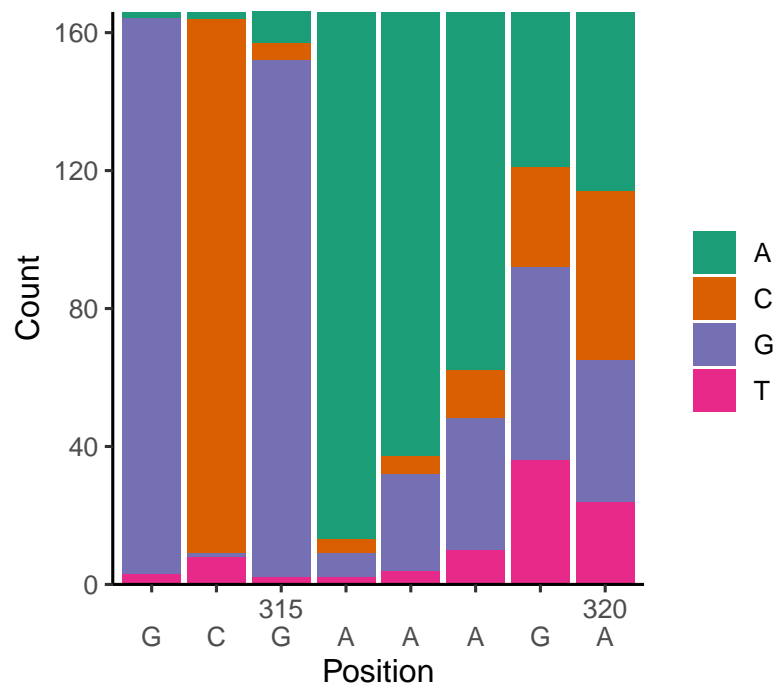
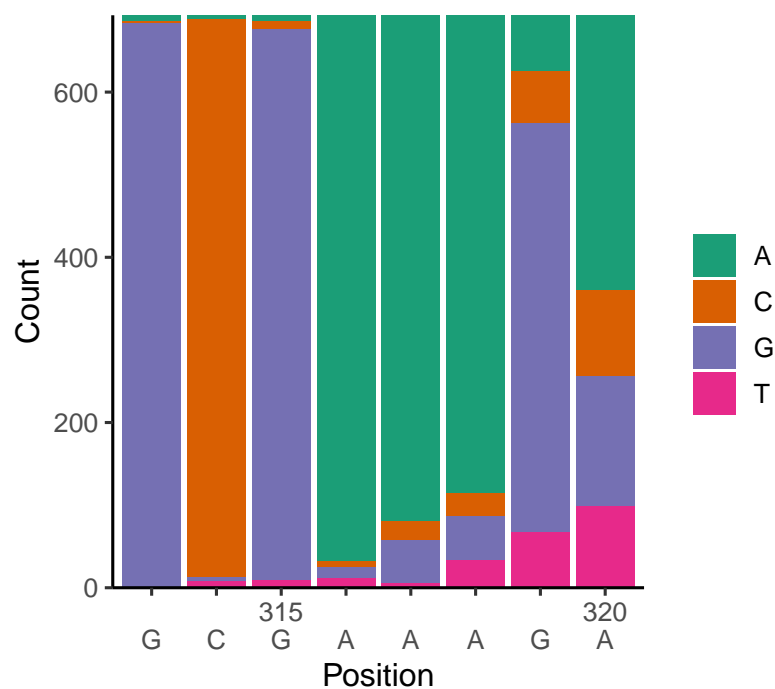


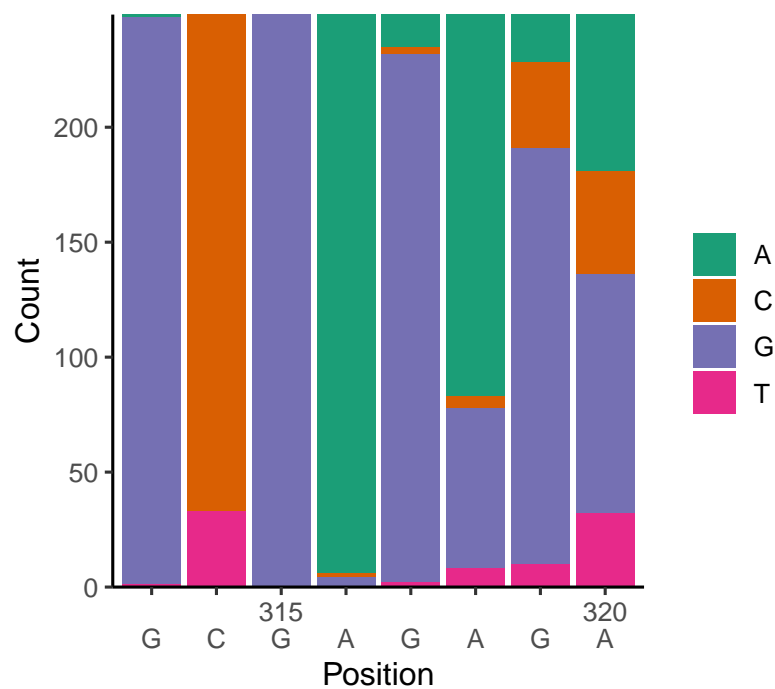
Gene IGHV3-30-3*02_C189T



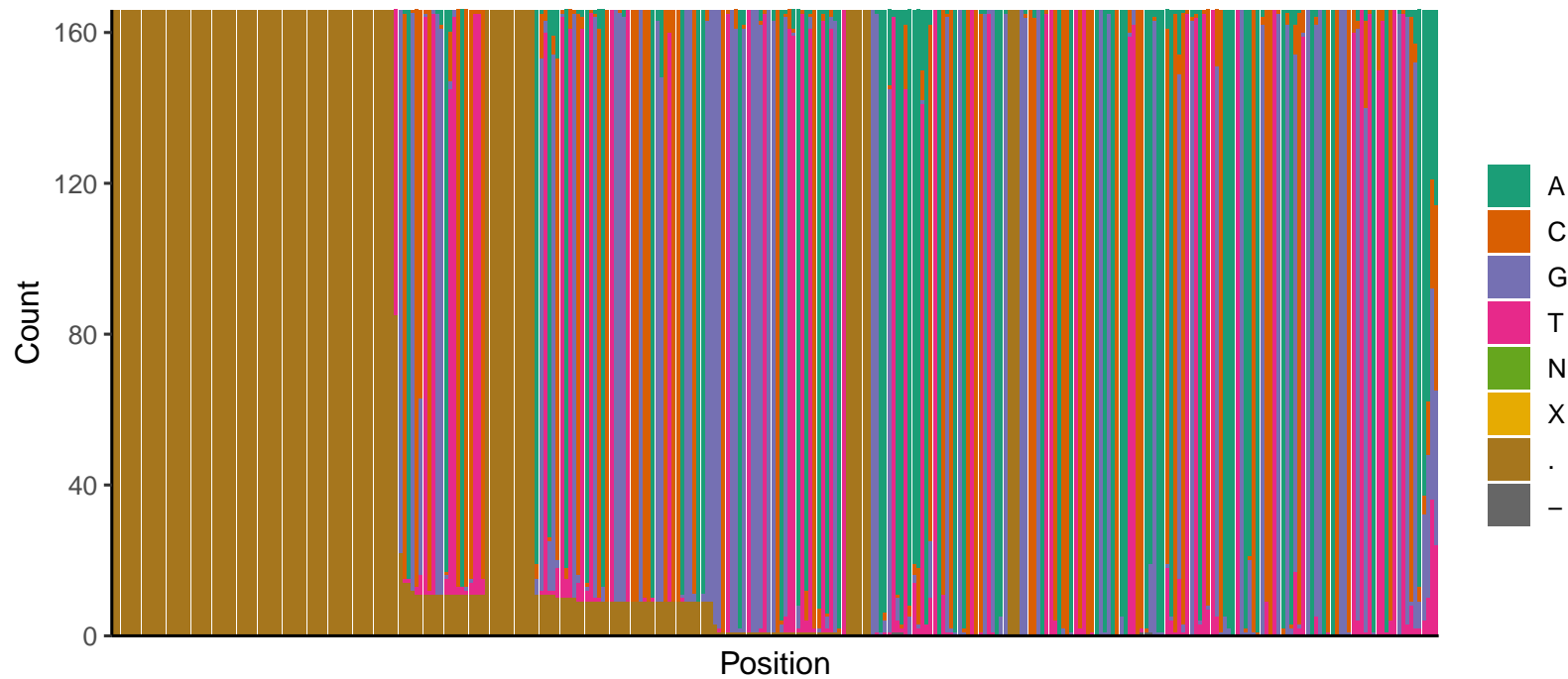
Gene IGHV3-30-3*02_C189T_T288C_T300C_G303A



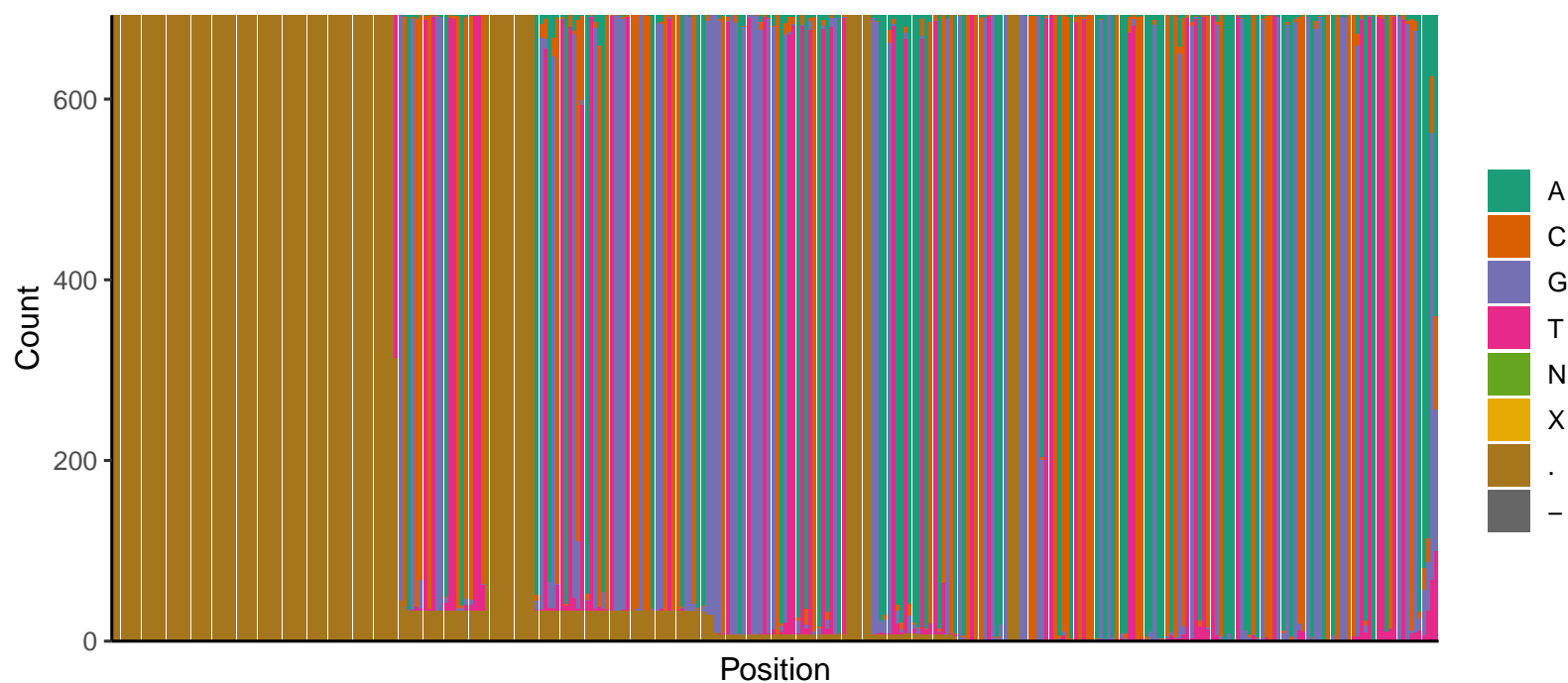
Gene IGHV6-1*01_02_A315G



Gene IGHV3-30-3*02_C189T



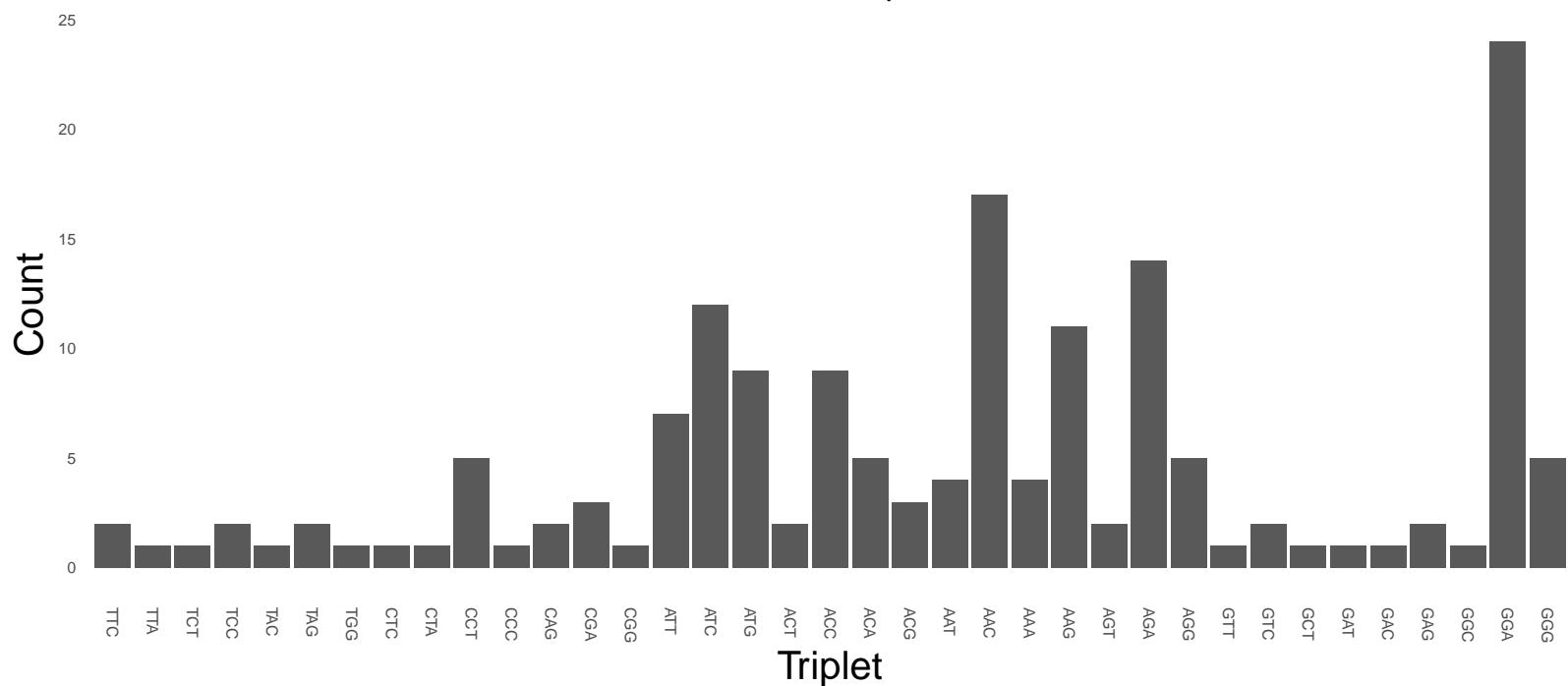
Gene IGHV3-30-3*02_C189T_T288C_T300C_G303A



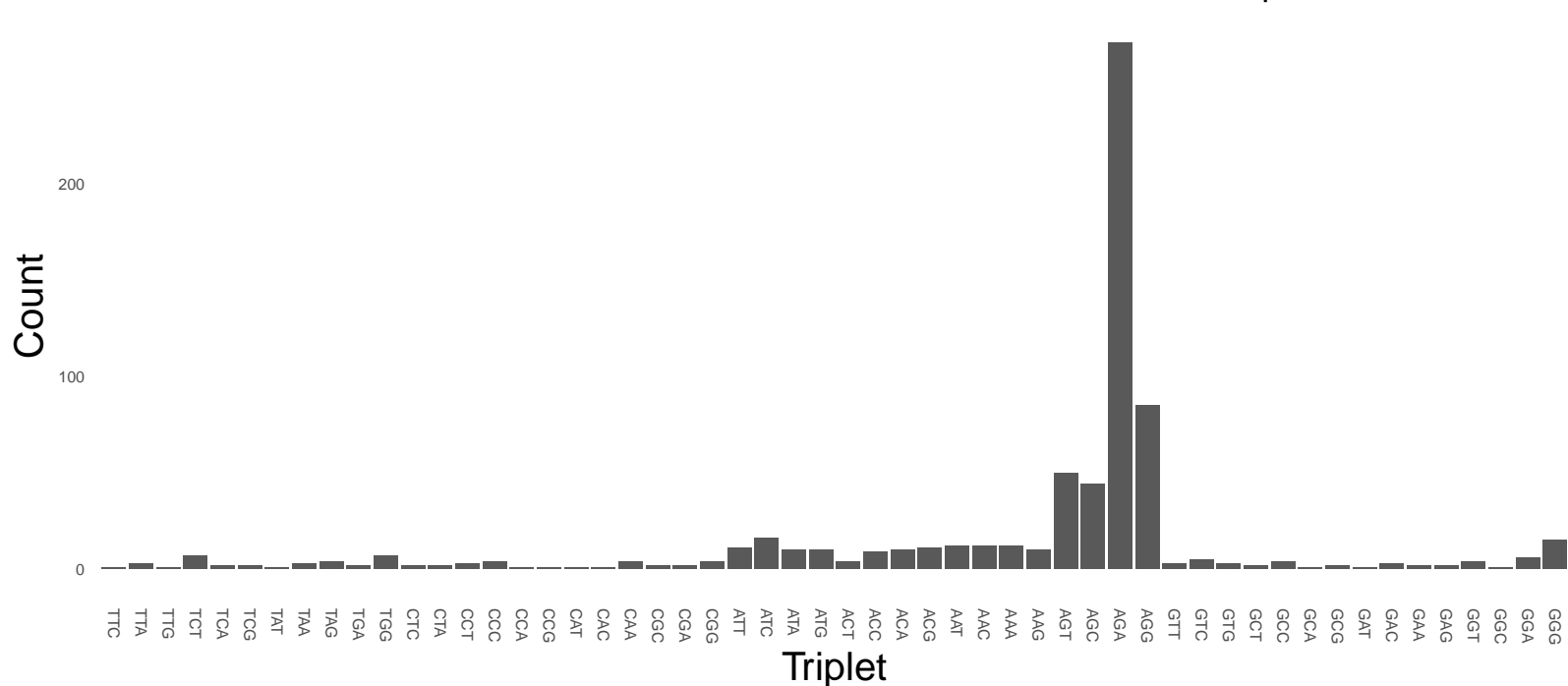
Gene IGHV6-1*01_02_A315G



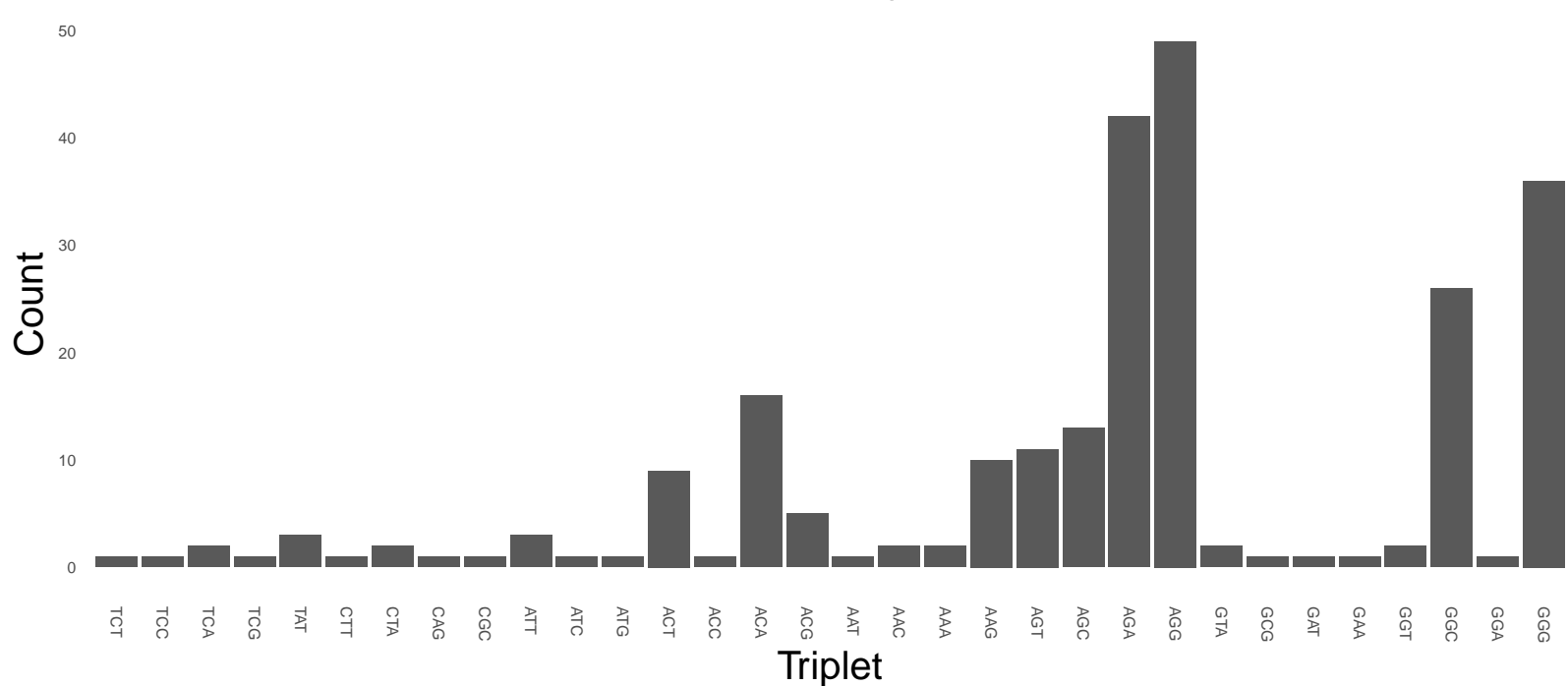
IGHV3-30-3*02_C189T- Final 3 nucleotides as a triplet



IGHV3-30-3*02_C189T_T288C_T300C_G303A- Final 3 nucleotides as a triplet

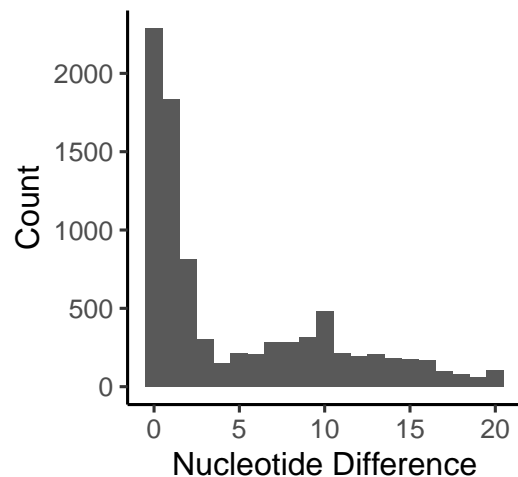


IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet



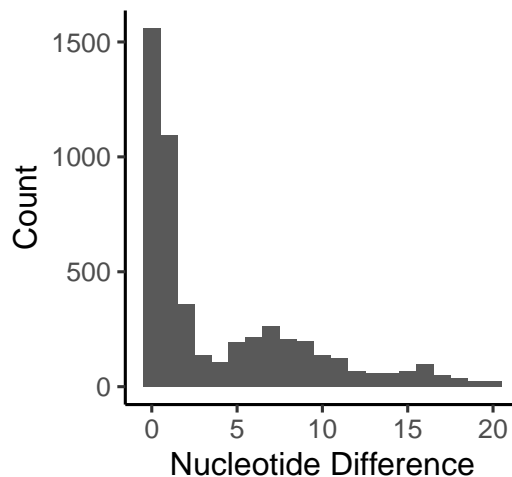
IGHV1-2*02

9684 sequences assigned
2287 (23.6%) exact matches, in which:
2005 unique CDR3
6 unique J



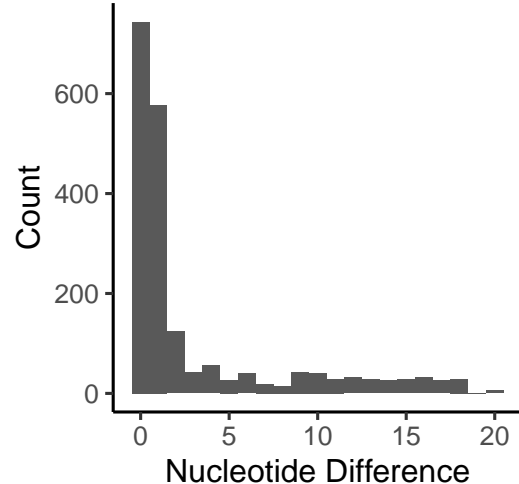
IGHV1-8*01

5777 sequences assigned
1559 (27%) exact matches, in which:
1428 unique CDR3
6 unique J



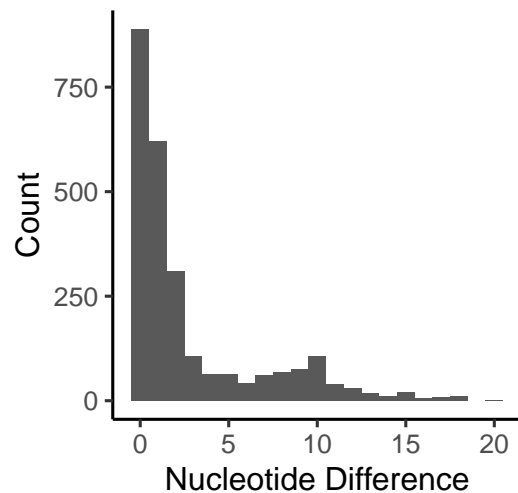
IGHV1-24*01

2130 sequences assigned
744 (34.9%) exact matches, in which:
651 unique CDR3
6 unique J



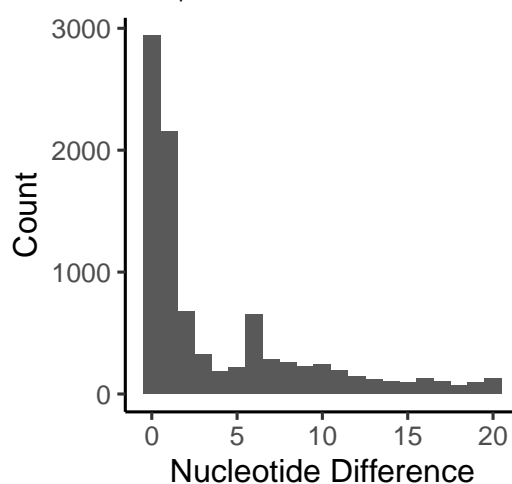
IGHV1-2*04

2623 sequences assigned
889 (33.9%) exact matches, in which:
815 unique CDR3
6 unique J



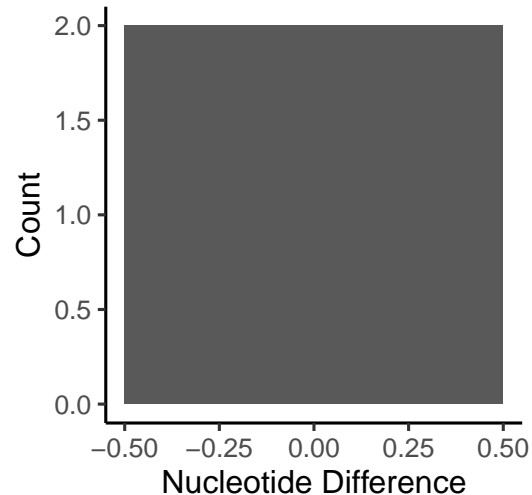
IGHV1-18*01

11684 sequences assigned
2939 (25.2%) exact matches, in which:
2663 unique CDR3
6 unique J



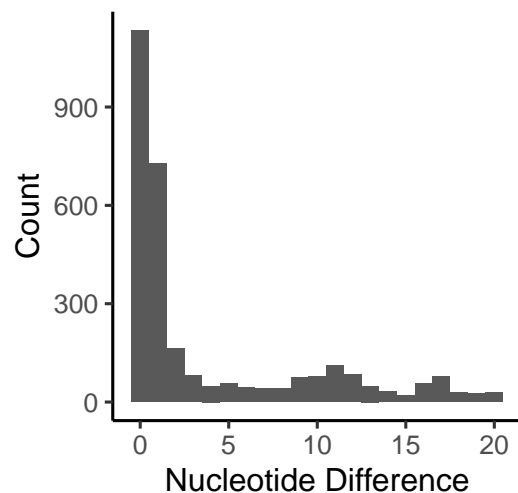
IGHV1-38-4*01

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



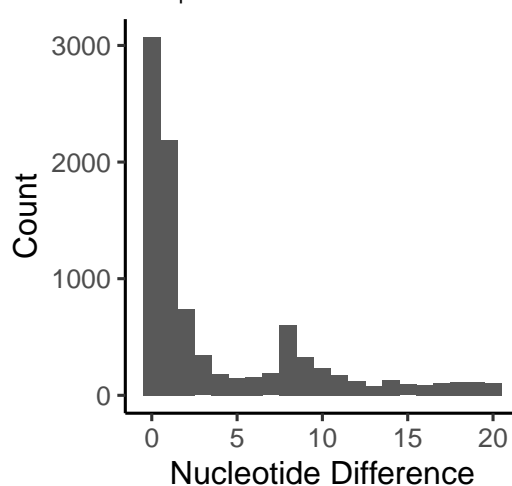
IGHV1-3*01_05

3803 sequences assigned
1134 (29.8%) exact matches, in which:
995 unique CDR3
6 unique J



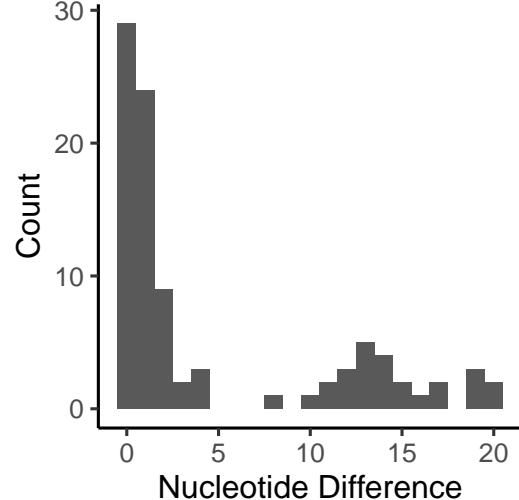
IGHV1-18*04

9952 sequences assigned
3072 (30.9%) exact matches, in which:
2726 unique CDR3
6 unique J



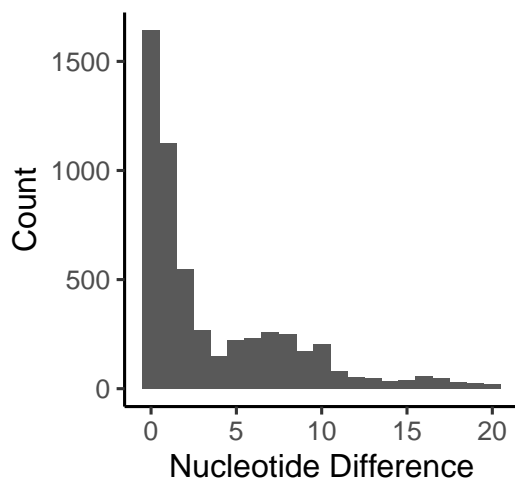
IGHV1-45*02

97 sequences assigned
29 (29.9%) exact matches, in which:
22 unique CDR3
4 unique J



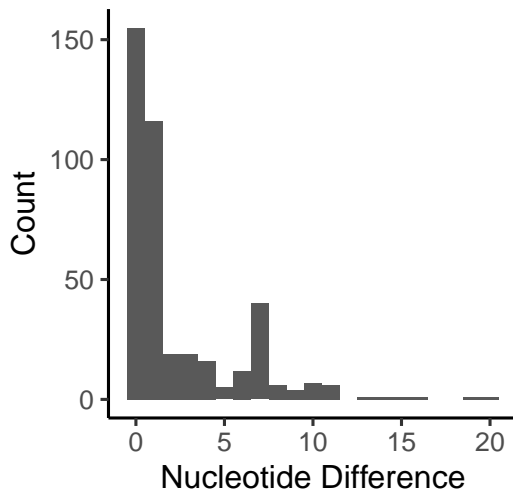
IGHV1-46*01

5754 sequences assigned
1642 (28.5%) exact matches, in which:
1482 unique CDR3
6 unique J



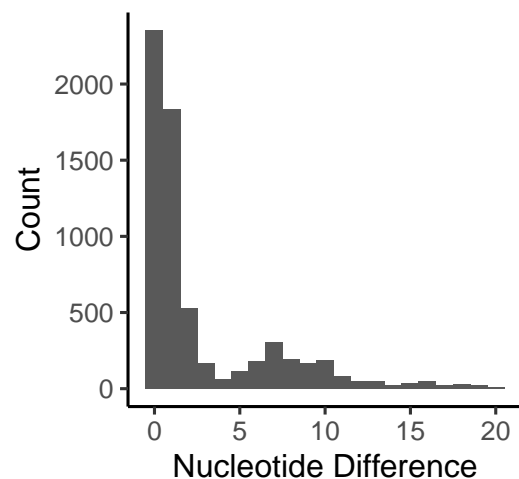
IGHV1-58*01_03

424 sequences assigned
155 (36.6%) exact matches, in which:
139 unique CDR3
6 unique J



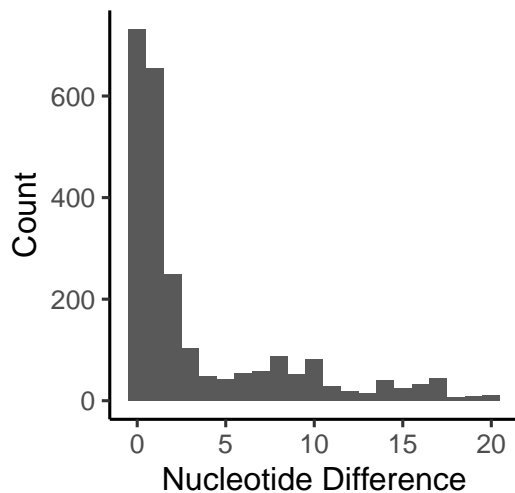
IGHV1-69*04_09

6879 sequences assigned
2352 (34.2%) exact matches, in which:
2132 unique CDR3
6 unique J



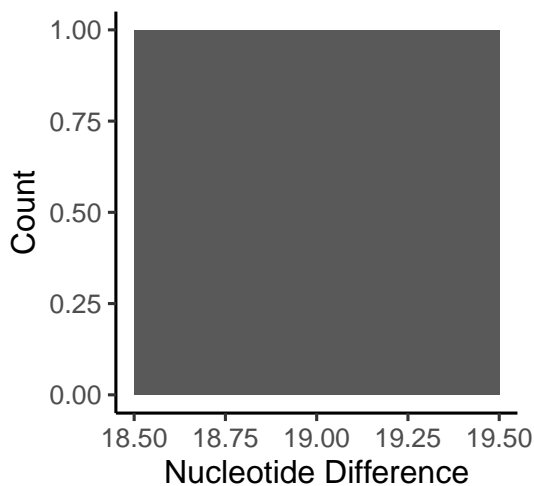
IGHV1-46*03

2699 sequences assigned
732 (27.1%) exact matches, in which:
605 unique CDR3
6 unique J



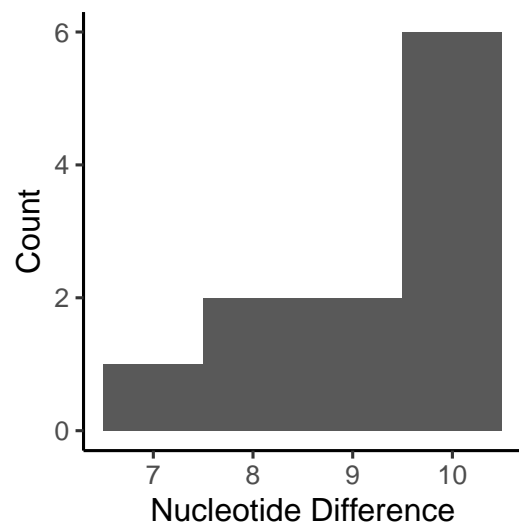
IGHV1-69-2*01

3 sequences assigned
No exact matches.



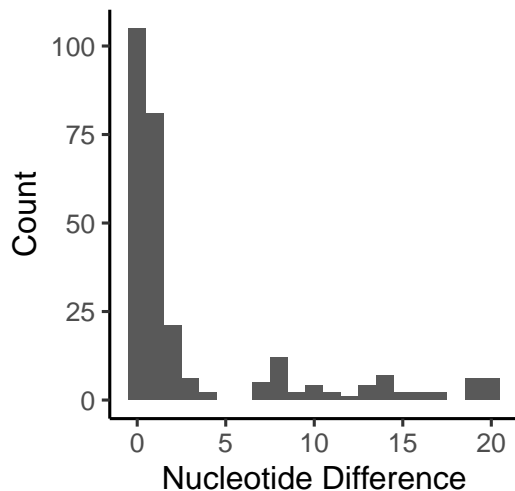
IGHV1-NL1*01

11 sequences assigned
No exact matches.



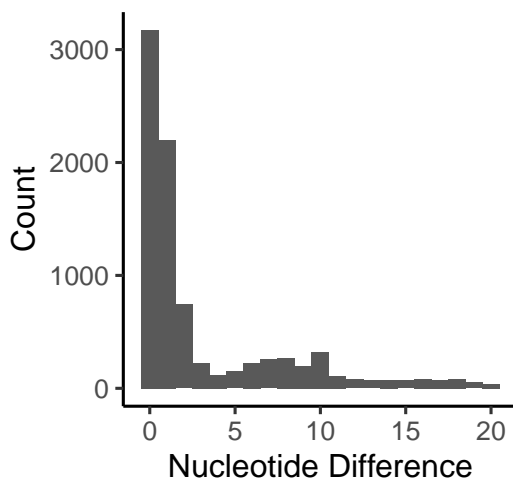
IGHV1-58*02

274 sequences assigned
105 (38.3%) exact matches, in which:
92 unique CDR3
6 unique J



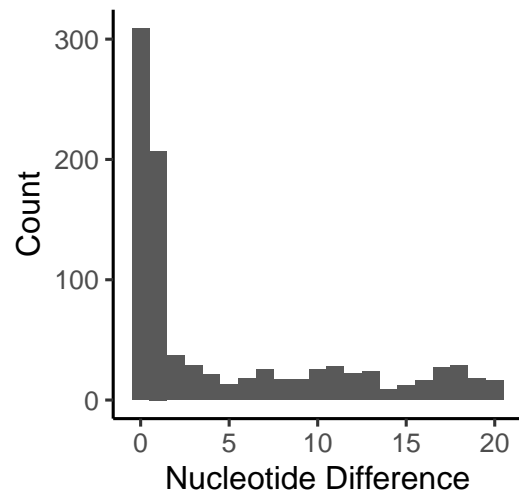
IGHV1-69*01_12_13

9233 sequences assigned
3173 (34.4%) exact matches, in which:
2909 unique CDR3
6 unique J



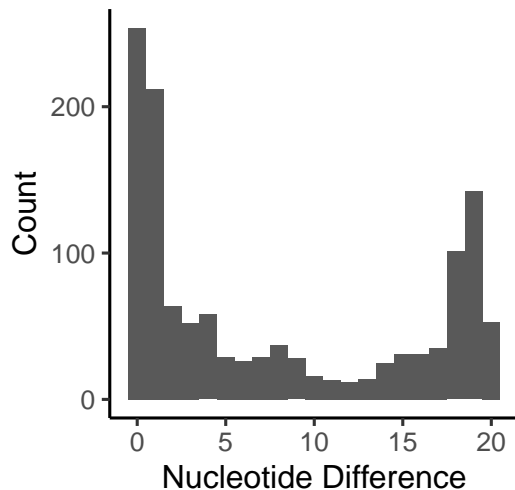
IGHV2-5*01

1331 sequences assigned
309 (23.2%) exact matches, in which:
285 unique CDR3
6 unique J



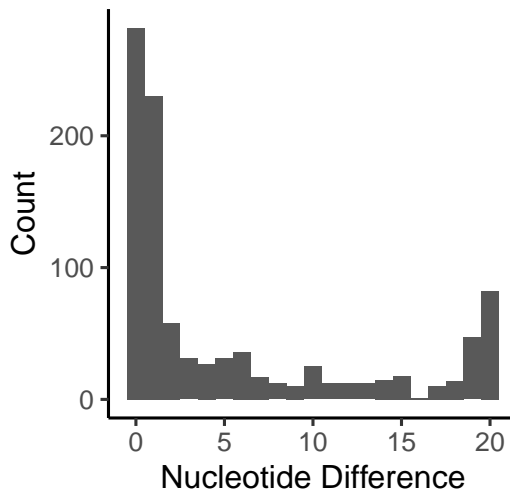
IGHV2-5*02

1466 sequences assigned
254 (17.3%) exact matches, in which:
226 unique CDR3
6 unique J



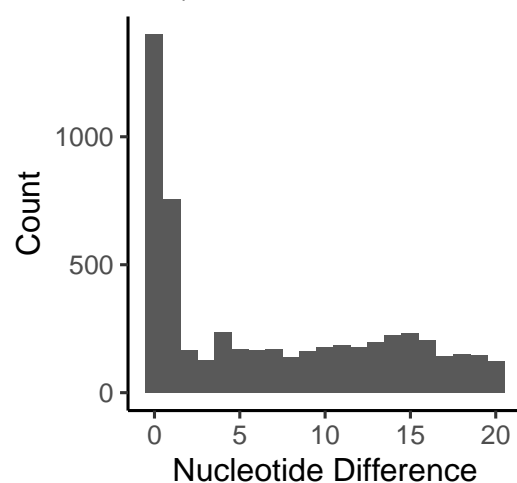
IGHV2-70*11_15

1083 sequences assigned
282 (26%) exact matches, in which:
249 unique CDR3
6 unique J



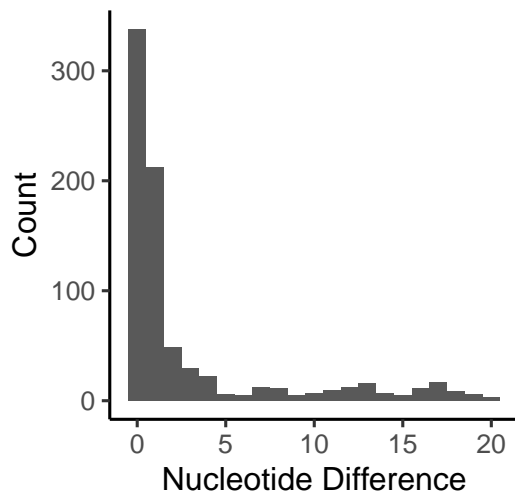
IGHV3-7*03

6298 sequences assigned
1400 (22.2%) exact matches, in which:
933 unique CDR3
6 unique J



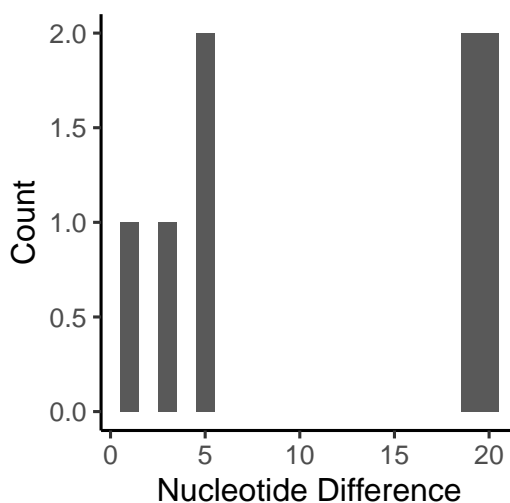
IGHV2-26*01

819 sequences assigned
338 (41.3%) exact matches, in which:
302 unique CDR3
6 unique J



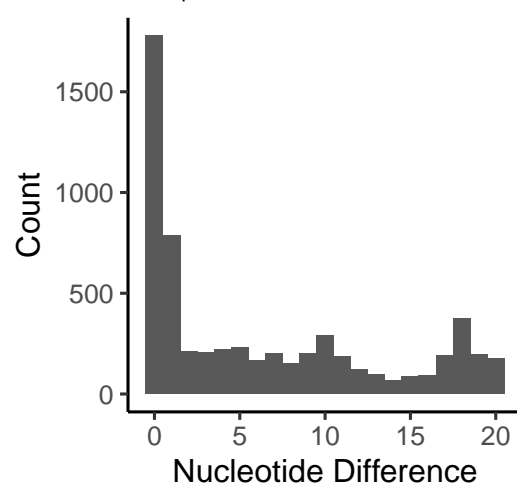
IGHV2-70D*14

9 sequences assigned
No exact matches.



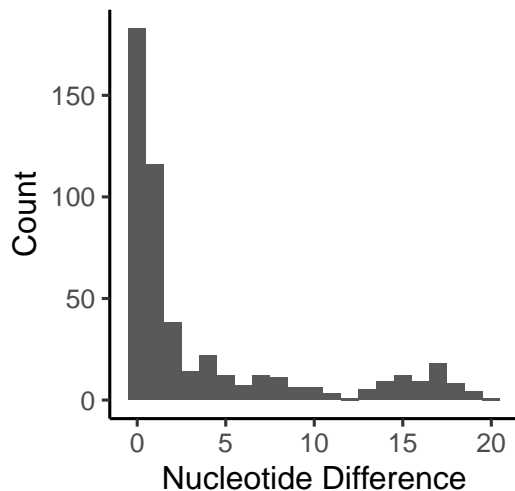
IGHV3-9*01

7209 sequences assigned
1778 (24.7%) exact matches, in which:
1185 unique CDR3
6 unique J



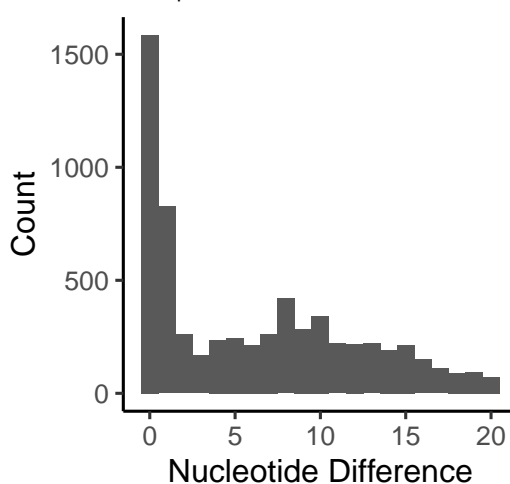
IGHV2-70*01

1066 sequences assigned
183 (17.2%) exact matches, in which:
156 unique CDR3
6 unique J



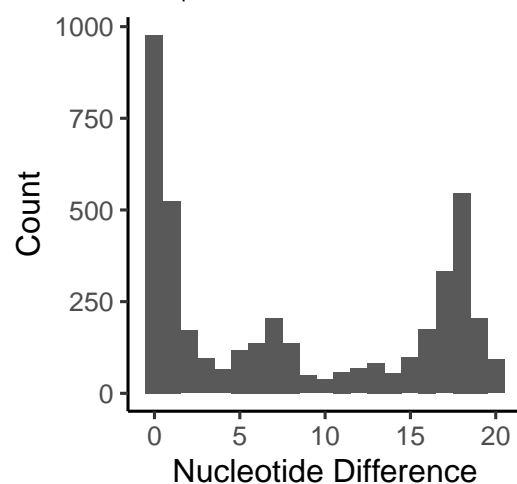
IGHV3-7*01

6865 sequences assigned
1585 (23.1%) exact matches, in which:
1161 unique CDR3
6 unique J



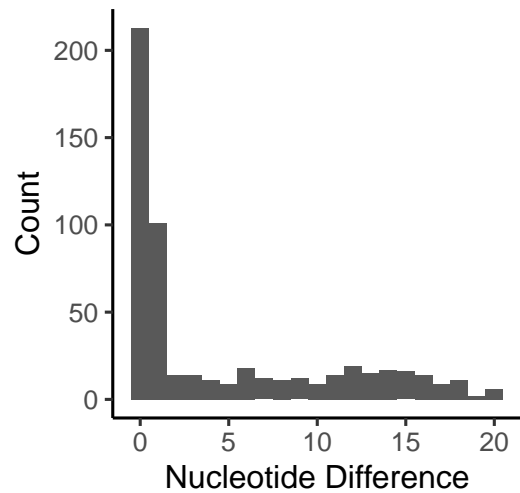
IGHV3-11*06

6395 sequences assigned
977 (15.3%) exact matches, in which:
693 unique CDR3
6 unique J



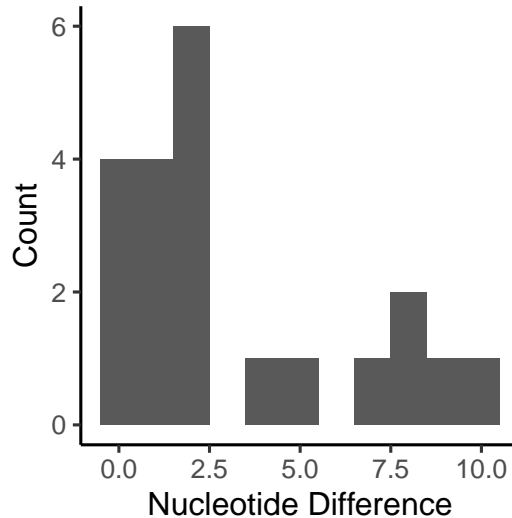
IGHV3-13*01

574 sequences assigned
213 (37.1%) exact matches, in which:
139 unique CDR3
6 unique J



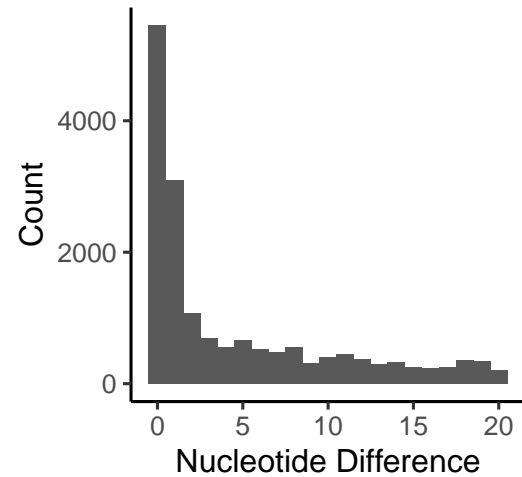
IGHV3-19*01

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



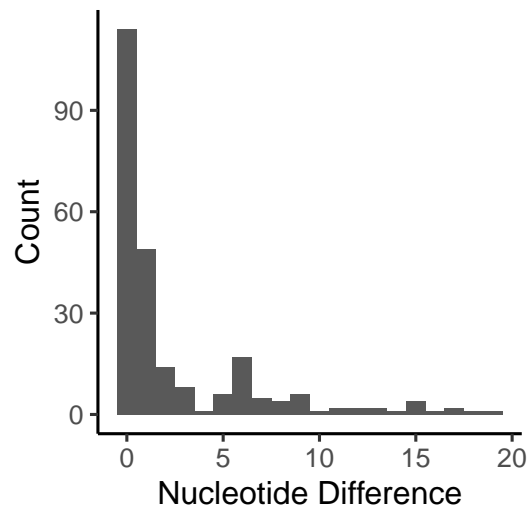
IGHV3-21*01_02

18843 sequences assigned
5451 (28.9%) exact matches, in which:
3503 unique CDR3
6 unique J



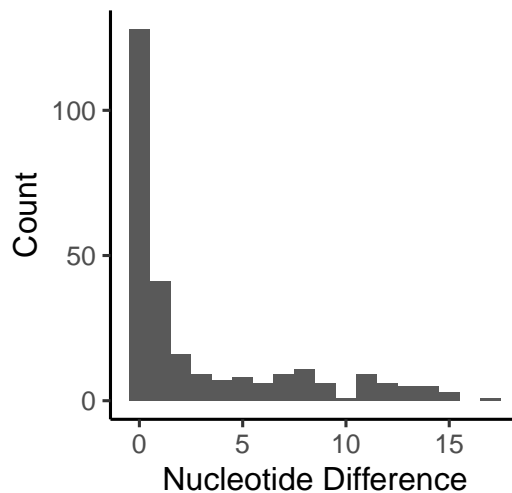
IGHV3-13*05

271 sequences assigned
114 (42.1%) exact matches, in which:
76 unique CDR3
6 unique J



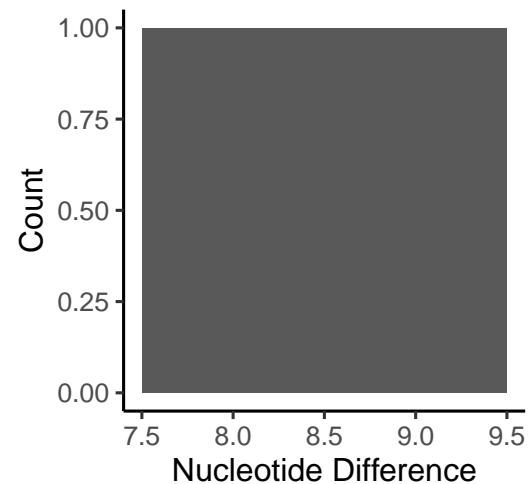
IGHV3-20*01_02

345 sequences assigned
128 (37.1%) exact matches, in which:
79 unique CDR3
6 unique J



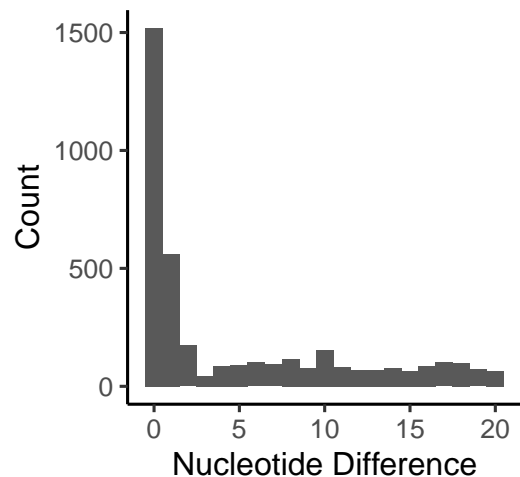
IGHV3-22*01_02

2 sequences assigned
No exact matches.



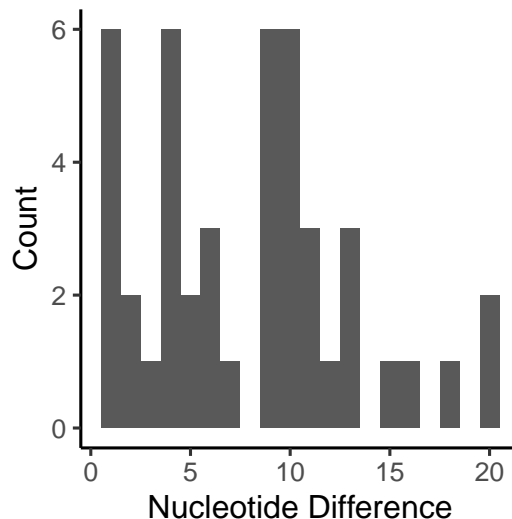
IGHV3-15*01_02

4241 sequences assigned
1519 (35.8%) exact matches, in which:
1029 unique CDR3
6 unique J



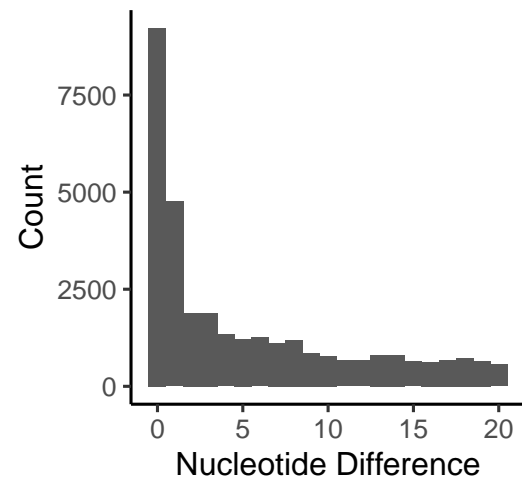
IGHV3-20*03_04

431 sequences assigned
No exact matches.



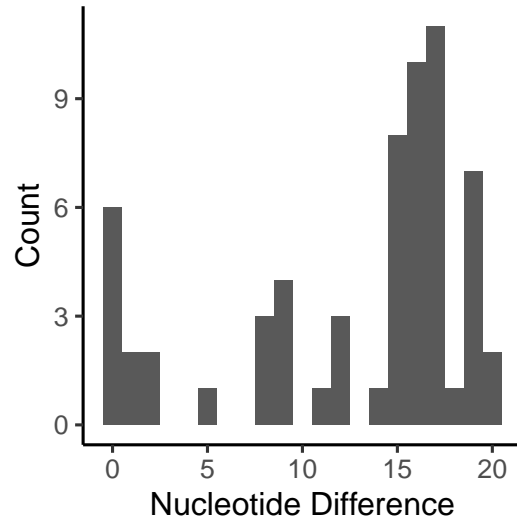
IGHV3-23*01_04

38854 sequences assigned
9225 (23.7%) exact matches, in which:
5717 unique CDR3
6 unique J



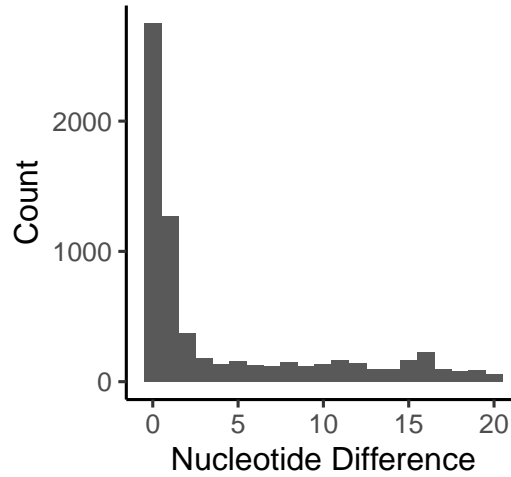
IGHV3-30-3*01

184 sequences assigned
6 (3.3%) exact matches, in which:
6 unique CDR3
2 unique J



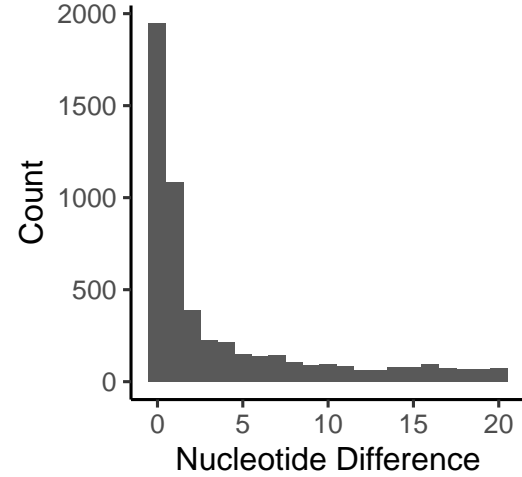
IGHV3-30*18

8315 sequences assigned
2750 (33.1%) exact matches, in which:
1928 unique CDR3
6 unique J



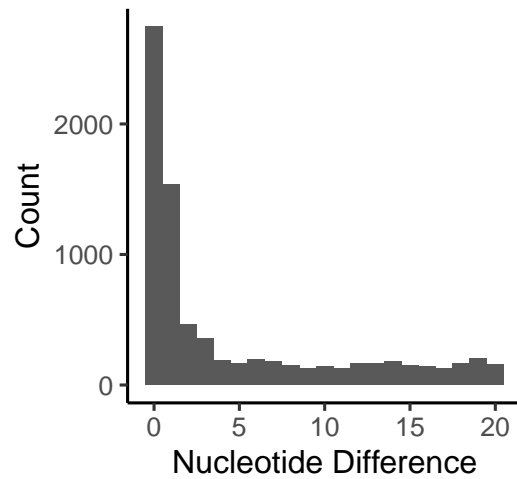
IGHV3-33*01

6624 sequences assigned
1947 (29.4%) exact matches, in which:
1335 unique CDR3
6 unique J



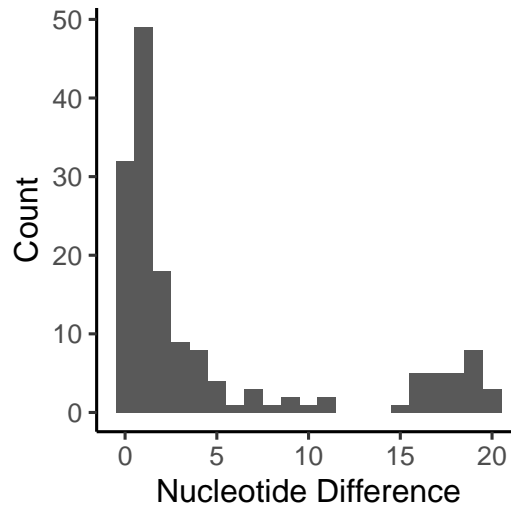
IGHV3-30*02

10683 sequences assigned
2745 (25.7%) exact matches, in which:
1916 unique CDR3
6 unique J



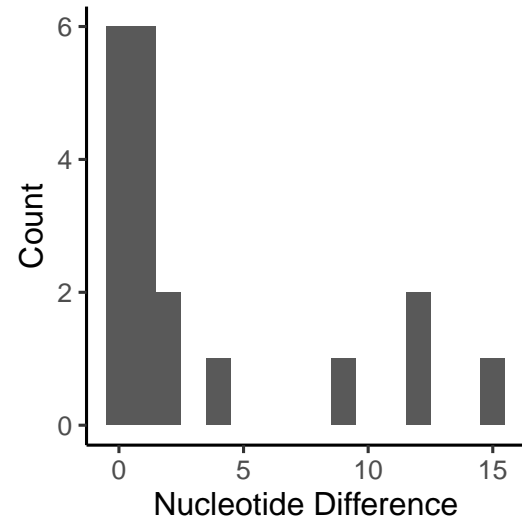
IGHV3-30-3*02_C189T

166 sequences assigned
32 (19.3%) exact matches, in which:
31 unique CDR3
4 unique J



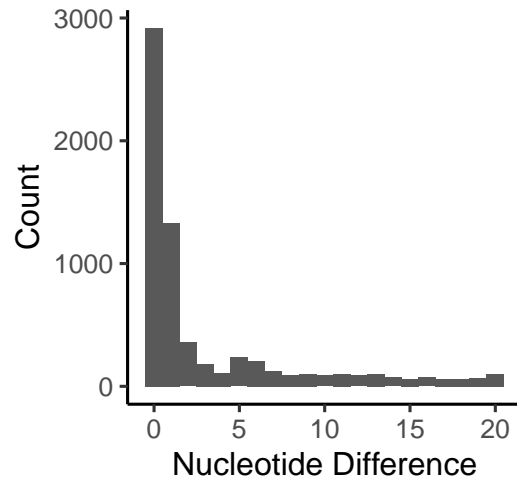
IGHV3-35*01

19 sequences assigned
6 (31.6%) exact matches, in which:
4 unique CDR3
2 unique J



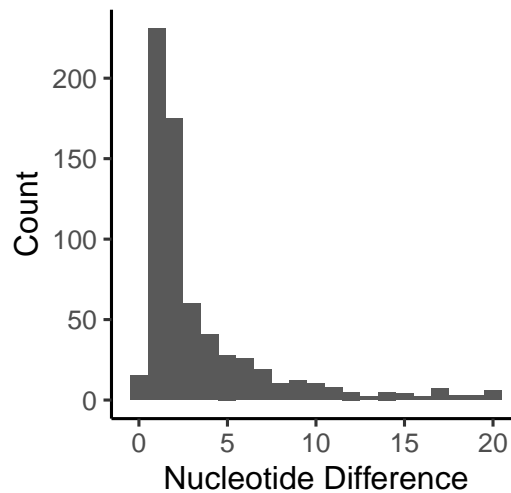
IGHV3-30*04

8786 sequences assigned
2918 (33.2%) exact matches, in which:
1972 unique CDR3
6 unique J



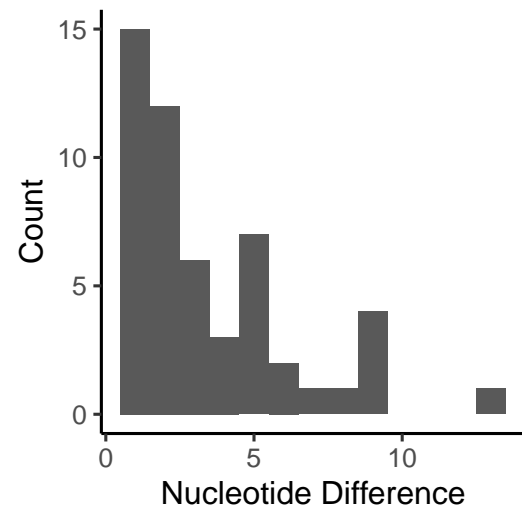
IGHV3-30-3*02_C189T_

693 sequences assigned
15 (2.2%) exact matches, in which:
15 unique CDR3
5 unique J



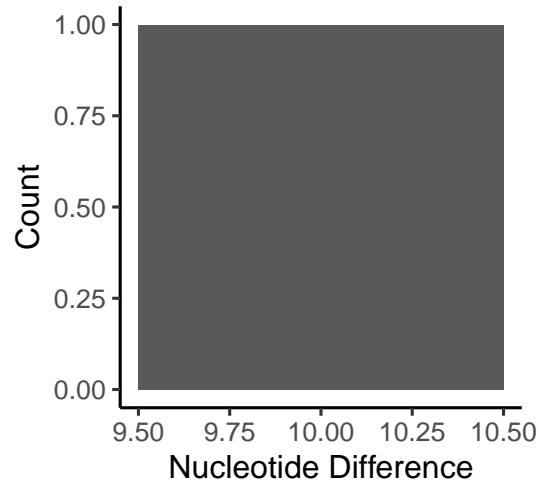
IGHV3-38-3*01

52 sequences assigned
No exact matches.



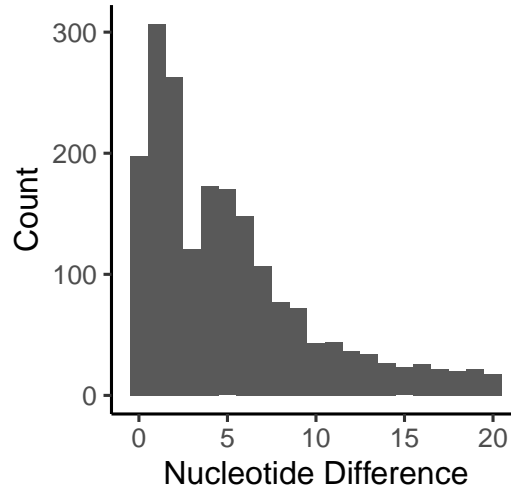
IGHV3-38*03

1 sequences assigned
No exact matches.



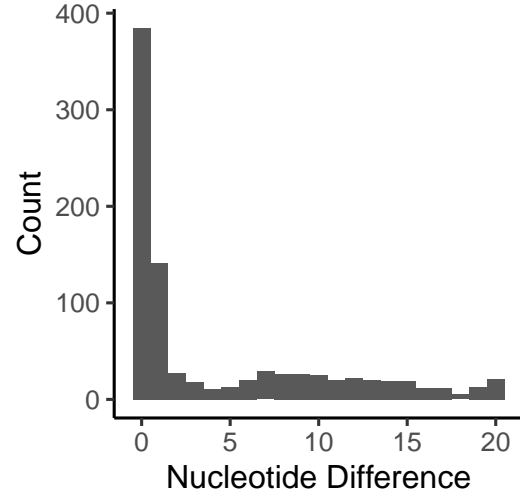
IGHV3-48*01

2107 sequences assigned
198 (9.4%) exact matches, in which:
193 unique CDR3
5 unique J



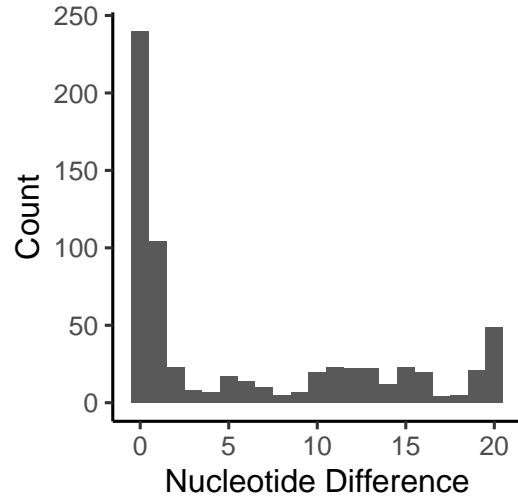
IGHV3-49*03_05

972 sequences assigned
385 (39.6%) exact matches, in which:
267 unique CDR3
6 unique J



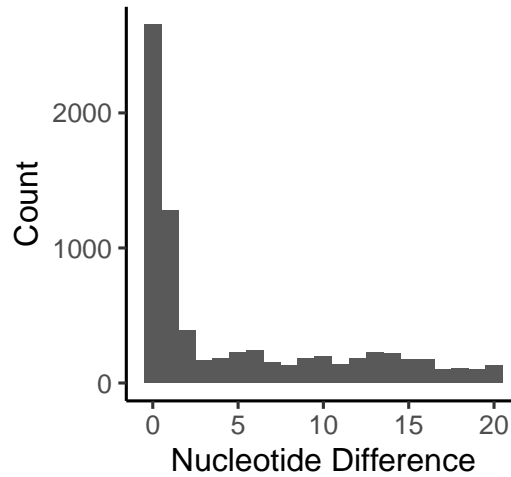
IGHV3-43*01

1033 sequences assigned
240 (23.2%) exact matches, in which:
157 unique CDR3
6 unique J



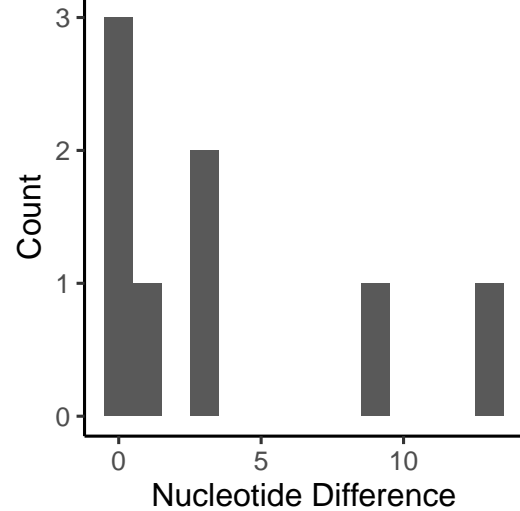
IGHV3-48*02

8547 sequences assigned
2653 (31%) exact matches, in which:
1697 unique CDR3
6 unique J



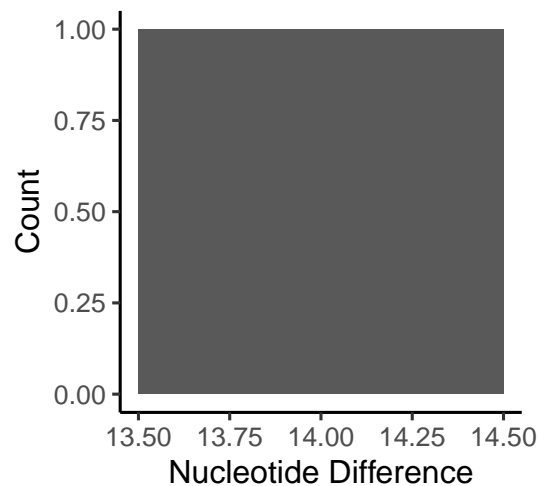
IGHV3-52*02

8 sequences assigned
3 (37.5%) exact matches, in which:
3 unique CDR3
3 unique J



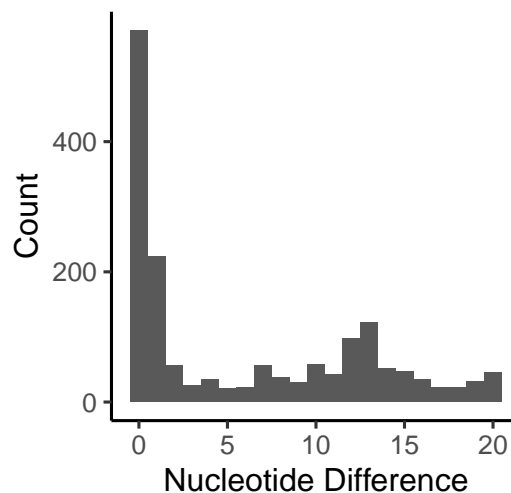
IGHV3-47*02

1 sequences assigned
No exact matches.



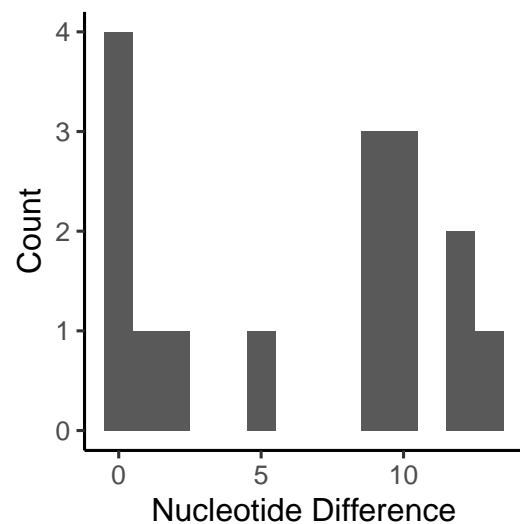
IGHV3-49*04

2150 sequences assigned
571 (26.6%) exact matches, in which:
400 unique CDR3
6 unique J



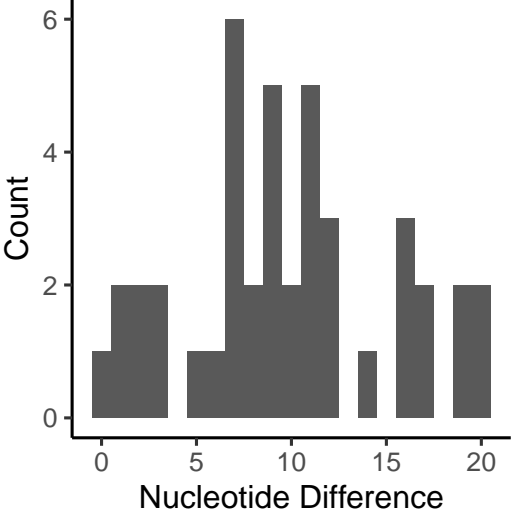
IGHV3-52*01_03

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



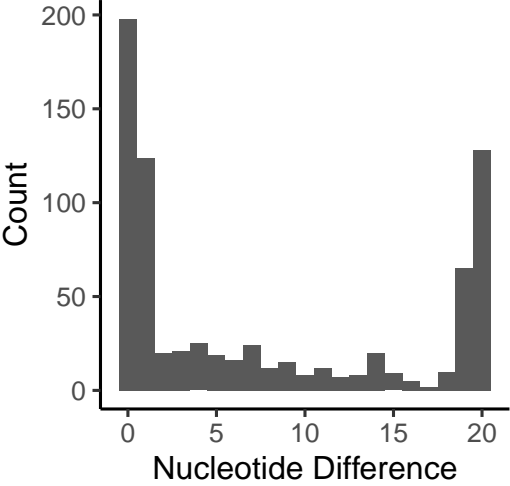
IGHV3-53*05

57 sequences assigned
1 (1.8%) exact matches, in which:
1 unique CDR3
1 unique J



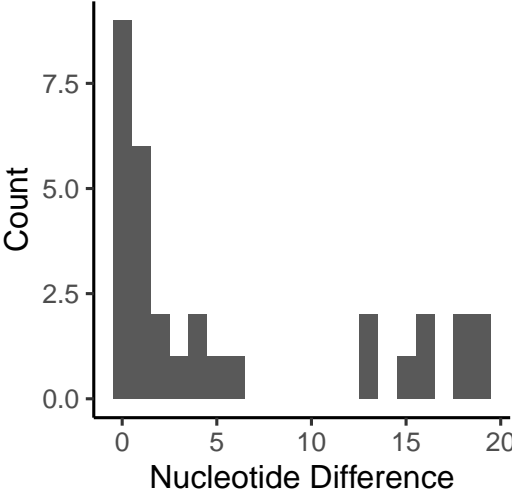
IGHV3-64*01

971 sequences assigned
198 (20.4%) exact matches, in which:
132 unique CDR3
6 unique J



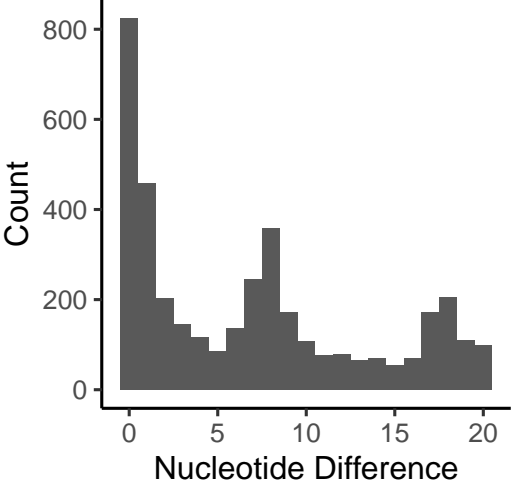
IGHV3-66*03

38 sequences assigned
9 (23.7%) exact matches, in which:
9 unique CDR3
5 unique J



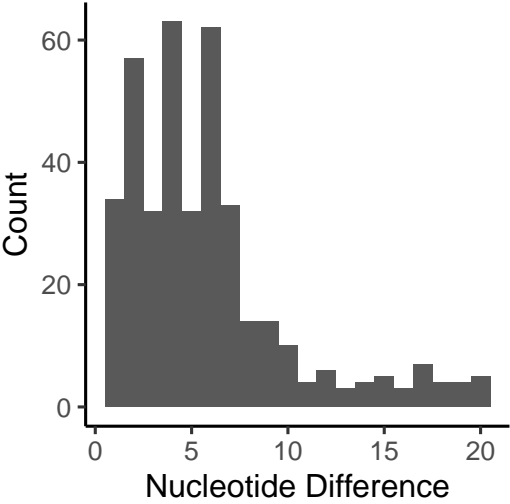
IGHV3-53*01_02

4237 sequences assigned
825 (19.5%) exact matches, in which:
559 unique CDR3
6 unique J



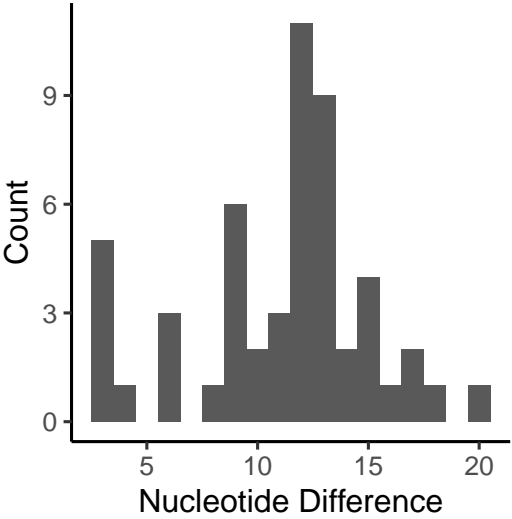
IGHV3-64*04

422 sequences assigned
No exact matches.



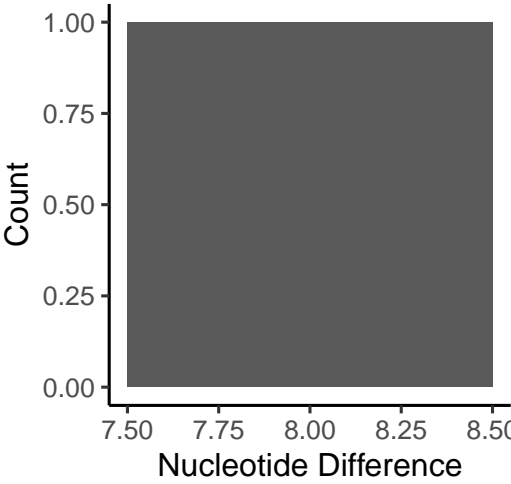
IGHV3-69-1*01

72 sequences assigned
No exact matches.



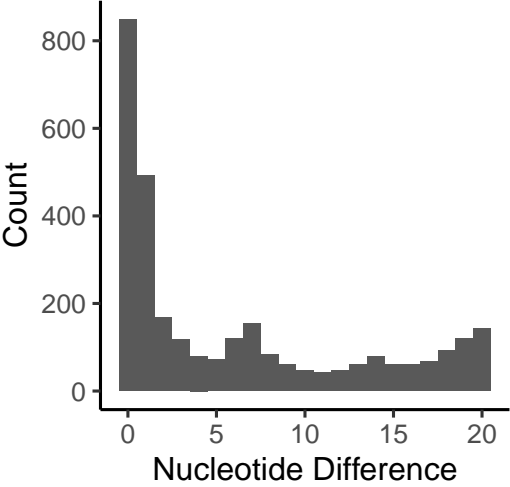
IGHV3-62*03

1 sequences assigned
No exact matches.



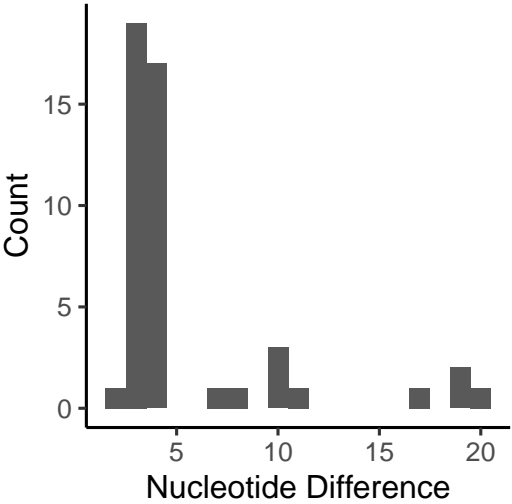
IGHV3-66*01

3972 sequences assigned
849 (21.4%) exact matches, in which:
586 unique CDR3
6 unique J



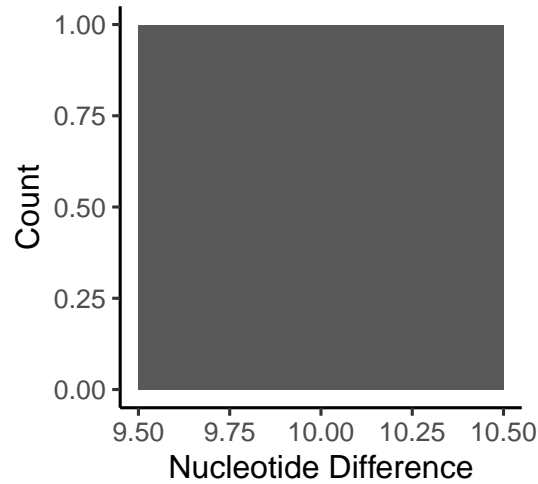
IGHV3-69-1*02

57 sequences assigned
No exact matches.



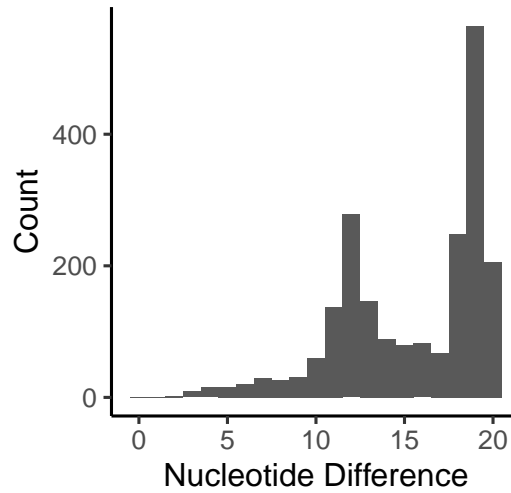
IGHV3-71*01_04

4 sequences assigned
No exact matches.



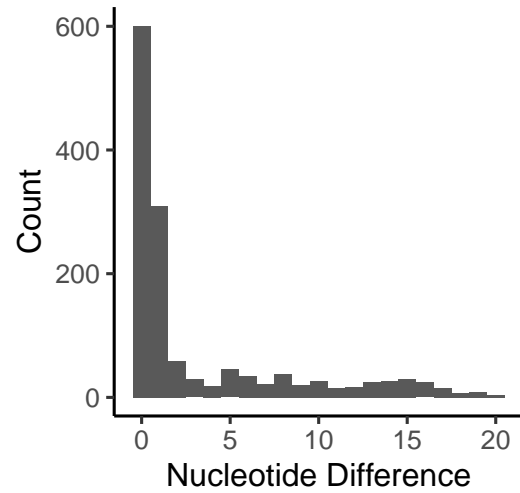
IGHV3-74*03

2618 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
1 unique J



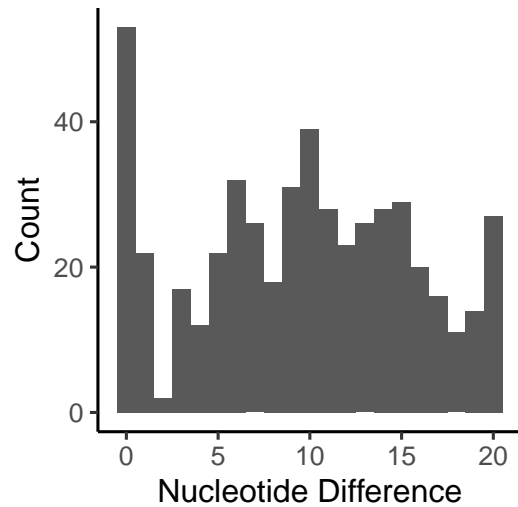
IGHV3-64D*06

1528 sequences assigned
601 (39.3%) exact matches, in which:
339 unique CDR3
6 unique J



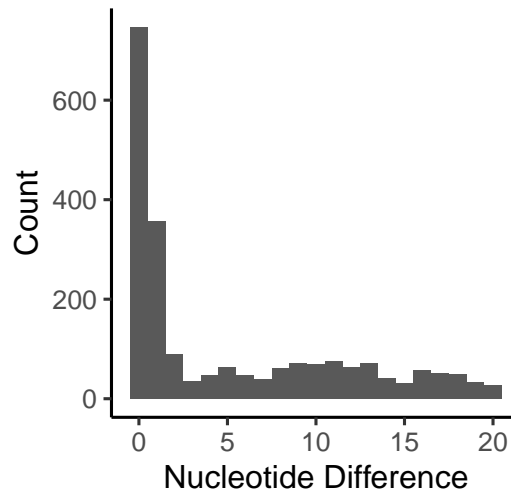
IGHV3-72*01

663 sequences assigned
53 (8%) exact matches, in which:
33 unique CDR3
5 unique J



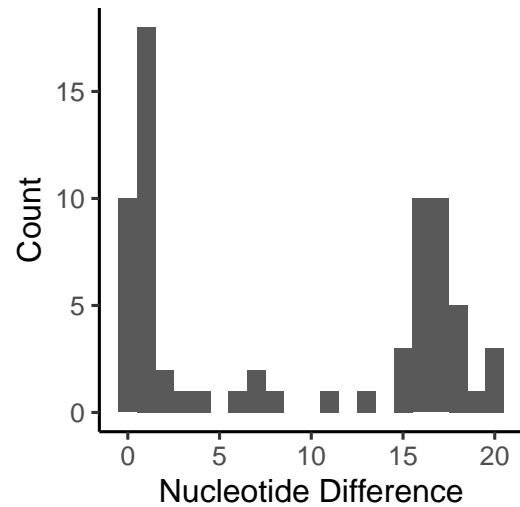
IGHV3-74*01_02

2233 sequences assigned
747 (33.5%) exact matches, in which:
417 unique CDR3
6 unique J



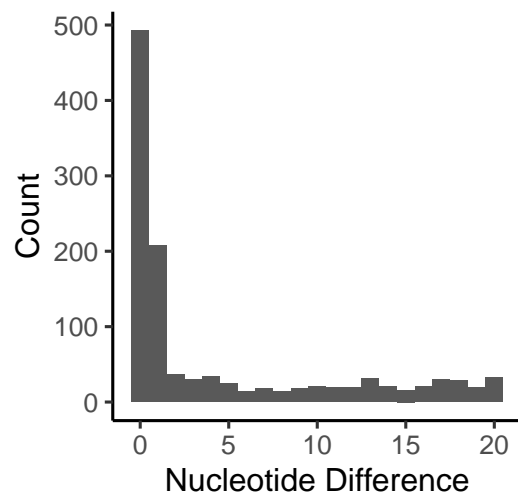
IGHV3-64D*08

439 sequences assigned
10 (2.3%) exact matches, in which:
7 unique CDR3
1 unique J



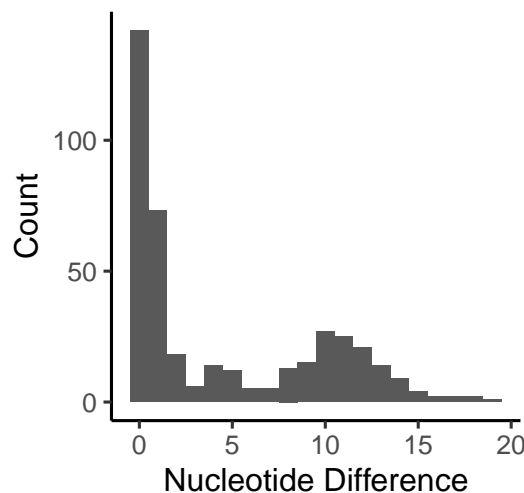
IGHV3-73*01_02

1698 sequences assigned
493 (29%) exact matches, in which:
309 unique CDR3
6 unique J



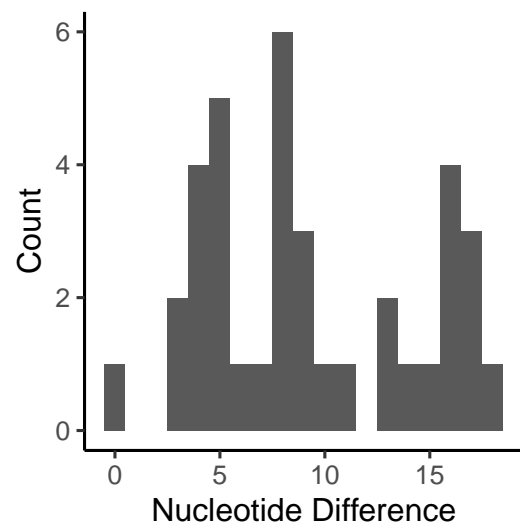
IGHV3-43D*03

428 sequences assigned
142 (33.2%) exact matches, in which:
95 unique CDR3
6 unique J



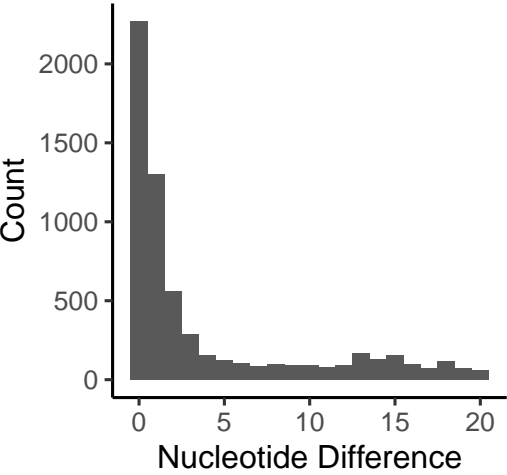
IGHV3-NL1*01

44 sequences assigned
1 (2.3%) exact matches, in which:
1 unique CDR3
1 unique J



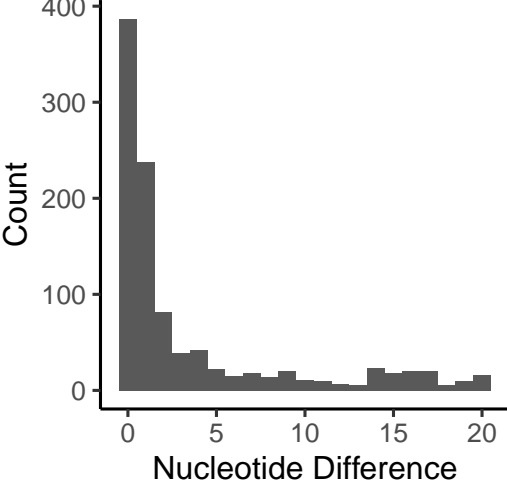
IGHV4-4*02_03

7440 sequences assigned
2269 (30.5%) exact matches, in which:
1987 unique CDR3
6 unique J



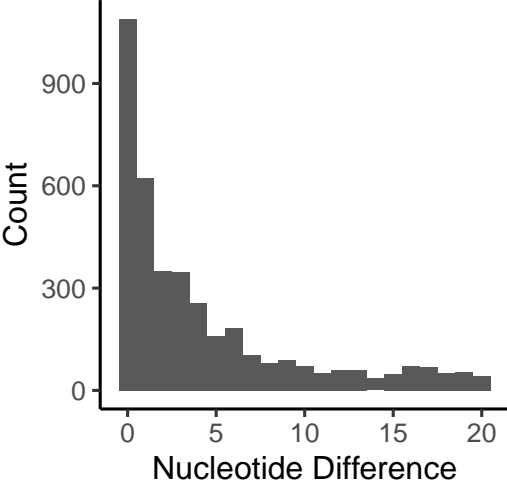
IGHV4-30-2*01

1150 sequences assigned
387 (33.7%) exact matches, in which:
301 unique CDR3
6 unique J



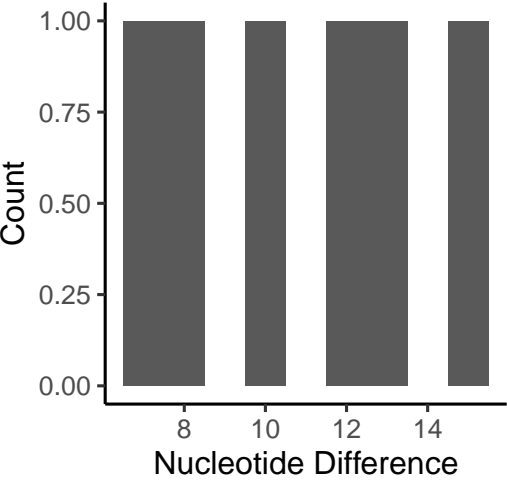
IGHV4-31*02

4721 sequences assigned
1090 (23.1%) exact matches, in which:
978 unique CDR3
6 unique J



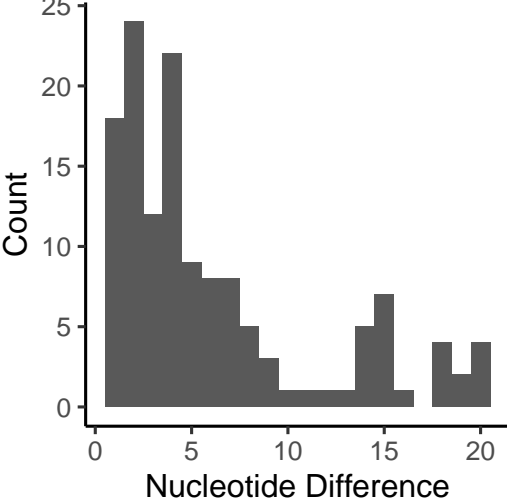
IGHV4-28*03

7 sequences assigned
No exact matches.



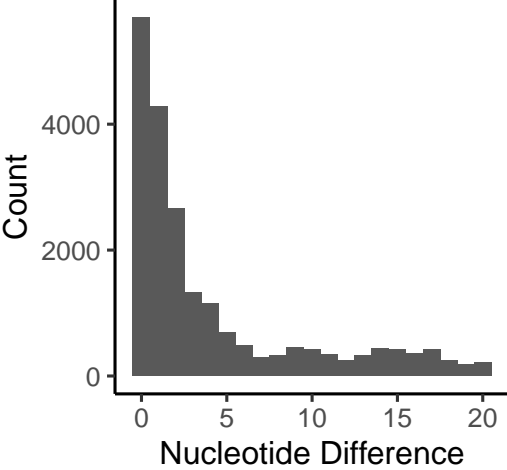
IGHV4-30-2*03

685 sequences assigned
No exact matches.



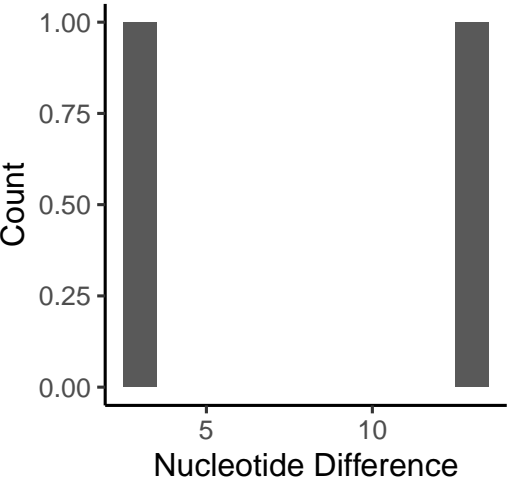
IGHV4-34*01_02

23272 sequences assigned
5691 (24.5%) exact matches, in which:
4873 unique CDR3
6 unique J



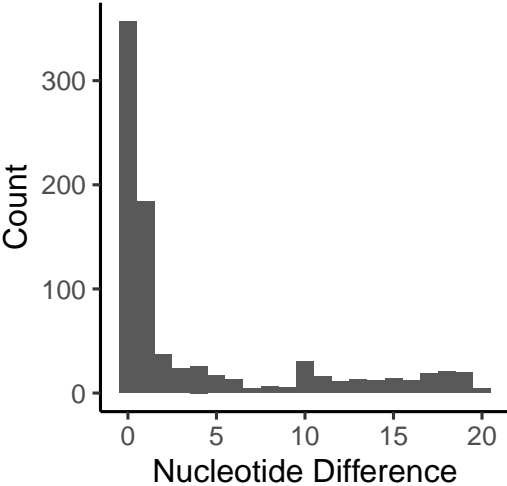
IGHV4-28*01_07

2 sequences assigned
No exact matches.



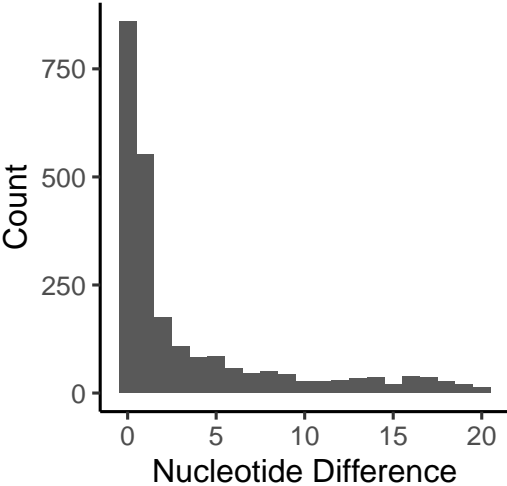
IGHV4-30-4*07

1482 sequences assigned
357 (24.1%) exact matches, in which:
298 unique CDR3
6 unique J



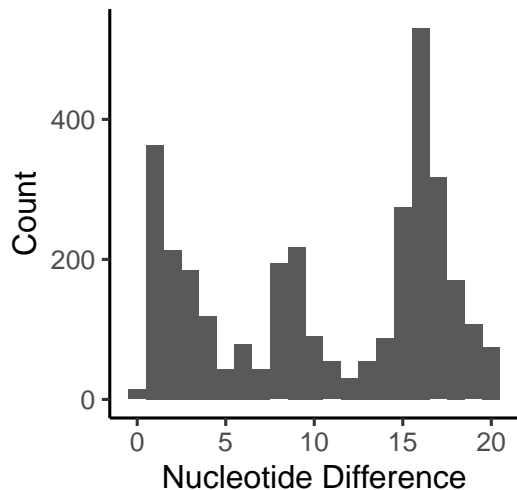
IGHV4-38-2*02

2645 sequences assigned
860 (32.5%) exact matches, in which:
788 unique CDR3
6 unique J



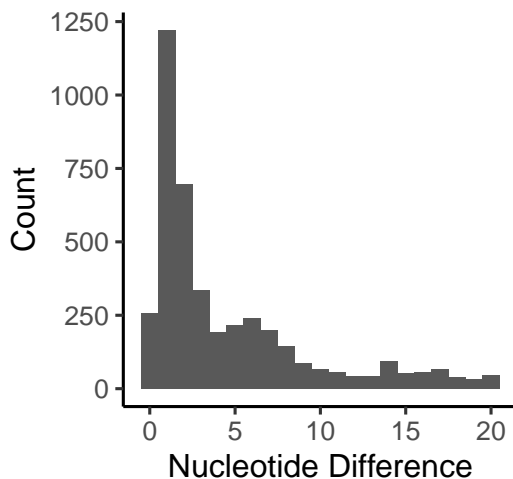
IGHV4–39*07

3877 sequences assigned
14 (0.4%) exact matches, in which:
14 unique CDR3
4 unique J



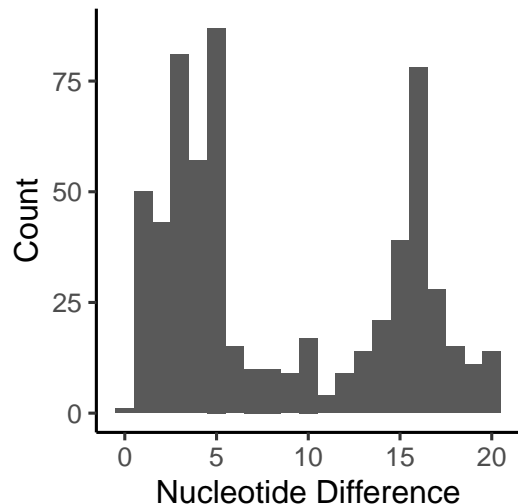
IGHV4–59*12

4810 sequences assigned
256 (5.3%) exact matches, in which:
251 unique CDR3
6 unique J



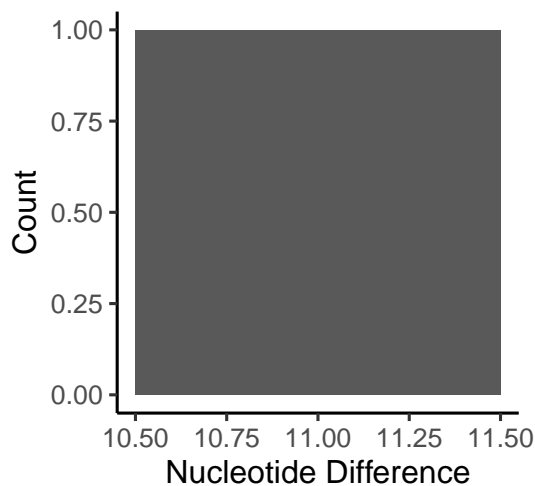
IGHV4–61*08

1368 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



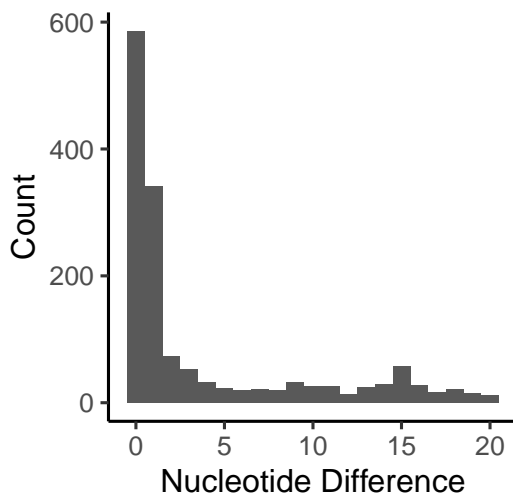
IGHV4–55*09

1 sequences assigned
No exact matches.



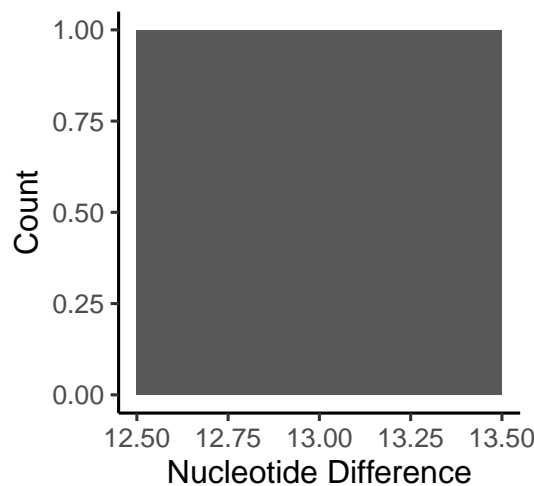
IGHV4–61*01

1656 sequences assigned
586 (35.4%) exact matches, in which:
557 unique CDR3
6 unique J



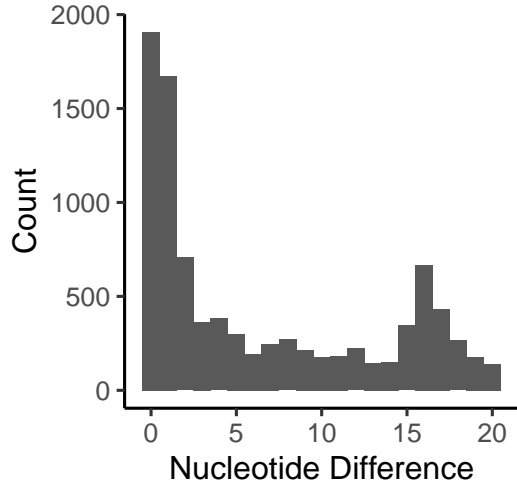
IGHV1/OR15–1*02

1 sequences assigned
No exact matches.



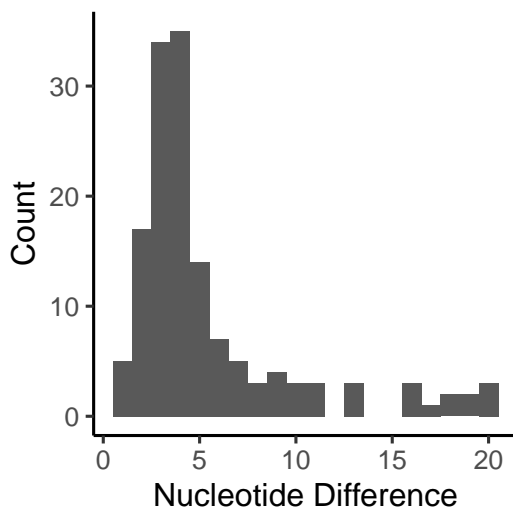
IGHV4–59*08

10526 sequences assigned
1907 (18.1%) exact matches, in which:
1690 unique CDR3
6 unique J



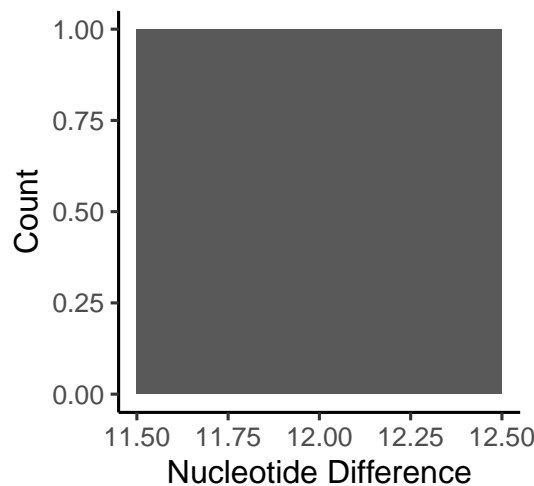
IGHV4–61*05

147 sequences assigned
No exact matches.



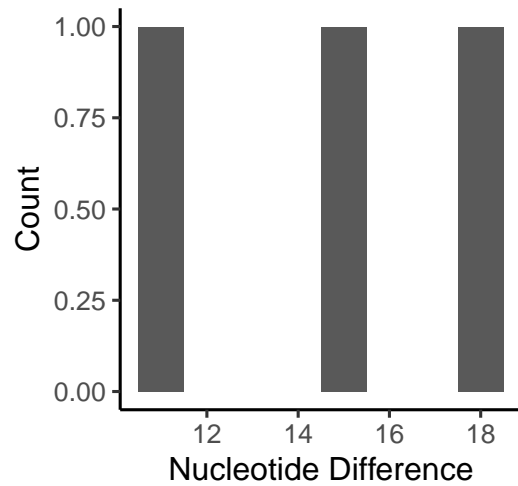
IGHV1/OR15–2*02_03

2 sequences assigned
No exact matches.



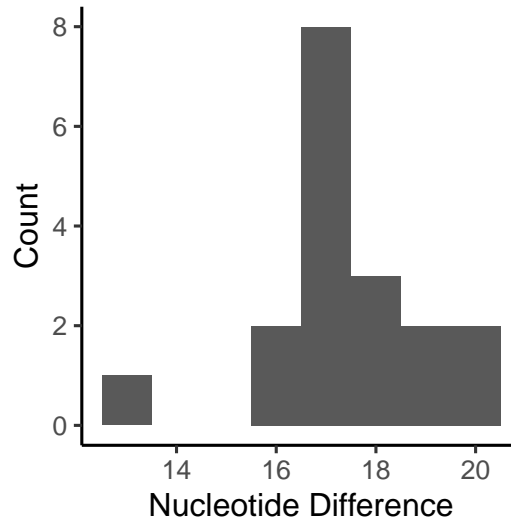
IGHV1/OR15-3*02

4 sequences assigned
No exact matches.



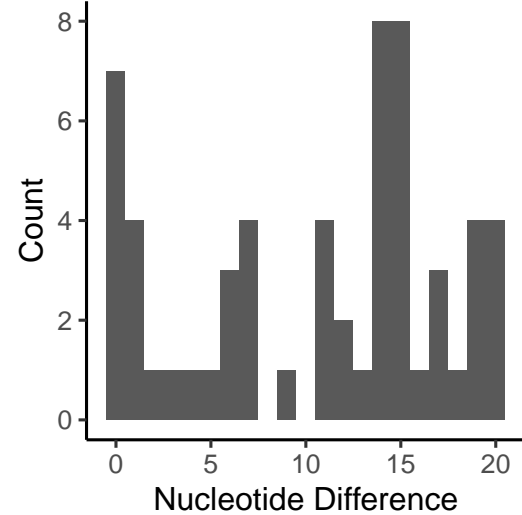
IGHV4/OR15-8*02

48 sequences assigned
No exact matches.



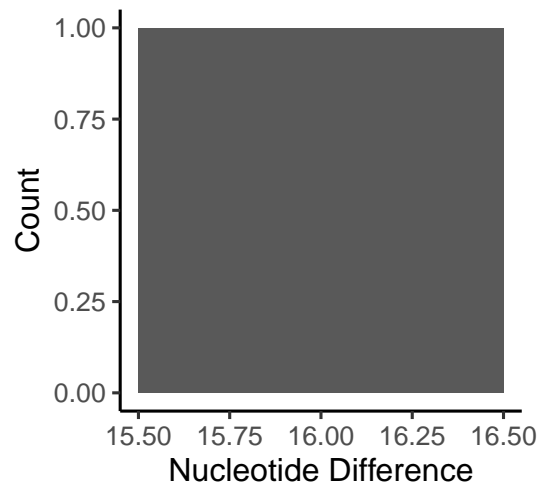
IGHV5-51*06

119 sequences assigned
7 (5.9%) exact matches, in which:
7 unique CDR3
4 unique J



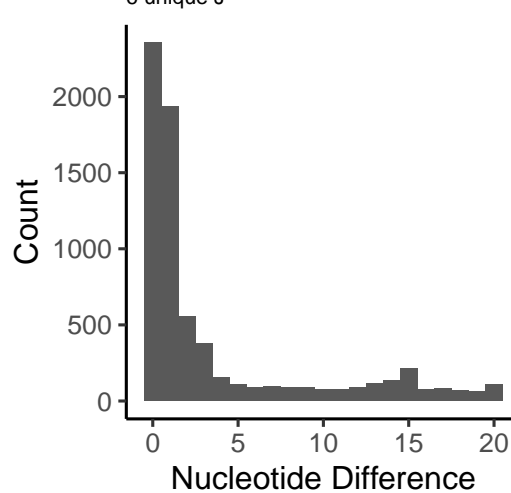
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



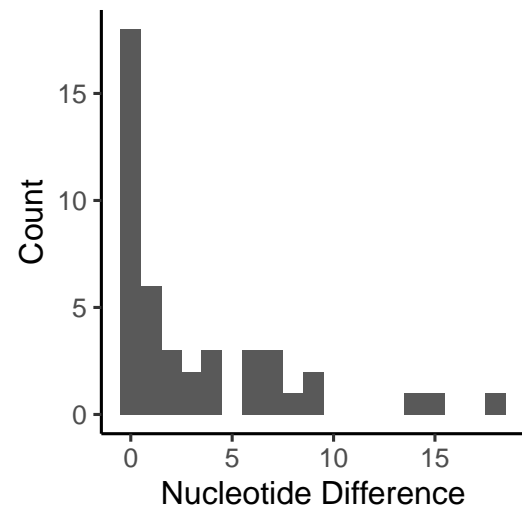
IGHV5-10-1*01_03

7949 sequences assigned
2354 (29.6%) exact matches, in which:
1813 unique CDR3
6 unique J



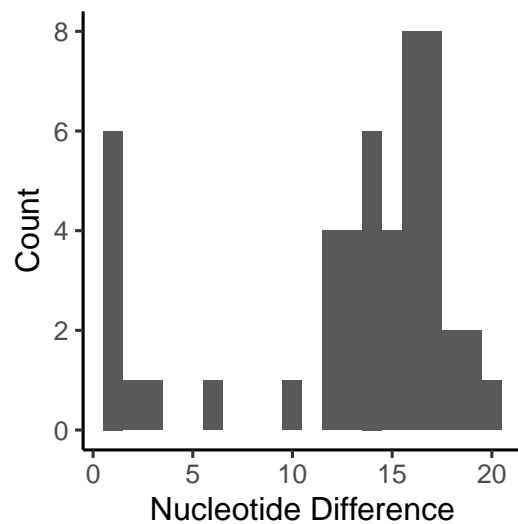
IGHV5-51*07

52 sequences assigned
18 (34.6%) exact matches, in which:
18 unique CDR3
5 unique J



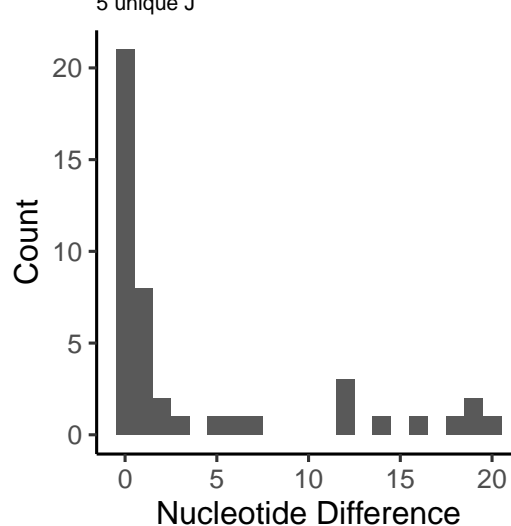
IGHV4/OR15-8*01

61 sequences assigned
No exact matches.



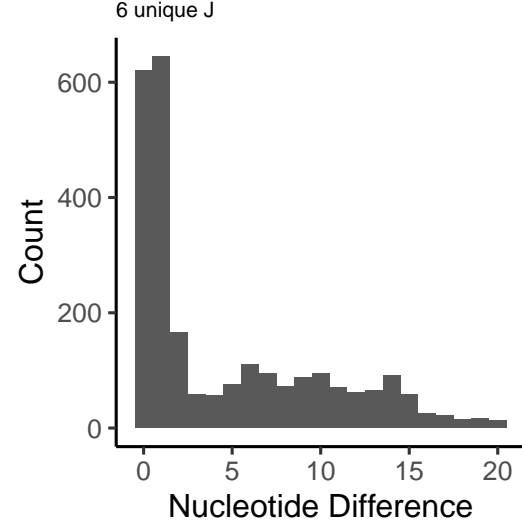
IGHV5-51*04

50 sequences assigned
21 (42%) exact matches, in which:
20 unique CDR3
5 unique J



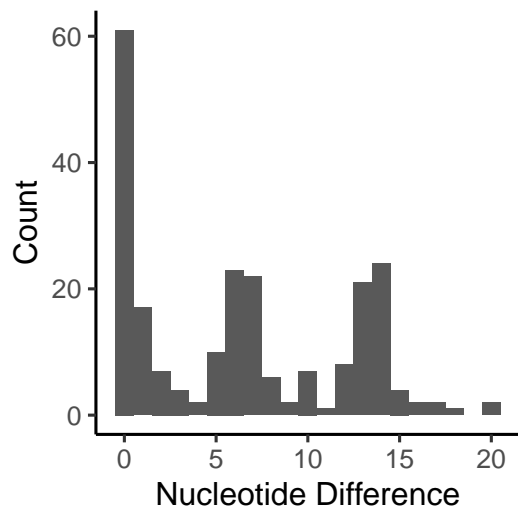
IGHV6-1*01_02

2706 sequences assigned
621 (22.9%) exact matches, in which:
552 unique CDR3
6 unique J



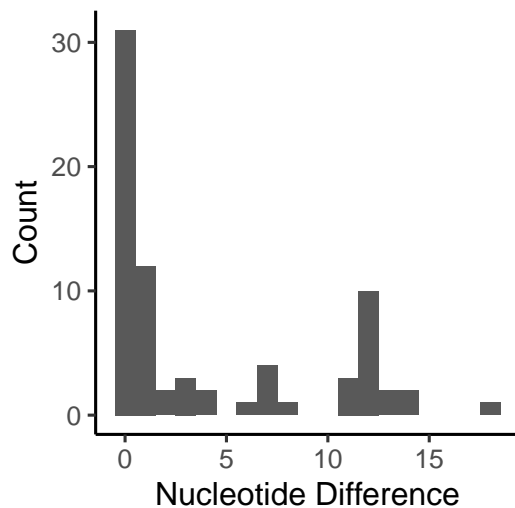
IGHV6-1*01_02_A315G

249 sequences assigned
61 (24.5%) exact matches, in which:
61 unique CDR3
6 unique J



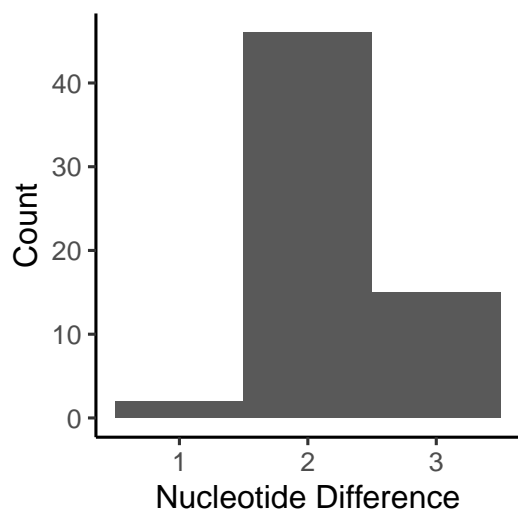
IGHV7-4-1*01

75 sequences assigned
31 (41.3%) exact matches, in which:
29 unique CDR3
4 unique J



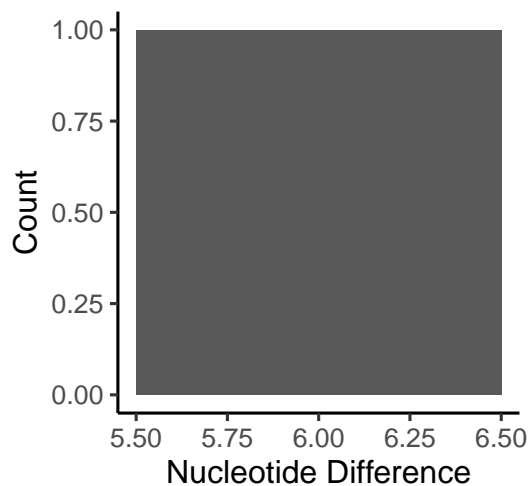
IGHV3/OR16-9*01

63 sequences assigned
No exact matches.



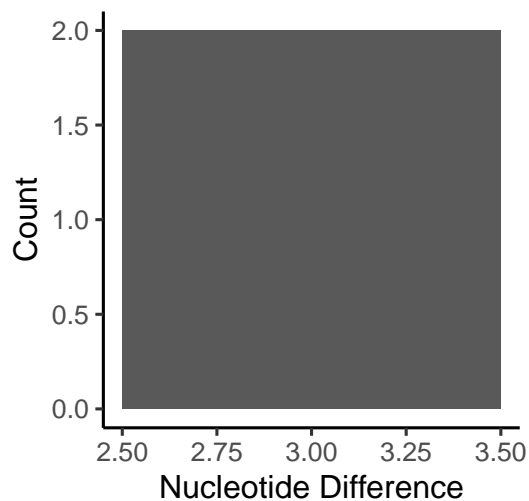
IGHV7-40*03

1 sequences assigned
No exact matches.

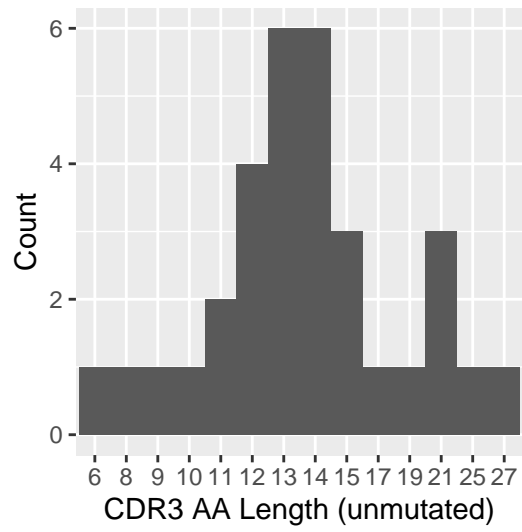


IGHV3/OR16-17*01

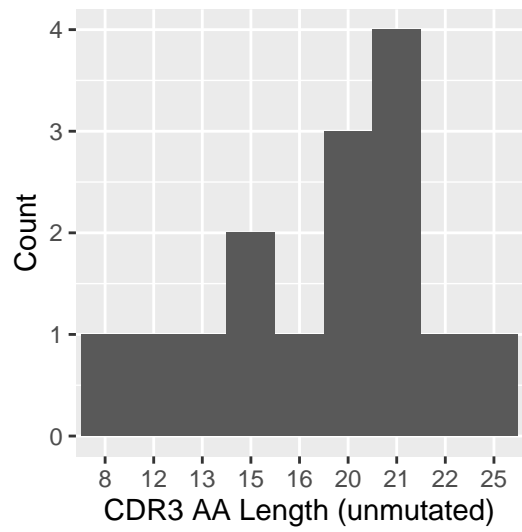
2 sequences assigned
No exact matches.



IGHV3-30-3*02_C189T



IGHV3-30-3*02_C189T_T288C_T300C_G303A



IGHV6-1*01_02_A315G

