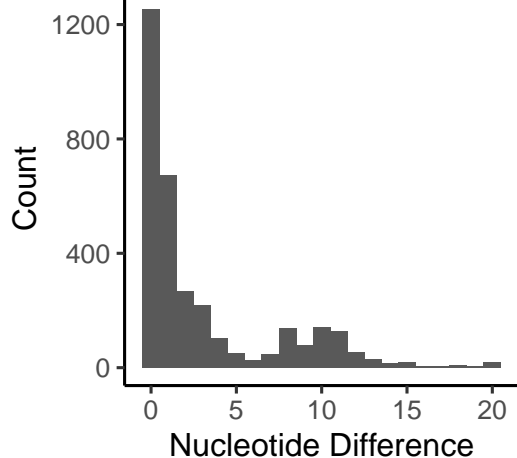


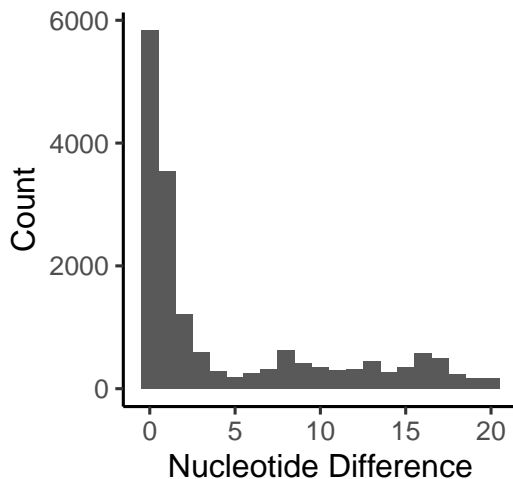
IGHV1-2*04

4406 sequences assigned
1253 (28.4%) exact matches, in which:
1151 unique CDR3
6 unique J



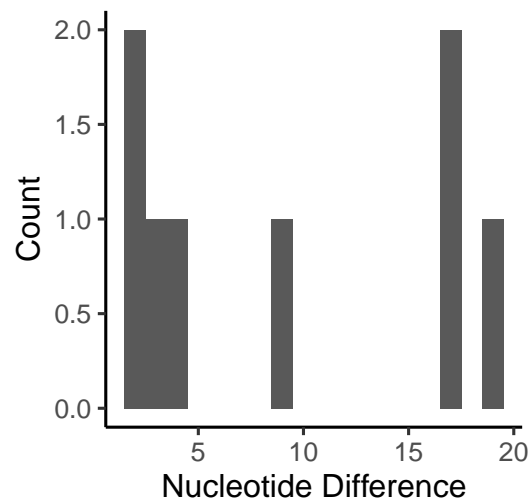
IGHV1-18*04

18960 sequences assigned
5835 (30.8%) exact matches, in which:
5291 unique CDR3
6 unique J



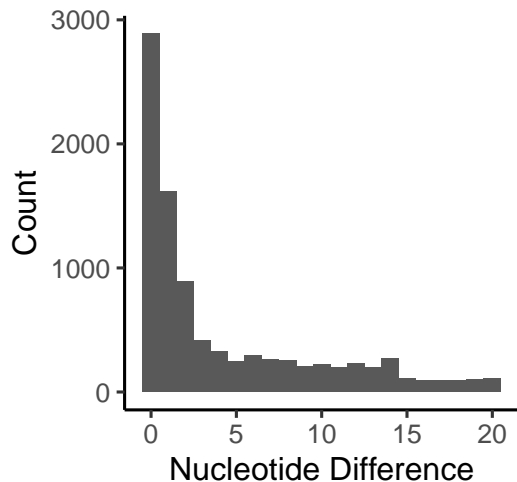
IGHV1-45*03

8 sequences assigned
No exact matches.



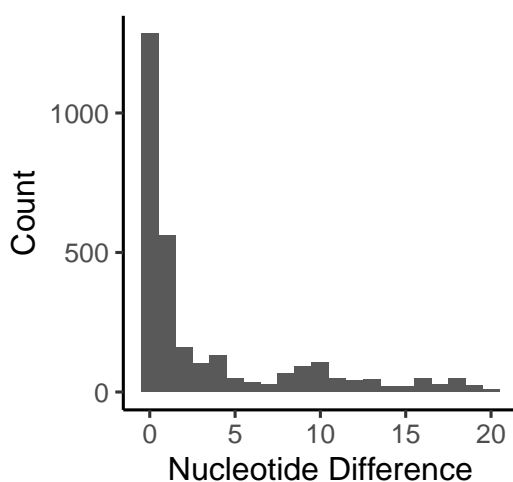
IGHV1-3*01_05

9493 sequences assigned
2888 (30.4%) exact matches, in which:
2616 unique CDR3
6 unique J



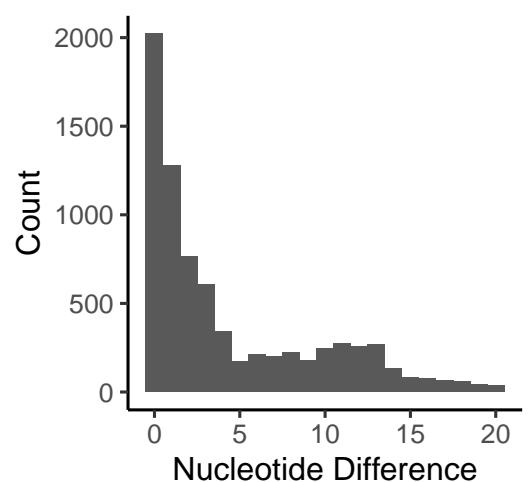
IGHV1-24*01

3016 sequences assigned
1284 (42.6%) exact matches, in which:
1204 unique CDR3
6 unique J



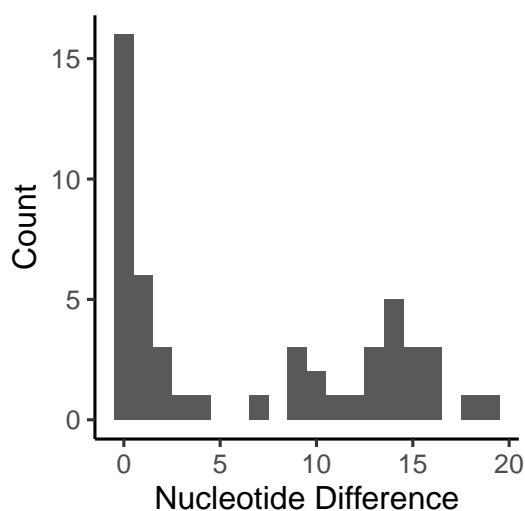
IGHV1-46*01

8110 sequences assigned
2022 (24.9%) exact matches, in which:
1870 unique CDR3
6 unique J



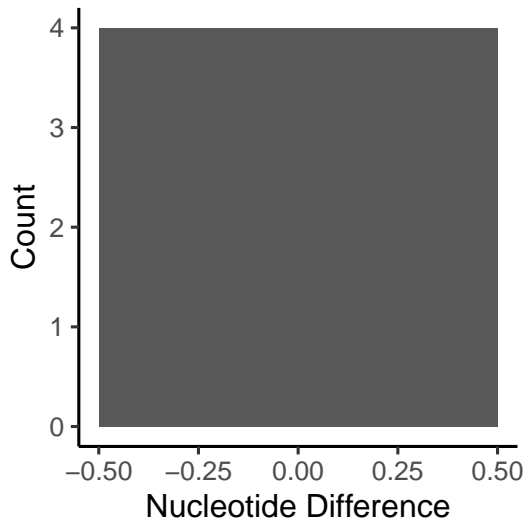
IGHV1-8*01

59 sequences assigned
16 (27.1%) exact matches, in which:
16 unique CDR3
3 unique J



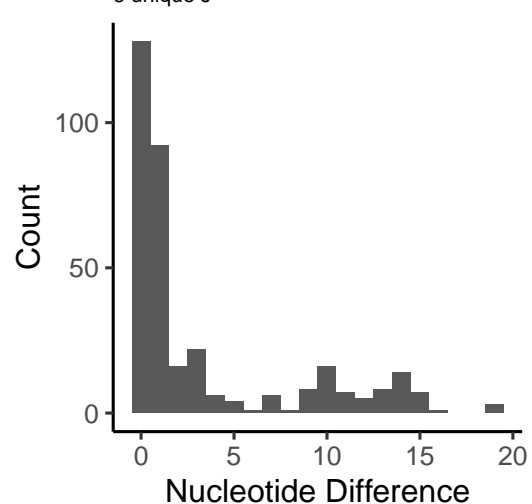
IGHV1-45*02

4 sequences assigned
4 (100%) exact matches, in which:
4 unique CDR3
3 unique J



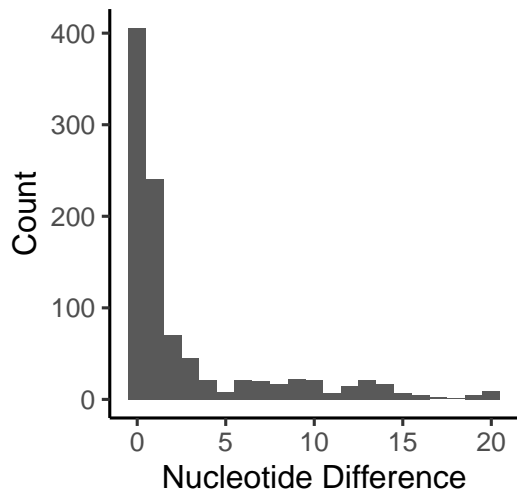
IGHV1-58*02

351 sequences assigned
128 (36.5%) exact matches, in which:
118 unique CDR3
6 unique J



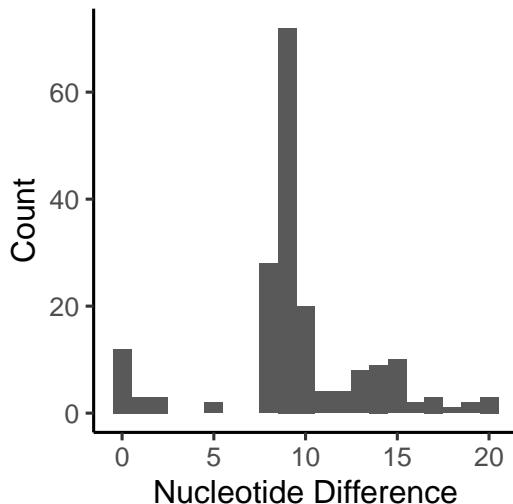
IGHV1-58*01_03

1031 sequences assigned
406 (39.4%) exact matches, in which:
380 unique CDR3
6 unique J



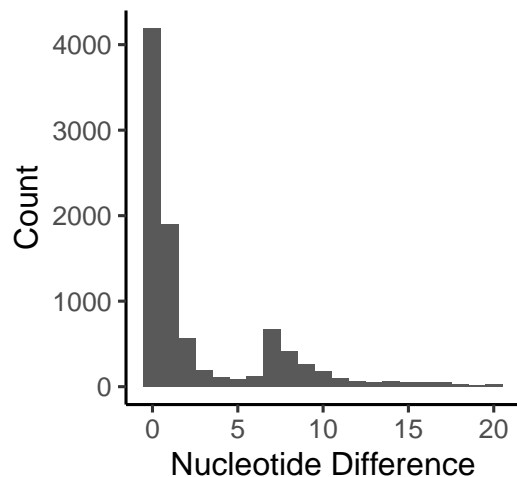
IGHV1-69-2*01

196 sequences assigned
12 (6.1%) exact matches, in which:
10 unique CDR3
4 unique J



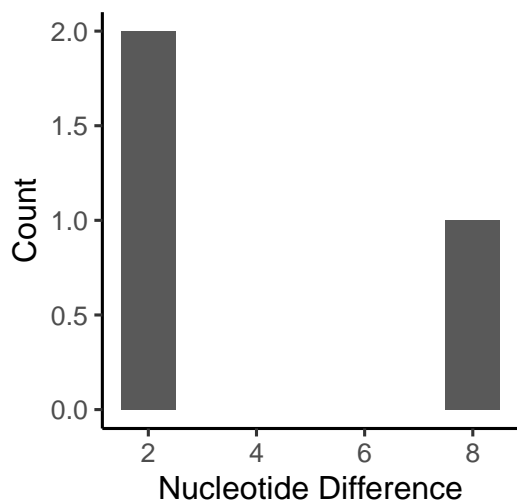
IGHV1-69*06_14

9779 sequences assigned
4190 (42.8%) exact matches, in which:
3977 unique CDR3
6 unique J



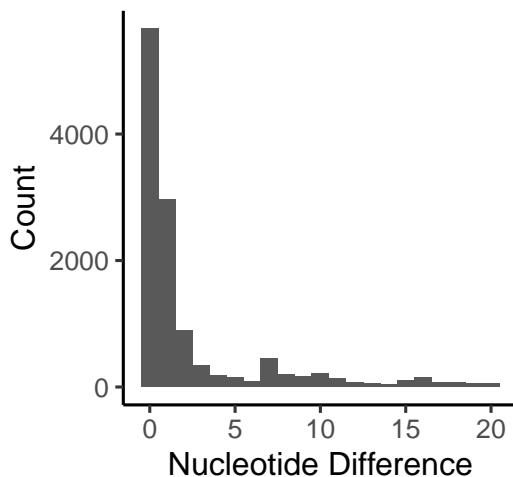
IGHV1-68*01

3 sequences assigned
No exact matches.



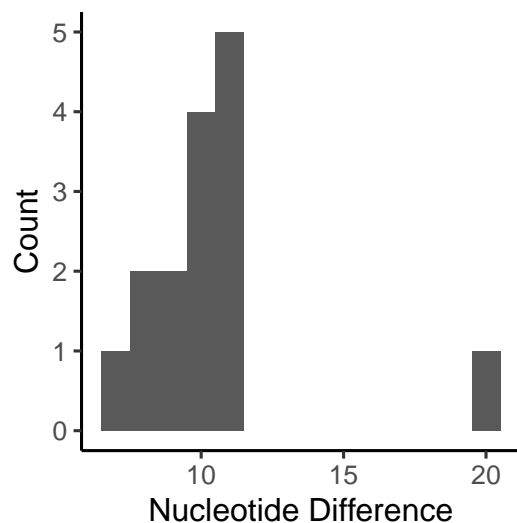
IGHV1-69*01_12_13

12360 sequences assigned
5665 (45.8%) exact matches, in which:
5314 unique CDR3
6 unique J



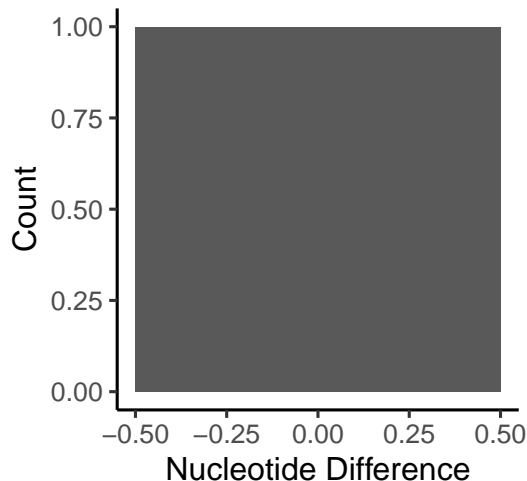
IGHV1-NL1*01

15 sequences assigned
No exact matches.



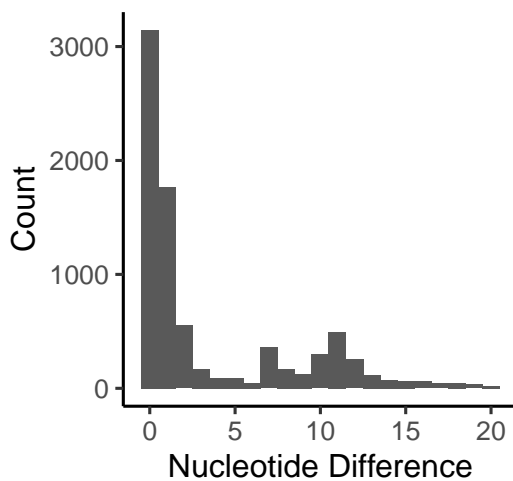
IGHV1-68*02_03

1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



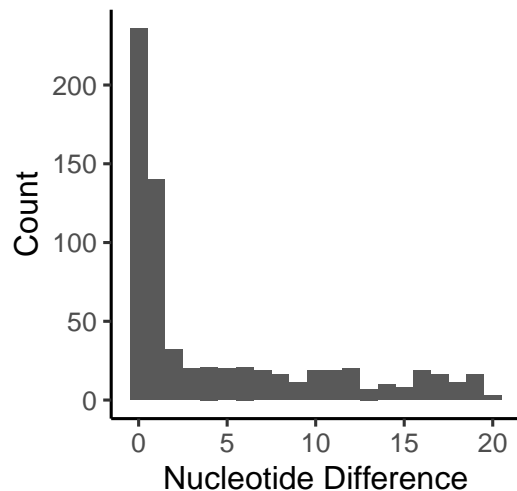
IGHV1-69*04_09

8142 sequences assigned
3145 (38.6%) exact matches, in which:
2977 unique CDR3
6 unique J



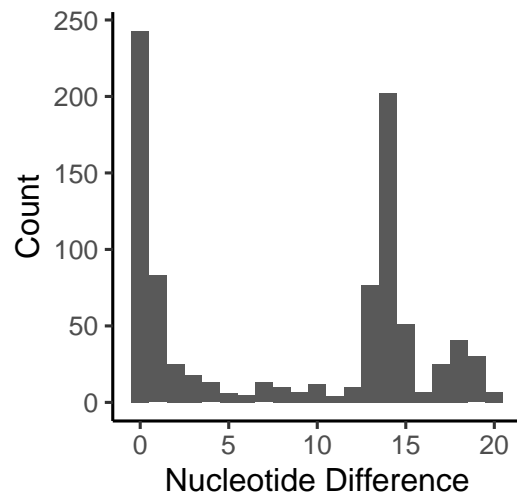
IGHV2-5*02

802 sequences assigned
236 (29.4%) exact matches, in which:
223 unique CDR3
6 unique J



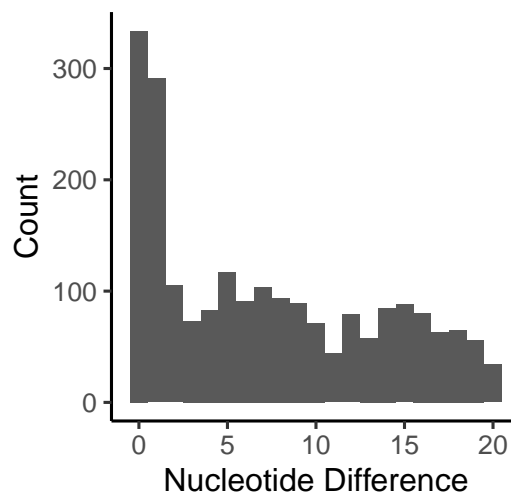
IGHV2-26*01

900 sequences assigned
243 (27%) exact matches, in which:
227 unique CDR3
5 unique J



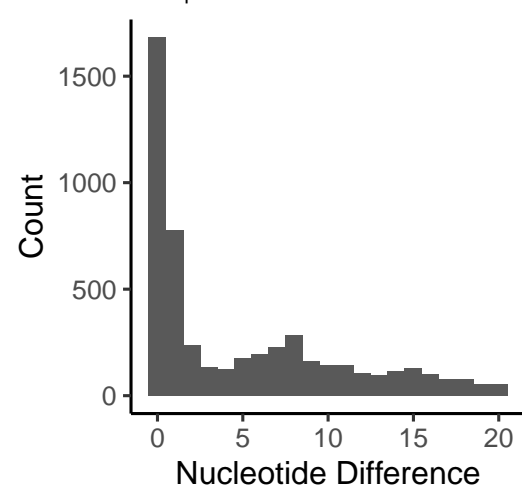
IGHV3-7*01

2338 sequences assigned
334 (14.3%) exact matches, in which:
329 unique CDR3
6 unique J



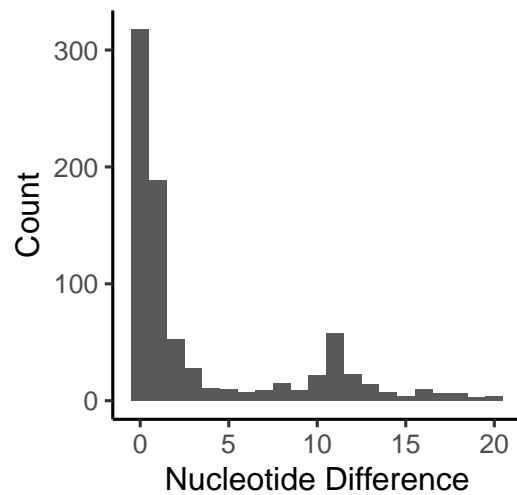
IGHV3-11*06

5381 sequences assigned
1682 (31.3%) exact matches, in which:
1269 unique CDR3
6 unique J



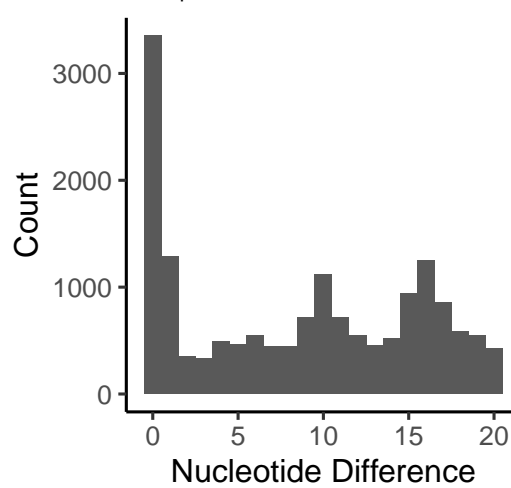
IGHV2-70*01

815 sequences assigned
318 (39%) exact matches, in which:
295 unique CDR3
6 unique J



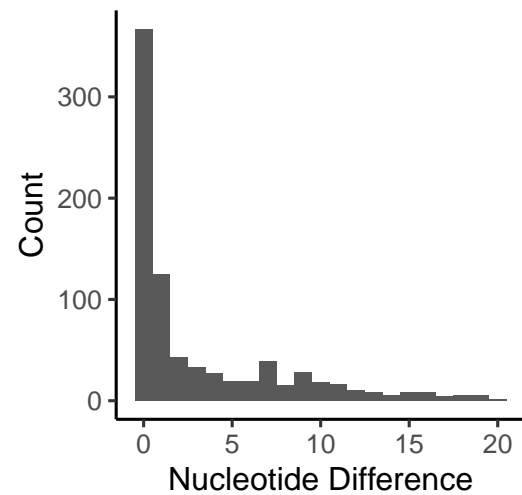
IGHV3-7*03

21836 sequences assigned
3353 (15.4%) exact matches, in which:
2418 unique CDR3
6 unique J



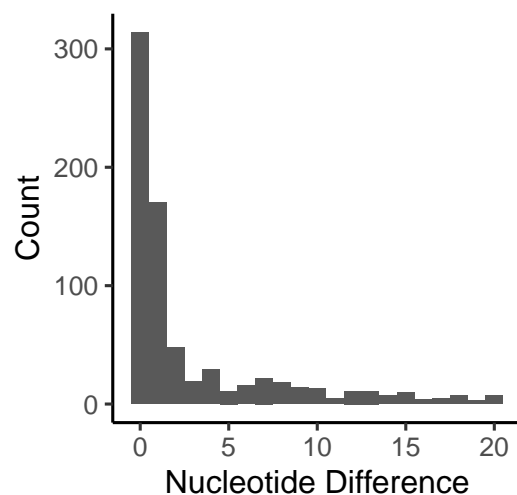
IGHV3-13*05

886 sequences assigned
367 (41.4%) exact matches, in which:
270 unique CDR3
5 unique J



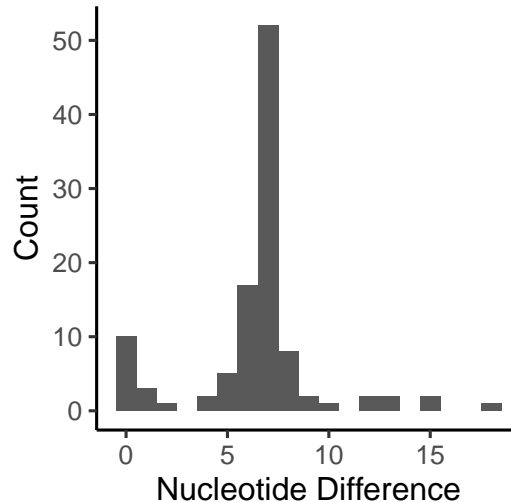
IGHV2-70*11_15

843 sequences assigned
314 (37.2%) exact matches, in which:
291 unique CDR3
6 unique J



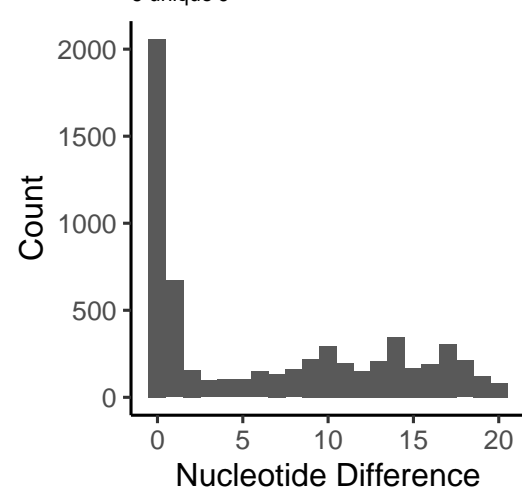
IGHV3-9*01

130 sequences assigned
10 (7.7%) exact matches, in which:
7 unique CDR3
4 unique J



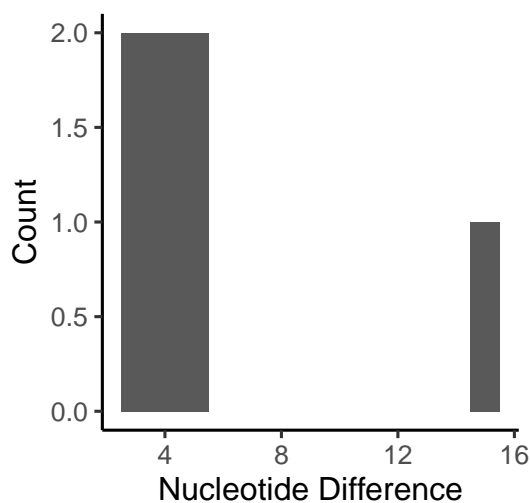
IGHV3-15*01_02

7205 sequences assigned
2058 (28.6%) exact matches, in which:
1575 unique CDR3
6 unique J



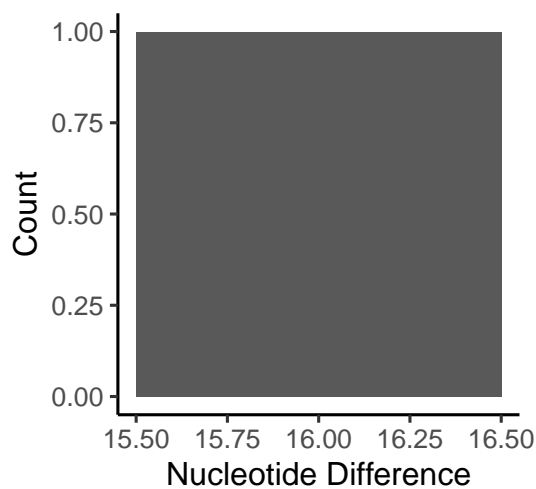
IGHV3-19*01

7 sequences assigned
No exact matches.



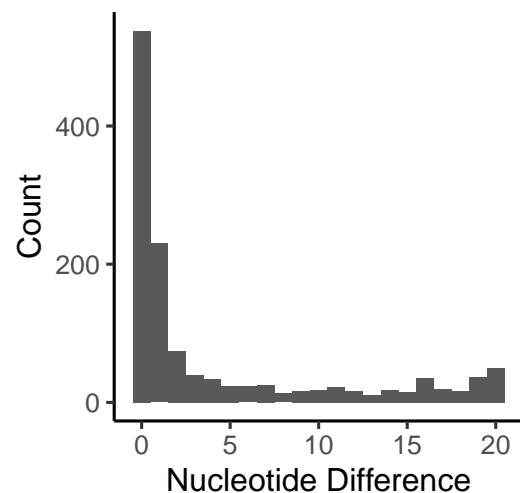
IGHV3-22*01_02

1 sequences assigned
No exact matches.



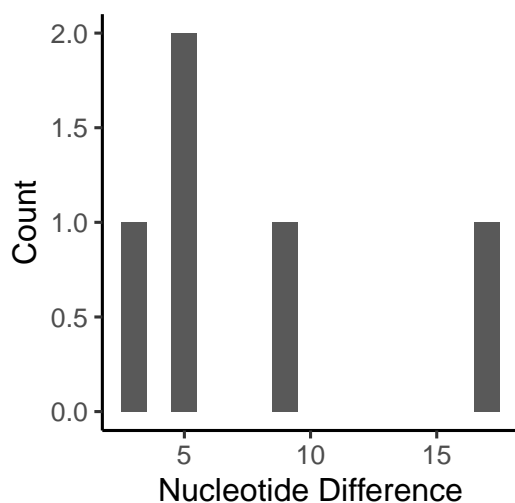
IGHV3-30*03

1362 sequences assigned
538 (39.5%) exact matches, in which:
508 unique CDR3
6 unique J



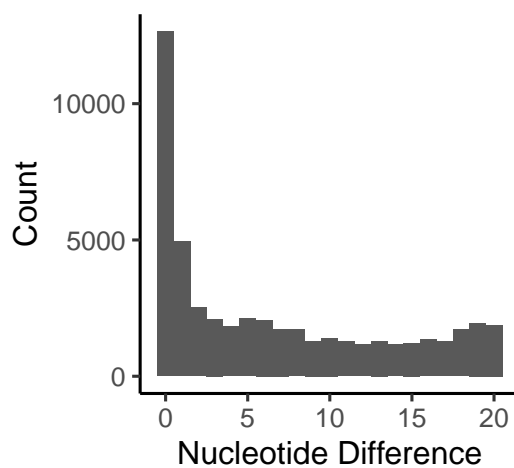
IGHV3-20*03_04

7 sequences assigned
No exact matches.



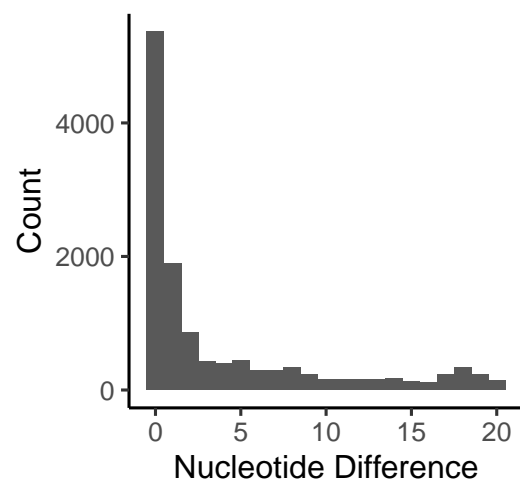
IGHV3-23*01_04

58198 sequences assigned
12649 (21.7%) exact matches, in which:
8794 unique CDR3
6 unique J



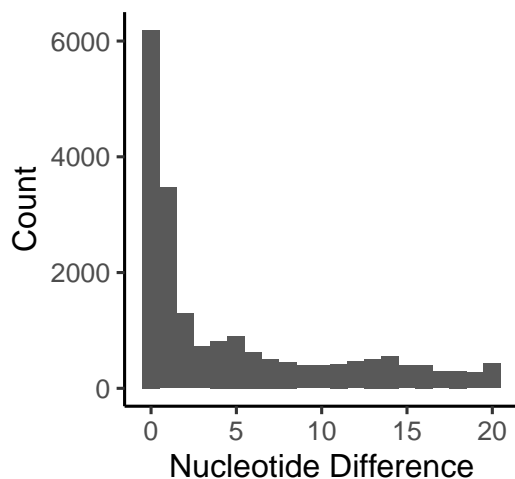
IGHV3-33*01

13492 sequences assigned
5366 (39.8%) exact matches, in which:
4068 unique CDR3
6 unique J



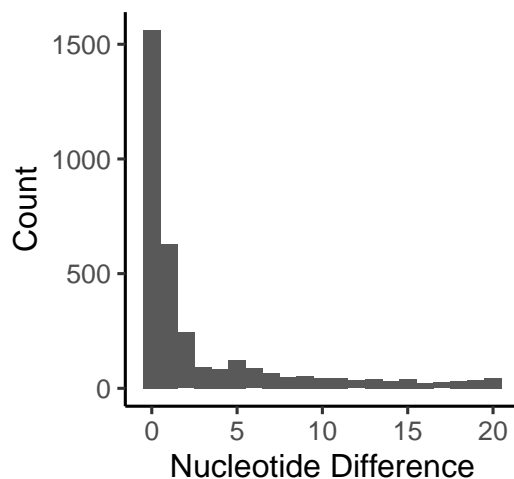
IGHV3-21*01_02

26340 sequences assigned
6190 (23.5%) exact matches, in which:
4421 unique CDR3
6 unique J



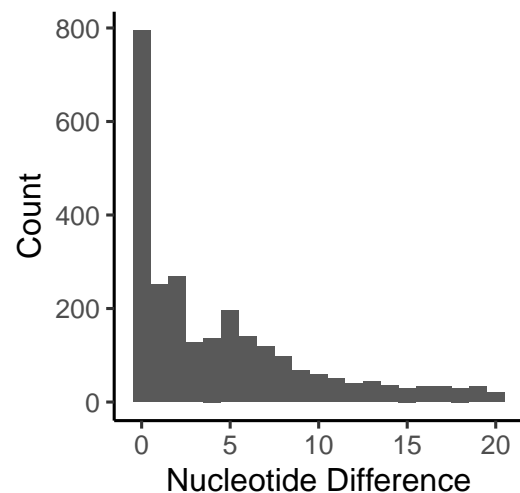
IGHV3-30-3*01

3982 sequences assigned
1562 (39.2%) exact matches, in which:
1169 unique CDR3
6 unique J



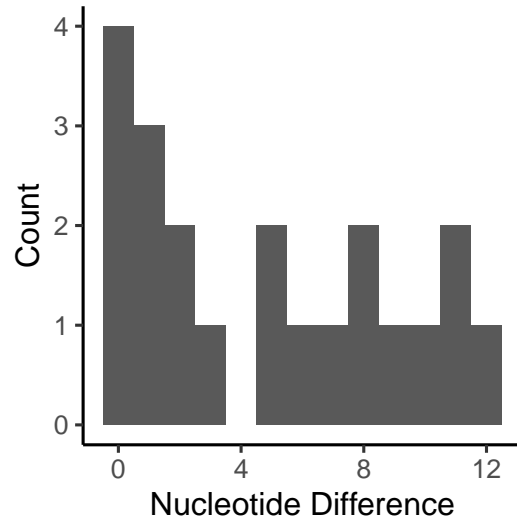
IGHV3-33*08

2744 sequences assigned
795 (29%) exact matches, in which:
732 unique CDR3
6 unique J



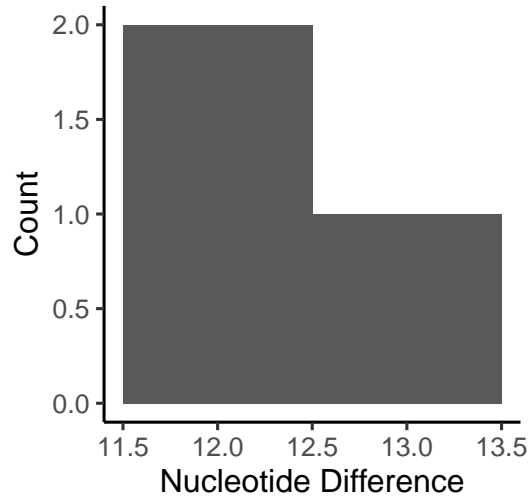
IGHV3-35*01

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



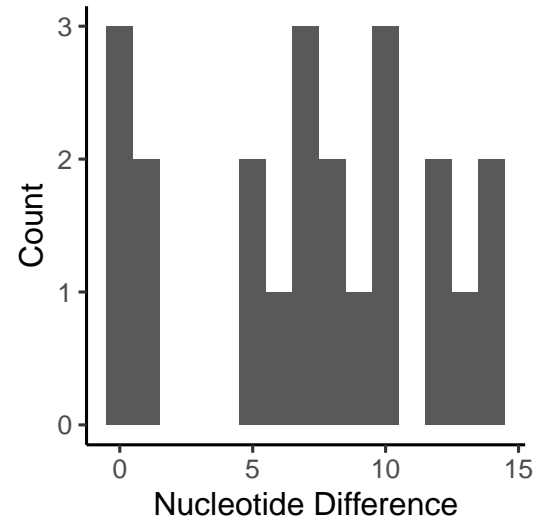
IGHV3-47*02

3 sequences assigned
No exact matches.



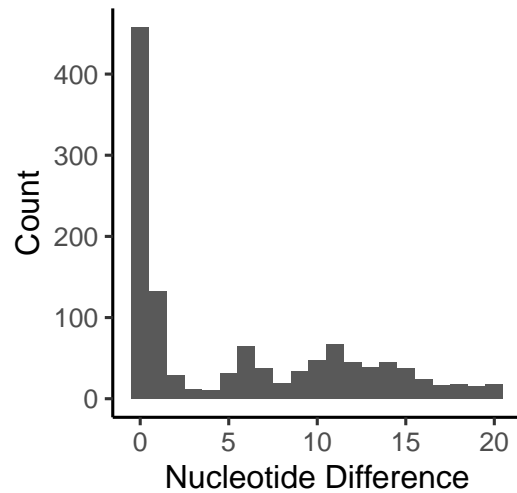
IGHV3-52*01_03

22 sequences assigned
3 (13.6%) exact matches, in which:
3 unique CDR3
3 unique J



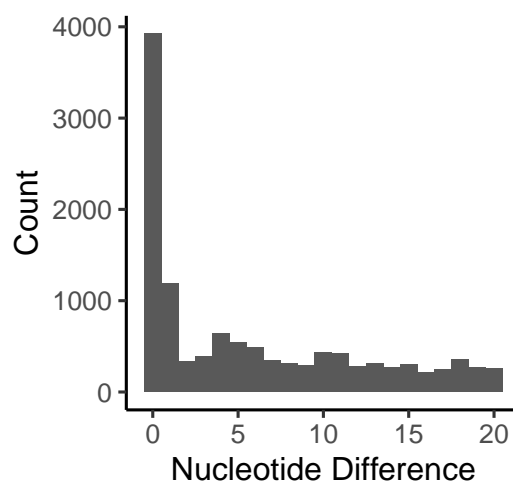
IGHV3-43*02

1304 sequences assigned
458 (35.1%) exact matches, in which:
337 unique CDR3
6 unique J



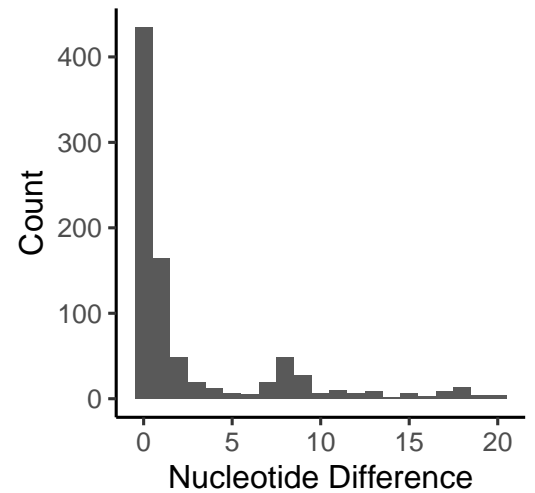
IGHV3-48*03

13793 sequences assigned
3924 (28.4%) exact matches, in which:
2898 unique CDR3
6 unique J



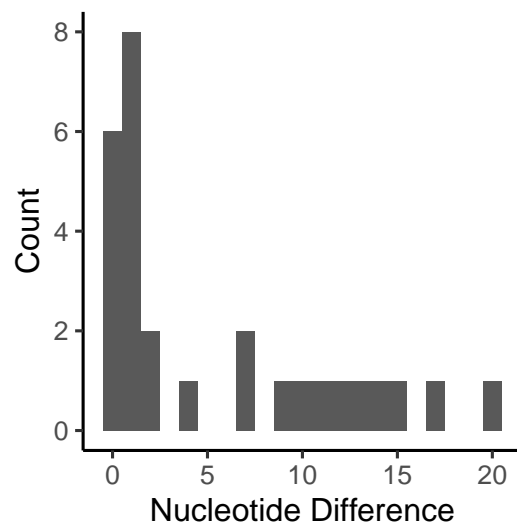
IGHV3-53*04

895 sequences assigned
435 (48.6%) exact matches, in which:
327 unique CDR3
6 unique J



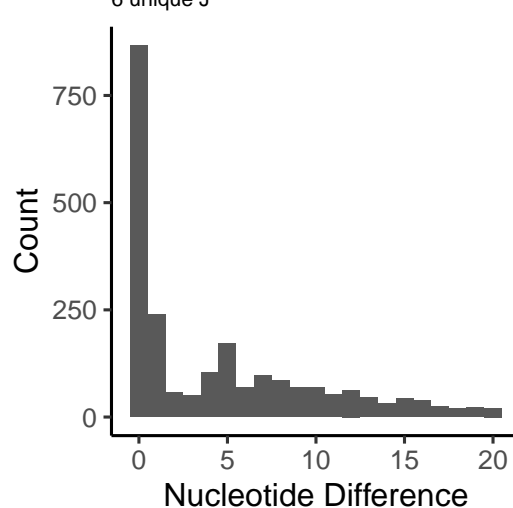
IGHV3-47*01

28 sequences assigned
6 (21.4%) exact matches, in which:
3 unique CDR3
3 unique J



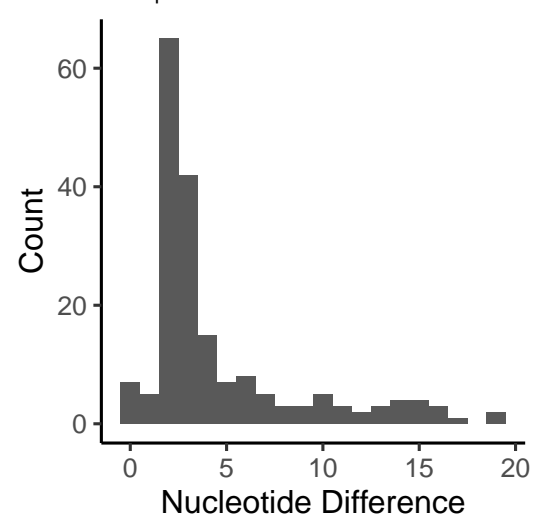
IGHV3-49*04

2412 sequences assigned
867 (35.9%) exact matches, in which:
662 unique CDR3
6 unique J



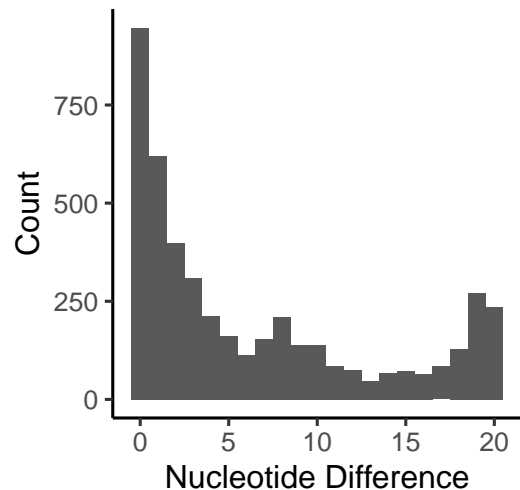
IGHV3-53*05

229 sequences assigned
7 (3.1%) exact matches, in which:
7 unique CDR3
2 unique J



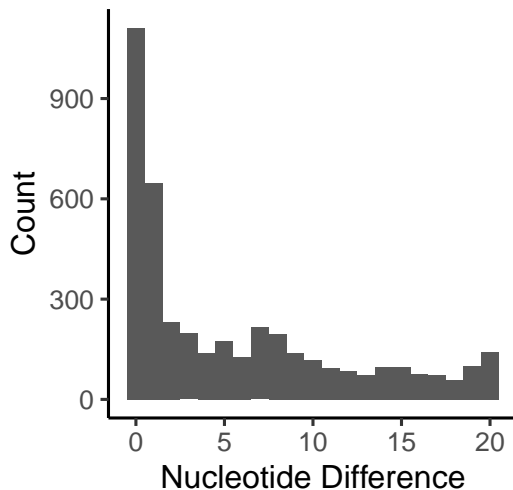
IGHV3-53*01_02

5120 sequences assigned
947 (18.5%) exact matches, in which:
693 unique CDR3
6 unique J



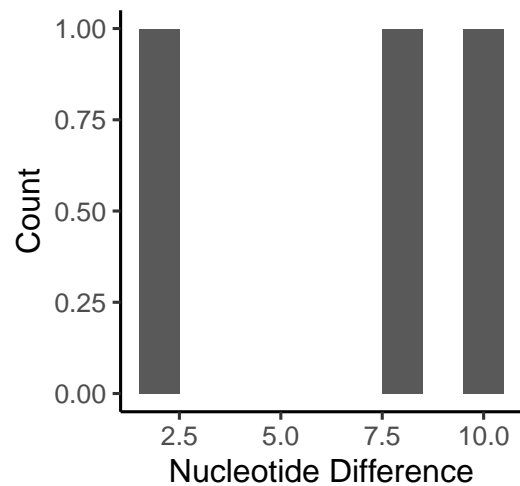
IGHV3-66*01

4503 sequences assigned
1112 (24.7%) exact matches, in which:
821 unique CDR3
6 unique J



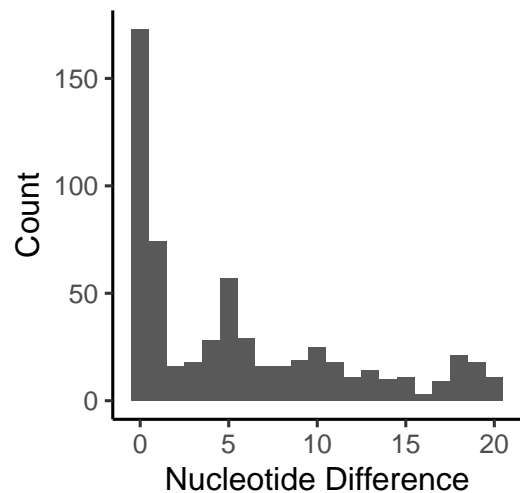
IGHV3-71*01_04

3 sequences assigned
No exact matches.



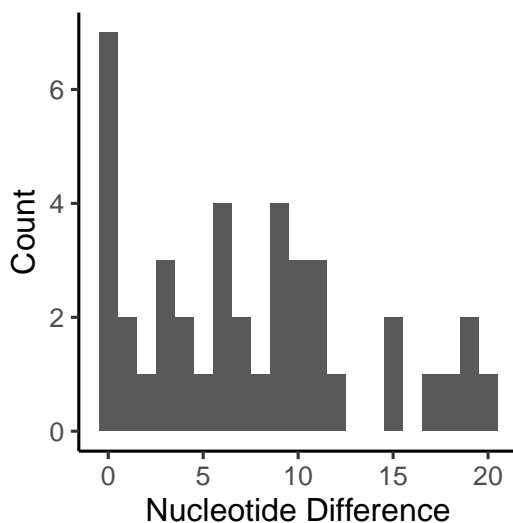
IGHV3-64*01

671 sequences assigned
173 (25.8%) exact matches, in which:
132 unique CDR3
5 unique J



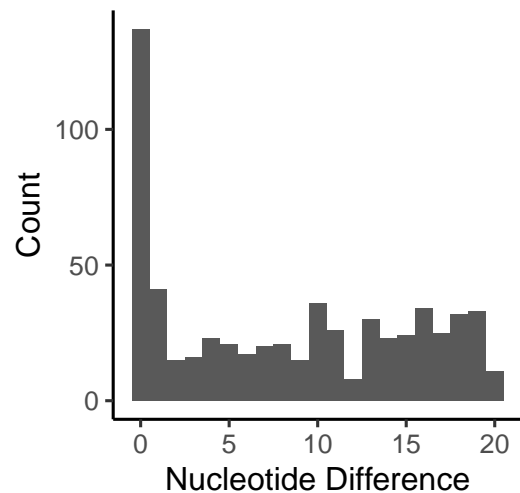
IGHV3-69-1*01

49 sequences assigned
7 (14.3%) exact matches, in which:
6 unique CDR3
2 unique J



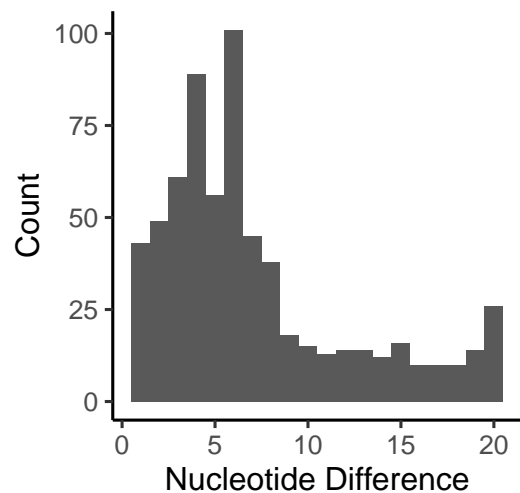
IGHV3-72*01

1491 sequences assigned
137 (9.2%) exact matches, in which:
102 unique CDR3
5 unique J



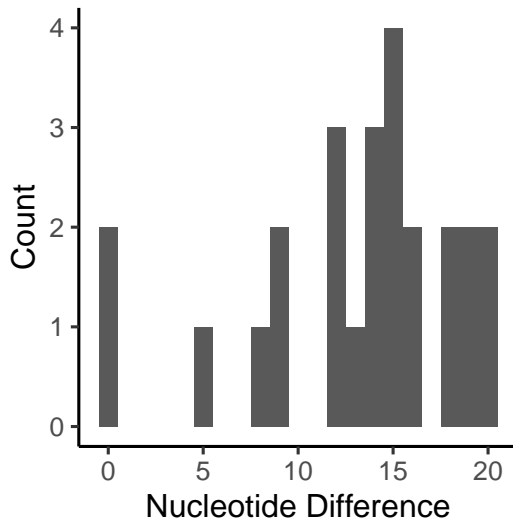
IGHV3-64*04

715 sequences assigned
No exact matches.



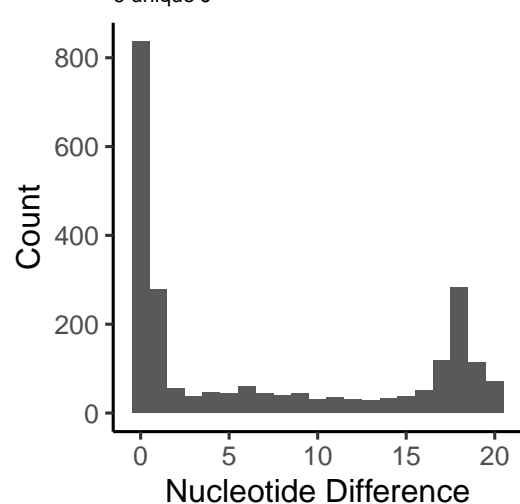
IGHV3-69-1*02

44 sequences assigned
2 (4.5%) exact matches, in which:
2 unique CDR3
2 unique J



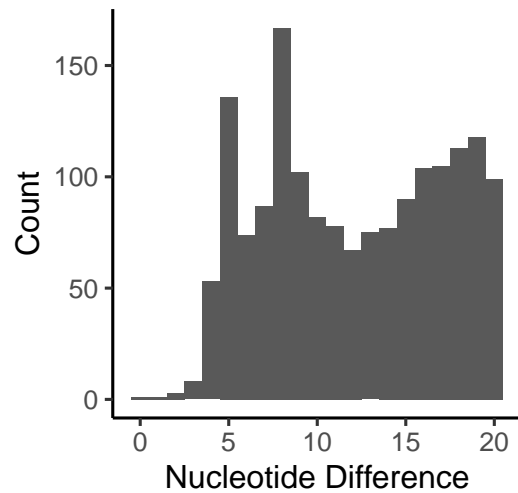
IGHV3-73*01_02

3148 sequences assigned
837 (26.6%) exact matches, in which:
611 unique CDR3
6 unique J



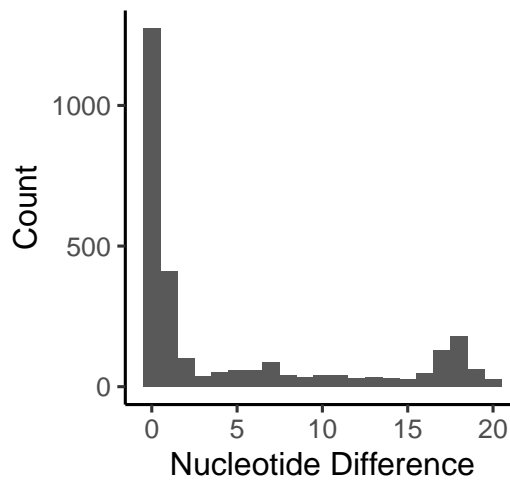
IGHV3-74*03

3169 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
1 unique J



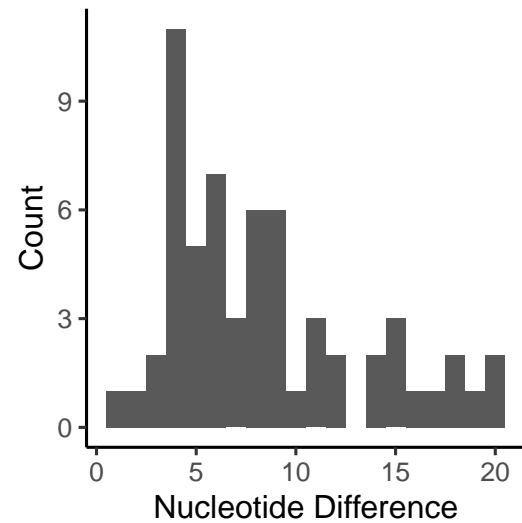
IGHV3-64D*06

3647 sequences assigned
1274 (34.9%) exact matches, in which:
828 unique CDR3
6 unique J



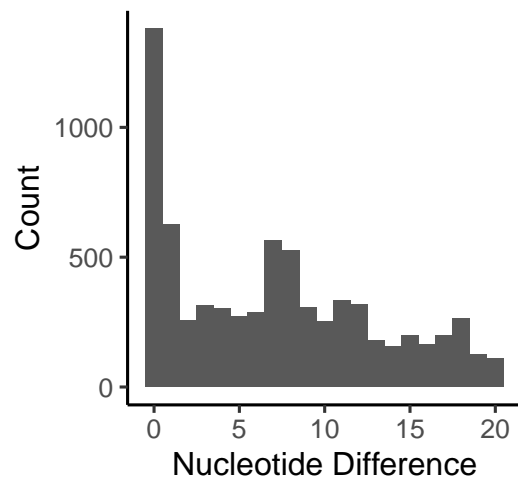
IGHV3-NL1*01

76 sequences assigned
No exact matches.



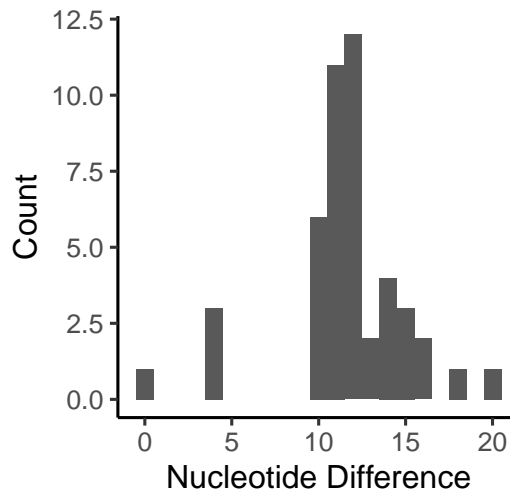
IGHV3-74*01_02

7648 sequences assigned
1380 (18%) exact matches, in which:
980 unique CDR3
6 unique J



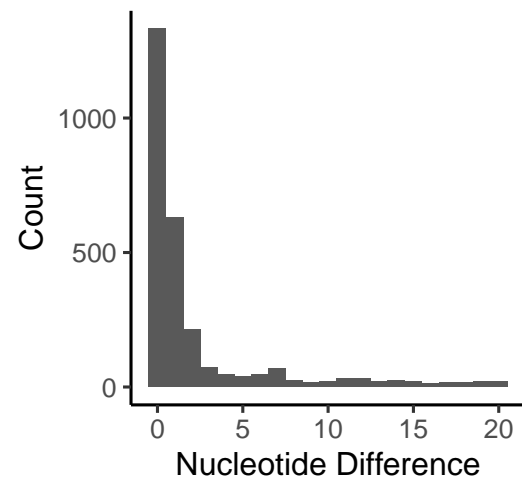
IGHV3-64D*08

58 sequences assigned
1 (1.7%) exact matches, in which:
1 unique CDR3
1 unique J



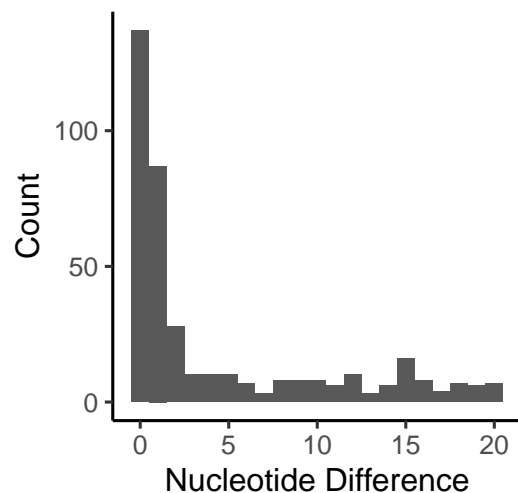
IGHV4-4*02_03

3007 sequences assigned
1332 (44.3%) exact matches, in which:
1207 unique CDR3
6 unique J



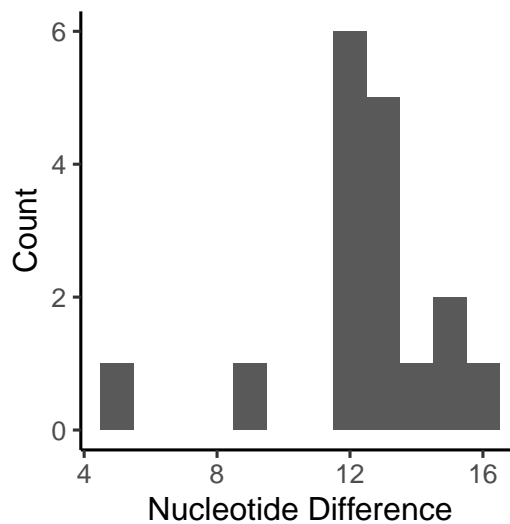
IGHV3-43D*04

416 sequences assigned
137 (32.9%) exact matches, in which:
93 unique CDR3
4 unique J



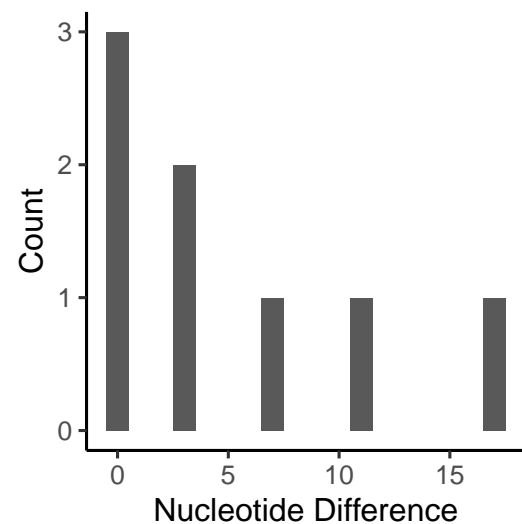
IGHV3-64D*09

19 sequences assigned
No exact matches.



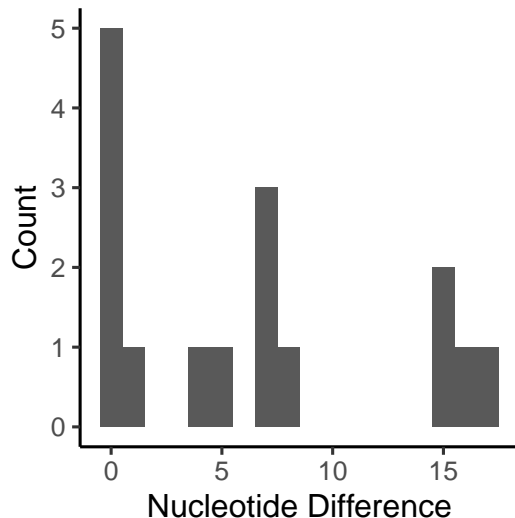
IGHV4-28*03

10 sequences assigned
3 (30%) exact matches, in which:
3 unique CDR3
3 unique J



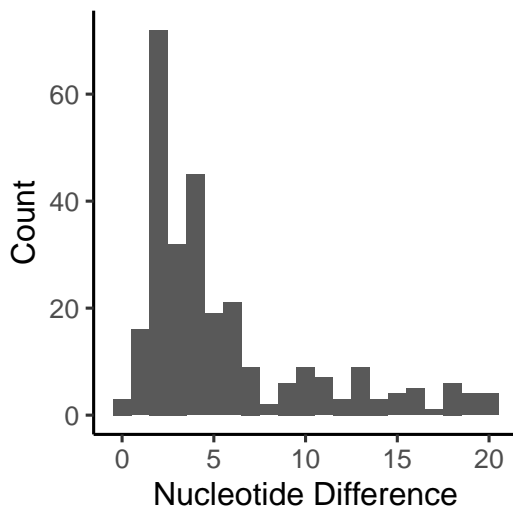
IGHV4-28*01_07

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



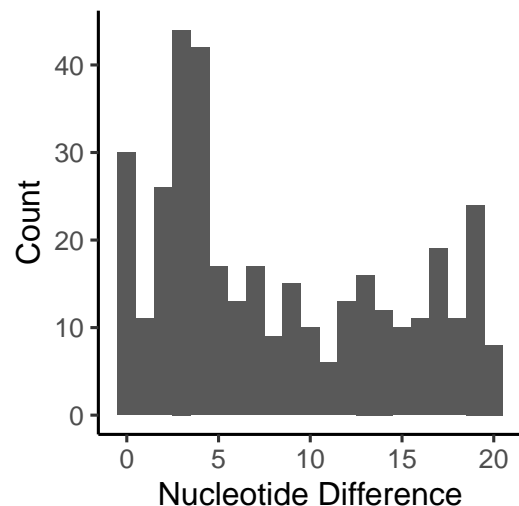
IGHV4-30-4*08

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



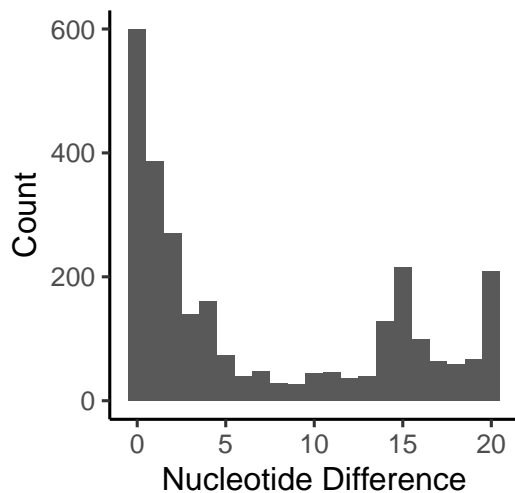
IGHV4-38-2*02

1061 sequences assigned
30 (2.8%) exact matches, in which:
30 unique CDR3
6 unique J



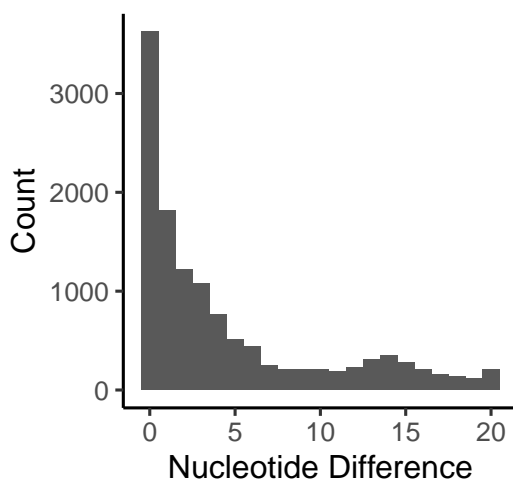
IGHV4-30-2*01

3584 sequences assigned
600 (16.7%) exact matches, in which:
543 unique CDR3
6 unique J



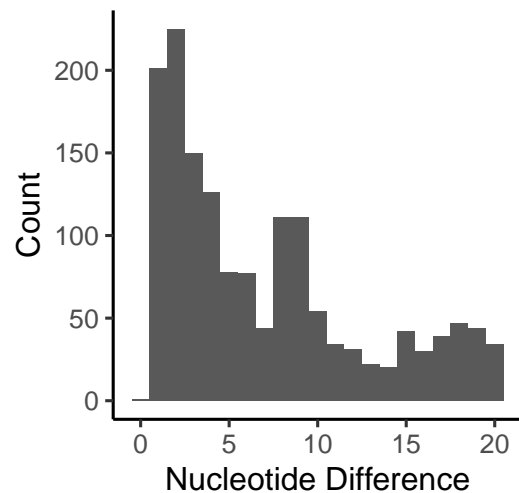
IGHV4-31*02

14049 sequences assigned
3625 (25.8%) exact matches, in which:
3390 unique CDR3
6 unique J



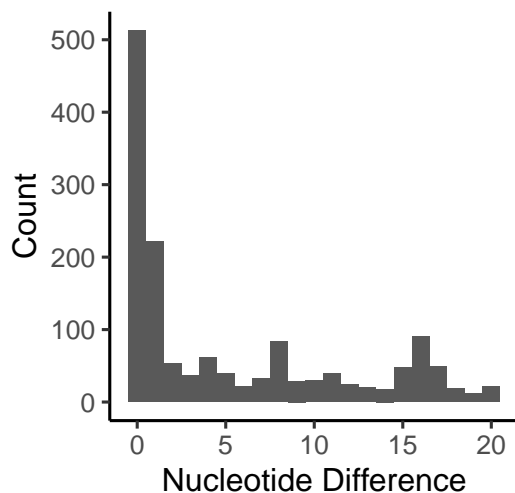
IGHV4-39*07

1920 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



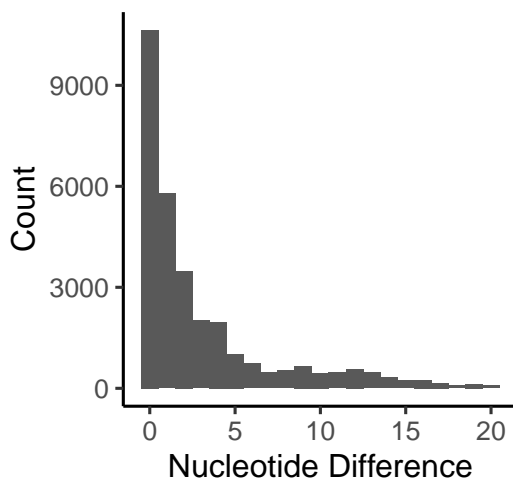
IGHV4-30-4*01

1567 sequences assigned
513 (32.7%) exact matches, in which:
485 unique CDR3
6 unique J



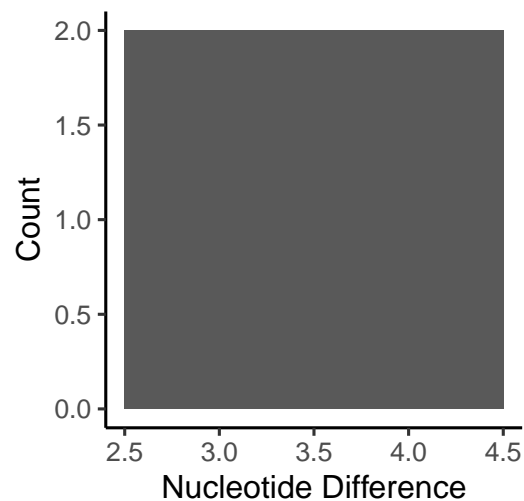
IGHV4-34*01_02

31256 sequences assigned
10642 (34%) exact matches, in which:
9551 unique CDR3
6 unique J



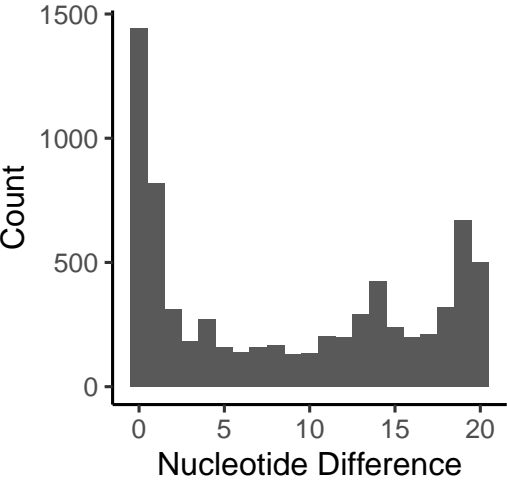
IGHV4-55*09

4 sequences assigned
No exact matches.



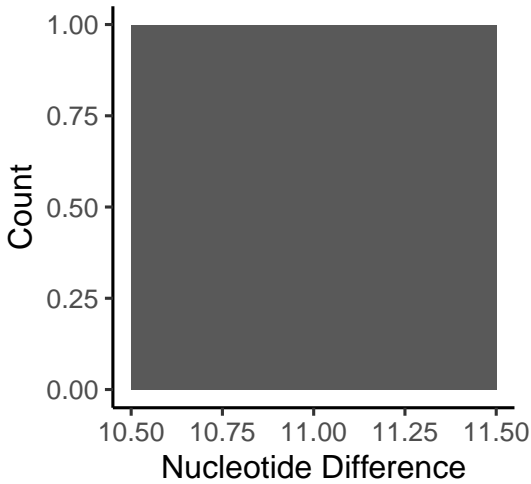
IGHV4-59*08

8432 sequences assigned
1442 (17.1%) exact matches, in which:
1359 unique CDR3
6 unique J



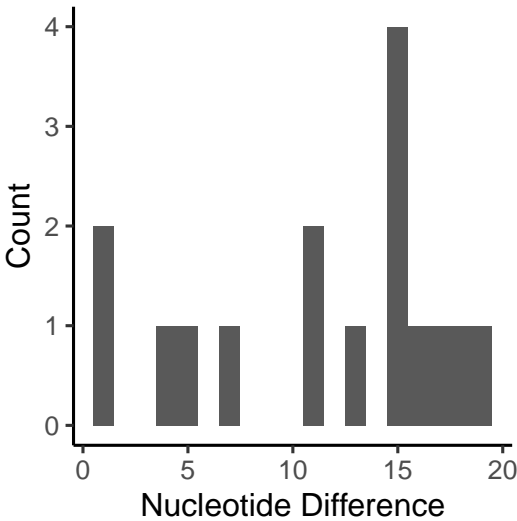
IGHV1/OR15-2*01

1 sequences assigned
No exact matches.



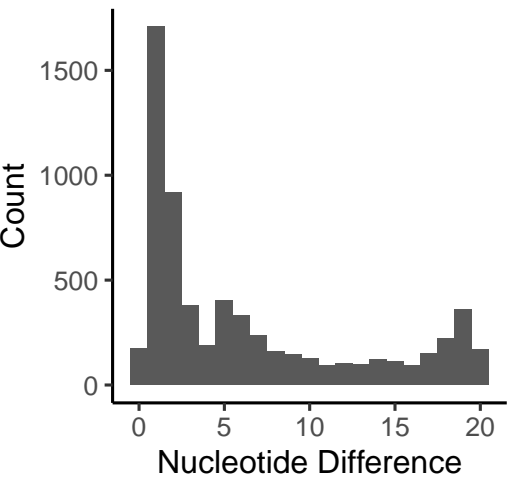
IGHV4/OR15-8*01

18 sequences assigned
No exact matches.



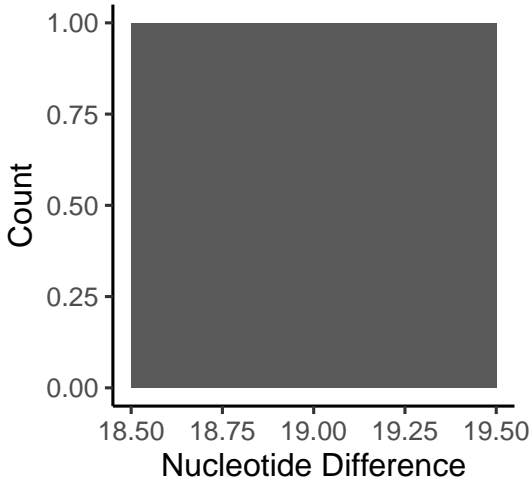
IGHV4-59*12

7439 sequences assigned
173 (2.3%) exact matches, in which:
172 unique CDR3
6 unique J



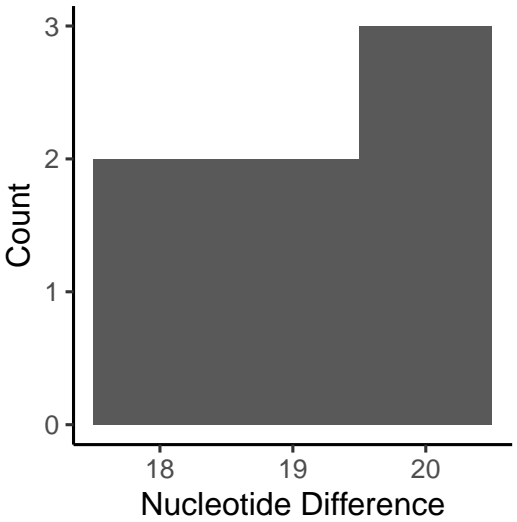
IGHV1/OR15-2*02_03

1 sequences assigned
No exact matches.



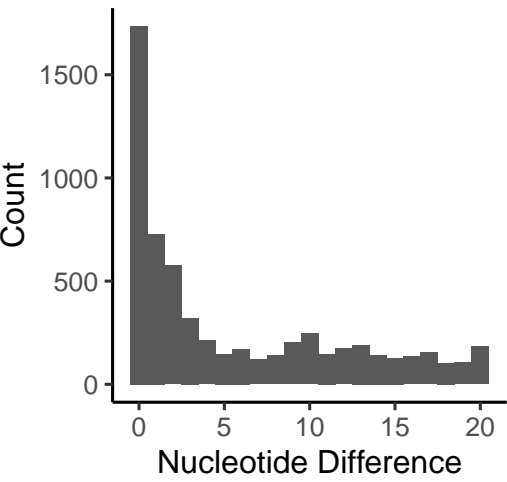
IGHV4/OR15-8*02

21 sequences assigned
No exact matches.



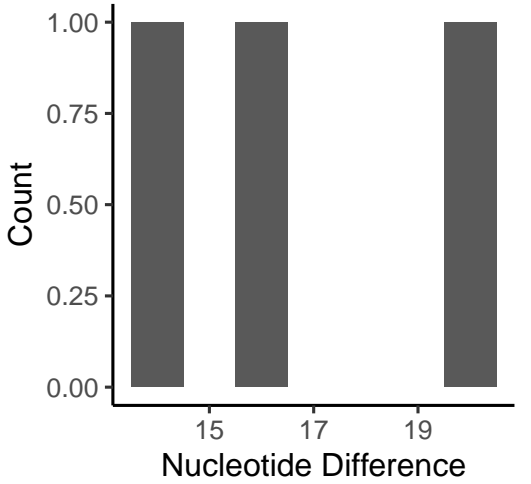
IGHV4-61*01

7694 sequences assigned
1736 (22.6%) exact matches, in which:
1658 unique CDR3
6 unique J



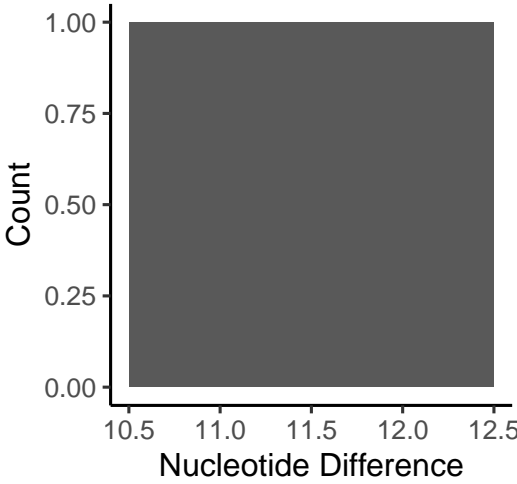
IGHV1/OR15-3*02

4 sequences assigned
No exact matches.



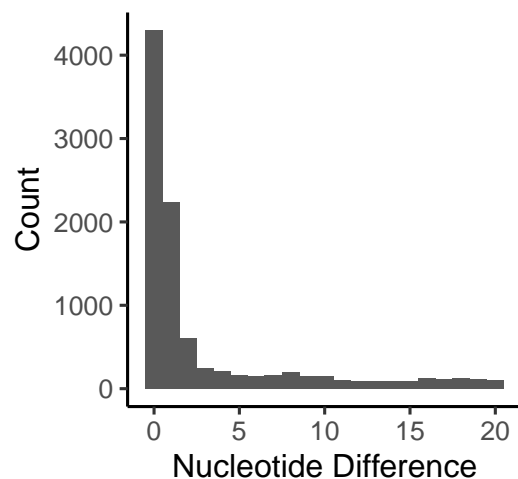
IGHV1/OR15-9*01

2 sequences assigned
No exact matches.



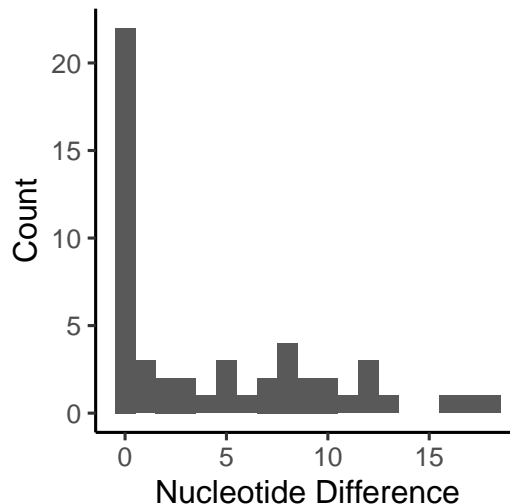
IGHV5-10-1*01_03

10964 sequences assigned
4297 (39.2%) exact matches, in which:
3595 unique CDR3
6 unique J



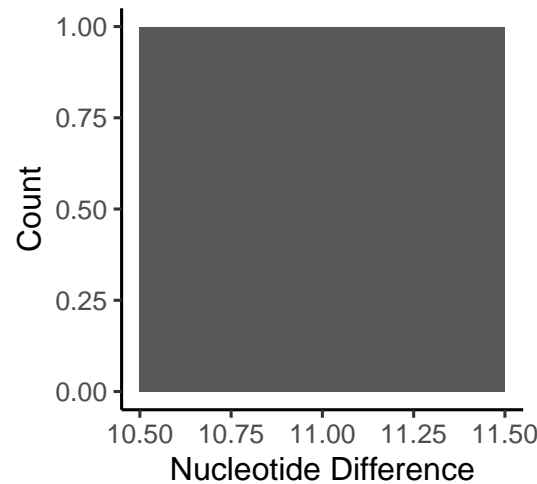
IGHV5-51*07

55 sequences assigned
22 (40%) exact matches, in which:
22 unique CDR3
4 unique J



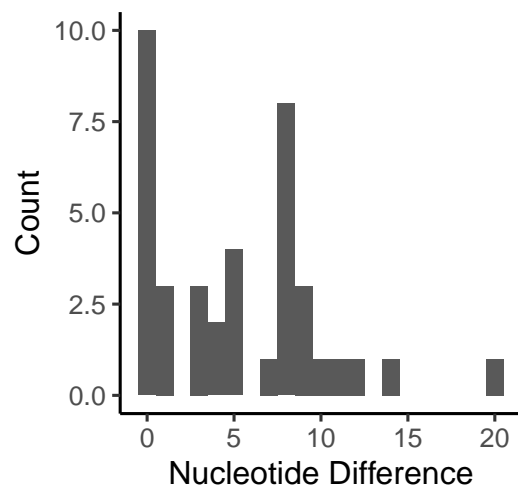
IGHV7-81*01

1 sequences assigned
No exact matches.



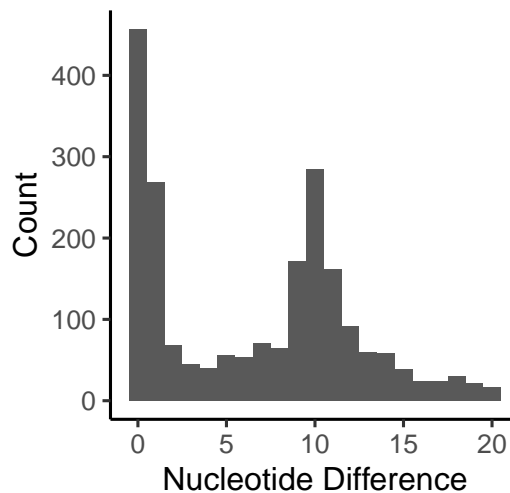
IGHV5-51*04

41 sequences assigned
10 (24.4%) exact matches, in which:
10 unique CDR3
4 unique J



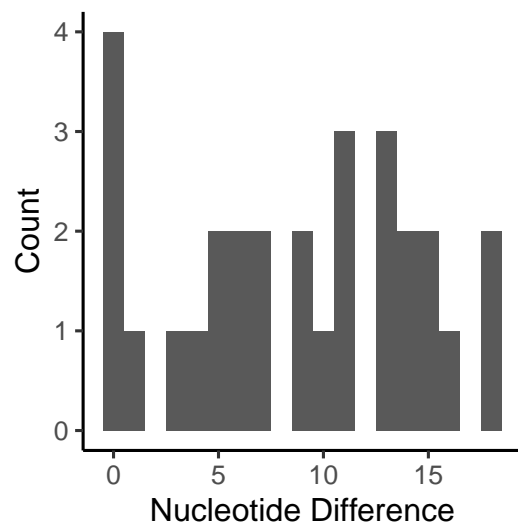
IGHV6-1*01_02

2187 sequences assigned
457 (20.9%) exact matches, in which:
435 unique CDR3
6 unique J



IGHV5-51*06

30 sequences assigned
4 (13.3%) exact matches, in which:
4 unique CDR3
2 unique J



IGHV7-4-1*02

3317 sequences assigned
743 (22.4%) exact matches, in which:
682 unique CDR3
6 unique J

