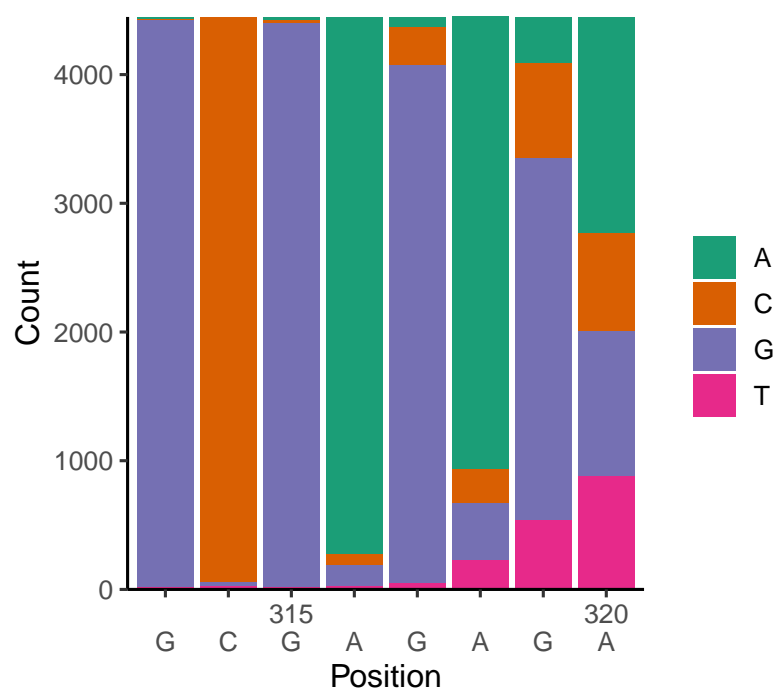


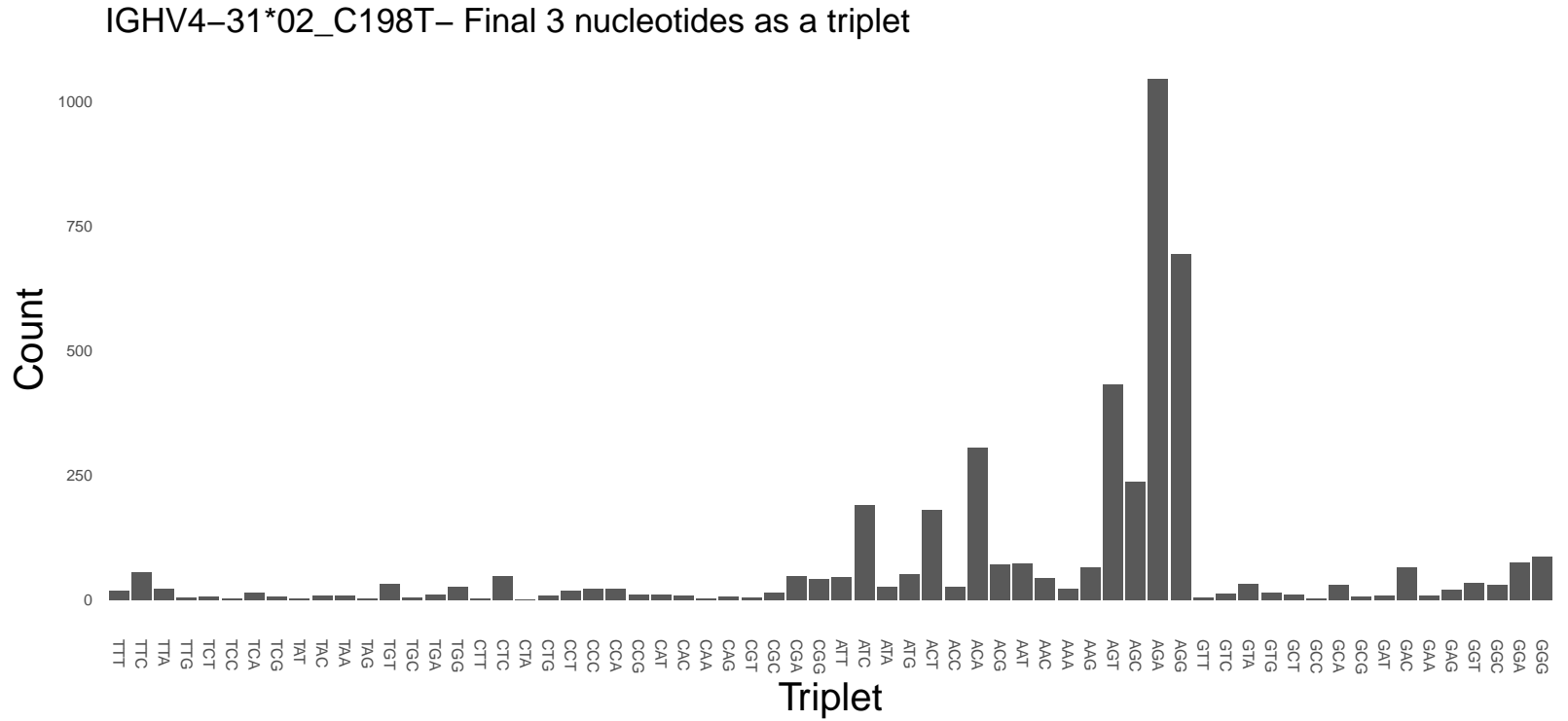
Gene IGHV4-31*02_C198T



Gene IGHV4-31*02_C198T

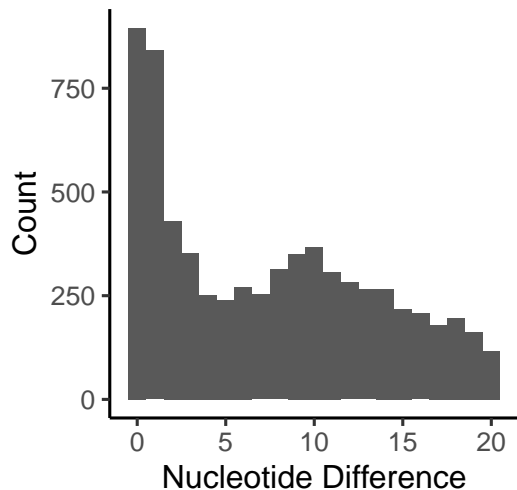


IGHV4-31*02_C198T- Final 3 nucleotides as a triplet



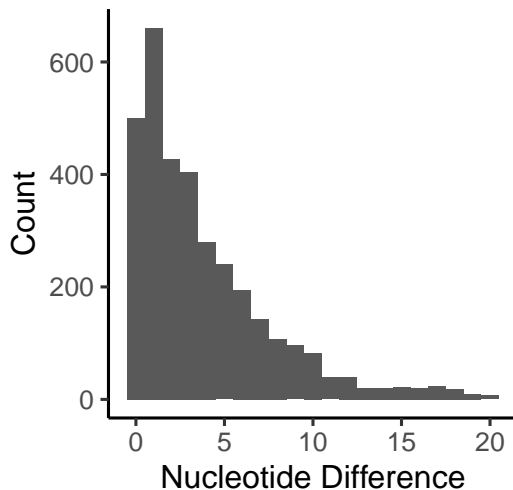
IGHV1-2*02

7336 sequences assigned
896 (12.2%) exact matches, in which:
740 unique CDR3
7 unique J



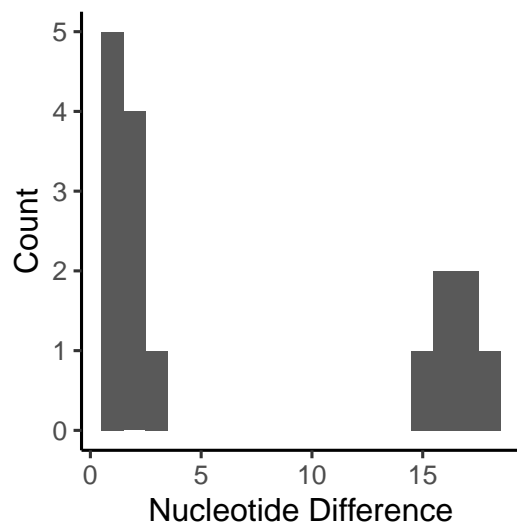
IGHV1-8*03

3395 sequences assigned
500 (14.7%) exact matches, in which:
382 unique CDR3
7 unique J



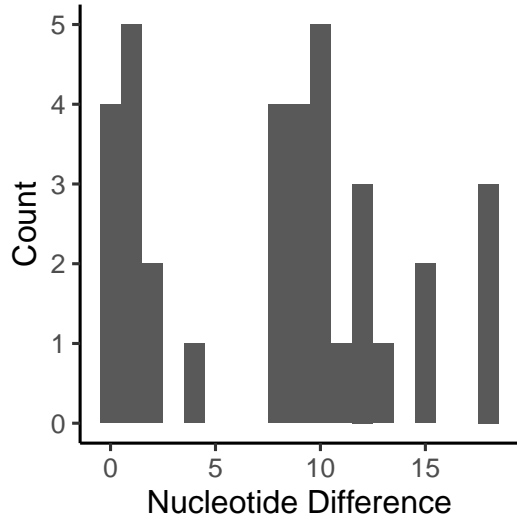
IGHV1-45*02

16 sequences assigned
No exact matches.



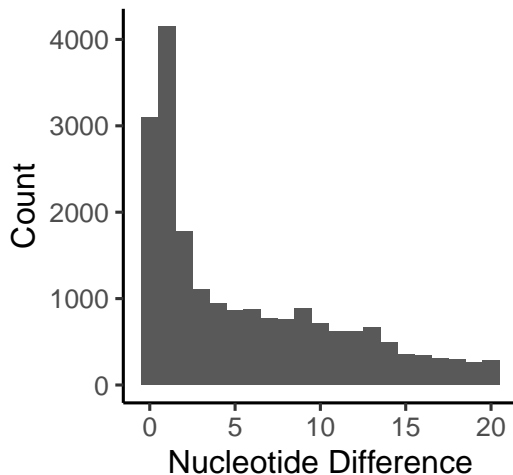
IGHV1-3*02

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



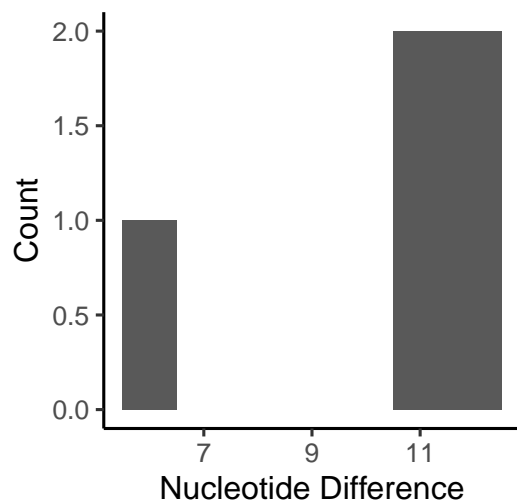
IGHV1-18*01

21307 sequences assigned
3096 (14.5%) exact matches, in which:
2375 unique CDR3
7 unique J



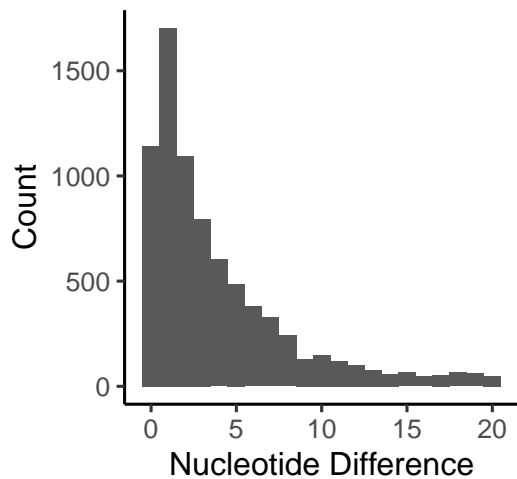
IGHV1-45*03

5 sequences assigned
No exact matches.



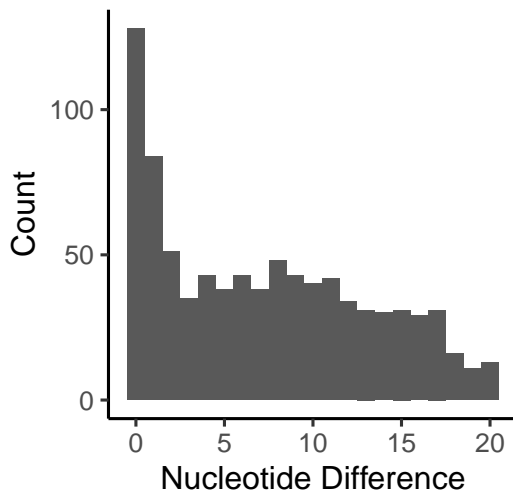
IGHV1-8*01

7867 sequences assigned
1143 (14.5%) exact matches, in which:
908 unique CDR3
7 unique J



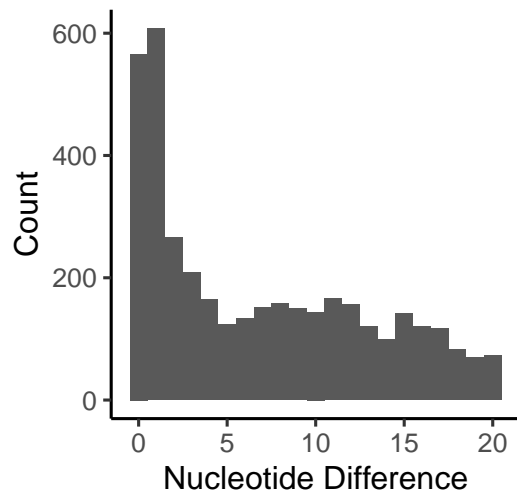
IGHV1-24*01

917 sequences assigned
128 (14%) exact matches, in which:
117 unique CDR3
7 unique J



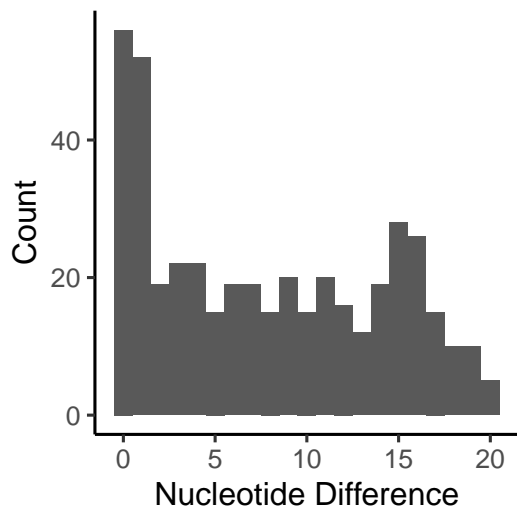
IGHV1-46*01

4106 sequences assigned
566 (13.8%) exact matches, in which:
435 unique CDR3
7 unique J



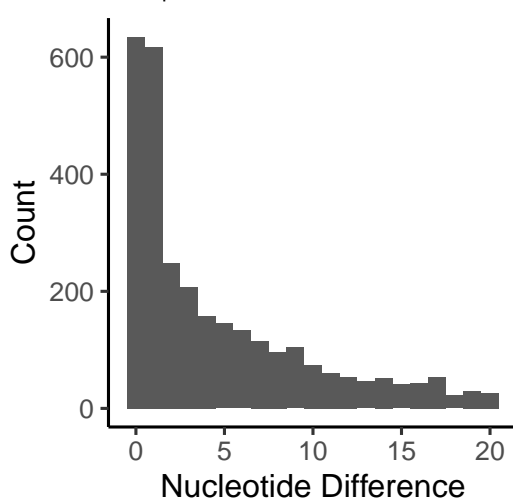
IGHV1-58*02

473 sequences assigned
56 (11.8%) exact matches, in which:
51 unique CDR3
7 unique J



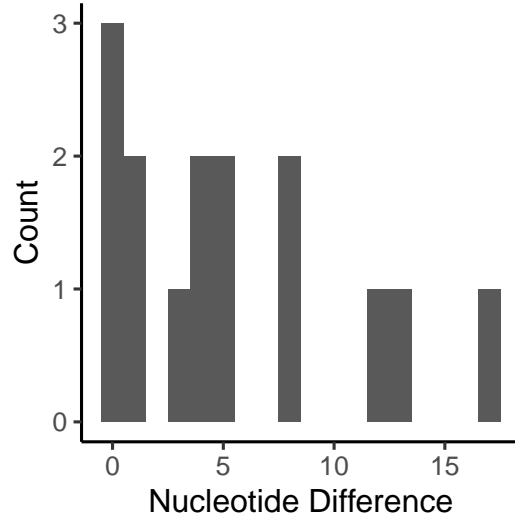
IGHV1-69*01_12_13

3114 sequences assigned
635 (20.4%) exact matches, in which:
540 unique CDR3
7 unique J



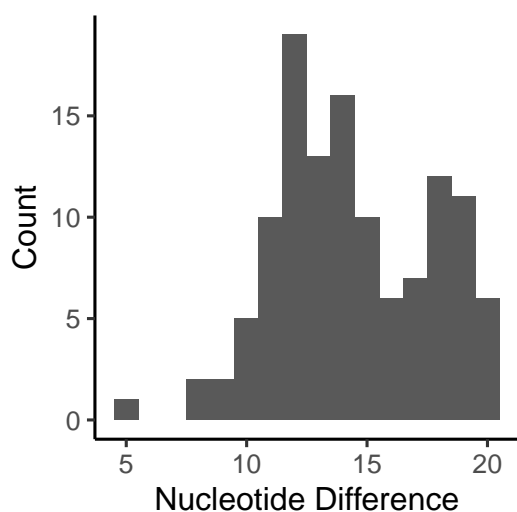
IGHV2-5*02

15 sequences assigned
3 (20%) exact matches, in which:
3 unique CDR3
2 unique J



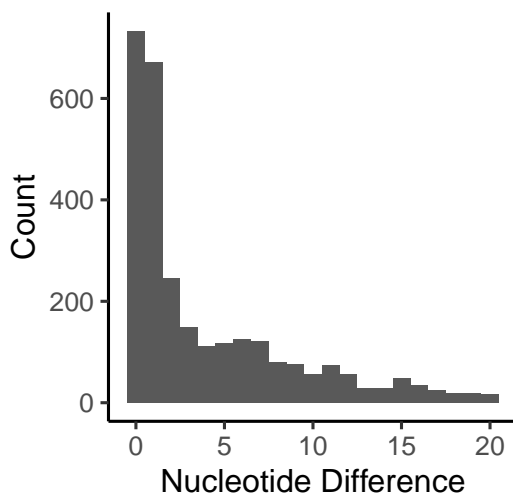
IGHV1-58*01_03

151 sequences assigned
No exact matches.



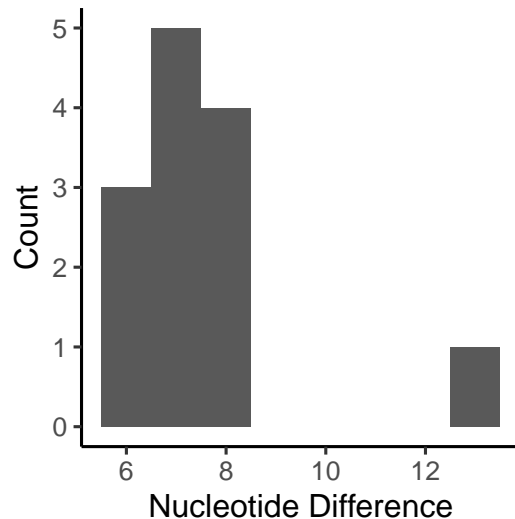
IGHV1-69*04_09

2946 sequences assigned
733 (24.9%) exact matches, in which:
624 unique CDR3
7 unique J



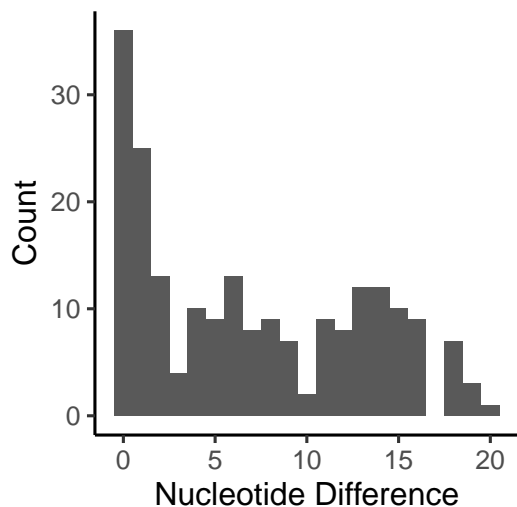
IGHV2-70*11_15

13 sequences assigned
No exact matches.



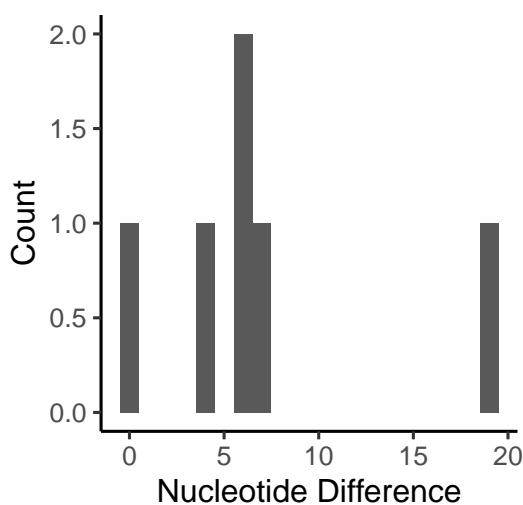
IGHV1-69-2*01

221 sequences assigned
36 (16.3%) exact matches, in which:
34 unique CDR3
6 unique J



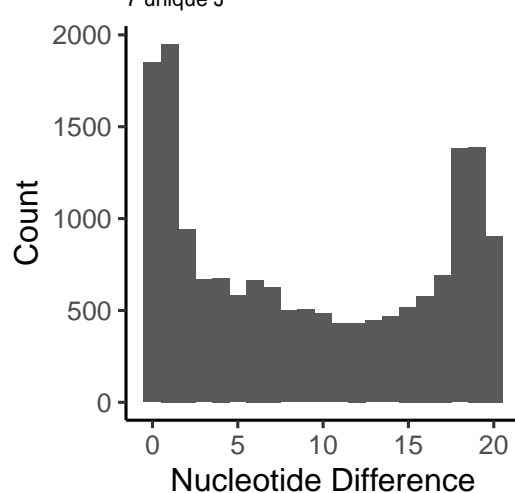
IGHV2-5*01

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



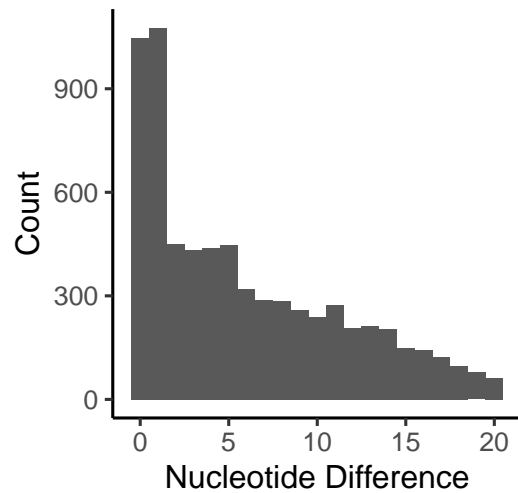
IGHV3-7*01

18862 sequences assigned
1849 (9.8%) exact matches, in which:
1470 unique CDR3
7 unique J



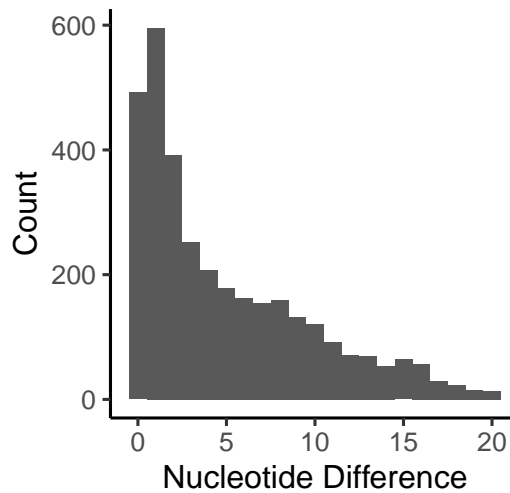
IGHV3-9*01

7064 sequences assigned
1047 (14.8%) exact matches, in which:
806 unique CDR3
7 unique J



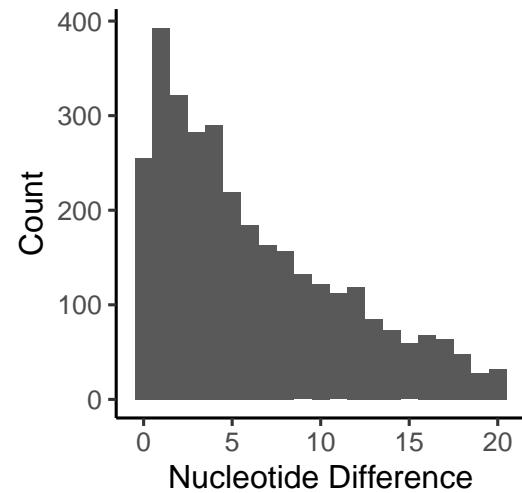
IGHV3-11*04

3382 sequences assigned
492 (14.5%) exact matches, in which:
399 unique CDR3
7 unique J



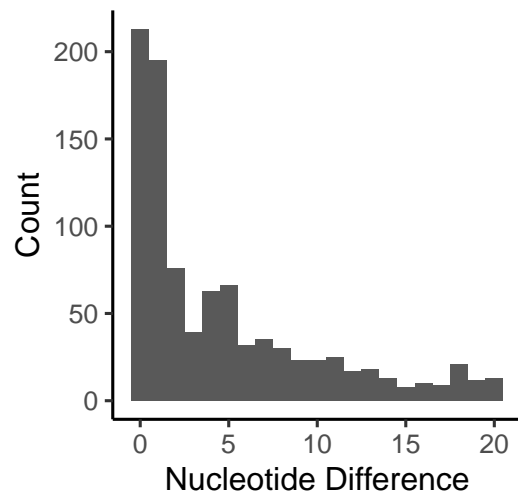
IGHV3-20*03_04

3307 sequences assigned
255 (7.7%) exact matches, in which:
203 unique CDR3
7 unique J



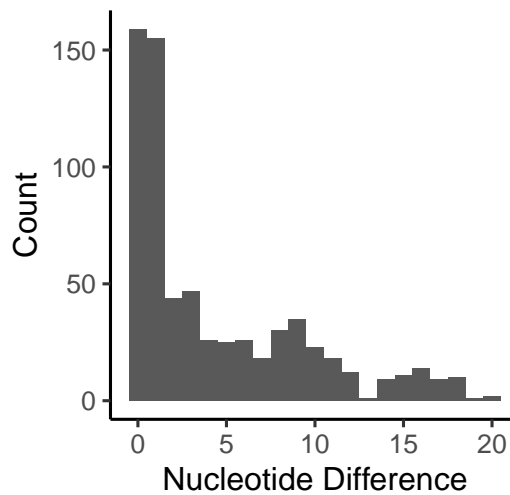
IGHV3-9*03

955 sequences assigned
213 (22.3%) exact matches, in which:
168 unique CDR3
7 unique J



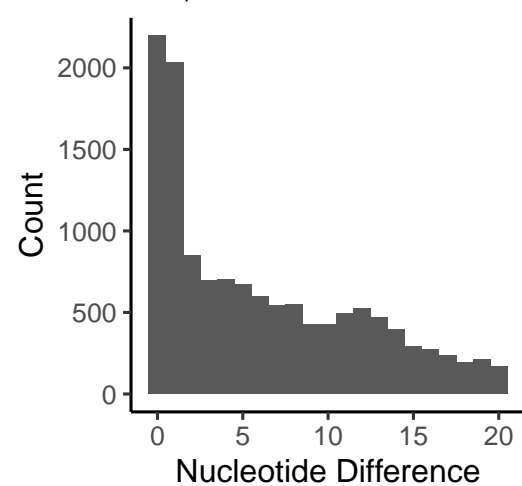
IGHV3-13*01

694 sequences assigned
159 (22.9%) exact matches, in which:
121 unique CDR3
6 unique J



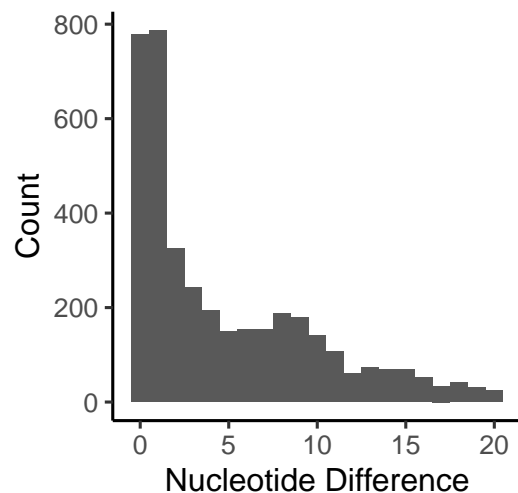
IGHV3-21*01_02

13531 sequences assigned
2197 (16.2%) exact matches, in which:
1692 unique CDR3
7 unique J



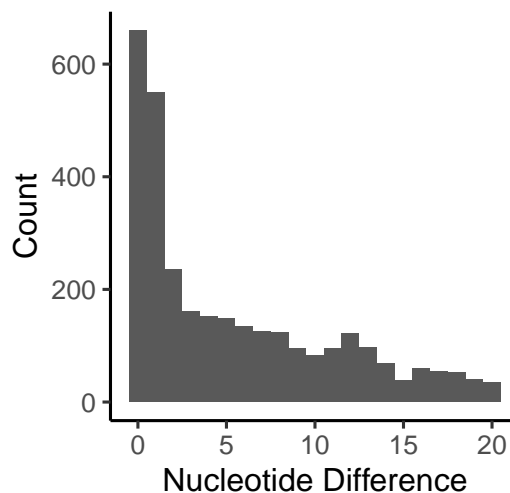
IGHV3-11*01

3942 sequences assigned
779 (19.8%) exact matches, in which:
624 unique CDR3
7 unique J



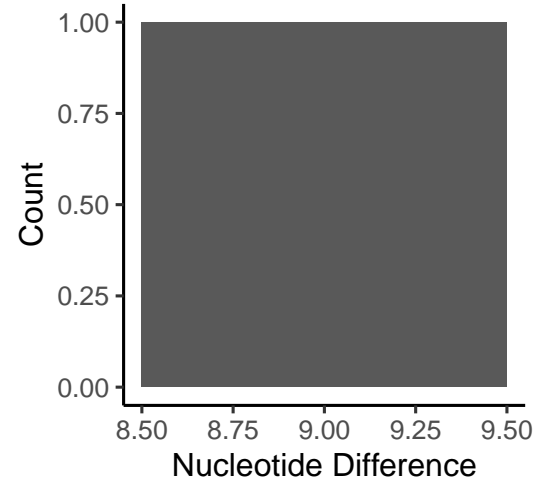
IGHV3-15*01_02

3263 sequences assigned
660 (20.2%) exact matches, in which:
583 unique CDR3
7 unique J



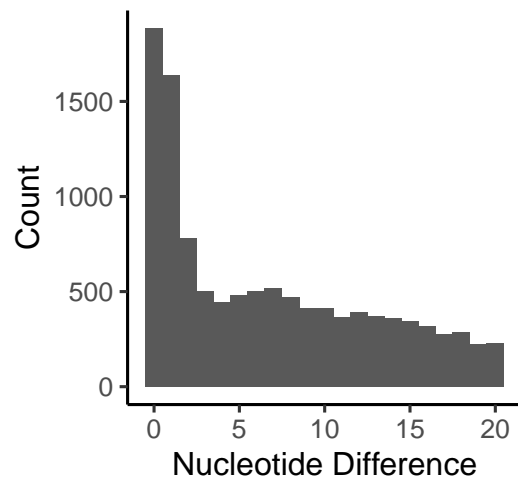
IGHV3-22*01_02

1 sequences assigned
No exact matches.



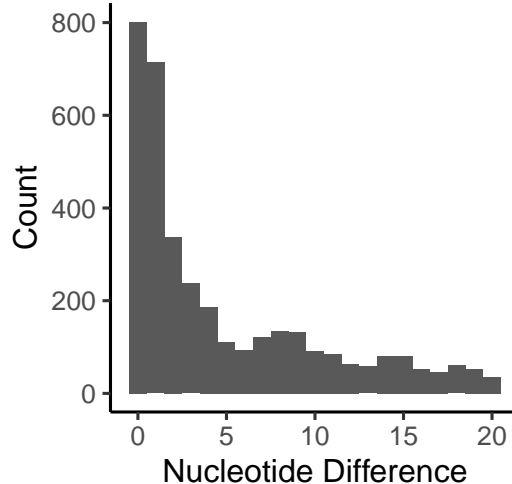
IGHV3-23*01_04

12374 sequences assigned
1884 (15.2%) exact matches, in which:
1544 unique CDR3
7 unique J



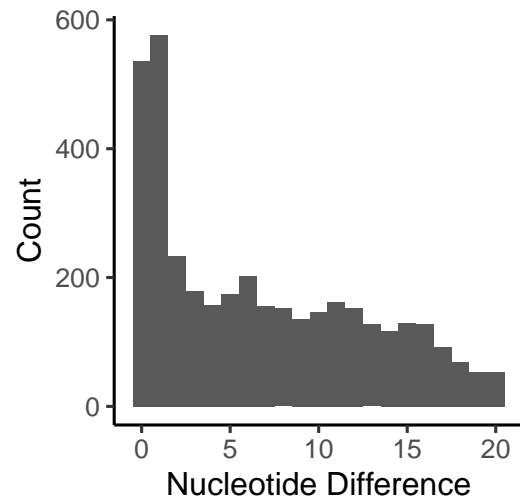
IGHV3-33*01

3662 sequences assigned
802 (21.9%) exact matches, in which:
556 unique CDR3
7 unique J



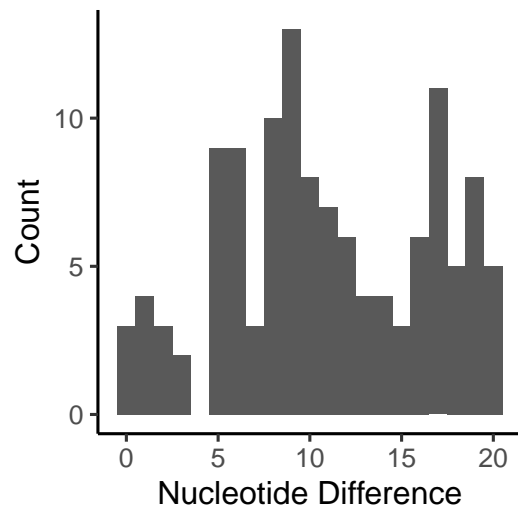
IGHV3-43*02

3927 sequences assigned
536 (13.6%) exact matches, in which:
420 unique CDR3
6 unique J



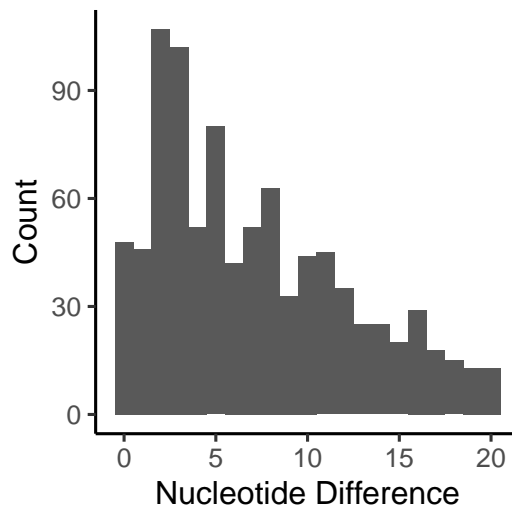
IGHV3-30-3*01

174 sequences assigned
3 (1.7%) exact matches, in which:
3 unique CDR3
3 unique J



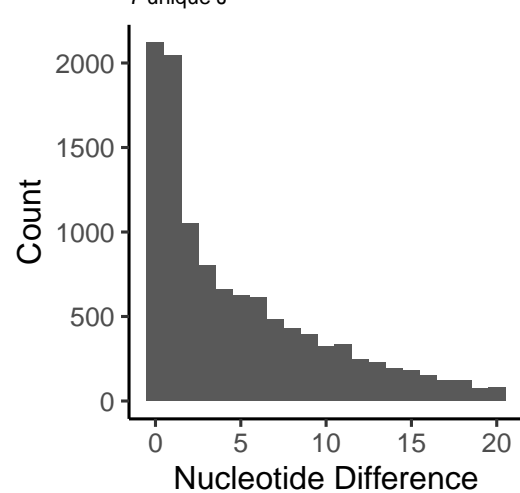
IGHV3-33*08

954 sequences assigned
48 (5%) exact matches, in which:
43 unique CDR3
6 unique J



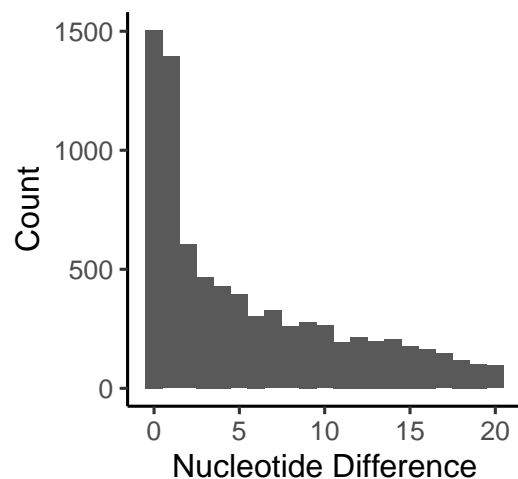
IGHV3-48*03

11550 sequences assigned
2120 (18.4%) exact matches, in which:
1729 unique CDR3
7 unique J



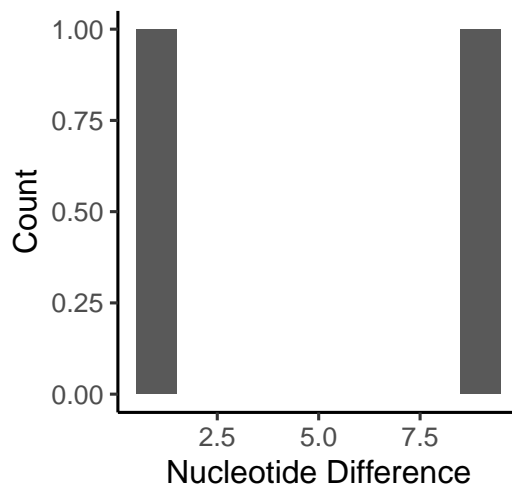
IGHV3-30*04

8252 sequences assigned
1505 (18.2%) exact matches, in which:
1244 unique CDR3
7 unique J



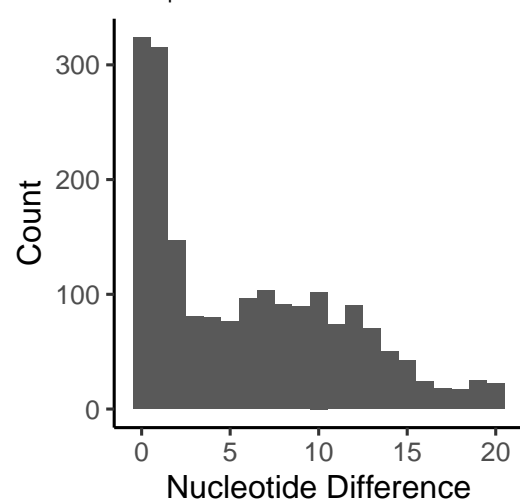
IGHV3-38-3*01

2 sequences assigned
No exact matches.



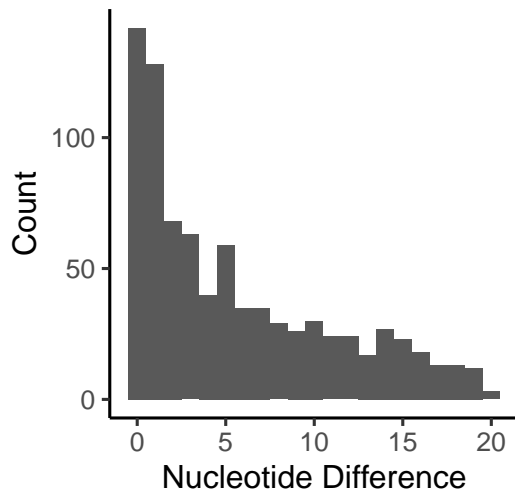
IGHV3-49*04

2035 sequences assigned
324 (15.9%) exact matches, in which:
258 unique CDR3
7 unique J



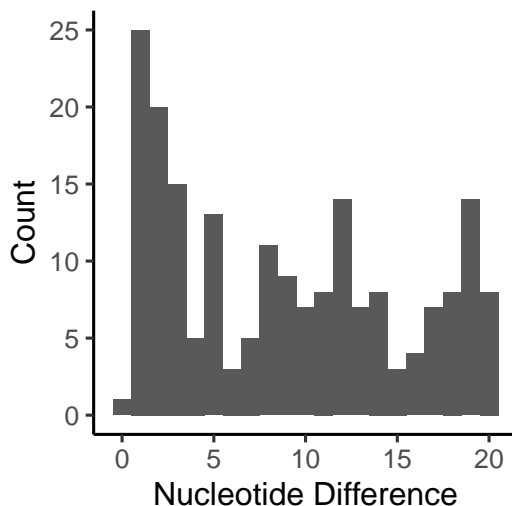
IGHV3-49*03_05

853 sequences assigned
142 (16.6%) exact matches, in which:
113 unique CDR3
7 unique J



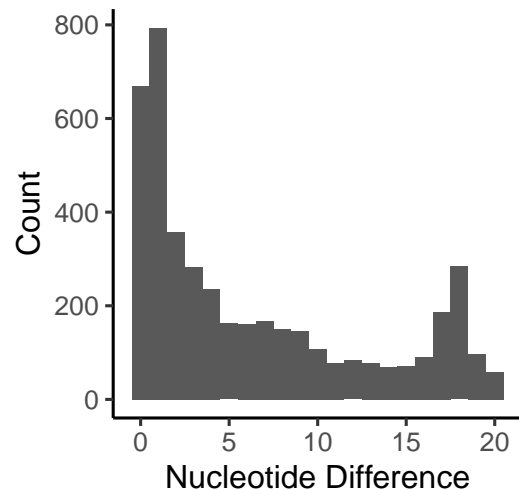
IGHV3-53*05

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



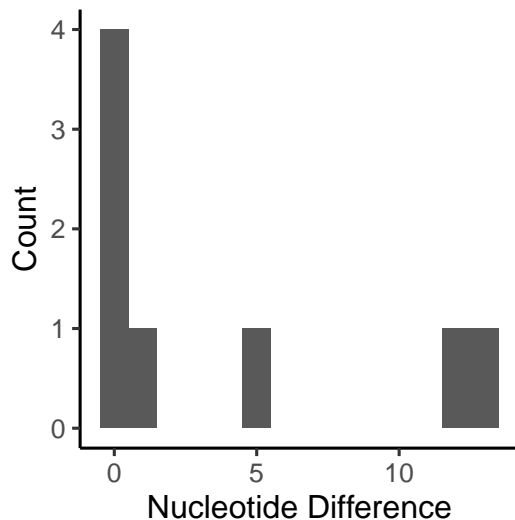
IGHV3-66*01

4543 sequences assigned
670 (14.7%) exact matches, in which:
517 unique CDR3
7 unique J



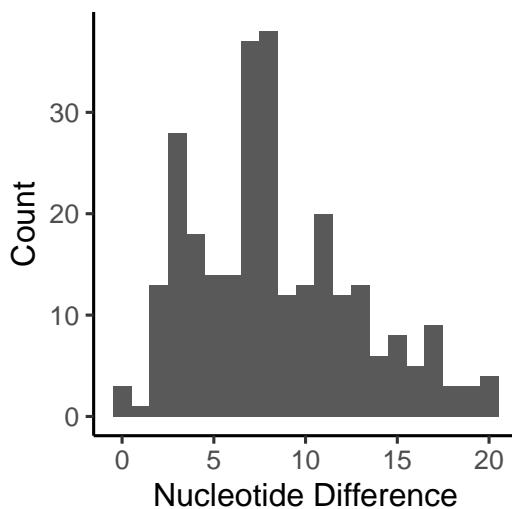
IGHV3-52*01_03

8 sequences assigned
4 (50%) exact matches, in which:
4 unique CDR3
3 unique J



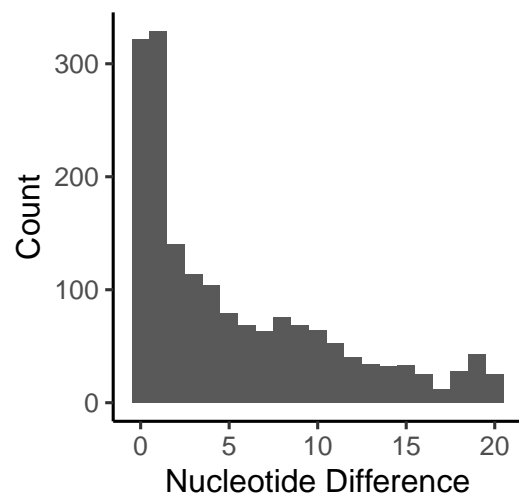
IGHV3-53*01_02

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



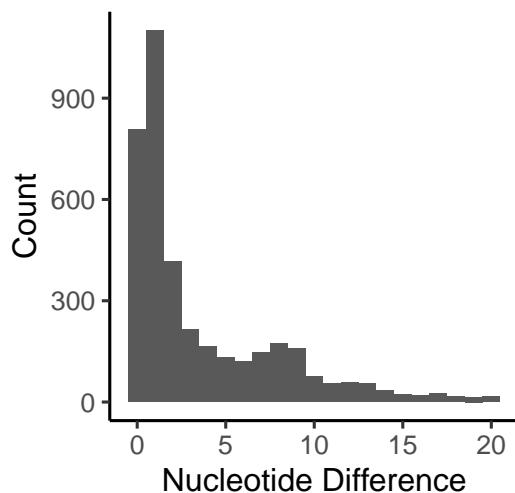
IGHV3-66*02

1835 sequences assigned
322 (17.5%) exact matches, in which:
251 unique CDR3
7 unique J



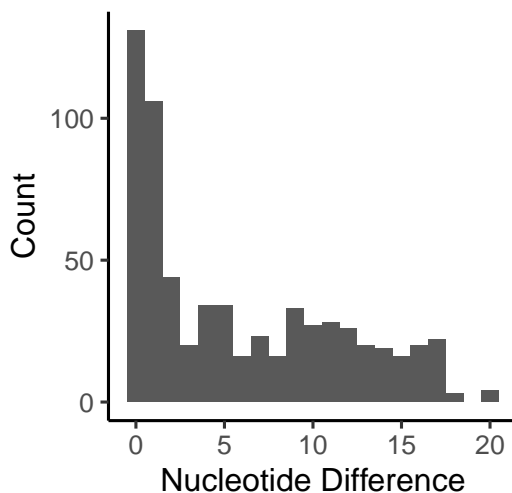
IGHV3-53*04

3888 sequences assigned
806 (20.7%) exact matches, in which:
576 unique CDR3
7 unique J



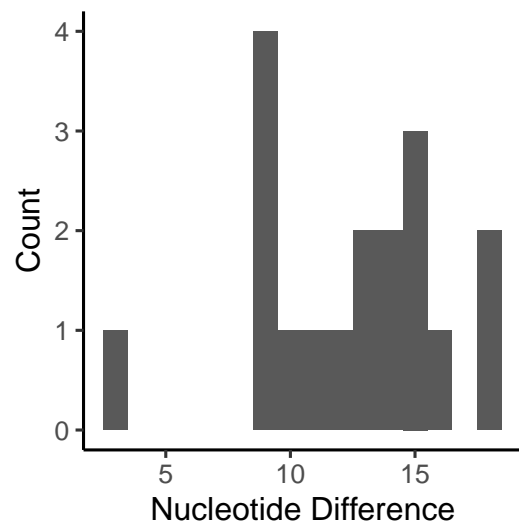
IGHV3-64*01

693 sequences assigned
131 (18.9%) exact matches, in which:
104 unique CDR3
7 unique J



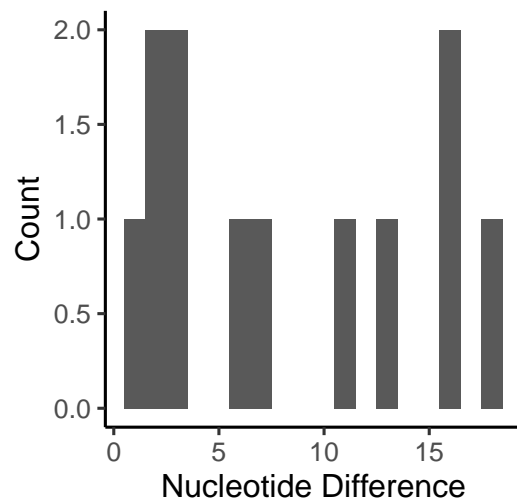
IGHV3-69-1*01

33 sequences assigned
No exact matches.



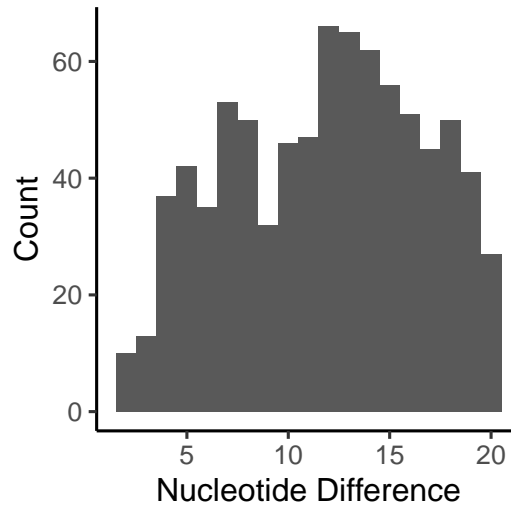
IGHV3-69-1*02

21 sequences assigned
No exact matches.



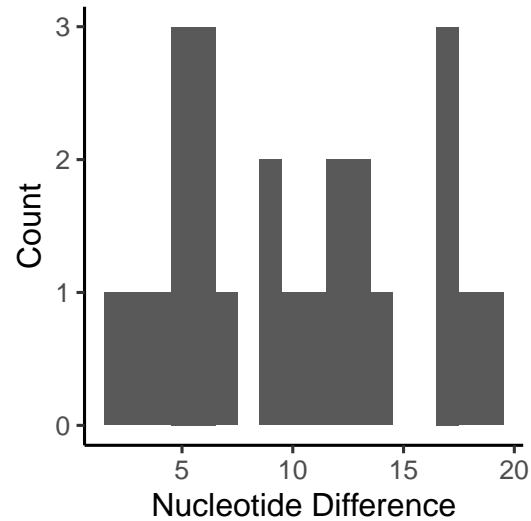
IGHV3-74*03

928 sequences assigned
No exact matches.



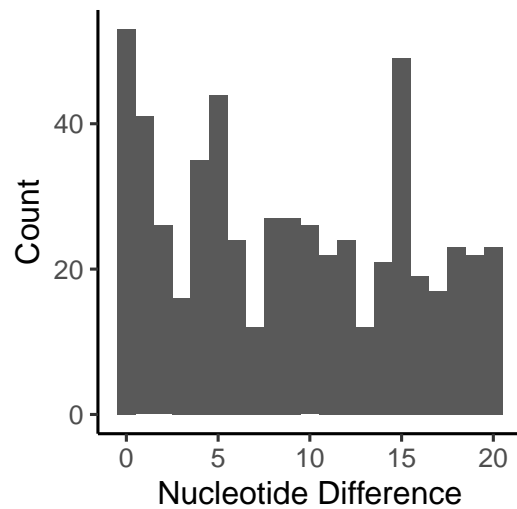
IGHV3-NL1*01

28 sequences assigned
No exact matches.



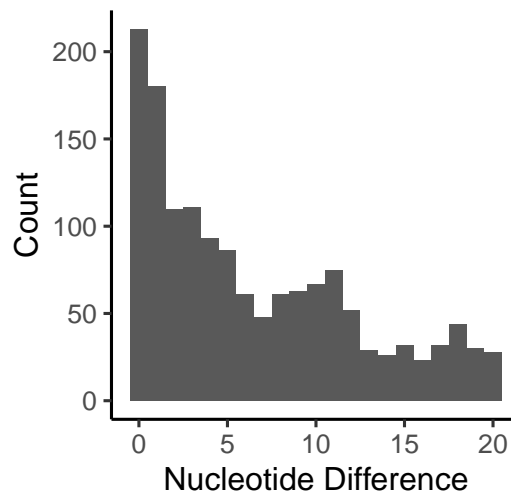
IGHV3-72*01

671 sequences assigned
53 (7.9%) exact matches, in which:
48 unique CDR3
5 unique J



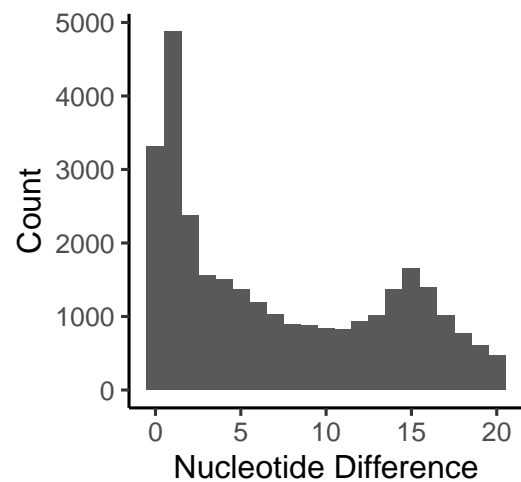
IGHV3-74*01_02

1551 sequences assigned
213 (13.7%) exact matches, in which:
170 unique CDR3
7 unique J



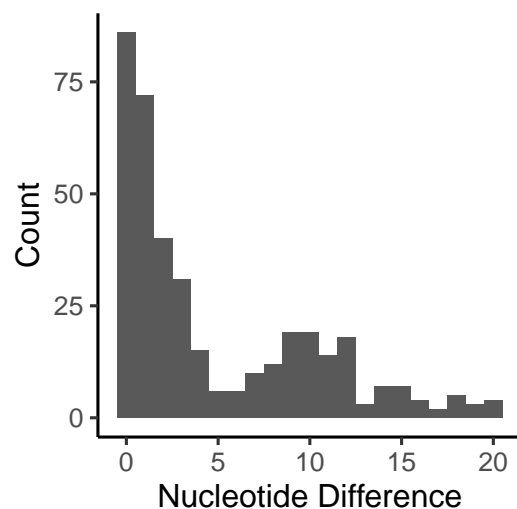
IGHV4-4*07

30882 sequences assigned
3311 (10.7%) exact matches, in which:
2233 unique CDR3
7 unique J



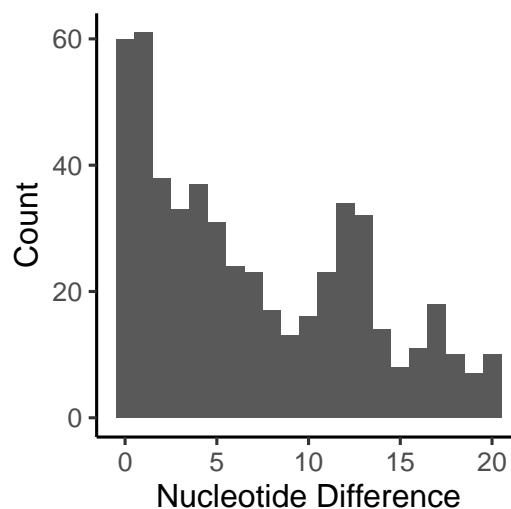
IGHV3-73*01_02

408 sequences assigned
86 (21.1%) exact matches, in which:
71 unique CDR3
7 unique J



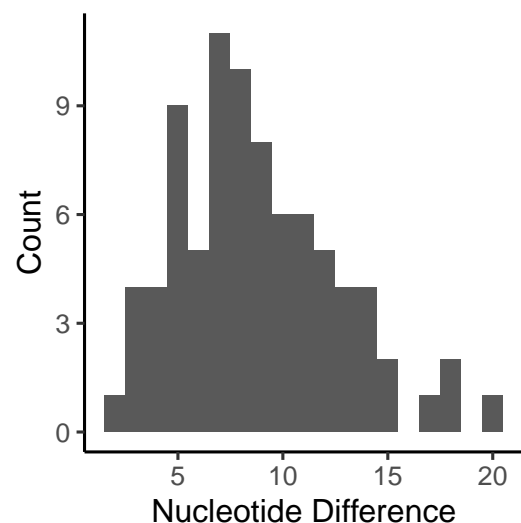
IGHV3-43D*04

533 sequences assigned
60 (11.3%) exact matches, in which:
47 unique CDR3
6 unique J



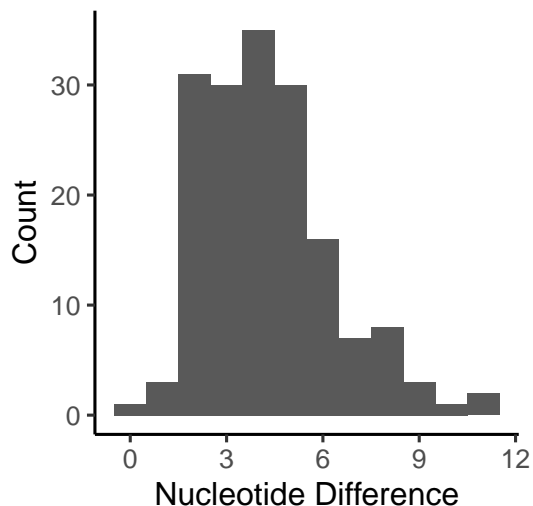
IGHV4-28*03

90 sequences assigned
No exact matches.



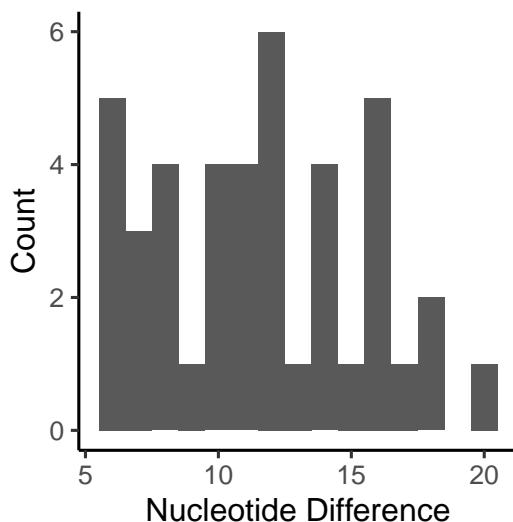
IGHV4-28*02_05

167 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



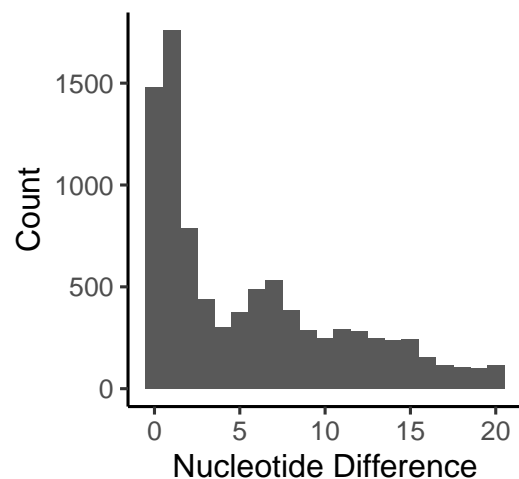
IGHV4-30-4*08

43 sequences assigned
No exact matches.



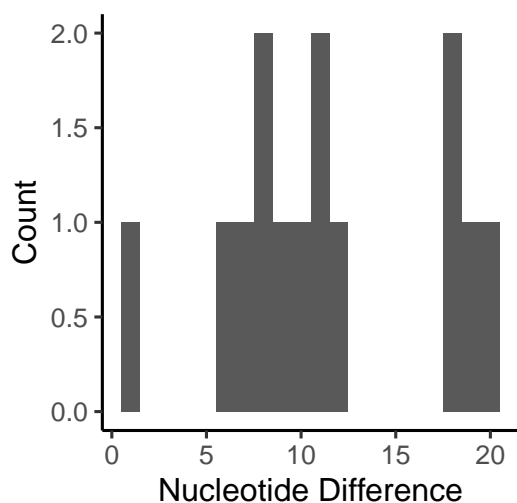
IGHV4-38-2*01

9452 sequences assigned
1479 (15.6%) exact matches, in which:
1074 unique CDR3
7 unique J



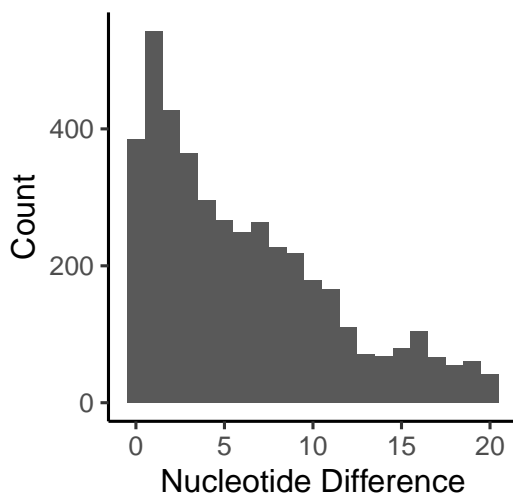
IGHV4-30-4*01

17 sequences assigned
No exact matches.



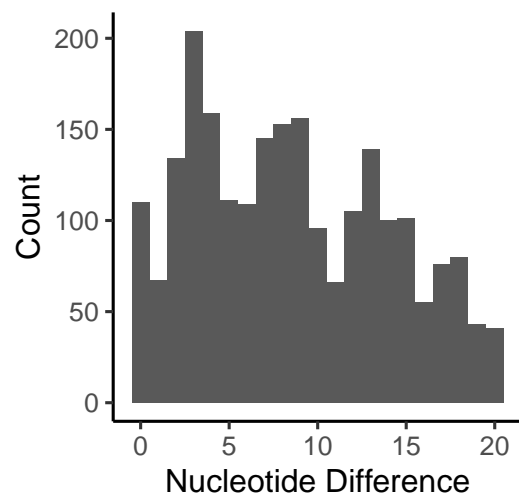
IGHV4-31*02_C198T

4448 sequences assigned
385 (8.7%) exact matches, in which:
275 unique CDR3
7 unique J



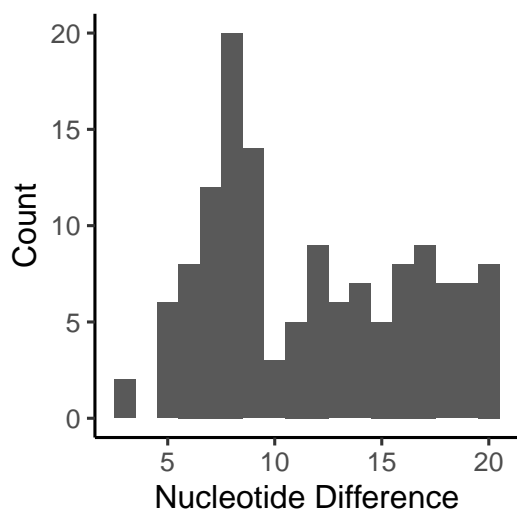
IGHV4-38-2*02

2516 sequences assigned
110 (4.4%) exact matches, in which:
103 unique CDR3
7 unique J



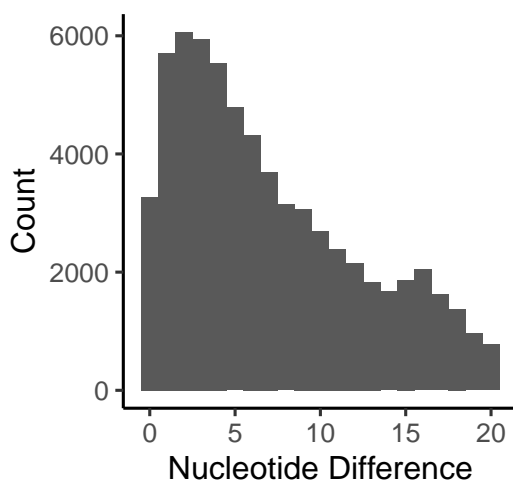
IGHV4-30-2*03

159 sequences assigned
No exact matches.



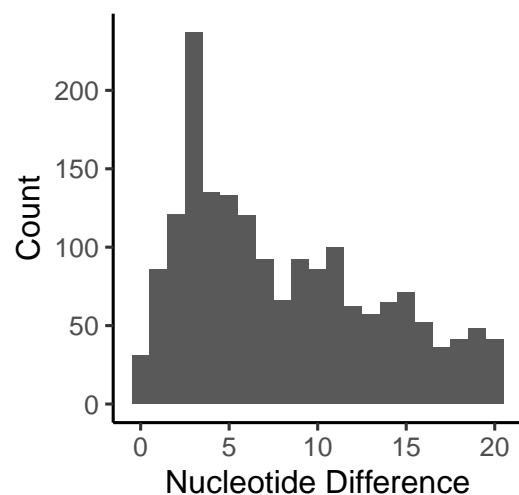
IGHV4-34*01_02

66743 sequences assigned
3269 (4.9%) exact matches, in which:
2201 unique CDR3
7 unique J



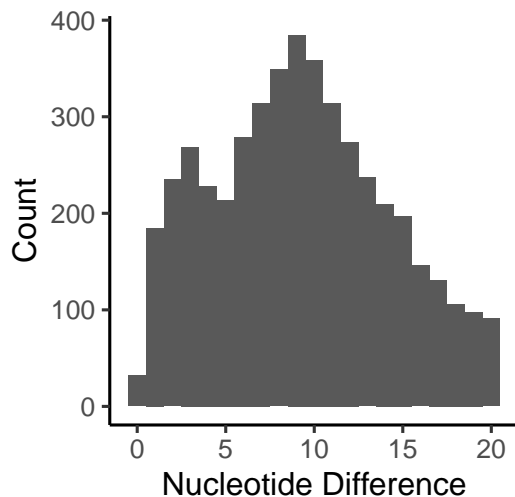
IGHV4-39*02

2037 sequences assigned
31 (1.5%) exact matches, in which:
23 unique CDR3
6 unique J



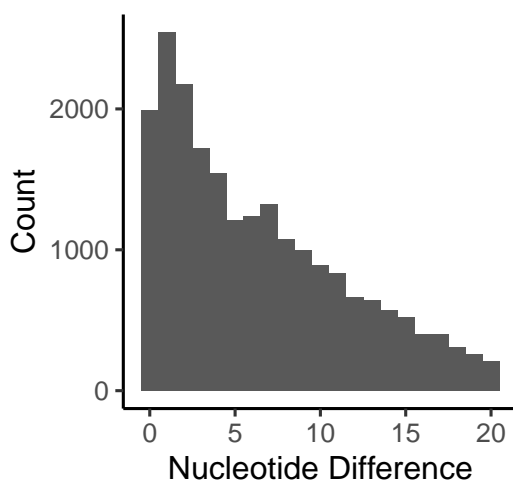
IGHV4–39*07

4972 sequences assigned
32 (0.6%) exact matches, in which:
30 unique CDR3
6 unique J



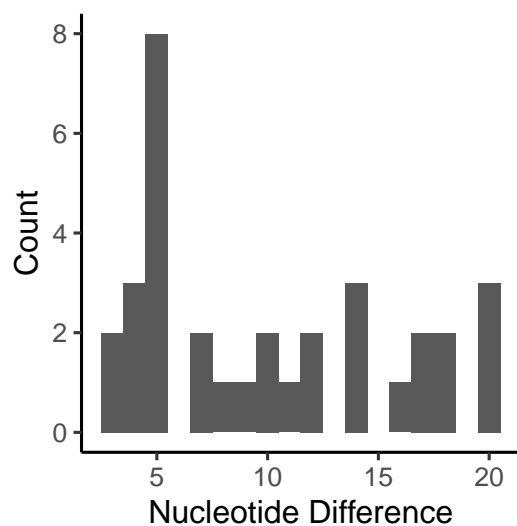
IGHV4–61*02

22341 sequences assigned
1988 (8.9%) exact matches, in which:
1466 unique CDR3
7 unique J



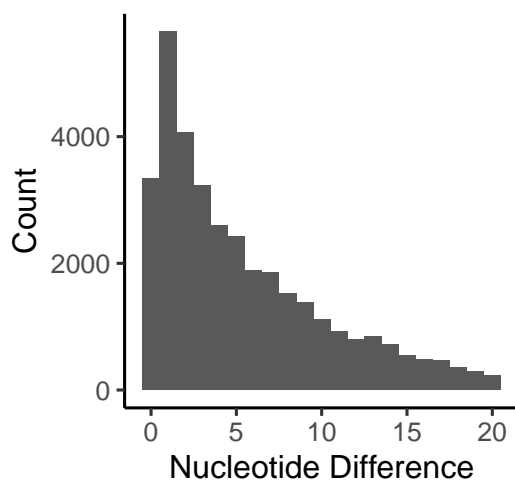
IGHV4/OR15–8*01

49 sequences assigned
No exact matches.



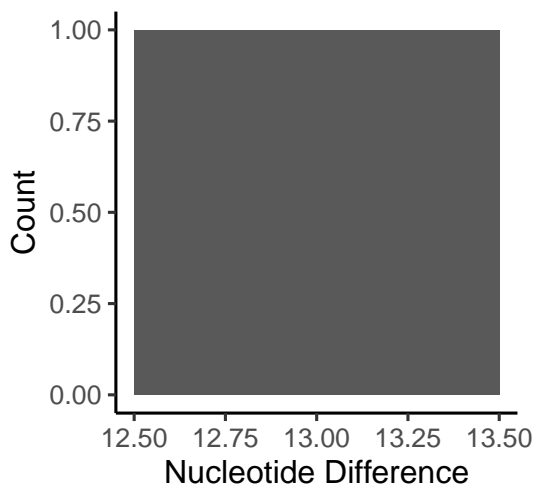
IGHV4–59*08

35651 sequences assigned
3346 (9.4%) exact matches, in which:
2298 unique CDR3
7 unique J



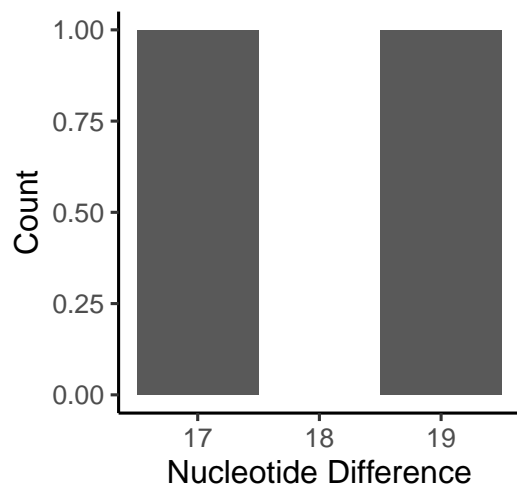
IGHV1/OR15–2*01

1 sequences assigned
No exact matches.



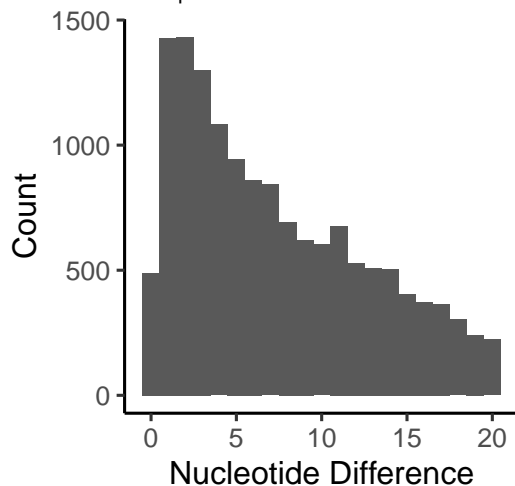
IGHV4/OR15–8*02

3 sequences assigned
No exact matches.



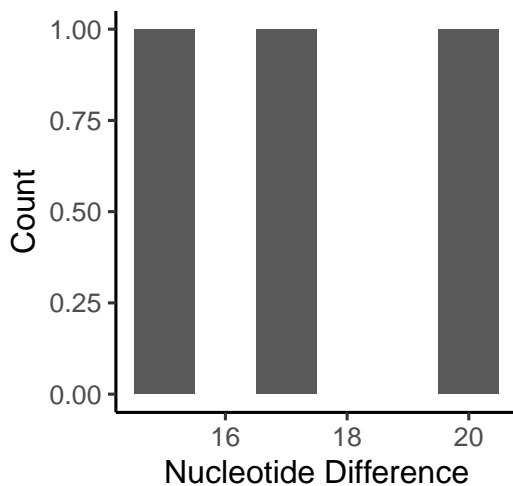
IGHV4–59*12

15381 sequences assigned
489 (3.2%) exact matches, in which:
445 unique CDR3
7 unique J



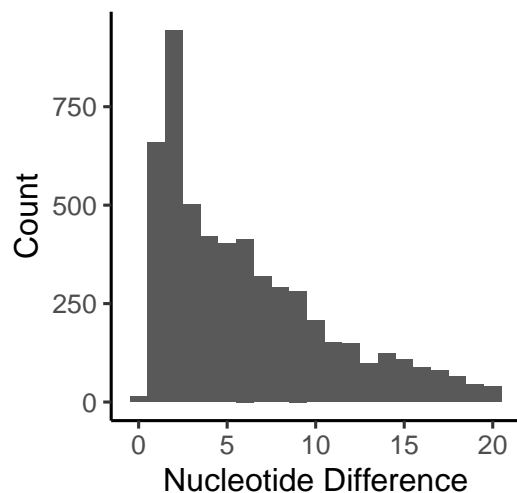
IGHV1/OR15–2*02_03

4 sequences assigned
No exact matches.



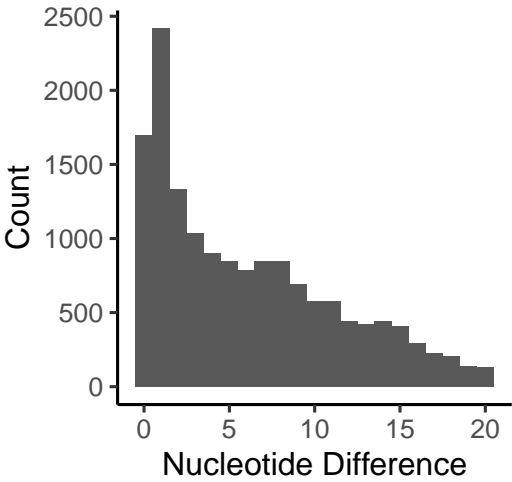
IGHV5–51*07

5567 sequences assigned
14 (0.3%) exact matches, in which:
14 unique CDR3
4 unique J



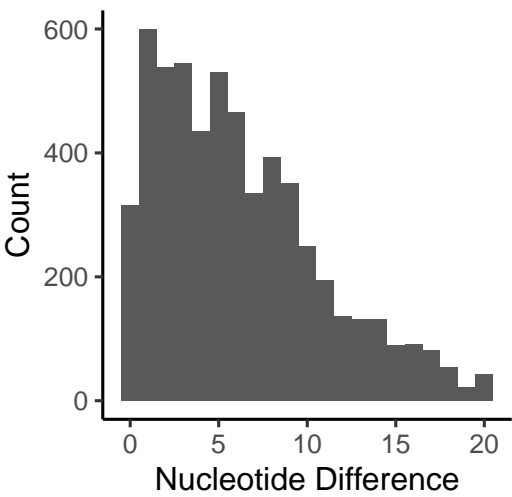
IGHV5-51*01_03

16017 sequences assigned
1696 (10.6%) exact matches, in which:
1236 unique CDR3
7 unique J

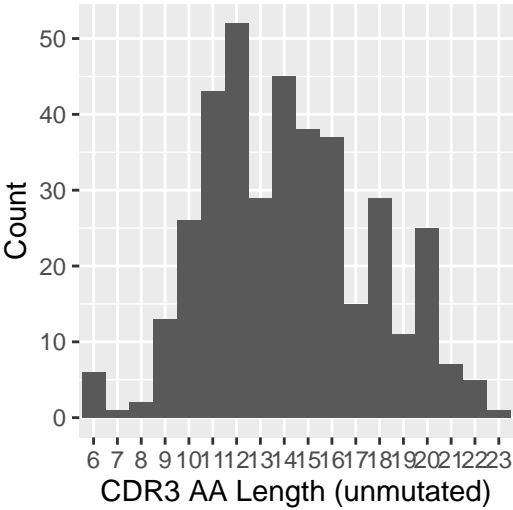


IGHV6-1*01_02

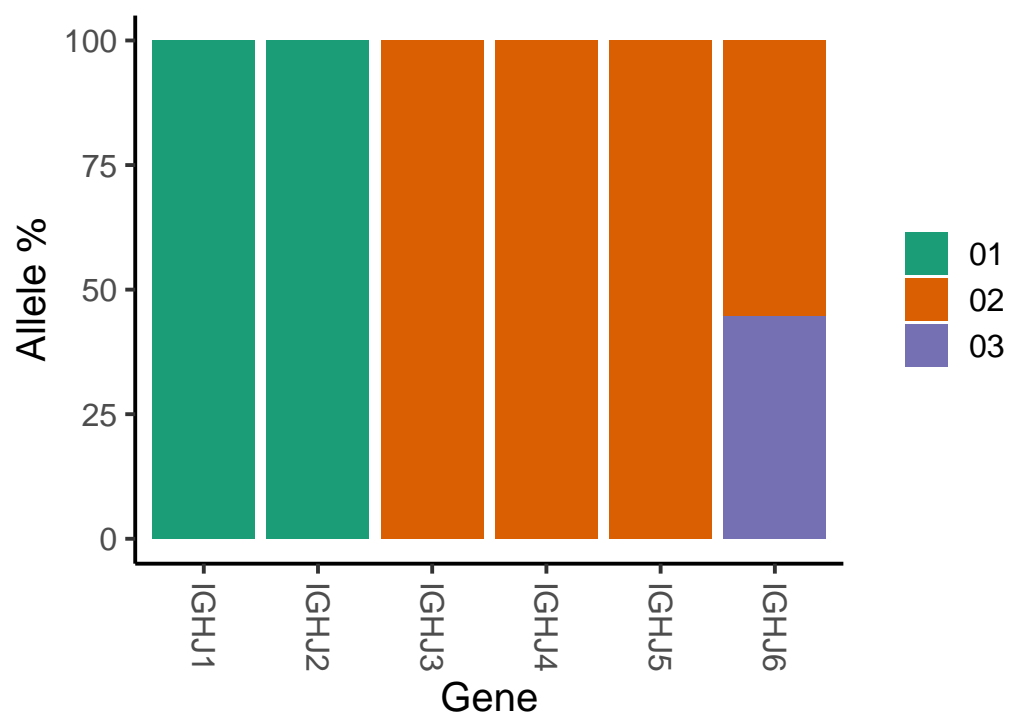
5950 sequences assigned
316 (5.3%) exact matches, in which:
234 unique CDR3
7 unique J



IGHV4-31*02_C198T



Allele Usage



Allele

02

03

Count

4000

2000

0

-2000

IGIM7-4-1*02

IGIM6-1*01_02

IGHM5-51*01_03

IGHM5-51*07

IGHM4/ORI5-8*02

IGHM4/ORI5-8*01

IGHM1/ORI5-2*01

IGHM4-51*02

IGHM4-59*12

IGHM4-59*08

IGHM4-59*07

IGHM4-59*02

IGHM4-38-2*02

IGHM4-38-2*01

IGHM4-30-2*03

IGHM4-30-4*01

IGHM4-28*02_05

IGHM4-28*03

IGHM4-4*07

IGHM3-ML*01

IGHM3-43D*04

IGHM3-74*01_02

IGHM3-74*03

IGHM3-73*01_02

IGHM3-72*01

IGHM3-89-1*02

IGHM3-89-1*01

IGHM3-86*02

IGHM3-86*01

IGHM3-84*01

IGHM3-53*01_02

IGHM3-53*05

IGHM3-53*04

IGHM3-52*01_03

IGHM3-49*03_05

IGHM3-49*04

IGHM3-48*03

IGHM3-43*02

IGHM3-33*08

IGHM3-33*01

IGHM3-30*04

IGHM3-30-3*01

IGHM3-23*01_04

IGHM3-21*01_02

IGHM3-20*03_04

IGHM3-15*01_02

IGHM3-13*01

IGHM3-11*04

IGHM3-11*01

IGHM3-9*03

IGHM3-9*01

IGHM3-7*01

IGHM2-7*01_15

IGHM1-69*04_09

IGHM1-69*01_12_13

IGHM1-69-2*01

IGHM1-69*01_03

IGHM1-58*01_02

IGHM1-46*01

IGHM1-46*02

IGHM1-24*01

IGHM1-18*01

IGHM1-8*03

IGHM1-8*01

IGHM1-3*02

IGHM1-2*02