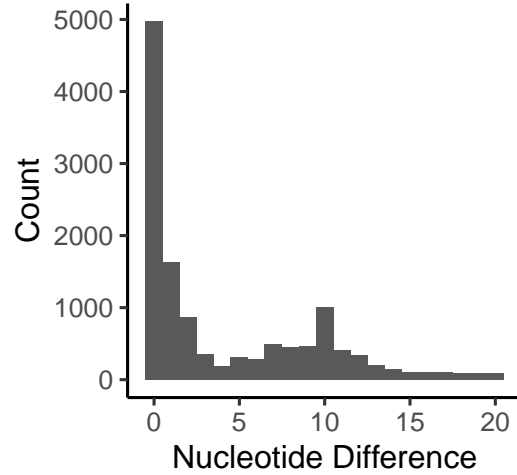


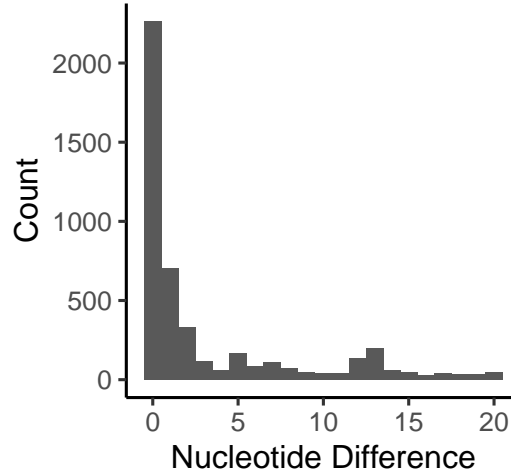
IGHV1-2*02

14340 sequences assigned
4973 (34.7%) exact matches, in which:
4776 unique CDR3
7 unique J



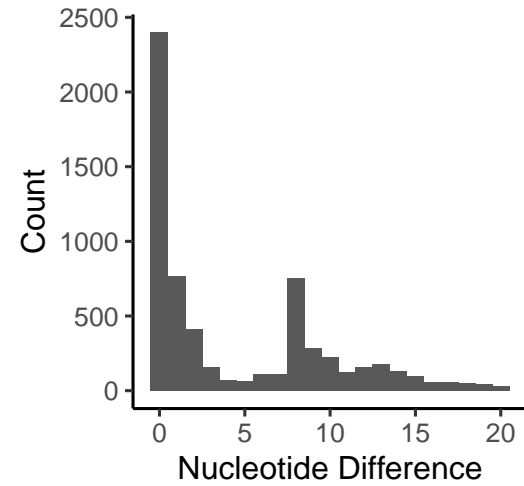
IGHV1-8*01

5294 sequences assigned
2263 (42.7%) exact matches, in which:
2196 unique CDR3
7 unique J



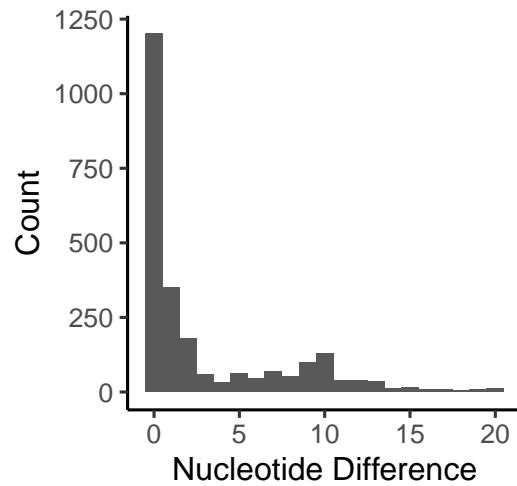
IGHV1-18*04

6823 sequences assigned
2399 (35.2%) exact matches, in which:
2349 unique CDR3
7 unique J



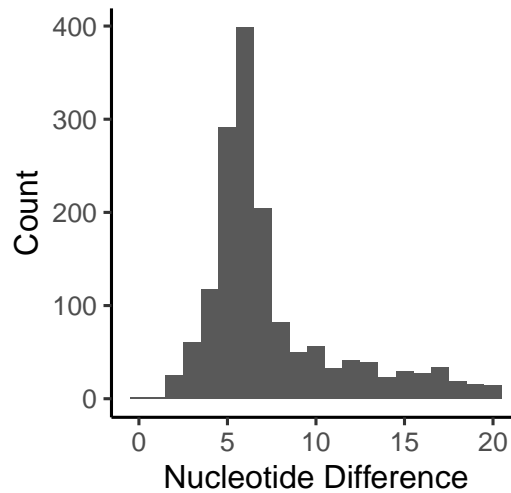
IGHV1-2*04

2585 sequences assigned
1201 (46.5%) exact matches, in which:
1163 unique CDR3
7 unique J



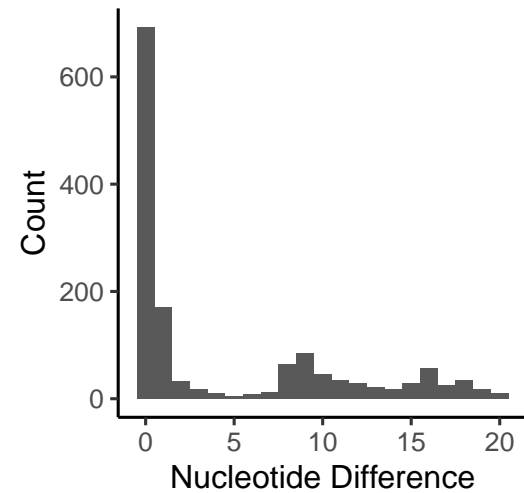
IGHV1-8*02

1691 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
2 unique J



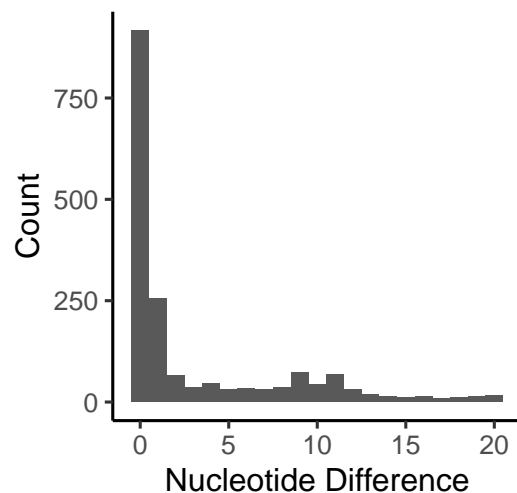
IGHV1-24*01

1506 sequences assigned
693 (46%) exact matches, in which:
674 unique CDR3
7 unique J



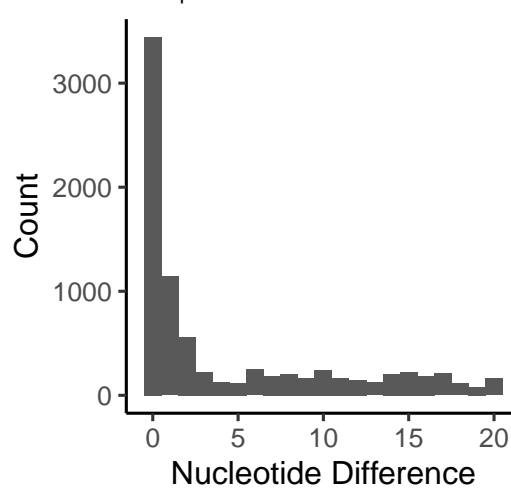
IGHV1-3*01_05

2065 sequences assigned
917 (44.4%) exact matches, in which:
876 unique CDR3
7 unique J



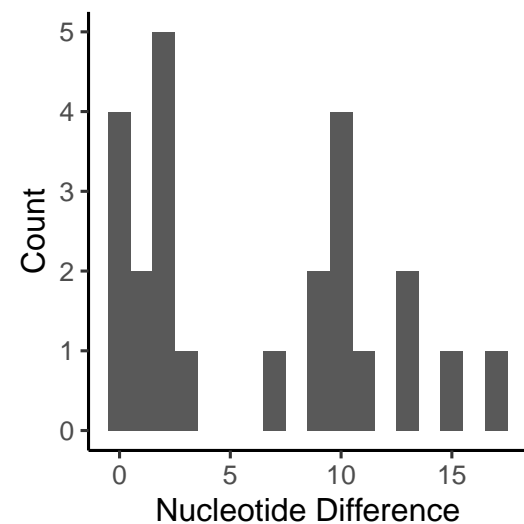
IGHV1-18*01

9977 sequences assigned
3443 (34.5%) exact matches, in which:
3353 unique CDR3
7 unique J



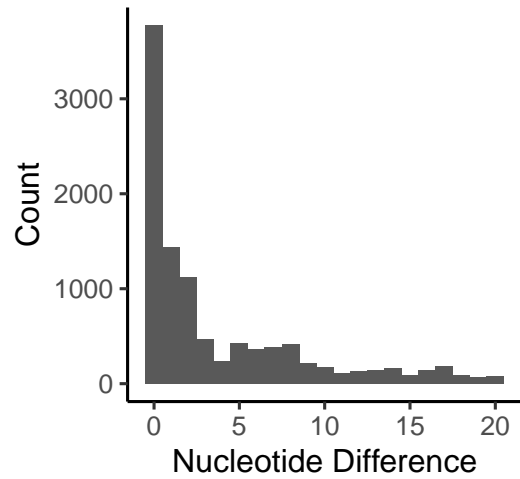
IGHV1-45*02

31 sequences assigned
4 (12.9%) exact matches, in which:
4 unique CDR3
3 unique J



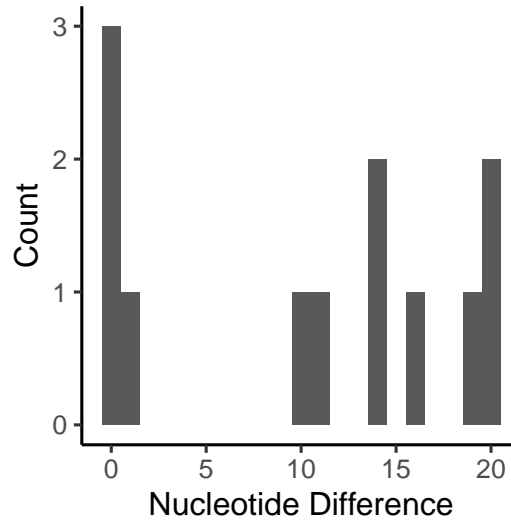
IGHV1-46*01

11446 sequences assigned
3773 (33%) exact matches, in which:
3658 unique CDR3
7 unique J



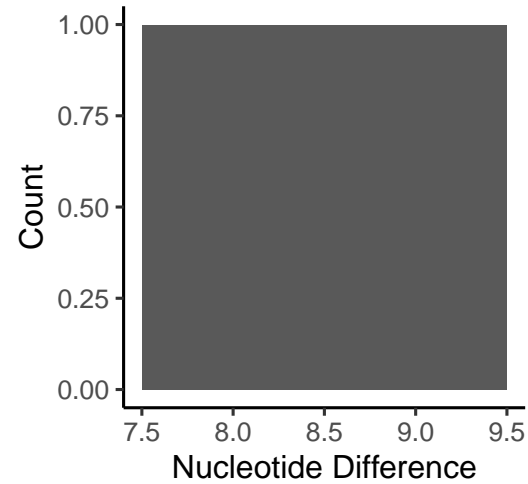
IGHV1-69-2*01

66 sequences assigned
3 (4.5%) exact matches, in which:
3 unique CDR3
2 unique J



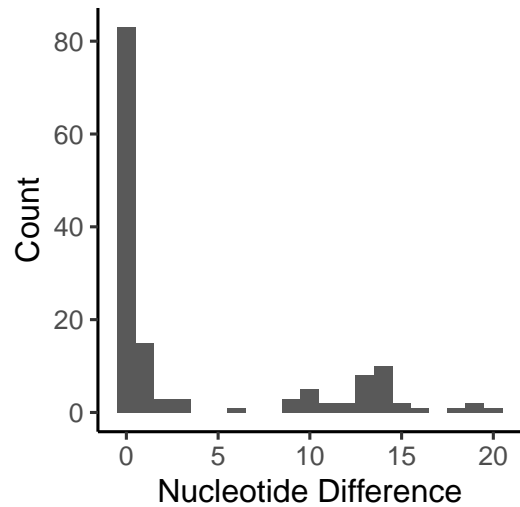
IGHV1-NL1*01

2 sequences assigned
No exact matches.



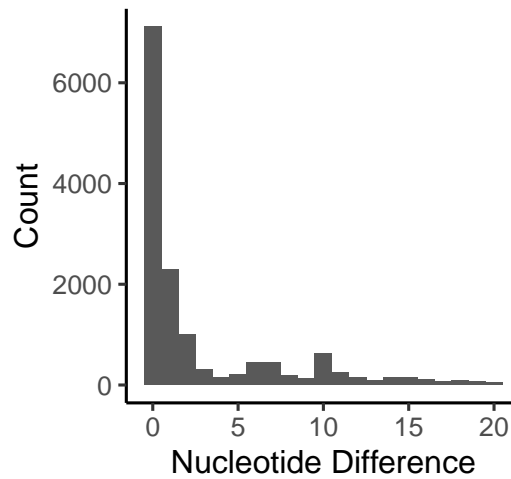
IGHV1-58*02

150 sequences assigned
83 (55.3%) exact matches, in which:
82 unique CDR3
7 unique J



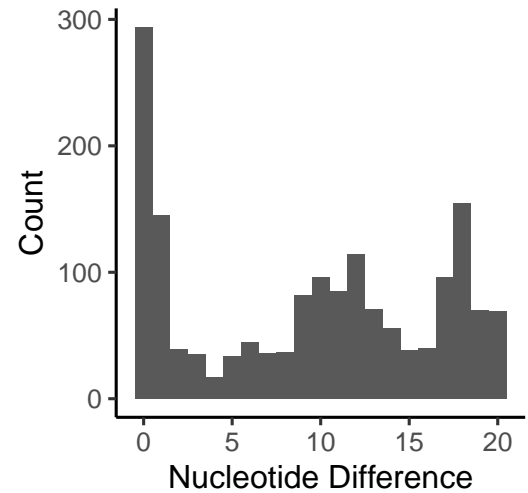
IGHV1-69*01_12_13

15134 sequences assigned
7113 (47%) exact matches, in which:
6919 unique CDR3
7 unique J



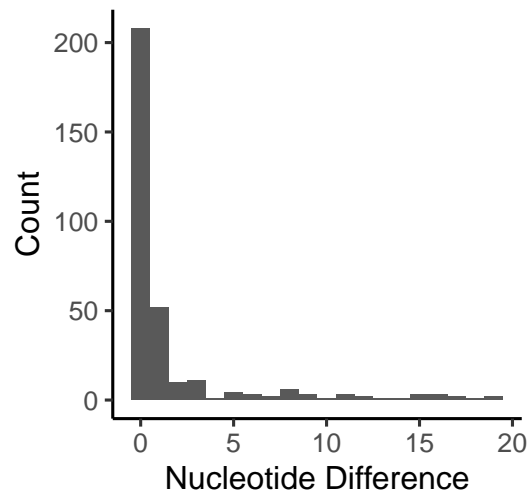
IGHV2-5*01

1960 sequences assigned
294 (15%) exact matches, in which:
285 unique CDR3
7 unique J



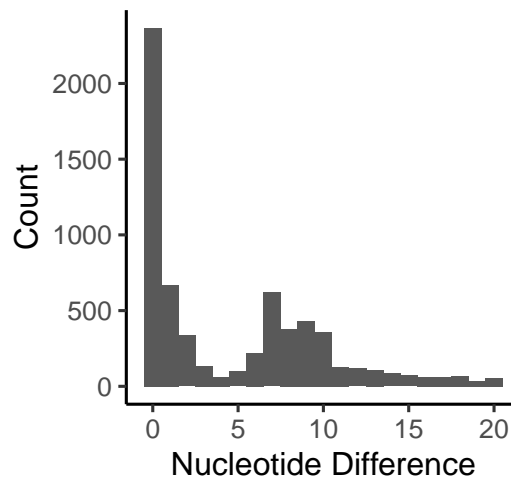
IGHV1-58*01_03

390 sequences assigned
208 (53.3%) exact matches, in which:
202 unique CDR3
7 unique J



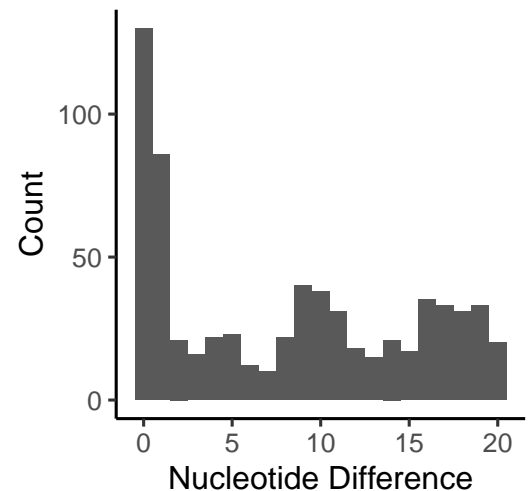
IGHV1-69*06_14

6977 sequences assigned
2366 (33.9%) exact matches, in which:
2320 unique CDR3
7 unique J



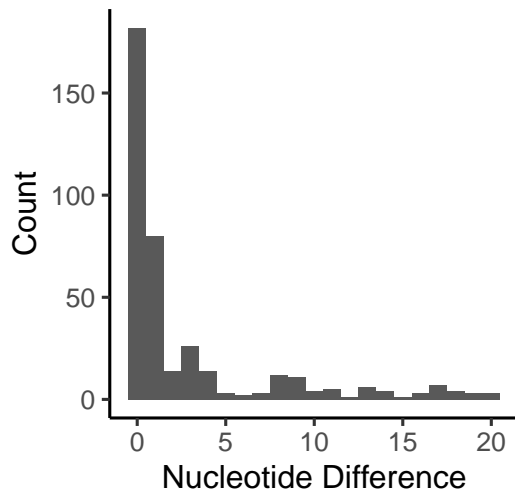
IGHV2-5*02

936 sequences assigned
130 (13.9%) exact matches, in which:
124 unique CDR3
7 unique J



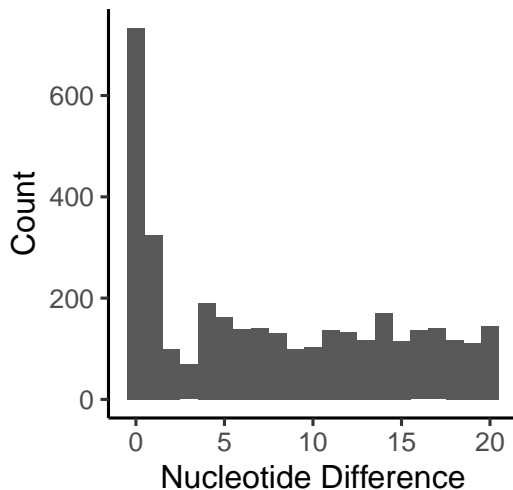
IGHV2-26*01

413 sequences assigned
182 (44.1%) exact matches, in which:
176 unique CDR3
6 unique J



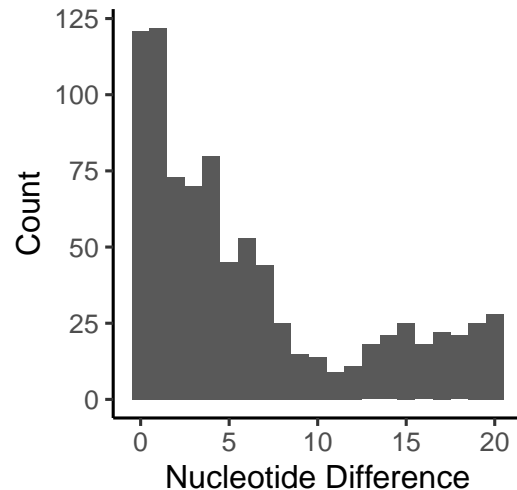
IGHV3-7*03

4739 sequences assigned
734 (15.5%) exact matches, in which:
650 unique CDR3
7 unique J



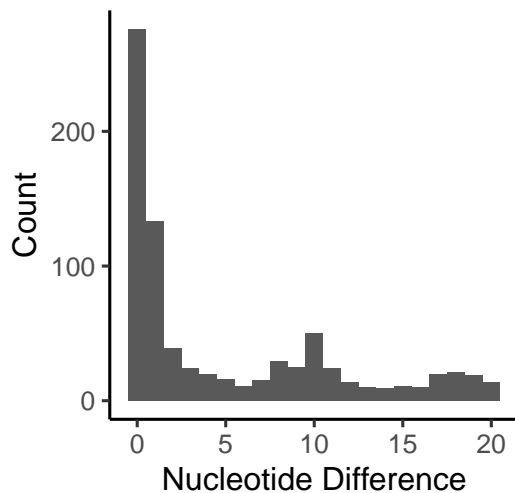
IGHV3-11*04

1048 sequences assigned
121 (11.5%) exact matches, in which:
121 unique CDR3
7 unique J



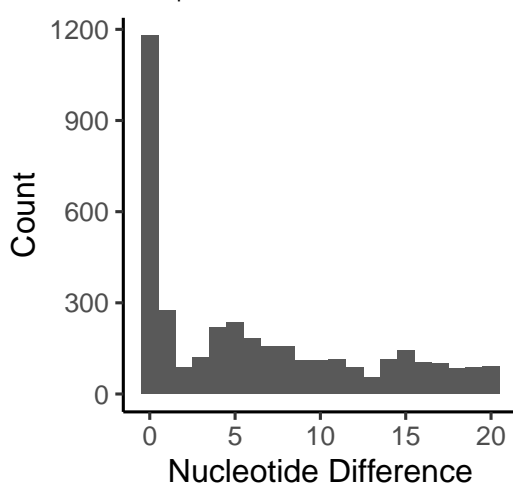
IGHV2-70*01

858 sequences assigned
276 (32.2%) exact matches, in which:
270 unique CDR3
7 unique J



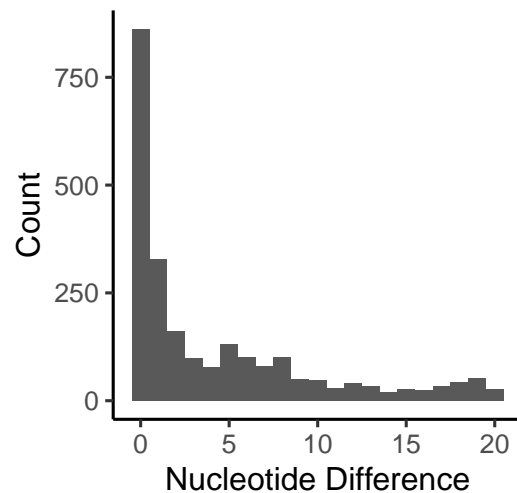
IGHV3-9*01

5043 sequences assigned
1179 (23.4%) exact matches, in which:
1063 unique CDR3
7 unique J



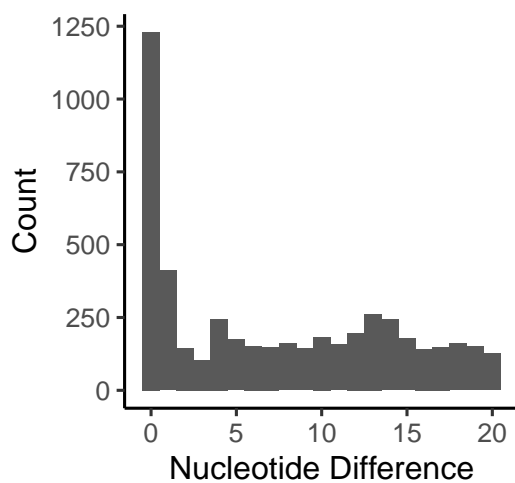
IGHV3-11*06

3393 sequences assigned
862 (25.4%) exact matches, in which:
775 unique CDR3
7 unique J



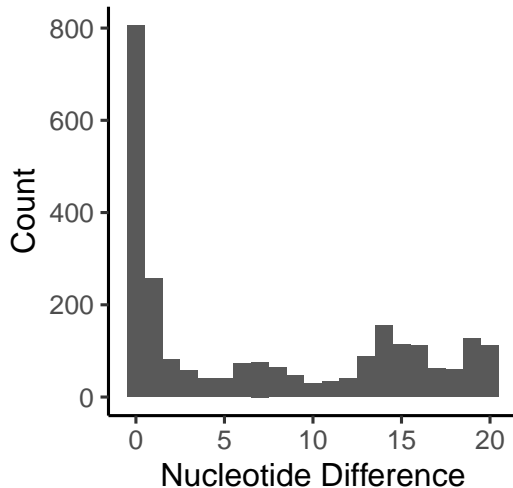
IGHV3-7*01

6247 sequences assigned
1230 (19.7%) exact matches, in which:
1140 unique CDR3
7 unique J



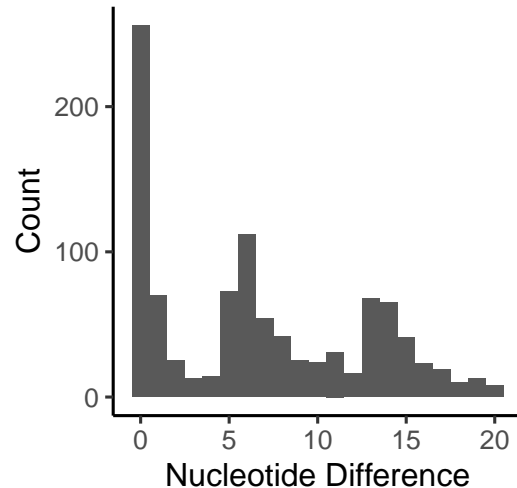
IGHV3-11*01

14215 sequences assigned
806 (5.7%) exact matches, in which:
741 unique CDR3
7 unique J



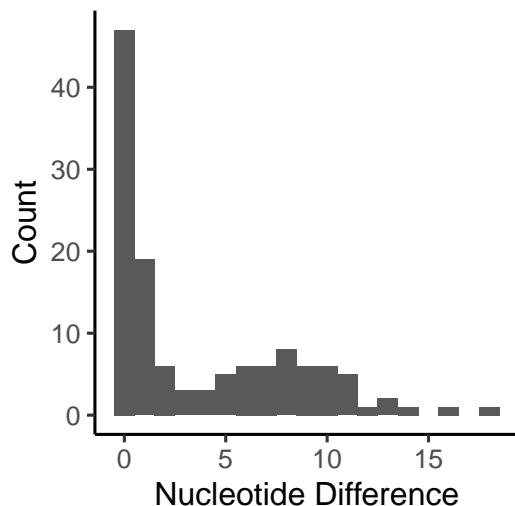
IGHV3-13*01

1120 sequences assigned
256 (22.9%) exact matches, in which:
233 unique CDR3
6 unique J



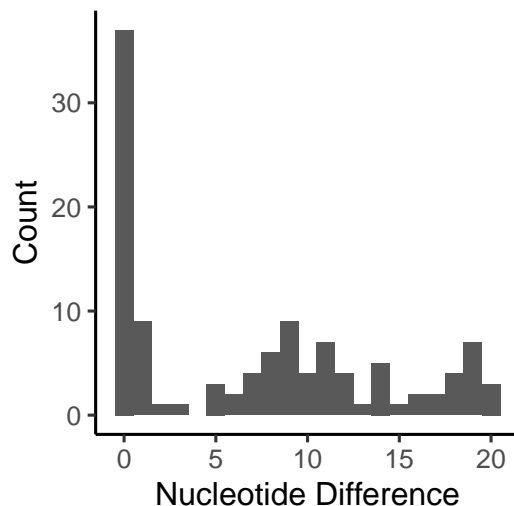
IGHV3-13*05

127 sequences assigned
47 (37%) exact matches, in which:
43 unique CDR3
6 unique J



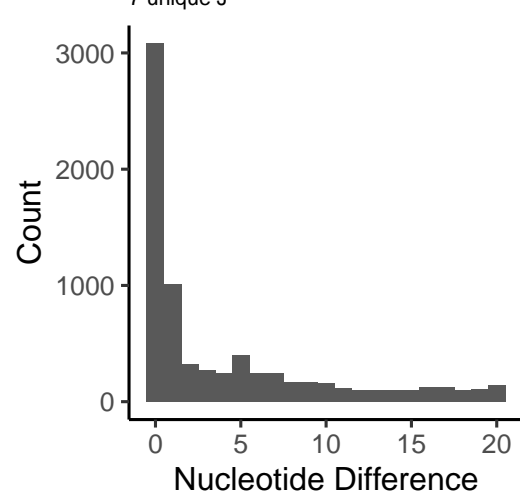
IGHV3-20*01_02

131 sequences assigned
37 (28.2%) exact matches, in which:
34 unique CDR3
5 unique J



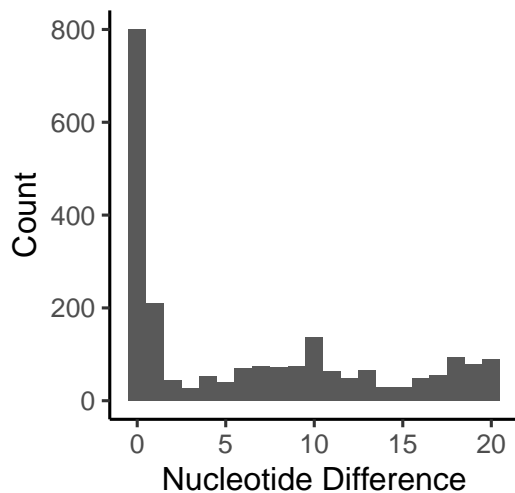
IGHV3-21*01_02

9221 sequences assigned
3082 (33.4%) exact matches, in which:
2759 unique CDR3
7 unique J



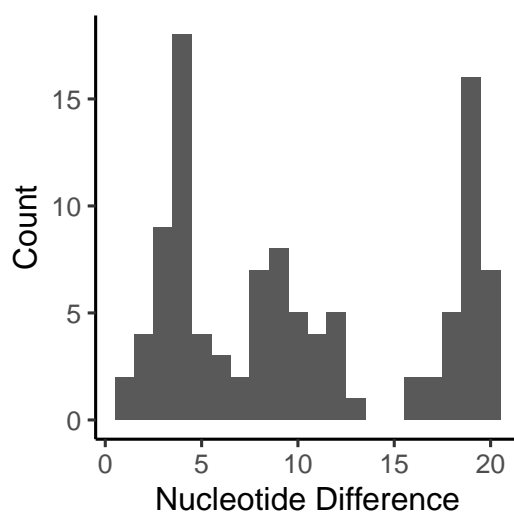
IGHV3-15*01_02

3064 sequences assigned
801 (26.1%) exact matches, in which:
710 unique CDR3
7 unique J



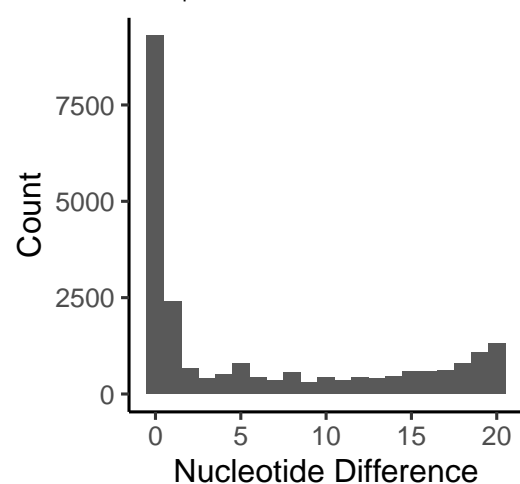
IGHV3-20*03_04

182 sequences assigned
No exact matches.



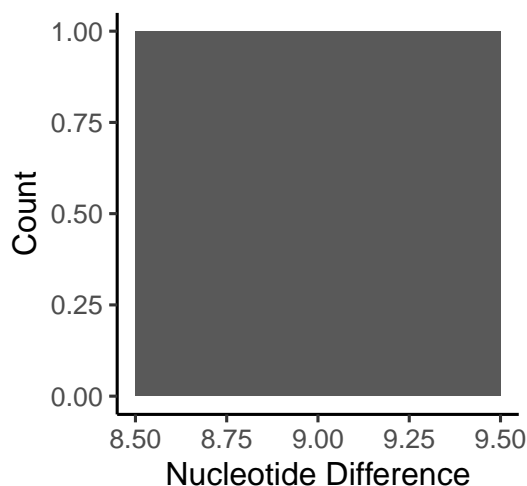
IGHV3-23*01_04

31242 sequences assigned
9296 (29.8%) exact matches, in which:
7976 unique CDR3
7 unique J



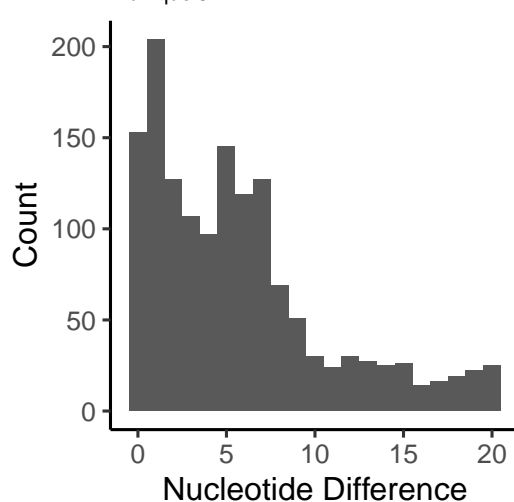
IGHV3-19*01

1 sequences assigned
No exact matches.



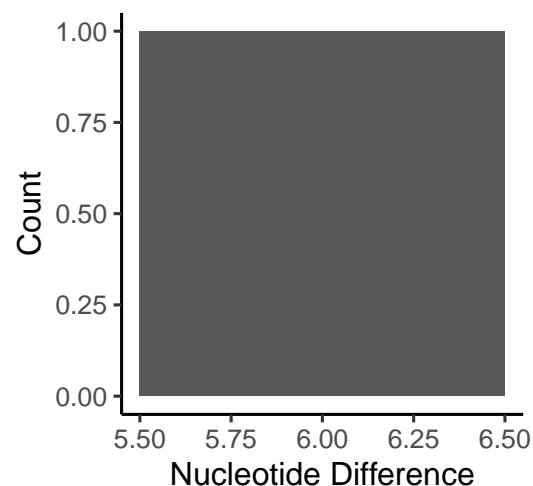
IGHV3-21*04

1743 sequences assigned
153 (8.8%) exact matches, in which:
153 unique CDR3
7 unique J



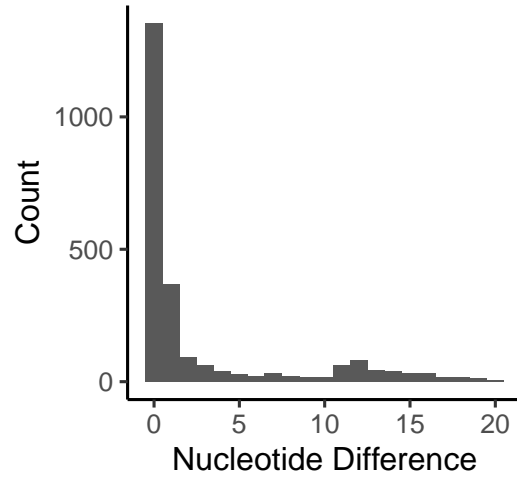
IGHV3-25*04

1 sequences assigned
No exact matches.



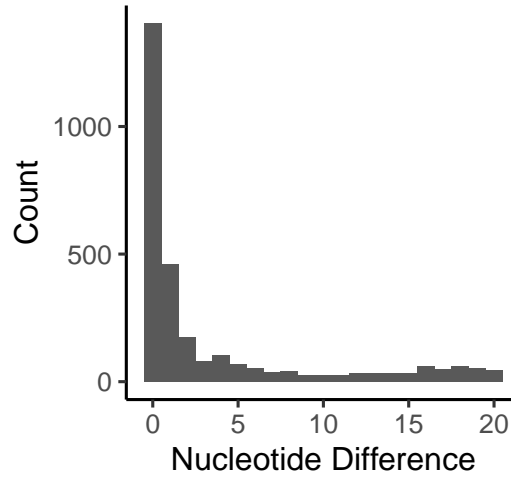
IGHV3-30-3*01

2558 sequences assigned
1353 (52.9%) exact matches, in which:
1263 unique CDR3
7 unique J



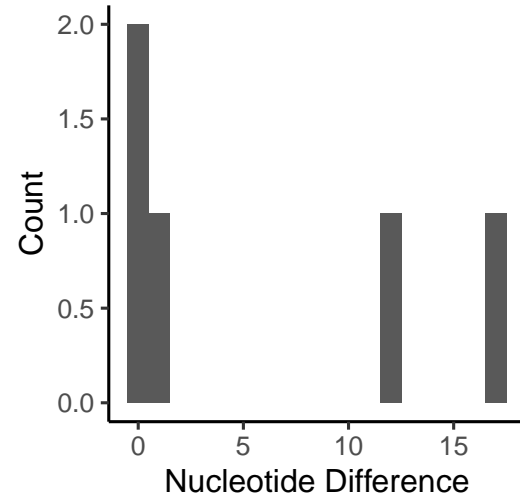
IGHV3-33*01

3659 sequences assigned
1404 (38.4%) exact matches, in which:
1295 unique CDR3
7 unique J



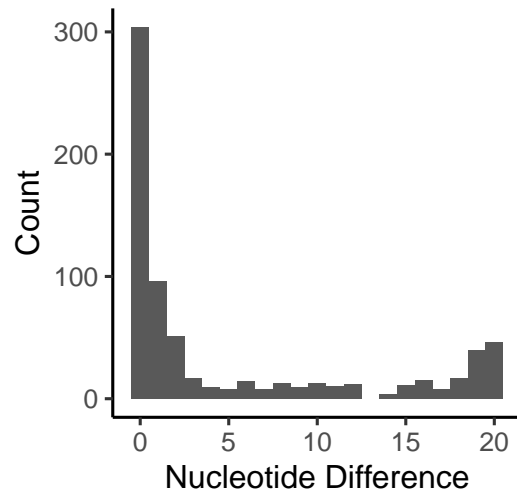
IGHV3-35*01

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
1 unique J



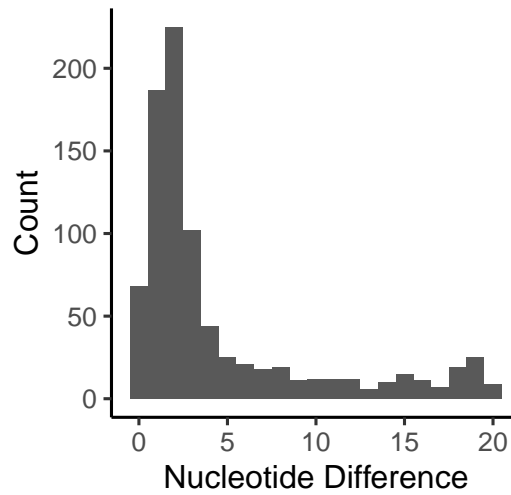
IGHV3-30*03

804 sequences assigned
304 (37.8%) exact matches, in which:
302 unique CDR3
7 unique J



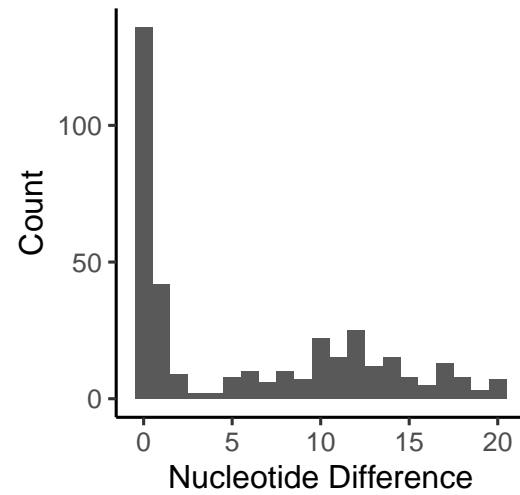
IGHV3-33*06

970 sequences assigned
68 (7%) exact matches, in which:
68 unique CDR3
7 unique J



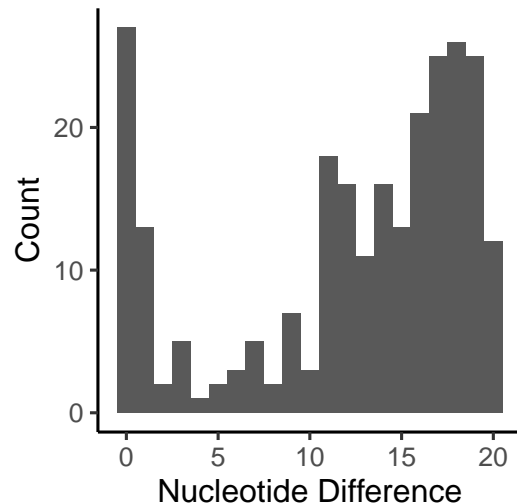
IGHV3-43*01

468 sequences assigned
136 (29.1%) exact matches, in which:
126 unique CDR3
7 unique J



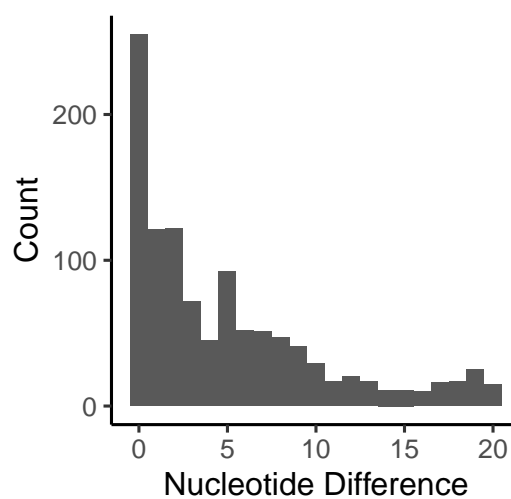
IGHV3-30*04

376 sequences assigned
27 (7.2%) exact matches, in which:
20 unique CDR3
3 unique J



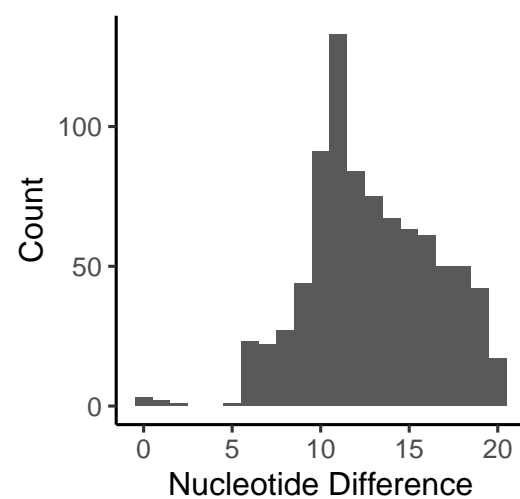
IGHV3-33*08

1335 sequences assigned
255 (19.1%) exact matches, in which:
251 unique CDR3
7 unique J



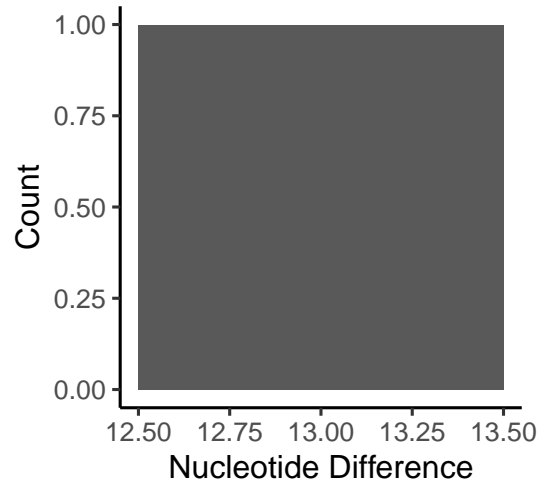
IGHV3-43*02

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



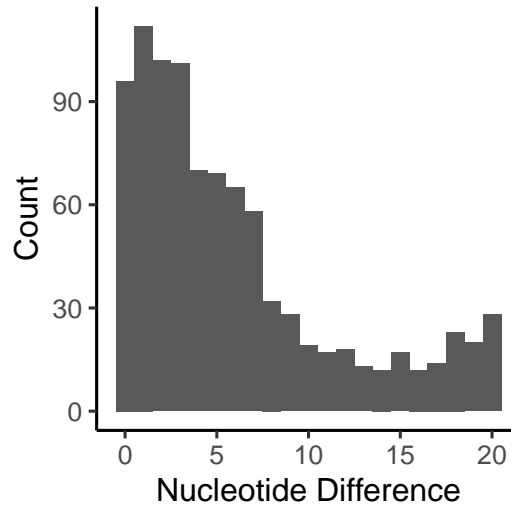
IGHV3-47*02

1 sequences assigned
No exact matches.



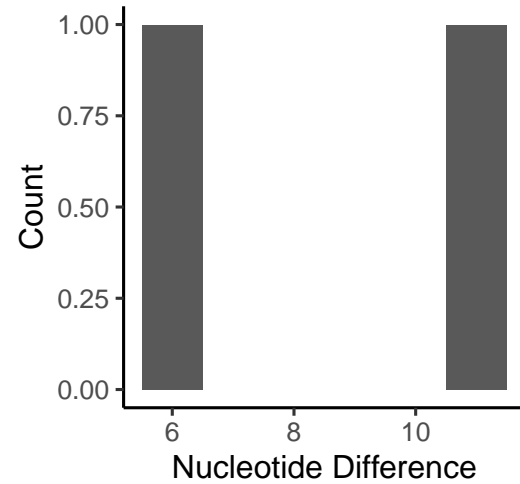
IGHV3-48*04

1270 sequences assigned
96 (7.6%) exact matches, in which:
96 unique CDR3
6 unique J



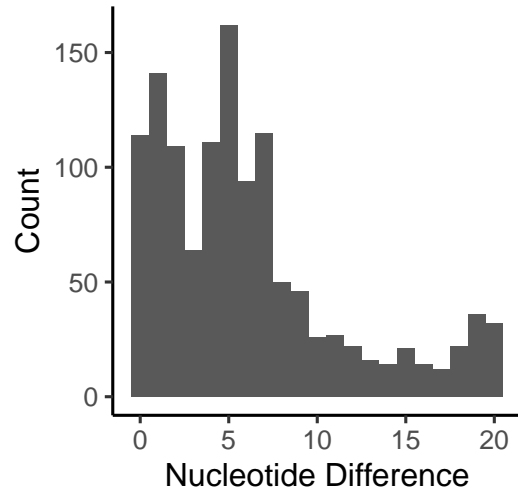
IGHV3-52*01_03

2 sequences assigned
No exact matches.



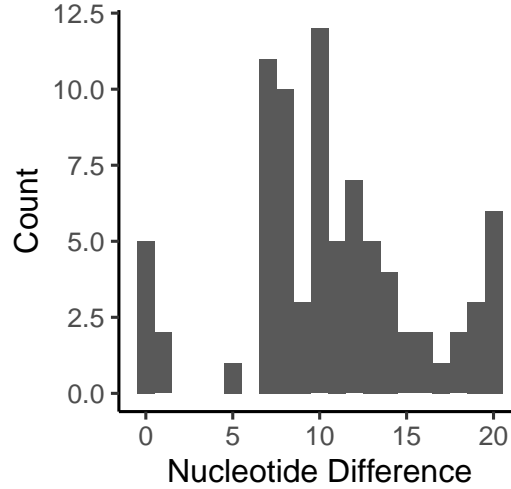
IGHV3-48*01

1450 sequences assigned
114 (7.9%) exact matches, in which:
114 unique CDR3
7 unique J



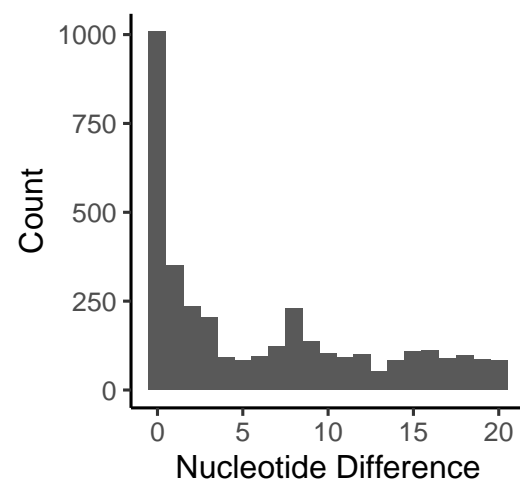
IGHV3-49*04

261 sequences assigned
5 (1.9%) exact matches, in which:
3 unique CDR3
2 unique J



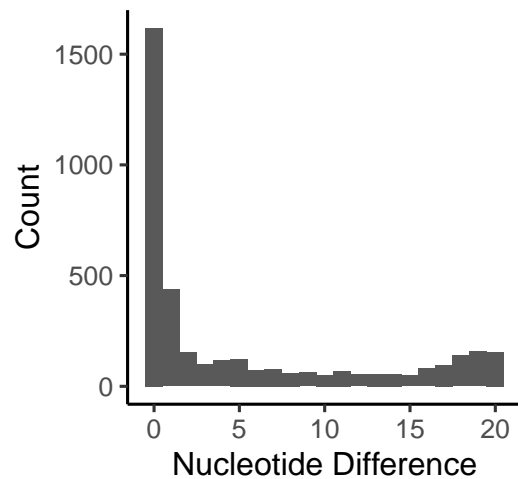
IGHV3-53*01_02

4767 sequences assigned
1008 (21.1%) exact matches, in which:
916 unique CDR3
7 unique J



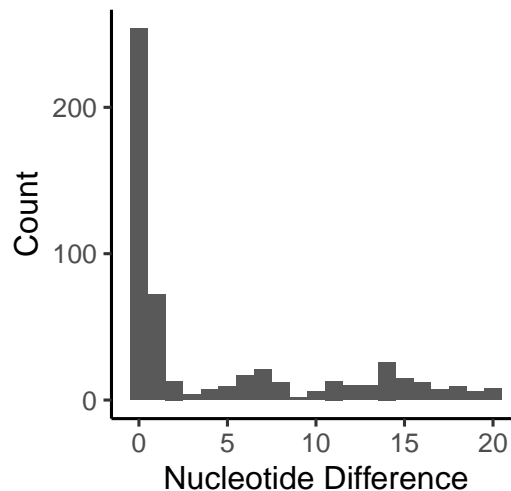
IGHV3-48*02

5025 sequences assigned
1618 (32.2%) exact matches, in which:
1447 unique CDR3
7 unique J



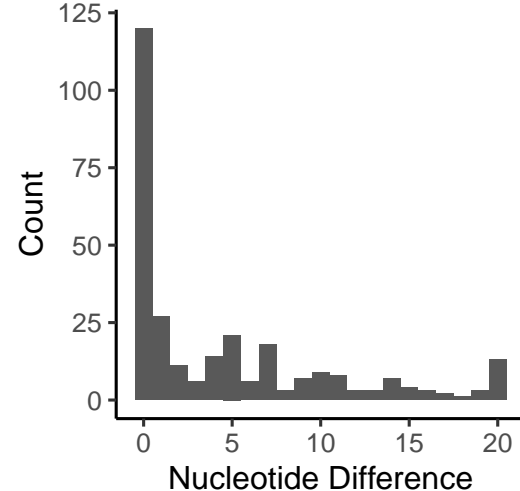
IGHV3-49*03_05

630 sequences assigned
254 (40.3%) exact matches, in which:
241 unique CDR3
7 unique J



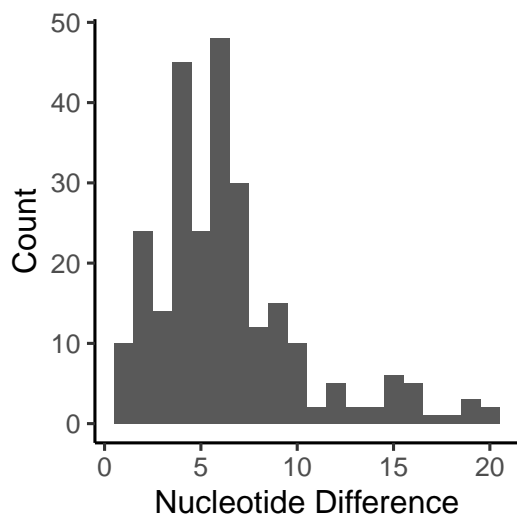
IGHV3-64*01

333 sequences assigned
120 (36%) exact matches, in which:
107 unique CDR3
7 unique J



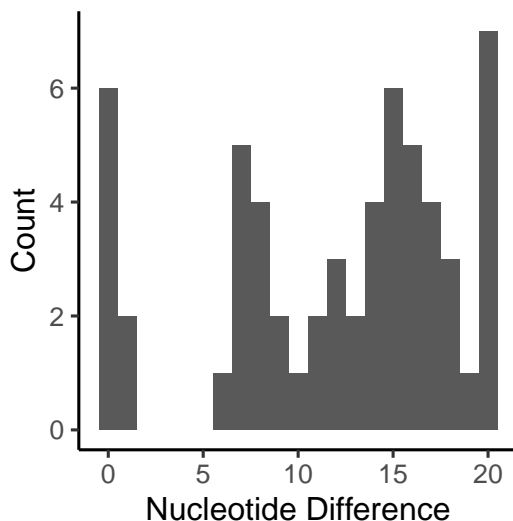
IGHV3-64*04

289 sequences assigned
No exact matches.



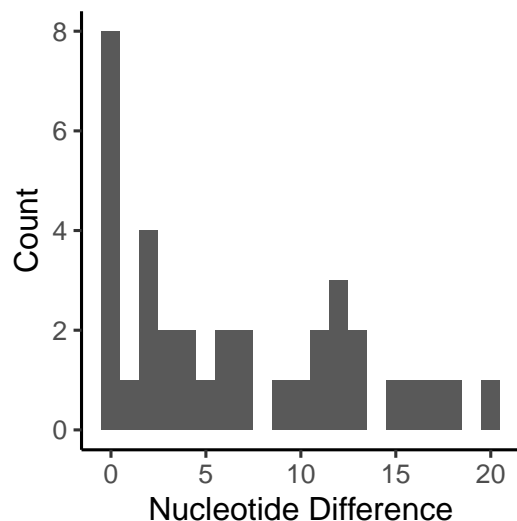
IGHV3-66*02

132 sequences assigned
6 (4.5%) exact matches, in which:
4 unique CDR3
2 unique J



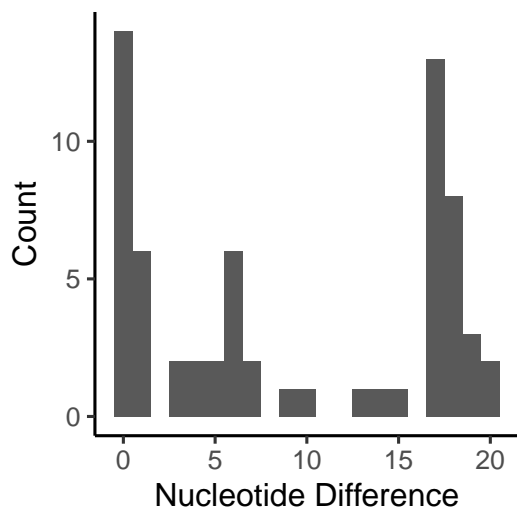
IGHV3-69-1*01

57 sequences assigned
8 (14%) exact matches, in which:
8 unique CDR3
6 unique J



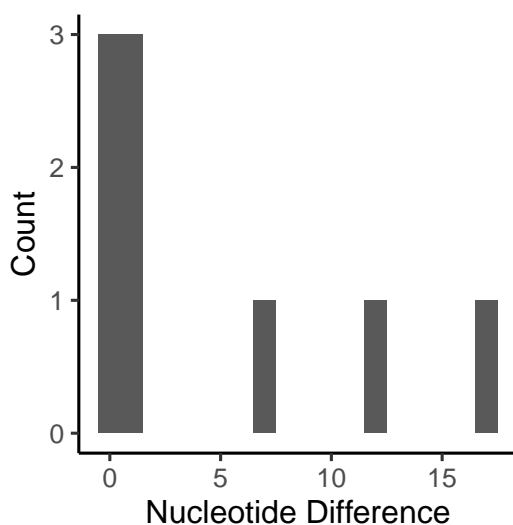
IGHV3-64*02_07

99 sequences assigned
14 (14.1%) exact matches, in which:
13 unique CDR3
4 unique J



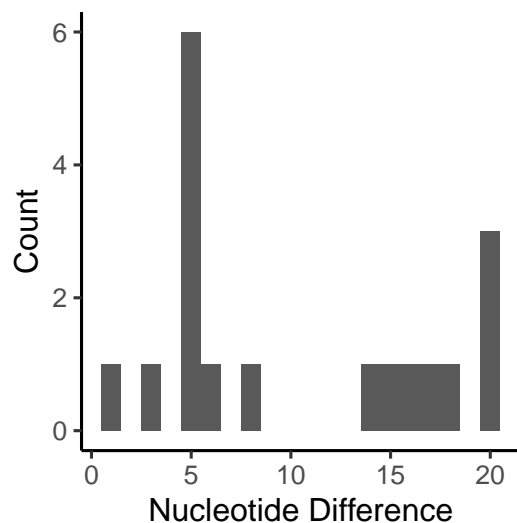
IGHV3-66*03

10 sequences assigned
3 (30%) exact matches, in which:
3 unique CDR3
2 unique J



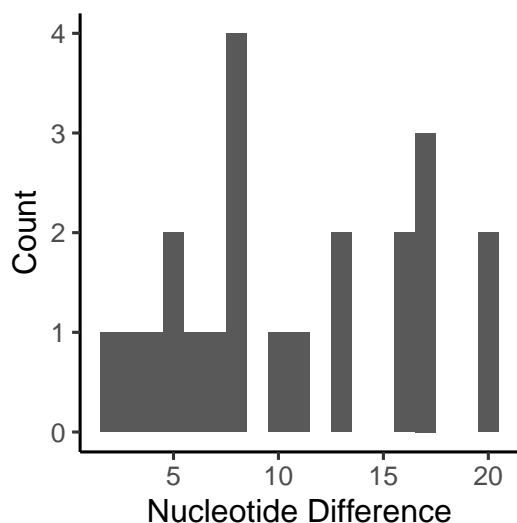
IGHV3-69-1*02

47 sequences assigned
No exact matches.



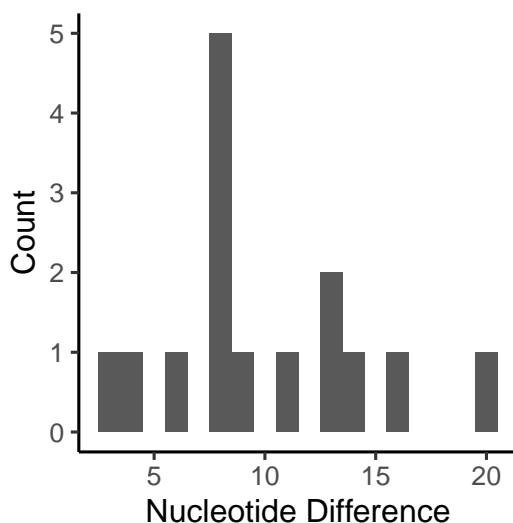
IGHV3-66*01

39 sequences assigned
No exact matches.



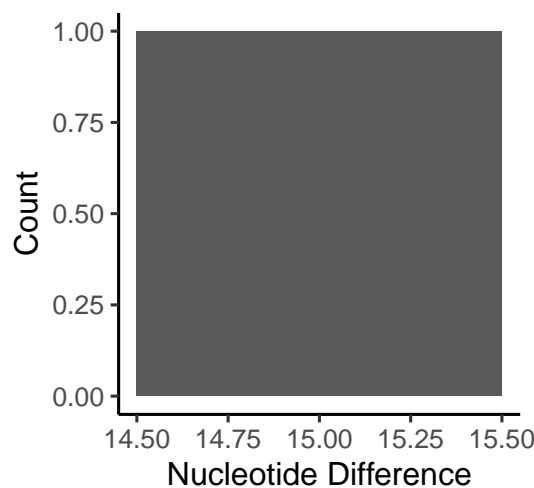
IGHV3-66*04

29 sequences assigned
No exact matches.



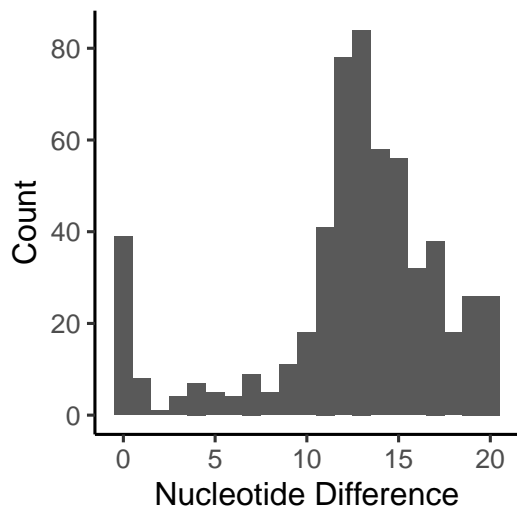
IGHV3-71*01_04

2 sequences assigned
No exact matches.



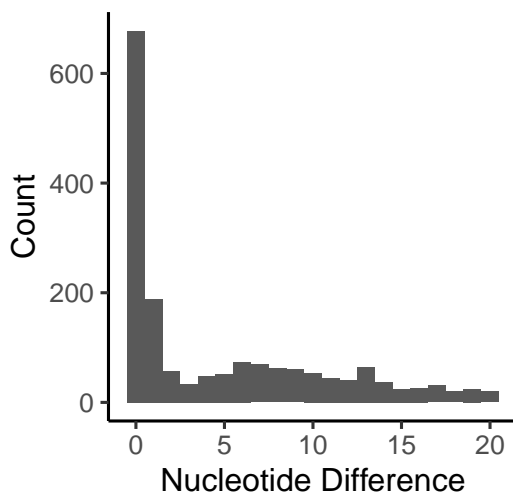
IGHV3-72*01

768 sequences assigned
39 (5.1%) exact matches, in which:
35 unique CDR3
5 unique J



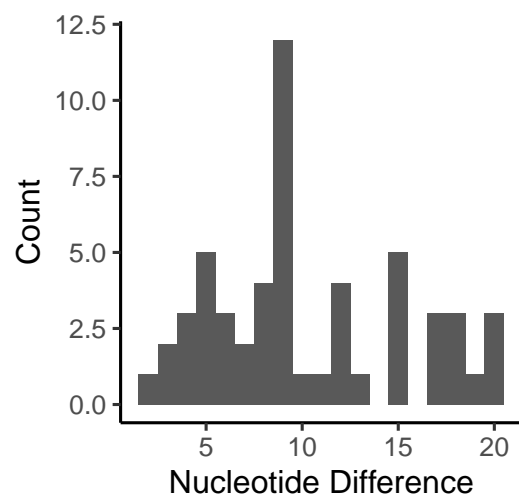
IGHV3-74*01_02

2085 sequences assigned
678 (32.5%) exact matches, in which:
605 unique CDR3
7 unique J



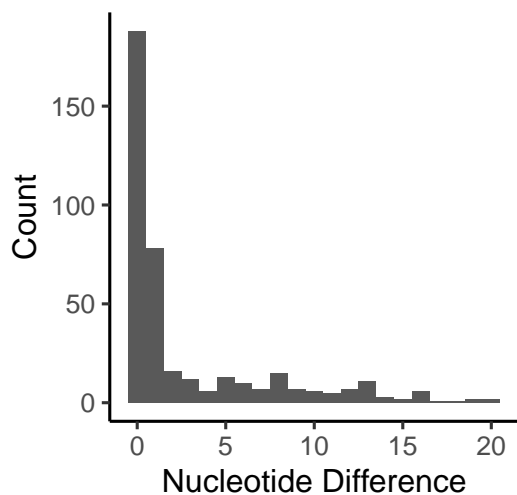
IGHV3-NL1*01

74 sequences assigned
No exact matches.



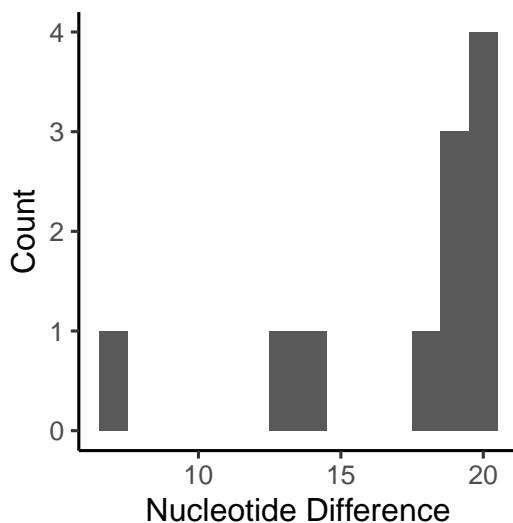
IGHV3-73*01_02

522 sequences assigned
188 (36%) exact matches, in which:
173 unique CDR3
7 unique J



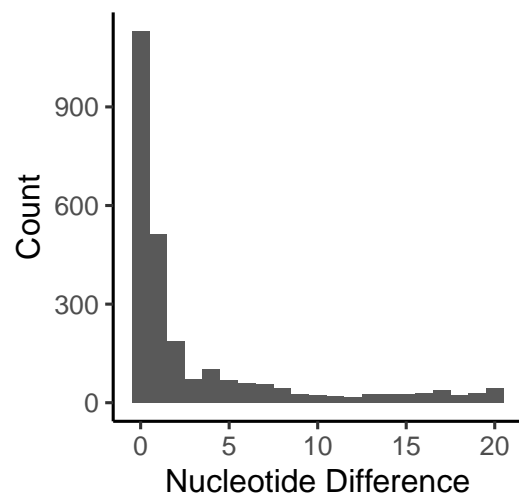
IGHV3-43D*04

18 sequences assigned
No exact matches.



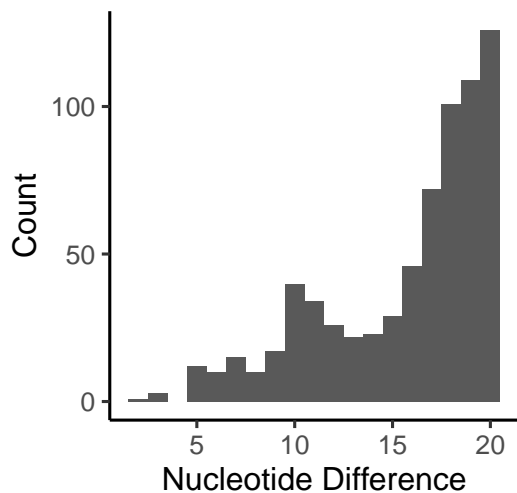
IGHV4-4*07

3635 sequences assigned
1131 (31.1%) exact matches, in which:
1107 unique CDR3
7 unique J



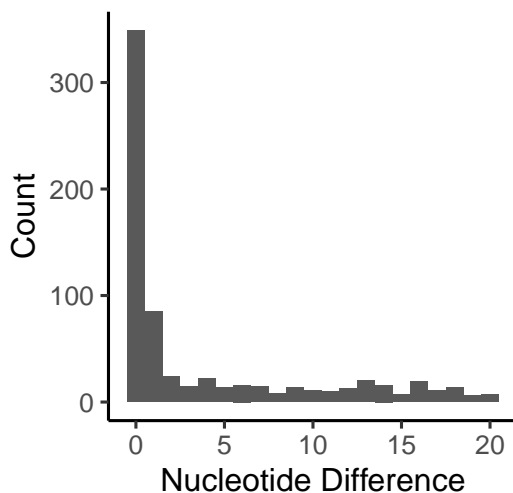
IGHV3-74*03

1889 sequences assigned
No exact matches.



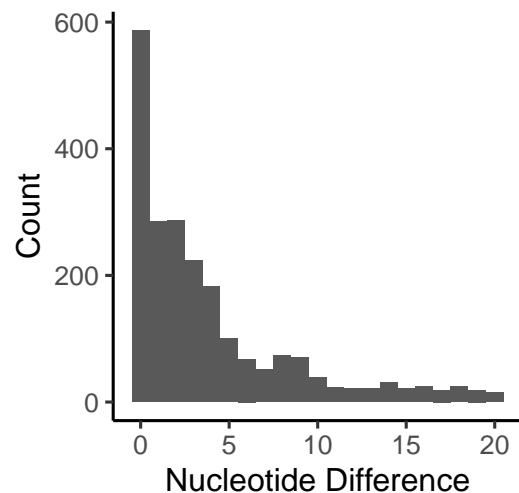
IGHV3-64D*06

785 sequences assigned
349 (44.5%) exact matches, in which:
309 unique CDR3
7 unique J



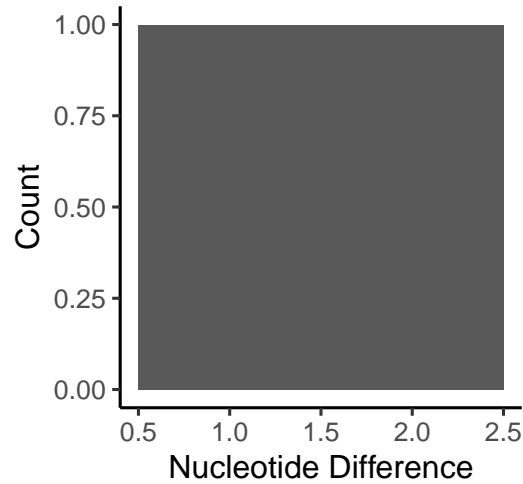
IGHV4-4*02_03

2383 sequences assigned
587 (24.6%) exact matches, in which:
566 unique CDR3
7 unique J



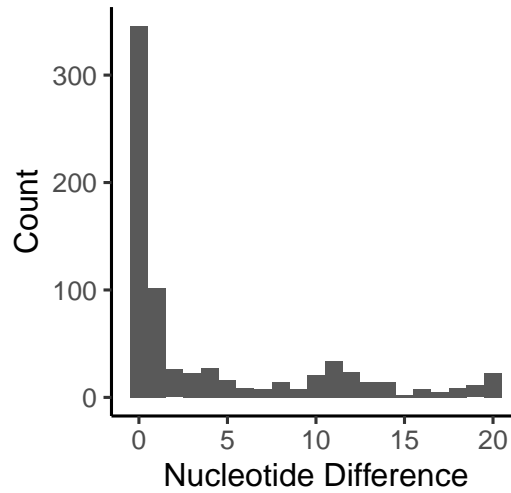
IGHV4-28*03

2 sequences assigned
No exact matches.



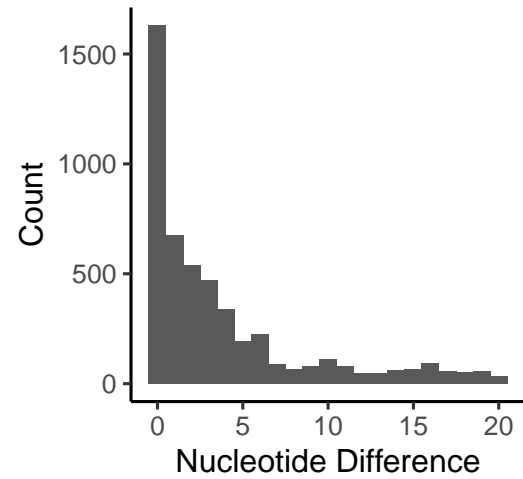
IGHV4-30-4*01

1027 sequences assigned
346 (33.7%) exact matches, in which:
337 unique CDR3
6 unique J



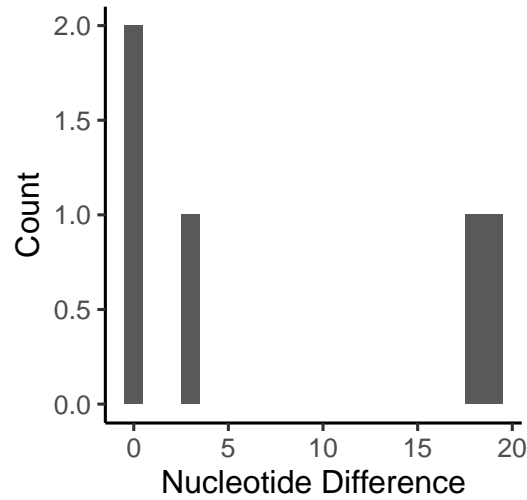
IGHV4-31*02

5724 sequences assigned
1630 (28.5%) exact matches, in which:
1598 unique CDR3
7 unique J



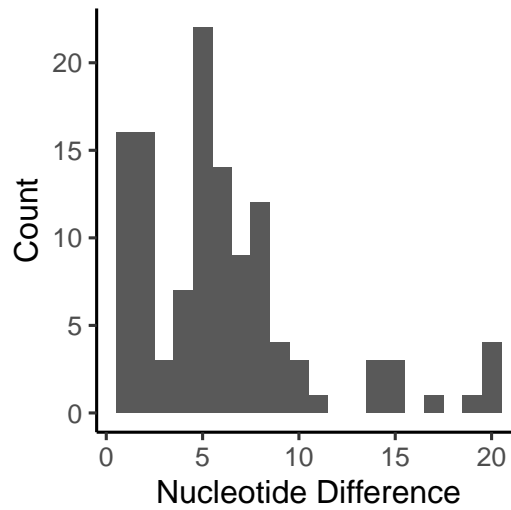
IGHV4-28*01_07

8 sequences assigned
2 (25%) exact matches, in which:
2 unique CDR3
1 unique J



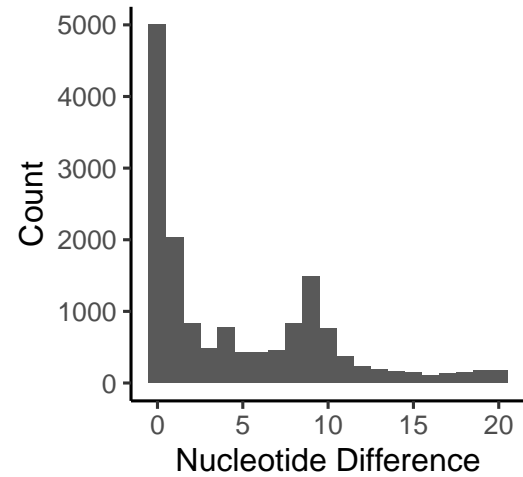
IGHV4-30-2*03

170 sequences assigned
No exact matches.



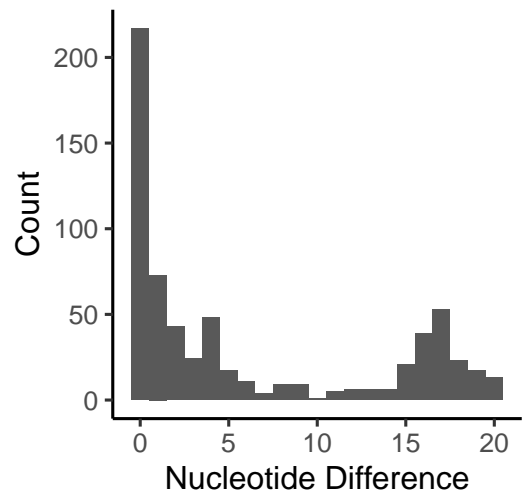
IGHV4-34*01_02

17361 sequences assigned
5002 (28.8%) exact matches, in which:
4761 unique CDR3
7 unique J



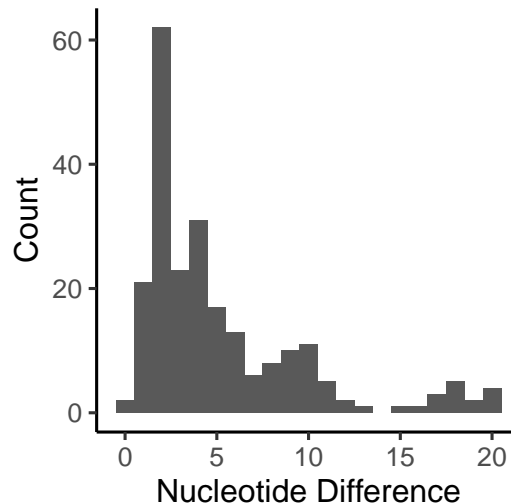
IGHV4-30-2*01

716 sequences assigned
217 (30.3%) exact matches, in which:
205 unique CDR3
6 unique J



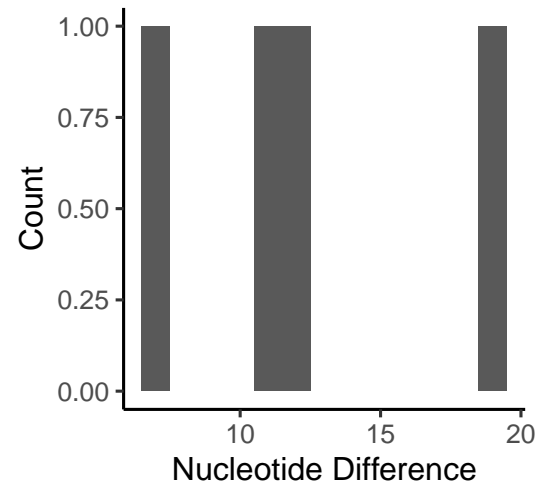
IGHV4-30-4*08

266 sequences assigned
2 (0.8%) exact matches, in which:
2 unique CDR3
2 unique J



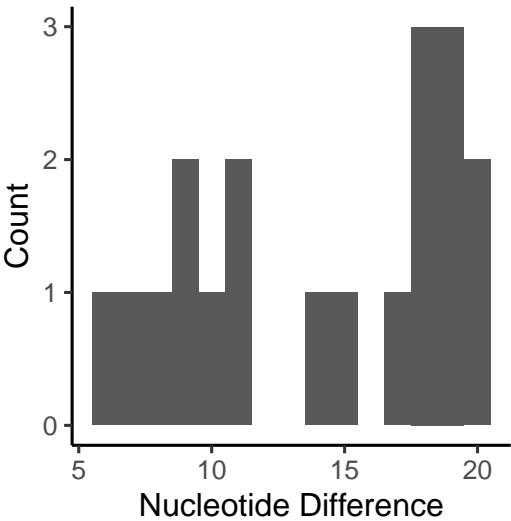
IGHV4-38-2*01

8 sequences assigned
No exact matches.



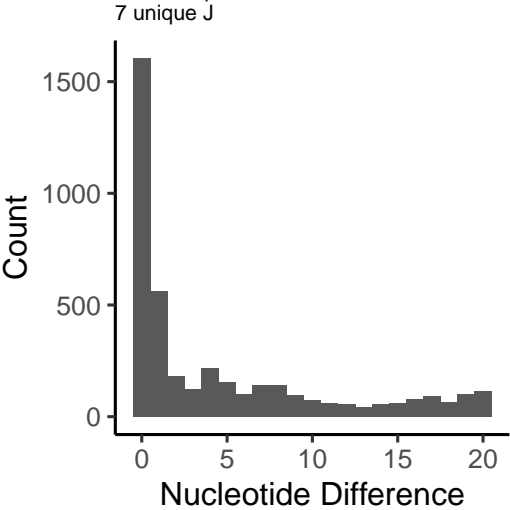
IGHV4-38-2*02

215 sequences assigned
No exact matches.



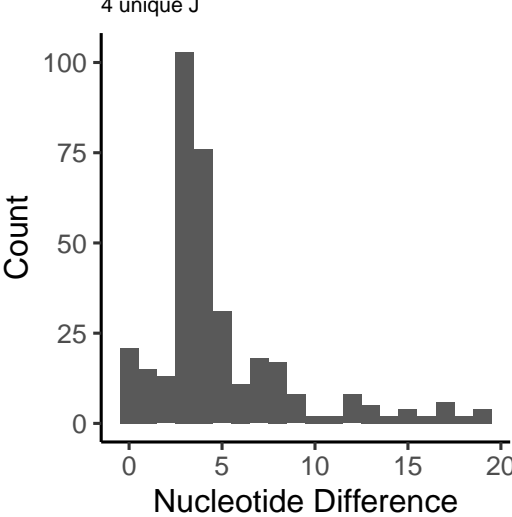
IGHV4-59*08

6022 sequences assigned
1604 (26.6%) exact matches, in which:
1568 unique CDR3
7 unique J



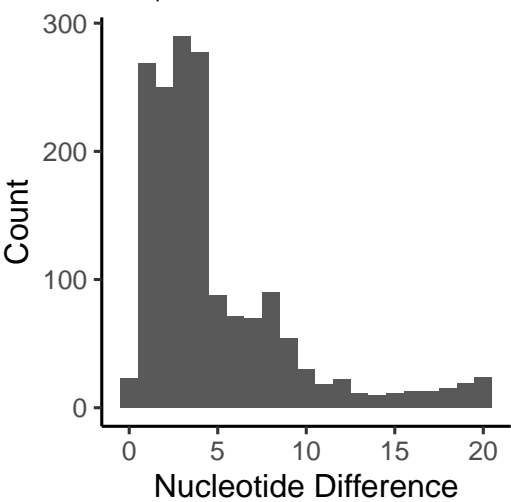
IGHV4-61*02

386 sequences assigned
21 (5.4%) exact matches, in which:
20 unique CDR3
4 unique J



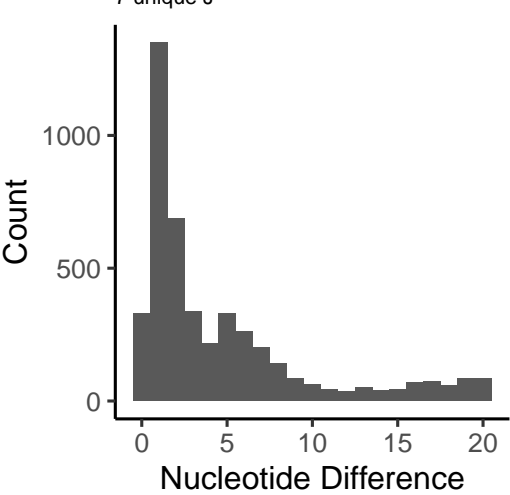
IGHV4-39*07

2332 sequences assigned
23 (1%) exact matches, in which:
23 unique CDR3
6 unique J



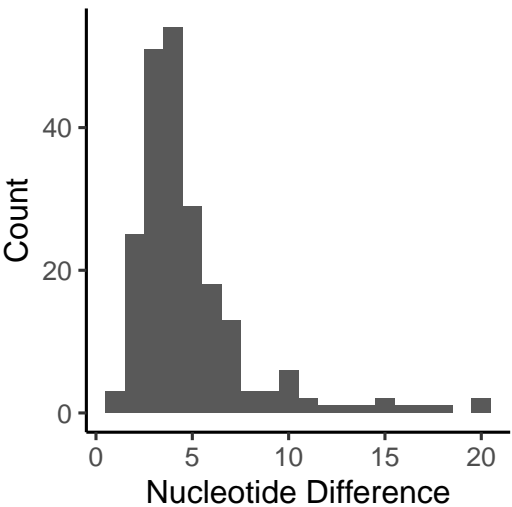
IGHV4-59*12

5798 sequences assigned
329 (5.7%) exact matches, in which:
327 unique CDR3
7 unique J



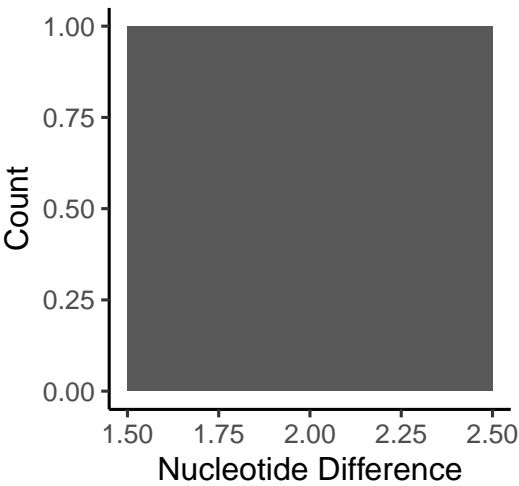
IGHV4-61*05

230 sequences assigned
No exact matches.



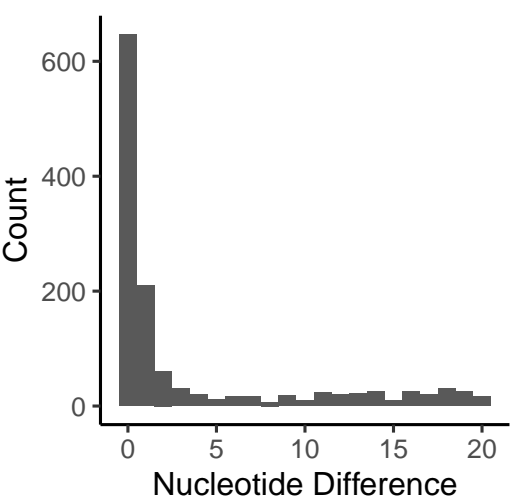
IGHV4-55*09

1 sequences assigned
No exact matches.



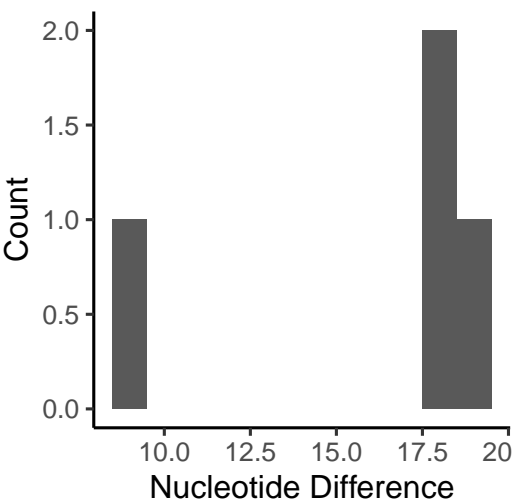
IGHV4-61*01

1472 sequences assigned
647 (44%) exact matches, in which:
638 unique CDR3
7 unique J



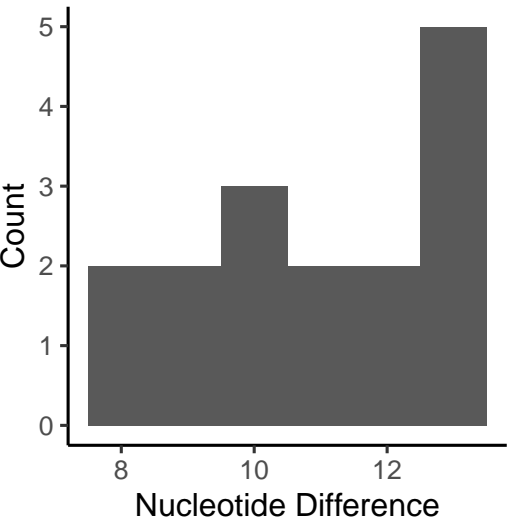
IGHV1/OR15-2*02_03

5 sequences assigned
No exact matches.



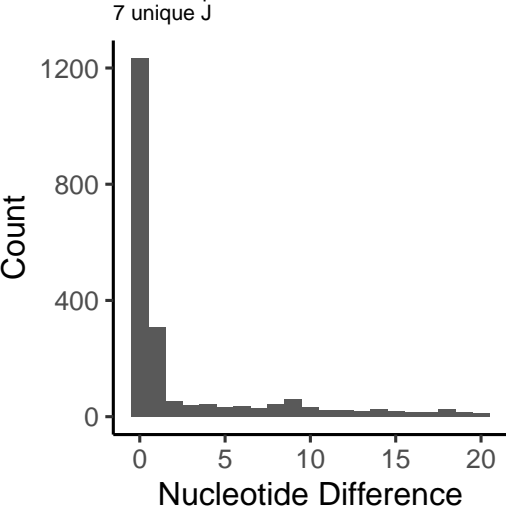
IGHV1/OR15-3*02

16 sequences assigned
No exact matches.



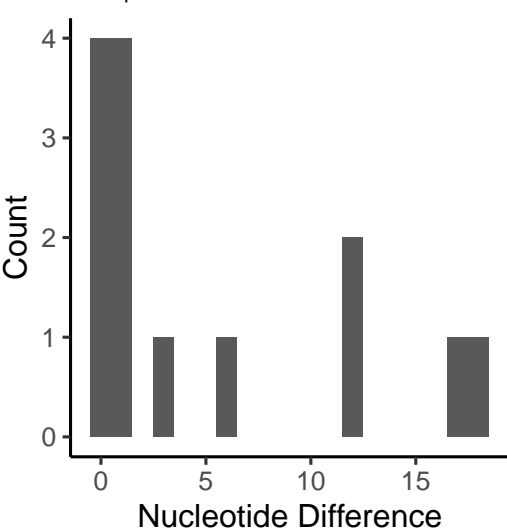
IGHV5-10-1*01_03

2182 sequences assigned
1233 (56.5%) exact matches, in which:
1108 unique CDR3
7 unique J



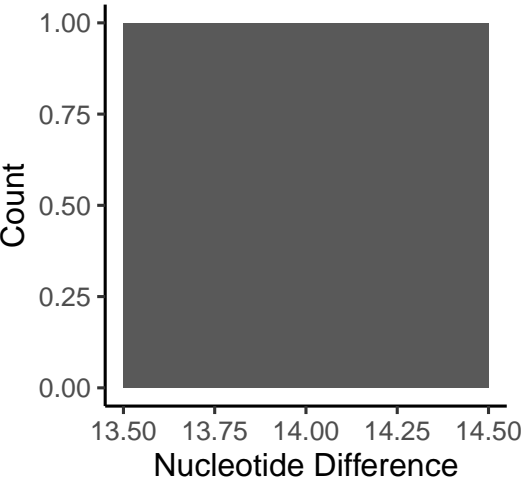
IGHV5-51*07

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



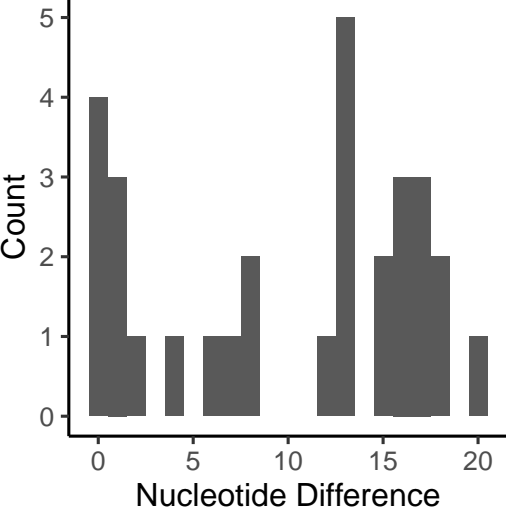
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



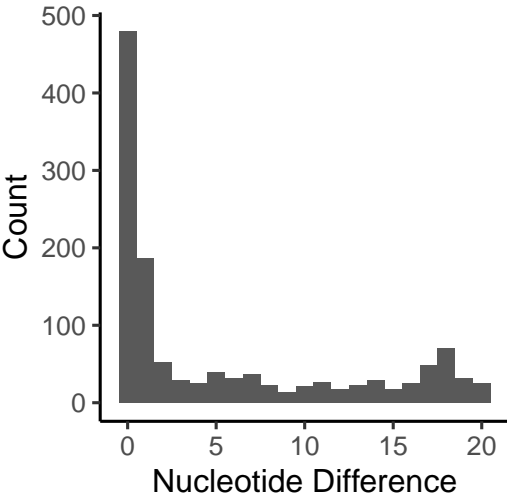
IGHV5-51*04

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



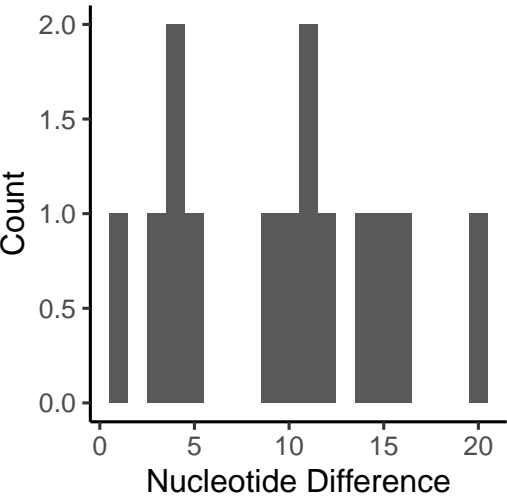
IGHV6-1*01_02

1727 sequences assigned
480 (27.8%) exact matches, in which:
470 unique CDR3
7 unique J



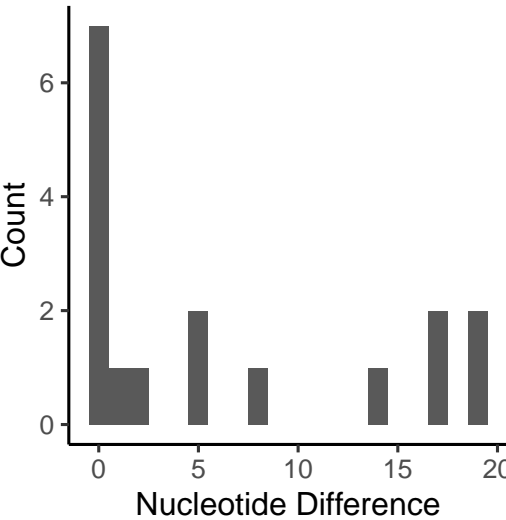
IGHV4/OR15-8*01

18 sequences assigned
No exact matches.



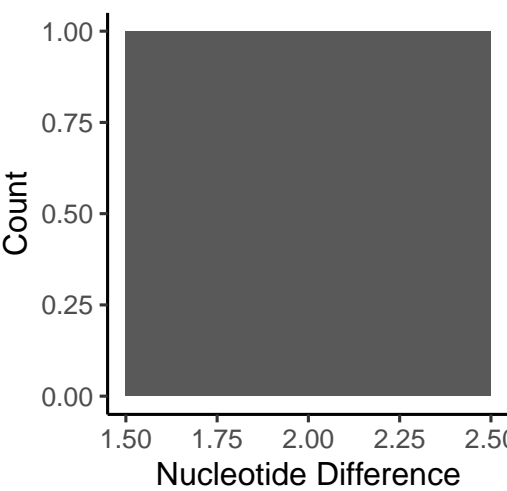
IGHV5-51*06

21 sequences assigned
7 (33.3%) exact matches, in which:
7 unique CDR3
3 unique J



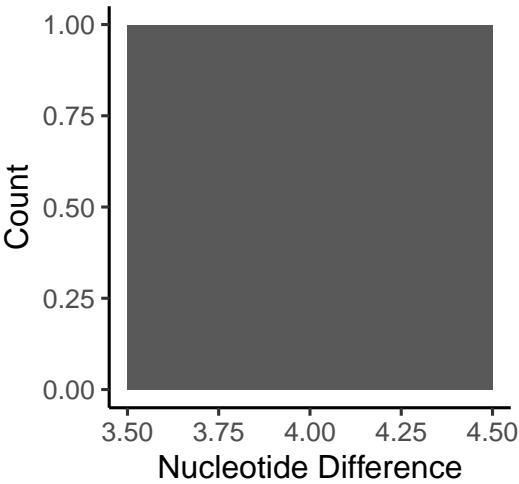
IGHV3/OR16-10*01_03

2 sequences assigned
No exact matches.



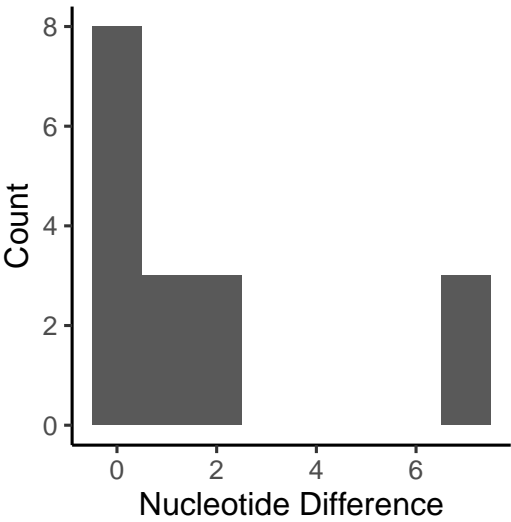
IGHV3/OR16-12*01

1 sequences assigned
No exact matches.



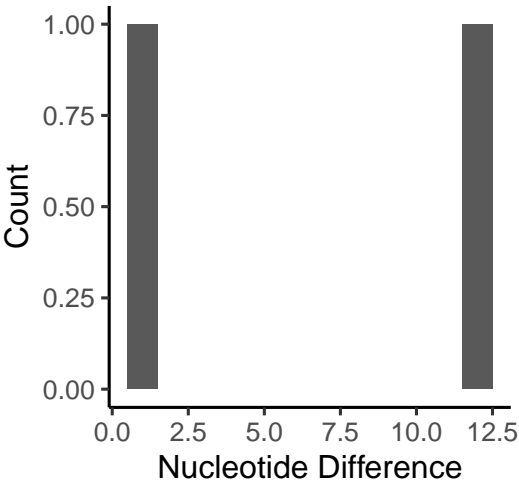
IGHV7-4-1*01

19 sequences assigned
8 (42.1%) exact matches, in which:
7 unique CDR3
3 unique J

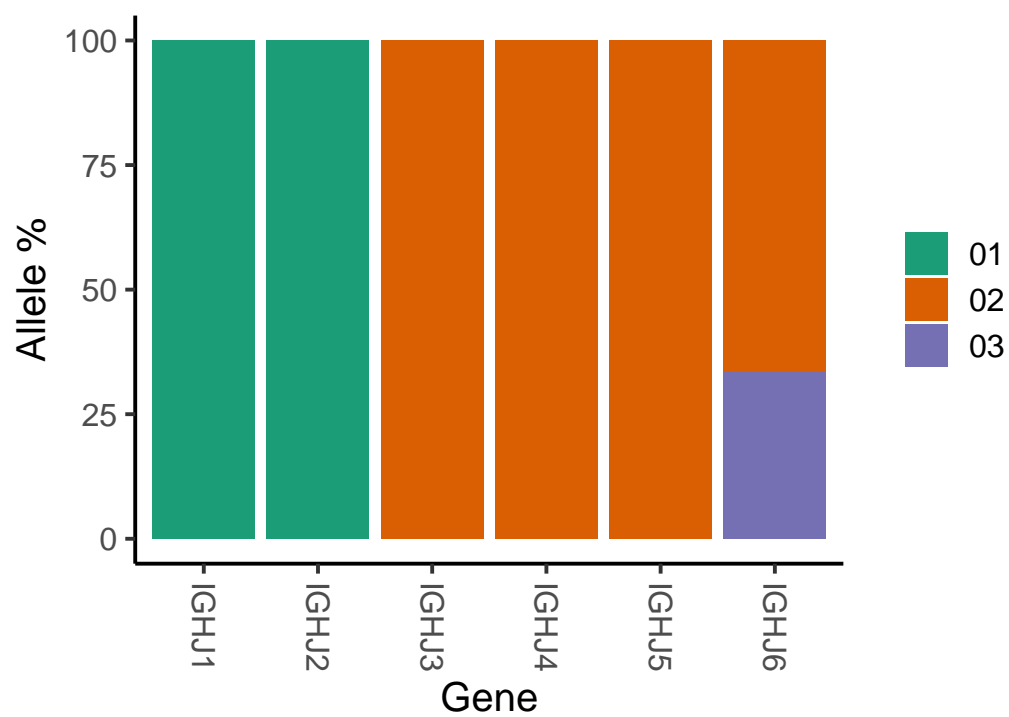


IGHV7-4-1*02

4 sequences assigned
No exact matches.



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]