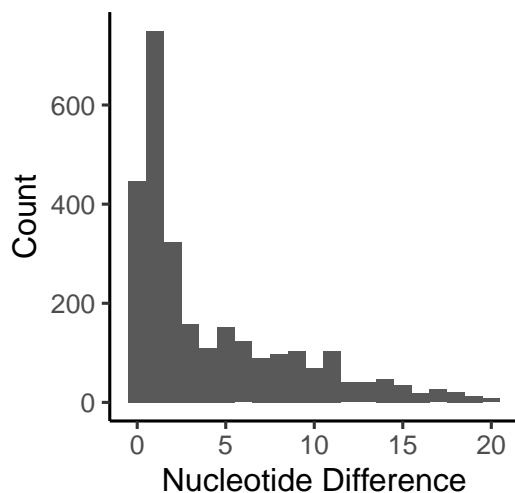


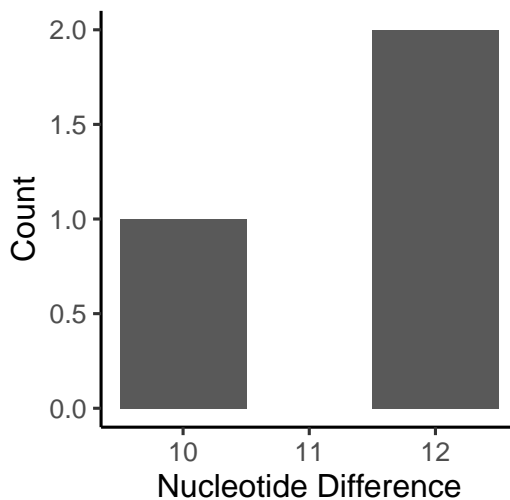
IGHV1-2*04

3045 sequences assigned
446 (14.6%) exact matches, in which:
352 unique CDR3
5 unique J



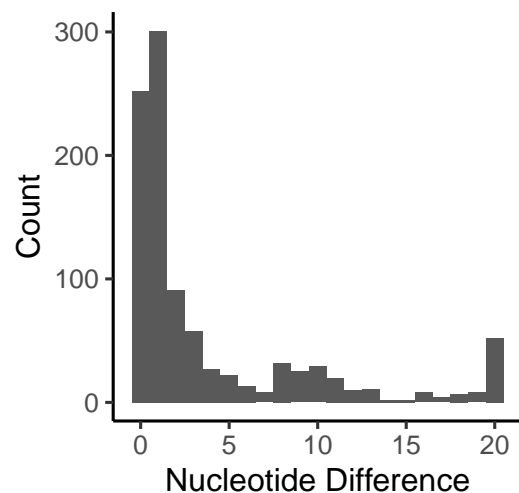
IGHV1-8*02

3 sequences assigned
No exact matches.



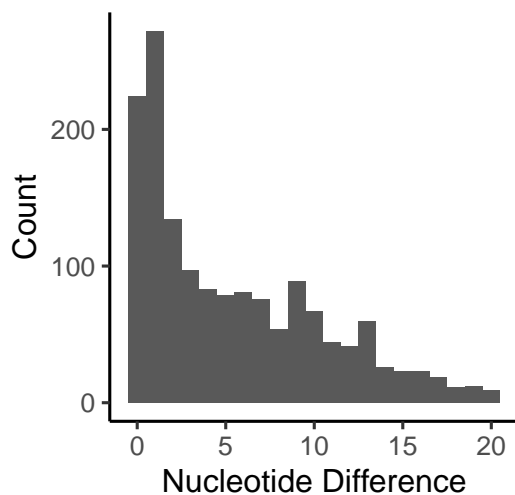
IGHV1-24*01

1177 sequences assigned
252 (21.4%) exact matches, in which:
189 unique CDR3
6 unique J



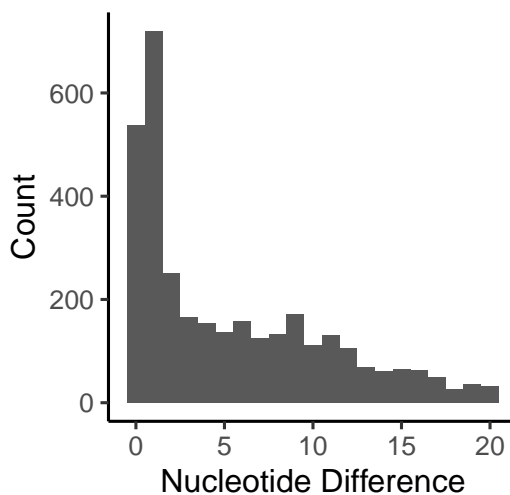
IGHV1-3*01_05

1805 sequences assigned
224 (12.4%) exact matches, in which:
168 unique CDR3
5 unique J



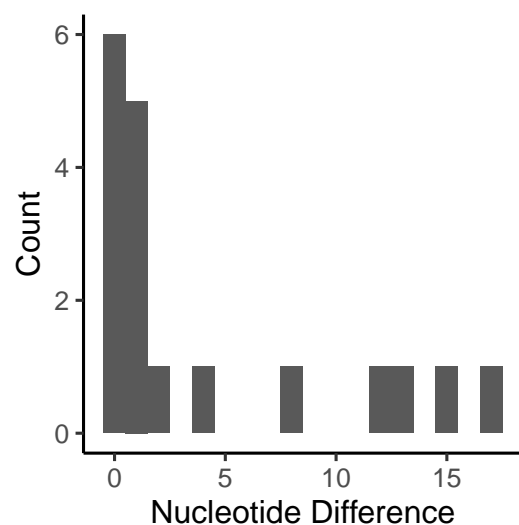
IGHV1-18*01

4777 sequences assigned
537 (11.2%) exact matches, in which:
426 unique CDR3
6 unique J



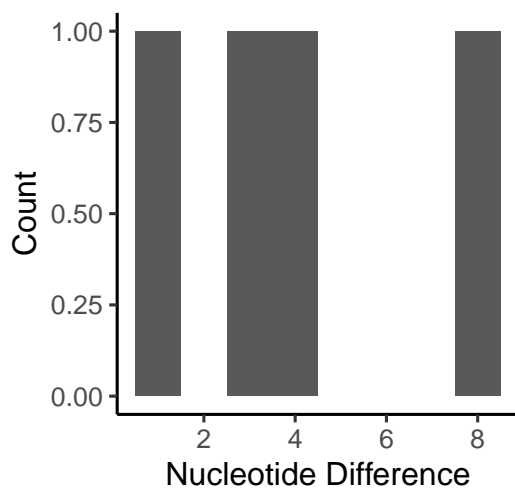
IGHV1-45*02

18 sequences assigned
6 (33.3%) exact matches, in which:
3 unique CDR3
2 unique J



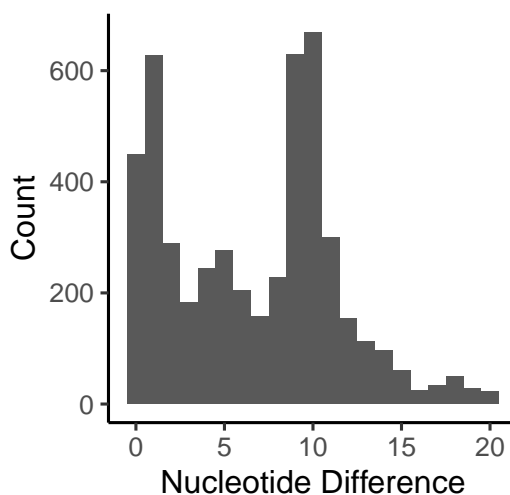
IGHV1-8*01

4 sequences assigned
No exact matches.



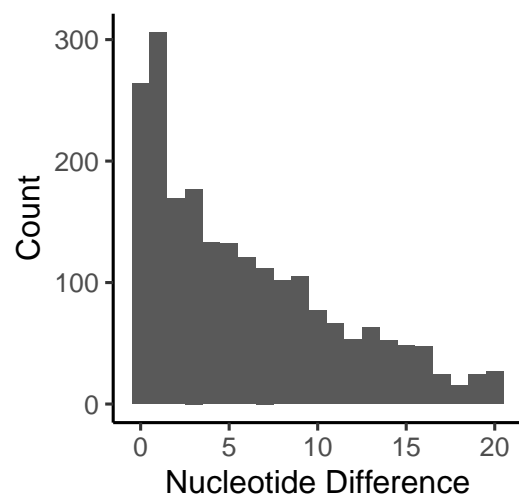
IGHV1-18*04

5391 sequences assigned
449 (8.3%) exact matches, in which:
367 unique CDR3
6 unique J



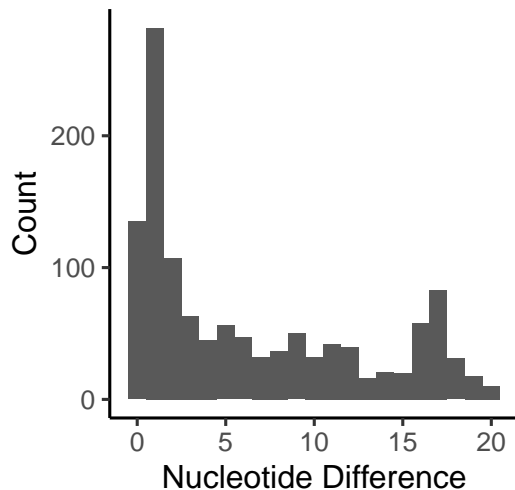
IGHV1-46*01

2734 sequences assigned
264 (9.7%) exact matches, in which:
210 unique CDR3
6 unique J



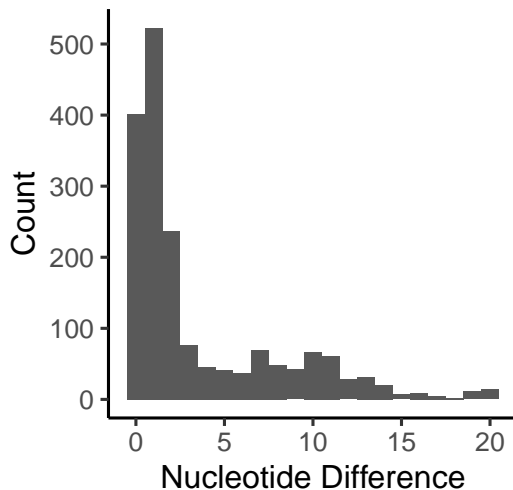
IGHV1-46*03

1283 sequences assigned
135 (10.5%) exact matches, in which:
101 unique CDR3
6 unique J



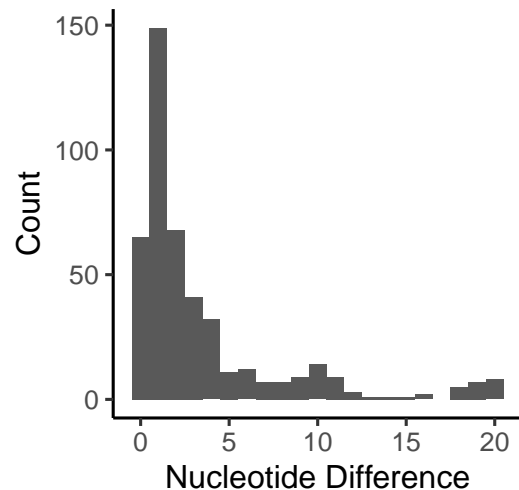
IGHV1-69*04_09

2358 sequences assigned
401 (17%) exact matches, in which:
335 unique CDR3
6 unique J



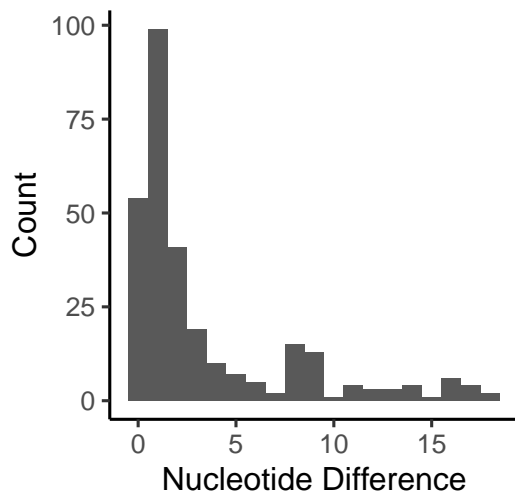
IGHV2-5*01

821 sequences assigned
65 (7.9%) exact matches, in which:
52 unique CDR3
6 unique J



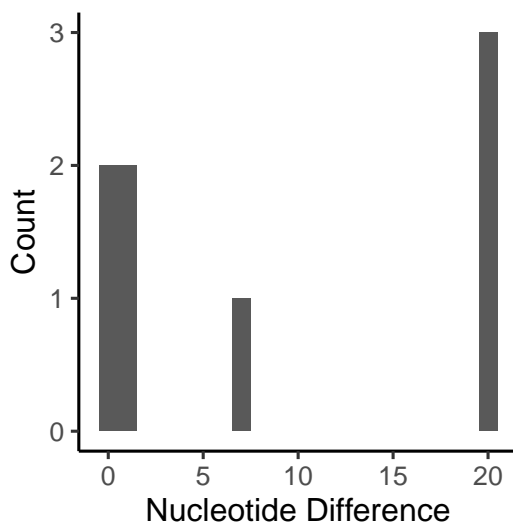
IGHV1-58*02

385 sequences assigned
54 (14%) exact matches, in which:
45 unique CDR3
5 unique J



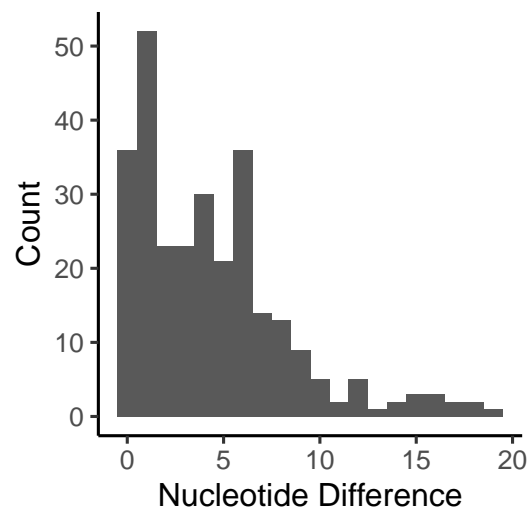
IGHV1-69D*01

26 sequences assigned
2 (7.7%) exact matches, in which:
2 unique CDR3
1 unique J



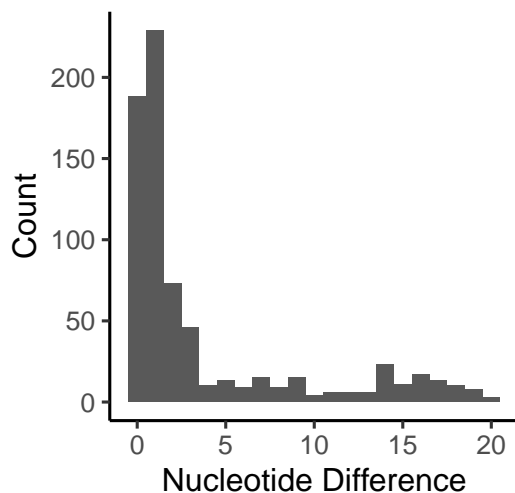
IGHV2-5*02

504 sequences assigned
36 (7.1%) exact matches, in which:
24 unique CDR3
4 unique J



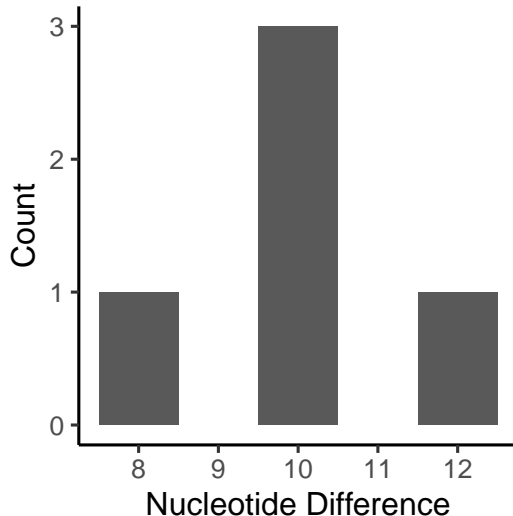
IGHV1-69*02

969 sequences assigned
188 (19.4%) exact matches, in which:
161 unique CDR3
5 unique J



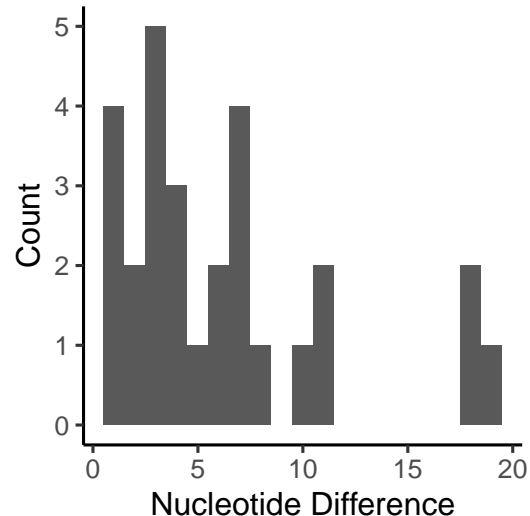
IGHV1-NL1*01

5 sequences assigned
No exact matches.



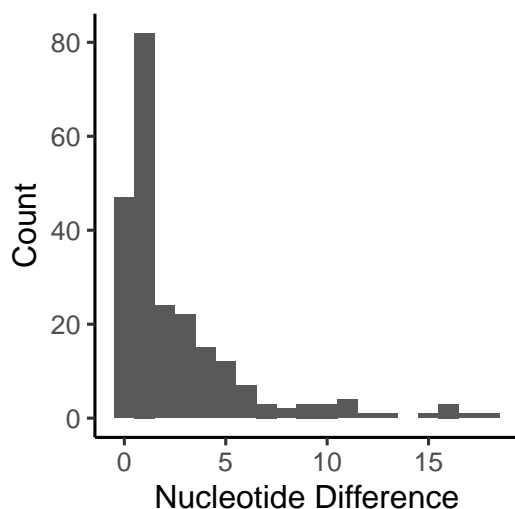
IGHV2-5*08

35 sequences assigned
No exact matches.



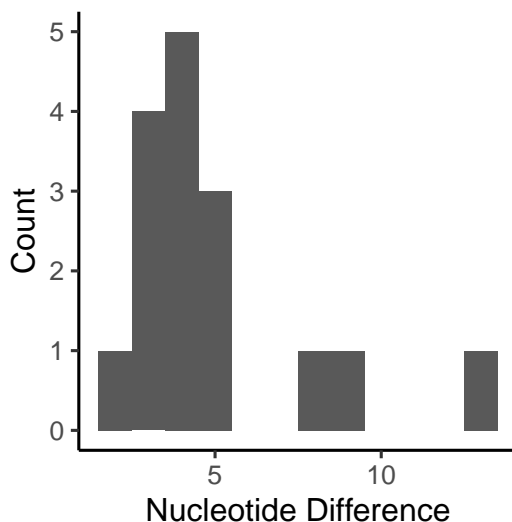
IGHV2-26*01

232 sequences assigned
47 (20.3%) exact matches, in which:
40 unique CDR3
5 unique J



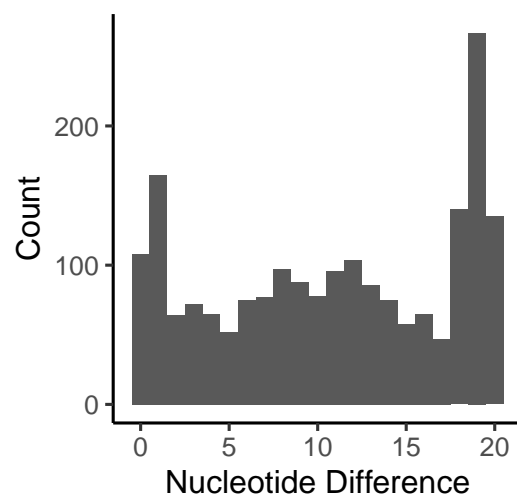
IGHV2-70D*04

17 sequences assigned
No exact matches.



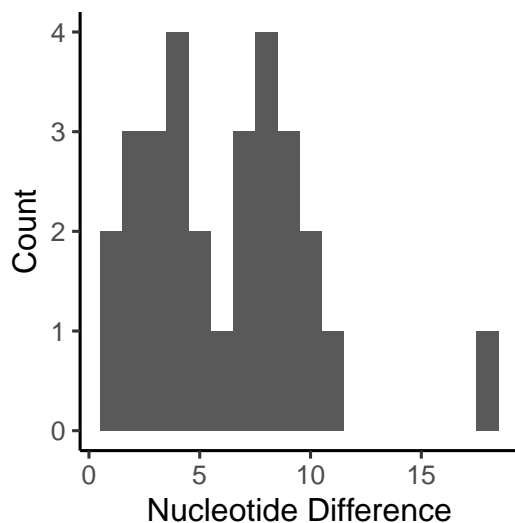
IGHV3-7*04

4393 sequences assigned
108 (2.5%) exact matches, in which:
68 unique CDR3
5 unique J



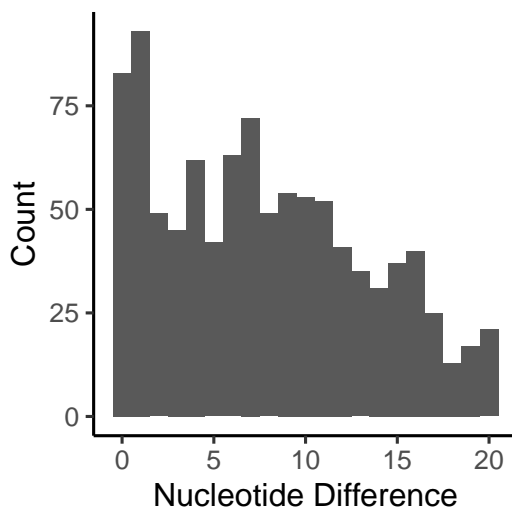
IGHV2-70*12

33 sequences assigned
No exact matches.



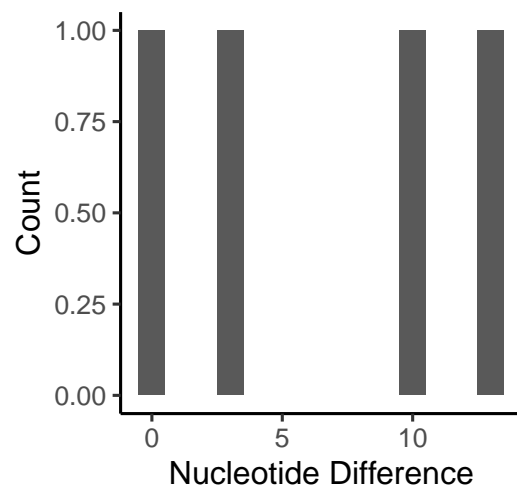
IGHV3-7*01

1198 sequences assigned
83 (6.9%) exact matches, in which:
74 unique CDR3
5 unique J



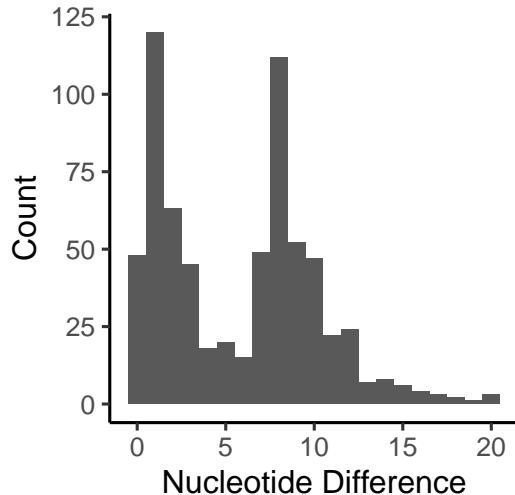
IGHV3-9*01

6 sequences assigned
1 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



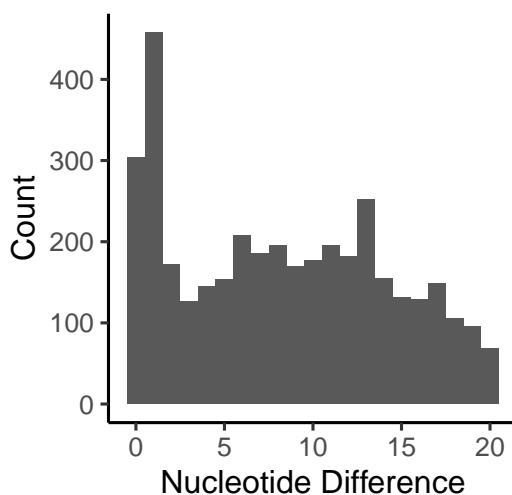
IGHV2-70*11_15

749 sequences assigned
48 (6.4%) exact matches, in which:
36 unique CDR3
4 unique J



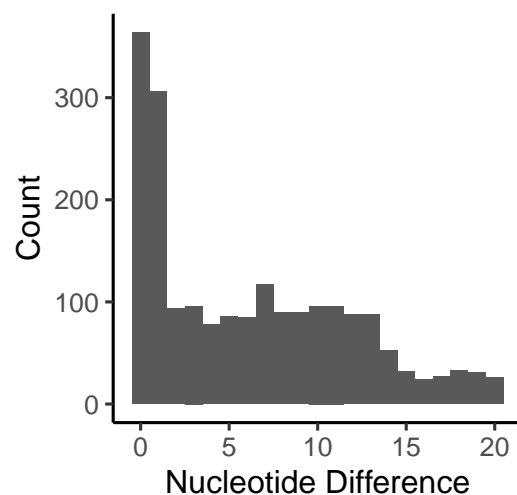
IGHV3-7*03

4570 sequences assigned
304 (6.7%) exact matches, in which:
211 unique CDR3
5 unique J



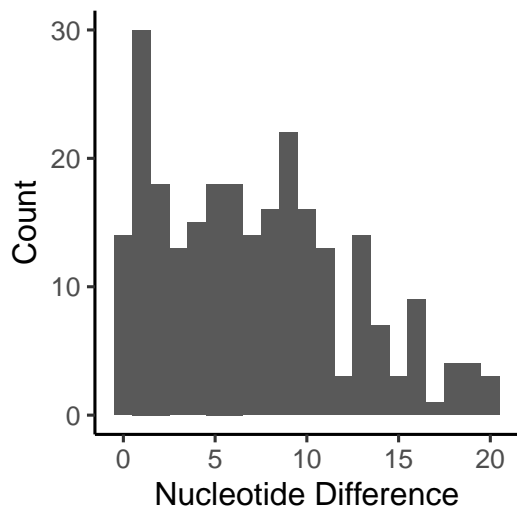
IGHV3-11*06

2187 sequences assigned
364 (16.6%) exact matches, in which:
256 unique CDR3
5 unique J



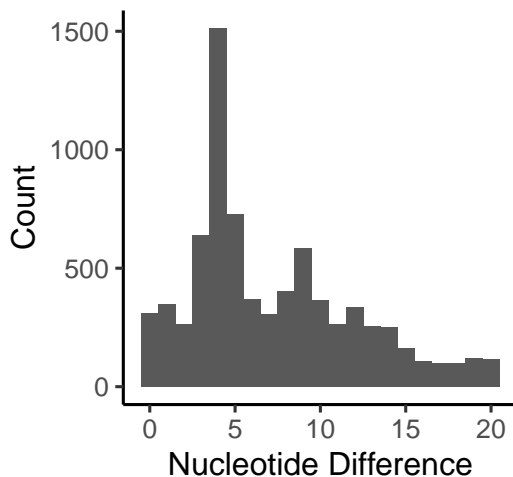
IGHV3-11*03_05

278 sequences assigned
14 (5%) exact matches, in which:
12 unique CDR3
4 unique J



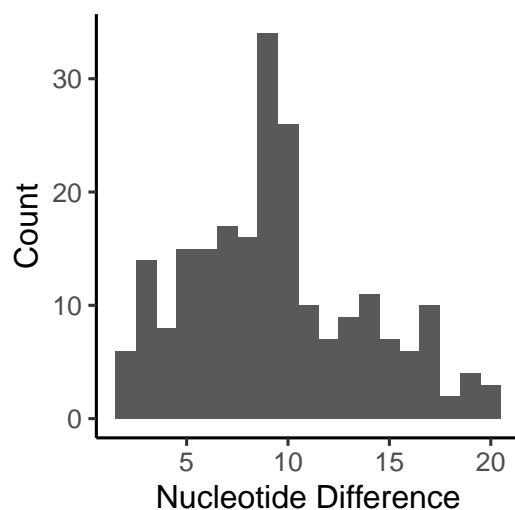
IGHV3-15*01_02

9300 sequences assigned
310 (3.3%) exact matches, in which:
189 unique CDR3
6 unique J



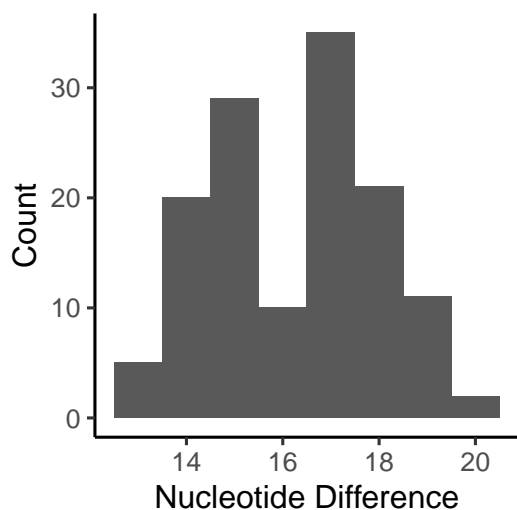
IGHV3-20*03_04

816 sequences assigned
No exact matches.



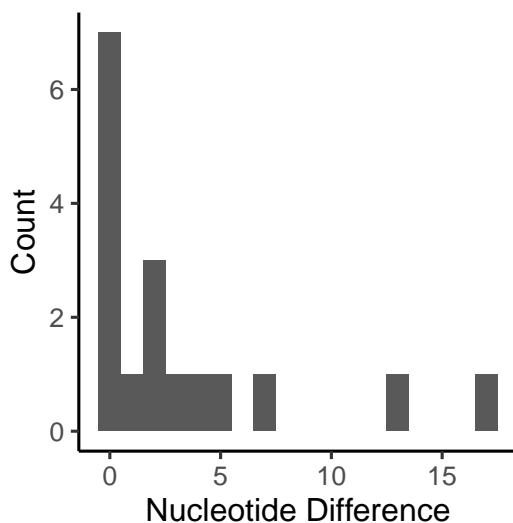
IGHV3-13*01

156 sequences assigned
No exact matches.



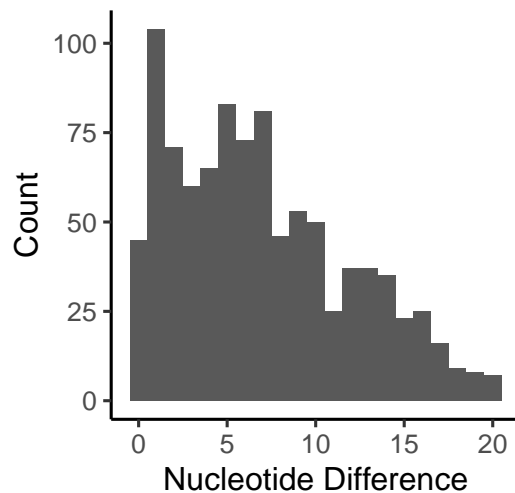
IGHV3-19*01

17 sequences assigned
7 (41.2%) exact matches, in which:
7 unique CDR3
3 unique J



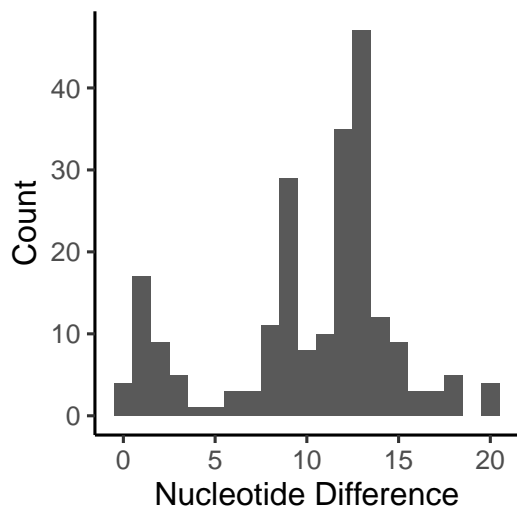
IGHV3-21*04

1138 sequences assigned
45 (4%) exact matches, in which:
40 unique CDR3
4 unique J



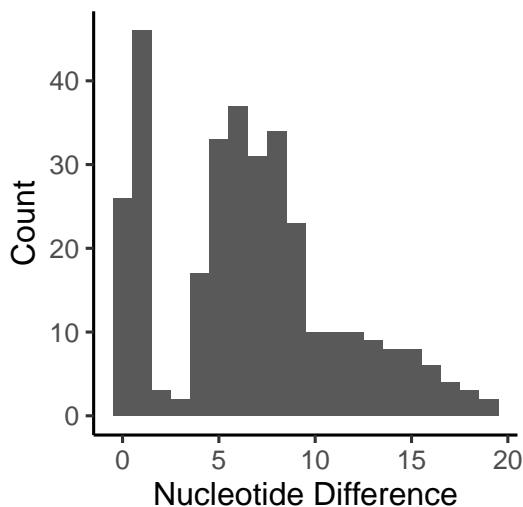
IGHV3-13*05

252 sequences assigned
4 (1.6%) exact matches, in which:
2 unique CDR3
2 unique J



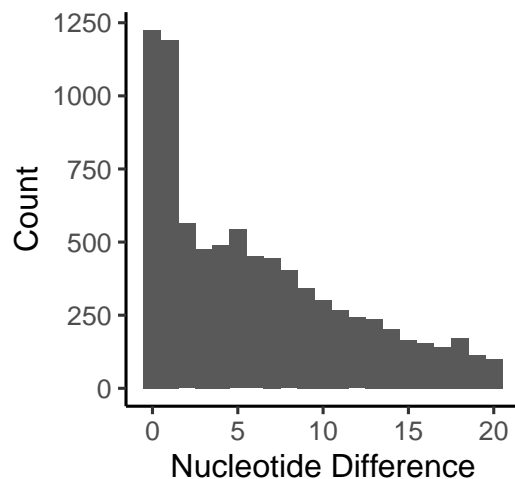
IGHV3-20*01_02

328 sequences assigned
26 (7.9%) exact matches, in which:
17 unique CDR3
3 unique J



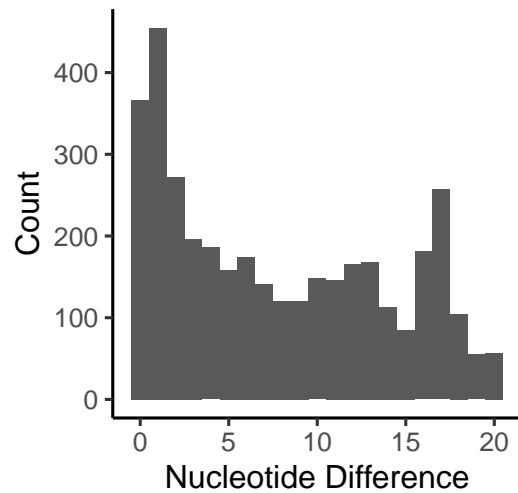
IGHV3-21*01_02

9856 sequences assigned
1225 (12.4%) exact matches, in which:
788 unique CDR3
6 unique J



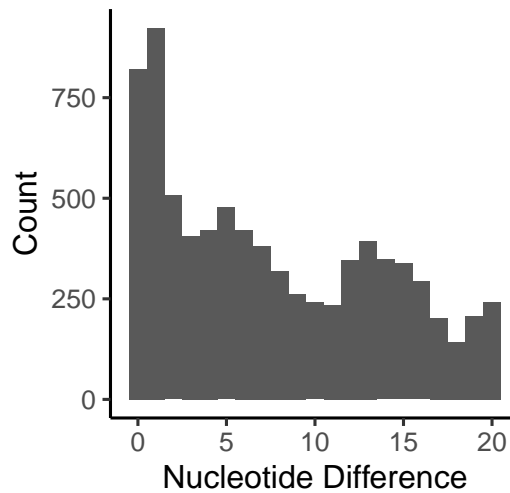
IGHV3-30-3*01

5092 sequences assigned
366 (7.2%) exact matches, in which:
241 unique CDR3
6 unique J



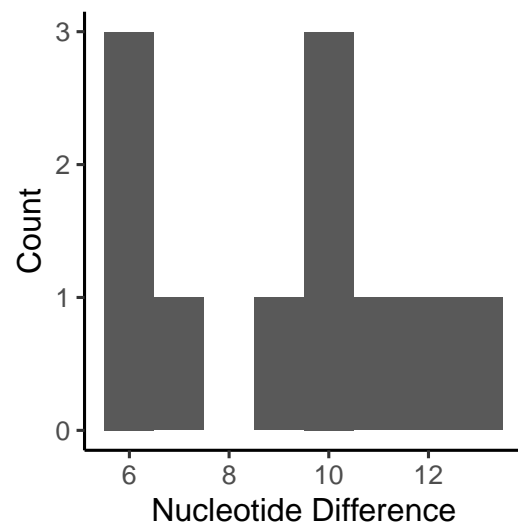
IGHV3-33*01

8871 sequences assigned
821 (9.3%) exact matches, in which:
541 unique CDR3
6 unique J



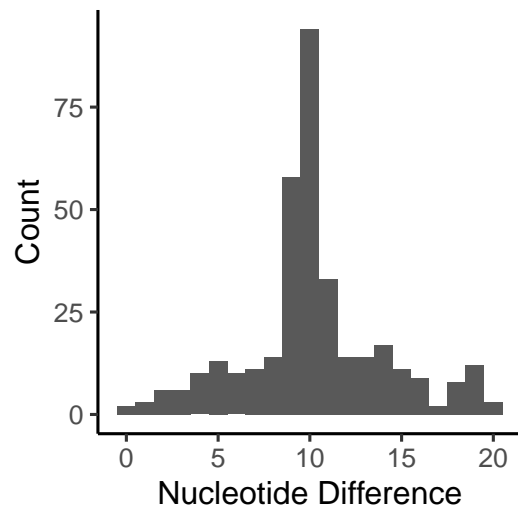
IGHV3-35*01

11 sequences assigned
No exact matches.



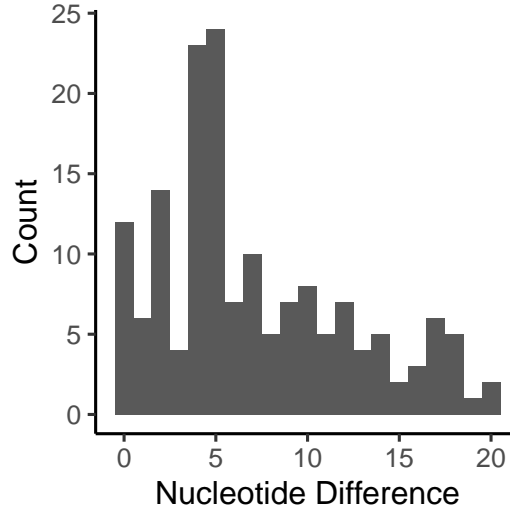
IGHV3-30-3*02

403 sequences assigned
2 (0.5%) exact matches, in which:
2 unique CDR3
2 unique J



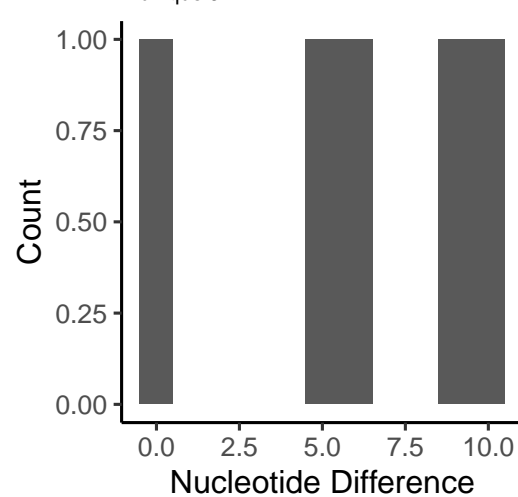
IGHV3-33*05

186 sequences assigned
12 (6.5%) exact matches, in which:
11 unique CDR3
2 unique J



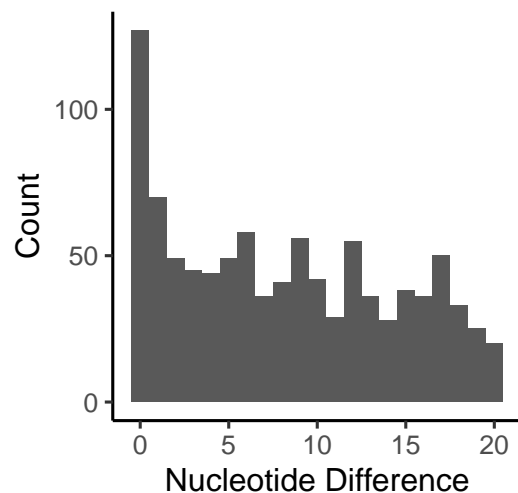
IGHV3-38*02

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



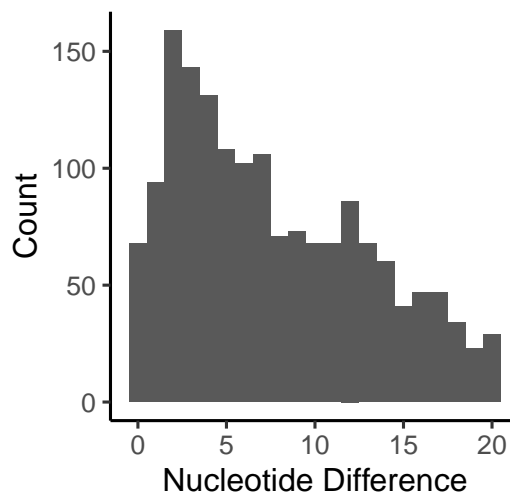
IGHV3-30*03

1298 sequences assigned
127 (9.8%) exact matches, in which:
117 unique CDR3
5 unique J



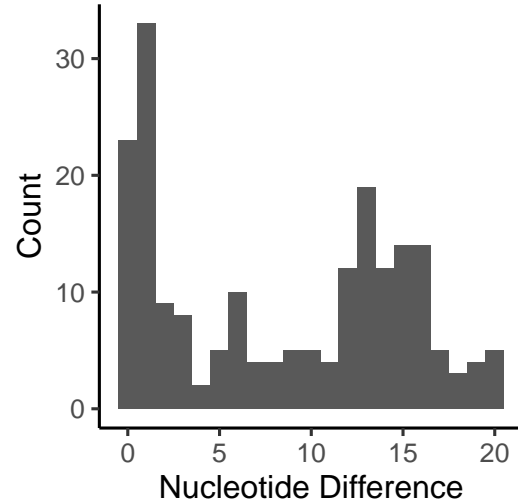
IGHV3-33*06

1727 sequences assigned
68 (3.9%) exact matches, in which:
64 unique CDR3
6 unique J



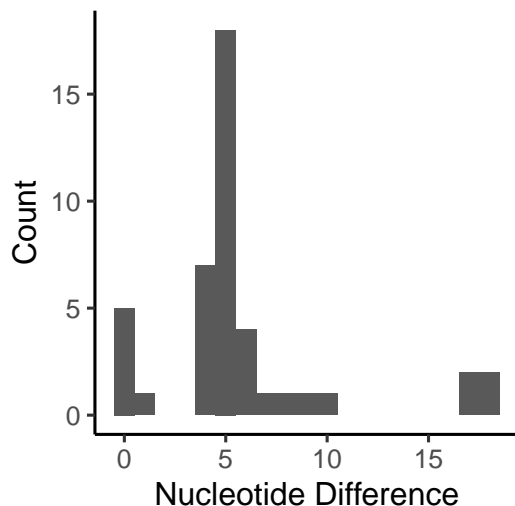
IGHV3-43*01

347 sequences assigned
23 (6.6%) exact matches, in which:
13 unique CDR3
3 unique J



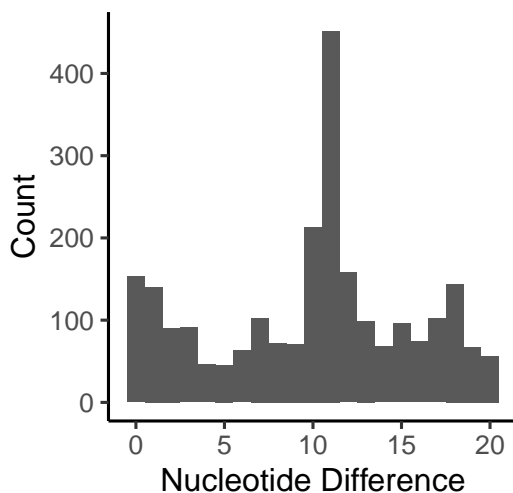
IGHV3-47*02

43 sequences assigned
5 (11.6%) exact matches, in which:
3 unique CDR3
1 unique J



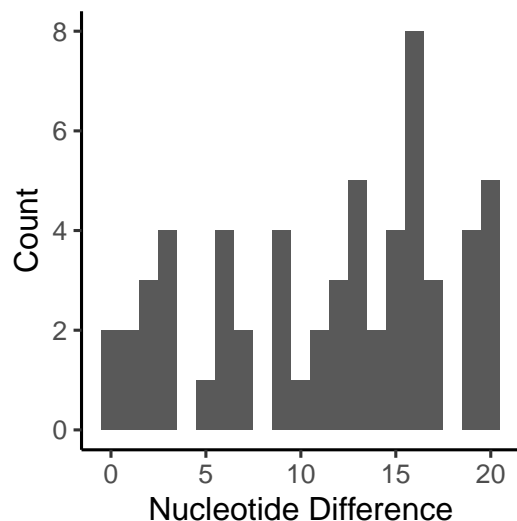
IGHV3-49*03_05

2961 sequences assigned
153 (5.2%) exact matches, in which:
84 unique CDR3
5 unique J



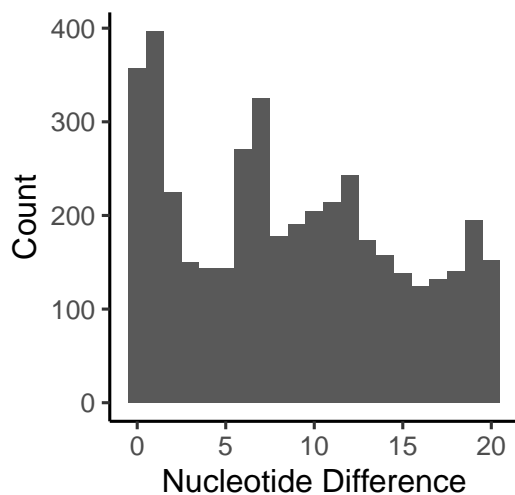
IGHV3-53*05

65 sequences assigned
2 (3.1%) exact matches, in which:
2 unique CDR3
1 unique J



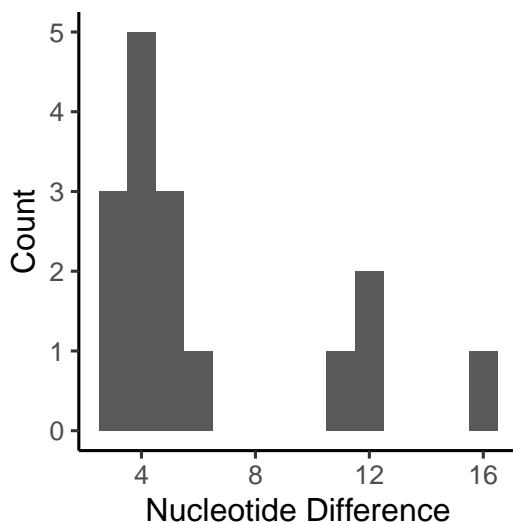
IGHV3-48*01

5648 sequences assigned
357 (6.3%) exact matches, in which:
256 unique CDR3
6 unique J



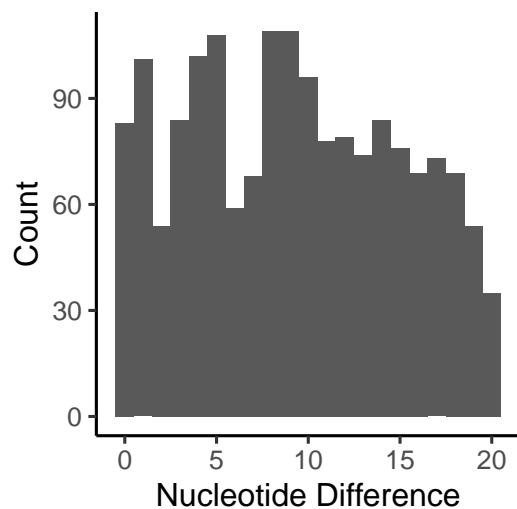
IGHV3-52*01_03

16 sequences assigned
No exact matches.



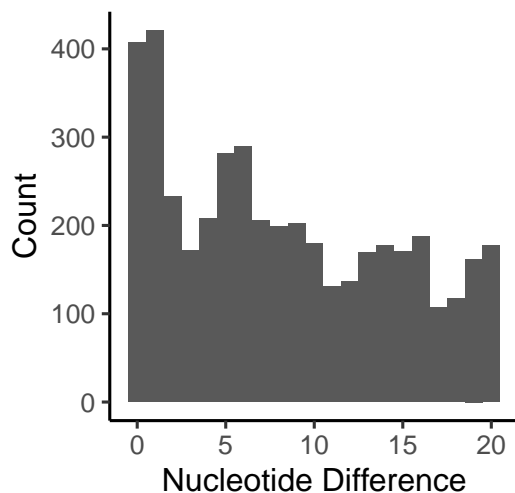
IGHV3-53*01_02

1877 sequences assigned
83 (4.4%) exact matches, in which:
60 unique CDR3
5 unique J



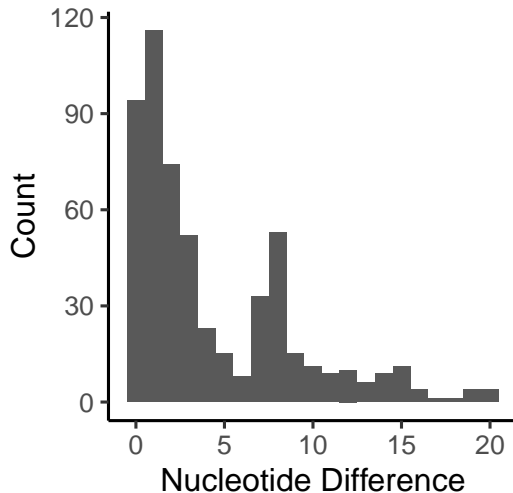
IGHV3-48*04

7040 sequences assigned
407 (5.8%) exact matches, in which:
300 unique CDR3
6 unique J



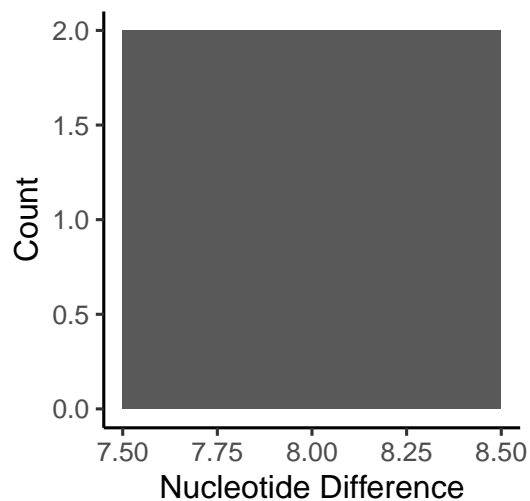
IGHV3-53*04

1099 sequences assigned
94 (8.6%) exact matches, in which:
60 unique CDR3
5 unique J



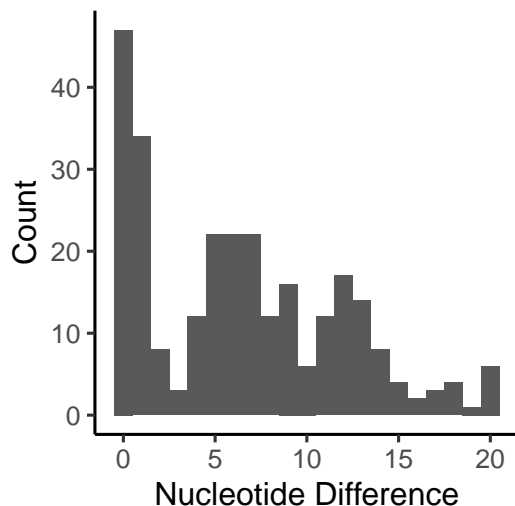
IGHV3-62*03

2 sequences assigned
No exact matches.



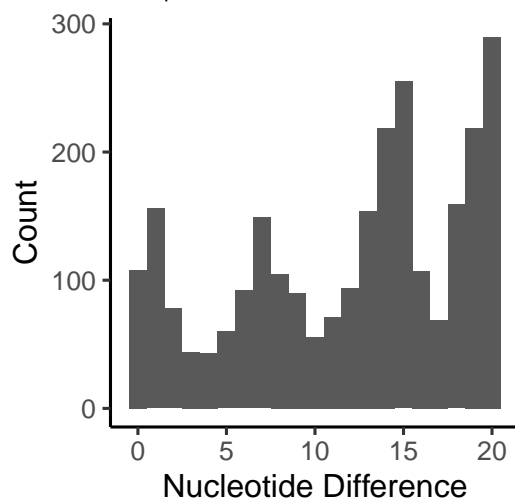
IGHV3-64*01

298 sequences assigned
47 (15.8%) exact matches, in which:
30 unique CDR3
6 unique J



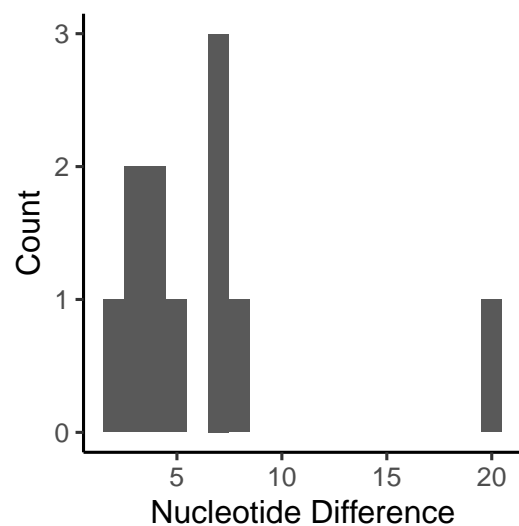
IGHV3-66*02

4065 sequences assigned
108 (2.7%) exact matches, in which:
74 unique CDR3
5 unique J



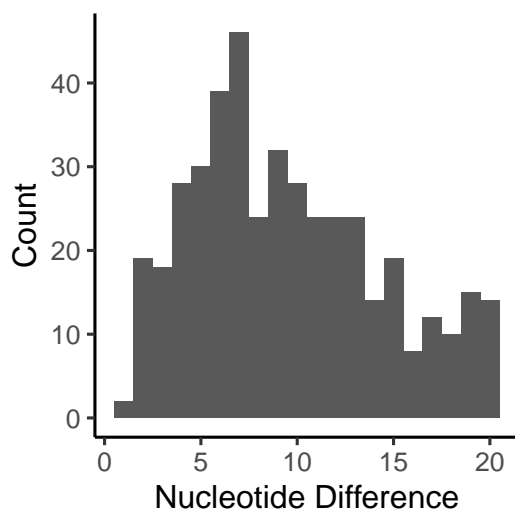
IGHV3-69-1*02

19 sequences assigned
No exact matches.



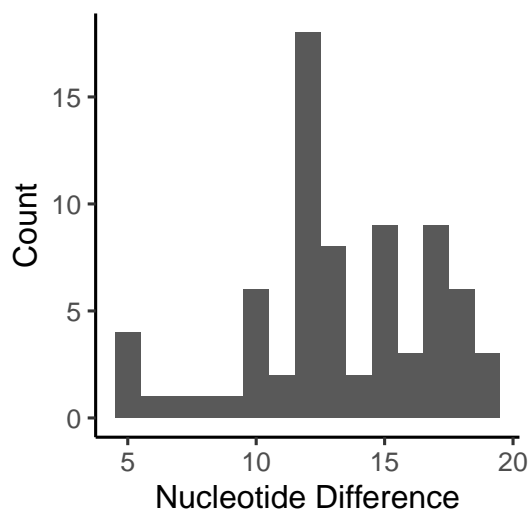
IGHV3-64*04

492 sequences assigned
No exact matches.



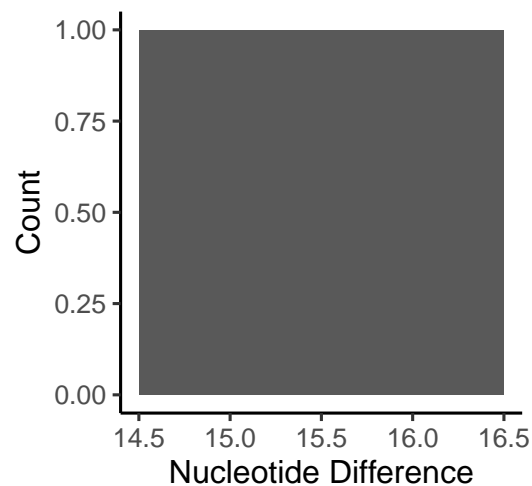
IGHV3-66*03

100 sequences assigned
No exact matches.



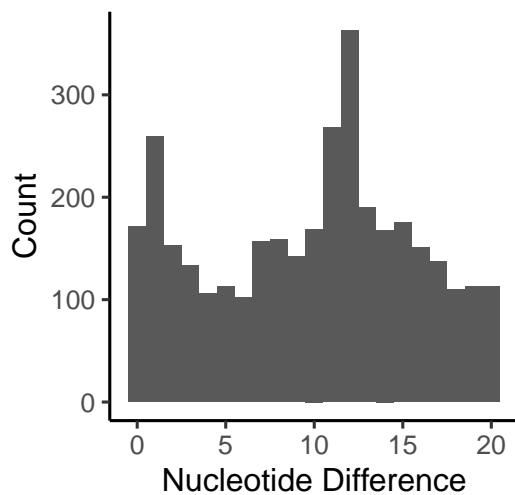
IGHV3-71*01_04

2 sequences assigned
No exact matches.



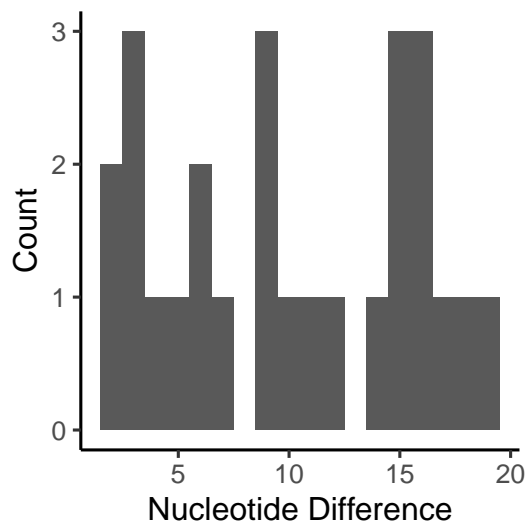
IGHV3-66*01

5298 sequences assigned
171 (3.2%) exact matches, in which:
118 unique CDR3
6 unique J



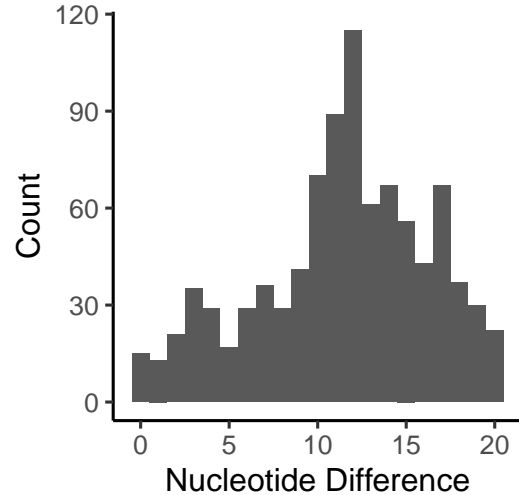
IGHV3-69-1*01

53 sequences assigned
No exact matches.



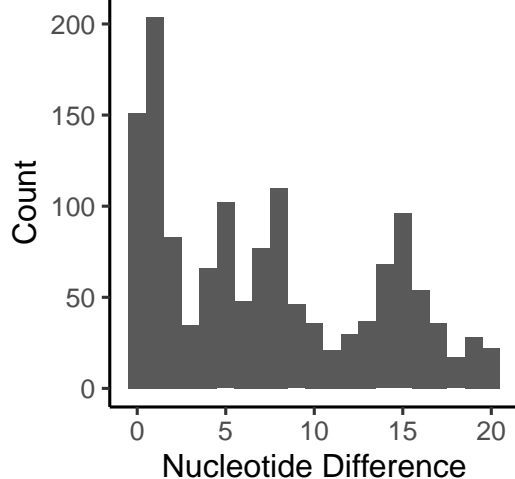
IGHV3-72*01

1660 sequences assigned
15 (0.9%) exact matches, in which:
11 unique CDR3
3 unique J



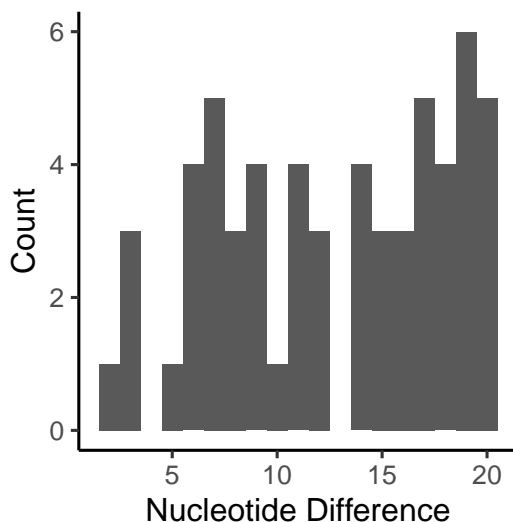
IGHV3-73*01_02

1517 sequences assigned
151 (10%) exact matches, in which:
92 unique CDR3
5 unique J



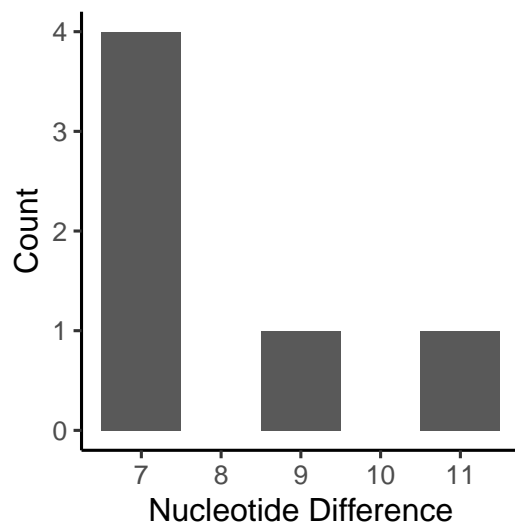
IGHV3-NL1*01

129 sequences assigned
No exact matches.



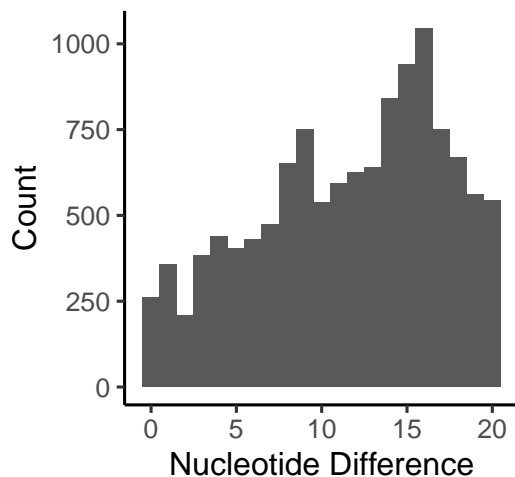
IGHV4-28*01_07

23 sequences assigned
No exact matches.



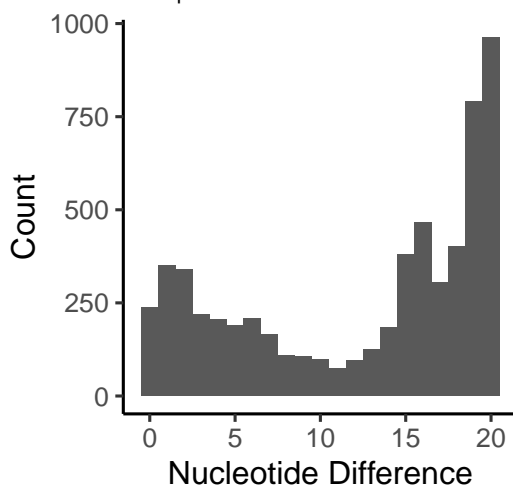
IGHV3-74*01_02

15738 sequences assigned
262 (1.7%) exact matches, in which:
177 unique CDR3
6 unique J



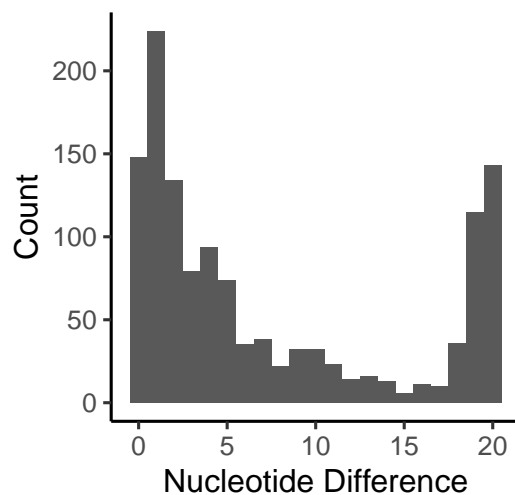
IGHV4-4*07

8702 sequences assigned
237 (2.7%) exact matches, in which:
188 unique CDR3
6 unique J



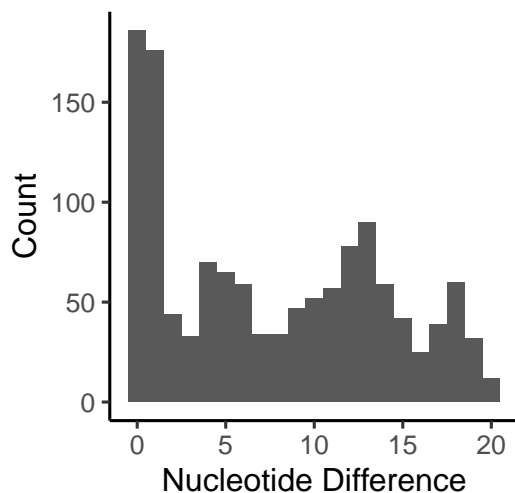
IGHV4-30-2*01

1467 sequences assigned
148 (10.1%) exact matches, in which:
105 unique CDR3
6 unique J



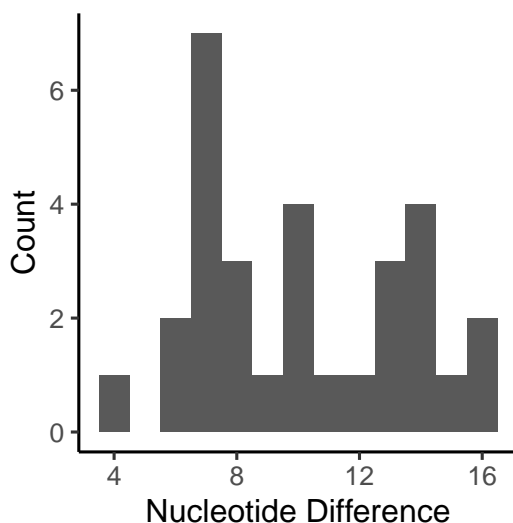
IGHV3-64D*06

1747 sequences assigned
186 (10.6%) exact matches, in which:
115 unique CDR3
6 unique J



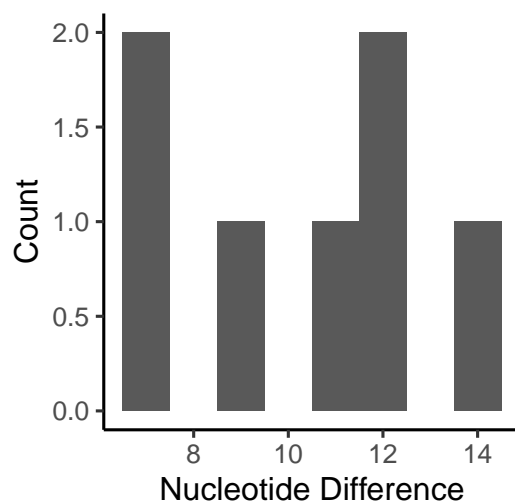
IGHV4-28*03

33 sequences assigned
No exact matches.



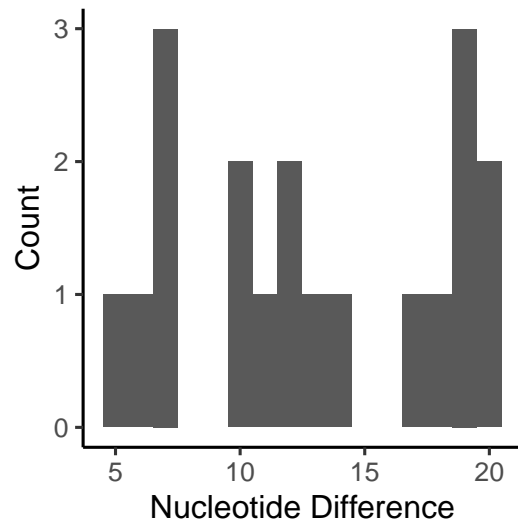
IGHV4-30-4*01

20 sequences assigned
No exact matches.



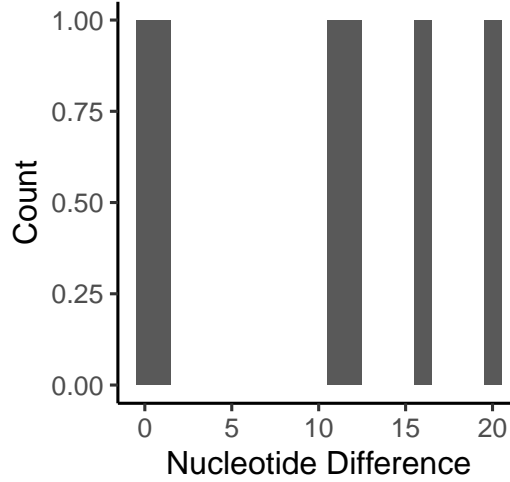
IGHV4-30-4*08

26 sequences assigned
No exact matches.



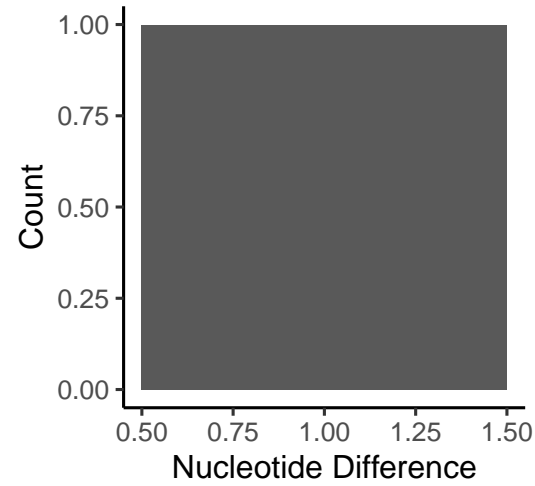
IGHV4-38-2*02

8 sequences assigned
1 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



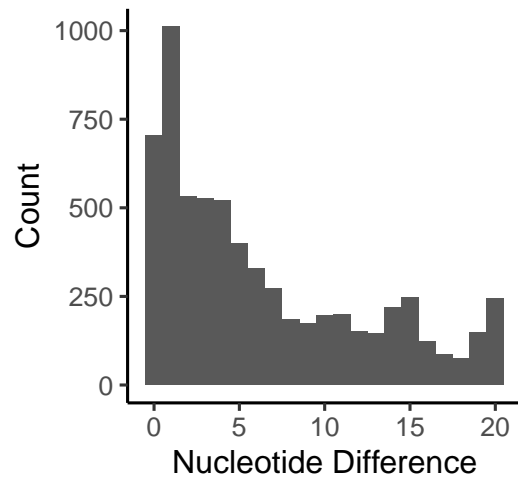
IGHV4-55*01_05

1 sequences assigned
No exact matches.



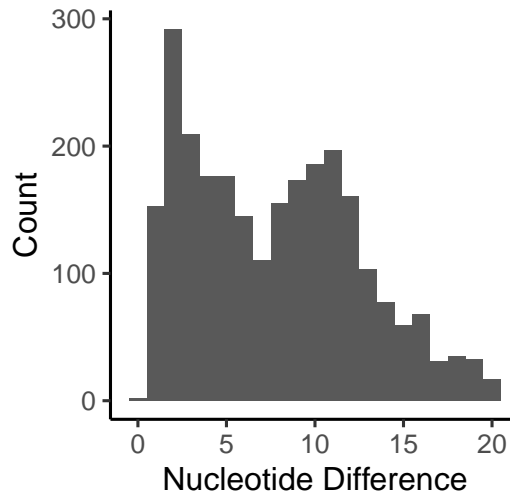
IGHV4-31*03_04

7956 sequences assigned
703 (8.8%) exact matches, in which:
550 unique CDR3
6 unique J



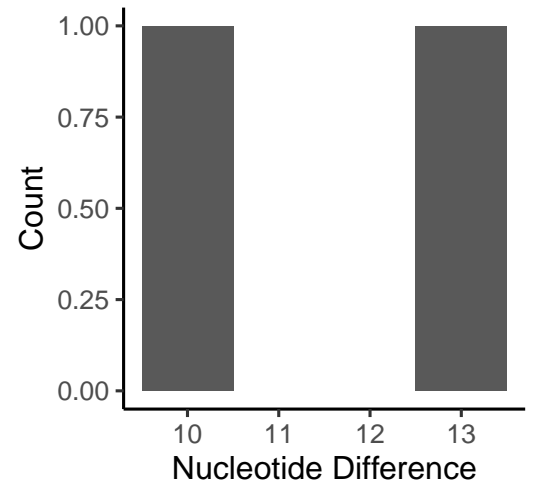
IGHV4-39*07

2722 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
2 unique J



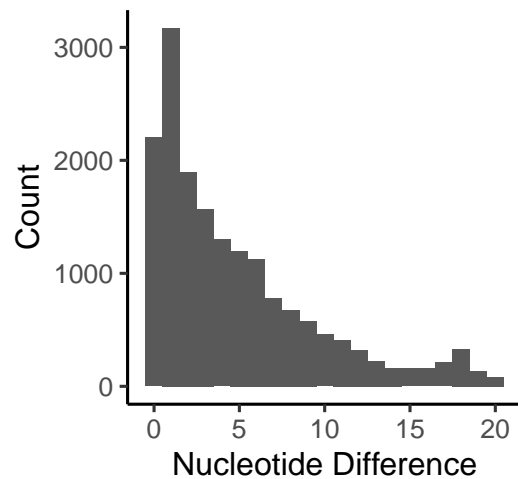
IGHV4-55*02_04_08

2 sequences assigned
No exact matches.



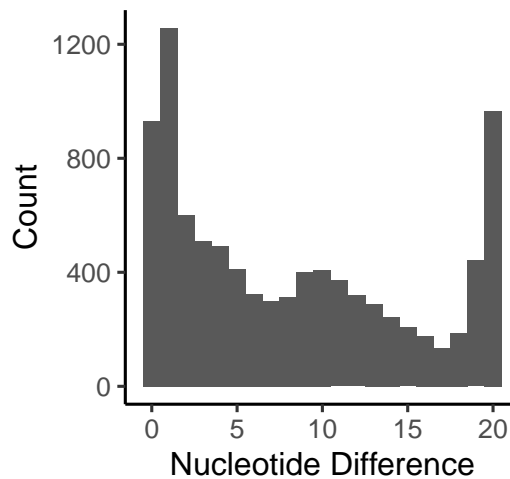
IGHV4-34*01_02

18225 sequences assigned
2203 (12.1%) exact matches, in which:
1465 unique CDR3
6 unique J



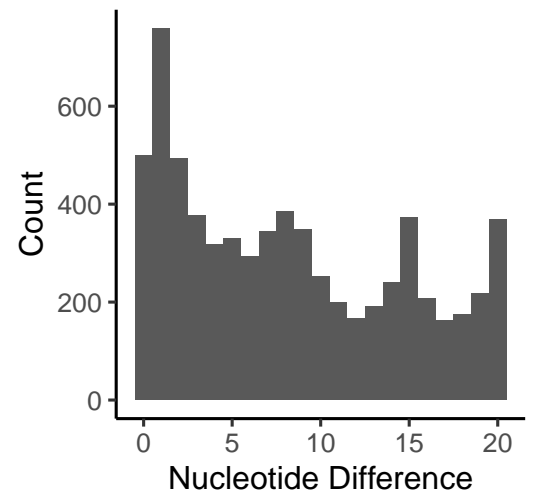
IGHV4-39*01_05

13297 sequences assigned
931 (7%) exact matches, in which:
693 unique CDR3
6 unique J



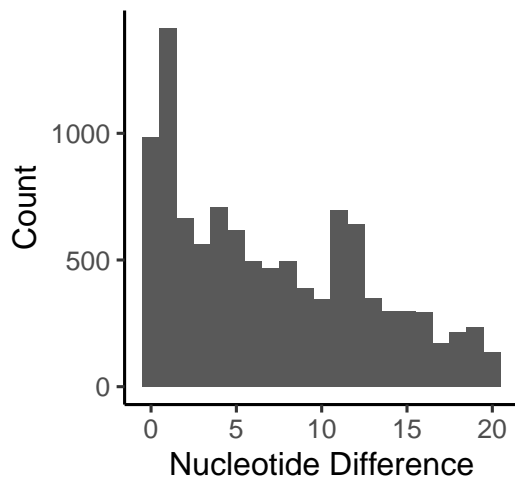
IGHV4-59*08

7302 sequences assigned
499 (6.8%) exact matches, in which:
374 unique CDR3
6 unique J



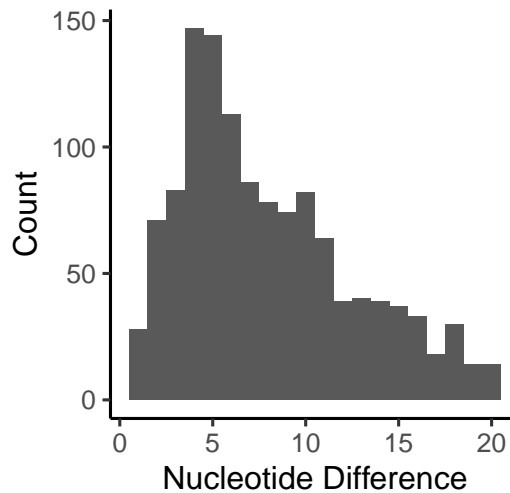
IGHV4-59*01_07

11934 sequences assigned
984 (8.2%) exact matches, in which:
771 unique CDR3
6 unique J



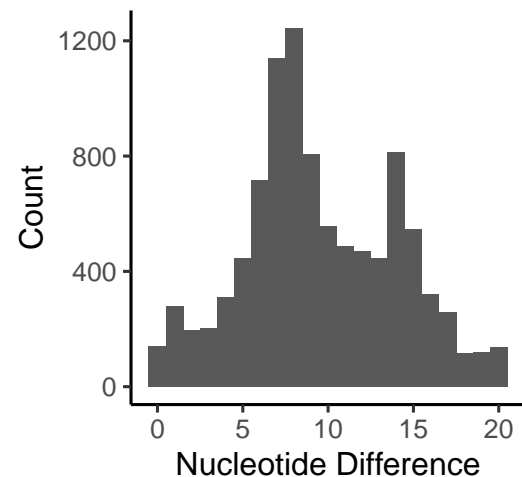
IGHV4-61*08

1415 sequences assigned
No exact matches.



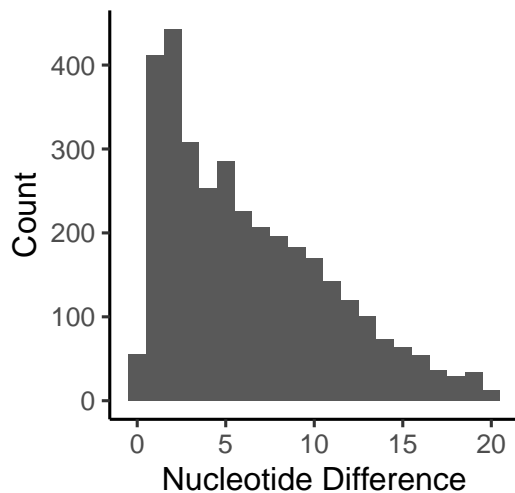
IGHV6-1*01_02

10014 sequences assigned
140 (1.4%) exact matches, in which:
112 unique CDR3
5 unique J



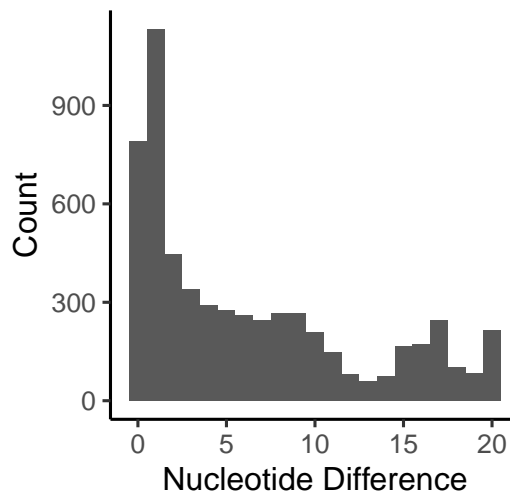
IGHV4-59*12

3575 sequences assigned
55 (1.5%) exact matches, in which:
54 unique CDR3
4 unique J



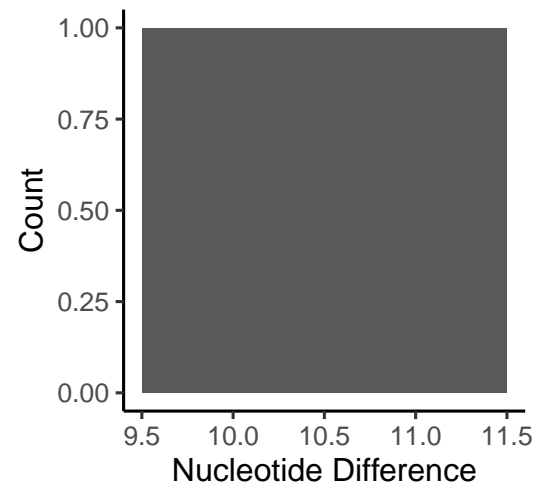
IGHV5-10-1*01_03

7684 sequences assigned
792 (10.3%) exact matches, in which:
470 unique CDR3
6 unique J



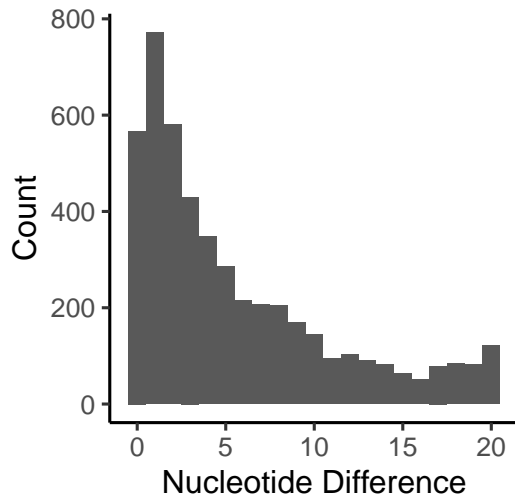
IGHV7-4-1*02

2 sequences assigned
No exact matches.



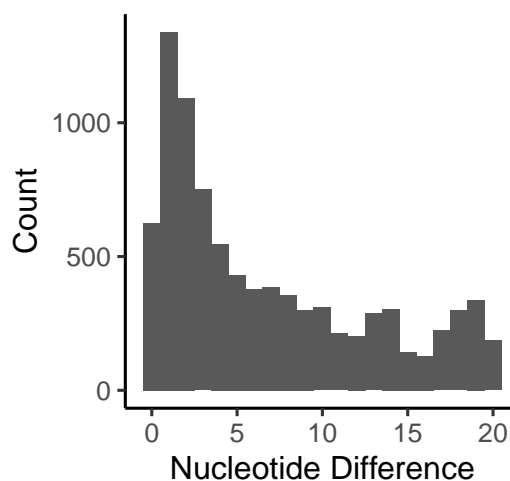
IGHV4-61*02

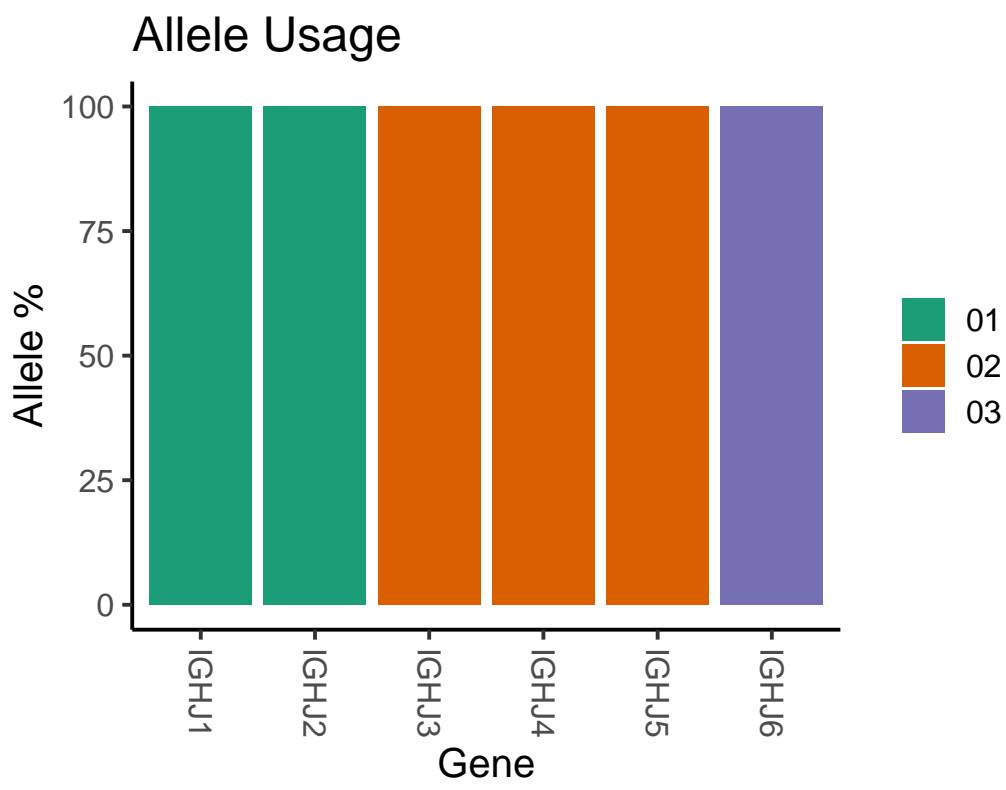
6845 sequences assigned
567 (8.3%) exact matches, in which:
451 unique CDR3
6 unique J



IGHV5-51*01_03

10371 sequences assigned
625 (6%) exact matches, in which:
364 unique CDR3
6 unique J





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

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s)IGHV3-33*01_G75CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-33*01_G75CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-30*03_T288CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s)IGHV1-69*04_09_G112AIGHV4-59*02_G88AIGHV5-10-1*01_03_T258CIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV1-69*08_C191TIGHV3-48*03_T303GIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s)IGHV3-30*03_T288CIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning:IGHV4-31*02,IGHV4-31*03_04 have identical germline sequences.

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

Novel sequence(s)IGHV1-69*04_09_G112A are not listed in the genotype and will be ignored.