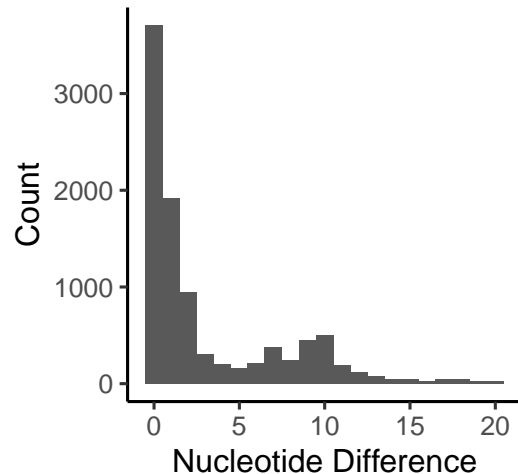


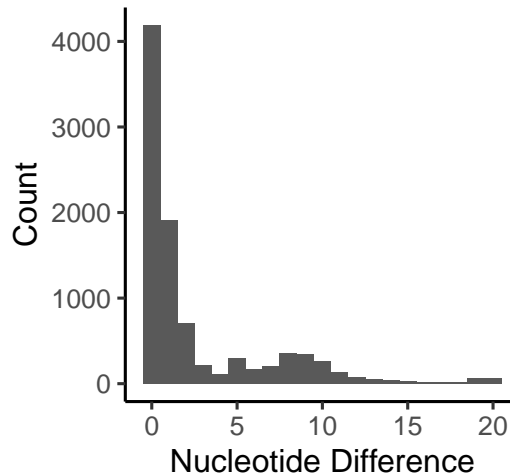
IGHV1-2*02

10297 sequences assigned
3705 (36%) exact matches, in which:
3477 unique CDR3
7 unique J



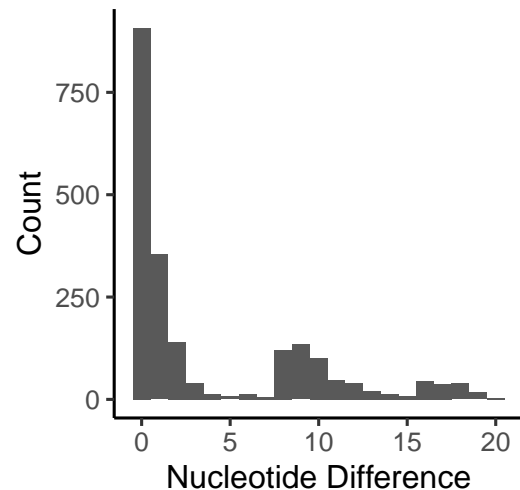
IGHV1-8*01

9440 sequences assigned
4187 (44.4%) exact matches, in which:
3980 unique CDR3
7 unique J



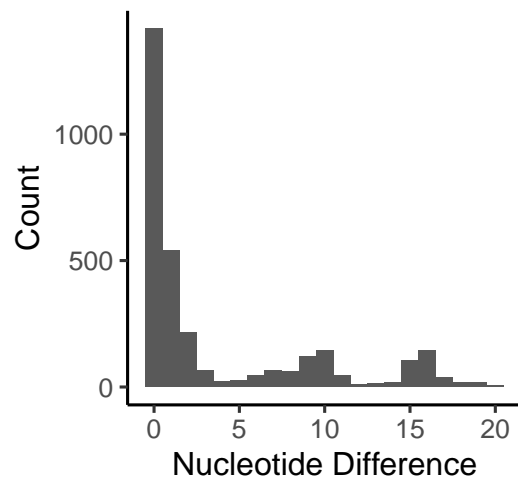
IGHV1-24*01

2267 sequences assigned
908 (40.1%) exact matches, in which:
865 unique CDR3
7 unique J



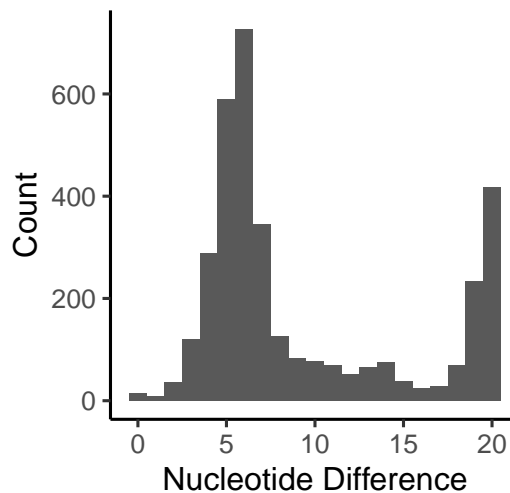
IGHV1-2*04

3218 sequences assigned
1417 (44%) exact matches, in which:
1354 unique CDR3
7 unique J



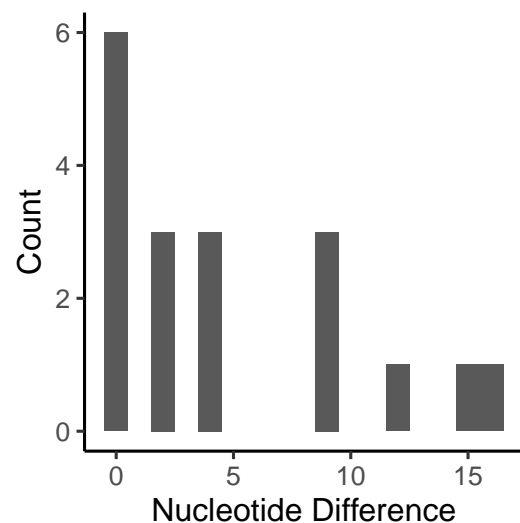
IGHV1-8*02

3837 sequences assigned
15 (0.4%) exact matches, in which:
15 unique CDR3
5 unique J



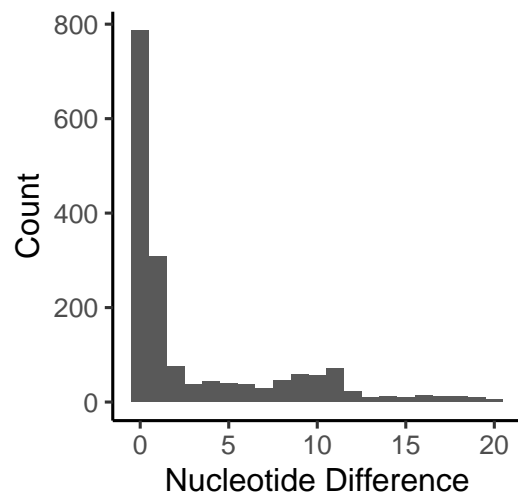
IGHV1-45*02

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



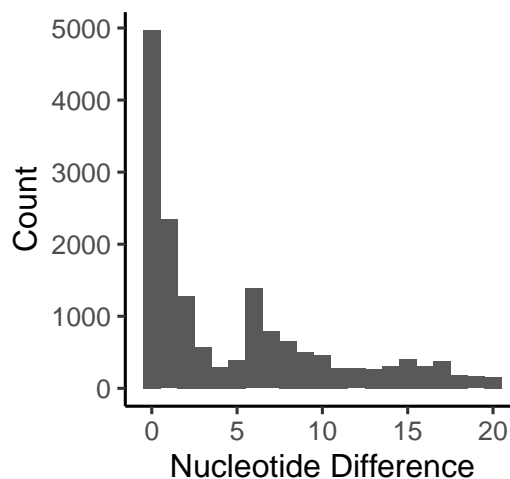
IGHV1-3*01_05

1825 sequences assigned
787 (43.1%) exact matches, in which:
733 unique CDR3
7 unique J



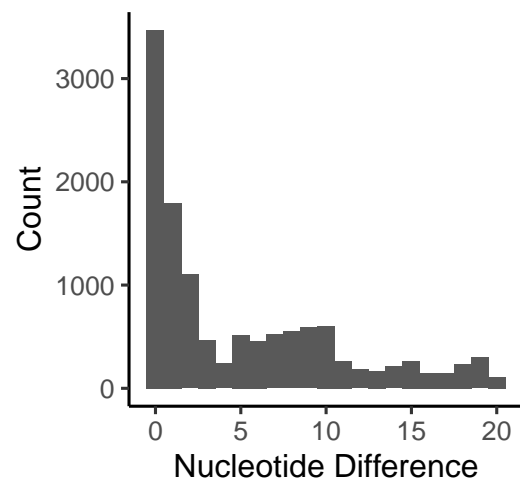
IGHV1-18*01

18427 sequences assigned
4972 (27%) exact matches, in which:
4679 unique CDR3
7 unique J



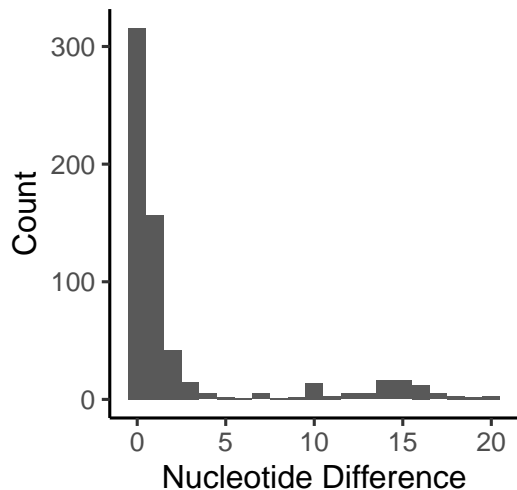
IGHV1-46*01

13660 sequences assigned
3470 (25.4%) exact matches, in which:
3289 unique CDR3
7 unique J



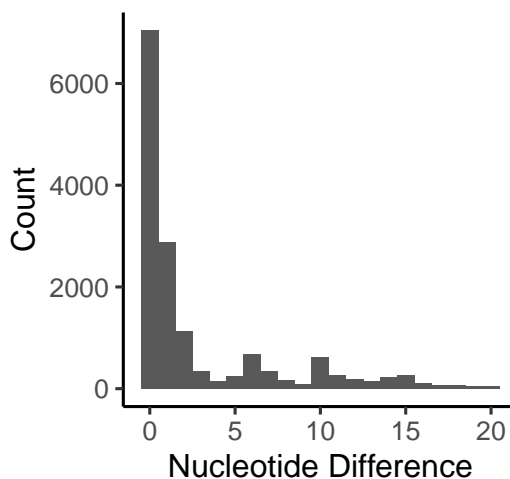
IGHV1–58*01_03

645 sequences assigned
316 (49%) exact matches, in which:
304 unique CDR3
7 unique J



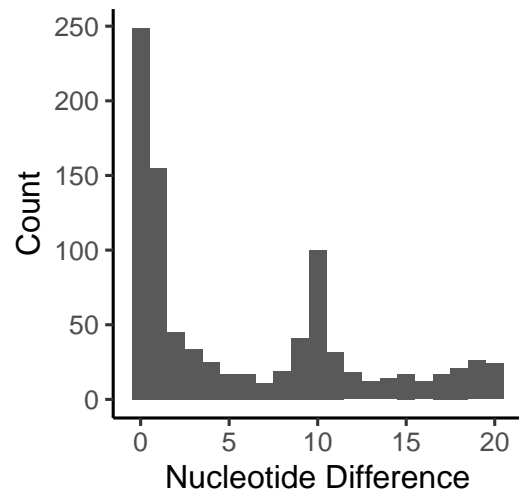
IGHV1–69*01_12_13

16411 sequences assigned
7043 (42.9%) exact matches, in which:
6731 unique CDR3
7 unique J



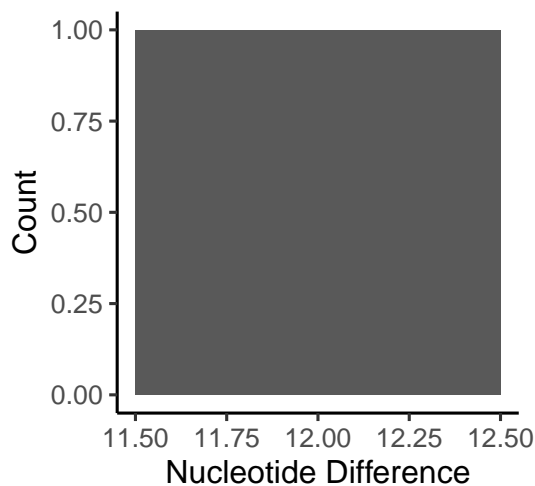
IGHV2–5*01

1200 sequences assigned
249 (20.8%) exact matches, in which:
238 unique CDR3
7 unique J



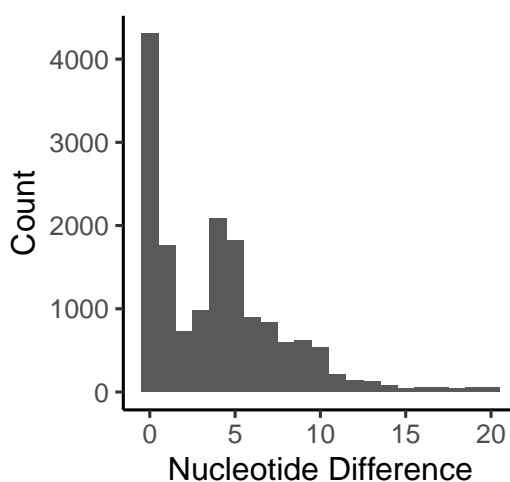
IGHV1–68*01

1 sequences assigned
No exact matches.



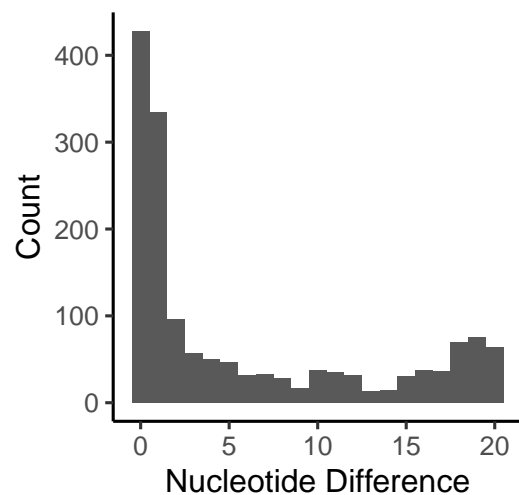
IGHV1–69*06_14

16315 sequences assigned
4305 (26.4%) exact matches, in which:
4148 unique CDR3
7 unique J



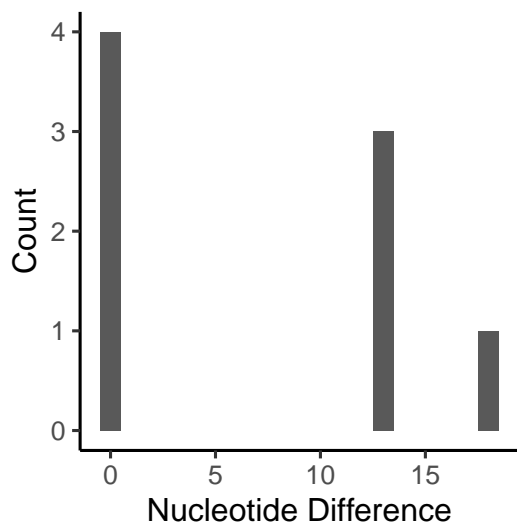
IGHV2–5*02

2215 sequences assigned
428 (19.3%) exact matches, in which:
405 unique CDR3
7 unique J



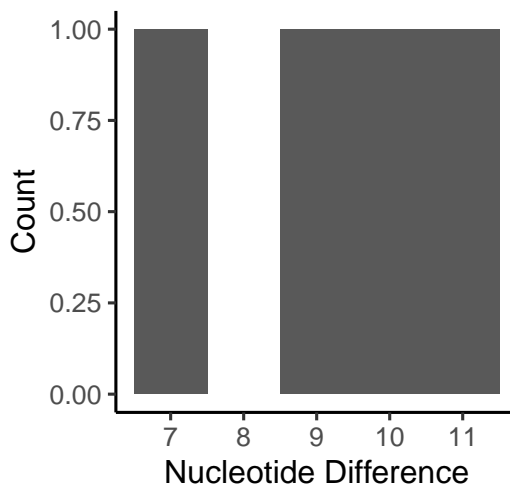
IGHV1–69–2*01

87 sequences assigned
4 (4.6%) exact matches, in which:
3 unique CDR3
2 unique J



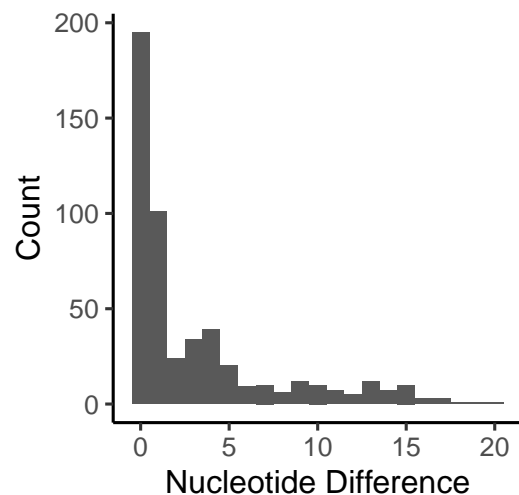
IGHV1–NL1*01

4 sequences assigned
No exact matches.



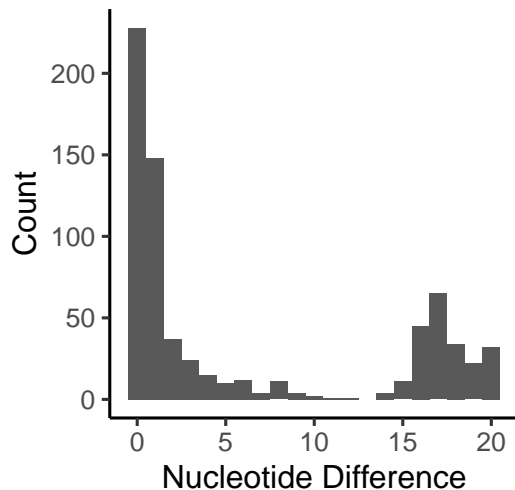
IGHV2–26*01

537 sequences assigned
195 (36.3%) exact matches, in which:
189 unique CDR3
7 unique J



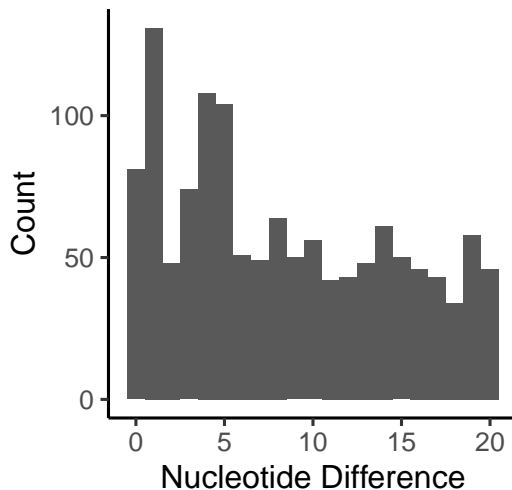
IGHV2-70*01

769 sequences assigned
228 (29.6%) exact matches, in which:
215 unique CDR3
7 unique J



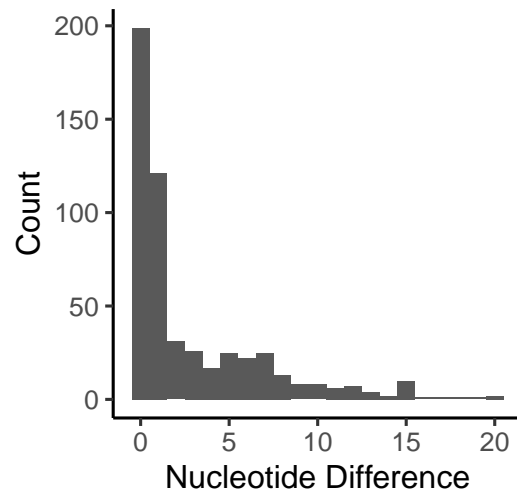
IGHV3-7*03

2239 sequences assigned
81 (3.6%) exact matches, in which:
74 unique CDR3
7 unique J



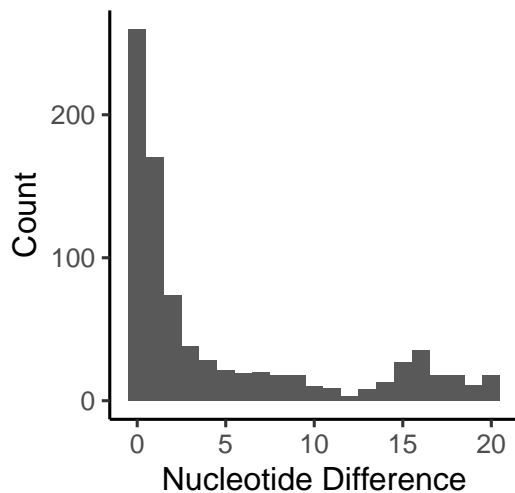
IGHV3-11*04

555 sequences assigned
199 (35.9%) exact matches, in which:
198 unique CDR3
7 unique J



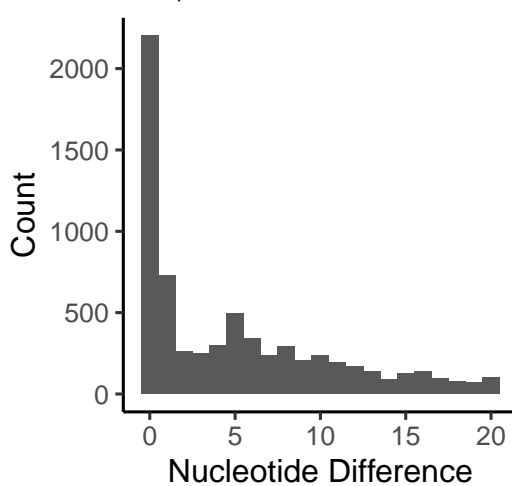
IGHV2-70*11_15

1194 sequences assigned
260 (21.8%) exact matches, in which:
243 unique CDR3
7 unique J



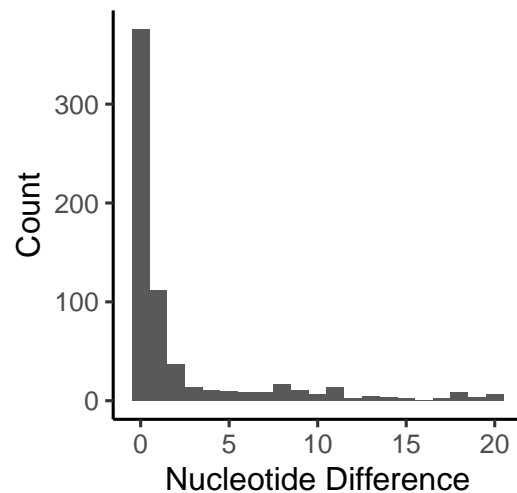
IGHV3-9*01

8122 sequences assigned
2202 (27.1%) exact matches, in which:
1748 unique CDR3
7 unique J



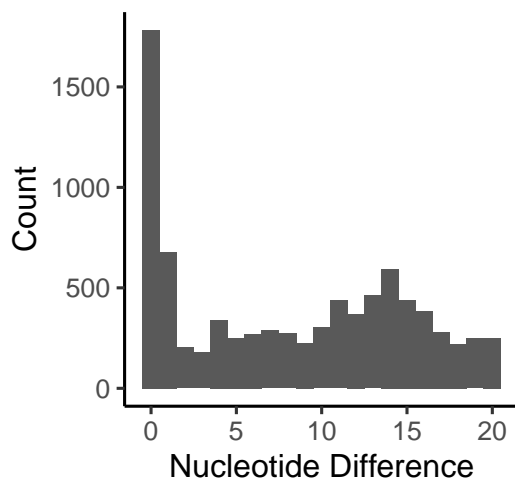
IGHV3-13*01

698 sequences assigned
376 (53.9%) exact matches, in which:
306 unique CDR3
7 unique J



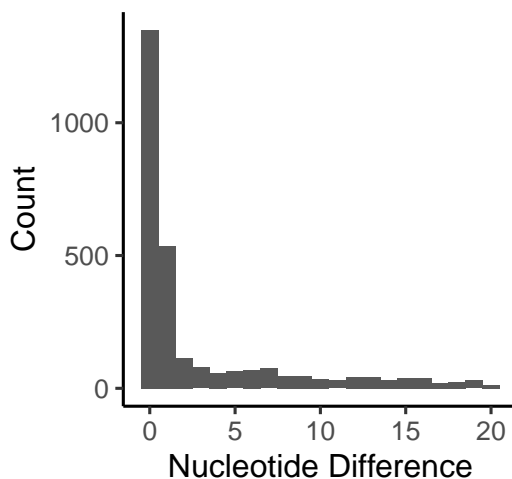
IGHV3-7*01

11272 sequences assigned
1783 (15.8%) exact matches, in which:
1478 unique CDR3
7 unique J



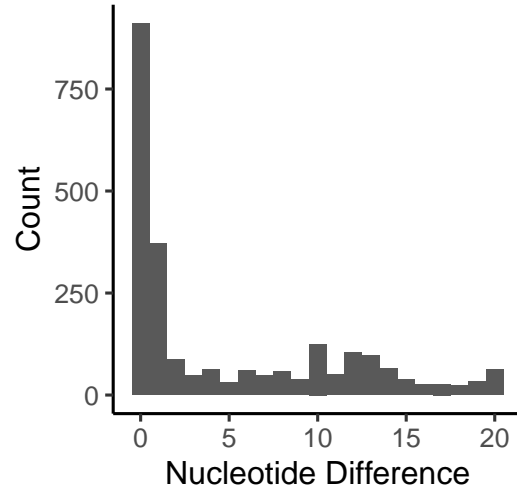
IGHV3-11*01

3536 sequences assigned
1349 (38.2%) exact matches, in which:
1148 unique CDR3
7 unique J



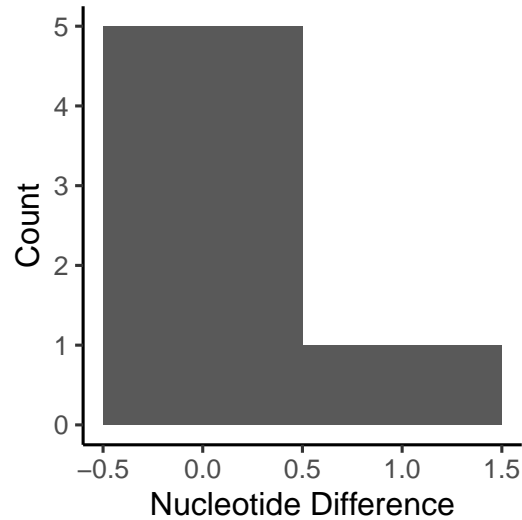
IGHV3-15*01_02

2986 sequences assigned
911 (30.5%) exact matches, in which:
743 unique CDR3
7 unique J



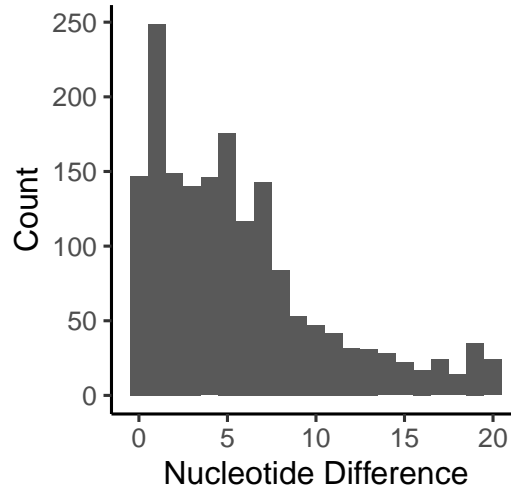
IGHV3-19*01

6 sequences assigned
5 (83.3%) exact matches, in which:
4 unique CDR3
2 unique J



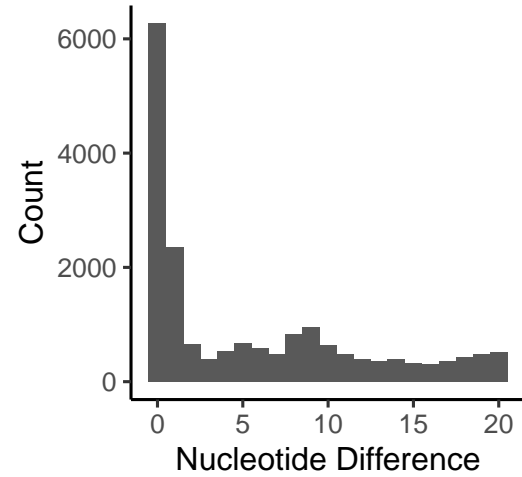
IGHV3-21*04

1994 sequences assigned
147 (7.4%) exact matches, in which:
145 unique CDR3
7 unique J



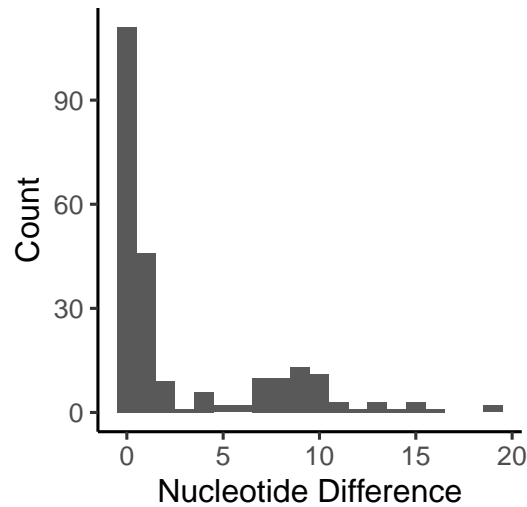
IGHV3-23*01_04

25362 sequences assigned
6270 (24.7%) exact matches, in which:
4871 unique CDR3
7 unique J



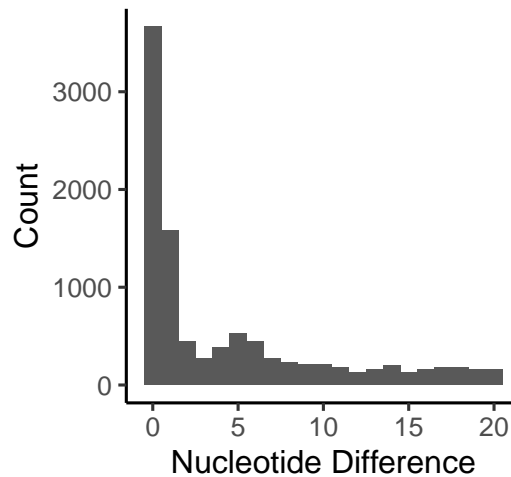
IGHV3-20*01_02

239 sequences assigned
111 (46.4%) exact matches, in which:
88 unique CDR3
6 unique J



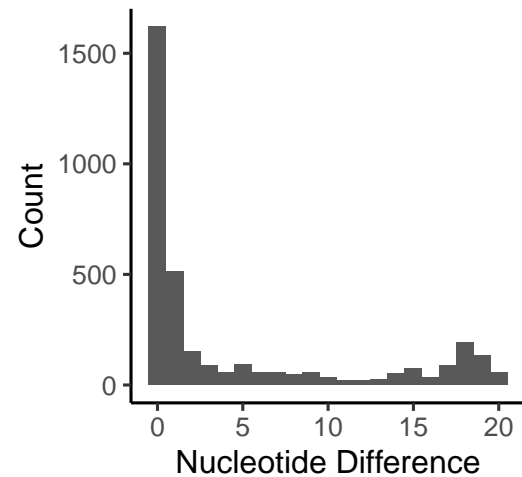
IGHV3-21*01_02

11386 sequences assigned
3665 (32.2%) exact matches, in which:
2990 unique CDR3
7 unique J



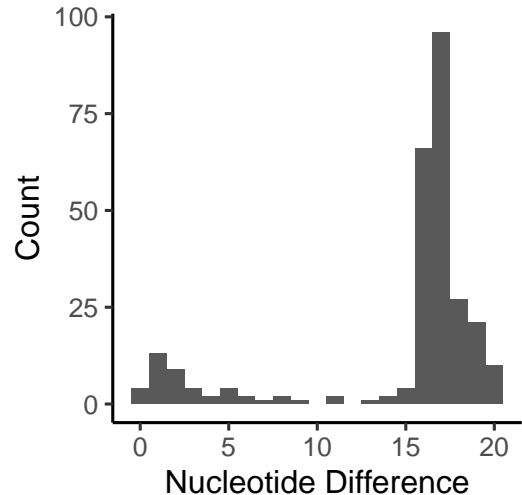
IGHV3-30*01

3732 sequences assigned
1620 (43.4%) exact matches, in which:
1382 unique CDR3
7 unique J



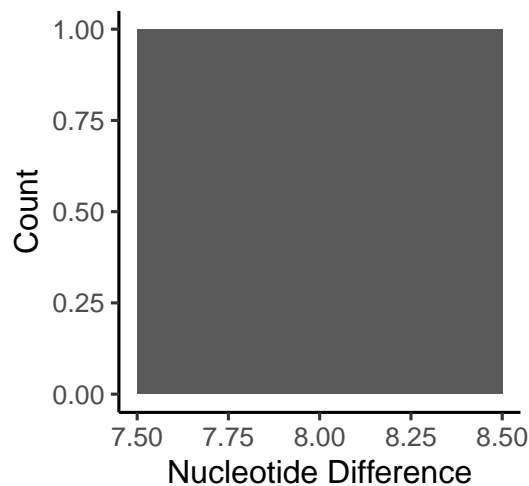
IGHV3-20*03_04

357 sequences assigned
4 (1.1%) exact matches, in which:
4 unique CDR3
3 unique J



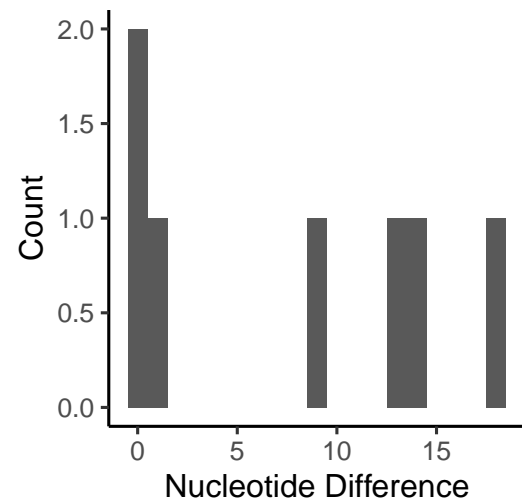
IGHV3-22*01_02

5 sequences assigned
No exact matches.



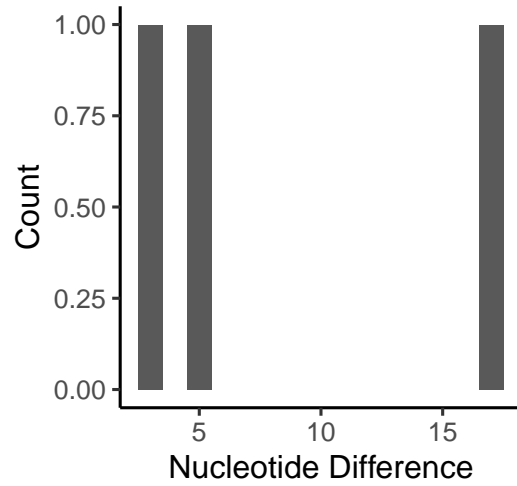
IGHV3-30-3*01

9 sequences assigned
2 (22.2%) exact matches, in which:
1 unique CDR3
1 unique J



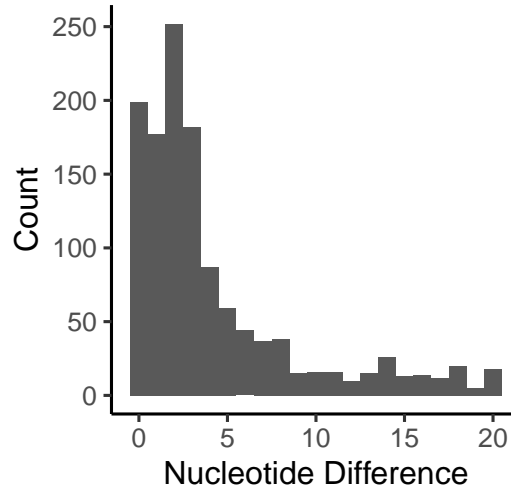
IGHV3-30-3*02

5 sequences assigned
No exact matches.



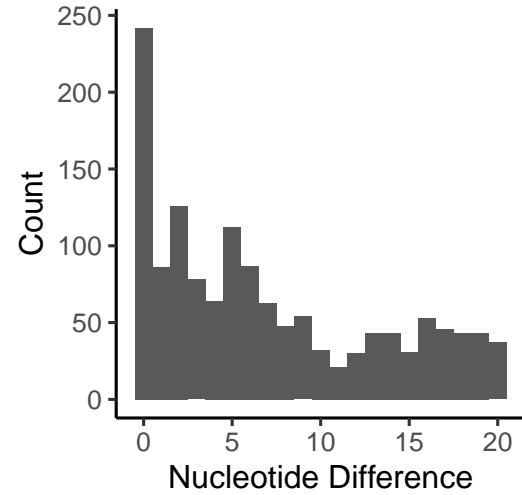
IGHV3-30*07

1315 sequences assigned
199 (15.1%) exact matches, in which:
197 unique CDR3
7 unique J



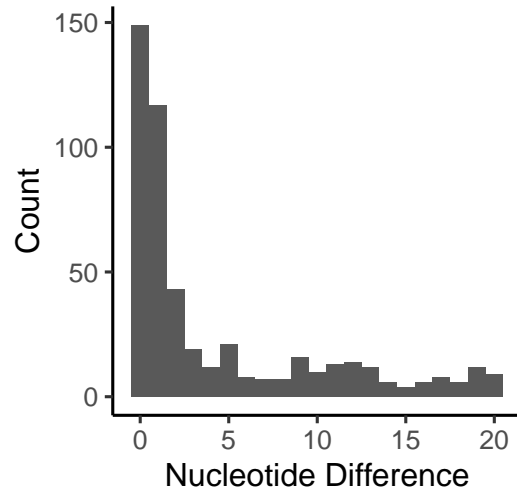
IGHV3-33*08

1570 sequences assigned
242 (15.4%) exact matches, in which:
238 unique CDR3
7 unique J



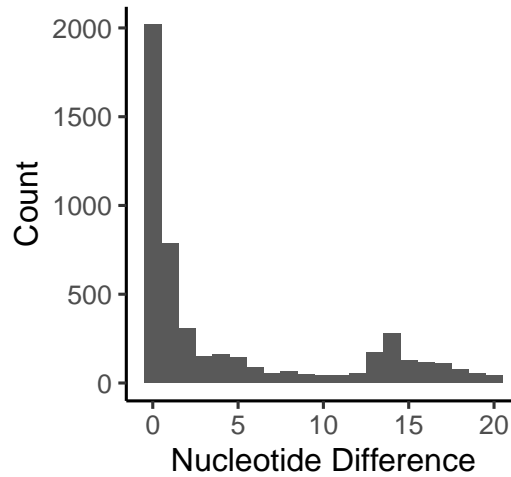
IGHV3-30*03

571 sequences assigned
149 (26.1%) exact matches, in which:
148 unique CDR3
7 unique J



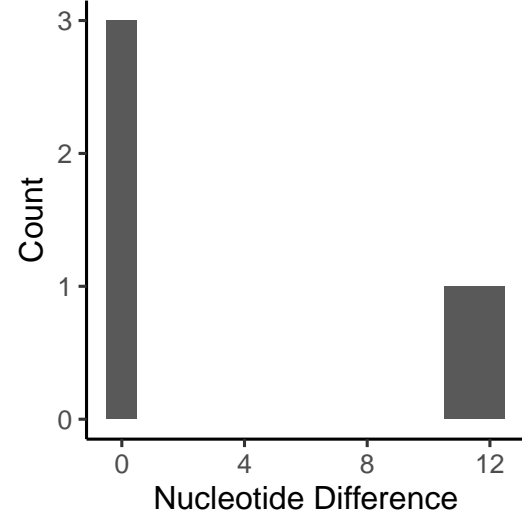
IGHV3-33*01

5240 sequences assigned
2018 (38.5%) exact matches, in which:
1695 unique CDR3
7 unique J



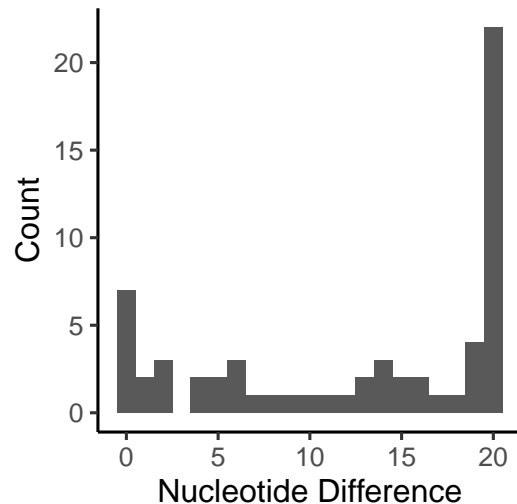
IGHV3-35*01

5 sequences assigned
3 (60%) exact matches, in which:
2 unique CDR3
2 unique J



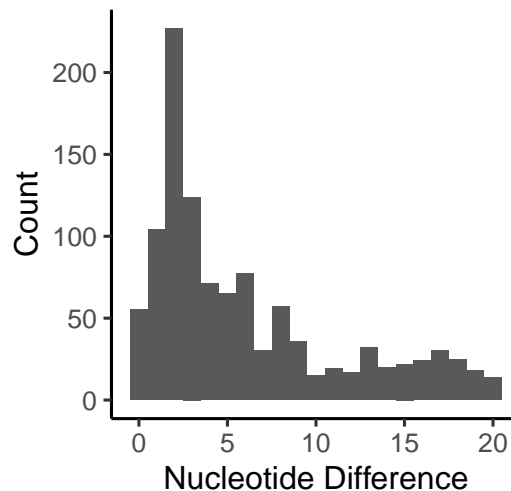
IGHV3-30-3*03

225 sequences assigned
7 (3.1%) exact matches, in which:
7 unique CDR3
3 unique J



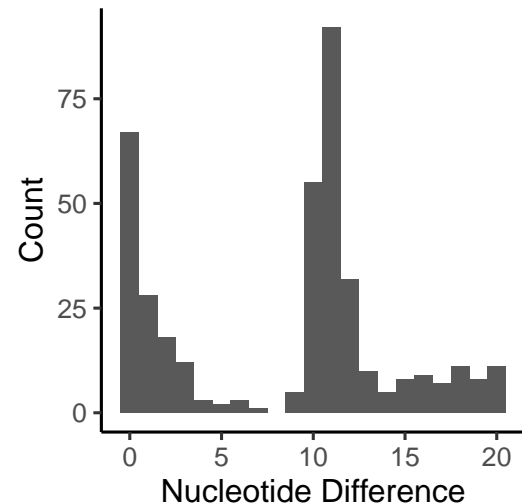
IGHV3-33*06

1381 sequences assigned
55 (4%) exact matches, in which:
54 unique CDR3
6 unique J



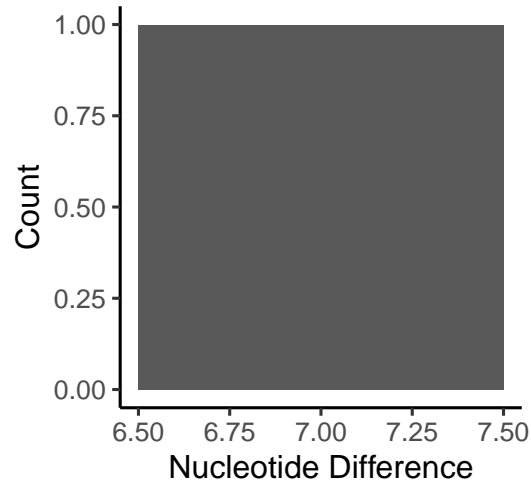
IGHV3-43*01

521 sequences assigned
67 (12.9%) exact matches, in which:
56 unique CDR3
5 unique J



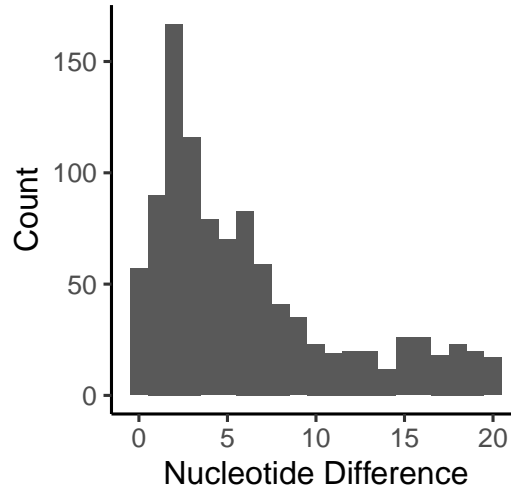
IGHV3-47*02

3 sequences assigned
No exact matches.



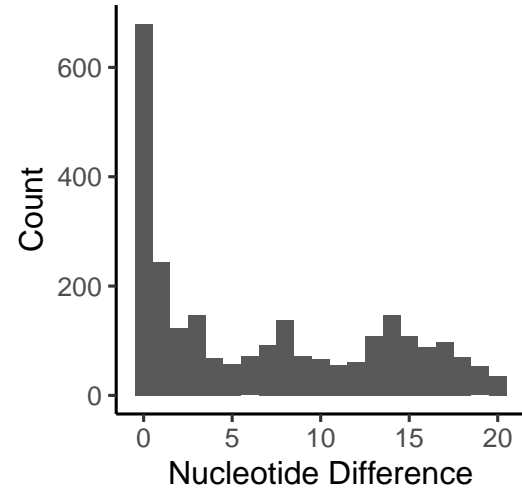
IGHV3-48*04

1395 sequences assigned
57 (4.1%) exact matches, in which:
57 unique CDR3
6 unique J



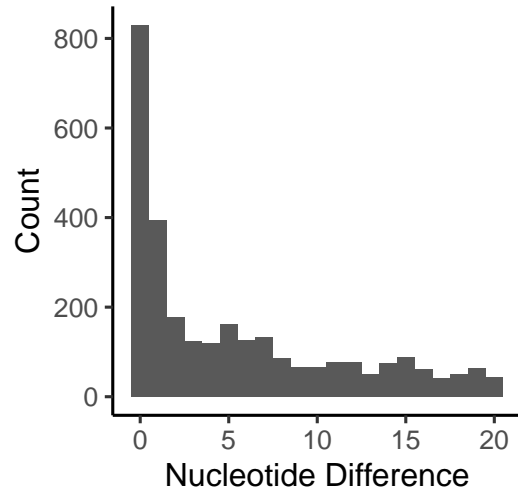
IGHV3-53*01_02

3316 sequences assigned
680 (20.5%) exact matches, in which:
579 unique CDR3
7 unique J



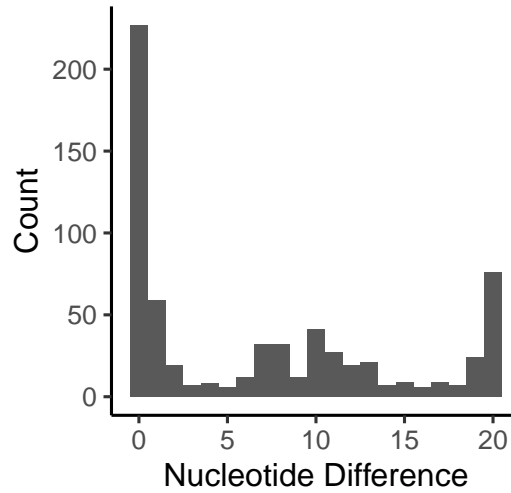
IGHV3-48*01

5138 sequences assigned
830 (16.2%) exact matches, in which:
691 unique CDR3
7 unique J



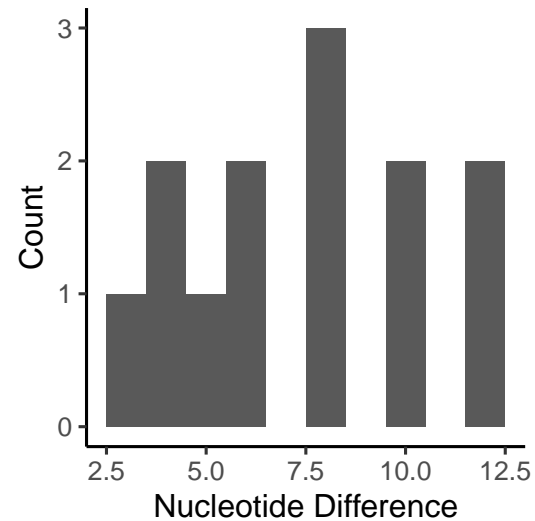
IGHV3-49*04

1022 sequences assigned
227 (22.2%) exact matches, in which:
198 unique CDR3
7 unique J



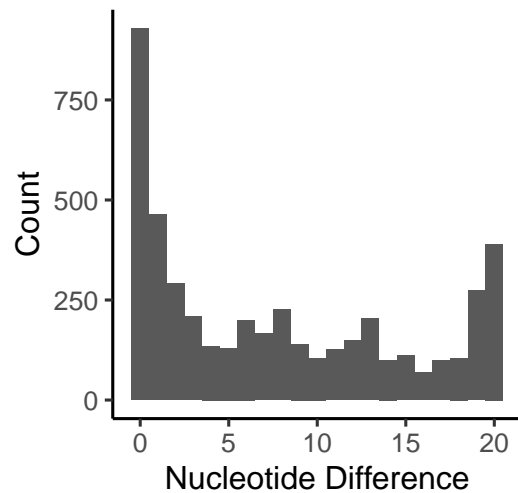
IGHV3-64*04

19 sequences assigned
No exact matches.



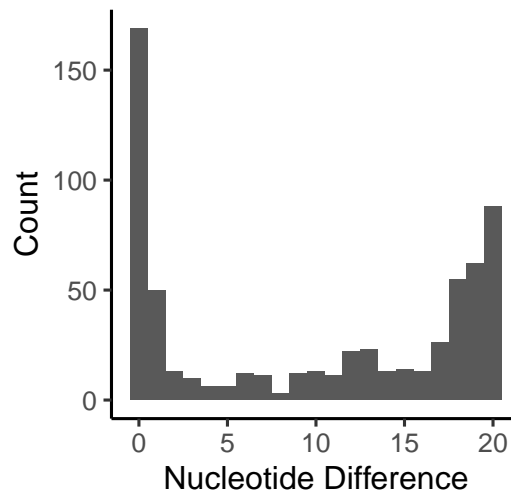
IGHV3-48*03

5748 sequences assigned
929 (16.2%) exact matches, in which:
762 unique CDR3
7 unique J



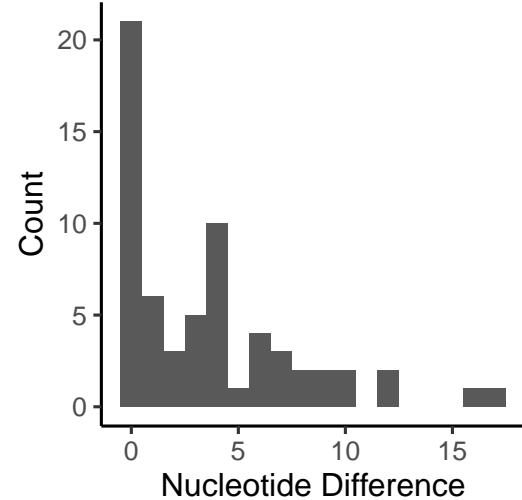
IGHV3-49*03_05

1062 sequences assigned
169 (15.9%) exact matches, in which:
141 unique CDR3
7 unique J



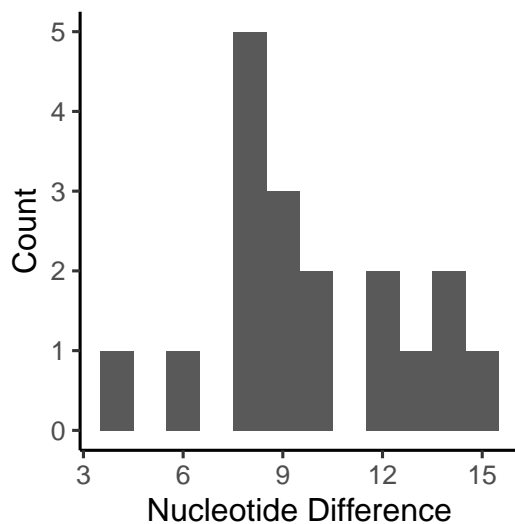
IGHV3-64*02_07

64 sequences assigned
21 (32.8%) exact matches, in which:
20 unique CDR3
6 unique J



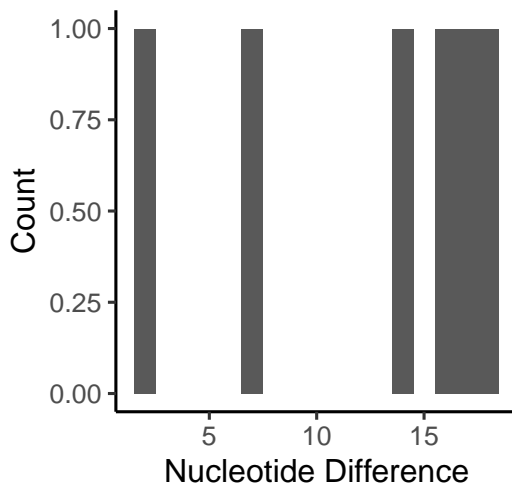
IGHV3-66*01

23 sequences assigned
No exact matches.



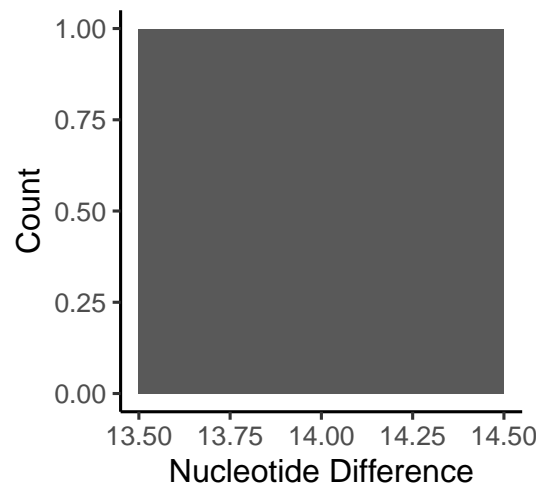
IGHV3-66*04

10 sequences assigned
No exact matches.



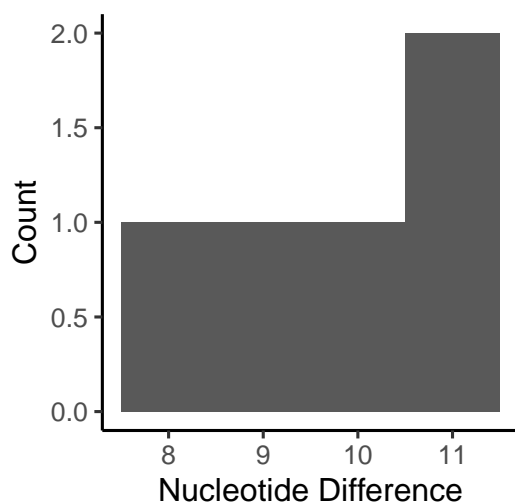
IGHV3-71*03

1 sequences assigned
No exact matches.



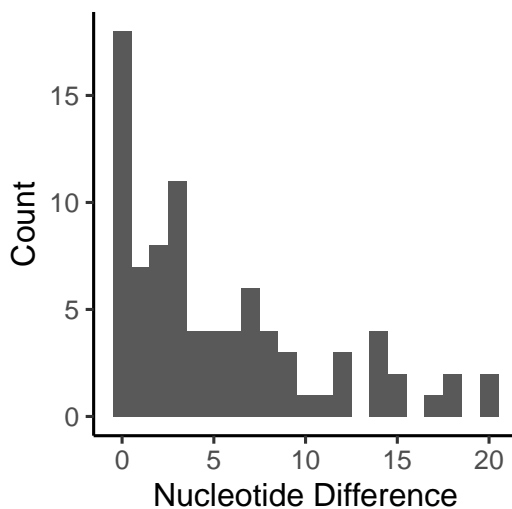
IGHV3-66*02

5 sequences assigned
No exact matches.



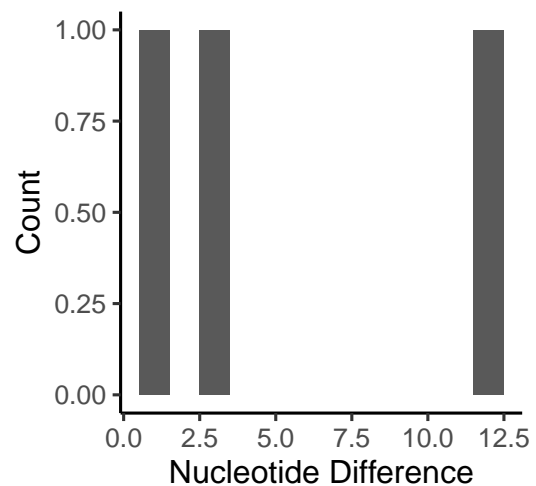
IGHV3-69-1*01

113 sequences assigned
18 (15.9%) exact matches, in which:
17 unique CDR3
6 unique J



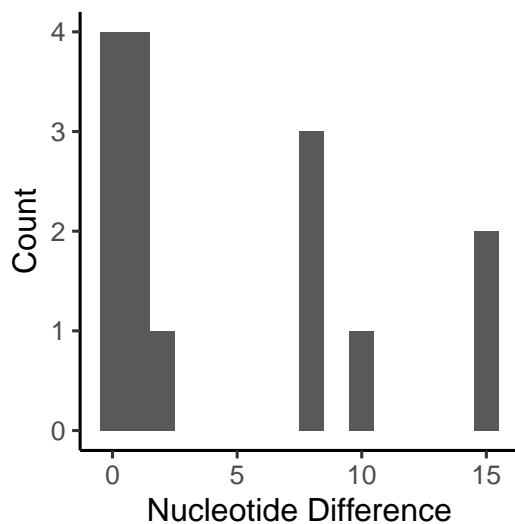
IGHV3-71*01_04

5 sequences assigned
No exact matches.



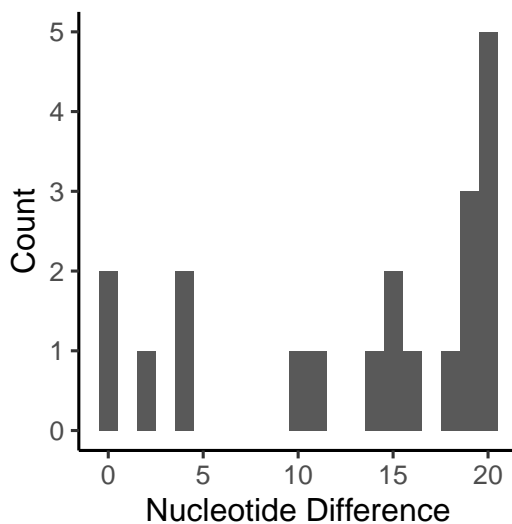
IGHV3-66*03

15 sequences assigned
4 (26.7%) exact matches, in which:
4 unique CDR3
2 unique J



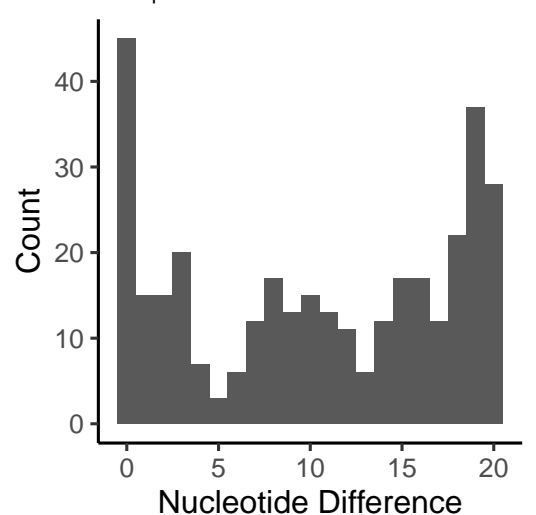
IGHV3-69-1*02

38 sequences assigned
2 (5.3%) exact matches, in which:
2 unique CDR3
2 unique J



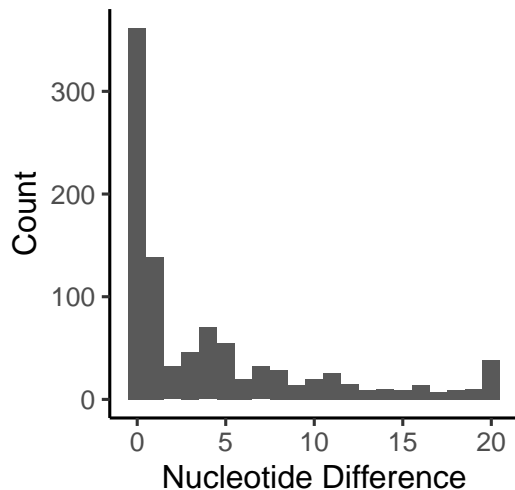
IGHV3-72*01

455 sequences assigned
45 (9.9%) exact matches, in which:
39 unique CDR3
6 unique J



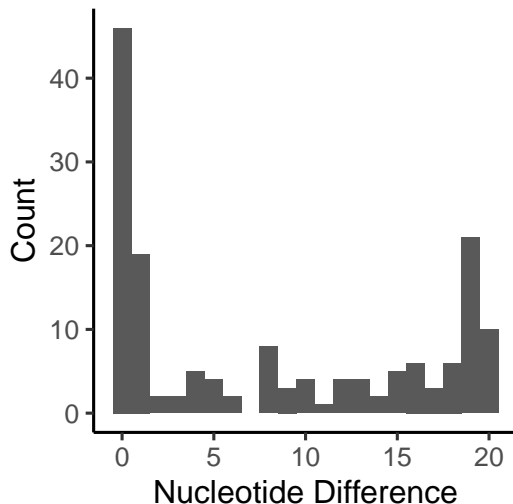
IGHV3-73*01_02

1163 sequences assigned
362 (31.1%) exact matches, in which:
307 unique CDR3
7 unique J



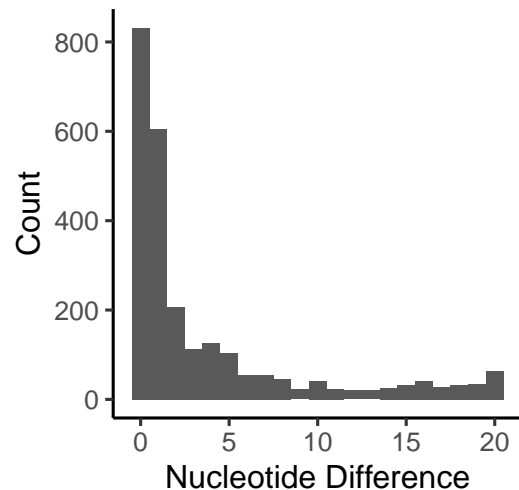
IGHV3-43D*04

186 sequences assigned
46 (24.7%) exact matches, in which:
41 unique CDR3
3 unique J



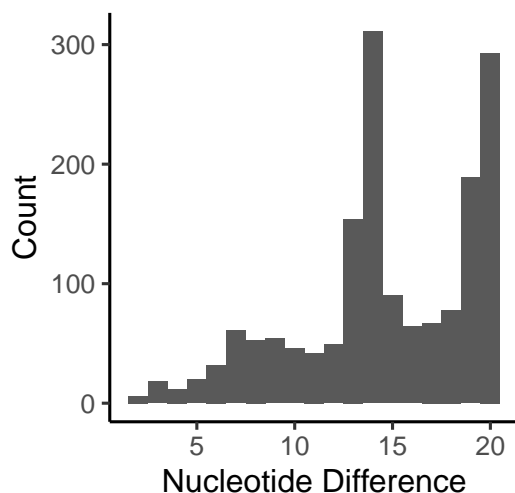
IGHV4-4*07

4397 sequences assigned
832 (18.9%) exact matches, in which:
788 unique CDR3
7 unique J



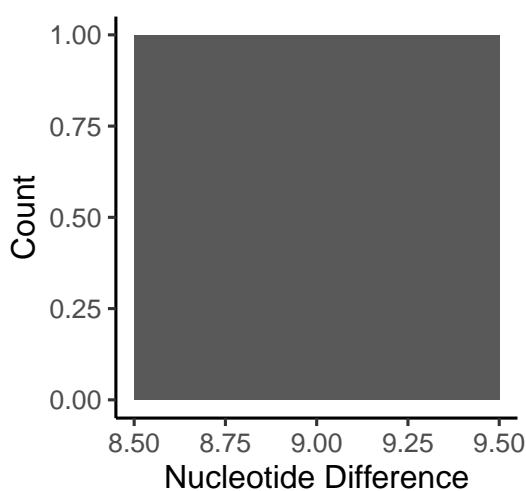
IGHV3-74*03

3370 sequences assigned
No exact matches.



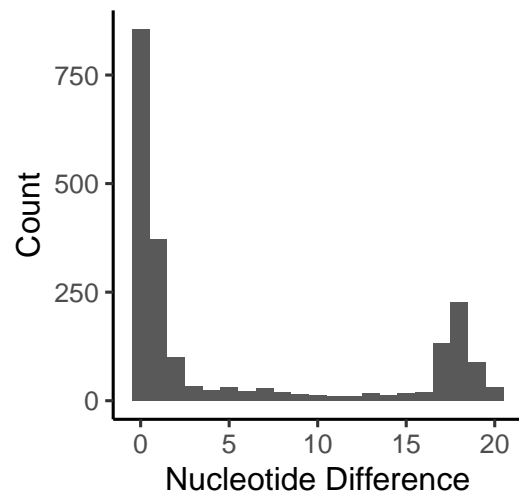
IGHV3-64D*06

6 sequences assigned
No exact matches.



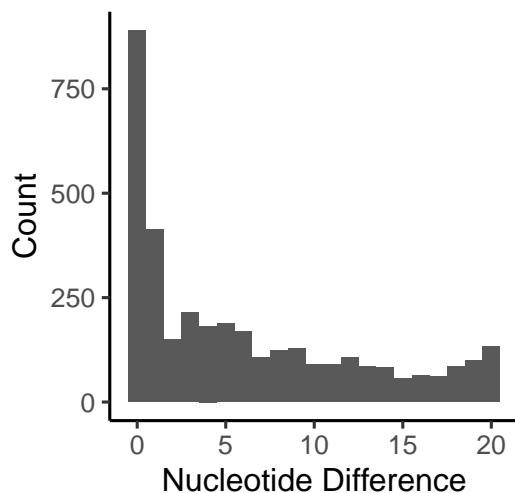
IGHV4-4*02_03

2355 sequences assigned
856 (36.3%) exact matches, in which:
795 unique CDR3
7 unique J



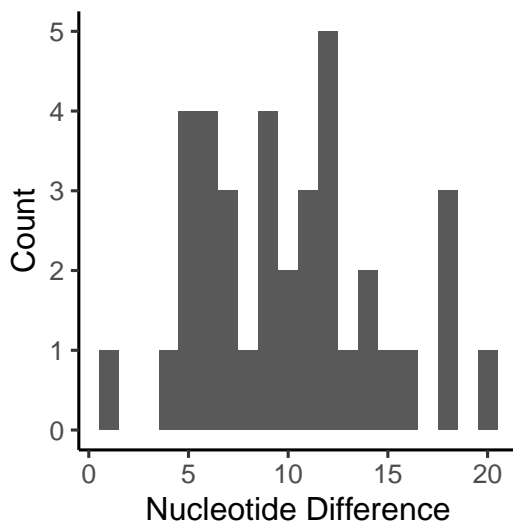
IGHV3-74*01_02

4121 sequences assigned
890 (21.6%) exact matches, in which:
716 unique CDR3
7 unique J



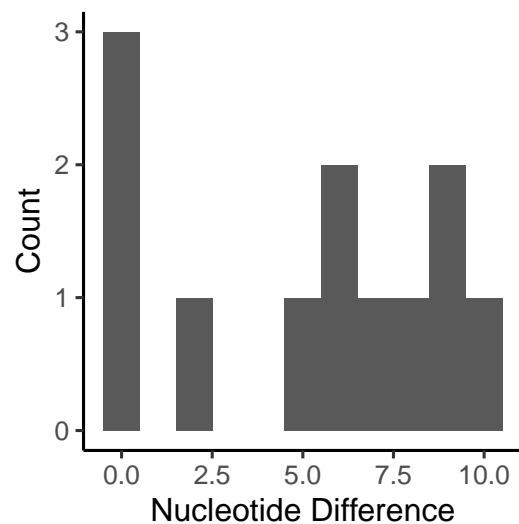
IGHV3-NL1*01

51 sequences assigned
No exact matches.



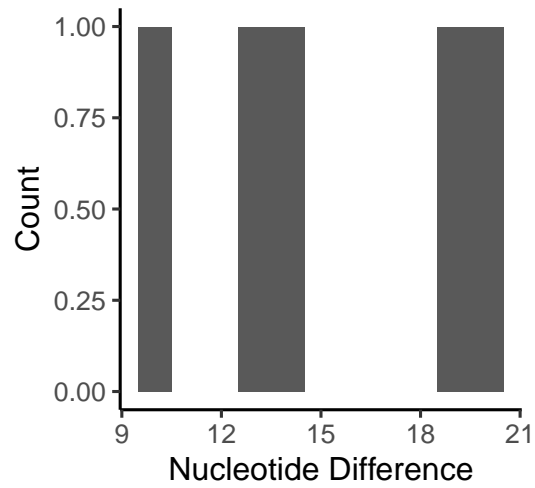
IGHV4-28*03

14 sequences assigned
3 (21.4%) exact matches, in which:
3 unique CDR3
2 unique J



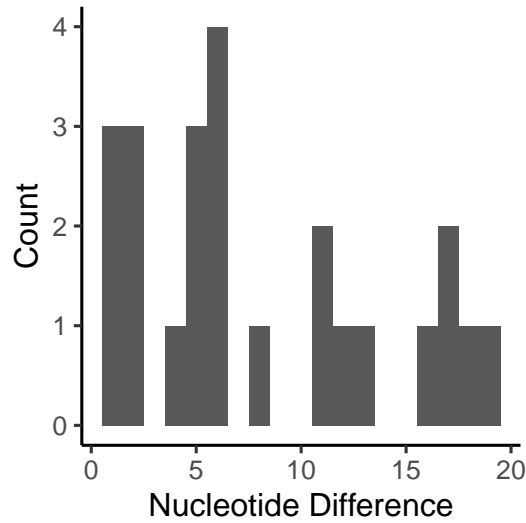
IGHV4-28*01_07

5 sequences assigned
No exact matches.



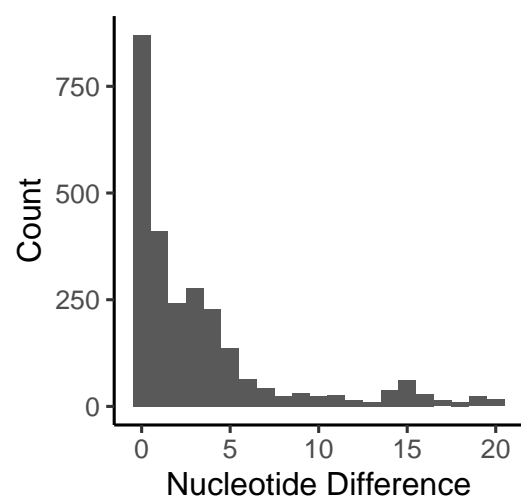
IGHV4-30-2*03

50 sequences assigned
No exact matches.



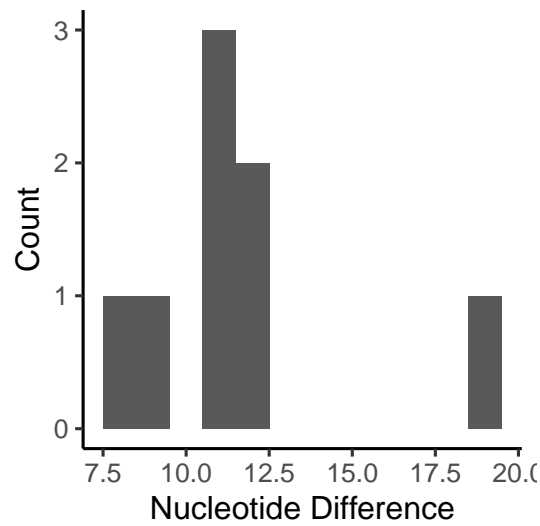
IGHV4-31*02

4211 sequences assigned
871 (20.7%) exact matches, in which:
815 unique CDR3
7 unique J



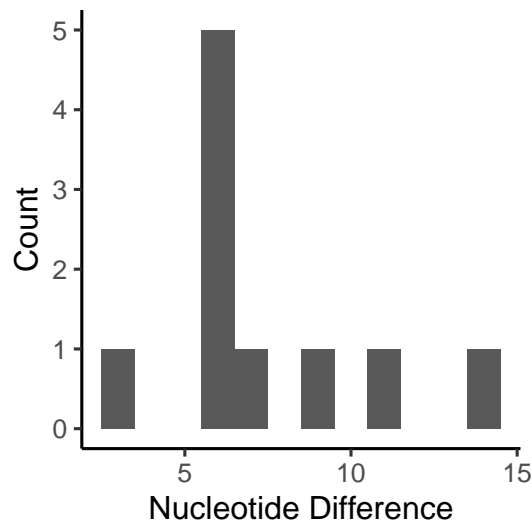
IGHV4-30-2*01

11 sequences assigned
No exact matches.



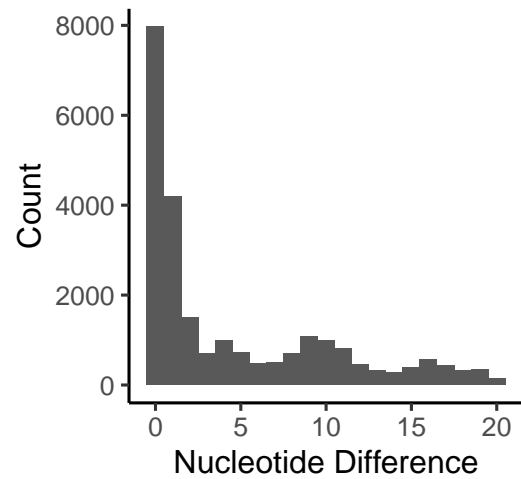
IGHV4-30-4*08

22 sequences assigned
No exact matches.



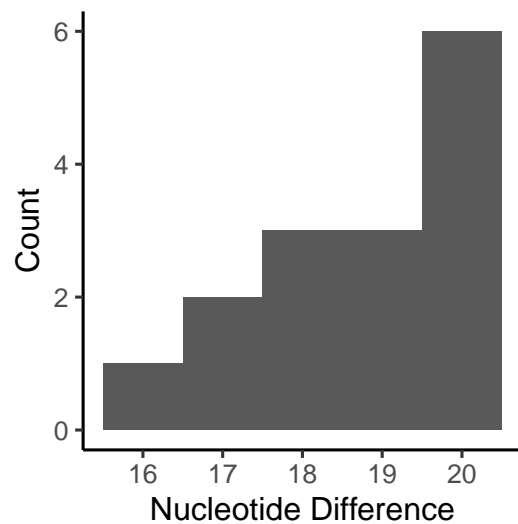
IGHV4-34*01_02

38869 sequences assigned
7970 (20.5%) exact matches, in which:
6846 unique CDR3
7 unique J



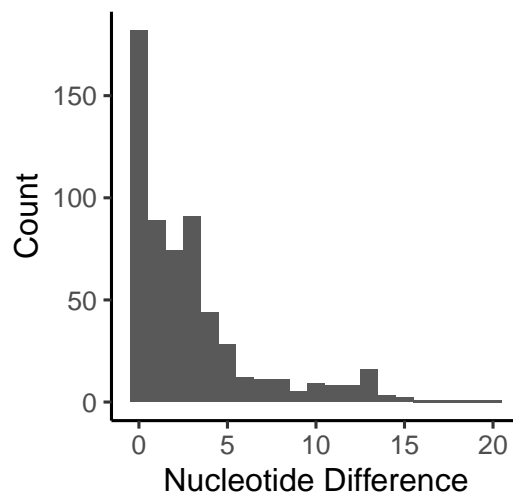
IGHV4-30-4*01

76 sequences assigned
No exact matches.



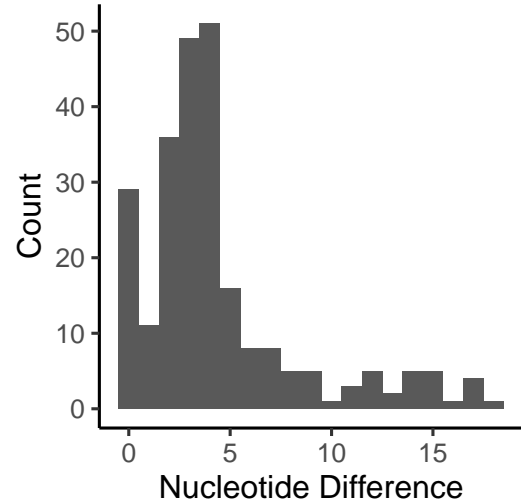
IGHV4-31*01

806 sequences assigned
182 (22.6%) exact matches, in which:
173 unique CDR3
7 unique J



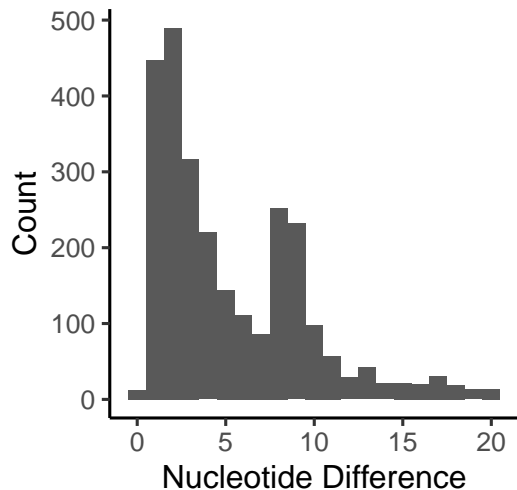
IGHV4-38-2*02

407 sequences assigned
29 (7.1%) exact matches, in which:
29 unique CDR3
7 unique J



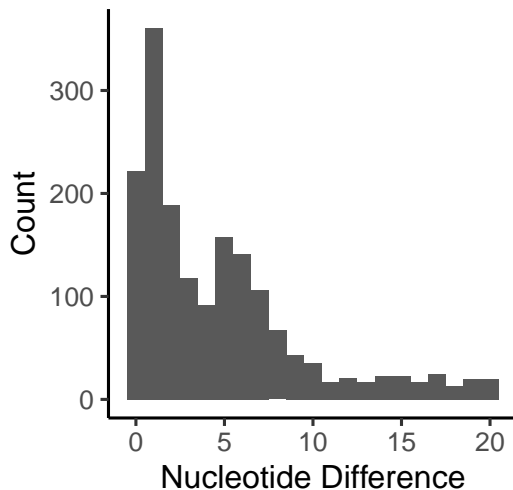
IGHV4–39*07

2917 sequences assigned
12 (0.4%) exact matches, in which:
12 unique CDR3
6 unique J



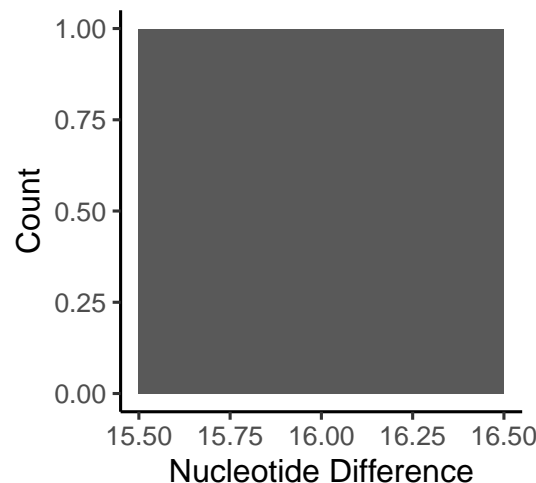
IGHV4–59*12

2113 sequences assigned
222 (10.5%) exact matches, in which:
221 unique CDR3
7 unique J



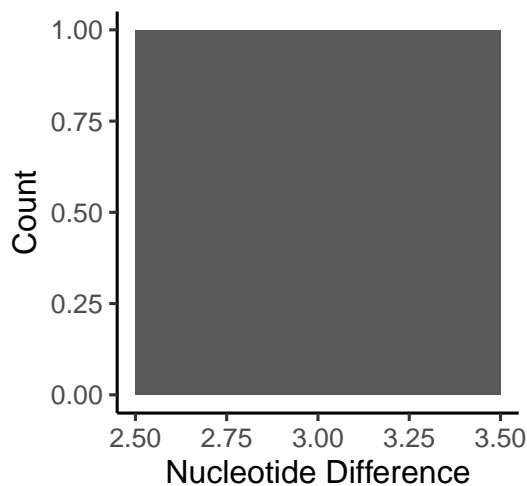
IGHV1/OR15–2*01

1 sequences assigned
No exact matches.



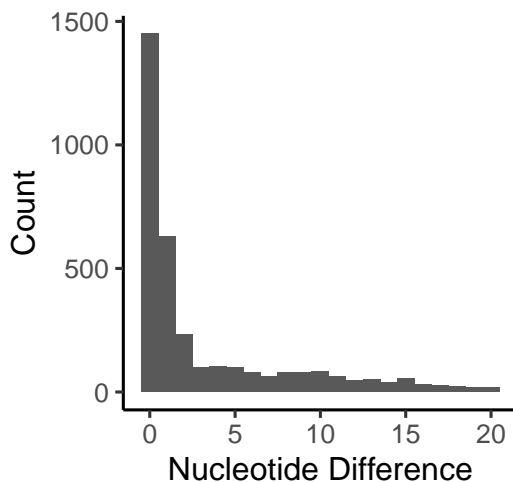
IGHV4–55*09

1 sequences assigned
No exact matches.



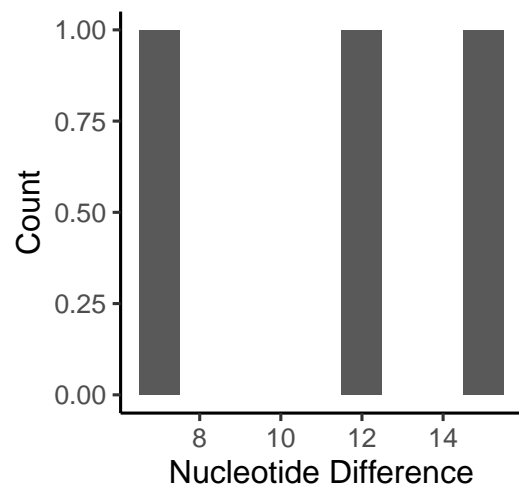
IGHV4–61*01

4030 sequences assigned
1450 (36%) exact matches, in which:
1407 unique CDR3
7 unique J



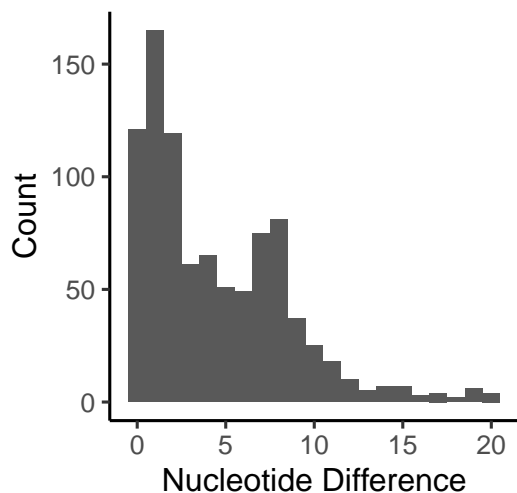
IGHV1/OR15–2*02_03

4 sequences assigned
No exact matches.



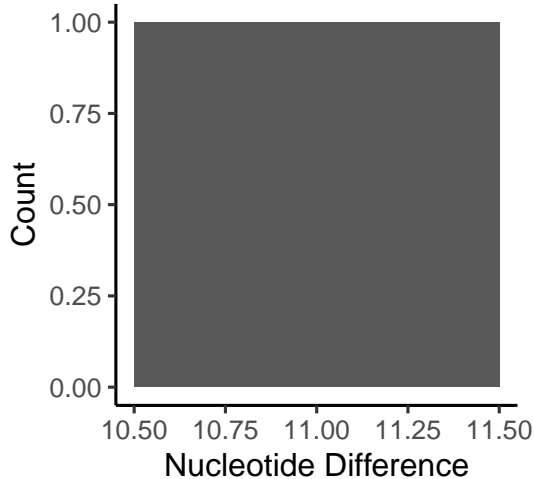
IGHV4–59*08

1000 sequences assigned
121 (12.1%) exact matches, in which:
116 unique CDR3
7 unique J



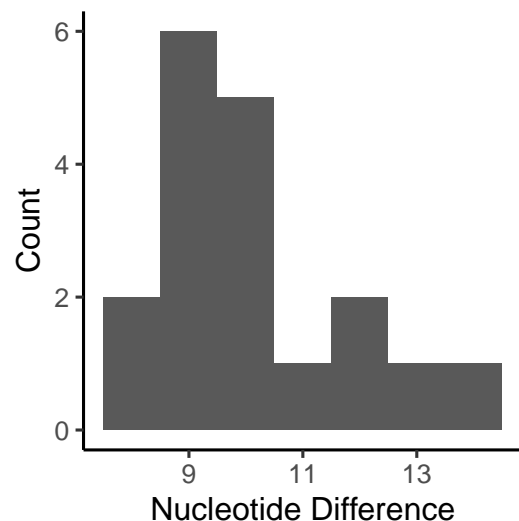
IGHV1/OR15–1*04

4 sequences assigned
No exact matches.



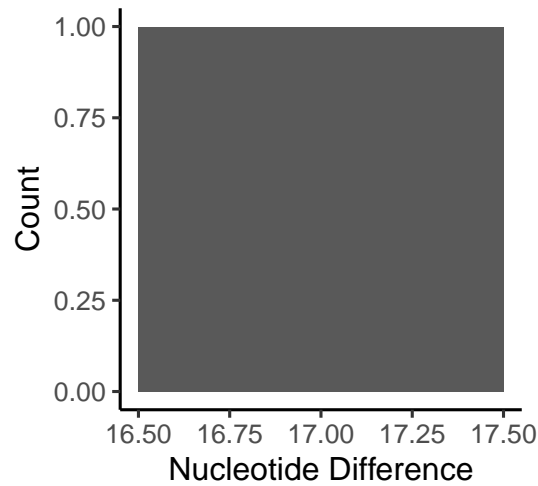
IGHV1/OR15–3*02

18 sequences assigned
No exact matches.



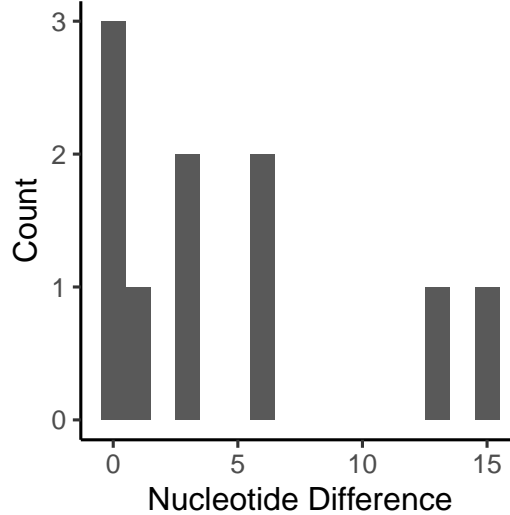
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



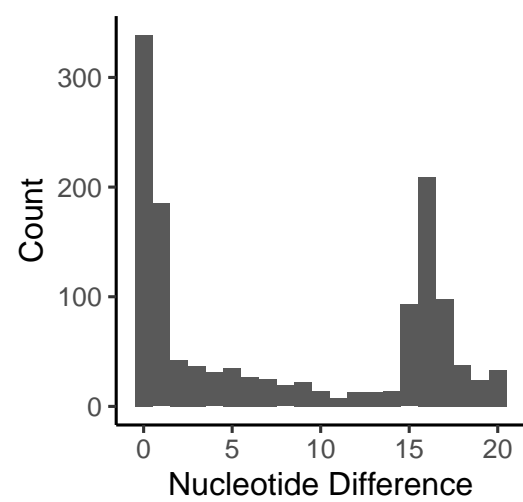
IGHV5-51*04

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



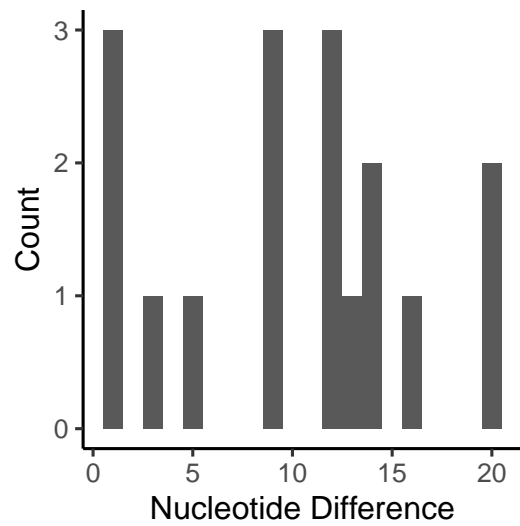
IGHV6-1*01_02

1532 sequences assigned
339 (22.1%) exact matches, in which:
318 unique CDR3
7 unique J



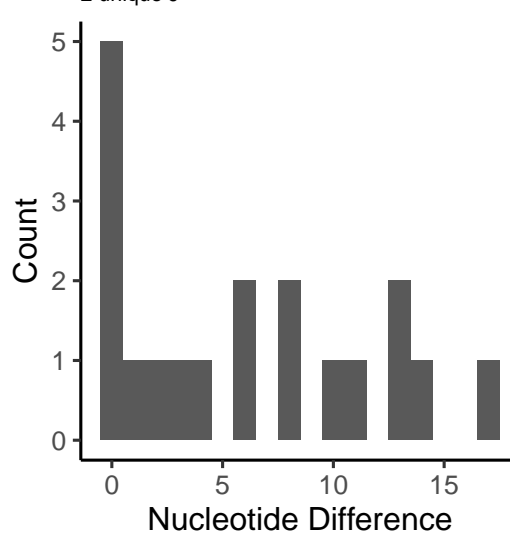
IGHV4/OR15-8*01

21 sequences assigned
No exact matches.



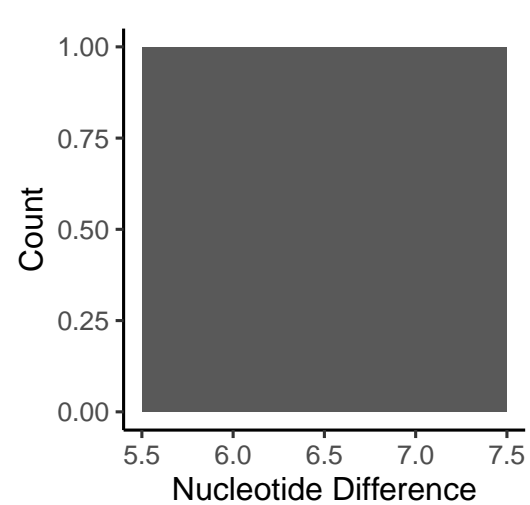
IGHV5-51*06

22 sequences assigned
5 (22.7%) exact matches, in which:
5 unique CDR3
2 unique J



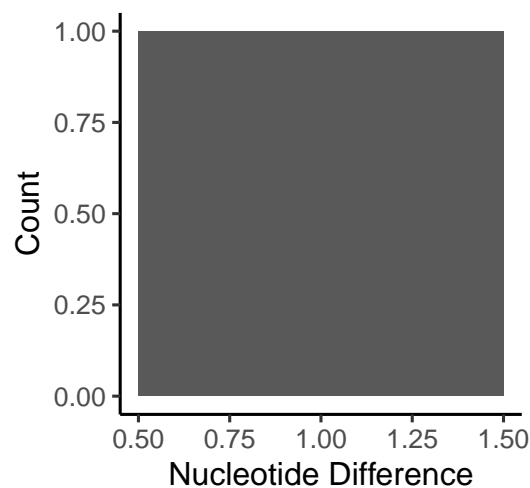
IGHV3/OR16-10*01_03

6 sequences assigned
No exact matches.



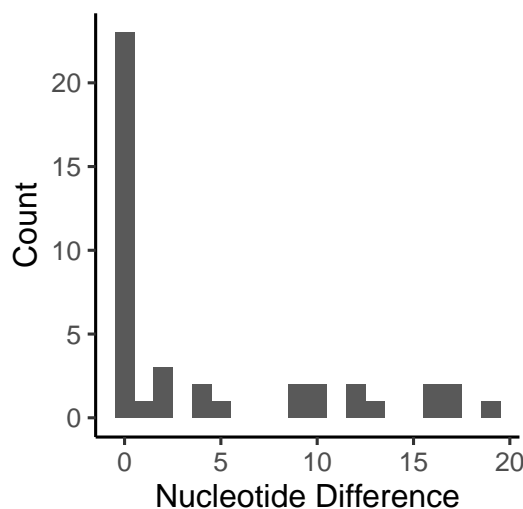
IGHV5-10-1*01_03

1 sequences assigned
No exact matches.



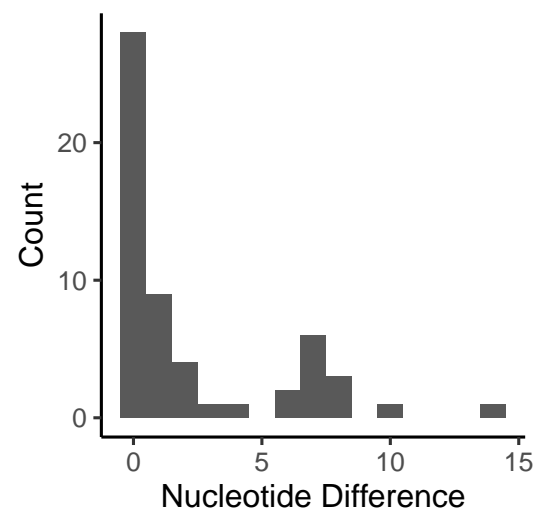
IGHV5-51*07

45 sequences assigned
23 (51.1%) exact matches, in which:
23 unique CDR3
6 unique J

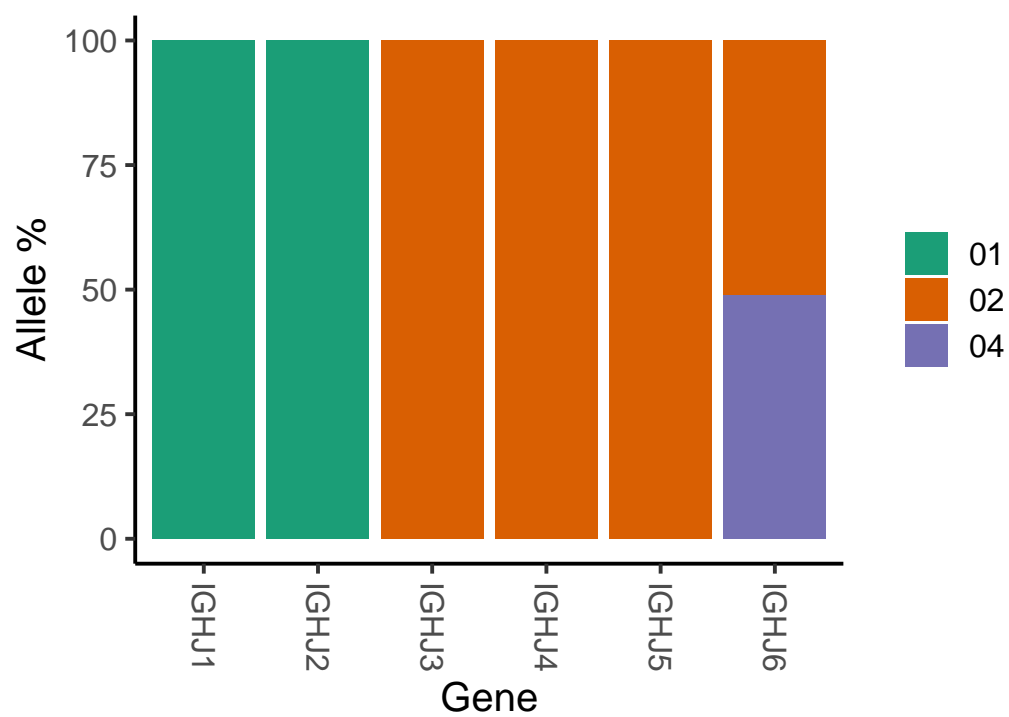


IGHV7-4-1*01

56 sequences assigned
28 (50%) exact matches, in which:
26 unique CDR3
4 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage

