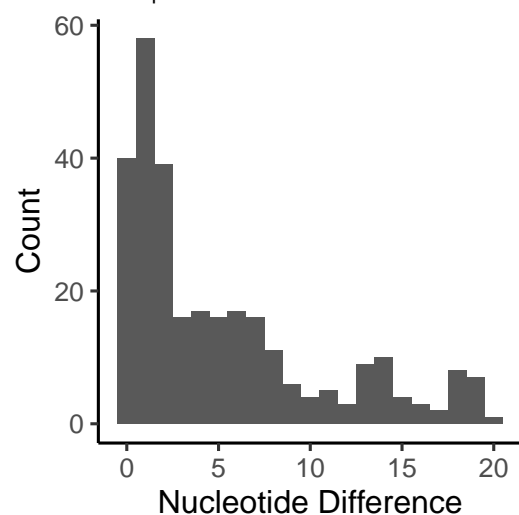
IGHV4–NL_21*01_S0142

3 sequences assigned
No exact matches.



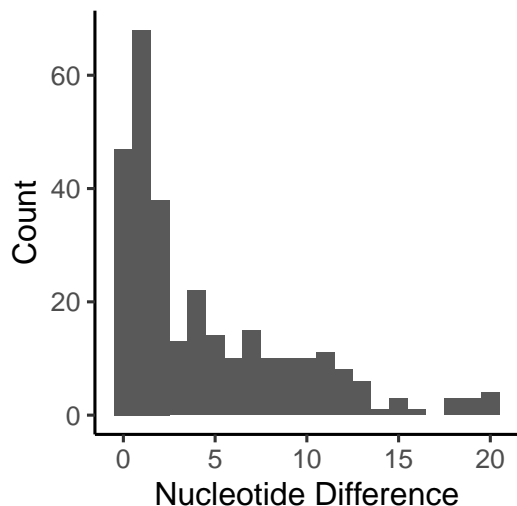
IGHV4–NL_22*01_S6977

306 sequences assigned
40 (13.1%) exact matches, in which:
37 unique CDR3
6 unique J



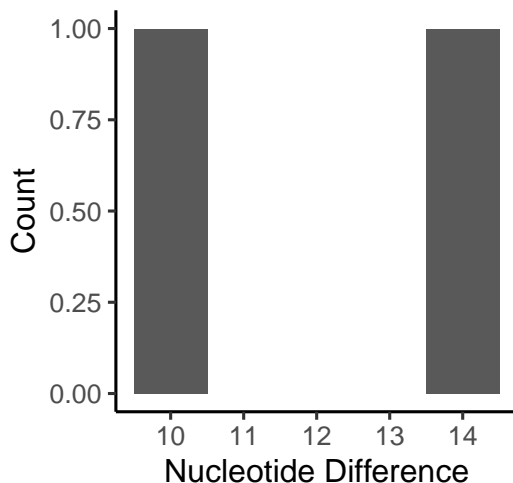
IGHV4-NL_22*01_S9255

325 sequences assigned
47 (14.5%) exact matches, in which:
39 unique CDR3
5 unique J



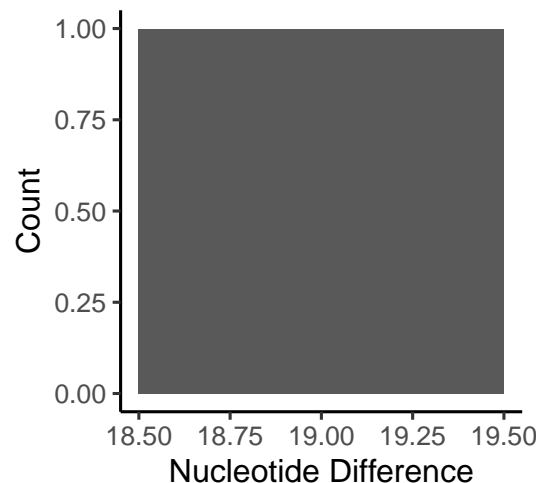
IGHV4-NL_26*01_S2267

3 sequences assigned
No exact matches.



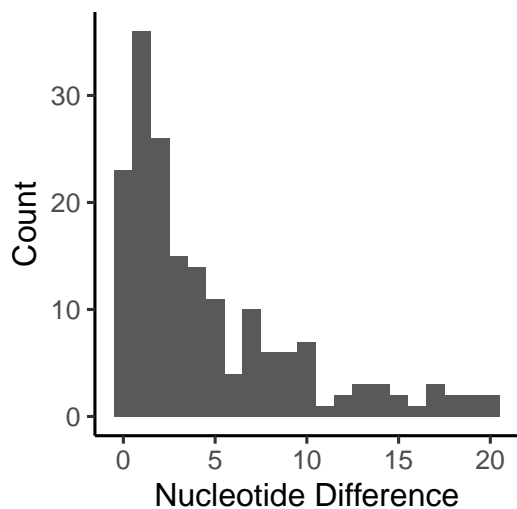
IGHV4-NL_28*01_S2610

1 sequences assigned
No exact matches.



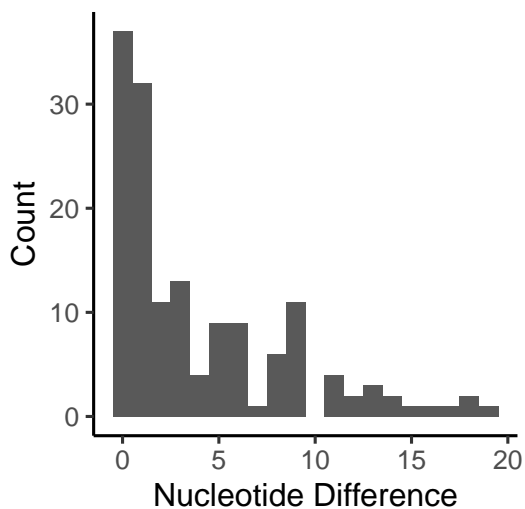
IGHV4-NL_24*01_S5697

201 sequences assigned
23 (11.4%) exact matches, in which:
21 unique CDR3
3 unique J



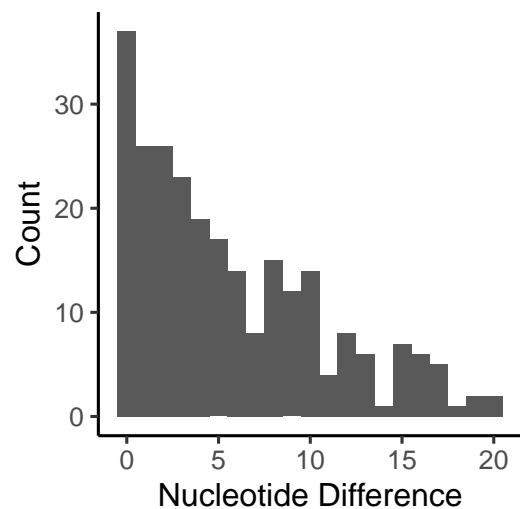
IGHV4-NL_27*01_S3510

154 sequences assigned
37 (24%) exact matches, in which:
35 unique CDR3
4 unique J



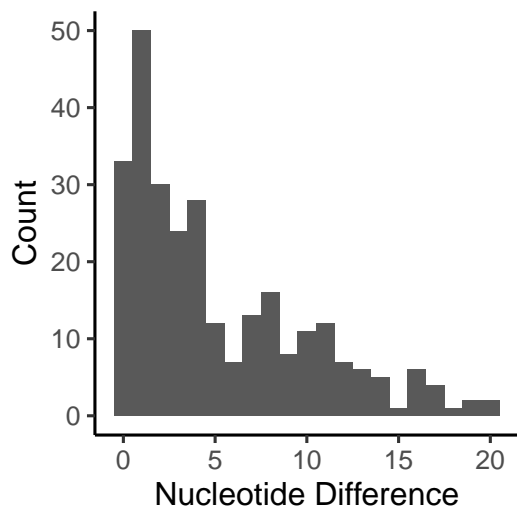
IGHV4-NL_29*01_S5315

262 sequences assigned
37 (14.1%) exact matches, in which:
29 unique CDR3
4 unique J



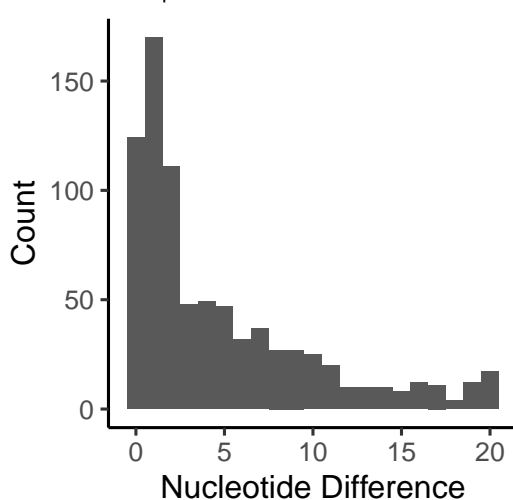
IGHV4-NL_25*01_S6383

298 sequences assigned
33 (11.1%) exact matches, in which:
25 unique CDR3
5 unique J



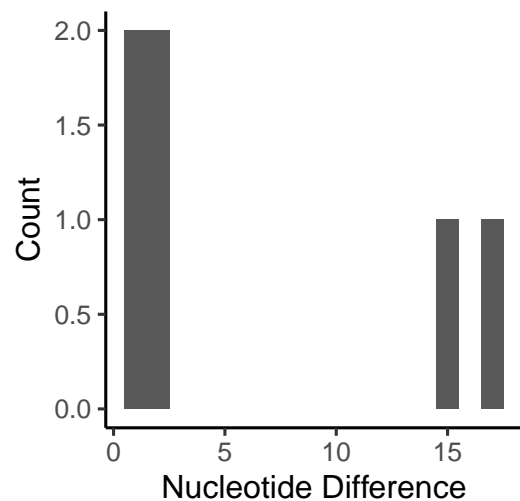
IGHV4-NL_27*01_S5829

867 sequences assigned
124 (14.3%) exact matches, in which:
108 unique CDR3
6 unique J



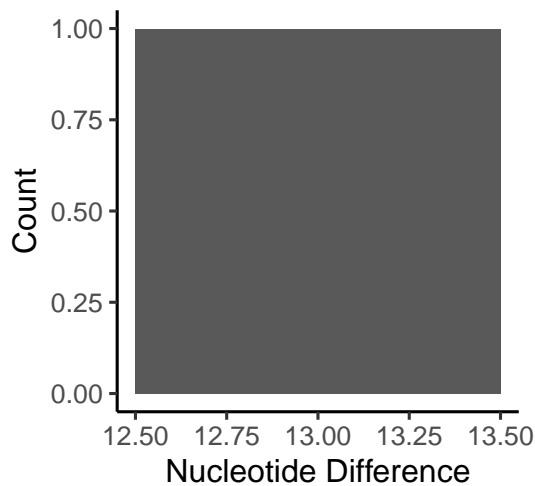
IGHV4-NL_3*01_S7576

6 sequences assigned
No exact matches.



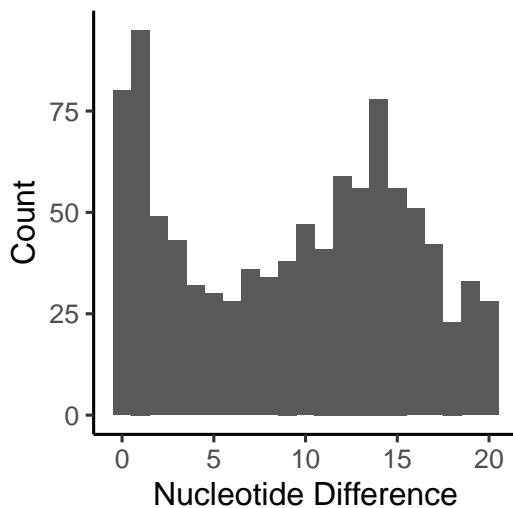
IGHV4–NL_30*01_S4257

1 sequences assigned
No exact matches.



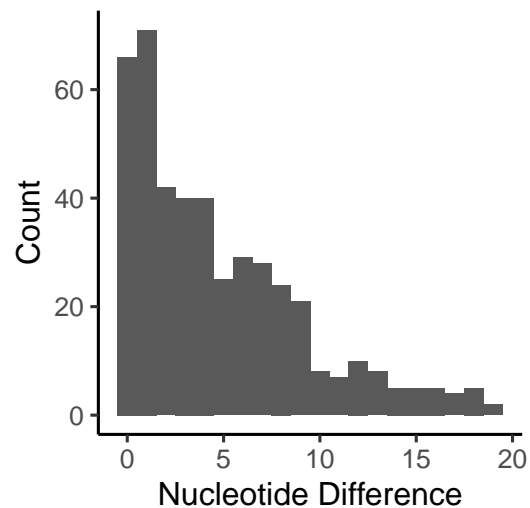
IGHV4–NL_33*01_S4467

1188 sequences assigned
80 (6.7%) exact matches, in which:
73 unique CDR3
5 unique J



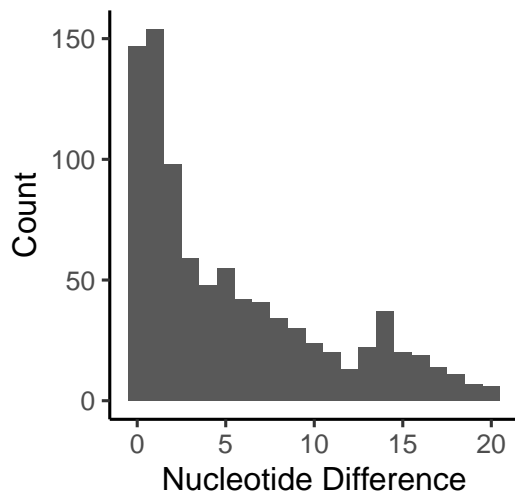
IGHV4–NL_36*01_S6973

450 sequences assigned
66 (14.7%) exact matches, in which:
55 unique CDR3
4 unique J



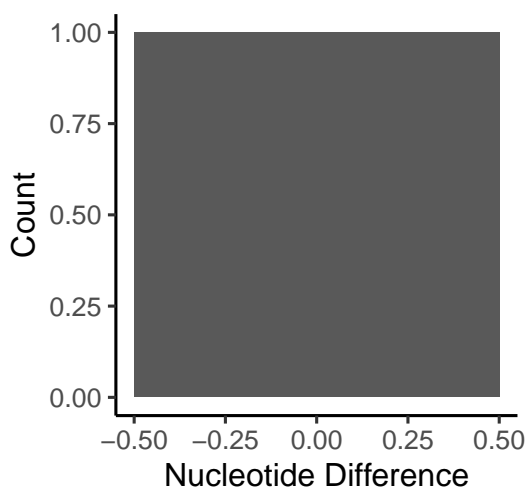
IGHV4–NL_31*01_S7693

933 sequences assigned
147 (15.8%) exact matches, in which:
133 unique CDR3
6 unique J



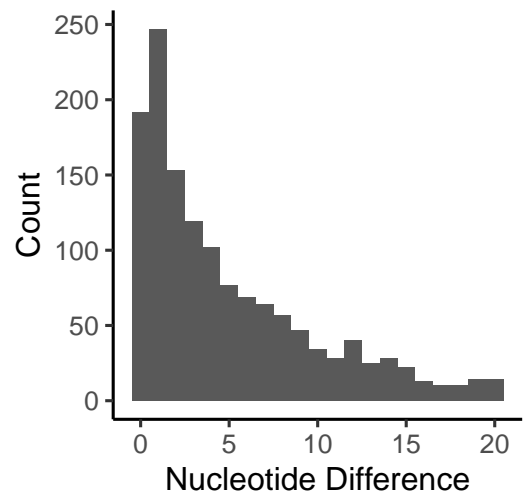
IGHV4–NL_34*01_S4637

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



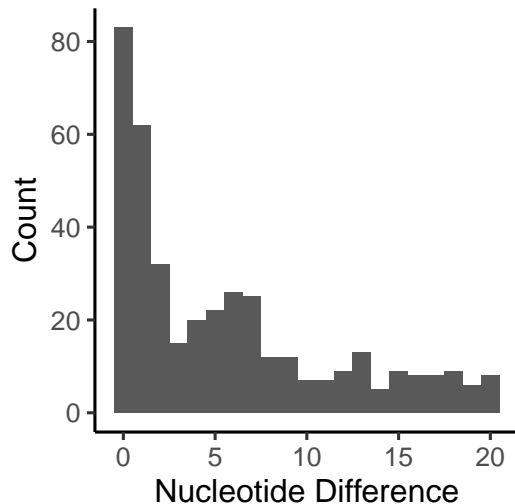
IGHV4–NL_38*01_S8437

1417 sequences assigned
192 (13.5%) exact matches, in which:
159 unique CDR3
6 unique J



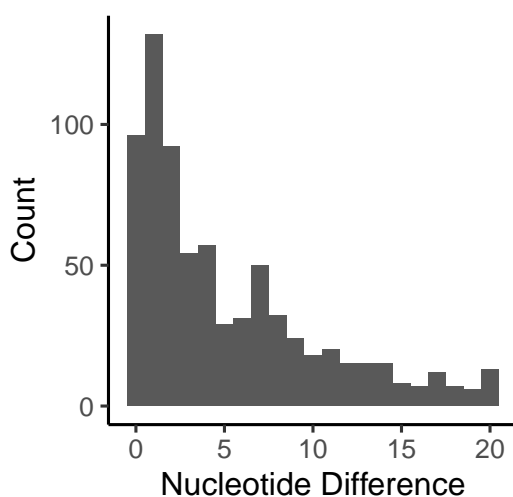
IGHV4–NL_32*01_S3033

410 sequences assigned
83 (20.2%) exact matches, in which:
71 unique CDR3
6 unique J



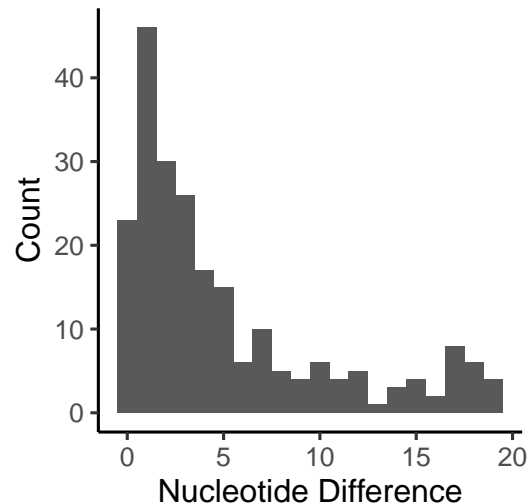
IGHV4–NL_36*01_S5319

787 sequences assigned
96 (12.2%) exact matches, in which:
75 unique CDR3
6 unique J



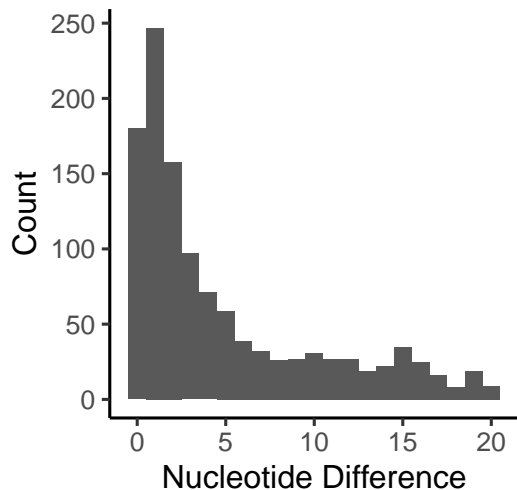
IGHV4–NL_4*01_S8866

273 sequences assigned
23 (8.4%) exact matches, in which:
21 unique CDR3
5 unique J



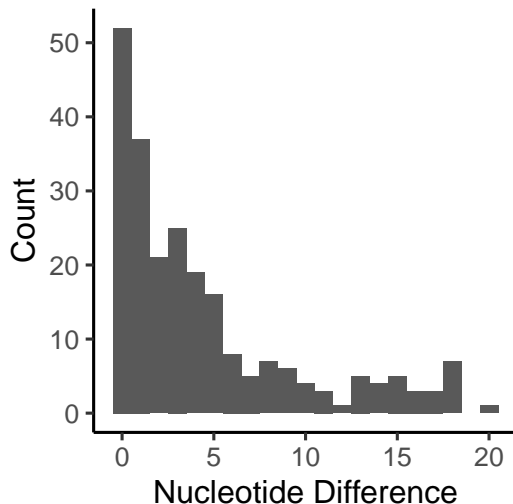
IGHV4–NL_40*01_S0979

1221 sequences assigned
180 (14.7%) exact matches, in which:
158 unique CDR3
6 unique J



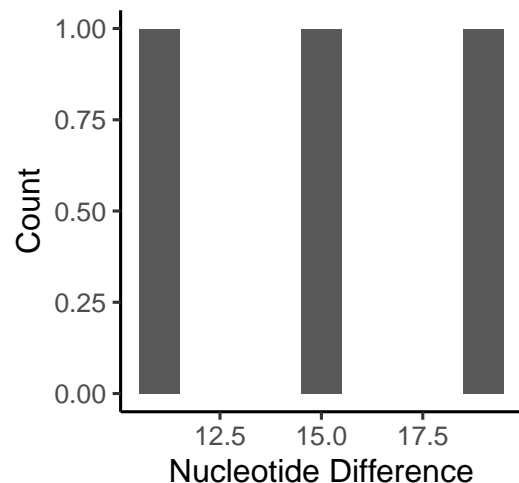
IGHV4–NL_5*01_S5158

277 sequences assigned
52 (18.8%) exact matches, in which:
47 unique CDR3
6 unique J



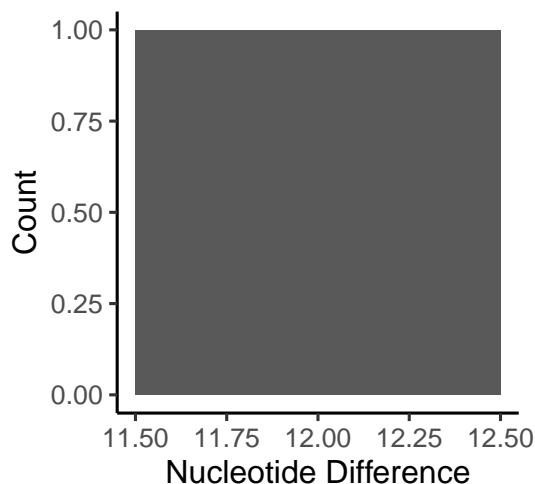
IGHV4–NL_9*01_S4567

166 sequences assigned
No exact matches.



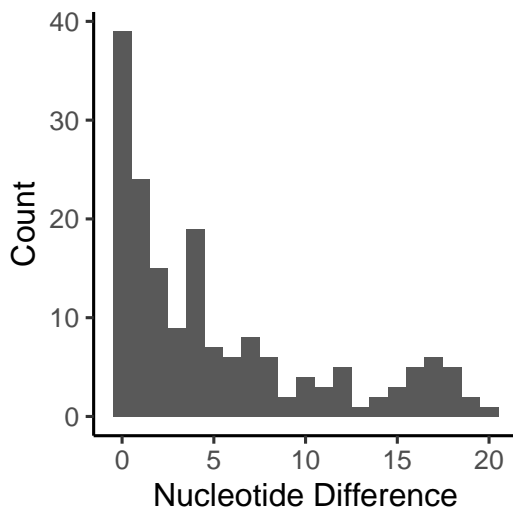
IGHV4–NL_42*01_S3666

2 sequences assigned
No exact matches.



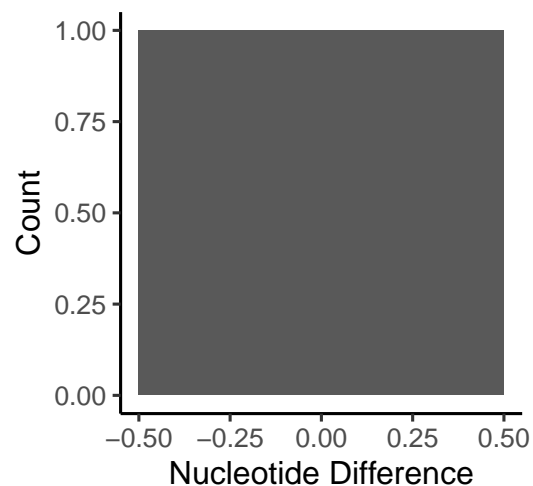
IGHV4–NL_7*02_S0143

205 sequences assigned
39 (19%) exact matches, in which:
31 unique CDR3
6 unique J



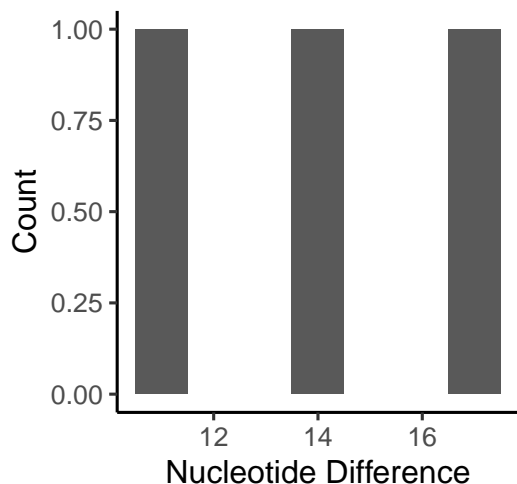
IGHV4–NL_9*01_S4906

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



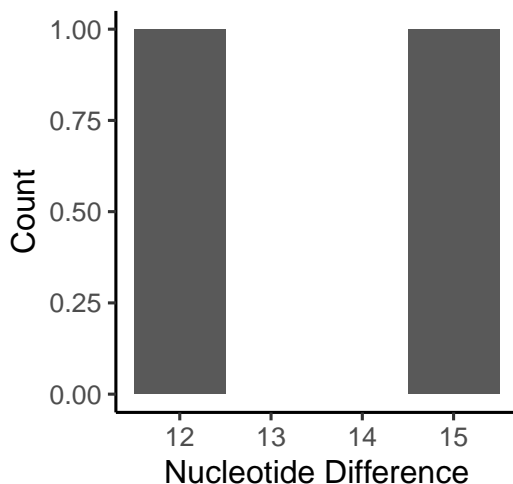
IGHV4–NL_43*01_S4510

5 sequences assigned
No exact matches.



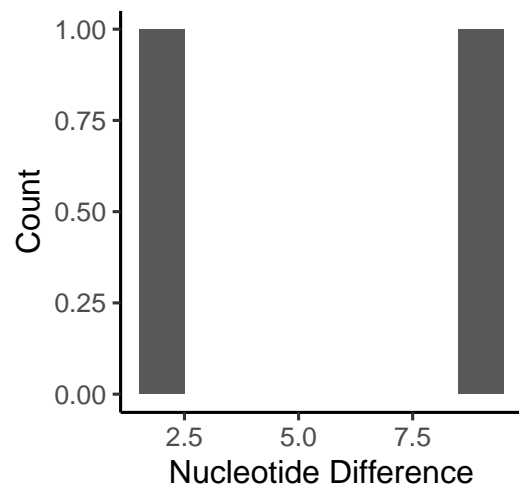
IGHV4–NL_9*01_S2406

3 sequences assigned
No exact matches.



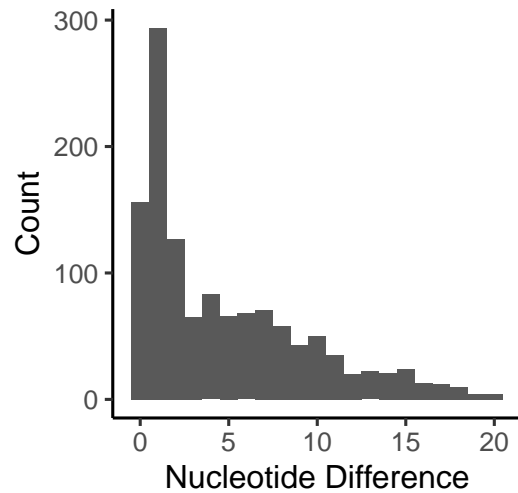
IGHV4–NL_9*01_S6766

2 sequences assigned
No exact matches.



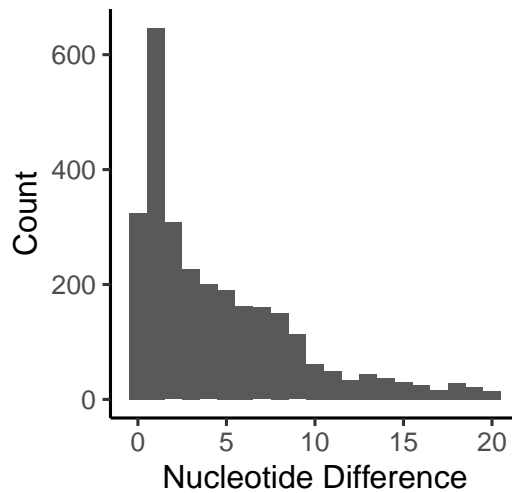
IGHV5–15*01_S2952

1260 sequences assigned
156 (12.4%) exact matches, in which:
104 unique CDR3
5 unique J



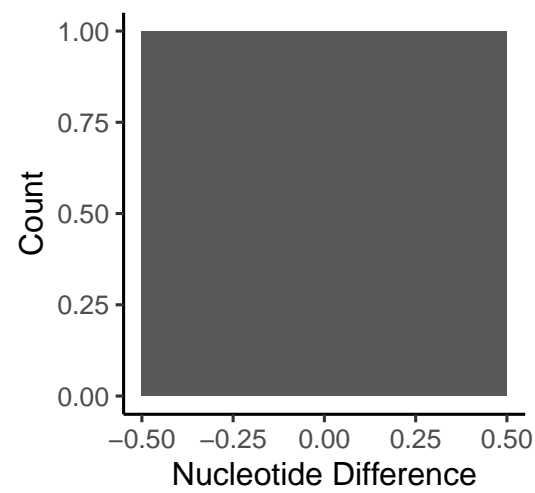
IGHV5–157*02_S3096

2937 sequences assigned
325 (11.1%) exact matches, in which:
194 unique CDR3
6 unique J



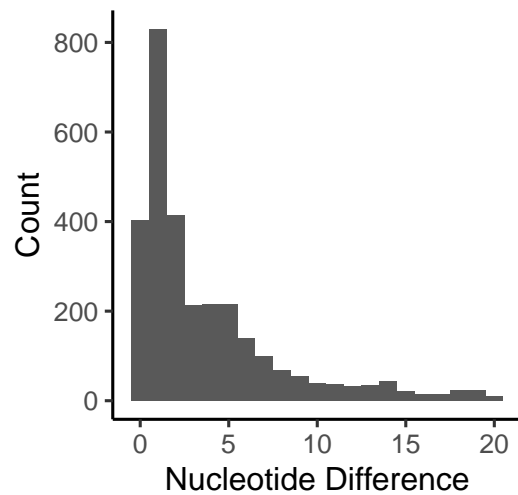
IGHV7–135*01_S9086

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



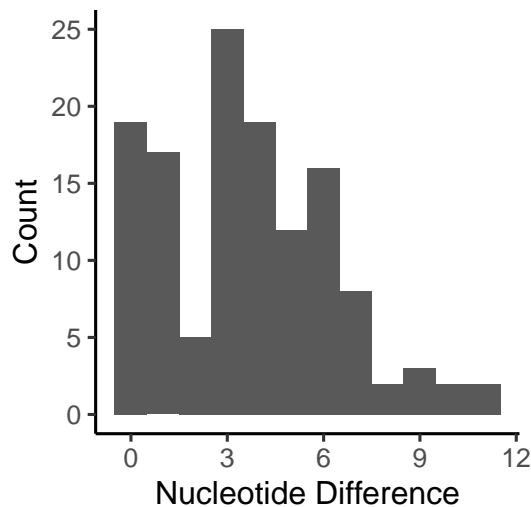
IGHV5–15*01_S8661

2982 sequences assigned
403 (13.5%) exact matches, in which:
252 unique CDR3
5 unique J



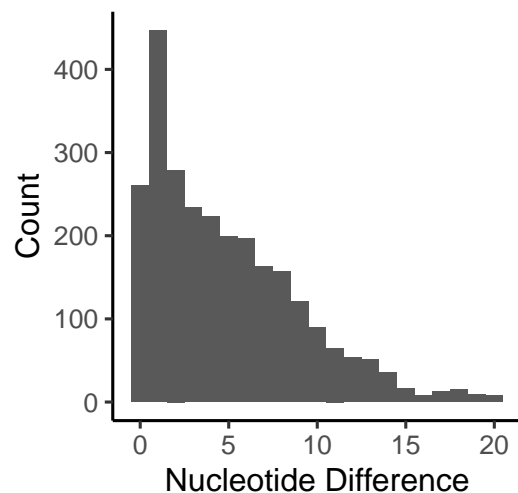
IGHV7–86*01_S3594

133 sequences assigned
19 (14.3%) exact matches, in which:
10 unique CDR3
2 unique J



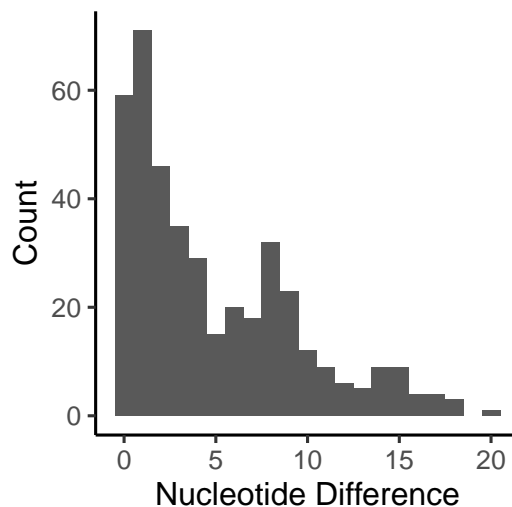
IGHV5–157*01_S6479

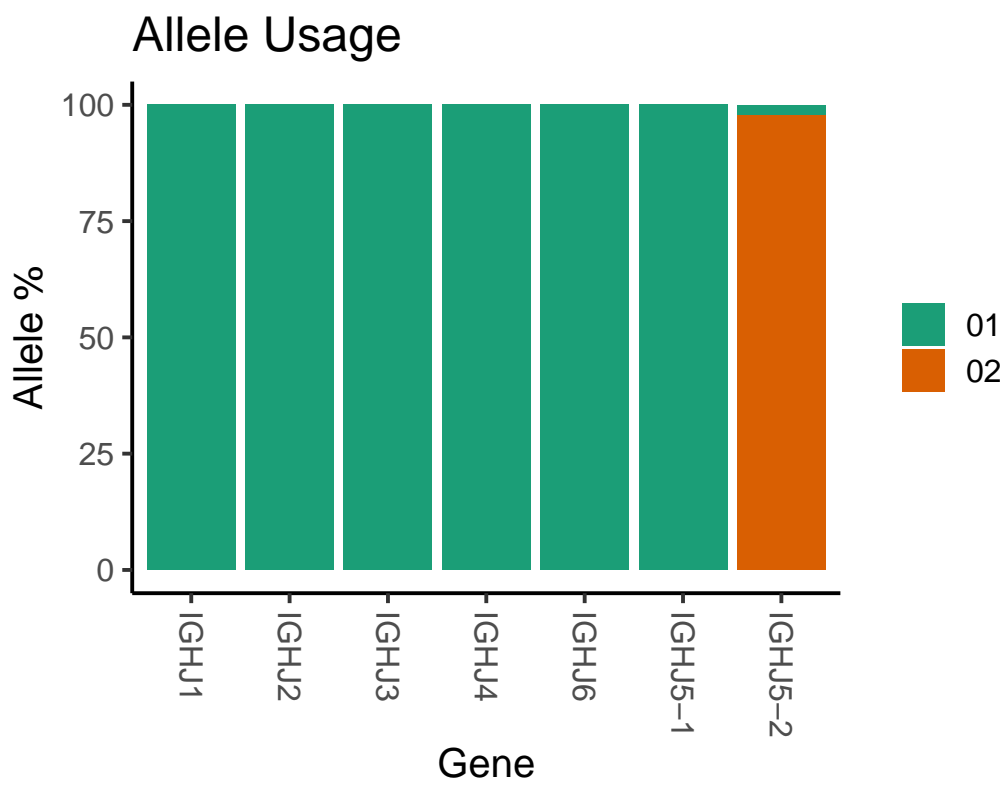
2712 sequences assigned
260 (9.6%) exact matches, in which:
134 unique CDR3
7 unique J



IGHV7–86*01_S3619

569 sequences assigned
59 (10.4%) exact matches, in which:
33 unique CDR3
3 unique J





Warning – no inferred sequences found.