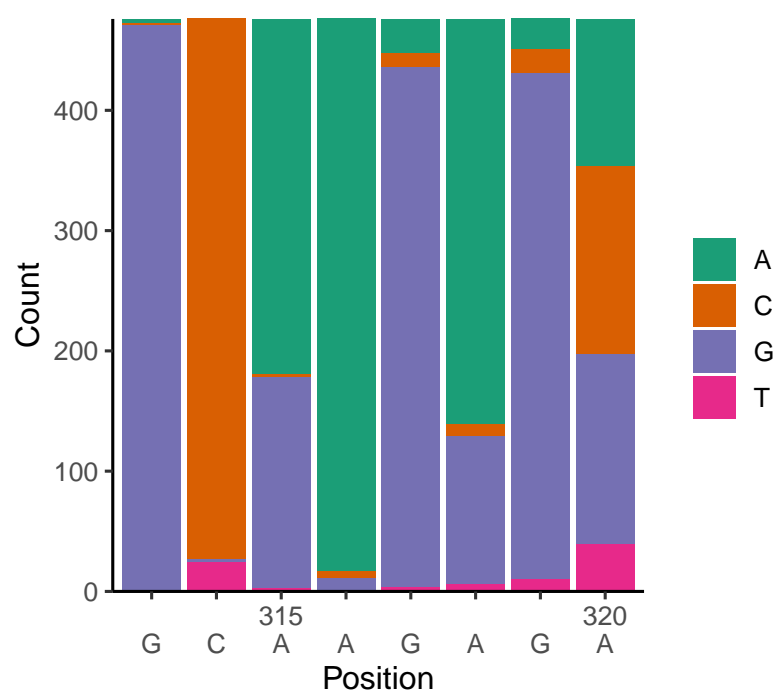
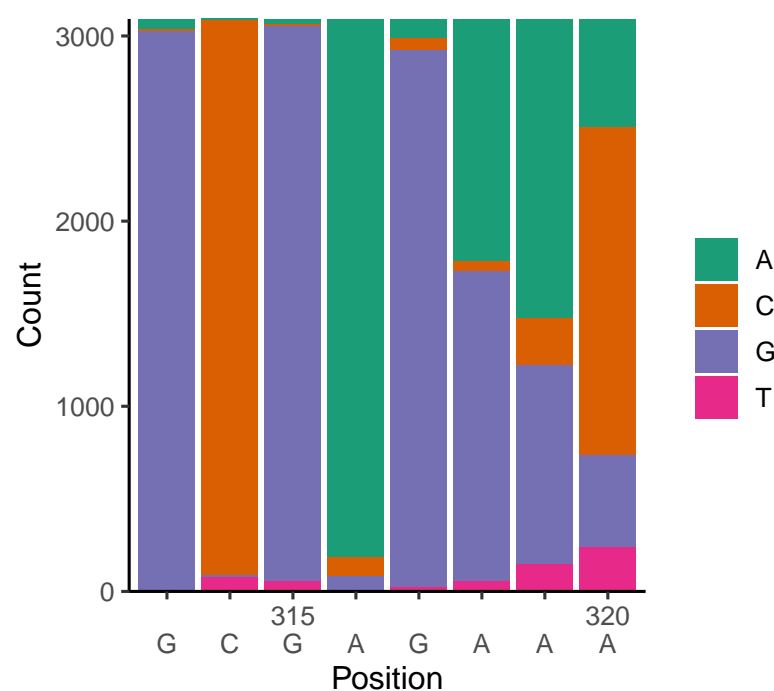


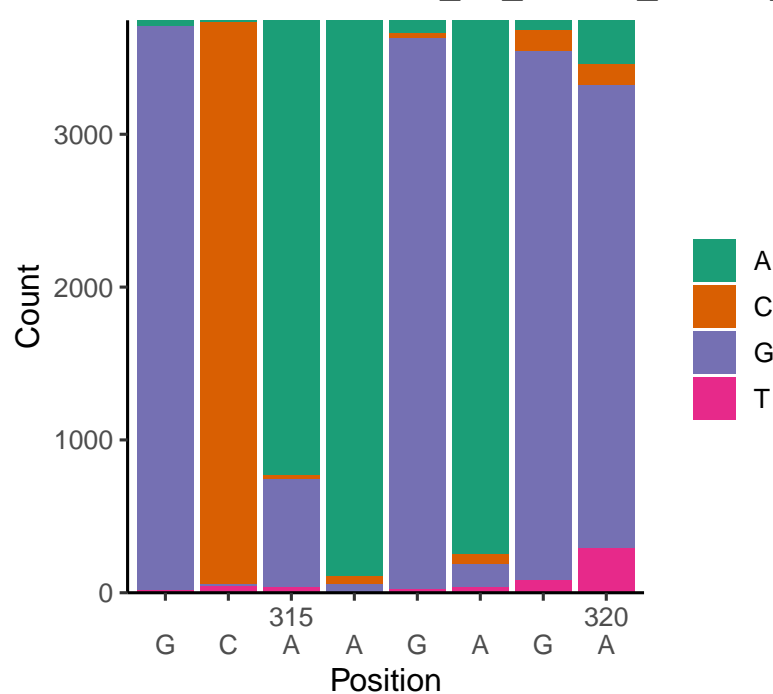
Gene IGHV3-13*01_C210T



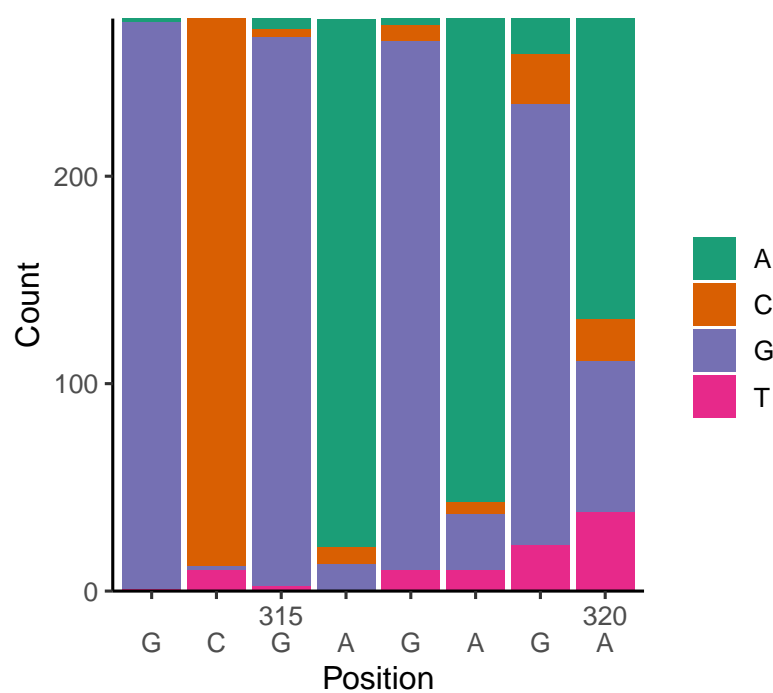
Gene IGHV4-28*02_05_G80T_A109C_C



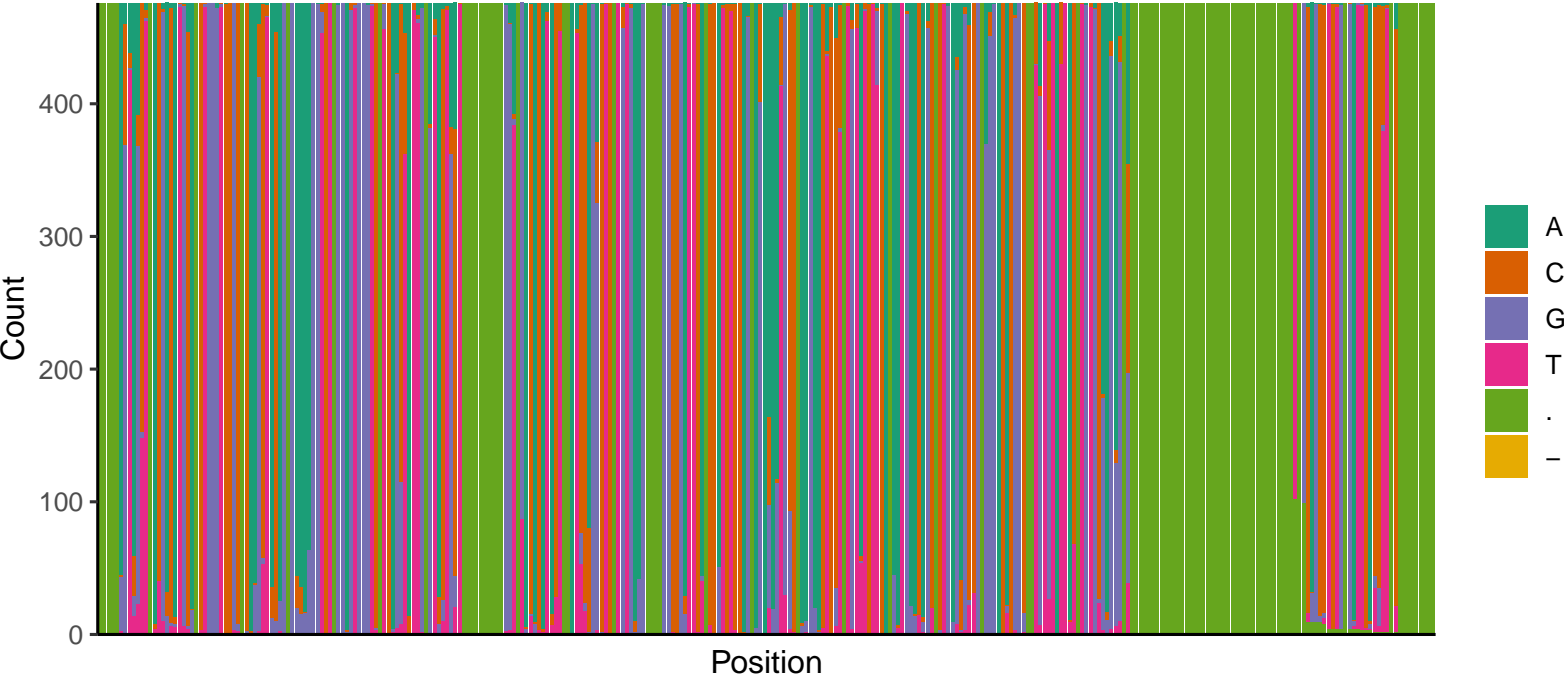
Gene IGHV6-1*01_02_A163C_C174T_G176T_A207C_C230T_A275C



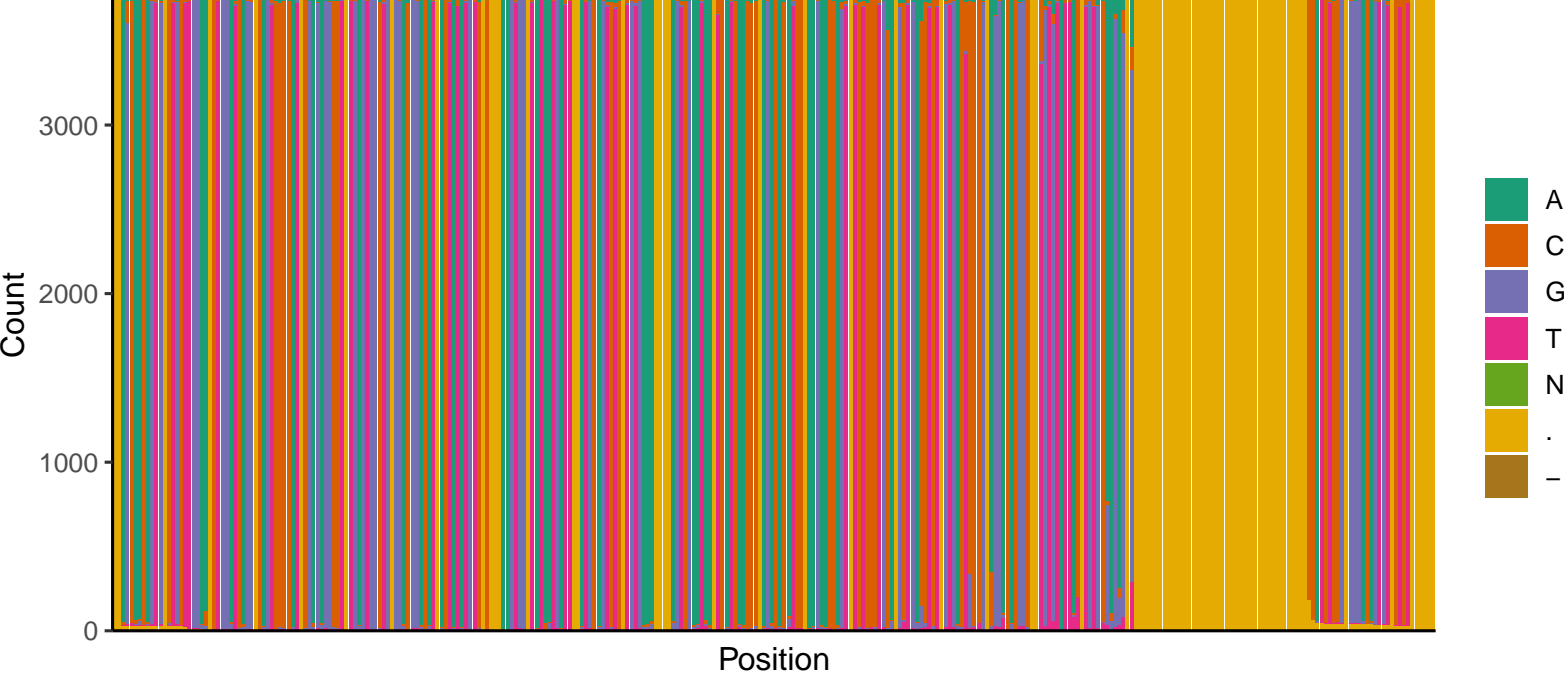
Gene IGHV1-3*01_05_C134A



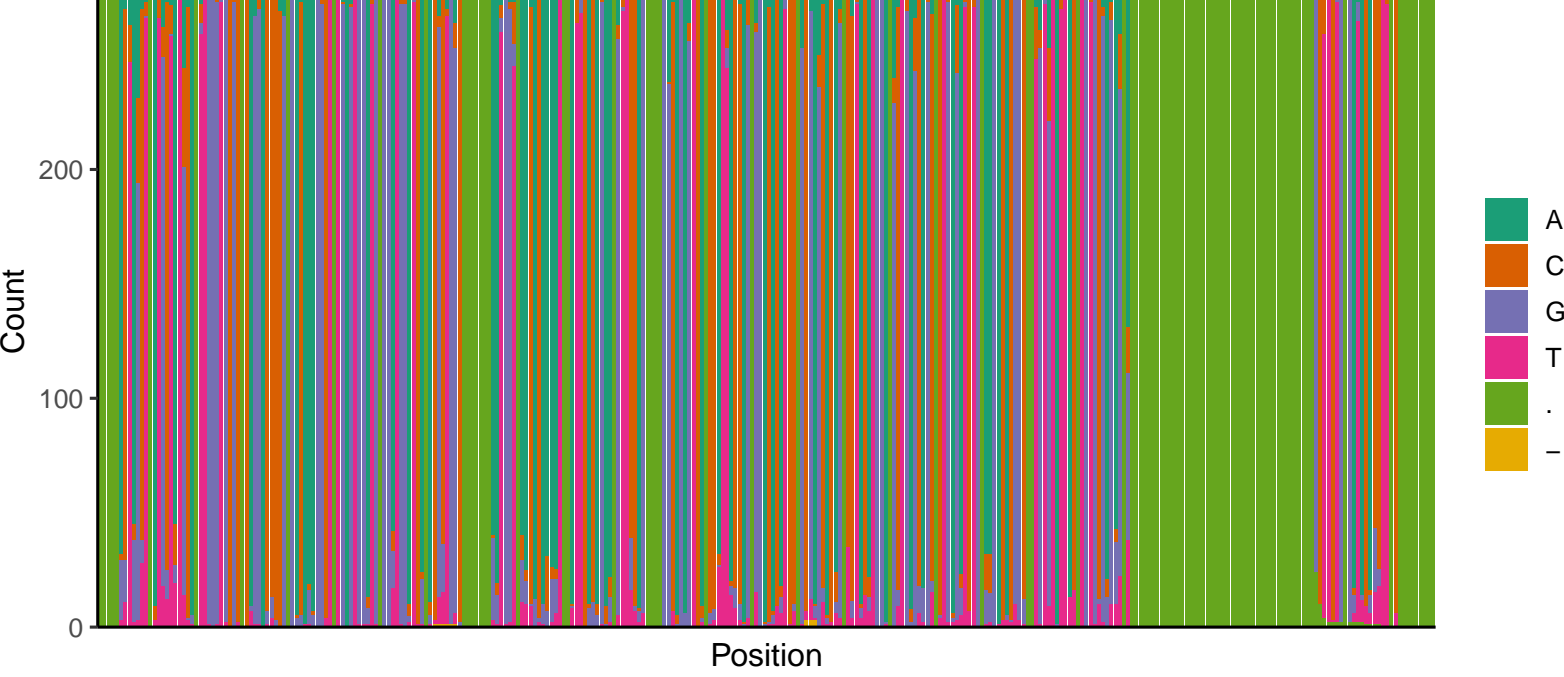
Gene IGHV3-13*01_C210T



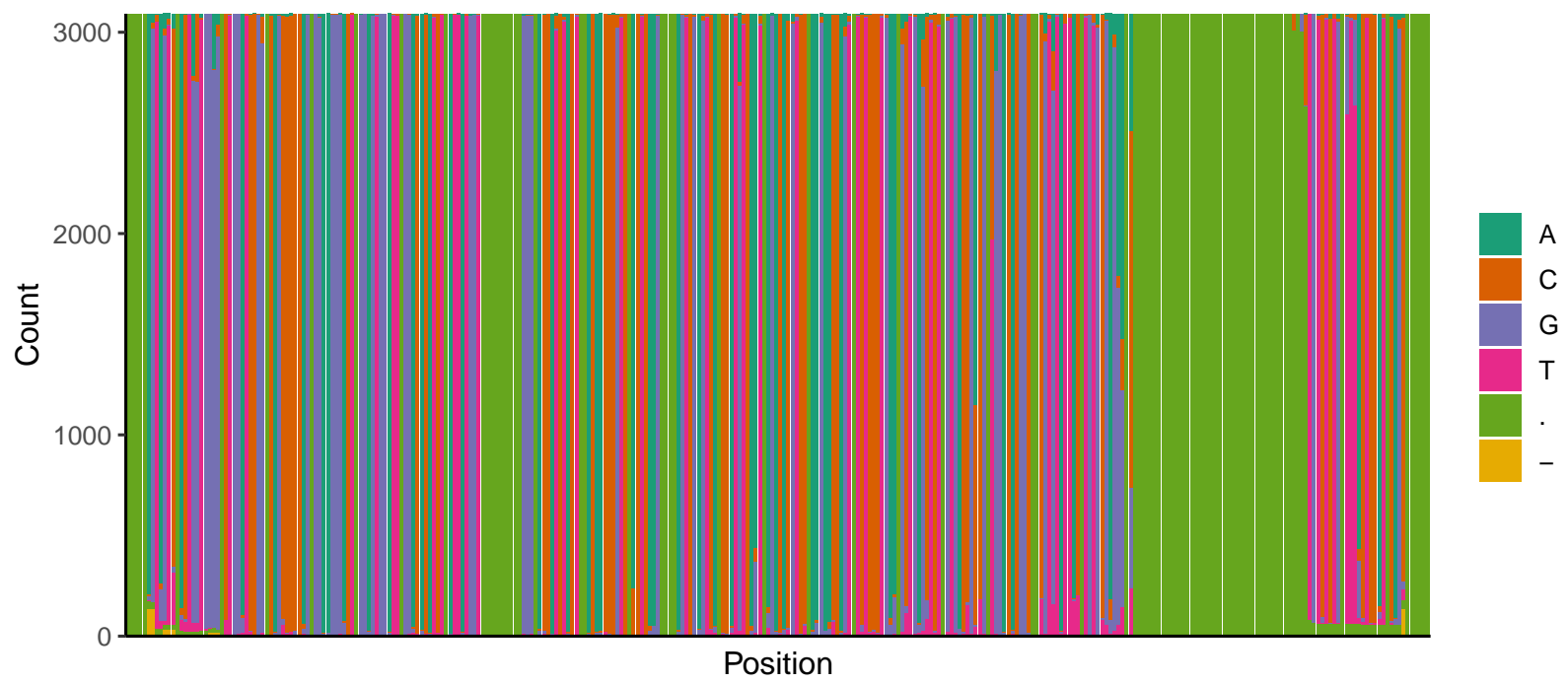
Gene IGHV6-1*01_02_A163C_C174T_G176T_A207C_C230T_A275C



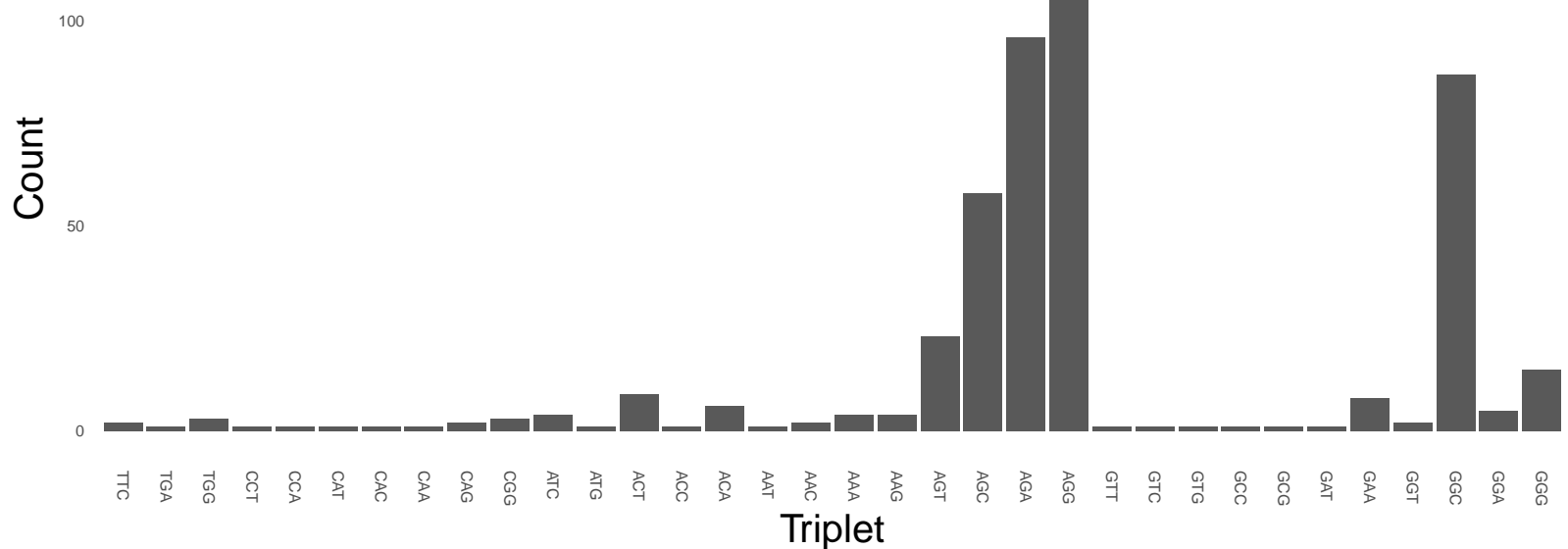
Gene IGHV1-3*01_05_C134A



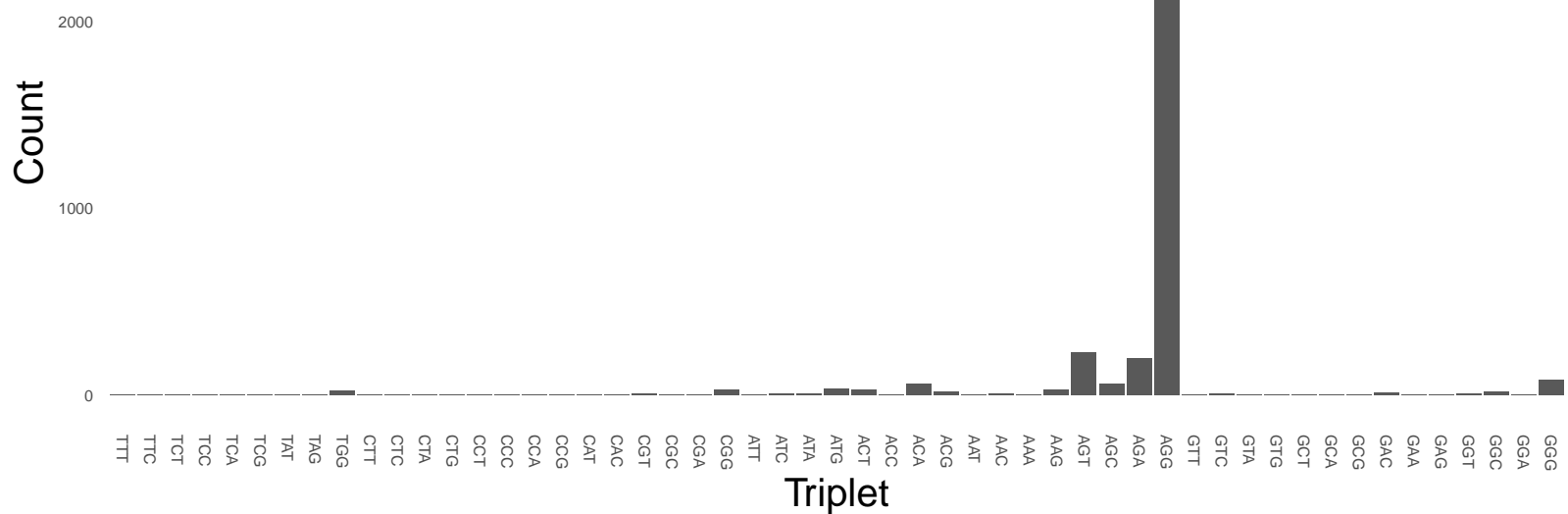
Gene IGHV4-28*02_05_G80T_A109C_G162A_T163C_A175G_G191C_C210A_G238A_



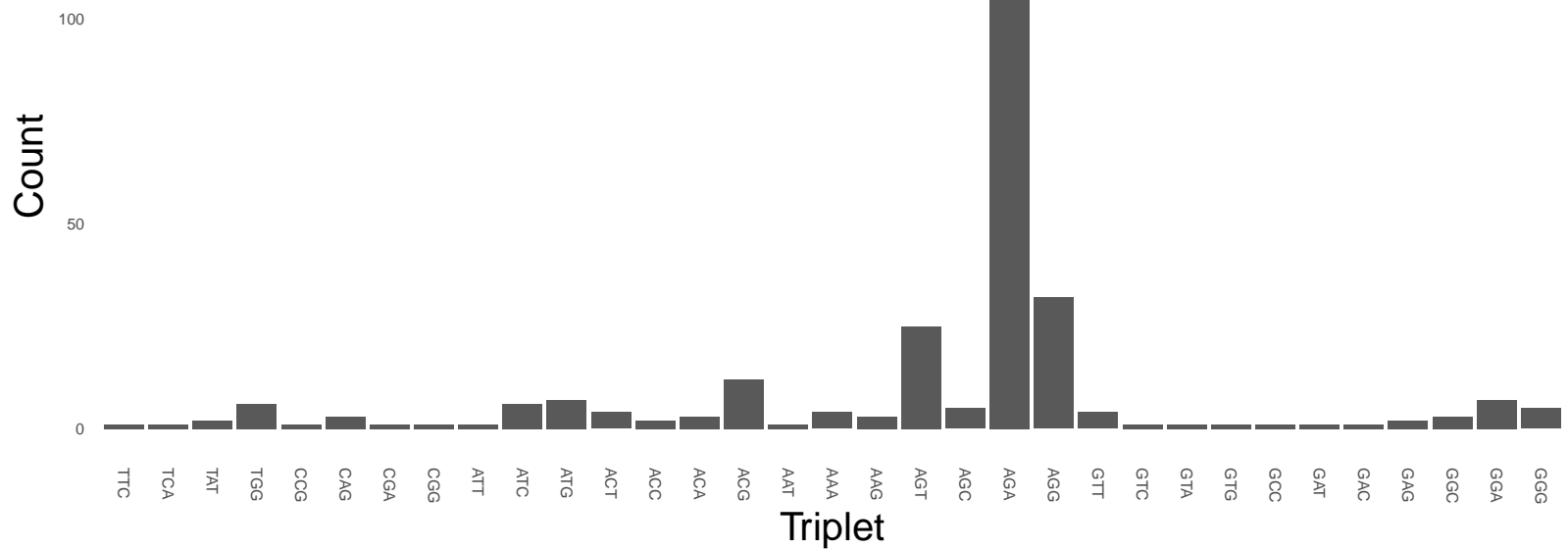
IGHV3-13*01_C210T- Final 3 nucleotides as a triplet

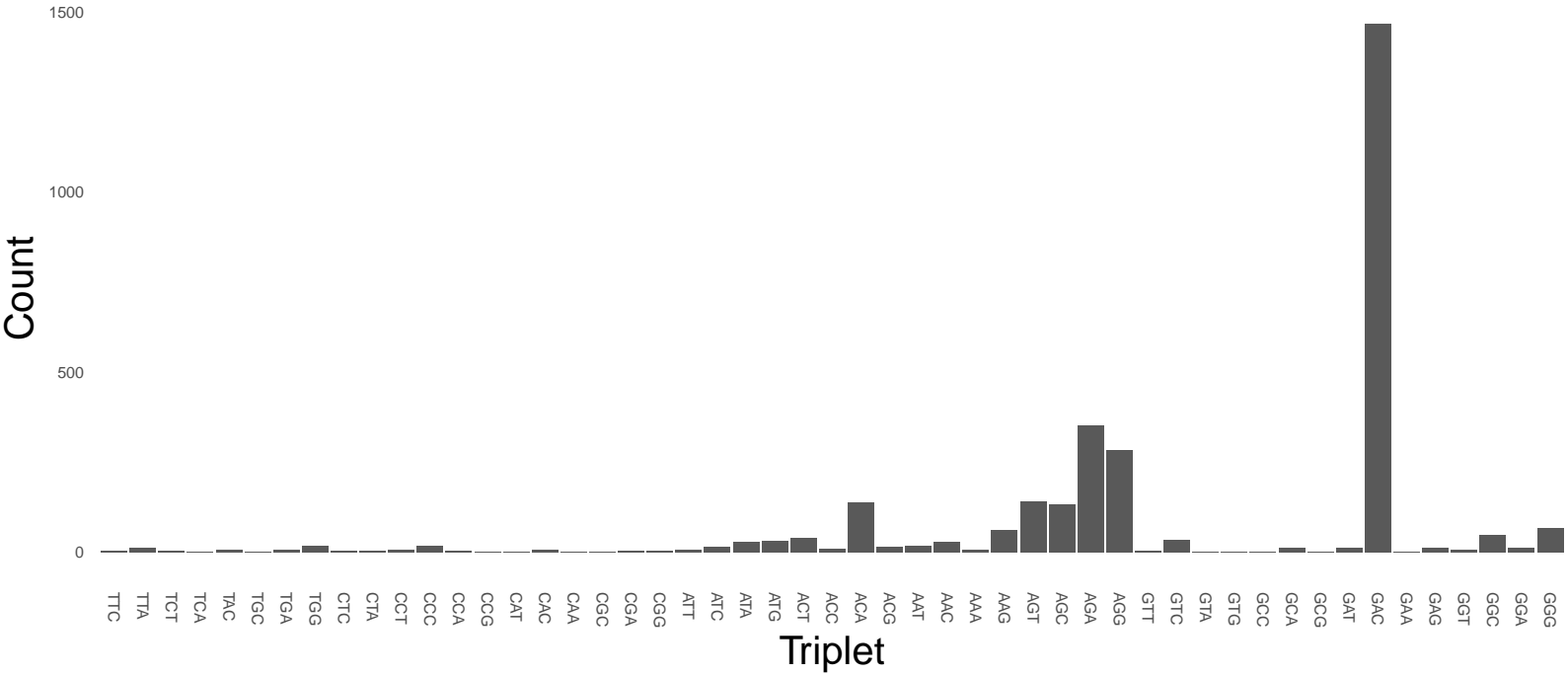


IGHV6-1*01_02_A163C_C174T_G176T_A207C_C230T_A275C- Final 3 nucleotides as a triplet



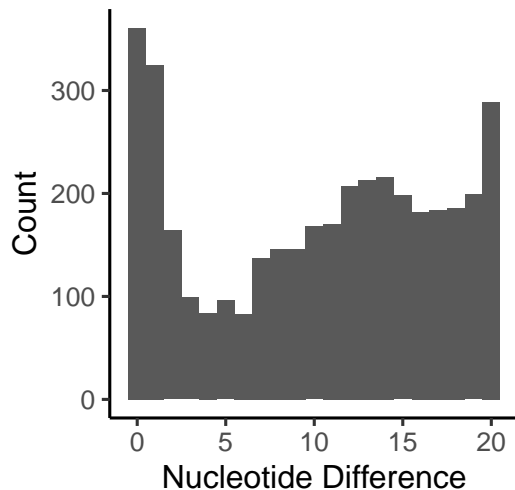
IGHV1-3*01_05_C134A- Final 3 nucleotides as a triplet





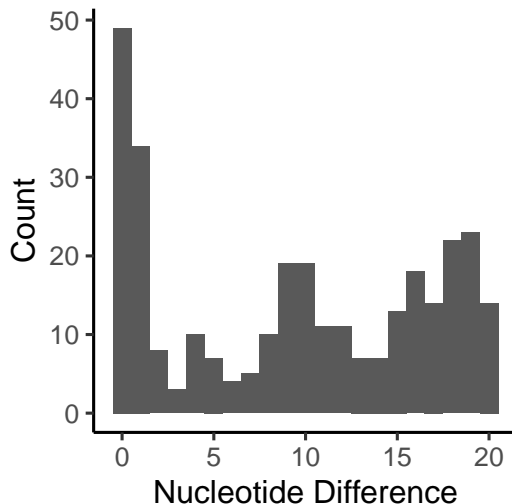
IGHV1-2*02

5580 sequences assigned
361 (6.5%) exact matches, in which:
297 unique CDR3
7 unique J



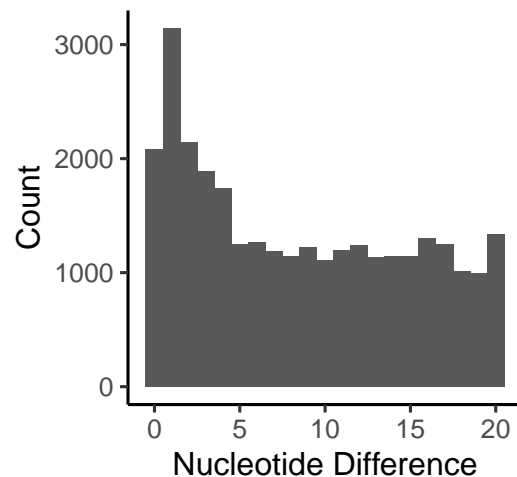
IGHV1-3*01_05

394 sequences assigned
49 (12.4%) exact matches, in which:
41 unique CDR3
6 unique J



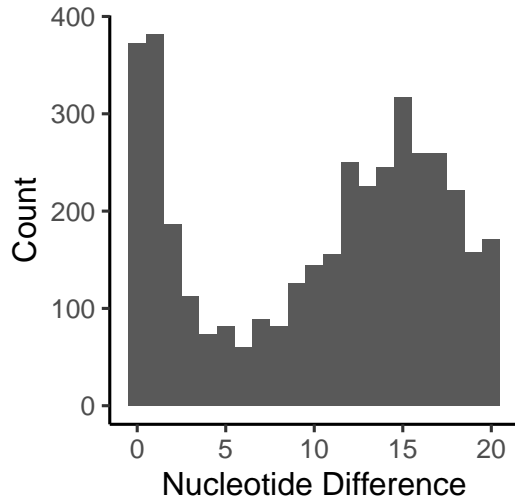
IGHV1-18*01

36478 sequences assigned
2081 (5.7%) exact matches, in which:
1609 unique CDR3
7 unique J



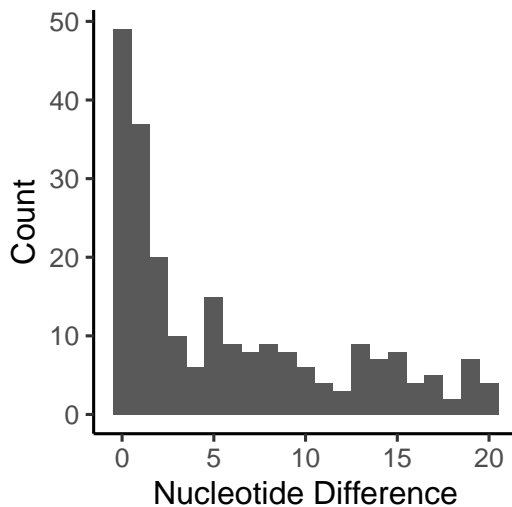
IGHV1-2*06

5041 sequences assigned
373 (7.4%) exact matches, in which:
303 unique CDR3
7 unique J



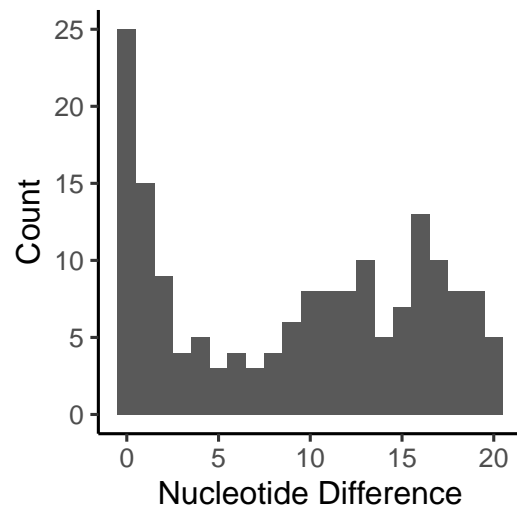
IGHV1-3*01_05_C134A

276 sequences assigned
49 (17.8%) exact matches, in which:
45 unique CDR3
5 unique J



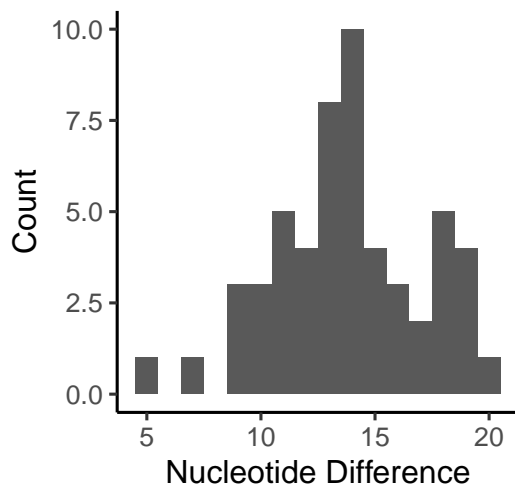
IGHV1-24*01

202 sequences assigned
25 (12.4%) exact matches, in which:
25 unique CDR3
4 unique J



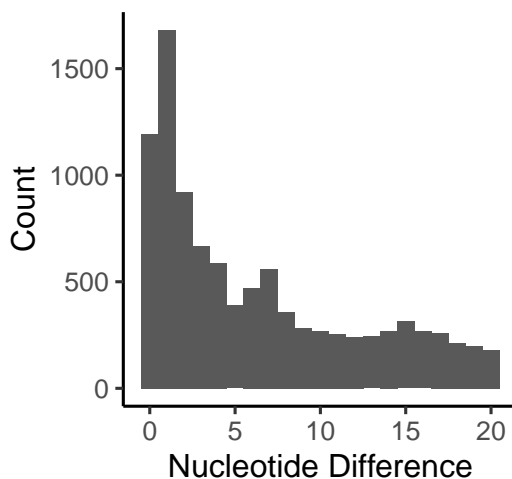
IGHV1-3*04

96 sequences assigned
No exact matches.



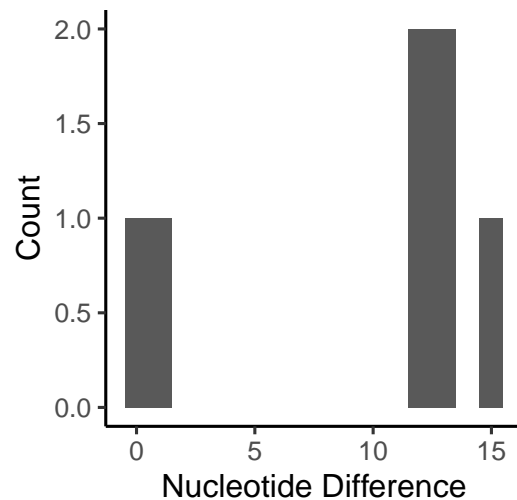
IGHV1-8*01

10917 sequences assigned
1194 (10.9%) exact matches, in which:
871 unique CDR3
7 unique J



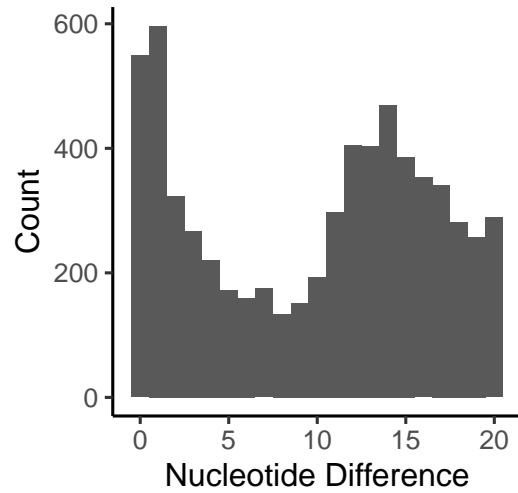
IGHV1-45*02

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



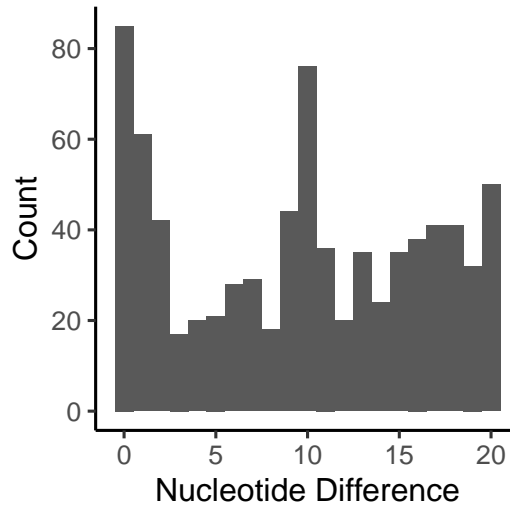
IGHV1-46*01

8669 sequences assigned
549 (6.3%) exact matches, in which:
444 unique CDR3
7 unique J



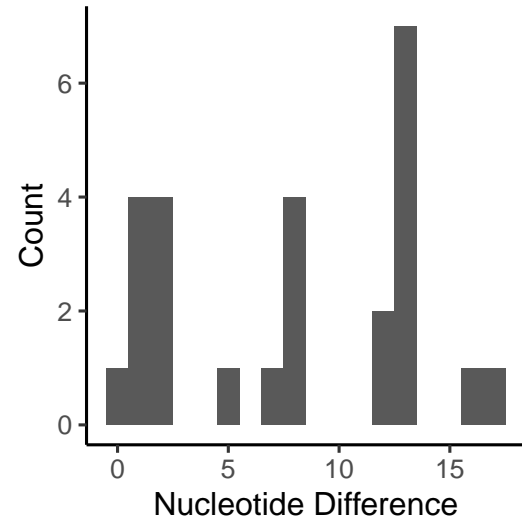
IGHV1-69*02

1158 sequences assigned
85 (7.3%) exact matches, in which:
74 unique CDR3
7 unique J



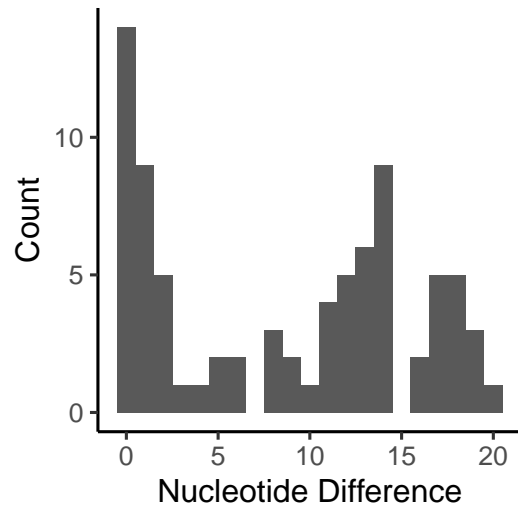
IGHV2-5*01

28 sequences assigned
1 (3.6%) exact matches, in which:
1 unique CDR3
1 unique J



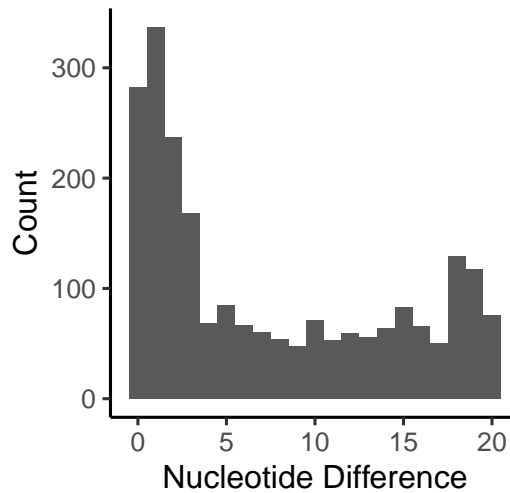
IGHV1-58*02

101 sequences assigned
14 (13.9%) exact matches, in which:
13 unique CDR3
4 unique J



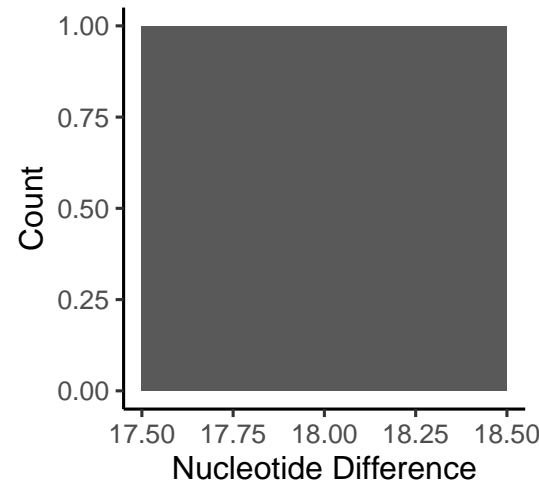
IGHV1-69*05

3083 sequences assigned
282 (9.1%) exact matches, in which:
220 unique CDR3
7 unique J



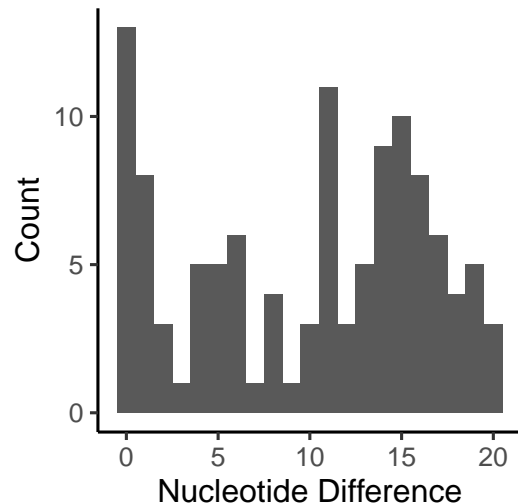
IGHV2-26*02

1 sequences assigned
No exact matches.



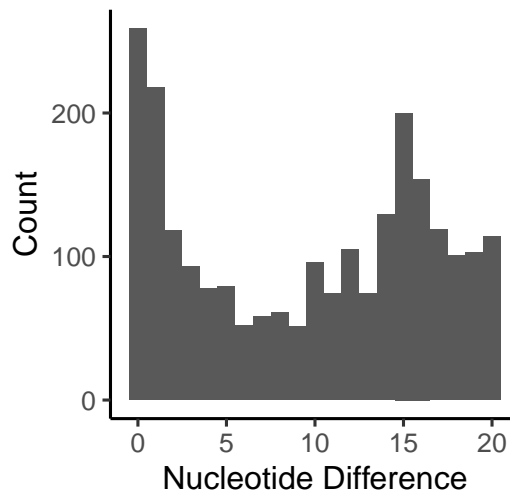
IGHV1-69-2*01

143 sequences assigned
13 (9.1%) exact matches, in which:
11 unique CDR3
3 unique J



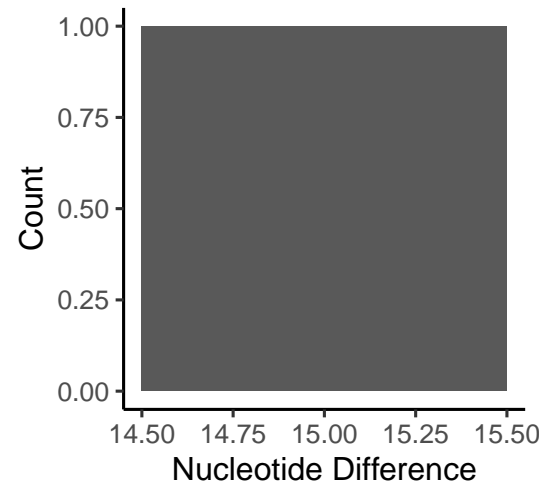
IGHV1-69*01_12_13

3079 sequences assigned
259 (8.4%) exact matches, in which:
225 unique CDR3
7 unique J



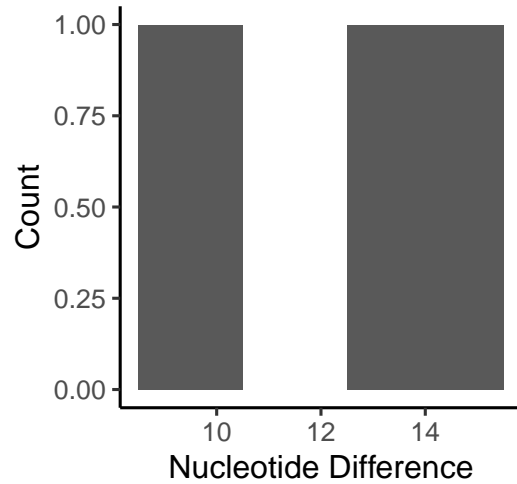
IGHV2-70*13

1 sequences assigned
No exact matches.



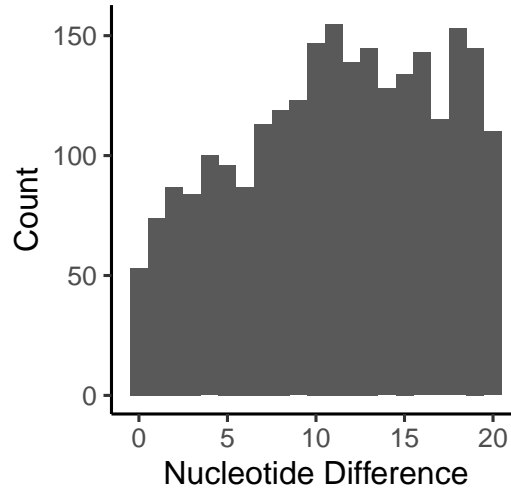
IGHV2-70*20

8 sequences assigned
No exact matches.



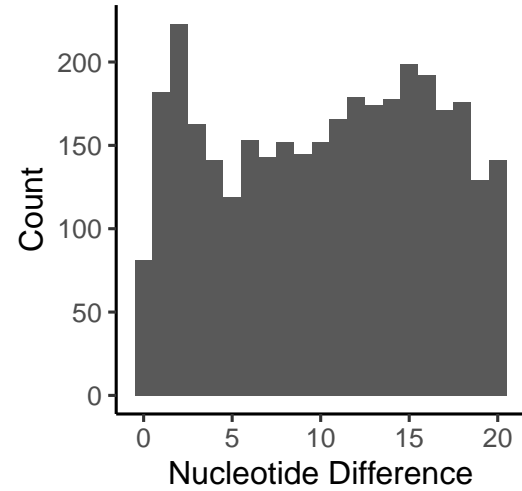
IGHV3-7*03

3185 sequences assigned
53 (1.7%) exact matches, in which:
52 unique CDR3
7 unique J



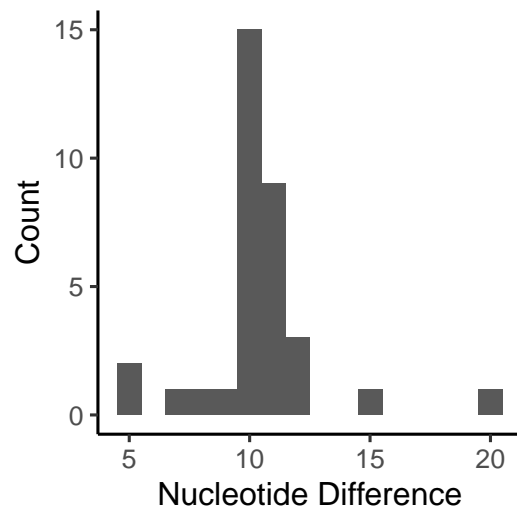
IGHV3-11*04

4039 sequences assigned
81 (2%) exact matches, in which:
79 unique CDR3
7 unique J



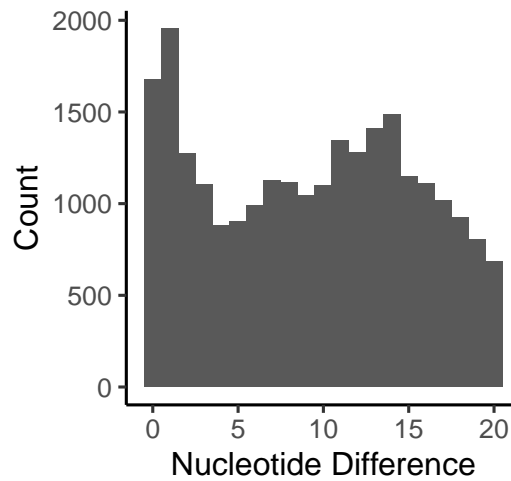
IGHV2-70*11_15

35 sequences assigned
No exact matches.



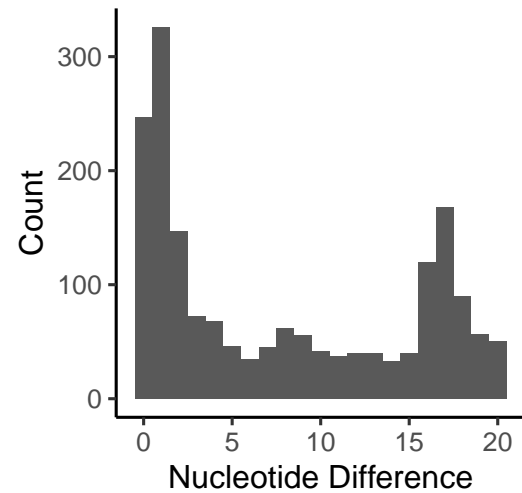
IGHV3-9*01

27980 sequences assigned
1679 (6%) exact matches, in which:
1195 unique CDR3
7 unique J



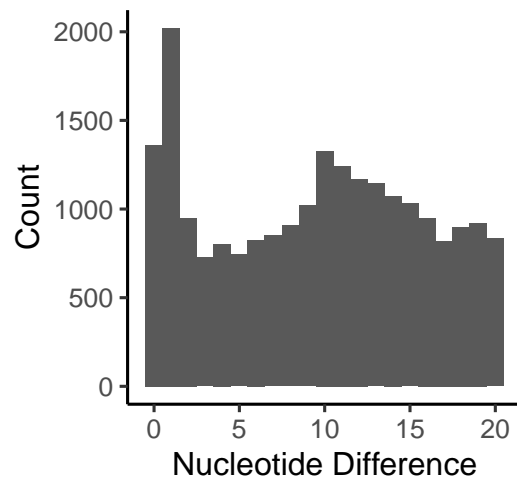
IGHV3-13*01

2085 sequences assigned
247 (11.8%) exact matches, in which:
175 unique CDR3
7 unique J



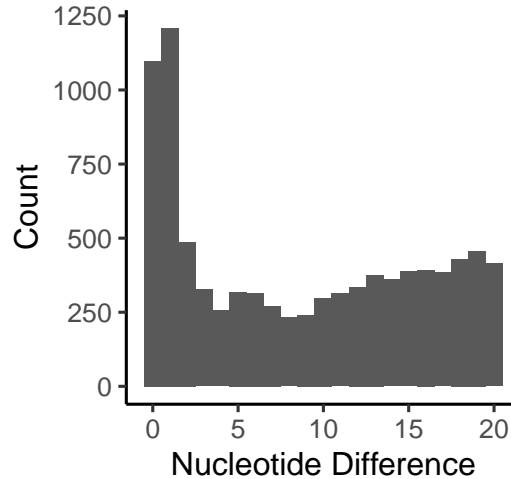
IGHV3-7*01

25910 sequences assigned
1362 (5.3%) exact matches, in which:
1045 unique CDR3
7 unique J



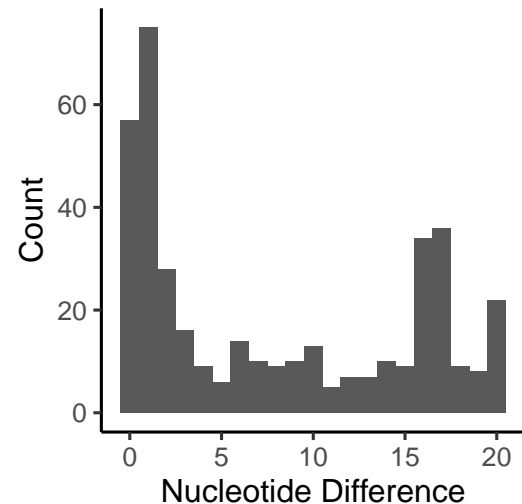
IGHV3-11*01

10938 sequences assigned
1098 (10%) exact matches, in which:
846 unique CDR3
7 unique J



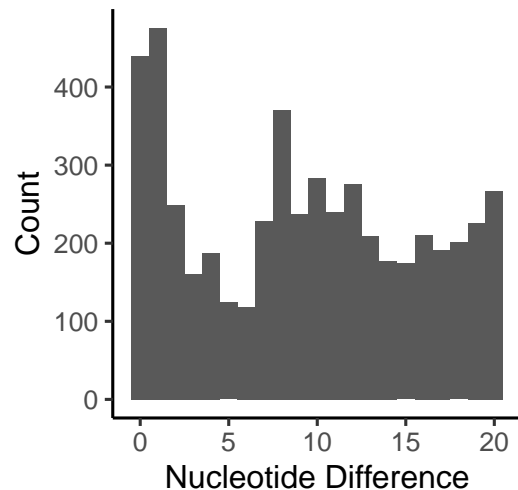
IGHV3-13*01_C210T

476 sequences assigned
57 (12%) exact matches, in which:
34 unique CDR3
6 unique J



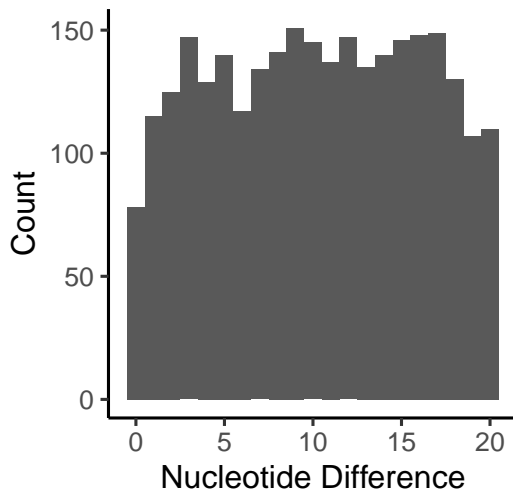
IGHV3-15*01_02

6726 sequences assigned
440 (6.5%) exact matches, in which:
350 unique CDR3
7 unique J



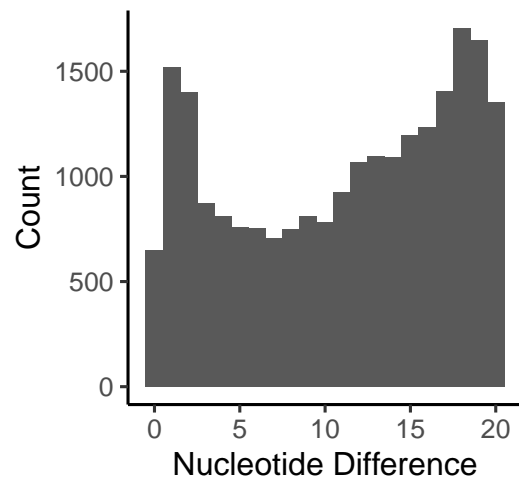
IGHV3-21*04

3499 sequences assigned
78 (2.2%) exact matches, in which:
74 unique CDR3
7 unique J



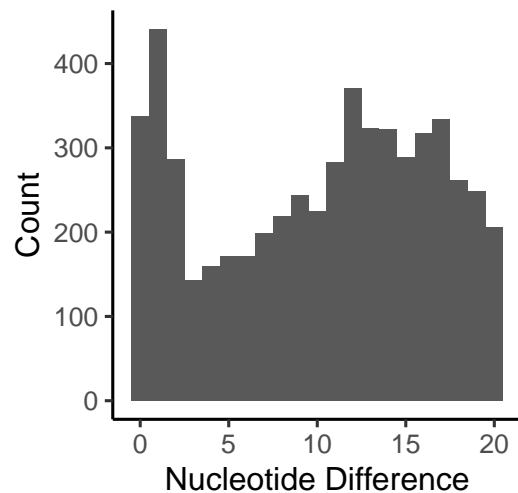
IGHV3-23*03

31284 sequences assigned
648 (2.1%) exact matches, in which:
498 unique CDR3
7 unique J



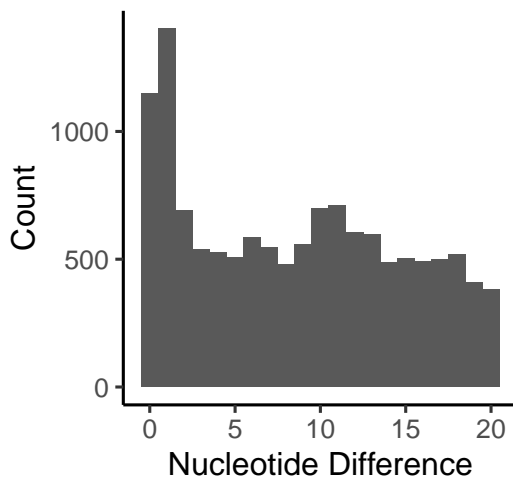
IGHV3-20*03_04

6935 sequences assigned
338 (4.9%) exact matches, in which:
227 unique CDR3
7 unique J



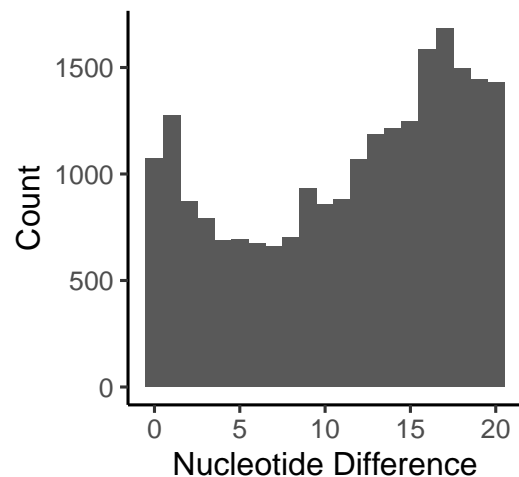
IGHV3-21*01_02

14699 sequences assigned
1150 (7.8%) exact matches, in which:
895 unique CDR3
7 unique J



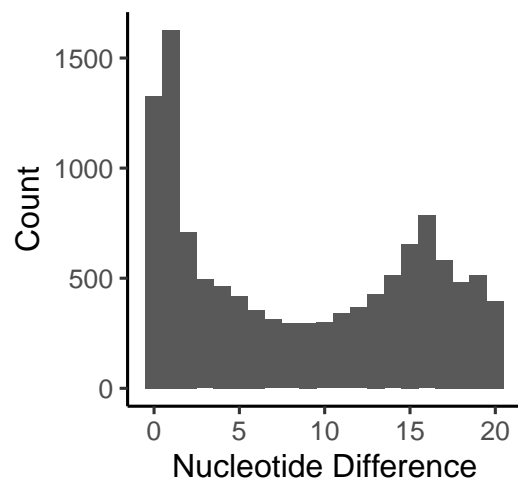
IGHV3-23*01_04

30754 sequences assigned
1072 (3.5%) exact matches, in which:
843 unique CDR3
7 unique J



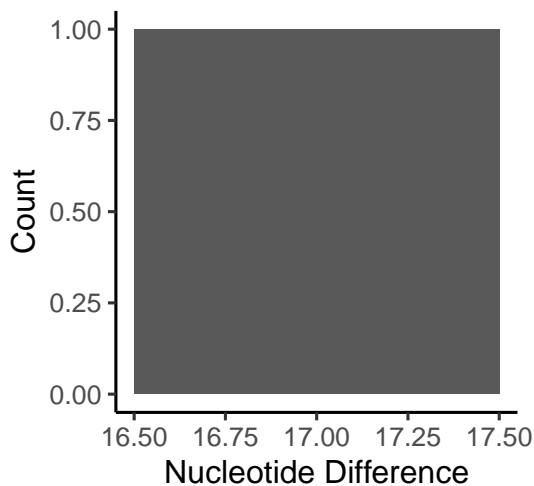
IGHV3-21*03

13826 sequences assigned
1328 (9.6%) exact matches, in which:
946 unique CDR3
7 unique J



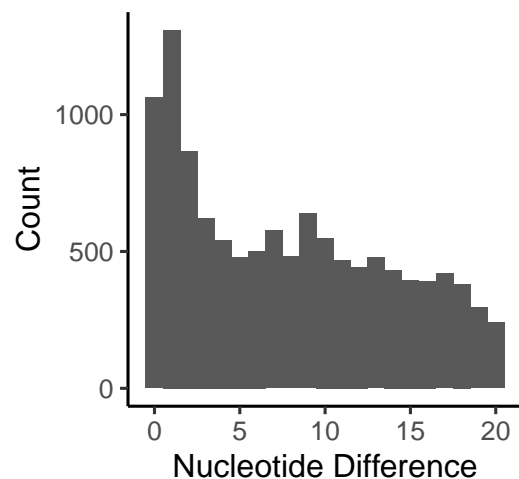
IGHV3-22*01_02

1 sequences assigned
No exact matches.



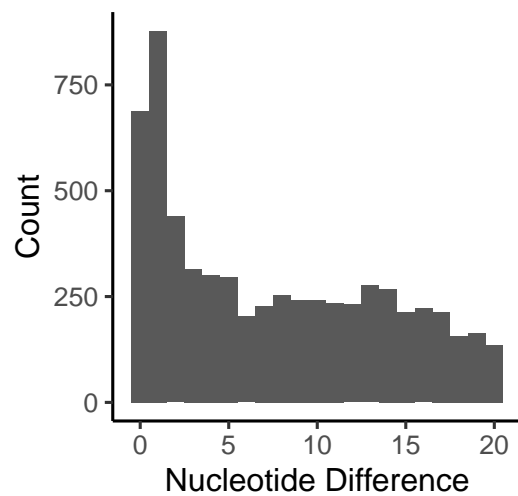
IGHV3-33*01

13083 sequences assigned
1062 (8.1%) exact matches, in which:
827 unique CDR3
7 unique J



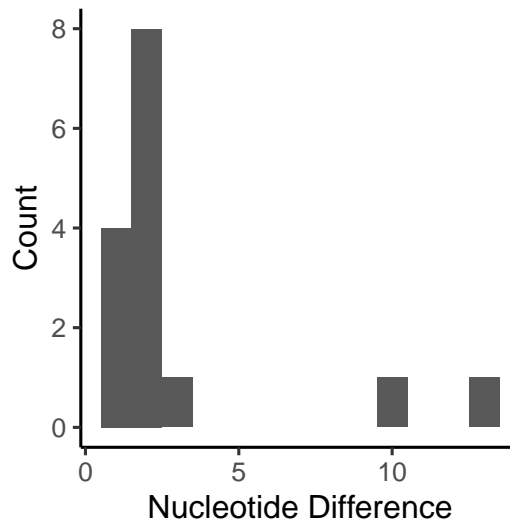
IGHV3–33*06

6871 sequences assigned
688 (10%) exact matches, in which:
435 unique CDR3
7 unique J



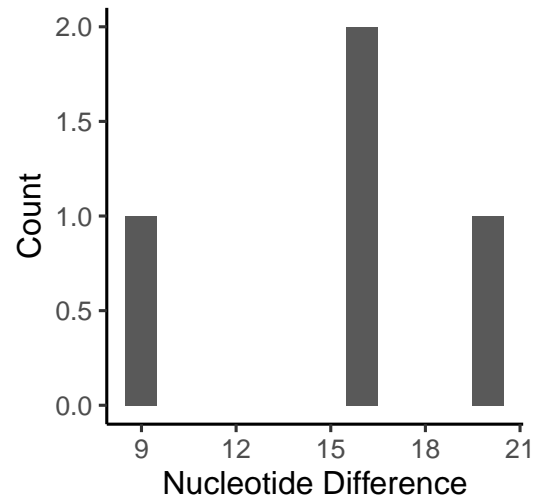
IGHV3–35*02

17 sequences assigned
No exact matches.



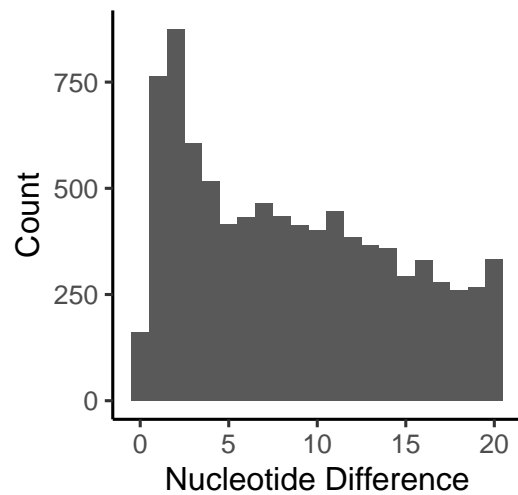
IGHV3–38*03

5 sequences assigned
No exact matches.



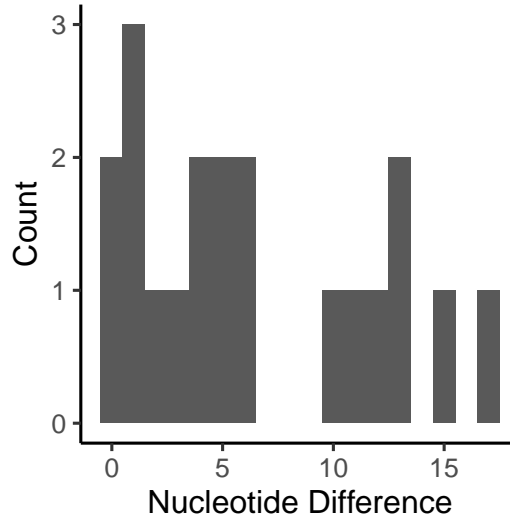
IGHV3–33*08

10219 sequences assigned
162 (1.6%) exact matches, in which:
153 unique CDR3
7 unique J



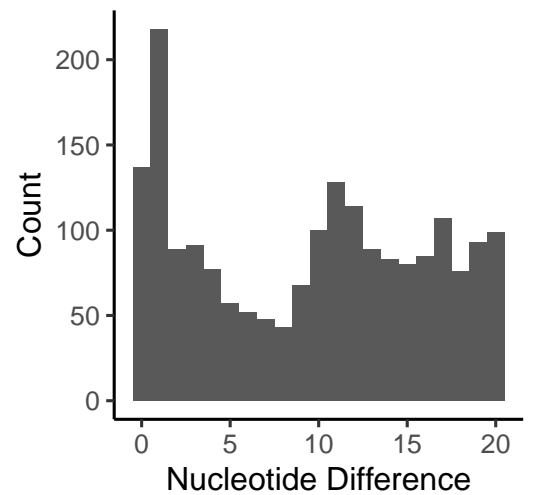
IGHV3–38–3*01

21 sequences assigned
2 (9.5%) exact matches, in which:
2 unique CDR3
1 unique J



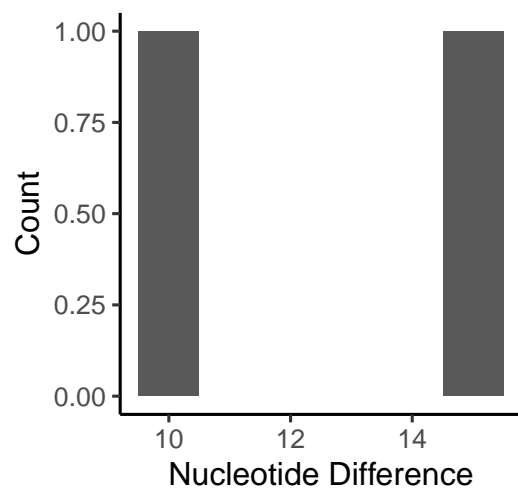
IGHV3–43*01

2516 sequences assigned
137 (5.4%) exact matches, in which:
90 unique CDR3
7 unique J



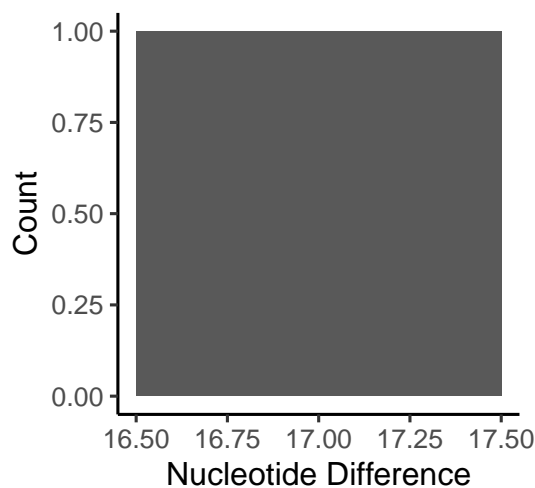
IGHV3–35*01

2 sequences assigned
No exact matches.



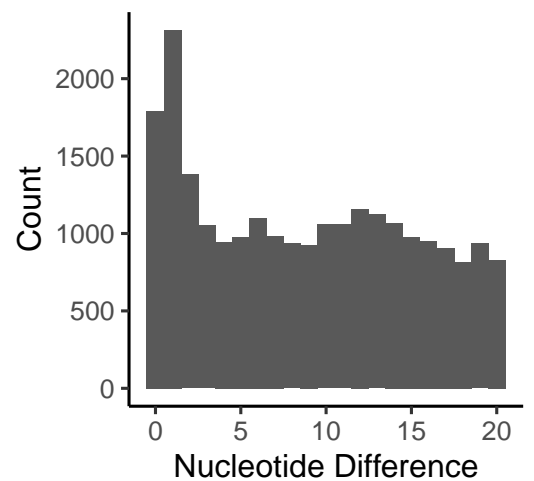
IGHV3–38*02

1 sequences assigned
No exact matches.



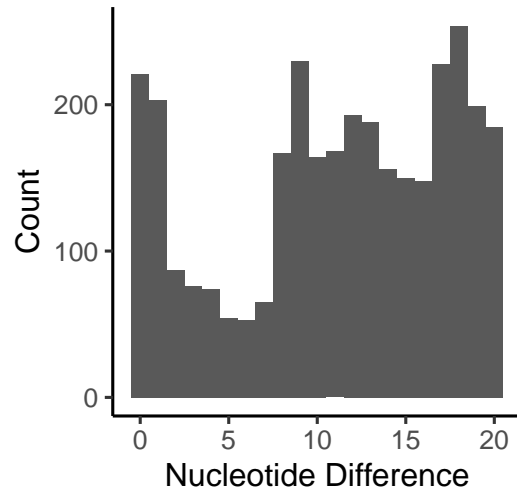
IGHV3–48*03

27788 sequences assigned
1790 (6.4%) exact matches, in which:
1378 unique CDR3
7 unique J



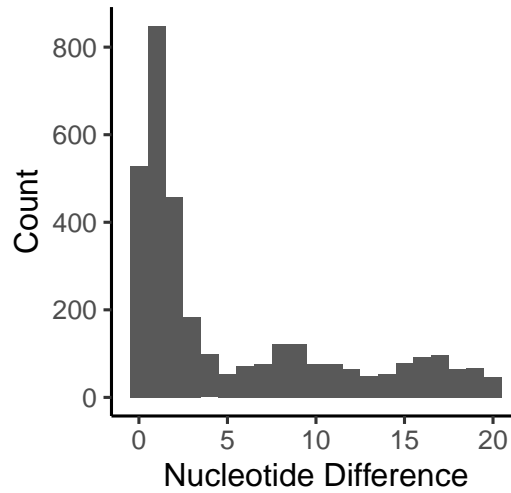
IGHV3-49*04

4909 sequences assigned
221 (4.5%) exact matches, in which:
165 unique CDR3
7 unique J



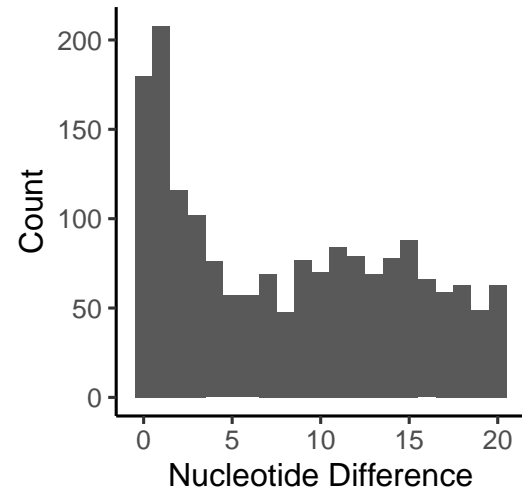
IGHV3-53*04

3654 sequences assigned
528 (14.4%) exact matches, in which:
362 unique CDR3
7 unique J



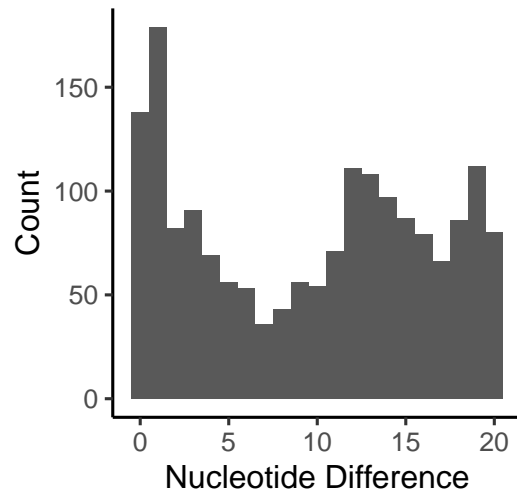
IGHV3-64*01

2064 sequences assigned
180 (8.7%) exact matches, in which:
130 unique CDR3
7 unique J



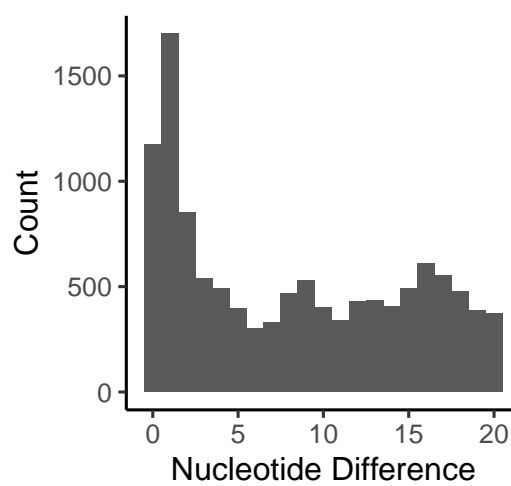
IGHV3-49*03_05

2248 sequences assigned
138 (6.1%) exact matches, in which:
99 unique CDR3
6 unique J



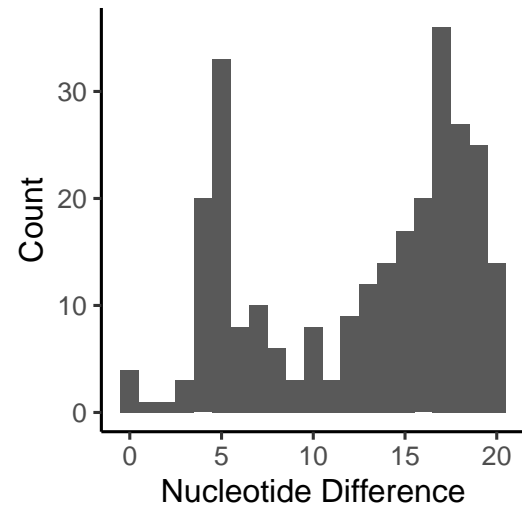
IGHV3-53*05

14821 sequences assigned
1175 (7.9%) exact matches, in which:
862 unique CDR3
7 unique J



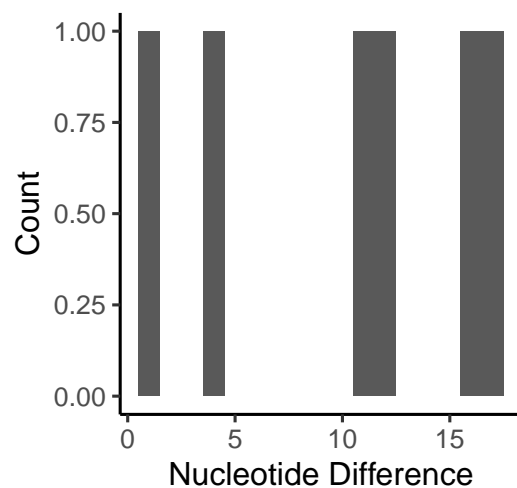
IGHV3-64*02_07

529 sequences assigned
4 (0.8%) exact matches, in which:
3 unique CDR3
3 unique J



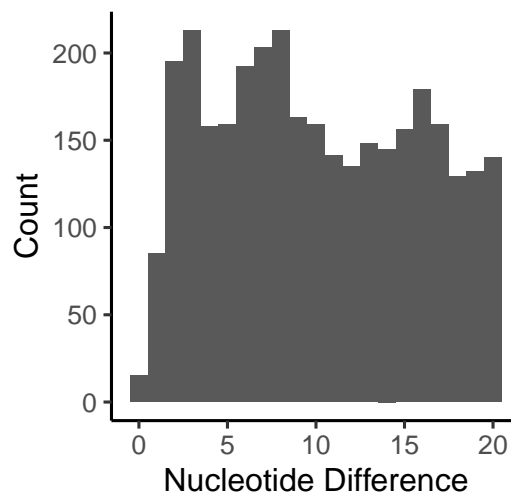
IGHV3-52*01_03

6 sequences assigned
No exact matches.



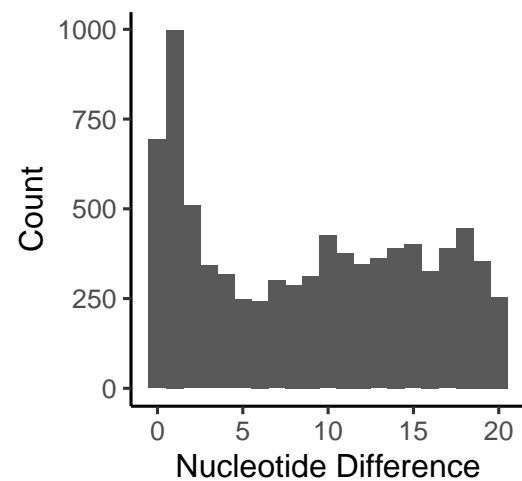
IGHV3-53*01_02

4167 sequences assigned
15 (0.4%) exact matches, in which:
15 unique CDR3
4 unique J



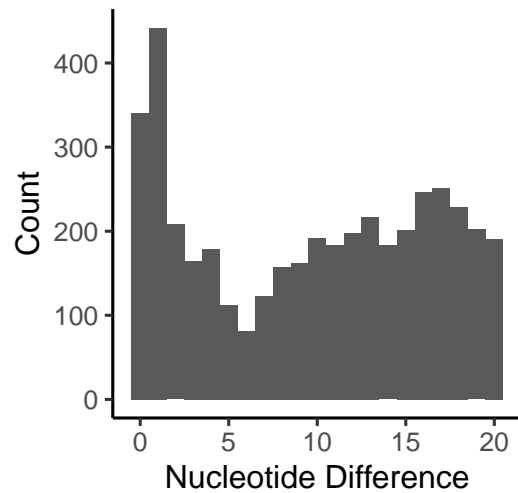
IGHV3-66*01

11203 sequences assigned
693 (6.2%) exact matches, in which:
512 unique CDR3
7 unique J



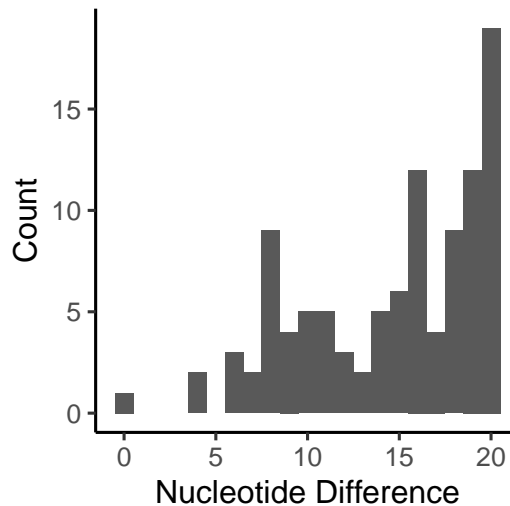
IGHV3-66*02

5363 sequences assigned
341 (6.4%) exact matches, in which:
256 unique CDR3
7 unique J



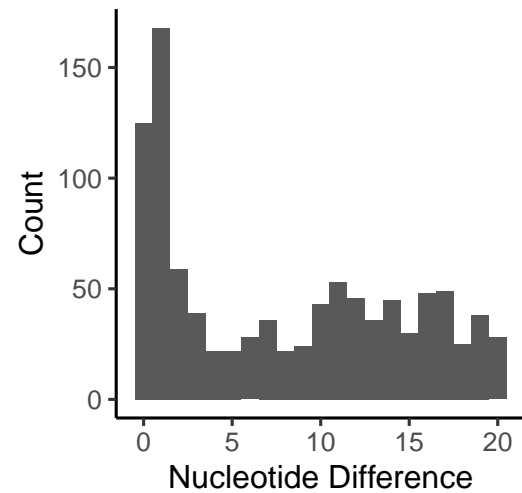
IGHV3-69-1*02

497 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



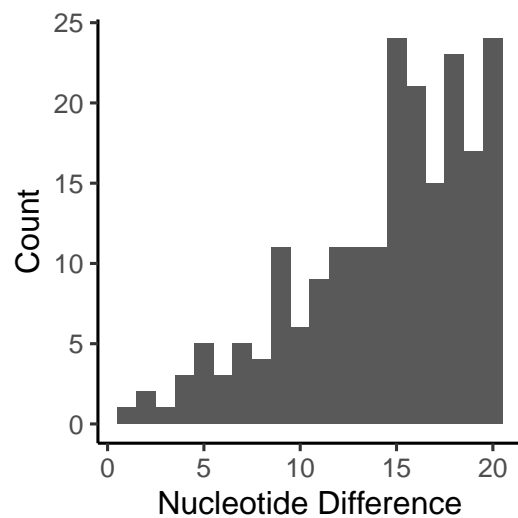
IGHV3-73*01_02

1198 sequences assigned
125 (10.4%) exact matches, in which:
102 unique CDR3
7 unique J



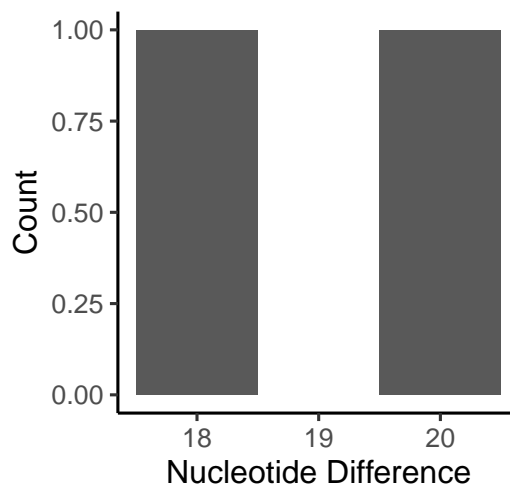
IGHV3-66*03

287 sequences assigned
No exact matches.



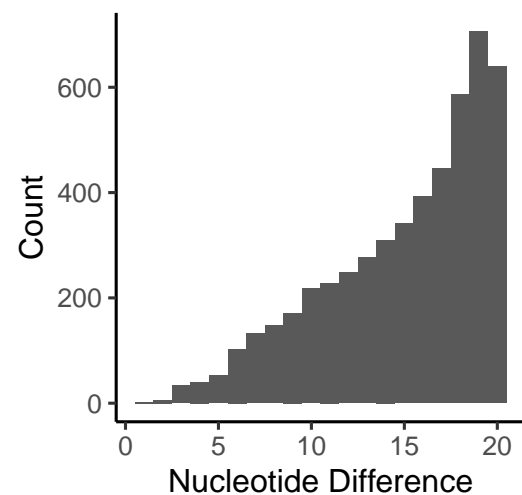
IGHV3-71*01_04

38 sequences assigned
No exact matches.



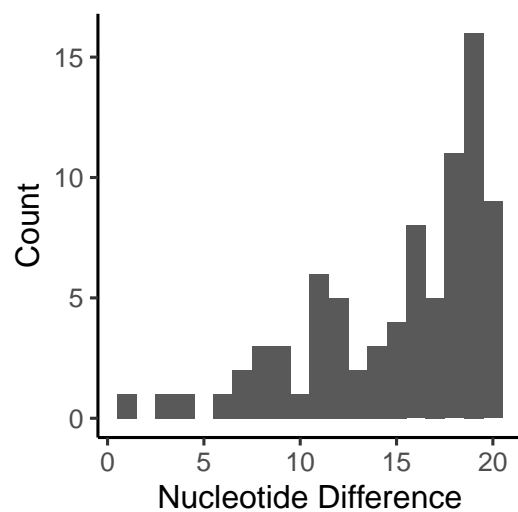
IGHV3-74*03

8442 sequences assigned
No exact matches.



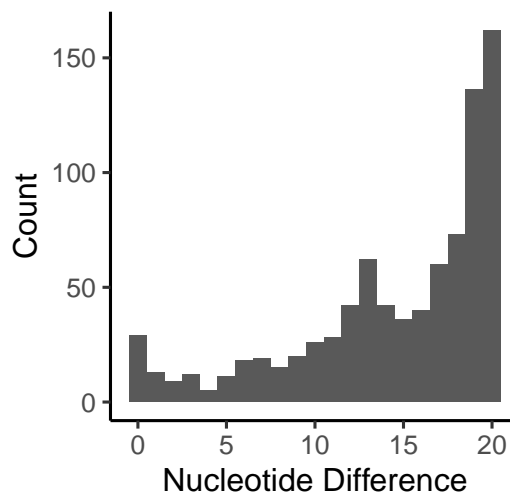
IGHV3-69-1*01

227 sequences assigned
No exact matches.



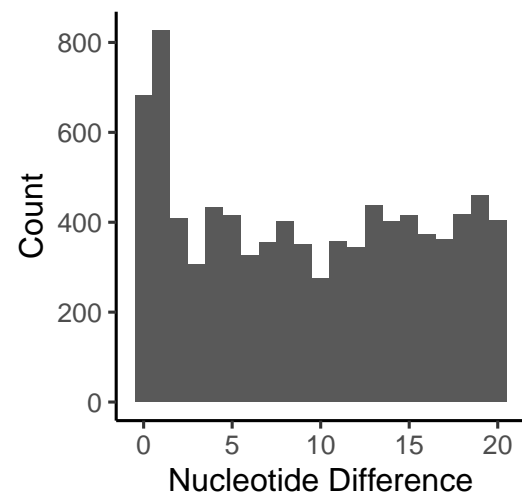
IGHV3-72*01

1328 sequences assigned
29 (2.2%) exact matches, in which:
24 unique CDR3
5 unique J



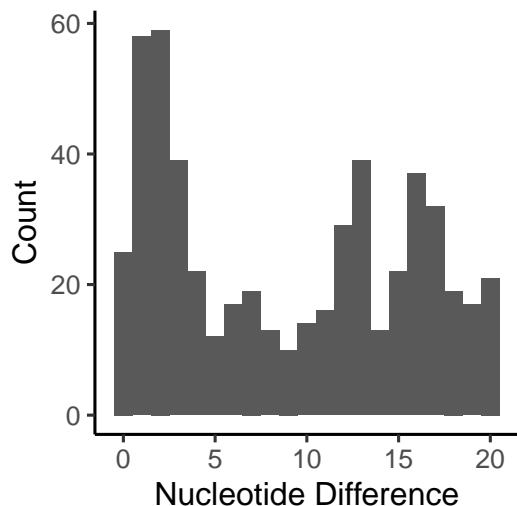
IGHV3-74*01_02

10863 sequences assigned
682 (6.3%) exact matches, in which:
534 unique CDR3
7 unique J



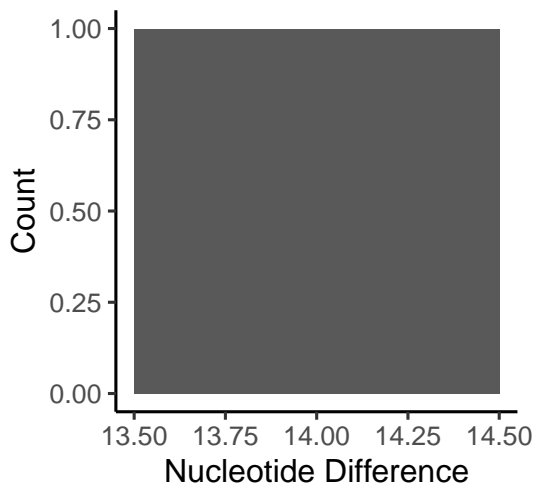
IGHV3-43D*03

660 sequences assigned
25 (3.8%) exact matches, in which:
21 unique CDR3
3 unique J



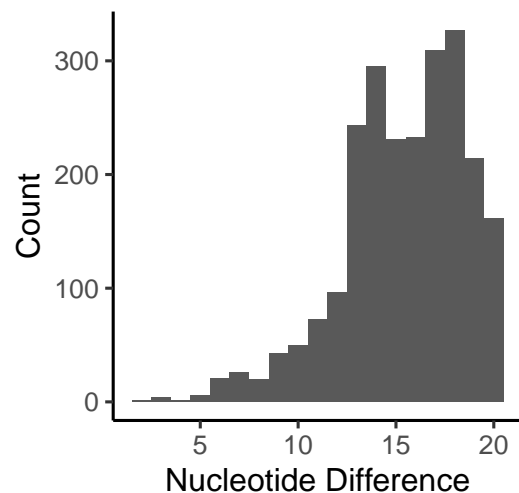
IGHV3-64D*09

4 sequences assigned
No exact matches.



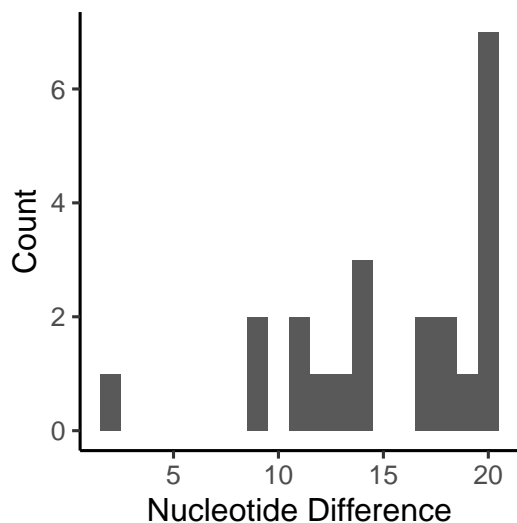
IGHV4-28*03

3034 sequences assigned
No exact matches.



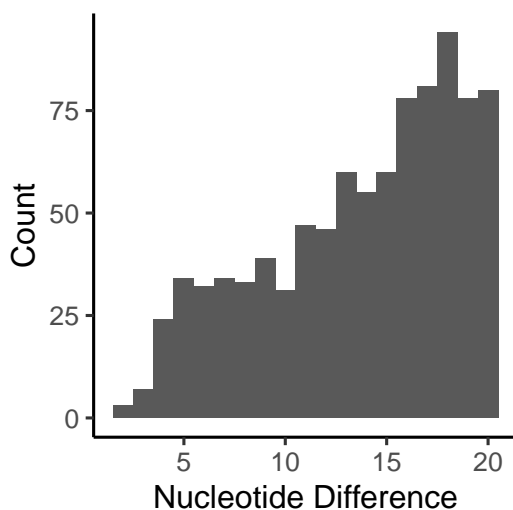
IGHV3-43D*04

53 sequences assigned
No exact matches.



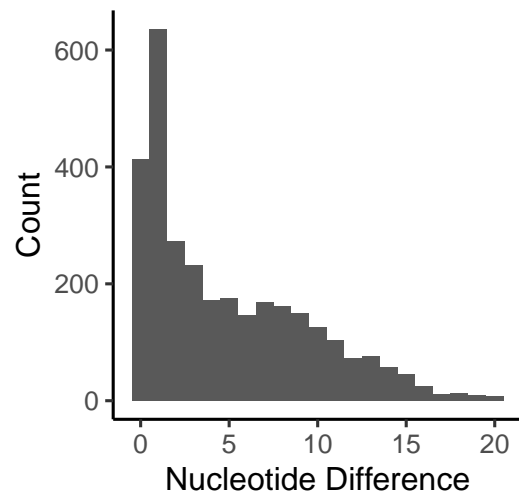
IGHV3-NL1*01

1370 sequences assigned
No exact matches.



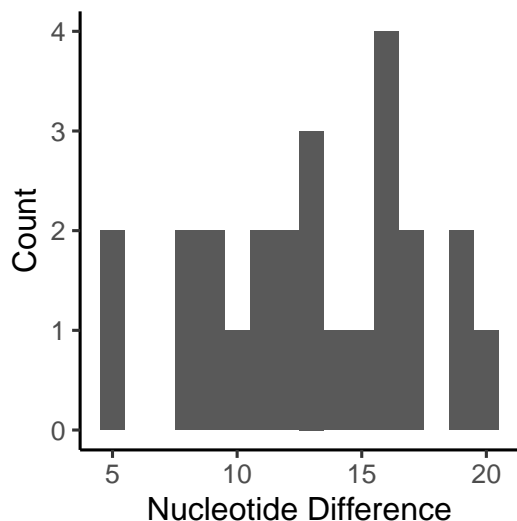
IGHV4-28*02_05_G80T_

3092 sequences assigned
414 (13.4%) exact matches, in which:
262 unique CDR3
7 unique J



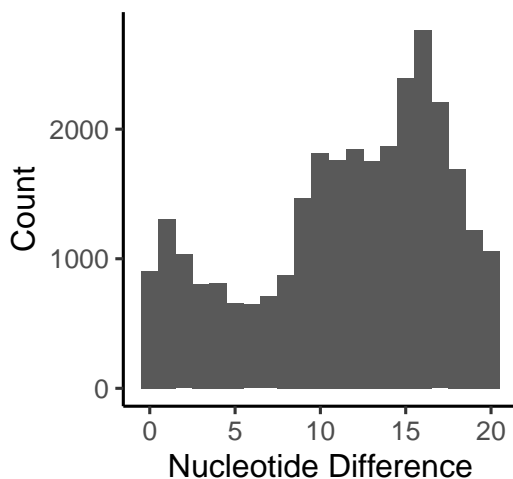
IGHV3-64D*06

32 sequences assigned
No exact matches.



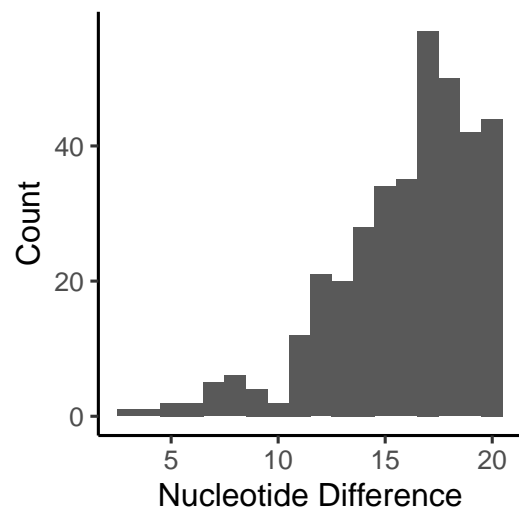
IGHV4-4*02_03

36046 sequences assigned
904 (2.5%) exact matches, in which:
646 unique CDR3
7 unique J



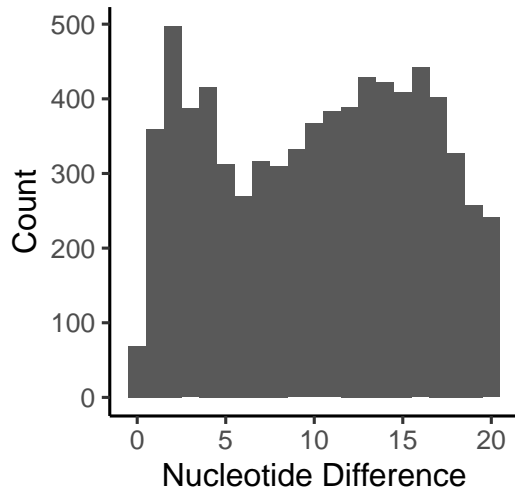
IGHV4-30-4*01

585 sequences assigned
No exact matches.



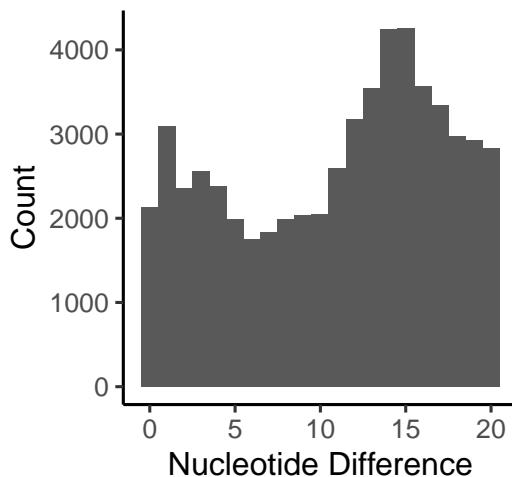
IGHV4-30-2*01

8310 sequences assigned
69 (0.8%) exact matches, in which:
65 unique CDR3
7 unique J



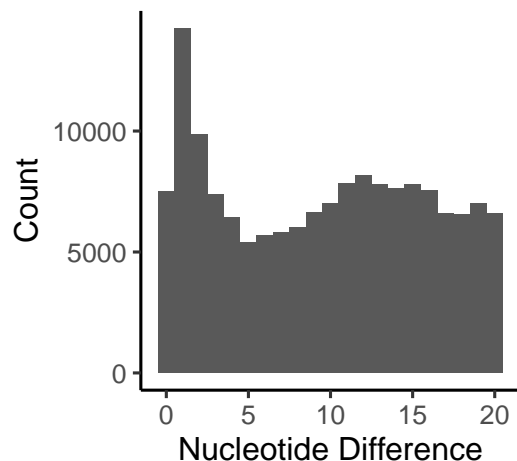
IGHV4-31*02

71062 sequences assigned
2136 (3%) exact matches, in which:
1450 unique CDR3
7 unique J



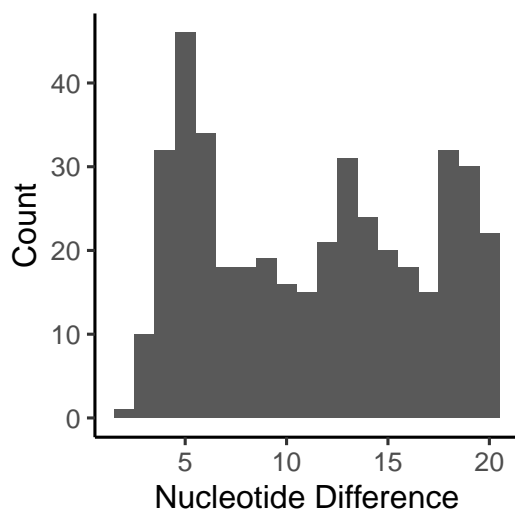
IGHV4-39*07

203127 sequences assigned
7488 (3.7%) exact matches, in which:
4522 unique CDR3
7 unique J



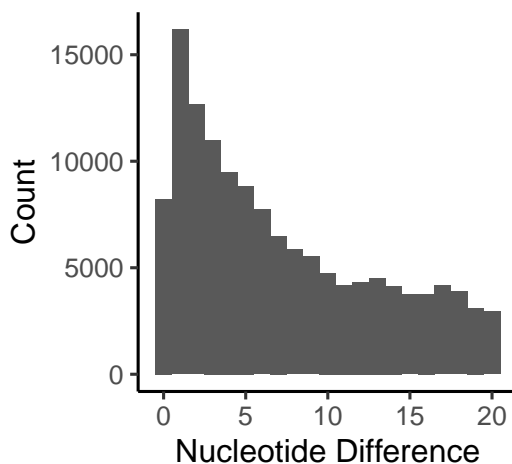
IGHV4-30-4*07

536 sequences assigned
No exact matches.



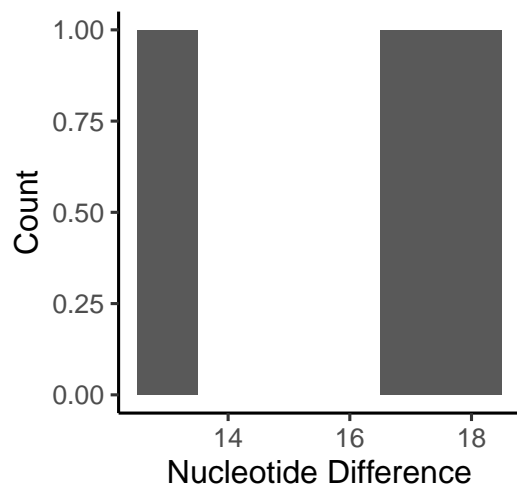
IGHV4-34*01_02

154206 sequences assigned
8233 (5.3%) exact matches, in which:
5114 unique CDR3
7 unique J



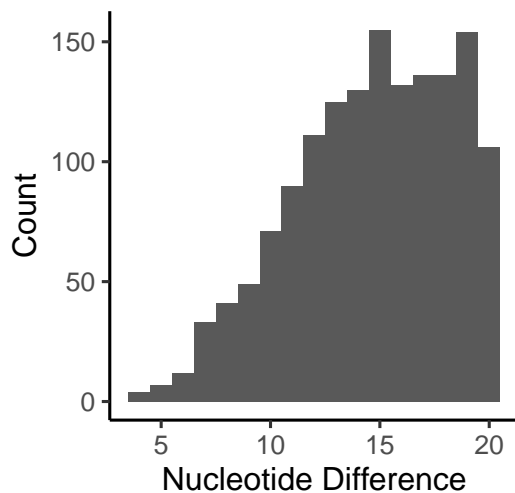
IGHV4-55*09

19 sequences assigned
No exact matches.



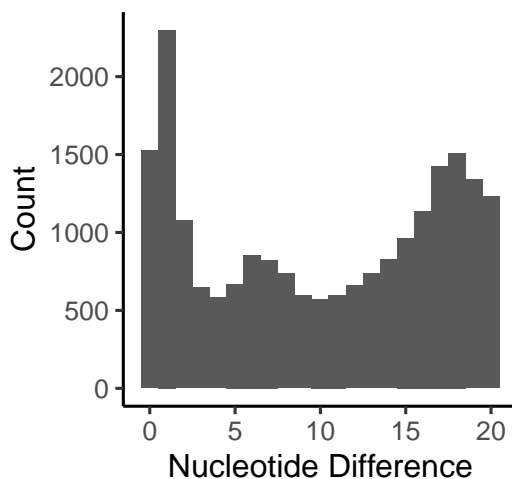
IGHV4-30-4*08

2247 sequences assigned
No exact matches.



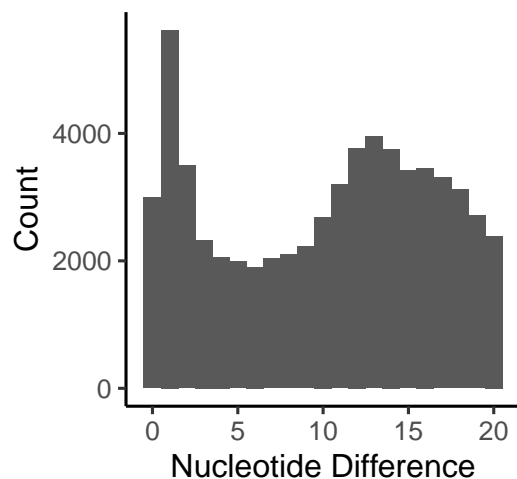
IGHV4-38-2*02

26422 sequences assigned
1525 (5.8%) exact matches, in which:
1023 unique CDR3
7 unique J



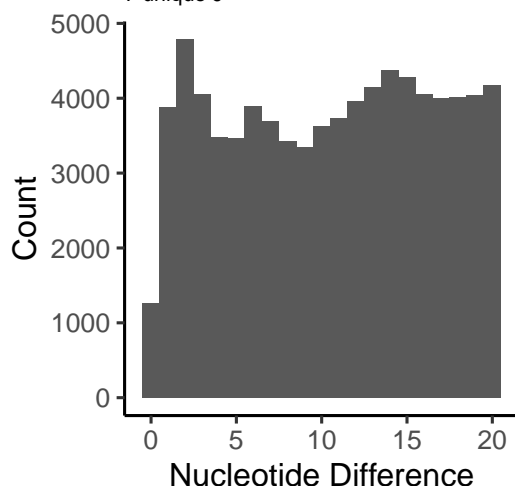
IGHV4-59*08

76460 sequences assigned
2992 (3.9%) exact matches, in which:
1953 unique CDR3
7 unique J



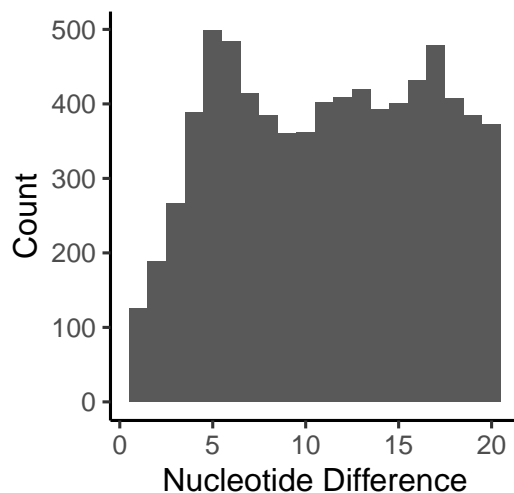
IGHV4-59*12

100761 sequences assigned
1265 (1.3%) exact matches, in which:
1019 unique CDR3
7 unique J



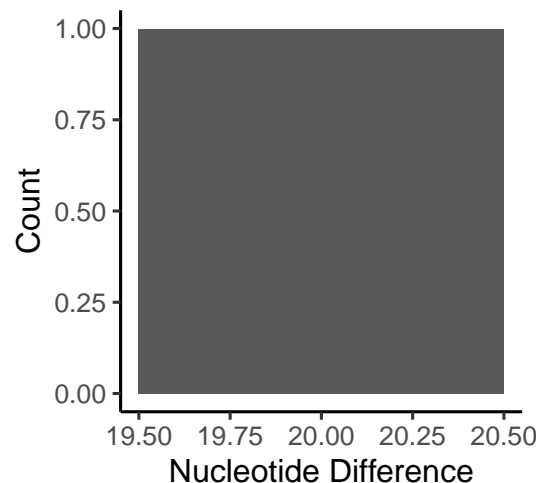
IGHV4-61*08

9574 sequences assigned
No exact matches.



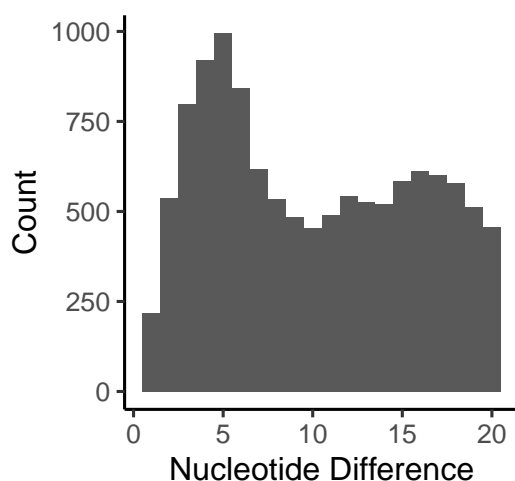
IGHV1/OR15-3*02

1 sequences assigned
No exact matches.



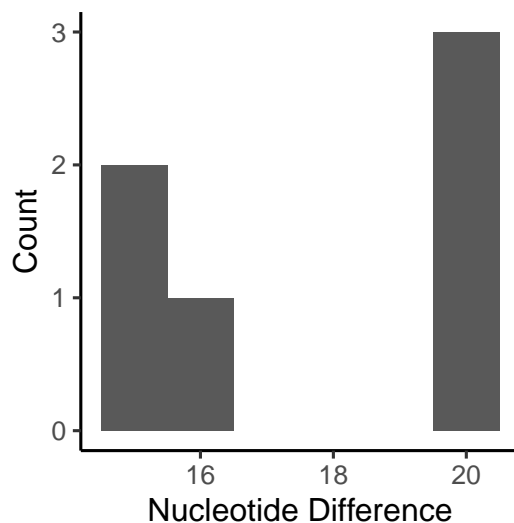
IGHV4-61*01

14019 sequences assigned
No exact matches.



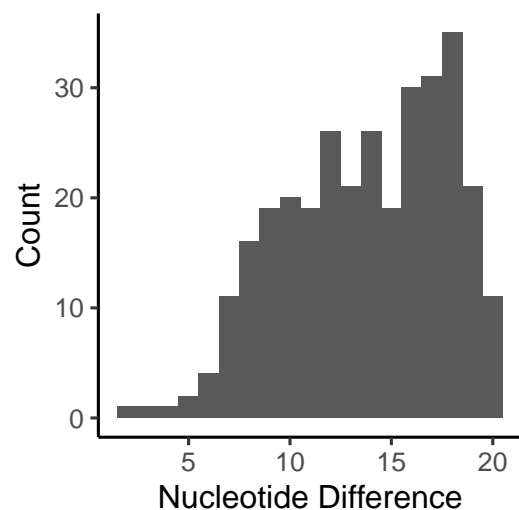
IGHV1/OR15-1*04

10 sequences assigned
No exact matches.



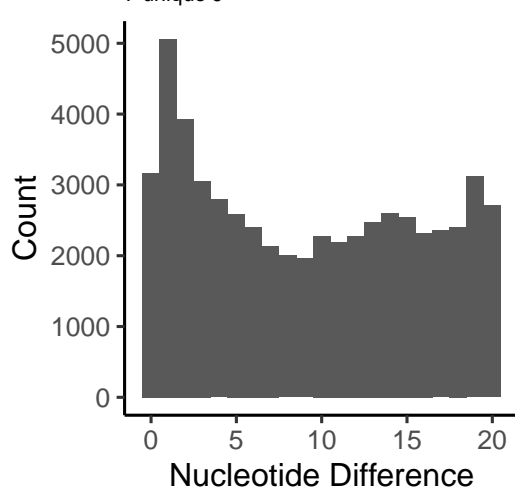
IGHV4/OR15-8*01

490 sequences assigned
No exact matches.



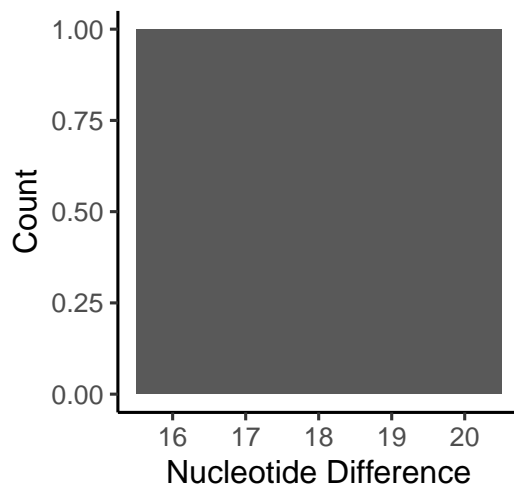
IGHV4-61*02

68708 sequences assigned
3166 (4.6%) exact matches, in which:
1996 unique CDR3
7 unique J



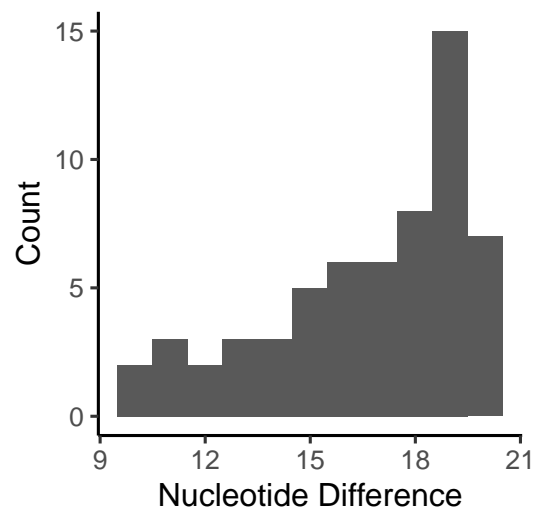
IGHV1/OR15-2*02_03

14 sequences assigned
No exact matches.



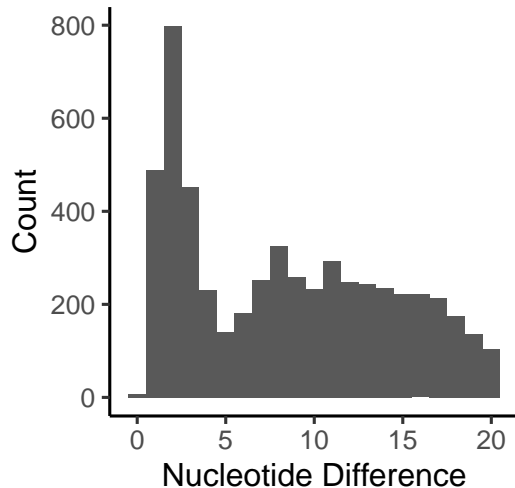
IGHV4/OR15-8*02

734 sequences assigned
No exact matches.



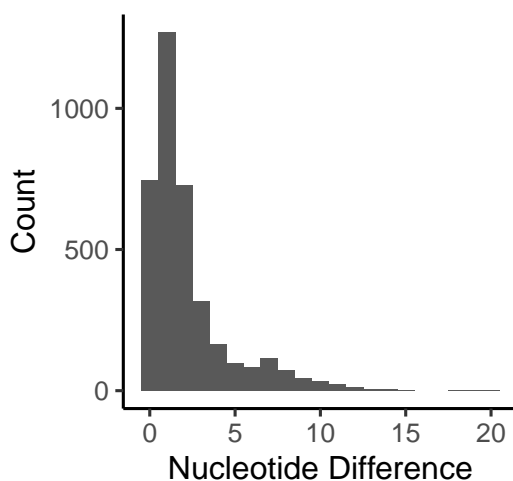
IGHV5–51*07

5893 sequences assigned
8 (0.1%) exact matches, in which:
8 unique CDR3
4 unique J



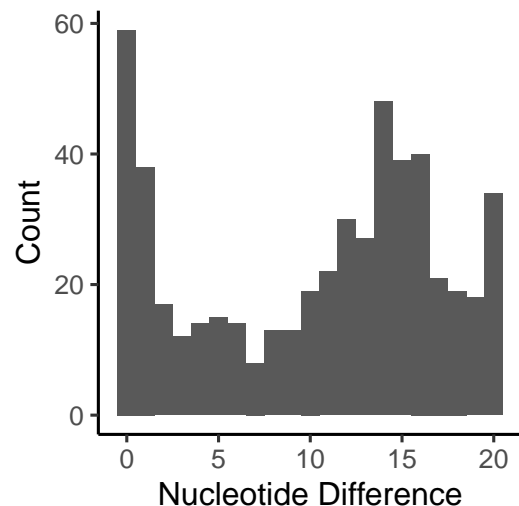
IGHV6–1*01_02_A163C

3746 sequences assigned
746 (19.9%) exact matches, in which:
334 unique CDR3
7 unique J



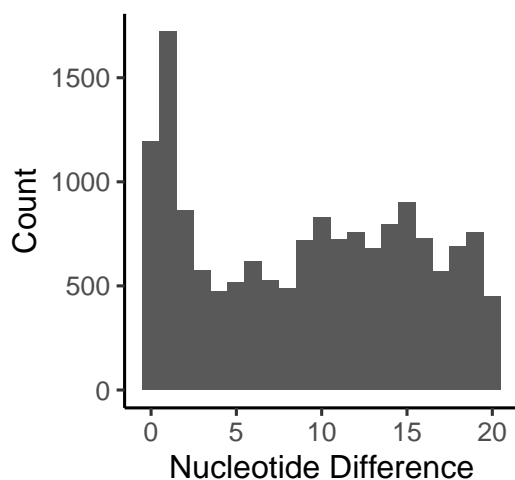
IGHV7–4–1*02

668 sequences assigned
59 (8.8%) exact matches, in which:
51 unique CDR3
7 unique J



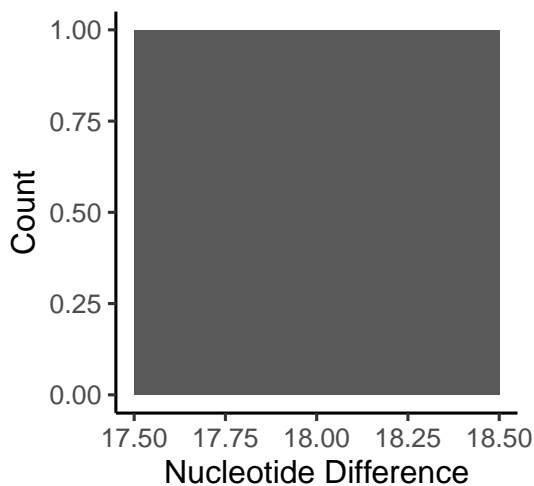
IGHV5–51*01_03

17171 sequences assigned
1192 (6.9%) exact matches, in which:
862 unique CDR3
7 unique J



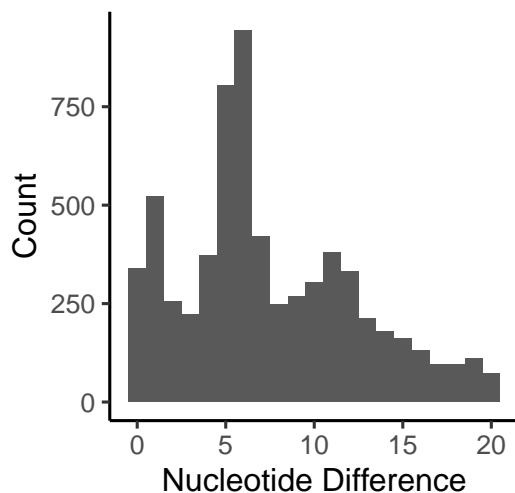
IGHV3/OR16–8*01

2 sequences assigned
No exact matches.



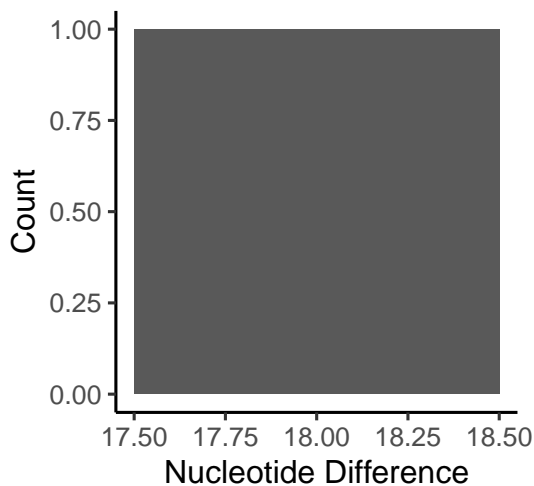
IGHV6–1*01_02

7022 sequences assigned
340 (4.8%) exact matches, in which:
247 unique CDR3
7 unique J

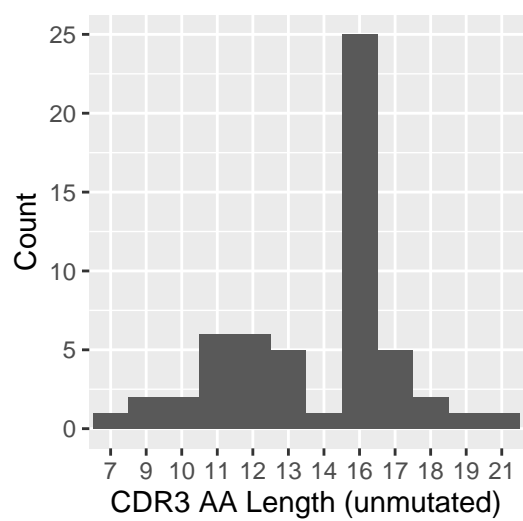


IGHV3/OR16–13*01

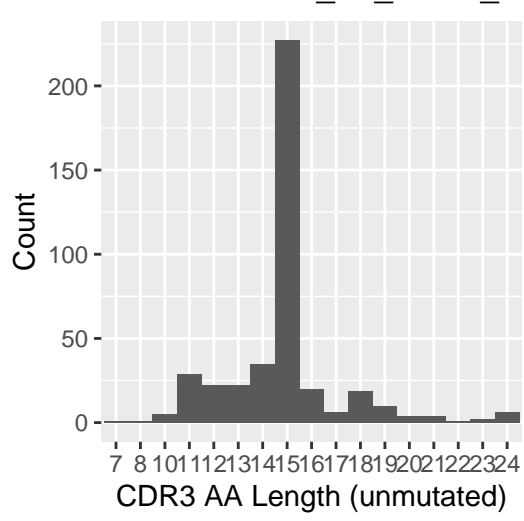
4 sequences assigned
No exact matches.



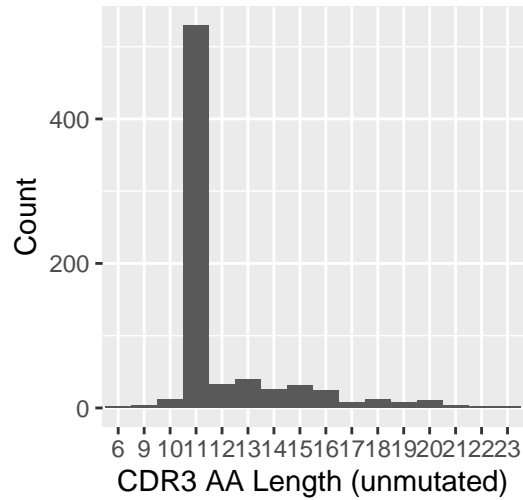
IGHV3-13*01_C210T



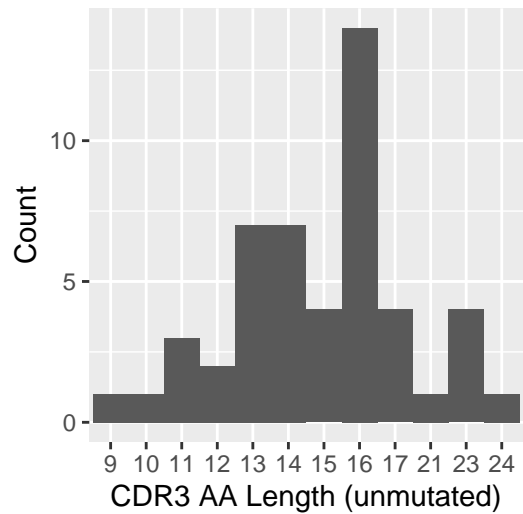
IGHV4-28*02_05_G80T_A109C_G162A_T163C_A175G_G19



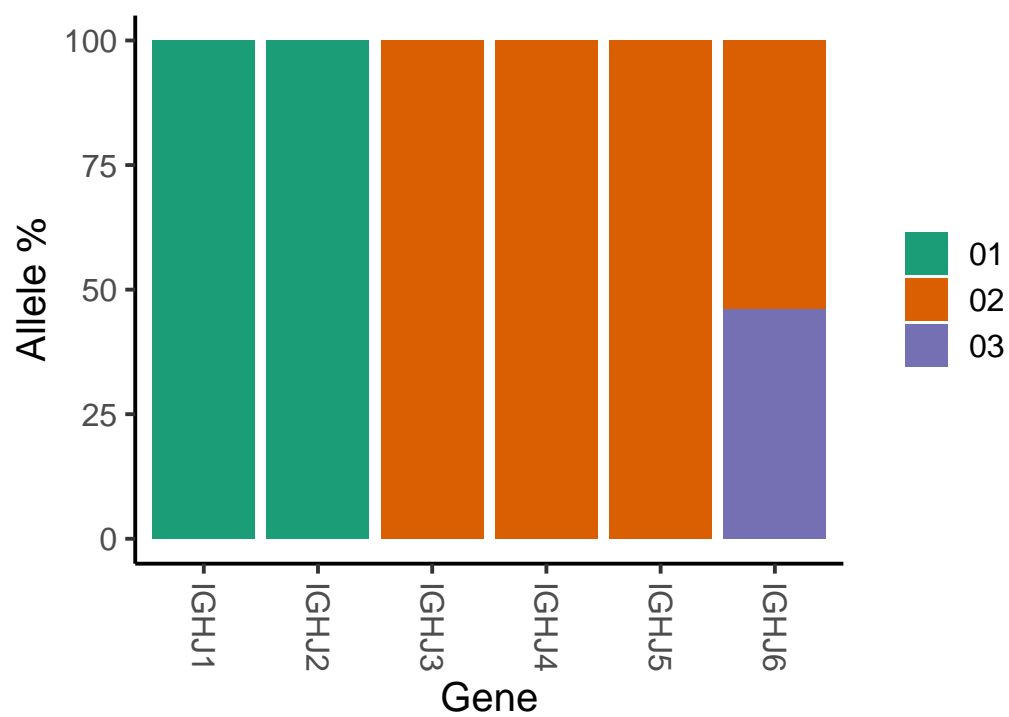
IGHV6-1*01_02_A163C_C174T_G176T_A207C_C230T_A275C



IGHV1-3*01_05_C134A



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.