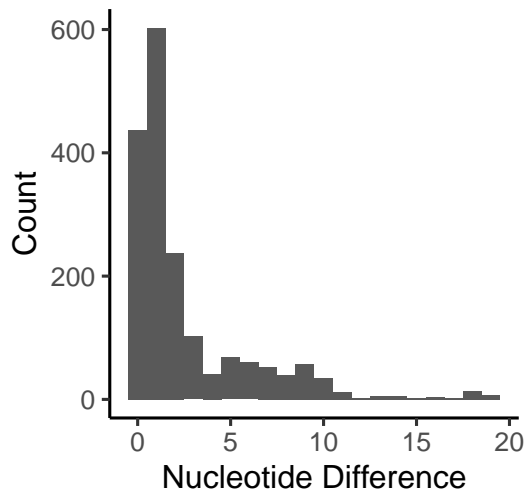


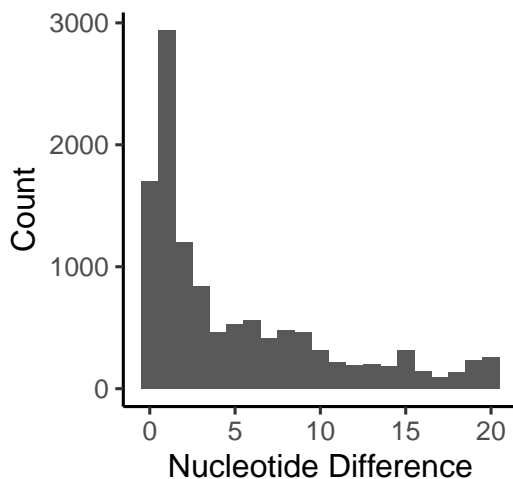
IGHV1-2*04

1825 sequences assigned
437 (23.9%) exact matches, in which:
362 unique CDR3
7 unique J



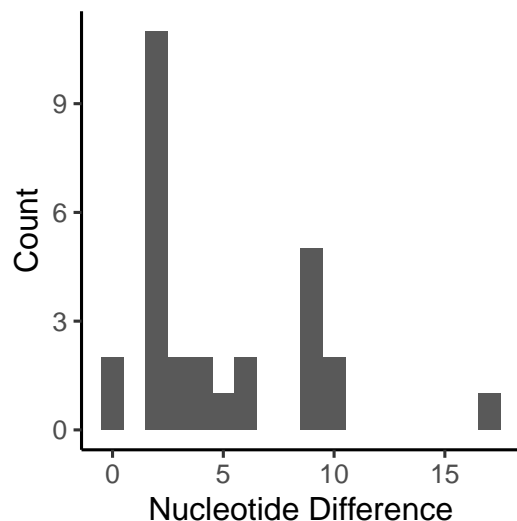
IGHV1-8*01

12485 sequences assigned
1698 (13.6%) exact matches, in which:
1279 unique CDR3
7 unique J



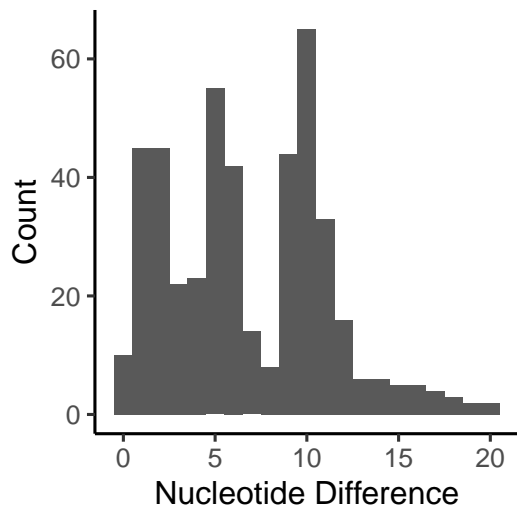
IGHV1-45*02

28 sequences assigned
2 (7.1%) exact matches, in which:
2 unique CDR3
2 unique J



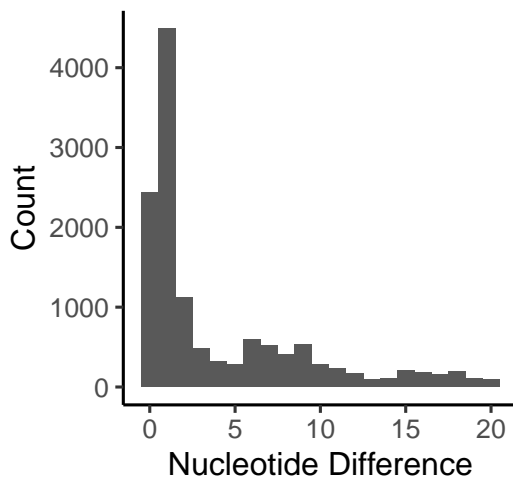
IGHV1-2*06

470 sequences assigned
10 (2.1%) exact matches, in which:
10 unique CDR3
5 unique J



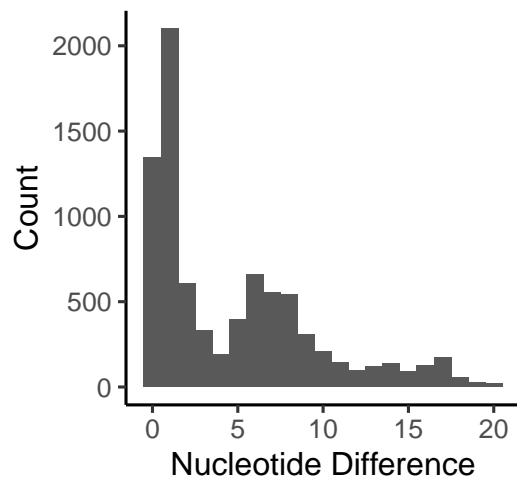
IGHV1-18*01

15764 sequences assigned
2440 (15.5%) exact matches, in which:
1839 unique CDR3
7 unique J



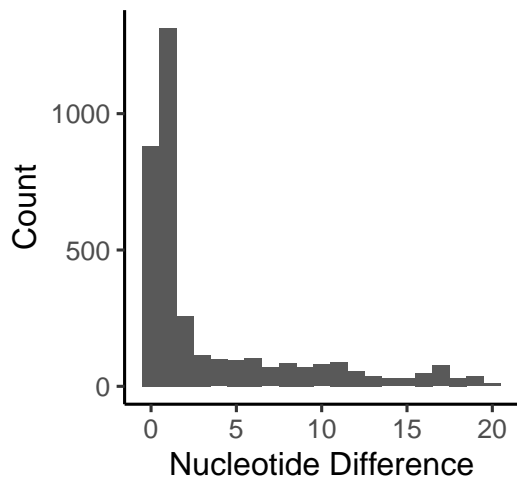
IGHV1-46*01

9247 sequences assigned
1347 (14.6%) exact matches, in which:
1060 unique CDR3
7 unique J



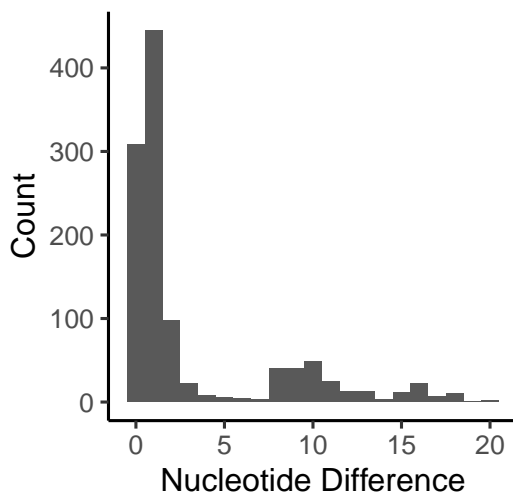
IGHV1-3*01_05

4736 sequences assigned
881 (18.6%) exact matches, in which:
683 unique CDR3
6 unique J



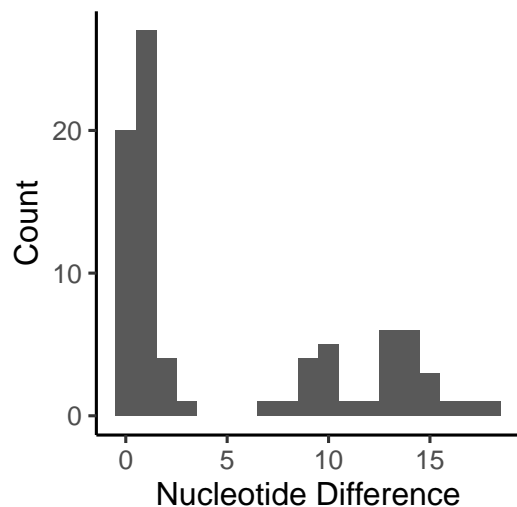
IGHV1-24*01

1325 sequences assigned
308 (23.2%) exact matches, in which:
265 unique CDR3
7 unique J



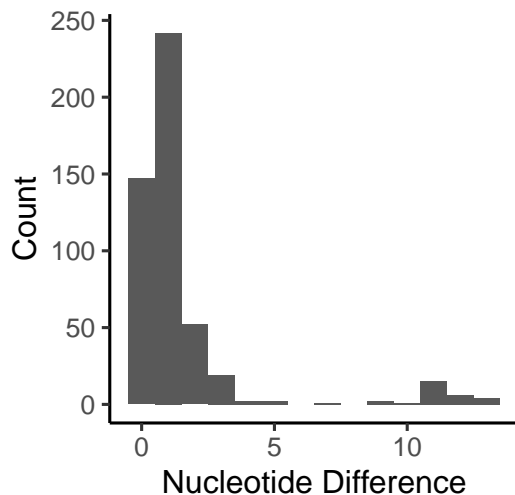
IGHV1-58*02

87 sequences assigned
20 (23%) exact matches, in which:
17 unique CDR3
6 unique J



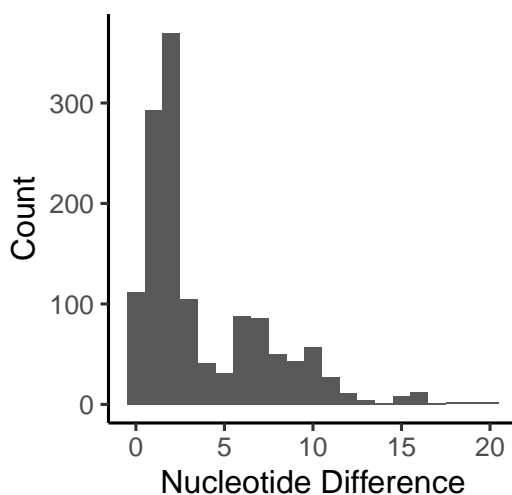
IGHV1-58*01_03

514 sequences assigned
147 (28.6%) exact matches, in which:
125 unique CDR3
6 unique J



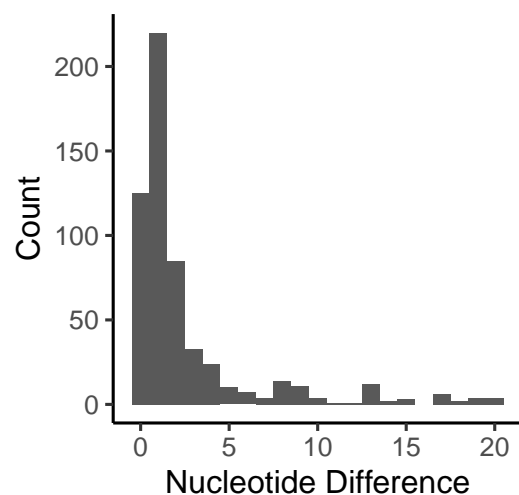
IGHV1-69*04_09

1354 sequences assigned
112 (8.3%) exact matches, in which:
105 unique CDR3
6 unique J



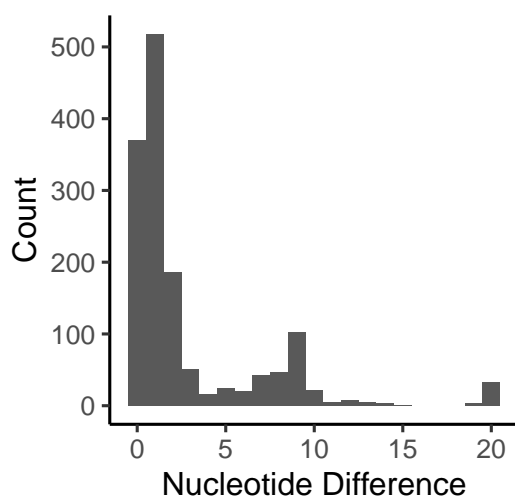
IGHV2-26*01

624 sequences assigned
125 (20%) exact matches, in which:
84 unique CDR3
6 unique J



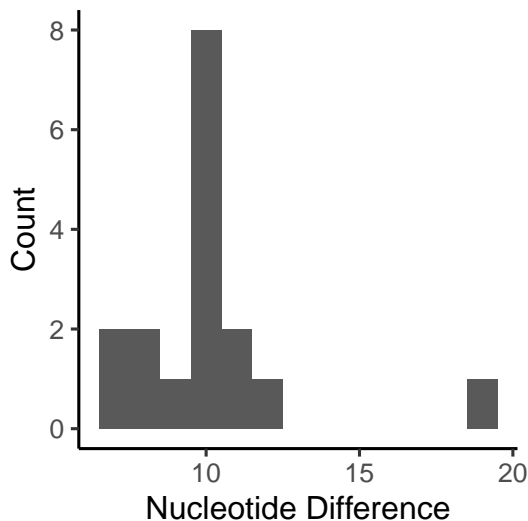
IGHV1-69*02

1568 sequences assigned
370 (23.6%) exact matches, in which:
308 unique CDR3
7 unique J



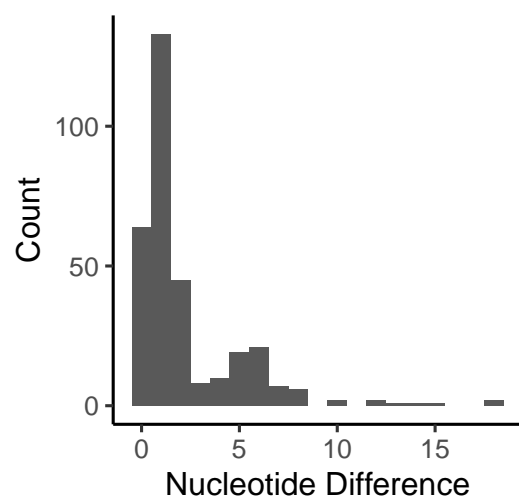
IGHV1-NL1*01

17 sequences assigned
No exact matches.



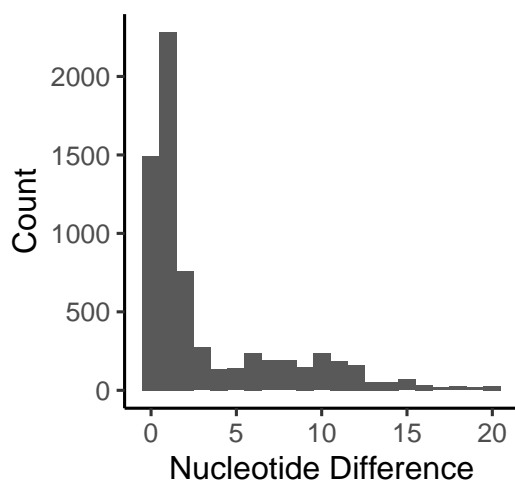
IGHV2-70*01

325 sequences assigned
64 (19.7%) exact matches, in which:
43 unique CDR3
5 unique J



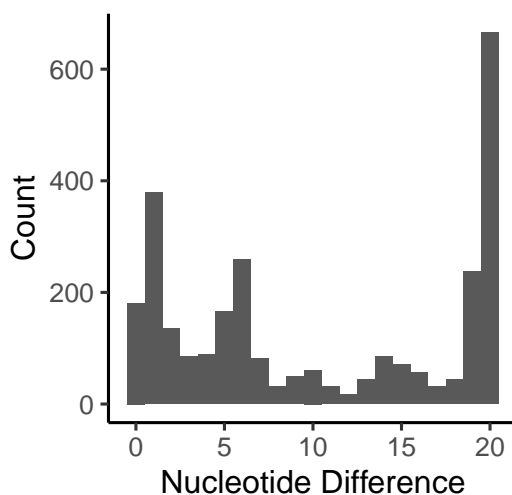
IGHV1-69*01_12_13

7457 sequences assigned
1492 (20%) exact matches, in which:
1241 unique CDR3
7 unique J



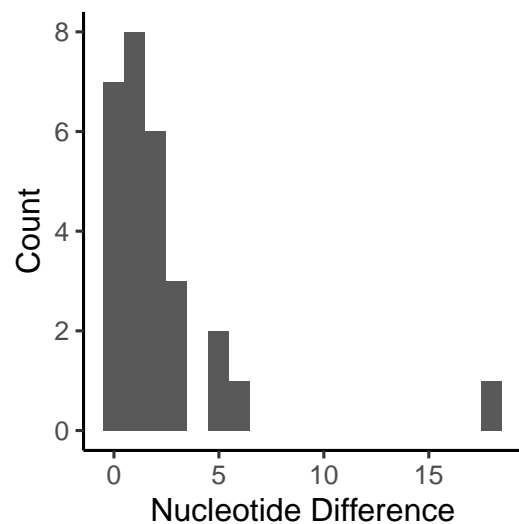
IGHV2-5*02

3513 sequences assigned
181 (5.2%) exact matches, in which:
135 unique CDR3
7 unique J



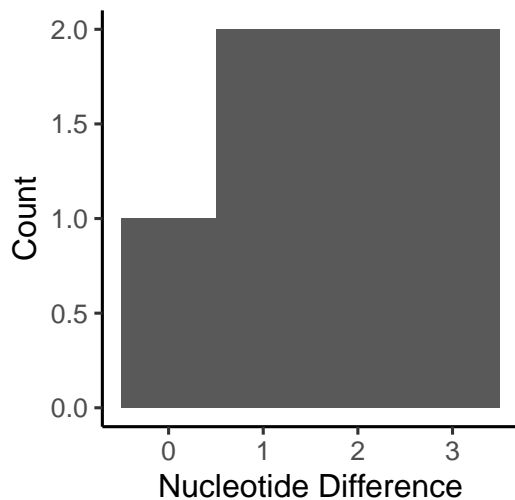
IGHV2-70*12

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



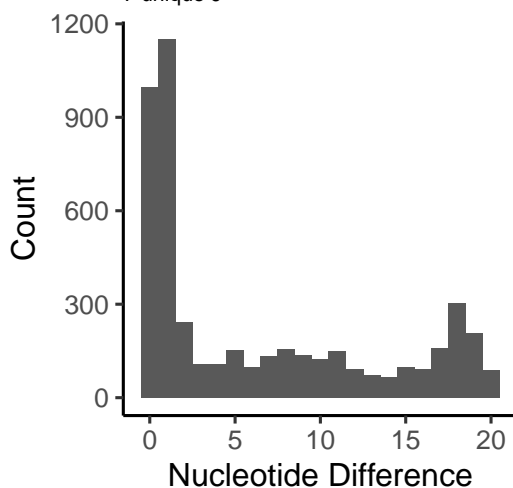
IGHV2-70D*04

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



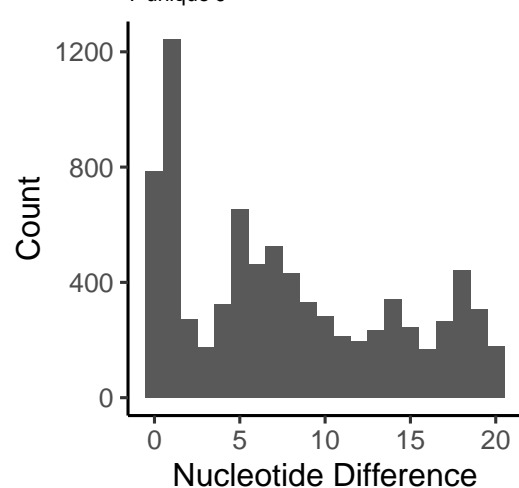
IGHV3-11*01

6002 sequences assigned
998 (16.6%) exact matches, in which:
660 unique CDR3
7 unique J



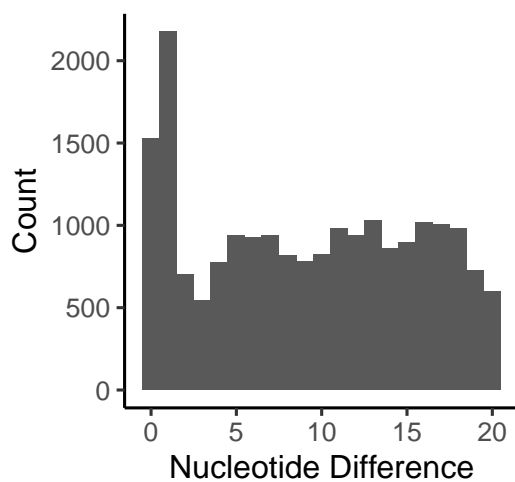
IGHV3-15*01_02

9977 sequences assigned
787 (7.9%) exact matches, in which:
473 unique CDR3
7 unique J



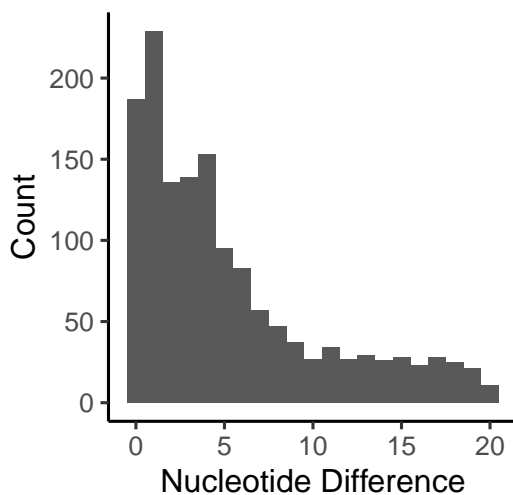
IGHV3-7*01

24619 sequences assigned
1528 (6.2%) exact matches, in which:
1030 unique CDR3
7 unique J



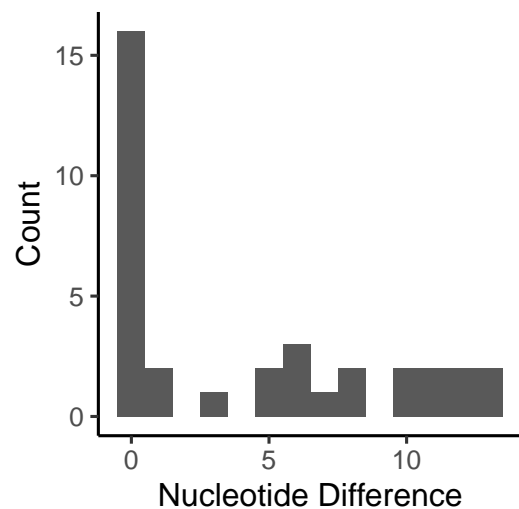
IGHV3-11*04

1559 sequences assigned
187 (12%) exact matches, in which:
165 unique CDR3
7 unique J



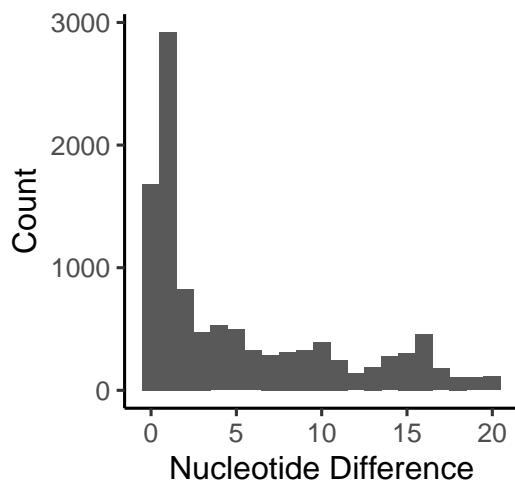
IGHV3-19*01

35 sequences assigned
16 (45.7%) exact matches, in which:
12 unique CDR3
3 unique J



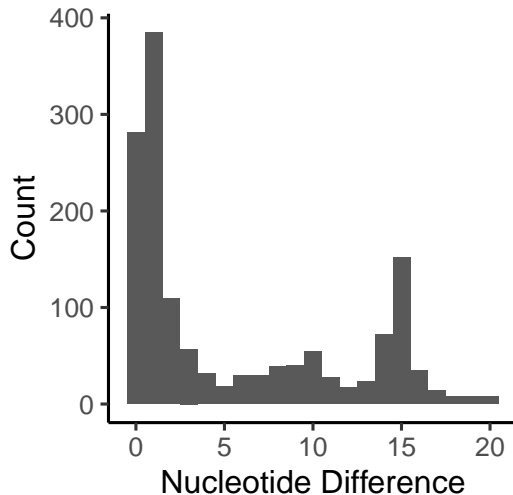
IGHV3-9*01

12729 sequences assigned
1684 (13.2%) exact matches, in which:
1002 unique CDR3
7 unique J



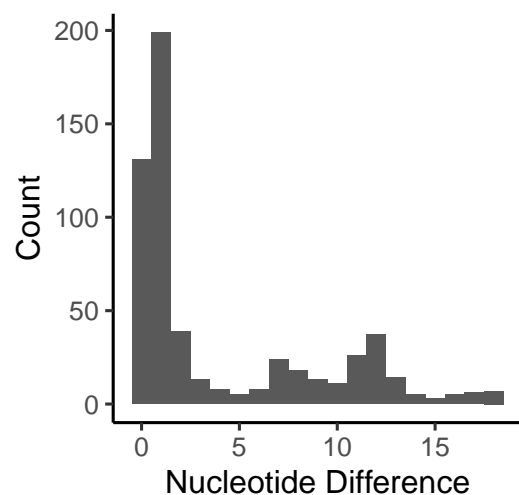
IGHV3-13*01

1595 sequences assigned
281 (17.6%) exact matches, in which:
196 unique CDR3
7 unique J



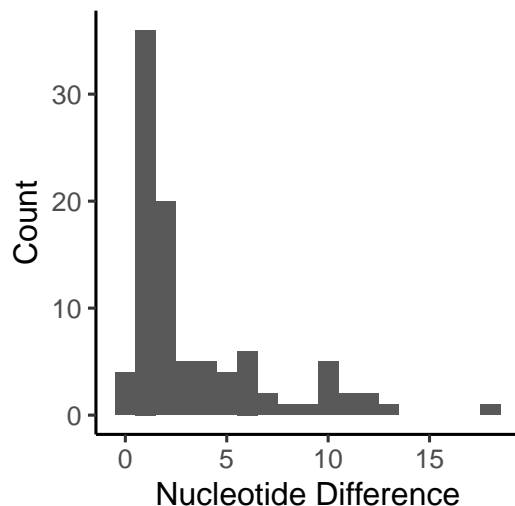
IGHV3-20*01_02

579 sequences assigned
131 (22.6%) exact matches, in which:
80 unique CDR3
5 unique J



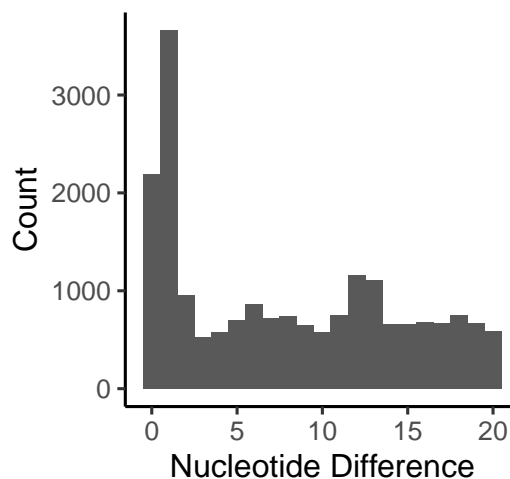
IGHV3-20*03_04

113 sequences assigned
4 (3.5%) exact matches, in which:
4 unique CDR3
3 unique J



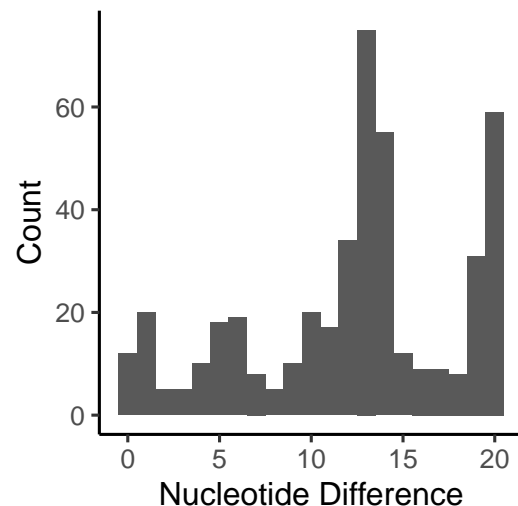
IGHV3-23*01_04

26171 sequences assigned
2191 (8.4%) exact matches, in which:
1294 unique CDR3
7 unique J



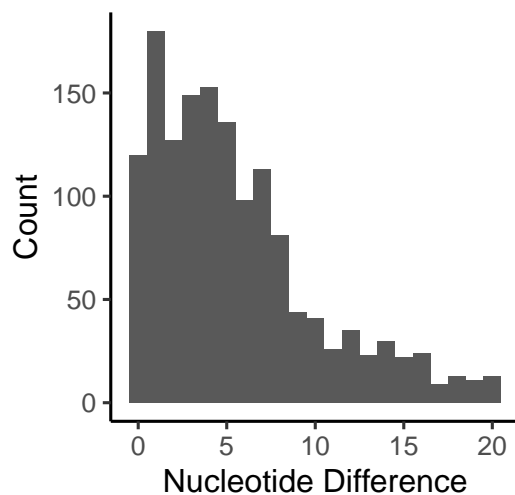
IGHV3-30*04

681 sequences assigned
12 (1.8%) exact matches, in which:
12 unique CDR3
4 unique J



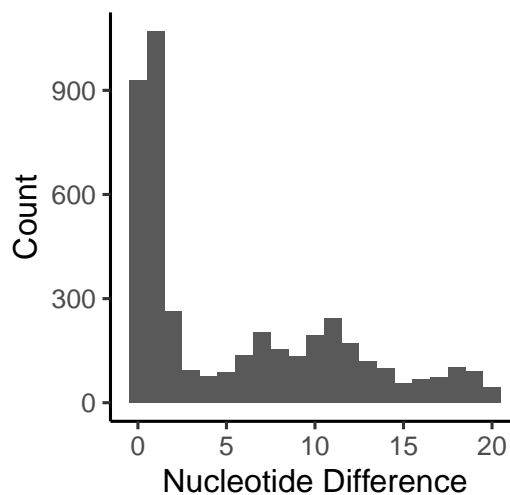
IGHV3-21*04

1506 sequences assigned
120 (8%) exact matches, in which:
103 unique CDR3
7 unique J



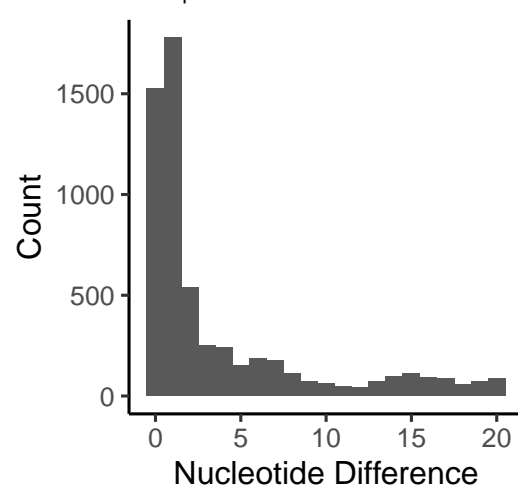
IGHV3-30-3*01

4647 sequences assigned
929 (20%) exact matches, in which:
652 unique CDR3
7 unique J



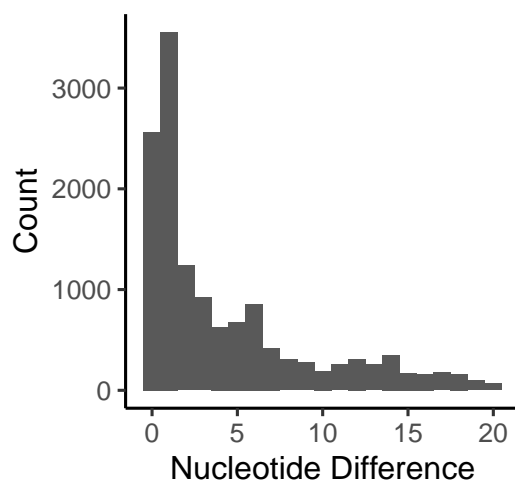
IGHV3-33*05

7379 sequences assigned
1524 (20.7%) exact matches, in which:
974 unique CDR3
7 unique J



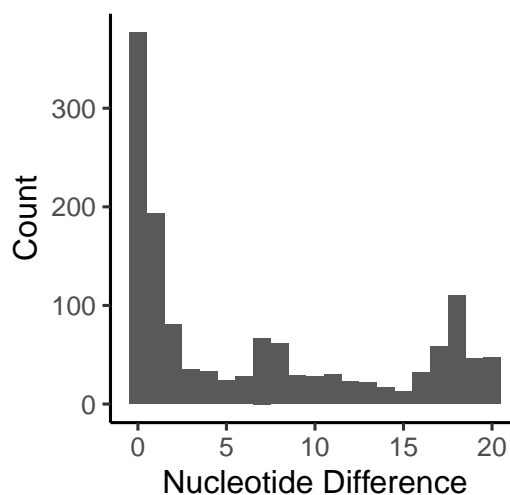
IGHV3-21*01_02

14673 sequences assigned
2564 (17.5%) exact matches, in which:
1581 unique CDR3
7 unique J



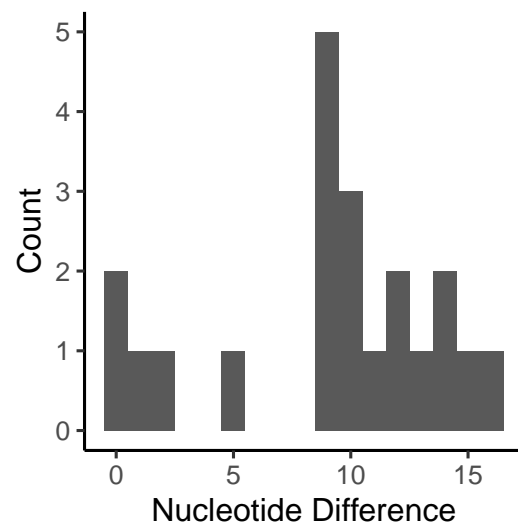
IGHV3-30*03

1702 sequences assigned
377 (22.2%) exact matches, in which:
320 unique CDR3
7 unique J



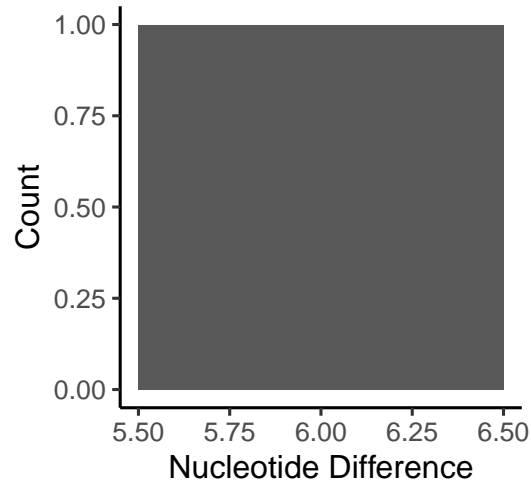
IGHV3-35*01

21 sequences assigned
2 (9.5%) exact matches, in which:
2 unique CDR3
2 unique J



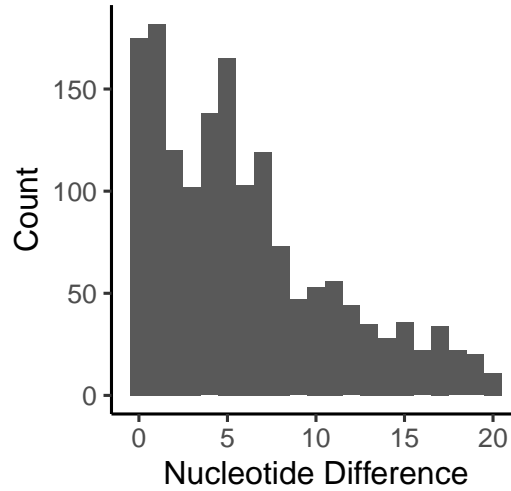
IGHV3-38*02

1 sequences assigned
No exact matches.



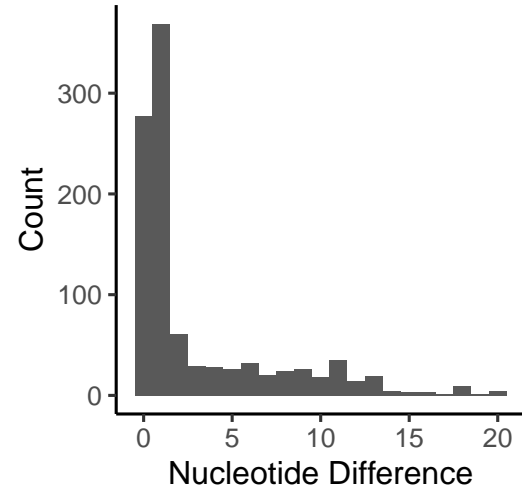
IGHV3-48*01

1667 sequences assigned
175 (10.5%) exact matches, in which:
144 unique CDR3
7 unique J



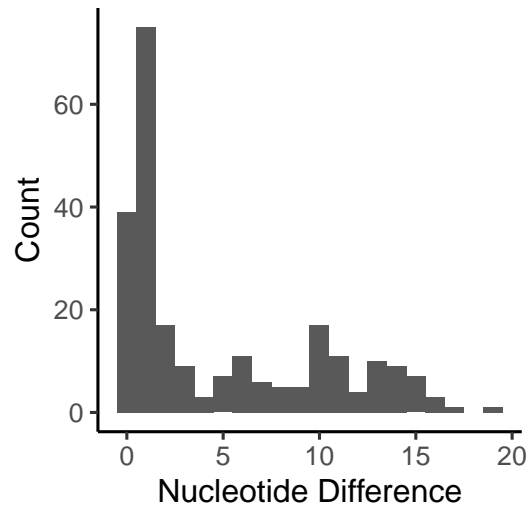
IGHV3-49*03_05

1156 sequences assigned
277 (24%) exact matches, in which:
165 unique CDR3
7 unique J



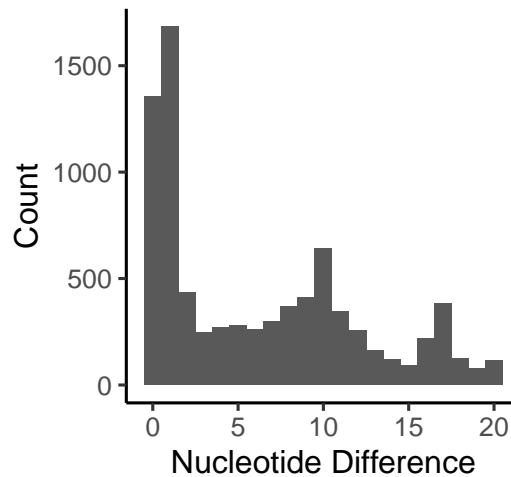
IGHV3-43*01

244 sequences assigned
39 (16%) exact matches, in which:
21 unique CDR3
4 unique J



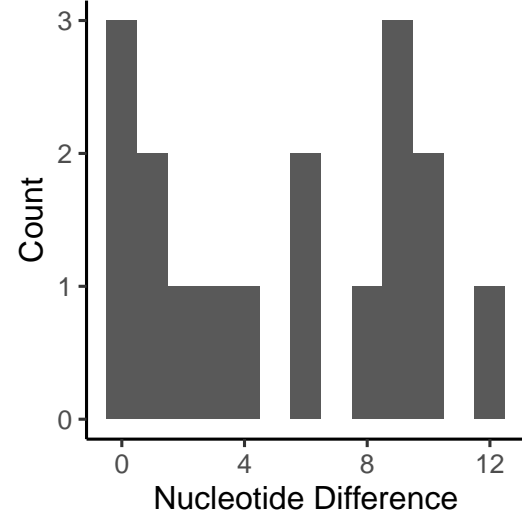
IGHV3-48*02

9330 sequences assigned
1357 (14.5%) exact matches, in which:
845 unique CDR3
7 unique J



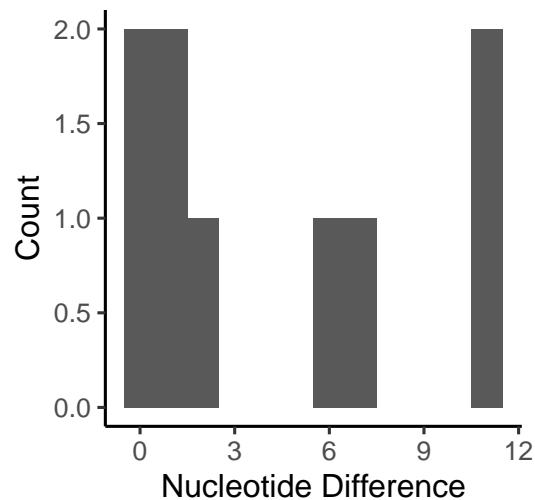
IGHV3-52*01_03

17 sequences assigned
3 (17.6%) exact matches, in which:
2 unique CDR3
1 unique J



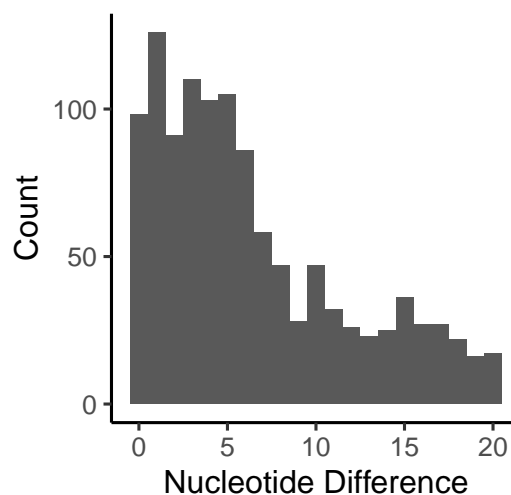
IGHV3-47*02

9 sequences assigned
2 (22.2%) exact matches, in which:
1 unique CDR3
1 unique J



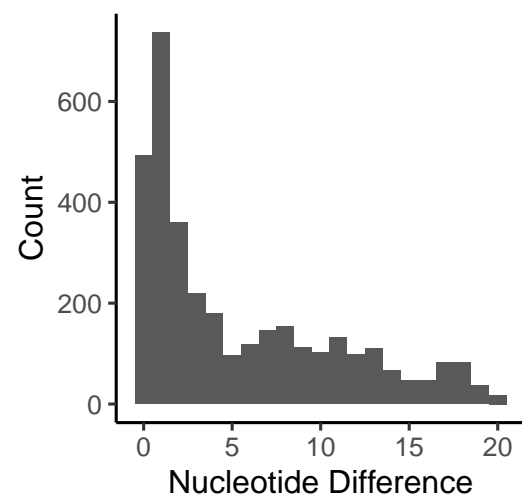
IGHV3-48*04

1309 sequences assigned
98 (7.5%) exact matches, in which:
85 unique CDR3
7 unique J



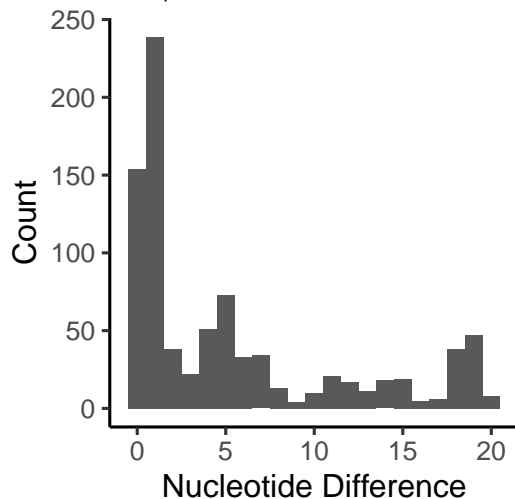
IGHV3-53*01_02

5484 sequences assigned
492 (9%) exact matches, in which:
346 unique CDR3
7 unique J



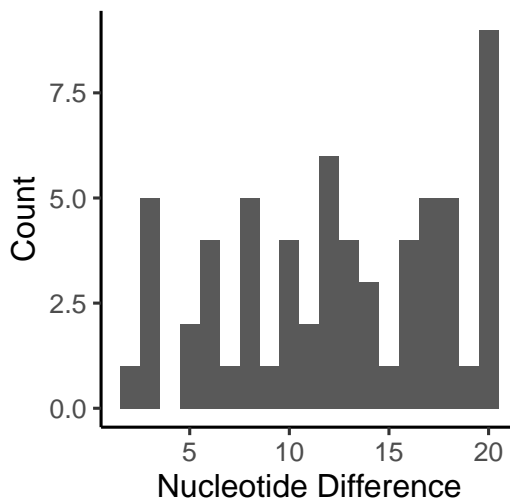
IGHV3-64*01

870 sequences assigned
154 (17.7%) exact matches, in which:
100 unique CDR3
6 unique J



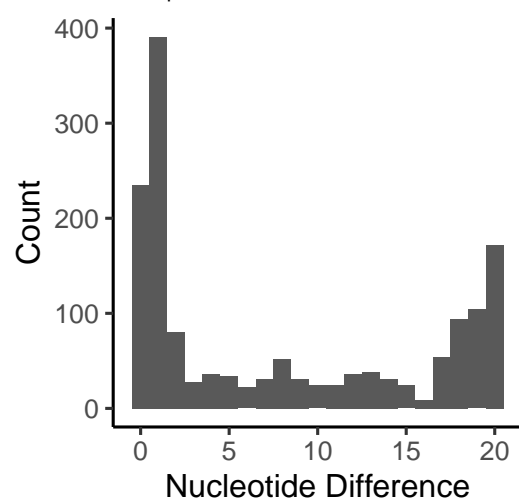
IGHV3-69-1*01

99 sequences assigned
No exact matches.



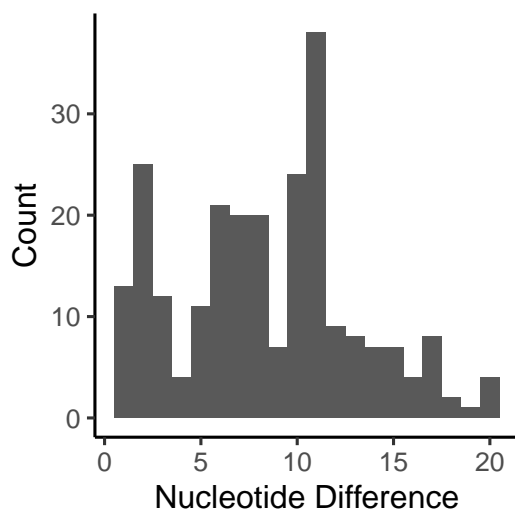
IGHV3-73*01_02

2089 sequences assigned
235 (11.2%) exact matches, in which:
156 unique CDR3
6 unique J



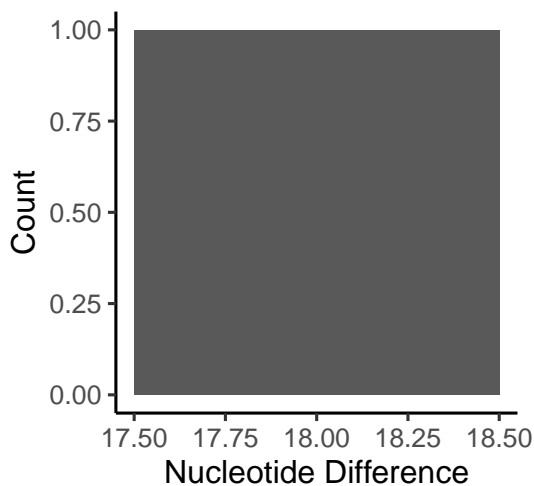
IGHV3-66*01

435 sequences assigned
No exact matches.



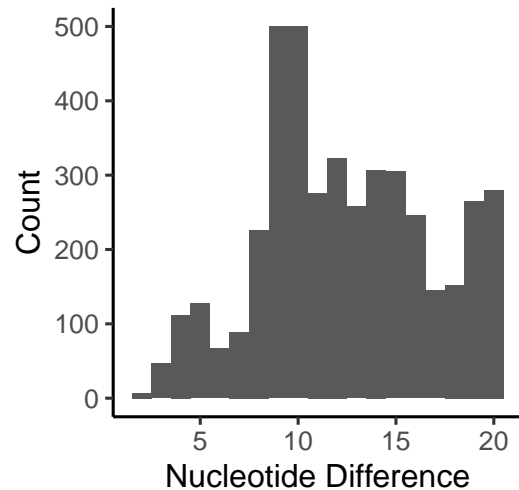
IGHV3-69-1*02

12 sequences assigned
No exact matches.



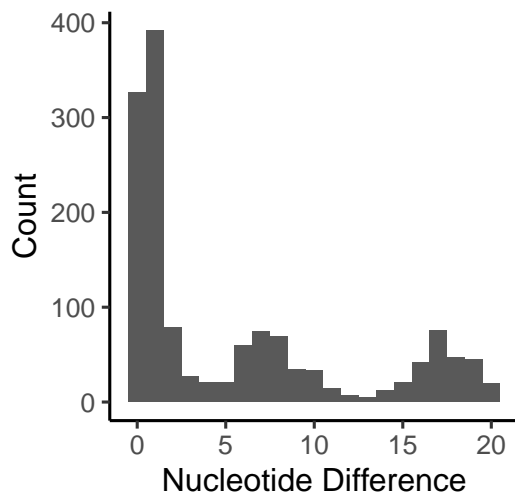
IGHV3-74*03

5602 sequences assigned
No exact matches.



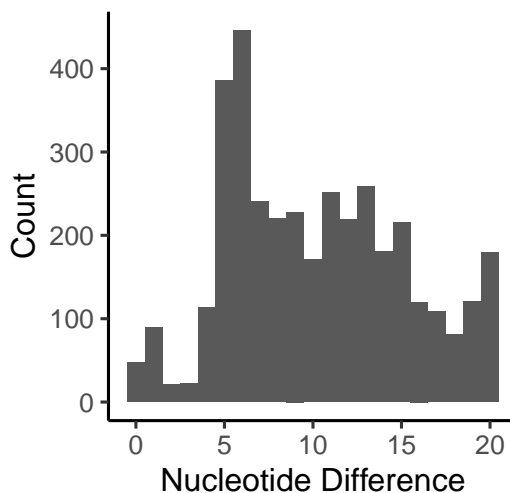
IGHV3-66*02

2149 sequences assigned
326 (15.2%) exact matches, in which:
233 unique CDR3
7 unique J



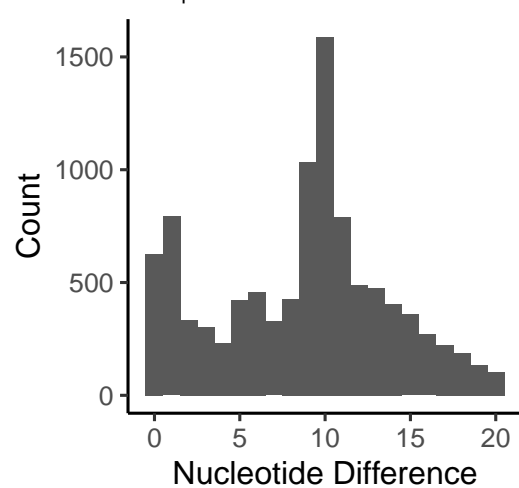
IGHV3-72*01

4729 sequences assigned
47 (1%) exact matches, in which:
32 unique CDR3
6 unique J



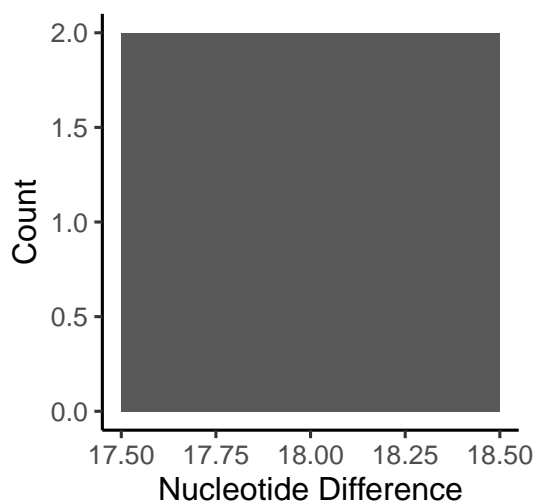
IGHV3-74*01_02

10653 sequences assigned
625 (5.9%) exact matches, in which:
442 unique CDR3
7 unique J



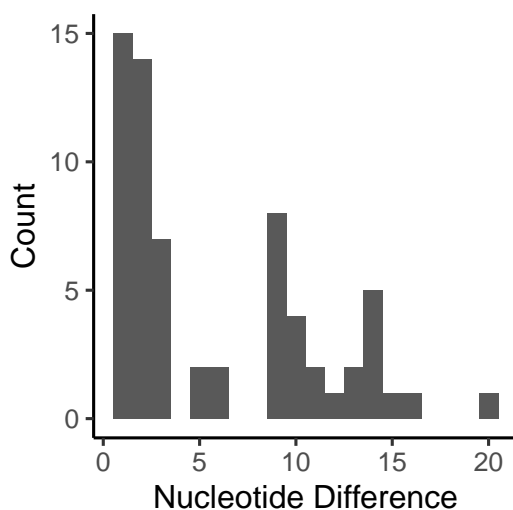
IGHV3-43D*04

2 sequences assigned
No exact matches.



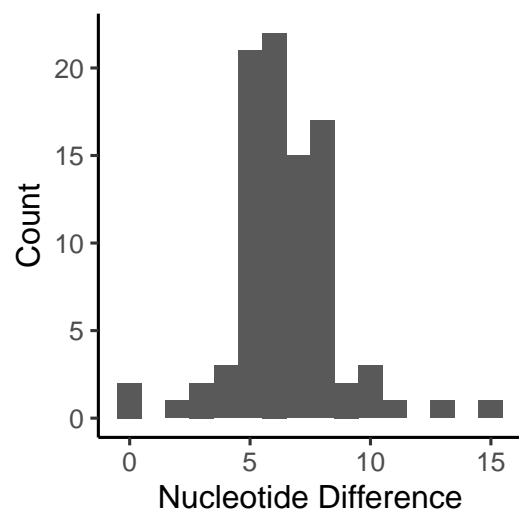
IGHV4-4*08

103 sequences assigned
No exact matches.



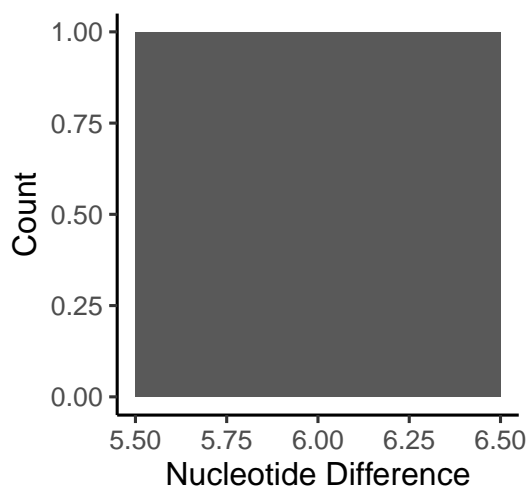
IGHV4-28*02_05

91 sequences assigned
2 (2.2%) exact matches, in which:
2 unique CDR3
1 unique J



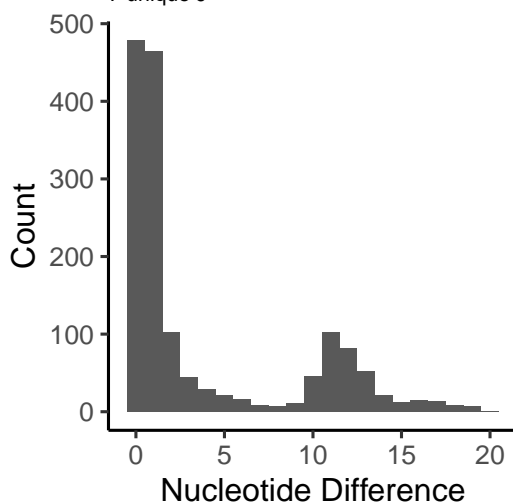
IGHV3-64D*06

2 sequences assigned
No exact matches.



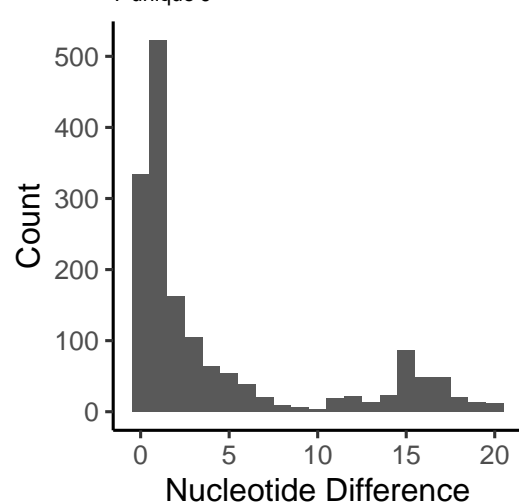
IGHV4-4*02_03

1822 sequences assigned
479 (26.3%) exact matches, in which:
346 unique CDR3
7 unique J



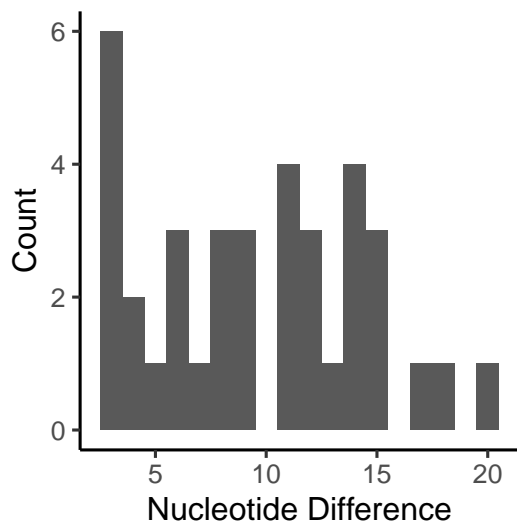
IGHV4-30-4*01

1739 sequences assigned
334 (19.2%) exact matches, in which:
255 unique CDR3
7 unique J



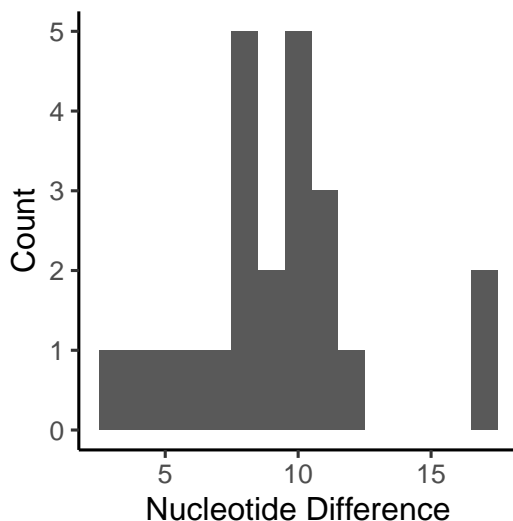
IGHV3-NL1*01

49 sequences assigned
No exact matches.



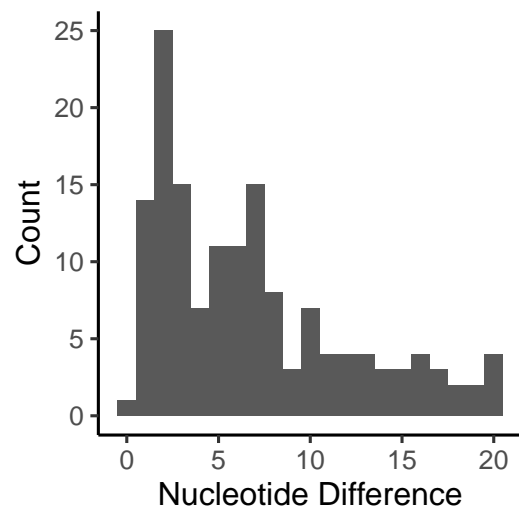
IGHV4-28*03

24 sequences assigned
No exact matches.



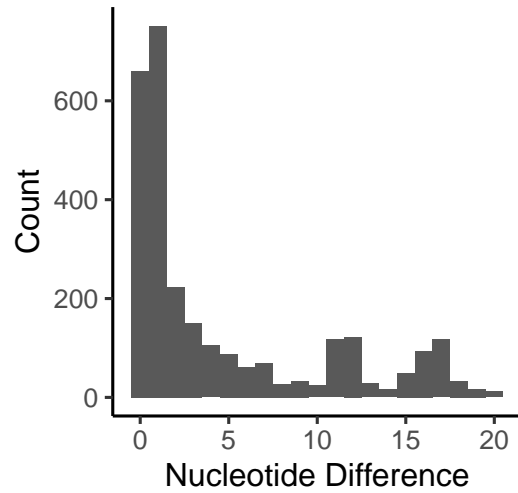
IGHV4-30-2*03

209 sequences assigned
1 (0.5%) exact matches, in which:
1 unique CDR3
1 unique J



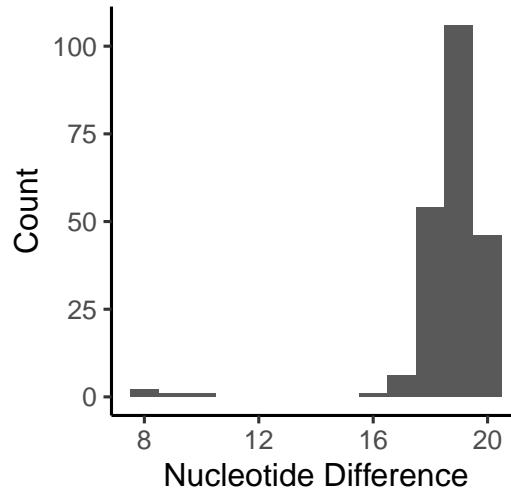
IGHV4-31*02

3403 sequences assigned
661 (19.4%) exact matches, in which:
531 unique CDR3
7 unique J



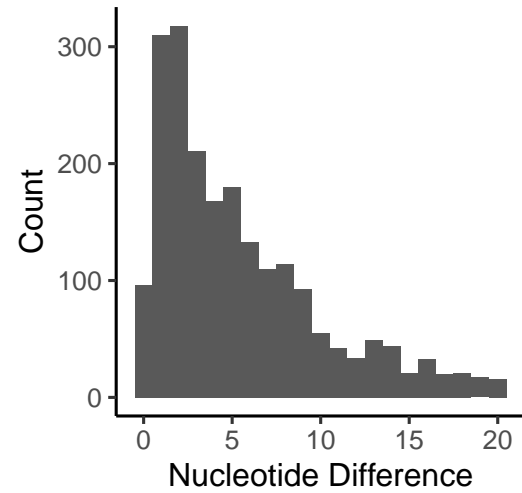
IGHV4-38-2*02

268 sequences assigned
No exact matches.



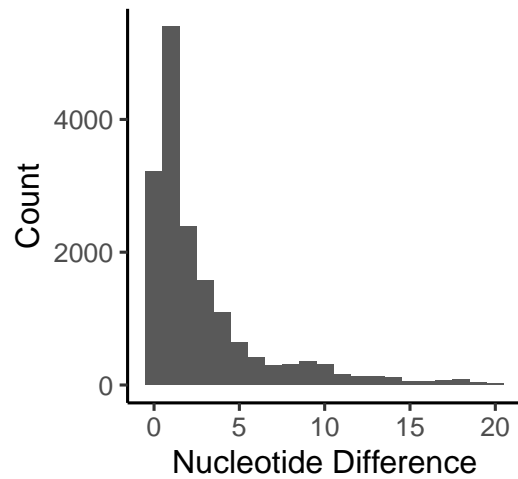
IGHV4-59*08

2346 sequences assigned
96 (4.1%) exact matches, in which:
89 unique CDR3
6 unique J



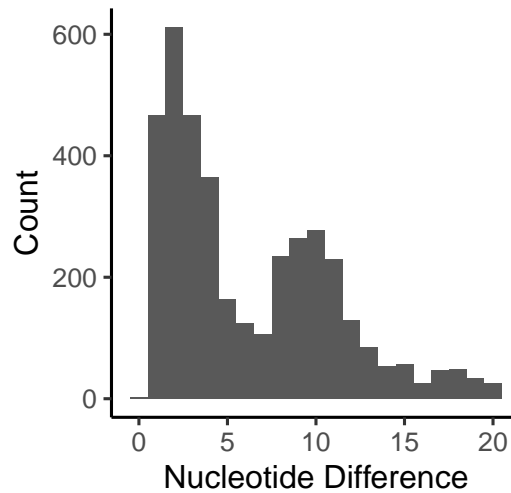
IGHV4-34*01_02

18736 sequences assigned
3215 (17.2%) exact matches, in which:
2081 unique CDR3
7 unique J



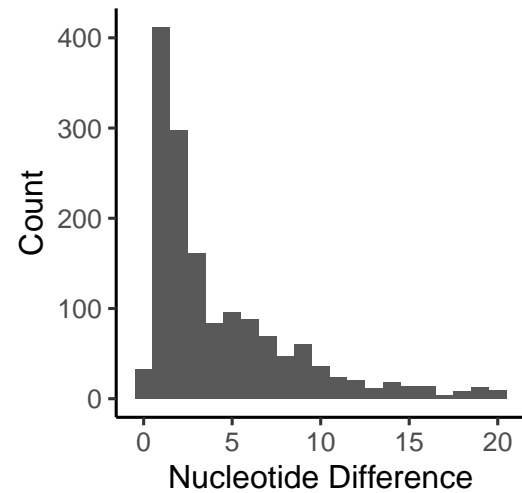
IGHV4-39*07

5697 sequences assigned
3 (0.1%) exact matches, in which:
3 unique CDR3
2 unique J



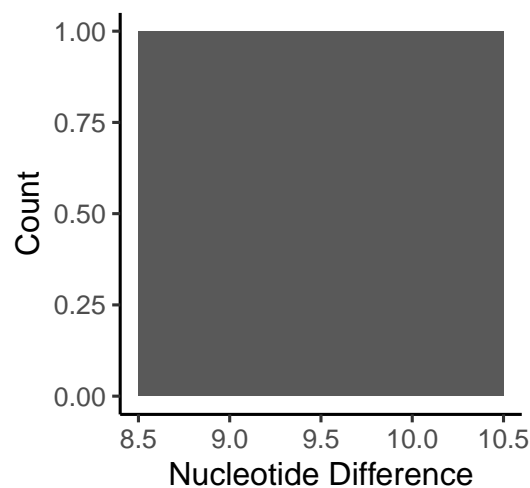
IGHV4-59*12

1568 sequences assigned
33 (2.1%) exact matches, in which:
32 unique CDR3
6 unique J



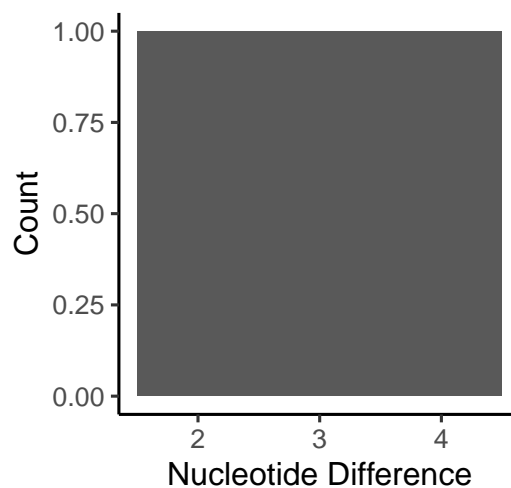
IGHV4-38-2*01

3 sequences assigned
No exact matches.



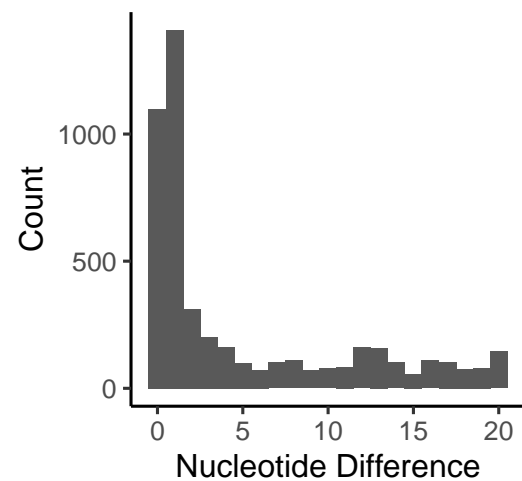
IGHV4-55*09

5 sequences assigned
No exact matches.



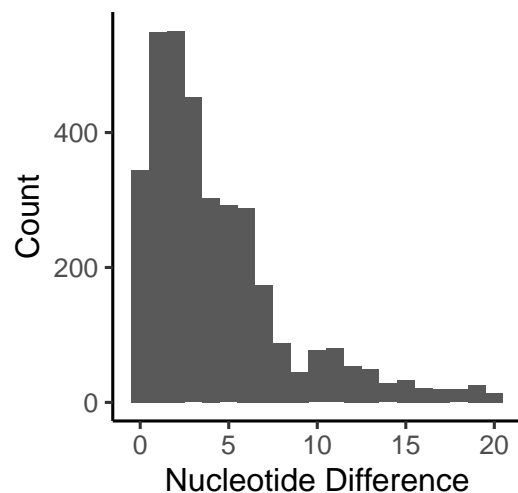
IGHV4-59*13

6235 sequences assigned
1099 (17.6%) exact matches, in which:
843 unique CDR3
7 unique J



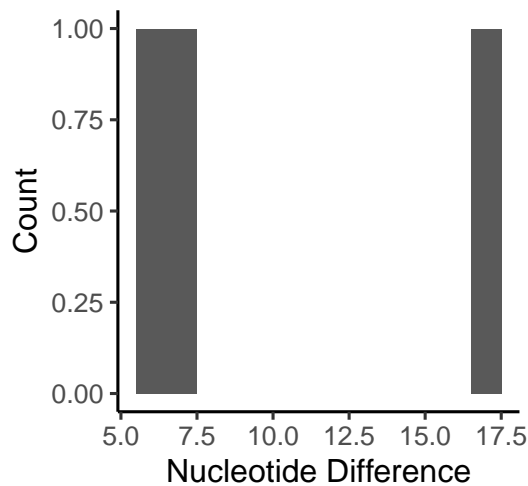
IGHV4–61*01

4492 sequences assigned
344 (7.7%) exact matches, in which:
302 unique CDR3
6 unique J



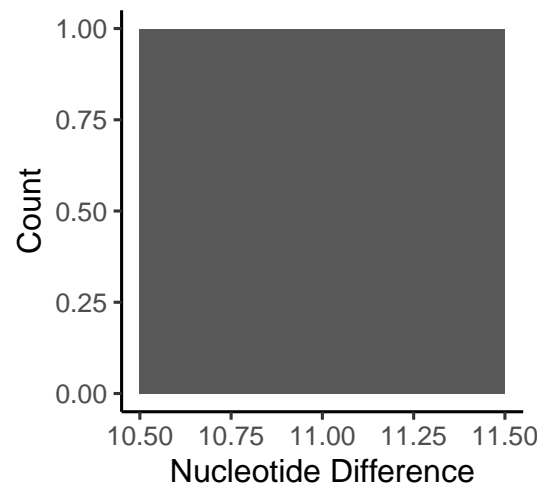
IGHV1/OR15–3*02

3 sequences assigned
No exact matches.



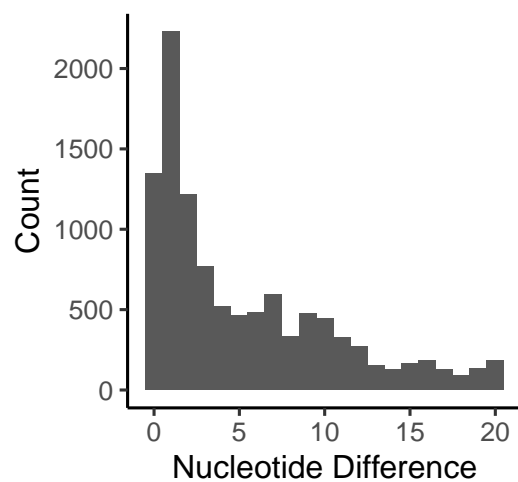
IGHV1/OR15–9*01

1 sequences assigned
No exact matches.



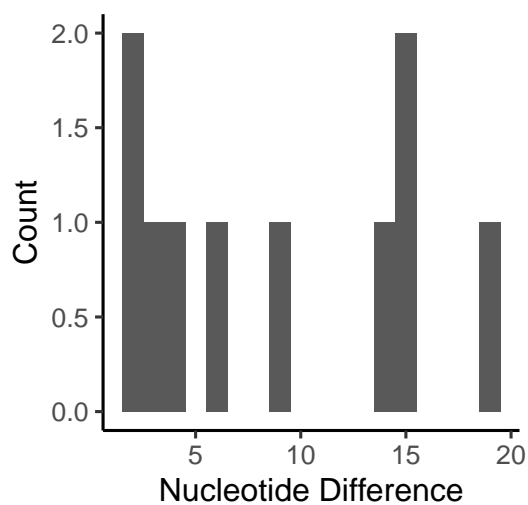
IGHV4–61*02

12590 sequences assigned
1350 (10.7%) exact matches, in which:
1047 unique CDR3
7 unique J



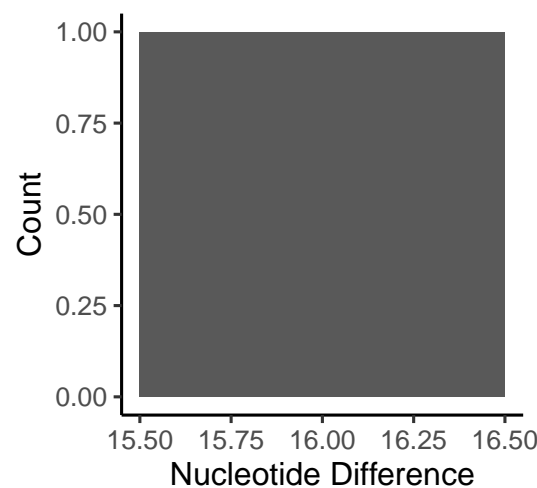
IGHV4/OR15–8*01

17 sequences assigned
No exact matches.



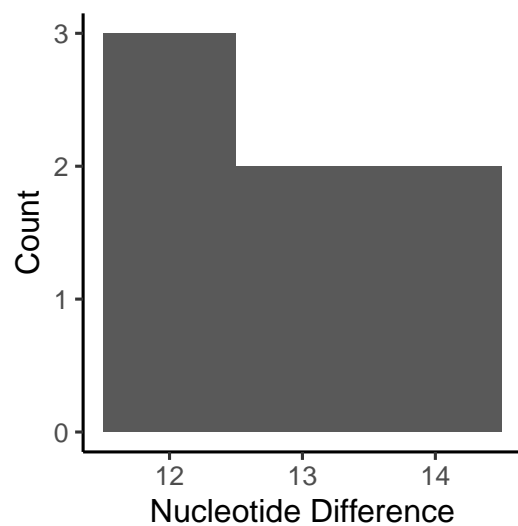
IGHV5–10–1*01_03

1 sequences assigned
No exact matches.



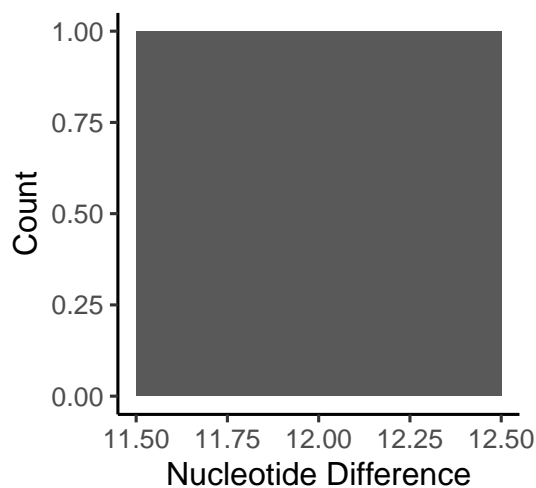
IGHV1/OR15–2*02_03

8 sequences assigned
No exact matches.



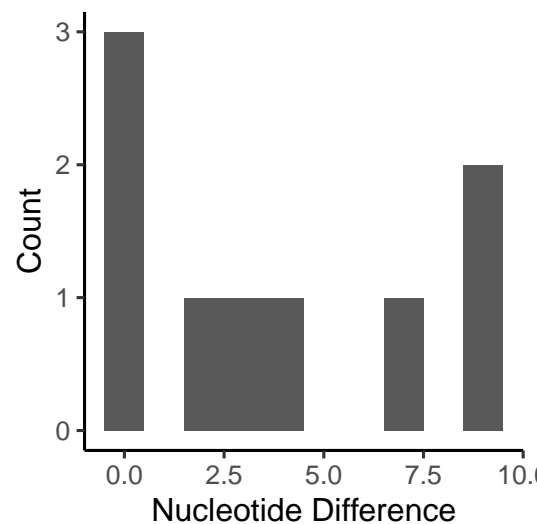
IGHV4/OR15–8*02

5 sequences assigned
No exact matches.



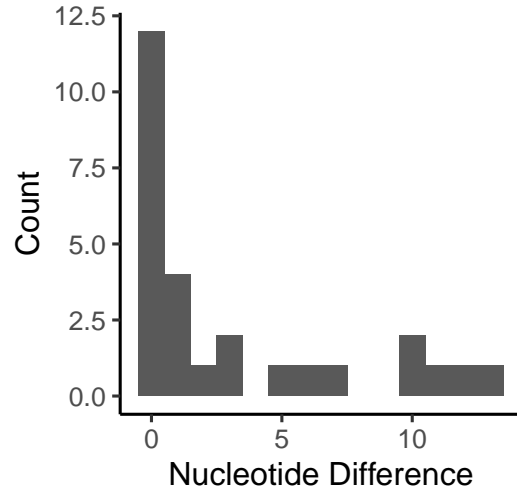
IGHV5–51*02

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



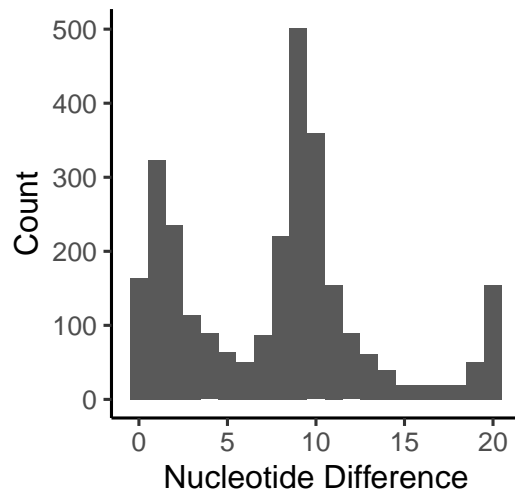
IGHV5–51*04

30 sequences assigned
12 (40%) exact matches, in which:
12 unique CDR3
5 unique J



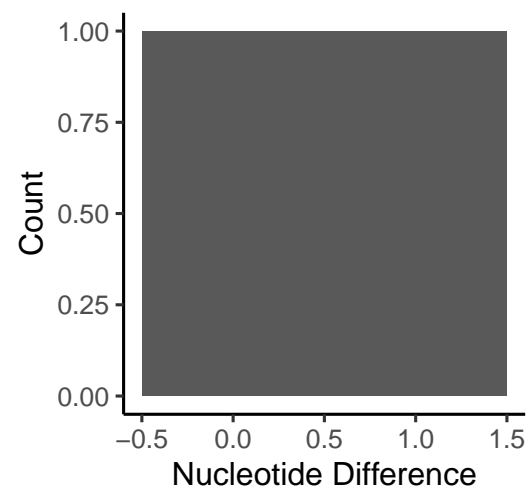
IGHV6–1*01_02

3289 sequences assigned
164 (5%) exact matches, in which:
144 unique CDR3
7 unique J



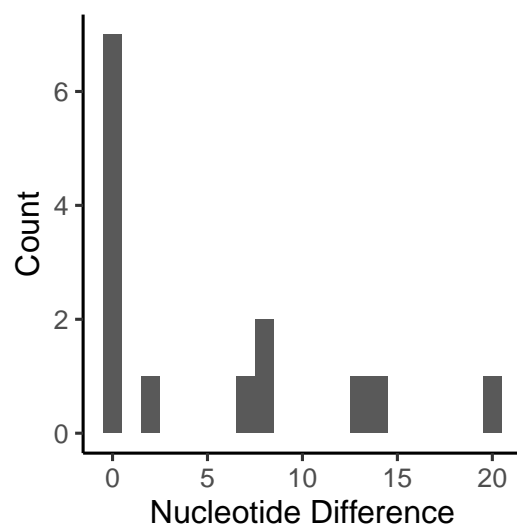
IGHV7–81*01

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



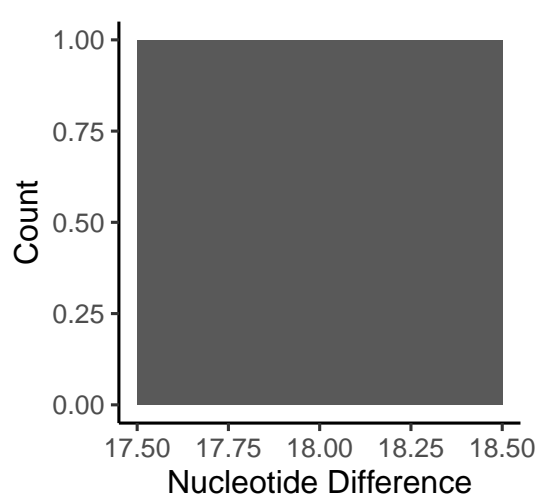
IGHV5–51*06

16 sequences assigned
7 (43.8%) exact matches, in which:
7 unique CDR3
5 unique J



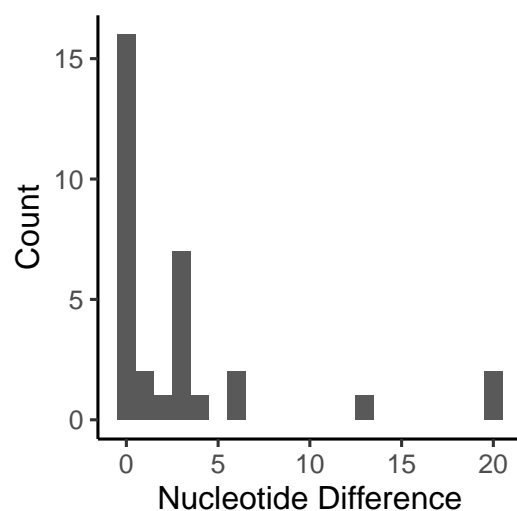
IGHV3/OR16–10*01_03

2 sequences assigned
No exact matches.



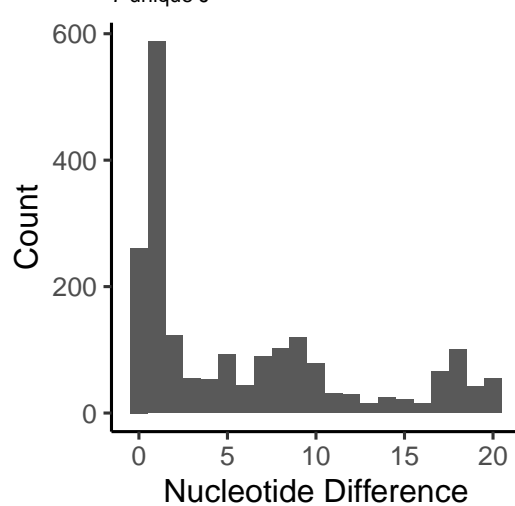
IGHV5–51*07

36 sequences assigned
16 (44.4%) exact matches, in which:
15 unique CDR3
6 unique J

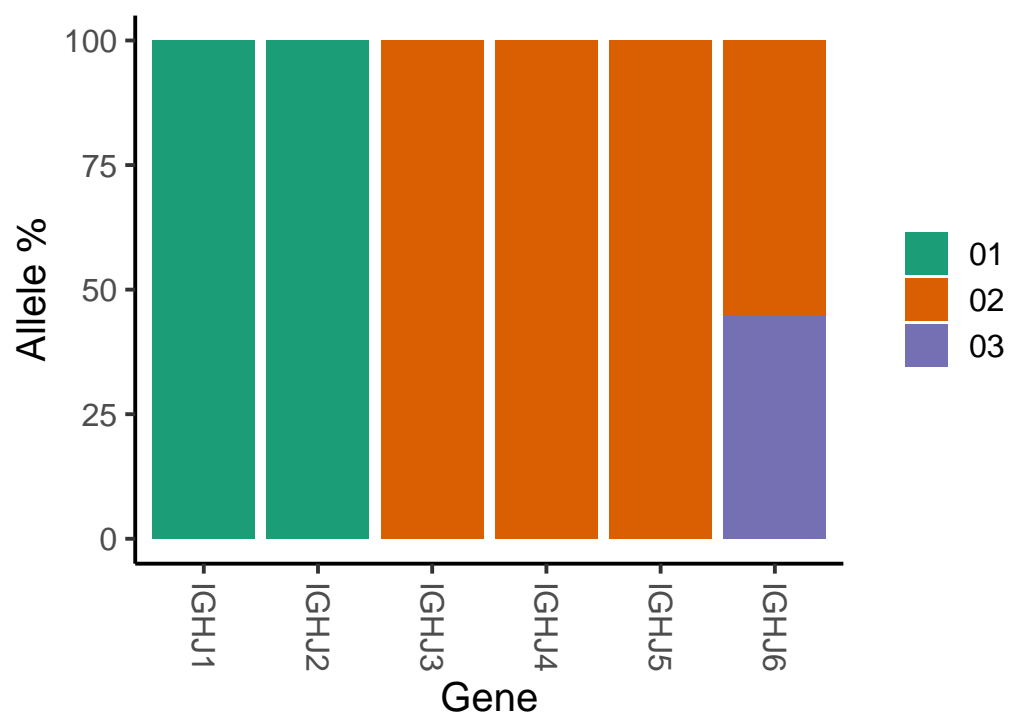


IGHV7–4–1*02

2581 sequences assigned
261 (10.1%) exact matches, in which:
198 unique CDR3
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage

