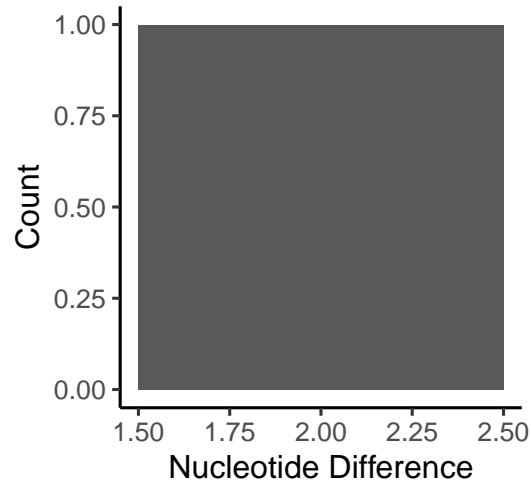


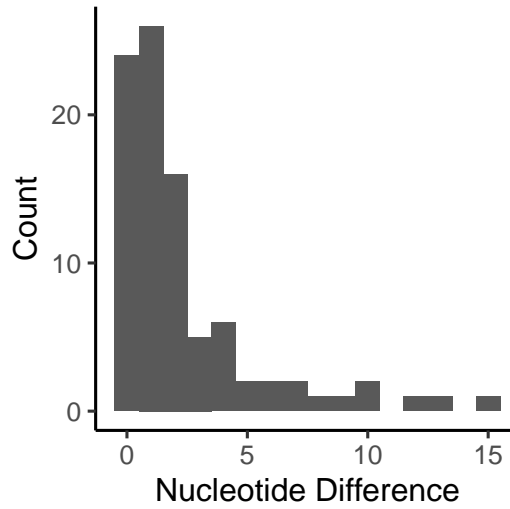
IGHV1-60*01_S1918

53 sequences assigned
No exact matches.



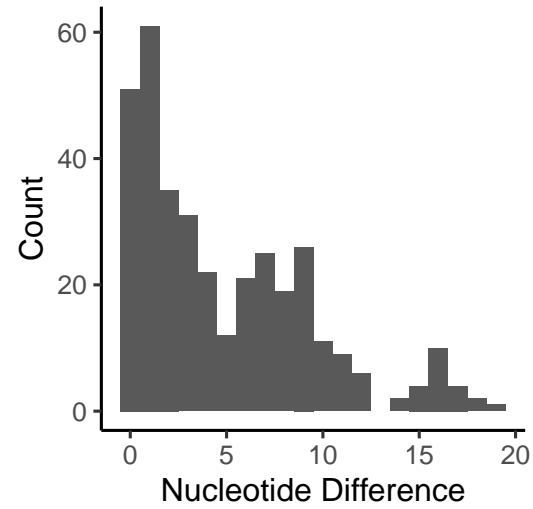
IGHV1-138*01_S2593

91 sequences assigned
24 (26.4%) exact matches, in which:
18 unique CDR3
4 unique J



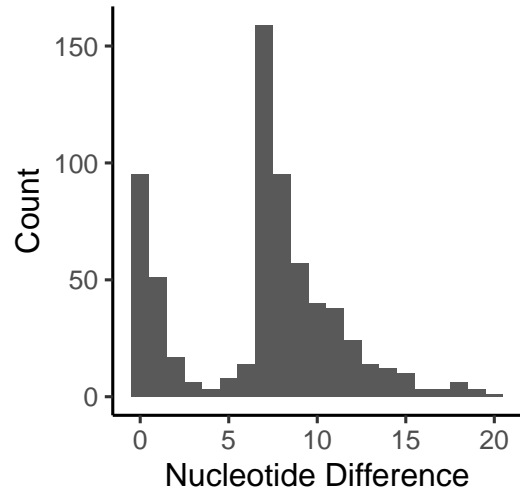
IGHV1-NL_1*01_S8523

358 sequences assigned
51 (14.2%) exact matches, in which:
38 unique CDR3
6 unique J



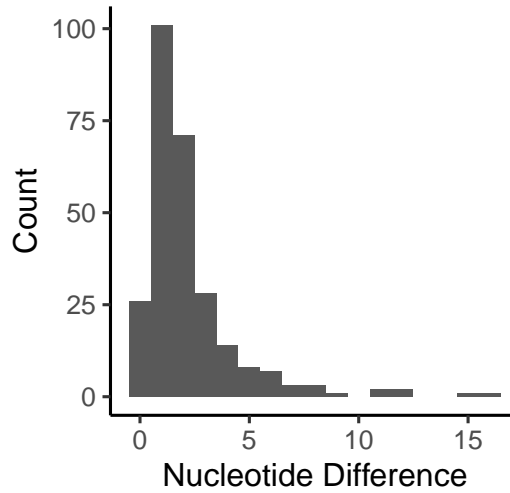
IGHV1-84*01_S9171

687 sequences assigned
95 (13.8%) exact matches, in which:
47 unique CDR3
5 unique J



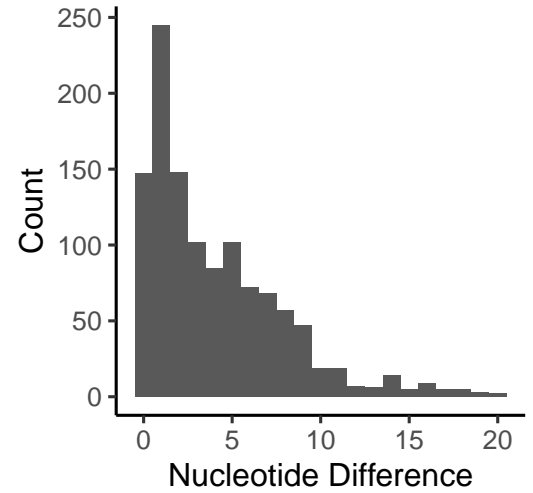
IGHV1-170*01_S3055

269 sequences assigned
26 (9.7%) exact matches, in which:
13 unique CDR3
4 unique J



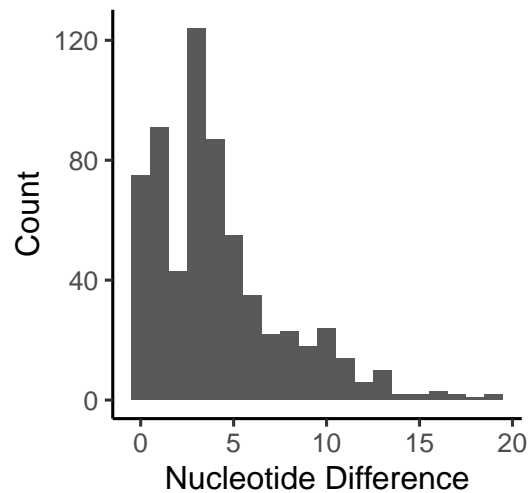
IGHV2-7*02_S1732

1184 sequences assigned
147 (12.4%) exact matches, in which:
115 unique CDR3
7 unique J



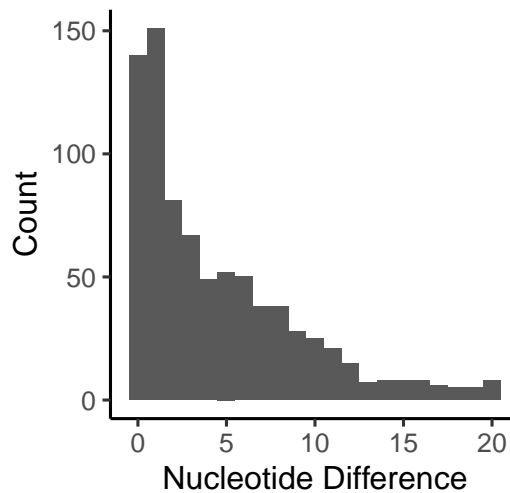
IGHV1-138*01_S2054

642 sequences assigned
75 (11.7%) exact matches, in which:
56 unique CDR3
7 unique J



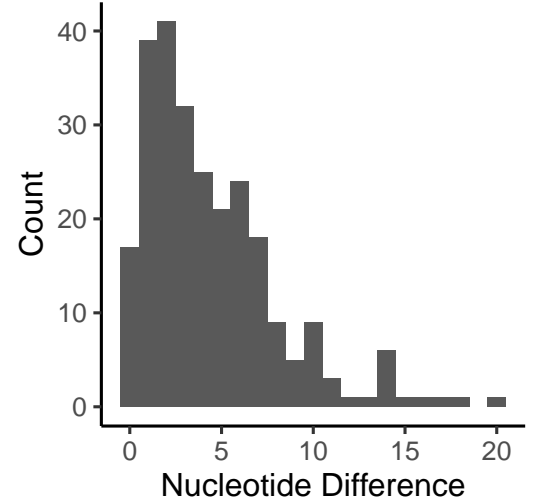
IGHV1-NL_1*01_S2052

864 sequences assigned
140 (16.2%) exact matches, in which:
93 unique CDR3
7 unique J



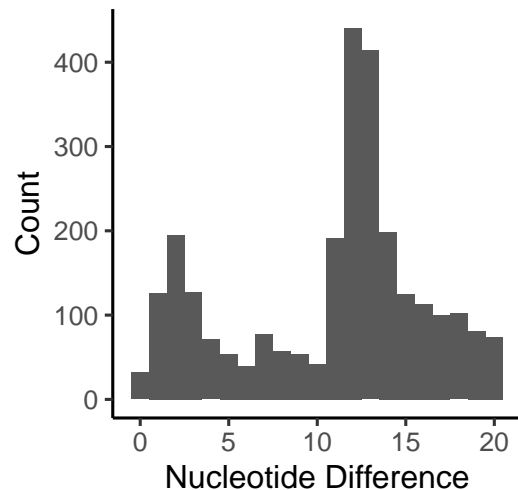
IGHV2-7*02_S4285

259 sequences assigned
17 (6.6%) exact matches, in which:
13 unique CDR3
4 unique J



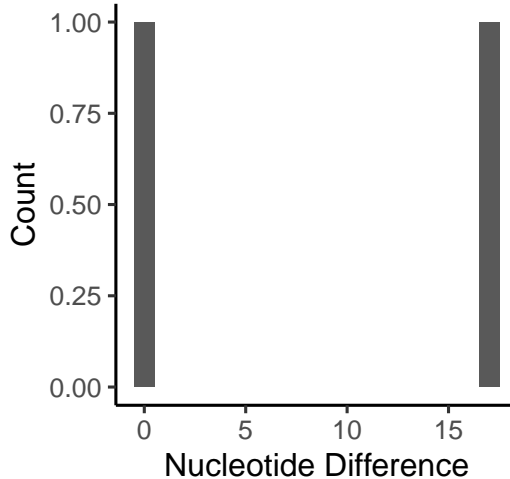
IGHV2-69*01_G289T

3009 sequences assigned
32 (1.1%) exact matches, in which:
32 unique CDR3
5 unique J



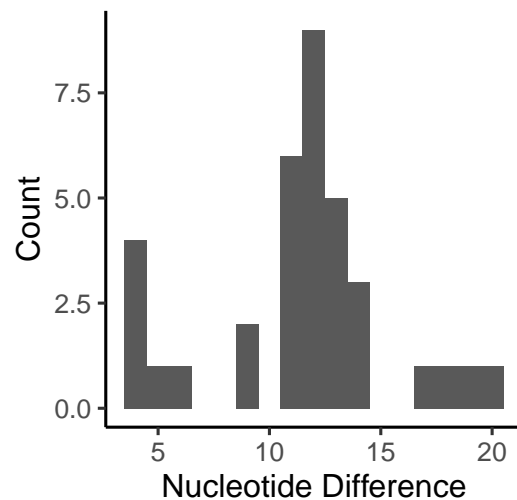
IGHV2-NL_2*01_S8873

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



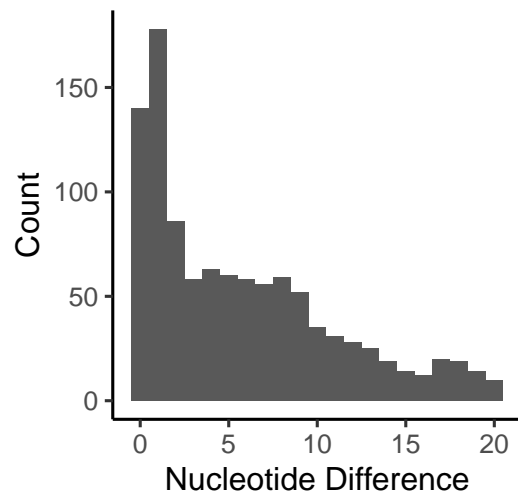
IGHV3-37*01_S4420

59 sequences assigned
No exact matches.



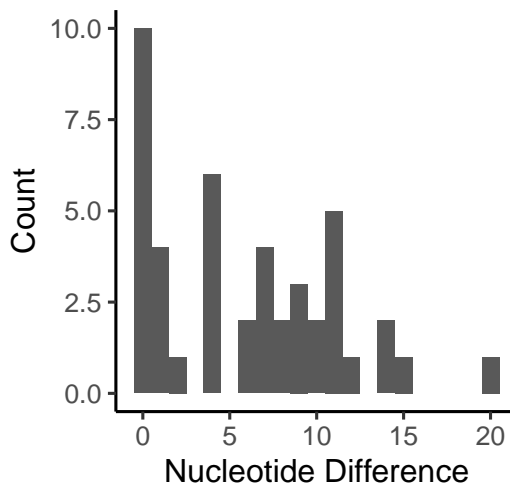
IGHV2-NL_1*01_S5779

1103 sequences assigned
140 (12.7%) exact matches, in which:
98 unique CDR3
6 unique J



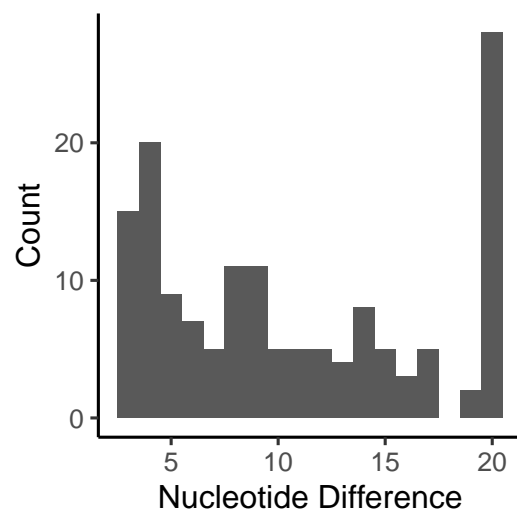
IGHV3-28*01_S7540

47 sequences assigned
10 (21.3%) exact matches, in which:
7 unique CDR3
3 unique J



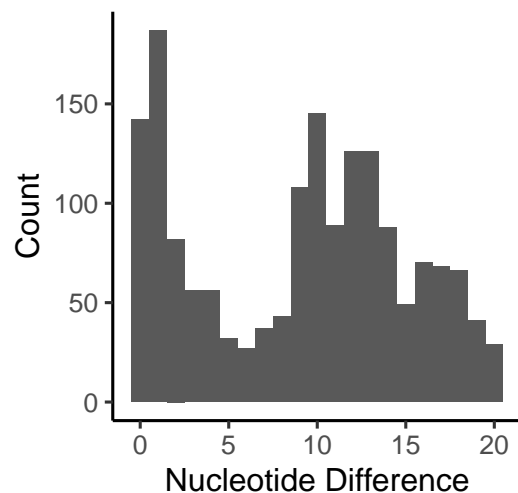
IGHV3-37*01_S6630

280 sequences assigned
No exact matches.



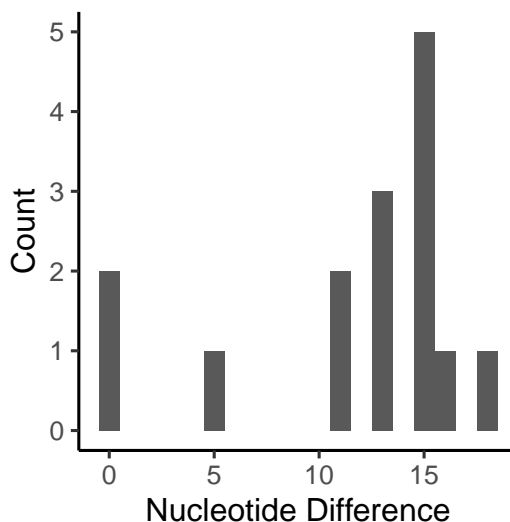
IGHV2-NL_1*01_S9725

1962 sequences assigned
142 (7.2%) exact matches, in which:
97 unique CDR3
6 unique J



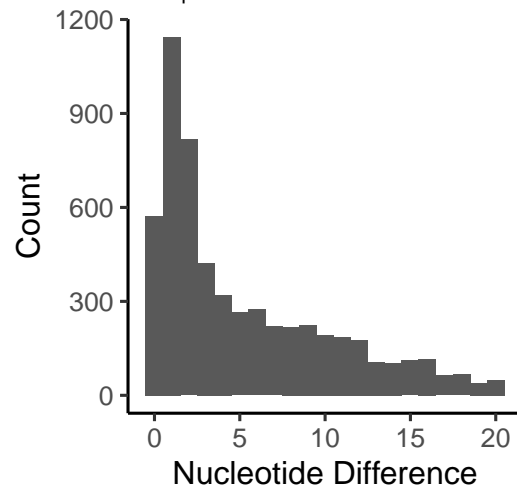
IGHV3-36*01_S7141

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



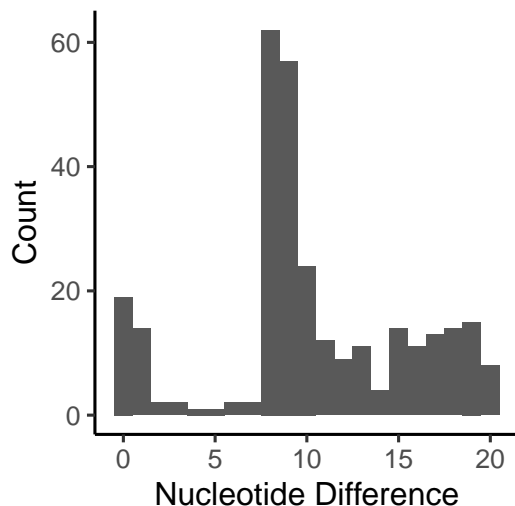
IGHV3-50*01_S1879

5949 sequences assigned
573 (9.6%) exact matches, in which:
441 unique CDR3
8 unique J



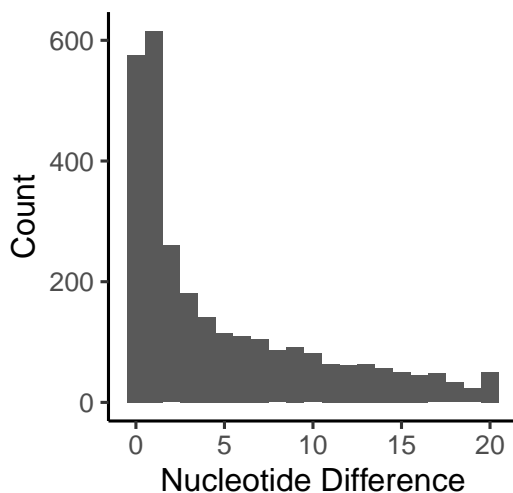
IGHV3-52*02_S5117

343 sequences assigned
19 (5.5%) exact matches, in which:
14 unique CDR3
4 unique J



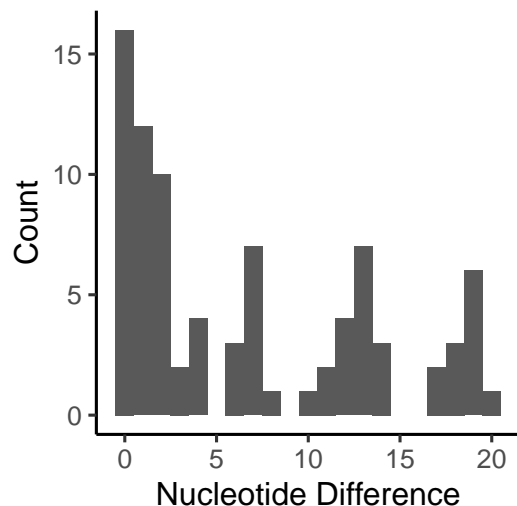
IGHV3-76*02_S4190

3049 sequences assigned
576 (18.9%) exact matches, in which:
437 unique CDR3
6 unique J



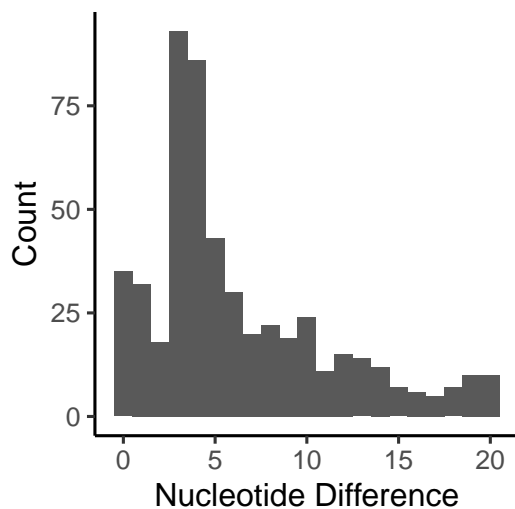
IGHV3-100*01_S4375

173 sequences assigned
16 (9.2%) exact matches, in which:
11 unique CDR3
3 unique J



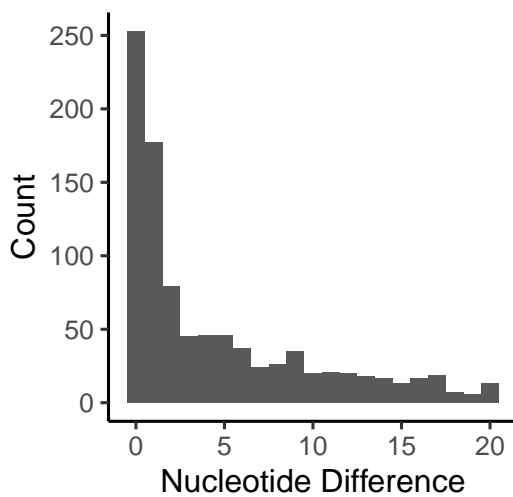
IGHV3-53*01_S3647

605 sequences assigned
35 (5.8%) exact matches, in which:
30 unique CDR3
6 unique J



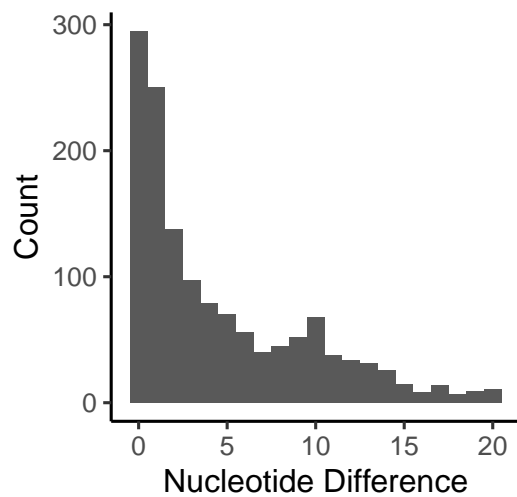
IGHV3-76*02_S4190_A2

992 sequences assigned
253 (25.5%) exact matches, in which:
234 unique CDR3
6 unique J



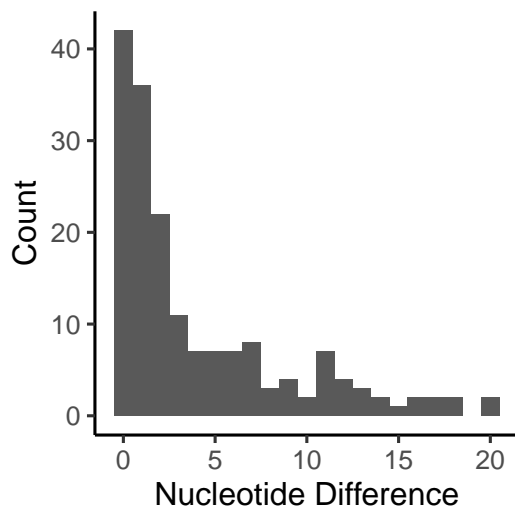
IGHV3-122*01_S8388

1470 sequences assigned
295 (20.1%) exact matches, in which:
228 unique CDR3
7 unique J



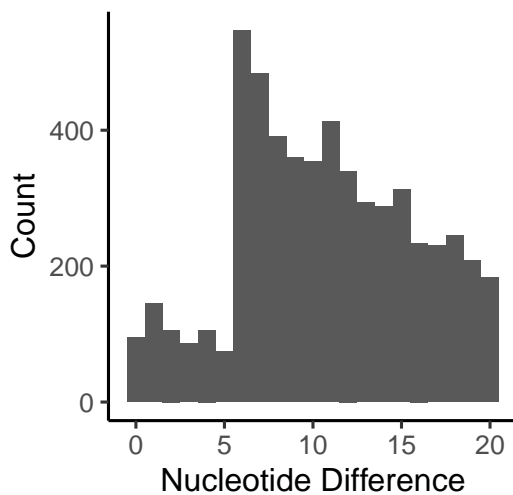
IGHV3-53*01_S5688

229 sequences assigned
42 (18.3%) exact matches, in which:
36 unique CDR3
5 unique J



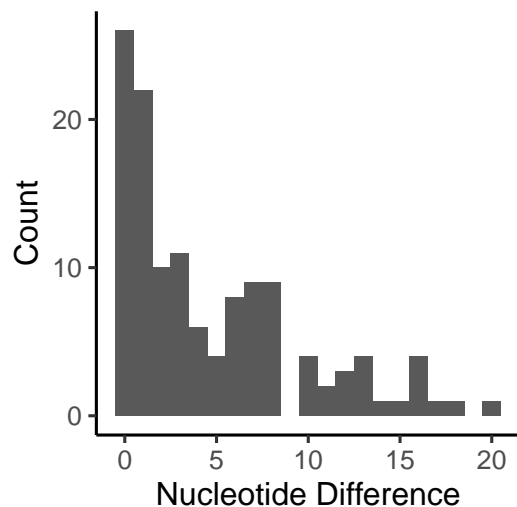
IGHV3-88*02_S7485

6187 sequences assigned
95 (1.5%) exact matches, in which:
80 unique CDR3
4 unique J



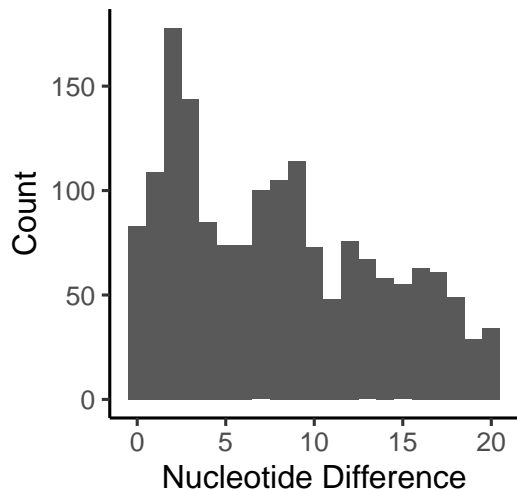
IGHV3-127*01_S6769

128 sequences assigned
26 (20.3%) exact matches, in which:
17 unique CDR3
4 unique J



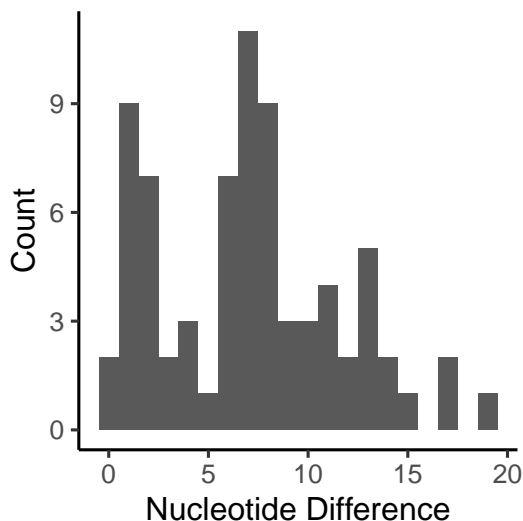
IGHV3-128*01_S1128

1826 sequences assigned
83 (4.5%) exact matches, in which:
63 unique CDR3
6 unique J



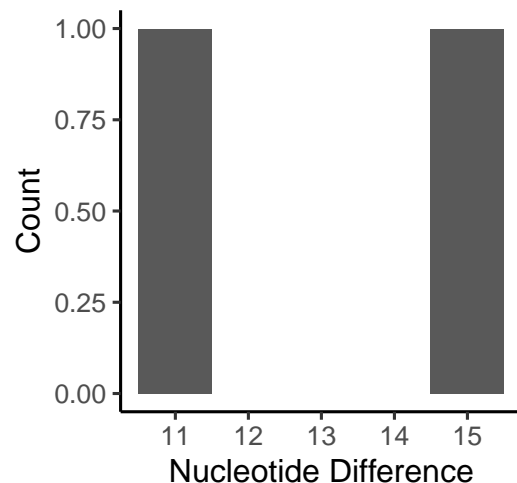
IGHV3-172*01_S1597

77 sequences assigned
2 (2.6%) exact matches, in which:
2 unique CDR3
1 unique J



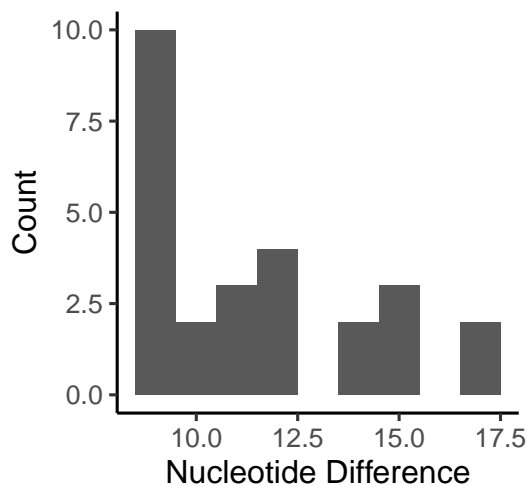
IGHV3-177*01_S1591

2 sequences assigned
No exact matches.



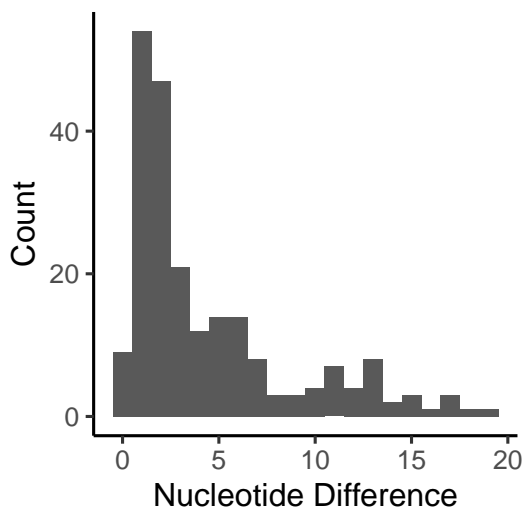
IGHV3-141*01_S3493

27 sequences assigned
No exact matches.



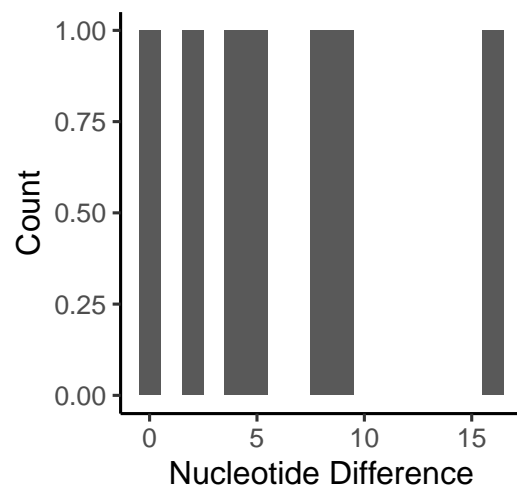
IGHV3-172*01_S8488

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



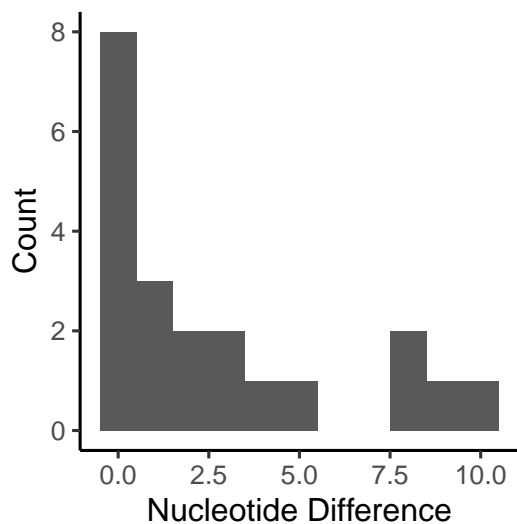
IGHV3-177*01_S5369

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



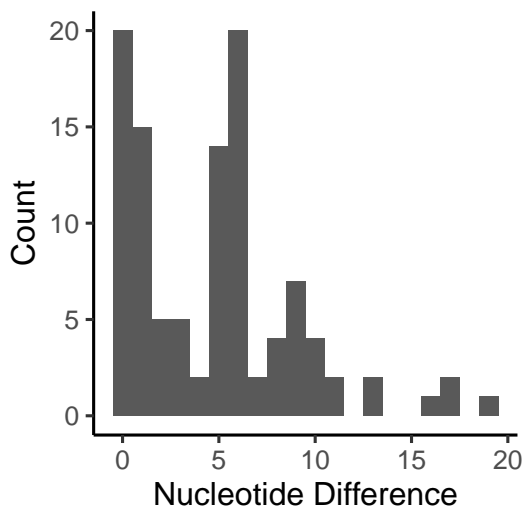
IGHV3-141*01_S8690

23 sequences assigned
8 (34.8%) exact matches, in which:
8 unique CDR3
5 unique J



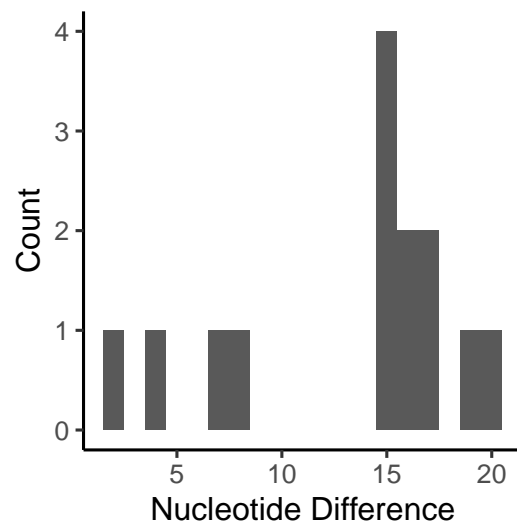
IGHV3-172*01_S8824

106 sequences assigned
20 (18.9%) exact matches, in which:
17 unique CDR3
4 unique J



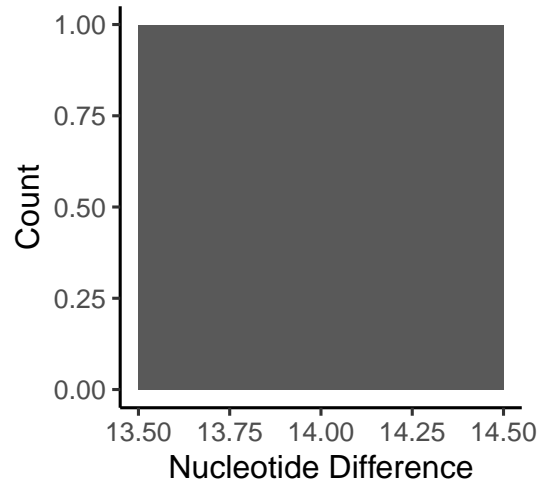
IGHV3-177*01_S6408

17 sequences assigned
No exact matches.



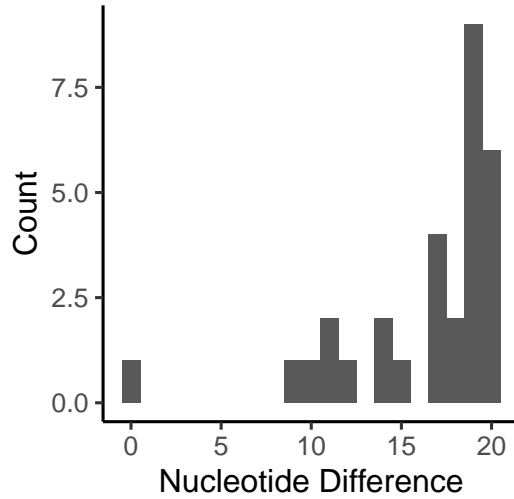
IGHV3-177*01_S8409

2 sequences assigned
No exact matches.



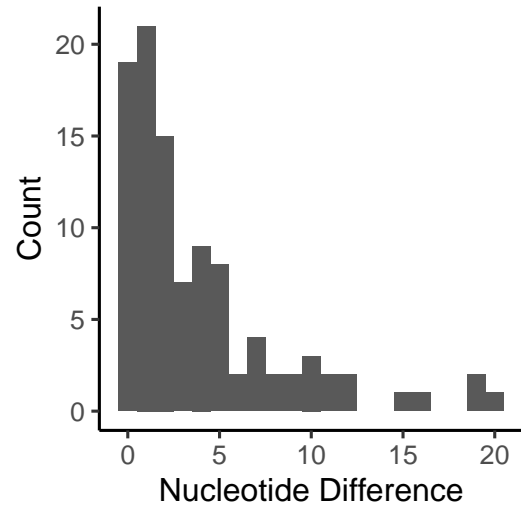
IGHV3-NL_10*02_S2212

63 sequences assigned
1 (1.6%) exact matches, in which:
1 unique CDR3
1 unique J



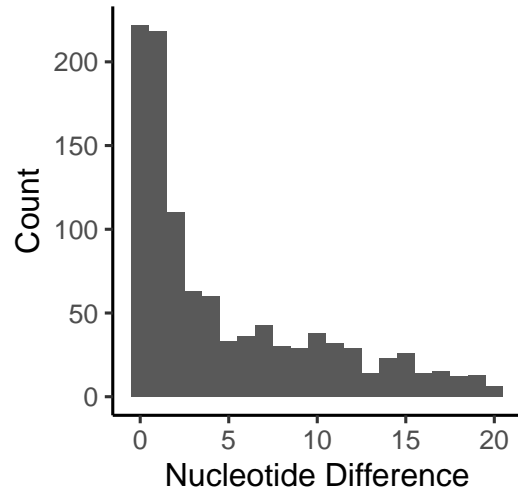
IGHV3-NL_13*01_S3277

104 sequences assigned
19 (18.3%) exact matches, in which:
14 unique CDR3
5 unique J



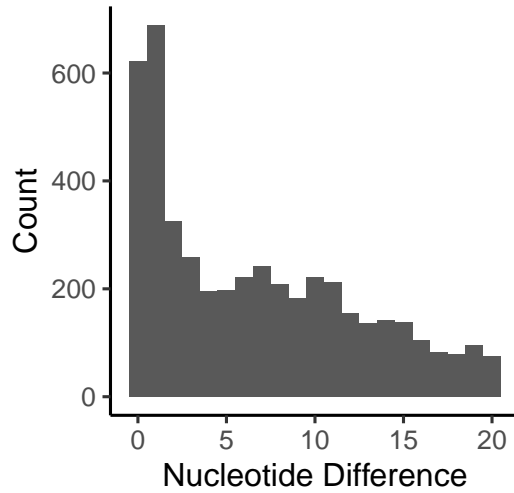
IGHV3-NL_1*01_S4331

1237 sequences assigned
222 (17.9%) exact matches, in which:
160 unique CDR3
6 unique J



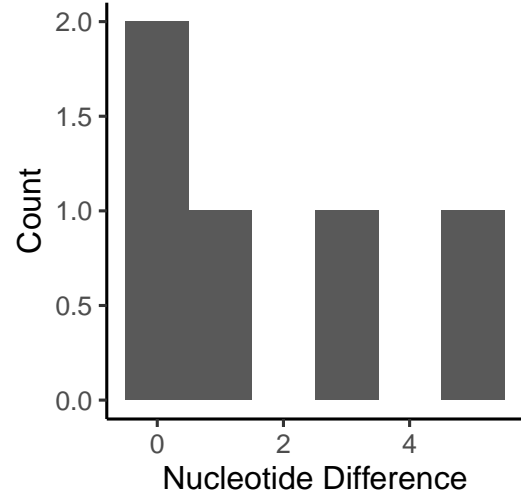
IGHV3-NL_11*01_S3736

4916 sequences assigned
621 (12.6%) exact matches, in which:
483 unique CDR3
8 unique J



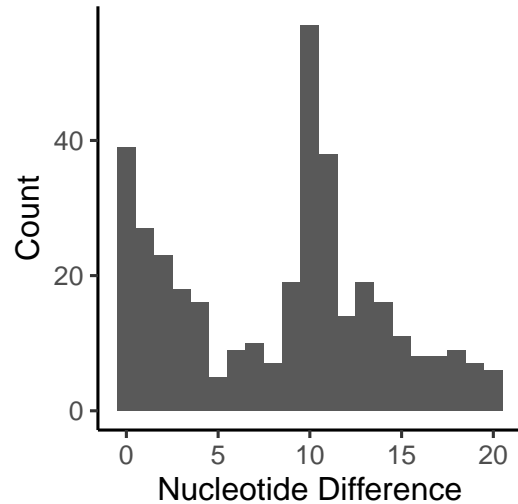
IGHV3-NL_14*01_S1113

6 sequences assigned
2 (33.3%) exact matches, in which:
2 unique CDR3
1 unique J



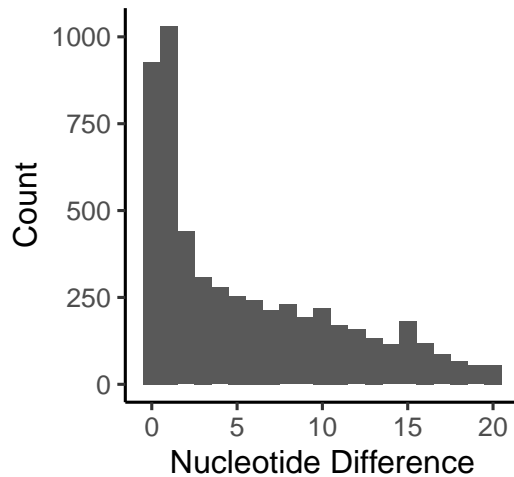
IGHV3-NL_1*01_S9422

468 sequences assigned
39 (8.3%) exact matches, in which:
30 unique CDR3
5 unique J



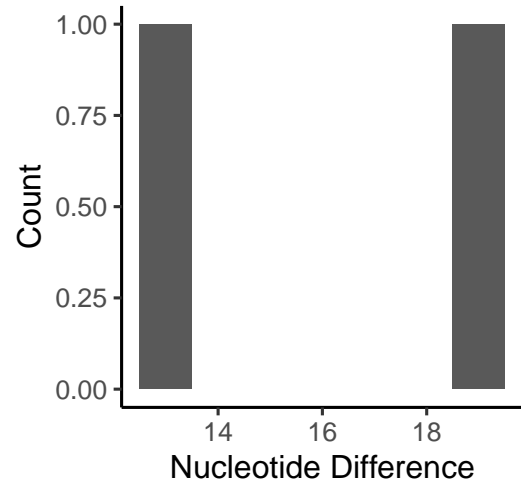
IGHV3-NL_11*01_S461

5871 sequences assigned
927 (15.8%) exact matches, in which:
675 unique CDR3
7 unique J



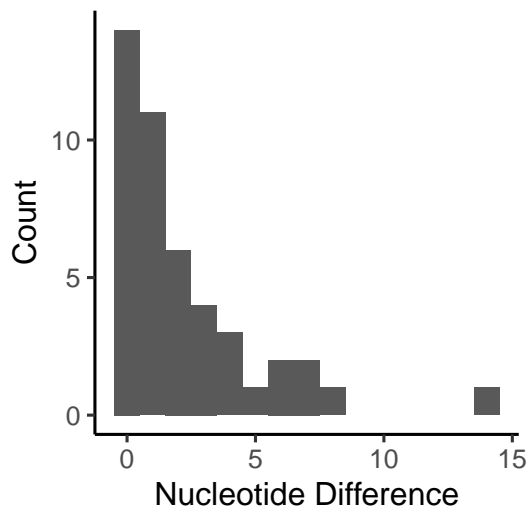
IGHV3-NL_15*01_S0604

2 sequences assigned
No exact matches.



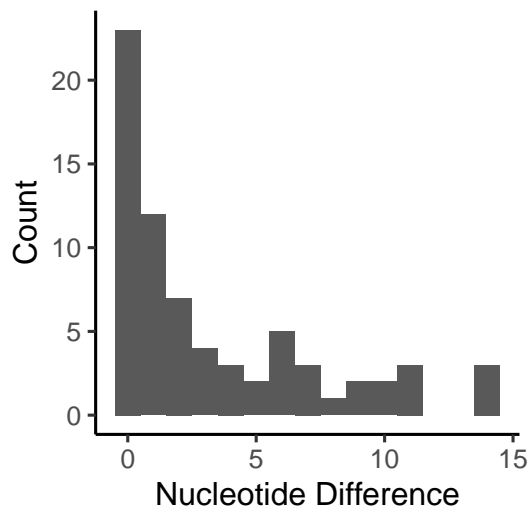
IGHV3–NL_16*01_S8234

49 sequences assigned
14 (28.6%) exact matches, in which:
11 unique CDR3
2 unique J



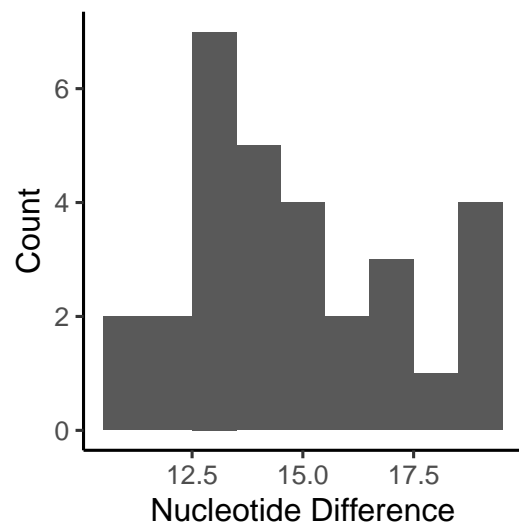
IGHV3–NL_19*01_S5460

72 sequences assigned
23 (31.9%) exact matches, in which:
19 unique CDR3
6 unique J



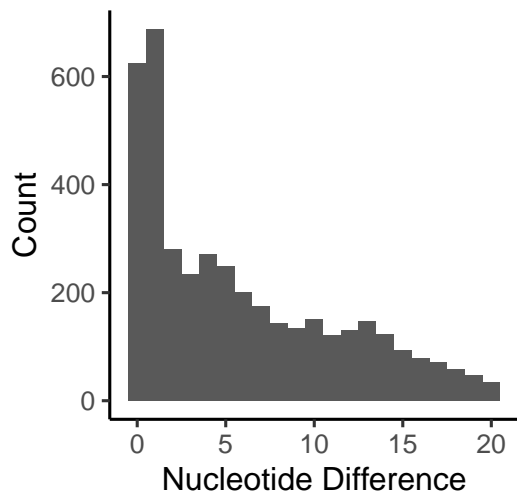
IGHV3–NL_4*01_S2727

34 sequences assigned
No exact matches.



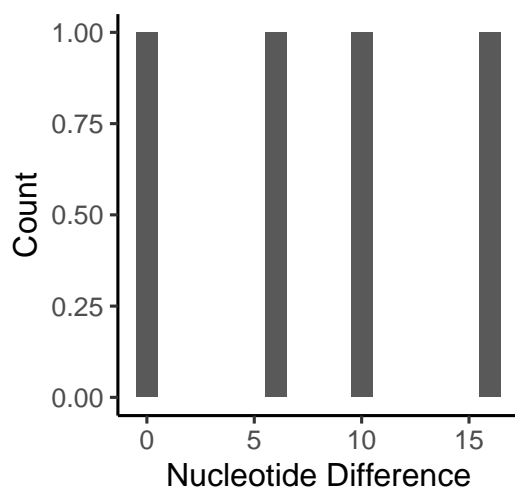
IGHV3–NL_17*01_S4250

4305 sequences assigned
625 (14.5%) exact matches, in which:
465 unique CDR3
7 unique J



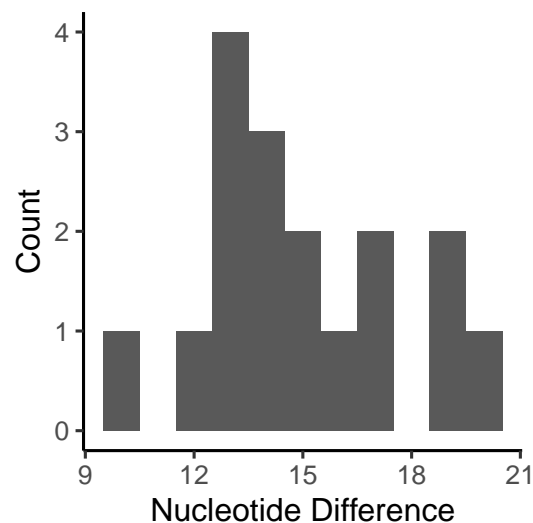
IGHV3–NL_2*01_S1693

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



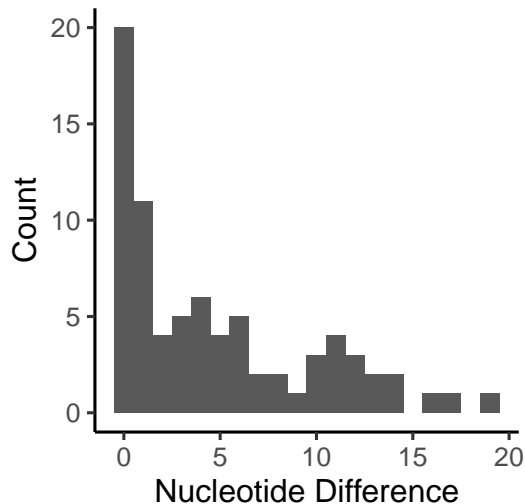
IGHV3–NL_4*01_S6405

25 sequences assigned
No exact matches.



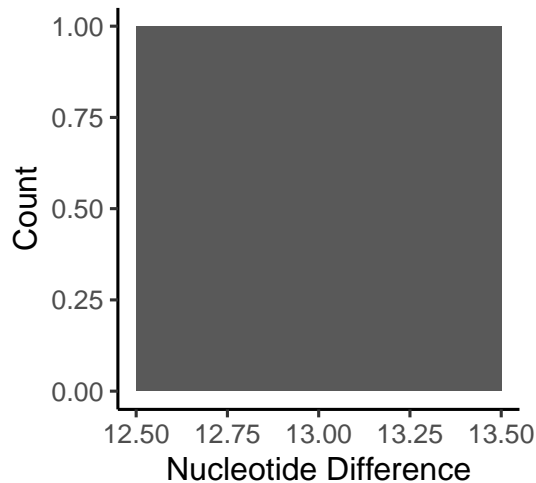
IGHV3–NL_18*01_S3867

80 sequences assigned
20 (25%) exact matches, in which:
16 unique CDR3
4 unique J



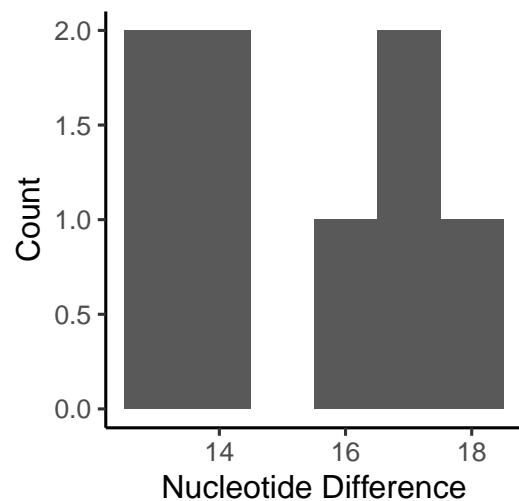
IGHV3–NL_2*01_S3900

9 sequences assigned
No exact matches.



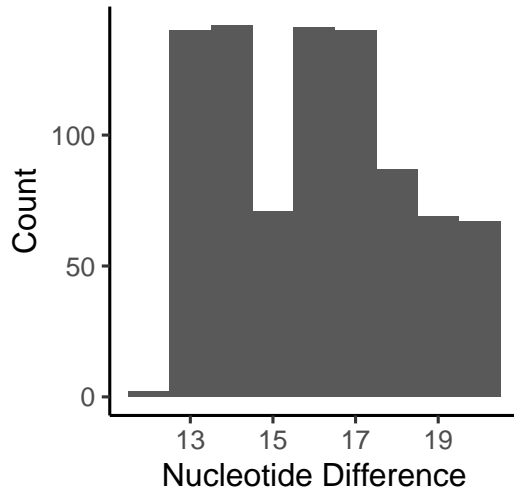
IGHV3–NL_4*01_S9635

11 sequences assigned
No exact matches.



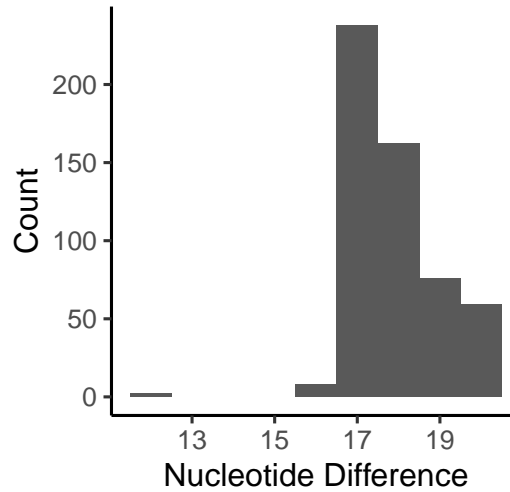
IGHV3–NL_5*01_S8361

1417 sequences assigned
No exact matches.



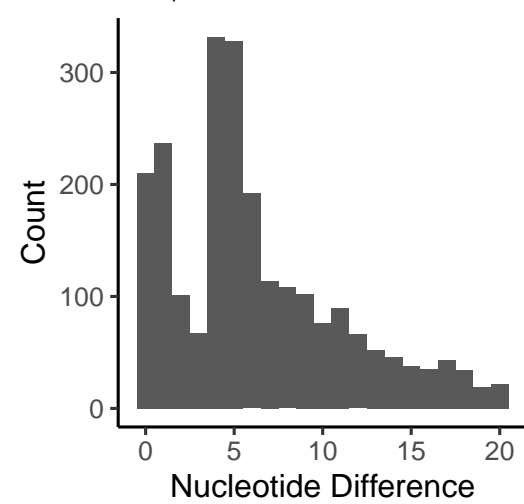
IGHV3–NL_8*01_S7474

916 sequences assigned
No exact matches.



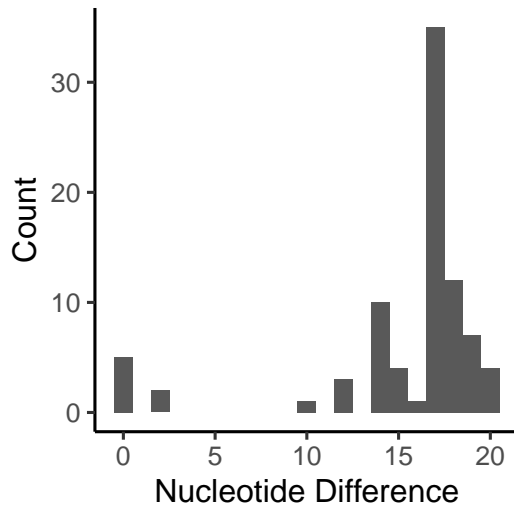
IGHV4–93*01_S5203

2441 sequences assigned
210 (8.6%) exact matches, in which:
182 unique CDR3
6 unique J



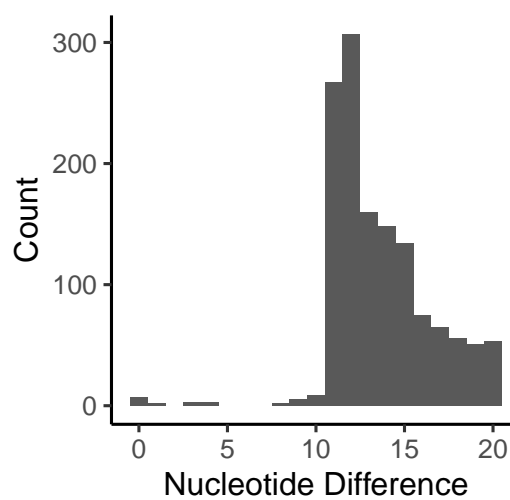
IGHV3–NL_6*02_S7808

286 sequences assigned
5 (1.7%) exact matches, in which:
3 unique CDR3
2 unique J



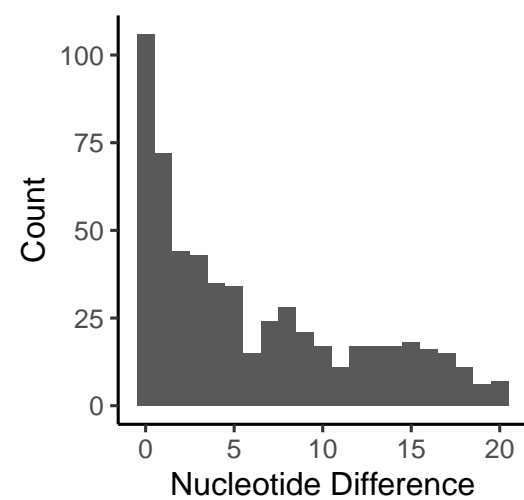
IGHV3–NL_9*01_S6098

1732 sequences assigned
7 (0.4%) exact matches, in which:
7 unique CDR3
3 unique J



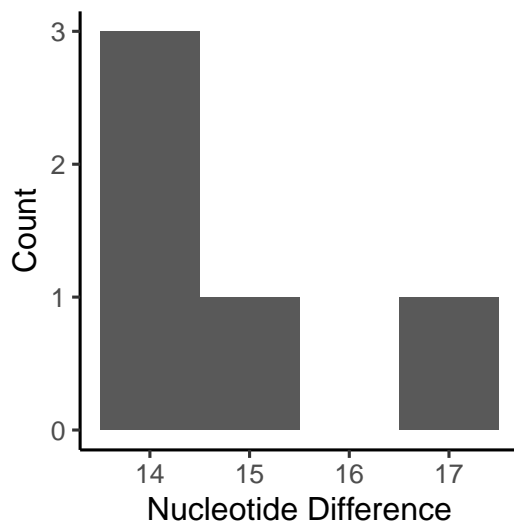
IGHV4–117*01_S5807

604 sequences assigned
106 (17.5%) exact matches, in which:
96 unique CDR3
7 unique J



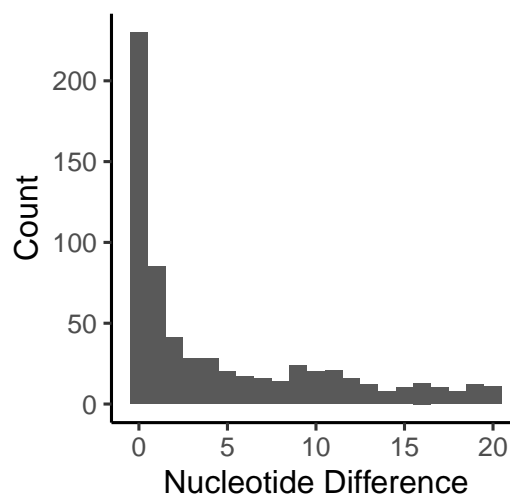
IGHV3–NL_7*01_S0199

6 sequences assigned
No exact matches.



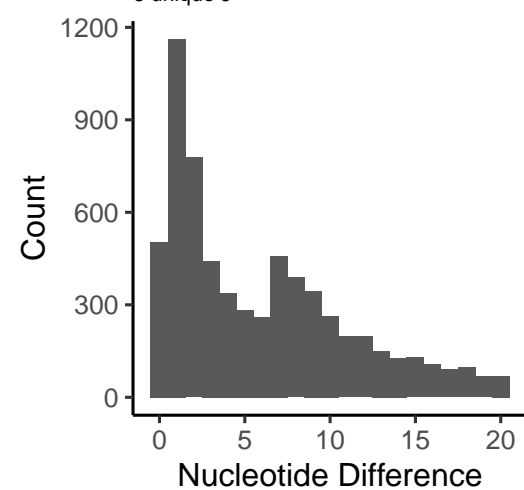
IGHV4–79*02_S9501

733 sequences assigned
230 (31.4%) exact matches, in which:
209 unique CDR3
6 unique J



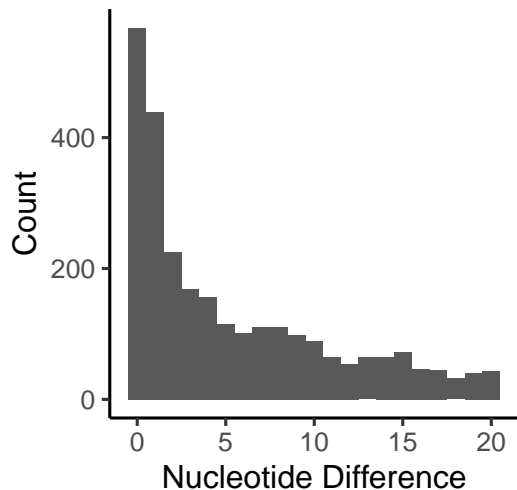
IGHV4–117*01_S8404

6872 sequences assigned
504 (7.3%) exact matches, in which:
427 unique CDR3
6 unique J



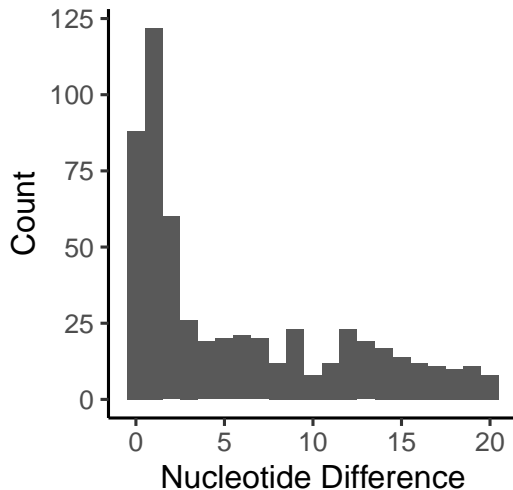
IGHV4-149*01_S1992

3041 sequences assigned
568 (18.7%) exact matches, in which:
476 unique CDR3
7 unique J



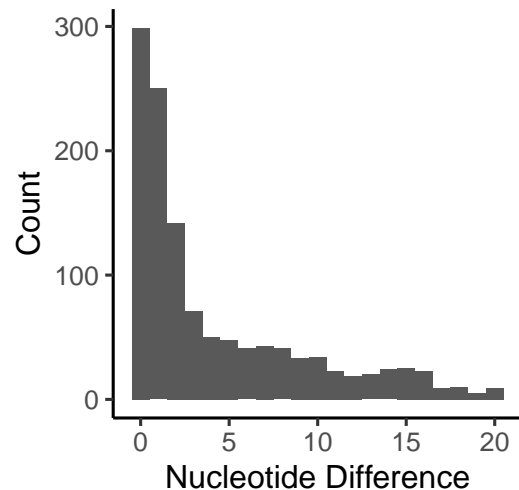
IGHV4-NL_1*01_S1134_

605 sequences assigned
88 (14.5%) exact matches, in which:
75 unique CDR3
7 unique J



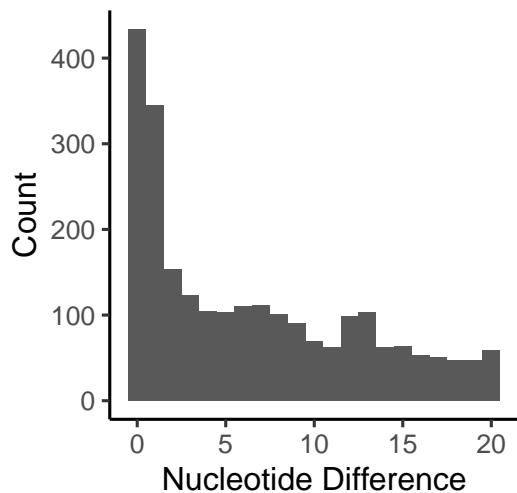
IGHV4-NL_1*01_S9508

1246 sequences assigned
299 (24%) exact matches, in which:
248 unique CDR3
6 unique J



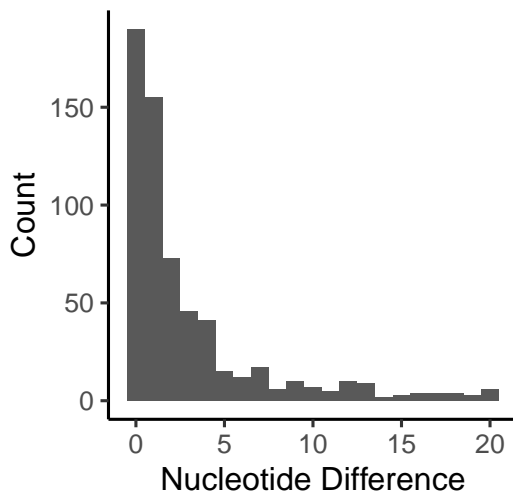
IGHV4-149*01_S5861

2725 sequences assigned
434 (15.9%) exact matches, in which:
370 unique CDR3
8 unique J



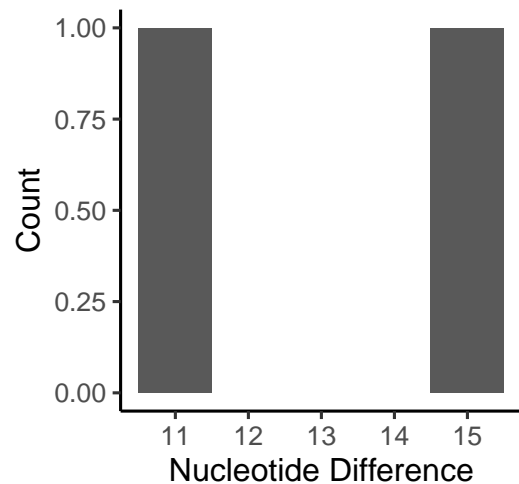
IGHV4-NL_1*01_S8621

634 sequences assigned
190 (30%) exact matches, in which:
154 unique CDR3
6 unique J



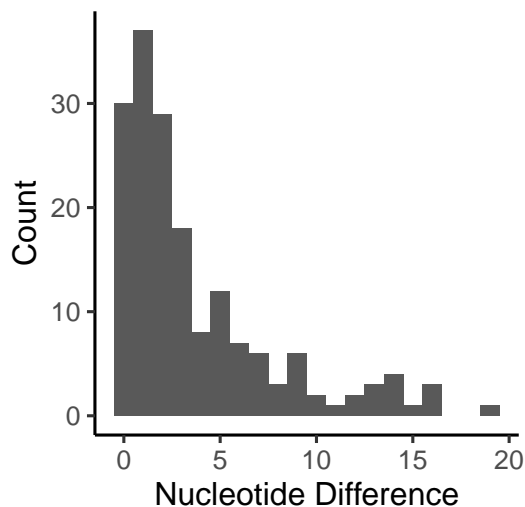
IGHV4-NL_11*01_S5570

2 sequences assigned
No exact matches.



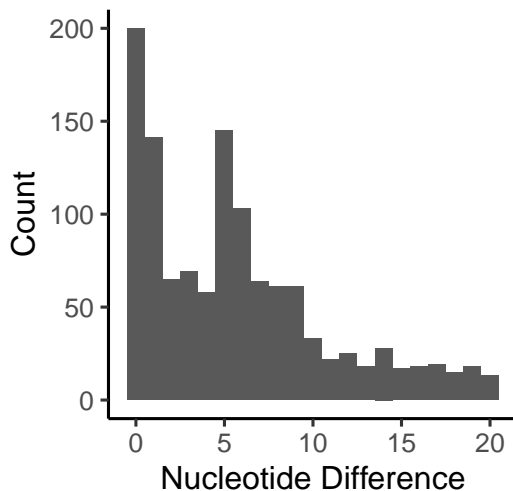
IGHV4-150*01_S8038

180 sequences assigned
30 (16.7%) exact matches, in which:
28 unique CDR3
7 unique J



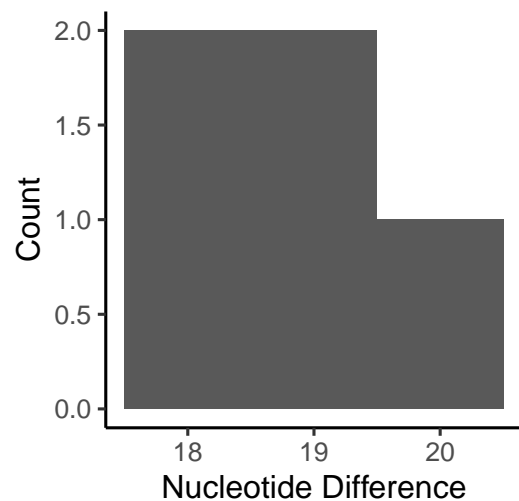
IGHV4-NL_1*01_S8720

1355 sequences assigned
200 (14.8%) exact matches, in which:
166 unique CDR3
7 unique J



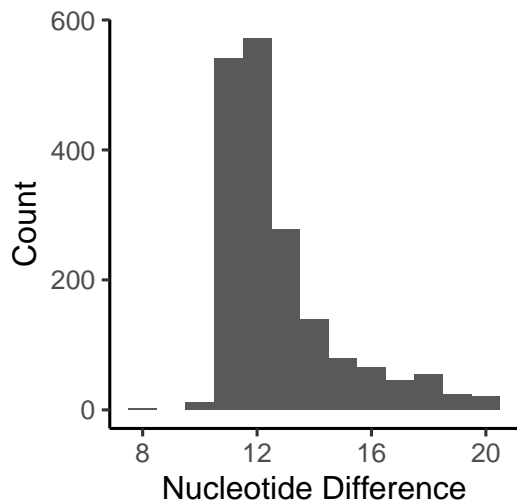
IGHV4-NL_11*01_S9942

51 sequences assigned
No exact matches.



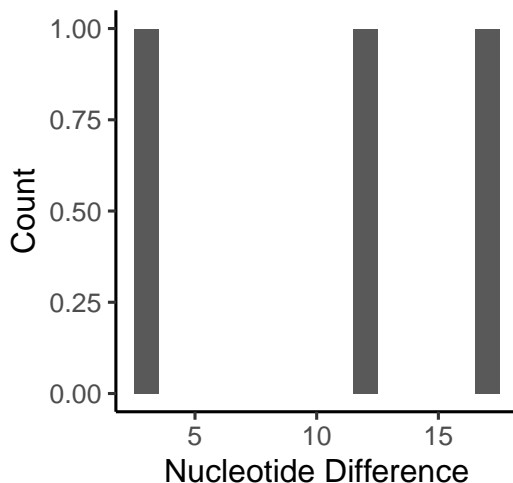
IGHV4–NL_12*01_S8068

1997 sequences assigned
No exact matches.



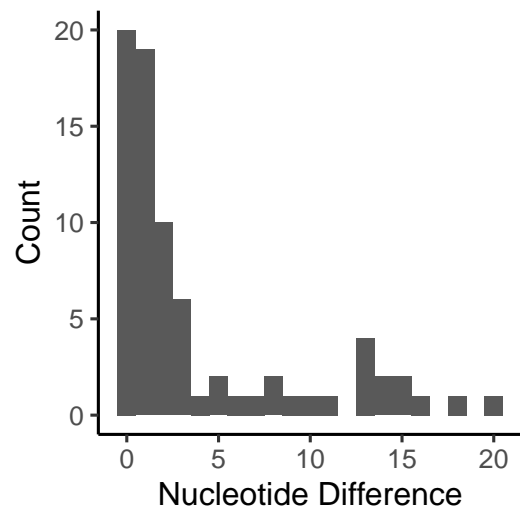
IGHV4–NL_16*01_S2324

3 sequences assigned
No exact matches.



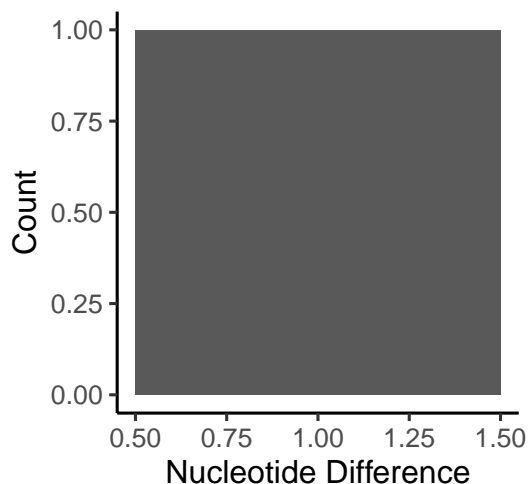
IGHV4–NL_19*01_S2661

77 sequences assigned
20 (26%) exact matches, in which:
20 unique CDR3
5 unique J



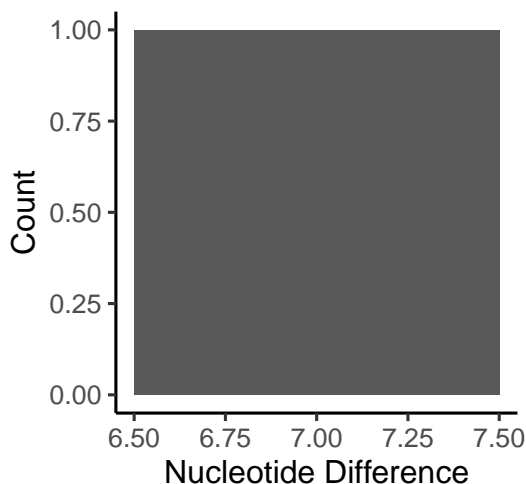
IGHV4–NL_15*01_S5717

1 sequences assigned
No exact matches.



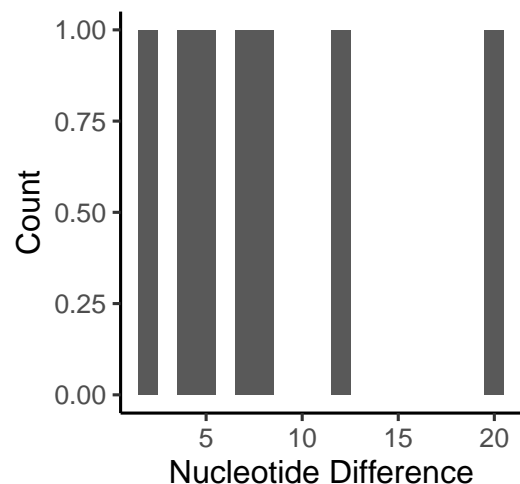
IGHV4–NL_16*01_S3062

1 sequences assigned
No exact matches.



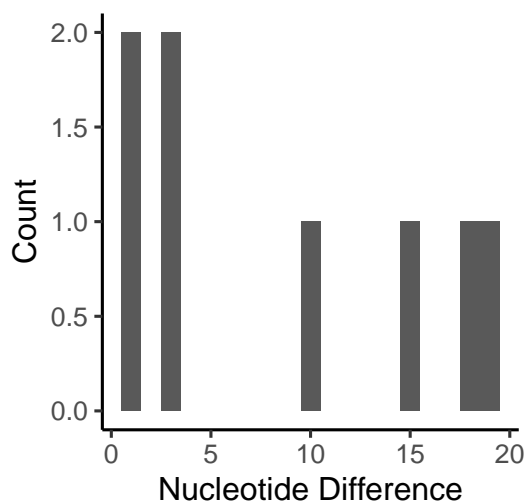
IGHV4–NL_20*01_S4754

15 sequences assigned
No exact matches.



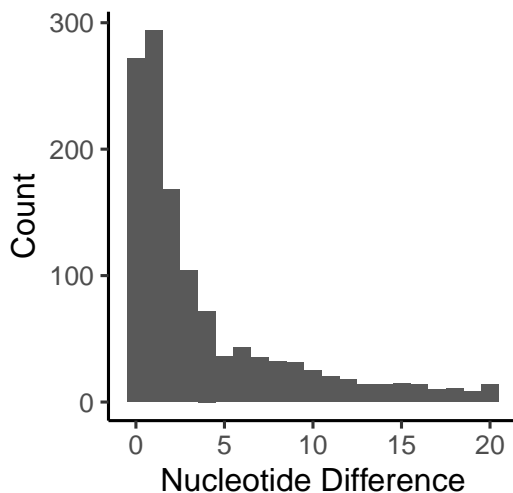
IGHV4–NL_16*01_S2138

9 sequences assigned
No exact matches.



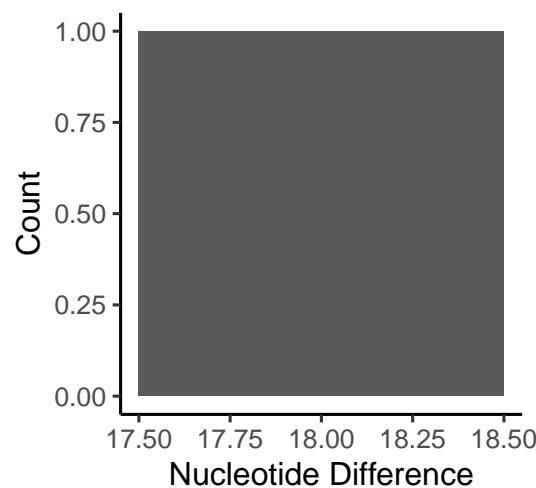
IGHV4–NL_17*01_S2142

1402 sequences assigned
272 (19.4%) exact matches, in which:
246 unique CDR3
7 unique J



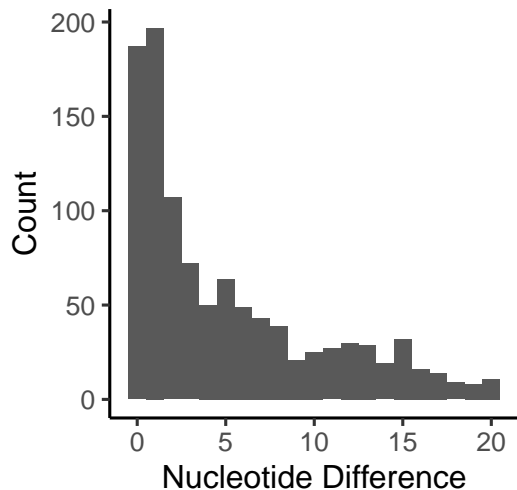
IGHV4–NL_20*01_S7244

3 sequences assigned
No exact matches.



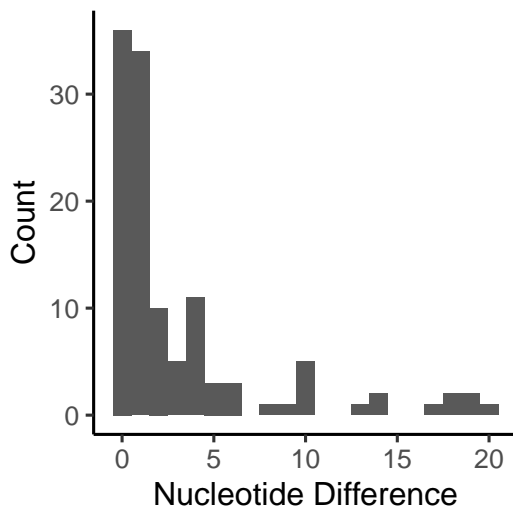
IGHV4–NL_21*01_S0138

1120 sequences assigned
187 (16.7%) exact matches, in which:
166 unique CDR3
7 unique J



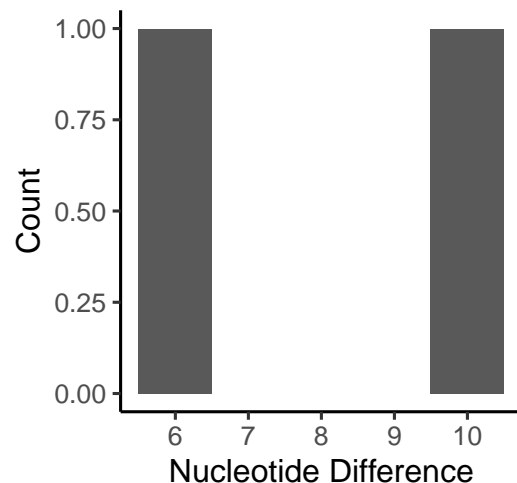
IGHV4–NL_24*01_S7468

121 sequences assigned
36 (29.8%) exact matches, in which:
31 unique CDR3
7 unique J



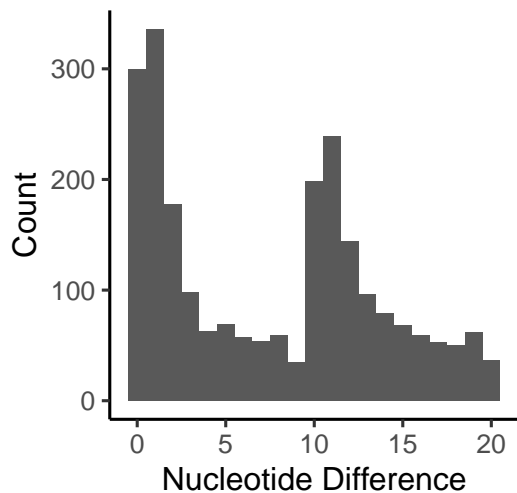
IGHV4–NL_27*01_S2822

2 sequences assigned
No exact matches.



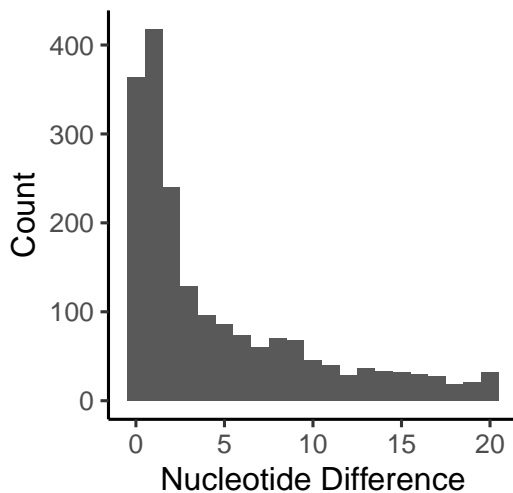
IGHV4–NL_21*01_S1118

2575 sequences assigned
300 (11.7%) exact matches, in which:
267 unique CDR3
6 unique J



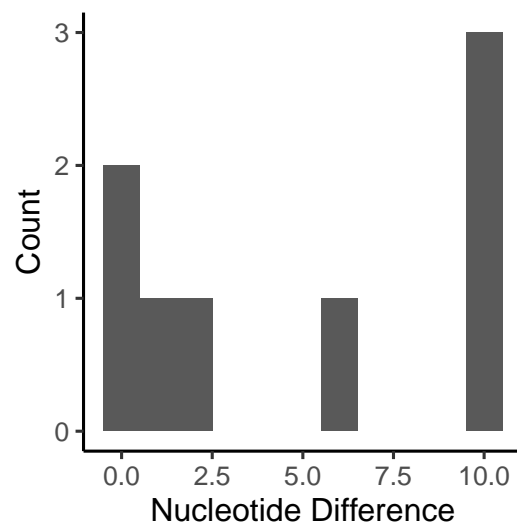
IGHV4–NL_25*01_S2780

2065 sequences assigned
364 (17.6%) exact matches, in which:
308 unique CDR3
6 unique J



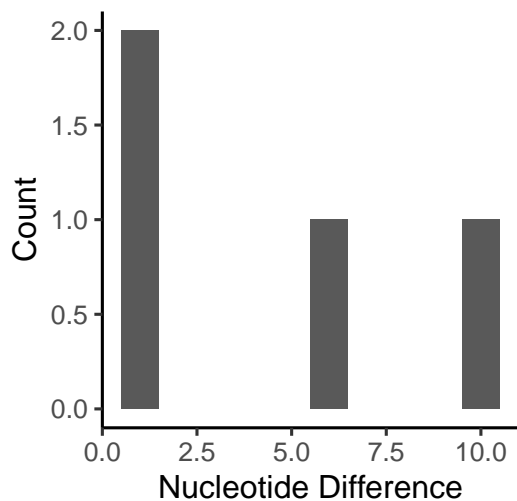
IGHV4–NL_27*01_S5151

9 sequences assigned
2 (22.2%) exact matches, in which:
2 unique CDR3
1 unique J



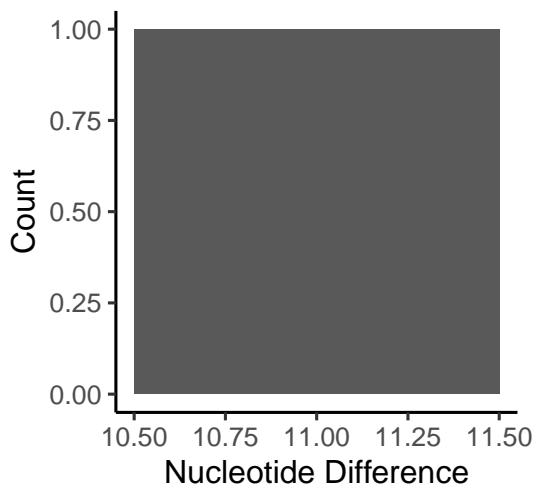
IGHV4–NL_22*01_S2393

6 sequences assigned
No exact matches.



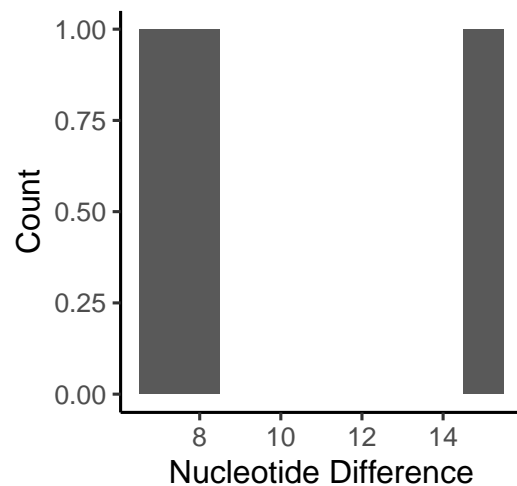
IGHV4–NL_26*01_S226'

1 sequences assigned
No exact matches.



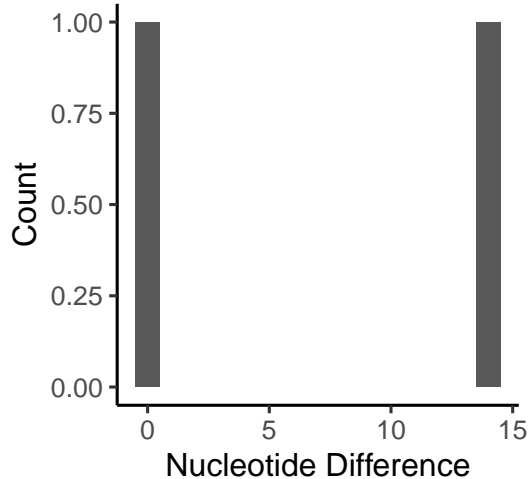
IGHV4–NL_27*01_S7433

3 sequences assigned
No exact matches.



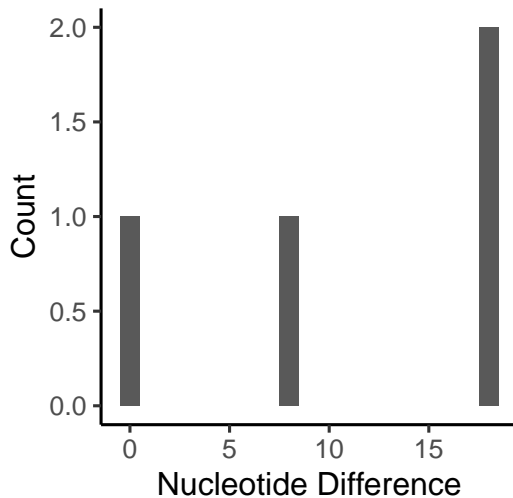
IGHV4-NL_27*01_S7643

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



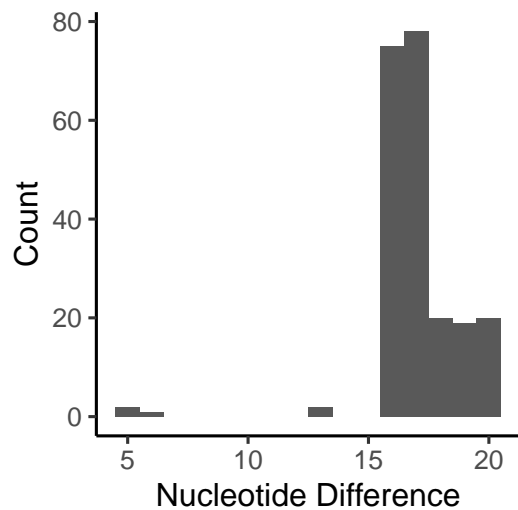
IGHV4-NL_31*01_S7693

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



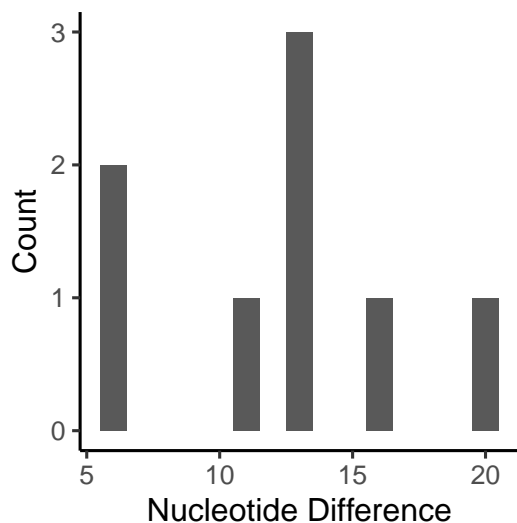
IGHV4-NL_34*01_S4637

263 sequences assigned
No exact matches.



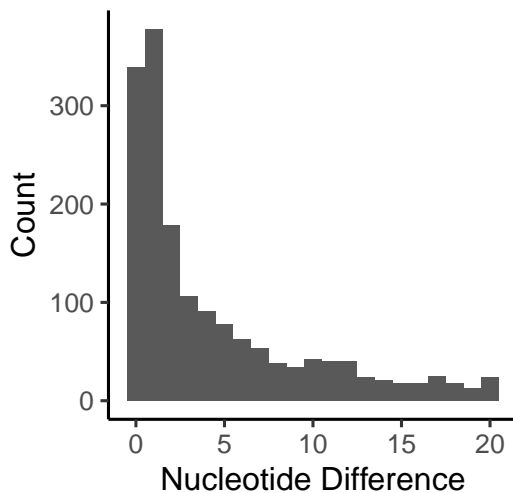
IGHV4-NL_29*01_S3761

14 sequences assigned
No exact matches.



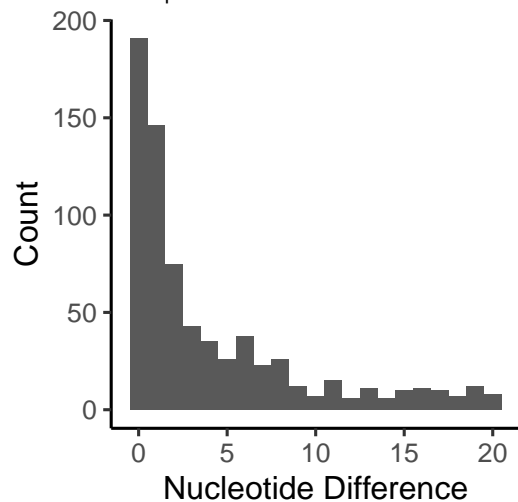
IGHV4-NL_33*01_S1148

1733 sequences assigned
339 (19.6%) exact matches, in which:
297 unique CDR3
6 unique J



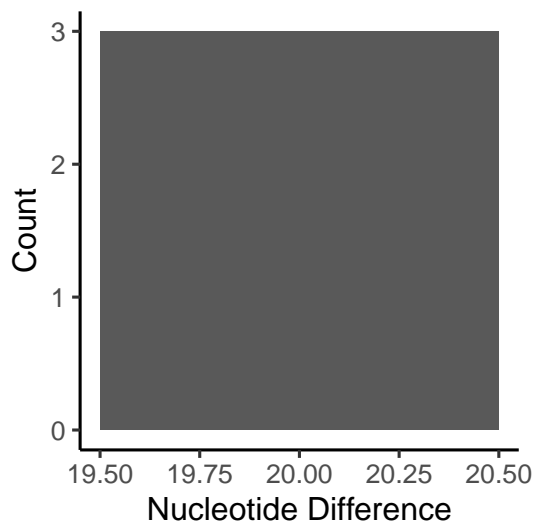
IGHV4-NL_36*01_S6474

786 sequences assigned
191 (24.3%) exact matches, in which:
165 unique CDR3
6 unique J



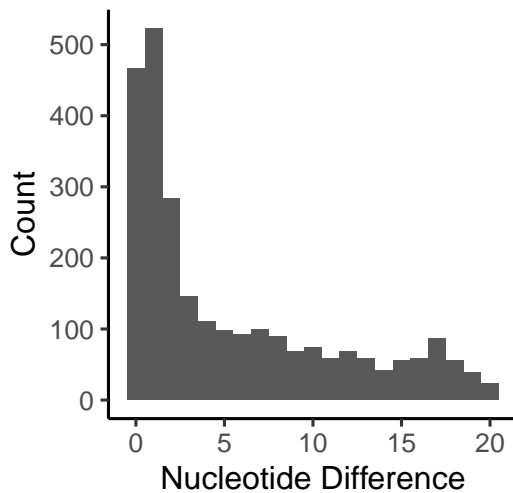
IGHV4-NL_3*01_S7864

20 sequences assigned
No exact matches.



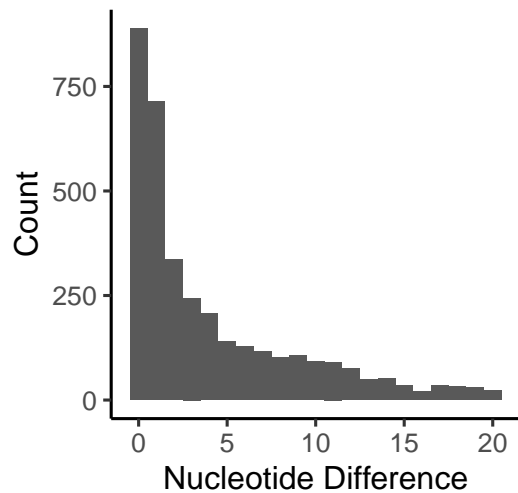
IGHV4-NL_33*01_S4377

2802 sequences assigned
467 (16.7%) exact matches, in which:
393 unique CDR3
7 unique J



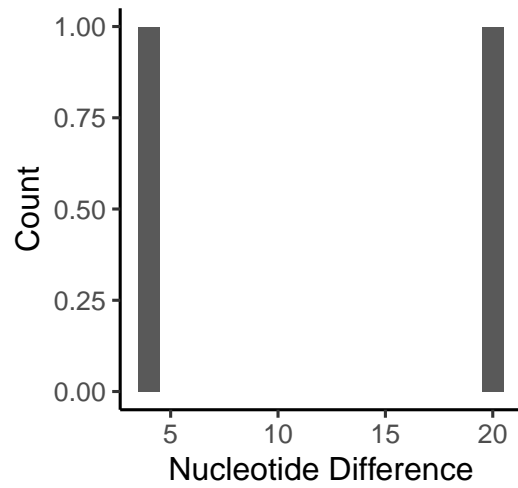
IGHV4-NL_36*01_S8200

3732 sequences assigned
889 (23.8%) exact matches, in which:
721 unique CDR3
8 unique J



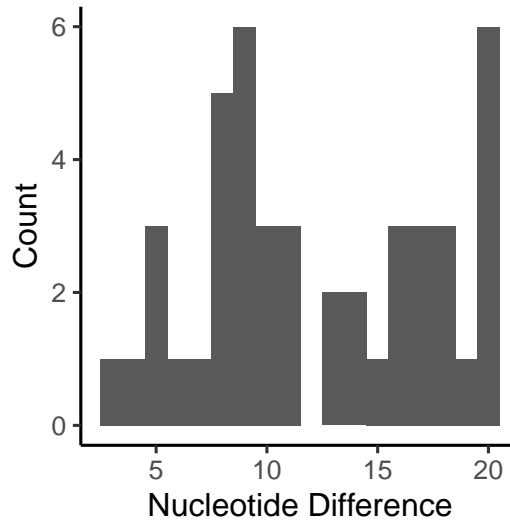
IGHV4–NL_38*01_S5467

5 sequences assigned
No exact matches.



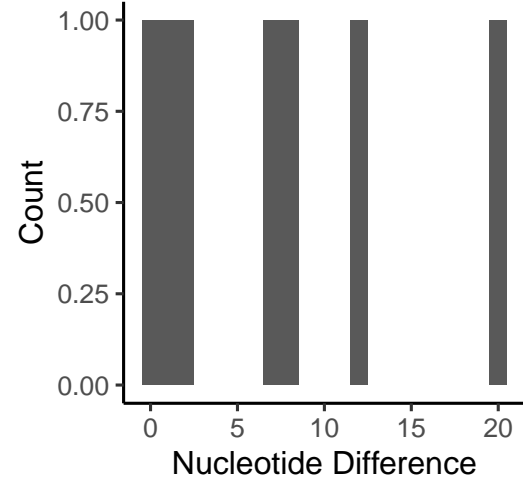
IGHV4–NL_4*01_S5211

54 sequences assigned
No exact matches.



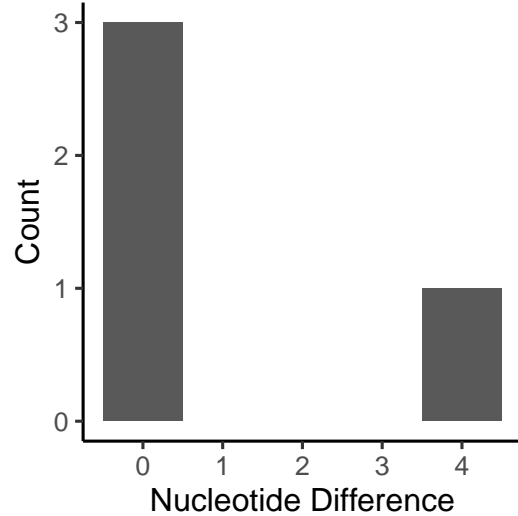
IGHV4–NL_40*01_S6927

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



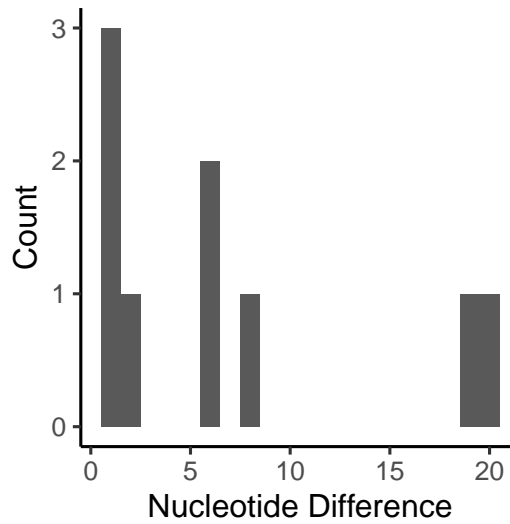
IGHV4–NL_38*01_S8437

14 sequences assigned
3 (21.4%) exact matches, in which:
3 unique CDR3
1 unique J



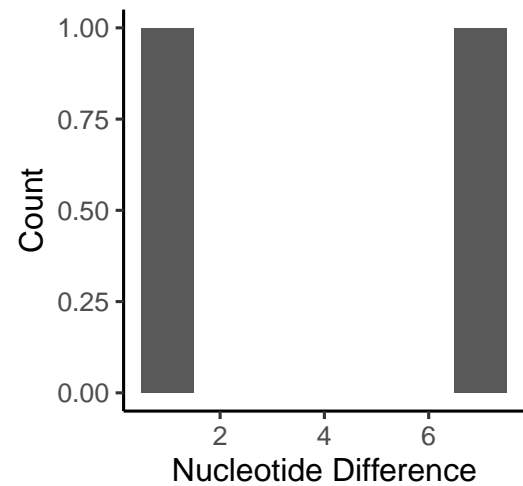
IGHV4–NL_4*01_S8866

48 sequences assigned
No exact matches.



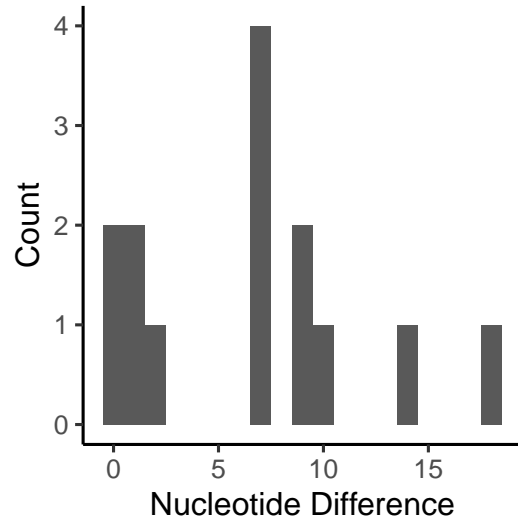
IGHV4–NL_42*01_S3076

2 sequences assigned
No exact matches.



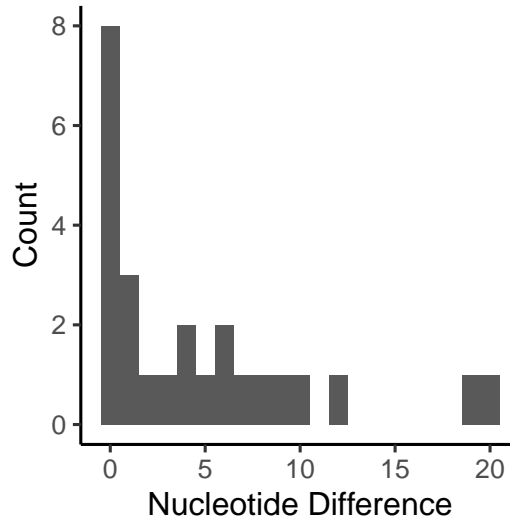
IGHV4–NL_38*01_S9244

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



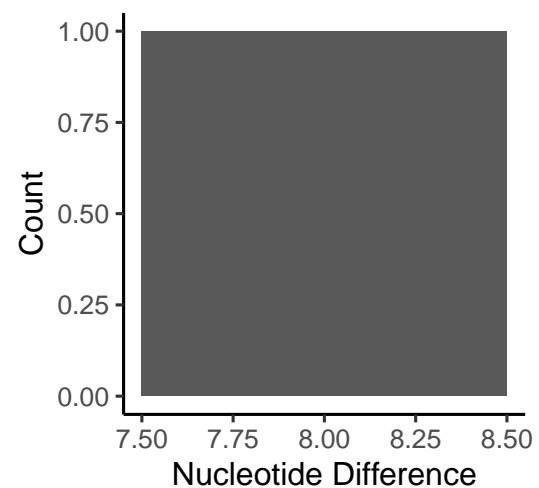
IGHV4–NL_40*01_S0696

28 sequences assigned
8 (28.6%) exact matches, in which:
8 unique CDR3
4 unique J



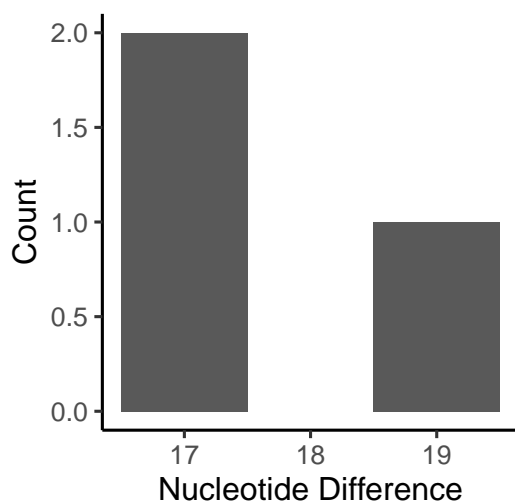
IGHV4–NL_42*01_S3572

1 sequences assigned
No exact matches.



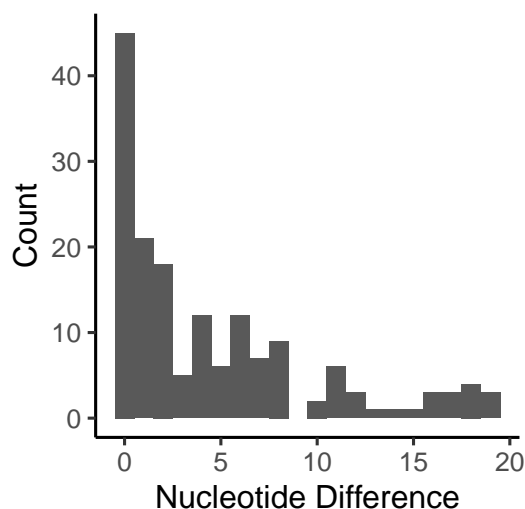
IGHV4–NL_42*01_S3666

4 sequences assigned
No exact matches.



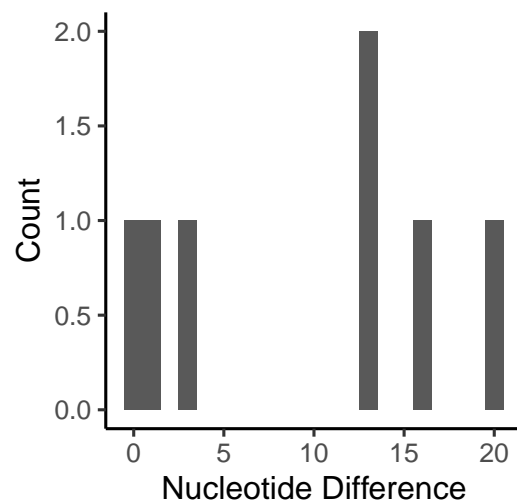
IGHV4–NL_5*01_S5158

179 sequences assigned
45 (25.1%) exact matches, in which:
42 unique CDR3
4 unique J



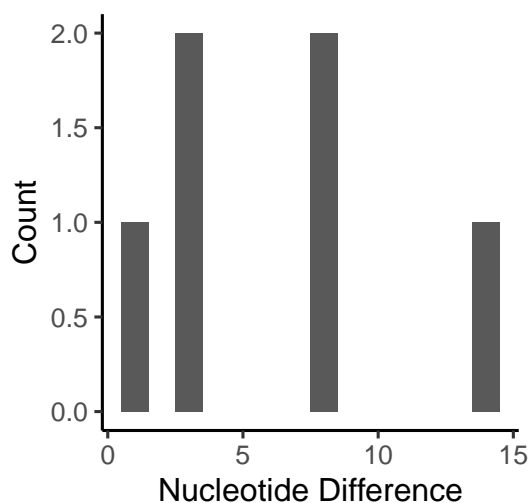
IGHV4–NL_9*01_S6142

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



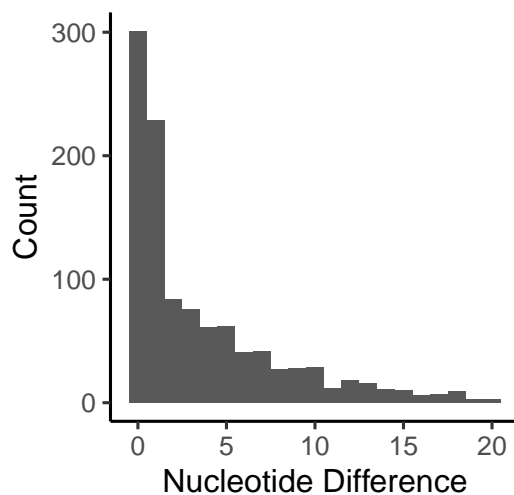
IGHV4–NL_42*01_S6064

8 sequences assigned
No exact matches.



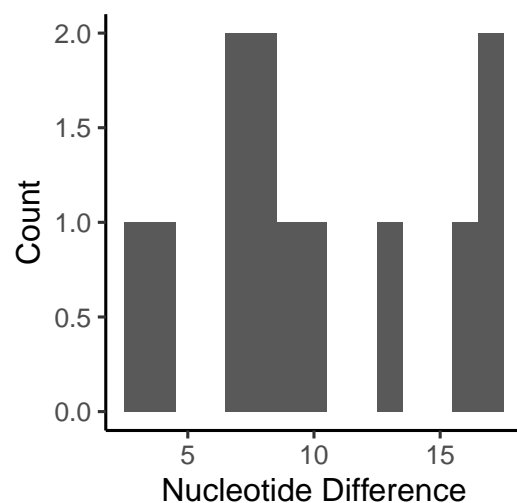
IGHV4–NL_5*01_S8078

1115 sequences assigned
301 (27%) exact matches, in which:
245 unique CDR3
6 unique J



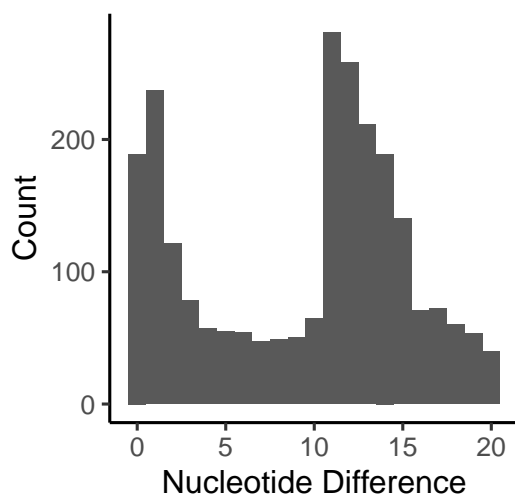
IGHV4–NL_9*01_S9889

13 sequences assigned
No exact matches.



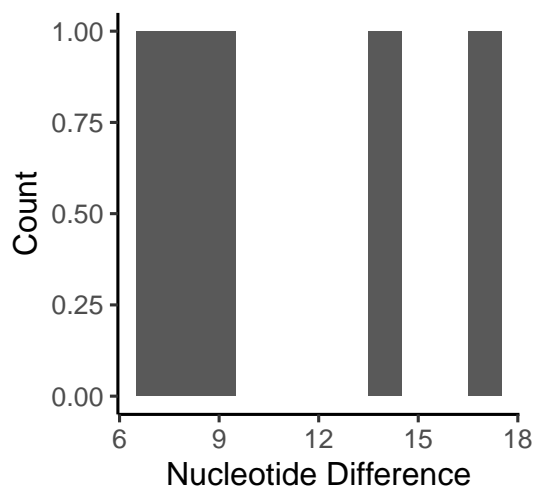
IGHV4–NL_43*01_S4510

2730 sequences assigned
189 (6.9%) exact matches, in which:
167 unique CDR3
6 unique J



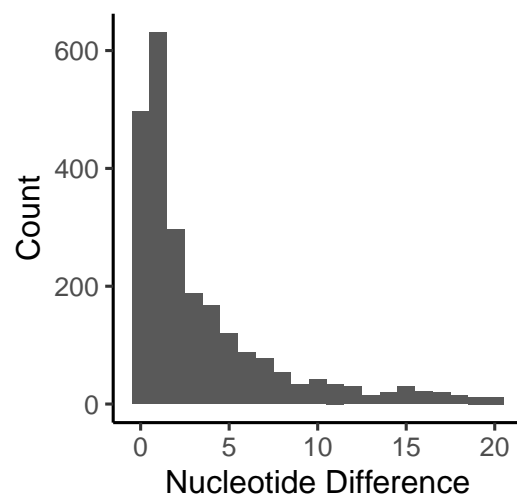
IGHV4–NL_9*01_S4567

5 sequences assigned
No exact matches.



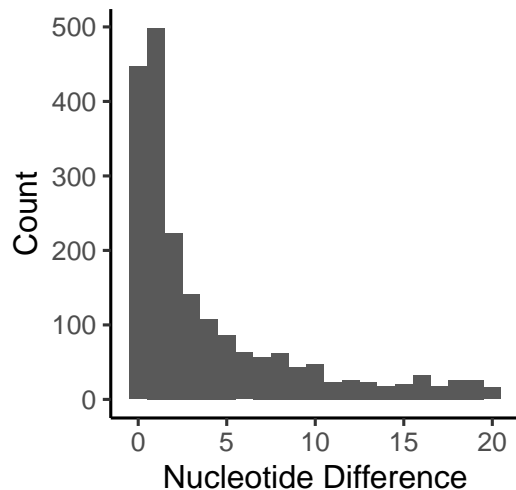
IGHV5–15*01_S2502

2416 sequences assigned
496 (20.5%) exact matches, in which:
295 unique CDR3
6 unique J



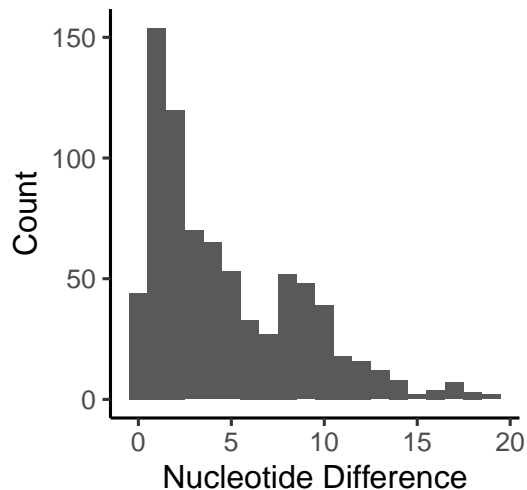
IGHV5-15*01_S4790

2056 sequences assigned
447 (21.7%) exact matches, in which:
281 unique CDR3
7 unique J



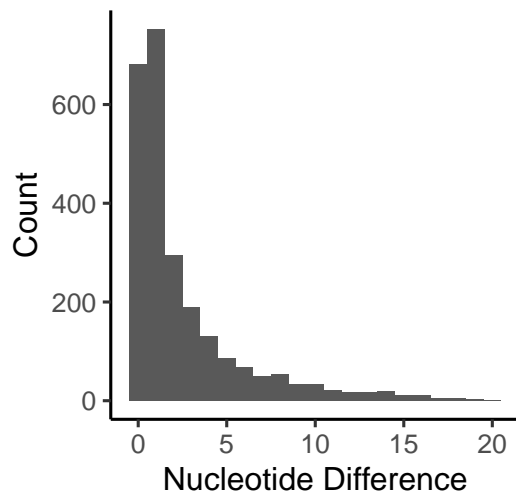
IGHV6-1*02_G280T

785 sequences assigned
44 (5.6%) exact matches, in which:
37 unique CDR3
5 unique J



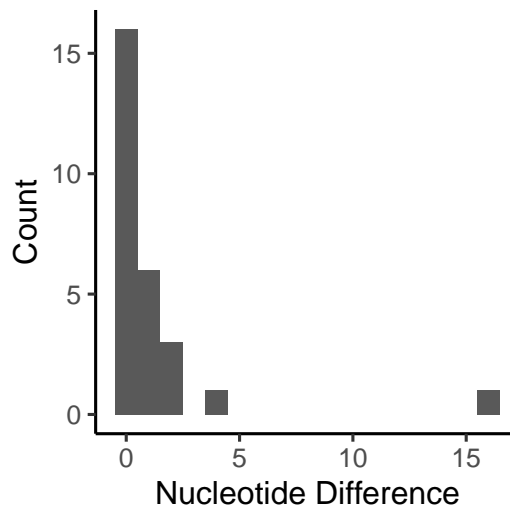
IGHV5-157*01_S8185

2497 sequences assigned
682 (27.3%) exact matches, in which:
358 unique CDR3
8 unique J



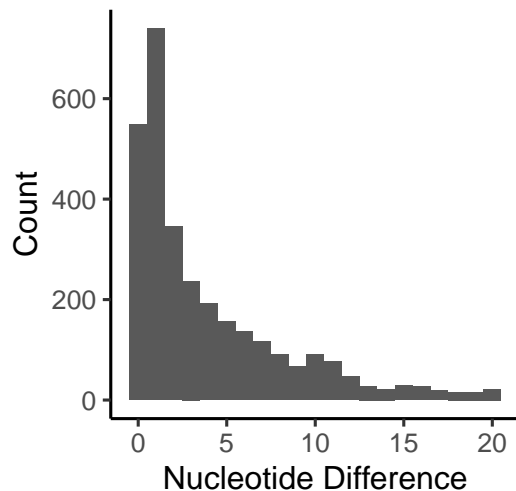
IGHV7-135*01_S4281

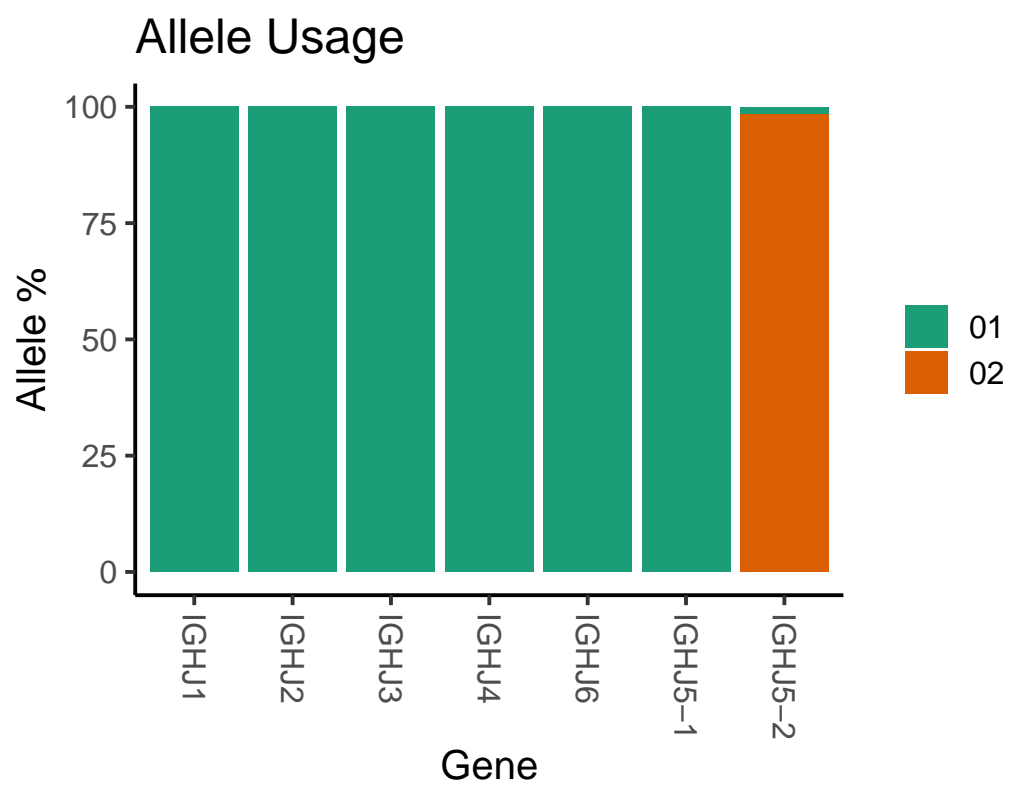
242 sequences assigned
16 (6.6%) exact matches, in which:
9 unique CDR3
4 unique J



IGHV5-157*02_S3096

3180 sequences assigned
549 (17.3%) exact matches, in which:
330 unique CDR3
6 unique J





Warning – no inferred sequences found.