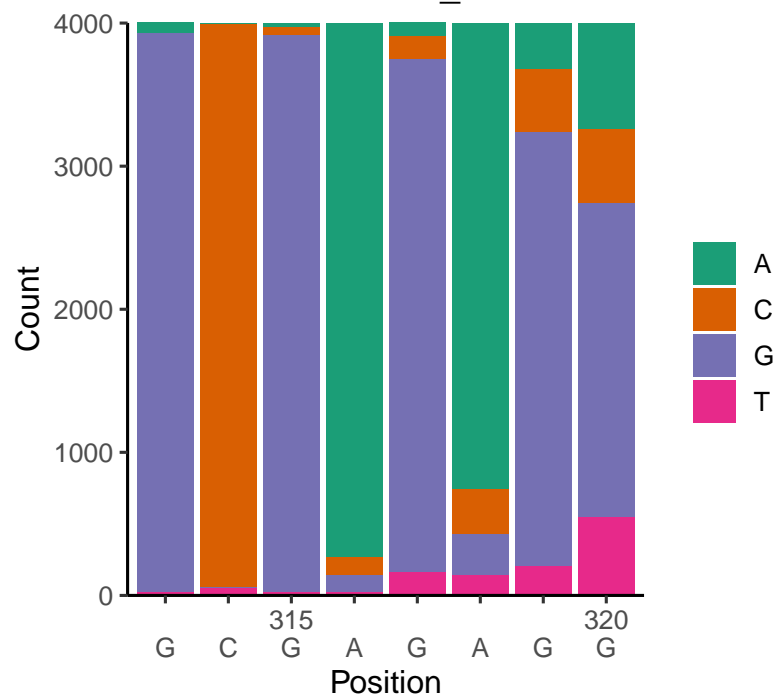
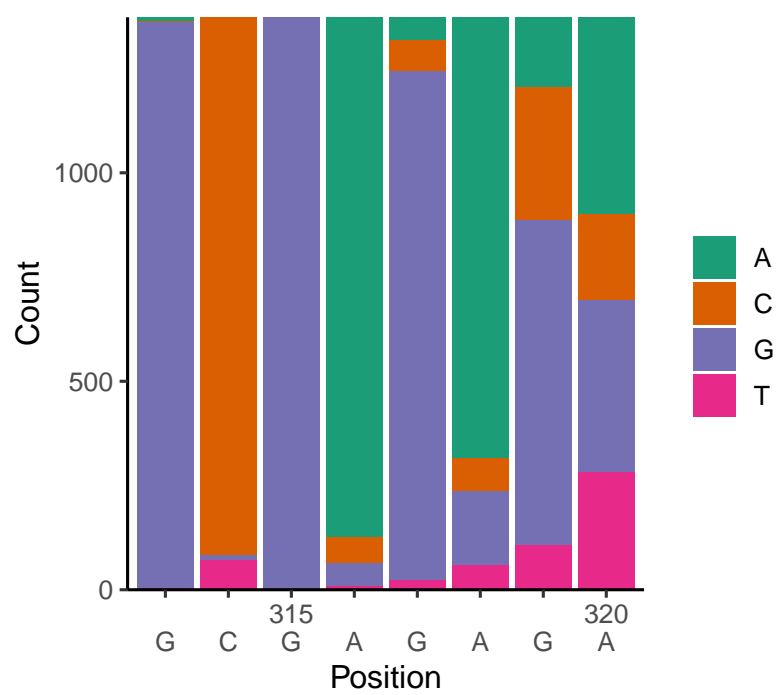


Gene IGHV1-8*02_A250G



Gene IGHV6-1*01_02_A315G



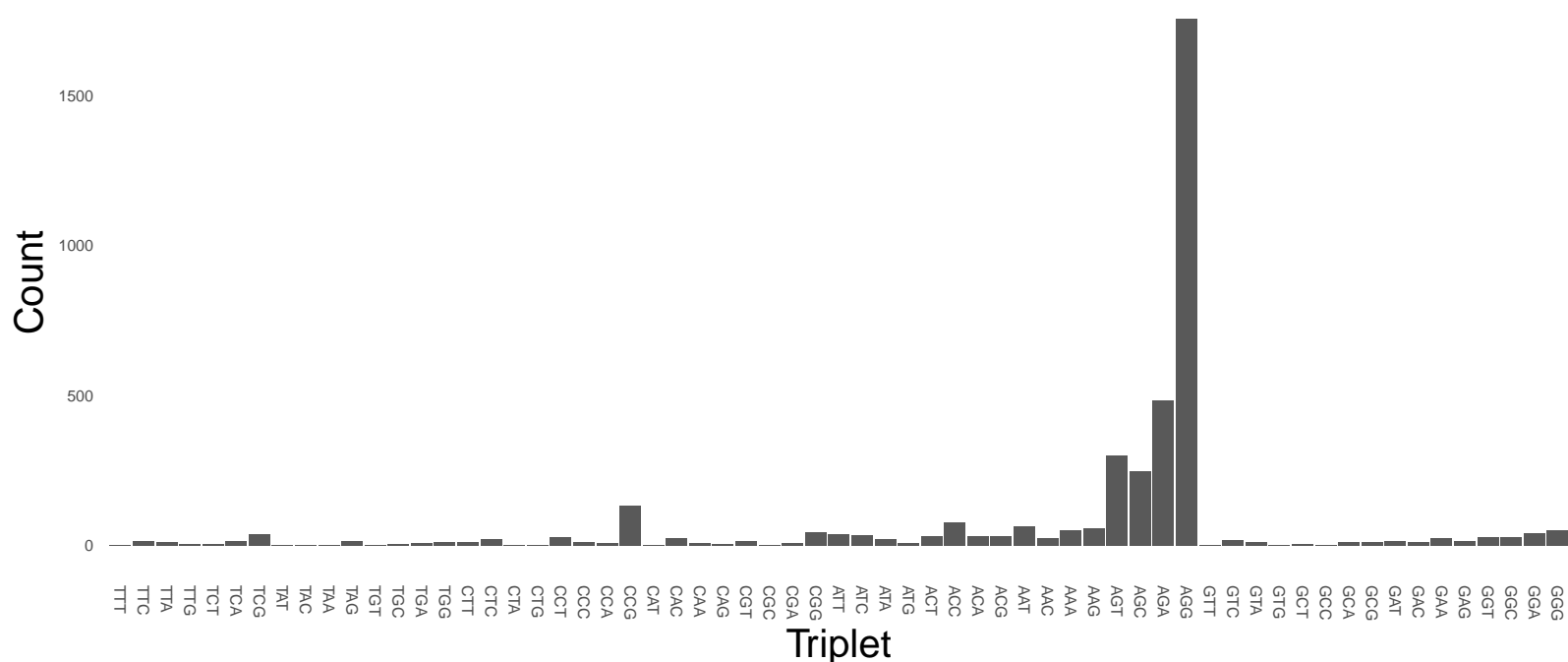
Gene IGHV1-8*02_A250G



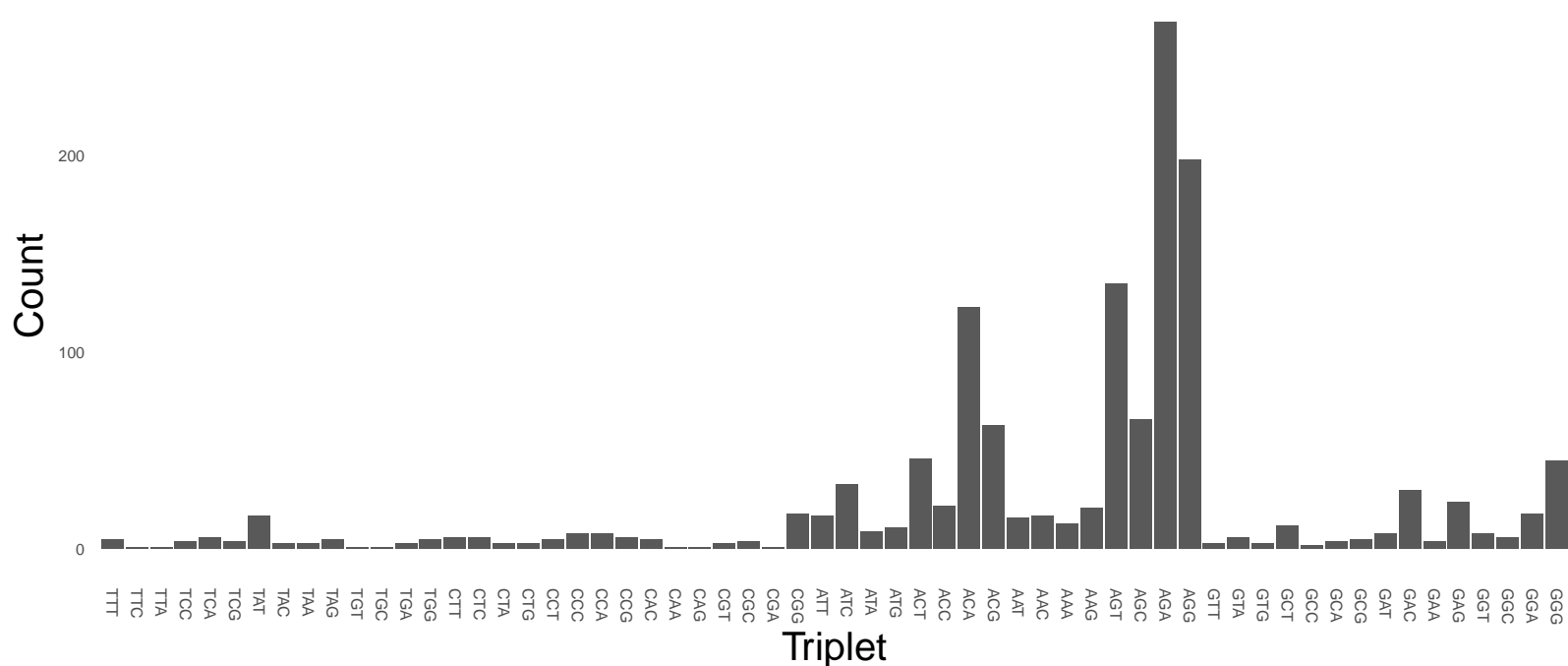
Gene IGHV6-1*01_02_A315G



IGHV1-8*02_A250G- Final 3 nucleotides as a triplet

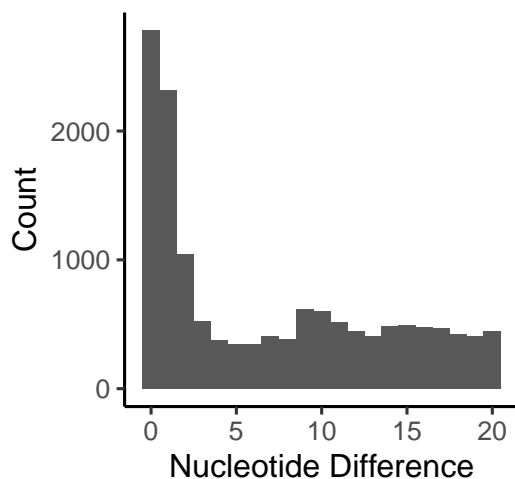


IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet



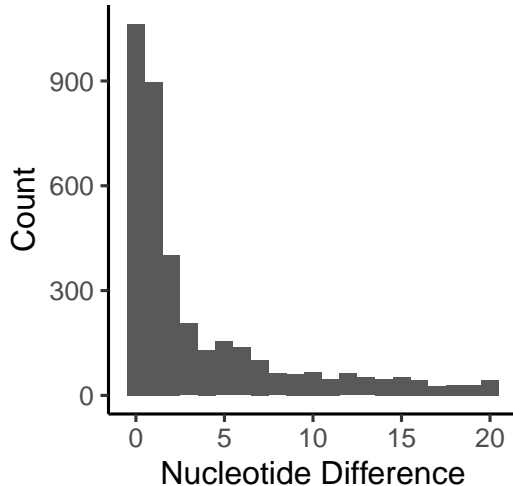
IGHV1-2*02

17160 sequences assigned
2781 (16.2%) exact matches, in which:
2377 unique CDR3
7 unique J



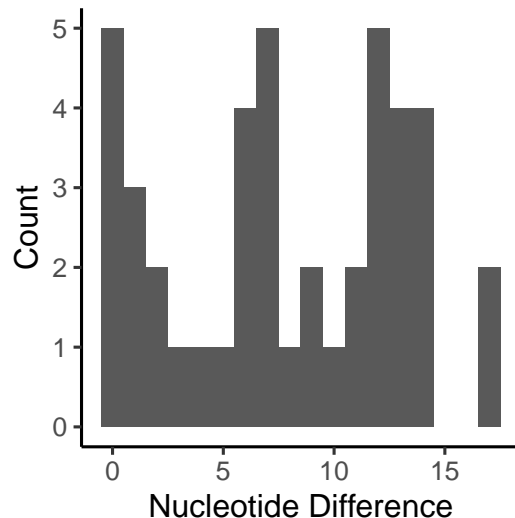
IGHV1-8*02_A250G

4001 sequences assigned
1064 (26.6%) exact matches, in which:
906 unique CDR3
7 unique J



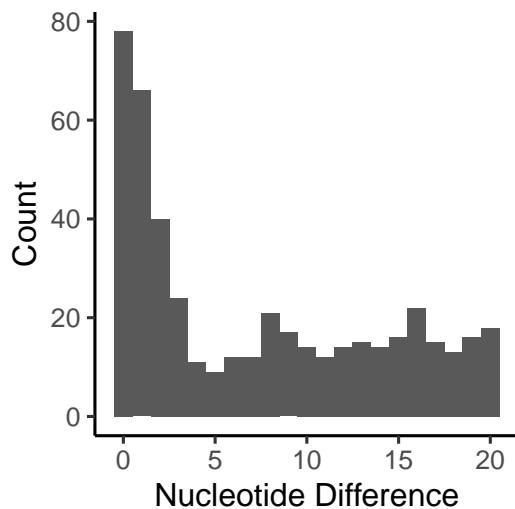
IGHV1-45*02

56 sequences assigned
5 (8.9%) exact matches, in which:
3 unique CDR3
2 unique J



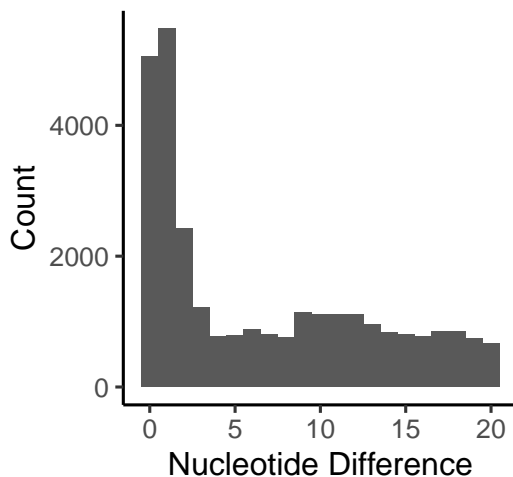
IGHV1-3*03

576 sequences assigned
78 (13.5%) exact matches, in which:
71 unique CDR3
6 unique J



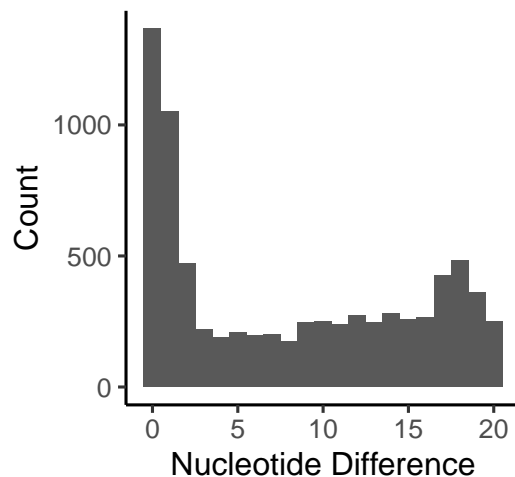
IGHV1-18*01

33887 sequences assigned
5059 (14.9%) exact matches, in which:
4002 unique CDR3
7 unique J



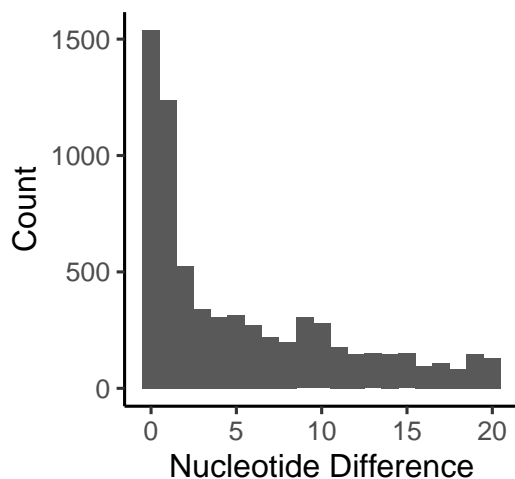
IGHV1-46*01

9628 sequences assigned
1367 (14.2%) exact matches, in which:
1183 unique CDR3
7 unique J



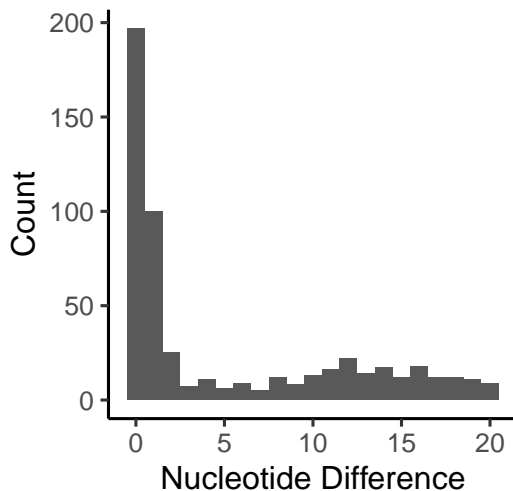
IGHV1-8*02

7441 sequences assigned
1539 (20.7%) exact matches, in which:
1286 unique CDR3
7 unique J



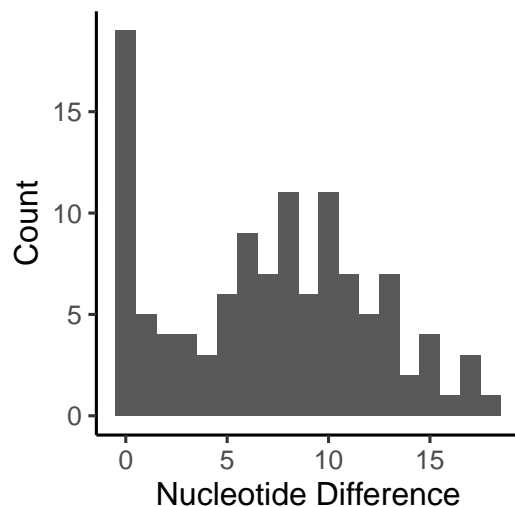
IGHV1-24*01

573 sequences assigned
197 (34.4%) exact matches, in which:
171 unique CDR3
7 unique J



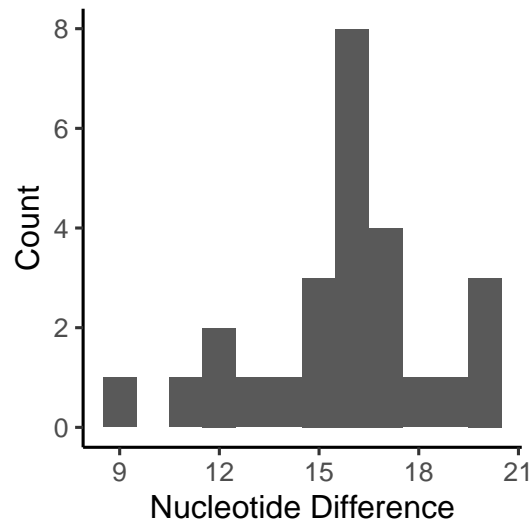
IGHV1-58*02

119 sequences assigned
19 (16%) exact matches, in which:
19 unique CDR3
4 unique J



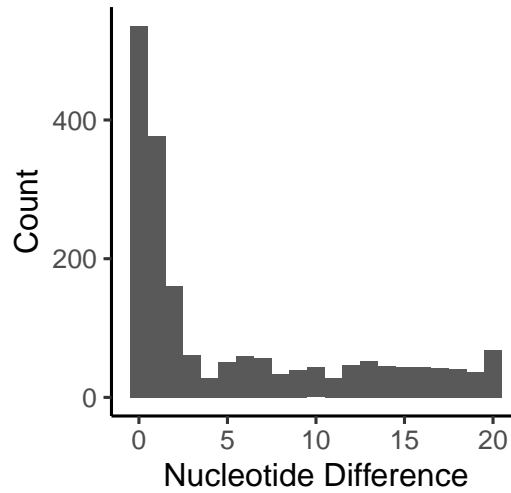
IGHV1-58*01_03

40 sequences assigned
No exact matches.



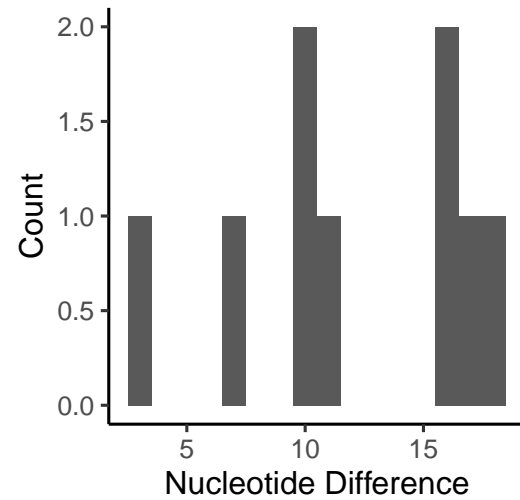
IGHV1-69*10

2300 sequences assigned
536 (23.3%) exact matches, in which:
467 unique CDR3
7 unique J



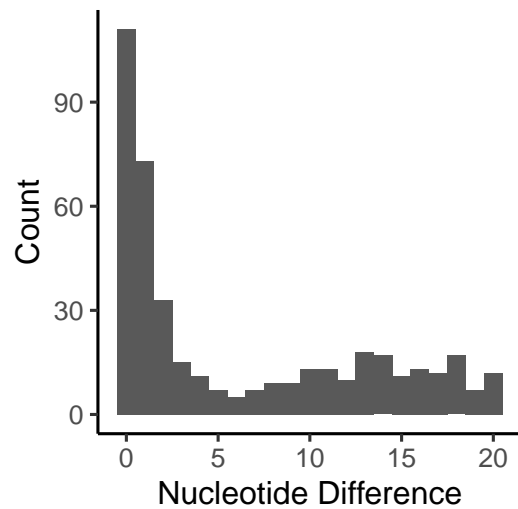
IGHV2-70*04

10 sequences assigned
No exact matches.



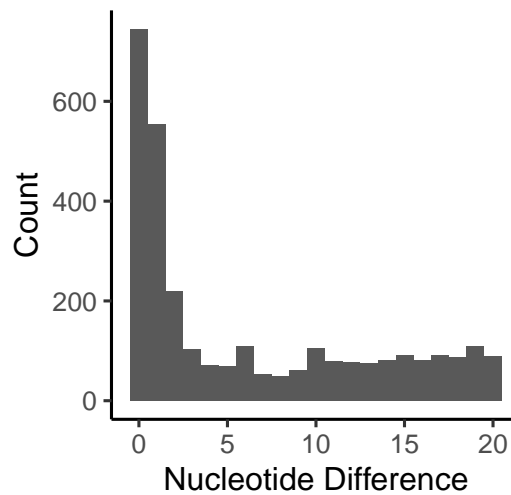
IGHV1-69-2*01

525 sequences assigned
111 (21.1%) exact matches, in which:
96 unique CDR3
7 unique J



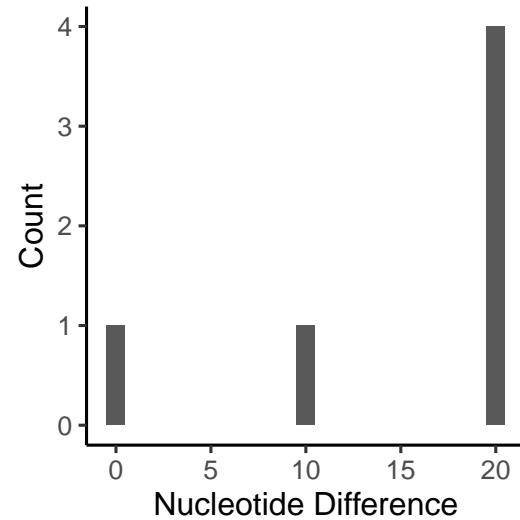
IGHV1-69*06_14

3682 sequences assigned
745 (20.2%) exact matches, in which:
667 unique CDR3
7 unique J



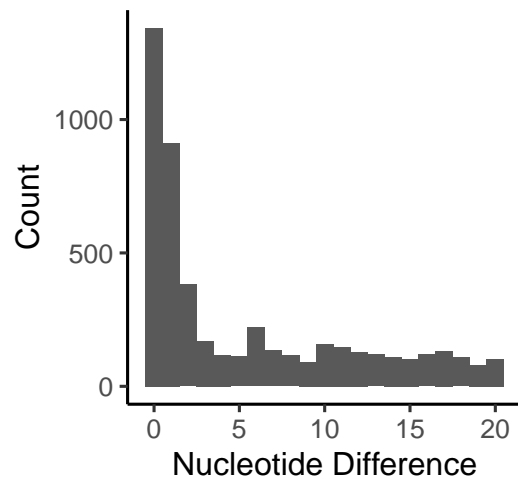
IGHV2-70*11_15

9 sequences assigned
1 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



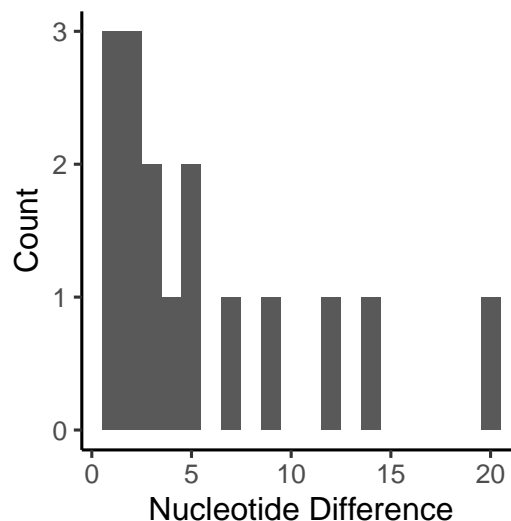
IGHV1-69*05

5938 sequences assigned
1343 (22.6%) exact matches, in which:
1190 unique CDR3
7 unique J



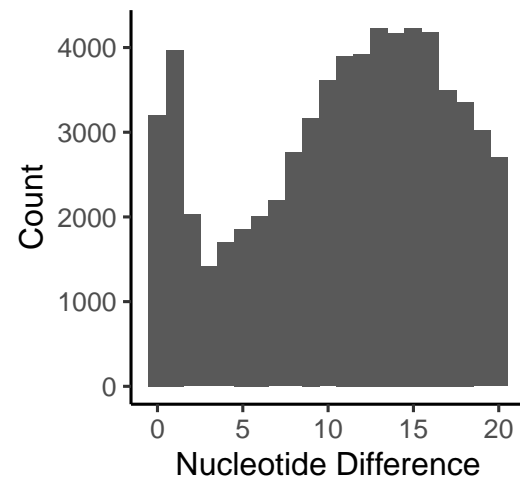
IGHV2-5*02

18 sequences assigned
No exact matches.



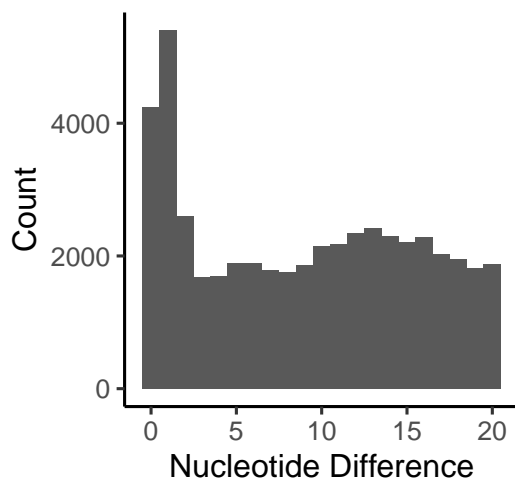
IGHV3-7*01

79645 sequences assigned
3204 (4%) exact matches, in which:
2683 unique CDR3
7 unique J



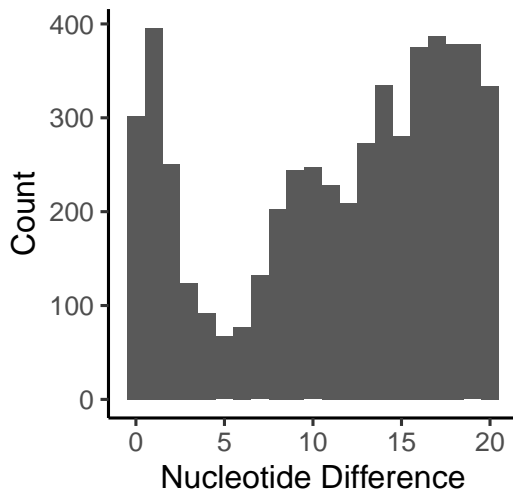
IGHV3-9*01

61462 sequences assigned
4236 (6.9%) exact matches, in which:
3326 unique CDR3
7 unique J



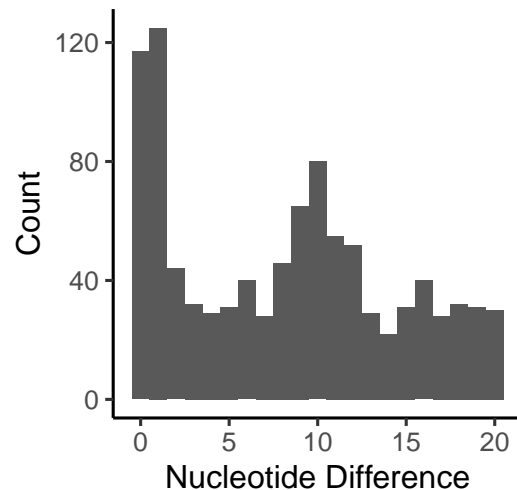
IGHV3-13*01

8553 sequences assigned
302 (3.5%) exact matches, in which:
240 unique CDR3
6 unique J



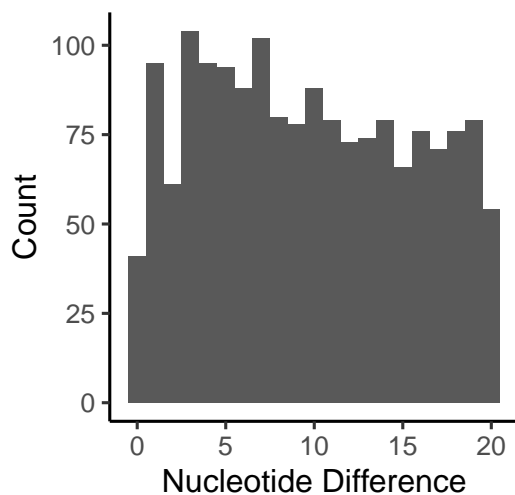
IGHV3-20*01_02

1210 sequences assigned
117 (9.7%) exact matches, in which:
91 unique CDR3
6 unique J



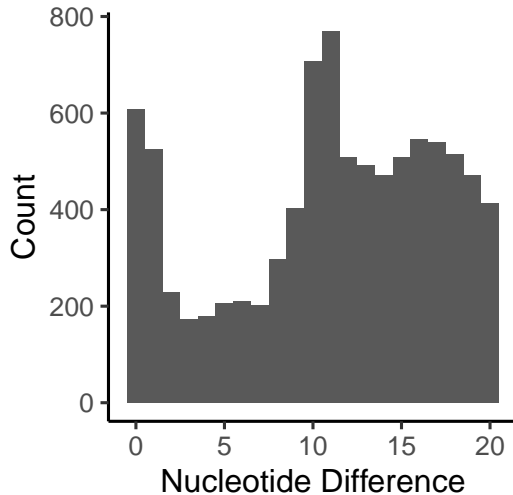
IGHV3-11*01

2266 sequences assigned
41 (1.8%) exact matches, in which:
41 unique CDR3
6 unique J



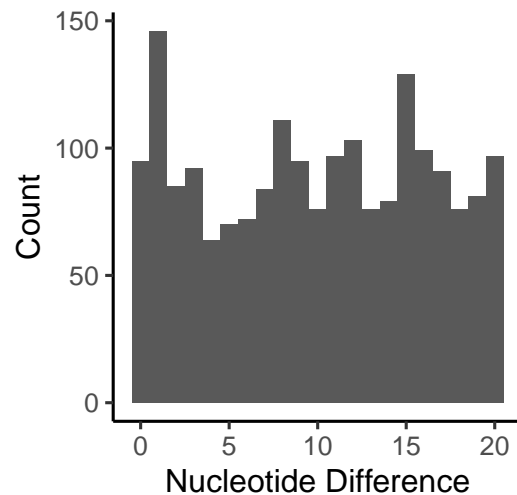
IGHV3-15*01_02

12343 sequences assigned
607 (4.9%) exact matches, in which:
530 unique CDR3
7 unique J



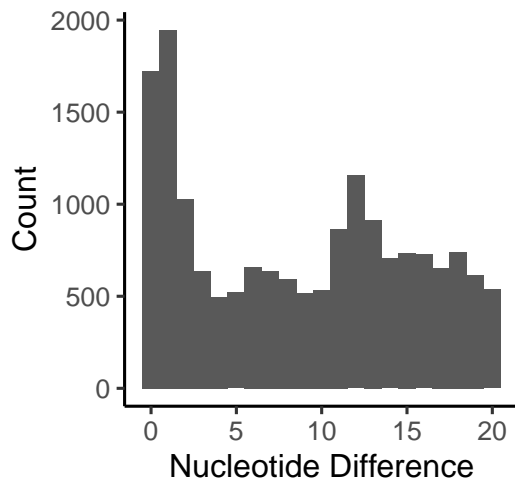
IGHV3-20*03_04

2432 sequences assigned
95 (3.9%) exact matches, in which:
80 unique CDR3
5 unique J



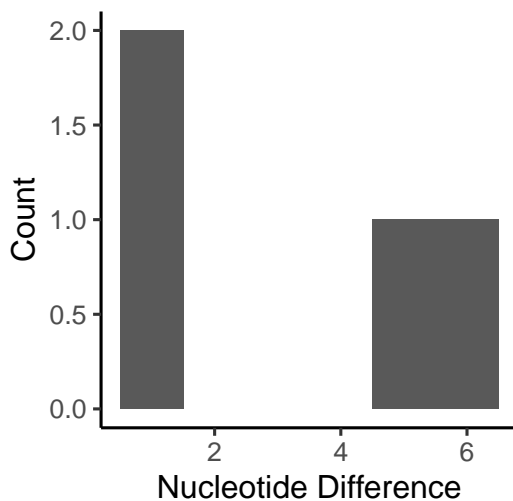
IGHV3-11*04

21420 sequences assigned
1725 (8.1%) exact matches, in which:
1465 unique CDR3
7 unique J



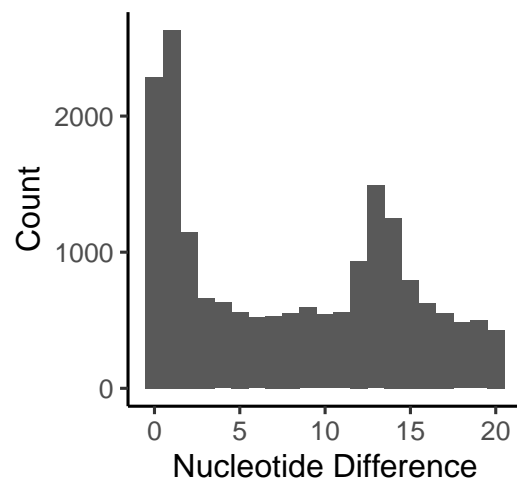
IGHV3-19*01

4 sequences assigned
No exact matches.



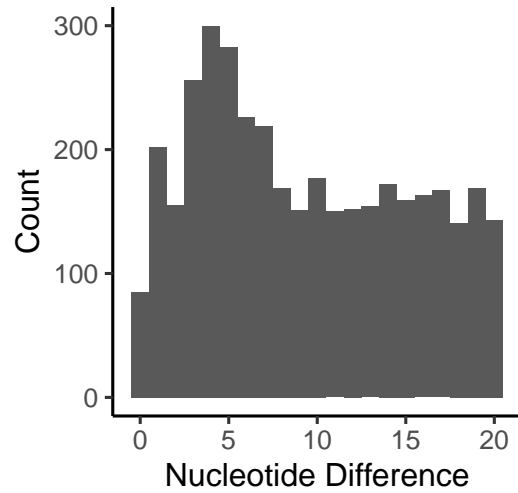
IGHV3-21*03

21356 sequences assigned
2287 (10.7%) exact matches, in which:
1722 unique CDR3
7 unique J



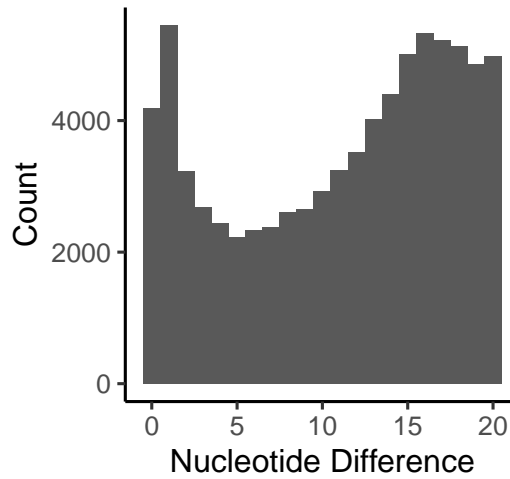
IGHV3-21*04

4714 sequences assigned
85 (1.8%) exact matches, in which:
84 unique CDR3
7 unique J



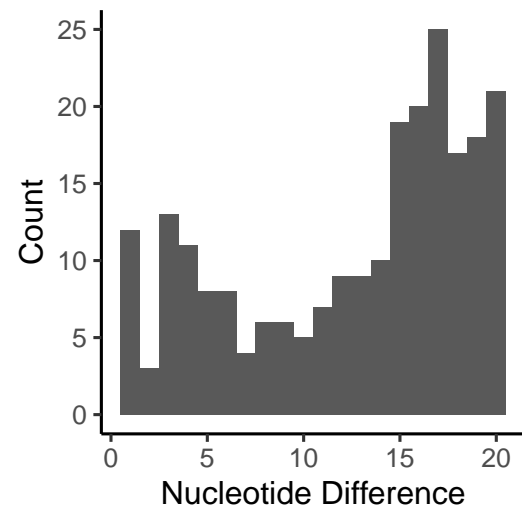
IGHV3-23*01_04

126947 sequences assigned
4185 (3.3%) exact matches, in which:
3343 unique CDR3
7 unique J



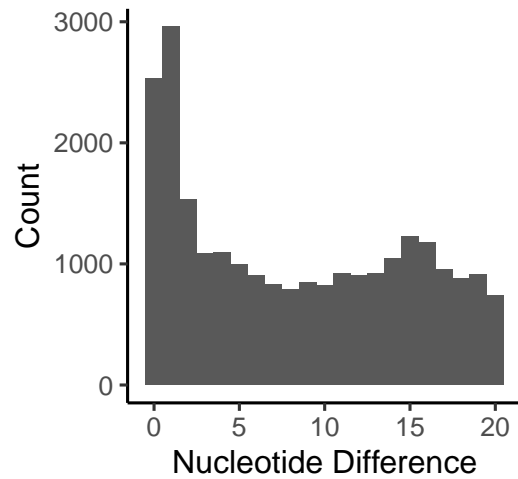
IGHV3-30-3*02

411 sequences assigned
No exact matches.



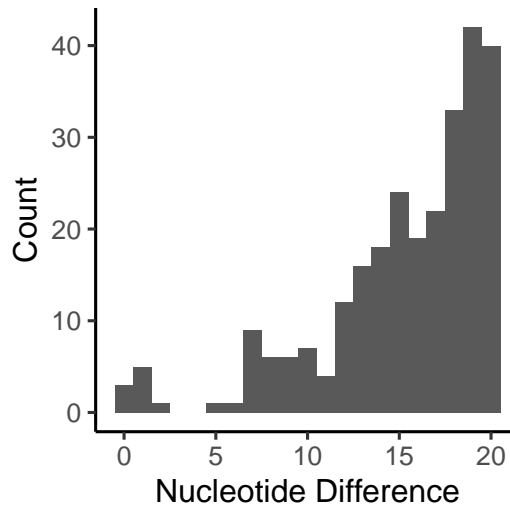
IGHV3-21*01_02

29054 sequences assigned
2533 (8.7%) exact matches, in which:
2092 unique CDR3
7 unique J



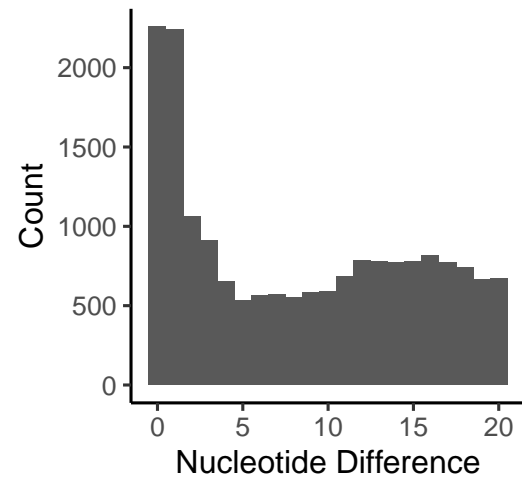
IGHV3-30-3*01

591 sequences assigned
3 (0.5%) exact matches, in which:
3 unique CDR3
1 unique J



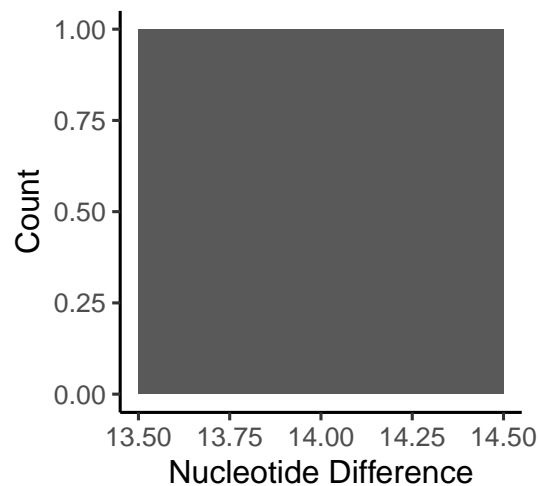
IGHV3-30*04

22377 sequences assigned
2258 (10.1%) exact matches, in which:
1966 unique CDR3
7 unique J



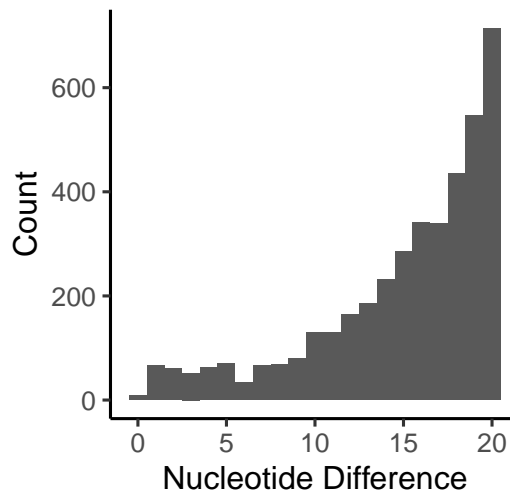
IGHV3-22*01_02

3 sequences assigned
No exact matches.



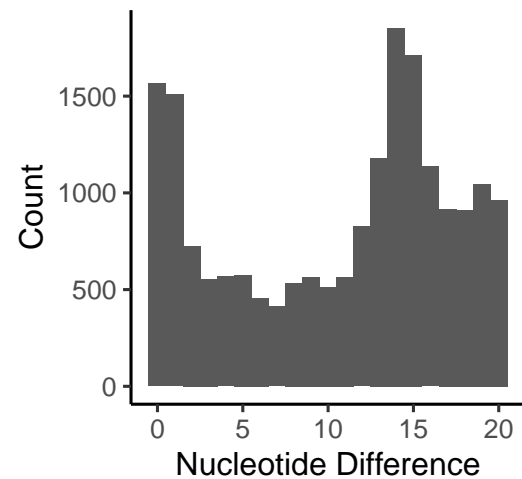
IGHV3-30*02

8677 sequences assigned
9 (0.1%) exact matches, in which:
9 unique CDR3
5 unique J



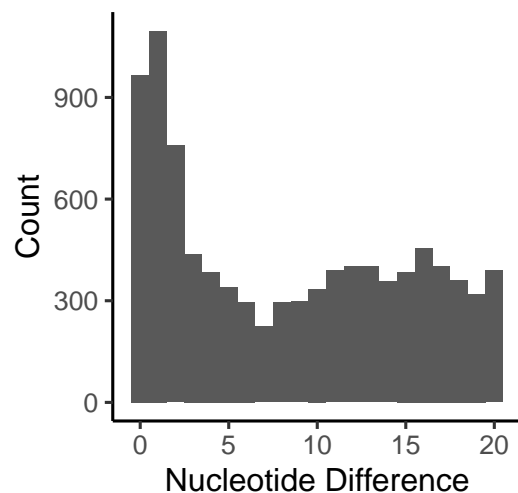
IGHV3-33*01

22759 sequences assigned
1566 (6.9%) exact matches, in which:
1213 unique CDR3
7 unique J



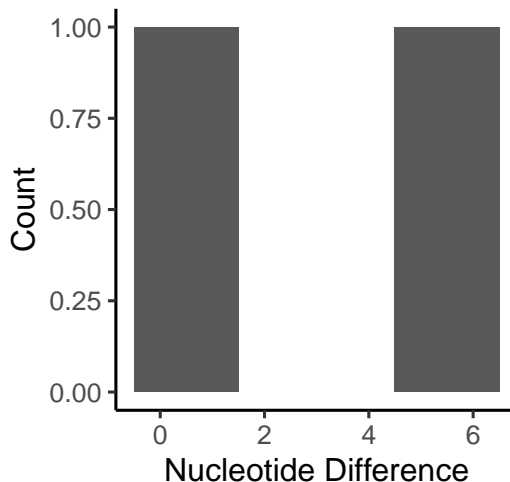
IGHV3–33*06

11425 sequences assigned
967 (8.5%) exact matches, in which:
712 unique CDR3
7 unique J



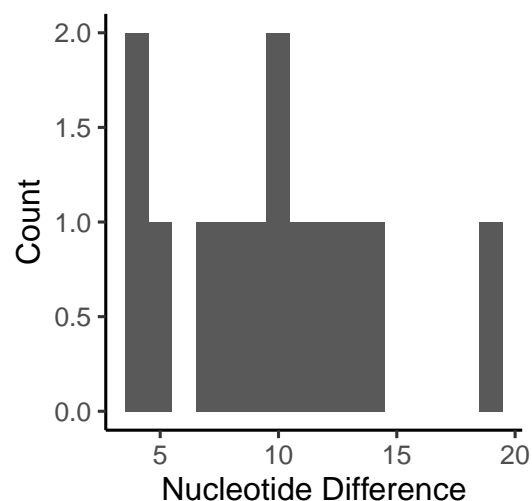
IGHV3–35*02

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



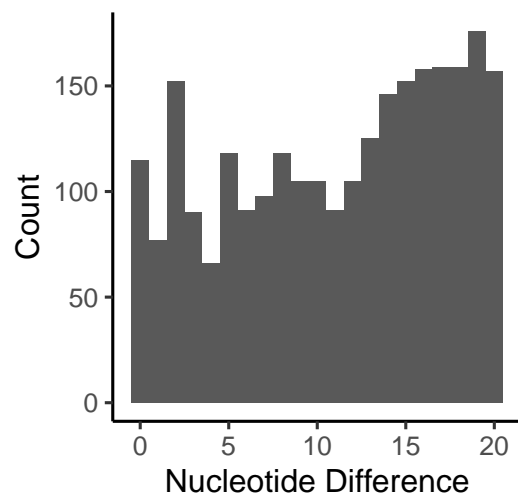
IGHV3–38*03

13 sequences assigned
No exact matches.



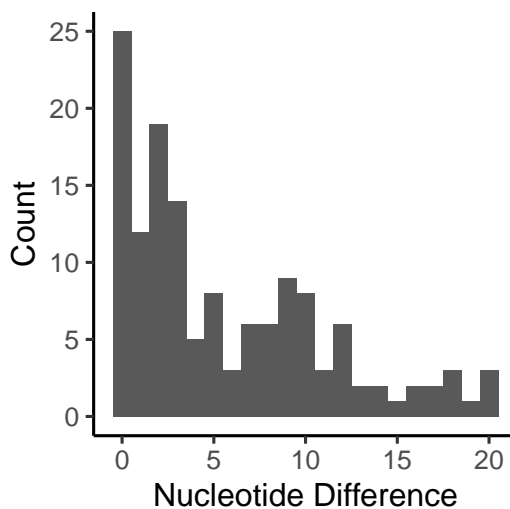
IGHV3–33*08

3748 sequences assigned
115 (3.1%) exact matches, in which:
115 unique CDR3
6 unique J



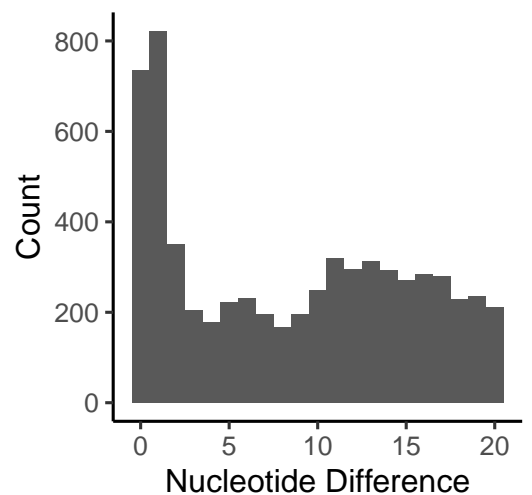
IGHV3–38–3*01

147 sequences assigned
25 (17%) exact matches, in which:
25 unique CDR3
5 unique J



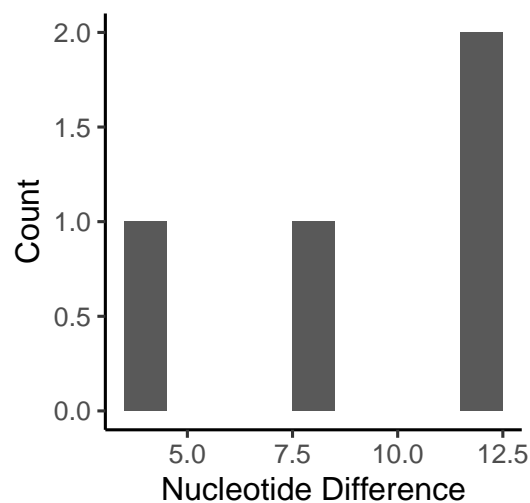
IGHV3–43*01

8499 sequences assigned
735 (8.6%) exact matches, in which:
596 unique CDR3
7 unique J



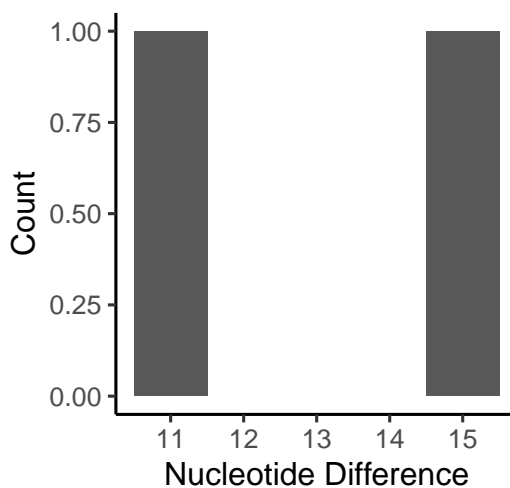
IGHV3–35*01

4 sequences assigned
No exact matches.



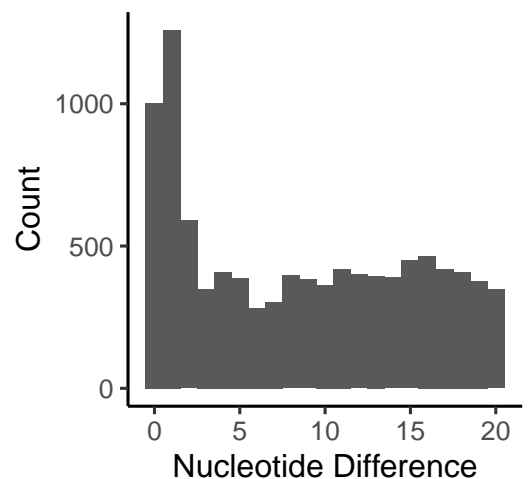
IGHV3–38*02

2 sequences assigned
No exact matches.



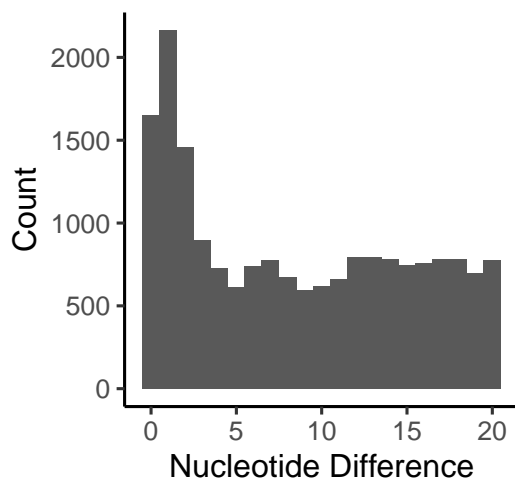
IGHV3–48*01

12167 sequences assigned
1003 (8.2%) exact matches, in which:
814 unique CDR3
7 unique J



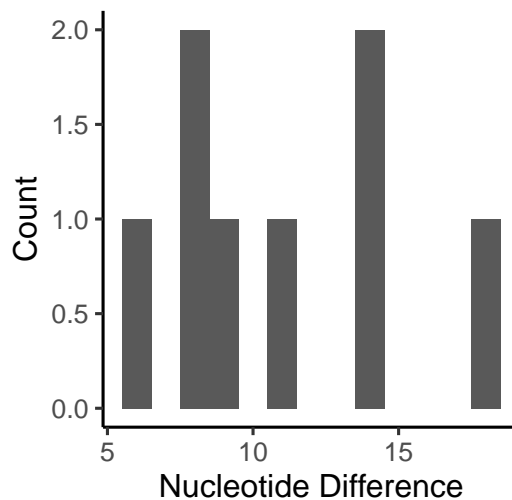
IGHV3-48*03

24423 sequences assigned
1651 (6.8%) exact matches, in which:
1339 unique CDR3
7 unique J



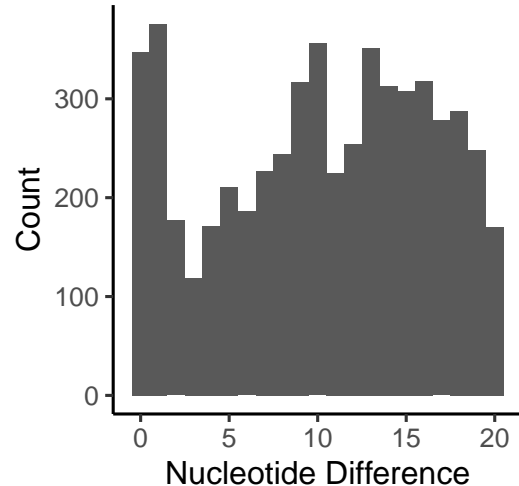
IGHV3-52*01_03

9 sequences assigned
No exact matches.



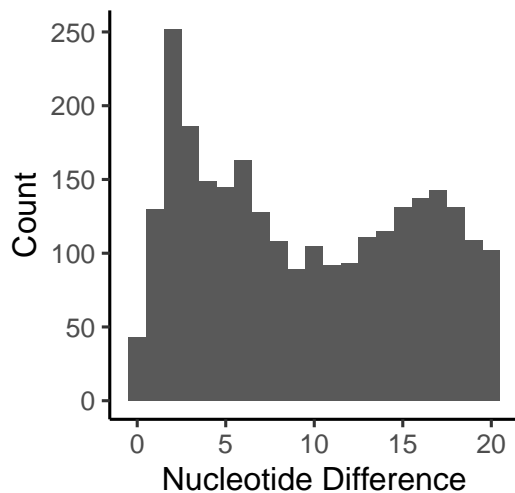
IGHV3-64*02_07

6676 sequences assigned
347 (5.2%) exact matches, in which:
283 unique CDR3
7 unique J



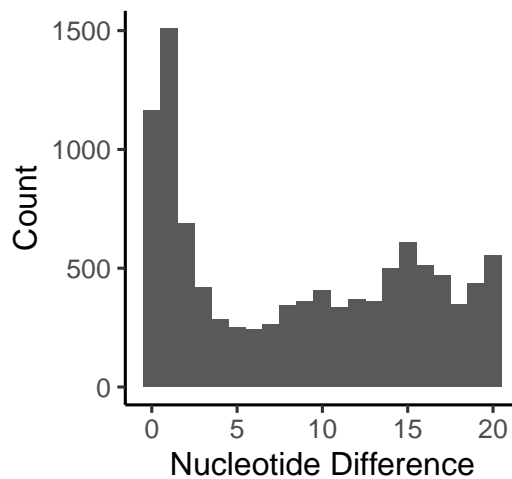
IGHV3-48*04

3696 sequences assigned
43 (1.2%) exact matches, in which:
39 unique CDR3
7 unique J



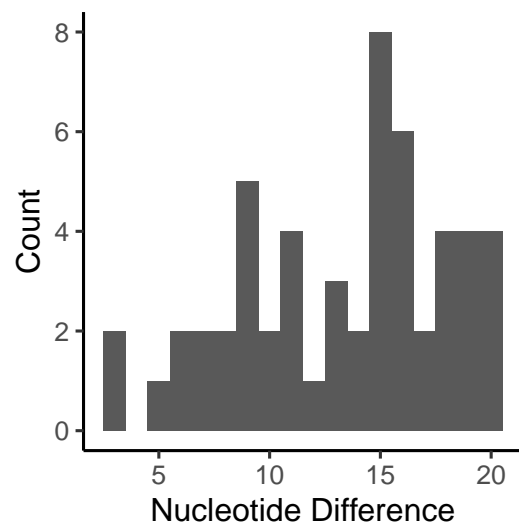
IGHV3-53*01_02

15728 sequences assigned
1165 (7.4%) exact matches, in which:
937 unique CDR3
7 unique J



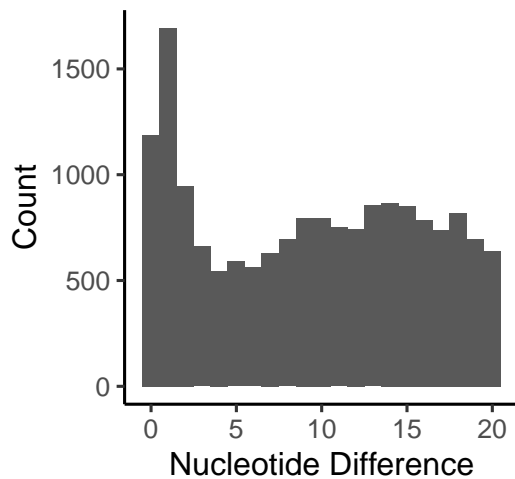
IGHV3-66*01

95 sequences assigned
No exact matches.



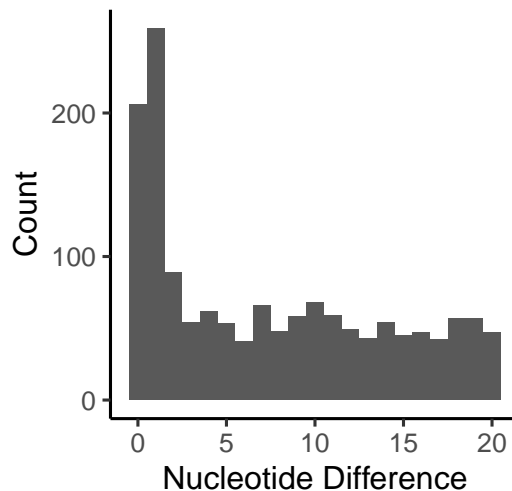
IGHV3-49*04

22459 sequences assigned
1188 (5.3%) exact matches, in which:
942 unique CDR3
7 unique J



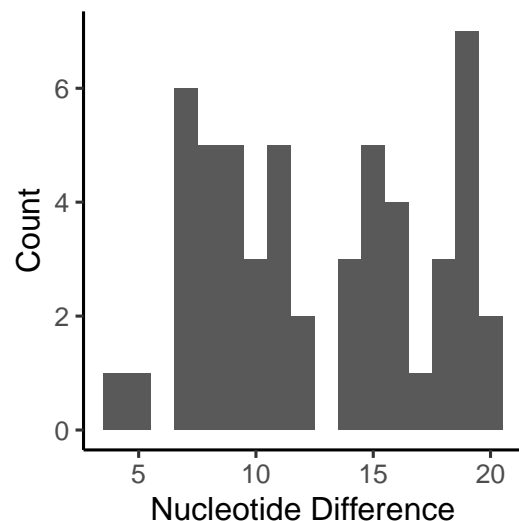
IGHV3-64*01

2181 sequences assigned
206 (9.4%) exact matches, in which:
166 unique CDR3
7 unique J



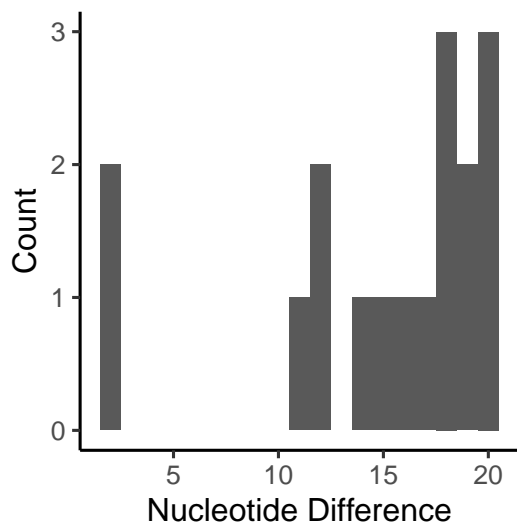
IGHV3-66*02

75 sequences assigned
No exact matches.



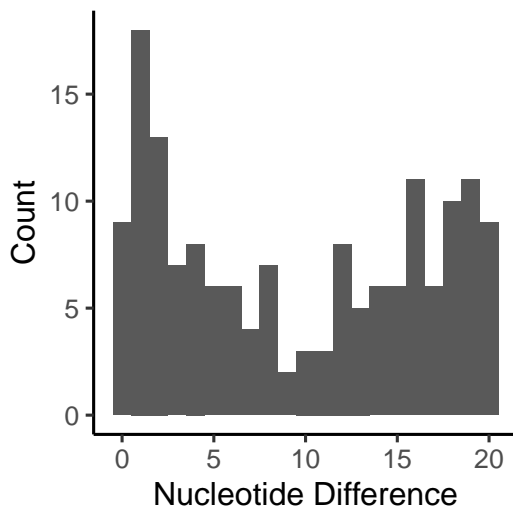
IGHV3-66*03

37 sequences assigned
No exact matches.



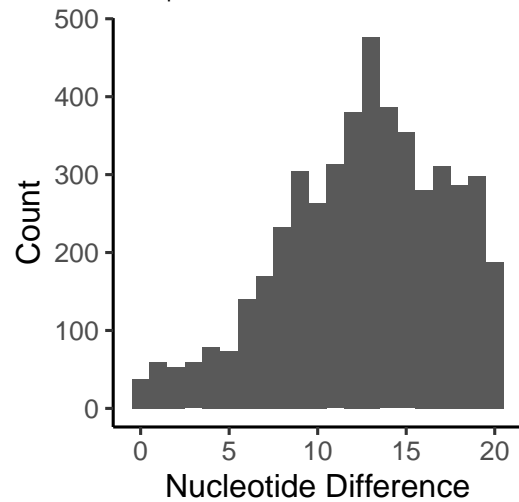
IGHV3-69-1*02

323 sequences assigned
9 (2.8%) exact matches, in which:
9 unique CDR3
4 unique J



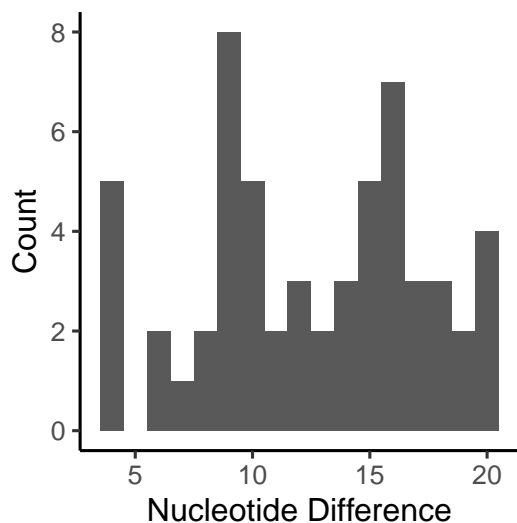
IGHV3-72*01

5901 sequences assigned
38 (0.6%) exact matches, in which:
33 unique CDR3
4 unique J



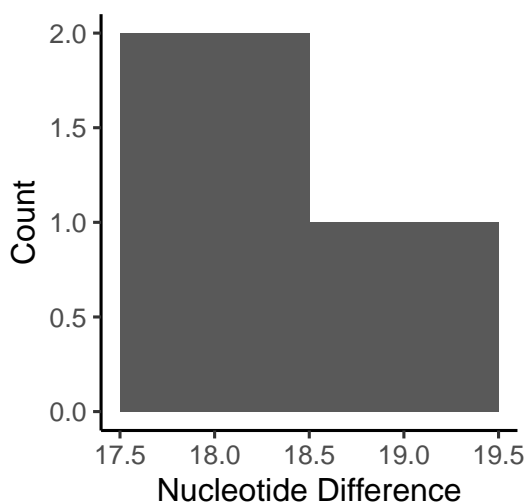
IGHV3-66*04

84 sequences assigned
No exact matches.



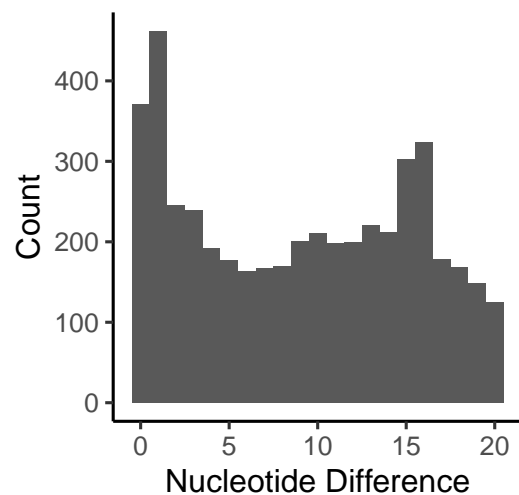
IGHV3-71*03

8 sequences assigned
No exact matches.



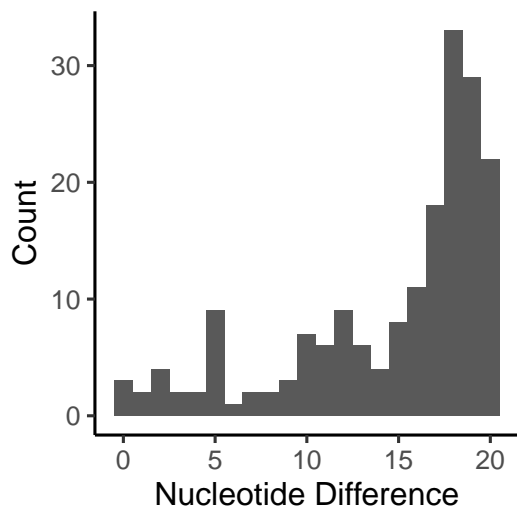
IGHV3-73*01_02

6624 sequences assigned
371 (5.6%) exact matches, in which:
311 unique CDR3
7 unique J



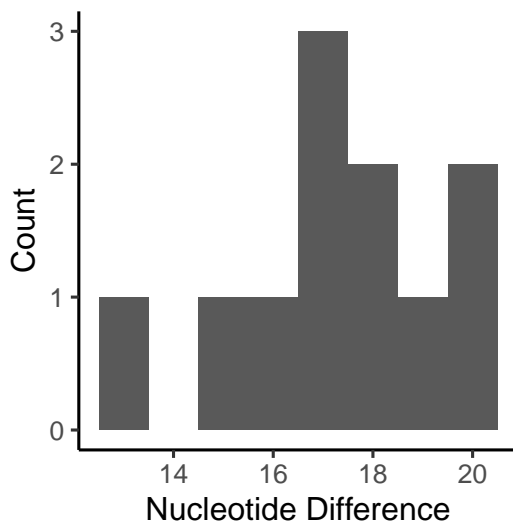
IGHV3-69-1*01

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



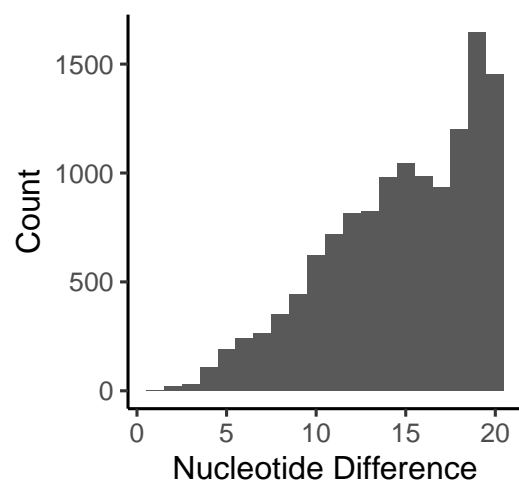
IGHV3-71*01_04

67 sequences assigned
No exact matches.



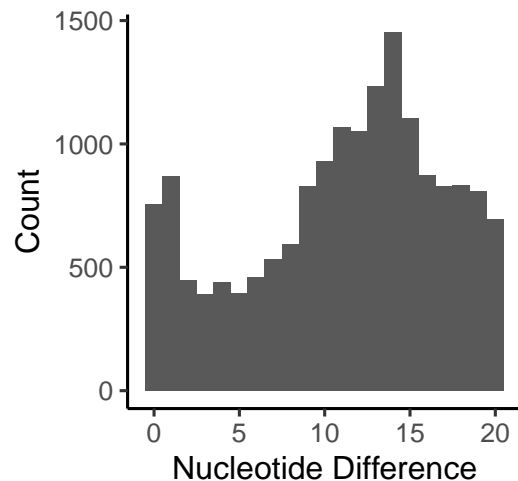
IGHV3-74*03

20369 sequences assigned
No exact matches.



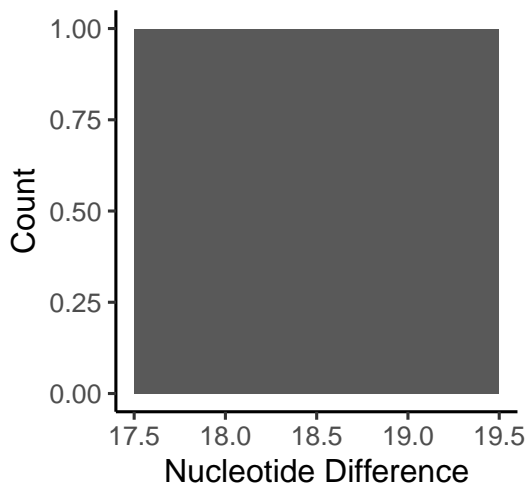
IGHV3-74*01_02

24169 sequences assigned
755 (3.1%) exact matches, in which:
586 unique CDR3
7 unique J



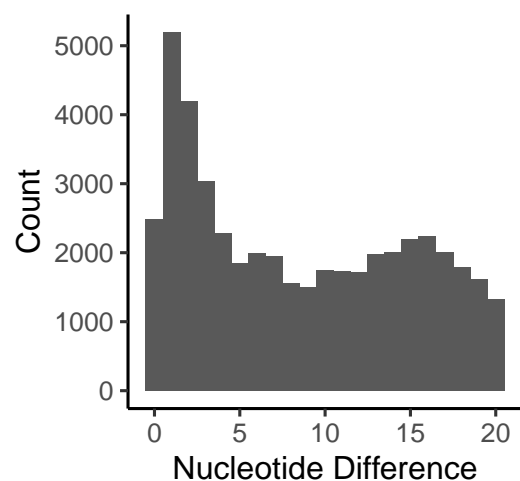
IGHV3-64D*08

4 sequences assigned
No exact matches.



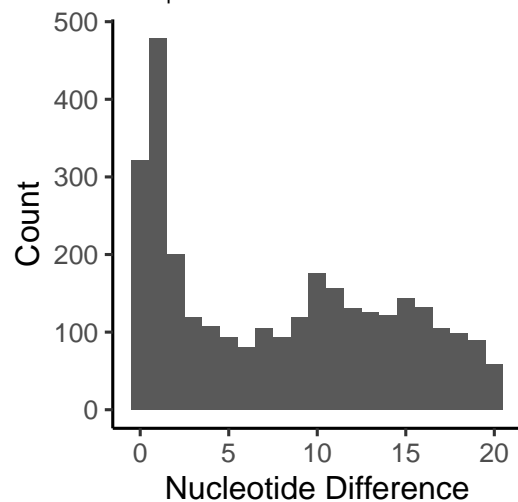
IGHV4-4*08

56083 sequences assigned
2483 (4.4%) exact matches, in which:
1915 unique CDR3
7 unique J



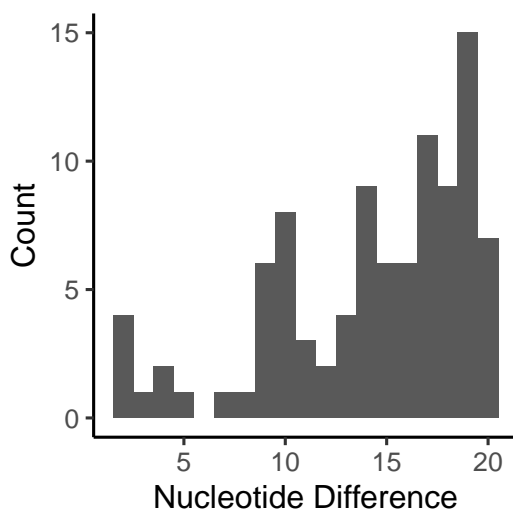
IGHV3-43D*04

3596 sequences assigned
322 (9%) exact matches, in which:
259 unique CDR3
7 unique J



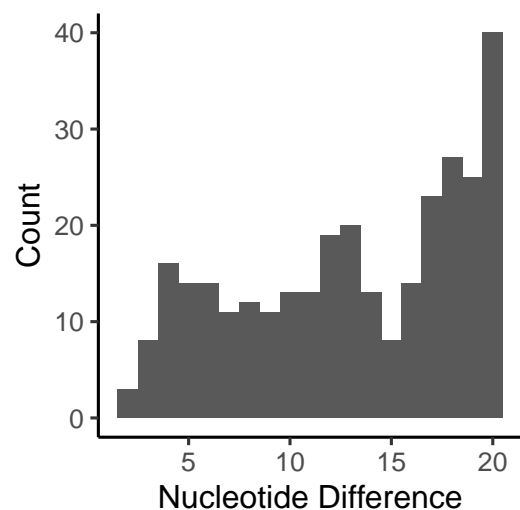
IGHV3-NL1*01

201 sequences assigned
No exact matches.



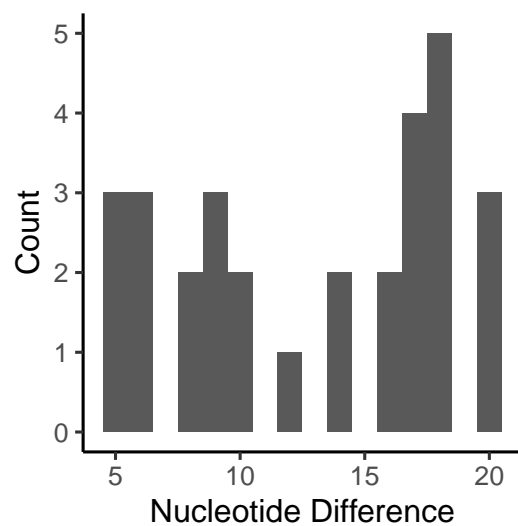
IGHV4-28*03

652 sequences assigned
No exact matches.



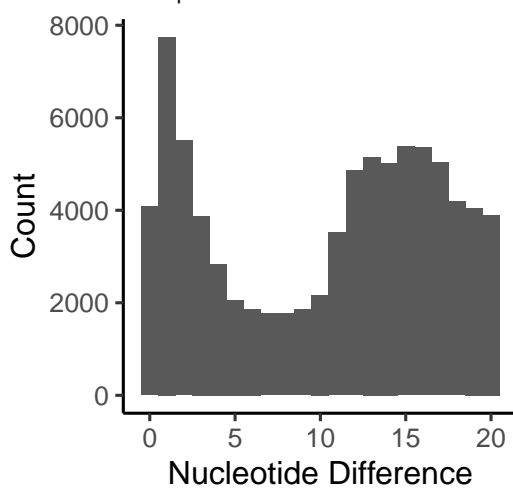
IGHV3-64D*06

50 sequences assigned
No exact matches.



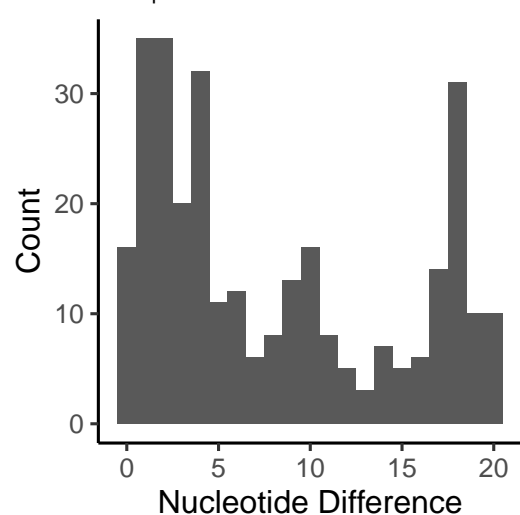
IGHV4-4*07

118970 sequences assigned
4079 (3.4%) exact matches, in which:
3055 unique CDR3
7 unique J



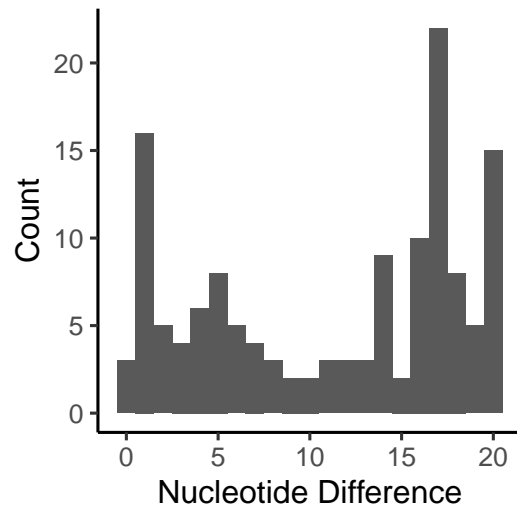
IGHV4-28*06

338 sequences assigned
16 (4.7%) exact matches, in which:
13 unique CDR3
3 unique J



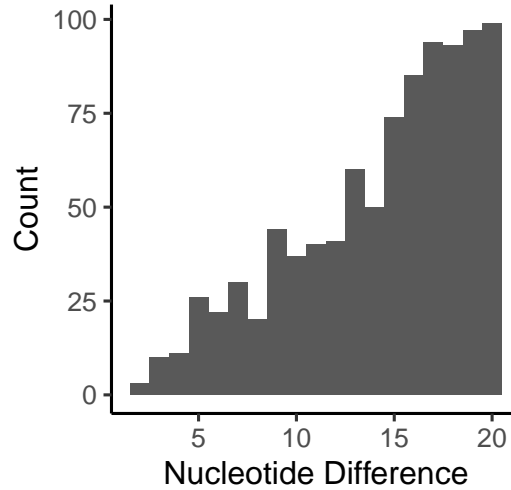
IGHV4-28*02_05

226 sequences assigned
3 (1.3%) exact matches, in which:
2 unique CDR3
1 unique J



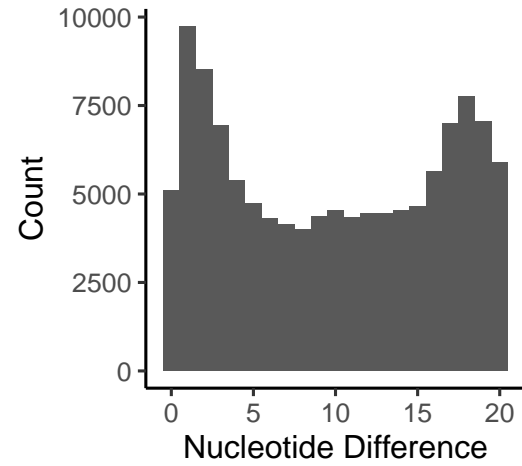
IGHV4-30-4*08

1700 sequences assigned
No exact matches.



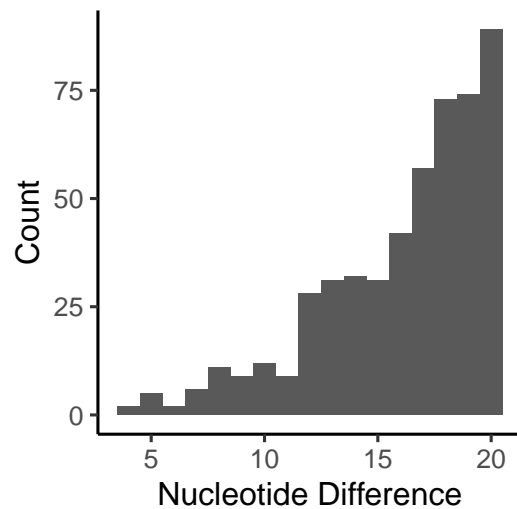
IGHV4-34*01_02

161391 sequences assigned
5113 (3.2%) exact matches, in which:
3703 unique CDR3
7 unique J



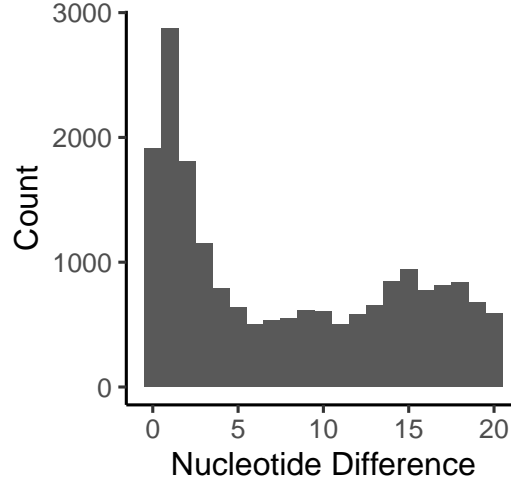
IGHV4-30-4*01

1322 sequences assigned
No exact matches.



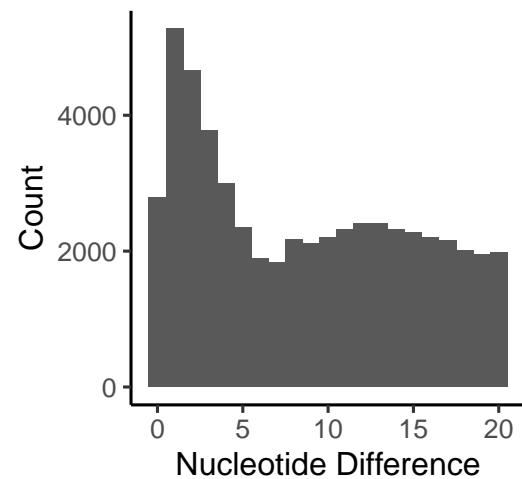
IGHV4-31*02

25236 sequences assigned
1911 (7.6%) exact matches, in which:
1510 unique CDR3
7 unique J



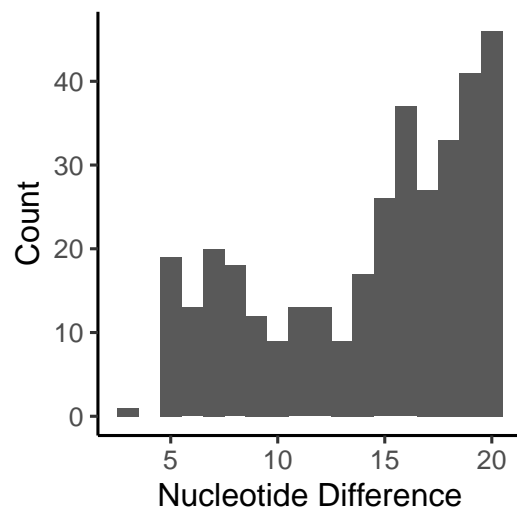
IGHV4-38-2*01

67663 sequences assigned
2793 (4.1%) exact matches, in which:
2259 unique CDR3
7 unique J



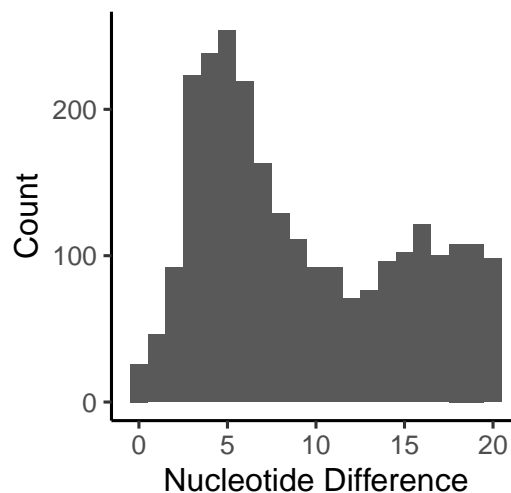
IGHV4-30-2*03

922 sequences assigned
No exact matches.



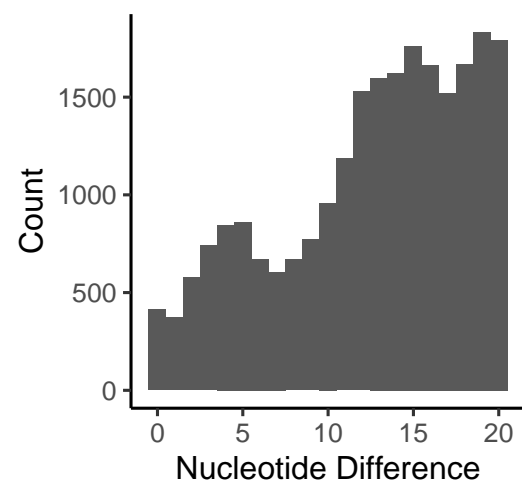
IGHV4-31*11

3348 sequences assigned
26 (0.8%) exact matches, in which:
25 unique CDR3
4 unique J



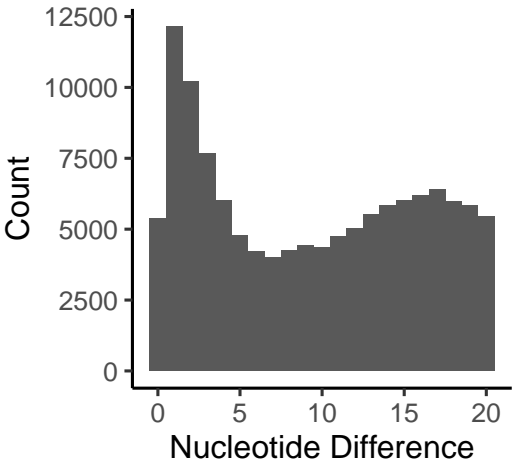
IGHV4-38-2*02

35688 sequences assigned
413 (1.2%) exact matches, in which:
362 unique CDR3
7 unique J



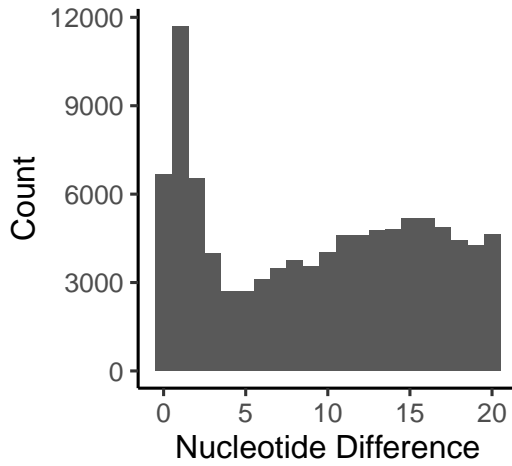
IGHV4–39*07

179111 sequences assigned
5376 (3%) exact matches, in which:
3884 unique CDR3
7 unique J



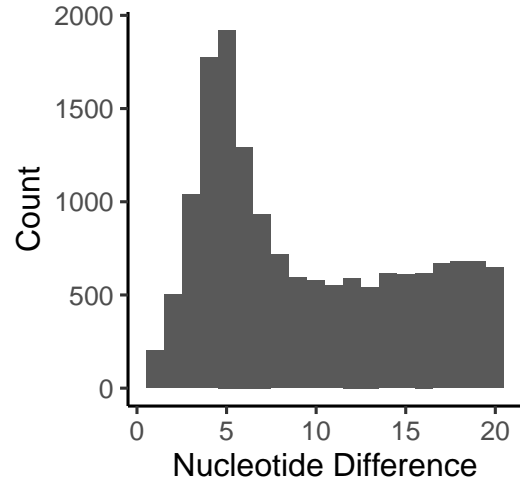
IGHV4–59*11

125381 sequences assigned
6676 (5.3%) exact matches, in which:
4840 unique CDR3
7 unique J



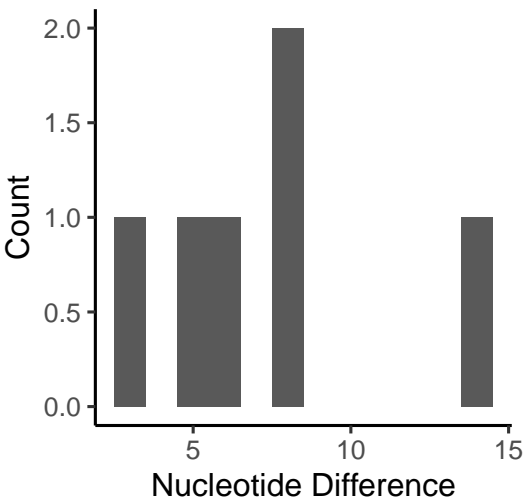
IGHV4–61*08

19802 sequences assigned
No exact matches.



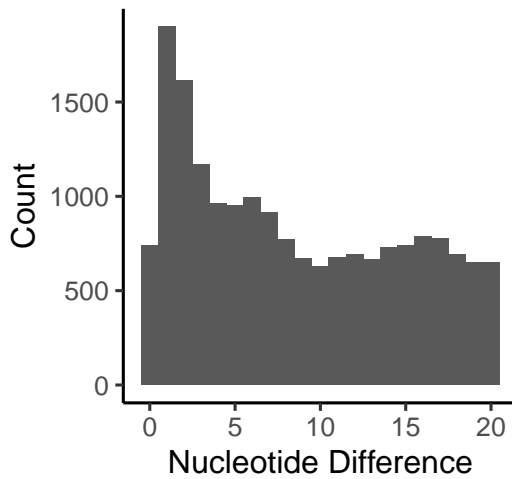
IGHV4–55*09

9 sequences assigned
No exact matches.



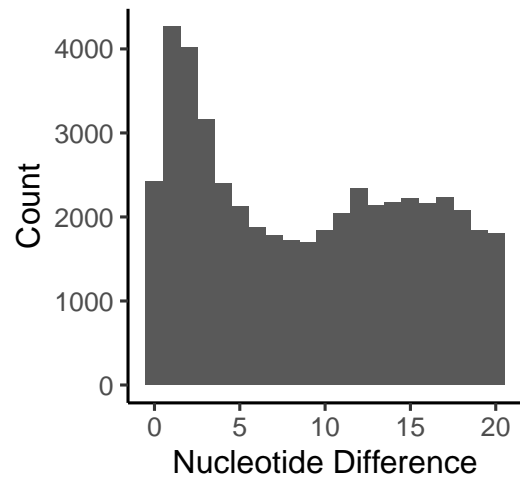
IGHV4–59*12

22980 sequences assigned
737 (3.2%) exact matches, in which:
677 unique CDR3
7 unique J



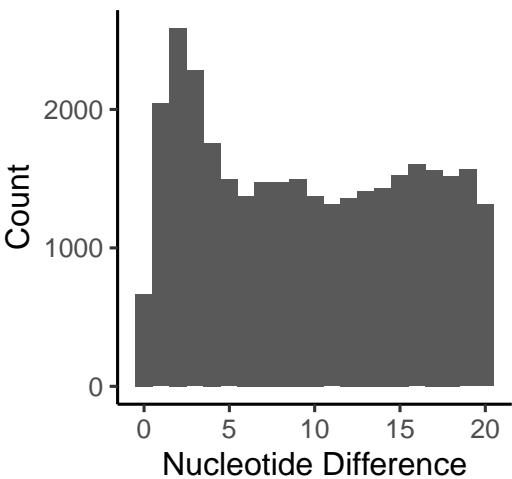
IGHV4–61*09

62239 sequences assigned
2424 (3.9%) exact matches, in which:
1909 unique CDR3
7 unique J



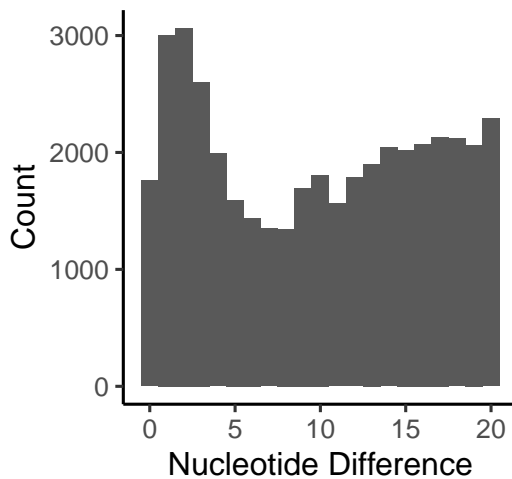
IGHV4–59*08

39757 sequences assigned
666 (1.7%) exact matches, in which:
604 unique CDR3
7 unique J



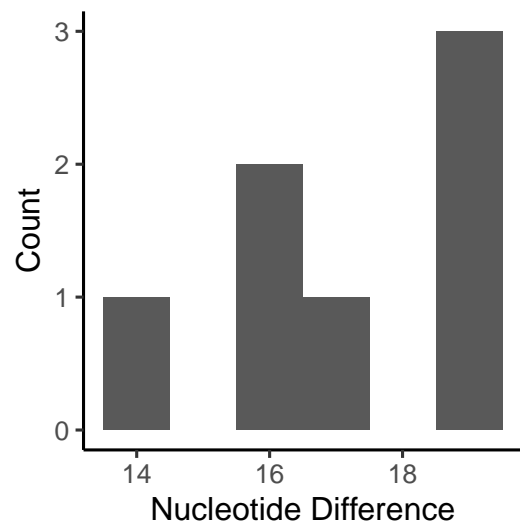
IGHV4–61*02

54400 sequences assigned
1759 (3.2%) exact matches, in which:
1416 unique CDR3
7 unique J



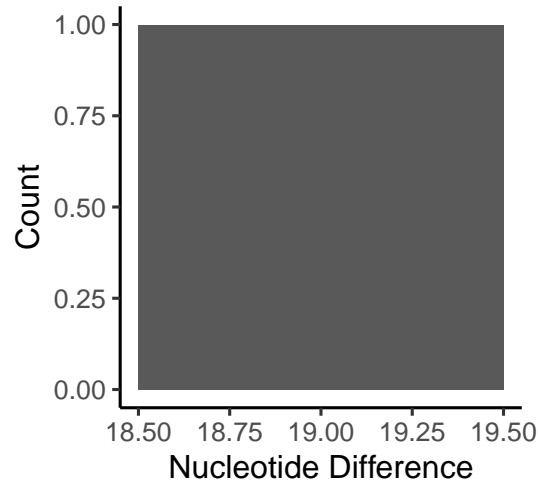
IGHV1/OR15–2*02_03

14 sequences assigned
No exact matches.



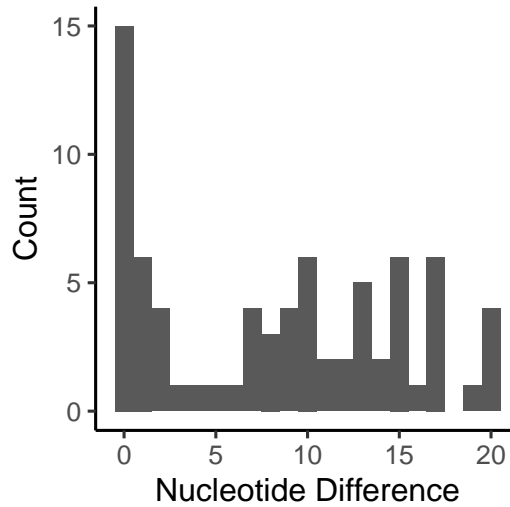
IGHV1/OR15-3*02

2 sequences assigned
No exact matches.



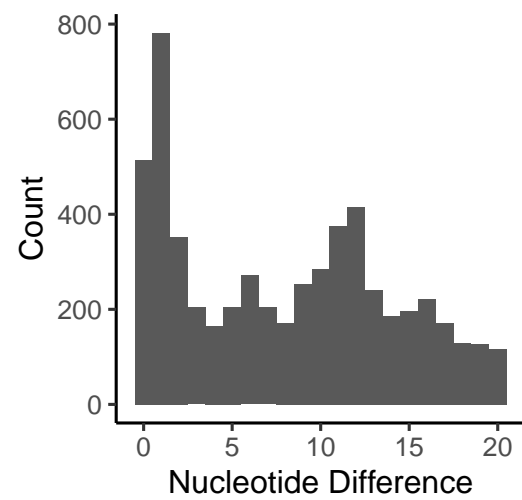
IGHV5-51*04

101 sequences assigned
15 (14.9%) exact matches, in which:
15 unique CDR3
3 unique J



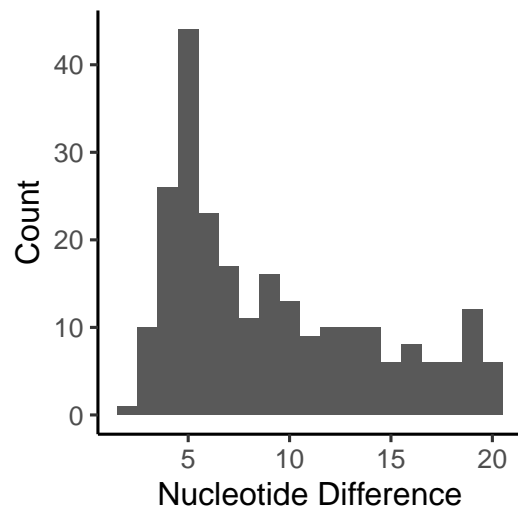
IGHV6-1*01_02

6104 sequences assigned
515 (8.4%) exact matches, in which:
338 unique CDR3
6 unique J



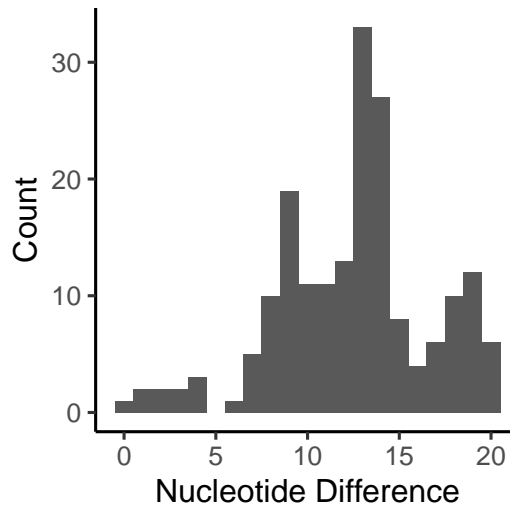
IGHV4/OR15-8*01

325 sequences assigned
No exact matches.



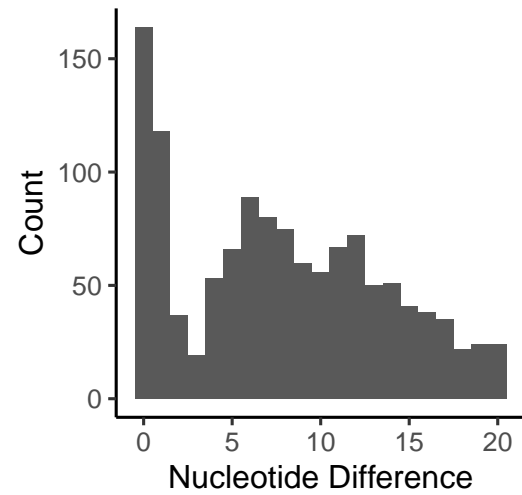
IGHV5-51*06

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



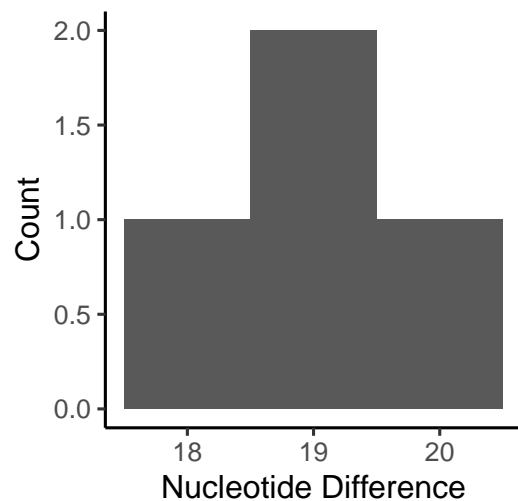
IGHV6-1*01_02_A315G

1373 sequences assigned
164 (11.9%) exact matches, in which:
164 unique CDR3
7 unique J



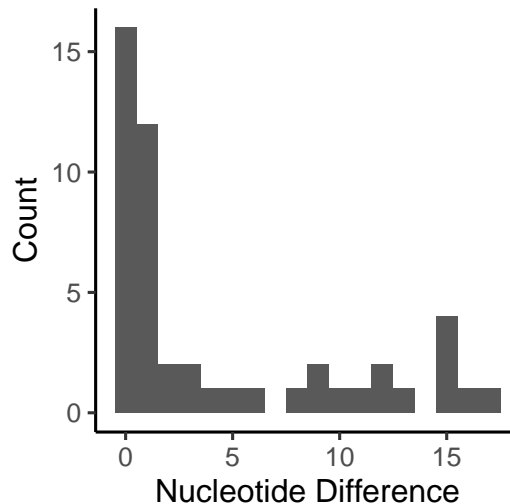
IGHV4/OR15-8*02

45 sequences assigned
No exact matches.



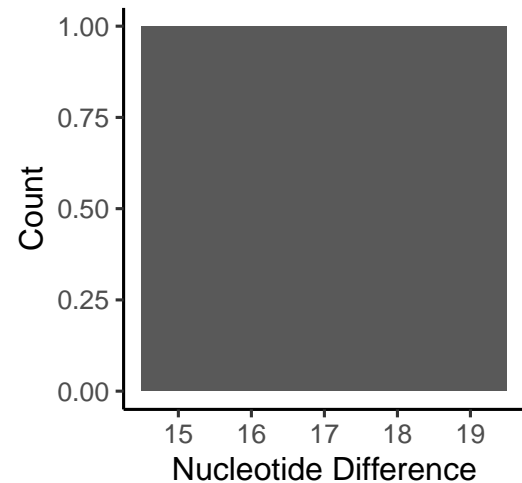
IGHV5-51*07

58 sequences assigned
16 (27.6%) exact matches, in which:
13 unique CDR3
4 unique J



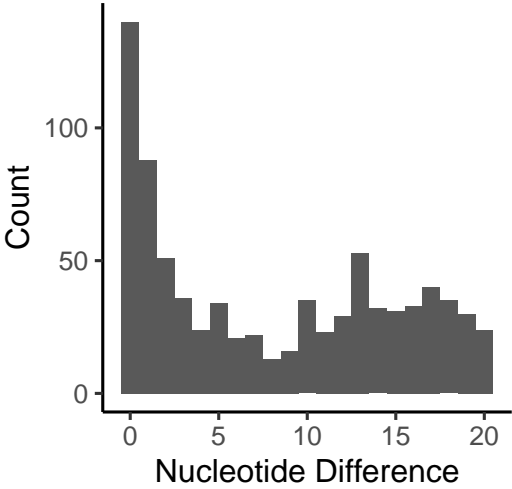
IGHV3/OR16-13*01

9 sequences assigned
No exact matches.

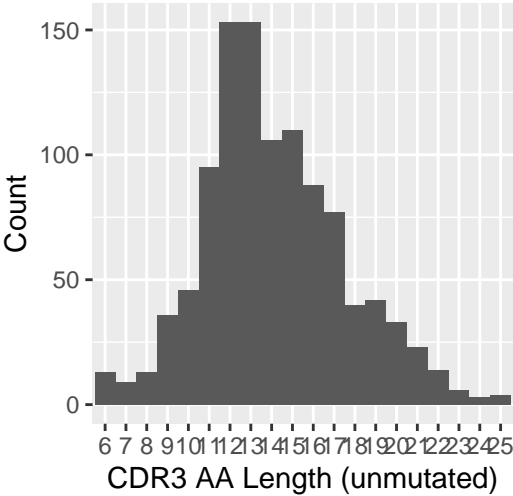


IGHV7-4-1*02

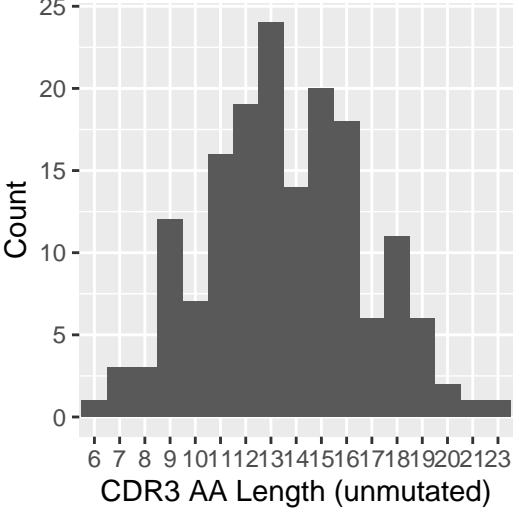
1001 sequences assigned
140 (14%) exact matches, in which:
128 unique CDR3
6 unique J



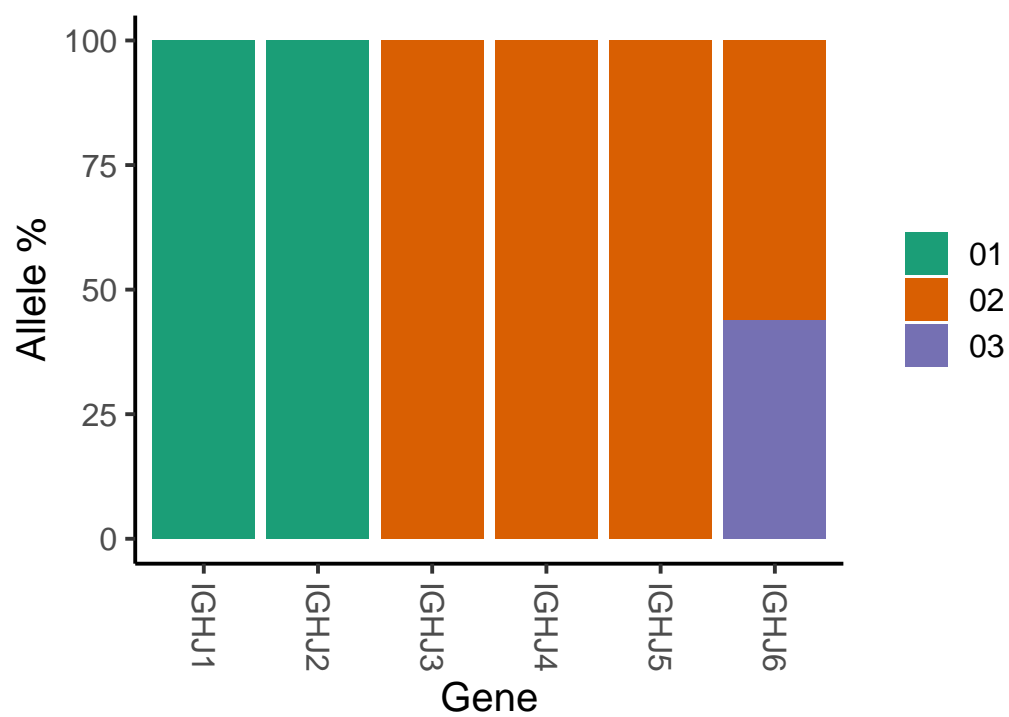
IGHV1-8*02_A250G



IGHV6-1*01_02_A315G



Allele Usage



Sequence Count by IGHJ6 allele usage

