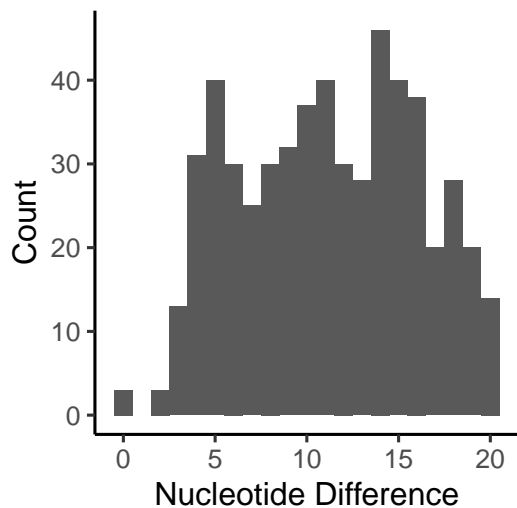


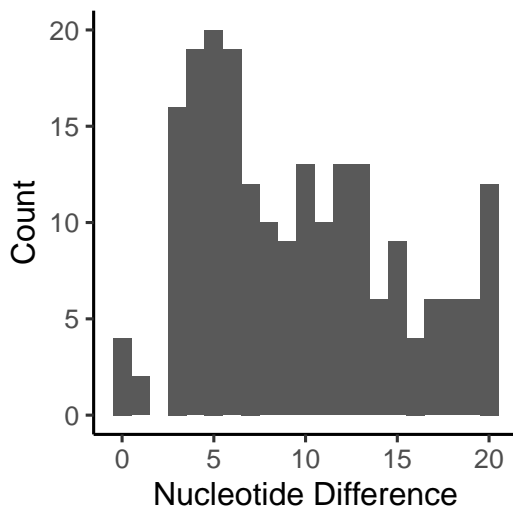
IGHV1-2*02

645 sequences assigned
3 (0.5%) exact matches, in which:
3 unique CDR3
3 unique J



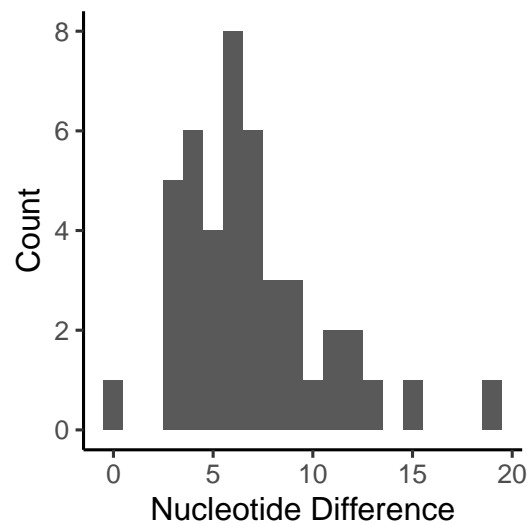
IGHV1-3*01_05

240 sequences assigned
4 (1.7%) exact matches, in which:
4 unique CDR3
2 unique J



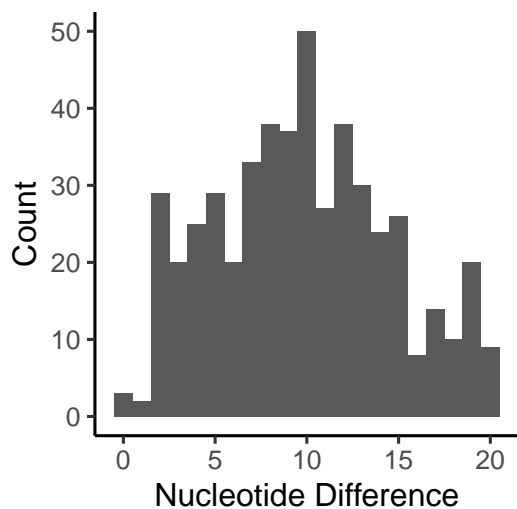
IGHV1-24*01

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



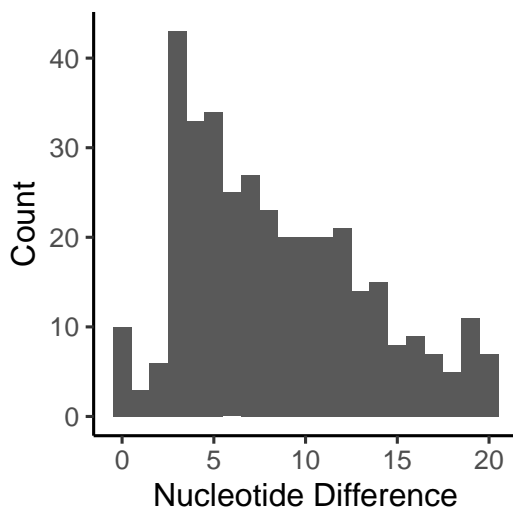
IGHV1-2*06

599 sequences assigned
3 (0.5%) exact matches, in which:
3 unique CDR3
1 unique J



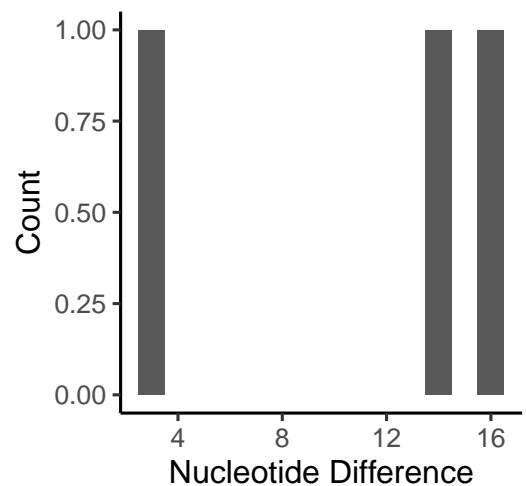
IGHV1-8*01

397 sequences assigned
10 (2.5%) exact matches, in which:
10 unique CDR3
3 unique J



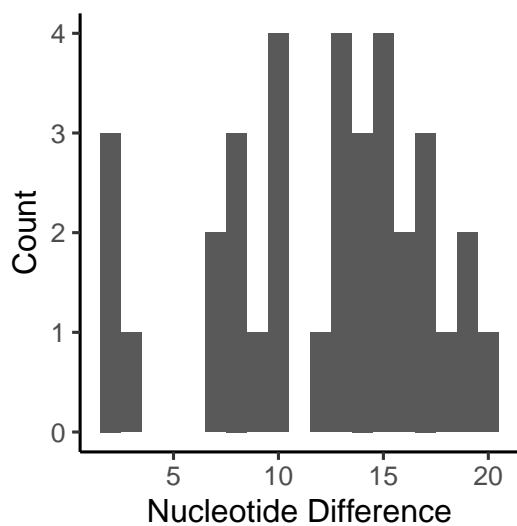
IGHV1-45*02

3 sequences assigned
No exact matches.



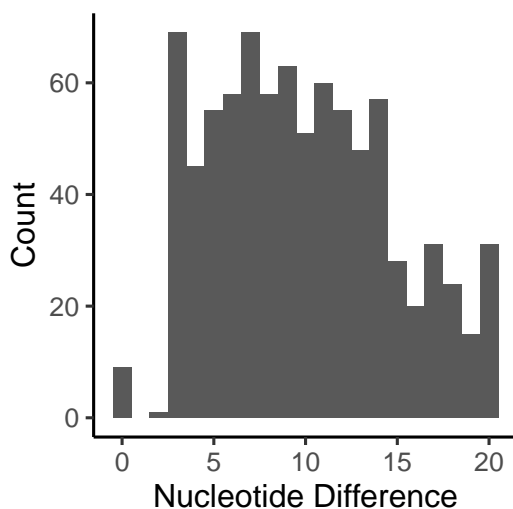
IGHV1-3*04

45 sequences assigned
No exact matches.



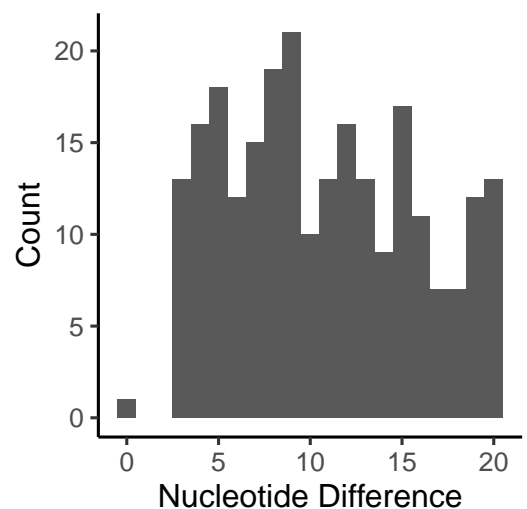
IGHV1-18*01

993 sequences assigned
9 (0.9%) exact matches, in which:
9 unique CDR3
3 unique J



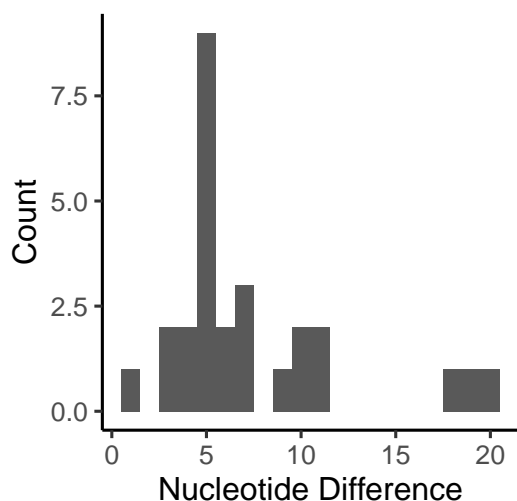
IGHV1-46*01

302 sequences assigned
1 (0.3%) exact matches, in which:
1 unique CDR3
1 unique J



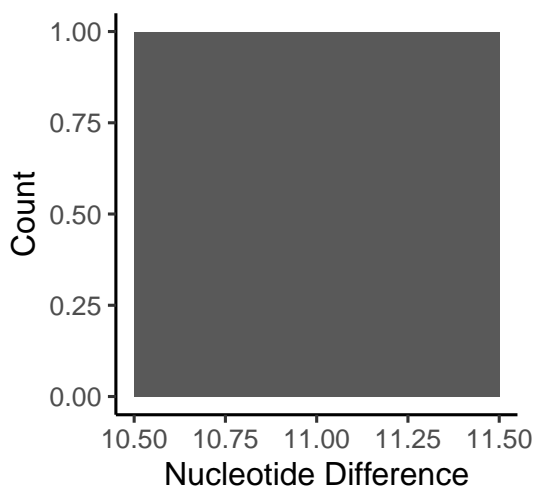
IGHV1-58*02

28 sequences assigned
No exact matches.



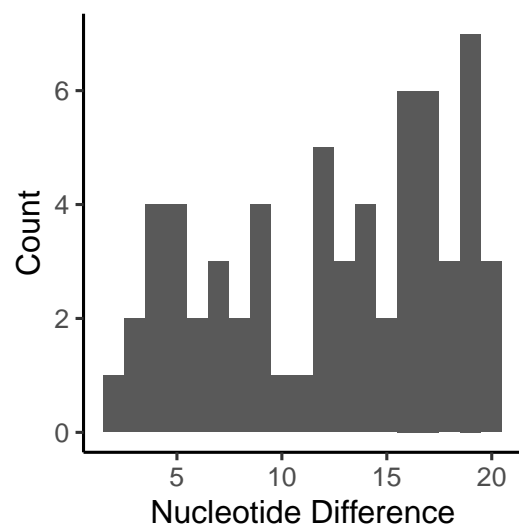
IGHV1-69-2*01

1 sequences assigned
No exact matches.



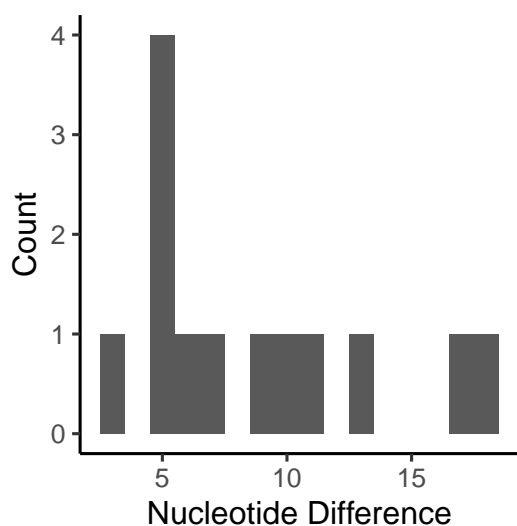
IGHV1-69*04_09

79 sequences assigned
No exact matches.



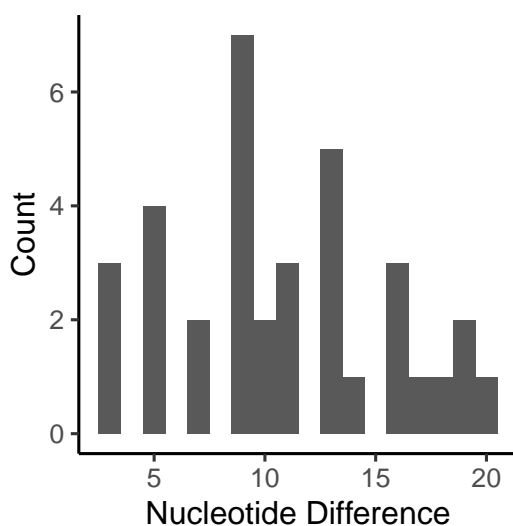
IGHV1-58*01_03

13 sequences assigned
No exact matches.



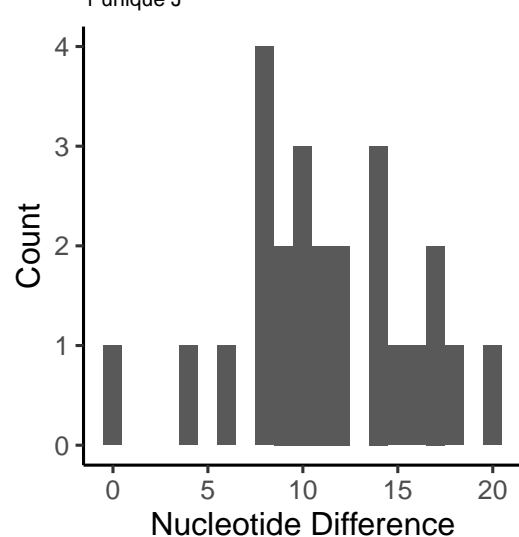
IGHV1-69*02

46 sequences assigned
No exact matches.



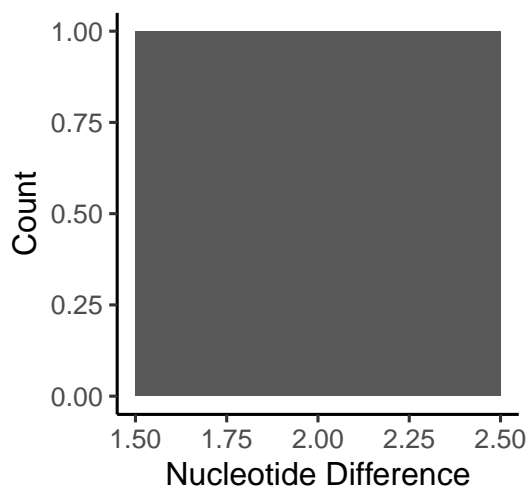
IGHV1-69*06_14

29 sequences assigned
1 (3.4%) exact matches, in which:
1 unique CDR3
1 unique J



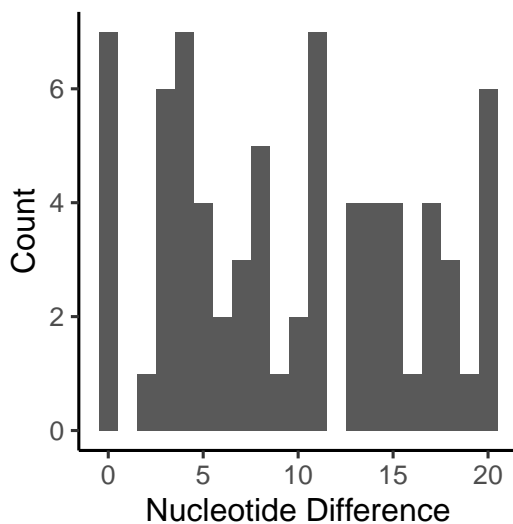
IGHV1-68*02_03

1 sequences assigned
No exact matches.



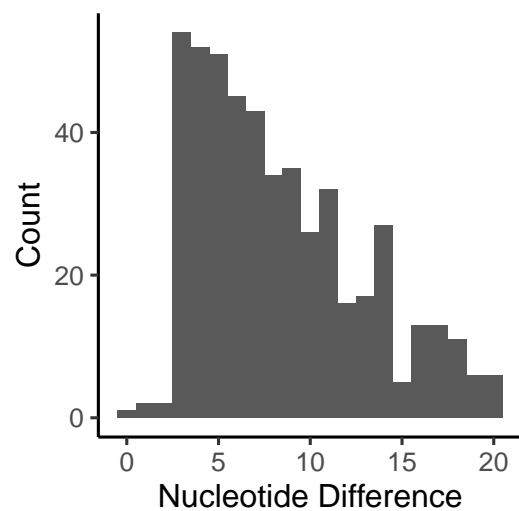
IGHV1-69*01_12_13

93 sequences assigned
7 (7.5%) exact matches, in which:
7 unique CDR3
4 unique J



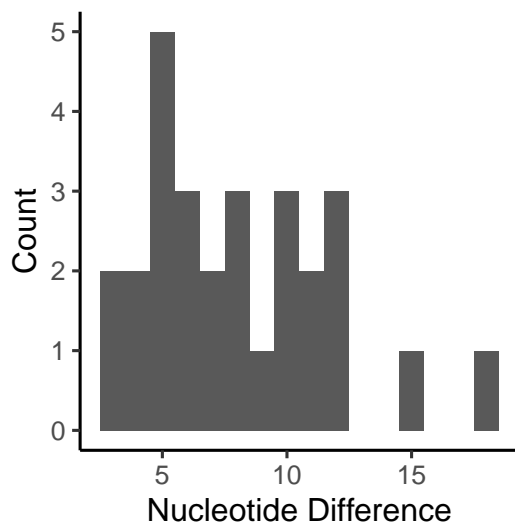
IGHV2-5*02

530 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



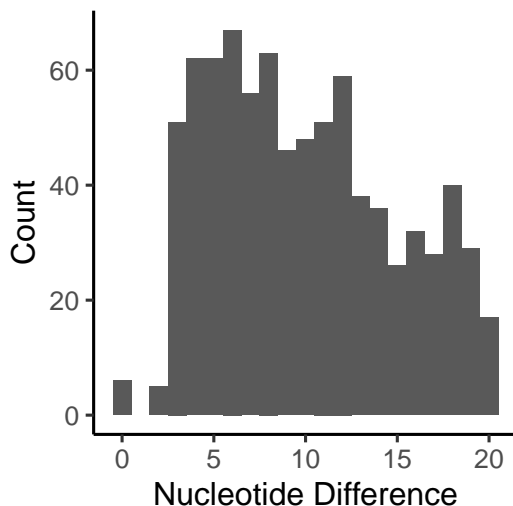
IGHV2-26*01

29 sequences assigned
No exact matches.



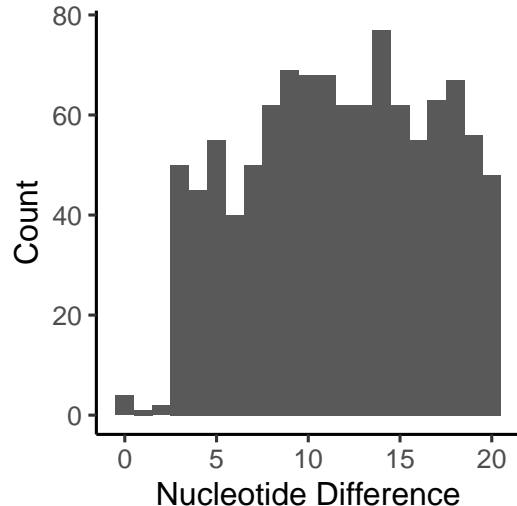
IGHV3-9*01

930 sequences assigned
6 (0.6%) exact matches, in which:
6 unique CDR3
2 unique J



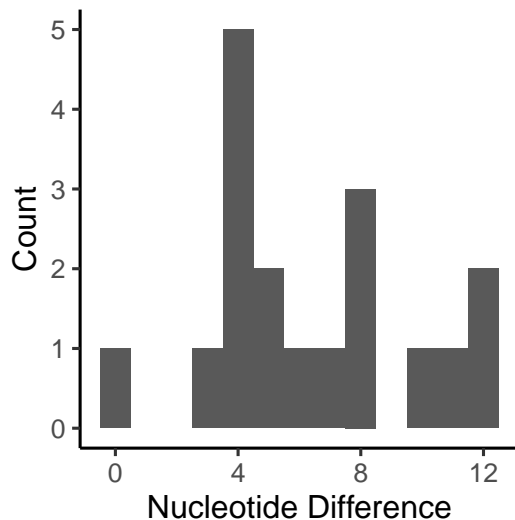
IGHV3-15*01_02

1290 sequences assigned
4 (0.3%) exact matches, in which:
4 unique CDR3
3 unique J



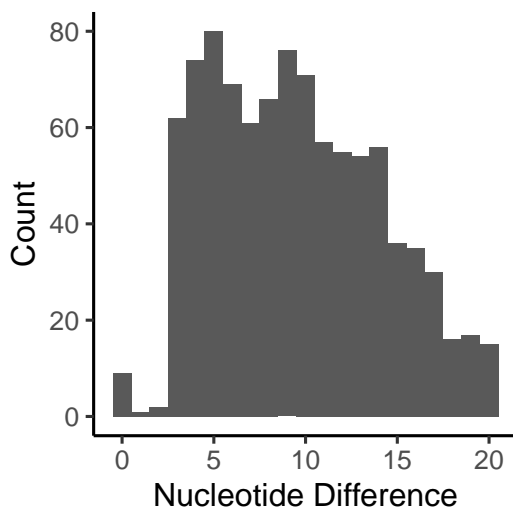
IGHV2-70*01

19 sequences assigned
1 (5.3%) exact matches, in which:
1 unique CDR3
1 unique J



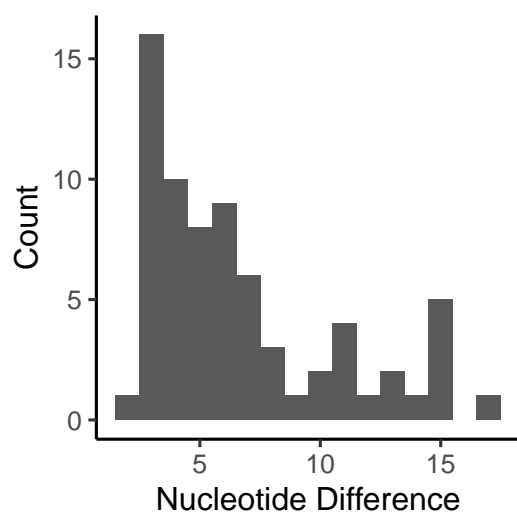
IGHV3-11*01

1025 sequences assigned
9 (0.9%) exact matches, in which:
8 unique CDR3
3 unique J



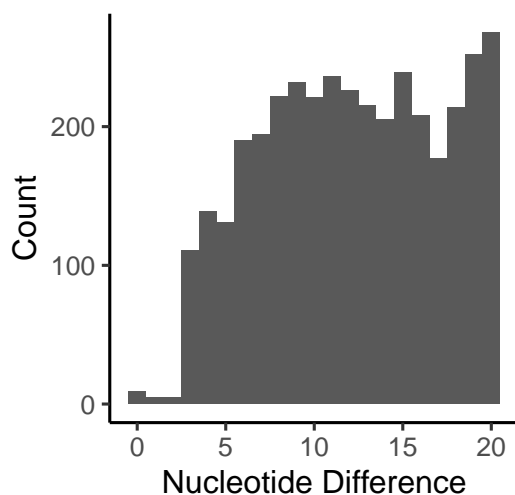
IGHV3-20*01_02

70 sequences assigned
No exact matches.



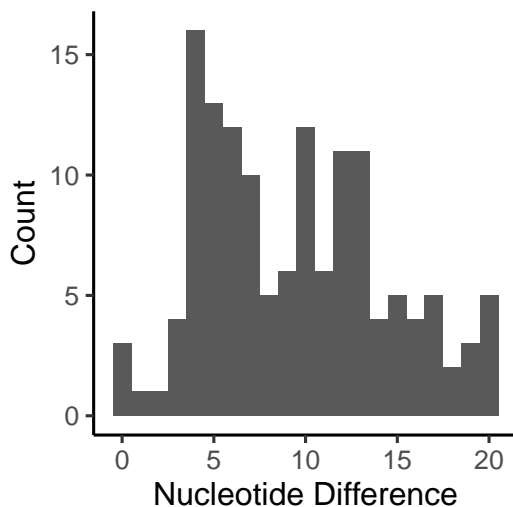
IGHV3-7*01

4737 sequences assigned
9 (0.2%) exact matches, in which:
8 unique CDR3
3 unique J



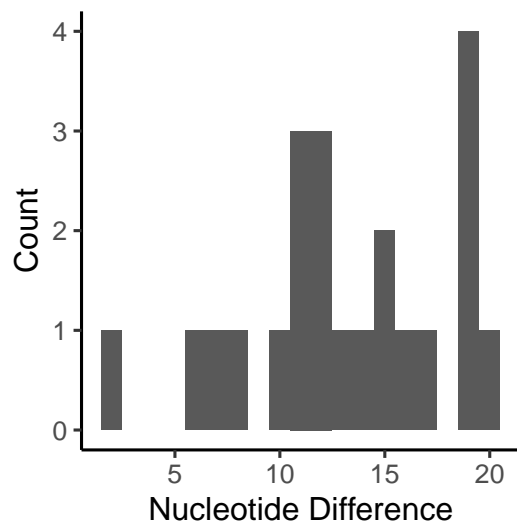
IGHV3-13*01

167 sequences assigned
3 (1.8%) exact matches, in which:
2 unique CDR3
2 unique J



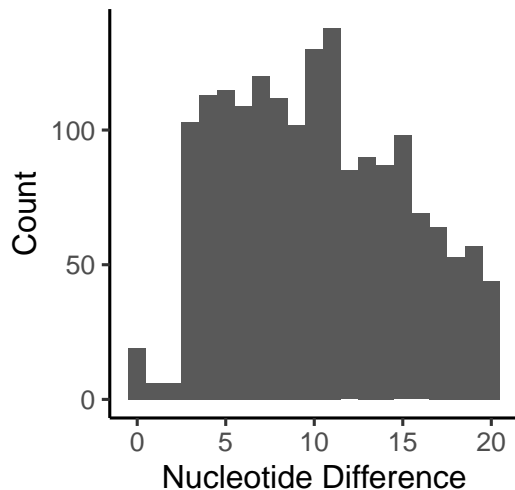
IGHV3-20*03_04

24 sequences assigned
No exact matches.



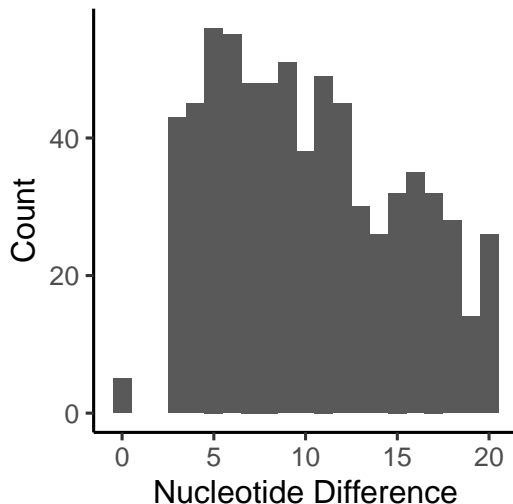
IGHV3-21*01_02

1984 sequences assigned
19 (1%) exact matches, in which:
16 unique CDR3
3 unique J



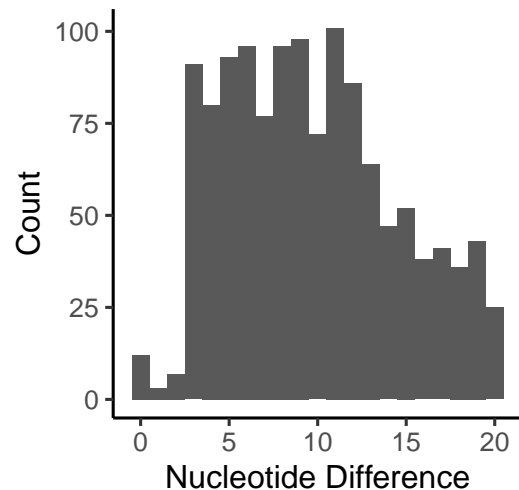
IGHV3-33*01

805 sequences assigned
5 (0.6%) exact matches, in which:
5 unique CDR3
2 unique J



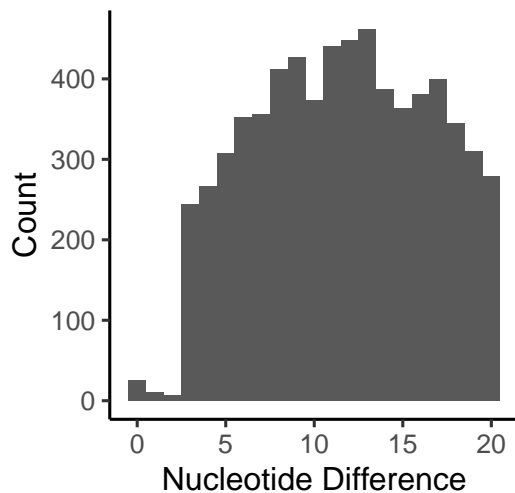
IGHV3-48*03

1398 sequences assigned
12 (0.9%) exact matches, in which:
10 unique CDR3
1 unique J



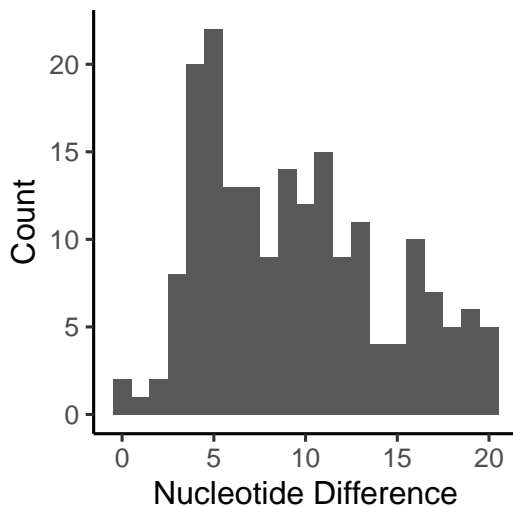
IGHV3-23*01_04

7998 sequences assigned
26 (0.3%) exact matches, in which:
23 unique CDR3
5 unique J



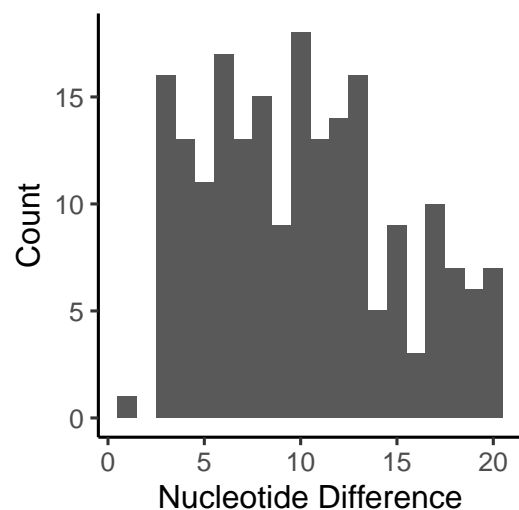
IGHV3-43*02

230 sequences assigned
2 (0.9%) exact matches, in which:
1 unique CDR3
1 unique J



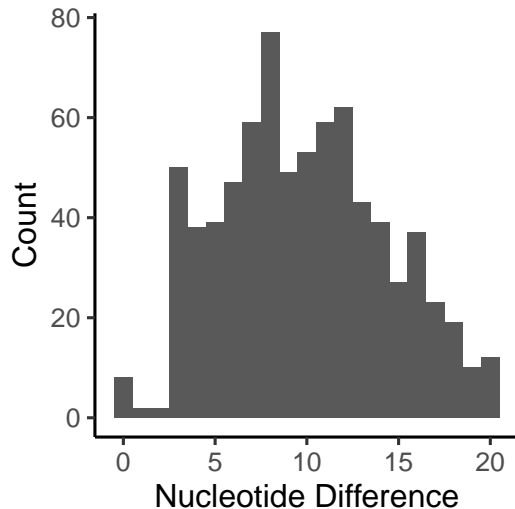
IGHV3-49*04

229 sequences assigned
No exact matches.



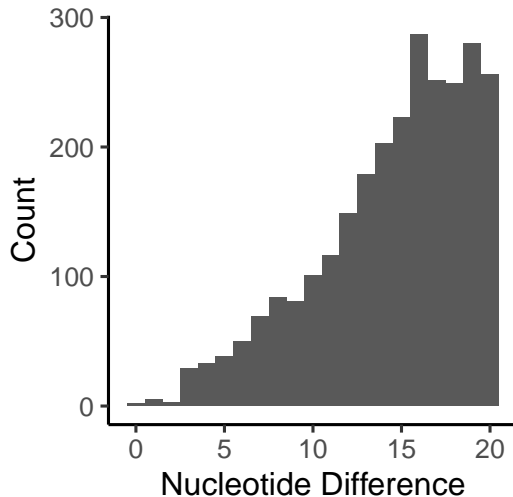
IGHV3-30-3*01

870 sequences assigned
8 (0.9%) exact matches, in which:
7 unique CDR3
4 unique J



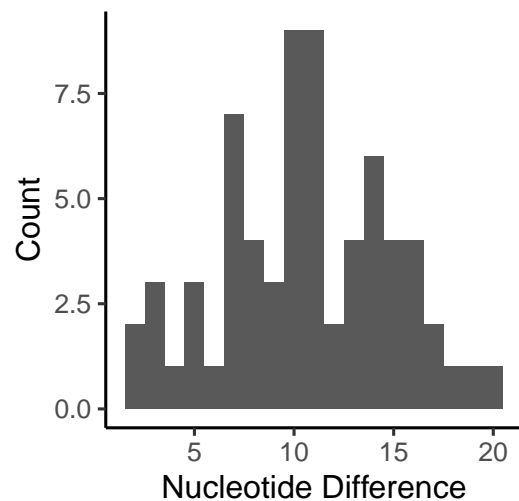
IGHV3-48*01

4119 sequences assigned
2 (0%) exact matches, in which:
2 unique CDR3
2 unique J



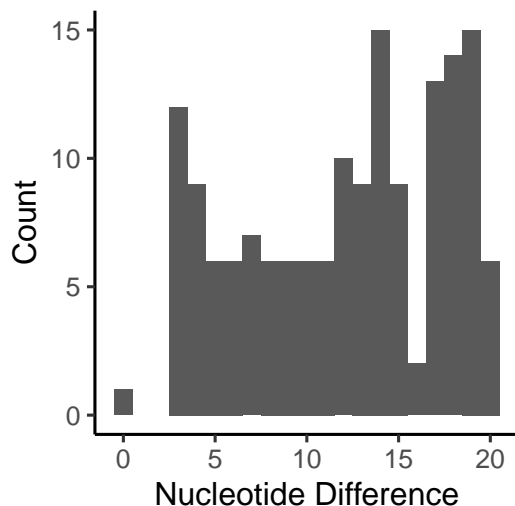
IGHV3-49*03_05

99 sequences assigned
No exact matches.



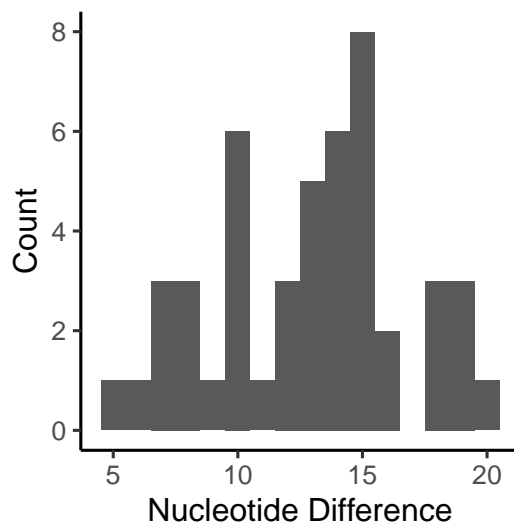
IGHV3-53*04

226 sequences assigned
1 (0.4%) exact matches, in which:
1 unique CDR3
1 unique J



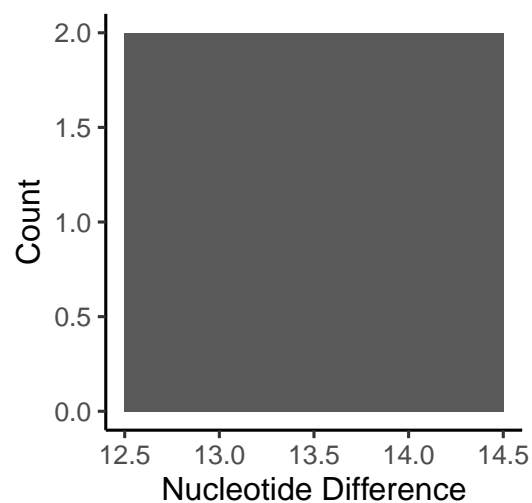
IGHV3-64*02_07

105 sequences assigned
No exact matches.



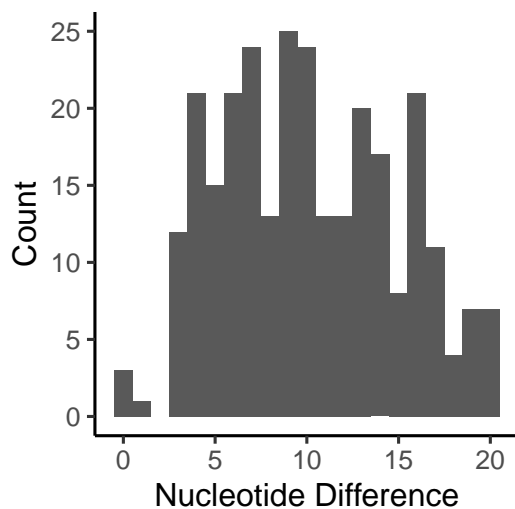
IGHV3-69-1*02

16 sequences assigned
No exact matches.



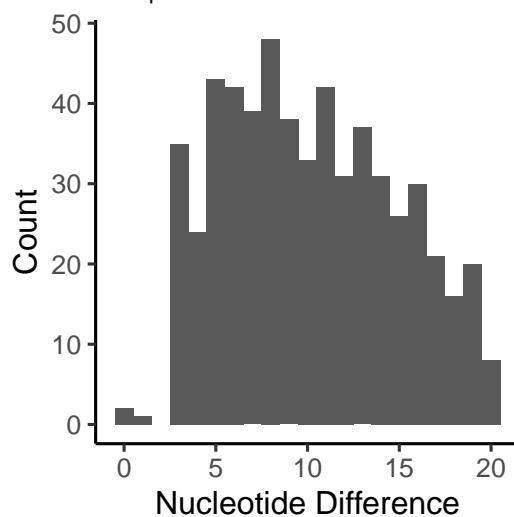
IGHV3-53*01_02

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



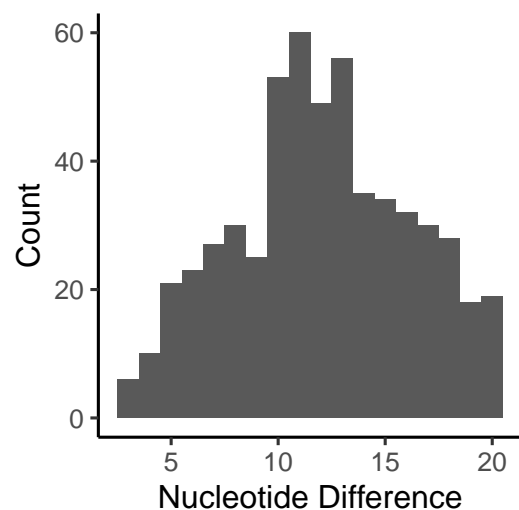
IGHV3-66*02

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



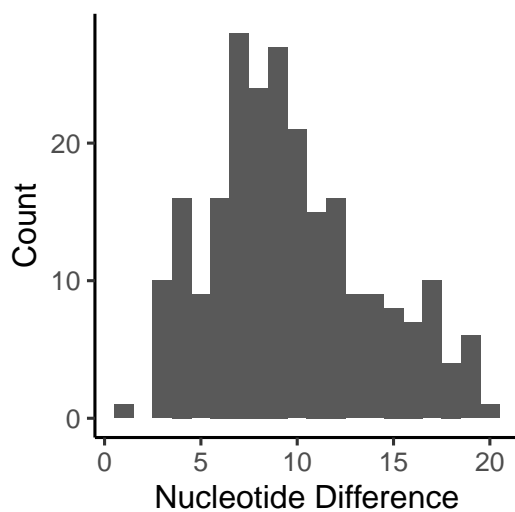
IGHV3-72*01

610 sequences assigned
No exact matches.



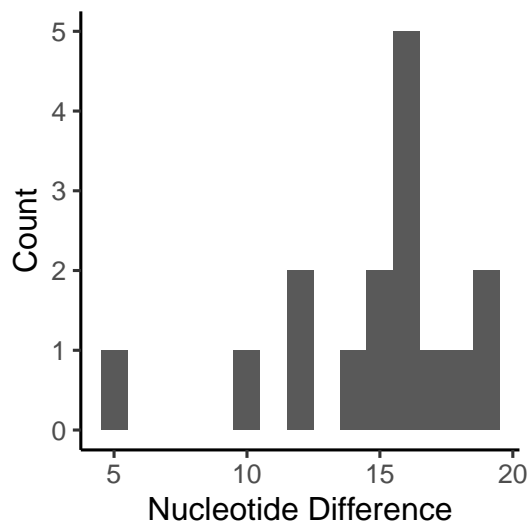
IGHV3-64*01

269 sequences assigned
No exact matches.



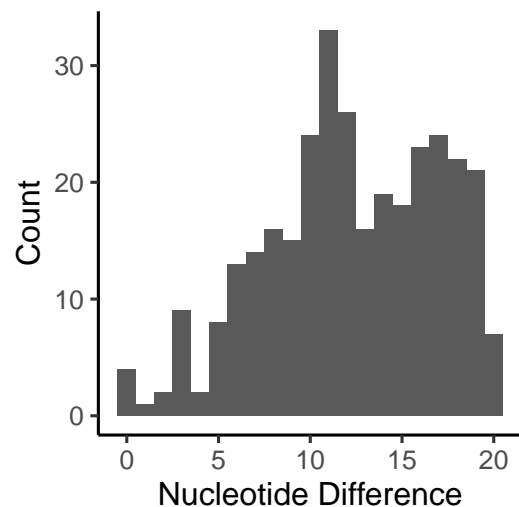
IGHV3-69-1*01

104 sequences assigned
No exact matches.



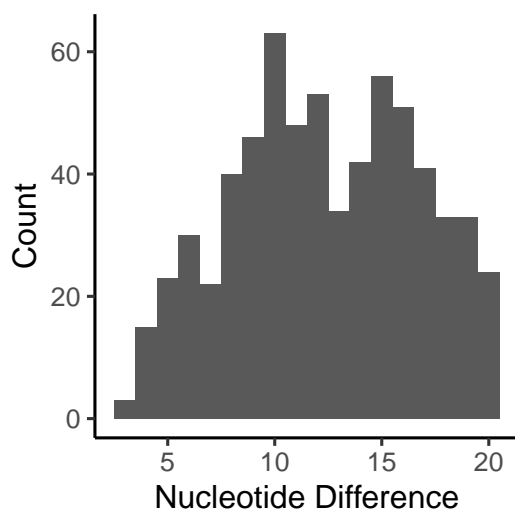
IGHV3-73*01_02

345 sequences assigned
4 (1.2%) exact matches, in which:
4 unique CDR3
3 unique J



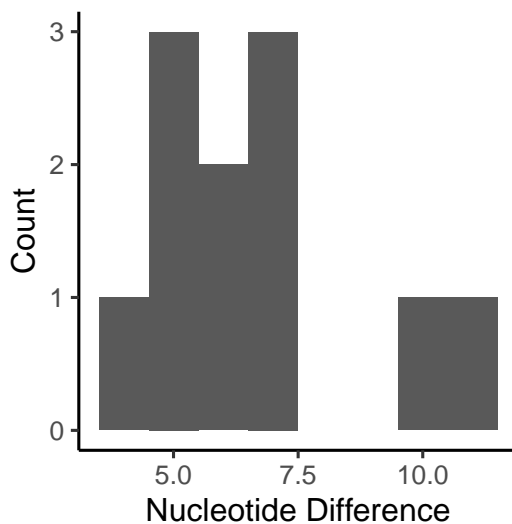
IGHV3-74*03

804 sequences assigned
No exact matches.



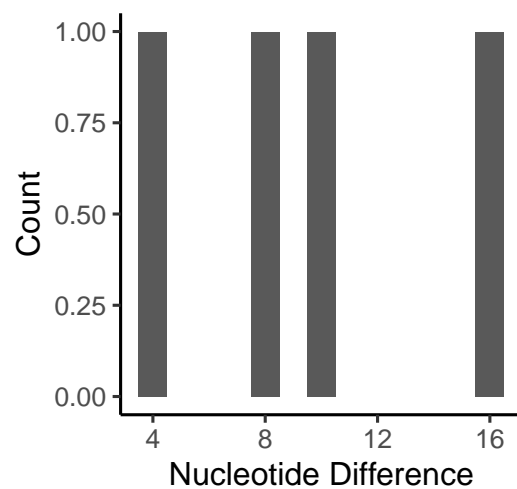
IGHV3-43D*04

12 sequences assigned
No exact matches.



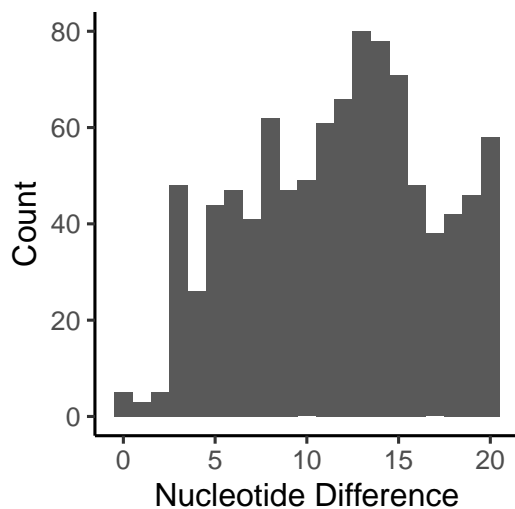
IGHV4-28*01_07

4 sequences assigned
No exact matches.



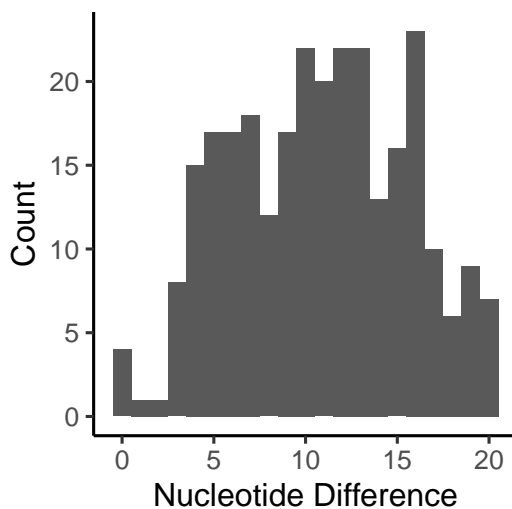
IGHV3-74*01_02

1095 sequences assigned
5 (0.5%) exact matches, in which:
5 unique CDR3
3 unique J



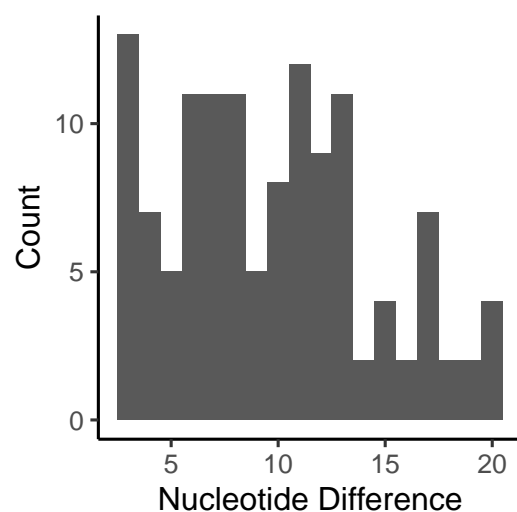
IGHV4-4*07

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



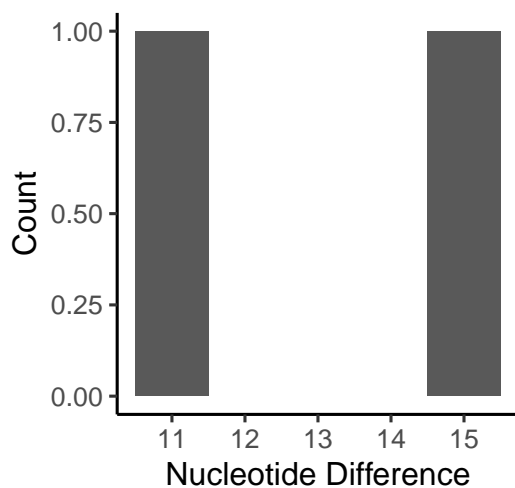
IGHV4-30-2*01

144 sequences assigned
No exact matches.



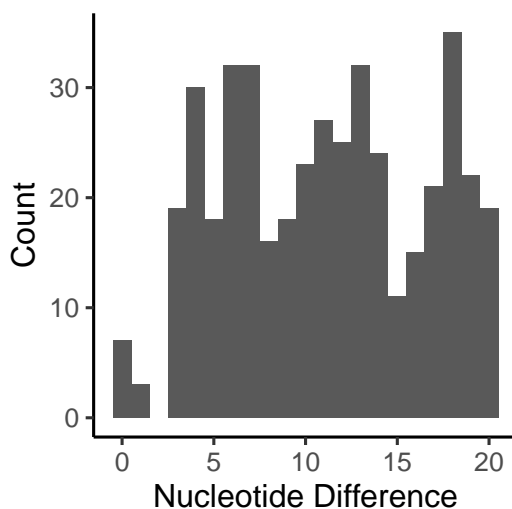
IGHV3-43D*03

3 sequences assigned
No exact matches.



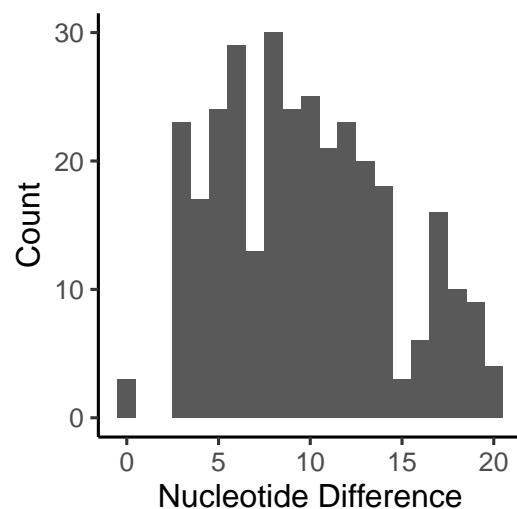
IGHV4-4*02_03

495 sequences assigned
7 (1.4%) exact matches, in which:
7 unique CDR3
4 unique J



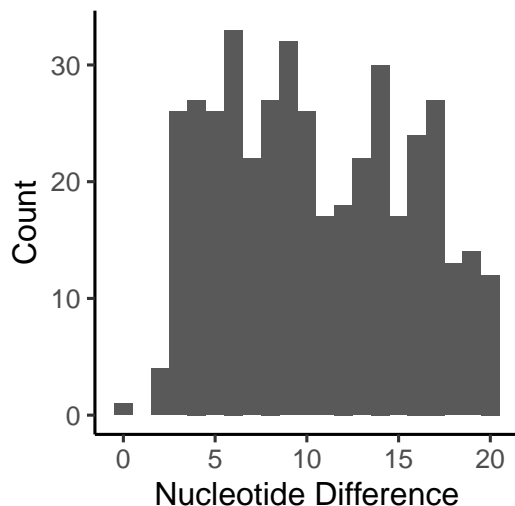
IGHV4-30-4*01

352 sequences assigned
3 (0.9%) exact matches, in which:
2 unique CDR3
2 unique J



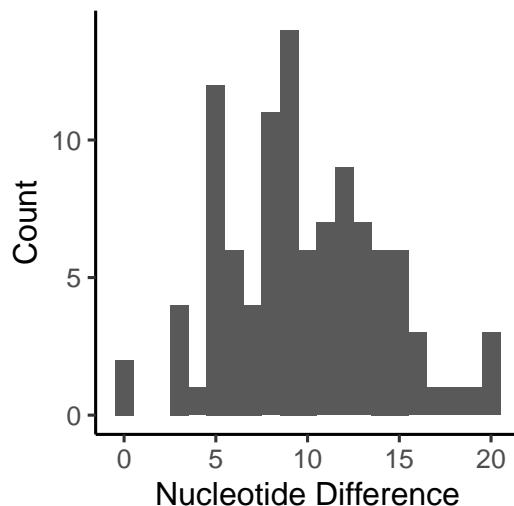
IGHV4-31*02

483 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



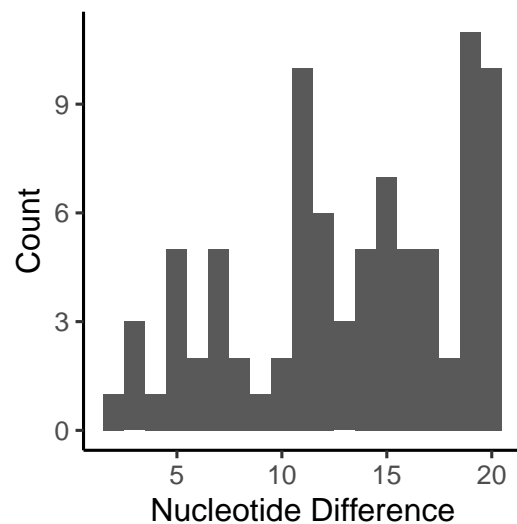
IGHV4-38-2*02

112 sequences assigned
2 (1.8%) exact matches, in which:
2 unique CDR3
2 unique J



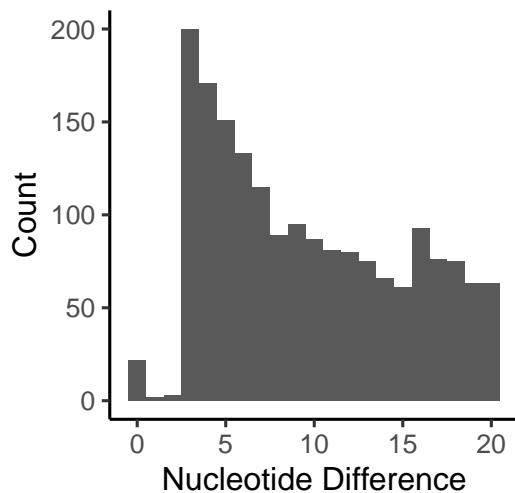
IGHV4-59*02

125 sequences assigned
No exact matches.



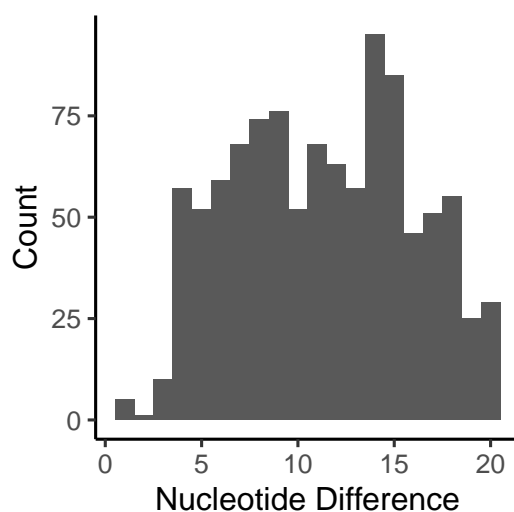
IGHV4-34*01_02

2329 sequences assigned
22 (0.9%) exact matches, in which:
19 unique CDR3
5 unique J



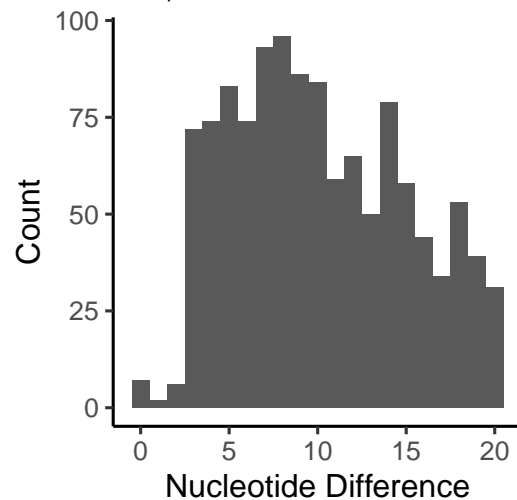
IGHV4-39*02

1803 sequences assigned
No exact matches.



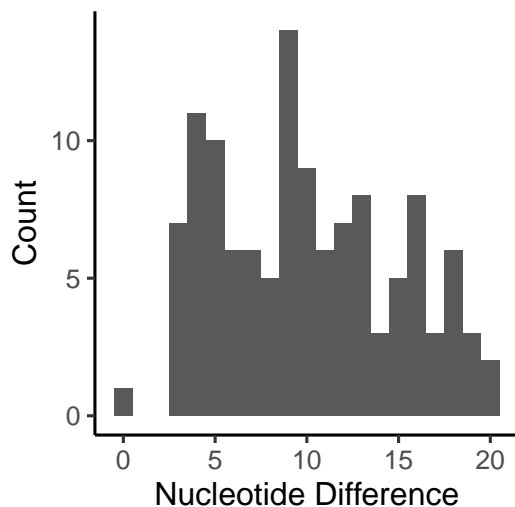
IGHV4-59*01_07

1359 sequences assigned
7 (0.5%) exact matches, in which:
7 unique CDR3
4 unique J



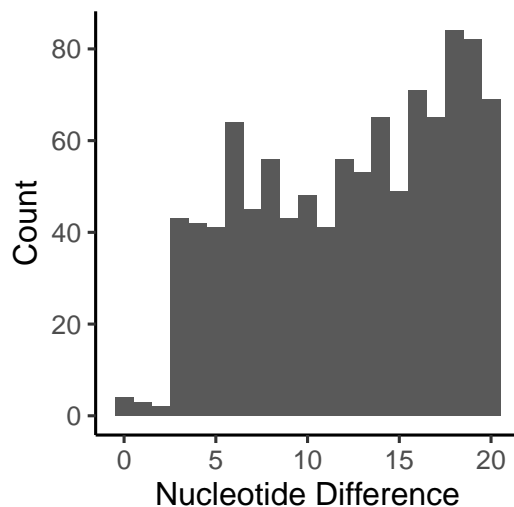
IGHV4-38-2*01

128 sequences assigned
1 (0.8%) exact matches, in which:
1 unique CDR3
1 unique J



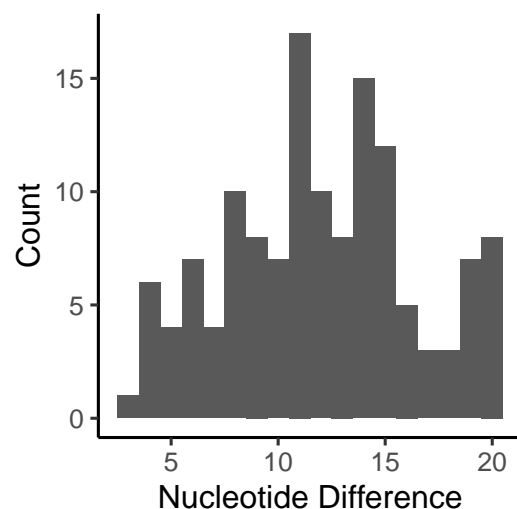
IGHV4-39*07

1933 sequences assigned
4 (0.2%) exact matches, in which:
4 unique CDR3
3 unique J



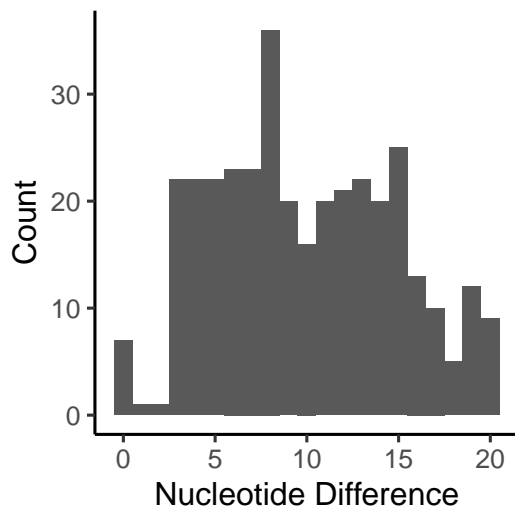
IGHV4-59*11

174 sequences assigned
No exact matches.



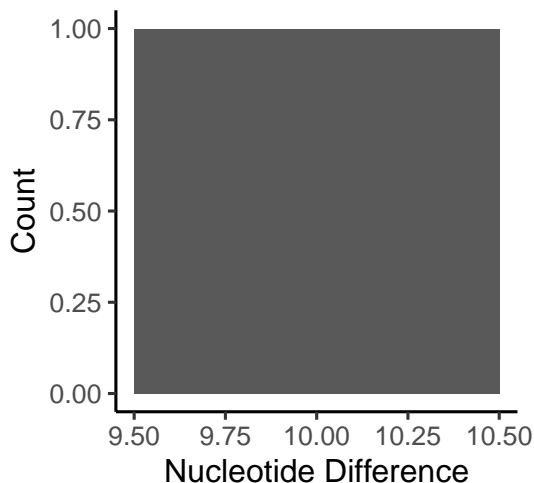
IGHV4-61*01

415 sequences assigned
7 (1.7%) exact matches, in which:
6 unique CDR3
3 unique J



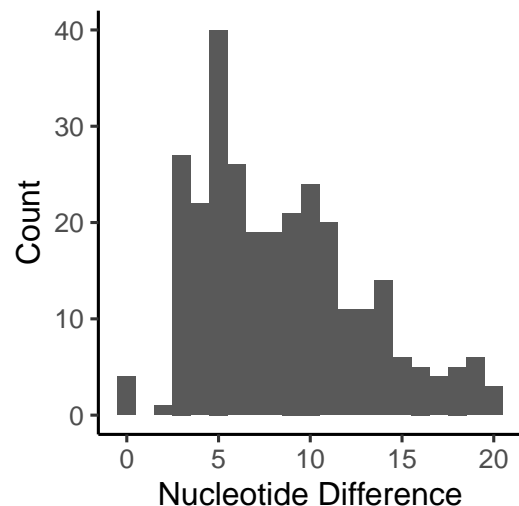
IGHV4/OR15-8*02

2 sequences assigned
No exact matches.



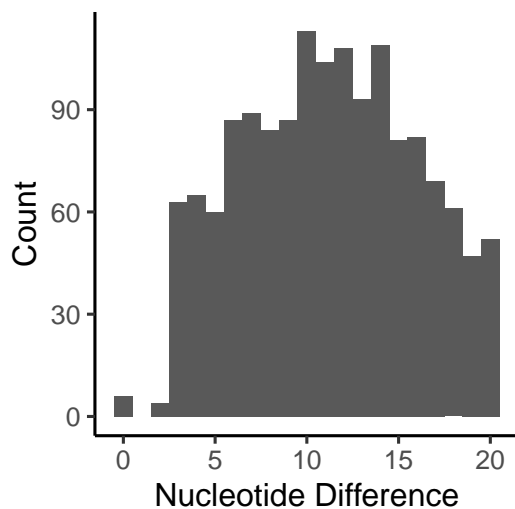
IGHV5-51*01_03

321 sequences assigned
4 (1.2%) exact matches, in which:
4 unique CDR3
3 unique J



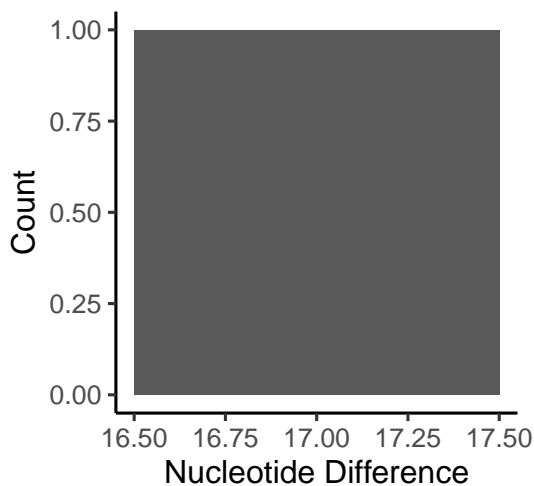
IGHV4-61*02

1660 sequences assigned
6 (0.4%) exact matches, in which:
5 unique CDR3
3 unique J



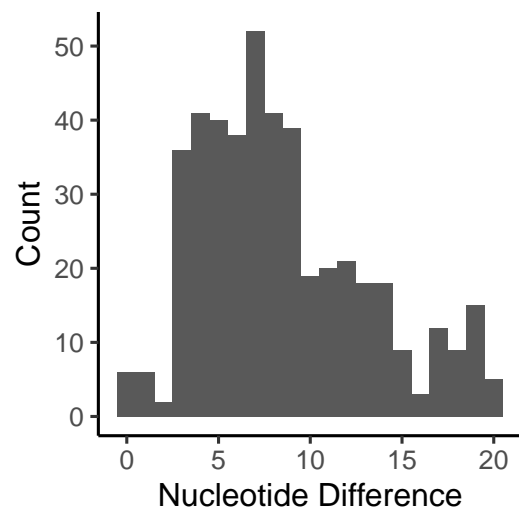
IGHV4/OR15-8*03

1 sequences assigned
No exact matches.



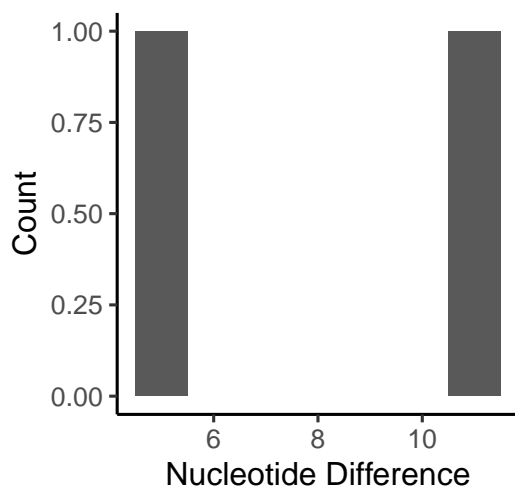
IGHV6-1*01_02

468 sequences assigned
6 (1.3%) exact matches, in which:
6 unique CDR3
1 unique J



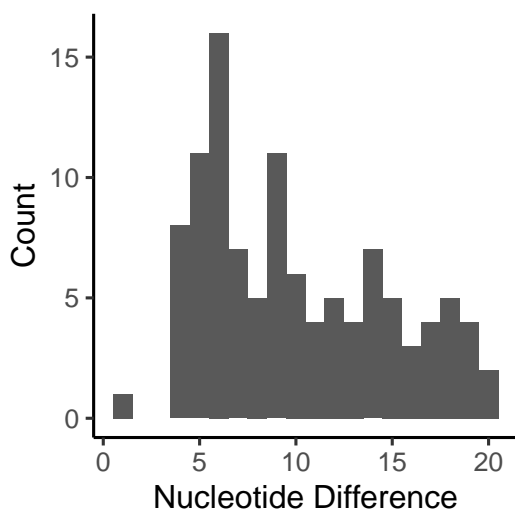
IGHV4/OR15-8*01

2 sequences assigned
No exact matches.



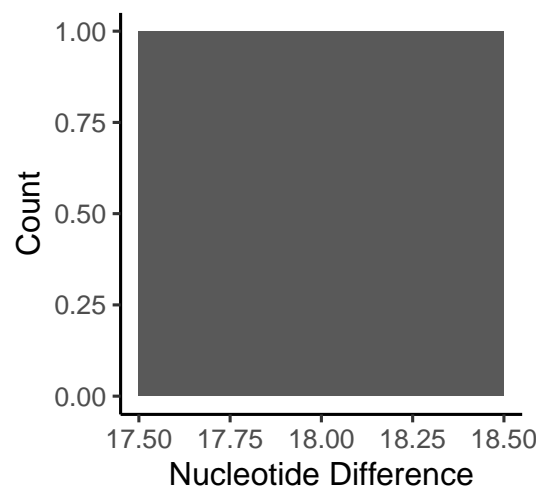
IGHV5-51*07

116 sequences assigned
No exact matches.



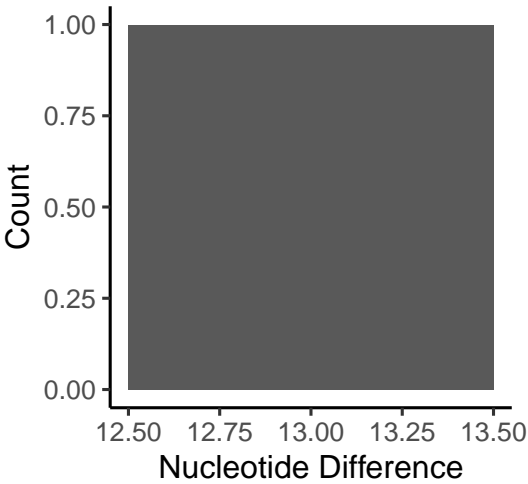
IGHV3/OR16-9*01

1 sequences assigned
No exact matches.



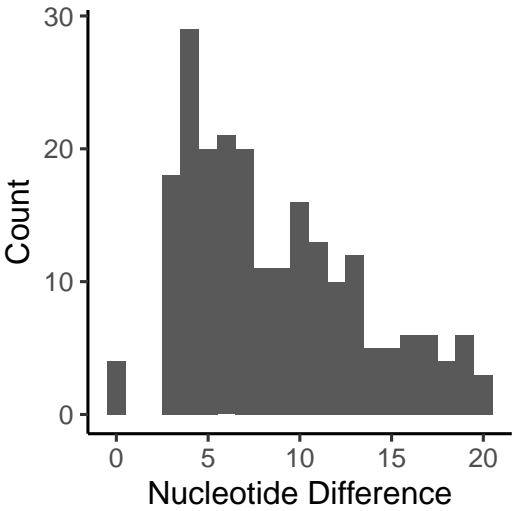
IGHV3/OR16-13*01

1 sequences assigned
No exact matches.



IGHV7-4-1*02

261 sequences assigned
4 (1.5%) exact matches, in which:
4 unique CDR3
2 unique J



Allele Usage

