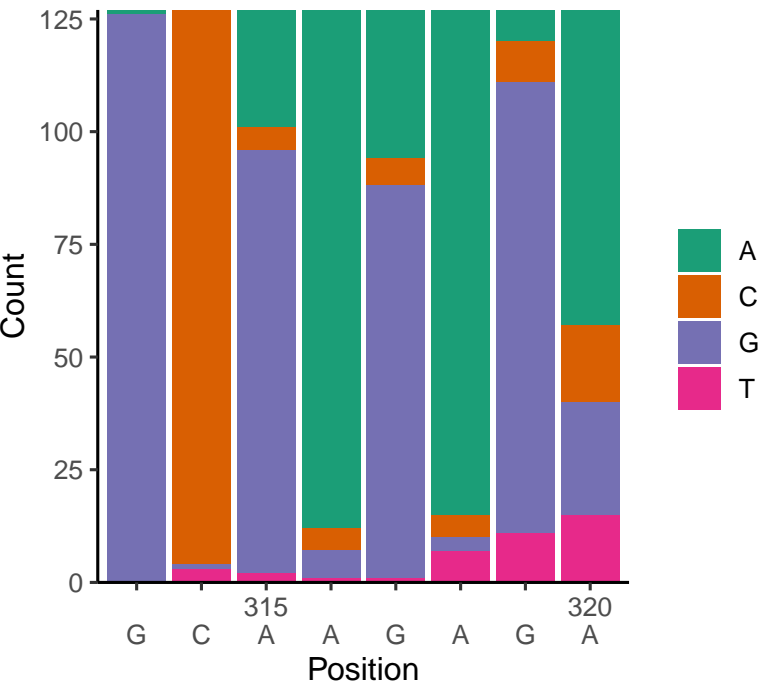
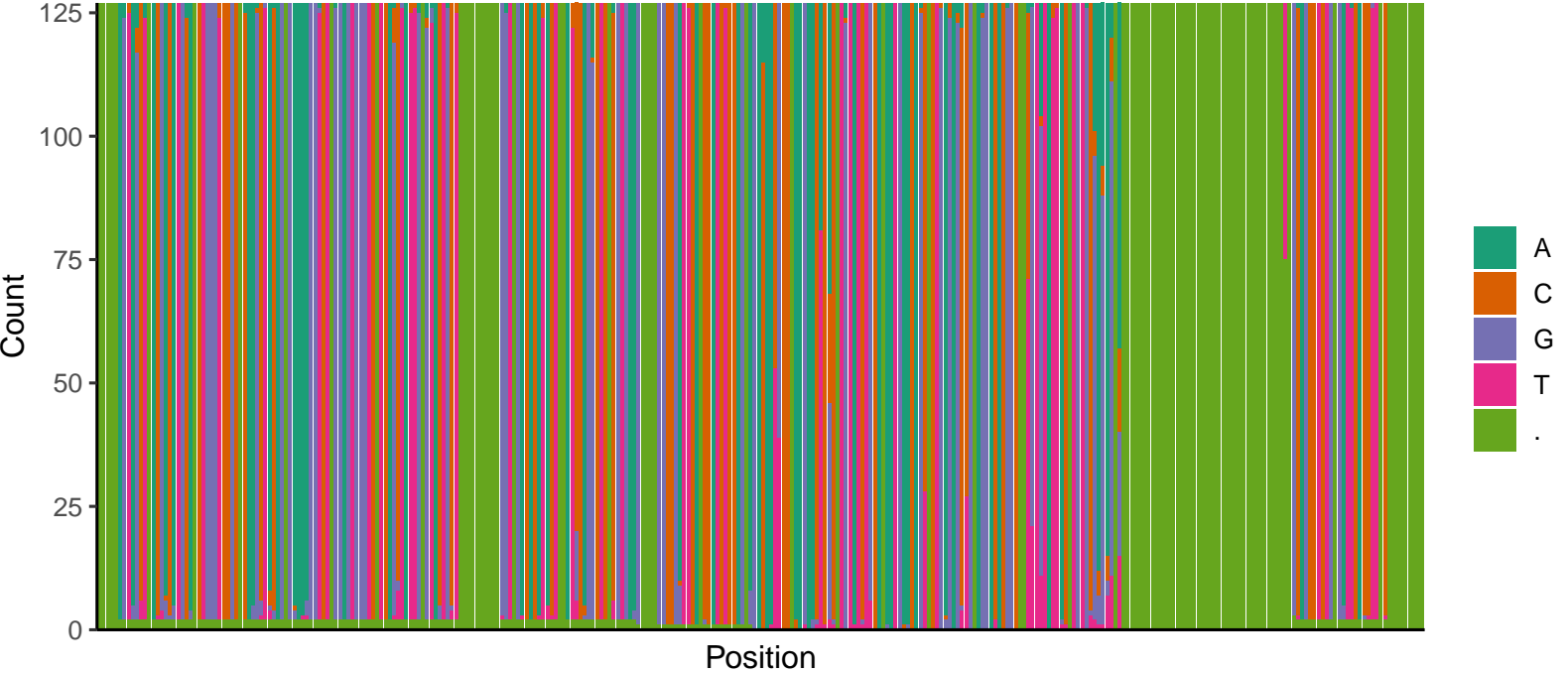


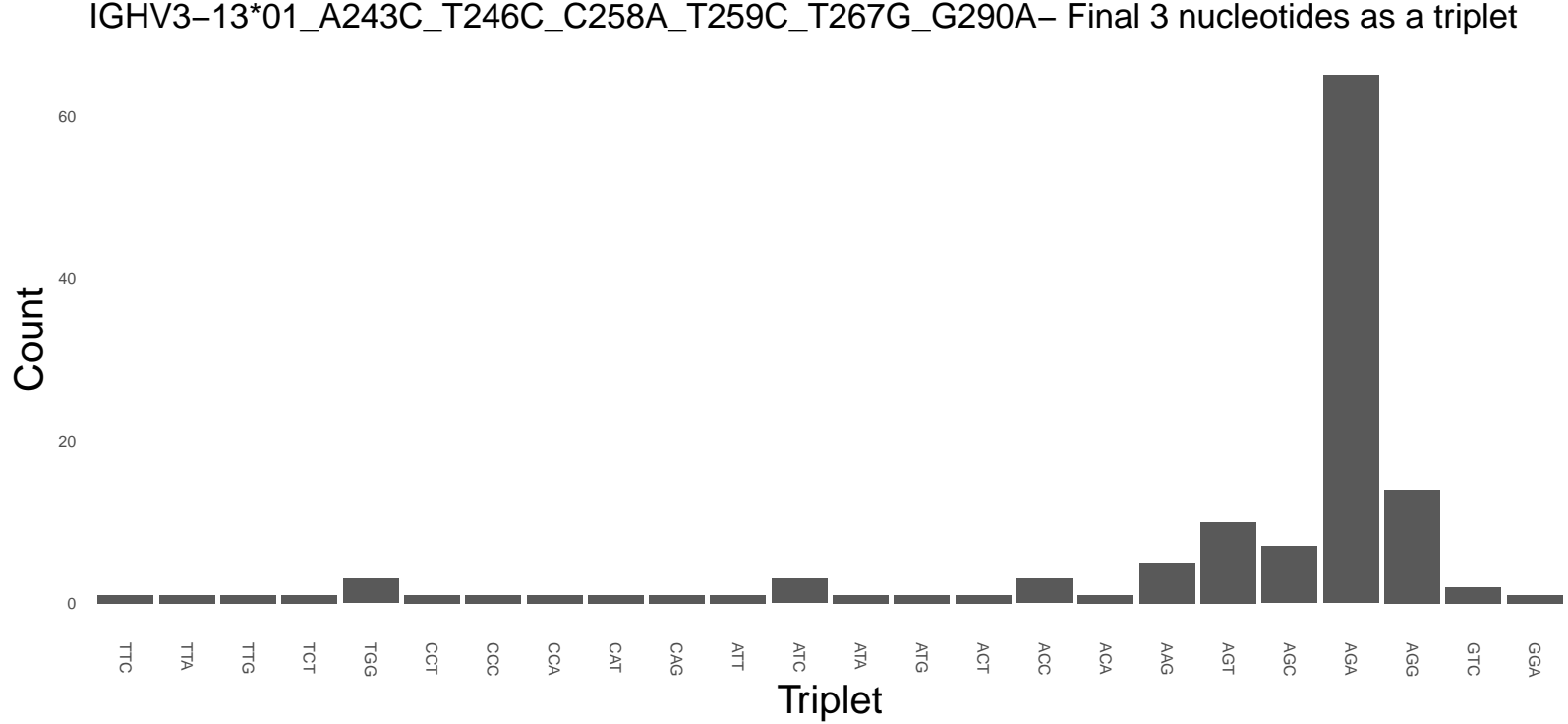
Gene IGHV3-13*01_A243C_T246C_C258A_T259C_T267G_G290A



Gene IGHV3-13*01_A243C_T246C_C258A_T259C_T267G_G290A

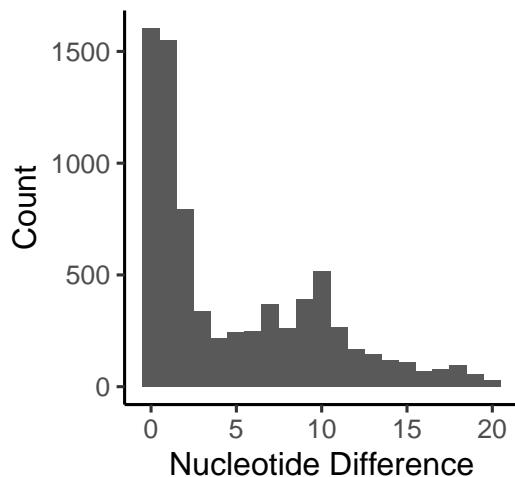


IGHV3-13*01_A243C_T246C_C258A_T259C_T267G_G290A- Final 3 nucleotides as a triplet



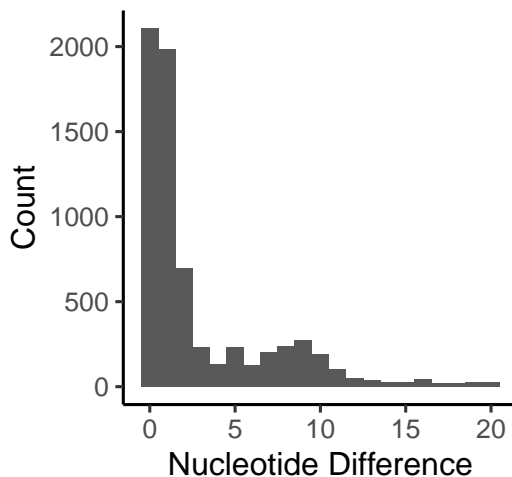
IGHV1-2*02

8820 sequences assigned
1603 (18.2%) exact matches, in which:
1395 unique CDR3
6 unique J



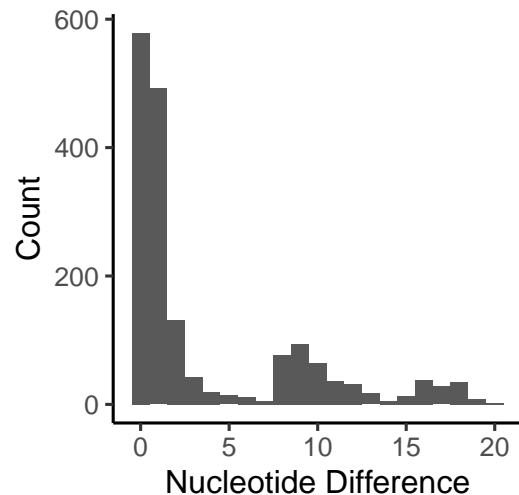
IGHV1-8*01

6890 sequences assigned
2107 (30.6%) exact matches, in which:
1800 unique CDR3
6 unique J



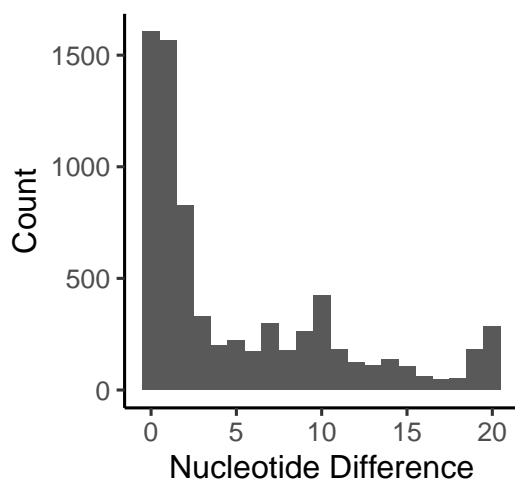
IGHV1-24*01

1768 sequences assigned
579 (32.7%) exact matches, in which:
513 unique CDR3
6 unique J



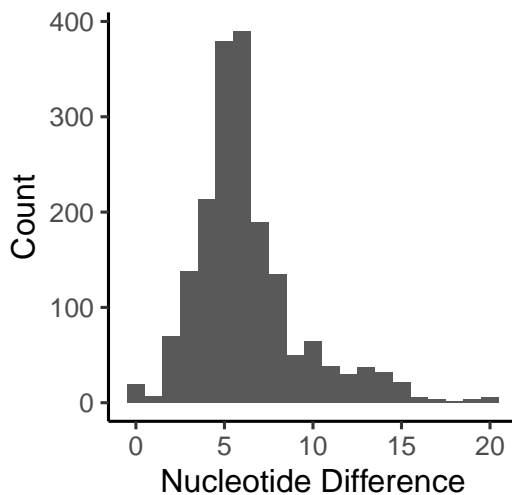
IGHV1-2*06

8028 sequences assigned
1605 (20%) exact matches, in which:
1364 unique CDR3
6 unique J



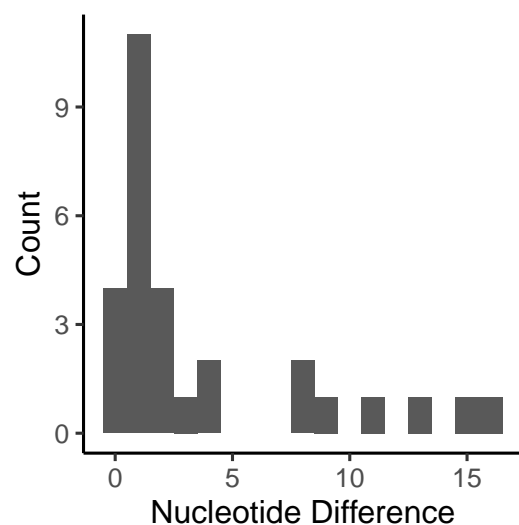
IGHV1-8*02

1849 sequences assigned
19 (1%) exact matches, in which:
18 unique CDR3
4 unique J



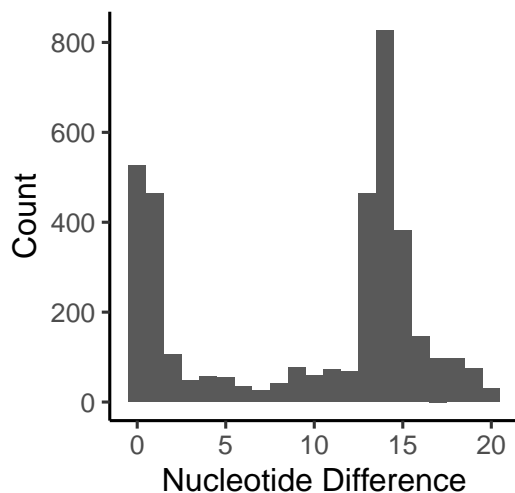
IGHV1-45*02

29 sequences assigned
4 (13.8%) exact matches, in which:
4 unique CDR3
4 unique J



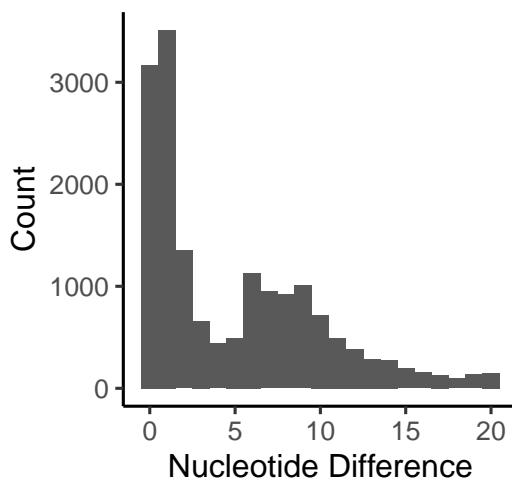
IGHV1-3*01_05

3996 sequences assigned
527 (13.2%) exact matches, in which:
452 unique CDR3
6 unique J



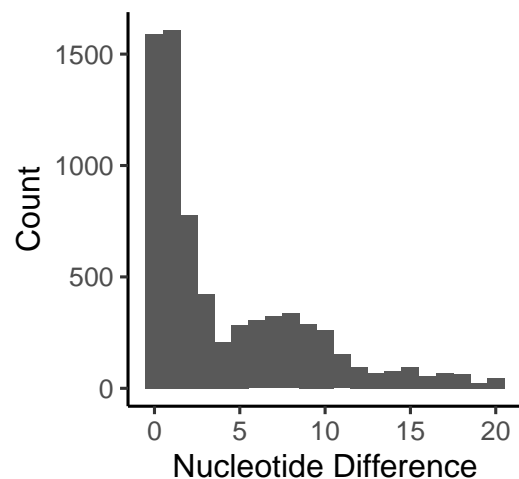
IGHV1-18*01

18076 sequences assigned
3167 (17.5%) exact matches, in which:
2625 unique CDR3
6 unique J



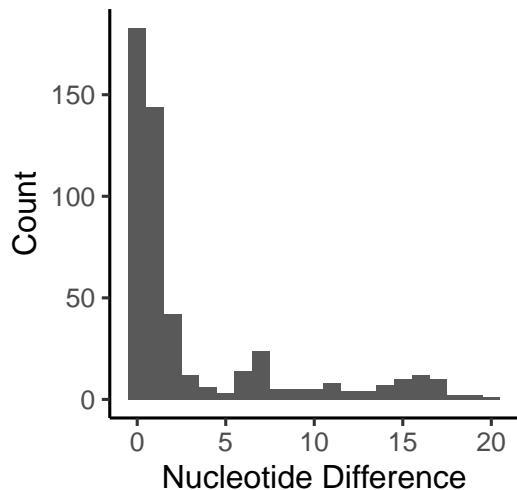
IGHV1-46*01

9362 sequences assigned
1589 (17%) exact matches, in which:
1386 unique CDR3
6 unique J



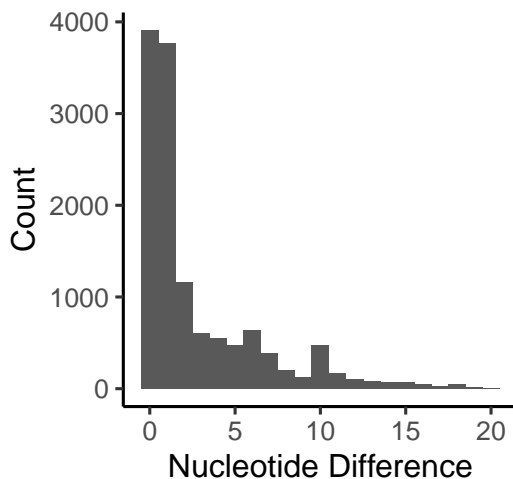
IGHV1–58*01_03

508 sequences assigned
183 (36%) exact matches, in which:
159 unique CDR3
6 unique J



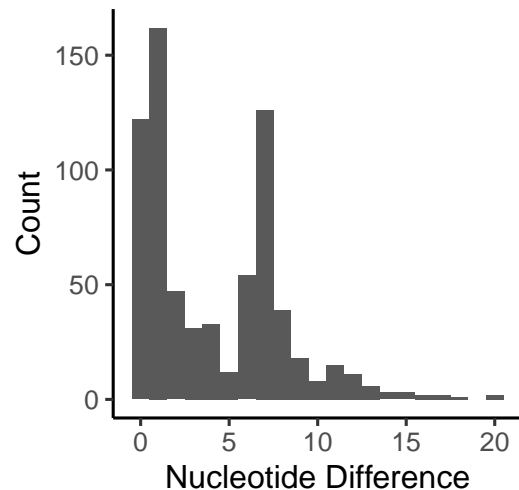
IGHV1–69*01_12_13

13151 sequences assigned
3907 (29.7%) exact matches, in which:
3349 unique CDR3
6 unique J



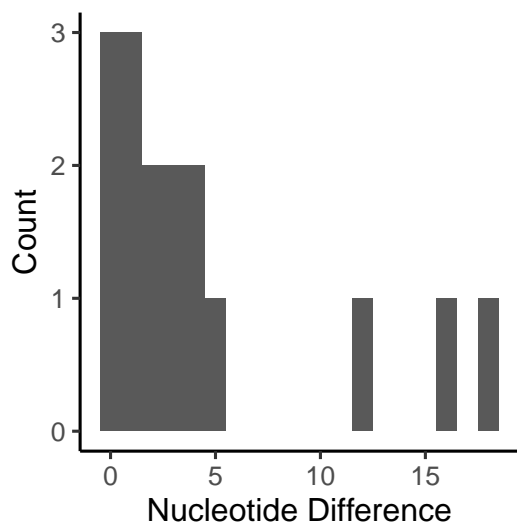
IGHV2–5*01

702 sequences assigned
122 (17.4%) exact matches, in which:
110 unique CDR3
6 unique J



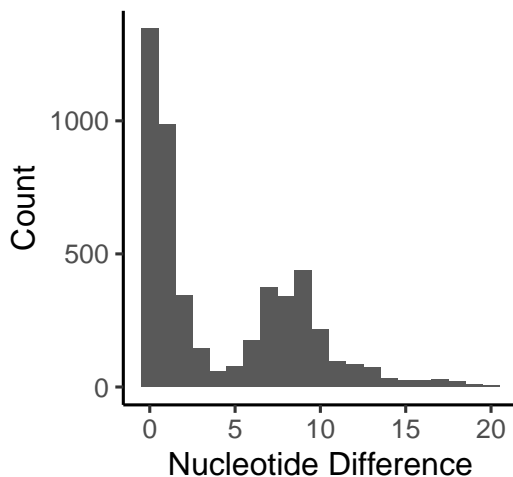
IGHV1–68*01

16 sequences assigned
3 (18.8%) exact matches, in which:
3 unique CDR3
1 unique J



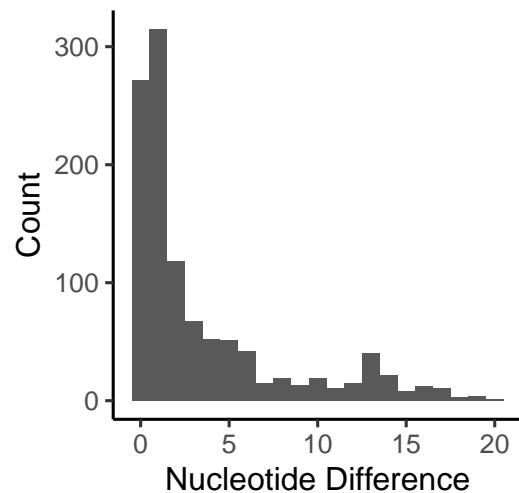
IGHV1–69*06_14

4912 sequences assigned
1346 (27.4%) exact matches, in which:
1231 unique CDR3
6 unique J



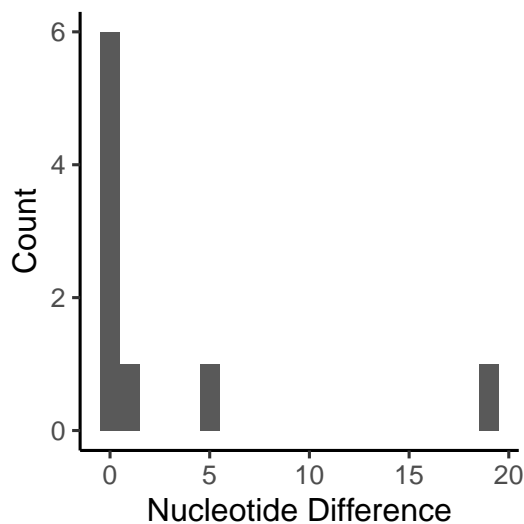
IGHV2–5*02

1163 sequences assigned
272 (23.4%) exact matches, in which:
221 unique CDR3
6 unique J



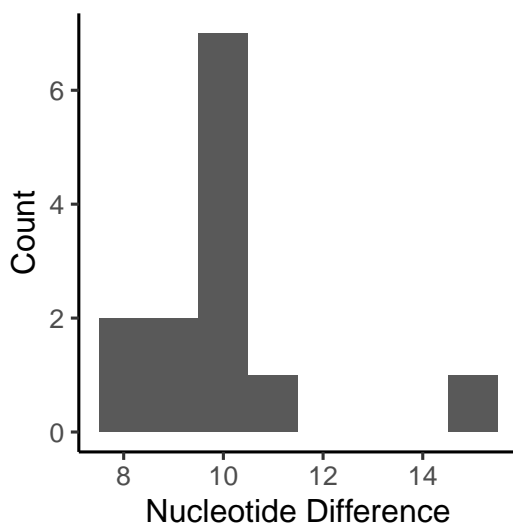
IGHV1–69–2*01

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



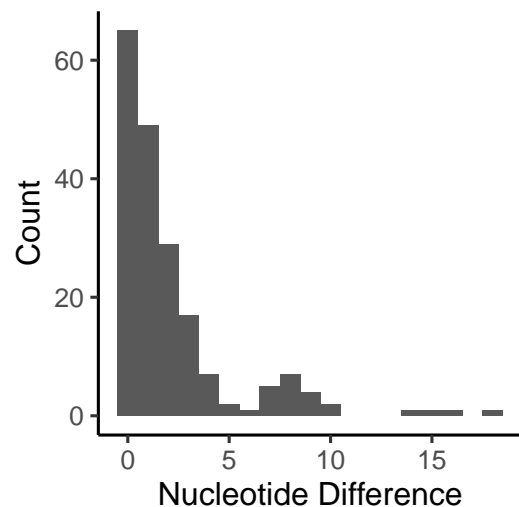
IGHV1–NL1*01

13 sequences assigned
No exact matches.



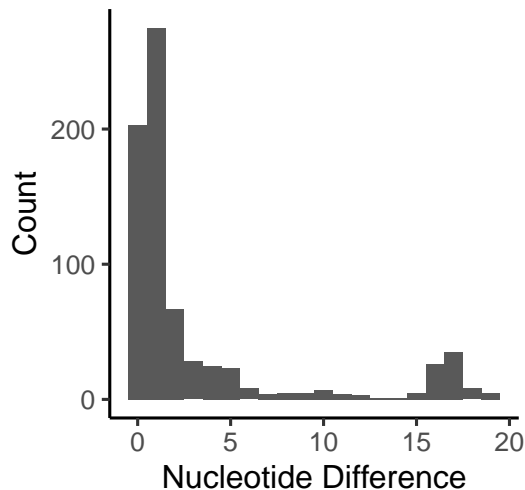
IGHV2–26*01

193 sequences assigned
65 (33.7%) exact matches, in which:
59 unique CDR3
6 unique J



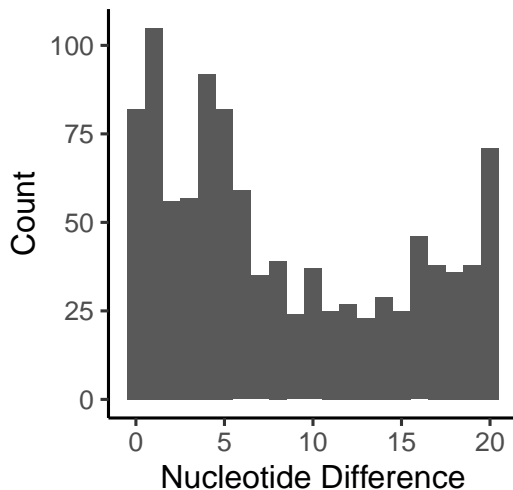
IGHV2-70*01

744 sequences assigned
203 (27.3%) exact matches, in which:
149 unique CDR3
6 unique J



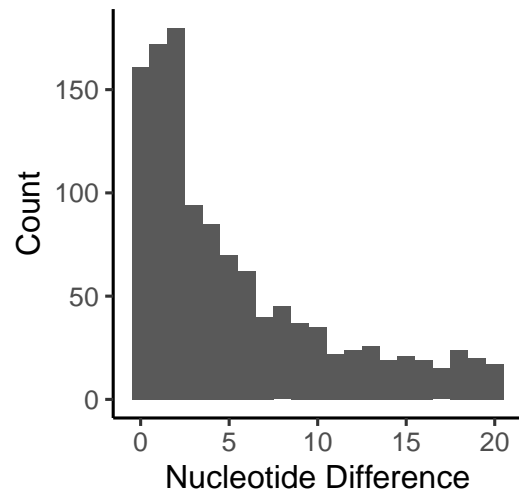
IGHV3-7*03

1273 sequences assigned
82 (6.4%) exact matches, in which:
70 unique CDR3
5 unique J



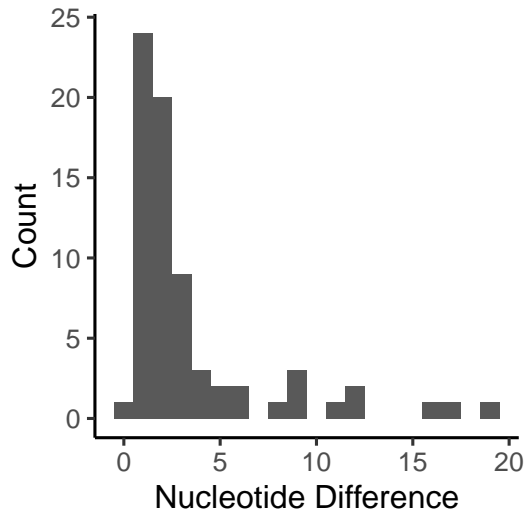
IGHV3-11*04

1299 sequences assigned
161 (12.4%) exact matches, in which:
154 unique CDR3
6 unique J



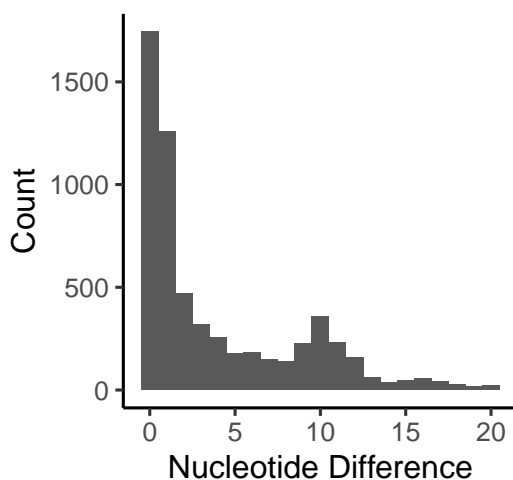
IGHV2-70*12

71 sequences assigned
1 (1.4%) exact matches, in which:
1 unique CDR3
1 unique J



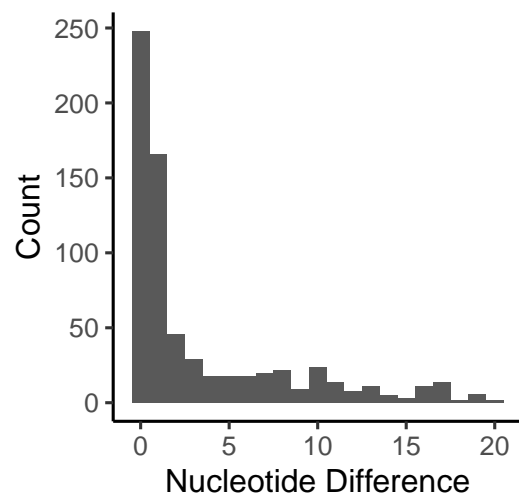
IGHV3-9*01

6825 sequences assigned
1744 (25.6%) exact matches, in which:
997 unique CDR3
6 unique J



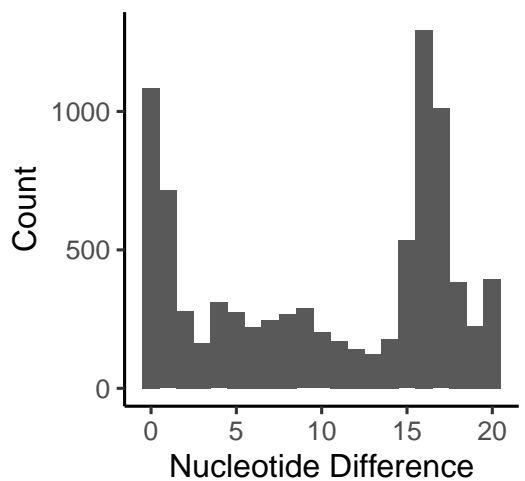
IGHV3-13*01

700 sequences assigned
248 (35.4%) exact matches, in which:
158 unique CDR3
5 unique J



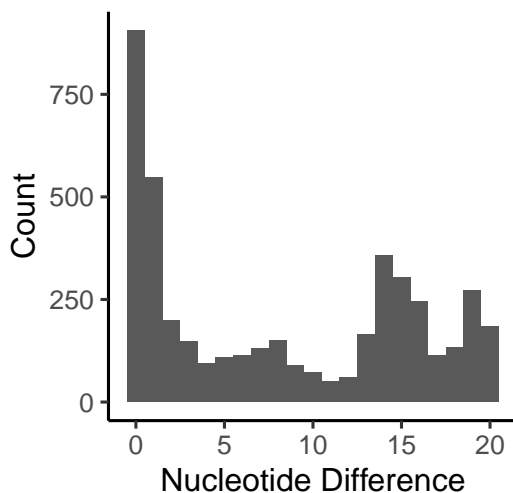
IGHV3-7*01

9714 sequences assigned
1085 (11.2%) exact matches, in which:
762 unique CDR3
6 unique J



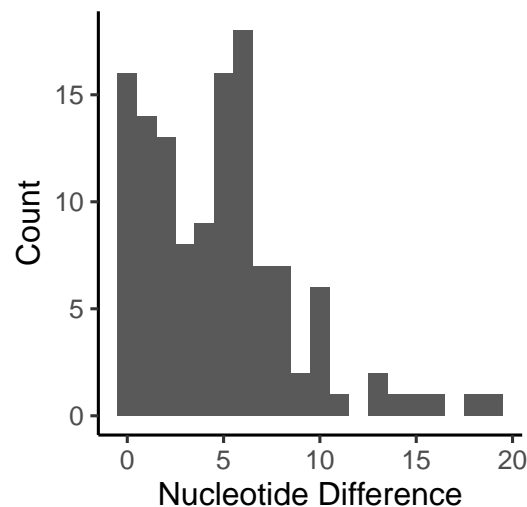
IGHV3-11*01

6551 sequences assigned
906 (13.8%) exact matches, in which:
612 unique CDR3
6 unique J



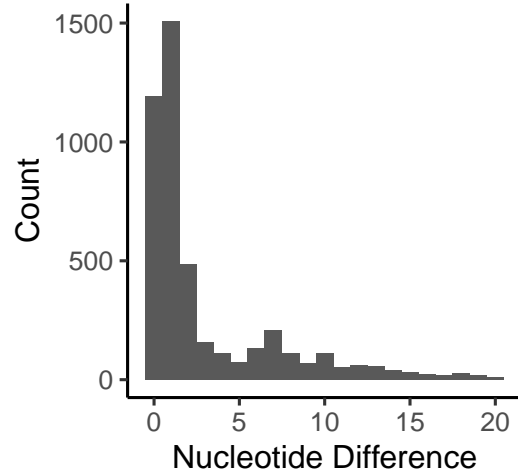
IGHV3-13*01_A243C_T24

127 sequences assigned
16 (12.6%) exact matches, in which:
16 unique CDR3
3 unique J



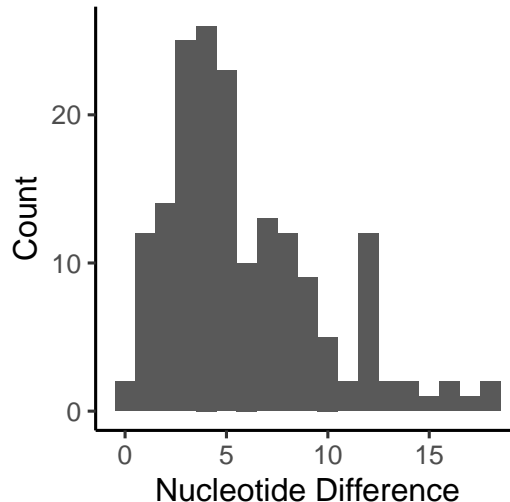
IGHV3-15*01_02

4601 sequences assigned
1193 (25.9%) exact matches, in which:
661 unique CDR3
6 unique J



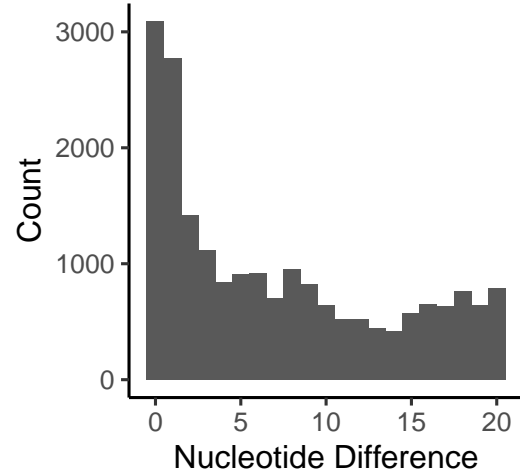
IGHV3-20*03_04

185 sequences assigned
2 (1.1%) exact matches, in which:
2 unique CDR3
1 unique J



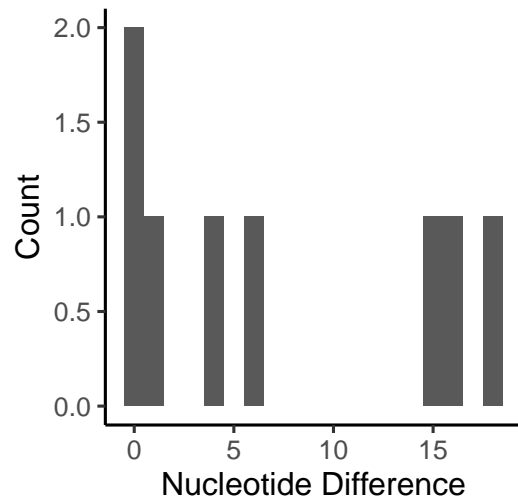
IGHV3-23*01_04

23663 sequences assigned
3090 (13.1%) exact matches, in which:
1841 unique CDR3
6 unique J



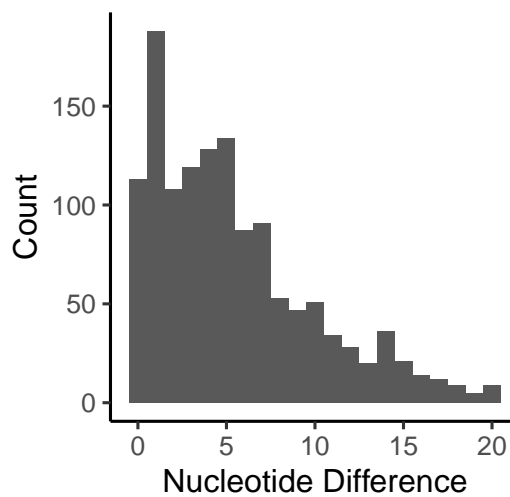
IGHV3-19*01

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



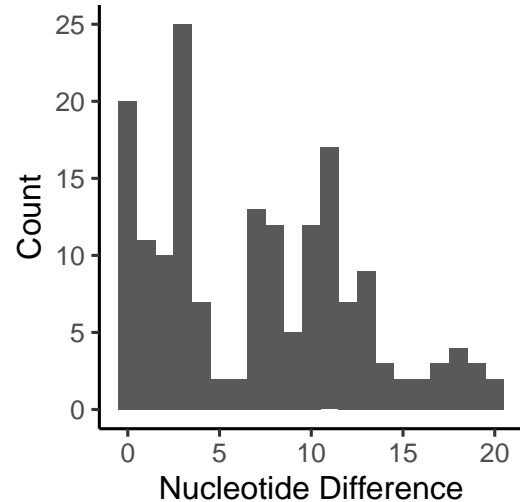
IGHV3-21*04

1346 sequences assigned
113 (8.4%) exact matches, in which:
110 unique CDR3
4 unique J



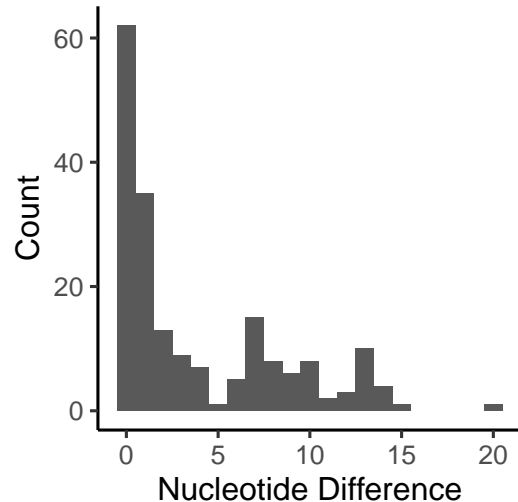
IGHV3-30-5*01

173 sequences assigned
20 (11.6%) exact matches, in which:
19 unique CDR3
4 unique J



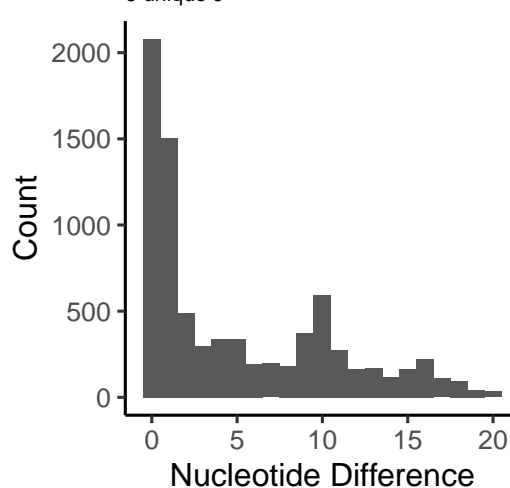
IGHV3-20*01_02

194 sequences assigned
62 (32%) exact matches, in which:
36 unique CDR3
6 unique J



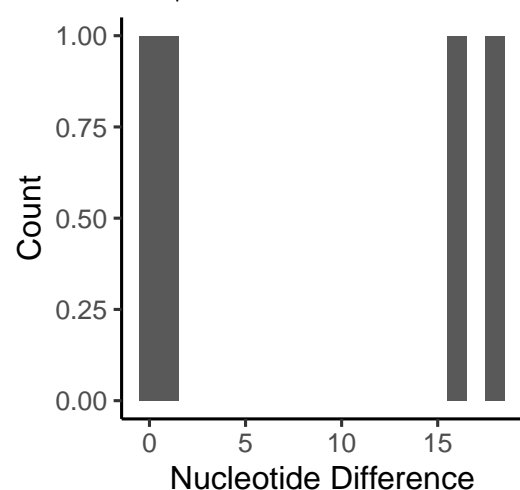
IGHV3-21*01_02

8217 sequences assigned
2079 (25.3%) exact matches, in which:
1324 unique CDR3
6 unique J



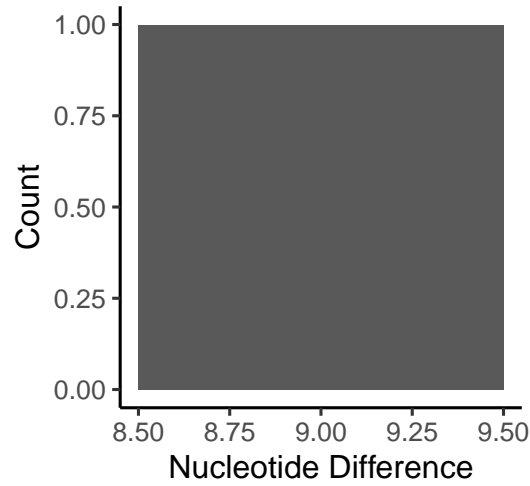
IGHV3-30-3*01

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



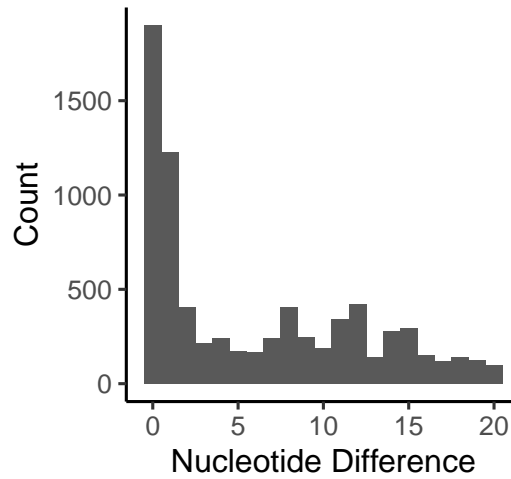
IGHV3-30-3*02

1 sequences assigned
No exact matches.



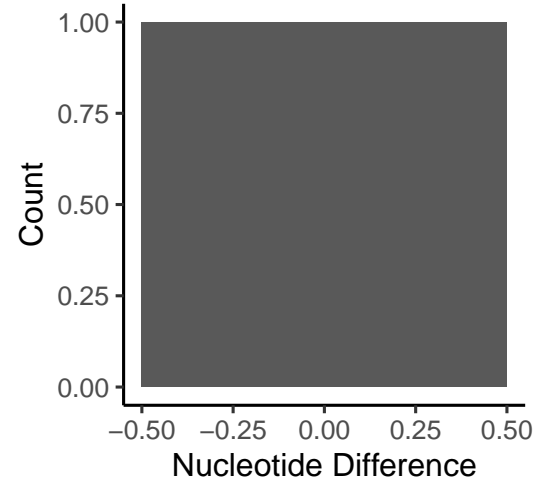
IGHV3-33*01

7915 sequences assigned
1899 (24%) exact matches, in which:
1276 unique CDR3
6 unique J



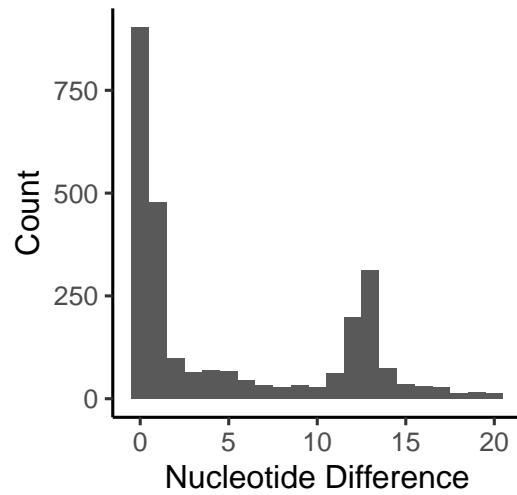
IGHV3-38*02

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



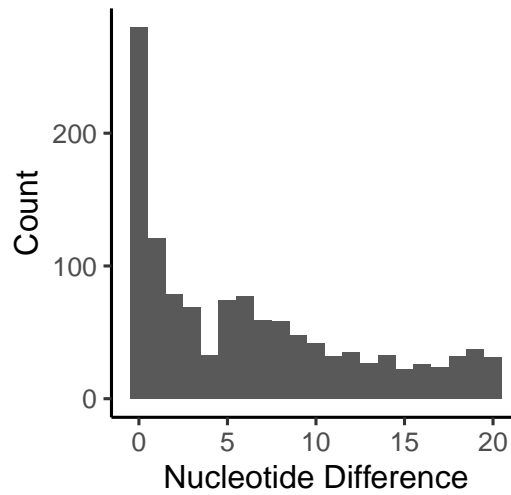
IGHV3-30*03

2662 sequences assigned
904 (34%) exact matches, in which:
580 unique CDR3
6 unique J



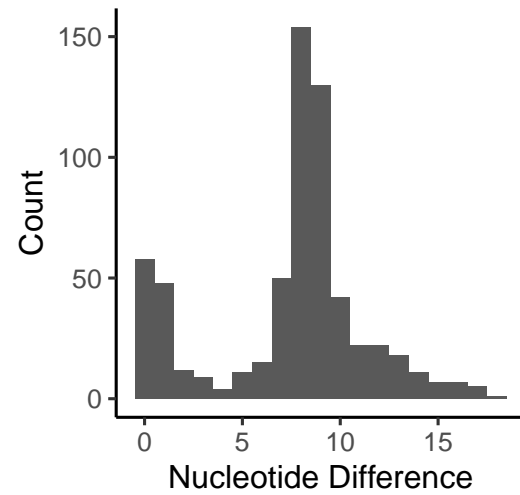
IGHV3-33*08

1340 sequences assigned
280 (20.9%) exact matches, in which:
241 unique CDR3
6 unique J



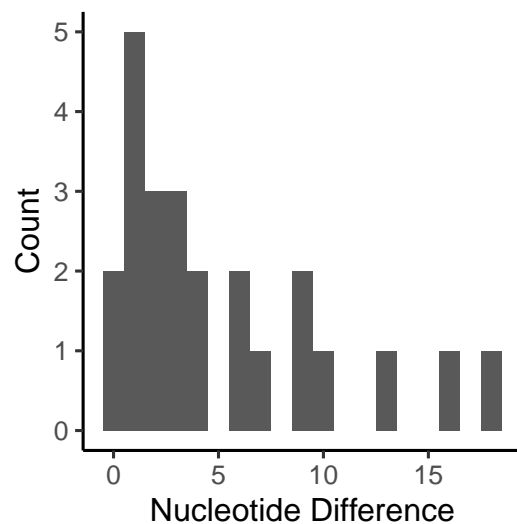
IGHV3-43*01

631 sequences assigned
58 (9.2%) exact matches, in which:
34 unique CDR3
3 unique J



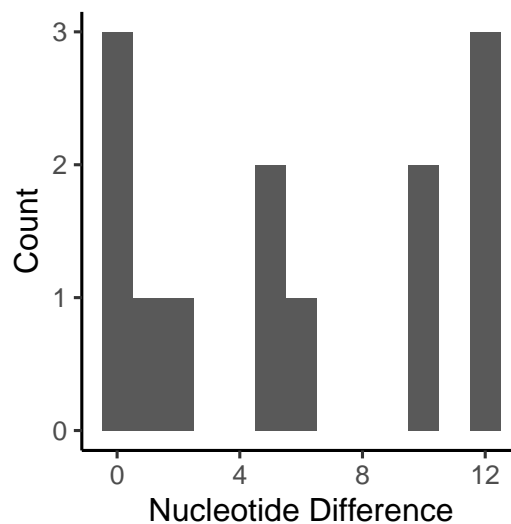
IGHV3-30-3*03

29 sequences assigned
2 (6.9%) exact matches, in which:
2 unique CDR3
2 unique J



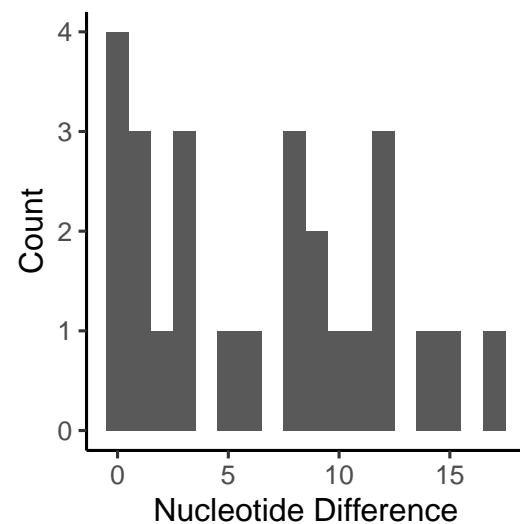
IGHV3-35*01

13 sequences assigned
3 (23.1%) exact matches, in which:
2 unique CDR3
1 unique J



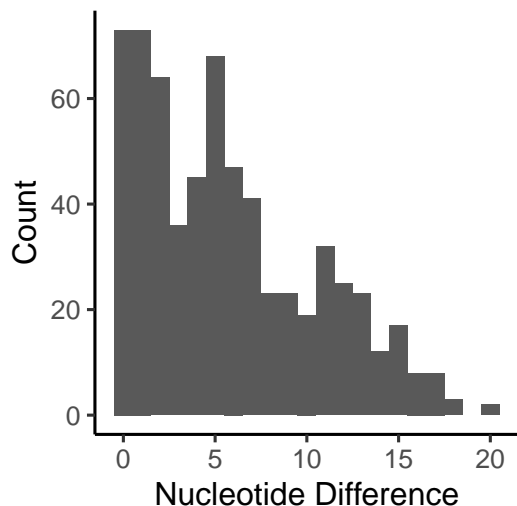
IGHV3-47*02

26 sequences assigned
4 (15.4%) exact matches, in which:
3 unique CDR3
2 unique J



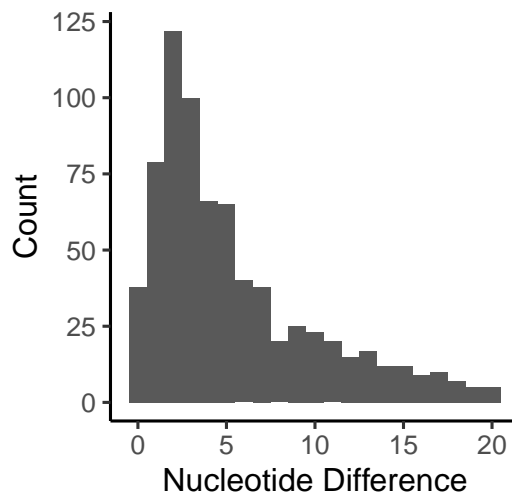
IGHV3-48*01

646 sequences assigned
73 (11.3%) exact matches, in which:
69 unique CDR3
4 unique J



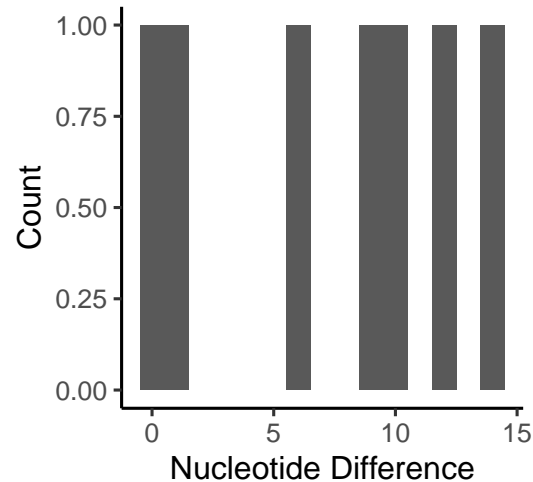
IGHV3-48*04

796 sequences assigned
38 (4.8%) exact matches, in which:
37 unique CDR3
4 unique J



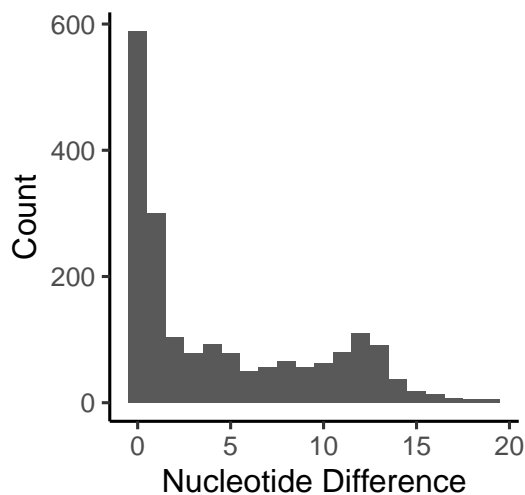
IGHV3-52*01_03

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



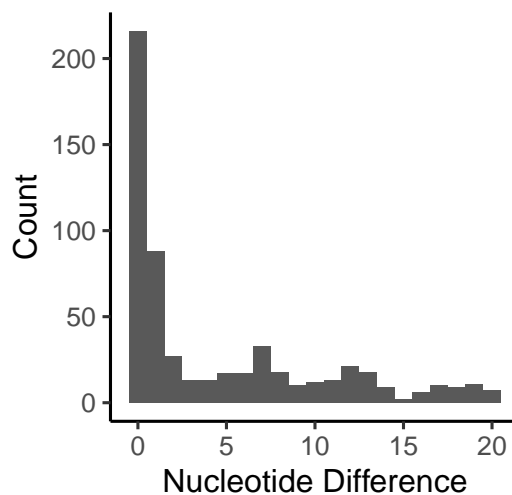
IGHV3-48*02

1973 sequences assigned
589 (29.9%) exact matches, in which:
373 unique CDR3
6 unique J



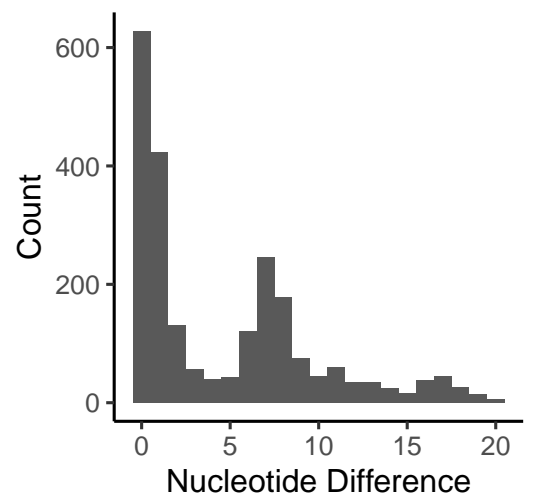
IGHV3-49*04

578 sequences assigned
216 (37.4%) exact matches, in which:
140 unique CDR3
6 unique J



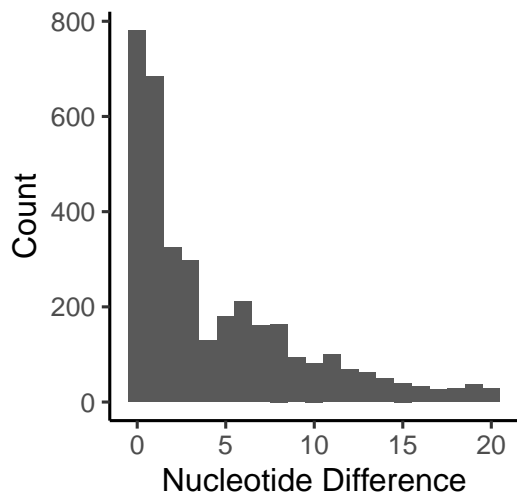
IGHV3-53*01_02

2339 sequences assigned
628 (26.8%) exact matches, in which:
411 unique CDR3
6 unique J



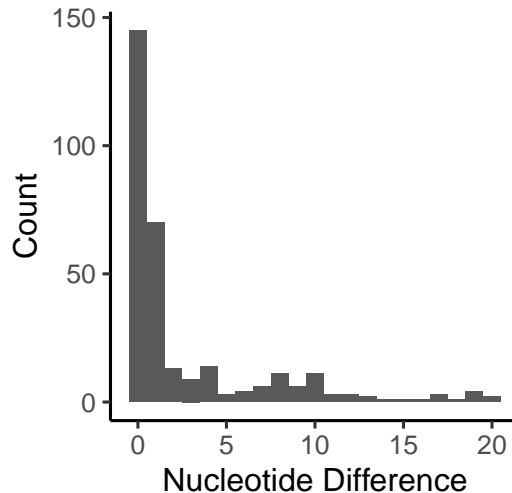
IGHV3-48*03

7624 sequences assigned
781 (10.2%) exact matches, in which:
492 unique CDR3
6 unique J



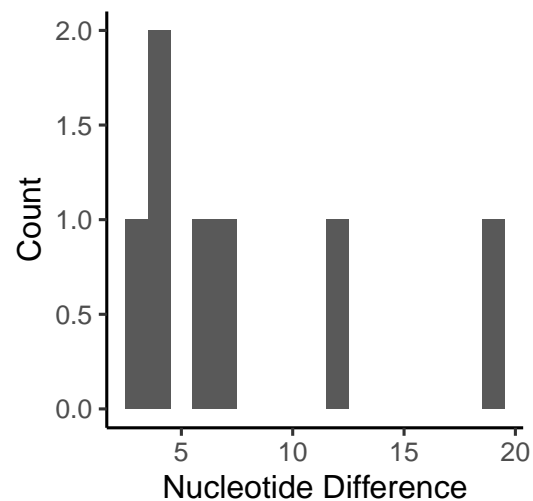
IGHV3-49*03_05

330 sequences assigned
145 (43.9%) exact matches, in which:
84 unique CDR3
5 unique J



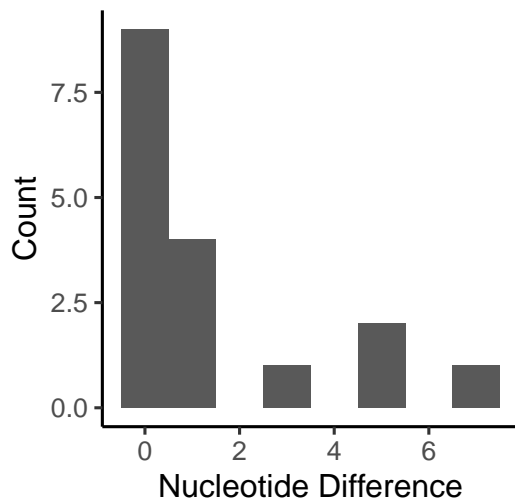
IGHV3-64*04

9 sequences assigned
No exact matches.



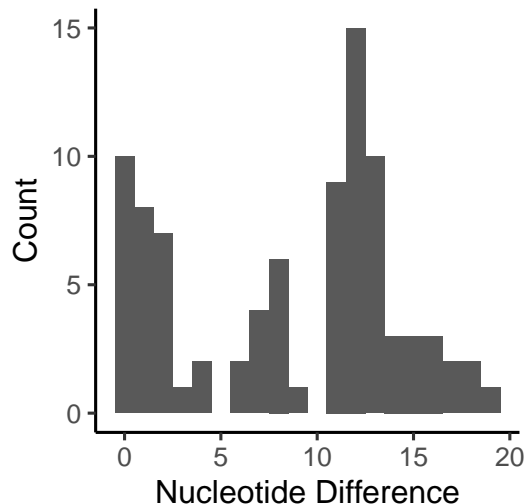
IGHV3-64*02_07

17 sequences assigned
9 (52.9%) exact matches, in which:
8 unique CDR3
4 unique J



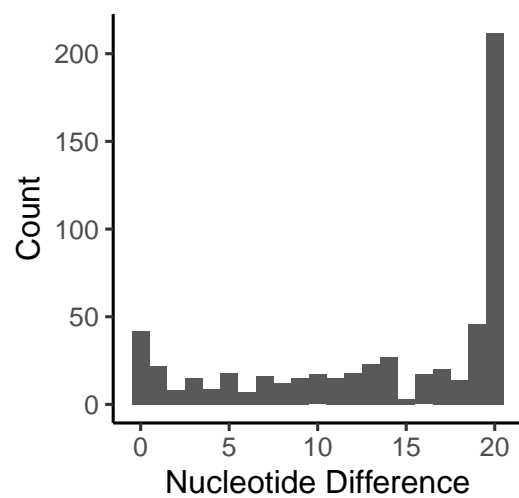
IGHV3-66*03

89 sequences assigned
10 (11.2%) exact matches, in which:
10 unique CDR3
2 unique J



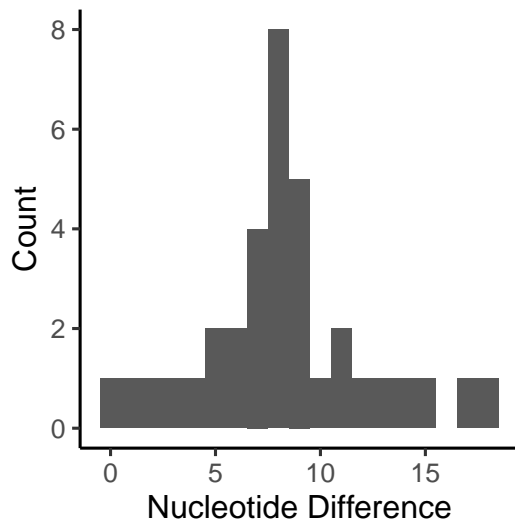
IGHV3-72*01

2089 sequences assigned
42 (2%) exact matches, in which:
30 unique CDR3
5 unique J



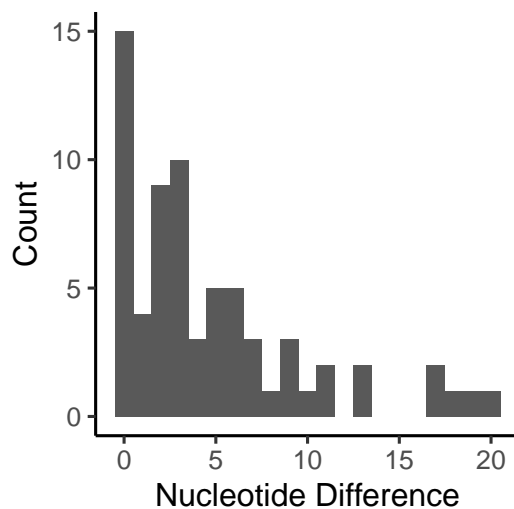
IGHV3-66*01

48 sequences assigned
1 (2.1%) exact matches, in which:
1 unique CDR3
1 unique J



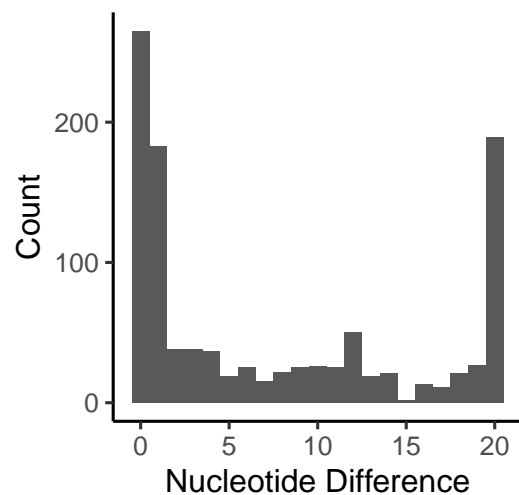
IGHV3-69-1*01

71 sequences assigned
15 (21.1%) exact matches, in which:
13 unique CDR3
3 unique J



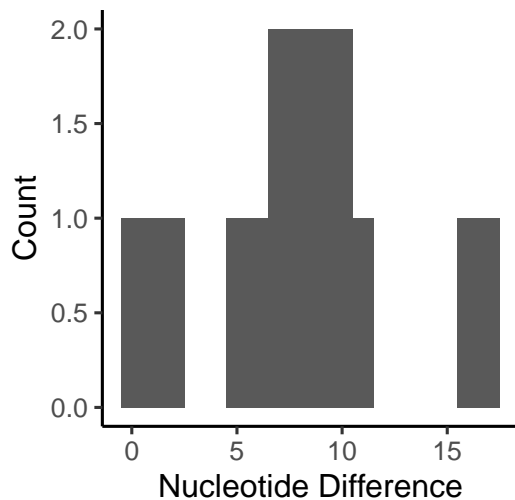
IGHV3-73*01_02

1731 sequences assigned
265 (15.3%) exact matches, in which:
159 unique CDR3
5 unique J



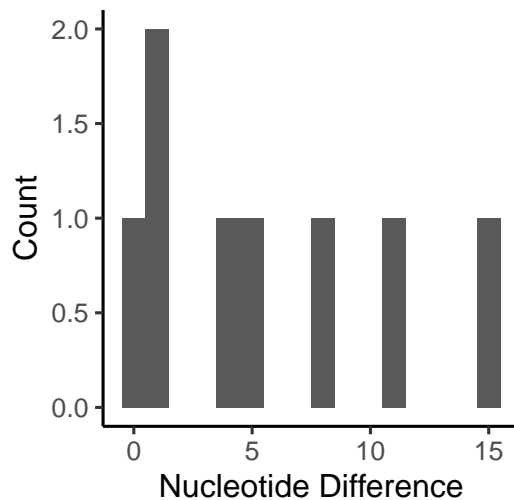
IGHV3-66*02

16 sequences assigned
1 (6.2%) exact matches, in which:
1 unique CDR3
1 unique J



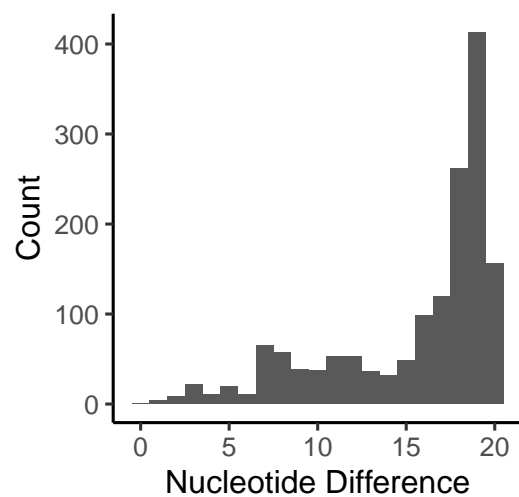
IGHV3-69-1*02

13 sequences assigned
1 (7.7%) exact matches, in which:
1 unique CDR3
1 unique J



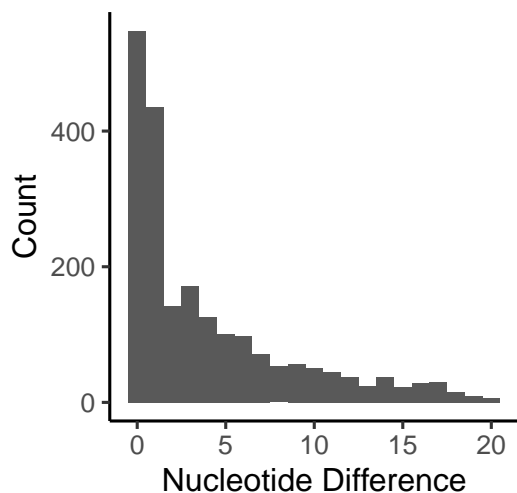
IGHV3-74*03

1823 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



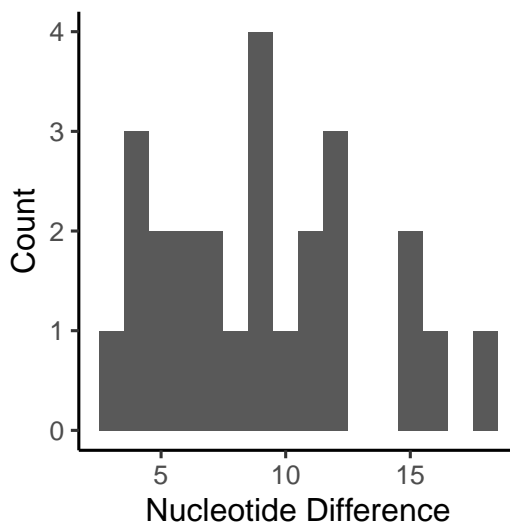
IGHV3-74*01_02

2336 sequences assigned
548 (23.5%) exact matches, in which:
355 unique CDR3
6 unique J



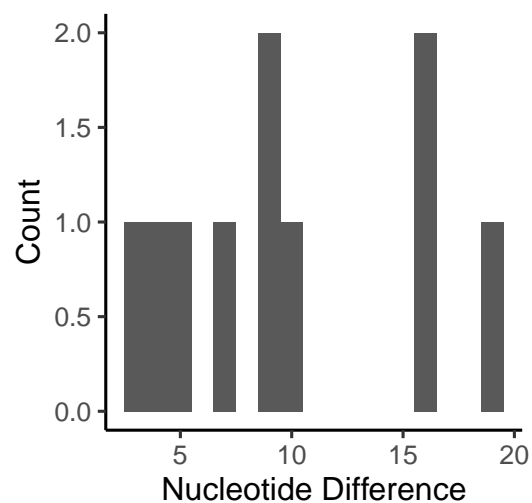
IGHV3-NL1*01

33 sequences assigned
No exact matches.



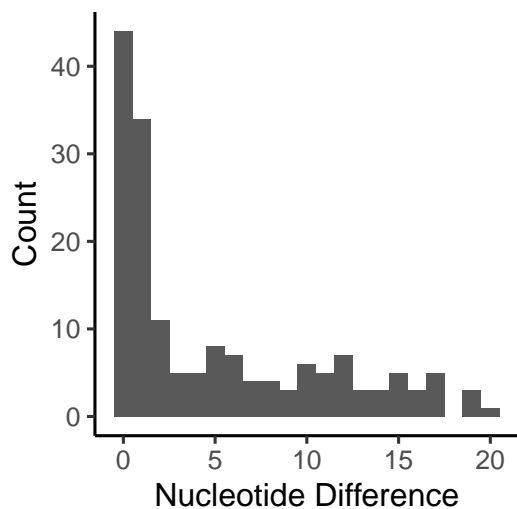
IGHV4-28*03

11 sequences assigned
No exact matches.



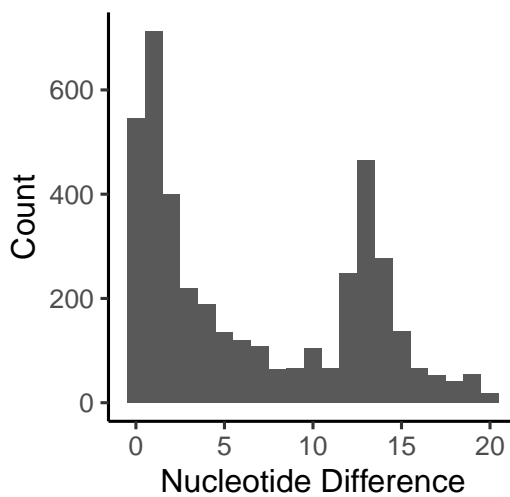
IGHV3-43D*04

174 sequences assigned
44 (25.3%) exact matches, in which:
24 unique CDR3
3 unique J



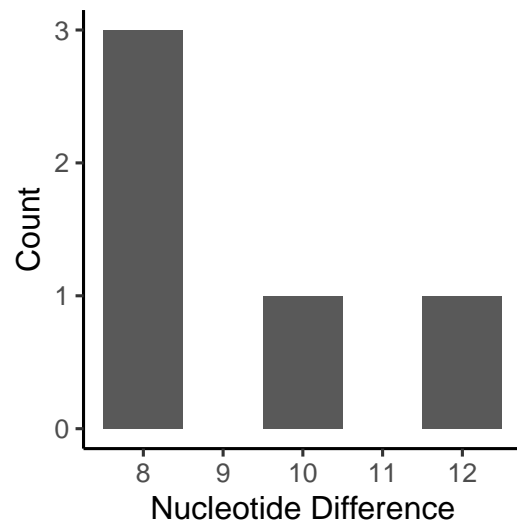
IGHV4-4*07

4164 sequences assigned
545 (13.1%) exact matches, in which:
450 unique CDR3
6 unique J



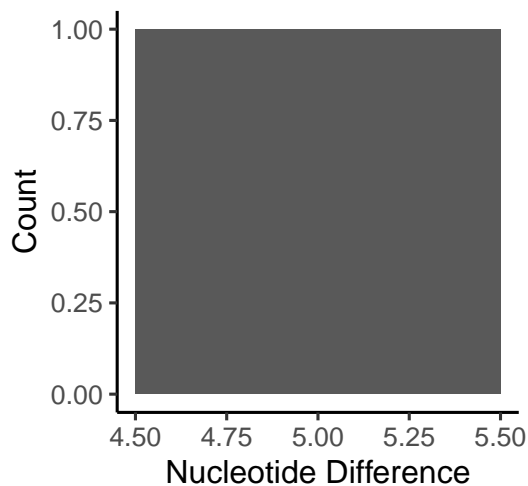
IGHV4-30-4*01

5 sequences assigned
No exact matches.



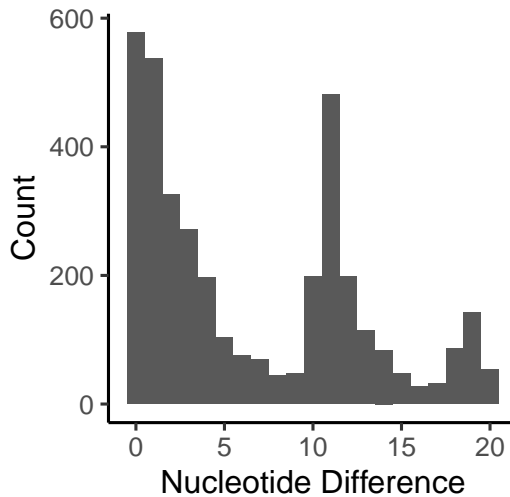
IGHV3-64D*06

11 sequences assigned
No exact matches.



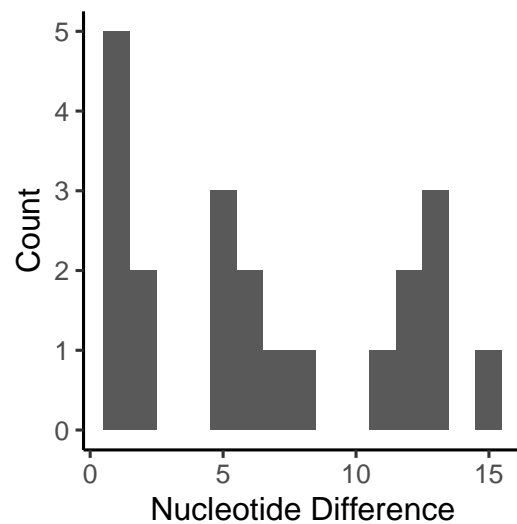
IGHV4-4*02_03

3823 sequences assigned
578 (15.1%) exact matches, in which:
463 unique CDR3
6 unique J



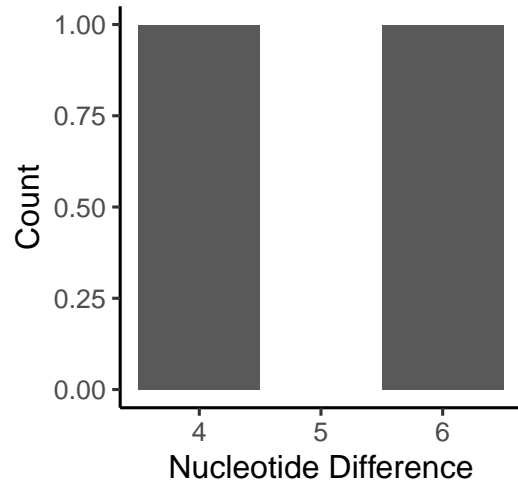
IGHV4-30-2*03

22 sequences assigned
No exact matches.



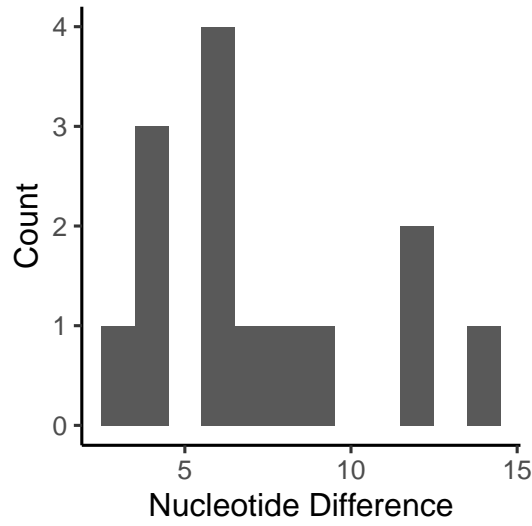
IGHV4-30-2*04

2 sequences assigned
No exact matches.



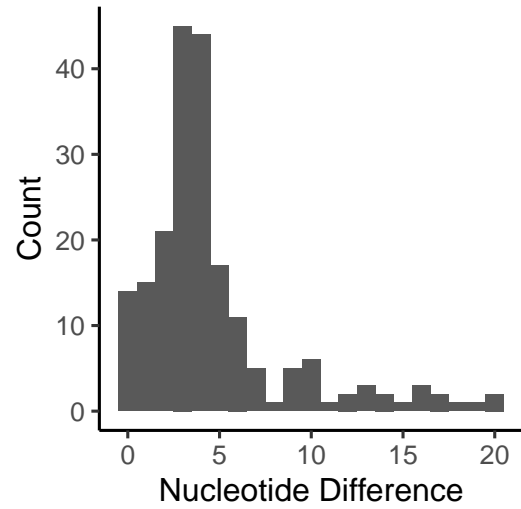
IGHV4-30-4*08

16 sequences assigned
No exact matches.



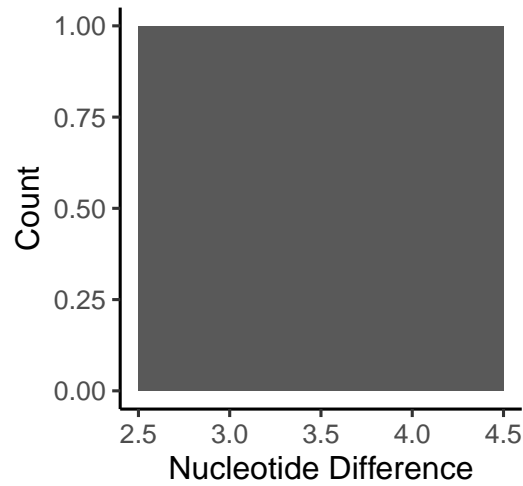
IGHV4-38-2*02

205 sequences assigned
14 (6.8%) exact matches, in which:
14 unique CDR3
5 unique J



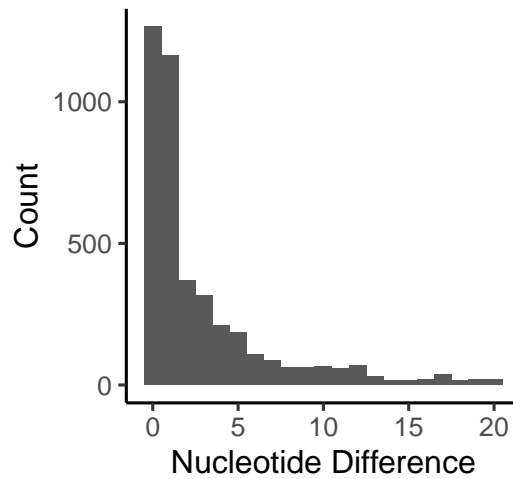
IGHV4-30-4*05

2 sequences assigned
No exact matches.



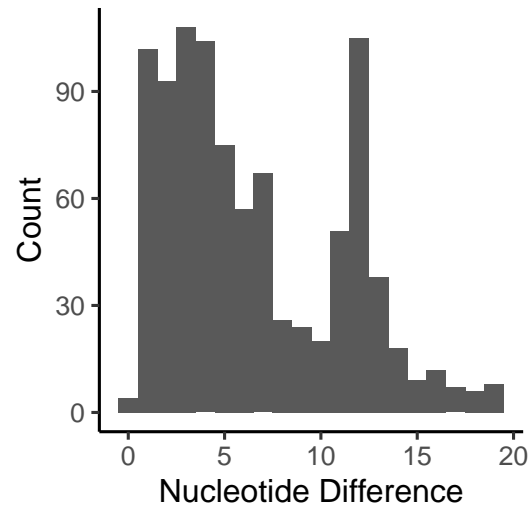
IGHV4-31*02

4330 sequences assigned
1265 (29.2%) exact matches, in which:
1075 unique CDR3
6 unique J



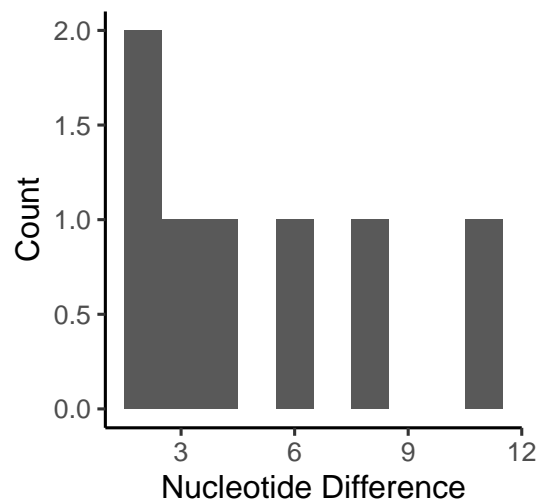
IGHV4-39*07

943 sequences assigned
4 (0.4%) exact matches, in which:
4 unique CDR3
2 unique J



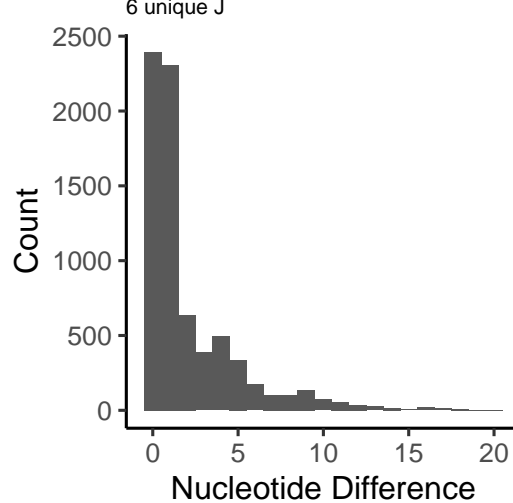
IGHV4-30-4*07

7 sequences assigned
No exact matches.



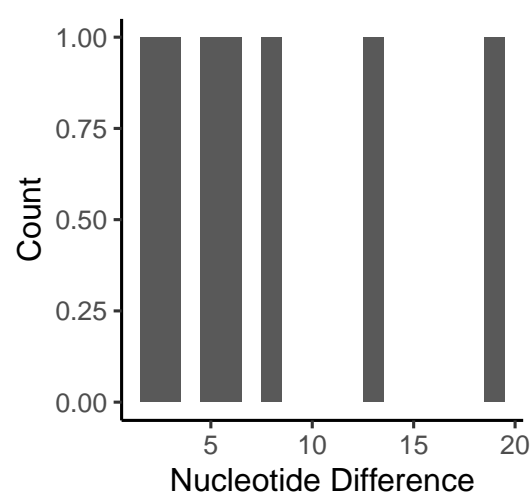
IGHV4-34*01_02

7435 sequences assigned
2394 (32.2%) exact matches, in which:
1777 unique CDR3
6 unique J



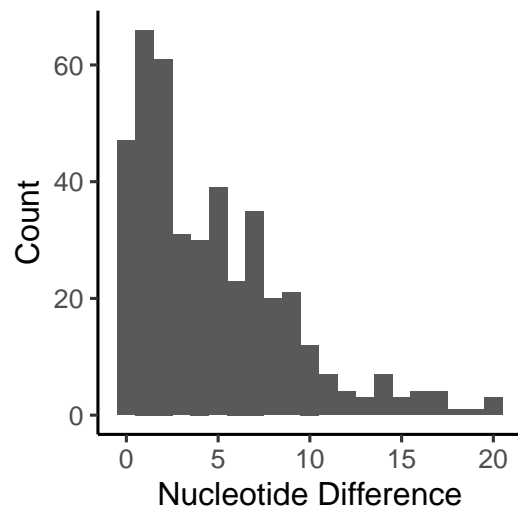
IGHV4-55*09

44 sequences assigned
No exact matches.



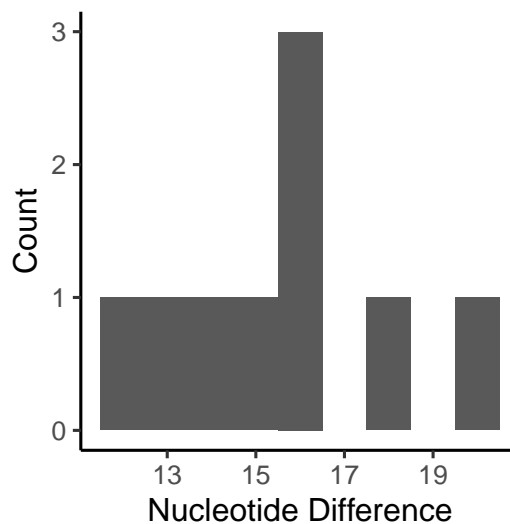
IGHV4-59*08

428 sequences assigned
47 (11%) exact matches, in which:
46 unique CDR3
5 unique J



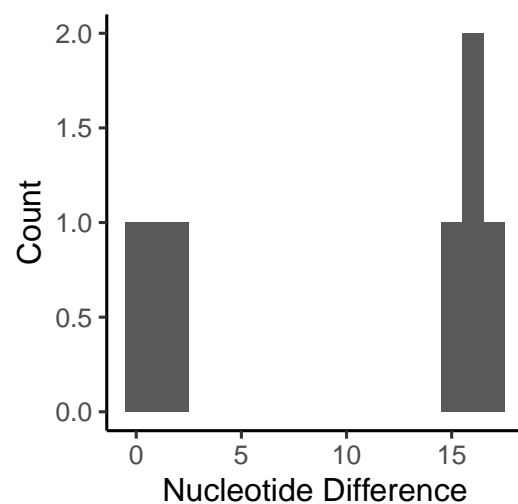
IGHV1/OR15-2*02_03

12 sequences assigned
No exact matches.



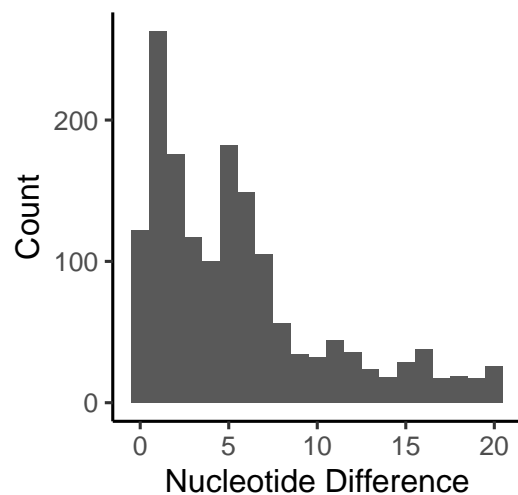
IGHV5-10-1*01_03

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



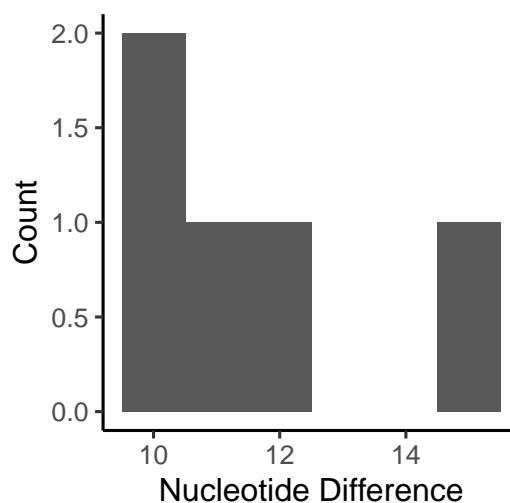
IGHV4-59*12

1754 sequences assigned
122 (7%) exact matches, in which:
116 unique CDR3
6 unique J



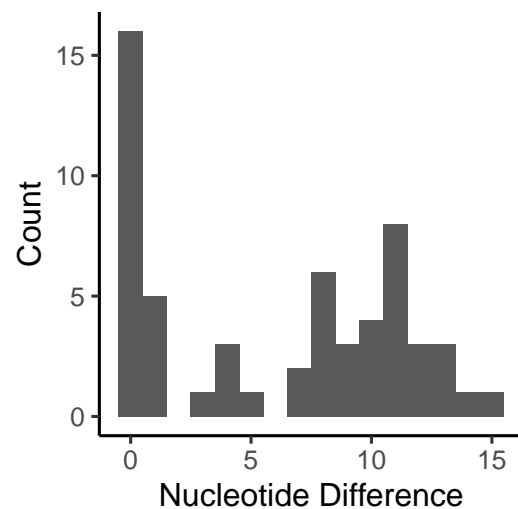
IGHV1/OR15-3*02

12 sequences assigned
No exact matches.



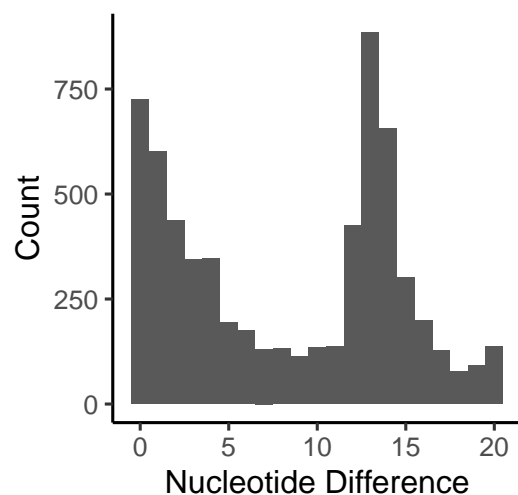
IGHV5-51*04

60 sequences assigned
16 (26.7%) exact matches, in which:
16 unique CDR3
5 unique J



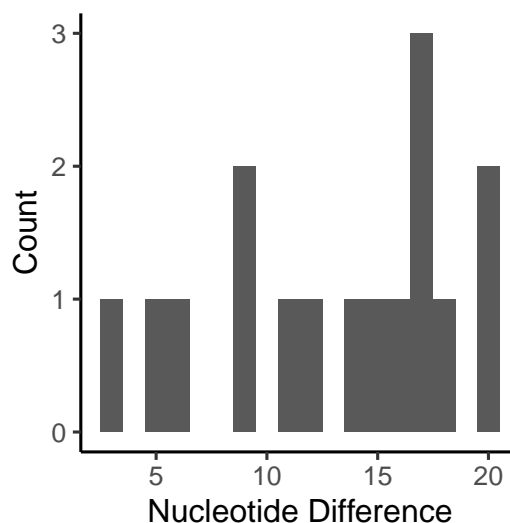
IGHV4-61*01

8461 sequences assigned
724 (8.6%) exact matches, in which:
666 unique CDR3
6 unique J



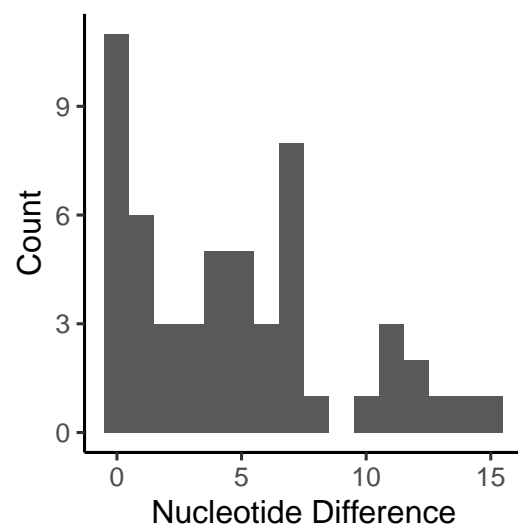
IGHV4/OR15-8*01

21 sequences assigned
No exact matches.



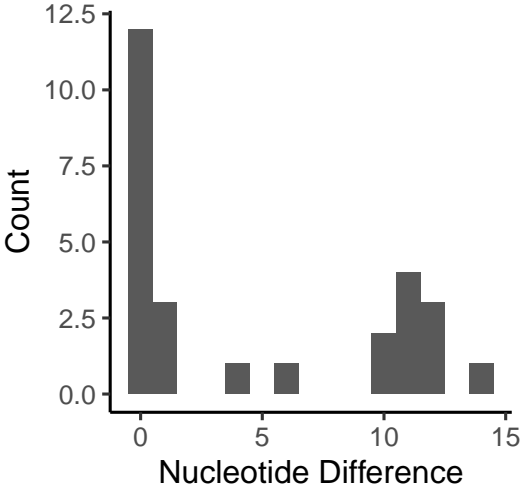
IGHV5-51*06

55 sequences assigned
11 (20%) exact matches, in which:
11 unique CDR3
6 unique J



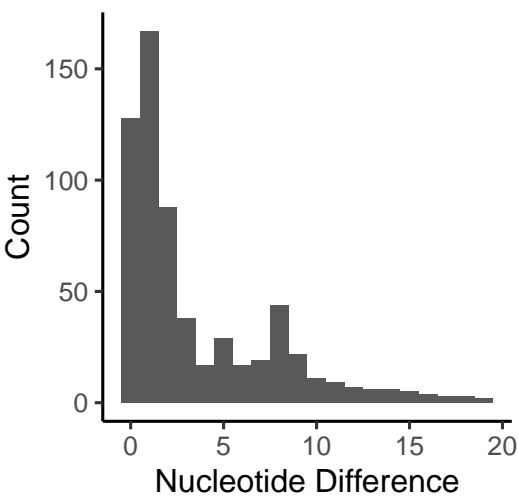
IGHV5-51*07

30 sequences assigned
12 (40%) exact matches, in which:
12 unique CDR3
4 unique J



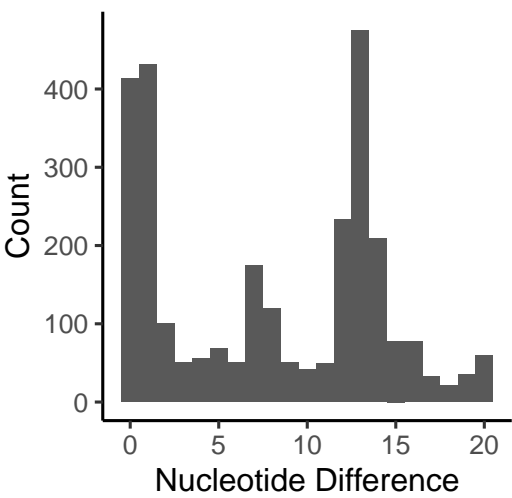
IGHV6-1*01_02

626 sequences assigned
128 (20.4%) exact matches, in which:
112 unique CDR3
5 unique J

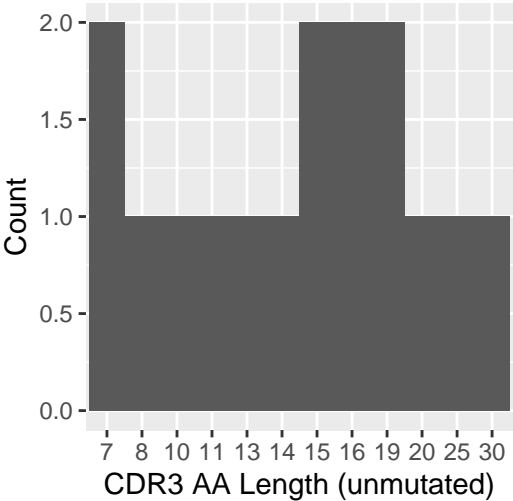


IGHV7-4-1*02

2869 sequences assigned
413 (14.4%) exact matches, in which:
335 unique CDR3
6 unique J



IGHV3-13*01_A243C_T246C_C258A_T259C_T267G_G290A





[illegible]