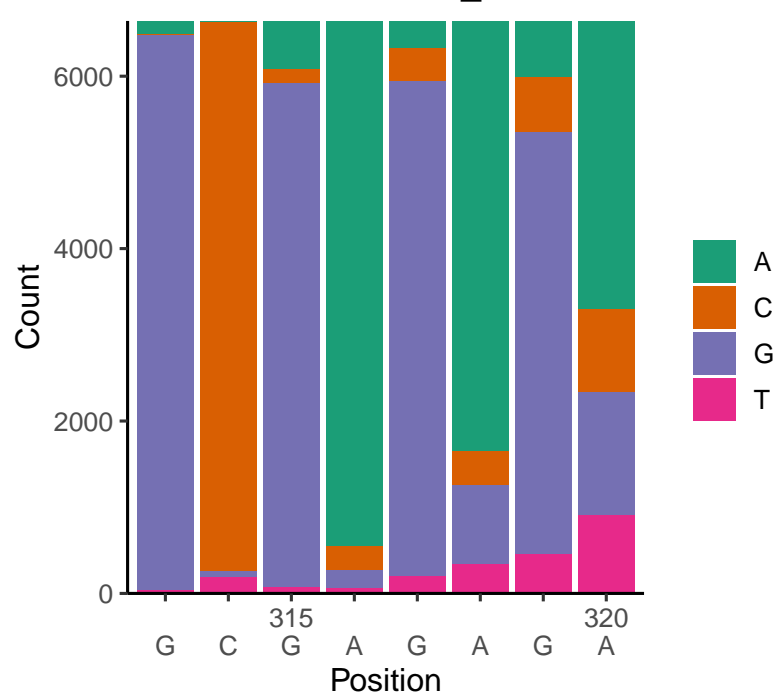
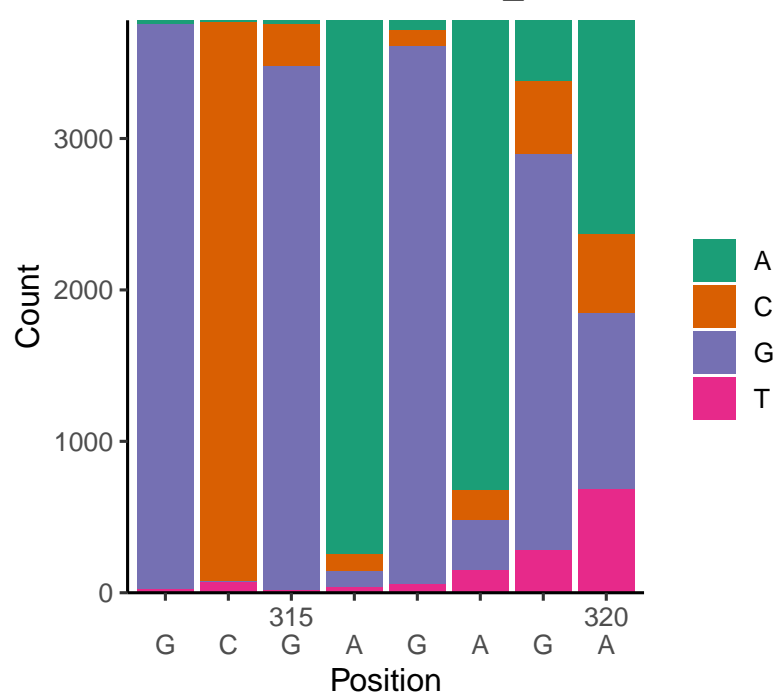


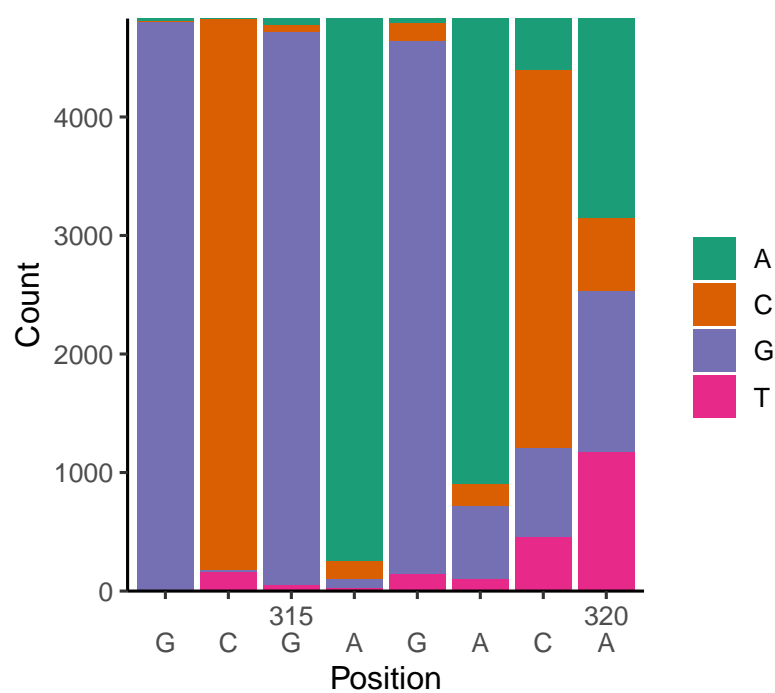
Gene IGHV3-30*03_T288C



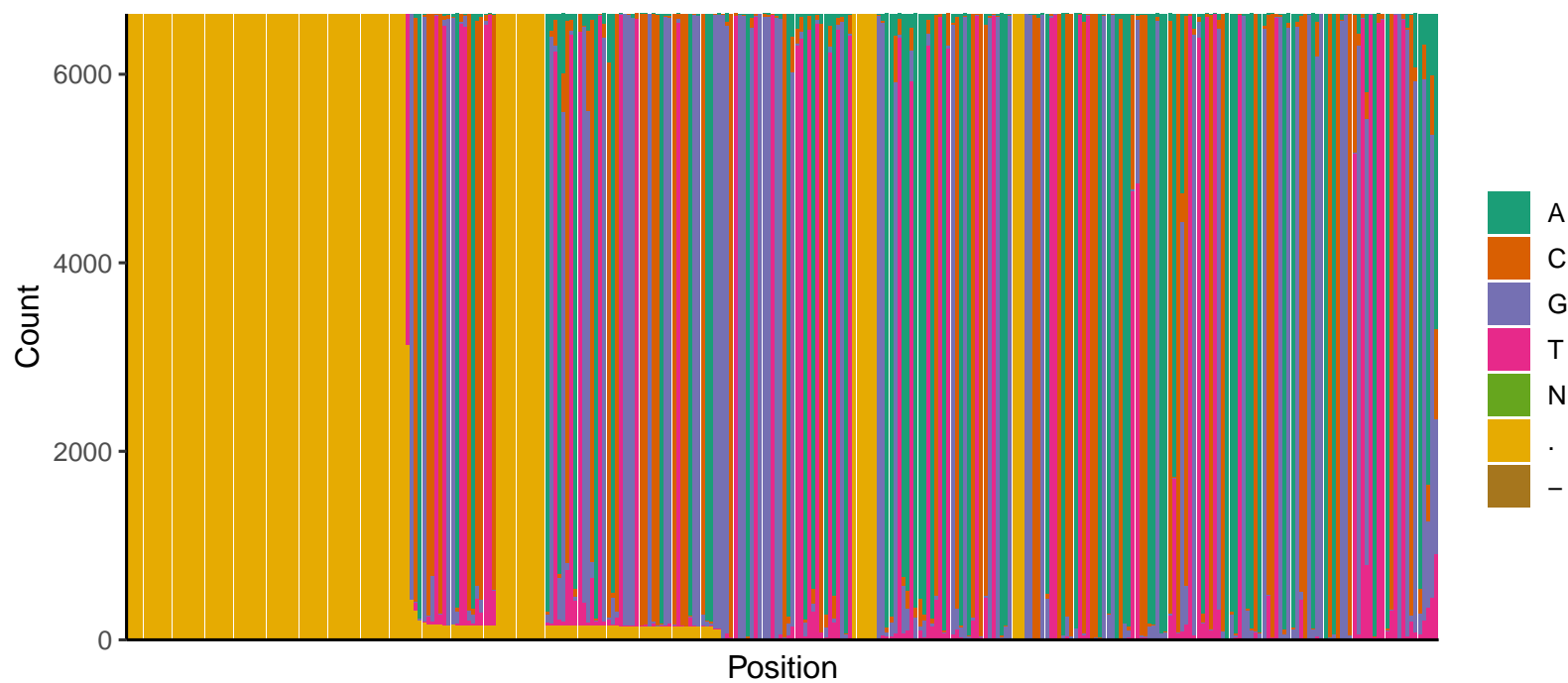
Gene IGHV4-38-2*02_A70G



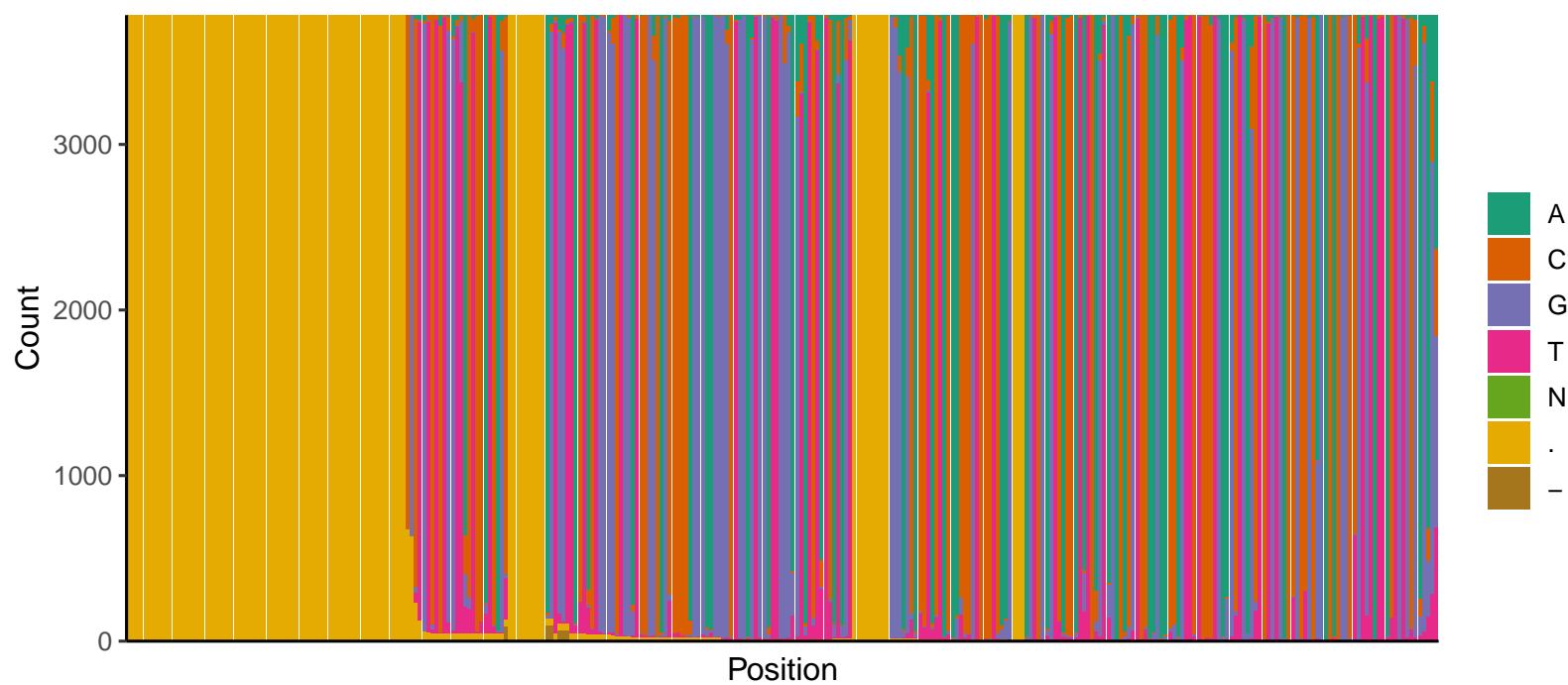
Gene IGHV5-51*01_03_A263T



Gene IGHV3-30*03_T288C



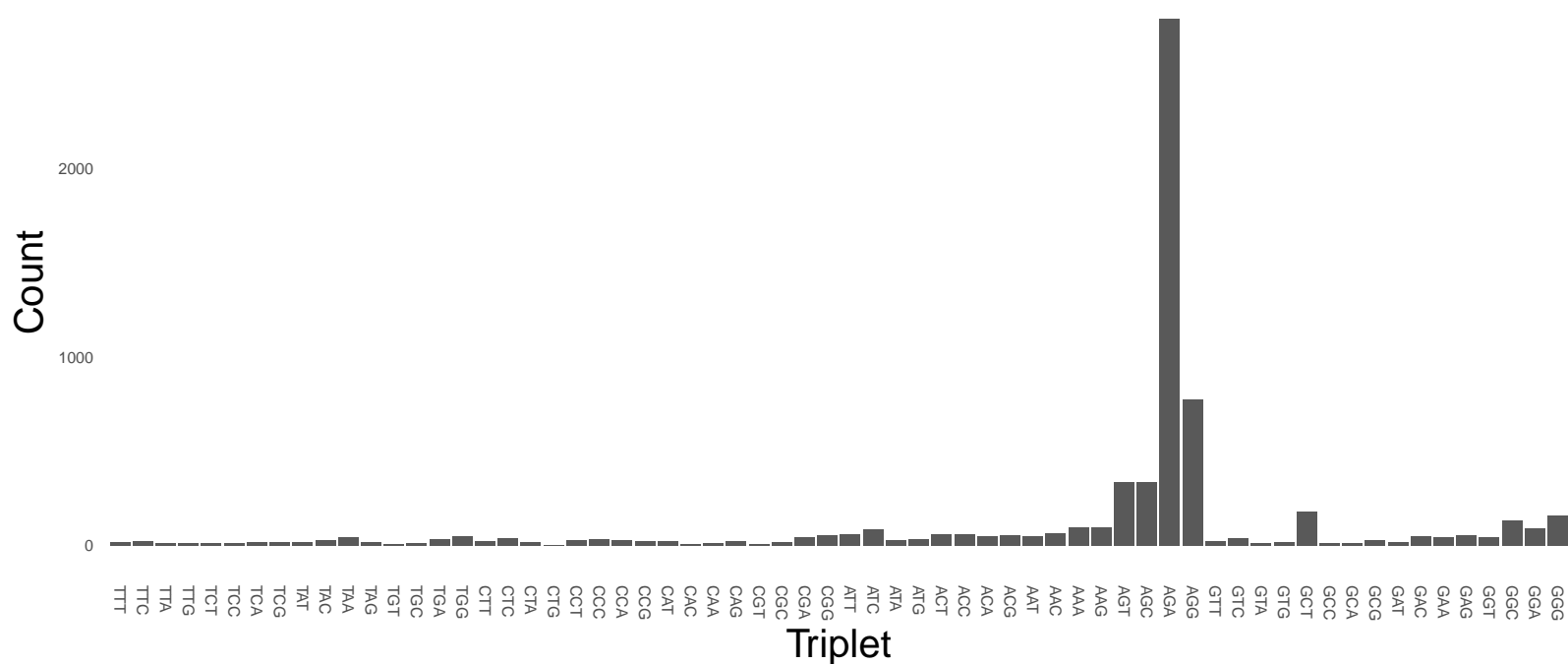
Gene IGHV4-38-2*02_A70G



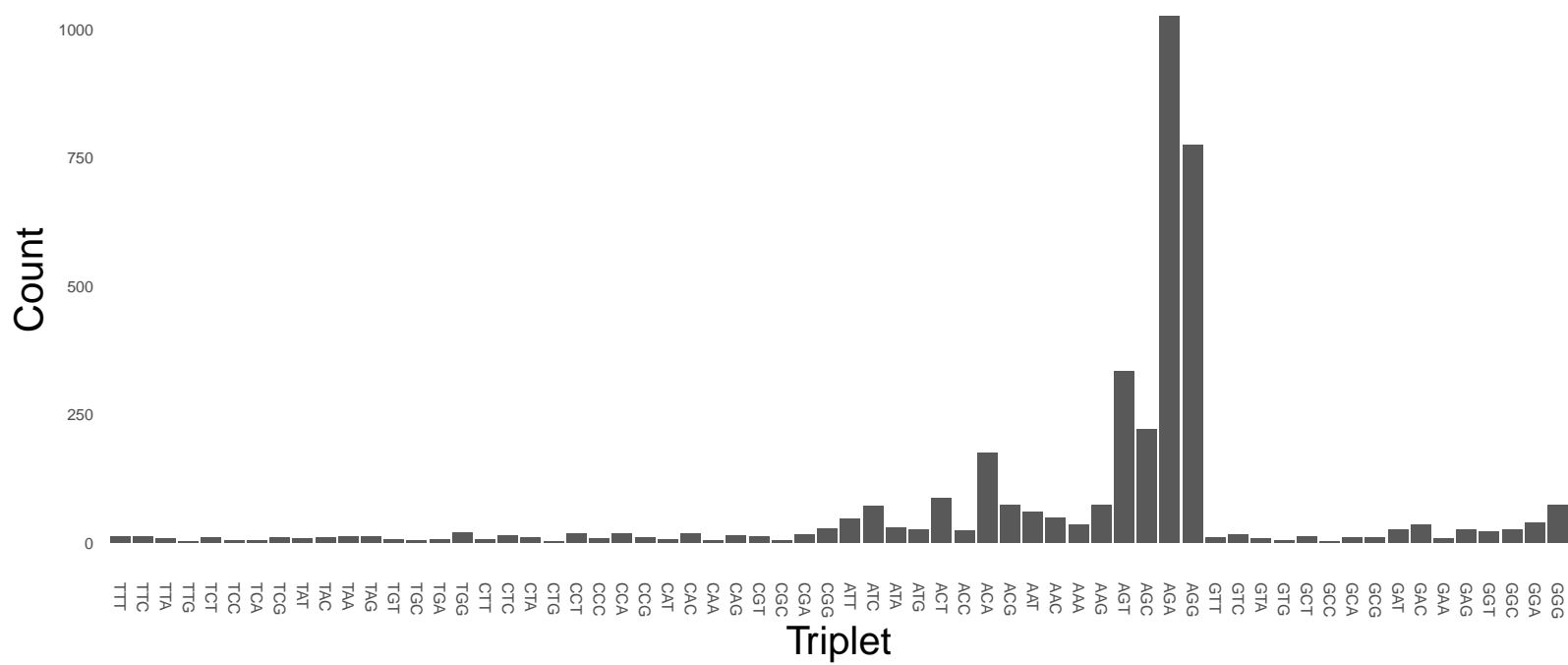
Gene IGHV5-51*01_03_A263T



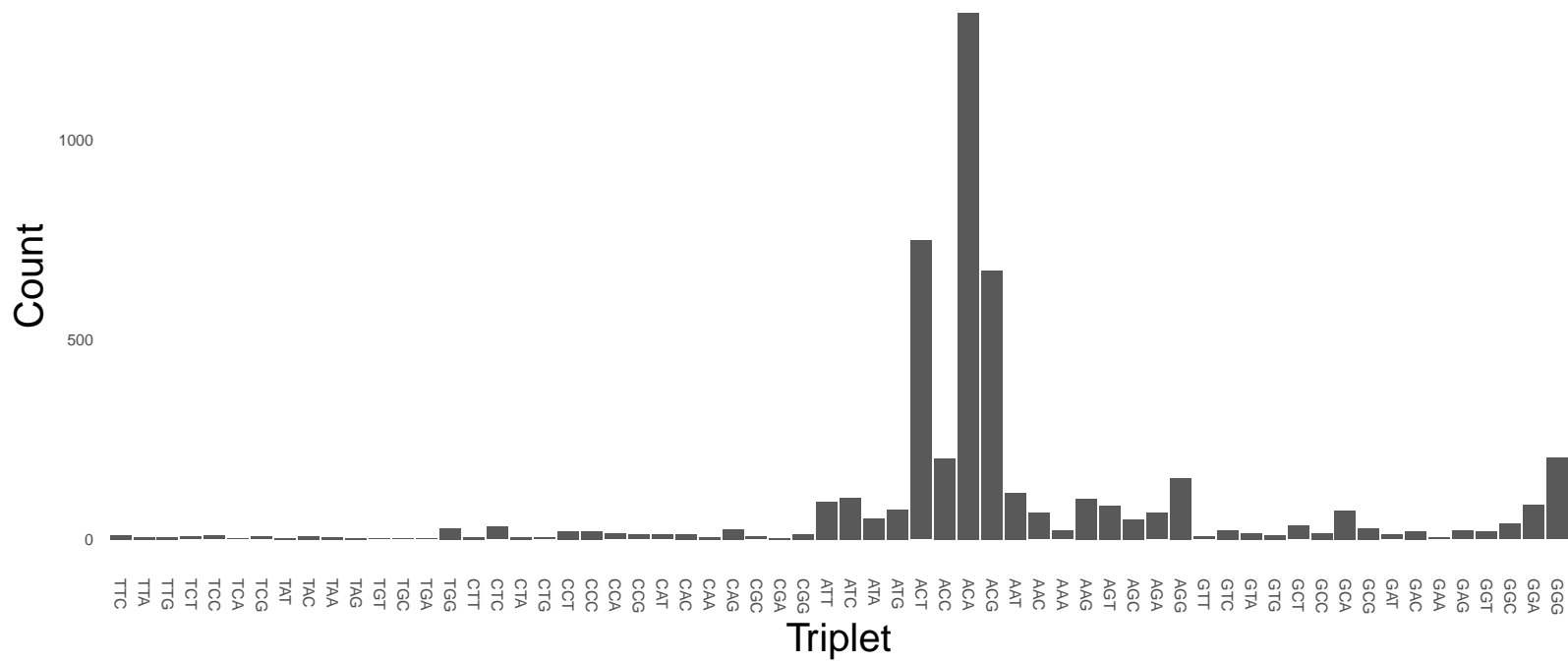
IGHV3-30*03_T288C- Final 3 nucleotides as a triplet



IGHV4-38-2*02_A70G- Final 3 nucleotides as a triplet

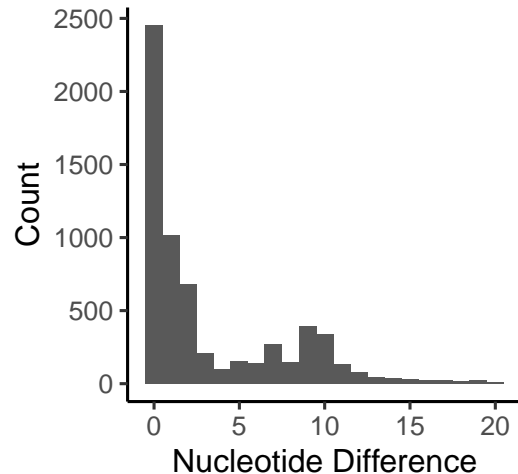


IGHV5-51*01_03_A263T- Final 3 nucleotides as a triplet



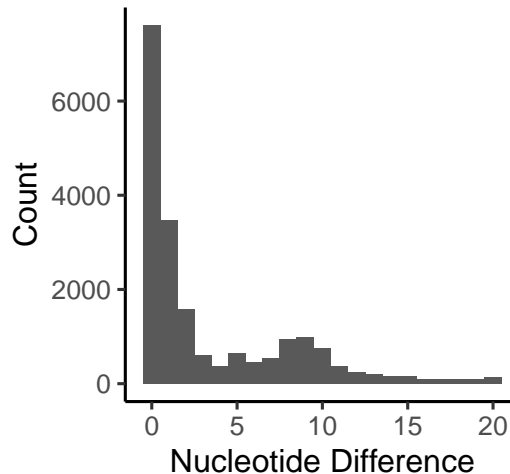
IGHV1-2*04

6412 sequences assigned
2452 (38.2%) exact matches, in which:
2336 unique CDR3
6 unique J



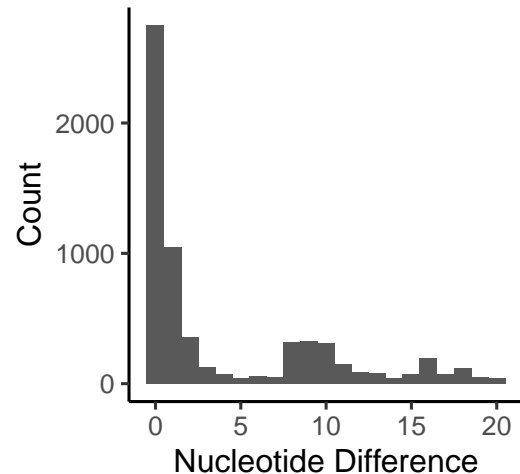
IGHV1-8*01

21435 sequences assigned
7606 (35.5%) exact matches, in which:
7204 unique CDR3
6 unique J



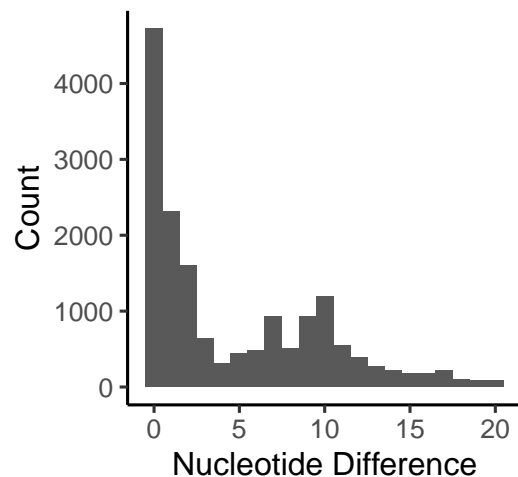
IGHV1-24*01

6453 sequences assigned
2749 (42.6%) exact matches, in which:
2611 unique CDR3
6 unique J



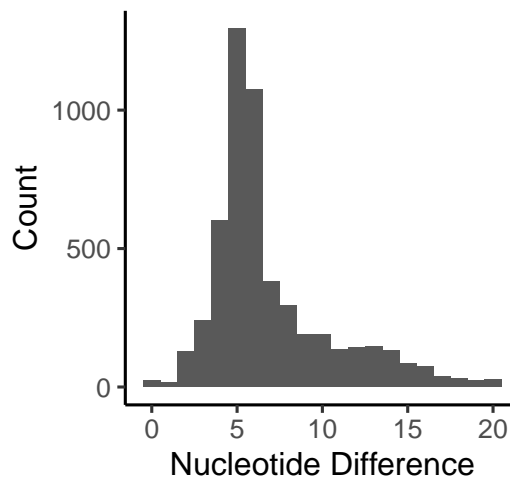
IGHV1-2*06

17172 sequences assigned
4722 (27.5%) exact matches, in which:
4462 unique CDR3
6 unique J



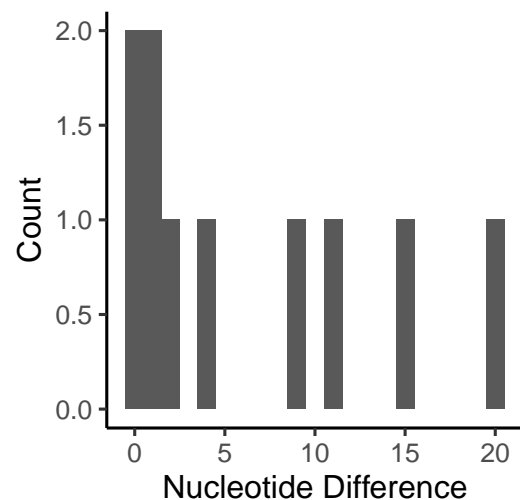
IGHV1-8*02

5573 sequences assigned
24 (0.4%) exact matches, in which:
24 unique CDR3
4 unique J



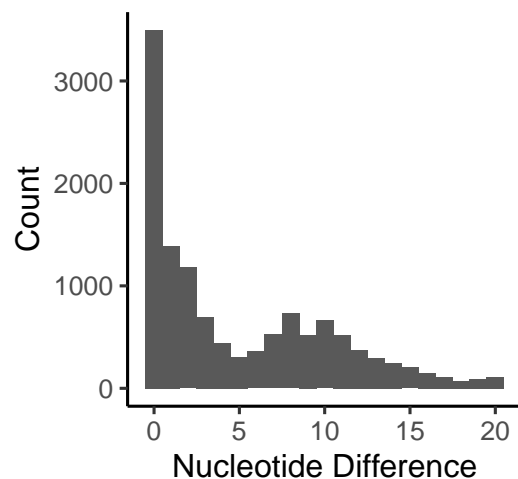
IGHV1-45*02

11 sequences assigned
2 (18.2%) exact matches, in which:
2 unique CDR3
2 unique J



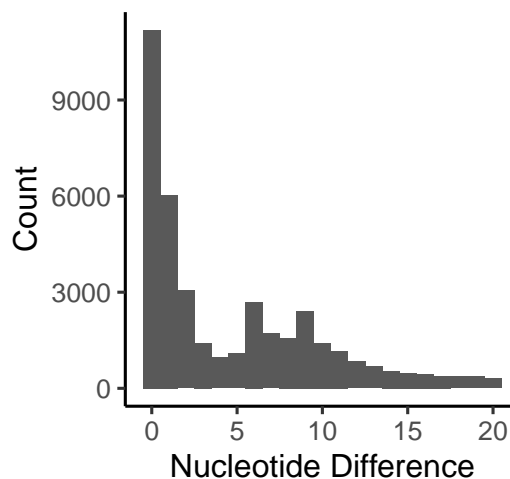
IGHV1-3*01_05

13196 sequences assigned
3497 (26.5%) exact matches, in which:
3263 unique CDR3
6 unique J



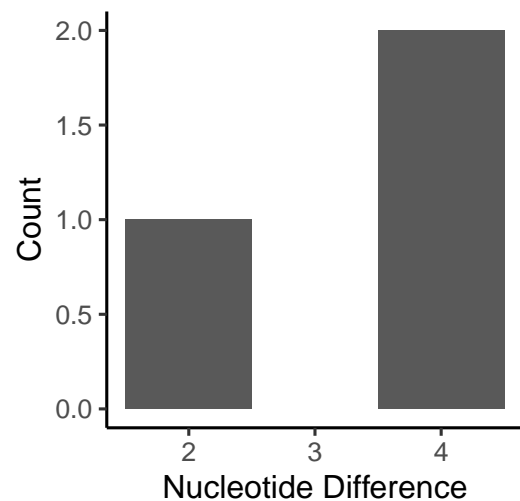
IGHV1-18*01

41540 sequences assigned
11183 (26.9%) exact matches, in which:
10353 unique CDR3
6 unique J



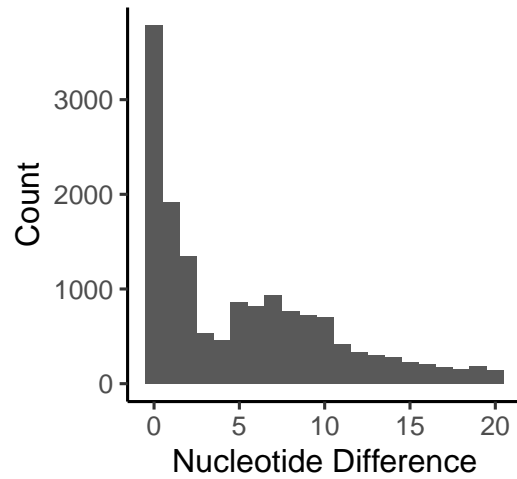
IGHV1-45*03

3 sequences assigned
No exact matches.



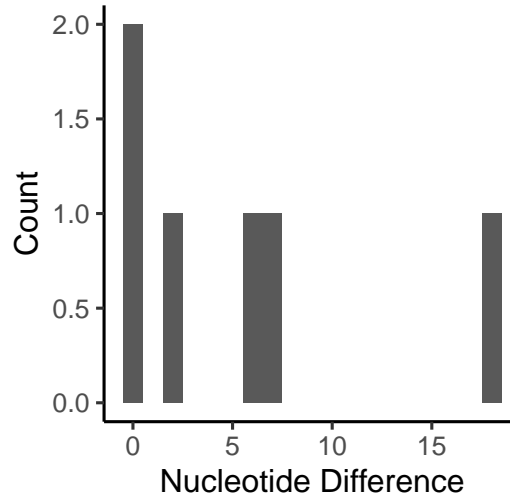
IGHV1-46*01

16280 sequences assigned
3784 (23.2%) exact matches, in which:
3608 unique CDR3
6 unique J



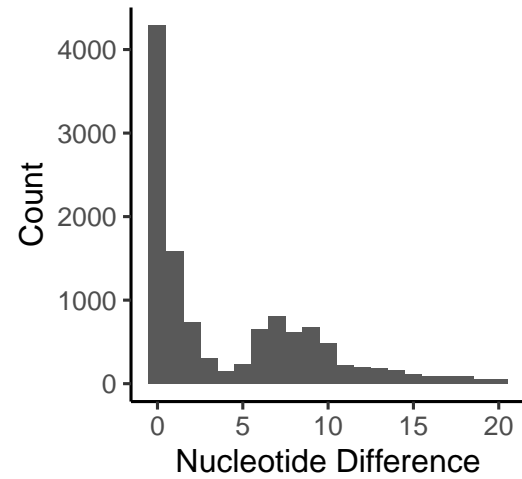
IGHV1-68*01

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



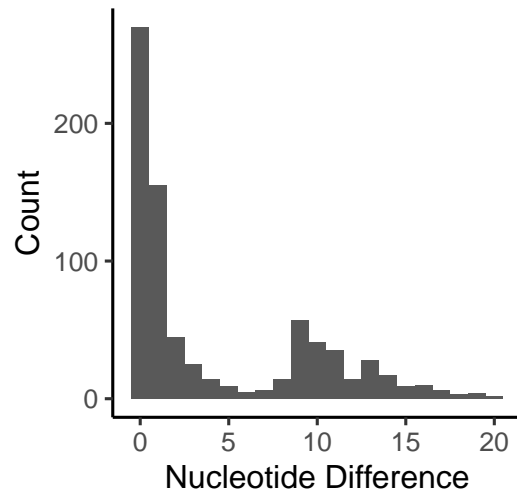
IGHV1-69*06_14

12220 sequences assigned
4289 (35.1%) exact matches, in which:
4156 unique CDR3
6 unique J



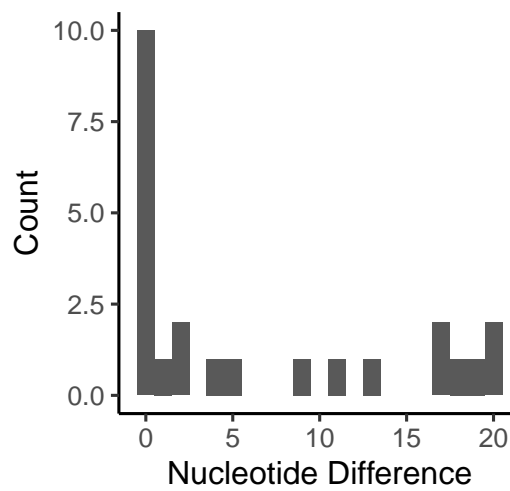
IGHV1-58*02

771 sequences assigned
270 (35%) exact matches, in which:
256 unique CDR3
6 unique J



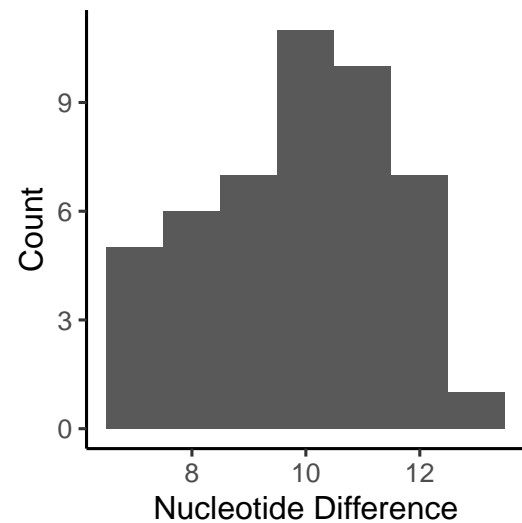
IGHV1-69-2*01

26 sequences assigned
10 (38.5%) exact matches, in which:
10 unique CDR3
4 unique J



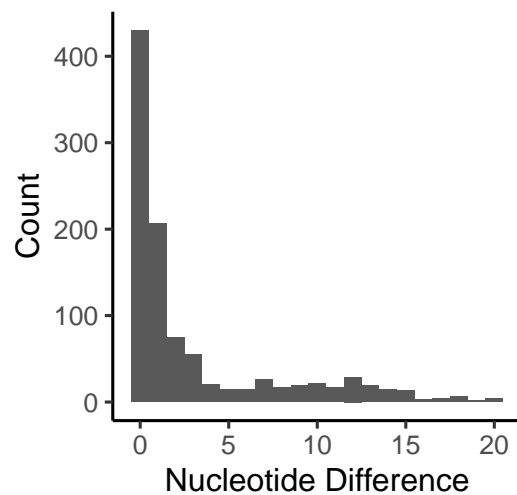
IGHV1-NL1*01

47 sequences assigned
No exact matches.



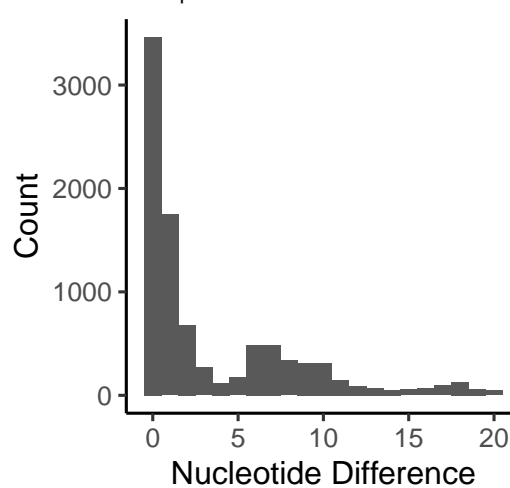
IGHV1-58*01_03

1037 sequences assigned
430 (41.5%) exact matches, in which:
408 unique CDR3
6 unique J



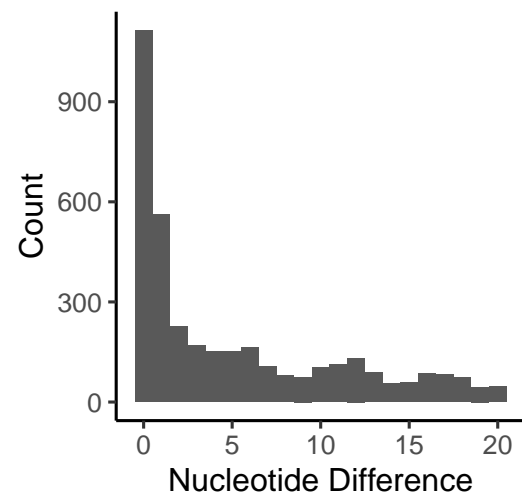
IGHV1-69*04_09

10029 sequences assigned
3464 (34.5%) exact matches, in which:
3344 unique CDR3
6 unique J



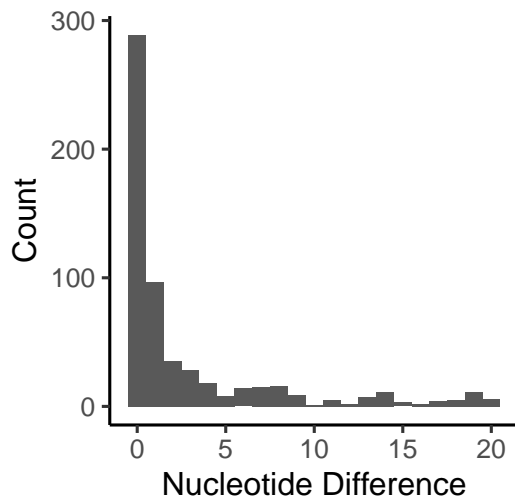
IGHV2-5*02

4015 sequences assigned
1114 (27.7%) exact matches, in which:
1050 unique CDR3
6 unique J



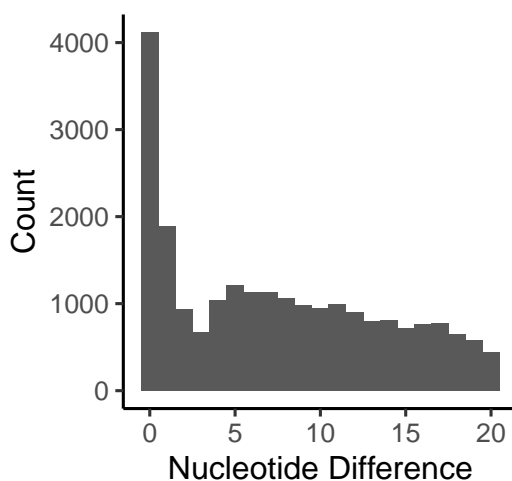
IGHV2-26*01

591 sequences assigned
289 (48.9%) exact matches, in which:
264 unique CDR3
5 unique J



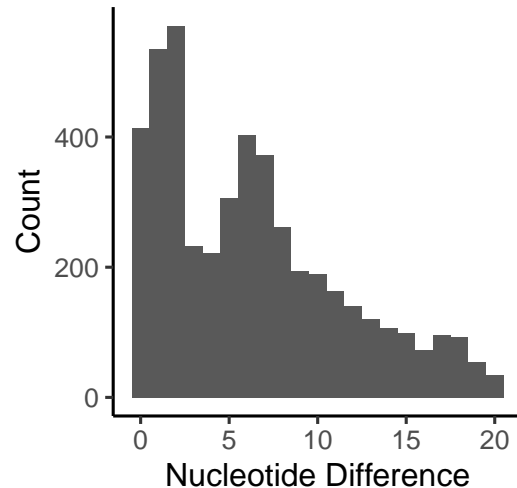
IGHV3-7*01

25348 sequences assigned
4117 (16.2%) exact matches, in which:
3352 unique CDR3
6 unique J



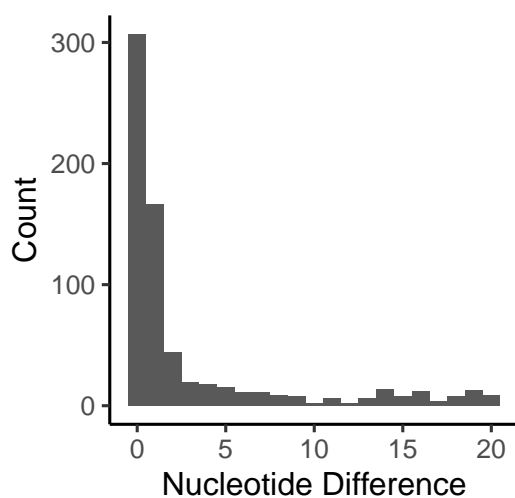
IGHV3-11*04

4860 sequences assigned
414 (8.5%) exact matches, in which:
407 unique CDR3
6 unique J



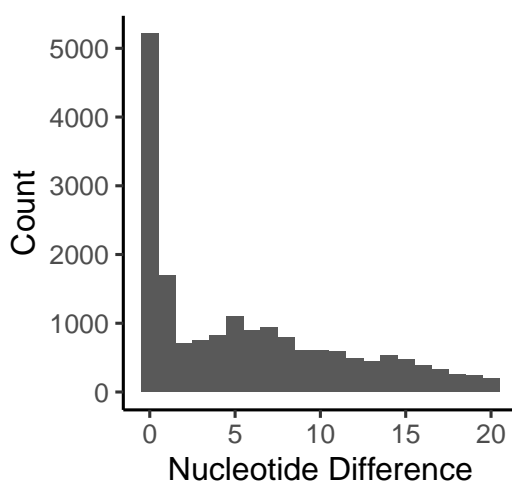
IGHV2-70*01

761 sequences assigned
307 (40.3%) exact matches, in which:
292 unique CDR3
5 unique J



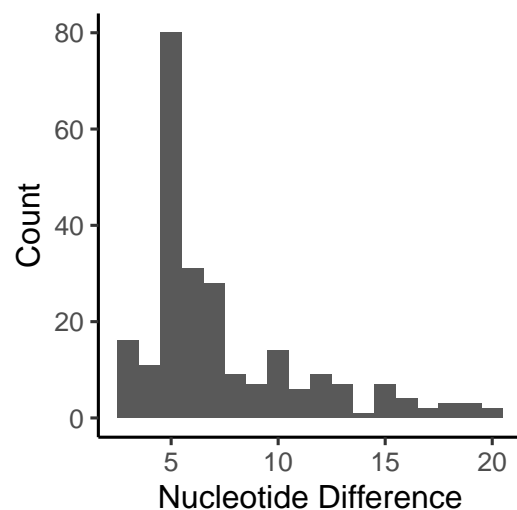
IGHV3-9*01

19532 sequences assigned
5212 (26.7%) exact matches, in which:
3971 unique CDR3
6 unique J



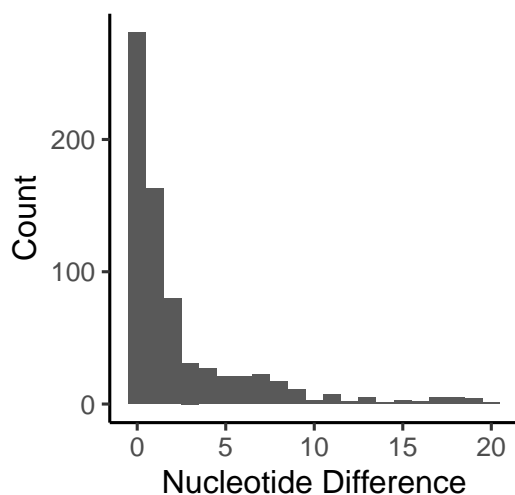
IGHV3-11*06

265 sequences assigned
No exact matches.



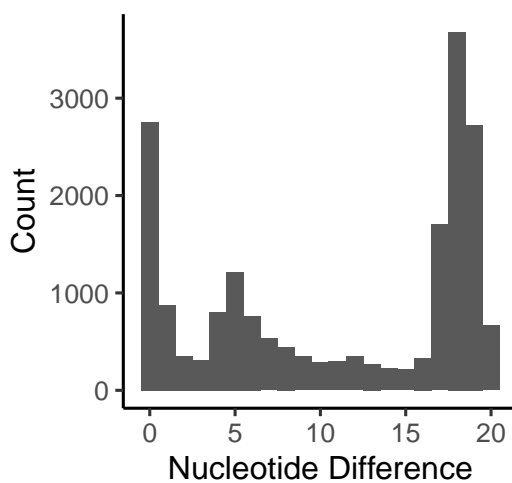
IGHV2-70*11_15

724 sequences assigned
281 (38.8%) exact matches, in which:
262 unique CDR3
6 unique J



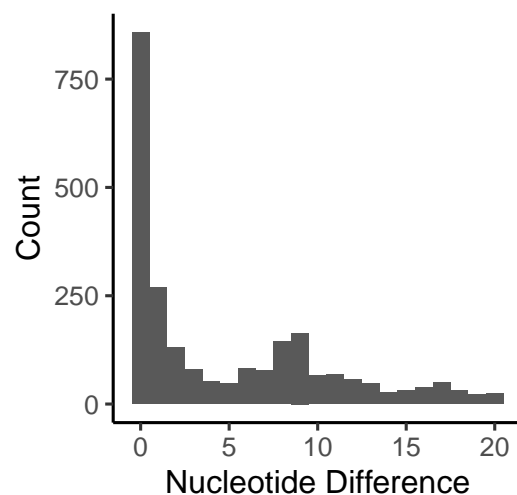
IGHV3-11*01

20170 sequences assigned
2753 (13.6%) exact matches, in which:
2233 unique CDR3
6 unique J



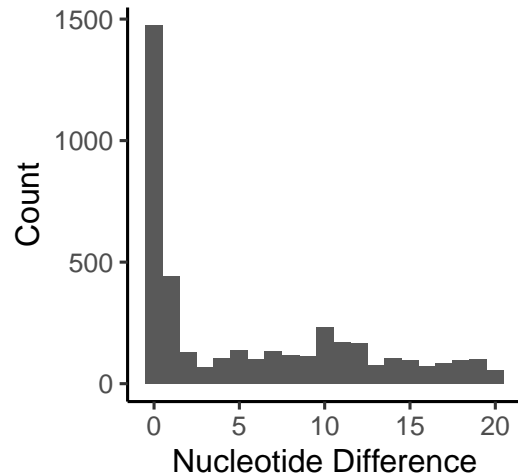
IGHV3-13*01

2493 sequences assigned
858 (34.4%) exact matches, in which:
678 unique CDR3
6 unique J



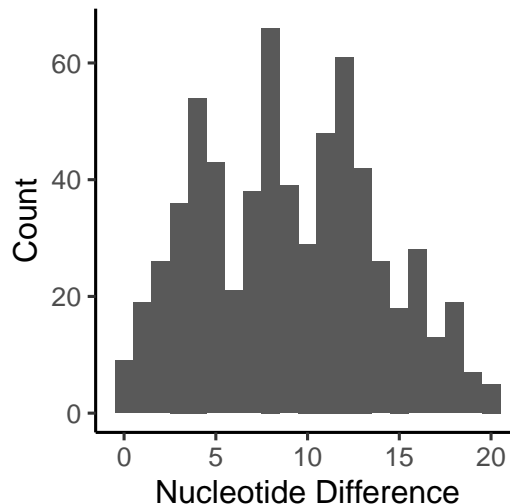
IGHV3-15*01_02

4596 sequences assigned
1474 (32.1%) exact matches, in which:
1207 unique CDR3
6 unique J



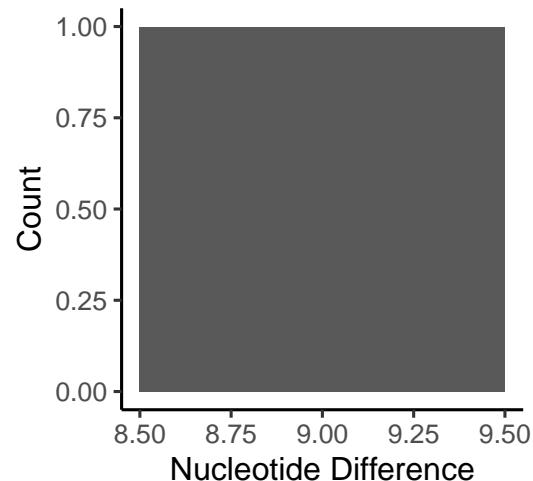
IGHV3-20*03_04

696 sequences assigned
9 (1.3%) exact matches, in which:
8 unique CDR3
5 unique J



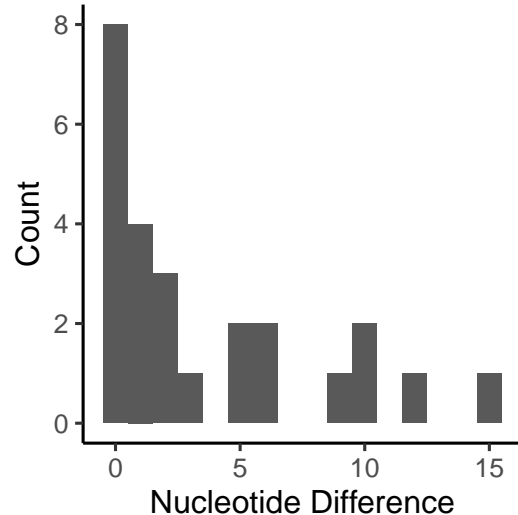
IGHV3-22*01_02

1 sequences assigned
No exact matches.



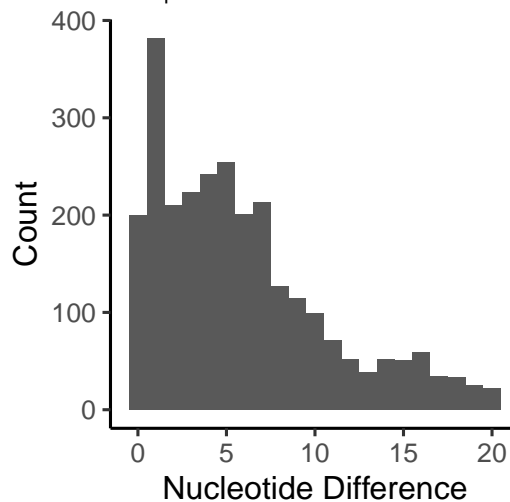
IGHV3-19*01

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



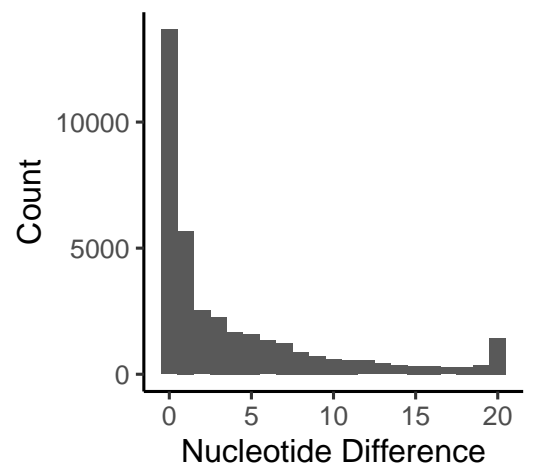
IGHV3-21*04

2825 sequences assigned
200 (7.1%) exact matches, in which:
194 unique CDR3
6 unique J



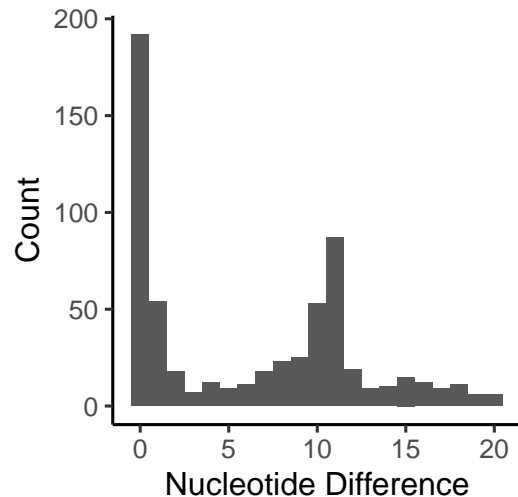
IGHV3-30-3*01

43110 sequences assigned
13671 (31.7%) exact matches, in which:
11028 unique CDR3
6 unique J



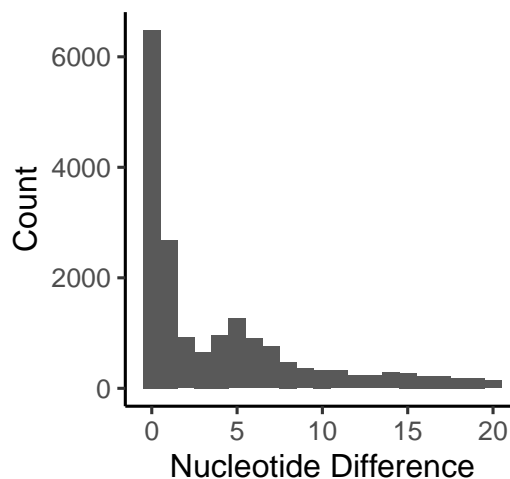
IGHV3-20*01_02

620 sequences assigned
192 (31%) exact matches, in which:
150 unique CDR3
5 unique J



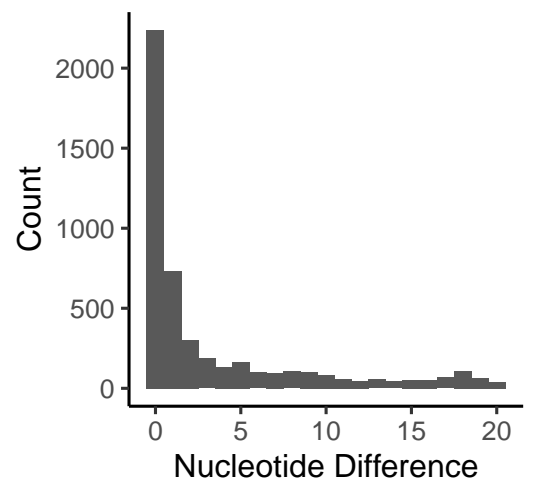
IGHV3-21*01_02

19114 sequences assigned
6484 (33.9%) exact matches, in which:
5143 unique CDR3
6 unique J



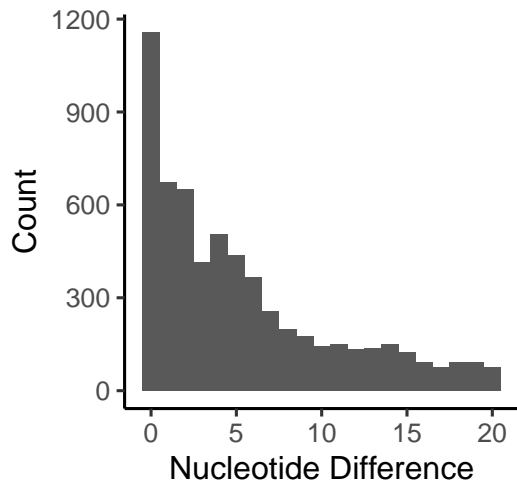
IGHV3-30*03

5194 sequences assigned
2238 (43.1%) exact matches, in which:
2116 unique CDR3
6 unique J



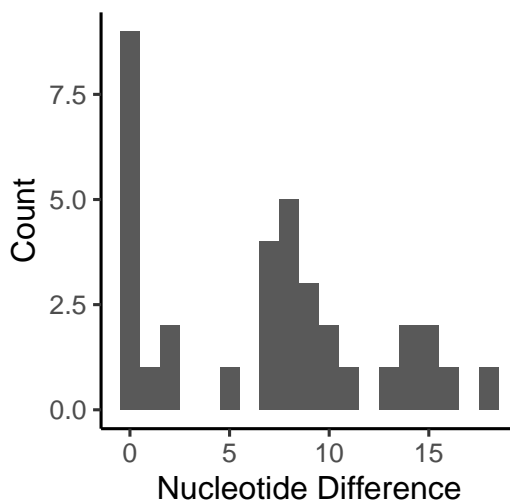
IGHV3-30*03_T288C

6641 sequences assigned
1157 (17.4%) exact matches, in which:
1102 unique CDR3
6 unique J



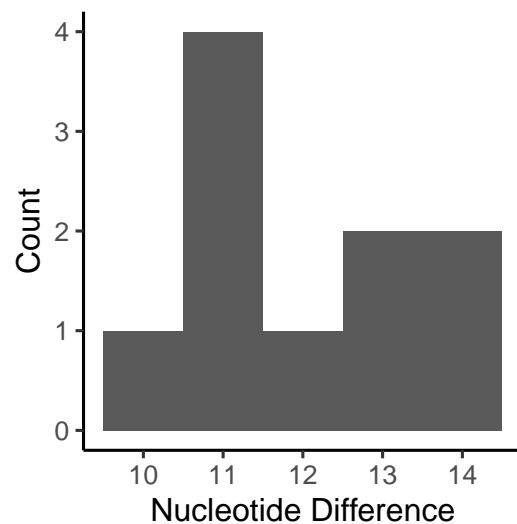
IGHV3-35*01

35 sequences assigned
9 (25.7%) exact matches, in which:
8 unique CDR3
4 unique J



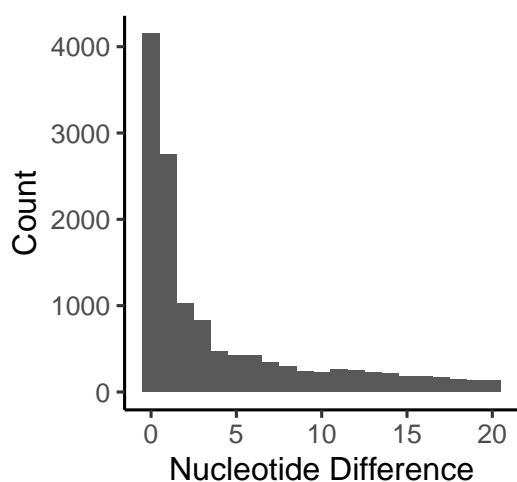
IGHV3-47*02

10 sequences assigned
No exact matches.



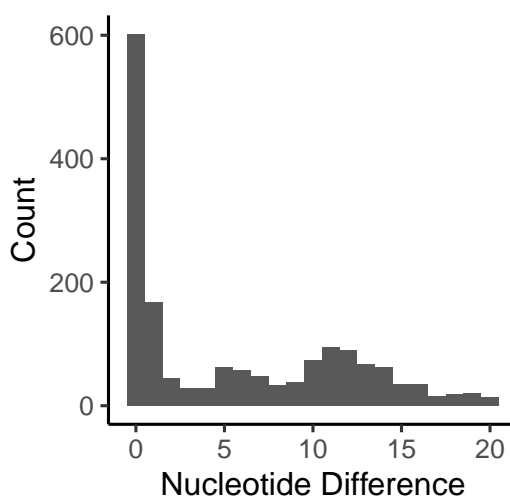
IGHV3-33*01

14368 sequences assigned
4150 (28.9%) exact matches, in which:
3464 unique CDR3
6 unique J



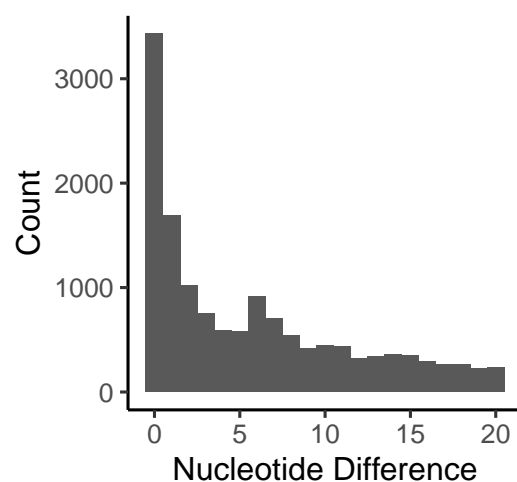
IGHV3-43*02

1940 sequences assigned
602 (31%) exact matches, in which:
490 unique CDR3
6 unique J



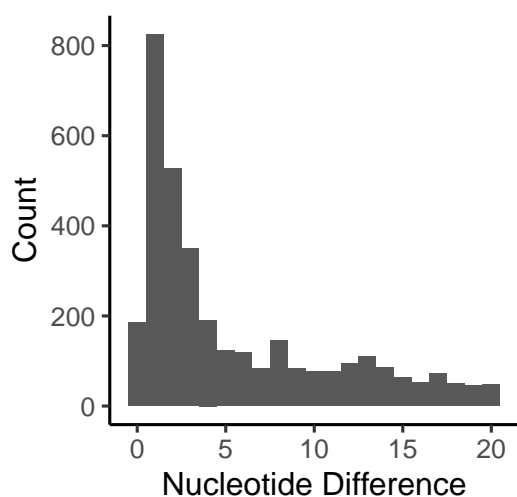
IGHV3-48*03

15465 sequences assigned
3431 (22.2%) exact matches, in which:
2789 unique CDR3
6 unique J



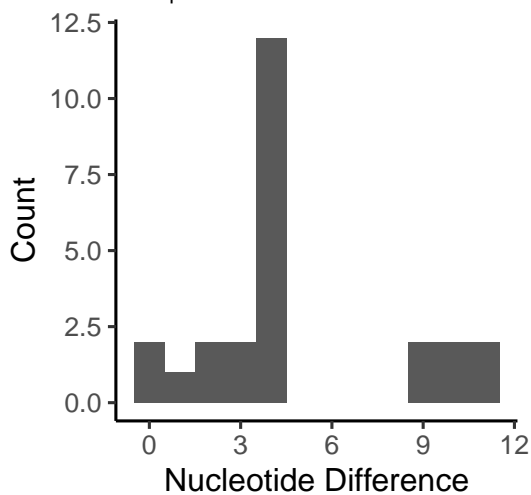
IGHV3-33*06

3803 sequences assigned
186 (4.9%) exact matches, in which:
185 unique CDR3
6 unique J



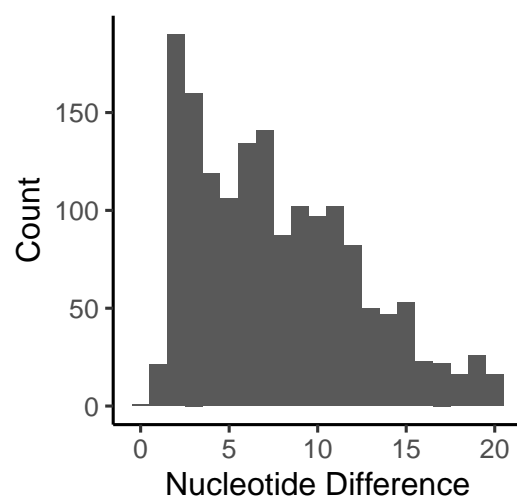
IGHV3-47*01

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



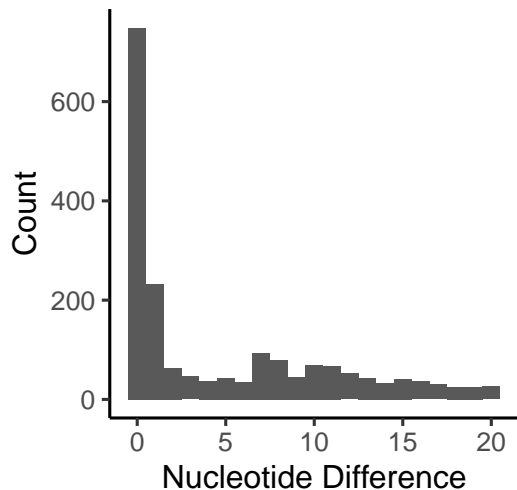
IGHV3-48*04

1697 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



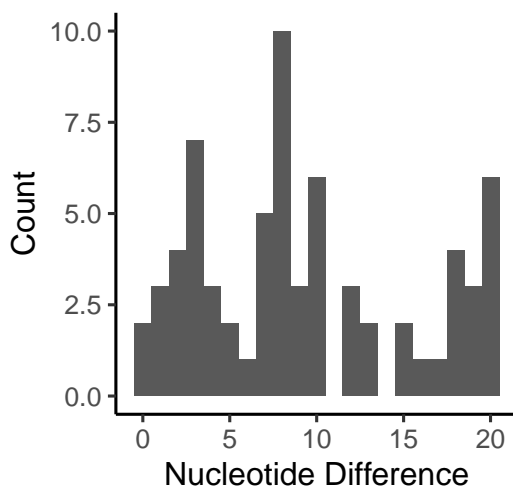
IGHV3-49*04

2042 sequences assigned
749 (36.7%) exact matches, in which:
633 unique CDR3
6 unique J



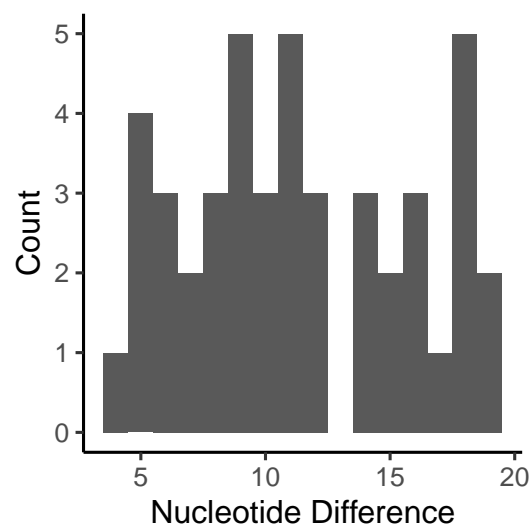
IGHV3-53*05

114 sequences assigned
2 (1.8%) exact matches, in which:
2 unique CDR3
1 unique J



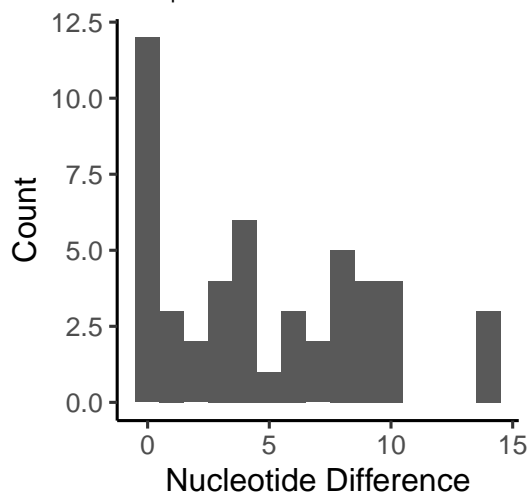
IGHV3-64*04

67 sequences assigned
No exact matches.



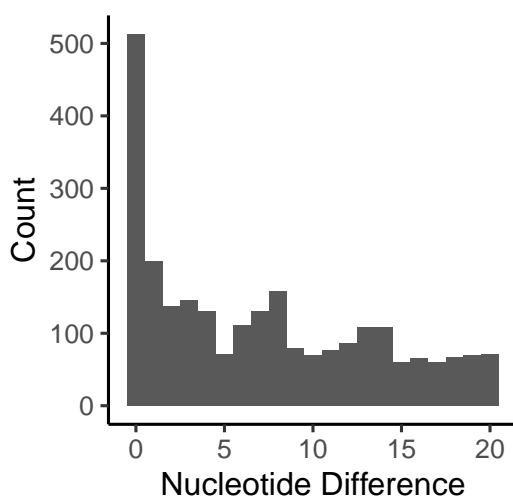
IGHV3-52*01_03

50 sequences assigned
12 (24%) exact matches, in which:
8 unique CDR3
4 unique J



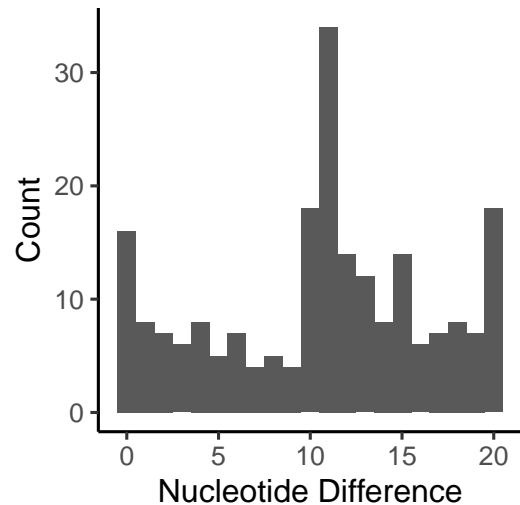
IGHV3-53*01_02

3297 sequences assigned
513 (15.6%) exact matches, in which:
426 unique CDR3
6 unique J



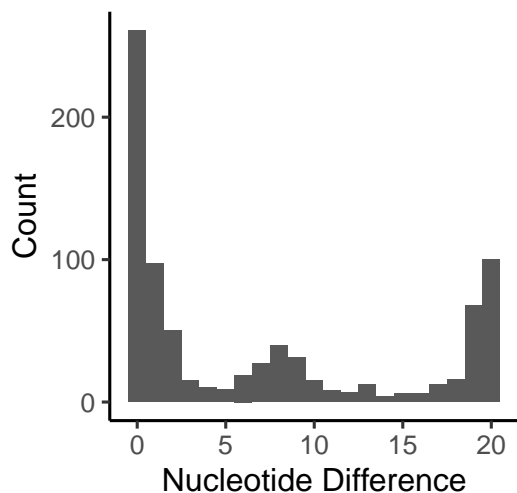
IGHV3-64*02_07

320 sequences assigned
16 (5%) exact matches, in which:
14 unique CDR3
3 unique J



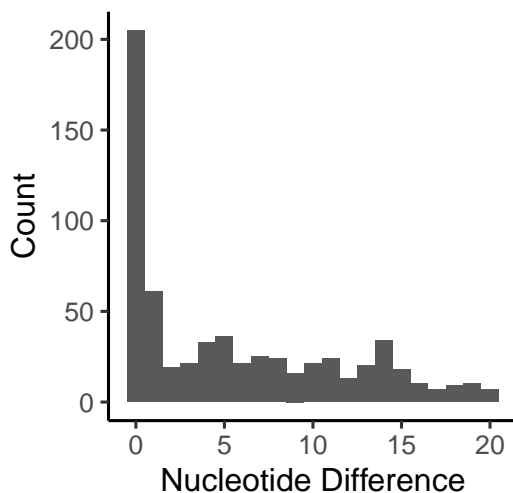
IGHV3-53*04

959 sequences assigned
261 (27.2%) exact matches, in which:
224 unique CDR3
6 unique J



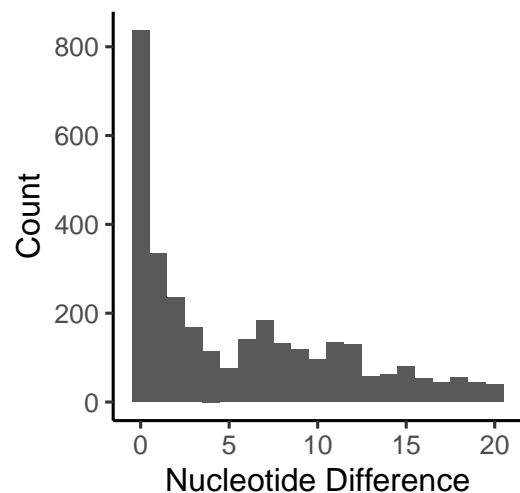
IGHV3-64*01

889 sequences assigned
205 (23.1%) exact matches, in which:
170 unique CDR3
6 unique J



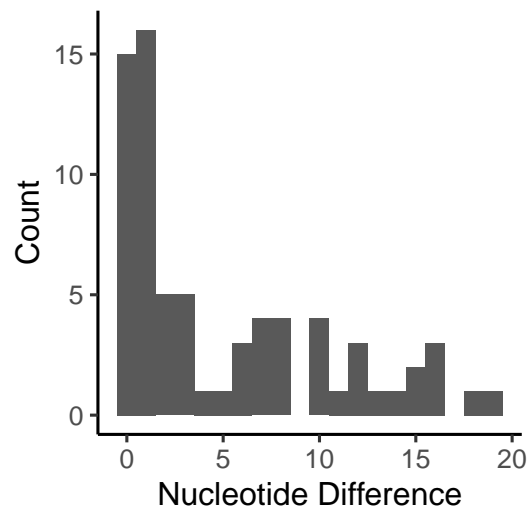
IGHV3-66*01

3855 sequences assigned
837 (21.7%) exact matches, in which:
692 unique CDR3
6 unique J



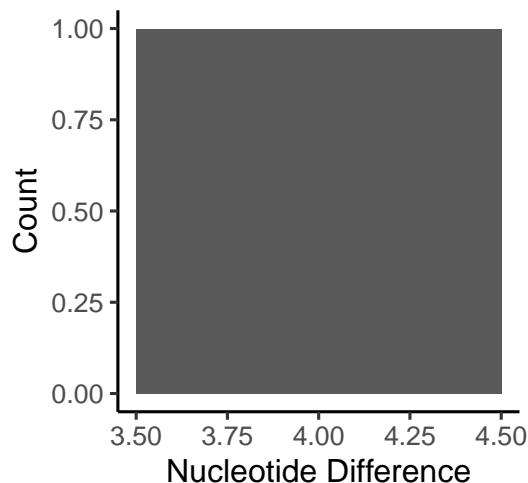
IGHV3-66*03

82 sequences assigned
15 (18.3%) exact matches, in which:
14 unique CDR3
4 unique J



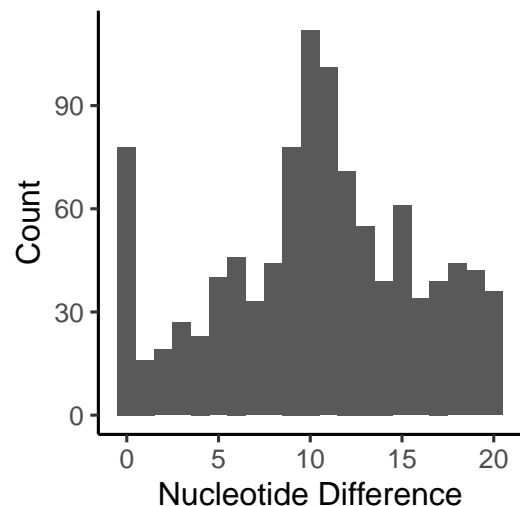
IGHV3-71*02

1 sequences assigned
No exact matches.



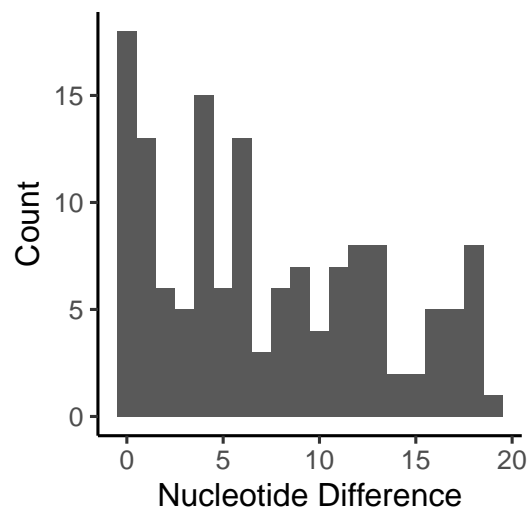
IGHV3-72*01

1388 sequences assigned
78 (5.6%) exact matches, in which:
63 unique CDR3
4 unique J



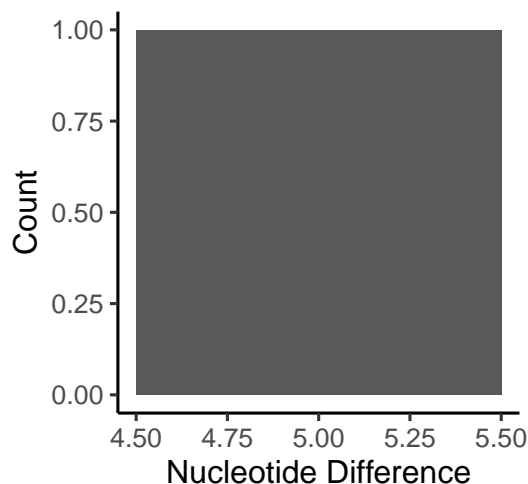
IGHV3-69-1*01

160 sequences assigned
18 (11.2%) exact matches, in which:
17 unique CDR3
4 unique J



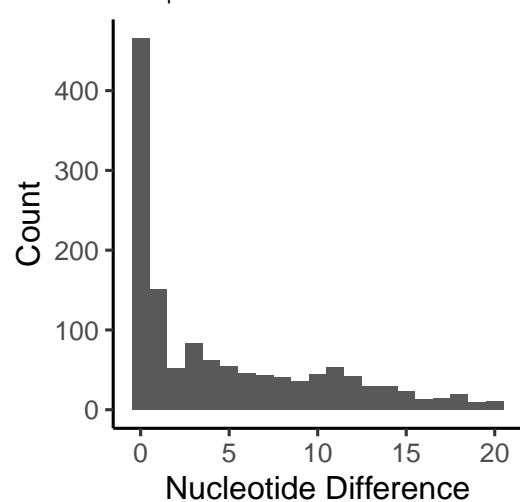
IGHV3-71*03

1 sequences assigned
No exact matches.



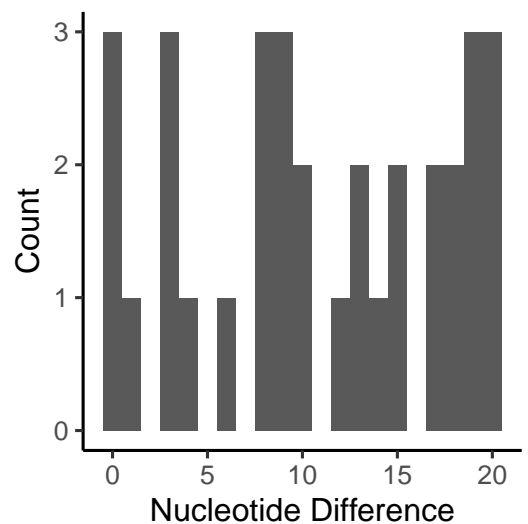
IGHV3-73*01_02

1360 sequences assigned
466 (34.3%) exact matches, in which:
371 unique CDR3
6 unique J



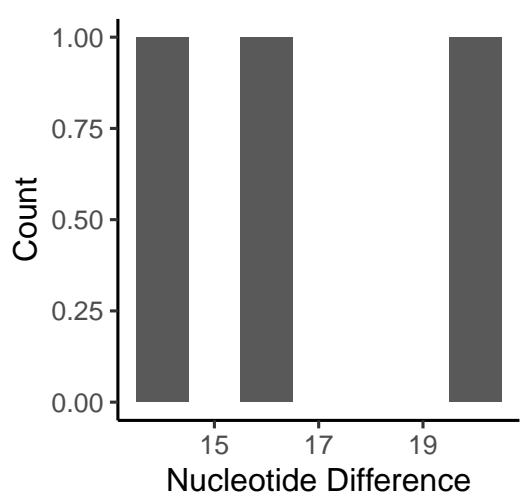
IGHV3-69-1*02

79 sequences assigned
3 (3.8%) exact matches, in which:
3 unique CDR3
2 unique J



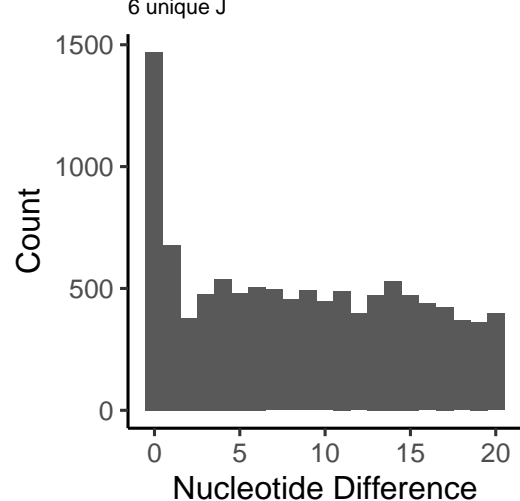
IGHV3-71*01_04

5 sequences assigned
No exact matches.



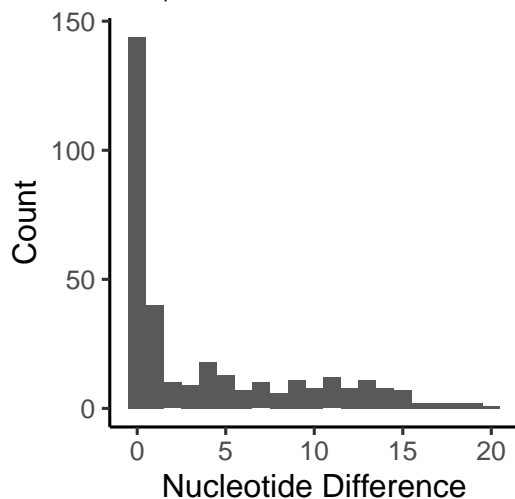
IGHV3-74*01_02

12674 sequences assigned
1470 (11.6%) exact matches, in which:
1169 unique CDR3
6 unique J



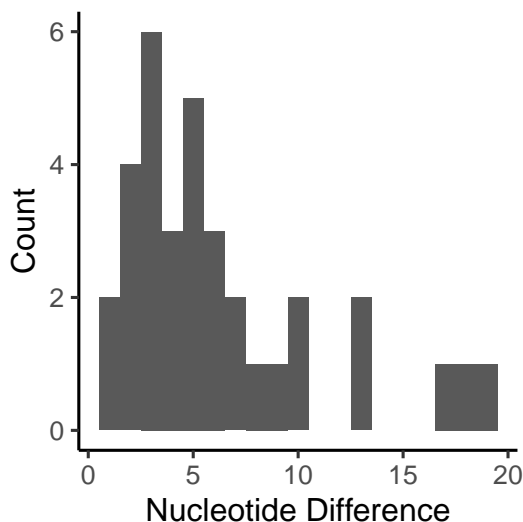
IGHV3-43D*04

333 sequences assigned
144 (43.2%) exact matches, in which:
117 unique CDR3
5 unique J



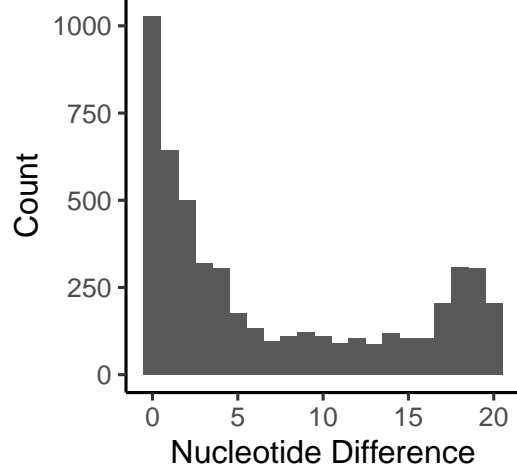
IGHV4-28*03

39 sequences assigned
No exact matches.



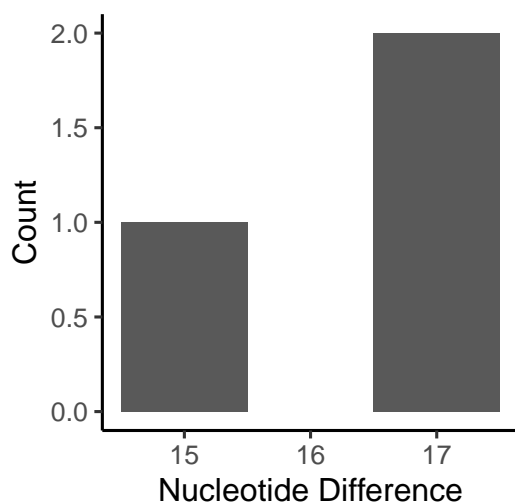
IGHV4-30-2*01

6195 sequences assigned
1027 (16.6%) exact matches, in which:
935 unique CDR3
6 unique J



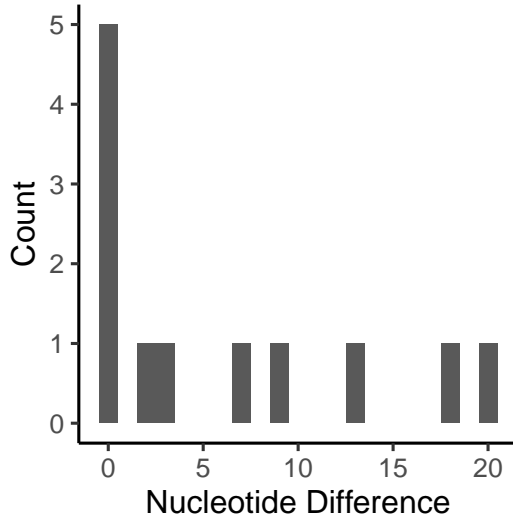
IGHV3-64D*08

9 sequences assigned
No exact matches.



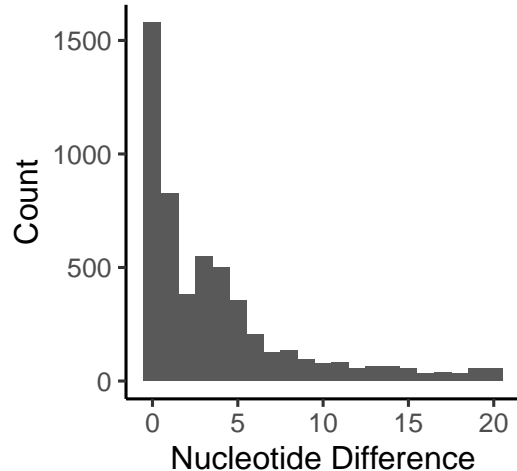
IGHV4-28*01_07

15 sequences assigned
5 (33.3%) exact matches, in which:
5 unique CDR3
3 unique J



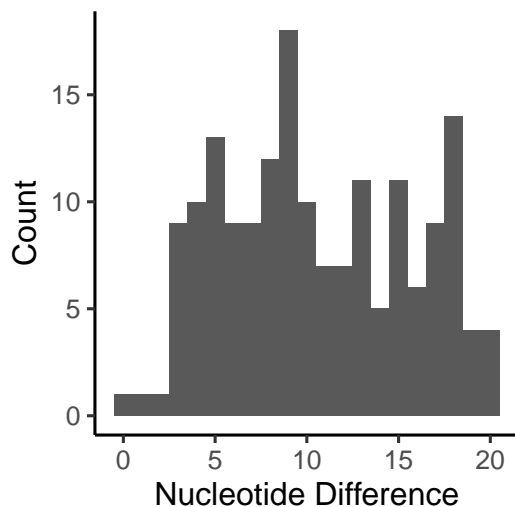
IGHV4-30-4*01

6966 sequences assigned
1578 (22.7%) exact matches, in which:
1493 unique CDR3
6 unique J



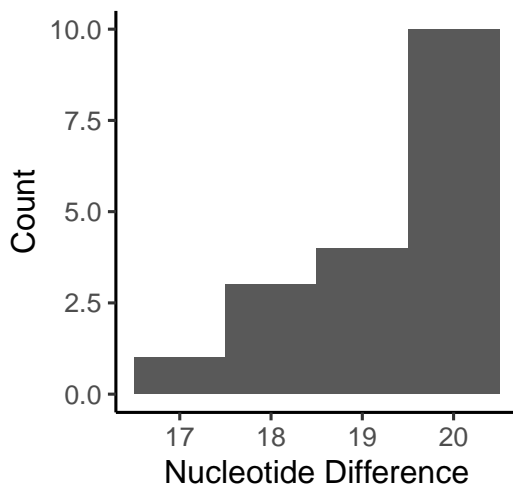
IGHV3-NL1*01

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



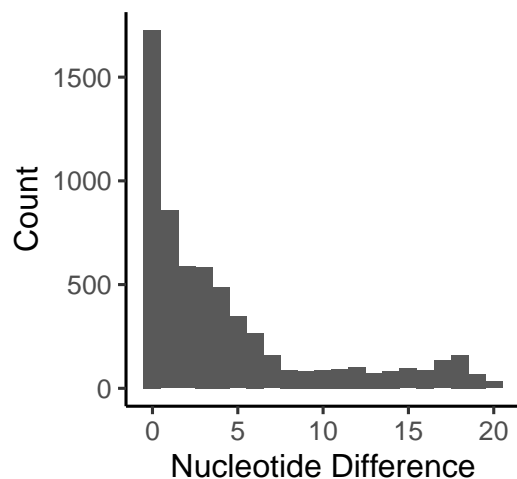
IGHV4-28*02_05

46 sequences assigned
No exact matches.



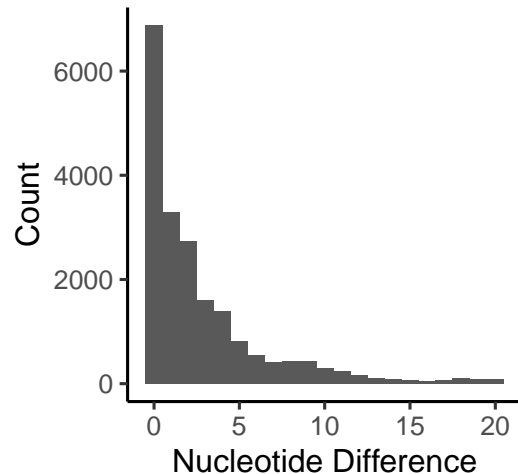
IGHV4-31*03_04

6973 sequences assigned
1727 (24.8%) exact matches, in which:
1611 unique CDR3
6 unique J



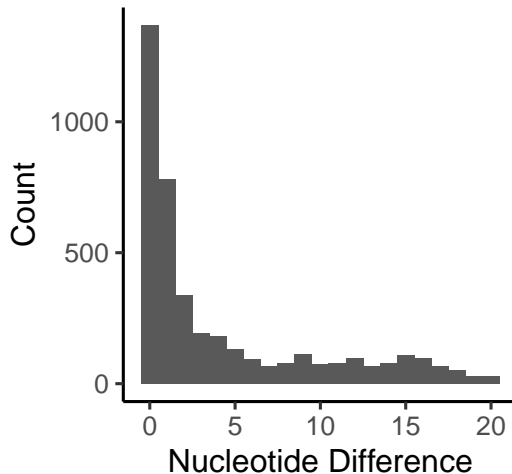
IGHV4-34*01_02

20618 sequences assigned
6877 (33.4%) exact matches, in which:
6381 unique CDR3
6 unique J



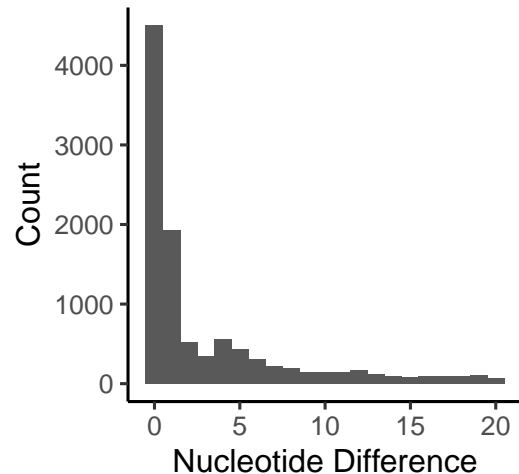
IGHV4-39*01_05

4507 sequences assigned
1368 (30.4%) exact matches, in which:
1263 unique CDR3
6 unique J



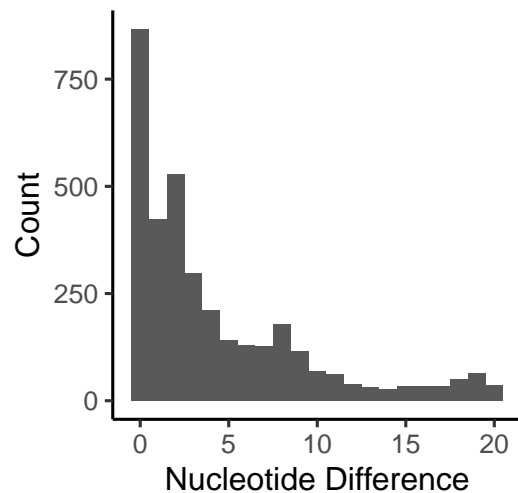
IGHV4-59*01_07

10934 sequences assigned
4502 (41.2%) exact matches, in which:
4258 unique CDR3
6 unique J



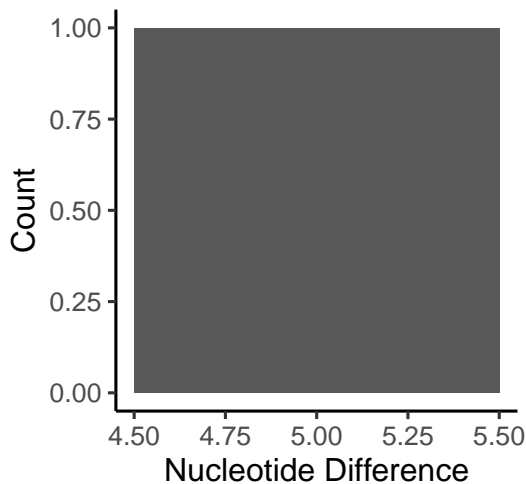
IGHV4-38-2*02_A70G

3781 sequences assigned
867 (22.9%) exact matches, in which:
818 unique CDR3
6 unique J



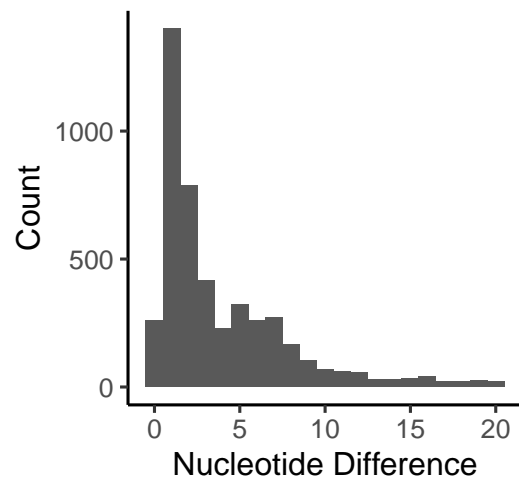
IGHV4-55*02_04_08

1 sequences assigned
No exact matches.



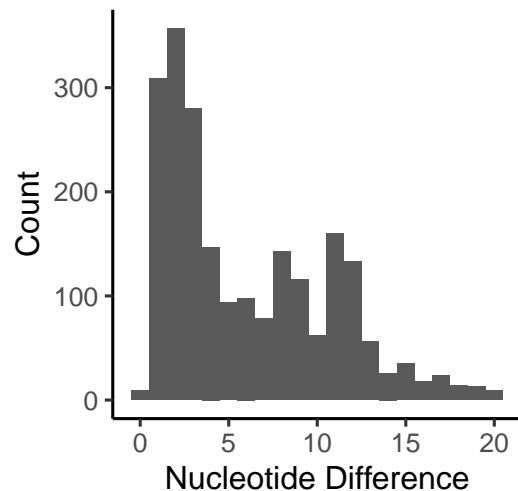
IGHV4-59*12

4802 sequences assigned
260 (5.4%) exact matches, in which:
260 unique CDR3
6 unique J



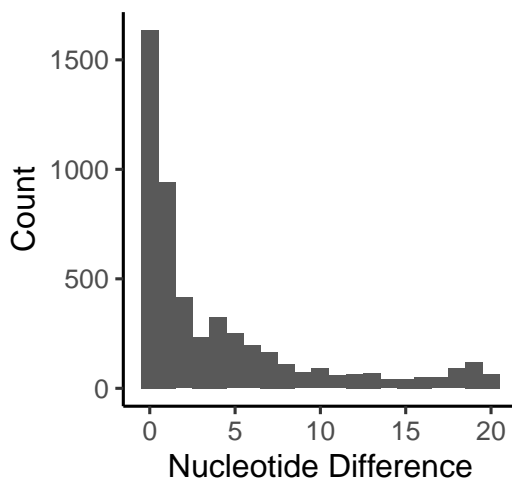
IGHV4-39*07

2238 sequences assigned
9 (0.4%) exact matches, in which:
9 unique CDR3
3 unique J



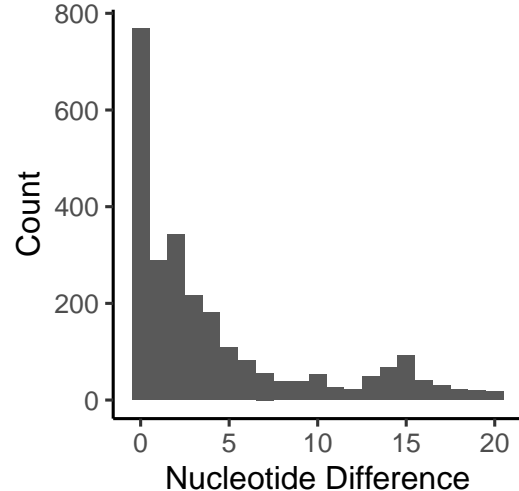
IGHV4-59*08

5500 sequences assigned
1636 (29.7%) exact matches, in which:
1544 unique CDR3
6 unique J



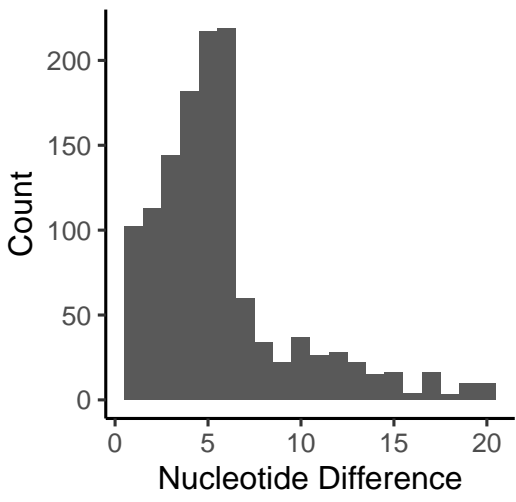
IGHV4-61*01

2787 sequences assigned
769 (27.6%) exact matches, in which:
753 unique CDR3
6 unique J



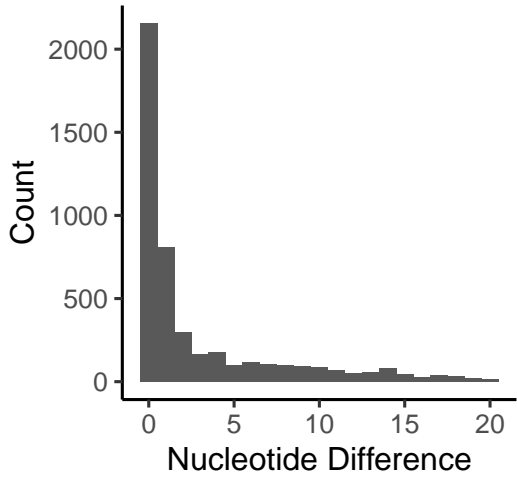
IGHV4–61*08

1341 sequences assigned
No exact matches.



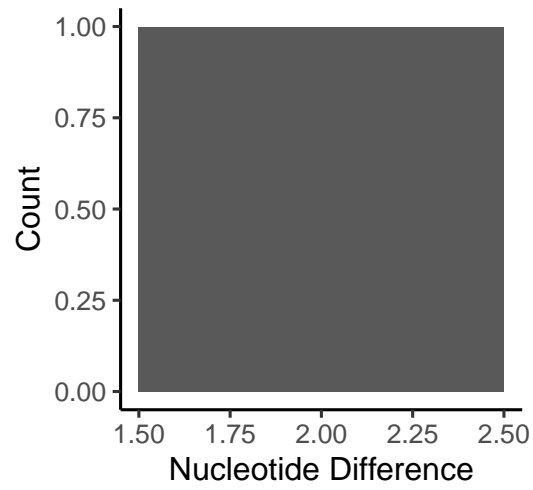
IGHV5–51*01_03_A263⁺

4830 sequences assigned
2155 (44.6%) exact matches, in which:
1709 unique CDR3
6 unique J



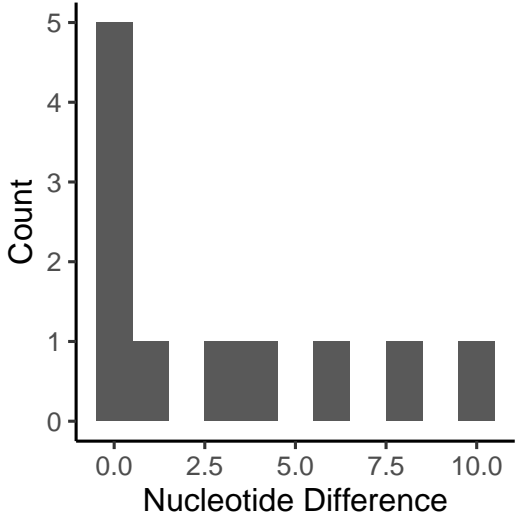
IGHV7–81*01

1 sequences assigned
No exact matches.



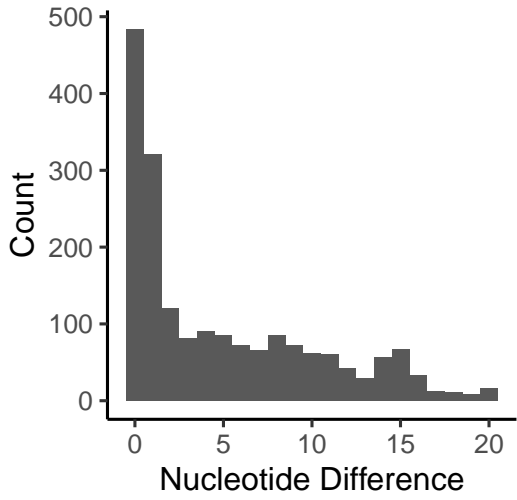
IGHV5–10–1*01_03

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



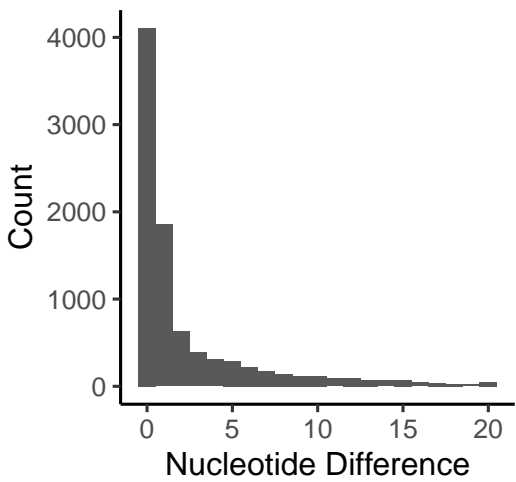
IGHV6–1*01_02

1945 sequences assigned
484 (24.9%) exact matches, in which:
459 unique CDR3
5 unique J



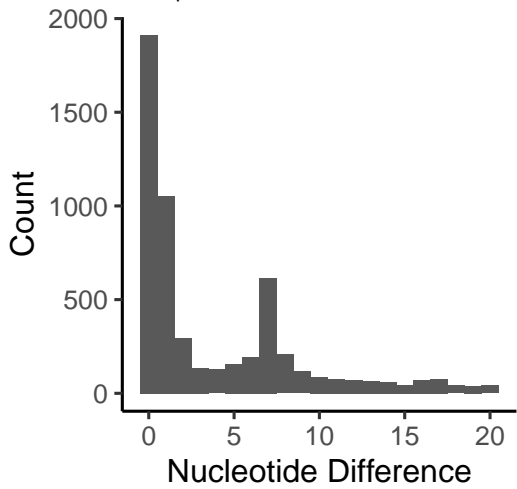
IGHV5–51*01_03

9146 sequences assigned
4107 (44.9%) exact matches, in which:
3181 unique CDR3
6 unique J



IGHV7–4–1*02

5821 sequences assigned
1912 (32.8%) exact matches, in which:
1794 unique CDR3
6 unique J





Novel sequence(s)IGHV1-69*01_12_13_G238AIGHV3-48*03_T303G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5-51*07_A128G are not listed in the genotype and will be ignored.