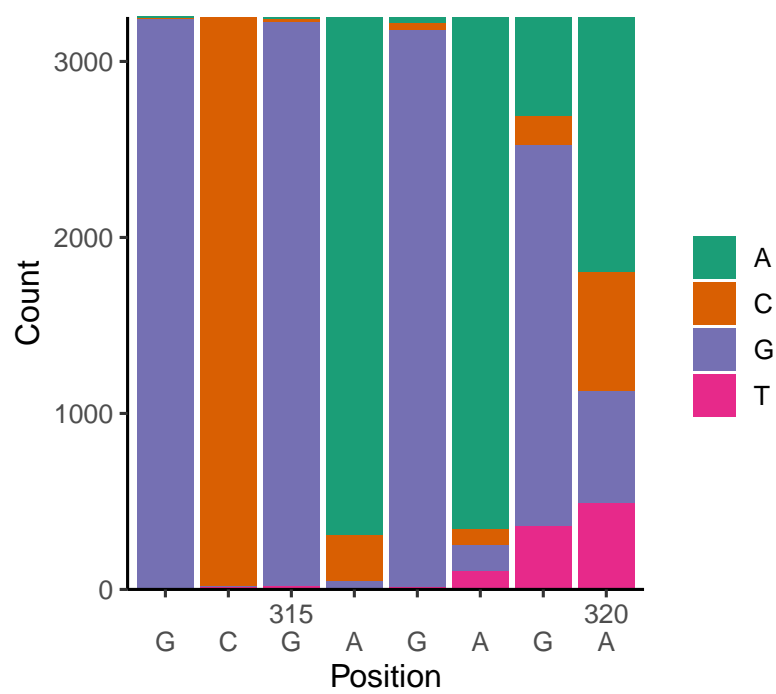


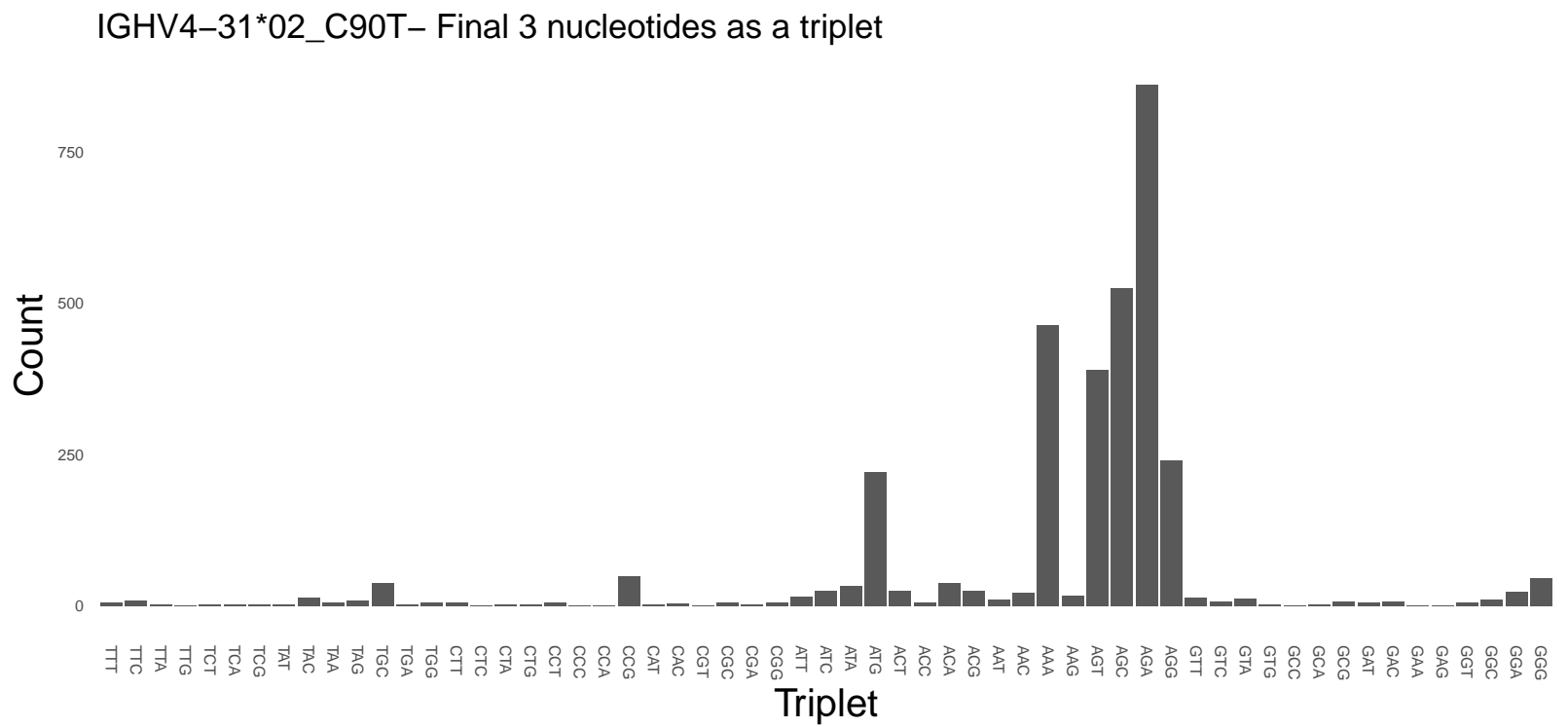
Gene IGHV4-31*02_C90T



Gene IGHV4-31*02_C90T

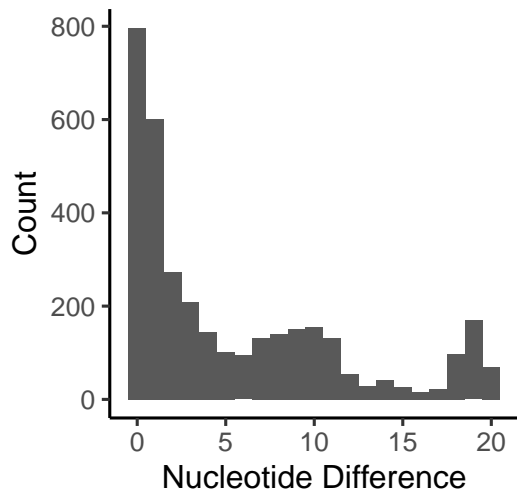


IGHV4-31*02_C90T- Final 3 nucleotides as a triplet



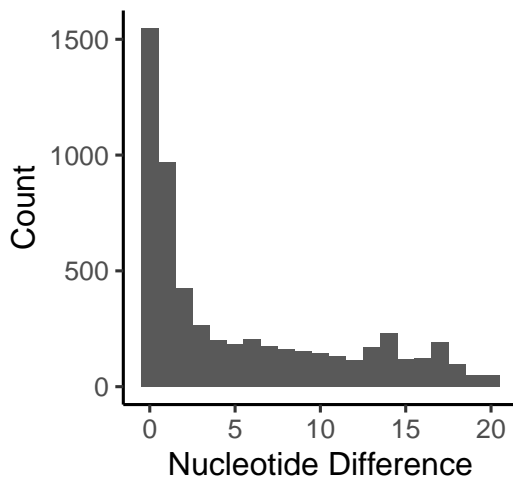
IGHV1-2*04

3936 sequences assigned
797 (20.2%) exact matches, in which:
700 unique CDR3
6 unique J



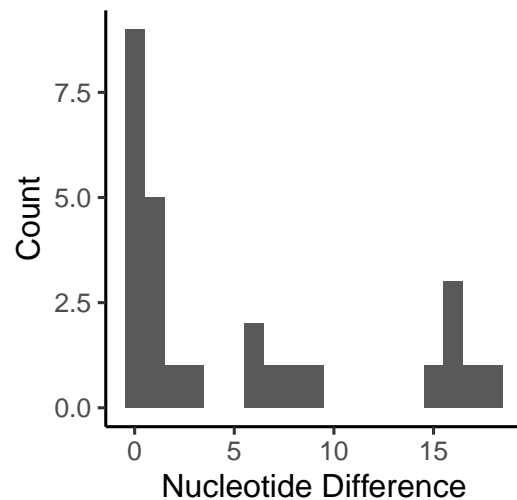
IGHV1-18*01

6620 sequences assigned
1547 (23.4%) exact matches, in which:
1392 unique CDR3
6 unique J



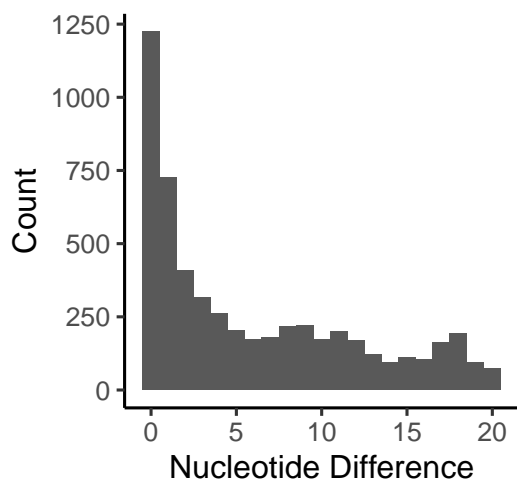
IGHV1-45*02

29 sequences assigned
9 (31%) exact matches, in which:
8 unique CDR3
4 unique J



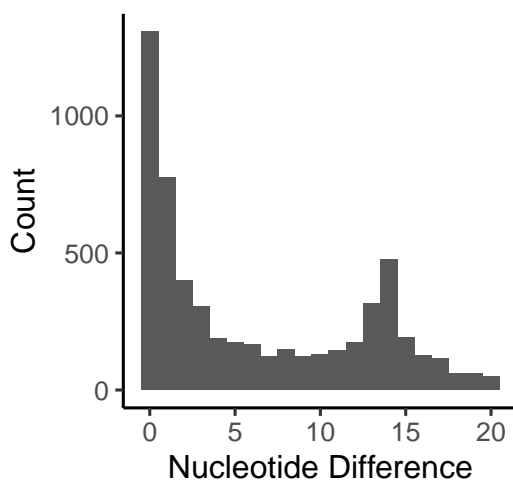
IGHV1-3*01_05

6324 sequences assigned
1224 (19.4%) exact matches, in which:
1050 unique CDR3
6 unique J



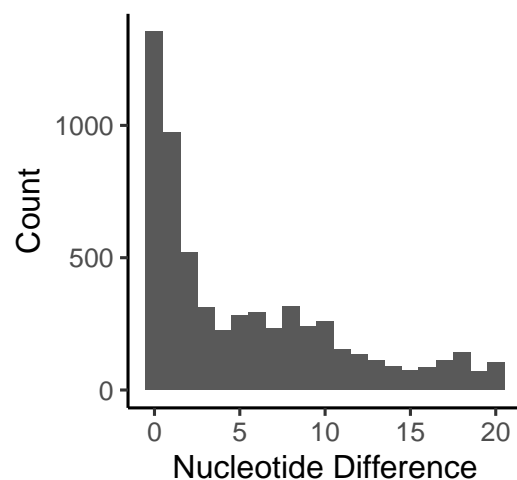
IGHV1-18*04

6123 sequences assigned
1307 (21.3%) exact matches, in which:
1173 unique CDR3
6 unique J



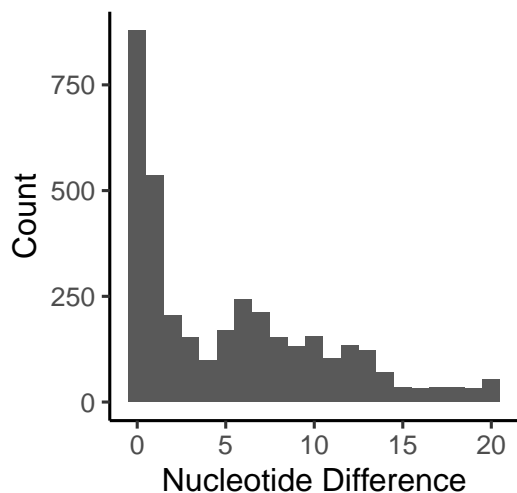
IGHV1-46*01

7315 sequences assigned
1354 (18.5%) exact matches, in which:
1225 unique CDR3
6 unique J



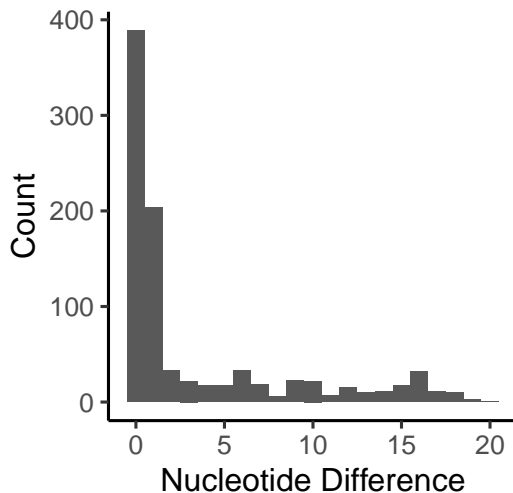
IGHV1-8*01

5034 sequences assigned
879 (17.5%) exact matches, in which:
798 unique CDR3
6 unique J



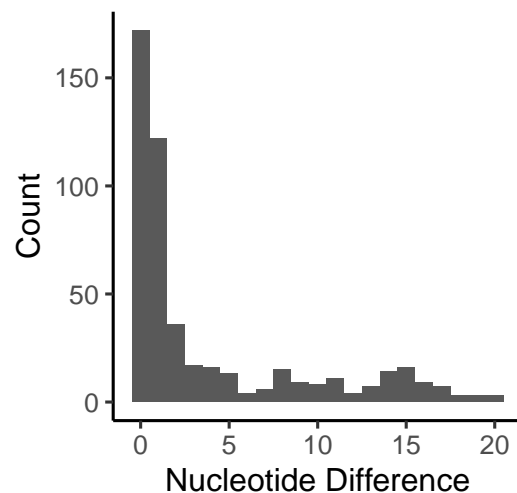
IGHV1-24*01

952 sequences assigned
389 (40.9%) exact matches, in which:
352 unique CDR3
6 unique J



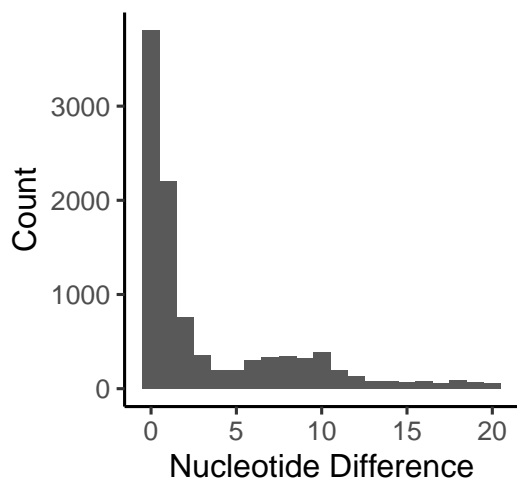
IGHV1-58*01_03

605 sequences assigned
172 (28.4%) exact matches, in which:
155 unique CDR3
5 unique J



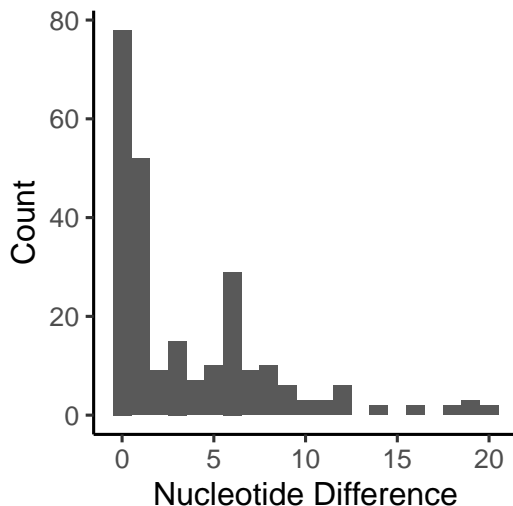
IGHV1-69*01_12_13

11125 sequences assigned
3804 (34.2%) exact matches, in which:
3477 unique CDR3
6 unique J



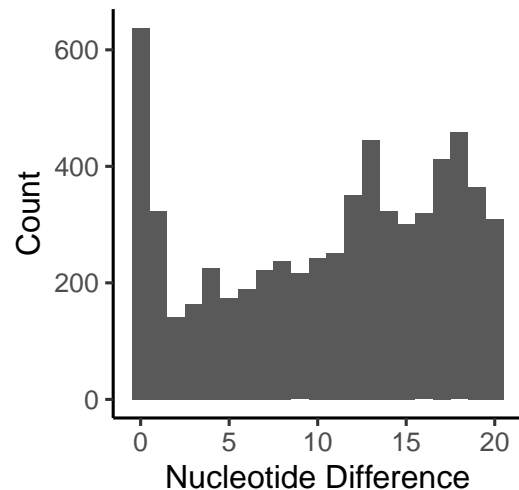
IGHV2-26*01

269 sequences assigned
78 (29%) exact matches, in which:
71 unique CDR3
6 unique J



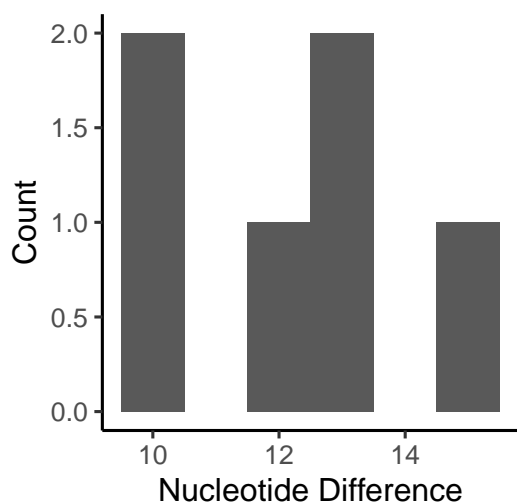
IGHV3-7*03

10138 sequences assigned
638 (6.3%) exact matches, in which:
466 unique CDR3
6 unique J



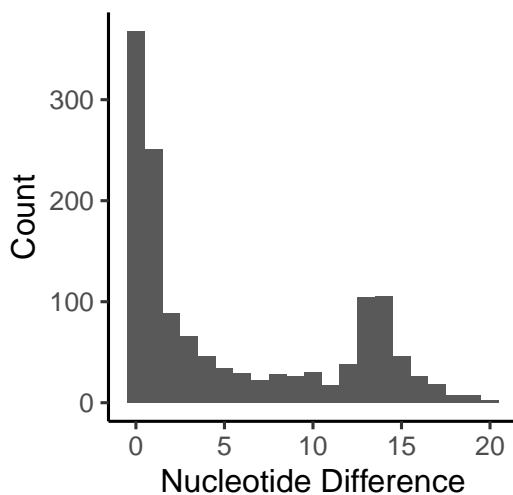
IGHV1-NL1*01

6 sequences assigned
No exact matches.



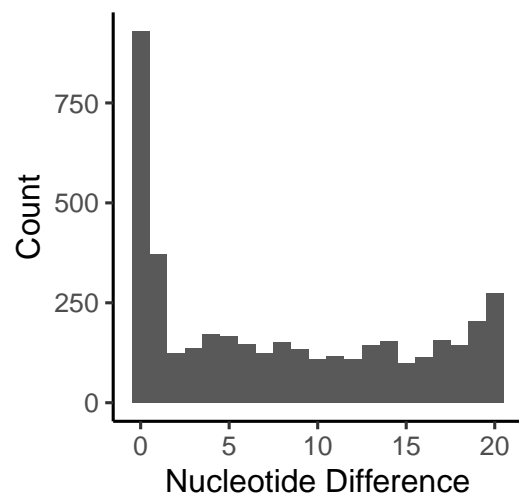
IGHV2-70*01

1639 sequences assigned
368 (22.5%) exact matches, in which:
333 unique CDR3
5 unique J



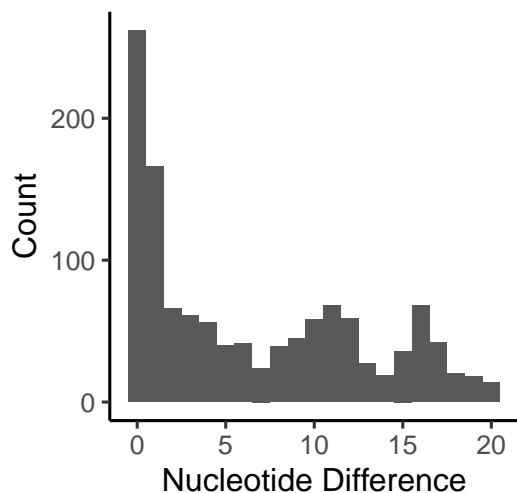
IGHV3-9*01

5995 sequences assigned
930 (15.5%) exact matches, in which:
663 unique CDR3
6 unique J



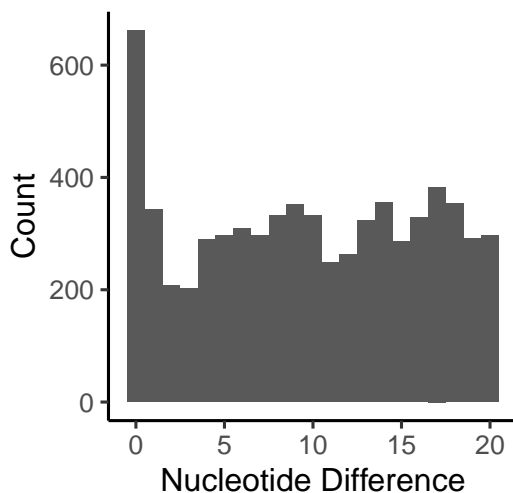
IGHV2-5*02

1952 sequences assigned
262 (13.4%) exact matches, in which:
238 unique CDR3
6 unique J



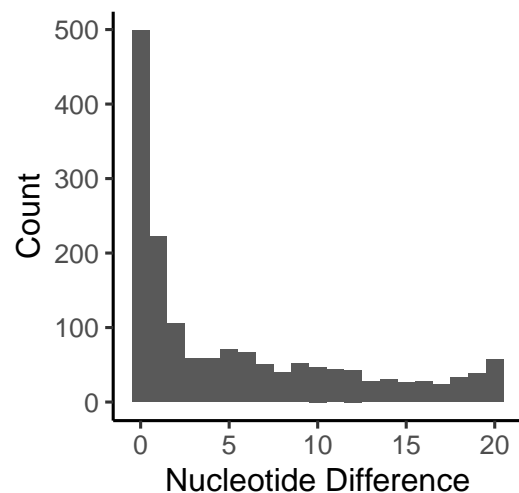
IGHV3-7*01

8532 sequences assigned
662 (7.8%) exact matches, in which:
488 unique CDR3
6 unique J



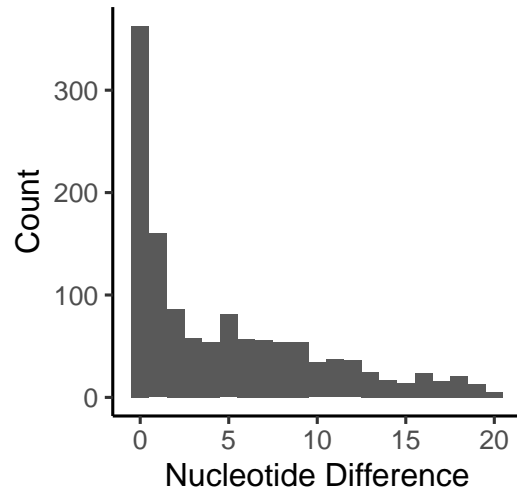
IGHV3-11*01

1898 sequences assigned
499 (26.3%) exact matches, in which:
370 unique CDR3
6 unique J



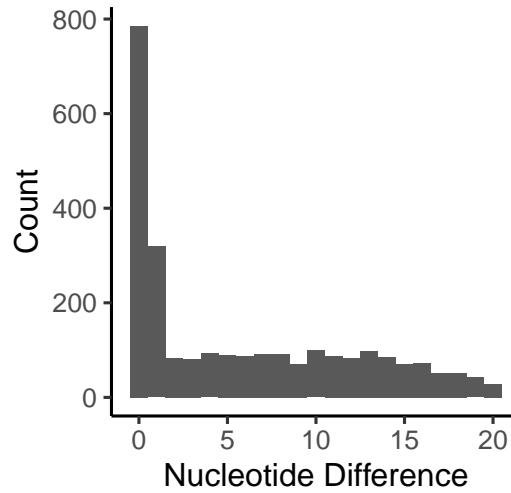
IGHV3-11*06

1338 sequences assigned
363 (27.1%) exact matches, in which:
263 unique CDR3
6 unique J



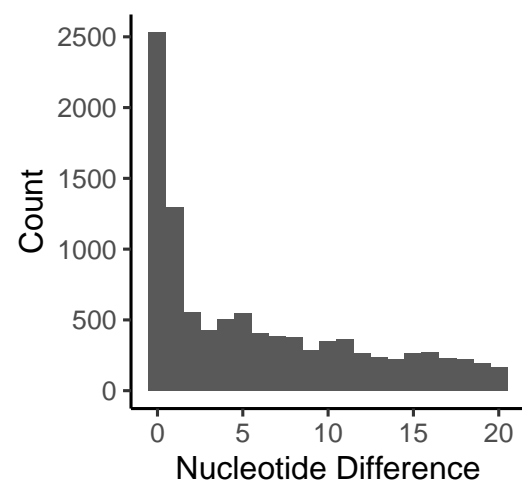
IGHV3-15*01_02

2873 sequences assigned
786 (27.4%) exact matches, in which:
579 unique CDR3
6 unique J



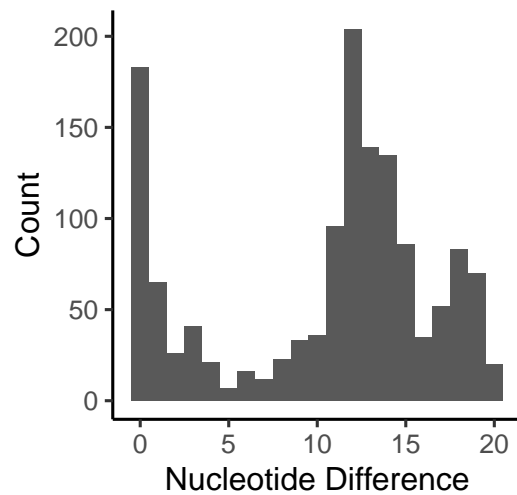
IGHV3-21*01_02

11782 sequences assigned
2531 (21.5%) exact matches, in which:
1770 unique CDR3
6 unique J



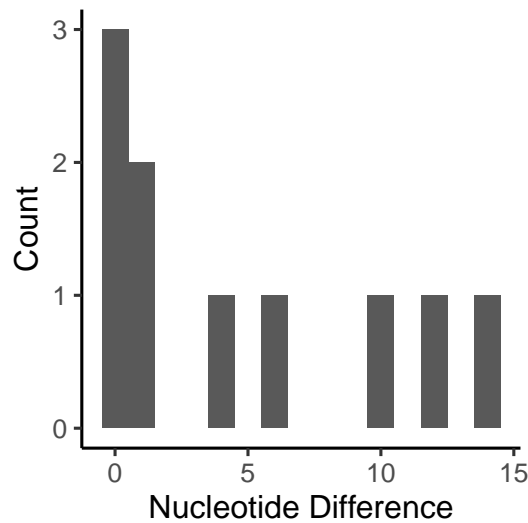
IGHV3-13*01

1468 sequences assigned
183 (12.5%) exact matches, in which:
125 unique CDR3
5 unique J



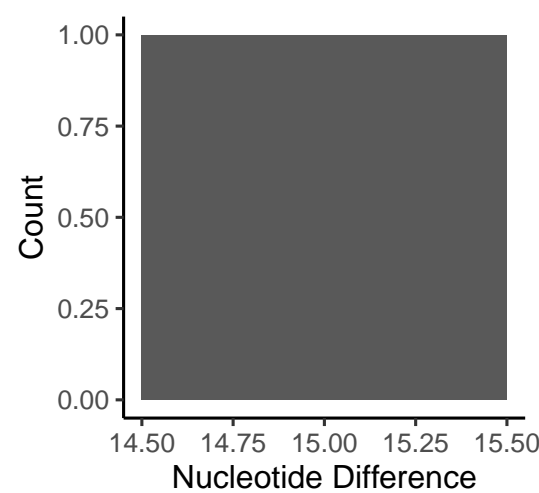
IGHV3-19*01

10 sequences assigned
3 (30%) exact matches, in which:
3 unique CDR3
1 unique J



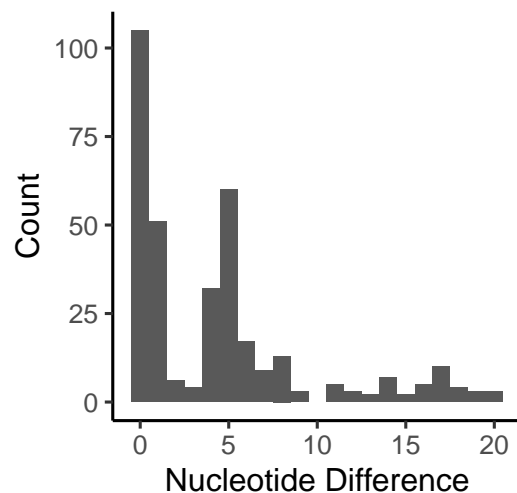
IGHV3-22*01_02

1 sequences assigned
No exact matches.



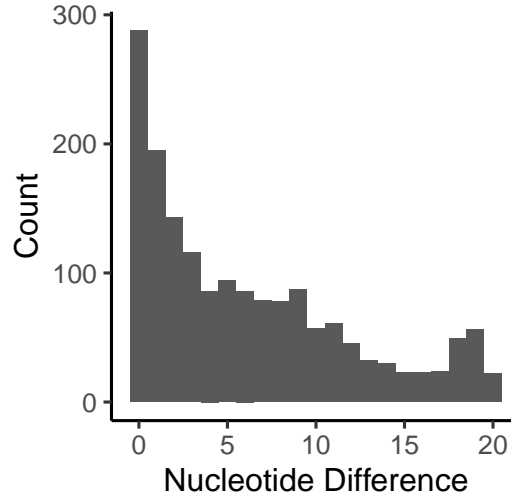
IGHV3-13*05

349 sequences assigned
105 (30.1%) exact matches, in which:
69 unique CDR3
4 unique J



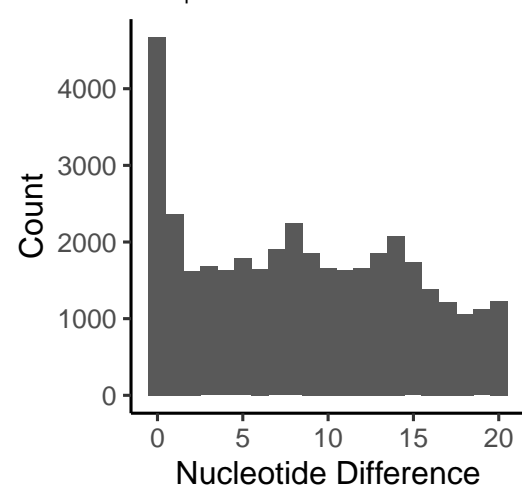
IGHV3-20*03_04

1927 sequences assigned
288 (14.9%) exact matches, in which:
212 unique CDR3
6 unique J



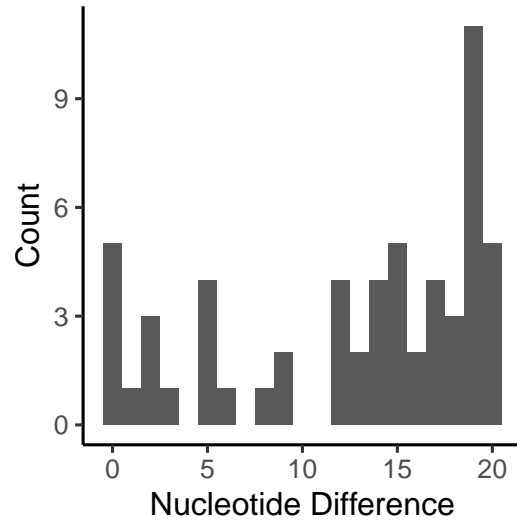
IGHV3-23*01_04

47283 sequences assigned
4674 (9.9%) exact matches, in which:
3208 unique CDR3
6 unique J



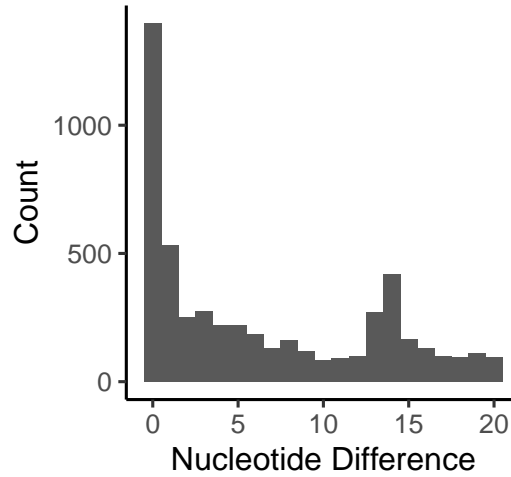
IGHV3-30-3*01

99 sequences assigned
5 (5.1%) exact matches, in which:
5 unique CDR3
3 unique J



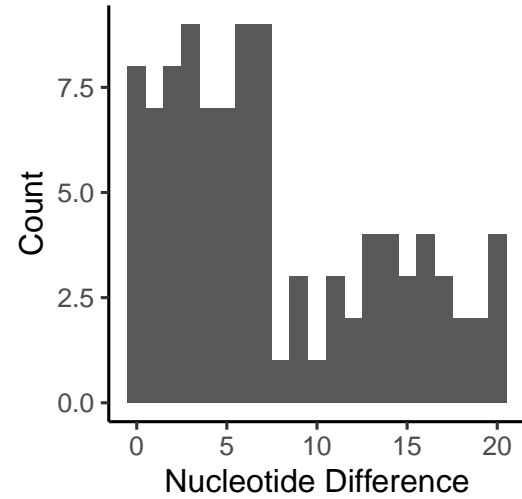
IGHV3-30*04

6026 sequences assigned
1397 (23.2%) exact matches, in which:
1036 unique CDR3
6 unique J



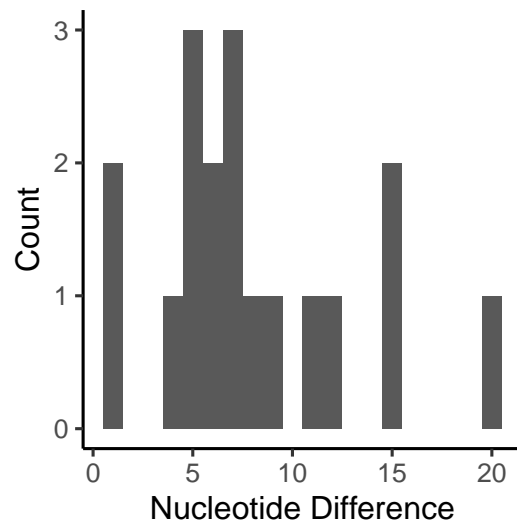
IGHV3-33*05

135 sequences assigned
8 (5.9%) exact matches, in which:
8 unique CDR3
2 unique J



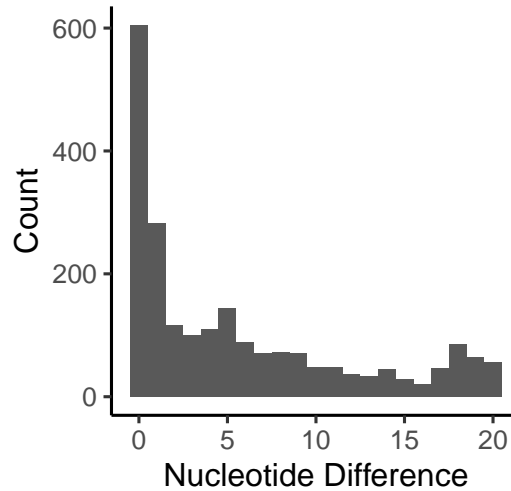
IGHV3-30-3*02

25 sequences assigned
No exact matches.



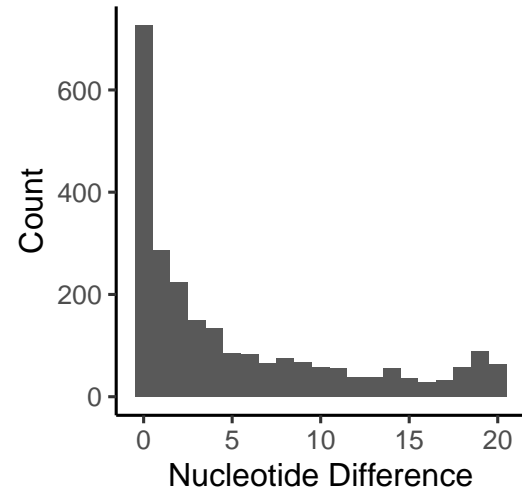
IGHV3-30*18

2776 sequences assigned
605 (21.8%) exact matches, in which:
439 unique CDR3
6 unique J



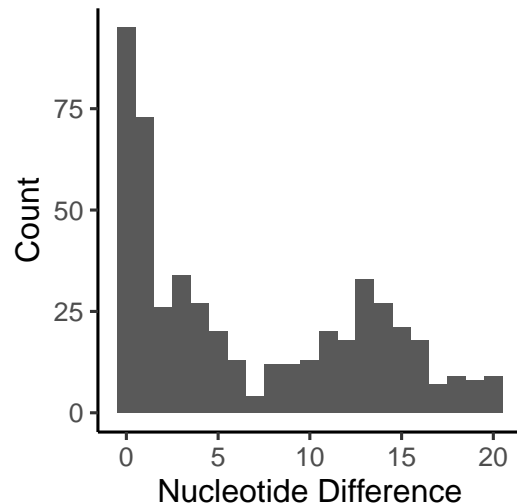
IGHV3-33*06

2782 sequences assigned
727 (26.1%) exact matches, in which:
535 unique CDR3
6 unique J



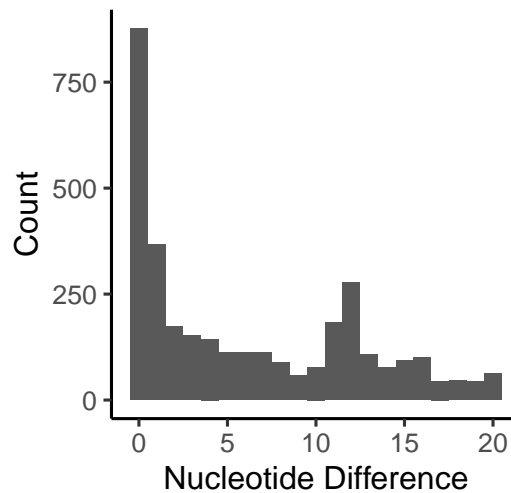
IGHV3-30*03

599 sequences assigned
95 (15.9%) exact matches, in which:
92 unique CDR3
5 unique J



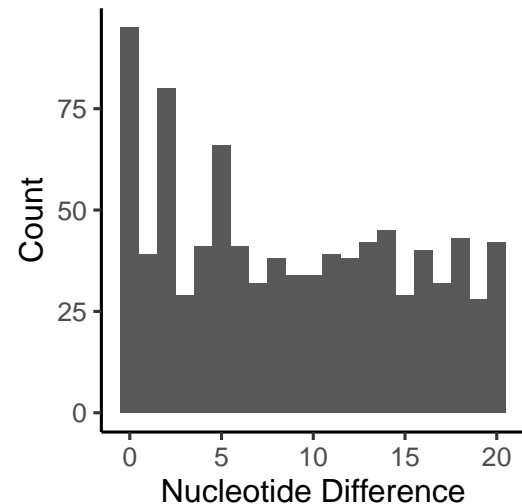
IGHV3-33*01

4040 sequences assigned
877 (21.7%) exact matches, in which:
676 unique CDR3
6 unique J



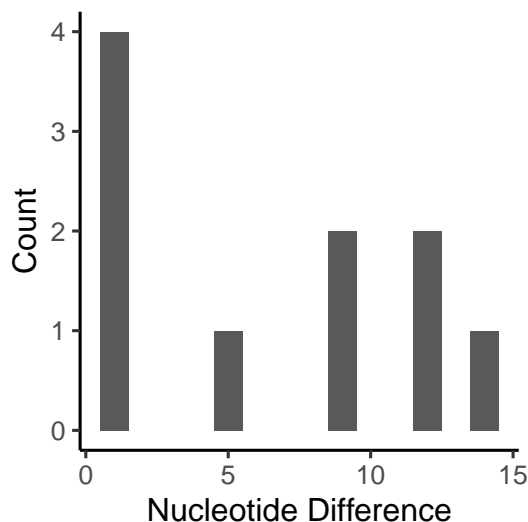
IGHV3-33*08

1146 sequences assigned
95 (8.3%) exact matches, in which:
89 unique CDR3
4 unique J



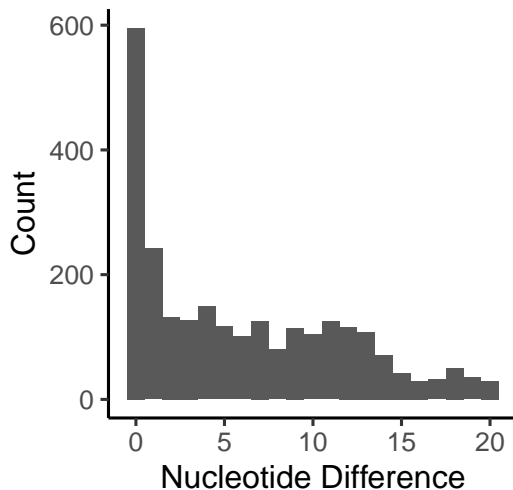
IGHV3-35*01

10 sequences assigned
No exact matches.



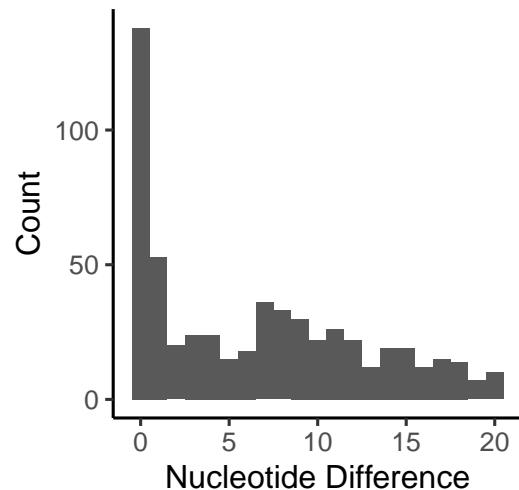
IGHV3-48*02

2944 sequences assigned
596 (20.2%) exact matches, in which:
429 unique CDR3
6 unique J



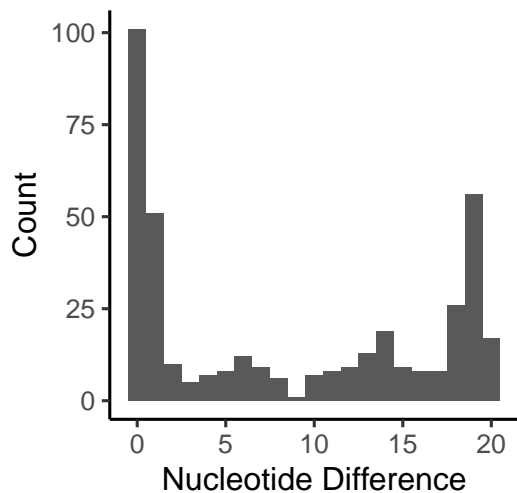
IGHV3-49*04

751 sequences assigned
138 (18.4%) exact matches, in which:
113 unique CDR3
6 unique J



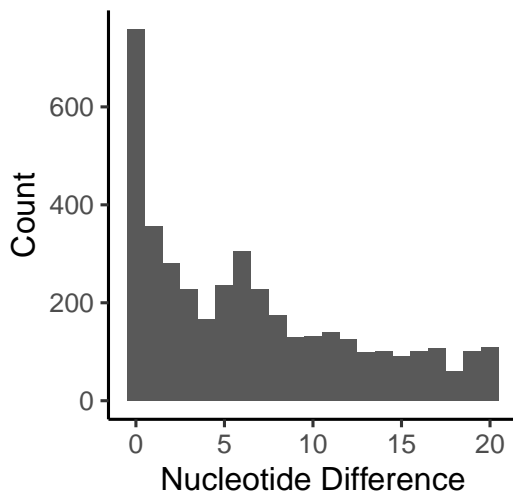
IGHV3-43*01

722 sequences assigned
101 (14%) exact matches, in which:
73 unique CDR3
5 unique J



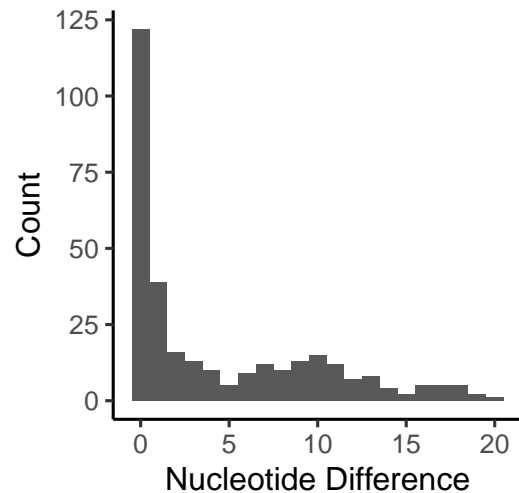
IGHV3-48*03

4799 sequences assigned
759 (15.8%) exact matches, in which:
543 unique CDR3
6 unique J



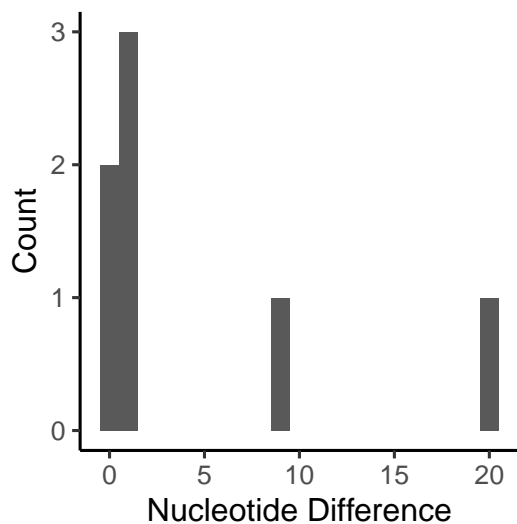
IGHV3-49*03_05

346 sequences assigned
122 (35.3%) exact matches, in which:
93 unique CDR3
4 unique J



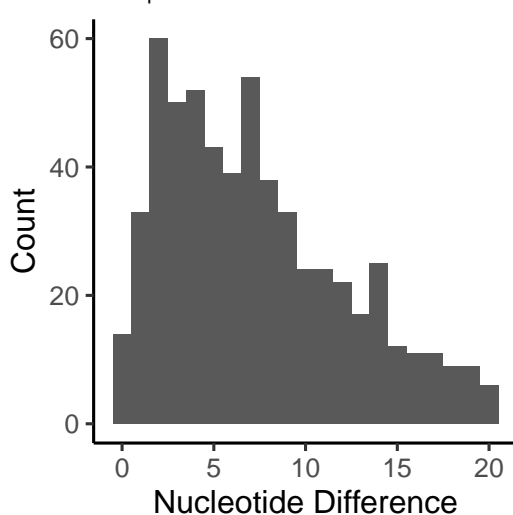
IGHV3-47*02

7 sequences assigned
2 (28.6%) exact matches, in which:
1 unique CDR3
1 unique J



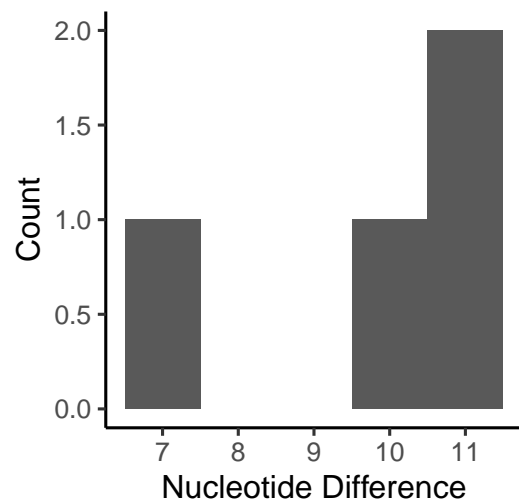
IGHV3-48*04

631 sequences assigned
14 (2.2%) exact matches, in which:
14 unique CDR3
4 unique J



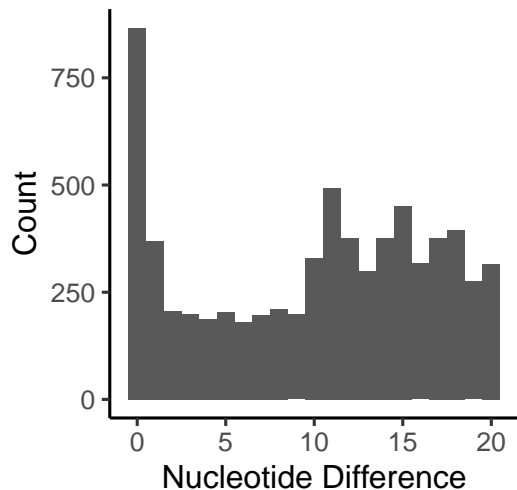
IGHV3-52*01_03

4 sequences assigned
No exact matches.



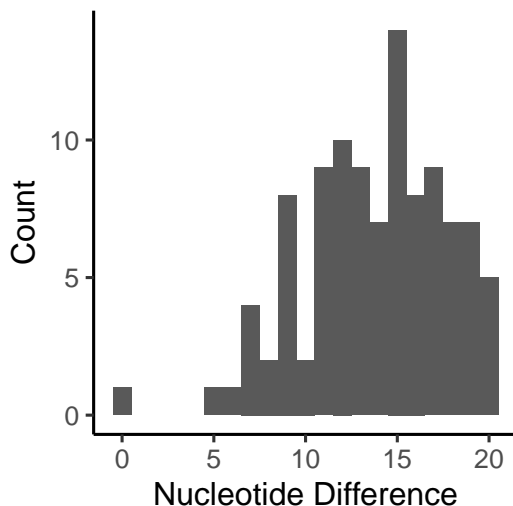
IGHV3-53*01_02

9280 sequences assigned
867 (9.3%) exact matches, in which:
636 unique CDR3
6 unique J



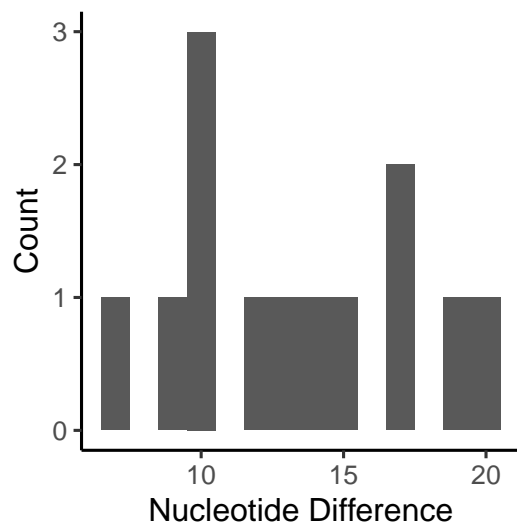
IGHV3-66*01

152 sequences assigned
1 (0.7%) exact matches, in which:
1 unique CDR3
1 unique J



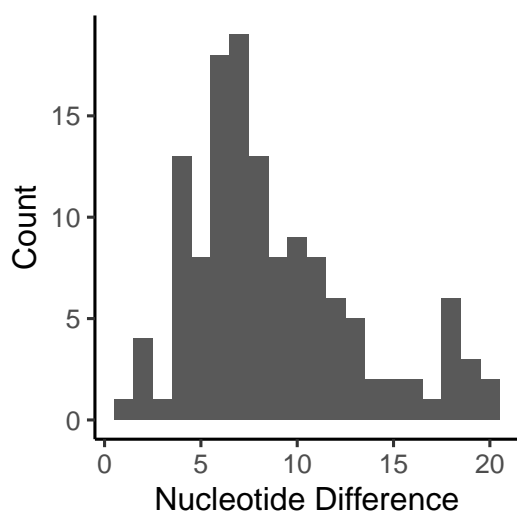
IGHV3-66*04

22 sequences assigned
No exact matches.



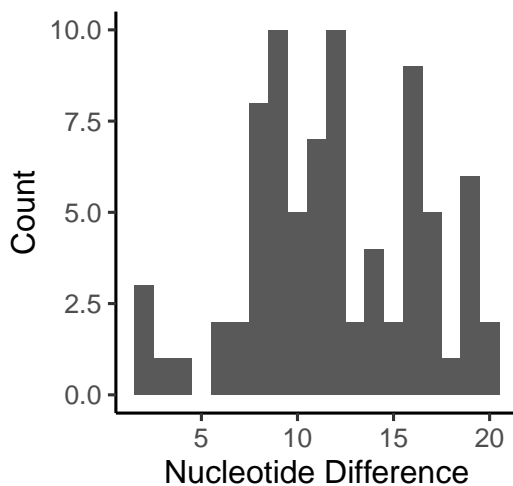
IGHV3-64*04

161 sequences assigned
No exact matches.



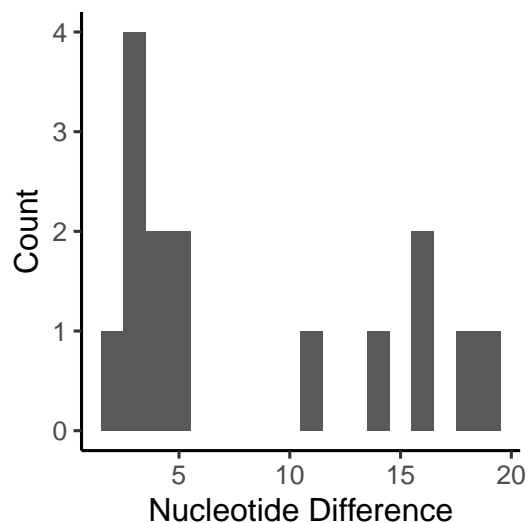
IGHV3-66*02

87 sequences assigned
No exact matches.



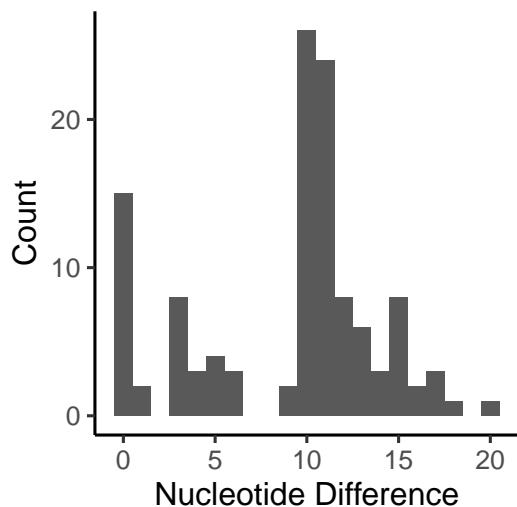
IGHV3-69-1*01

33 sequences assigned
No exact matches.



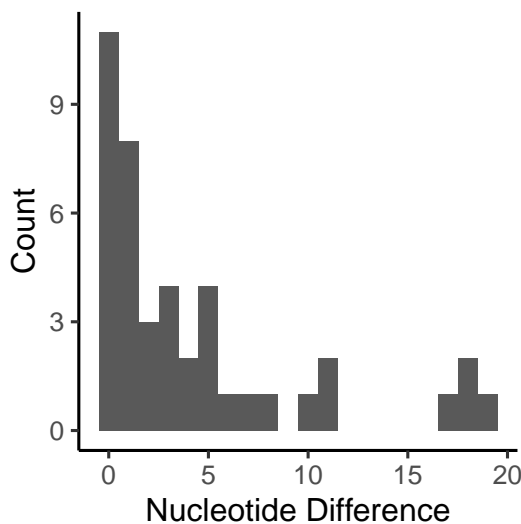
IGHV3-64*02_07

134 sequences assigned
15 (11.2%) exact matches, in which:
13 unique CDR3
3 unique J



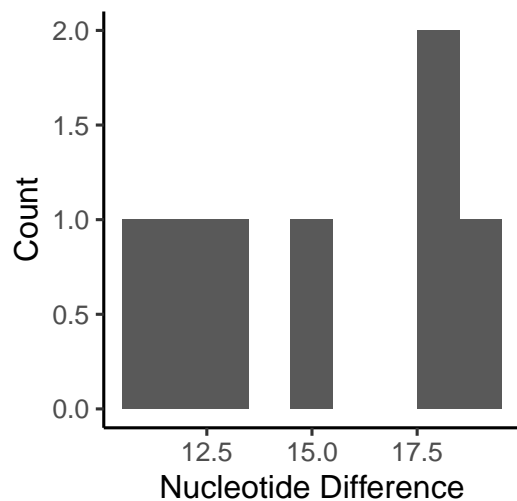
IGHV3-66*03

46 sequences assigned
11 (23.9%) exact matches, in which:
11 unique CDR3
3 unique J



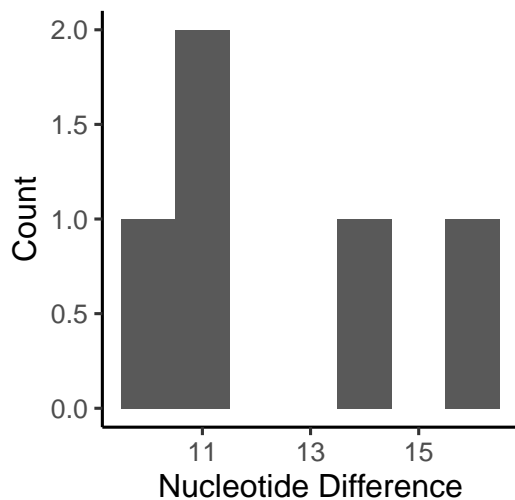
IGHV3-69-1*02

153 sequences assigned
No exact matches.



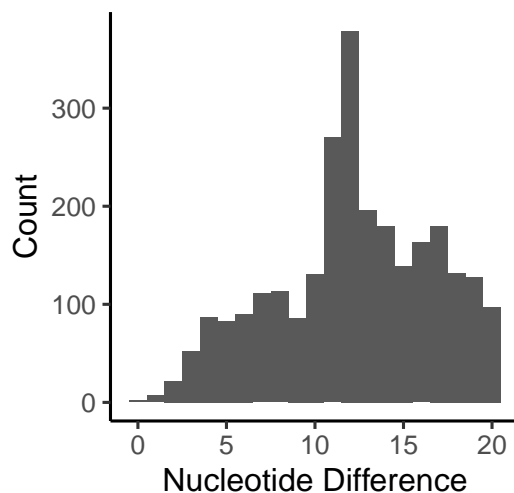
IGHV3-71*01_04

6 sequences assigned
No exact matches.



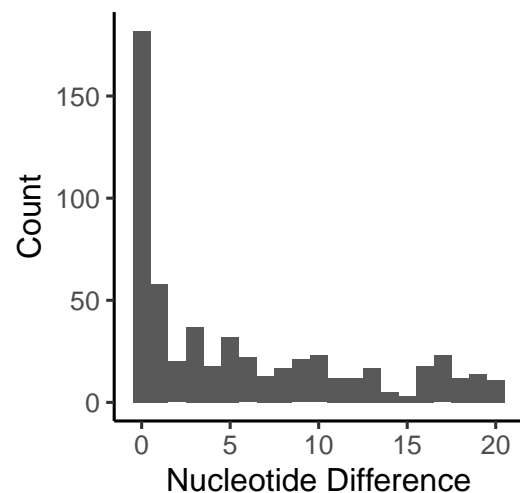
IGHV3-74*03

3727 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
1 unique J



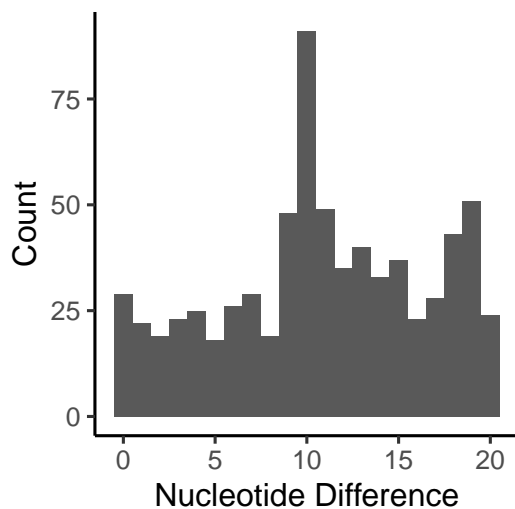
IGHV3-64D*06

739 sequences assigned
182 (24.6%) exact matches, in which:
124 unique CDR3
5 unique J



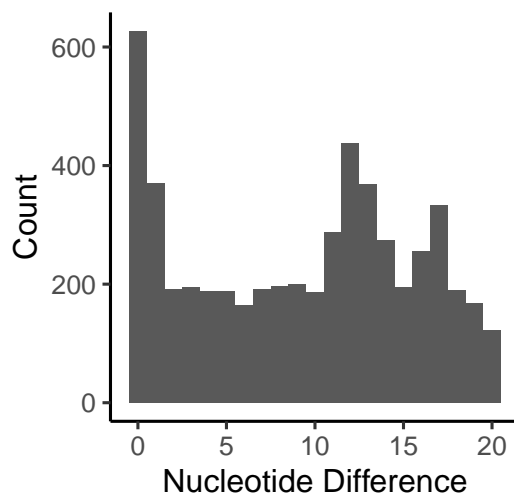
IGHV3-72*01

962 sequences assigned
29 (3%) exact matches, in which:
22 unique CDR3
4 unique J



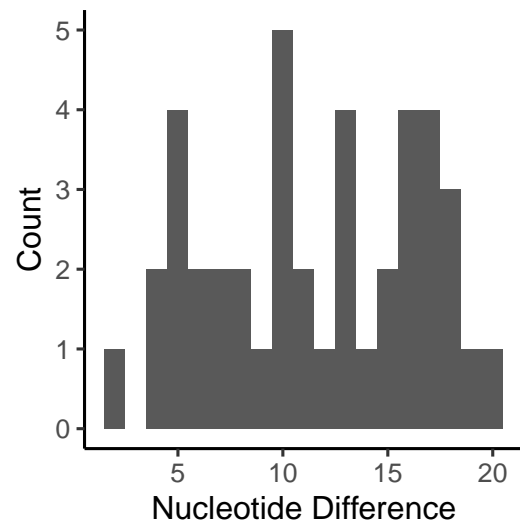
IGHV3-74*01_02

6265 sequences assigned
627 (10%) exact matches, in which:
418 unique CDR3
6 unique J



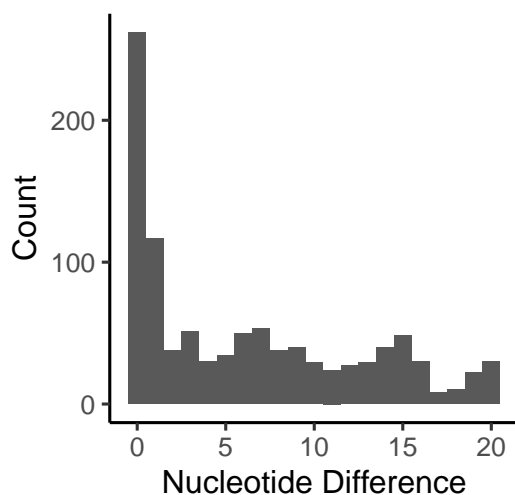
IGHV3-NL1*01

62 sequences assigned
No exact matches.



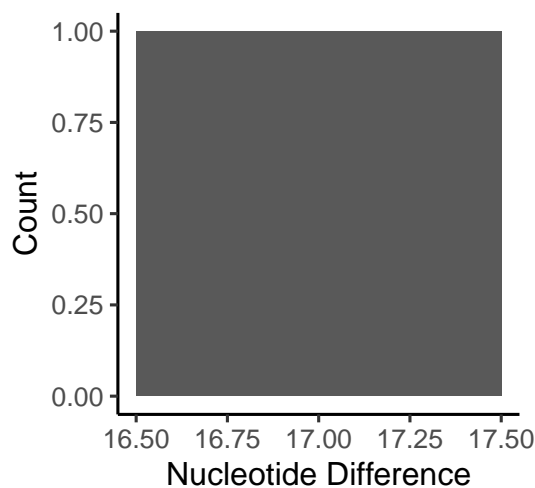
IGHV3-73*01_02

1156 sequences assigned
262 (22.7%) exact matches, in which:
186 unique CDR3
5 unique J



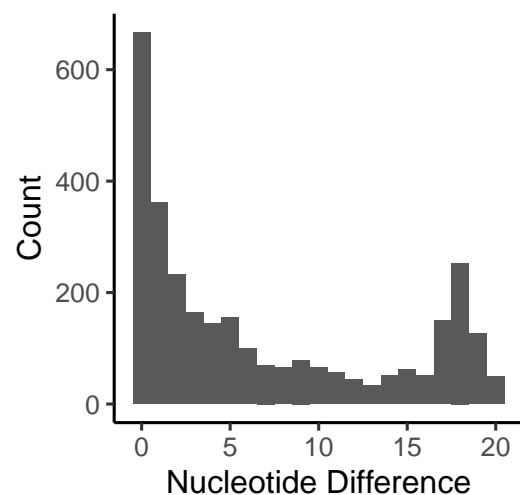
IGHV3-43D*04

53 sequences assigned
No exact matches.



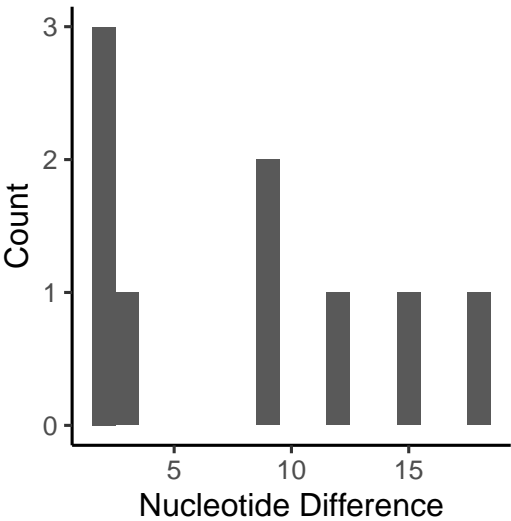
IGHV4-4*02_03

3714 sequences assigned
667 (18%) exact matches, in which:
581 unique CDR3
6 unique J



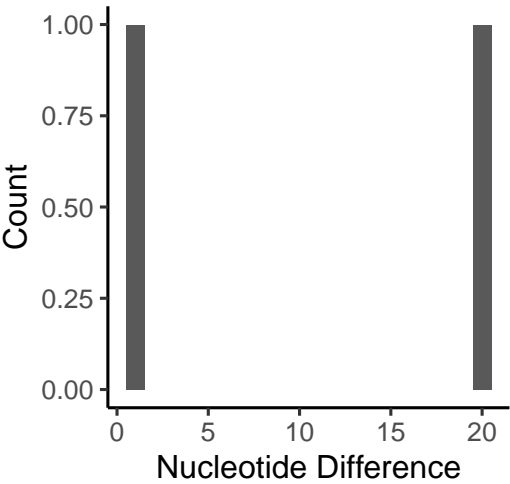
IGHV4-28*03

9 sequences assigned
No exact matches.



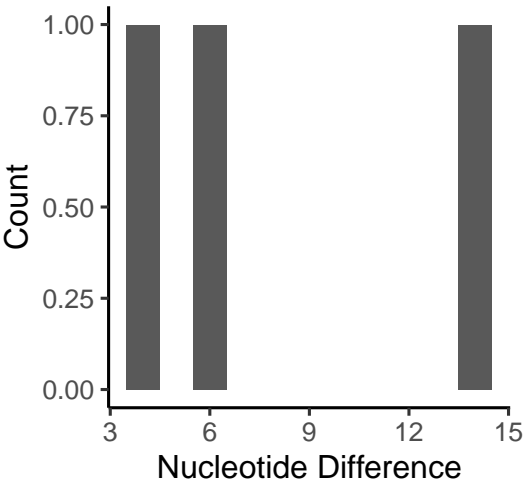
IGHV4-30-2*01

7 sequences assigned
No exact matches.



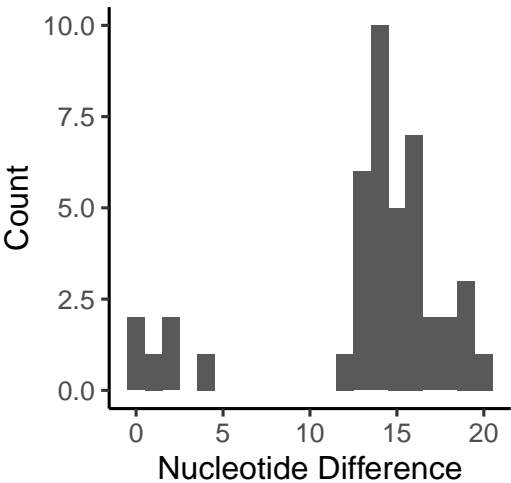
IGHV4-30-4*08

27 sequences assigned
No exact matches.



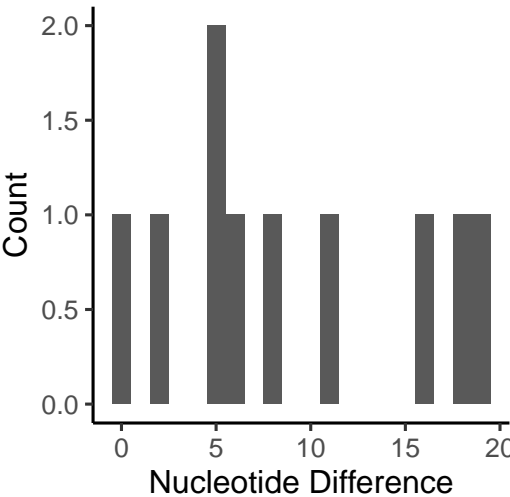
IGHV4-28*01_07

57 sequences assigned
2 (3.5%) exact matches, in which:
2 unique CDR3
2 unique J



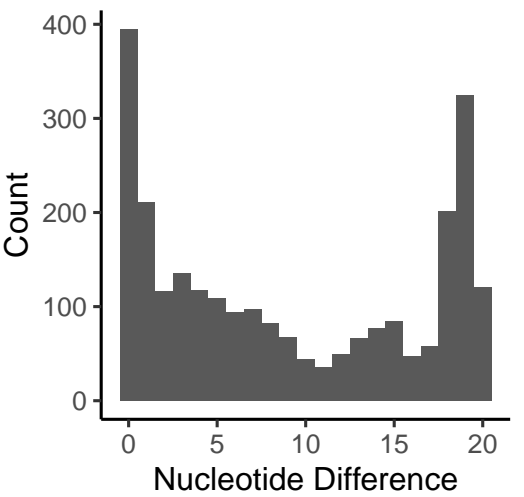
IGHV4-30-2*03

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



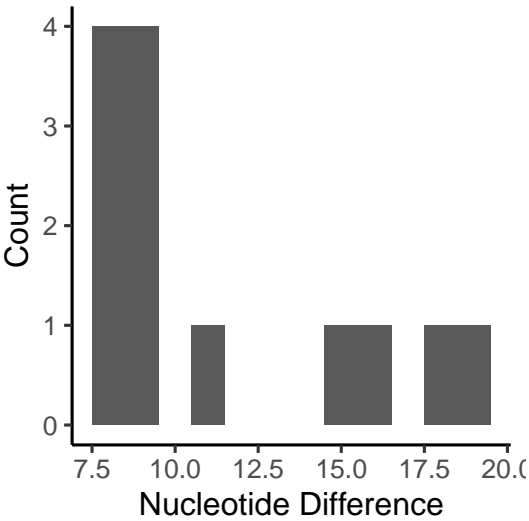
IGHV4-31*02

2976 sequences assigned
395 (13.3%) exact matches, in which:
378 unique CDR3
6 unique J



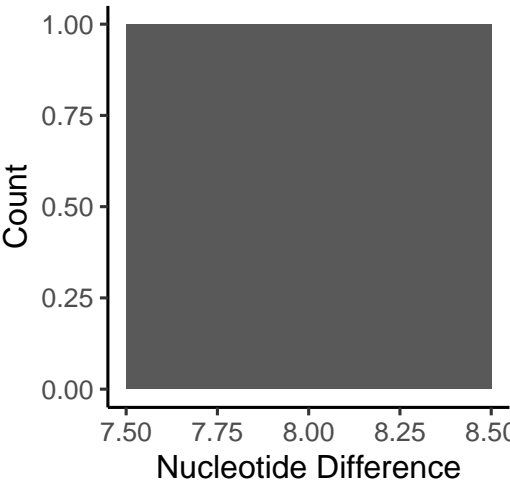
IGHV4-30-4*01

109 sequences assigned
No exact matches.



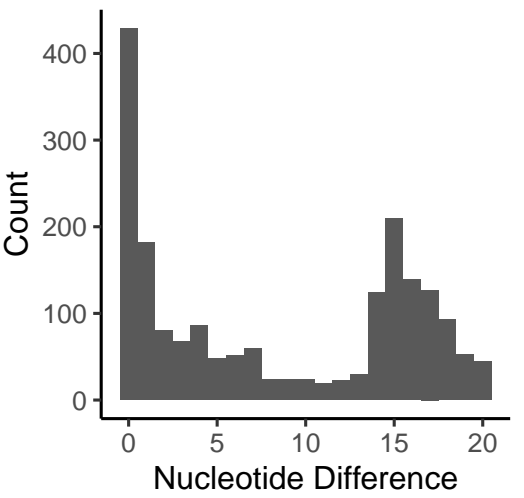
IGHV4-30-2*04

1 sequences assigned
No exact matches.



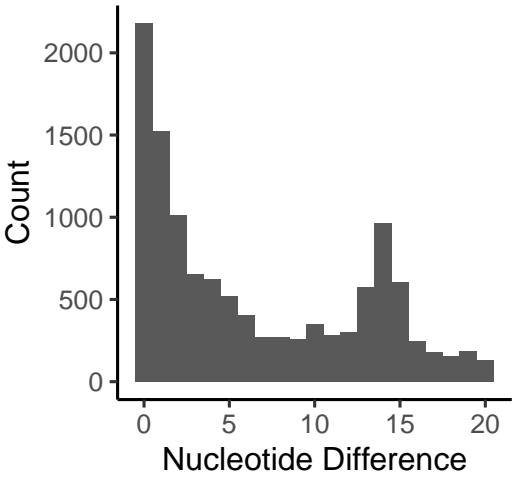
IGHV4-31*02_C90T

3253 sequences assigned
429 (13.2%) exact matches, in which:
408 unique CDR3
6 unique J



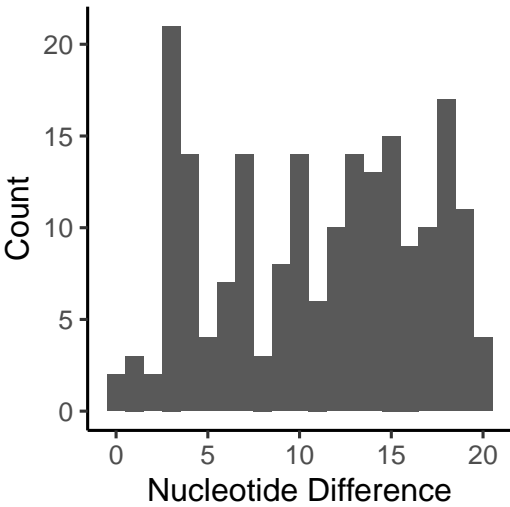
IGHV4-34*01_02

12588 sequences assigned
2179 (17.3%) exact matches, in which:
1846 unique CDR3
6 unique J



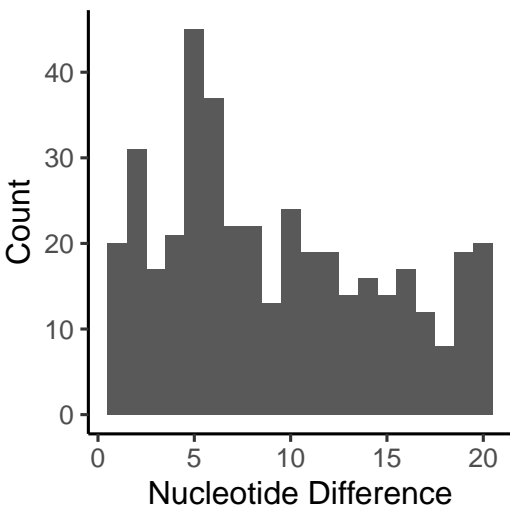
IGHV4-59*11

364 sequences assigned
2 (0.5%) exact matches, in which:
2 unique CDR3
2 unique J



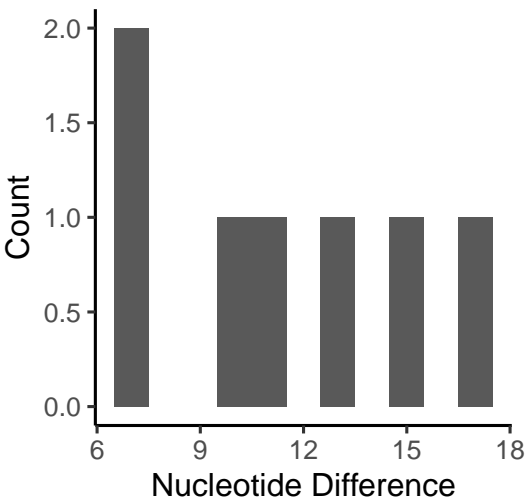
IGHV4-61*08

757 sequences assigned
No exact matches.



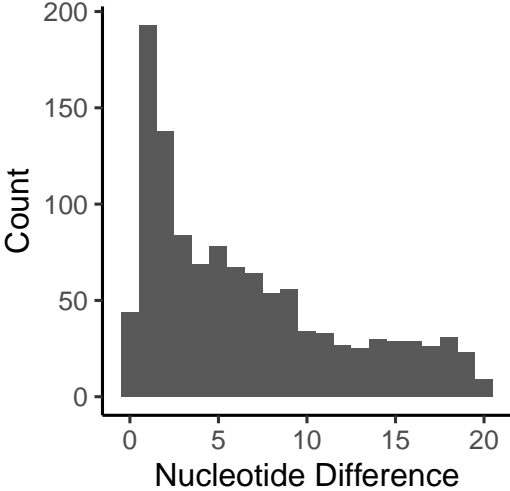
IGHV4-38-2*02

17 sequences assigned
No exact matches.



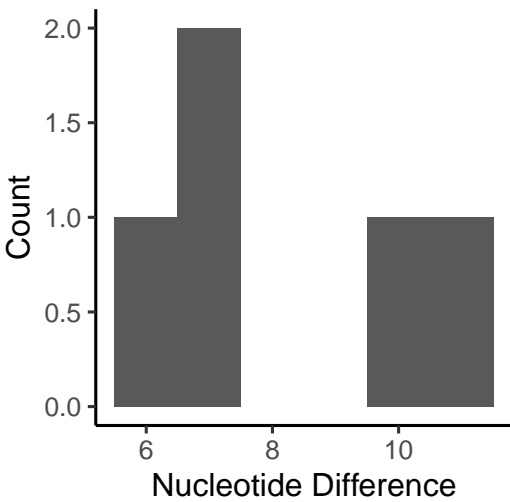
IGHV4-59*12

1344 sequences assigned
44 (3.3%) exact matches, in which:
44 unique CDR3
5 unique J



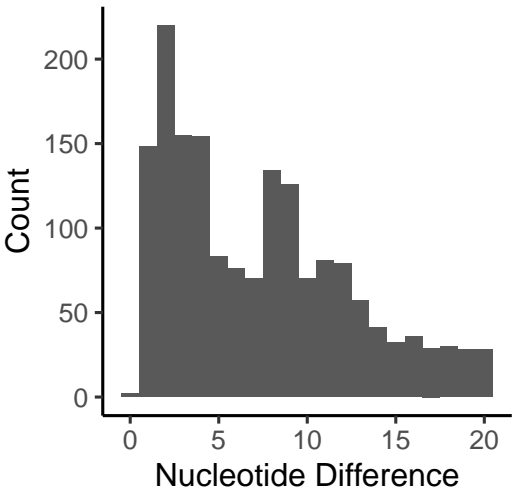
IGHV1/OR15-1*04

10 sequences assigned
No exact matches.



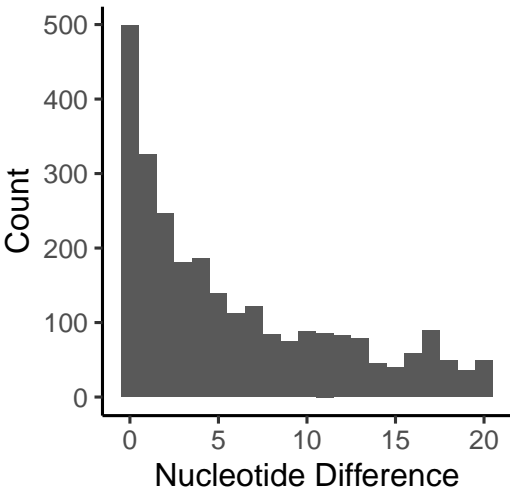
IGHV4-39*07

2330 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
1 unique J



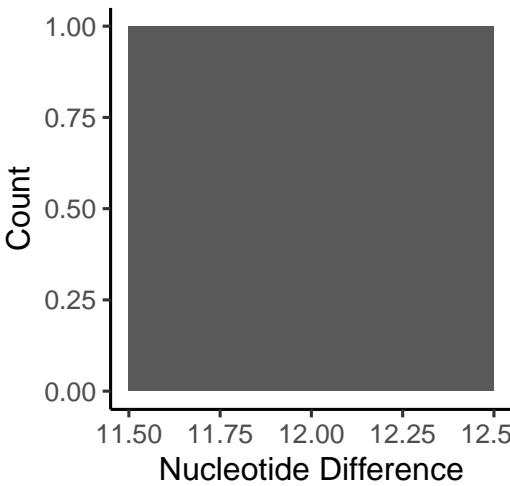
IGHV4-61*01

3047 sequences assigned
499 (16.4%) exact matches, in which:
466 unique CDR3
6 unique J



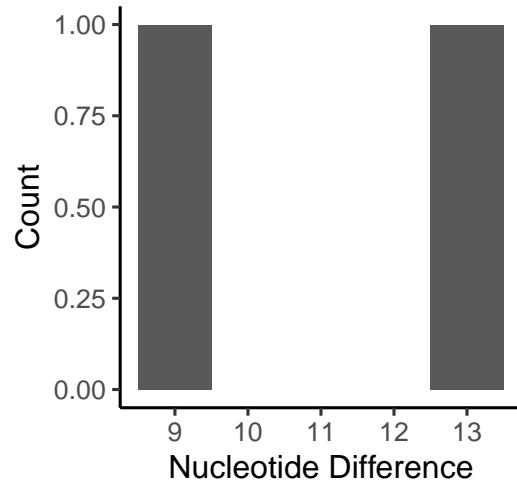
IGHV1/OR15-2*02_03

1 sequences assigned
No exact matches.



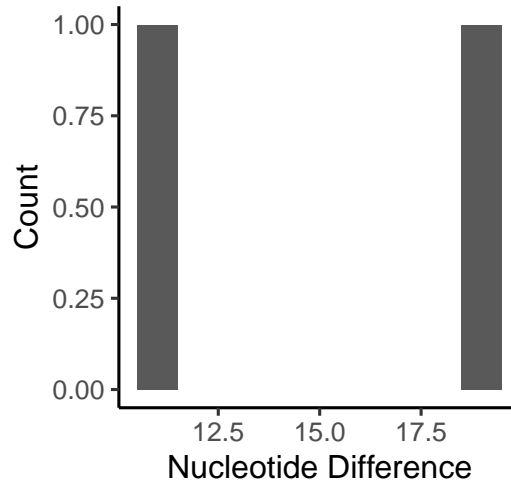
IGHV1/OR15–3*02

2 sequences assigned
No exact matches.



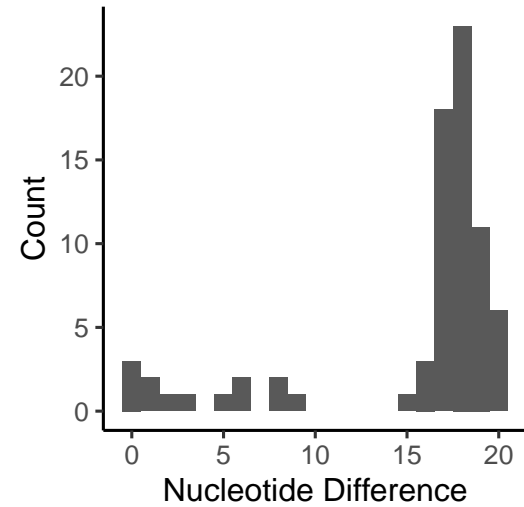
IGHV1/OR15–9*01

2 sequences assigned
No exact matches.



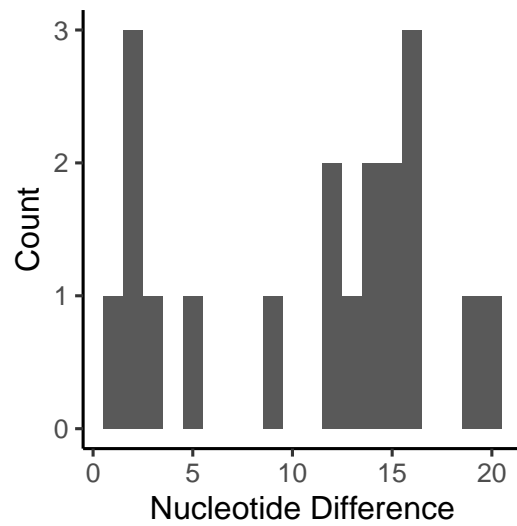
IGHV5–51*06

85 sequences assigned
3 (3.5%) exact matches, in which:
3 unique CDR3
3 unique J



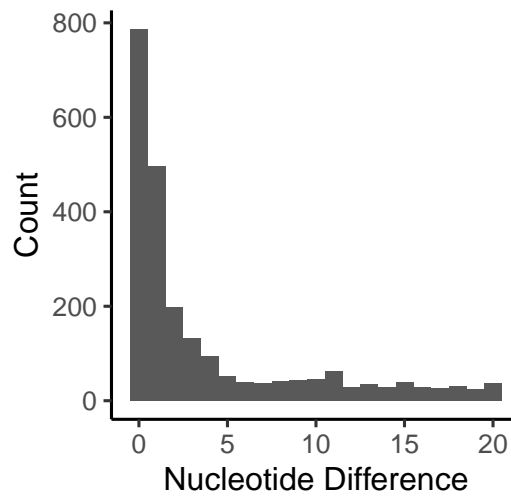
IGHV4/OR15–8*01

21 sequences assigned
No exact matches.



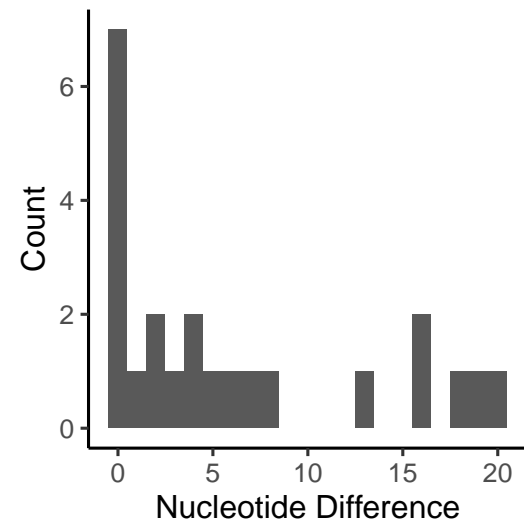
IGHV5–10–1*01_03

2697 sequences assigned
787 (29.2%) exact matches, in which:
594 unique CDR3
6 unique J



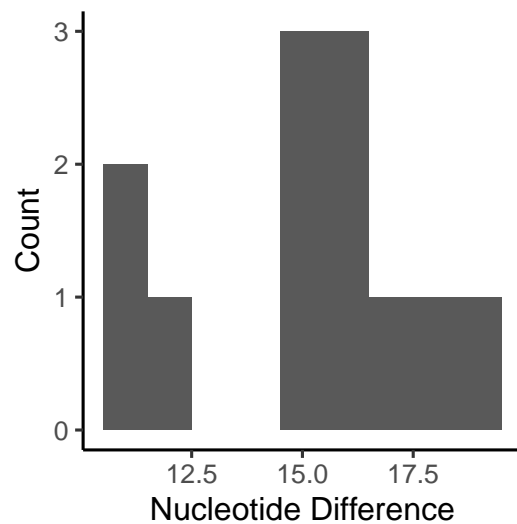
IGHV5–51*07

25 sequences assigned
7 (28%) exact matches, in which:
7 unique CDR3
3 unique J



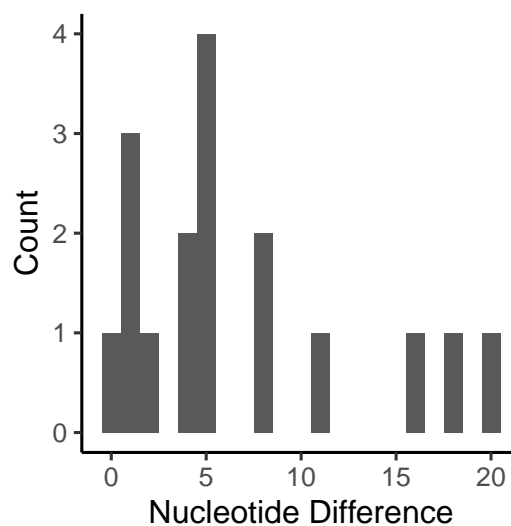
IGHV4/OR15–8*02

41 sequences assigned
No exact matches.



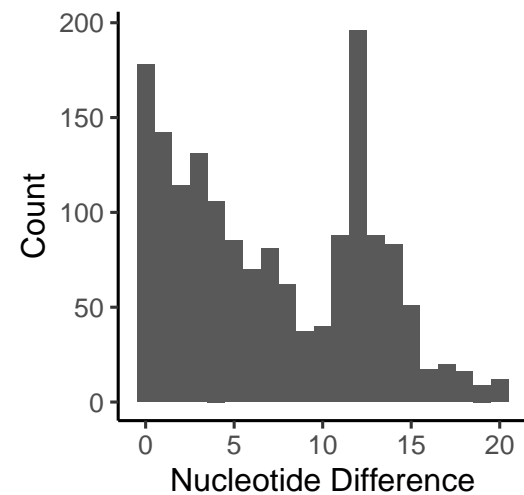
IGHV5–51*04

18 sequences assigned
1 (5.6%) exact matches, in which:
1 unique CDR3
1 unique J



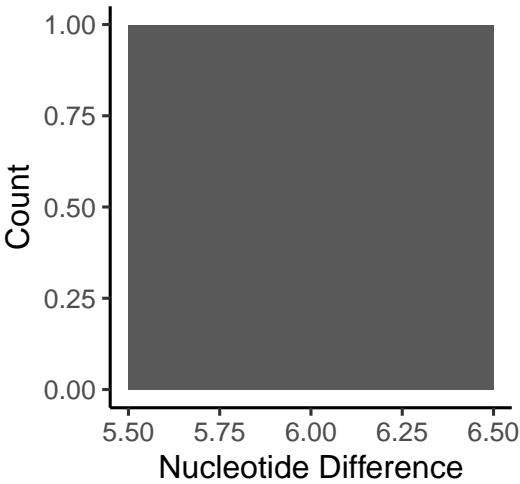
IGHV6–1*01_02

1972 sequences assigned
178 (9%) exact matches, in which:
165 unique CDR3
5 unique J



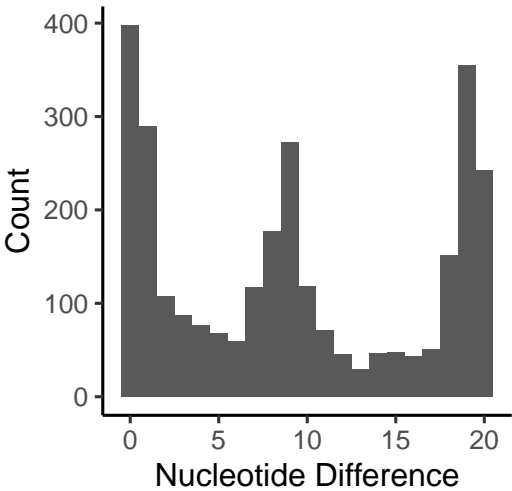
IGHV3/OR16-10*01_03

2 sequences assigned
No exact matches.



IGHV7-4-1*02

3164 sequences assigned
398 (12.6%) exact matches, in which:
364 unique CDR3
6 unique J



IGHV4-31*02_C90T

