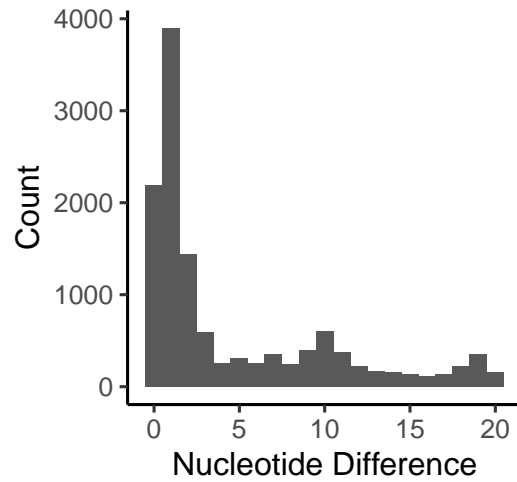


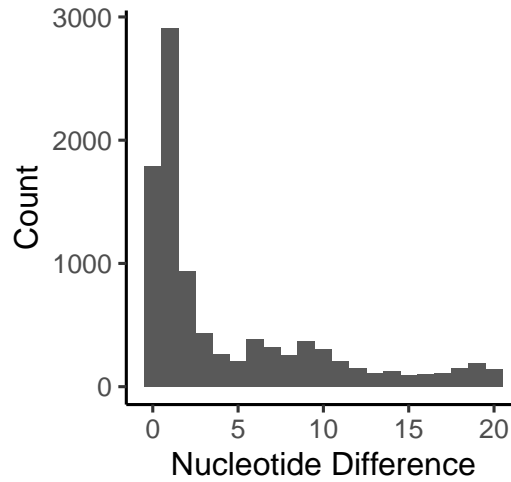
IGHV1-2*06

15300 sequences assigned
2194 (14.3%) exact matches, in which:
1512 unique CDR3
7 unique J



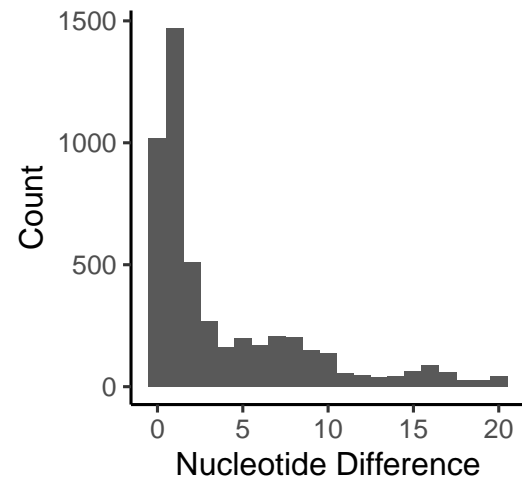
IGHV1-18*01

10637 sequences assigned
1789 (16.8%) exact matches, in which:
1328 unique CDR3
7 unique J



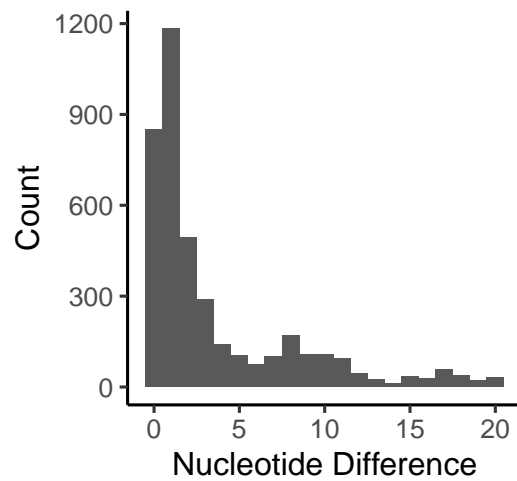
IGHV1-46*01

6170 sequences assigned
1021 (16.5%) exact matches, in which:
791 unique CDR3
7 unique J



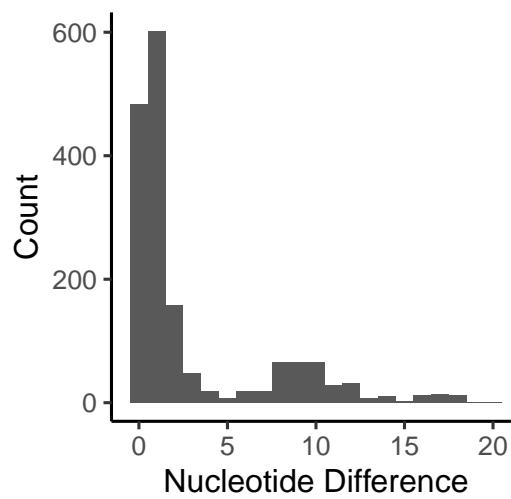
IGHV1-3*01_05

4277 sequences assigned
850 (19.9%) exact matches, in which:
630 unique CDR3
7 unique J



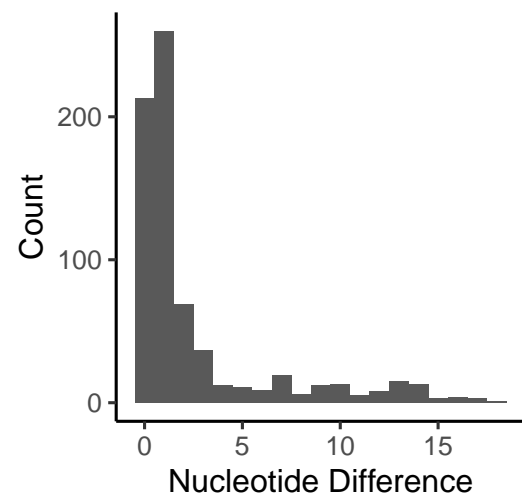
IGHV1-24*01

1704 sequences assigned
483 (28.3%) exact matches, in which:
377 unique CDR3
7 unique J



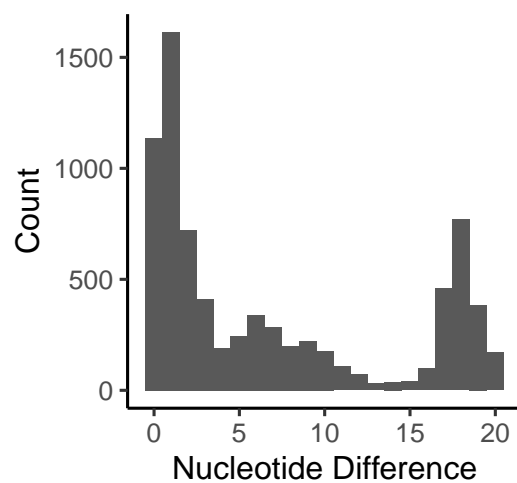
IGHV1-58*01_03

713 sequences assigned
213 (29.9%) exact matches, in which:
170 unique CDR3
6 unique J



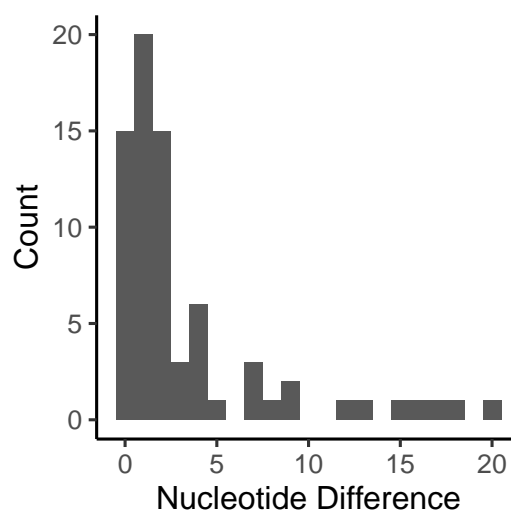
IGHV1-8*01

8106 sequences assigned
1137 (14%) exact matches, in which:
917 unique CDR3
7 unique J



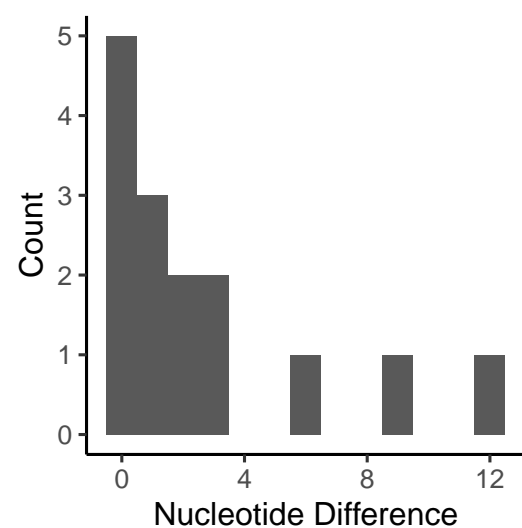
IGHV1-45*02

74 sequences assigned
15 (20.3%) exact matches, in which:
11 unique CDR3
4 unique J



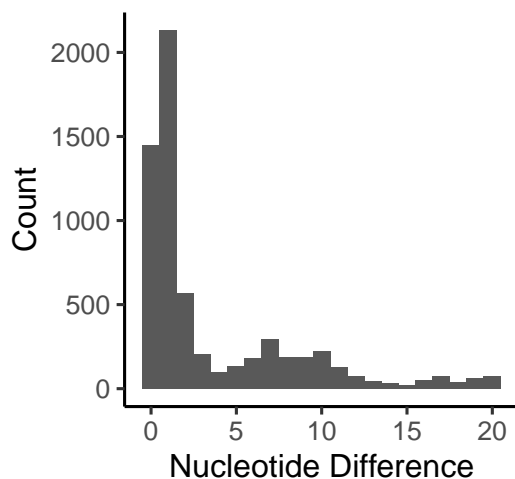
IGHV1-69-2*01

15 sequences assigned
5 (33.3%) exact matches, in which:
5 unique CDR3
2 unique J



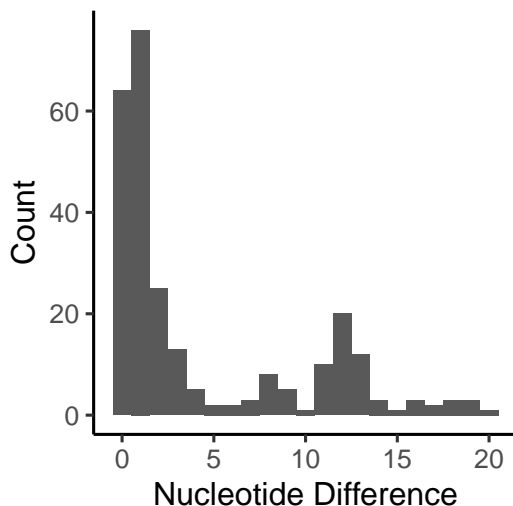
IGHV1-69*06_14

6583 sequences assigned
1447 (22%) exact matches, in which:
1105 unique CDR3
7 unique J



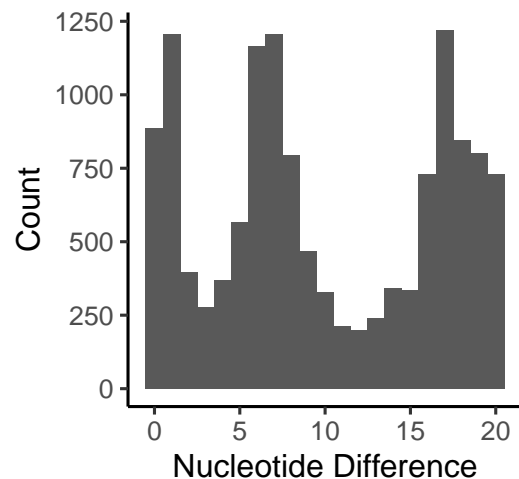
IGHV2-26*01

264 sequences assigned
64 (24.2%) exact matches, in which:
47 unique CDR3
6 unique J



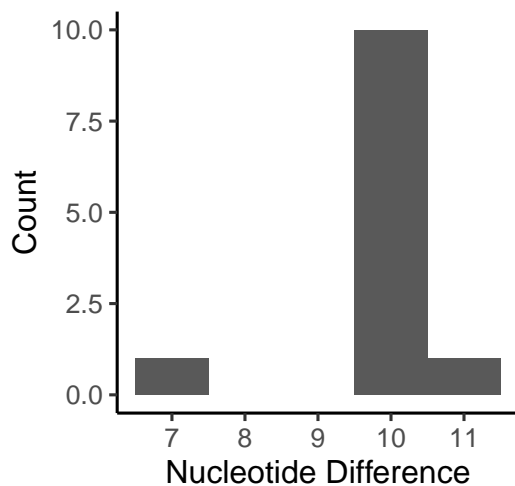
IGHV3-7*01

17209 sequences assigned
888 (5.2%) exact matches, in which:
580 unique CDR3
7 unique J



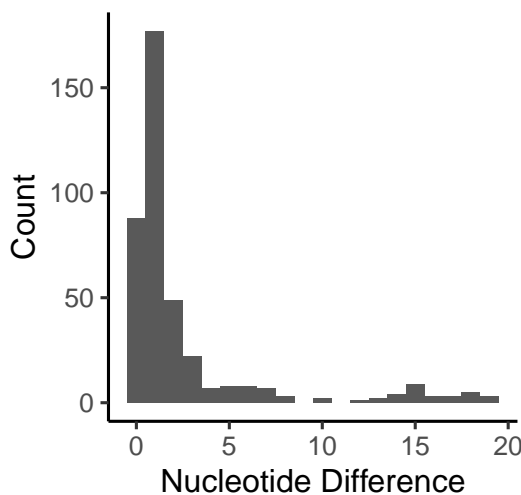
IGHV1-NL1*01

12 sequences assigned
No exact matches.



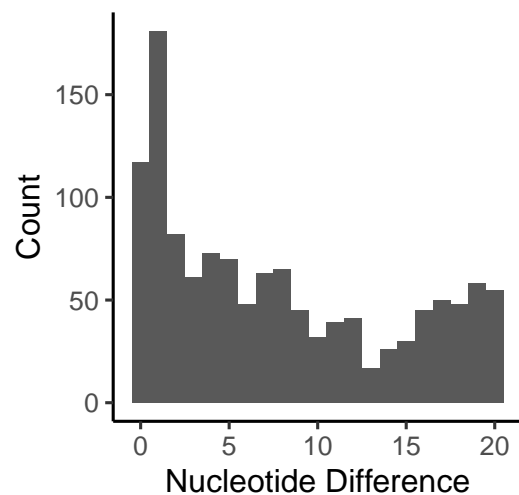
IGHV2-70*01

415 sequences assigned
88 (21.2%) exact matches, in which:
49 unique CDR3
5 unique J



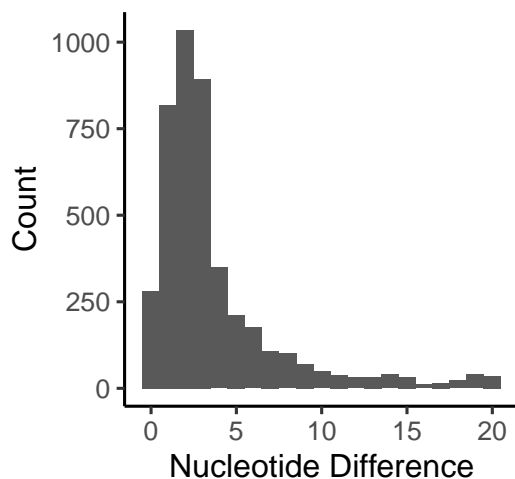
IGHV3-7*03

2387 sequences assigned
117 (4.9%) exact matches, in which:
86 unique CDR3
5 unique J



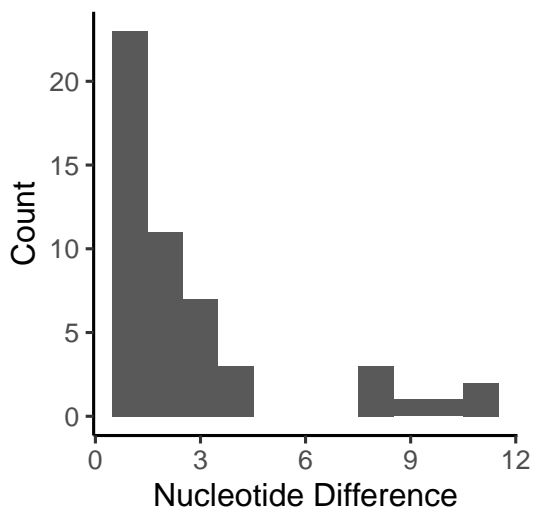
IGHV2-5*02

5217 sequences assigned
282 (5.4%) exact matches, in which:
179 unique CDR3
7 unique J



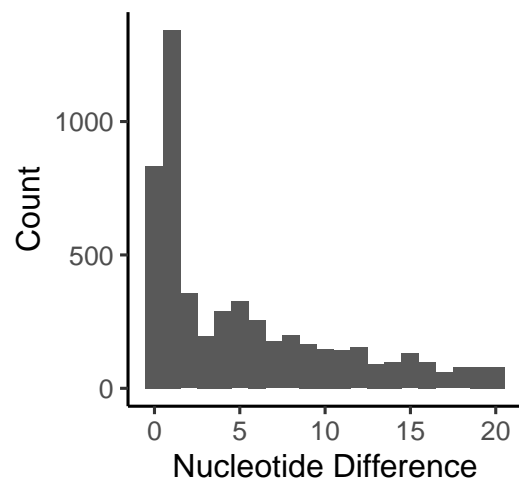
IGHV2-70*12

53 sequences assigned
No exact matches.



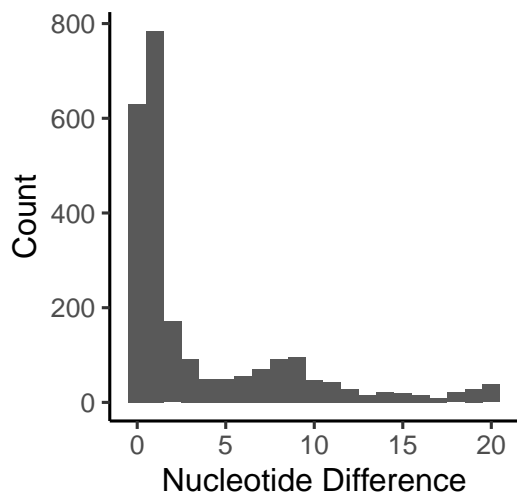
IGHV3-9*01

19449 sequences assigned
834 (4.3%) exact matches, in which:
455 unique CDR3
7 unique J



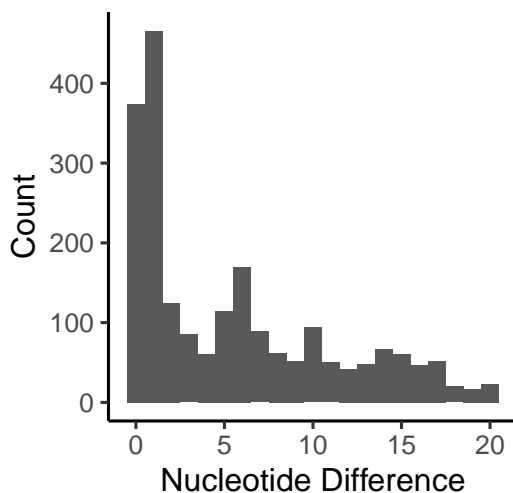
IGHV3-11*01

3613 sequences assigned
631 (17.5%) exact matches, in which:
410 unique CDR3
7 unique J



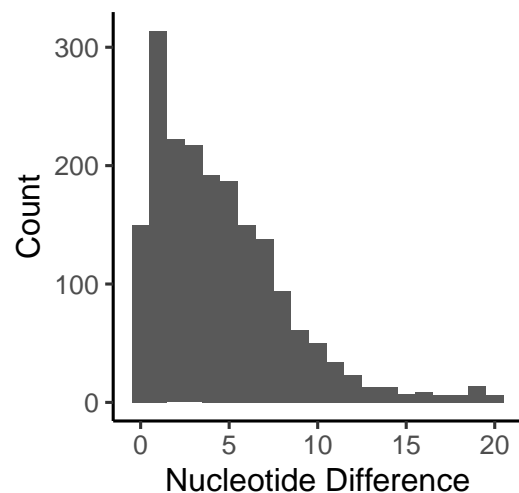
IGHV3-15*01_02

2596 sequences assigned
374 (14.4%) exact matches, in which:
201 unique CDR3
6 unique J



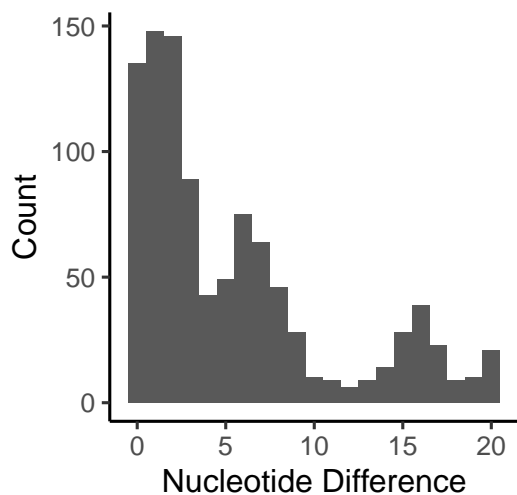
IGHV3-21*04

1978 sequences assigned
150 (7.6%) exact matches, in which:
119 unique CDR3
6 unique J



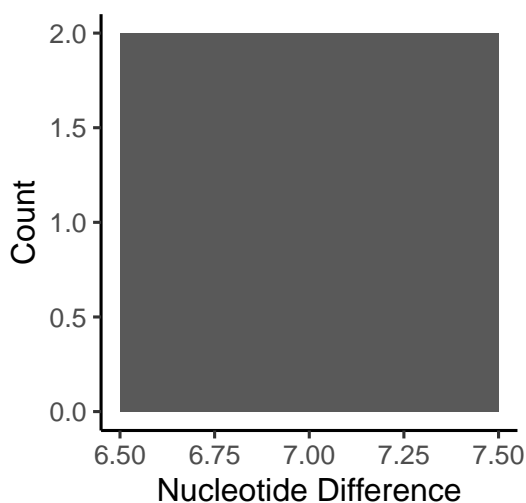
IGHV3-11*04

1105 sequences assigned
135 (12.2%) exact matches, in which:
108 unique CDR3
6 unique J



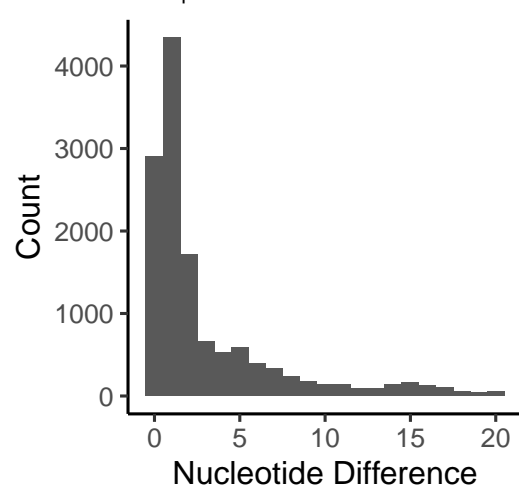
IGHV3-19*01

2 sequences assigned
No exact matches.



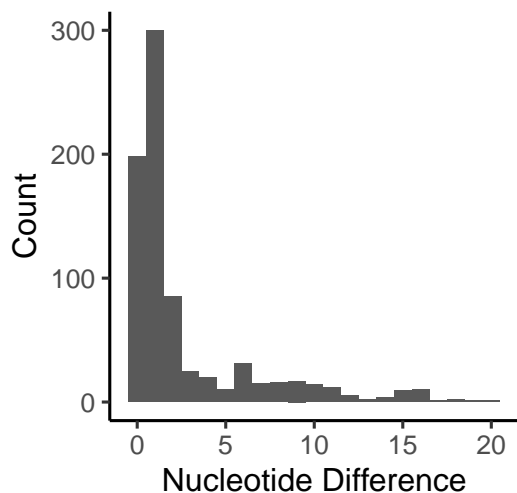
IGHV3-21*01_02

13817 sequences assigned
2909 (21.1%) exact matches, in which:
1605 unique CDR3
7 unique J



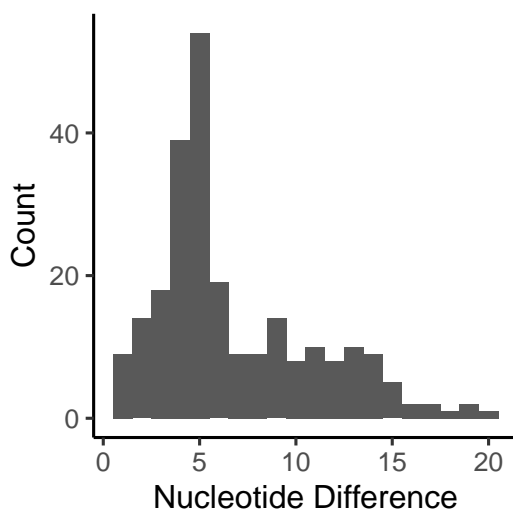
IGHV3-13*01

828 sequences assigned
198 (23.9%) exact matches, in which:
137 unique CDR3
7 unique J



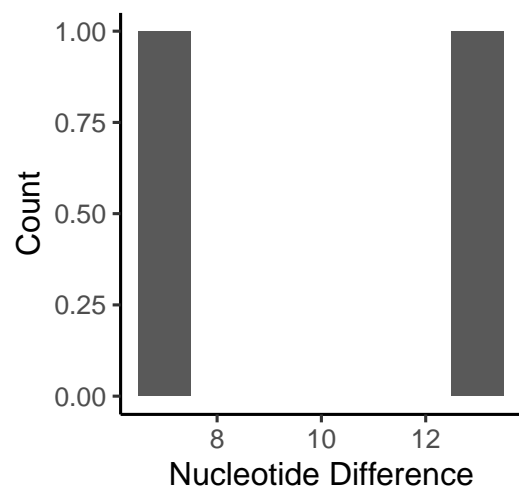
IGHV3-20*03_04

333 sequences assigned
No exact matches.



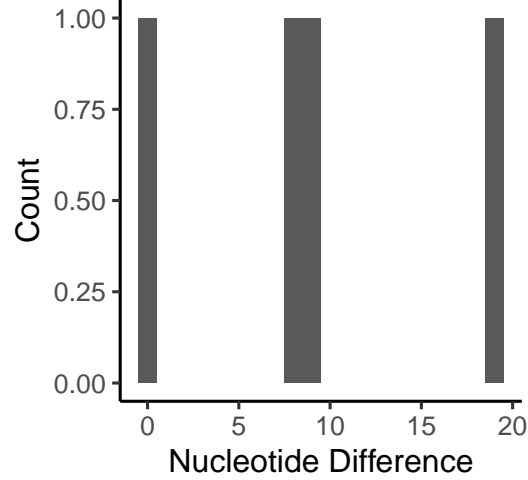
IGHV3-22*01_02

2 sequences assigned
No exact matches.



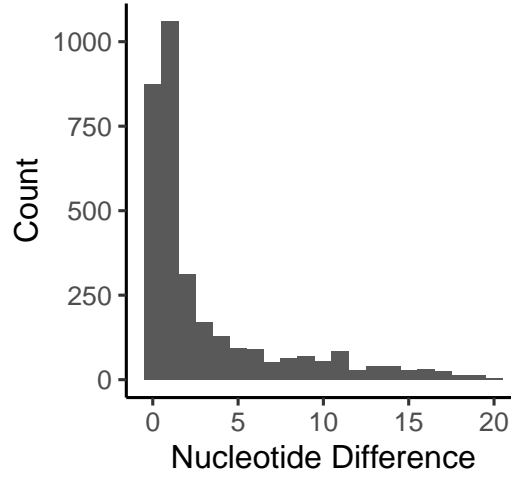
IGHV3-30-3*01

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



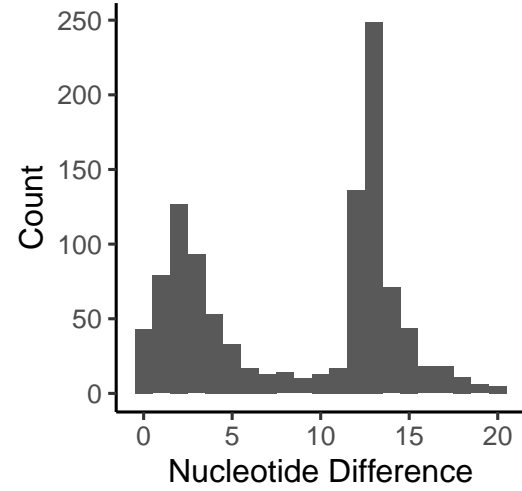
IGHV3-30*03

3439 sequences assigned
874 (25.4%) exact matches, in which:
560 unique CDR3
7 unique J



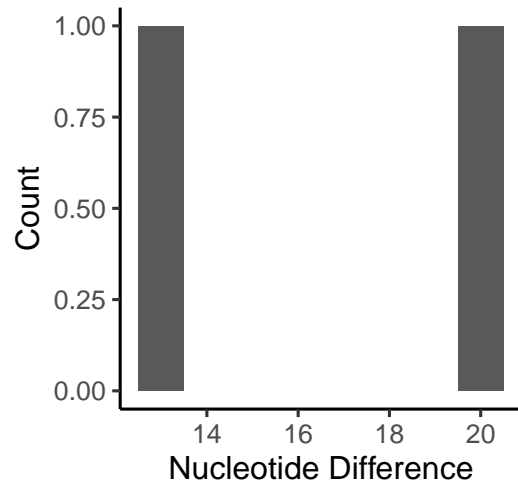
IGHV3-33*06

1126 sequences assigned
43 (3.8%) exact matches, in which:
35 unique CDR3
7 unique J



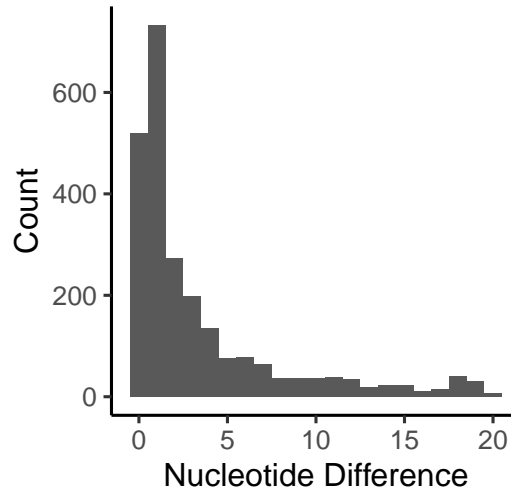
IGHV3-30-3*02

12 sequences assigned
No exact matches.



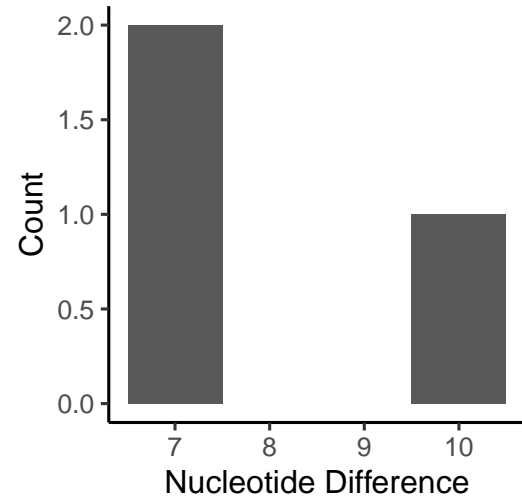
IGHV3-33*01

3243 sequences assigned
519 (16%) exact matches, in which:
329 unique CDR3
7 unique J



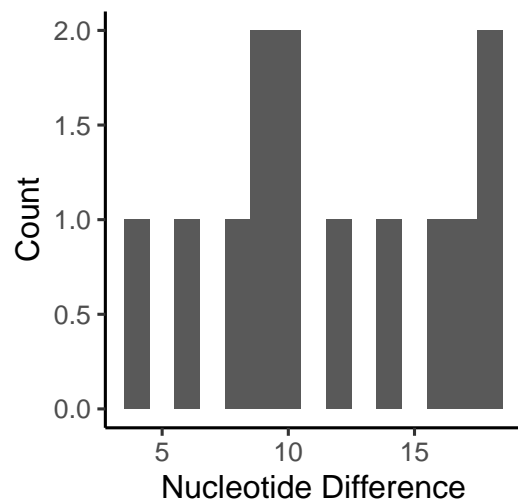
IGHV3-35*01

3 sequences assigned
No exact matches.



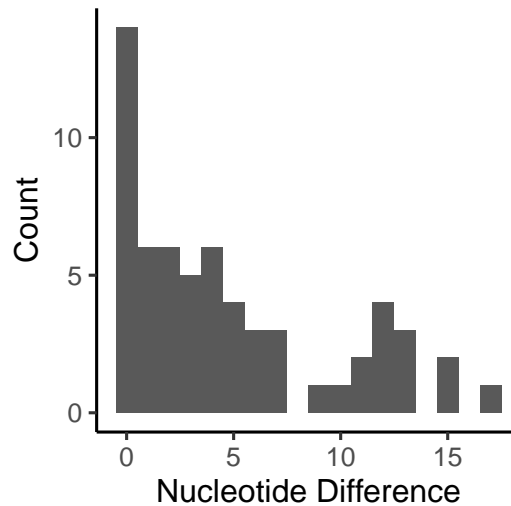
IGHV3-30-3*03

20 sequences assigned
No exact matches.



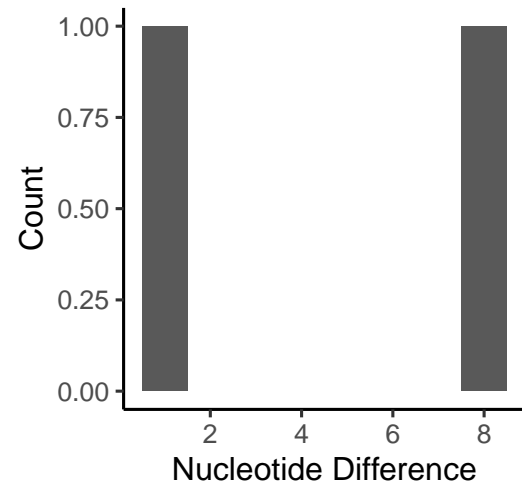
IGHV3-33*05

90 sequences assigned
14 (15.6%) exact matches, in which:
14 unique CDR3
5 unique J



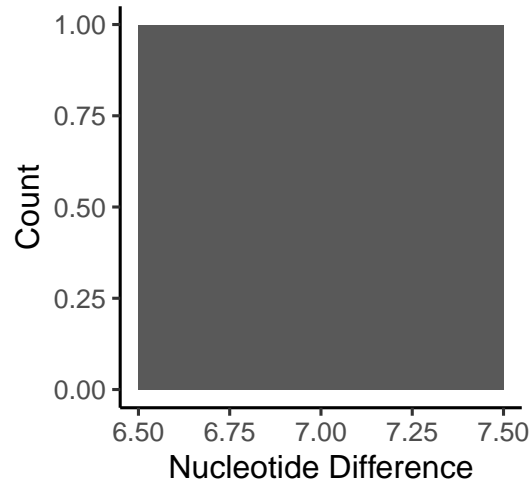
IGHV3-38-3*01

2 sequences assigned
No exact matches.



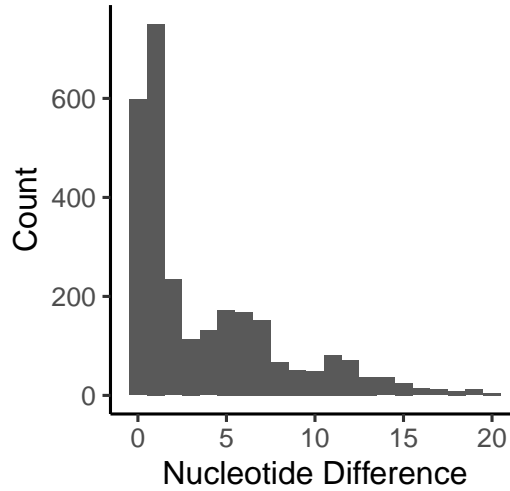
IGHV3-38*03

1 sequences assigned
No exact matches.



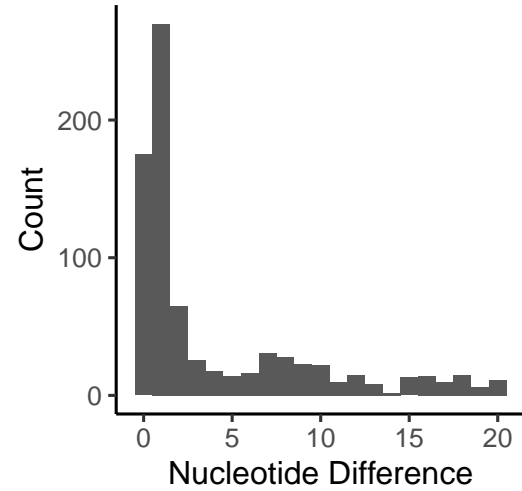
IGHV3-48*01

2891 sequences assigned
598 (20.7%) exact matches, in which:
351 unique CDR3
7 unique J



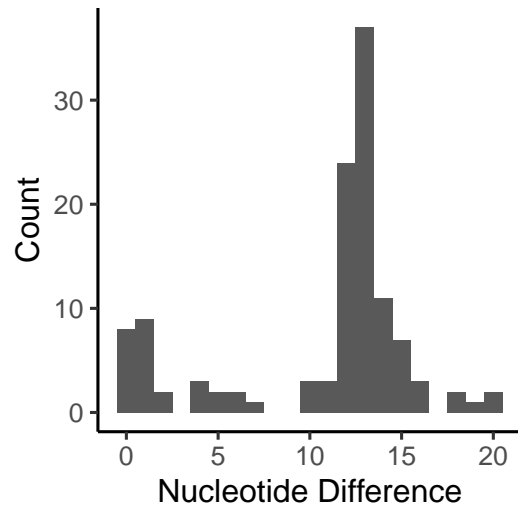
IGHV3-49*04

879 sequences assigned
175 (19.9%) exact matches, in which:
93 unique CDR3
6 unique J



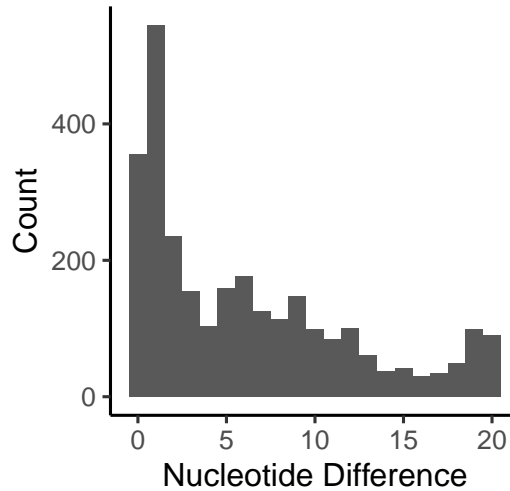
IGHV3-43*01

1606 sequences assigned
8 (0.5%) exact matches, in which:
5 unique CDR3
2 unique J



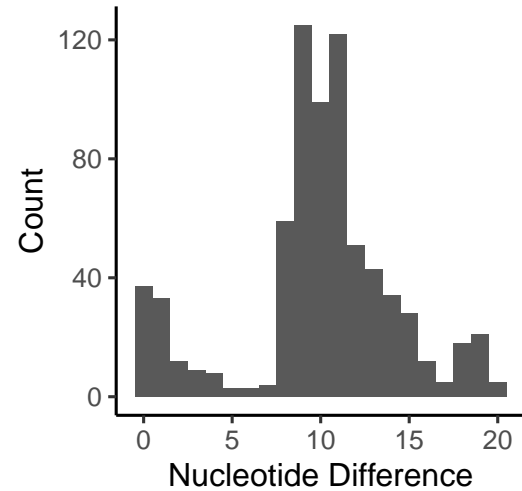
IGHV3-48*03

4188 sequences assigned
356 (8.5%) exact matches, in which:
198 unique CDR3
7 unique J



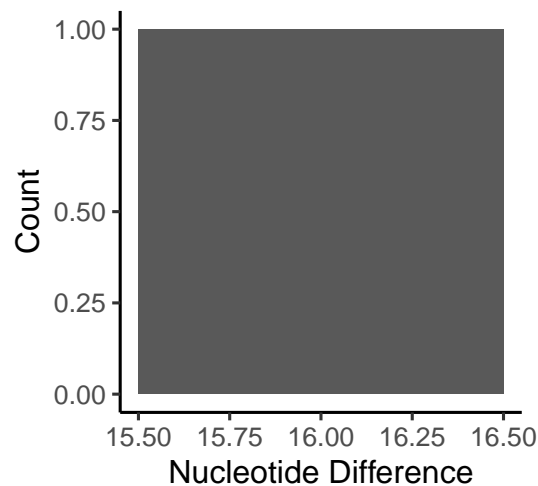
IGHV3-49*03_05

894 sequences assigned
37 (4.1%) exact matches, in which:
26 unique CDR3
6 unique J



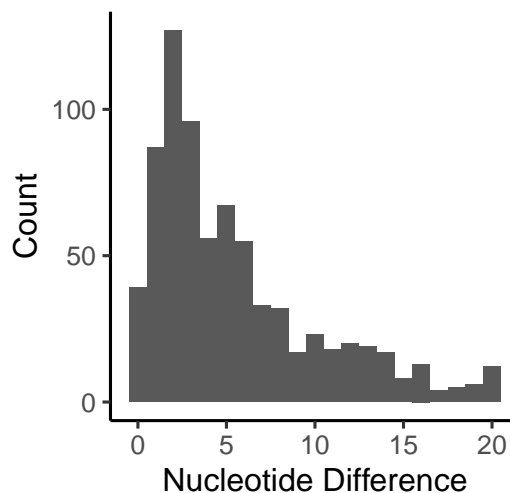
IGHV3-47*02

1 sequences assigned
No exact matches.



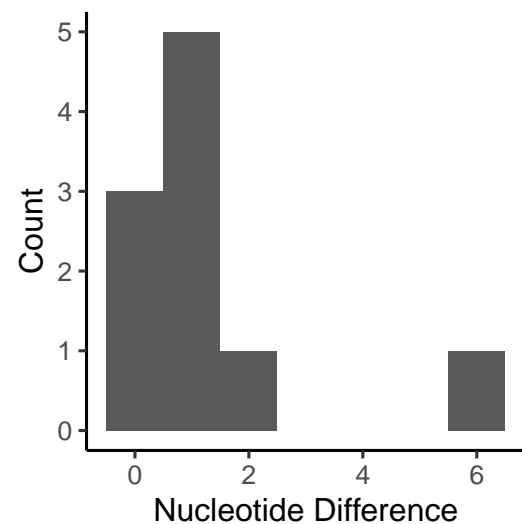
IGHV3-48*04

855 sequences assigned
39 (4.6%) exact matches, in which:
32 unique CDR3
6 unique J



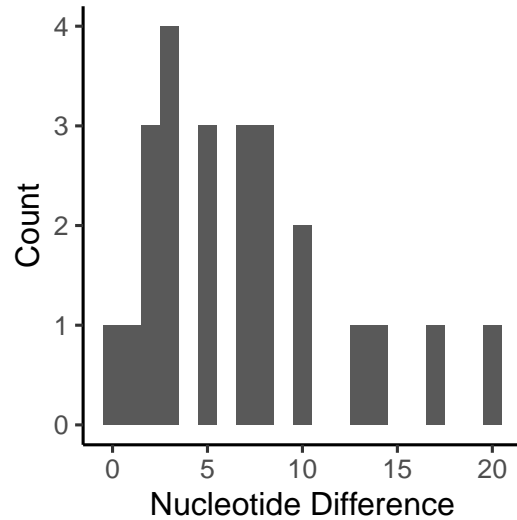
IGHV3-52*01_03

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



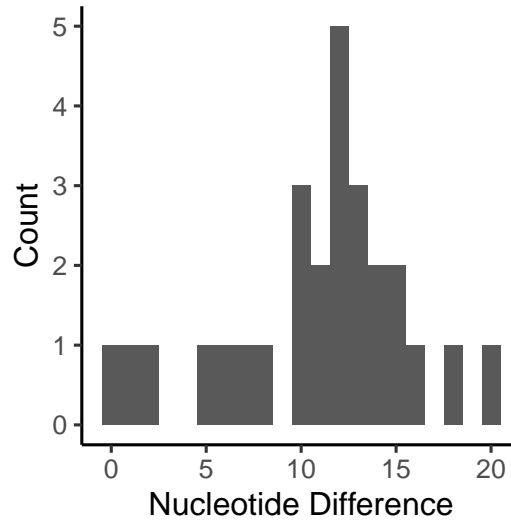
IGHV3-53*05

34 sequences assigned
1 (2.9%) exact matches, in which:
1 unique CDR3
1 unique J



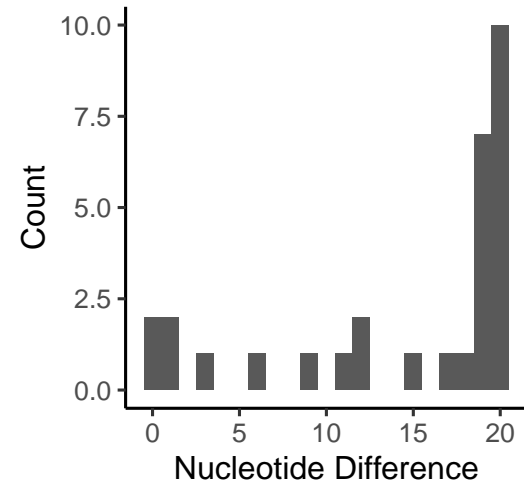
IGHV3-66*01

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



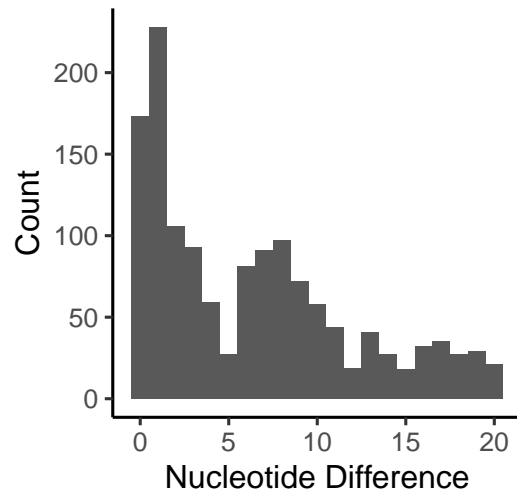
IGHV3-69-1*02

47 sequences assigned
2 (4.3%) exact matches, in which:
2 unique CDR3
2 unique J



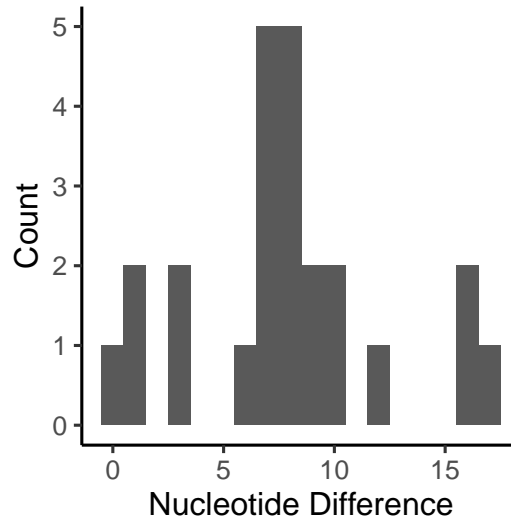
IGHV3-53*01_02

4646 sequences assigned
173 (3.7%) exact matches, in which:
120 unique CDR3
6 unique J



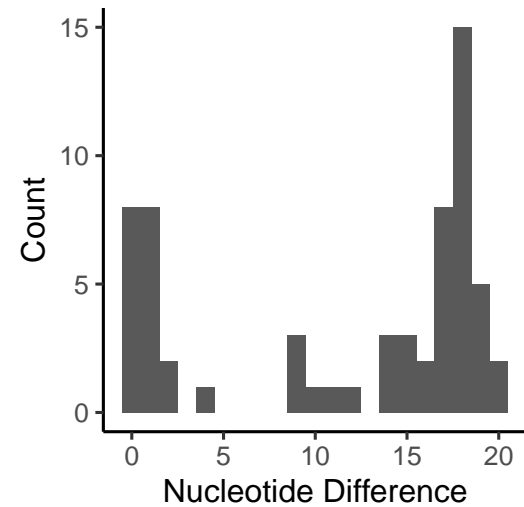
IGHV3-66*03

25 sequences assigned
1 (4%) exact matches, in which:
1 unique CDR3
1 unique J



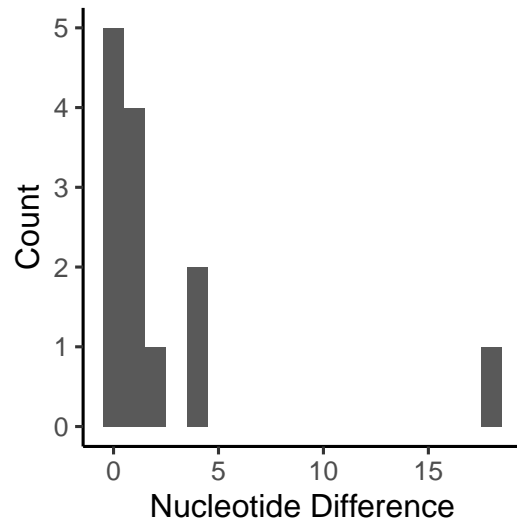
IGHV3-72*01

221 sequences assigned
8 (3.6%) exact matches, in which:
5 unique CDR3
4 unique J



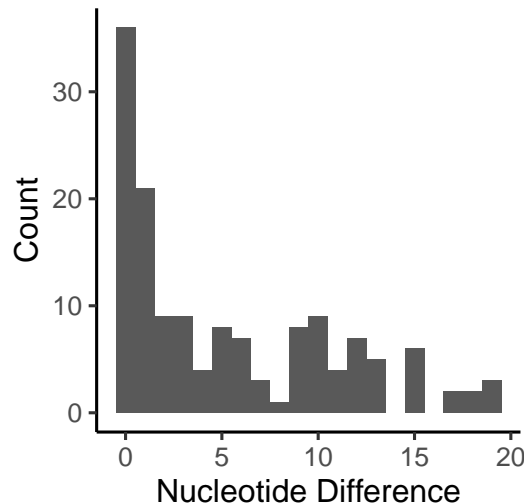
IGHV3-64*02_07

13 sequences assigned
5 (38.5%) exact matches, in which:
4 unique CDR3
1 unique J



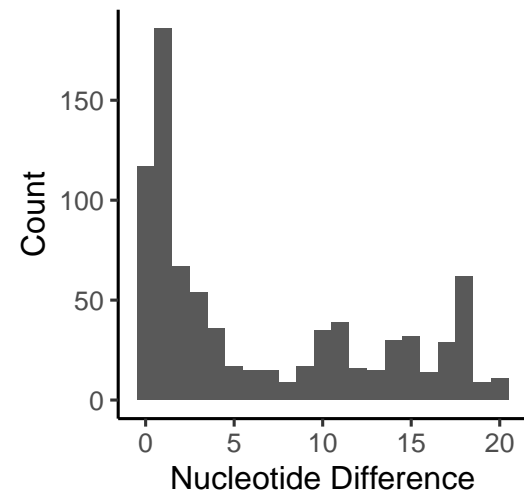
IGHV3-69-1*01

148 sequences assigned
36 (24.3%) exact matches, in which:
32 unique CDR3
6 unique J



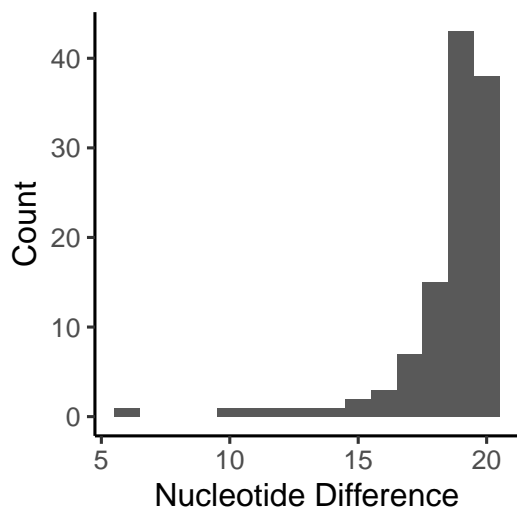
IGHV3-73*01_02

2517 sequences assigned
117 (4.6%) exact matches, in which:
71 unique CDR3
7 unique J



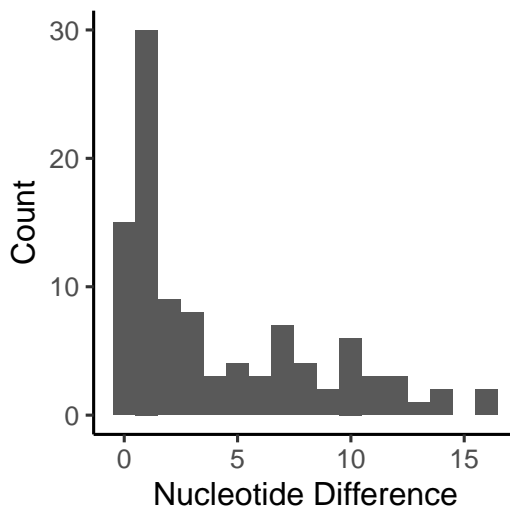
IGHV3-74*03

3173 sequences assigned
No exact matches.



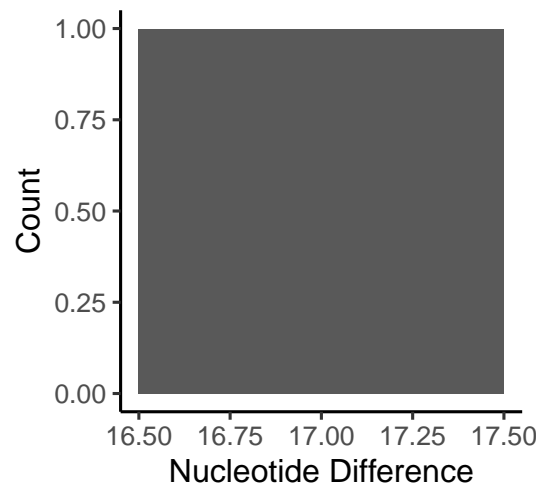
IGHV3-43D*04

105 sequences assigned
15 (14.3%) exact matches, in which:
10 unique CDR3
2 unique J



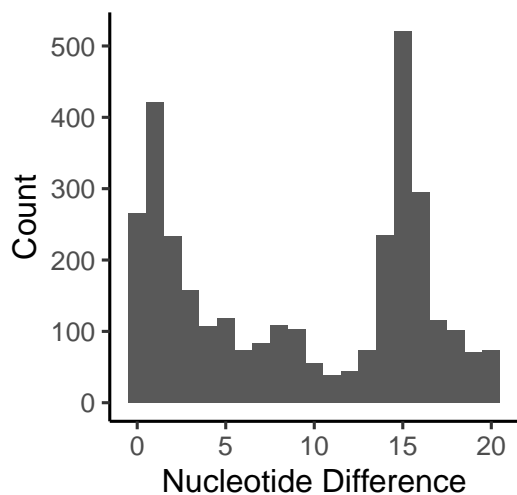
IGHV4-28*01_07

1 sequences assigned
No exact matches.



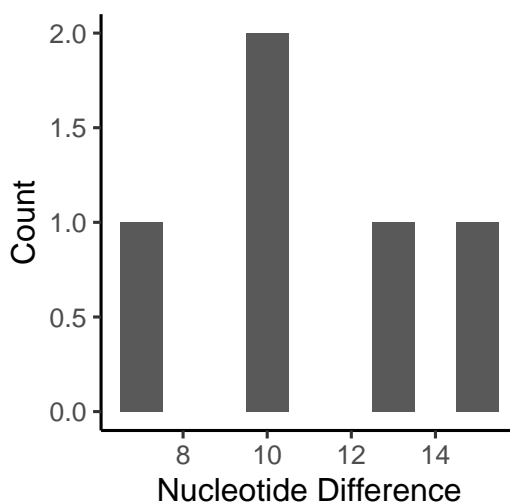
IGHV3-74*01_02

3742 sequences assigned
266 (7.1%) exact matches, in which:
182 unique CDR3
7 unique J



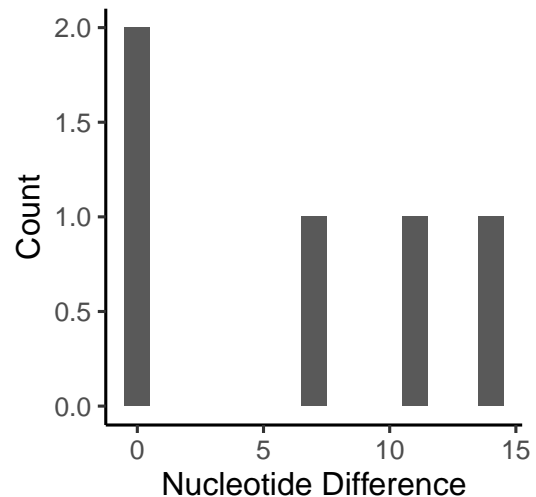
IGHV3-NL1*01

32 sequences assigned
No exact matches.



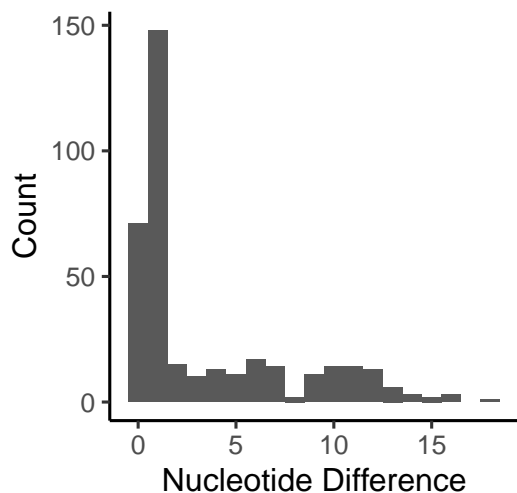
IGHV4-30-4*01

37 sequences assigned
2 (5.4%) exact matches, in which:
2 unique CDR3
1 unique J



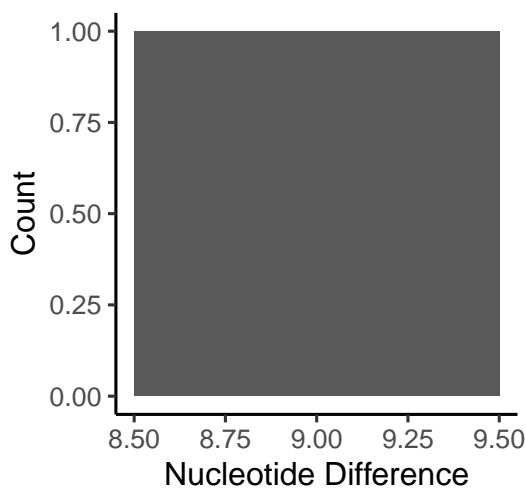
IGHV3-43D*03

378 sequences assigned
71 (18.8%) exact matches, in which:
47 unique CDR3
4 unique J



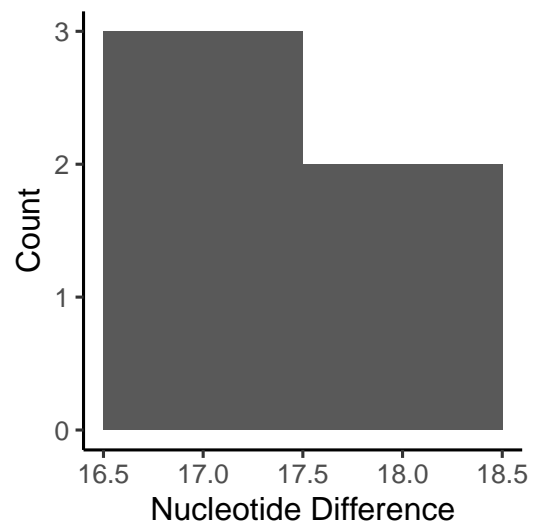
IGHV4-28*03

2 sequences assigned
No exact matches.



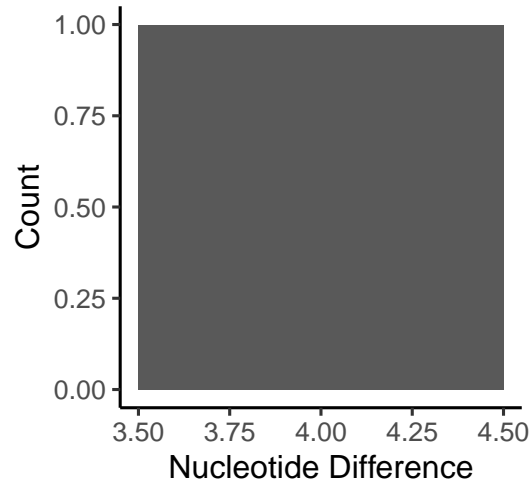
IGHV4-30-2*01

6 sequences assigned
No exact matches.



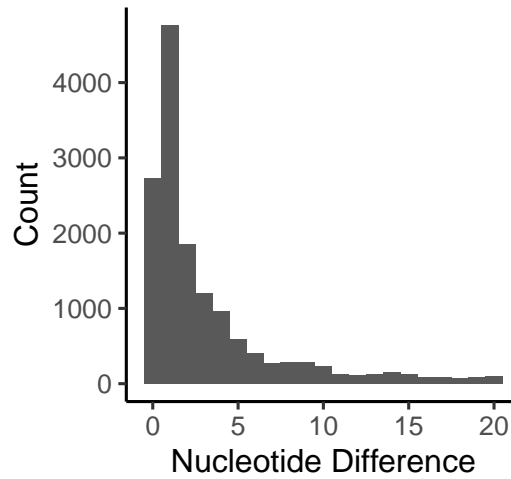
IGHV4-30-2*04

3 sequences assigned
No exact matches.



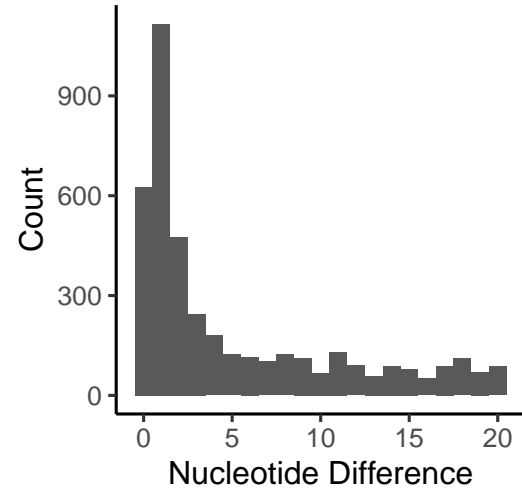
IGHV4-34*01_02

19106 sequences assigned
2732 (14.3%) exact matches, in which:
1695 unique CDR3
7 unique J



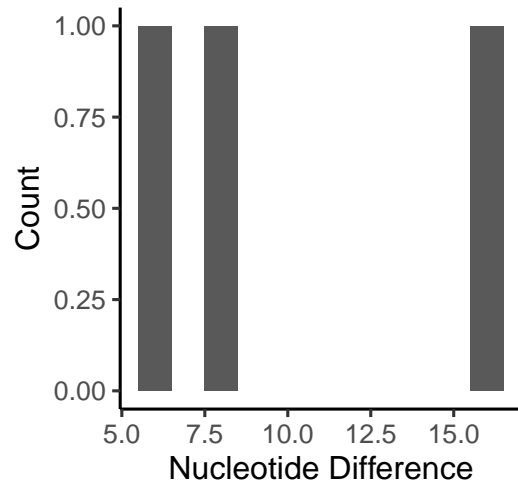
IGHV4-39*07

4796 sequences assigned
626 (13.1%) exact matches, in which:
461 unique CDR3
7 unique J



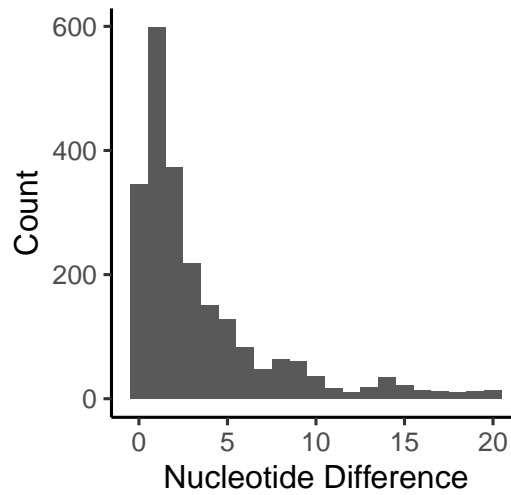
IGHV4-30-4*08

9 sequences assigned
No exact matches.



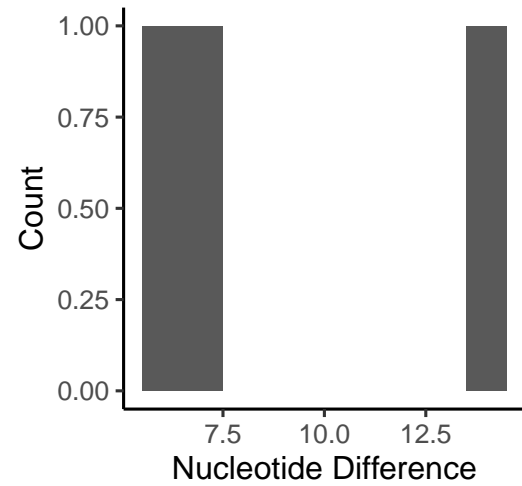
IGHV4-38-2*01

2403 sequences assigned
346 (14.4%) exact matches, in which:
261 unique CDR3
7 unique J



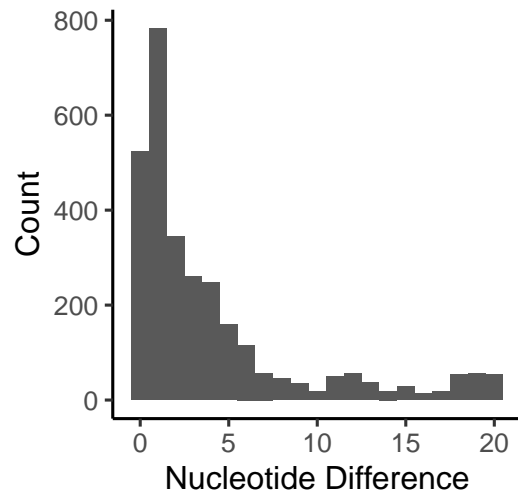
IGHV4-55*01_05

3 sequences assigned
No exact matches.



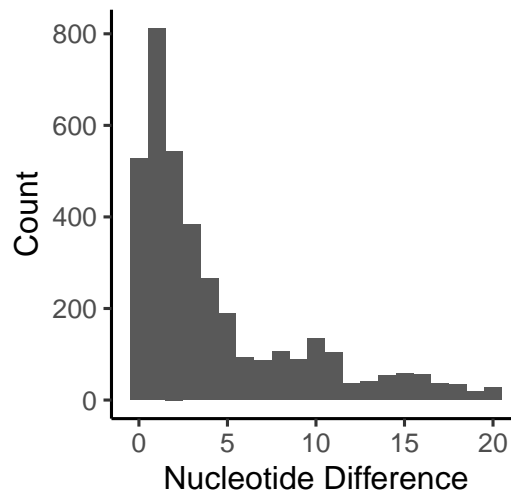
IGHV4-31*03_04

18825 sequences assigned
523 (2.8%) exact matches, in which:
381 unique CDR3
7 unique J



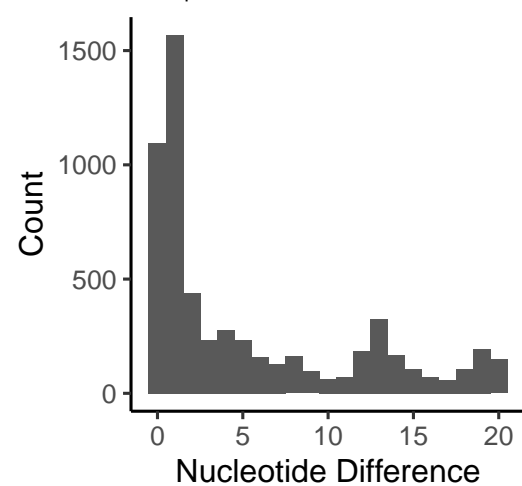
IGHV4-38-2*02

4949 sequences assigned
527 (10.6%) exact matches, in which:
390 unique CDR3
7 unique J



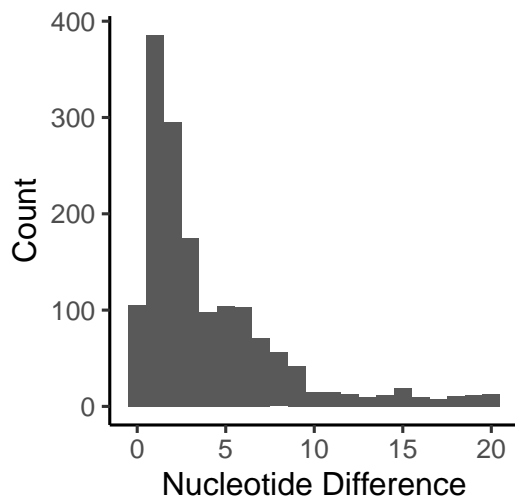
IGHV4-59*01_07

8112 sequences assigned
1096 (13.5%) exact matches, in which:
781 unique CDR3
7 unique J



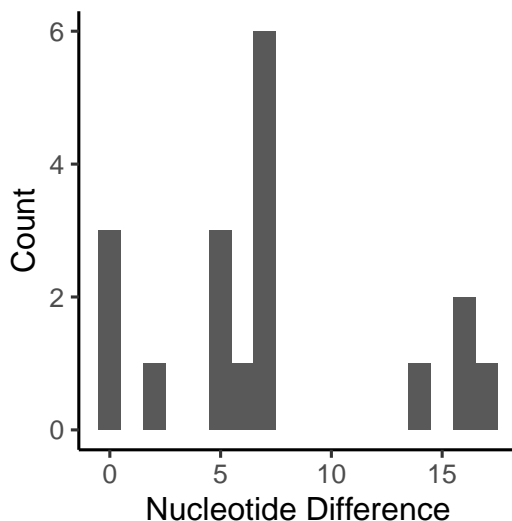
IGHV4-59*12

1822 sequences assigned
105 (5.8%) exact matches, in which:
102 unique CDR3
7 unique J



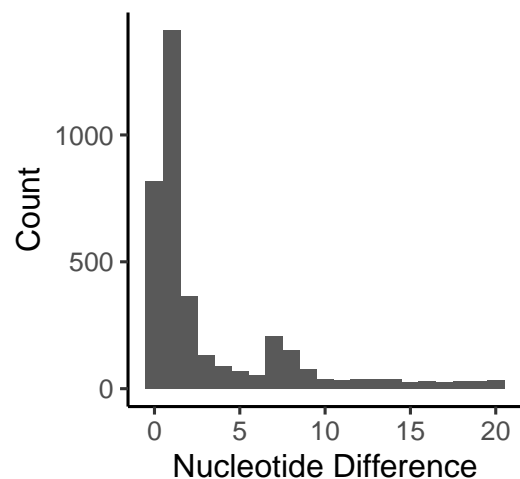
IGHV5-10-1*01_03

18 sequences assigned
3 (16.7%) exact matches, in which:
3 unique CDR3
3 unique J



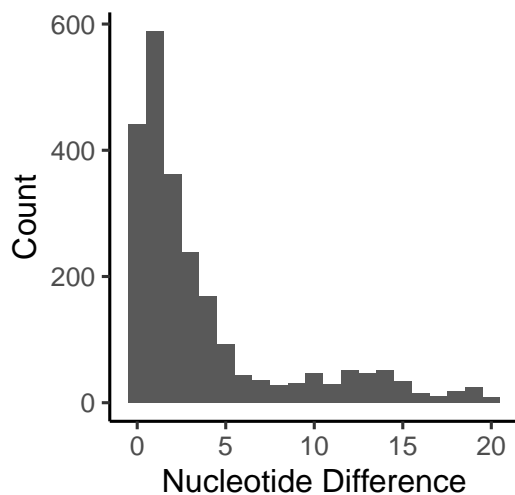
IGHV7-4-1*02

4716 sequences assigned
817 (17.3%) exact matches, in which:
579 unique CDR3
7 unique J



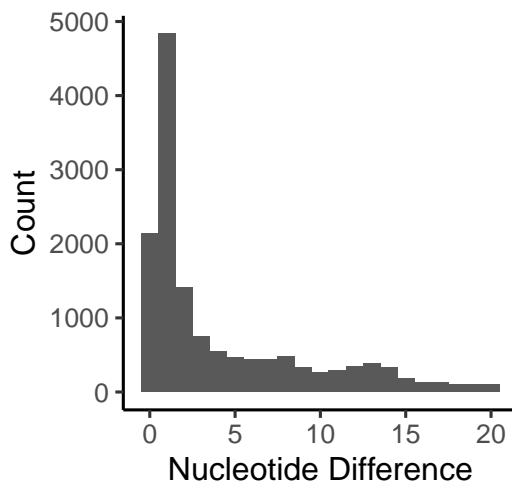
IGHV4-61*01

2474 sequences assigned
441 (17.8%) exact matches, in which:
344 unique CDR3
6 unique J



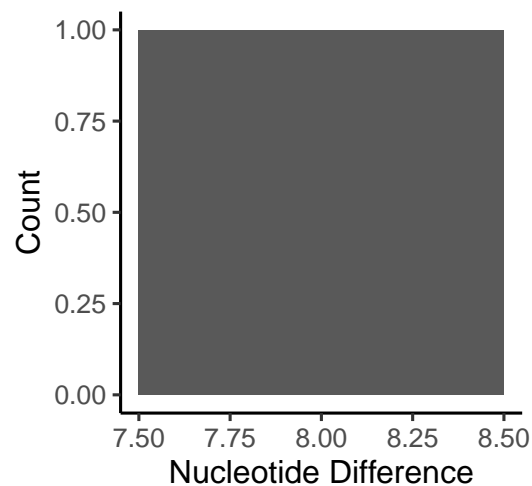
IGHV5-51*01_03

14942 sequences assigned
2137 (14.3%) exact matches, in which:
1084 unique CDR3
7 unique J



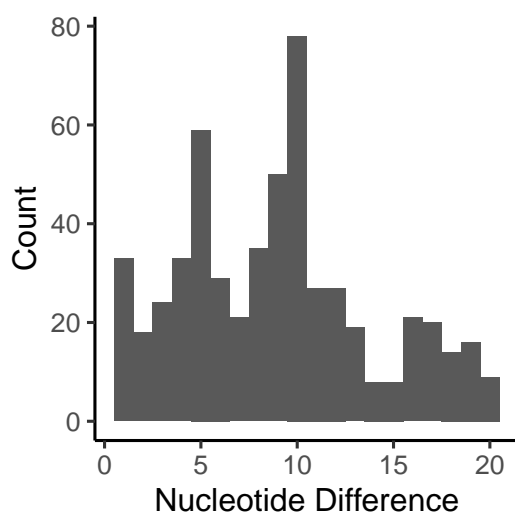
IGHV7-40*03

1 sequences assigned
No exact matches.



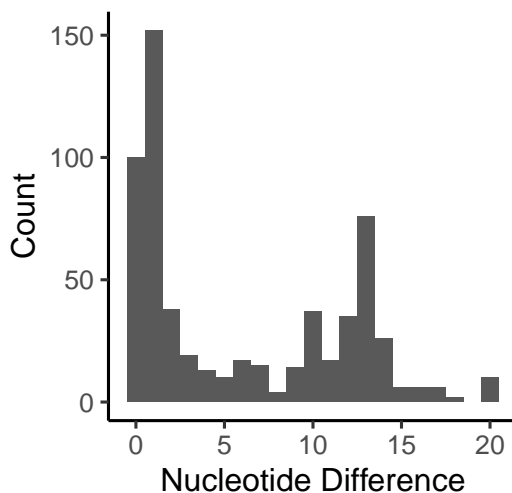
IGHV4-61*08

618 sequences assigned
No exact matches.



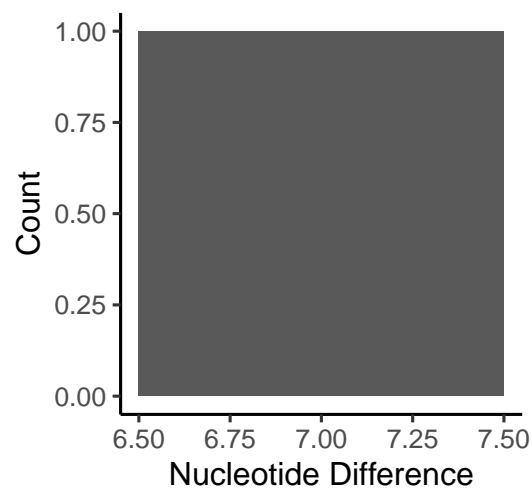
IGHV6-1*01_02

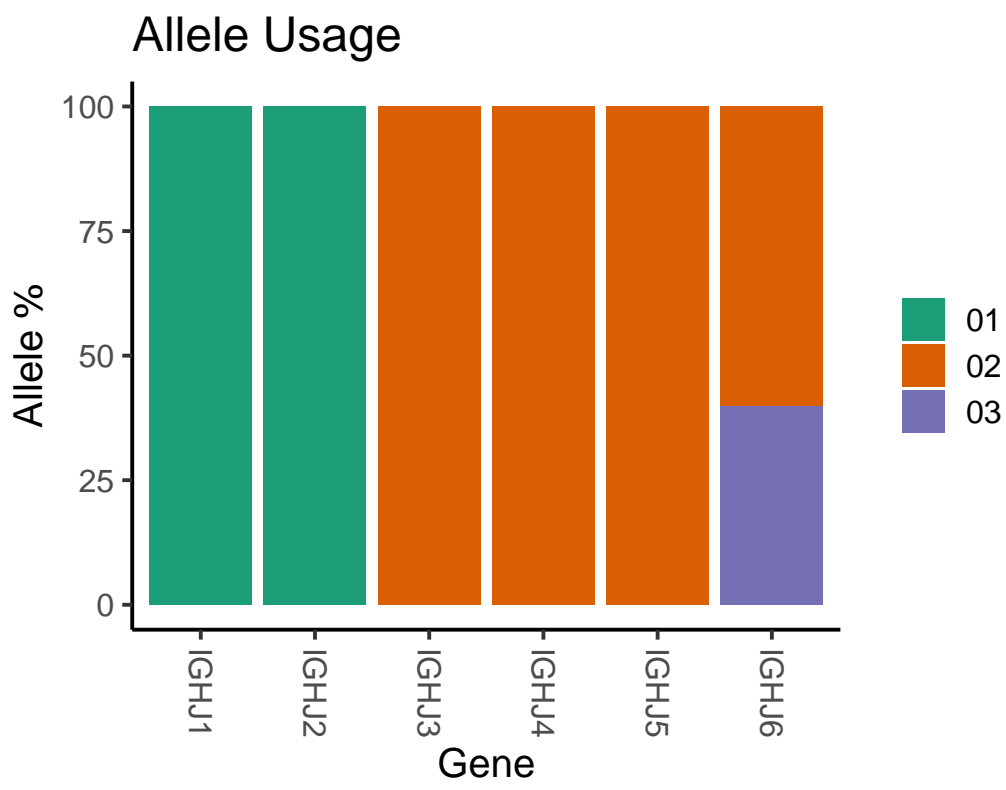
688 sequences assigned
100 (14.5%) exact matches, in which:
77 unique CDR3
5 unique J



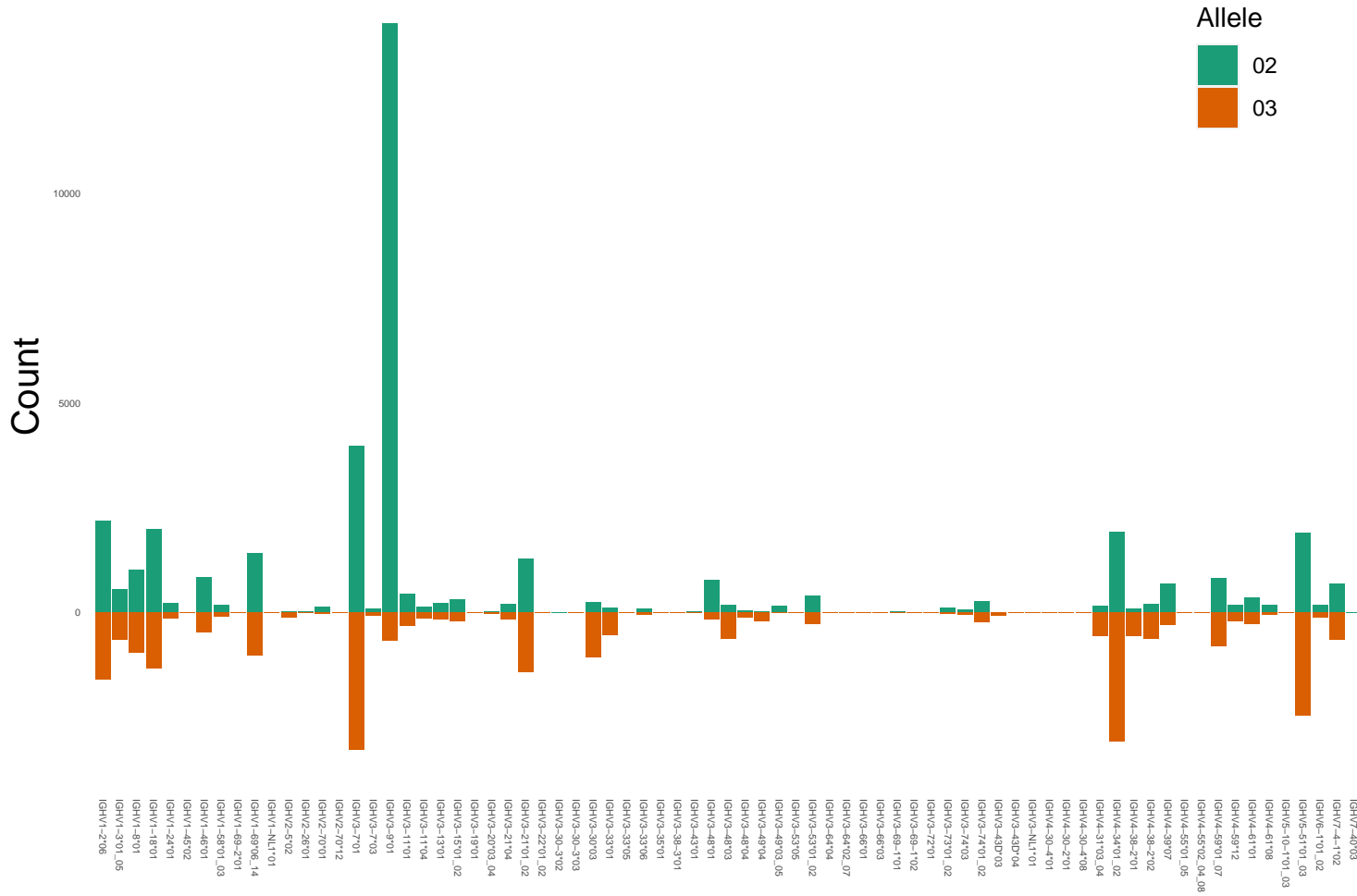
IGHV7-81*01

1 sequences assigned
No exact matches.





Sequence Count by IGHJ6 allele usage



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.

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

Novel sequence(s) 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 IGHV3–30*03_T288C IGHV3–30–3*02_G75C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

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

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

Novel sequence(s) IGHV4–4*02_03_C300T IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

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

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV1–69*08_C191T IGHV3–11*06_T300C IGHV3–30*03_T288C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

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

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) IGHV3–30*03_T288C IGHV3–30–3*01_T288C 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) IGHV3–48*04_A193T_C198T_A200C_C201T_T210A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

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

Novel sequence(s) IGHV3–33*01_C288T IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s) IGHV3–33*01_T105C_A173T_T192G_C288T are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–30*04_T288C IGHV3–33*01_G75C IGHV4–30–2*03_T288C IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–11*06_T300C are not listed in the genotype and will be ignored.

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

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