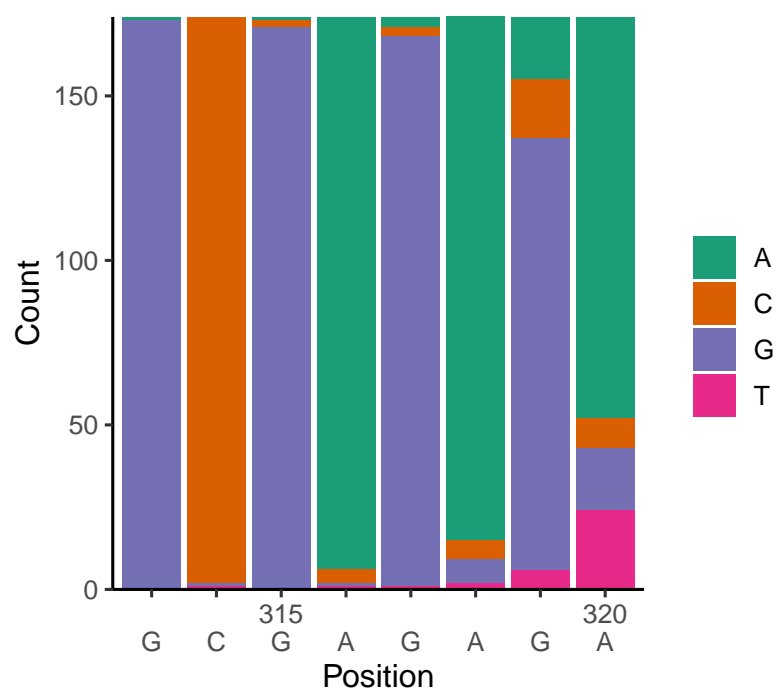
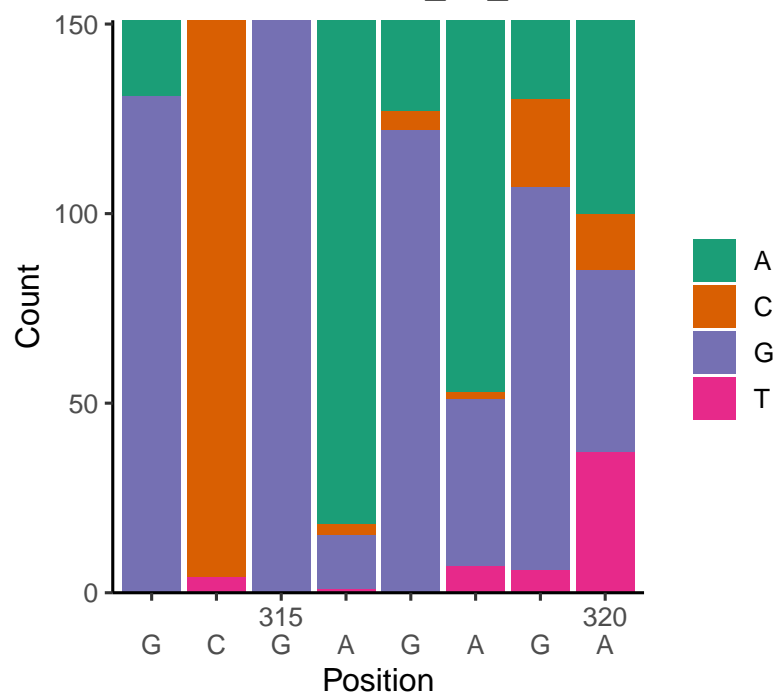


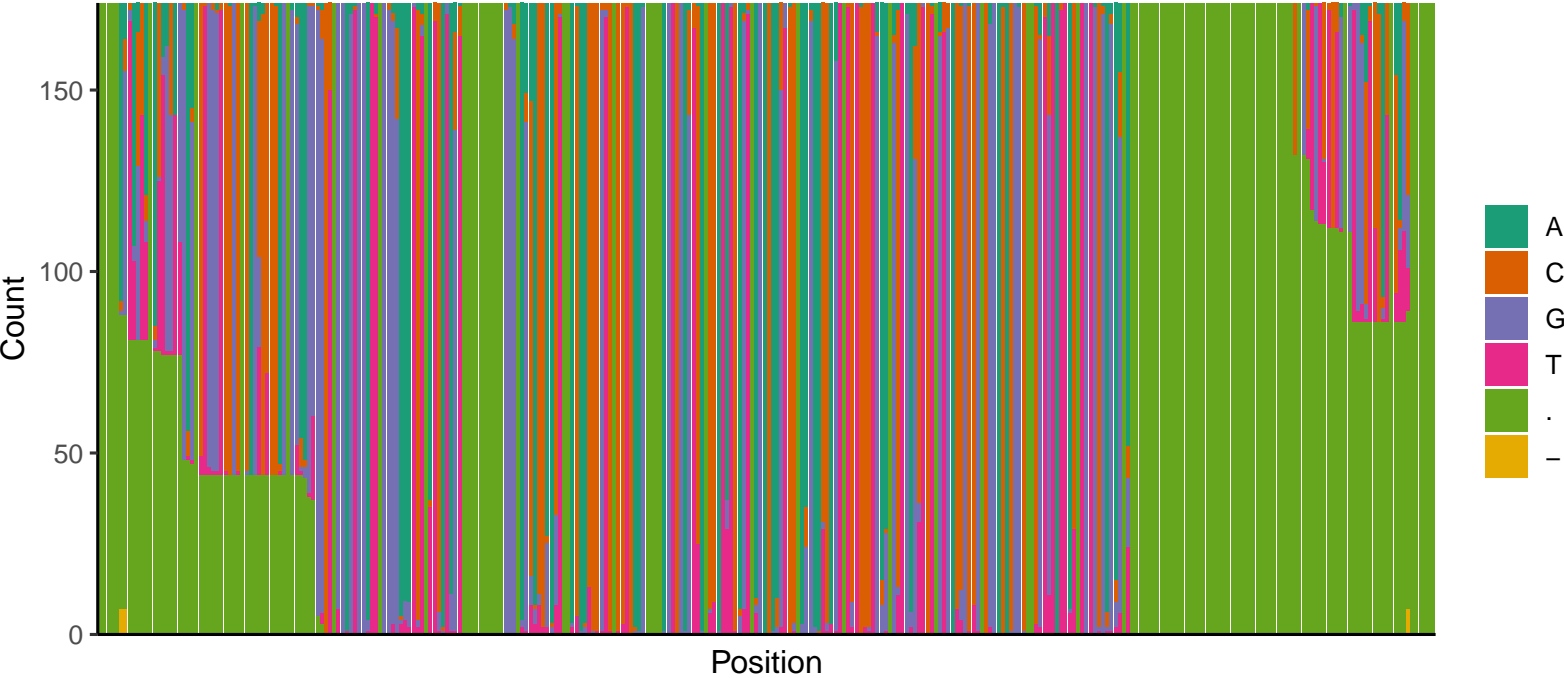
Gene IGHV4/OR15-8*01_C193A



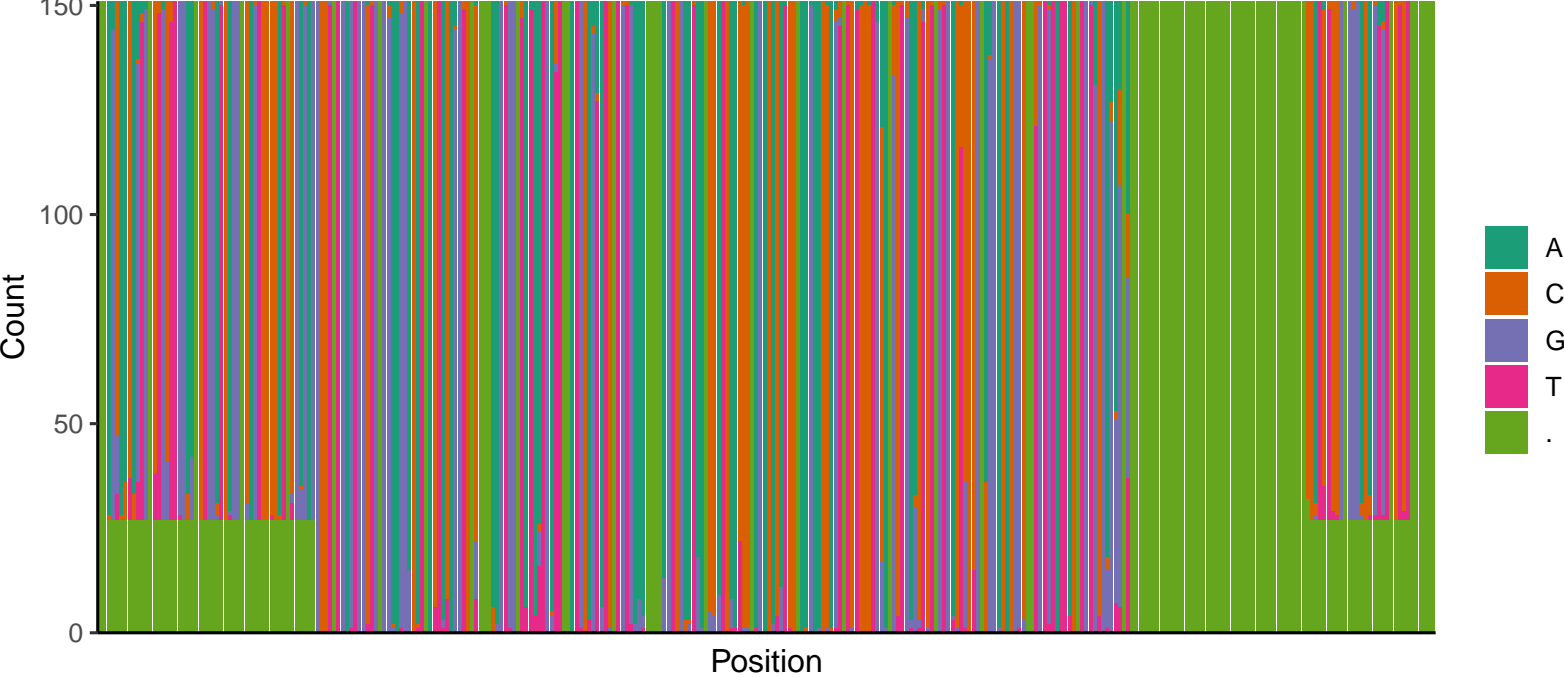
Gene IGHV6-1*01_02_A315G



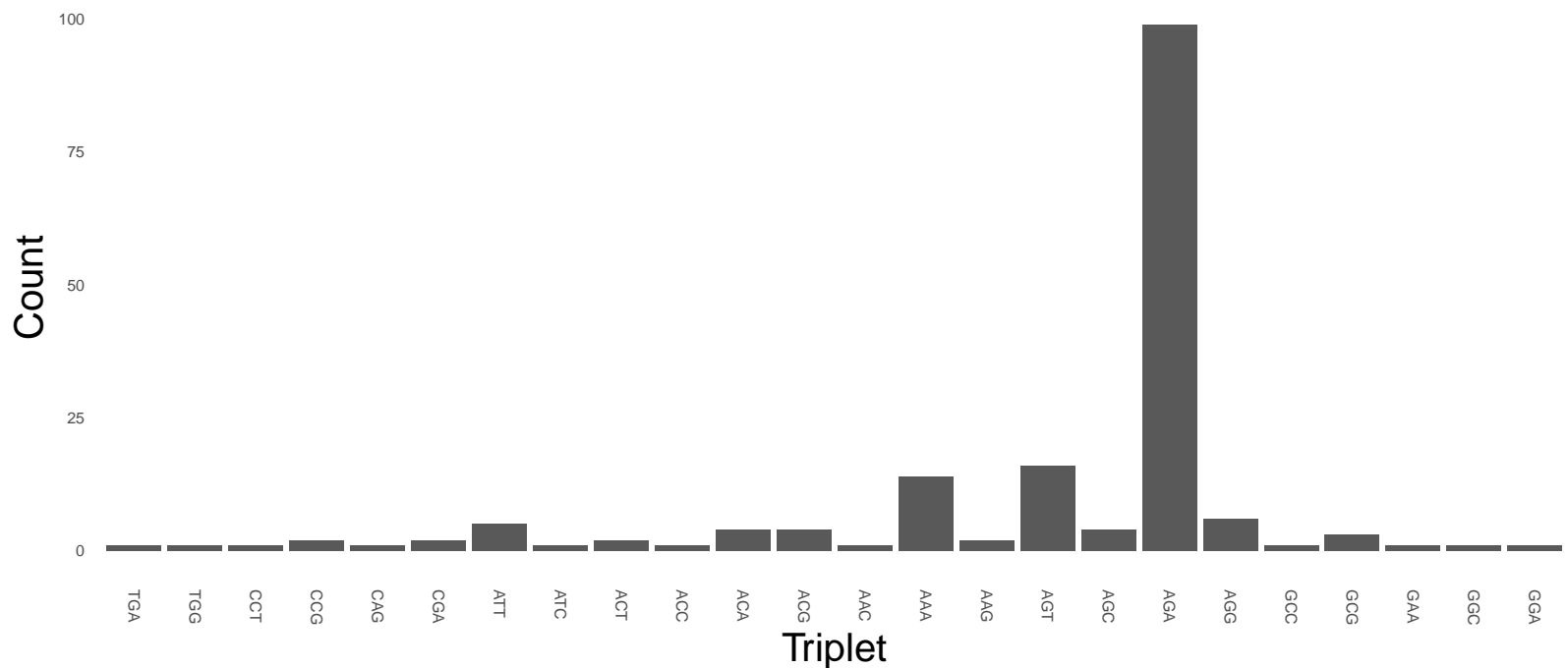
Gene IGHV4/OR15-8*01_C193A



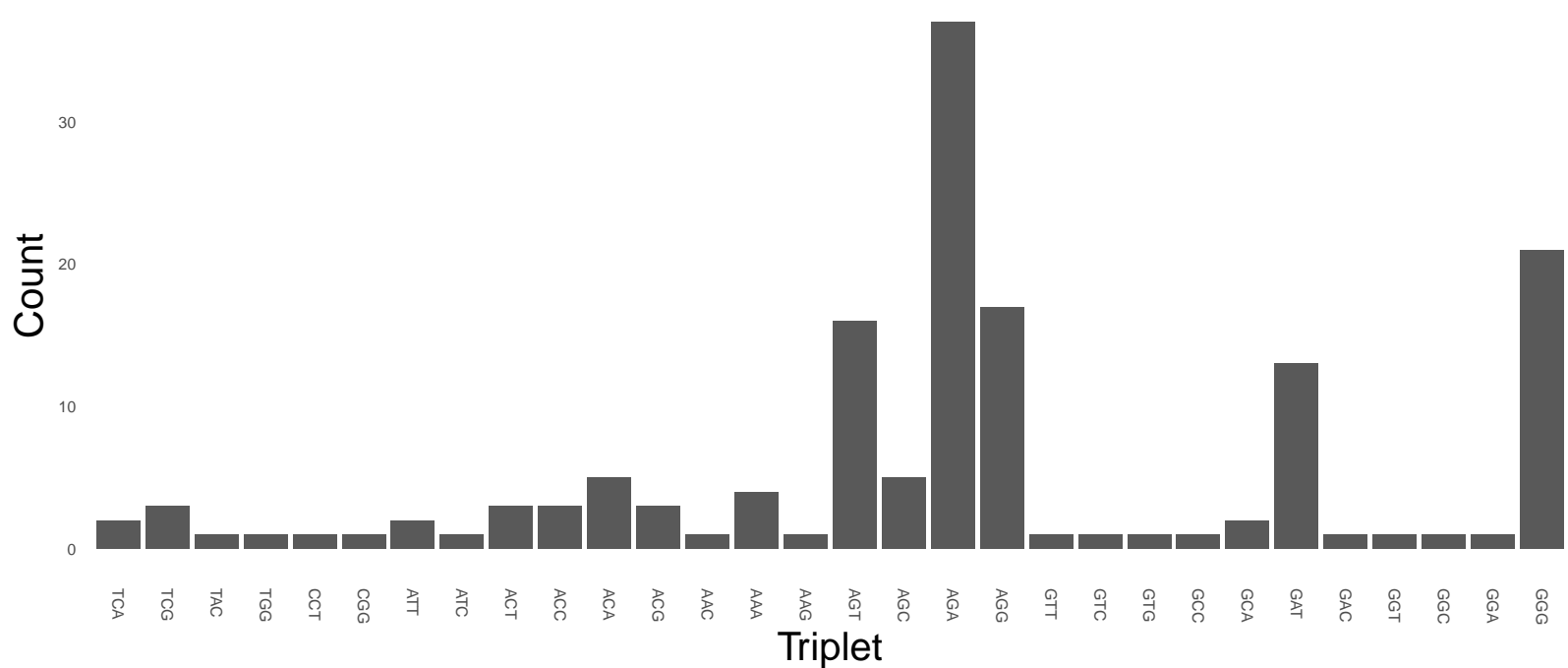
Gene IGHV6-1*01_02_A315G



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

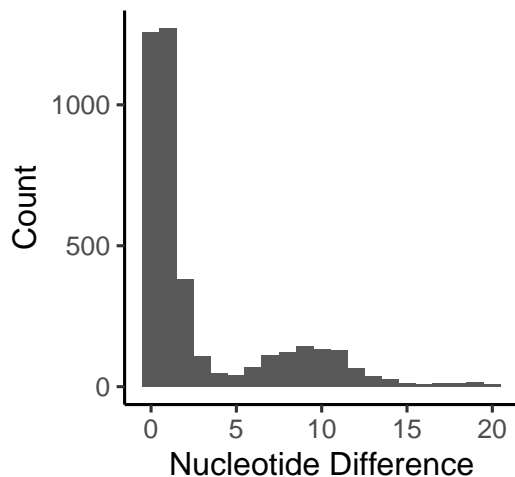


IGHV6–1*01_02_A315G– Final 3 nucleotides as a triplet



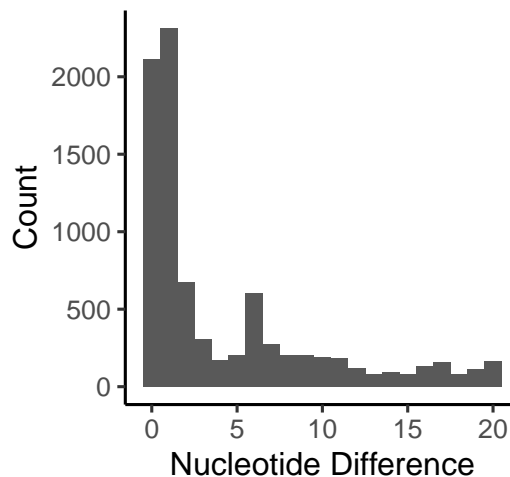
IGHV1-2*04

4543 sequences assigned
1257 (27.7%) exact matches, in which:
1049 unique CDR3
6 unique J



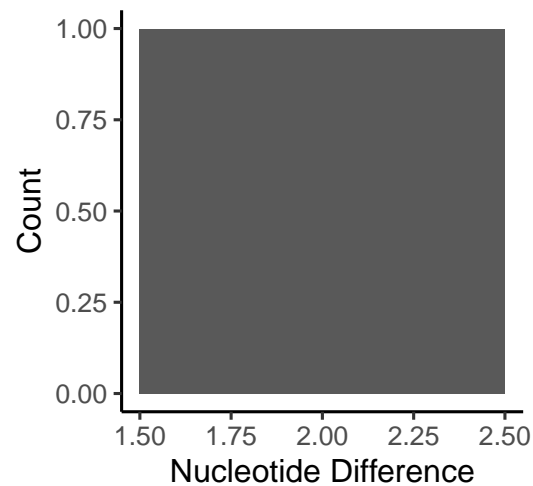
IGHV1-18*01

20730 sequences assigned
2111 (10.2%) exact matches, in which:
1752 unique CDR3
6 unique J



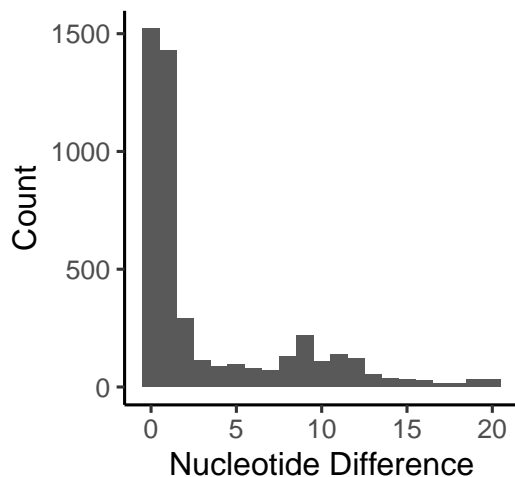
IGHV1-38-4*01

1 sequences assigned
No exact matches.



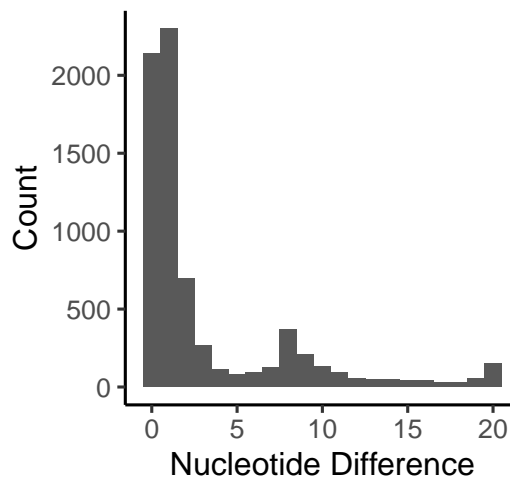
IGHV1-3*01_05

4867 sequences assigned
1521 (31.3%) exact matches, in which:
1238 unique CDR3
6 unique J



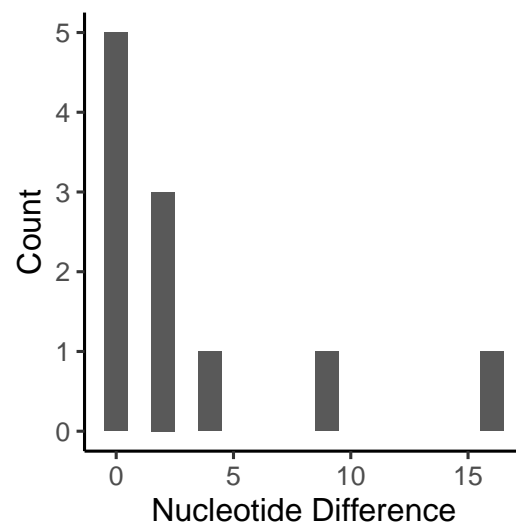
IGHV1-18*04

7922 sequences assigned
2141 (27%) exact matches, in which:
1793 unique CDR3
6 unique J



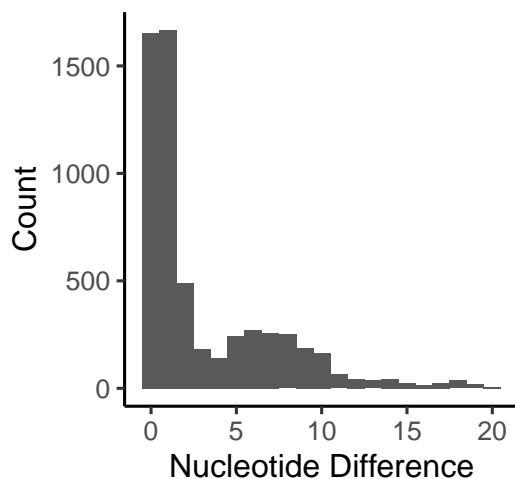
IGHV1-45*02

17 sequences assigned
5 (29.4%) exact matches, in which:
4 unique CDR3
1 unique J



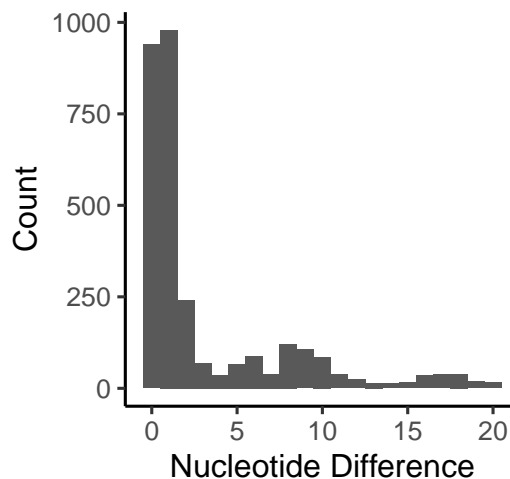
IGHV1-8*01

5927 sequences assigned
1652 (27.9%) exact matches, in which:
1390 unique CDR3
6 unique J



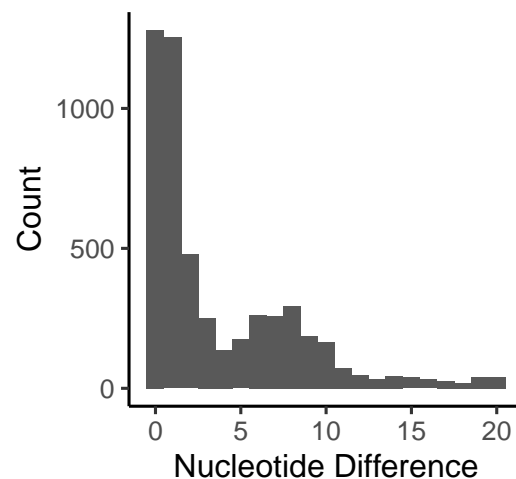
IGHV1-24*01

3857 sequences assigned
940 (24.4%) exact matches, in which:
792 unique CDR3
6 unique J



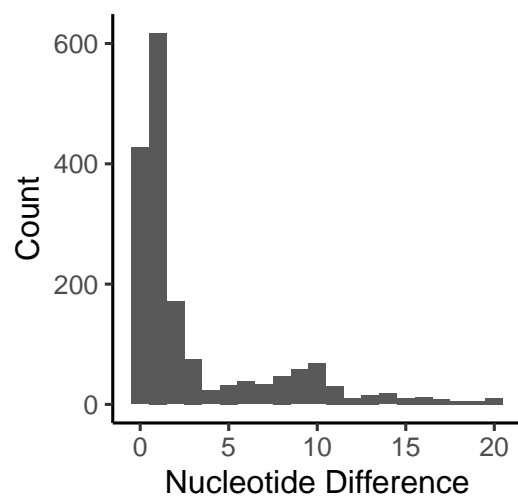
IGHV1-46*01

5815 sequences assigned
1280 (22%) exact matches, in which:
1115 unique CDR3
6 unique J



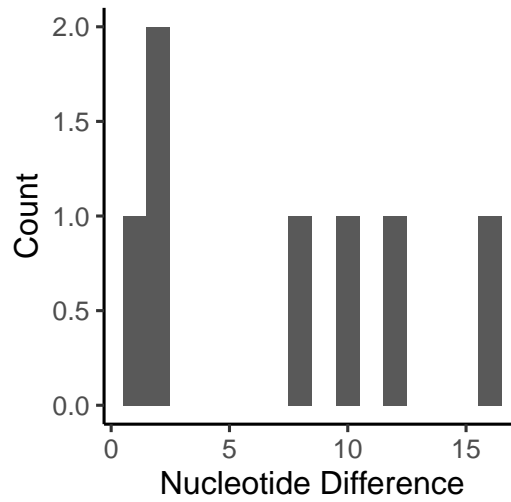
IGHV1-46*03

1742 sequences assigned
427 (24.5%) exact matches, in which:
325 unique CDR3
6 unique J



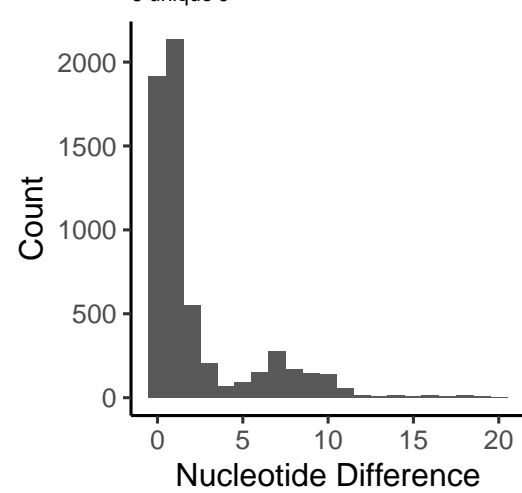
IGHV1-68*01

7 sequences assigned
No exact matches.



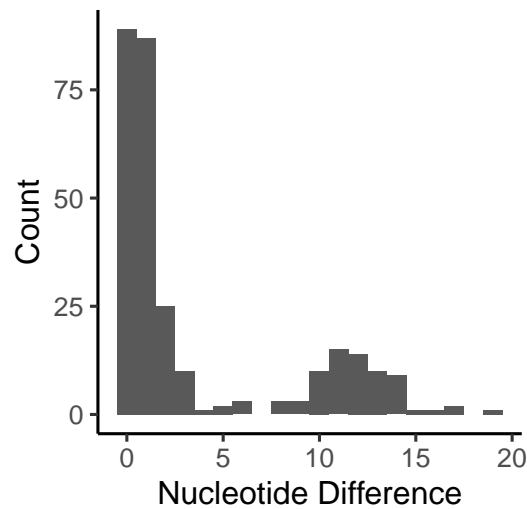
IGHV1-69*04_09

6247 sequences assigned
1918 (30.7%) exact matches, in which:
1652 unique CDR3
6 unique J



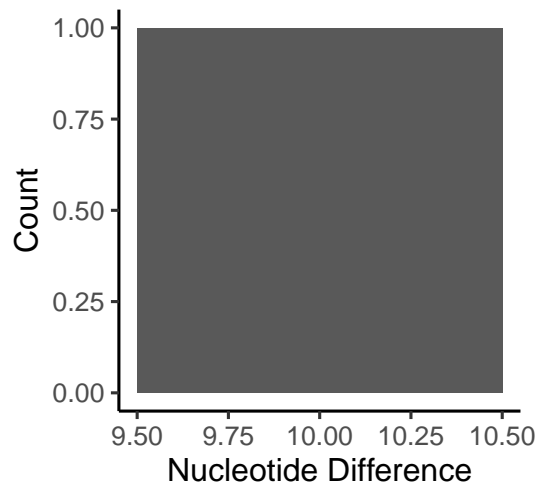
IGHV1-58*02

289 sequences assigned
89 (30.8%) exact matches, in which:
75 unique CDR3
6 unique J



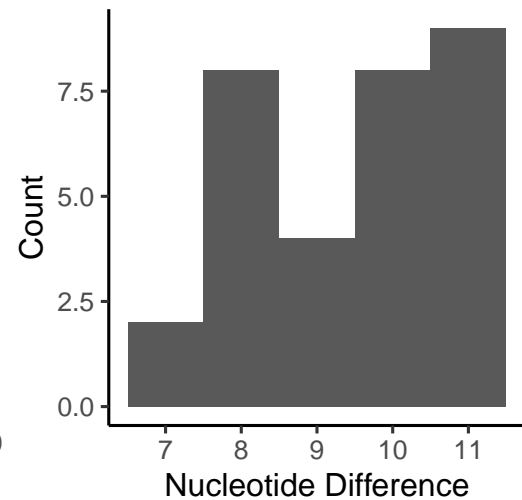
IGHV1-69-2*01

1 sequences assigned
No exact matches.



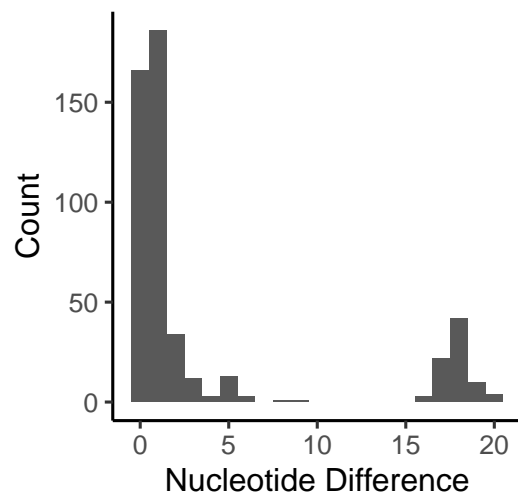
IGHV1-NL1*01

31 sequences assigned
No exact matches.



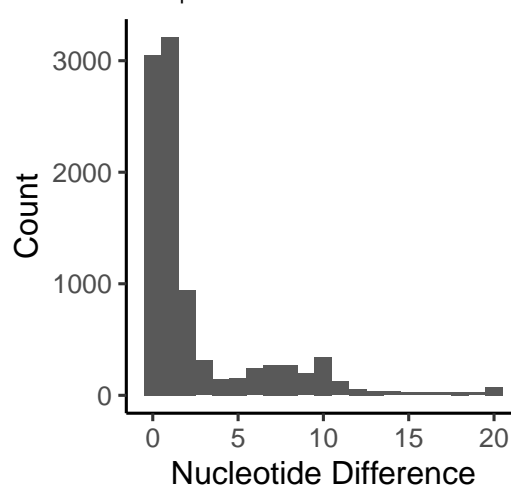
IGHV1-58*01_03

510 sequences assigned
166 (32.5%) exact matches, in which:
143 unique CDR3
6 unique J



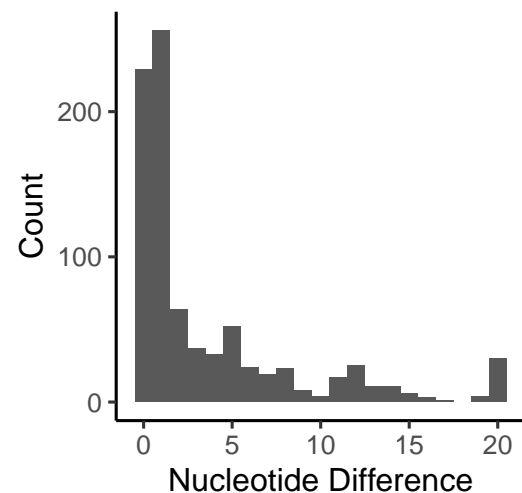
IGHV1-69*01_12_13

11649 sequences assigned
3049 (26.2%) exact matches, in which:
2611 unique CDR3
6 unique J



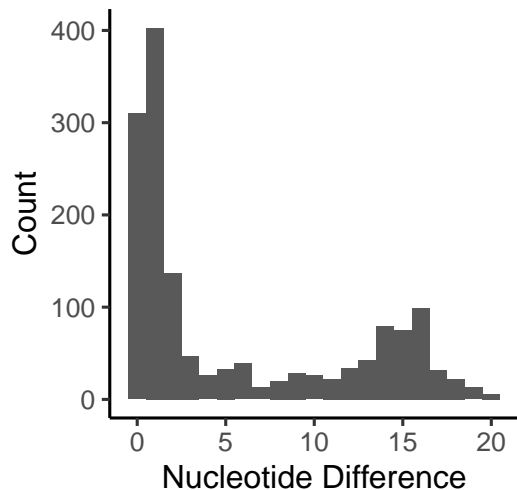
IGHV2-5*01

1023 sequences assigned
229 (22.4%) exact matches, in which:
199 unique CDR3
6 unique J



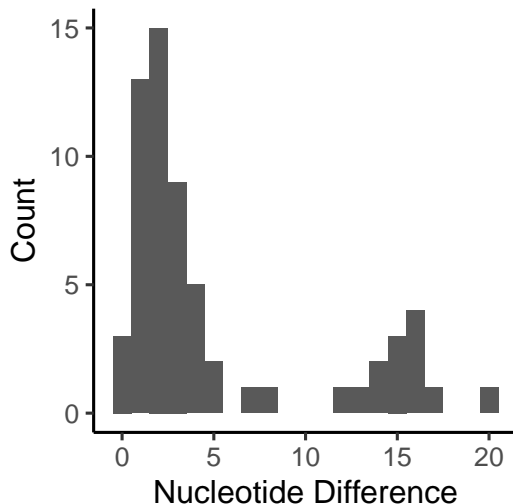
IGHV2-5*02

2159 sequences assigned
310 (14.4%) exact matches, in which:
249 unique CDR3
6 unique J



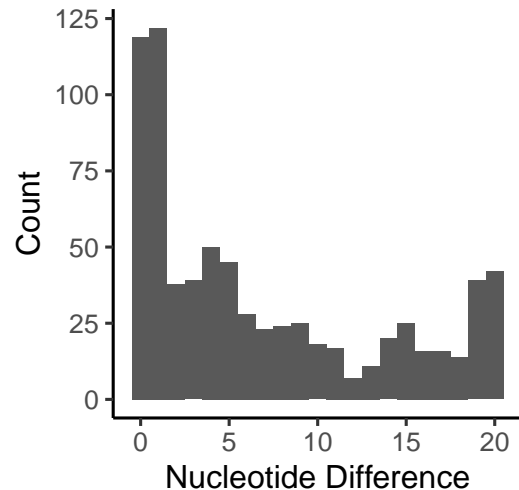
IGHV2-70*12

65 sequences assigned
3 (4.6%) exact matches, in which:
3 unique CDR3
2 unique J



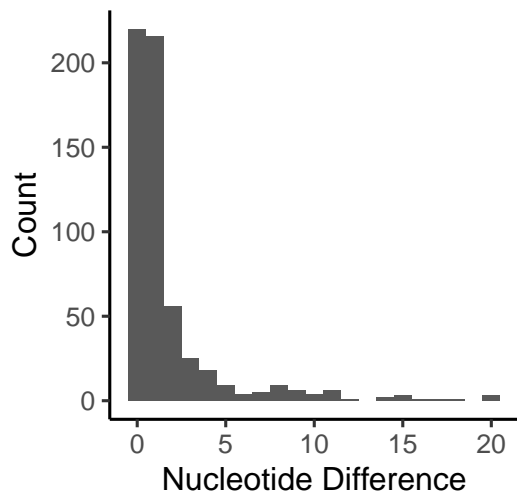
IGHV3-7*03

1154 sequences assigned
119 (10.3%) exact matches, in which:
101 unique CDR3
5 unique J



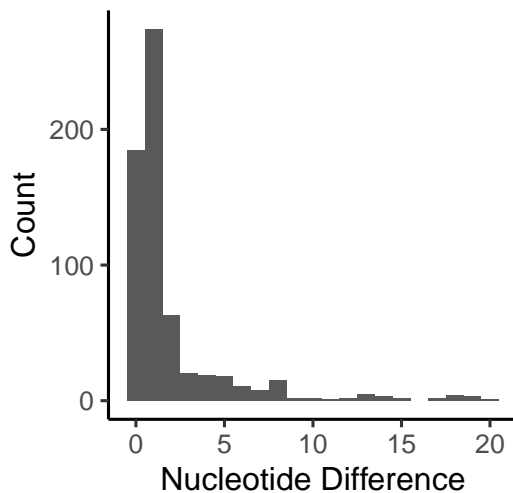
IGHV2-26*01

767 sequences assigned
220 (28.7%) exact matches, in which:
182 unique CDR3
5 unique J



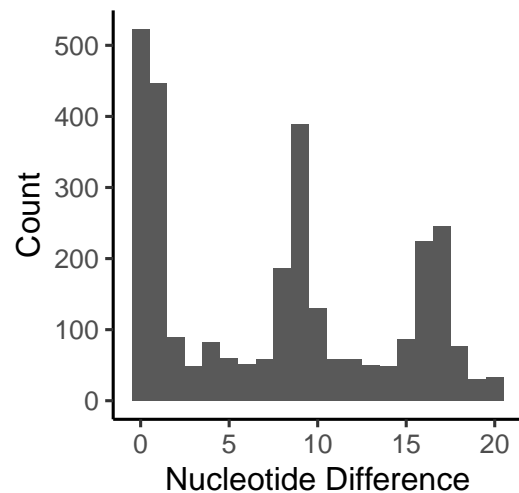
IGHV2-70*11_15

645 sequences assigned
185 (28.7%) exact matches, in which:
150 unique CDR3
5 unique J



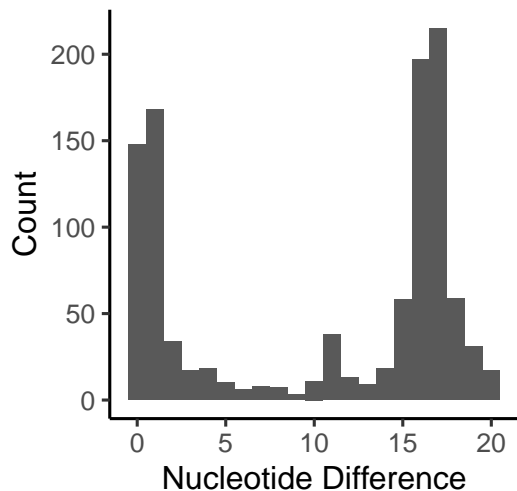
IGHV3-7*05

3275 sequences assigned
523 (16%) exact matches, in which:
344 unique CDR3
6 unique J



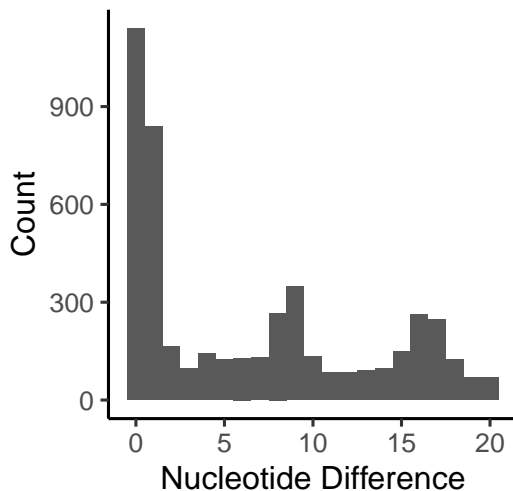
IGHV2-70*01

1141 sequences assigned
148 (13%) exact matches, in which:
122 unique CDR3
5 unique J



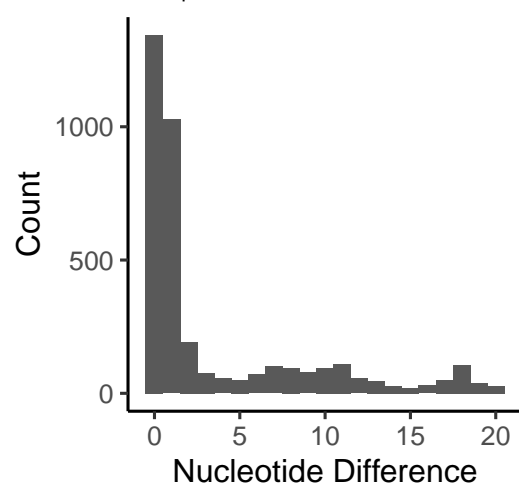
IGHV3-7*01

5774 sequences assigned
1140 (19.7%) exact matches, in which:
793 unique CDR3
6 unique J



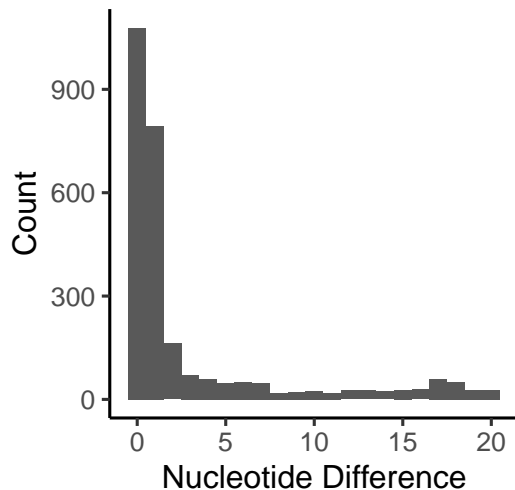
IGHV3-9*01

4114 sequences assigned
1344 (32.7%) exact matches, in which:
803 unique CDR3
6 unique J



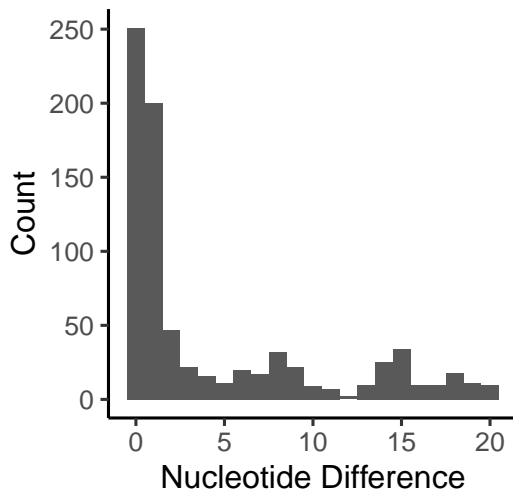
IGHV3-11*01

3468 sequences assigned
1079 (31.1%) exact matches, in which:
714 unique CDR3
6 unique J



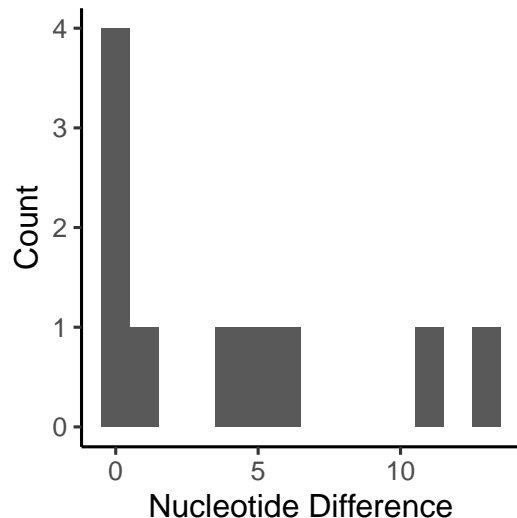
IGHV3-13*01

886 sequences assigned
251 (28.3%) exact matches, in which:
162 unique CDR3
5 unique J



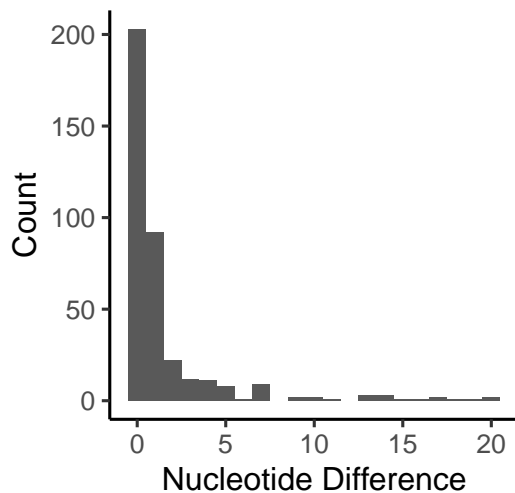
IGHV3-19*01

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



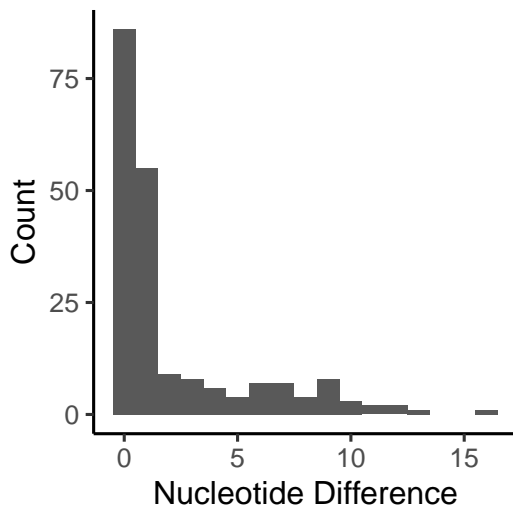
IGHV3-11*04

386 sequences assigned
203 (52.6%) exact matches, in which:
196 unique CDR3
6 unique J



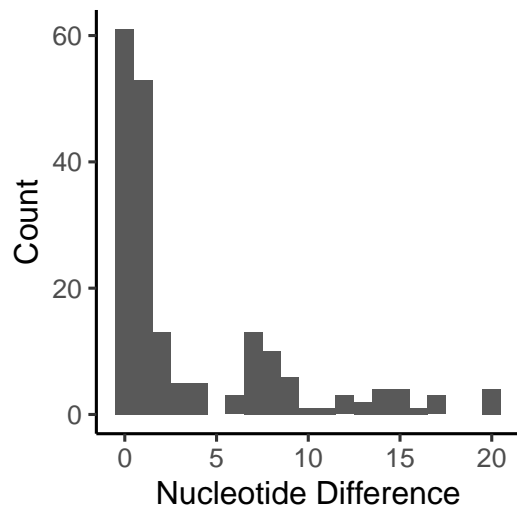
IGHV3-13*05

204 sequences assigned
86 (42.2%) exact matches, in which:
62 unique CDR3
5 unique J



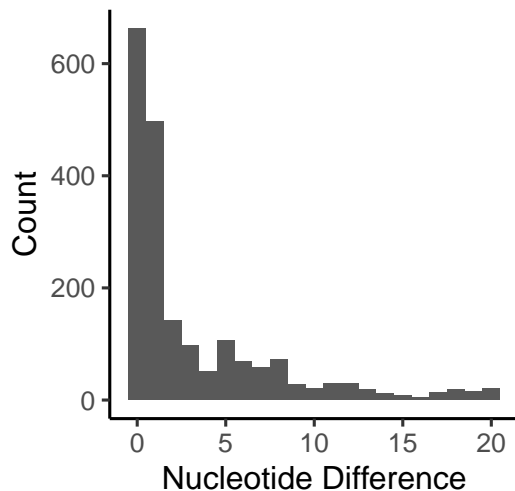
IGHV3-20*01_02

239 sequences assigned
61 (25.5%) exact matches, in which:
37 unique CDR3
6 unique J



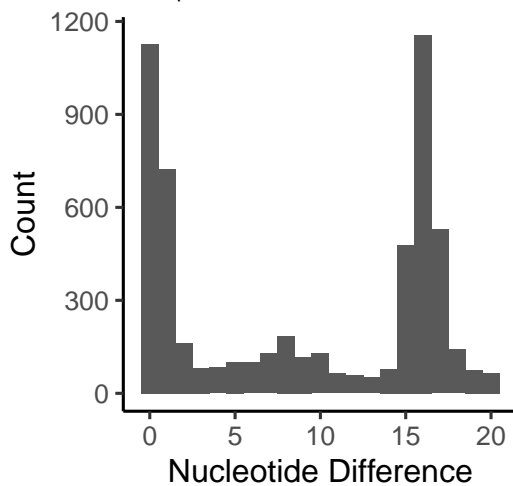
IGHV3-11*06

2068 sequences assigned
663 (32.1%) exact matches, in which:
442 unique CDR3
6 unique J



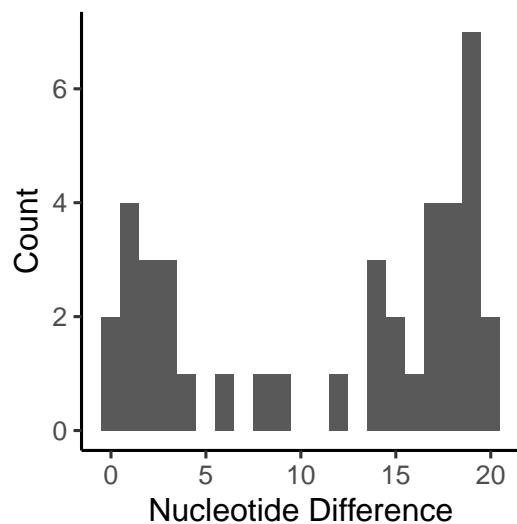
IGHV3-15*01_02

6545 sequences assigned
1127 (17.2%) exact matches, in which:
697 unique CDR3
6 unique J



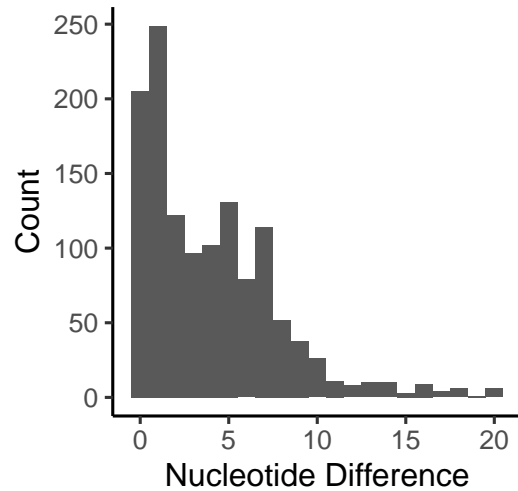
IGHV3-20*03_04

252 sequences assigned
2 (0.8%) exact matches, in which:
2 unique CDR3
2 unique J



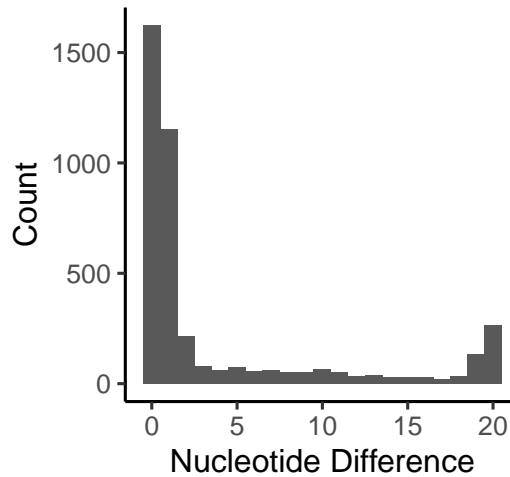
IGHV3-21*04

1408 sequences assigned
205 (14.6%) exact matches, in which:
184 unique CDR3
5 unique J



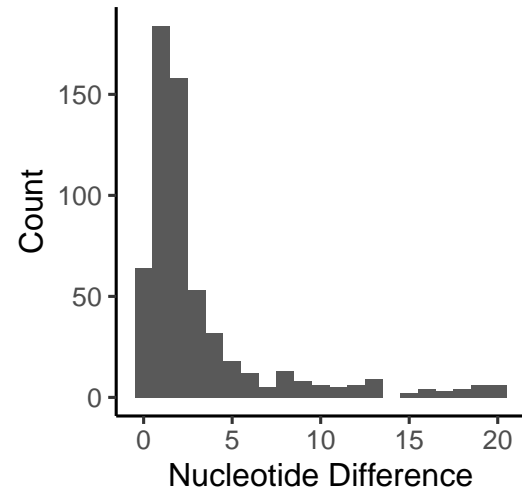
IGHV3-30-3*01

4946 sequences assigned
1623 (32.8%) exact matches, in which:
1019 unique CDR3
6 unique J



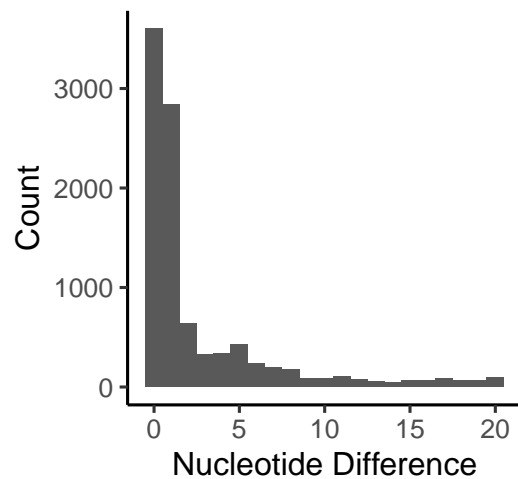
IGHV3-33*06

647 sequences assigned
64 (9.9%) exact matches, in which:
62 unique CDR3
6 unique J



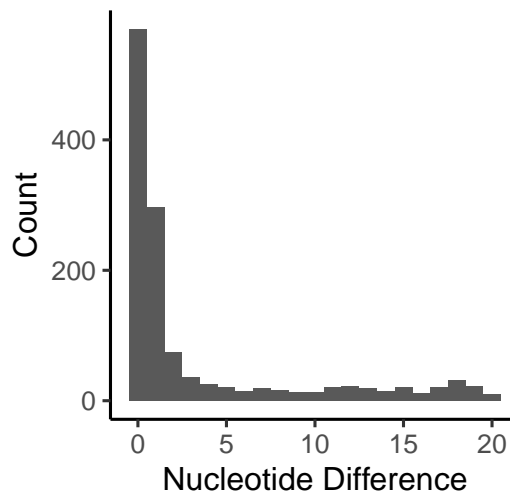
IGHV3-21*01_02

12531 sequences assigned
3601 (28.7%) exact matches, in which:
2237 unique CDR3
6 unique J



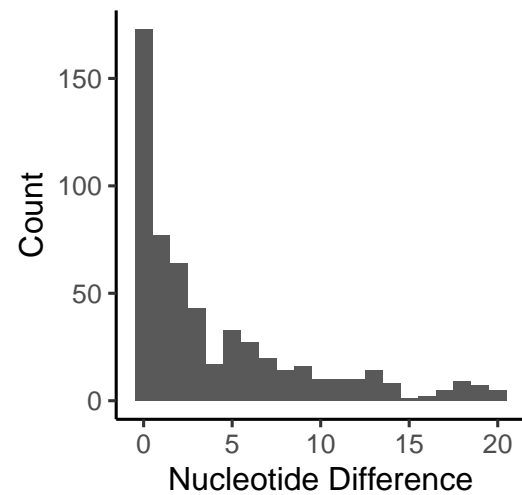
IGHV3-30*03

1509 sequences assigned
570 (37.8%) exact matches, in which:
506 unique CDR3
6 unique J



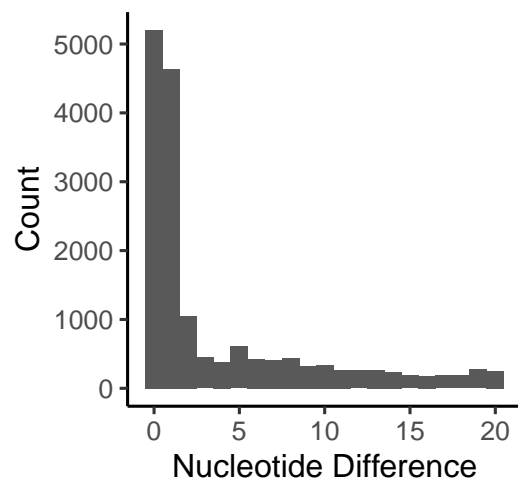
IGHV3-33*08

670 sequences assigned
173 (25.8%) exact matches, in which:
146 unique CDR3
6 unique J



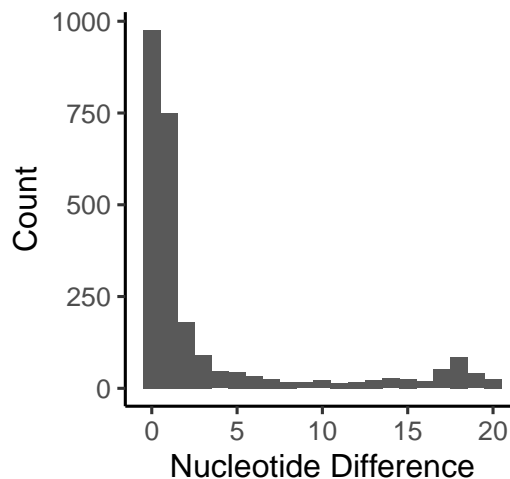
IGHV3-23*01_04

24189 sequences assigned
5203 (21.5%) exact matches, in which:
2972 unique CDR3
6 unique J



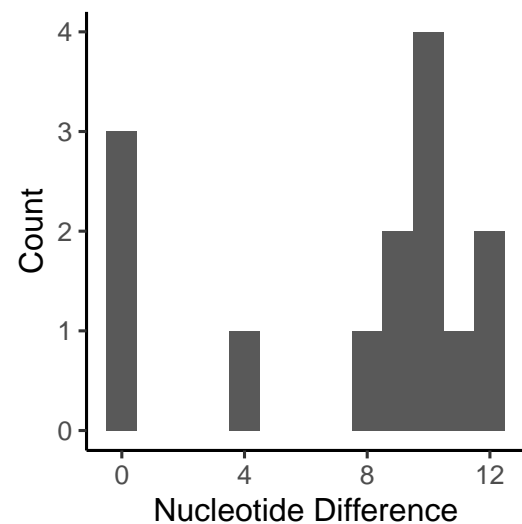
IGHV3-33*01

3716 sequences assigned
976 (26.3%) exact matches, in which:
643 unique CDR3
6 unique J



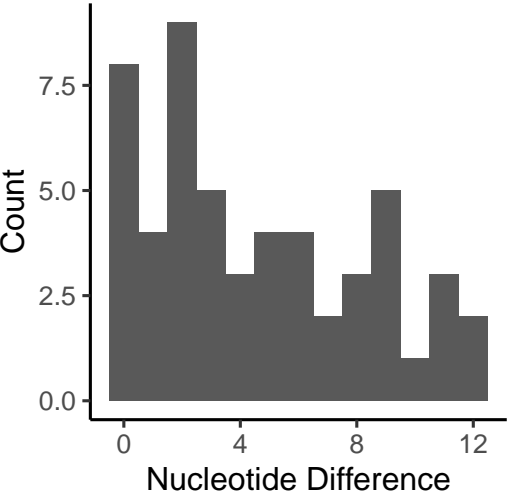
IGHV3-35*01

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



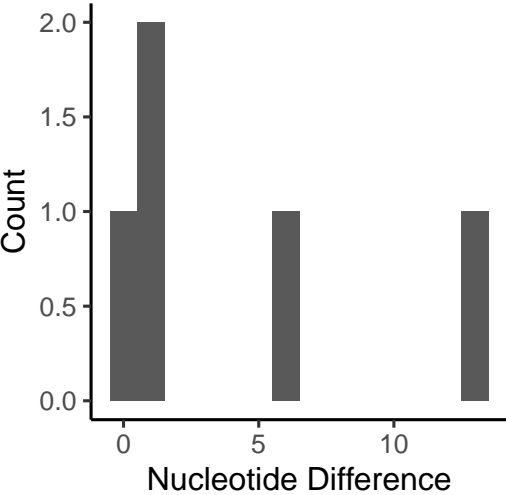
IGHV3-38-3*01

53 sequences assigned
8 (15.1%) exact matches, in which:
8 unique CDR3
3 unique J



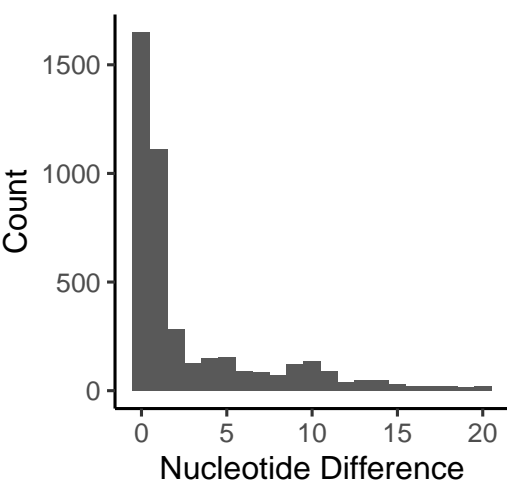
IGHV3-47*01

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



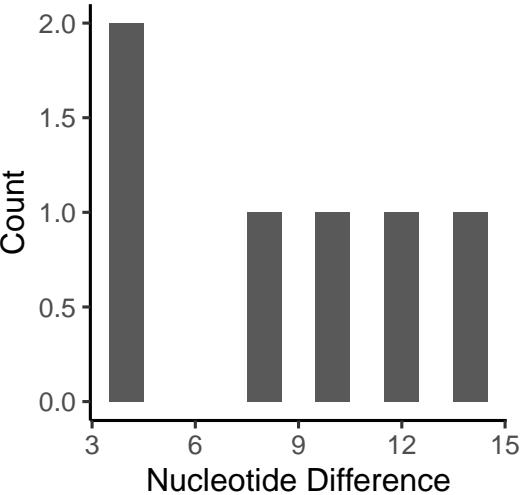
IGHV3-48*04

5302 sequences assigned
1649 (31.1%) exact matches, in which:
1106 unique CDR3
6 unique J



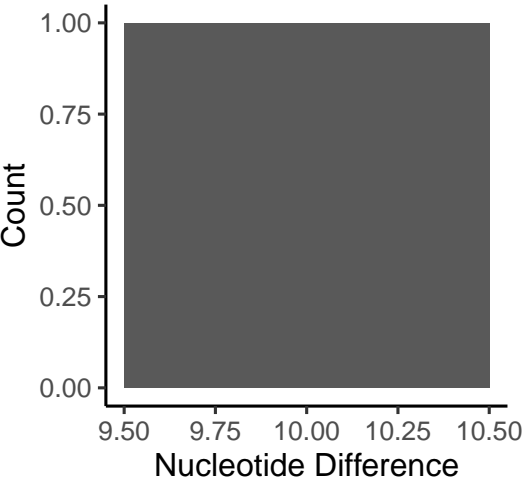
IGHV3-38*03

6 sequences assigned
No exact matches.



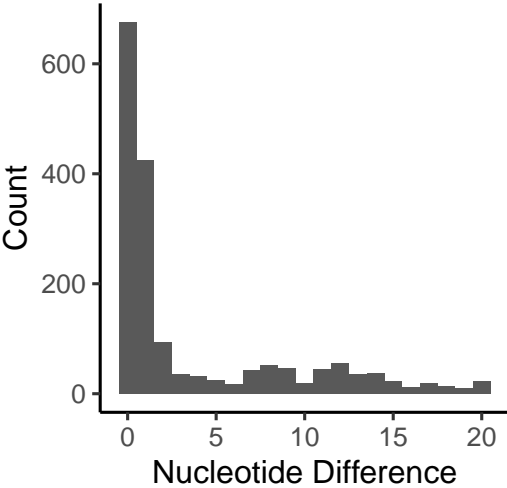
IGHV3-47*02

1 sequences assigned
No exact matches.



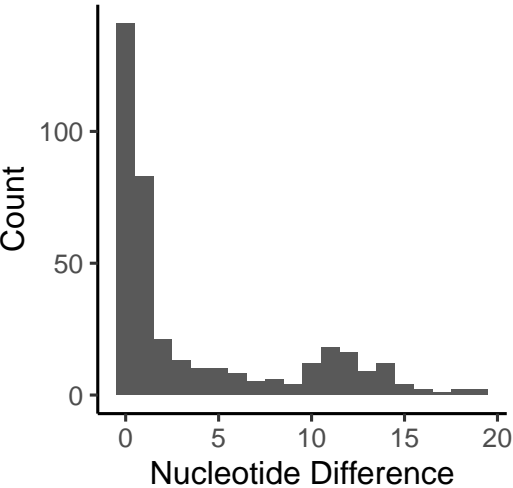
IGHV3-49*03_05

2461 sequences assigned
676 (27.5%) exact matches, in which:
395 unique CDR3
6 unique J



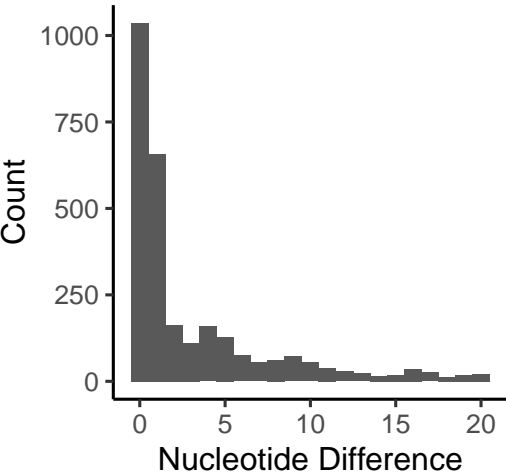
IGHV3-43*01

1384 sequences assigned
141 (10.2%) exact matches, in which:
83 unique CDR3
6 unique J



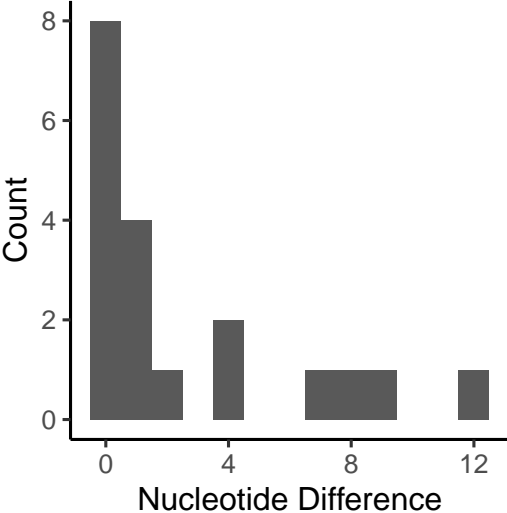
IGHV3-48*01

3928 sequences assigned
1036 (26.4%) exact matches, in which:
669 unique CDR3
6 unique J



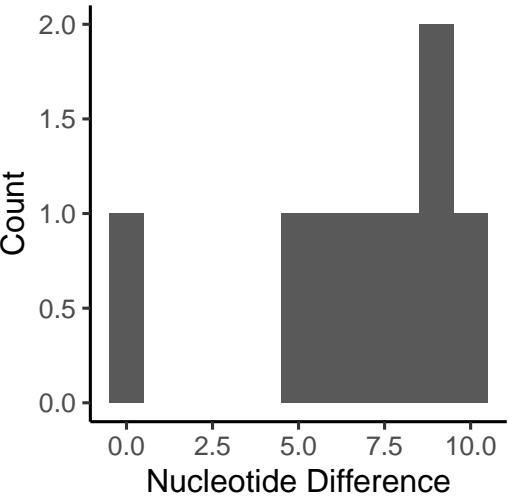
IGHV3-52*02

19 sequences assigned
8 (42.1%) exact matches, in which:
6 unique CDR3
2 unique J



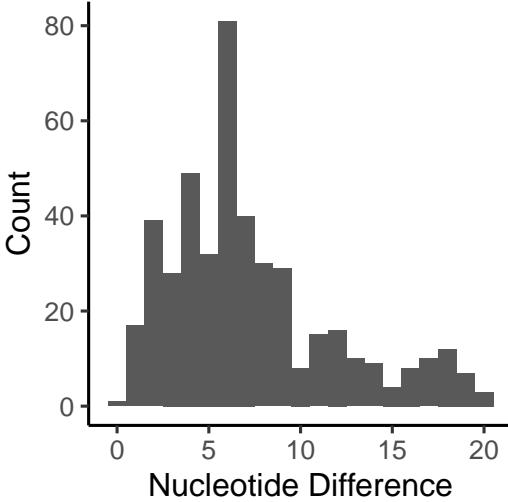
IGHV3-52*01_03

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



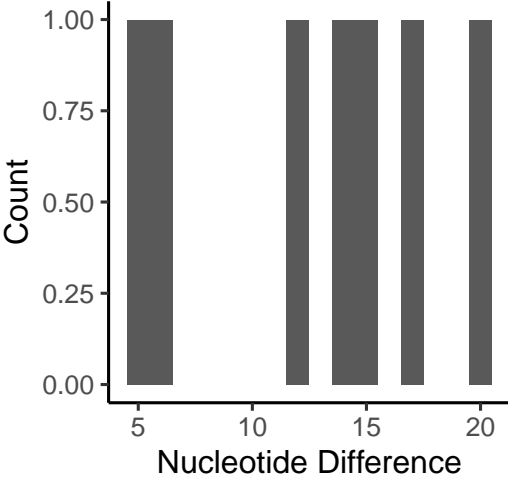
IGHV3-64*04

468 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



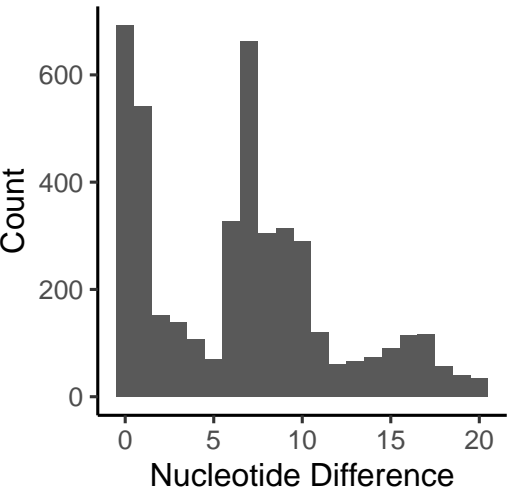
IGHV3-69-1*02

26 sequences assigned
No exact matches.



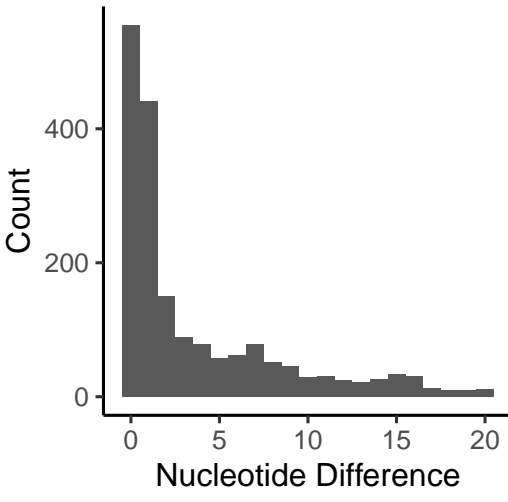
IGHV3-53*01_02

5871 sequences assigned
693 (11.8%) exact matches, in which:
443 unique CDR3
6 unique J



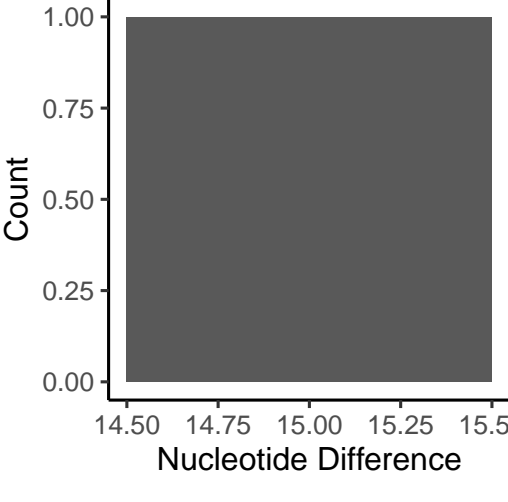
IGHV3-66*01

1973 sequences assigned
555 (28.1%) exact matches, in which:
366 unique CDR3
6 unique J



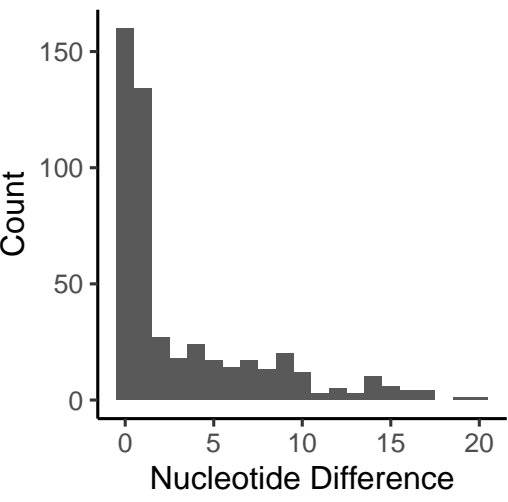
IGHV3-71*01_04

2 sequences assigned
No exact matches.



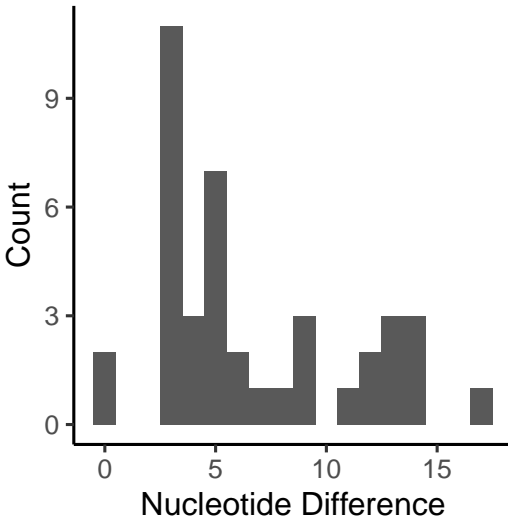
IGHV3-64*01

553 sequences assigned
160 (28.9%) exact matches, in which:
101 unique CDR3
5 unique J



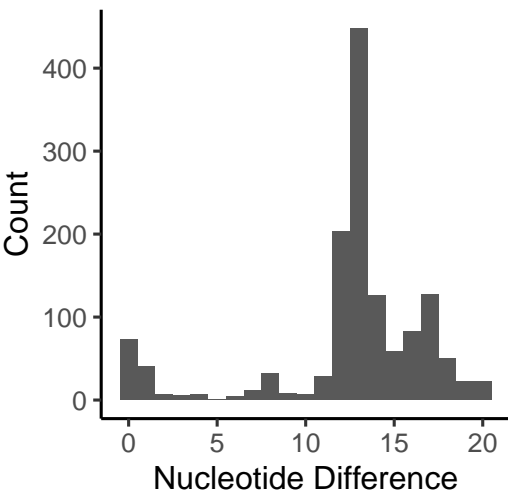
IGHV3-69-1*01

59 sequences assigned
2 (3.4%) exact matches, in which:
1 unique CDR3
1 unique J



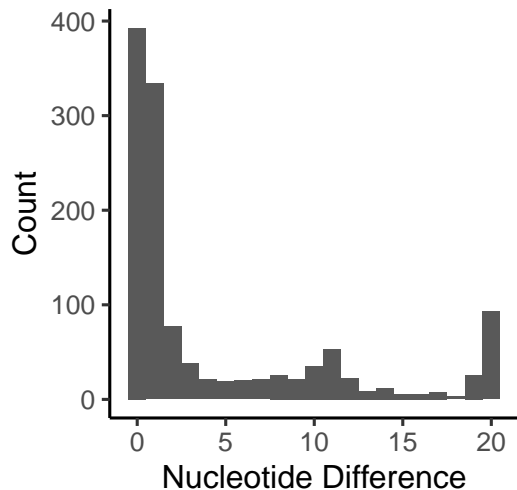
IGHV3-72*01

1721 sequences assigned
73 (4.2%) exact matches, in which:
49 unique CDR3
6 unique J



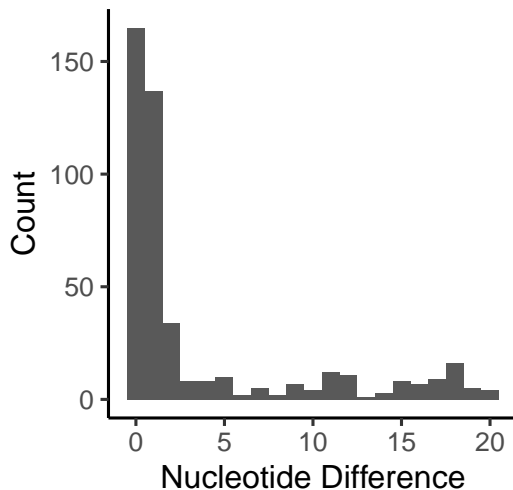
IGHV3-73*01_02

2246 sequences assigned
393 (17.5%) exact matches, in which:
242 unique CDR3
6 unique J



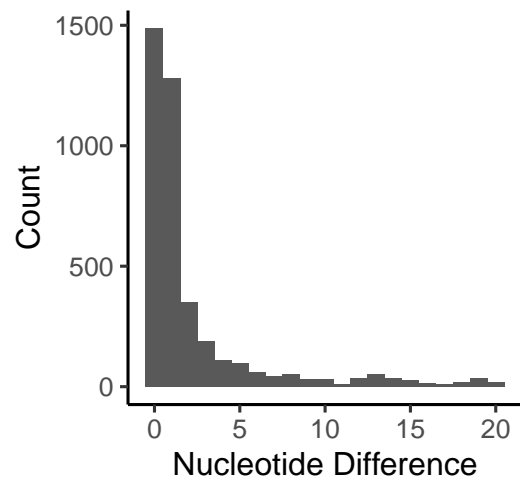
IGHV3-43D*03

1142 sequences assigned
165 (14.4%) exact matches, in which:
104 unique CDR3
5 unique J



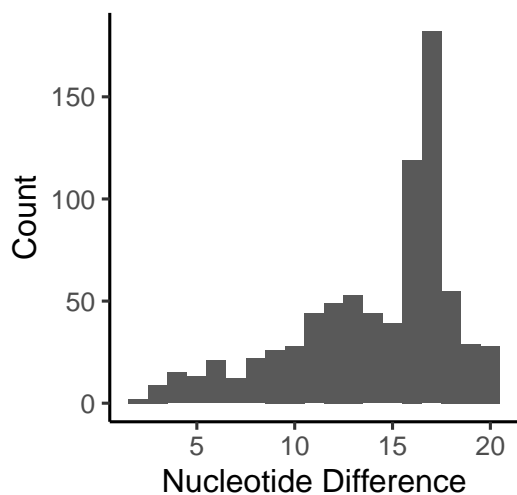
IGHV4-4*02_03

4342 sequences assigned
1487 (34.2%) exact matches, in which:
1167 unique CDR3
6 unique J



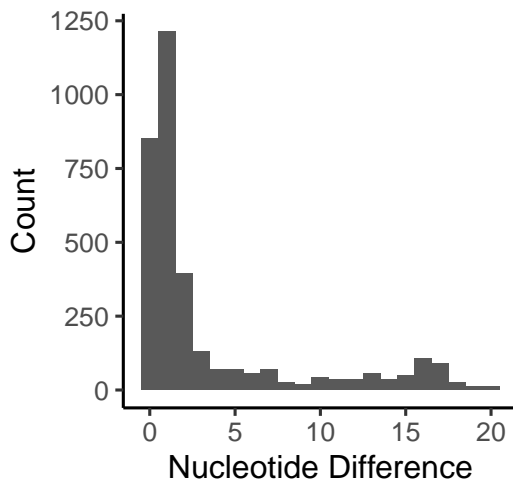
IGHV3-74*03

1306 sequences assigned
No exact matches.



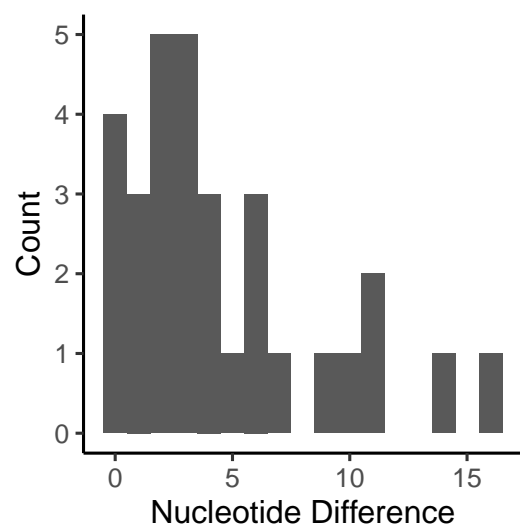
IGHV3-64D*08

3533 sequences assigned
852 (24.1%) exact matches, in which:
425 unique CDR3
6 unique J



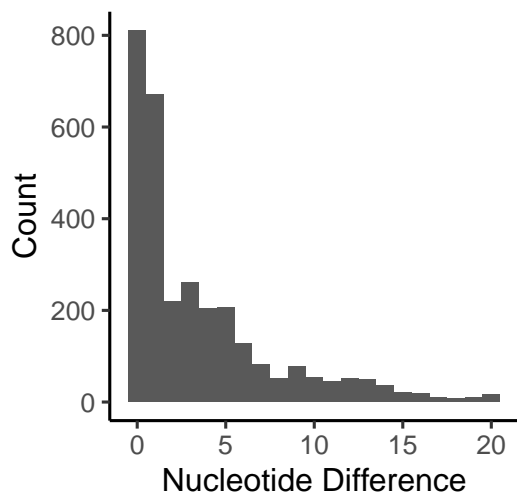
IGHV4-28*03

32 sequences assigned
4 (12.5%) exact matches, in which:
4 unique CDR3
3 unique J



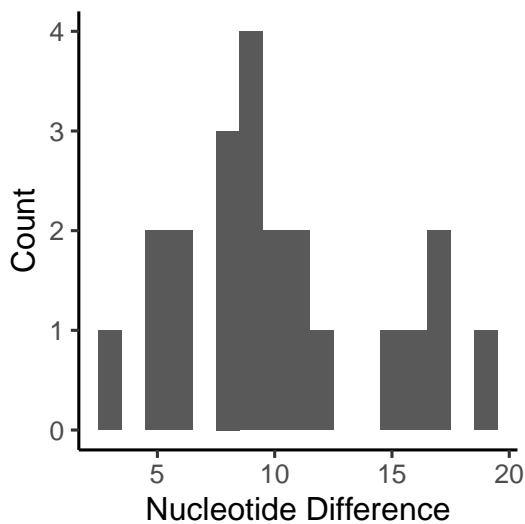
IGHV3-74*01_02

3199 sequences assigned
811 (25.4%) exact matches, in which:
543 unique CDR3
6 unique J



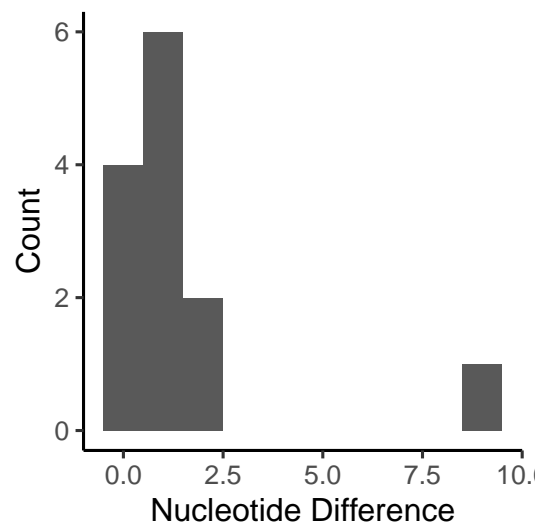
IGHV3-NL1*01

42 sequences assigned
No exact matches.



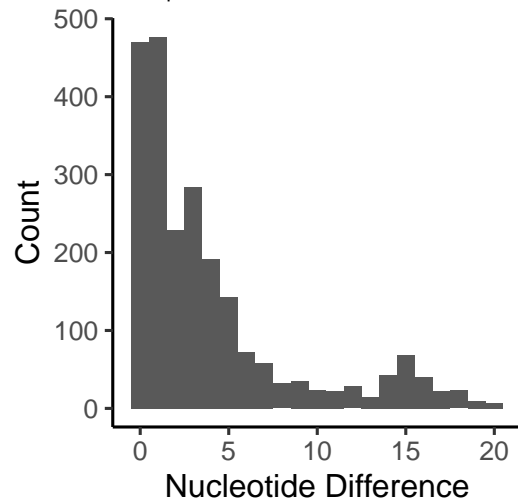
IGHV4-28*01_07

19 sequences assigned
4 (21.1%) exact matches, in which:
3 unique CDR3
2 unique J



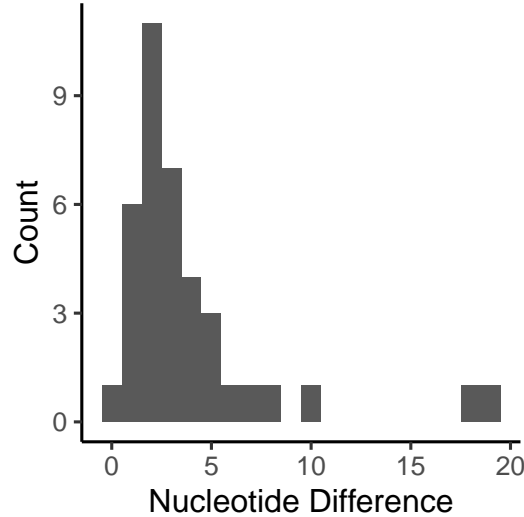
IGHV4-30-4*01

9336 sequences assigned
470 (5%) exact matches, in which:
408 unique CDR3
6 unique J



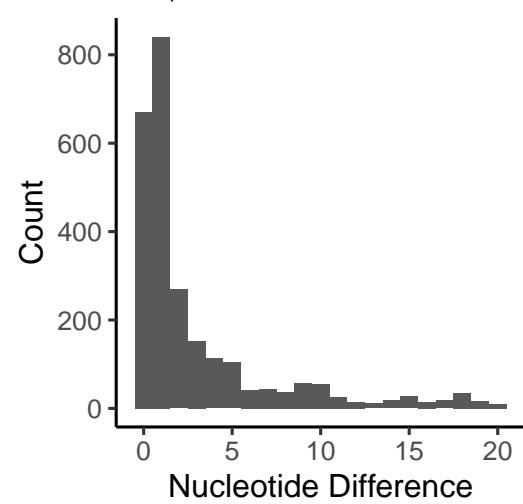
IGHV4-30-2*05

52 sequences assigned
1 (1.9%) exact matches, in which:
1 unique CDR3
1 unique J



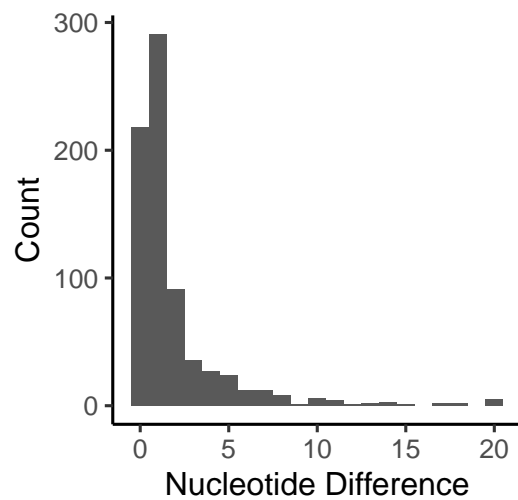
IGHV4-38-2*02

3359 sequences assigned
670 (19.9%) exact matches, in which:
578 unique CDR3
6 unique J



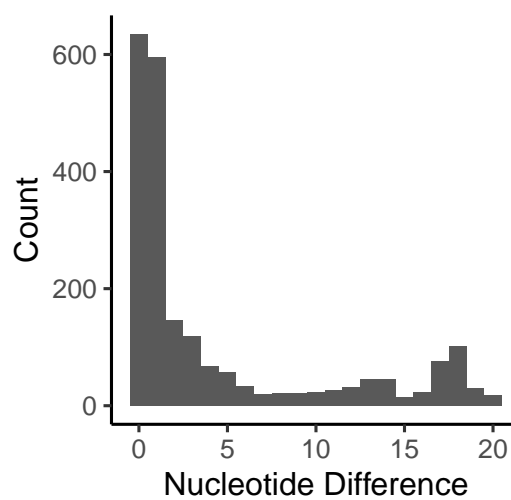
IGHV4-30-2*01

1499 sequences assigned
218 (14.5%) exact matches, in which:
145 unique CDR3
6 unique J



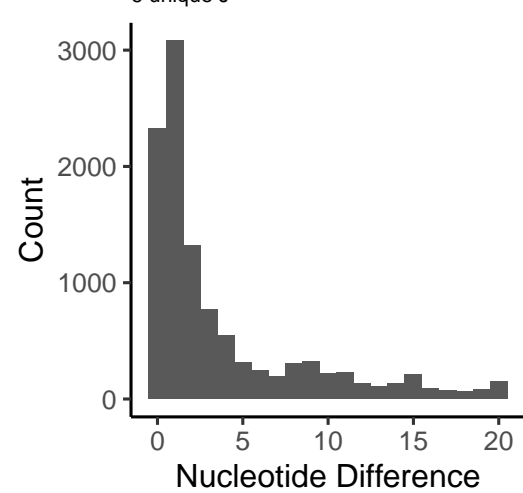
IGHV4-31*02

3241 sequences assigned
635 (19.6%) exact matches, in which:
536 unique CDR3
6 unique J



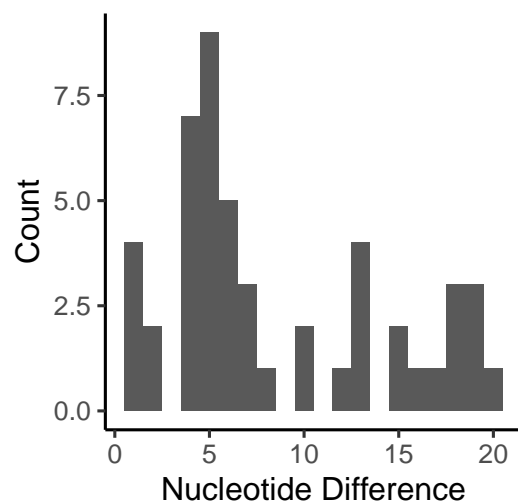
IGHV4-39*07

13606 sequences assigned
2327 (17.1%) exact matches, in which:
1875 unique CDR3
6 unique J



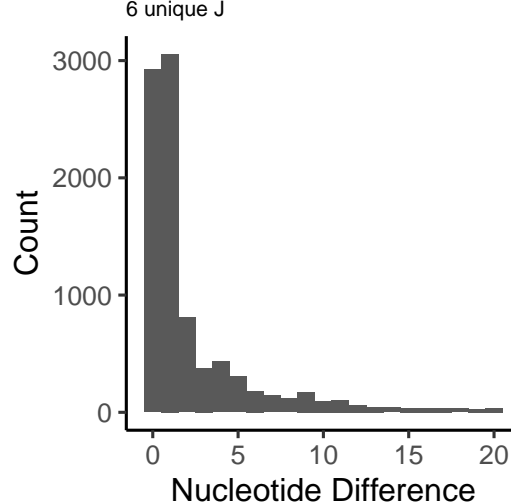
IGHV4-30-2*03

70 sequences assigned
No exact matches.



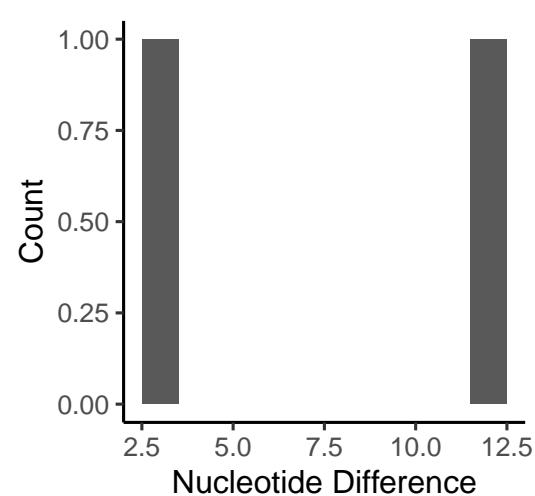
IGHV4-34*01_02

12214 sequences assigned
2925 (23.9%) exact matches, in which:
2171 unique CDR3
6 unique J



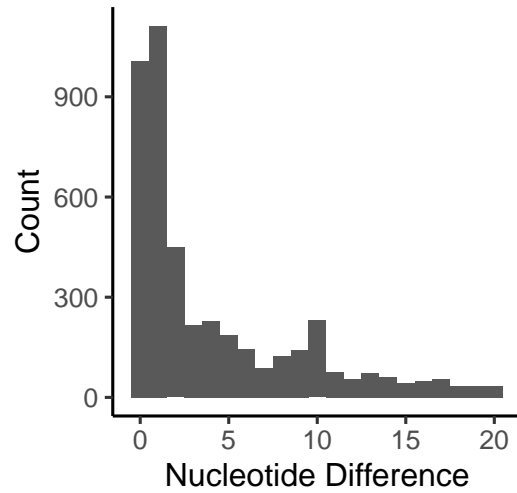
IGHV4-55*09

4 sequences assigned
No exact matches.



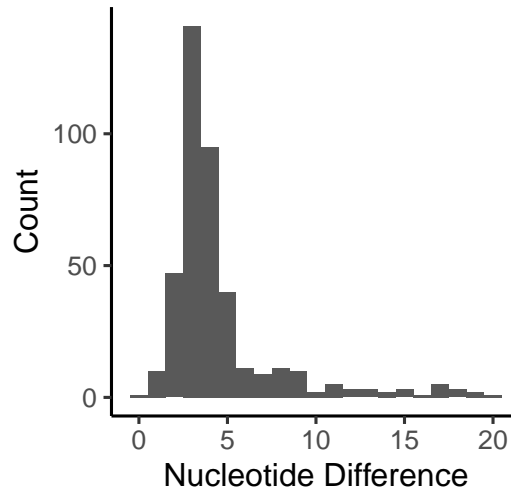
IGHV4–59*08

4944 sequences assigned
1007 (20.4%) exact matches, in which:
818 unique CDR3
6 unique J



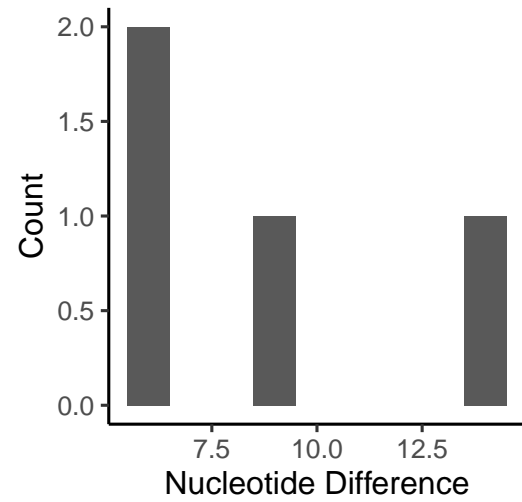
IGHV4–61*05

436 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



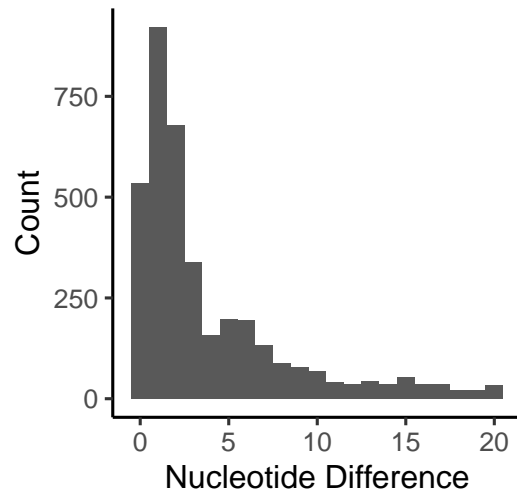
IGHV1/OR15–3*02

6 sequences assigned
No exact matches.



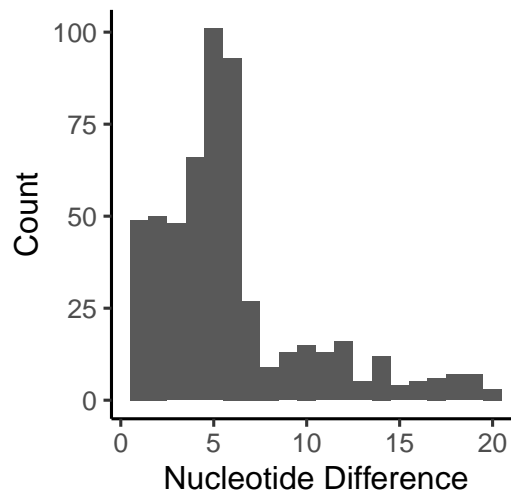
IGHV4–59*12

5374 sequences assigned
535 (10%) exact matches, in which:
519 unique CDR3
6 unique J



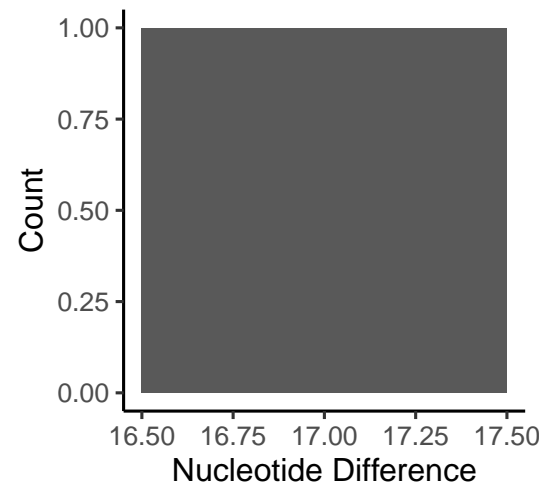
IGHV4–61*08

607 sequences assigned
No exact matches.



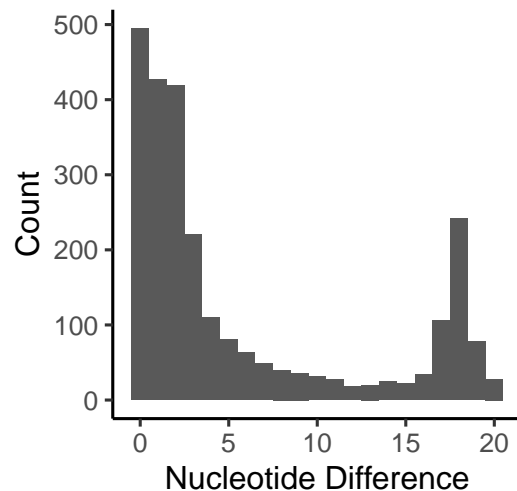
IGHV1/OR15–4*01

1 sequences assigned
No exact matches.



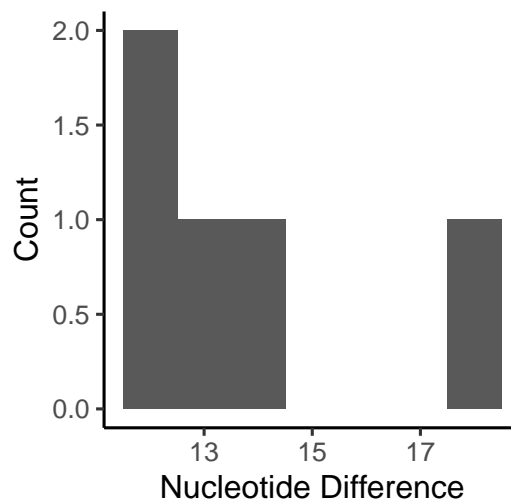
IGHV4–61*01

2702 sequences assigned
495 (18.3%) exact matches, in which:
445 unique CDR3
6 unique J



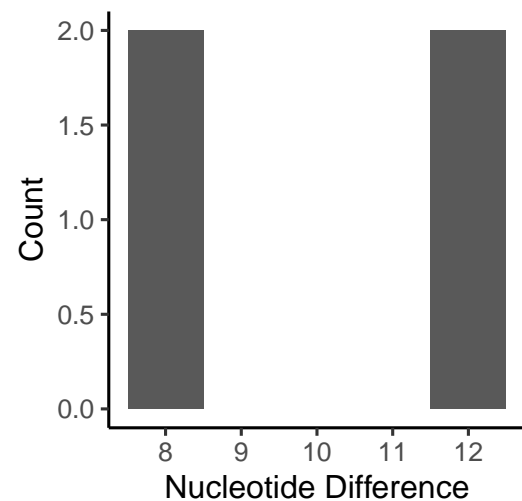
IGHV1/OR15–2*02_03

5 sequences assigned
No exact matches.



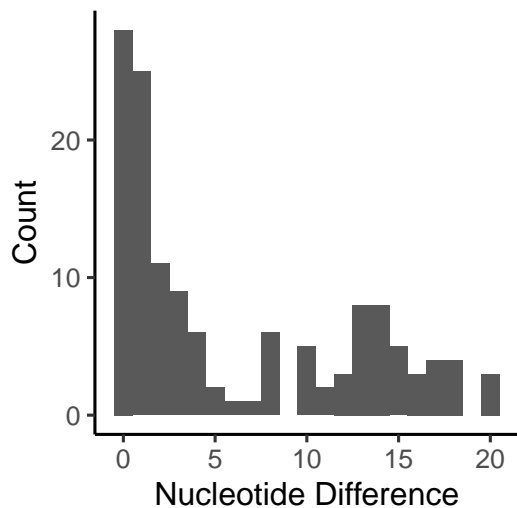
IGHV4/OR15–8*02

9 sequences assigned
No exact matches.



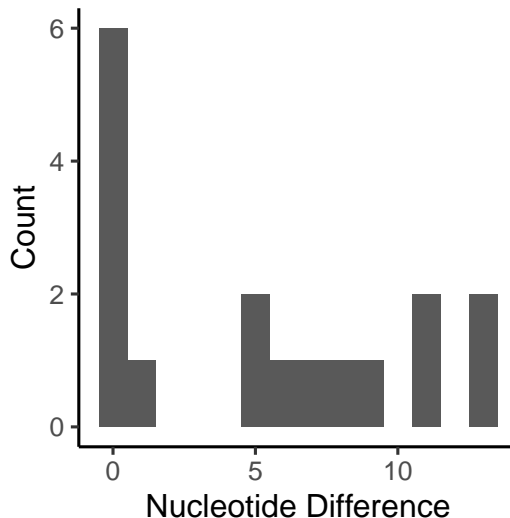
IGHV4/OR15–8*01_C193/

174 sequences assigned
28 (16.1%) exact matches, in which:
24 unique CDR3
4 unique J



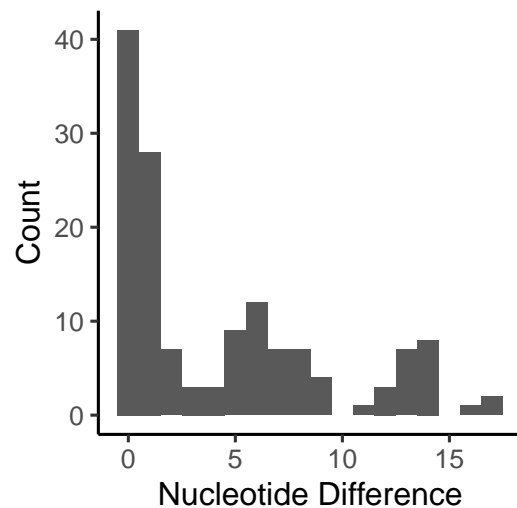
IGHV5–51*06

32 sequences assigned
6 (18.8%) exact matches, in which:
6 unique CDR3
4 unique J



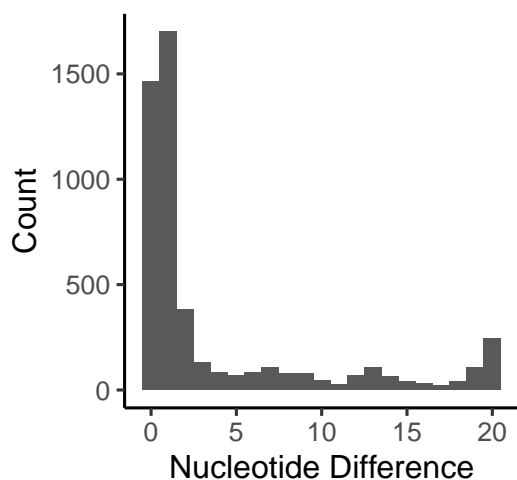
IGHV6–1*01_02_A315G

151 sequences assigned
41 (27.2%) exact matches, in which:
39 unique CDR3
5 unique J



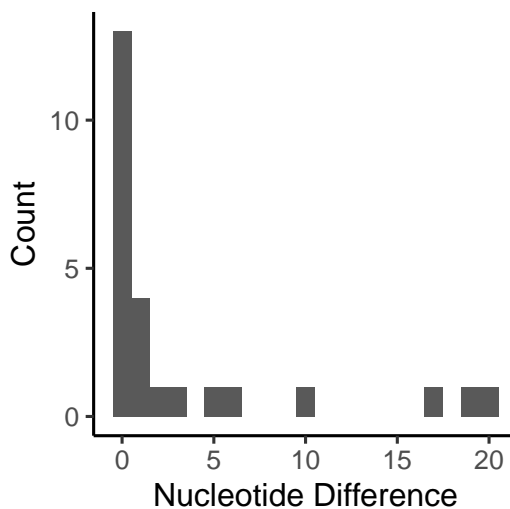
IGHV5–10–1*01_03

7408 sequences assigned
1465 (19.8%) exact matches, in which:
988 unique CDR3
6 unique J



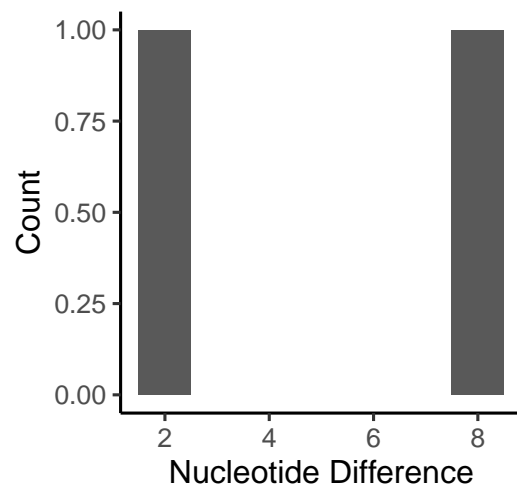
IGHV5–51*07

29 sequences assigned
13 (44.8%) exact matches, in which:
13 unique CDR3
4 unique J



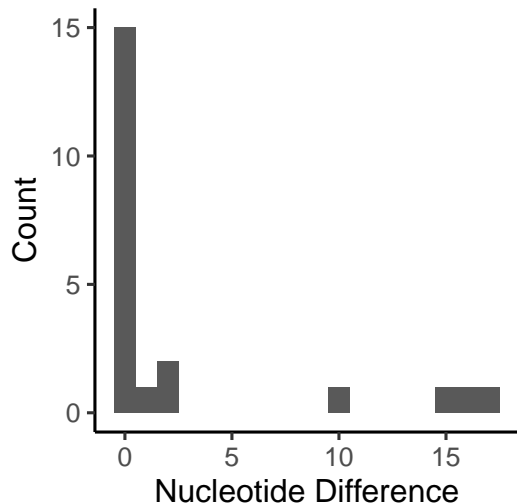
IGHV3/OR16–9*01

2 sequences assigned
No exact matches.



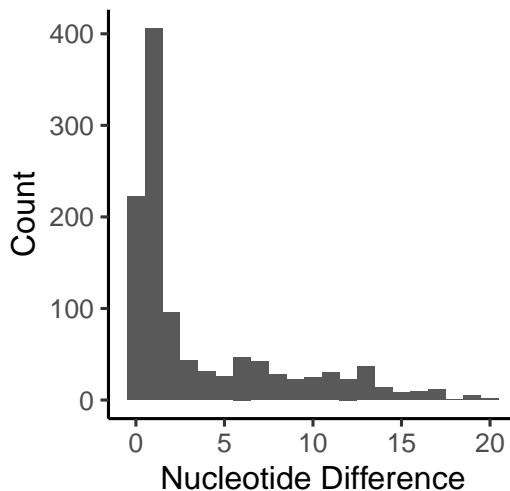
IGHV5–51*04

192 sequences assigned
15 (7.8%) exact matches, in which:
15 unique CDR3
4 unique J



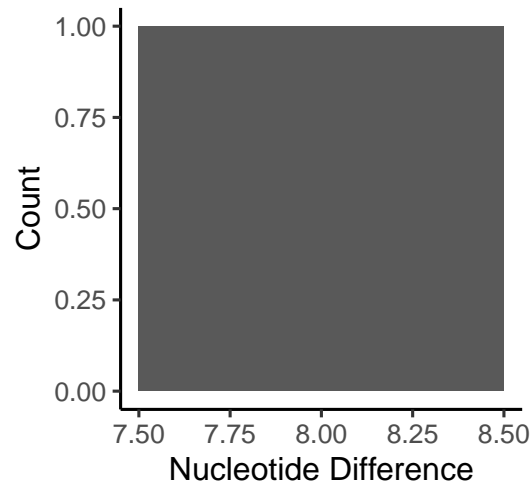
IGHV6–1*01_02

1525 sequences assigned
222 (14.6%) exact matches, in which:
173 unique CDR3
5 unique J



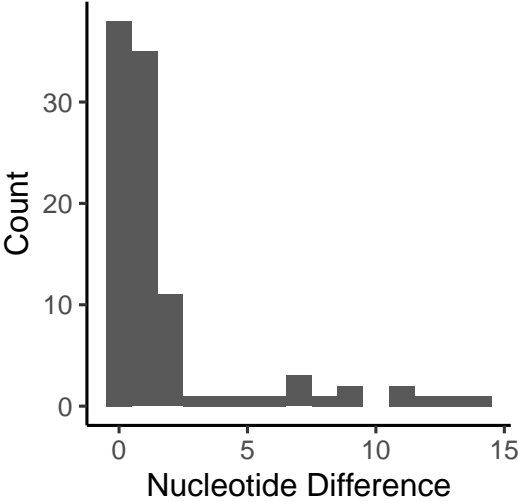
IGHV3/OR16–13*01

1 sequences assigned
No exact matches.

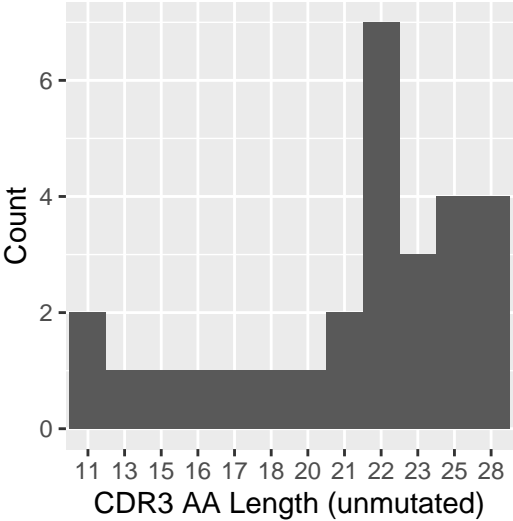


IGHV7-4-1*01

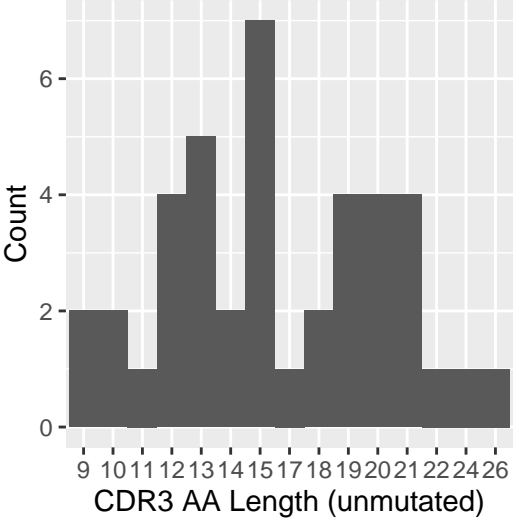
100 sequences assigned
38 (38%) exact matches, in which:
36 unique CDR3
5 unique J



IGHV4/OR15-8*01_C193A



IGHV6-1*01_02_A315G





[illegible]