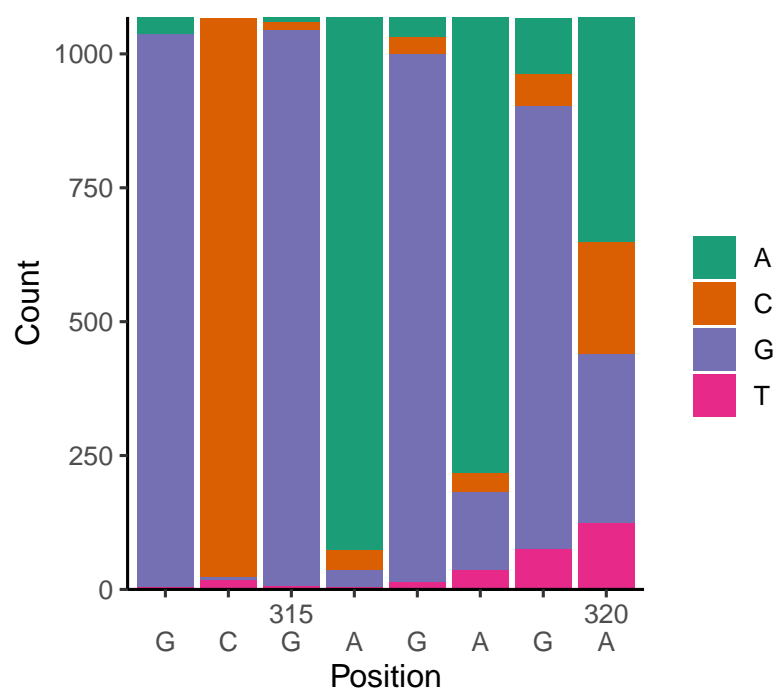
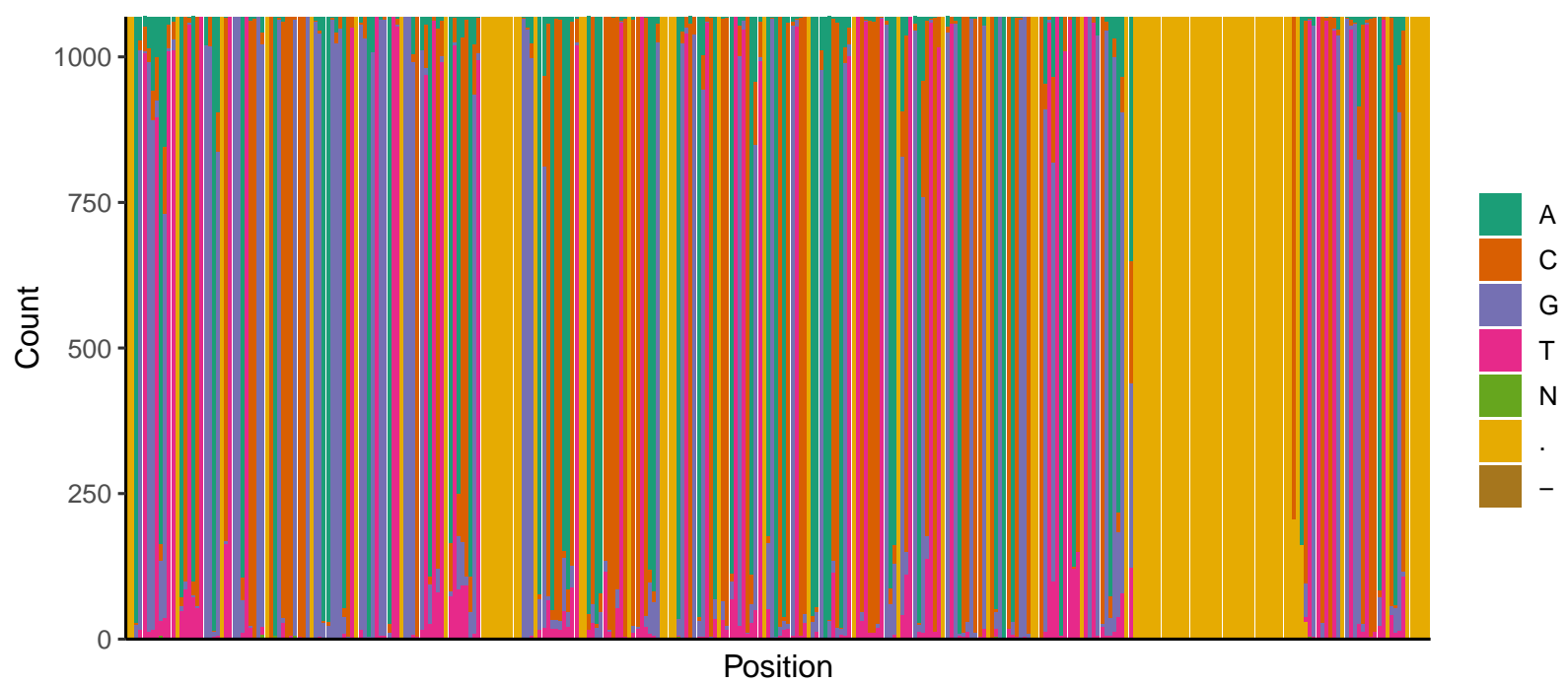


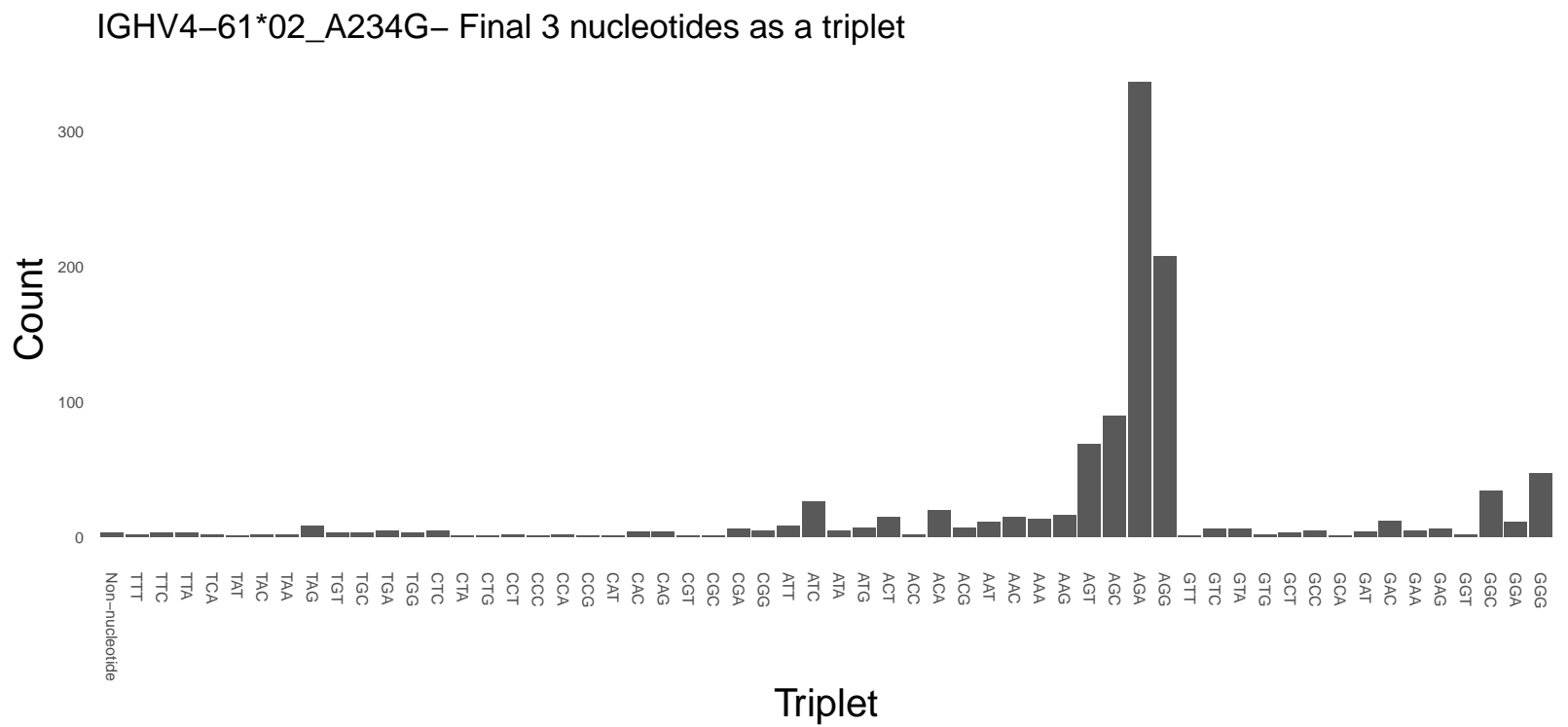
Gene IGHV4-61*02_A234G



Gene IGHV4-61*02_A234G

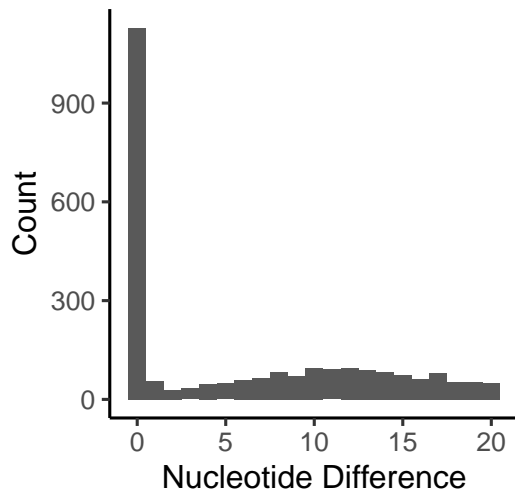


IGHV4-61*02_A234G- Final 3 nucleotides as a triplet



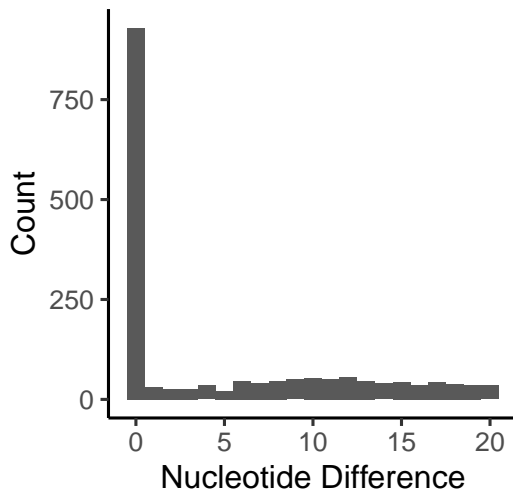
IGHV1–2*02

2753 sequences assigned
1129 (41%) exact matches, in which:
1102 unique CDR3
7 unique J



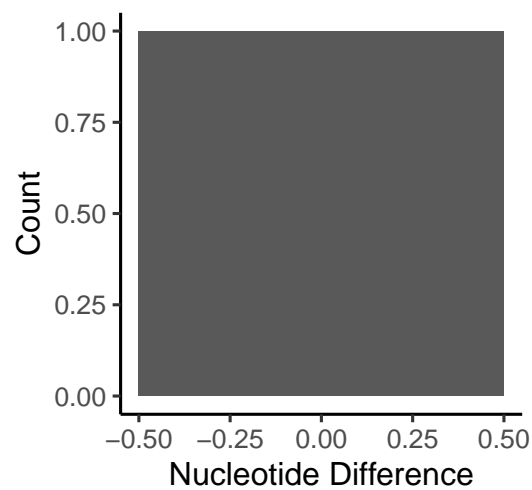
IGHV1–18*01

1999 sequences assigned
930 (46.5%) exact matches, in which:
911 unique CDR3
7 unique J



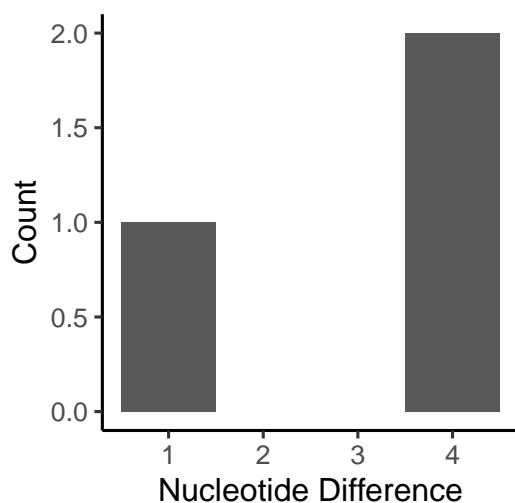
IGHV1–45*03

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



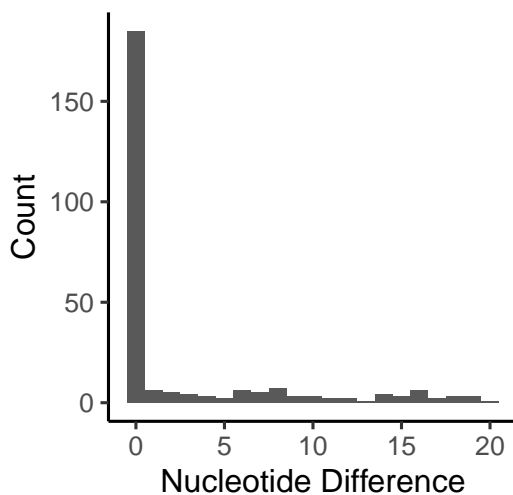
IGHV1–3*02

4 sequences assigned
No exact matches.



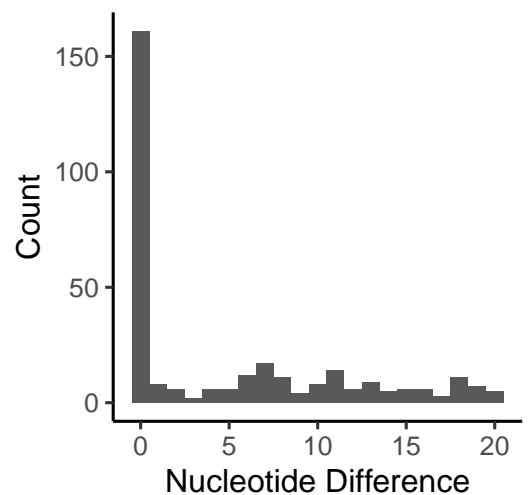
IGHV1–24*01

295 sequences assigned
185 (62.7%) exact matches, in which:
183 unique CDR3
7 unique J



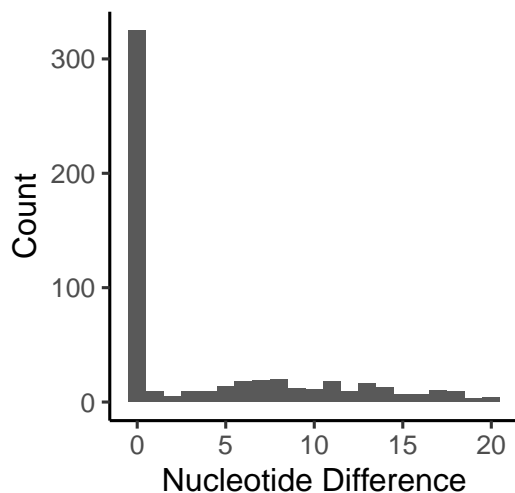
IGHV1–46*01

337 sequences assigned
161 (47.8%) exact matches, in which:
156 unique CDR3
6 unique J



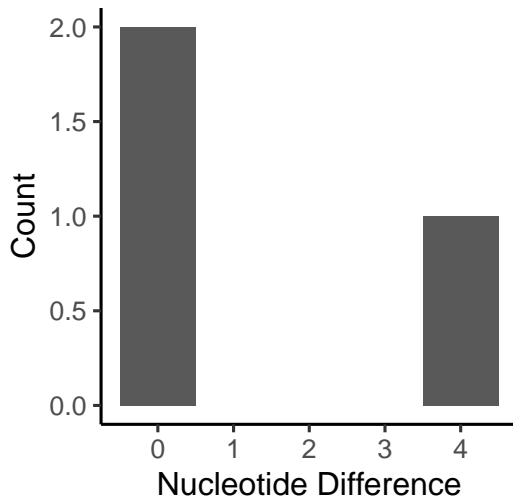
IGHV1–8*01

606 sequences assigned
325 (53.6%) exact matches, in which:
321 unique CDR3
6 unique J



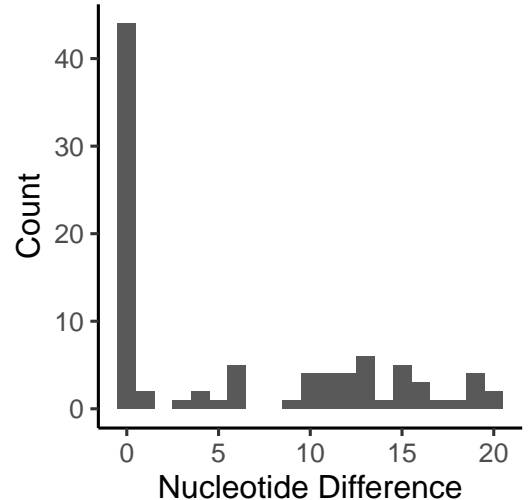
IGHV1–45*02

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



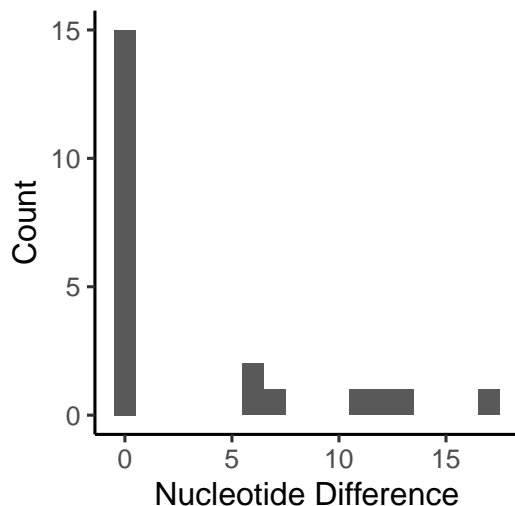
IGHV1–46*03

103 sequences assigned
44 (42.7%) exact matches, in which:
43 unique CDR3
6 unique J



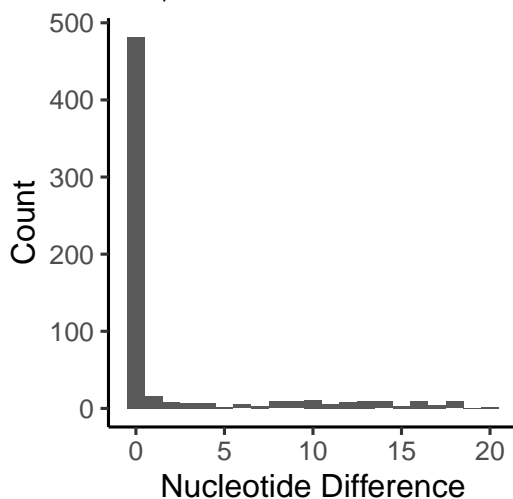
IGHV1-58*02

24 sequences assigned
15 (62.5%) exact matches, in which:
14 unique CDR3
3 unique J



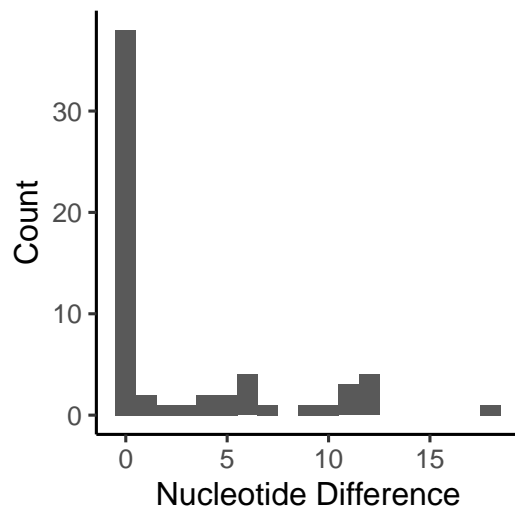
IGHV1-69*06_14

696 sequences assigned
482 (69.3%) exact matches, in which:
477 unique CDR3
7 unique J



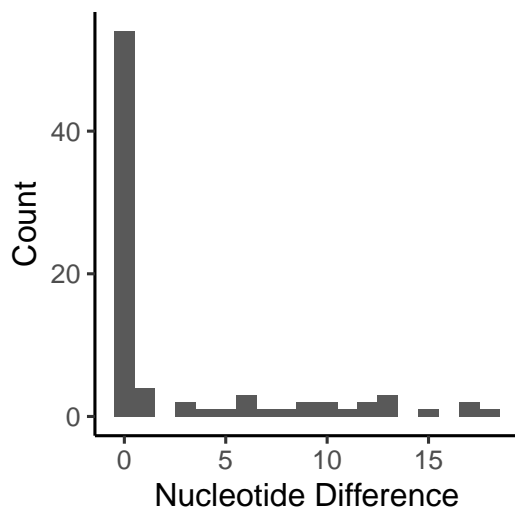
IGHV2-26*01

67 sequences assigned
38 (56.7%) exact matches, in which:
37 unique CDR3
6 unique J



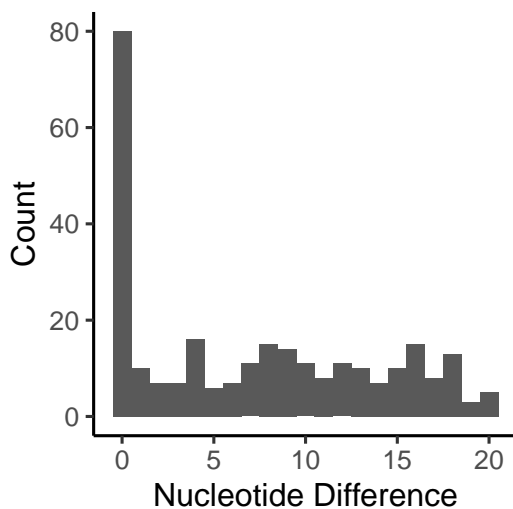
IGHV1-58*01_03

89 sequences assigned
54 (60.7%) exact matches, in which:
52 unique CDR3
5 unique J



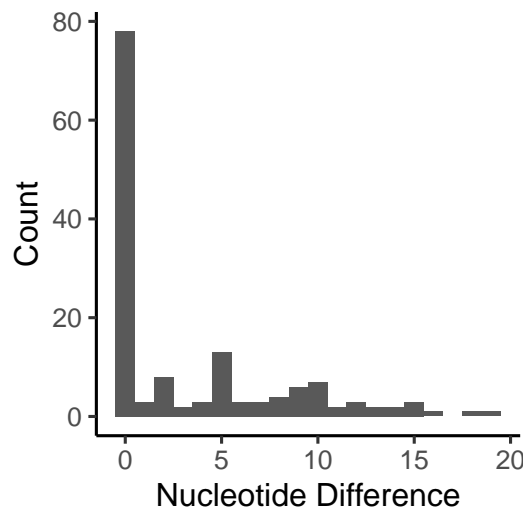
IGHV2-5*01

300 sequences assigned
80 (26.7%) exact matches, in which:
76 unique CDR3
6 unique J



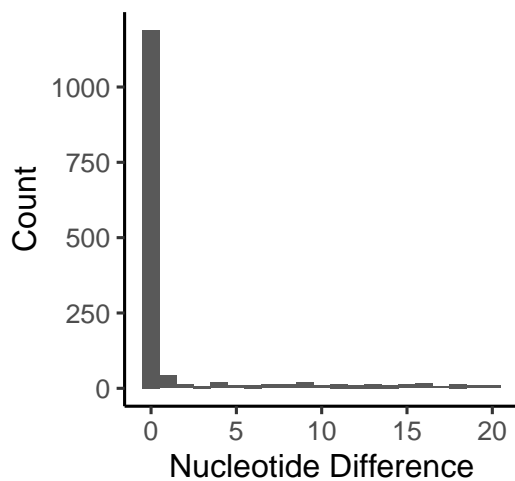
IGHV2-70*01

162 sequences assigned
78 (48.1%) exact matches, in which:
78 unique CDR3
6 unique J



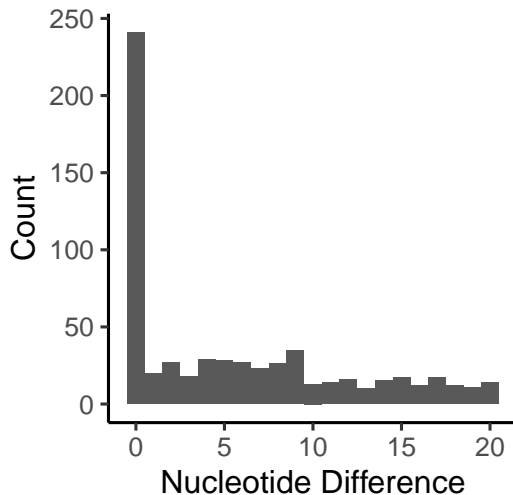
IGHV1-69*01_12_13

1622 sequences assigned
1189 (73.3%) exact matches, in which:
1172 unique CDR3
7 unique J



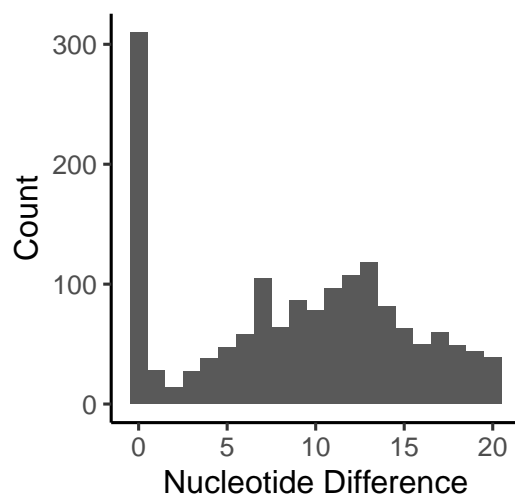
IGHV2-5*02

686 sequences assigned
241 (35.1%) exact matches, in which:
234 unique CDR3
6 unique J



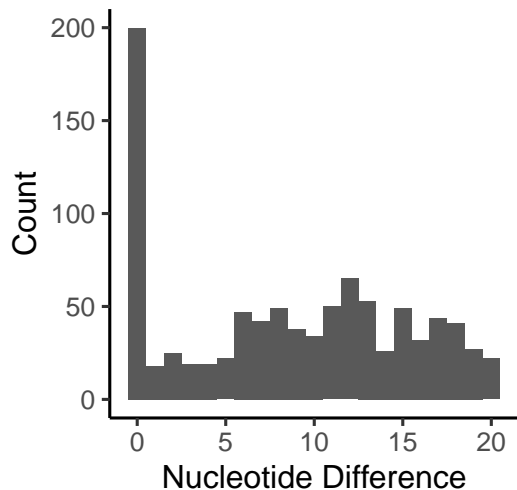
IGHV3-7*01

1800 sequences assigned
310 (17.2%) exact matches, in which:
286 unique CDR3
6 unique J



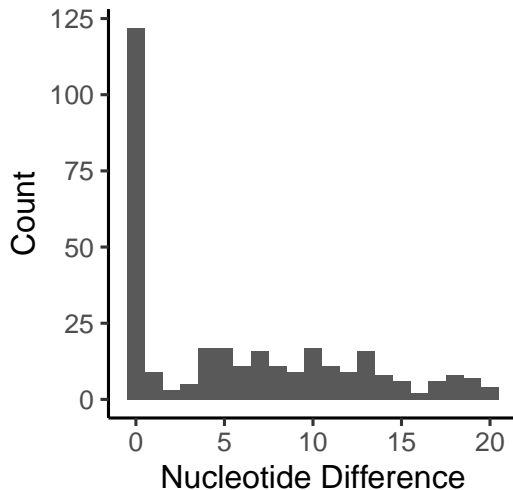
IGHV3-7*04

1136 sequences assigned
200 (17.6%) exact matches, in which:
183 unique CDR3
6 unique J



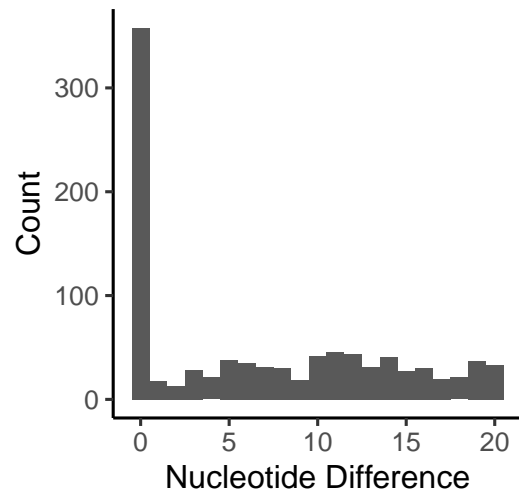
IGHV3-11*06

422 sequences assigned
122 (28.9%) exact matches, in which:
113 unique CDR3
6 unique J



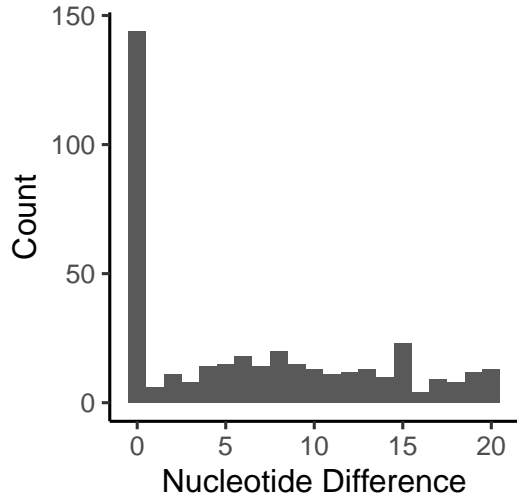
IGHV3-15*01_02

1374 sequences assigned
358 (26.1%) exact matches, in which:
334 unique CDR3
7 unique J



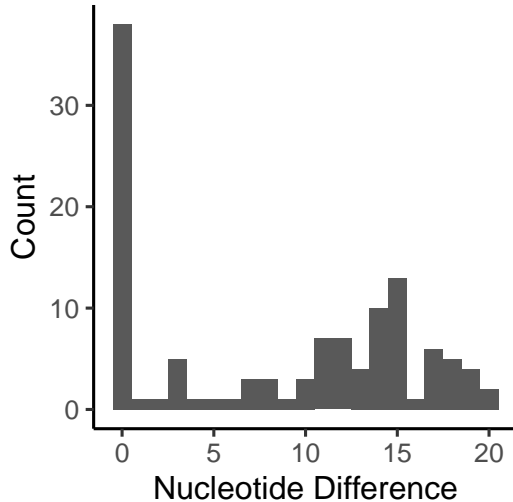
IGHV3-9*01

461 sequences assigned
144 (31.2%) exact matches, in which:
141 unique CDR3
6 unique J



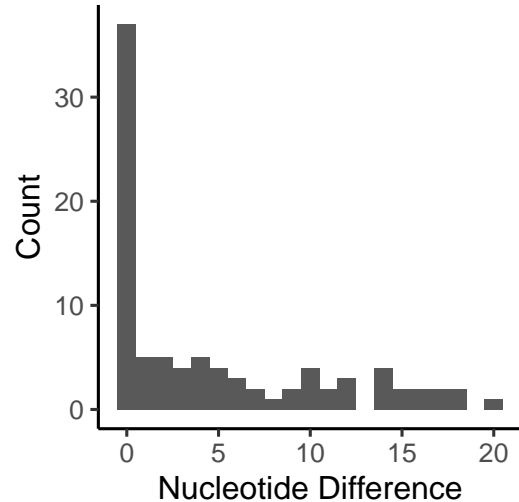
IGHV3-13*01

145 sequences assigned
38 (26.2%) exact matches, in which:
38 unique CDR3
5 unique J



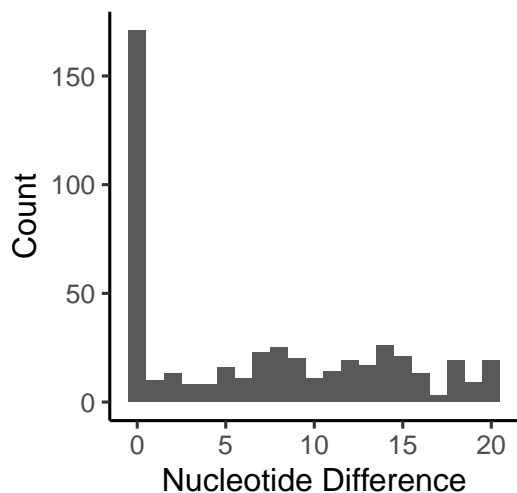
IGHV3-20*01_02

103 sequences assigned
37 (35.9%) exact matches, in which:
36 unique CDR3
6 unique J



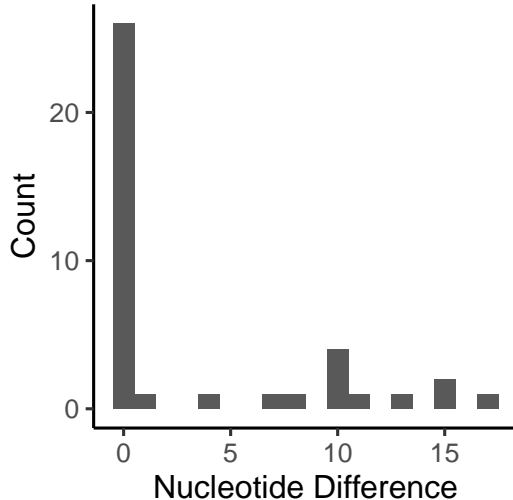
IGHV3-11*01

610 sequences assigned
171 (28%) exact matches, in which:
165 unique CDR3
6 unique J



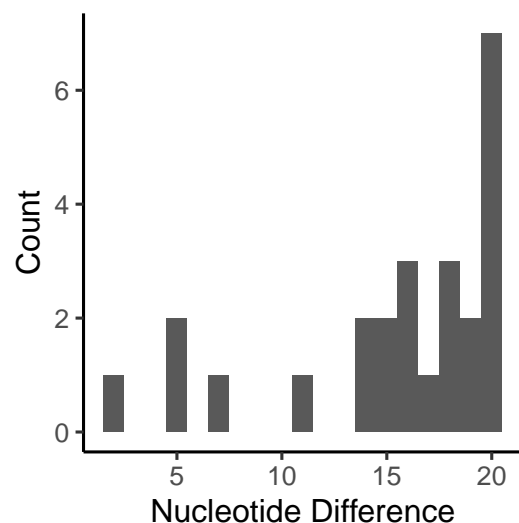
IGHV3-13*05

49 sequences assigned
26 (53.1%) exact matches, in which:
25 unique CDR3
4 unique J



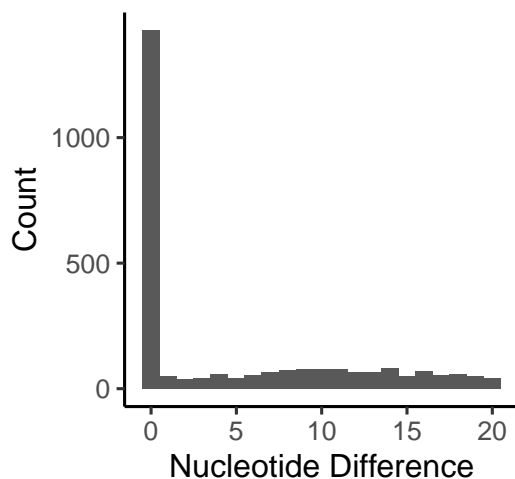
IGHV3-20*03_04

112 sequences assigned
No exact matches.



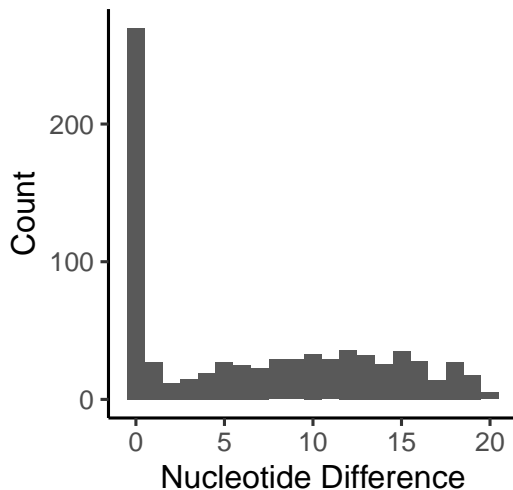
IGHV3–21*01_02

2963 sequences assigned
1427 (48.2%) exact matches, in which:
1288 unique CDR3
7 unique J



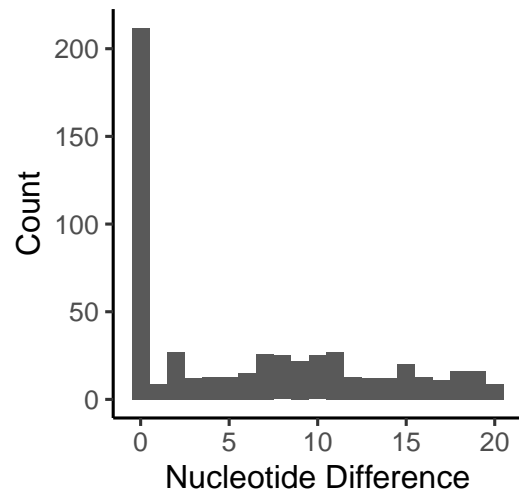
IGHV3–33*01

920 sequences assigned
270 (29.3%) exact matches, in which:
262 unique CDR3
7 unique J



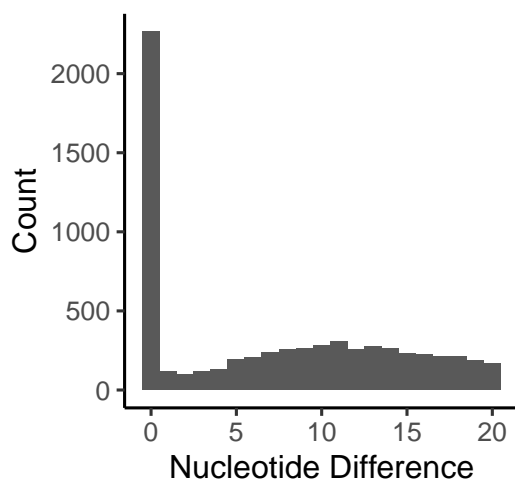
IGHV3–48*01

622 sequences assigned
212 (34.1%) exact matches, in which:
188 unique CDR3
6 unique J



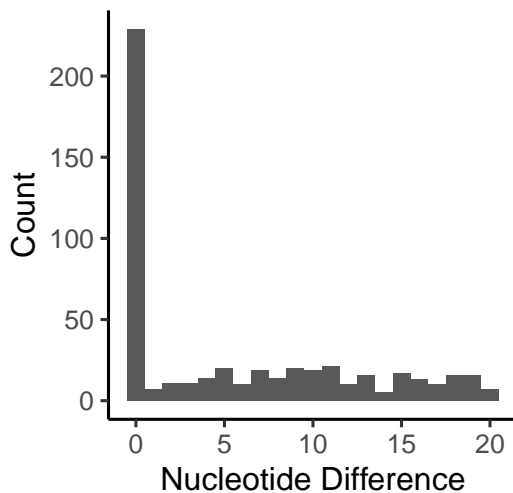
IGHV3–23*01_04

7983 sequences assigned
2265 (28.4%) exact matches, in which:
2069 unique CDR3
7 unique J



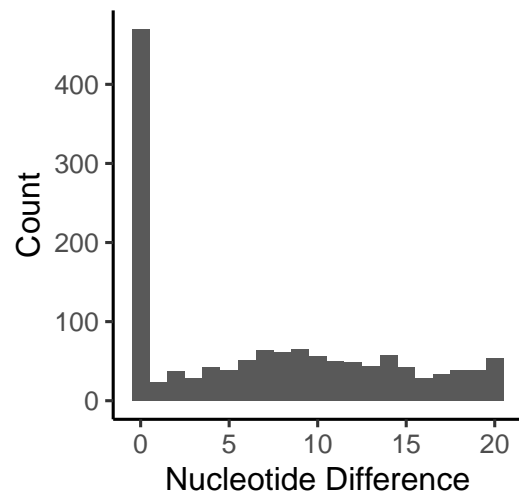
IGHV3–43*02

670 sequences assigned
229 (34.2%) exact matches, in which:
210 unique CDR3
6 unique J



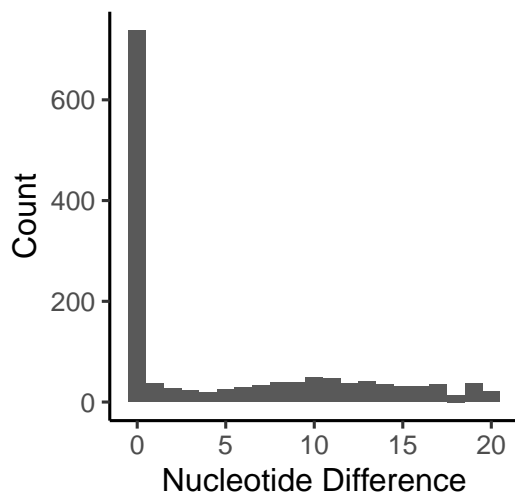
IGHV3–48*03

1583 sequences assigned
470 (29.7%) exact matches, in which:
445 unique CDR3
6 unique J



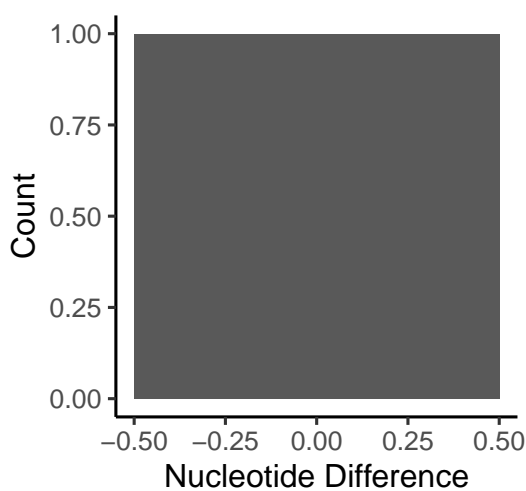
IGHV3–30–3*01

1579 sequences assigned
738 (46.7%) exact matches, in which:
706 unique CDR3
7 unique J



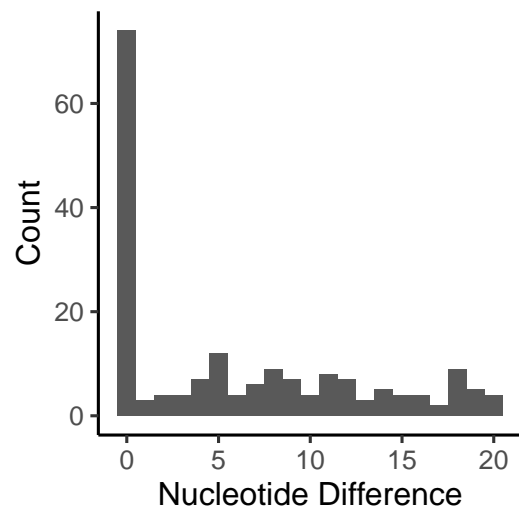
IGHV3–47*02

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



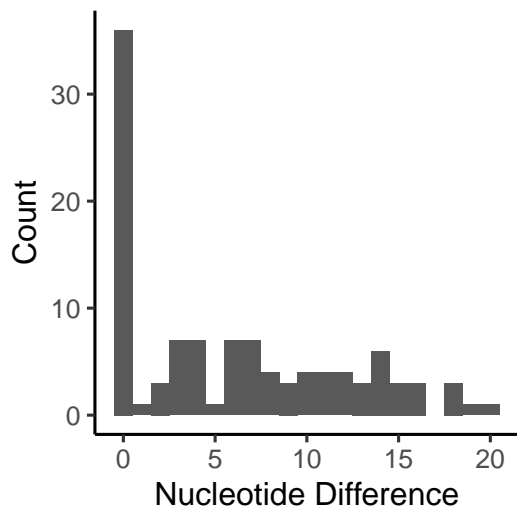
IGHV3–49*04

228 sequences assigned
74 (32.5%) exact matches, in which:
72 unique CDR3
5 unique J



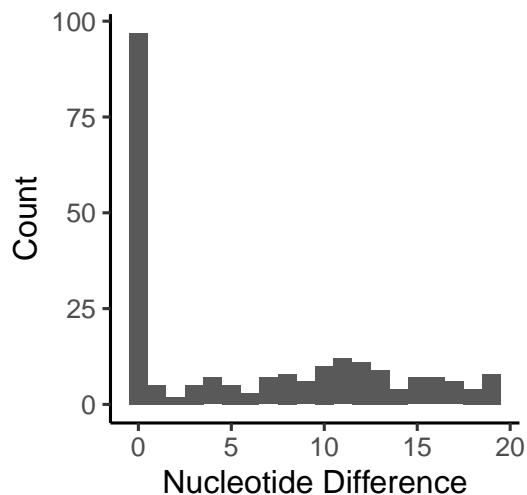
IGHV3-49*03_05

126 sequences assigned
36 (28.6%) exact matches, in which:
34 unique CDR3
5 unique J



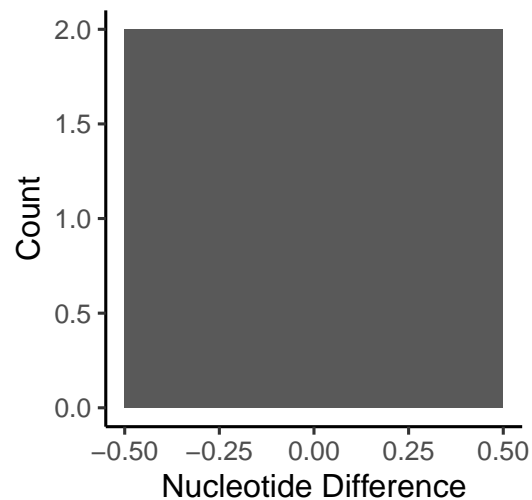
IGHV3-53*01_02

245 sequences assigned
97 (39.6%) exact matches, in which:
87 unique CDR3
5 unique J



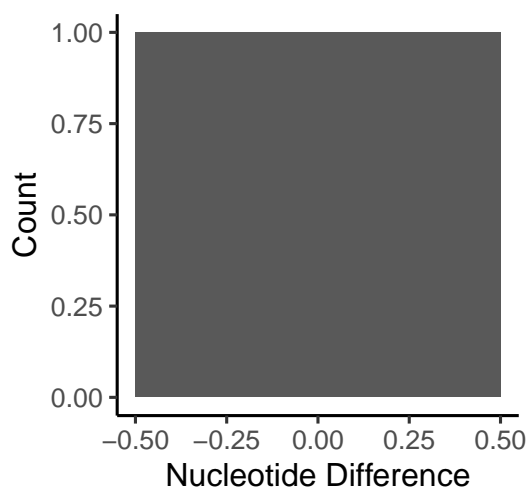
IGHV3-66*03

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
1 unique J



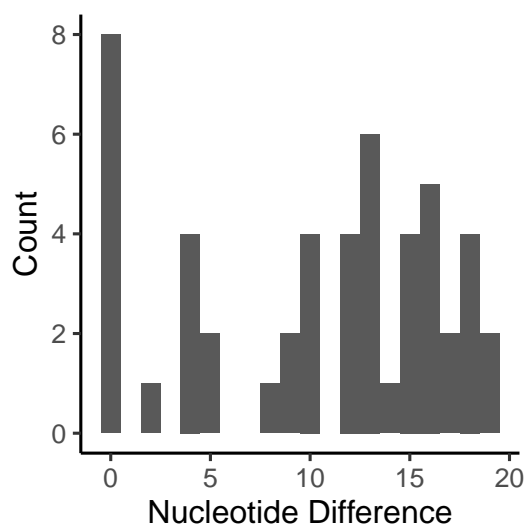
IGHV3-52*01_03

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



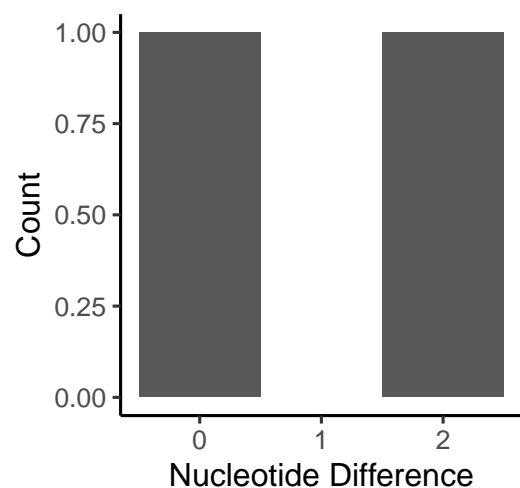
IGHV3-64*02_07

54 sequences assigned
8 (14.8%) exact matches, in which:
8 unique CDR3
3 unique J



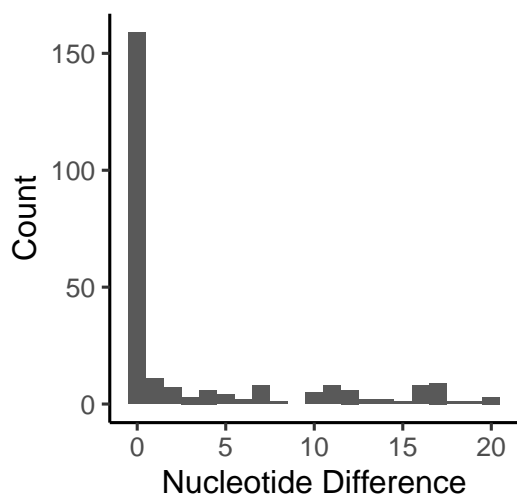
IGHV3-66*04

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



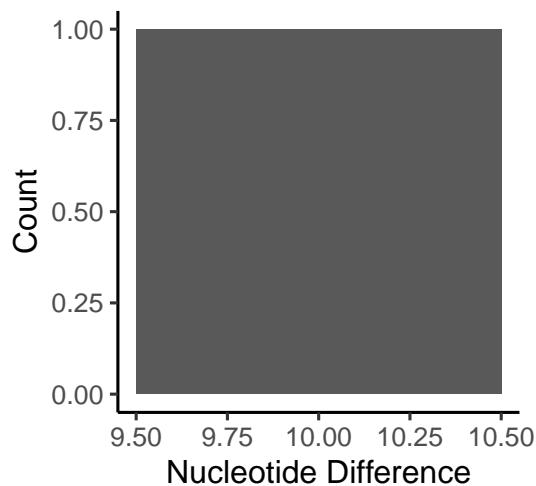
IGHV3-53*04

322 sequences assigned
159 (49.4%) exact matches, in which:
148 unique CDR3
7 unique J



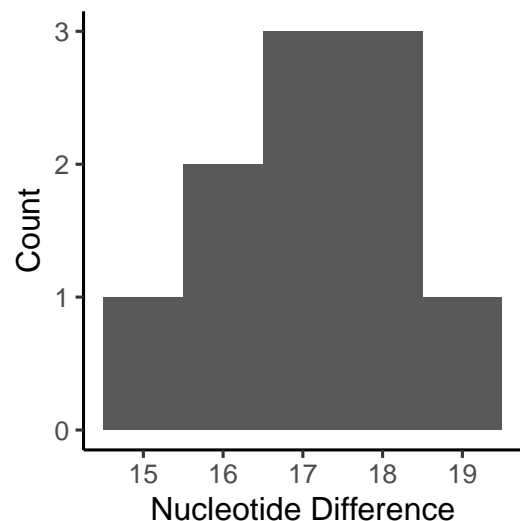
IGHV3-66*02

10 sequences assigned
No exact matches.



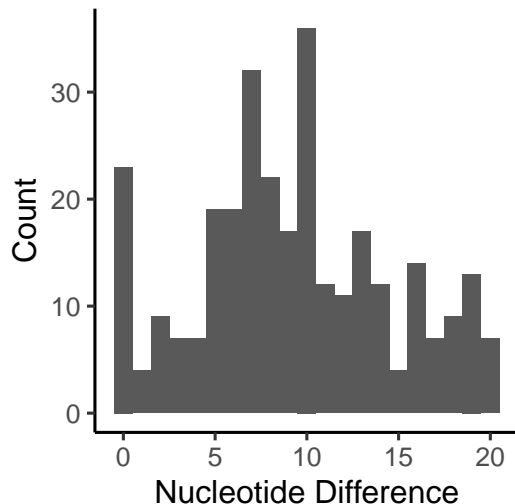
IGHV3-69-1*01

19 sequences assigned
No exact matches.



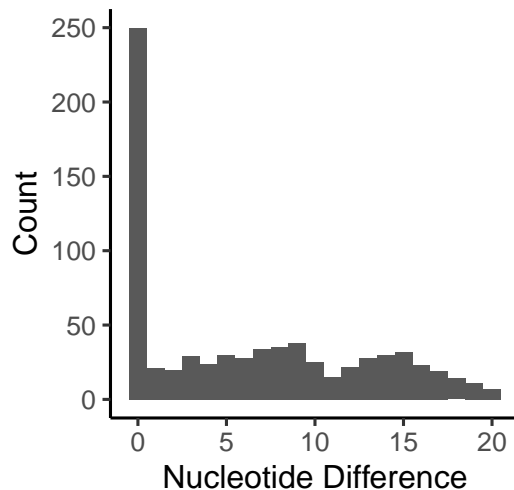
IGHV3-72*01

351 sequences assigned
23 (6.6%) exact matches, in which:
22 unique CDR3
6 unique J



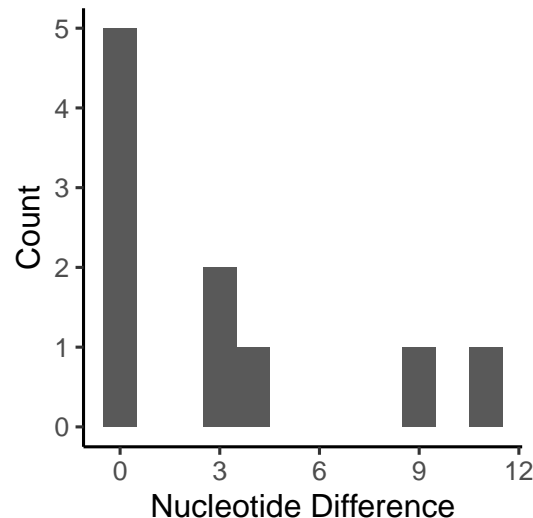
IGHV3-74*01_02

873 sequences assigned
250 (28.6%) exact matches, in which:
218 unique CDR3
7 unique J



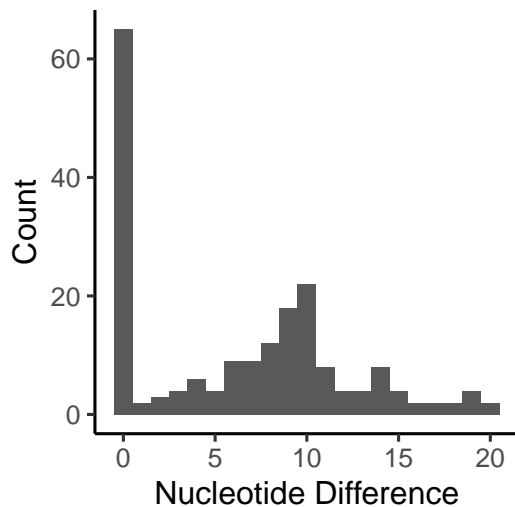
IGHV4-28*01_07

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



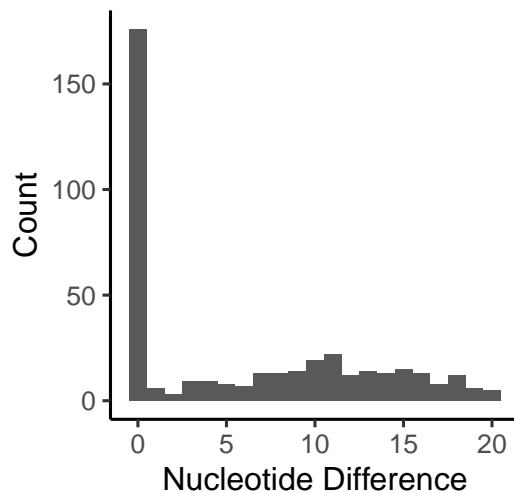
IGHV3-73*01_02

223 sequences assigned
65 (29.1%) exact matches, in which:
63 unique CDR3
6 unique J



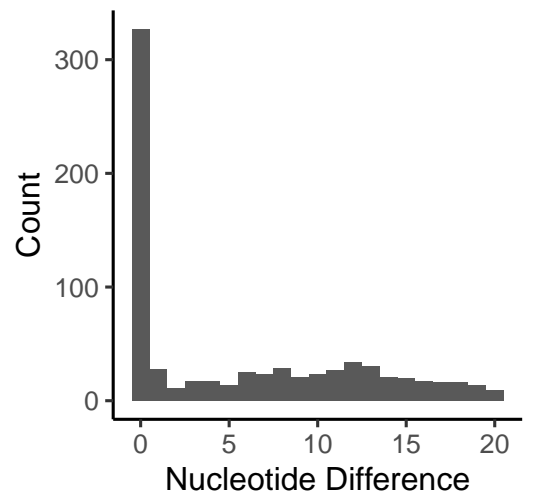
IGHV3-64D*06

447 sequences assigned
176 (39.4%) exact matches, in which:
162 unique CDR3
6 unique J



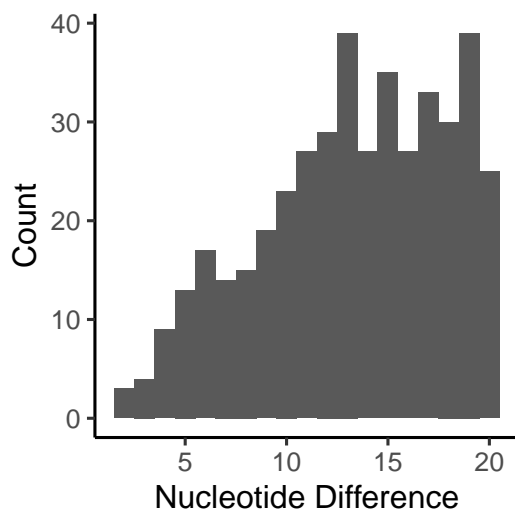
IGHV4-30-4*01

908 sequences assigned
327 (36%) exact matches, in which:
310 unique CDR3
7 unique J



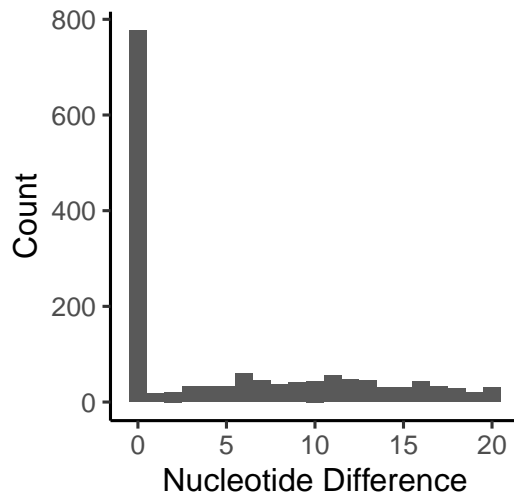
IGHV3-74*03

575 sequences assigned
No exact matches.



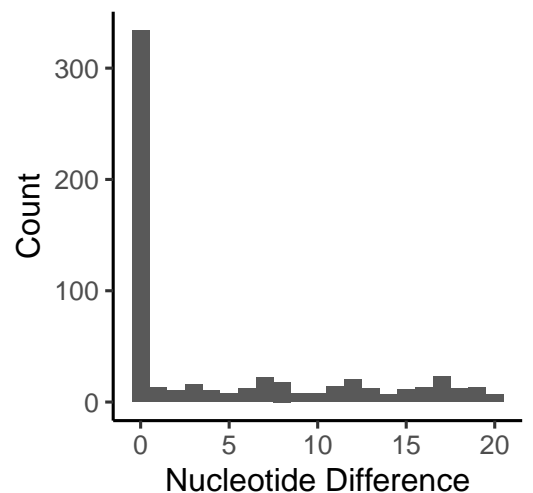
IGHV4-4*07

1659 sequences assigned
777 (46.8%) exact matches, in which:
712 unique CDR3
7 unique J



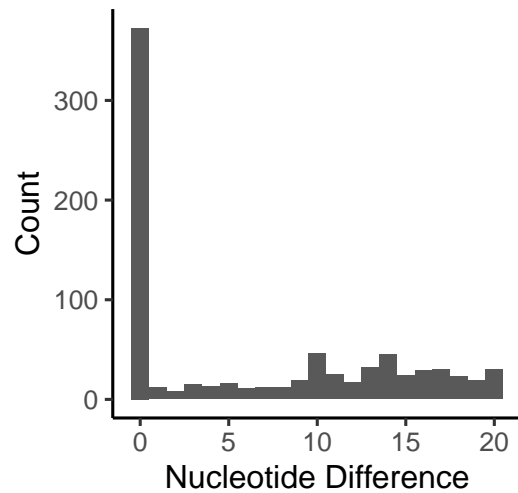
IGHV4-30-2*01

771 sequences assigned
334 (43.3%) exact matches, in which:
312 unique CDR3
7 unique J



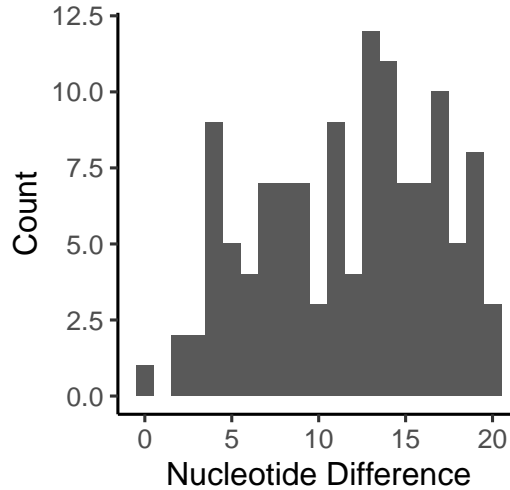
IGHV4-31*02

953 sequences assigned
373 (39.1%) exact matches, in which:
363 unique CDR3
7 unique J



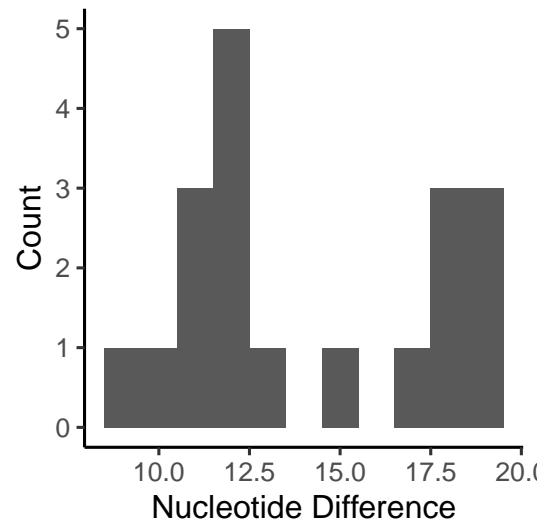
IGHV4-39*02

171 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



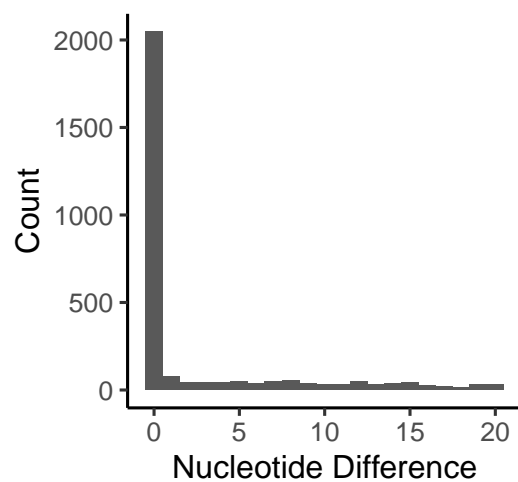
IGHV4-59*12

40 sequences assigned
No exact matches.



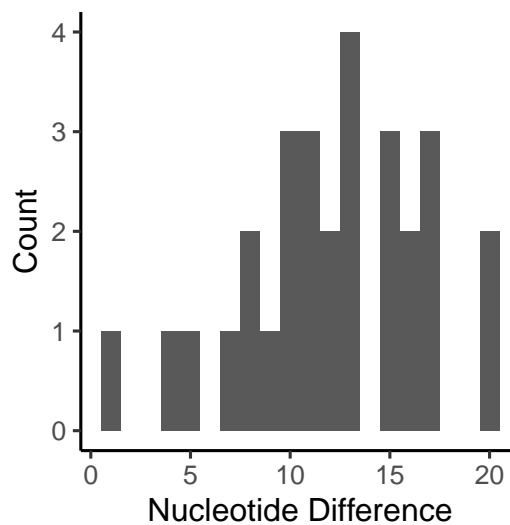
IGHV4-34*01_02

2982 sequences assigned
2047 (68.6%) exact matches, in which:
1860 unique CDR3
7 unique J



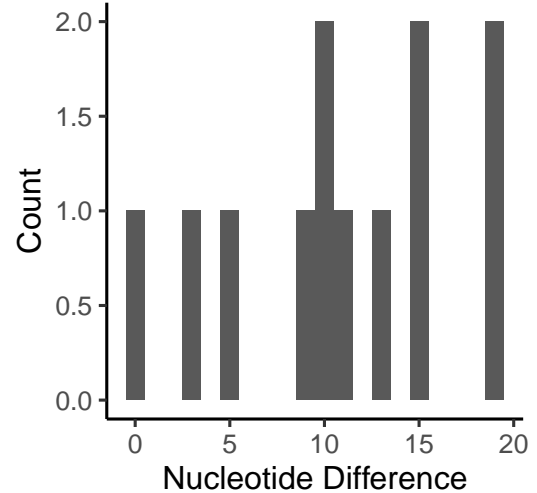
IGHV4-59*02

66 sequences assigned
No exact matches.



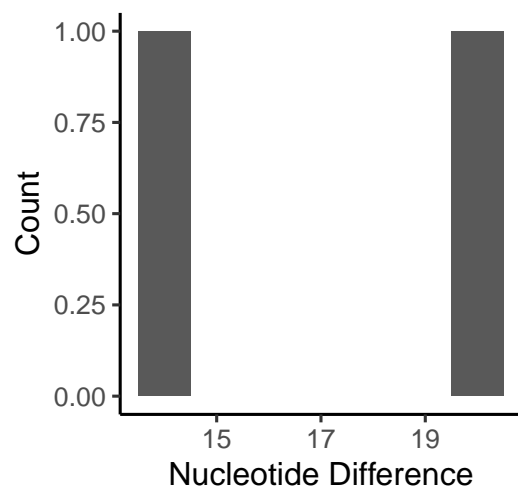
IGHV4-59*13

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



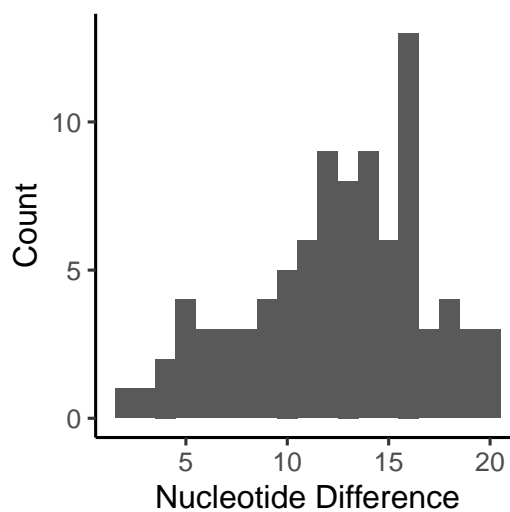
IGHV4-38-2*02

14 sequences assigned
No exact matches.



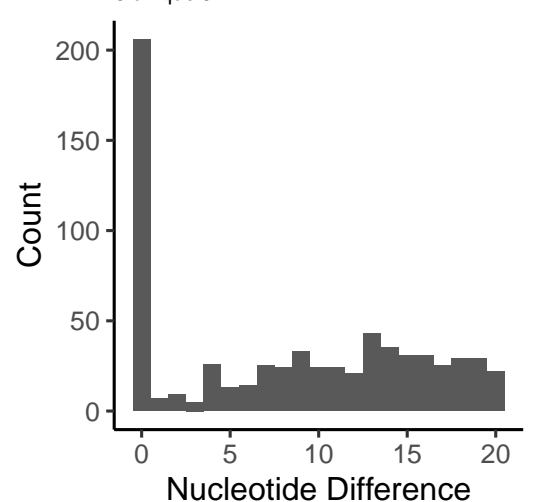
IGHV4-59*11

157 sequences assigned
No exact matches.



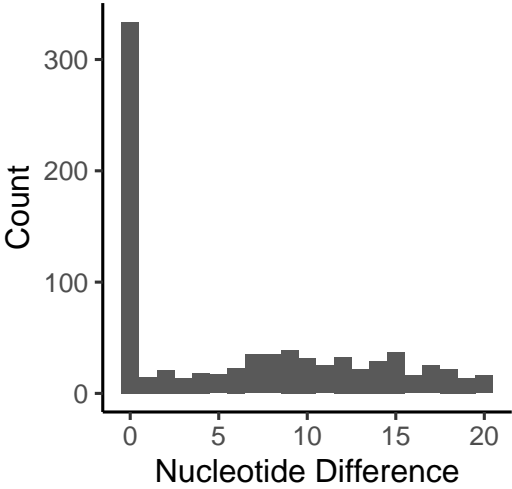
IGHV4-61*01

804 sequences assigned
206 (25.6%) exact matches, in which:
186 unique CDR3
6 unique J



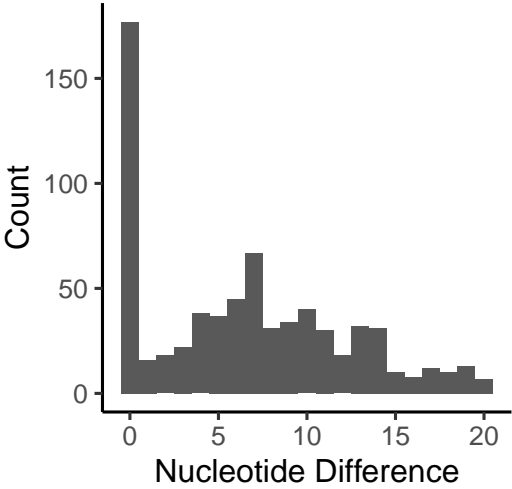
IGHV4-61*02_A234G

1069 sequences assigned
334 (31.2%) exact matches, in which:
323 unique CDR3
7 unique J



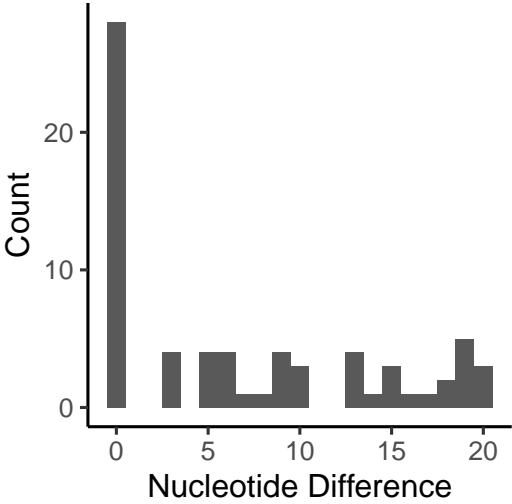
IGHV6-1*01_02

725 sequences assigned
177 (24.4%) exact matches, in which:
174 unique CDR3
7 unique J



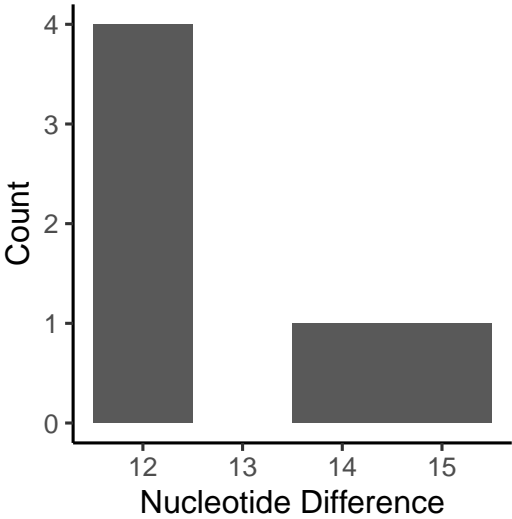
IGHV5-10-1*01_03

112 sequences assigned
28 (25%) exact matches, in which:
28 unique CDR3
4 unique J

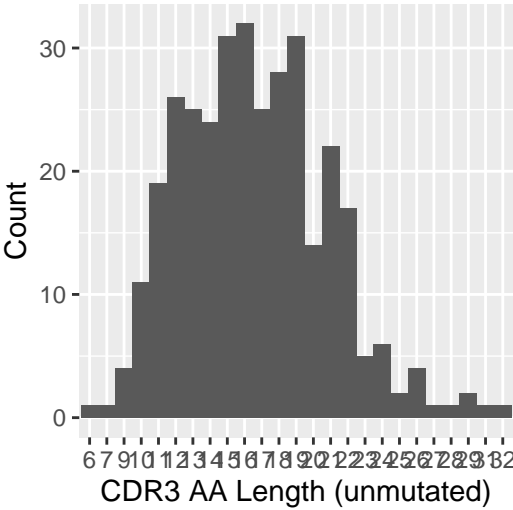


IGHV5-51*06

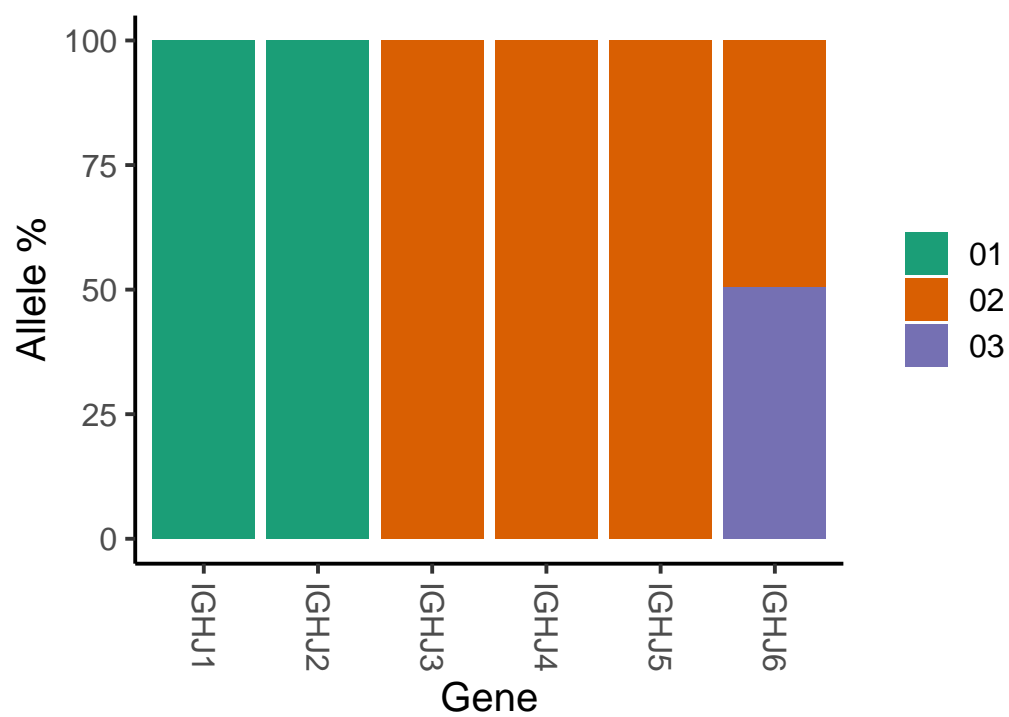
6 sequences assigned
No exact matches.



IGHV4-61*02_A234G



Allele Usage



Sequence Count by IGHJ6 allele usage

