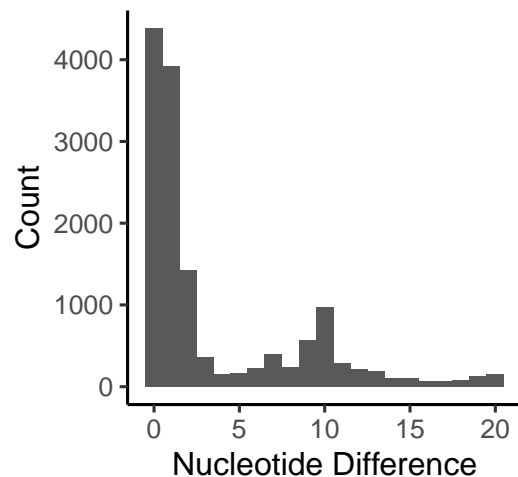


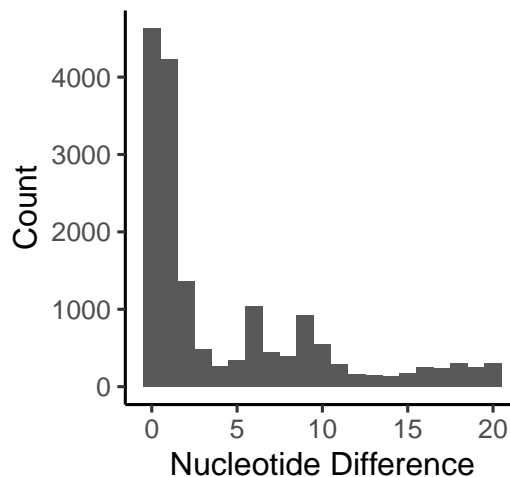
IGHV1-2*02

18492 sequences assigned
4383 (23.7%) exact matches, in which:
3800 unique CDR3
7 unique J



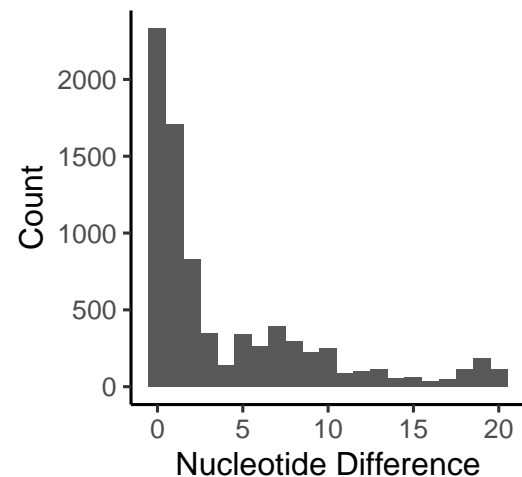
IGHV1-18*01

25278 sequences assigned
4629 (18.3%) exact matches, in which:
3982 unique CDR3
7 unique J



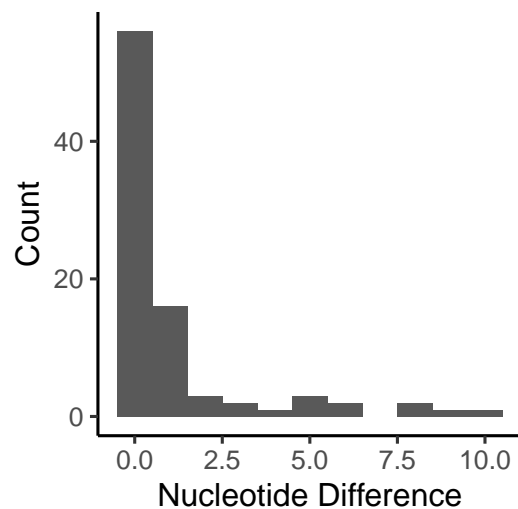
IGHV1-46*01

9802 sequences assigned
2332 (23.8%) exact matches, in which:
2106 unique CDR3
7 unique J



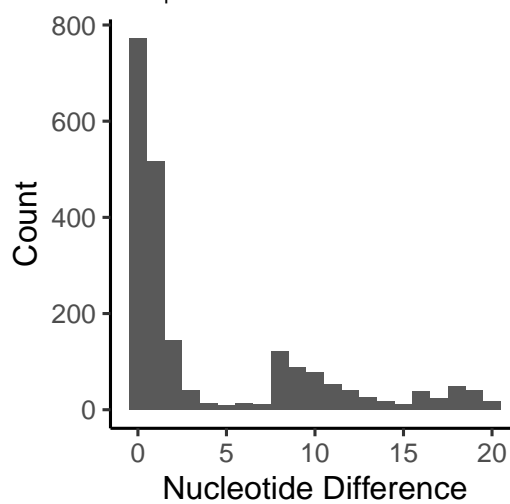
IGHV1-3*02

89 sequences assigned
56 (62.9%) exact matches, in which:
54 unique CDR3
6 unique J



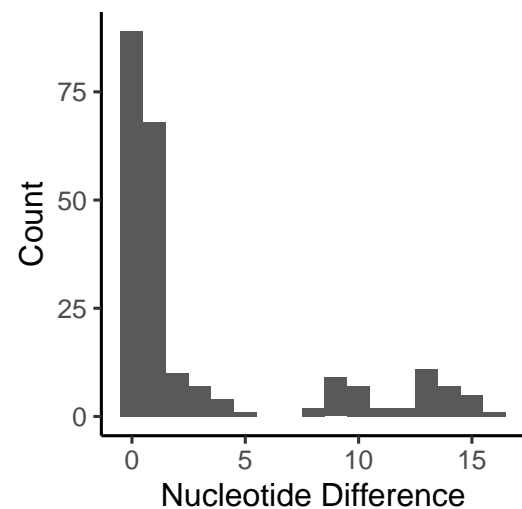
IGHV1-24*01

2324 sequences assigned
773 (33.3%) exact matches, in which:
711 unique CDR3
7 unique J



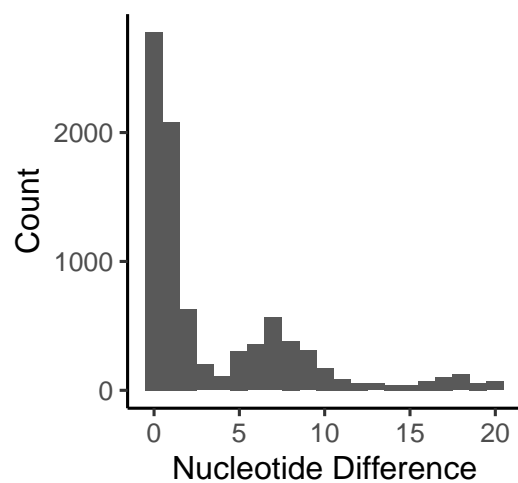
IGHV1-58*02

225 sequences assigned
89 (39.6%) exact matches, in which:
81 unique CDR3
6 unique J



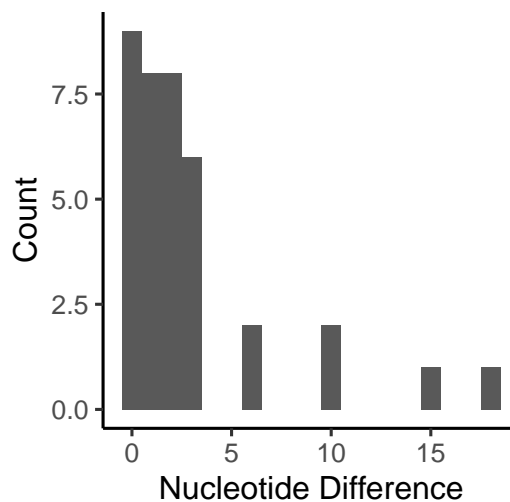
IGHV1-8*01

11145 sequences assigned
2780 (24.9%) exact matches, in which:
2481 unique CDR3
7 unique J



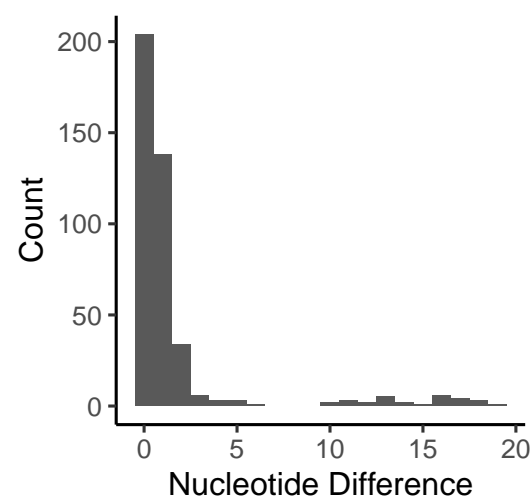
IGHV1-45*02

37 sequences assigned
9 (24.3%) exact matches, in which:
9 unique CDR3
2 unique J



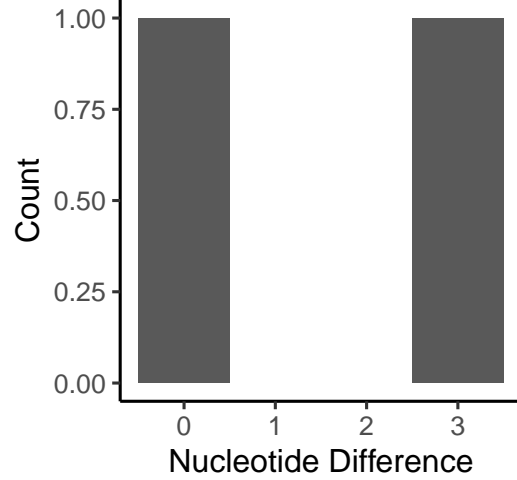
IGHV1-58*01_03

457 sequences assigned
204 (44.6%) exact matches, in which:
169 unique CDR3
6 unique J



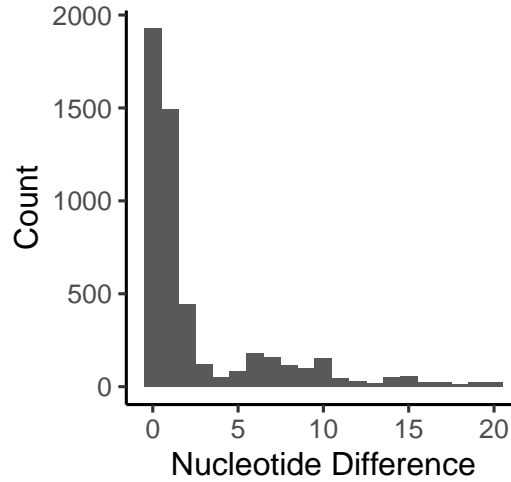
IGHV1-68*01

2 sequences assigned
1 (50%) exact matches, in which:
1 unique CDR3
1 unique J



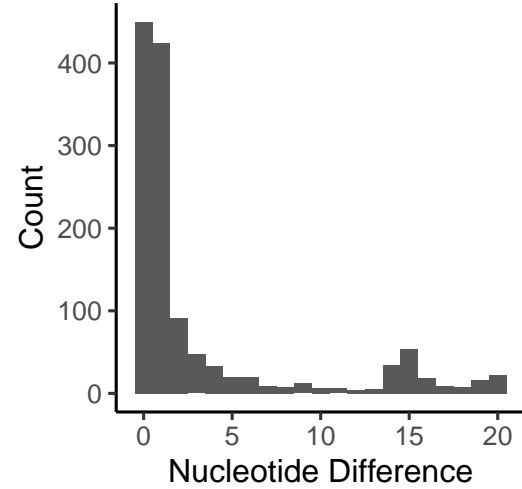
IGHV1-69*04_09

6947 sequences assigned
1928 (27.8%) exact matches, in which:
1792 unique CDR3
7 unique J



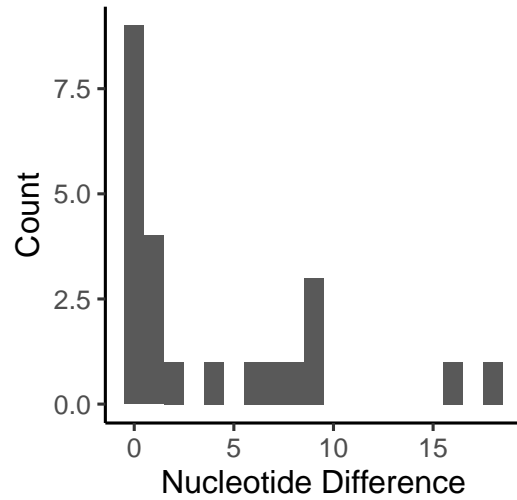
IGHV2-5*01

1946 sequences assigned
450 (23.1%) exact matches, in which:
384 unique CDR3
6 unique J



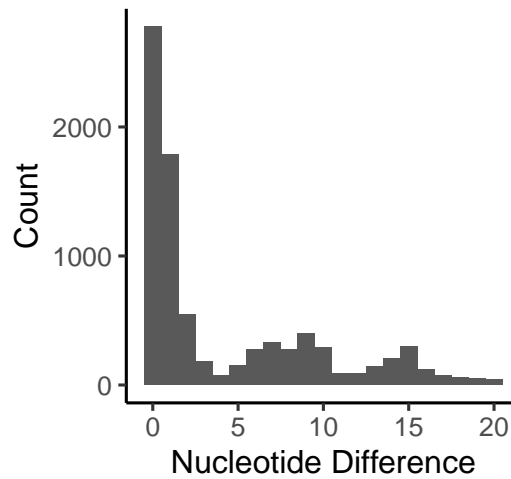
IGHV1-69-2*01

44 sequences assigned
9 (20.5%) exact matches, in which:
9 unique CDR3
3 unique J



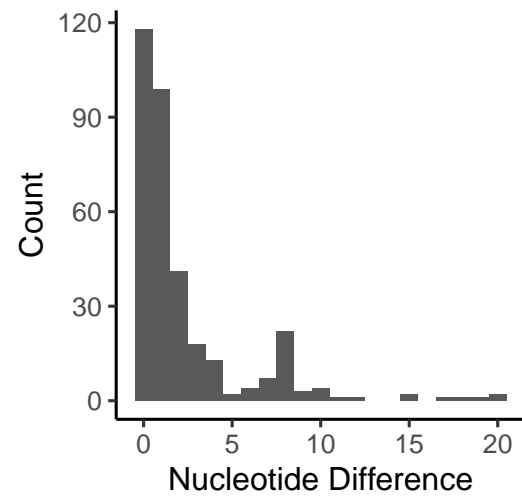
IGHV1-69*06_14

8861 sequences assigned
2777 (31.3%) exact matches, in which:
2559 unique CDR3
7 unique J



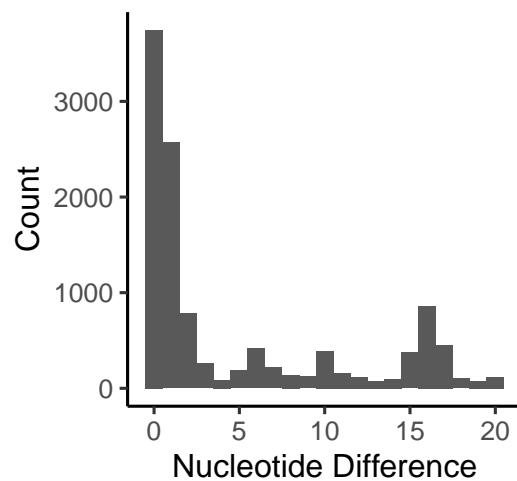
IGHV2-26*01

347 sequences assigned
118 (34%) exact matches, in which:
99 unique CDR3
5 unique J



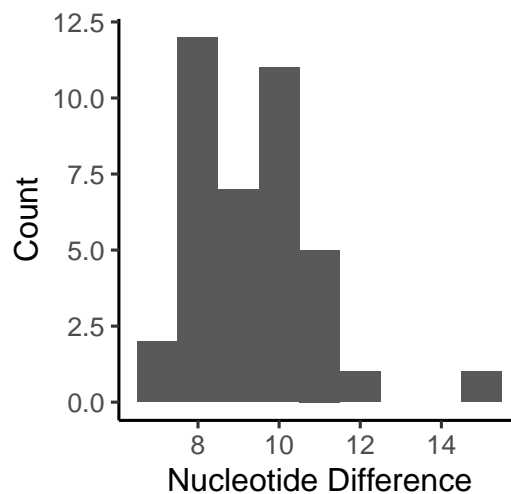
IGHV1-69*01_12_13

13477 sequences assigned
3746 (27.8%) exact matches, in which:
3393 unique CDR3
7 unique J



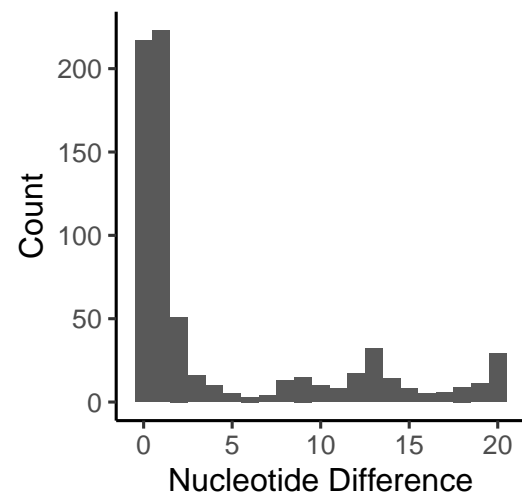
IGHV1-NL1*01

40 sequences assigned
No exact matches.



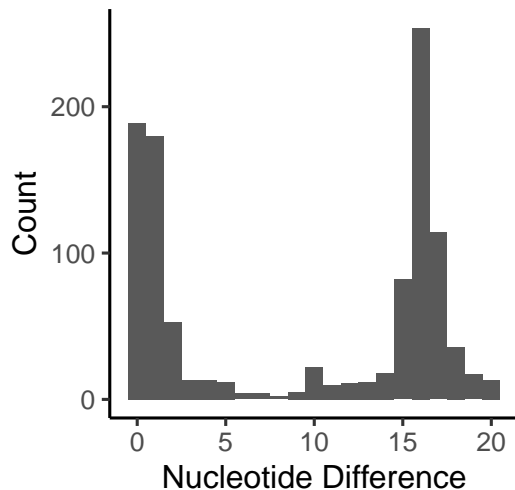
IGHV2-70*01

1518 sequences assigned
217 (14.3%) exact matches, in which:
182 unique CDR3
6 unique J



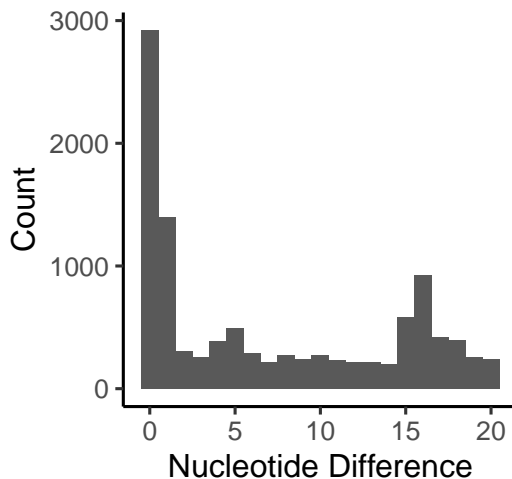
IGHV2-70*11_15

1104 sequences assigned
189 (17.1%) exact matches, in which:
156 unique CDR3
6 unique J



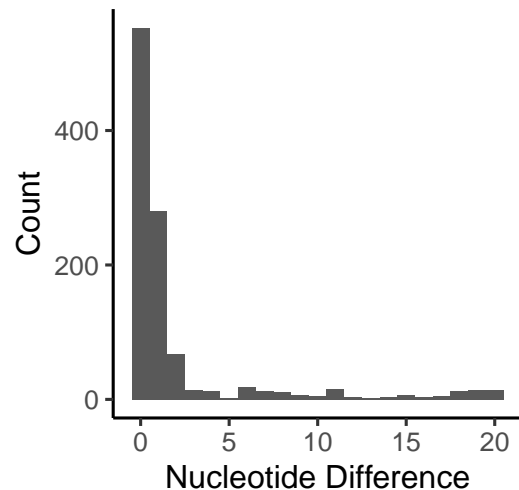
IGHV3-9*01

13267 sequences assigned
2920 (22%) exact matches, in which:
1795 unique CDR3
7 unique J



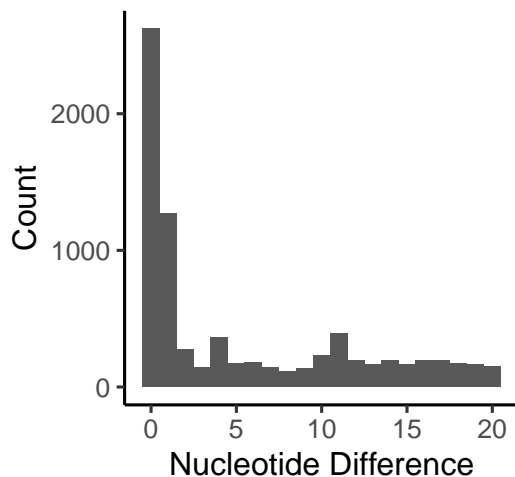
IGHV3-13*01

1113 sequences assigned
553 (49.7%) exact matches, in which:
374 unique CDR3
7 unique J



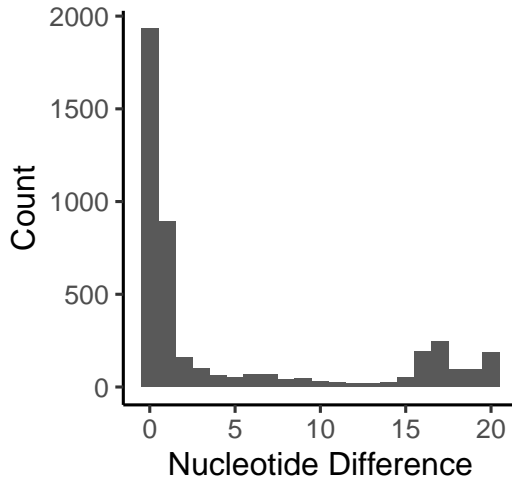
IGHV3-7*01

11505 sequences assigned
2622 (22.8%) exact matches, in which:
1798 unique CDR3
7 unique J



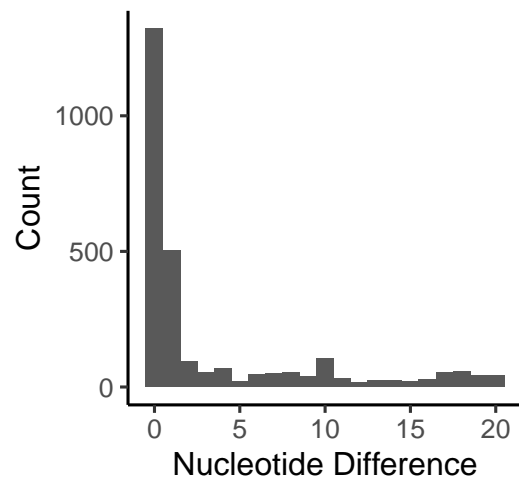
IGHV3-11*01

5866 sequences assigned
1932 (32.9%) exact matches, in which:
1294 unique CDR3
7 unique J



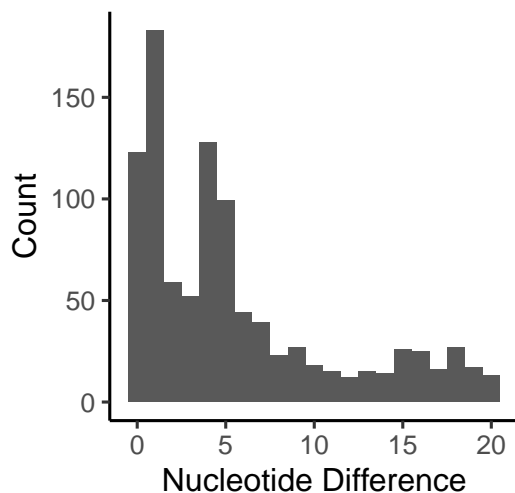
IGHV3-15*01_02

4313 sequences assigned
1321 (30.6%) exact matches, in which:
852 unique CDR3
7 unique J



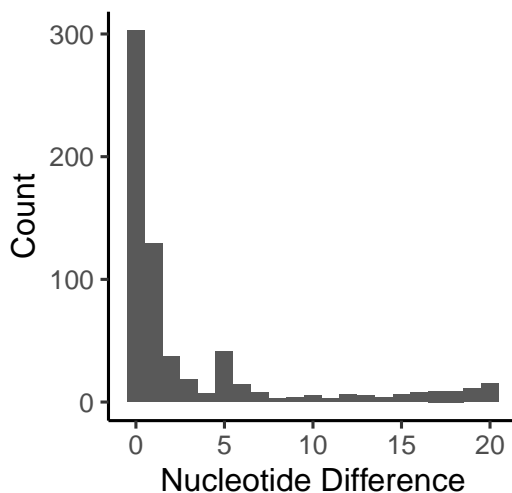
IGHV3-7*03

1283 sequences assigned
123 (9.6%) exact matches, in which:
116 unique CDR3
7 unique J



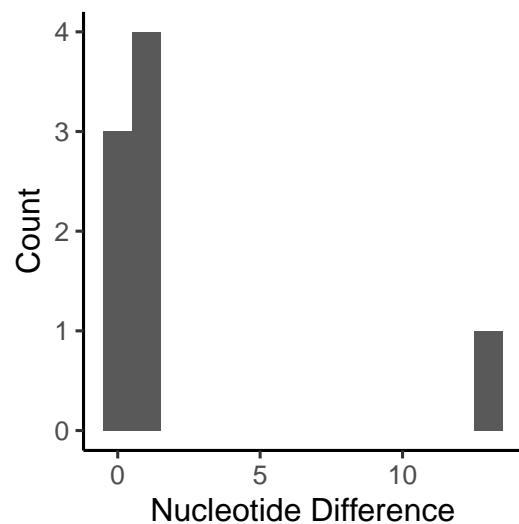
IGHV3-11*04

727 sequences assigned
303 (41.7%) exact matches, in which:
297 unique CDR3
7 unique J



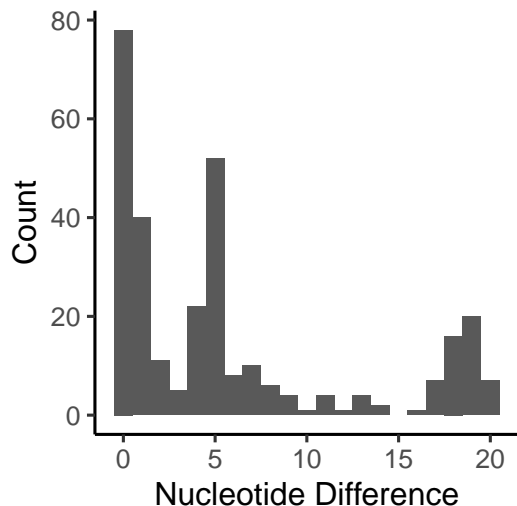
IGHV3-19*01

8 sequences assigned
3 (37.5%) exact matches, in which:
2 unique CDR3
2 unique J



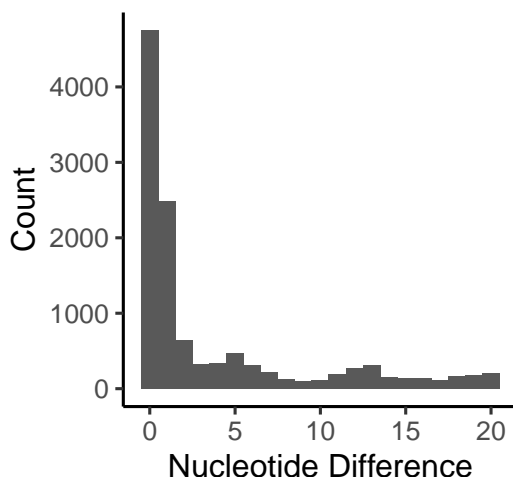
IGHV3-20*01_02

397 sequences assigned
78 (19.6%) exact matches, in which:
46 unique CDR3
6 unique J



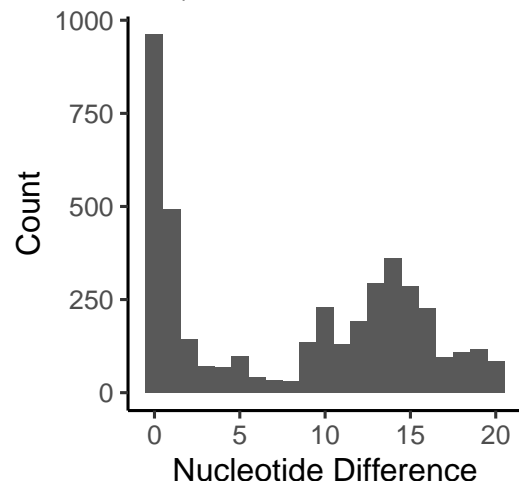
IGHV3-21*01_02

16229 sequences assigned
4749 (29.3%) exact matches, in which:
3077 unique CDR3
7 unique J



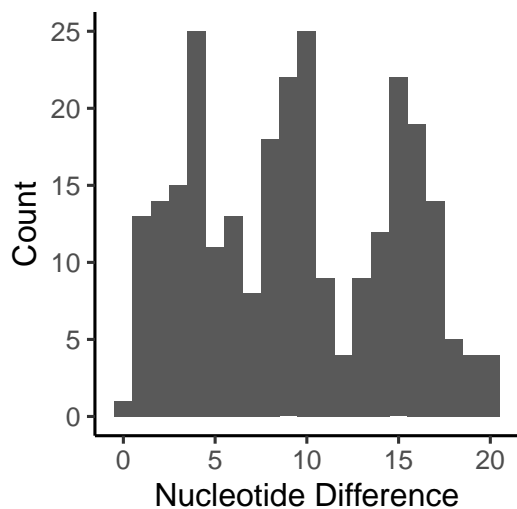
IGHV3-30*03

4888 sequences assigned
962 (19.7%) exact matches, in which:
658 unique CDR3
7 unique J



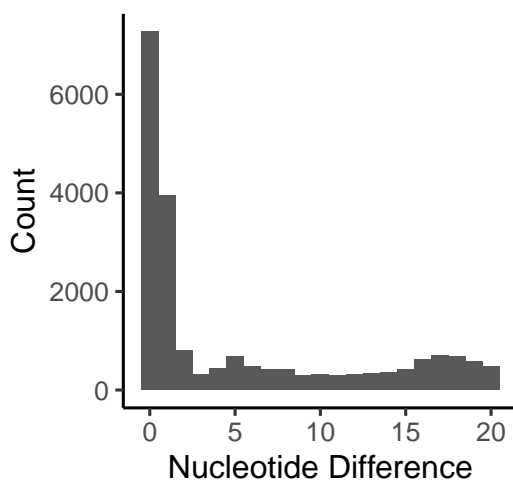
IGHV3-20*03_04

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



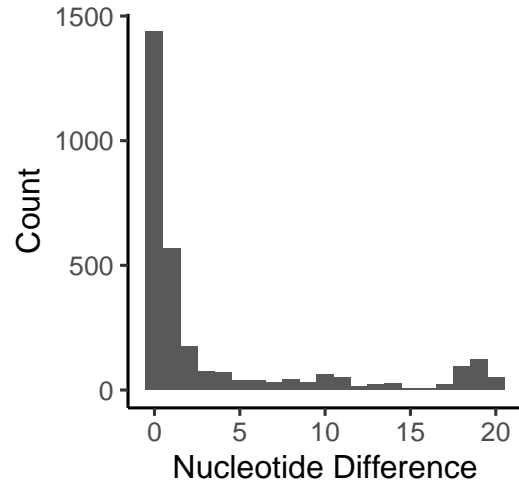
IGHV3-23*01_04

29601 sequences assigned
7270 (24.6%) exact matches, in which:
4263 unique CDR3
7 unique J



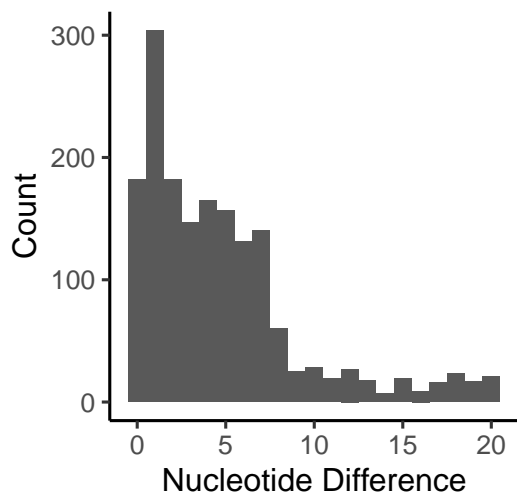
IGHV3-33*01

4431 sequences assigned
1437 (32.4%) exact matches, in which:
1051 unique CDR3
7 unique J



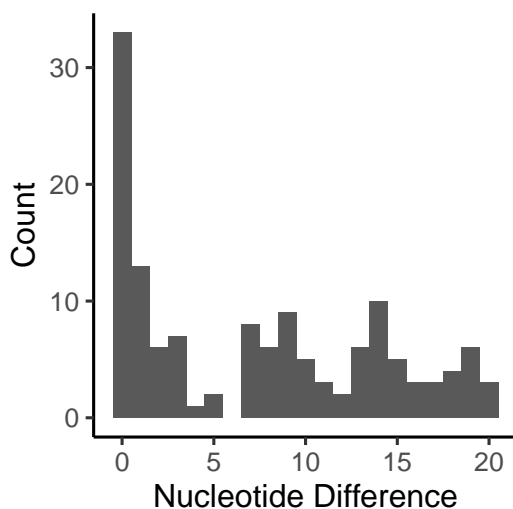
IGHV3-21*04

2076 sequences assigned
182 (8.8%) exact matches, in which:
177 unique CDR3
7 unique J



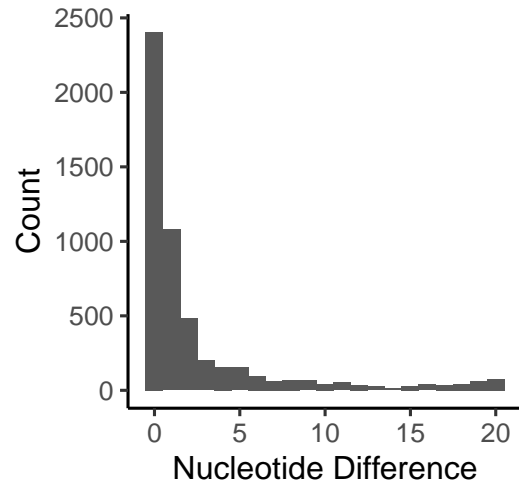
IGHV3-30-5*01

364 sequences assigned
33 (9.1%) exact matches, in which:
32 unique CDR3
5 unique J



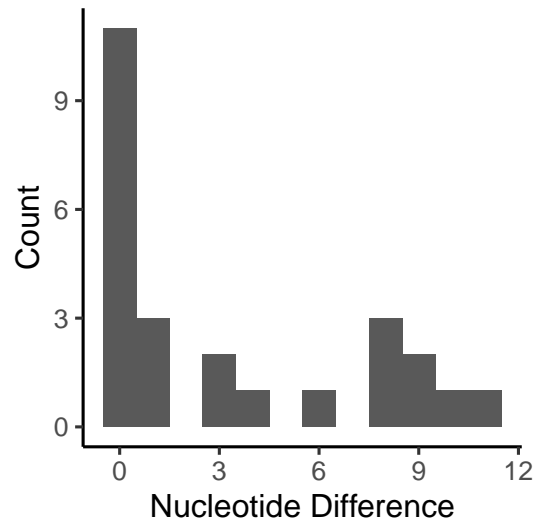
IGHV3-33*08

8031 sequences assigned
2405 (29.9%) exact matches, in which:
1704 unique CDR3
7 unique J



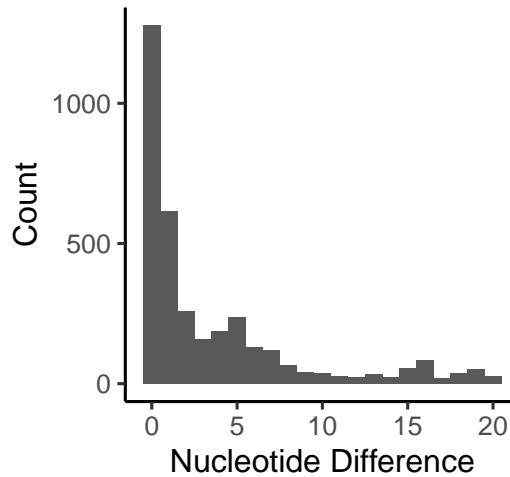
IGHV3–35*01

25 sequences assigned
11 (44%) exact matches, in which:
11 unique CDR3
4 unique J



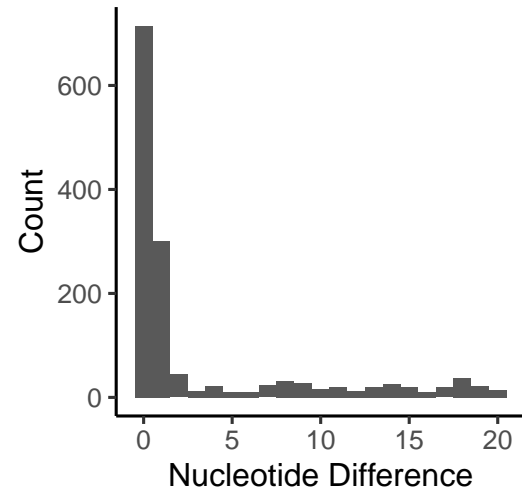
IGHV3–48*01

3722 sequences assigned
1278 (34.3%) exact matches, in which:
924 unique CDR3
7 unique J



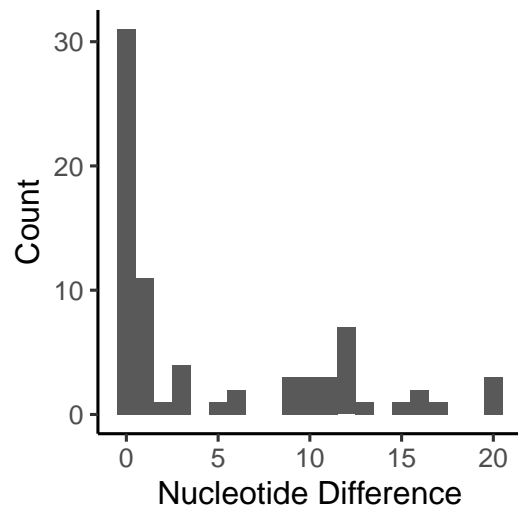
IGHV3–49*03_05

2574 sequences assigned
715 (27.8%) exact matches, in which:
450 unique CDR3
7 unique J



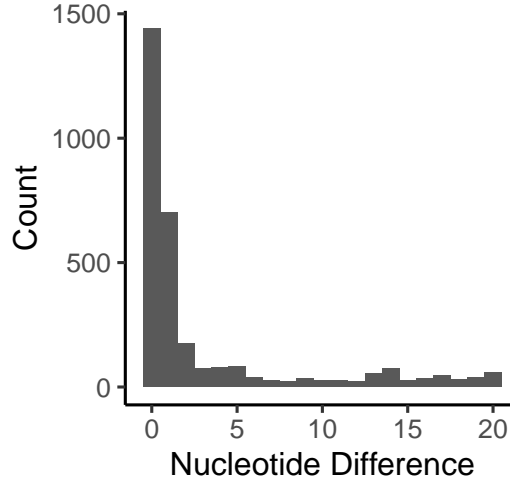
IGHV3–43*01

368 sequences assigned
31 (8.4%) exact matches, in which:
22 unique CDR3
4 unique J



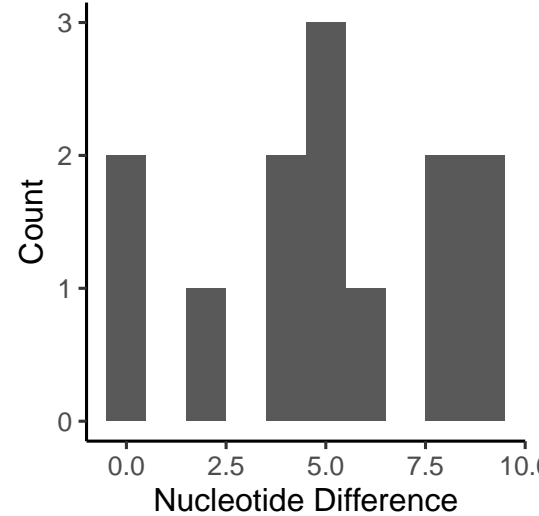
IGHV3–48*02

4079 sequences assigned
1440 (35.3%) exact matches, in which:
904 unique CDR3
7 unique J



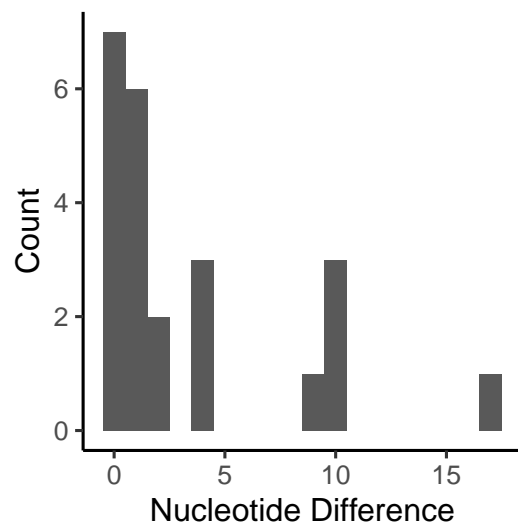
IGHV3–52*02

13 sequences assigned
2 (15.4%) exact matches, in which:
1 unique CDR3
1 unique J



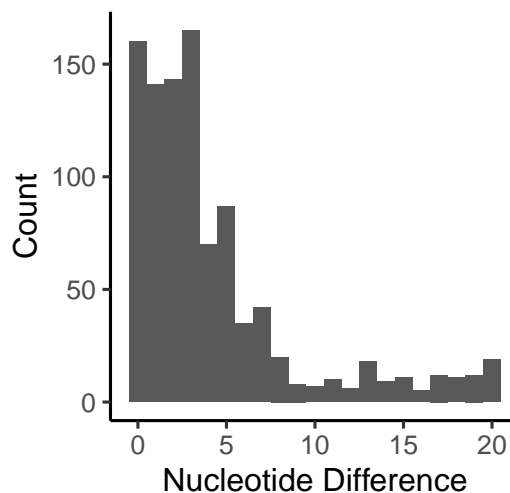
IGHV3–47*02

23 sequences assigned
7 (30.4%) exact matches, in which:
3 unique CDR3
2 unique J



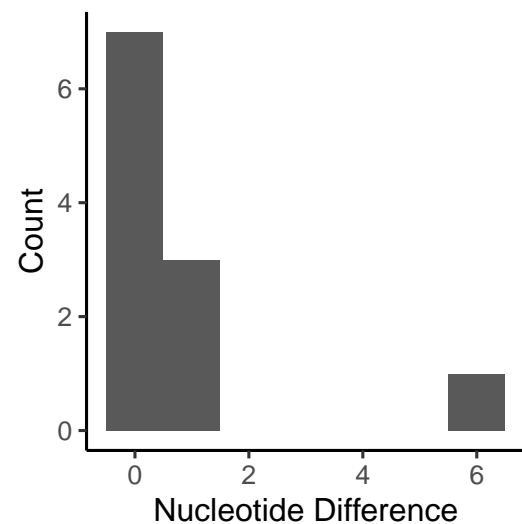
IGHV3–48*04

1165 sequences assigned
160 (13.7%) exact matches, in which:
156 unique CDR3
7 unique J



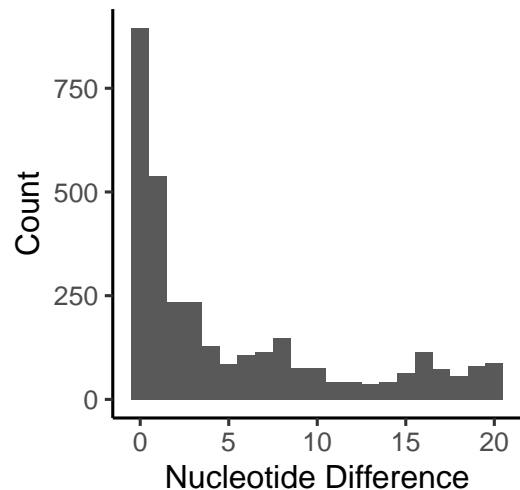
IGHV3–52*01_03

11 sequences assigned
7 (63.6%) exact matches, in which:
6 unique CDR3
3 unique J



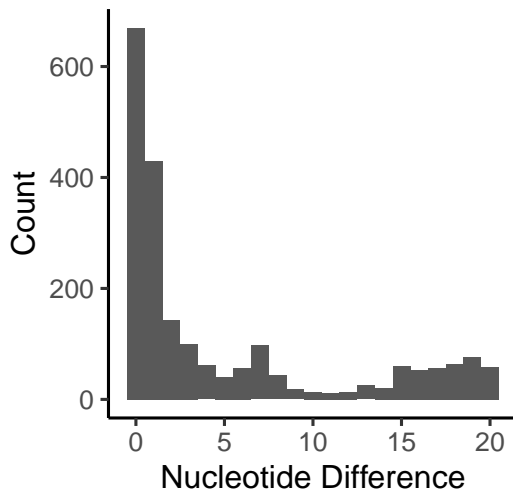
IGHV3-53*01_02

5181 sequences assigned
896 (17.3%) exact matches, in which:
585 unique CDR3
7 unique J



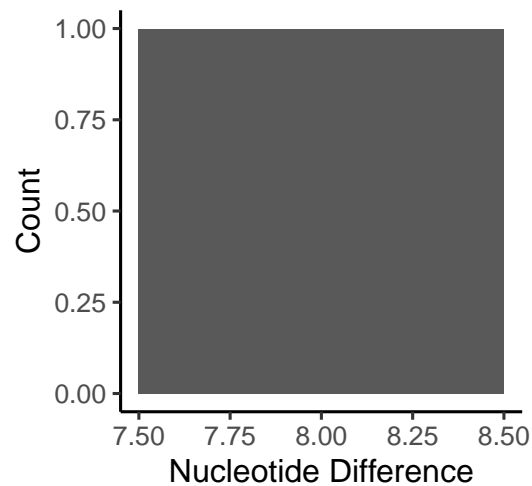
IGHV3-66*01

3280 sequences assigned
670 (20.4%) exact matches, in which:
453 unique CDR3
7 unique J



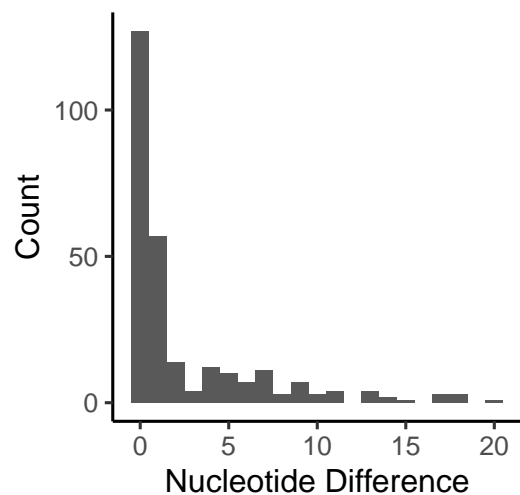
IGHV3-71*01_04

1 sequences assigned
No exact matches.



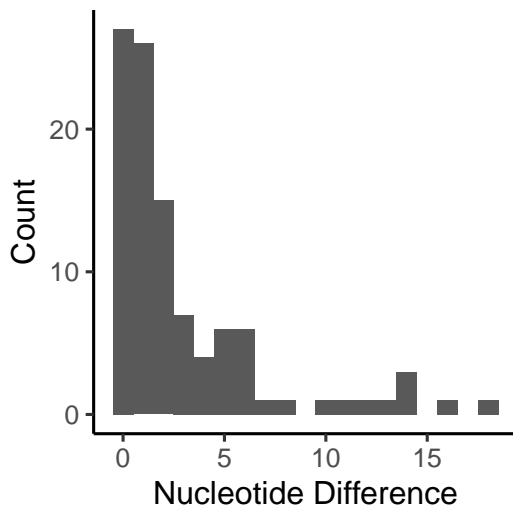
IGHV3-64*01

294 sequences assigned
127 (43.2%) exact matches, in which:
75 unique CDR3
5 unique J



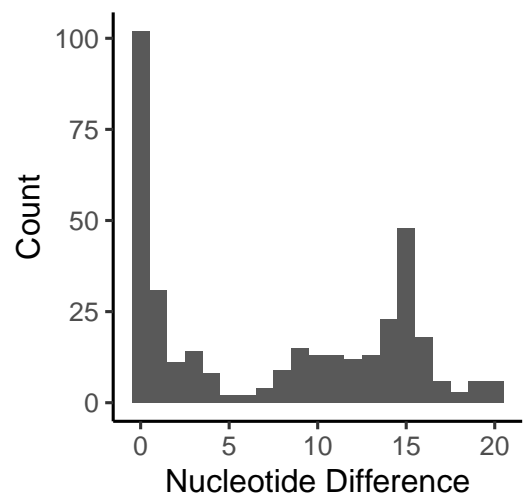
IGHV3-69-1*01

115 sequences assigned
27 (23.5%) exact matches, in which:
24 unique CDR3
5 unique J



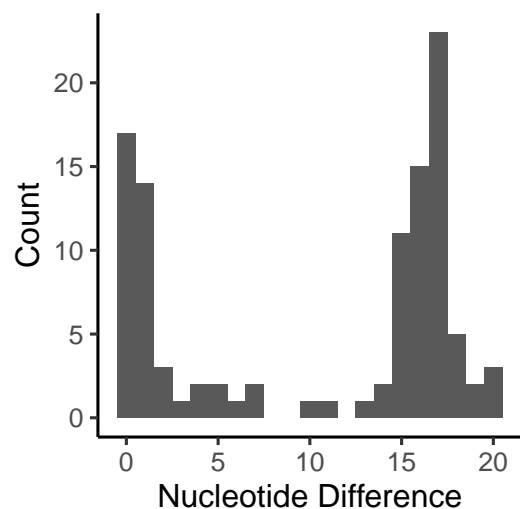
IGHV3-72*01

727 sequences assigned
102 (14%) exact matches, in which:
65 unique CDR3
6 unique J



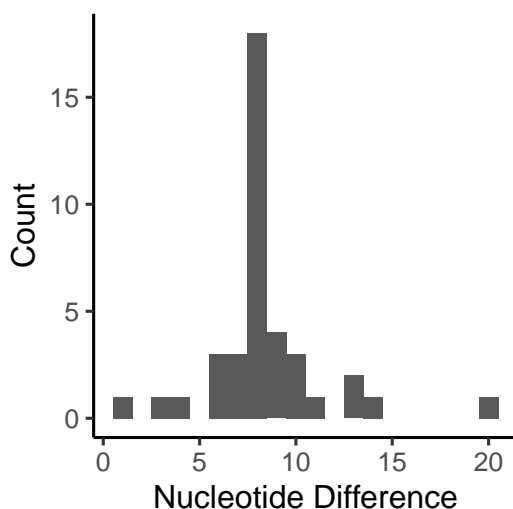
IGHV3-64*02_07

112 sequences assigned
17 (15.2%) exact matches, in which:
11 unique CDR3
4 unique J



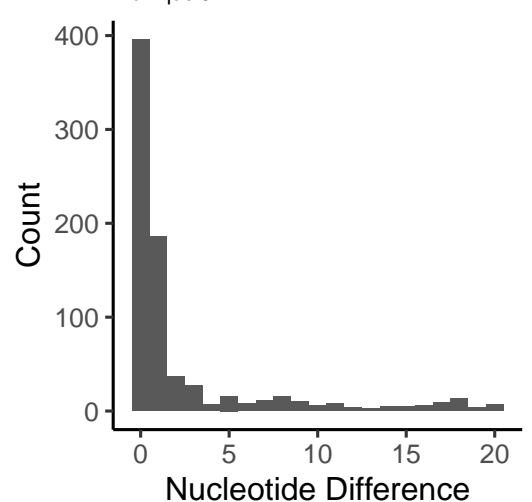
IGHV3-69-1*02

55 sequences assigned
No exact matches.



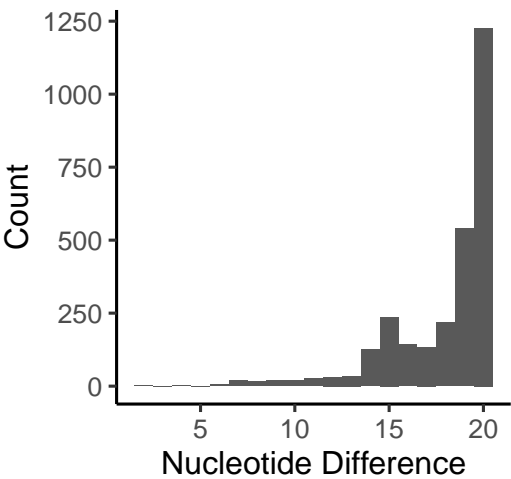
IGHV3-73*01_02

968 sequences assigned
396 (40.9%) exact matches, in which:
260 unique CDR3
7 unique J



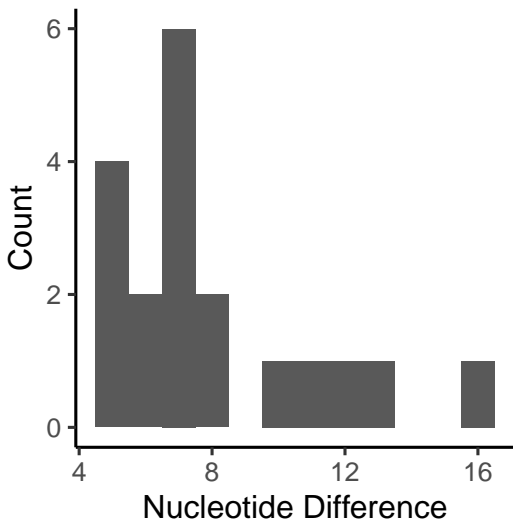
IGHV3–74*03

8693 sequences assigned
No exact matches.



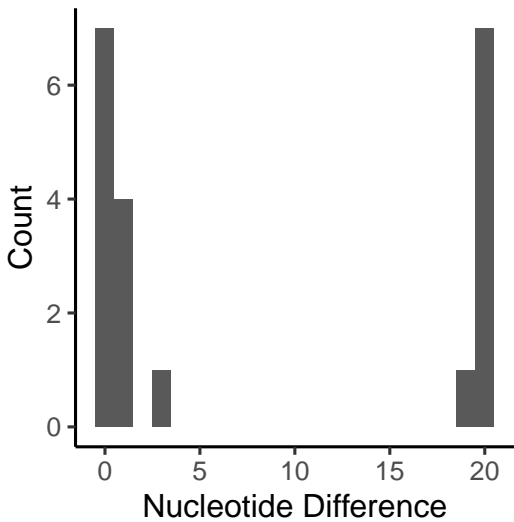
IGHV3–NL1*01

57 sequences assigned
No exact matches.



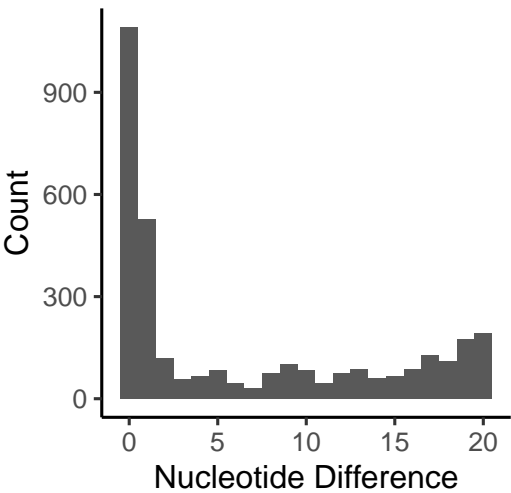
IGHV4–28*01_07

65 sequences assigned
7 (10.8%) exact matches, in which:
6 unique CDR3
4 unique J



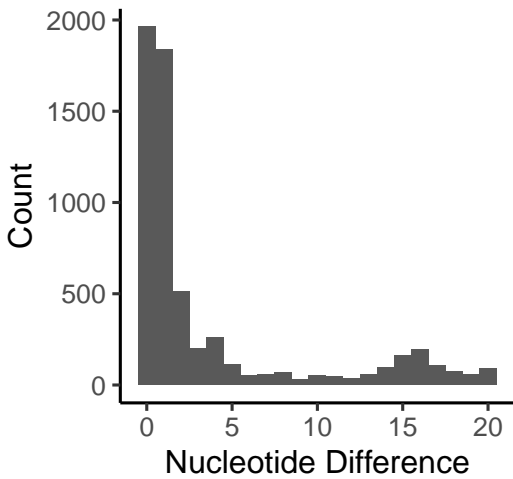
IGHV3–74*01_02

5052 sequences assigned
1092 (21.6%) exact matches, in which:
708 unique CDR3
7 unique J



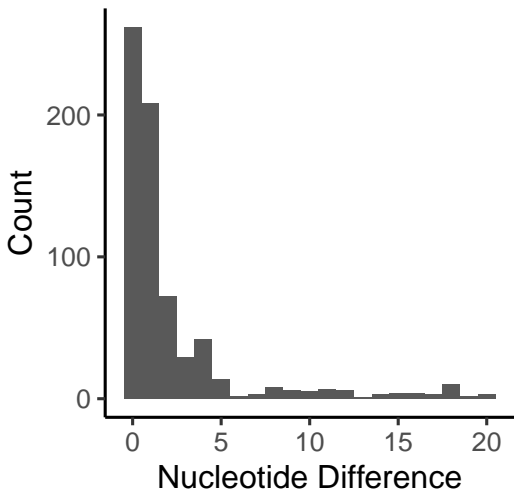
IGHV4–4*07

8702 sequences assigned
1963 (22.6%) exact matches, in which:
1740 unique CDR3
7 unique J



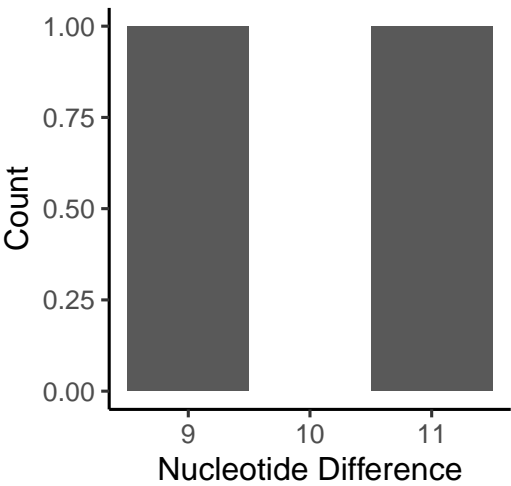
IGHV4–30–2*01

742 sequences assigned
262 (35.3%) exact matches, in which:
192 unique CDR3
7 unique J



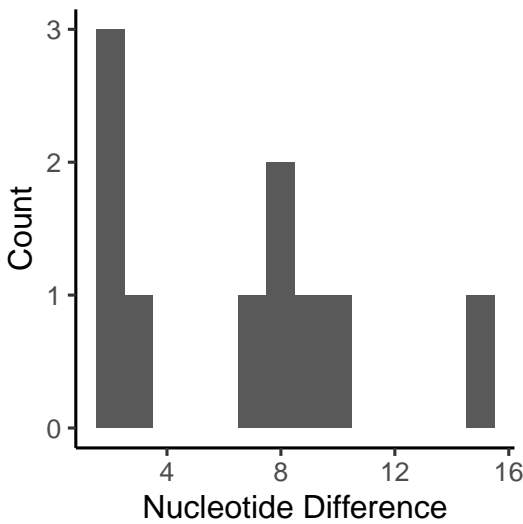
IGHV3–64D*06

4 sequences assigned
No exact matches.



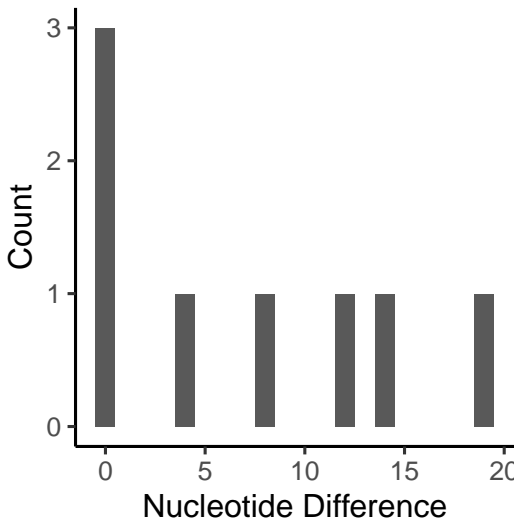
IGHV4–28*03

13 sequences assigned
No exact matches.



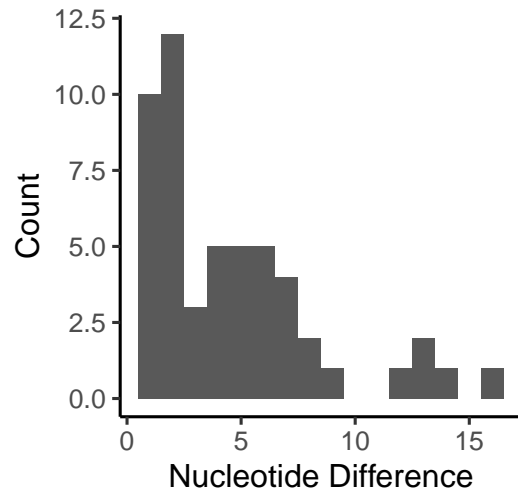
IGHV4–30–4*01

38 sequences assigned
3 (7.9%) exact matches, in which:
3 unique CDR3
2 unique J



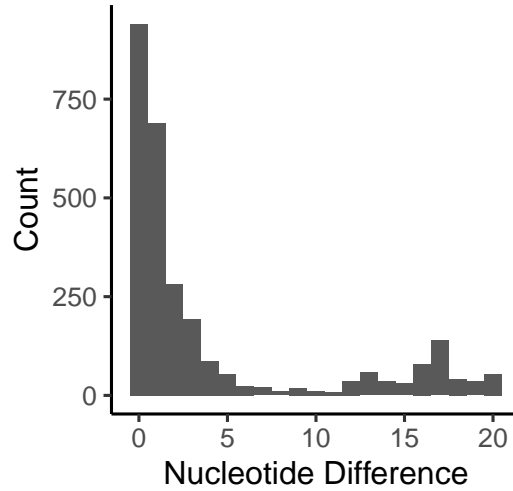
IGHV4-30-2*03

87 sequences assigned
No exact matches.



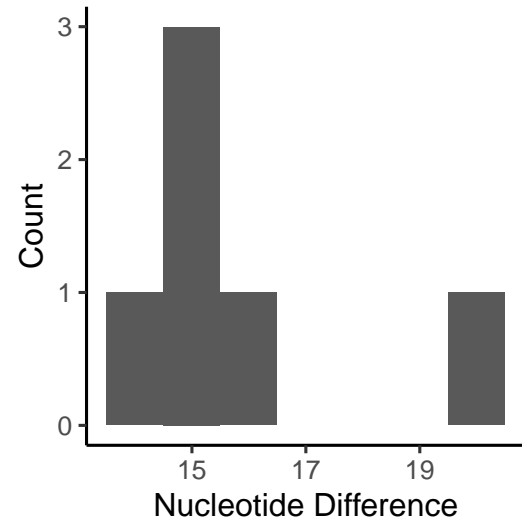
IGHV4-31*02

3823 sequences assigned
941 (24.6%) exact matches, in which:
832 unique CDR3
7 unique J



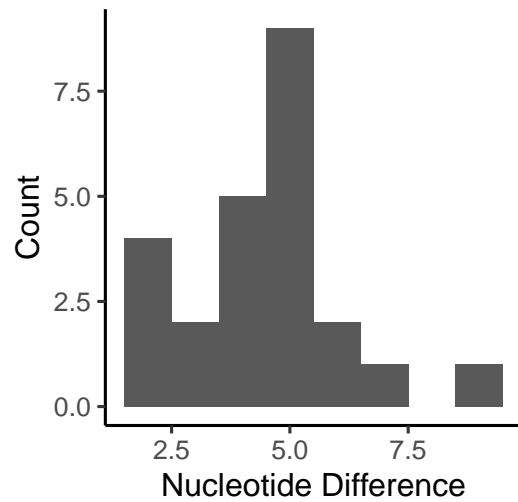
IGHV4-38-2*02

13 sequences assigned
No exact matches.



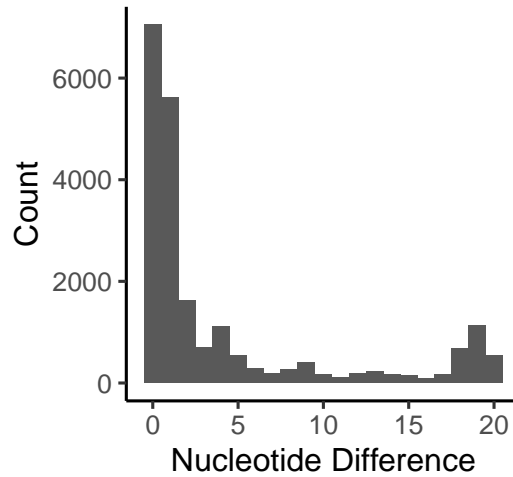
IGHV4-30-4*07

24 sequences assigned
No exact matches.



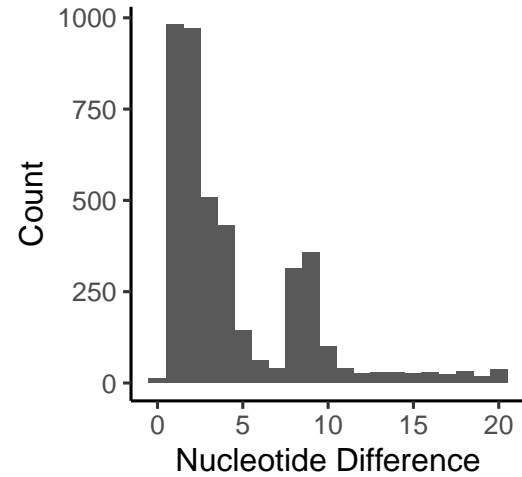
IGHV4-34*01_02

24568 sequences assigned
7050 (28.7%) exact matches, in which:
5872 unique CDR3
7 unique J



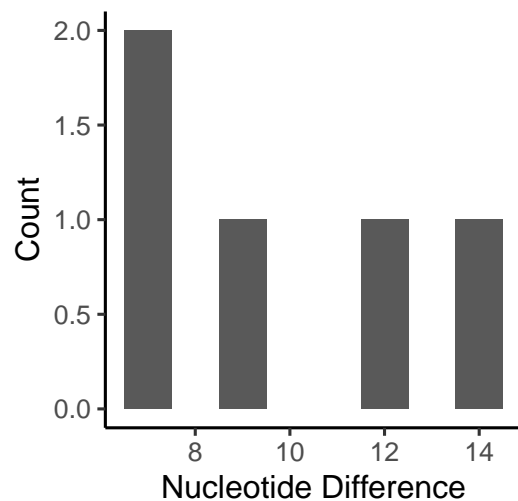
IGHV4-39*07

5633 sequences assigned
13 (0.2%) exact matches, in which:
13 unique CDR3
5 unique J



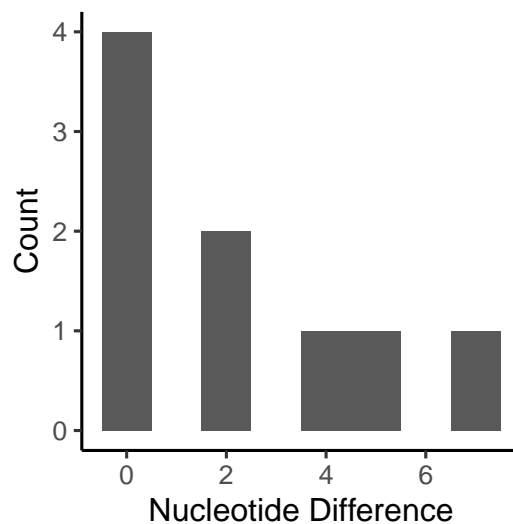
IGHV4-30-4*08

12 sequences assigned
No exact matches.



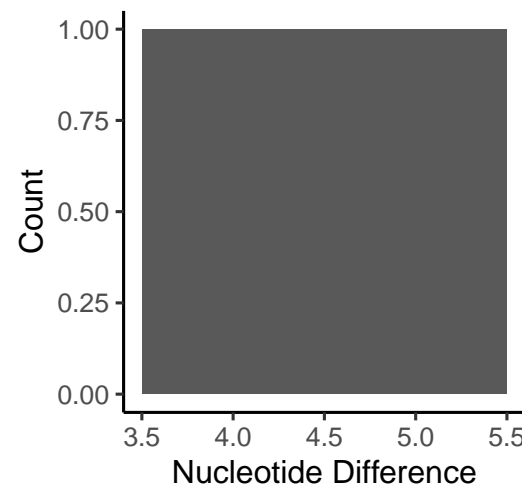
IGHV4-38-2*01

13 sequences assigned
4 (30.8%) exact matches, in which:
4 unique CDR3
4 unique J



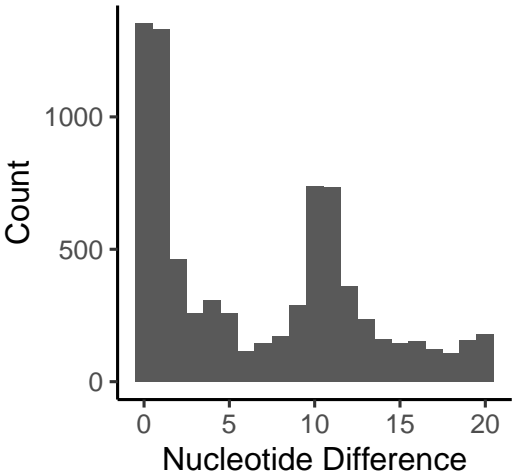
IGHV4-55*09

2 sequences assigned
No exact matches.



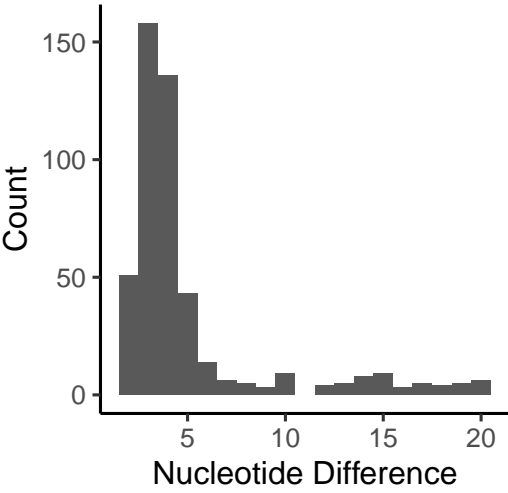
IGHV4-59*08

10132 sequences assigned
1353 (13.4%) exact matches, in which:
1175 unique CDR3
7 unique J



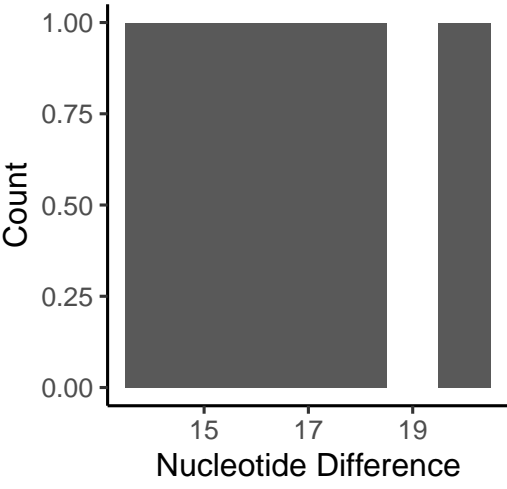
IGHV4-61*05

508 sequences assigned
No exact matches.



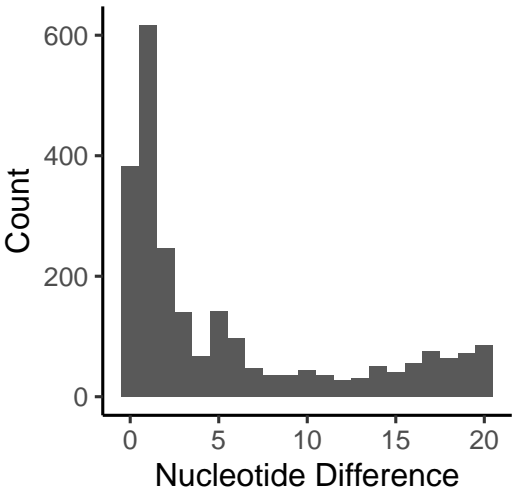
IGHV1/OR15-2*02_03

6 sequences assigned
No exact matches.



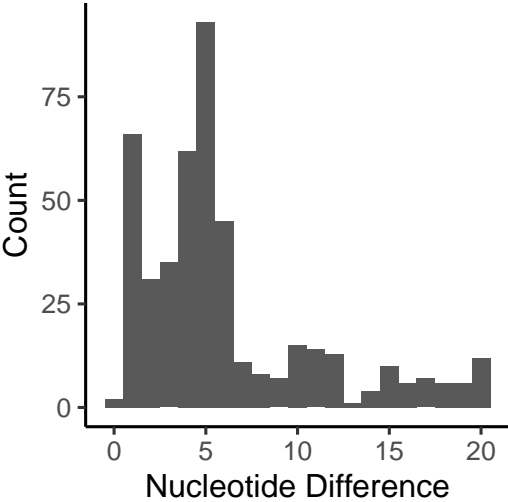
IGHV4-59*12

3416 sequences assigned
382 (11.2%) exact matches, in which:
371 unique CDR3
7 unique J



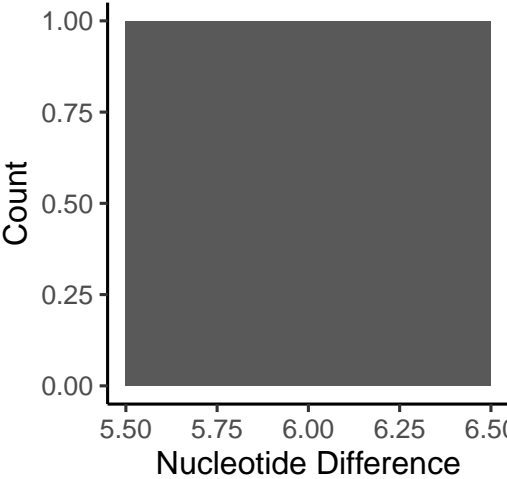
IGHV4-61*08

732 sequences assigned
2 (0.3%) exact matches, in which:
2 unique CDR3
1 unique J



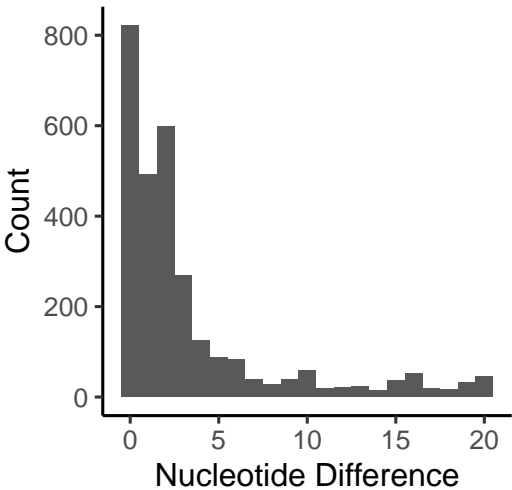
IGHV1/OR15-3*02

1 sequences assigned
No exact matches.



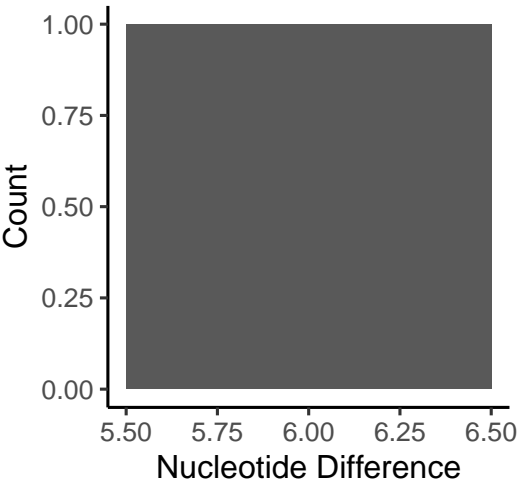
IGHV4-61*01

3213 sequences assigned
822 (25.6%) exact matches, in which:
777 unique CDR3
7 unique J



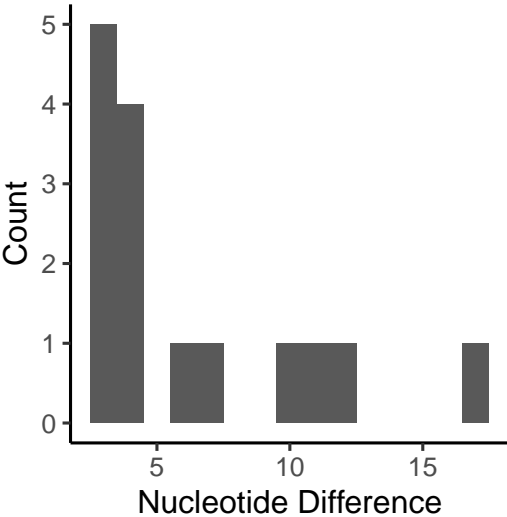
IGHV1/OR15-1*04

7 sequences assigned
No exact matches.



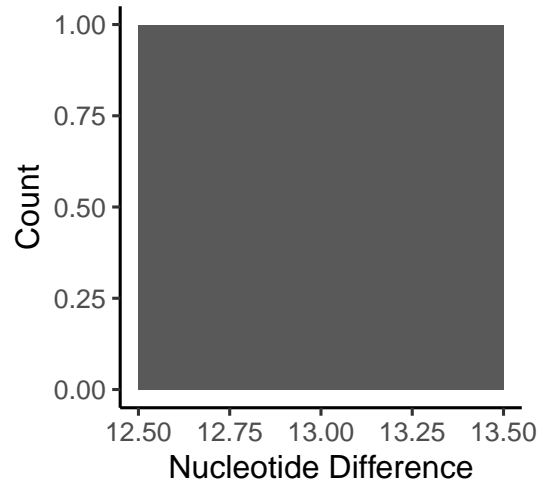
IGHV4/OR15-8*01

17 sequences assigned
No exact matches.



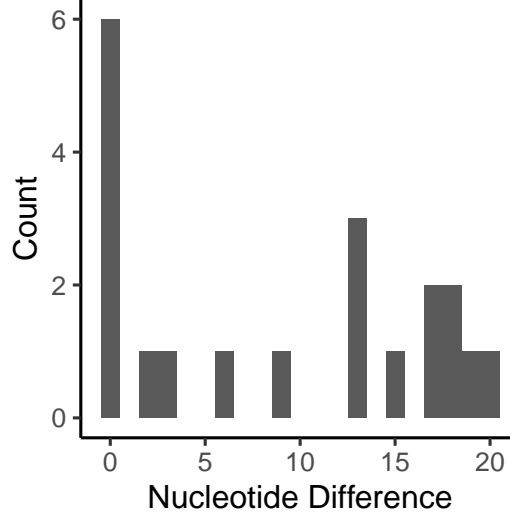
IGHV4/OR15-8*02

3 sequences assigned
No exact matches.



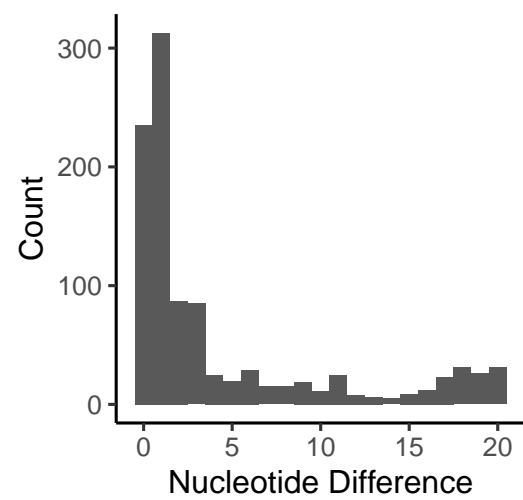
IGHV5-51*04

40 sequences assigned
6 (15%) exact matches, in which:
6 unique CDR3
4 unique J



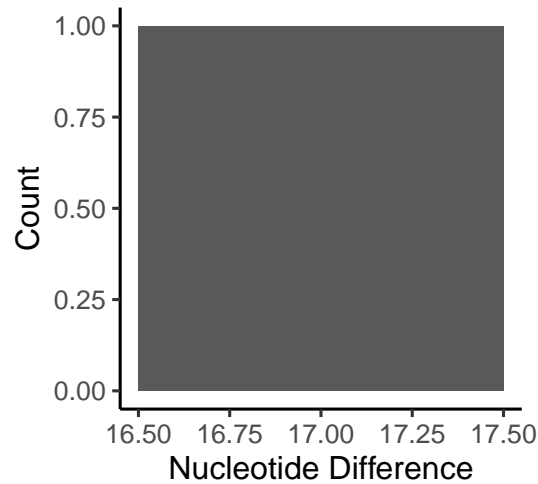
IGHV6-1*01_02

1127 sequences assigned
235 (20.9%) exact matches, in which:
206 unique CDR3
7 unique J



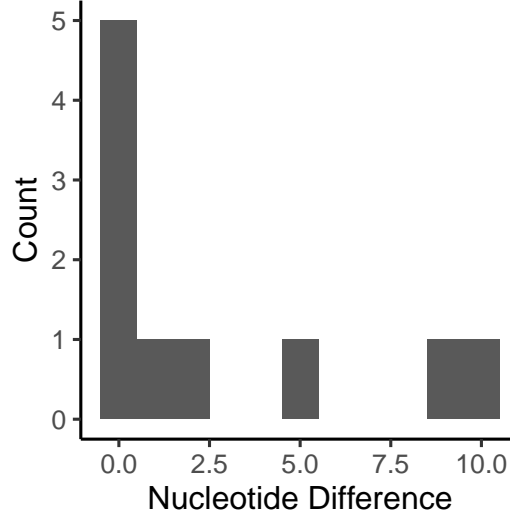
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



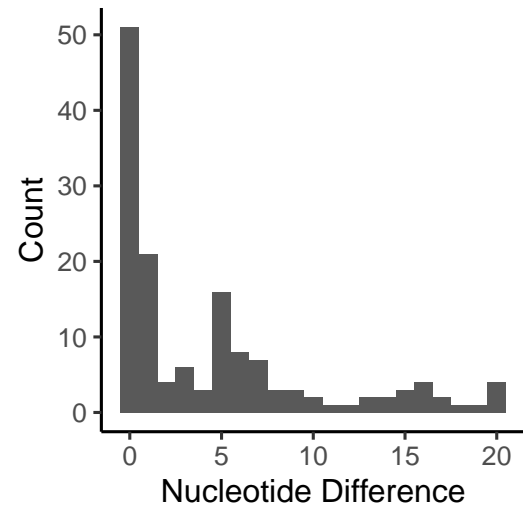
IGHV5-51*06

14 sequences assigned
5 (35.7%) exact matches, in which:
5 unique CDR3
2 unique J



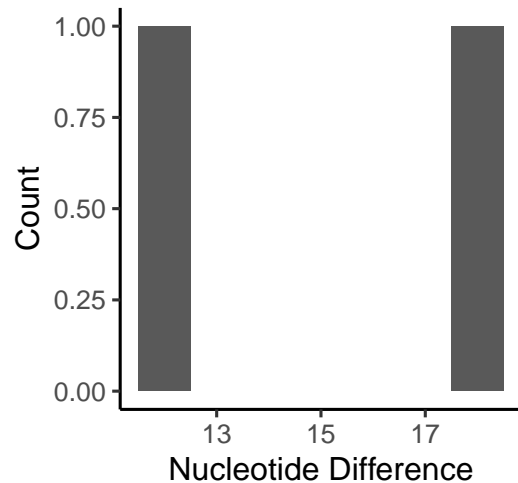
IGHV6-1*01_02_A315G

228 sequences assigned
51 (22.4%) exact matches, in which:
51 unique CDR3
7 unique J



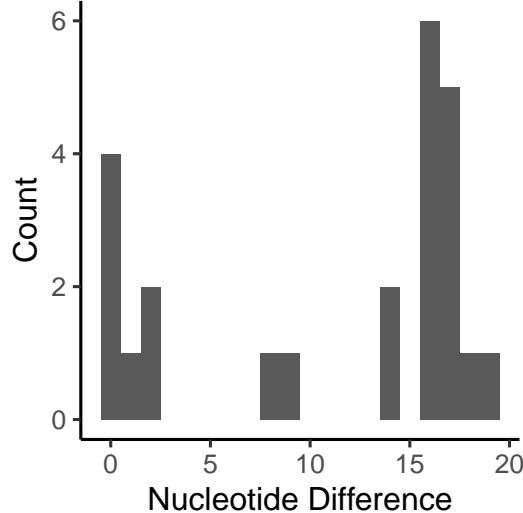
IGHV5-10-1*01_03

2 sequences assigned
No exact matches.



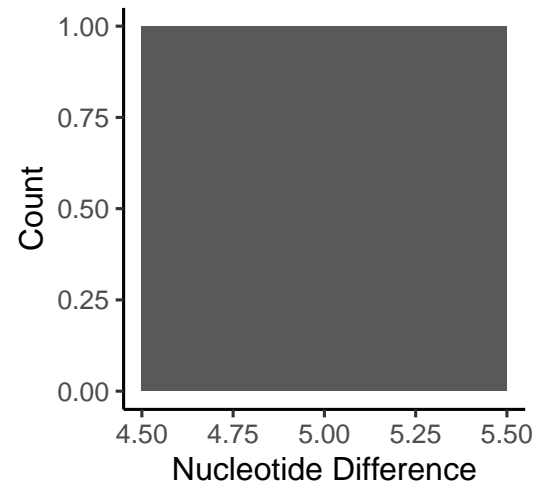
IGHV5-51*07

35 sequences assigned
4 (11.4%) exact matches, in which:
4 unique CDR3
3 unique J



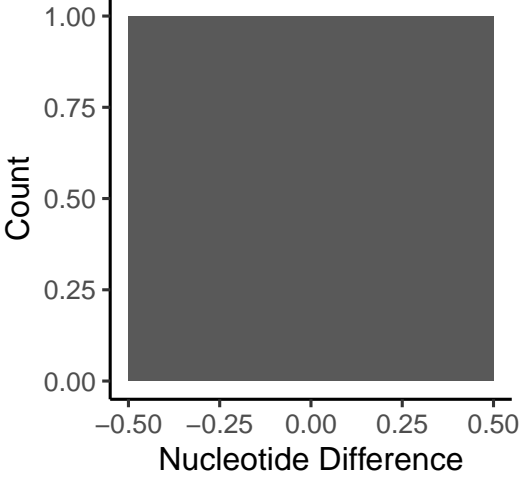
IGHV3/OR16-13*01

1 sequences assigned
No exact matches.



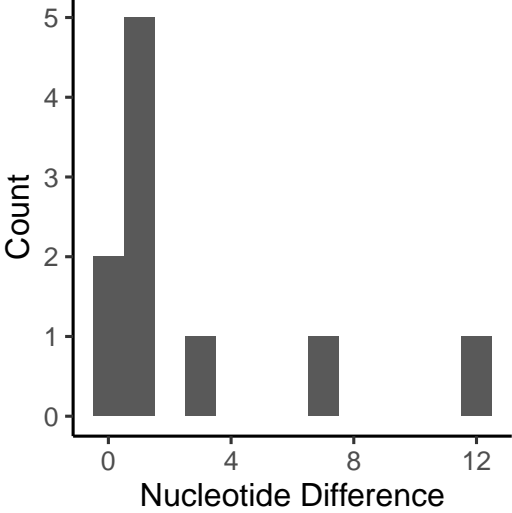
IGHV7-4-1*01

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

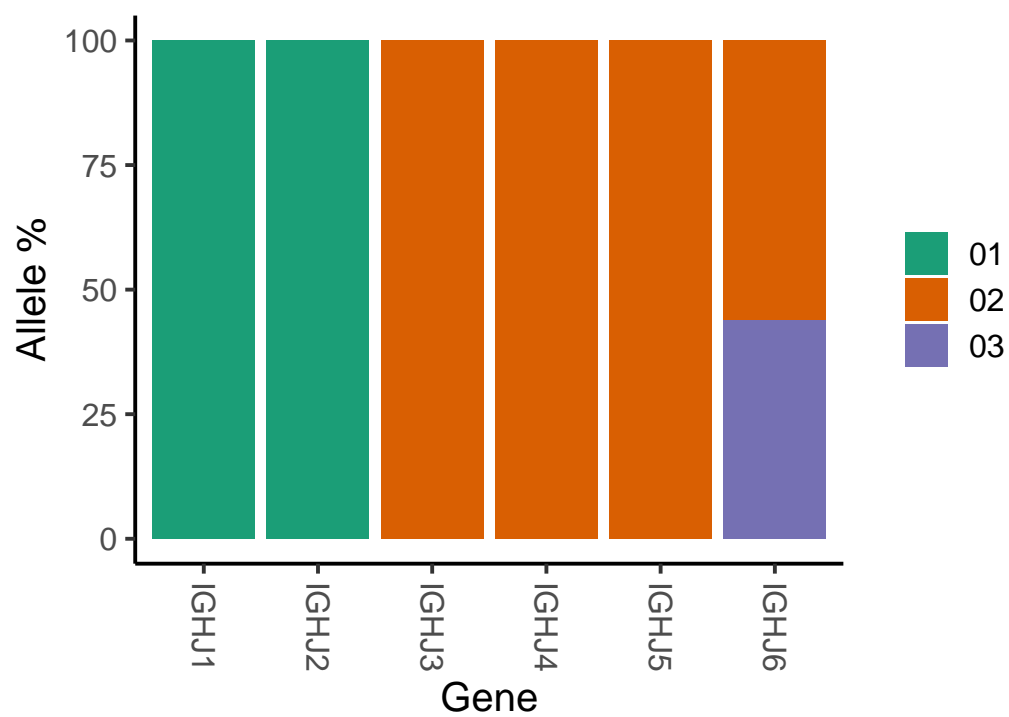


IGHV7-4-1*02

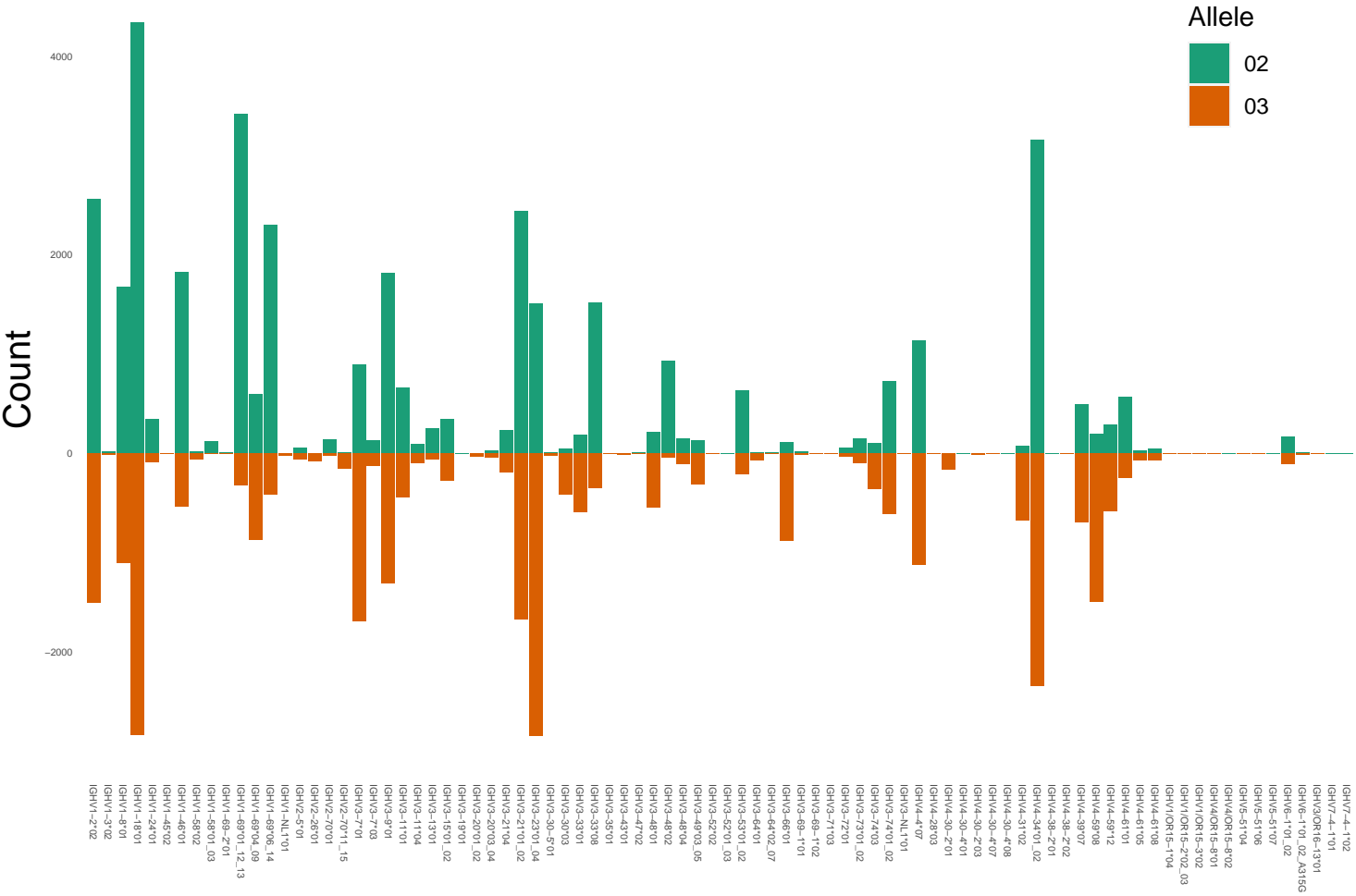
10 sequences assigned
2 (20%) exact matches, in which:
2 unique CDR3
2 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.