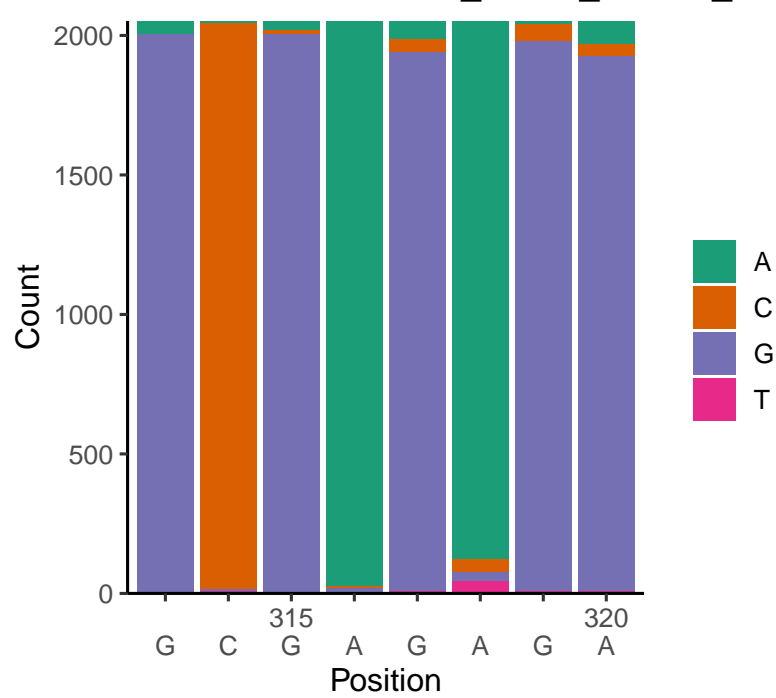
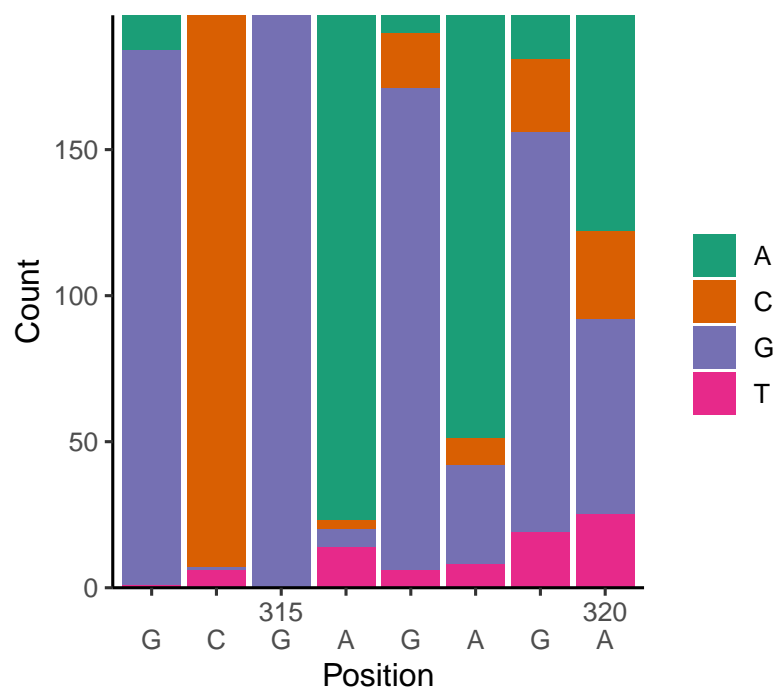


Gene IGHV3-64*01_C86G_T105C_C113T_G163A_T171C_T189C_C203G_G216T_A26



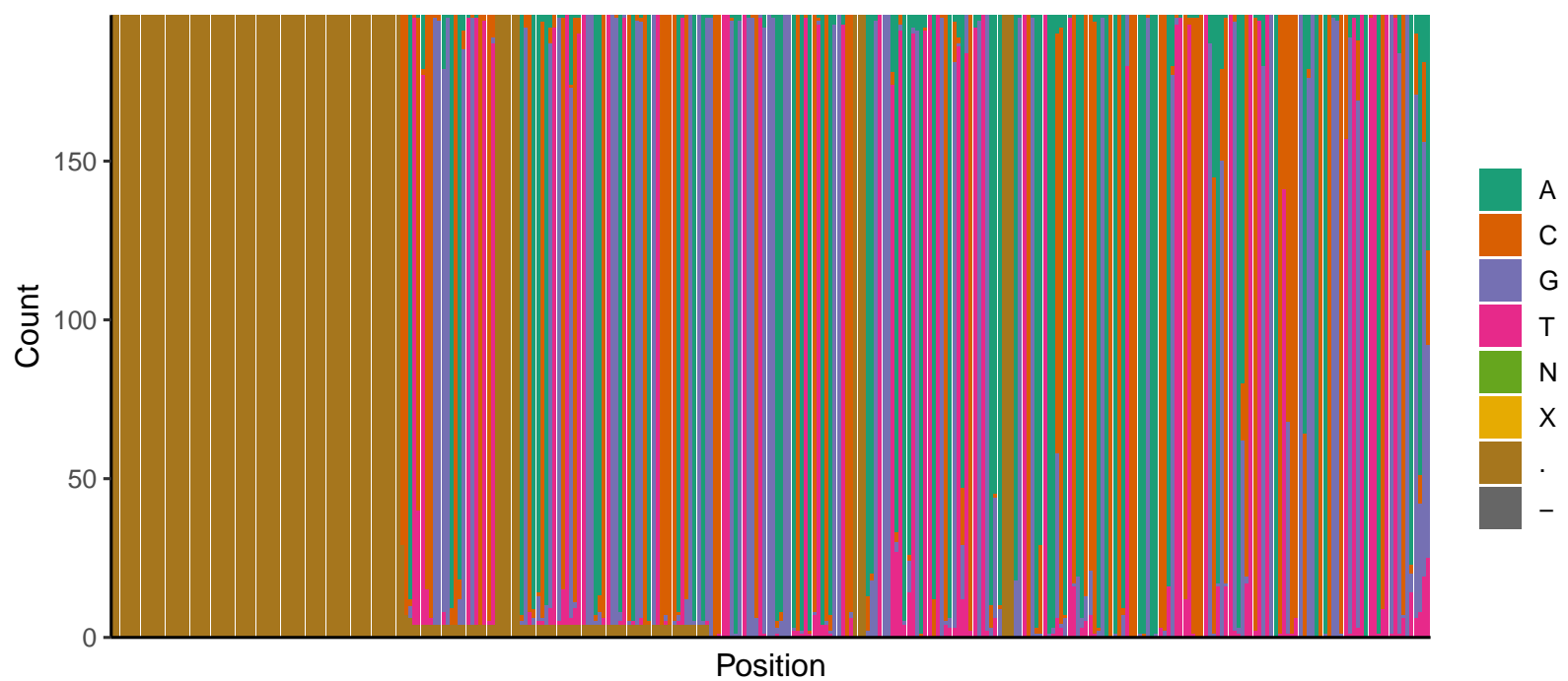
Gene IGHV6-1*01_02_A315G



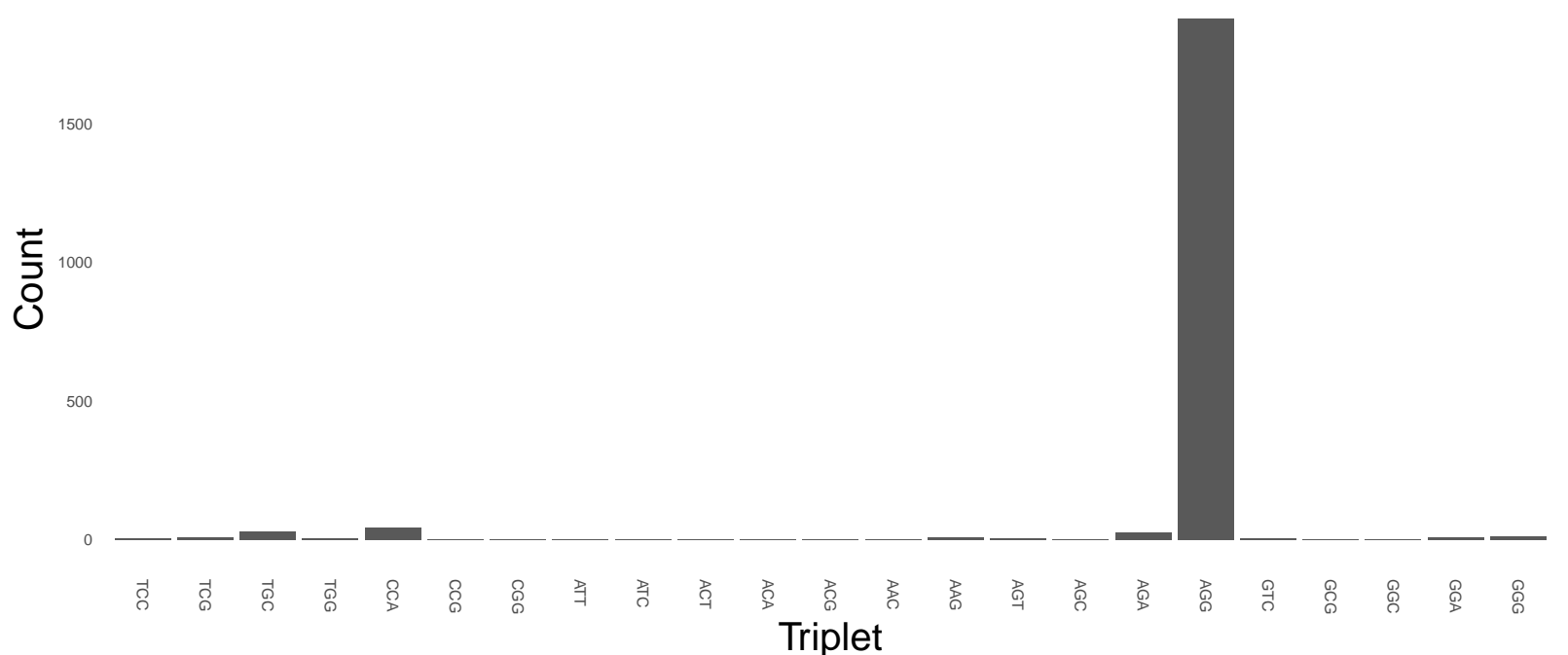
Gene IGHV3-64*01_C86G_T105C_C113T_G163A_T171C_T189C_C203G_G216T_A26



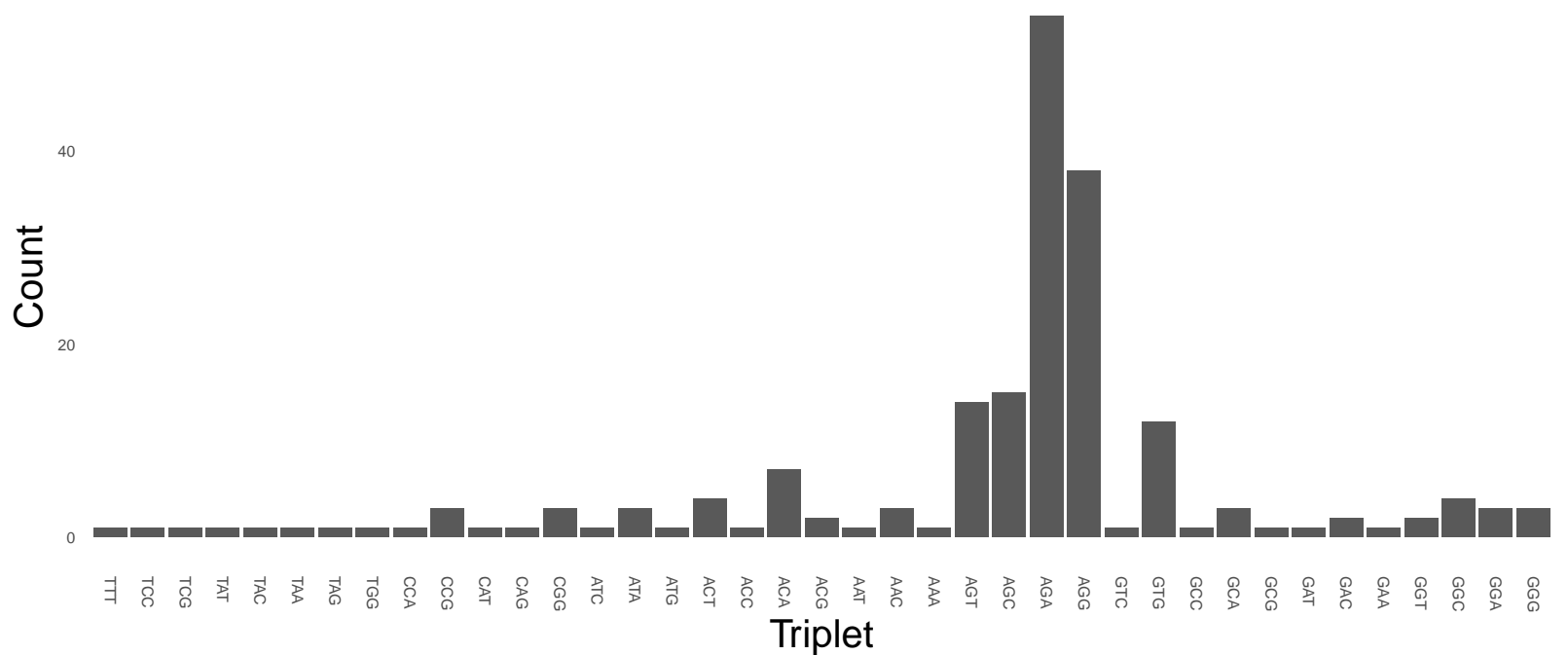
Gene IGHV6-1*01_02_A315G



IGHV3-64*01_C86G_T105C_C113T_G163A_T171C_T189C_C203G_G216T_A263T_G303C- F

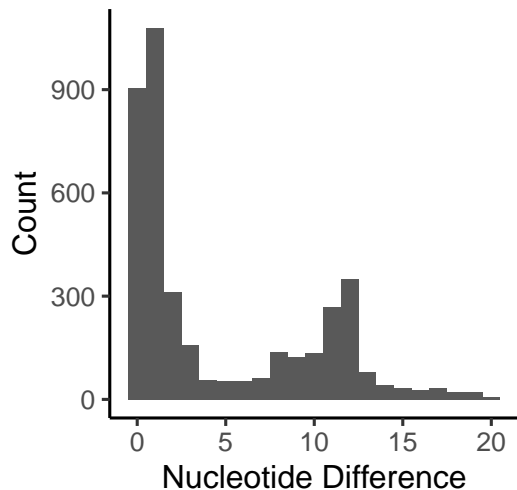


IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet



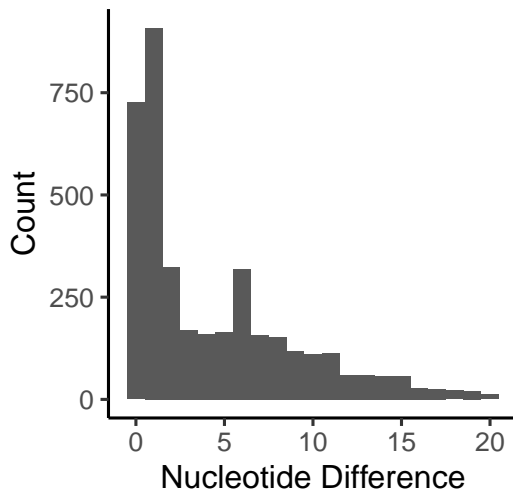
IGHV1-2*04

4035 sequences assigned
905 (22.4%) exact matches, in which:
734 unique CDR3
6 unique J



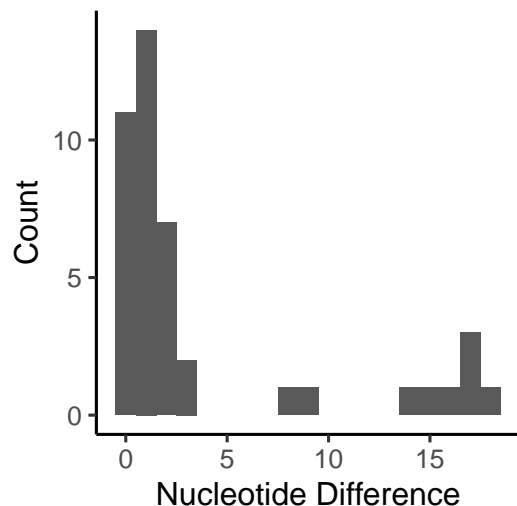
IGHV1-18*01

4189 sequences assigned
726 (17.3%) exact matches, in which:
616 unique CDR3
6 unique J



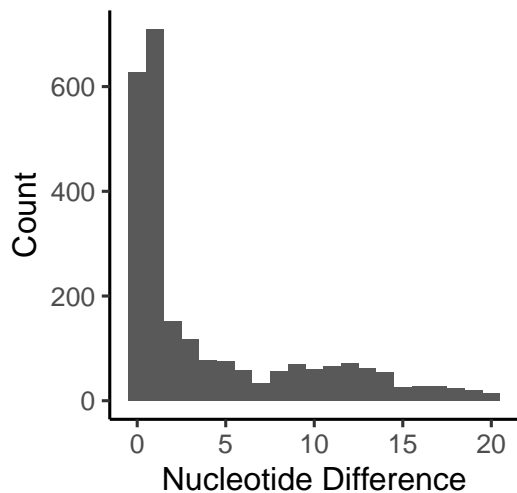
IGHV1-45*02

43 sequences assigned
11 (25.6%) exact matches, in which:
8 unique CDR3
4 unique J



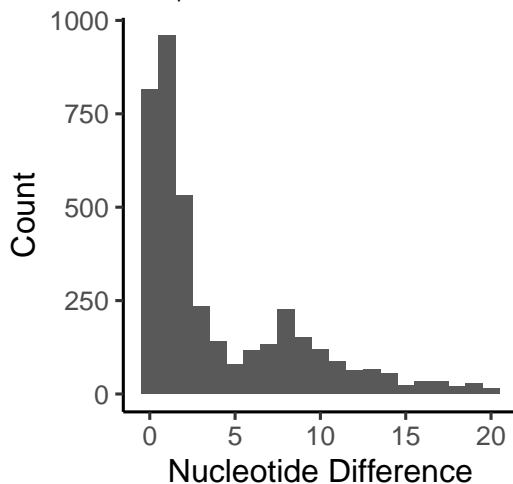
IGHV1-3*01_05

2808 sequences assigned
627 (22.3%) exact matches, in which:
488 unique CDR3
6 unique J



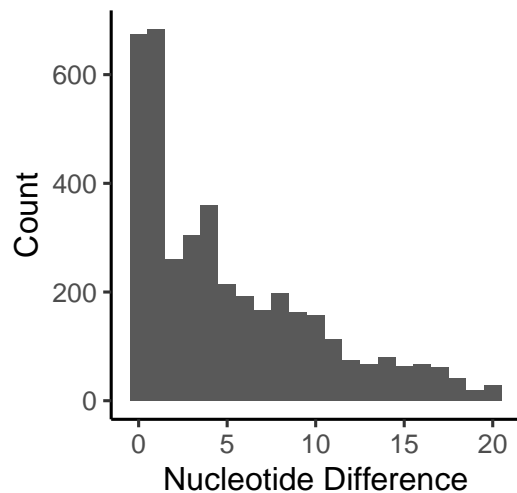
IGHV1-18*04

4284 sequences assigned
816 (19%) exact matches, in which:
659 unique CDR3
6 unique J



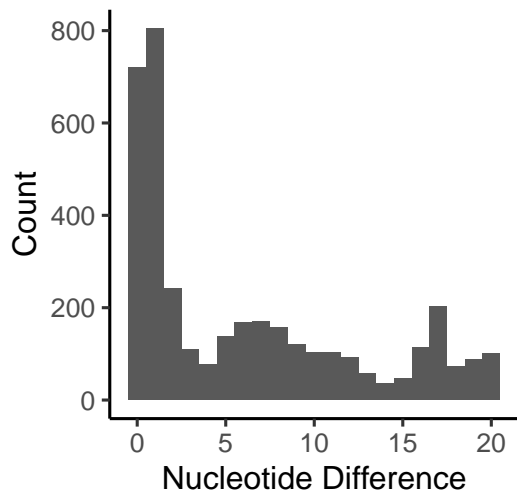
IGHV1-46*01

4155 sequences assigned
674 (16.2%) exact matches, in which:
580 unique CDR3
6 unique J



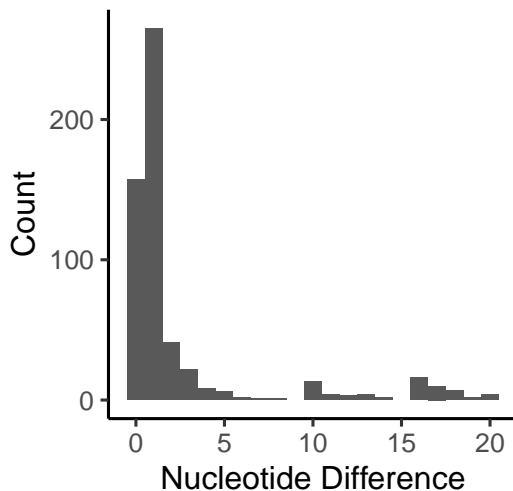
IGHV1-8*01

3878 sequences assigned
721 (18.6%) exact matches, in which:
607 unique CDR3
6 unique J



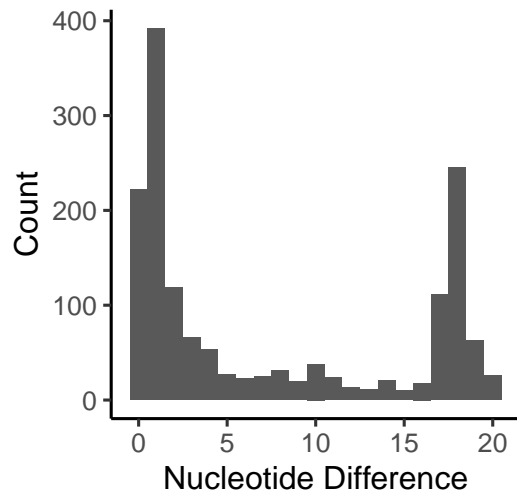
IGHV1-24*01

593 sequences assigned
157 (26.5%) exact matches, in which:
100 unique CDR3
6 unique J



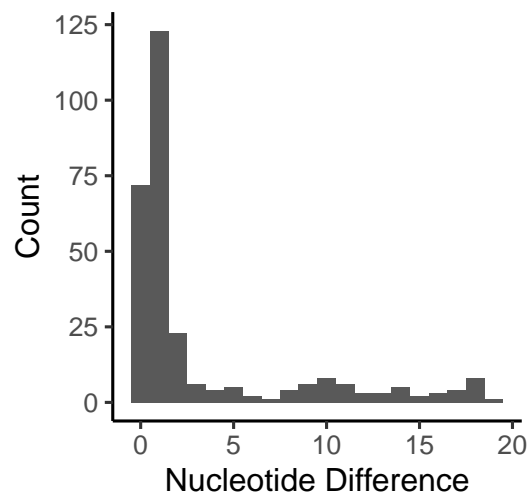
IGHV1-46*03

1627 sequences assigned
222 (13.6%) exact matches, in which:
152 unique CDR3
5 unique J



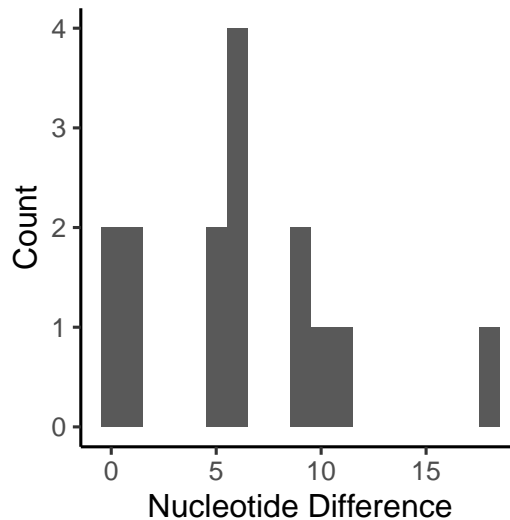
IGHV1–58*02

296 sequences assigned
72 (24.3%) exact matches, in which:
54 unique CDR3
5 unique J



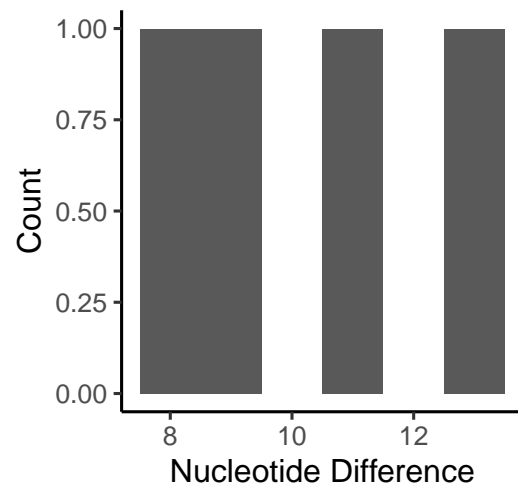
IGHV1–69–2*01

15 sequences assigned
2 (13.3%) exact matches, in which:
2 unique CDR3
1 unique J



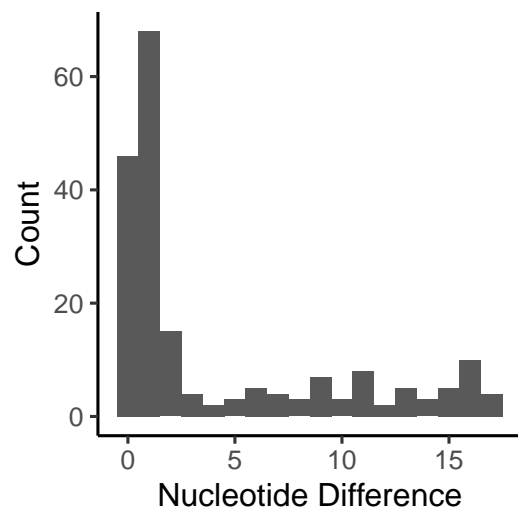
IGHV1–NL1*01

4 sequences assigned
No exact matches.



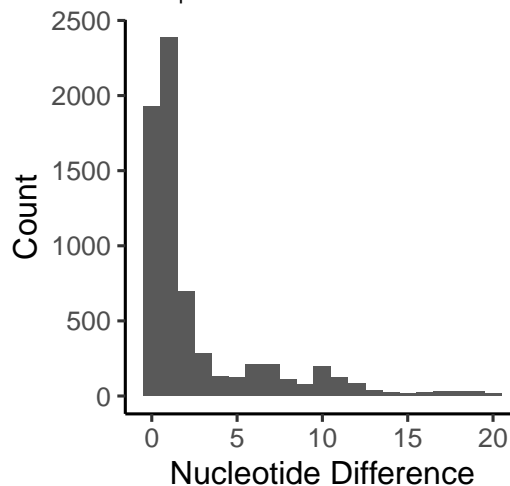
IGHV1–58*01_03

206 sequences assigned
46 (22.3%) exact matches, in which:
35 unique CDR3
4 unique J



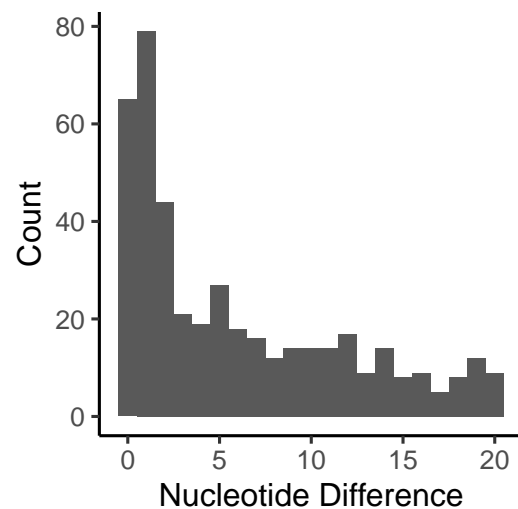
IGHV1–69*01_12_13

7051 sequences assigned
1930 (27.4%) exact matches, in which:
1597 unique CDR3
6 unique J



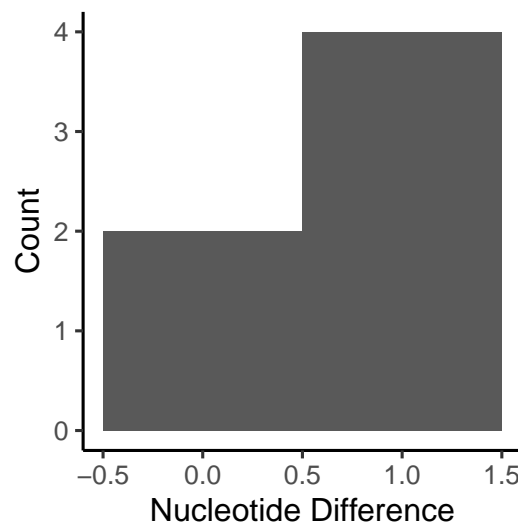
IGHV2–5*01

475 sequences assigned
65 (13.7%) exact matches, in which:
53 unique CDR3
6 unique J



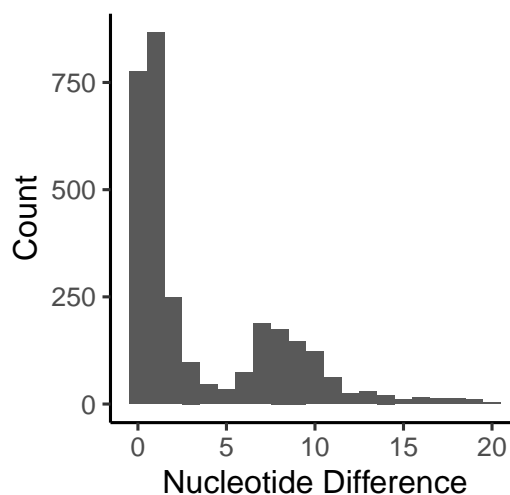
IGHV1–68*01

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



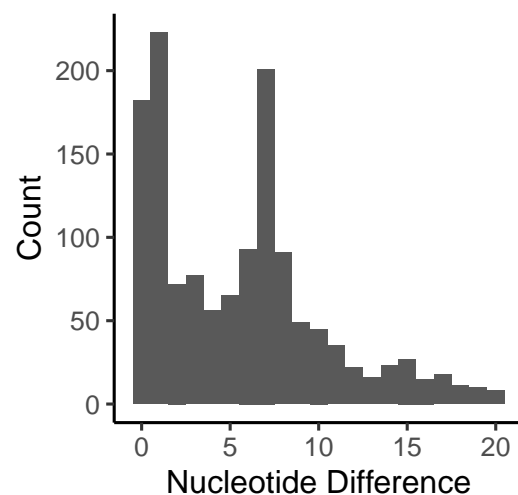
IGHV1–69*06_14

3014 sequences assigned
776 (25.7%) exact matches, in which:
679 unique CDR3
6 unique J



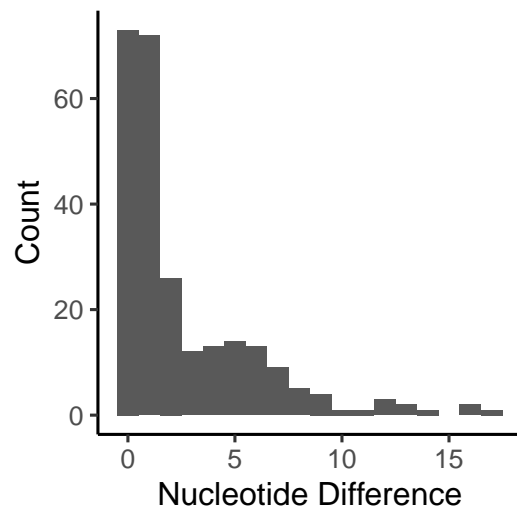
IGHV2–5*02

1684 sequences assigned
182 (10.8%) exact matches, in which:
141 unique CDR3
5 unique J



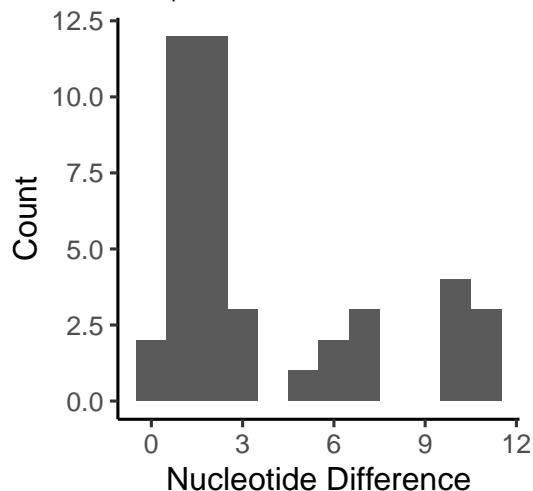
IGHV2-26*01

254 sequences assigned
73 (28.7%) exact matches, in which:
63 unique CDR3
5 unique J



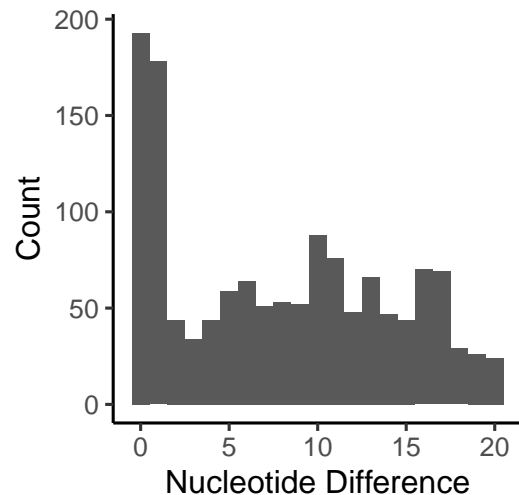
IGHV2-70*12

42 sequences assigned
2 (4.8%) exact matches, in which:
2 unique CDR3
2 unique J



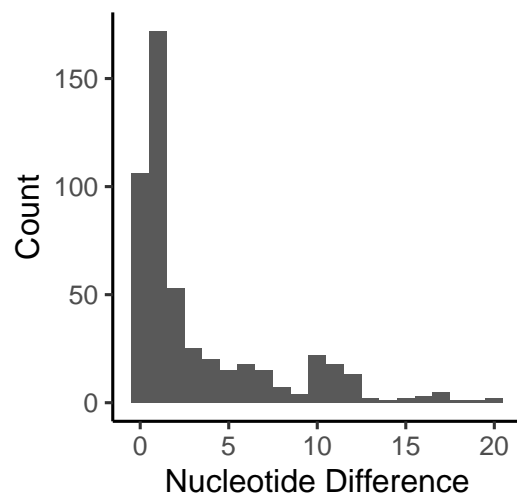
IGHV3-7*05

1634 sequences assigned
193 (11.8%) exact matches, in which:
138 unique CDR3
5 unique J



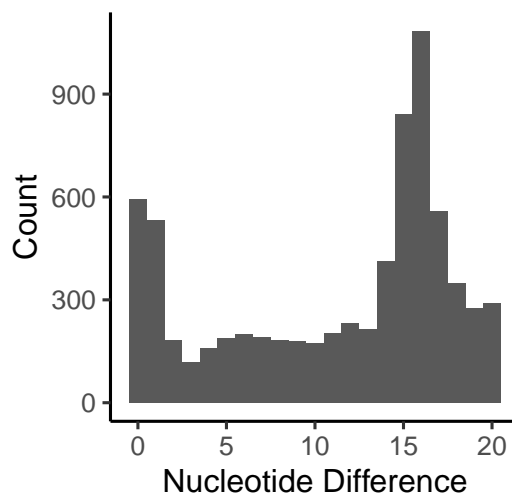
IGHV2-70*01

509 sequences assigned
106 (20.8%) exact matches, in which:
72 unique CDR3
5 unique J



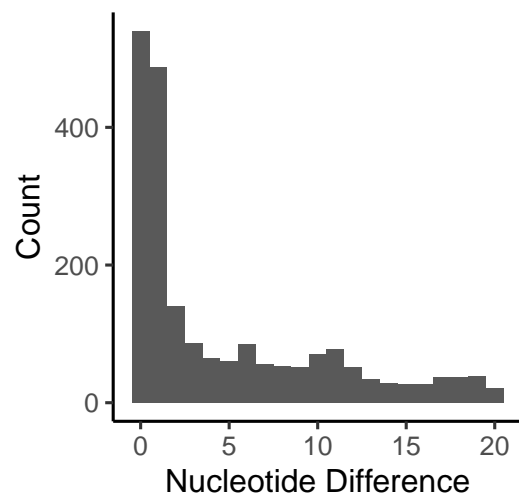
IGHV3-7*01

9547 sequences assigned
594 (6.2%) exact matches, in which:
400 unique CDR3
5 unique J



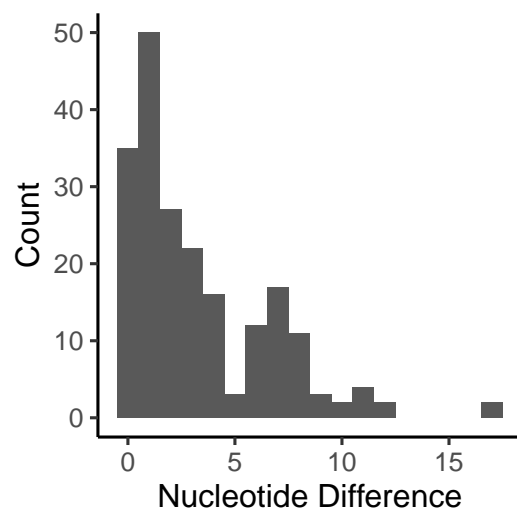
IGHV3-9*01

2428 sequences assigned
540 (22.2%) exact matches, in which:
310 unique CDR3
6 unique J



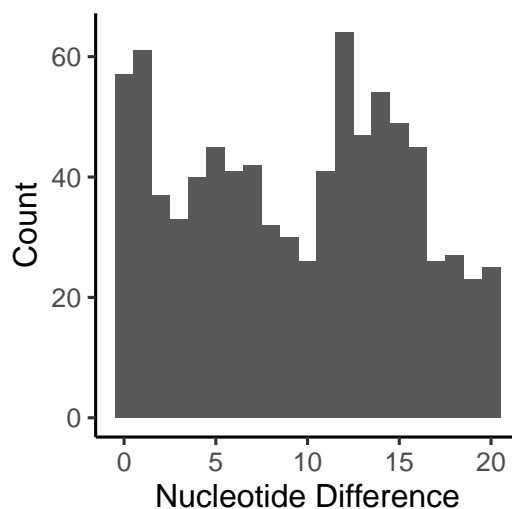
IGHV2-70*04

214 sequences assigned
35 (16.4%) exact matches, in which:
28 unique CDR3
4 unique J



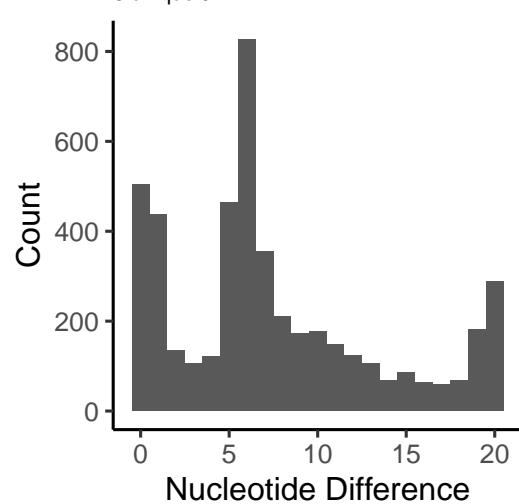
IGHV3-7*03

981 sequences assigned
57 (5.8%) exact matches, in which:
49 unique CDR3
5 unique J



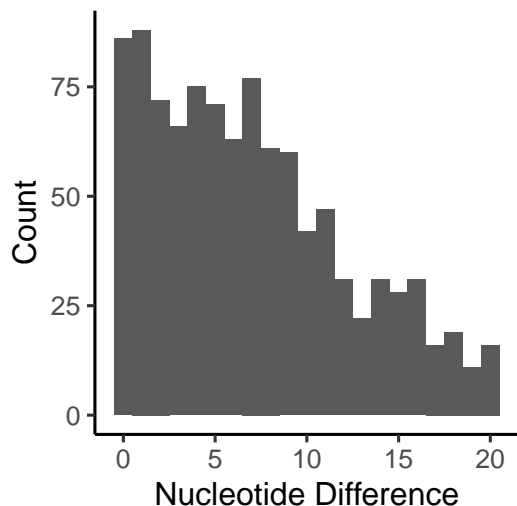
IGHV3-11*01

5074 sequences assigned
504 (9.9%) exact matches, in which:
324 unique CDR3
6 unique J



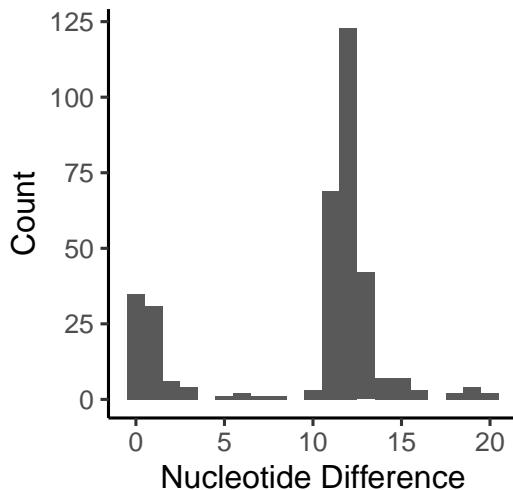
IGHV3-11*04

1053 sequences assigned
86 (8.2%) exact matches, in which:
82 unique CDR3
5 unique J



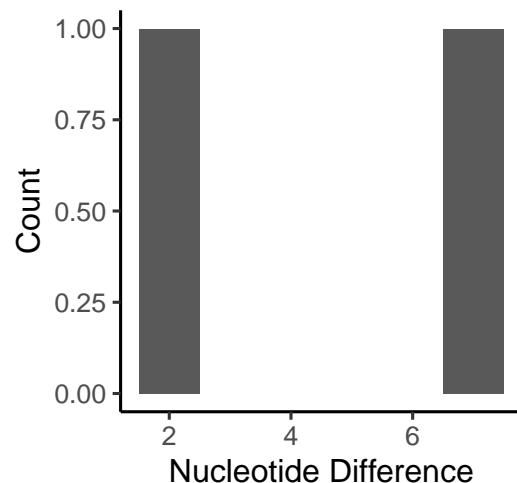
IGHV3-13*05

350 sequences assigned
35 (10%) exact matches, in which:
23 unique CDR3
4 unique J



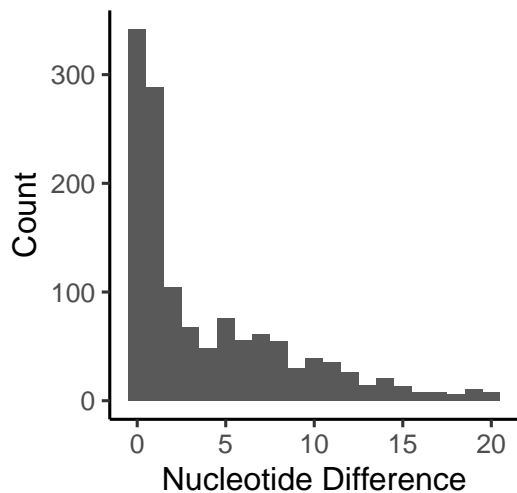
IGHV3-19*01

2 sequences assigned
No exact matches.



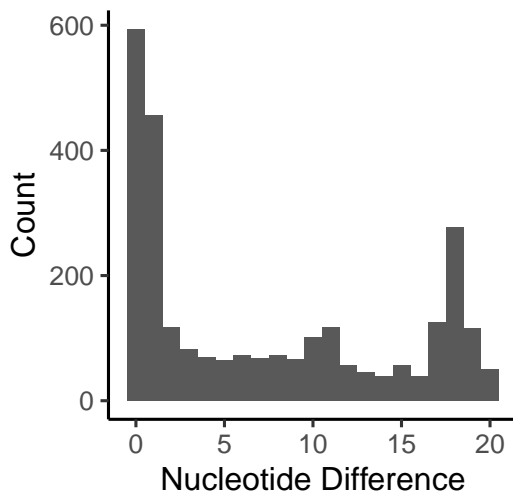
IGHV3-11*06

1631 sequences assigned
342 (21%) exact matches, in which:
243 unique CDR3
6 unique J



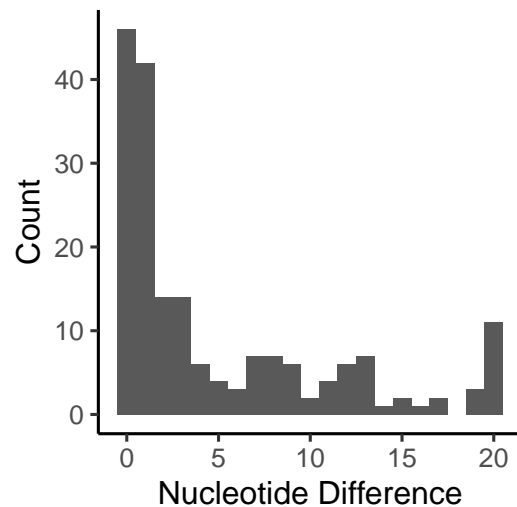
IGHV3-15*07

3809 sequences assigned
594 (15.6%) exact matches, in which:
360 unique CDR3
5 unique J



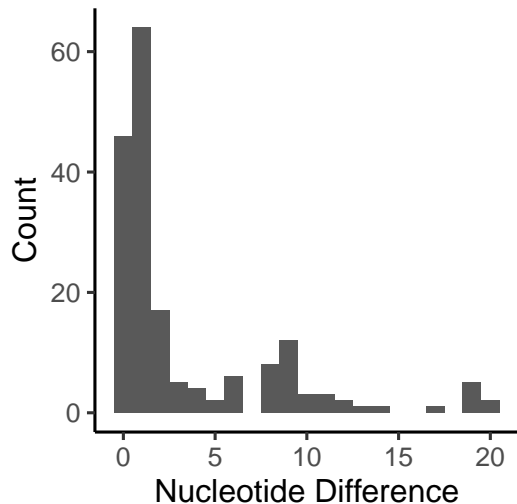
IGHV3-20*03_04

392 sequences assigned
46 (11.7%) exact matches, in which:
30 unique CDR3
5 unique J



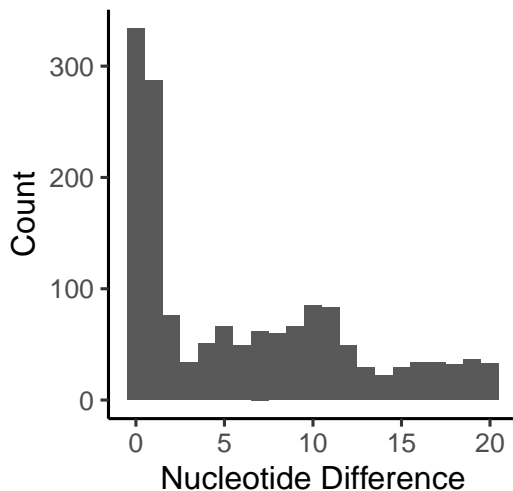
IGHV3-13*01

212 sequences assigned
46 (21.7%) exact matches, in which:
23 unique CDR3
3 unique J



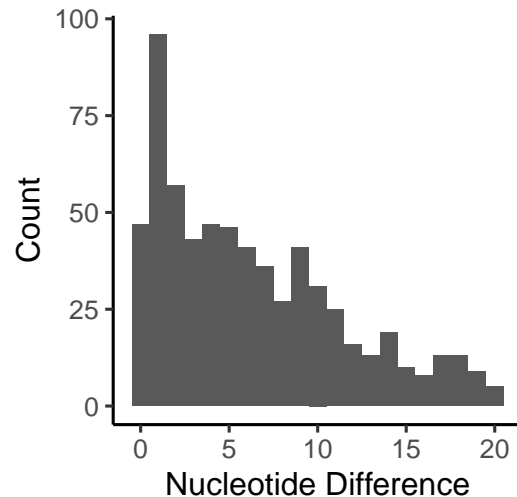
IGHV3-15*01_02

1932 sequences assigned
334 (17.3%) exact matches, in which:
209 unique CDR3
5 unique J



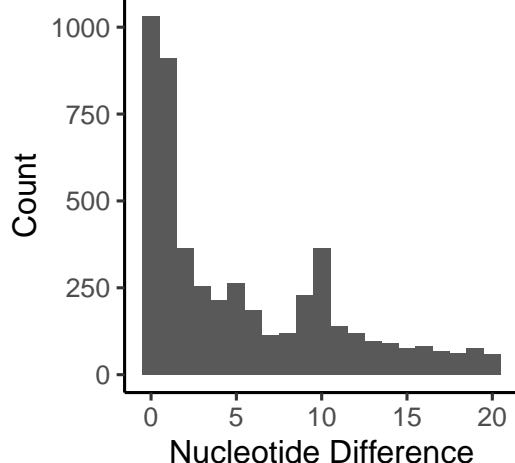
IGHV3-21*04

709 sequences assigned
47 (6.6%) exact matches, in which:
45 unique CDR3
5 unique J



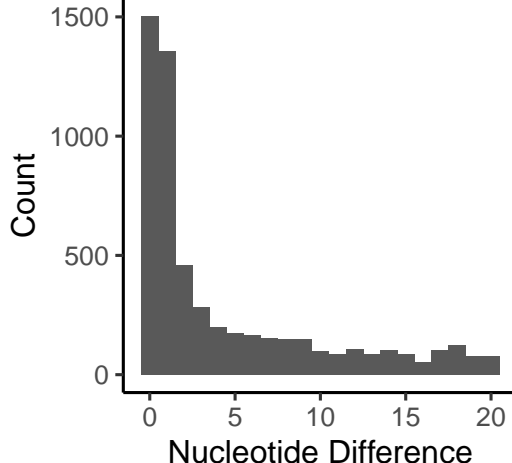
IGHV3-21*01_02

5328 sequences assigned
1031 (19.4%) exact matches, in which:
687 unique CDR3
6 unique J



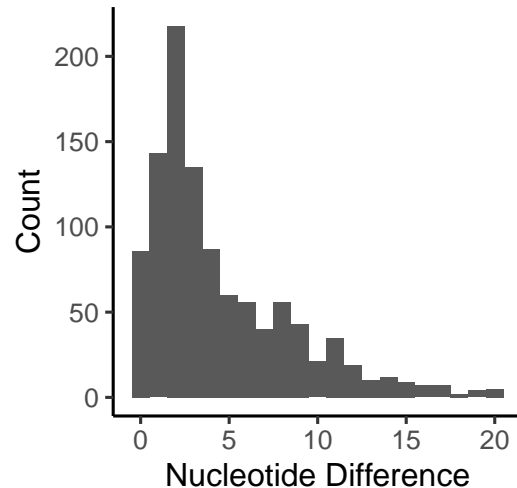
IGHV3-30*03

7881 sequences assigned
1502 (19.1%) exact matches, in which:
1006 unique CDR3
6 unique J



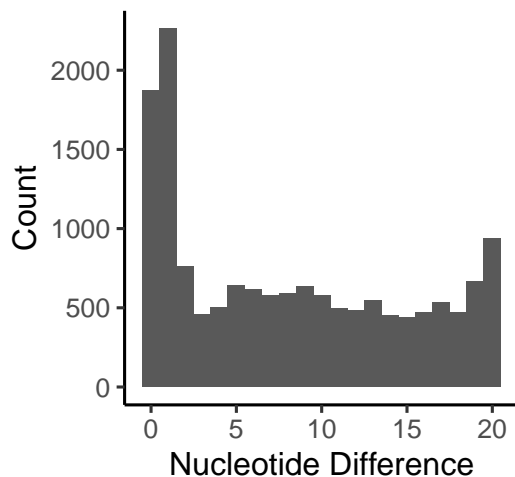
IGHV3-33*06

1083 sequences assigned
86 (7.9%) exact matches, in which:
82 unique CDR3
6 unique J



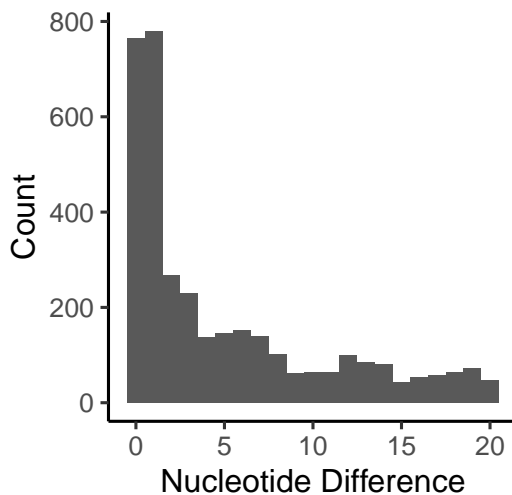
IGHV3-23*01_04

25275 sequences assigned
1873 (7.4%) exact matches, in which:
1069 unique CDR3
6 unique J



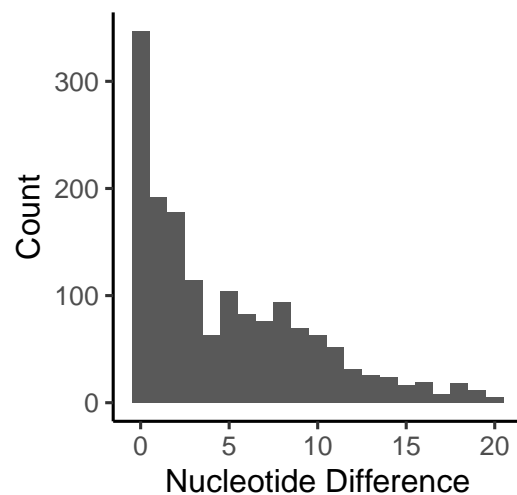
IGHV3-30*18

4078 sequences assigned
765 (18.8%) exact matches, in which:
444 unique CDR3
5 unique J



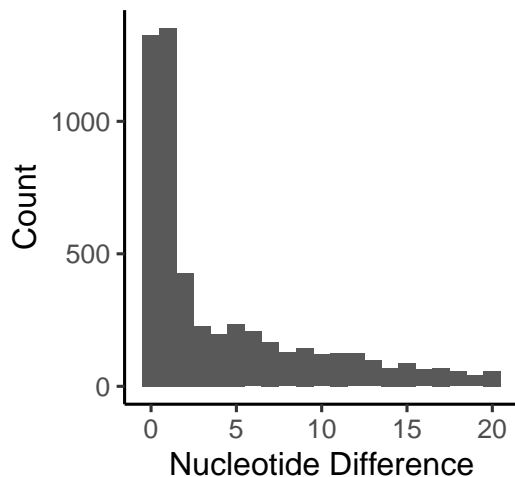
IGHV3-33*08

1684 sequences assigned
347 (20.6%) exact matches, in which:
260 unique CDR3
6 unique J



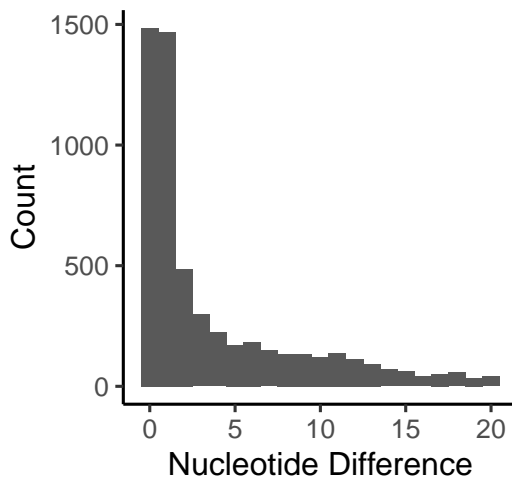
IGHV3-30-3*01

5821 sequences assigned
1325 (22.8%) exact matches, in which:
856 unique CDR3
6 unique J



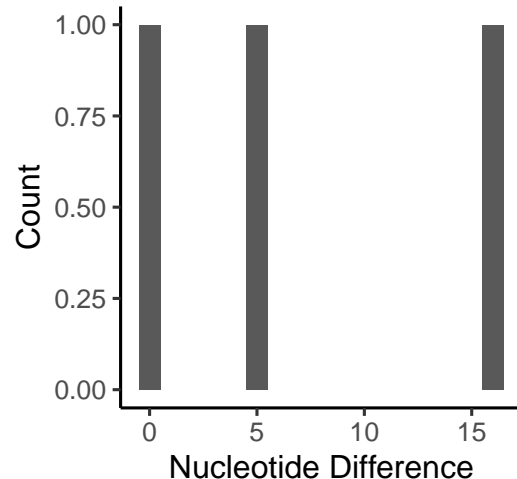
IGHV3-33*01

5934 sequences assigned
1485 (25%) exact matches, in which:
950 unique CDR3
6 unique J



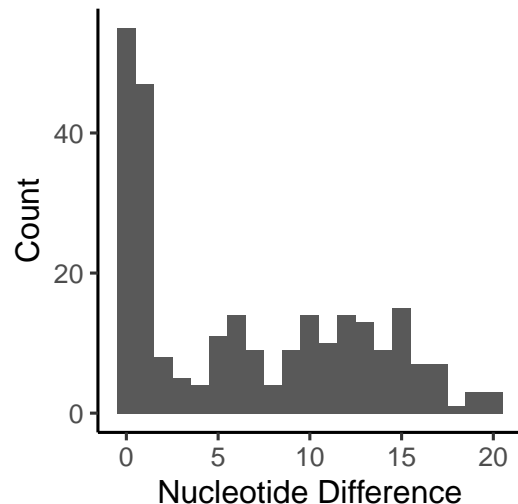
IGHV3-35*01

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



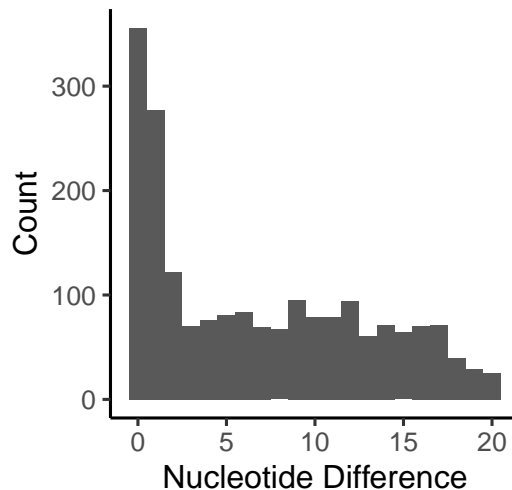
IGHV3-43*01

309 sequences assigned
55 (17.8%) exact matches, in which:
28 unique CDR3
5 unique J



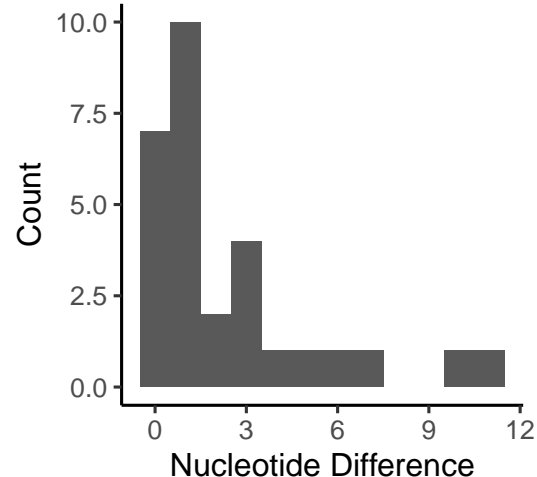
IGHV3-48*02

2118 sequences assigned
356 (16.8%) exact matches, in which:
224 unique CDR3
6 unique J



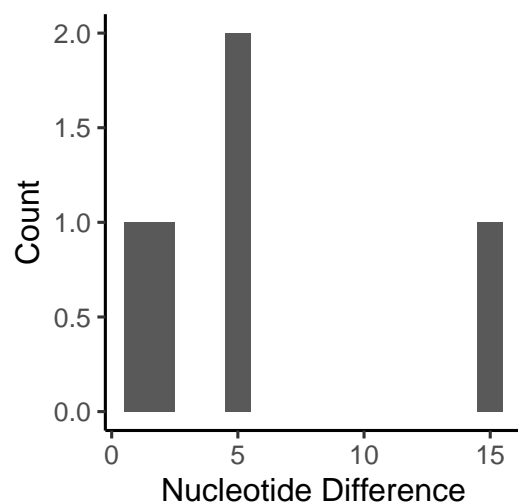
IGHV3-52*02

30 sequences assigned
7 (23.3%) exact matches, in which:
5 unique CDR3
1 unique J



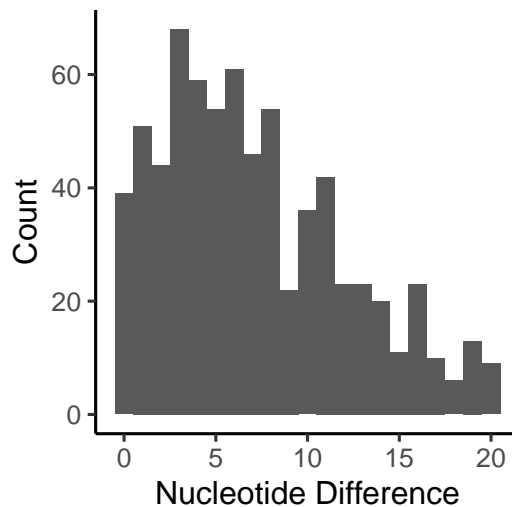
IGHV3-47*02

5 sequences assigned
No exact matches.



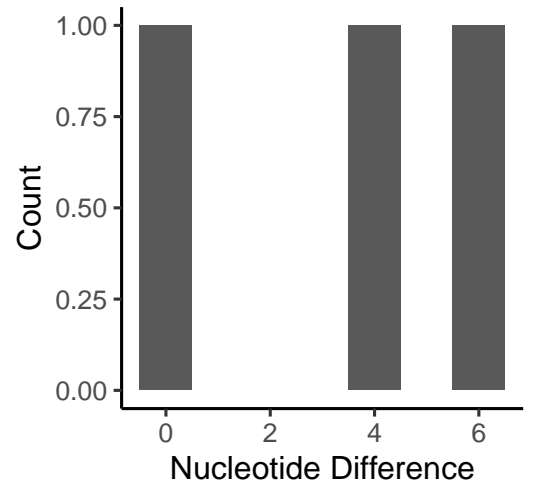
IGHV3-48*04

809 sequences assigned
39 (4.8%) exact matches, in which:
38 unique CDR3
6 unique J



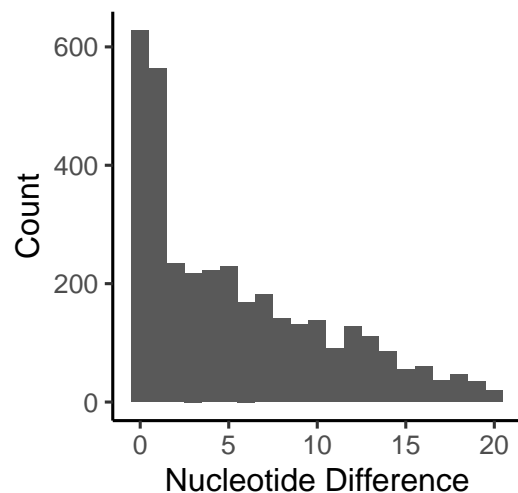
IGHV3-52*01_03

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



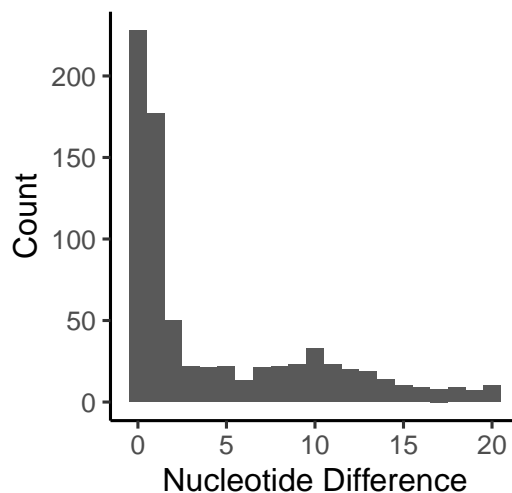
IGHV3-48*01

3630 sequences assigned
628 (17.3%) exact matches, in which:
418 unique CDR3
6 unique J



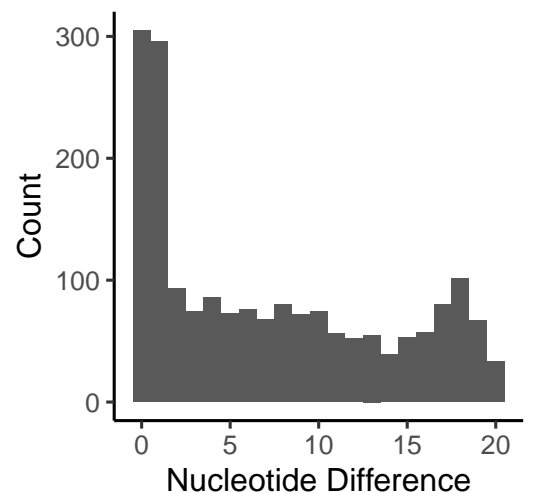
IGHV3-49*03_05

1043 sequences assigned
228 (21.9%) exact matches, in which:
138 unique CDR3
5 unique J



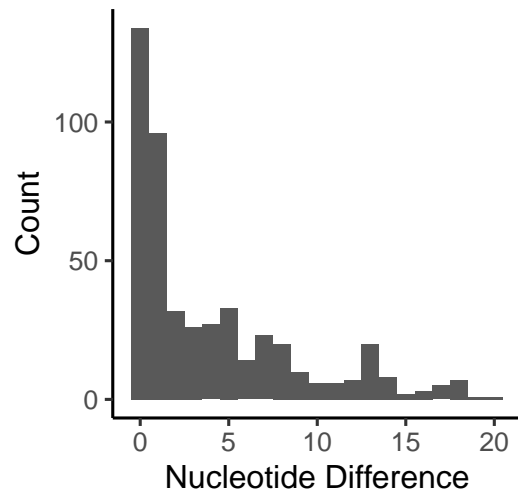
IGHV3-53*01_02

2212 sequences assigned
305 (13.8%) exact matches, in which:
201 unique CDR3
6 unique J



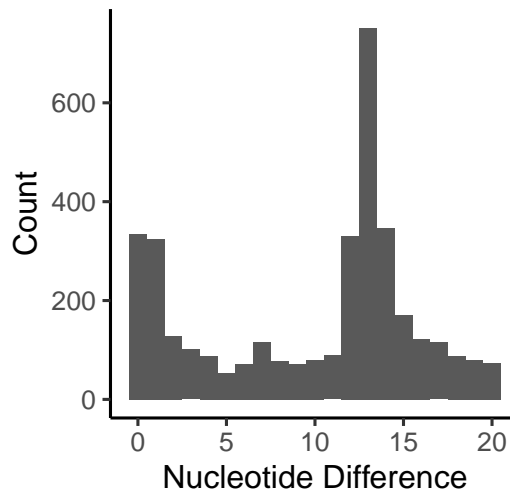
IGHV3-64*01

606 sequences assigned
134 (22.1%) exact matches, in which:
88 unique CDR3
5 unique J



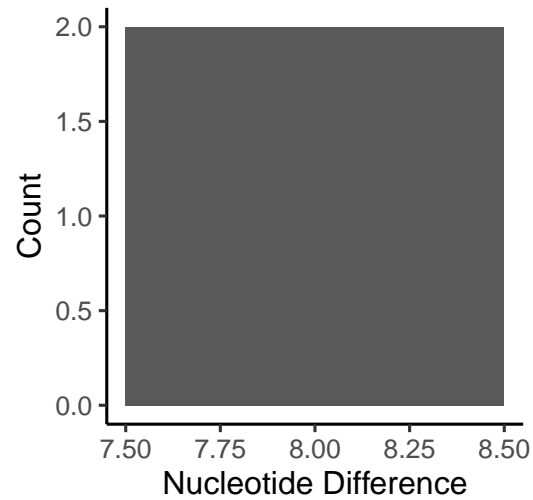
IGHV3-66*01

3903 sequences assigned
335 (8.6%) exact matches, in which:
215 unique CDR3
6 unique J



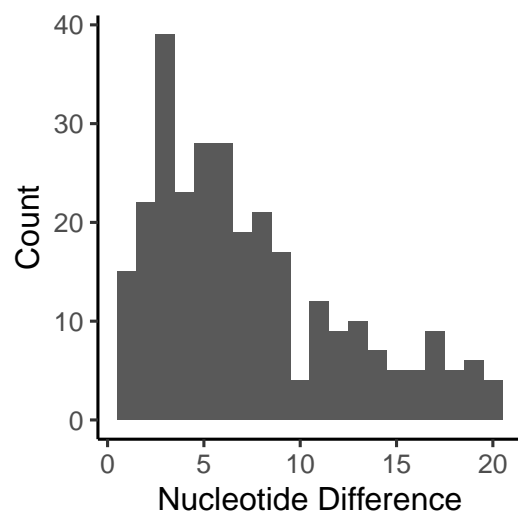
IGHV3-71*01_04

2 sequences assigned
No exact matches.



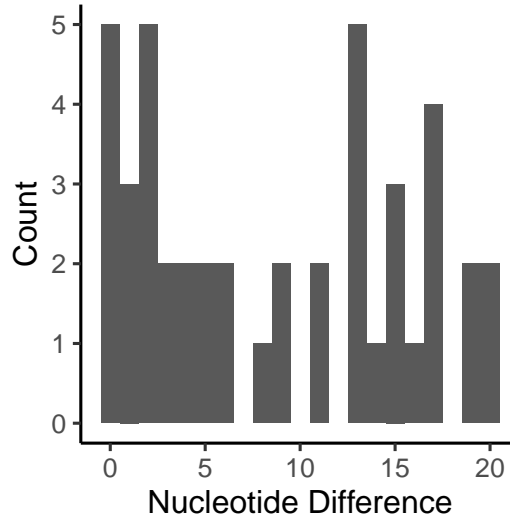
IGHV3-64*04

311 sequences assigned
No exact matches.



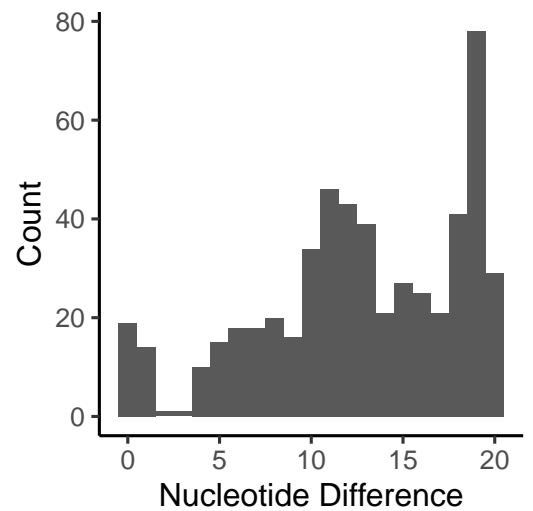
IGHV3-69-1*01

57 sequences assigned
5 (8.8%) exact matches, in which:
5 unique CDR3
3 unique J



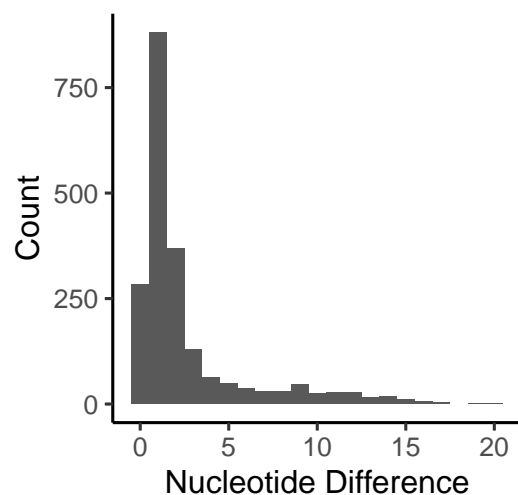
IGHV3-72*01

661 sequences assigned
19 (2.9%) exact matches, in which:
10 unique CDR3
3 unique J



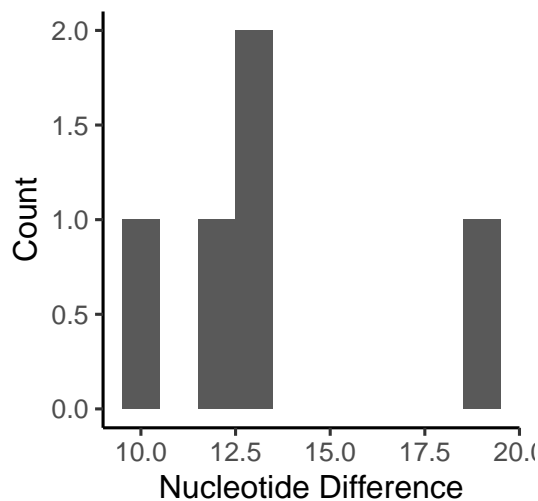
IGHV3-64*01_C86G_T1C

2052 sequences assigned
283 (13.8%) exact matches, in which:
112 unique CDR3
4 unique J



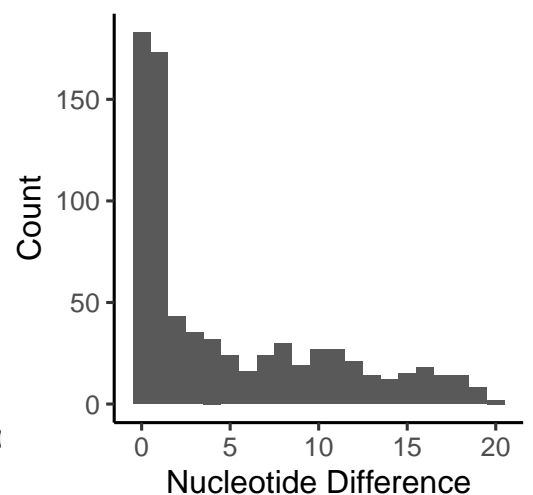
IGHV3-69-1*02

17 sequences assigned
No exact matches.



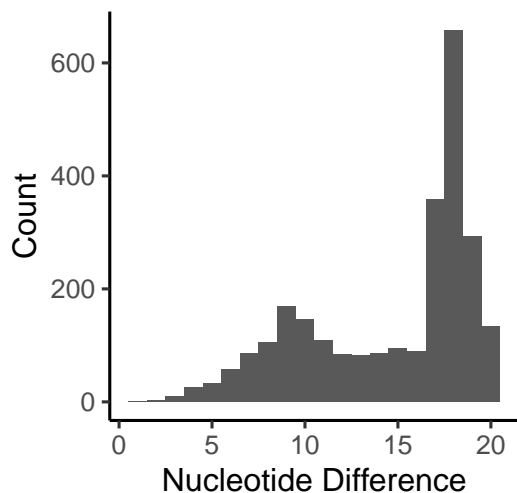
IGHV3-73*01_02

1712 sequences assigned
183 (10.7%) exact matches, in which:
111 unique CDR3
5 unique J



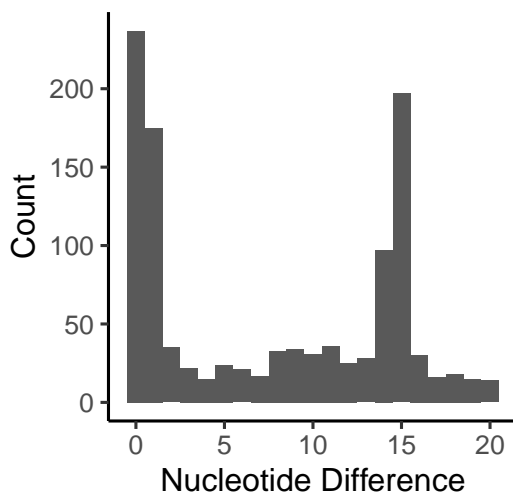
IGHV3-74*03

5380 sequences assigned
No exact matches.



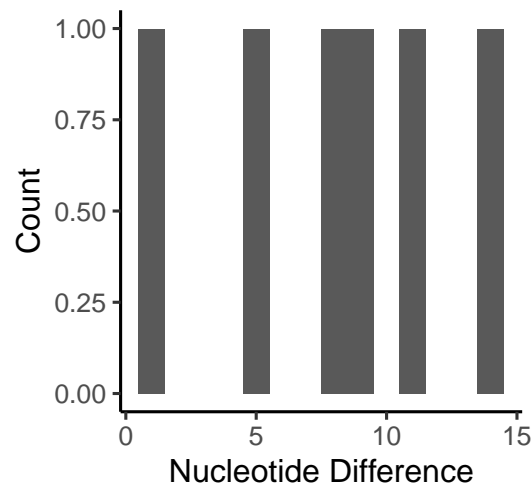
IGHV3-64D*08

1235 sequences assigned
237 (19.2%) exact matches, in which:
138 unique CDR3
5 unique J



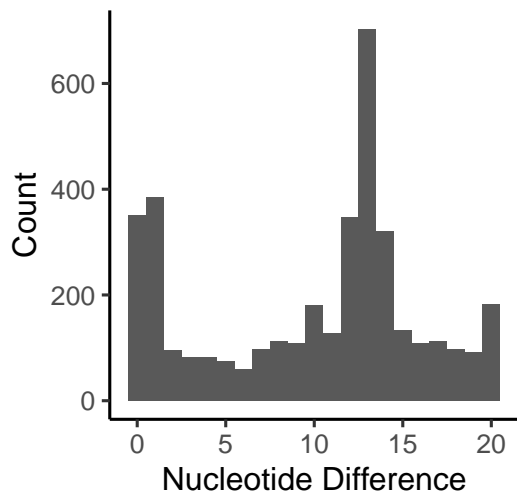
IGHV4-28*03

6 sequences assigned
No exact matches.



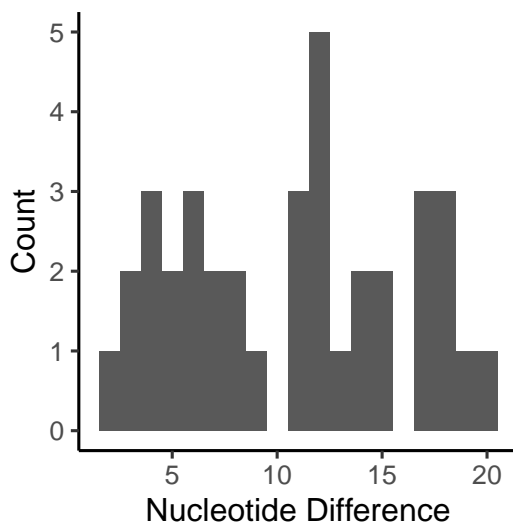
IGHV3-74*01_02

4710 sequences assigned
351 (7.5%) exact matches, in which:
186 unique CDR3
5 unique J



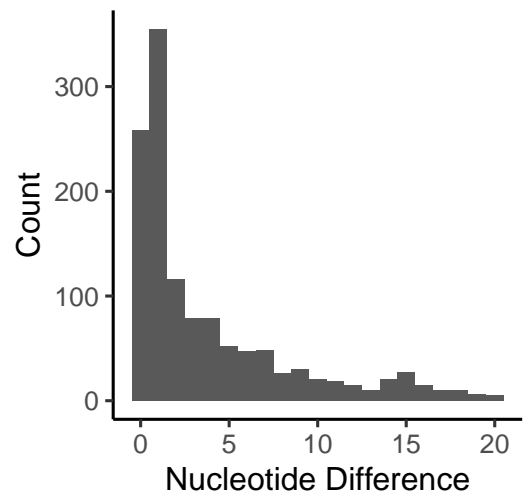
IGHV3-NL1*01

115 sequences assigned
No exact matches.



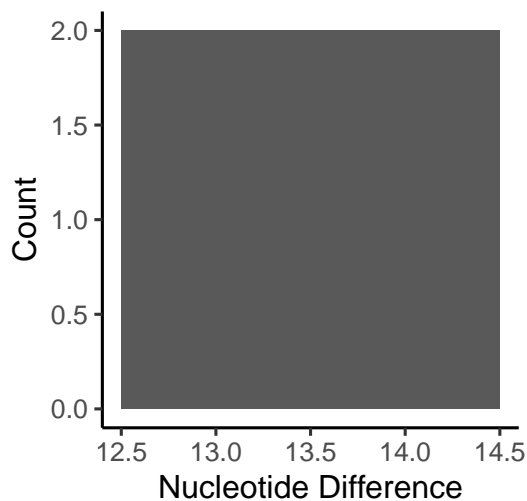
IGHV4-30-2*01

1757 sequences assigned
258 (14.7%) exact matches, in which:
152 unique CDR3
5 unique J



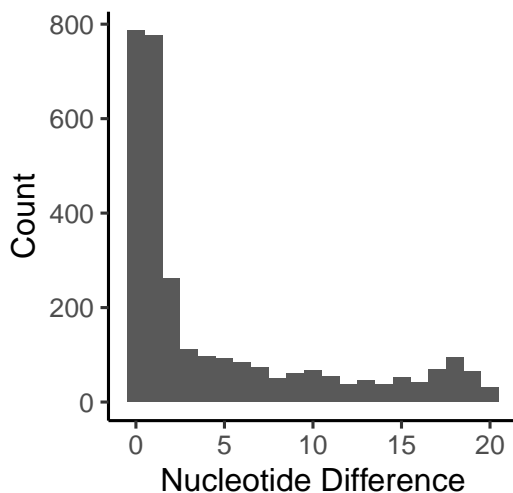
IGHV3-43D*04

4 sequences assigned
No exact matches.



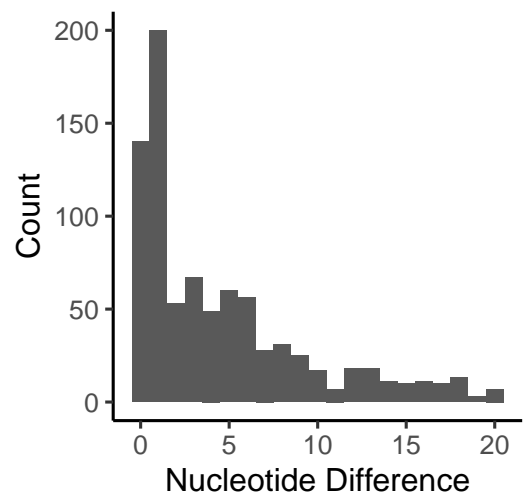
IGHV4-4*02_03

5072 sequences assigned
787 (15.5%) exact matches, in which:
591 unique CDR3
6 unique J



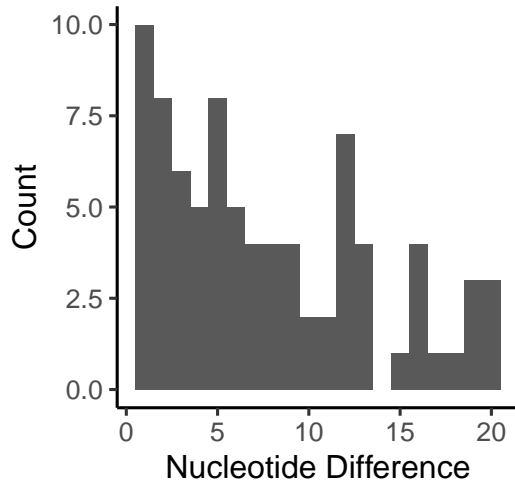
IGHV4-30-4*01

912 sequences assigned
140 (15.4%) exact matches, in which:
103 unique CDR3
5 unique J



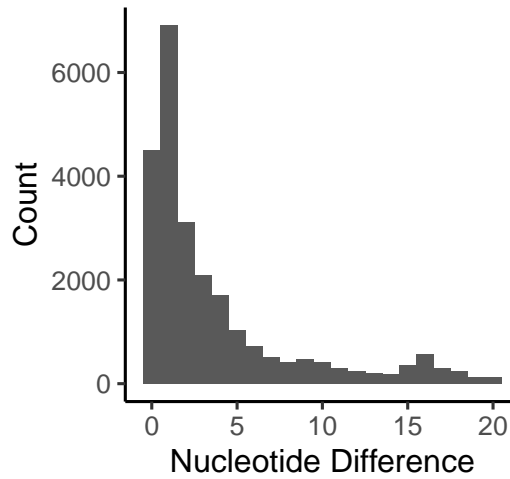
IGHV4-30-2*03

128 sequences assigned
No exact matches.



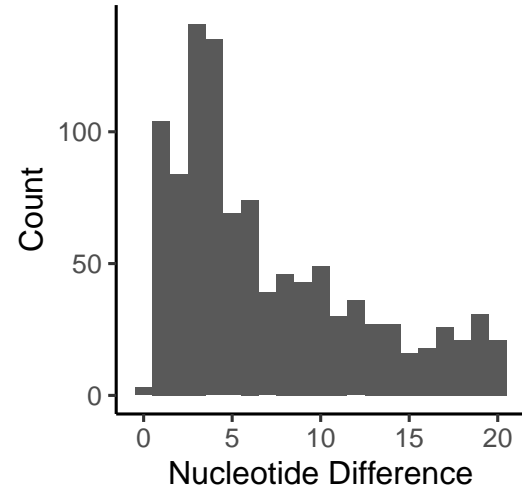
IGHV4-34*01_02

27521 sequences assigned
4496 (16.3%) exact matches, in which:
2992 unique CDR3
6 unique J



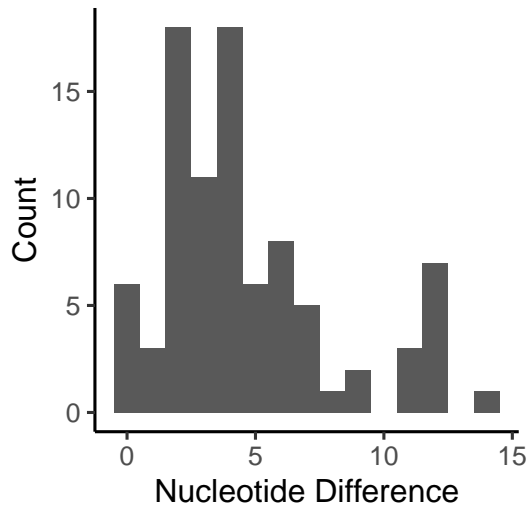
IGHV4-39*07

1255 sequences assigned
3 (0.2%) exact matches, in which:
3 unique CDR3
2 unique J



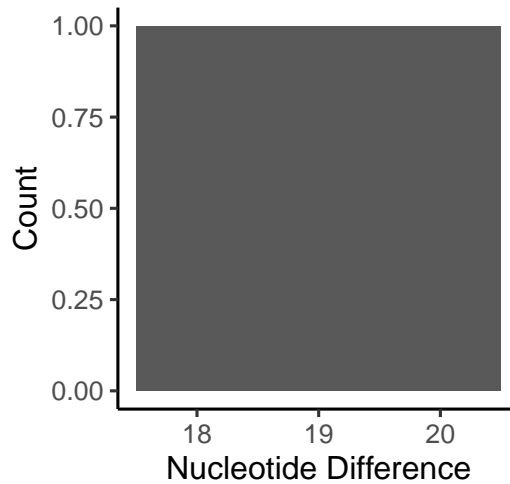
IGHV4-30-2*05

90 sequences assigned
6 (6.7%) exact matches, in which:
6 unique CDR3
3 unique J



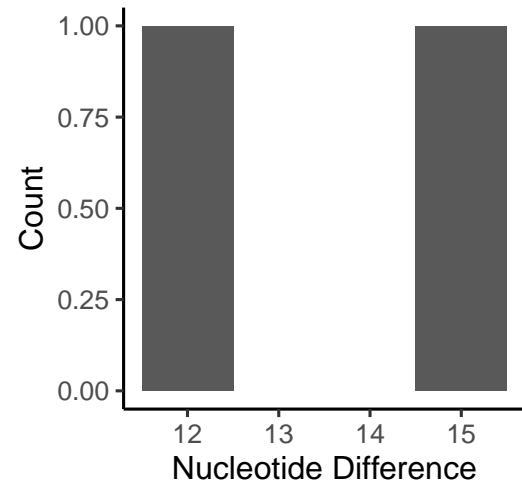
IGHV4-38-2*01

12 sequences assigned
No exact matches.



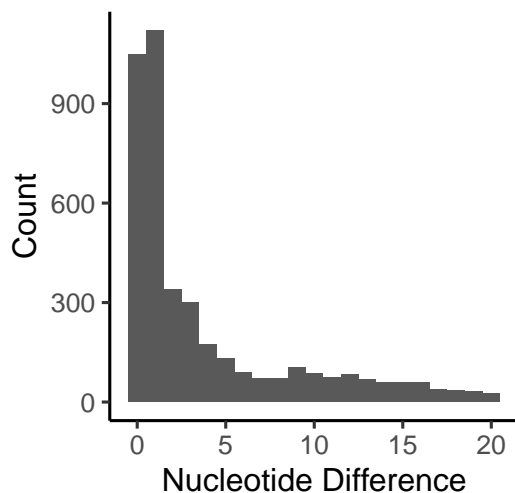
IGHV4-55*09

2 sequences assigned
No exact matches.



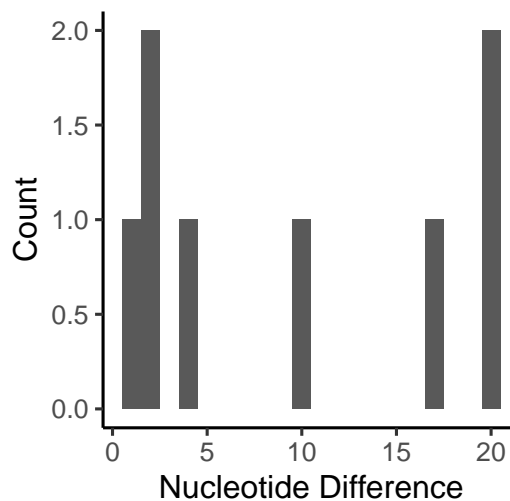
IGHV4-31*02

4950 sequences assigned
1048 (21.2%) exact matches, in which:
822 unique CDR3
6 unique J



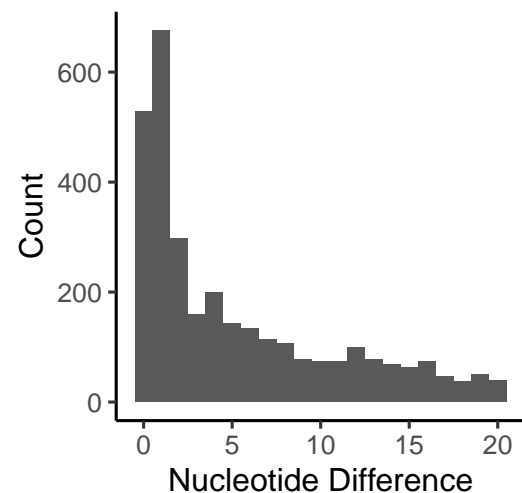
IGHV4-38-2*02

19 sequences assigned
No exact matches.



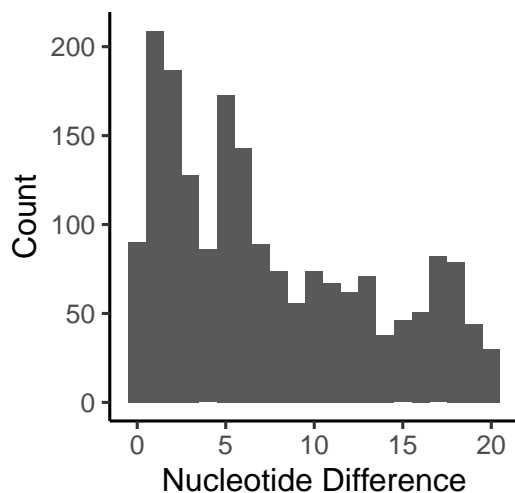
IGHV4-59*08

3441 sequences assigned
528 (15.3%) exact matches, in which:
416 unique CDR3
5 unique J



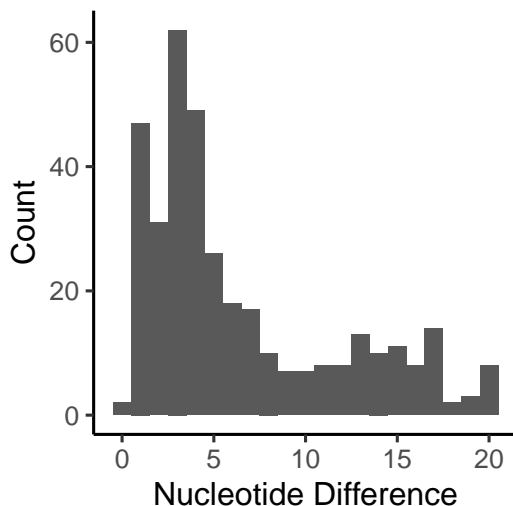
IGHV4-59*12

2533 sequences assigned
90 (3.6%) exact matches, in which:
85 unique CDR3
4 unique J



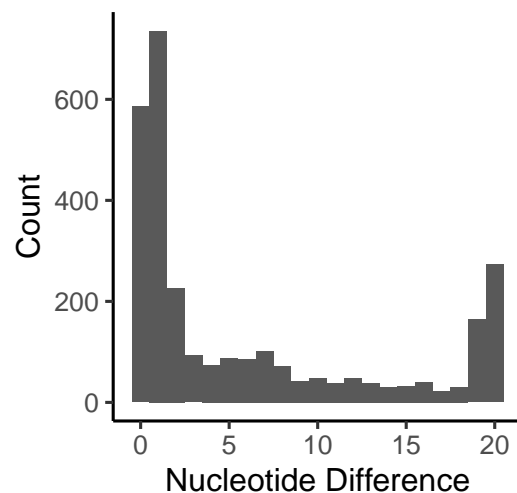
IGHV4-61*08

943 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
2 unique J



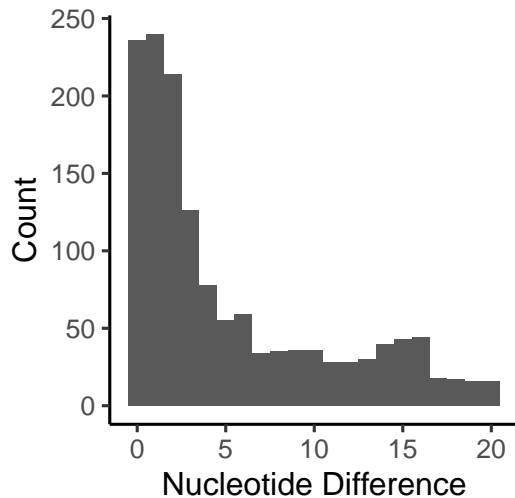
IGHV5-10-1*01_03

3618 sequences assigned
586 (16.2%) exact matches, in which:
366 unique CDR3
5 unique J



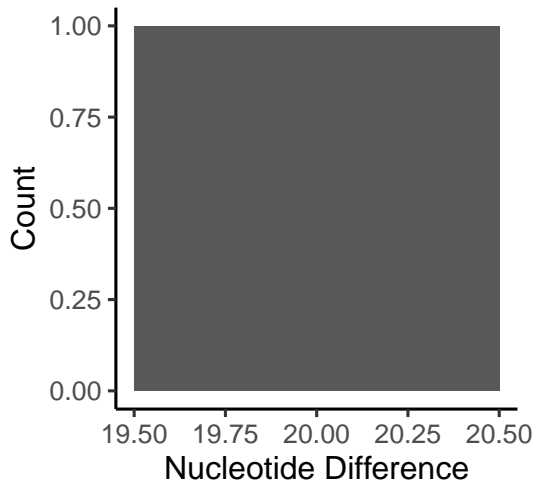
IGHV4-61*01

1584 sequences assigned
236 (14.9%) exact matches, in which:
187 unique CDR3
6 unique J



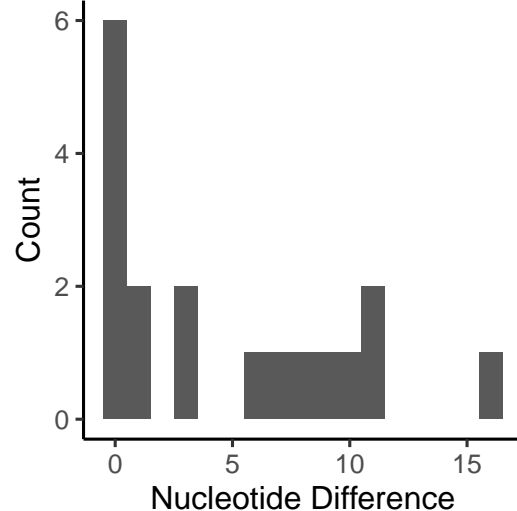
IGHV1/OR15-2*02_03

1 sequences assigned
No exact matches.



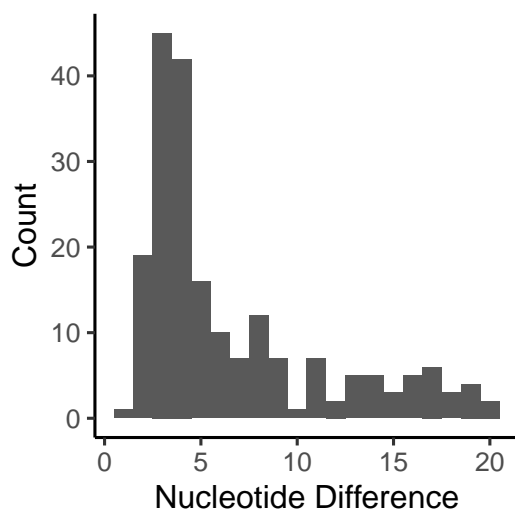
IGHV5-51*04

21 sequences assigned
6 (28.6%) exact matches, in which:
6 unique CDR3
2 unique J



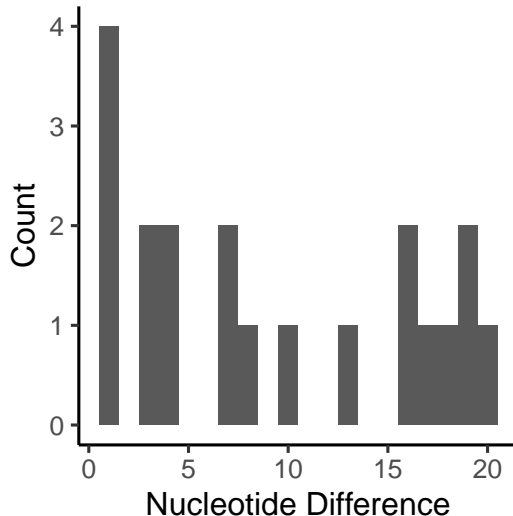
IGHV4-61*05

248 sequences assigned
No exact matches.



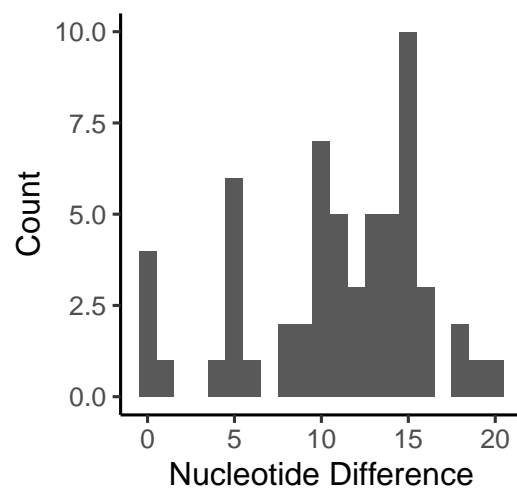
IGHV4/OR15-8*01

31 sequences assigned
No exact matches.



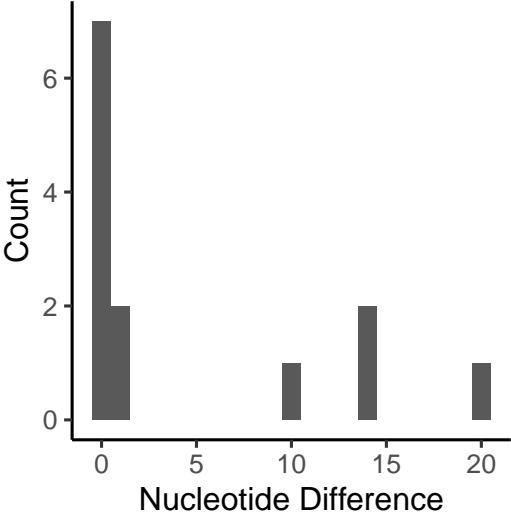
IGHV5-51*06

61 sequences assigned
4 (6.6%) exact matches, in which:
4 unique CDR3
2 unique J



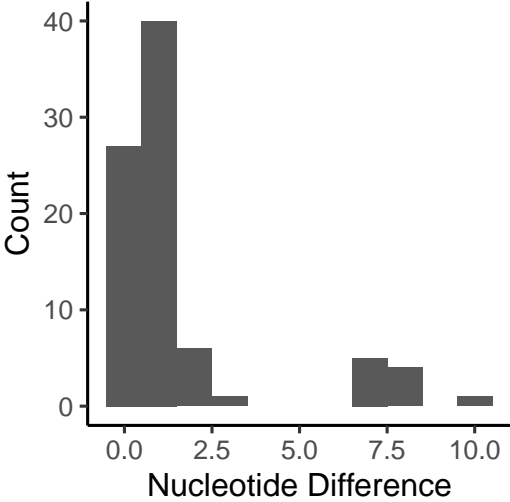
IGHV5-51*07

14 sequences assigned
7 (50%) exact matches, in which:
7 unique CDR3
4 unique J



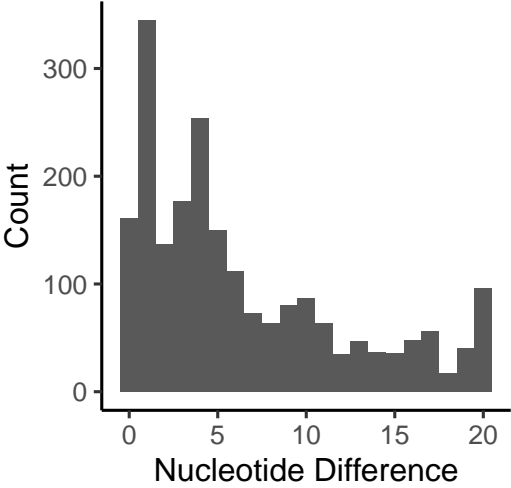
IGHV7-4-1*01

84 sequences assigned
27 (32.1%) exact matches, in which:
23 unique CDR3
4 unique J



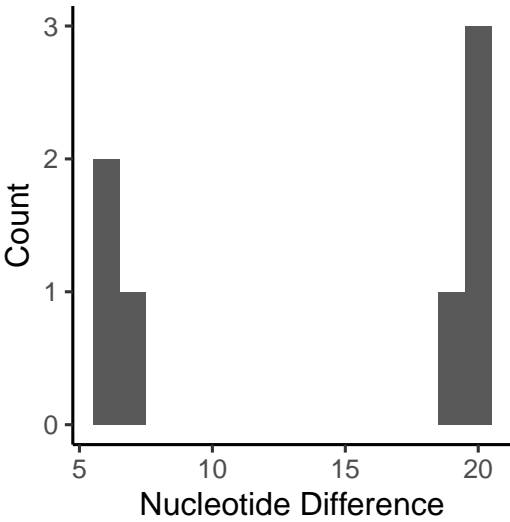
IGHV6-1*01_02

2242 sequences assigned
161 (7.2%) exact matches, in which:
124 unique CDR3
5 unique J



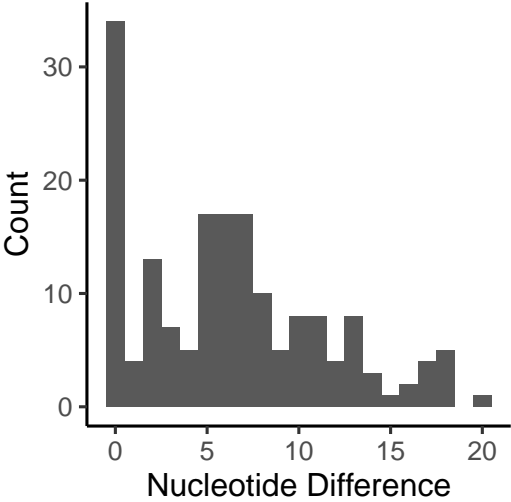
IGHV7-4-1*02

12 sequences assigned
No exact matches.

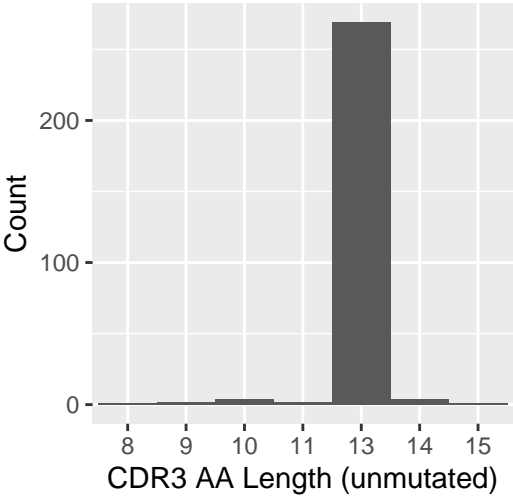


IGHV6-1*01_02_A315G

196 sequences assigned
34 (17.3%) exact matches, in which:
34 unique CDR3
5 unique J



IGHV3-64*01_C86G_T105C_C113T_G163A_T171C_T189C_C203G_G216T_A263T_G303C



IGHV6-1*01_02_A315G

