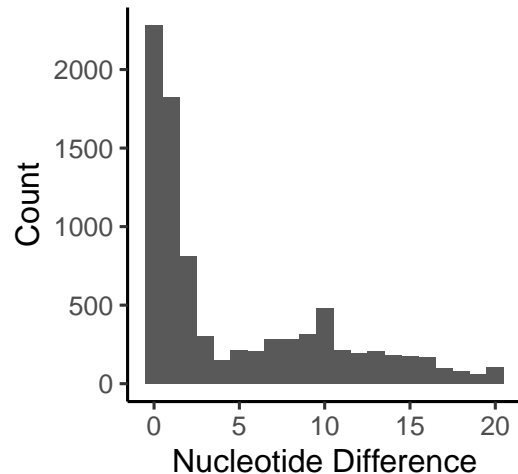


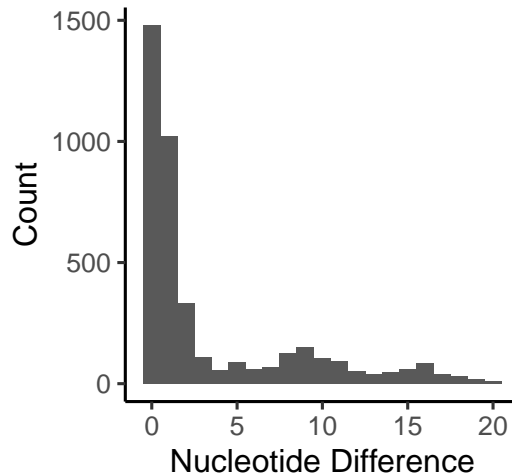
IGHV1-2*02

9653 sequences assigned
2281 (23.6%) exact matches, in which:
2001 unique CDR3
6 unique J



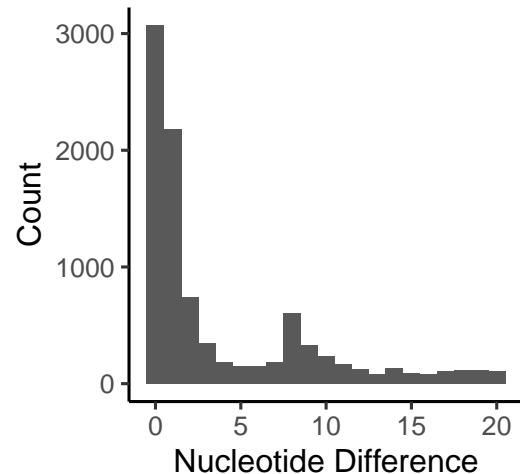
IGHV1-8*01

4717 sequences assigned
1479 (31.4%) exact matches, in which:
1364 unique CDR3
6 unique J



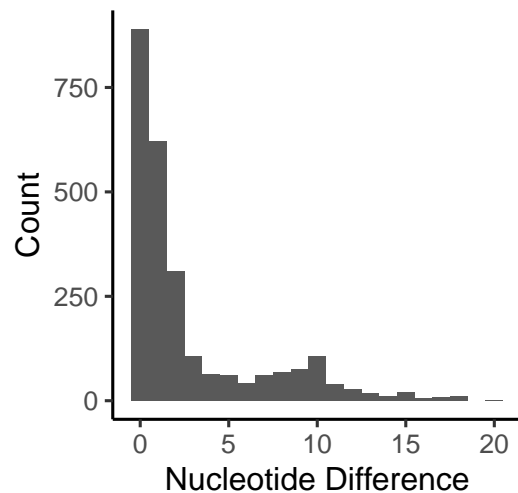
IGHV1-18*04

9938 sequences assigned
3070 (30.9%) exact matches, in which:
2723 unique CDR3
6 unique J



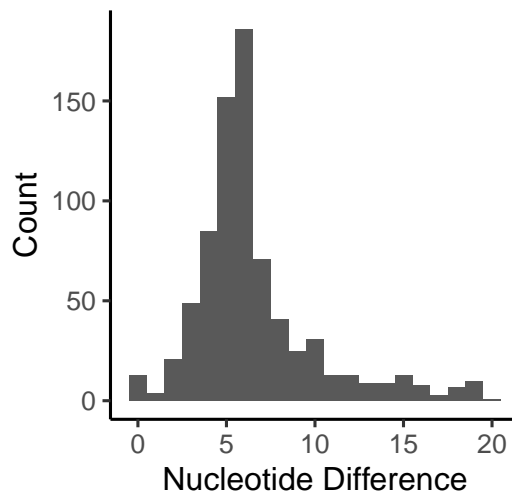
IGHV1-2*04

2621 sequences assigned
890 (34%) exact matches, in which:
815 unique CDR3
6 unique J



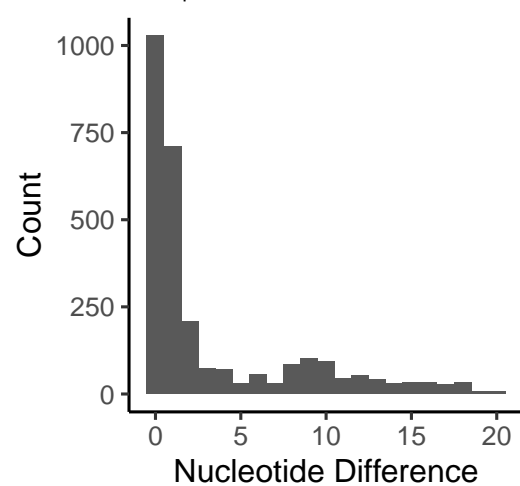
IGHV1-8*02

793 sequences assigned
13 (1.6%) exact matches, in which:
12 unique CDR3
4 unique J



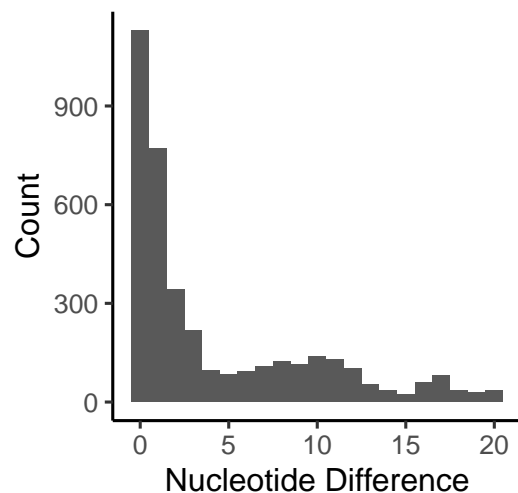
IGHV1-24*01

2962 sequences assigned
1028 (34.7%) exact matches, in which:
931 unique CDR3
6 unique J



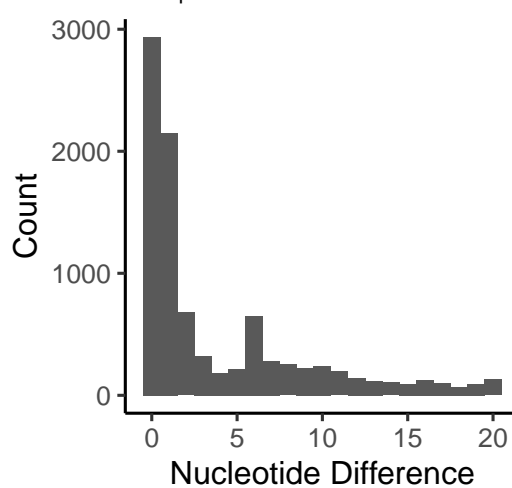
IGHV1-3*01_05

4646 sequences assigned
1130 (24.3%) exact matches, in which:
991 unique CDR3
6 unique J



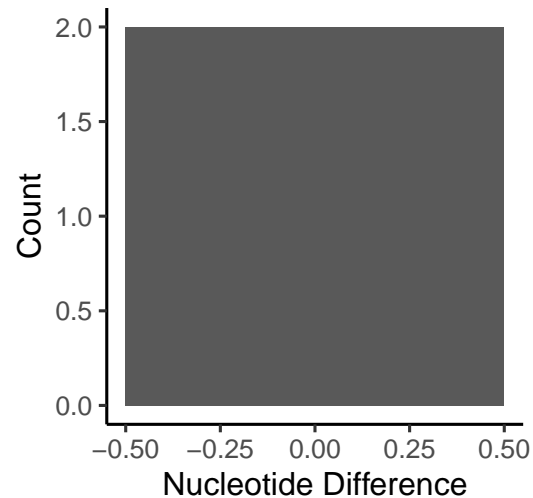
IGHV1-18*01

11676 sequences assigned
2936 (25.1%) exact matches, in which:
2661 unique CDR3
6 unique J



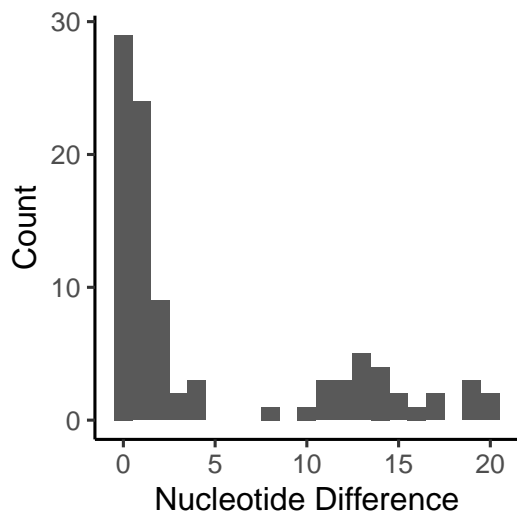
IGHV1-38-4*01

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
2 unique J



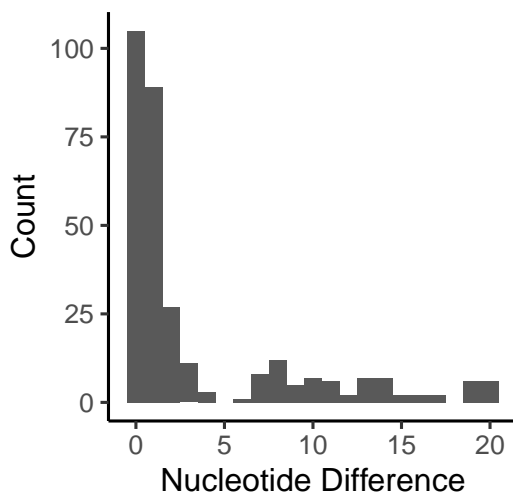
IGHV1-45*02

98 sequences assigned
29 (29.6%) exact matches, in which:
22 unique CDR3
4 unique J



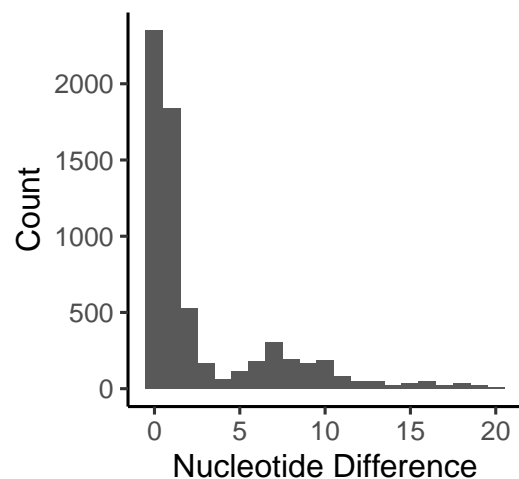
IGHV1-58*02

312 sequences assigned
105 (33.7%) exact matches, in which:
92 unique CDR3
6 unique J



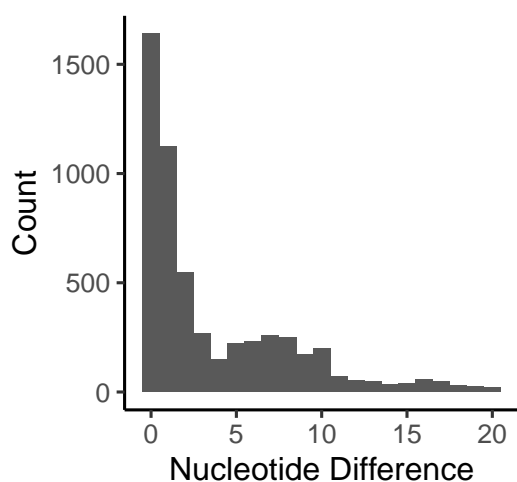
IGHV1-69*04_09

6876 sequences assigned
2350 (34.2%) exact matches, in which:
2130 unique CDR3
6 unique J



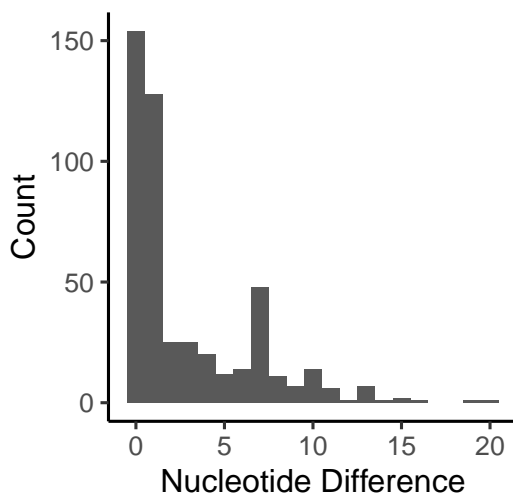
IGHV1-46*01

5732 sequences assigned
1640 (28.6%) exact matches, in which:
1480 unique CDR3
6 unique J



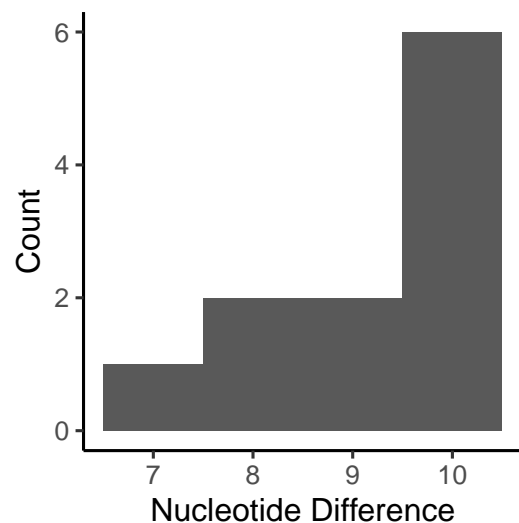
IGHV1-58*01_03

491 sequences assigned
154 (31.4%) exact matches, in which:
138 unique CDR3
6 unique J



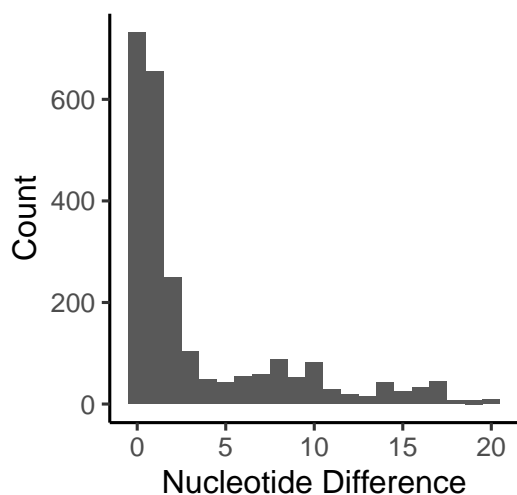
IGHV1-NL1*01

11 sequences assigned
No exact matches.



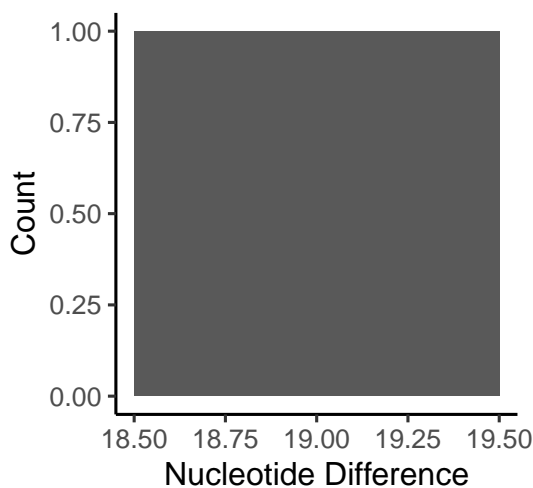
IGHV1-46*03

2693 sequences assigned
732 (27.2%) exact matches, in which:
605 unique CDR3
6 unique J



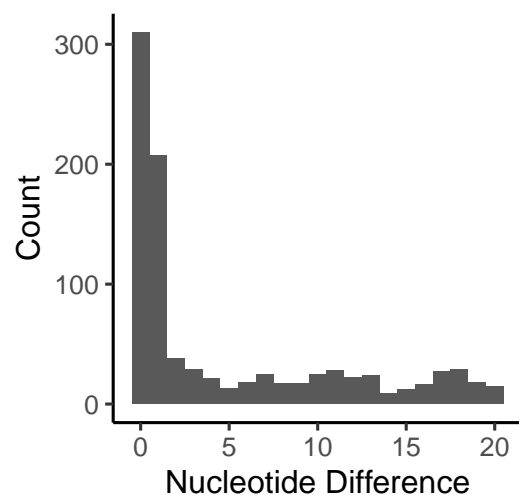
IGHV1-69-2*01

3 sequences assigned
No exact matches.



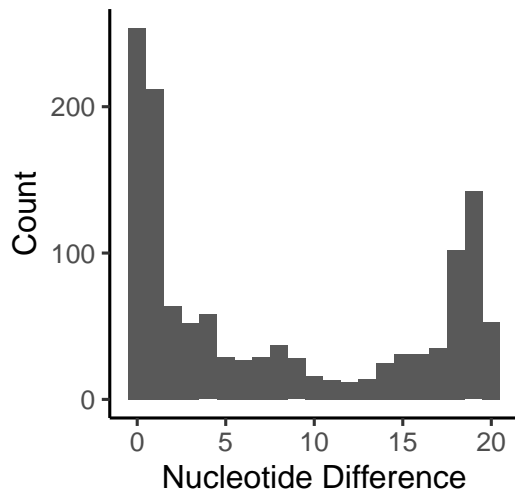
IGHV2-5*01

1090 sequences assigned
310 (28.4%) exact matches, in which:
286 unique CDR3
6 unique J



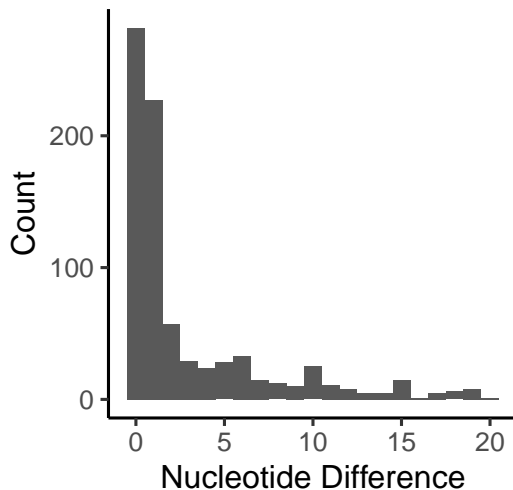
IGHV2-5*02

1467 sequences assigned
254 (17.3%) exact matches, in which:
226 unique CDR3
6 unique J



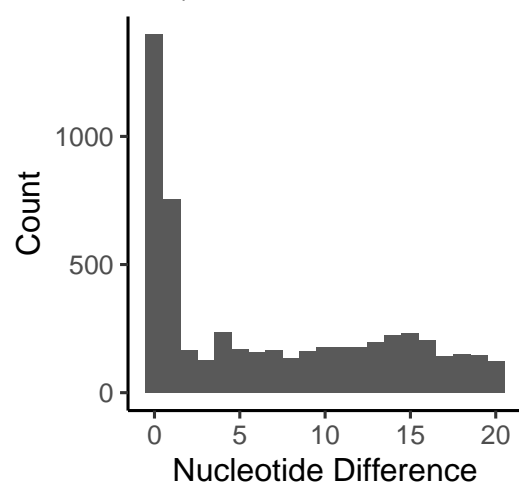
IGHV2-70*11_15

860 sequences assigned
282 (32.8%) exact matches, in which:
249 unique CDR3
6 unique J



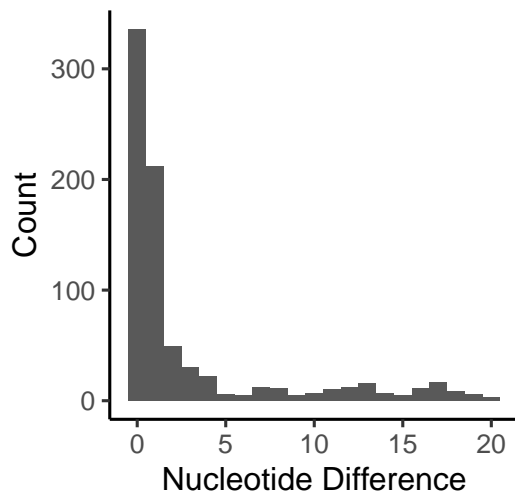
IGHV3-7*03

6257 sequences assigned
1398 (22.3%) exact matches, in which:
931 unique CDR3
6 unique J



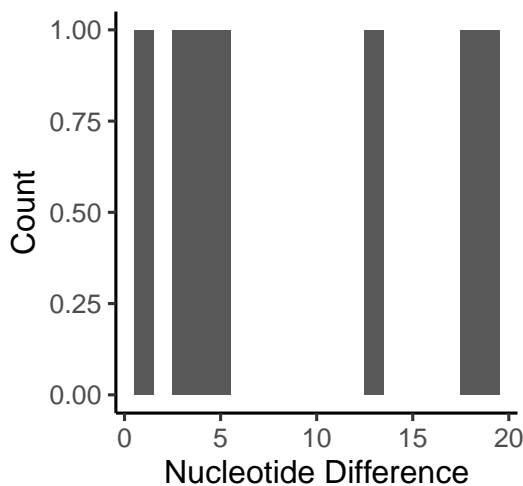
IGHV2-26*01

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



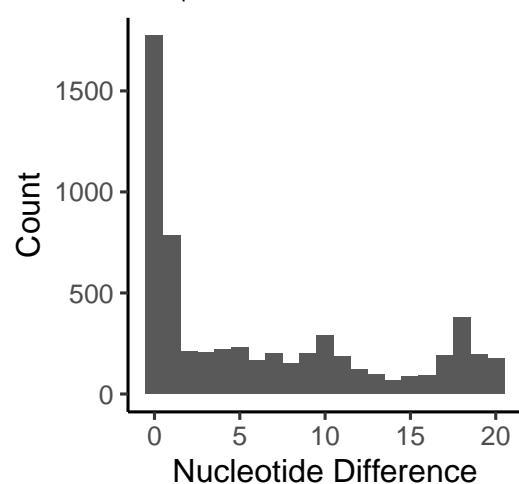
IGHV2-70D*04

7 sequences assigned
No exact matches.



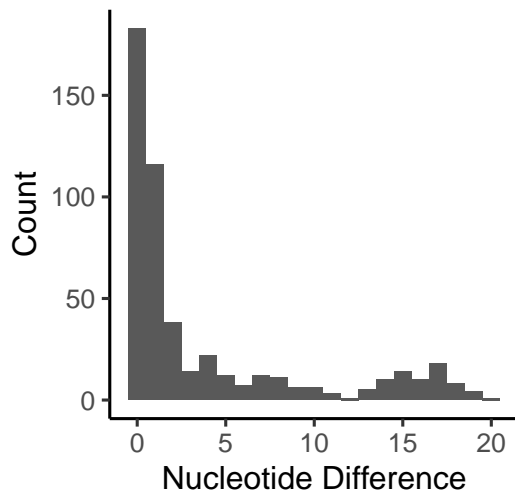
IGHV3-9*01

7197 sequences assigned
1773 (24.6%) exact matches, in which:
1184 unique CDR3
6 unique J



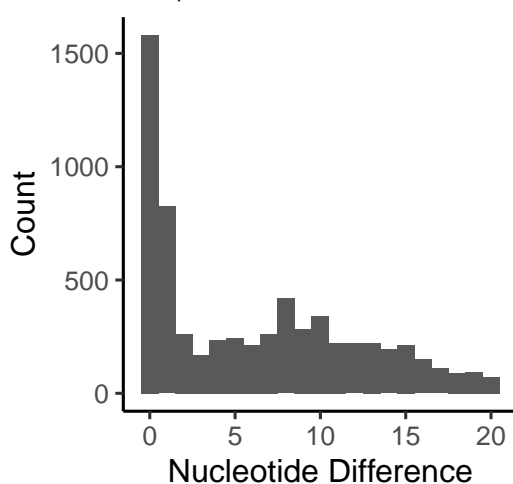
IGHV2-70*01

1071 sequences assigned
183 (17.1%) exact matches, in which:
156 unique CDR3
6 unique J



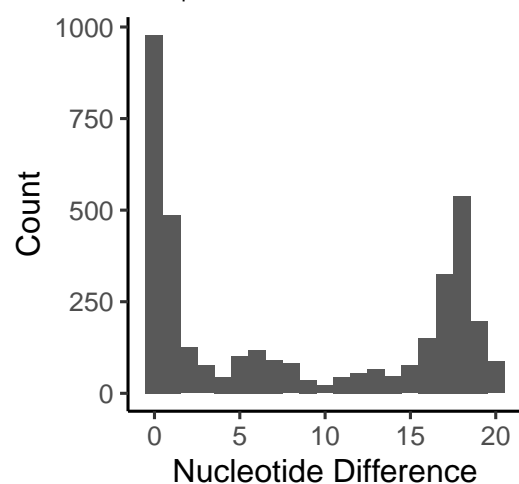
IGHV3-7*01

6854 sequences assigned
1581 (23.1%) exact matches, in which:
1158 unique CDR3
6 unique J



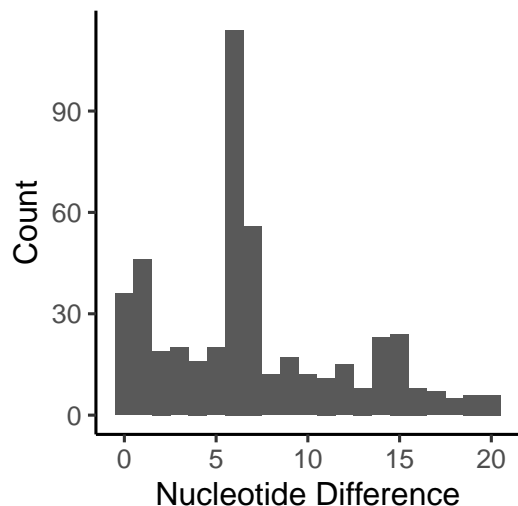
IGHV3-11*06

5384 sequences assigned
978 (18.2%) exact matches, in which:
693 unique CDR3
6 unique J



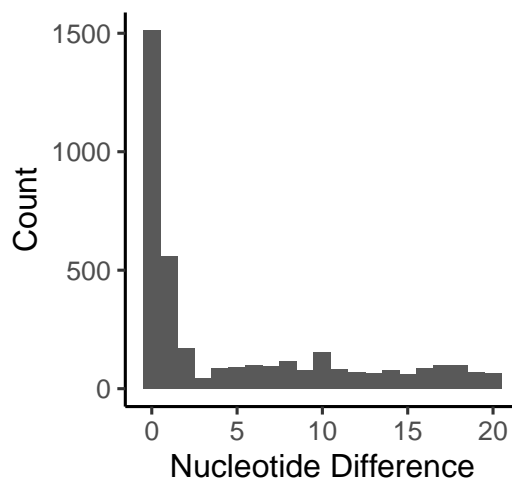
IGHV3-11*03_05

1000 sequences assigned
36 (3.6%) exact matches, in which:
36 unique CDR3
6 unique J



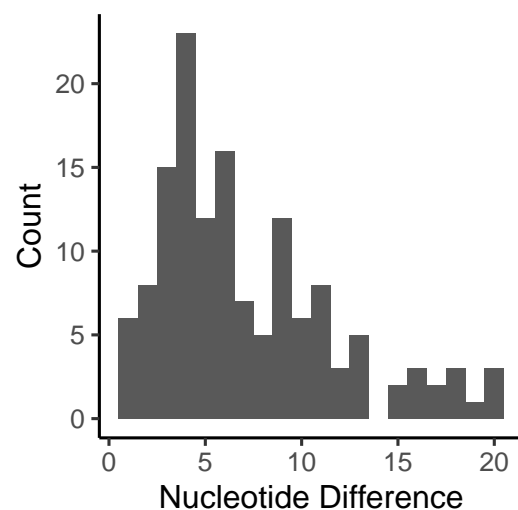
IGHV3-15*01_02

4220 sequences assigned
1512 (35.8%) exact matches, in which:
1026 unique CDR3
6 unique J



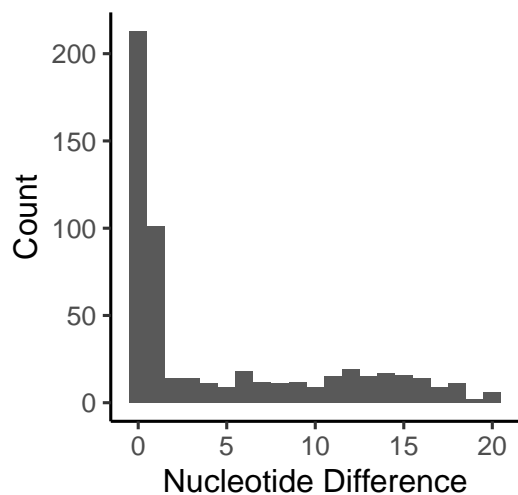
IGHV3-20*03_04

556 sequences assigned
No exact matches.



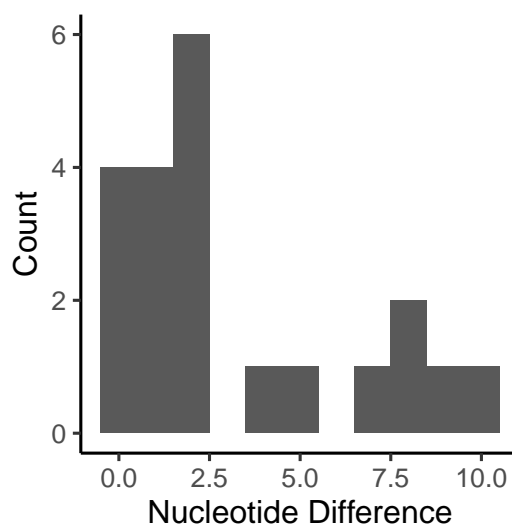
IGHV3-13*01

576 sequences assigned
213 (37%) exact matches, in which:
139 unique CDR3
6 unique J



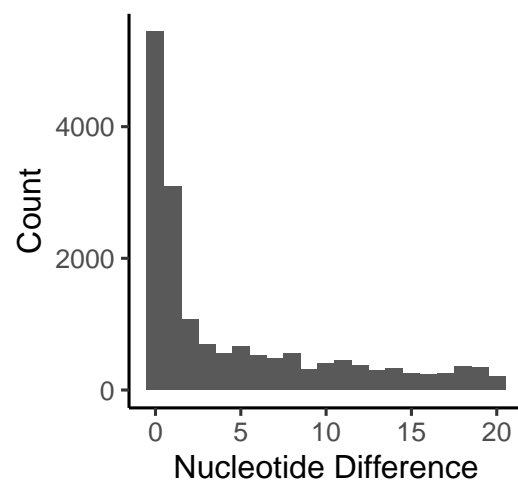
IGHV3-19*01

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



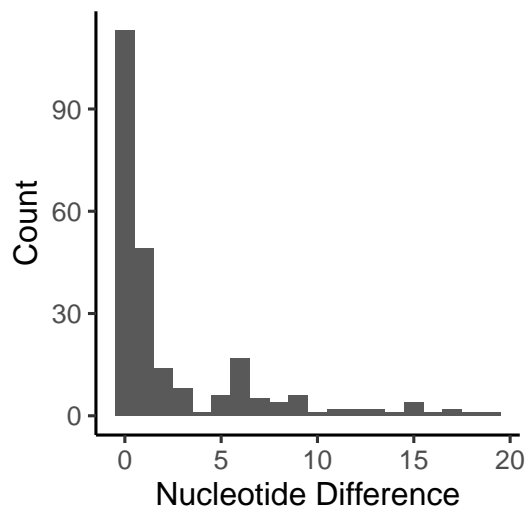
IGHV3-21*01_02

18791 sequences assigned
5442 (29%) exact matches, in which:
3498 unique CDR3
6 unique J



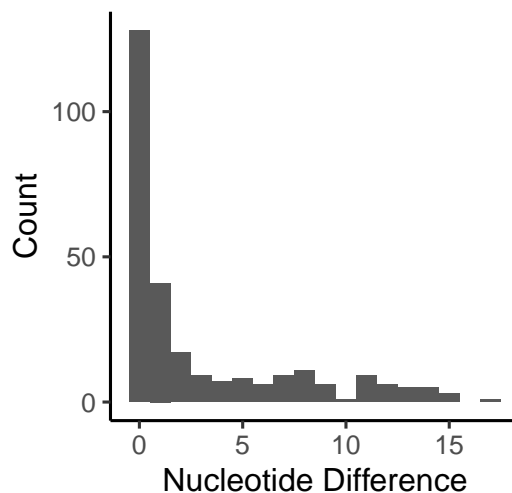
IGHV3-13*05

270 sequences assigned
113 (41.9%) exact matches, in which:
75 unique CDR3
6 unique J



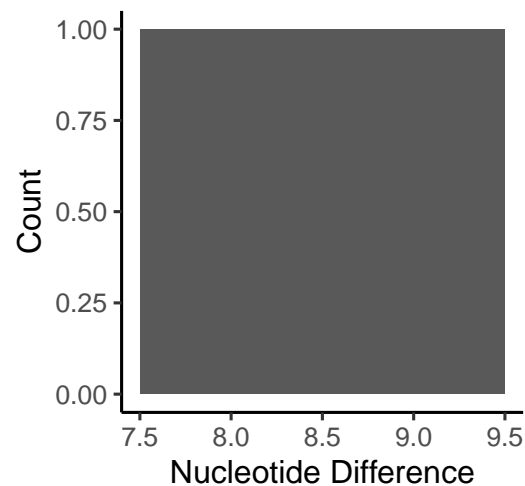
IGHV3-20*01_02

347 sequences assigned
128 (36.9%) exact matches, in which:
79 unique CDR3
6 unique J



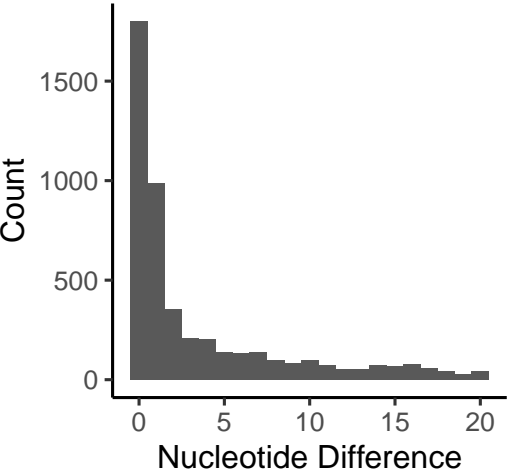
IGHV3-22*01_02

2 sequences assigned
No exact matches.



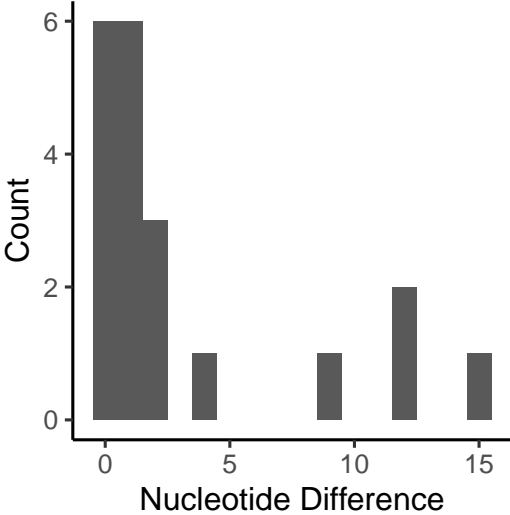
IGHV3-33*01

5553 sequences assigned
1800 (32.4%) exact matches, in which:
1205 unique CDR3
6 unique J



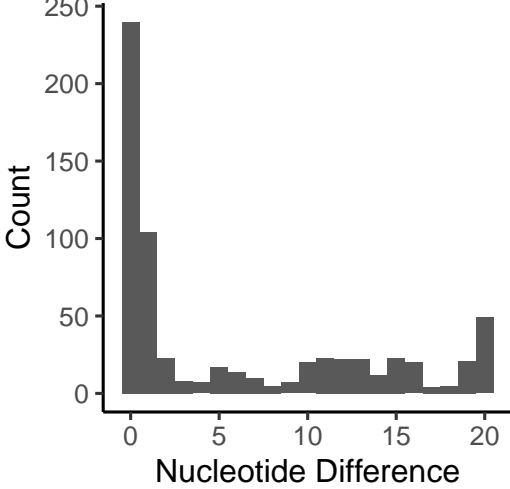
IGHV3-35*01

20 sequences assigned
6 (30%) exact matches, in which:
4 unique CDR3
2 unique J



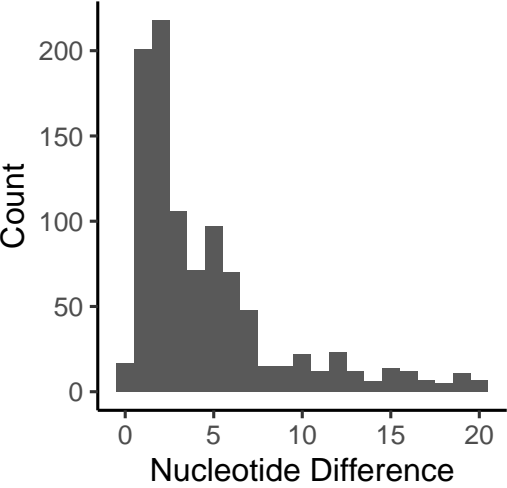
IGHV3-43*01

1033 sequences assigned
240 (23.2%) exact matches, in which:
157 unique CDR3
6 unique J



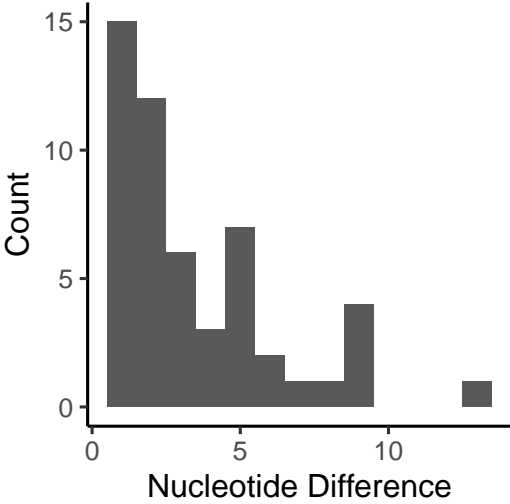
IGHV3-33*05

1149 sequences assigned
17 (1.5%) exact matches, in which:
16 unique CDR3
3 unique J



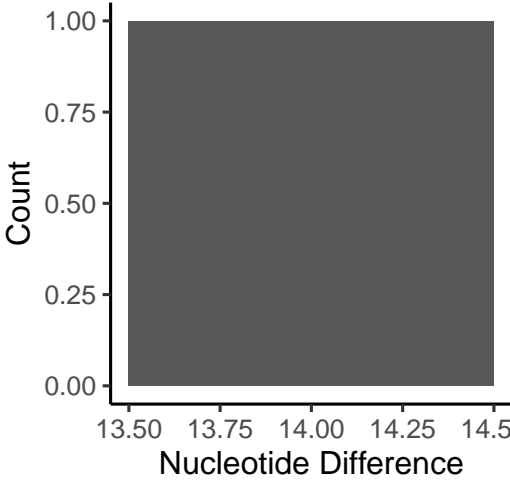
IGHV3-38-3*01

52 sequences assigned
No exact matches.



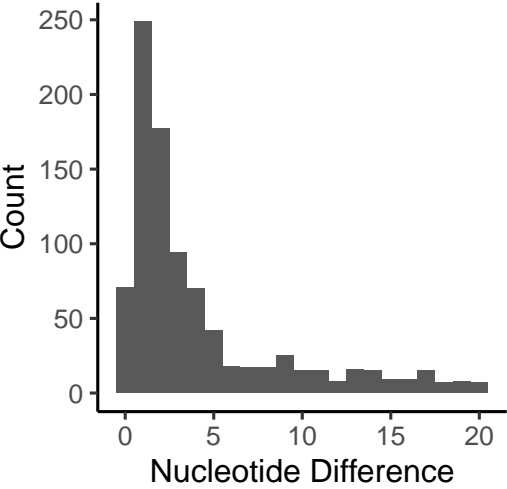
IGHV3-47*02

1 sequences assigned
No exact matches.



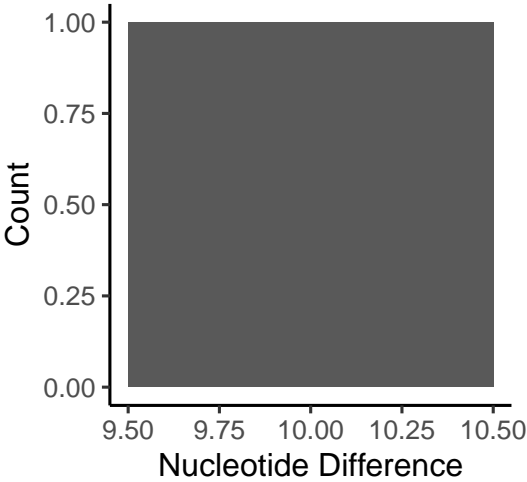
IGHV3-33*06

999 sequences assigned
71 (7.1%) exact matches, in which:
70 unique CDR3
6 unique J



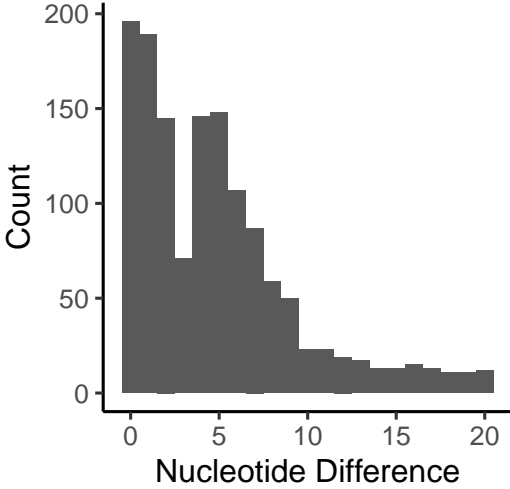
IGHV3-38*03

1 sequences assigned
No exact matches.



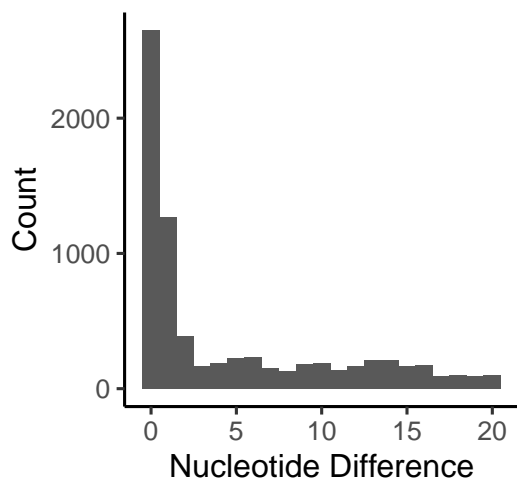
IGHV3-48*01

1413 sequences assigned
196 (13.9%) exact matches, in which:
191 unique CDR3
5 unique J



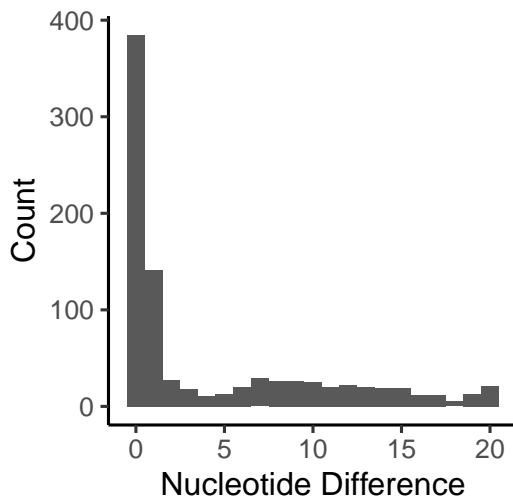
IGHV3-48*02

8029 sequences assigned
2649 (33%) exact matches, in which:
1694 unique CDR3
6 unique J



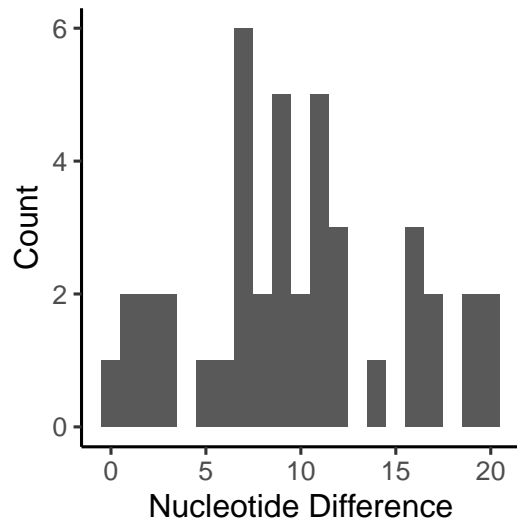
IGHV3-49*03_05

973 sequences assigned
385 (39.6%) exact matches, in which:
267 unique CDR3
6 unique J



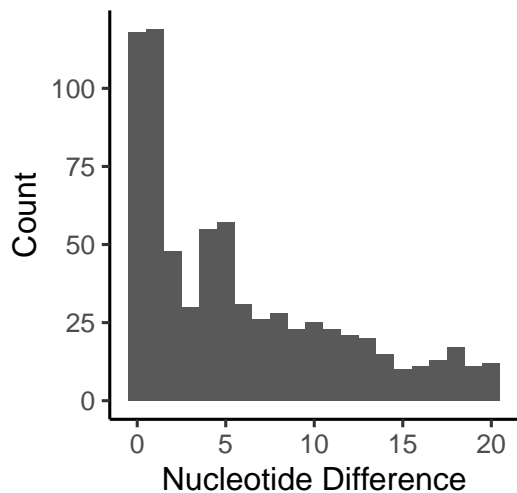
IGHV3-53*05

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



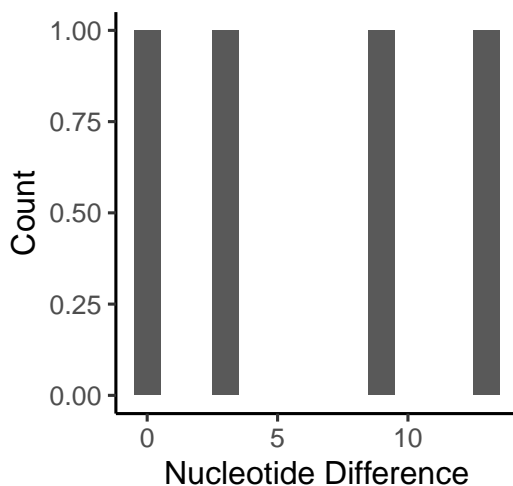
IGHV3-48*04

942 sequences assigned
118 (12.5%) exact matches, in which:
114 unique CDR3
5 unique J



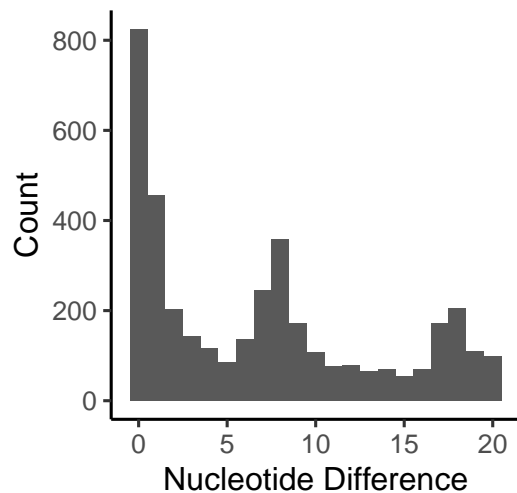
IGHV3-52*02

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



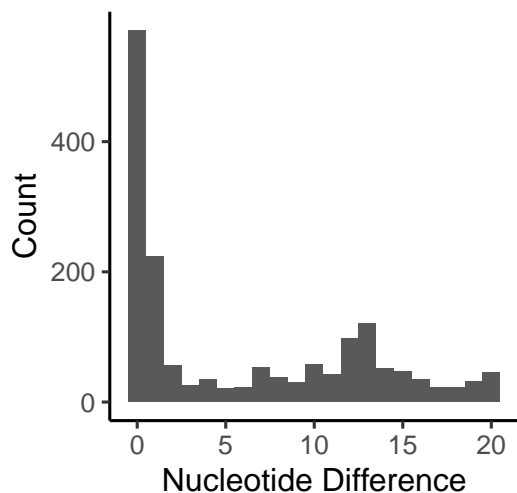
IGHV3-53*01_02

4236 sequences assigned
825 (19.5%) exact matches, in which:
559 unique CDR3
6 unique J



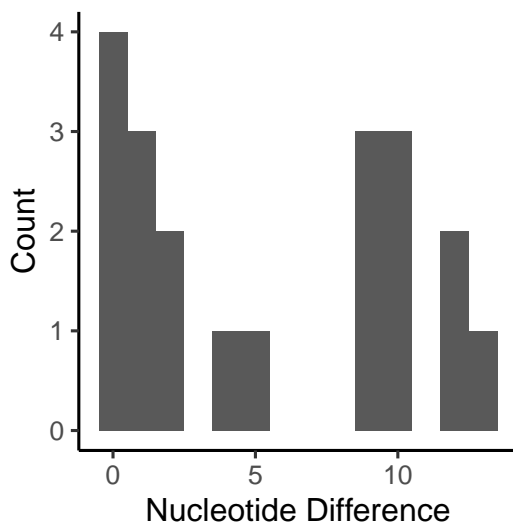
IGHV3-49*04

2144 sequences assigned
571 (26.6%) exact matches, in which:
400 unique CDR3
6 unique J



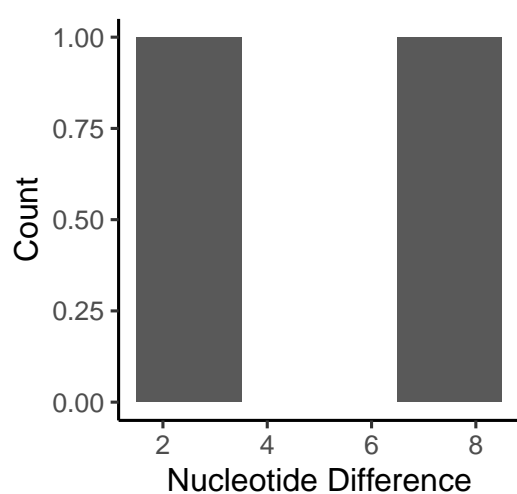
IGHV3-52*01_03

20 sequences assigned
4 (20%) exact matches, in which:
4 unique CDR3
2 unique J



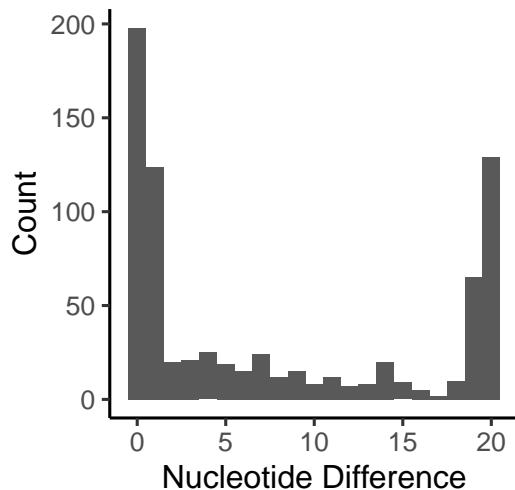
IGHV3-62*03

4 sequences assigned
No exact matches.



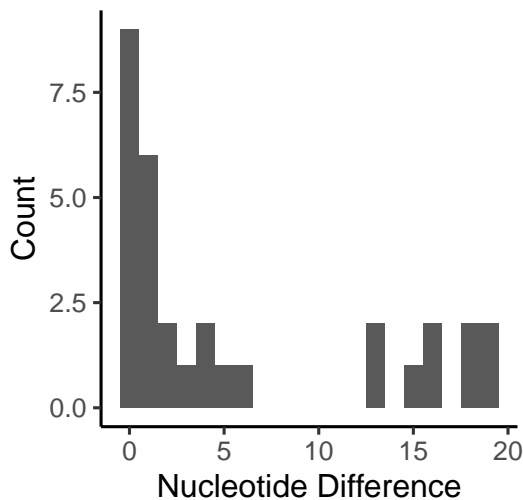
IGHV3-64*01

971 sequences assigned
198 (20.4%) exact matches, in which:
132 unique CDR3
6 unique J



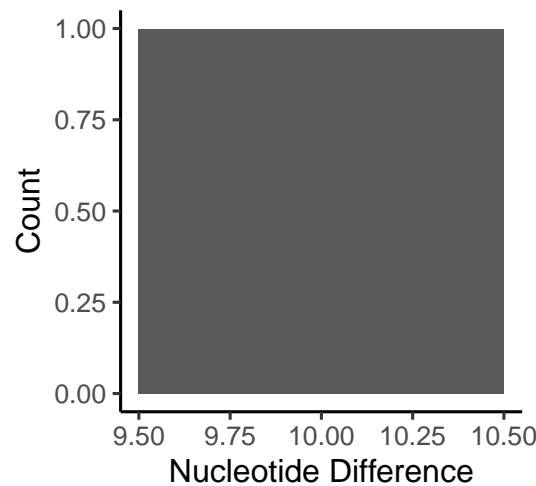
IGHV3-66*03

38 sequences assigned
9 (23.7%) exact matches, in which:
9 unique CDR3
5 unique J



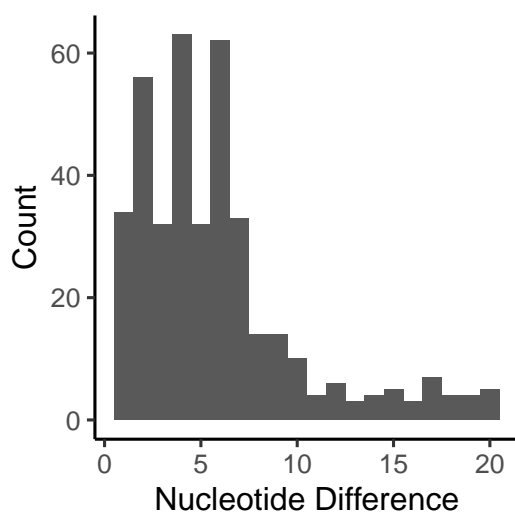
IGHV3-71*01_04

4 sequences assigned
No exact matches.



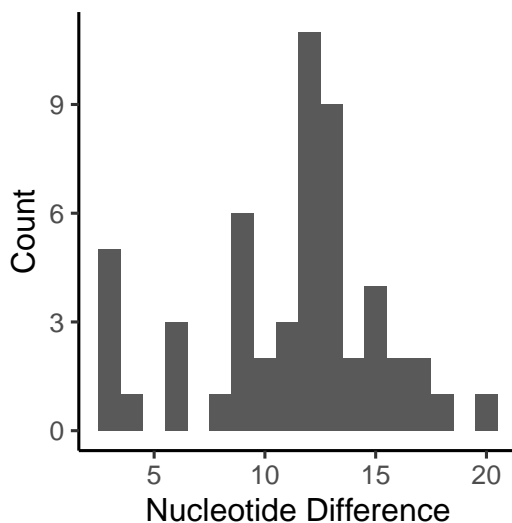
IGHV3-64*04

442 sequences assigned
No exact matches.



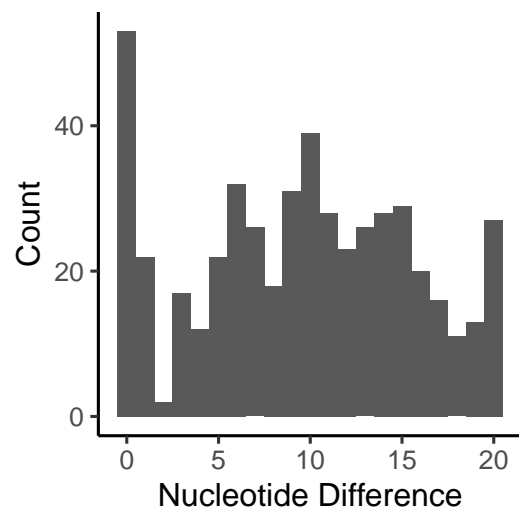
IGHV3-69-1*01

67 sequences assigned
No exact matches.



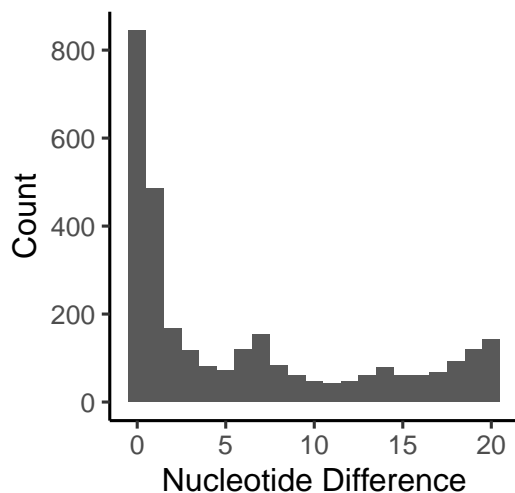
IGHV3-72*01

660 sequences assigned
53 (8%) exact matches, in which:
33 unique CDR3
5 unique J



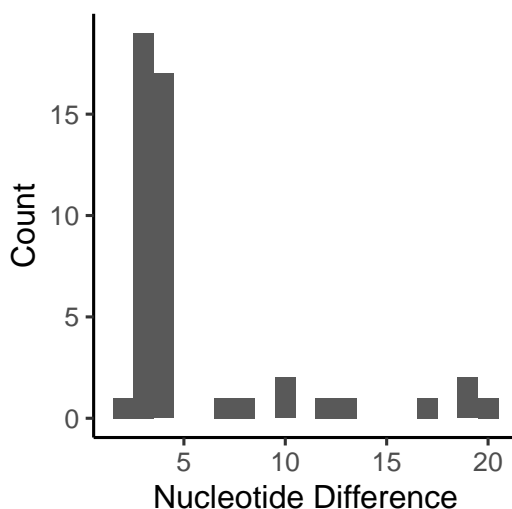
IGHV3-66*01

3957 sequences assigned
845 (21.4%) exact matches, in which:
583 unique CDR3
6 unique J



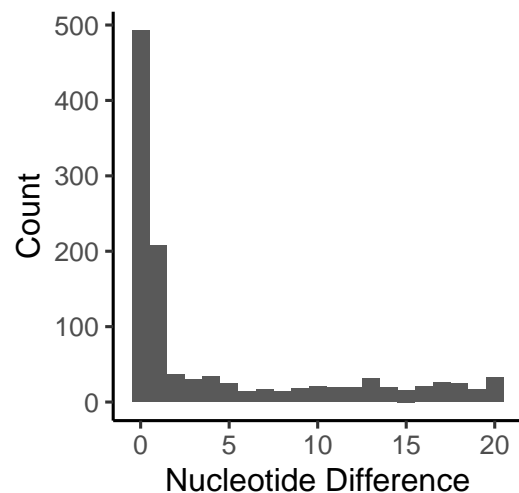
IGHV3-69-1*02

55 sequences assigned
No exact matches.



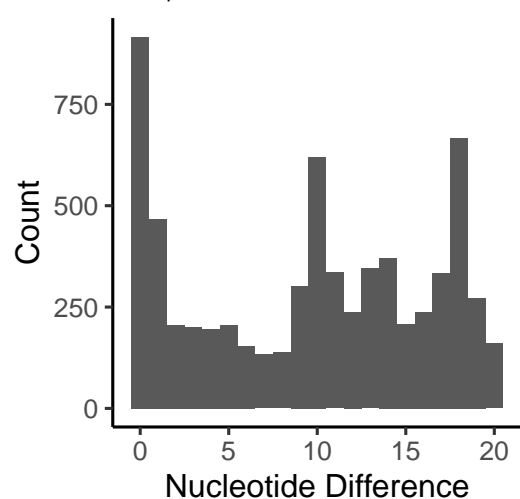
IGHV3-73*01_02

1685 sequences assigned
493 (29.3%) exact matches, in which:
309 unique CDR3
6 unique J



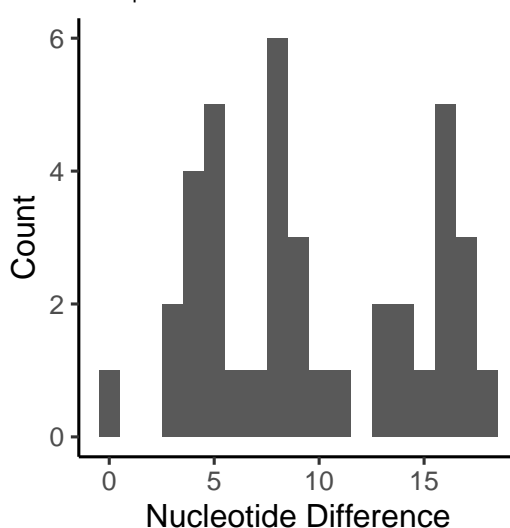
IGHV3-74*01_02

7470 sequences assigned
917 (12.3%) exact matches, in which:
581 unique CDR3
6 unique J



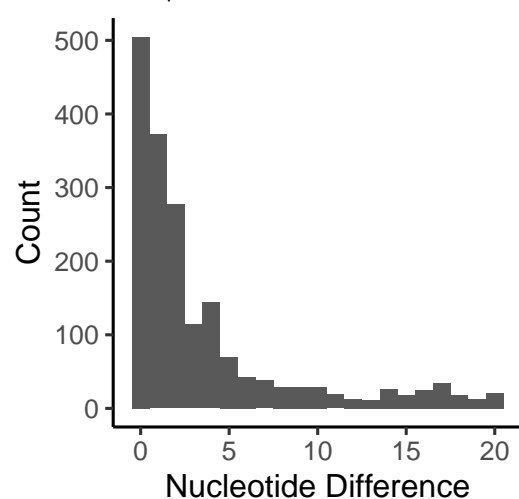
IGHV3-NL1*01

46 sequences assigned
1 (2.2%) exact matches, in which:
1 unique CDR3
1 unique J



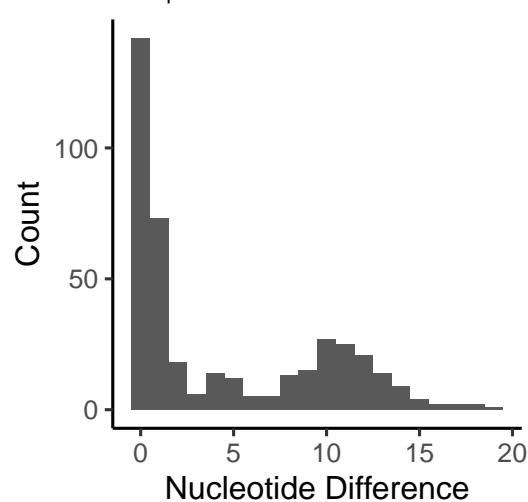
IGHV4-30-2*01

2000 sequences assigned
505 (25.2%) exact matches, in which:
418 unique CDR3
6 unique J



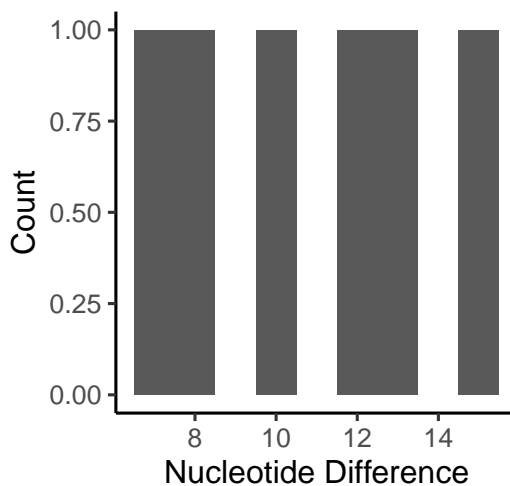
IGHV3-43D*03

428 sequences assigned
142 (33.2%) exact matches, in which:
95 unique CDR3
6 unique J



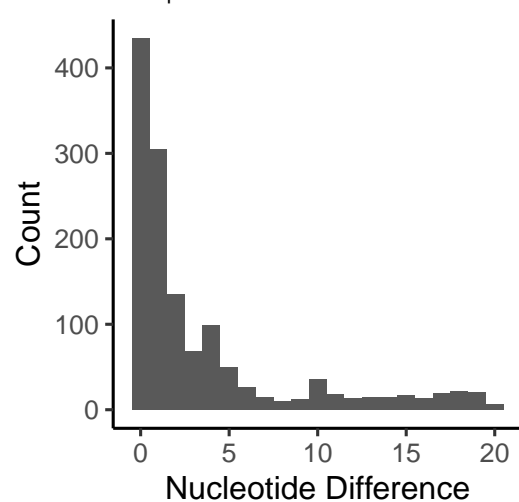
IGHV4-28*03

7 sequences assigned
No exact matches.



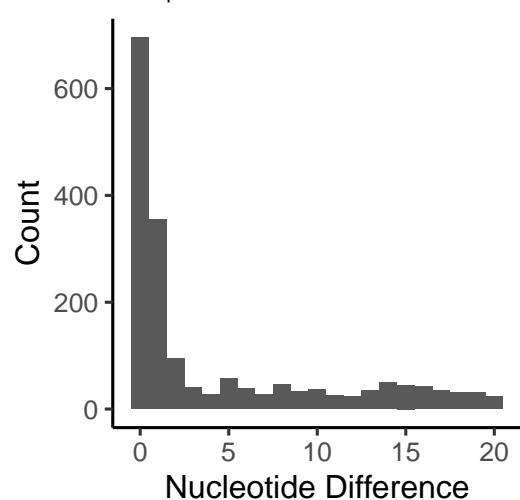
IGHV4-30-4*07

2020 sequences assigned
435 (21.5%) exact matches, in which:
375 unique CDR3
6 unique J



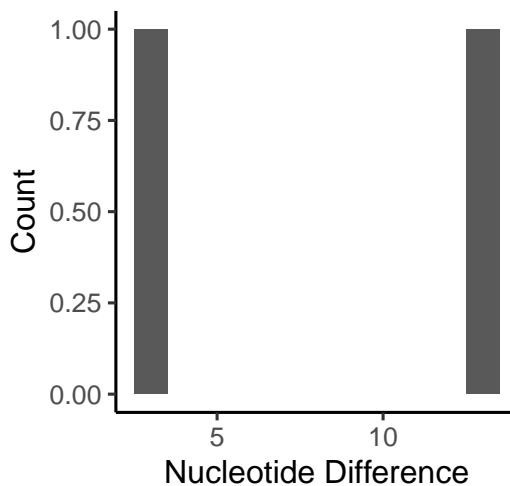
IGHV3-64D*06

2759 sequences assigned
696 (25.2%) exact matches, in which:
421 unique CDR3
6 unique J



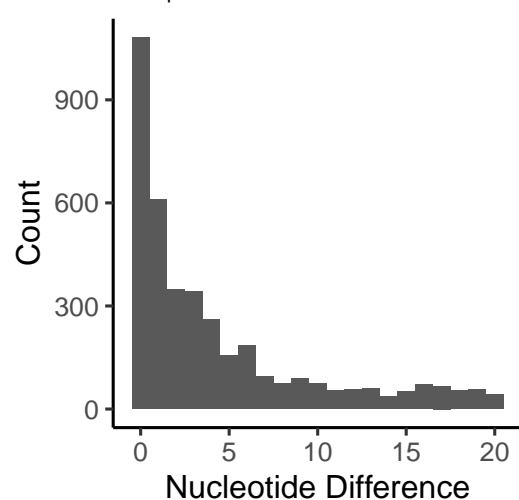
IGHV4-28*01_07

2 sequences assigned
No exact matches.



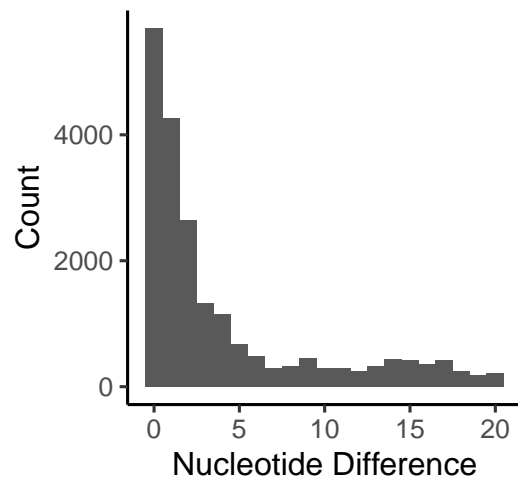
IGHV4-31*03_04

4685 sequences assigned
1082 (23.1%) exact matches, in which:
968 unique CDR3
6 unique J



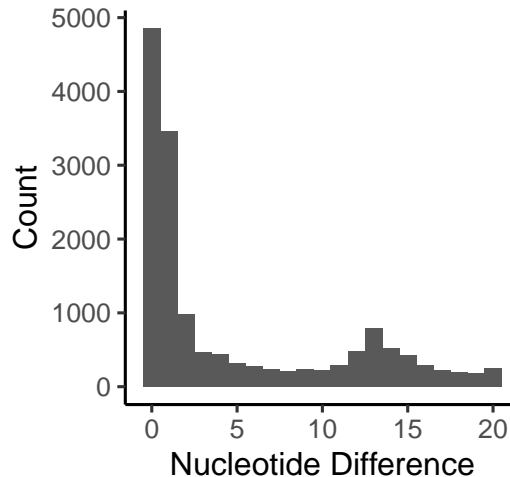
IGHV4-34*01_02

23025 sequences assigned
5690 (24.7%) exact matches, in which:
4867 unique CDR3
6 unique J



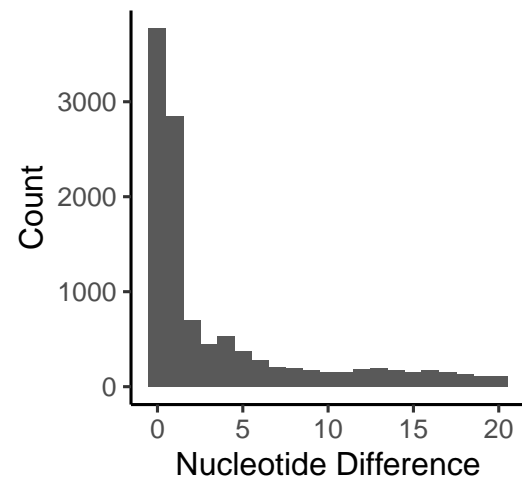
IGHV4-39*01_05

18934 sequences assigned
4854 (25.6%) exact matches, in which:
4111 unique CDR3
6 unique J



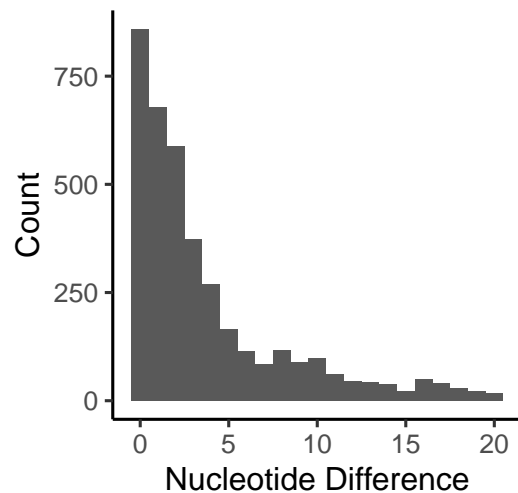
IGHV4-59*01_07

12360 sequences assigned
3772 (30.5%) exact matches, in which:
3325 unique CDR3
6 unique J



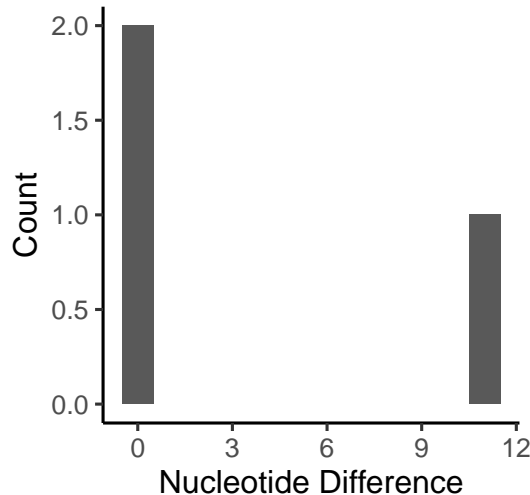
IGHV4-38-2*02

4134 sequences assigned
859 (20.8%) exact matches, in which:
787 unique CDR3
6 unique J



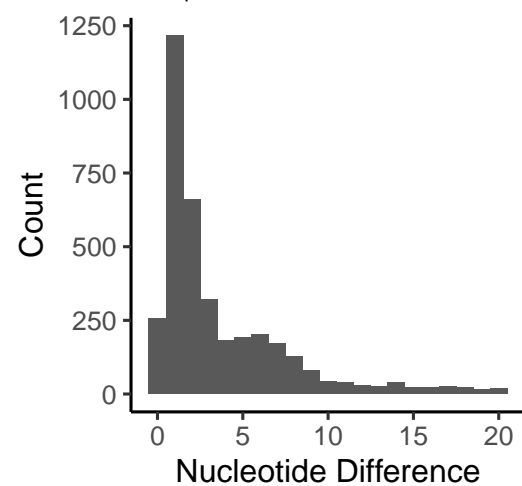
IGHV4-55*01_05

3 sequences assigned
2 (66.7%) exact matches, in which:
2 unique CDR3
2 unique J



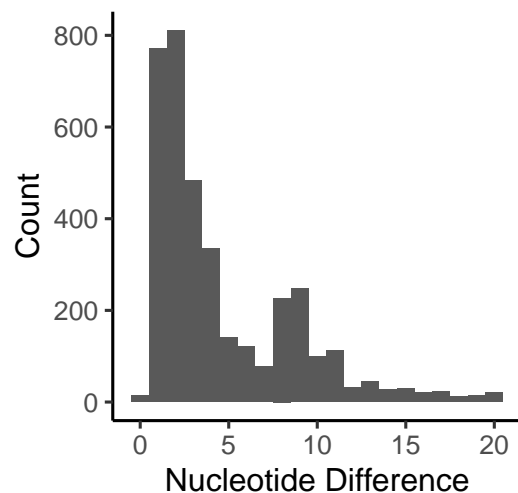
IGHV4-59*12

3931 sequences assigned
255 (6.5%) exact matches, in which:
250 unique CDR3
6 unique J



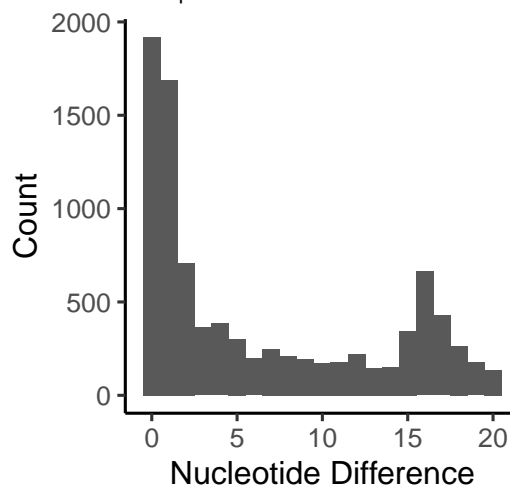
IGHV4-39*07

3826 sequences assigned
15 (0.4%) exact matches, in which:
15 unique CDR3
4 unique J



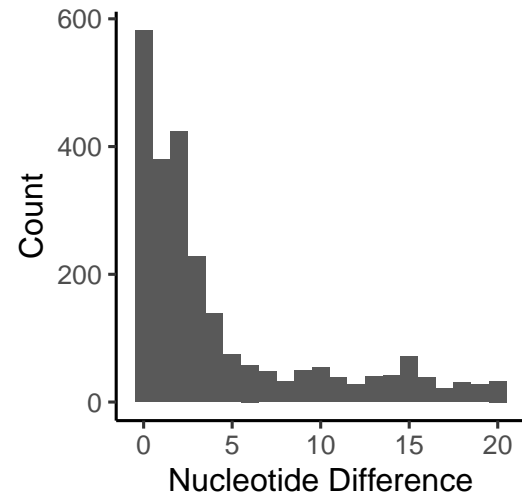
IGHV4-59*08

10419 sequences assigned
1919 (18.4%) exact matches, in which:
1697 unique CDR3
6 unique J



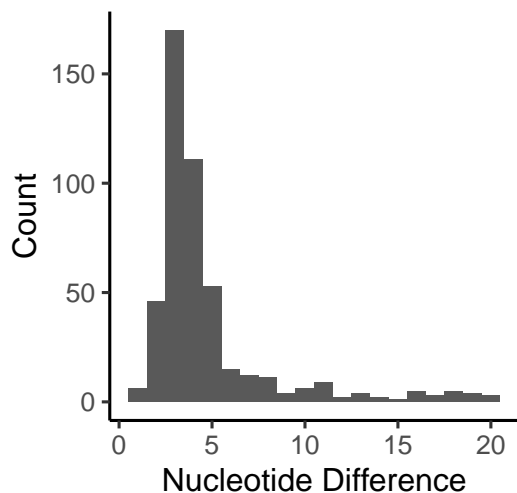
IGHV4-61*01

2658 sequences assigned
582 (21.9%) exact matches, in which:
554 unique CDR3
6 unique J



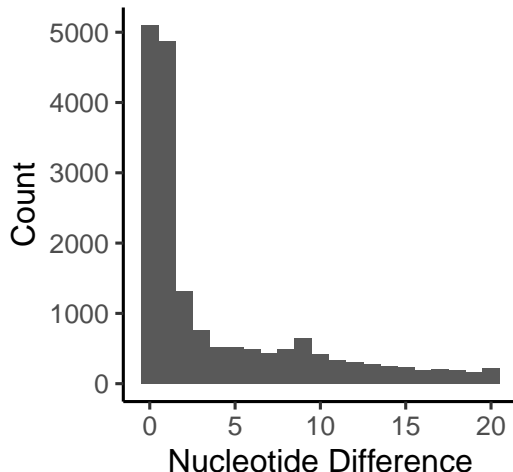
IGHV4-61*05

486 sequences assigned
No exact matches.



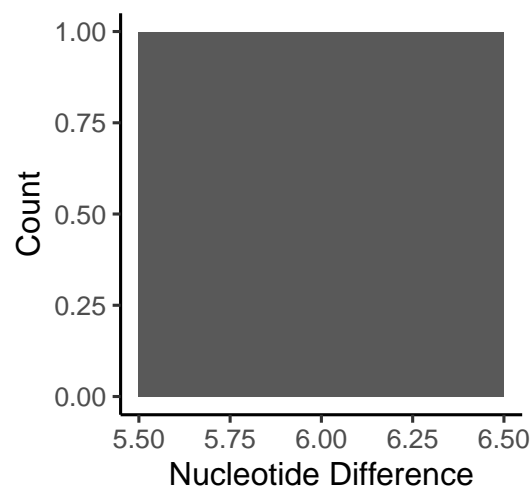
IGHV5-51*01_03

19333 sequences assigned
5097 (26.4%) exact matches, in which:
3711 unique CDR3
6 unique J



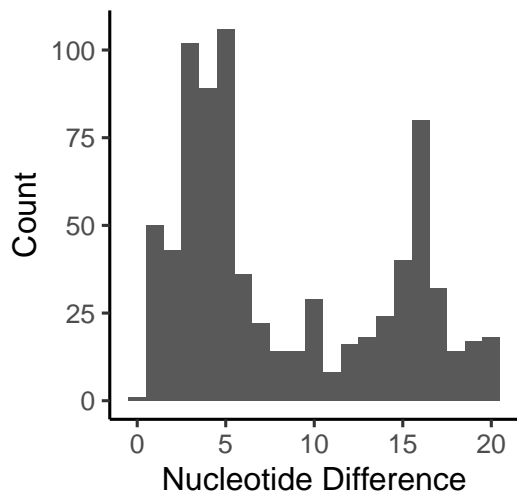
IGHV7-40*03

1 sequences assigned
No exact matches.



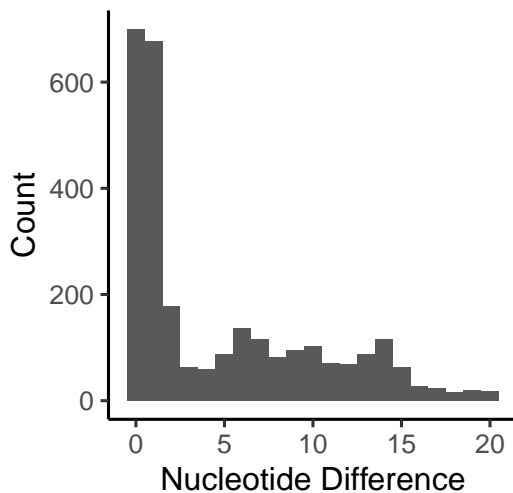
IGHV4-61*08

1585 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



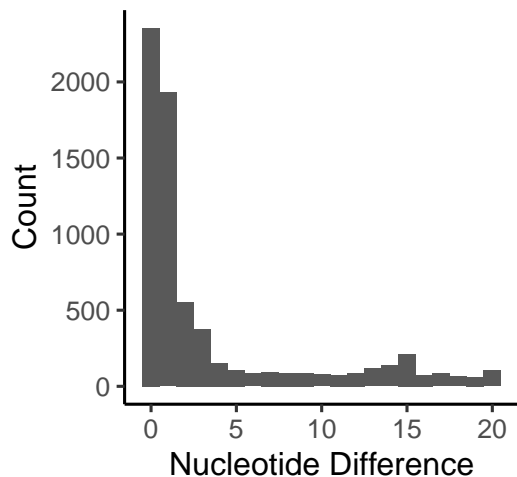
IGHV6-1*01_02

3038 sequences assigned
700 (23%) exact matches, in which:
626 unique CDR3
6 unique J



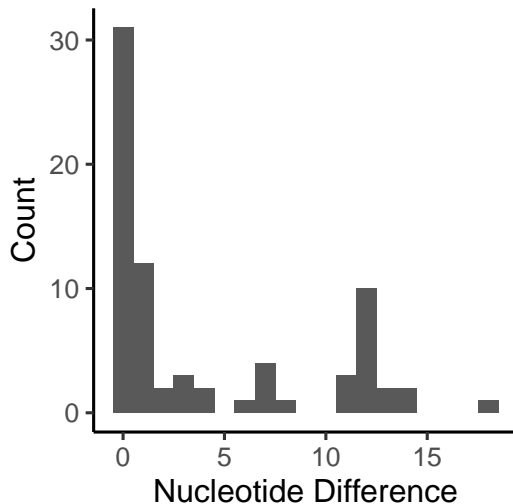
IGHV5-10-1*01_03

7938 sequences assigned
2354 (29.7%) exact matches, in which:
1812 unique CDR3
6 unique J

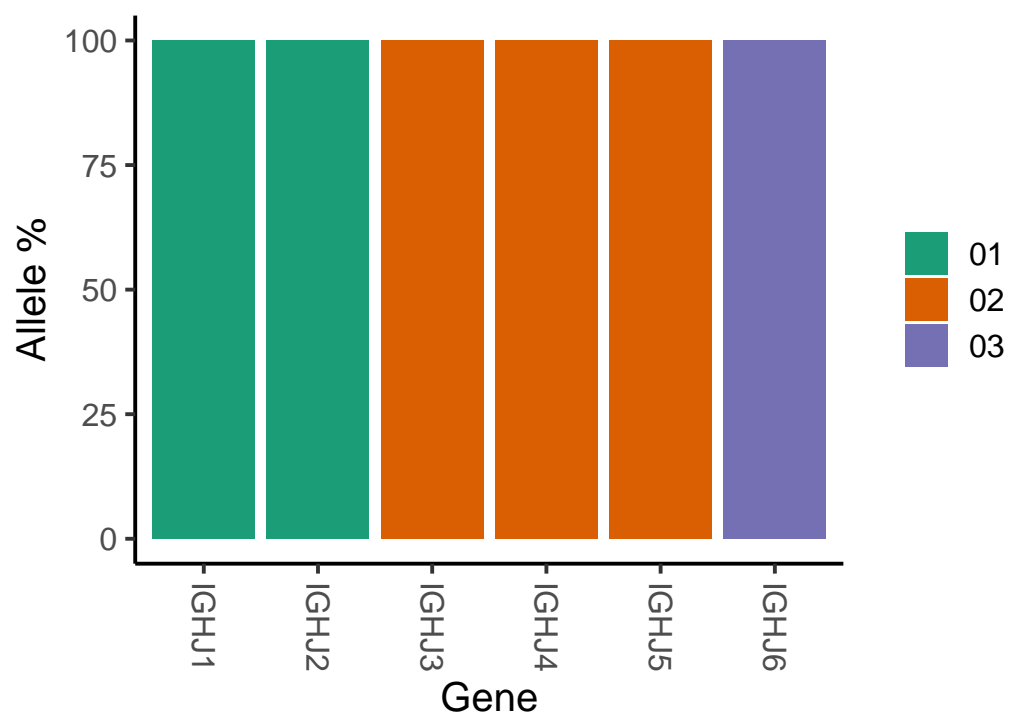


IGHV7-4-1*01

75 sequences assigned
31 (41.3%) exact matches, in which:
29 unique CDR3
4 unique J



Allele Usage



Novel sequence(s)IGHV1-69*01_12_13_G238AIGHV3-48*03_T303G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5-51*07_A128G are not listed in the genotype and will be ignored.