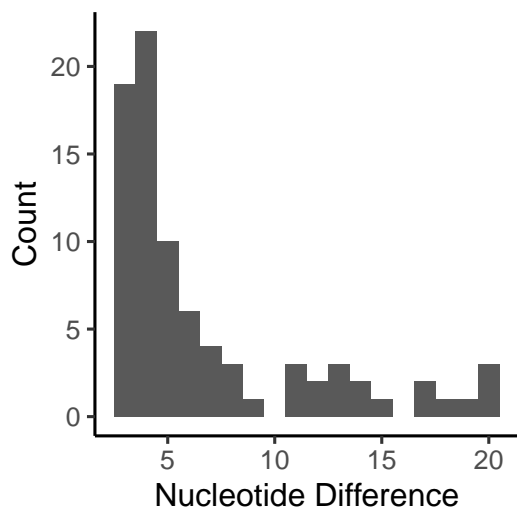


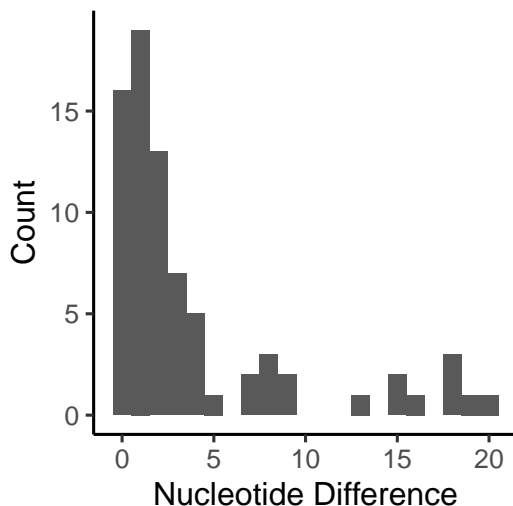
### IGHV1-58\*02

109 sequences assigned  
No exact matches.



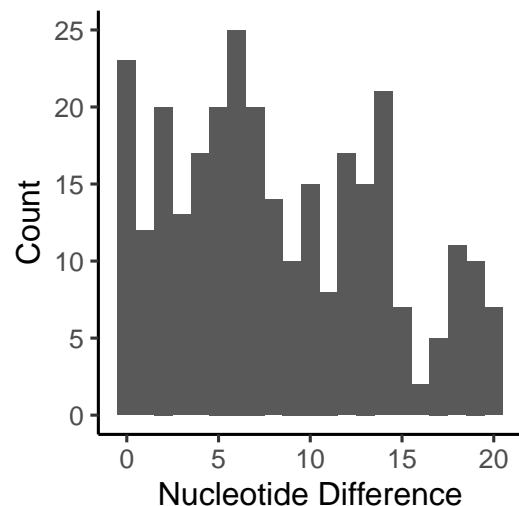
### IGHV1-84\*01\_S8557

101 sequences assigned  
16 (15.8%) exact matches, in which:  
8 unique CDR3  
4 unique J



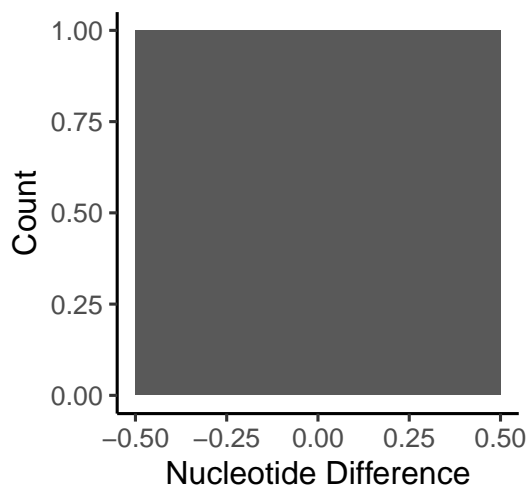
### IGHV1-NL\_2\*01\_S3568

342 sequences assigned  
23 (6.7%) exact matches, in which:  
12 unique CDR3  
3 unique J



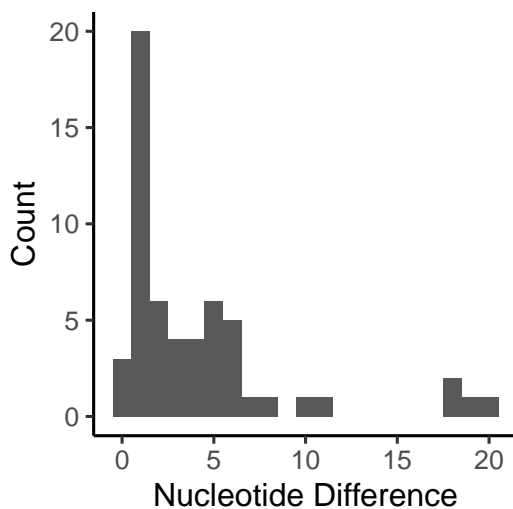
### IGHV1-60\*01\_S7772

1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



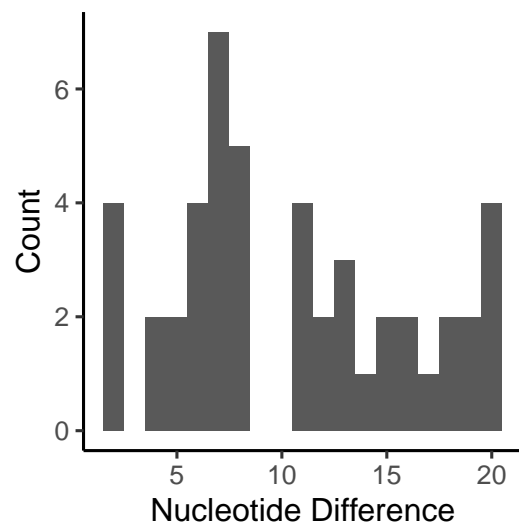
### IGHV1-124\*01\_S1765

56 sequences assigned  
3 (5.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



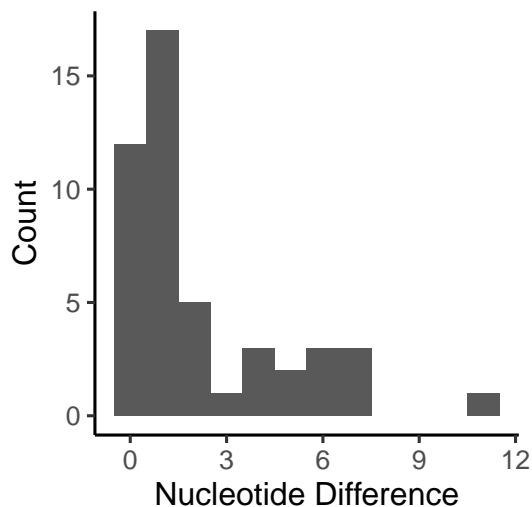
### IGHV1-NL\_2\*01\_S9896

112 sequences assigned  
No exact matches.



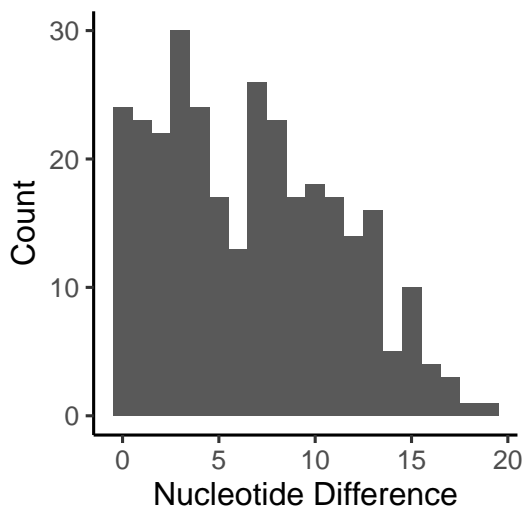
### IGHV1-84\*01\_S0240

47 sequences assigned  
12 (25.5%) exact matches, in which:  
5 unique CDR3  
1 unique J



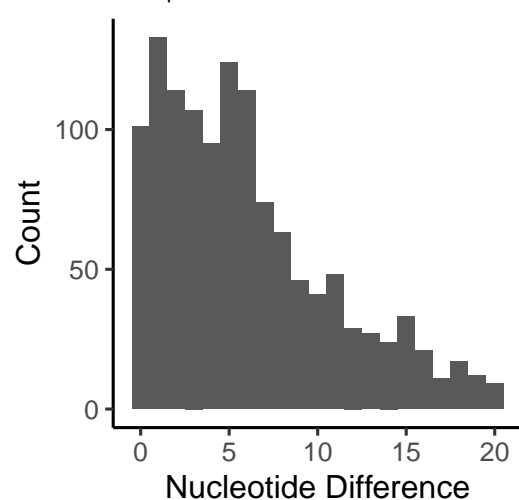
### IGHV1-NL\_1\*01\_S8523

314 sequences assigned  
24 (7.6%) exact matches, in which:  
12 unique CDR3  
3 unique J



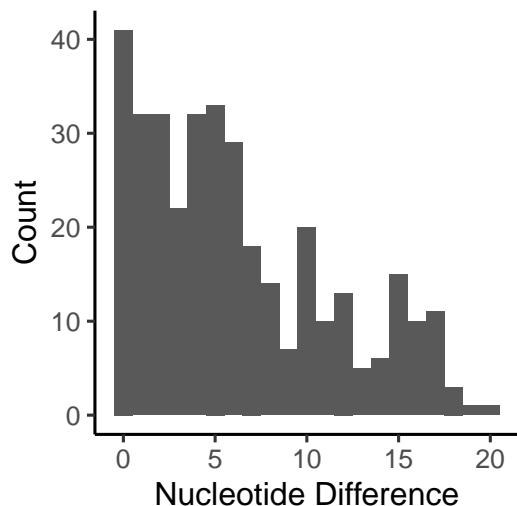
### IGHV2-7\*02\_S4078

1316 sequences assigned  
101 (7.7%) exact matches, in which:  
74 unique CDR3  
4 unique J



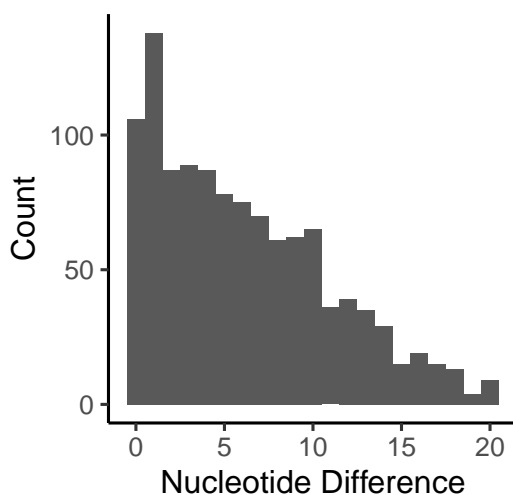
### IGHV2-7\*02\_S4078\_G289

374 sequences assigned  
41 (11%) exact matches, in which:  
40 unique CDR3  
4 unique J



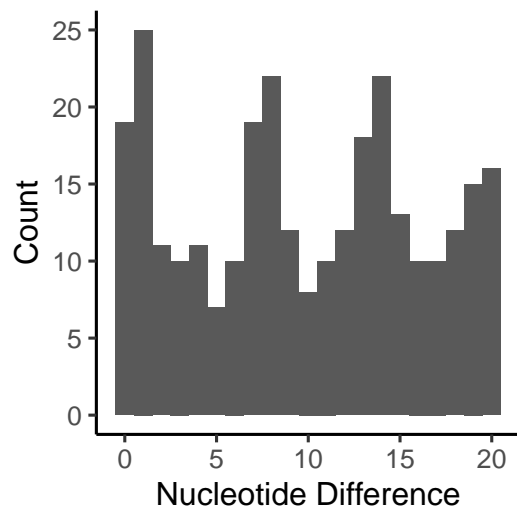
### IGHV2-NL\_1\*01\_S5779

1249 sequences assigned  
106 (8.5%) exact matches, in which:  
76 unique CDR3  
6 unique J



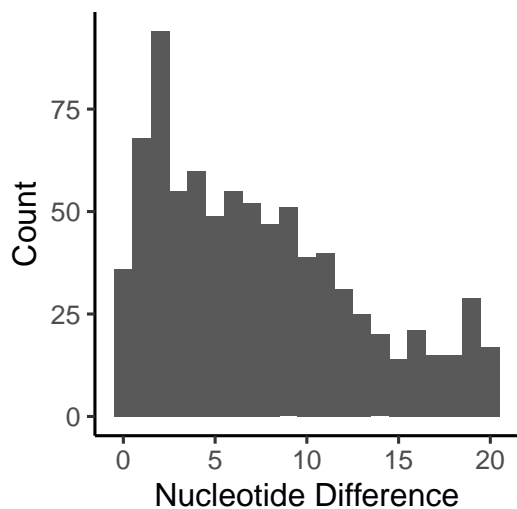
### IGHV3-28\*01\_S5703

390 sequences assigned  
19 (4.9%) exact matches, in which:  
12 unique CDR3  
3 unique J



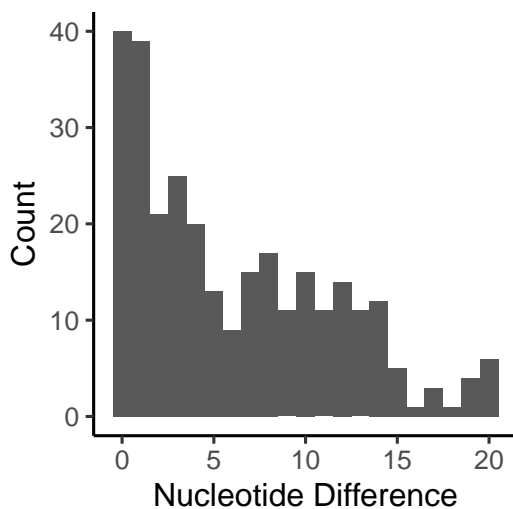
### IGHV2-69\*01\_S8510

915 sequences assigned  
36 (3.9%) exact matches, in which:  
24 unique CDR3  
3 unique J



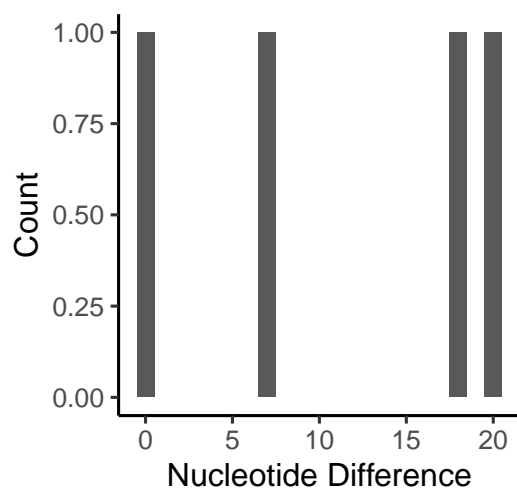
### IGHV2-NL\_1\*01\_S5779\_C

310 sequences assigned  
40 (12.9%) exact matches, in which:  
39 unique CDR3  
6 unique J



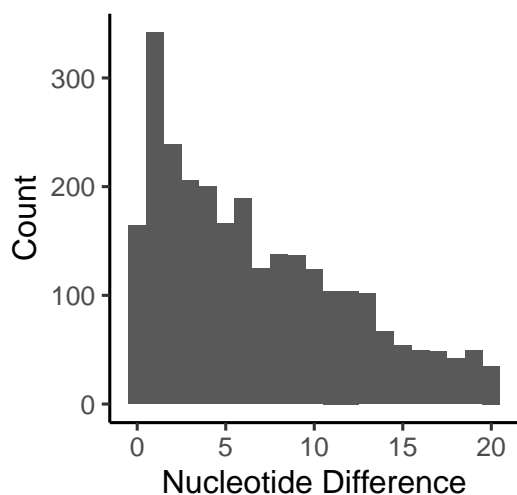
### IGHV3-34\*01\_S1309

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



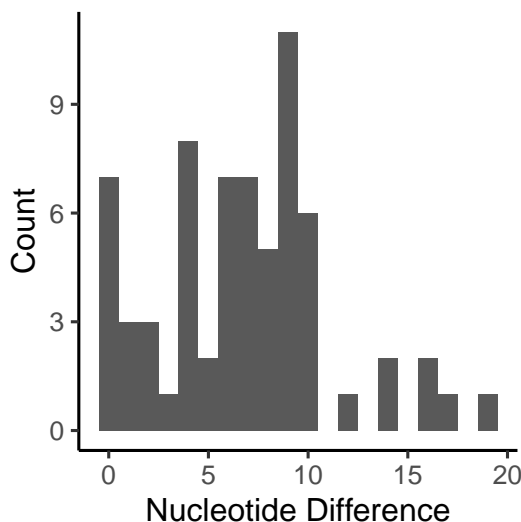
### IGHV2-118\*01\_S4527

2936 sequences assigned  
164 (5.6%) exact matches, in which:  
114 unique CDR3  
5 unique J



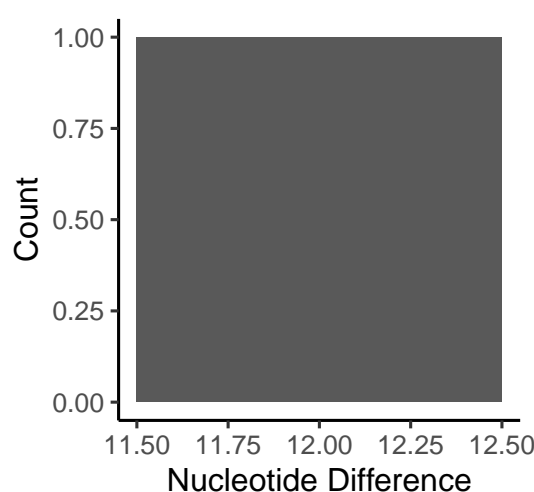
### IGHV3-28\*01\_S5419

89 sequences assigned  
7 (7.9%) exact matches, in which:  
6 unique CDR3  
3 unique J



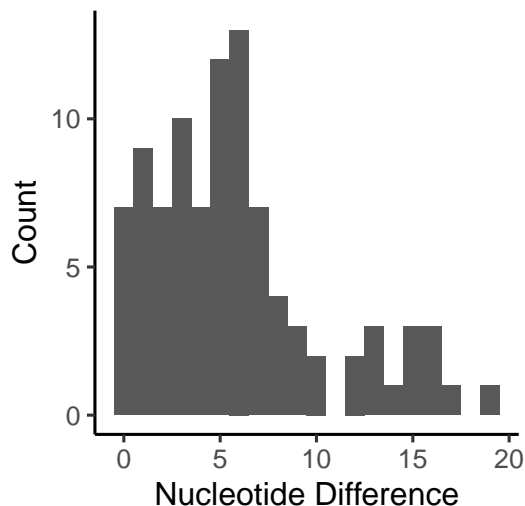
### IGHV3-34\*01\_S2915

1 sequences assigned  
No exact matches.



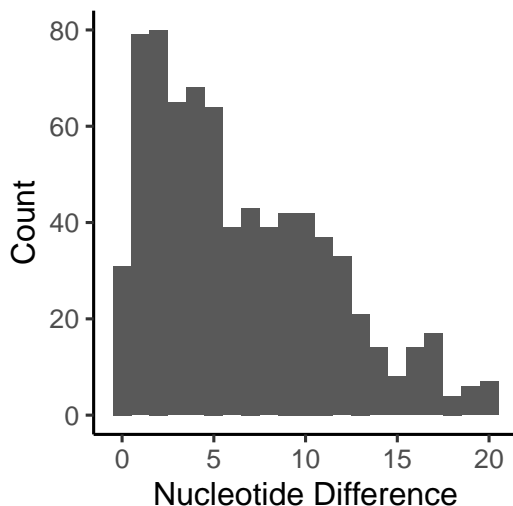
### IGHV3-36\*01\_S7141

106 sequences assigned  
7 (6.6%) exact matches, in which:  
7 unique CDR3  
2 unique J



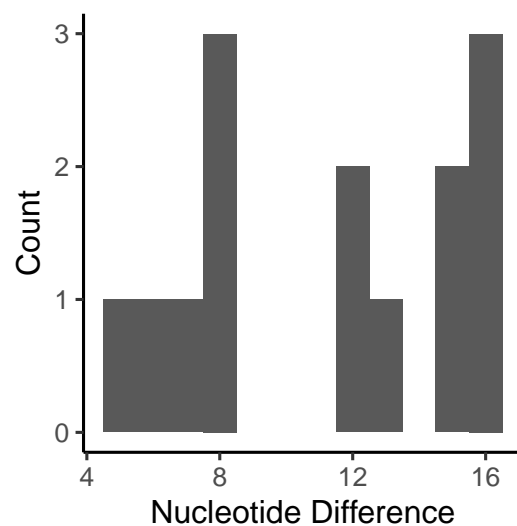
### IGHV3-53\*01\_S2949

811 sequences assigned  
31 (3.8%) exact matches, in which:  
20 unique CDR3  
3 unique J



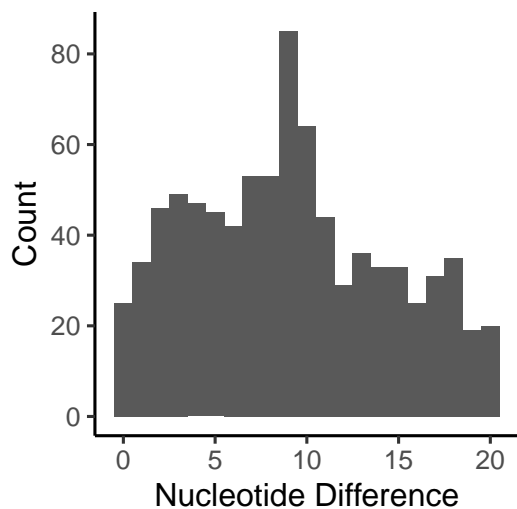
### IGHV3-76\*01\_S5420

19 sequences assigned  
No exact matches.



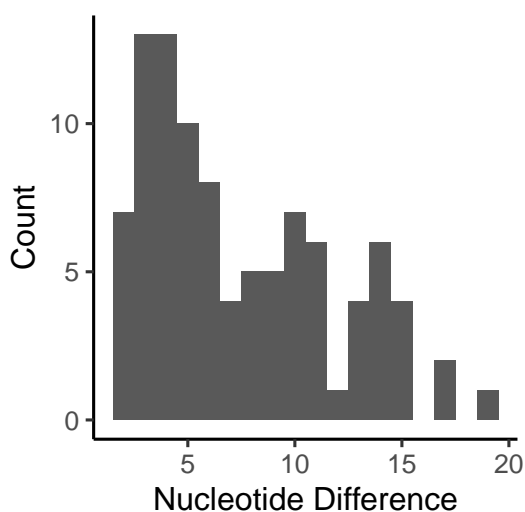
### IGHV3-37\*01\_S4420

1323 sequences assigned  
25 (1.9%) exact matches, in which:  
19 unique CDR3  
4 unique J



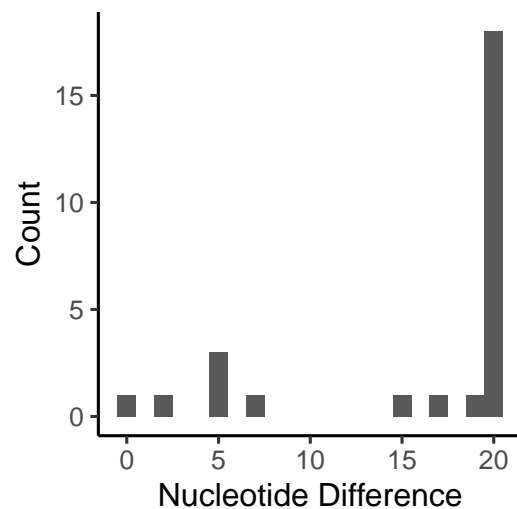
### IGHV3-53\*01\_S4256

104 sequences assigned  
No exact matches.



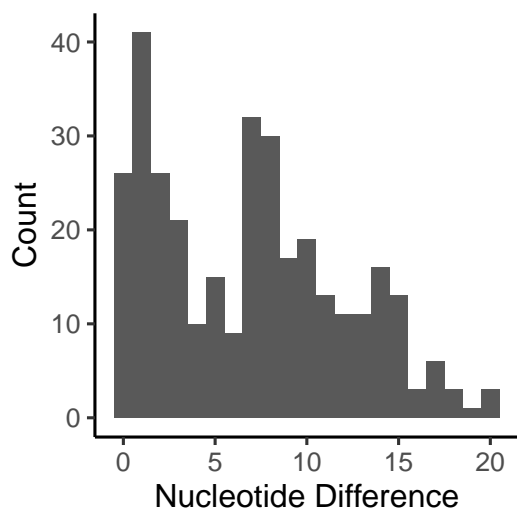
### IGHV3-76\*02\_S4190

82 sequences assigned  
1 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



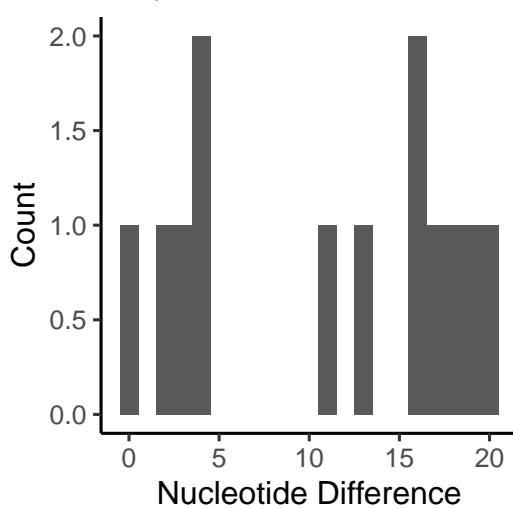
### IGHV3-52\*01\_S3960

450 sequences assigned  
26 (5.8%) exact matches, in which:  
15 unique CDR3  
5 unique J



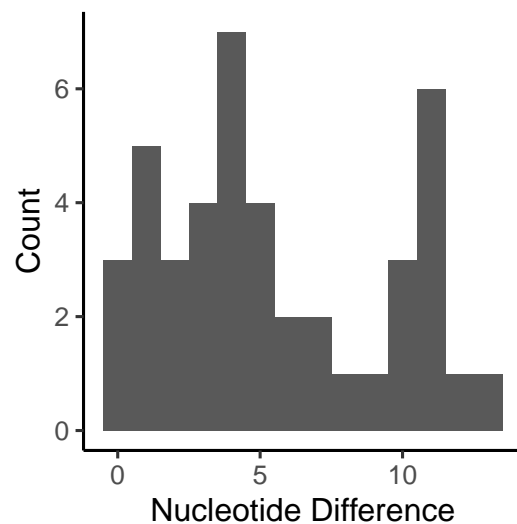
### IGHV3-76\*01\_S0794

22 sequences assigned  
1 (4.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



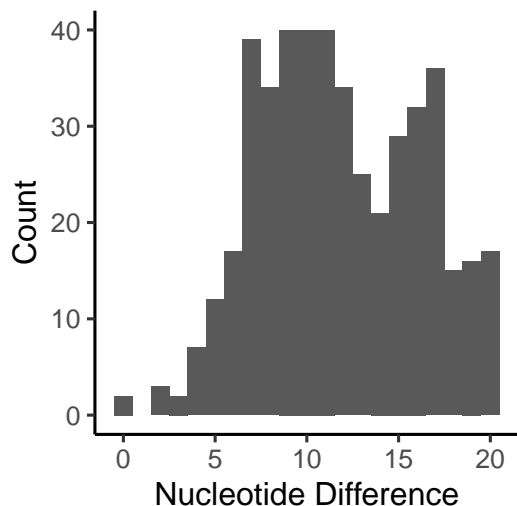
### IGHV3-83\*02\_S9518

48 sequences assigned  
3 (6.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



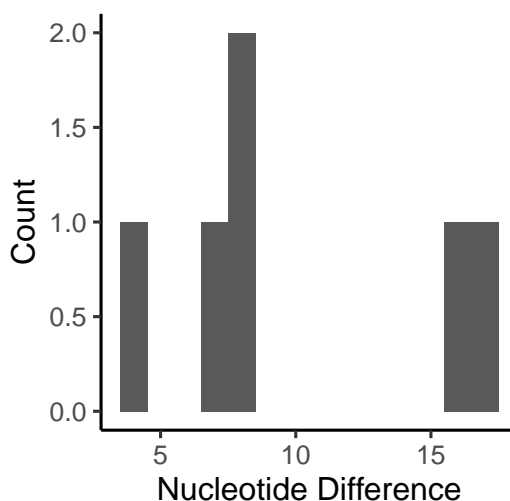
### IGHV3-88\*01\_S6871

605 sequences assigned  
2 (0.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



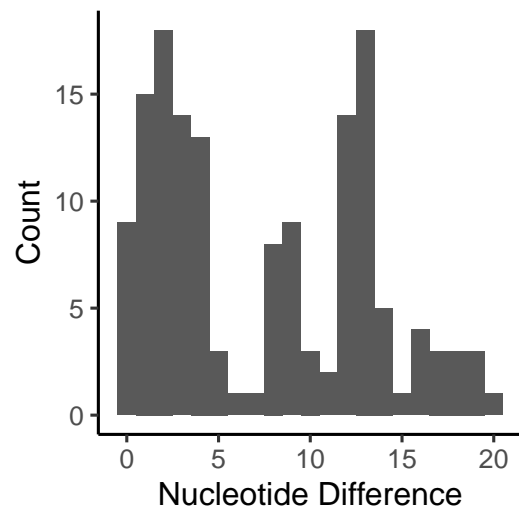
### IGHV3-94\*01\_S4458

11 sequences assigned  
No exact matches.



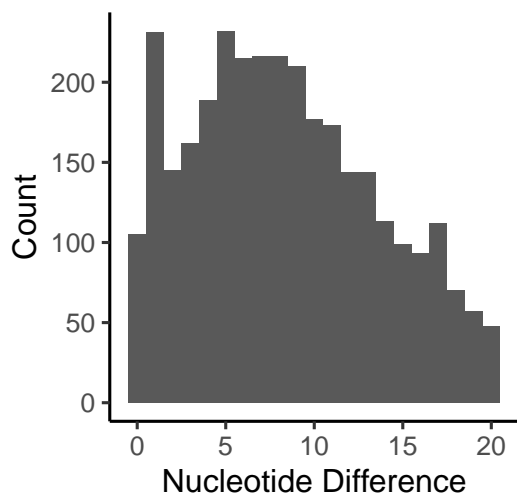
### IGHV3-100\*01\_S4375

209 sequences assigned  
9 (4.3%) exact matches, in which:  
8 unique CDR3  
3 unique J



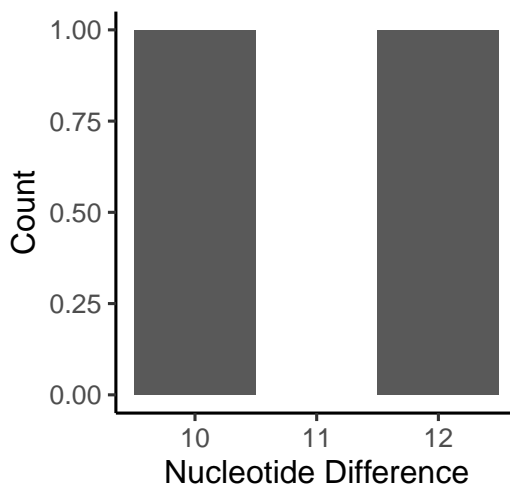
### IGHV3-88\*01\_S9155

3629 sequences assigned  
105 (2.9%) exact matches, in which:  
71 unique CDR3  
5 unique J



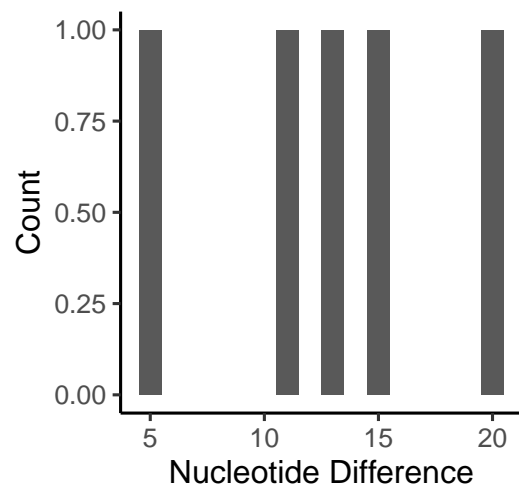
### IGHV3-94\*01\_S7982

27 sequences assigned  
No exact matches.



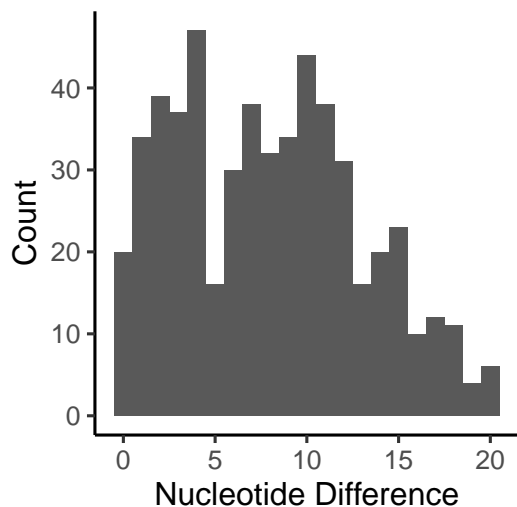
### IGHV3-120\*01\_S4231

11 sequences assigned  
No exact matches.



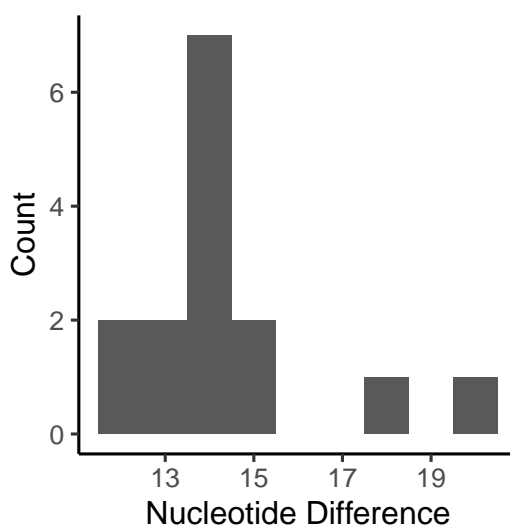
### IGHV3-88\*02\_S3953

576 sequences assigned  
20 (3.5%) exact matches, in which:  
17 unique CDR3  
2 unique J



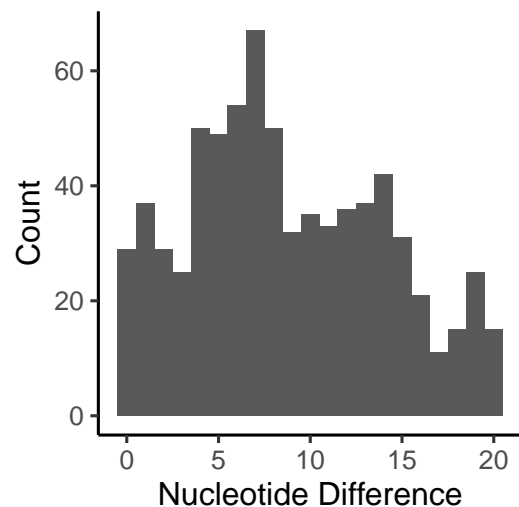
### IGHV3-100\*01\_S4205

25 sequences assigned  
No exact matches.



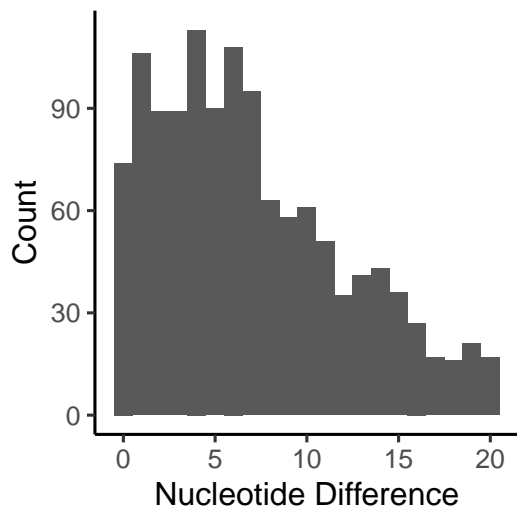
### IGHV3-122\*01\_S5299

792 sequences assigned  
29 (3.7%) exact matches, in which:  
20 unique CDR3  
3 unique J



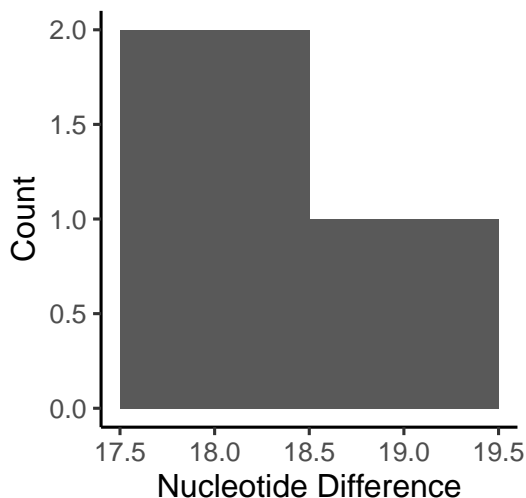
### IGHV3-122\*01\_S8388

1369 sequences assigned  
74 (5.4%) exact matches, in which:  
54 unique CDR3  
6 unique J



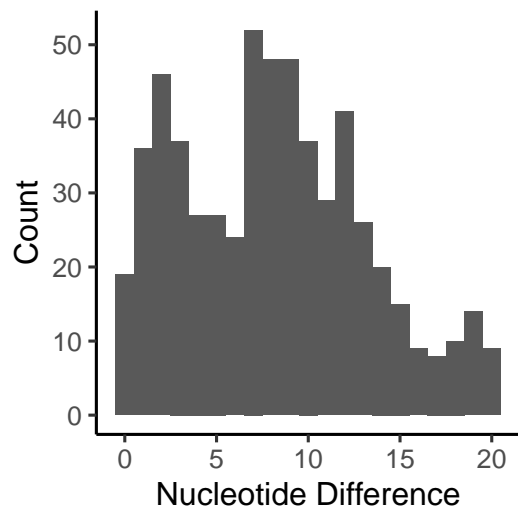
### IGHV3-141\*01\_S3493

4 sequences assigned  
No exact matches.



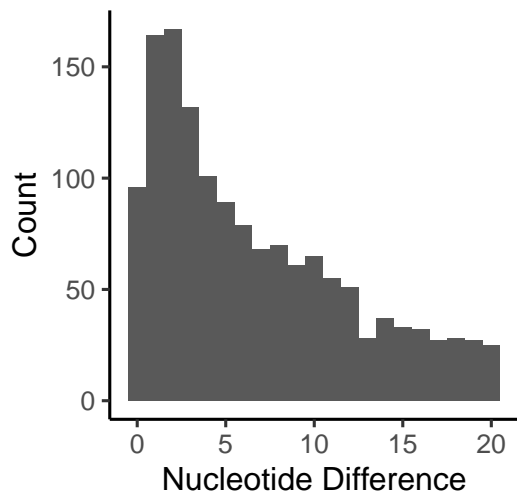
### IGHV3-152\*01\_S1133

644 sequences assigned  
19 (3%) exact matches, in which:  
13 unique CDR3  
5 unique J



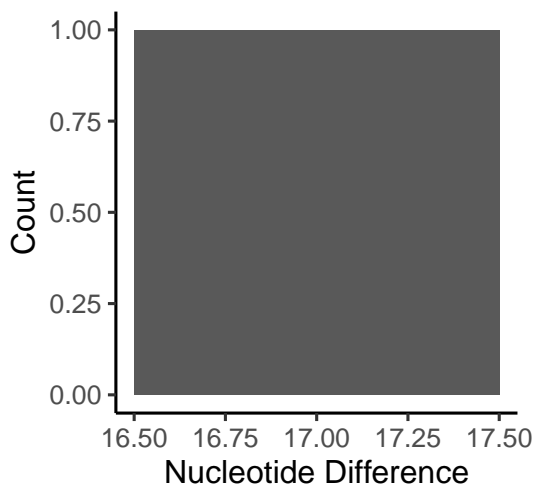
### IGHV3-127\*01\_S5171

1544 sequences assigned  
96 (6.2%) exact matches, in which:  
72 unique CDR3  
6 unique J



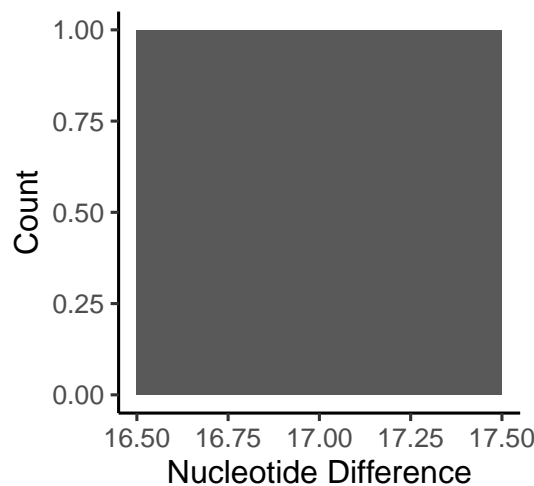
### IGHV3-141\*02\_S2868

2 sequences assigned  
No exact matches.



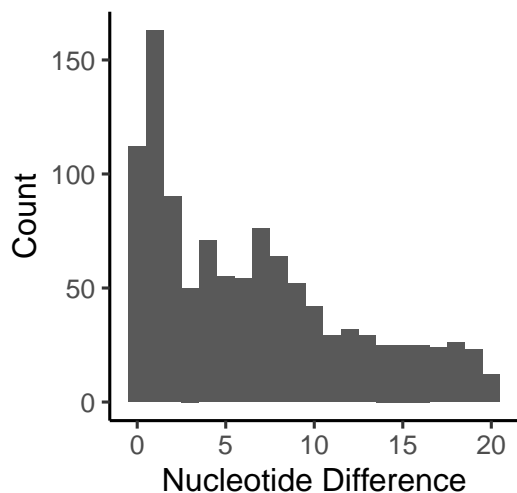
### IGHV3-172\*01\_S2175

3 sequences assigned  
No exact matches.



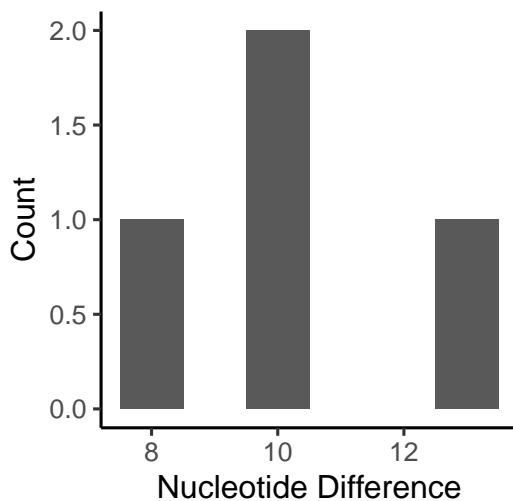
### IGHV3-128\*02\_S1570

1192 sequences assigned  
112 (9.4%) exact matches, in which:  
77 unique CDR3  
7 unique J



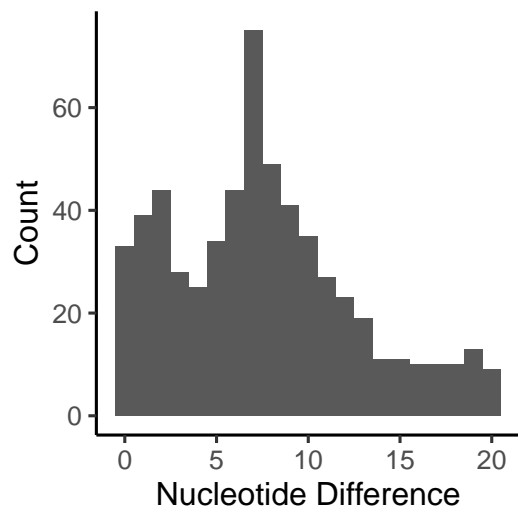
### IGHV3-141\*02\_S6589

4 sequences assigned  
No exact matches.



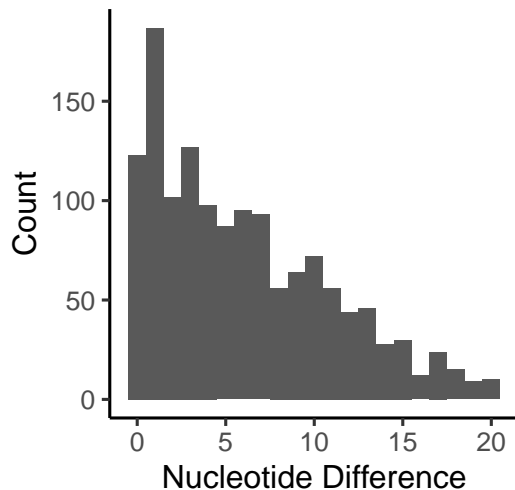
### IGHV3-177\*01\_S8409

662 sequences assigned  
33 (5%) exact matches, in which:  
25 unique CDR3  
2 unique J



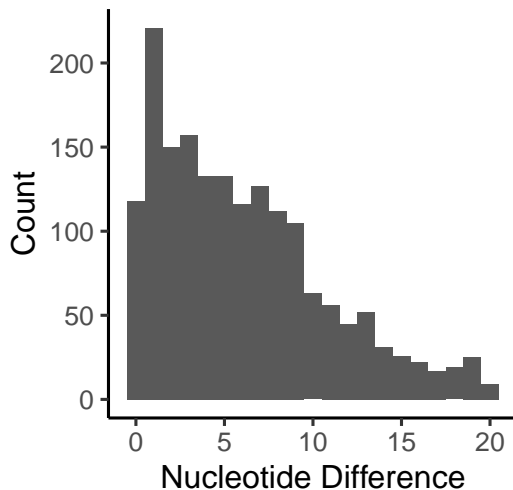
### IGHV3-187\*01\_S6840

1450 sequences assigned  
123 (8.5%) exact matches, in which:  
97 unique CDR3  
5 unique J



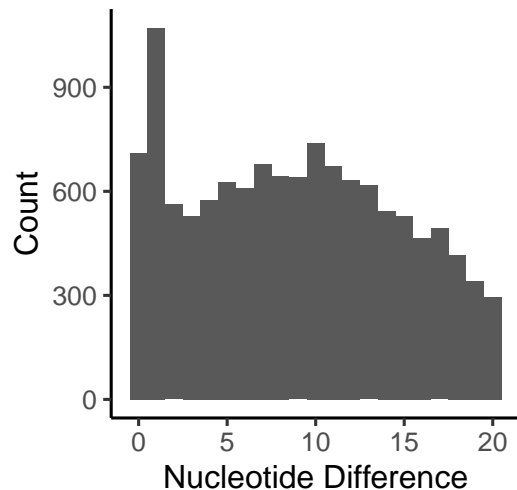
### IGHV3-NL\_1\*01\_S4549

1855 sequences assigned  
118 (6.4%) exact matches, in which:  
90 unique CDR3  
6 unique J



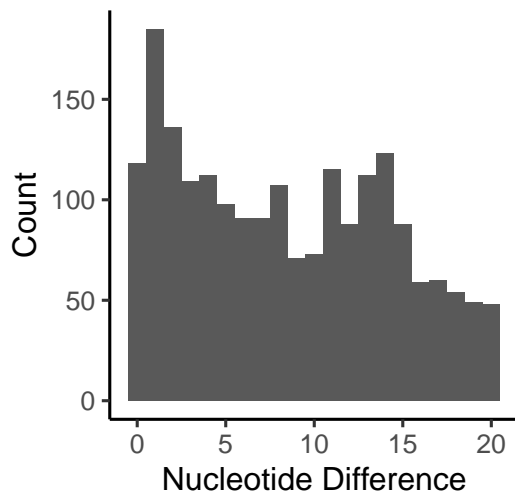
### IGHV3-NL\_11\*01\_S3736

15349 sequences assigned  
711 (4.6%) exact matches, in which:  
528 unique CDR3  
7 unique J



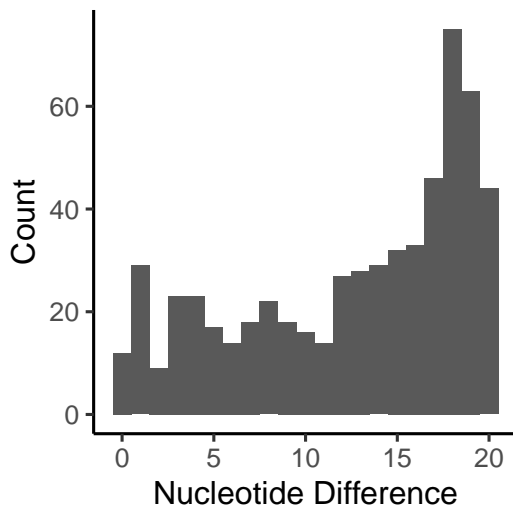
### IGHV3-187\*01\_S8972

2311 sequences assigned  
118 (5.1%) exact matches, in which:  
87 unique CDR3  
5 unique J



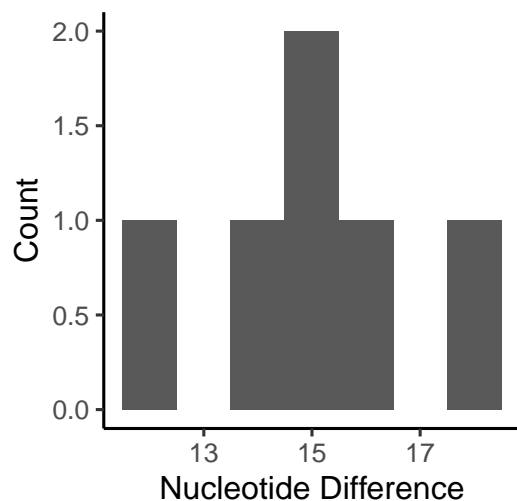
### IGHV3-NL\_1\*01\_S9422

779 sequences assigned  
12 (1.5%) exact matches, in which:  
11 unique CDR3  
4 unique J



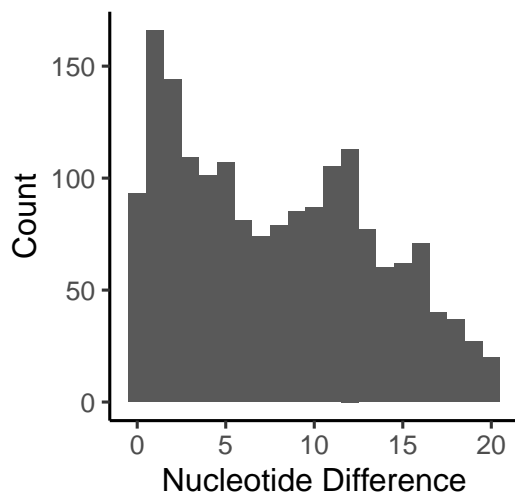
### IGHV3-NL\_13\*01\_S3940

21 sequences assigned  
No exact matches.



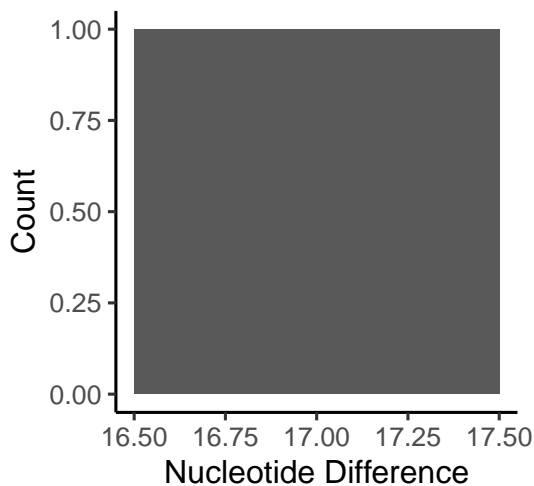
### IGHV3-NL\_1\*01\_S4331

1937 sequences assigned  
93 (4.8%) exact matches, in which:  
65 unique CDR3  
4 unique J



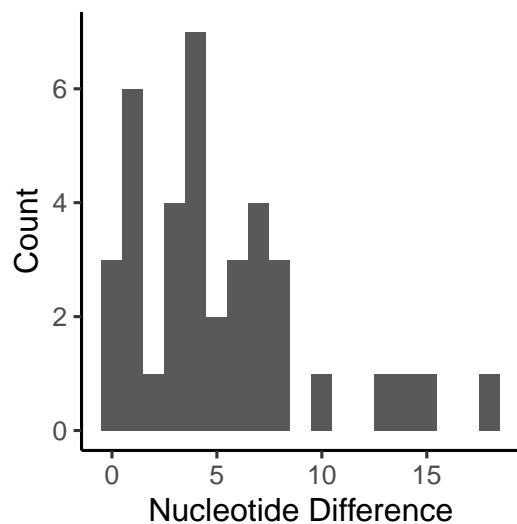
### IGHV3-NL\_10\*02\_S1970

2 sequences assigned  
No exact matches.



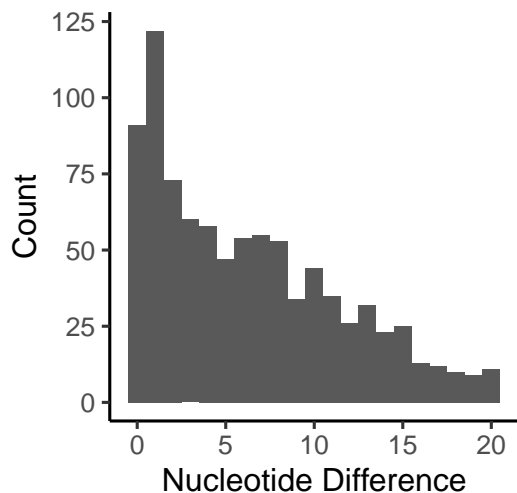
### IGHV3-NL\_13\*01\_S5767

39 sequences assigned  
3 (7.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



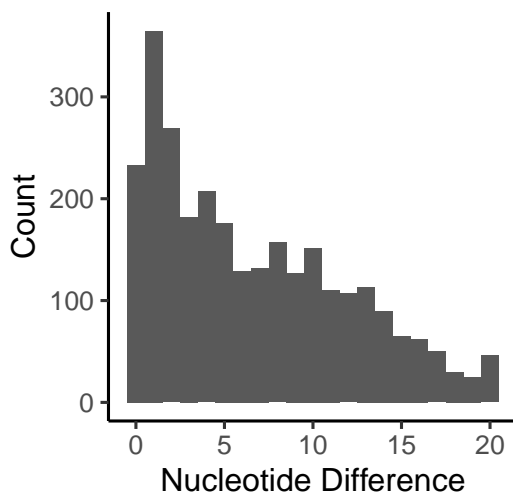
### IGHV3–NL\_14\*01\_S9823

916 sequences assigned  
91 (9.9%) exact matches, in which:  
70 unique CDR3  
5 unique J



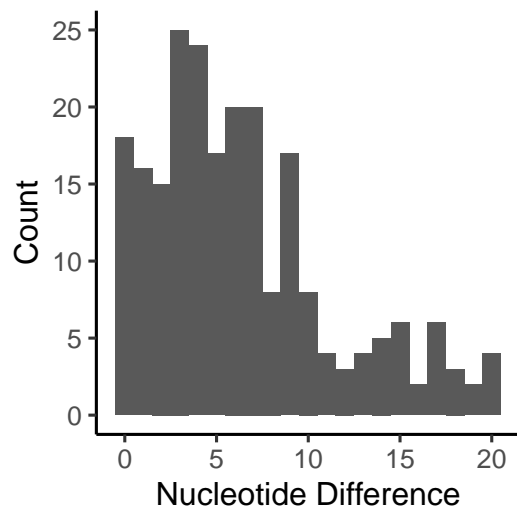
### IGHV3–NL\_17\*01\_S4736

3201 sequences assigned  
233 (7.3%) exact matches, in which:  
149 unique CDR3  
5 unique J



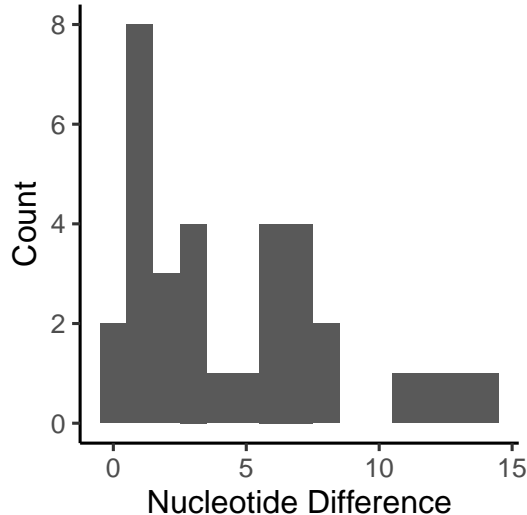
### IGHV3–NL\_19\*01\_S2472

249 sequences assigned  
18 (7.2%) exact matches, in which:  
17 unique CDR3  
2 unique J



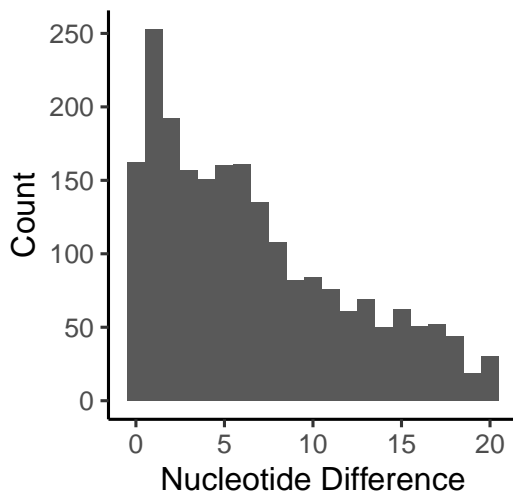
### IGHV3–NL\_15\*01\_S0604

33 sequences assigned  
2 (6.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



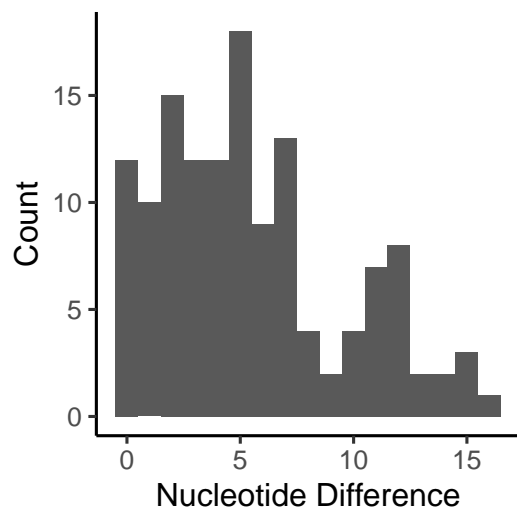
### IGHV3–NL\_17\*01\_S9589

2327 sequences assigned  
162 (7%) exact matches, in which:  
108 unique CDR3  
5 unique J



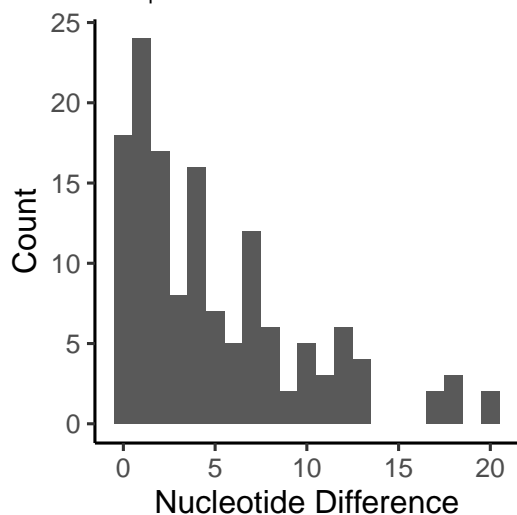
### IGHV3–NL\_19\*01\_S4000

139 sequences assigned  
12 (8.6%) exact matches, in which:  
11 unique CDR3  
3 unique J



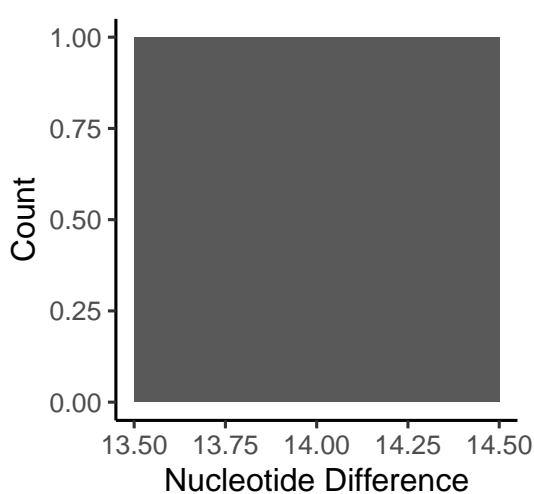
### IGHV3–NL\_16\*01\_S8234

160 sequences assigned  
18 (11.2%) exact matches, in which:  
14 unique CDR3  
5 unique J



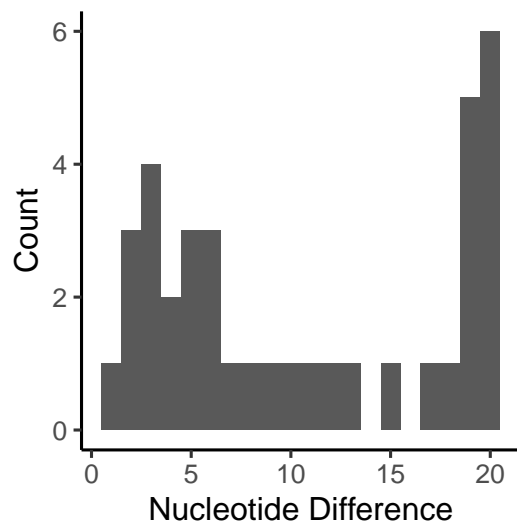
### IGHV3–NL\_18\*01\_S0984

1 sequences assigned  
No exact matches.



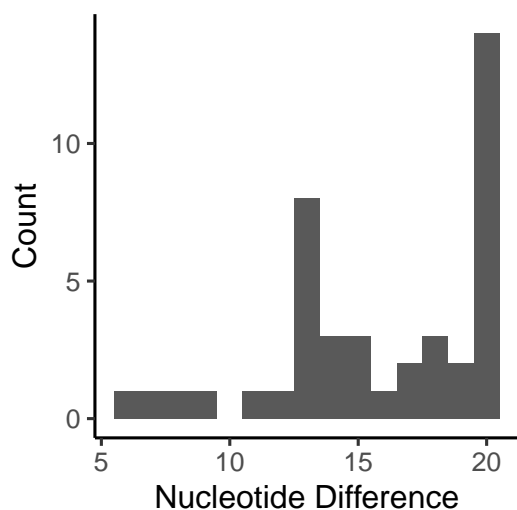
### IGHV3–NL\_19\*01\_S6894

59 sequences assigned  
No exact matches.



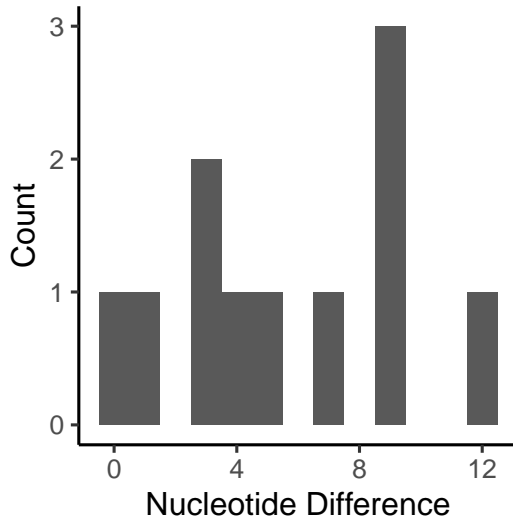
### IGHV3–NL\_2\*01\_S1693

61 sequences assigned  
No exact matches.



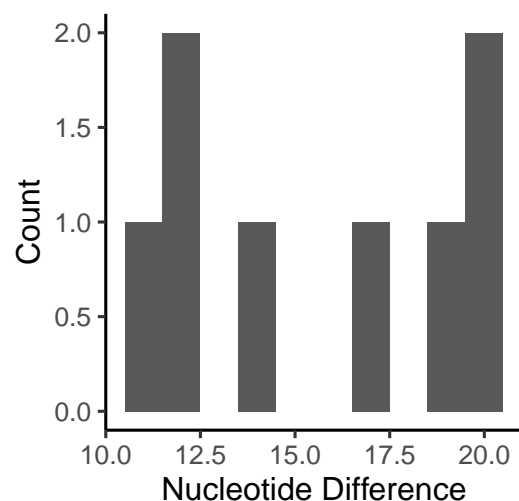
### IGHV3–NL\_6\*02\_S7808

38 sequences assigned  
1 (2.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



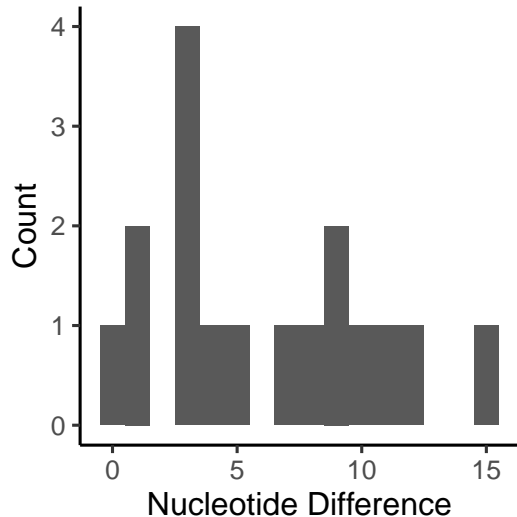
### IGHV3–NL\_9\*01\_S6098

37 sequences assigned  
No exact matches.



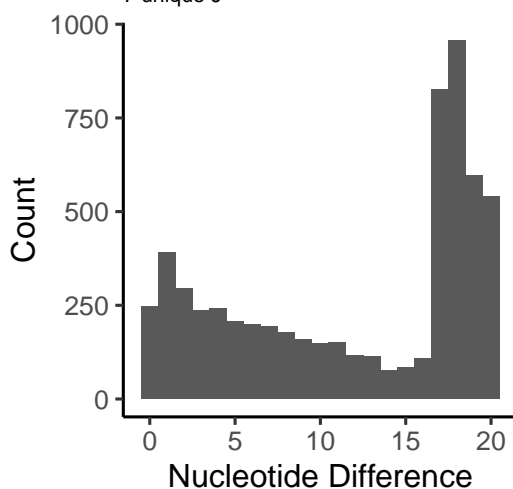
### IGHV3–NL\_2\*01\_S5884

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



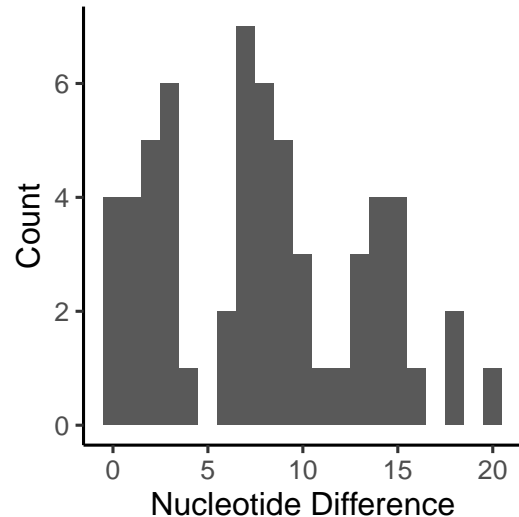
### IGHV3–NL\_7\*01\_S0199

11016 sequences assigned  
247 (2.2%) exact matches, in which:  
199 unique CDR3  
7 unique J



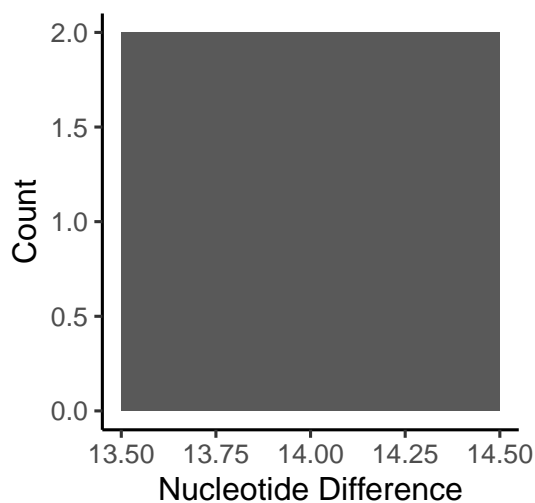
### IGHV4–67\*01\_S8827

71 sequences assigned  
4 (5.6%) exact matches, in which:  
4 unique CDR3  
3 unique J



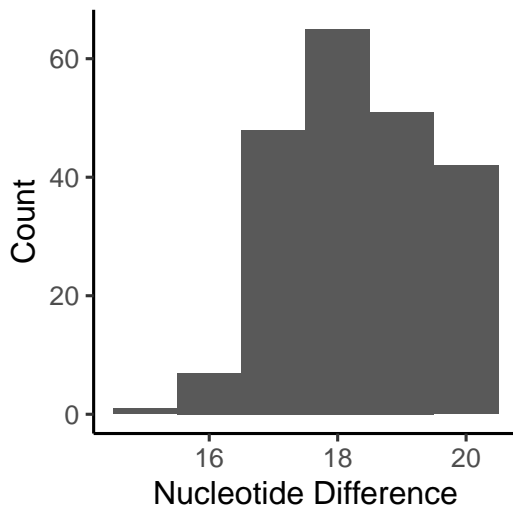
### IGHV3–NL\_5\*01\_S8361

2 sequences assigned  
No exact matches.



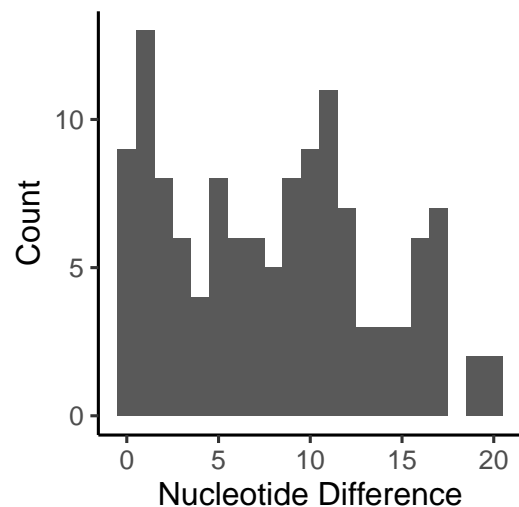
### IGHV3–NL\_8\*01\_S7474

481 sequences assigned  
No exact matches.



### IGHV4–67\*02\_S8671

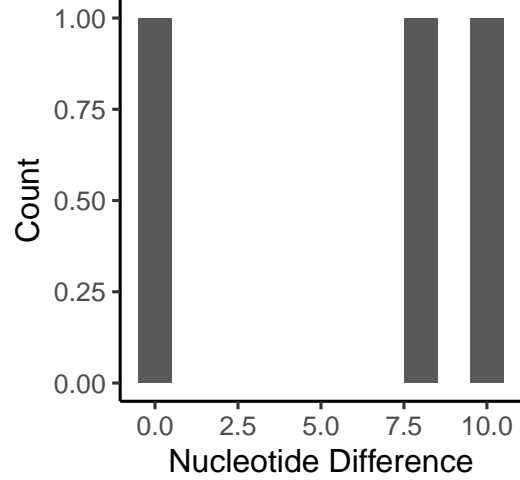
146 sequences assigned  
9 (6.2%) exact matches, in which:  
9 unique CDR3  
4 unique J





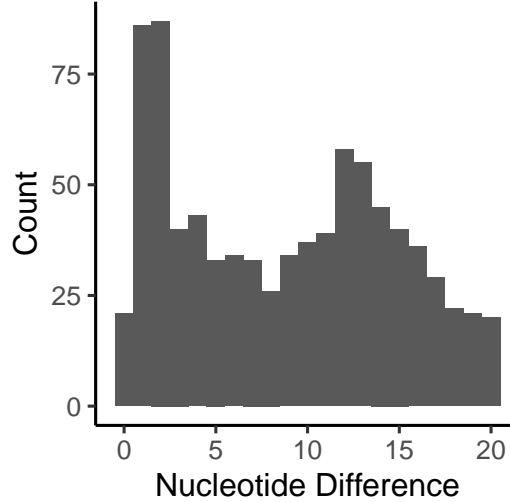
### IGHV4-79\*01\_S1478

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



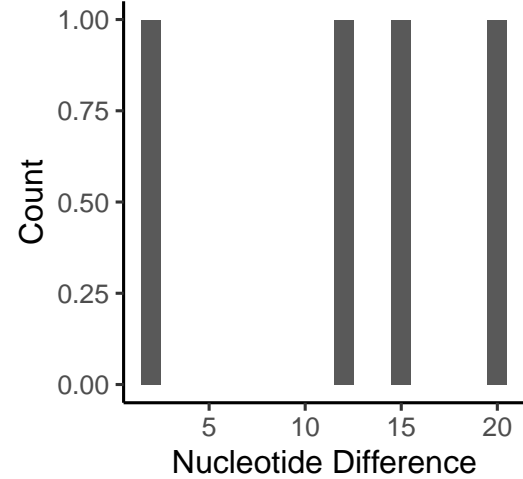
### IGHV4-144\*01\_S3676

1003 sequences assigned  
21 (2.1%) exact matches, in which:  
19 unique CDR3  
5 unique J



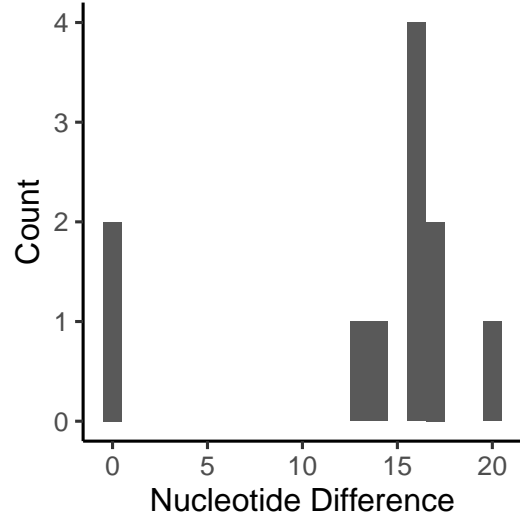
### IGHV4-174\*02\_S3984

5 sequences assigned  
No exact matches.



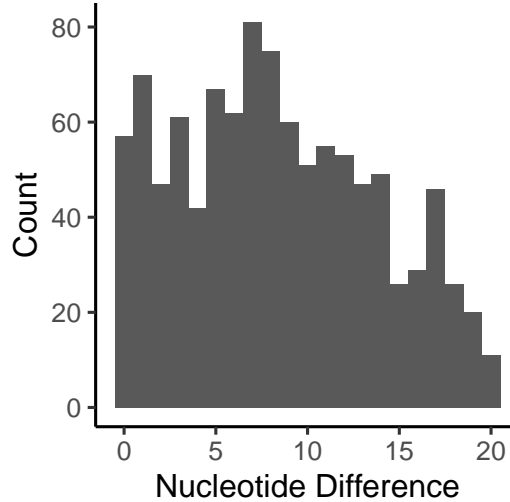
### IGHV4-79\*02\_S9501

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



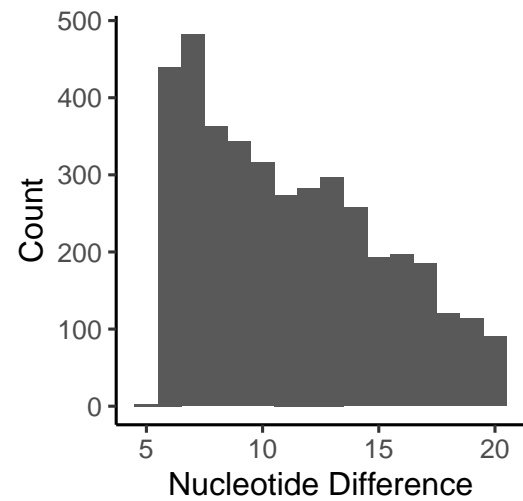
### IGHV4-149\*01\_S1992

1299 sequences assigned  
57 (4.4%) exact matches, in which:  
46 unique CDR3  
5 unique J



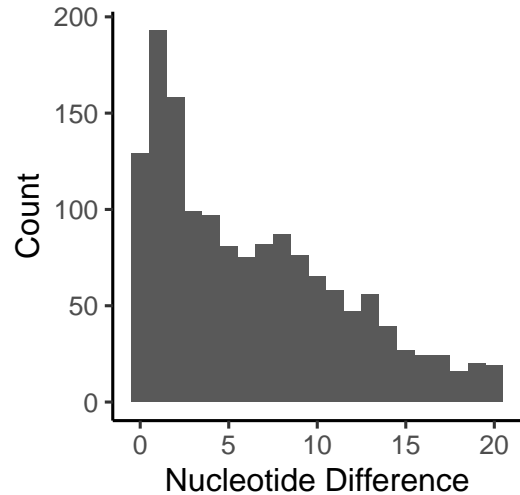
### IGHV4-174\*02\_S5400

4561 sequences assigned  
No exact matches.



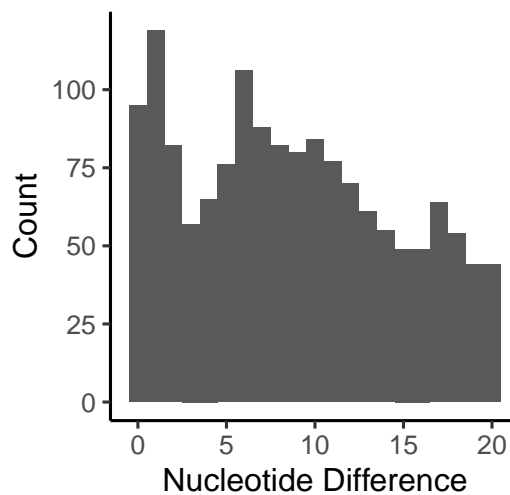
### IGHV4-93\*01\_S5203

1561 sequences assigned  
129 (8.3%) exact matches, in which:  
112 unique CDR3  
7 unique J



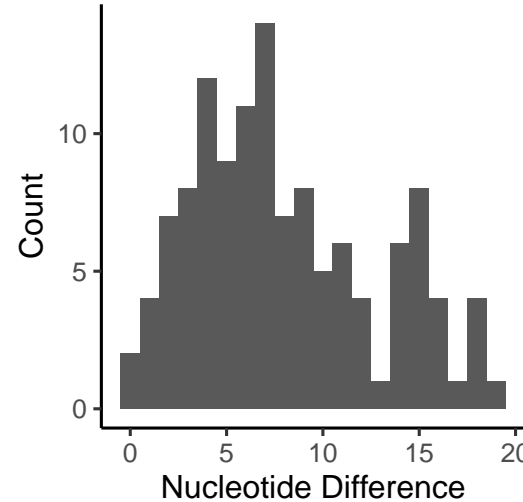
### IGHV4-149\*01\_S9613

1803 sequences assigned  
95 (5.3%) exact matches, in which:  
81 unique CDR3  
5 unique J



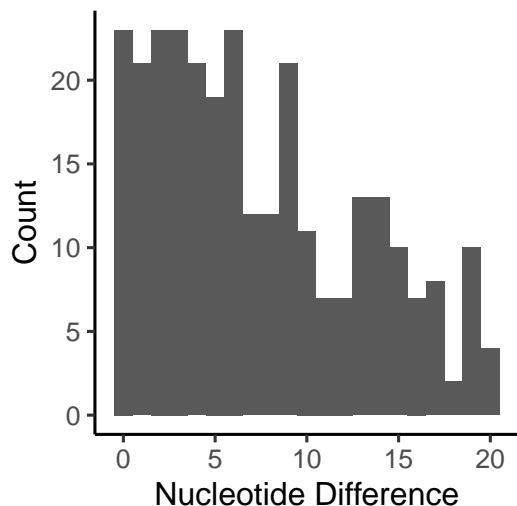
### IGHV4-NL\_1\*01\_S4155

166 sequences assigned  
2 (1.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



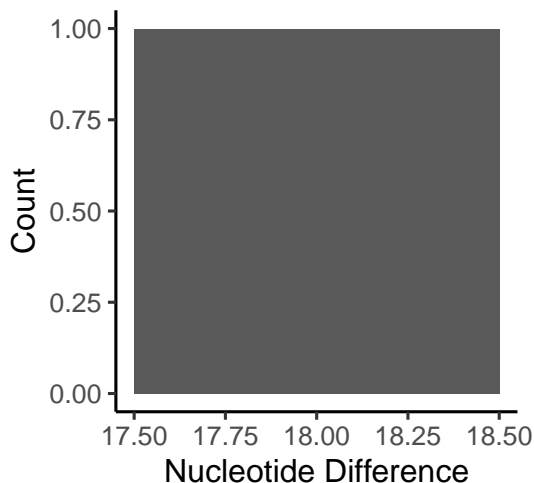
## IGHV4–NL\_1\*01\_S5296

305 sequences assigned  
23 (7.5%) exact matches, in which:  
16 unique CDR3  
4 unique J



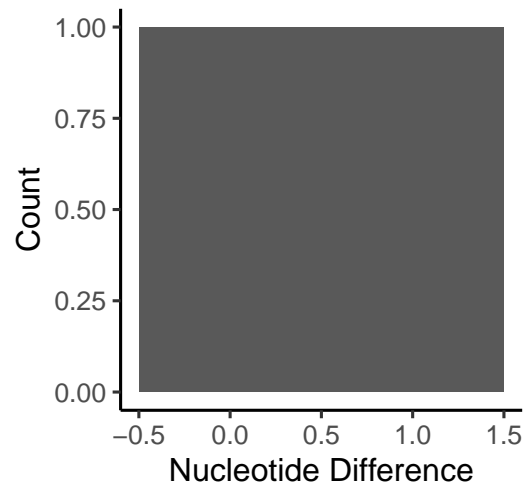
## IGHV4–NL\_10\*02\_S9346

1 sequences assigned  
No exact matches.



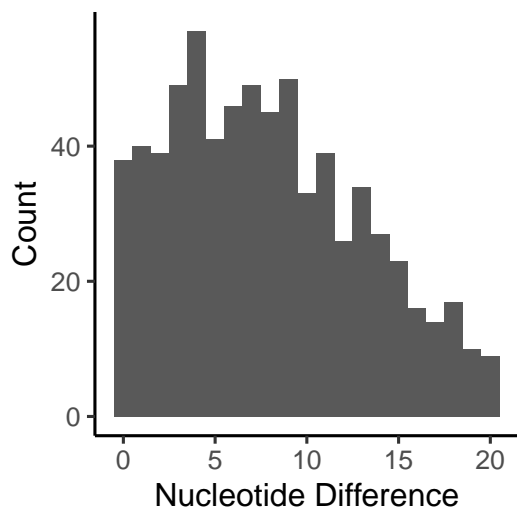
## IGHV4–NL\_17\*01\_S0936

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



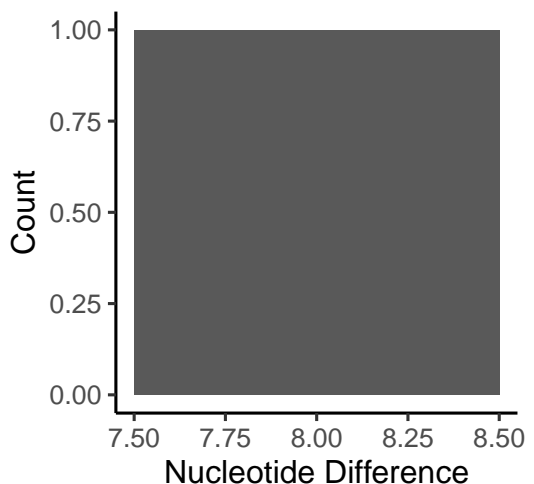
## IGHV4–NL\_1\*01\_S9508

784 sequences assigned  
38 (4.8%) exact matches, in which:  
32 unique CDR3  
7 unique J



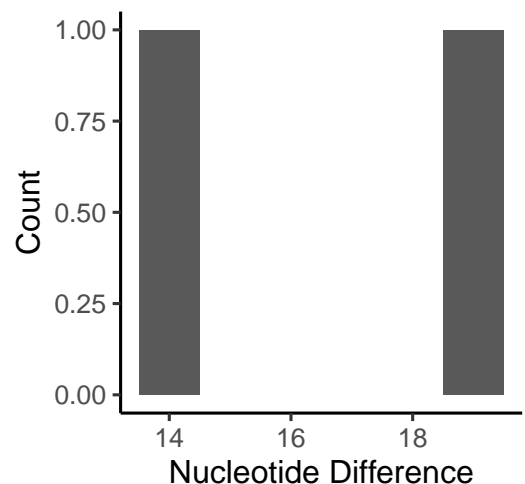
## IGHV4–NL\_15\*01\_S5717

2 sequences assigned  
No exact matches.



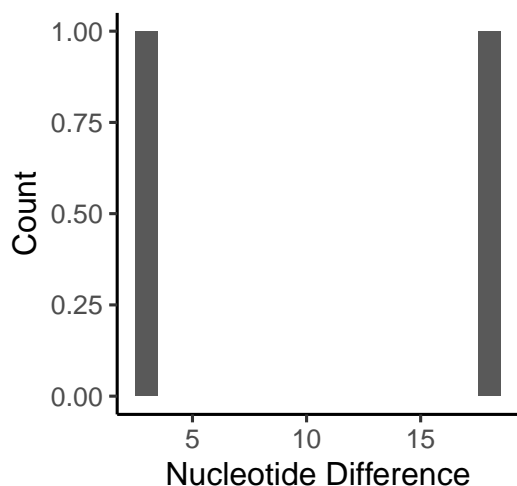
## IGHV4–NL\_17\*01\_S4099

3 sequences assigned  
No exact matches.



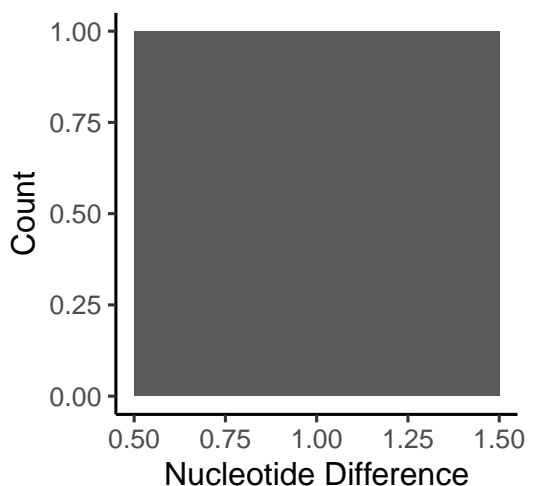
## IGHV4–NL\_10\*01\_S7684

2 sequences assigned  
No exact matches.



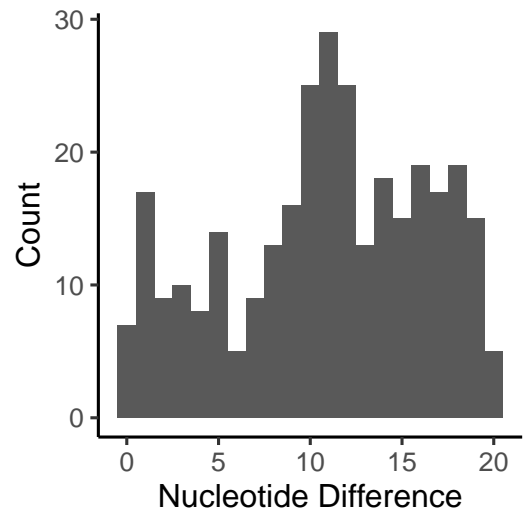
## IGHV4–NL\_15\*01\_S7687

2 sequences assigned  
No exact matches.



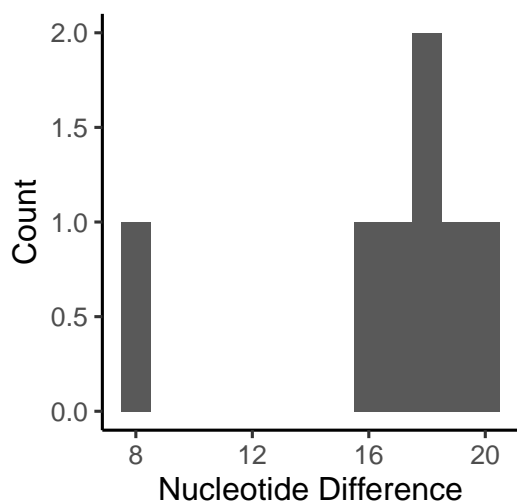
## IGHV4–NL\_19\*01\_S3005

363 sequences assigned  
7 (1.9%) exact matches, in which:  
7 unique CDR3  
2 unique J



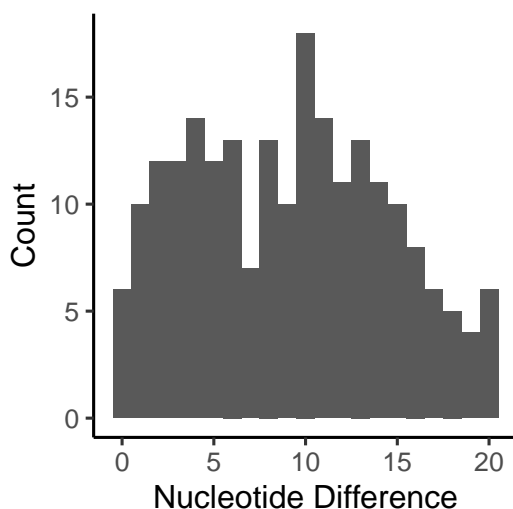
### IGHV4–NL\_20\*01\_S2908

18 sequences assigned  
No exact matches.



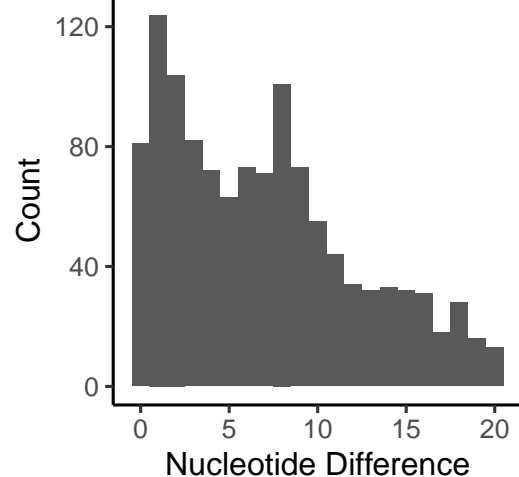
### IGHV4–NL\_21\*01\_S6308

268 sequences assigned  
6 (2.2%) exact matches, in which:  
5 unique CDR3  
2 unique J



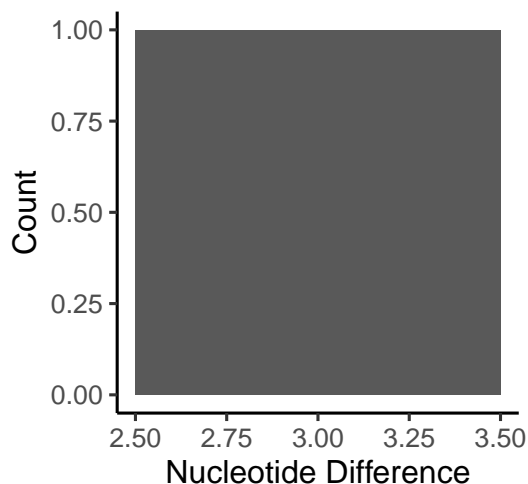
### IGHV4–NL\_25\*01\_S6960

1548 sequences assigned  
81 (5.2%) exact matches, in which:  
64 unique CDR3  
6 unique J



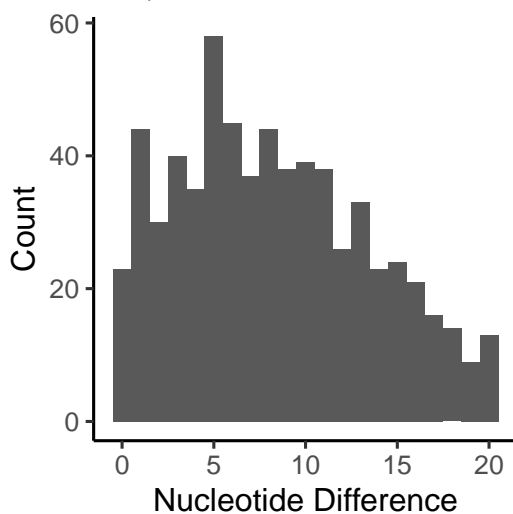
### IGHV4–NL\_20\*01\_S6186

1 sequences assigned  
No exact matches.



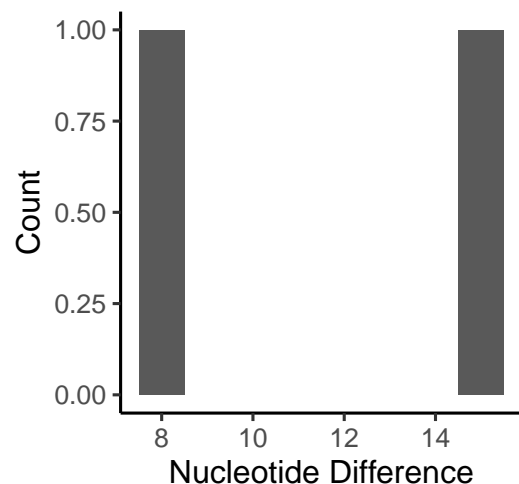
### IGHV4–NL\_22\*01\_S5234

734 sequences assigned  
23 (3.1%) exact matches, in which:  
22 unique CDR3  
5 unique J



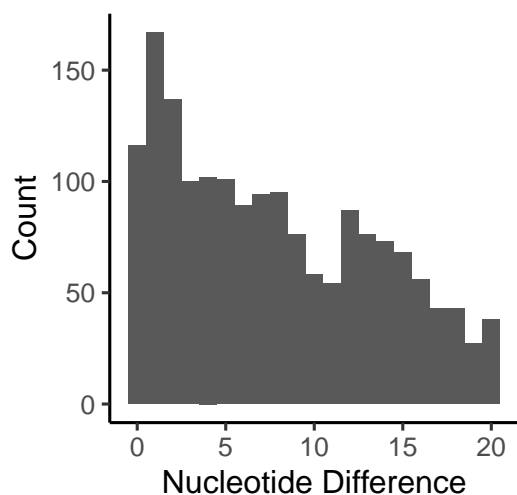
### IGHV4–NL\_26\*01\_S2261

6 sequences assigned  
No exact matches.



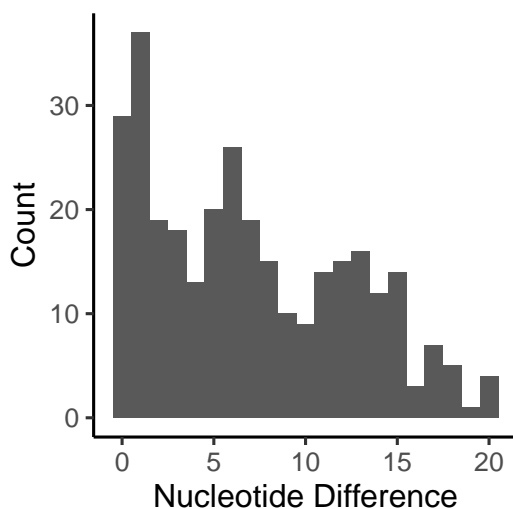
### IGHV4–NL\_21\*01\_S0138

1905 sequences assigned  
116 (6.1%) exact matches, in which:  
99 unique CDR3  
7 unique J



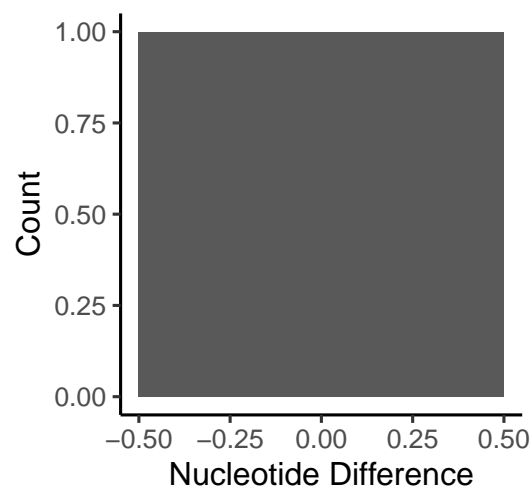
### IGHV4–NL\_24\*01\_S5697

318 sequences assigned  
29 (9.1%) exact matches, in which:  
24 unique CDR3  
6 unique J



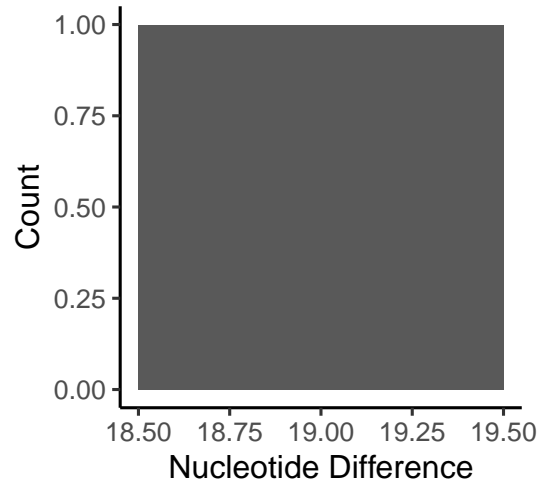
### IGHV4–NL\_27\*01\_S1458

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



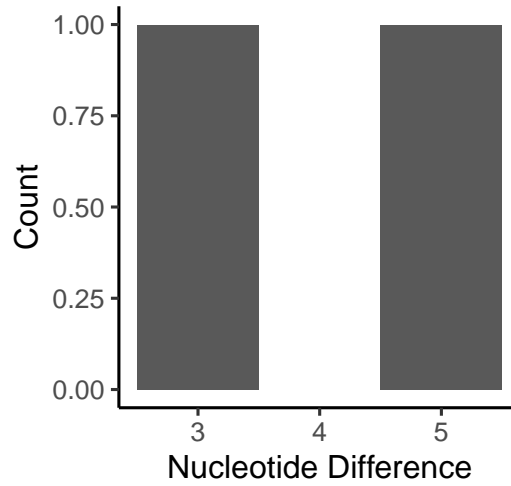
### IGHV4-NL\_27\*01\_S2979

1 sequences assigned  
No exact matches.



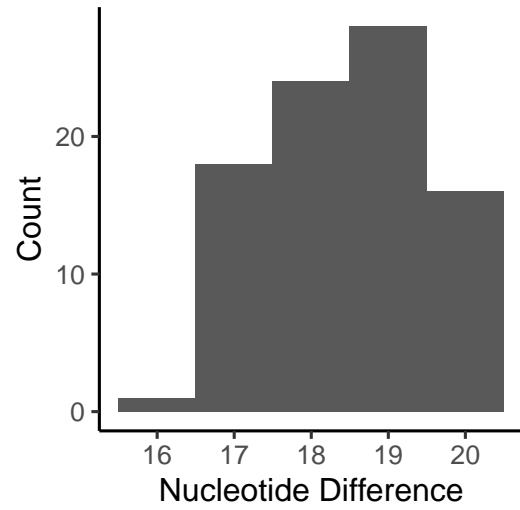
### IGHV4-NL\_28\*01\_S2610

2 sequences assigned  
No exact matches.



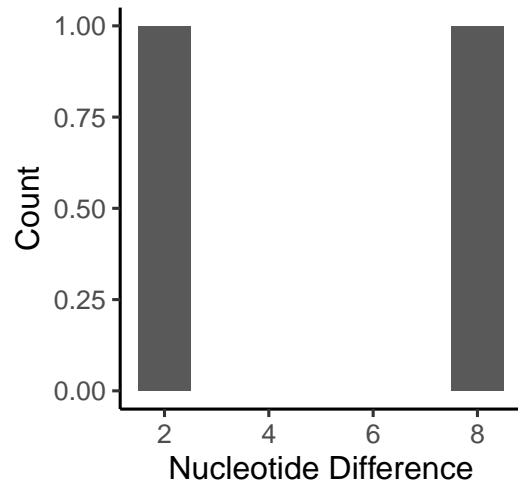
### IGHV4-NL\_3\*01\_S7576

139 sequences assigned  
No exact matches.



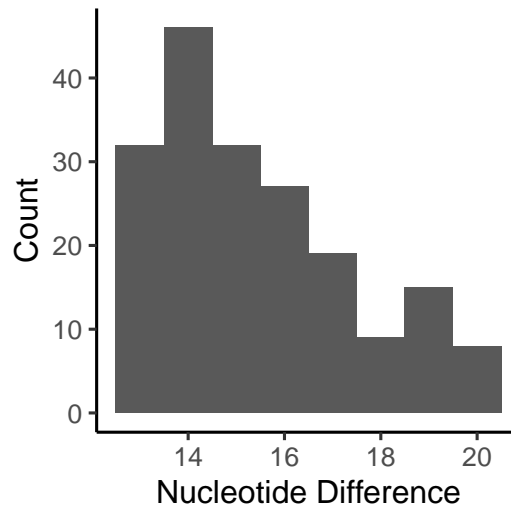
### IGHV4-NL\_27\*01\_S3510

2 sequences assigned  
No exact matches.



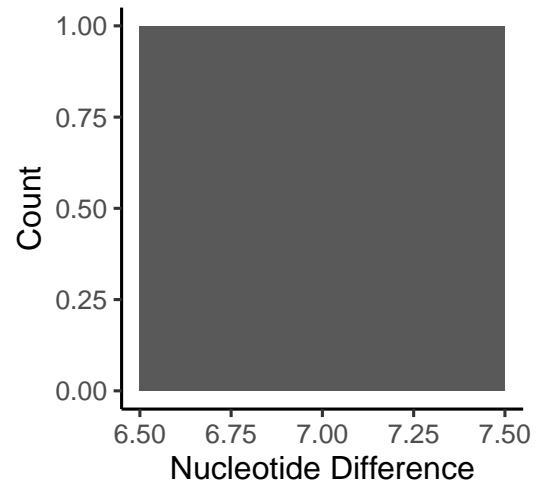
### IGHV4-NL\_29\*01\_S3761

228 sequences assigned  
No exact matches.



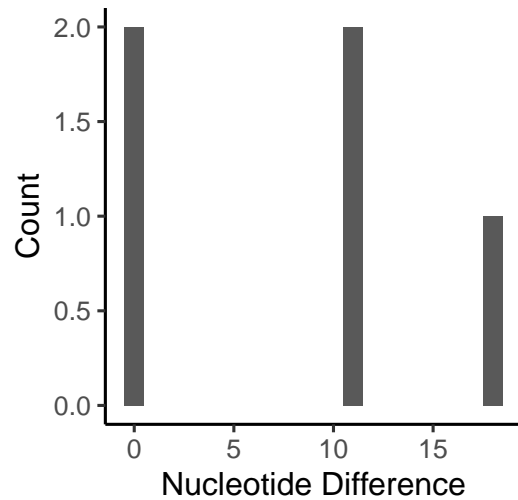
### IGHV4-NL\_31\*01\_S1675

1 sequences assigned  
No exact matches.



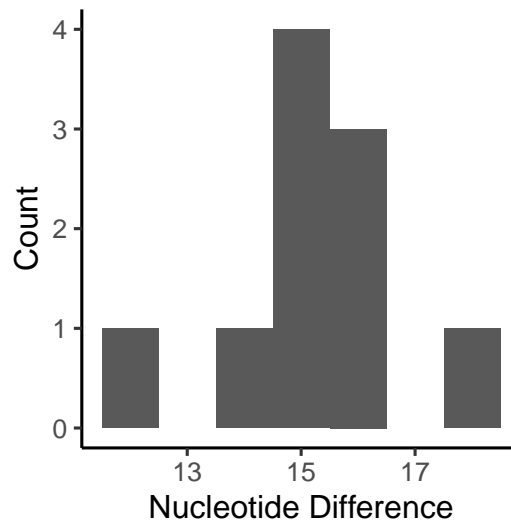
### IGHV4-NL\_27\*01\_S9001

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



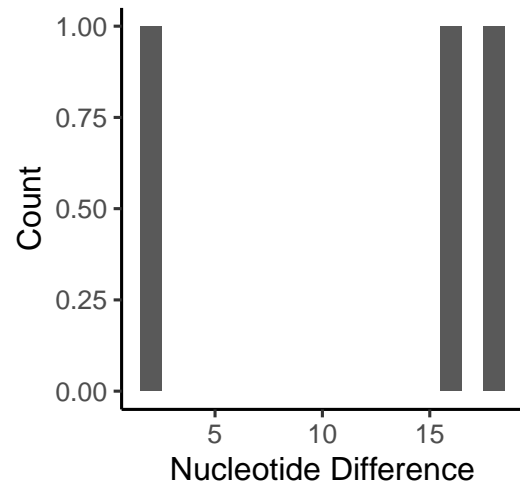
### IGHV4-NL\_29\*01\_S5315

30 sequences assigned  
No exact matches.



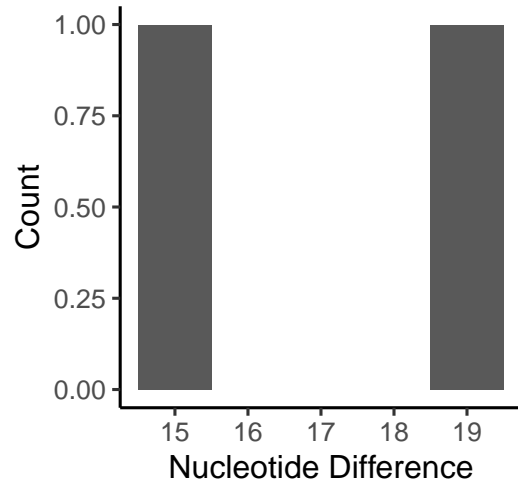
### IGHV4-NL\_31\*01\_S7693

4 sequences assigned  
No exact matches.



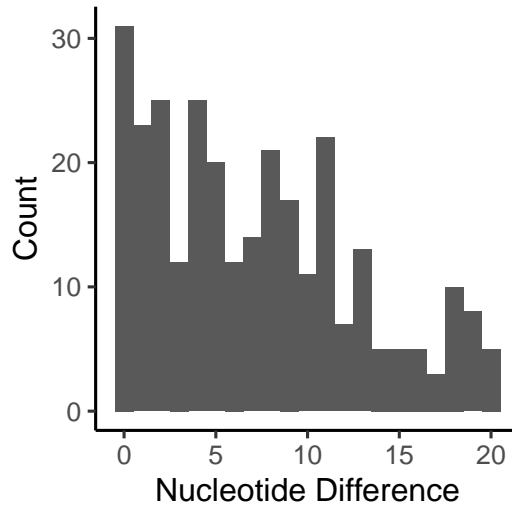
### IGHV4-NL\_32\*01\_S3033

5 sequences assigned  
No exact matches.



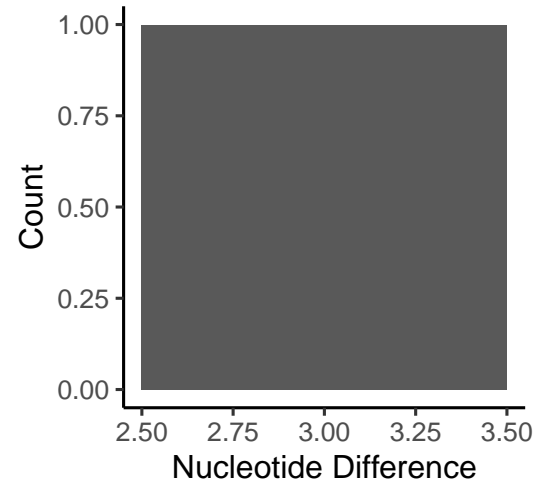
### IGHV4-NL\_36\*01\_S5000

330 sequences assigned  
31 (9.4%) exact matches, in which:  
28 unique CDR3  
5 unique J



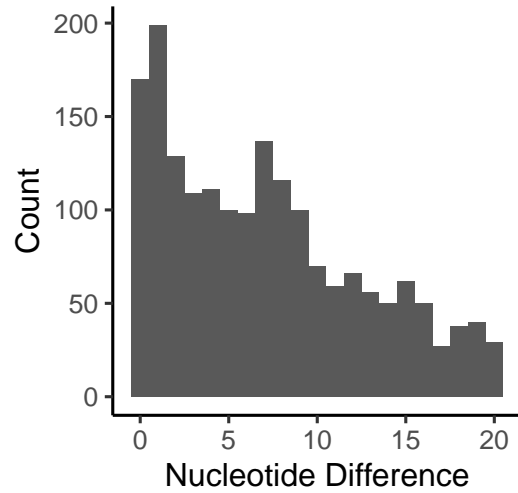
### IGHV4-NL\_40\*01\_S0690

1 sequences assigned  
No exact matches.



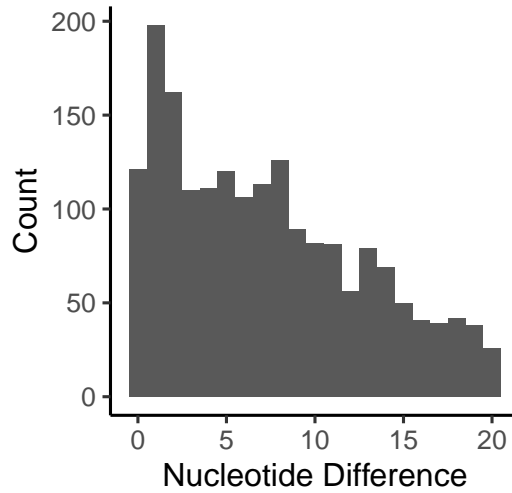
### IGHV4-NL\_33\*01\_S9428

2107 sequences assigned  
170 (8.1%) exact matches, in which:  
145 unique CDR3  
6 unique J



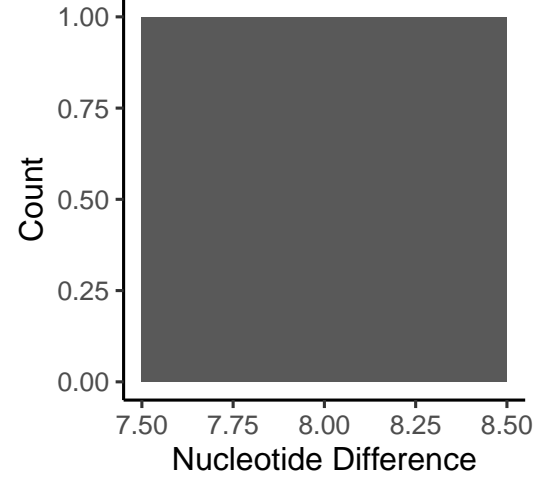
### IGHV4-NL\_38\*01\_S6935

2019 sequences assigned  
121 (6%) exact matches, in which:  
106 unique CDR3  
5 unique J



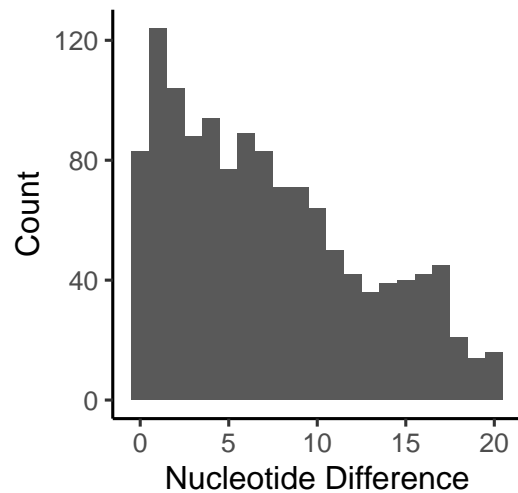
### IGHV4-NL\_42\*01\_S3070

1 sequences assigned  
No exact matches.



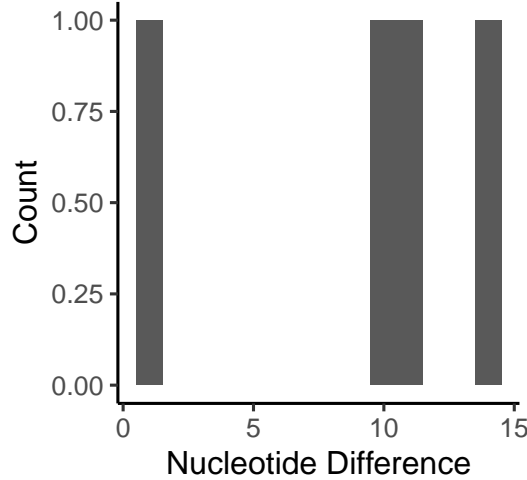
### IGHV4-NL\_34\*01\_S4637

1478 sequences assigned  
83 (5.6%) exact matches, in which:  
75 unique CDR3  
6 unique J



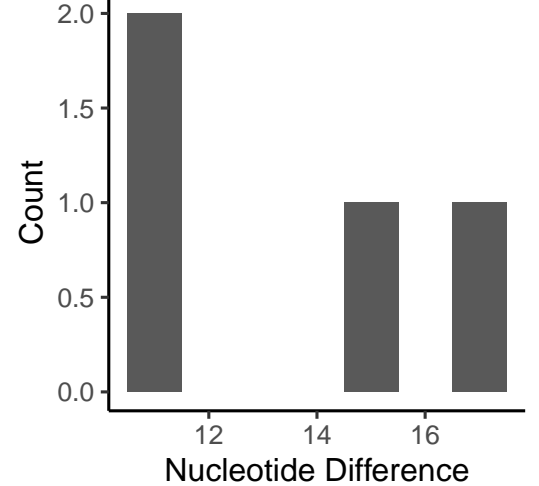
### IGHV4-NL\_4\*01\_S8866

14 sequences assigned  
No exact matches.



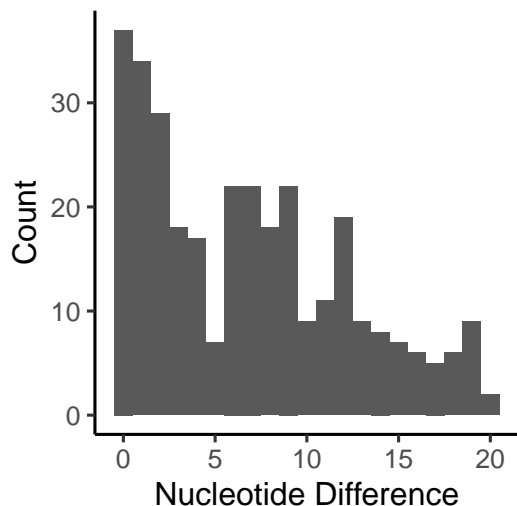
### IGHV4-NL\_43\*01\_S4510

18 sequences assigned  
No exact matches.



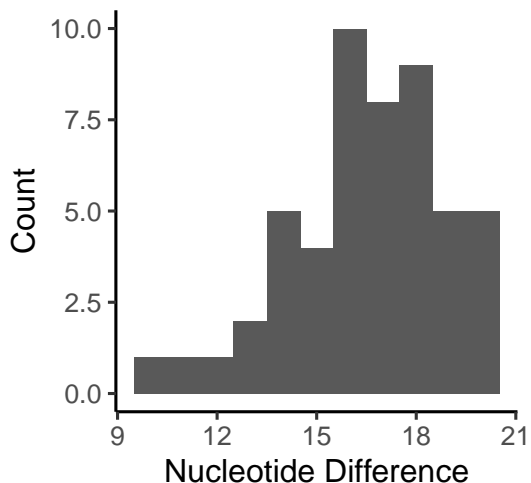
### IGHV4–NL\_5\*01\_S5158

393 sequences assigned  
37 (9.4%) exact matches, in which:  
35 unique CDR3  
5 unique J



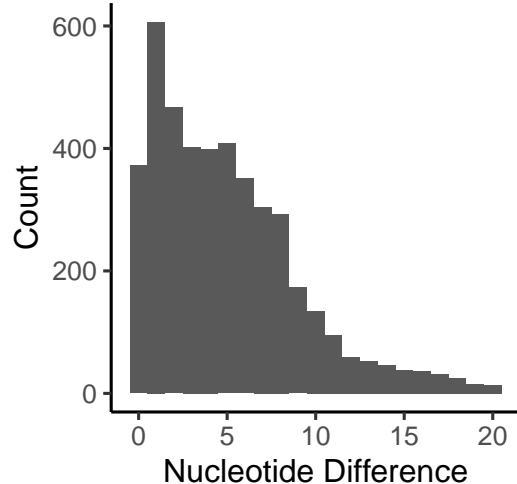
### IGHV4–NL\_9\*01\_S4990

129 sequences assigned  
No exact matches.



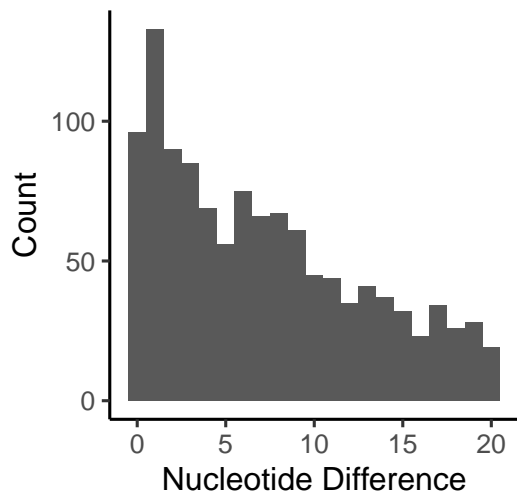
### IGHV5–157\*01\_S0308

4392 sequences assigned  
372 (8.5%) exact matches, in which:  
184 unique CDR3  
5 unique J



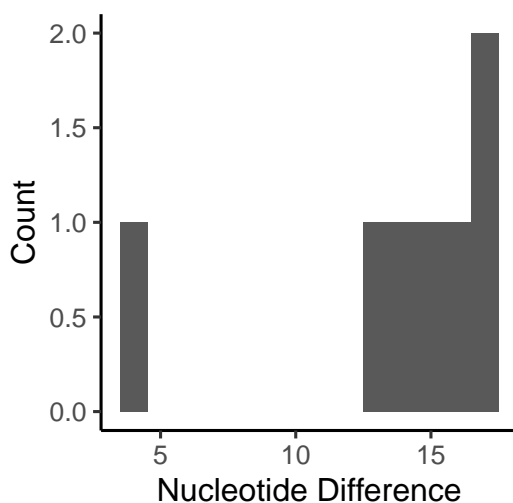
### IGHV4–NL\_5\*01\_S8645

1233 sequences assigned  
96 (7.8%) exact matches, in which:  
81 unique CDR3  
6 unique J



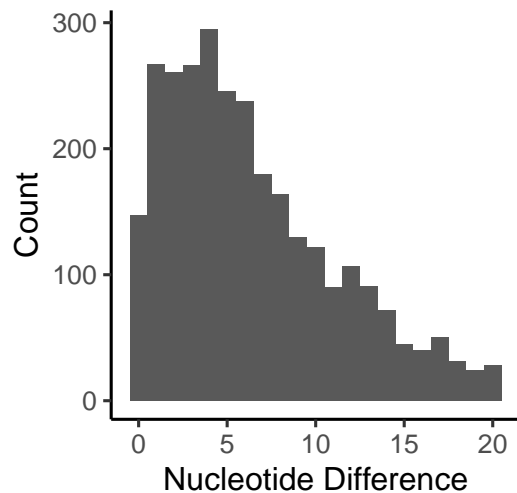
### IGHV4–NL\_9\*01\_S9889

8 sequences assigned  
No exact matches.



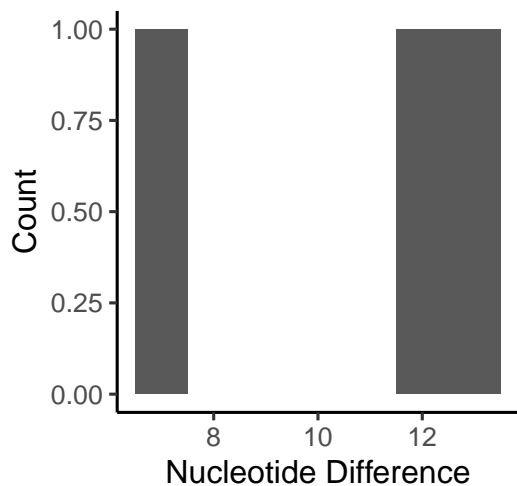
### IGHV5–157\*02\_S3440

2978 sequences assigned  
147 (4.9%) exact matches, in which:  
83 unique CDR3  
6 unique J



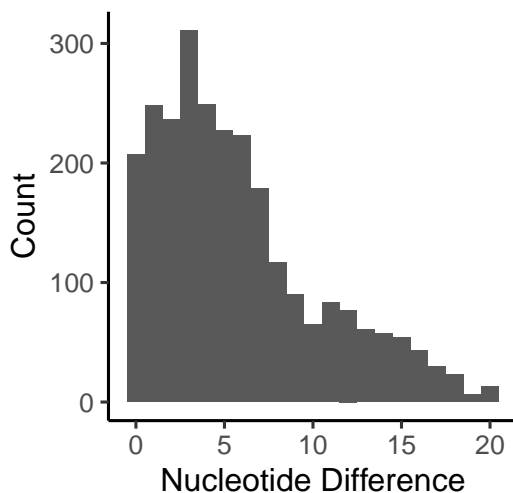
### IGHV4–NL\_9\*01\_S3502

5 sequences assigned  
No exact matches.



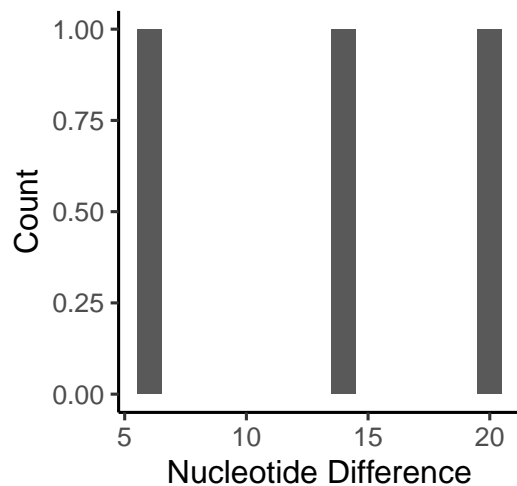
### IGHV5–15\*01\_S9061

2750 sequences assigned  
207 (7.5%) exact matches, in which:  
118 unique CDR3  
8 unique J



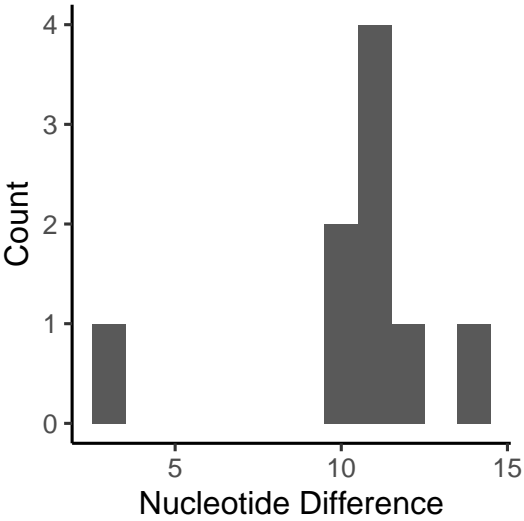
### IGHV7–135\*01\_S9086

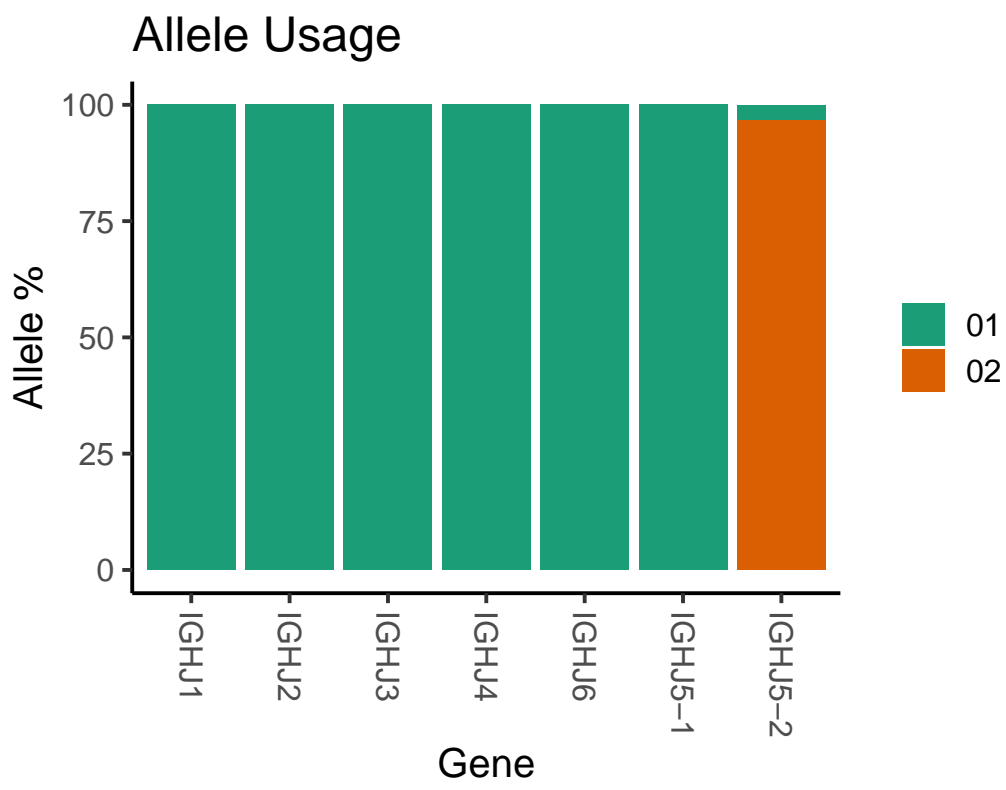
131 sequences assigned  
No exact matches.



# IGHV7-135\*02\_S1424

9 sequences assigned  
No exact matches.







Warning – no inferred sequences found.