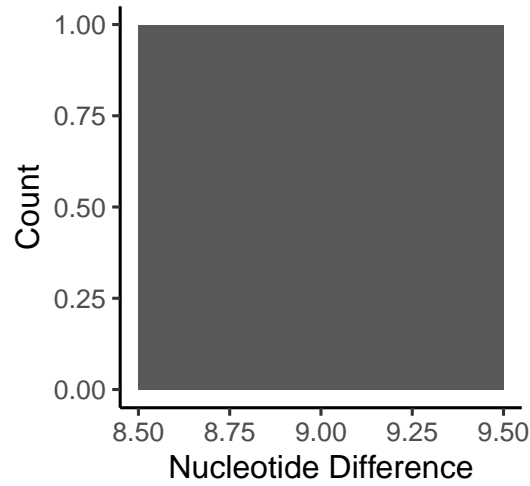


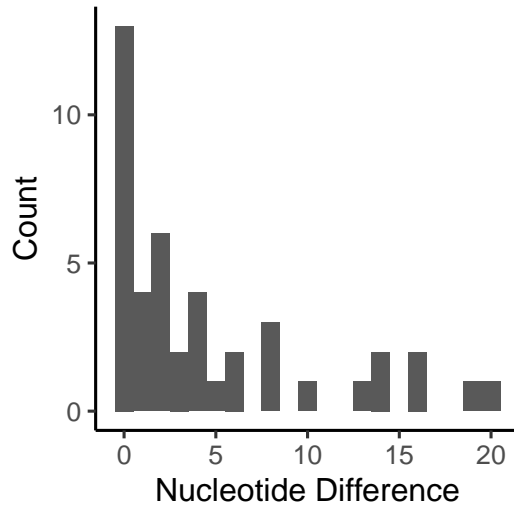
IGHV1-60*01_S7772

1 sequences assigned
No exact matches.



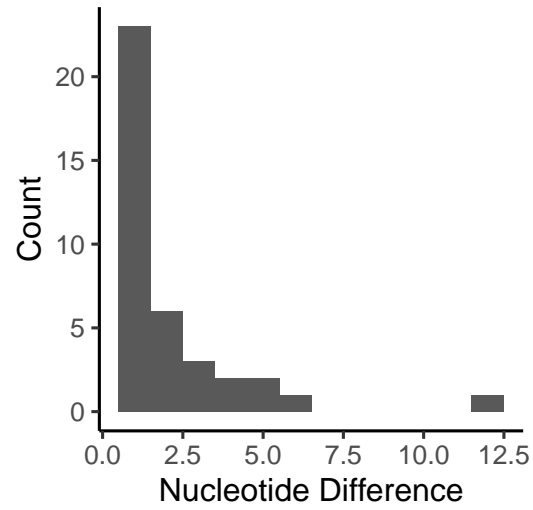
IGHV1-124*01_S7834

43 sequences assigned
13 (30.2%) exact matches, in which:
9 unique CDR3
3 unique J



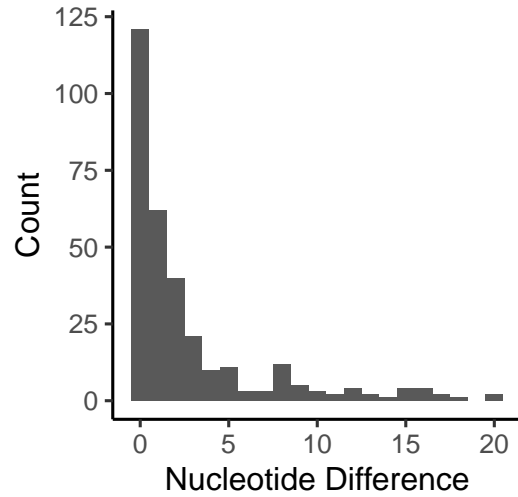
IGHV1-170*01_S3055

39 sequences assigned
No exact matches.



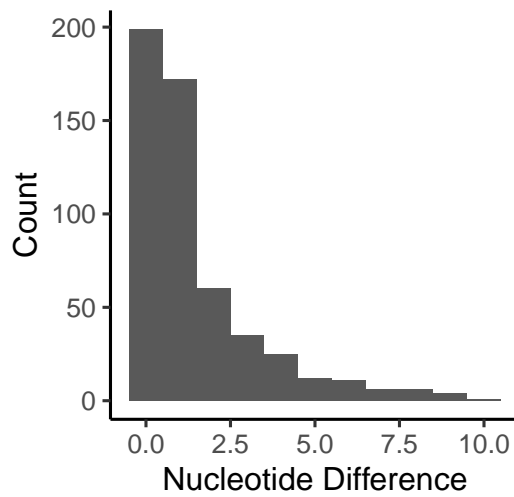
IGHV1-84*01_S9366

347 sequences assigned
121 (34.9%) exact matches, in which:
61 unique CDR3
5 unique J



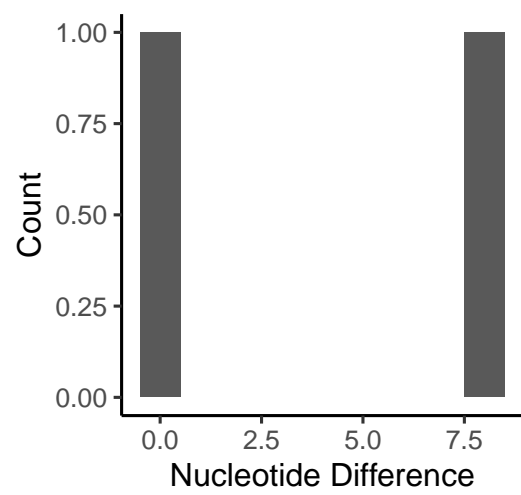
IGHV1-138*01_S1423

531 sequences assigned
199 (37.5%) exact matches, in which:
155 unique CDR3
9 unique J



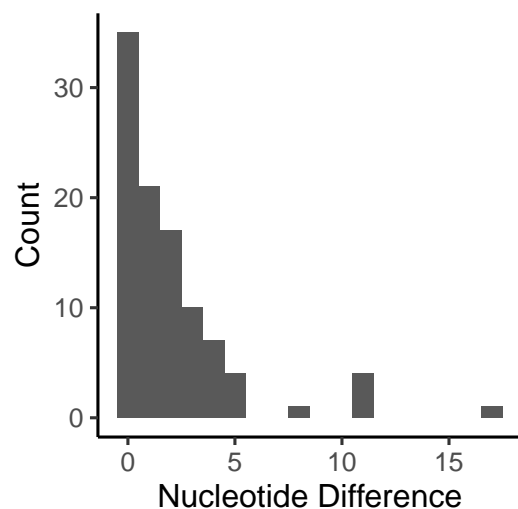
IGHV1-NL_1*01_S3125

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



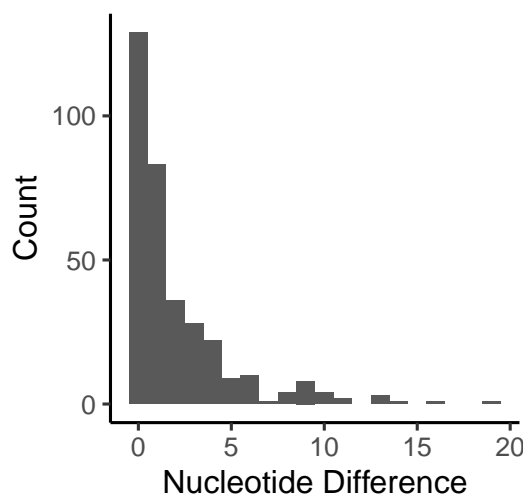
IGHV1-84*01_S9762

102 sequences assigned
35 (34.3%) exact matches, in which:
15 unique CDR3
5 unique J



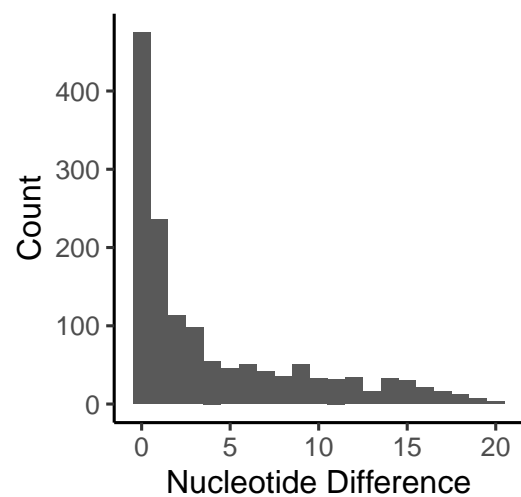
IGHV1-138*01_S2054

344 sequences assigned
129 (37.5%) exact matches, in which:
102 unique CDR3
7 unique J



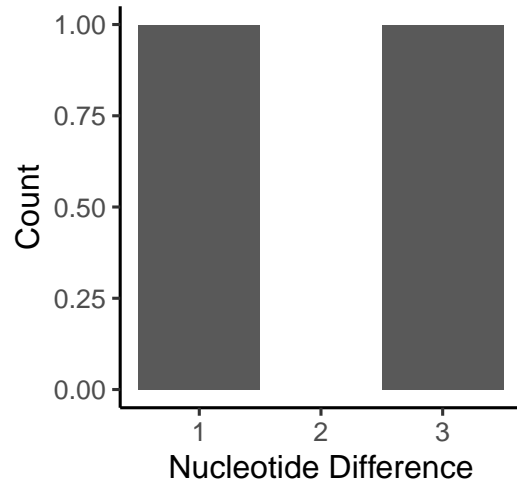
IGHV1-NL_2*01_S4581

1515 sequences assigned
475 (31.4%) exact matches, in which:
244 unique CDR3
7 unique J



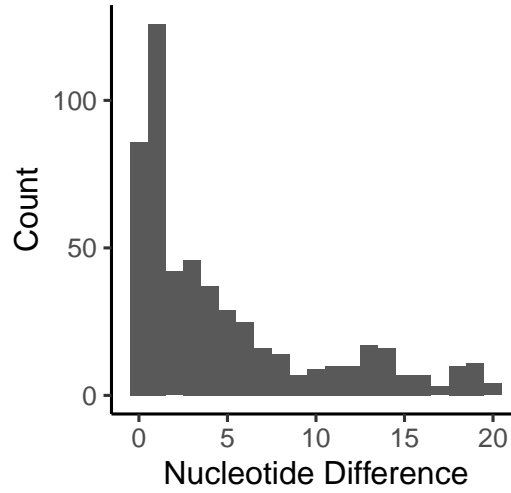
IGHV2-7*02_S1732

2 sequences assigned
No exact matches.



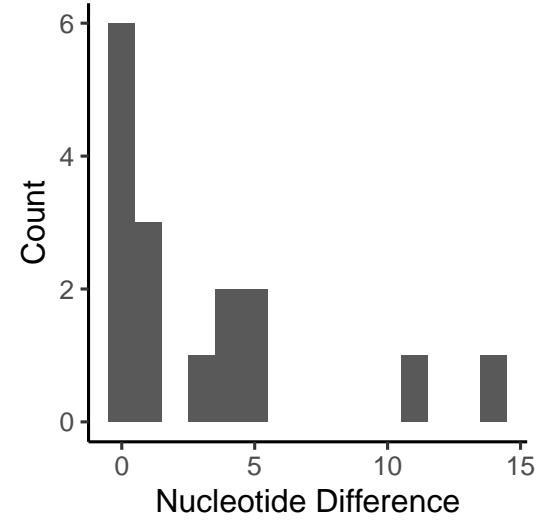
IGHV2-69*01_S4953

577 sequences assigned
86 (14.9%) exact matches, in which:
54 unique CDR3
7 unique J



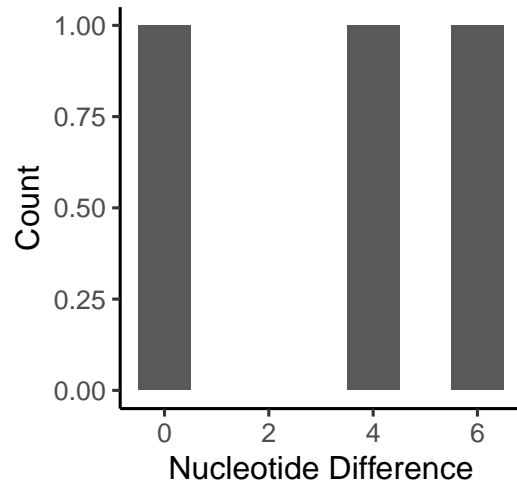
IGHV2-NL_1*01_S4605

17 sequences assigned
6 (35.3%) exact matches, in which:
3 unique CDR3
1 unique J



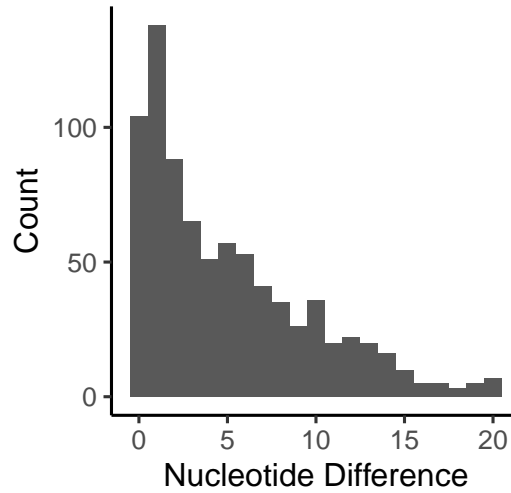
IGHV2-7*02_S4285

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



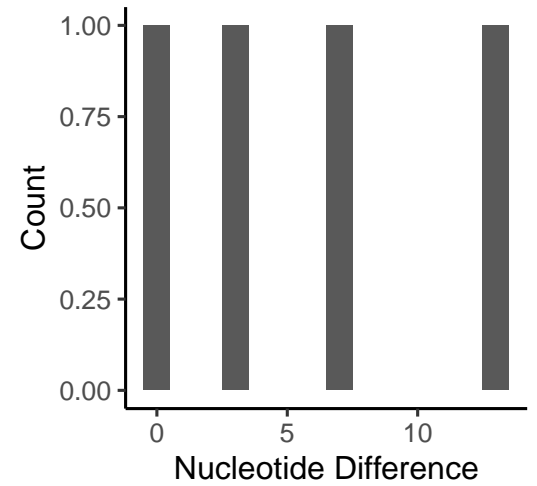
IGHV2-118*01_S4632

889 sequences assigned
104 (11.7%) exact matches, in which:
78 unique CDR3
6 unique J



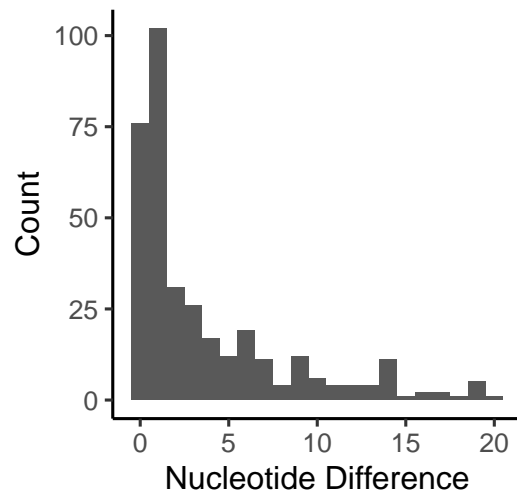
IGHV2-NL_1*01_S9848

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



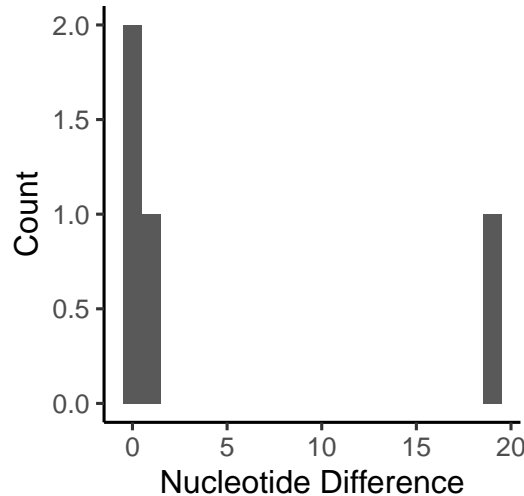
IGHV2-69*01_S4887

356 sequences assigned
76 (21.3%) exact matches, in which:
49 unique CDR3
7 unique J



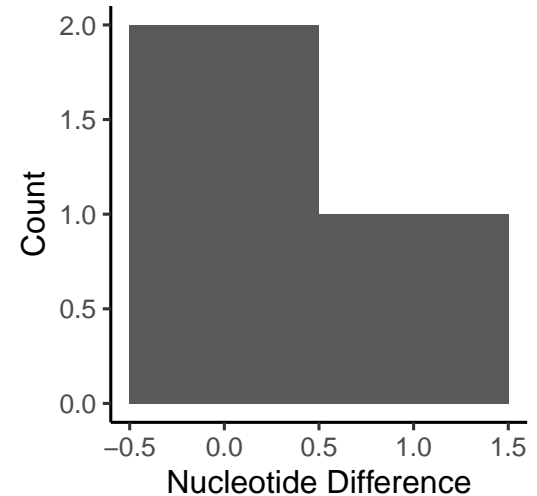
IGHV2-173*01_S2781

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
2 unique J



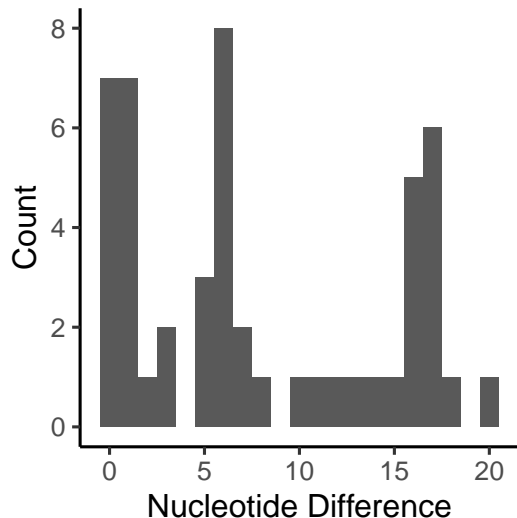
IGHV2-NL_2*01_S2193

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



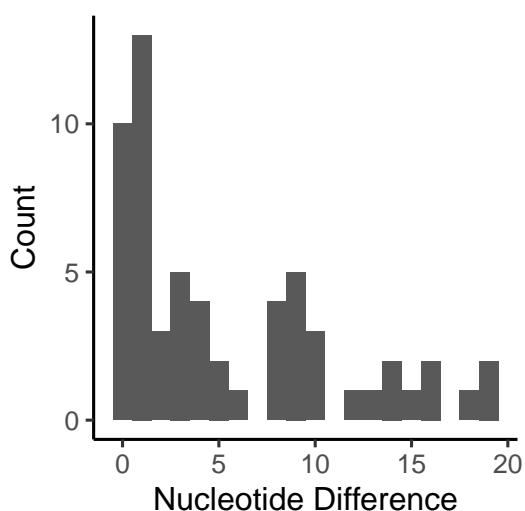
IGHV3-5*01_S1720

56 sequences assigned
7 (12.5%) exact matches, in which:
3 unique CDR3
2 unique J



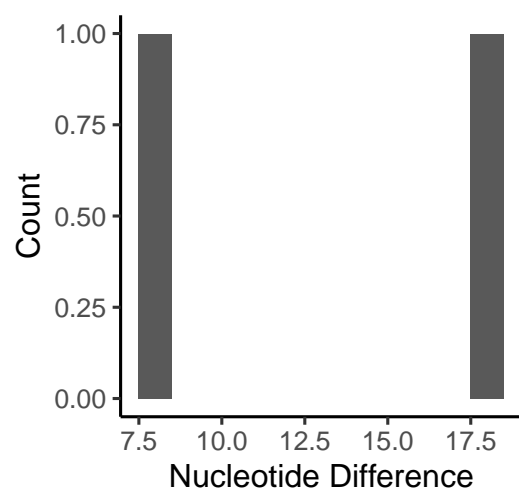
IGHV3-28*01_S4621

76 sequences assigned
10 (13.2%) exact matches, in which:
8 unique CDR3
4 unique J



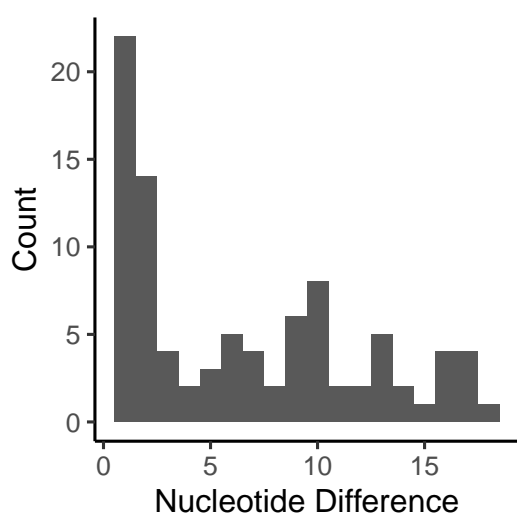
IGHV3-37*01_S0586

2 sequences assigned
No exact matches.



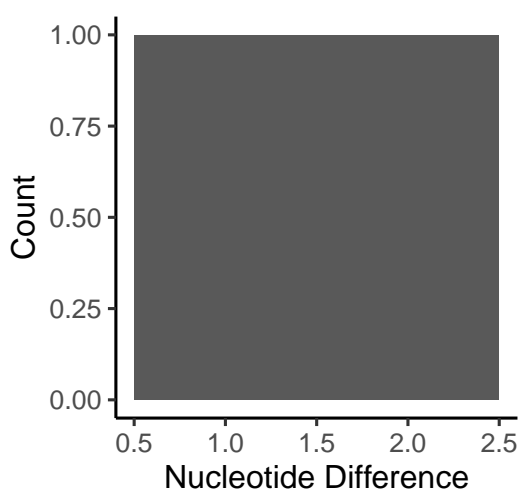
IGHV3-5*01_S7285

111 sequences assigned
No exact matches.



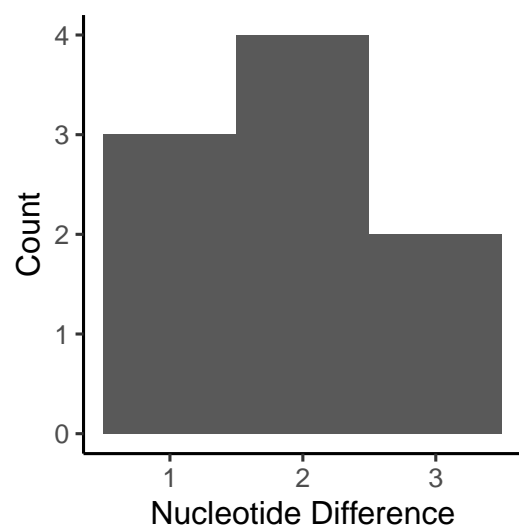
IGHV3-34*01_S1309

2 sequences assigned
No exact matches.



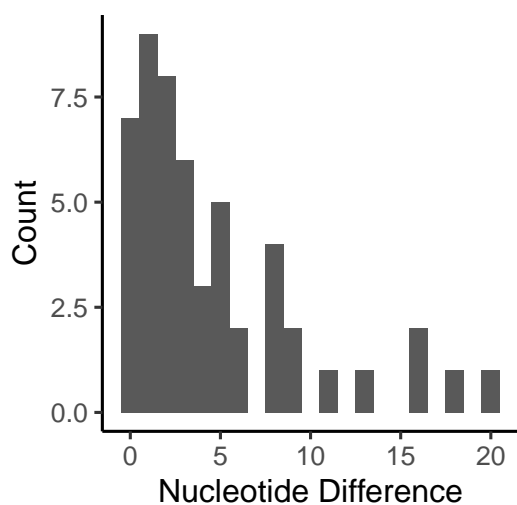
IGHV3-37*01_S4016

9 sequences assigned
No exact matches.



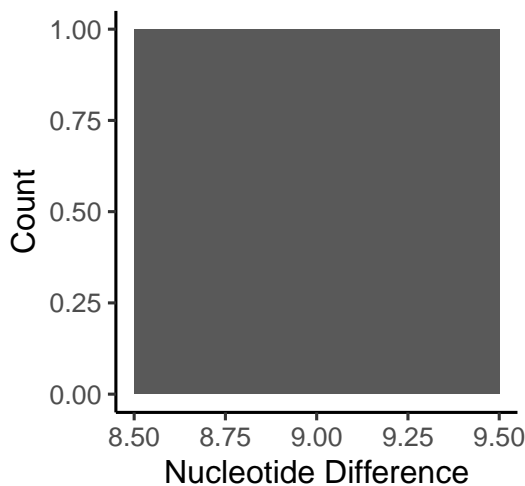
IGHV3-9*01_S0778

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



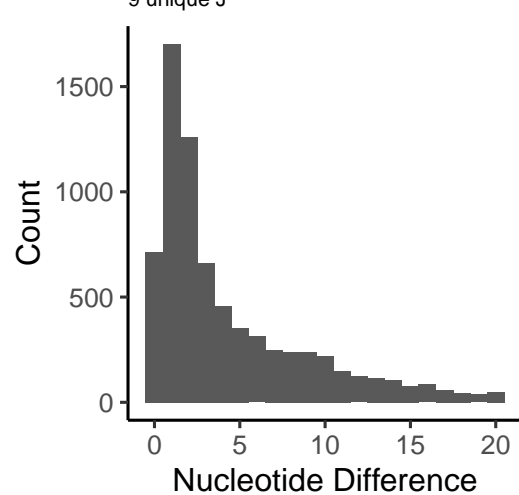
IGHV3-36*01_S5206

1 sequences assigned
No exact matches.



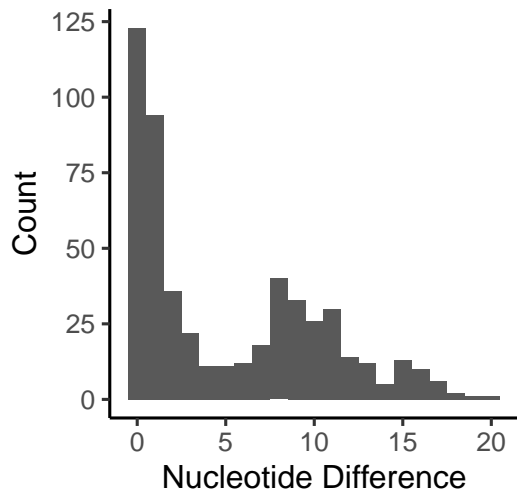
IGHV3-50*01_S1879

7474 sequences assigned
715 (9.6%) exact matches, in which:
493 unique CDR3
9 unique J



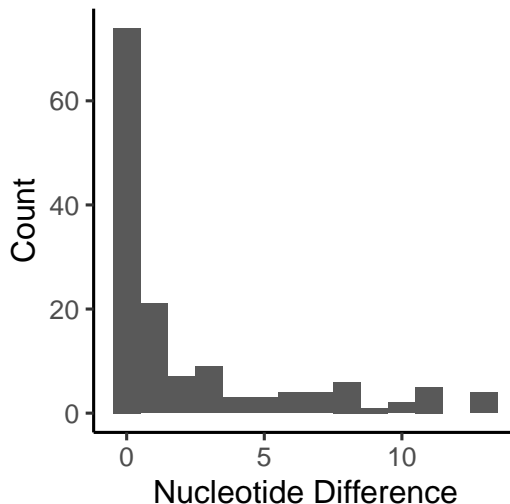
IGHV3-52*02_S4550

554 sequences assigned
123 (22.2%) exact matches, in which:
76 unique CDR3
6 unique J



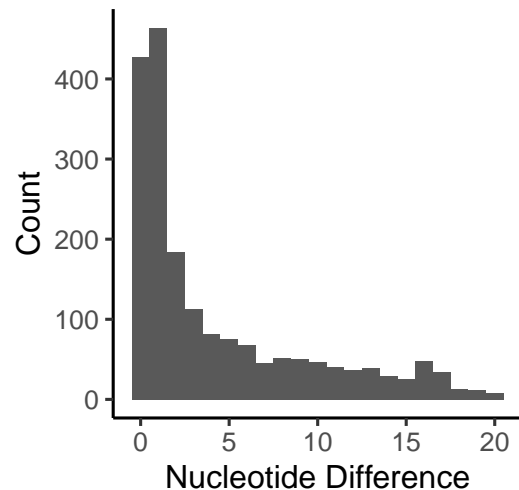
IGHV3-73*01_S6942

147 sequences assigned
74 (50.3%) exact matches, in which:
48 unique CDR3
6 unique J



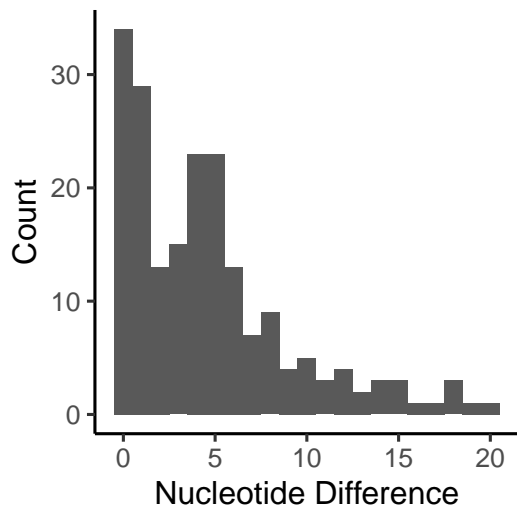
IGHV3-76*02_S2453

2034 sequences assigned
427 (21%) exact matches, in which:
284 unique CDR3
9 unique J



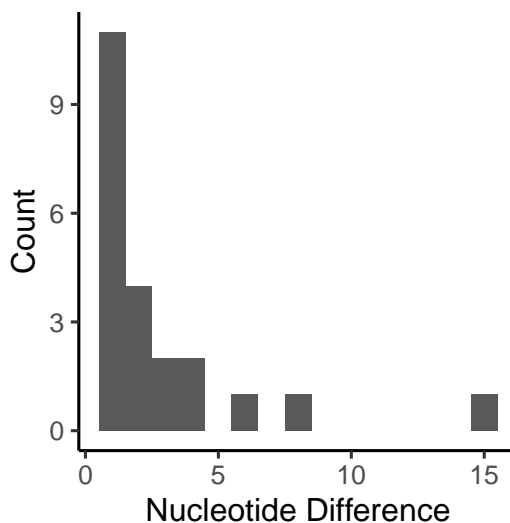
IGHV3-53*01_S2905_G27

209 sequences assigned
34 (16.3%) exact matches, in which:
25 unique CDR3
6 unique J



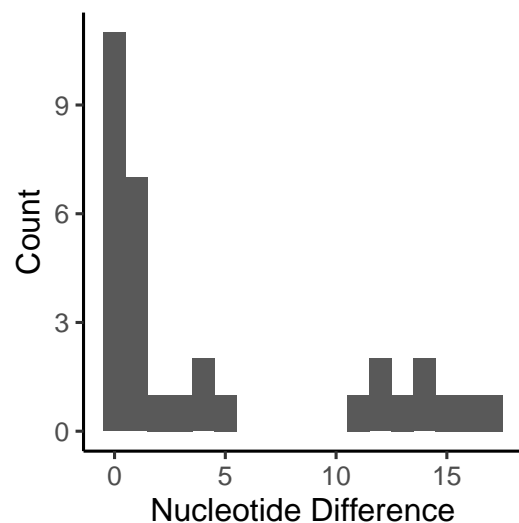
IGHV3-73*02_S5005

27 sequences assigned
No exact matches.



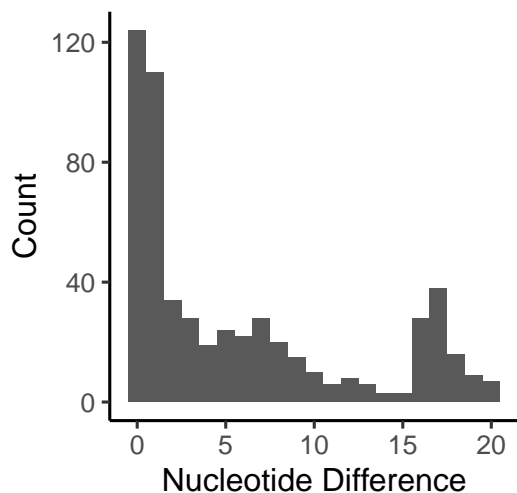
IGHV3-83*02_S3229

32 sequences assigned
11 (34.4%) exact matches, in which:
9 unique CDR3
3 unique J



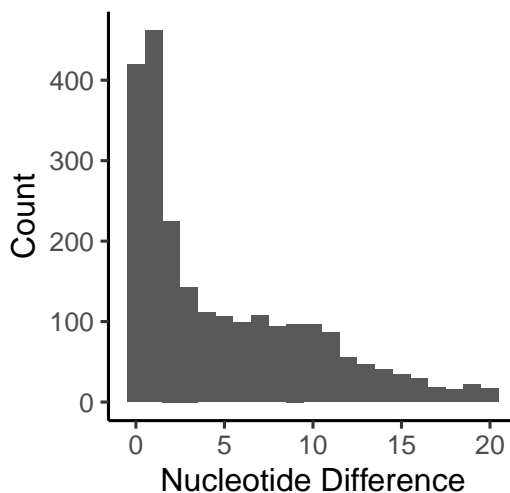
IGHV3-53*01_S5918

617 sequences assigned
124 (20.1%) exact matches, in which:
80 unique CDR3
7 unique J



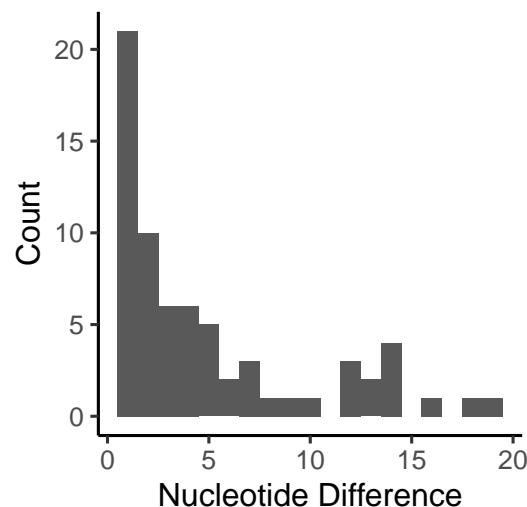
IGHV3-76*01_S4285

2927 sequences assigned
419 (14.3%) exact matches, in which:
293 unique CDR3
10 unique J



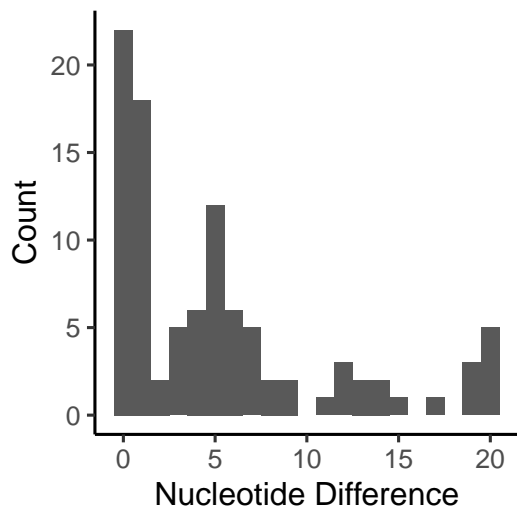
IGHV3-87*01_S5669

68 sequences assigned
No exact matches.



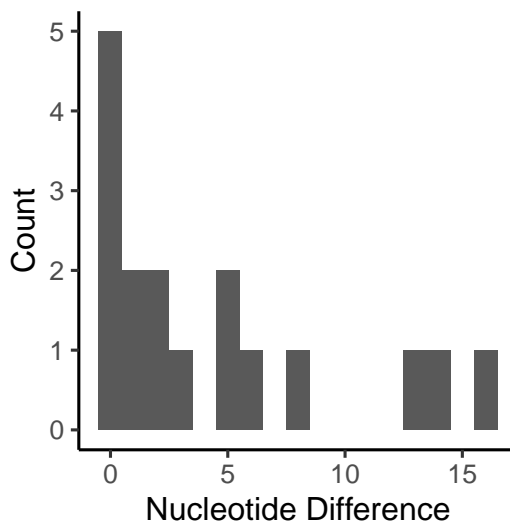
IGHV3-87*01_S6311

117 sequences assigned
22 (18.8%) exact matches, in which:
17 unique CDR3
4 unique J



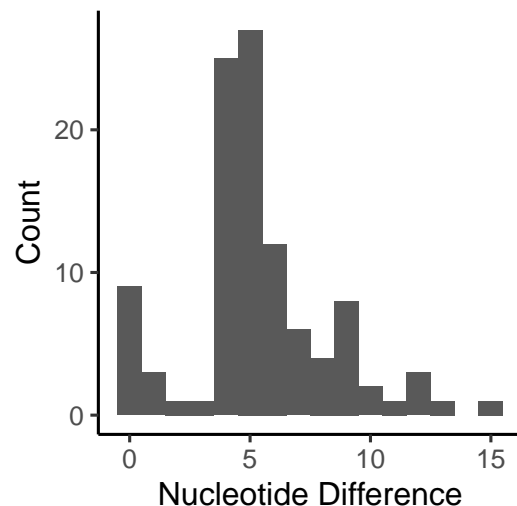
IGHV3-100*01_S4375

23 sequences assigned
5 (21.7%) exact matches, in which:
5 unique CDR3
2 unique J



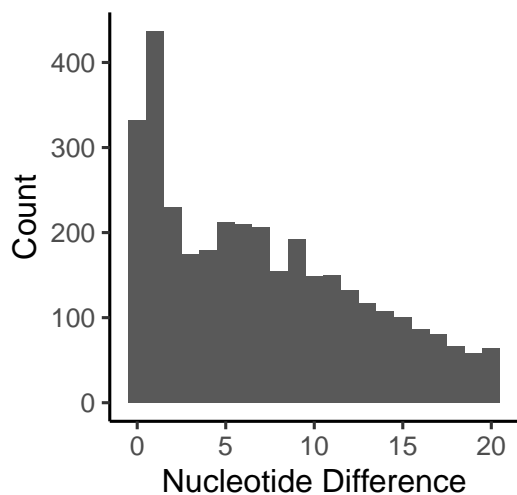
IGHV3-119*01_S9769

105 sequences assigned
9 (8.6%) exact matches, in which:
8 unique CDR3
3 unique J



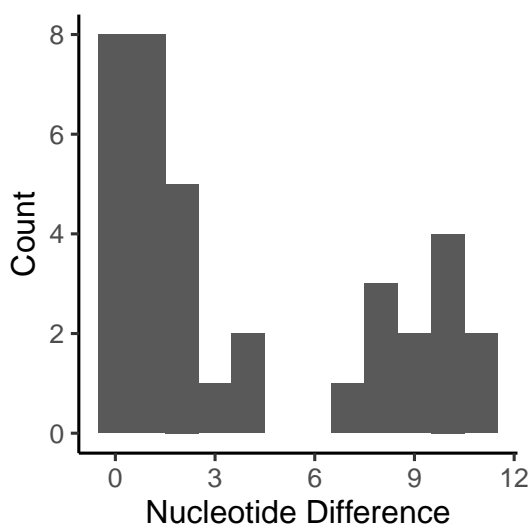
IGHV3-88*01_S0560

4071 sequences assigned
332 (8.2%) exact matches, in which:
226 unique CDR3
6 unique J



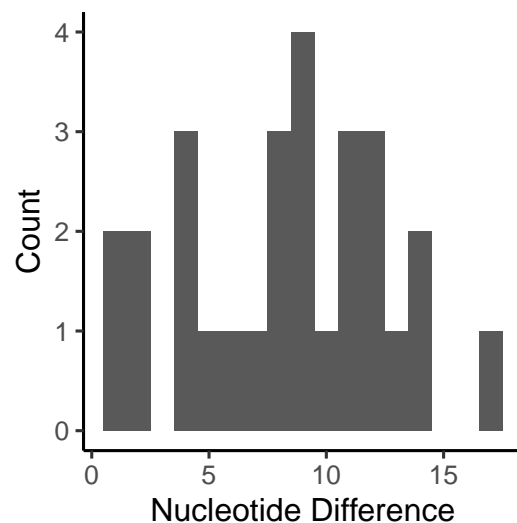
IGHV3-100*01_S8697

37 sequences assigned
8 (21.6%) exact matches, in which:
6 unique CDR3
5 unique J



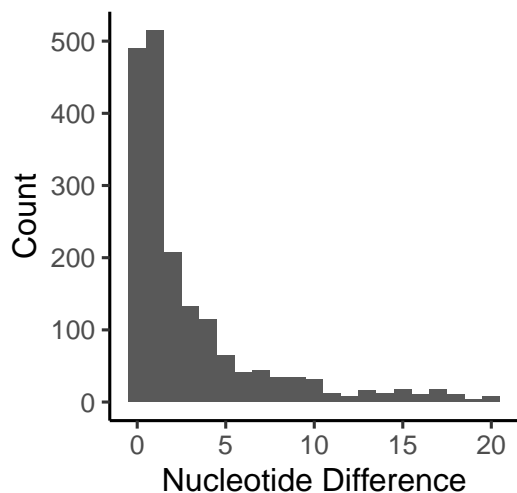
IGHV3-120*01_S7674

28 sequences assigned
No exact matches.



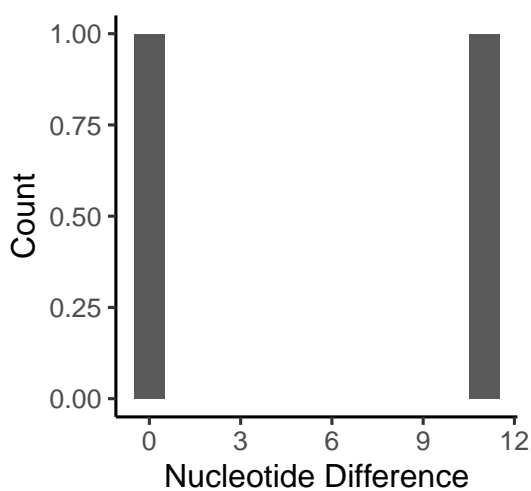
IGHV3-94*01_S3427

1857 sequences assigned
490 (26.4%) exact matches, in which:
340 unique CDR3
7 unique J



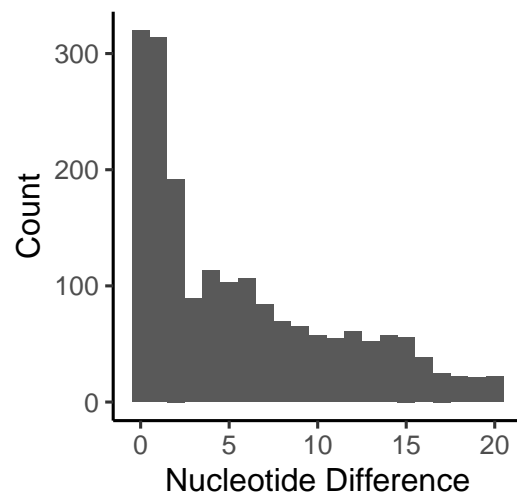
IGHV3-103*01_S1165

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



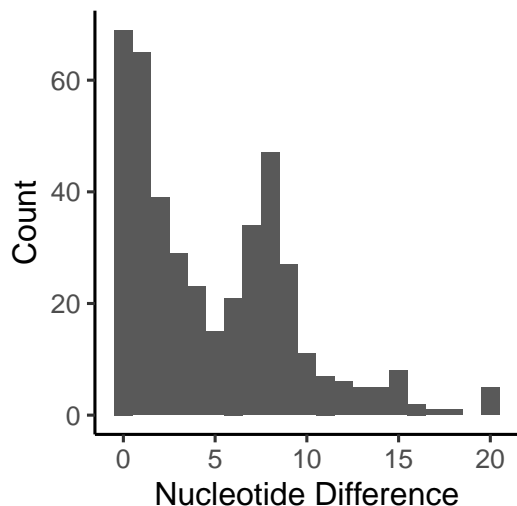
IGHV3-122*01_S8388

2103 sequences assigned
320 (15.2%) exact matches, in which:
233 unique CDR3
11 unique J



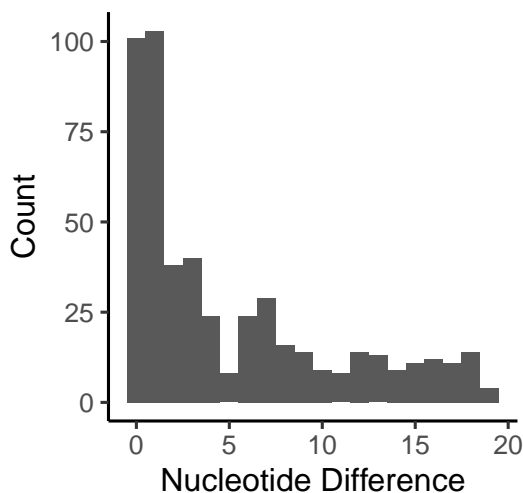
IGHV3-127*01_S6769

452 sequences assigned
69 (15.3%) exact matches, in which:
49 unique CDR3
6 unique J



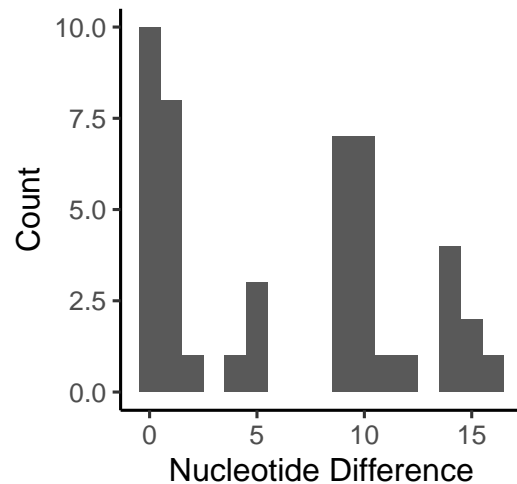
IGHV3-128*02_S2828

607 sequences assigned
101 (16.6%) exact matches, in which:
70 unique CDR3
7 unique J



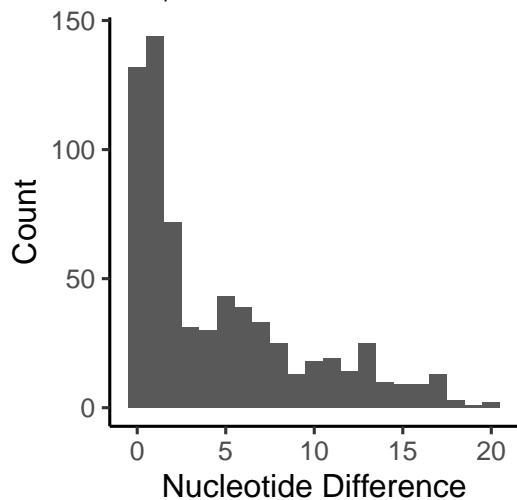
IGHV3-143*01_S1151

60 sequences assigned
10 (16.7%) exact matches, in which:
9 unique CDR3
4 unique J



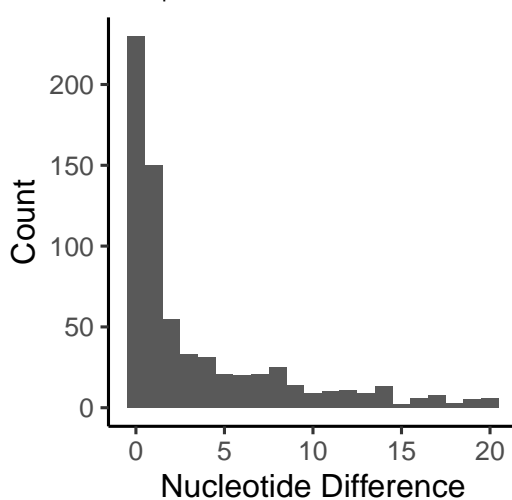
IGHV3-127*01_S9220

707 sequences assigned
132 (18.7%) exact matches, in which:
81 unique CDR3
5 unique J



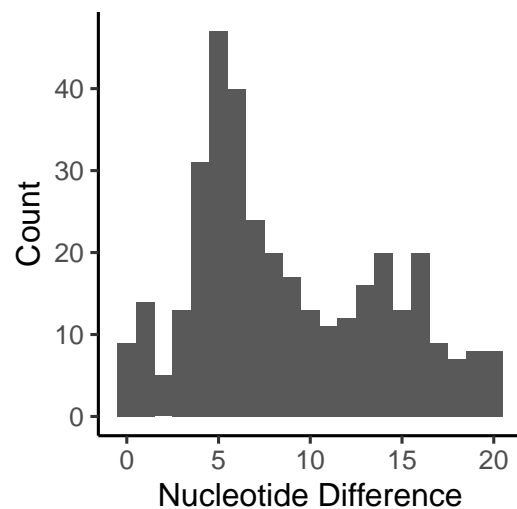
IGHV3-141*01_S7670

691 sequences assigned
230 (33.3%) exact matches, in which:
174 unique CDR3
9 unique J



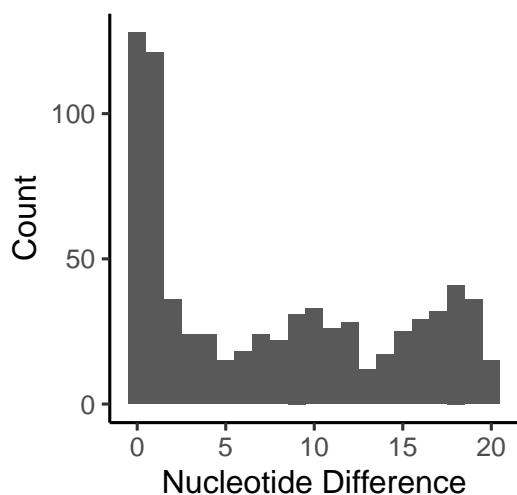
IGHV3-152*01_S2211

496 sequences assigned
9 (1.8%) exact matches, in which:
6 unique CDR3
3 unique J



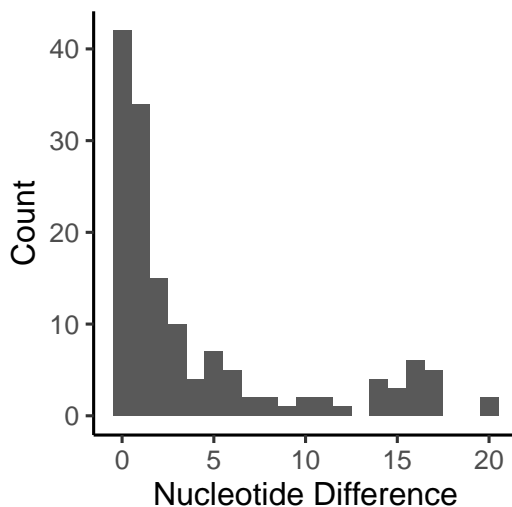
IGHV3-128*01_S3347

863 sequences assigned
128 (14.8%) exact matches, in which:
81 unique CDR3
8 unique J



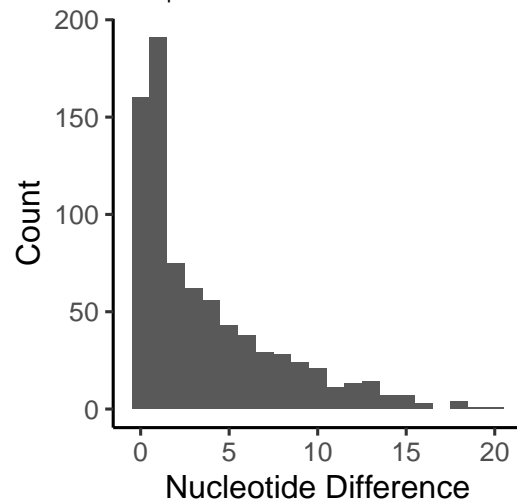
IGHV3-141*02_S7574

161 sequences assigned
42 (26.1%) exact matches, in which:
32 unique CDR3
5 unique J



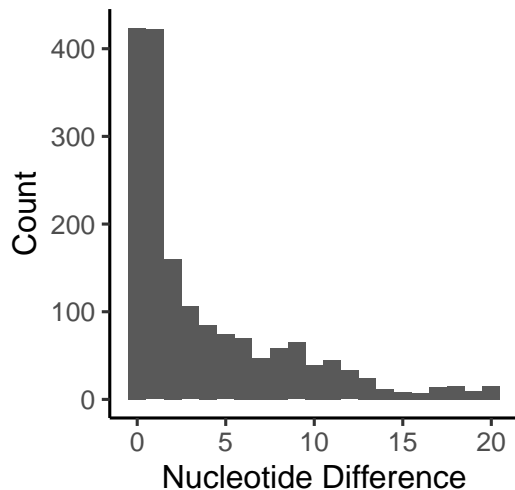
IGHV3-172*01_S2175

855 sequences assigned
160 (18.7%) exact matches, in which:
98 unique CDR3
7 unique J



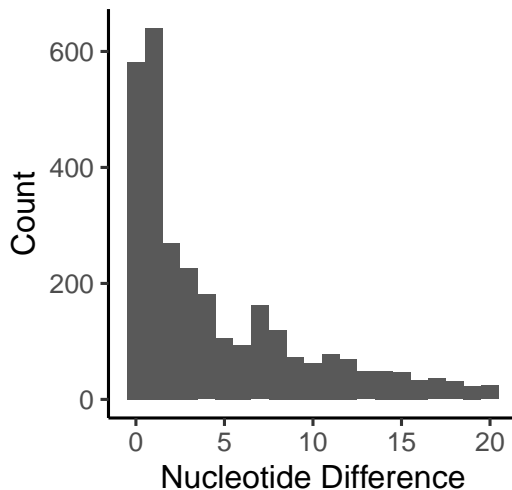
IGHV3-187*01_S1177

1861 sequences assigned
424 (22.8%) exact matches, in which:
260 unique CDR3
10 unique J



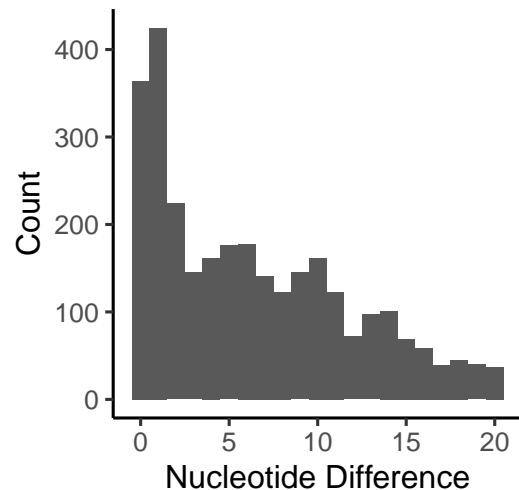
IGHV3-NL_1*01_S9891

3075 sequences assigned
582 (18.9%) exact matches, in which:
384 unique CDR3
10 unique J



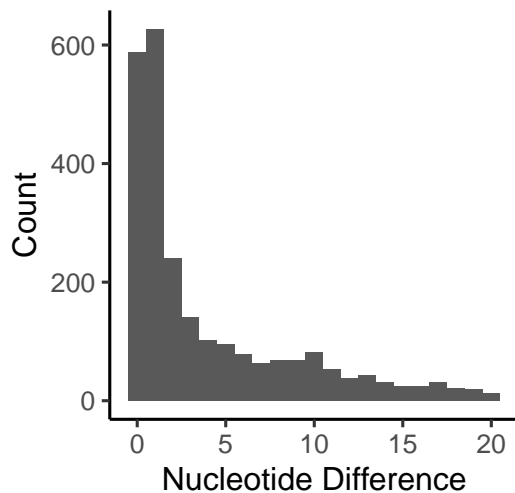
IGHV3-NL_11*01_S7399

3383 sequences assigned
364 (10.8%) exact matches, in which:
258 unique CDR3
8 unique J



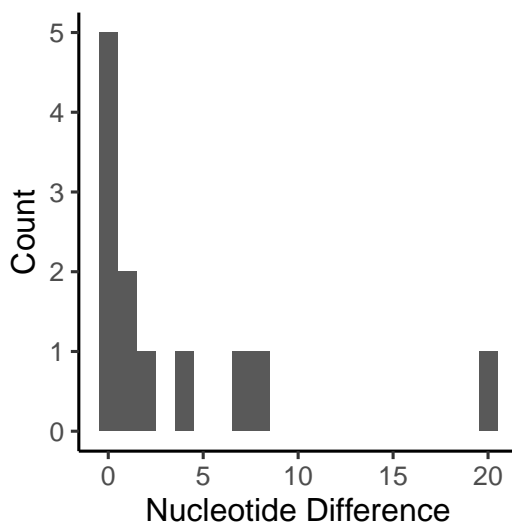
IGHV3-187*01_S1387

2666 sequences assigned
588 (22.1%) exact matches, in which:
366 unique CDR3
8 unique J



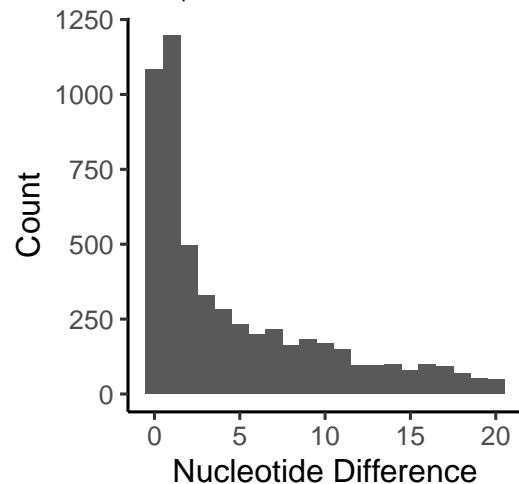
IGHV3-NL_10*02_S2212

12 sequences assigned
5 (41.7%) exact matches, in which:
5 unique CDR3
2 unique J



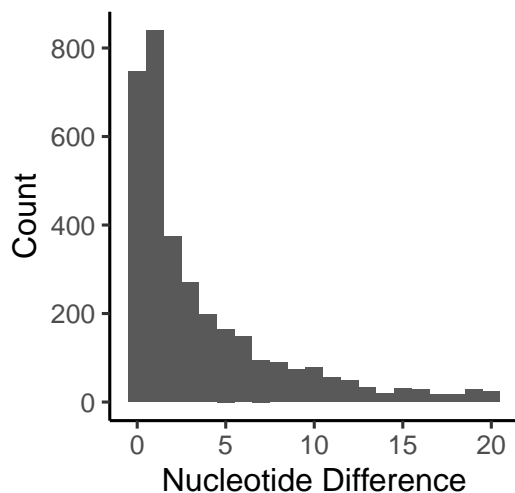
IGHV3-NL_11*01_S782

5712 sequences assigned
1083 (19%) exact matches, in which:
743 unique CDR3
9 unique J



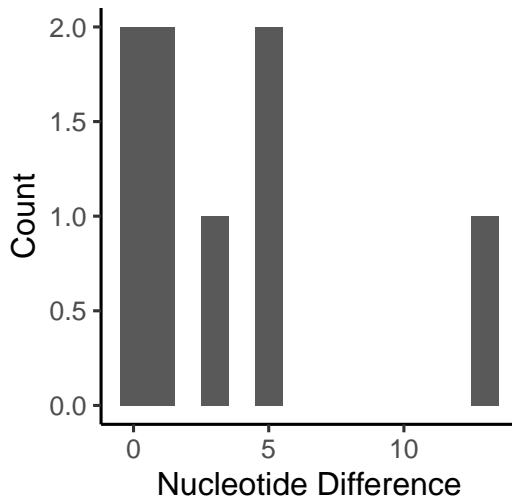
IGHV3-NL_1*01_S1780

3526 sequences assigned
747 (21.2%) exact matches, in which:
486 unique CDR3
9 unique J



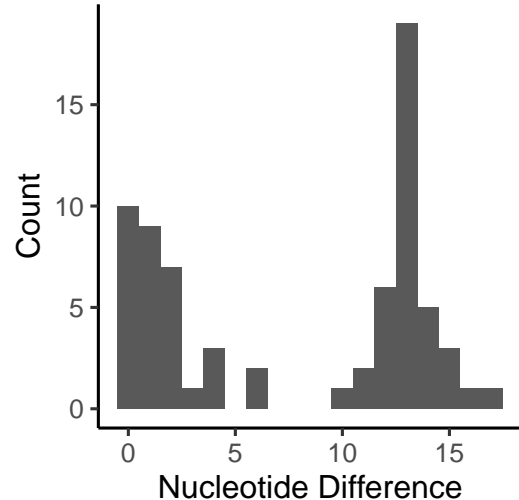
IGHV3-NL_10*02_S8522

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



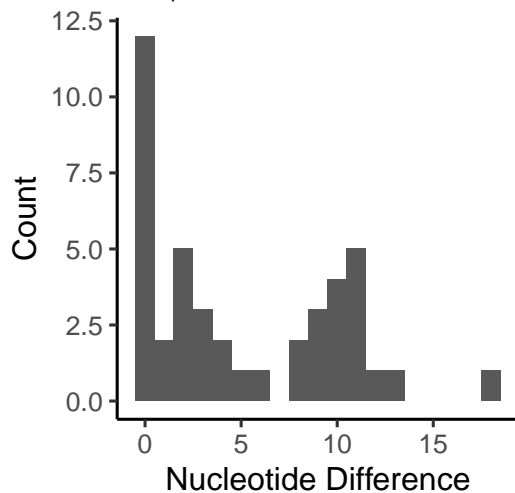
IGHV3-NL_12*02_S2468

72 sequences assigned
10 (13.9%) exact matches, in which:
8 unique CDR3
4 unique J



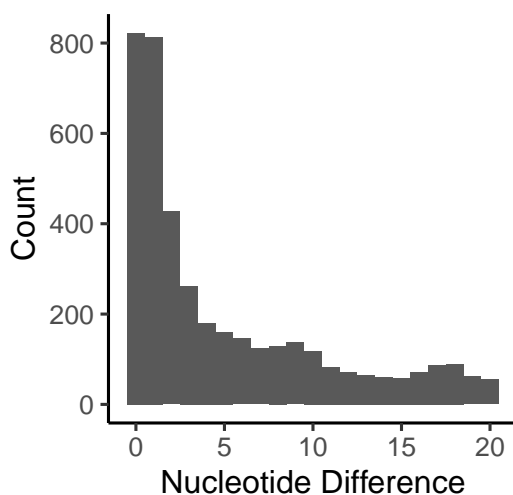
IGHV3–NL_12*02_S5864

44 sequences assigned
12 (27.3%) exact matches, in which:
11 unique CDR3
5 unique J



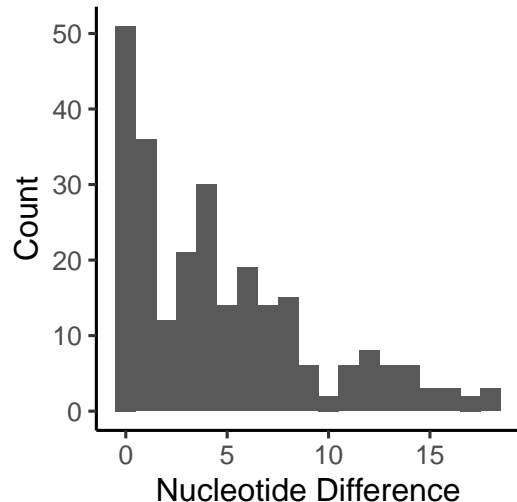
IGHV3–NL_17*01_S0238

4403 sequences assigned
823 (18.7%) exact matches, in which:
566 unique CDR3
11 unique J



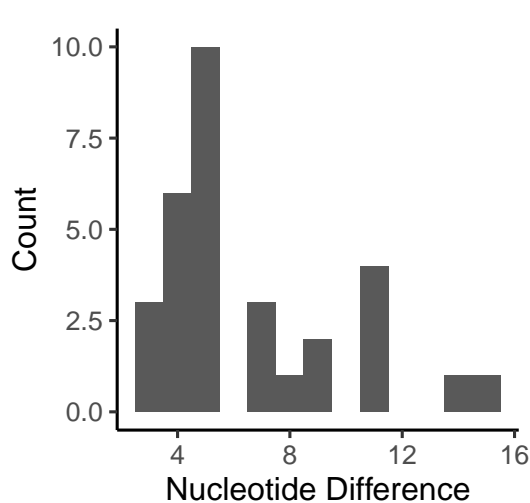
IGHV3–NL_19*01_S1690

262 sequences assigned
51 (19.5%) exact matches, in which:
41 unique CDR3
6 unique J



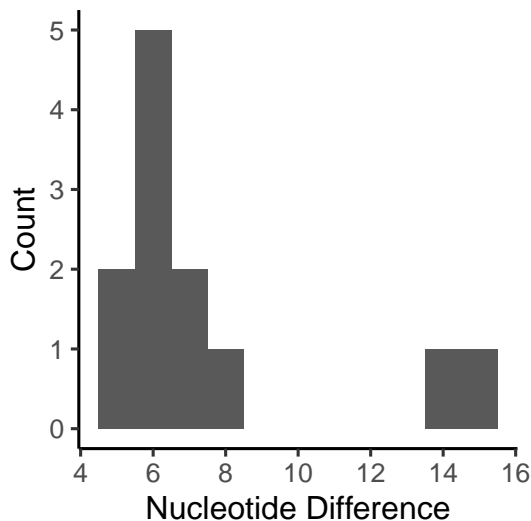
IGHV3–NL_13*01_S6424

31 sequences assigned
No exact matches.



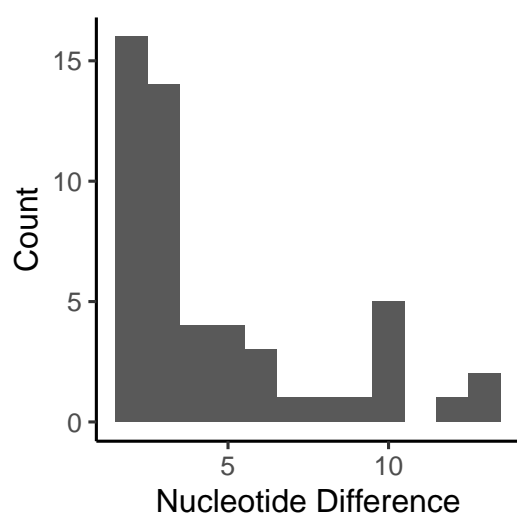
IGHV3–NL_18*01_S3886

26 sequences assigned
No exact matches.



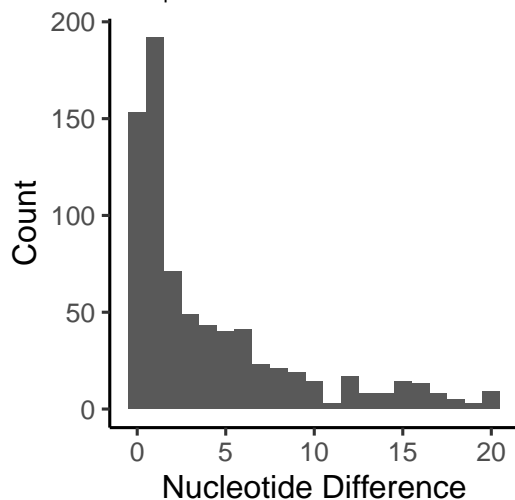
IGHV3–NL_2*01_S4683

70 sequences assigned
No exact matches.



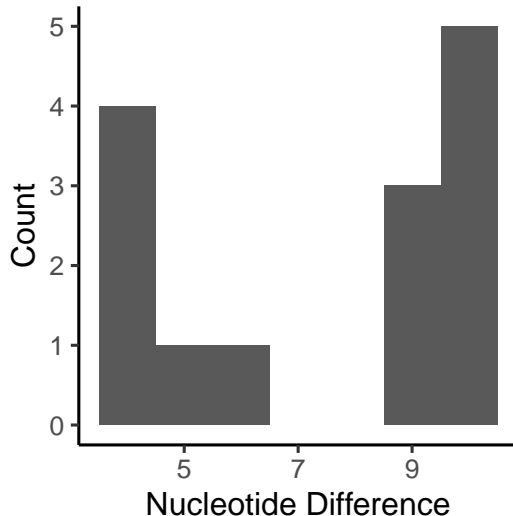
IGHV3–NL_14*01_S0414

768 sequences assigned
153 (19.9%) exact matches, in which:
114 unique CDR3
8 unique J



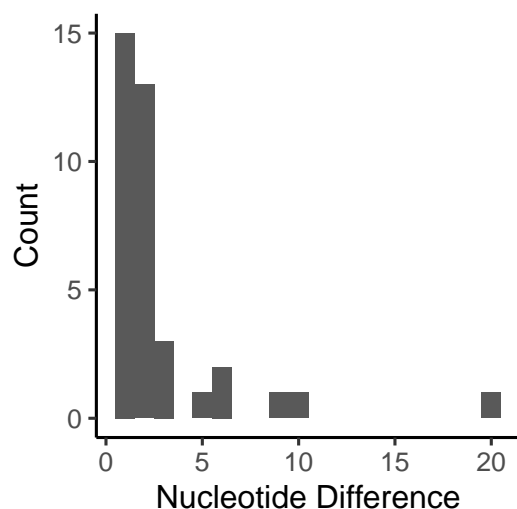
IGHV3–NL_18*01_S6383

14 sequences assigned
No exact matches.



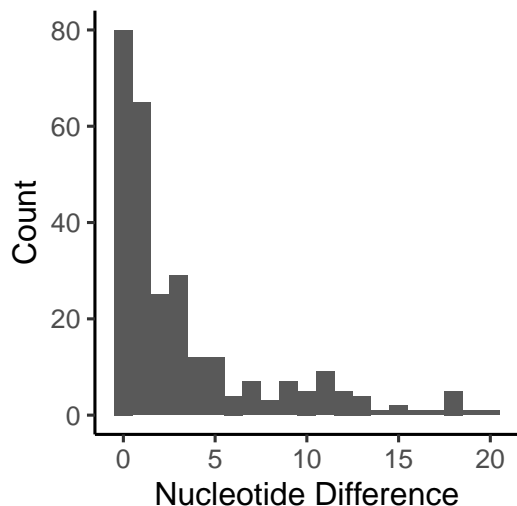
IGHV3–NL_2*01_S6231

38 sequences assigned
No exact matches.



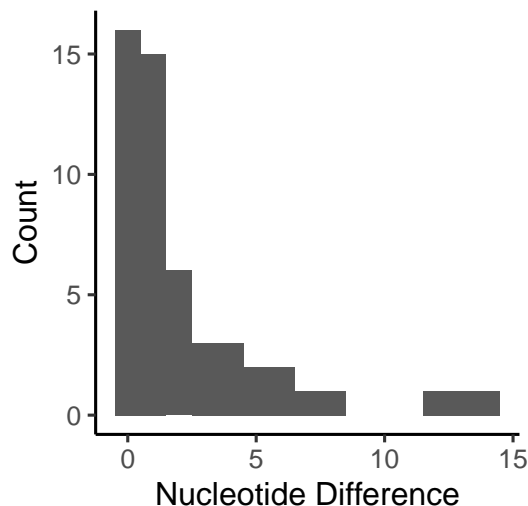
IGHV3–NL_5*01_S7761

324 sequences assigned
80 (24.7%) exact matches, in which:
53 unique CDR3
7 unique J



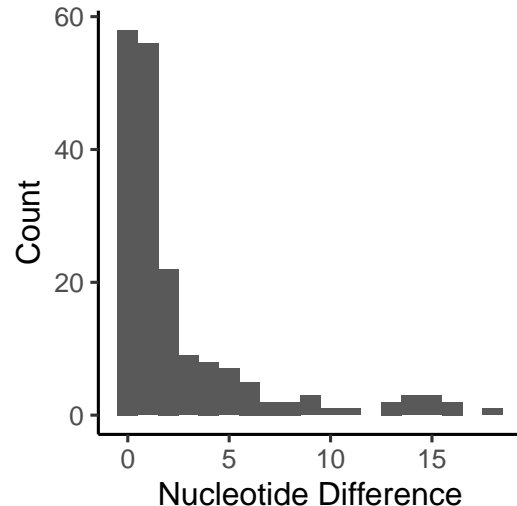
IGHV3–NL_8*01_S9584_01

52 sequences assigned
16 (30.8%) exact matches, in which:
11 unique CDR3
5 unique J



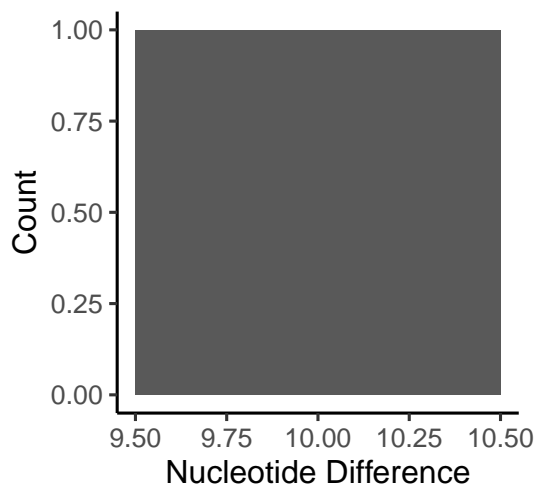
IGHV4–67*02_S6848

188 sequences assigned
58 (30.9%) exact matches, in which:
49 unique CDR3
6 unique J



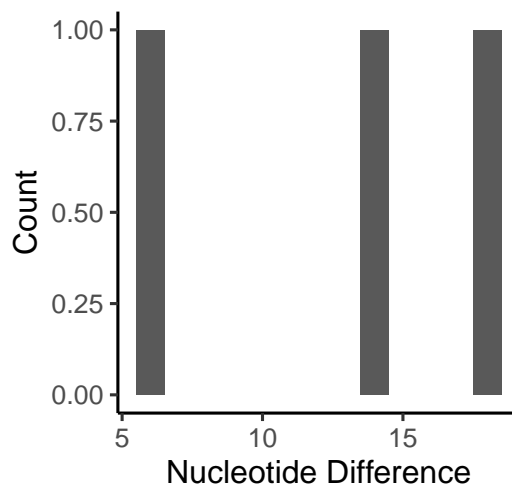
IGHV3–NL_6*02_S6474

1 sequences assigned
No exact matches.



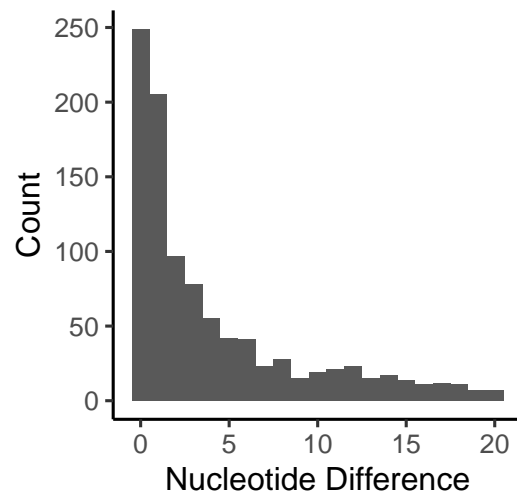
IGHV3–NL_9*01_S1652

3 sequences assigned
No exact matches.



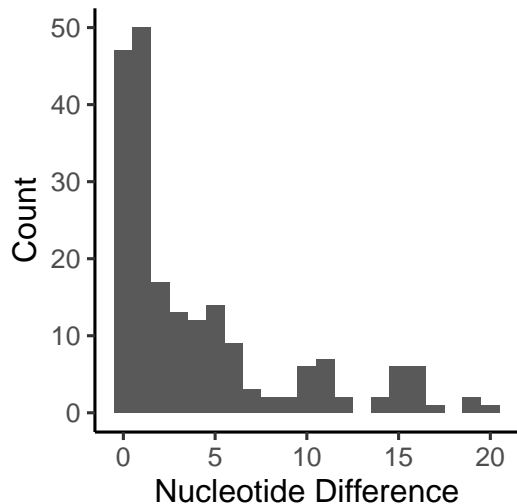
IGHV4–93*01_S0054

1018 sequences assigned
249 (24.5%) exact matches, in which:
210 unique CDR3
8 unique J



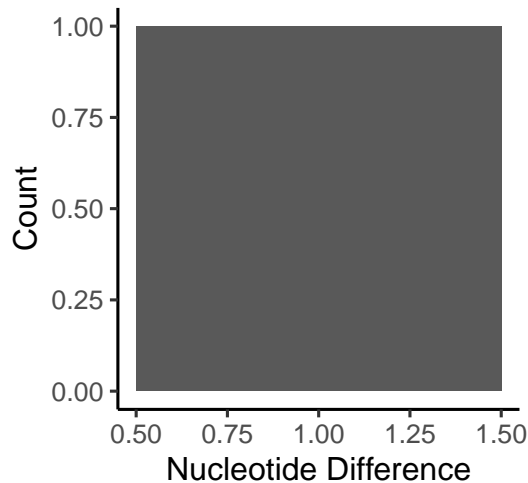
IGHV3–NL_8*01_S9584

207 sequences assigned
47 (22.7%) exact matches, in which:
37 unique CDR3
5 unique J



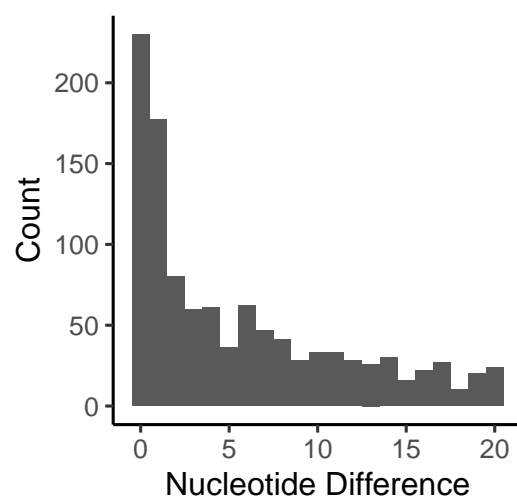
IGHV3–NL_9*01_S6098

1 sequences assigned
No exact matches.



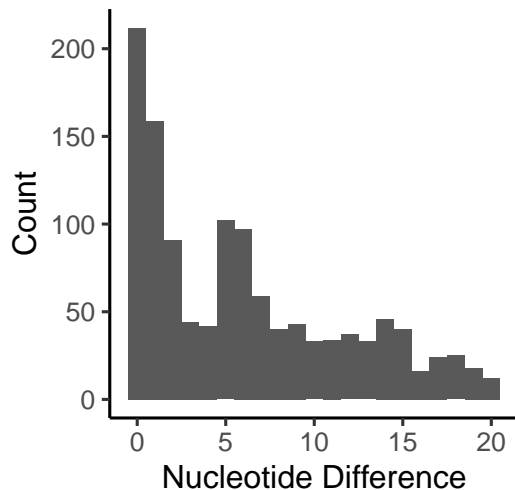
IGHV4–93*01_S1164

1189 sequences assigned
230 (19.3%) exact matches, in which:
179 unique CDR3
8 unique J



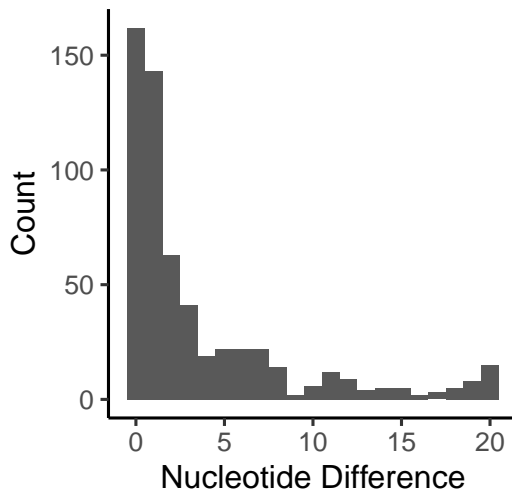
IGHV4-117*01_S3417

1292 sequences assigned
212 (16.4%) exact matches, in which:
164 unique CDR3
8 unique J



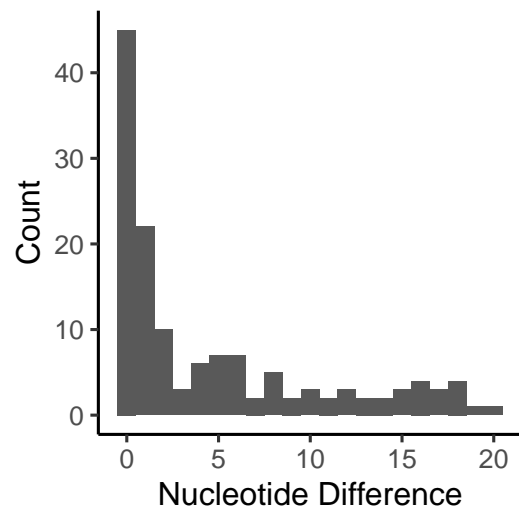
IGHV4-150*01_S6885

785 sequences assigned
162 (20.6%) exact matches, in which:
125 unique CDR3
7 unique J



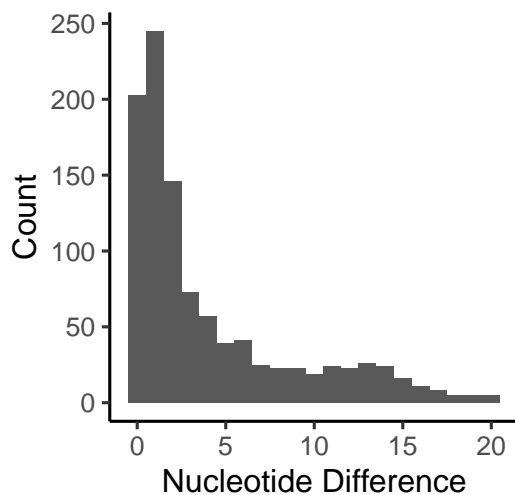
IGHV4-NL_1*02_S4829

162 sequences assigned
45 (27.8%) exact matches, in which:
38 unique CDR3
6 unique J



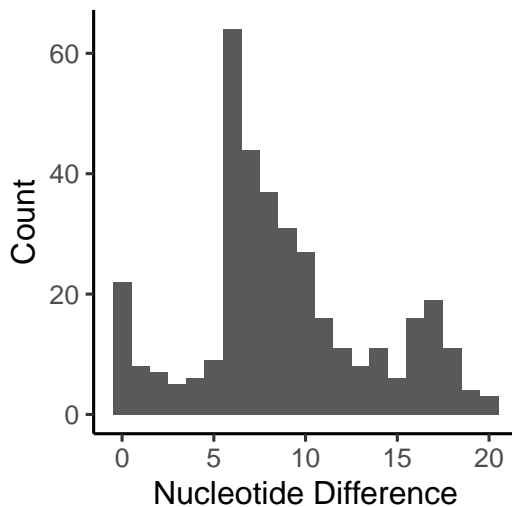
IGHV4-144*01_S8596

1088 sequences assigned
203 (18.7%) exact matches, in which:
166 unique CDR3
8 unique J



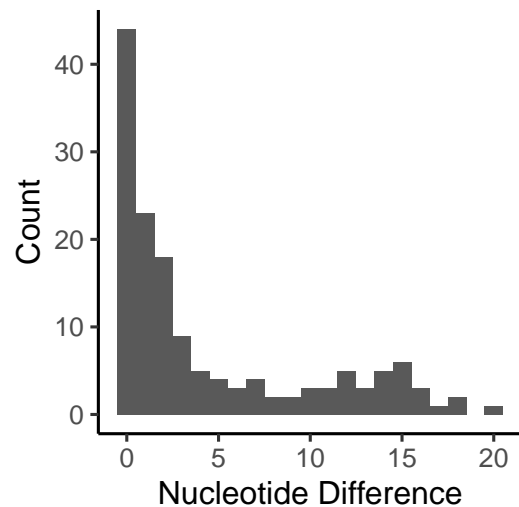
IGHV4-174*02_S2437

389 sequences assigned
22 (5.7%) exact matches, in which:
21 unique CDR3
5 unique J



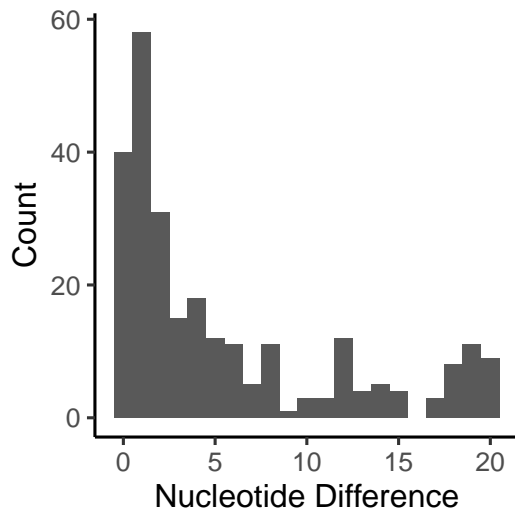
IGHV4-NL_1*02_S4829_A

180 sequences assigned
44 (24.4%) exact matches, in which:
40 unique CDR3
5 unique J



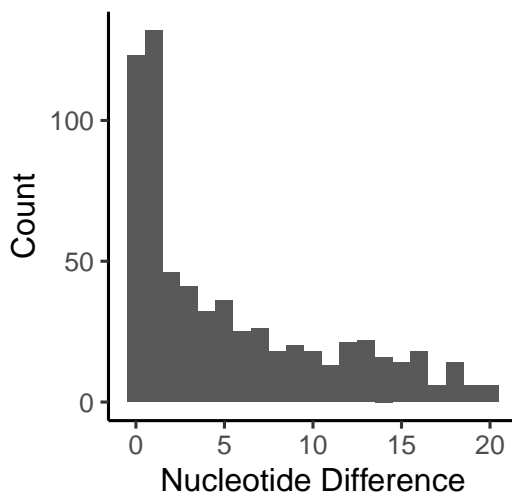
IGHV4-149*02_S8521

276 sequences assigned
40 (14.5%) exact matches, in which:
35 unique CDR3
8 unique J



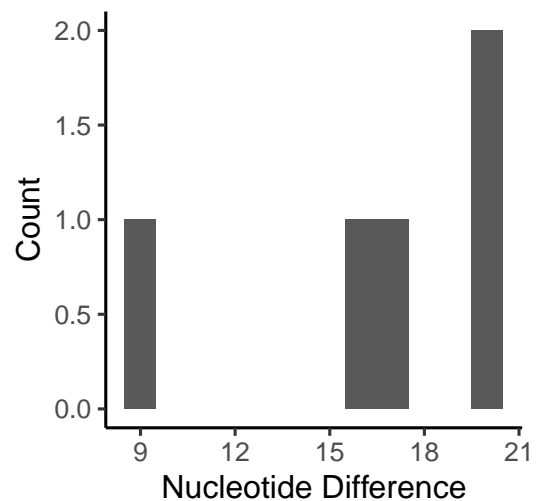
IGHV4-NL_1*01_S9508

702 sequences assigned
123 (17.5%) exact matches, in which:
100 unique CDR3
6 unique J



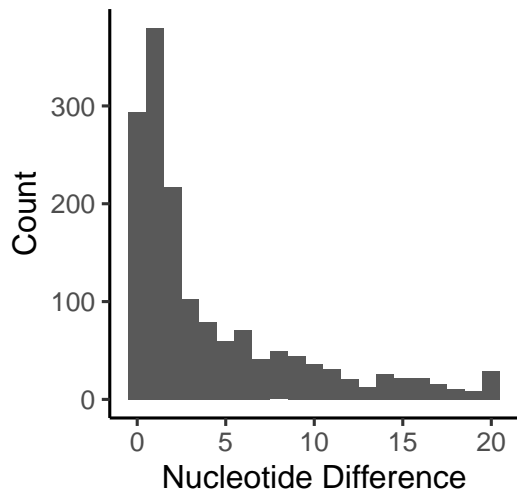
IGHV4-NL_10*01_S8809

7 sequences assigned
No exact matches.



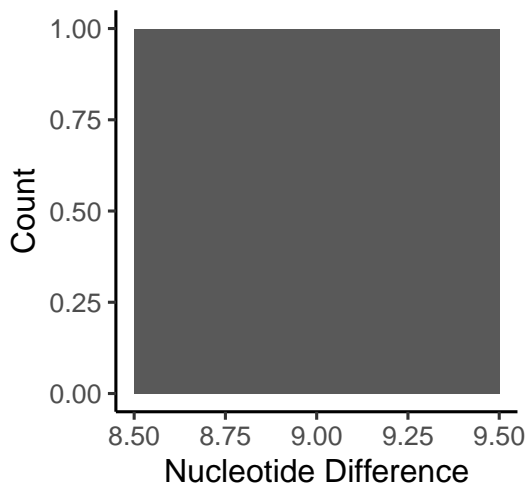
IGHV4–NL_12*01_S2985

1661 sequences assigned
294 (17.7%) exact matches, in which:
233 unique CDR3
7 unique J



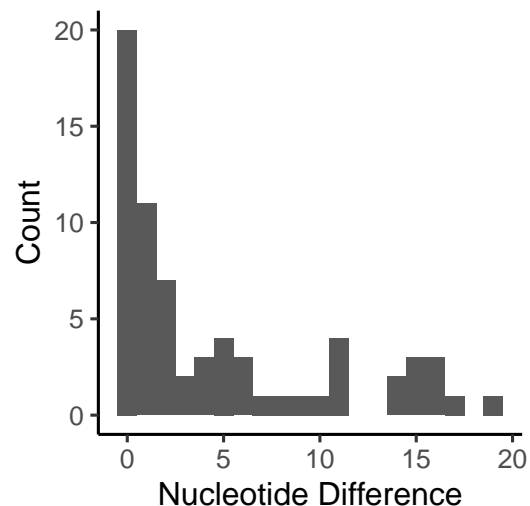
IGHV4–NL_14*01_S5312

1 sequences assigned
No exact matches.



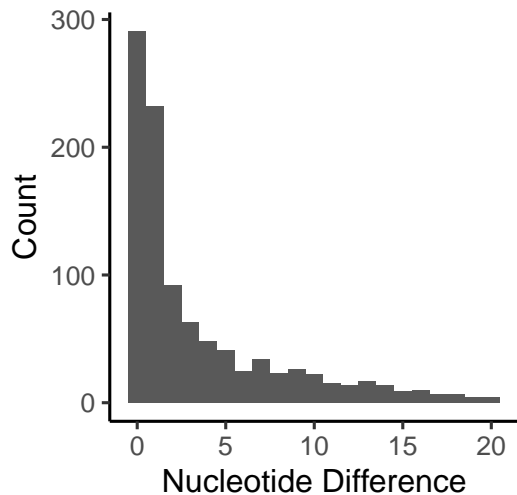
IGHV4–NL_17*01_S3842

71 sequences assigned
20 (28.2%) exact matches, in which:
20 unique CDR3
4 unique J



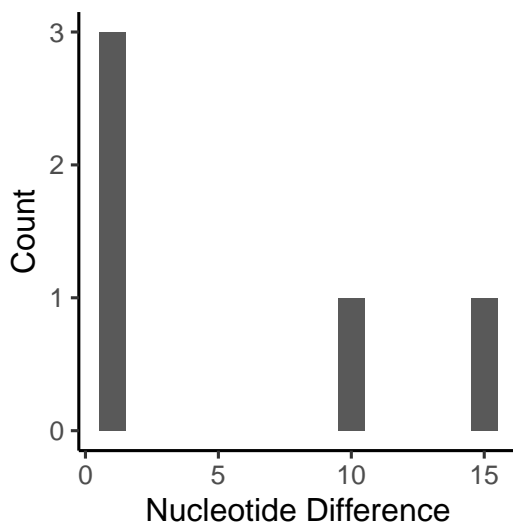
IGHV4–NL_13*01_S9273

1026 sequences assigned
291 (28.4%) exact matches, in which:
253 unique CDR3
8 unique J



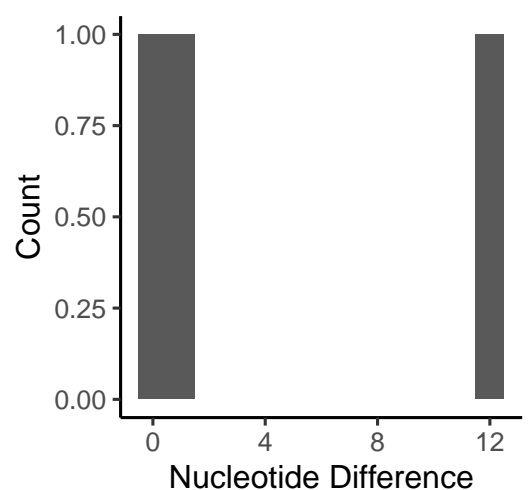
IGHV4–NL_16*01_S2138

6 sequences assigned
No exact matches.



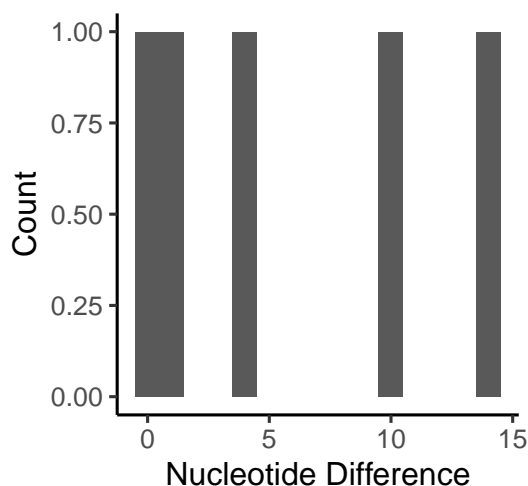
IGHV4–NL_17*01_S9085

24 sequences assigned
1 (4.2%) exact matches, in which:
1 unique CDR3
0 unique J



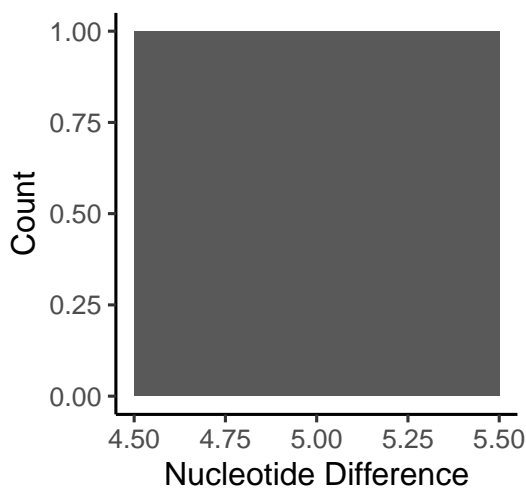
IGHV4–NL_14*01_S3055

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



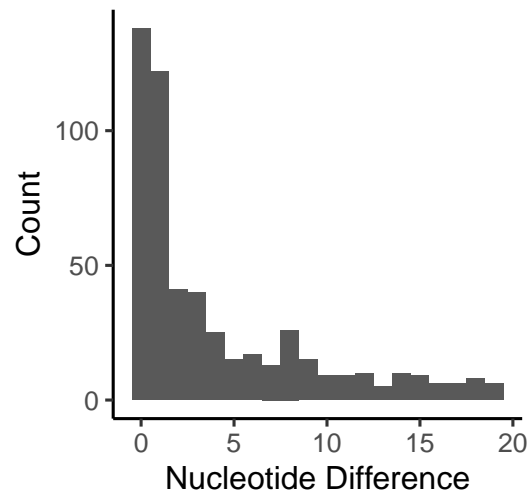
IGHV4–NL_16*01_S2324

1 sequences assigned
No exact matches.



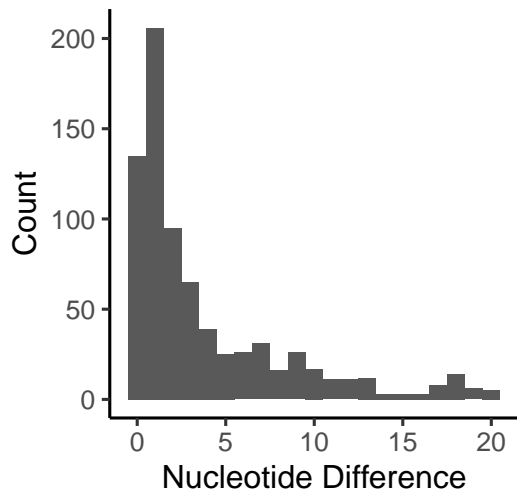
IGHV4–NL_18*01_S0143

551 sequences assigned
138 (25%) exact matches, in which:
114 unique CDR3
7 unique J



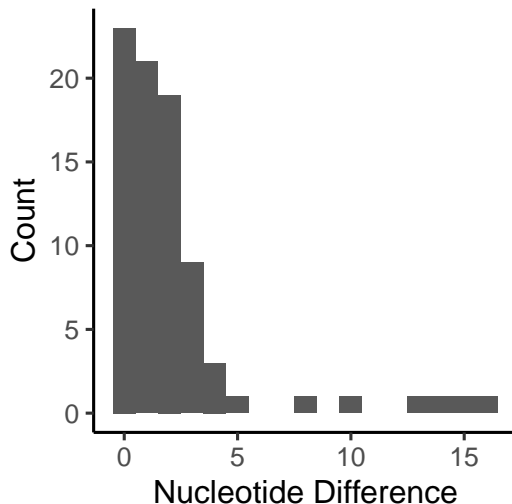
IGHV4–NL_21*01_S6392

807 sequences assigned
135 (16.7%) exact matches, in which:
109 unique CDR3
8 unique J



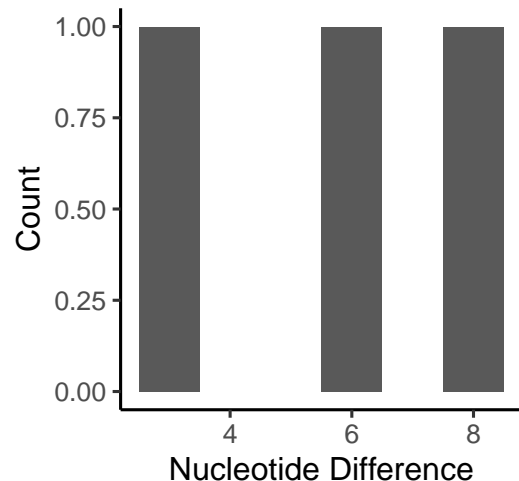
IGHV4–NL_24*01_S5697

83 sequences assigned
23 (27.7%) exact matches, in which:
20 unique CDR3
6 unique J



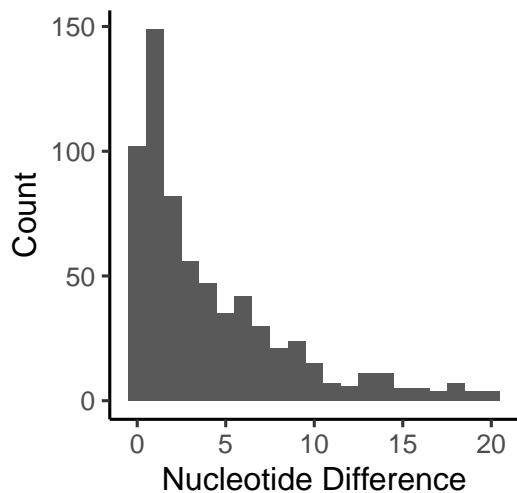
IGHV4–NL_28*01_S1039

3 sequences assigned
No exact matches.



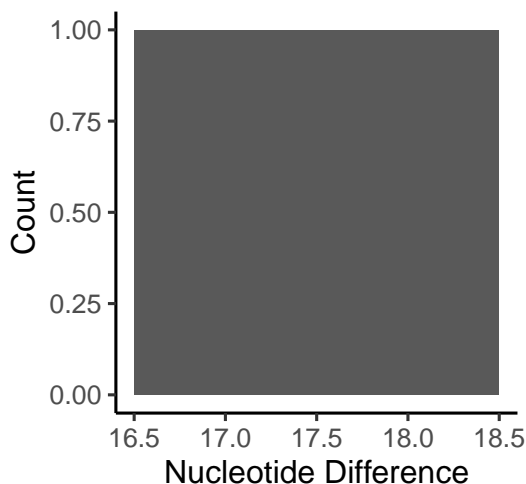
IGHV4–NL_22*01_S0411

698 sequences assigned
102 (14.6%) exact matches, in which:
92 unique CDR3
6 unique J



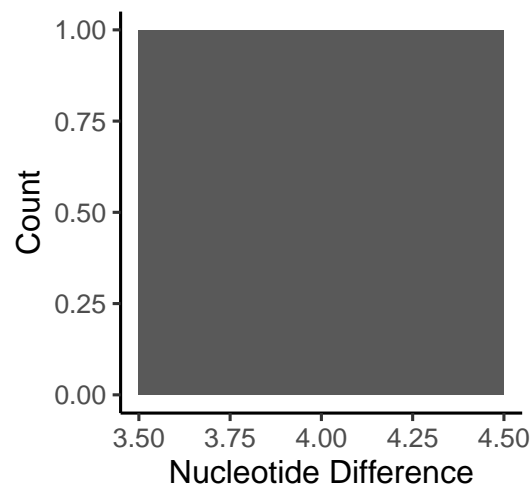
IGHV4–NL_25*01_S995

2 sequences assigned
No exact matches.



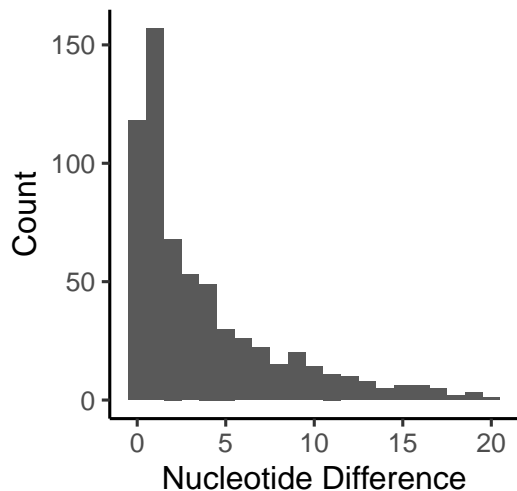
IGHV4–NL_28*01_S6567

1 sequences assigned
No exact matches.



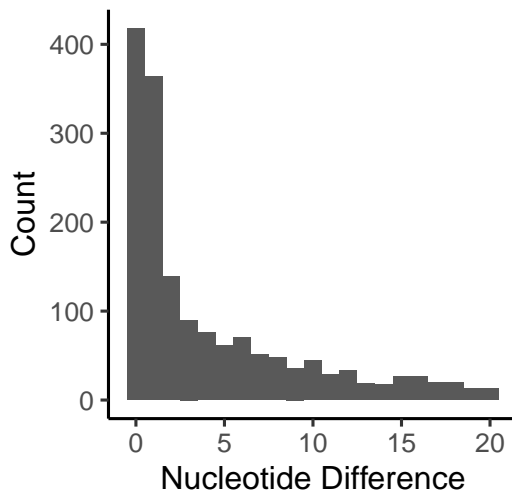
IGHV4–NL_22*01_S9255

666 sequences assigned
118 (17.7%) exact matches, in which:
102 unique CDR3
8 unique J



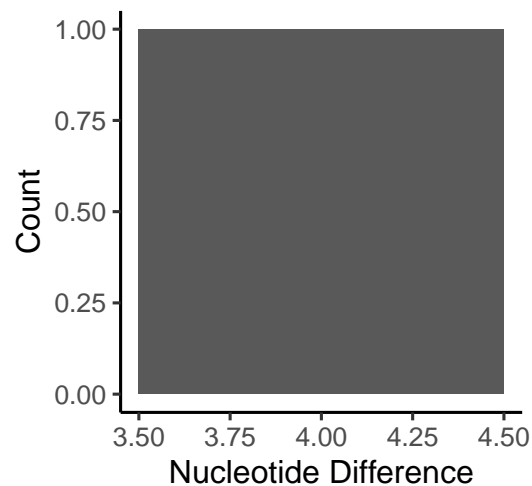
IGHV4–NL_27*01_S6960

1686 sequences assigned
418 (24.8%) exact matches, in which:
336 unique CDR3
8 unique J



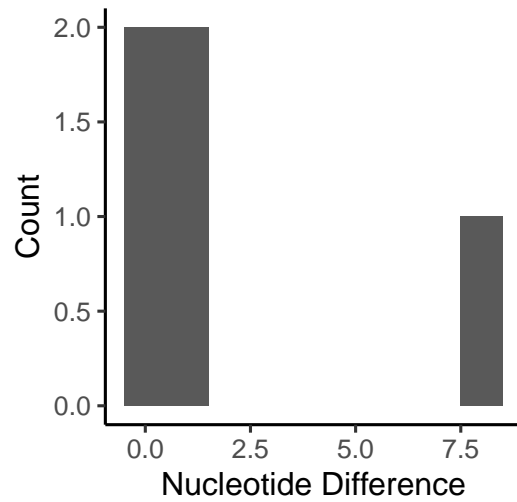
IGHV4–NL_28*01_S7478

1 sequences assigned
No exact matches.



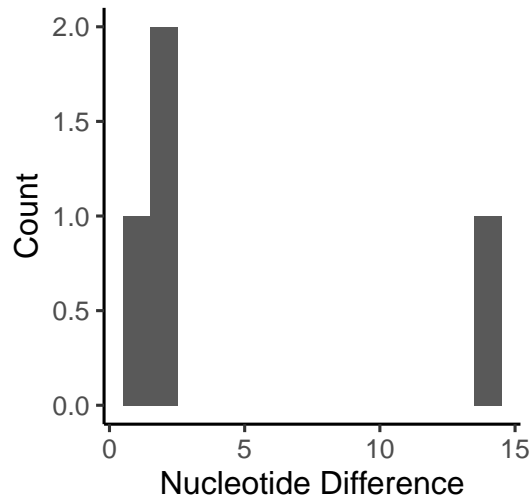
IGHV4–NL_29*01_S1436

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



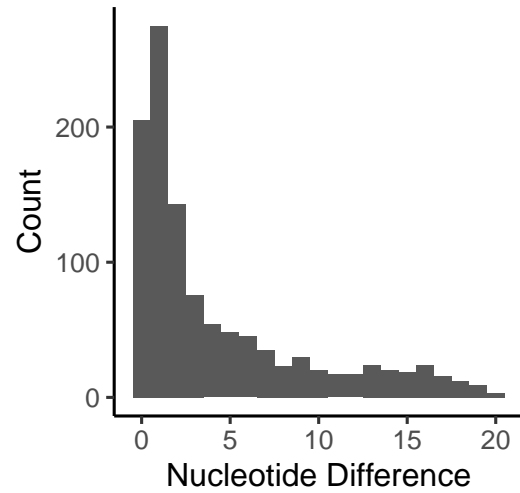
IGHV4–NL_3*01_S5200

4 sequences assigned
No exact matches.



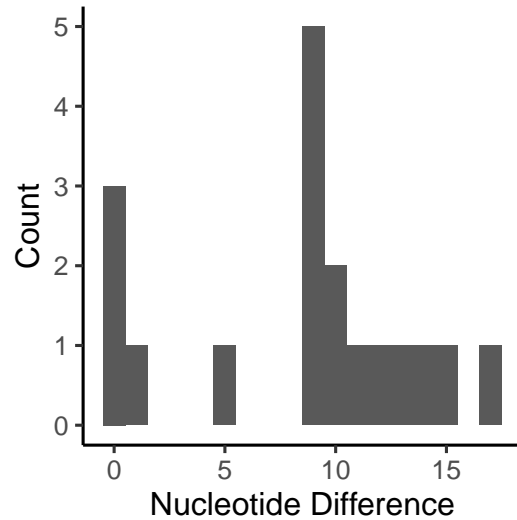
IGHV4–NL_33*01_S4764

1146 sequences assigned
205 (17.9%) exact matches, in which:
176 unique CDR3
7 unique J



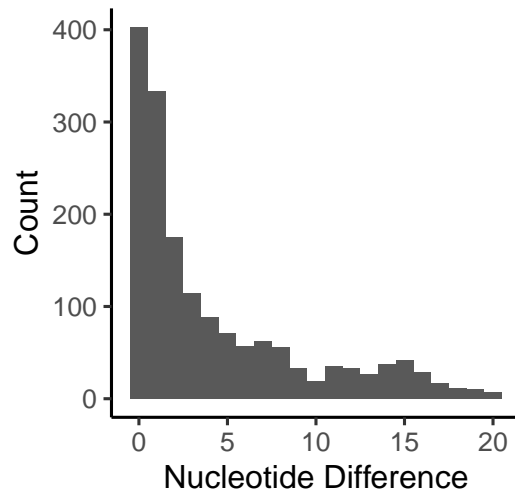
IGHV4–NL_29*01_S3761

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



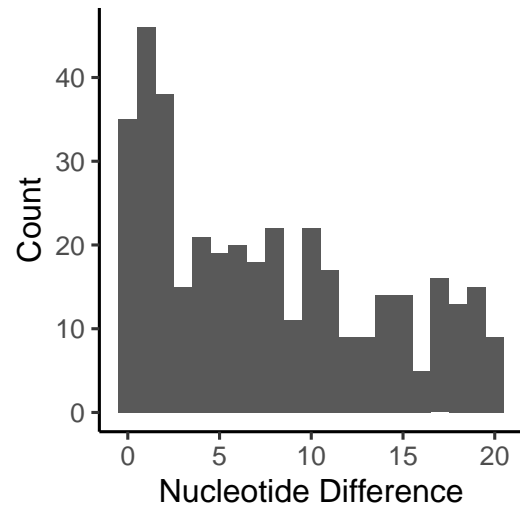
IGHV4–NL_31*01_S8320

1726 sequences assigned
403 (23.3%) exact matches, in which:
333 unique CDR3
9 unique J



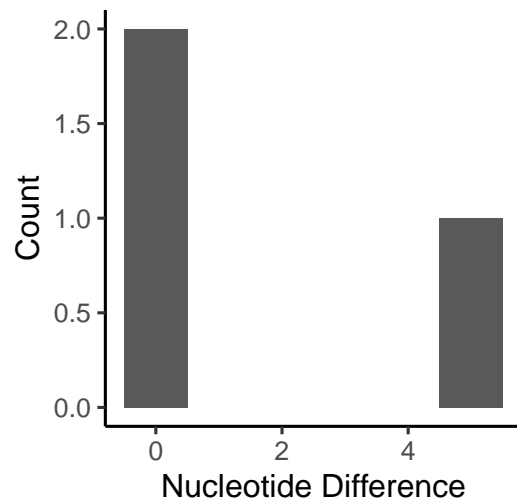
IGHV4–NL_35*01_S9510

648 sequences assigned
35 (5.4%) exact matches, in which:
27 unique CDR3
6 unique J



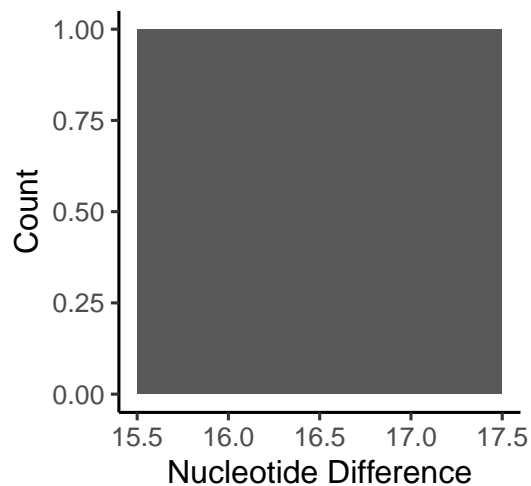
IGHV4–NL_29*01_S9610

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



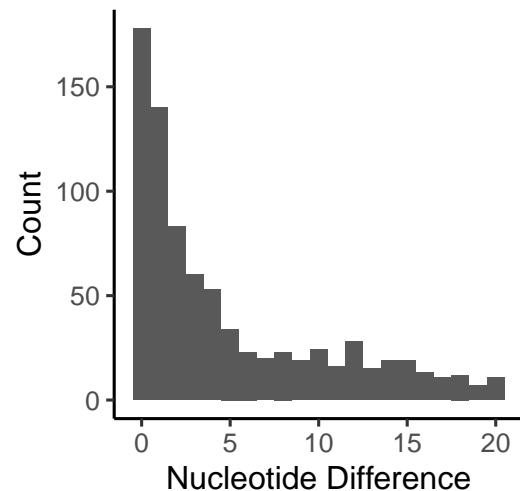
IGHV4–NL_32*01_S1450

4 sequences assigned
No exact matches.



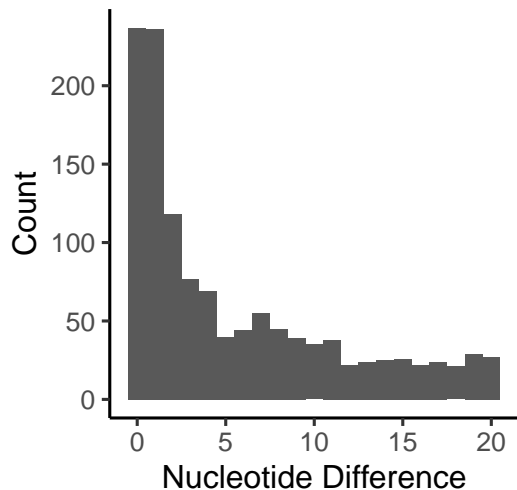
IGHV4–NL_36*01_S4591

857 sequences assigned
178 (20.8%) exact matches, in which:
133 unique CDR3
10 unique J



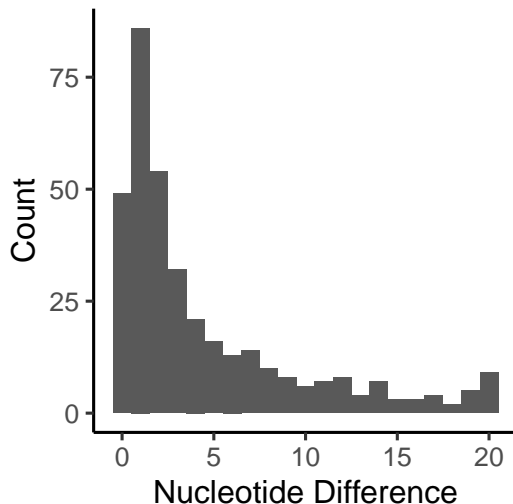
IGHV4–NL_36*01_S5319

1426 sequences assigned
237 (16.6%) exact matches, in which:
187 unique CDR3
7 unique J



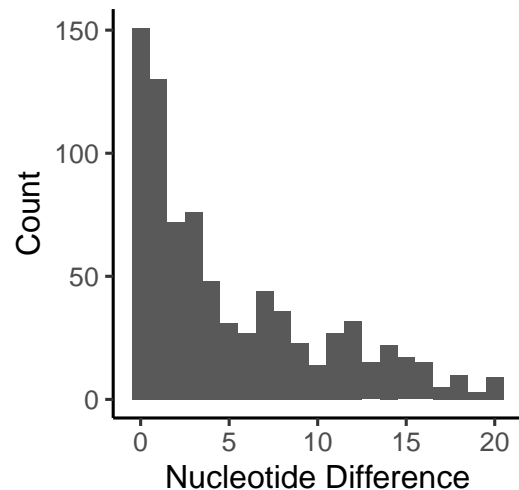
IGHV4–NL_4*01_S8866

380 sequences assigned
49 (12.9%) exact matches, in which:
40 unique CDR3
6 unique J



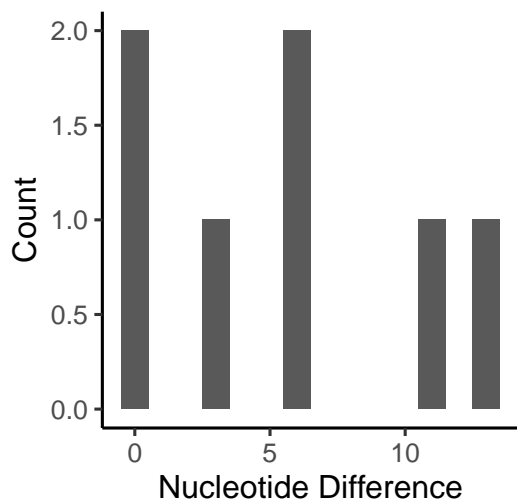
IGHV4–NL_42*01_S3572

868 sequences assigned
151 (17.4%) exact matches, in which:
125 unique CDR3
6 unique J



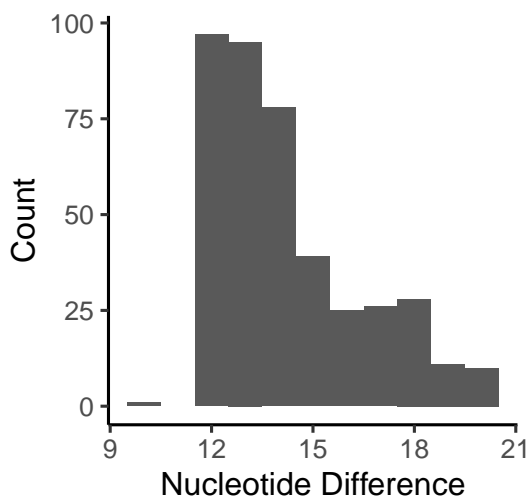
IGHV4–NL_37*01_S0997

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



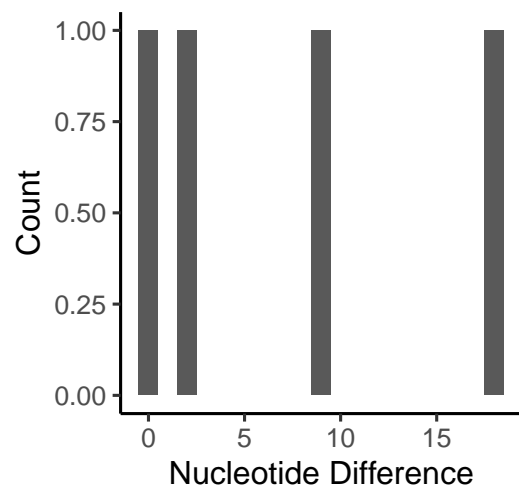
IGHV4–NL_41*01_S6928

522 sequences assigned
No exact matches.



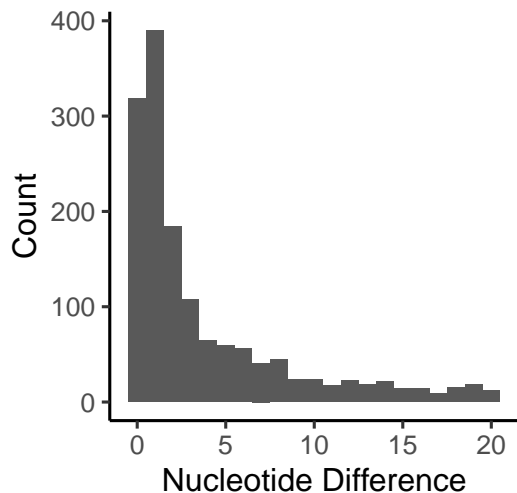
IGHV4–NL_43*01_S1860

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



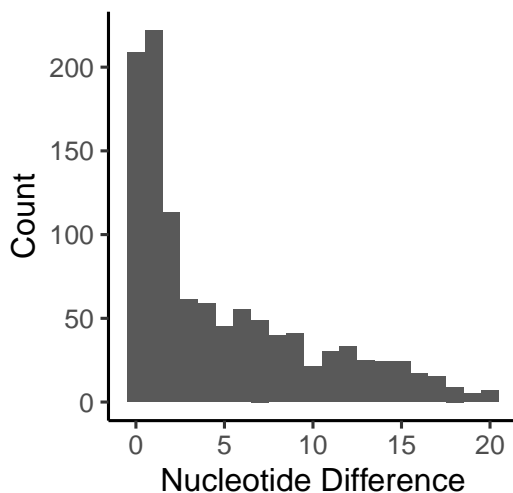
IGHV4–NL_38*01_S8437

1538 sequences assigned
318 (20.7%) exact matches, in which:
253 unique CDR3
8 unique J



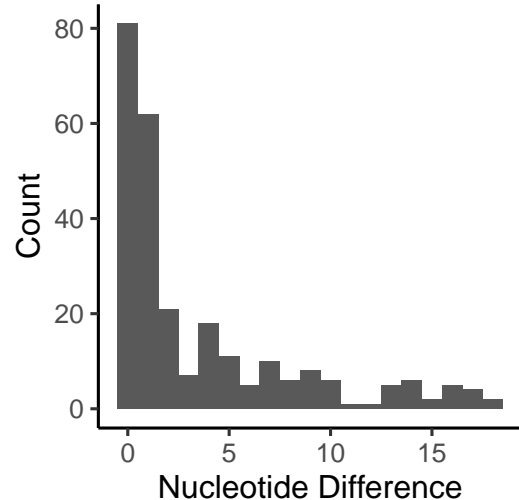
IGHV4–NL_42*01_S2425

1163 sequences assigned
209 (18%) exact matches, in which:
163 unique CDR3
9 unique J



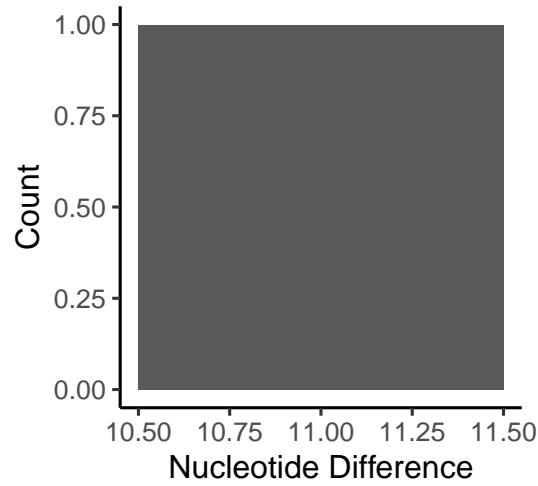
IGHV4–NL_5*01_S5158

270 sequences assigned
81 (30%) exact matches, in which:
72 unique CDR3
8 unique J



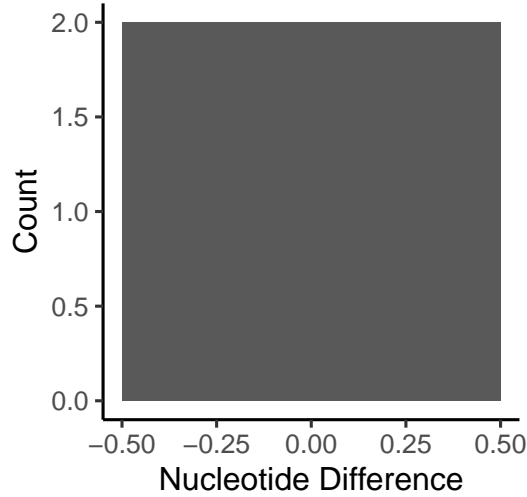
IGHV4–NL_6*01_S1427

1 sequences assigned
No exact matches.



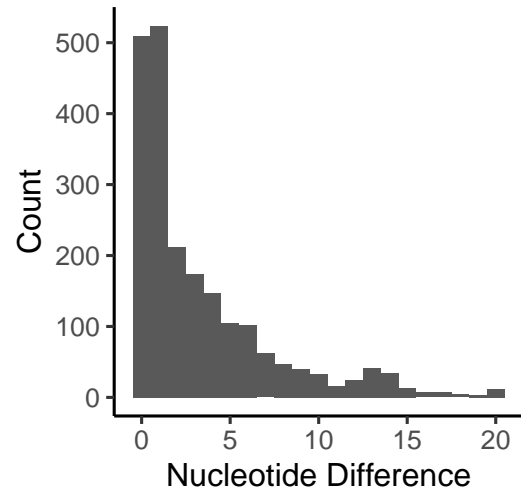
IGHV4–NL_7*02_S8742

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



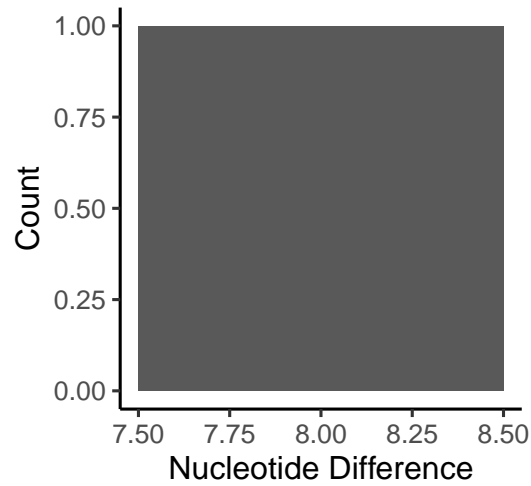
IGHV5–157*01_S5960

2174 sequences assigned
509 (23.4%) exact matches, in which:
288 unique CDR3
11 unique J



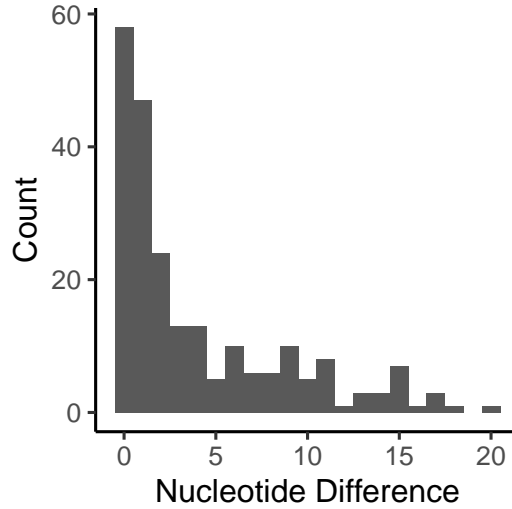
IGHV4–NL_6*01_S4760

1 sequences assigned
No exact matches.



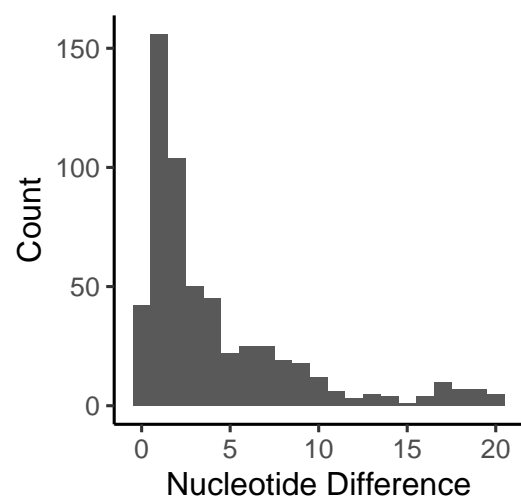
IGHV4–NL_9*02_S2874

226 sequences assigned
58 (25.7%) exact matches, in which:
47 unique CDR3
7 unique J



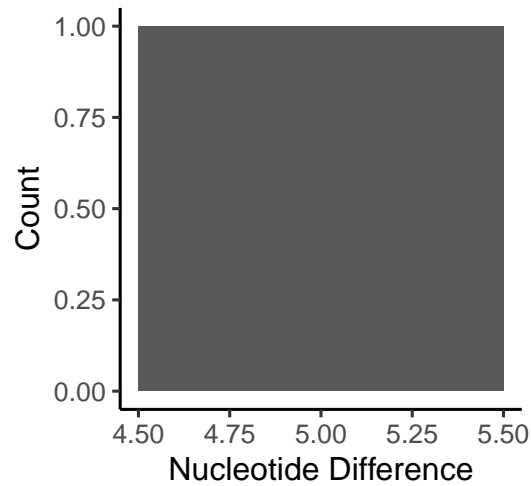
IGHV6–1*02_G283T

600 sequences assigned
42 (7%) exact matches, in which:
36 unique CDR3
9 unique J



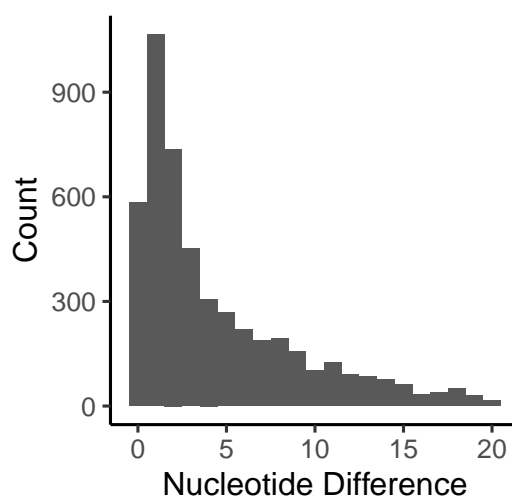
IGHV4–NL_6*01_S6860

1 sequences assigned
No exact matches.



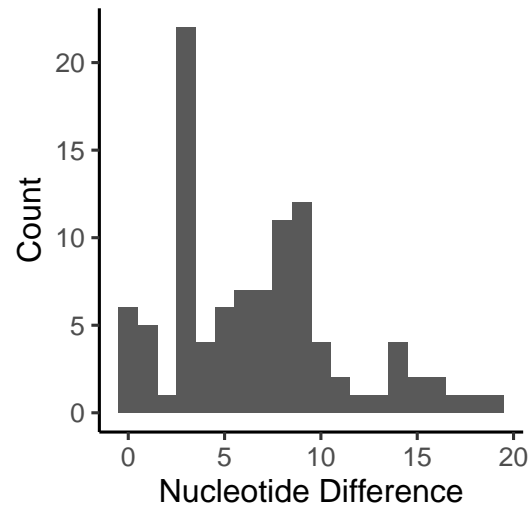
IGHV5–15*01_S8767

5009 sequences assigned
584 (11.7%) exact matches, in which:
411 unique CDR3
11 unique J

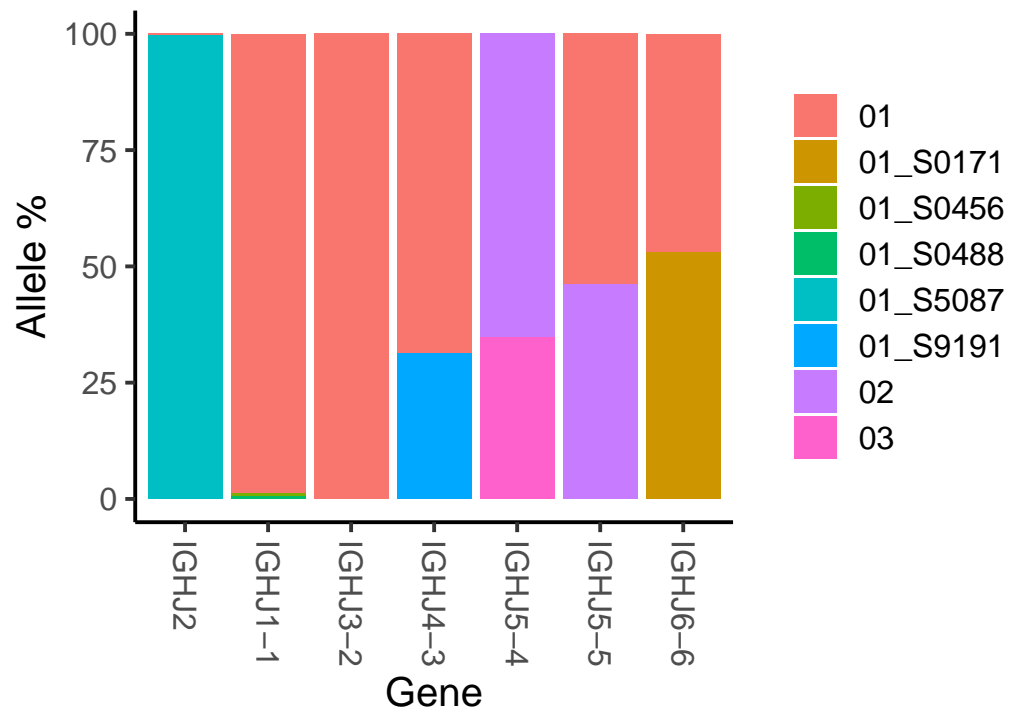


IGHV7–86*01_S5982

130 sequences assigned
6 (4.6%) exact matches, in which:
4 unique CDR3
2 unique J



Allele Usage

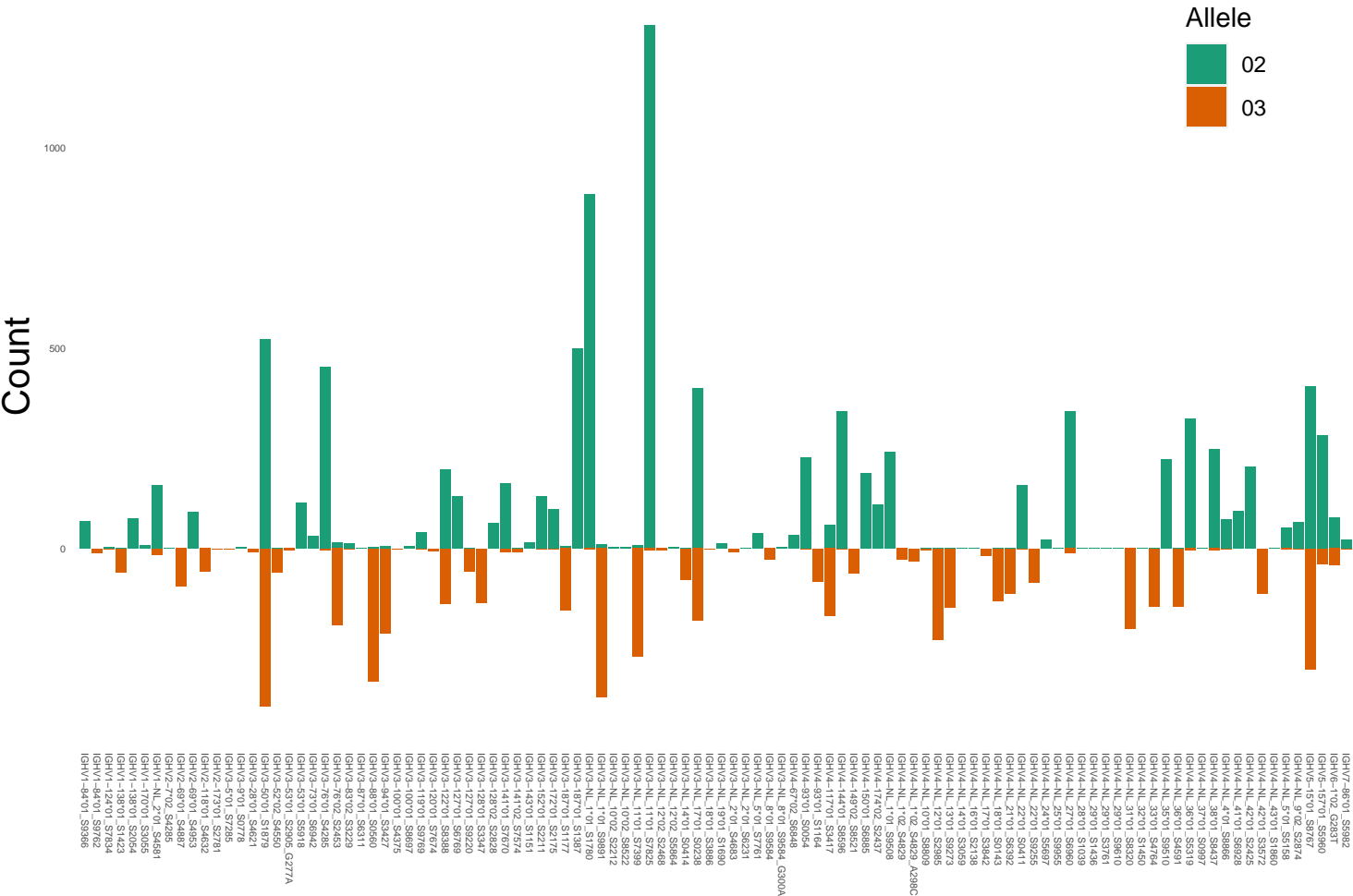


2000

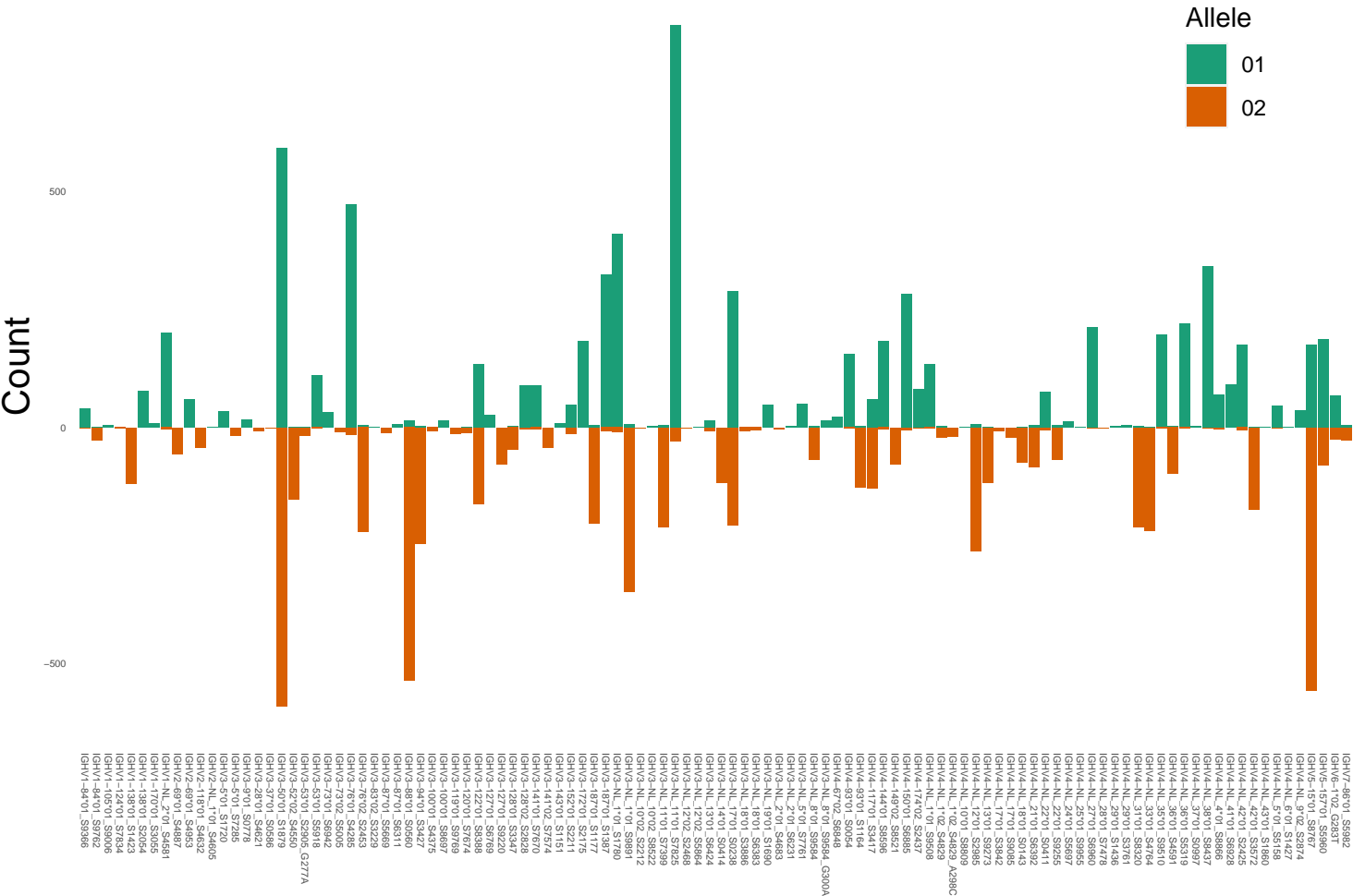


Count

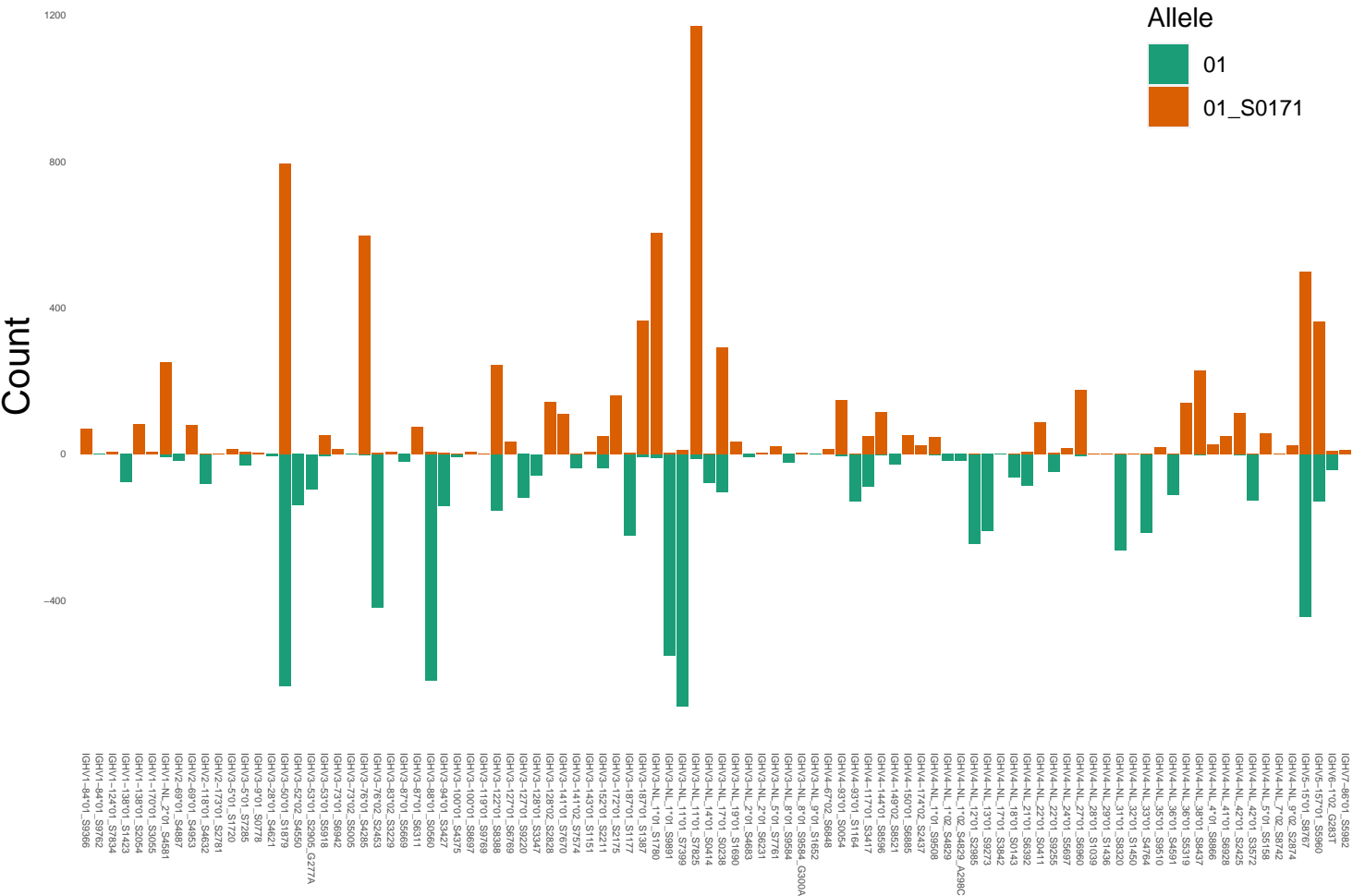
Sequence Count by IGHJ5–4 allele usage



Sequence Count by IGHJ5–5 allele usage



Sequence Count byIGHJ6–6 allele usage



Warning – no inferred sequences found.