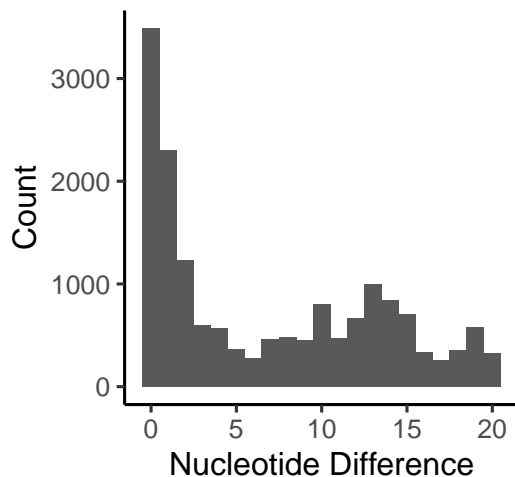


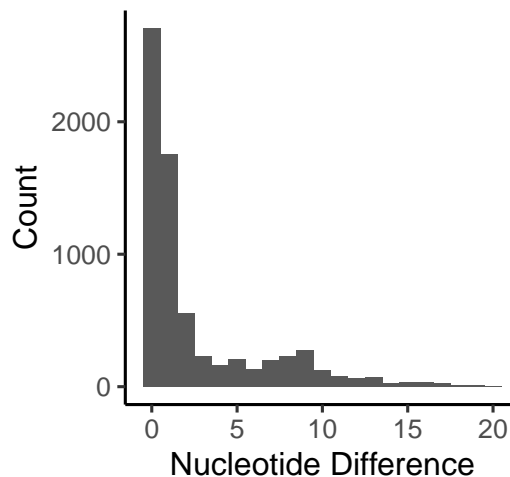
IGHV1-2*02

18221 sequences assigned
3488 (19.1%) exact matches, in which:
3129 unique CDR3
7 unique J



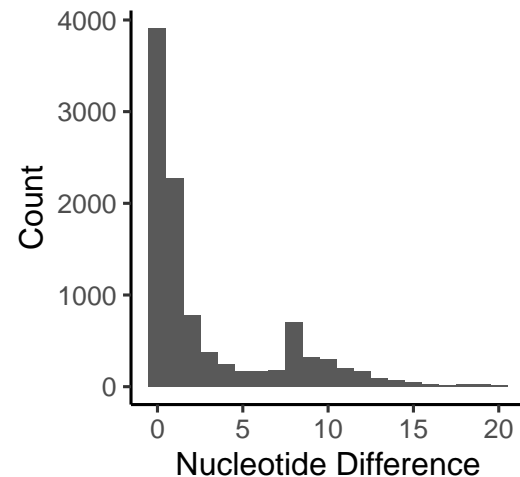
IGHV1-8*01

6969 sequences assigned
2705 (38.8%) exact matches, in which:
2463 unique CDR3
7 unique J



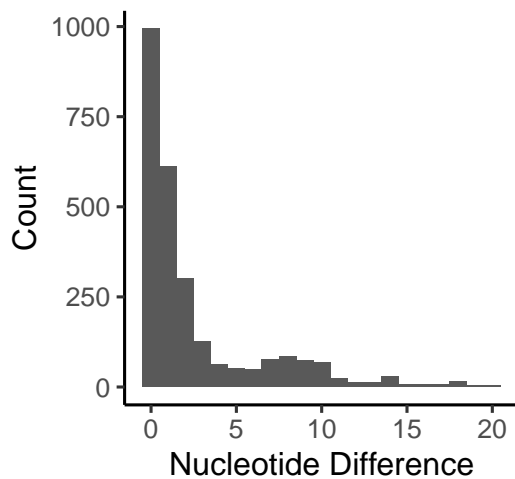
IGHV1-18*04

10271 sequences assigned
3908 (38%) exact matches, in which:
3555 unique CDR3
7 unique J



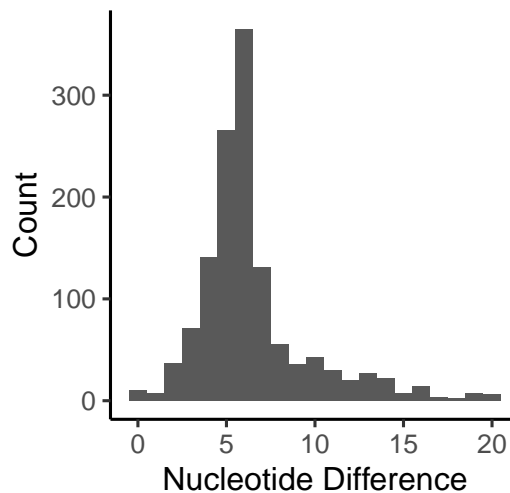
IGHV1-2*04

2627 sequences assigned
994 (37.8%) exact matches, in which:
913 unique CDR3
7 unique J



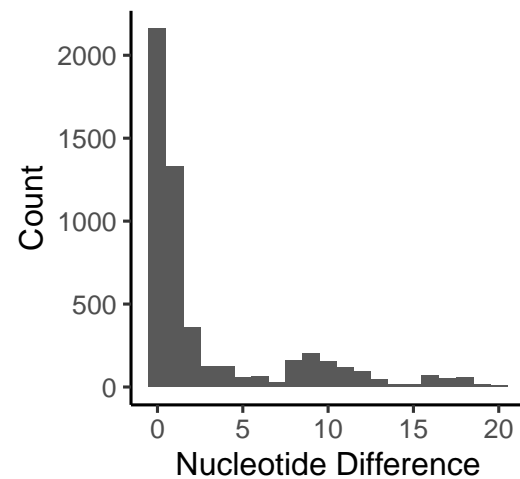
IGHV1-8*02

1318 sequences assigned
10 (0.8%) exact matches, in which:
10 unique CDR3
4 unique J



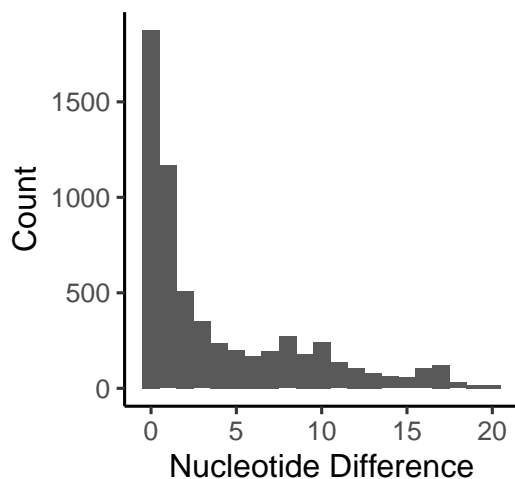
IGHV1-24*01

5319 sequences assigned
2160 (40.6%) exact matches, in which:
1976 unique CDR3
7 unique J



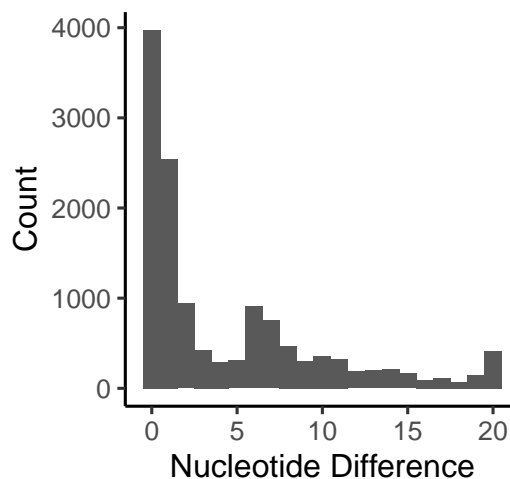
IGHV1-3*01_05

6249 sequences assigned
1876 (30%) exact matches, in which:
1636 unique CDR3
7 unique J



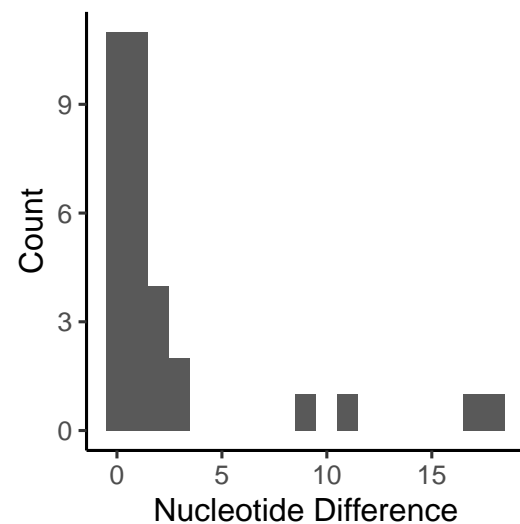
IGHV1-18*01

14494 sequences assigned
3974 (27.4%) exact matches, in which:
3633 unique CDR3
7 unique J



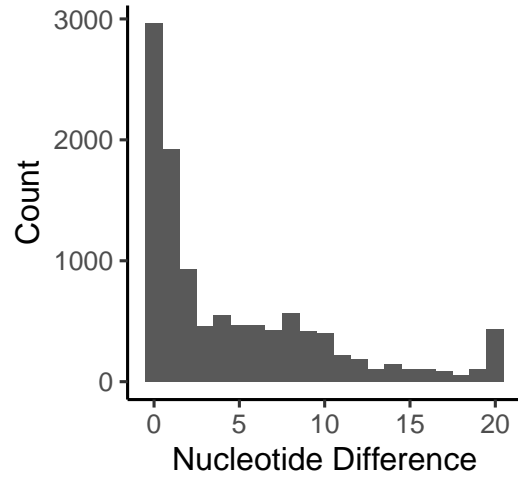
IGHV1-45*02

32 sequences assigned
11 (34.4%) exact matches, in which:
10 unique CDR3
4 unique J



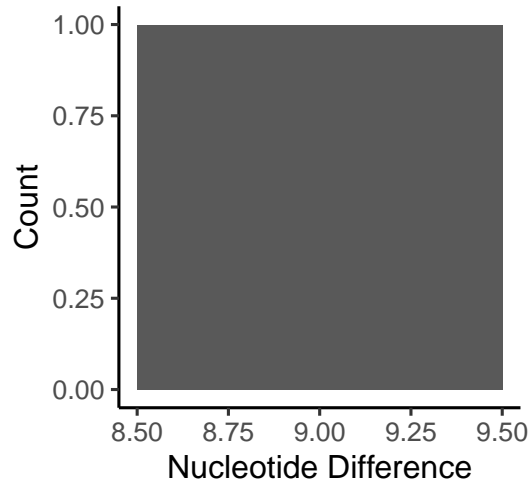
IGHV1-46*01

12846 sequences assigned
2963 (23.1%) exact matches, in which:
2700 unique CDR3
7 unique J



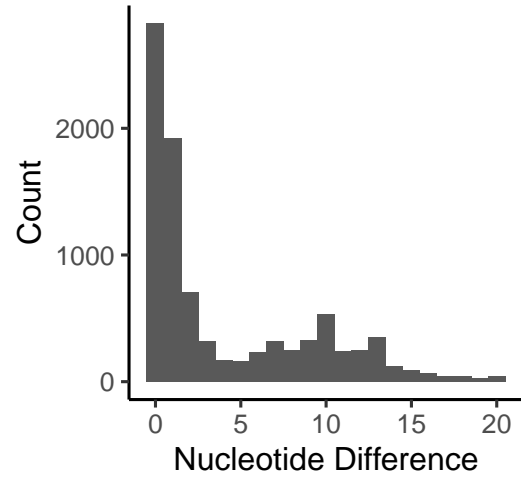
IGHV1-68*01

1 sequences assigned
No exact matches.



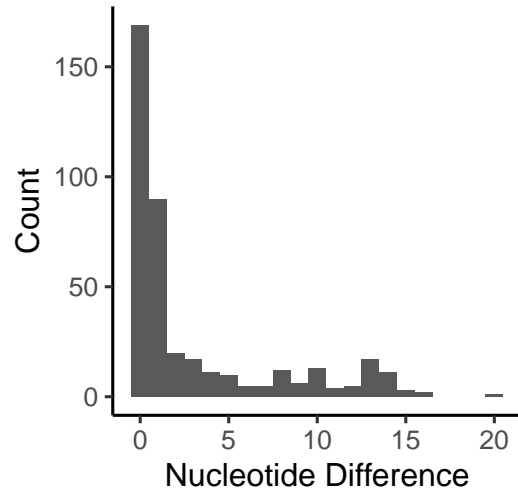
IGHV1-69*04_09

9219 sequences assigned
2828 (30.7%) exact matches, in which:
2632 unique CDR3
7 unique J



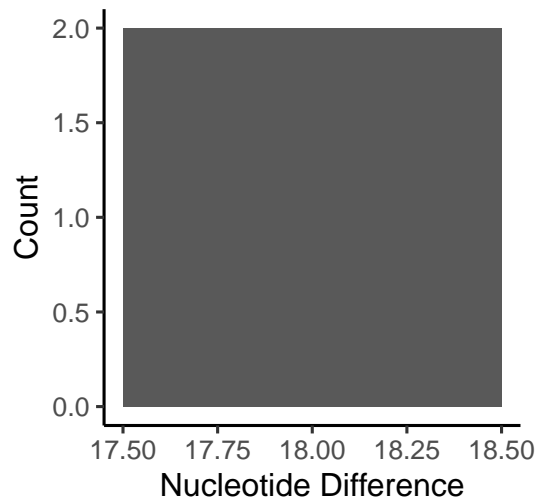
IGHV1-58*02

532 sequences assigned
169 (31.8%) exact matches, in which:
153 unique CDR3
7 unique J



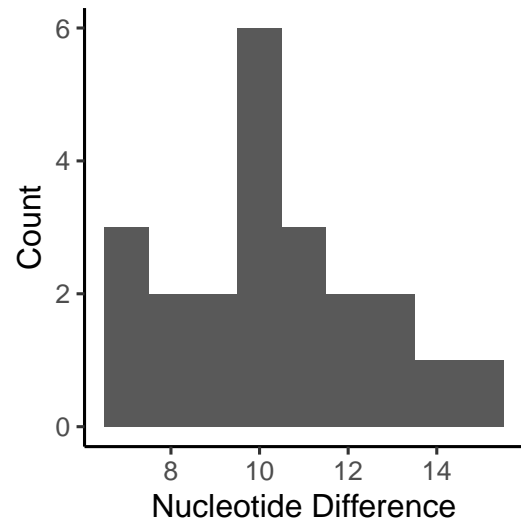
IGHV1-69-2*01

2 sequences assigned
No exact matches.



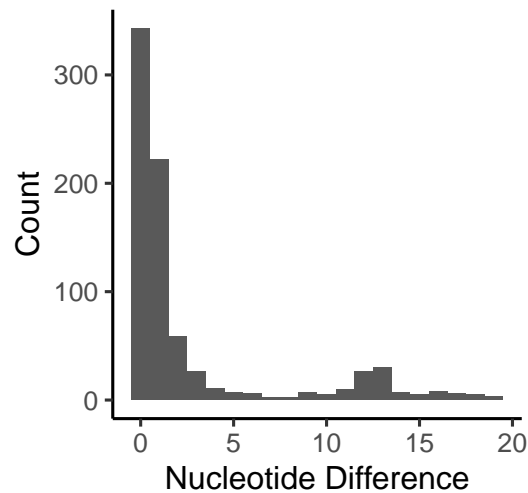
IGHV1-NL1*01

22 sequences assigned
No exact matches.



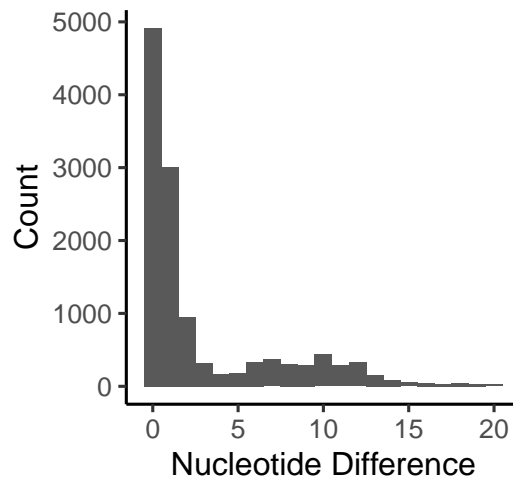
IGHV1-58*01_03

794 sequences assigned
343 (43.2%) exact matches, in which:
311 unique CDR3
7 unique J



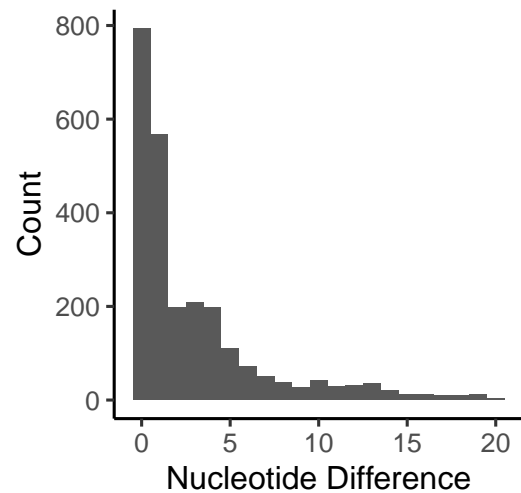
IGHV1-69*01_12_13

12451 sequences assigned
4915 (39.5%) exact matches, in which:
4534 unique CDR3
7 unique J



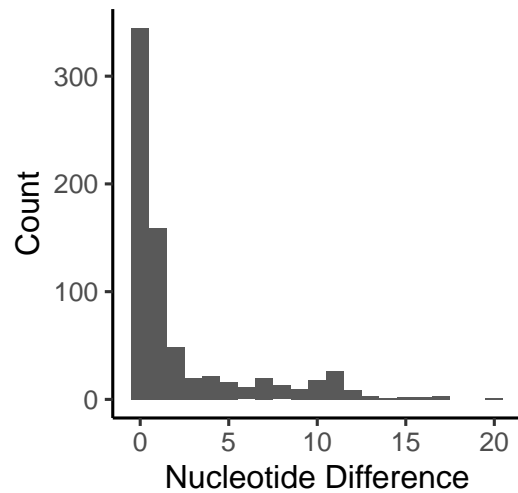
IGHV2-5*02

2509 sequences assigned
794 (31.6%) exact matches, in which:
712 unique CDR3
7 unique J



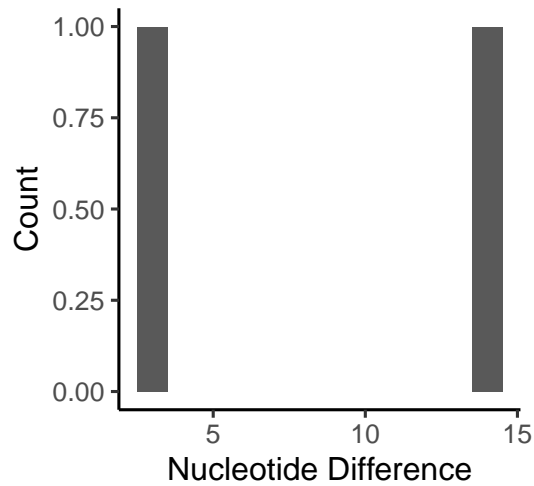
IGHV2-26*01

731 sequences assigned
345 (47.2%) exact matches, in which:
323 unique CDR3
6 unique J



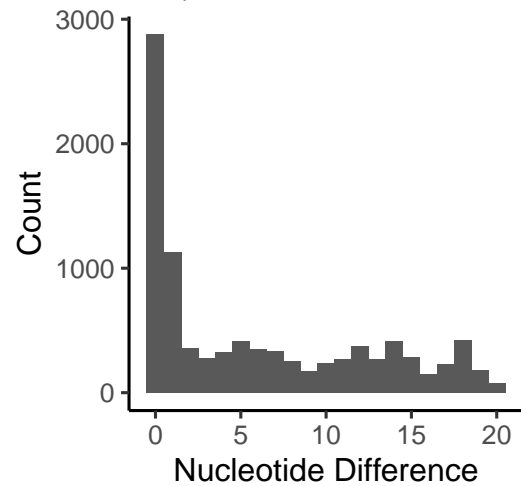
IGHV2-70D*04

3 sequences assigned
No exact matches.



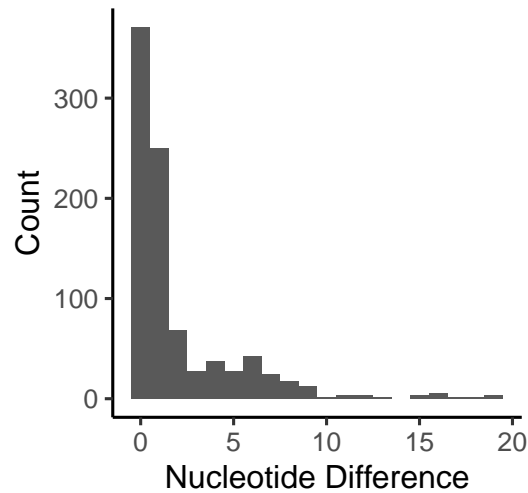
IGHV3-9*01

9579 sequences assigned
2878 (30%) exact matches, in which:
1950 unique CDR3
7 unique J



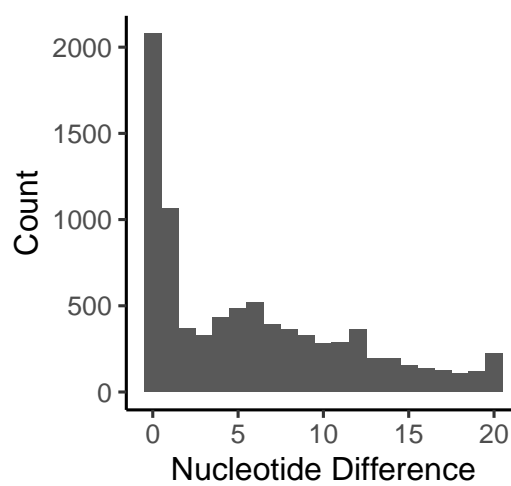
IGHV2-70*01

902 sequences assigned
371 (41.1%) exact matches, in which:
336 unique CDR3
6 unique J



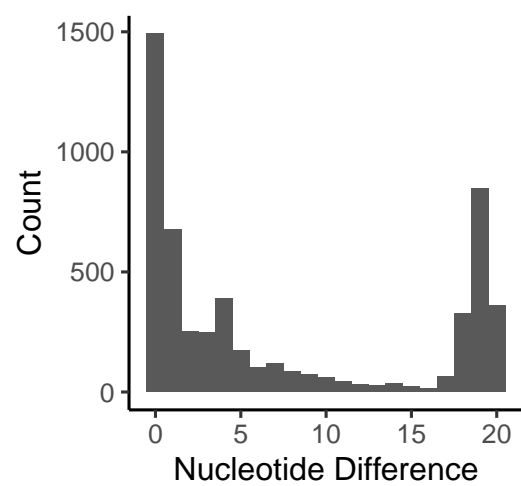
IGHV3-7*01

9197 sequences assigned
2078 (22.6%) exact matches, in which:
1509 unique CDR3
7 unique J



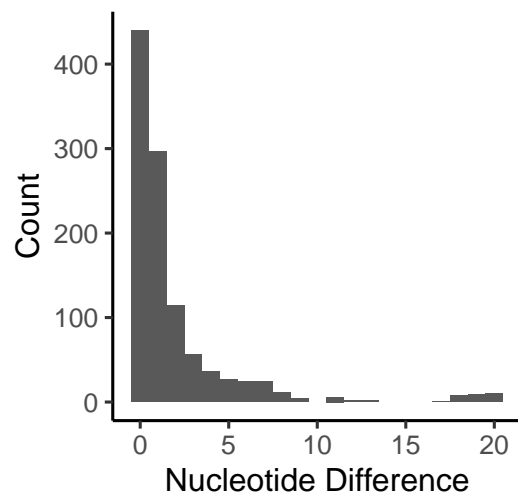
IGHV3-11*01

5774 sequences assigned
1492 (25.8%) exact matches, in which:
1054 unique CDR3
7 unique J



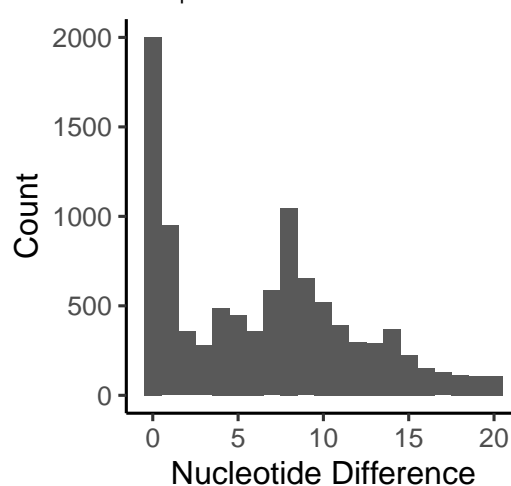
IGHV2-70*11_15

1081 sequences assigned
440 (40.7%) exact matches, in which:
403 unique CDR3
7 unique J



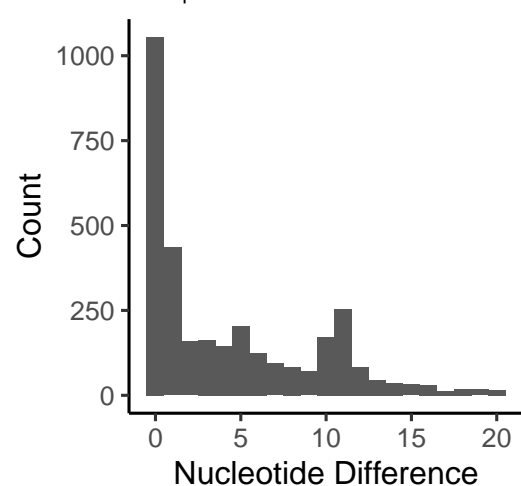
IGHV3-7*03

10248 sequences assigned
2002 (19.5%) exact matches, in which:
1389 unique CDR3
7 unique J



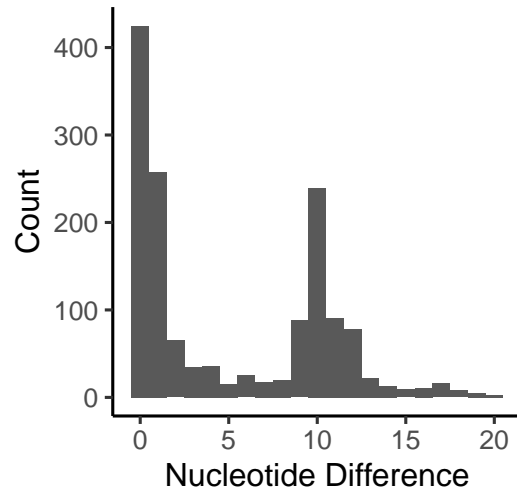
IGHV3-11*06

3301 sequences assigned
1055 (32%) exact matches, in which:
741 unique CDR3
7 unique J



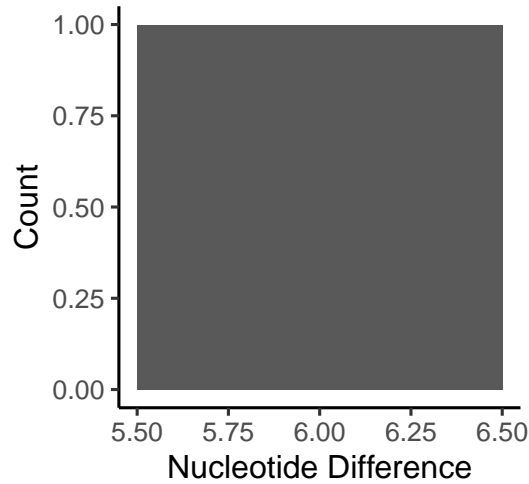
IGHV3-13*01

1485 sequences assigned
425 (28.6%) exact matches, in which:
258 unique CDR3
7 unique J



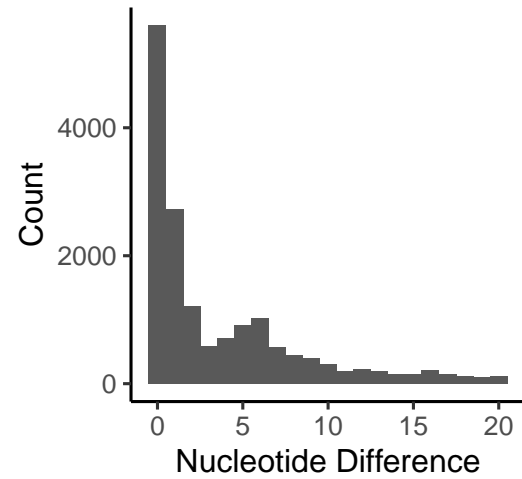
IGHV3-19*01

1 sequences assigned
No exact matches.



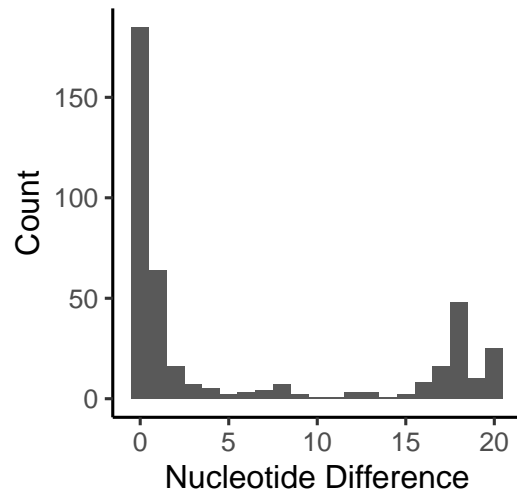
IGHV3-21*01_02

16743 sequences assigned
5600 (33.4%) exact matches, in which:
3801 unique CDR3
7 unique J



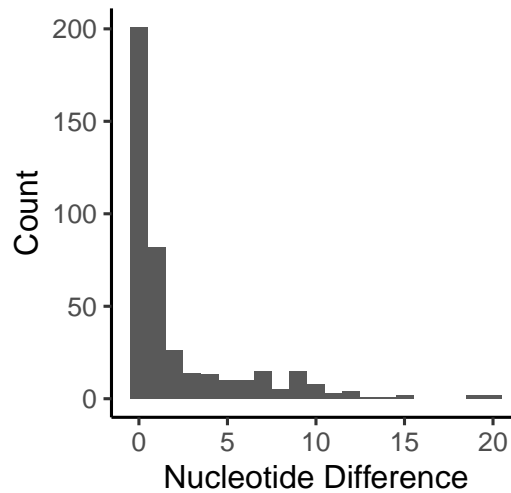
IGHV3-13*05

488 sequences assigned
185 (37.9%) exact matches, in which:
118 unique CDR3
6 unique J



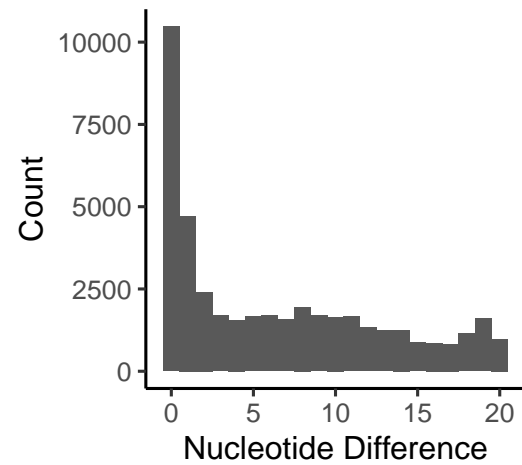
IGHV3-20*01_02

430 sequences assigned
201 (46.7%) exact matches, in which:
127 unique CDR3
6 unique J



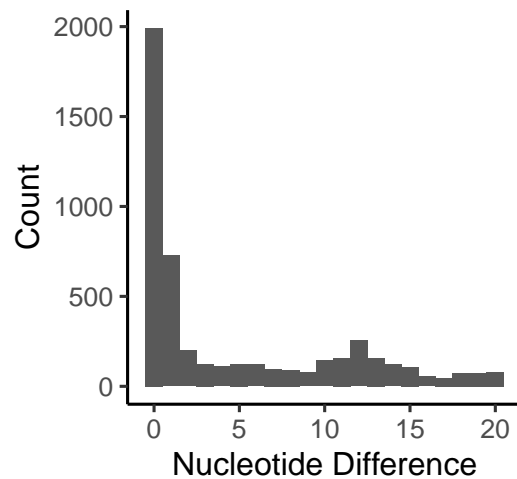
IGHV3-23*01_04

48493 sequences assigned
10476 (21.6%) exact matches, in which:
6835 unique CDR3
7 unique J



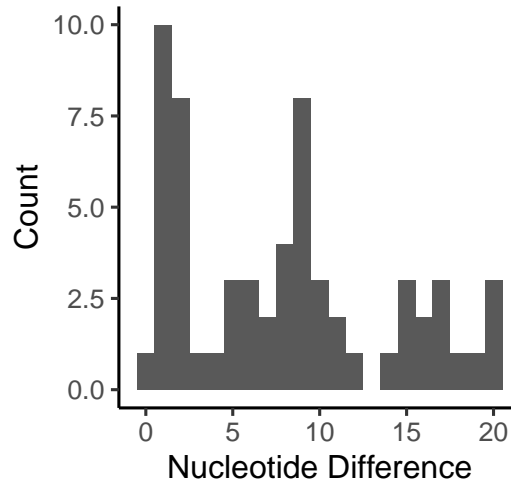
IGHV3-15*01_02

5660 sequences assigned
1992 (35.2%) exact matches, in which:
1461 unique CDR3
7 unique J



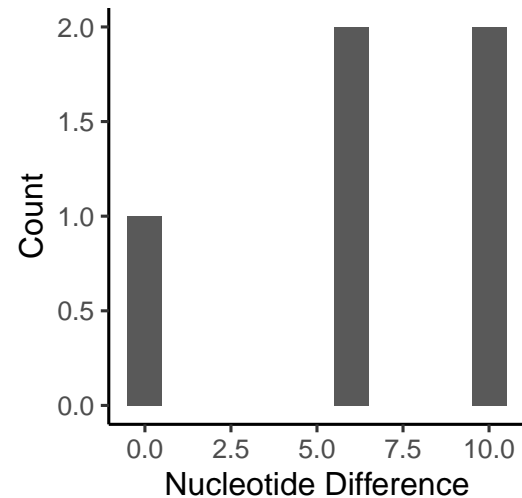
IGHV3-20*03_04

65 sequences assigned
1 (1.5%) exact matches, in which:
1 unique CDR3
1 unique J



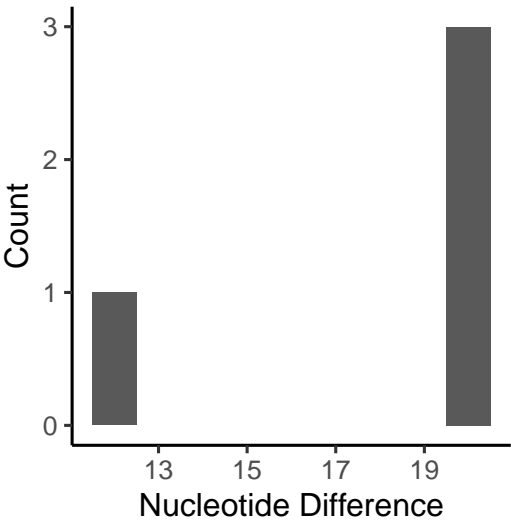
IGHV3-30-3*01

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



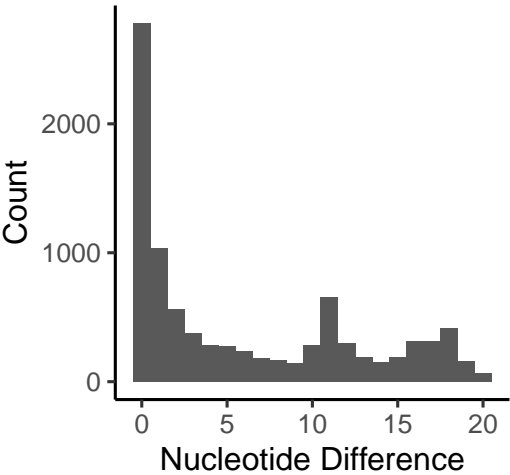
IGHV3-30-3*02

14 sequences assigned
No exact matches.



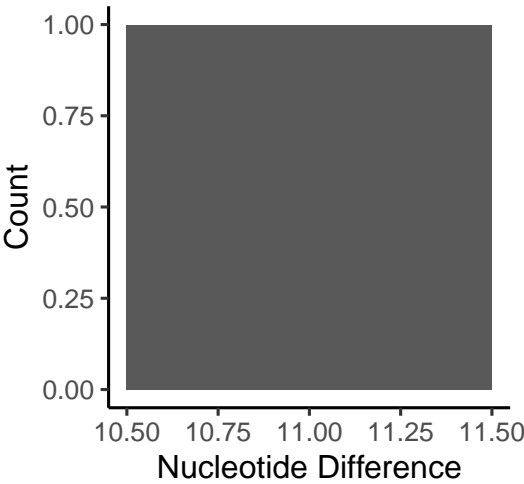
IGHV3-33*08

9588 sequences assigned
2779 (29%) exact matches, in which:
2015 unique CDR3
7 unique J



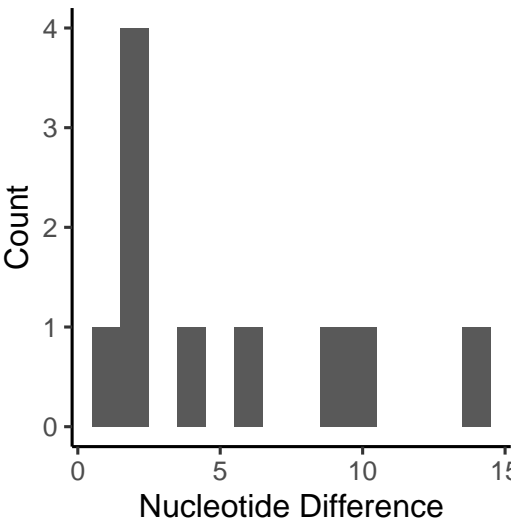
IGHV3-47*01

1 sequences assigned
No exact matches.



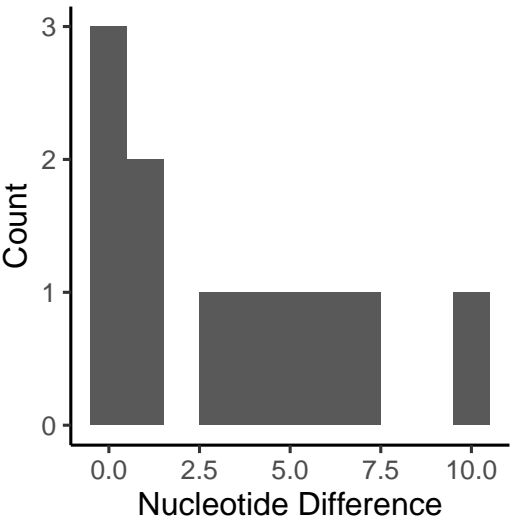
IGHV3-30-3*03

13 sequences assigned
No exact matches.



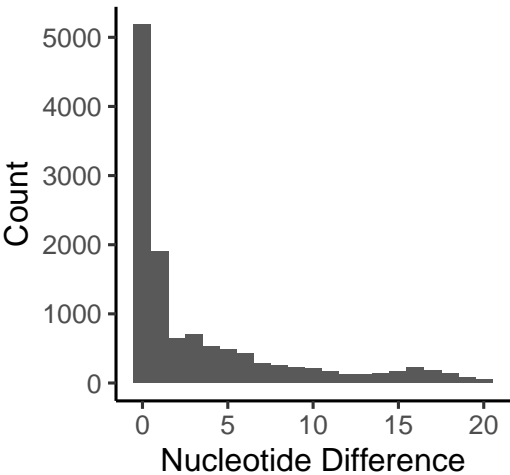
IGHV3-35*01

11 sequences assigned
3 (27.3%) exact matches, in which:
3 unique CDR3
2 unique J



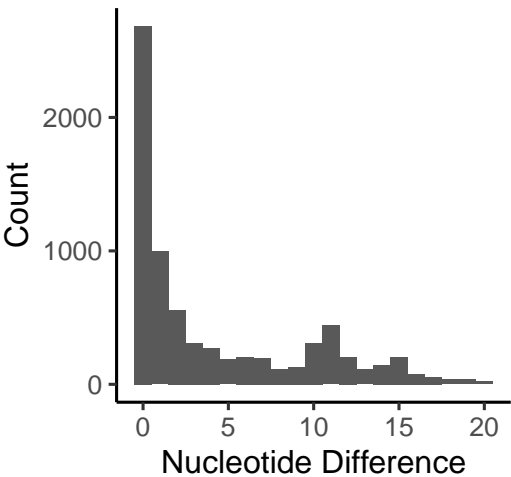
IGHV3-48*03

13205 sequences assigned
5182 (39.2%) exact matches, in which:
3503 unique CDR3
7 unique J



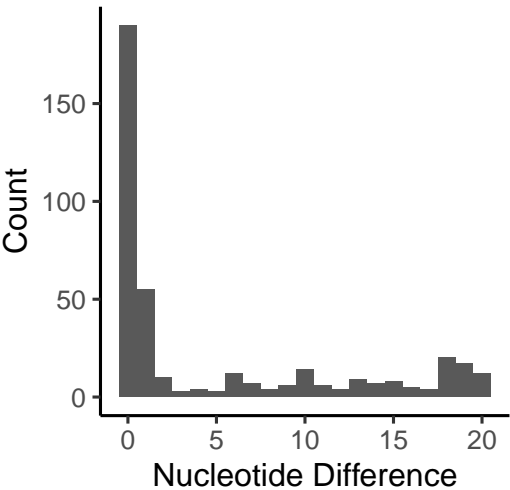
IGHV3-33*01

8461 sequences assigned
2685 (31.7%) exact matches, in which:
1970 unique CDR3
7 unique J



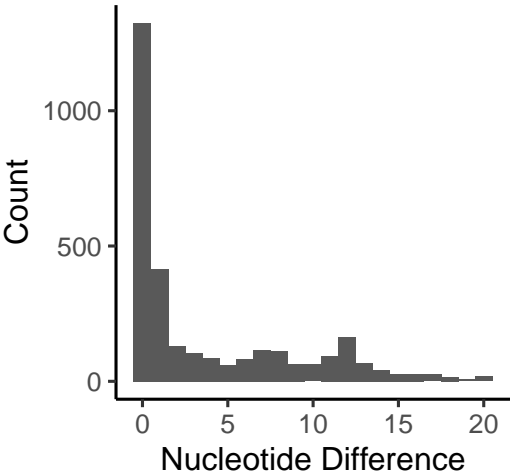
IGHV3-43*01

421 sequences assigned
190 (45.1%) exact matches, in which:
128 unique CDR3
7 unique J



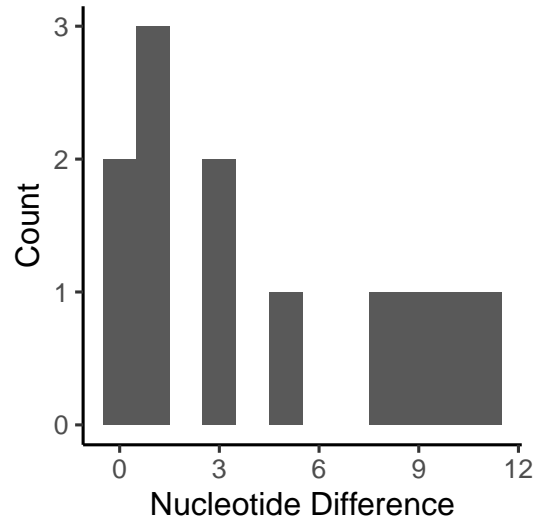
IGHV3-49*04

3136 sequences assigned
1324 (42.2%) exact matches, in which:
943 unique CDR3
7 unique J



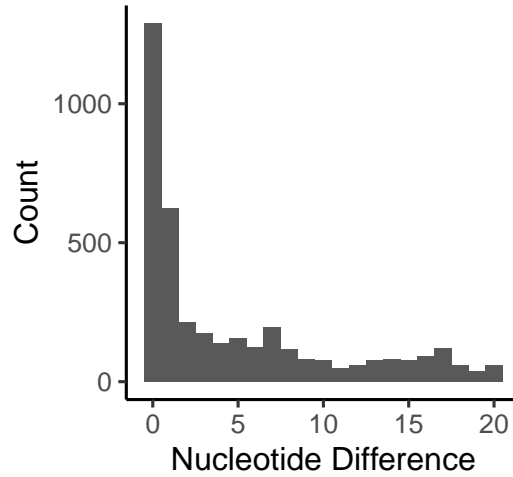
IGHV3-52*01_03

12 sequences assigned
2 (16.7%) exact matches, in which:
2 unique CDR3
1 unique J



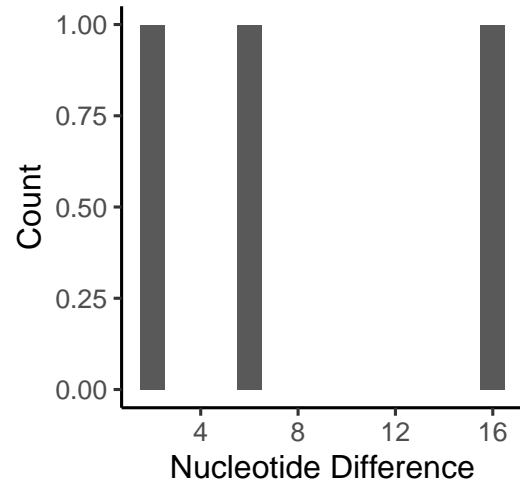
IGHV3-66*01

4641 sequences assigned
1289 (27.8%) exact matches, in which:
893 unique CDR3
7 unique J



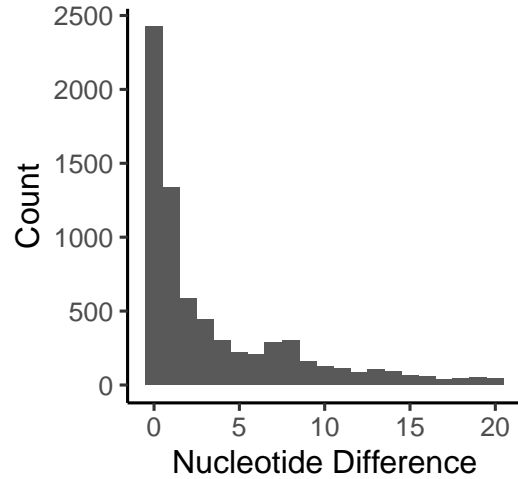
IGHV3-71*03

3 sequences assigned
No exact matches.



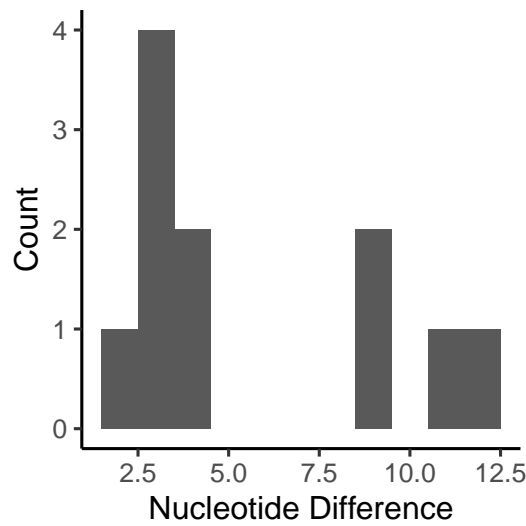
IGHV3-53*01_02

7407 sequences assigned
2424 (32.7%) exact matches, in which:
1652 unique CDR3
7 unique J



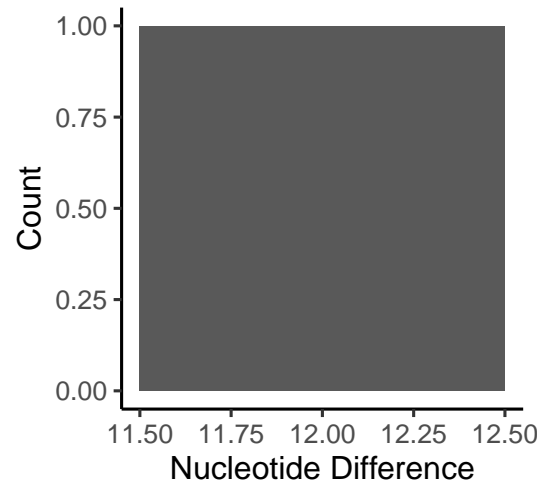
IGHV3-69-1*01

12 sequences assigned
No exact matches.



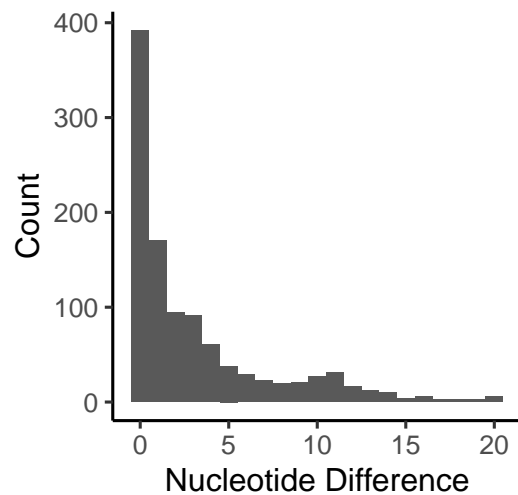
IGHV3-71*01_04

2 sequences assigned
No exact matches.



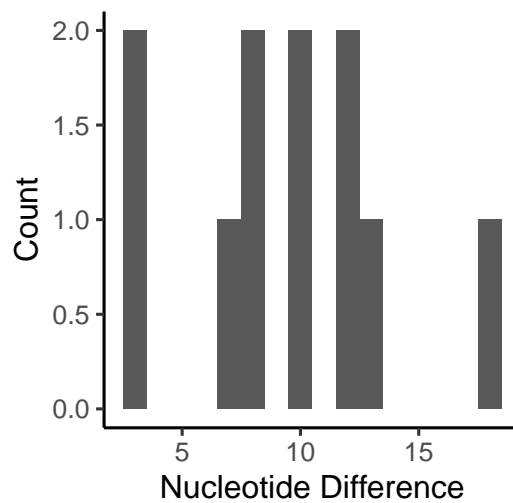
IGHV3-64*01

1117 sequences assigned
392 (35.1%) exact matches, in which:
259 unique CDR3
7 unique J



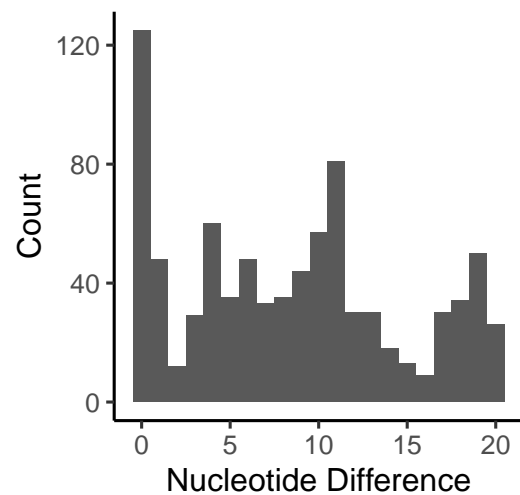
IGHV3-69-1*02

18 sequences assigned
No exact matches.



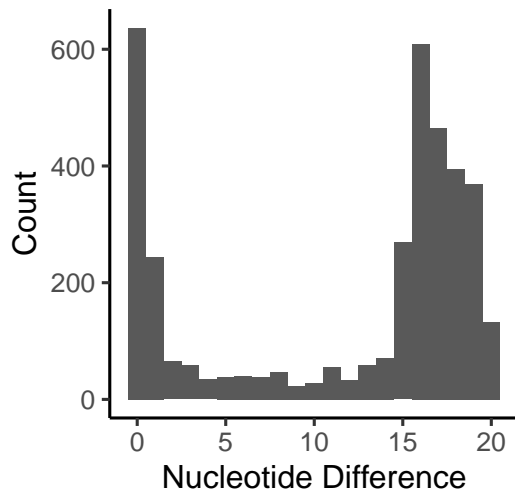
IGHV3-72*01

906 sequences assigned
125 (13.8%) exact matches, in which:
90 unique CDR3
7 unique J



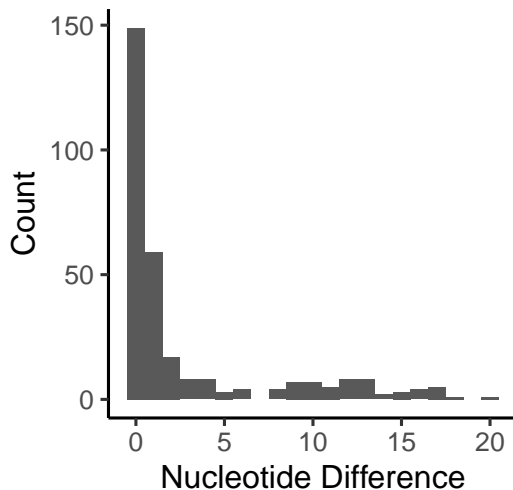
IGHV3-73*01_02

4042 sequences assigned
637 (15.8%) exact matches, in which:
434 unique CDR3
7 unique J



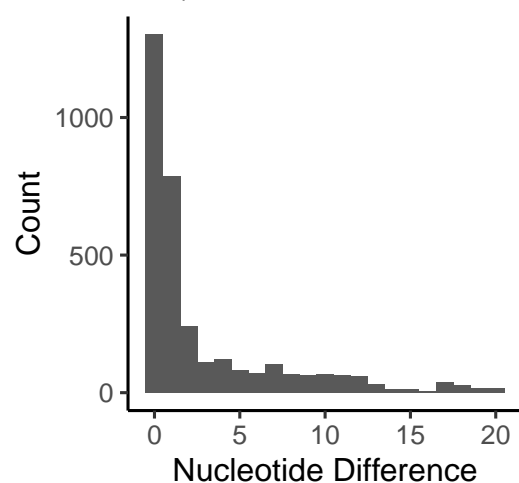
IGHV3-43D*04

327 sequences assigned
149 (45.6%) exact matches, in which:
110 unique CDR3
6 unique J



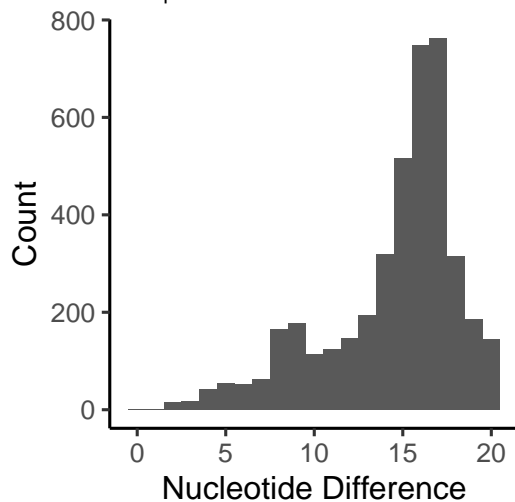
IGHV4-4*07

3376 sequences assigned
1302 (38.6%) exact matches, in which:
1167 unique CDR3
7 unique J



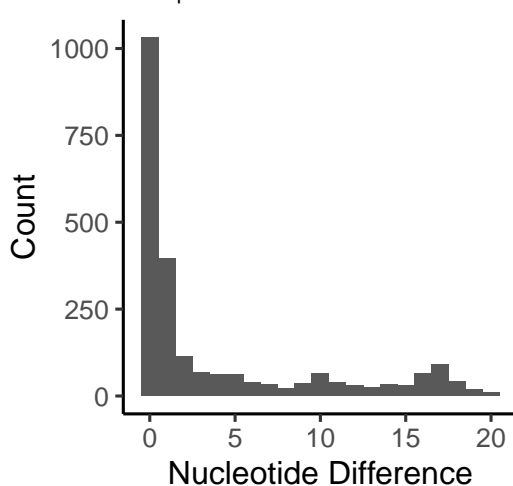
IGHV3-74*03

4472 sequences assigned
2 (0%) exact matches, in which:
2 unique CDR3
1 unique J



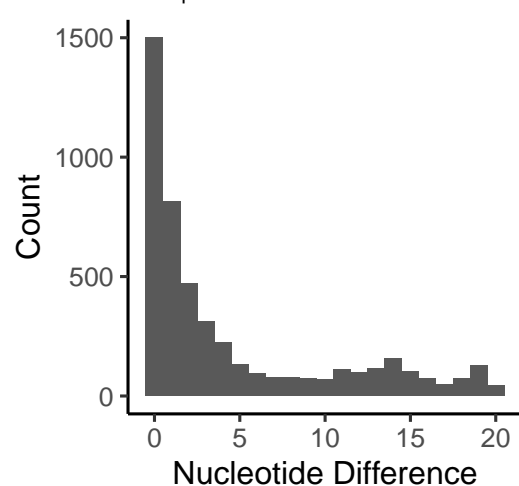
IGHV3-64D*06

2556 sequences assigned
1031 (40.3%) exact matches, in which:
652 unique CDR3
7 unique J



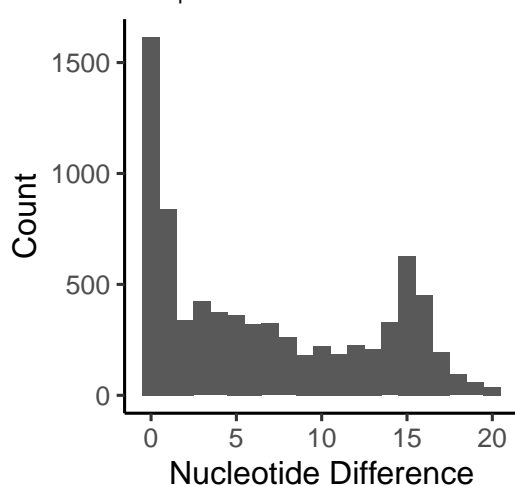
IGHV4-4*02_03

5051 sequences assigned
1500 (29.7%) exact matches, in which:
1363 unique CDR3
7 unique J



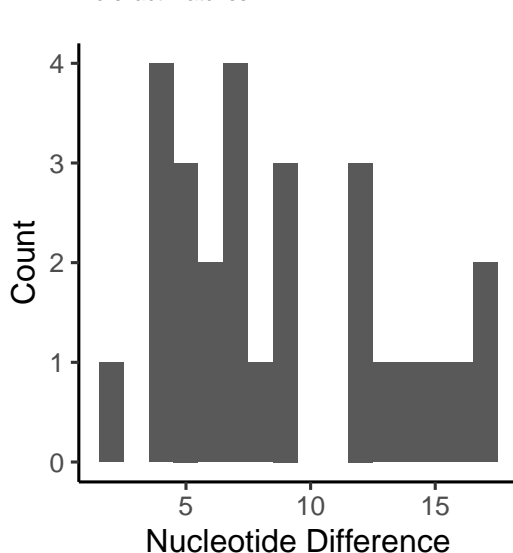
IGHV3-74*01_02

7813 sequences assigned
1615 (20.7%) exact matches, in which:
1061 unique CDR3
7 unique J



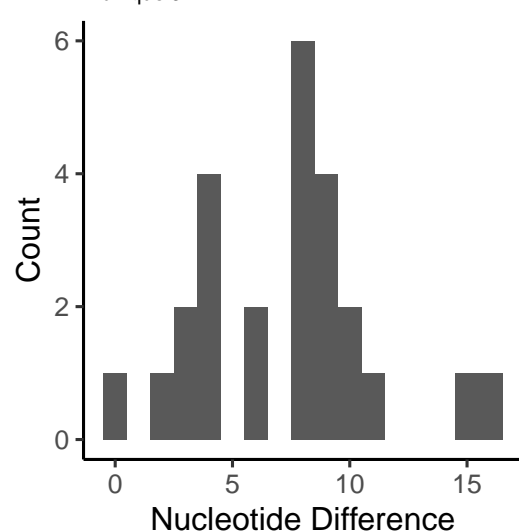
IGHV3-NL1*01

38 sequences assigned
No exact matches.



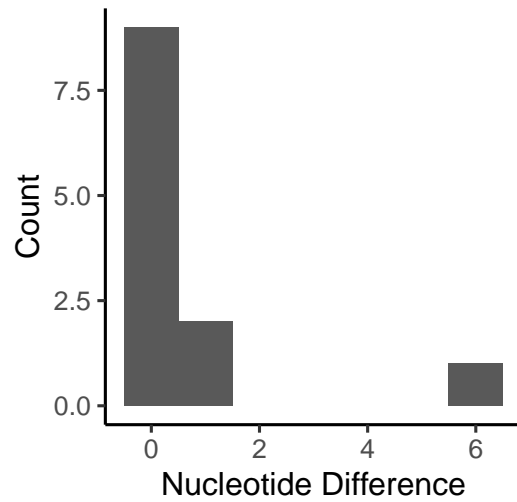
IGHV4-28*03

26 sequences assigned
1 (3.8%) exact matches, in which:
1 unique CDR3
1 unique J



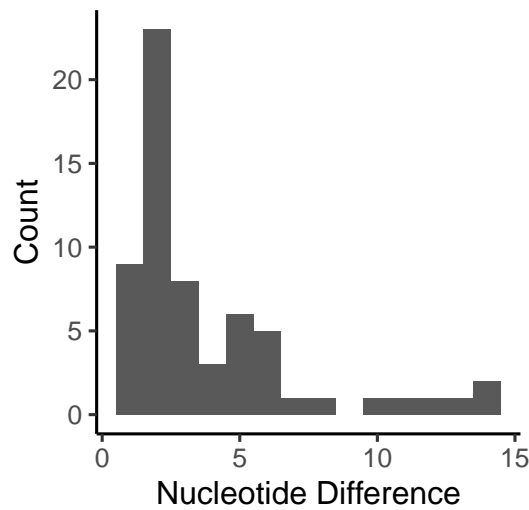
IGHV4-28*01_07

12 sequences assigned
9 (75%) exact matches, in which:
9 unique CDR3
5 unique J



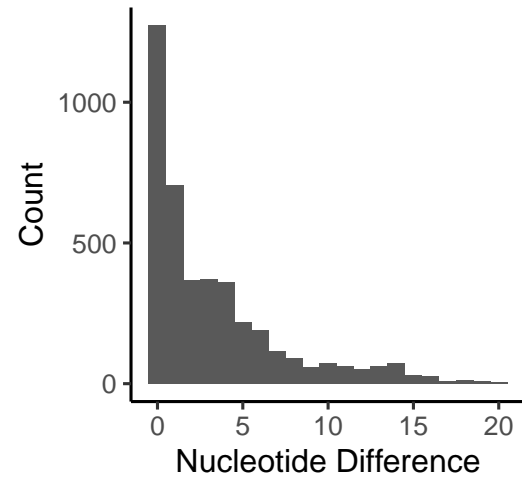
IGHV4-30-2*03

69 sequences assigned
No exact matches.



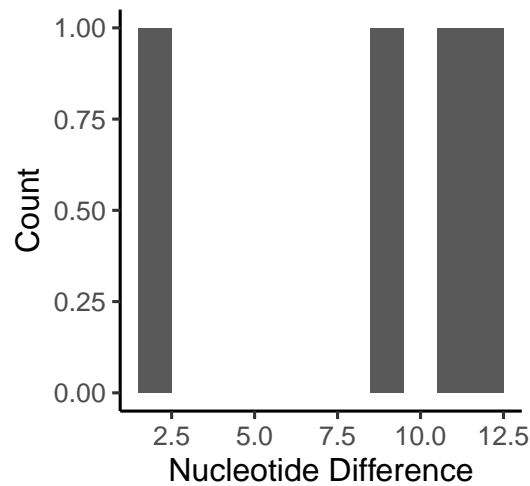
IGHV4-31*02

4450 sequences assigned
1273 (28.6%) exact matches, in which:
1184 unique CDR3
7 unique J



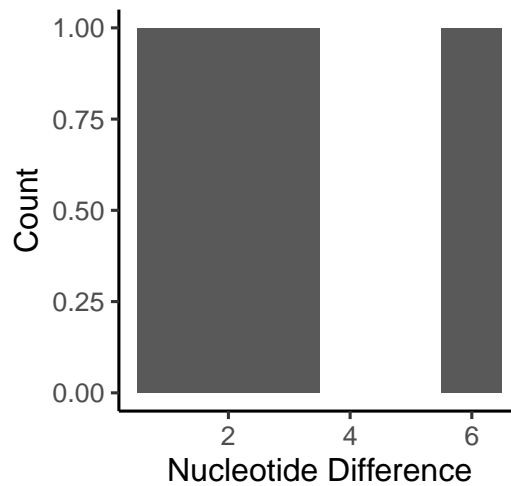
IGHV4-30-2*01

4 sequences assigned
No exact matches.



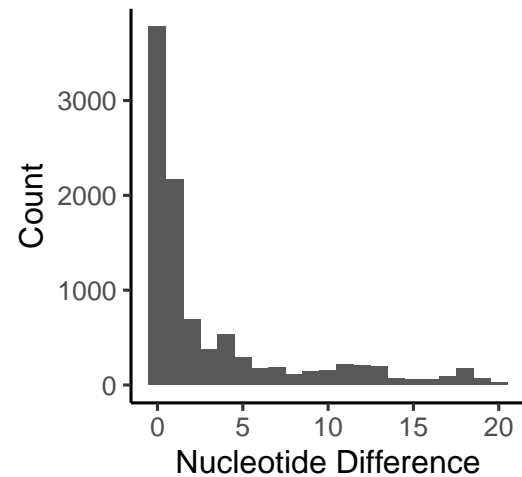
IGHV4-30-2*04

4 sequences assigned
No exact matches.



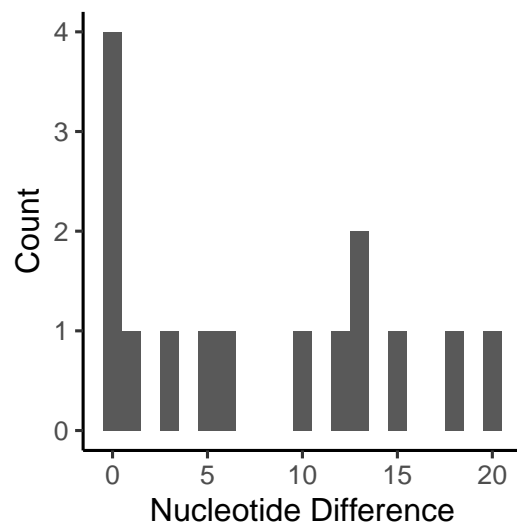
IGHV4-34*01_02

10004 sequences assigned
3778 (37.8%) exact matches, in which:
3326 unique CDR3
7 unique J



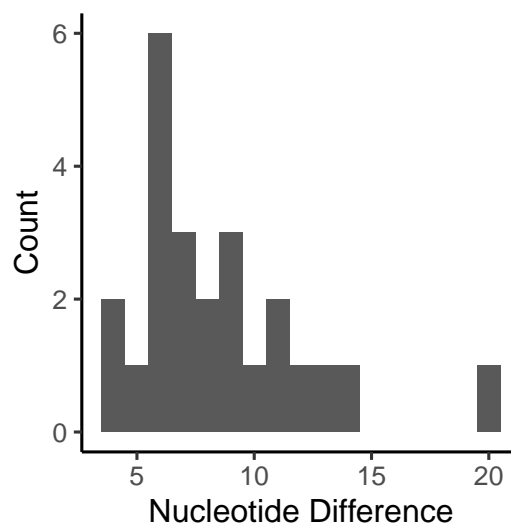
IGHV4-30-4*01

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



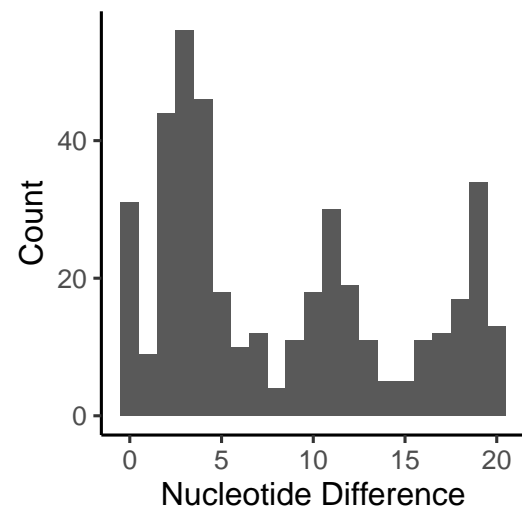
IGHV4-30-4*08

28 sequences assigned
No exact matches.



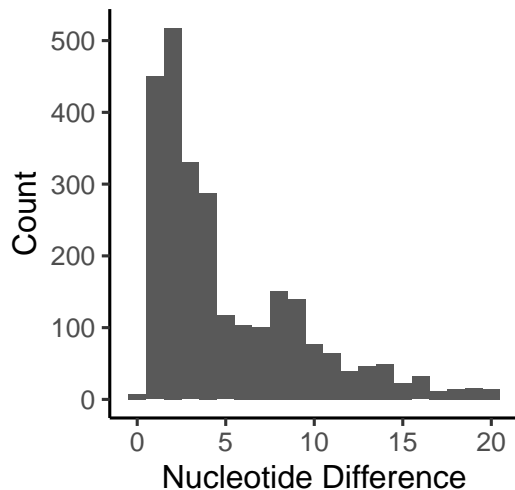
IGHV4-38-2*02

465 sequences assigned
31 (6.7%) exact matches, in which:
31 unique CDR3
6 unique J



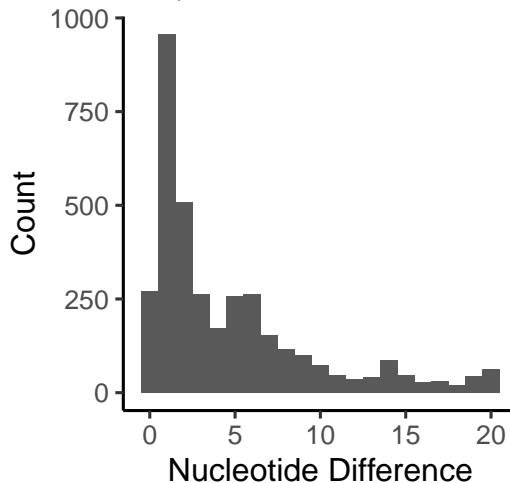
IGHV4–39*07

2870 sequences assigned
8 (0.3%) exact matches, in which:
8 unique CDR3
3 unique J



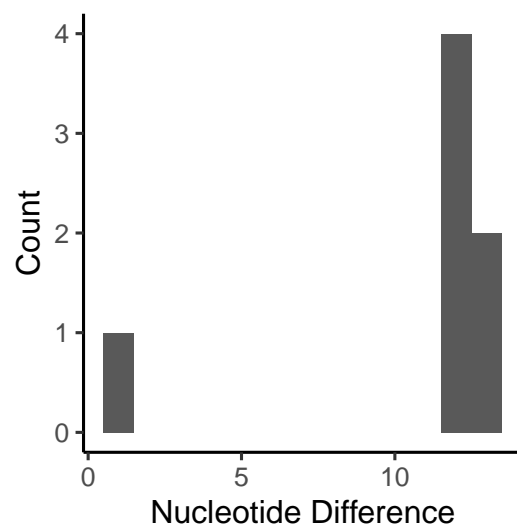
IGHV4–59*12

3725 sequences assigned
270 (7.2%) exact matches, in which:
268 unique CDR3
7 unique J



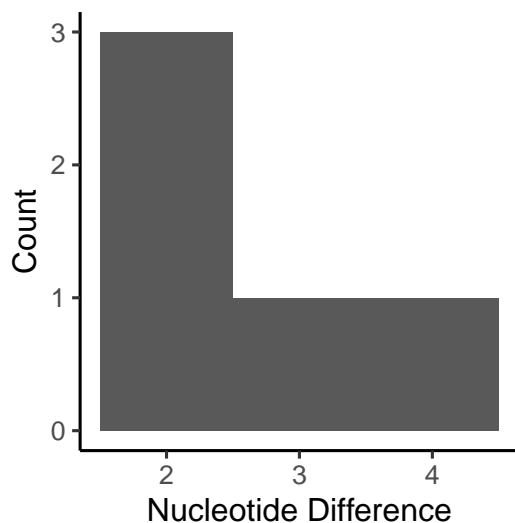
IGHV4/OR15–8*01

8 sequences assigned
No exact matches.



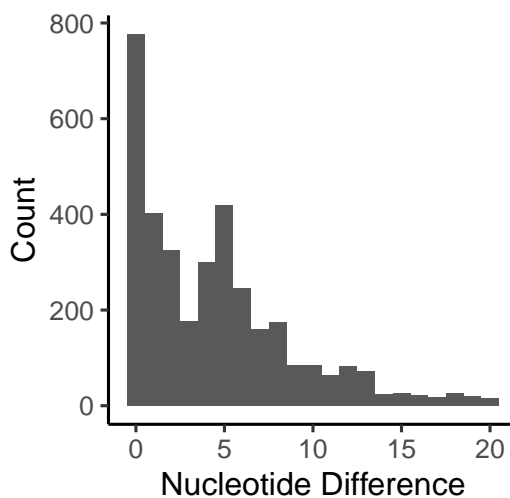
IGHV4–55*09

6 sequences assigned
No exact matches.



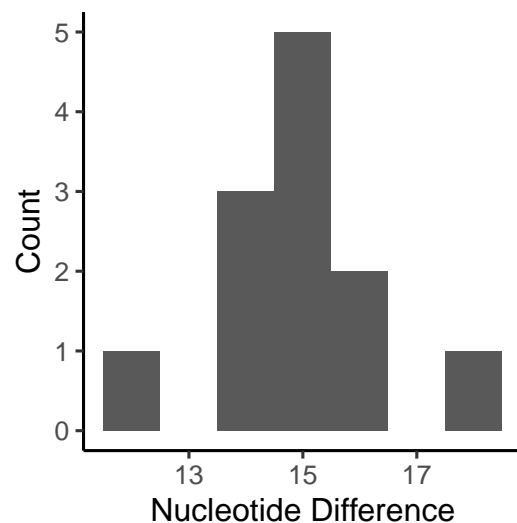
IGHV4–61*01

3560 sequences assigned
777 (21.8%) exact matches, in which:
731 unique CDR3
7 unique J



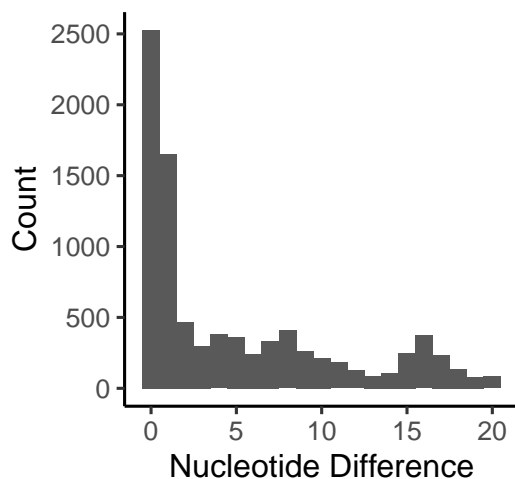
IGHV4/OR15–8*02

15 sequences assigned
No exact matches.



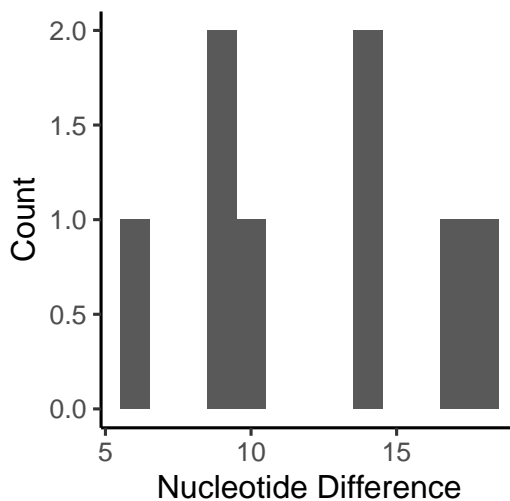
IGHV4–59*08

9641 sequences assigned
2527 (26.2%) exact matches, in which:
2268 unique CDR3
7 unique J



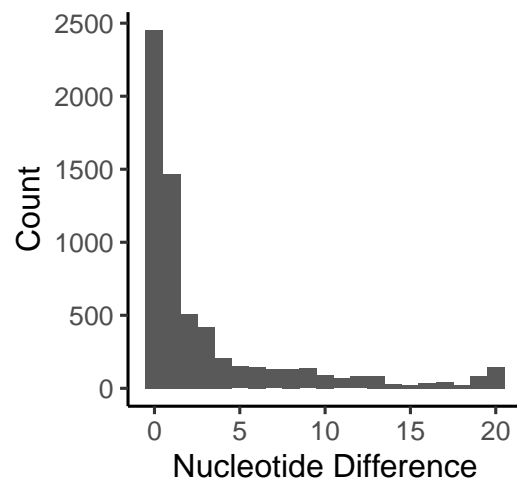
IGHV1/OR15–3*02

8 sequences assigned
No exact matches.



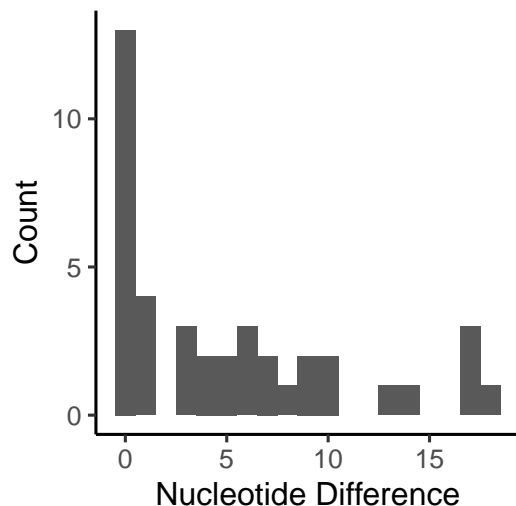
IGHV5–10–1*01_03

6590 sequences assigned
2453 (37.2%) exact matches, in which:
1915 unique CDR3
7 unique J



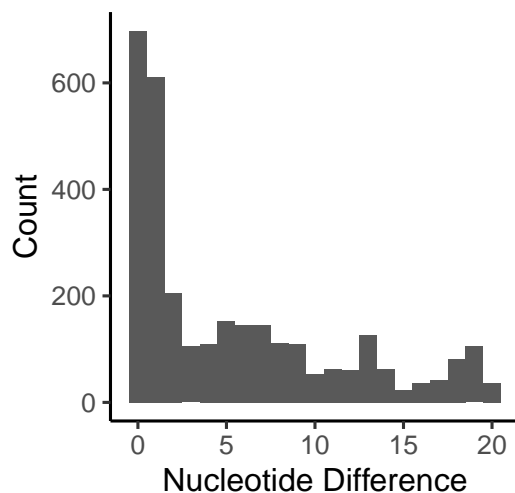
IGHV5–51*04

40 sequences assigned
13 (32.5%) exact matches, in which:
12 unique CDR3
5 unique J



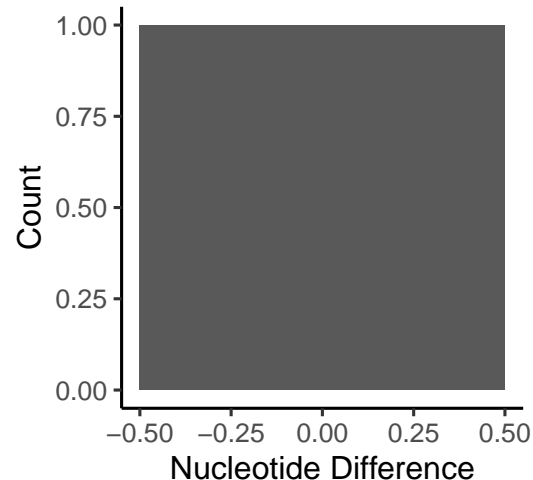
IGHV6–1*01_02

3533 sequences assigned
698 (19.8%) exact matches, in which:
624 unique CDR3
7 unique J



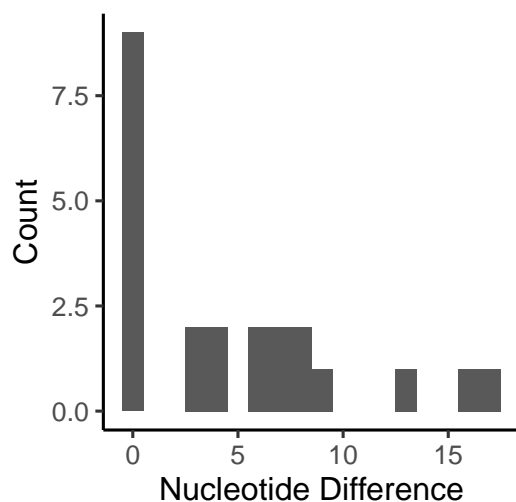
IGHV7–4–1*02

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



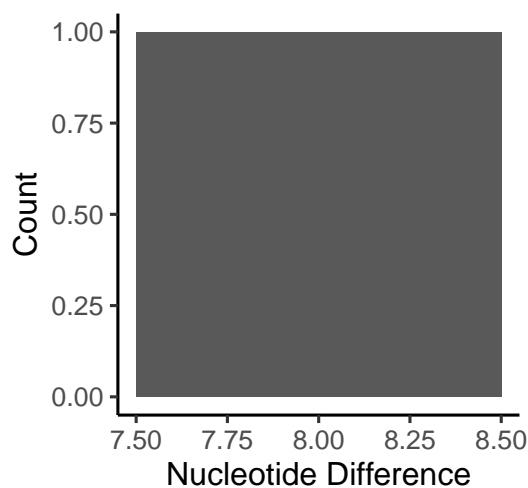
IGHV5–51*06

23 sequences assigned
9 (39.1%) exact matches, in which:
9 unique CDR3
4 unique J



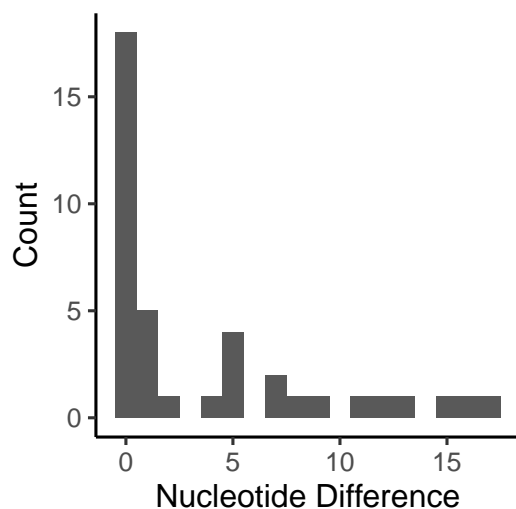
IGHV3/OR16–13*01

1 sequences assigned
No exact matches.



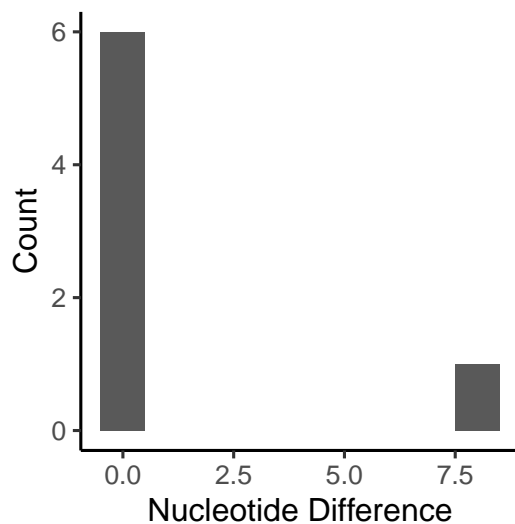
IGHV5–51*07

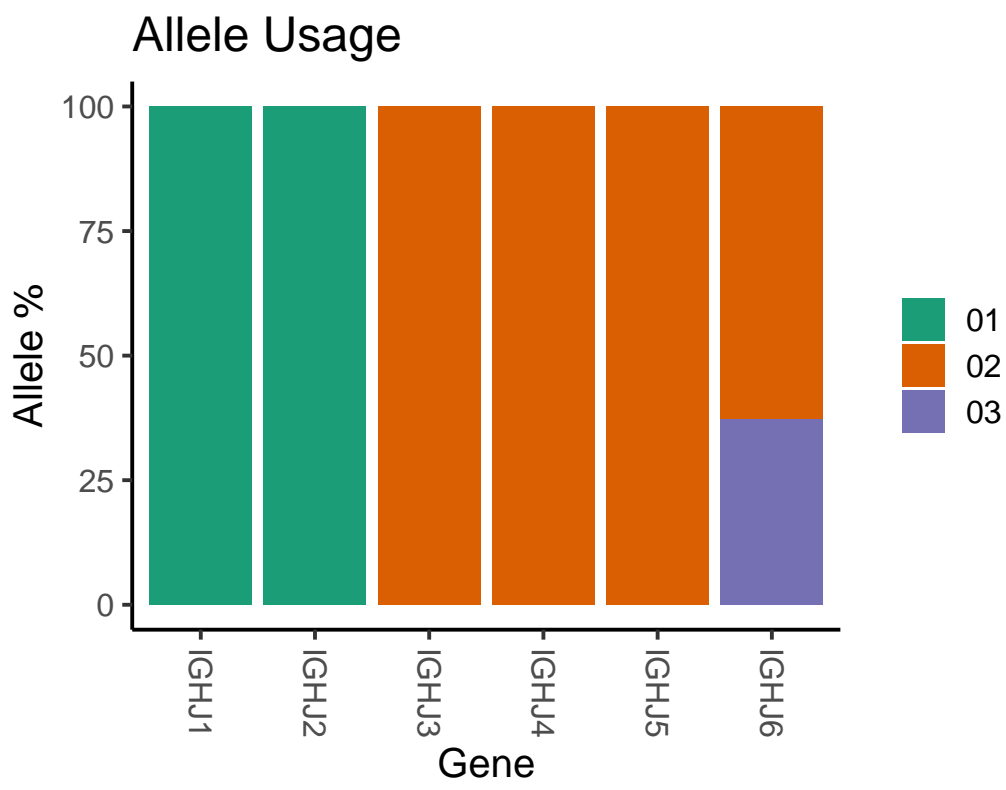
40 sequences assigned
18 (45%) exact matches, in which:
18 unique CDR3
5 unique J



IGHV7–4–1*01

7 sequences assigned
6 (85.7%) exact matches, in which:
6 unique CDR3
4 unique J





Sequence Count by IGHJ6 allele usage



[illegible]