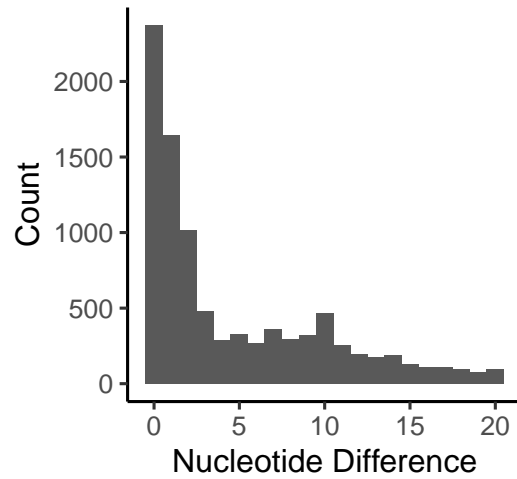


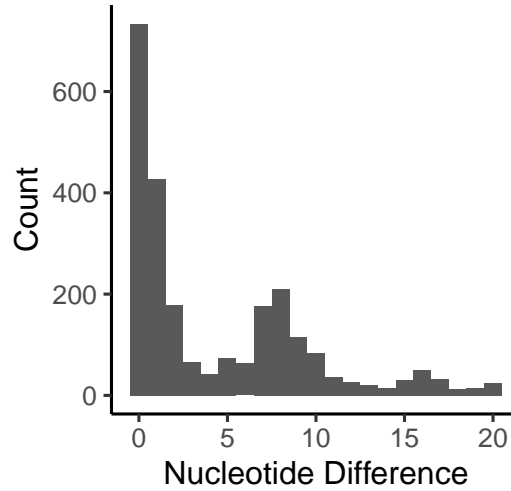
IGHV1-2*02

11285 sequences assigned
2371 (21%) exact matches, in which:
2091 unique CDR3
7 unique J



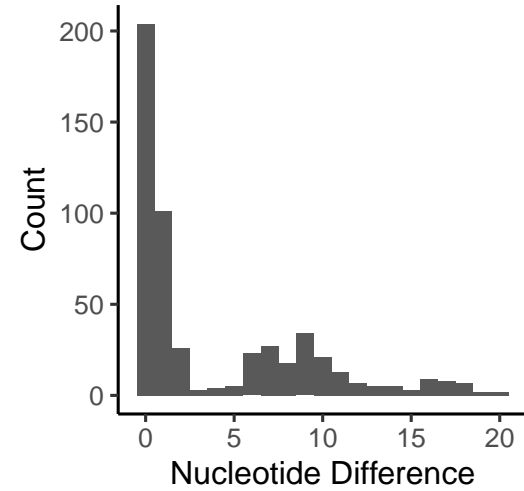
IGHV1-8*01

2694 sequences assigned
734 (27.2%) exact matches, in which:
679 unique CDR3
7 unique J



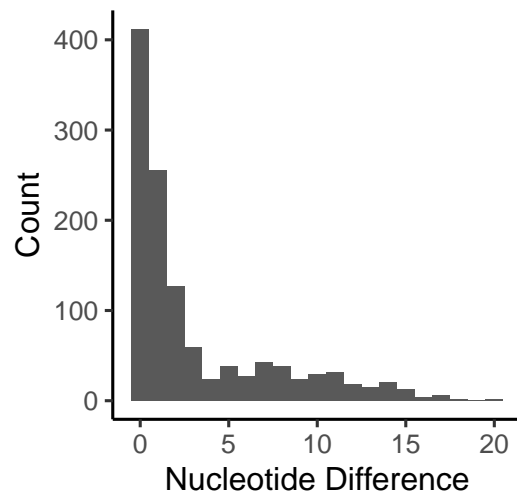
IGHV1-24*01

635 sequences assigned
204 (32.1%) exact matches, in which:
191 unique CDR3
7 unique J



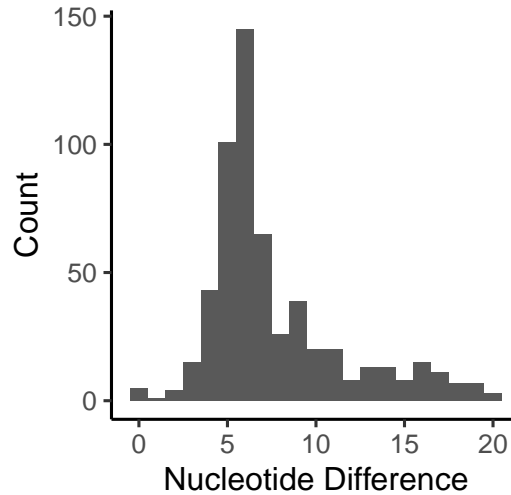
IGHV1-2*04

1232 sequences assigned
412 (33.4%) exact matches, in which:
374 unique CDR3
7 unique J



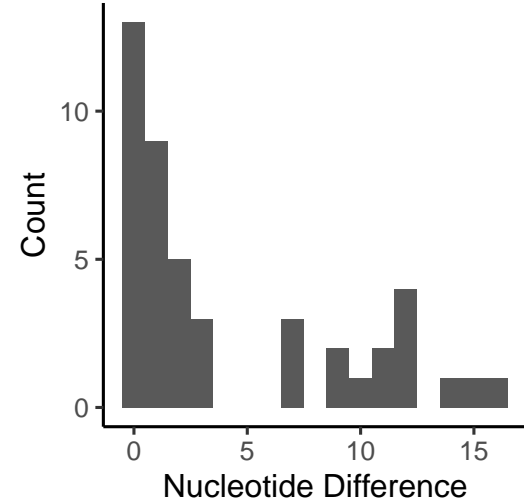
IGHV1-8*02

618 sequences assigned
5 (0.8%) exact matches, in which:
5 unique CDR3
3 unique J



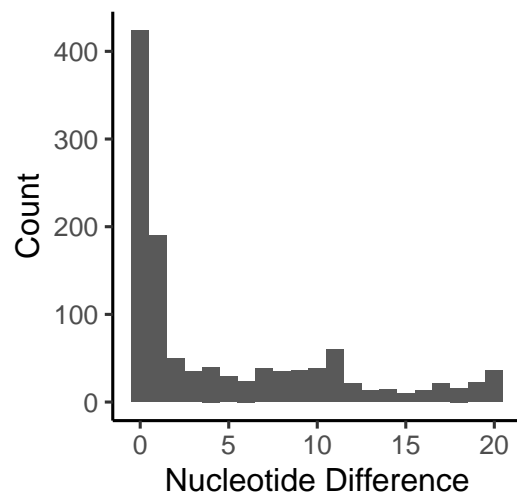
IGHV1-45*02

45 sequences assigned
13 (28.9%) exact matches, in which:
11 unique CDR3
2 unique J



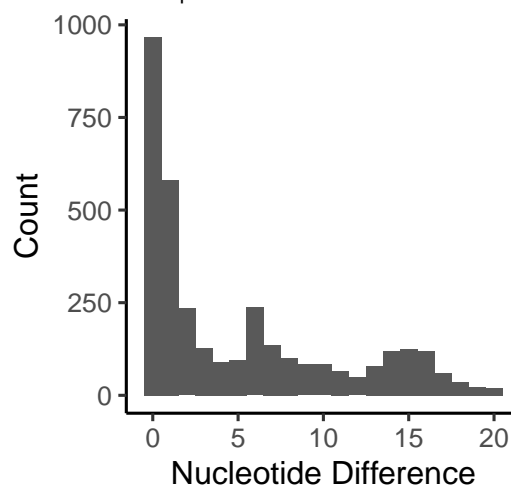
IGHV1-3*01_05

1377 sequences assigned
424 (30.8%) exact matches, in which:
376 unique CDR3
7 unique J



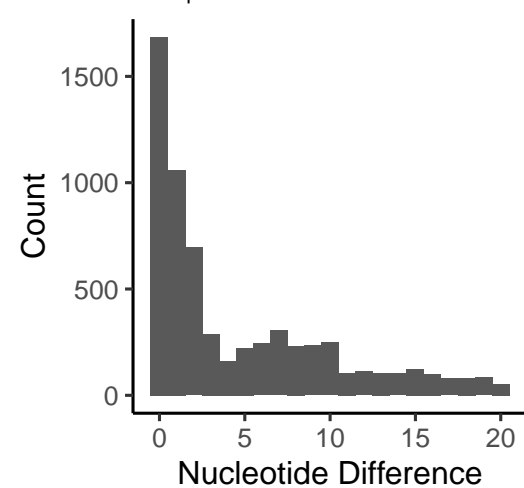
IGHV1-18*01

4380 sequences assigned
967 (22.1%) exact matches, in which:
893 unique CDR3
7 unique J



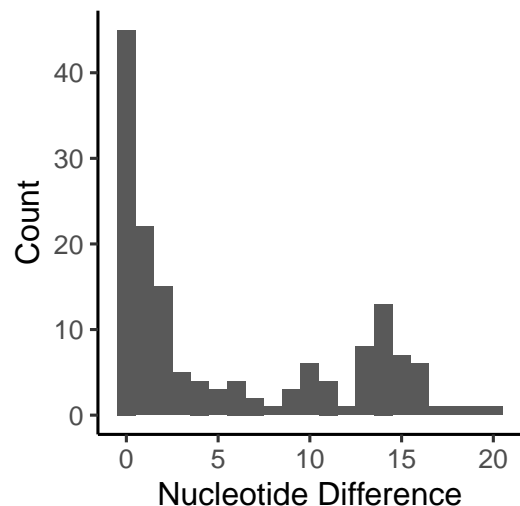
IGHV1-46*01

7045 sequences assigned
1685 (23.9%) exact matches, in which:
1554 unique CDR3
7 unique J



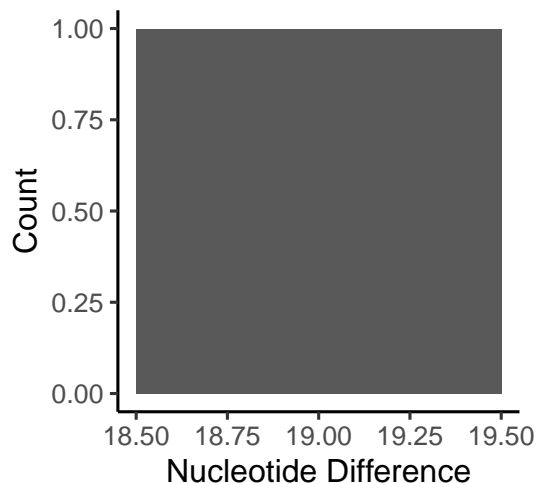
IGHV1-58*02

185 sequences assigned
45 (24.3%) exact matches, in which:
44 unique CDR3
7 unique J



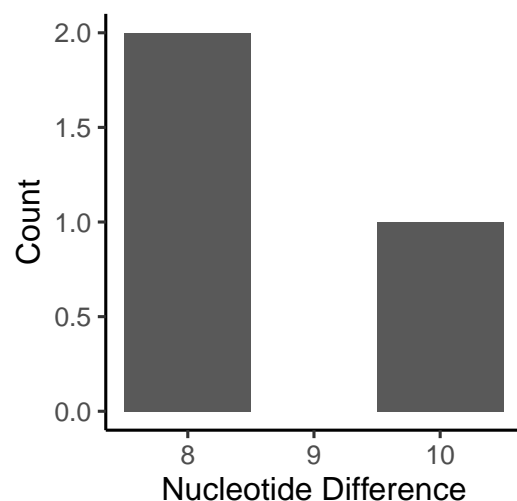
IGHV1-69-2*01

1 sequences assigned
No exact matches.



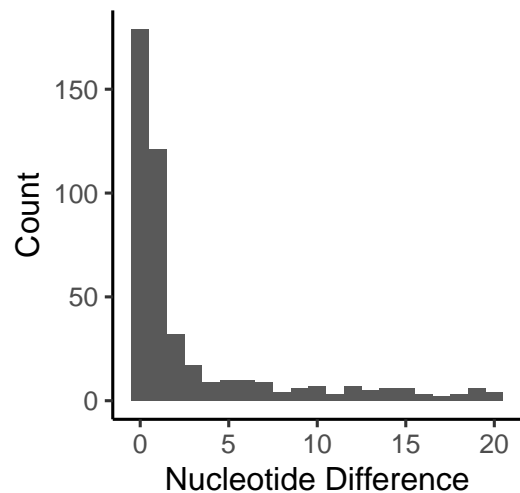
IGHV1-NL1*01

3 sequences assigned
No exact matches.



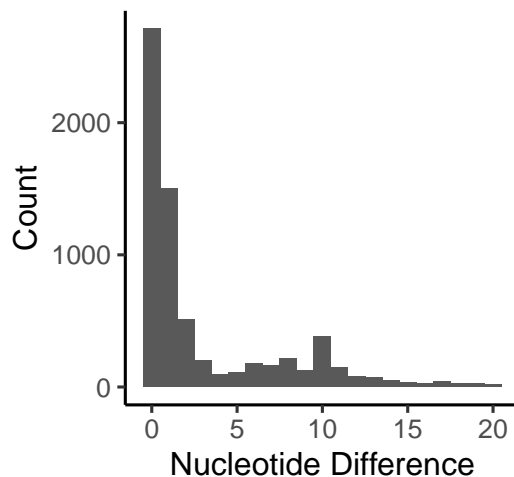
IGHV1-58*01_03

463 sequences assigned
179 (38.7%) exact matches, in which:
169 unique CDR3
6 unique J



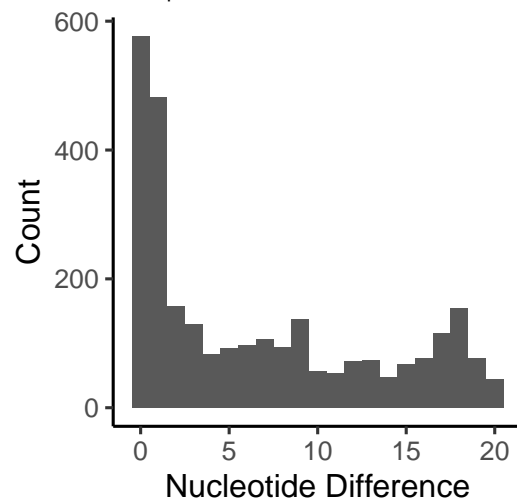
IGHV1-69*01_12_13

6869 sequences assigned
2711 (39.5%) exact matches, in which:
2537 unique CDR3
7 unique J



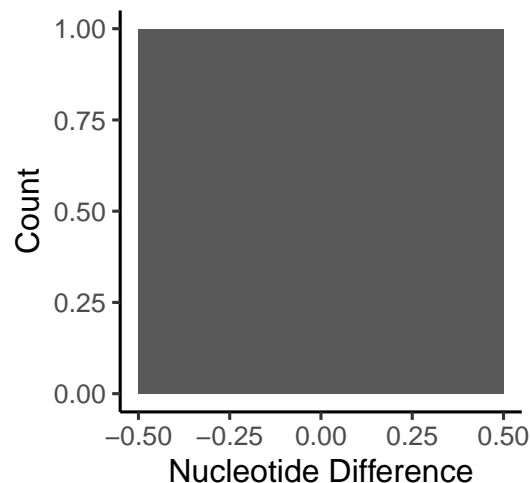
IGHV2-5*02

3108 sequences assigned
577 (18.6%) exact matches, in which:
517 unique CDR3
7 unique J



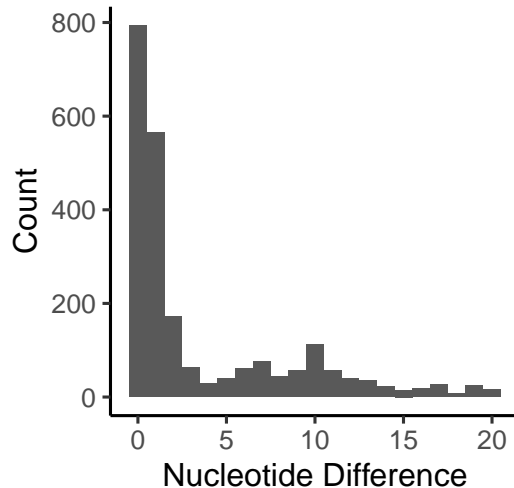
IGHV1-68*01

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



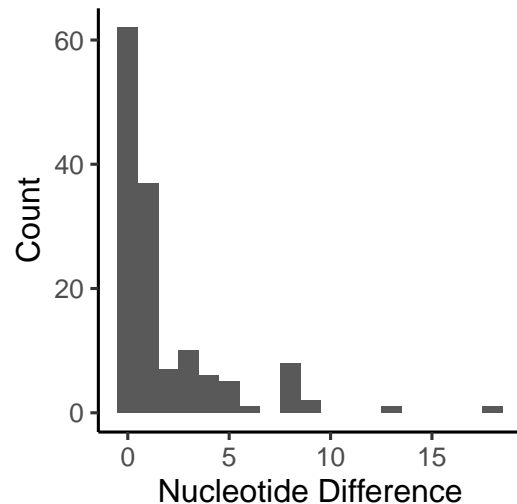
IGHV1-69*10

2445 sequences assigned
794 (32.5%) exact matches, in which:
741 unique CDR3
7 unique J



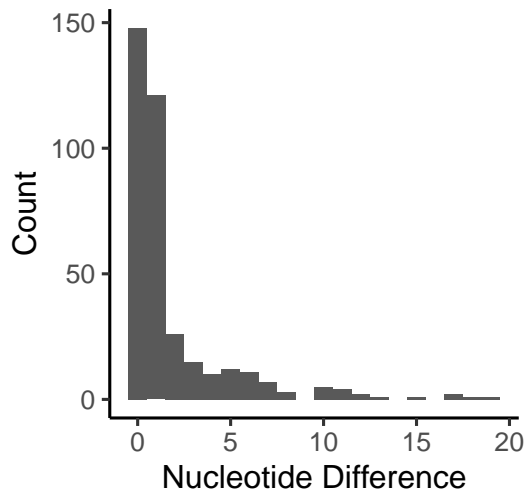
IGHV2-26*01

141 sequences assigned
62 (44%) exact matches, in which:
56 unique CDR3
6 unique J



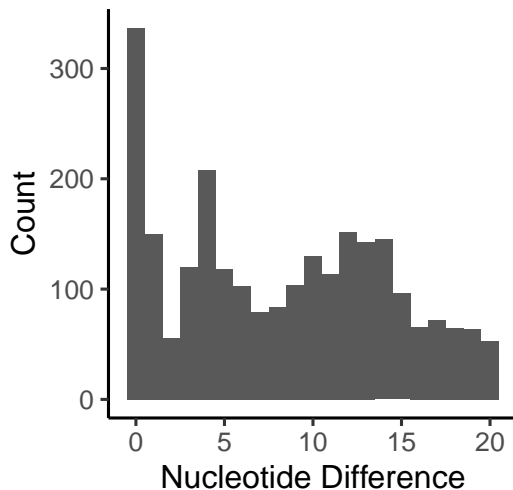
IGHV2-70*01

381 sequences assigned
148 (38.8%) exact matches, in which:
127 unique CDR3
6 unique J



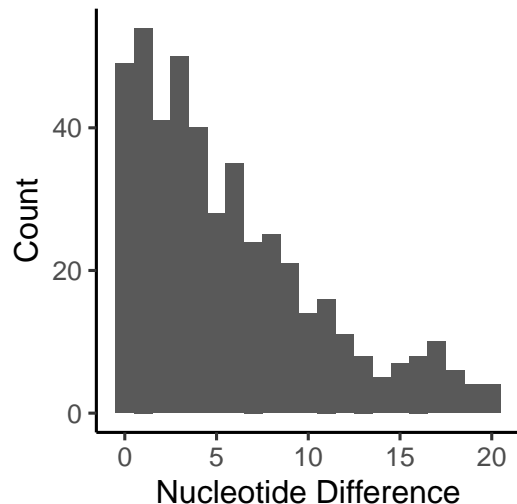
IGHV3-7*04

2983 sequences assigned
337 (11.3%) exact matches, in which:
247 unique CDR3
7 unique J



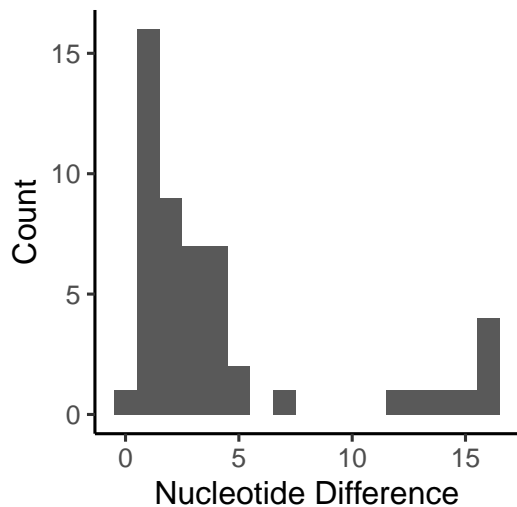
IGHV3-11*04

549 sequences assigned
49 (8.9%) exact matches, in which:
49 unique CDR3
5 unique J



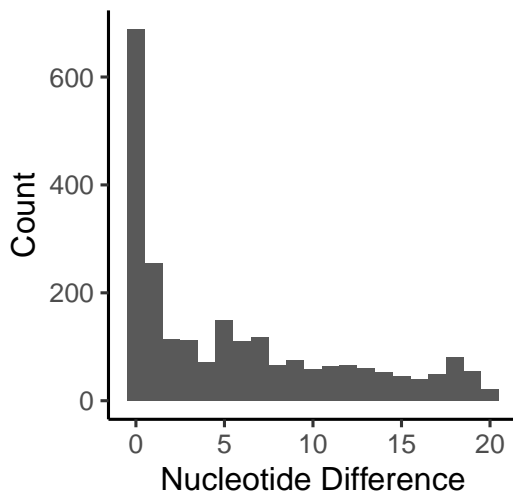
IGHV2-70*12

52 sequences assigned
1 (1.9%) exact matches, in which:
1 unique CDR3
1 unique J



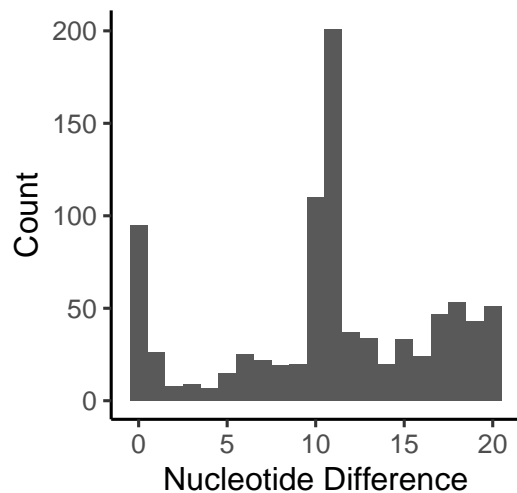
IGHV3-9*01

2570 sequences assigned
689 (26.8%) exact matches, in which:
483 unique CDR3
7 unique J



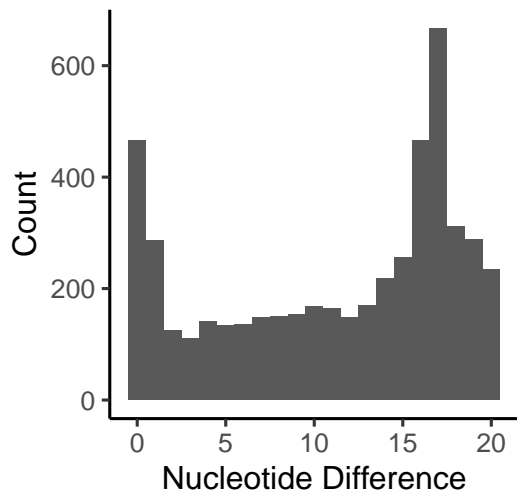
IGHV3-13*01

1315 sequences assigned
95 (7.2%) exact matches, in which:
66 unique CDR3
7 unique J



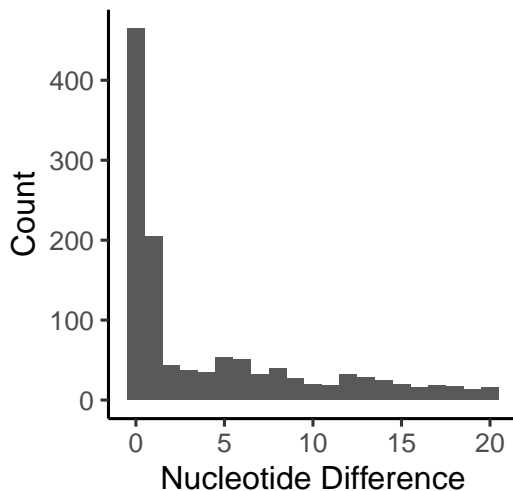
IGHV3-7*01

6405 sequences assigned
466 (7.3%) exact matches, in which:
354 unique CDR3
7 unique J



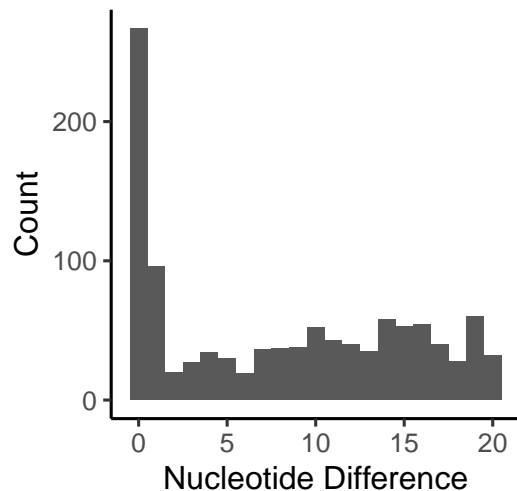
IGHV3-11*01

1403 sequences assigned
465 (33.1%) exact matches, in which:
343 unique CDR3
7 unique J



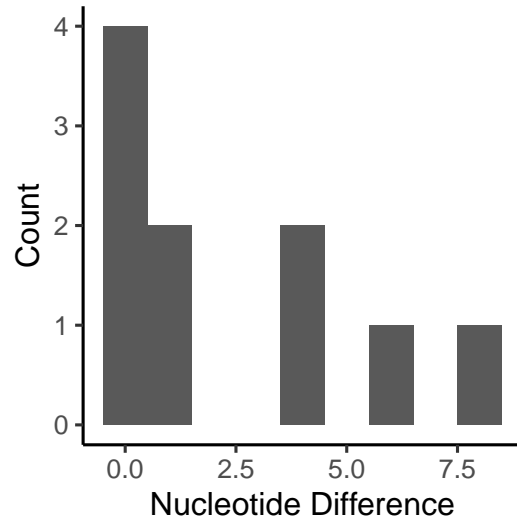
IGHV3-15*01_02

1796 sequences assigned
267 (14.9%) exact matches, in which:
195 unique CDR3
7 unique J



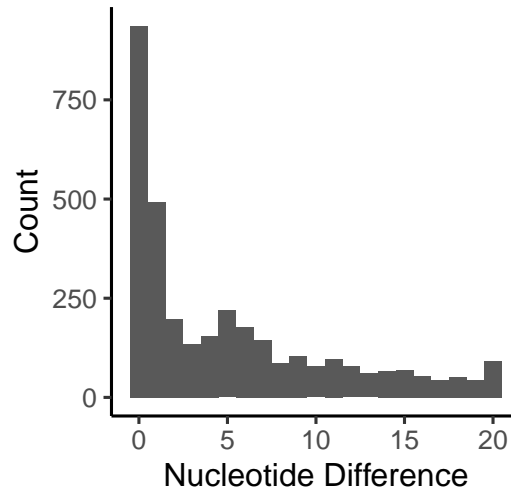
IGHV3-19*01

10 sequences assigned
4 (40%) exact matches, in which:
3 unique CDR3
2 unique J



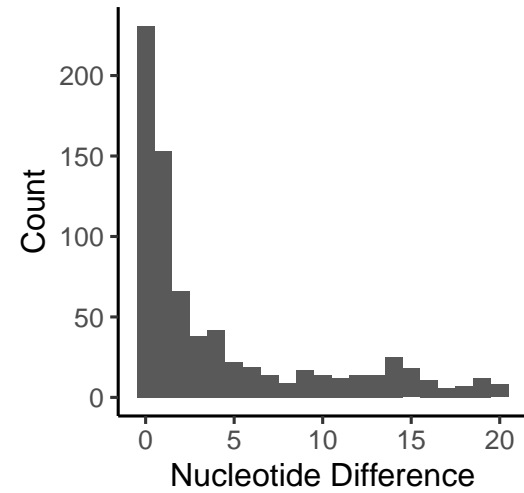
IGHV3-21*01_02

4354 sequences assigned
937 (21.5%) exact matches, in which:
698 unique CDR3
7 unique J



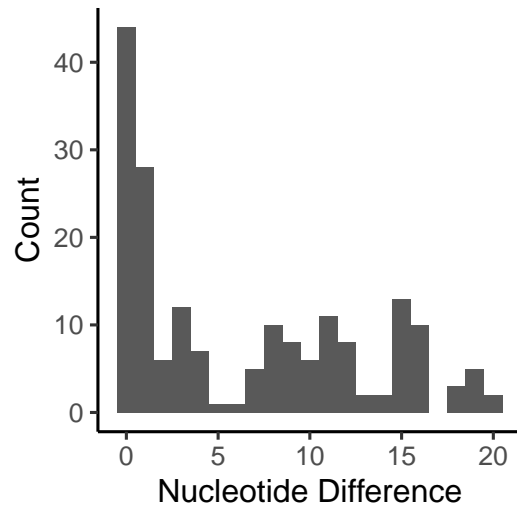
IGHV3-30*03

840 sequences assigned
231 (27.5%) exact matches, in which:
221 unique CDR3
7 unique J



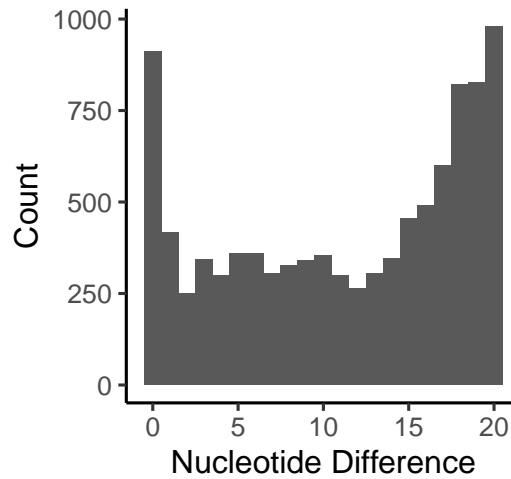
IGHV3-20*01_02

188 sequences assigned
44 (23.4%) exact matches, in which:
31 unique CDR3
5 unique J



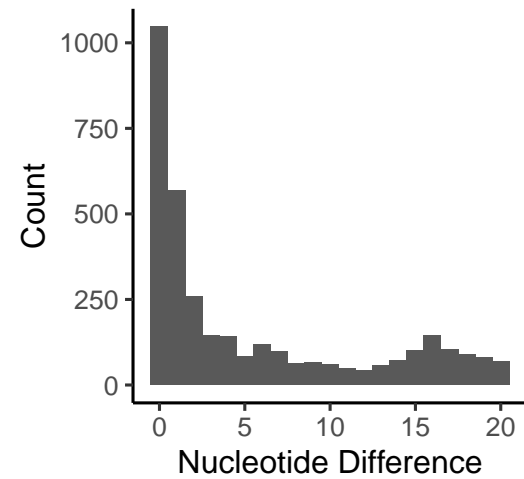
IGHV3-23*01_04

17280 sequences assigned
911 (5.3%) exact matches, in which:
621 unique CDR3
7 unique J



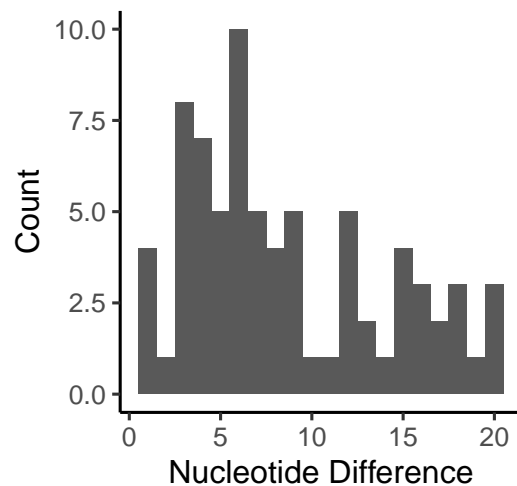
IGHV3-33*01

3967 sequences assigned
1047 (26.4%) exact matches, in which:
815 unique CDR3
7 unique J



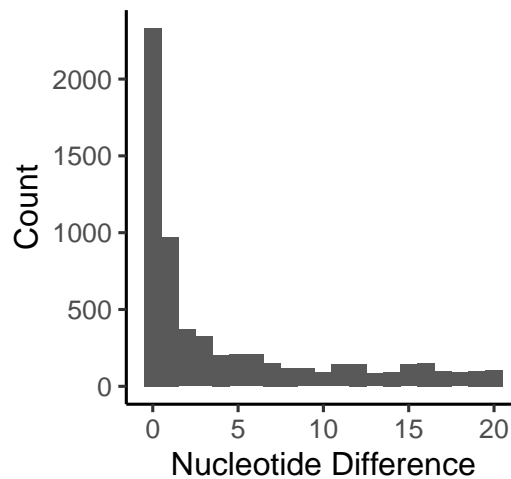
IGHV3-20*03_04

102 sequences assigned
No exact matches.



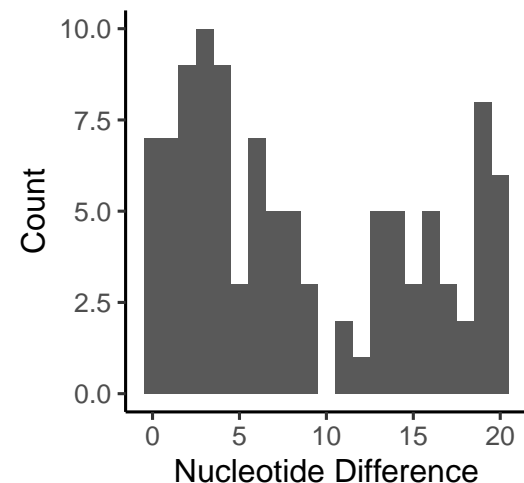
IGHV3-30-3*01

6753 sequences assigned
2332 (34.5%) exact matches, in which:
1769 unique CDR3
7 unique J



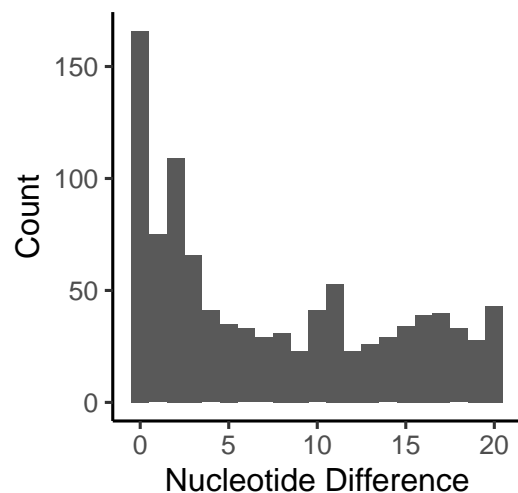
IGHV3-33*05

219 sequences assigned
7 (3.2%) exact matches, in which:
7 unique CDR3
3 unique J



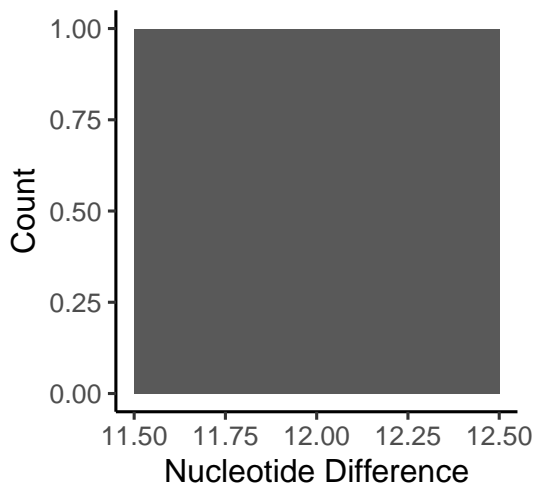
IGHV3–33*08

1290 sequences assigned
166 (12.9%) exact matches, in which:
156 unique CDR3
7 unique J



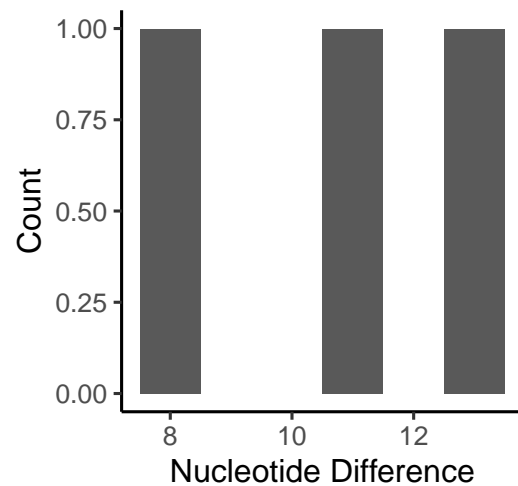
IGHV3–38*03

1 sequences assigned
No exact matches.



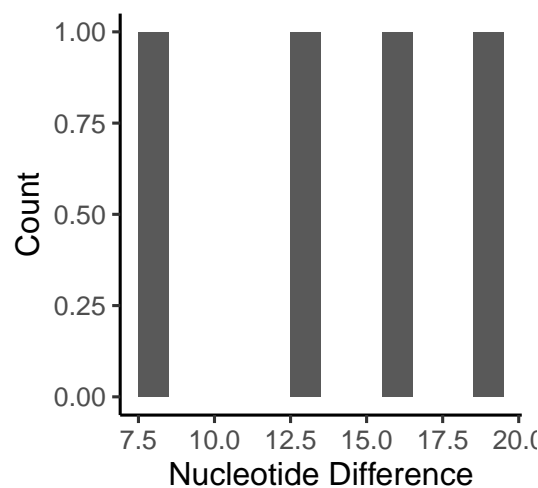
IGHV3–47*02

3 sequences assigned
No exact matches.



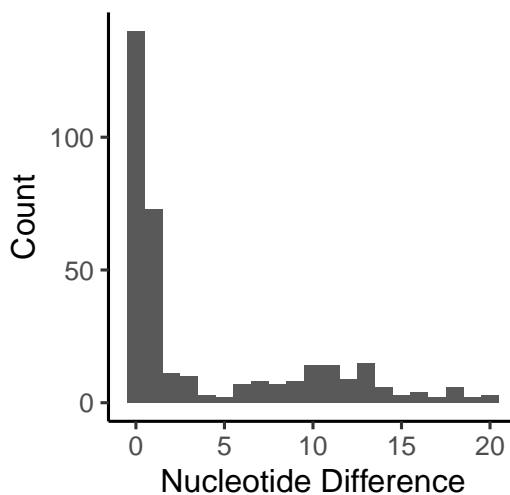
IGHV3–35*01

5 sequences assigned
No exact matches.



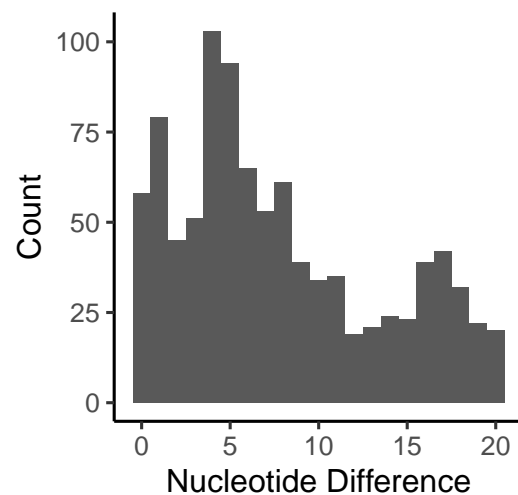
IGHV3–43*01

402 sequences assigned
140 (34.8%) exact matches, in which:
106 unique CDR3
7 unique J



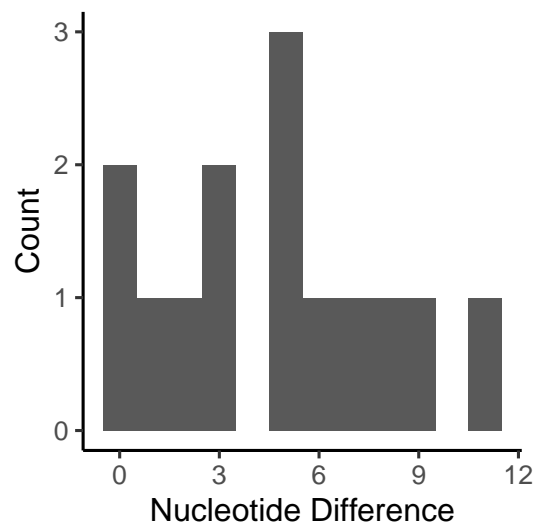
IGHV3–48*01

1120 sequences assigned
58 (5.2%) exact matches, in which:
57 unique CDR3
7 unique J



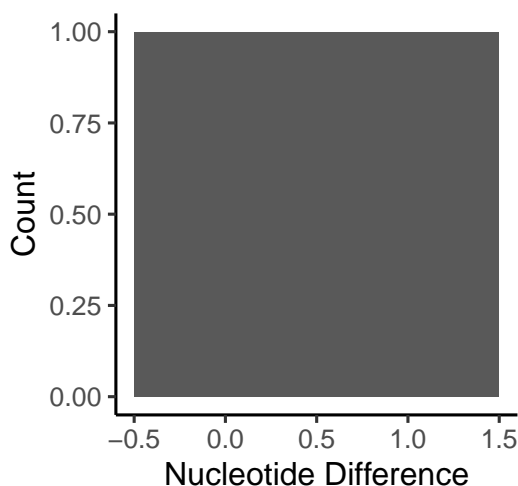
IGHV3–38–3*01

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



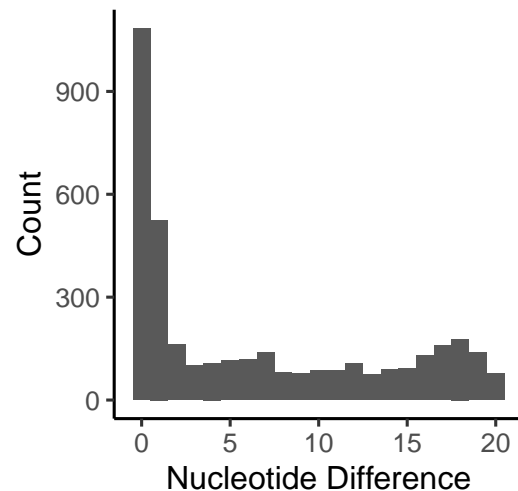
IGHV3–47*01

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



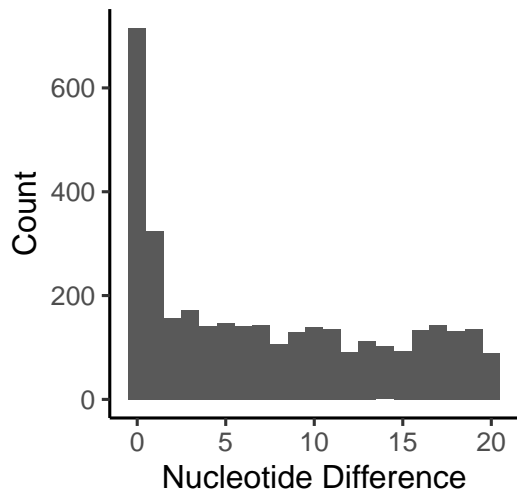
IGHV3–48*02

4461 sequences assigned
1084 (24.3%) exact matches, in which:
753 unique CDR3
7 unique J



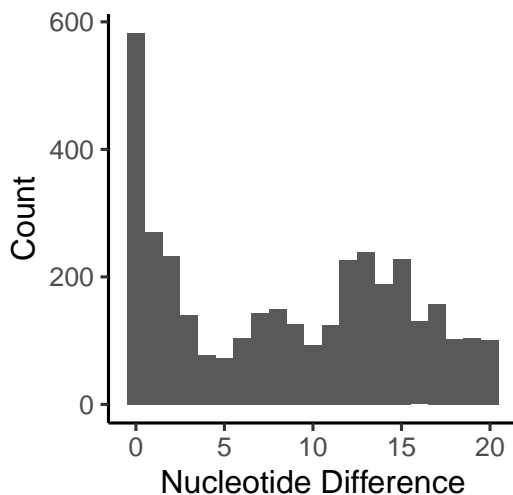
IGHV3-48*04

4561 sequences assigned
716 (15.7%) exact matches, in which:
526 unique CDR3
7 unique J



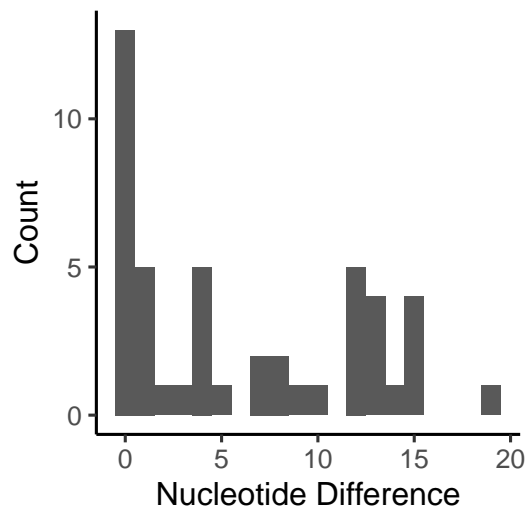
IGHV3-53*01_02

4537 sequences assigned
583 (12.8%) exact matches, in which:
455 unique CDR3
7 unique J



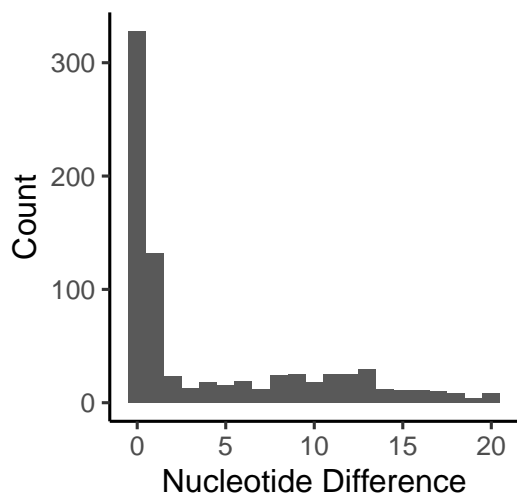
IGHV3-64*02_07

57 sequences assigned
13 (22.8%) exact matches, in which:
11 unique CDR3
5 unique J



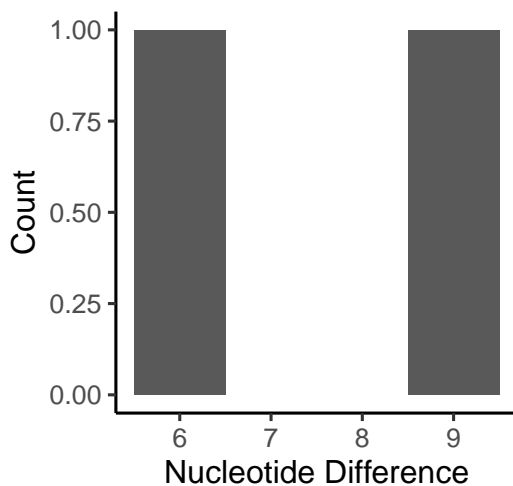
IGHV3-49*03_05

947 sequences assigned
328 (34.6%) exact matches, in which:
247 unique CDR3
7 unique J



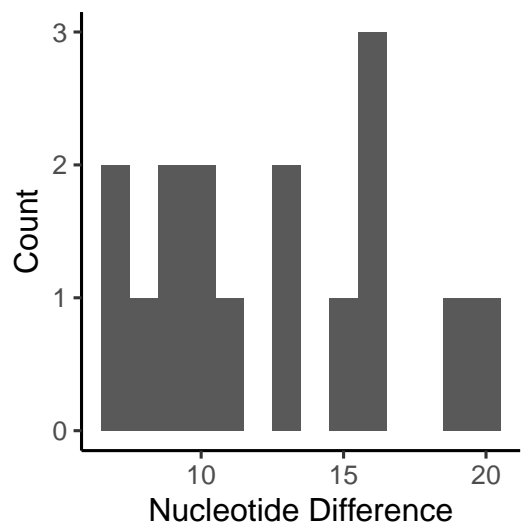
IGHV3-62*04

2 sequences assigned
No exact matches.



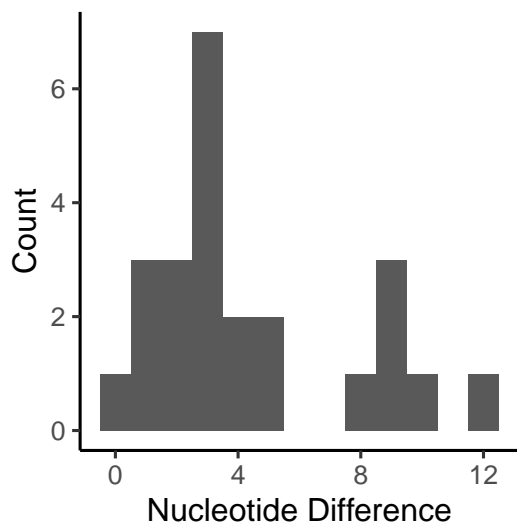
IGHV3-66*01

31 sequences assigned
No exact matches.



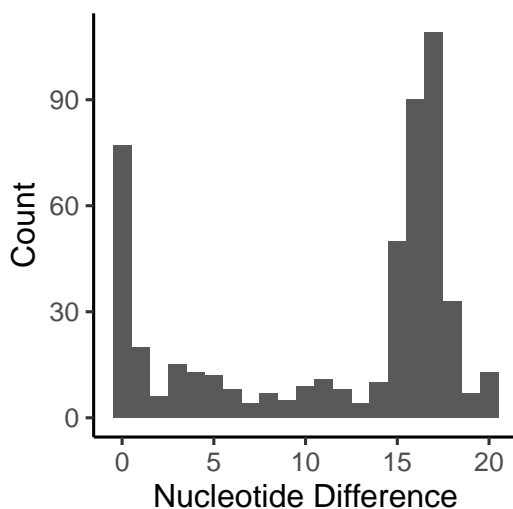
IGHV3-52*01_03

24 sequences assigned
1 (4.2%) exact matches, in which:
1 unique CDR3
1 unique J



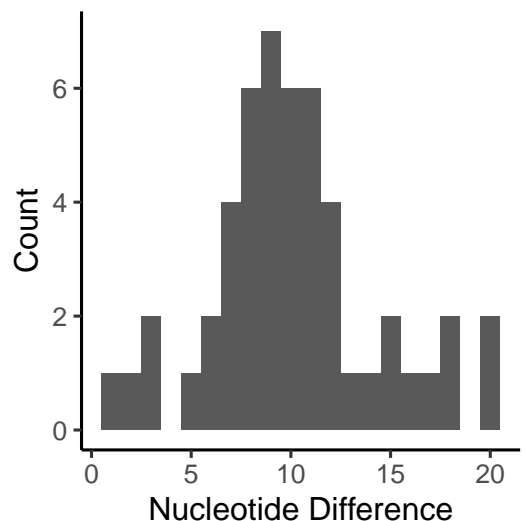
IGHV3-64*01

563 sequences assigned
77 (13.7%) exact matches, in which:
56 unique CDR3
5 unique J



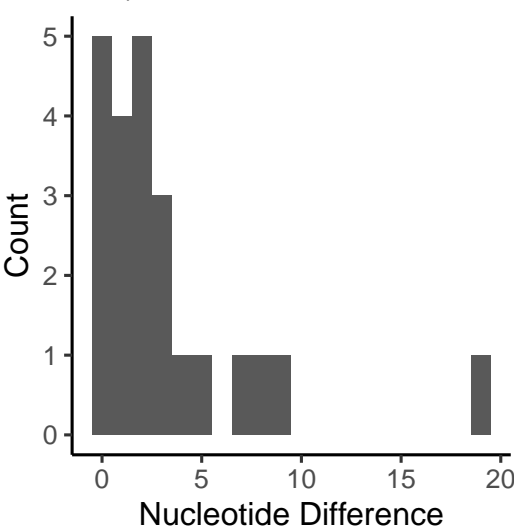
IGHV3-66*02

64 sequences assigned
No exact matches.



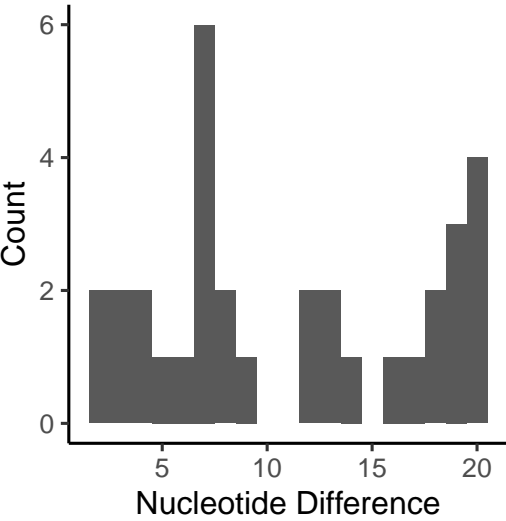
IGHV3-66*03

24 sequences assigned
5 (20.8%) exact matches, in which:
5 unique CDR3
4 unique J



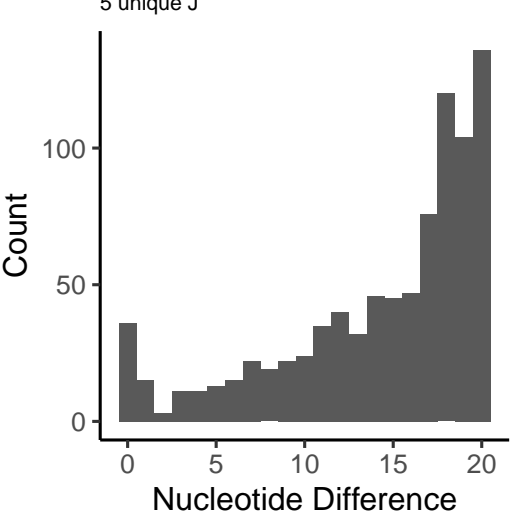
IGHV3-69-1*02

51 sequences assigned
No exact matches.



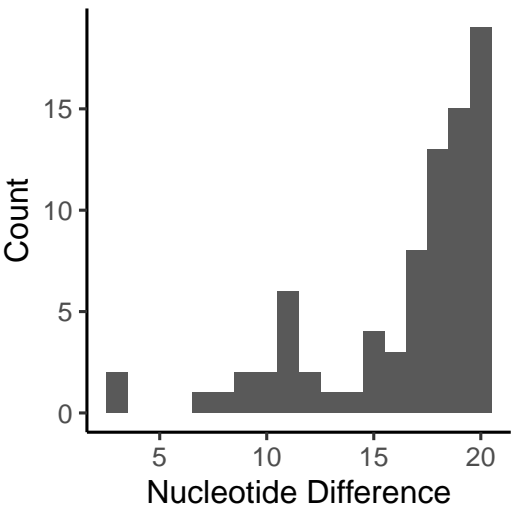
IGHV3-72*01

2202 sequences assigned
36 (1.6%) exact matches, in which:
29 unique CDR3
5 unique J



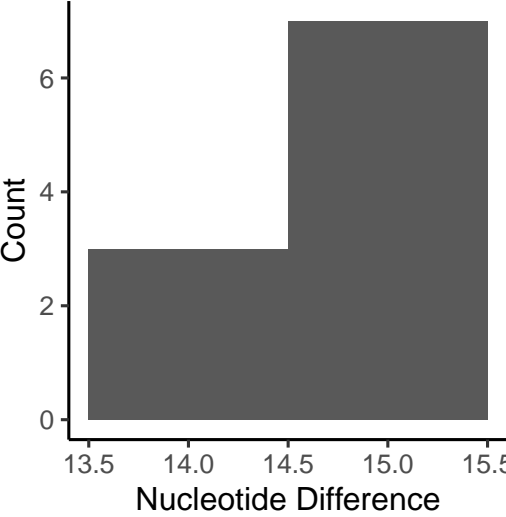
IGHV3-66*04

149 sequences assigned
No exact matches.



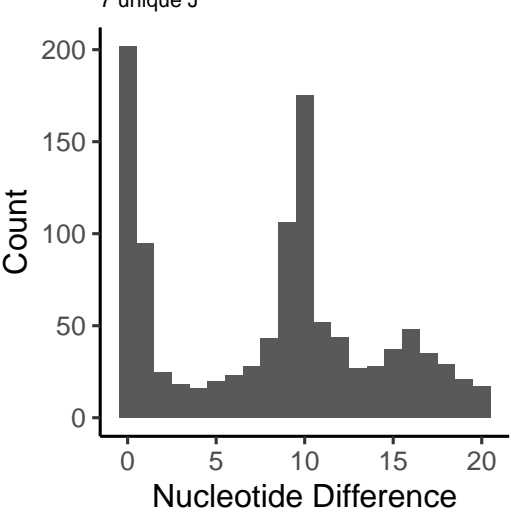
IGHV3-71*02

10 sequences assigned
No exact matches.



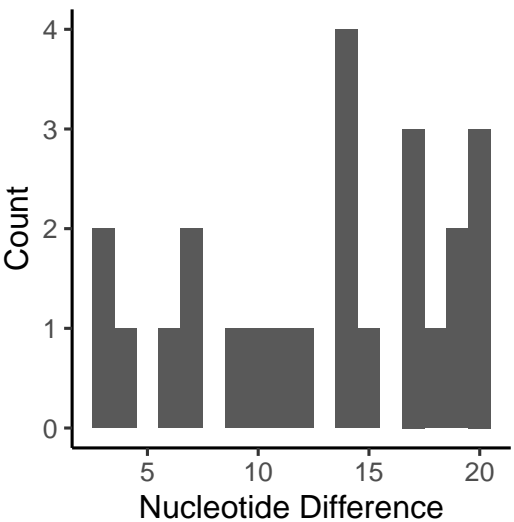
IGHV3-73*01_02

1273 sequences assigned
202 (15.9%) exact matches, in which:
162 unique CDR3
7 unique J



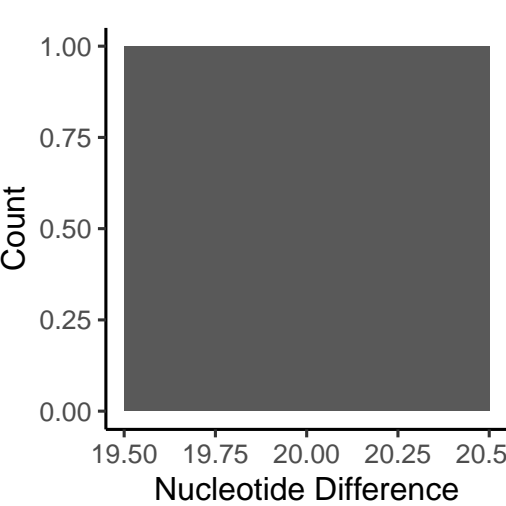
IGHV3-69-1*01

44 sequences assigned
No exact matches.



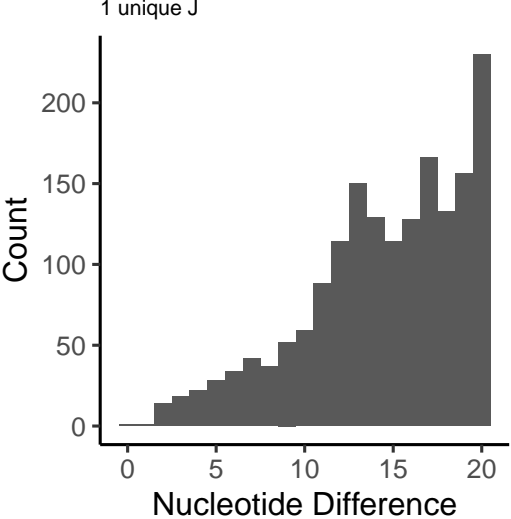
IGHV3-71*01_04

6 sequences assigned
No exact matches.



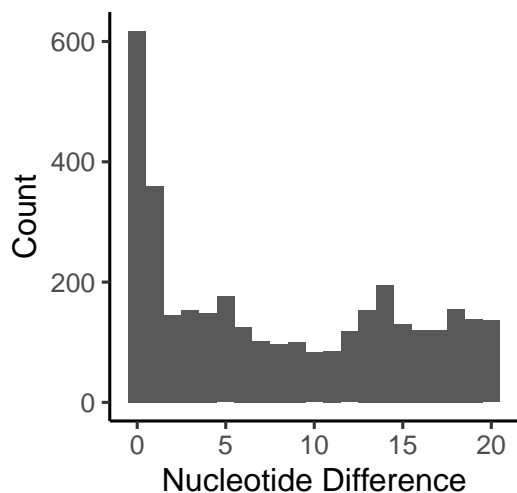
IGHV3-74*03

4663 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
1 unique J



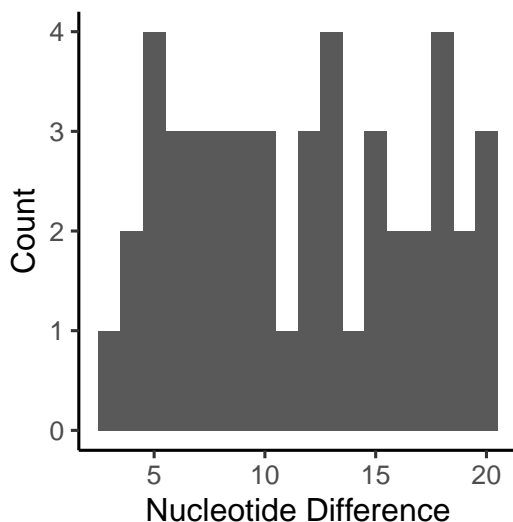
IGHV3-74*01_02

4499 sequences assigned
618 (13.7%) exact matches, in which:
438 unique CDR3
7 unique J



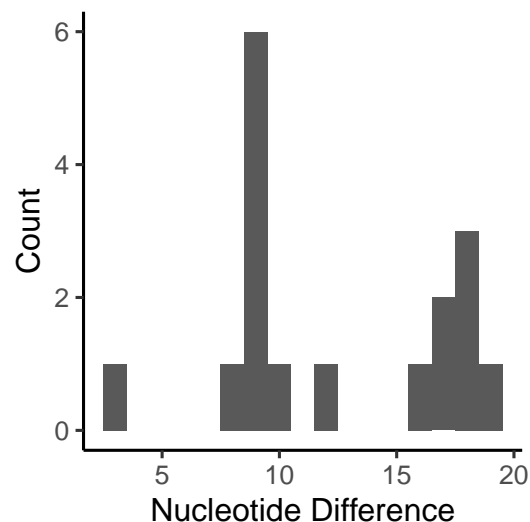
IGHV3-NL1*01

70 sequences assigned
No exact matches.



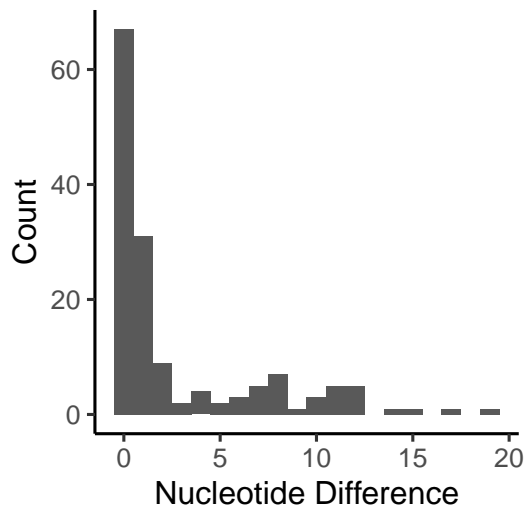
IGHV4-28*02_05

17 sequences assigned
No exact matches.



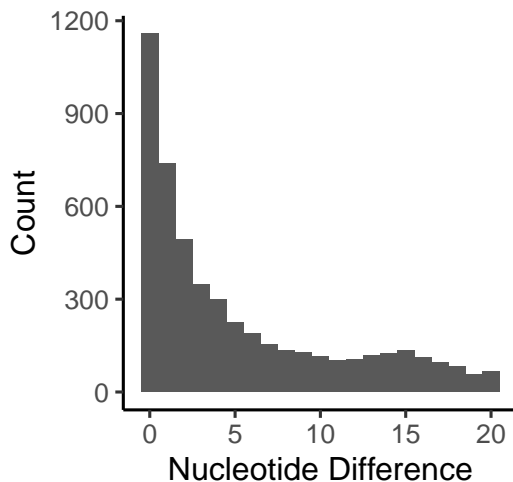
IGHV3-43D*03

149 sequences assigned
67 (45%) exact matches, in which:
52 unique CDR3
4 unique J



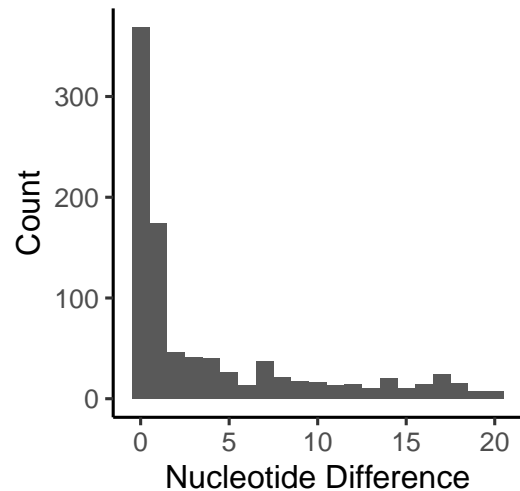
IGHV4-4*02_03

5768 sequences assigned
1158 (20.1%) exact matches, in which:
1006 unique CDR3
7 unique J



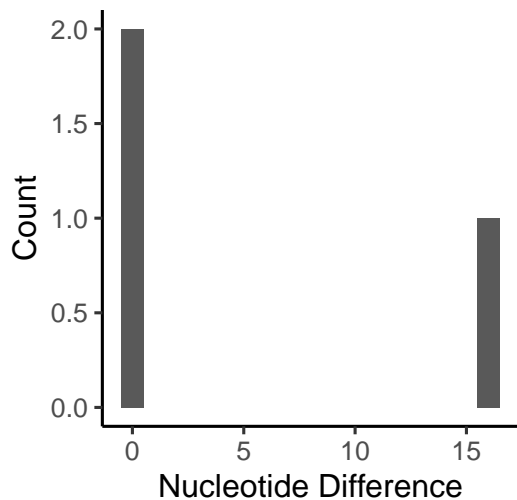
IGHV4-30-4*01

1069 sequences assigned
369 (34.5%) exact matches, in which:
343 unique CDR3
7 unique J



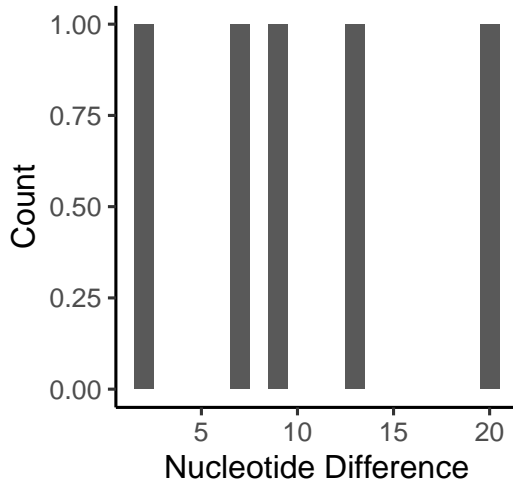
IGHV3-64D*06

59 sequences assigned
2 (3.4%) exact matches, in which:
2 unique CDR3
1 unique J



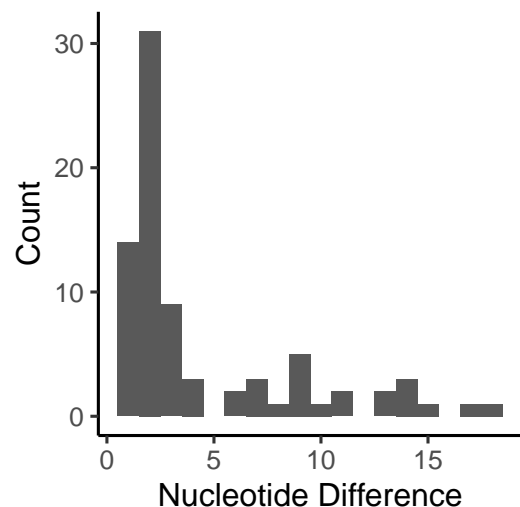
IGHV4-28*03

5 sequences assigned
No exact matches.



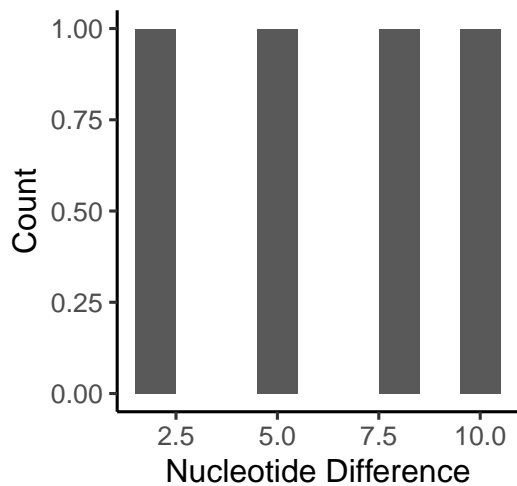
IGHV4-30-2*03

223 sequences assigned
No exact matches.



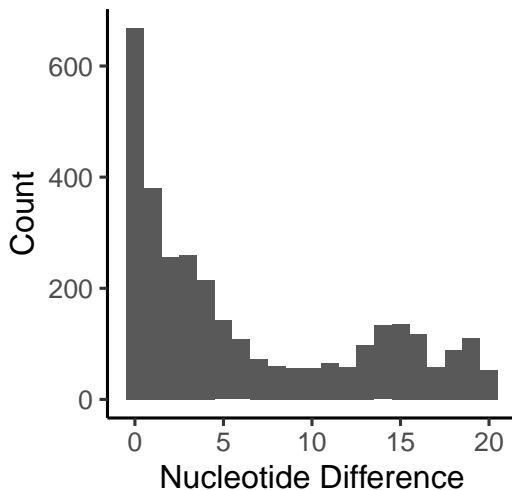
IGHV4-30-2*04

5 sequences assigned
No exact matches.



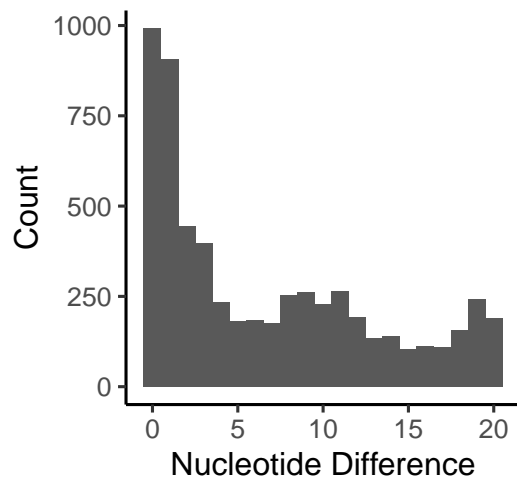
IGHV4-31*02

3427 sequences assigned
669 (19.5%) exact matches, in which:
622 unique CDR3
7 unique J



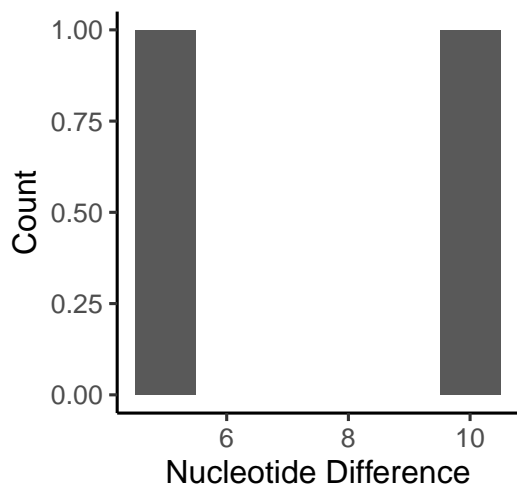
IGHV4-39*07

7340 sequences assigned
992 (13.5%) exact matches, in which:
894 unique CDR3
7 unique J



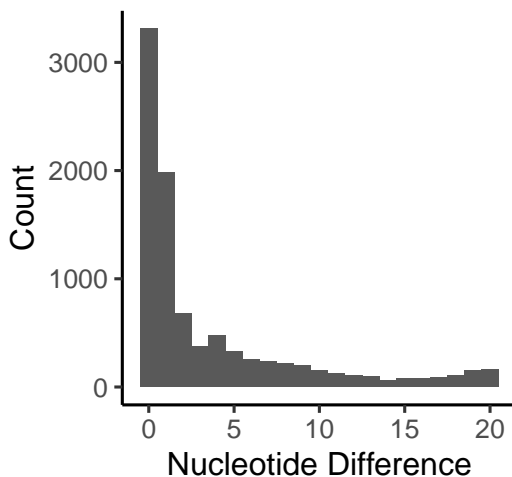
IGHV4-30-2*05

2 sequences assigned
No exact matches.



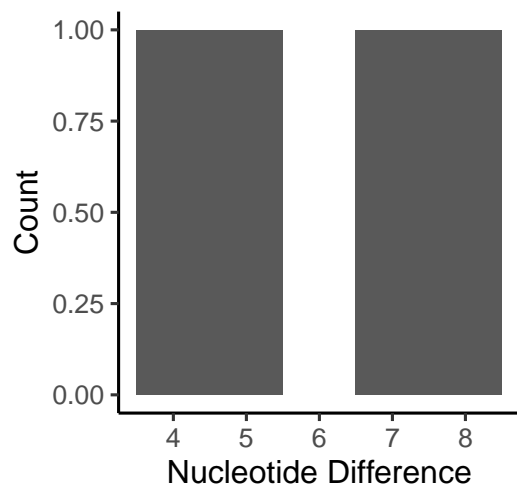
IGHV4-34*01_02

10025 sequences assigned
3311 (33%) exact matches, in which:
2859 unique CDR3
7 unique J



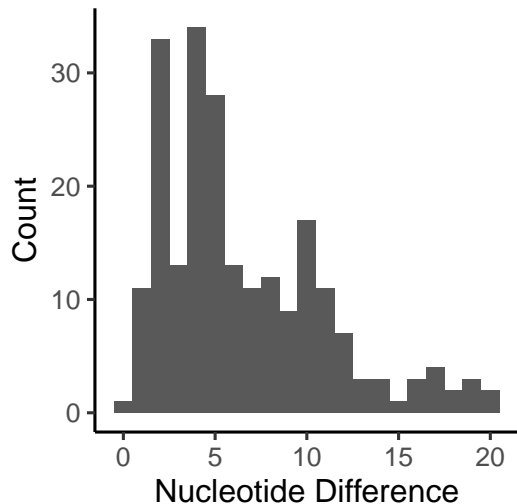
IGHV4-55*09

7 sequences assigned
No exact matches.



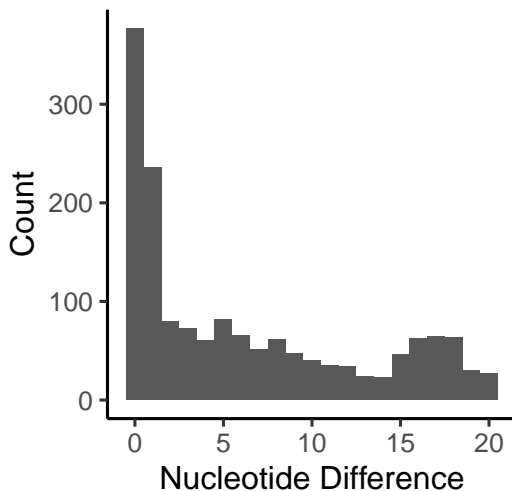
IGHV4-30-4*08

261 sequences assigned
1 (0.4%) exact matches, in which:
1 unique CDR3
1 unique J



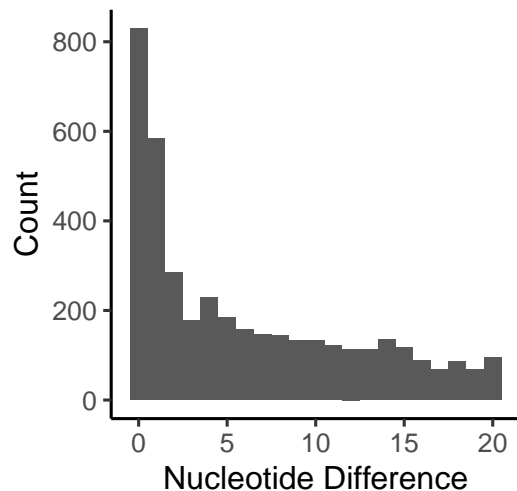
IGHV4-38-2*02

1985 sequences assigned
377 (19%) exact matches, in which:
347 unique CDR3
7 unique J



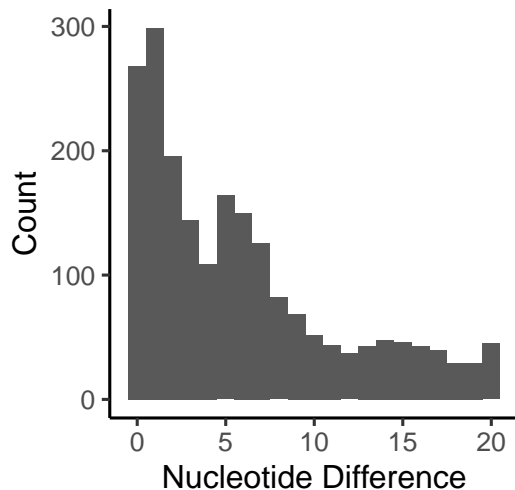
IGHV4-59*08

4913 sequences assigned
830 (16.9%) exact matches, in which:
747 unique CDR3
7 unique J



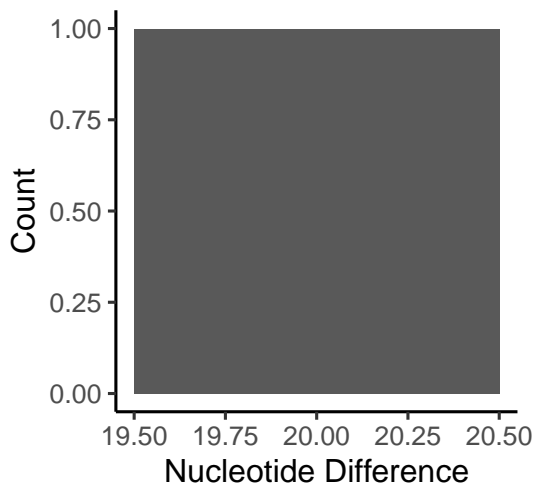
IGHV4–59*12

2478 sequences assigned
268 (10.8%) exact matches, in which:
266 unique CDR3
7 unique J



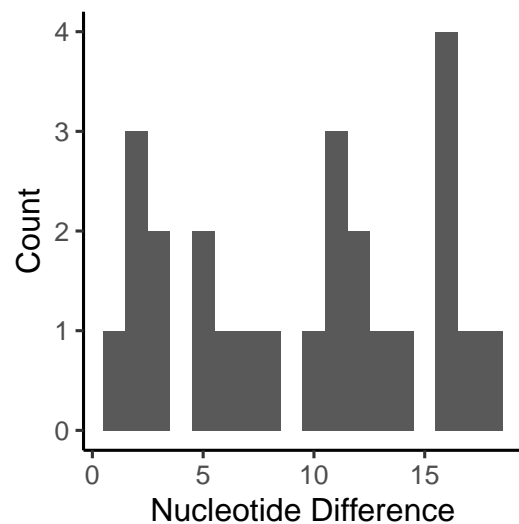
IGHV1/OR15–1*04

1 sequences assigned
No exact matches.



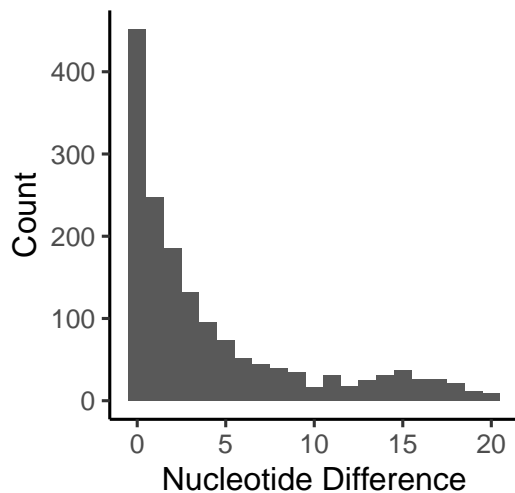
IGHV4/OR15–8*01

37 sequences assigned
No exact matches.



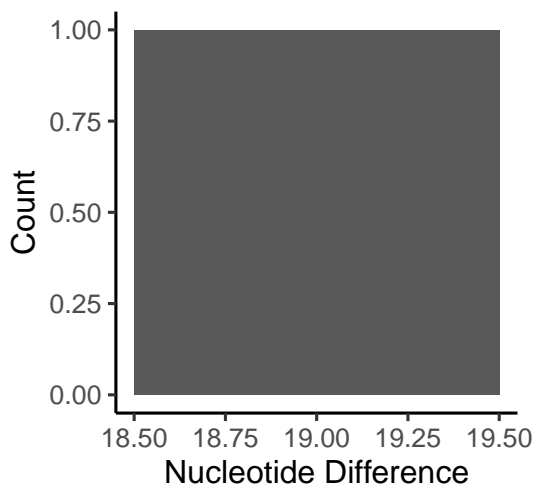
IGHV4–61*01

1749 sequences assigned
452 (25.8%) exact matches, in which:
426 unique CDR3
7 unique J



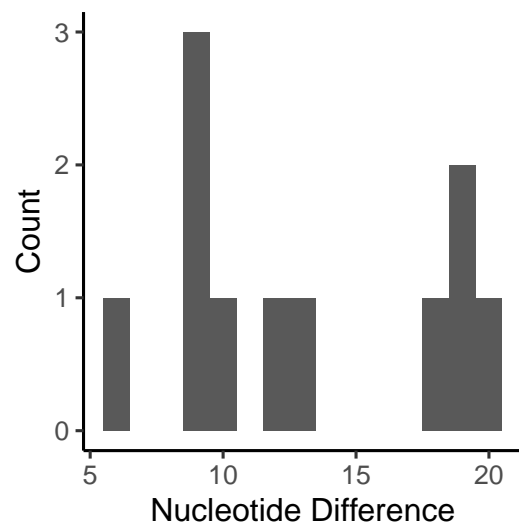
IGHV1/OR15–2*02_03

12 sequences assigned
No exact matches.



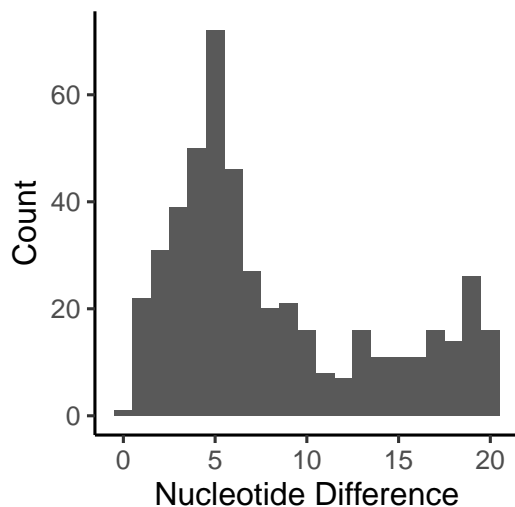
IGHV4/OR15–8*02

18 sequences assigned
No exact matches.



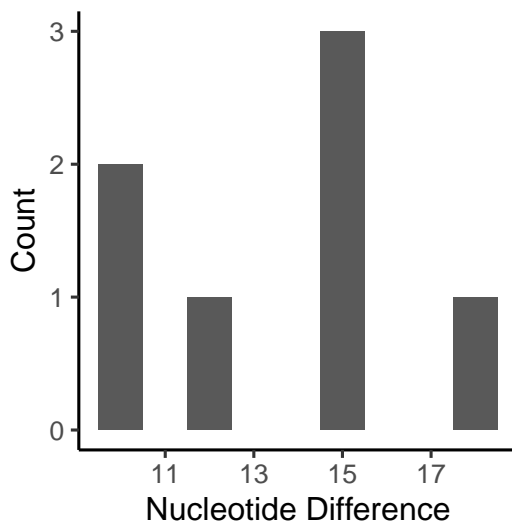
IGHV4–61*08

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



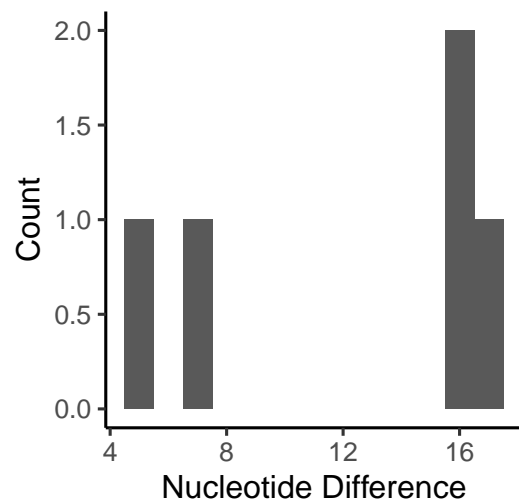
IGHV1/OR15–3*02

7 sequences assigned
No exact matches.



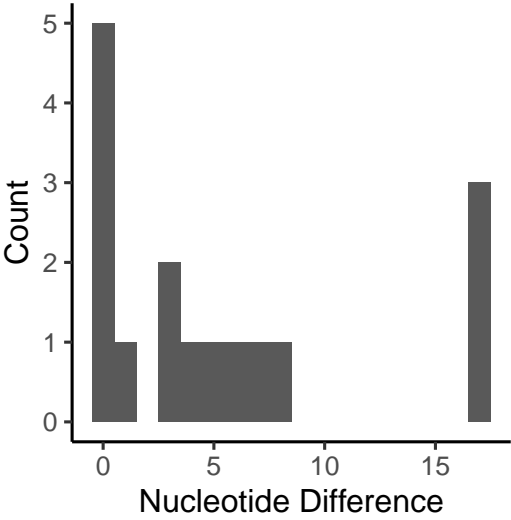
IGHV5–10–1*01_03

5 sequences assigned
No exact matches.



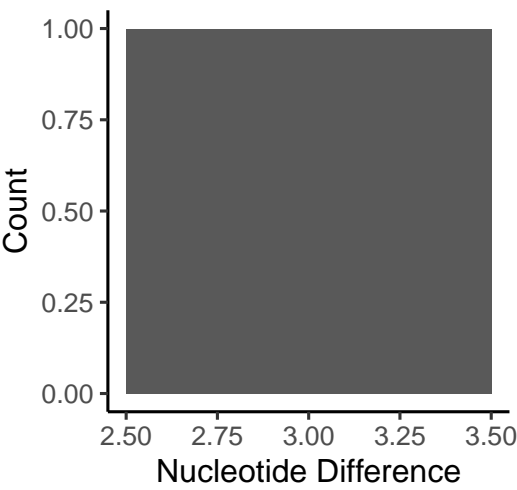
IGHV5-51*04

18 sequences assigned
5 (27.8%) exact matches, in which:
5 unique CDR3
3 unique J



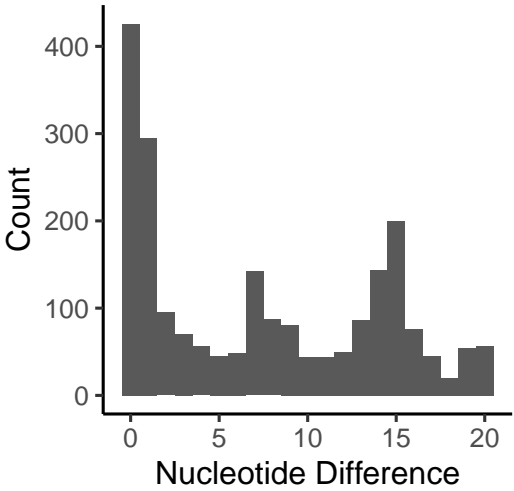
IGHV5-78*01

1 sequences assigned
No exact matches.



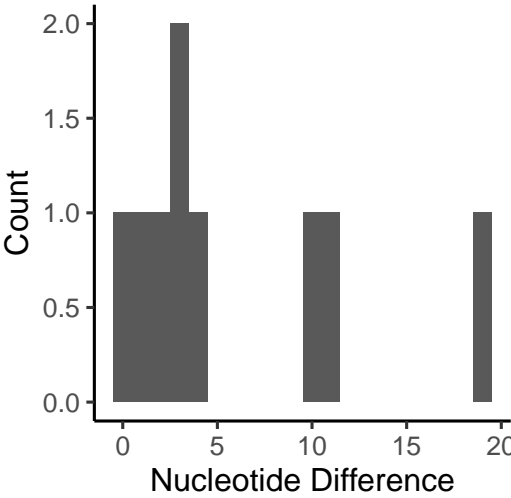
IGHV7-4-1*02

2499 sequences assigned
426 (17%) exact matches, in which:
388 unique CDR3
7 unique J



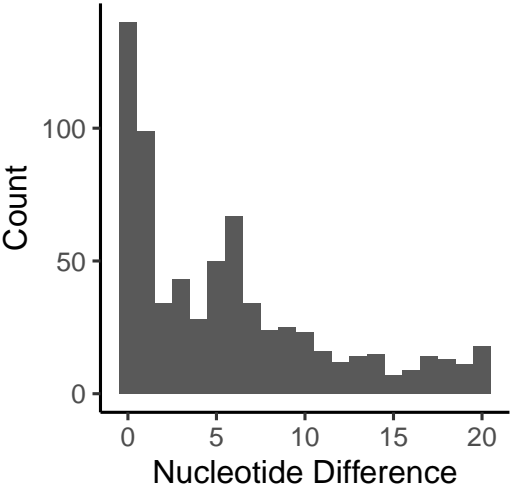
IGHV5-51*06

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



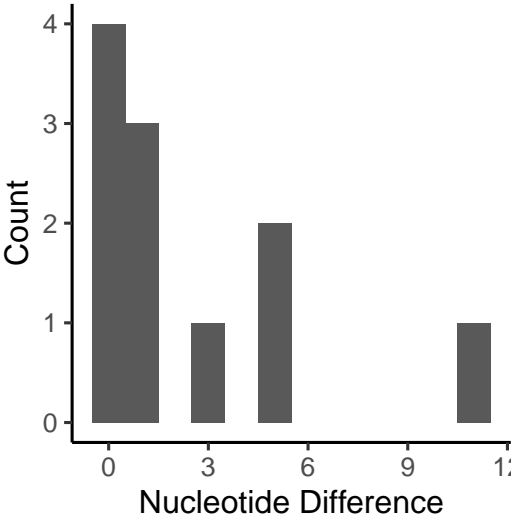
IGHV6-1*01_02

755 sequences assigned
140 (18.5%) exact matches, in which:
129 unique CDR3
6 unique J



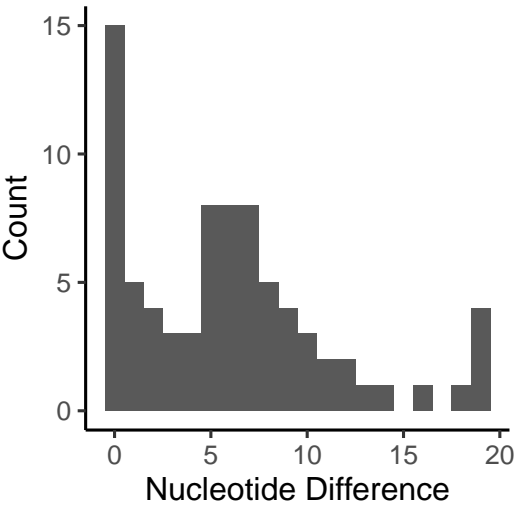
IGHV5-51*07

11 sequences assigned
4 (36.4%) exact matches, in which:
3 unique CDR3
2 unique J

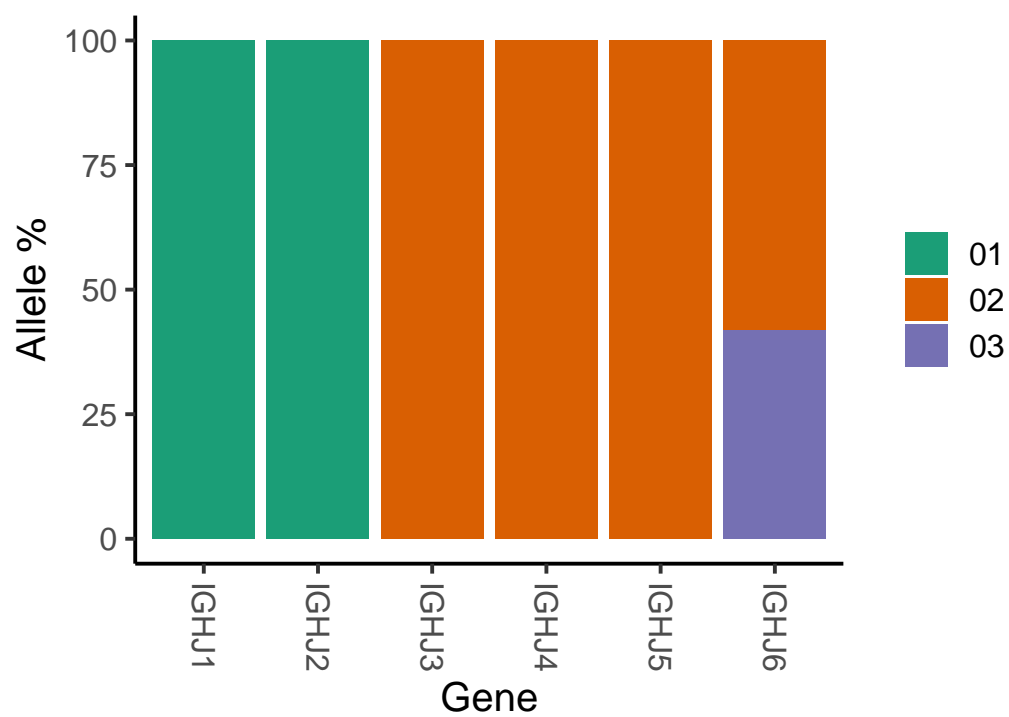


IGHV6-1*01_02_A315G

80 sequences assigned
15 (18.8%) exact matches, in which:
15 unique CDR3
5 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.