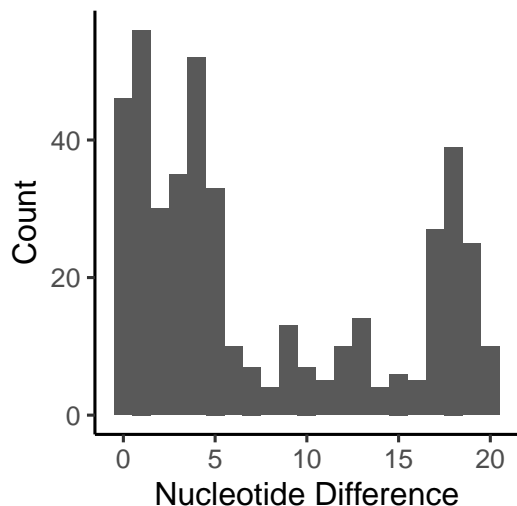


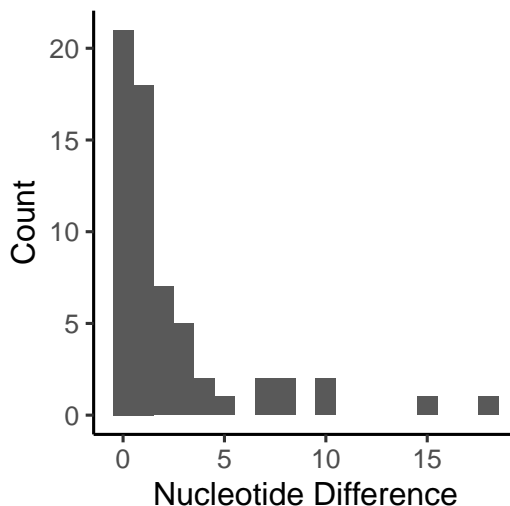
IGHV1-60*01_S7772

475 sequences assigned
46 (9.7%) exact matches, in which:
26 unique CDR3
6 unique J



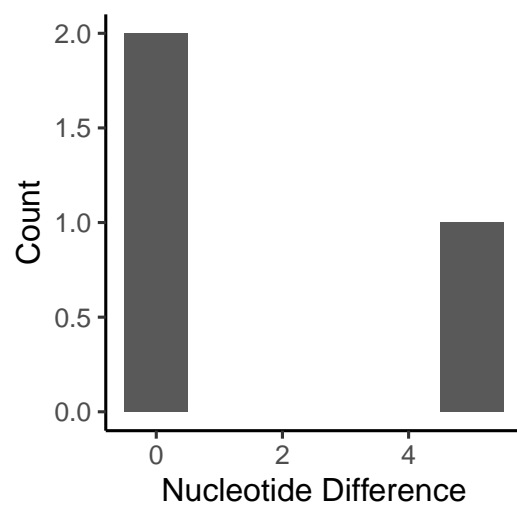
IGHV1-138*01_S2593

62 sequences assigned
21 (33.9%) exact matches, in which:
12 unique CDR3
6 unique J



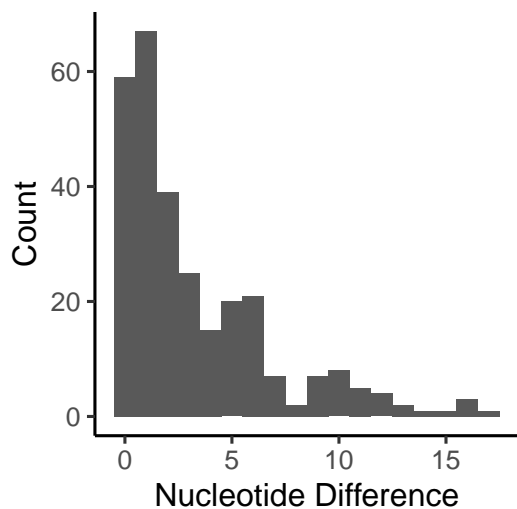
IGHV1-193*01_S6037

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



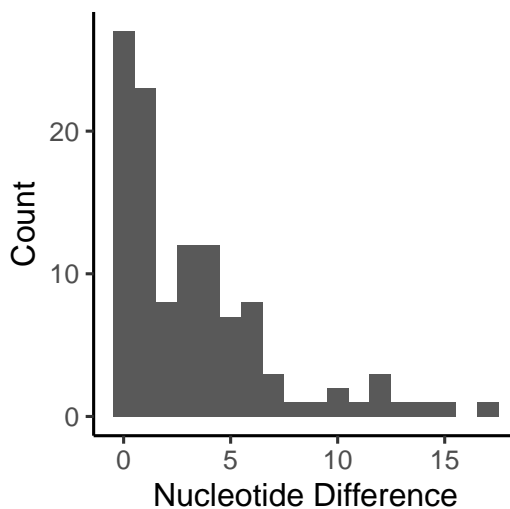
IGHV1-84*01_S4663

291 sequences assigned
59 (20.3%) exact matches, in which:
20 unique CDR3
5 unique J



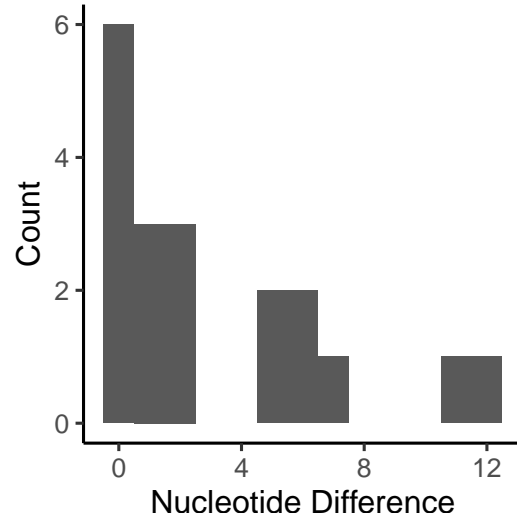
IGHV1-138*01_S8042

112 sequences assigned
27 (24.1%) exact matches, in which:
20 unique CDR3
6 unique J



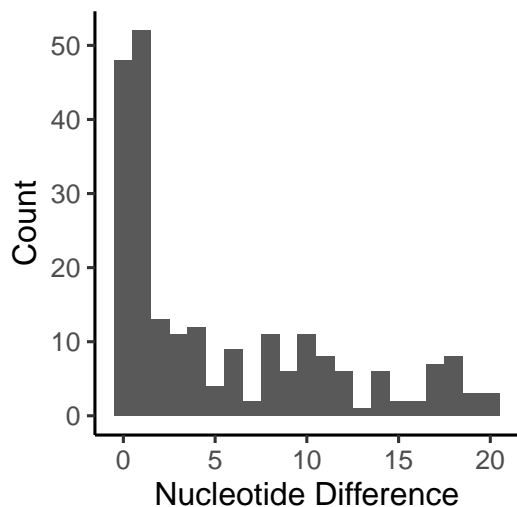
IGHV1-NL_1*01_S2052

23 sequences assigned
6 (26.1%) exact matches, in which:
6 unique CDR3
3 unique J



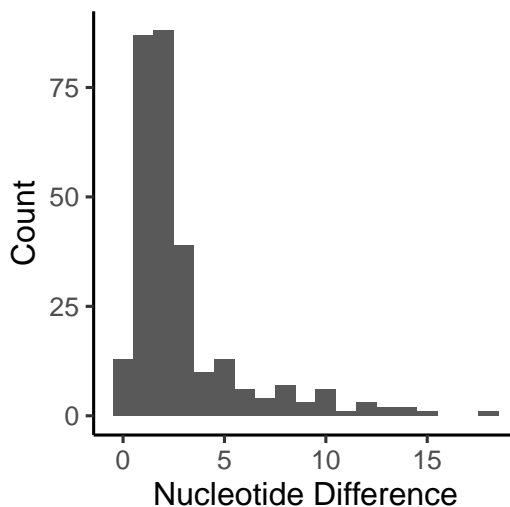
IGHV1-84*01_S9171

244 sequences assigned
48 (19.7%) exact matches, in which:
23 unique CDR3
6 unique J



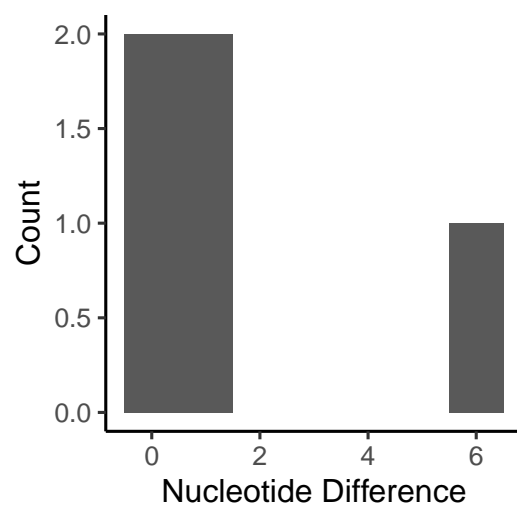
IGHV1-170*01_S3055

288 sequences assigned
13 (4.5%) exact matches, in which:
8 unique CDR3
3 unique J



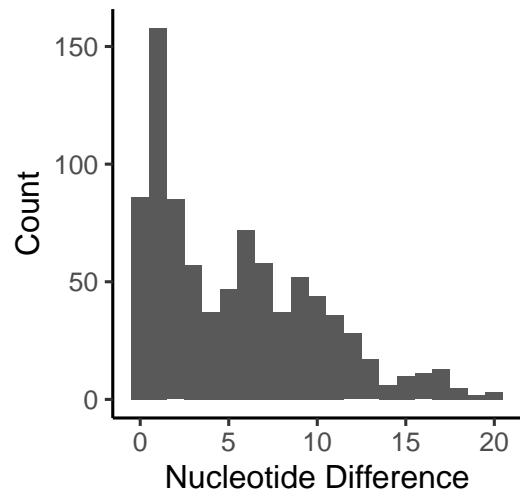
IGHV1-NL_1*01_S8523

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



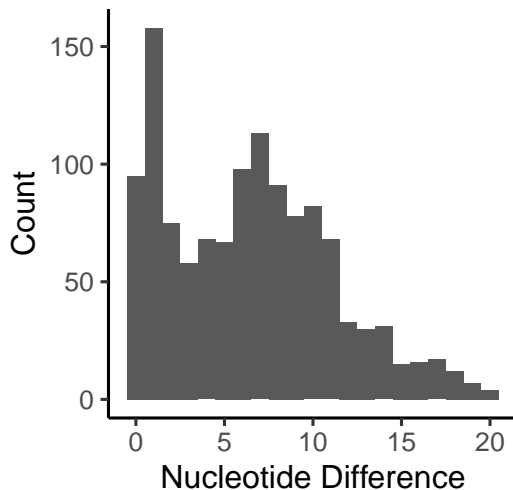
IGHV2-7*02_S1732

875 sequences assigned
86 (9.8%) exact matches, in which:
44 unique CDR3
6 unique J



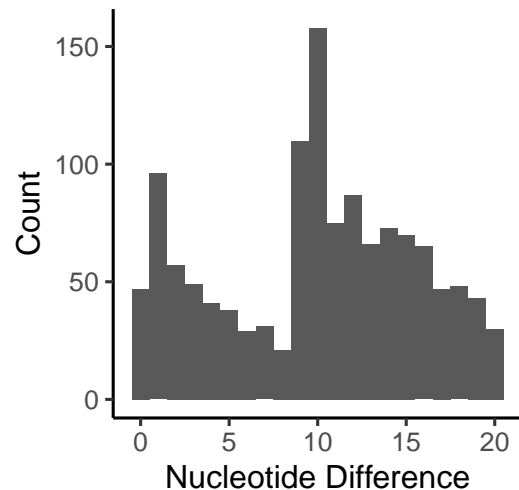
IGHV2-69*01_S6153

1297 sequences assigned
95 (7.3%) exact matches, in which:
37 unique CDR3
6 unique J



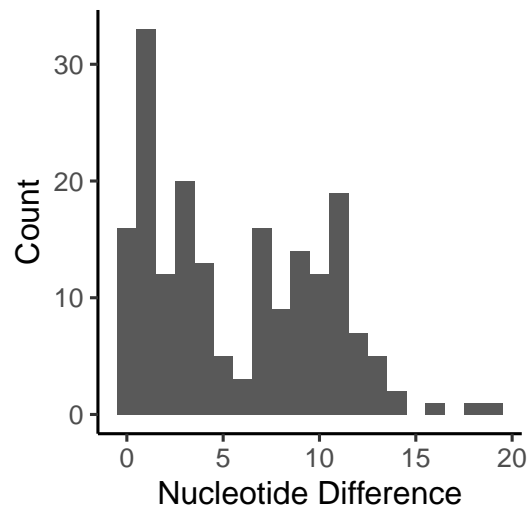
IGHV2-NL_1*01_S9725

1468 sequences assigned
47 (3.2%) exact matches, in which:
25 unique CDR3
6 unique J



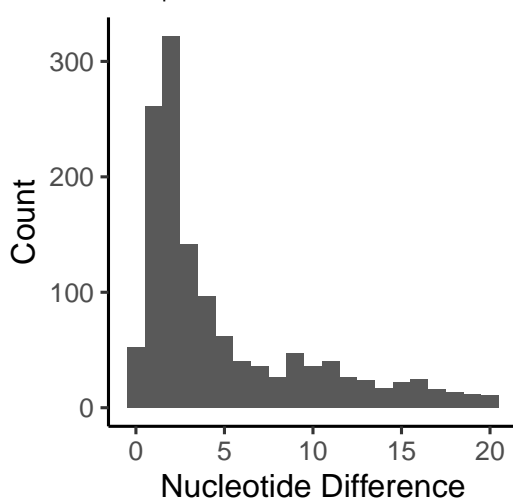
IGHV2-7*02_S4285

193 sequences assigned
16 (8.3%) exact matches, in which:
10 unique CDR3
2 unique J



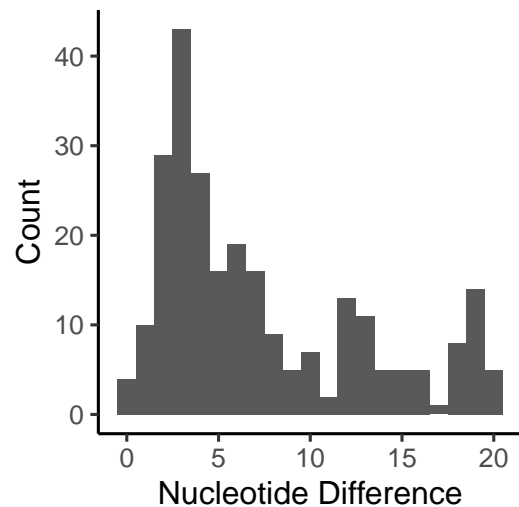
IGHV2-173*01_G289T

1470 sequences assigned
52 (3.5%) exact matches, in which:
47 unique CDR3
6 unique J



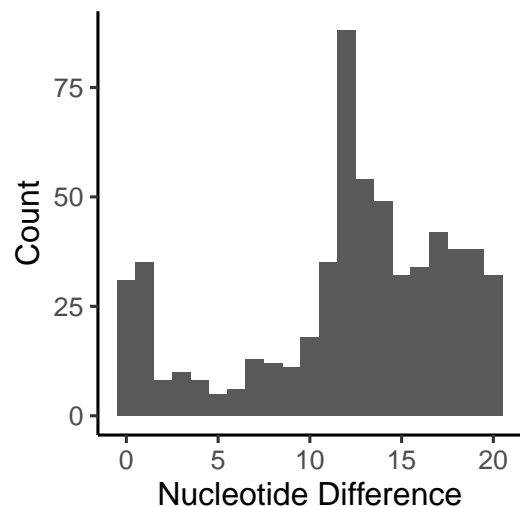
IGHV3-5*01_S0388

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



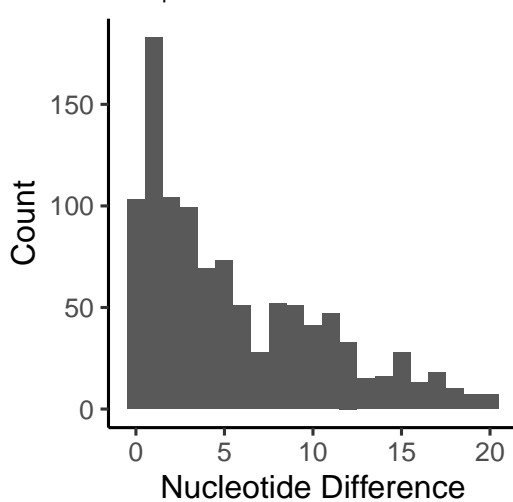
IGHV2-69*01_S2332

684 sequences assigned
31 (4.5%) exact matches, in which:
12 unique CDR3
4 unique J



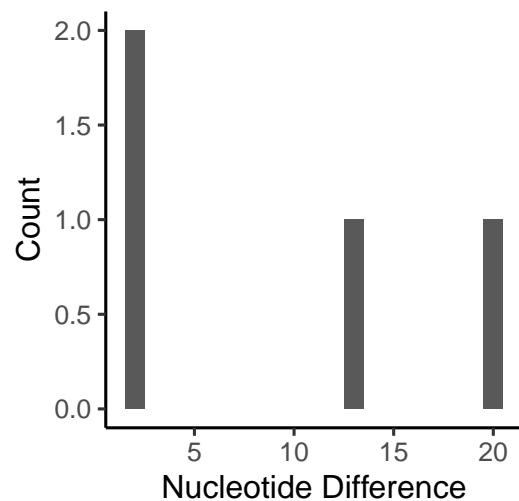
IGHV2-NL_1*01_S5779

1114 sequences assigned
103 (9.2%) exact matches, in which:
55 unique CDR3
7 unique J



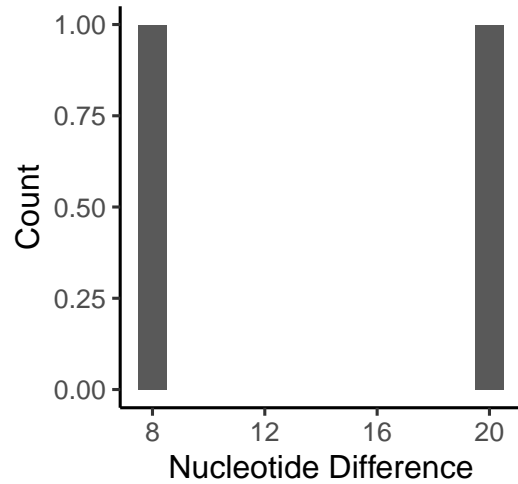
IGHV3-28*01_S0096

7 sequences assigned
No exact matches.



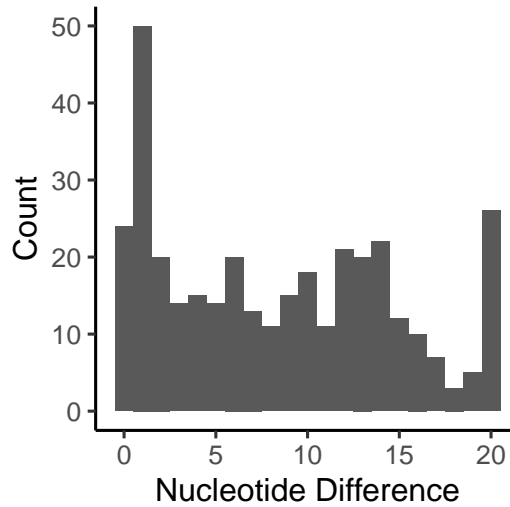
IGHV3-28*01_S3792

2 sequences assigned
No exact matches.



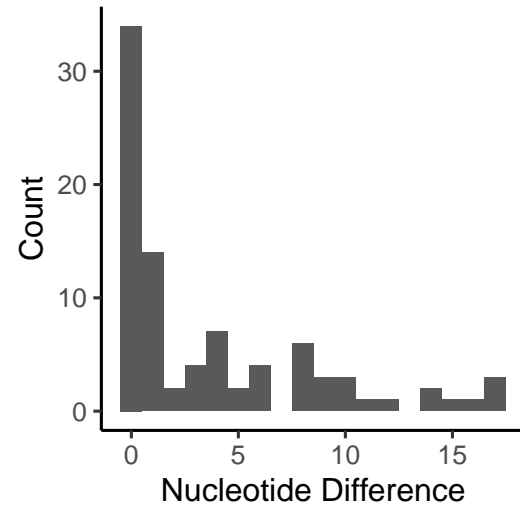
IGHV3-37*01_S6630

561 sequences assigned
24 (4.3%) exact matches, in which:
17 unique CDR3
4 unique J



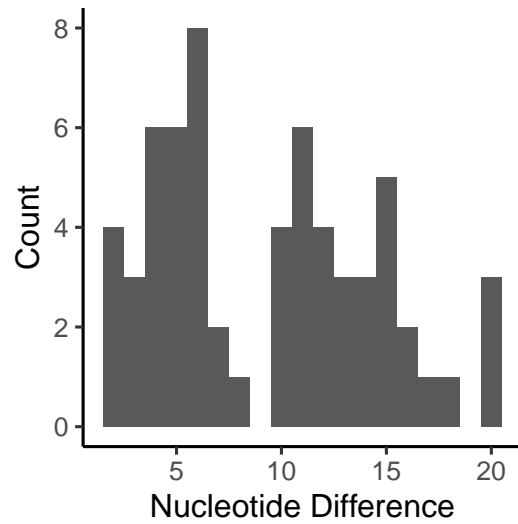
IGHV3-73*02_S5005

94 sequences assigned
34 (36.2%) exact matches, in which:
24 unique CDR3
6 unique J



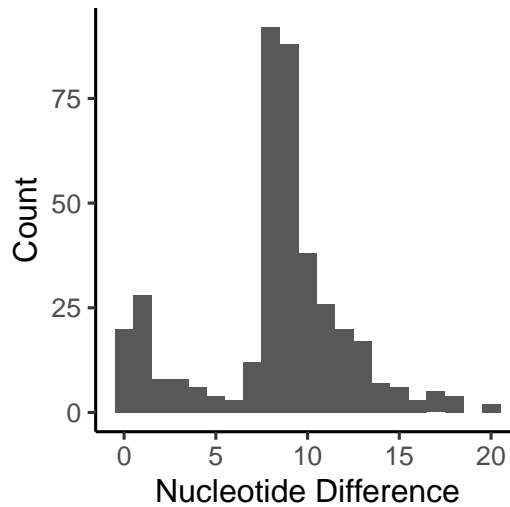
IGHV3-28*01_S5703

63 sequences assigned
No exact matches.



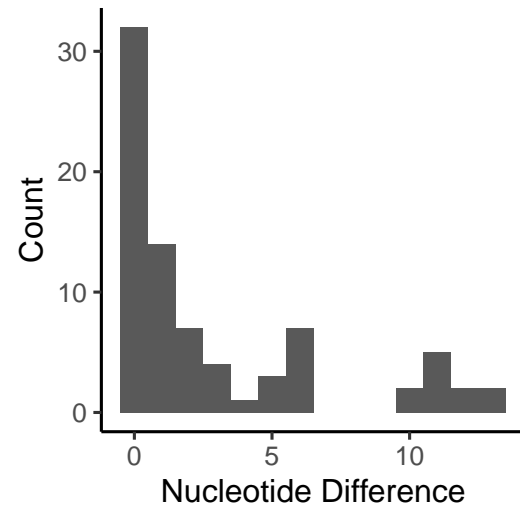
IGHV3-53*01_S4423

416 sequences assigned
20 (4.8%) exact matches, in which:
14 unique CDR3
3 unique J



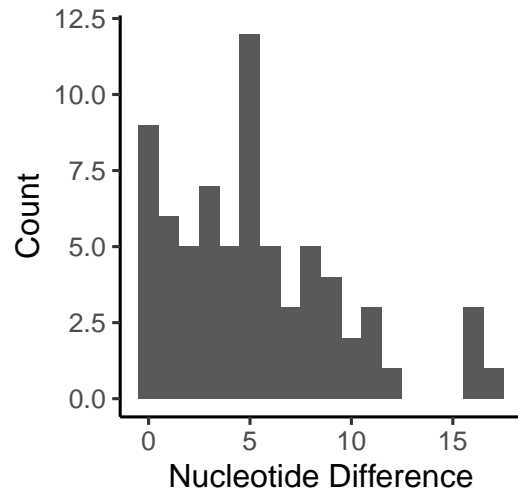
IGHV3-73*02_S7955

105 sequences assigned
32 (30.5%) exact matches, in which:
22 unique CDR3
6 unique J



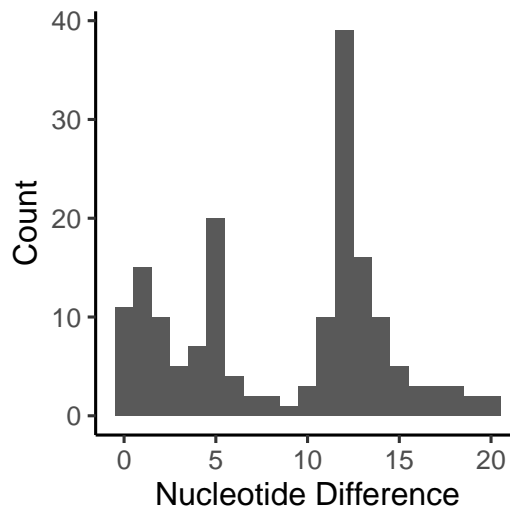
IGHV3-36*01_S5206

75 sequences assigned
9 (12%) exact matches, in which:
9 unique CDR3
3 unique J



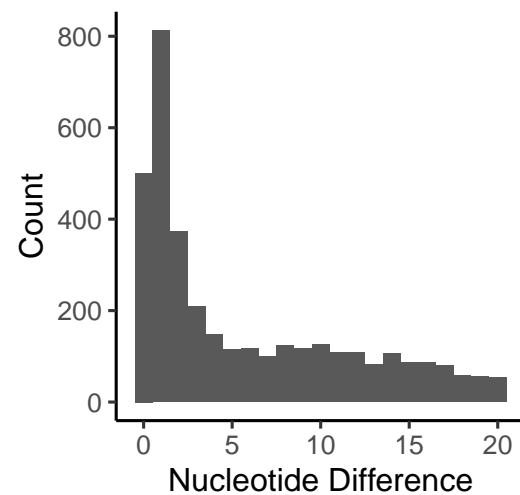
IGHV3-53*01_S5688

182 sequences assigned
11 (6%) exact matches, in which:
8 unique CDR3
2 unique J



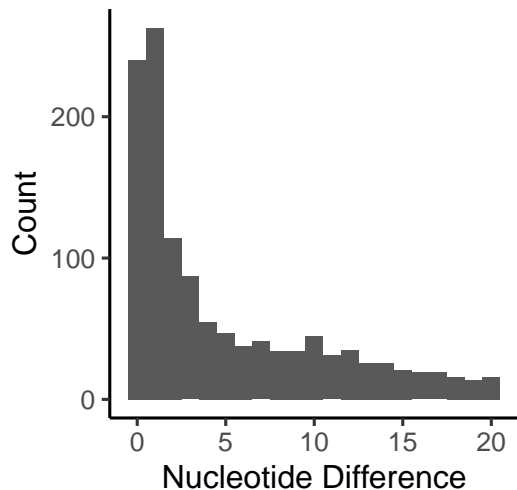
IGHV3-76*02_S4190

4047 sequences assigned
501 (12.4%) exact matches, in which:
297 unique CDR3
8 unique J



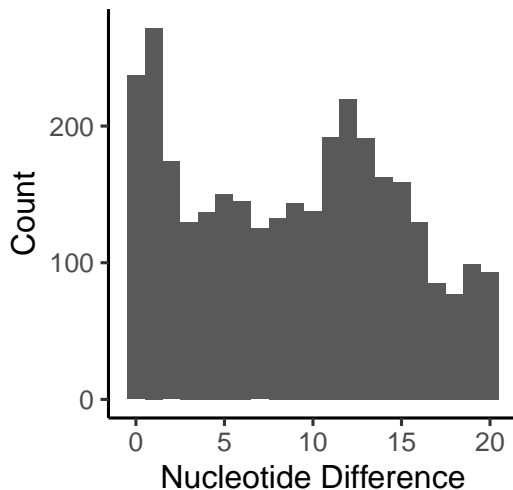
IGHV3-76*02_S4190_A2

1393 sequences assigned
240 (17.2%) exact matches, in which:
190 unique CDR3
7 unique J



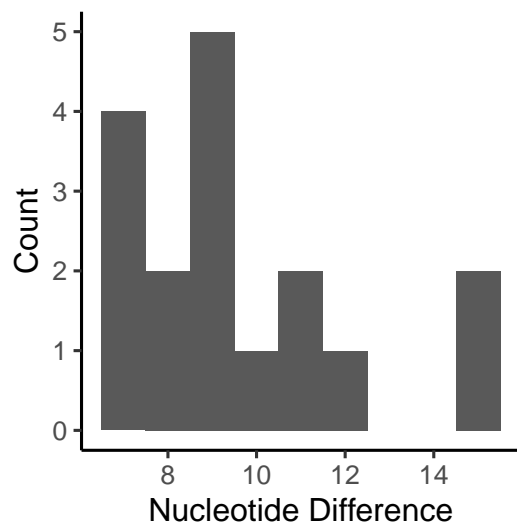
IGHV3-88*01_S9315

3673 sequences assigned
237 (6.5%) exact matches, in which:
84 unique CDR3
7 unique J



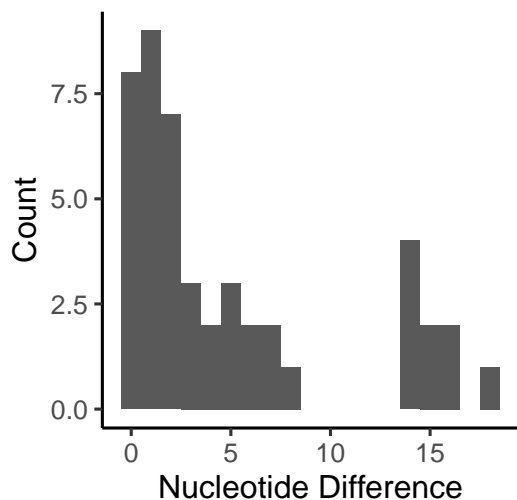
IGHV3-100*01_S4205

17 sequences assigned
No exact matches.



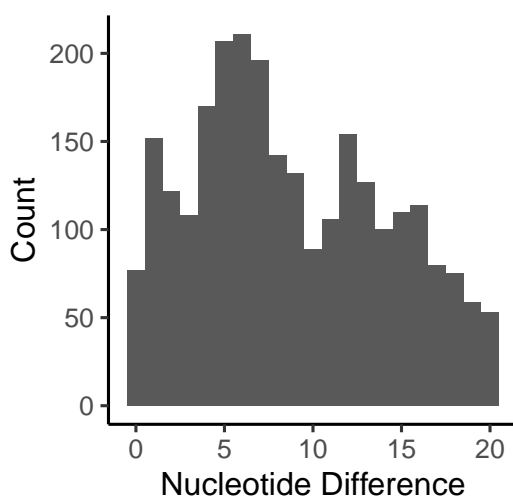
IGHV3-83*01_S5932

47 sequences assigned
8 (17%) exact matches, in which:
7 unique CDR3
4 unique J



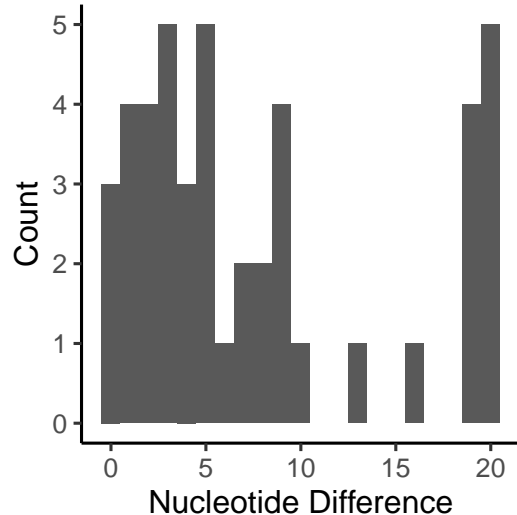
IGHV3-88*02_S7485

2896 sequences assigned
77 (2.7%) exact matches, in which:
48 unique CDR3
4 unique J



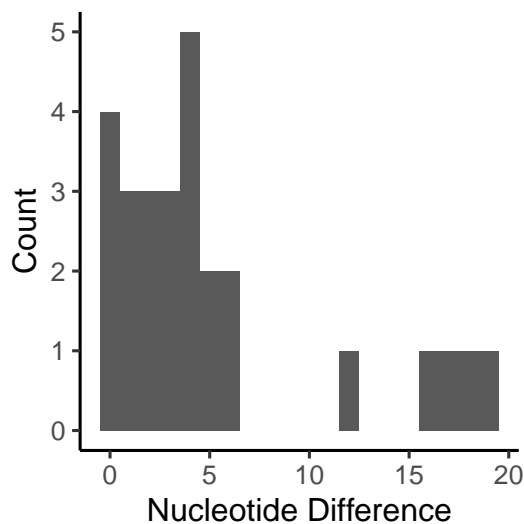
IGHV3-100*01_S4375

46 sequences assigned
3 (6.5%) exact matches, in which:
2 unique CDR3
2 unique J



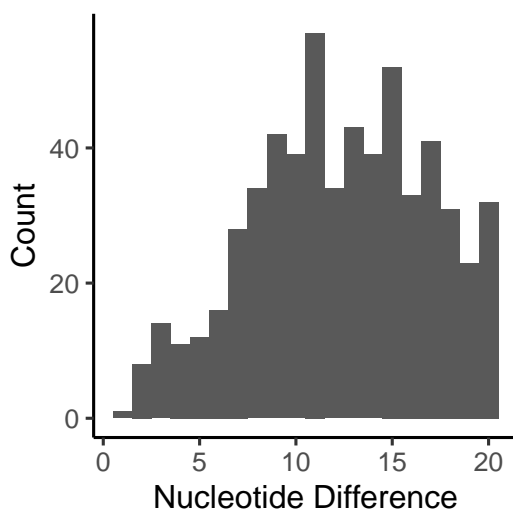
IGHV3-83*02_S2462

32 sequences assigned
4 (12.5%) exact matches, in which:
3 unique CDR3
2 unique J



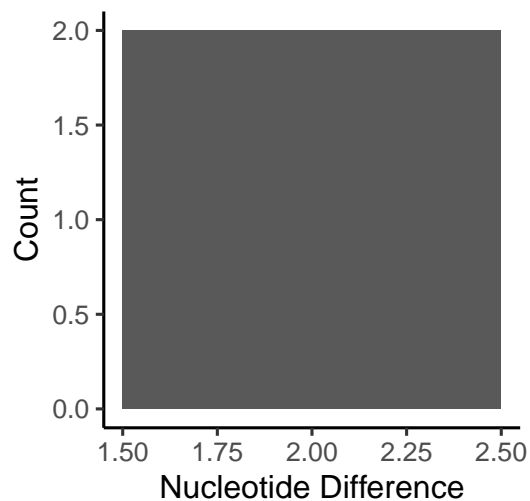
IGHV3-88*02_S9033

1220 sequences assigned
No exact matches.



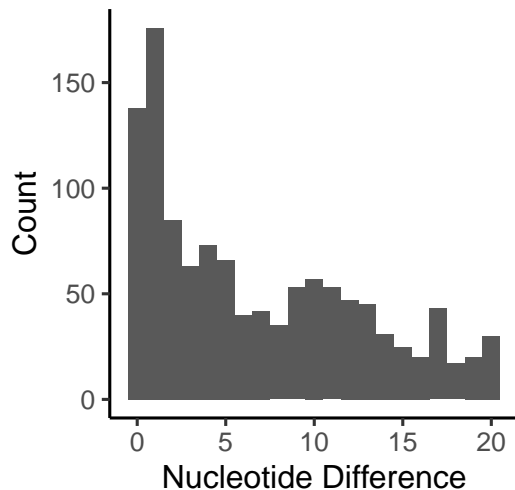
IGHV3-120*01_S4231

2 sequences assigned
No exact matches.



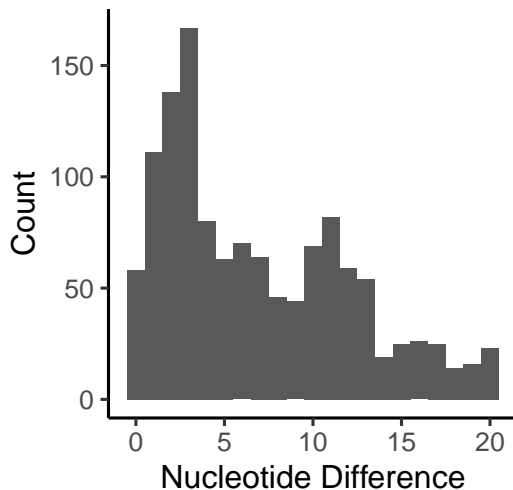
IGHV3-122*01_S8388

1358 sequences assigned
138 (10.2%) exact matches, in which:
93 unique CDR3
7 unique J



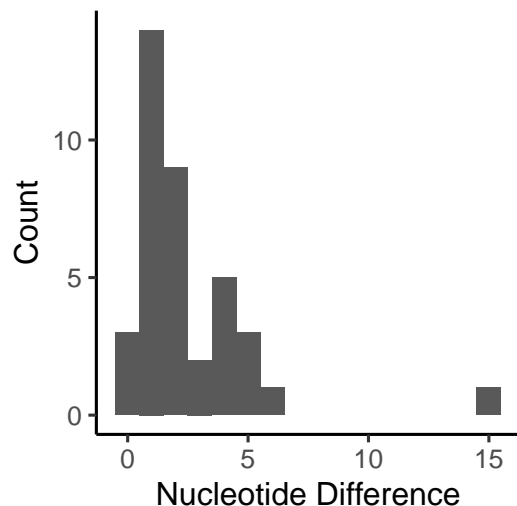
IGHV3-128*01_S1128

1416 sequences assigned
58 (4.1%) exact matches, in which:
32 unique CDR3
6 unique J



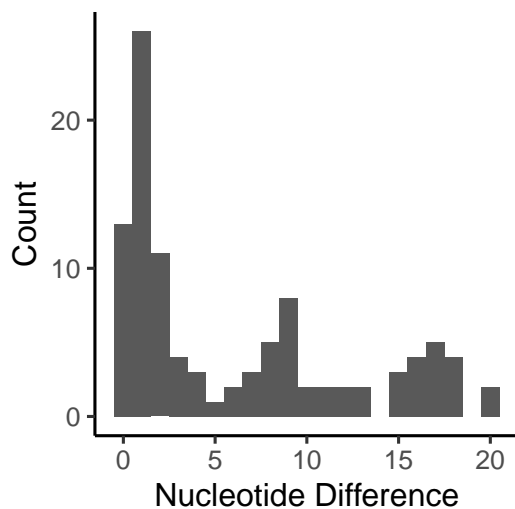
IGHV3-143*01_S1151

38 sequences assigned
3 (7.9%) exact matches, in which:
2 unique CDR3
2 unique J



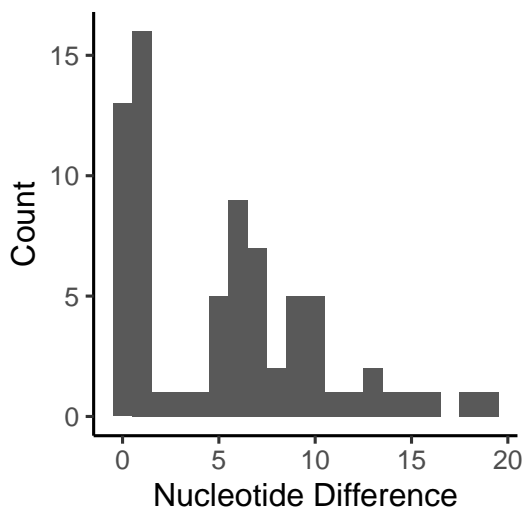
IGHV3-127*01_S6769

105 sequences assigned
13 (12.4%) exact matches, in which:
10 unique CDR3
1 unique J



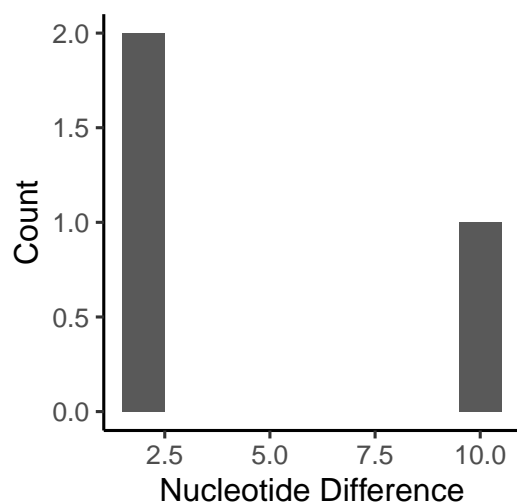
IGHV3-141*01_S6168

75 sequences assigned
13 (17.3%) exact matches, in which:
11 unique CDR3
4 unique J



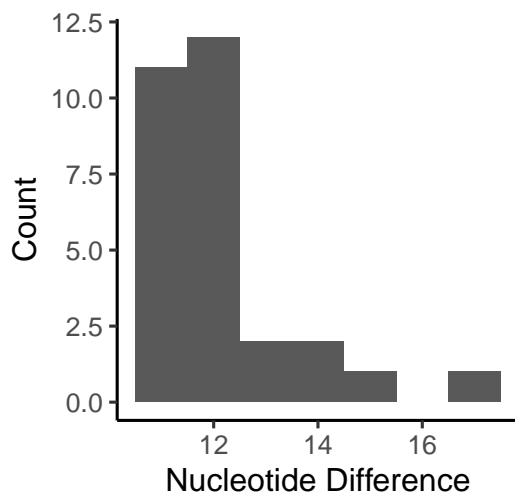
IGHV3-152*01_S5891

6 sequences assigned
No exact matches.



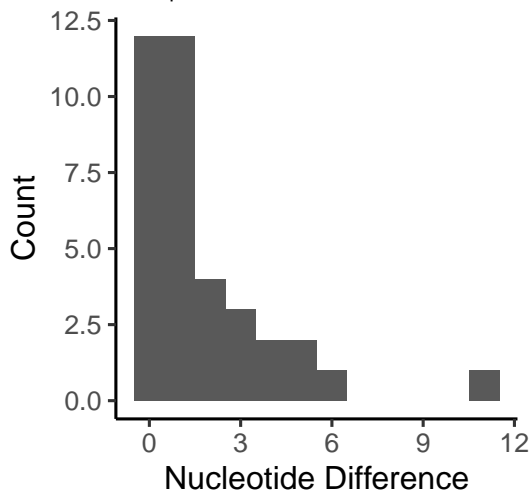
IGHV3-127*01_S7059

31 sequences assigned
No exact matches.



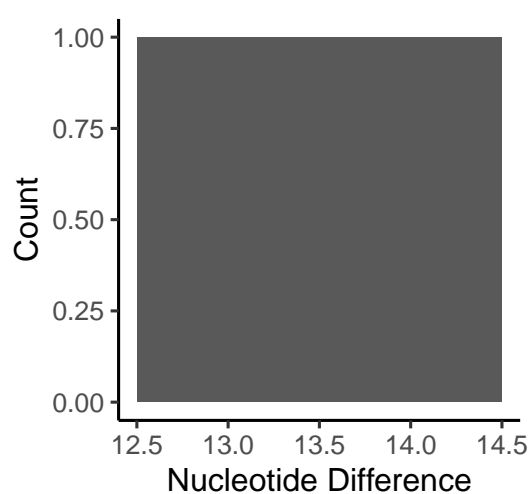
IGHV3-141*02_S1149

37 sequences assigned
12 (32.4%) exact matches, in which:
6 unique CDR3
4 unique J



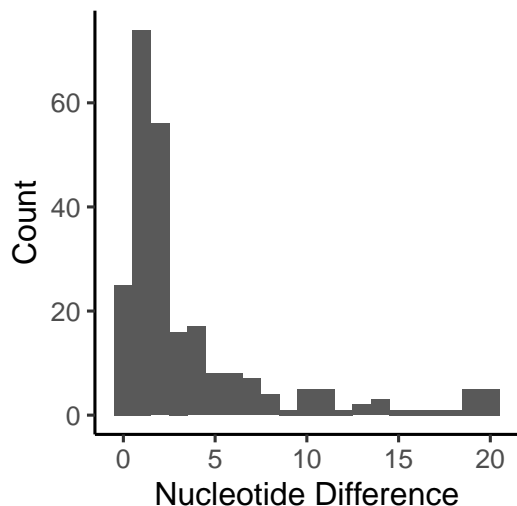
IGHV3-152*01_S7388

3 sequences assigned
No exact matches.



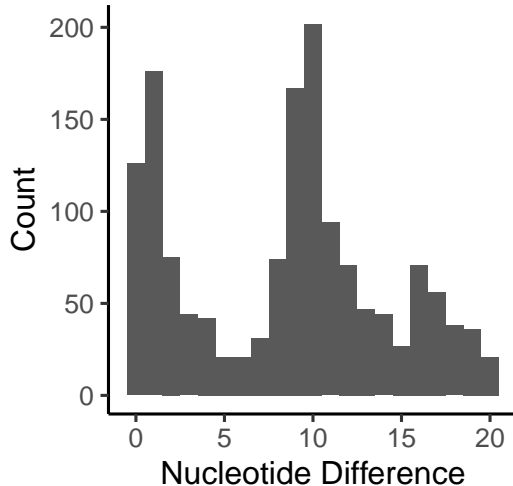
IGHV3-172*01_S8488

254 sequences assigned
25 (9.8%) exact matches, in which:
12 unique CDR3
4 unique J



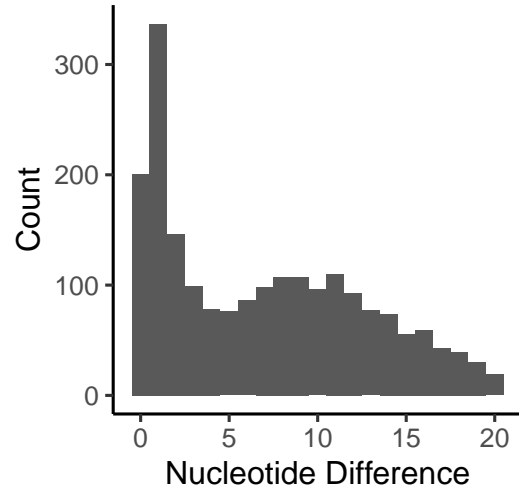
IGHV3-187*01_S1133

2089 sequences assigned
126 (6%) exact matches, in which:
69 unique CDR3
7 unique J



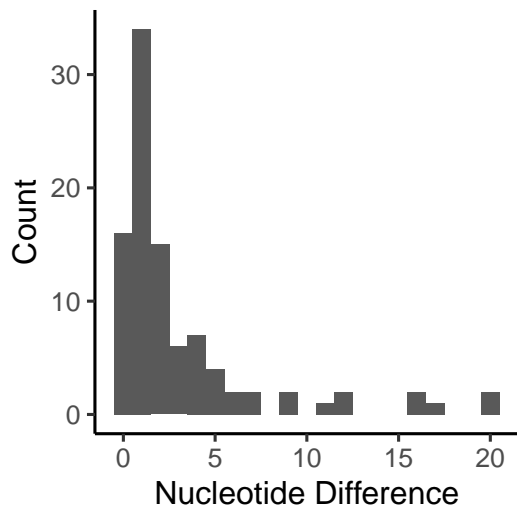
IGHV3-NL_10*02_S2212

2336 sequences assigned
201 (8.6%) exact matches, in which:
135 unique CDR3
6 unique J



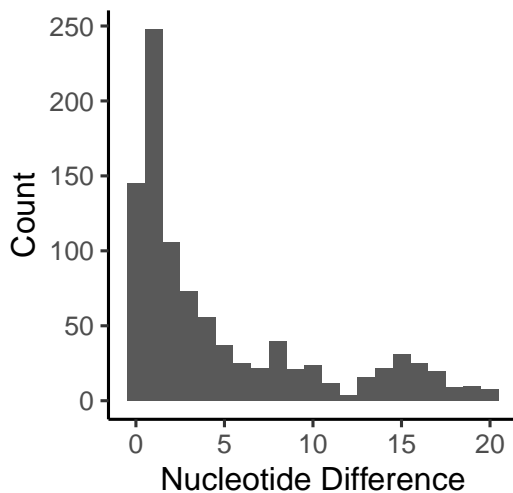
IGHV3-172*01_S8824

97 sequences assigned
16 (16.5%) exact matches, in which:
10 unique CDR3
4 unique J



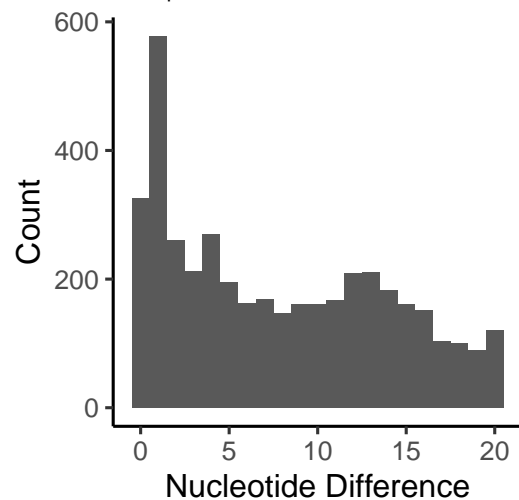
IGHV3-NL_1*01_S4331

1029 sequences assigned
145 (14.1%) exact matches, in which:
79 unique CDR3
7 unique J



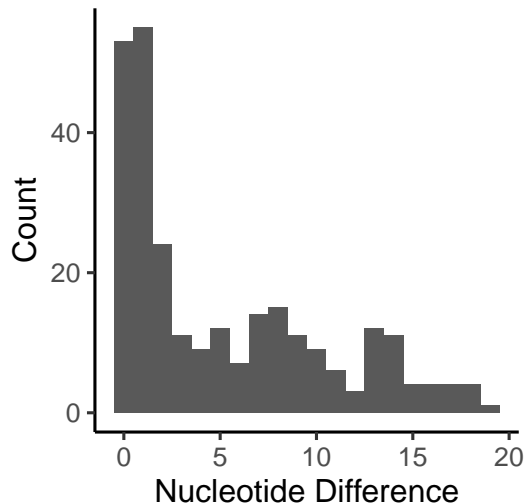
IGHV3-NL_11*01_S3736

5006 sequences assigned
326 (6.5%) exact matches, in which:
204 unique CDR3
7 unique J



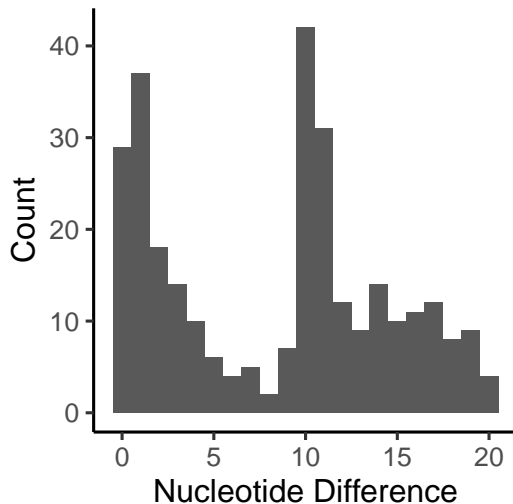
IGHV3-177*01_S5369

285 sequences assigned
53 (18.6%) exact matches, in which:
33 unique CDR3
5 unique J



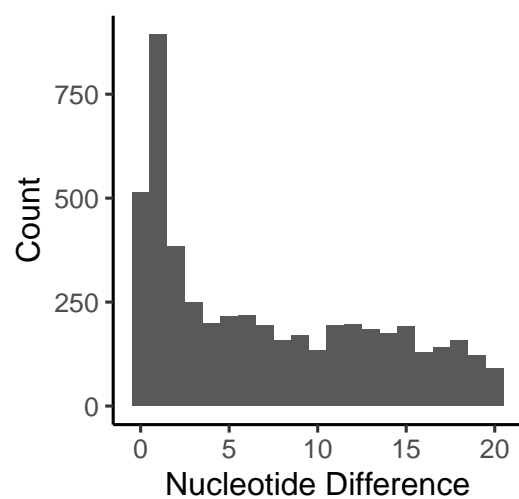
IGHV3-NL_1*01_S9422

338 sequences assigned
29 (8.6%) exact matches, in which:
18 unique CDR3
5 unique J



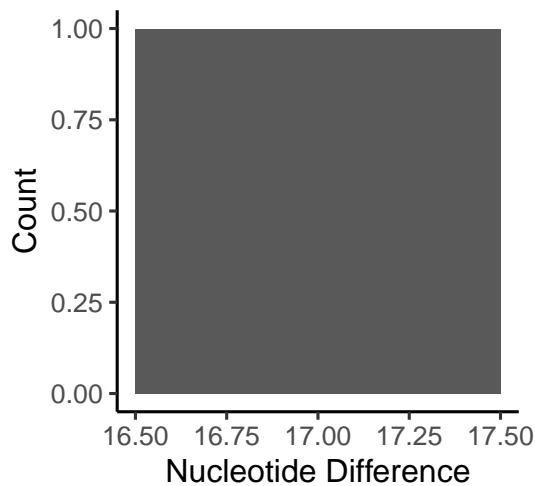
IGHV3-NL_11*01_S4619

5427 sequences assigned
514 (9.5%) exact matches, in which:
318 unique CDR3
7 unique J



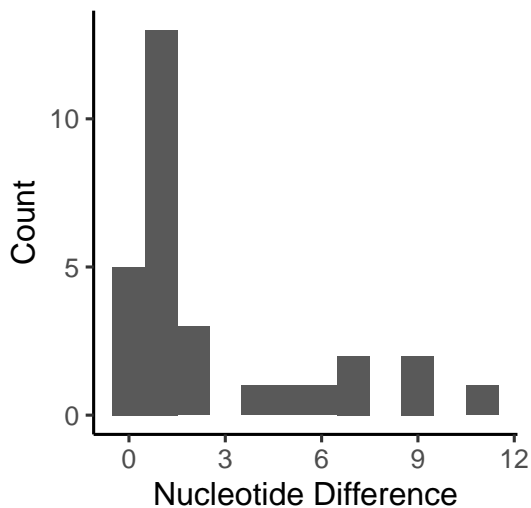
IGHV3–NL_13*01_S3940

41 sequences assigned
No exact matches.



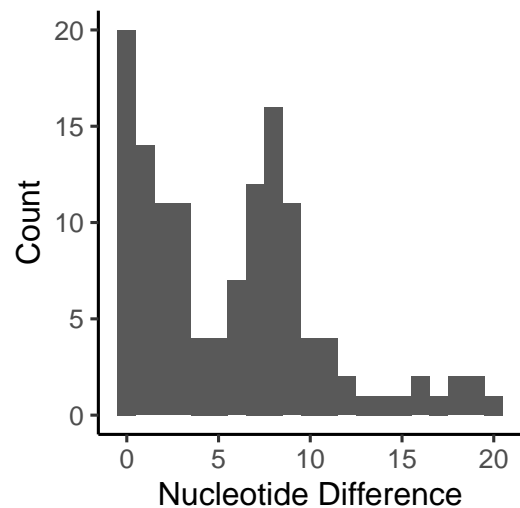
IGHV3–NL_16*01_S8234

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



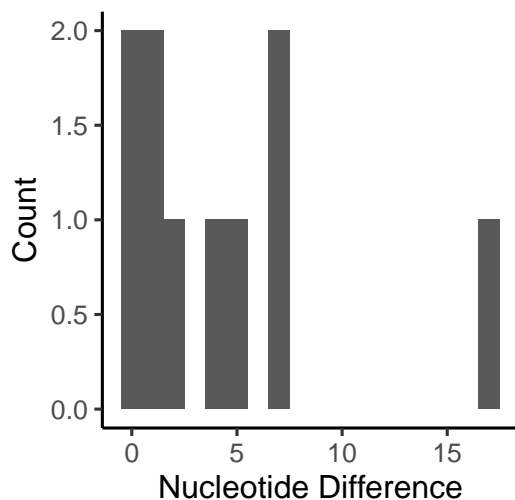
IGHV3–NL_19*01_S5460

134 sequences assigned
20 (14.9%) exact matches, in which:
15 unique CDR3
3 unique J



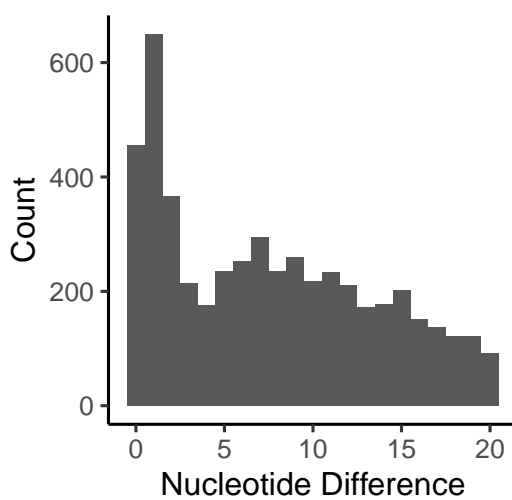
IGHV3–NL_14*01_S1113

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



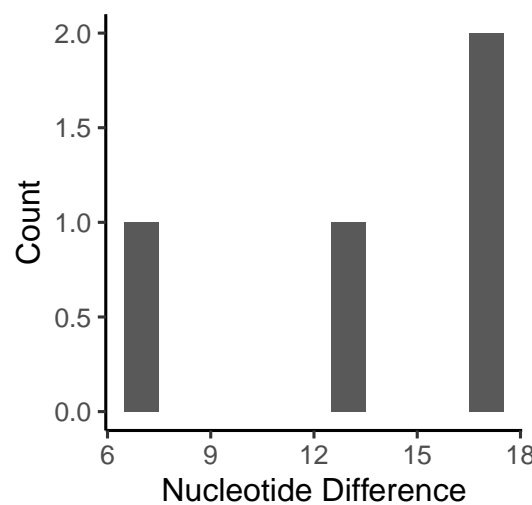
IGHV3–NL_17*01_S4250

5651 sequences assigned
455 (8.1%) exact matches, in which:
258 unique CDR3
6 unique J



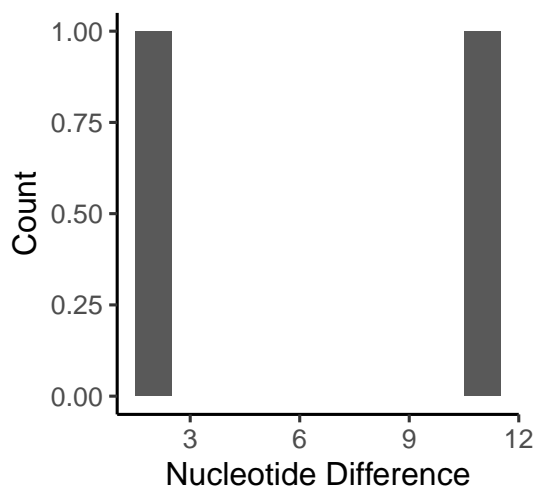
IGHV3–NL_2*01_S1693

4 sequences assigned
No exact matches.



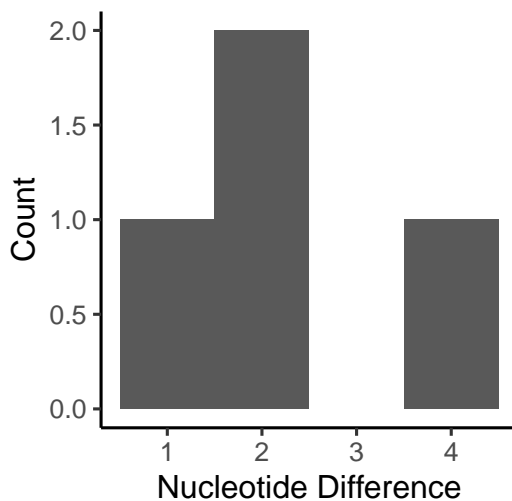
IGHV3–NL_15*01_S2828

2 sequences assigned
No exact matches.



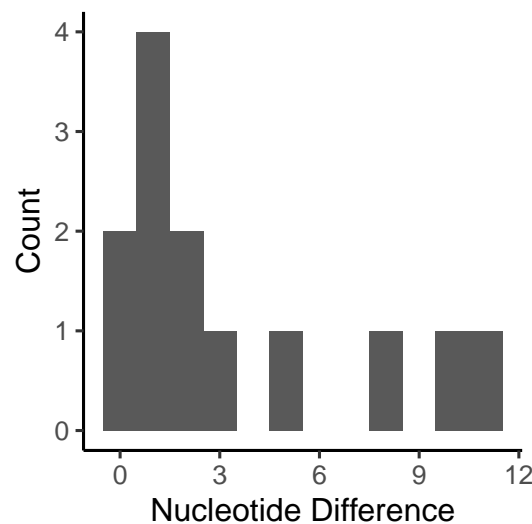
IGHV3–NL_18*01_S3867

4 sequences assigned
No exact matches.



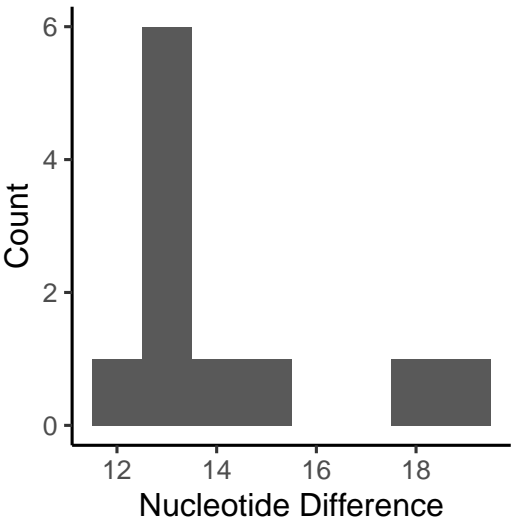
IGHV3–NL_2*01_S3900

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



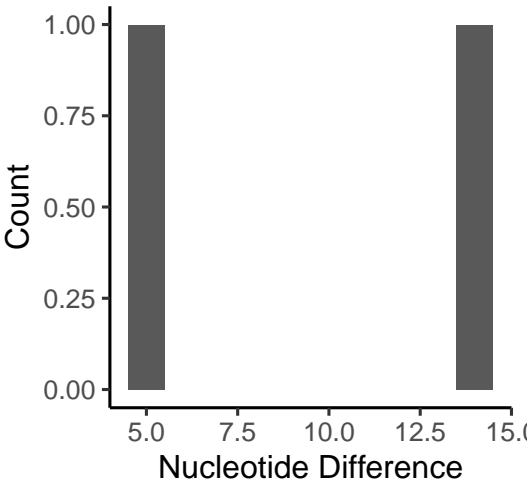
IGHV3–NL_4*01_S2727

13 sequences assigned
No exact matches.



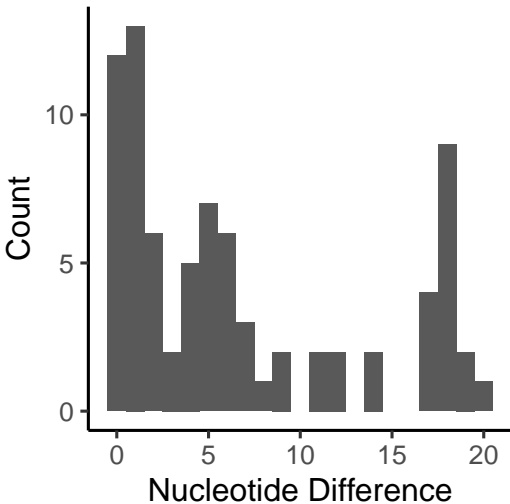
IGHV3–NL_5*01_S8361

9 sequences assigned
No exact matches.



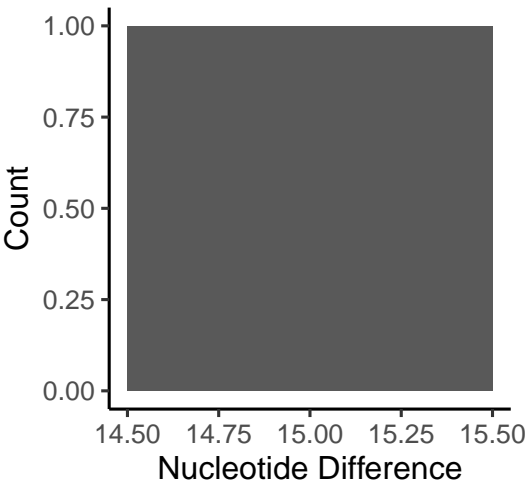
IGHV3–NL_8*01_S7474

97 sequences assigned
12 (12.4%) exact matches, in which:
9 unique CDR3
4 unique J



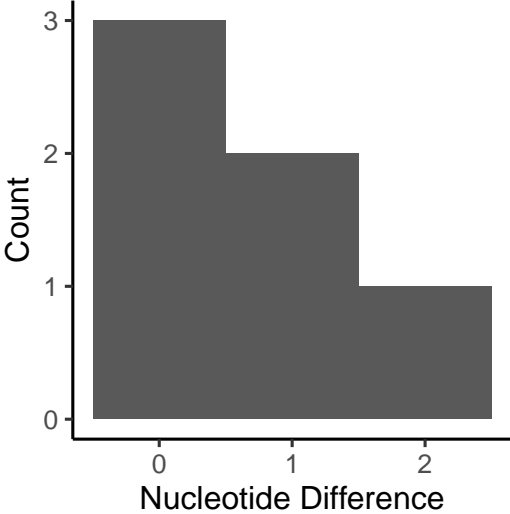
IGHV3–NL_4*01_S9067

2 sequences assigned
No exact matches.



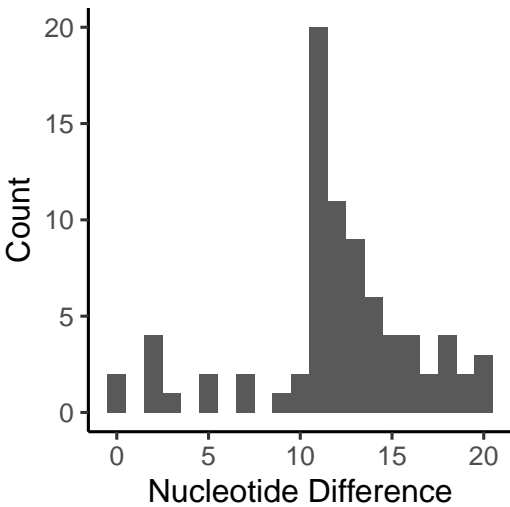
IGHV3–NL_6*02_S7808

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



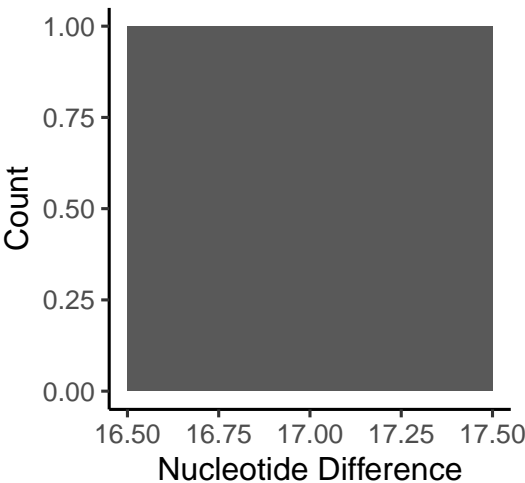
IGHV3–NL_9*01_S6098

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



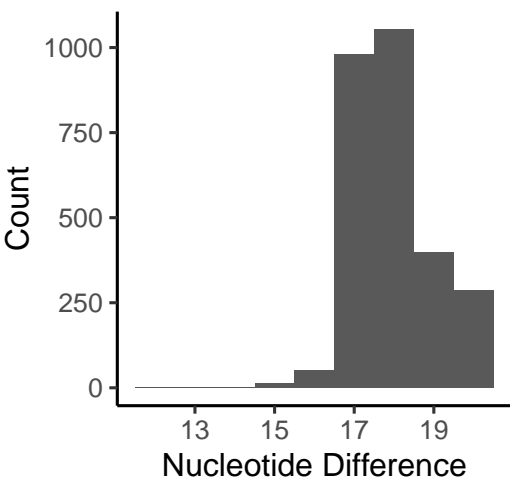
IGHV3–NL_4*01_S9635

1 sequences assigned
No exact matches.



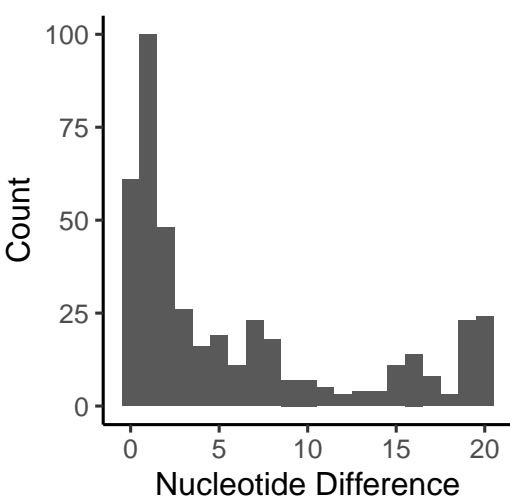
IGHV3–NL_7*01_S0199

4535 sequences assigned
No exact matches.



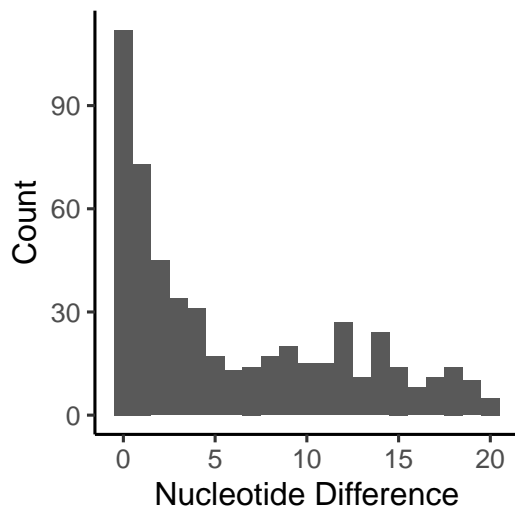
IGHV4–67*02_S8878

490 sequences assigned
61 (12.4%) exact matches, in which:
49 unique CDR3
7 unique J



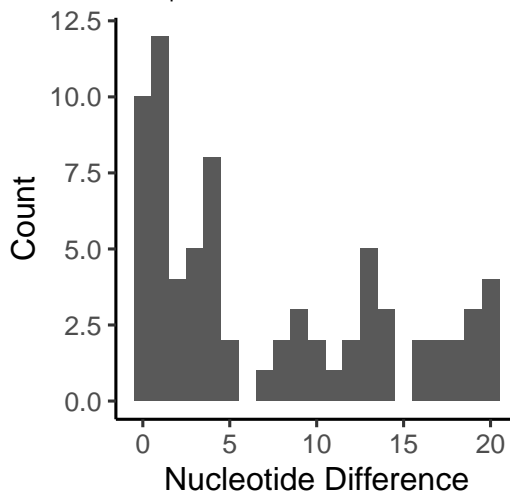
IGHV4-79*02_S9501

717 sequences assigned
112 (15.6%) exact matches, in which:
90 unique CDR3
7 unique J



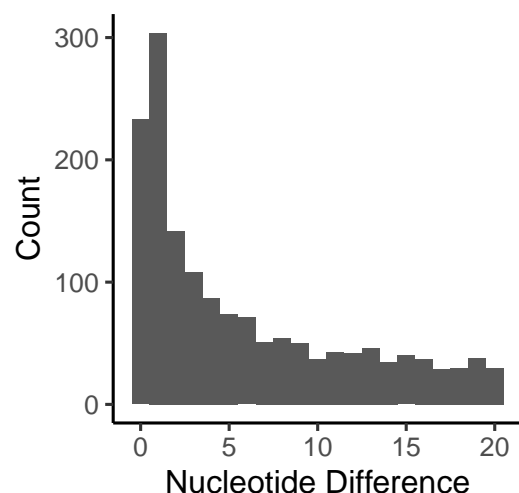
IGHV4-144*01_S5374

258 sequences assigned
10 (3.9%) exact matches, in which:
7 unique CDR3
3 unique J



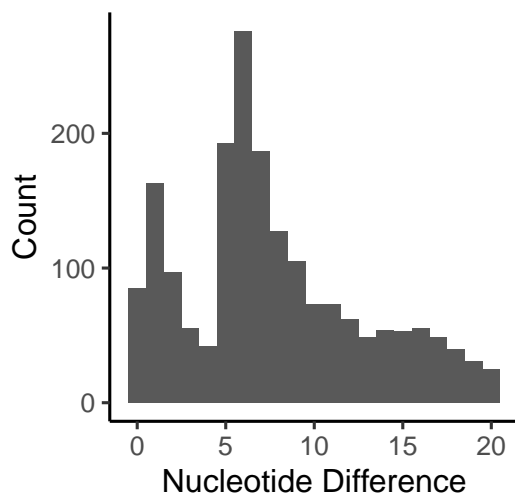
IGHV4-149*01_S3418

2803 sequences assigned
233 (8.3%) exact matches, in which:
167 unique CDR3
7 unique J



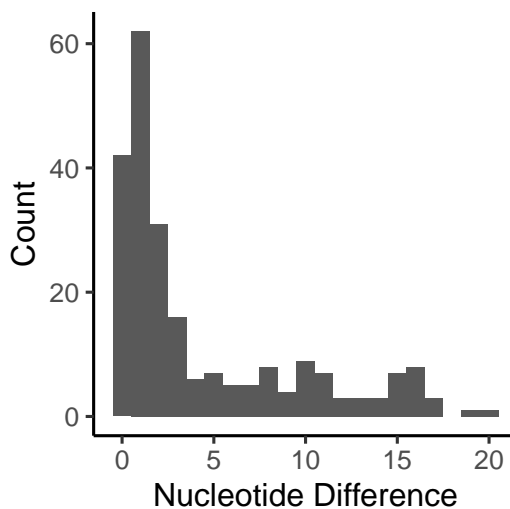
IGHV4-93*01_S6528

2038 sequences assigned
85 (4.2%) exact matches, in which:
57 unique CDR3
7 unique J



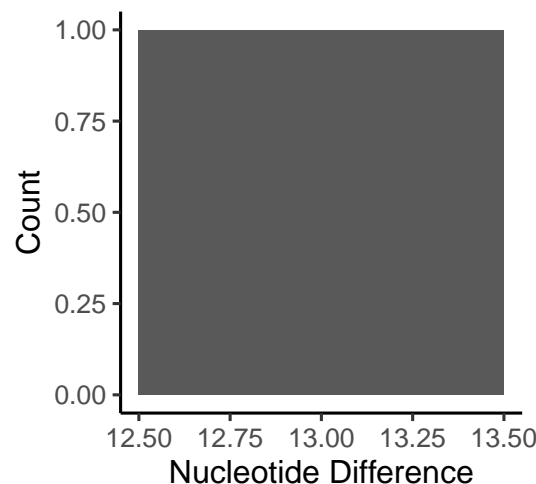
IGHV4-144*01_S8596

302 sequences assigned
42 (13.9%) exact matches, in which:
30 unique CDR3
7 unique J



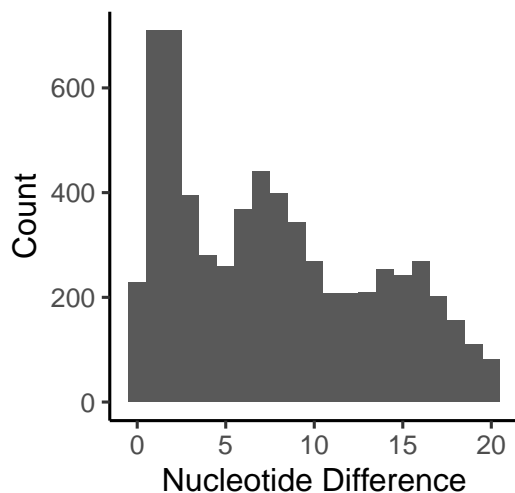
IGHV4-150*01_S2067

5 sequences assigned
No exact matches.



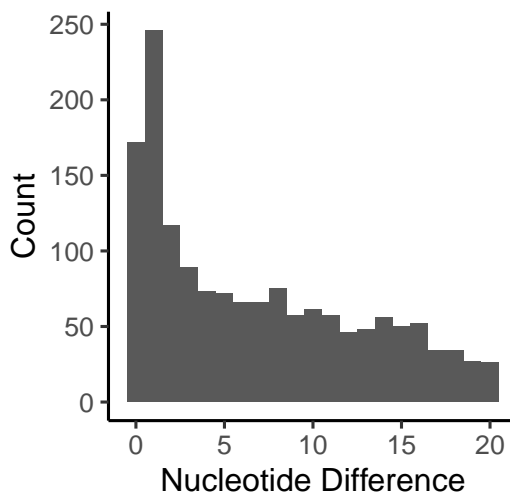
IGHV4-117*01_S8404

7184 sequences assigned
229 (3.2%) exact matches, in which:
168 unique CDR3
8 unique J



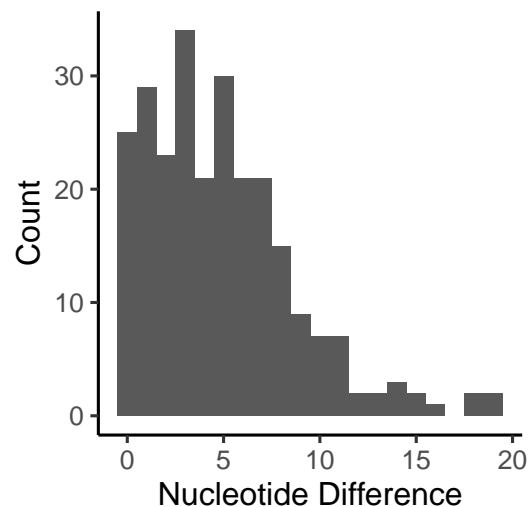
IGHV4-149*01_S1992

1824 sequences assigned
172 (9.4%) exact matches, in which:
116 unique CDR3
7 unique J



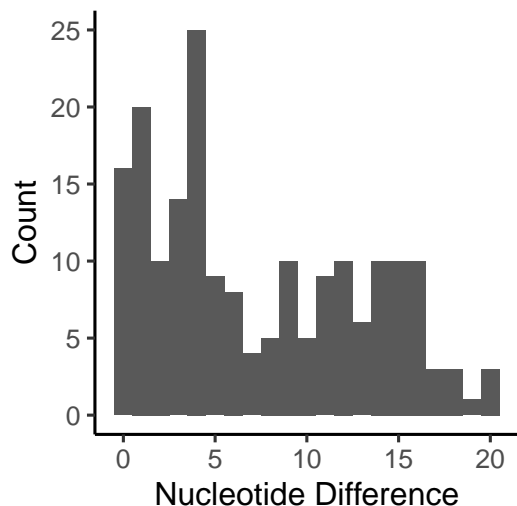
IGHV4-150*01_S6885

260 sequences assigned
25 (9.6%) exact matches, in which:
21 unique CDR3
5 unique J



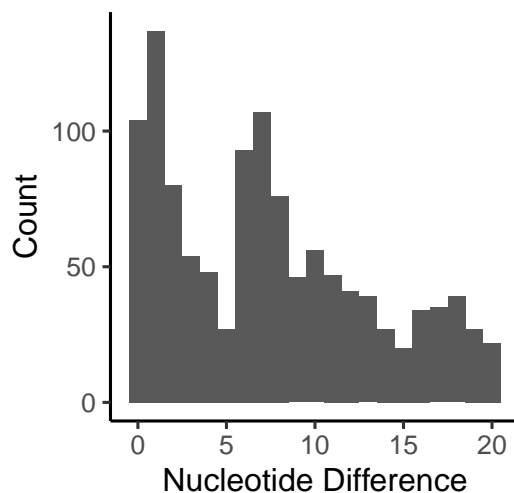
IGHV4–NL_1*01_S4155

200 sequences assigned
16 (8%) exact matches, in which:
10 unique CDR3
3 unique J



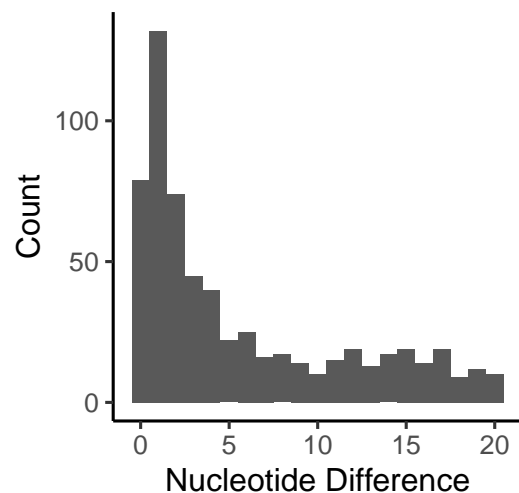
IGHV4–NL_1*01_S9508

1400 sequences assigned
104 (7.4%) exact matches, in which:
73 unique CDR3
7 unique J



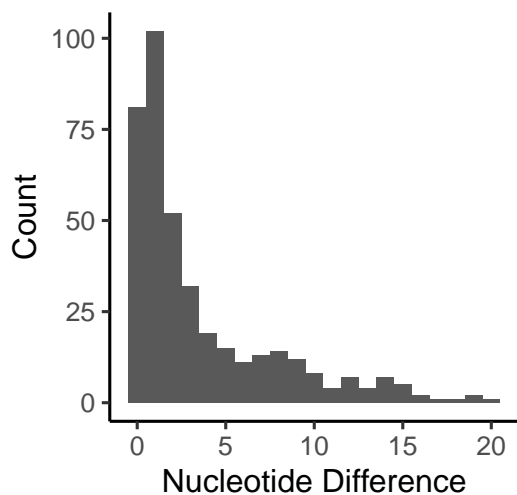
IGHV4–NL_16*01_S3062

712 sequences assigned
79 (11.1%) exact matches, in which:
60 unique CDR3
6 unique J



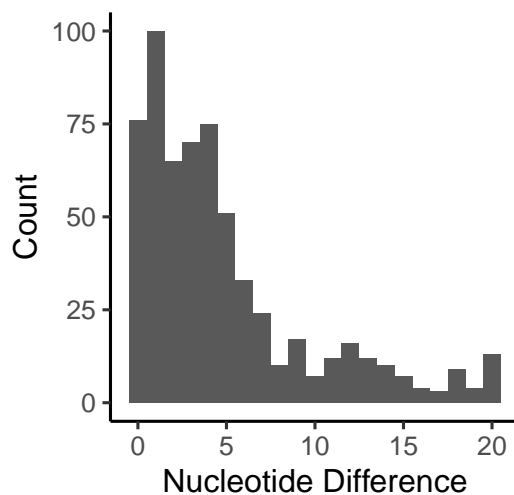
IGHV4–NL_1*01_S4750

417 sequences assigned
81 (19.4%) exact matches, in which:
59 unique CDR3
7 unique J



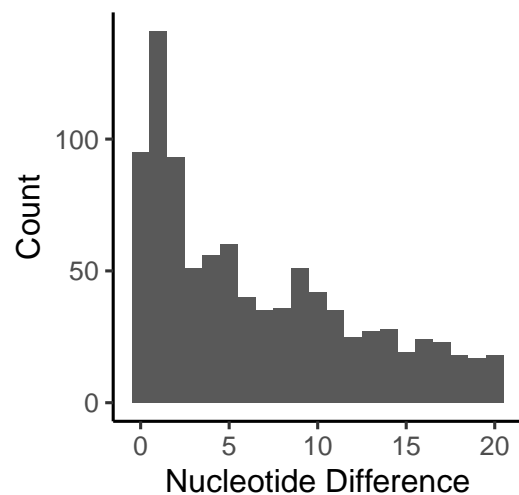
IGHV4–NL_11*01_S9942

652 sequences assigned
76 (11.7%) exact matches, in which:
56 unique CDR3
7 unique J



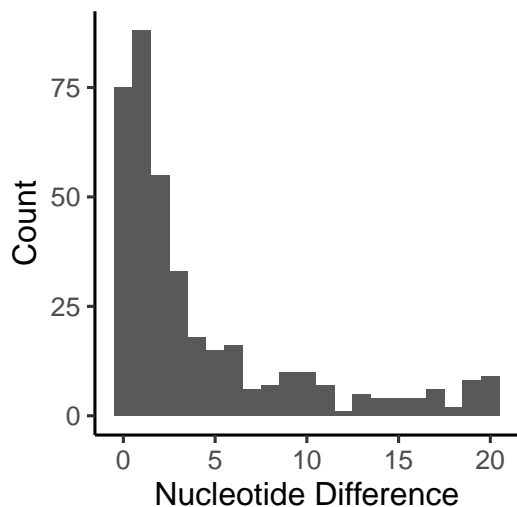
IGHV4–NL_16*01_S3640

998 sequences assigned
95 (9.5%) exact matches, in which:
71 unique CDR3
7 unique J



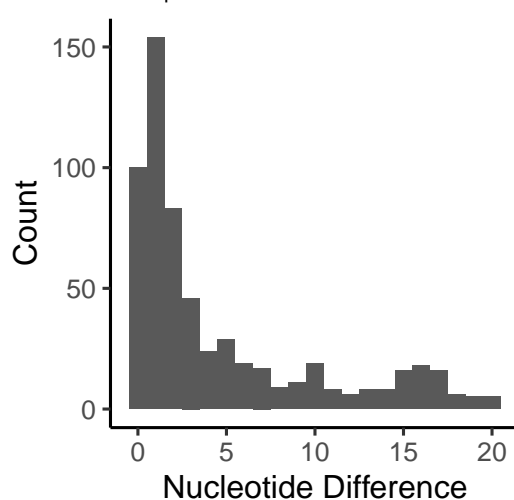
IGHV4–NL_1*01_S8621

496 sequences assigned
75 (15.1%) exact matches, in which:
52 unique CDR3
5 unique J



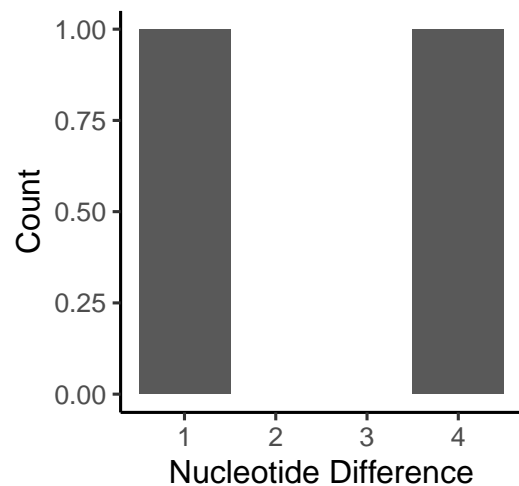
IGHV4–NL_13*01_S9744

666 sequences assigned
100 (15%) exact matches, in which:
70 unique CDR3
8 unique J



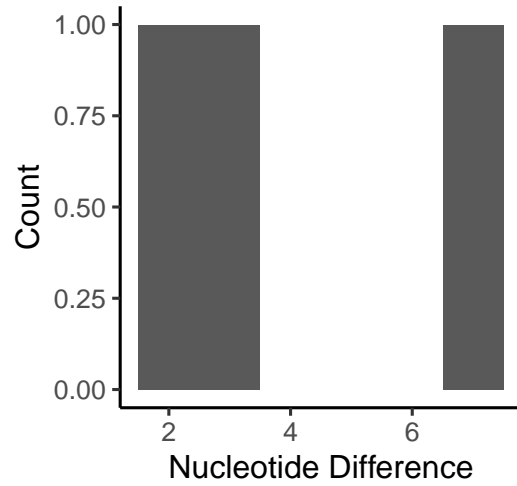
IGHV4–NL_17*01_S0904

3 sequences assigned
No exact matches.



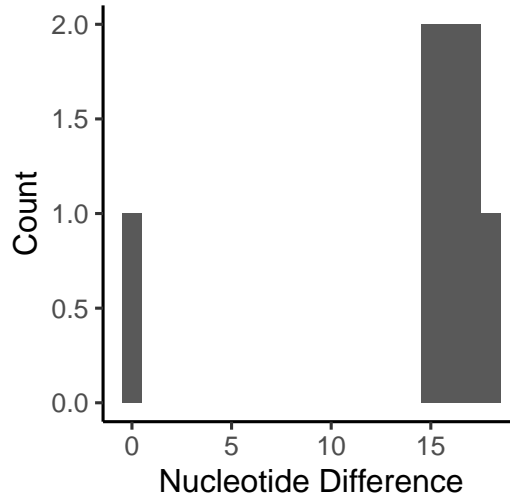
IGHV4-NL_17*01_S2080

3 sequences assigned
No exact matches.



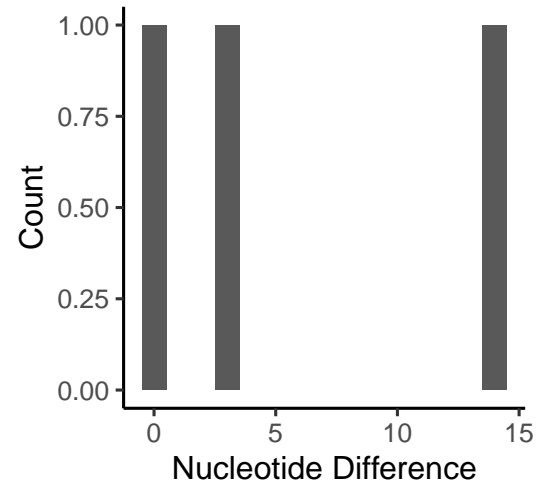
IGHV4-NL_20*01_S3868

18 sequences assigned
1 (5.6%) exact matches, in which:
1 unique CDR3
1 unique J



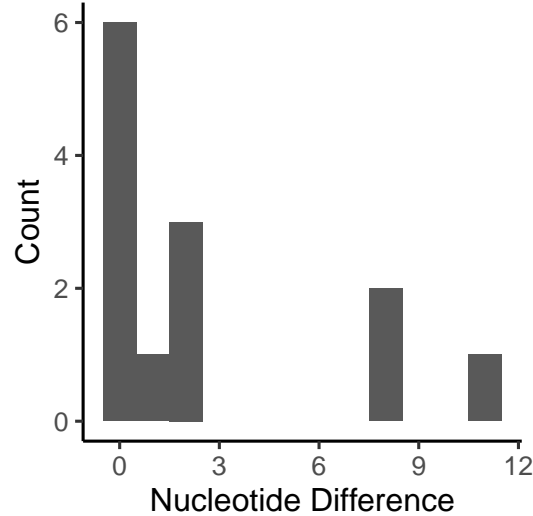
IGHV4-NL_23*01_S1290

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



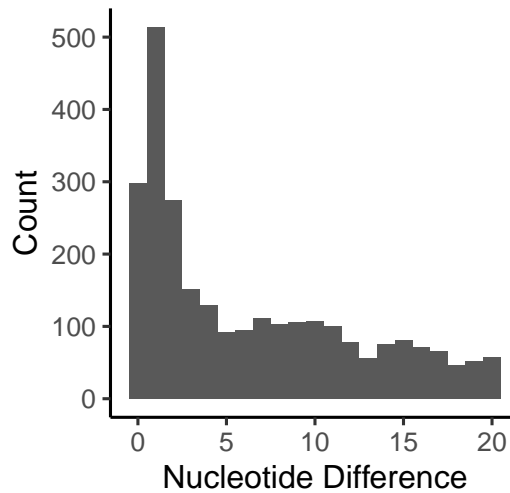
IGHV4-NL_17*01_S2142

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



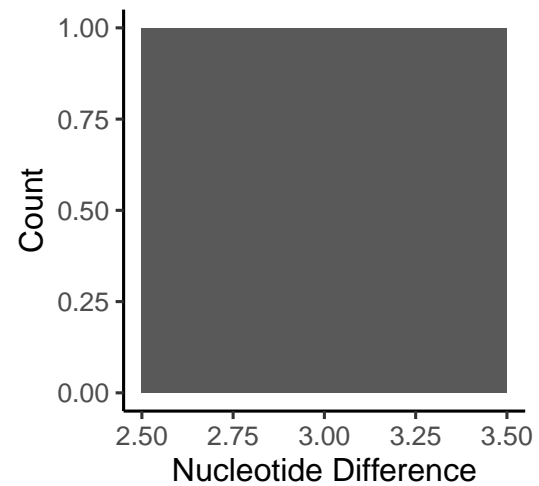
IGHV4-NL_21*01_S0138

3109 sequences assigned
298 (9.6%) exact matches, in which:
224 unique CDR3
7 unique J



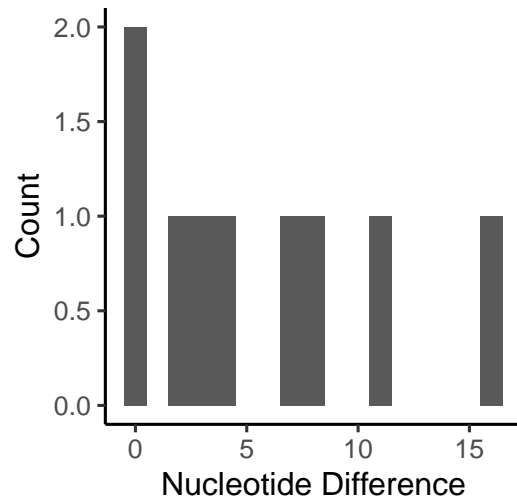
IGHV4-NL_23*01_S7000

1 sequences assigned
No exact matches.



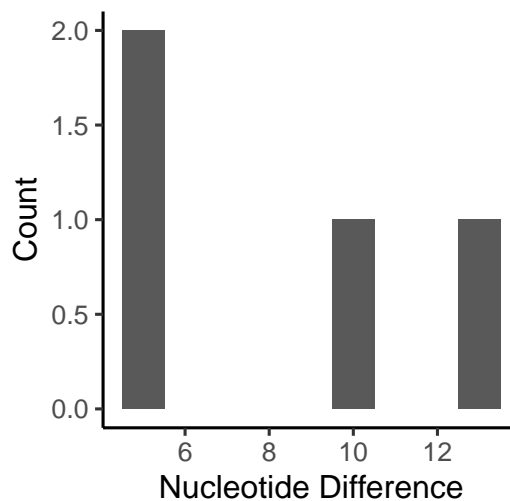
IGHV4-NL_17*01_S4099

12 sequences assigned
2 (16.7%) exact matches, in which:
2 unique CDR3
2 unique J



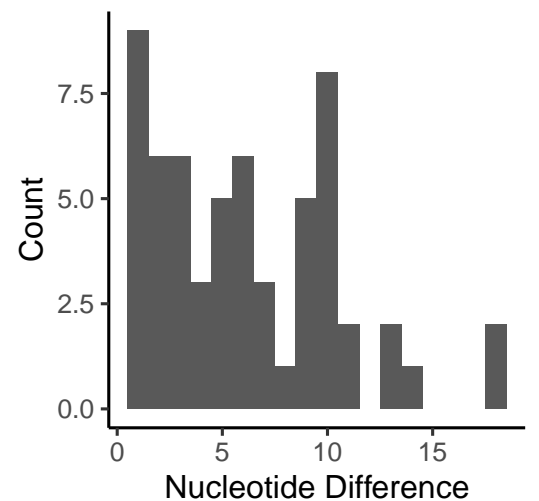
IGHV4-NL_22*01_S6977

4 sequences assigned
No exact matches.



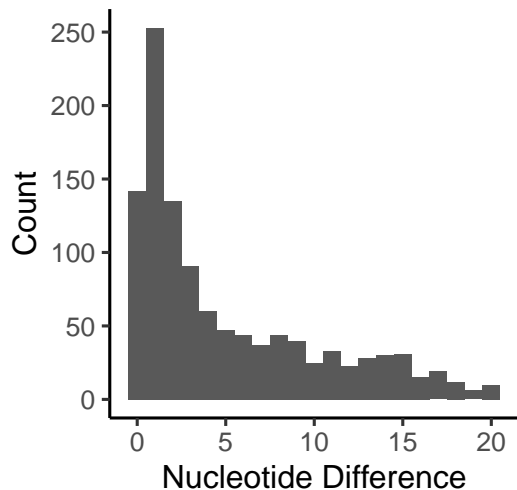
IGHV4-NL_24*01_S5697

62 sequences assigned
No exact matches.



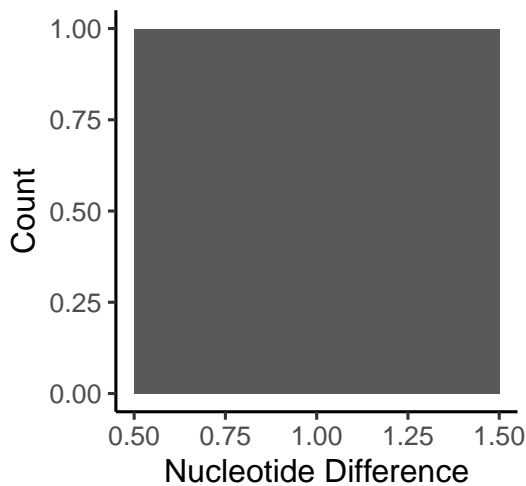
IGHV4-NL_25*01_S2780

1247 sequences assigned
142 (11.4%) exact matches, in which:
103 unique CDR3
7 unique J



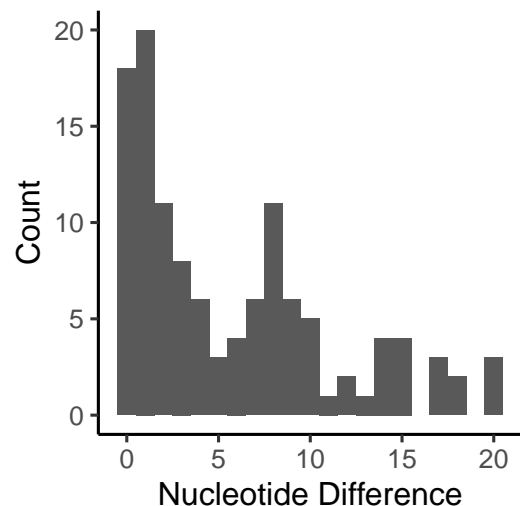
IGHV4-NL_27*01_S1458

1 sequences assigned
No exact matches.



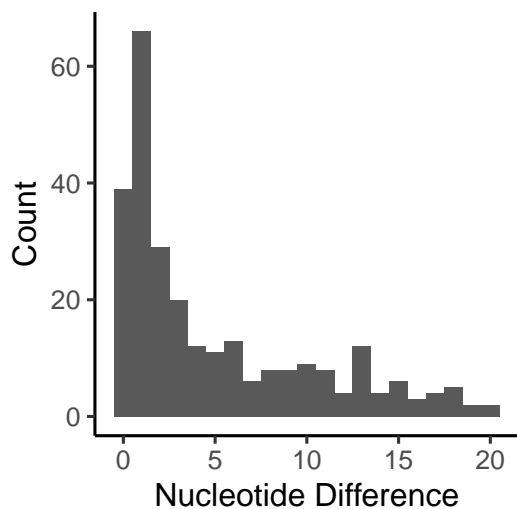
IGHV4-NL_28*01_S2610

129 sequences assigned
18 (14%) exact matches, in which:
15 unique CDR3
4 unique J



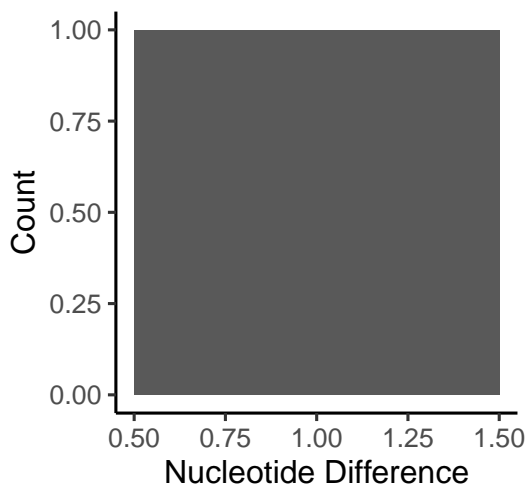
IGHV4-NL_25*01_S9478

301 sequences assigned
39 (13%) exact matches, in which:
31 unique CDR3
7 unique J



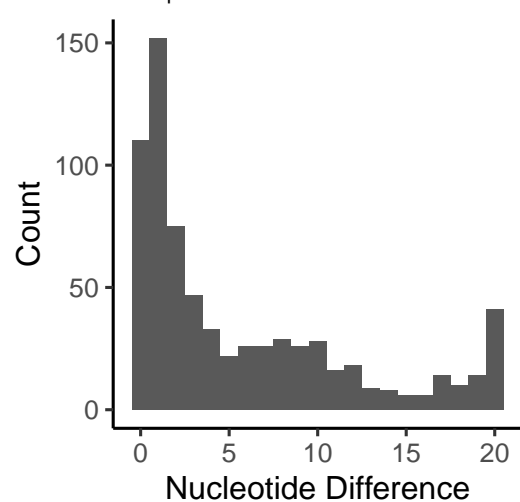
IGHV4-NL_27*01_S7643

1 sequences assigned
No exact matches.



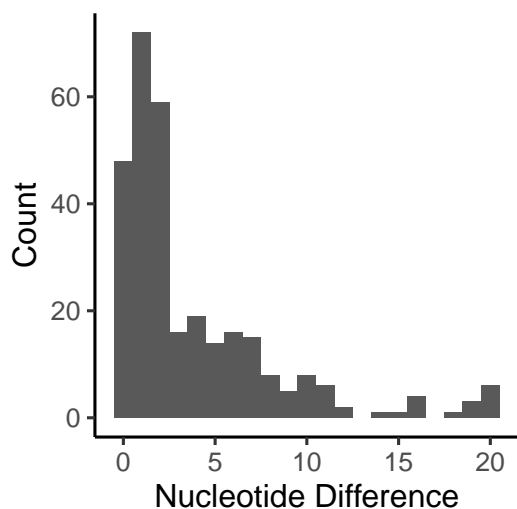
IGHV4-NL_29*01_S3018

899 sequences assigned
110 (12.2%) exact matches, in which:
78 unique CDR3
7 unique J



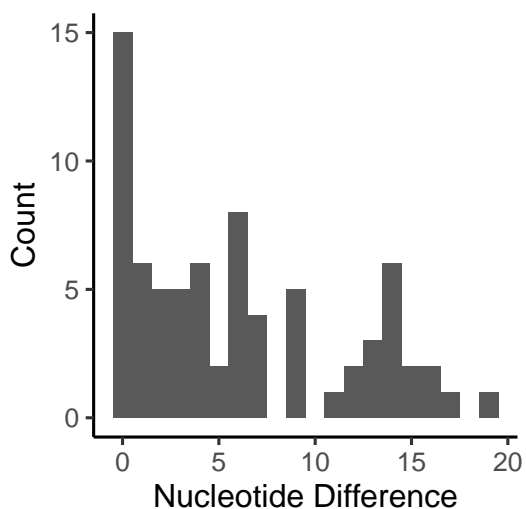
IGHV4-NL_25*01_S9955

326 sequences assigned
48 (14.7%) exact matches, in which:
35 unique CDR3
5 unique J



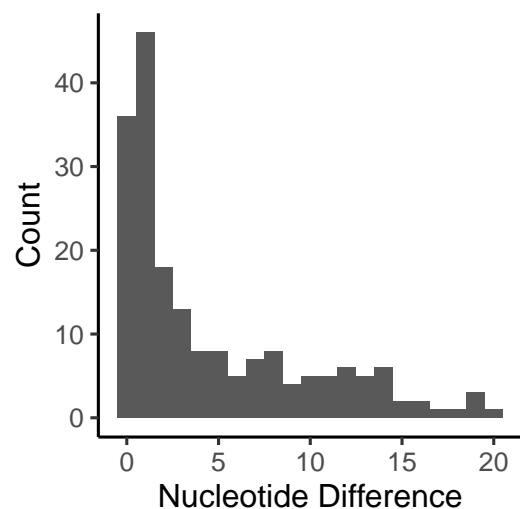
IGHV4-NL_28*01_S2610

88 sequences assigned
15 (17%) exact matches, in which:
12 unique CDR3
4 unique J



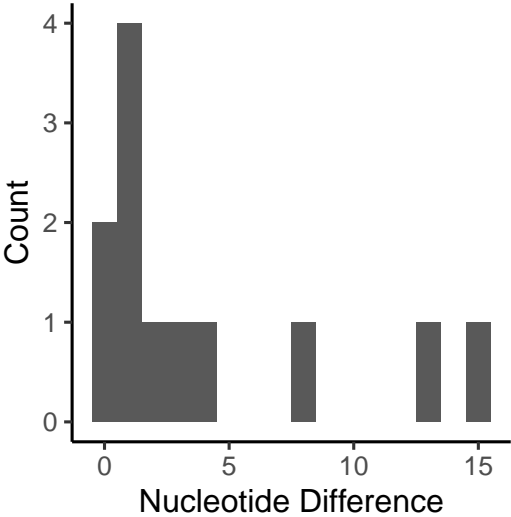
IGHV4-NL_29*01_S3761

196 sequences assigned
36 (18.4%) exact matches, in which:
31 unique CDR3
7 unique J



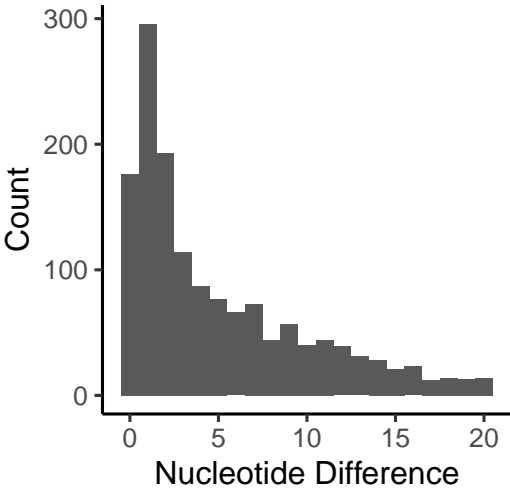
IGHV4–NL_3*01_S7864

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



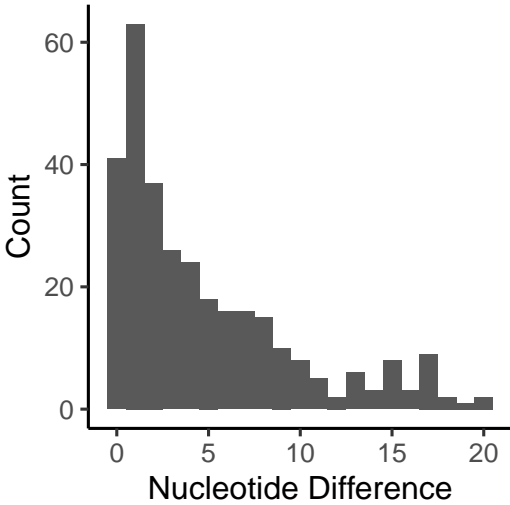
IGHV4–NL_33*01_S1148

1621 sequences assigned
176 (10.9%) exact matches, in which:
136 unique CDR3
7 unique J



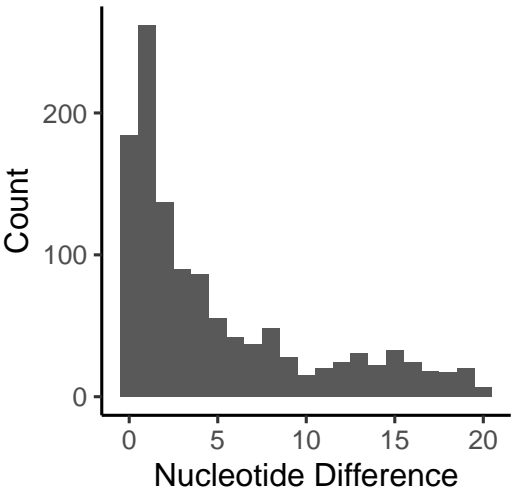
IGHV4–NL_36*01_S0936

328 sequences assigned
41 (12.5%) exact matches, in which:
32 unique CDR3
6 unique J



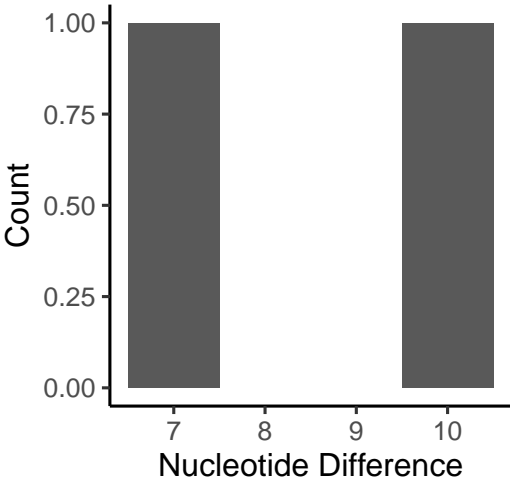
IGHV4–NL_31*01_S7693

1363 sequences assigned
184 (13.5%) exact matches, in which:
134 unique CDR3
8 unique J



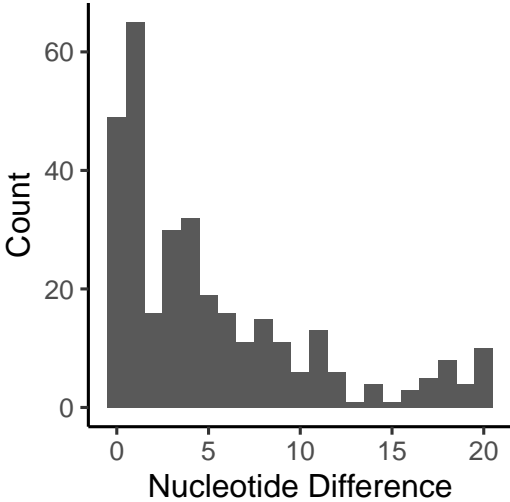
IGHV4–NL_34*01_S4637

2 sequences assigned
No exact matches.



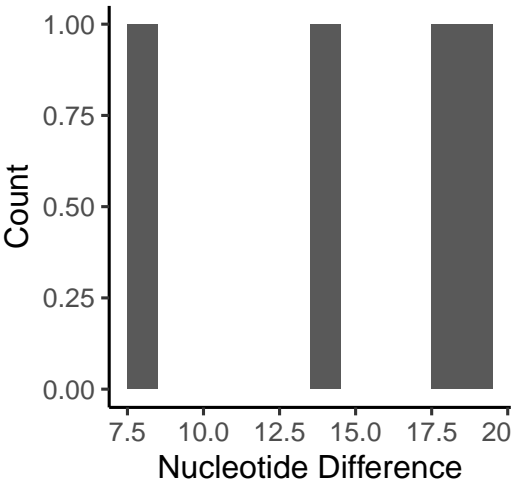
IGHV4–NL_36*01_S5847

345 sequences assigned
49 (14.2%) exact matches, in which:
35 unique CDR3
6 unique J



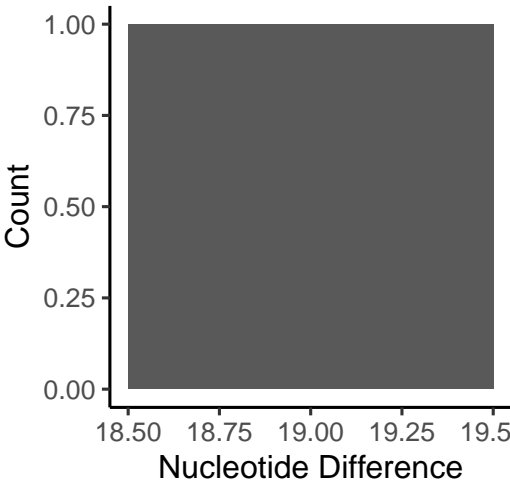
IGHV4–NL_32*01_S3033

7 sequences assigned
No exact matches.



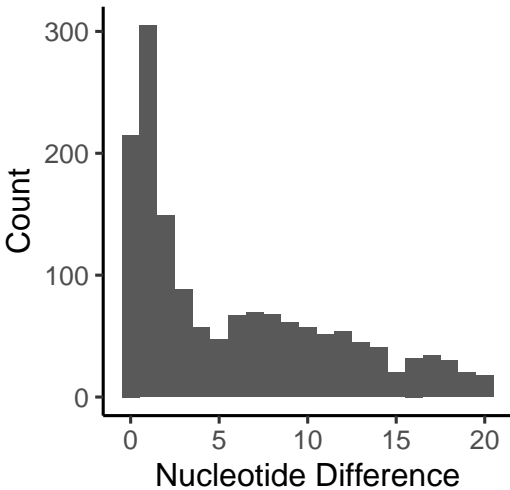
IGHV4–NL_34*01_S4745

3 sequences assigned
No exact matches.



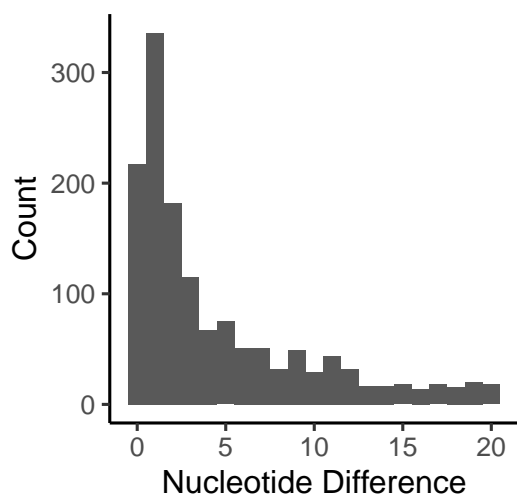
IGHV4–NL_36*01_S9644

1809 sequences assigned
215 (11.9%) exact matches, in which:
154 unique CDR3
7 unique J



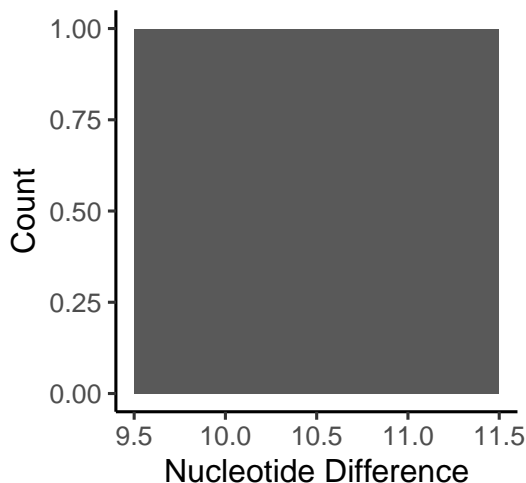
IGHV4–NL_38*01_S8437

1695 sequences assigned
217 (12.8%) exact matches, in which:
158 unique CDR3
7 unique J



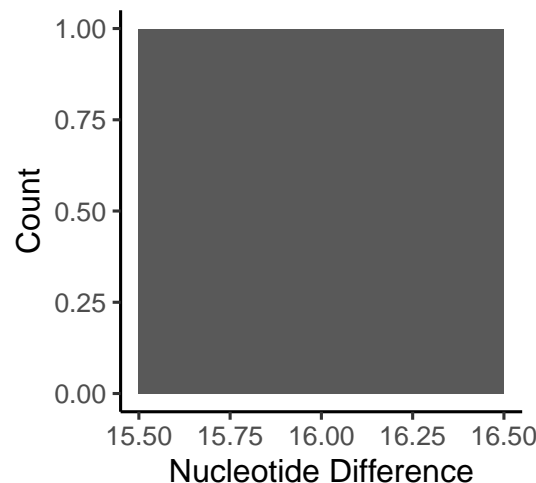
IGHV4–NL_42*01_S3076

3 sequences assigned
No exact matches.



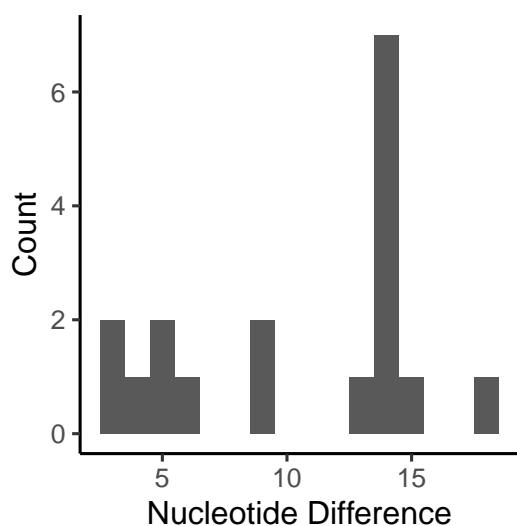
IGHV4–NL_42*01_S6064

1 sequences assigned
No exact matches.



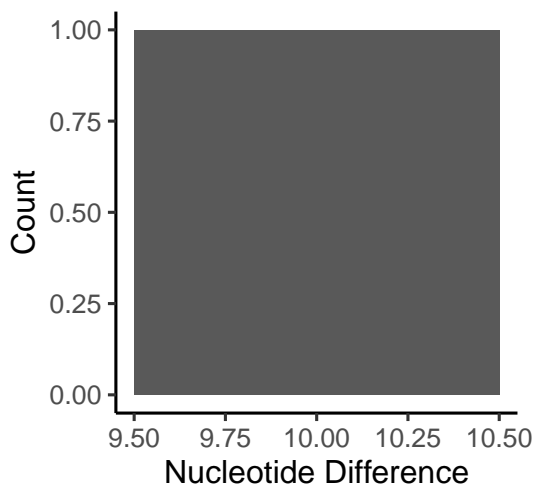
IGHV4–NL_4*01_S5211

21 sequences assigned
No exact matches.



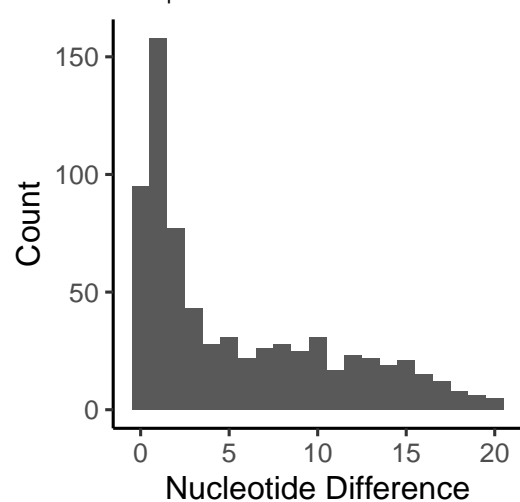
IGHV4–NL_42*01_S3572

1 sequences assigned
No exact matches.



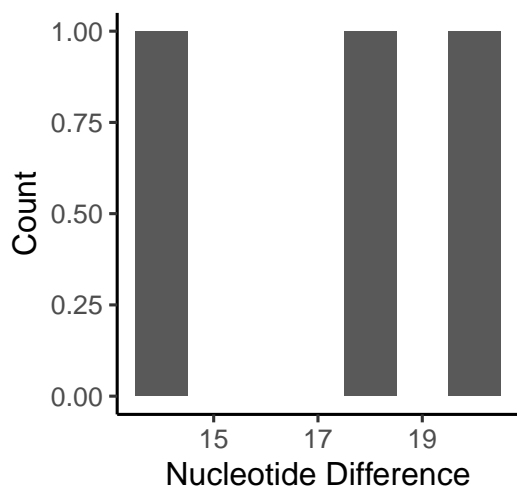
IGHV4–NL_43*01_S4510

784 sequences assigned
95 (12.1%) exact matches, in which:
70 unique CDR3
7 unique J



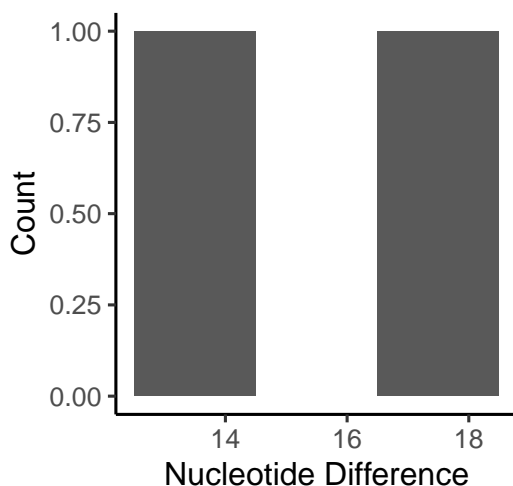
IGHV4–NL_4*01_S8866

5 sequences assigned
No exact matches.



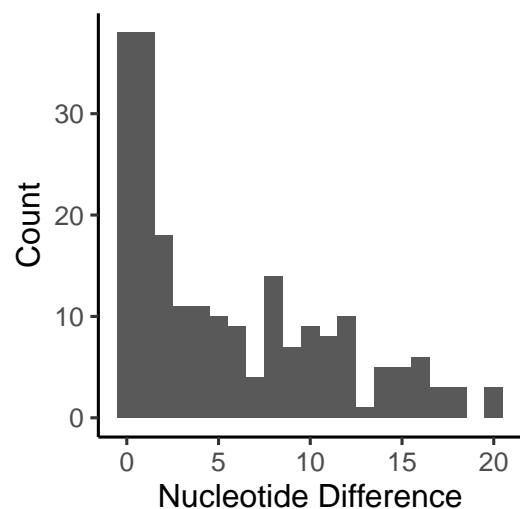
IGHV4–NL_42*01_S3666

9 sequences assigned
No exact matches.



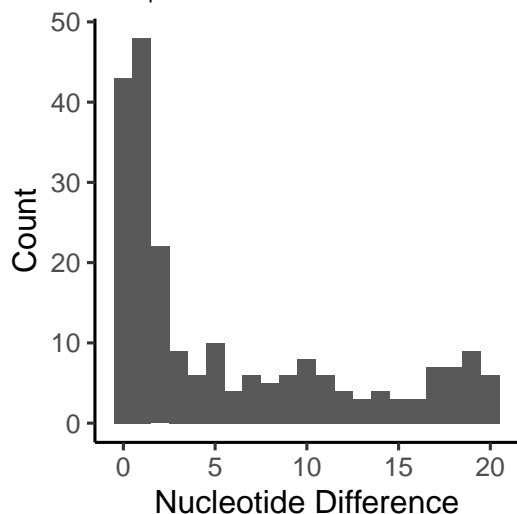
IGHV4–NL_5*01_S5158

220 sequences assigned
38 (17.3%) exact matches, in which:
26 unique CDR3
7 unique J



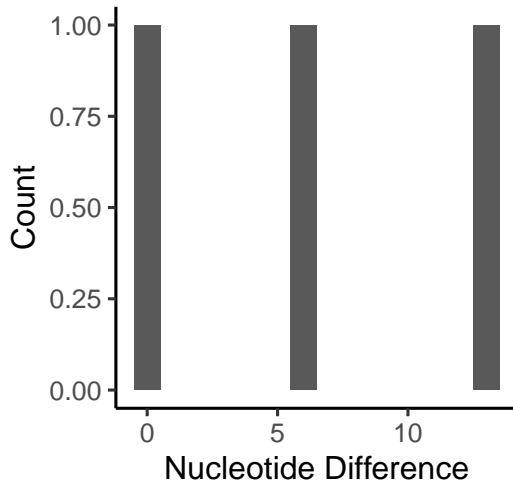
IGHV4–NL_5*01_S7147

234 sequences assigned
43 (18.4%) exact matches, in which:
34 unique CDR3
6 unique J



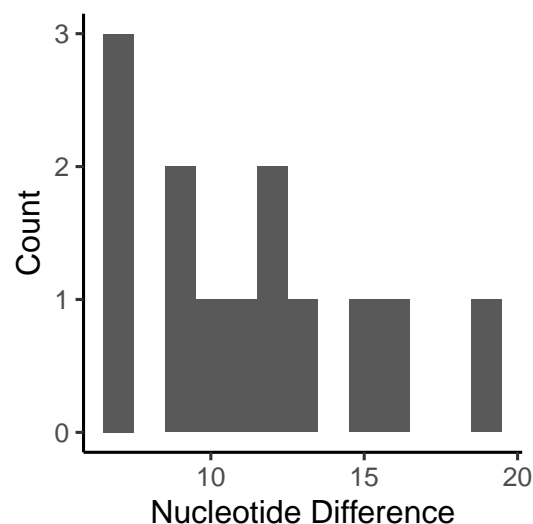
IGHV4–NL_9*01_S3502

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



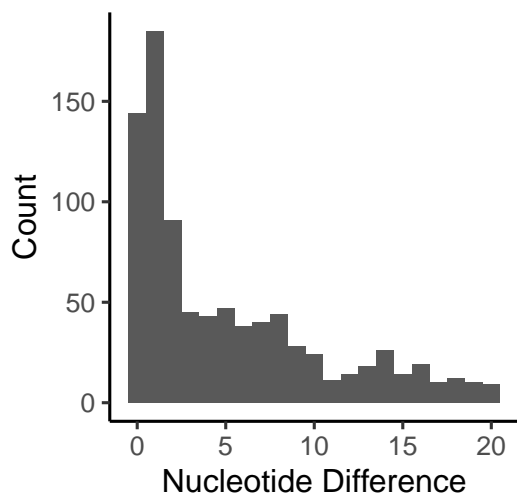
IGHV4–NL_9*01_S9889

19 sequences assigned
No exact matches.



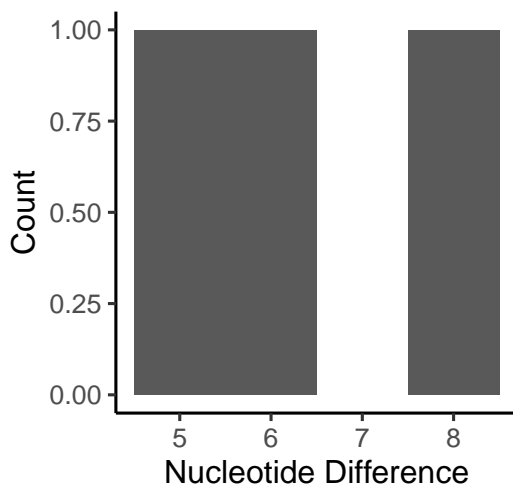
IGHV4–NL_5*01_S8781

904 sequences assigned
144 (15.9%) exact matches, in which:
106 unique CDR3
7 unique J



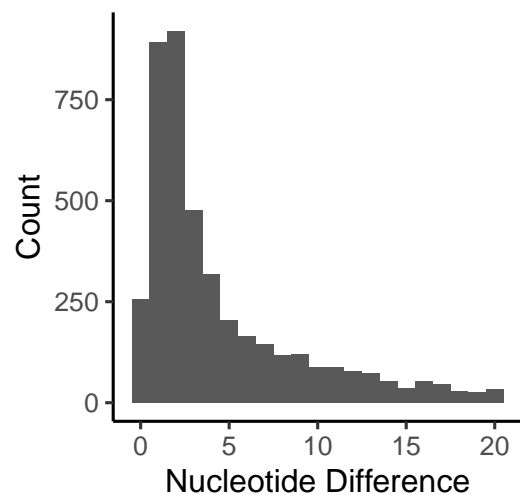
IGHV4–NL_9*01_S4567

4 sequences assigned
No exact matches.



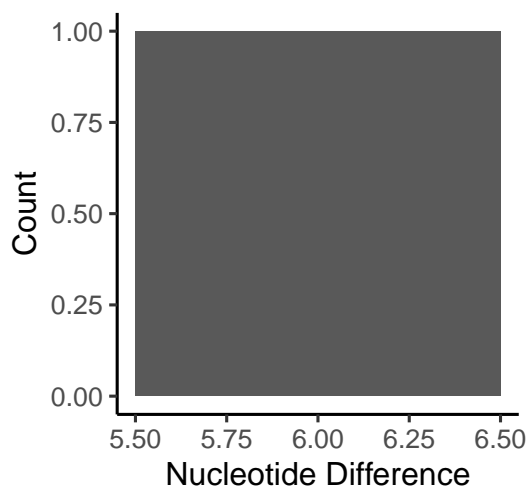
IGHV5–15*01_S0203

4423 sequences assigned
256 (5.8%) exact matches, in which:
137 unique CDR3
6 unique J



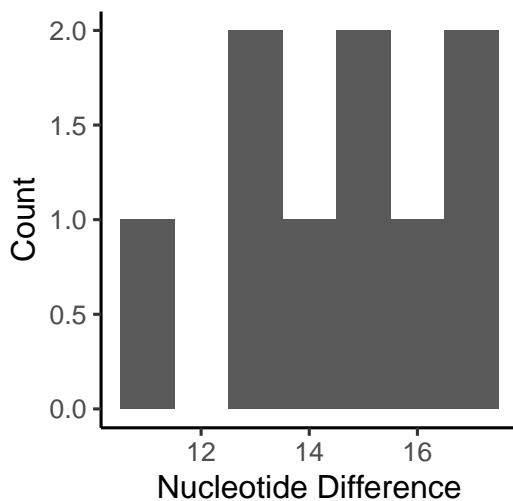
IGHV4–NL_8*02_S1304

1 sequences assigned
No exact matches.



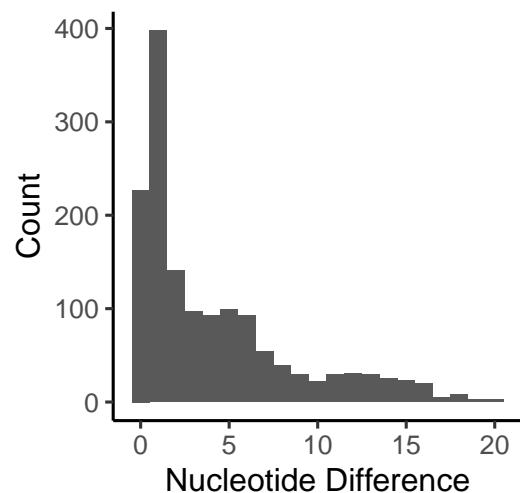
IGHV4–NL_9*01_S4990

28 sequences assigned
No exact matches.



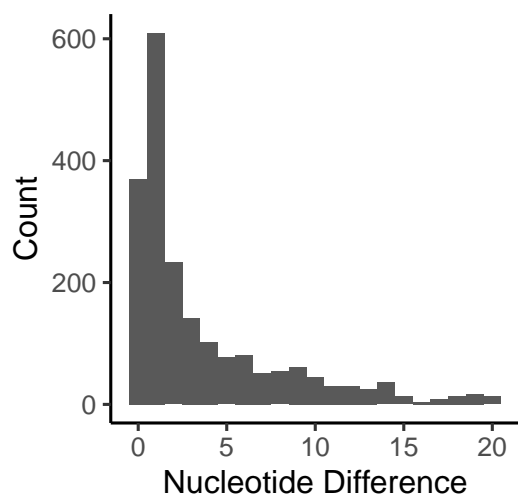
IGHV5–157*01_S8185

1485 sequences assigned
227 (15.3%) exact matches, in which:
125 unique CDR3
7 unique J



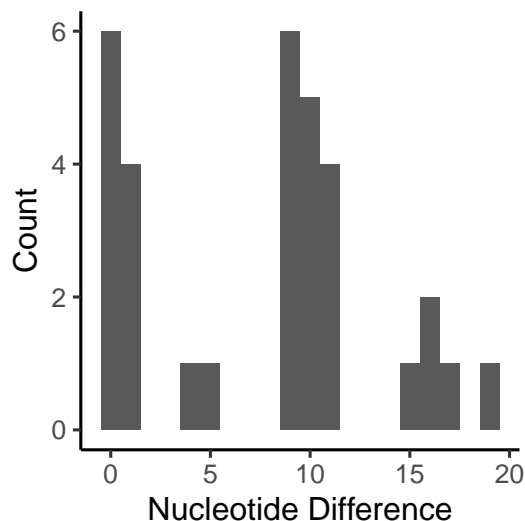
IGHV5-157*02_S3096

2146 sequences assigned
370 (17.2%) exact matches, in which:
180 unique CDR3
8 unique J



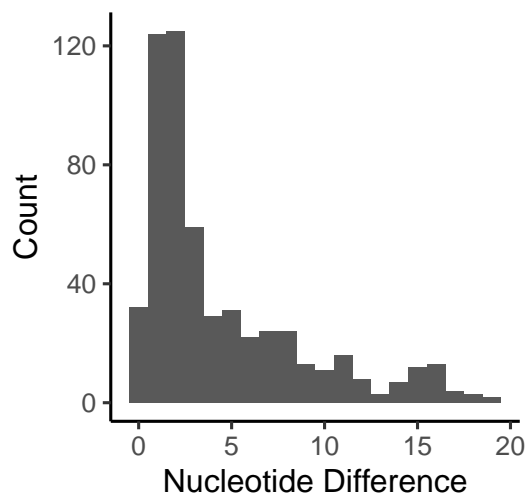
IGHV7-135*01_S4281

34 sequences assigned
6 (17.6%) exact matches, in which:
3 unique CDR3
3 unique J



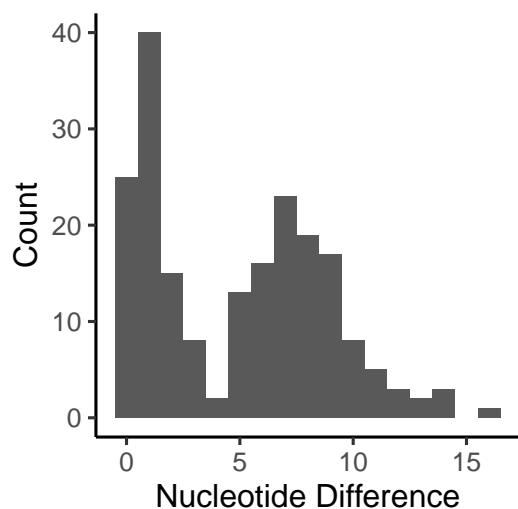
IGHV6-1*02_G280T

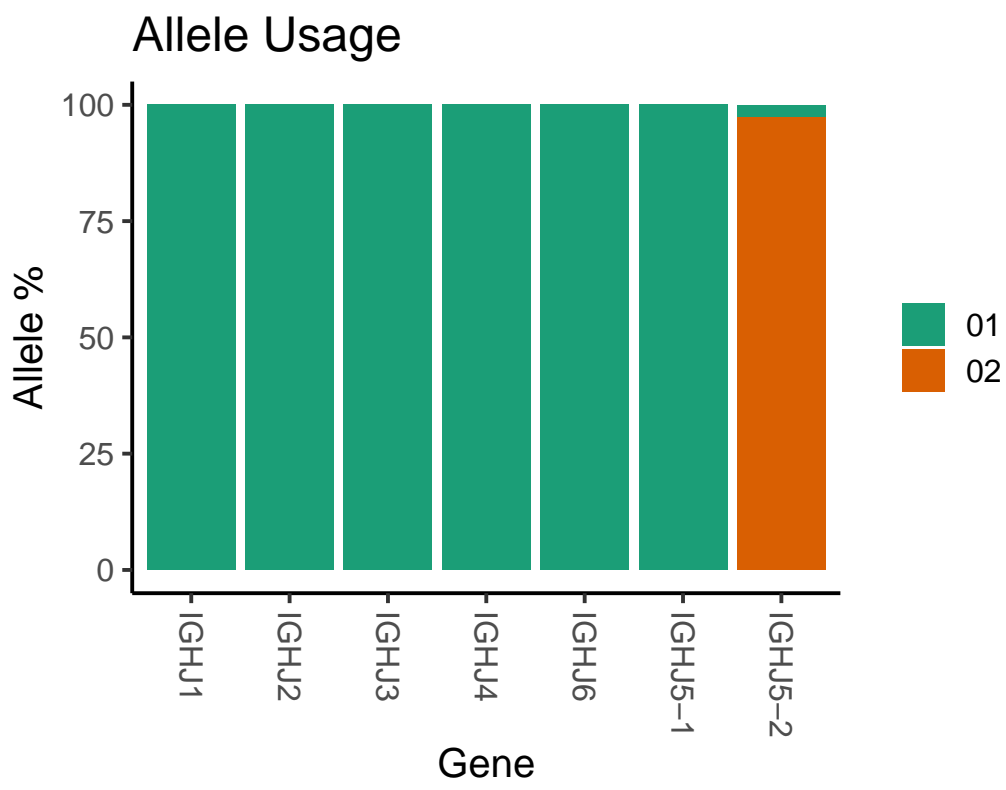
572 sequences assigned
32 (5.6%) exact matches, in which:
22 unique CDR3
6 unique J



IGHV7-86*01_S9209

206 sequences assigned
25 (12.1%) exact matches, in which:
10 unique CDR3
2 unique J





Warning – no inferred sequences found.