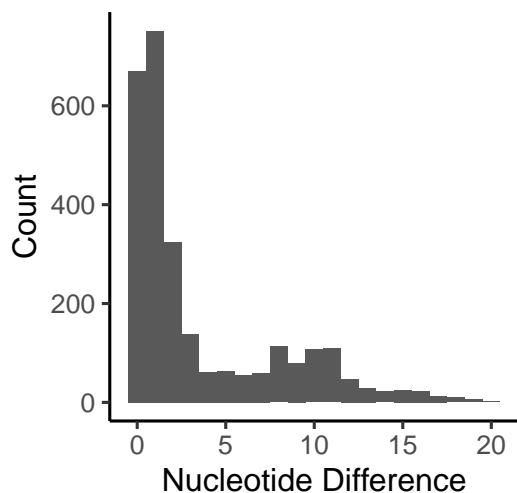


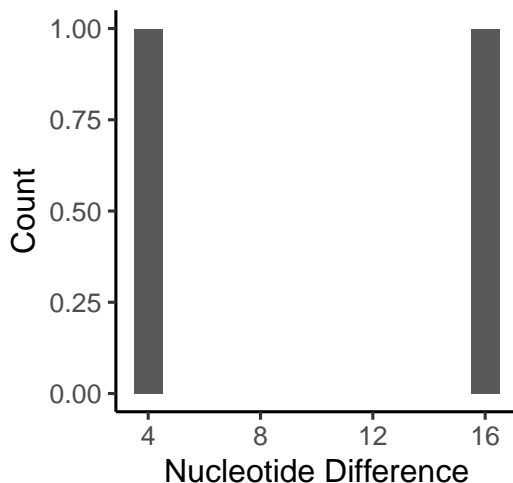
IGHV1-2*04

3597 sequences assigned
670 (18.6%) exact matches, in which:
570 unique CDR3
6 unique J



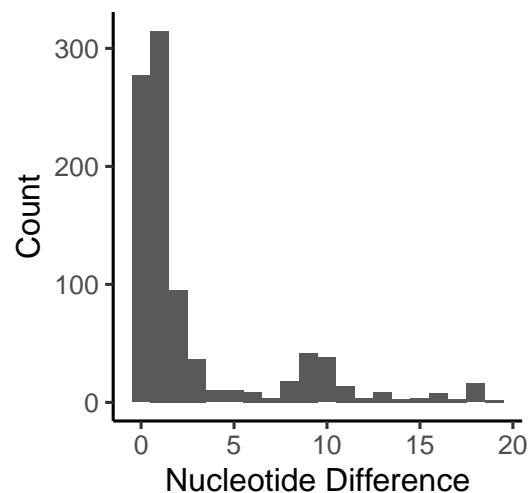
IGHV1-8*02

2 sequences assigned
No exact matches.



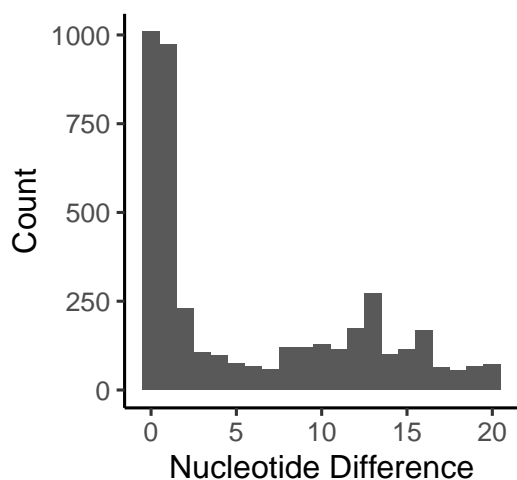
IGHV1-24*01

933 sequences assigned
277 (29.7%) exact matches, in which:
230 unique CDR3
6 unique J



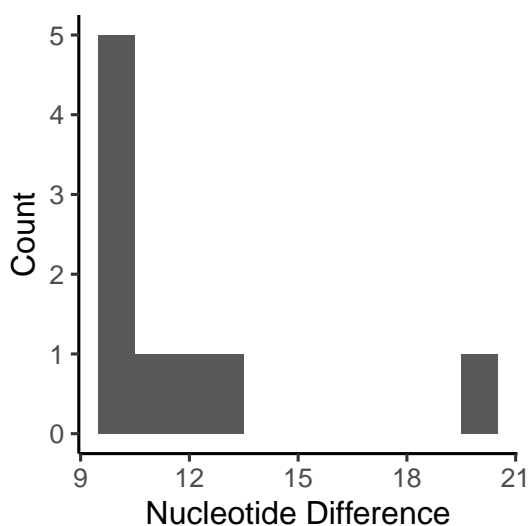
IGHV1-3*01_05

4539 sequences assigned
1009 (22.2%) exact matches, in which:
831 unique CDR3
6 unique J



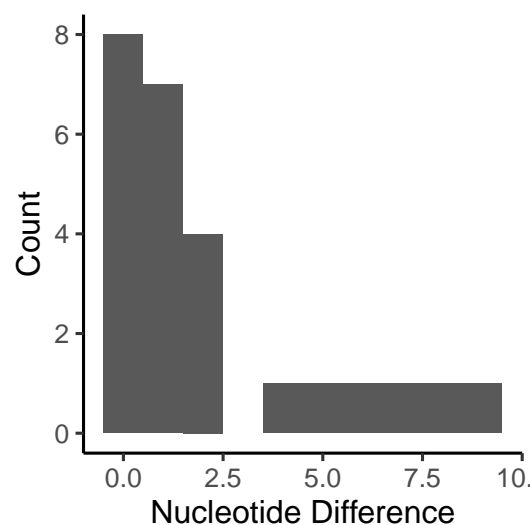
IGHV1-8*03

10 sequences assigned
No exact matches.



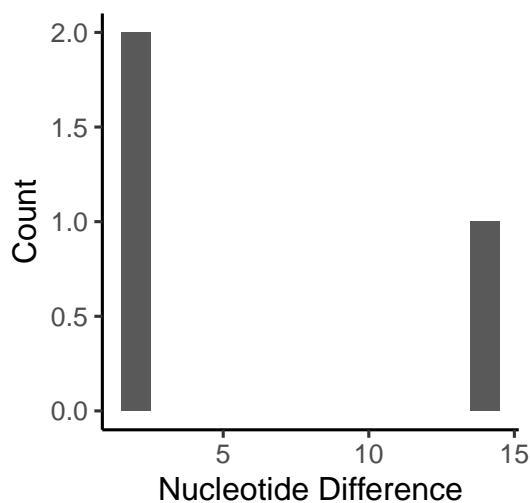
IGHV1-45*02

25 sequences assigned
8 (32%) exact matches, in which:
7 unique CDR3
4 unique J



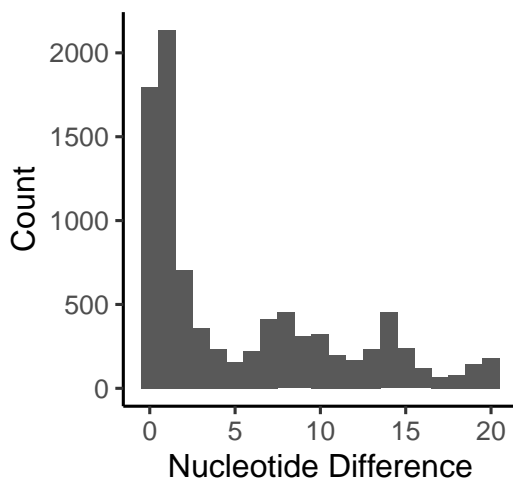
IGHV1-8*01

4 sequences assigned
No exact matches.



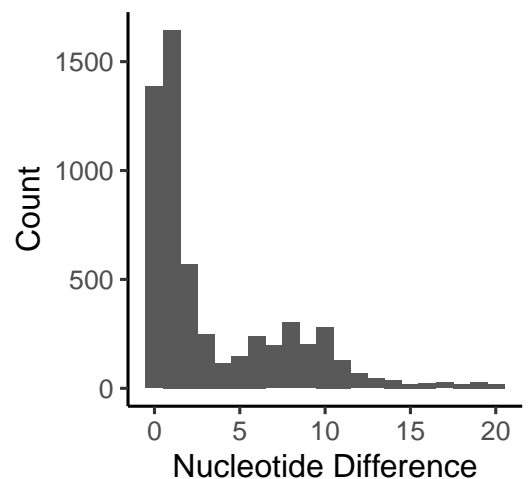
IGHV1-18*04

9510 sequences assigned
1796 (18.9%) exact matches, in which:
1461 unique CDR3
6 unique J



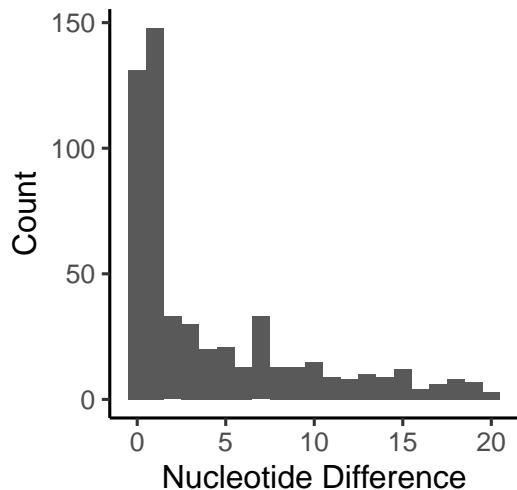
IGHV1-46*01

6700 sequences assigned
1386 (20.7%) exact matches, in which:
1142 unique CDR3
6 unique J



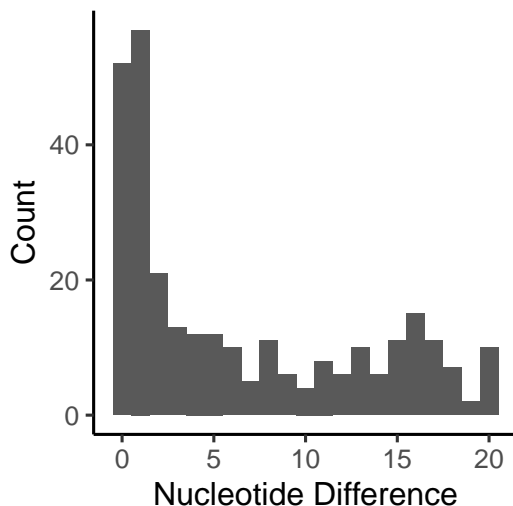
IGHV1–58*01_03

549 sequences assigned
131 (23.9%) exact matches, in which:
104 unique CDR3
5 unique J



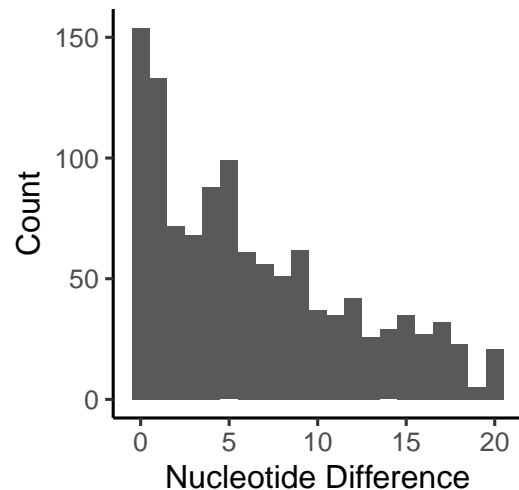
IGHV2–5*02

430 sequences assigned
52 (12.1%) exact matches, in which:
43 unique CDR3
5 unique J



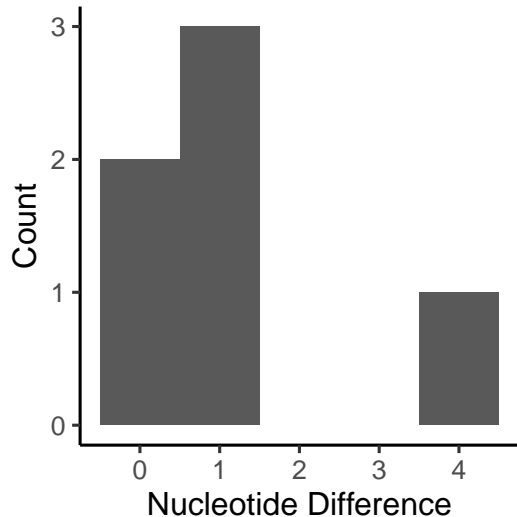
IGHV3–7*01

1280 sequences assigned
154 (12%) exact matches, in which:
142 unique CDR3
6 unique J



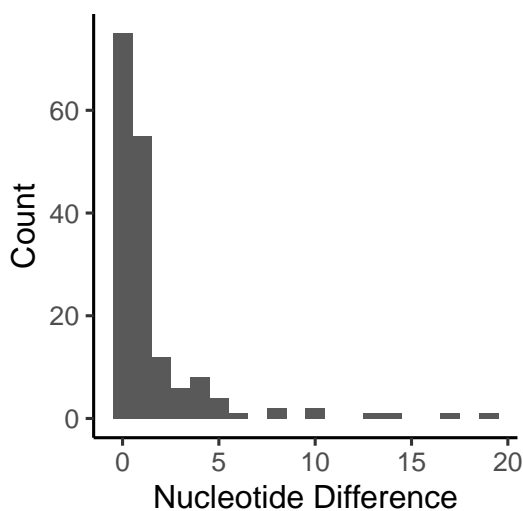
IGHV1–68*01

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



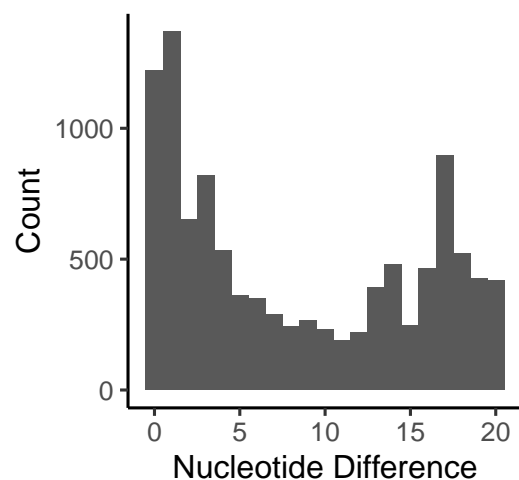
IGHV2–26*01

172 sequences assigned
75 (43.6%) exact matches, in which:
66 unique CDR3
5 unique J



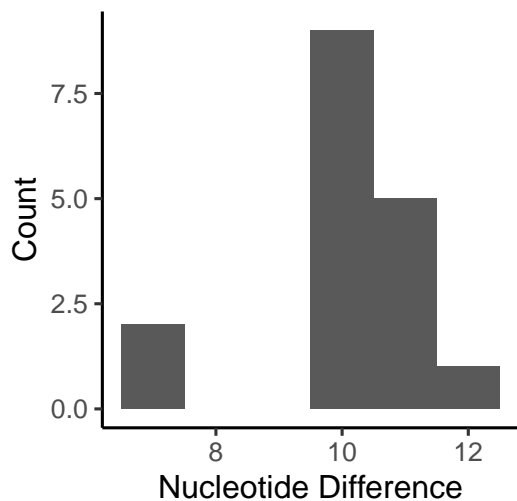
IGHV3–7*03

14835 sequences assigned
1220 (8.2%) exact matches, in which:
754 unique CDR3
6 unique J



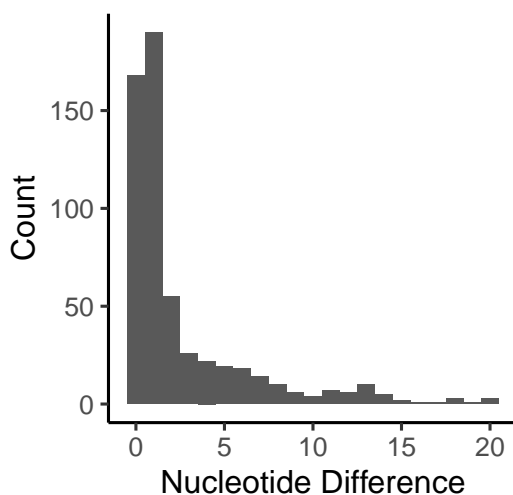
IGHV1–NL1*01

17 sequences assigned
No exact matches.



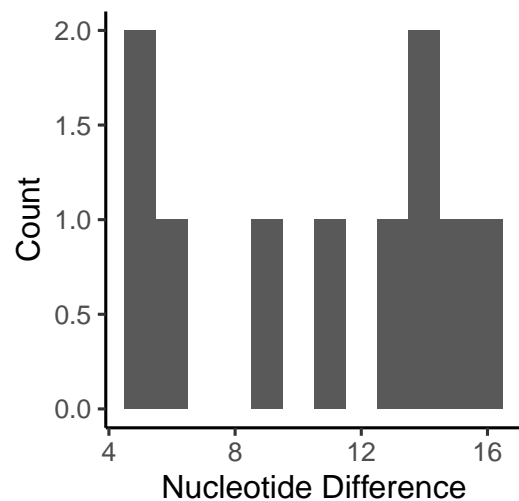
IGHV2–70*01

610 sequences assigned
168 (27.5%) exact matches, in which:
139 unique CDR3
5 unique J



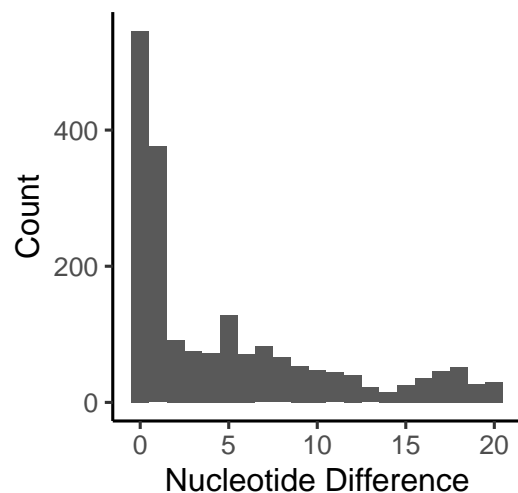
IGHV3–9*01

10 sequences assigned
No exact matches.



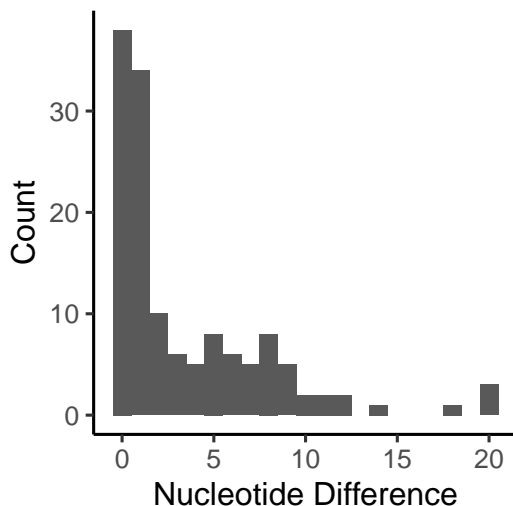
IGHV3-11*06

2675 sequences assigned
546 (20.4%) exact matches, in which:
364 unique CDR3
6 unique J



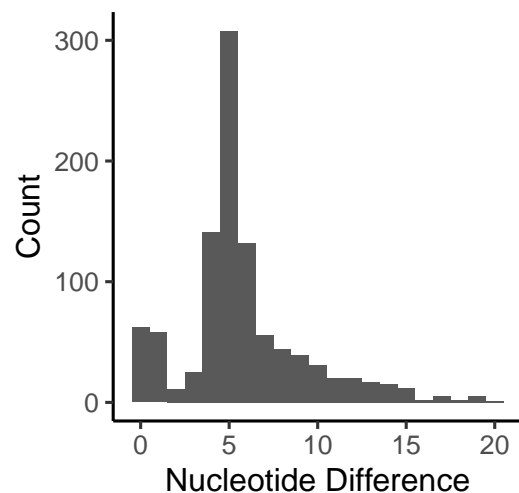
IGHV3-13*05

155 sequences assigned
38 (24.5%) exact matches, in which:
24 unique CDR3
5 unique J



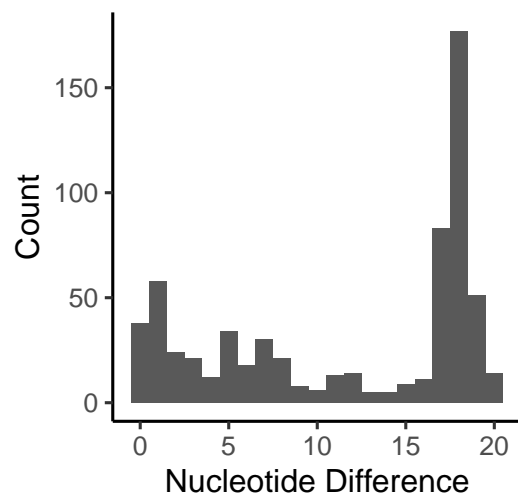
IGHV3-20*01_02

1010 sequences assigned
62 (6.1%) exact matches, in which:
39 unique CDR3
5 unique J



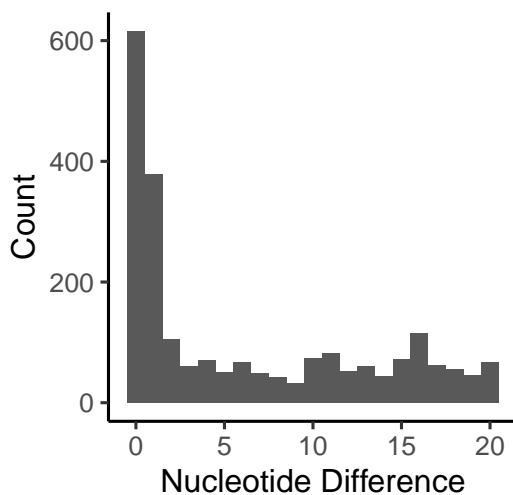
IGHV3-11*03_05

773 sequences assigned
38 (4.9%) exact matches, in which:
38 unique CDR3
5 unique J



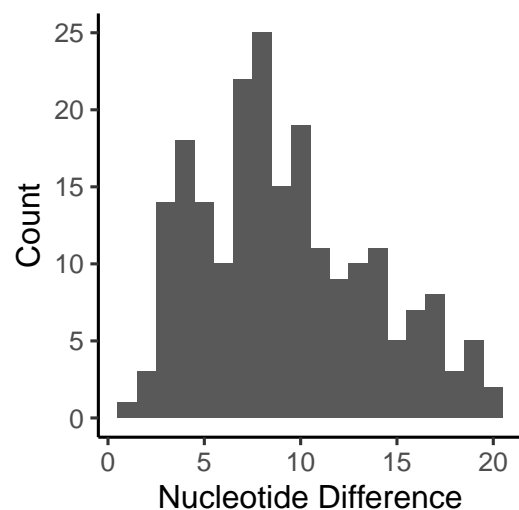
IGHV3-15*01_02

3256 sequences assigned
616 (18.9%) exact matches, in which:
376 unique CDR3
6 unique J



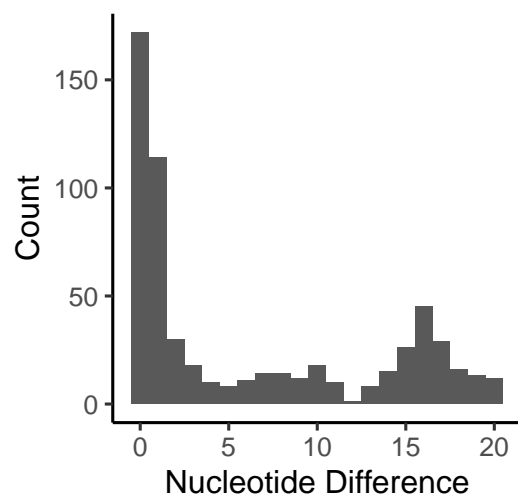
IGHV3-20*03_04

235 sequences assigned
No exact matches.



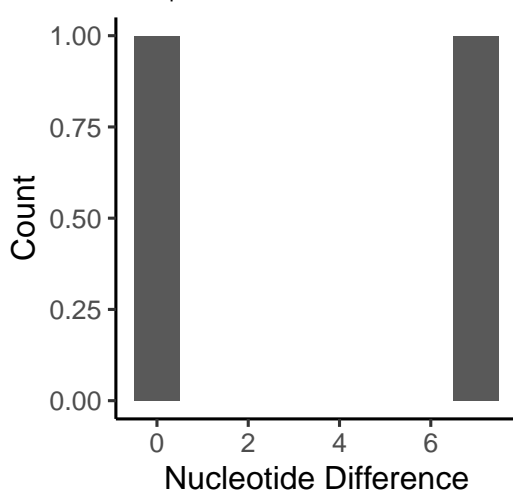
IGHV3-13*04

681 sequences assigned
172 (25.3%) exact matches, in which:
111 unique CDR3
5 unique J



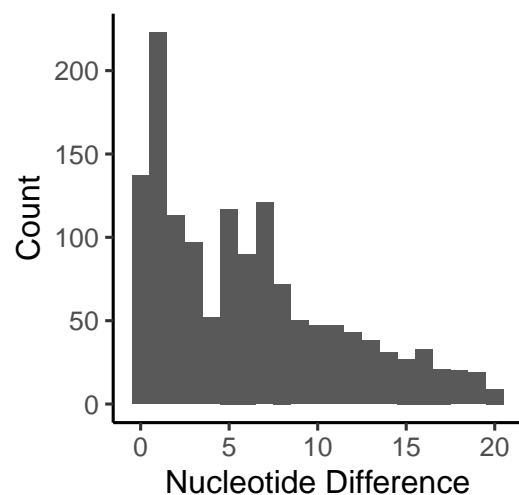
IGHV3-19*01

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



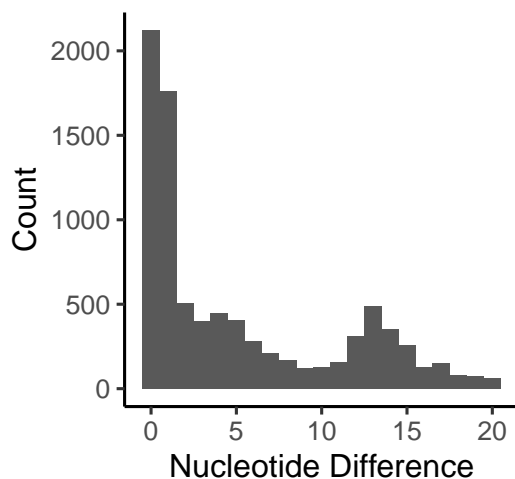
IGHV3-21*04

1446 sequences assigned
137 (9.5%) exact matches, in which:
128 unique CDR3
6 unique J



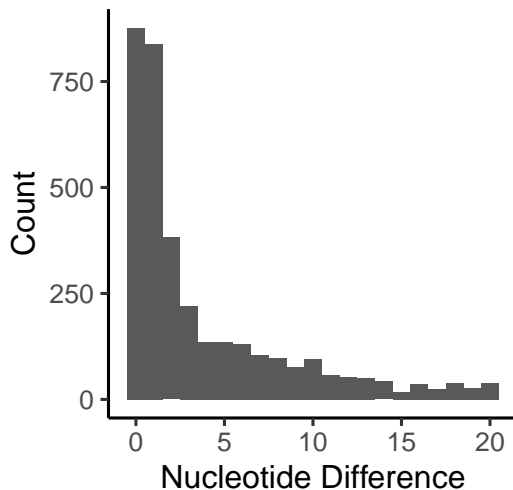
IGHV3-21*01_02

8989 sequences assigned
2121 (23.6%) exact matches, in which:
1323 unique CDR3
6 unique J



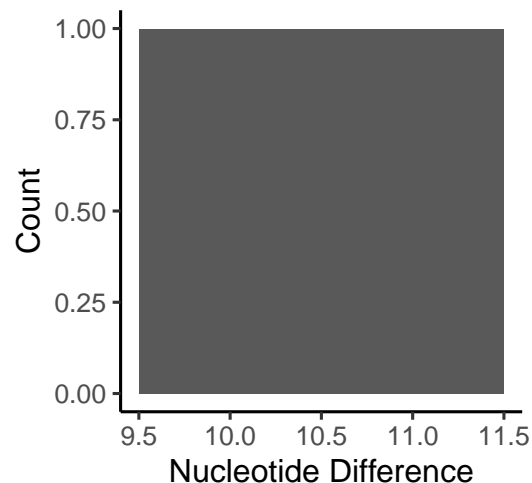
IGHV3-33*01

4702 sequences assigned
877 (18.7%) exact matches, in which:
614 unique CDR3
6 unique J



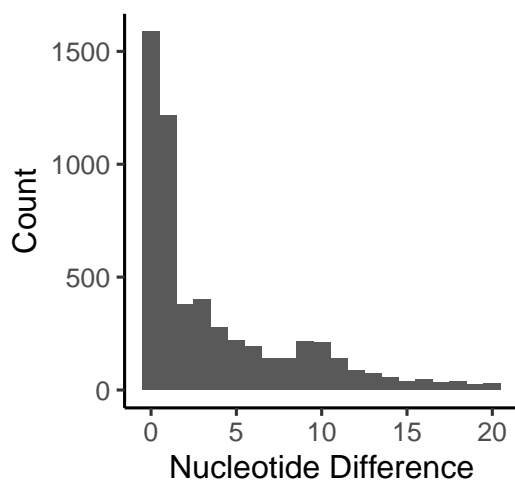
IGHV3-35*01

2 sequences assigned
No exact matches.



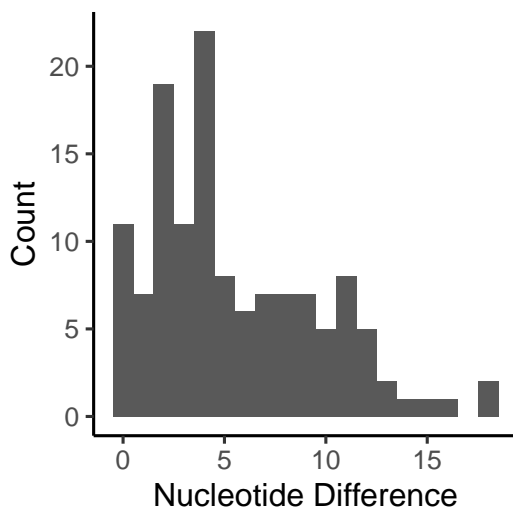
IGHV3-30-3*01

5954 sequences assigned
1587 (26.7%) exact matches, in which:
1079 unique CDR3
6 unique J



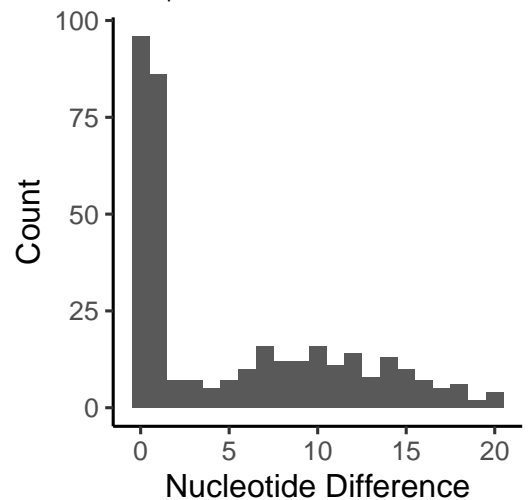
IGHV3-33*05

135 sequences assigned
11 (8.1%) exact matches, in which:
10 unique CDR3
4 unique J



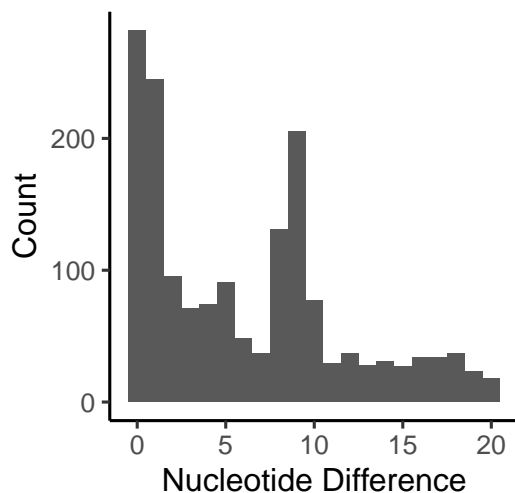
IGHV3-43*01

398 sequences assigned
96 (24.1%) exact matches, in which:
52 unique CDR3
3 unique J



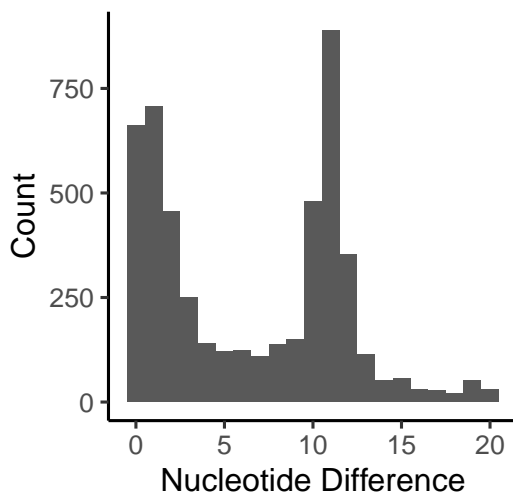
IGHV3-30*03

2048 sequences assigned
282 (13.8%) exact matches, in which:
260 unique CDR3
5 unique J



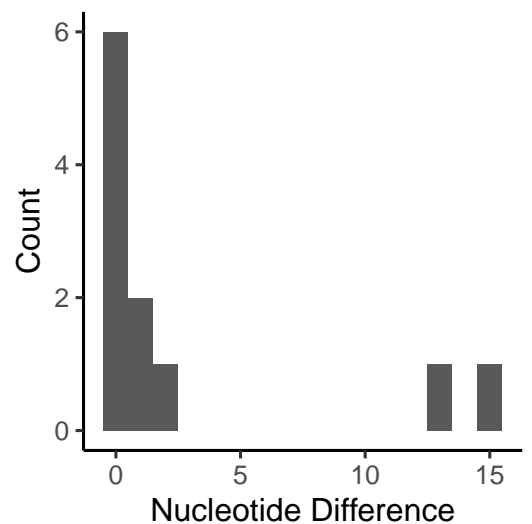
IGHV3-33*06

5942 sequences assigned
662 (11.1%) exact matches, in which:
414 unique CDR3
6 unique J



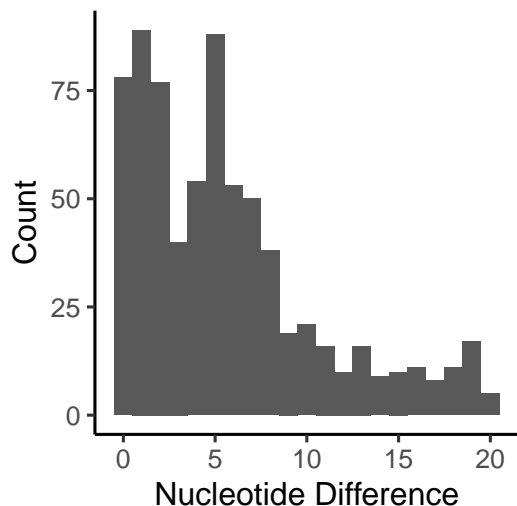
IGHV3-47*02

11 sequences assigned
6 (54.5%) exact matches, in which:
5 unique CDR3
1 unique J



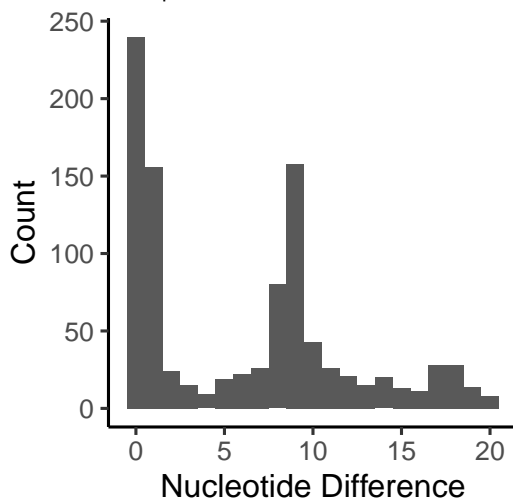
IGHV3-48*01

779 sequences assigned
78 (10%) exact matches, in which:
75 unique CDR3
4 unique J



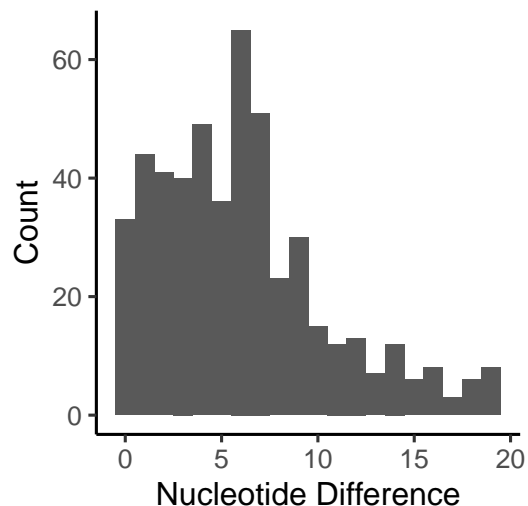
IGHV3-49*03_05

1117 sequences assigned
240 (21.5%) exact matches, in which:
145 unique CDR3
4 unique J



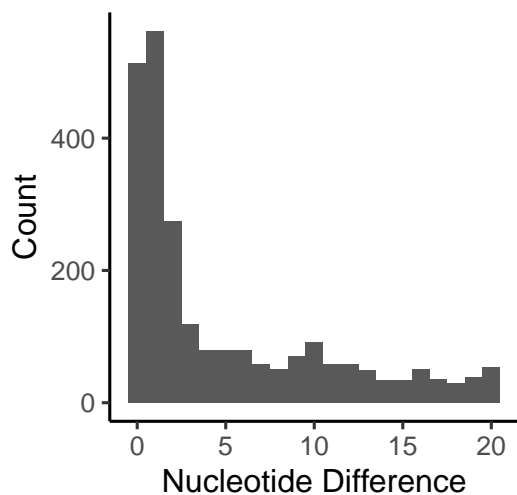
IGHV3-64*04

517 sequences assigned
33 (6.4%) exact matches, in which:
33 unique CDR3
3 unique J



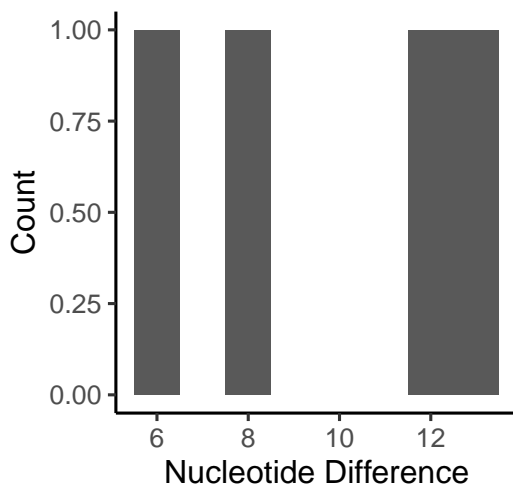
IGHV3-48*02

3053 sequences assigned
513 (16.8%) exact matches, in which:
320 unique CDR3
6 unique J



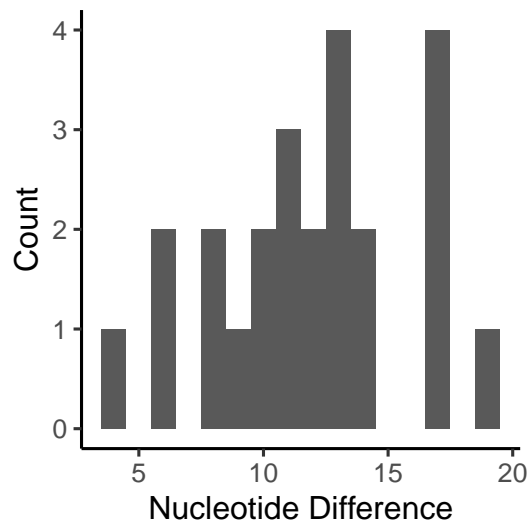
IGHV3-52*01_03

4 sequences assigned
No exact matches.



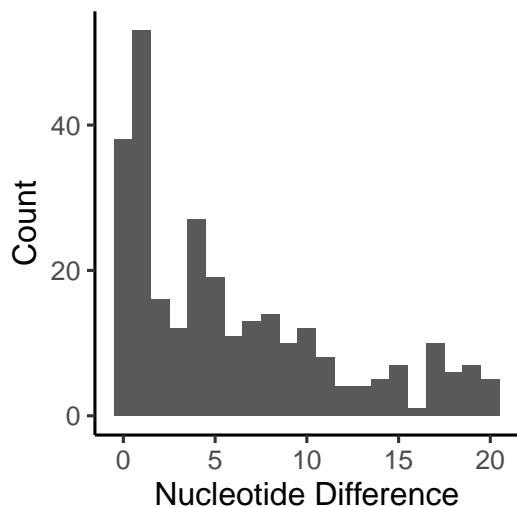
IGHV3-66*01

33 sequences assigned
No exact matches.



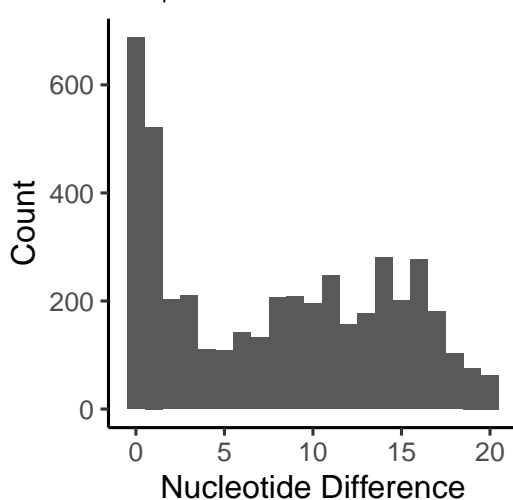
IGHV3-48*04

325 sequences assigned
38 (11.7%) exact matches, in which:
38 unique CDR3
5 unique J



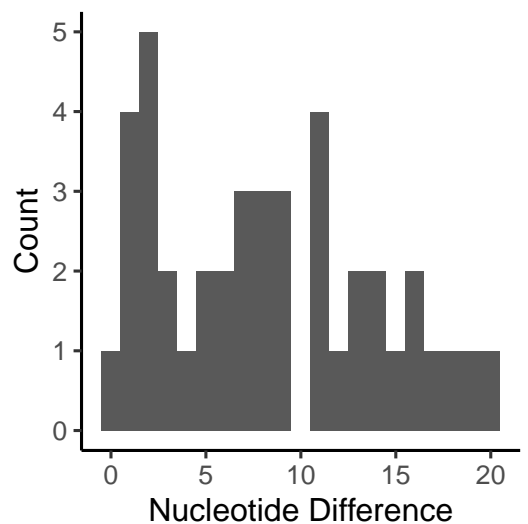
IGHV3-53*01_02

5839 sequences assigned
688 (11.8%) exact matches, in which:
447 unique CDR3
6 unique J



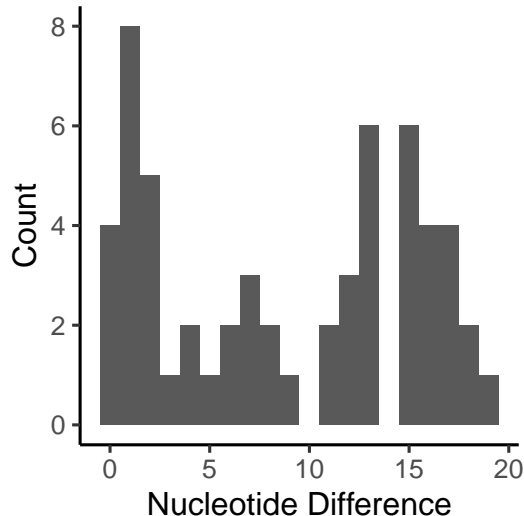
IGHV3-66*02

63 sequences assigned
1 (1.6%) exact matches, in which:
1 unique CDR3
1 unique J



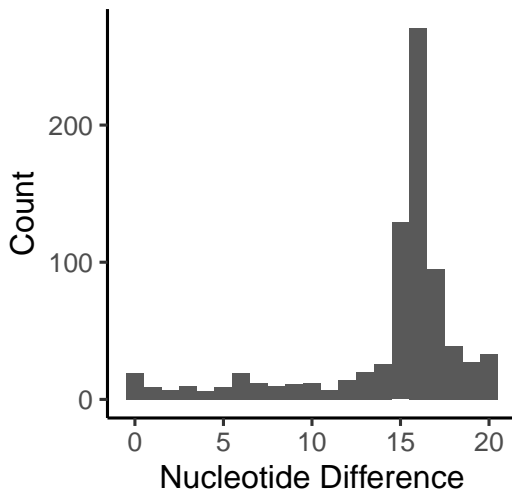
IGHV3-66*03

62 sequences assigned
4 (6.5%) exact matches, in which:
4 unique CDR3
4 unique J



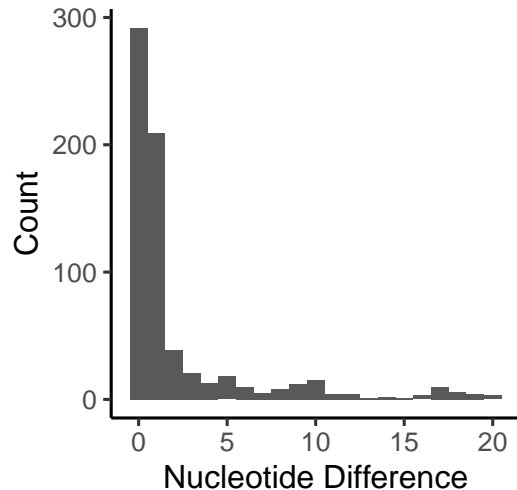
IGHV3-72*01

861 sequences assigned
19 (2.2%) exact matches, in which:
12 unique CDR3
2 unique J



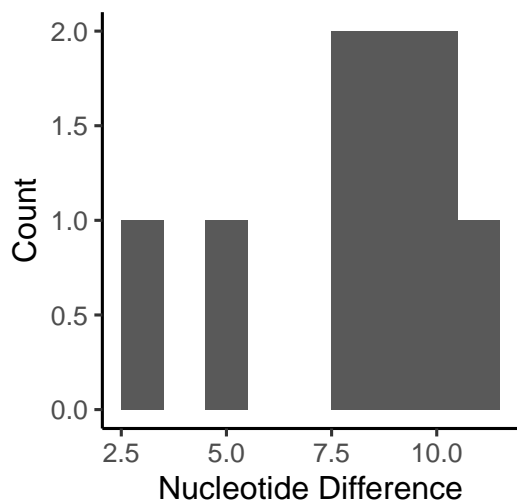
IGHV3-64D*06

734 sequences assigned
292 (39.8%) exact matches, in which:
176 unique CDR3
6 unique J



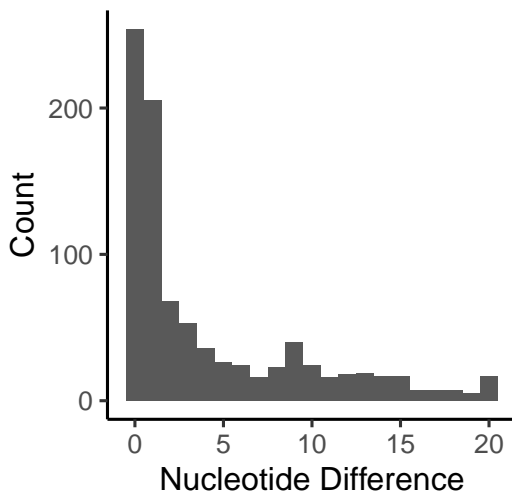
IGHV3-66*04

13 sequences assigned
No exact matches.



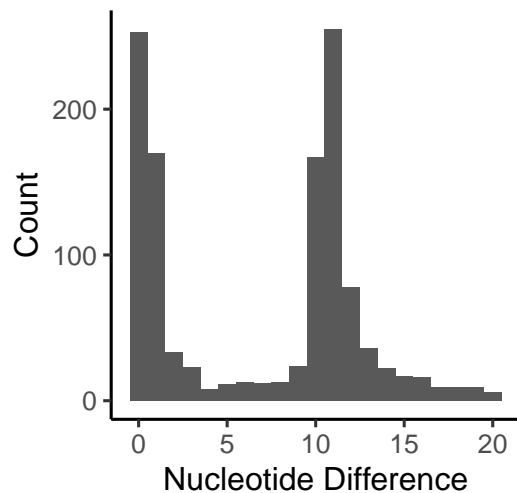
IGHV3-73*01_02

1201 sequences assigned
254 (21.1%) exact matches, in which:
157 unique CDR3
6 unique J



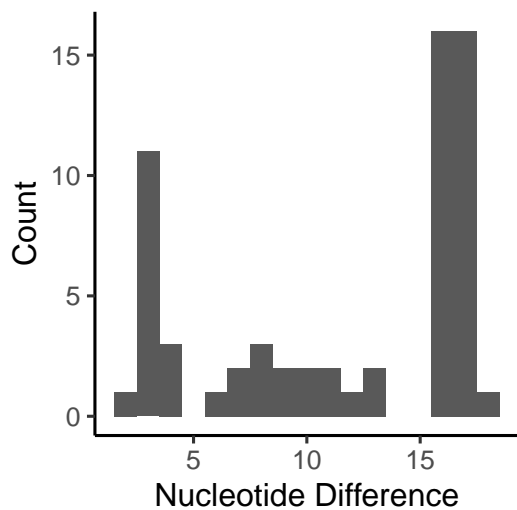
IGHV3-64D*09

1213 sequences assigned
253 (20.9%) exact matches, in which:
147 unique CDR3
6 unique J



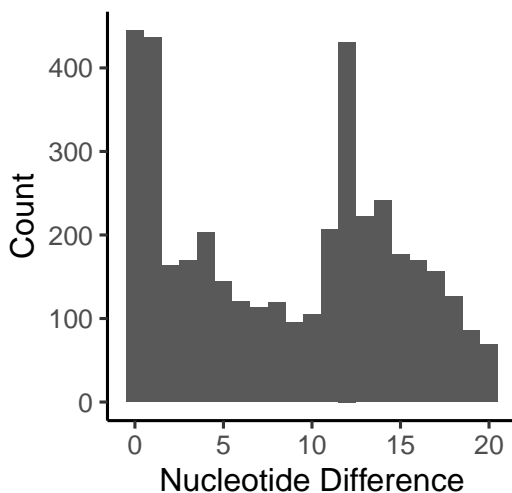
IGHV3-69-1*01

64 sequences assigned
No exact matches.



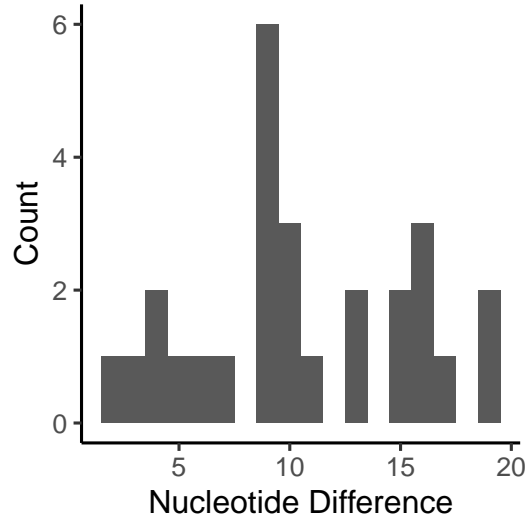
IGHV3-74*01_02

5664 sequences assigned
445 (7.9%) exact matches, in which:
294 unique CDR3
6 unique J



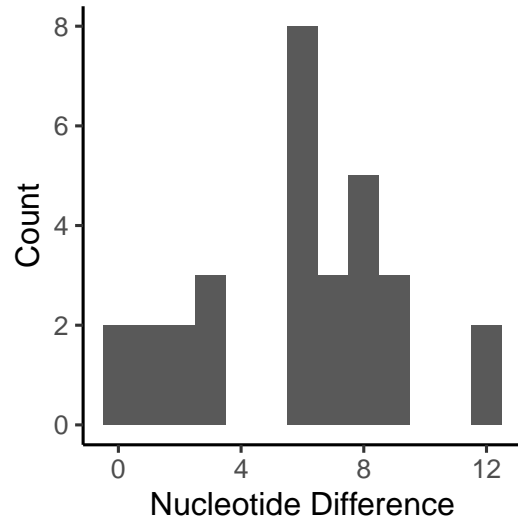
IGHV3-NL1*01

33 sequences assigned
No exact matches.



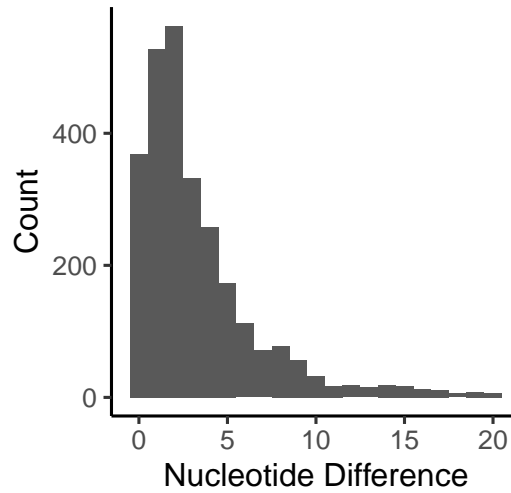
IGHV4-28*03

32 sequences assigned
2 (6.2%) exact matches, in which:
2 unique CDR3
2 unique J



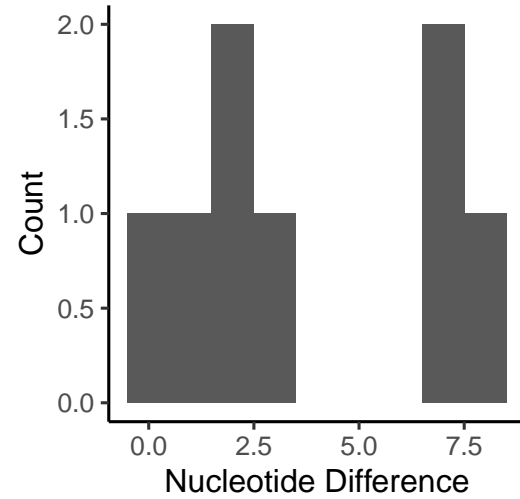
IGHV4-30-4*01

3138 sequences assigned
369 (11.8%) exact matches, in which:
296 unique CDR3
6 unique J



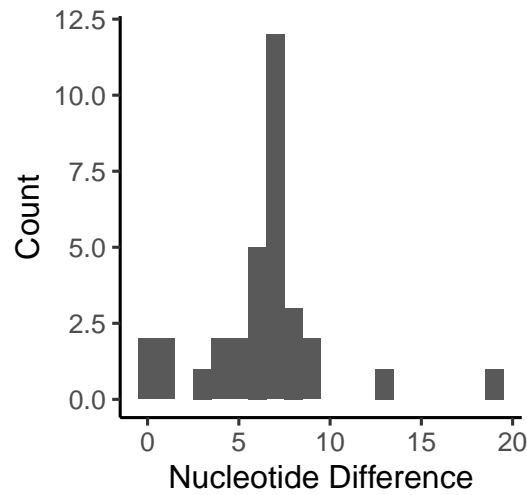
IGHV4-38-2*02

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



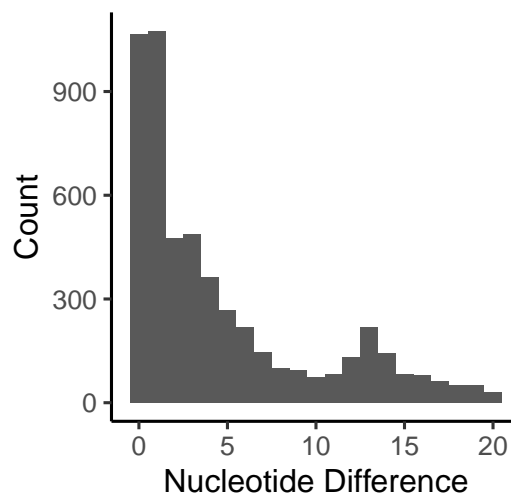
IGHV4-28*01_07

34 sequences assigned
2 (5.9%) exact matches, in which:
2 unique CDR3
2 unique J



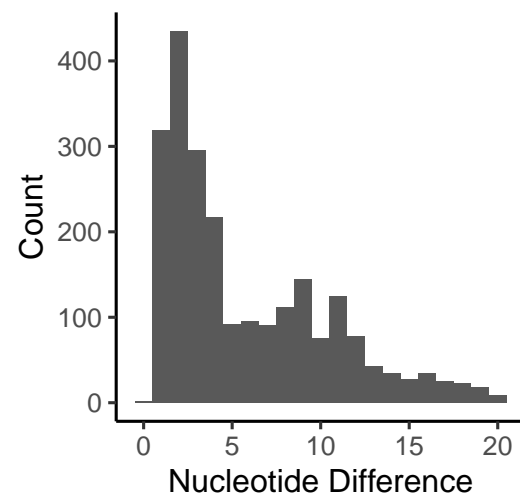
IGHV4-31*03_04

5866 sequences assigned
1065 (18.2%) exact matches, in which:
883 unique CDR3
6 unique J



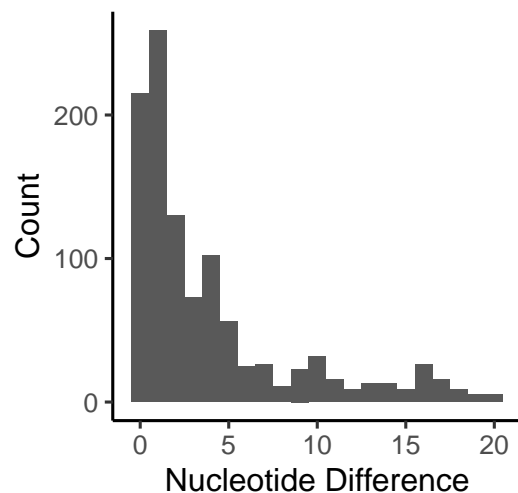
IGHV4-39*07

2396 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
1 unique J



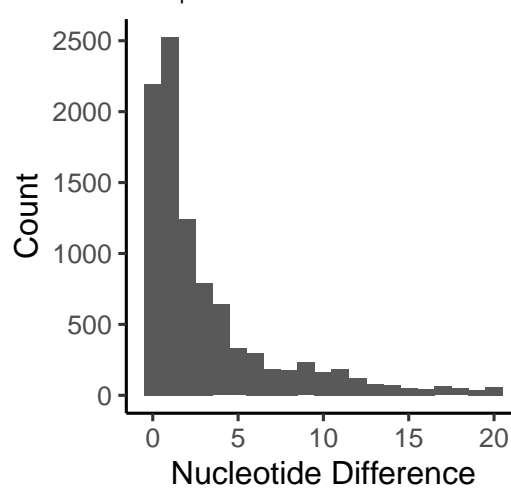
IGHV4-30-2*01

1097 sequences assigned
215 (19.6%) exact matches, in which:
160 unique CDR3
6 unique J



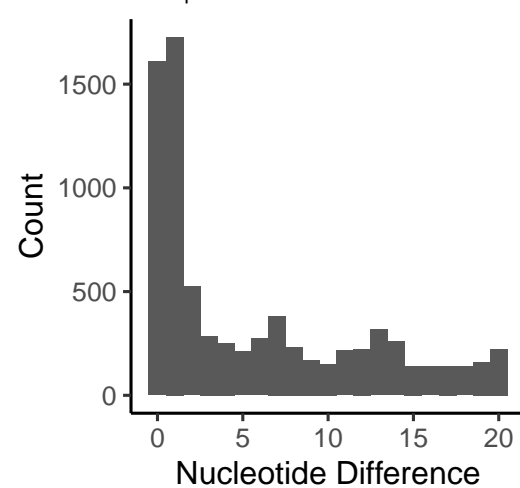
IGHV4-34*01_02

10600 sequences assigned
2193 (20.7%) exact matches, in which:
1640 unique CDR3
6 unique J



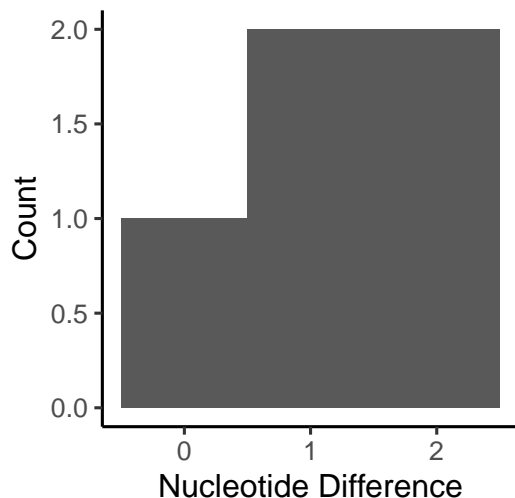
IGHV4-39*01_05

10957 sequences assigned
1610 (14.7%) exact matches, in which:
1247 unique CDR3
6 unique J



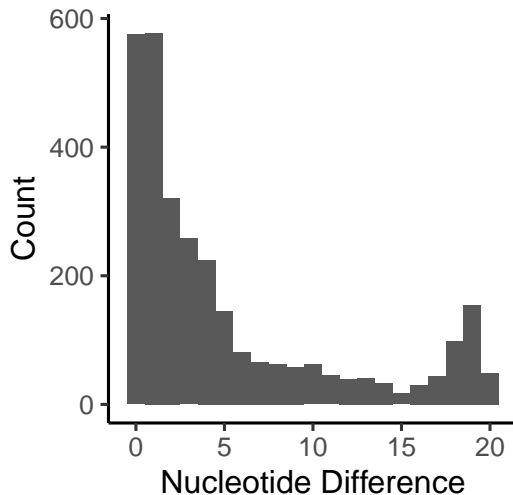
IGHV4-55*01_05

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



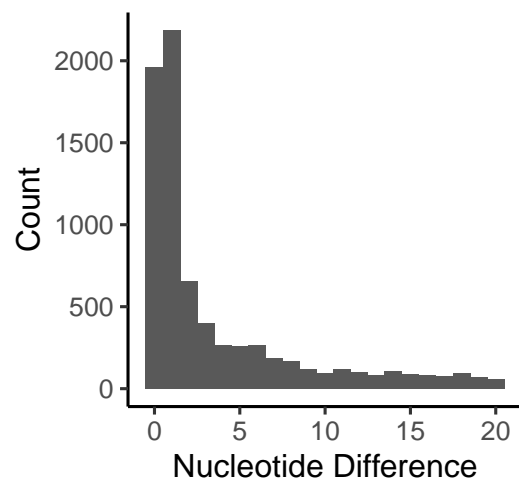
IGHV4-61*01

3925 sequences assigned
575 (14.6%) exact matches, in which:
513 unique CDR3
6 unique J



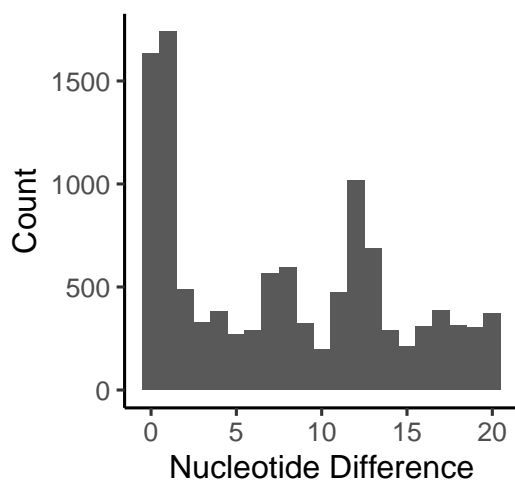
IGHV5-51*01_03

8147 sequences assigned
1958 (24%) exact matches, in which:
1140 unique CDR3
5 unique J



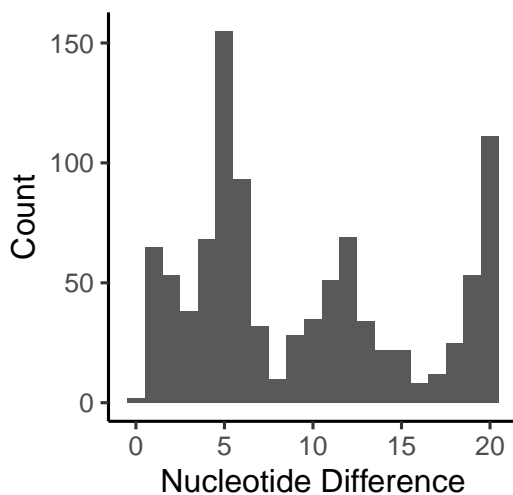
IGHV4-59*01_07

12710 sequences assigned
1635 (12.9%) exact matches, in which:
1310 unique CDR3
6 unique J



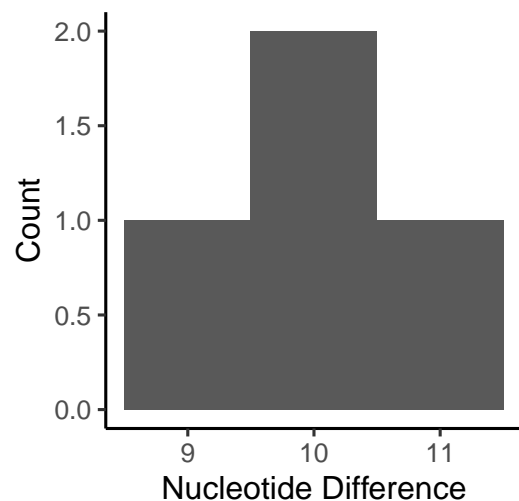
IGHV4-61*08

1106 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
2 unique J



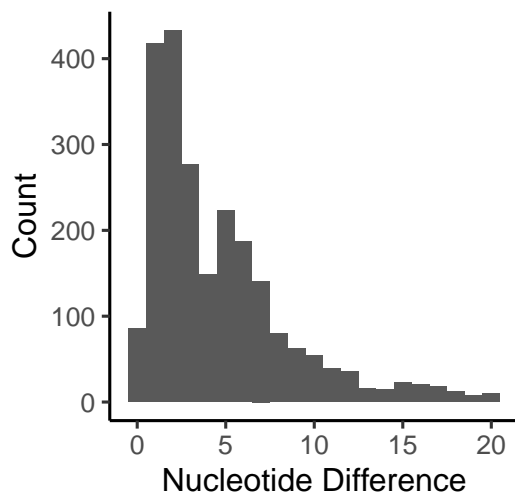
IGHV5-78*01

4 sequences assigned
No exact matches.



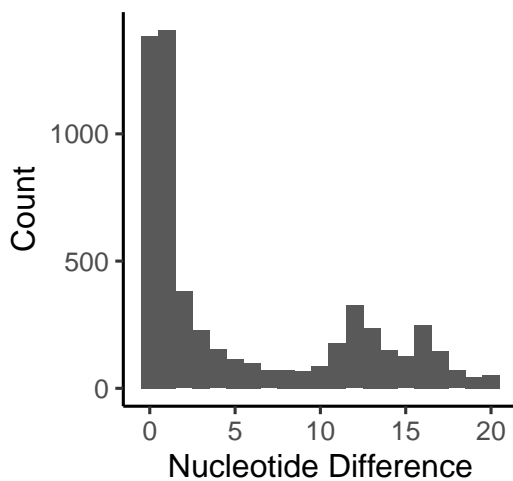
IGHV4-59*12

2425 sequences assigned
86 (3.5%) exact matches, in which:
86 unique CDR3
5 unique J



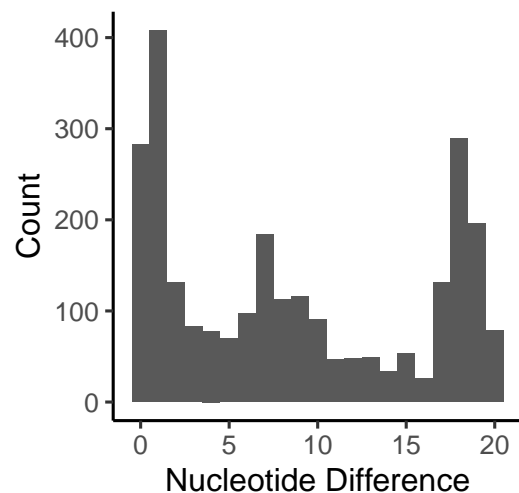
IGHV5-10-1*01_03

5974 sequences assigned
1385 (23.2%) exact matches, in which:
875 unique CDR3
6 unique J



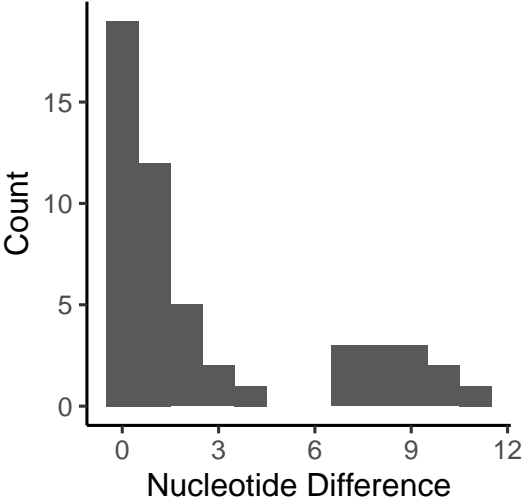
IGHV6-1*01_02

2890 sequences assigned
283 (9.8%) exact matches, in which:
247 unique CDR3
6 unique J



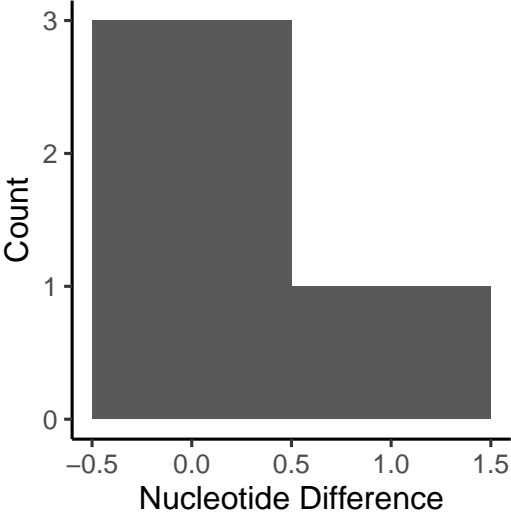
IGHV7-4-1*01

51 sequences assigned
19 (37.3%) exact matches, in which:
17 unique CDR3
4 unique J



IGHV7-4-1*02

4 sequences assigned
3 (75%) exact matches, in which:
3 unique CDR3
2 unique J





Novel sequence(s)IGHV3-33*01_G75C IGHV4-59*02_G88A 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_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-33*01_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-30*03_T288C IGHV4-59*02_G88A IGHV5-51*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_G112A IGHV4-59*02_G88A IGHV5-10-1*01_03_T258C IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV1-69*08_C191T IGHV3-48*03_T303G IGHV4-59*02_G88A 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)IGHV3-30*03_T288C IGHV5-51*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.