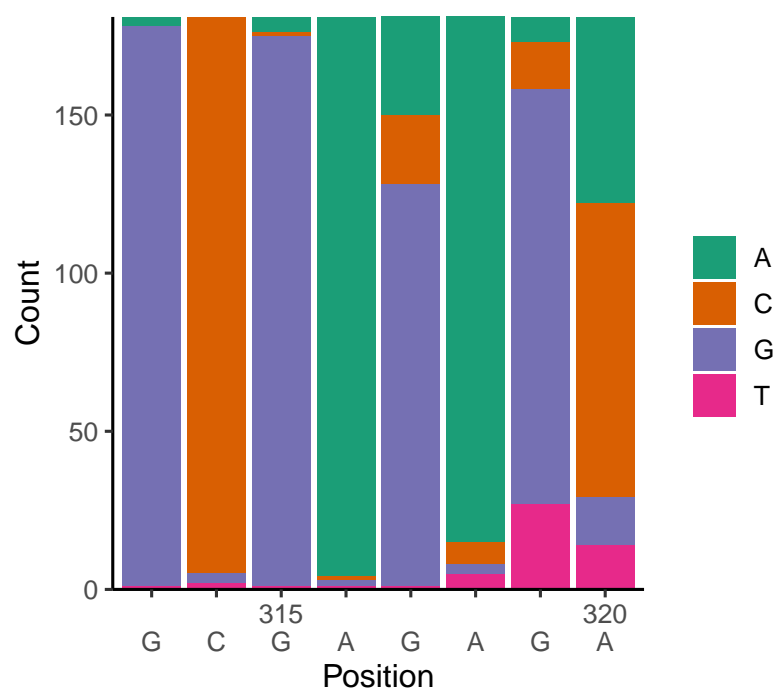
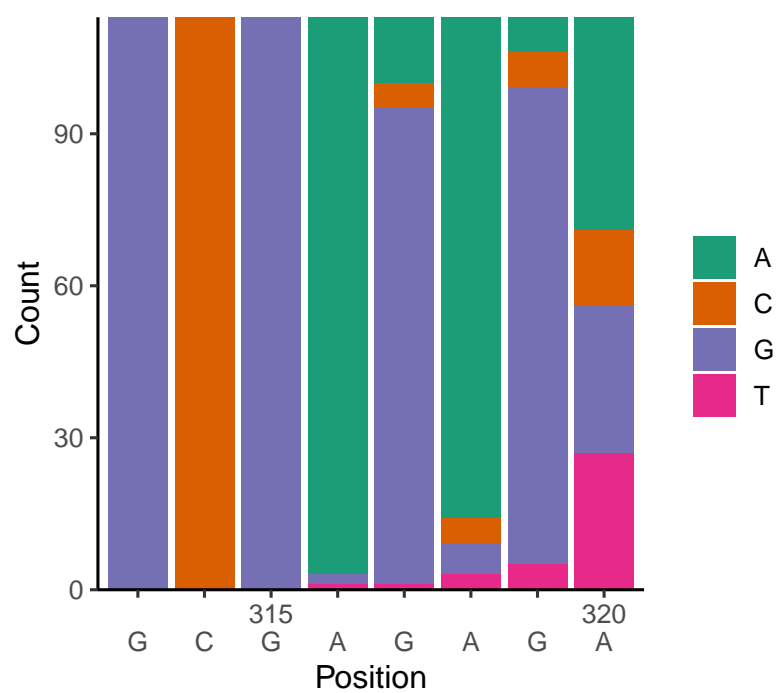


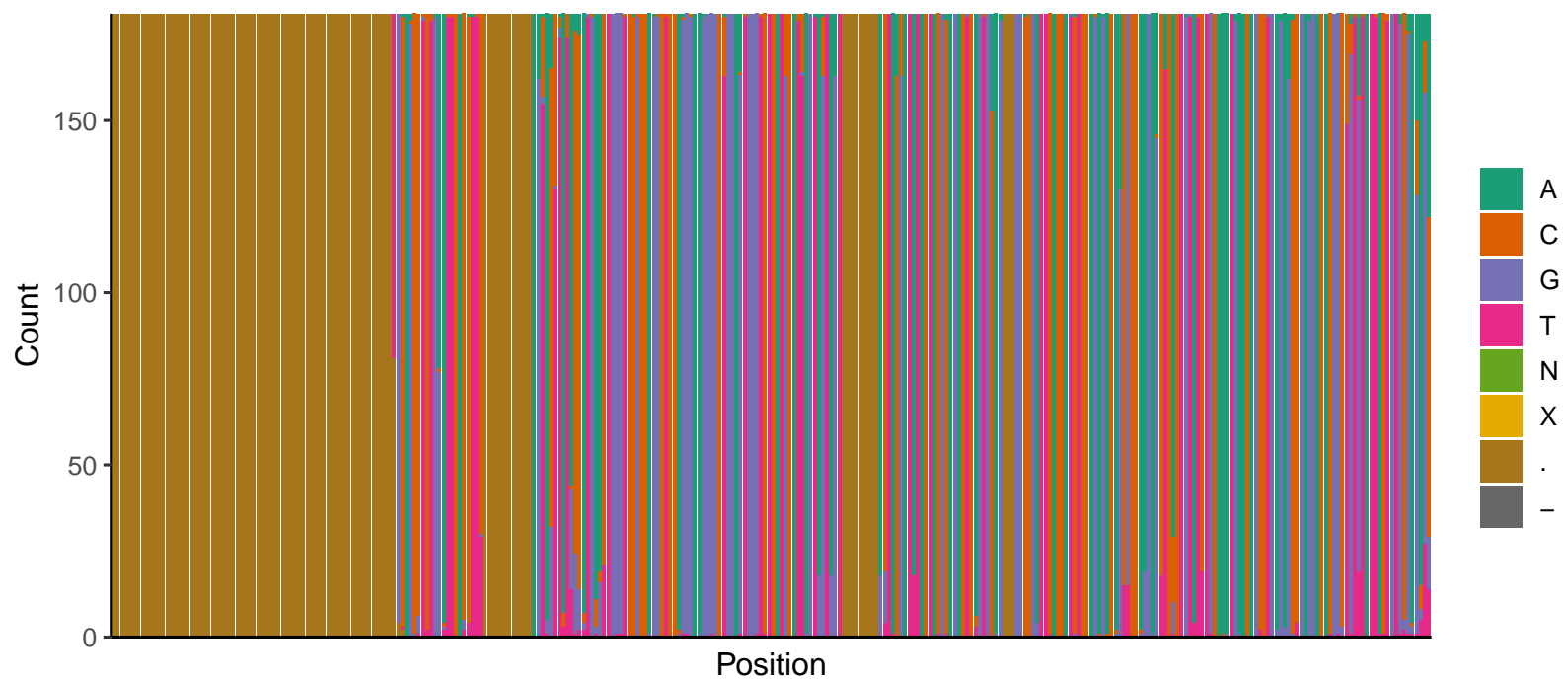
Gene IGHV3-69-1*01_G80A_G106A_A107C_C108T_C111T_T112A_A113C_C164G_G1



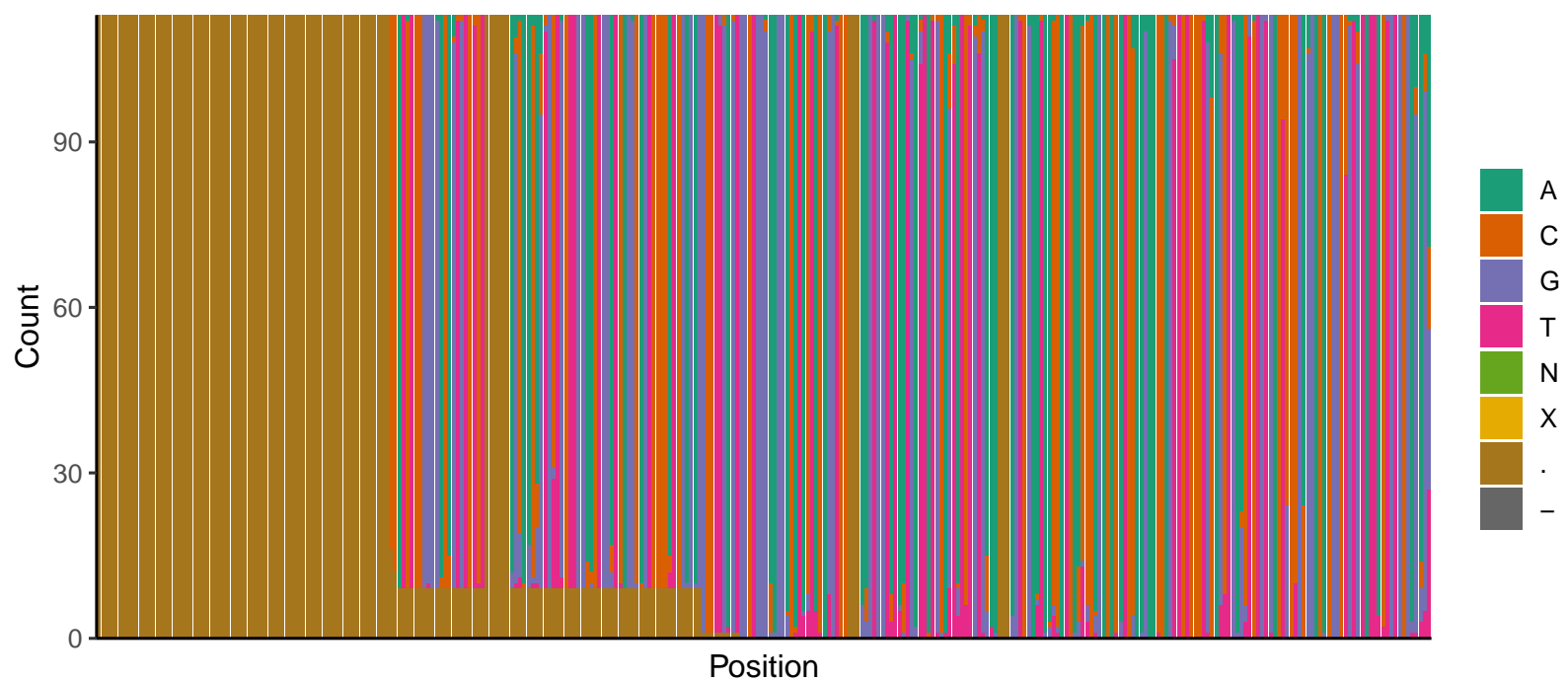
Gene IGHV6-1*01_02_A315G



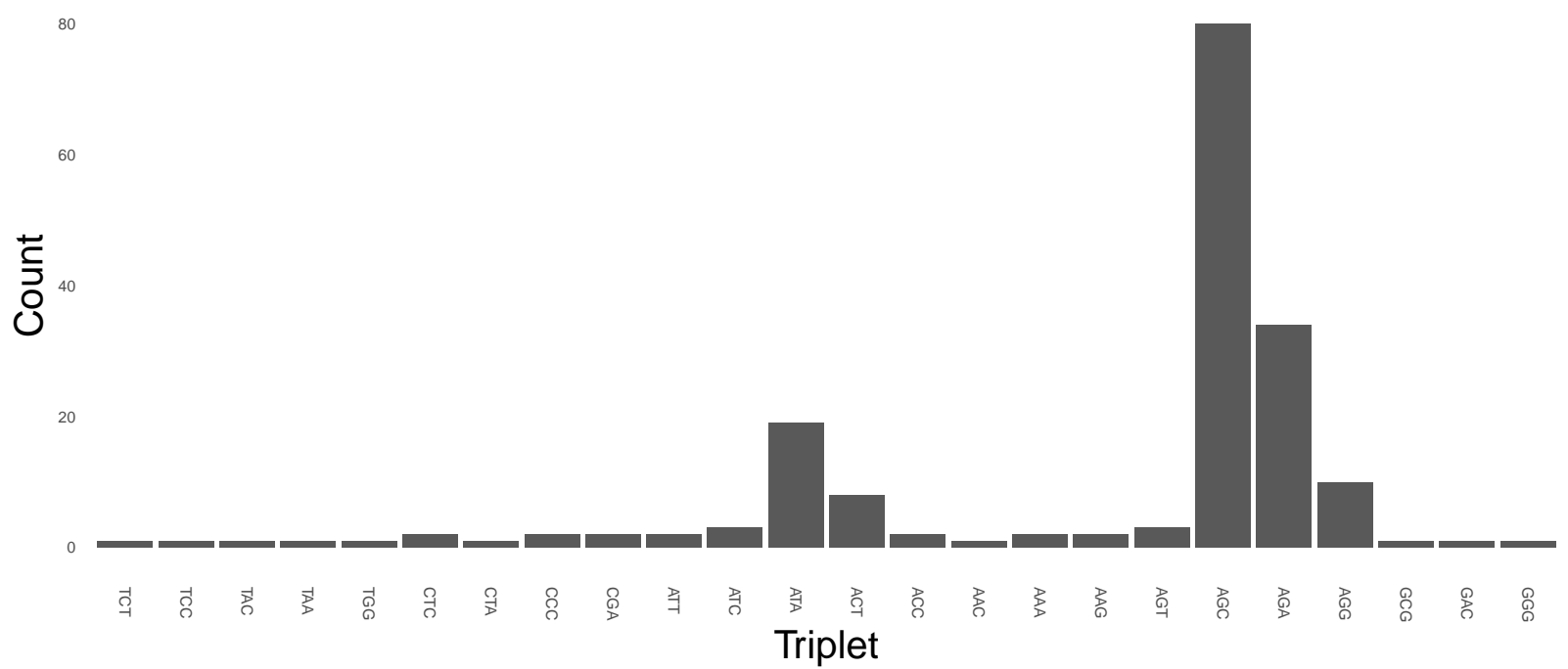
Gene IGHV3-69-1*01_G80A_G106A_A107C_C108T_C111T_T112A_A113C_C164G_G1



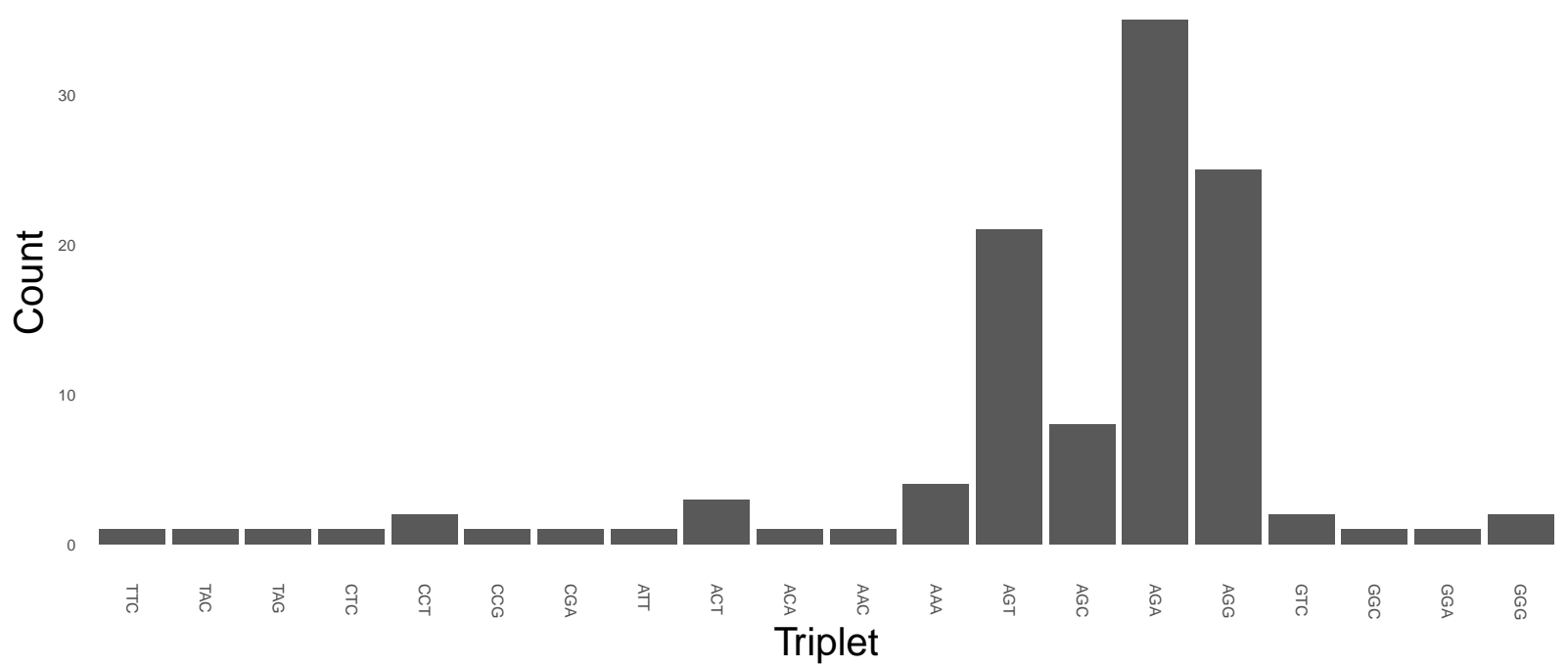
Gene IGHV6-1*01_02_A315G



IGHV3-69-1*01_G80A_G106A_A107C_C108T_C111T_T112A_A113C_C164G_G188C_C192G_

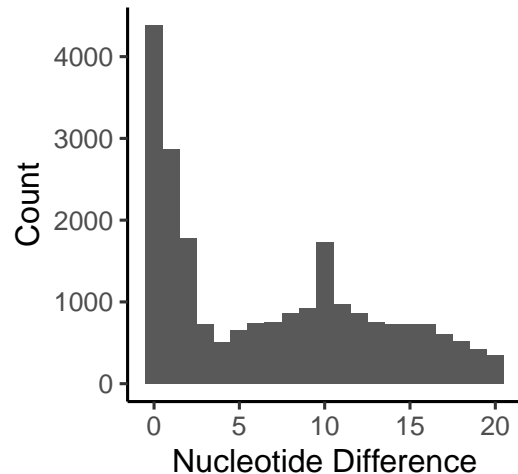


IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet



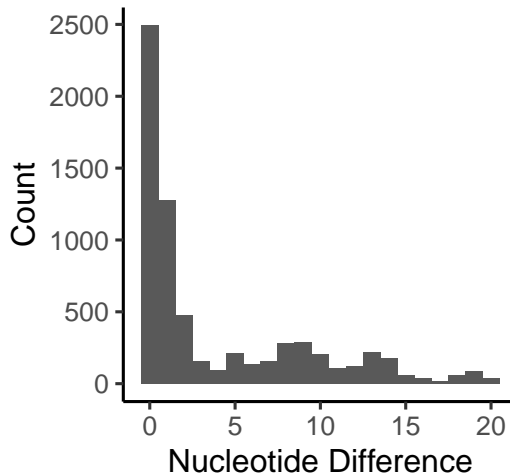
IGHV1-2*02

23991 sequences assigned
4382 (18.3%) exact matches, in which:
3953 unique CDR3
7 unique J



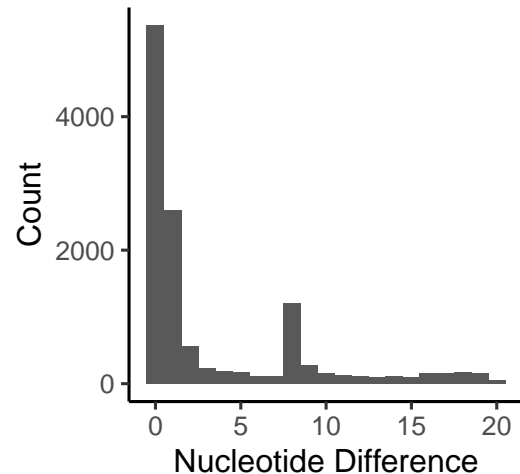
IGHV1-8*01

7224 sequences assigned
2493 (34.5%) exact matches, in which:
2305 unique CDR3
7 unique J



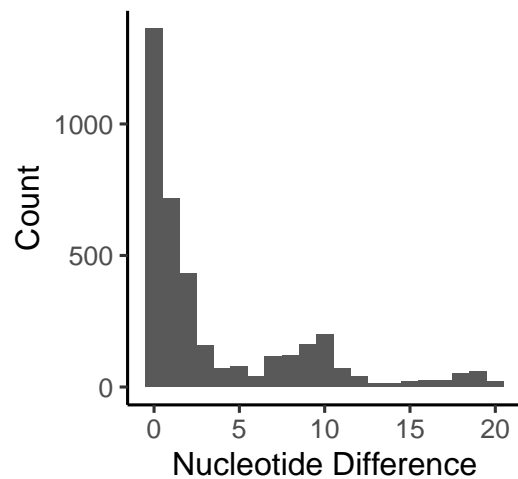
IGHV1-18*04

12724 sequences assigned
5367 (42.2%) exact matches, in which:
4949 unique CDR3
7 unique J



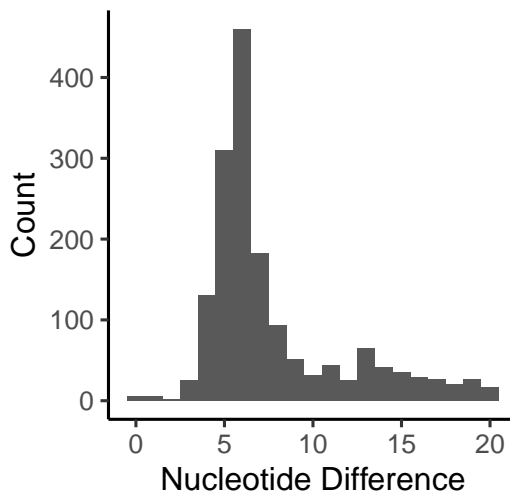
IGHV1-2*04

3880 sequences assigned
1362 (35.1%) exact matches, in which:
1252 unique CDR3
7 unique J



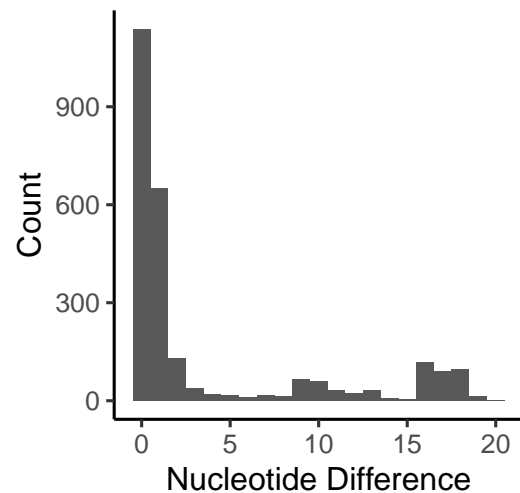
IGHV1-8*02

2329 sequences assigned
5 (0.2%) exact matches, in which:
5 unique CDR3
3 unique J



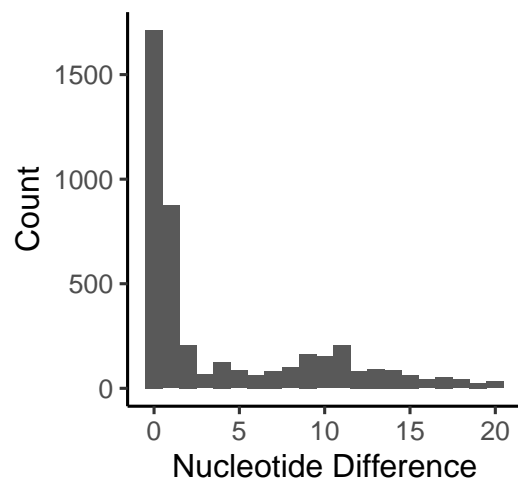
IGHV1-24*01

2612 sequences assigned
1138 (43.6%) exact matches, in which:
971 unique CDR3
7 unique J



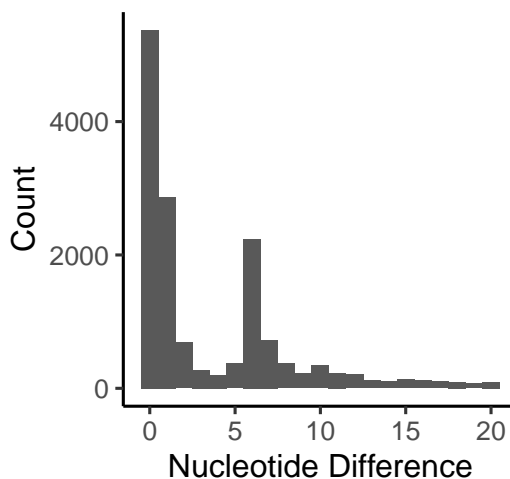
IGHV1-3*01_05

4662 sequences assigned
1713 (36.7%) exact matches, in which:
1532 unique CDR3
7 unique J



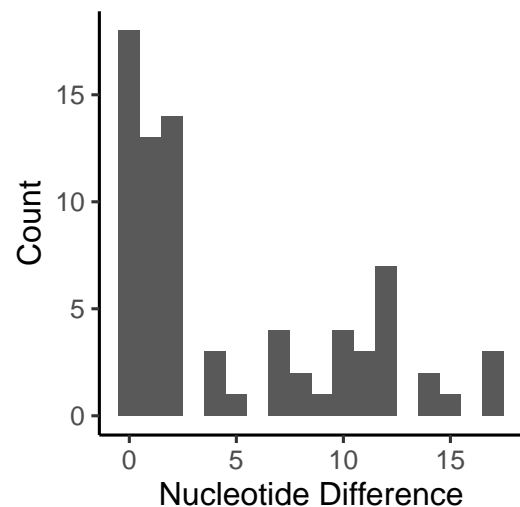
IGHV1-18*01

15799 sequences assigned
5373 (34%) exact matches, in which:
4976 unique CDR3
7 unique J



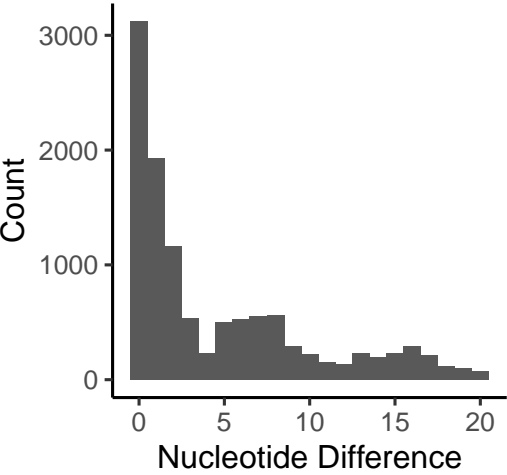
IGHV1-45*02

77 sequences assigned
18 (23.4%) exact matches, in which:
16 unique CDR3
5 unique J



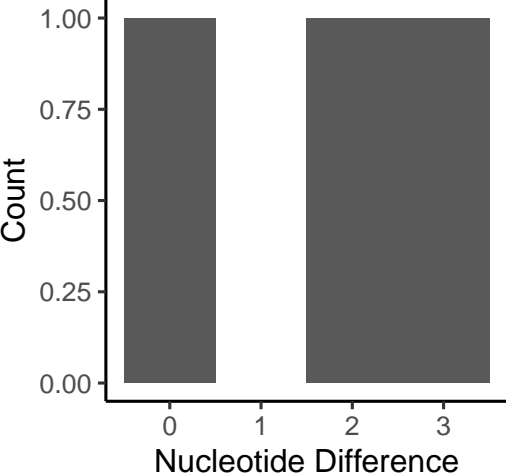
IGHV1-46*01

11740 sequences assigned
3121 (26.6%) exact matches, in which:
2854 unique CDR3
7 unique J



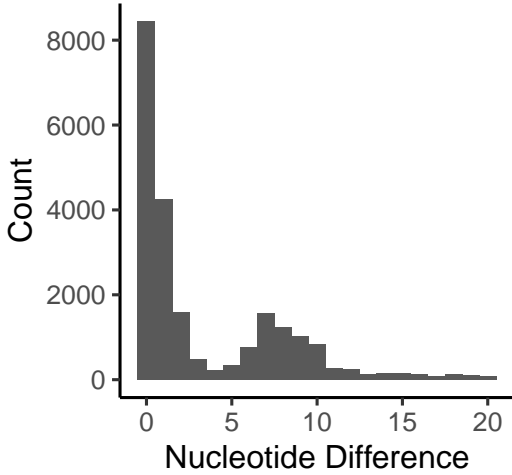
IGHV1-68*02_03

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



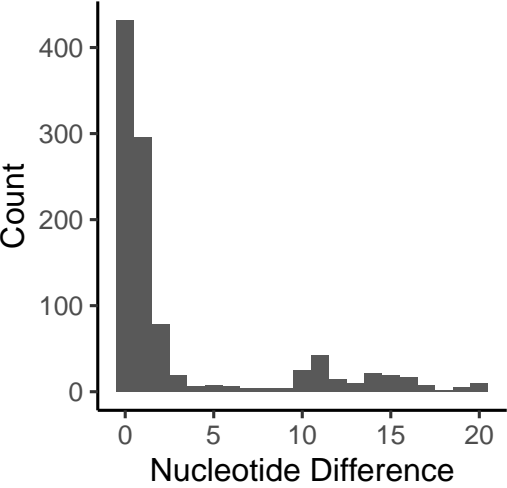
IGHV1-69*06_14

23120 sequences assigned
8442 (36.5%) exact matches, in which:
7807 unique CDR3
7 unique J



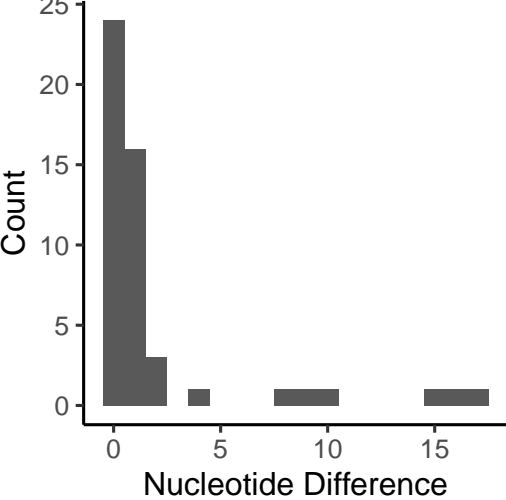
IGHV1-58*01_03

1113 sequences assigned
432 (38.8%) exact matches, in which:
387 unique CDR3
7 unique J



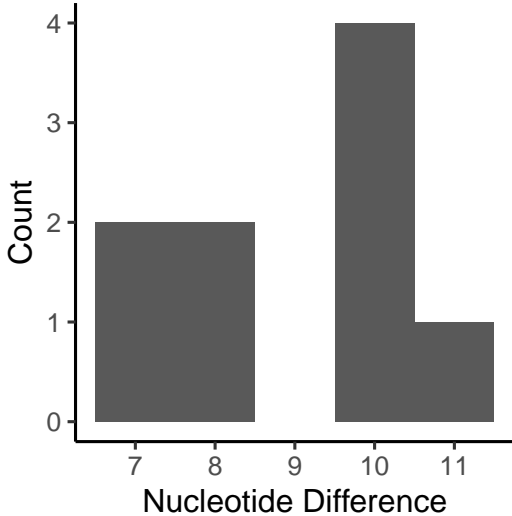
IGHV1-69-2*01

53 sequences assigned
24 (45.3%) exact matches, in which:
21 unique CDR3
6 unique J



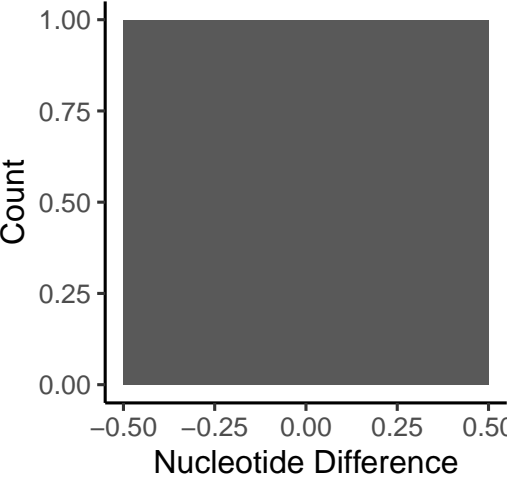
IGHV1-NL1*01

9 sequences assigned
No exact matches.



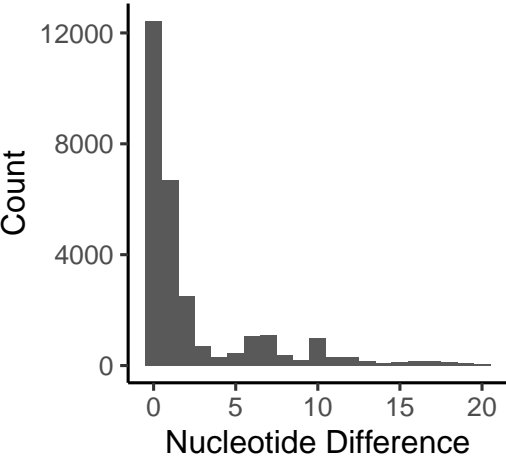
IGHV1-68*01

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



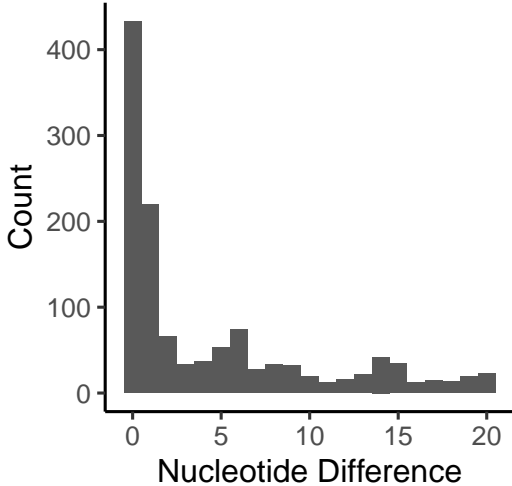
IGHV1-69*01_12_13

29180 sequences assigned
12438 (42.6%) exact matches, in which:
11406 unique CDR3
7 unique J



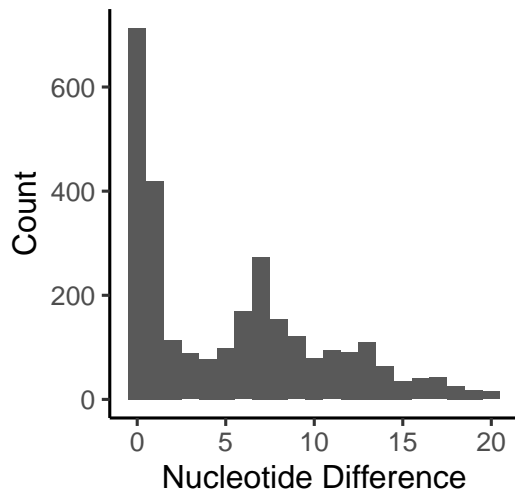
IGHV2-5*01

1320 sequences assigned
433 (32.8%) exact matches, in which:
409 unique CDR3
7 unique J



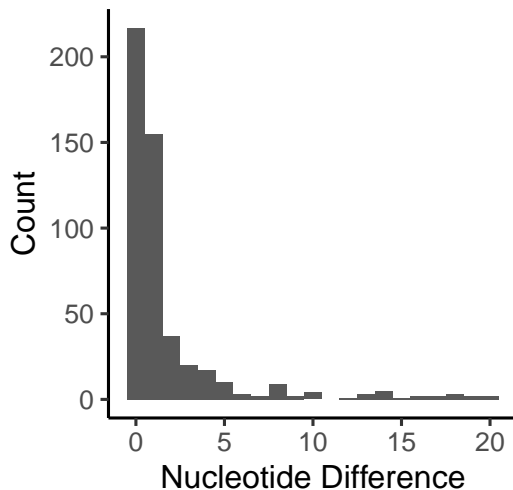
IGHV2-5*02

3382 sequences assigned
714 (21.1%) exact matches, in which:
662 unique CDR3
7 unique J



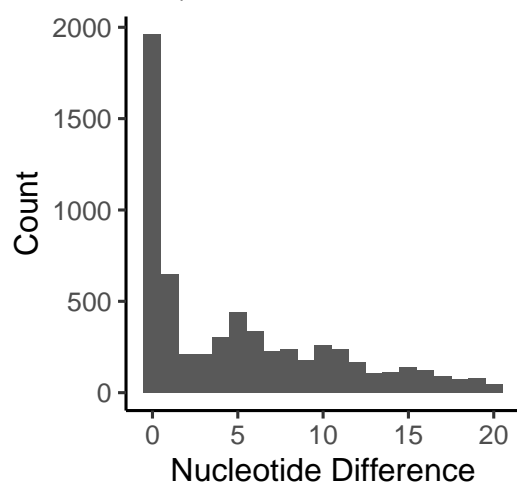
IGHV2-70*04

499 sequences assigned
217 (43.5%) exact matches, in which:
200 unique CDR3
6 unique J



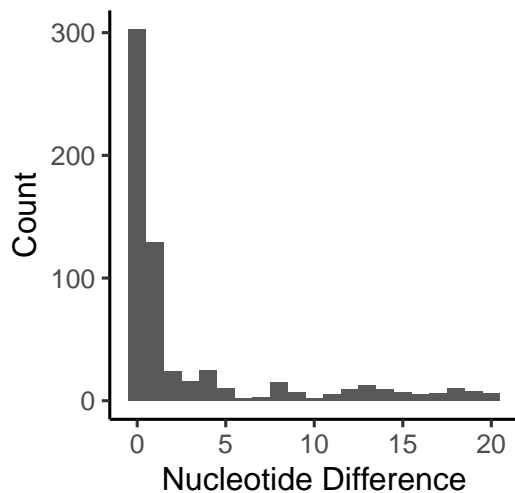
IGHV3-9*01

6530 sequences assigned
1961 (30%) exact matches, in which:
1346 unique CDR3
7 unique J



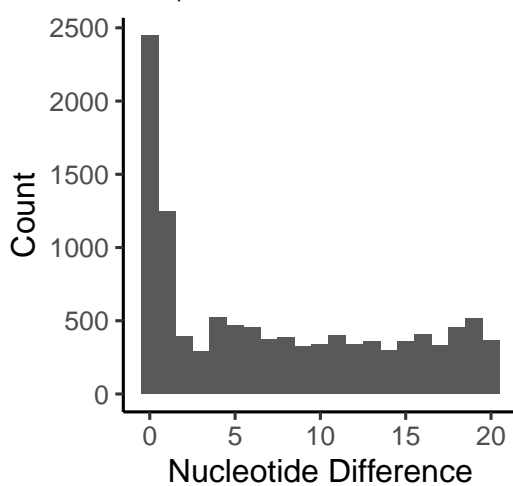
IGHV2-26*01

639 sequences assigned
303 (47.4%) exact matches, in which:
279 unique CDR3
7 unique J



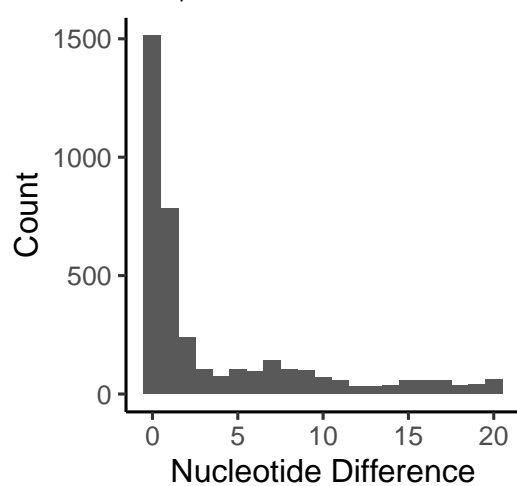
IGHV3-7*01

12344 sequences assigned
2446 (19.8%) exact matches, in which:
1878 unique CDR3
7 unique J



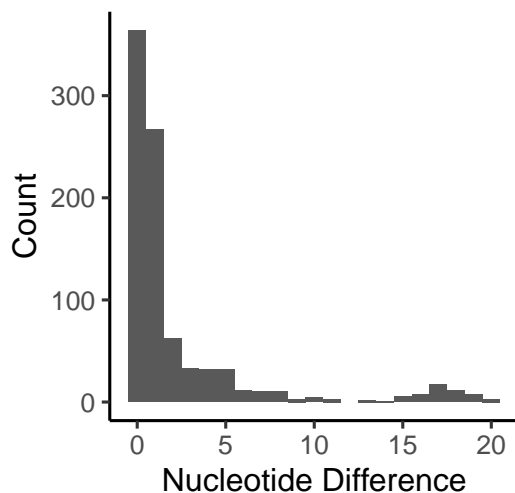
IGHV3-11*01

4272 sequences assigned
1513 (35.4%) exact matches, in which:
1124 unique CDR3
7 unique J



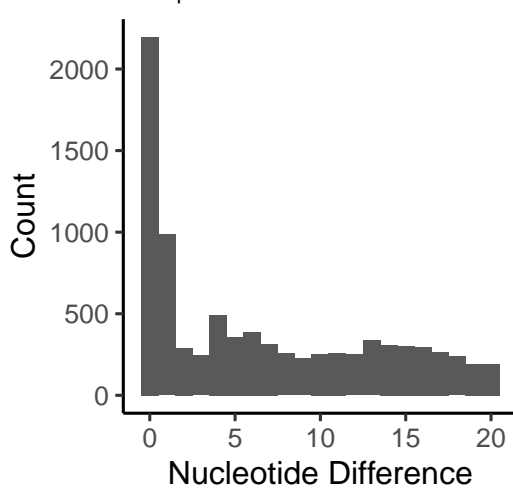
IGHV2-70*01

898 sequences assigned
364 (40.5%) exact matches, in which:
337 unique CDR3
6 unique J



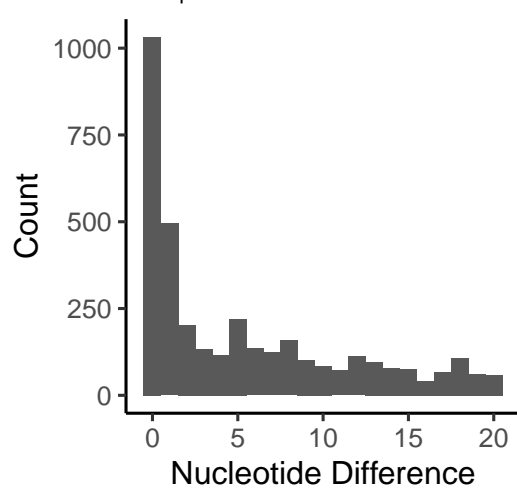
IGHV3-7*03

9599 sequences assigned
2196 (22.9%) exact matches, in which:
1575 unique CDR3
7 unique J



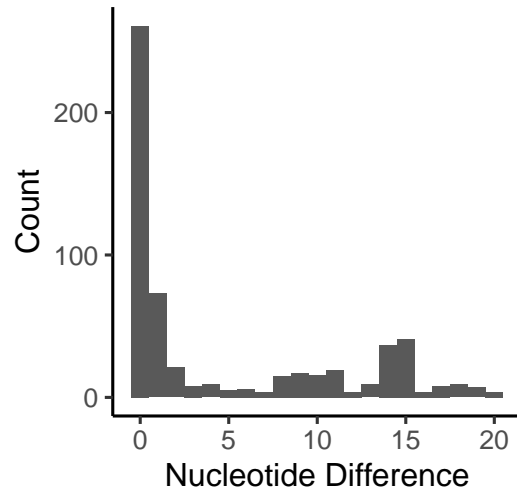
IGHV3-11*06

3936 sequences assigned
1032 (26.2%) exact matches, in which:
775 unique CDR3
7 unique J



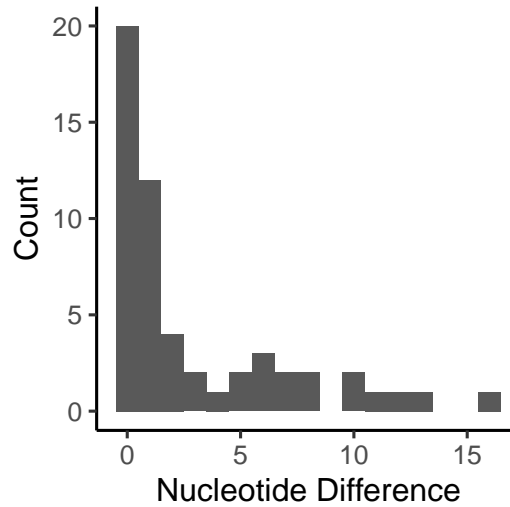
IGHV3-13*01

617 sequences assigned
261 (42.3%) exact matches, in which:
169 unique CDR3
6 unique J



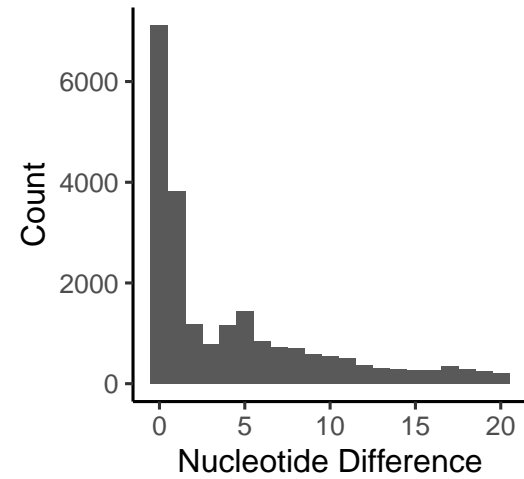
IGHV3-19*01

54 sequences assigned
20 (37%) exact matches, in which:
14 unique CDR3
4 unique J



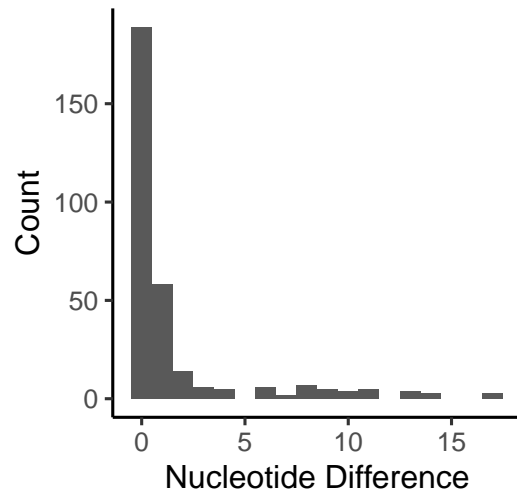
IGHV3-21*01_02

22933 sequences assigned
7115 (31%) exact matches, in which:
4959 unique CDR3
7 unique J



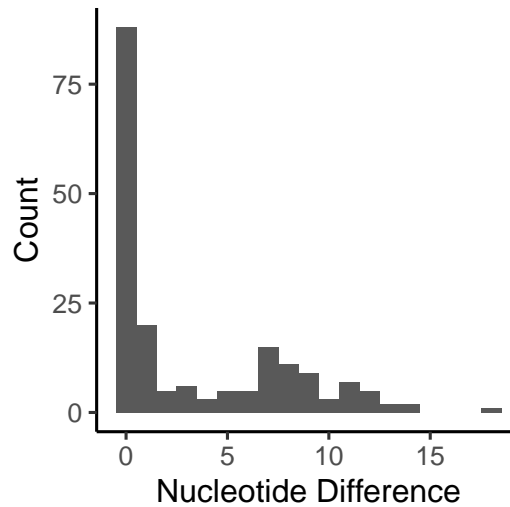
IGHV3-13*05

311 sequences assigned
189 (60.8%) exact matches, in which:
116 unique CDR3
6 unique J



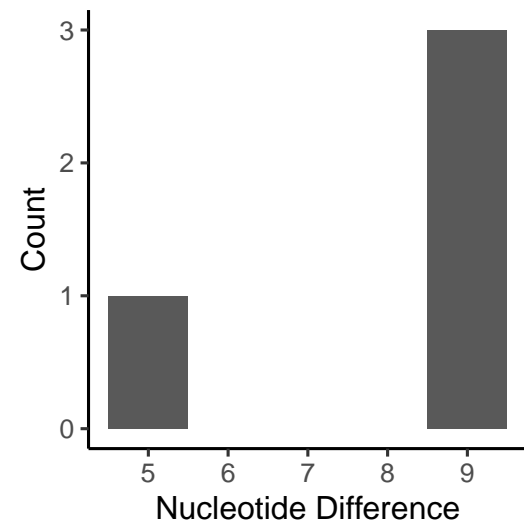
IGHV3-20*01_02

188 sequences assigned
88 (46.8%) exact matches, in which:
65 unique CDR3
5 unique J



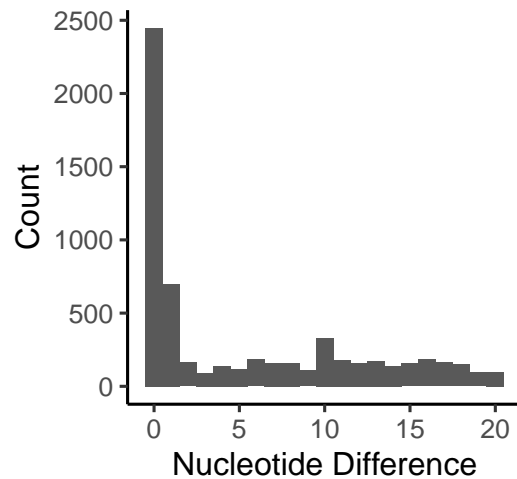
IGHV3-22*01_02

4 sequences assigned
No exact matches.



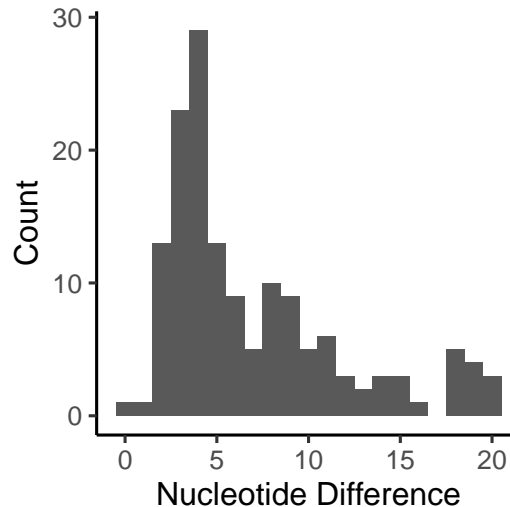
IGHV3-15*01_02

6906 sequences assigned
2447 (35.4%) exact matches, in which:
1783 unique CDR3
7 unique J



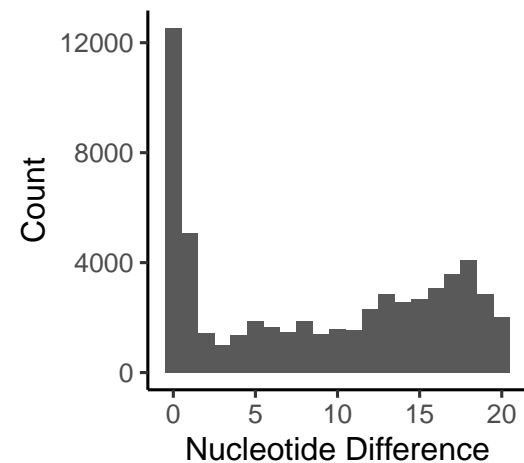
IGHV3-20*03_04

196 sequences assigned
1 (0.5%) exact matches, in which:
1 unique CDR3
1 unique J



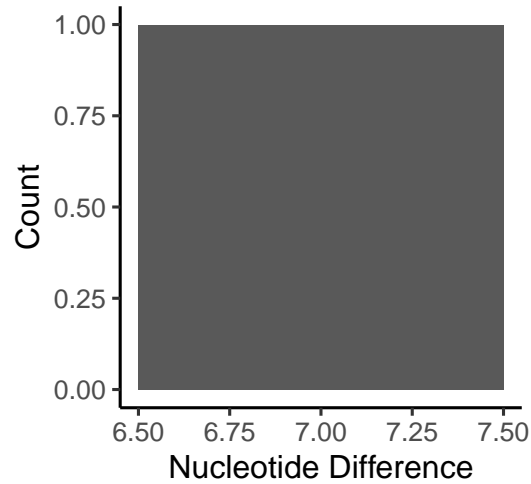
IGHV3-23*01_04

68437 sequences assigned
12543 (18.3%) exact matches, in which:
8104 unique CDR3
7 unique J



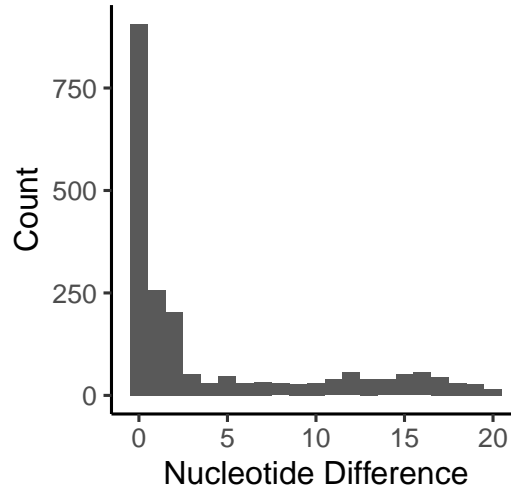
IGHV3-25*04

1 sequences assigned
No exact matches.



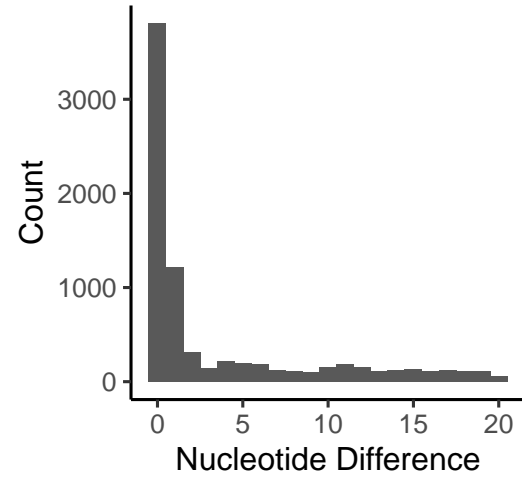
IGHV3-30*03

2173 sequences assigned
907 (41.7%) exact matches, in which:
840 unique CDR3
7 unique J



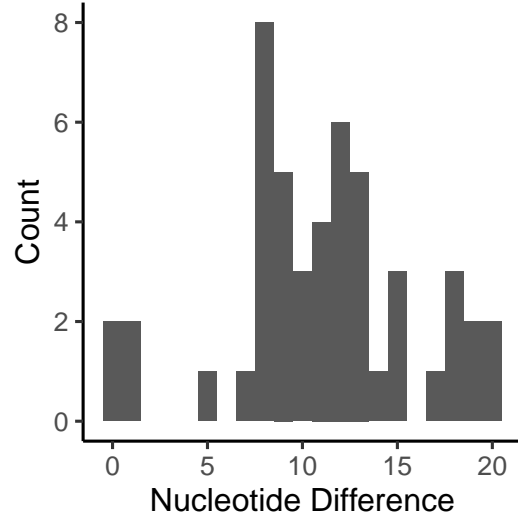
IGHV3-33*01

8135 sequences assigned
3806 (46.8%) exact matches, in which:
2866 unique CDR3
7 unique J



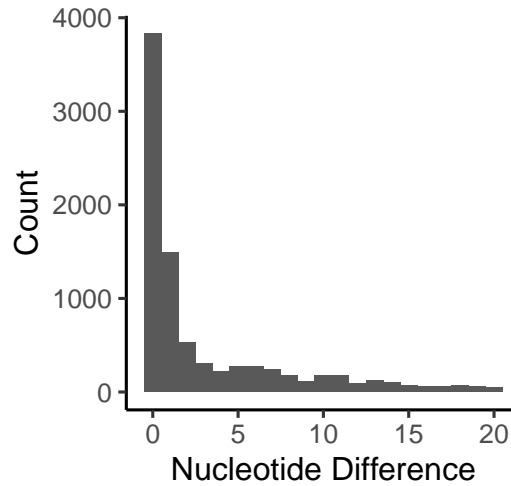
IGHV3-30-3*01

187 sequences assigned
2 (1.1%) exact matches, in which:
2 unique CDR3
1 unique J



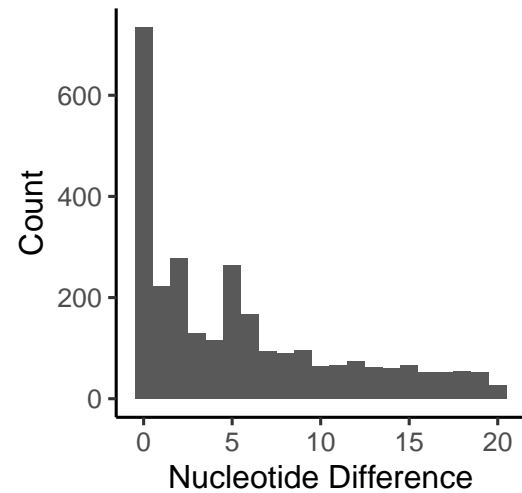
IGHV3-30*04

9114 sequences assigned
3829 (42%) exact matches, in which:
2840 unique CDR3
7 unique J



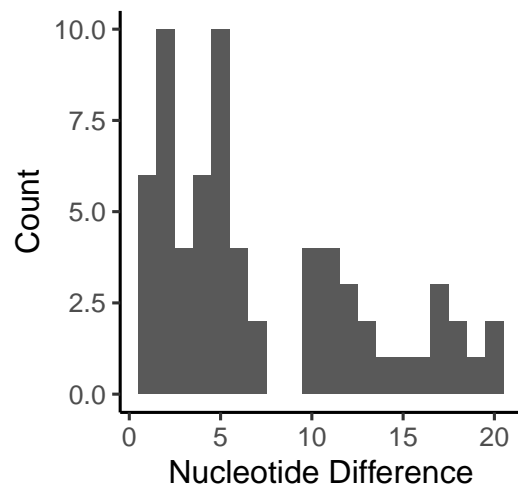
IGHV3-33*08

3004 sequences assigned
735 (24.5%) exact matches, in which:
660 unique CDR3
7 unique J



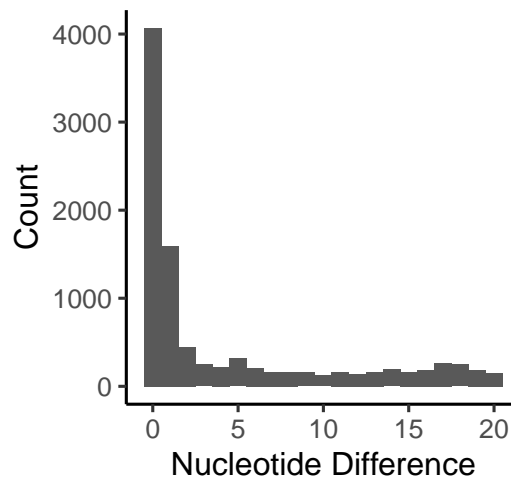
IGHV3-30-3*02

98 sequences assigned
No exact matches.



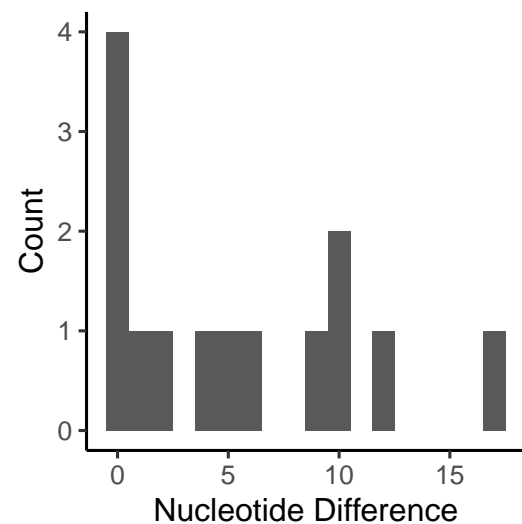
IGHV3-30*18

10579 sequences assigned
4068 (38.5%) exact matches, in which:
2819 unique CDR3
7 unique J



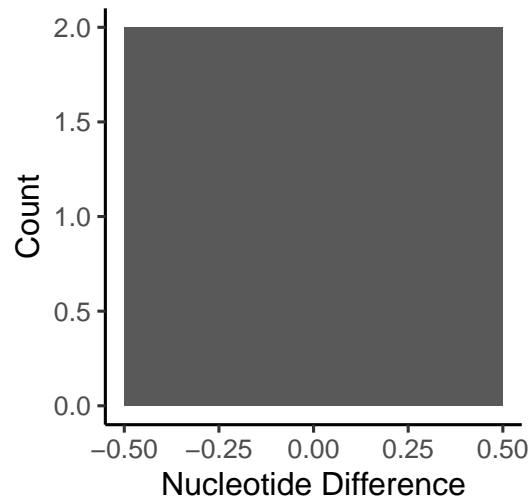
IGHV3-35*01

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



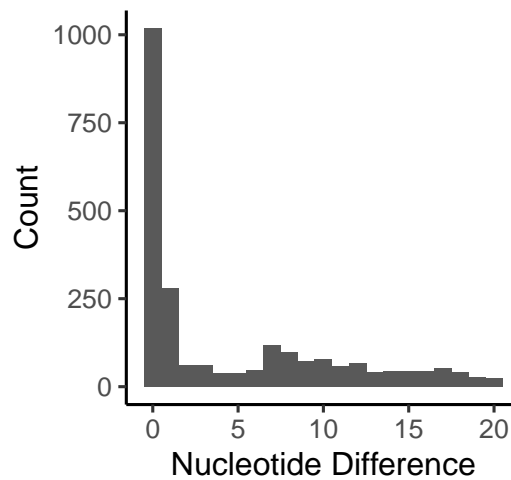
IGHV3-43*02

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



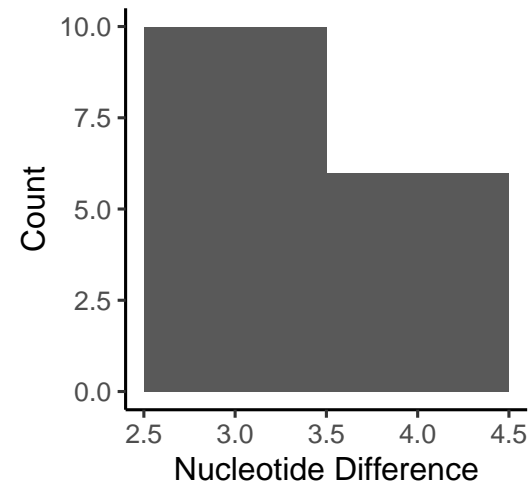
IGHV3-49*04

2592 sequences assigned
1018 (39.3%) exact matches, in which:
756 unique CDR3
7 unique J



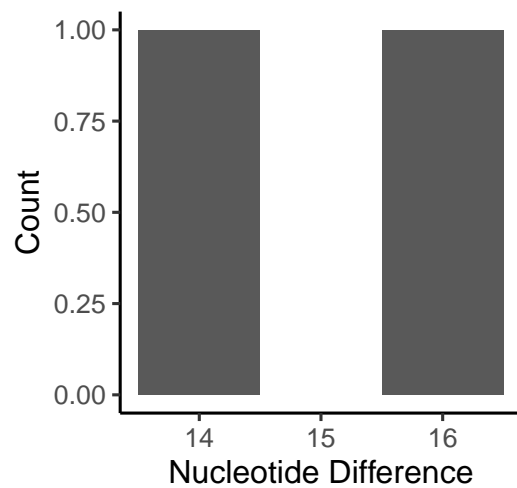
IGHV3-62*03

16 sequences assigned
No exact matches.



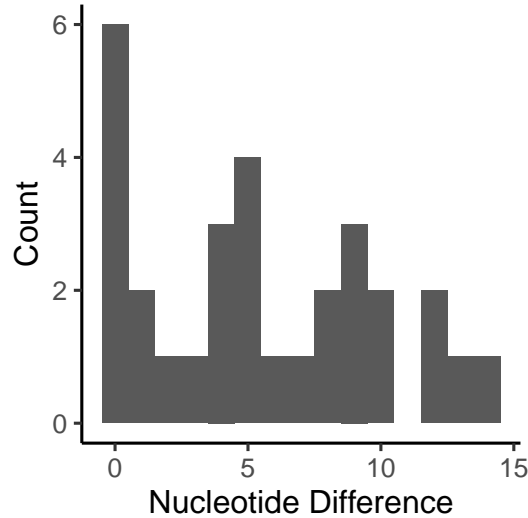
IGHV3-47*02

2 sequences assigned
No exact matches.



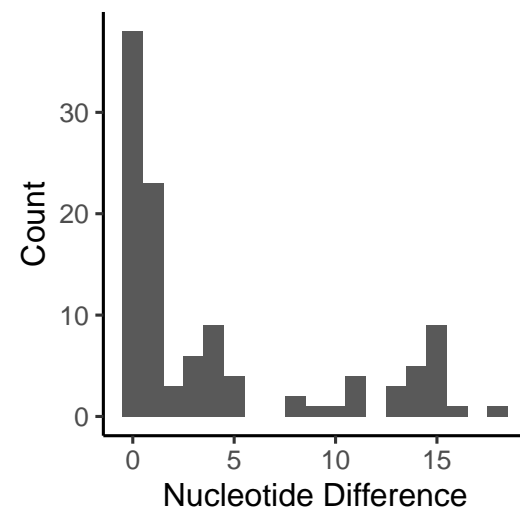
IGHV3-52*01_03

30 sequences assigned
6 (20%) exact matches, in which:
4 unique CDR3
2 unique J



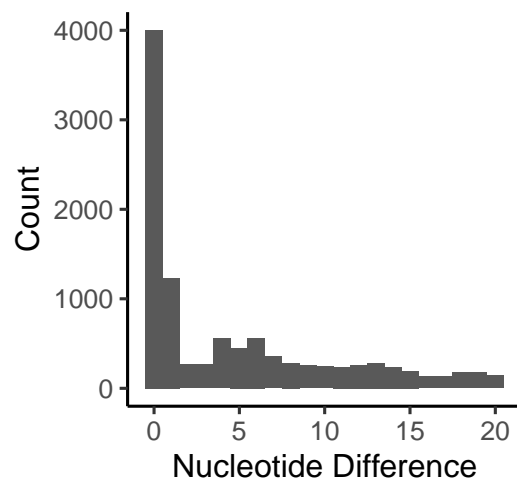
IGHV3-64*02_07

117 sequences assigned
38 (32.5%) exact matches, in which:
29 unique CDR3
5 unique J



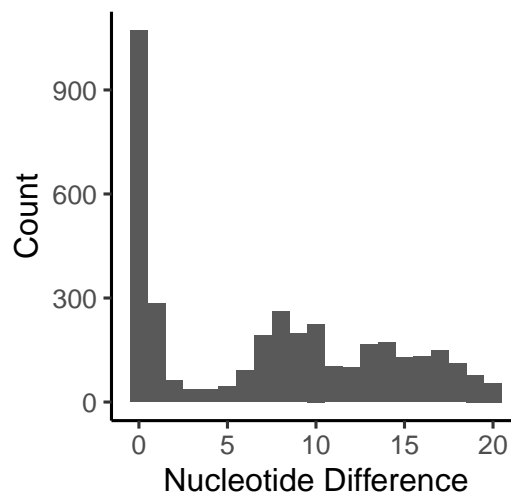
IGHV3-48*03

11096 sequences assigned
4003 (36.1%) exact matches, in which:
2812 unique CDR3
7 unique J



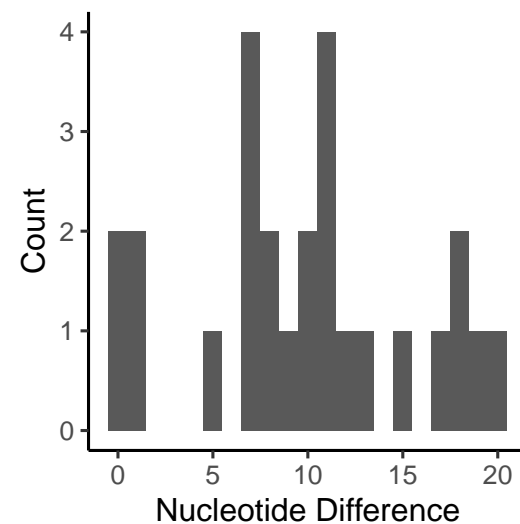
IGHV3-53*01_02

4118 sequences assigned
1072 (26%) exact matches, in which:
784 unique CDR3
7 unique J



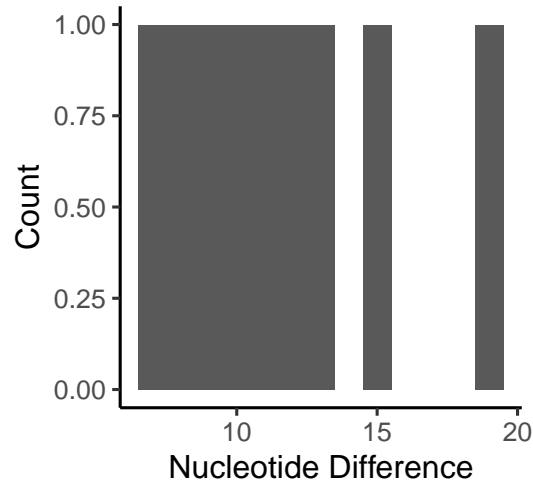
IGHV3-66*01

32 sequences assigned
2 (6.2%) exact matches, in which:
1 unique CDR3
1 unique J



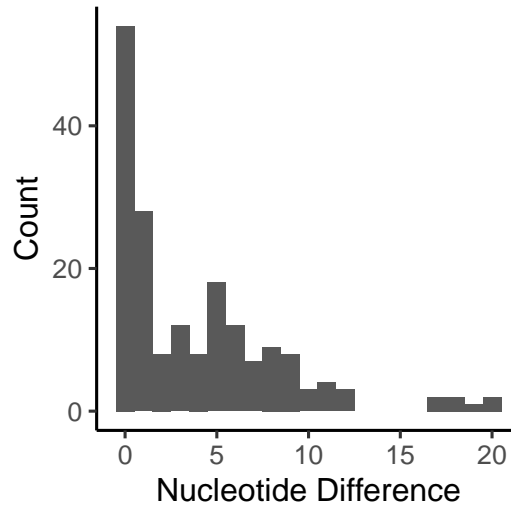
IGHV3-66*02

13 sequences assigned
No exact matches.



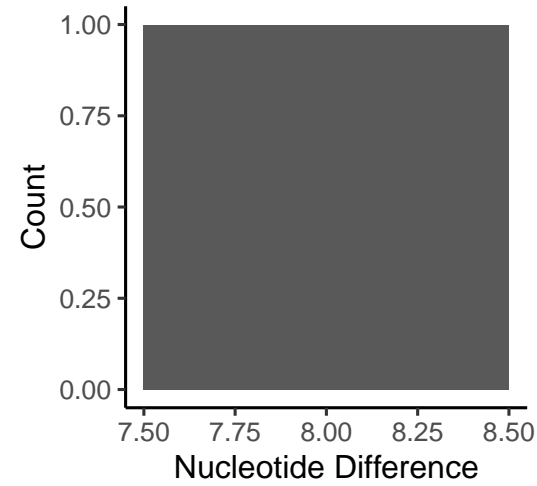
IGHV3-69-1*01

198 sequences assigned
54 (27.3%) exact matches, in which:
46 unique CDR3
7 unique J



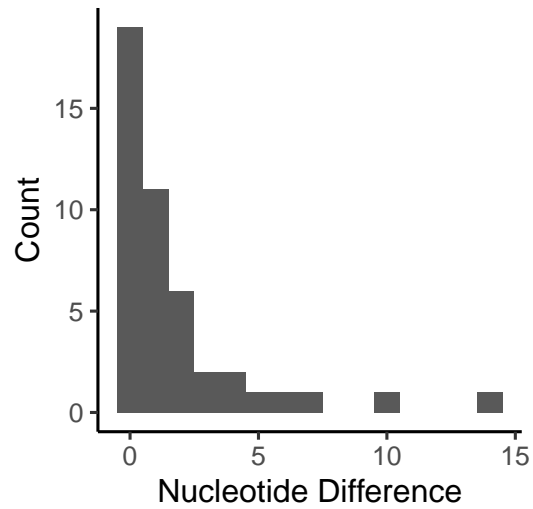
IGHV3-71*01_04

3 sequences assigned
No exact matches.



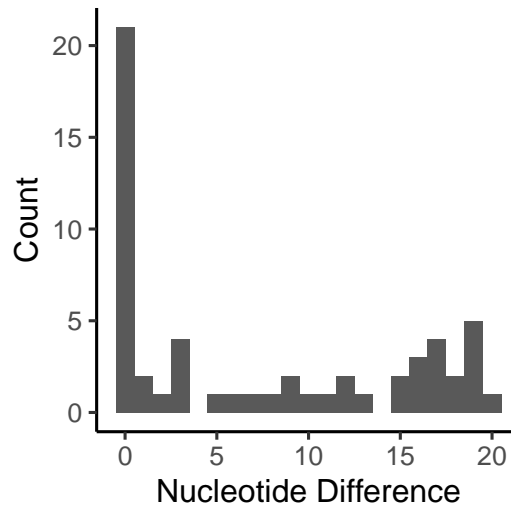
IGHV3-66*03

45 sequences assigned
19 (42.2%) exact matches, in which:
19 unique CDR3
5 unique J



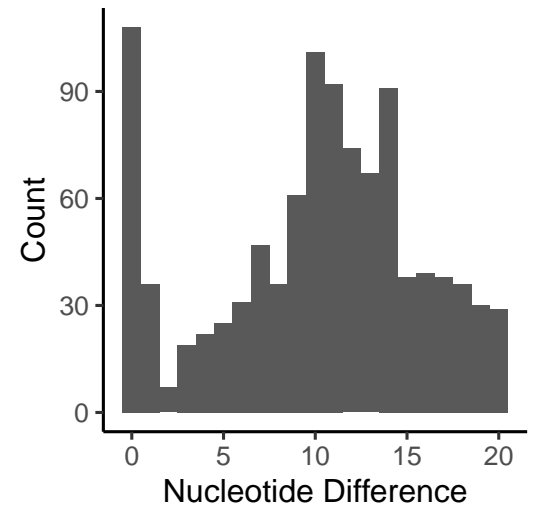
IGHV3-69-1*02

67 sequences assigned
21 (31.3%) exact matches, in which:
21 unique CDR3
4 unique J



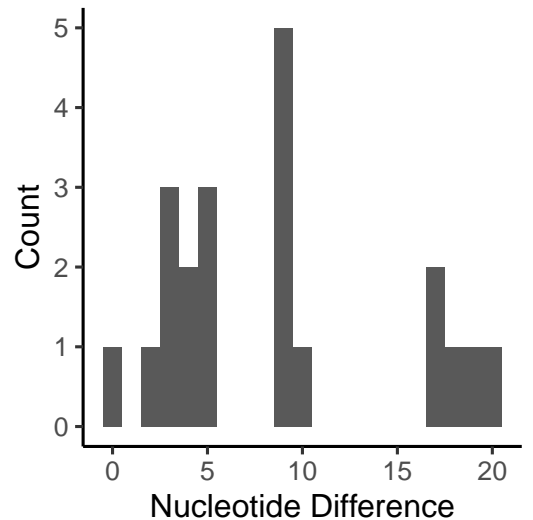
IGHV3-72*01

1370 sequences assigned
108 (7.9%) exact matches, in which:
82 unique CDR3
7 unique J



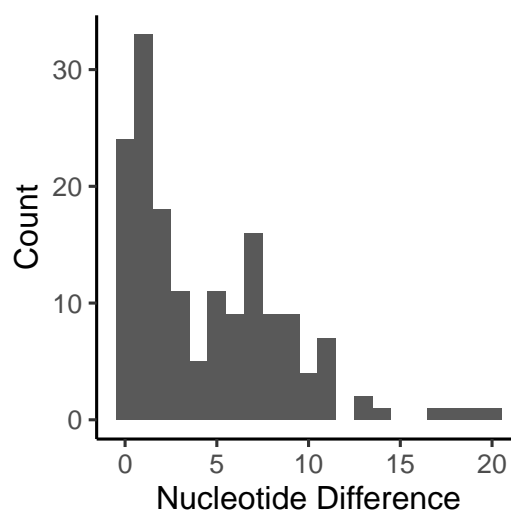
IGHV3-66*04

26 sequences assigned
1 (3.8%) exact matches, in which:
1 unique CDR3
1 unique J



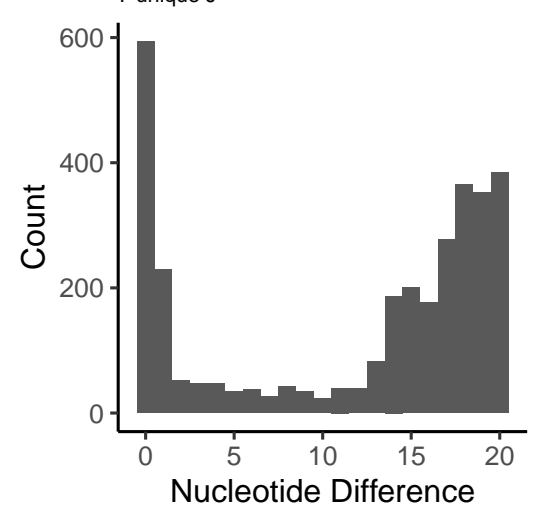
IGHV3-69-1*01_G80A_G

181 sequences assigned
24 (13.3%) exact matches, in which:
18 unique CDR3
6 unique J



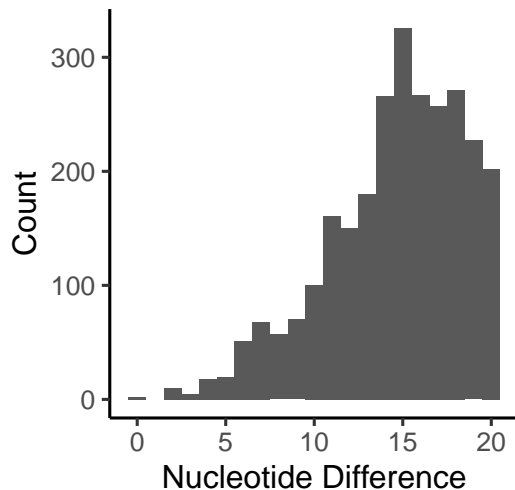
IGHV3-73*01_02

4278 sequences assigned
594 (13.9%) exact matches, in which:
427 unique CDR3
7 unique J



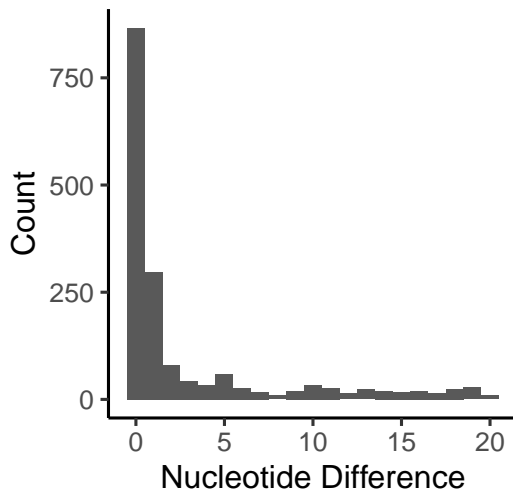
IGHV3-74*03

4085 sequences assigned
2 (0%) exact matches, in which:
2 unique CDR3
1 unique J



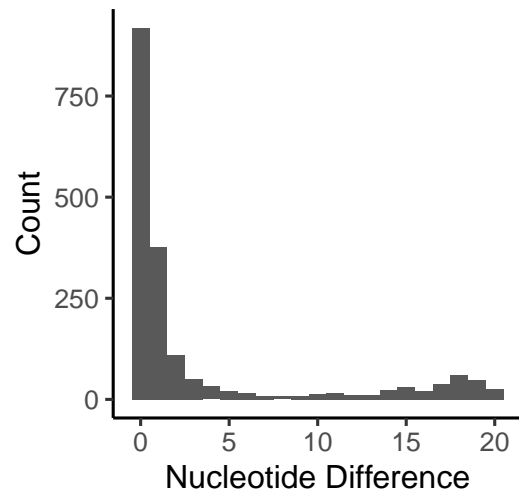
IGHV3-64D*06

1806 sequences assigned
867 (48%) exact matches, in which:
511 unique CDR3
7 unique J



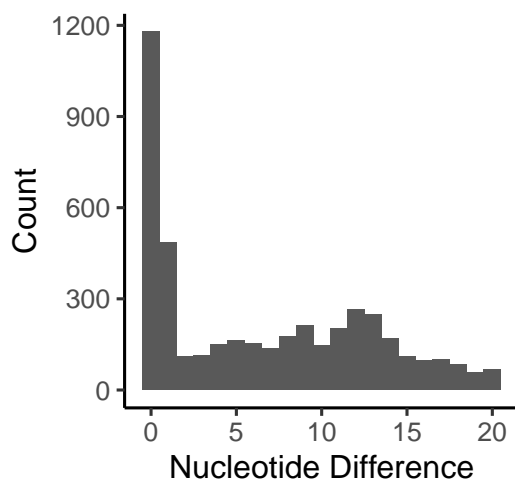
IGHV4-4*02_03

2145 sequences assigned
919 (42.8%) exact matches, in which:
860 unique CDR3
7 unique J



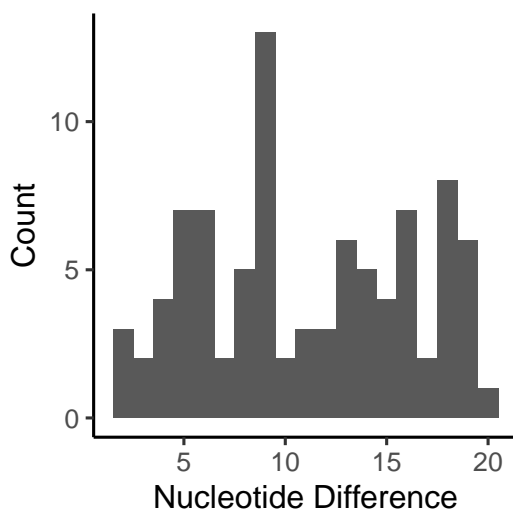
IGHV3-74*01_02

4827 sequences assigned
1179 (24.4%) exact matches, in which:
744 unique CDR3
7 unique J



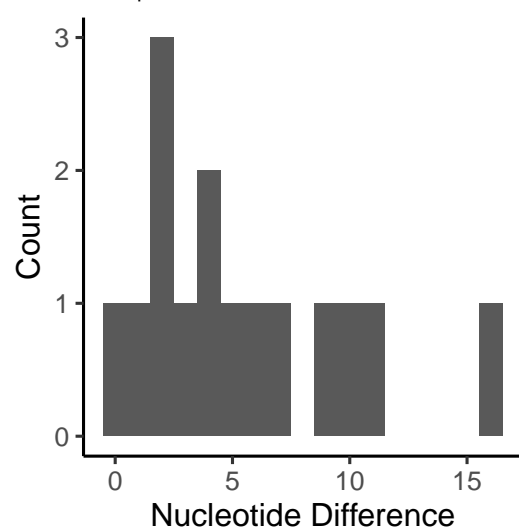
IGHV3-NL1*01

109 sequences assigned
No exact matches.



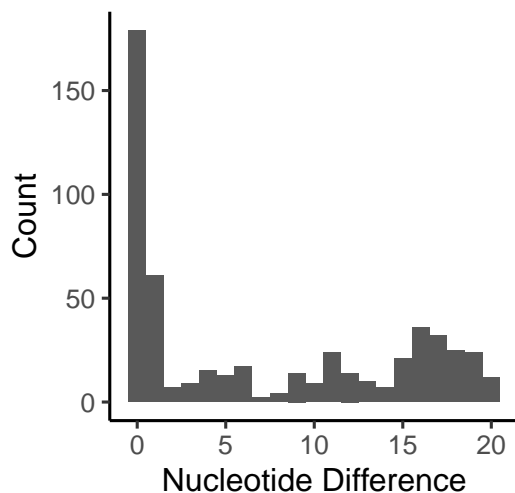
IGHV4-28*03

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



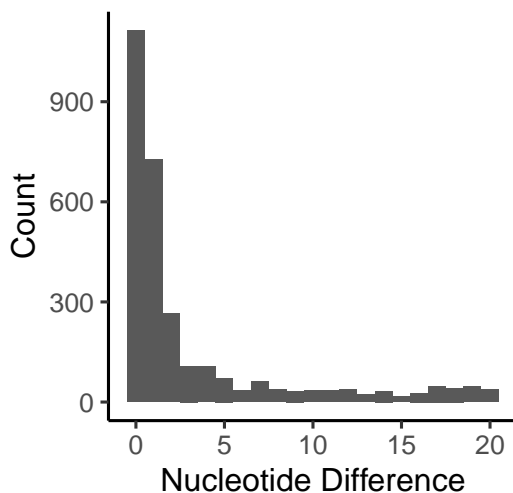
IGHV3-43D*04

561 sequences assigned
179 (31.9%) exact matches, in which:
122 unique CDR3
7 unique J



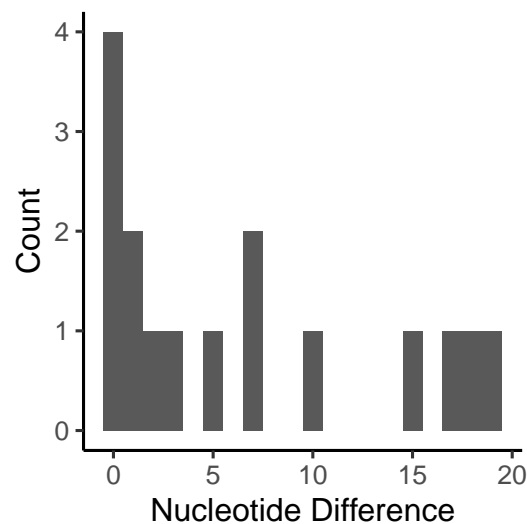
IGHV4-4*07

3101 sequences assigned
1114 (35.9%) exact matches, in which:
1014 unique CDR3
7 unique J



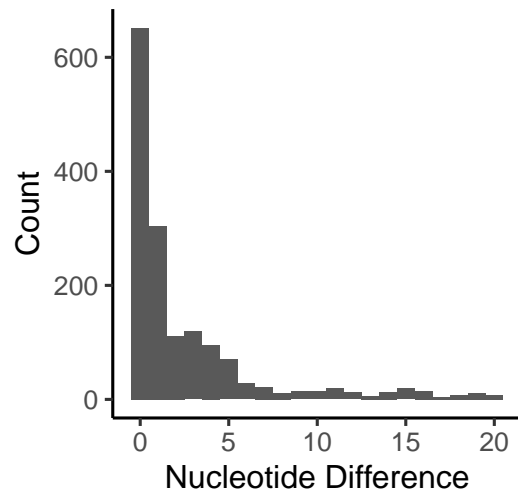
IGHV4-28*01_07

17 sequences assigned
4 (23.5%) exact matches, in which:
3 unique CDR3
3 unique J



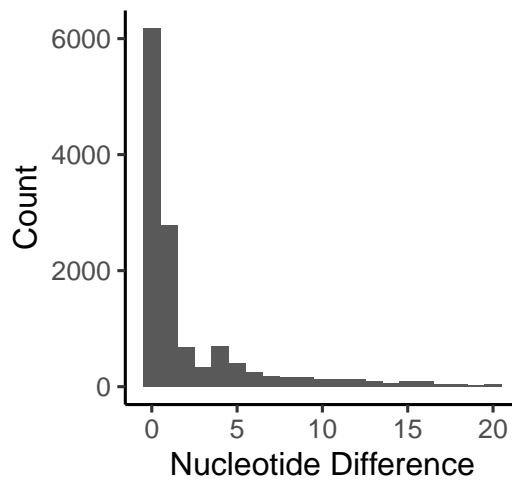
IGHV4-30-4*01

1687 sequences assigned
652 (38.6%) exact matches, in which:
602 unique CDR3
7 unique J



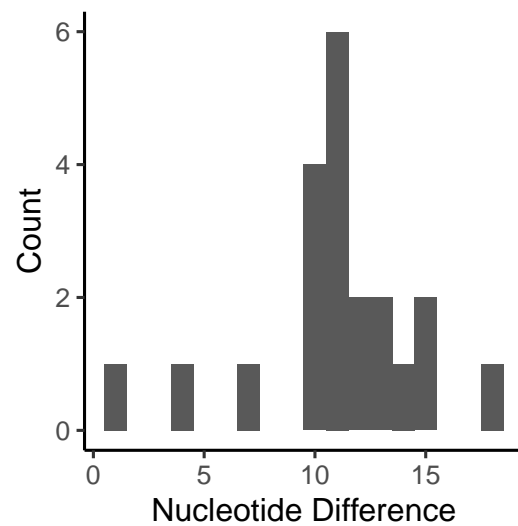
IGHV4-34*01_02

13036 sequences assigned
6176 (47.4%) exact matches, in which:
5511 unique CDR3
7 unique J



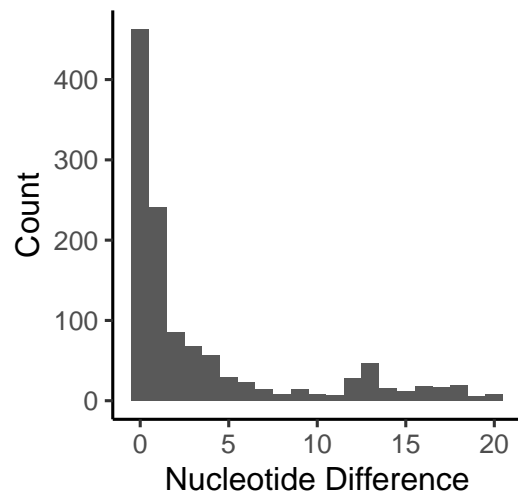
IGHV4-39*07

25 sequences assigned
No exact matches.



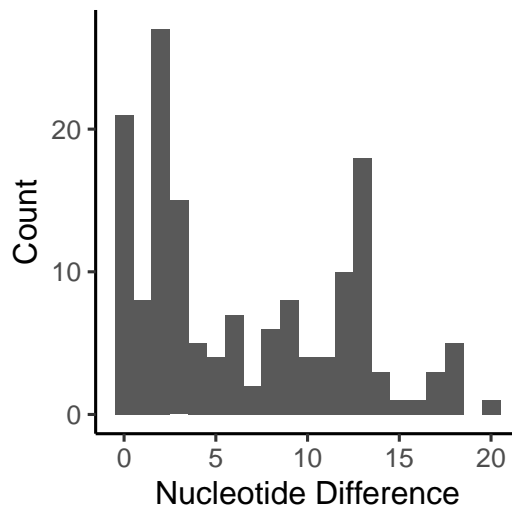
IGHV4-30-2*01

1269 sequences assigned
463 (36.5%) exact matches, in which:
404 unique CDR3
7 unique J



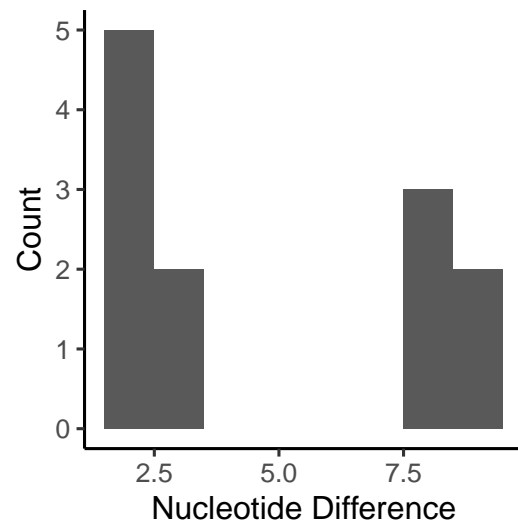
IGHV4-38-2*02

184 sequences assigned
21 (11.4%) exact matches, in which:
21 unique CDR3
5 unique J



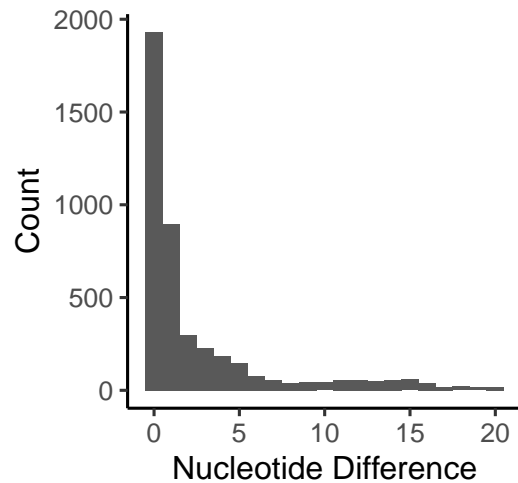
IGHV4-55*09

12 sequences assigned
No exact matches.



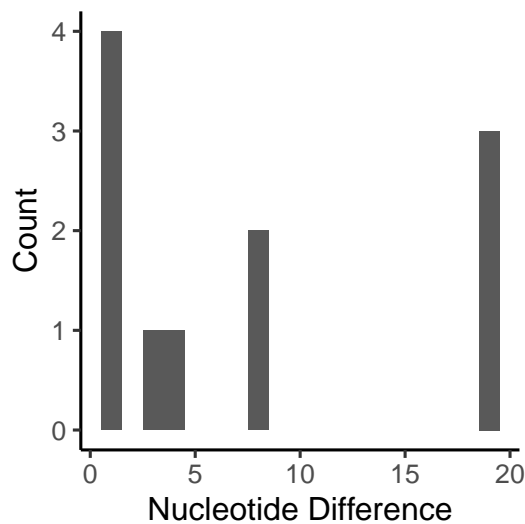
IGHV4-31*02

4614 sequences assigned
1931 (41.9%) exact matches, in which:
1798 unique CDR3
7 unique J



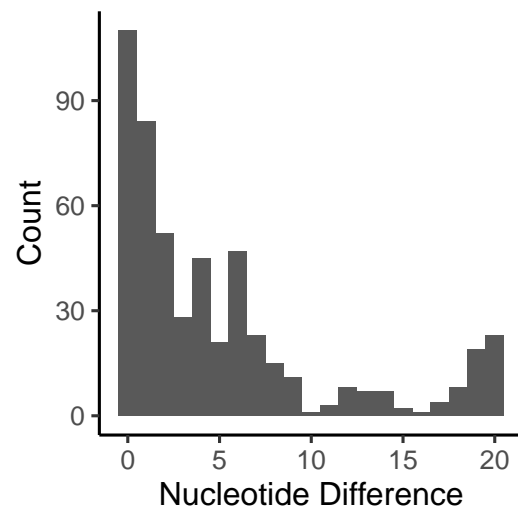
IGHV4-39*02

13 sequences assigned
No exact matches.

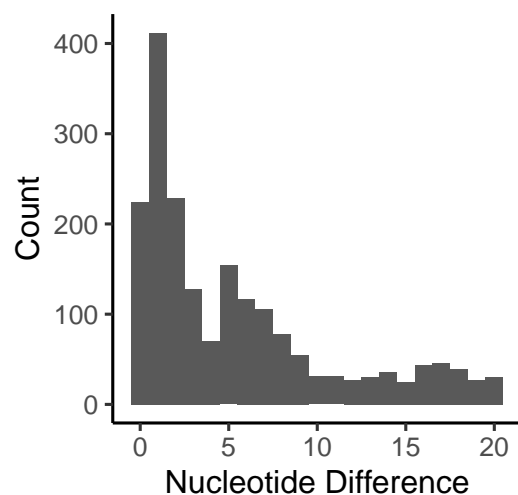


IGHV4-59*08

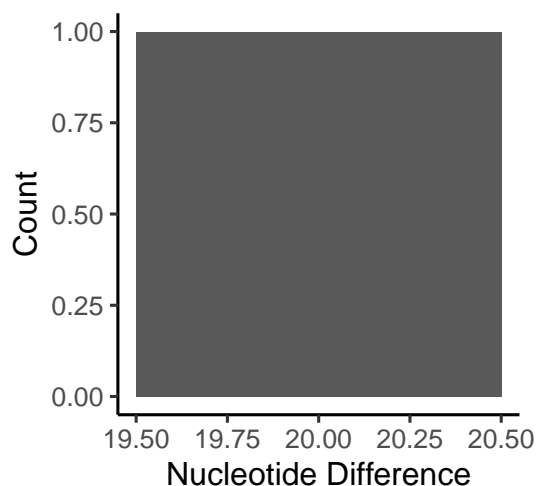
545 sequences assigned
110 (20.2%) exact matches, in which:
108 unique CDR3
7 unique J



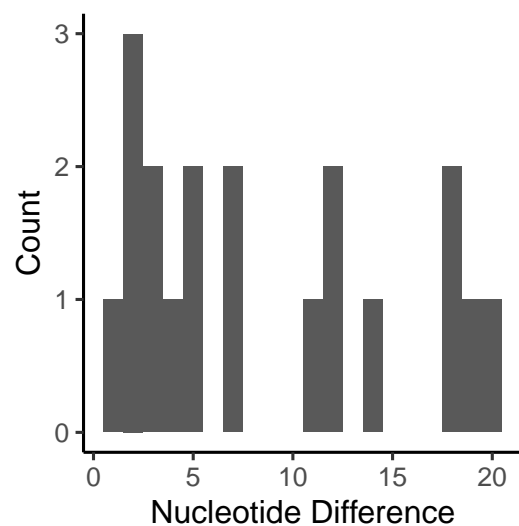
2137 sequences assigned
224 (10.5%) exact matches, in which:
224 unique CDR3
7 unique J



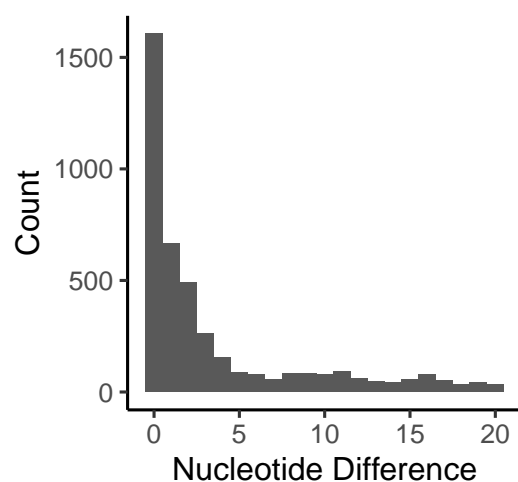
3 sequences assigned
No exact matches.



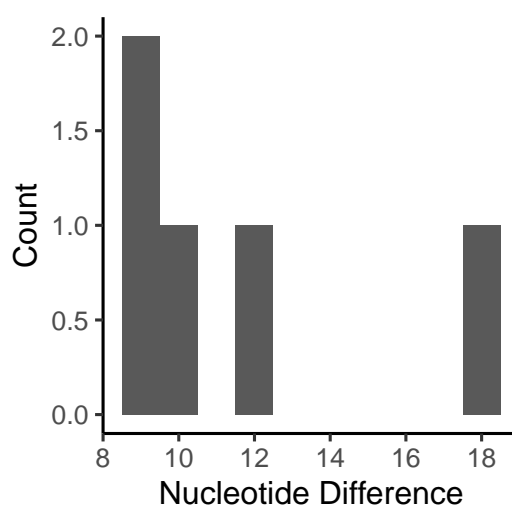
26 sequences assigned
No exact matches.



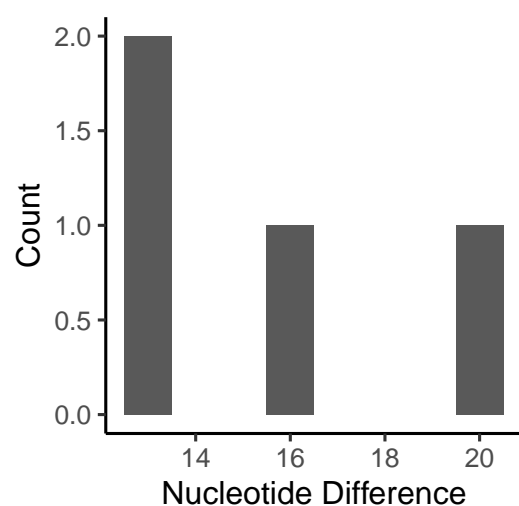
4371 sequences assigned
1606 (36.7%) exact matches, in which:
1497 unique CDR3
7 unique J



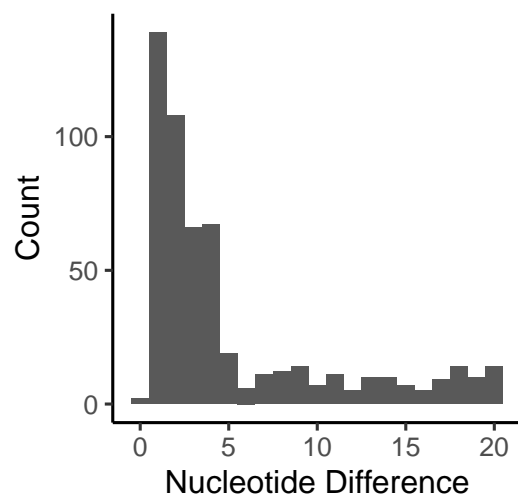
7 sequences assigned
No exact matches.



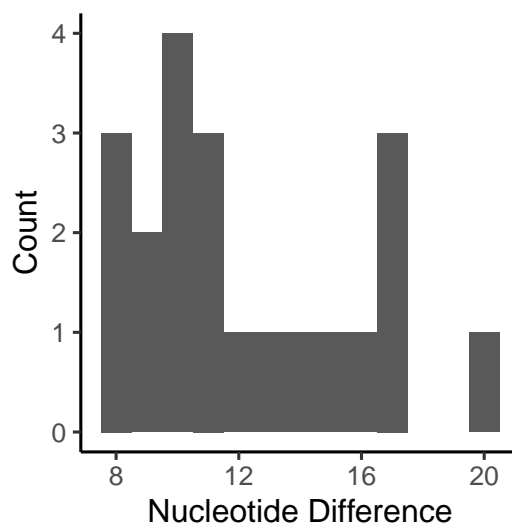
29 sequences assigned
No exact matches.



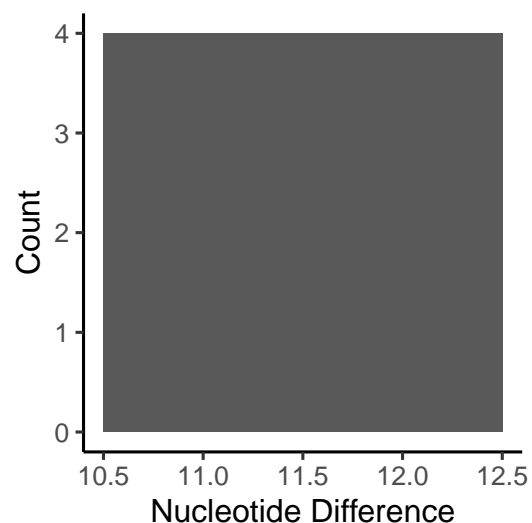
631 sequences assigned
2 (0.3%) exact matches, in which:
2 unique CDR3
2 unique J



28 sequences assigned
No exact matches.

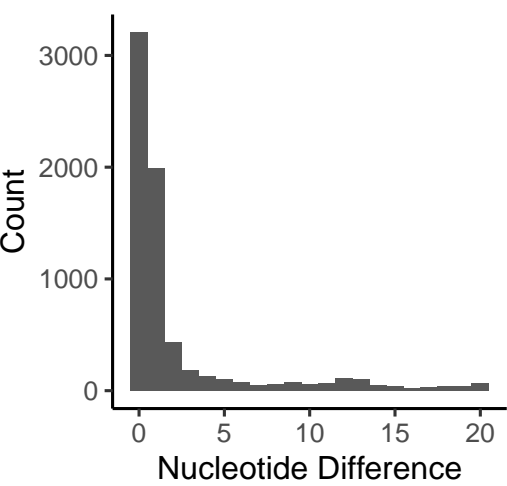


8 sequences assigned
No exact matches.



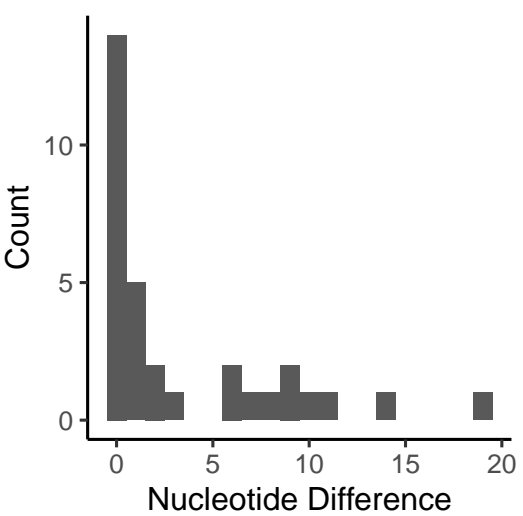
IGHV5-10-1*01_03

7186 sequences assigned
3206 (44.6%) exact matches, in which:
2387 unique CDR3
7 unique J



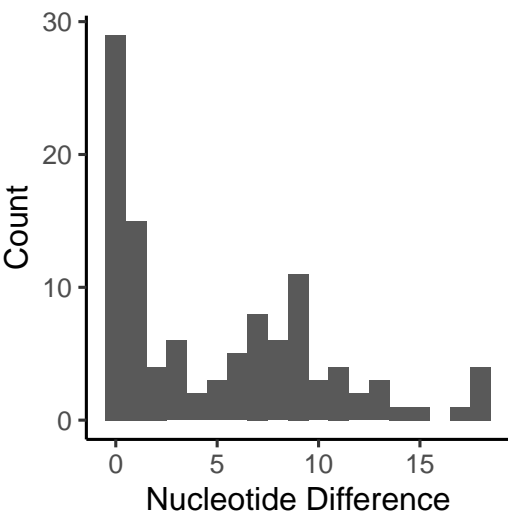
IGHV5-51*07

33 sequences assigned
14 (42.4%) exact matches, in which:
14 unique CDR3
5 unique J



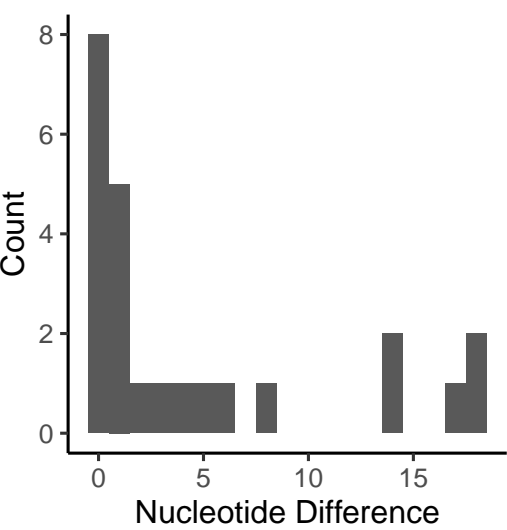
IGHV6-1*01_02_A315G

113 sequences assigned
29 (25.7%) exact matches, in which:
29 unique CDR3
6 unique J



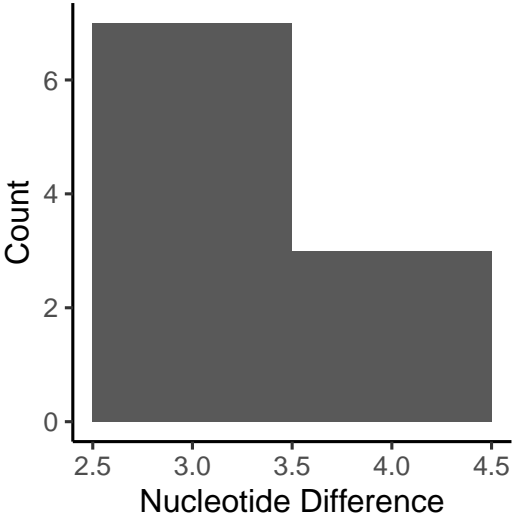
IGHV5-51*04

25 sequences assigned
8 (32%) exact matches, in which:
8 unique CDR3
5 unique J



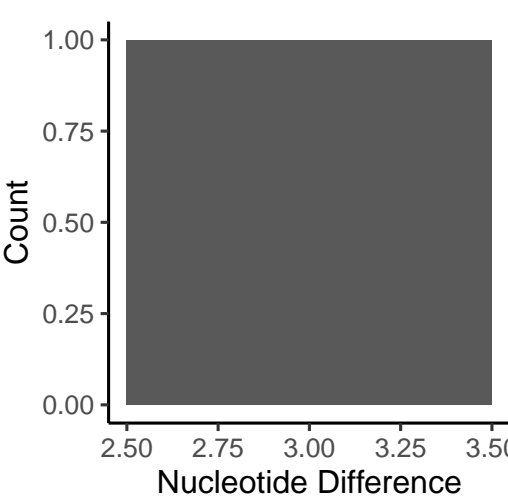
IGHV5-78*01

10 sequences assigned
No exact matches.



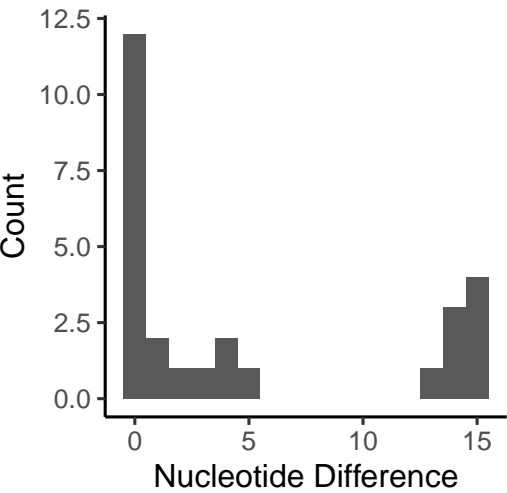
IGHV3/OR16-8*01

1 sequences assigned
No exact matches.



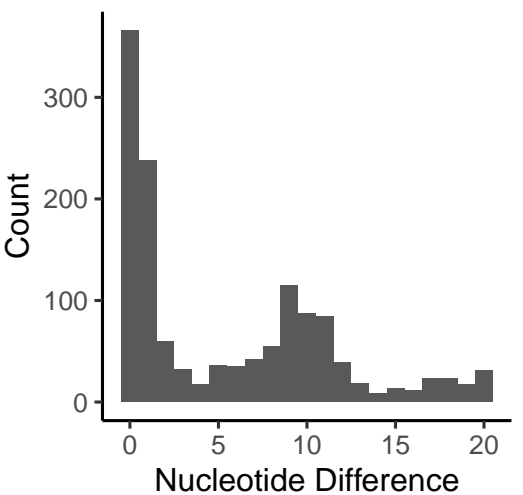
IGHV5-51*06

28 sequences assigned
12 (42.9%) exact matches, in which:
12 unique CDR3
3 unique J



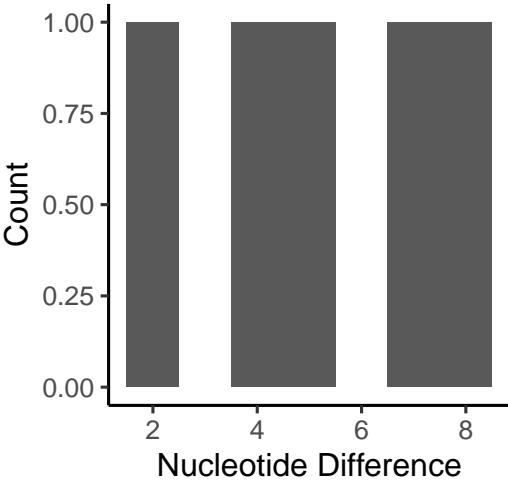
IGHV6-1*01_02

1466 sequences assigned
366 (25%) exact matches, in which:
332 unique CDR3
6 unique J



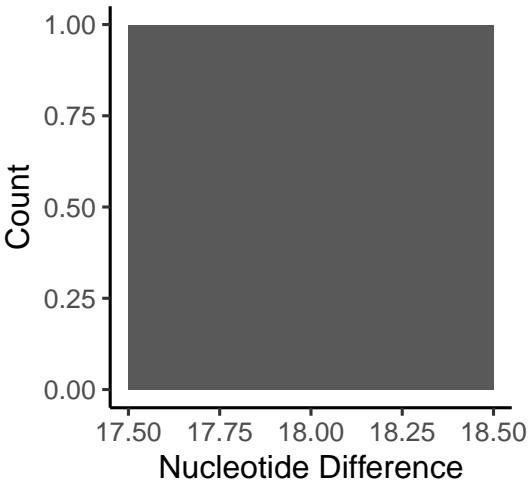
IGHV3/OR16-9*01

5 sequences assigned
No exact matches.



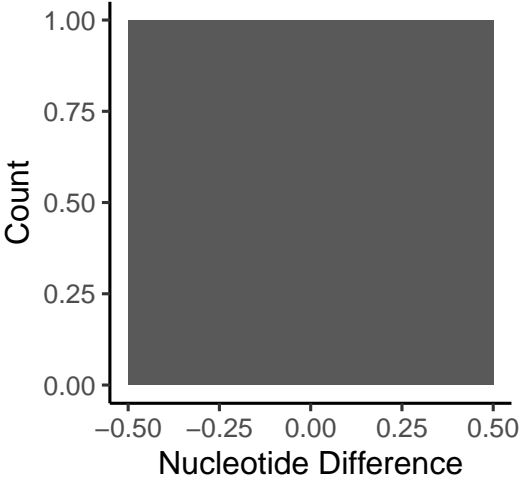
IGHV3/OR16-13*01

2 sequences assigned
No exact matches.



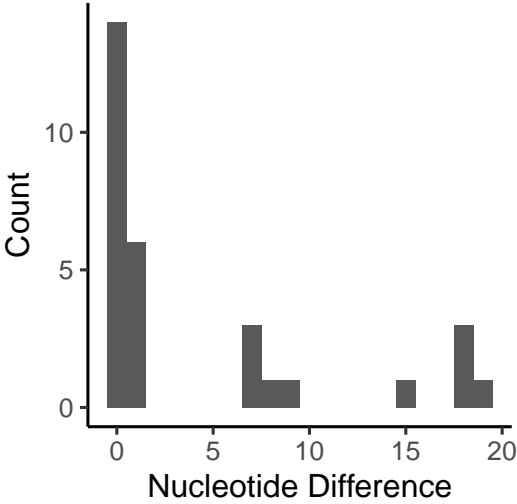
IGHV7-81*01

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



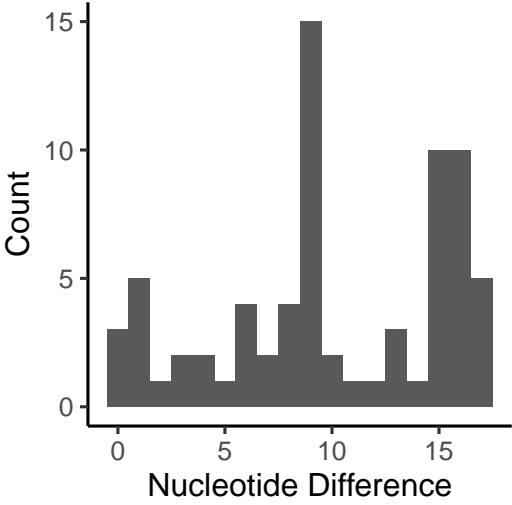
IGHV7-4-1*01

33 sequences assigned
14 (42.4%) exact matches, in which:
14 unique CDR3
6 unique J

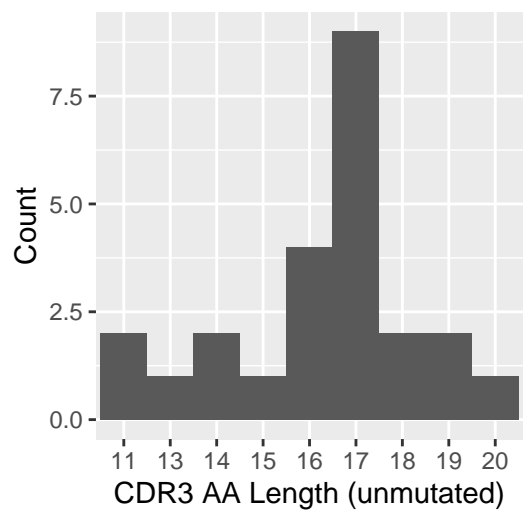


IGHV7-4-1*02

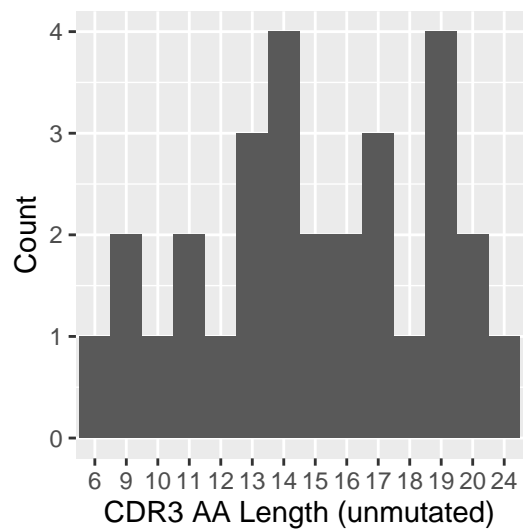
94 sequences assigned
3 (3.2%) exact matches, in which:
2 unique CDR3
1 unique J



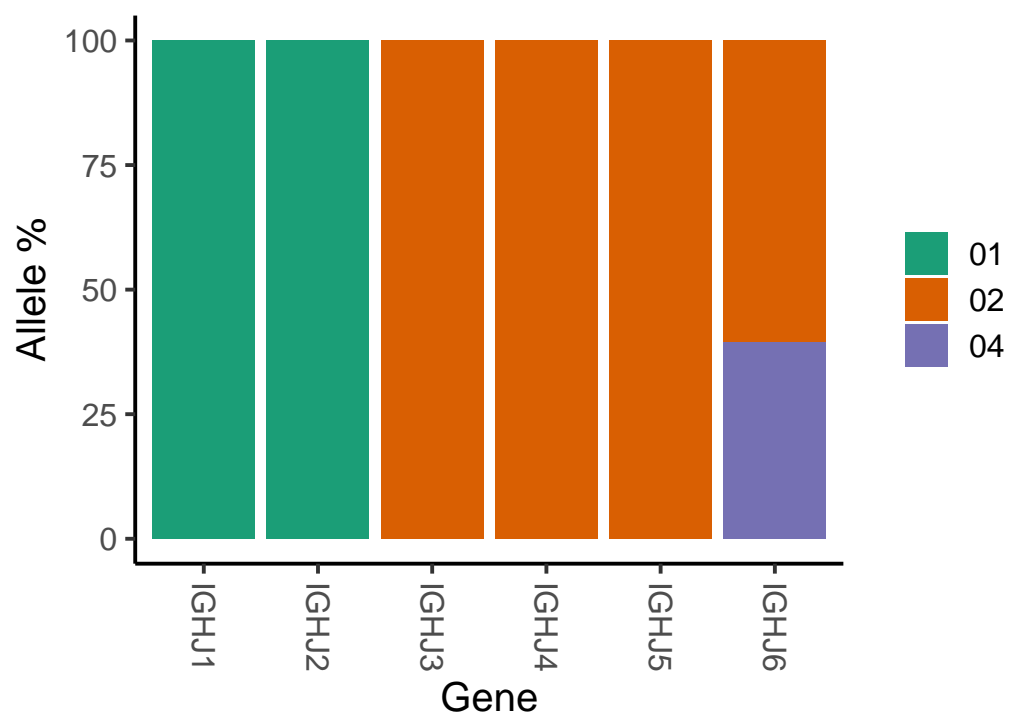
IGHV3-69-1*01_G80A_G106A_A107C_C108T_C111T_T112A_A113C_C164G_G188C_C192G_



IGHV6-1*01_02_A315G



Allele Usage



Sequence Count by IGHJ6 allele usage

