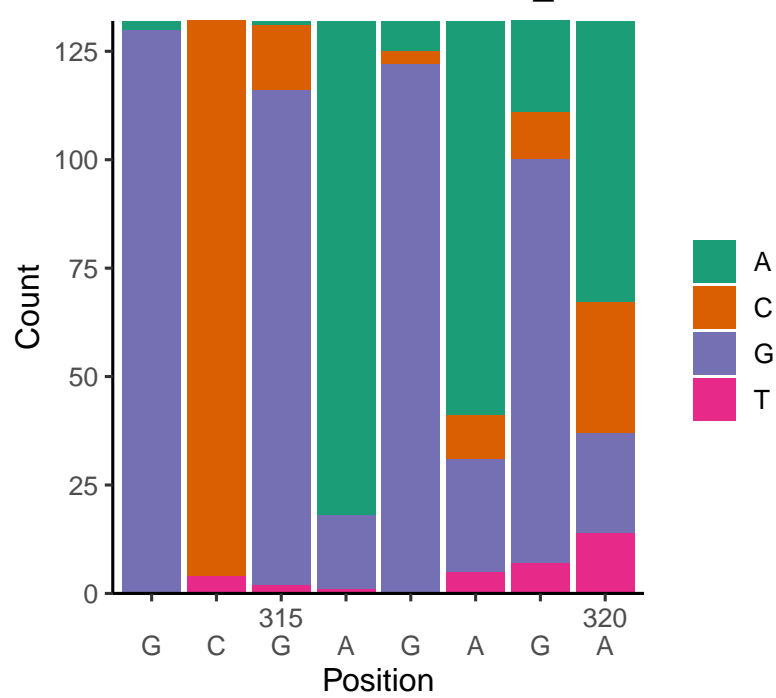
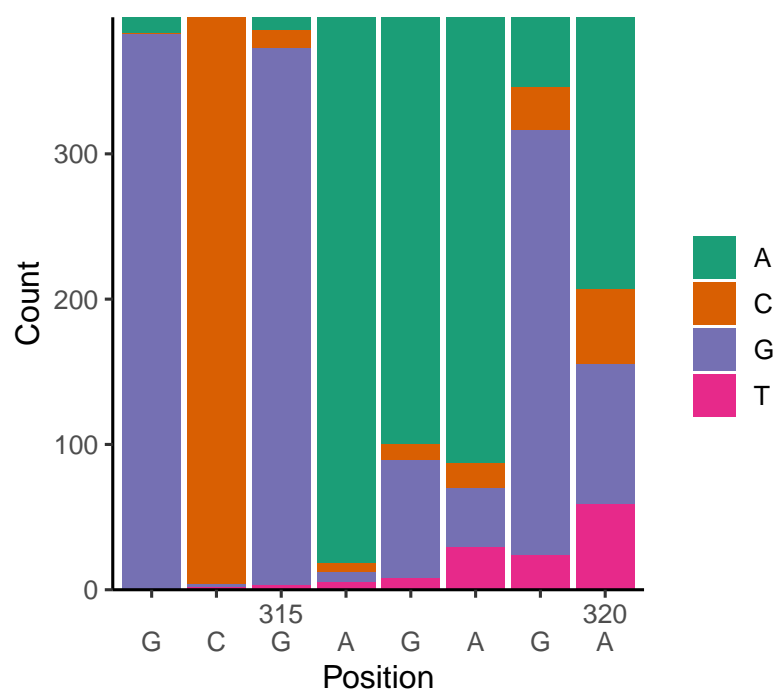


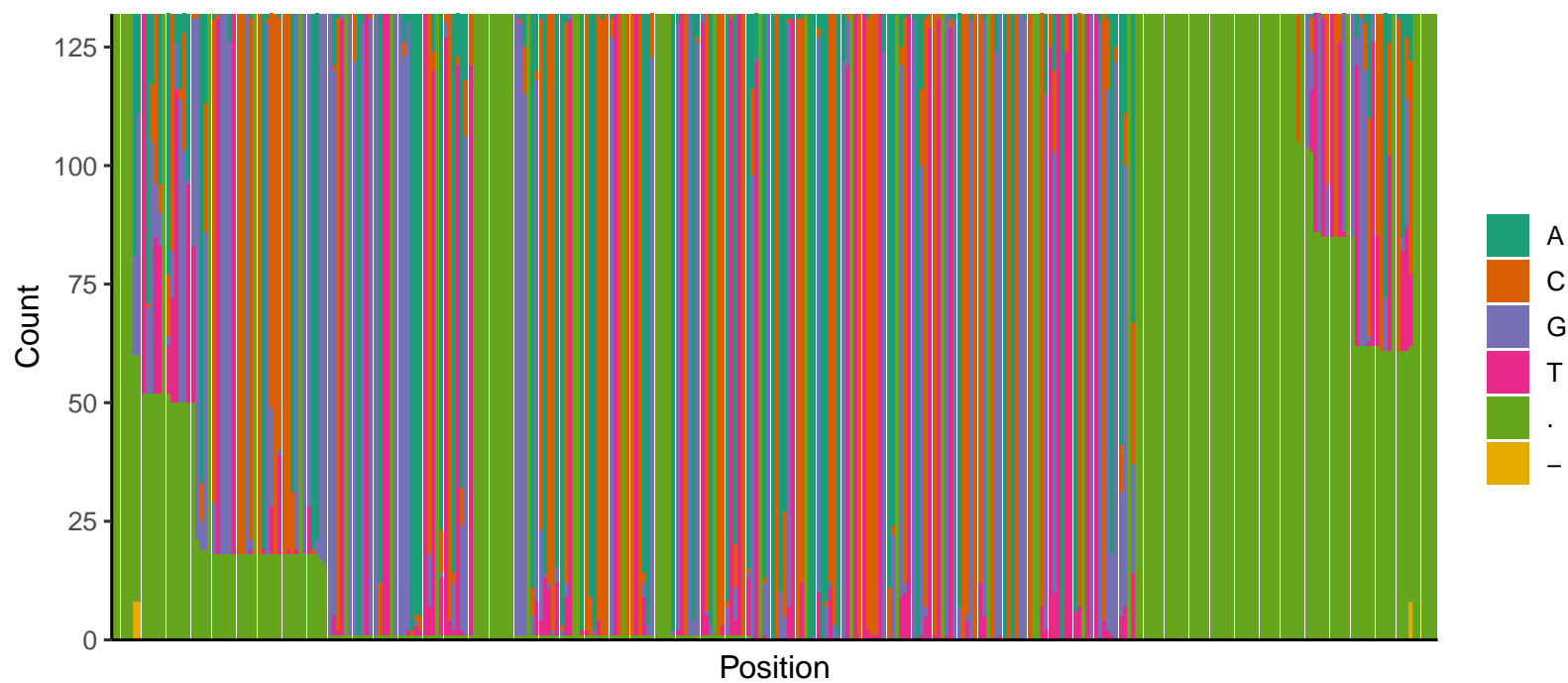
Gene IGHV4/OR15-8*01_C193A



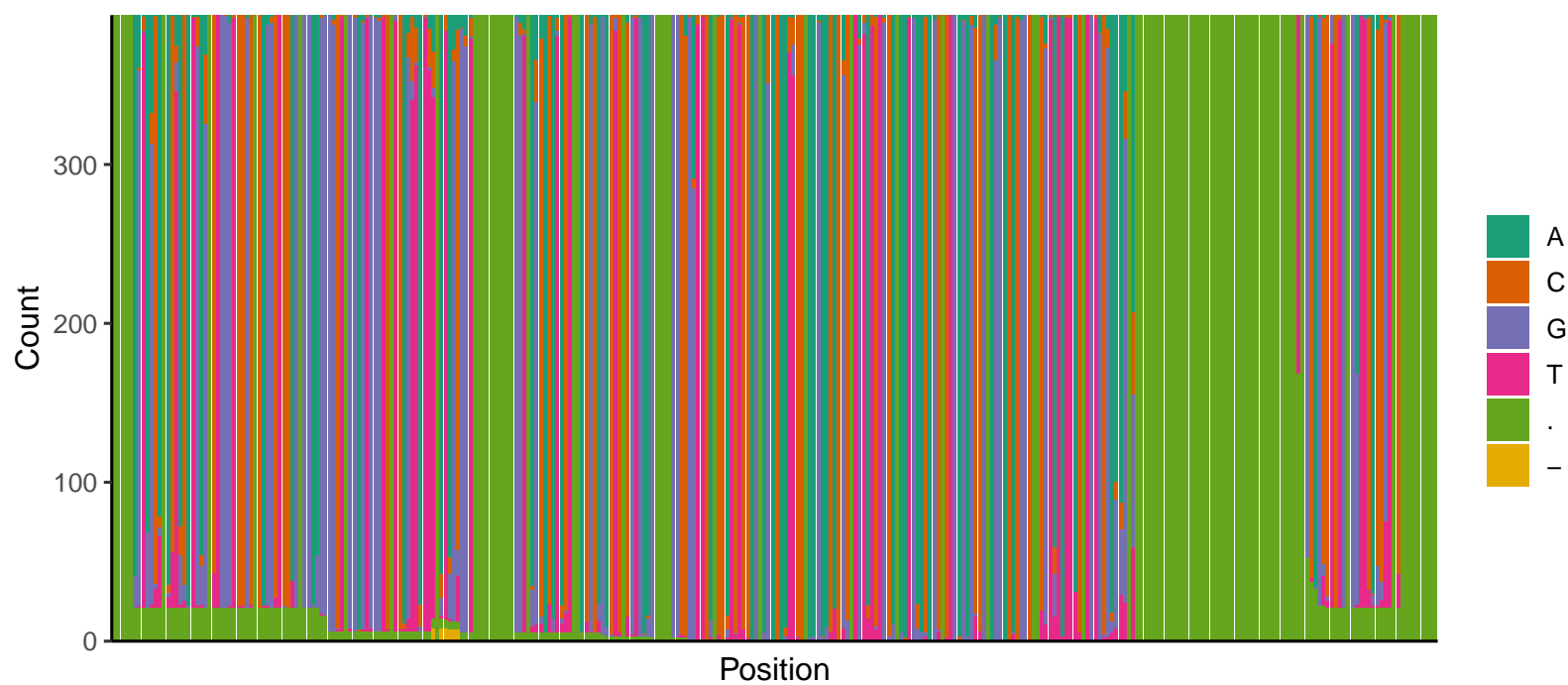
Gene IGHV3-53*01_02_A225G_T267G_G303A



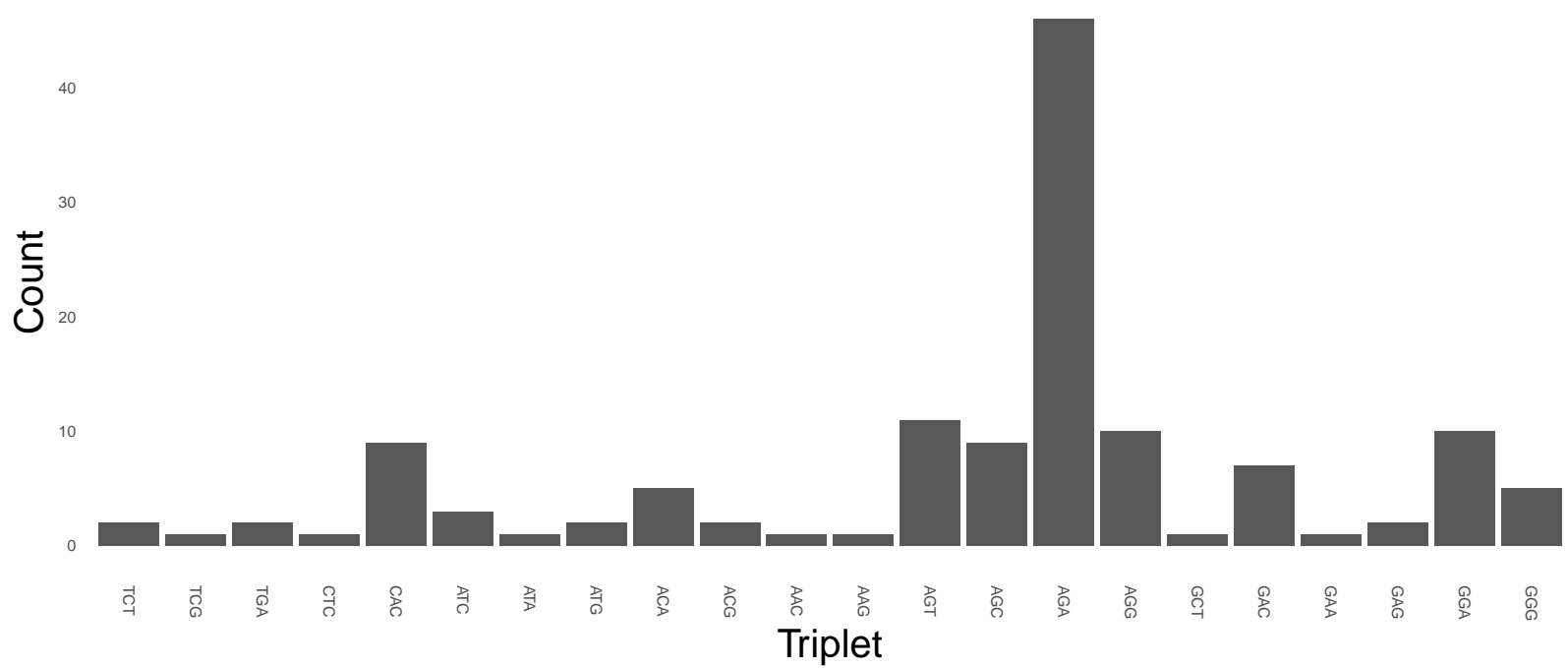
Gene IGHV4/OR15-8*01_C193A



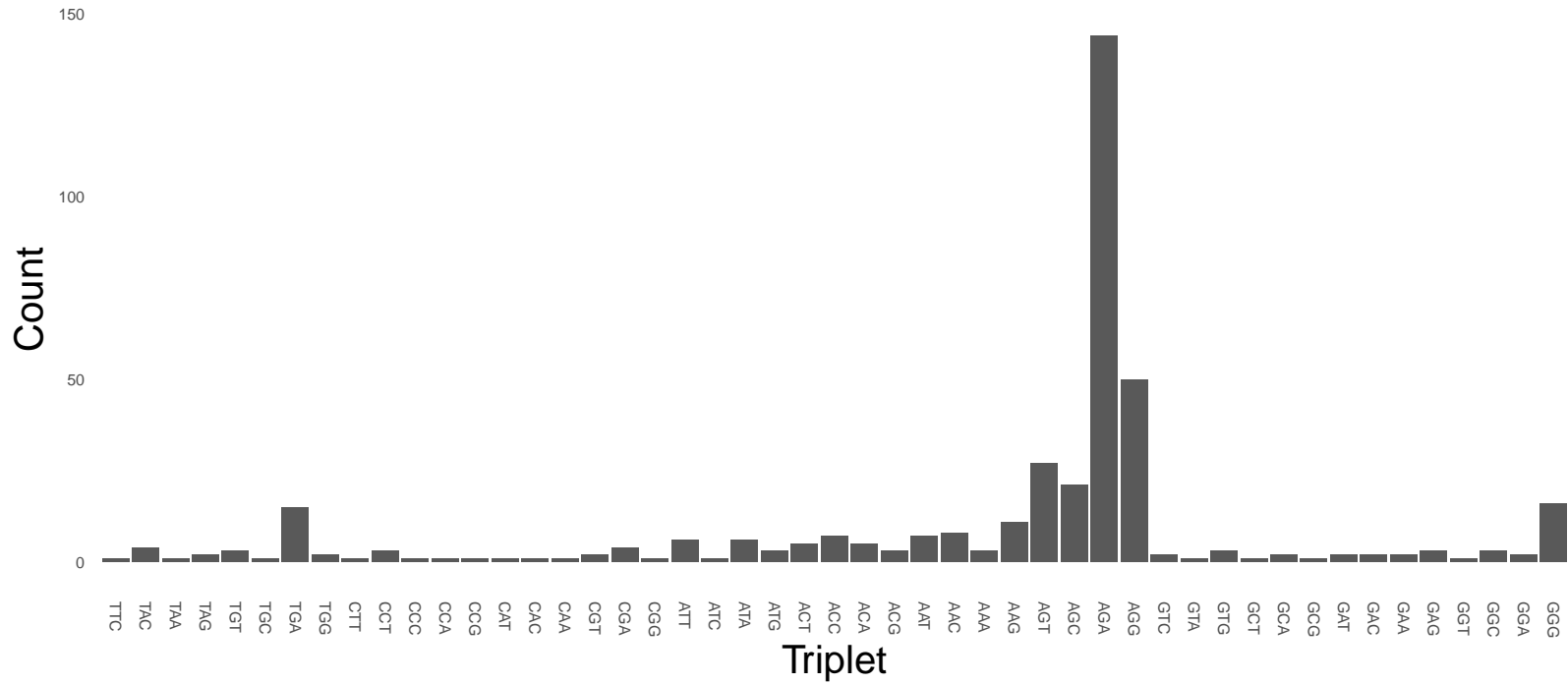
Gene IGHV3-53*01_02_A225G_T267G_G303A



IGHV4/OR15–8*01_C193A– Final 3 nucleotides as a triplet

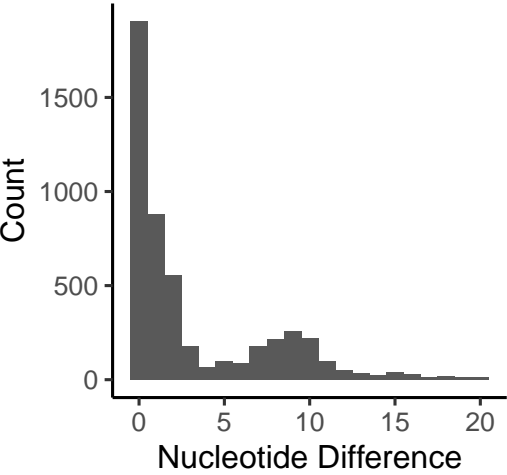


IGHV3–53*01_02_A225G_T267G_G303A– Final 3 nucleotides as a triplet



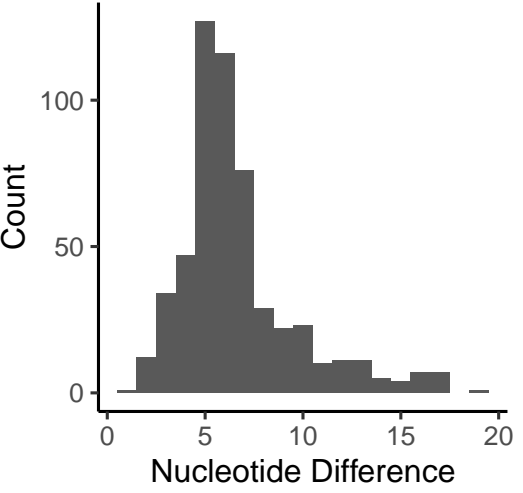
IGHV1-2*04

5030 sequences assigned
1904 (37.9%) exact matches, in which:
1841 unique CDR3
6 unique J



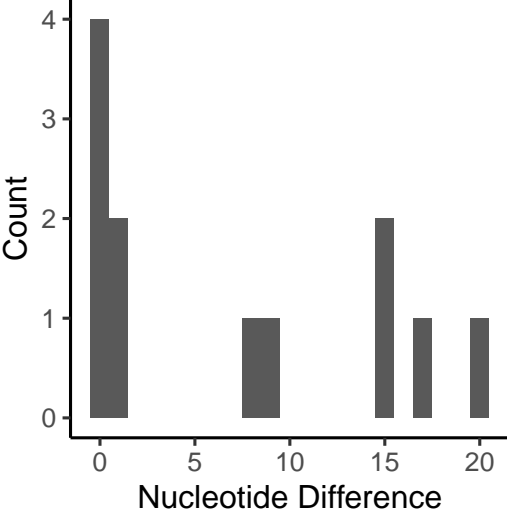
IGHV1-8*02

553 sequences assigned
No exact matches.



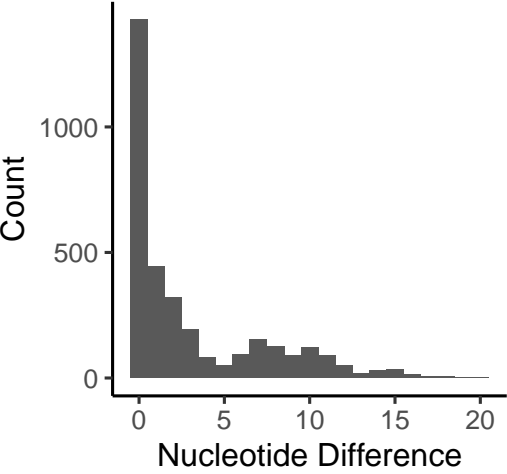
IGHV1-45*02

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



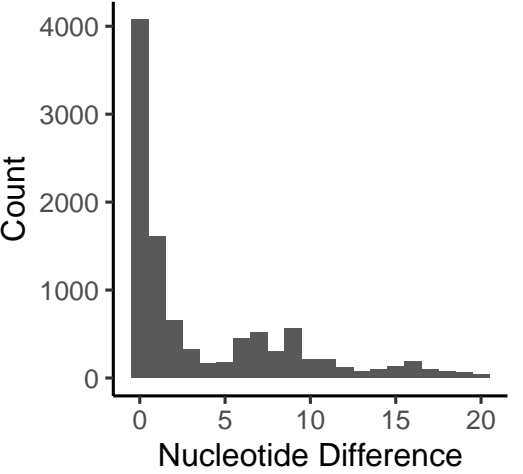
IGHV1-3*01_05

3393 sequences assigned
1427 (42.1%) exact matches, in which:
1350 unique CDR3
6 unique J



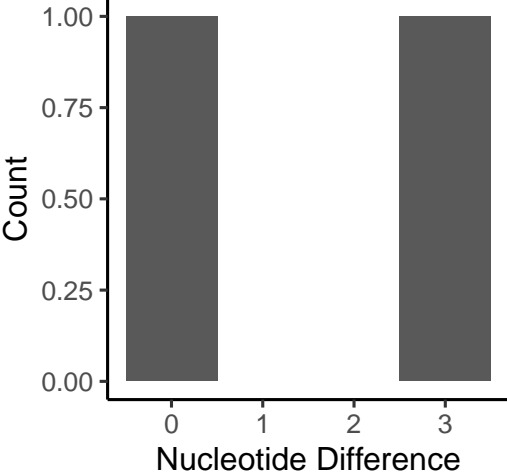
IGHV1-18*01

10681 sequences assigned
4074 (38.1%) exact matches, in which:
3943 unique CDR3
6 unique J



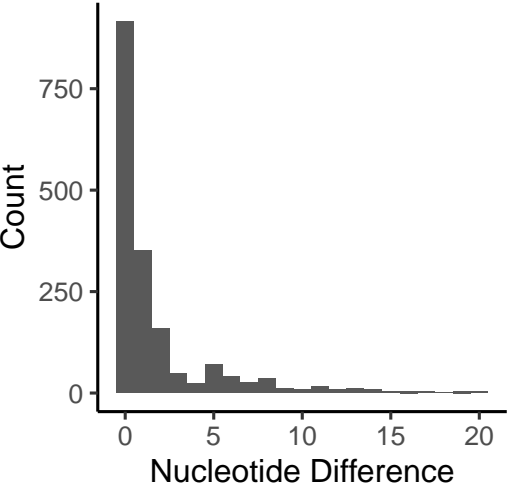
IGHV1-45*03

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



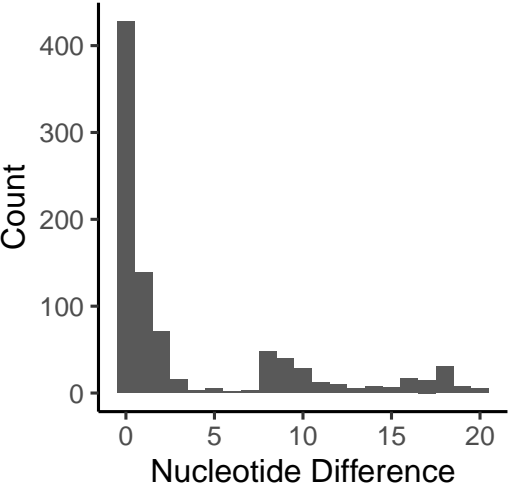
IGHV1-8*01

1784 sequences assigned
916 (51.3%) exact matches, in which:
895 unique CDR3
6 unique J



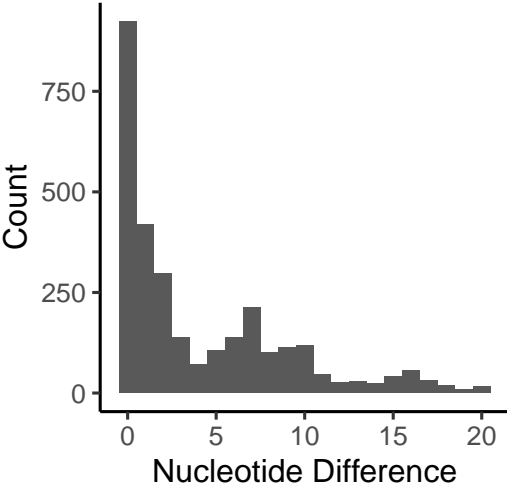
IGHV1-24*01

938 sequences assigned
428 (45.6%) exact matches, in which:
421 unique CDR3
6 unique J



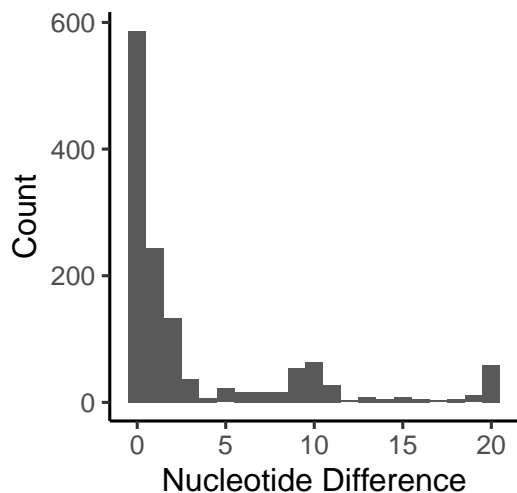
IGHV1-46*01

2986 sequences assigned
924 (30.9%) exact matches, in which:
905 unique CDR3
6 unique J



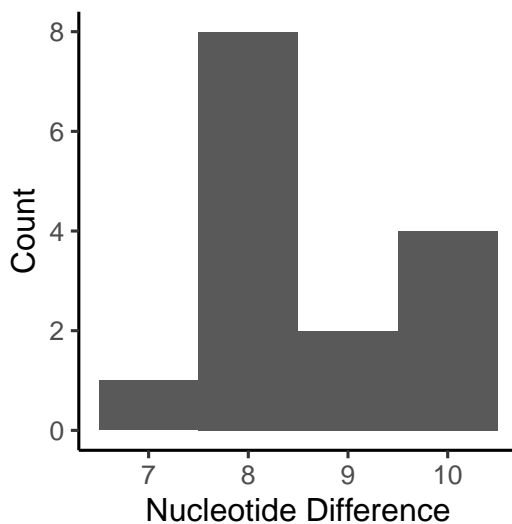
IGHV1-46*03

1601 sequences assigned
587 (36.7%) exact matches, in which:
559 unique CDR3
6 unique J



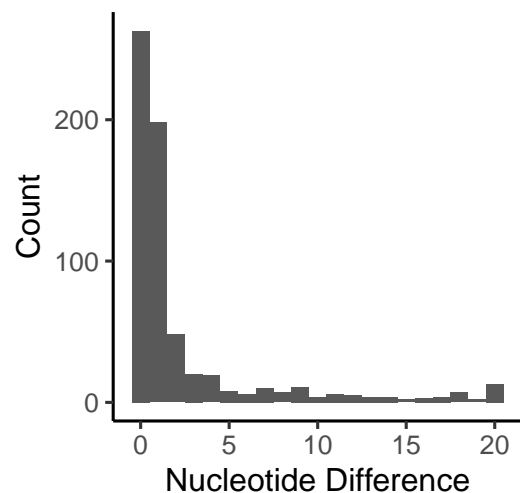
IGHV1-NL1*01

15 sequences assigned
No exact matches.



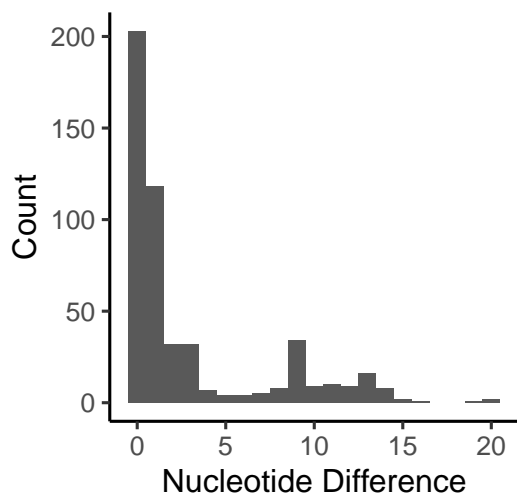
IGHV2-70*11_15

677 sequences assigned
263 (38.8%) exact matches, in which:
243 unique CDR3
6 unique J



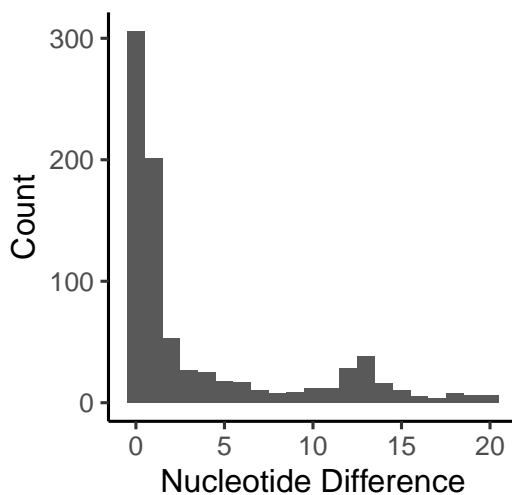
IGHV1-58*02

508 sequences assigned
203 (40%) exact matches, in which:
201 unique CDR3
5 unique J



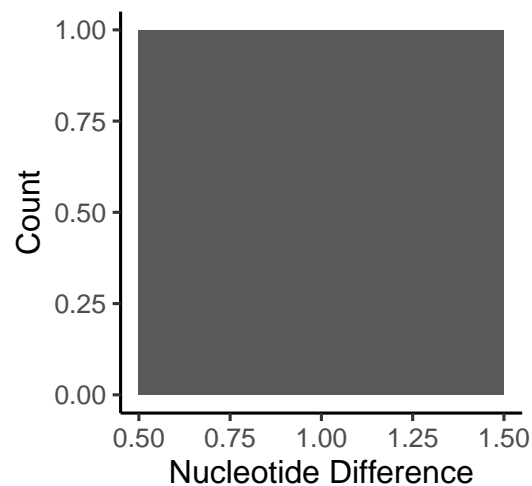
IGHV2-5*02

842 sequences assigned
306 (36.3%) exact matches, in which:
289 unique CDR3
6 unique J



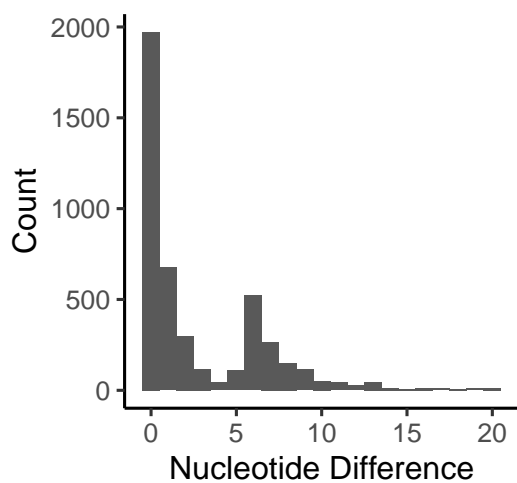
IGHV2-70D*04

2 sequences assigned
No exact matches.



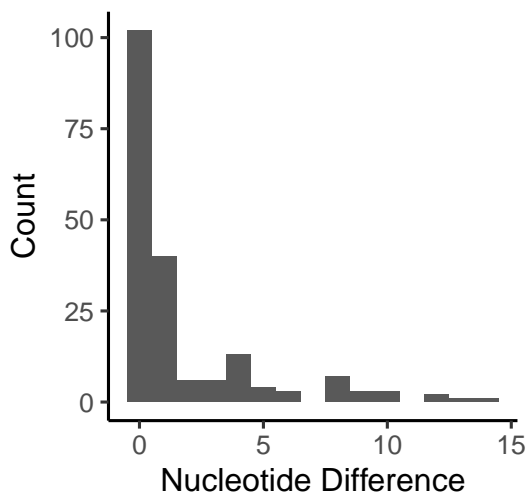
IGHV1-69*04_09

4622 sequences assigned
1972 (42.7%) exact matches, in which:
1942 unique CDR3
6 unique J



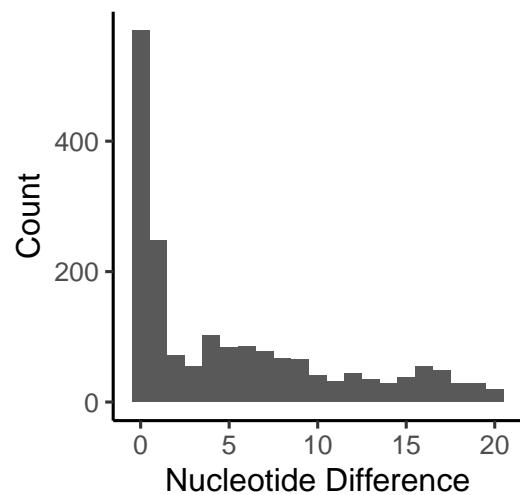
IGHV2-26*01

192 sequences assigned
102 (53.1%) exact matches, in which:
92 unique CDR3
5 unique J



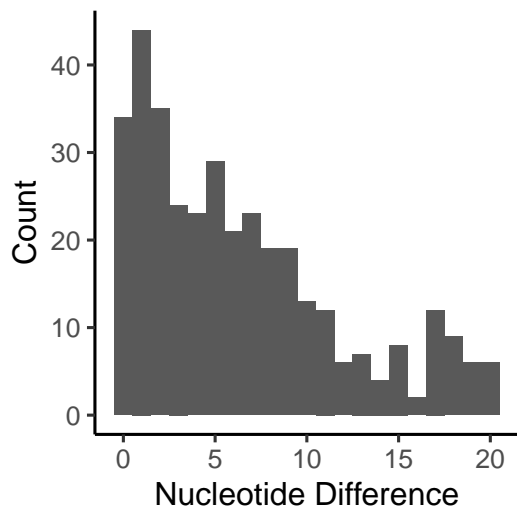
IGHV3-7*01

1956 sequences assigned
570 (29.1%) exact matches, in which:
498 unique CDR3
6 unique J



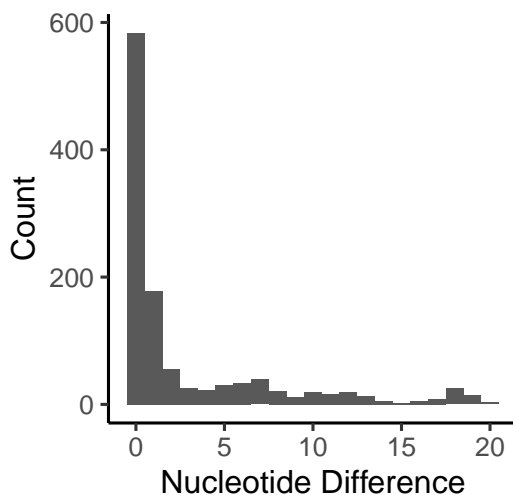
IGHV3-7*03

384 sequences assigned
34 (8.9%) exact matches, in which:
30 unique CDR3
4 unique J



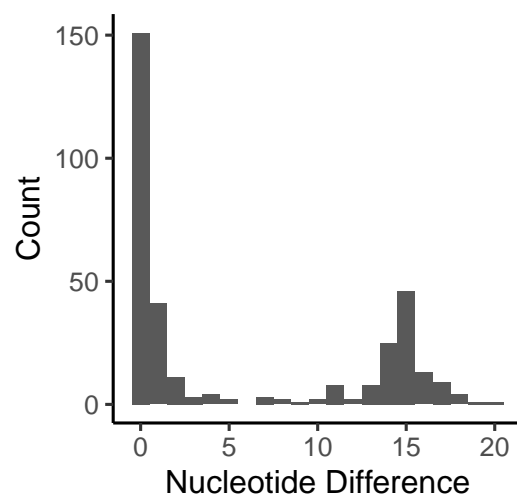
IGHV3-11*01

1220 sequences assigned
584 (47.9%) exact matches, in which:
500 unique CDR3
6 unique J



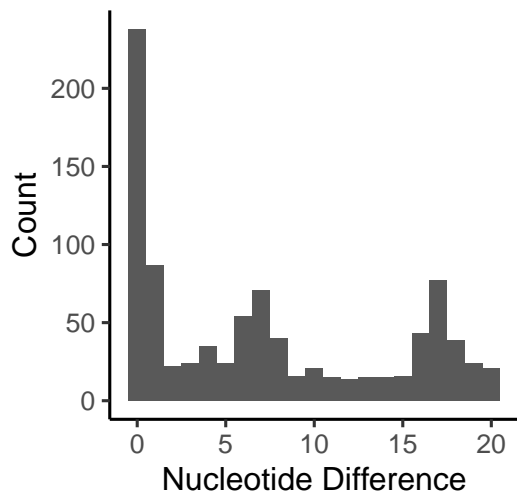
IGHV3-13*01

377 sequences assigned
151 (40.1%) exact matches, in which:
127 unique CDR3
5 unique J



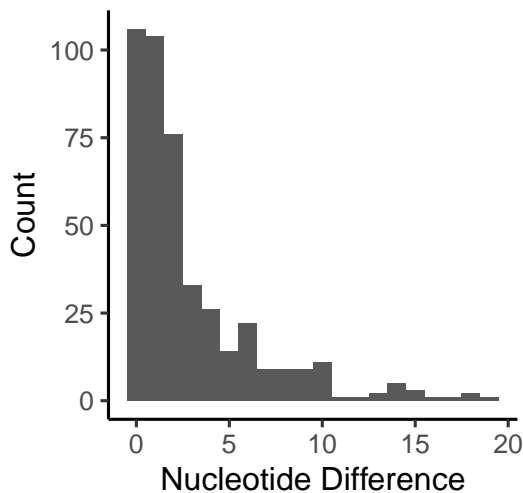
IGHV3-7*04

952 sequences assigned
238 (25%) exact matches, in which:
197 unique CDR3
5 unique J



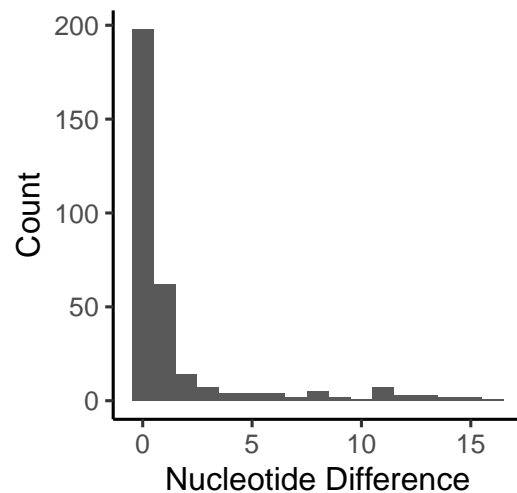
IGHV3-11*04

443 sequences assigned
106 (23.9%) exact matches, in which:
106 unique CDR3
6 unique J



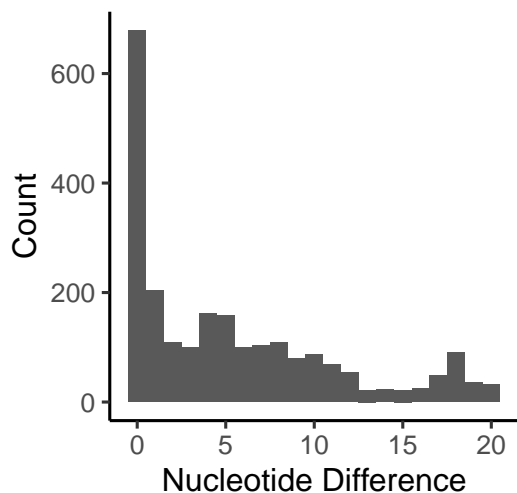
IGHV3-13*04

360 sequences assigned
198 (55%) exact matches, in which:
170 unique CDR3
5 unique J



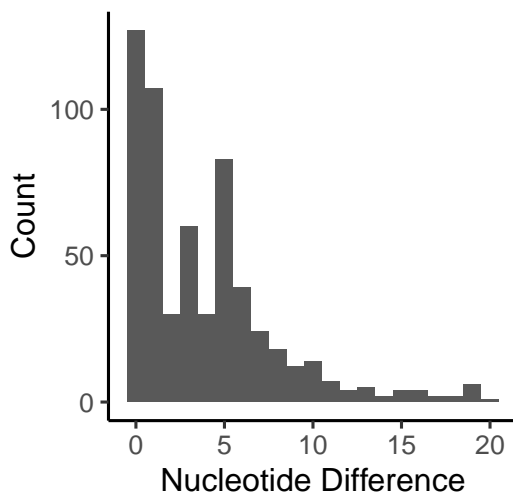
IGHV3-9*01

3448 sequences assigned
679 (19.7%) exact matches, in which:
591 unique CDR3
6 unique J



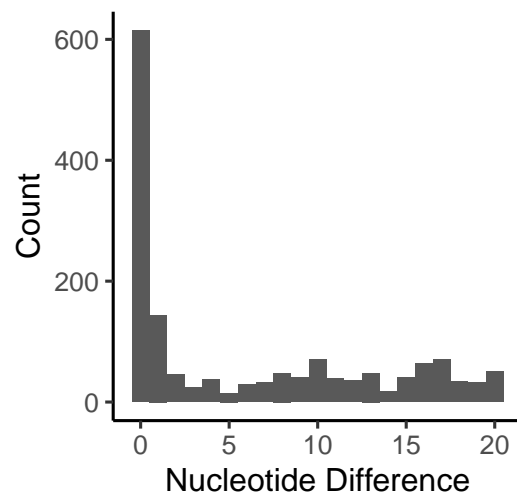
IGHV3-11*06

634 sequences assigned
127 (20%) exact matches, in which:
125 unique CDR3
5 unique J



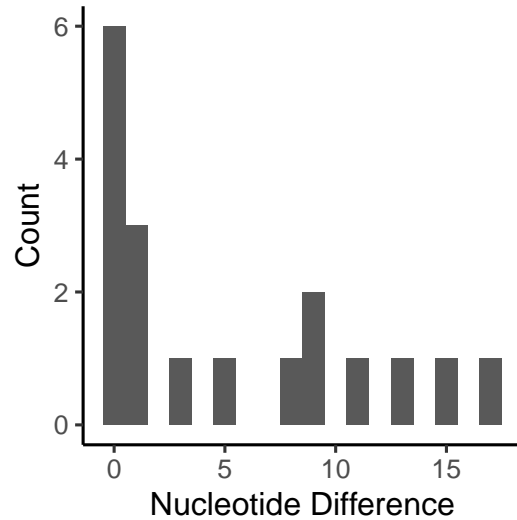
IGHV3-15*01_02

1846 sequences assigned
615 (33.3%) exact matches, in which:
540 unique CDR3
6 unique J



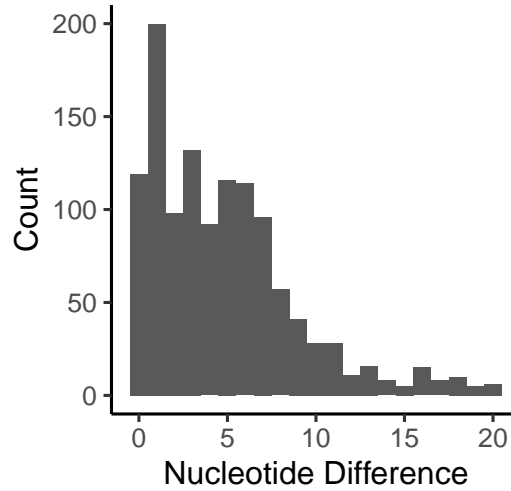
IGHV3-19*01

18 sequences assigned
6 (33.3%) exact matches, in which:
4 unique CDR3
2 unique J



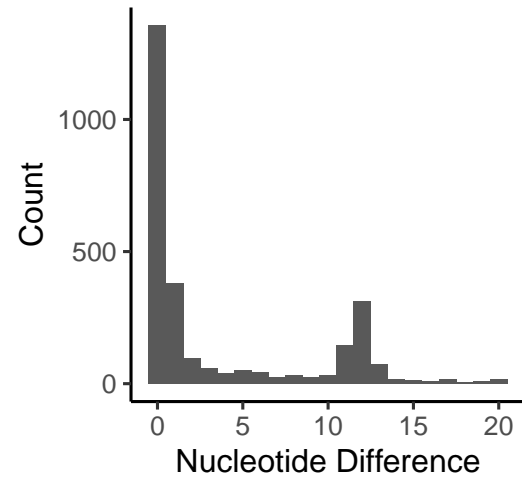
IGHV3-21*04

1256 sequences assigned
119 (9.5%) exact matches, in which:
116 unique CDR3
5 unique J



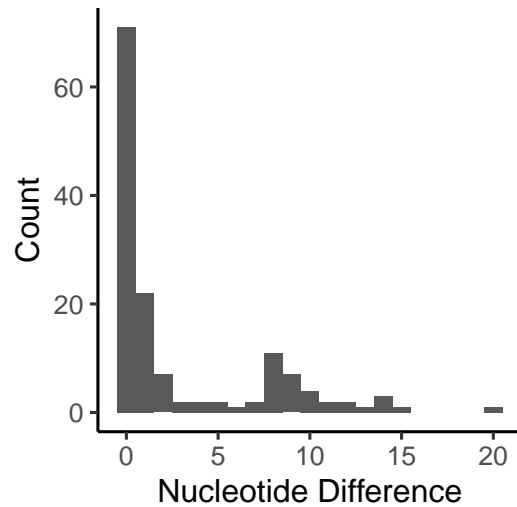
IGHV3-30-3*01

2942 sequences assigned
1356 (46.1%) exact matches, in which:
1216 unique CDR3
6 unique J



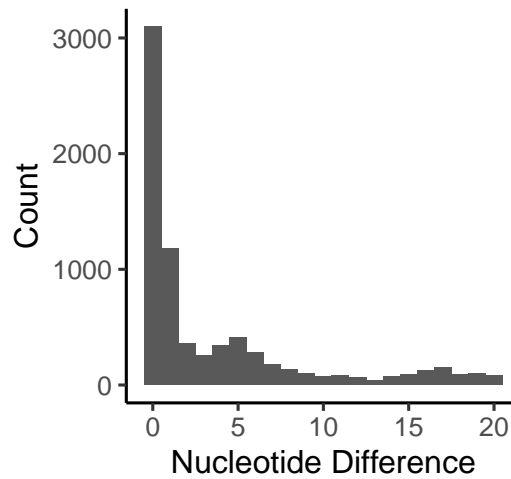
IGHV3-20*01_02

141 sequences assigned
71 (50.4%) exact matches, in which:
59 unique CDR3
5 unique J



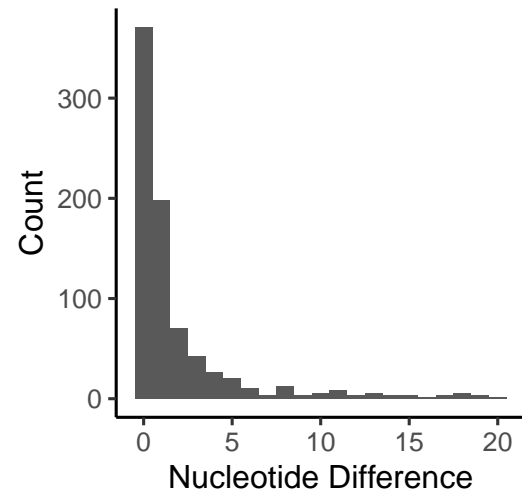
IGHV3-21*01_02

8013 sequences assigned
3097 (38.6%) exact matches, in which:
2618 unique CDR3
6 unique J



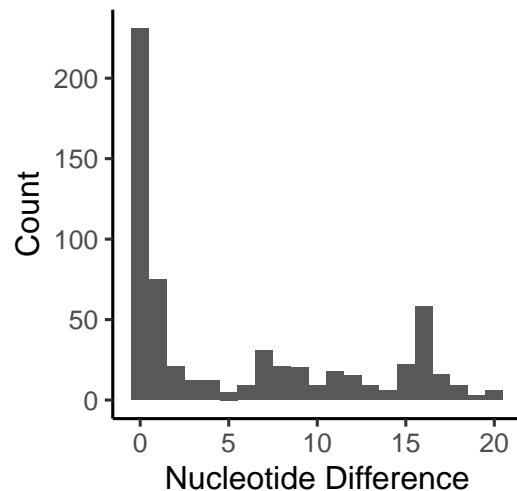
IGHV3-30*03

840 sequences assigned
371 (44.2%) exact matches, in which:
361 unique CDR3
6 unique J



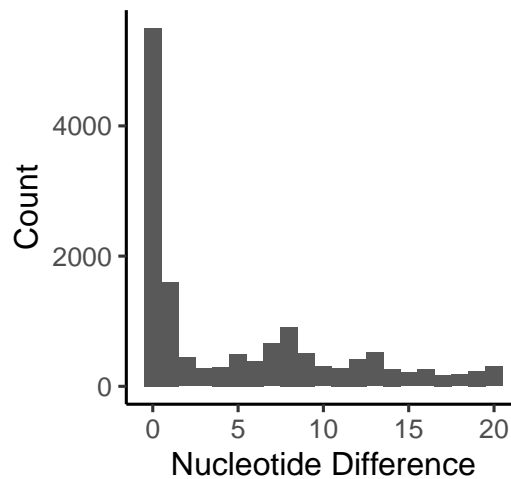
IGHV3-20*03_04

684 sequences assigned
231 (33.8%) exact matches, in which:
204 unique CDR3
6 unique J



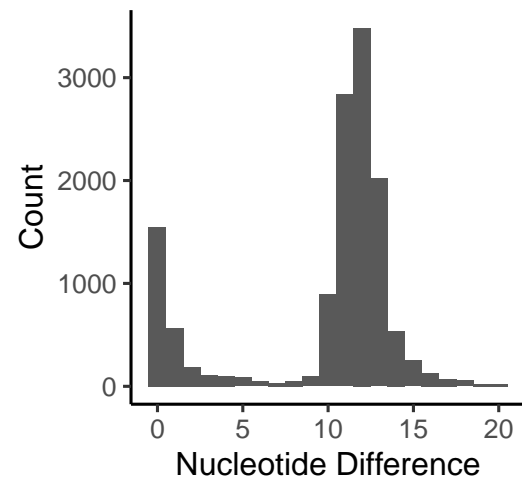
IGHV3-23*01_04

15133 sequences assigned
5503 (36.4%) exact matches, in which:
4646 unique CDR3
6 unique J



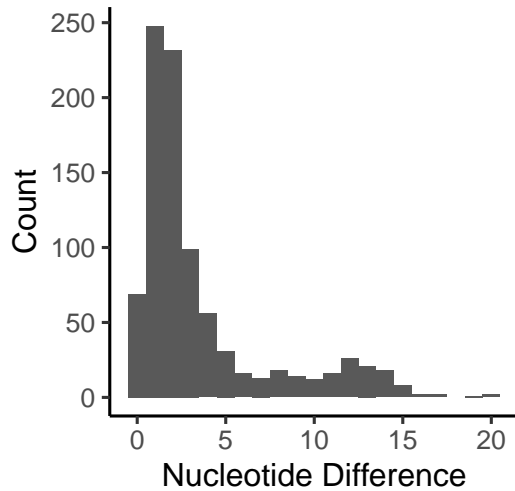
IGHV3-33*01

13225 sequences assigned
1549 (11.7%) exact matches, in which:
1378 unique CDR3
6 unique J



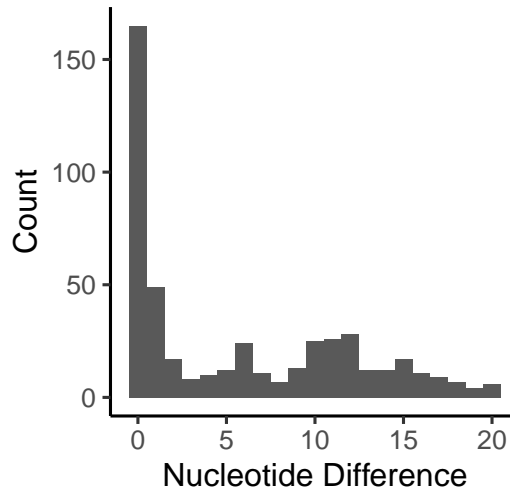
IGHV3–33*06

922 sequences assigned
69 (7.5%) exact matches, in which:
69 unique CDR3
6 unique J



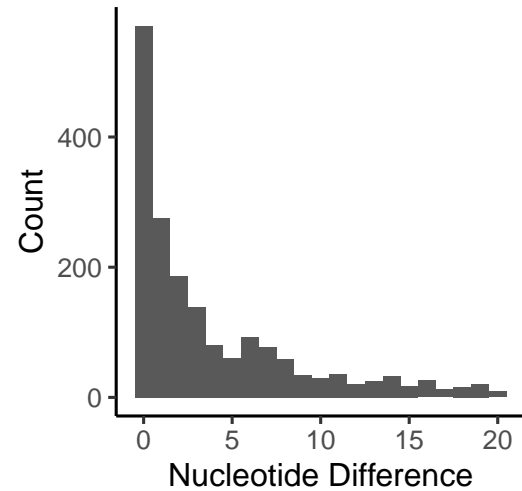
IGHV3–43*02

486 sequences assigned
165 (34%) exact matches, in which:
143 unique CDR3
5 unique J



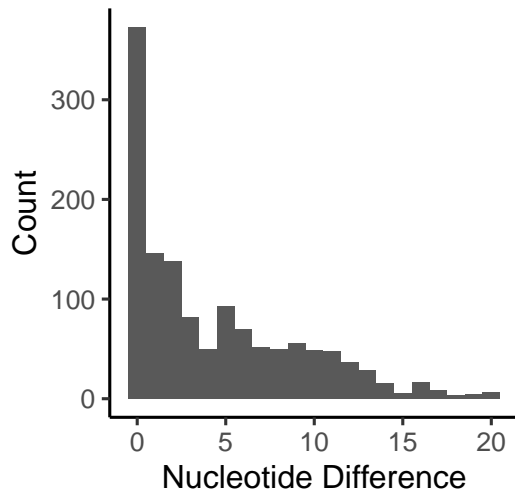
IGHV3–48*03

1943 sequences assigned
571 (29.4%) exact matches, in which:
487 unique CDR3
6 unique J



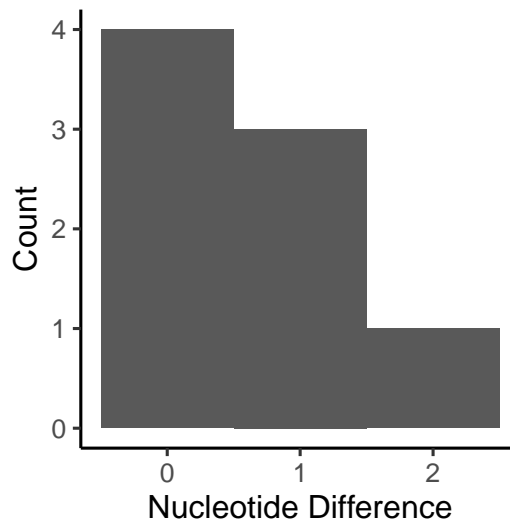
IGHV3–33*08

1353 sequences assigned
373 (27.6%) exact matches, in which:
361 unique CDR3
6 unique J



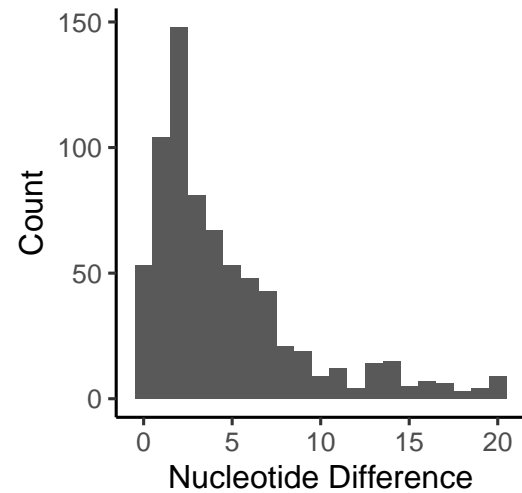
IGHV3–47*02

8 sequences assigned
4 (50%) exact matches, in which:
4 unique CDR3
2 unique J



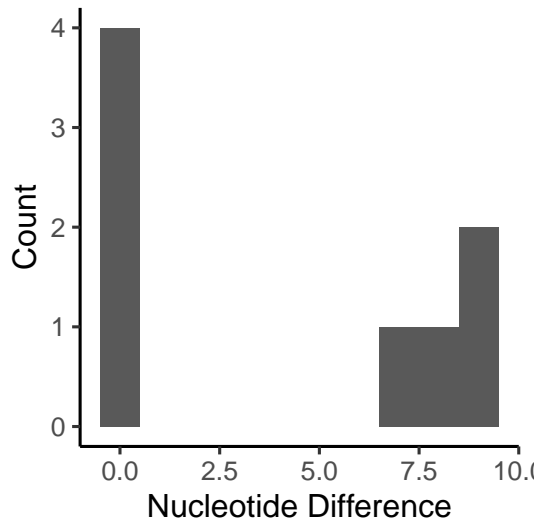
IGHV3–48*04

750 sequences assigned
53 (7.1%) exact matches, in which:
52 unique CDR3
5 unique J



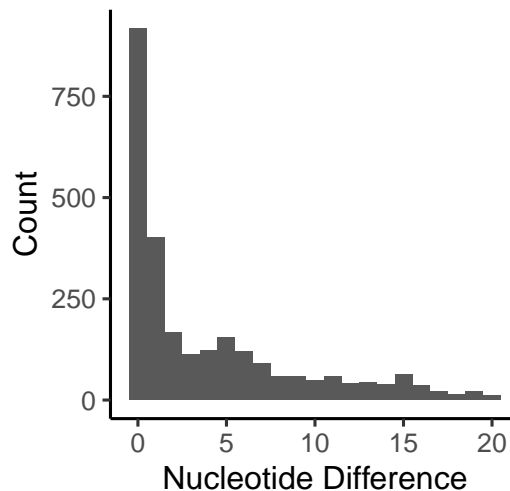
IGHV3–35*01

8 sequences assigned
4 (50%) exact matches, in which:
4 unique CDR3
2 unique J



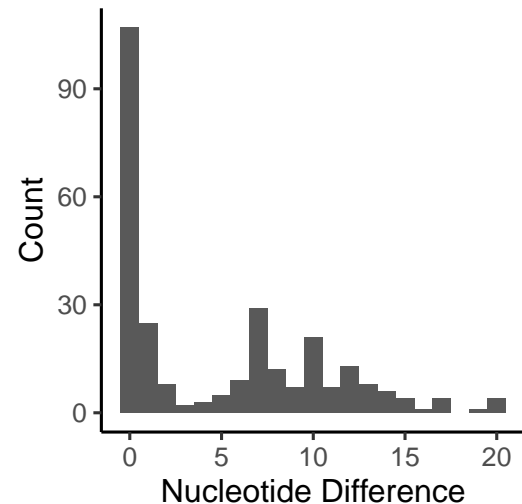
IGHV3–48*01

2813 sequences assigned
918 (32.6%) exact matches, in which:
792 unique CDR3
6 unique J



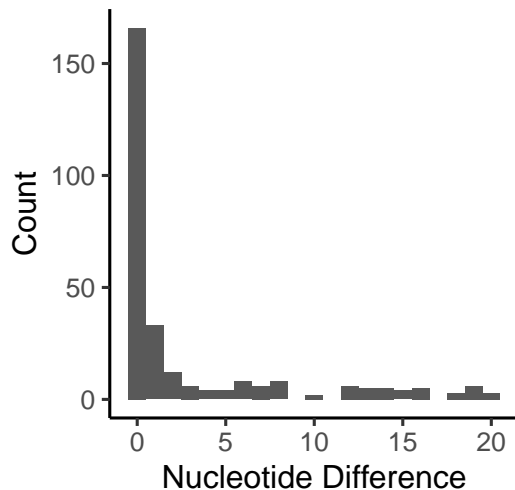
IGHV3–49*04

314 sequences assigned
107 (34.1%) exact matches, in which:
97 unique CDR3
5 unique J



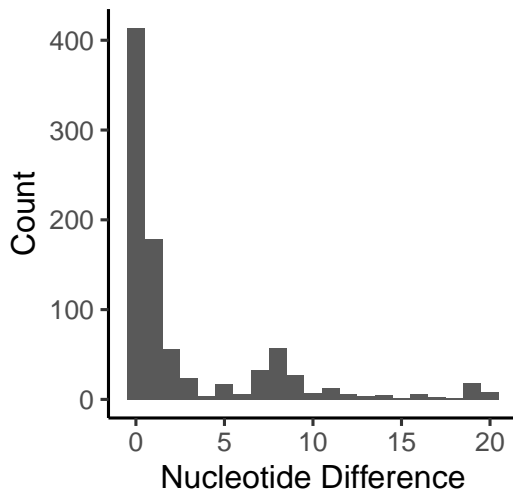
IGHV3-49*03_05

344 sequences assigned
166 (48.3%) exact matches, in which:
148 unique CDR3
6 unique J



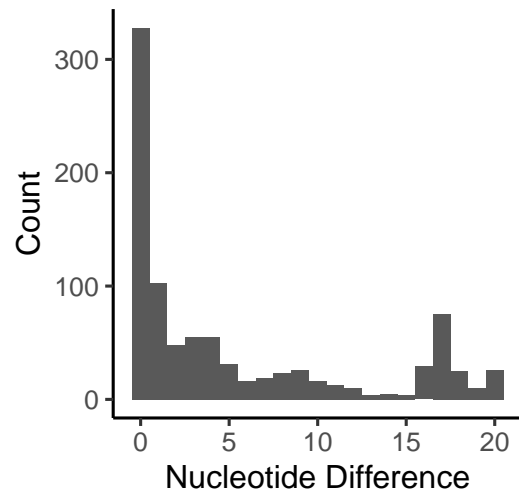
IGHV3-53*04

1047 sequences assigned
414 (39.5%) exact matches, in which:
370 unique CDR3
6 unique J



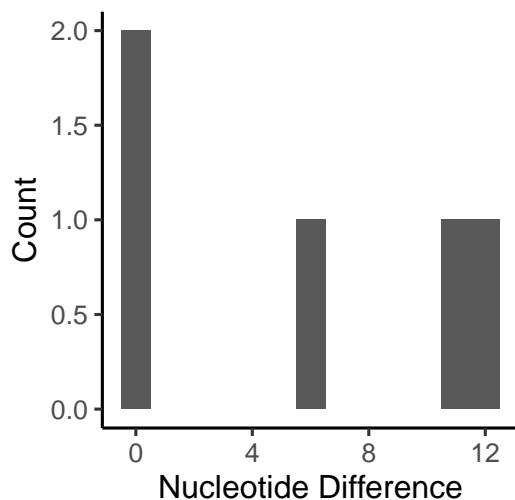
IGHV3-64*01

1262 sequences assigned
328 (26%) exact matches, in which:
280 unique CDR3
6 unique J



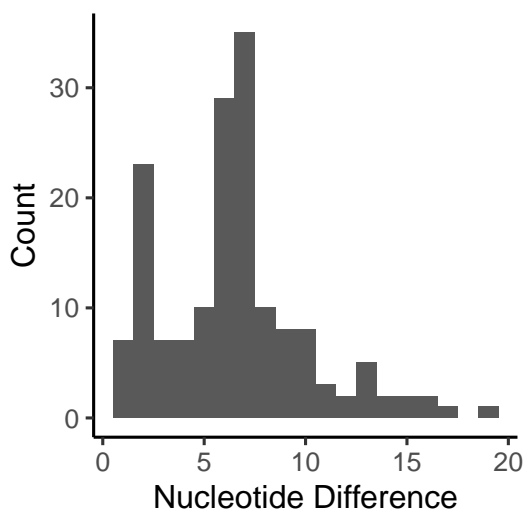
IGHV3-52*02

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



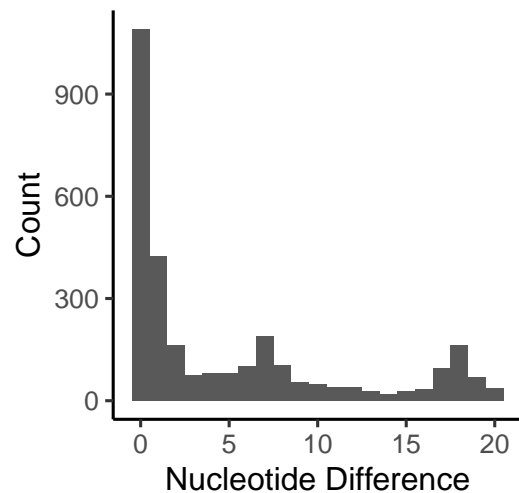
IGHV3-53*01_02

167 sequences assigned
No exact matches.



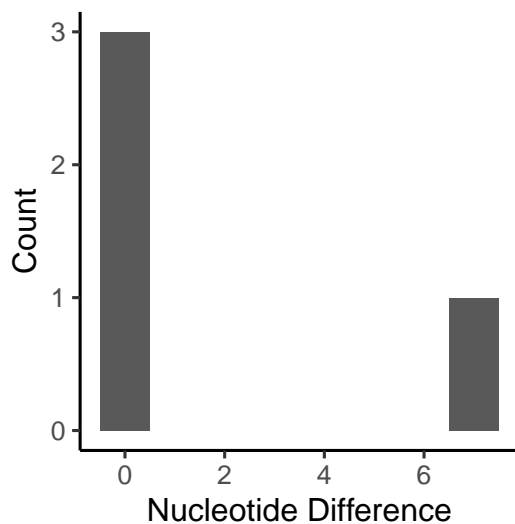
IGHV3-66*01

3594 sequences assigned
1091 (30.4%) exact matches, in which:
966 unique CDR3
6 unique J



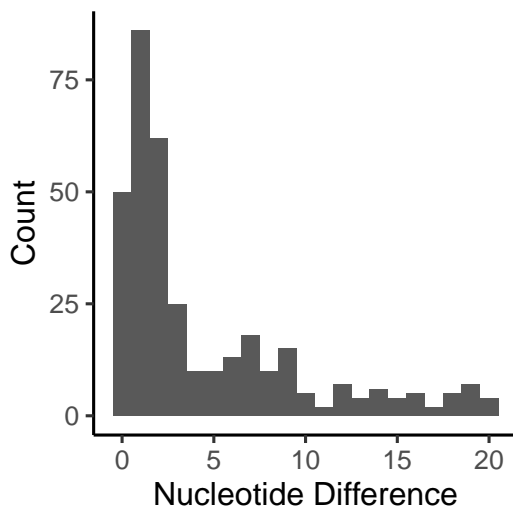
IGHV3-52*01_03

4 sequences assigned
3 (75%) exact matches, in which:
3 unique CDR3
2 unique J



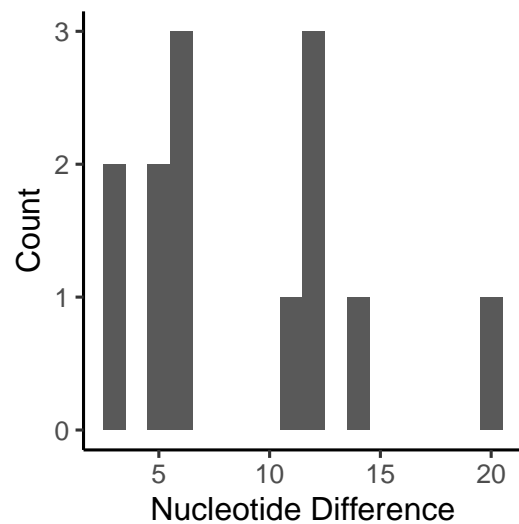
IGHV3-53*01_02_A225G_

394 sequences assigned
50 (12.7%) exact matches, in which:
50 unique CDR3
5 unique J



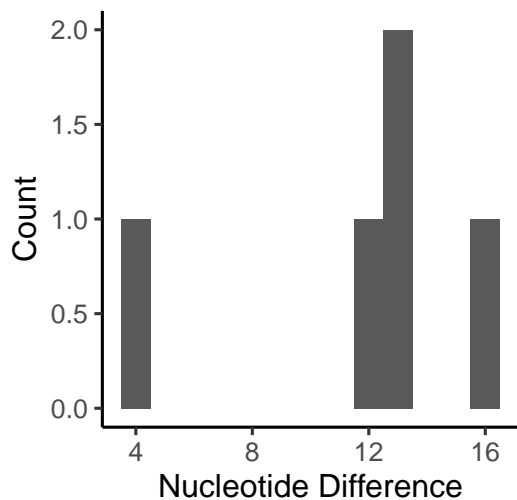
IGHV3-69-1*01

16 sequences assigned
No exact matches.



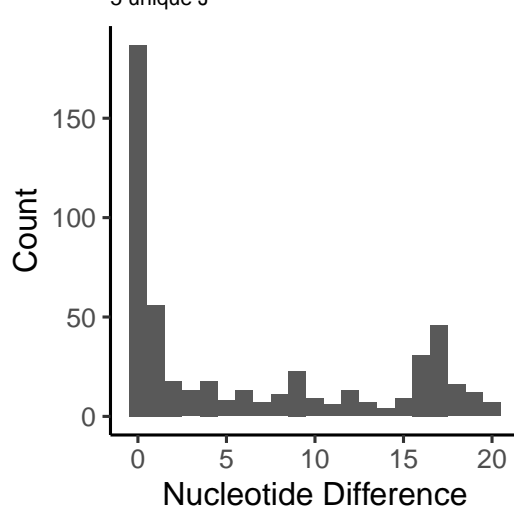
IGHV3-69-1*02

8 sequences assigned
No exact matches.



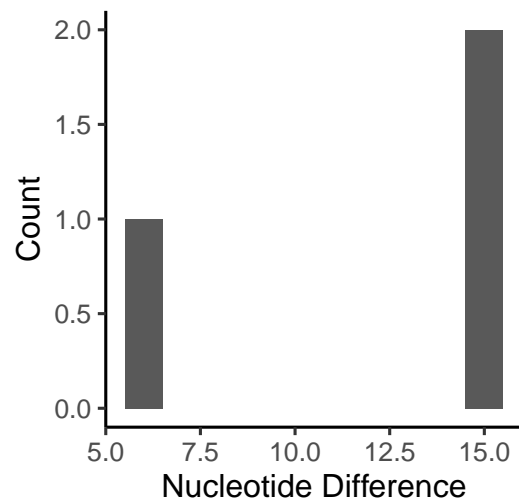
IGHV3-73*01_02

611 sequences assigned
187 (30.6%) exact matches, in which:
169 unique CDR3
5 unique J



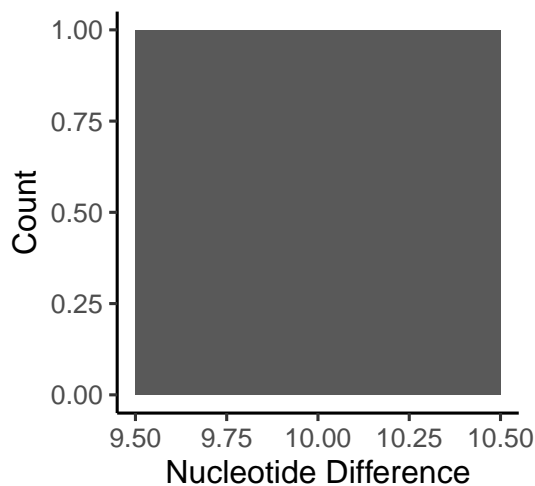
IGHV3-43D*04

3 sequences assigned
No exact matches.



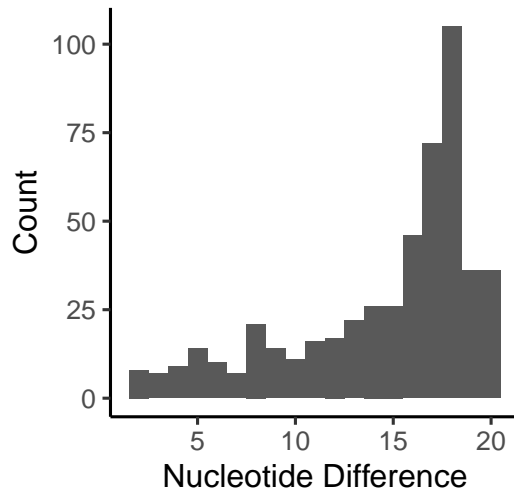
IGHV3-71*01_04

3 sequences assigned
No exact matches.



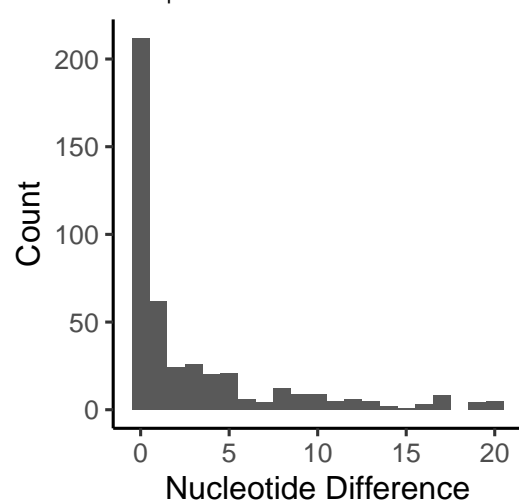
IGHV3-74*03

1656 sequences assigned
No exact matches.



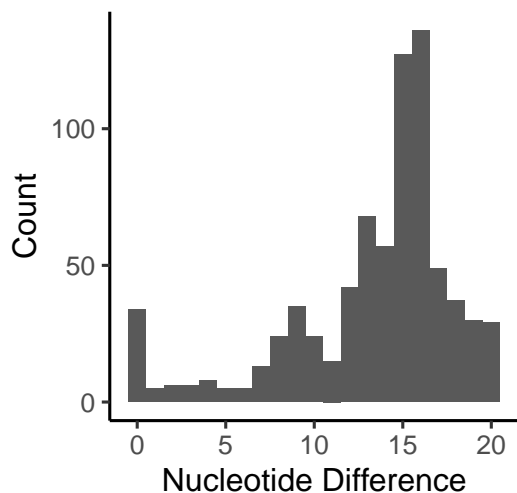
IGHV3-64D*06

589 sequences assigned
212 (36%) exact matches, in which:
173 unique CDR3
6 unique J



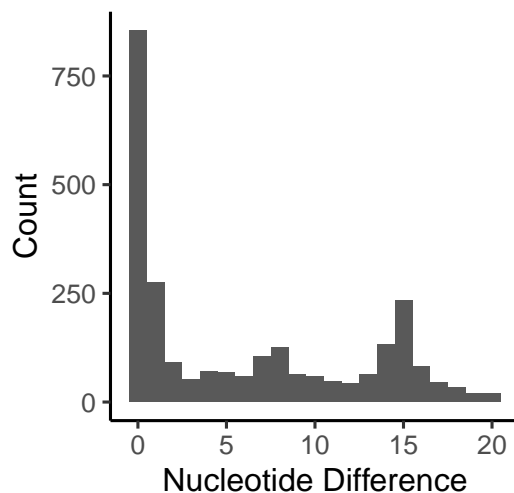
IGHV3-72*01

1127 sequences assigned
34 (3%) exact matches, in which:
29 unique CDR3
6 unique J



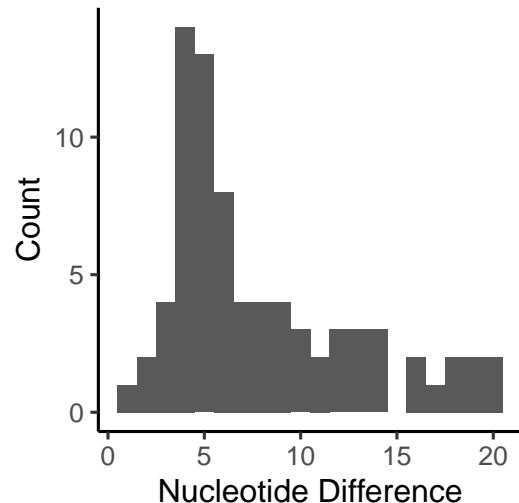
IGHV3-74*01_02

3027 sequences assigned
855 (28.2%) exact matches, in which:
719 unique CDR3
6 unique J



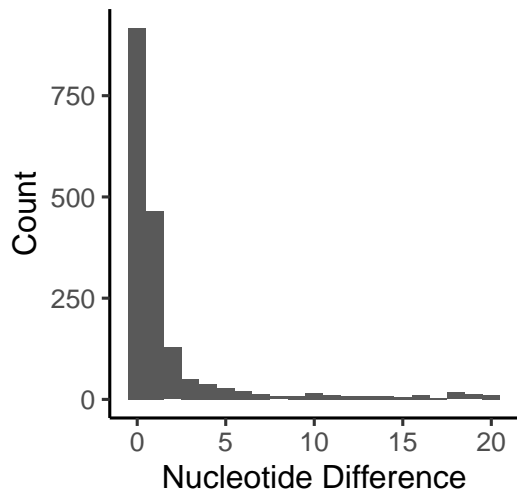
IGHV3-NL1*01

78 sequences assigned
No exact matches.



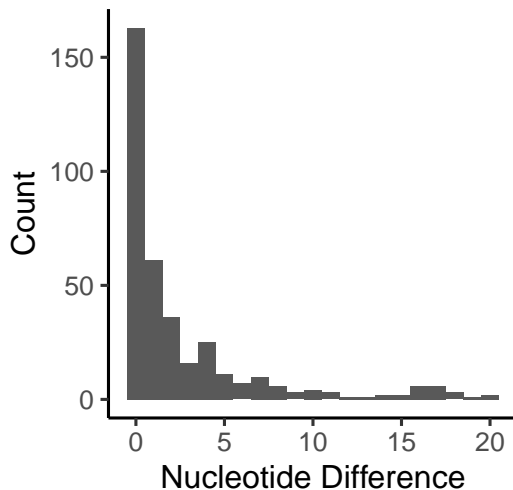
IGHV4-4*02_03

1914 sequences assigned
918 (48%) exact matches, in which:
845 unique CDR3
6 unique J



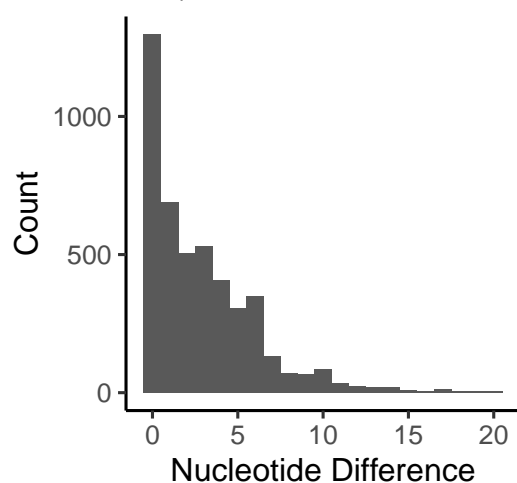
IGHV4-30-2*01

380 sequences assigned
163 (42.9%) exact matches, in which:
140 unique CDR3
6 unique J



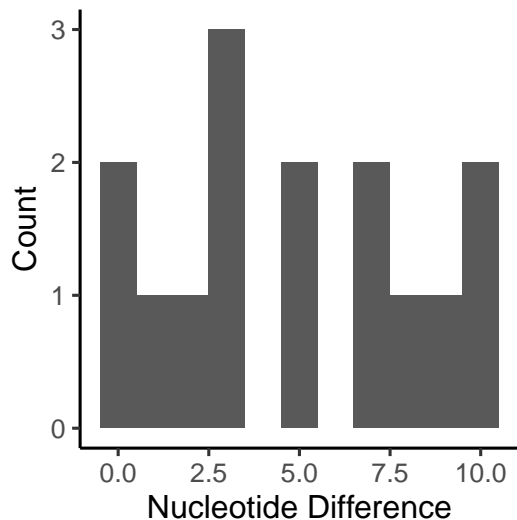
IGHV4-31*02

4994 sequences assigned
1297 (26%) exact matches, in which:
1244 unique CDR3
6 unique J



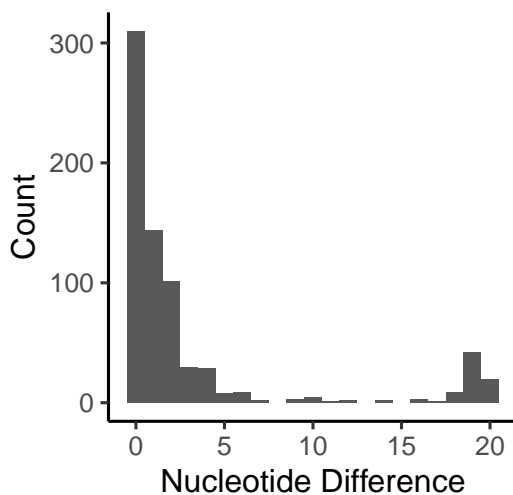
IGHV4-28*03

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



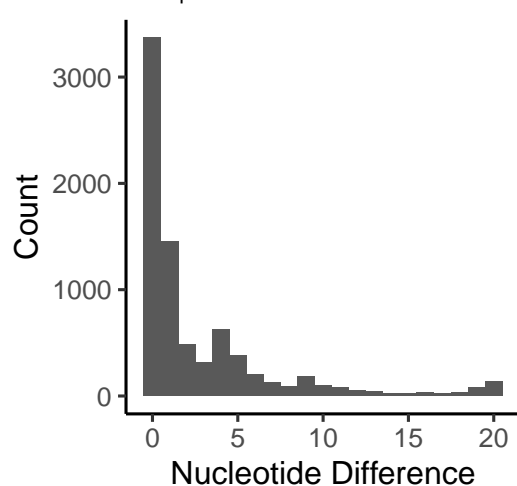
IGHV4-30-4*01

752 sequences assigned
310 (41.2%) exact matches, in which:
302 unique CDR3
6 unique J



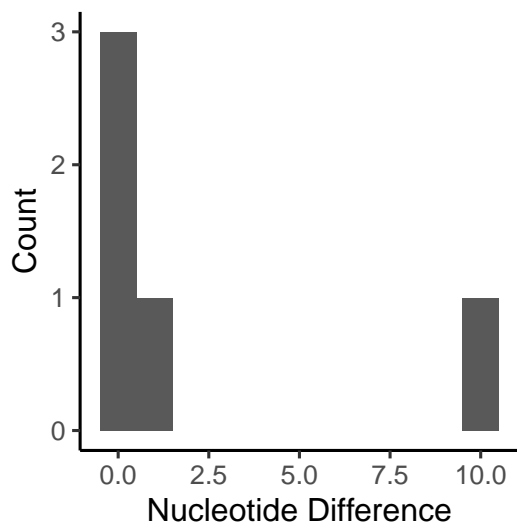
IGHV4-34*01_02

8499 sequences assigned
3370 (39.7%) exact matches, in which:
3173 unique CDR3
6 unique J



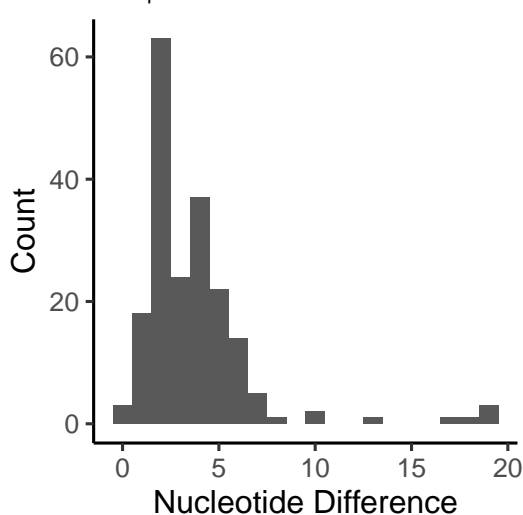
IGHV4-28*01_07

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



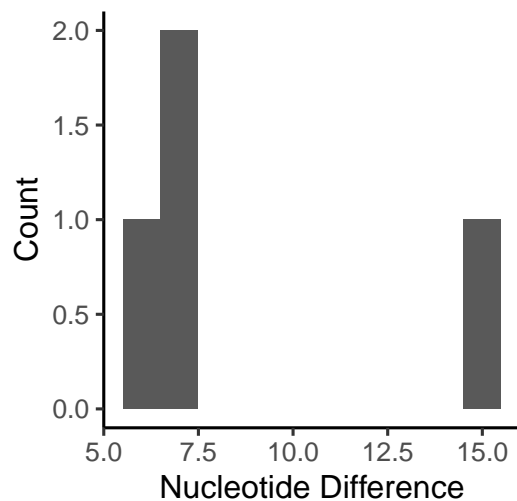
IGHV4-30-4*08

199 sequences assigned
3 (1.5%) exact matches, in which:
3 unique CDR3
2 unique J



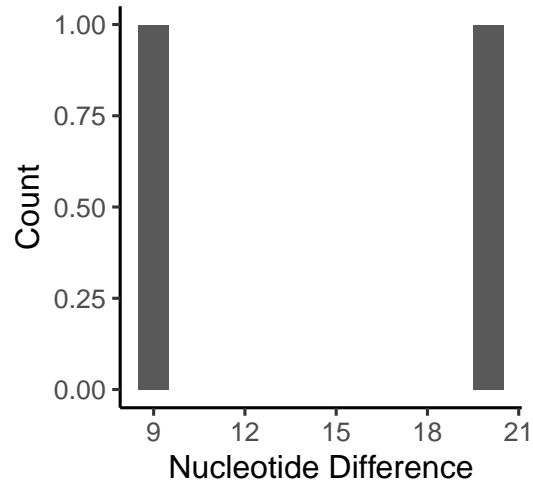
IGHV4-38-2*01

6 sequences assigned
No exact matches.



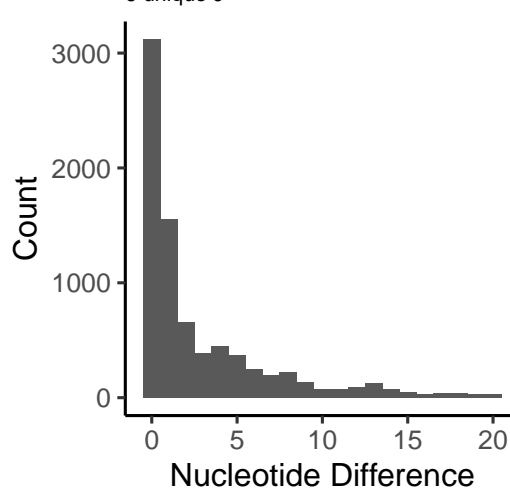
IGHV4-38-2*02

3 sequences assigned
No exact matches.



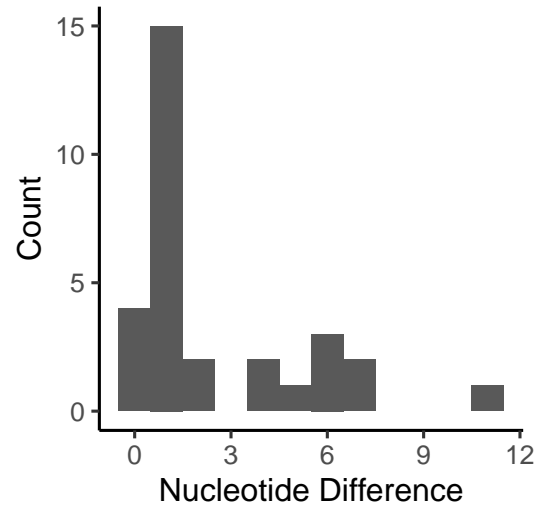
IGHV4-59*08

8626 sequences assigned
3119 (36.2%) exact matches, in which:
3001 unique CDR3
6 unique J



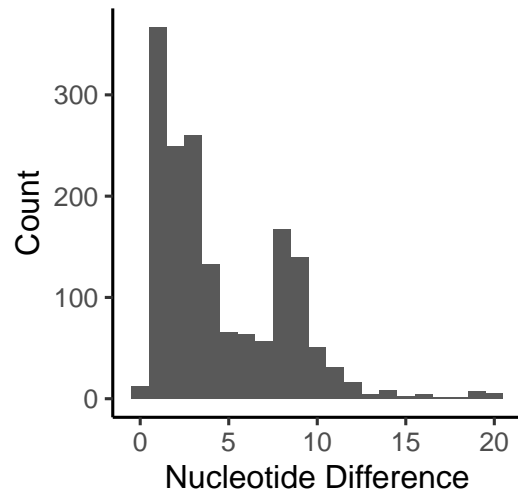
IGHV4-61*05

33 sequences assigned
4 (12.1%) exact matches, in which:
4 unique CDR3
3 unique J



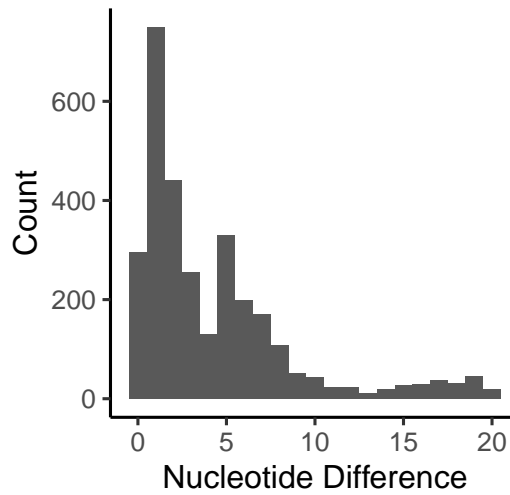
IGHV4-39*07

1668 sequences assigned
12 (0.7%) exact matches, in which:
12 unique CDR3
4 unique J



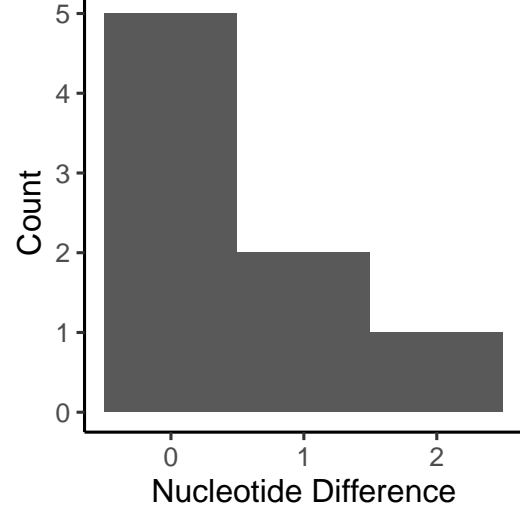
IGHV4-59*12

3173 sequences assigned
296 (9.3%) exact matches, in which:
293 unique CDR3
6 unique J



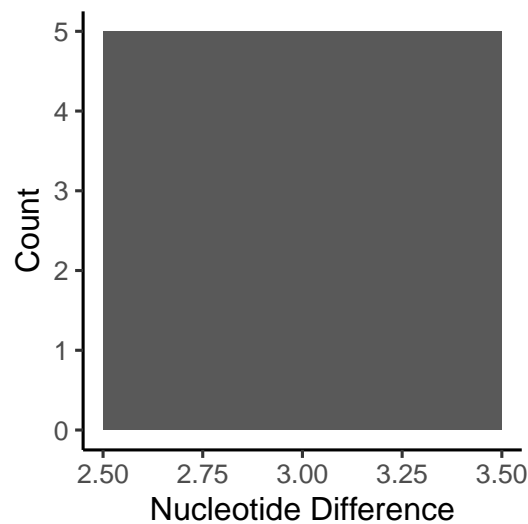
IGHV4-61*07

8 sequences assigned
5 (62.5%) exact matches, in which:
5 unique CDR3
3 unique J



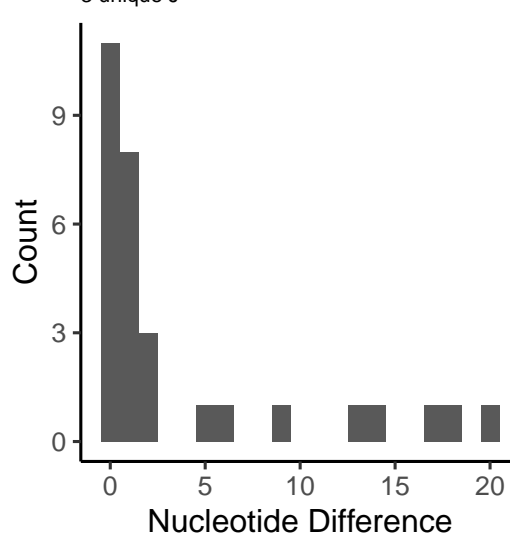
IGHV4-55*09

5 sequences assigned
No exact matches.



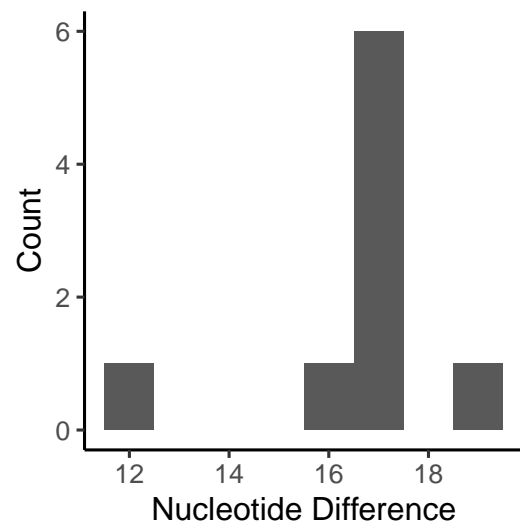
IGHV4-61*01

32 sequences assigned
11 (34.4%) exact matches, in which:
10 unique CDR3
3 unique J



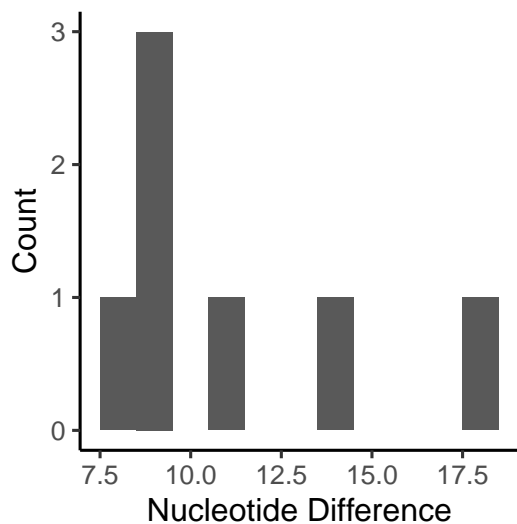
IGHV1/OR15-2*02_03

9 sequences assigned
No exact matches.



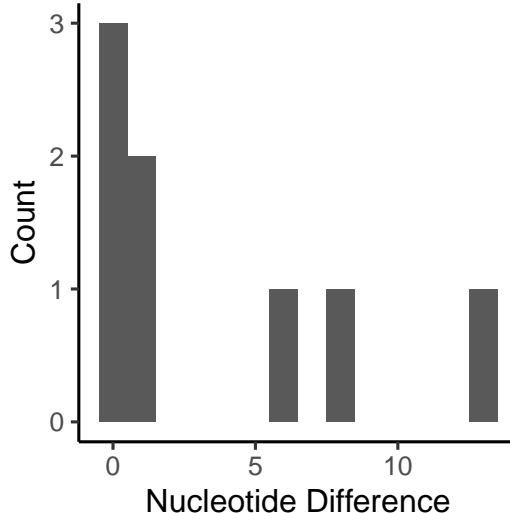
IGHV1/OR15-3*02

7 sequences assigned
No exact matches.



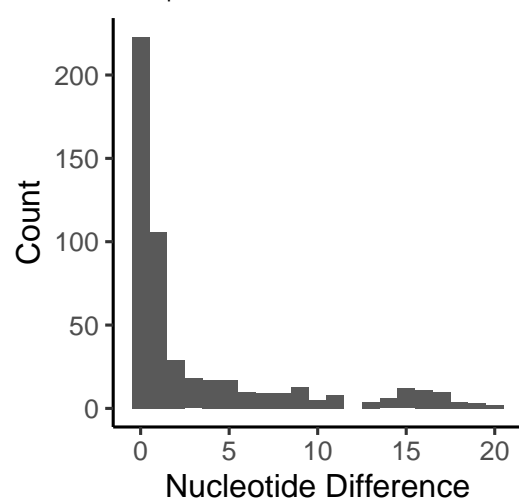
IGHV5-51*04

11 sequences assigned
3 (27.3%) exact matches, in which:
3 unique CDR3
2 unique J



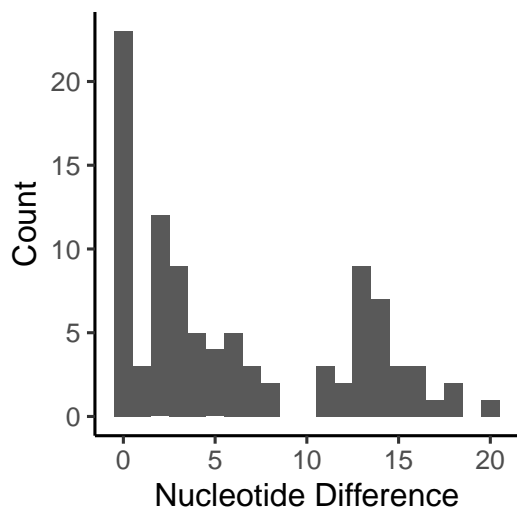
IGHV6-1*01_02

523 sequences assigned
223 (42.6%) exact matches, in which:
219 unique CDR3
6 unique J



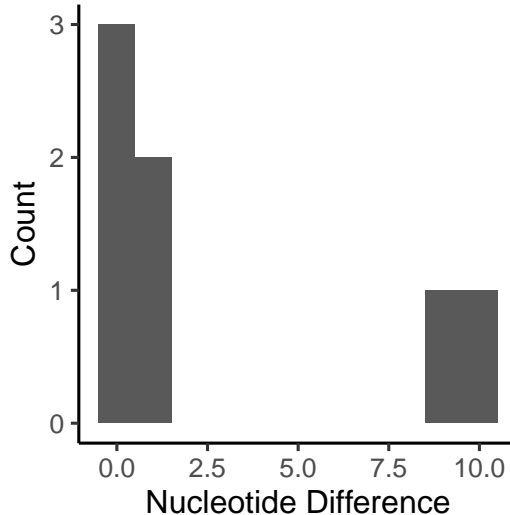
IGHV4/OR15-8*01_C193/

132 sequences assigned
23 (17.4%) exact matches, in which:
22 unique CDR3
3 unique J



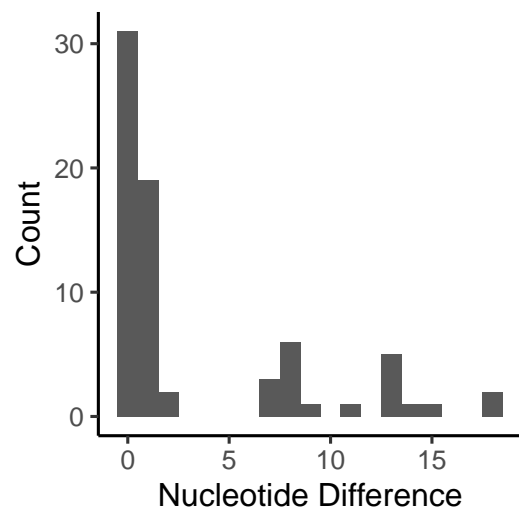
IGHV5-51*06

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



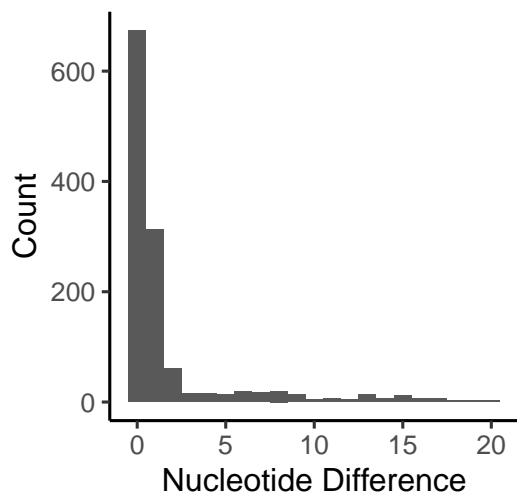
IGHV7-4-1*01

72 sequences assigned
31 (43.1%) exact matches, in which:
29 unique CDR3
6 unique J



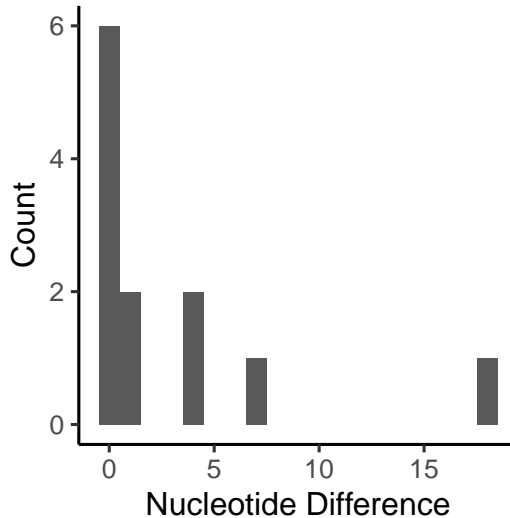
IGHV5-10-1*01_03

1242 sequences assigned
674 (54.3%) exact matches, in which:
621 unique CDR3
6 unique J



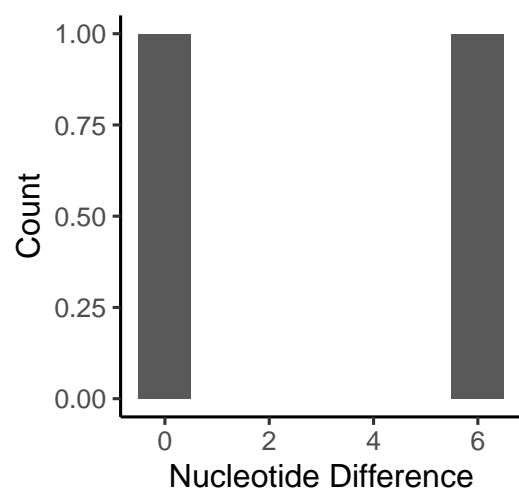
IGHV5-51*07

14 sequences assigned
6 (42.9%) exact matches, in which:
6 unique CDR3
4 unique J

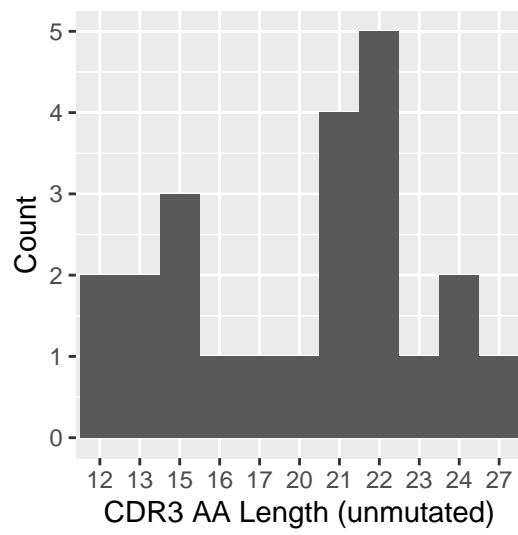


IGHV7-81*01

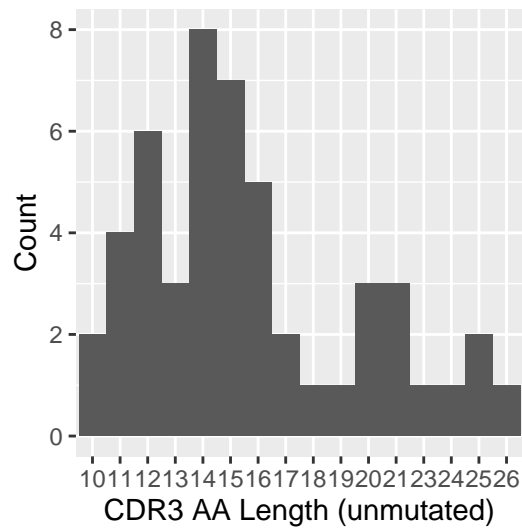
2 sequences assigned
1 (50%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV4/OR15-8*01_C193A



IGHV3-53*01_02_A225G_T267G_G303A





[illegible]