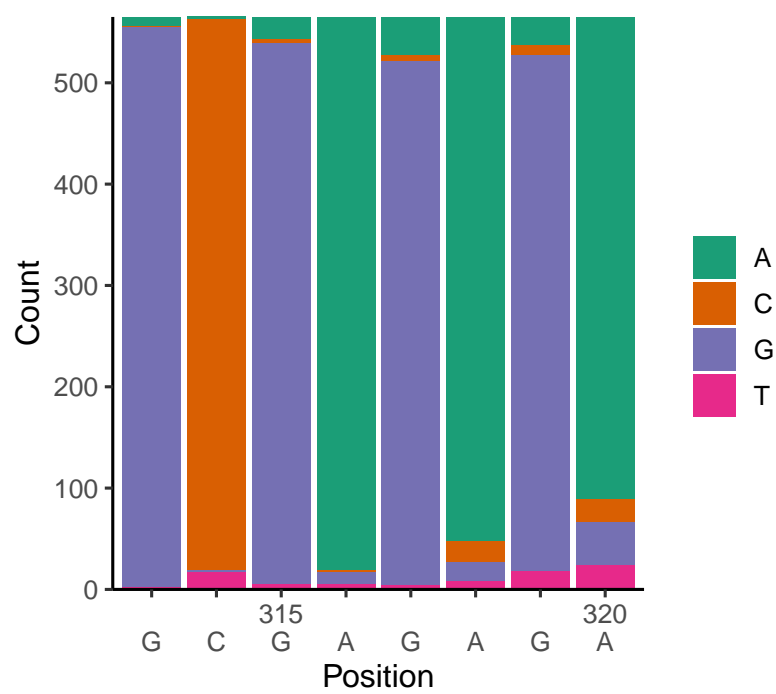
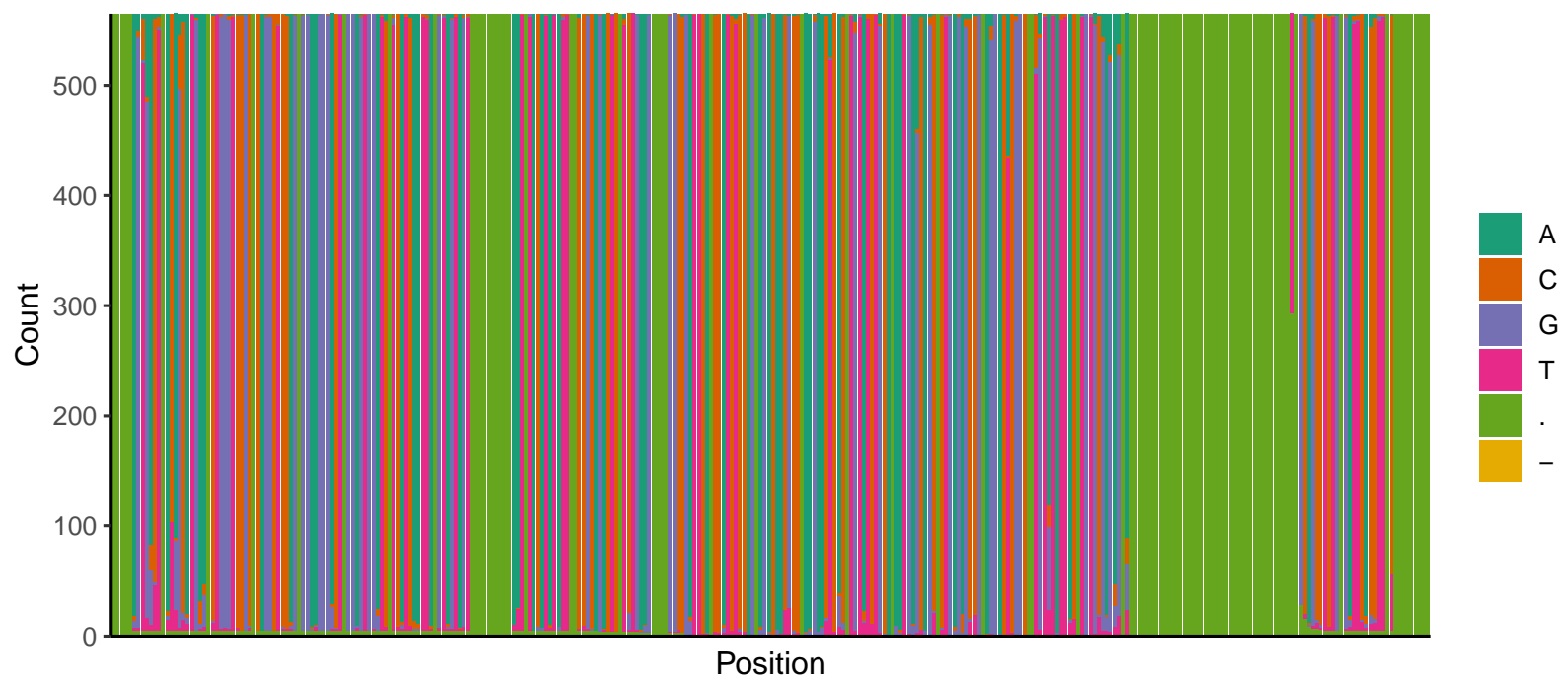


Gene IGHV3-69-1*01_T112A_A113G_G147A_G157A_C165A_G188A_A190T_C191A_C



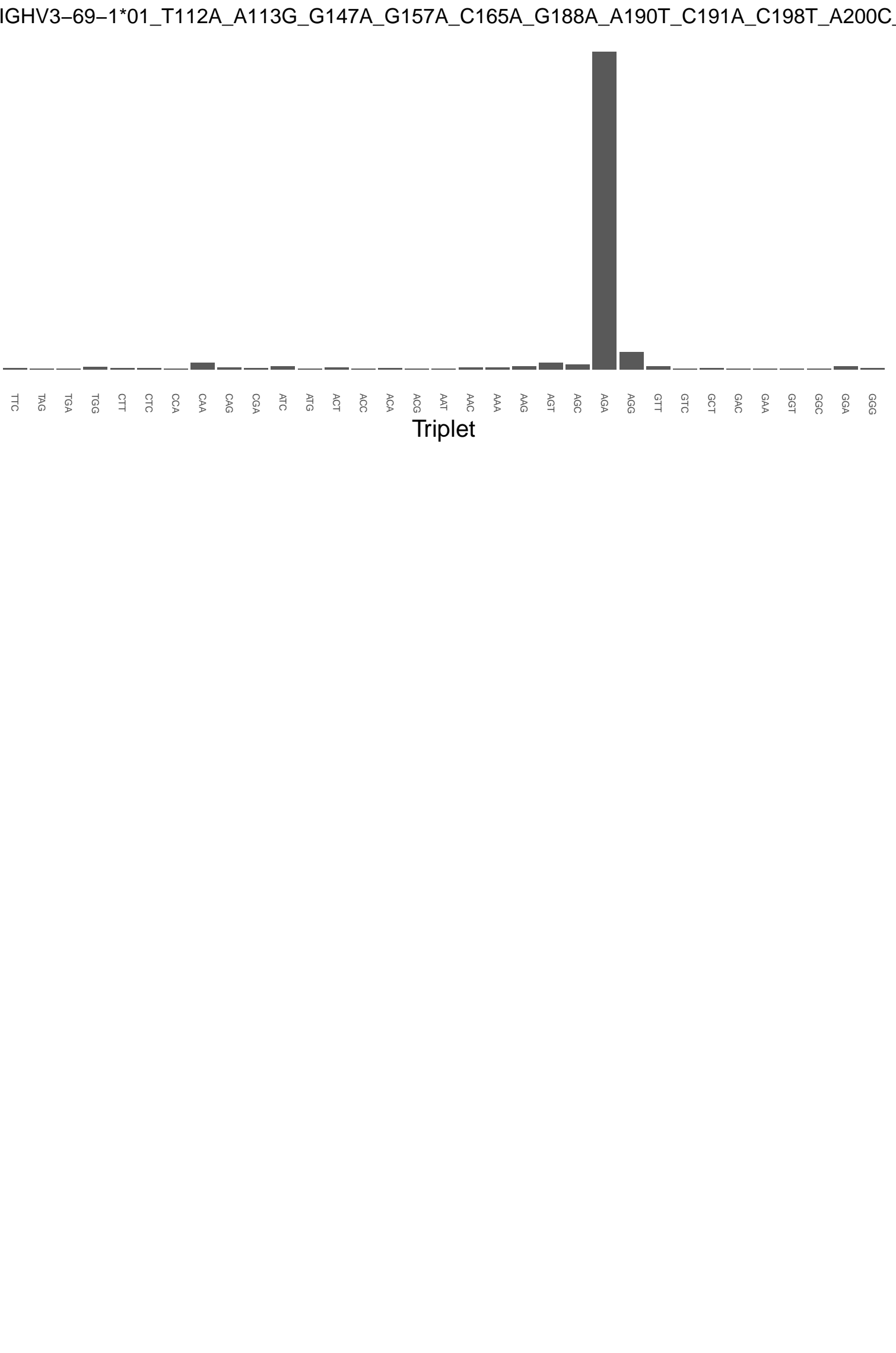


Count

400
300
200
100
0

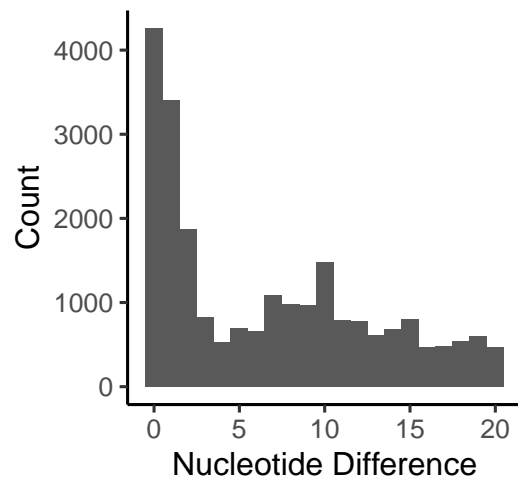
Triplet

TTC TAG TGA TGG CTT CTC CCA CAA CAG CGA ATC ATG ACT ACC ACA ACG AAT AAC AAA AAG AGT AGC AGA AGG GTT GTC GCT GAC GAA GGT GGC GGA GGG



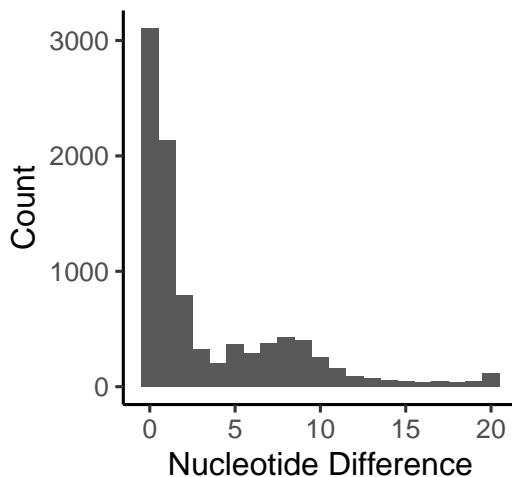
IGHV1-2*02

25766 sequences assigned
4258 (16.5%) exact matches, in which:
3744 unique CDR3
6 unique J



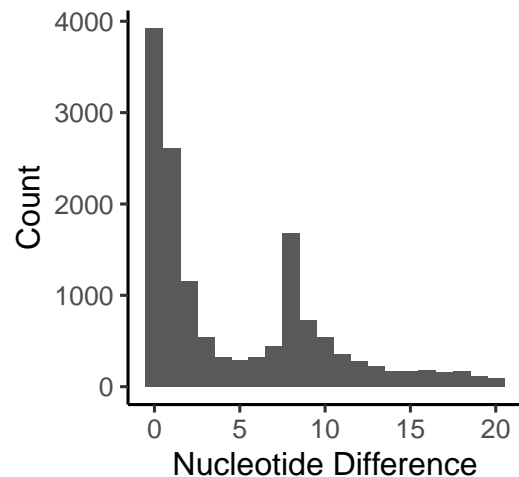
IGHV1-8*01

9811 sequences assigned
3105 (31.6%) exact matches, in which:
2779 unique CDR3
6 unique J



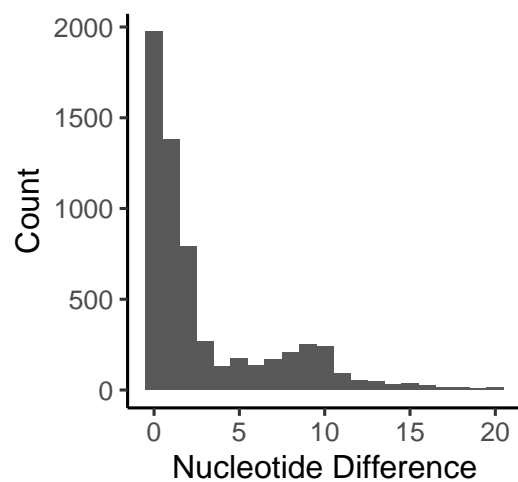
IGHV1-18*04

16183 sequences assigned
3922 (24.2%) exact matches, in which:
3531 unique CDR3
6 unique J



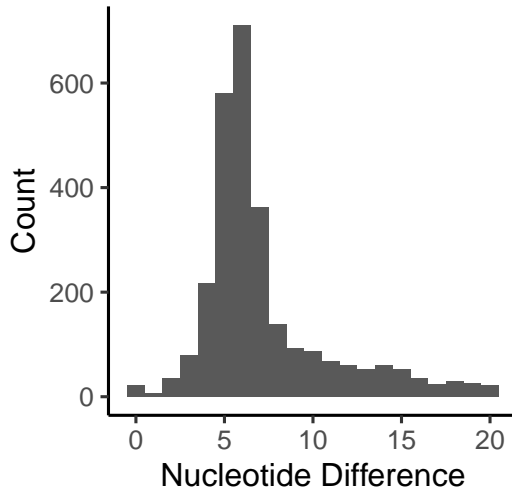
IGHV1-2*04

6196 sequences assigned
1974 (31.9%) exact matches, in which:
1778 unique CDR3
6 unique J



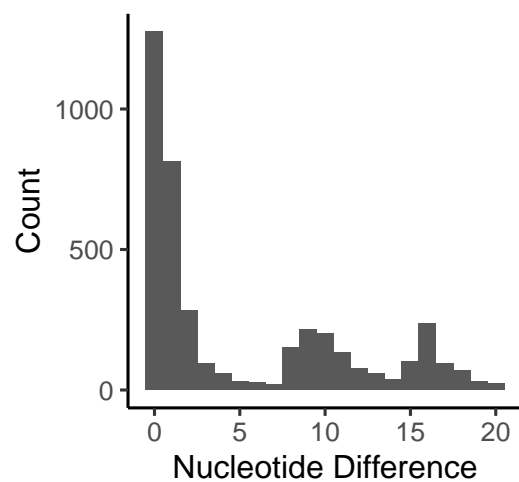
IGHV1-8*02

3186 sequences assigned
22 (0.7%) exact matches, in which:
22 unique CDR3
5 unique J



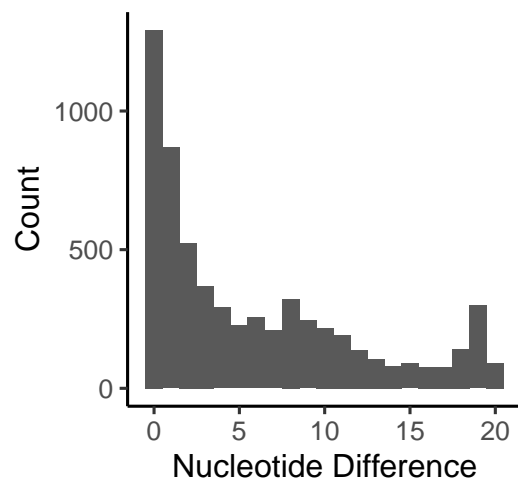
IGHV1-24*01

4121 sequences assigned
1275 (30.9%) exact matches, in which:
1162 unique CDR3
6 unique J



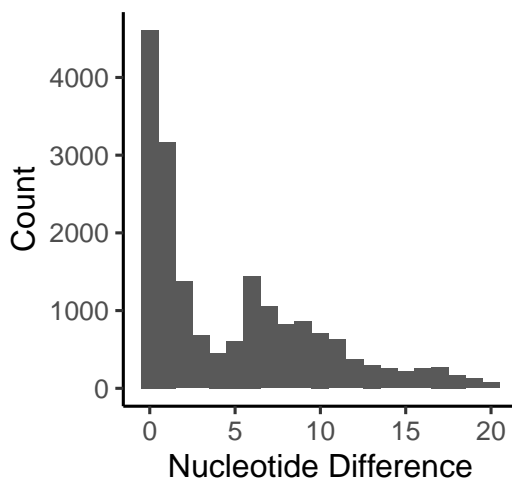
IGHV1-3*01_05

6684 sequences assigned
1292 (19.3%) exact matches, in which:
1141 unique CDR3
6 unique J



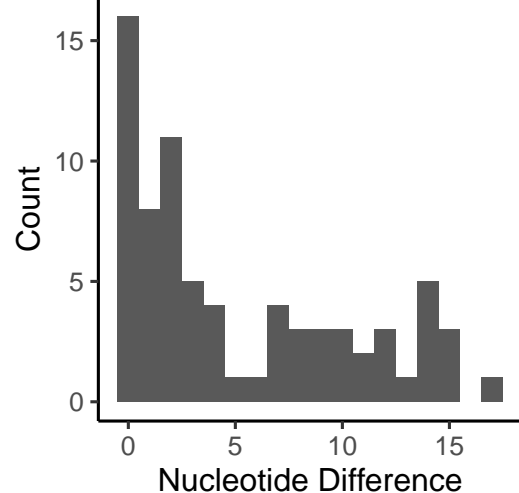
IGHV1-18*01

19425 sequences assigned
4610 (23.7%) exact matches, in which:
4124 unique CDR3
6 unique J



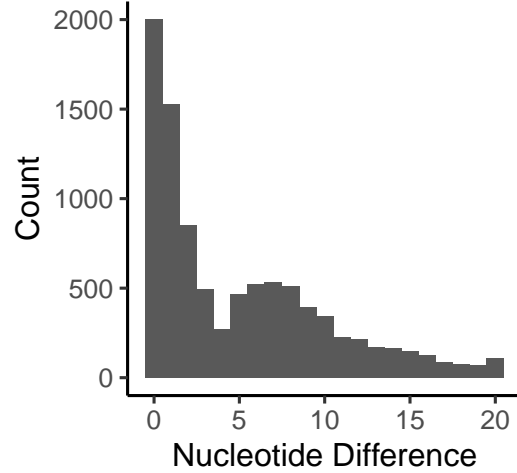
IGHV1-45*02

98 sequences assigned
16 (16.3%) exact matches, in which:
14 unique CDR3
4 unique J



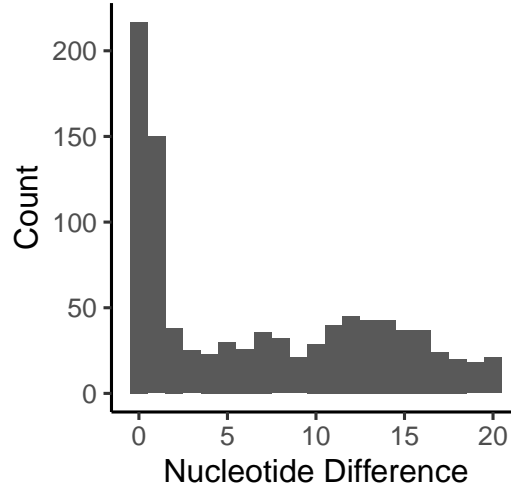
IGHV1-46*01

9768 sequences assigned
2001 (20.5%) exact matches, in which:
1843 unique CDR3
6 unique J



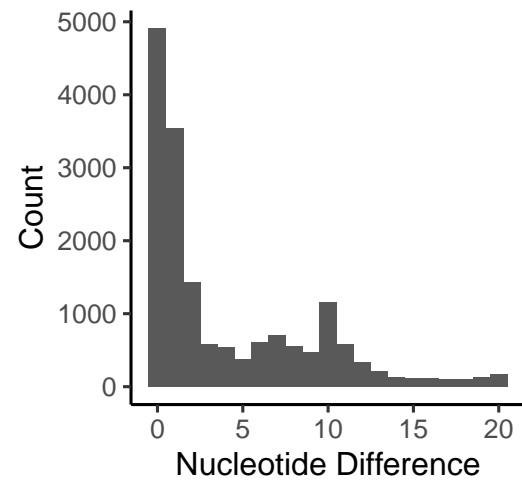
IGHV1-58*01_03

1099 sequences assigned
217 (19.7%) exact matches, in which:
199 unique CDR3
6 unique J



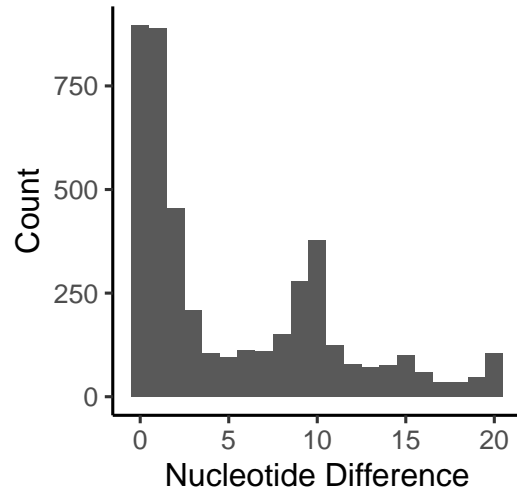
IGHV1-69*01_12_13

18808 sequences assigned
4909 (26.1%) exact matches, in which:
4519 unique CDR3
6 unique J



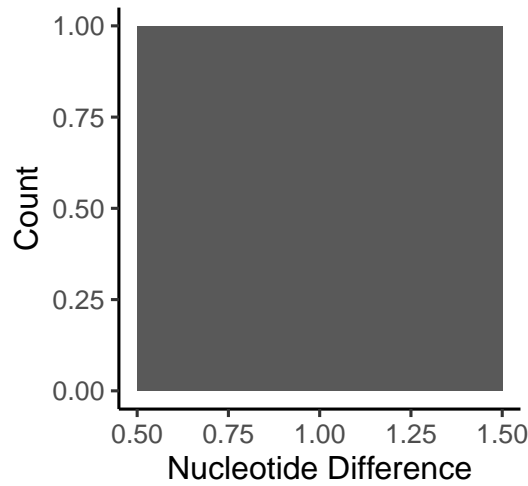
IGHV1-46*03

5318 sequences assigned
897 (16.9%) exact matches, in which:
741 unique CDR3
6 unique J



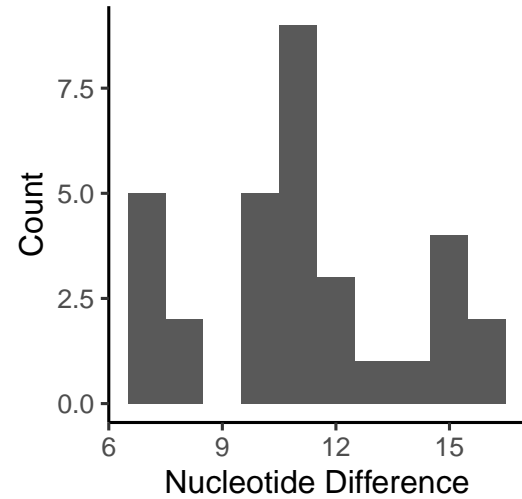
IGHV1-68*01

1 sequences assigned
No exact matches.



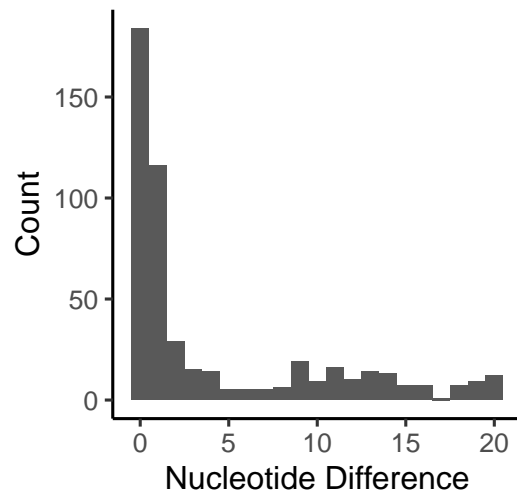
IGHV1-NL1*01

33 sequences assigned
No exact matches.



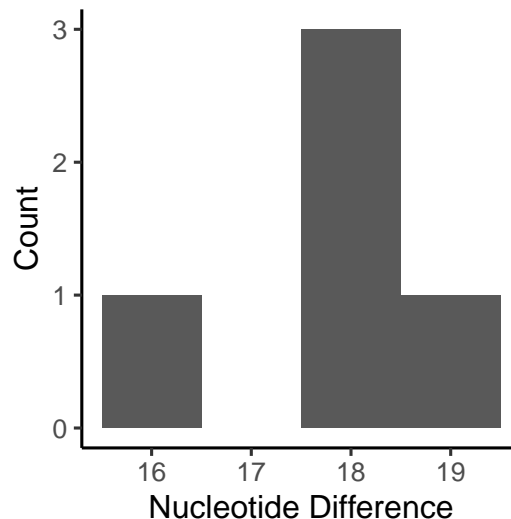
IGHV1-58*02

526 sequences assigned
184 (35%) exact matches, in which:
165 unique CDR3
6 unique J



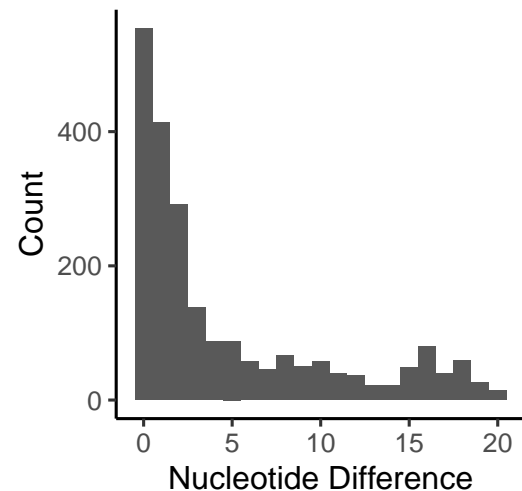
IGHV1-69-2*01

6 sequences assigned
No exact matches.



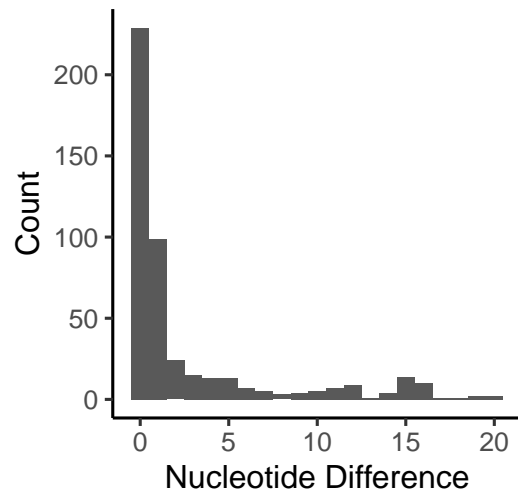
IGHV2-5*01

2391 sequences assigned
554 (23.2%) exact matches, in which:
492 unique CDR3
6 unique J



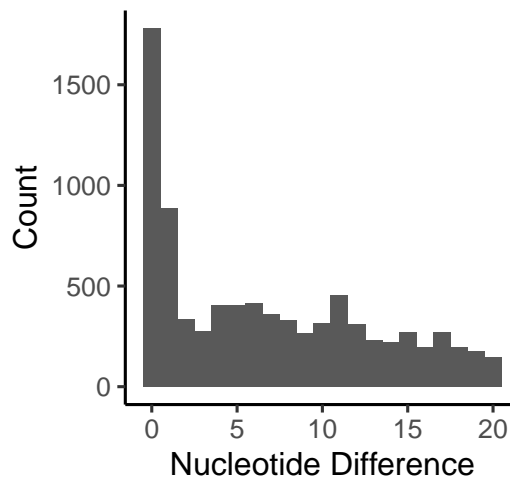
IGHV2-26*01

488 sequences assigned
229 (46.9%) exact matches, in which:
210 unique CDR3
6 unique J



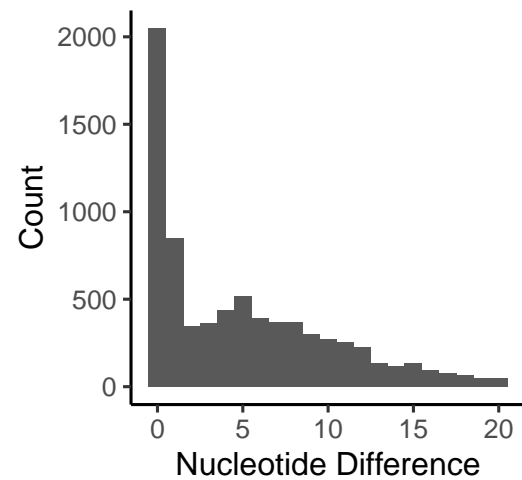
IGHV3-7*01

9681 sequences assigned
1780 (18.4%) exact matches, in which:
1313 unique CDR3
6 unique J



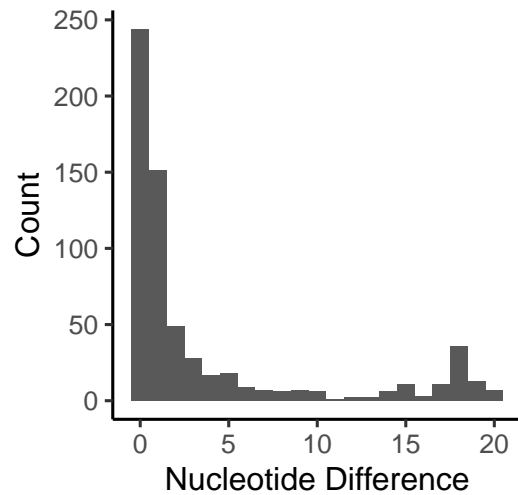
IGHV3-9*01

8160 sequences assigned
2048 (25.1%) exact matches, in which:
1349 unique CDR3
6 unique J



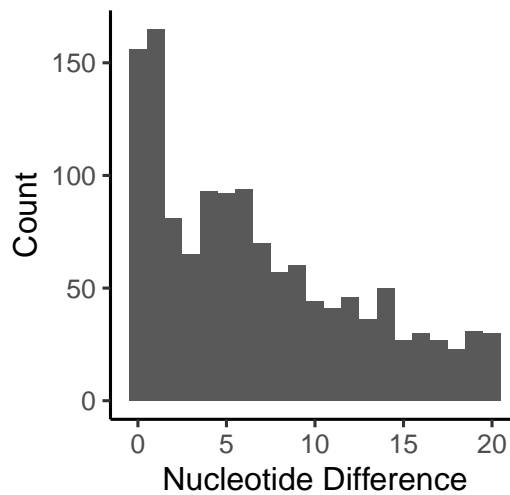
IGHV2-70*01

652 sequences assigned
244 (37.4%) exact matches, in which:
213 unique CDR3
5 unique J



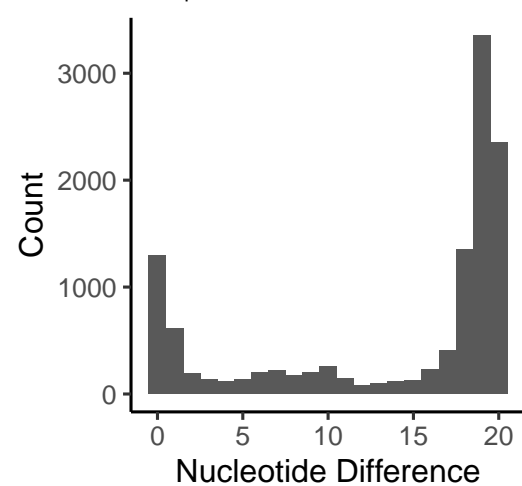
IGHV3-7*03

1726 sequences assigned
156 (9%) exact matches, in which:
139 unique CDR3
5 unique J



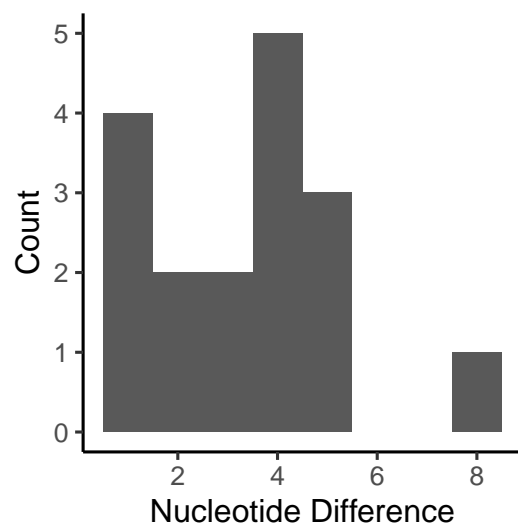
IGHV3-11*01

13366 sequences assigned
1297 (9.7%) exact matches, in which:
915 unique CDR3
6 unique J



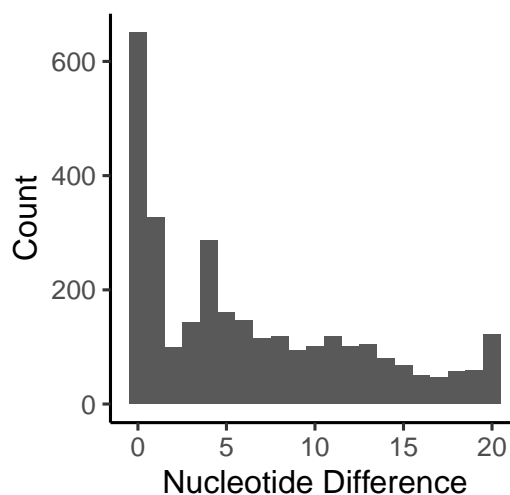
IGHV2-70D*04

17 sequences assigned
No exact matches.



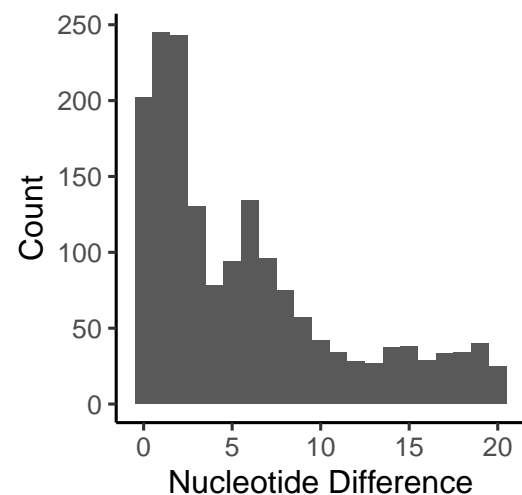
IGHV3-7*05

4068 sequences assigned
651 (16%) exact matches, in which:
449 unique CDR3
6 unique J



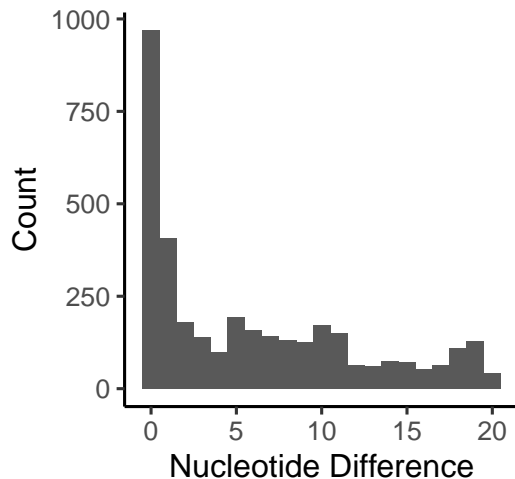
IGHV3-11*04

1851 sequences assigned
202 (10.9%) exact matches, in which:
196 unique CDR3
6 unique J



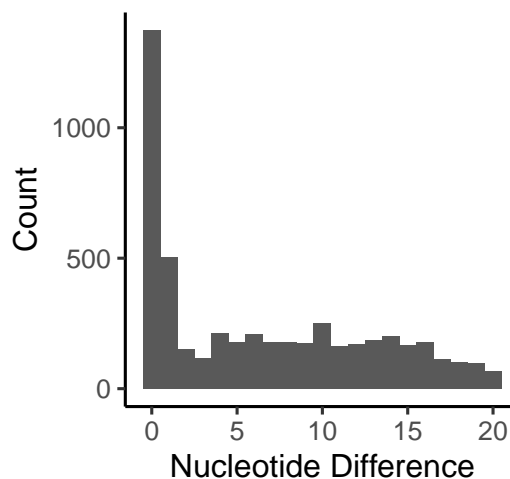
IGHV3-11*06

4166 sequences assigned
969 (23.3%) exact matches, in which:
722 unique CDR3
6 unique J



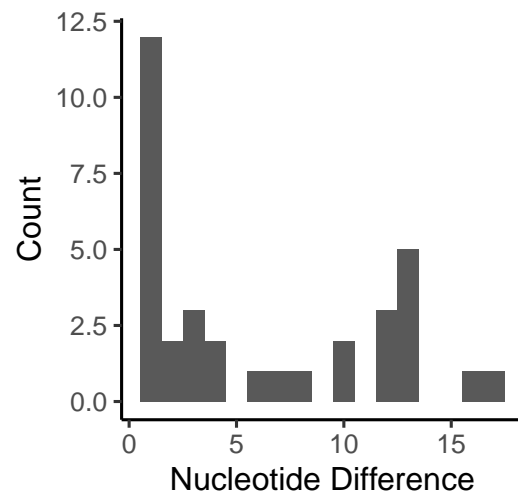
IGHV3-15*01_02

6123 sequences assigned
1373 (22.4%) exact matches, in which:
957 unique CDR3
6 unique J



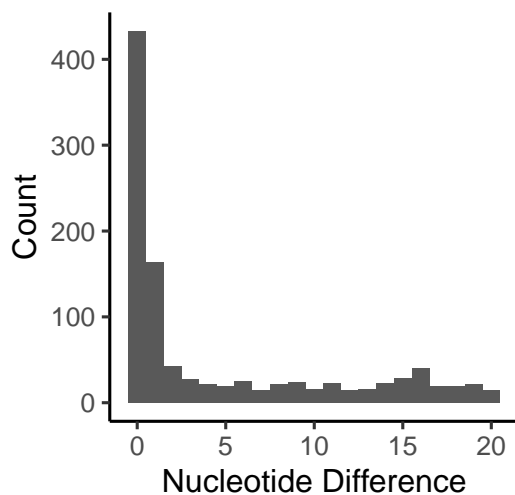
IGHV3-20*03_04

55 sequences assigned
No exact matches.



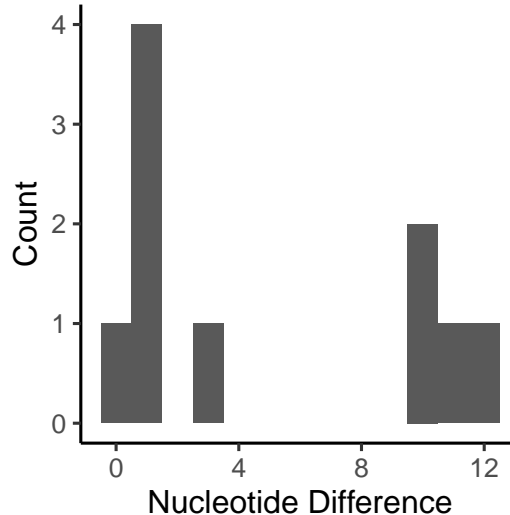
IGHV3-13*01

1155 sequences assigned
433 (37.5%) exact matches, in which:
296 unique CDR3
6 unique J



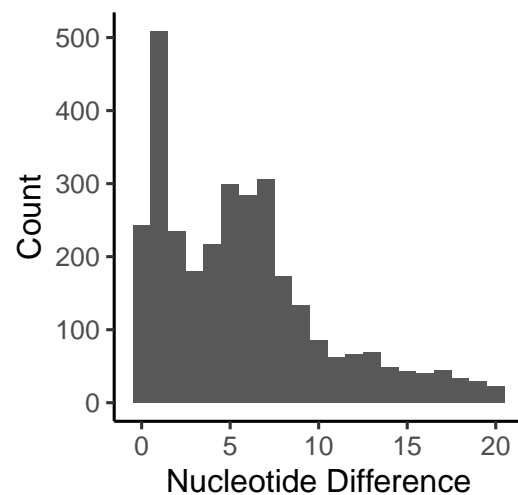
IGHV3-19*01

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



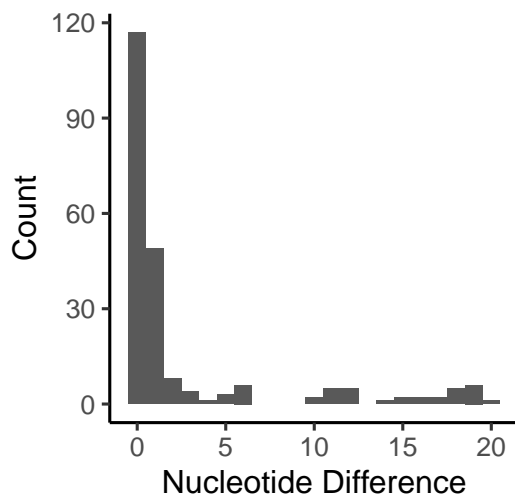
IGHV3-21*04

3320 sequences assigned
243 (7.3%) exact matches, in which:
228 unique CDR3
5 unique J



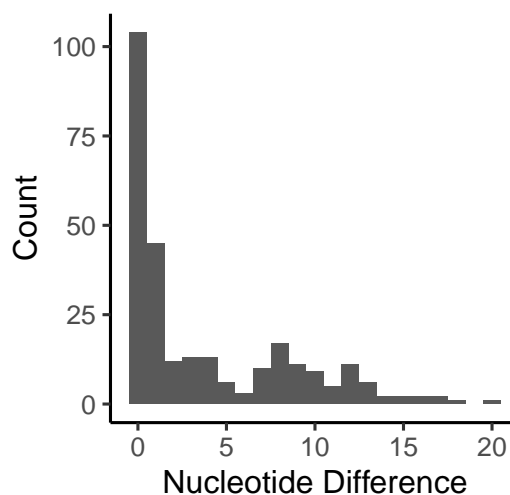
IGHV3-13*05

227 sequences assigned
117 (51.5%) exact matches, in which:
87 unique CDR3
6 unique J



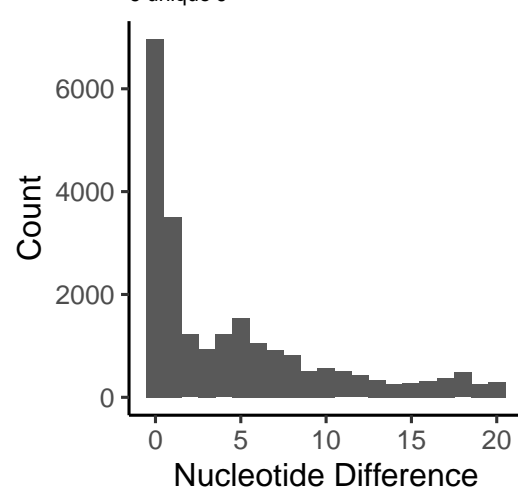
IGHV3-20*01_02

283 sequences assigned
104 (36.7%) exact matches, in which:
73 unique CDR3
5 unique J



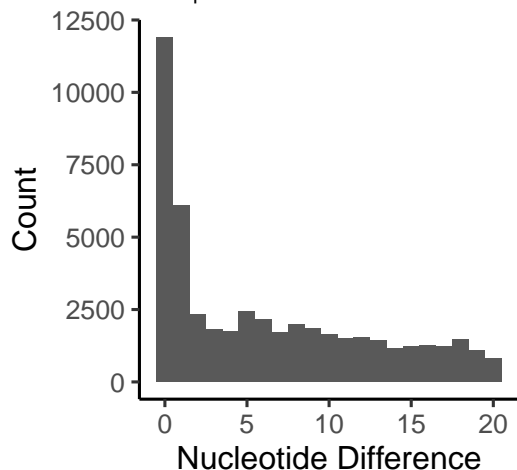
IGHV3-21*01_02

25092 sequences assigned
6967 (27.8%) exact matches, in which:
4756 unique CDR3
6 unique J



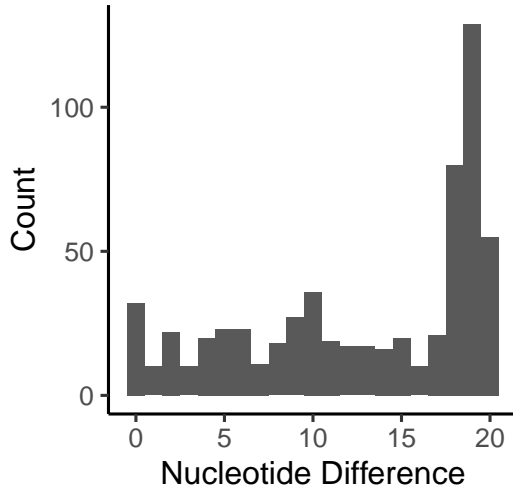
IGHV3-23*01_04

57467 sequences assigned
11907 (20.7%) exact matches, in which:
7404 unique CDR3
6 unique J



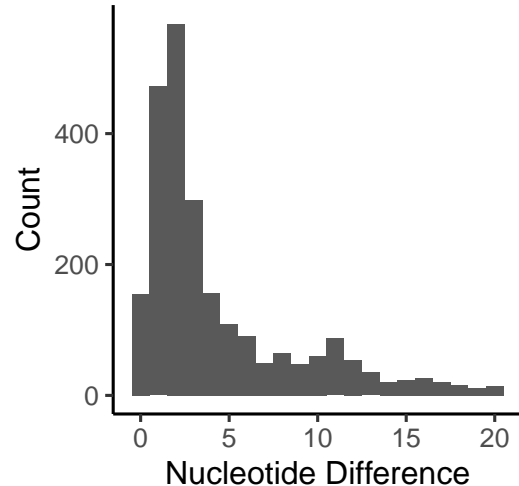
IGHV3-30*04

854 sequences assigned
32 (3.7%) exact matches, in which:
31 unique CDR3
5 unique J



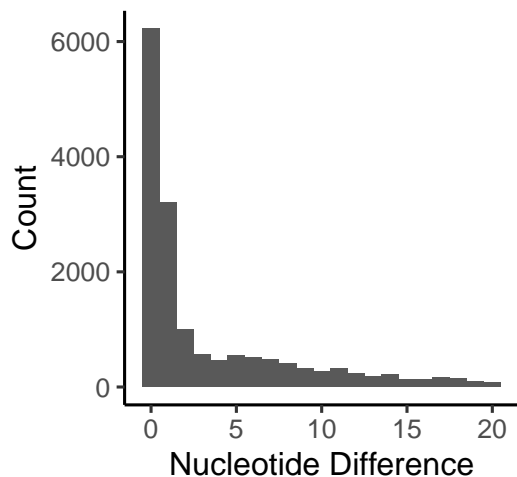
IGHV3-33*06

2529 sequences assigned
155 (6.1%) exact matches, in which:
154 unique CDR3
6 unique J



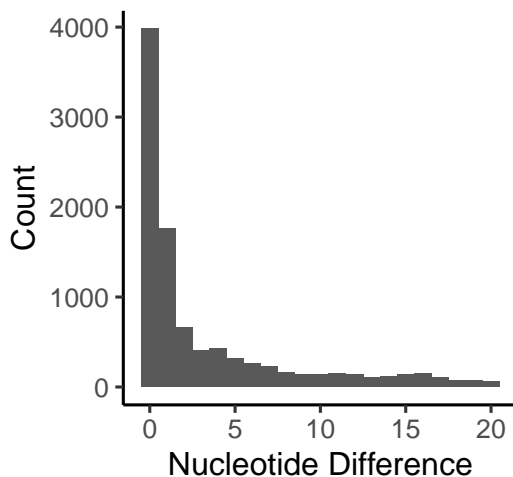
IGHV3-30-3*01

16871 sequences assigned
6223 (36.9%) exact matches, in which:
4166 unique CDR3
6 unique J



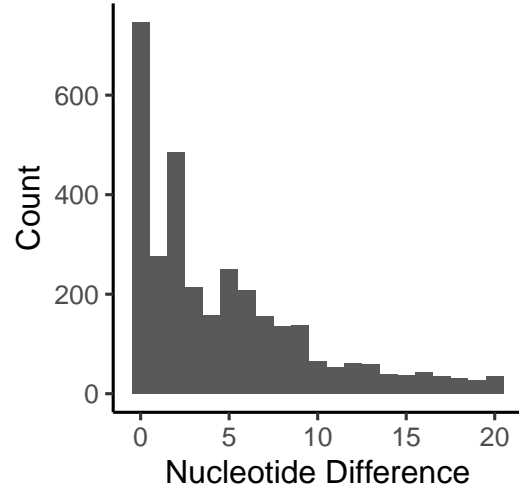
IGHV3-33*01

10091 sequences assigned
3982 (39.5%) exact matches, in which:
2829 unique CDR3
6 unique J



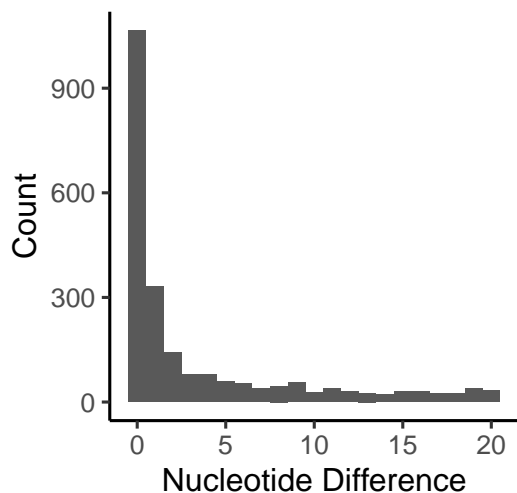
IGHV3-33*08

3424 sequences assigned
747 (21.8%) exact matches, in which:
671 unique CDR3
6 unique J



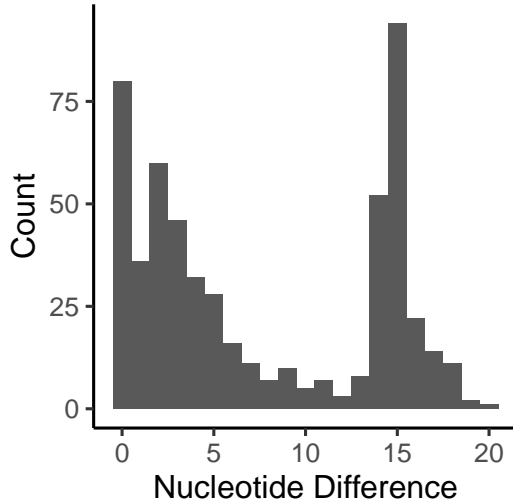
IGHV3-30*03

2457 sequences assigned
1066 (43.4%) exact matches, in which:
982 unique CDR3
6 unique J



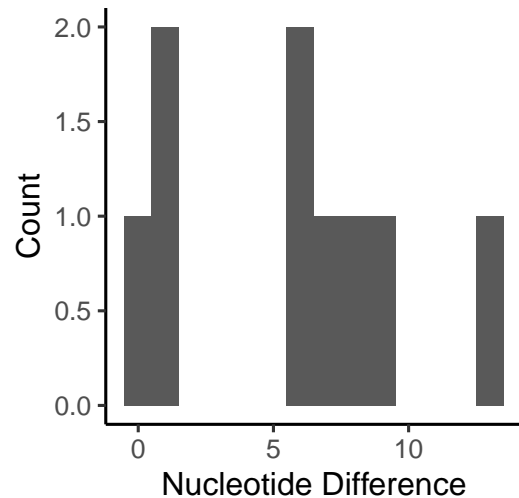
IGHV3-33*05

631 sequences assigned
80 (12.7%) exact matches, in which:
79 unique CDR3
5 unique J



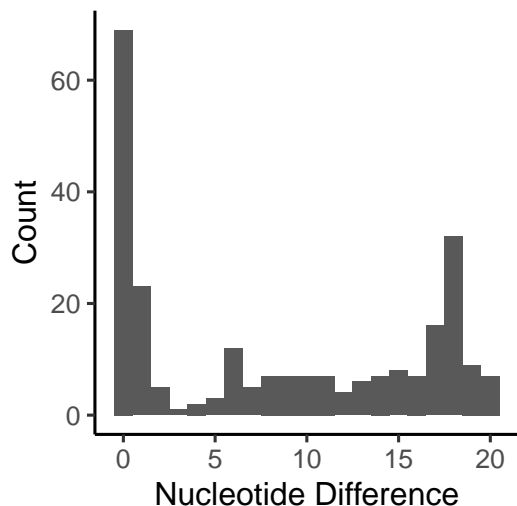
IGHV3-35*01

9 sequences assigned
1 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



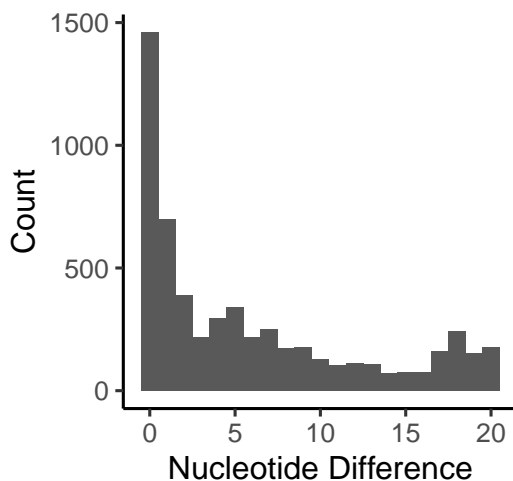
IGHV3-43*01

272 sequences assigned
69 (25.4%) exact matches, in which:
45 unique CDR3
4 unique J



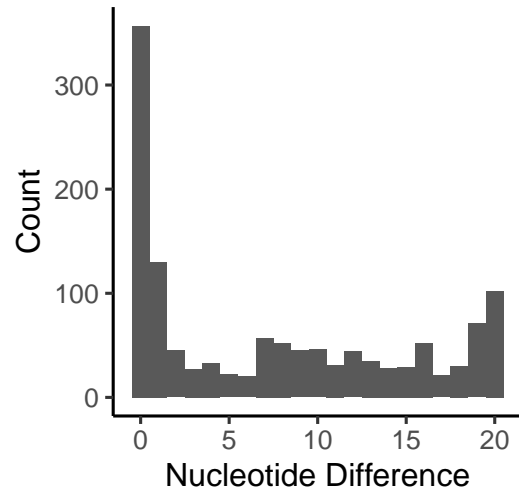
IGHV3-48*01

6554 sequences assigned
1460 (22.3%) exact matches, in which:
1036 unique CDR3
6 unique J



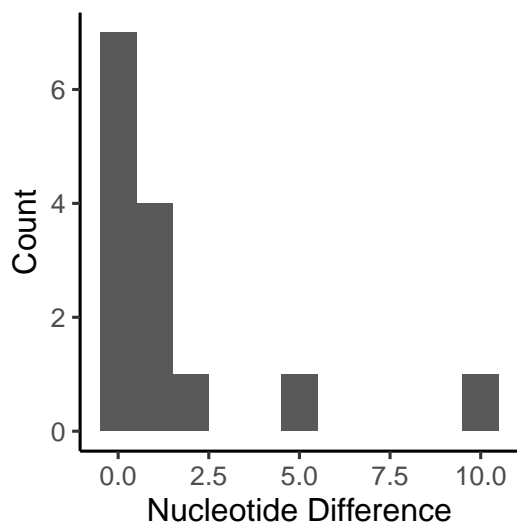
IGHV3-49*04

1585 sequences assigned
357 (22.5%) exact matches, in which:
251 unique CDR3
5 unique J



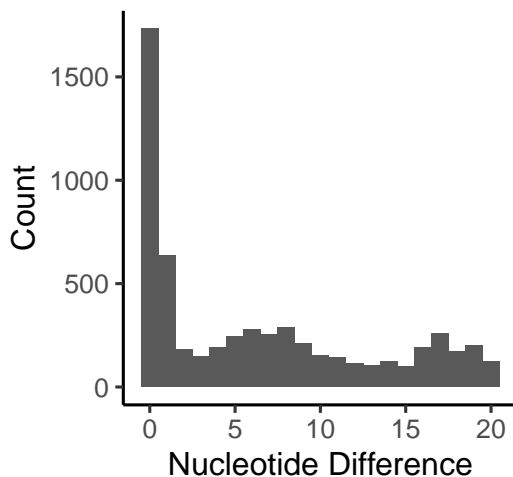
IGHV3-47*01

14 sequences assigned
7 (50%) exact matches, in which:
5 unique CDR3
2 unique J



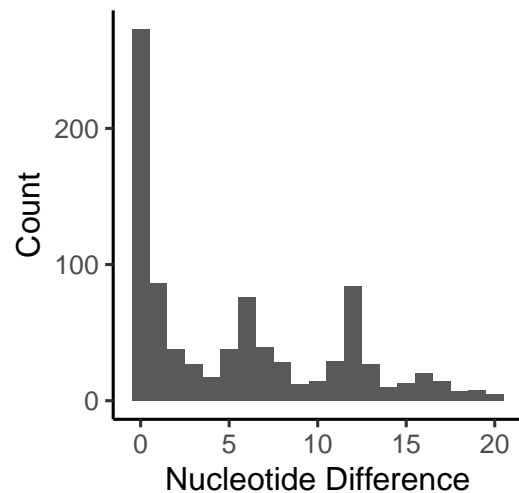
IGHV3-48*03

6929 sequences assigned
1733 (25%) exact matches, in which:
1163 unique CDR3
6 unique J



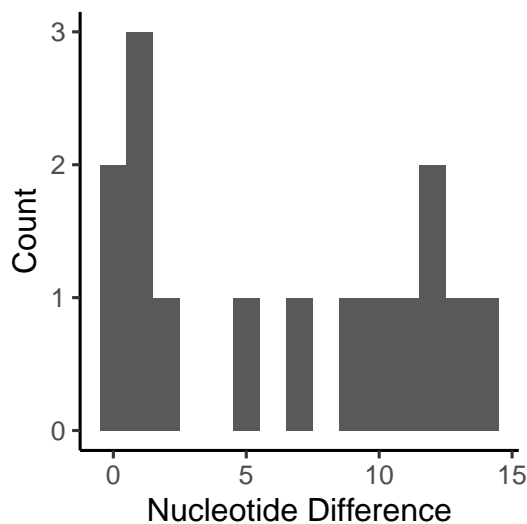
IGHV3-49*03_05

956 sequences assigned
273 (28.6%) exact matches, in which:
196 unique CDR3
5 unique J



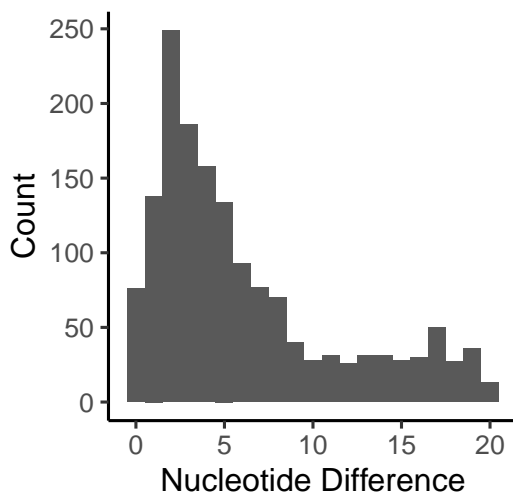
IGHV3-47*02

15 sequences assigned
2 (13.3%) exact matches, in which:
1 unique CDR3
1 unique J



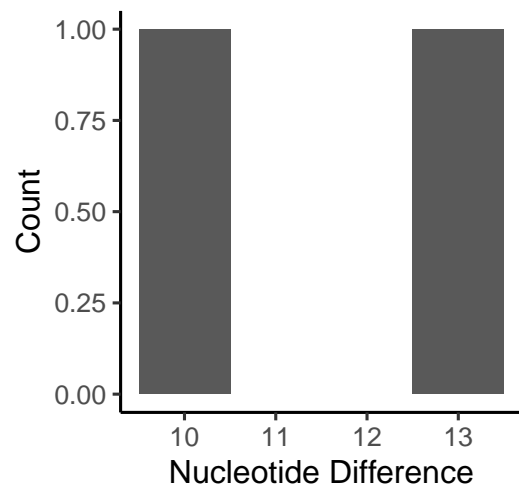
IGHV3-48*04

1687 sequences assigned
76 (4.5%) exact matches, in which:
76 unique CDR3
5 unique J



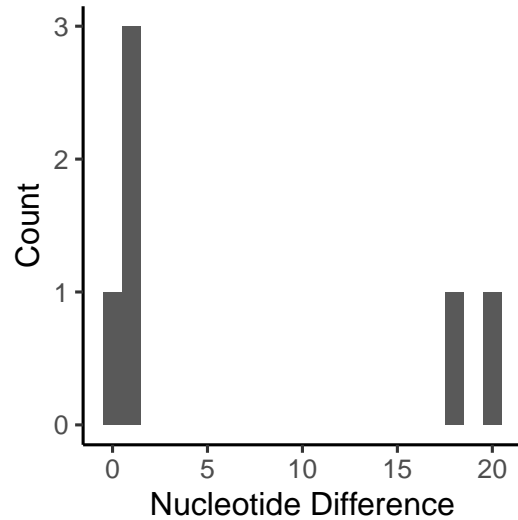
IGHV3-52*02

2 sequences assigned
No exact matches.



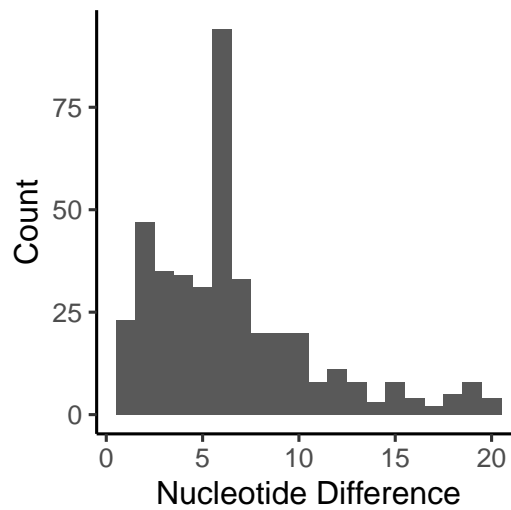
IGHV3-52*01_03

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



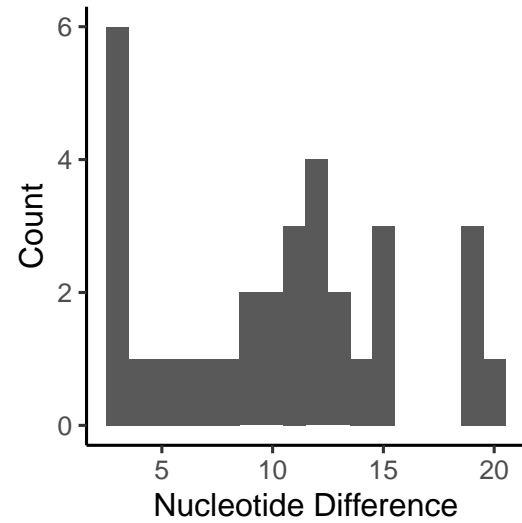
IGHV3-64*04

479 sequences assigned
No exact matches.



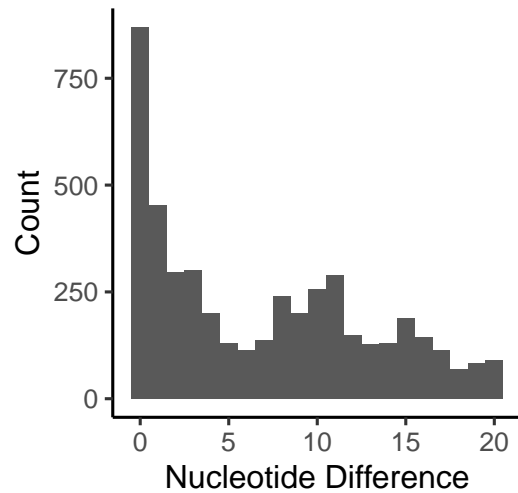
IGHV3-69-1*01

87 sequences assigned
No exact matches.



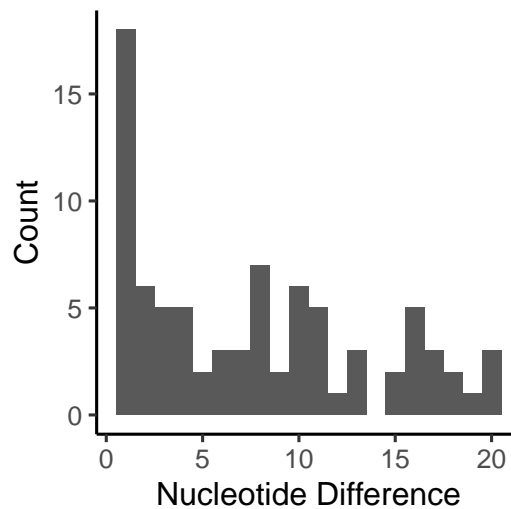
IGHV3-53*01_02

5201 sequences assigned
870 (16.7%) exact matches, in which:
623 unique CDR3
6 unique J



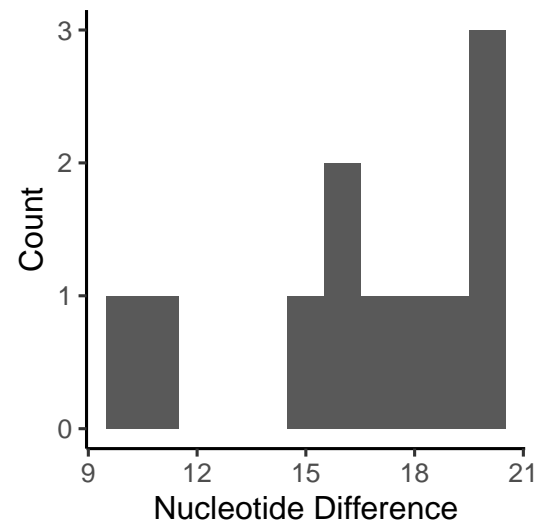
IGHV3-66*01

90 sequences assigned
No exact matches.



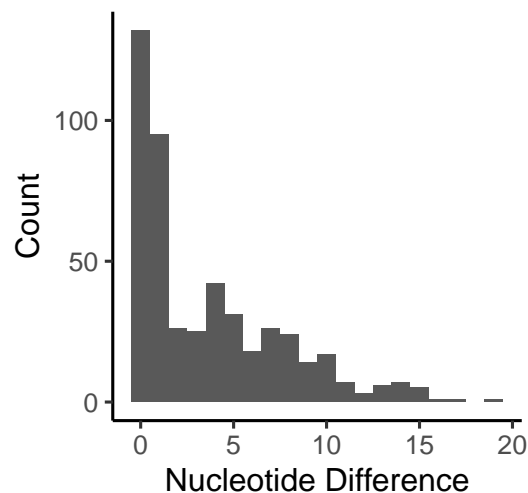
IGHV3-69-1*02

41 sequences assigned
No exact matches.



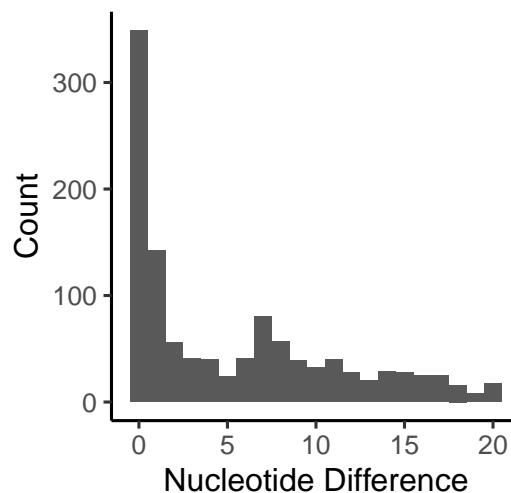
IGHV3-64*01

495 sequences assigned
132 (26.7%) exact matches, in which:
88 unique CDR3
5 unique J



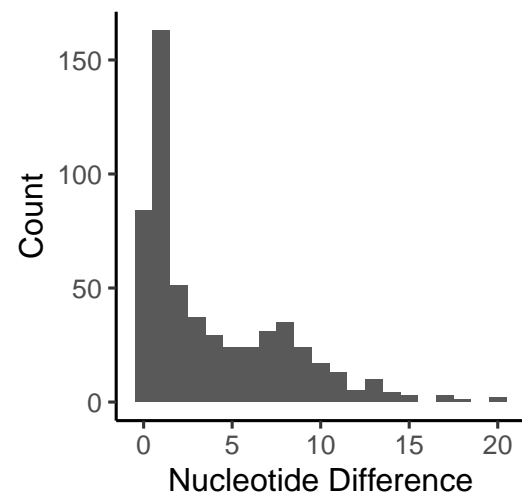
IGHV3-66*02

1240 sequences assigned
349 (28.1%) exact matches, in which:
257 unique CDR3
6 unique J



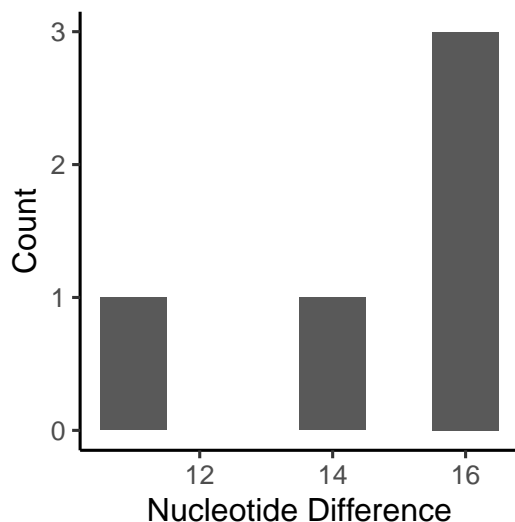
IGHV3-69-1*01_T112A_

565 sequences assigned
84 (14.9%) exact matches, in which:
44 unique CDR3
4 unique J



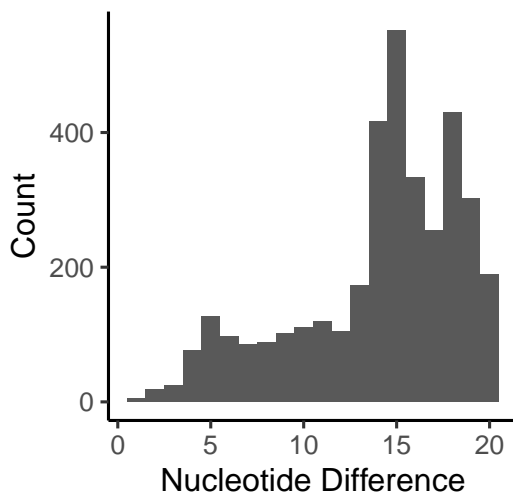
IGHV3-71*01_04

7 sequences assigned
No exact matches.



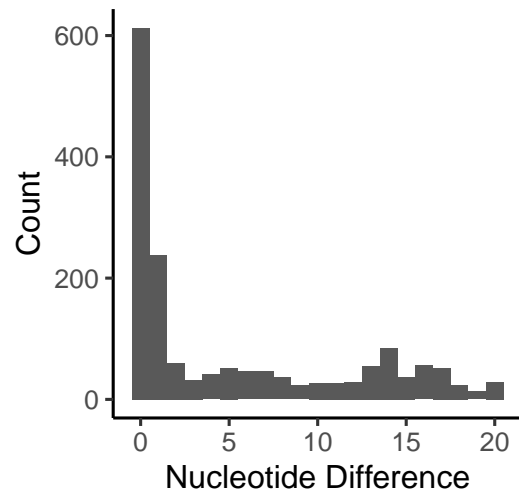
IGHV3-74*03

4394 sequences assigned
No exact matches.



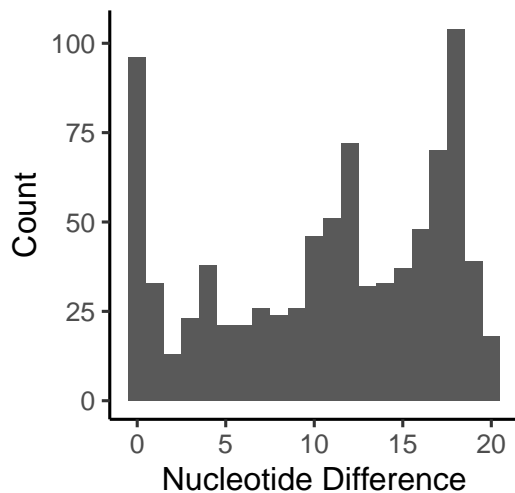
IGHV3-64D*08

2185 sequences assigned
613 (28.1%) exact matches, in which:
374 unique CDR3
6 unique J



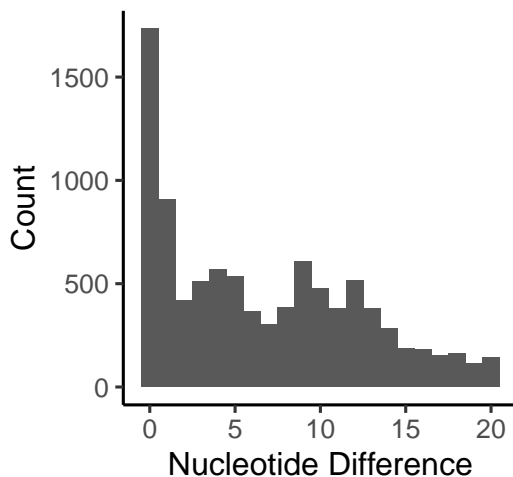
IGHV3-72*01

1141 sequences assigned
96 (8.4%) exact matches, in which:
69 unique CDR3
5 unique J



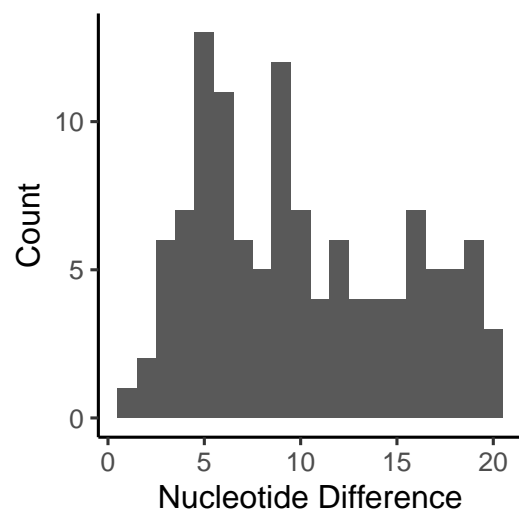
IGHV3-74*01_02

9958 sequences assigned
1734 (17.4%) exact matches, in which:
1167 unique CDR3
6 unique J



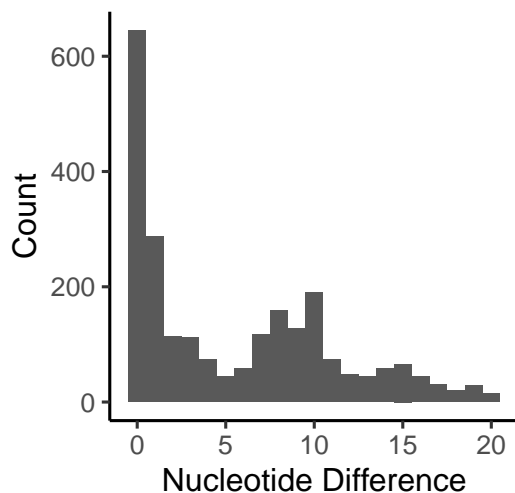
IGHV3-NL1*01

137 sequences assigned
No exact matches.



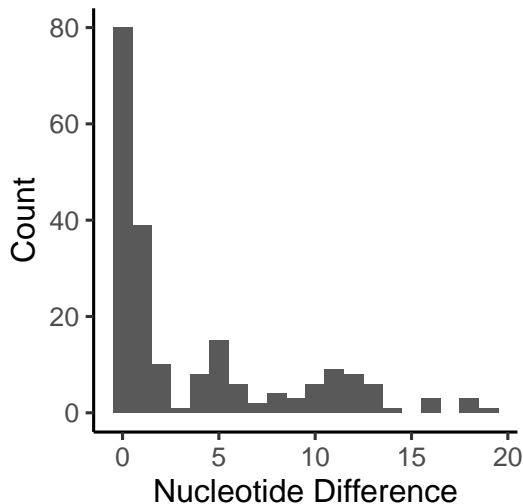
IGHV3-73*01_02

2566 sequences assigned
645 (25.1%) exact matches, in which:
436 unique CDR3
6 unique J



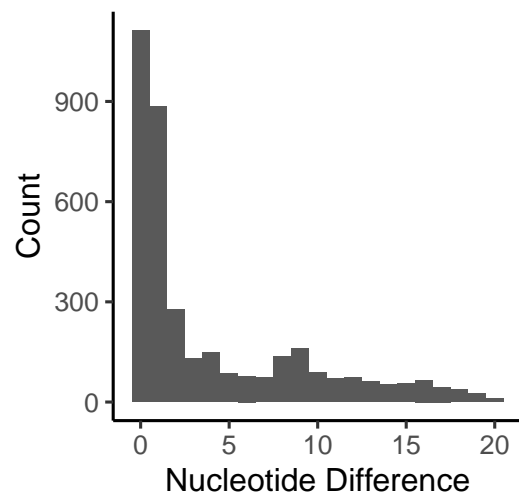
IGHV3-43D*04

215 sequences assigned
80 (37.2%) exact matches, in which:
50 unique CDR3
4 unique J



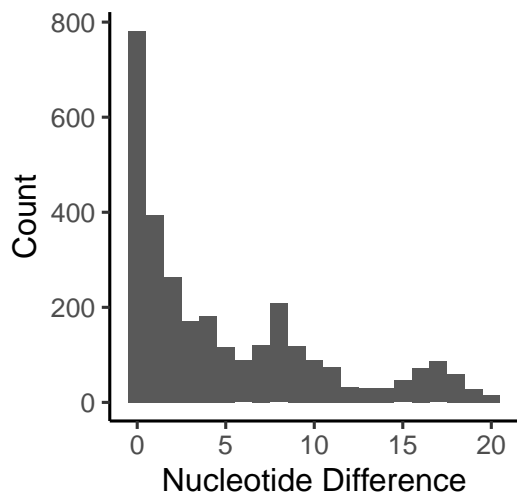
IGHV4-4*07

4197 sequences assigned
1113 (26.5%) exact matches, in which:
1005 unique CDR3
6 unique J



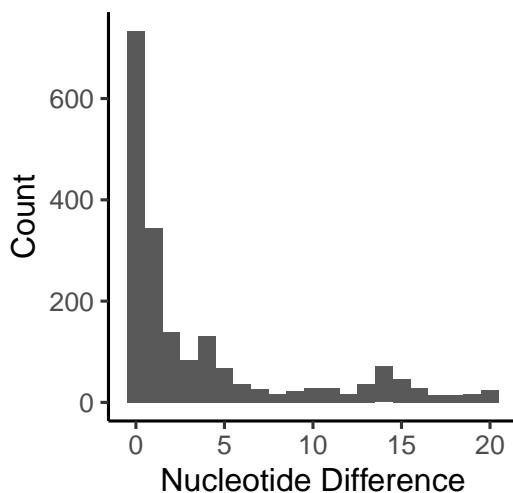
IGHV4-4*02_03

3158 sequences assigned
782 (24.8%) exact matches, in which:
716 unique CDR3
6 unique J



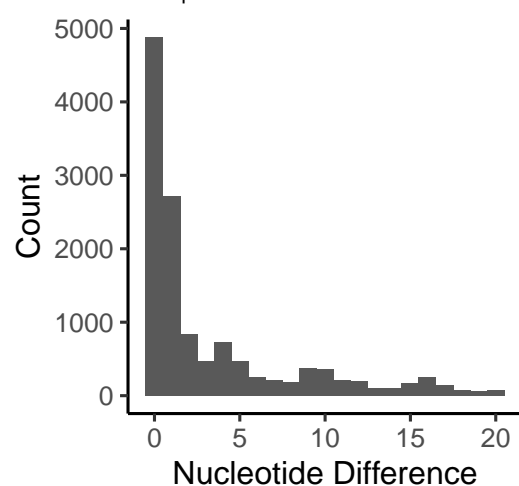
IGHV4-30-2*01

2097 sequences assigned
734 (35%) exact matches, in which:
582 unique CDR3
6 unique J



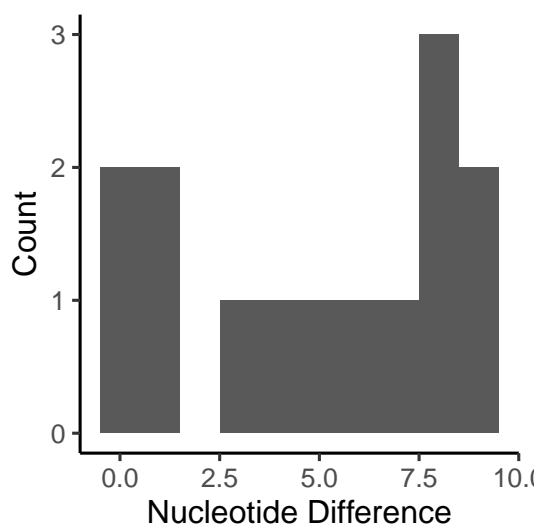
IGHV4-34*01_02

14426 sequences assigned
4878 (33.8%) exact matches, in which:
4300 unique CDR3
6 unique J



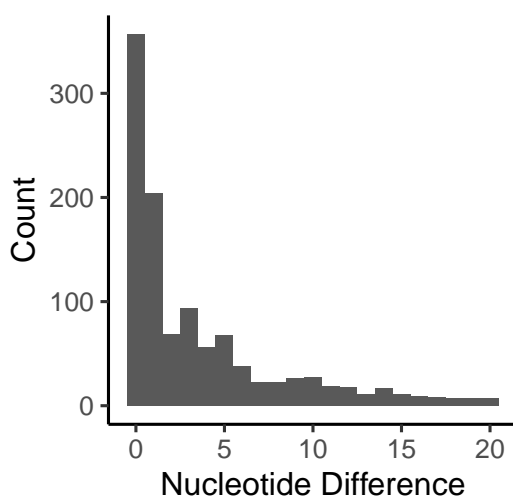
IGHV4-28*03

16 sequences assigned
2 (12.5%) exact matches, in which:
2 unique CDR3
1 unique J



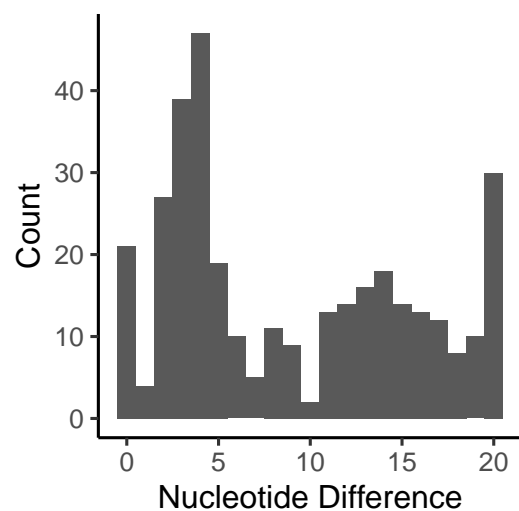
IGHV4-30-4*01

1368 sequences assigned
357 (26.1%) exact matches, in which:
328 unique CDR3
6 unique J



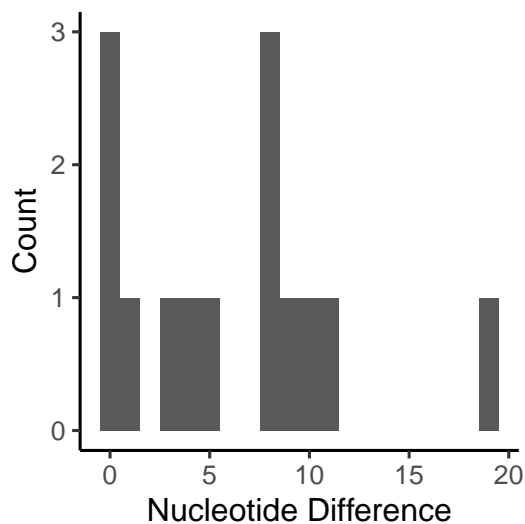
IGHV4-38-2*02

590 sequences assigned
21 (3.6%) exact matches, in which:
21 unique CDR3
4 unique J



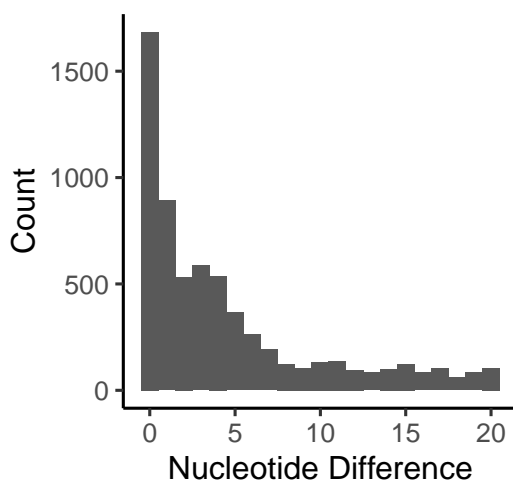
IGHV4-28*01_07

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



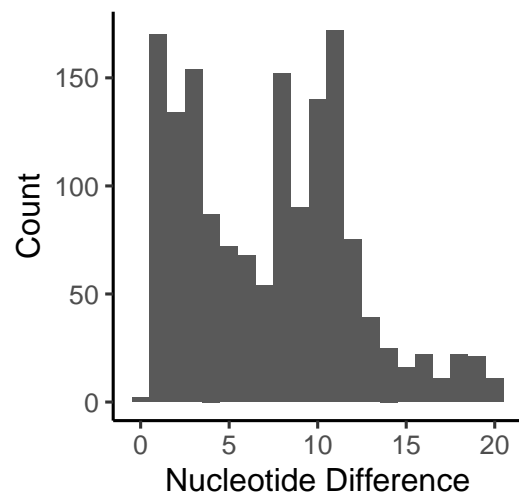
IGHV4-31*02

6672 sequences assigned
1684 (25.2%) exact matches, in which:
1550 unique CDR3
6 unique J



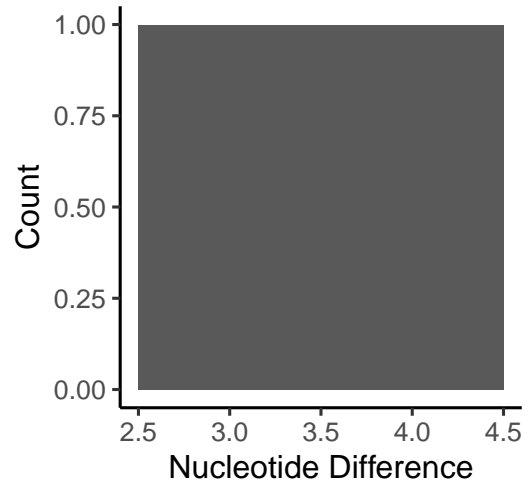
IGHV4-39*07

2068 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
1 unique J



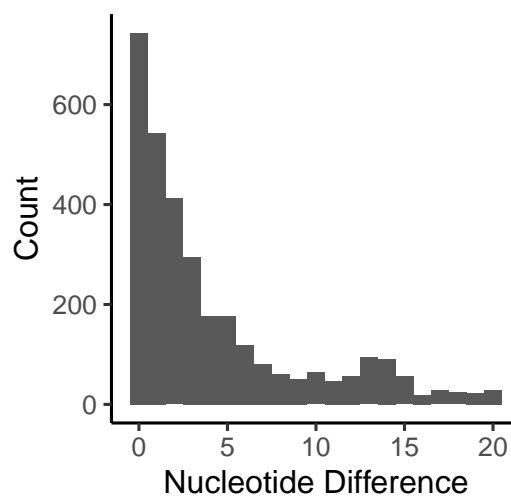
IGHV4-55*09

2 sequences assigned
No exact matches.



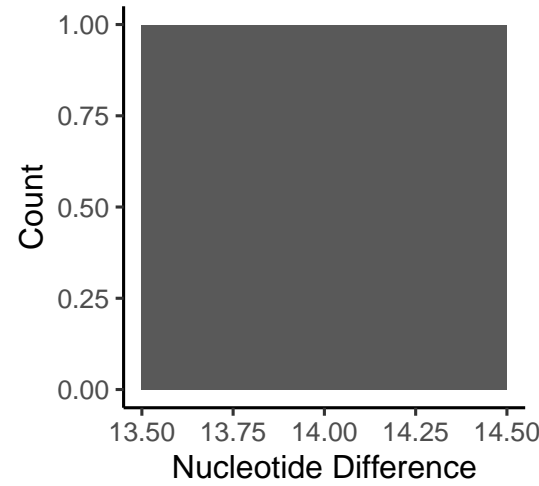
IGHV4-61*01

3306 sequences assigned
744 (22.5%) exact matches, in which:
696 unique CDR3
6 unique J



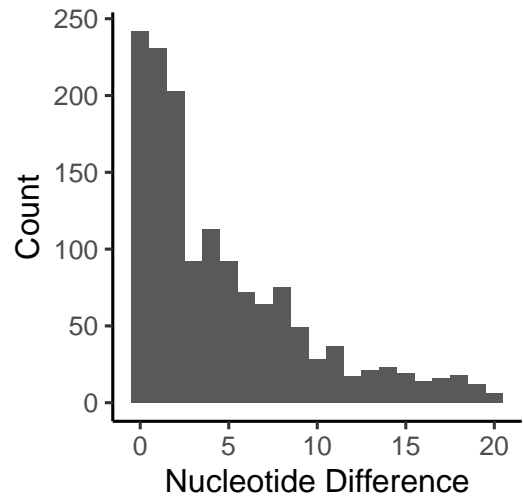
IGHV1/OR15-1*04

2 sequences assigned
No exact matches.



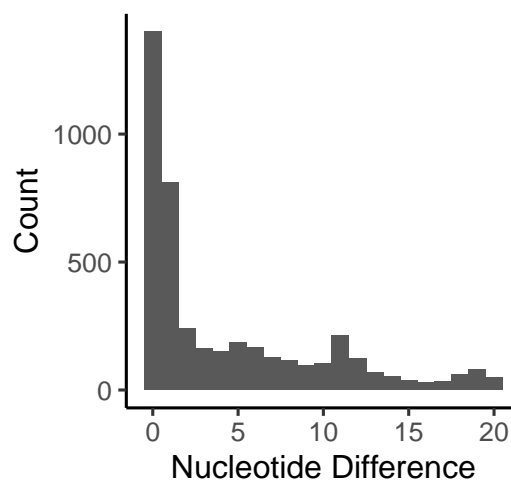
IGHV4-59*08

1520 sequences assigned
242 (15.9%) exact matches, in which:
241 unique CDR3
6 unique J



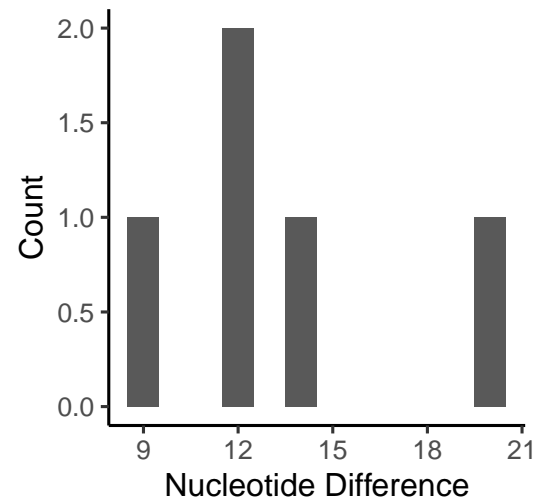
IGHV4-61*02

5281 sequences assigned
1400 (26.5%) exact matches, in which:
1318 unique CDR3
6 unique J



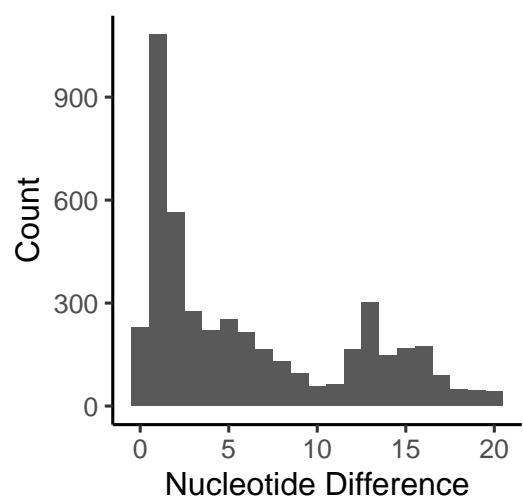
IGHV1/OR15-2*02_03

7 sequences assigned
No exact matches.



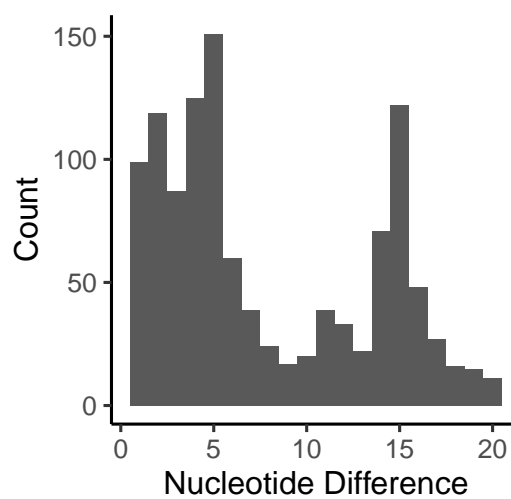
IGHV4-59*12

4800 sequences assigned
230 (4.8%) exact matches, in which:
227 unique CDR3
6 unique J



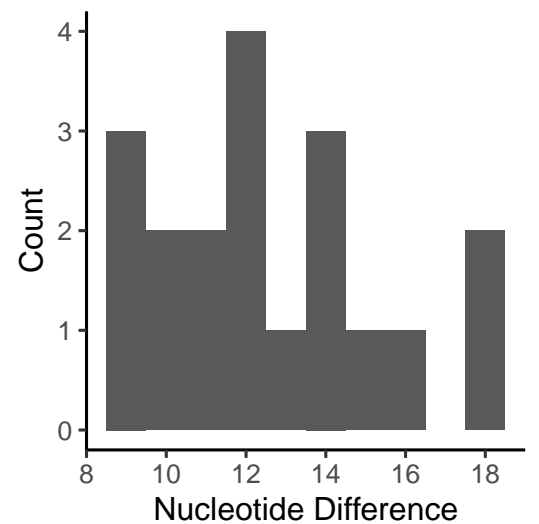
IGHV4-61*08

1203 sequences assigned
No exact matches.



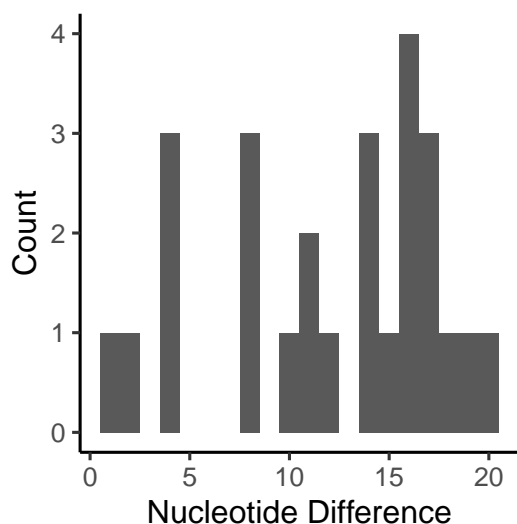
IGHV1/OR15-3*02

31 sequences assigned
No exact matches.



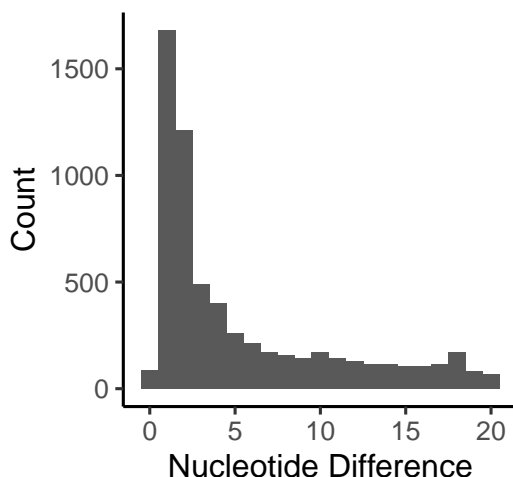
IGHV4/OR15–8*01

37 sequences assigned
No exact matches.



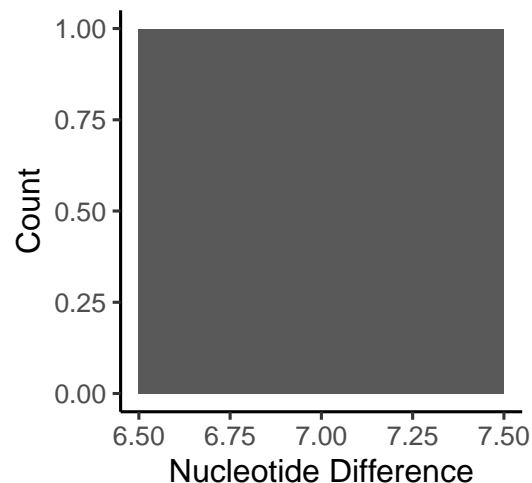
IGHV5–51*07

6531 sequences assigned
87 (1.3%) exact matches, in which:
79 unique CDR3
5 unique J



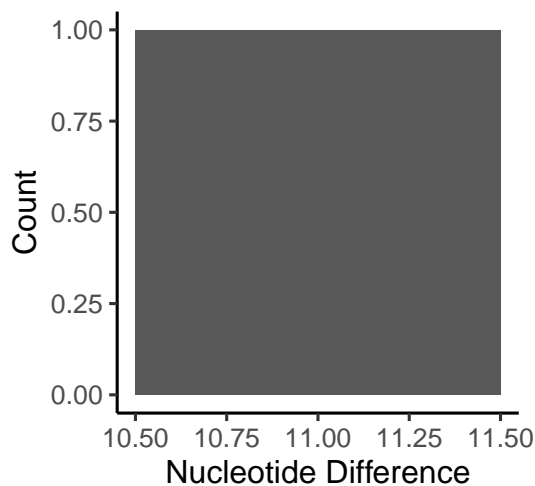
IGHV3/OR16–6*02

1 sequences assigned
No exact matches.



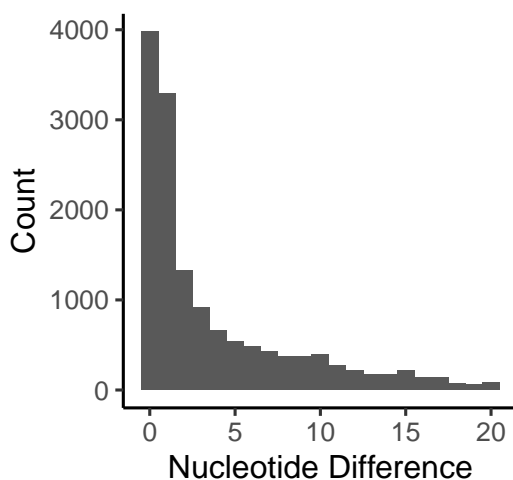
IGHV1/OR15–9*01

1 sequences assigned
No exact matches.



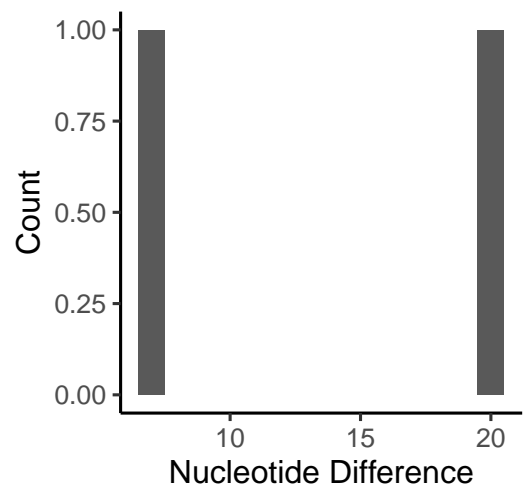
IGHV5–51*01_03

15016 sequences assigned
3978 (26.5%) exact matches, in which:
2507 unique CDR3
6 unique J



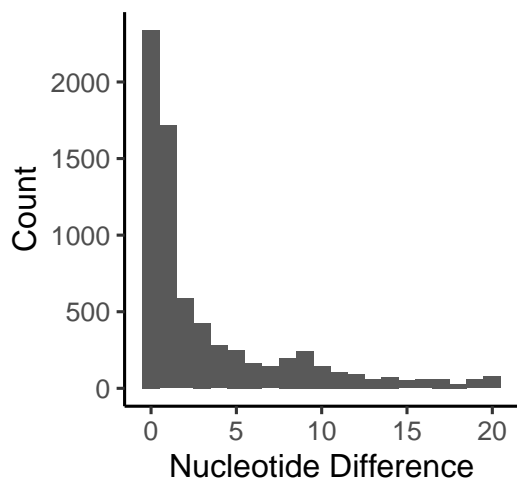
IGHV3/OR16–13*01

4 sequences assigned
No exact matches.



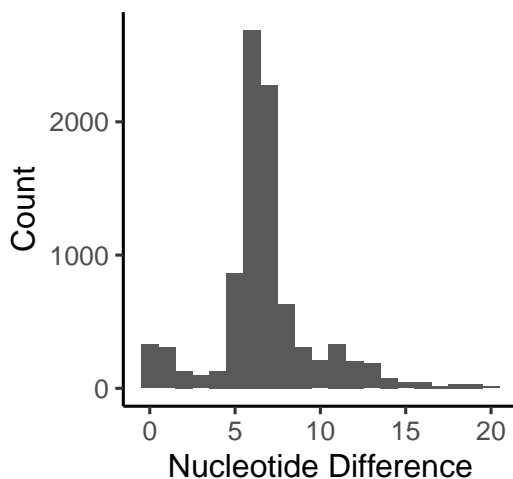
IGHV5–10–1*01_03

7370 sequences assigned
2339 (31.7%) exact matches, in which:
1608 unique CDR3
6 unique J



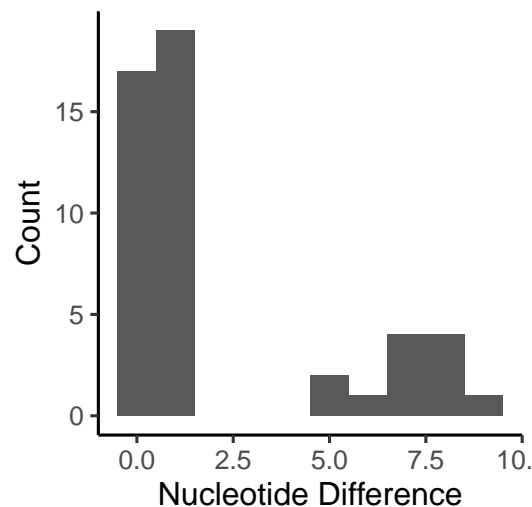
IGHV6–1*01_02

9199 sequences assigned
329 (3.6%) exact matches, in which:
293 unique CDR3
6 unique J

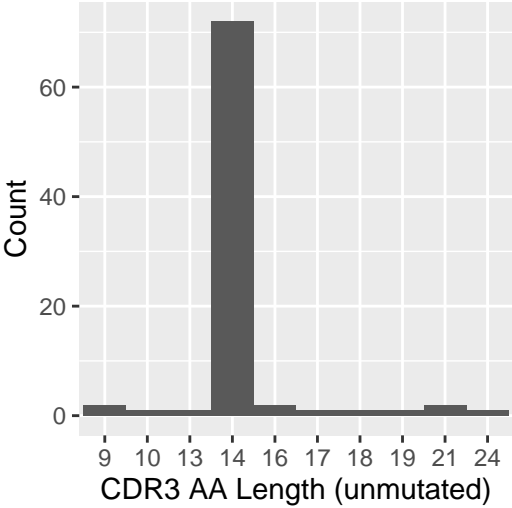


IGHV7–4–1*01

48 sequences assigned
17 (35.4%) exact matches, in which:
15 unique CDR3
4 unique J



IGHV3-69-1*01_T112A_A113G_G147A_G157A_C165A_G188A_A190T_C191A_C198T_A200C_





[illegible]