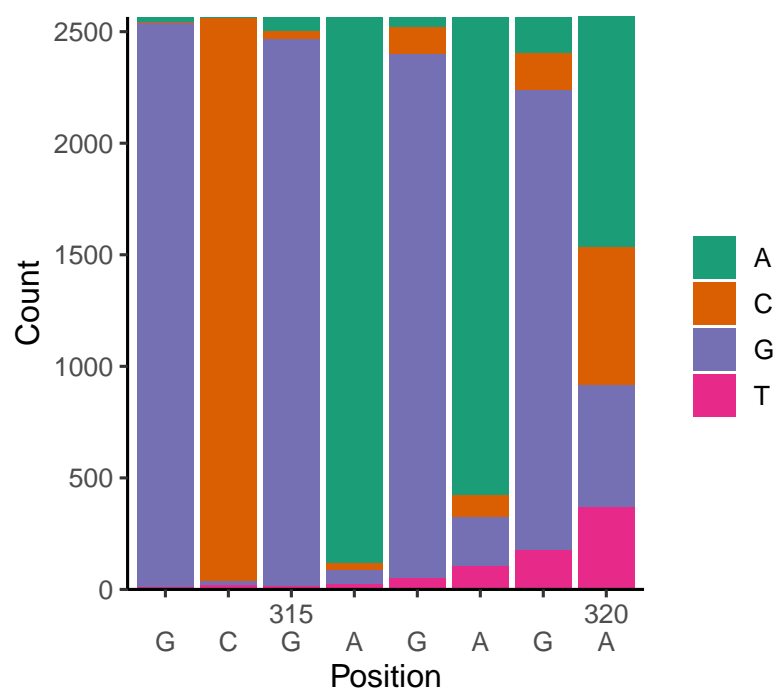
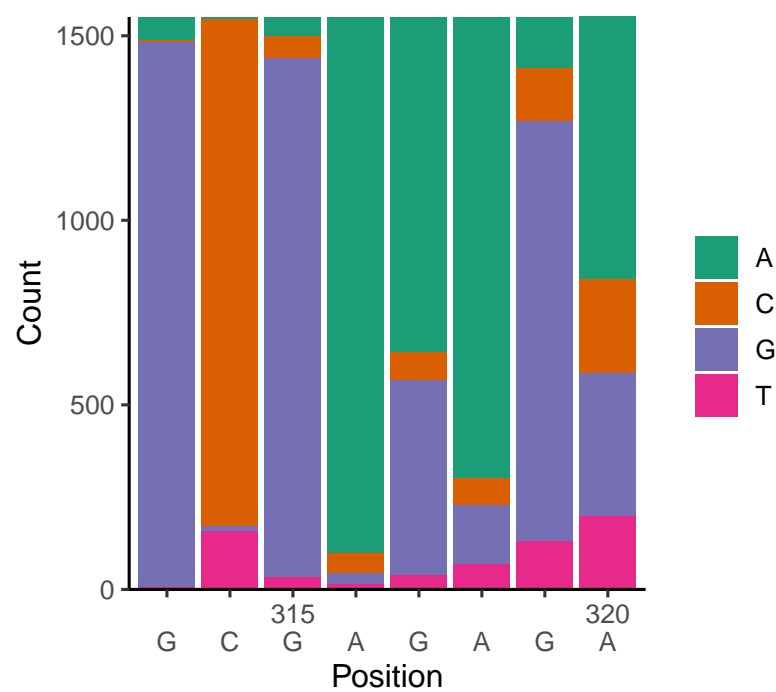


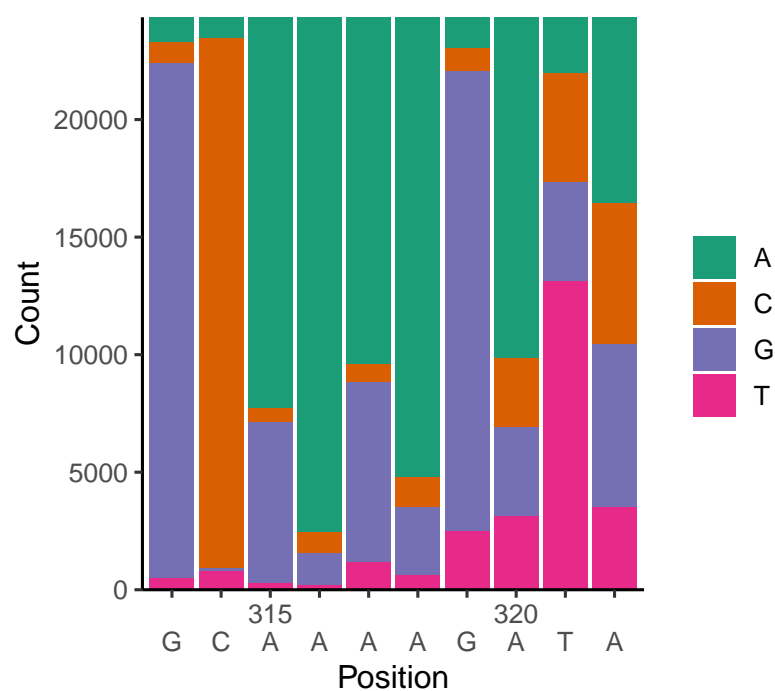
Gene IGHV1/OR15-2*02_03_T81A_T90



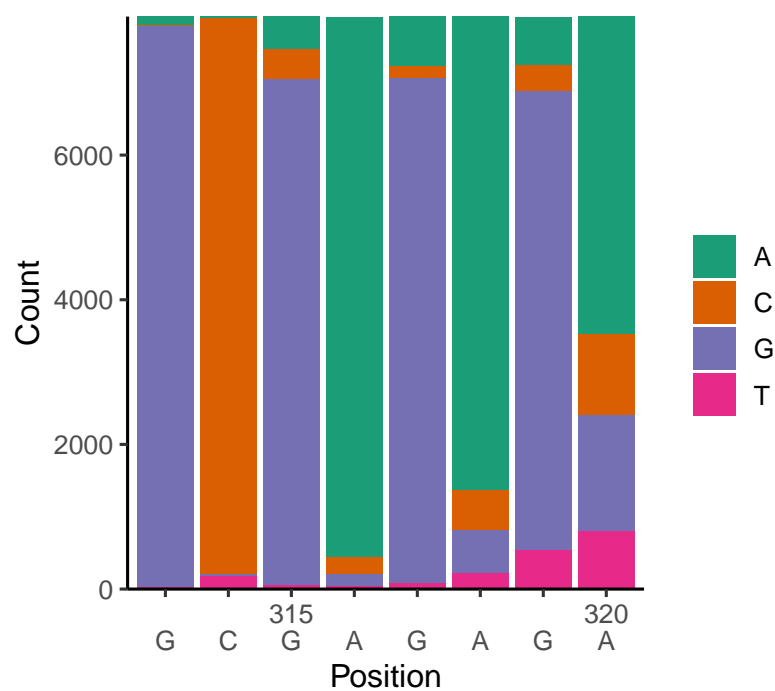
Gene IGHV3-30*04_C203T_T288C_T300



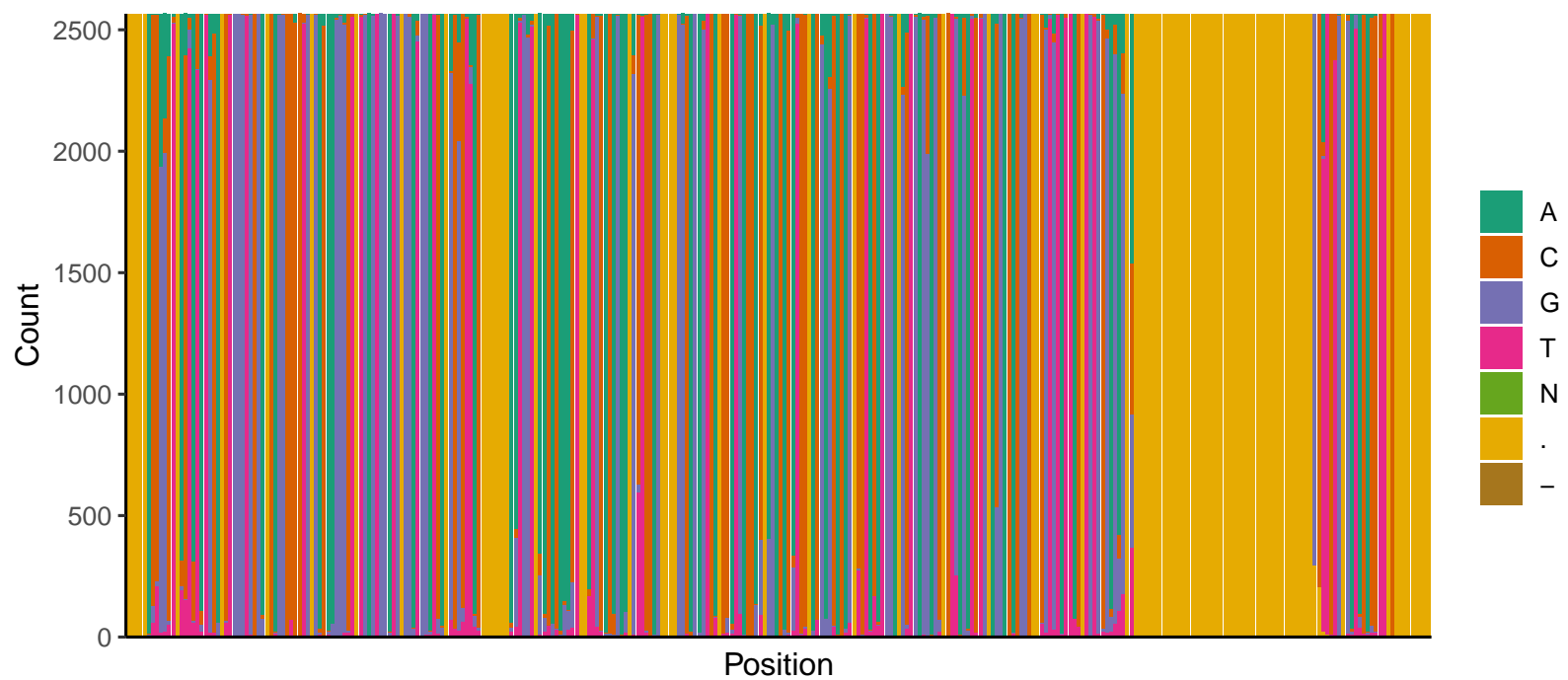
Gene IGHV3-9*01_A104G



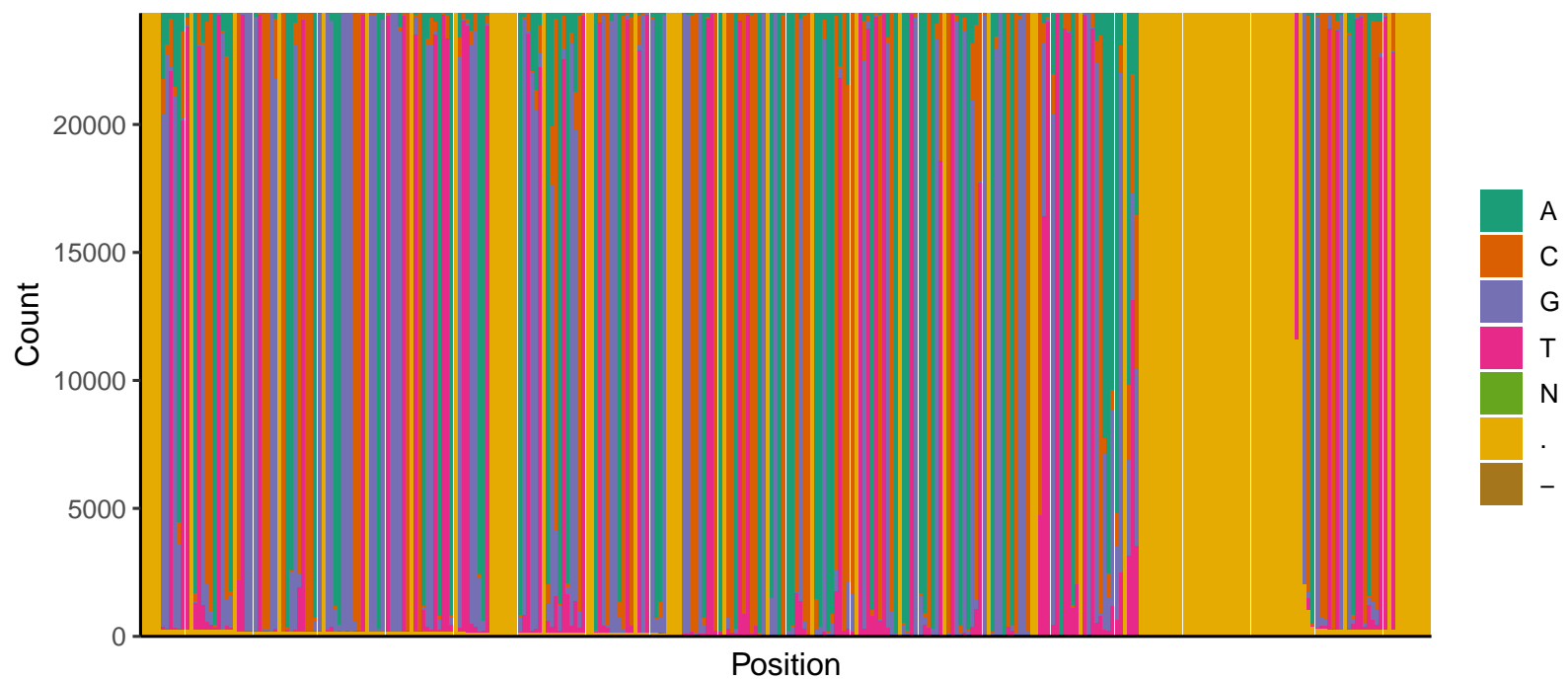
Gene IGHV3-30*04_C203T



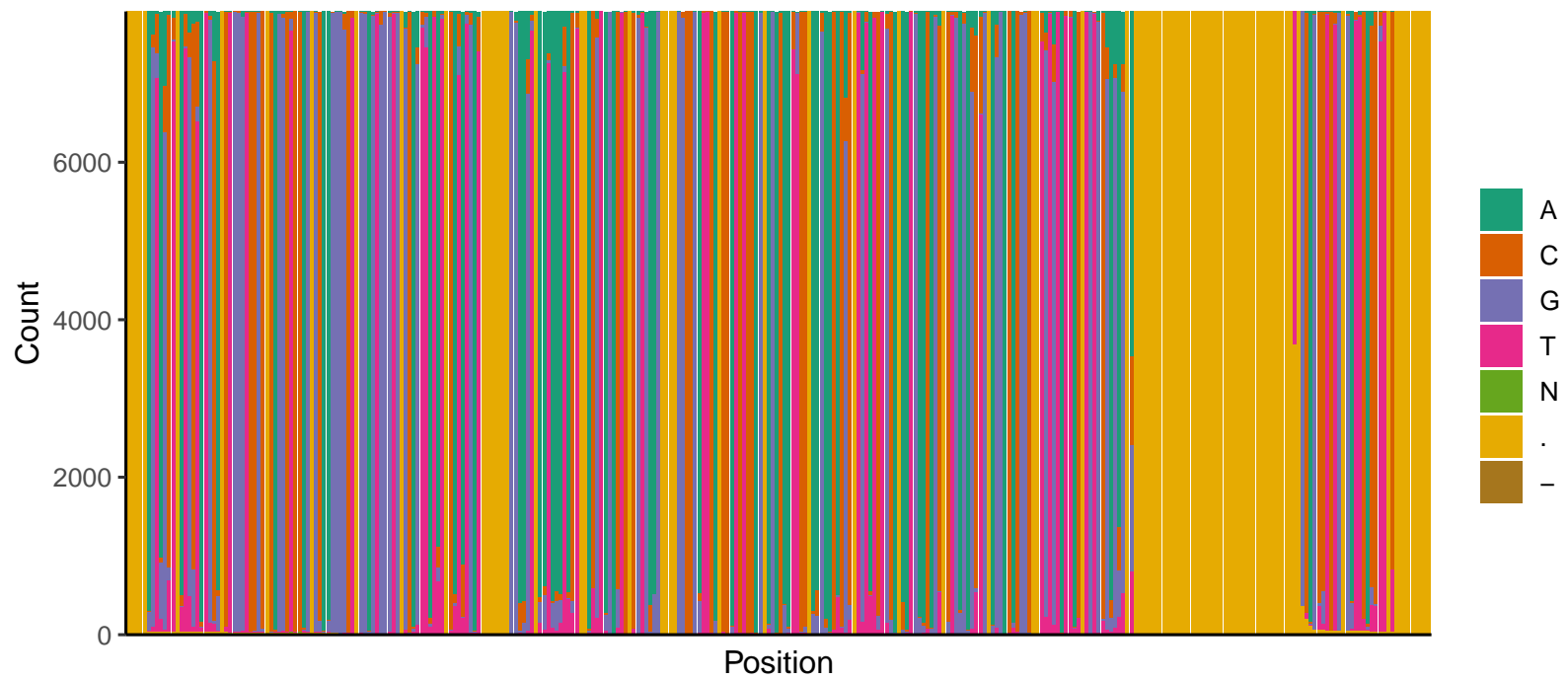
Gene IGHV1/OR15-2*02_03_T81A_T90C_A106G_T127C_A140G_A170G_A172G_C203T



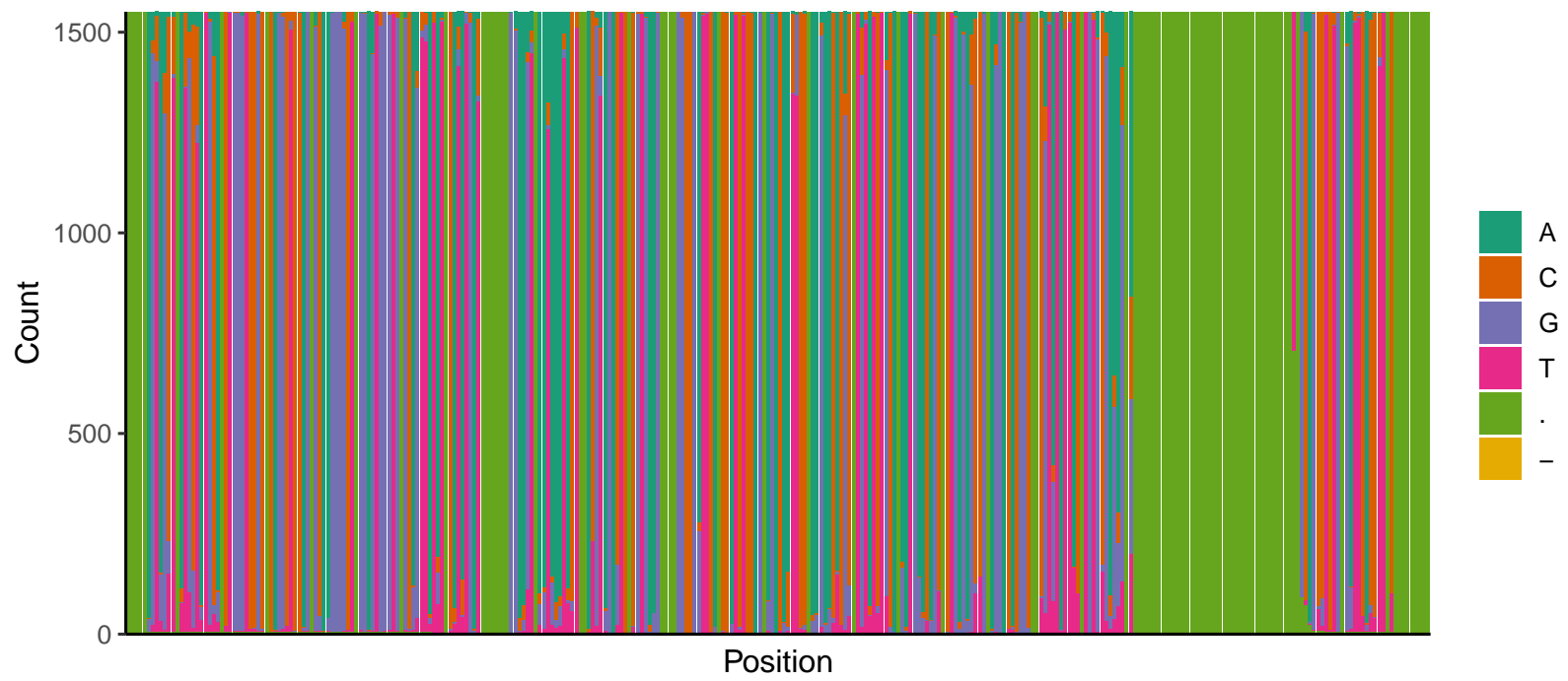
Gene IGHV3-9*01_A104G



Gene IGHV3-30*04_C203T

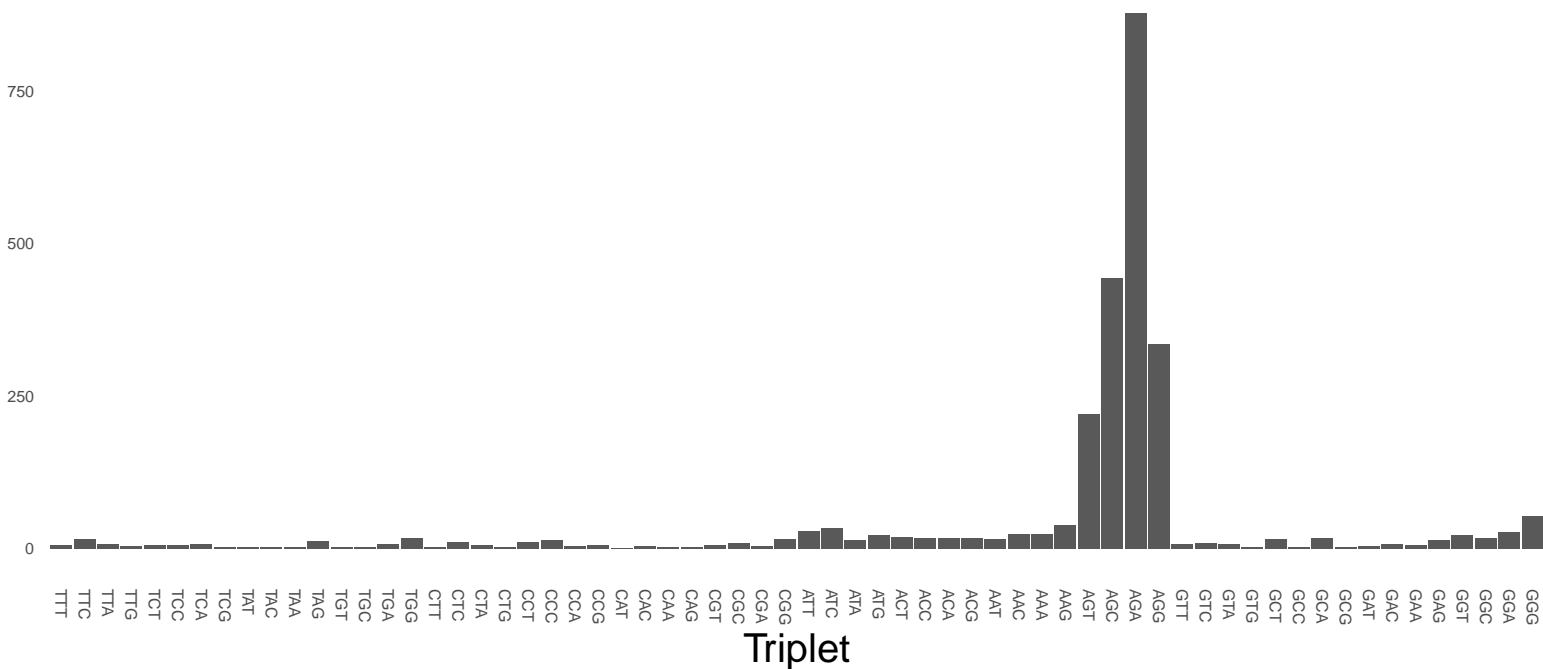


Gene IGHV3-30*04_C203T_T288C_T300C_G303A



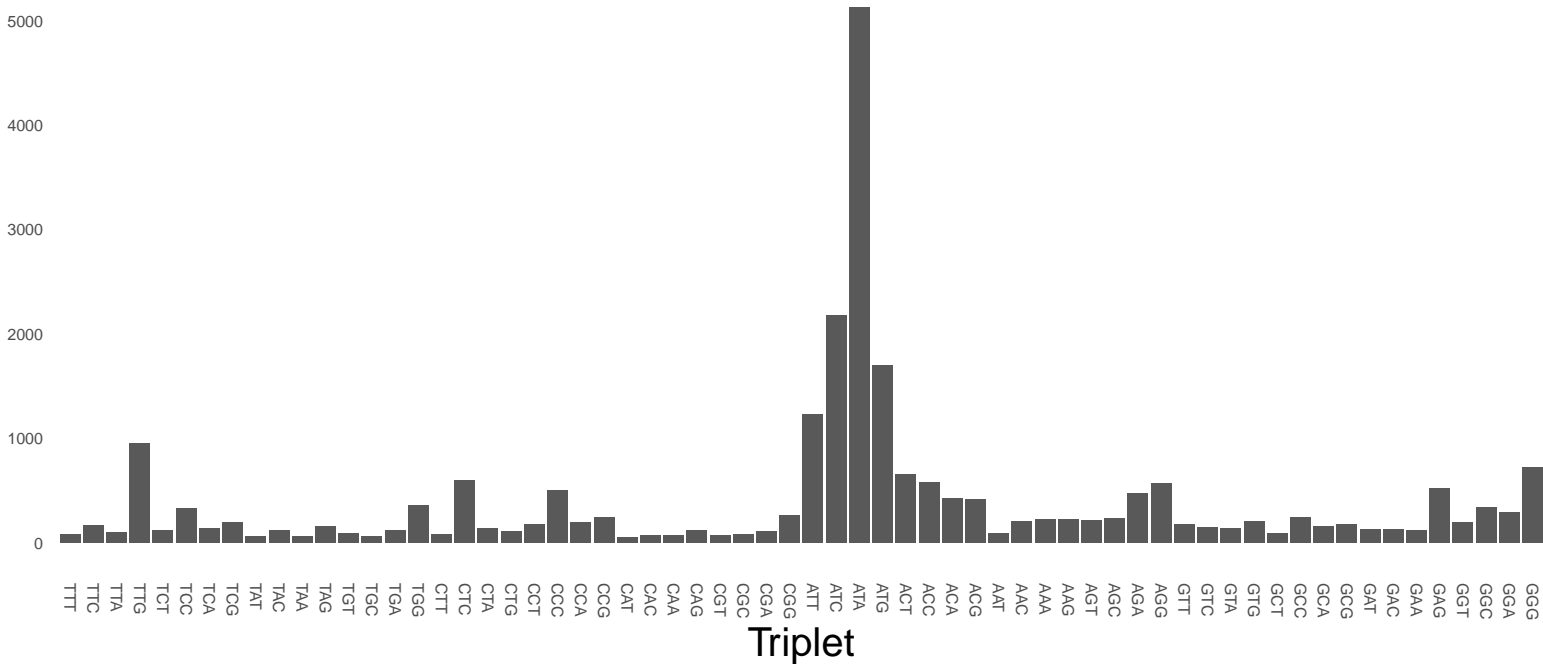
IGHV1/OR15-2*02_03_T81A_T90C_A106G_T127C_A140G_A170G_A172G_C201T_C202G_A2

Count



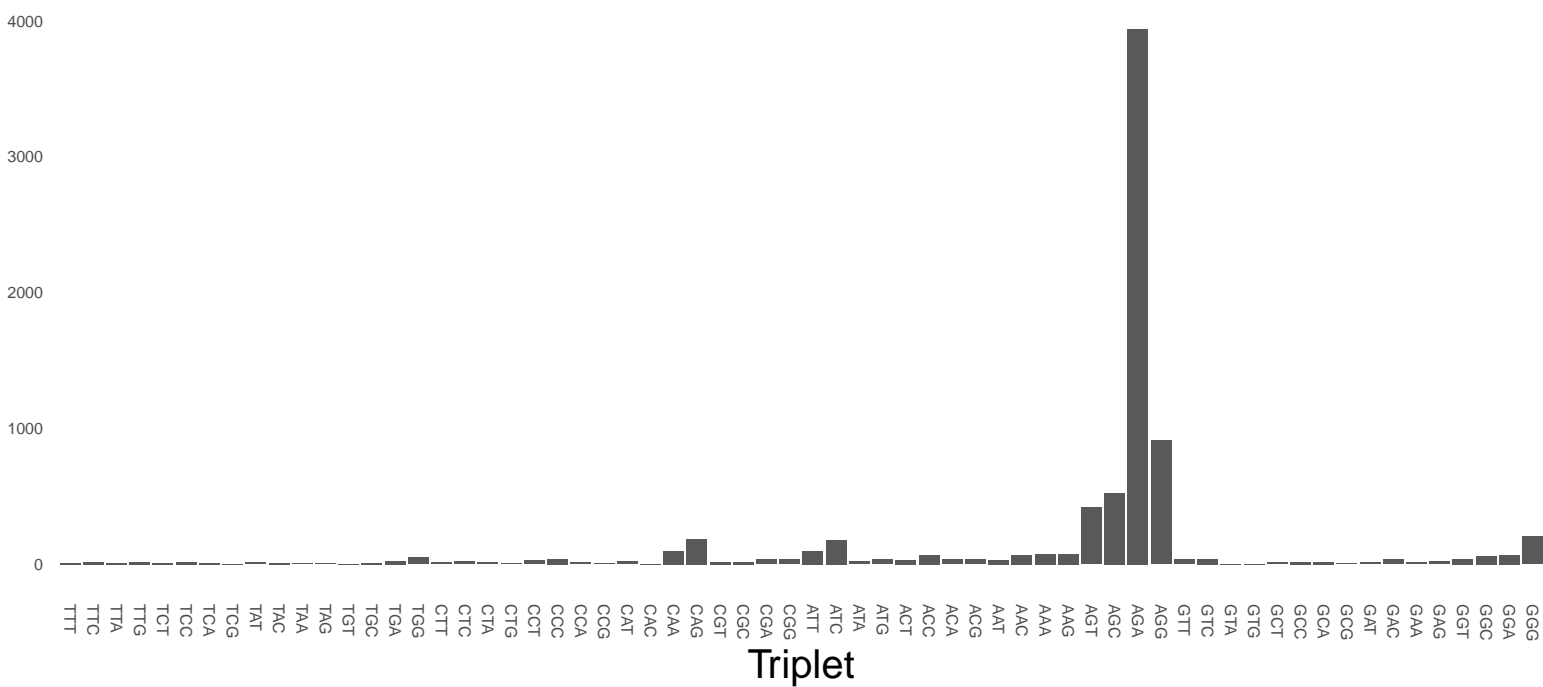
IGHV3-9*01_A104G- Final 3 nucleotides as a triplet

Count

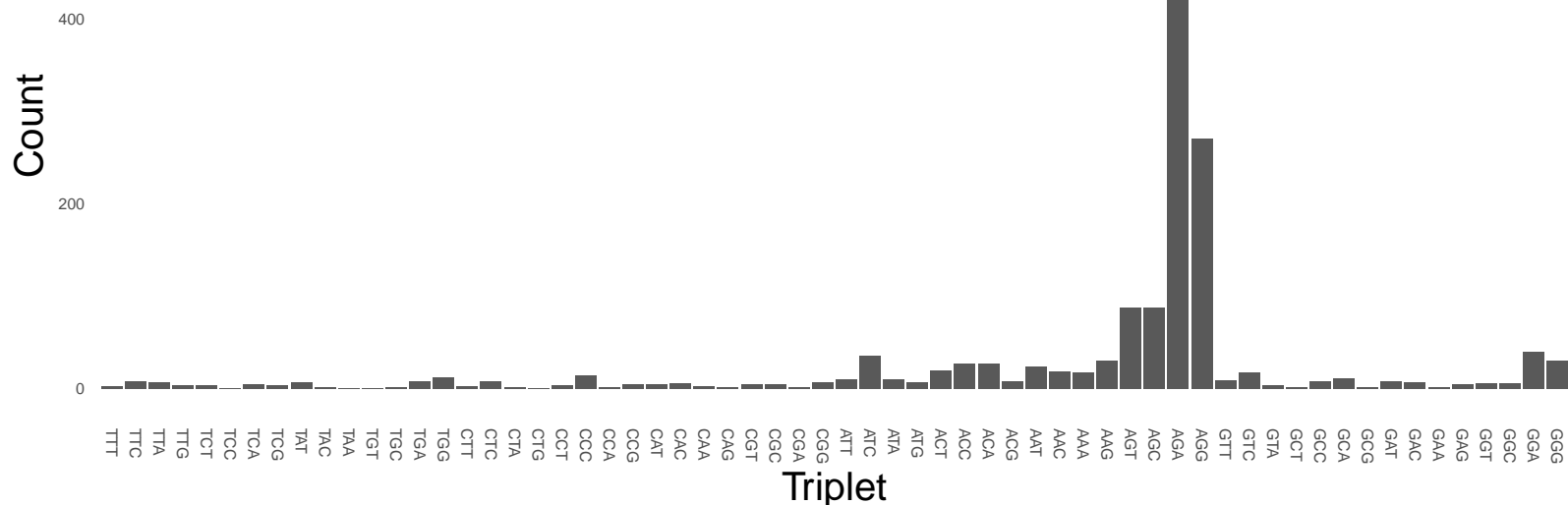


IGHV3-30*04_C203T- Final 3 nucleotides as a triplet

Count

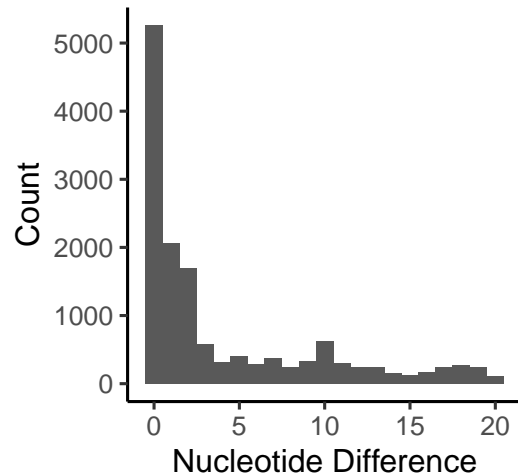


IGHV3-30*04_C203T_T288C_T300C_G303A- Final 3 nucleotides as a triplet



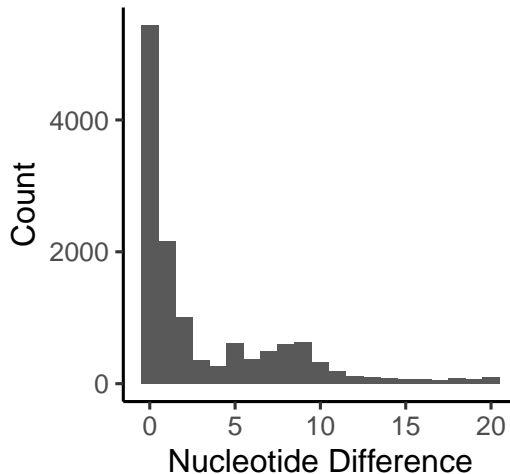
IGHV1-2*02

15489 sequences assigned
5259 (34%) exact matches, in which:
5040 unique CDR3
6 unique J



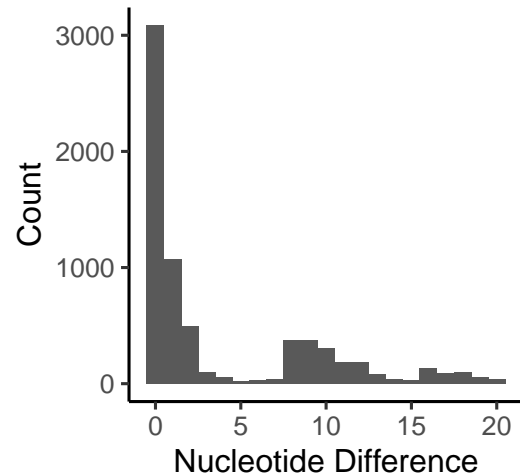
IGHV1-8*01

14008 sequences assigned
5434 (38.8%) exact matches, in which:
5219 unique CDR3
6 unique J



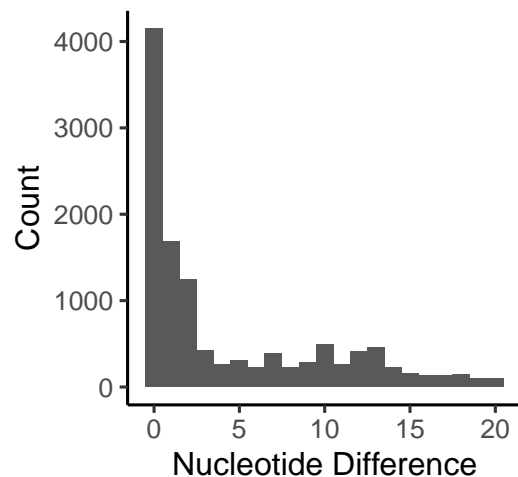
IGHV1-24*01

6949 sequences assigned
3085 (44.4%) exact matches, in which:
2925 unique CDR3
6 unique J



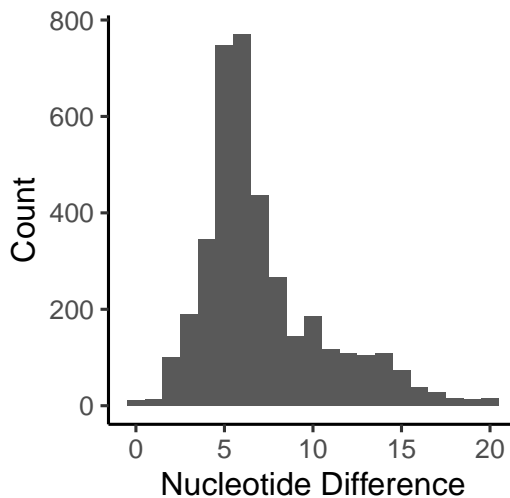
IGHV1-2*06

12640 sequences assigned
4148 (32.8%) exact matches, in which:
3945 unique CDR3
6 unique J



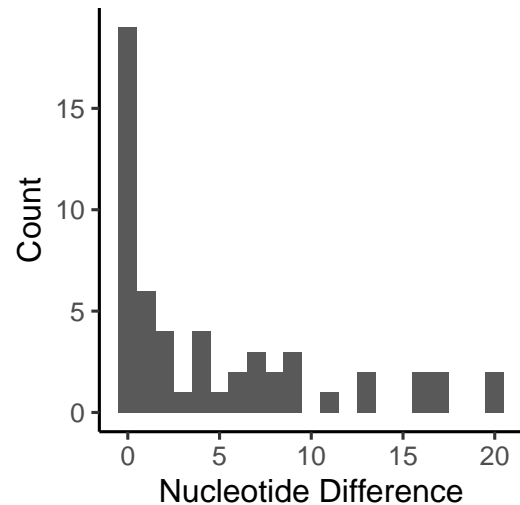
IGHV1-8*02

4042 sequences assigned
11 (0.3%) exact matches, in which:
11 unique CDR3
4 unique J



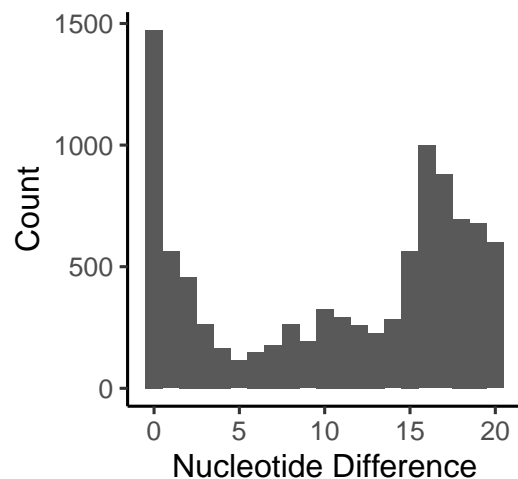
IGHV1-45*02

56 sequences assigned
19 (33.9%) exact matches, in which:
17 unique CDR3
5 unique J



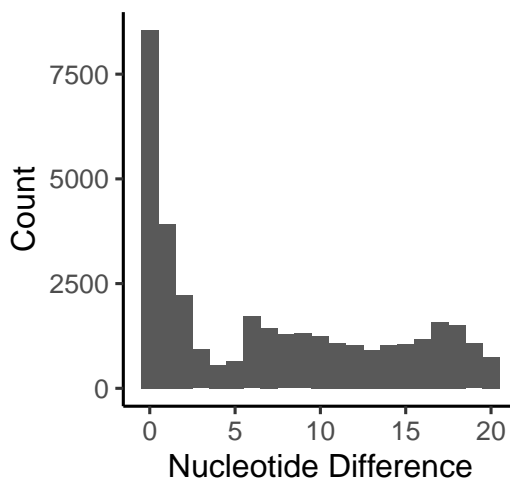
IGHV1-3*01_05

16802 sequences assigned
1473 (8.8%) exact matches, in which:
1375 unique CDR3
6 unique J



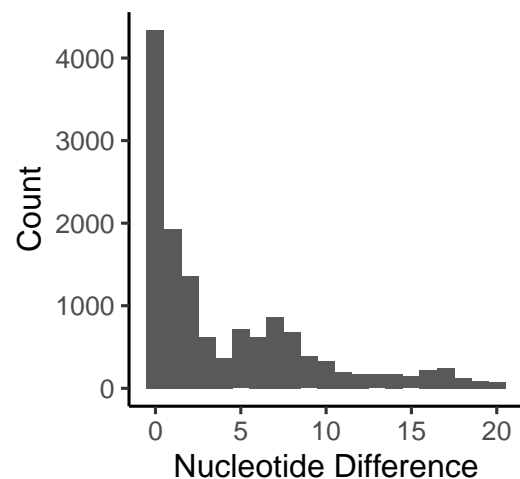
IGHV1-18*01

38465 sequences assigned
8553 (22.2%) exact matches, in which:
8092 unique CDR3
6 unique J



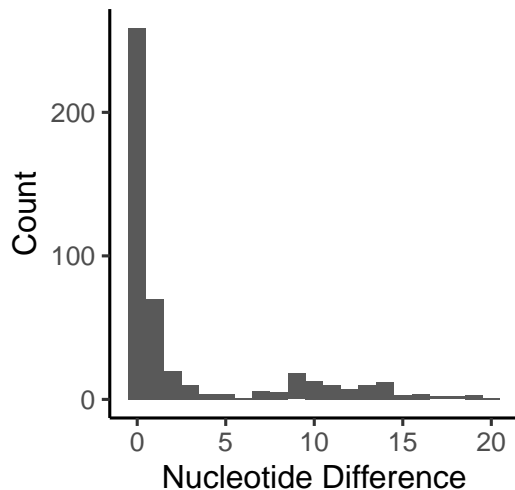
IGHV1-46*01

14700 sequences assigned
4339 (29.5%) exact matches, in which:
4184 unique CDR3
6 unique J



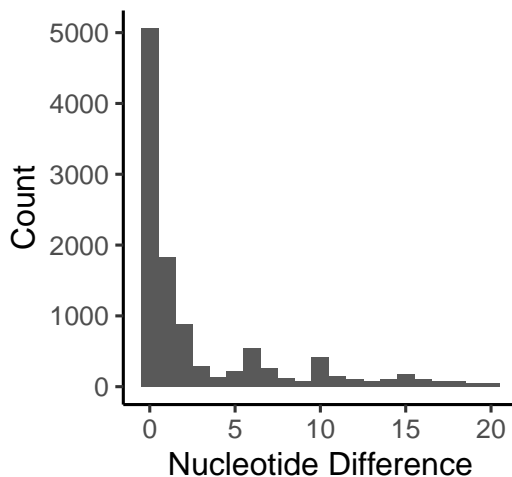
IGHV1-58*02

471 sequences assigned
259 (55%) exact matches, in which:
250 unique CDR3
6 unique J



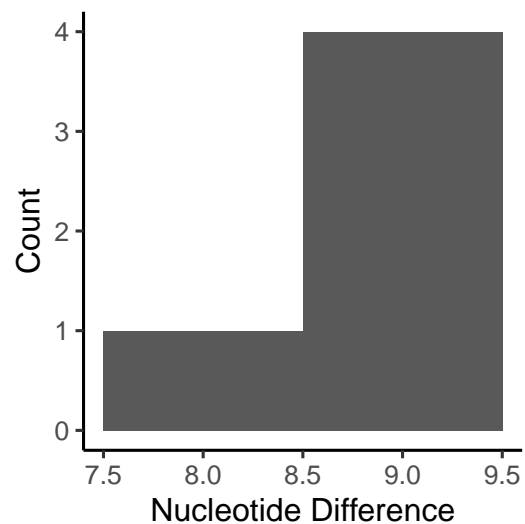
IGHV1-69*01_12_13

11346 sequences assigned
5060 (44.6%) exact matches, in which:
4947 unique CDR3
6 unique J



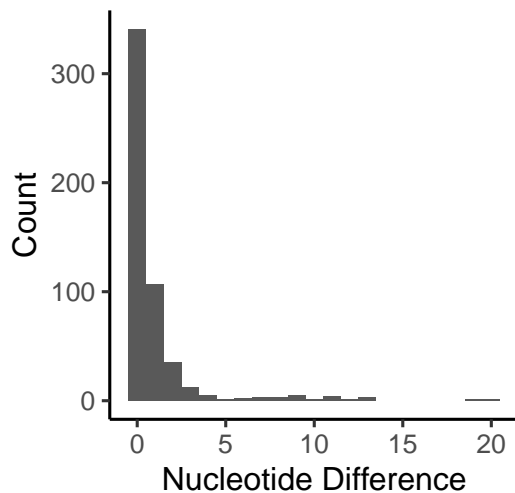
IGHV1-NL1*01

5 sequences assigned
No exact matches.



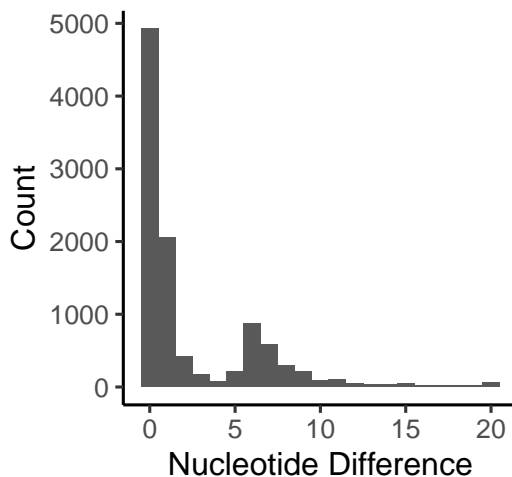
IGHV1-58*01_03

669 sequences assigned
341 (51%) exact matches, in which:
323 unique CDR3
6 unique J



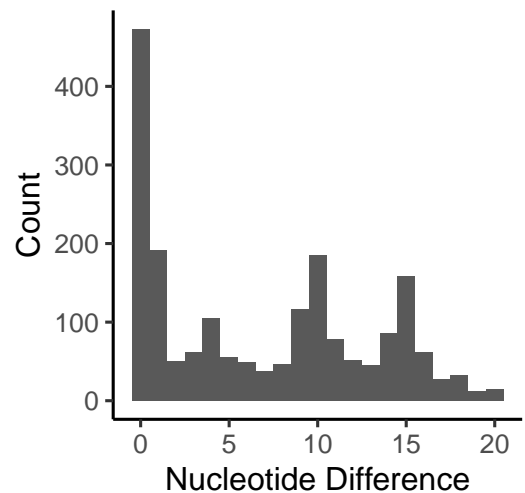
IGHV1-69*04_09

10612 sequences assigned
4926 (46.4%) exact matches, in which:
4768 unique CDR3
6 unique J



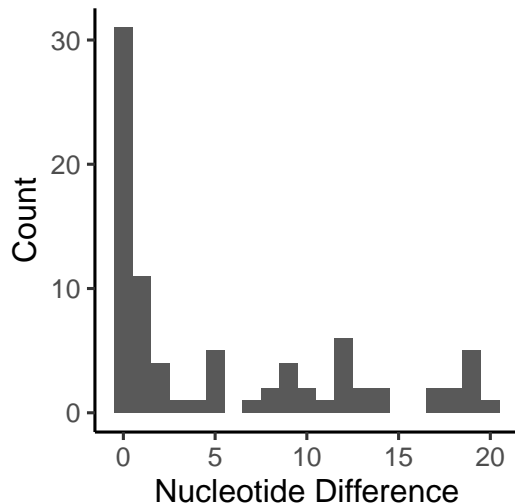
IGHV2-5*01

2012 sequences assigned
473 (23.5%) exact matches, in which:
453 unique CDR3
6 unique J



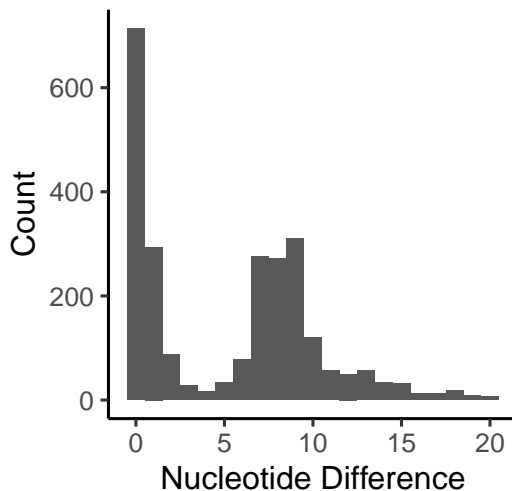
IGHV1-69-2*01

93 sequences assigned
31 (33.3%) exact matches, in which:
30 unique CDR3
4 unique J



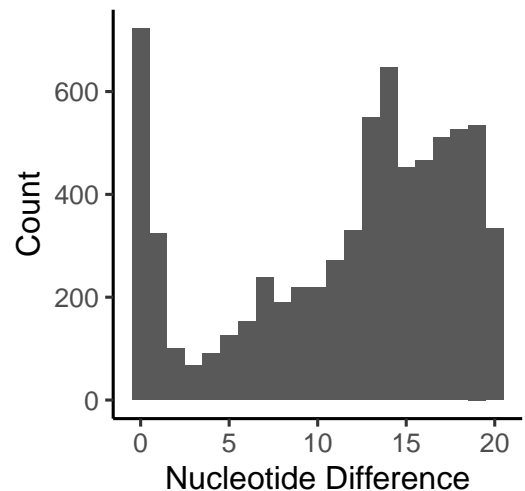
IGHV1-69*06_14

2585 sequences assigned
714 (27.6%) exact matches, in which:
710 unique CDR3
6 unique J



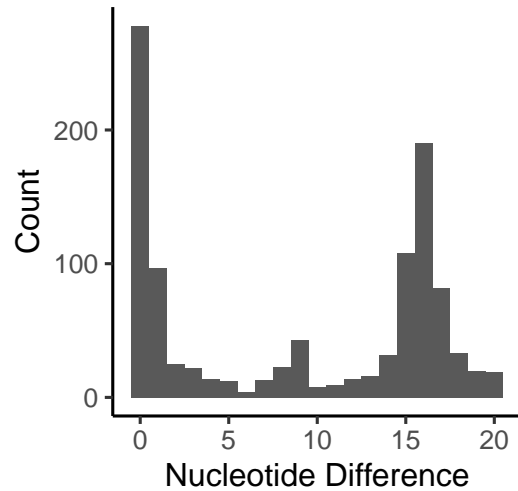
IGHV2-5*02

7947 sequences assigned
723 (9.1%) exact matches, in which:
693 unique CDR3
6 unique J



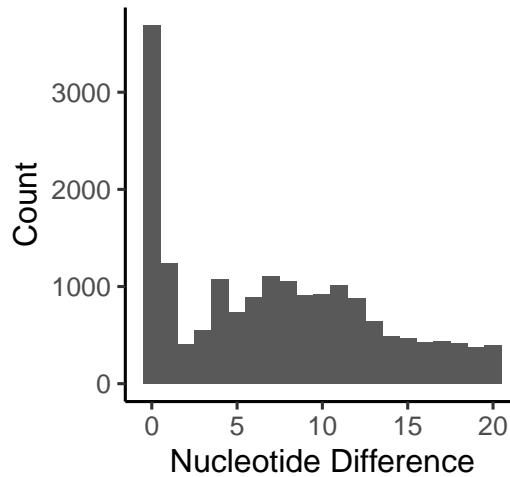
IGHV2-26*01

1108 sequences assigned
278 (25.1%) exact matches, in which:
266 unique CDR3
5 unique J



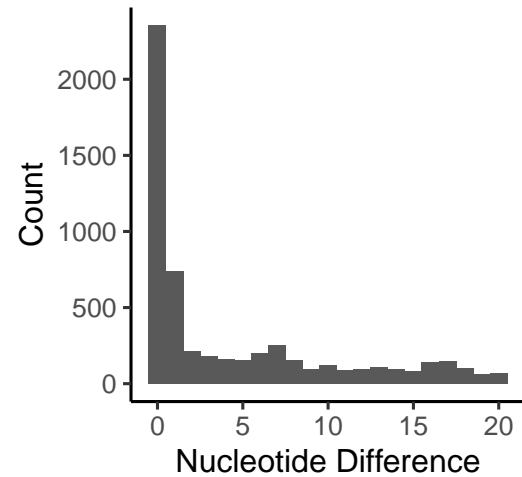
IGHV3-7*01

20869 sequences assigned
3688 (17.7%) exact matches, in which:
3105 unique CDR3
6 unique J



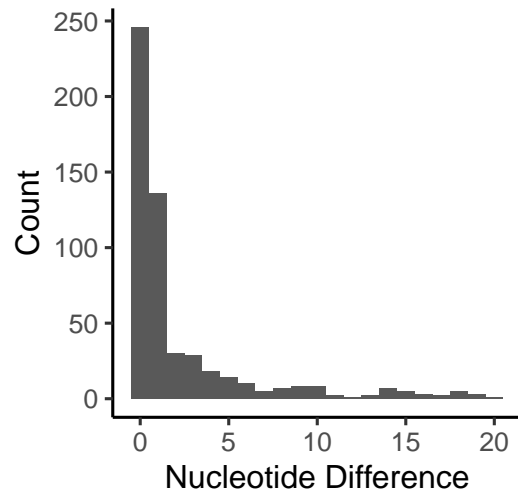
IGHV3-11*01

7859 sequences assigned
2354 (30%) exact matches, in which:
2046 unique CDR3
6 unique J



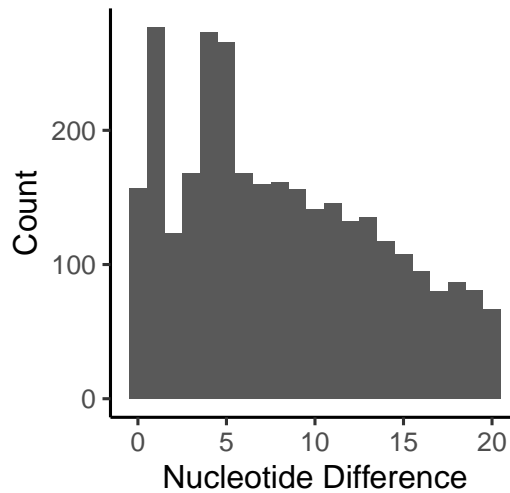
IGHV2-70*01

576 sequences assigned
246 (42.7%) exact matches, in which:
232 unique CDR3
6 unique J



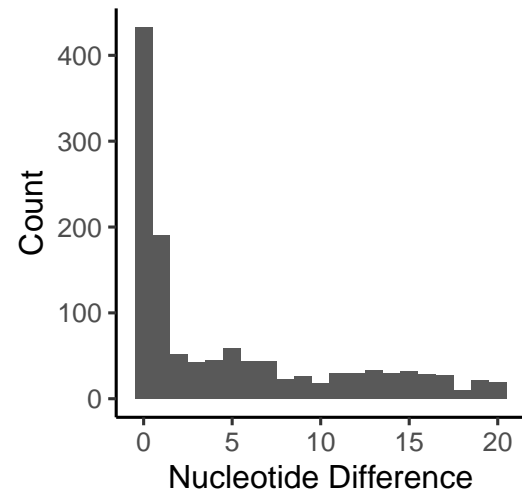
IGHV3-7*03

3533 sequences assigned
157 (4.4%) exact matches, in which:
155 unique CDR3
5 unique J



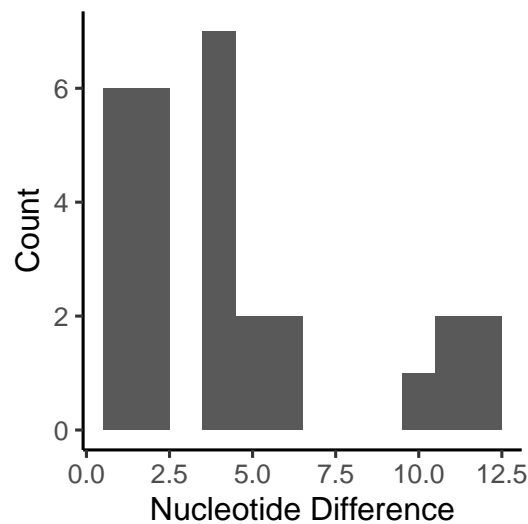
IGHV3-11*04

1420 sequences assigned
433 (30.5%) exact matches, in which:
425 unique CDR3
6 unique J



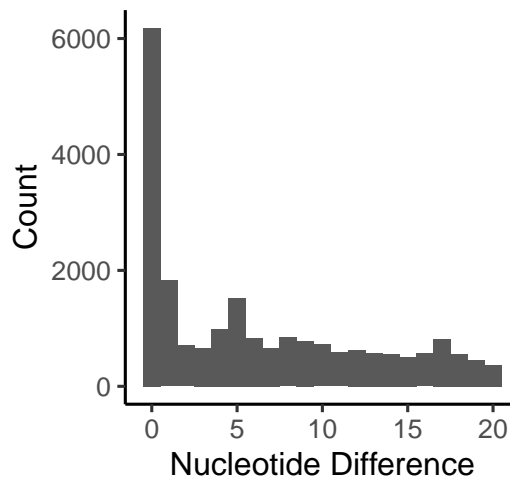
IGHV2-70D*04

31 sequences assigned
No exact matches.



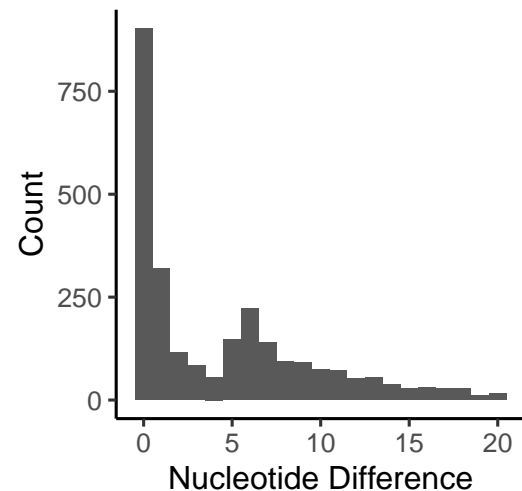
IGHV3-9*01_A104G

24352 sequences assigned
6181 (25.4%) exact matches, in which:
4836 unique CDR3
6 unique J



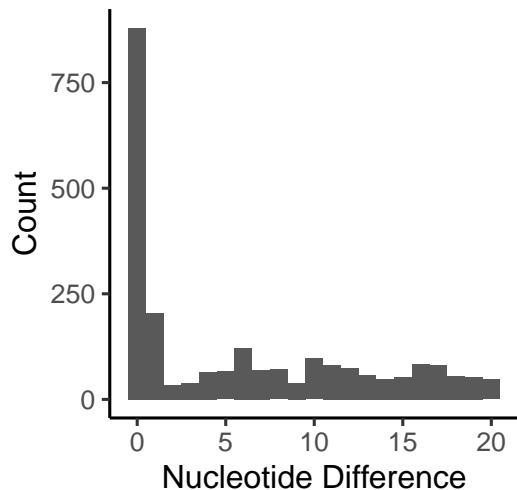
IGHV3-13*01

2749 sequences assigned
903 (32.8%) exact matches, in which:
752 unique CDR3
6 unique J



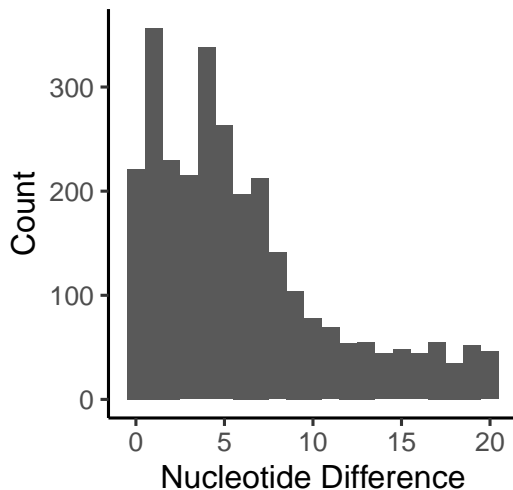
IGHV3-15*01_02

3227 sequences assigned
880 (27.3%) exact matches, in which:
751 unique CDR3
6 unique J



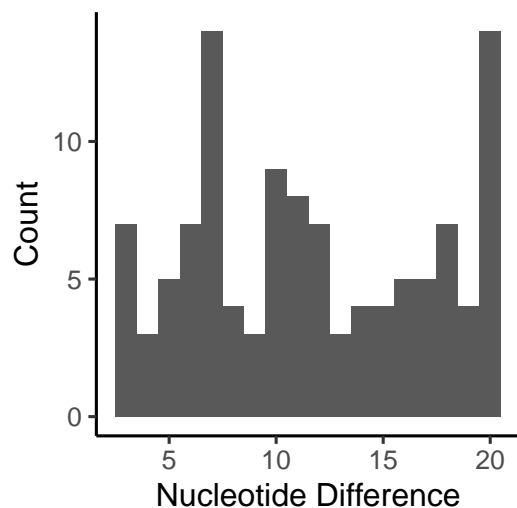
IGHV3-21*04

3106 sequences assigned
221 (7.1%) exact matches, in which:
221 unique CDR3
6 unique J



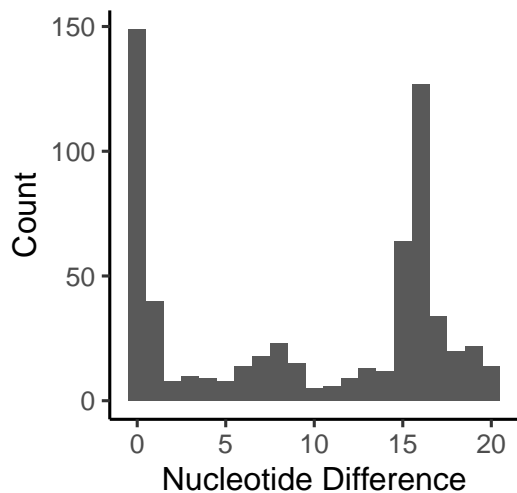
IGHV3-30-5*01

212 sequences assigned
No exact matches.



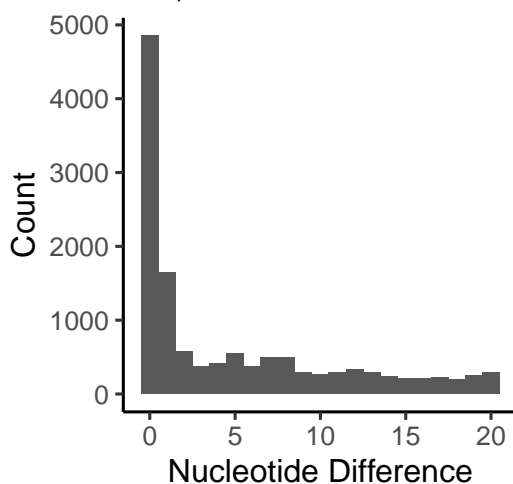
IGHV3-20*01_02

656 sequences assigned
149 (22.7%) exact matches, in which:
124 unique CDR3
5 unique J



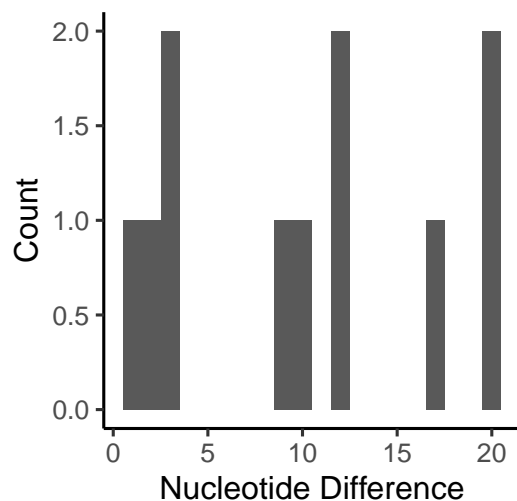
IGHV3-21*01_02

14204 sequences assigned
4853 (34.2%) exact matches, in which:
4029 unique CDR3
6 unique J



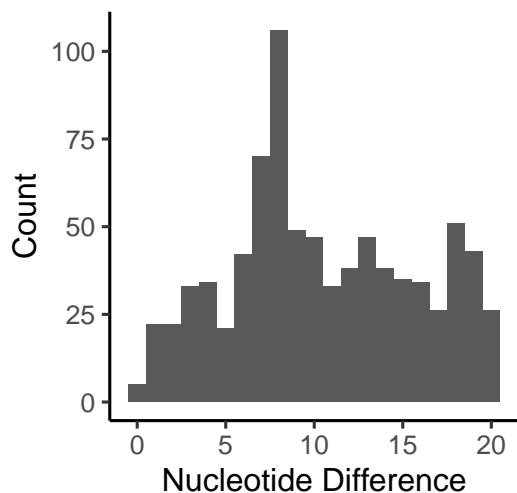
IGHV3-30-3*02

19 sequences assigned
No exact matches.



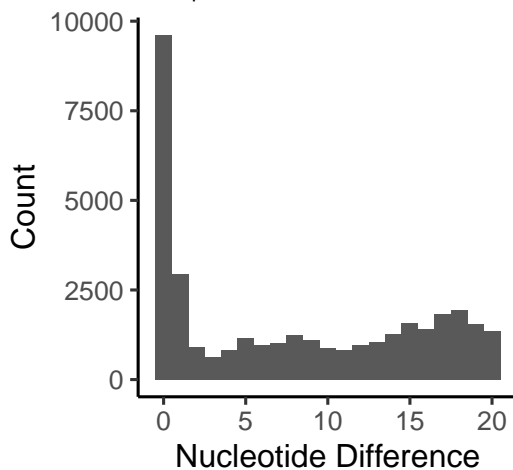
IGHV3-20*03_04

950 sequences assigned
5 (0.5%) exact matches, in which:
4 unique CDR3
3 unique J



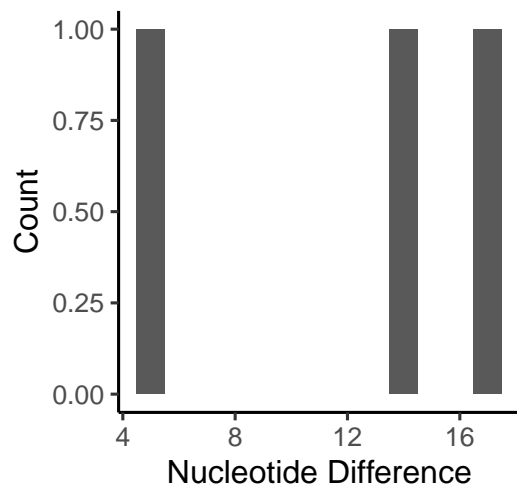
IGHV3-23*01_04

43921 sequences assigned
9620 (21.9%) exact matches, in which:
7503 unique CDR3
6 unique J



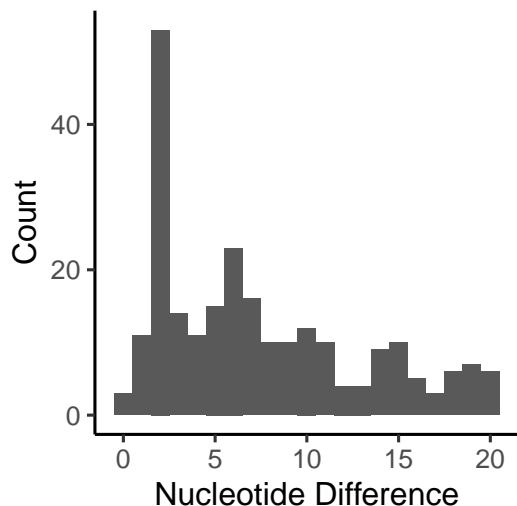
IGHV3-30-5*02

6 sequences assigned
No exact matches.



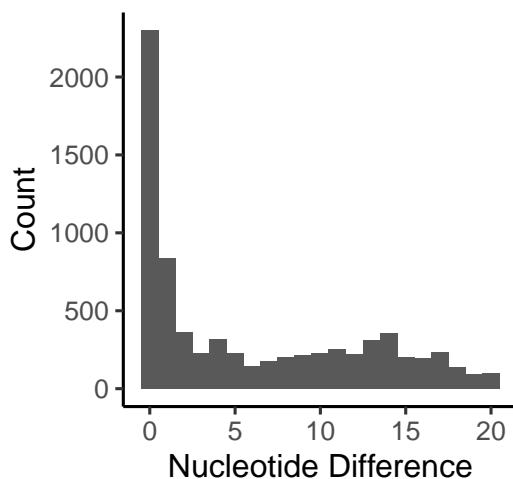
IGHV3-30-3*03

363 sequences assigned
3 (0.8%) exact matches, in which:
3 unique CDR3
2 unique J



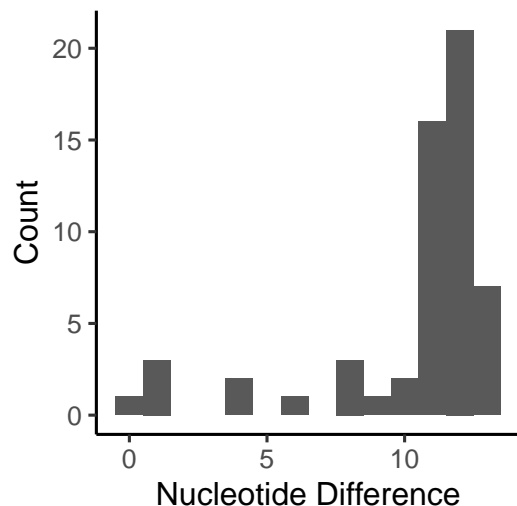
IGHV3-33*01

8008 sequences assigned
2299 (28.7%) exact matches, in which:
2033 unique CDR3
6 unique J



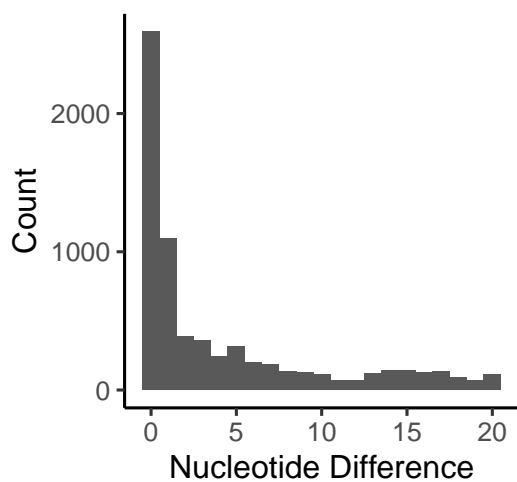
IGHV3-35*01

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



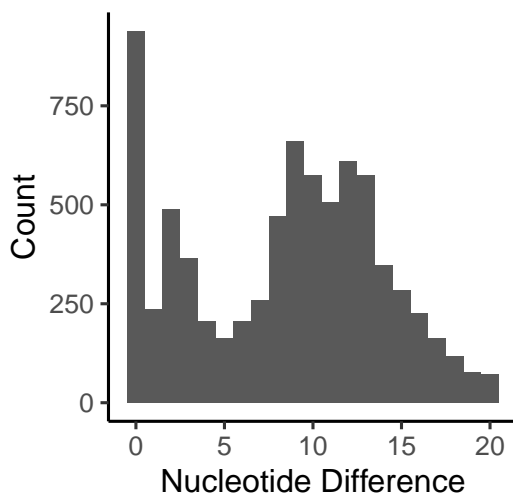
IGHV3-30*04_C203T

7915 sequences assigned
2592 (32.7%) exact matches, in which:
2208 unique CDR3
6 unique J



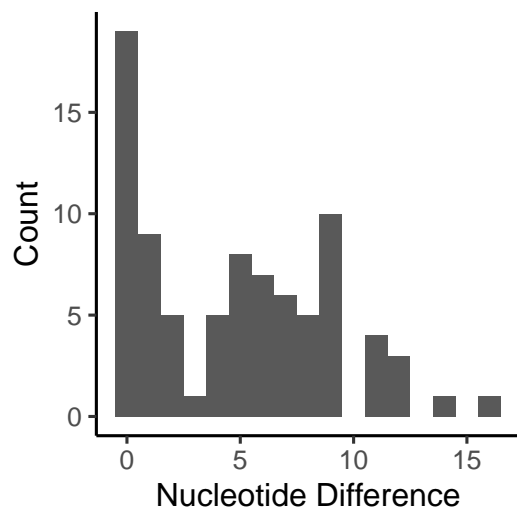
IGHV3-33*06

8132 sequences assigned
939 (11.5%) exact matches, in which:
784 unique CDR3
6 unique J



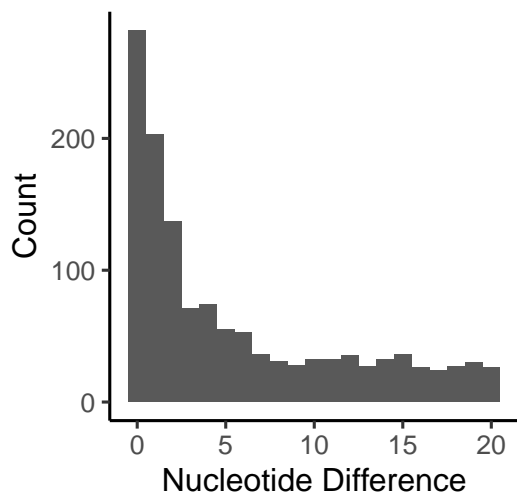
IGHV3-38-3*01

84 sequences assigned
19 (22.6%) exact matches, in which:
19 unique CDR3
4 unique J



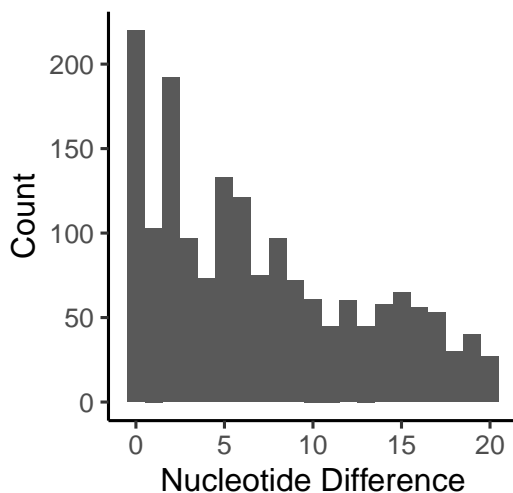
IGHV3-30*04_C203T_T2

1551 sequences assigned
282 (18.2%) exact matches, in which:
280 unique CDR3
6 unique J



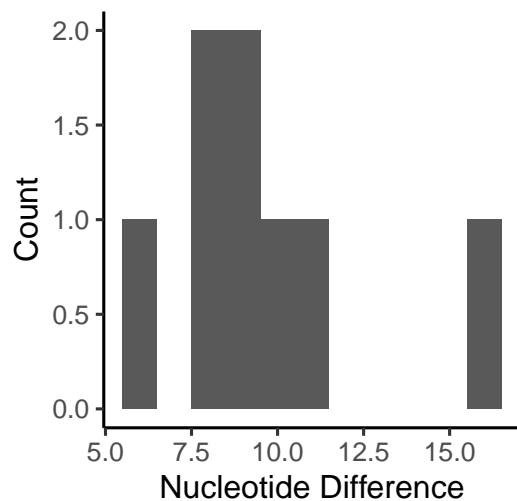
IGHV3-33*08

2007 sequences assigned
220 (11%) exact matches, in which:
215 unique CDR3
6 unique J



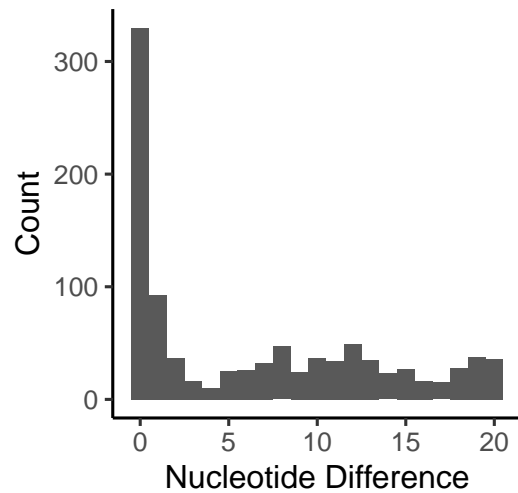
IGHV3-38*03

8 sequences assigned
No exact matches.



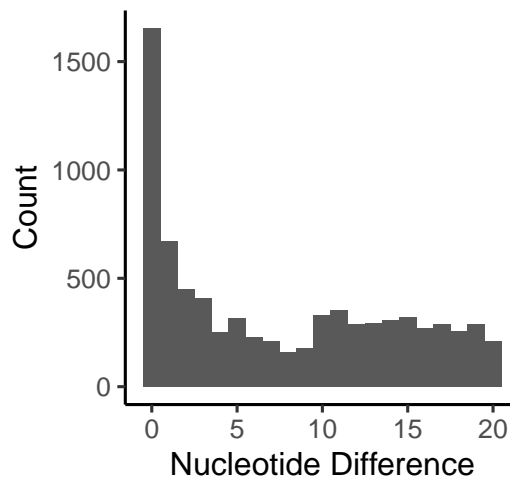
IGHV3-43*01

1168 sequences assigned
330 (28.3%) exact matches, in which:
283 unique CDR3
6 unique J



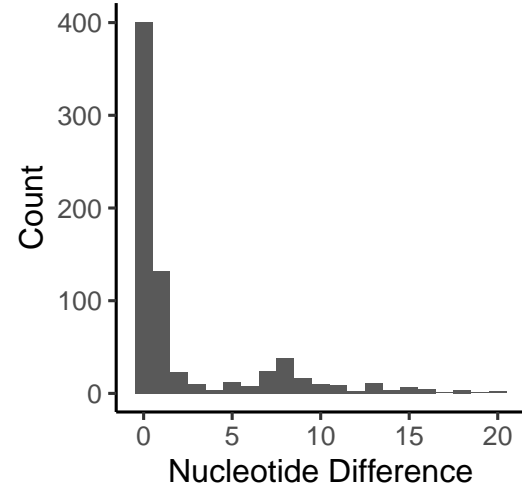
IGHV3-48*04

9657 sequences assigned
1653 (17.1%) exact matches, in which:
1443 unique CDR3
6 unique J



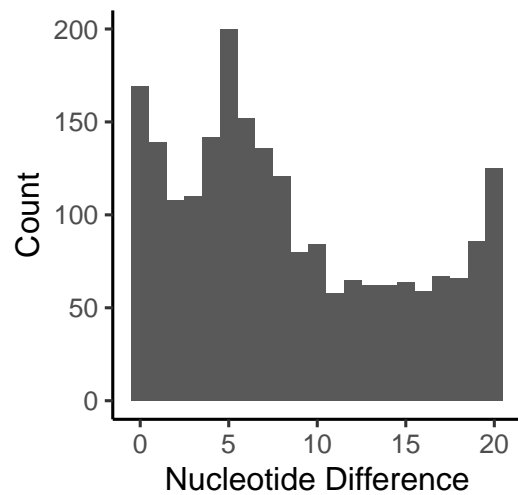
IGHV3-53*04

739 sequences assigned
401 (54.3%) exact matches, in which:
347 unique CDR3
6 unique J



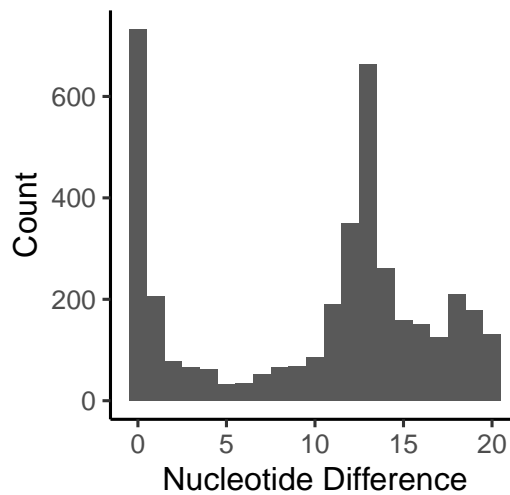
IGHV3-48*01

2598 sequences assigned
169 (6.5%) exact matches, in which:
169 unique CDR3
6 unique J



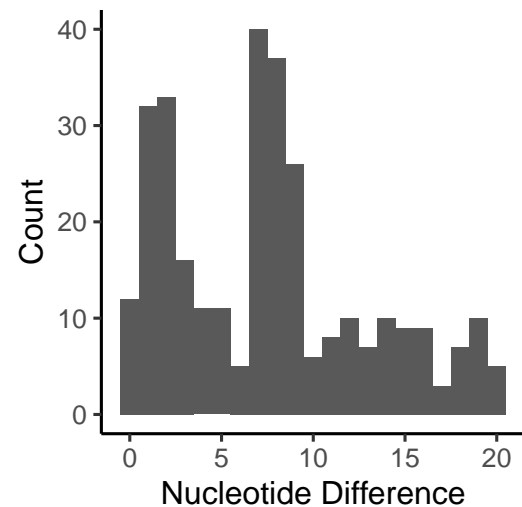
IGHV3-49*03_05

4539 sequences assigned
733 (16.1%) exact matches, in which:
627 unique CDR3
6 unique J



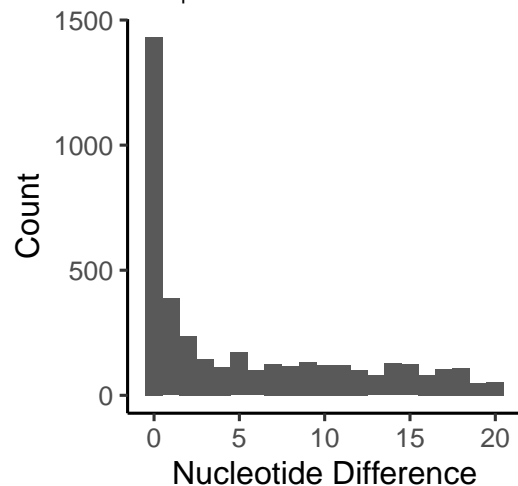
IGHV3-53*05

356 sequences assigned
12 (3.4%) exact matches, in which:
12 unique CDR3
3 unique J



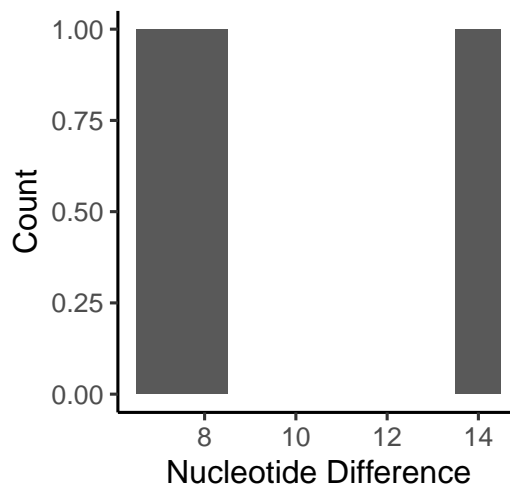
IGHV3-48*02

4486 sequences assigned
1432 (31.9%) exact matches, in which:
1178 unique CDR3
6 unique J



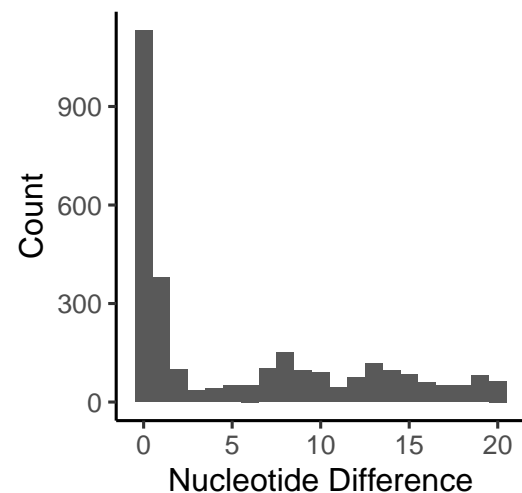
IGHV3-52*01_03

3 sequences assigned
No exact matches.



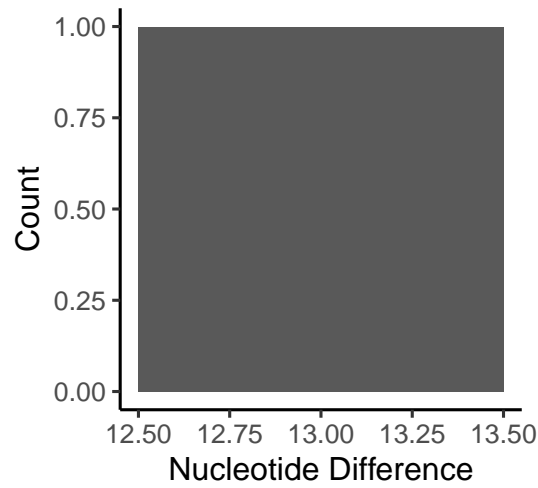
IGHV3-53*01_02

3542 sequences assigned
1132 (32%) exact matches, in which:
973 unique CDR3
6 unique J



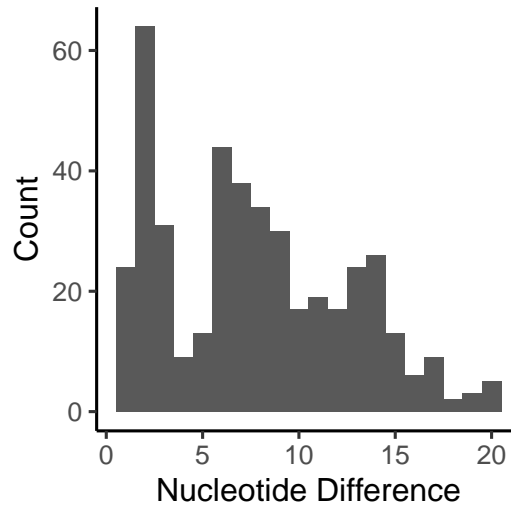
IGHV3-62*03

1 sequences assigned
No exact matches.



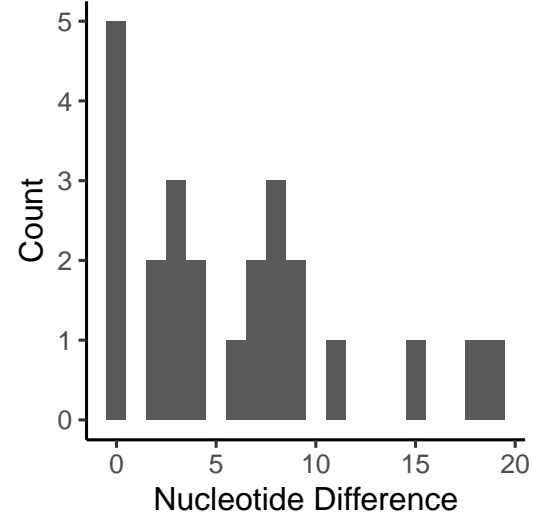
IGHV3-66*01

460 sequences assigned
No exact matches.



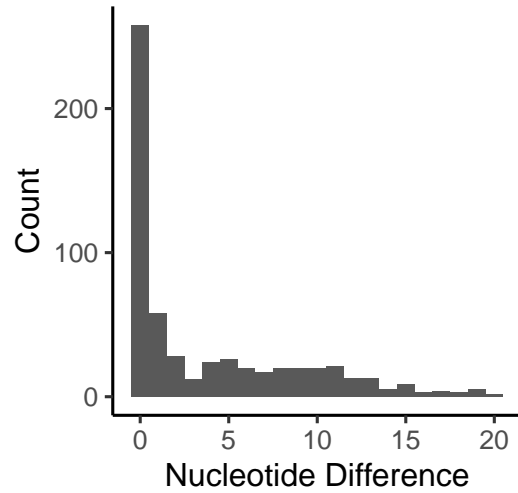
IGHV3-69-1*02

39 sequences assigned
5 (12.8%) exact matches, in which:
5 unique CDR3
3 unique J



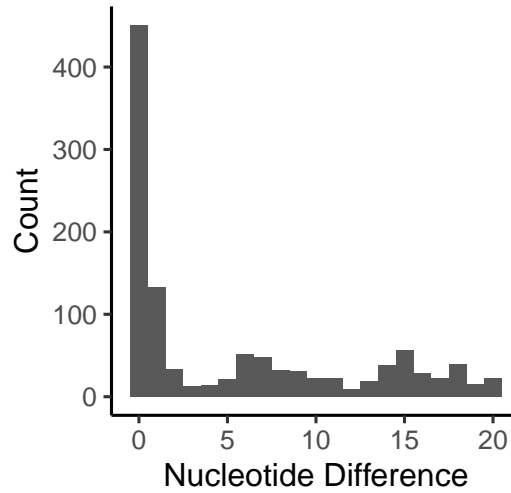
IGHV3-64*01

601 sequences assigned
258 (42.9%) exact matches, in which:
198 unique CDR3
6 unique J



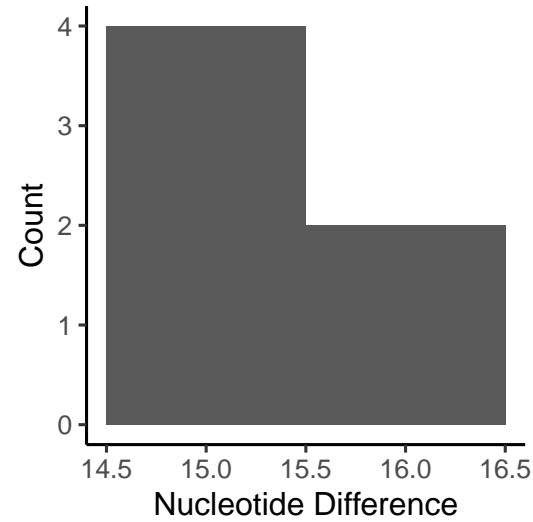
IGHV3-66*02

1394 sequences assigned
451 (32.4%) exact matches, in which:
387 unique CDR3
6 unique J



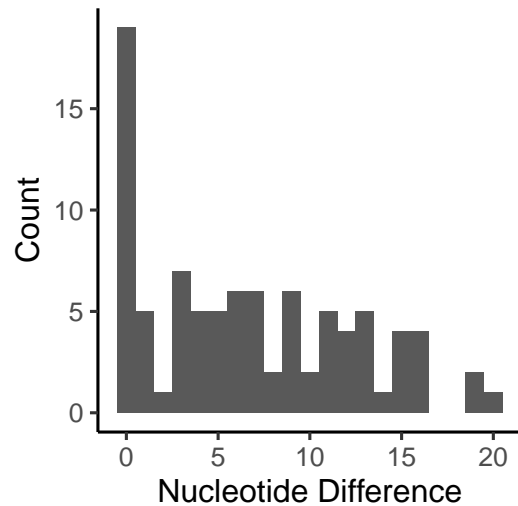
IGHV3-71*01_04

8 sequences assigned
No exact matches.



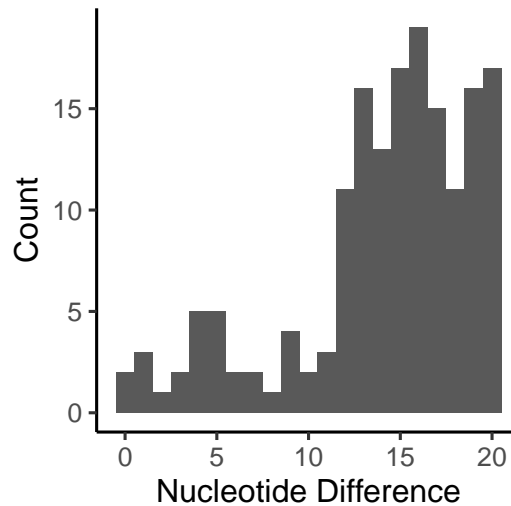
IGHV3-64*02_07

97 sequences assigned
19 (19.6%) exact matches, in which:
15 unique CDR3
3 unique J



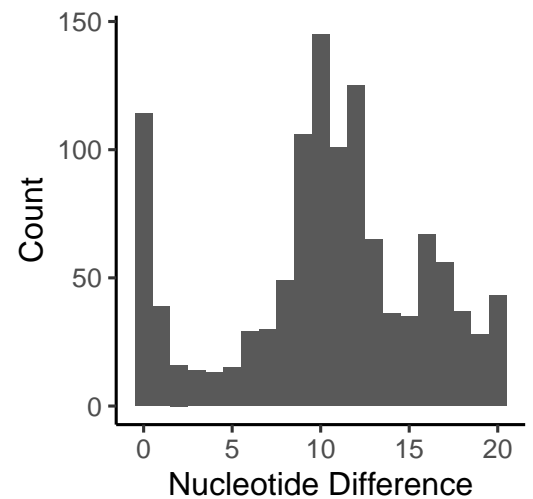
IGHV3-69-1*01

251 sequences assigned
2 (0.8%) exact matches, in which:
2 unique CDR3
1 unique J



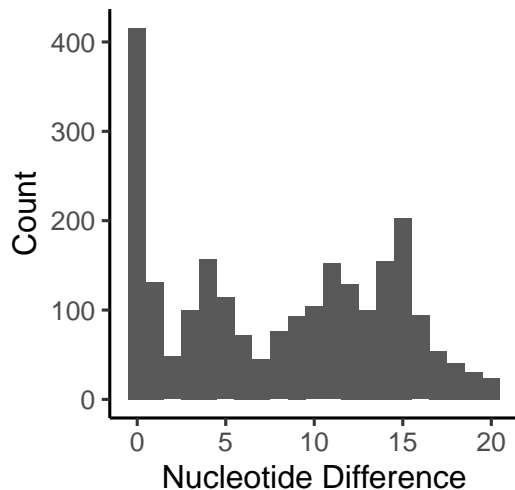
IGHV3-72*01

1731 sequences assigned
114 (6.6%) exact matches, in which:
105 unique CDR3
6 unique J



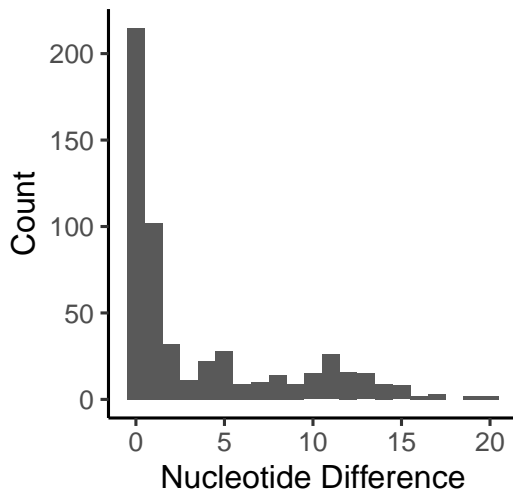
IGHV3-73*01_02

2582 sequences assigned
416 (16.1%) exact matches, in which:
348 unique CDR3
6 unique J



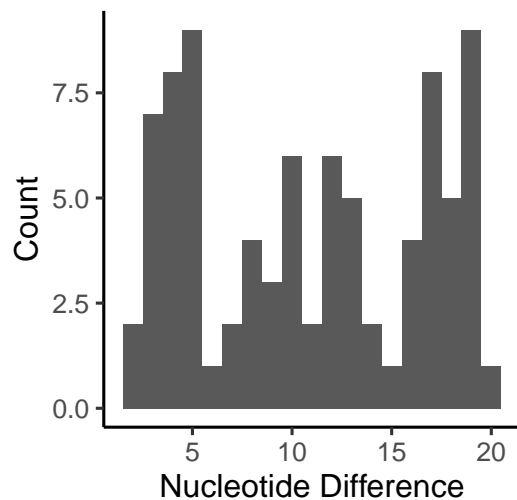
IGHV3-43D*03

757 sequences assigned
215 (28.4%) exact matches, in which:
187 unique CDR3
6 unique J



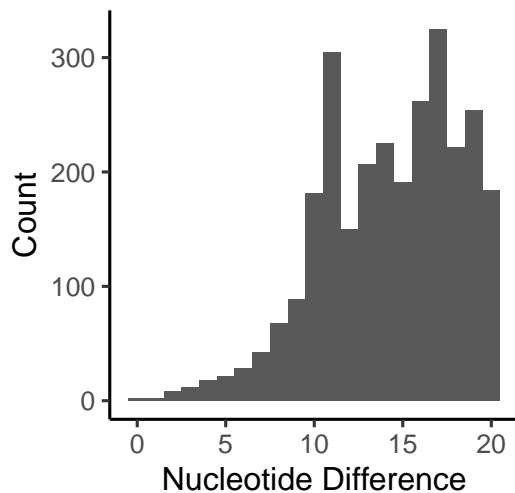
IGHV3-NL1*01

136 sequences assigned
No exact matches.



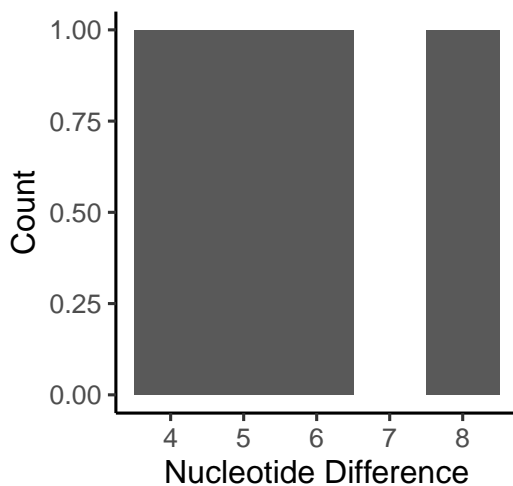
IGHV3-74*03

5265 sequences assigned
2 (0%) exact matches, in which:
1 unique CDR3
1 unique J



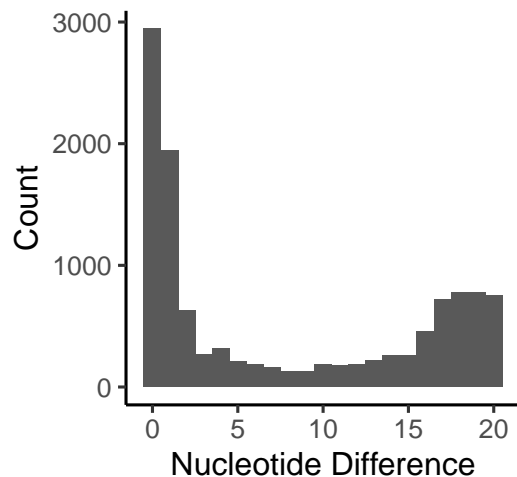
IGHV3-64D*06

6 sequences assigned
No exact matches.



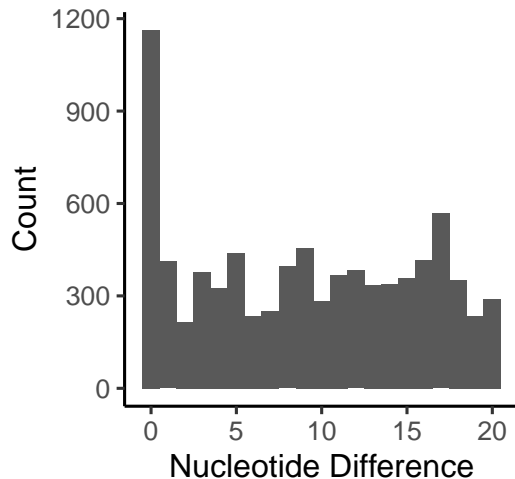
IGHV4-4*07

20598 sequences assigned
2945 (14.3%) exact matches, in which:
2802 unique CDR3
6 unique J



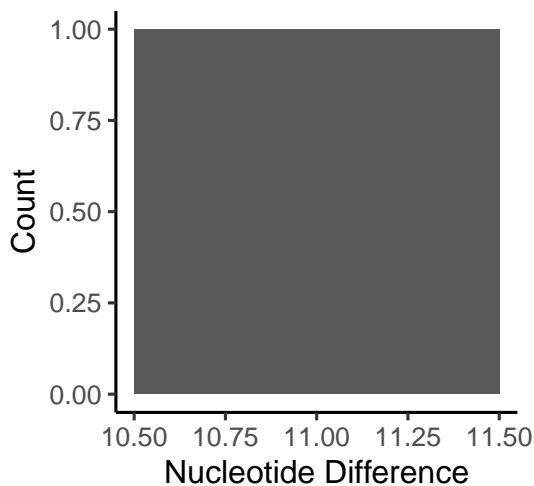
IGHV3-74*01_02

9508 sequences assigned
1163 (12.2%) exact matches, in which:
955 unique CDR3
6 unique J



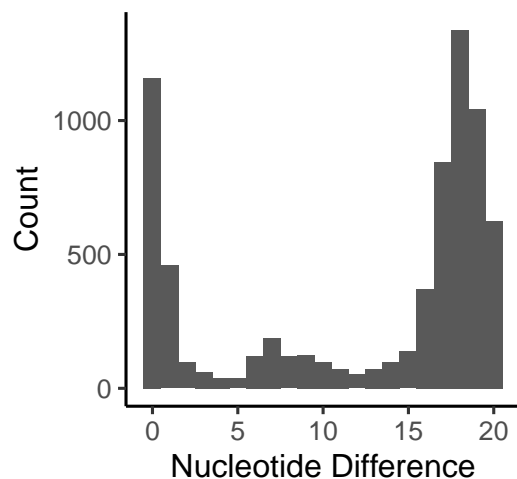
IGHV3-64D*08

1 sequences assigned
No exact matches.



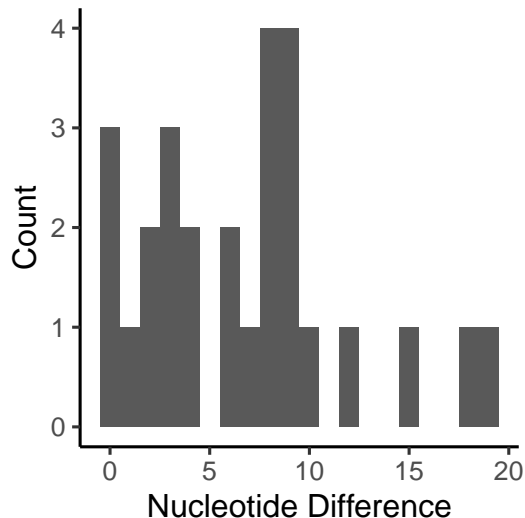
IGHV4-4*02_03

9067 sequences assigned
1159 (12.8%) exact matches, in which:
1115 unique CDR3
6 unique J



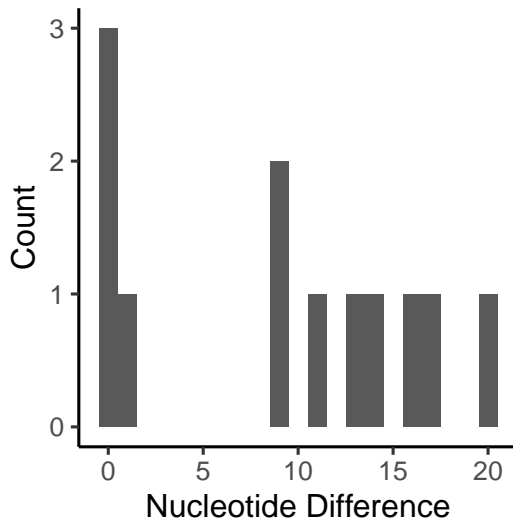
IGHV4-28*03

29 sequences assigned
3 (10.3%) exact matches, in which:
3 unique CDR3
2 unique J



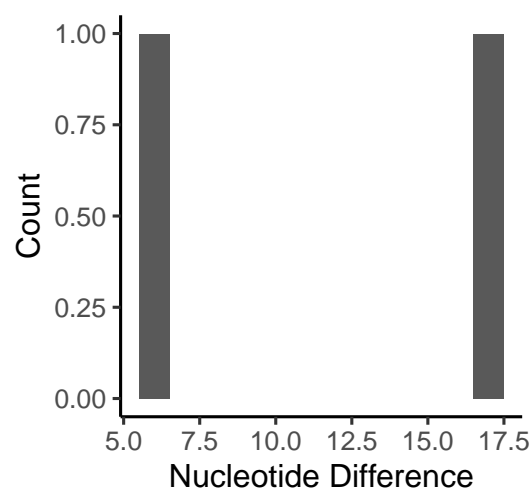
IGHV4-30-2*01

17 sequences assigned
3 (17.6%) exact matches, in which:
3 unique CDR3
2 unique J



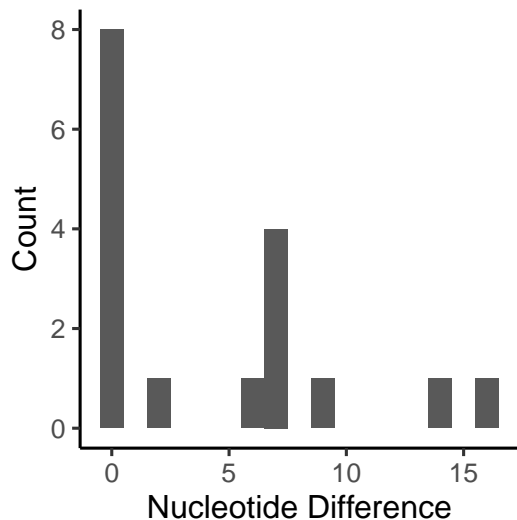
IGHV4-30-4*07

5 sequences assigned
No exact matches.



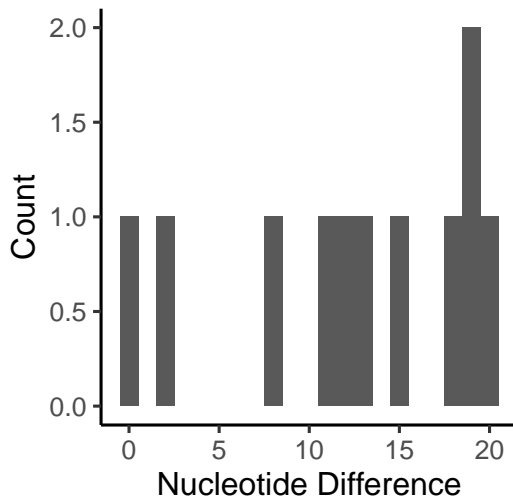
IGHV4-28*01_07

18 sequences assigned
8 (44.4%) exact matches, in which:
8 unique CDR3
2 unique J



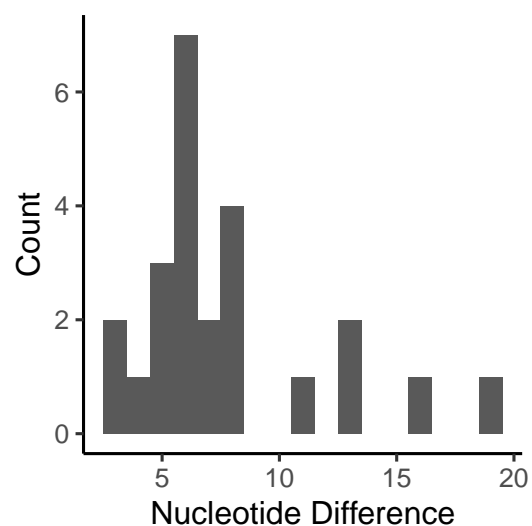
IGHV4-30-4*01

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



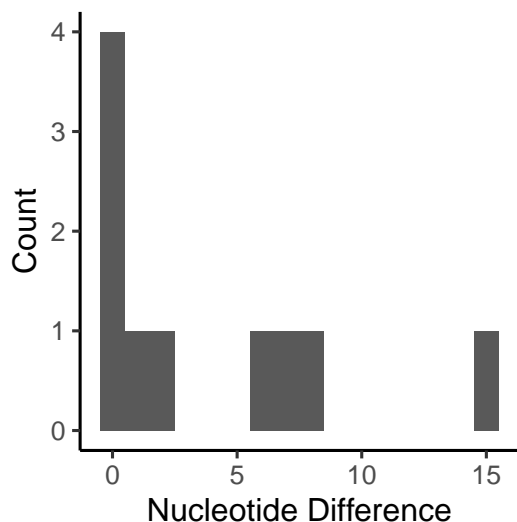
IGHV4-30-4*08

33 sequences assigned
No exact matches.



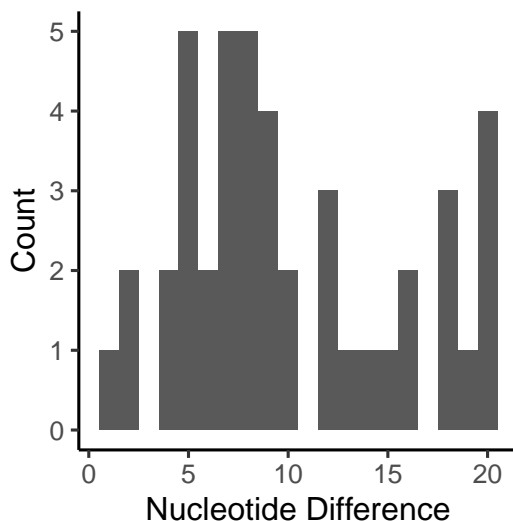
IGHV4-28*02_05

12 sequences assigned
4 (33.3%) exact matches, in which:
4 unique CDR3
3 unique J



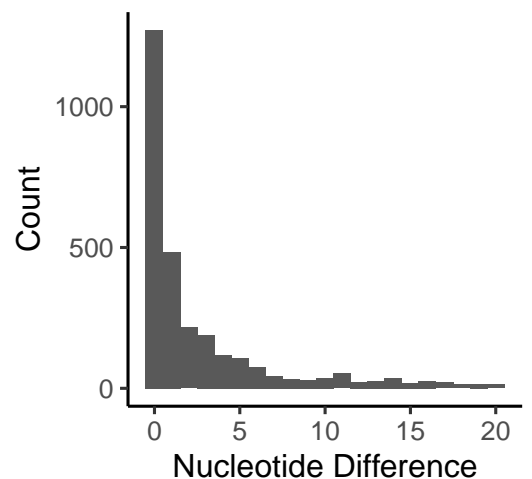
IGHV4-30-2*03

77 sequences assigned
No exact matches.



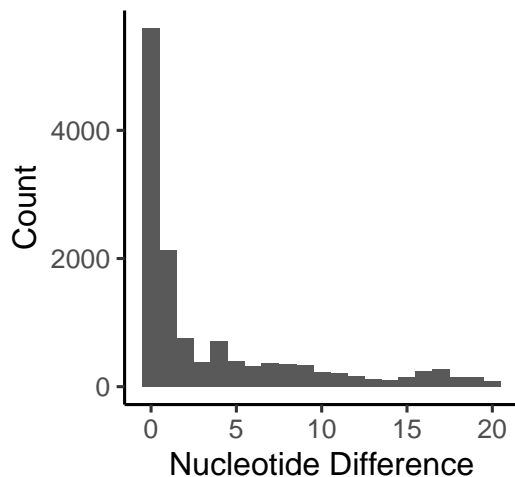
IGHV4-31*02

2952 sequences assigned
1272 (43.1%) exact matches, in which:
1243 unique CDR3
6 unique J



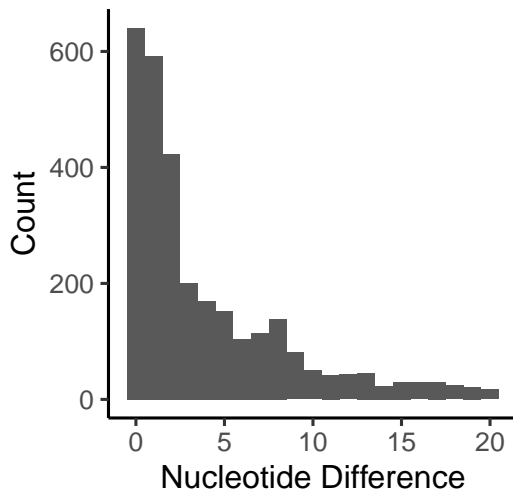
IGHV4-34*01_02

15296 sequences assigned
5591 (36.6%) exact matches, in which:
5281 unique CDR3
6 unique J



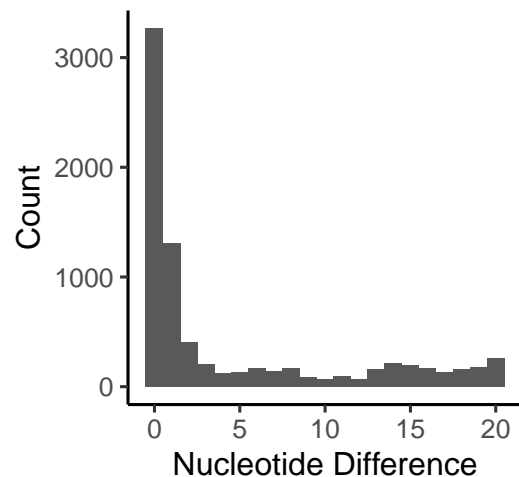
IGHV4-59*08

3204 sequences assigned
641 (20%) exact matches, in which:
634 unique CDR3
6 unique J



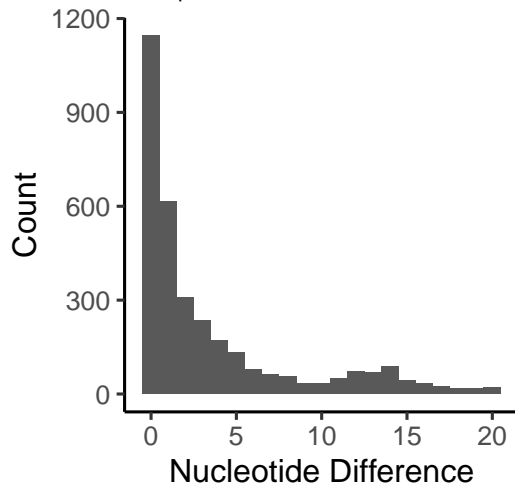
IGHV4-61*02

9410 sequences assigned
3266 (34.7%) exact matches, in which:
3155 unique CDR3
6 unique J



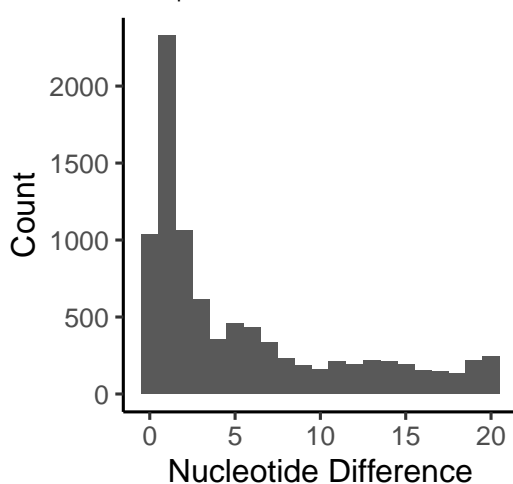
IGHV4-38-2*02

3529 sequences assigned
1145 (32.4%) exact matches, in which:
1092 unique CDR3
6 unique J



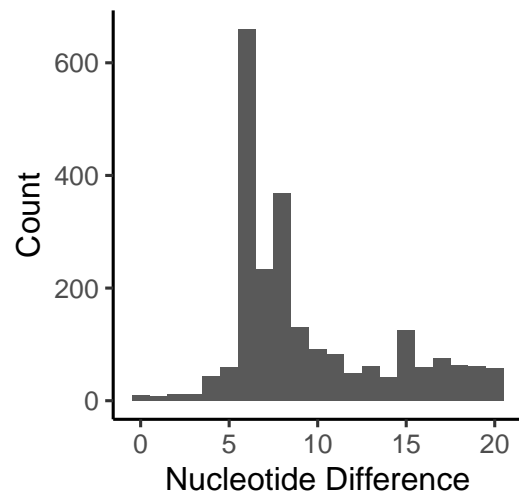
IGHV4-59*12

9811 sequences assigned
1039 (10.6%) exact matches, in which:
1034 unique CDR3
6 unique J



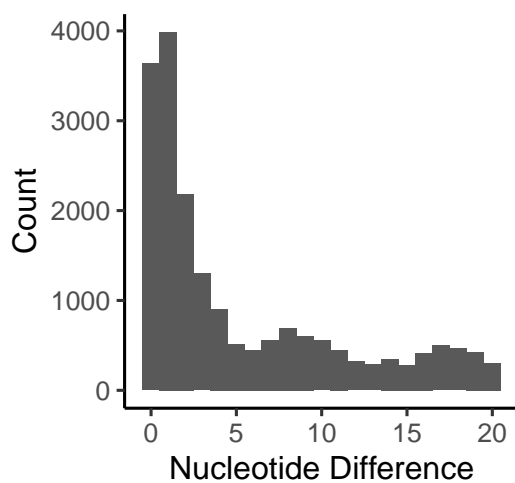
IGHV1/OR15-2*02_03_T

2566 sequences assigned
10 (0.4%) exact matches, in which:
10 unique CDR3
4 unique J



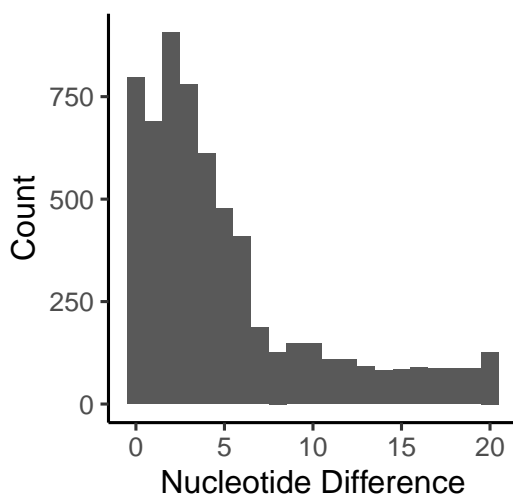
IGHV4-39*07

25688 sequences assigned
3637 (14.2%) exact matches, in which:
3451 unique CDR3
6 unique J



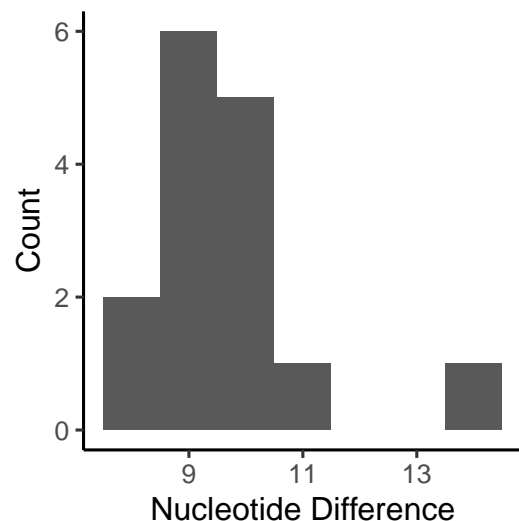
IGHV4-61*01

7917 sequences assigned
796 (10.1%) exact matches, in which:
784 unique CDR3
6 unique J



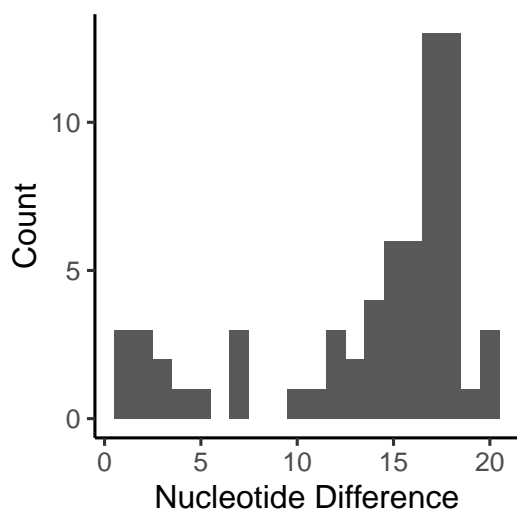
IGHV1/OR15-3*02

22 sequences assigned
No exact matches.



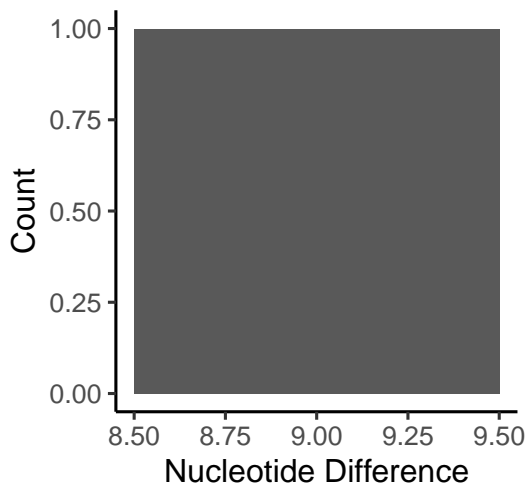
IGHV4/OR15–8*01

93 sequences assigned
No exact matches.



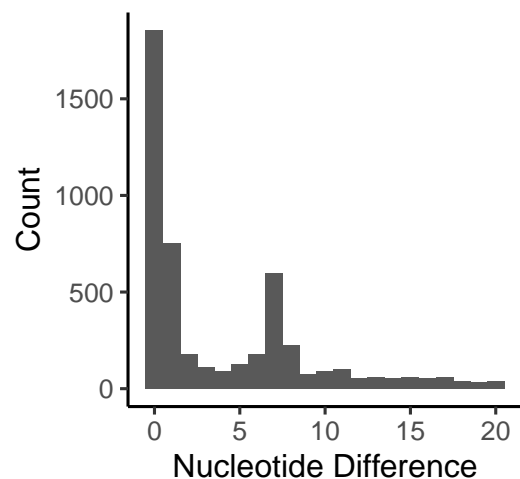
IGHV5–78*01

1 sequences assigned
No exact matches.



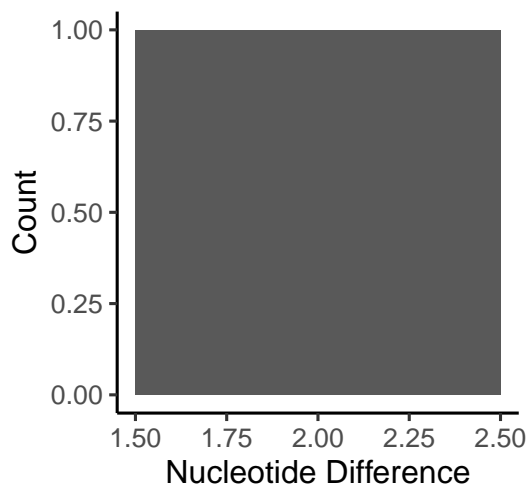
IGHV7–4–1*02

5401 sequences assigned
1854 (34.3%) exact matches, in which:
1748 unique CDR3
6 unique J



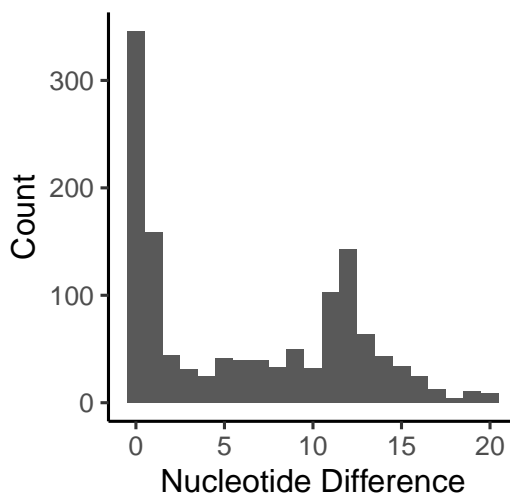
IGHV5–10–1*01_03

1 sequences assigned
No exact matches.



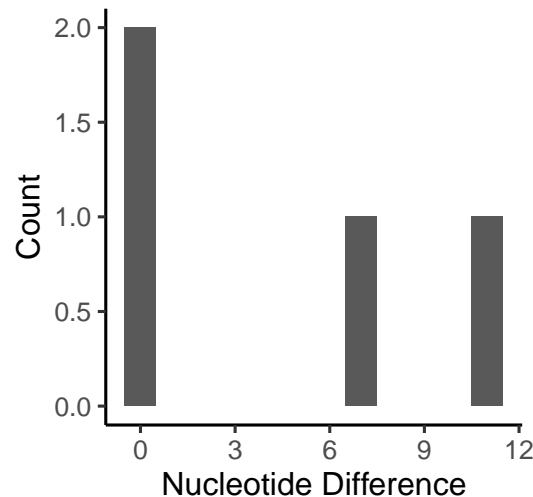
IGHV6–1*01_02

1539 sequences assigned
346 (22.5%) exact matches, in which:
337 unique CDR3
6 unique J



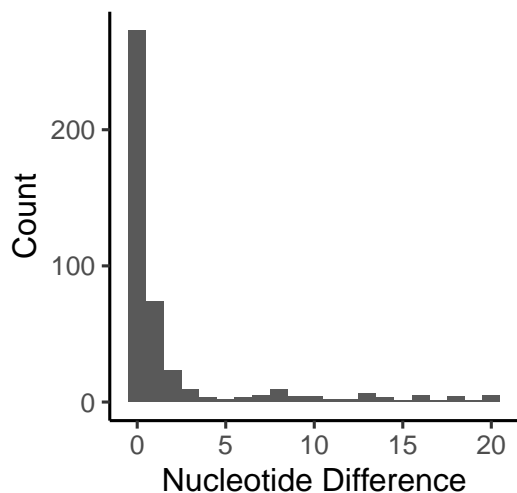
IGHV7–81*01

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



IGHV5–51*07

456 sequences assigned
273 (59.9%) exact matches, in which:
252 unique CDR3
6 unique J



IGHV3/OR16–9*01

2 sequences assigned
No exact matches.

