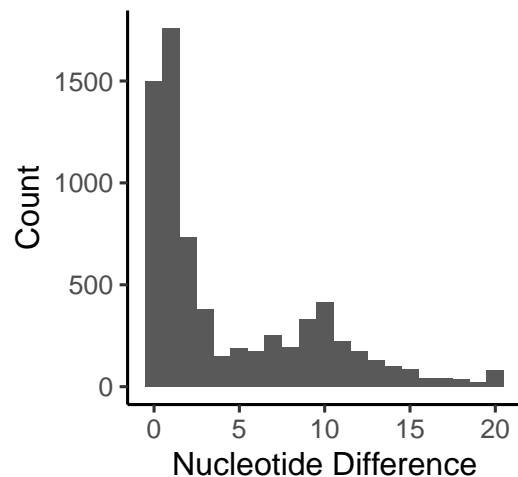


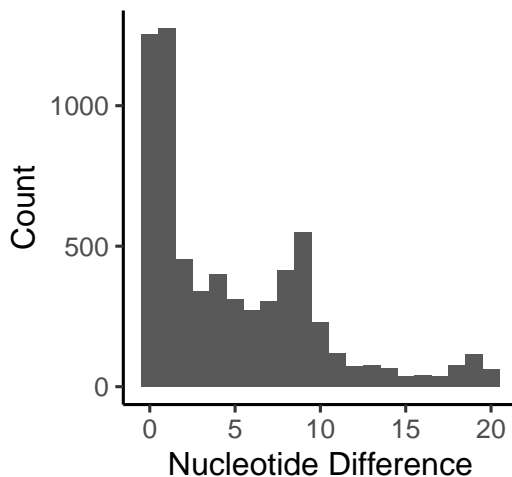
IGHV1-2*02

7660 sequences assigned
1499 (19.6%) exact matches, in which:
1276 unique CDR3
7 unique J



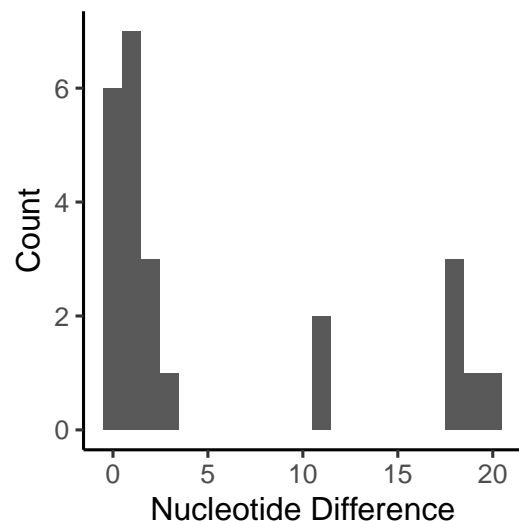
IGHV1-8*01

6677 sequences assigned
1253 (18.8%) exact matches, in which:
1080 unique CDR3
7 unique J



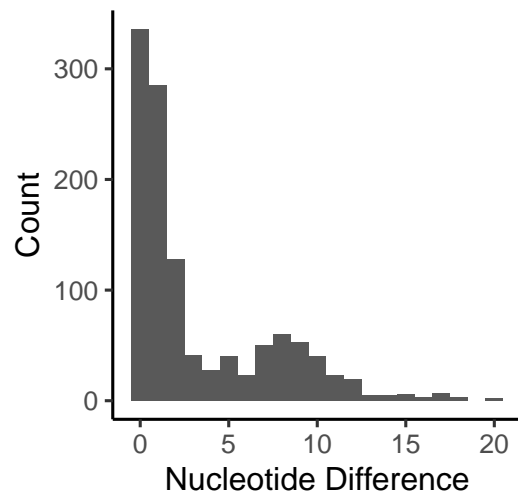
IGHV1-45*02

24 sequences assigned
6 (25%) exact matches, in which:
6 unique CDR3
5 unique J



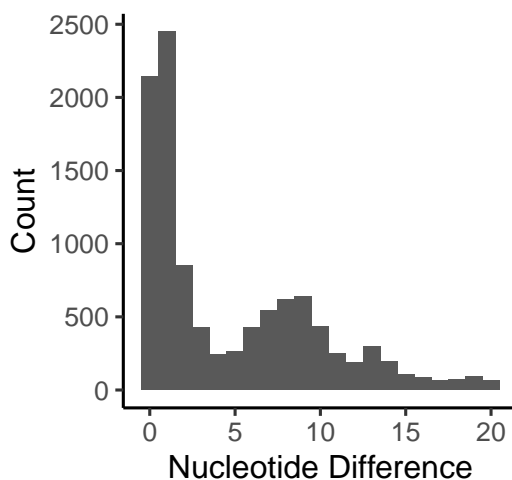
IGHV1-2*04

1157 sequences assigned
336 (29%) exact matches, in which:
301 unique CDR3
7 unique J



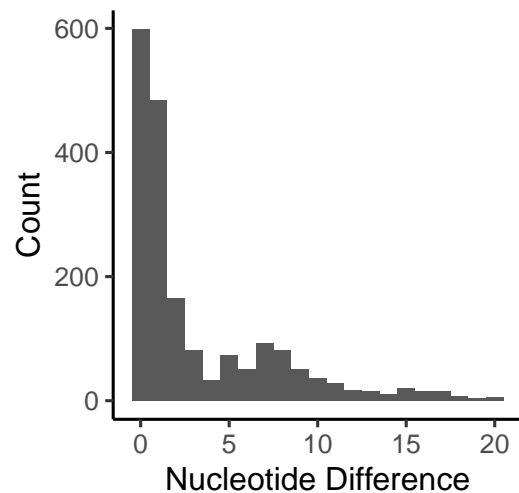
IGHV1-18*01

11095 sequences assigned
2142 (19.3%) exact matches, in which:
1800 unique CDR3
7 unique J



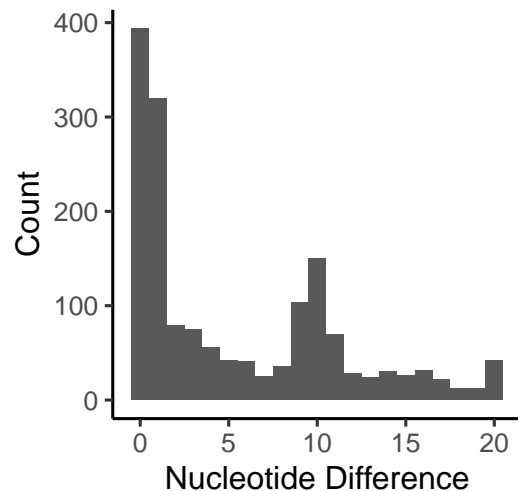
IGHV1-46*01

1902 sequences assigned
599 (31.5%) exact matches, in which:
530 unique CDR3
7 unique J



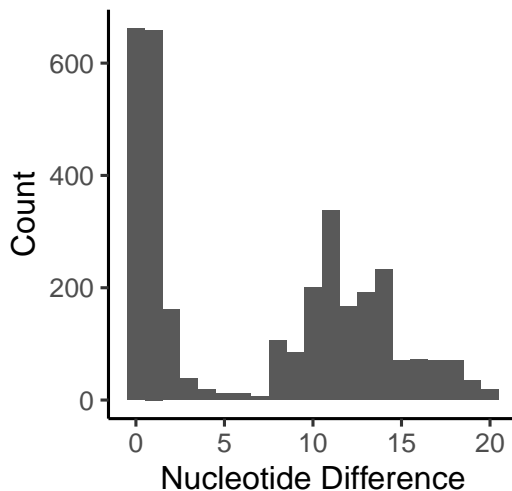
IGHV1-3*01_05

1764 sequences assigned
394 (22.3%) exact matches, in which:
333 unique CDR3
7 unique J



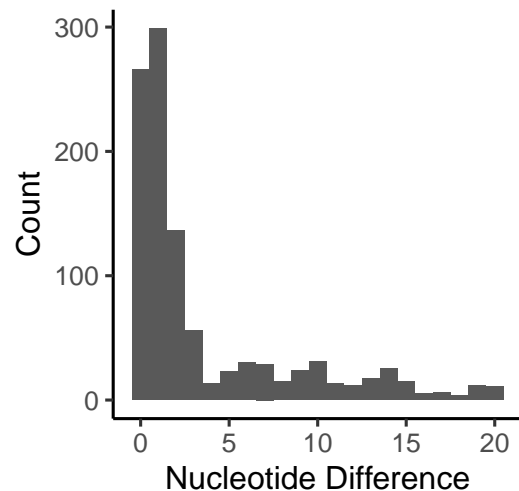
IGHV1-24*01

3318 sequences assigned
662 (20%) exact matches, in which:
558 unique CDR3
7 unique J



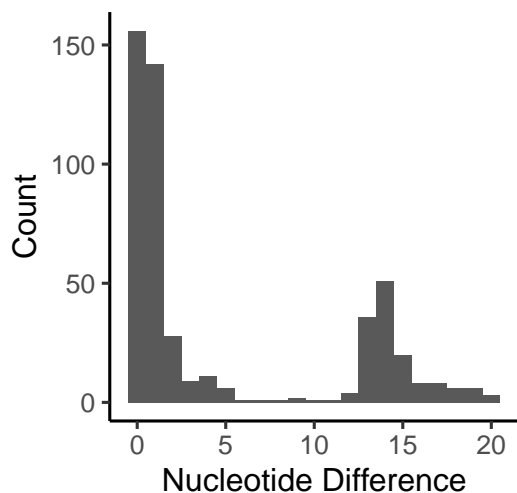
IGHV1-46*03

1074 sequences assigned
266 (24.8%) exact matches, in which:
210 unique CDR3
7 unique J



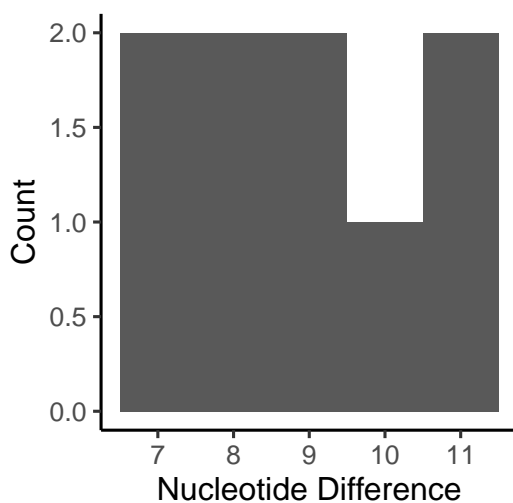
IGHV1–58*02

517 sequences assigned
156 (30.2%) exact matches, in which:
127 unique CDR3
6 unique J



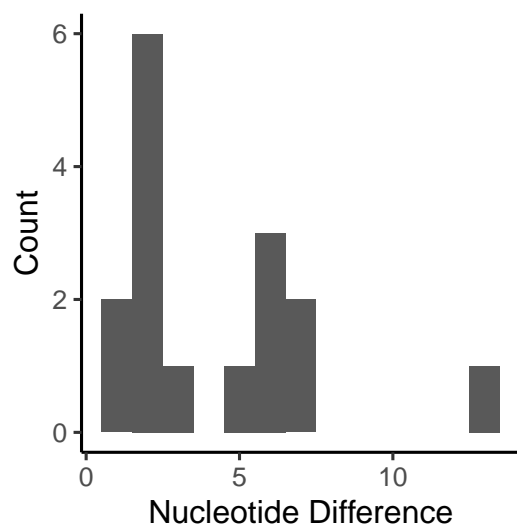
IGHV1–NL1*01

9 sequences assigned
No exact matches.



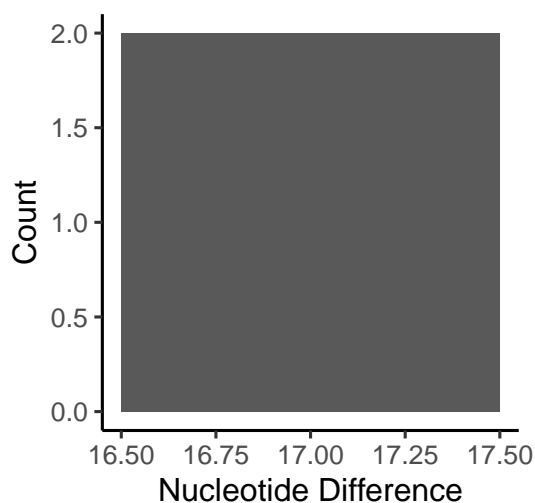
IGHV2–70*12

16 sequences assigned
No exact matches.



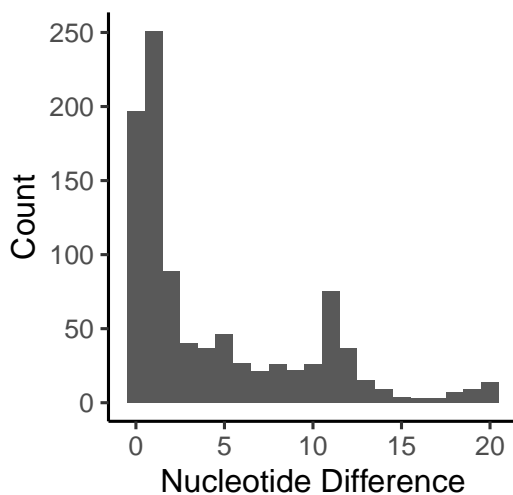
IGHV1–69–2*01

3 sequences assigned
No exact matches.



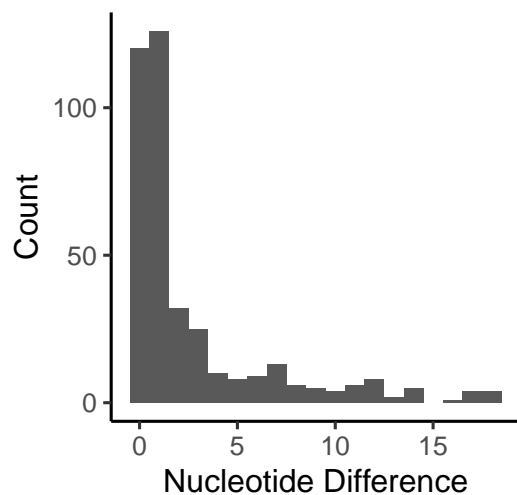
IGHV2–5*02

1030 sequences assigned
197 (19.1%) exact matches, in which:
167 unique CDR3
7 unique J



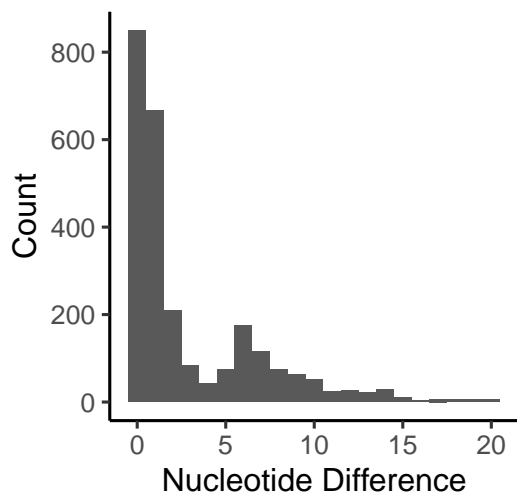
IGHV2–70*11_15

390 sequences assigned
120 (30.8%) exact matches, in which:
95 unique CDR3
5 unique J



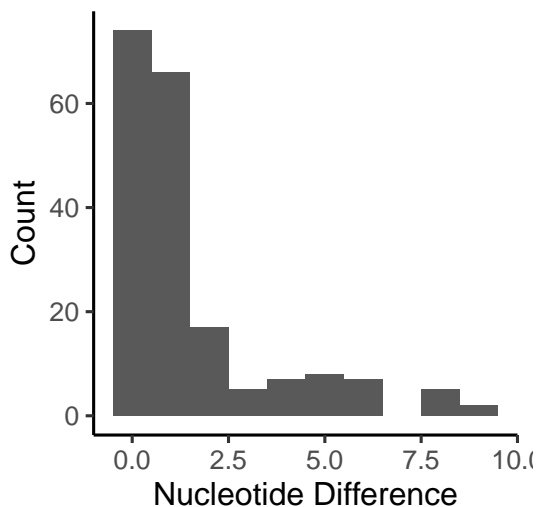
IGHV1–69*04_09

2874 sequences assigned
850 (29.6%) exact matches, in which:
771 unique CDR3
7 unique J



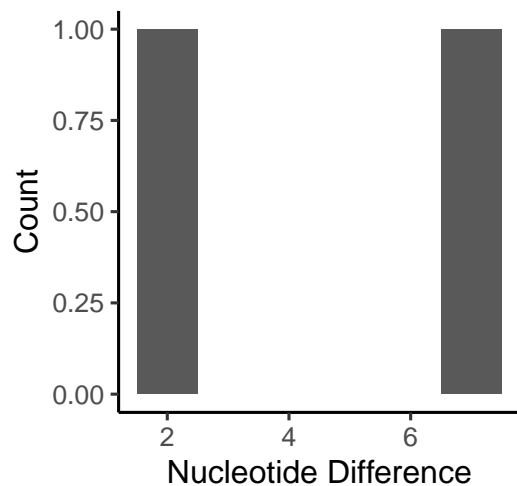
IGHV2–26*01

204 sequences assigned
74 (36.3%) exact matches, in which:
65 unique CDR3
6 unique J



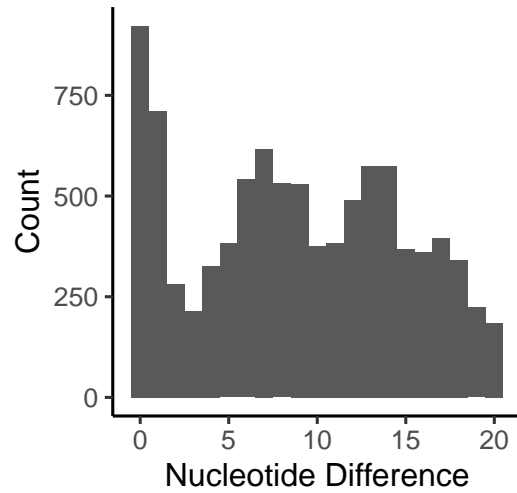
IGHV2–70D*04

2 sequences assigned
No exact matches.



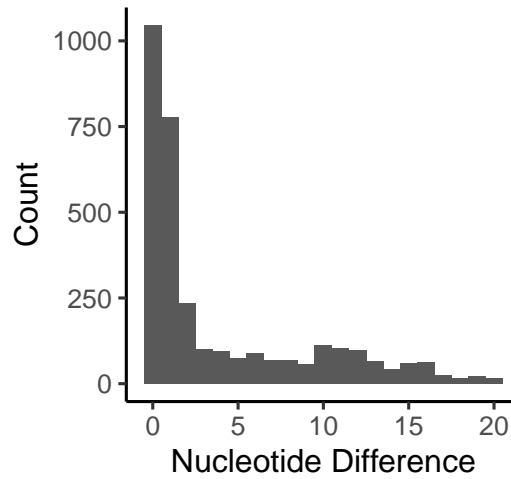
IGHV3-7*01

10404 sequences assigned
923 (8.9%) exact matches, in which:
654 unique CDR3
7 unique J



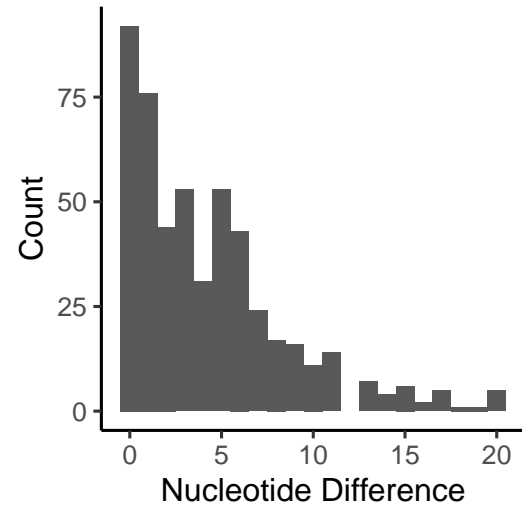
IGHV3-9*01

3571 sequences assigned
1045 (29.3%) exact matches, in which:
639 unique CDR3
7 unique J



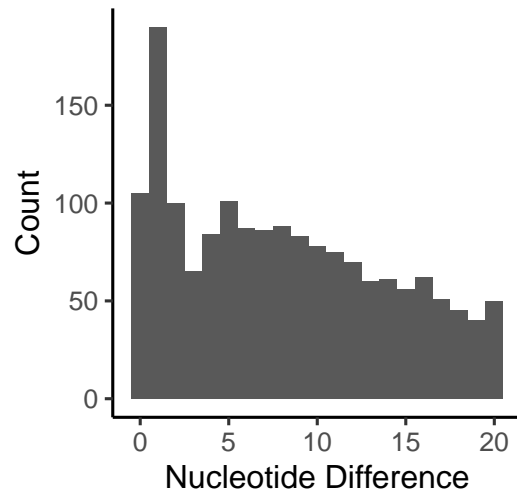
IGHV3-11*06

562 sequences assigned
92 (16.4%) exact matches, in which:
87 unique CDR3
7 unique J



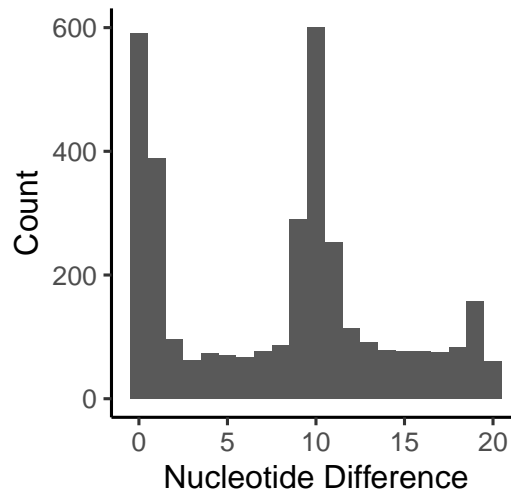
IGHV3-7*03

1926 sequences assigned
105 (5.5%) exact matches, in which:
80 unique CDR3
6 unique J



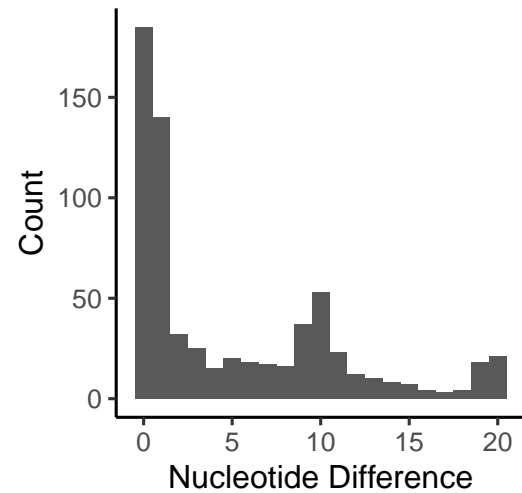
IGHV3-11*01

4609 sequences assigned
591 (12.8%) exact matches, in which:
412 unique CDR3
6 unique J



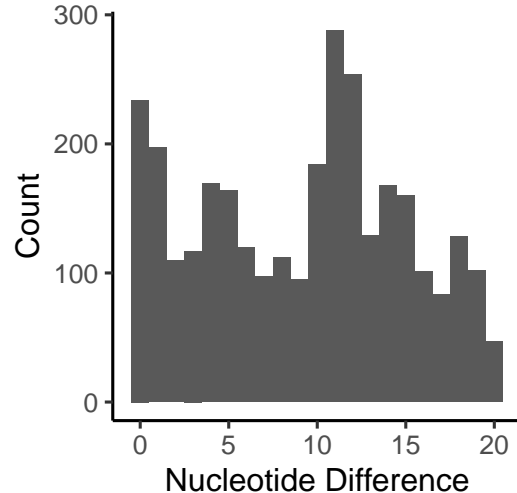
IGHV3-13*01

745 sequences assigned
185 (24.8%) exact matches, in which:
121 unique CDR3
5 unique J



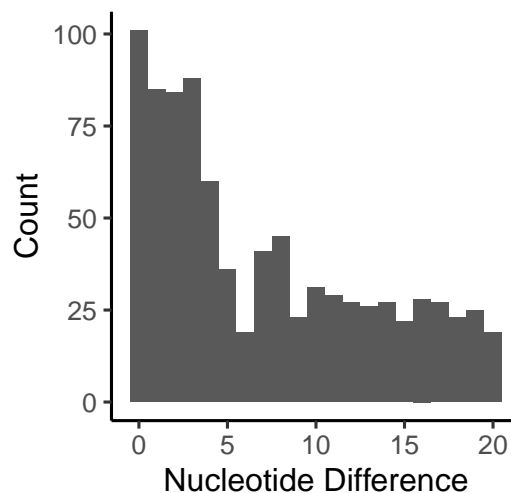
IGHV3-7*04

3353 sequences assigned
234 (7%) exact matches, in which:
146 unique CDR3
7 unique J



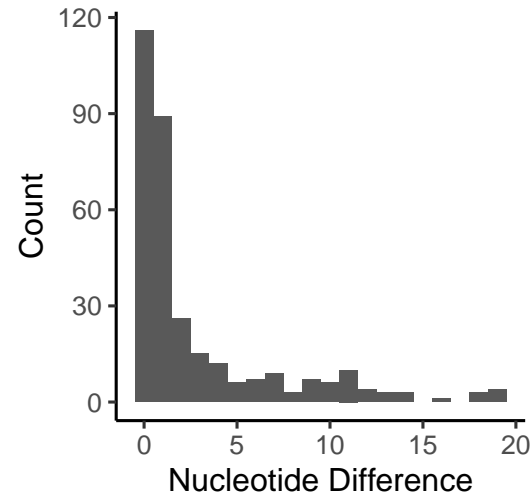
IGHV3-11*04

970 sequences assigned
101 (10.4%) exact matches, in which:
99 unique CDR3
6 unique J



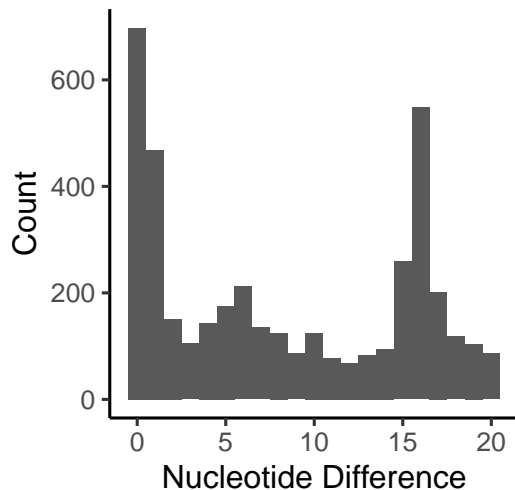
IGHV3-13*04

357 sequences assigned
116 (32.5%) exact matches, in which:
74 unique CDR3
6 unique J



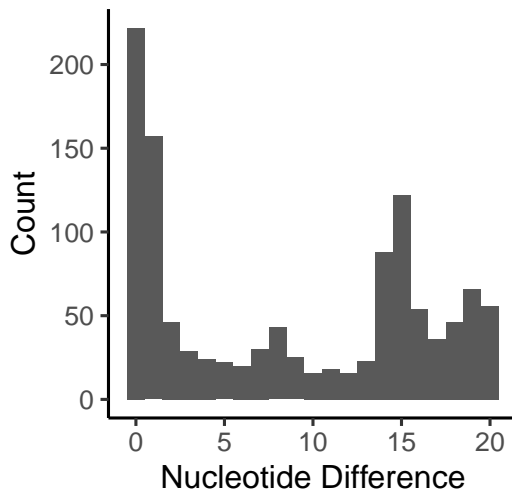
IGHV3-15*01_02

4607 sequences assigned
698 (15.2%) exact matches, in which:
440 unique CDR3
7 unique J



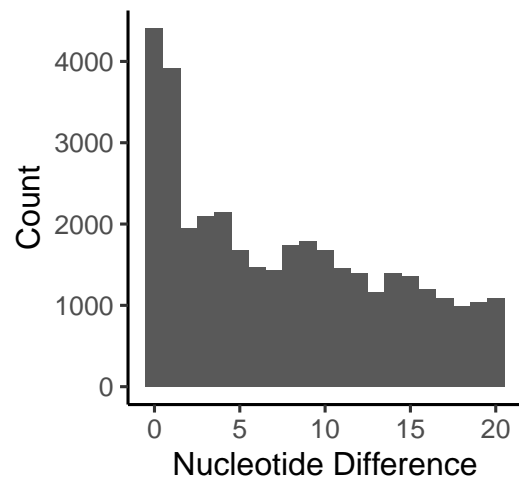
IGHV3-20*03_04

1523 sequences assigned
222 (14.6%) exact matches, in which:
146 unique CDR3
7 unique J



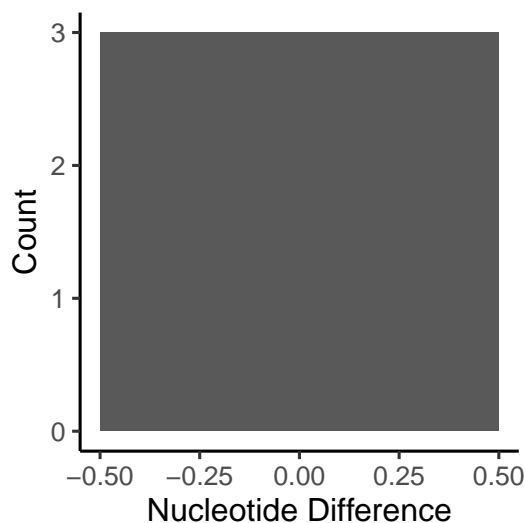
IGHV3-23*01_04

48850 sequences assigned
4406 (9%) exact matches, in which:
2651 unique CDR3
7 unique J



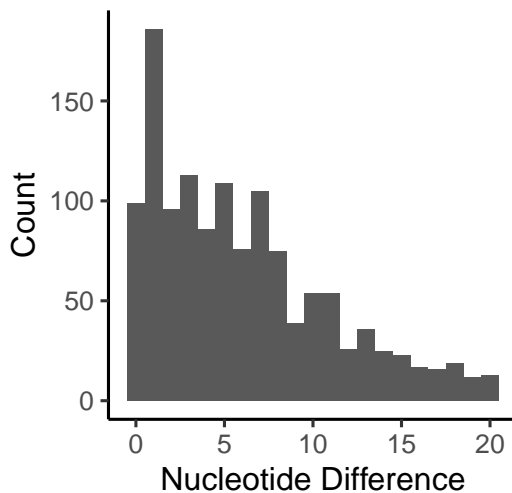
IGHV3-19*01

3 sequences assigned
3 (100%) exact matches, in which:
3 unique CDR3
2 unique J



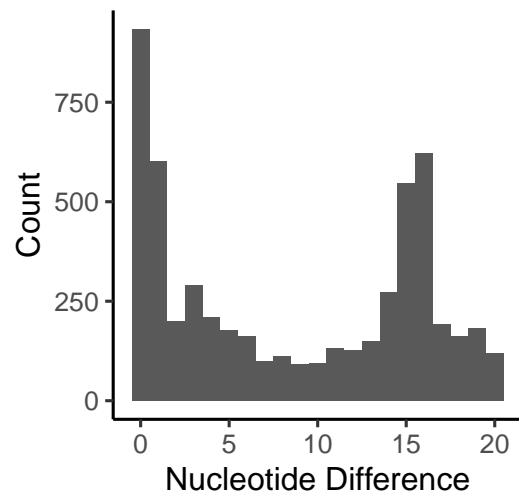
IGHV3-21*04

1394 sequences assigned
99 (7.1%) exact matches, in which:
92 unique CDR3
6 unique J



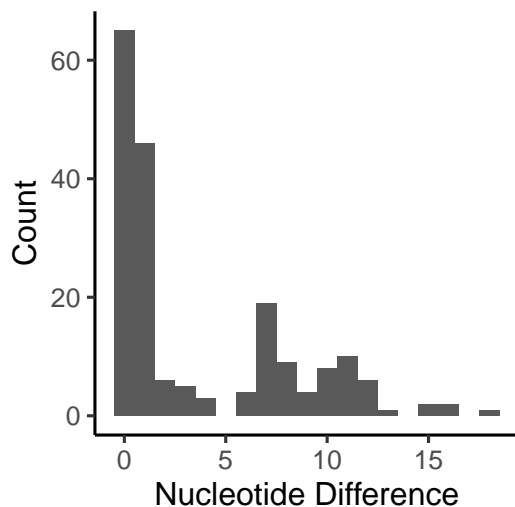
IGHV3-30*01

5841 sequences assigned
934 (16%) exact matches, in which:
626 unique CDR3
7 unique J



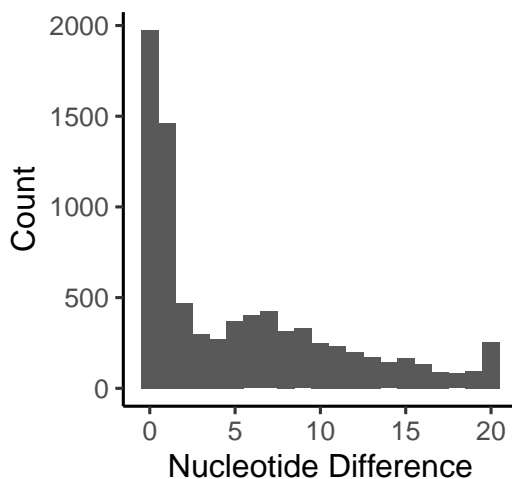
IGHV3-20*01_02

207 sequences assigned
65 (31.4%) exact matches, in which:
36 unique CDR3
5 unique J



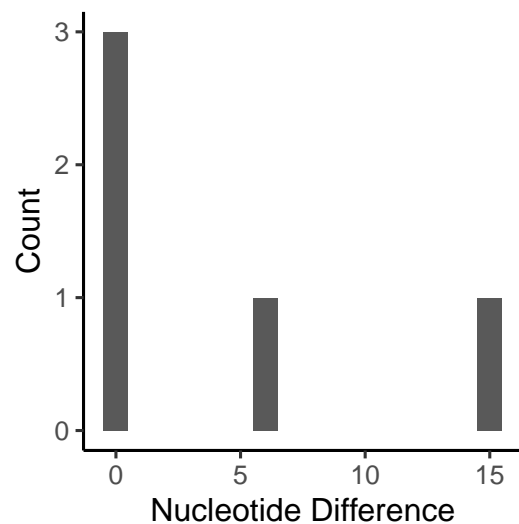
IGHV3-21*01_02

9802 sequences assigned
1975 (20.1%) exact matches, in which:
1269 unique CDR3
7 unique J



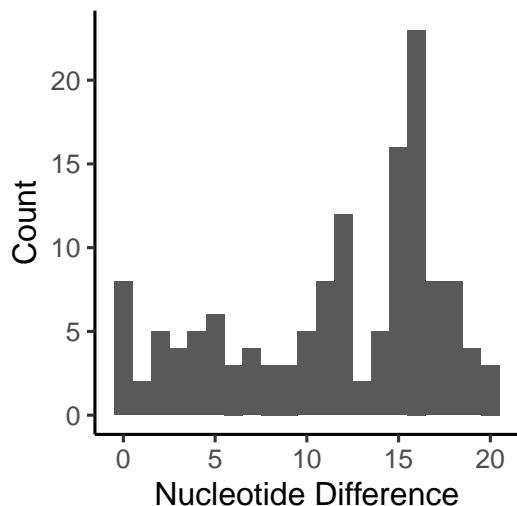
IGHV3-30-3*01

11 sequences assigned
3 (27.3%) exact matches, in which:
3 unique CDR3
2 unique J



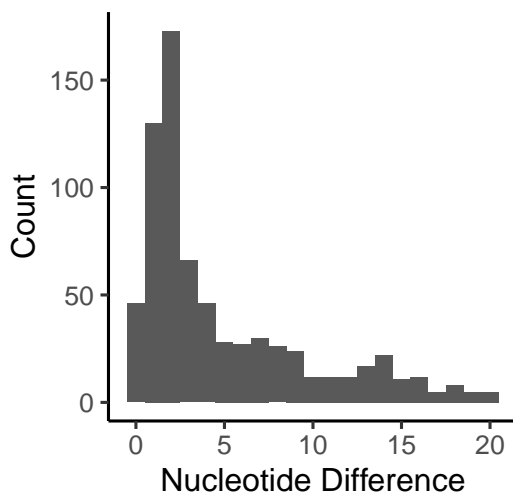
IGHV3-30-3*03

336 sequences assigned
8 (2.4%) exact matches, in which:
6 unique CDR3
3 unique J



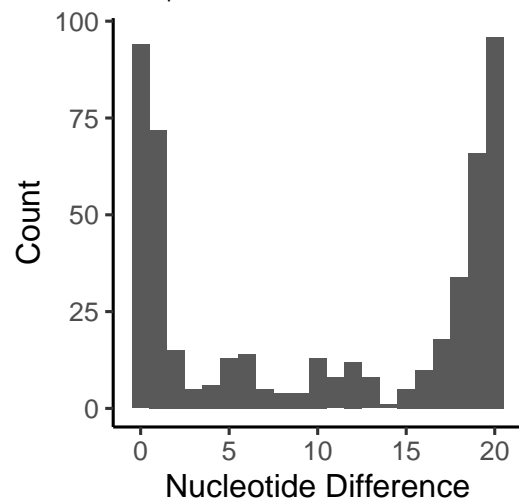
IGHV3-33*06

749 sequences assigned
46 (6.1%) exact matches, in which:
45 unique CDR3
5 unique J



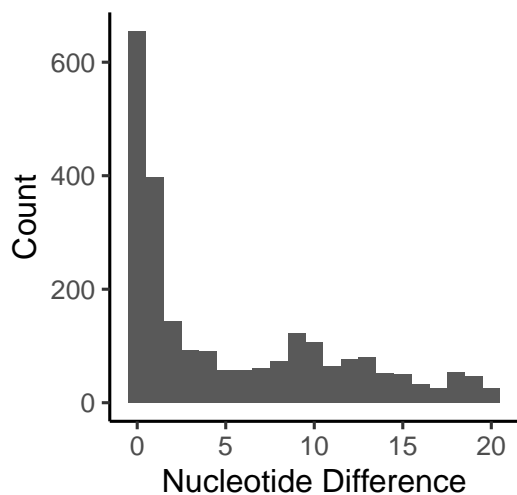
IGHV3-43*01

1115 sequences assigned
94 (8.4%) exact matches, in which:
54 unique CDR3
6 unique J



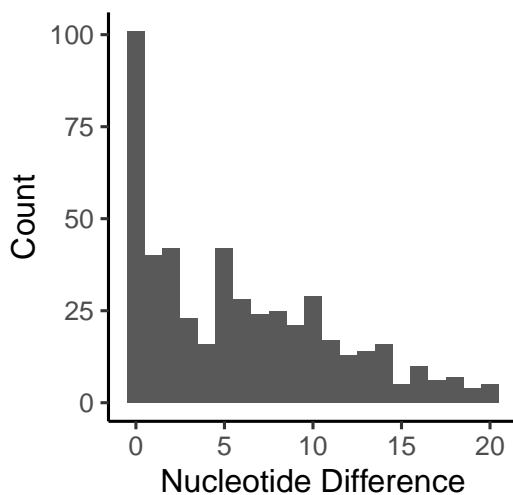
IGHV3-33*01

2673 sequences assigned
655 (24.5%) exact matches, in which:
446 unique CDR3
7 unique J



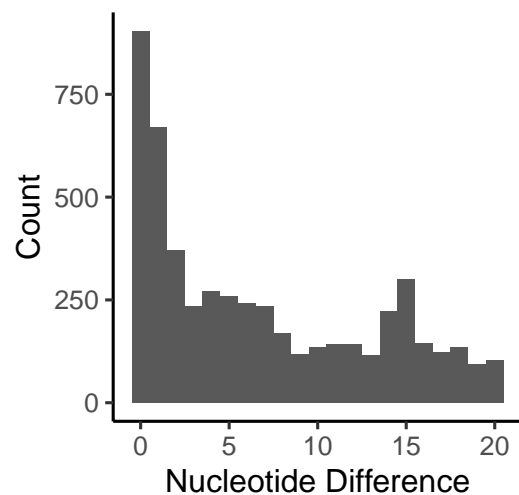
IGHV3-33*08

541 sequences assigned
101 (18.7%) exact matches, in which:
88 unique CDR3
6 unique J



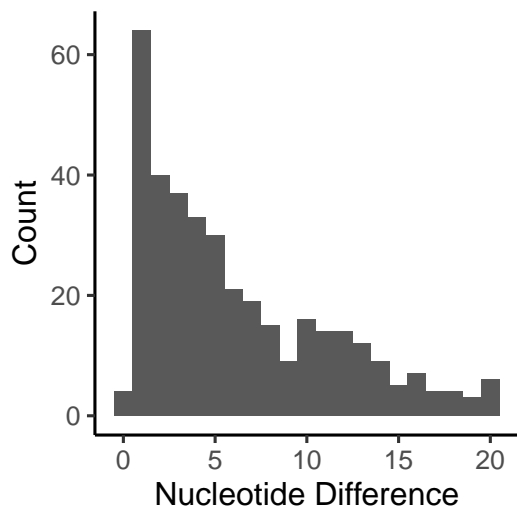
IGHV3-48*01

5823 sequences assigned
904 (15.5%) exact matches, in which:
611 unique CDR3
7 unique J



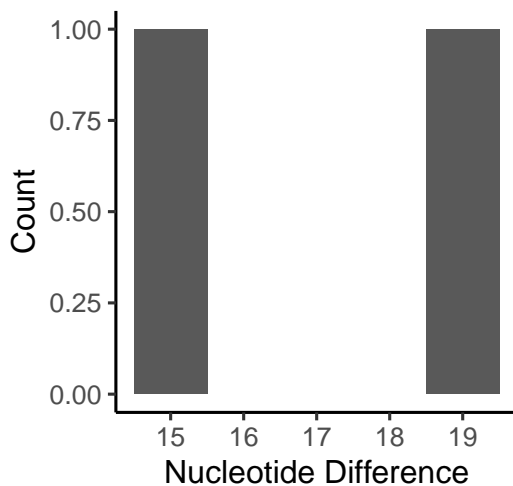
IGHV3-33*05

467 sequences assigned
4 (0.9%) exact matches, in which:
4 unique CDR3
3 unique J



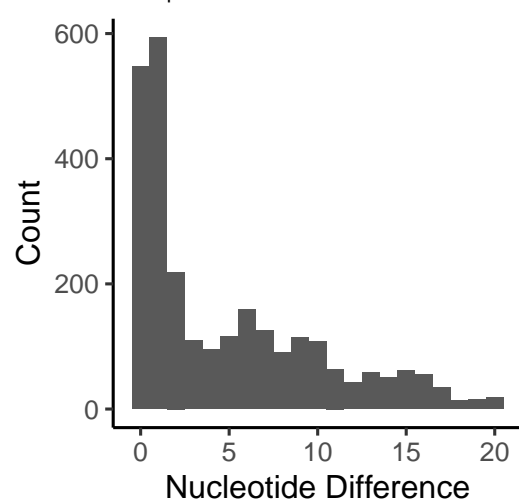
IGHV3-35*01

2 sequences assigned
No exact matches.



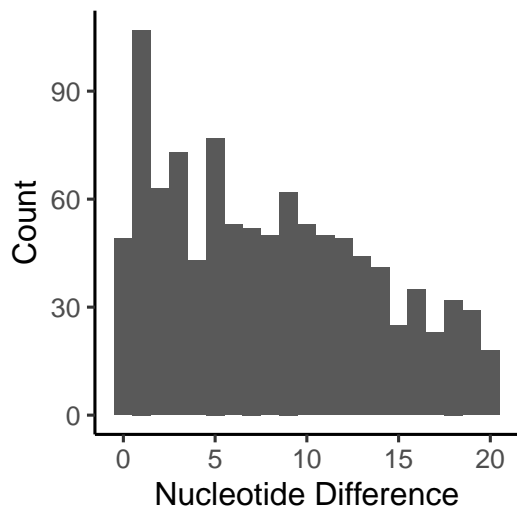
IGHV3-48*02

2809 sequences assigned
547 (19.5%) exact matches, in which:
339 unique CDR3
7 unique J



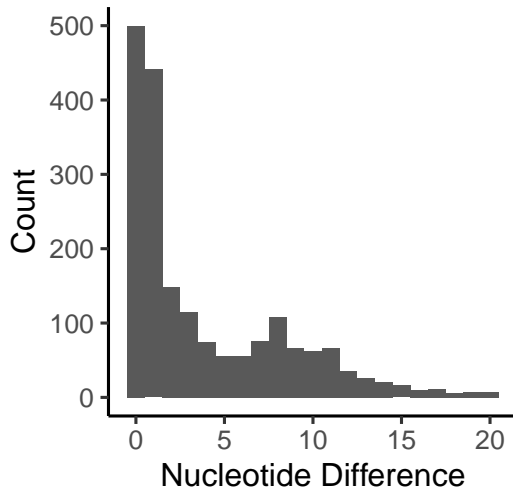
IGHV3-48*04

1163 sequences assigned
49 (4.2%) exact matches, in which:
49 unique CDR3
5 unique J



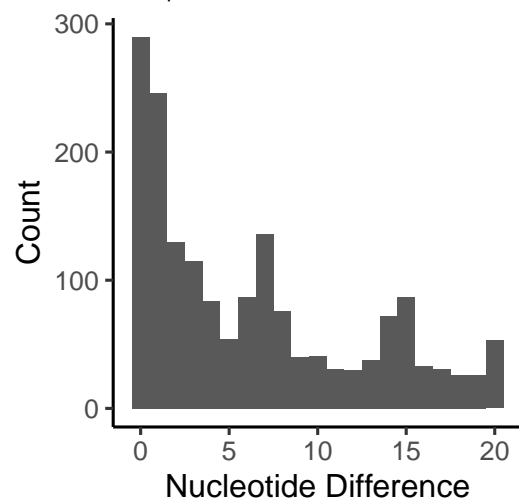
IGHV3-53*01_02

1992 sequences assigned
500 (25.1%) exact matches, in which:
335 unique CDR3
7 unique J



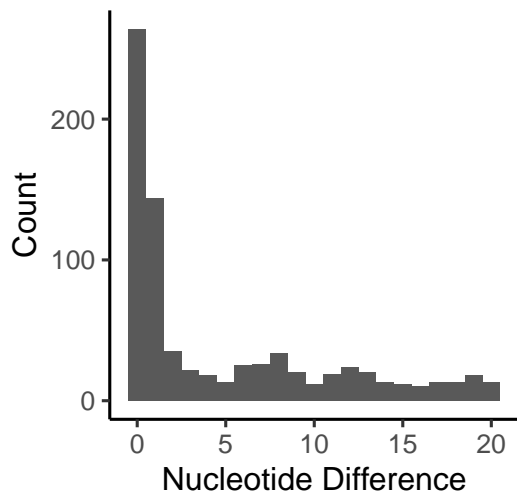
IGHV3-66*01

2377 sequences assigned
290 (12.2%) exact matches, in which:
201 unique CDR3
6 unique J



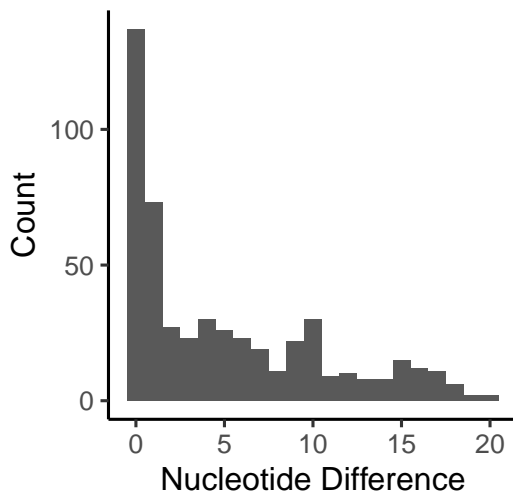
IGHV3-49*03_05

909 sequences assigned
264 (29%) exact matches, in which:
165 unique CDR3
7 unique J



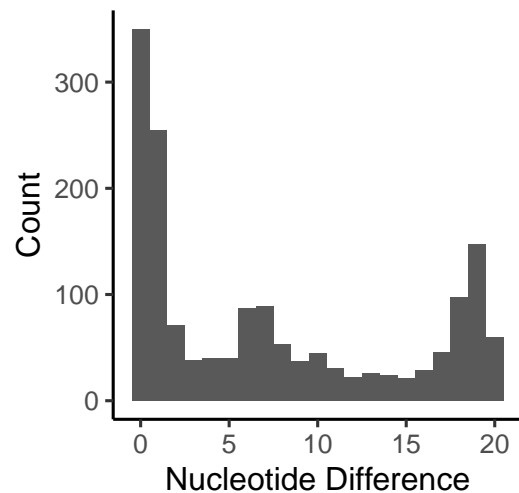
IGHV3-64*01

537 sequences assigned
137 (25.5%) exact matches, in which:
87 unique CDR3
5 unique J



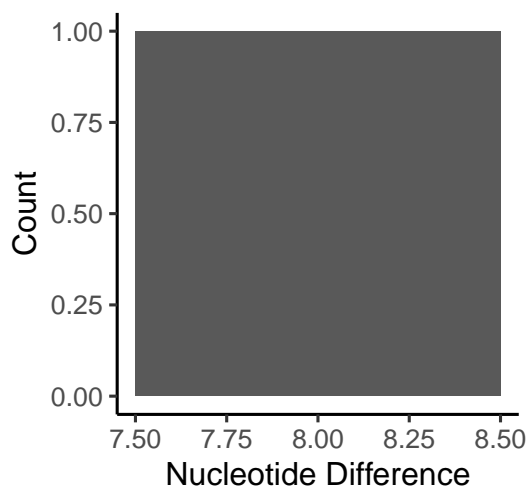
IGHV3-66*02

1902 sequences assigned
350 (18.4%) exact matches, in which:
228 unique CDR3
7 unique J



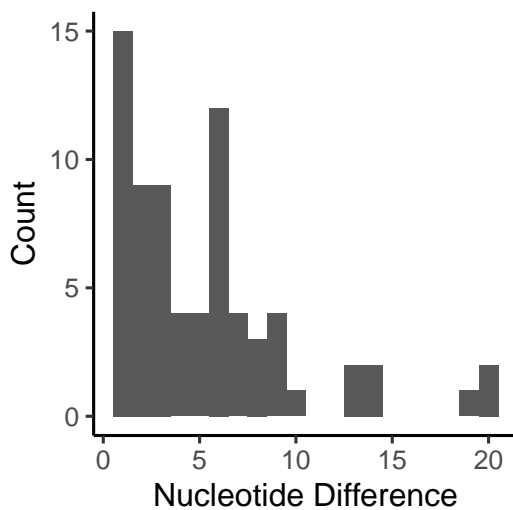
IGHV3-52*02

1 sequences assigned
No exact matches.



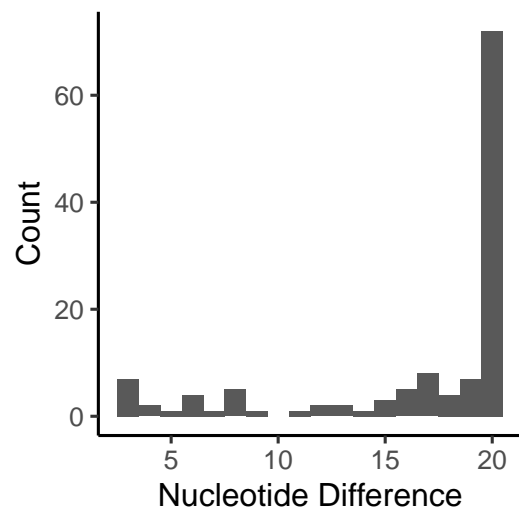
IGHV3-64*04

75 sequences assigned
No exact matches.



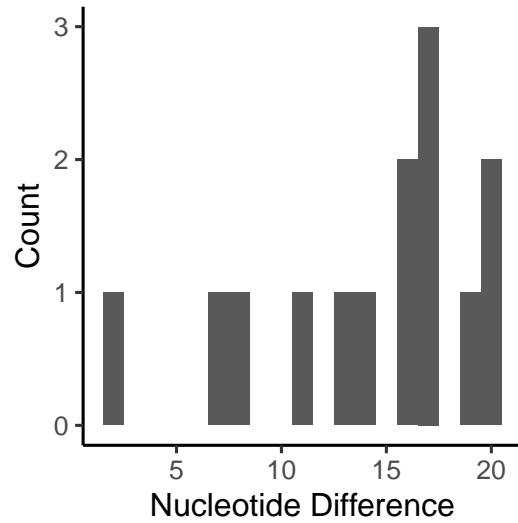
IGHV3-69-1*01

322 sequences assigned
No exact matches.



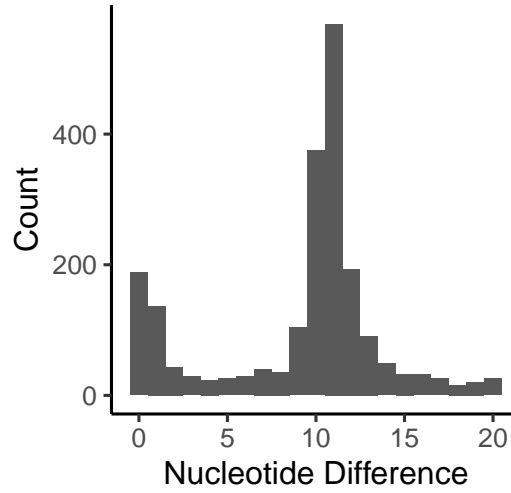
IGHV3-69-1*02

20 sequences assigned
No exact matches.



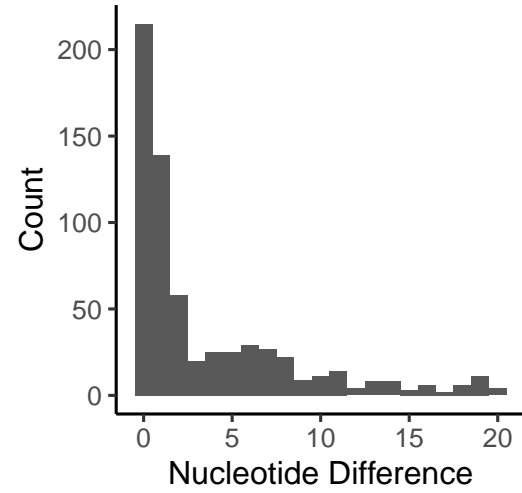
IGHV3-73*01_02

2137 sequences assigned
188 (8.8%) exact matches, in which:
118 unique CDR3
7 unique J



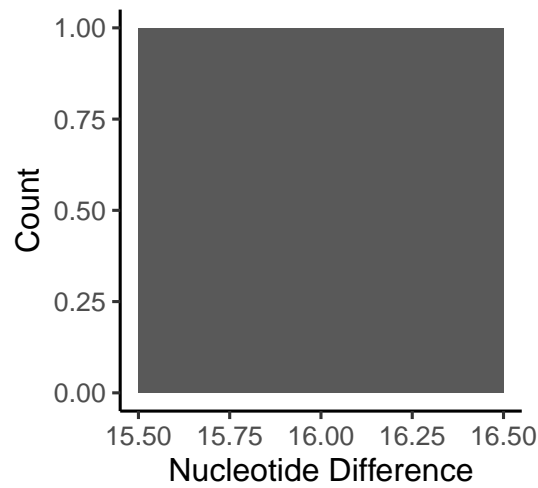
IGHV3-64D*06

850 sequences assigned
215 (25.3%) exact matches, in which:
127 unique CDR3
7 unique J



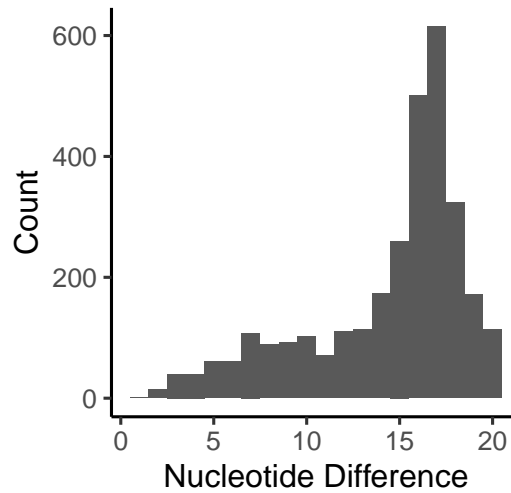
IGHV3-71*03

1 sequences assigned
No exact matches.



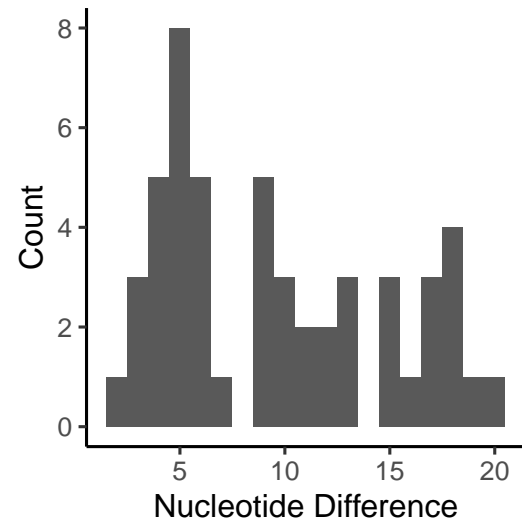
IGHV3-74*03

3791 sequences assigned
No exact matches.



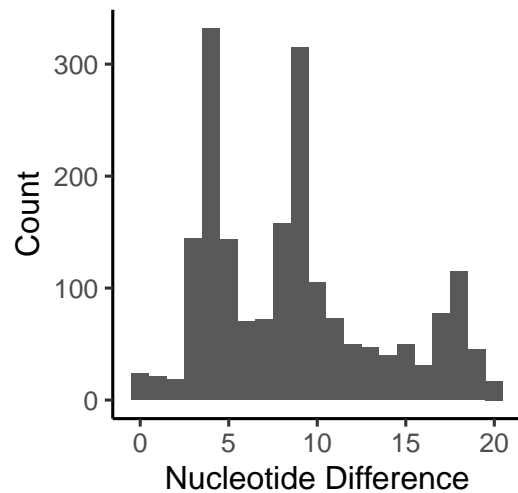
IGHV3-NL1*01

74 sequences assigned
No exact matches.



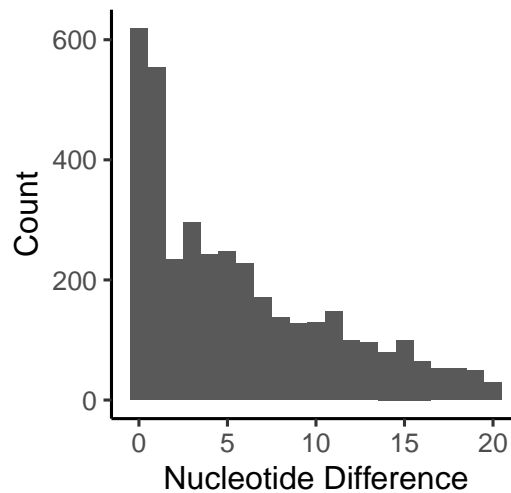
IGHV3-72*01

2006 sequences assigned
24 (1.2%) exact matches, in which:
16 unique CDR3
6 unique J



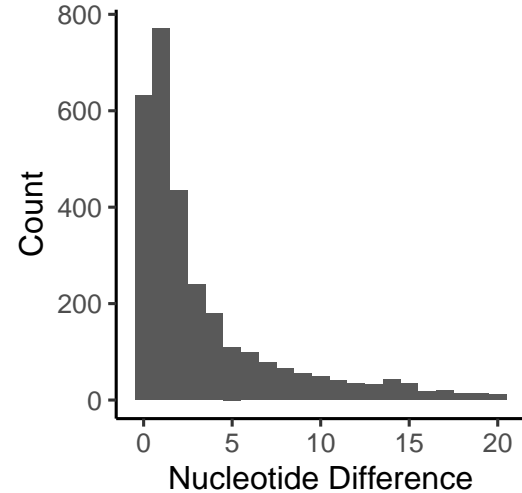
IGHV3-74*01_02

4192 sequences assigned
619 (14.8%) exact matches, in which:
418 unique CDR3
7 unique J



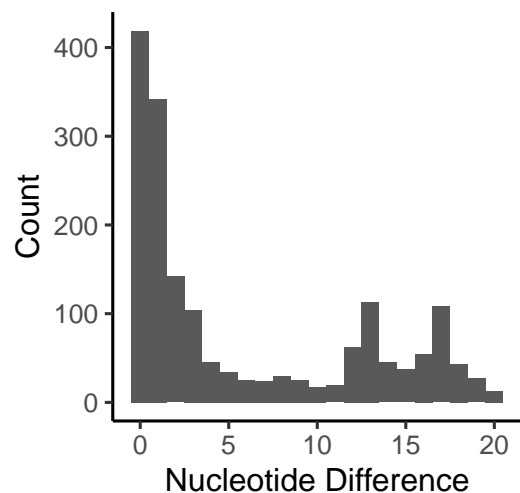
IGHV4-4*07

3331 sequences assigned
631 (18.9%) exact matches, in which:
547 unique CDR3
7 unique J



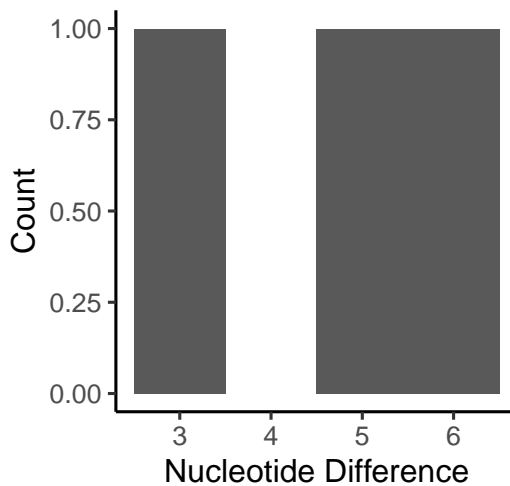
IGHV4-4*02_03

2062 sequences assigned
419 (20.3%) exact matches, in which:
357 unique CDR3
7 unique J



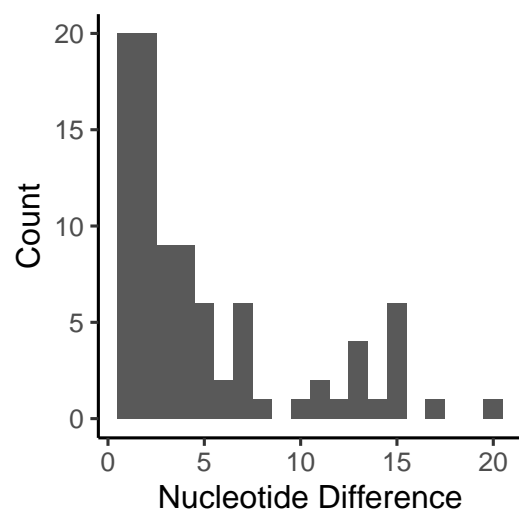
IGHV4-28*02_05

3 sequences assigned
No exact matches.



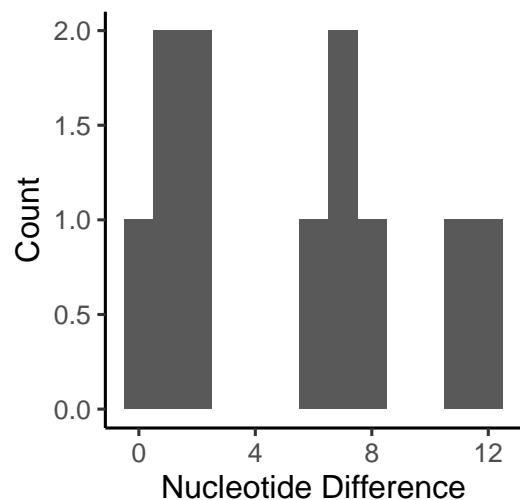
IGHV4-30-2*03

131 sequences assigned
No exact matches.



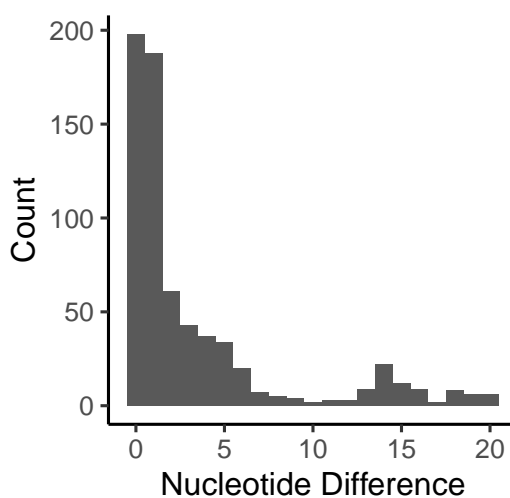
IGHV4-28*03

13 sequences assigned
1 (7.7%) exact matches, in which:
1 unique CDR3
1 unique J



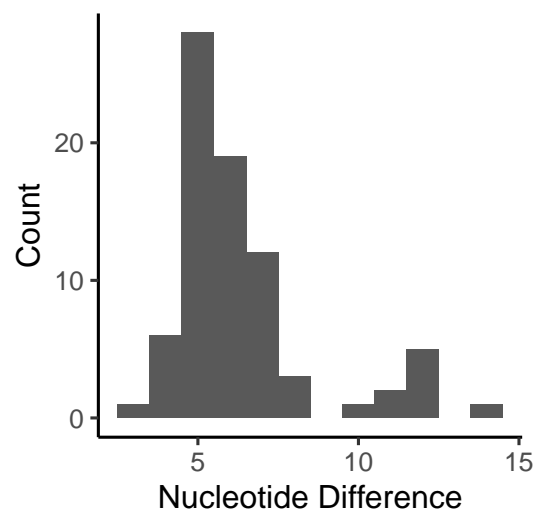
IGHV4-30-2*01

847 sequences assigned
198 (23.4%) exact matches, in which:
141 unique CDR3
5 unique J



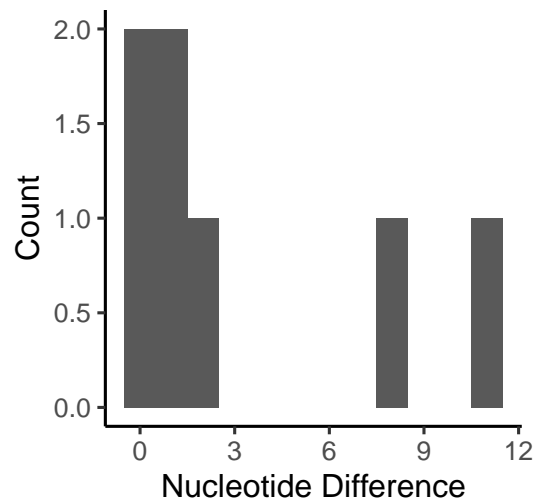
IGHV4-30-4*07

78 sequences assigned
No exact matches.



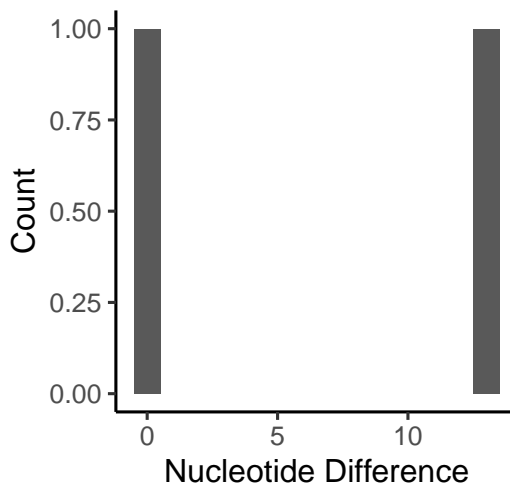
IGHV4-28*01_07

7 sequences assigned
2 (28.6%) exact matches, in which:
2 unique CDR3
2 unique J



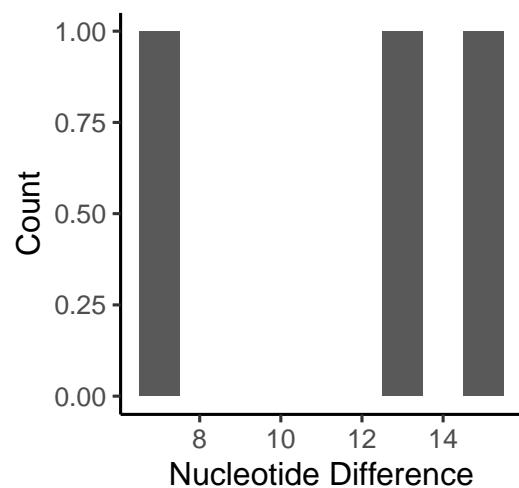
IGHV4-30-4*01

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



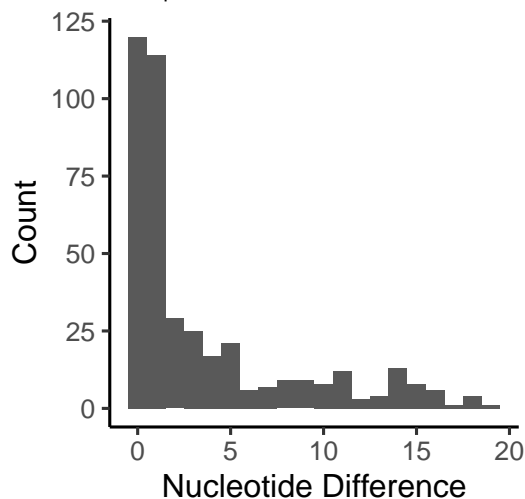
IGHV4-30-4*08

4 sequences assigned
No exact matches.



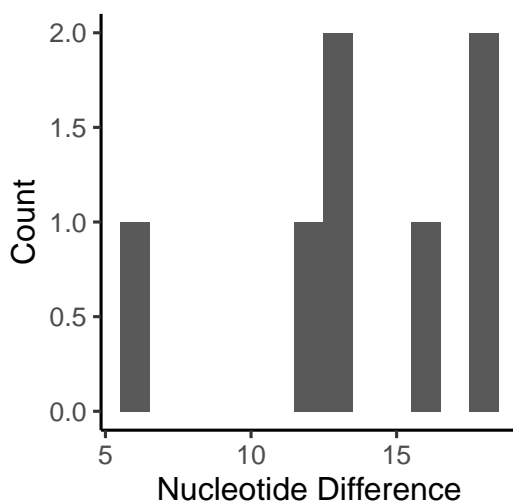
IGHV4-31*01

438 sequences assigned
120 (27.4%) exact matches, in which:
102 unique CDR3
7 unique J



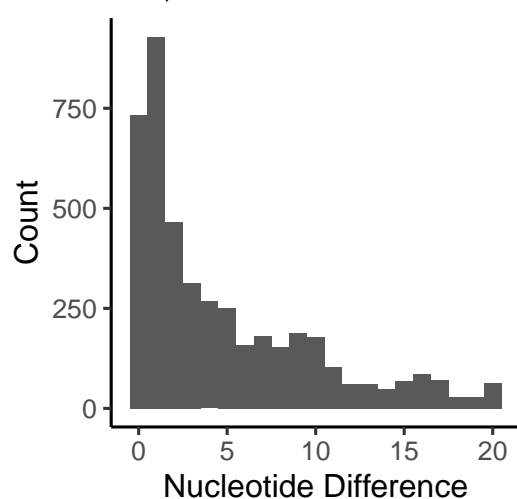
IGHV4-38-2*02

9 sequences assigned
No exact matches.



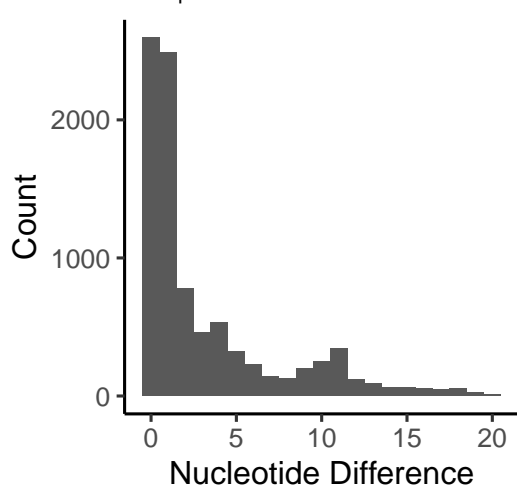
IGHV4-59*08

5489 sequences assigned
733 (13.4%) exact matches, in which:
621 unique CDR3
7 unique J



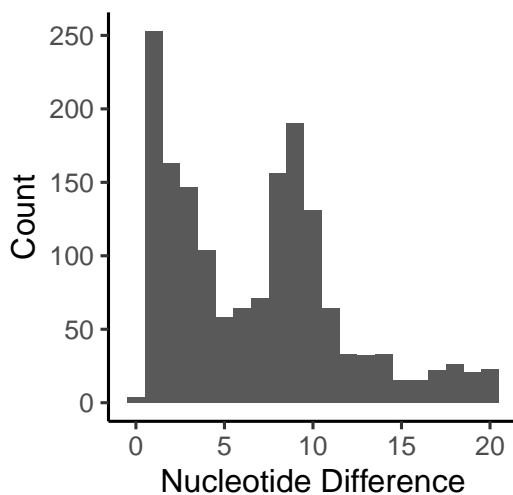
IGHV4-34*01_02

9600 sequences assigned
2595 (27%) exact matches, in which:
1951 unique CDR3
7 unique J



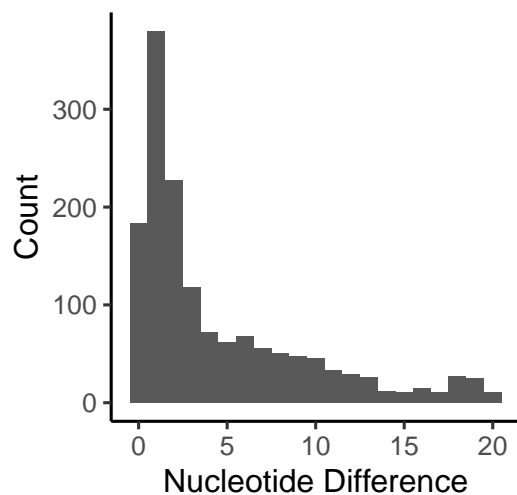
IGHV4-39*07

1782 sequences assigned
4 (0.2%) exact matches, in which:
4 unique CDR3
2 unique J



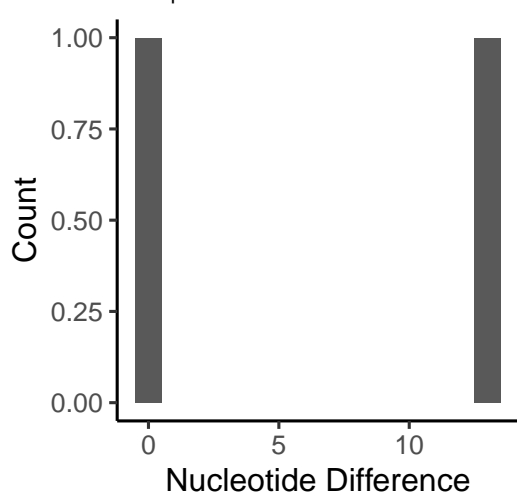
IGHV4-59*12

2303 sequences assigned
184 (8%) exact matches, in which:
177 unique CDR3
7 unique J



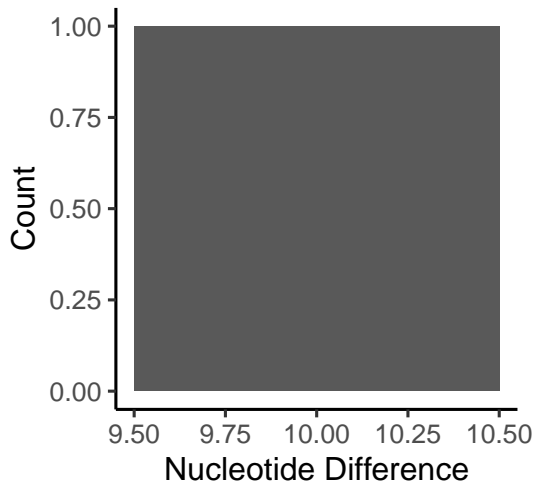
IGHV4-38-2*01

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



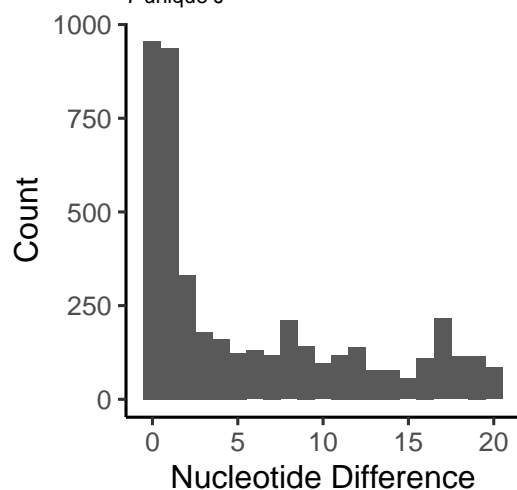
IGHV4-55*03

1 sequences assigned
No exact matches.



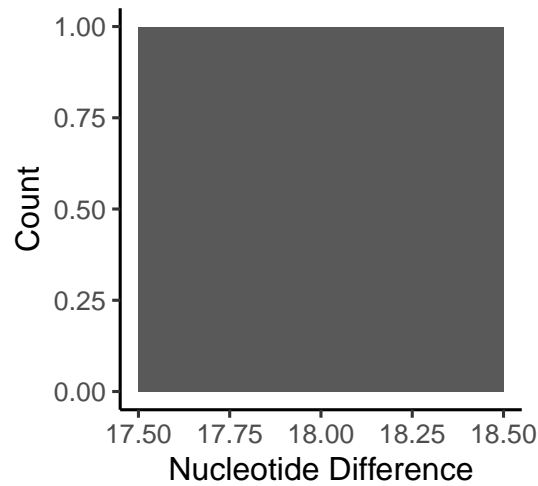
IGHV4-61*02

5307 sequences assigned
956 (18%) exact matches, in which:
832 unique CDR3
7 unique J



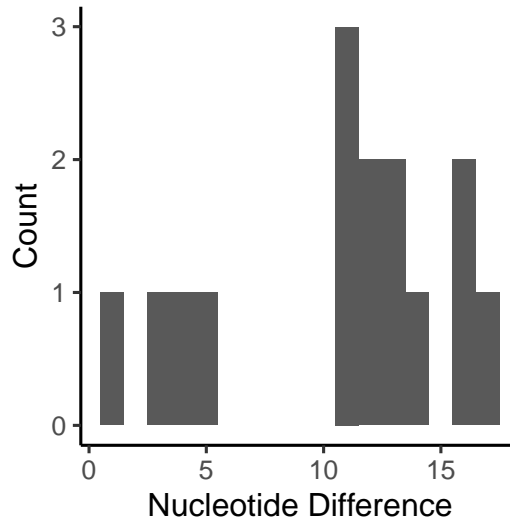
IGHV1/OR15-2*01

1 sequences assigned
No exact matches.



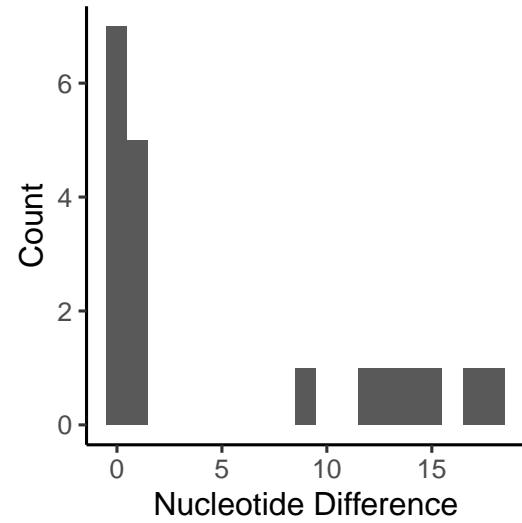
IGHV4/OR15-8*01

19 sequences assigned
No exact matches.



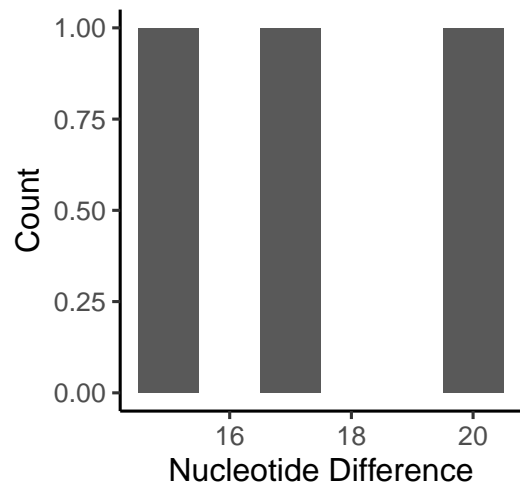
IGHV5-51*04

22 sequences assigned
7 (31.8%) exact matches, in which:
7 unique CDR3
4 unique J



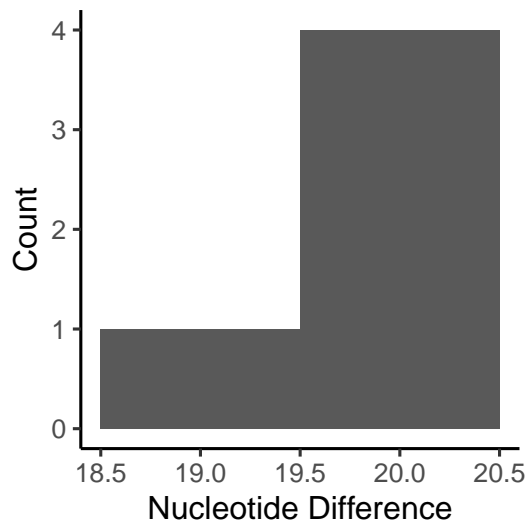
IGHV1/OR15-2*02_03

3 sequences assigned
No exact matches.



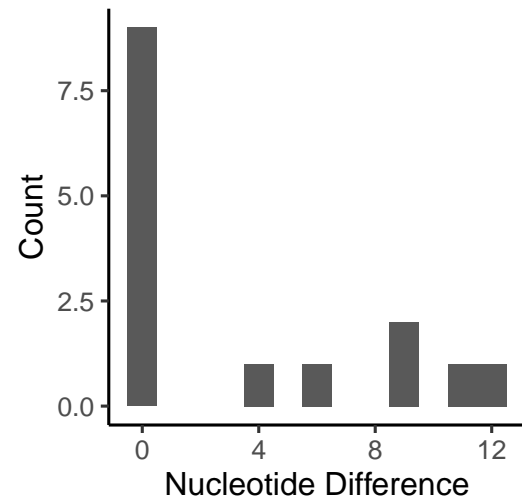
IGHV4/OR15-8*02

11 sequences assigned
No exact matches.



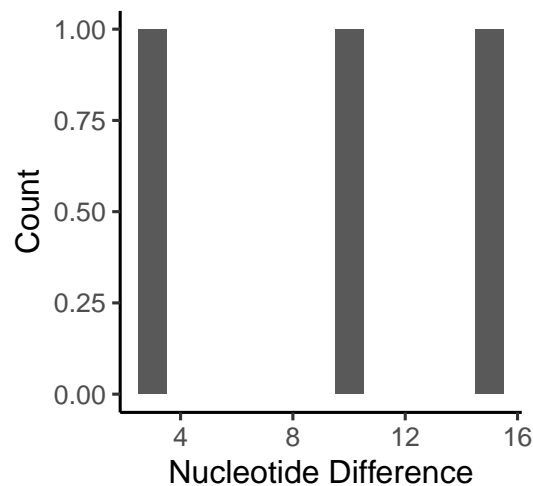
IGHV5-51*06

16 sequences assigned
9 (56.2%) exact matches, in which:
9 unique CDR3
5 unique J



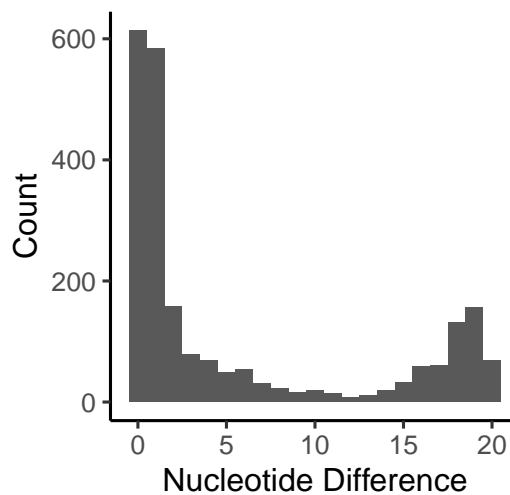
IGHV1/OR15-3*02

4 sequences assigned
No exact matches.



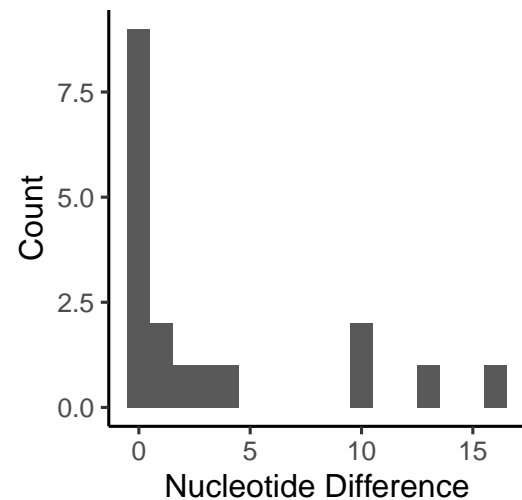
IGHV5-10-1*01_03

2526 sequences assigned
614 (24.3%) exact matches, in which:
407 unique CDR3
7 unique J



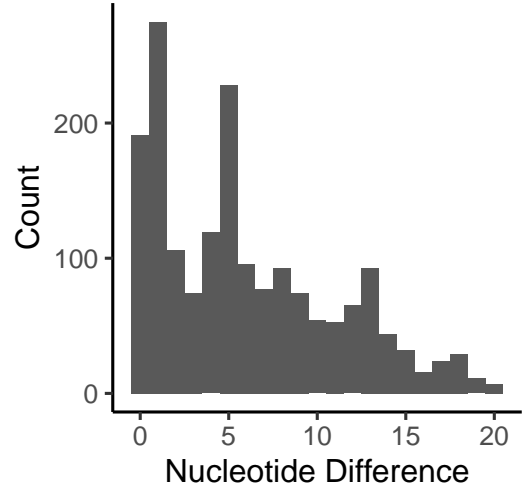
IGHV5-51*07

21 sequences assigned
9 (42.9%) exact matches, in which:
9 unique CDR3
4 unique J



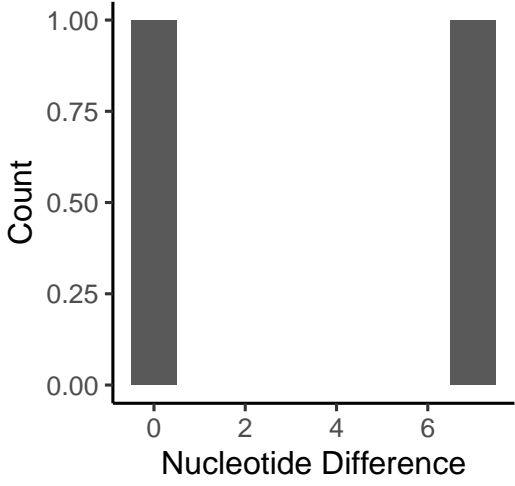
IGHV6-1*01_02

1769 sequences assigned
191 (10.8%) exact matches, in which:
154 unique CDR3
7 unique J



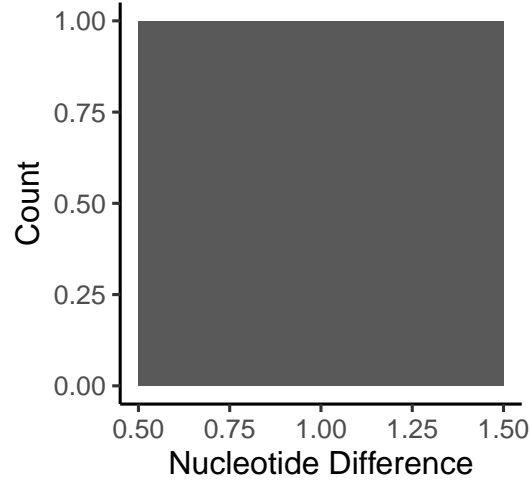
IGHV7-4-1*02

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



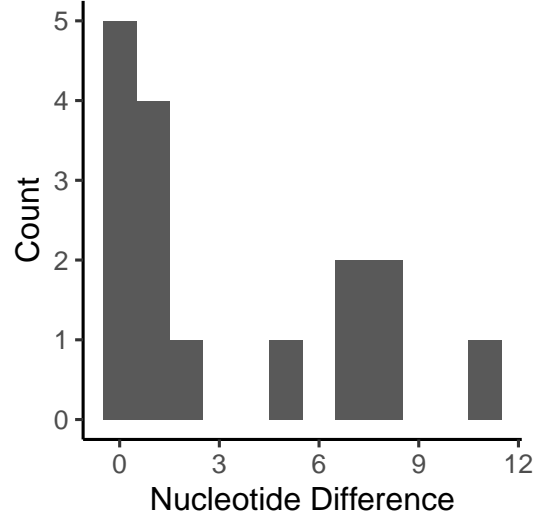
IGHV3/OR16-8*01

1 sequences assigned
No exact matches.

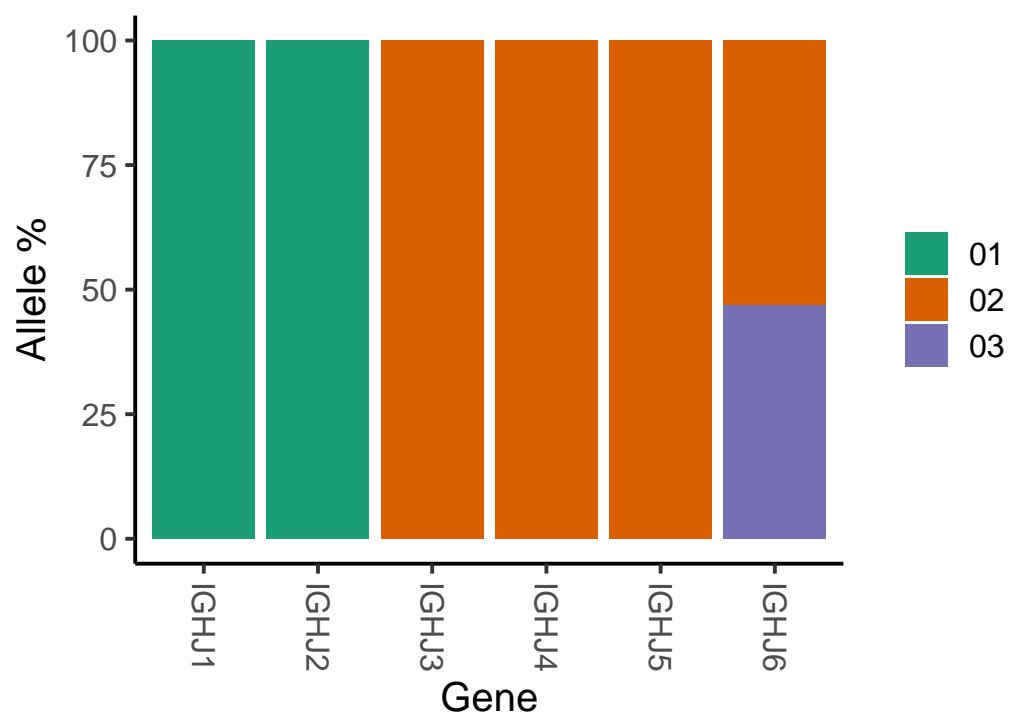


IGHV7-4-1*01

16 sequences assigned
5 (31.2%) exact matches, in which:
5 unique CDR3
3 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.