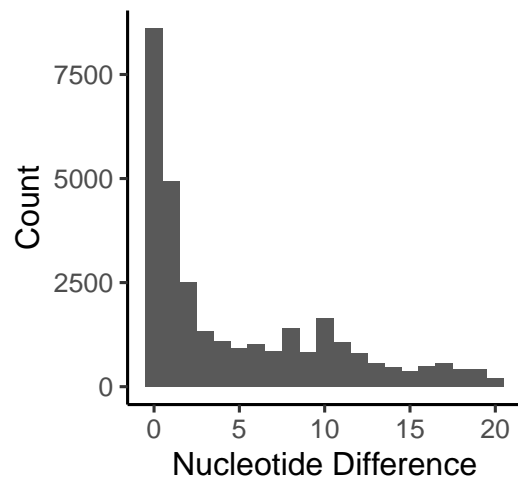


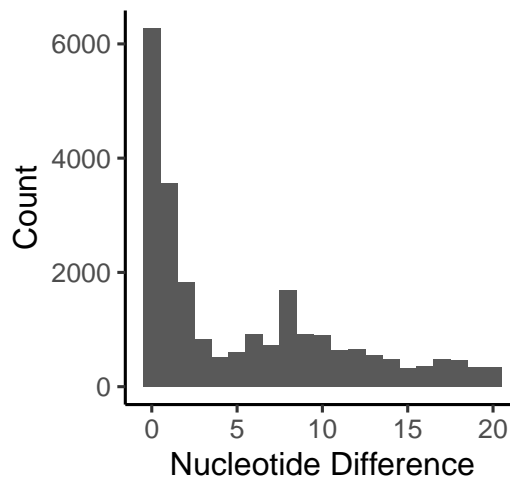
IGHV1-2*02

31896 sequences assigned
8607 (27%) exact matches, in which:
7861 unique CDR3
7 unique J



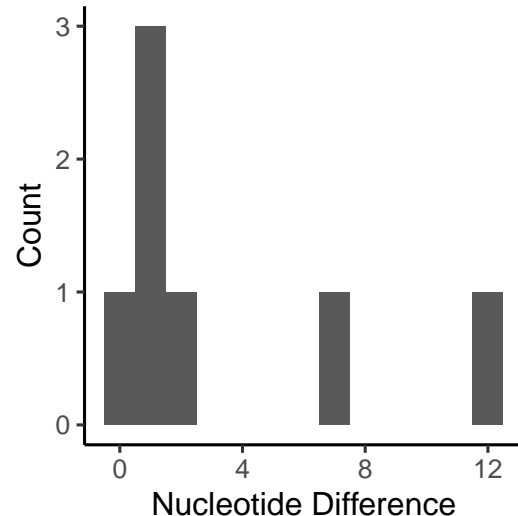
IGHV1-18*04

26325 sequences assigned
6271 (23.8%) exact matches, in which:
5704 unique CDR3
7 unique J



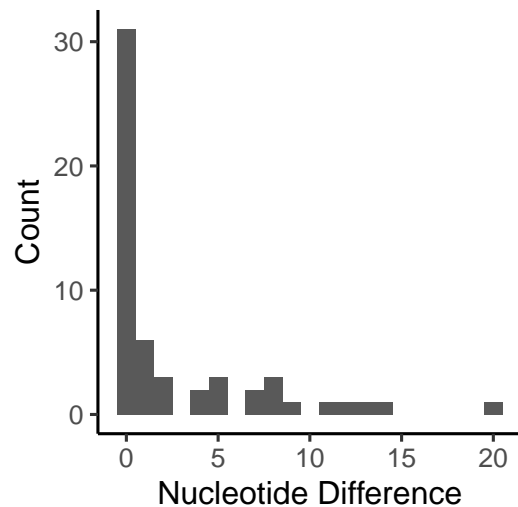
IGHV1-45*03

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



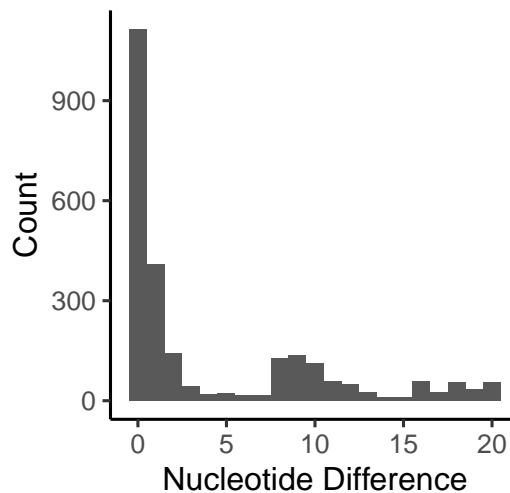
IGHV1-3*02

58 sequences assigned
31 (53.4%) exact matches, in which:
30 unique CDR3
4 unique J



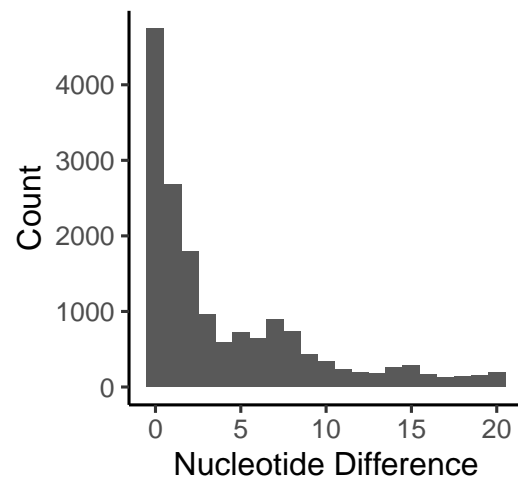
IGHV1-24*01

2713 sequences assigned
1115 (41.1%) exact matches, in which:
1059 unique CDR3
7 unique J



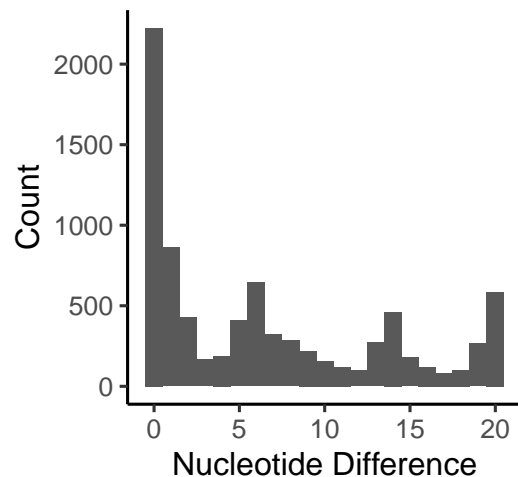
IGHV1-46*01

18562 sequences assigned
4742 (25.5%) exact matches, in which:
4448 unique CDR3
7 unique J



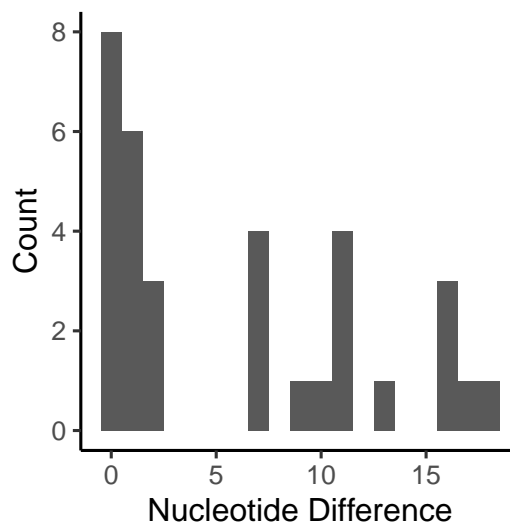
IGHV1-8*03

8983 sequences assigned
2224 (24.8%) exact matches, in which:
2100 unique CDR3
7 unique J



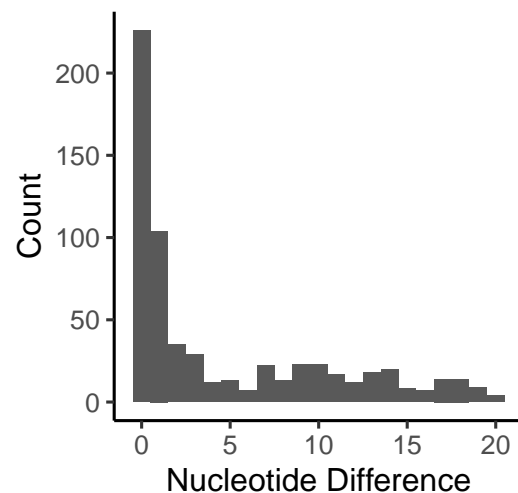
IGHV1-45*02

33 sequences assigned
8 (24.2%) exact matches, in which:
7 unique CDR3
3 unique J



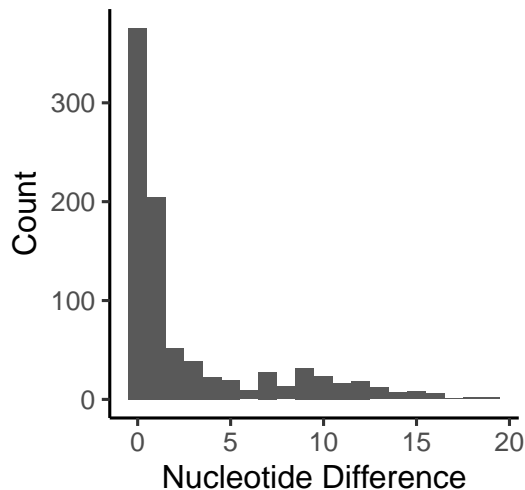
IGHV1-58*02

666 sequences assigned
226 (33.9%) exact matches, in which:
212 unique CDR3
7 unique J



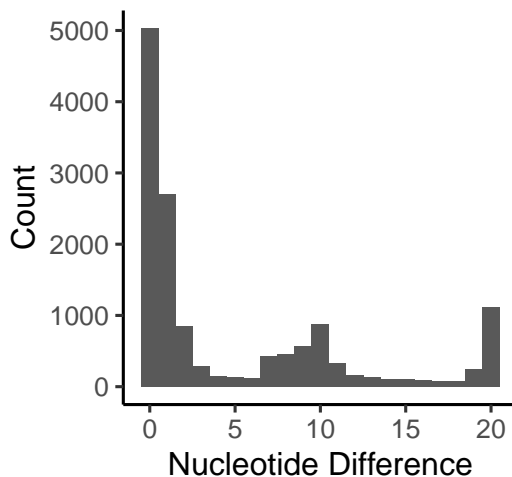
IGHV1–58*01_03

1319 sequences assigned
376 (28.5%) exact matches, in which:
352 unique CDR3
7 unique J



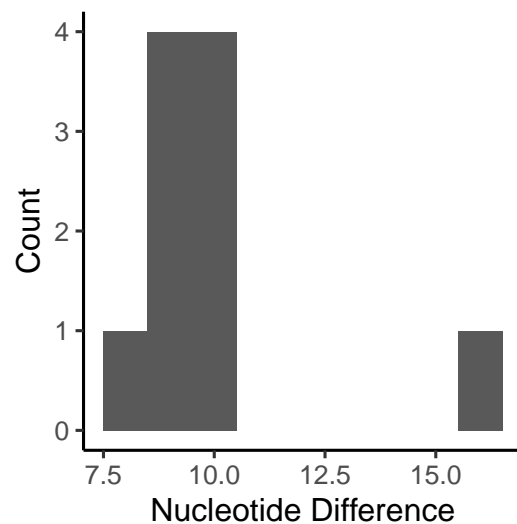
IGHV1–69*01_12_13

18250 sequences assigned
5029 (27.6%) exact matches, in which:
4797 unique CDR3
7 unique J



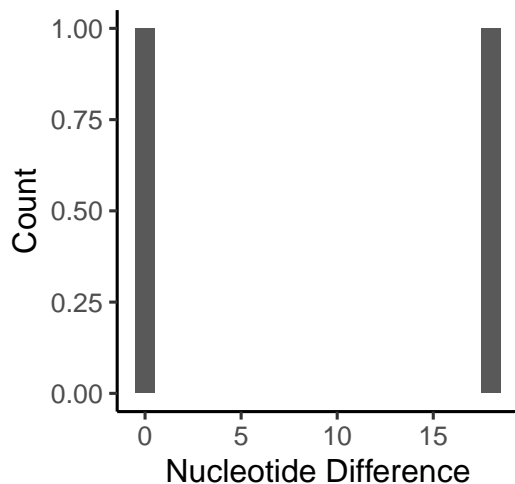
IGHV1–NL1*01

10 sequences assigned
No exact matches.



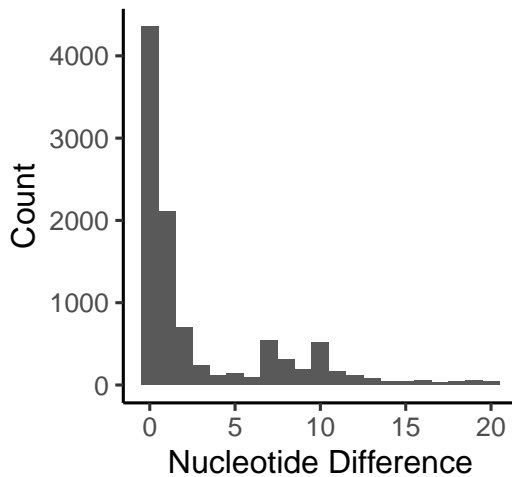
IGHV1–68*01

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



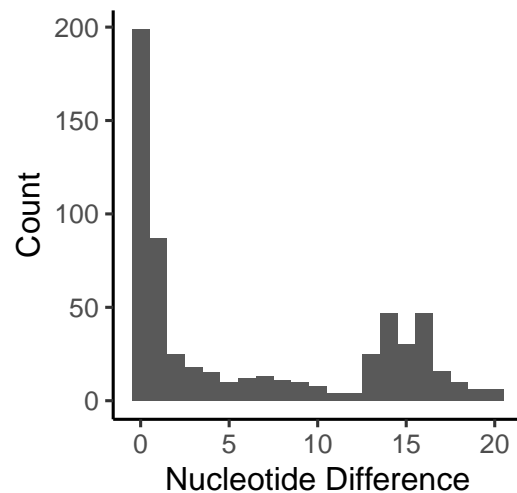
IGHV1–69*10

10346 sequences assigned
4354 (42.1%) exact matches, in which:
4164 unique CDR3
7 unique J



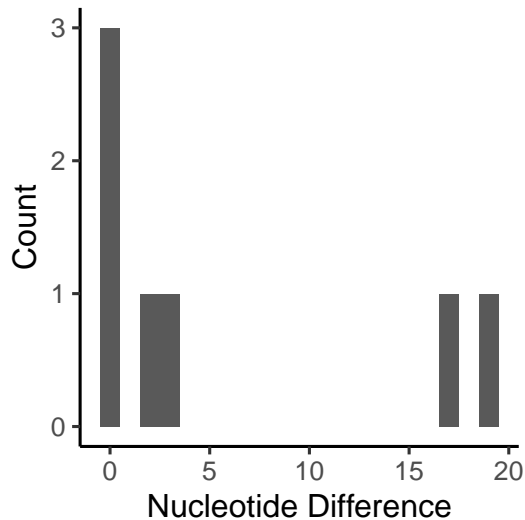
IGHV2–5*01

629 sequences assigned
199 (31.6%) exact matches, in which:
190 unique CDR3
7 unique J



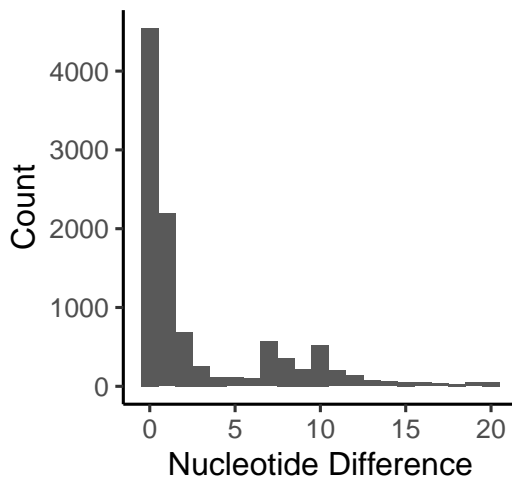
IGHV1–69–2*01

16 sequences assigned
3 (18.8%) exact matches, in which:
3 unique CDR3
2 unique J



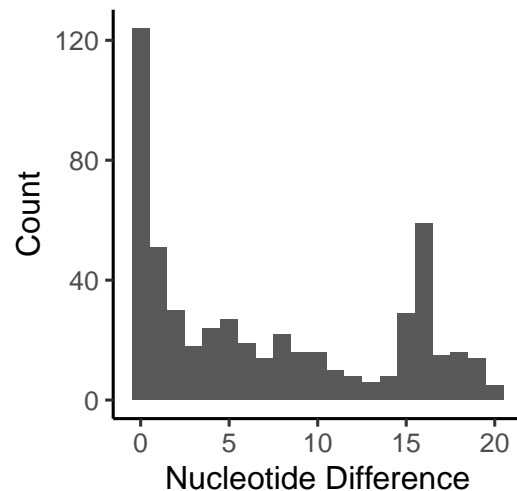
IGHV1–69*04_09

10671 sequences assigned
4546 (42.6%) exact matches, in which:
4336 unique CDR3
7 unique J



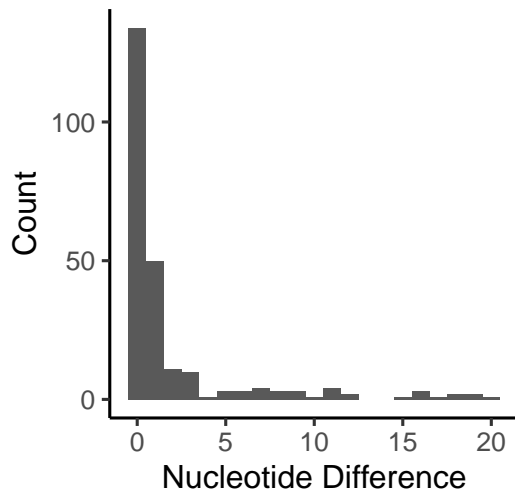
IGHV2–5*02

803 sequences assigned
124 (15.4%) exact matches, in which:
116 unique CDR3
7 unique J



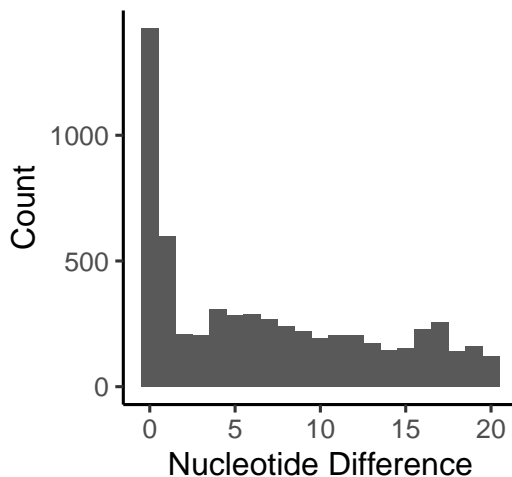
IGHV2-26*01

449 sequences assigned
134 (29.8%) exact matches, in which:
128 unique CDR3
6 unique J



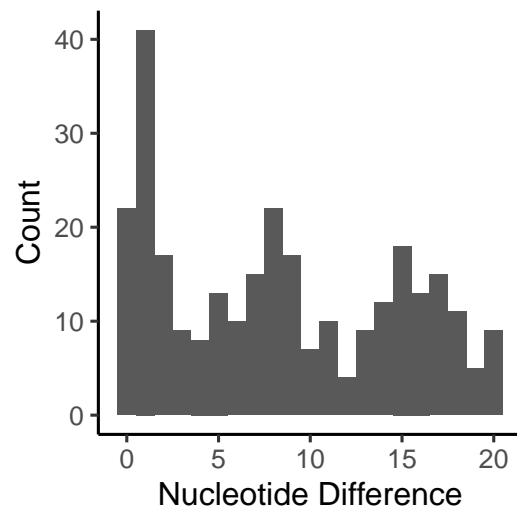
IGHV3-7*03

8027 sequences assigned
1425 (17.8%) exact matches, in which:
1104 unique CDR3
7 unique J



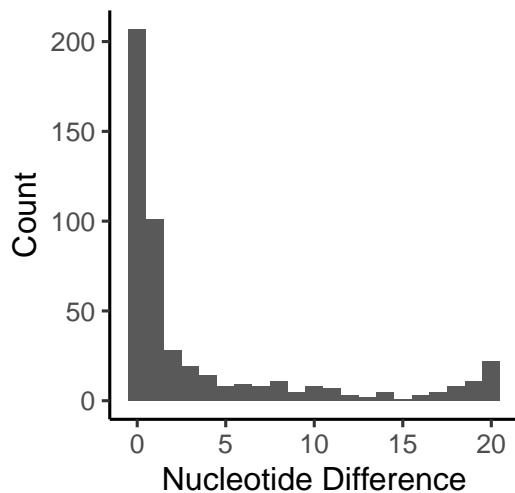
IGHV3-11*01

446 sequences assigned
22 (4.9%) exact matches, in which:
22 unique CDR3
6 unique J



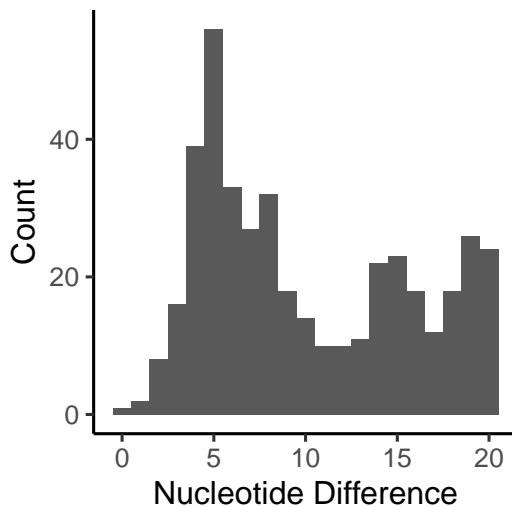
IGHV2-70*01

573 sequences assigned
207 (36.1%) exact matches, in which:
194 unique CDR3
6 unique J



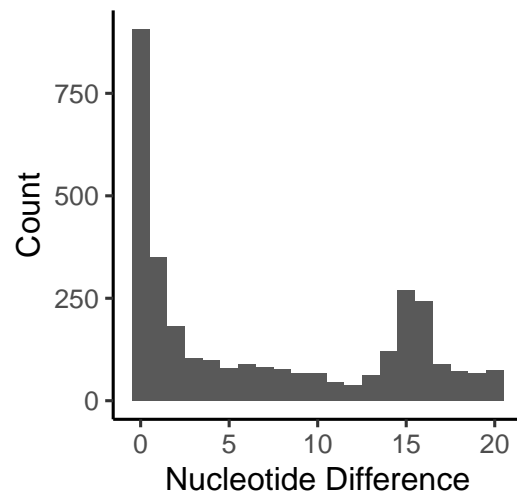
IGHV3-9*01

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



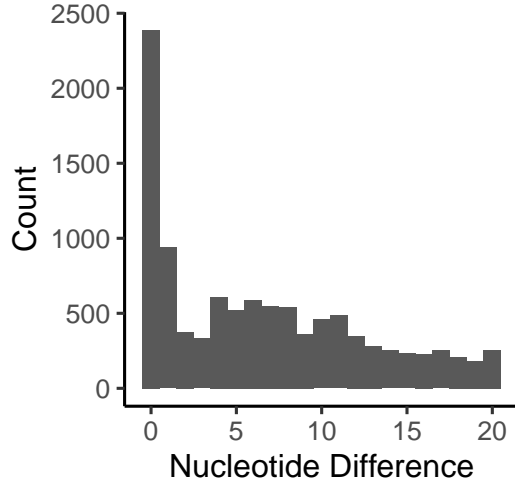
IGHV3-11*04

5482 sequences assigned
907 (16.5%) exact matches, in which:
750 unique CDR3
7 unique J



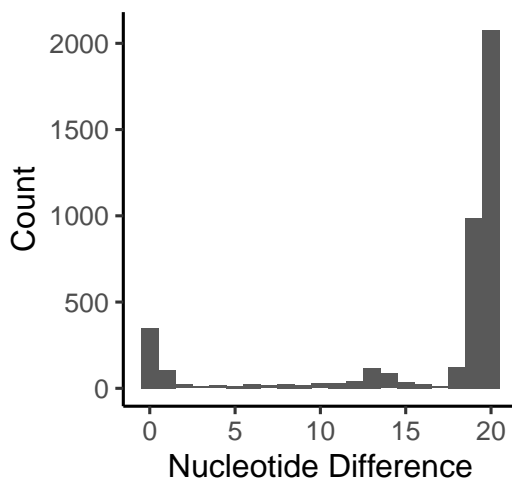
IGHV3-7*01

12317 sequences assigned
2388 (19.4%) exact matches, in which:
1897 unique CDR3
7 unique J



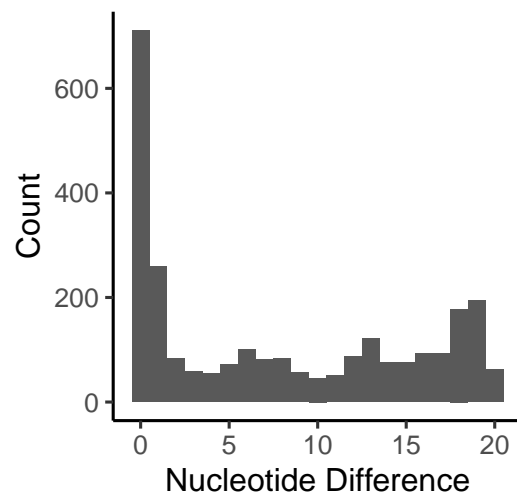
IGHV3-9*03

6164 sequences assigned
348 (5.6%) exact matches, in which:
265 unique CDR3
6 unique J



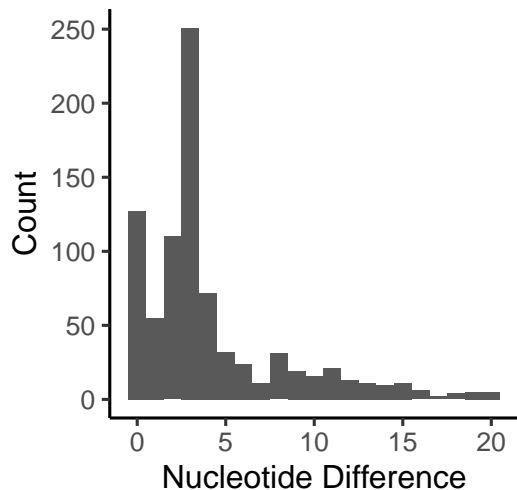
IGHV3-11*06

3392 sequences assigned
711 (21%) exact matches, in which:
572 unique CDR3
7 unique J



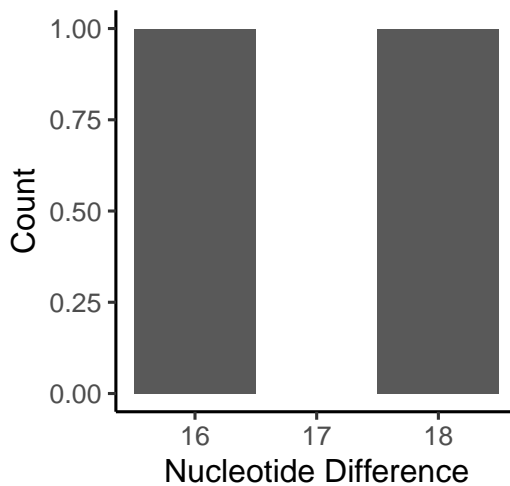
IGHV3-13*05

866 sequences assigned
127 (14.7%) exact matches, in which:
91 unique CDR3
7 unique J



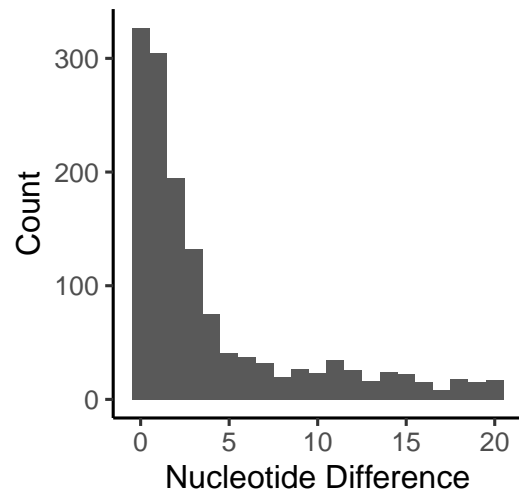
IGHV3-20*03_04

15 sequences assigned
No exact matches.



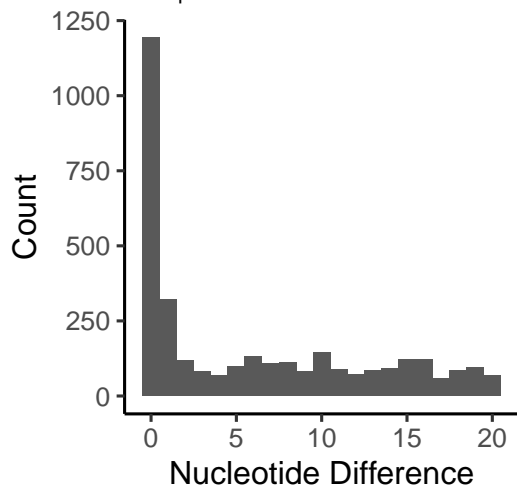
IGHV3-30*03

1714 sequences assigned
327 (19.1%) exact matches, in which:
319 unique CDR3
7 unique J



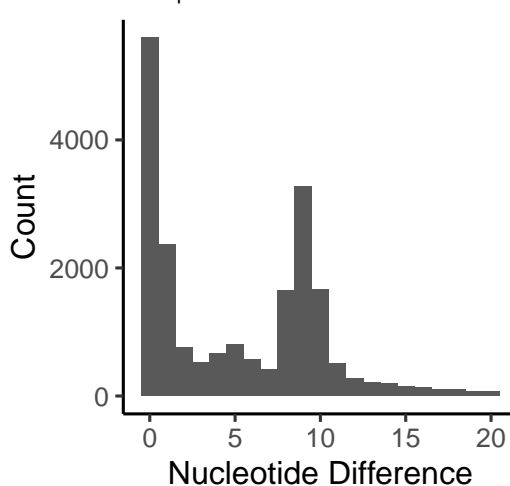
IGHV3-15*01_02

4433 sequences assigned
1193 (26.9%) exact matches, in which:
947 unique CDR3
7 unique J



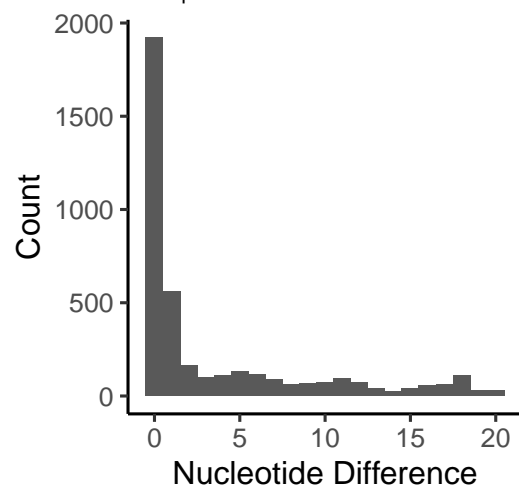
IGHV3-21*01_02

21498 sequences assigned
5596 (26%) exact matches, in which:
4157 unique CDR3
7 unique J



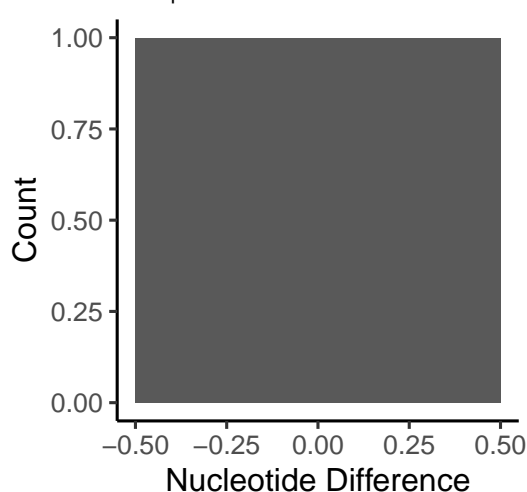
IGHV3-33*01

4330 sequences assigned
1921 (44.4%) exact matches, in which:
1554 unique CDR3
7 unique J



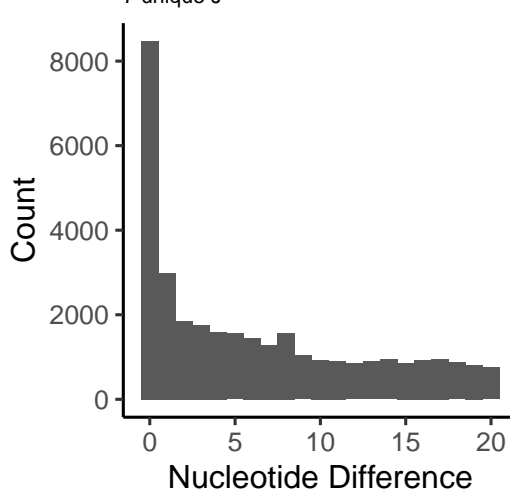
IGHV3-19*01

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



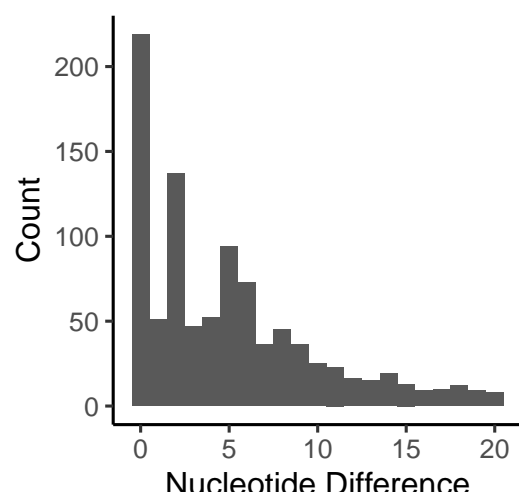
IGHV3-23*01_04

45091 sequences assigned
8474 (18.8%) exact matches, in which:
6083 unique CDR3
7 unique J



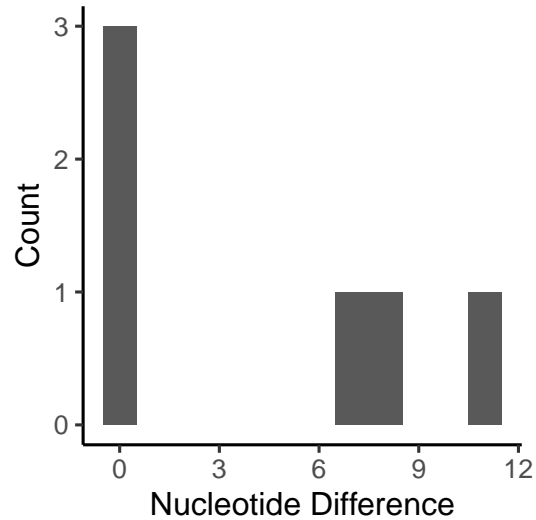
IGHV3-33*08

1173 sequences assigned
219 (18.7%) exact matches, in which:
208 unique CDR3
7 unique J



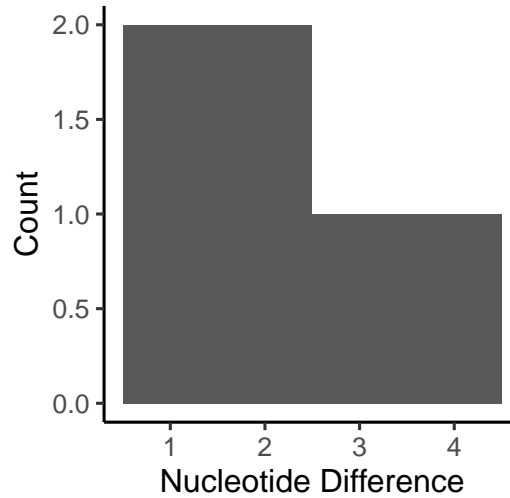
IGHV3–35*01

6 sequences assigned
3 (50%) exact matches, in which:
2 unique CDR3
1 unique J



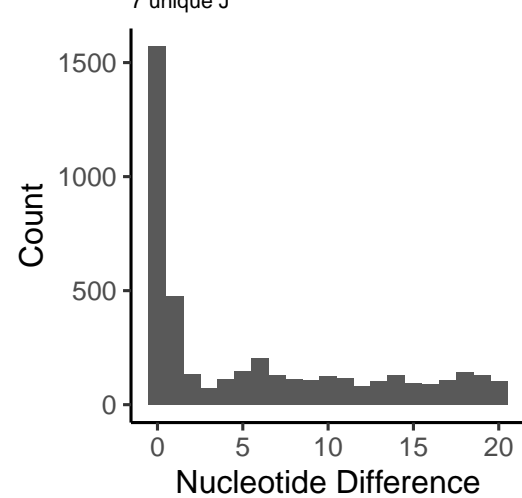
IGHV3–47*02

8 sequences assigned
No exact matches.



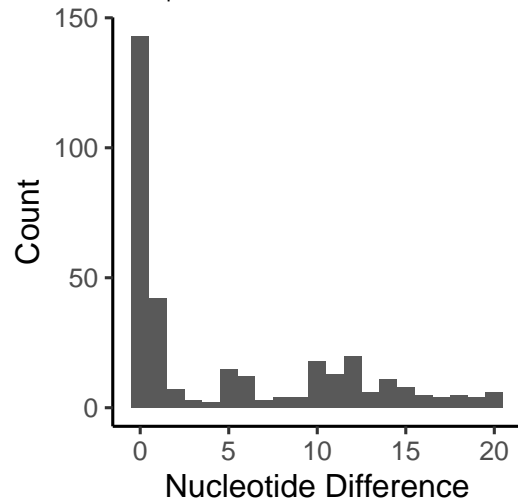
IGHV3–48*03

4966 sequences assigned
1571 (31.6%) exact matches, in which:
1203 unique CDR3
7 unique J



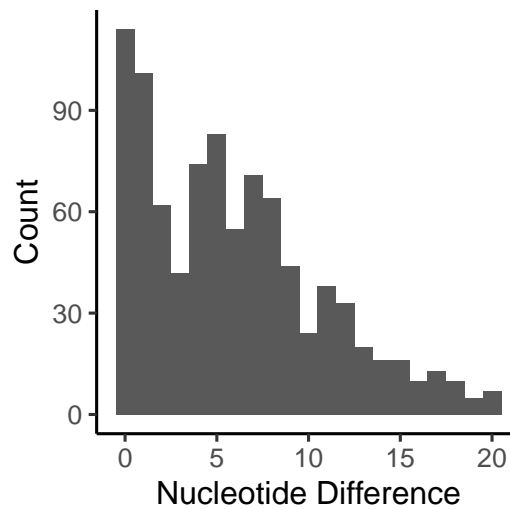
IGHV3–43*01

383 sequences assigned
143 (37.3%) exact matches, in which:
115 unique CDR3
7 unique J



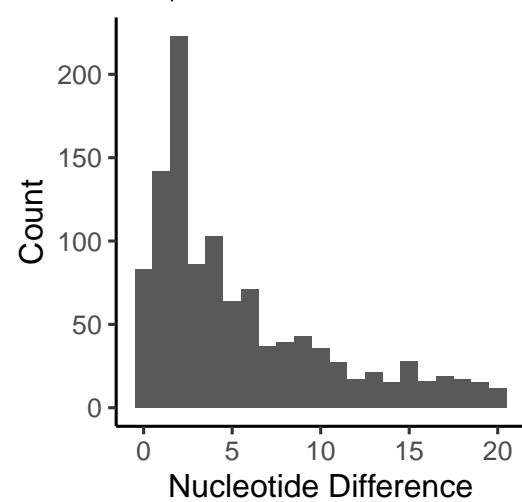
IGHV3–48*01

961 sequences assigned
114 (11.9%) exact matches, in which:
113 unique CDR3
7 unique J



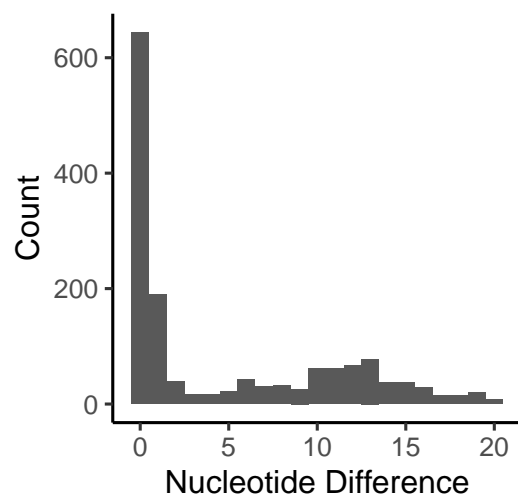
IGHV3–48*04

1359 sequences assigned
83 (6.1%) exact matches, in which:
82 unique CDR3
6 unique J



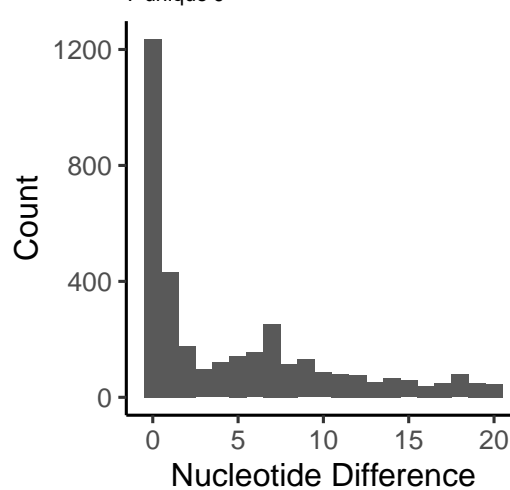
IGHV3–43*02

2029 sequences assigned
644 (31.7%) exact matches, in which:
471 unique CDR3
6 unique J



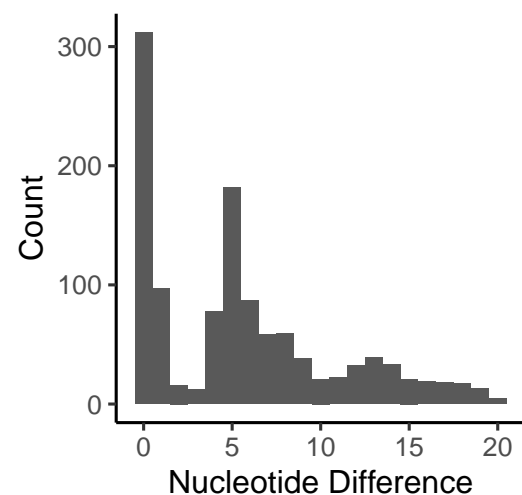
IGHV3–48*02

3965 sequences assigned
1236 (31.2%) exact matches, in which:
948 unique CDR3
7 unique J



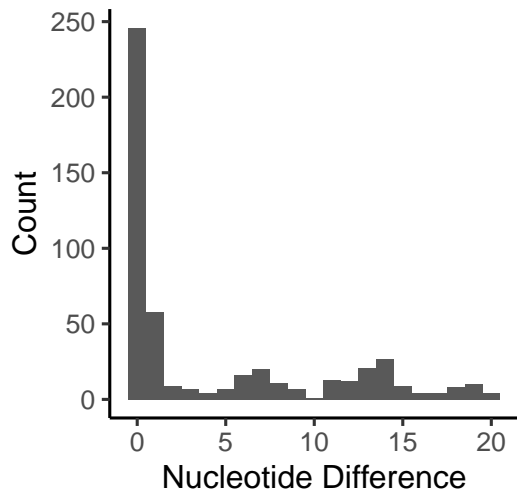
IGHV3–49*04

1413 sequences assigned
312 (22.1%) exact matches, in which:
265 unique CDR3
7 unique J



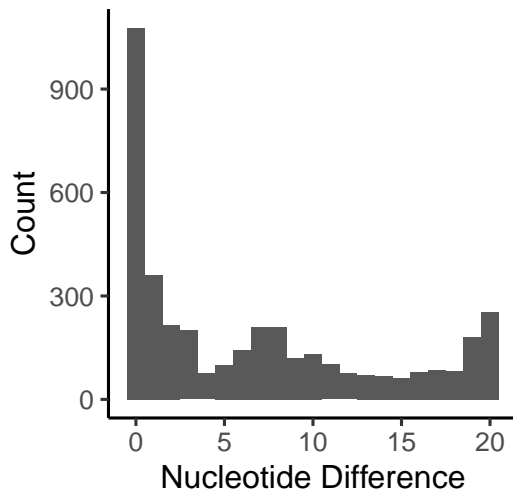
IGHV3-49*03_05

507 sequences assigned
246 (48.5%) exact matches, in which:
208 unique CDR3
7 unique J



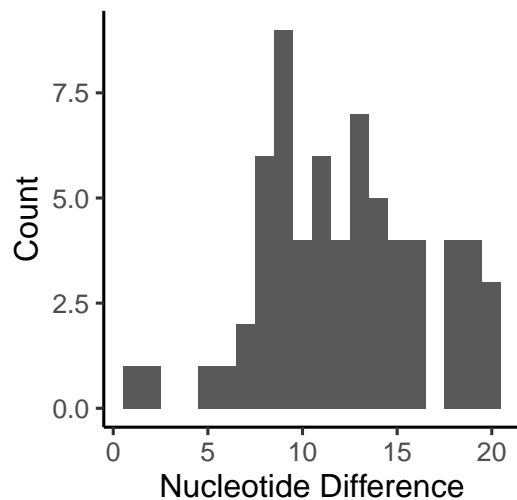
IGHV3-53*01_02

5772 sequences assigned
1078 (18.7%) exact matches, in which:
861 unique CDR3
7 unique J



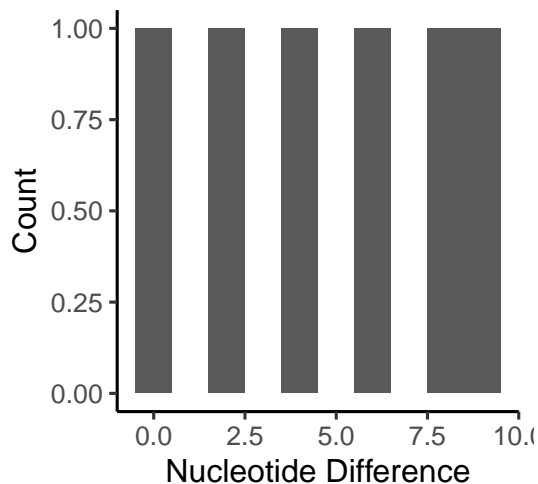
IGHV3-66*01

82 sequences assigned
No exact matches.



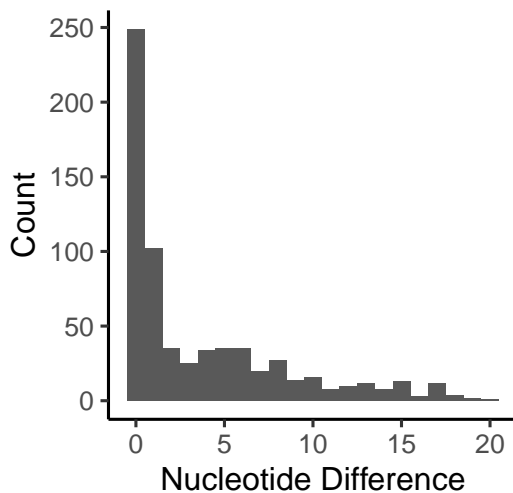
IGHV3-52*01_03

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



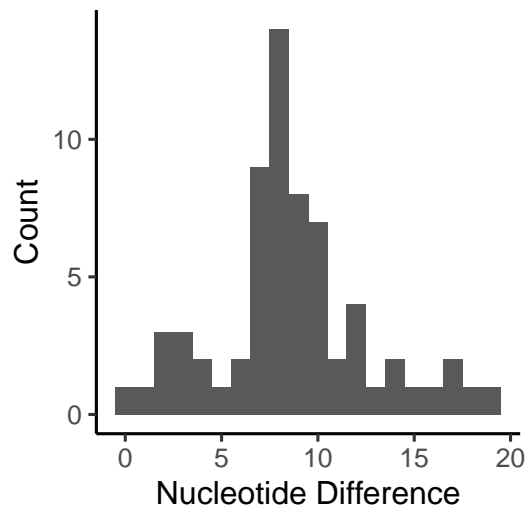
IGHV3-64*01

800 sequences assigned
249 (31.1%) exact matches, in which:
186 unique CDR3
7 unique J



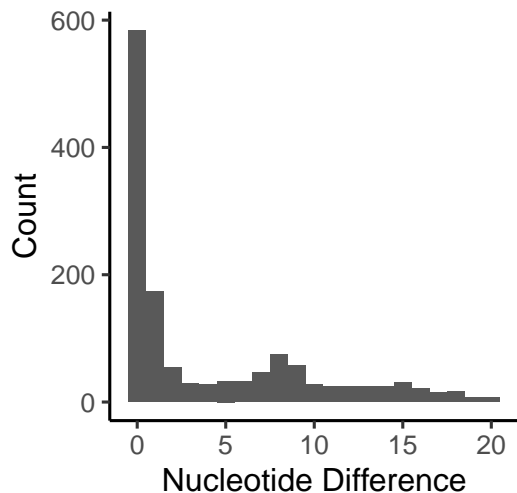
IGHV3-66*02

141 sequences assigned
1 (0.7%) exact matches, in which:
1 unique CDR3
1 unique J



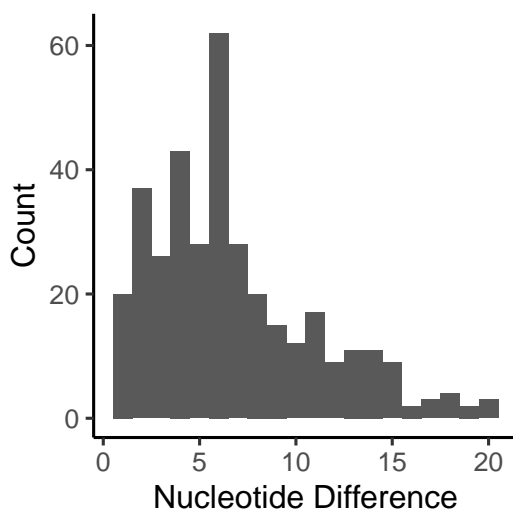
IGHV3-53*04

1530 sequences assigned
584 (38.2%) exact matches, in which:
449 unique CDR3
7 unique J



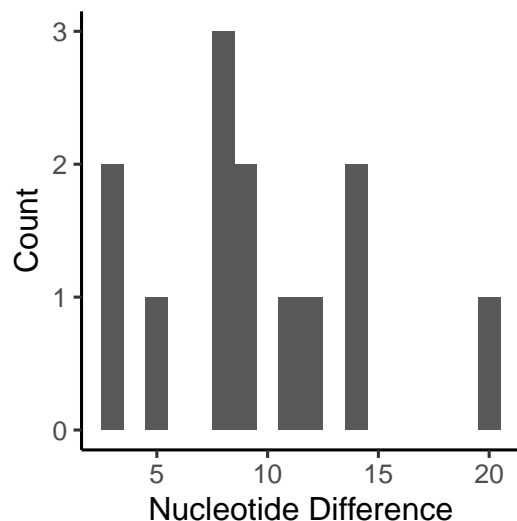
IGHV3-64*04

373 sequences assigned
No exact matches.



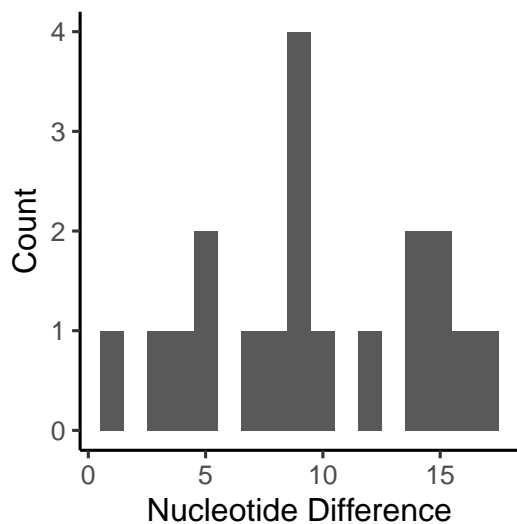
IGHV3-66*04

25 sequences assigned
No exact matches.



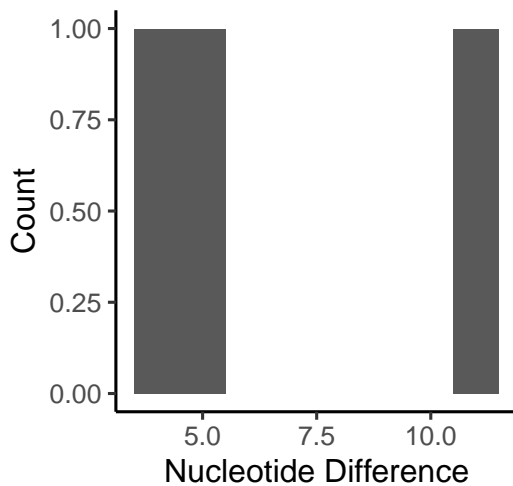
IGHV3-69-1*01

33 sequences assigned
No exact matches.



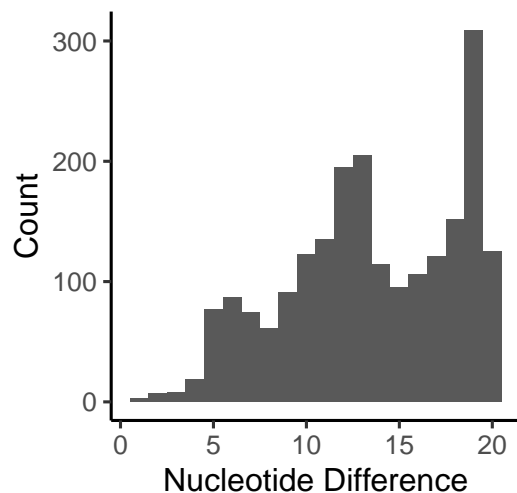
IGHV3-71*01_04

5 sequences assigned
No exact matches.



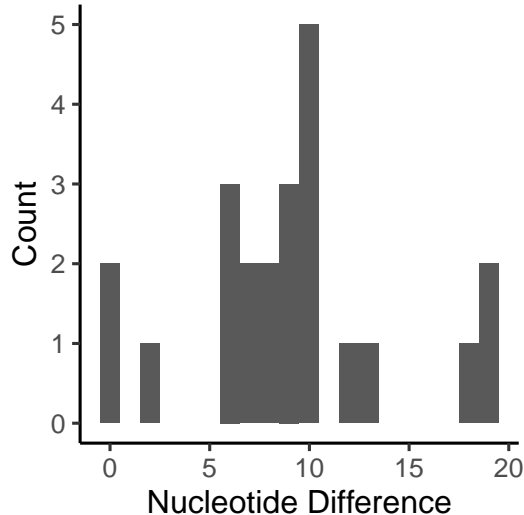
IGHV3-74*03

3909 sequences assigned
No exact matches.



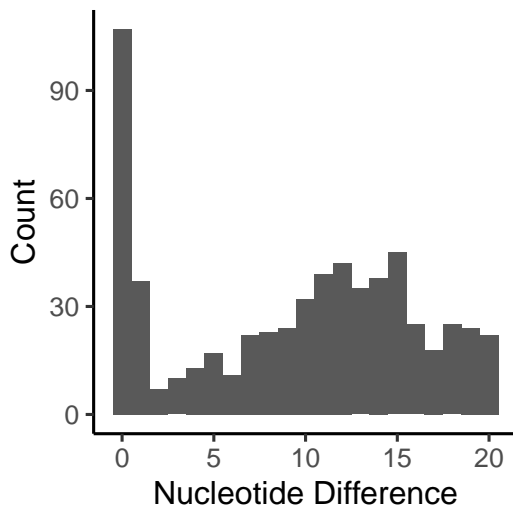
IGHV3-69-1*02

134 sequences assigned
2 (1.5%) exact matches, in which:
1 unique CDR3
1 unique J



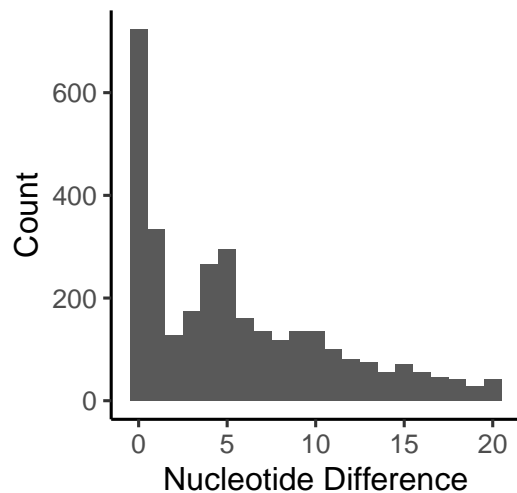
IGHV3-72*01

720 sequences assigned
107 (14.9%) exact matches, in which:
80 unique CDR3
6 unique J



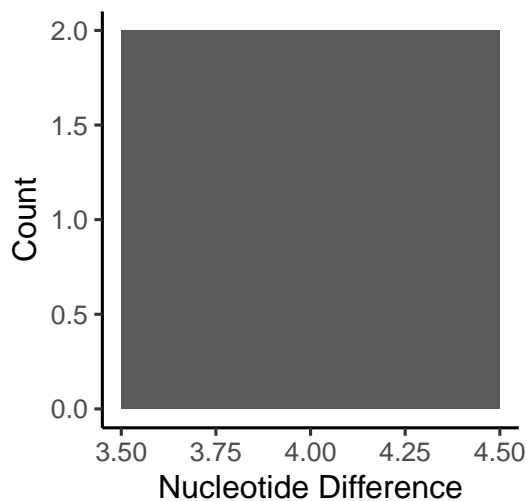
IGHV3-74*01_02

3623 sequences assigned
724 (20%) exact matches, in which:
564 unique CDR3
7 unique J



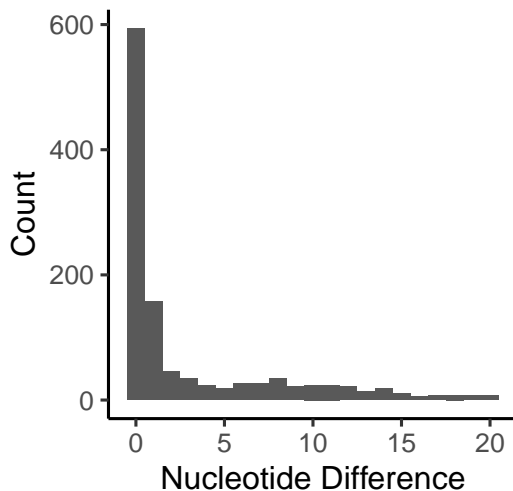
IGHV3-71*03

2 sequences assigned
No exact matches.



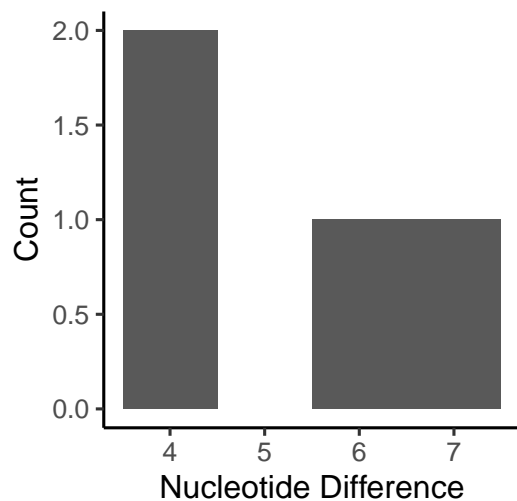
IGHV3-73*01_02

1393 sequences assigned
594 (42.6%) exact matches, in which:
467 unique CDR3
7 unique J



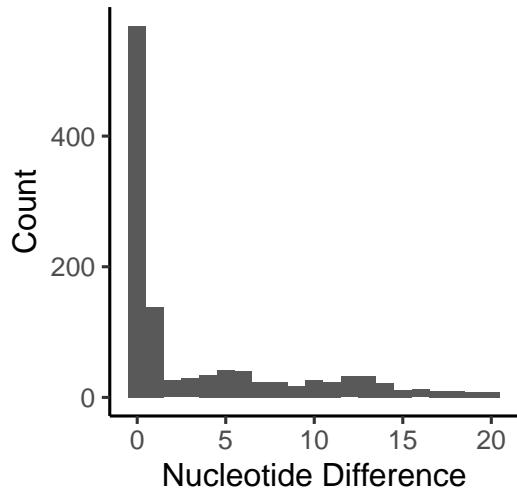
IGHV3-43D*04

4 sequences assigned
No exact matches.



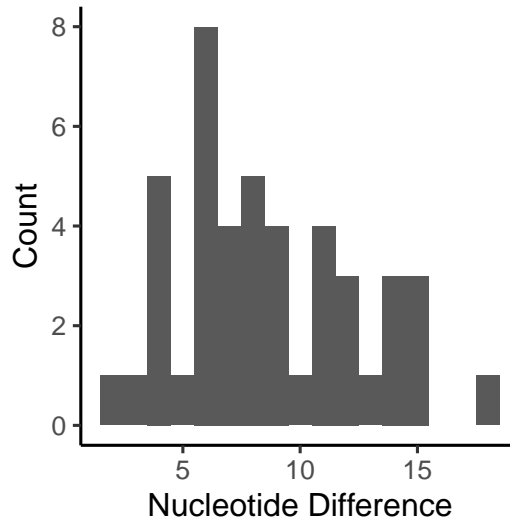
IGHV3–64D*06

1173 sequences assigned
569 (48.5%) exact matches, in which:
381 unique CDR3
7 unique J



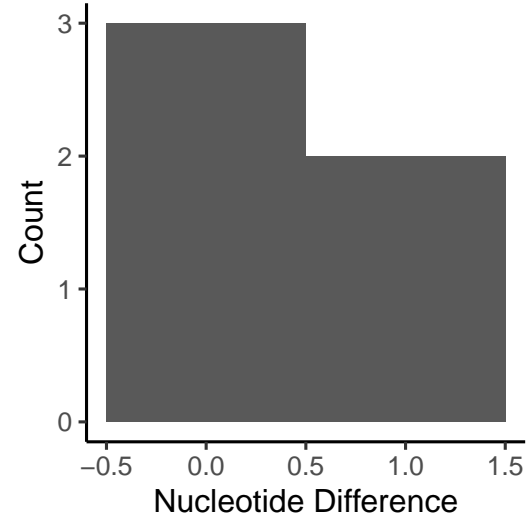
IGHV3–NL1*01

64 sequences assigned
No exact matches.



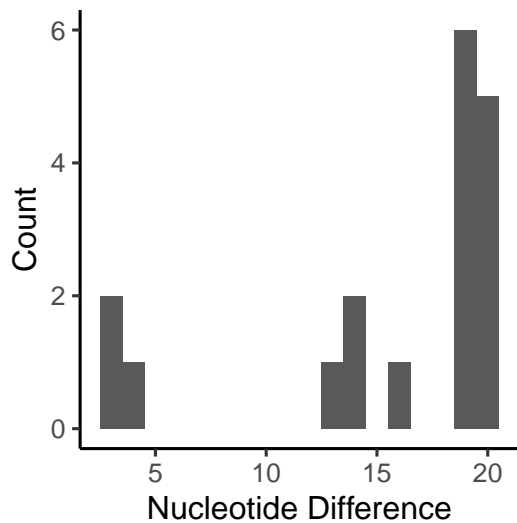
IGHV4–28*01_07

5 sequences assigned
3 (60%) exact matches, in which:
3 unique CDR3
3 unique J



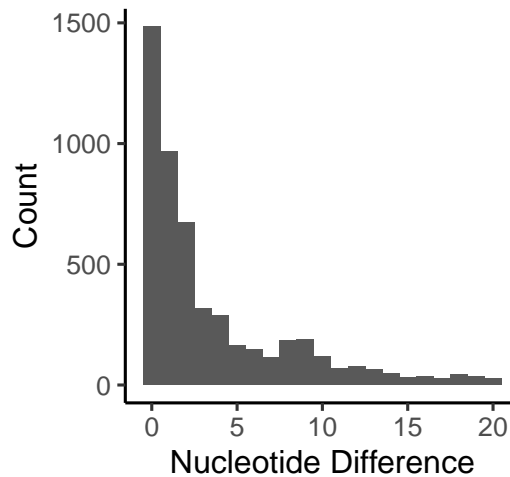
IGHV3–64D*08

26 sequences assigned
No exact matches.



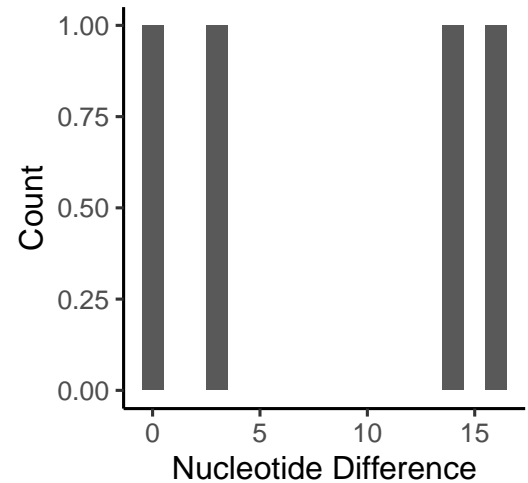
IGHV4–4*07

6866 sequences assigned
1484 (21.6%) exact matches, in which:
1391 unique CDR3
7 unique J



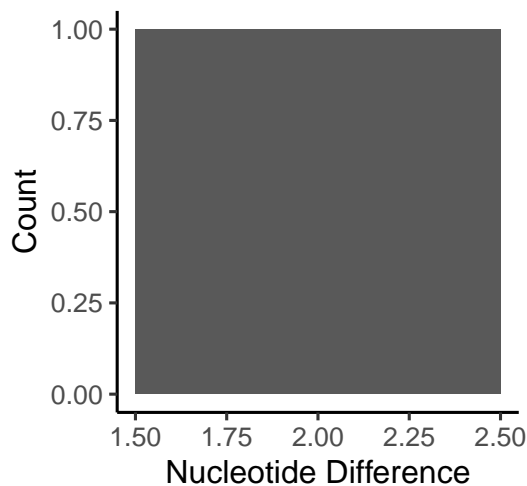
IGHV4–28*02_05

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



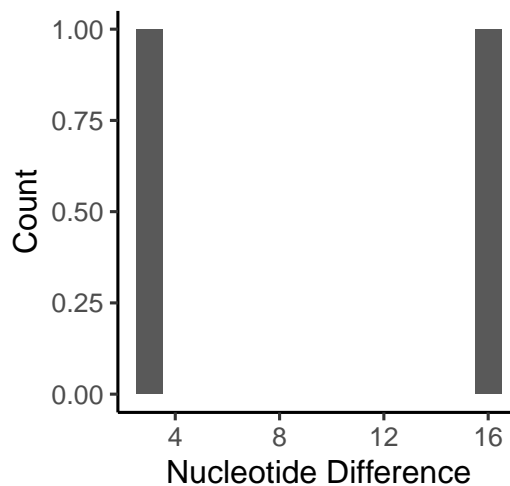
IGHV3–64D*09

6 sequences assigned
No exact matches.



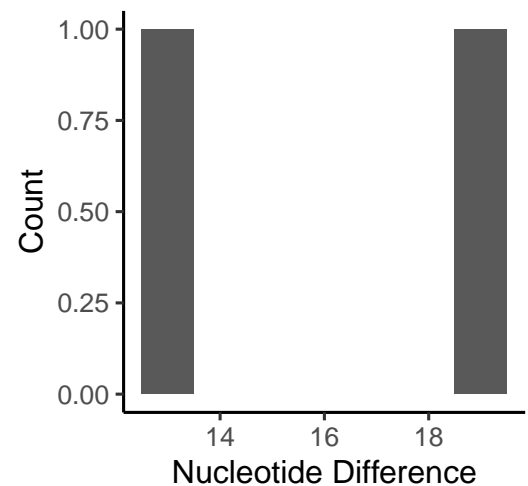
IGHV4–28*03

2 sequences assigned
No exact matches.



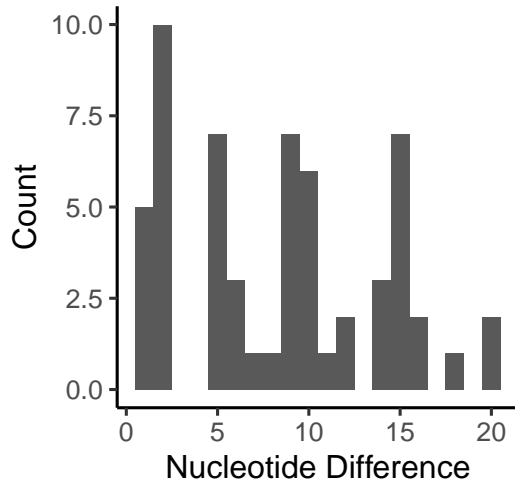
IGHV4–30–4*01

9 sequences assigned
No exact matches.



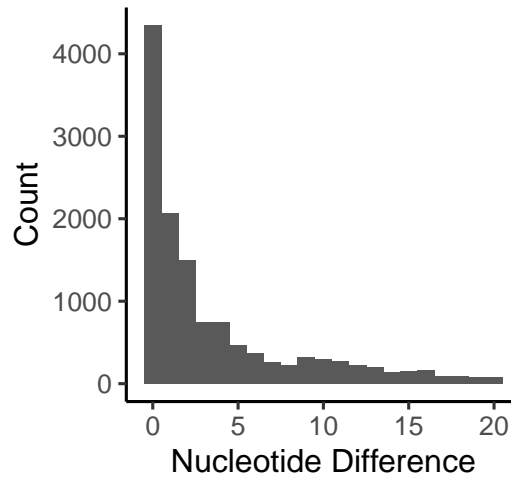
IGHV4-30-2*03

81 sequences assigned
No exact matches.



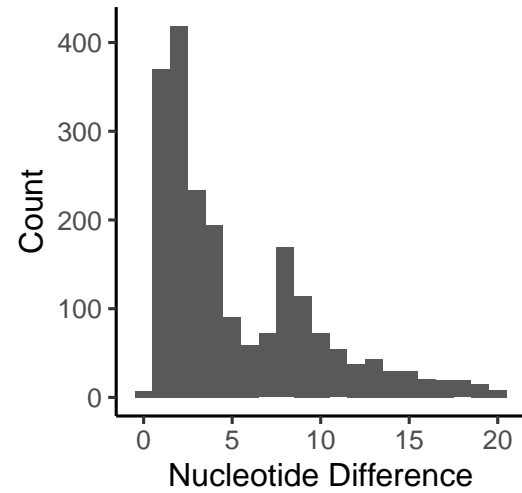
IGHV4-34*01_02

14798 sequences assigned
4344 (29.4%) exact matches, in which:
4085 unique CDR3
7 unique J



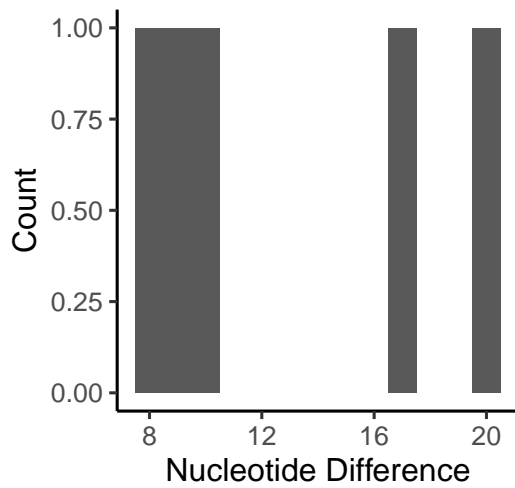
IGHV4-39*07

2790 sequences assigned
7 (0.3%) exact matches, in which:
7 unique CDR3
3 unique J



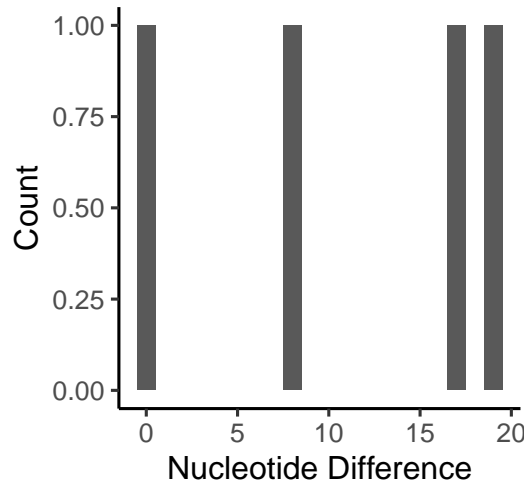
IGHV4-30-4*08

11 sequences assigned
No exact matches.



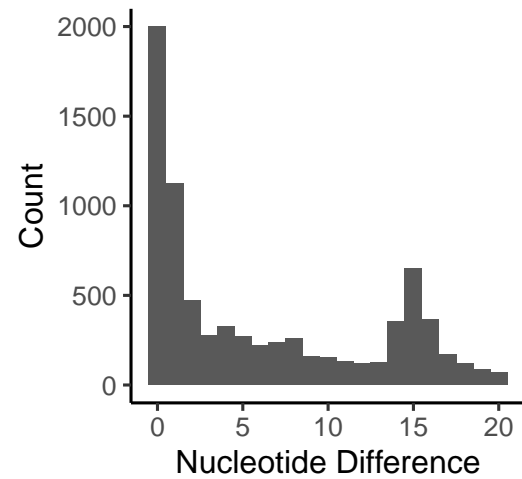
IGHV4-38-2*01

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



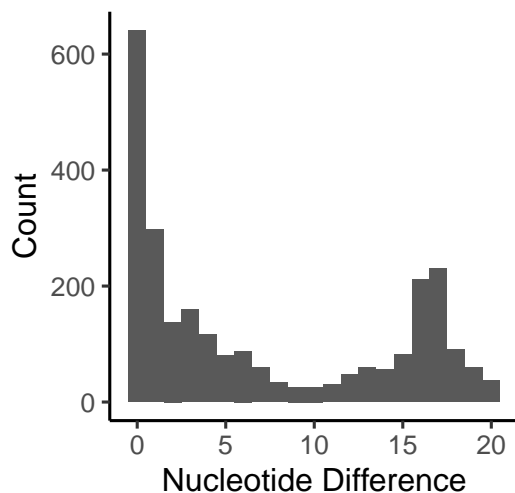
IGHV4-59*08

8907 sequences assigned
1999 (22.4%) exact matches, in which:
1857 unique CDR3
7 unique J



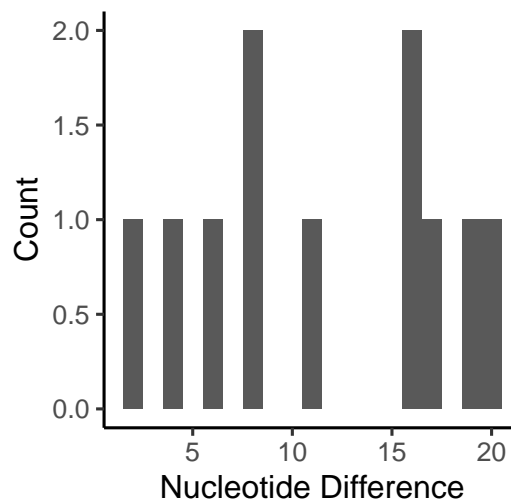
IGHV4-31*02

2851 sequences assigned
641 (22.5%) exact matches, in which:
616 unique CDR3
7 unique J



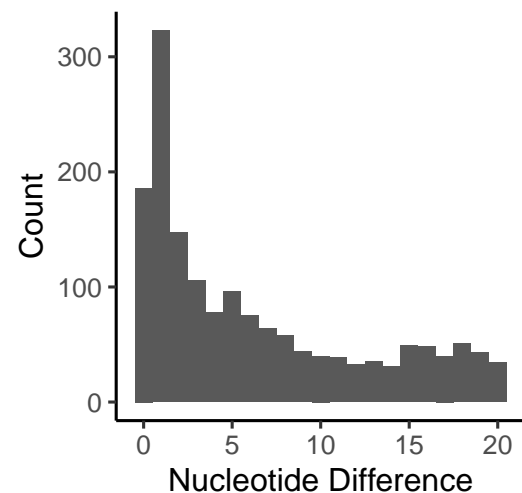
IGHV4-38-2*02

18 sequences assigned
No exact matches.



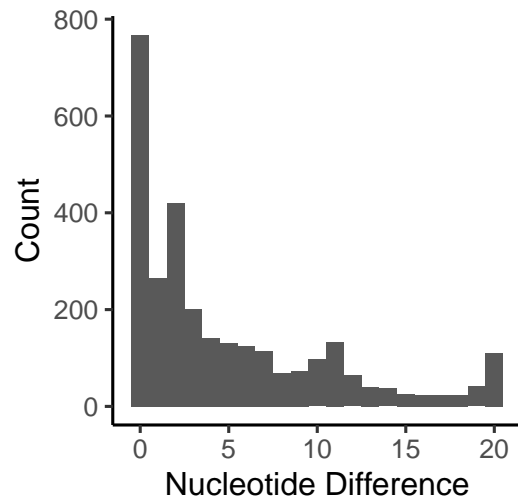
IGHV4-59*12

2198 sequences assigned
186 (8.5%) exact matches, in which:
186 unique CDR3
6 unique J



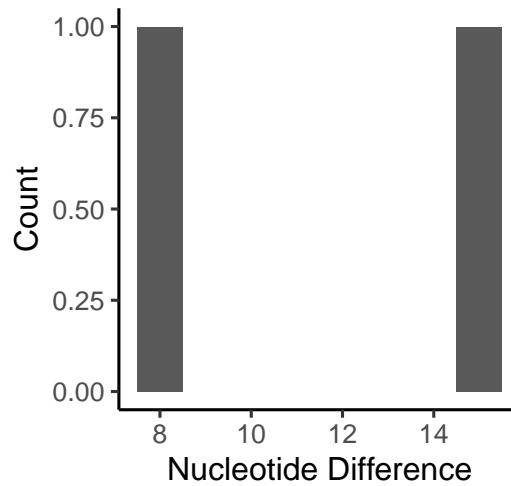
IGHV4–61*01

3832 sequences assigned
768 (20%) exact matches, in which:
744 unique CDR3
7 unique J



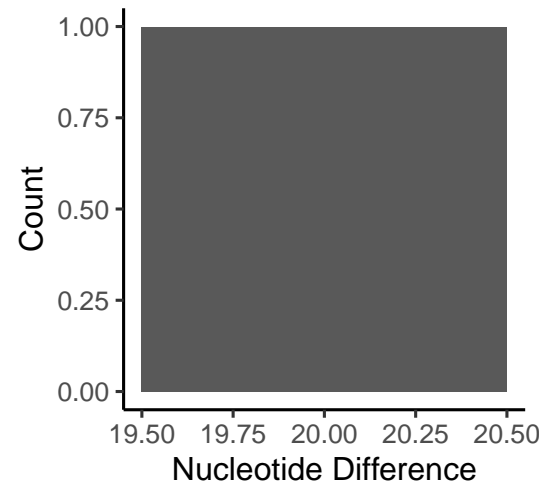
IGHV1/OR15–3*02

2 sequences assigned
No exact matches.



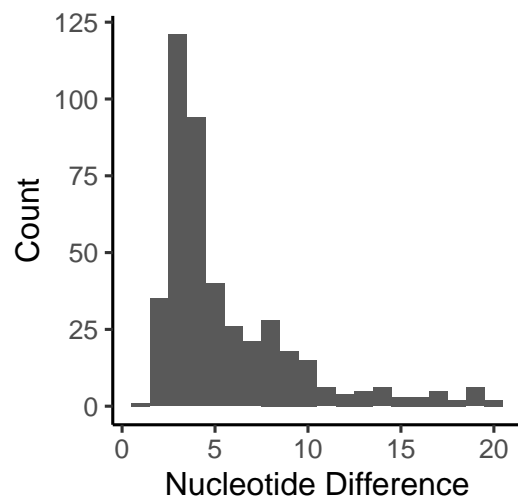
IGHV1/OR15–9*01

1 sequences assigned
No exact matches.



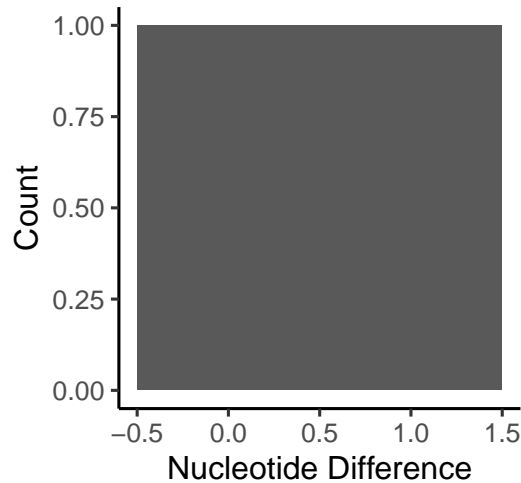
IGHV4–61*05

485 sequences assigned
No exact matches.



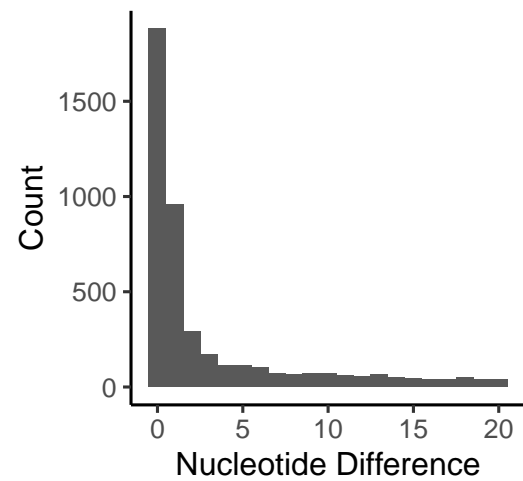
IGHV1/OR15–5*02

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



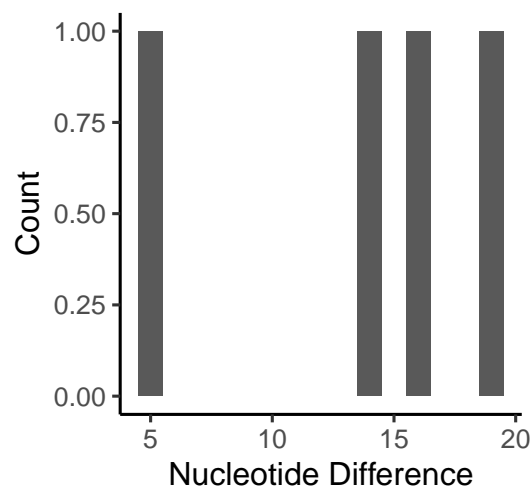
IGHV5–10–1*01_03

5153 sequences assigned
1881 (36.5%) exact matches, in which:
1519 unique CDR3
7 unique J



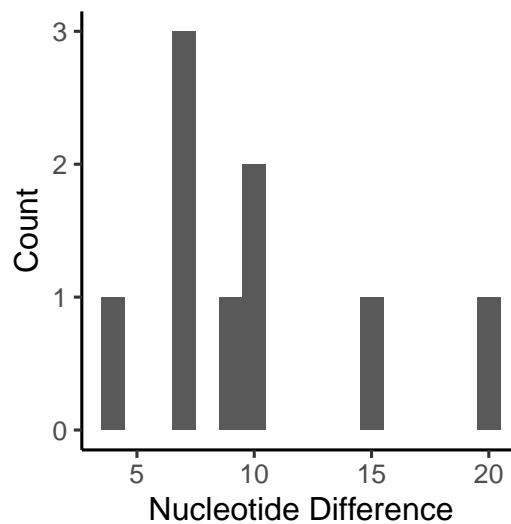
IGHV1/OR15–2*02_03

6 sequences assigned
No exact matches.



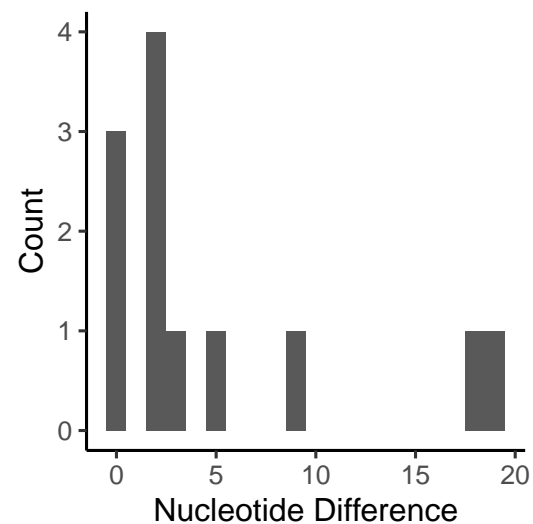
IGHV4/OR15–8*01

11 sequences assigned
No exact matches.



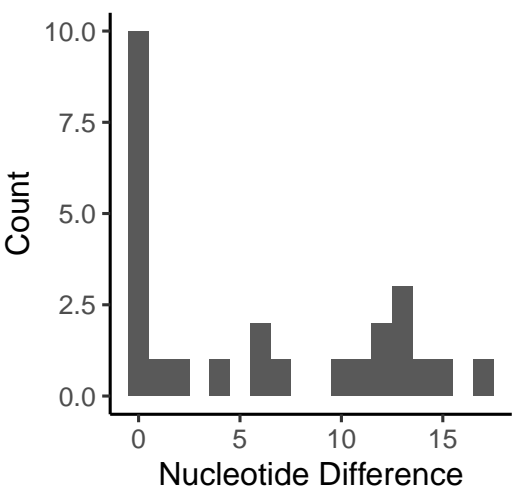
IGHV5–51*04

24 sequences assigned
3 (12.5%) exact matches, in which:
3 unique CDR3
2 unique J



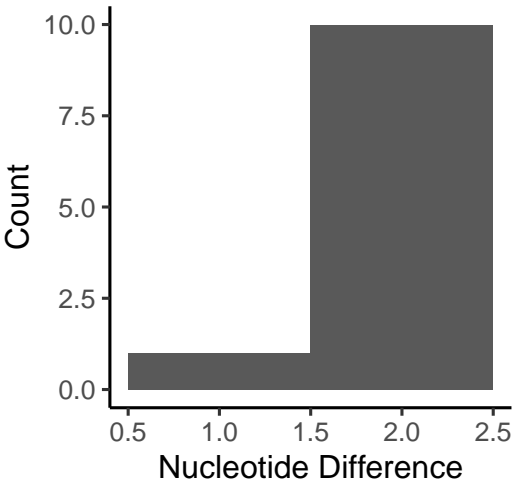
IGHV5-51*06

31 sequences assigned
10 (32.3%) exact matches, in which:
10 unique CDR3
6 unique J



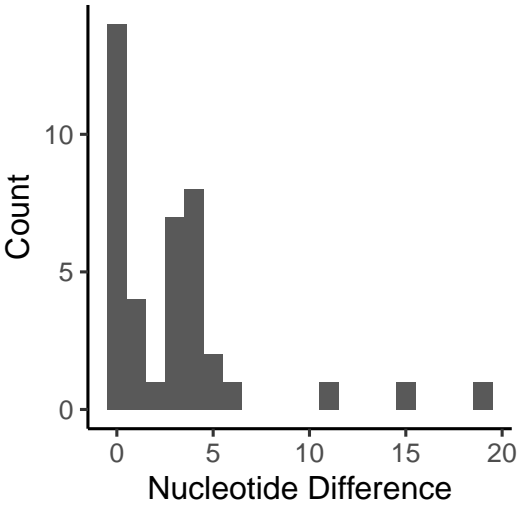
IGHV3/OR16-9*01

12 sequences assigned
No exact matches.



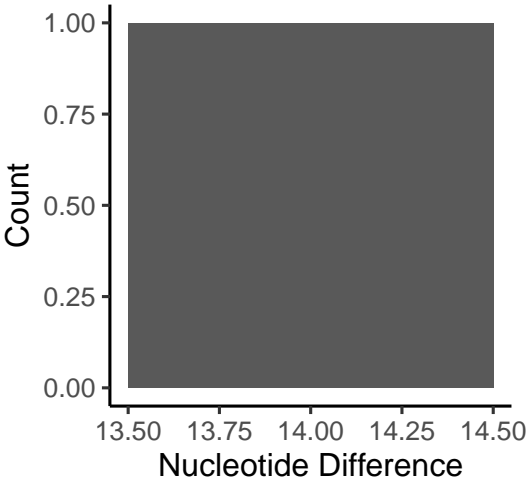
IGHV5-51*07

48 sequences assigned
14 (29.2%) exact matches, in which:
14 unique CDR3
4 unique J



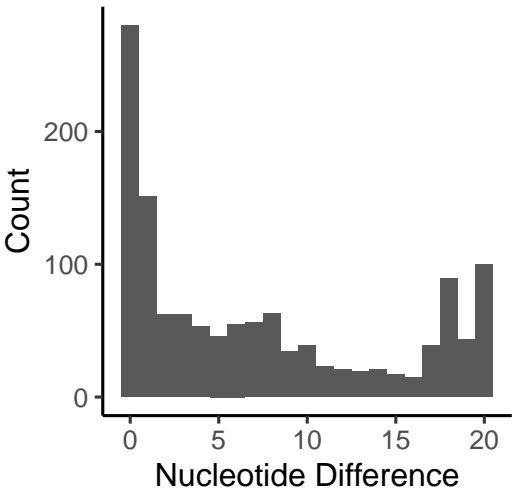
IGHV7-4-1*02

1 sequences assigned
No exact matches.

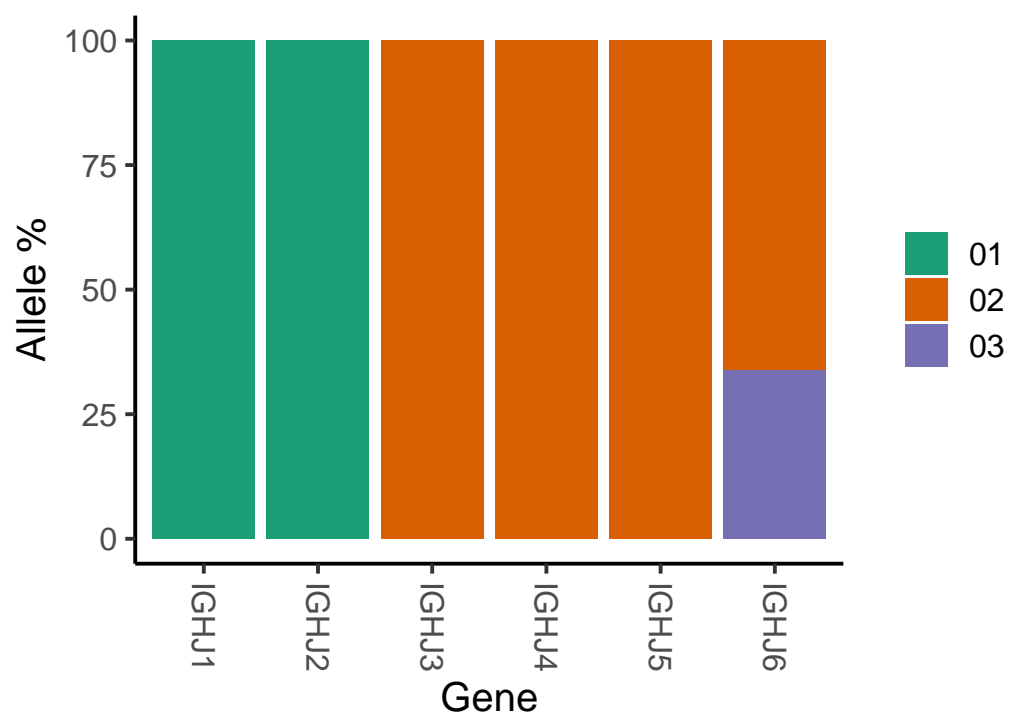


IGHV6-1*01_02

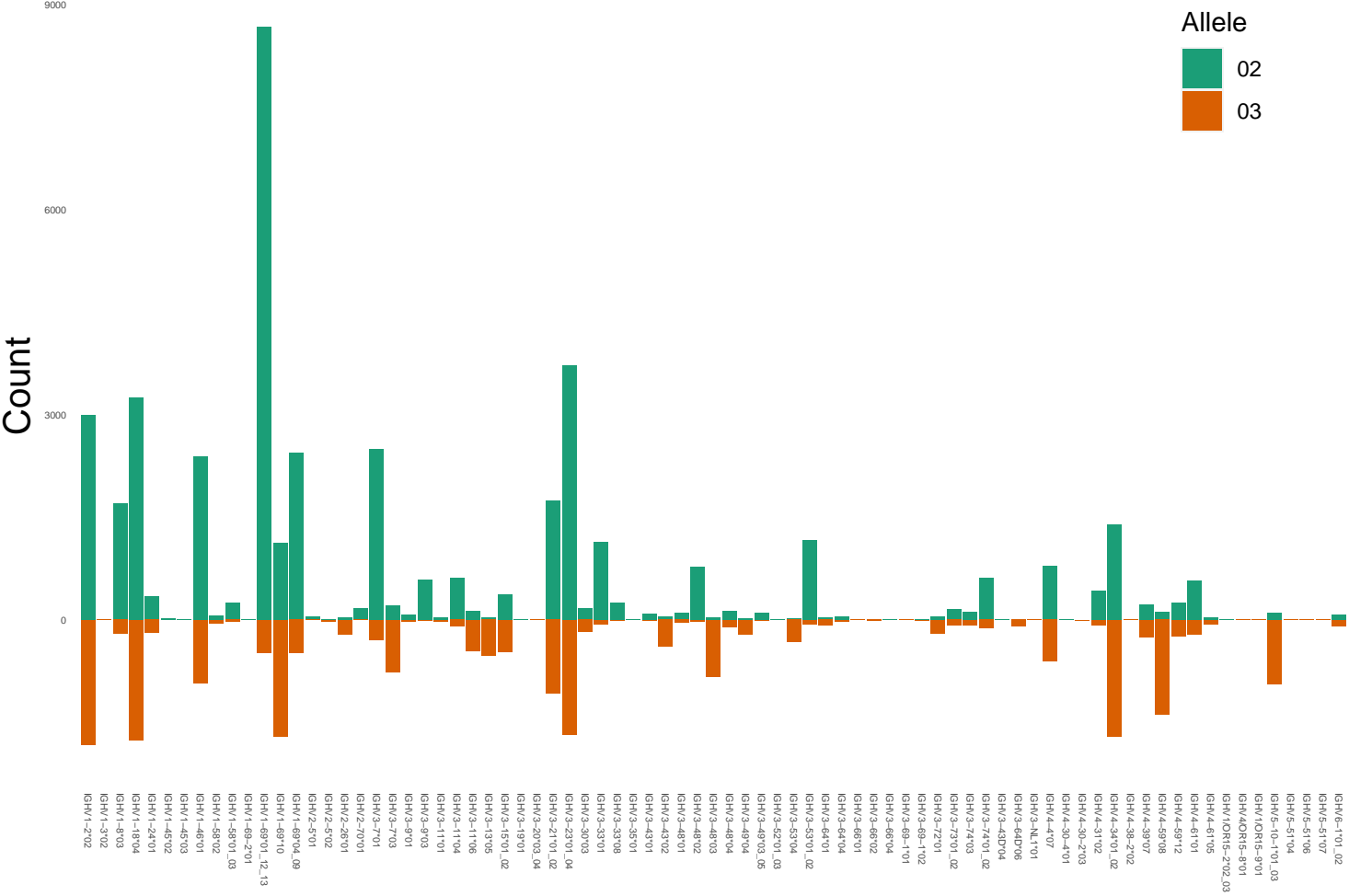
1743 sequences assigned
280 (16.1%) exact matches, in which:
269 unique CDR3
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.