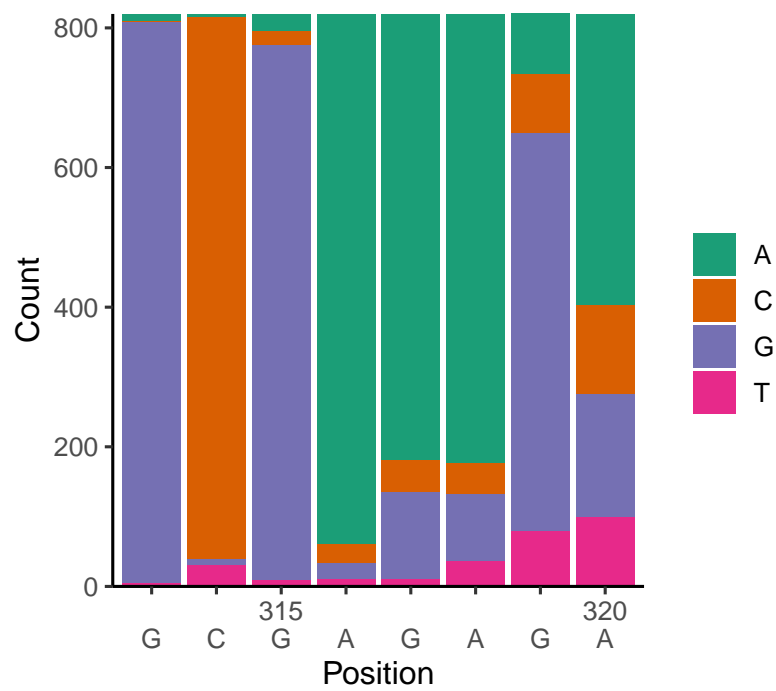
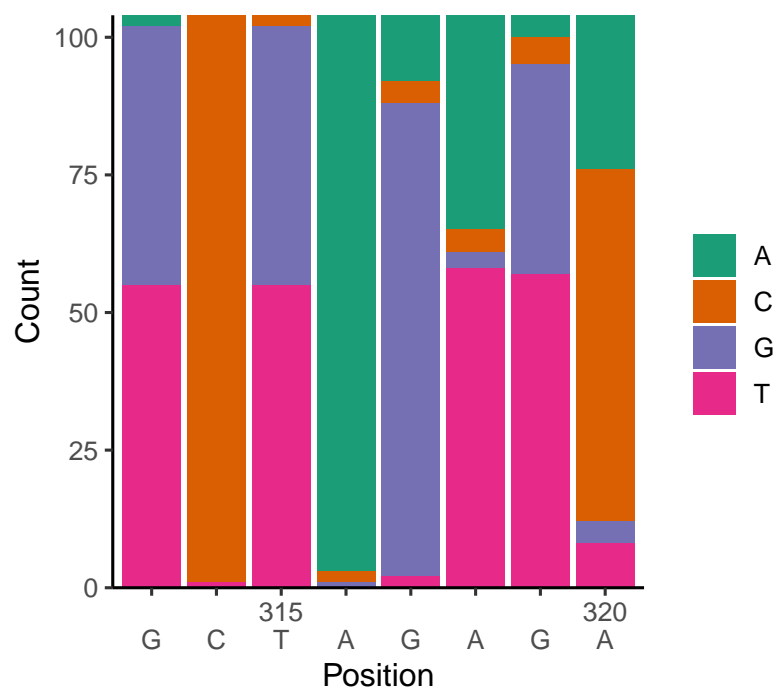


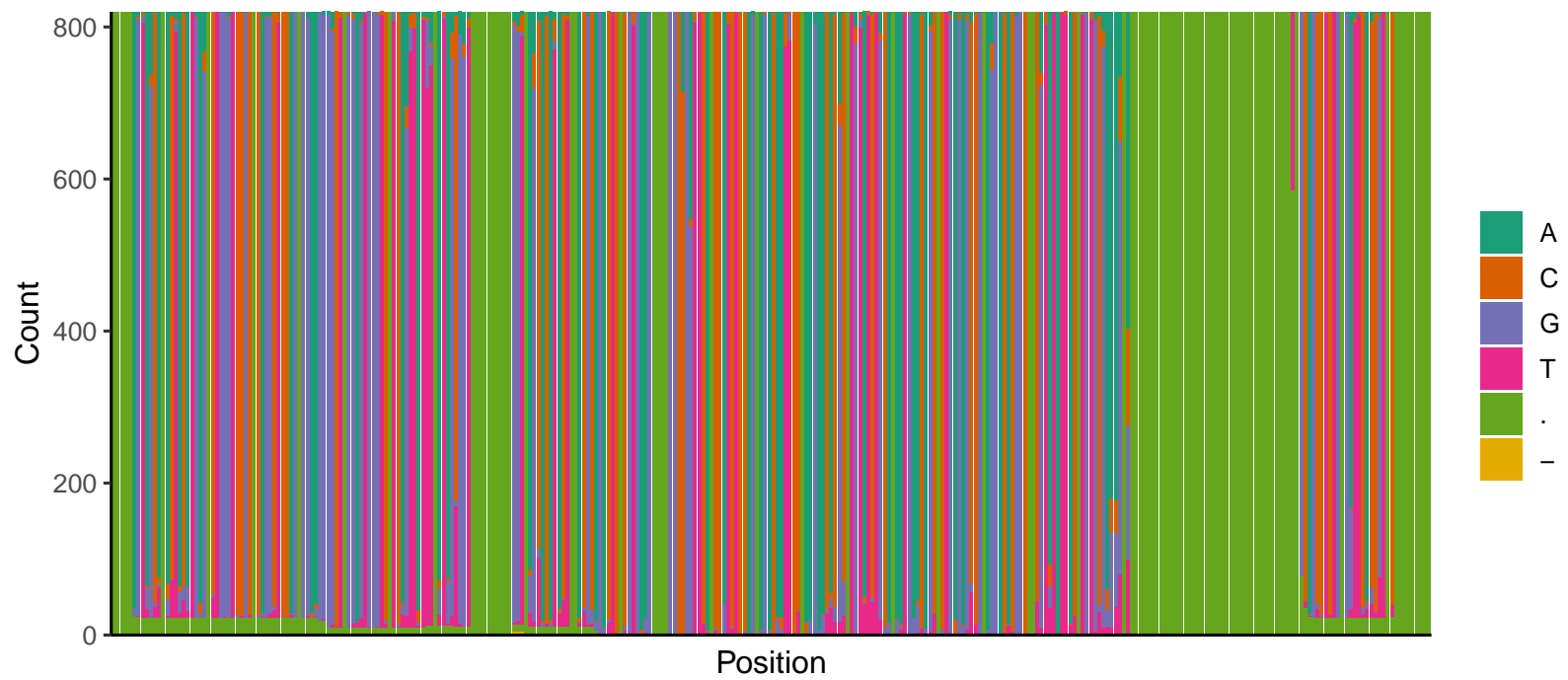
Gene IGHV3-53*01_02_G81A_A225G_T267G_G303A



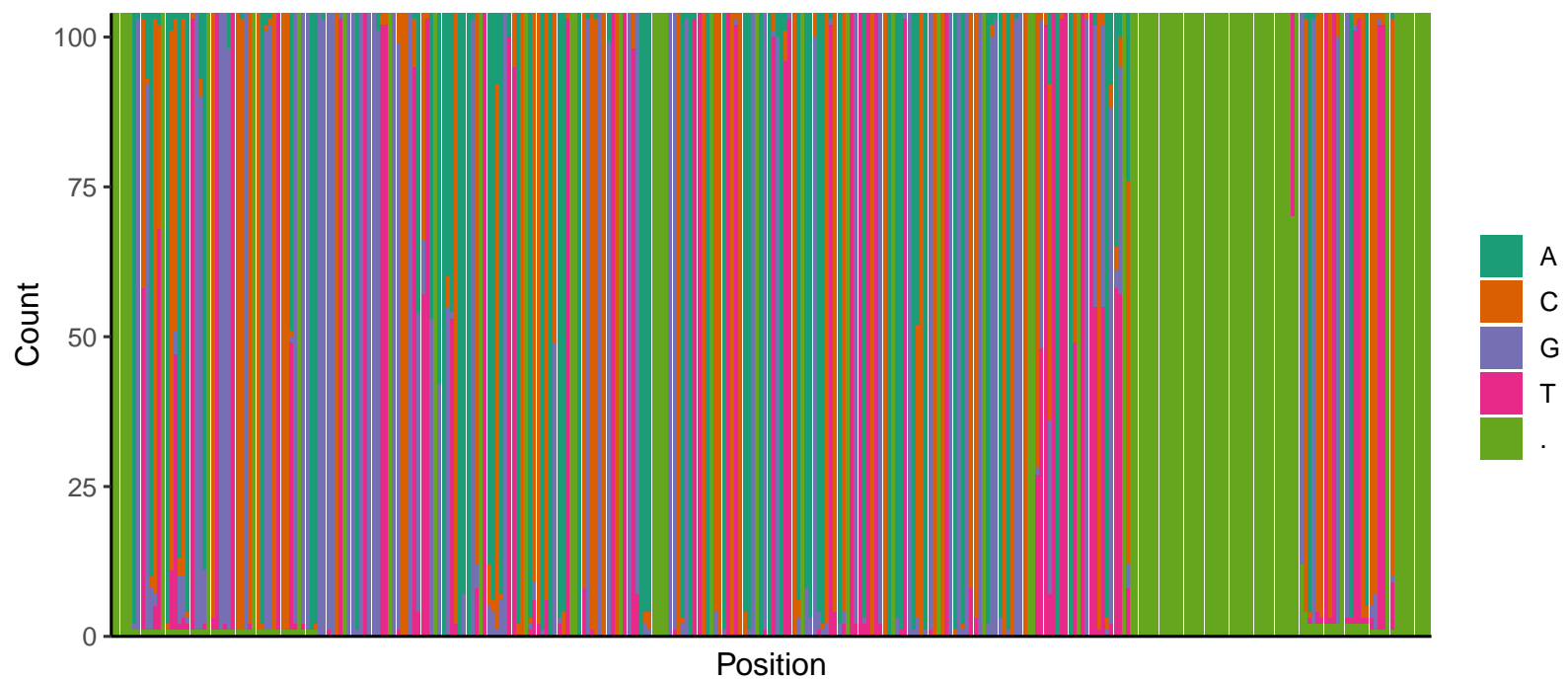
Gene IGHV3-72*01_A284G_A286G_C300T



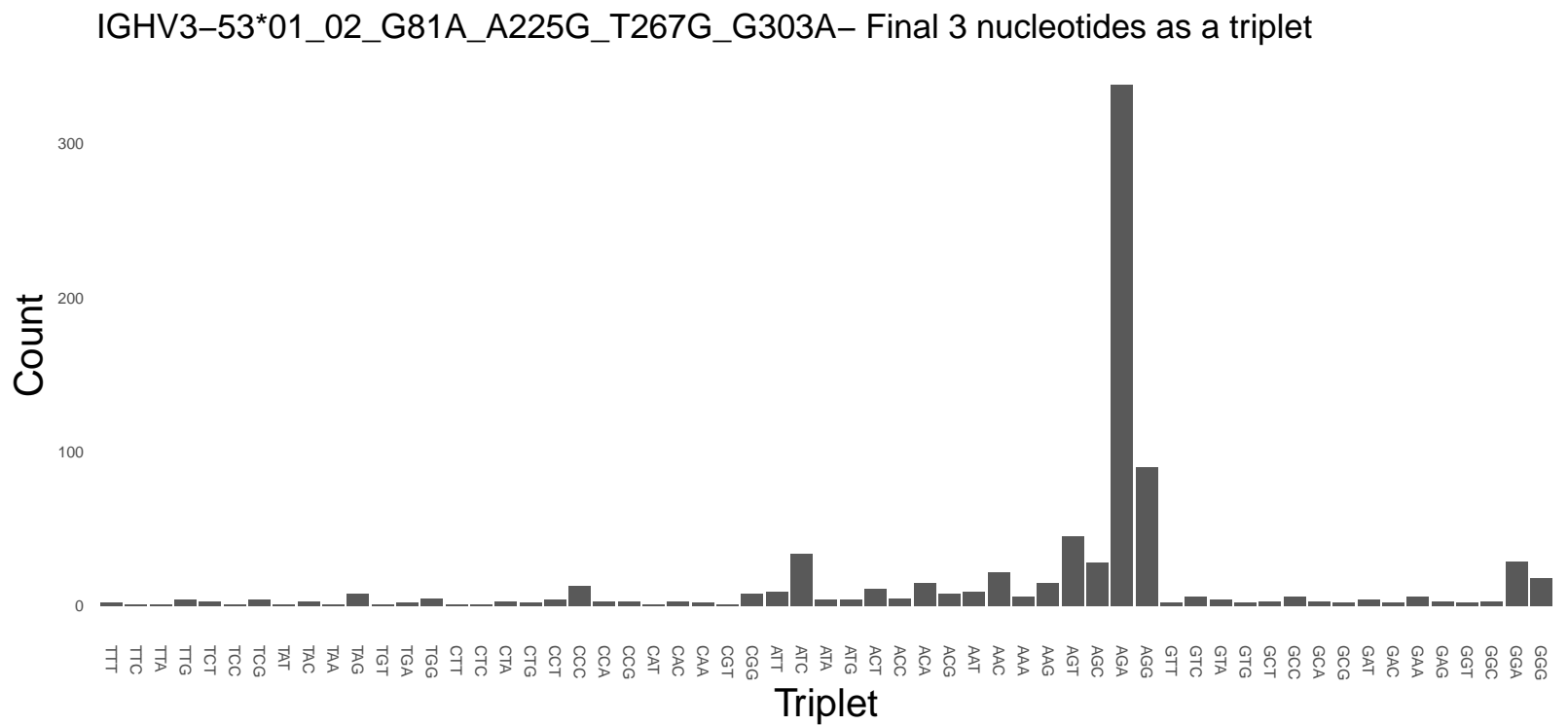
Gene IGHV3-53*01_02_G81A_A225G_T267G_G303A



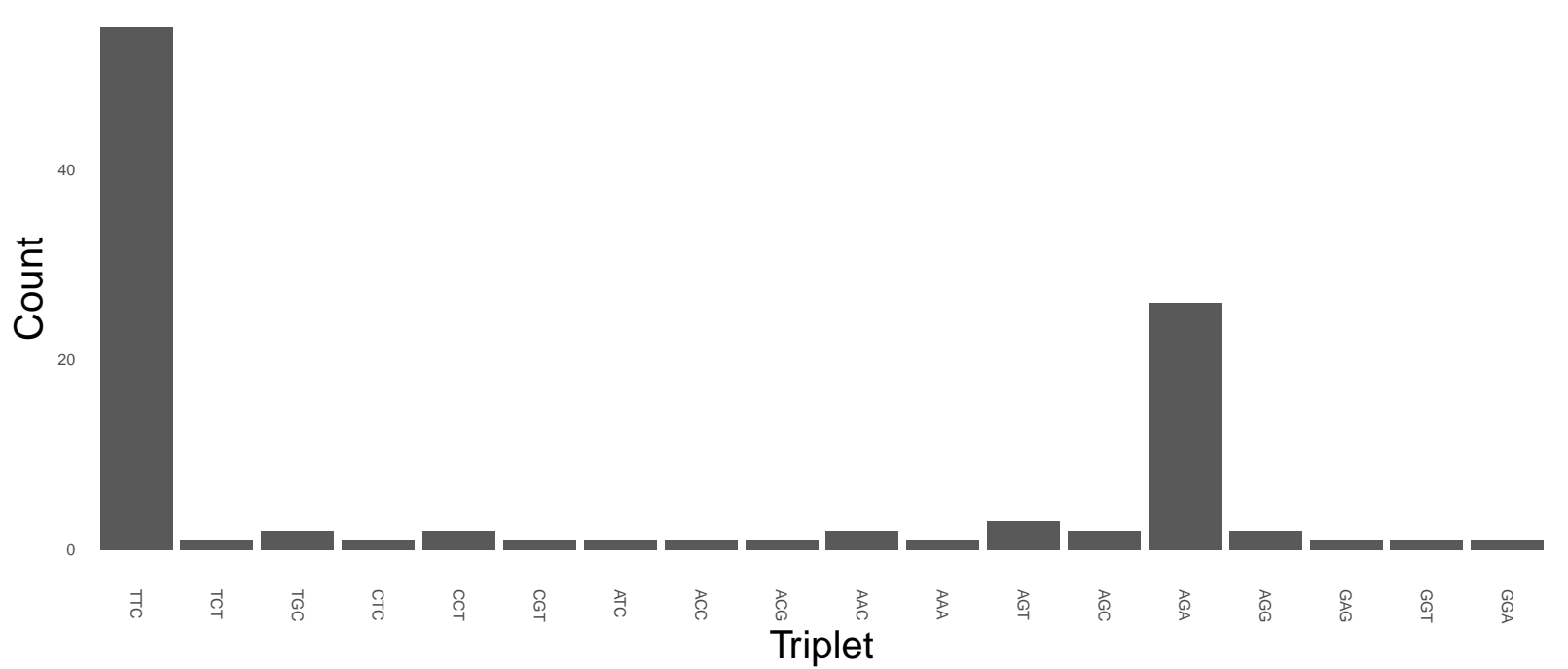
Gene IGHV3-72*01_A284G_A286G_C300T



IGHV3-53*01_02_G81A_A225G_T267G_G303A- Final 3 nucleotides as a triplet

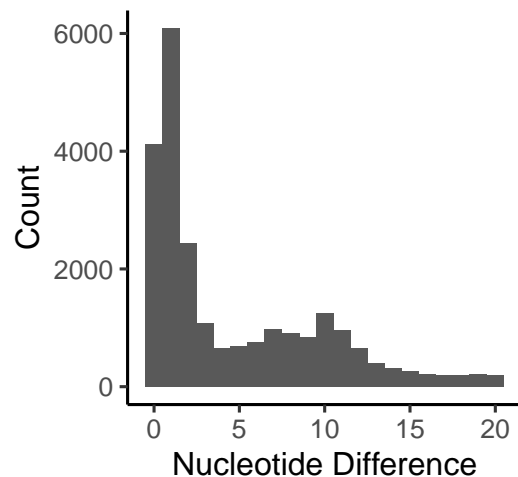


IGHV3-72*01_A284G_A286G_C300T- Final 3 nucleotides as a triplet



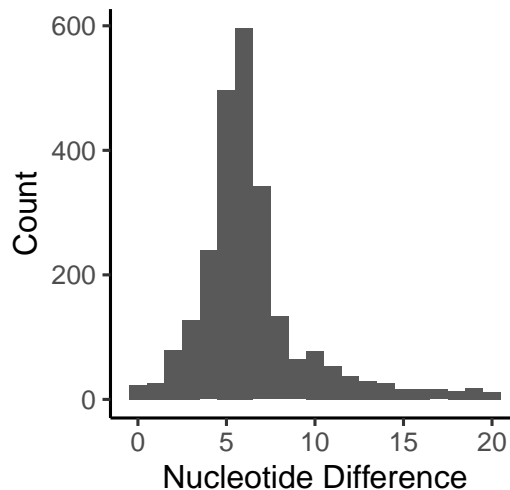
IGHV1-2*02

24097 sequences assigned
4117 (17.1%) exact matches, in which:
3165 unique CDR3
6 unique J



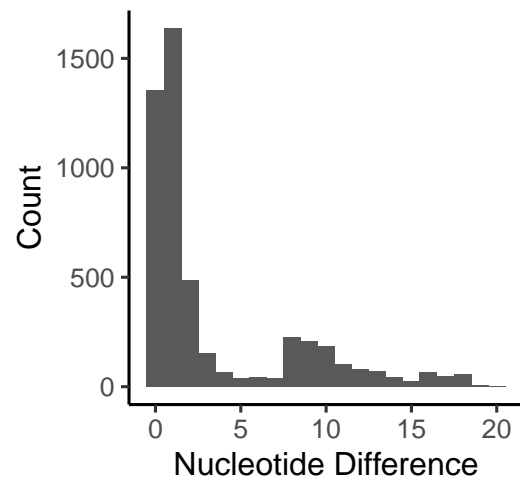
IGHV1-8*02

2620 sequences assigned
23 (0.9%) exact matches, in which:
23 unique CDR3
4 unique J



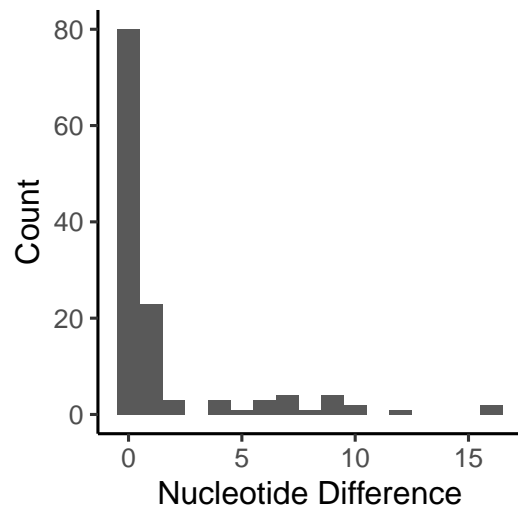
IGHV1-24*01

4976 sequences assigned
1355 (27.2%) exact matches, in which:
1108 unique CDR3
6 unique J



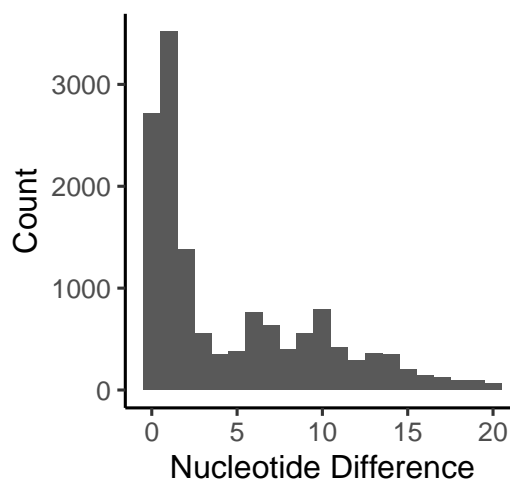
IGHV1-3*02

131 sequences assigned
80 (61.1%) exact matches, in which:
76 unique CDR3
6 unique J



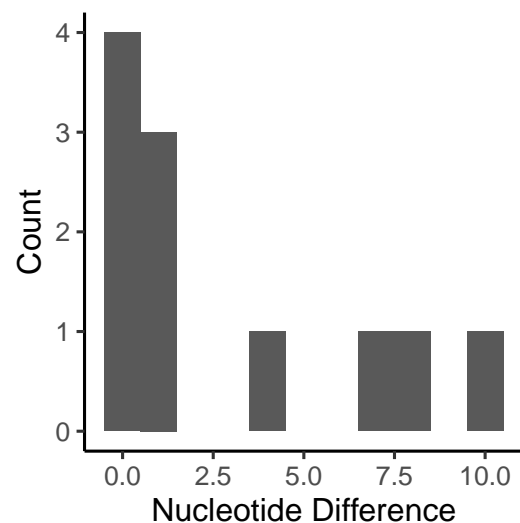
IGHV1-18*01

14588 sequences assigned
2717 (18.6%) exact matches, in which:
2203 unique CDR3
6 unique J



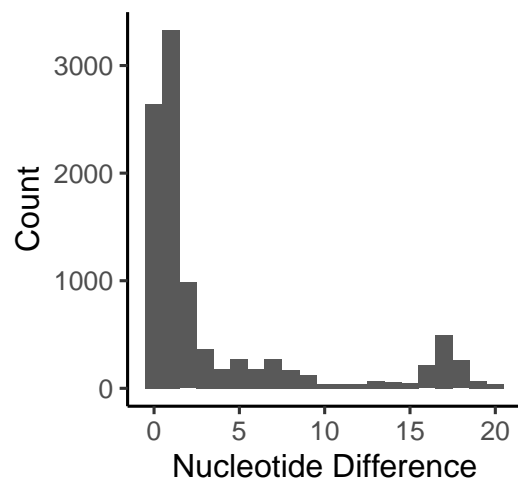
IGHV1-45*03

11 sequences assigned
4 (36.4%) exact matches, in which:
4 unique CDR3
2 unique J



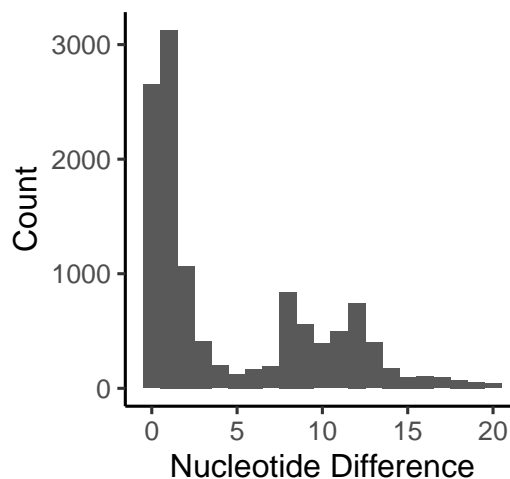
IGHV1-8*01

10112 sequences assigned
2641 (26.1%) exact matches, in which:
2126 unique CDR3
6 unique J



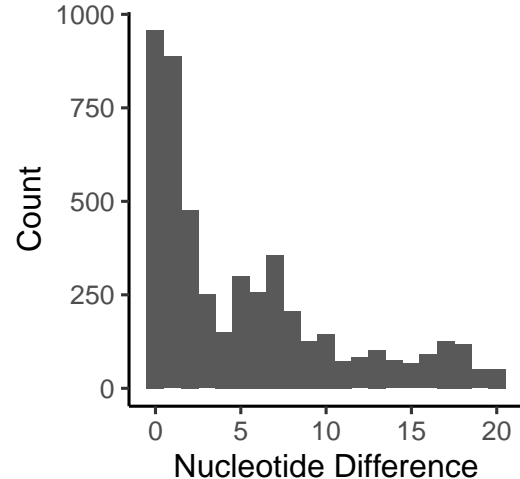
IGHV1-18*04

12740 sequences assigned
2651 (20.8%) exact matches, in which:
2137 unique CDR3
6 unique J



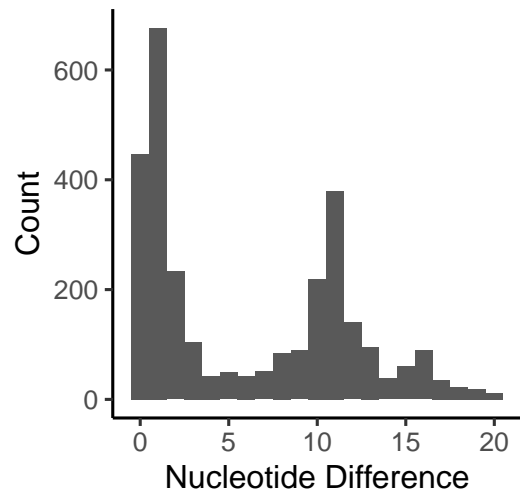
IGHV1-46*01

5232 sequences assigned
958 (18.3%) exact matches, in which:
850 unique CDR3
6 unique J



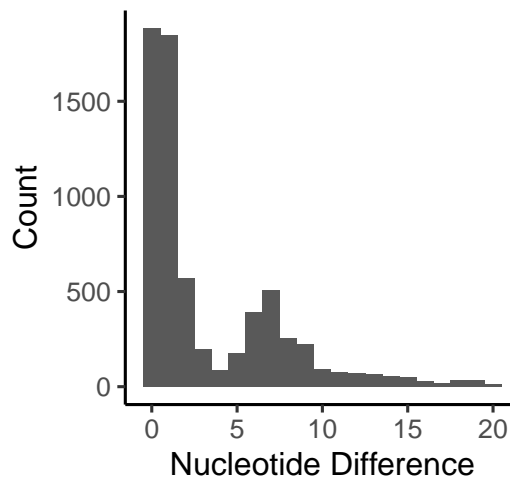
IGHV1-46*03

2979 sequences assigned
447 (15%) exact matches, in which:
320 unique CDR3
6 unique J



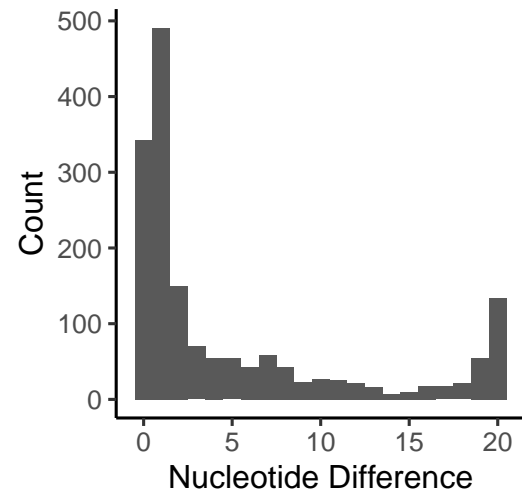
IGHV1-69*04_09

6750 sequences assigned
1883 (27.9%) exact matches, in which:
1597 unique CDR3
6 unique J



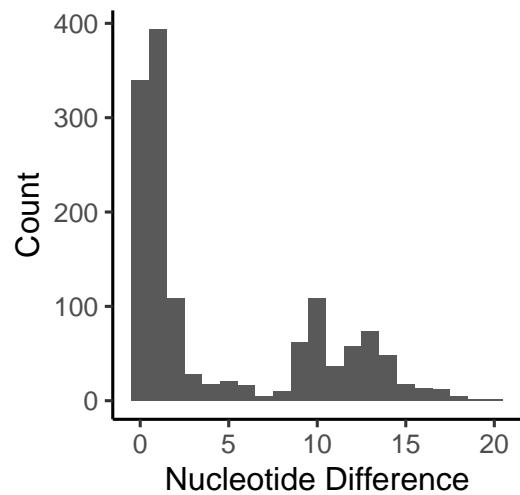
IGHV2-5*02

1885 sequences assigned
343 (18.2%) exact matches, in which:
247 unique CDR3
6 unique J



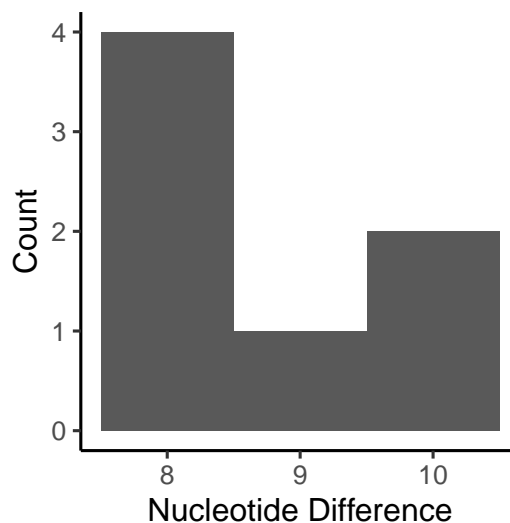
IGHV1-58*02

1421 sequences assigned
340 (23.9%) exact matches, in which:
281 unique CDR3
6 unique J



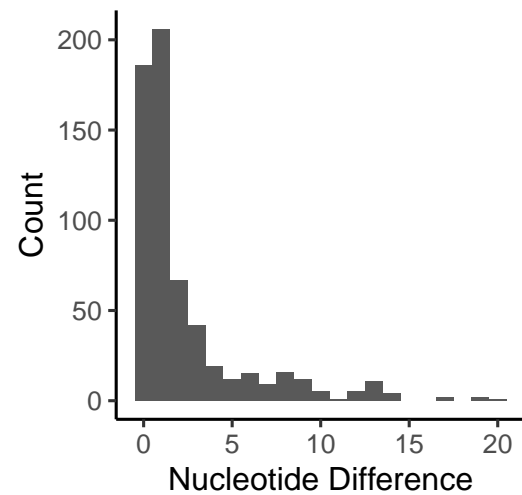
IGHV1-NL1*01

7 sequences assigned
No exact matches.



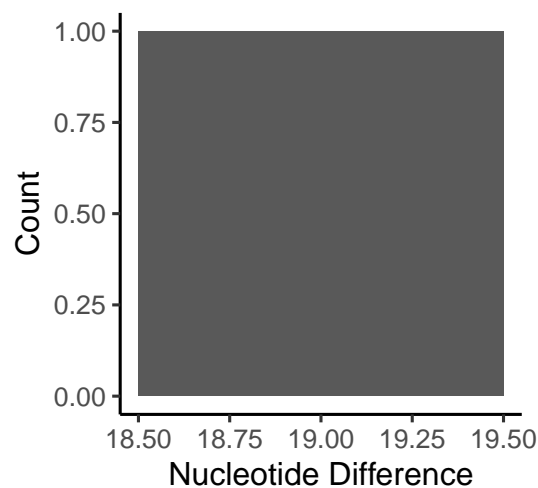
IGHV2-26*01

625 sequences assigned
186 (29.8%) exact matches, in which:
141 unique CDR3
6 unique J



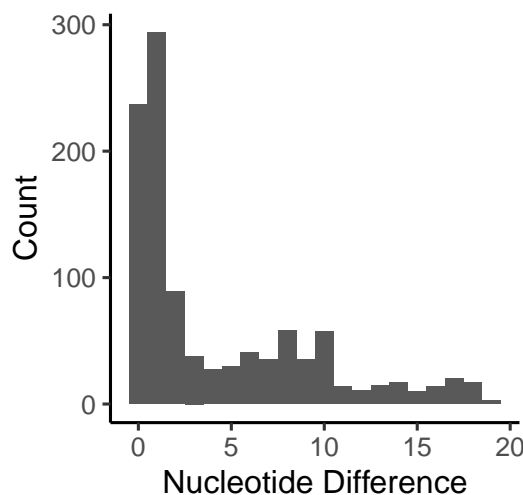
IGHV1-69-2*01

1 sequences assigned
No exact matches.



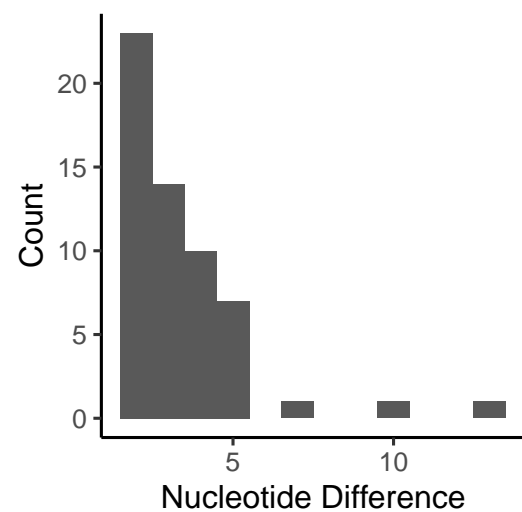
IGHV2-5*01

1098 sequences assigned
237 (21.6%) exact matches, in which:
182 unique CDR3
6 unique J



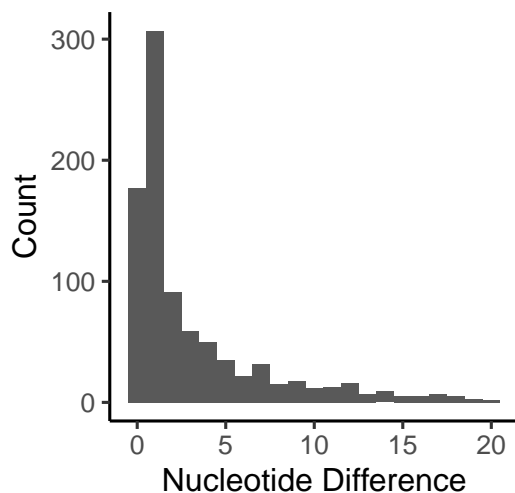
IGHV2-70*12

57 sequences assigned
No exact matches.



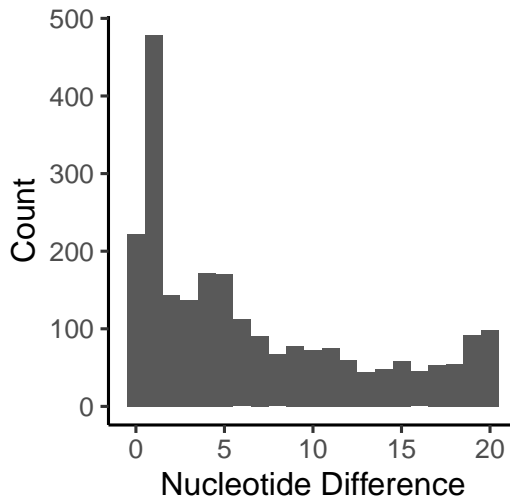
IGHV2-70*11_15

987 sequences assigned
177 (17.9%) exact matches, in which:
118 unique CDR3
6 unique J



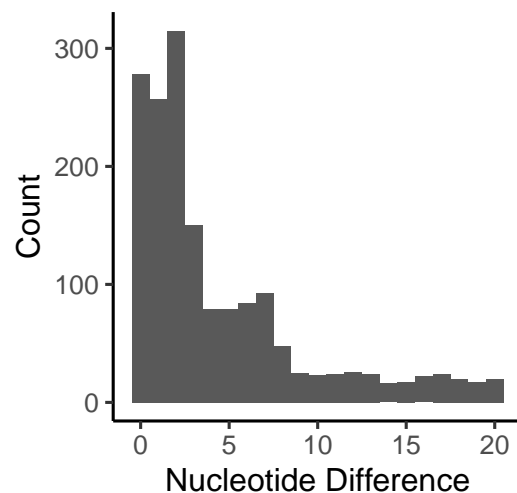
IGHV3-7*03

3119 sequences assigned
222 (7.1%) exact matches, in which:
163 unique CDR3
6 unique J



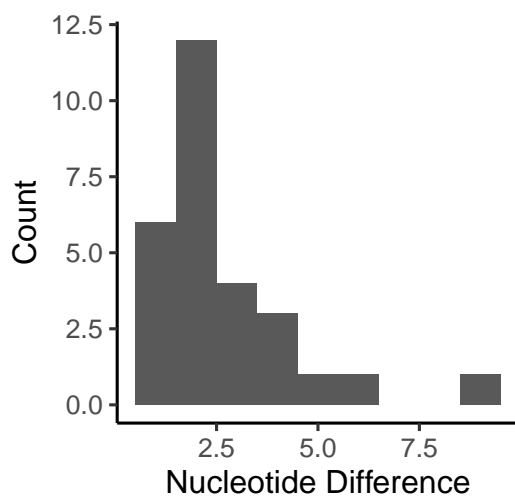
IGHV3-11*04

1742 sequences assigned
278 (16%) exact matches, in which:
258 unique CDR3
6 unique J



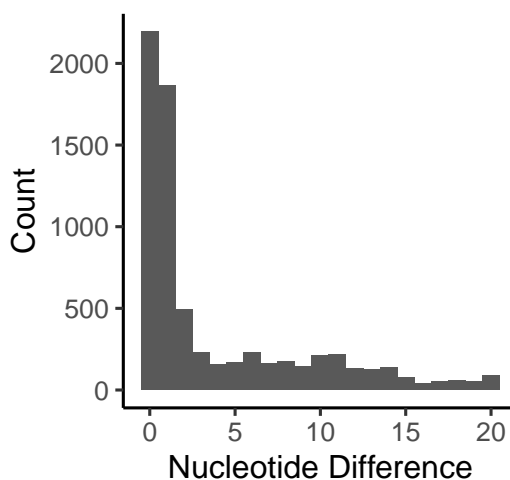
IGHV2-70D*04

28 sequences assigned
No exact matches.



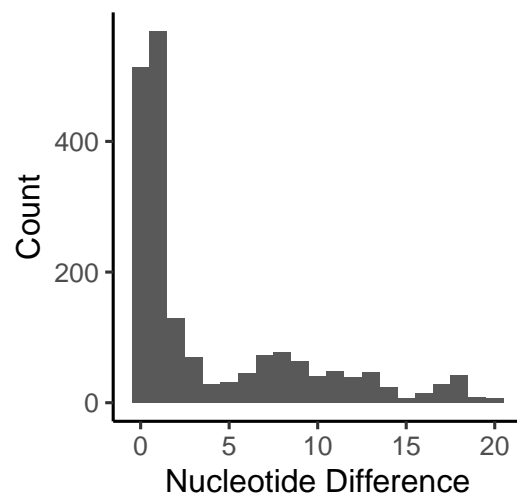
IGHV3-9*01

8929 sequences assigned
2194 (24.6%) exact matches, in which:
1272 unique CDR3
6 unique J



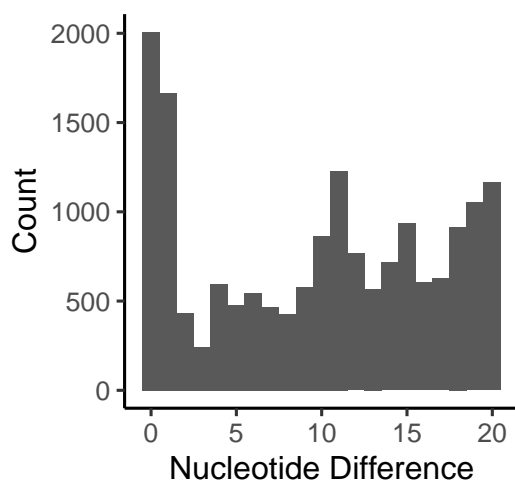
IGHV3-13*01

1943 sequences assigned
513 (26.4%) exact matches, in which:
317 unique CDR3
6 unique J



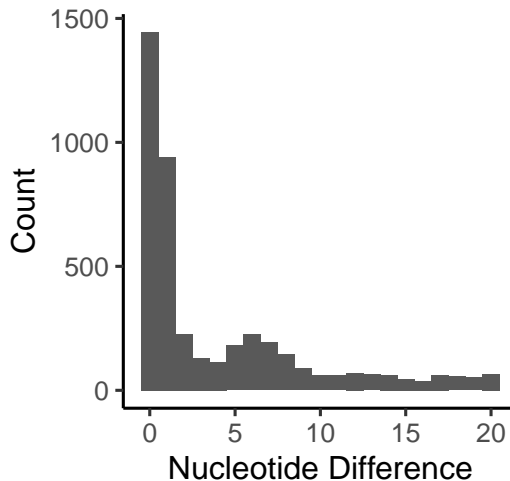
IGHV3-7*01

21074 sequences assigned
2007 (9.5%) exact matches, in which:
1373 unique CDR3
6 unique J



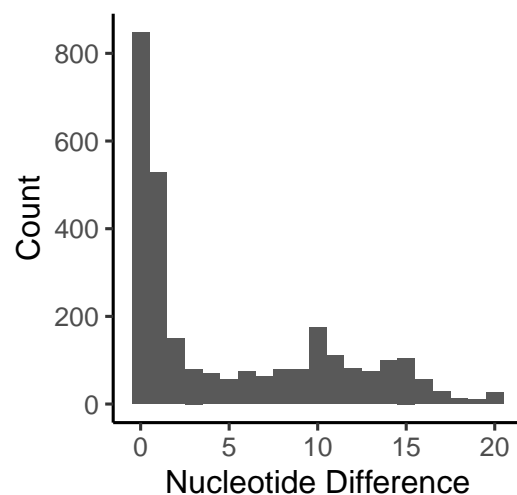
IGHV3-11*01

5018 sequences assigned
1445 (28.8%) exact matches, in which:
958 unique CDR3
6 unique J



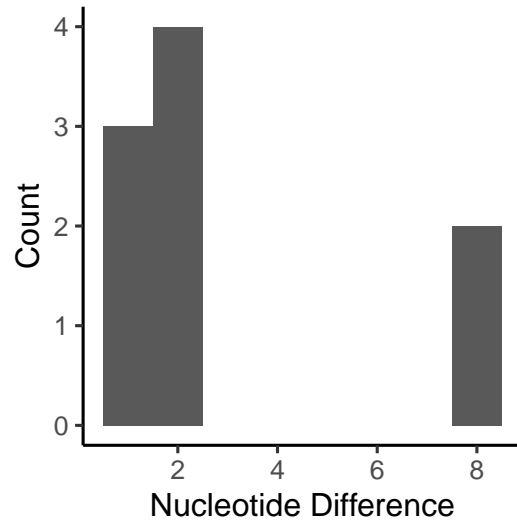
IGHV3-15*01_02

3537 sequences assigned
848 (24%) exact matches, in which:
516 unique CDR3
6 unique J



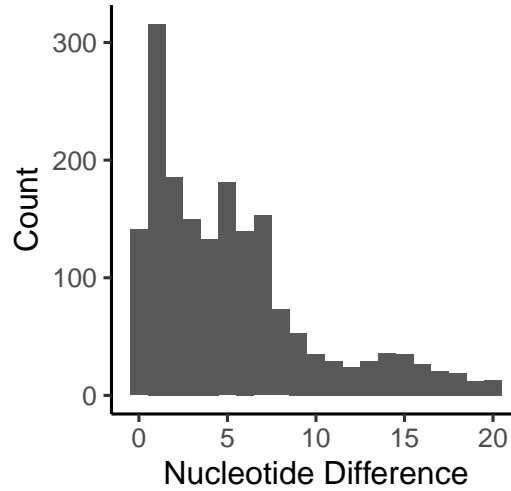
IGHV3-19*01

9 sequences assigned
No exact matches.



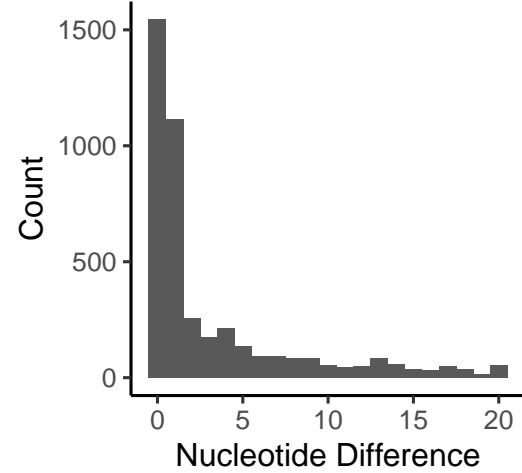
IGHV3-21*04

1895 sequences assigned
141 (7.4%) exact matches, in which:
133 unique CDR3
6 unique J



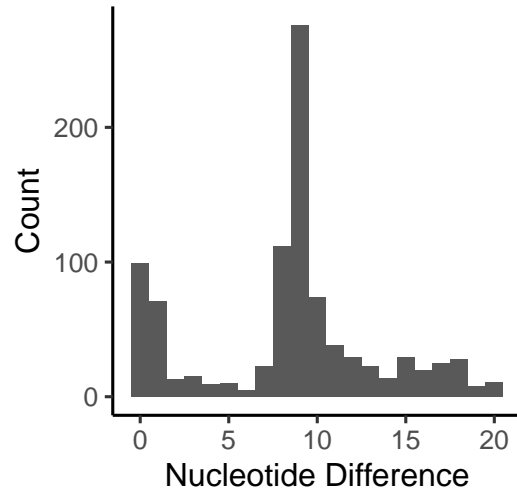
IGHV3-30-3*01

4592 sequences assigned
1545 (33.6%) exact matches, in which:
1022 unique CDR3
6 unique J



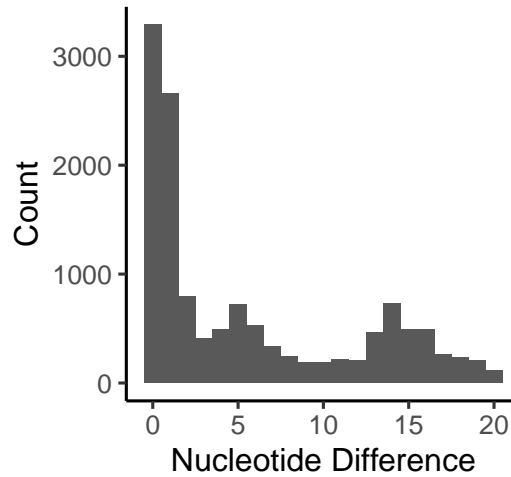
IGHV3-20*01_02

959 sequences assigned
99 (10.3%) exact matches, in which:
60 unique CDR3
5 unique J



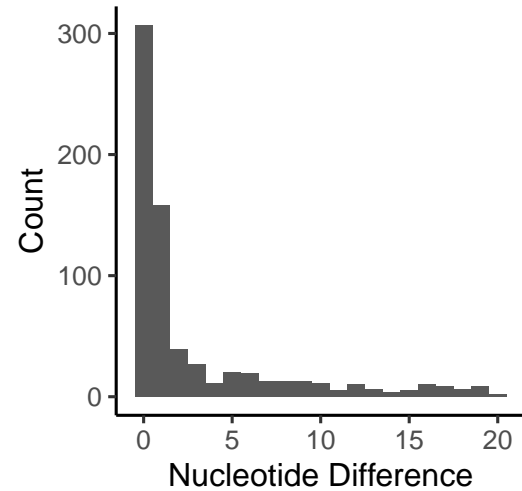
IGHV3-21*01_02

13829 sequences assigned
3290 (23.8%) exact matches, in which:
2062 unique CDR3
6 unique J



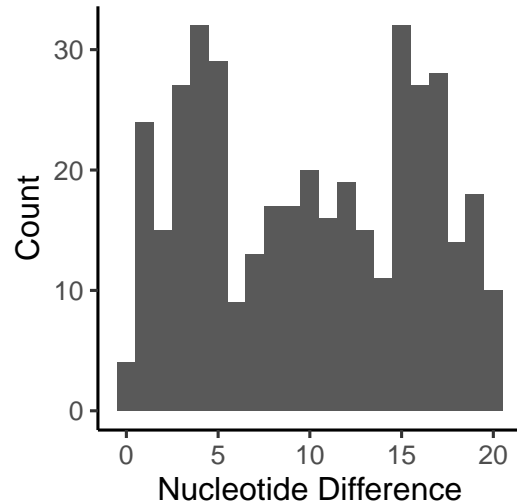
IGHV3-30*03

762 sequences assigned
307 (40.3%) exact matches, in which:
283 unique CDR3
6 unique J



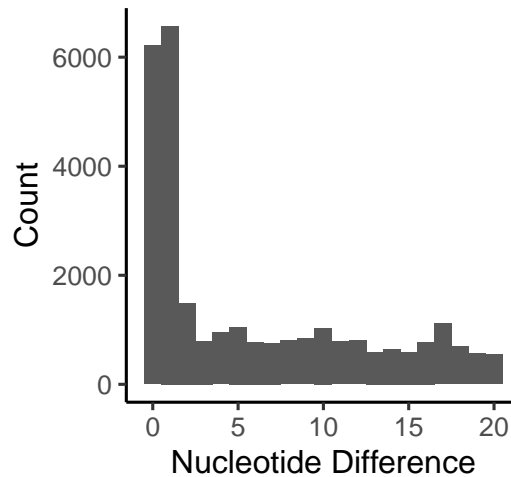
IGHV3-20*03_04

457 sequences assigned
4 (0.9%) exact matches, in which:
4 unique CDR3
2 unique J



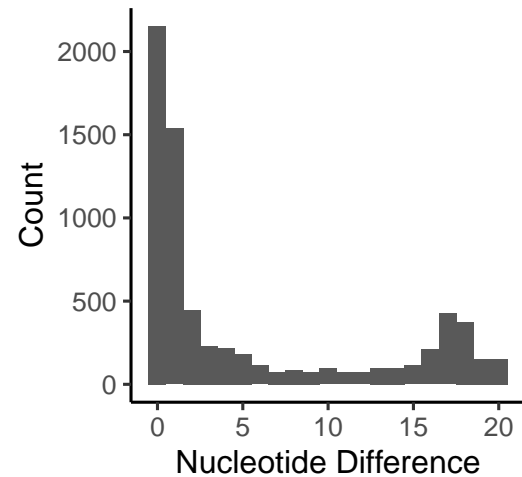
IGHV3-23*01_04

32530 sequences assigned
6213 (19.1%) exact matches, in which:
3449 unique CDR3
6 unique J



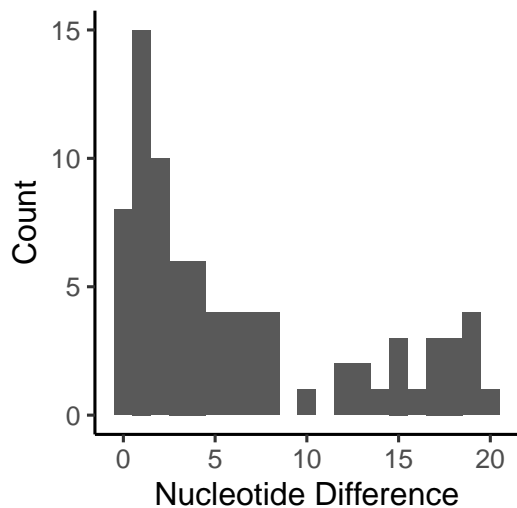
IGHV3-33*01

7596 sequences assigned
2153 (28.3%) exact matches, in which:
1443 unique CDR3
6 unique J



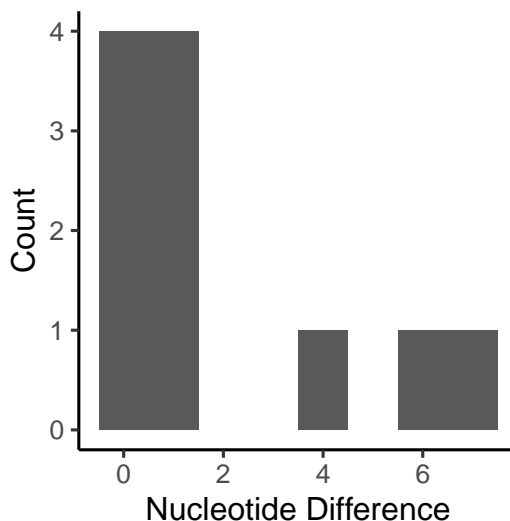
IGHV3-33*05

89 sequences assigned
8 (9%) exact matches, in which:
8 unique CDR3
2 unique J



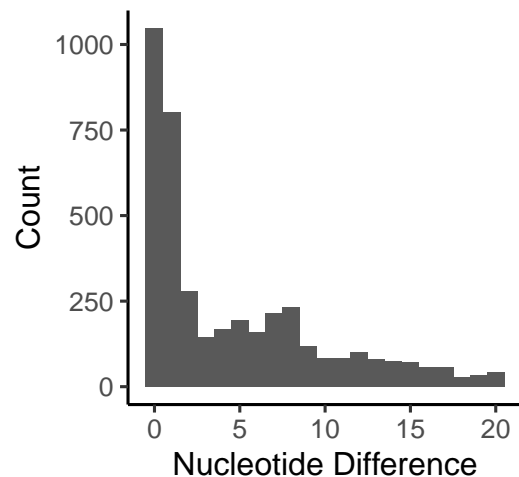
IGHV3-38*02

11 sequences assigned
4 (36.4%) exact matches, in which:
3 unique CDR3
3 unique J



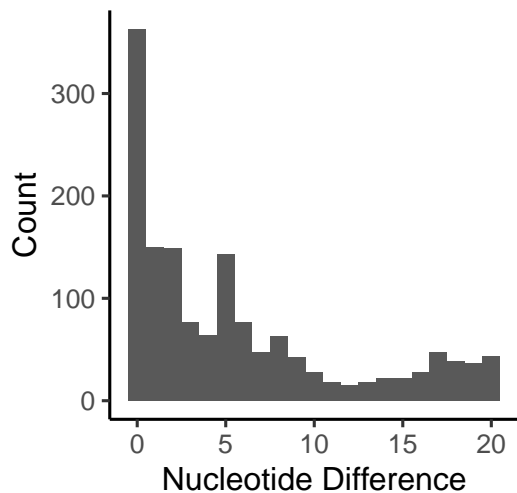
IGHV3-48*01

4158 sequences assigned
1047 (25.2%) exact matches, in which:
683 unique CDR3
6 unique J



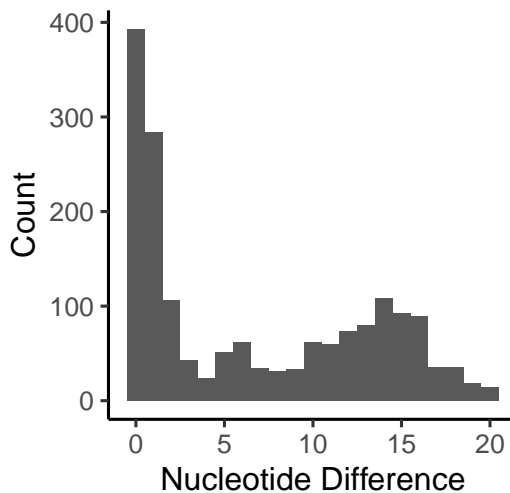
IGHV3-33*08

1670 sequences assigned
363 (21.7%) exact matches, in which:
281 unique CDR3
6 unique J



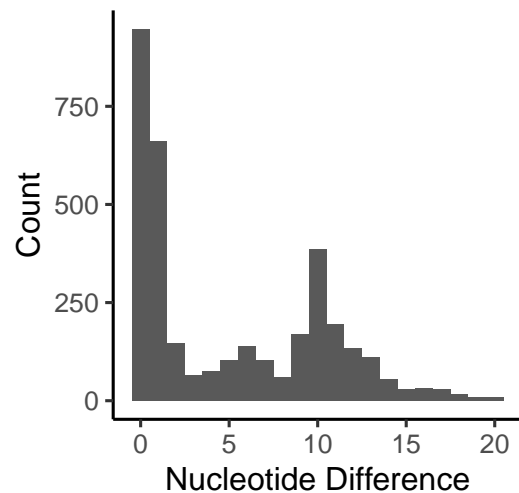
IGHV3-43*02

2346 sequences assigned
393 (16.8%) exact matches, in which:
242 unique CDR3
6 unique J



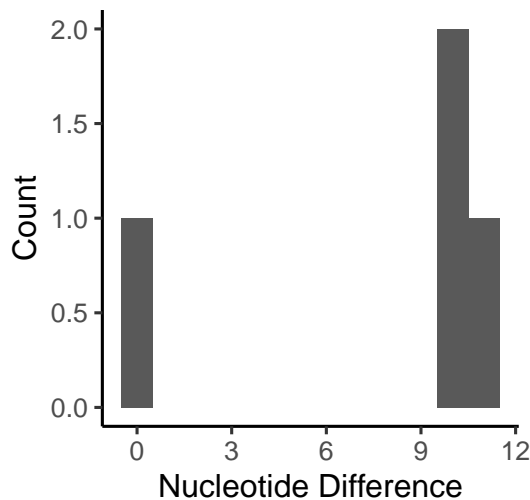
IGHV3-48*03

3747 sequences assigned
947 (25.3%) exact matches, in which:
570 unique CDR3
6 unique J



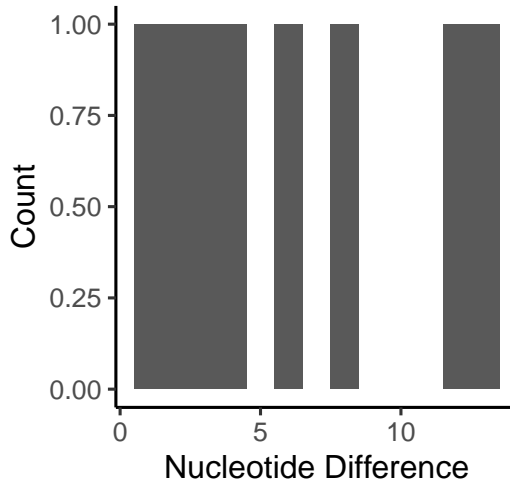
IGHV3-35*01

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



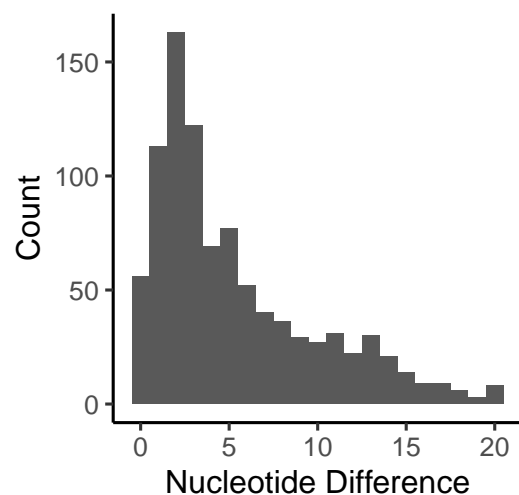
IGHV3-47*02

8 sequences assigned
No exact matches.



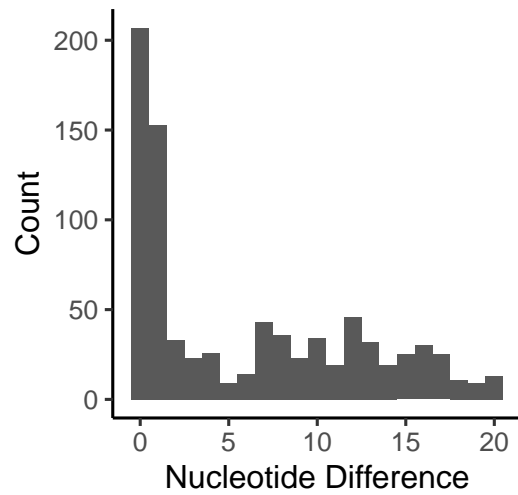
IGHV3-48*04

965 sequences assigned
56 (5.8%) exact matches, in which:
53 unique CDR3
6 unique J



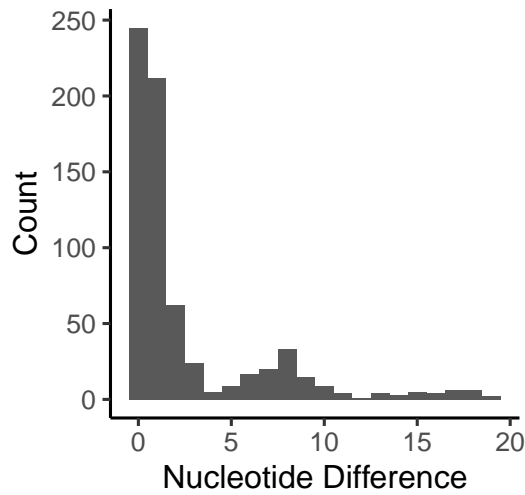
IGHV3-49*04

897 sequences assigned
207 (23.1%) exact matches, in which:
132 unique CDR3
6 unique J



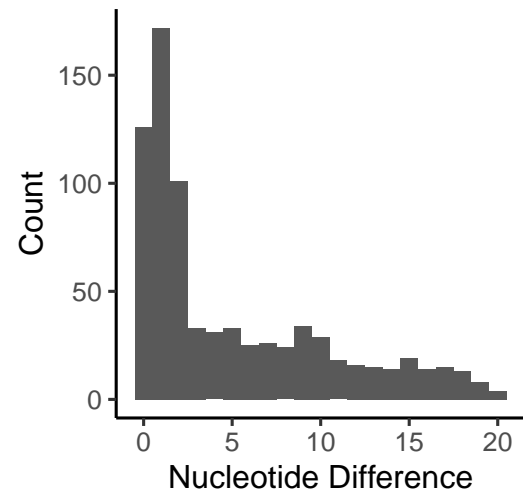
IGHV3-53*04

691 sequences assigned
245 (35.5%) exact matches, in which:
164 unique CDR3
6 unique J



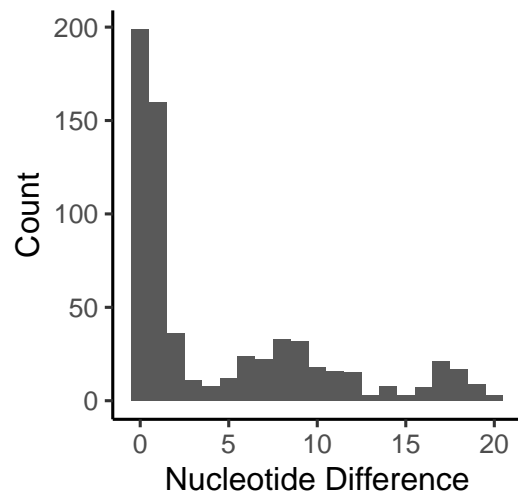
IGHV3-53*01_02_G81A_

820 sequences assigned
126 (15.4%) exact matches, in which:
121 unique CDR3
6 unique J



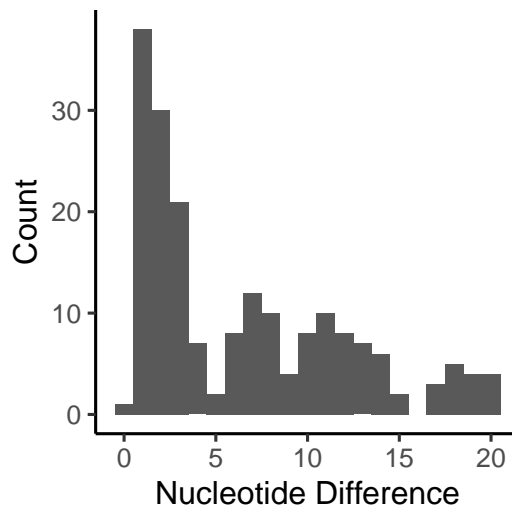
IGHV3-49*03_05

675 sequences assigned
199 (29.5%) exact matches, in which:
132 unique CDR3
5 unique J



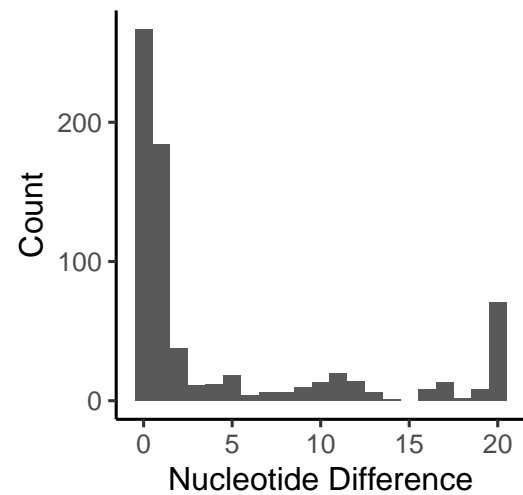
IGHV3-53*05

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



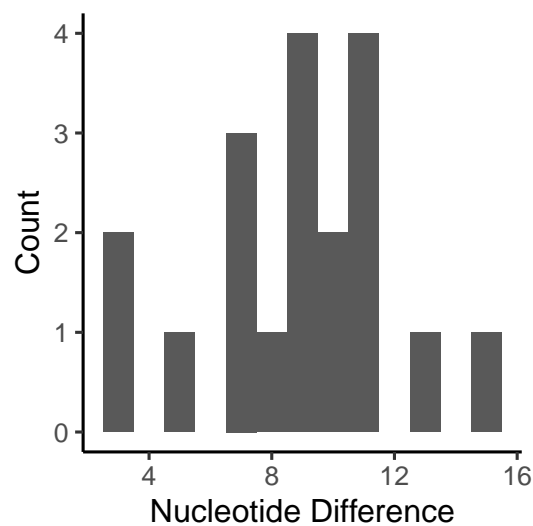
IGHV3-64*01

969 sequences assigned
267 (27.6%) exact matches, in which:
179 unique CDR3
6 unique J



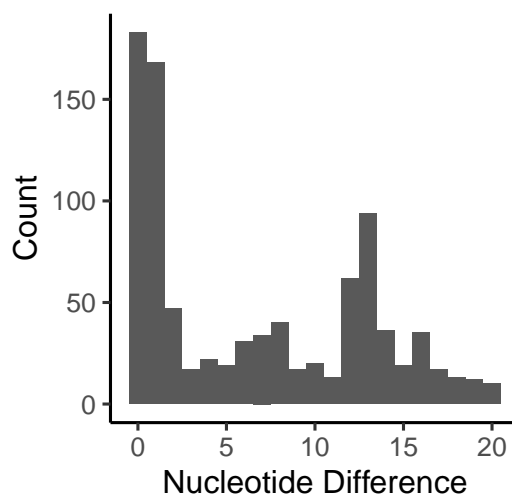
IGHV3-52*01_03

19 sequences assigned
No exact matches.



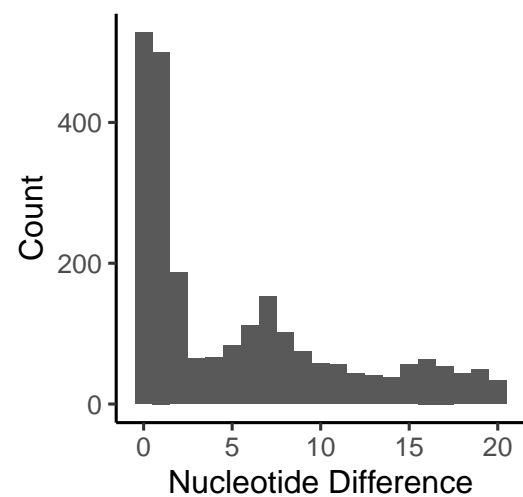
IGHV3-53*01_02

964 sequences assigned
183 (19%) exact matches, in which:
117 unique CDR3
6 unique J



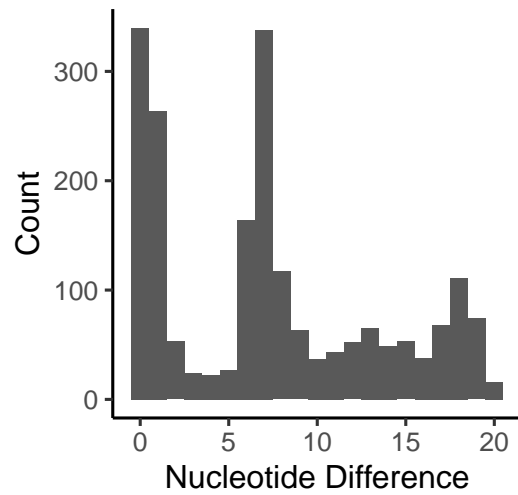
IGHV3-66*01

3258 sequences assigned
528 (16.2%) exact matches, in which:
351 unique CDR3
6 unique J



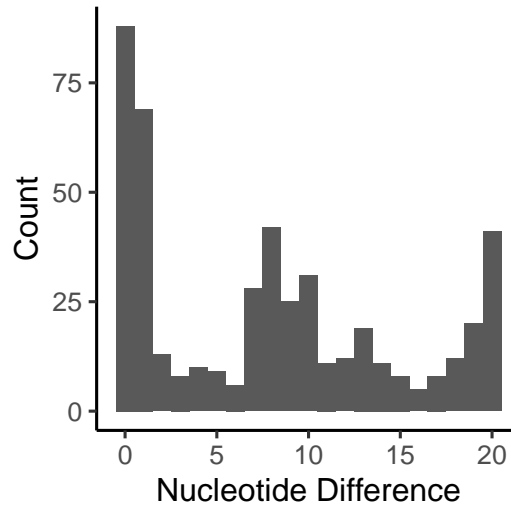
IGHV3-66*02

2257 sequences assigned
340 (15.1%) exact matches, in which:
234 unique CDR3
6 unique J



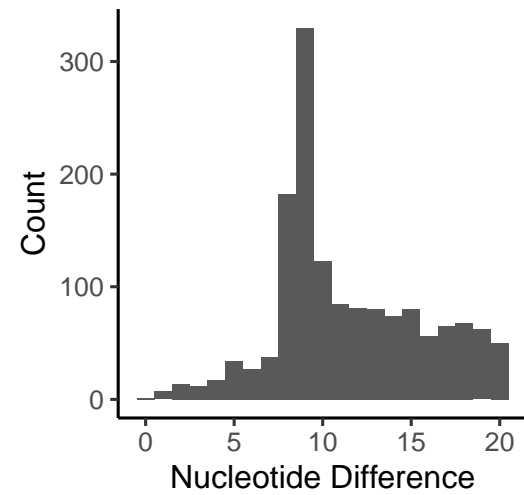
IGHV3-72*01

588 sequences assigned
88 (15%) exact matches, in which:
51 unique CDR3
6 unique J



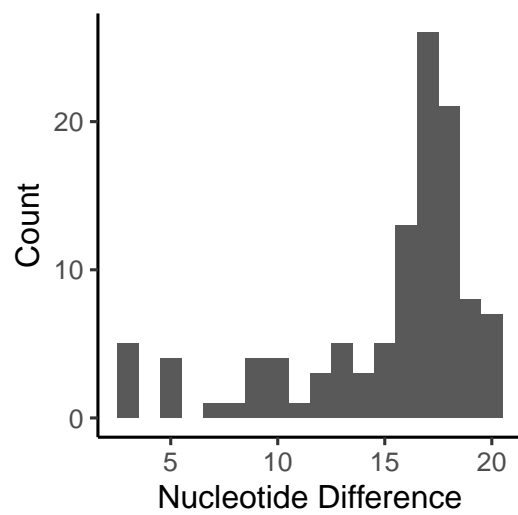
IGHV3-74*03

2740 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
1 unique J



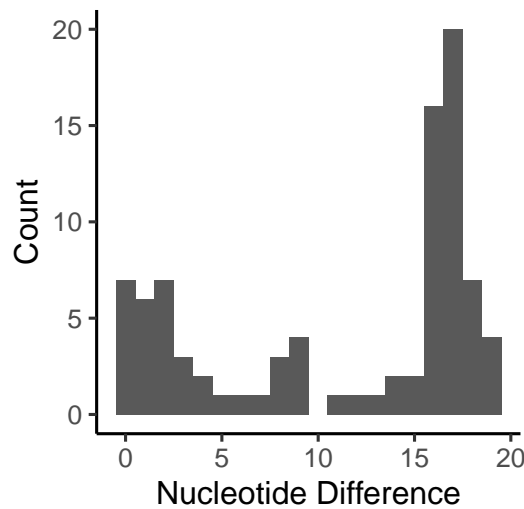
IGHV3-69-1*01

128 sequences assigned
No exact matches.



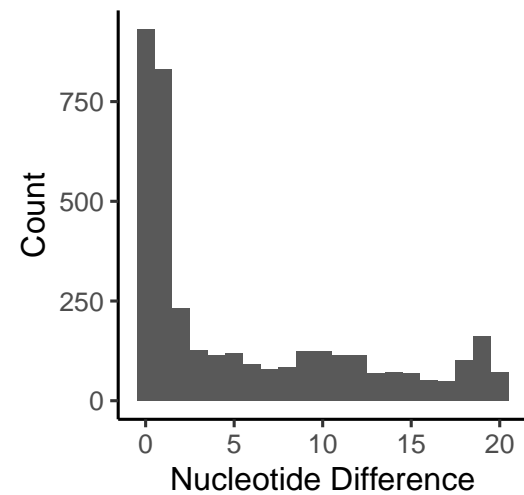
IGHV3-72*01_A284G_A285G

104 sequences assigned
7 (6.7%) exact matches, in which:
7 unique CDR3
2 unique J



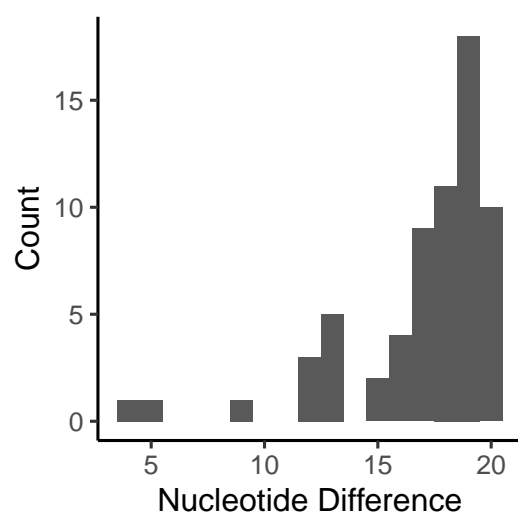
IGHV3-74*01_02

4061 sequences assigned
932 (23%) exact matches, in which:
617 unique CDR3
6 unique J



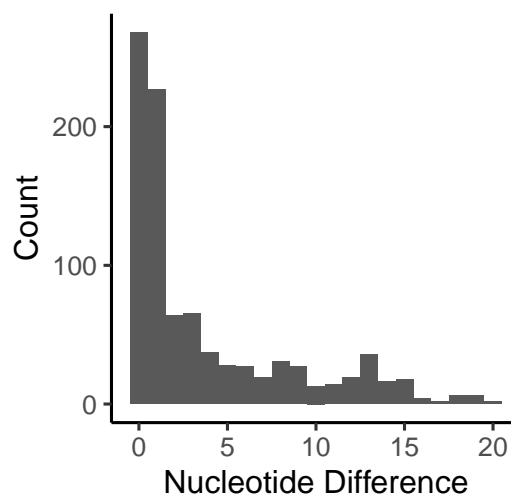
IGHV3-69-1*02

84 sequences assigned
No exact matches.



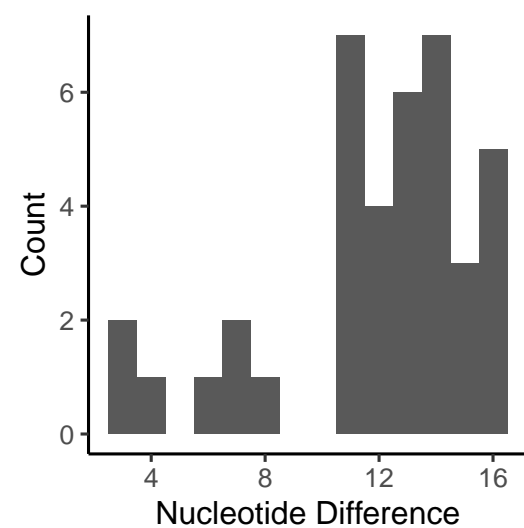
IGHV3-73*01_02

936 sequences assigned
268 (28.6%) exact matches, in which:
160 unique CDR3
5 unique J



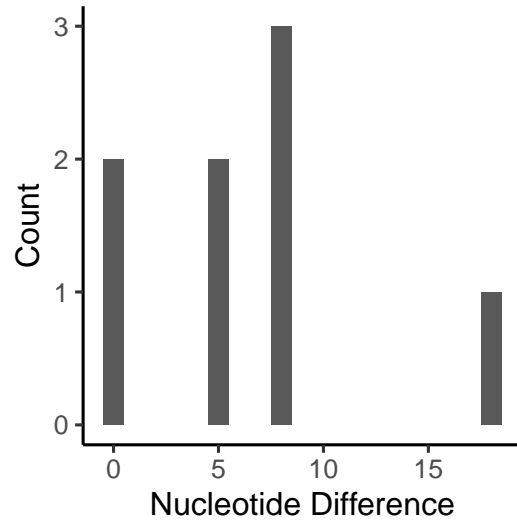
IGHV3-43D*04

39 sequences assigned
No exact matches.



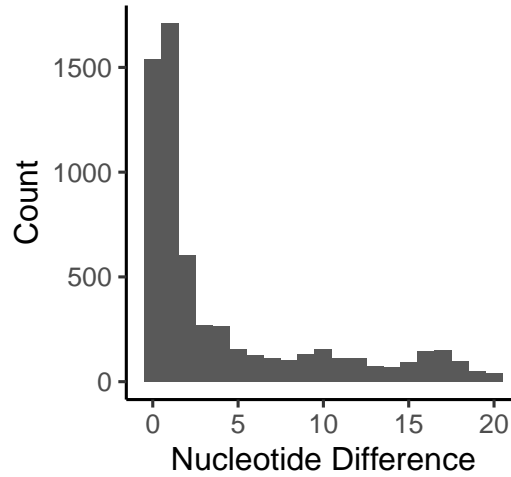
IGHV3-64D*06

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



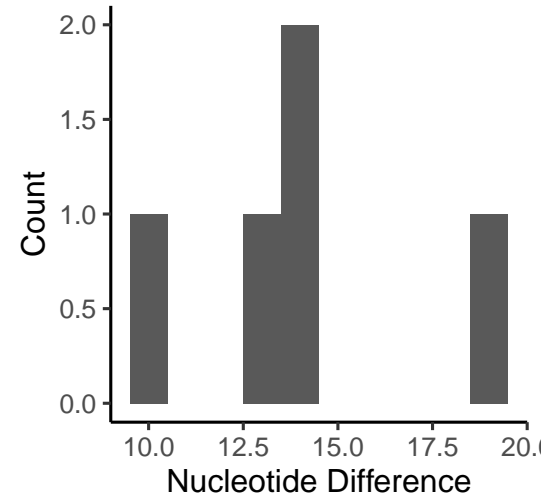
IGHV4-4*07

6724 sequences assigned
1538 (22.9%) exact matches, in which:
1237 unique CDR3
6 unique J



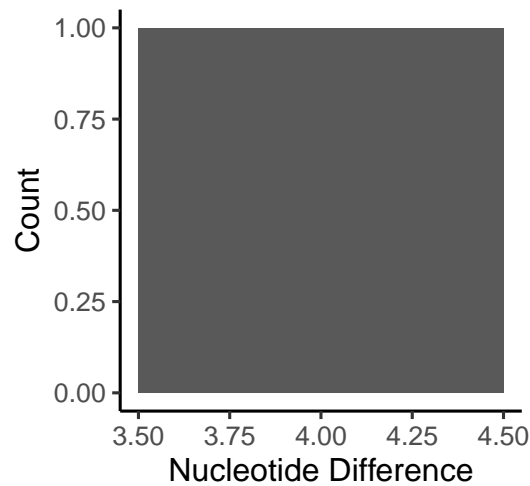
IGHV4-30-4*01

6 sequences assigned
No exact matches.



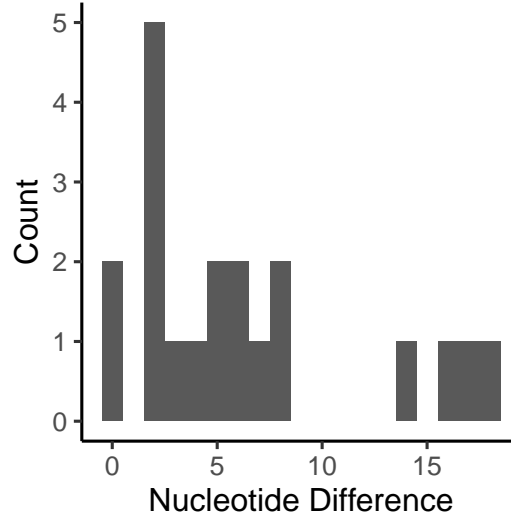
IGHV3-64D*09

1 sequences assigned
No exact matches.



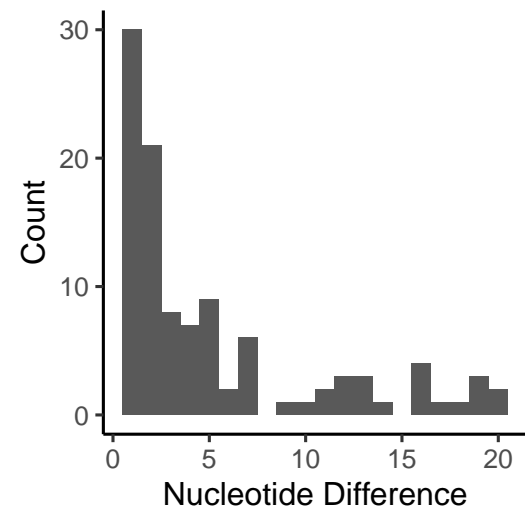
IGHV4-28*03

28 sequences assigned
2 (7.1%) exact matches, in which:
2 unique CDR3
2 unique J



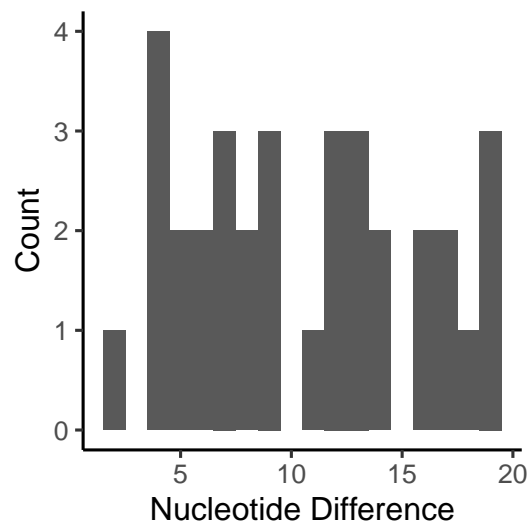
IGHV4-30-2*03

106 sequences assigned
No exact matches.



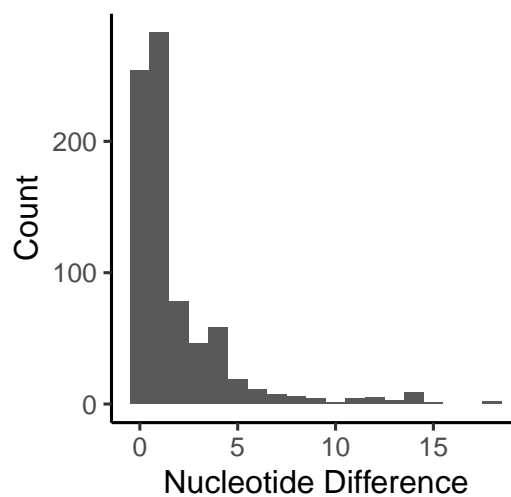
IGHV3-NL1*01

41 sequences assigned
No exact matches.



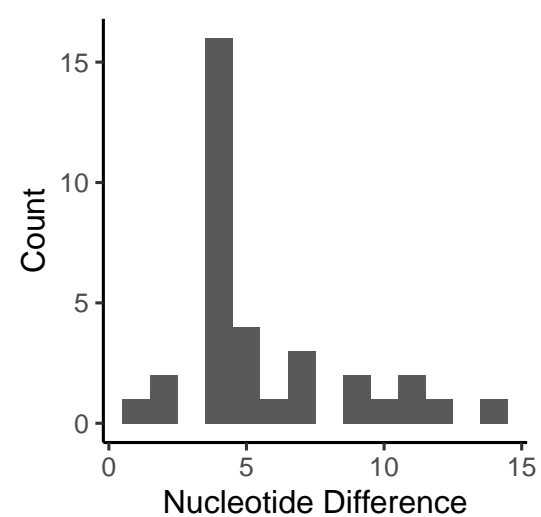
IGHV4-30-2*01

800 sequences assigned
254 (31.8%) exact matches, in which:
147 unique CDR3
6 unique J



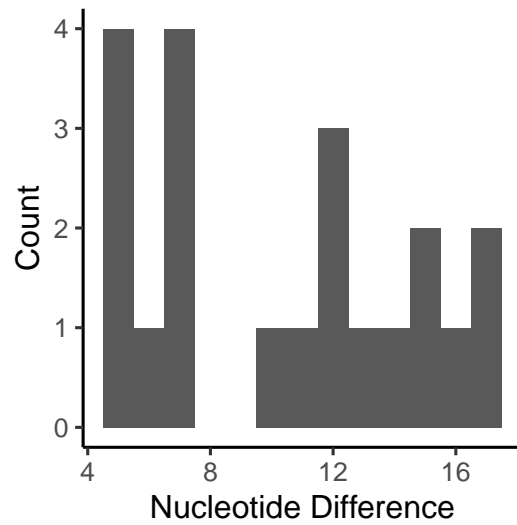
IGHV4-30-4*07

35 sequences assigned
No exact matches.



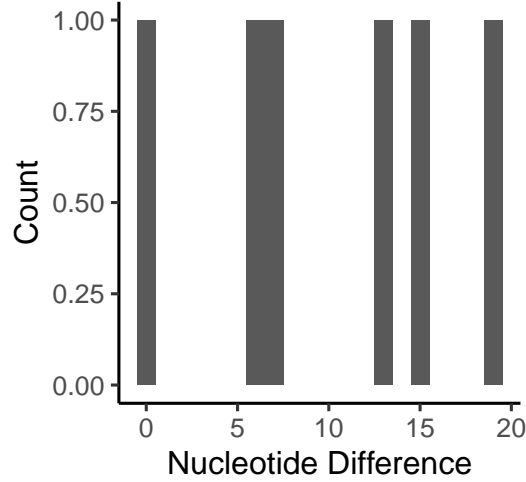
IGHV4-30-4*08

29 sequences assigned
No exact matches.



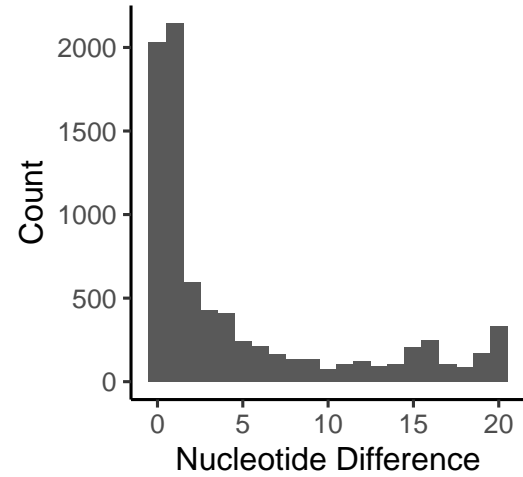
IGHV4-38-2*02

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



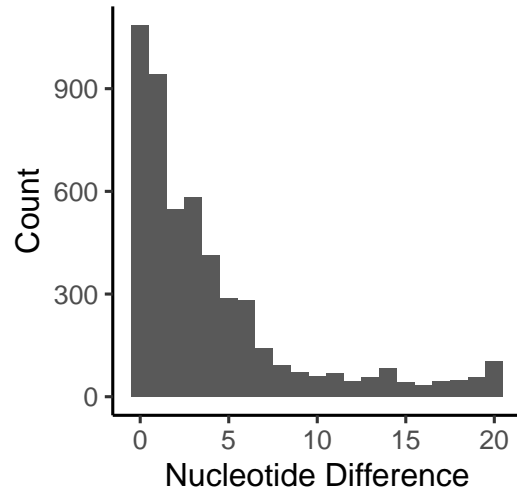
IGHV4-59*01_07

9141 sequences assigned
2029 (22.2%) exact matches, in which:
1632 unique CDR3
6 unique J



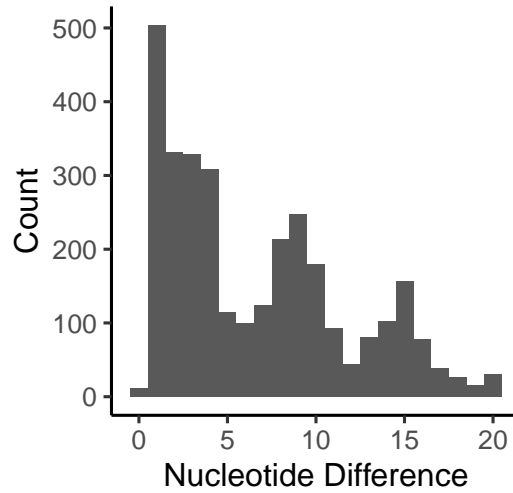
IGHV4-31*02

5541 sequences assigned
1086 (19.6%) exact matches, in which:
920 unique CDR3
6 unique J



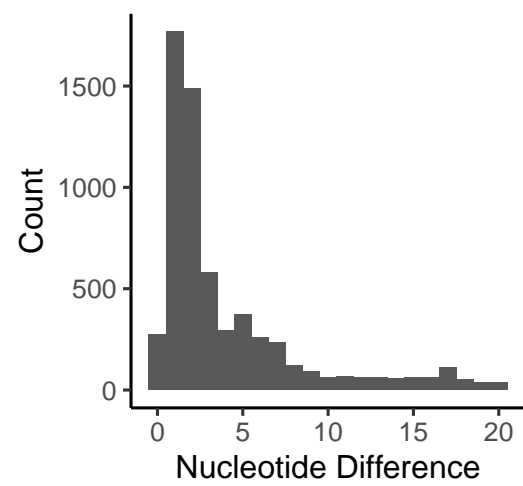
IGHV4-39*07

3426 sequences assigned
11 (0.3%) exact matches, in which:
11 unique CDR3
4 unique J



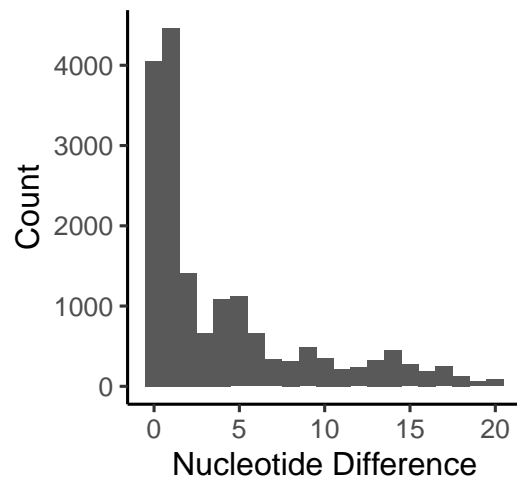
IGHV4-59*12

6440 sequences assigned
273 (4.2%) exact matches, in which:
257 unique CDR3
6 unique J



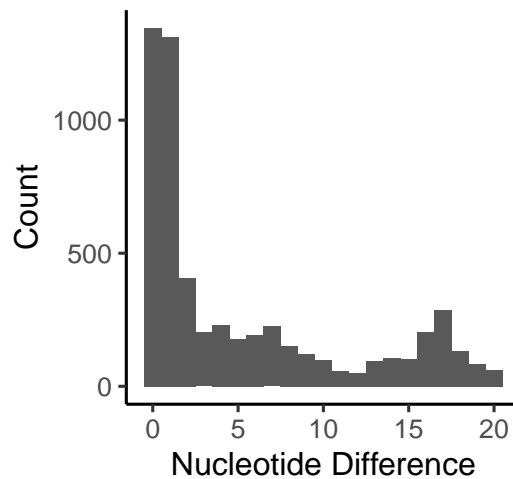
IGHV4-34*01_02

17623 sequences assigned
4057 (23%) exact matches, in which:
2697 unique CDR3
6 unique J



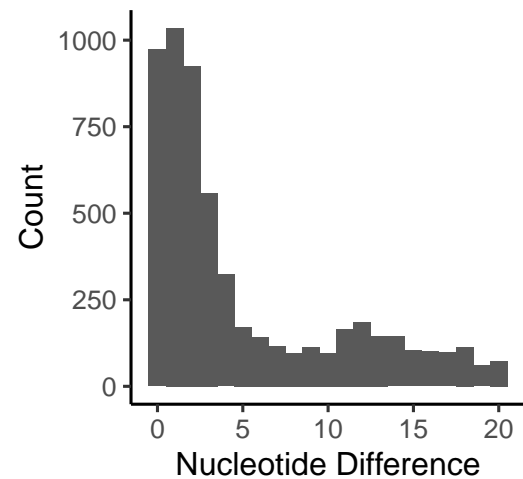
IGHV4-59*08

6414 sequences assigned
1346 (21%) exact matches, in which:
1072 unique CDR3
6 unique J



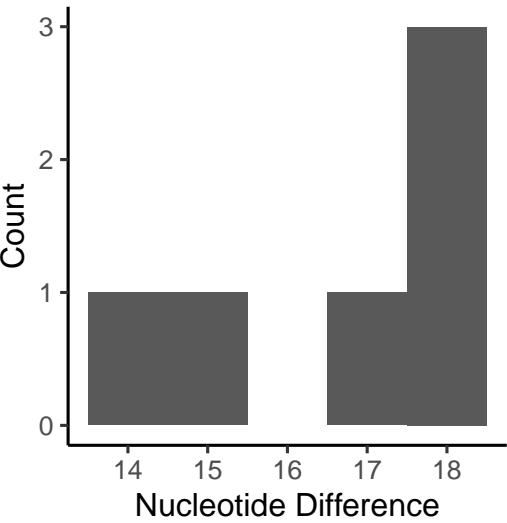
IGHV4-61*02

6891 sequences assigned
973 (14.1%) exact matches, in which:
842 unique CDR3
6 unique J



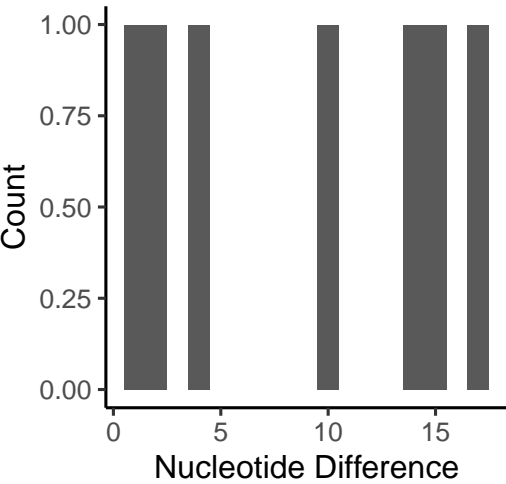
IGHV1/OR15-1*04

6 sequences assigned
No exact matches.



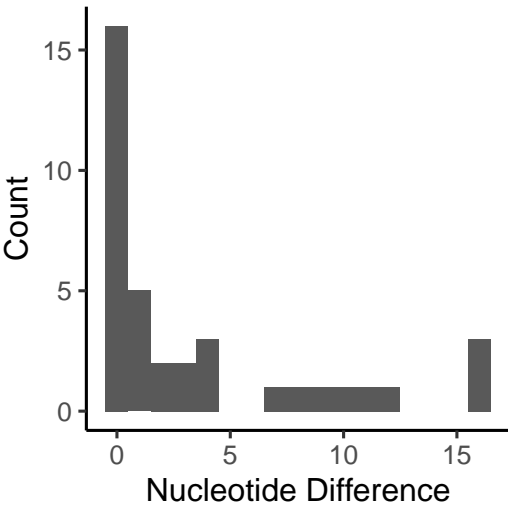
IGHV4/OR15-8*01

11 sequences assigned
No exact matches.



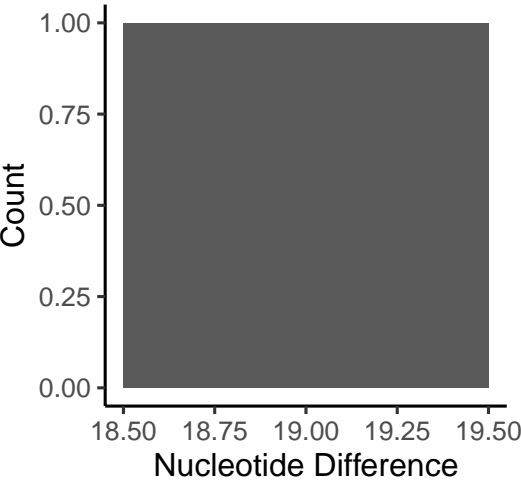
IGHV5-51*04

65 sequences assigned
16 (24.6%) exact matches, in which:
15 unique CDR3
3 unique J



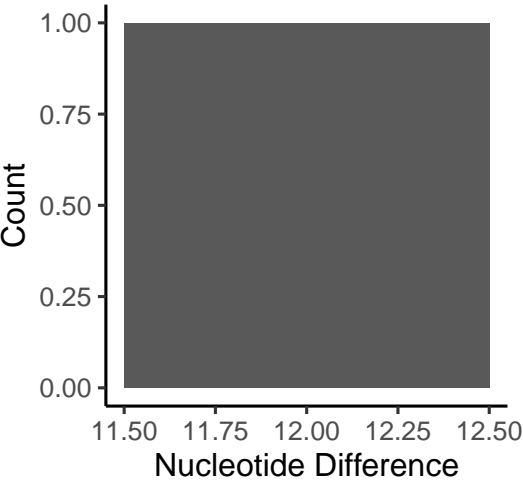
IGHV1/OR15-2*02_03

2 sequences assigned
No exact matches.



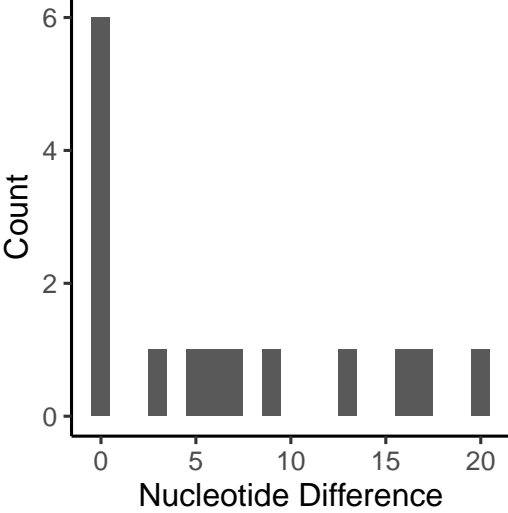
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



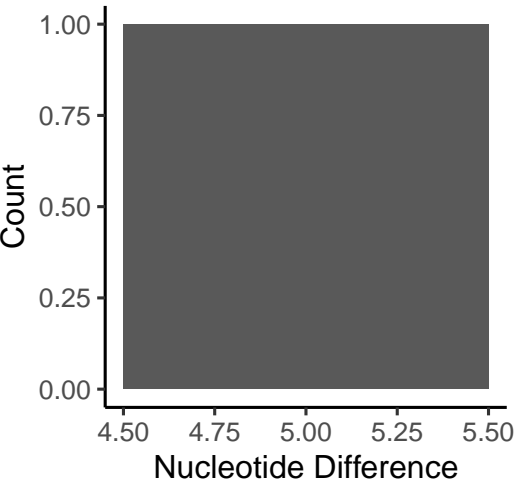
IGHV5-51*06

15 sequences assigned
6 (40%) exact matches, in which:
6 unique CDR3
4 unique J



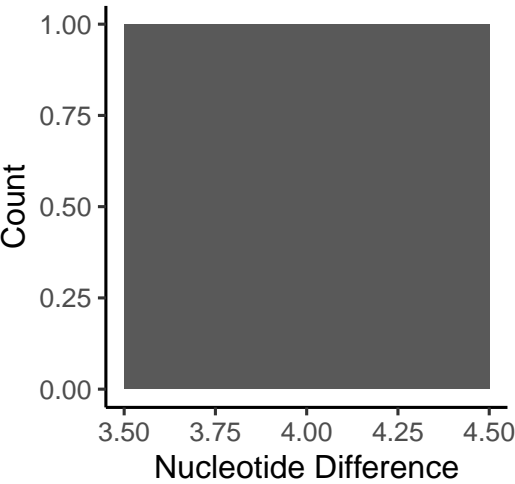
IGHV1/OR15-3*02

1 sequences assigned
No exact matches.



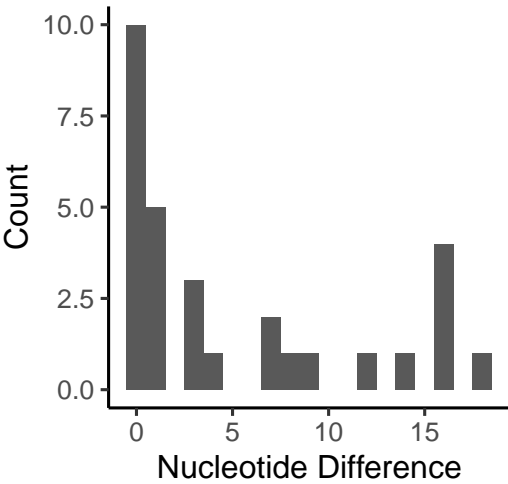
IGHV5-10-1*01_03

2 sequences assigned
No exact matches.



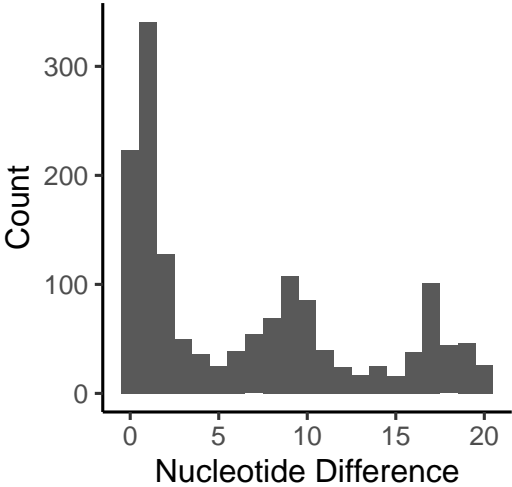
IGHV5-51*07

32 sequences assigned
10 (31.2%) exact matches, in which:
10 unique CDR3
5 unique J



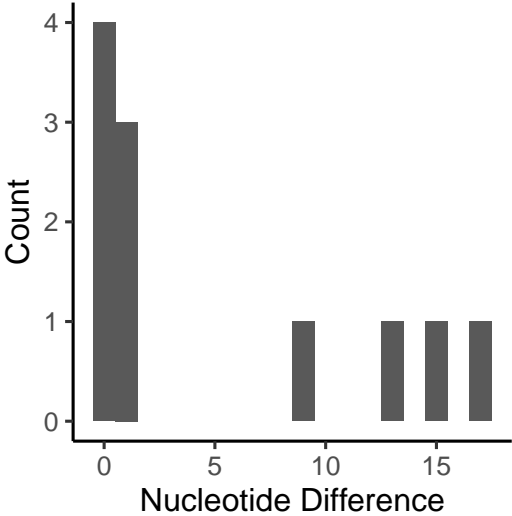
IGHV6-1*01_02

1626 sequences assigned
223 (13.7%) exact matches, in which:
181 unique CDR3
6 unique J

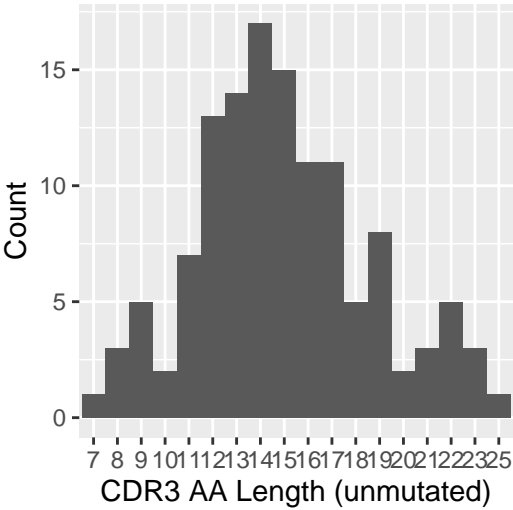


IGHV7-4-1*02

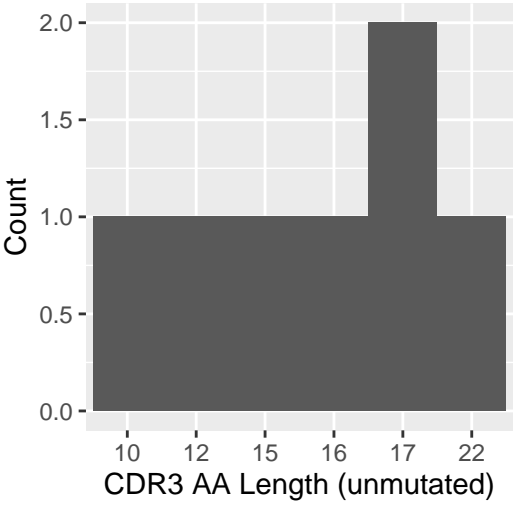
11 sequences assigned
4 (36.4%) exact matches, in which:
3 unique CDR3
1 unique J



IGHV3-53*01_02_G81A_A225G_T267G_G303A



IGHV3-72*01_A284G_A286G_C300T





[illegible]