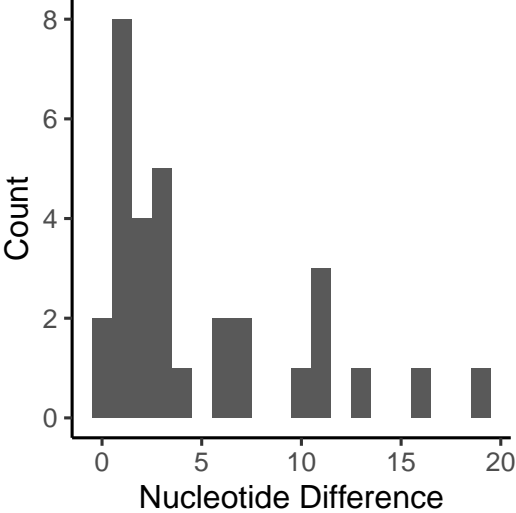


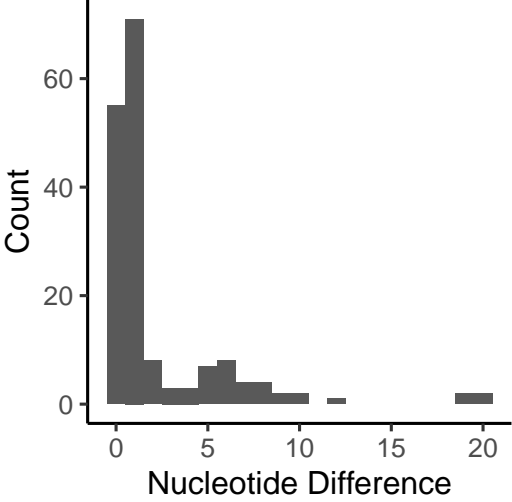
IGHV1-2*02

31 sequences assigned
2 (6.5%) exact matches, in which:
1 unique CDR3
1 unique J



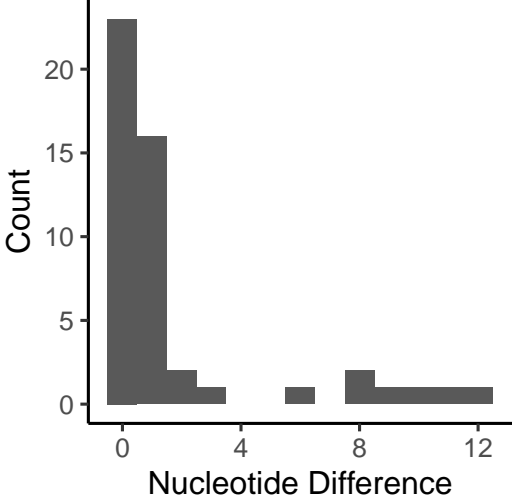
IGHV1-8*01

175 sequences assigned
55 (31.4%) exact matches, in which:
50 unique CDR3
5 unique J



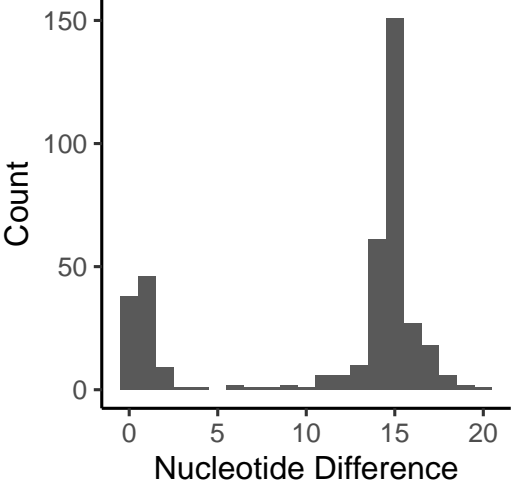
IGHV1-24*01

49 sequences assigned
23 (46.9%) exact matches, in which:
23 unique CDR3
6 unique J



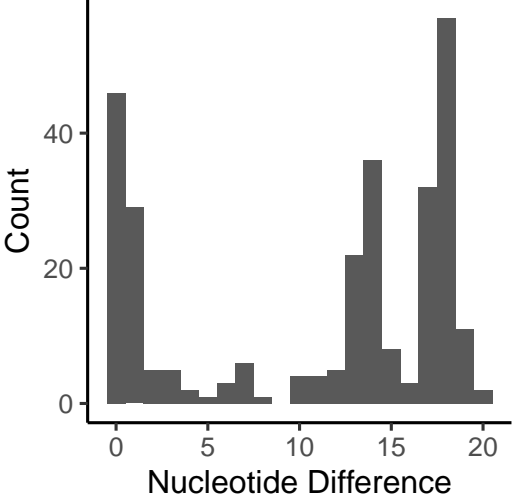
IGHV1-2*04

392 sequences assigned
38 (9.7%) exact matches, in which:
37 unique CDR3
6 unique J



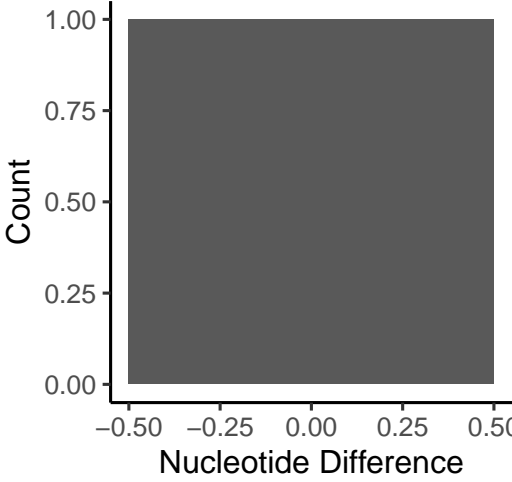
IGHV1-18*01

287 sequences assigned
46 (16%) exact matches, in which:
46 unique CDR3
7 unique J



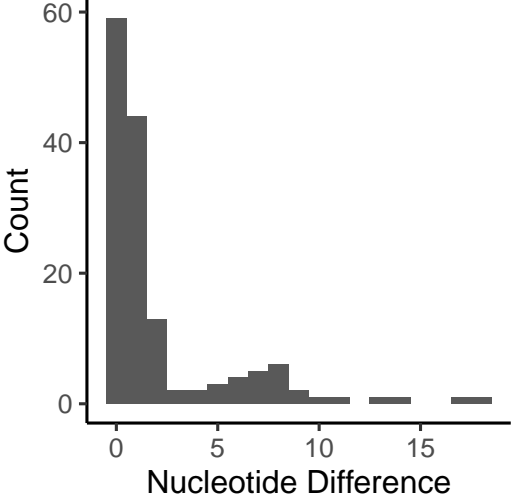
IGHV1-38-4*01

1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



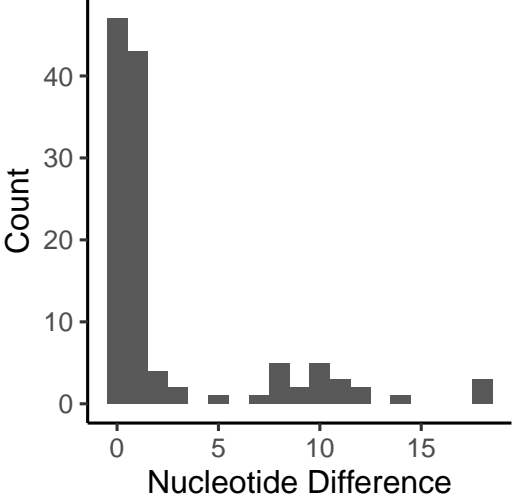
IGHV1-3*01_05

146 sequences assigned
59 (40.4%) exact matches, in which:
52 unique CDR3
6 unique J



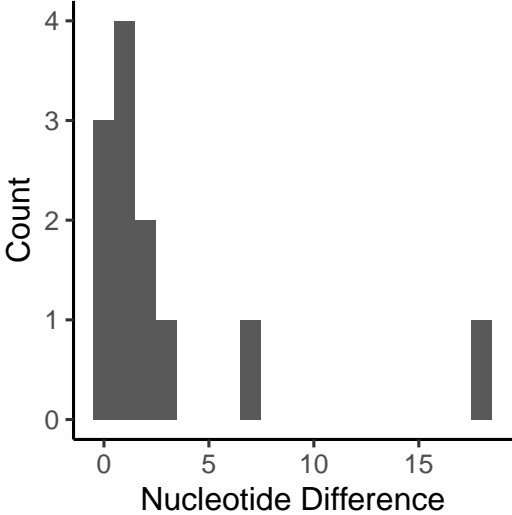
IGHV1-18*04

121 sequences assigned
47 (38.8%) exact matches, in which:
46 unique CDR3
5 unique J



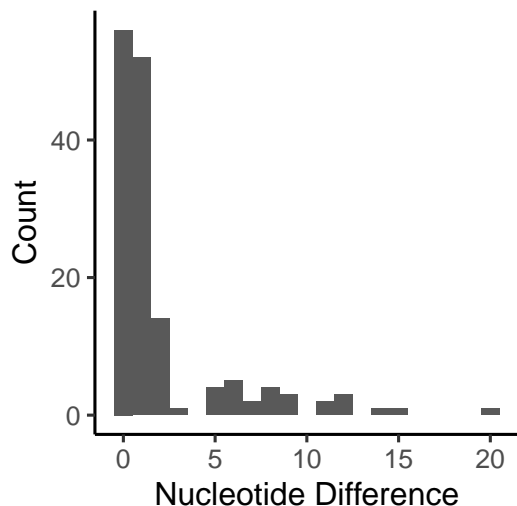
IGHV1-45*02

12 sequences assigned
3 (25%) exact matches, in which:
3 unique CDR3
2 unique J



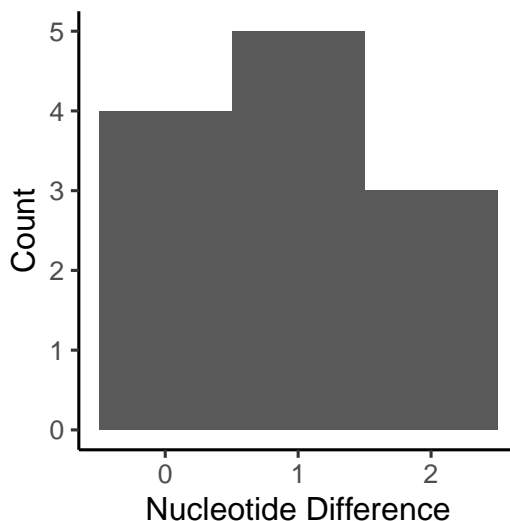
IGHV1-46*01

150 sequences assigned
56 (37.3%) exact matches, in which:
52 unique CDR3
6 unique J



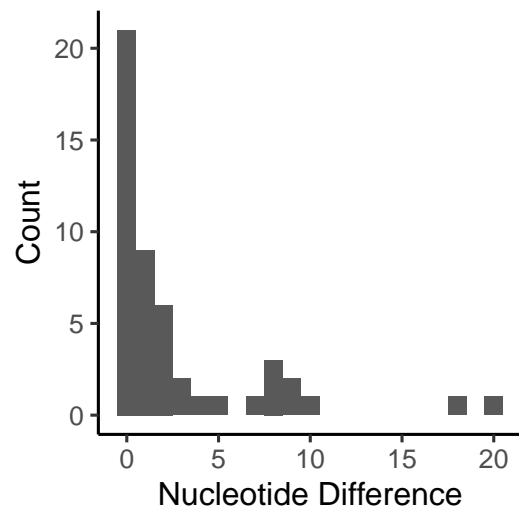
IGHV1-58*01_03

12 sequences assigned
4 (33.3%) exact matches, in which:
4 unique CDR3
2 unique J



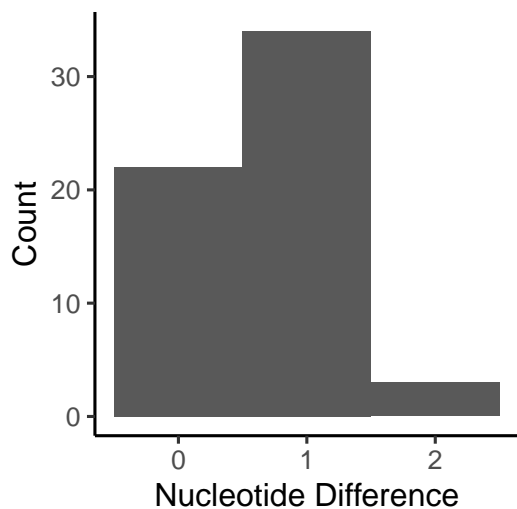
IGHV2-5*02

49 sequences assigned
21 (42.9%) exact matches, in which:
20 unique CDR3
4 unique J



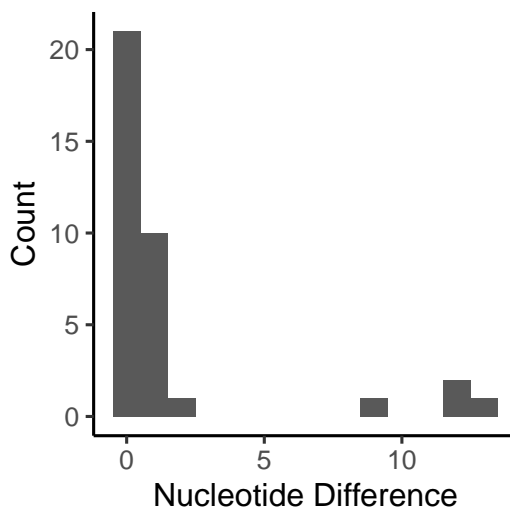
IGHV1-46*03

59 sequences assigned
22 (37.3%) exact matches, in which:
20 unique CDR3
5 unique J



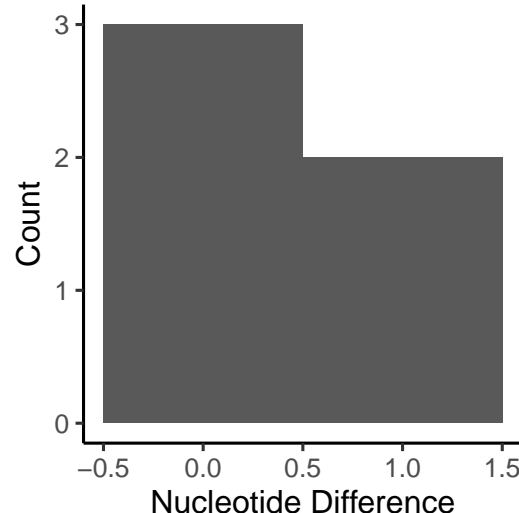
IGHV1-69*02

36 sequences assigned
21 (58.3%) exact matches, in which:
20 unique CDR3
5 unique J



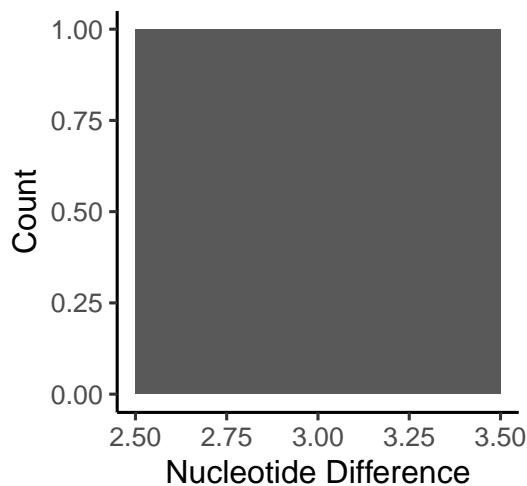
IGHV2-26*01

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



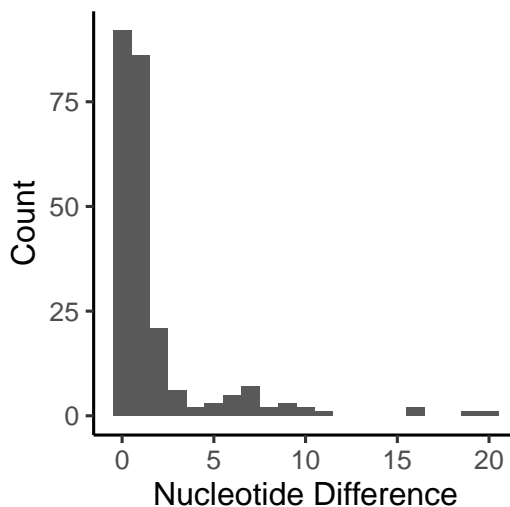
IGHV1-58*02

1 sequences assigned
No exact matches.



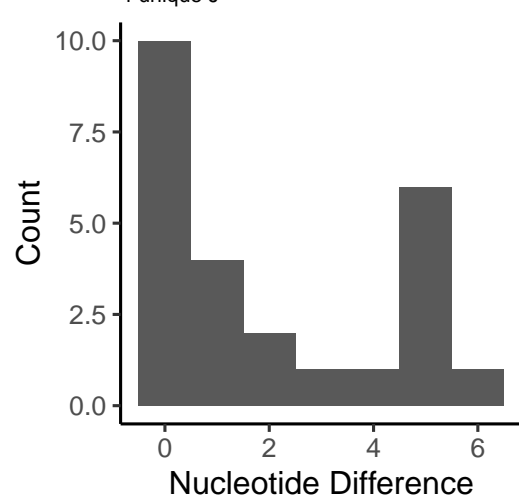
IGHV1-69*04_09

236 sequences assigned
92 (39%) exact matches, in which:
87 unique CDR3
7 unique J



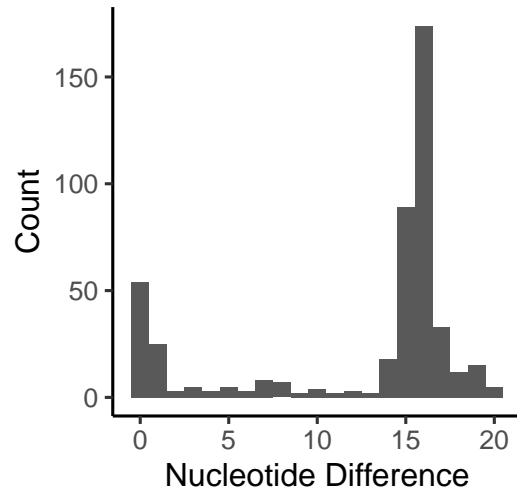
IGHV2-70*11_15

25 sequences assigned
10 (40%) exact matches, in which:
9 unique CDR3
4 unique J



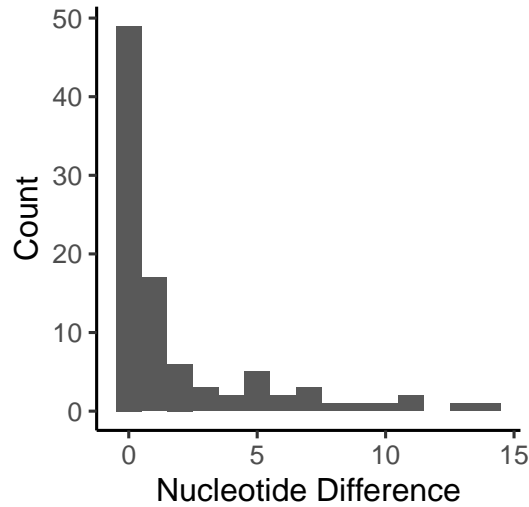
IGHV3-7*01

490 sequences assigned
54 (11%) exact matches, in which:
37 unique CDR3
7 unique J



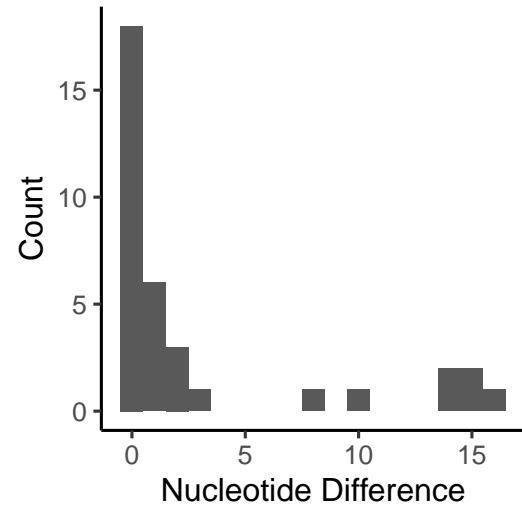
IGHV3-11*01

96 sequences assigned
49 (51%) exact matches, in which:
31 unique CDR3
3 unique J



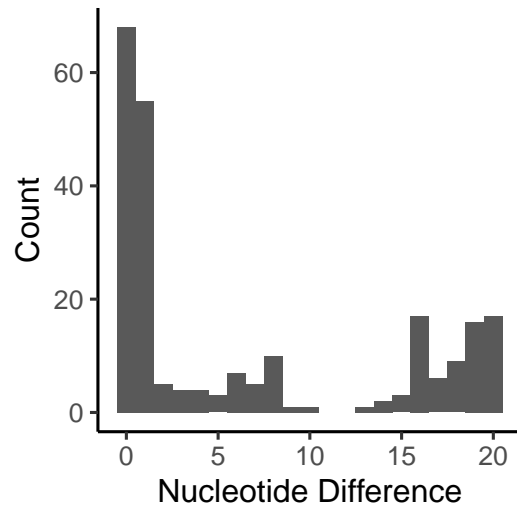
IGHV3-13*01

35 sequences assigned
18 (51.4%) exact matches, in which:
13 unique CDR3
4 unique J



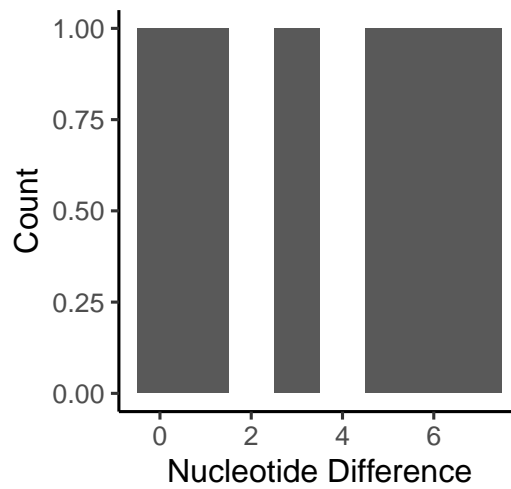
IGHV3-7*03

551 sequences assigned
68 (12.3%) exact matches, in which:
46 unique CDR3
5 unique J



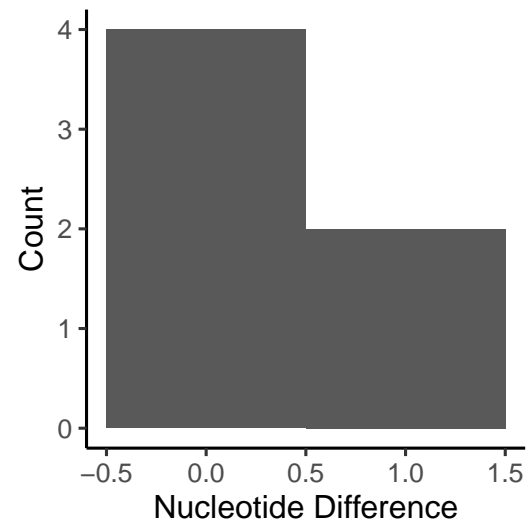
IGHV3-11*04

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



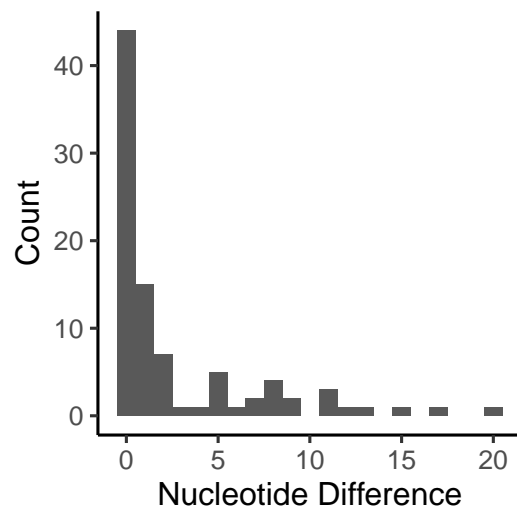
IGHV3-13*05

6 sequences assigned
4 (66.7%) exact matches, in which:
3 unique CDR3
2 unique J



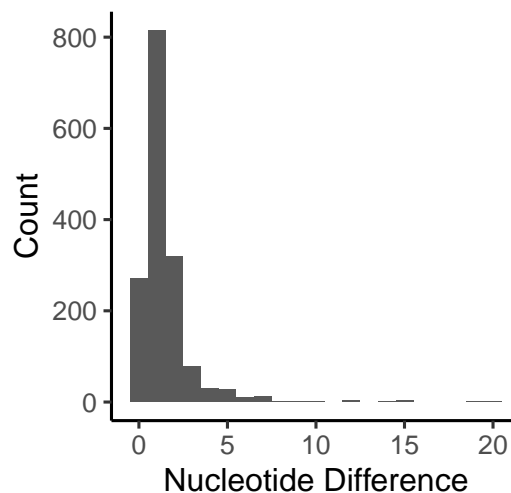
IGHV3-9*01

90 sequences assigned
44 (48.9%) exact matches, in which:
30 unique CDR3
5 unique J



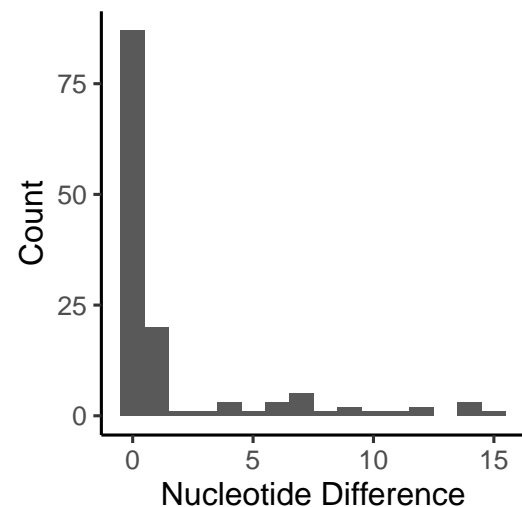
IGHV3-11*06

1581 sequences assigned
271 (17.1%) exact matches, in which:
104 unique CDR3
7 unique J



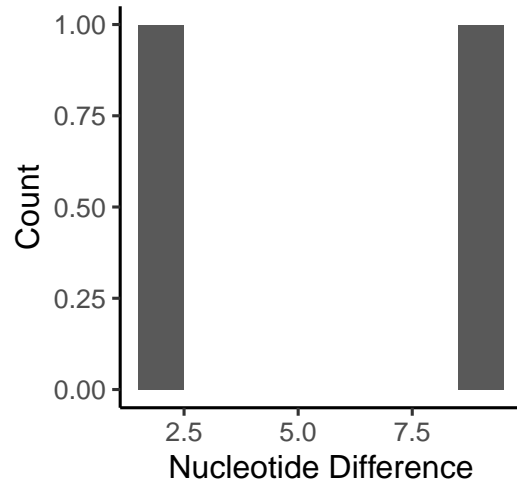
IGHV3-15*01_02

133 sequences assigned
87 (65.4%) exact matches, in which:
61 unique CDR3
6 unique J



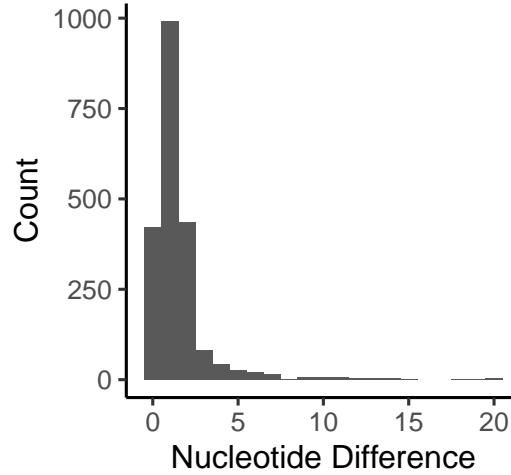
IGHV3-19*01

2 sequences assigned
No exact matches.



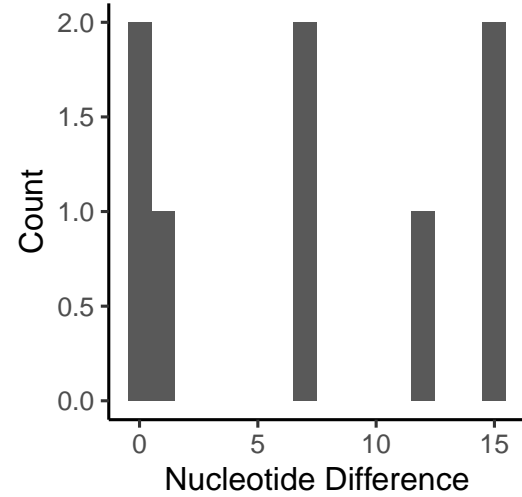
IGHV3-21*01_02

2081 sequences assigned
421 (20.2%) exact matches, in which:
172 unique CDR3
6 unique J



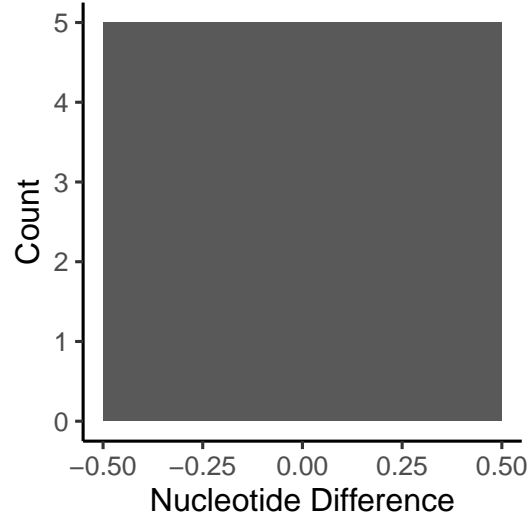
IGHV3-30-5*01

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



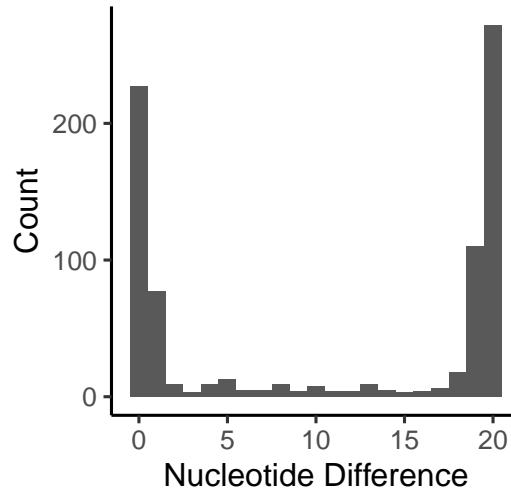
IGHV3-20*01_02

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



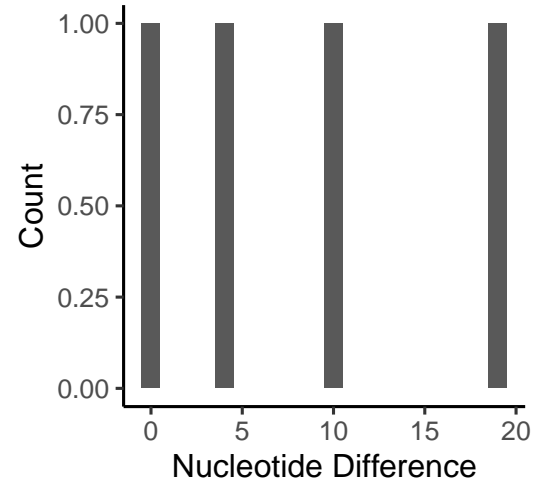
IGHV3-23*01_04

919 sequences assigned
227 (24.7%) exact matches, in which:
137 unique CDR3
7 unique J



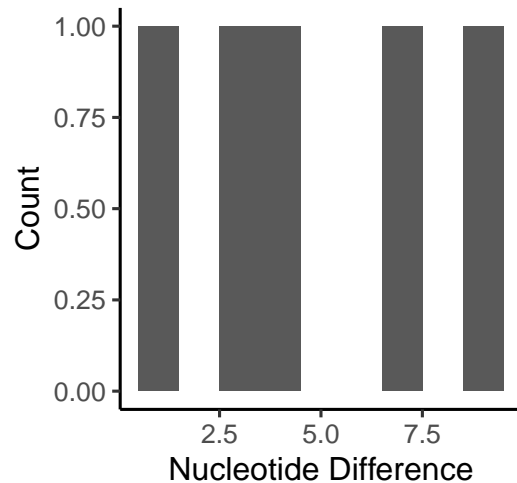
IGHV3-30-5*02

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



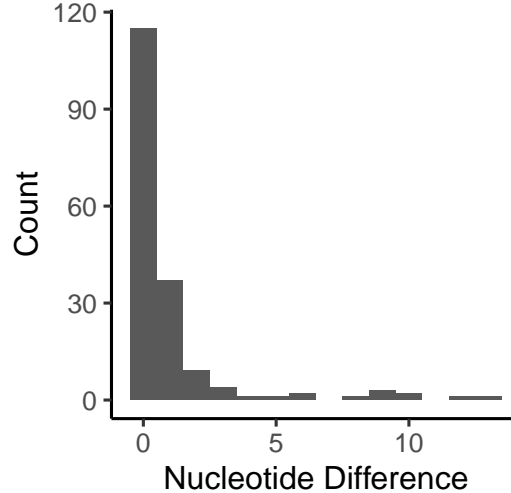
IGHV3-20*03_04

5 sequences assigned
No exact matches.



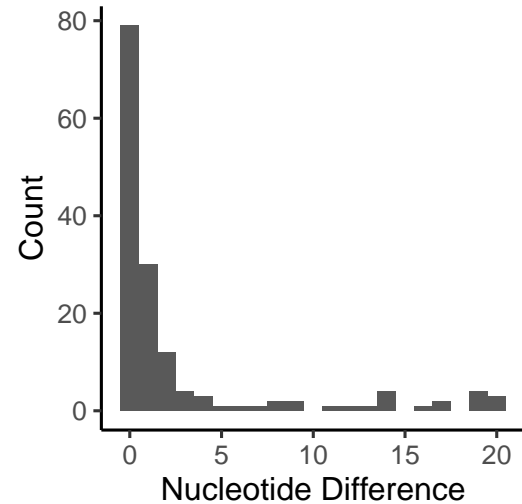
IGHV3-30*01

177 sequences assigned
115 (65%) exact matches, in which:
79 unique CDR3
6 unique J



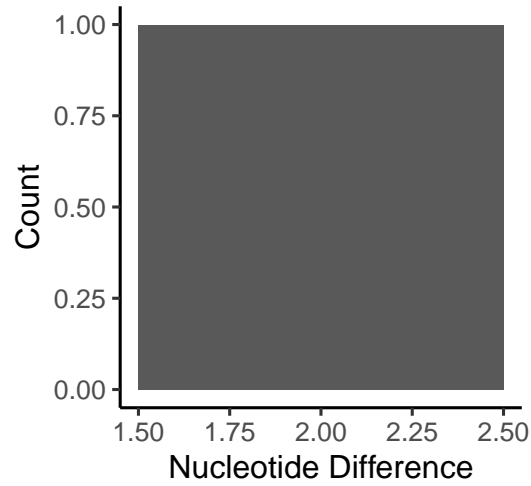
IGHV3-33*01

171 sequences assigned
79 (46.2%) exact matches, in which:
52 unique CDR3
5 unique J



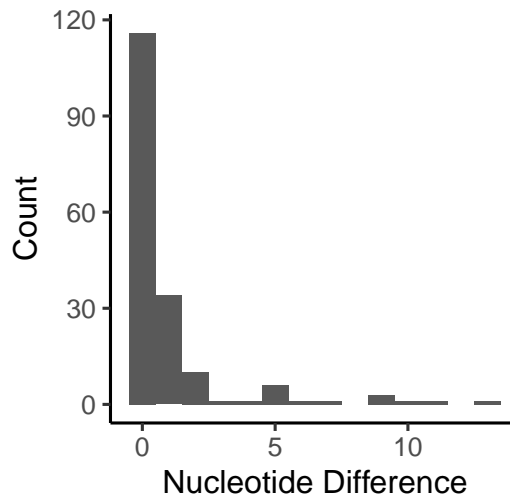
IGHV3-38-3*01

1 sequences assigned
No exact matches.



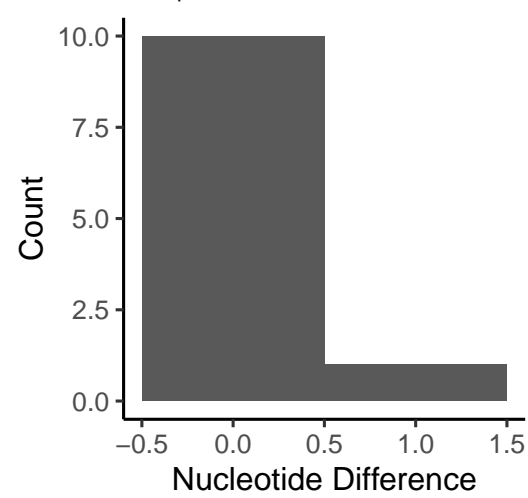
IGHV3-48*02

180 sequences assigned
116 (64.4%) exact matches, in which:
72 unique CDR3
6 unique J



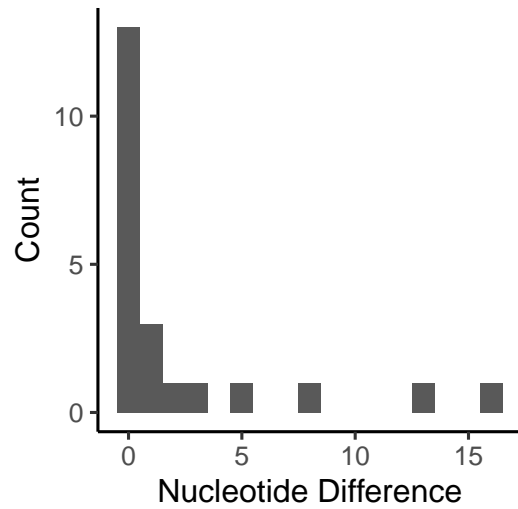
IGHV3-49*03_05

16 sequences assigned
10 (62.5%) exact matches, in which:
7 unique CDR3
4 unique J



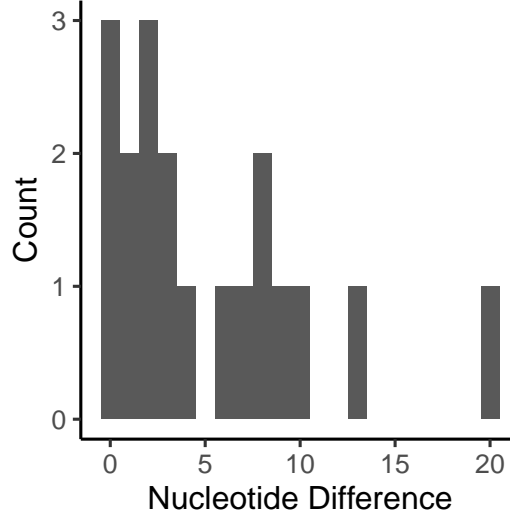
IGHV3-43*01

22 sequences assigned
13 (59.1%) exact matches, in which:
9 unique CDR3
4 unique J



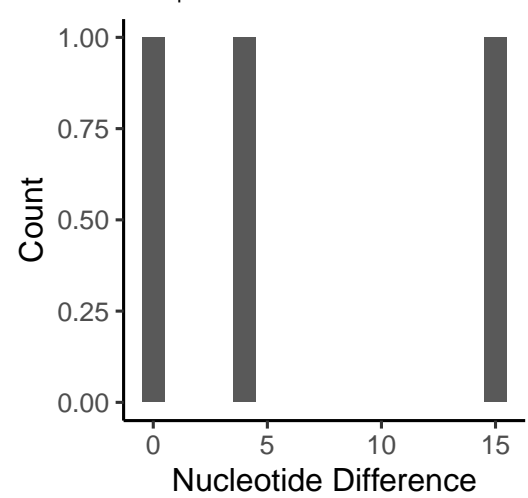
IGHV3-48*04

21 sequences assigned
3 (14.3%) exact matches, in which:
3 unique CDR3
3 unique J



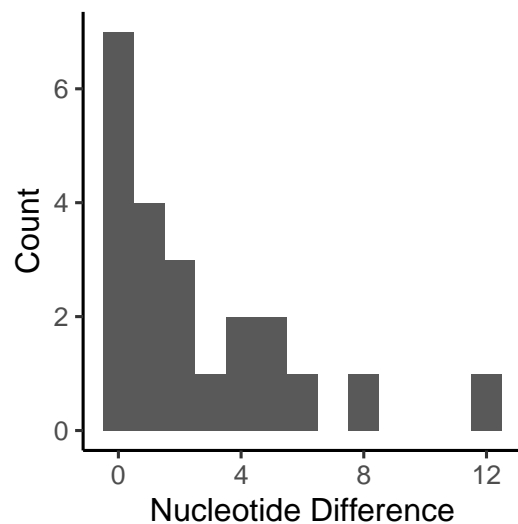
IGHV3-52*01_03

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



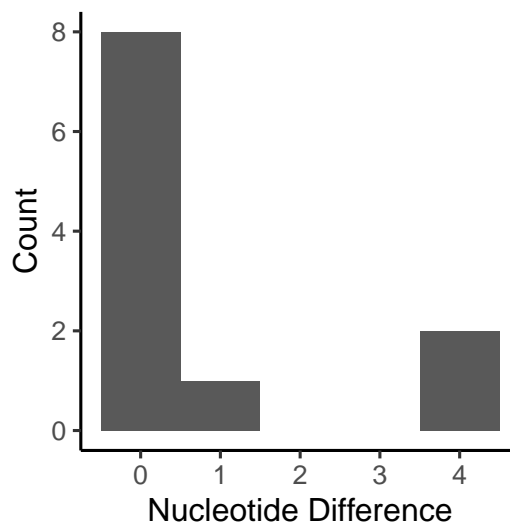
IGHV3-48*01

22 sequences assigned
7 (31.8%) exact matches, in which:
7 unique CDR3
5 unique J



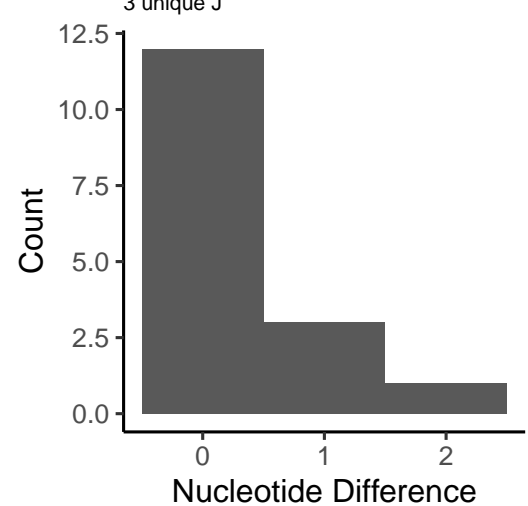
IGHV3-49*04

11 sequences assigned
8 (72.7%) exact matches, in which:
6 unique CDR3
4 unique J



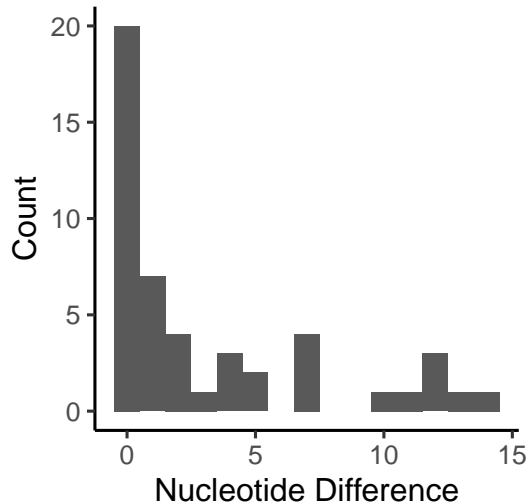
IGHV3-53*04

16 sequences assigned
12 (75%) exact matches, in which:
8 unique CDR3
3 unique J



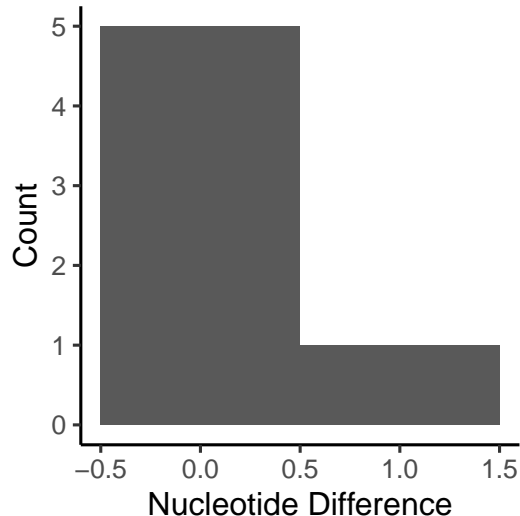
IGHV3-53*01_02

48 sequences assigned
20 (41.7%) exact matches, in which:
15 unique CDR3
5 unique J



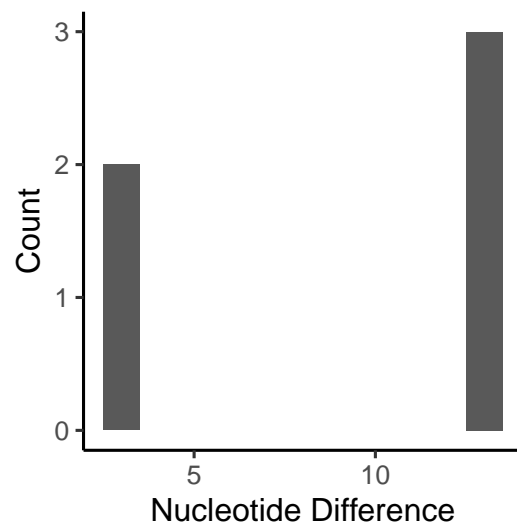
IGHV3-64*02_07

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



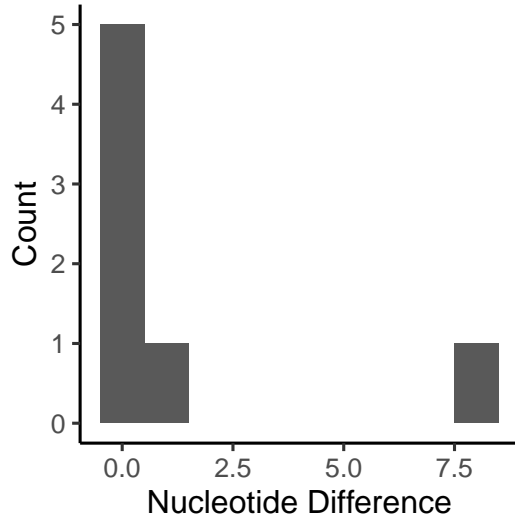
IGHV3-69-1*01

5 sequences assigned
No exact matches.



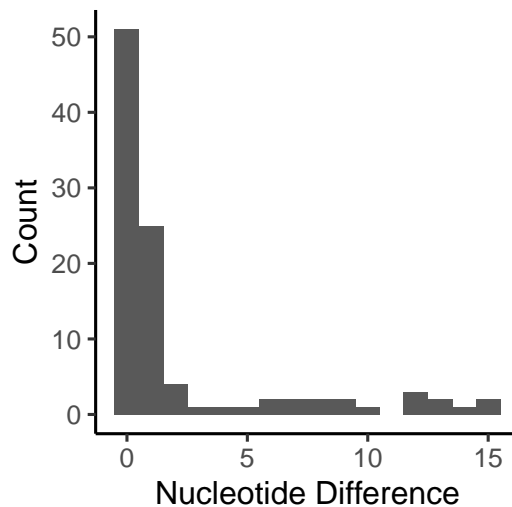
IGHV3-64*01

7 sequences assigned
5 (71.4%) exact matches, in which:
5 unique CDR3
2 unique J



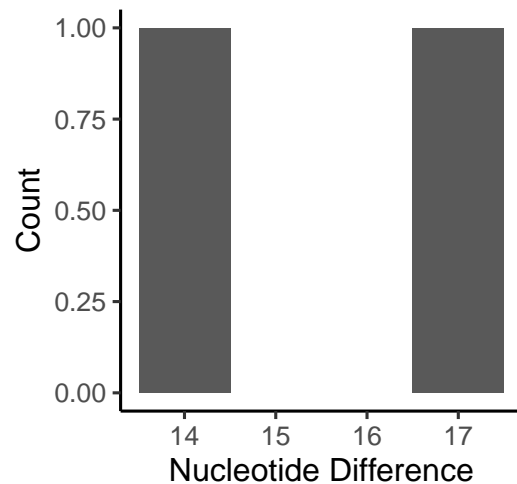
IGHV3-66*01

101 sequences assigned
51 (50.5%) exact matches, in which:
31 unique CDR3
5 unique J



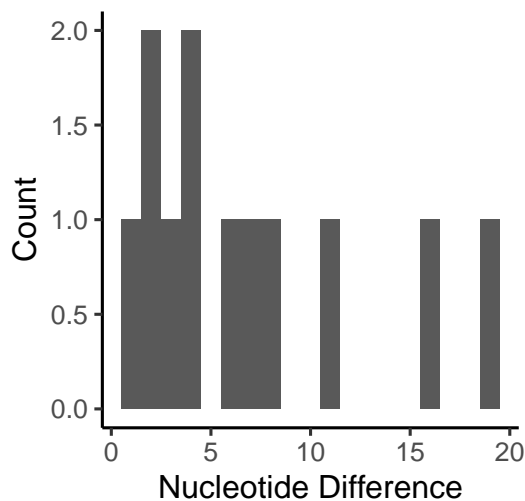
IGHV3-69-1*02

2 sequences assigned
No exact matches.



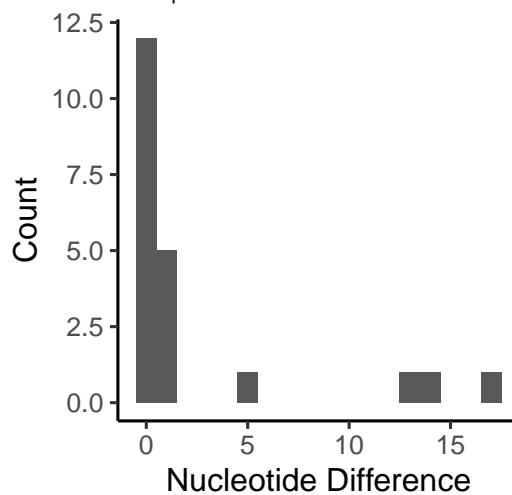
IGHV3-64*04

16 sequences assigned
No exact matches.



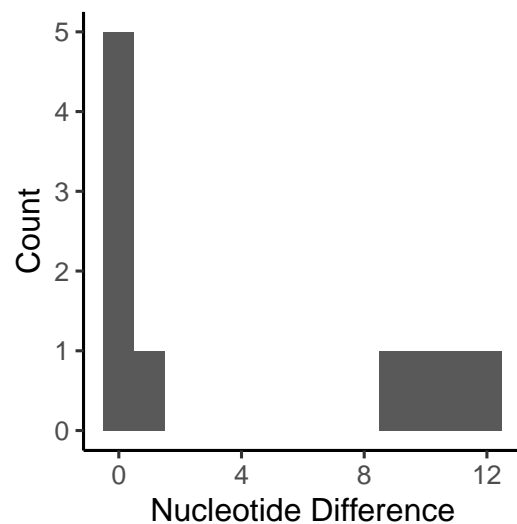
IGHV3-66*02

22 sequences assigned
12 (54.5%) exact matches, in which:
9 unique CDR3
5 unique J



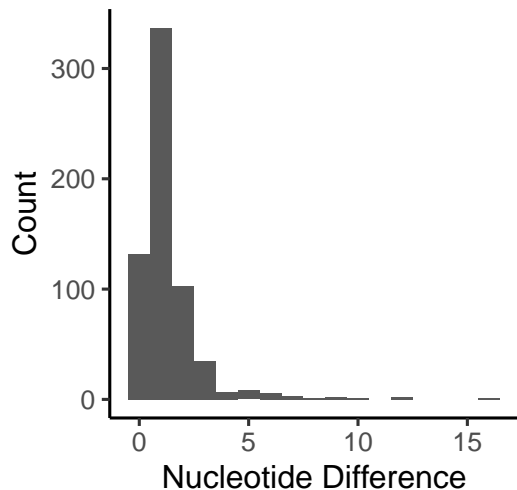
IGHV3-72*01

11 sequences assigned
5 (45.5%) exact matches, in which:
3 unique CDR3
3 unique J



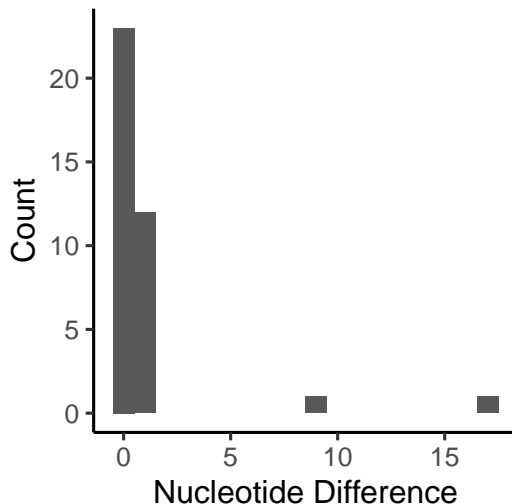
IGHV3-73*01_02

638 sequences assigned
132 (20.7%) exact matches, in which:
67 unique CDR3
4 unique J



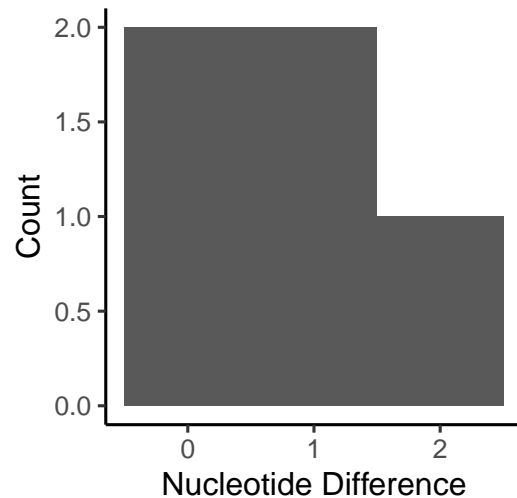
IGHV3-64D*06

86 sequences assigned
23 (26.7%) exact matches, in which:
13 unique CDR3
4 unique J



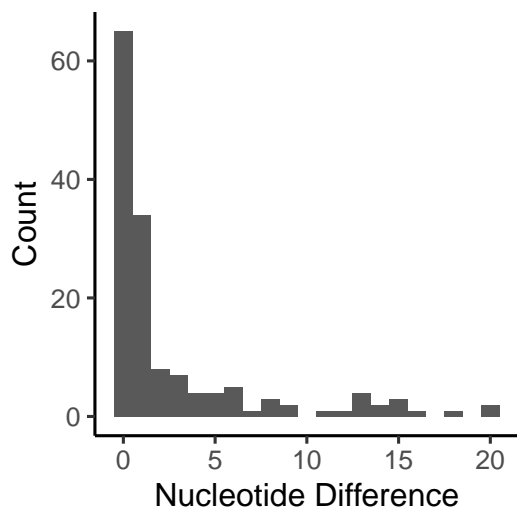
IGHV4-28*02_05

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
1 unique J



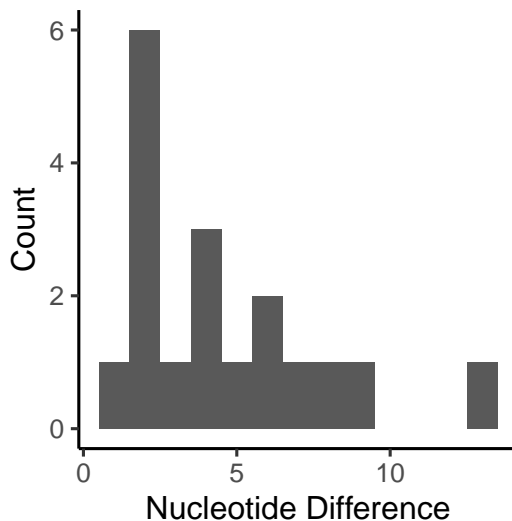
IGHV3-74*01_02

160 sequences assigned
65 (40.6%) exact matches, in which:
42 unique CDR3
5 unique J



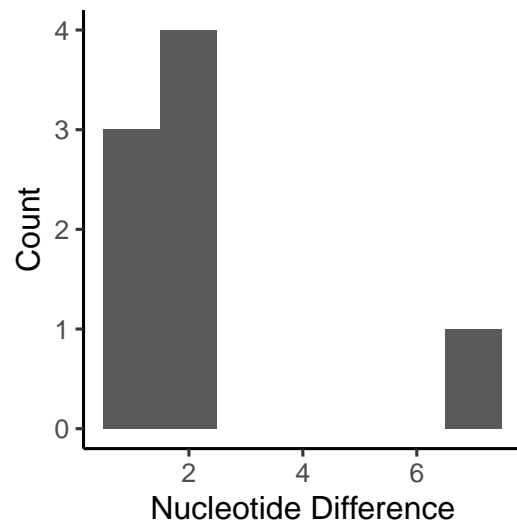
IGHV4-4*07

24 sequences assigned
No exact matches.



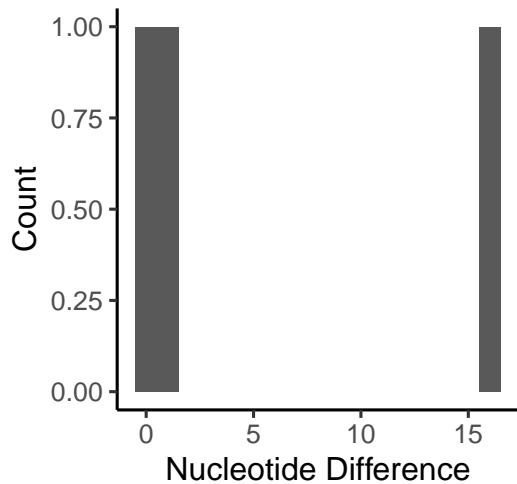
IGHV4-30-2*03

8 sequences assigned
No exact matches.



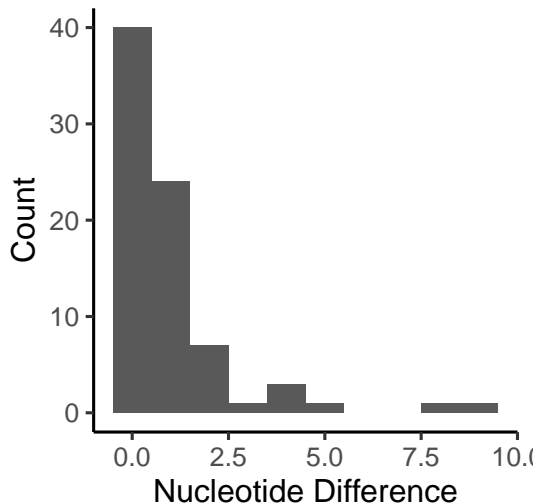
IGHV3-43D*03

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



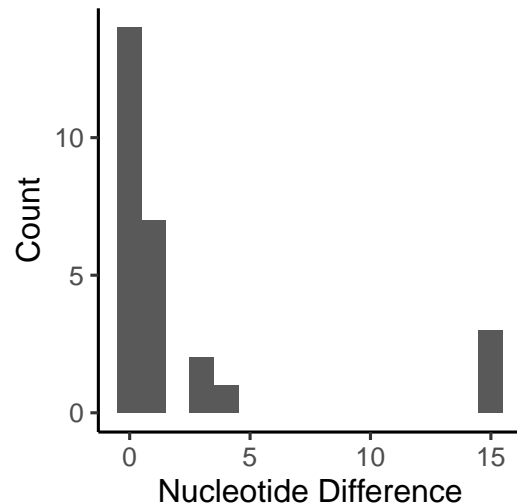
IGHV4-4*02_03

78 sequences assigned
40 (51.3%) exact matches, in which:
37 unique CDR3
4 unique J



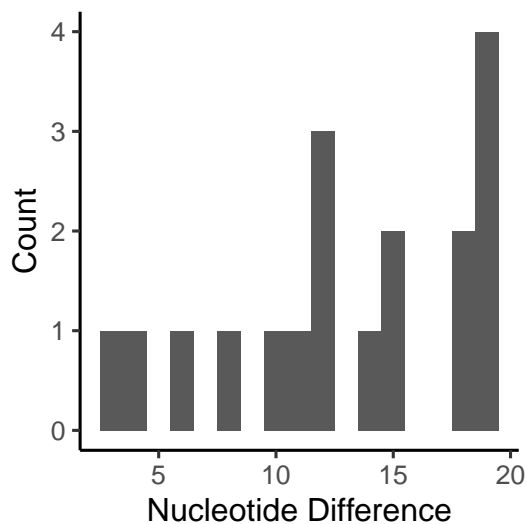
IGHV4-31*01

27 sequences assigned
14 (51.9%) exact matches, in which:
11 unique CDR3
3 unique J



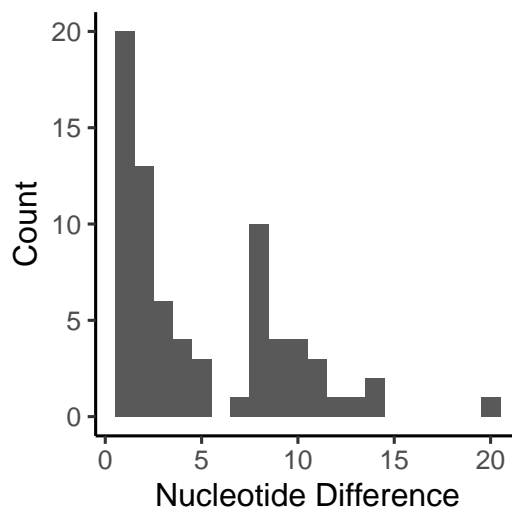
IGHV4-31*02

20 sequences assigned
No exact matches.



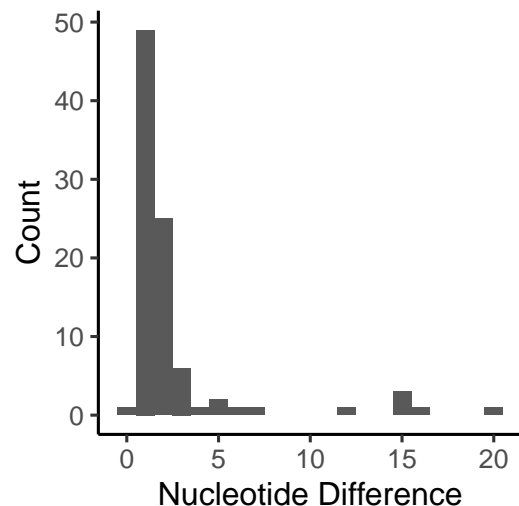
IGHV4-39*07

75 sequences assigned
No exact matches.



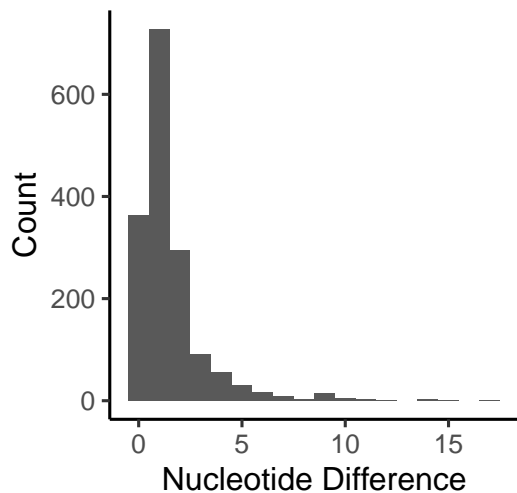
IGHV4-59*12

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



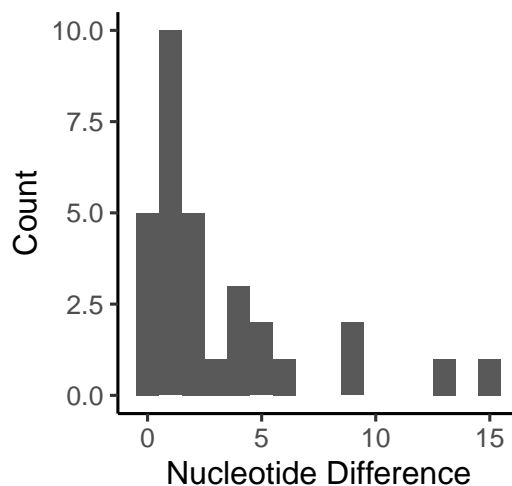
IGHV4-34*01_02

1621 sequences assigned
363 (22.4%) exact matches, in which:
242 unique CDR3
6 unique J



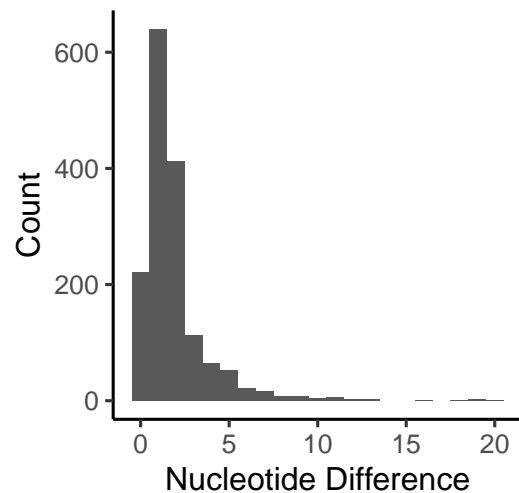
IGHV4-59*08

31 sequences assigned
5 (16.1%) exact matches, in which:
5 unique CDR3
4 unique J



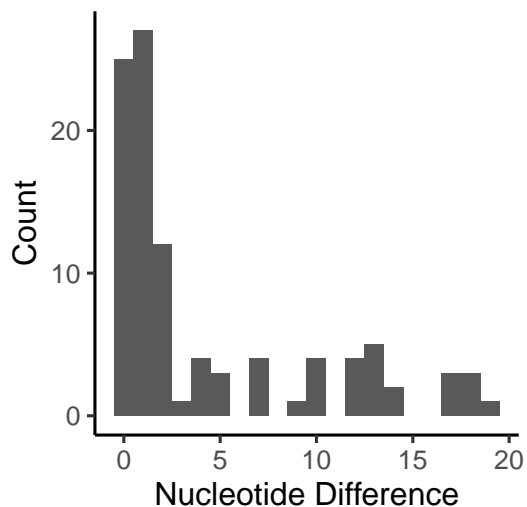
IGHV4-61*01

1577 sequences assigned
221 (14%) exact matches, in which:
121 unique CDR3
5 unique J



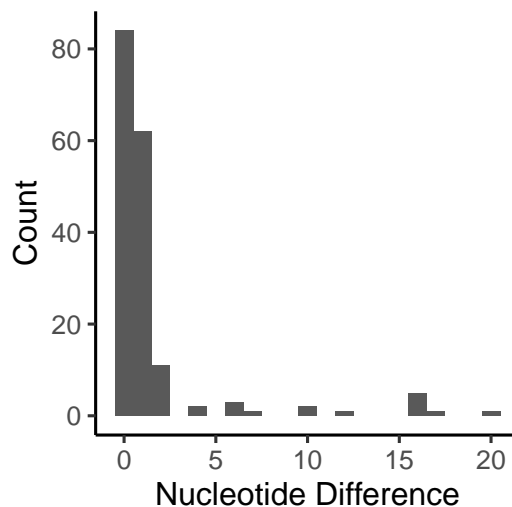
IGHV4-38-2*02

100 sequences assigned
25 (25%) exact matches, in which:
22 unique CDR3
6 unique J



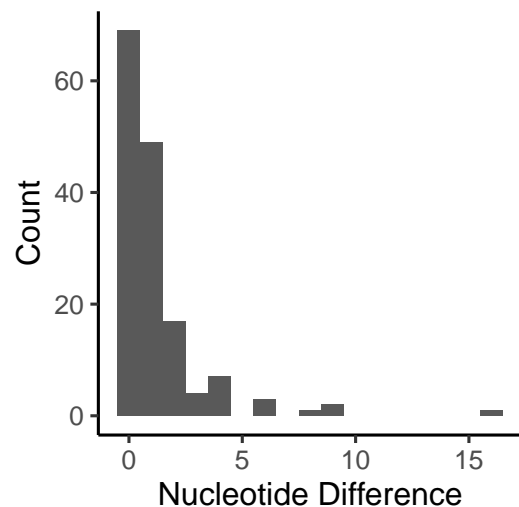
IGHV4-59*01_07

182 sequences assigned
84 (46.2%) exact matches, in which:
76 unique CDR3
5 unique J



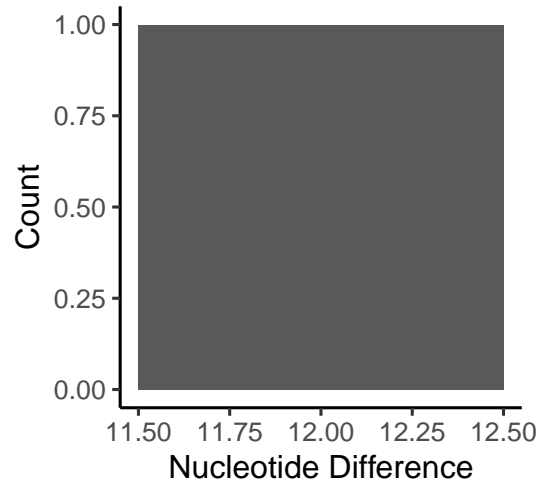
IGHV4-61*02

162 sequences assigned
69 (42.6%) exact matches, in which:
64 unique CDR3
5 unique J



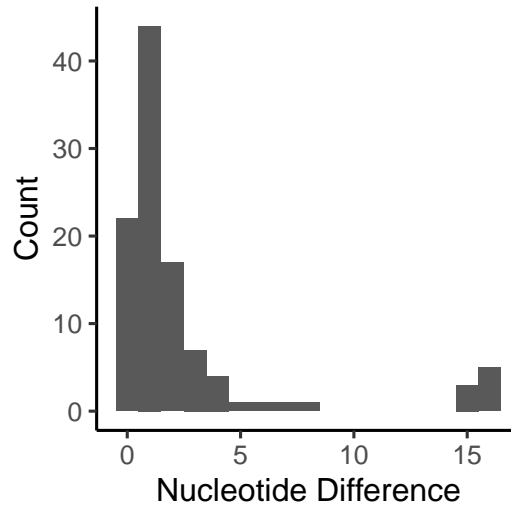
IGHV1/OR15-2*02_03

1 sequences assigned
No exact matches.



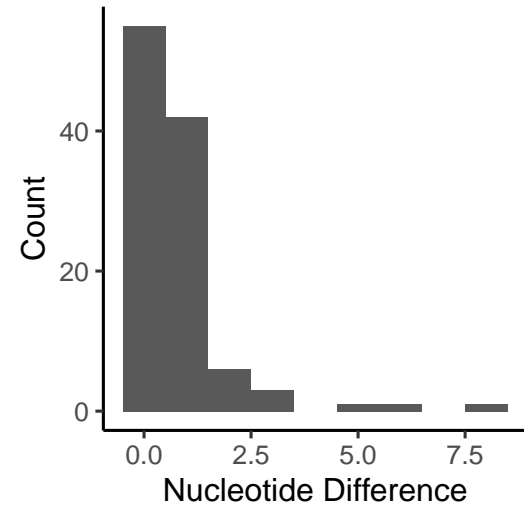
IGHV5-51*07

106 sequences assigned
22 (20.8%) exact matches, in which:
18 unique CDR3
6 unique J



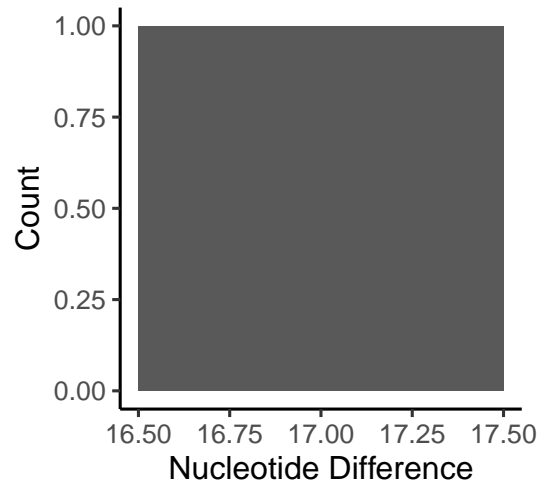
IGHV7-4-1*02

109 sequences assigned
55 (50.5%) exact matches, in which:
49 unique CDR3
5 unique J



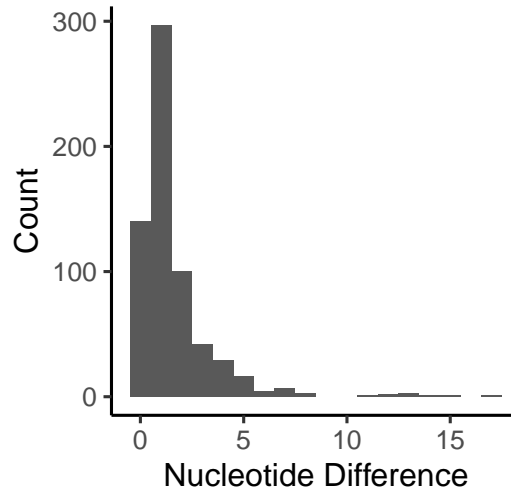
IGHV4/OR15-8*02

1 sequences assigned
No exact matches.



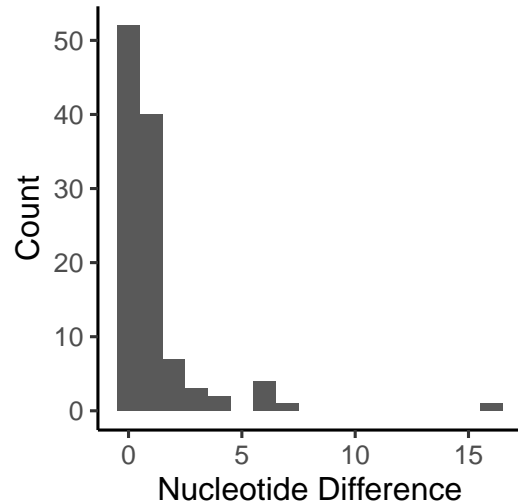
IGHV5-51*01_03

647 sequences assigned
140 (21.6%) exact matches, in which:
90 unique CDR3
6 unique J



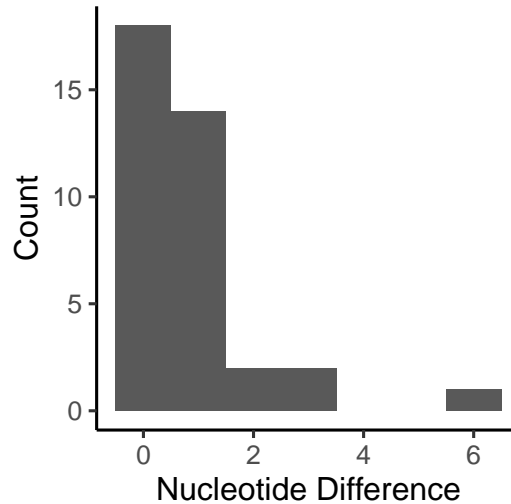
IGHV5-10-1*01_03

110 sequences assigned
52 (47.3%) exact matches, in which:
41 unique CDR3
4 unique J

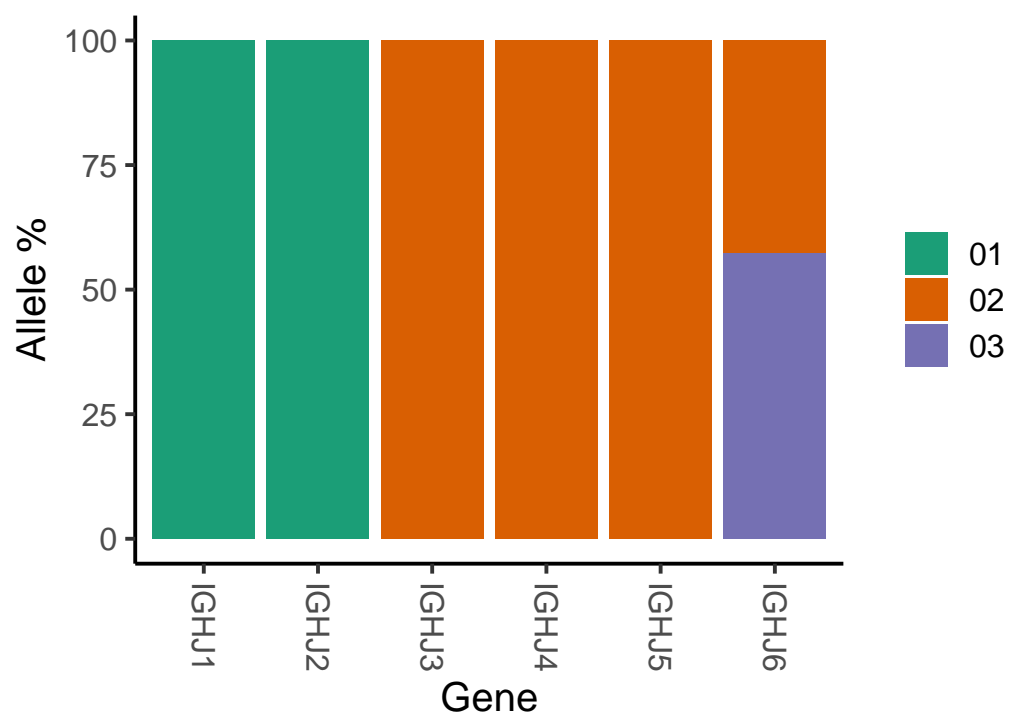


IGHV6-1*01_02

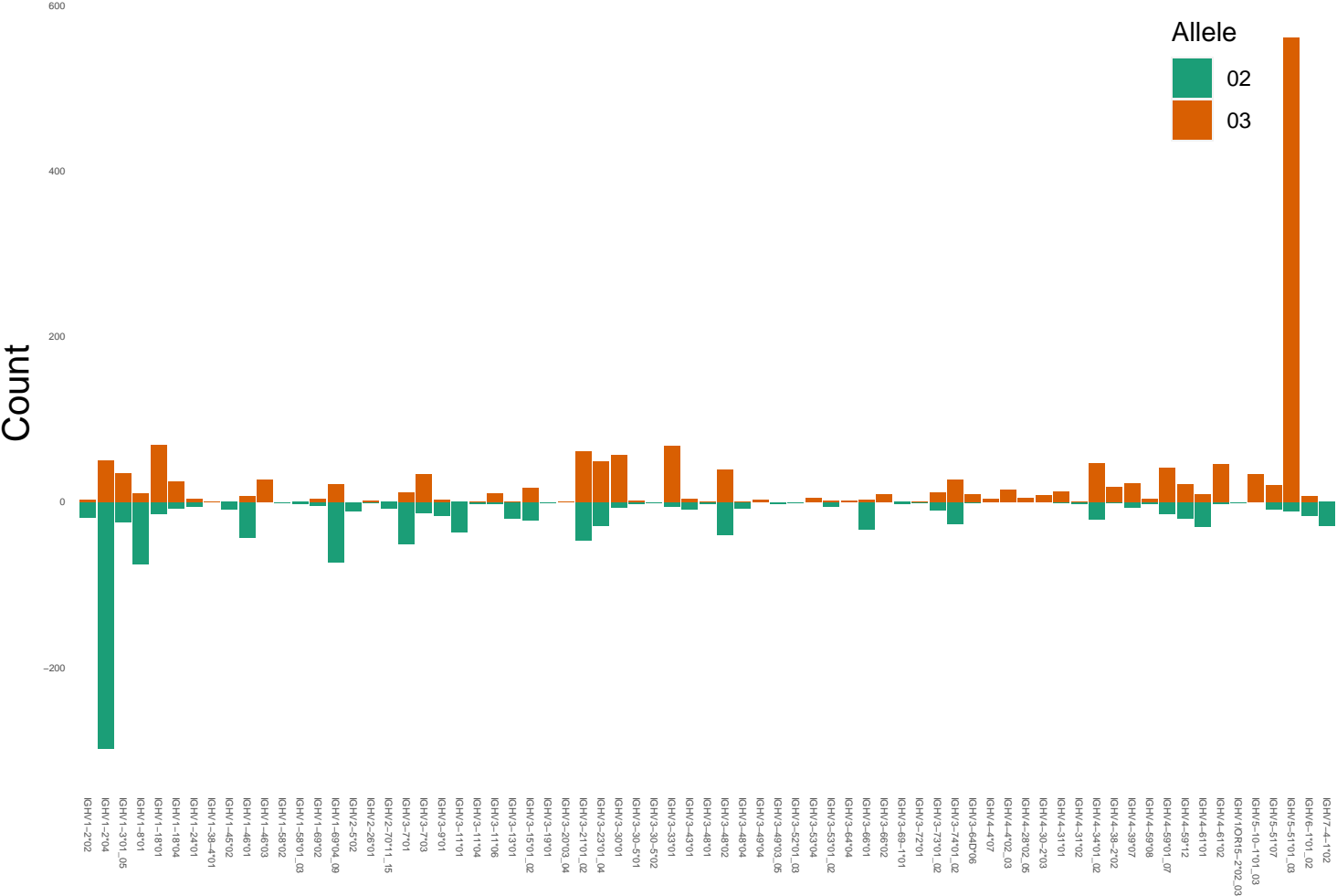
38 sequences assigned
18 (47.4%) exact matches, in which:
17 unique CDR3
4 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]