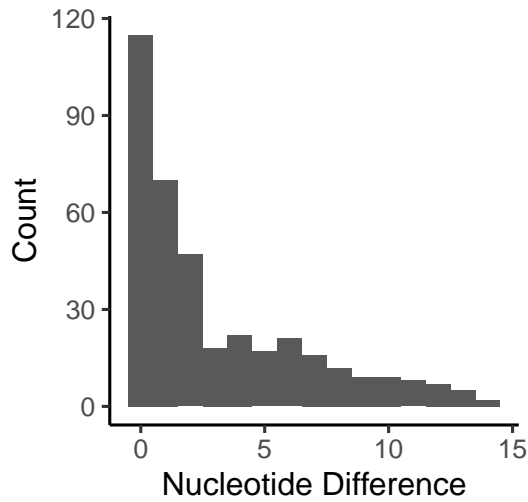


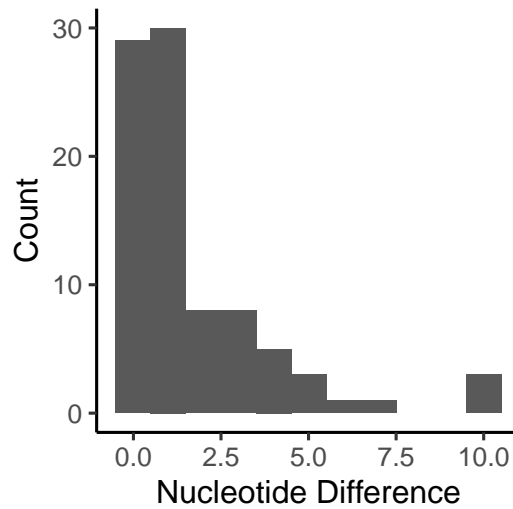
### IGHV1-60\*01\_S7772

387 sequences assigned  
115 (29.7%) exact matches, in which:  
77 unique CDR3  
6 unique J



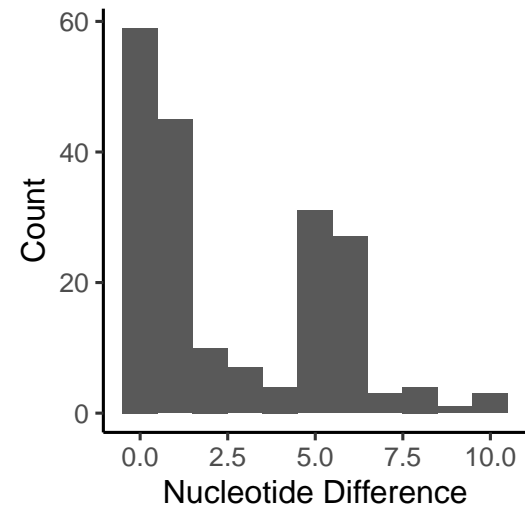
### IGHV1-124\*01\_S7834

92 sequences assigned  
29 (31.5%) exact matches, in which:  
15 unique CDR3  
5 unique J



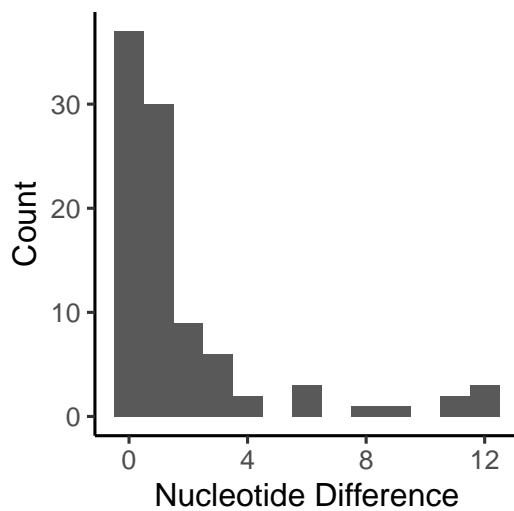
### IGHV1-138\*01\_S6073

202 sequences assigned  
59 (29.2%) exact matches, in which:  
54 unique CDR3  
8 unique J



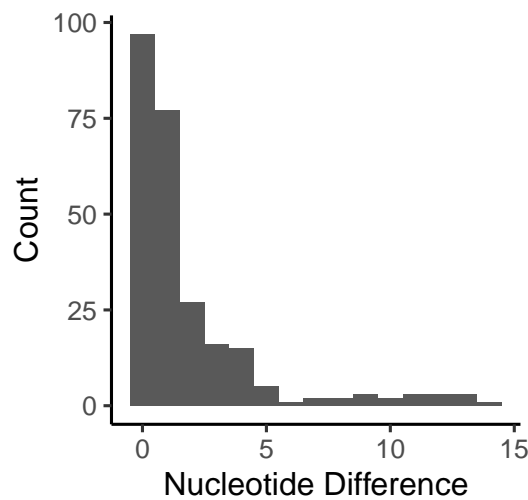
### IGHV1-84\*01\_S9022

94 sequences assigned  
37 (39.4%) exact matches, in which:  
17 unique CDR3  
5 unique J



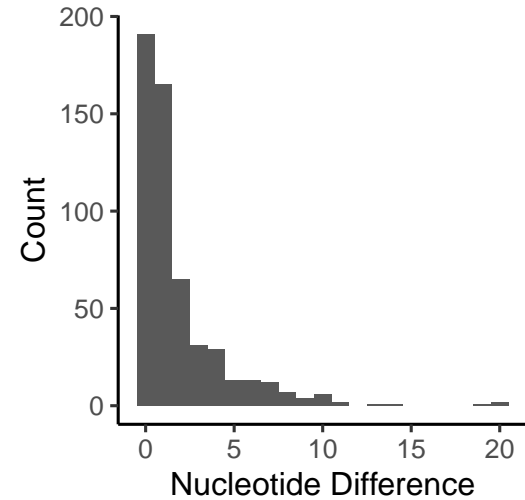
### IGHV1-138\*01\_S0851

260 sequences assigned  
97 (37.3%) exact matches, in which:  
71 unique CDR3  
9 unique J



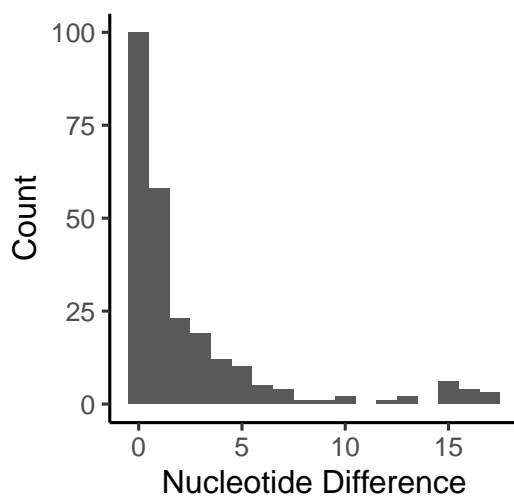
### IGHV1-138\*01\_S8860

547 sequences assigned  
191 (34.9%) exact matches, in which:  
148 unique CDR3  
7 unique J



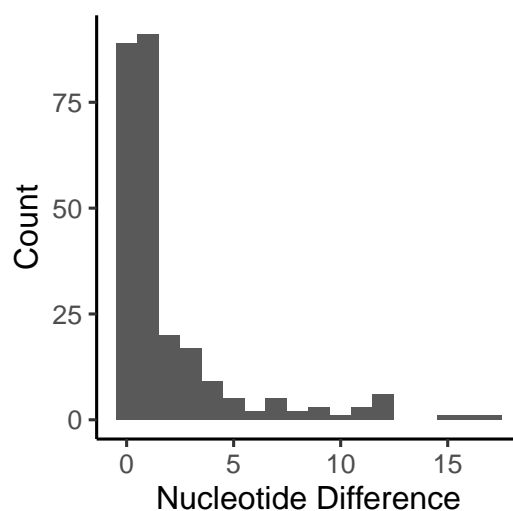
### IGHV1-84\*01\_S9171

253 sequences assigned  
100 (39.5%) exact matches, in which:  
44 unique CDR3  
8 unique J



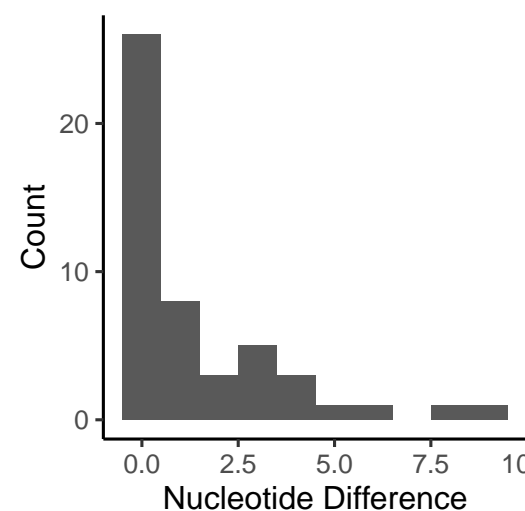
### IGHV1-138\*01\_S2054

258 sequences assigned  
89 (34.5%) exact matches, in which:  
69 unique CDR3  
5 unique J



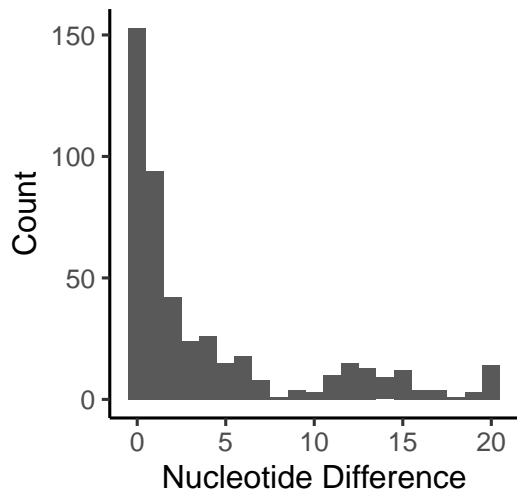
### IGHV1-170\*01\_S3055

60 sequences assigned  
26 (43.3%) exact matches, in which:  
10 unique CDR3  
5 unique J



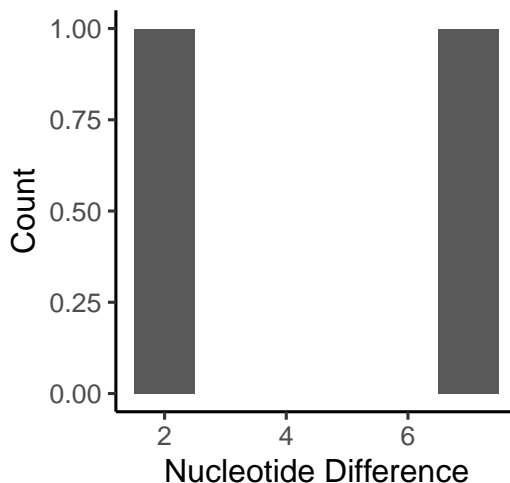
### IGHV1–NL\_1\*01\_S3125

481 sequences assigned  
153 (31.8%) exact matches, in which:  
104 unique CDR3  
6 unique J



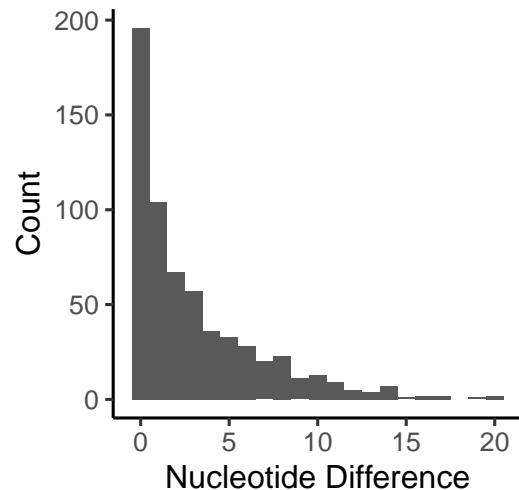
### IGHV1–NL\_2\*01\_S4581

2 sequences assigned  
No exact matches.



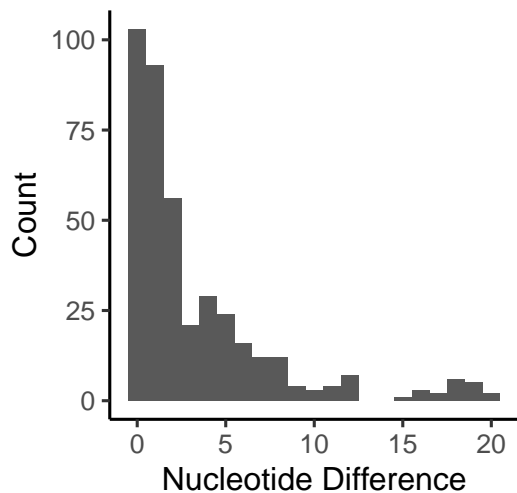
### IGHV2–7\*02\_S4078\_G29

627 sequences assigned  
196 (31.3%) exact matches, in which:  
173 unique CDR3  
7 unique J



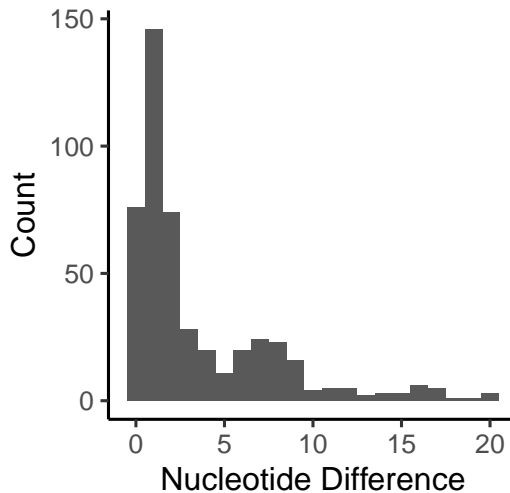
### IGHV1–NL\_1\*01\_S8759

410 sequences assigned  
103 (25.1%) exact matches, in which:  
64 unique CDR3  
8 unique J



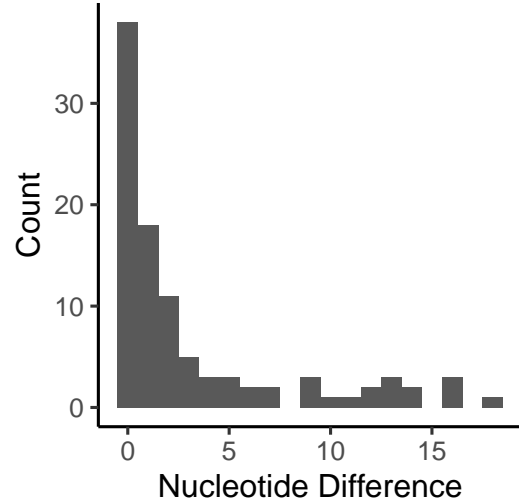
### IGHV2–7\*02\_S1732

482 sequences assigned  
76 (15.8%) exact matches, in which:  
57 unique CDR3  
7 unique J



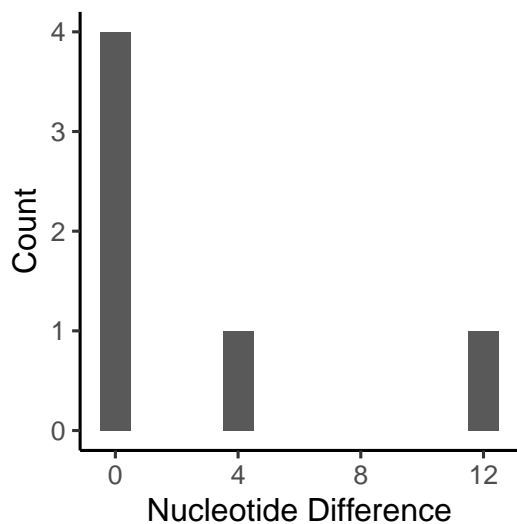
### IGHV2–69\*01\_A208C\_A2

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



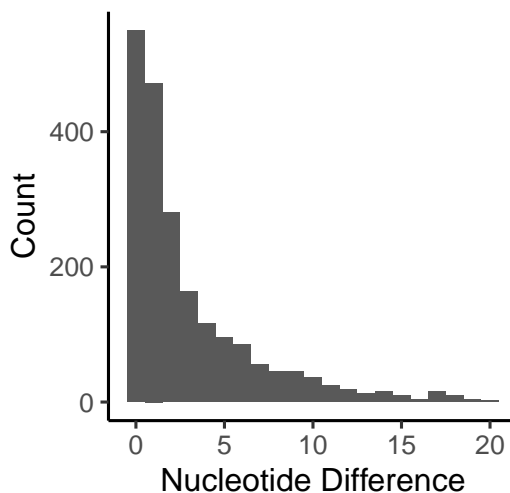
### IGHV1–NL\_2\*01\_S3477

6 sequences assigned  
4 (66.7%) exact matches, in which:  
3 unique CDR3  
1 unique J



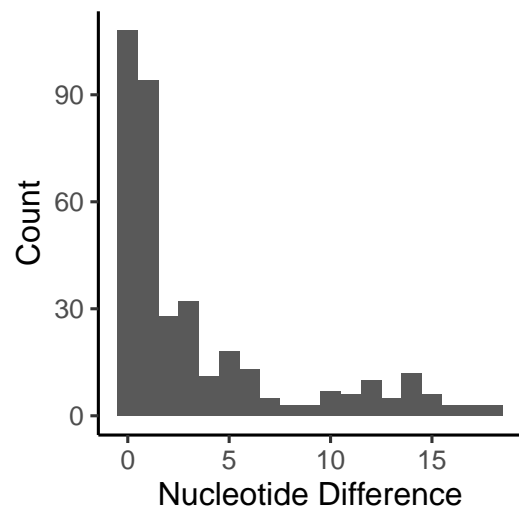
### IGHV2–7\*02\_S4078

2085 sequences assigned  
550 (26.4%) exact matches, in which:  
371 unique CDR3  
8 unique J



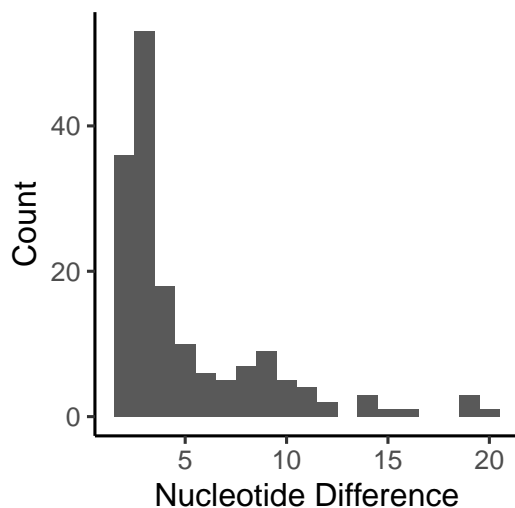
### IGHV2–69\*01\_S2886

380 sequences assigned  
108 (28.4%) exact matches, in which:  
64 unique CDR3  
8 unique J



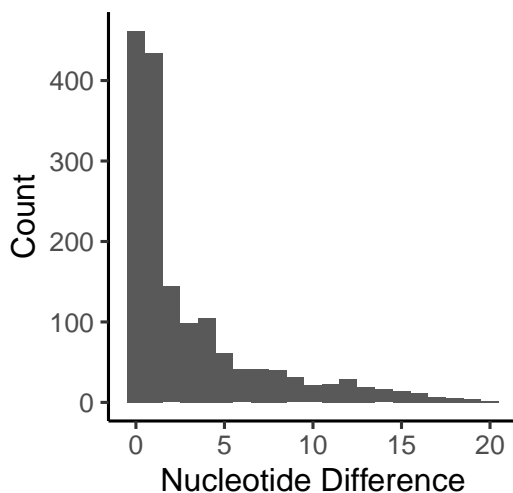
### IGHV2-69\*01\_S4953

321 sequences assigned  
No exact matches.



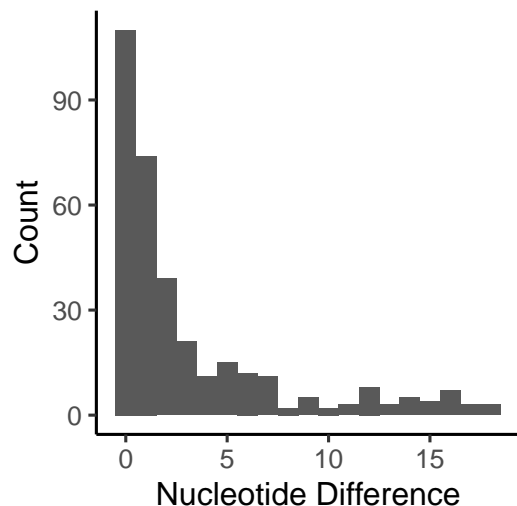
### IGHV2-173\*01\_S2781

1656 sequences assigned  
462 (27.9%) exact matches, in which:  
294 unique CDR3  
9 unique J



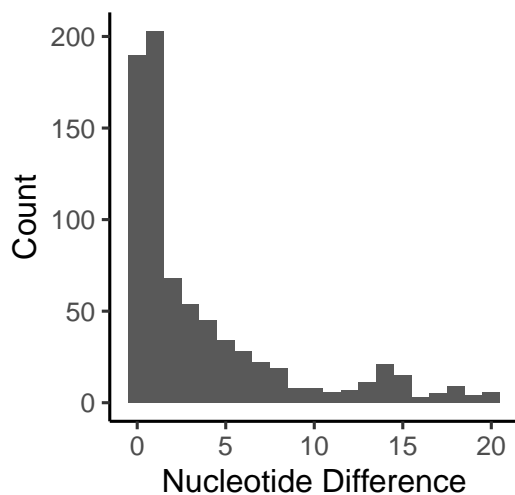
### IGHV2-NL\_1\*01\_S5779\_C

359 sequences assigned  
110 (30.6%) exact matches, in which:  
103 unique CDR3  
7 unique J



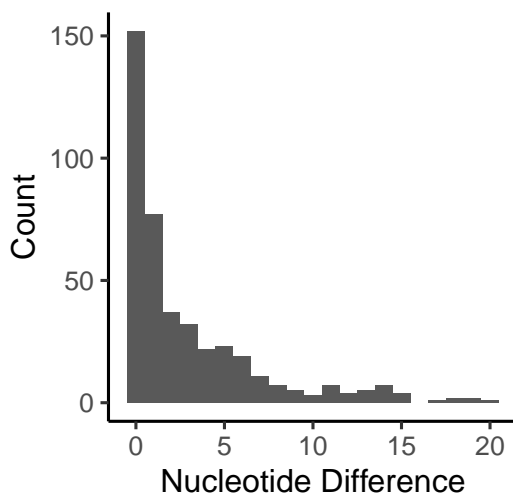
### IGHV2-118\*01\_S4632

831 sequences assigned  
190 (22.9%) exact matches, in which:  
126 unique CDR3  
7 unique J



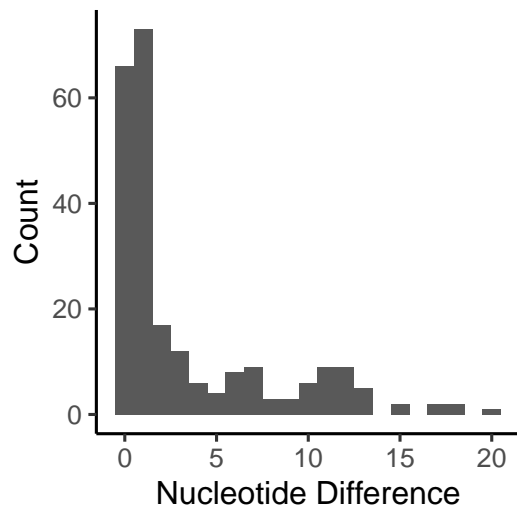
### IGHV2-173\*01\_S2781\_G

425 sequences assigned  
152 (35.8%) exact matches, in which:  
133 unique CDR3  
8 unique J



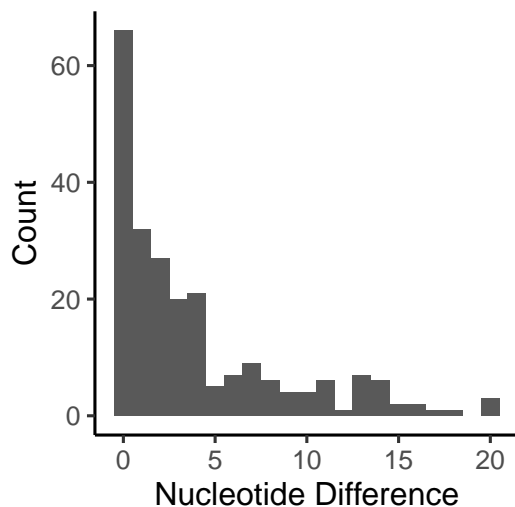
### IGHV2-NL\_2\*01\_S2193

266 sequences assigned  
66 (24.8%) exact matches, in which:  
42 unique CDR3  
6 unique J



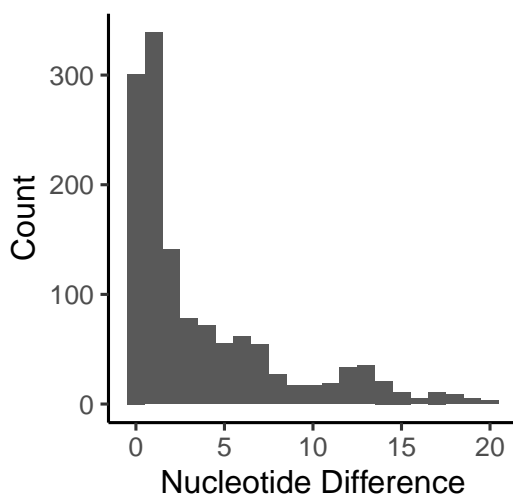
### IGHV2-118\*01\_S4632\_G2

243 sequences assigned  
66 (27.2%) exact matches, in which:  
63 unique CDR3  
7 unique J



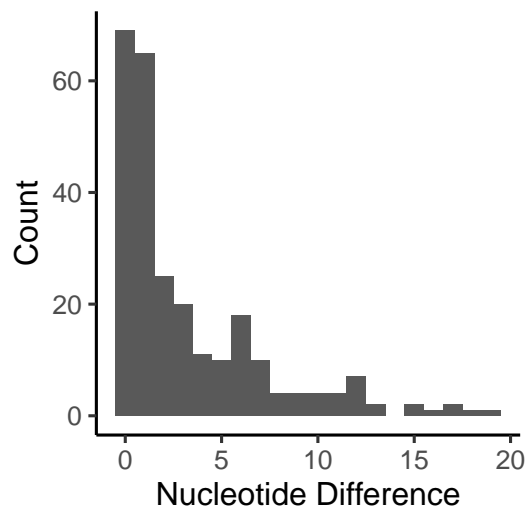
### IGHV2-NL\_1\*01\_S5779

1378 sequences assigned  
301 (21.8%) exact matches, in which:  
197 unique CDR3  
8 unique J



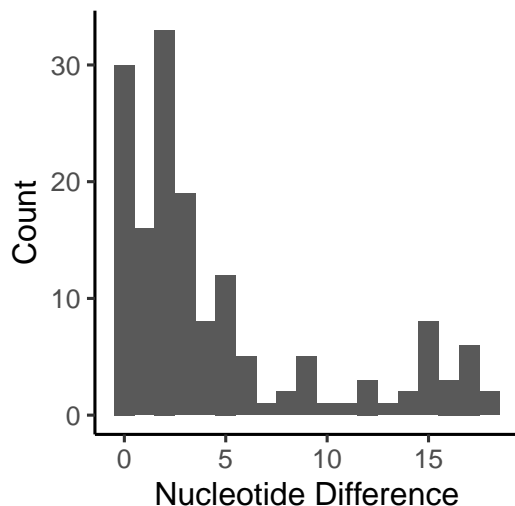
### IGHV3-5\*01\_S0199

276 sequences assigned  
69 (25%) exact matches, in which:  
41 unique CDR3  
6 unique J



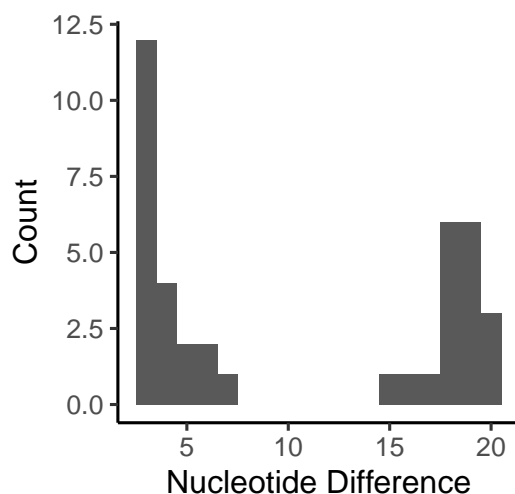
### IGHV3-9\*01\_S1378

168 sequences assigned  
30 (17.9%) exact matches, in which:  
25 unique CDR3  
6 unique J



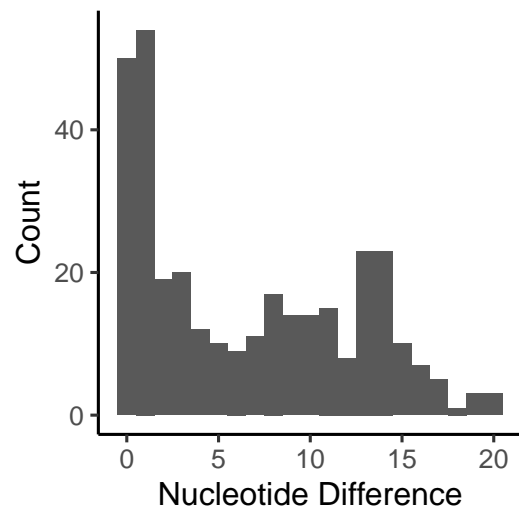
### IGHV3-28\*01\_S7540

66 sequences assigned  
No exact matches.



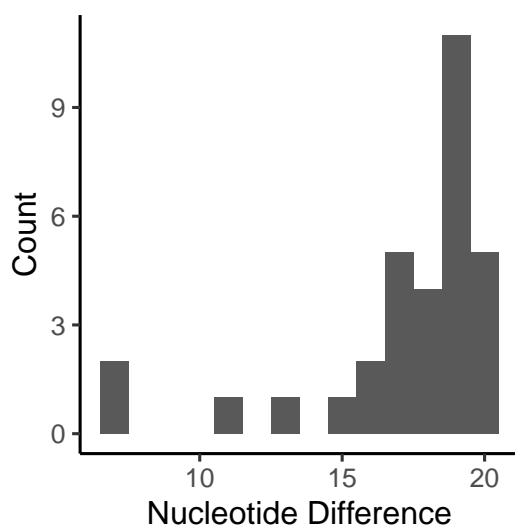
### IGHV3-37\*01\_S4016

454 sequences assigned  
50 (11%) exact matches, in which:  
35 unique CDR3  
8 unique J



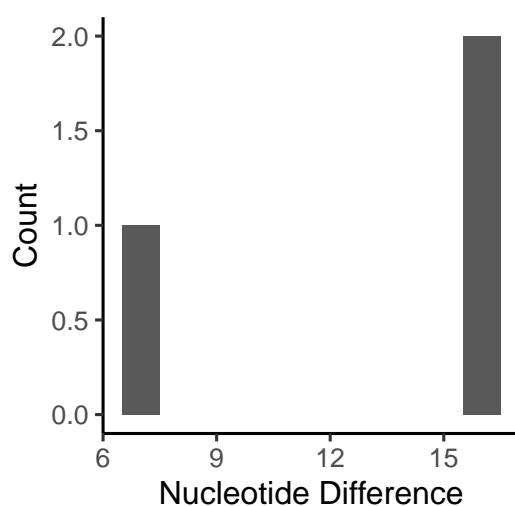
### IGHV3-28\*01\_S3617

49 sequences assigned  
No exact matches.



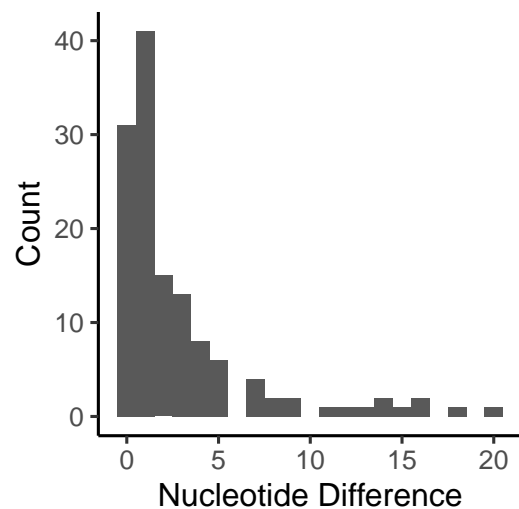
### IGHV3-34\*01\_S4677

5 sequences assigned  
No exact matches.



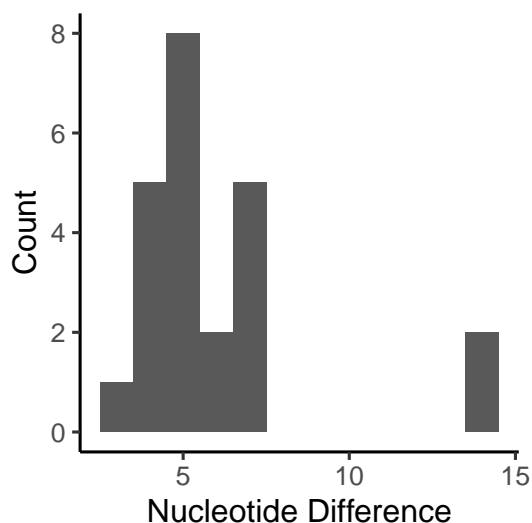
### IGHV3-52\*02\_S4087

133 sequences assigned  
31 (23.3%) exact matches, in which:  
20 unique CDR3  
5 unique J



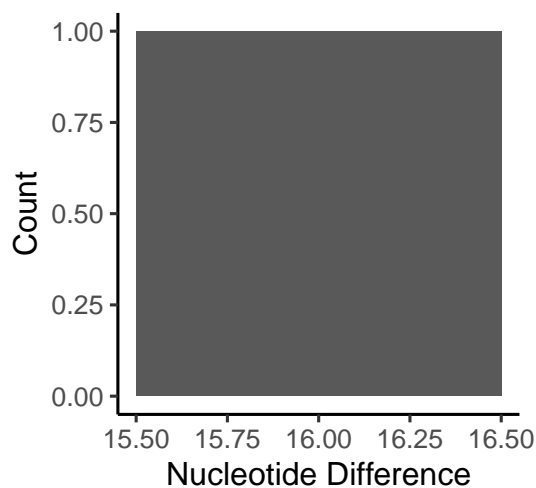
### IGHV3-28\*01\_S4621

29 sequences assigned  
No exact matches.



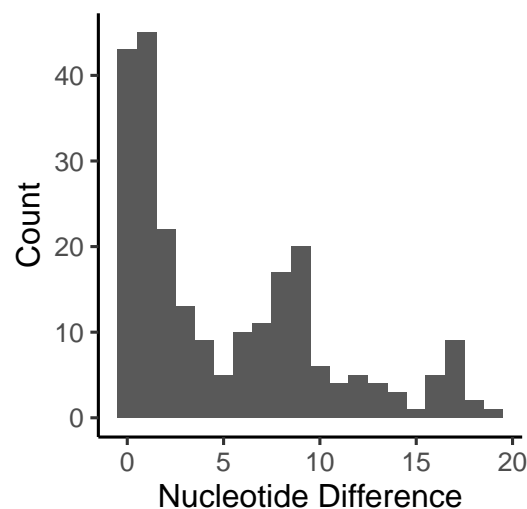
### IGHV3-34\*02\_S0219

1 sequences assigned  
No exact matches.



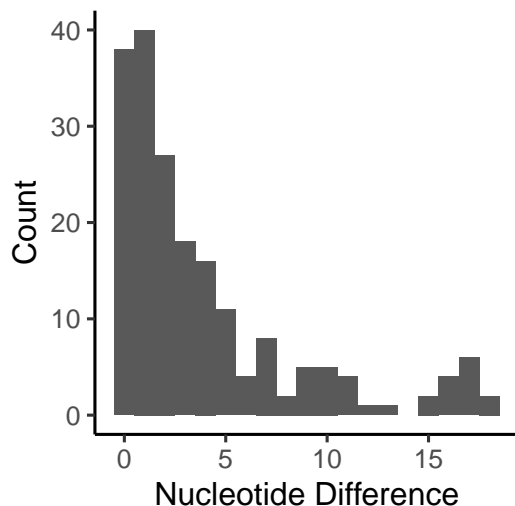
### IGHV3-53\*01\_S4772

238 sequences assigned  
43 (18.1%) exact matches, in which:  
28 unique CDR3  
7 unique J



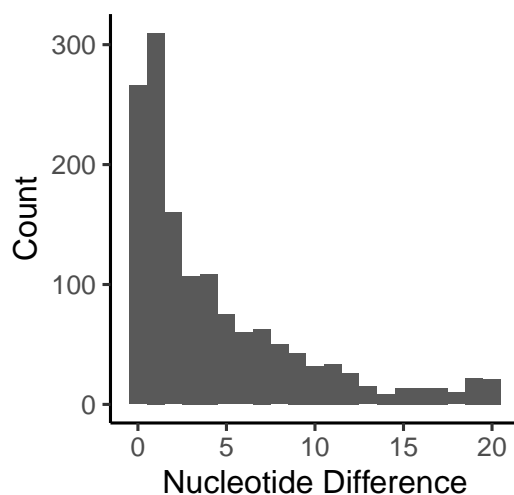
### IGHV3-53\*01\_S6933

205 sequences assigned  
38 (18.5%) exact matches, in which:  
27 unique CDR3  
5 unique J



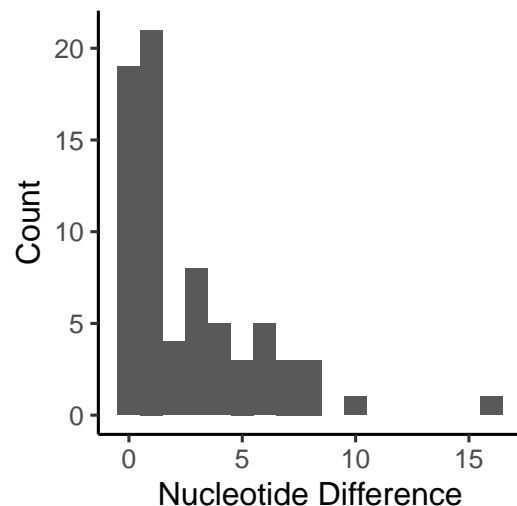
### IGHV3-76\*01\_S0477

1779 sequences assigned  
266 (15%) exact matches, in which:  
173 unique CDR3  
8 unique J



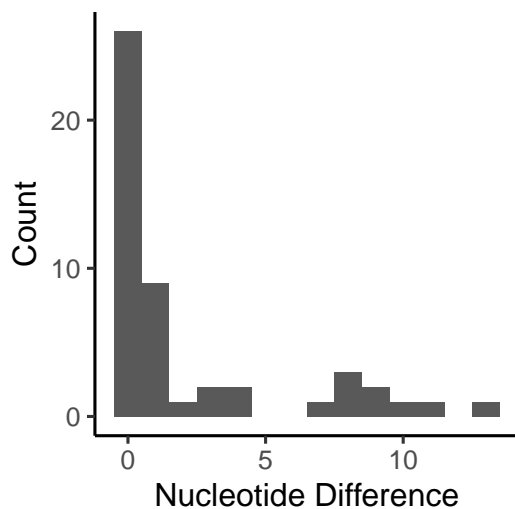
### IGHV3-87\*02\_S7927

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



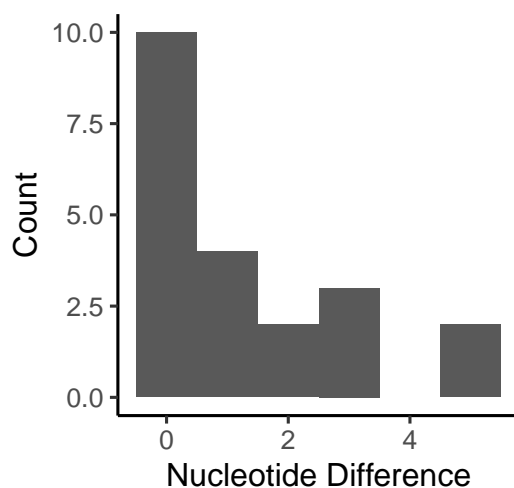
### IGHV3-73\*01\_S8108

49 sequences assigned  
26 (53.1%) exact matches, in which:  
17 unique CDR3  
6 unique J



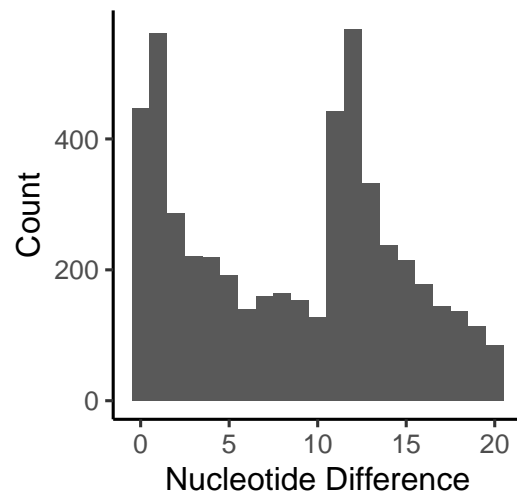
### IGHV3-83\*02\_S1476

23 sequences assigned  
10 (43.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



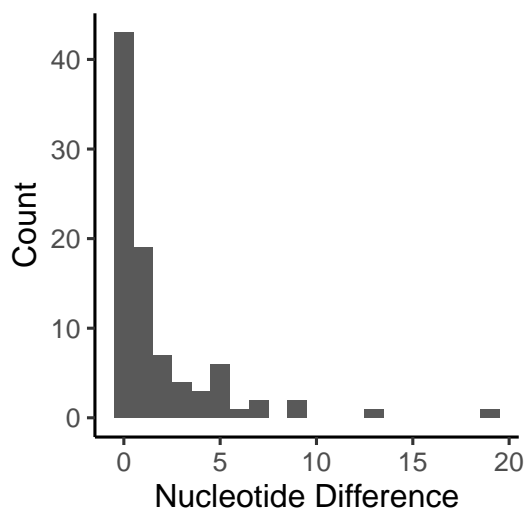
### IGHV3-88\*01\_S3750

6200 sequences assigned  
447 (7.2%) exact matches, in which:  
287 unique CDR3  
8 unique J



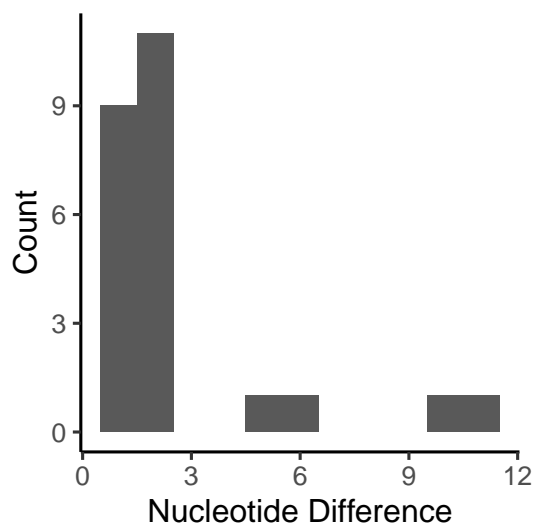
### IGHV3-73\*01\_S9948

90 sequences assigned  
43 (47.8%) exact matches, in which:  
26 unique CDR3  
5 unique J



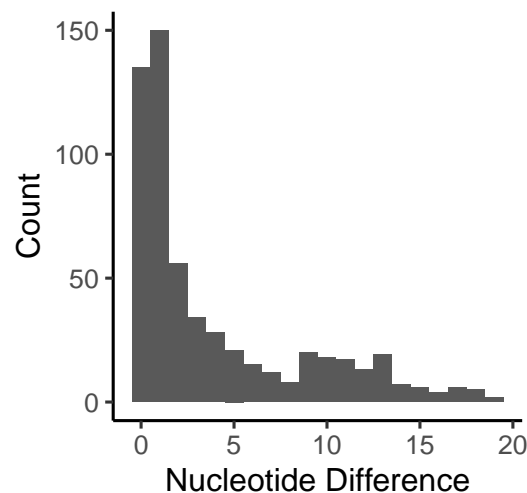
### IGHV3-87\*01\_S5669

25 sequences assigned  
No exact matches.



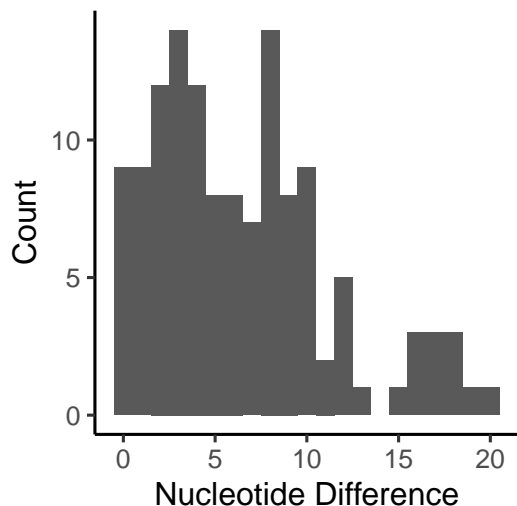
### IGHV3-94\*01\_S9358

594 sequences assigned  
135 (22.7%) exact matches, in which:  
93 unique CDR3  
7 unique J



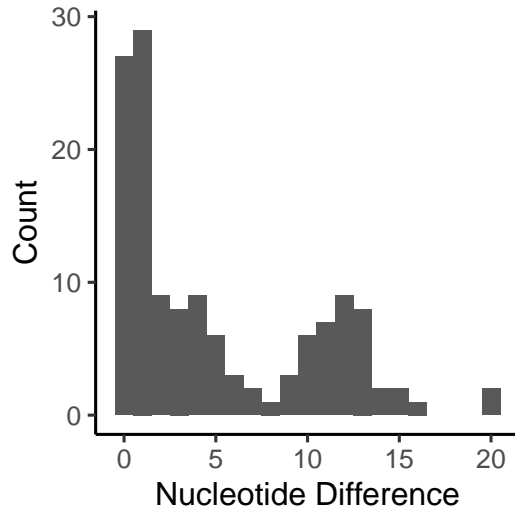
### IGHV3-100\*01\_S4375

211 sequences assigned  
9 (4.3%) exact matches, in which:  
7 unique CDR3  
2 unique J



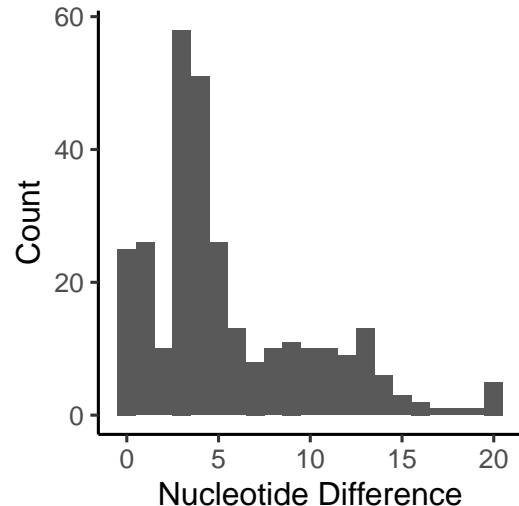
### IGHV3-119\*01\_S9769

138 sequences assigned  
27 (19.6%) exact matches, in which:  
15 unique CDR3  
3 unique J



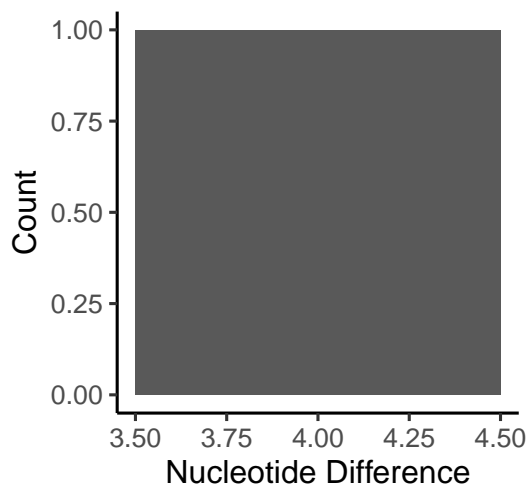
### IGHV3-127\*01\_S7059

325 sequences assigned  
25 (7.7%) exact matches, in which:  
13 unique CDR3  
4 unique J



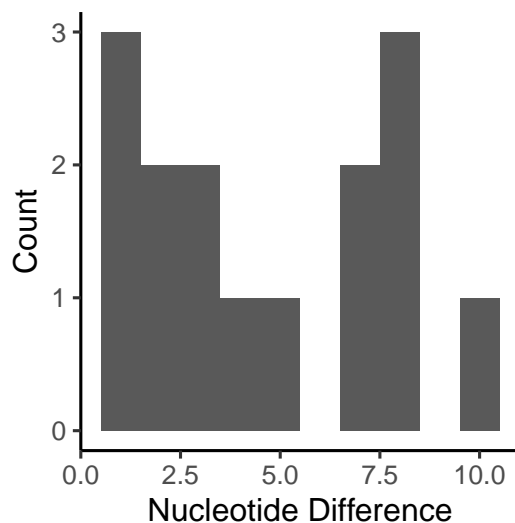
### IGHV3-103\*01\_S0760

1 sequences assigned  
No exact matches.



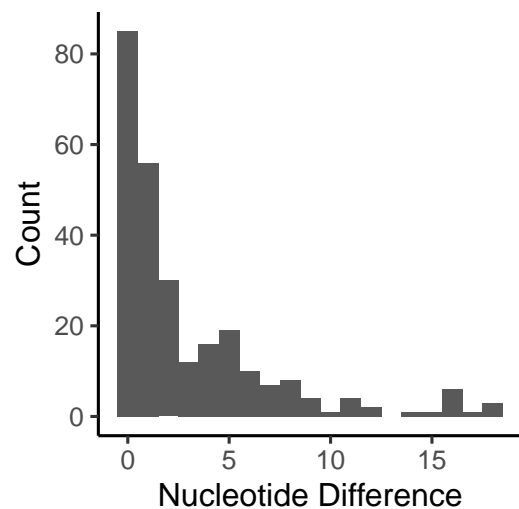
### IGHV3-120\*01\_S7674

15 sequences assigned  
No exact matches.



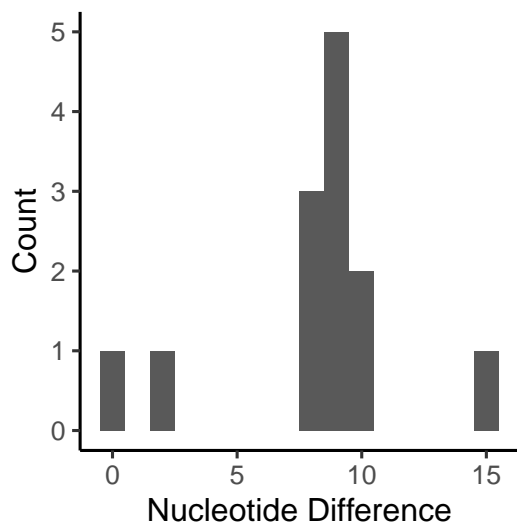
### IGHV3-141\*01\_S2819

267 sequences assigned  
85 (31.8%) exact matches, in which:  
70 unique CDR3  
7 unique J



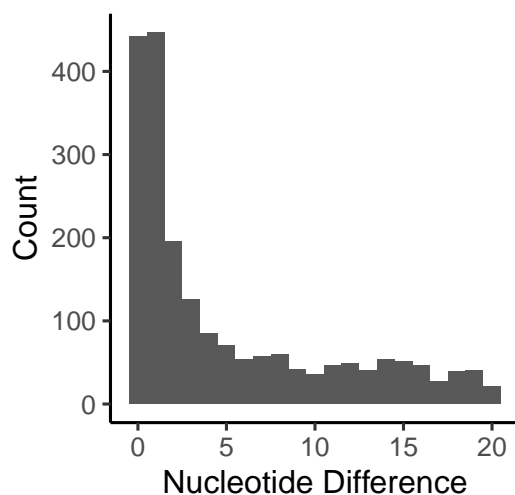
### IGHV3-103\*01\_S1165

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



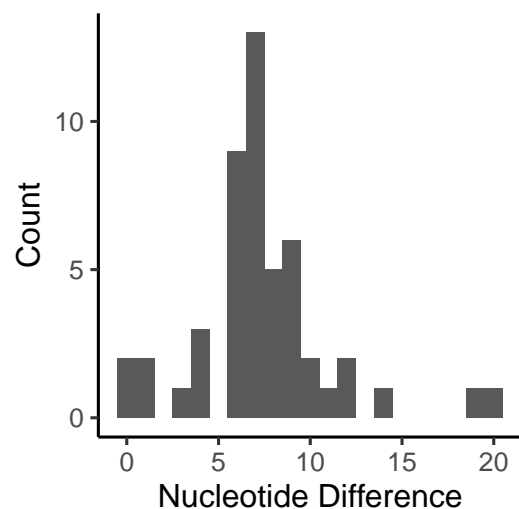
### IGHV3-122\*01\_S8388

2296 sequences assigned  
442 (19.3%) exact matches, in which:  
285 unique CDR3  
8 unique J



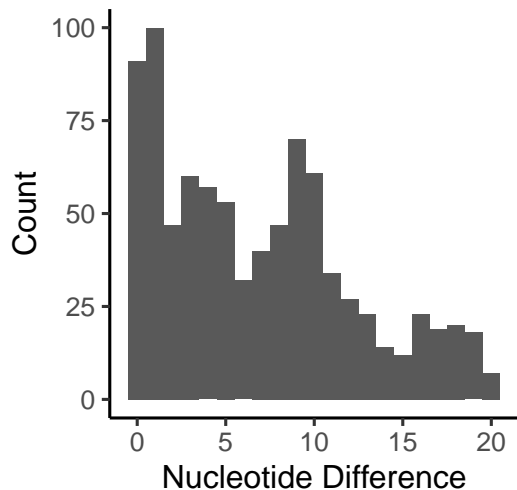
### IGHV3-143\*01\_S5283

49 sequences assigned  
2 (4.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



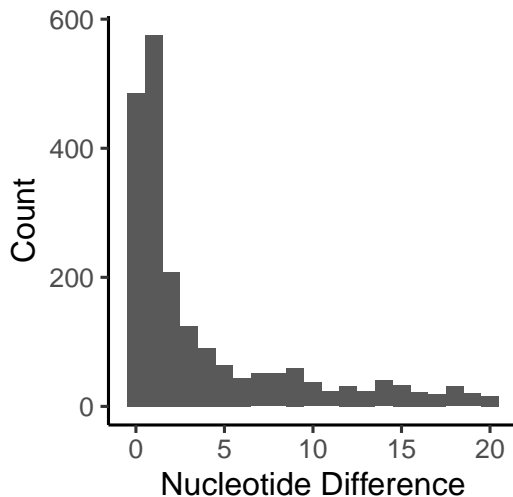
### IGHV3-152\*01\_S8754

888 sequences assigned  
91 (10.2%) exact matches, in which:  
60 unique CDR3  
7 unique J



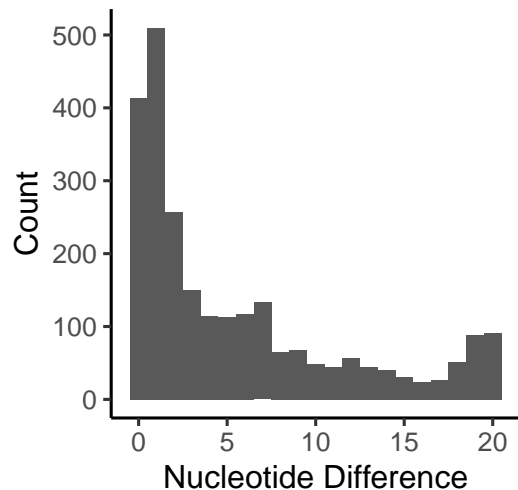
### IGHV3-187\*01\_S8341

2384 sequences assigned  
485 (20.3%) exact matches, in which:  
310 unique CDR3  
8 unique J



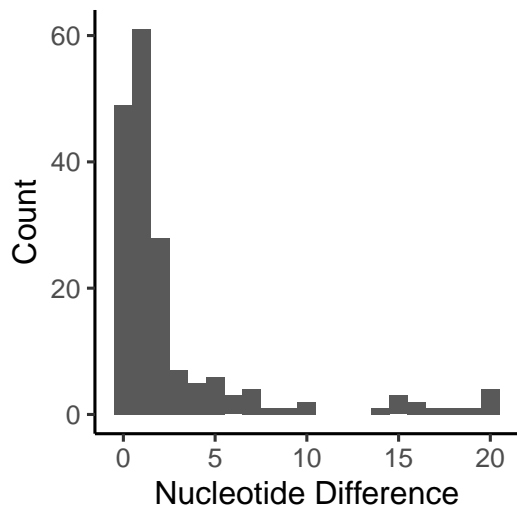
### IGHV3-NL\_10\*02\_S2212

2955 sequences assigned  
413 (14%) exact matches, in which:  
276 unique CDR3  
9 unique J



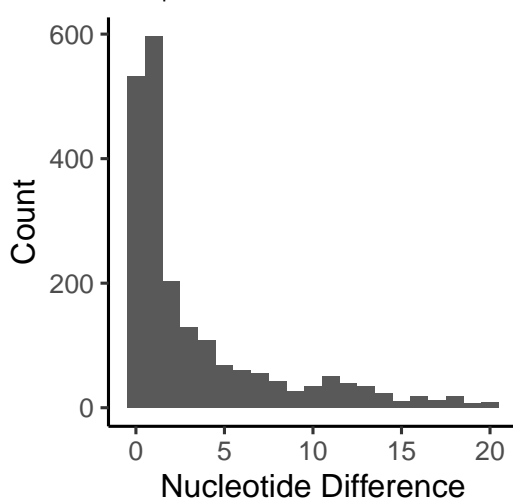
### IGHV3-172\*01\_S8488

186 sequences assigned  
49 (26.3%) exact matches, in which:  
30 unique CDR3  
6 unique J



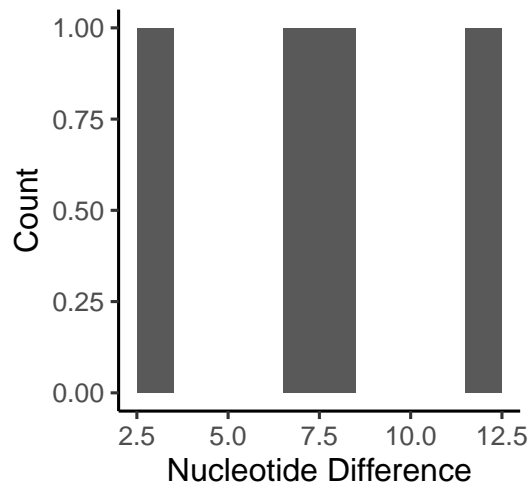
### IGHV3-NL\_1\*01\_S1263

2199 sequences assigned  
532 (24.2%) exact matches, in which:  
347 unique CDR3  
8 unique J



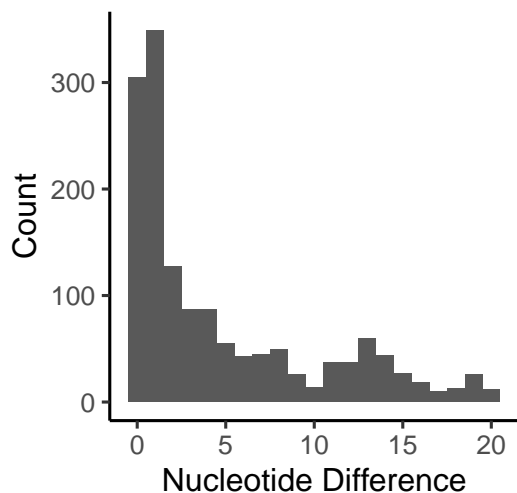
### IGHV3-NL\_11\*01\_S4619

72 sequences assigned  
No exact matches.



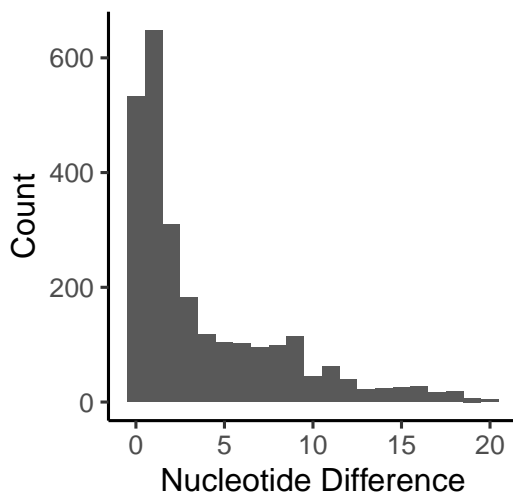
### IGHV3-187\*01\_S6840

1728 sequences assigned  
305 (17.7%) exact matches, in which:  
194 unique CDR3  
8 unique J



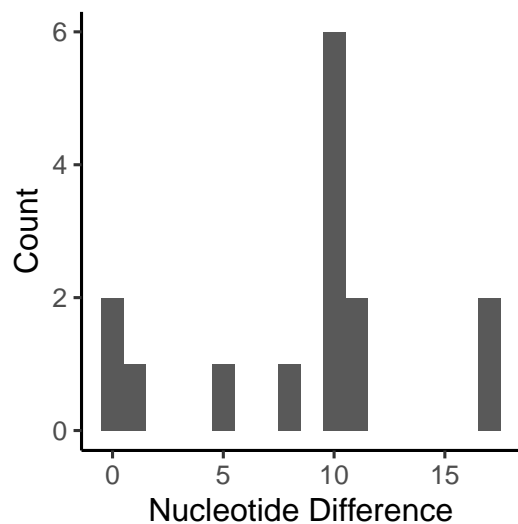
### IGHV3-NL\_1\*01\_S5784

2654 sequences assigned  
532 (20%) exact matches, in which:  
328 unique CDR3  
8 unique J



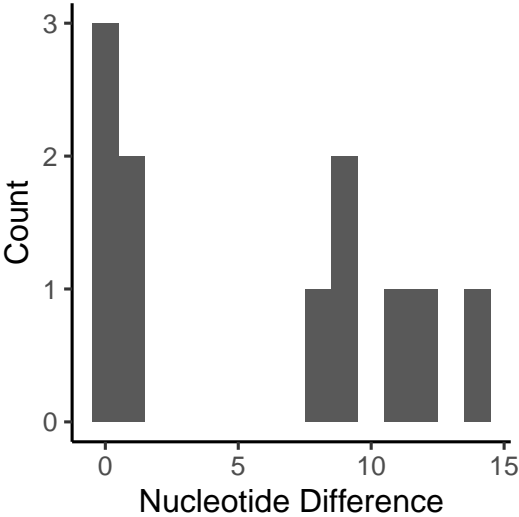
### IGHV3-NL\_11\*01\_S5714

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



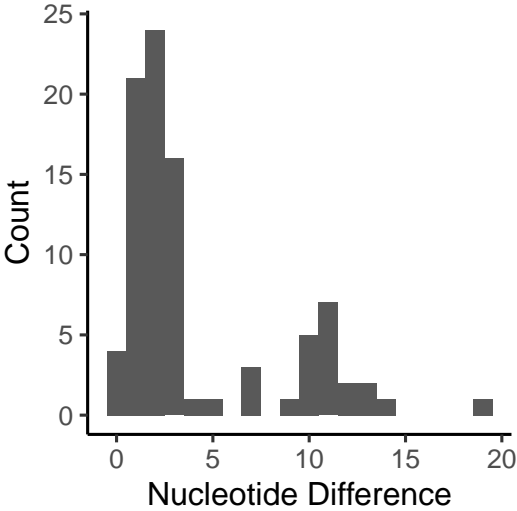
IGHV3-NL\_11\*01\_S7399

177 sequences assigned  
3 (1.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



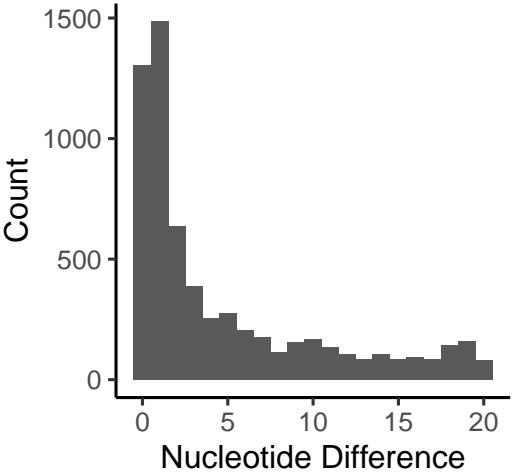
IGHV3-NL\_13\*01\_S6424

93 sequences assigned  
4 (4.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



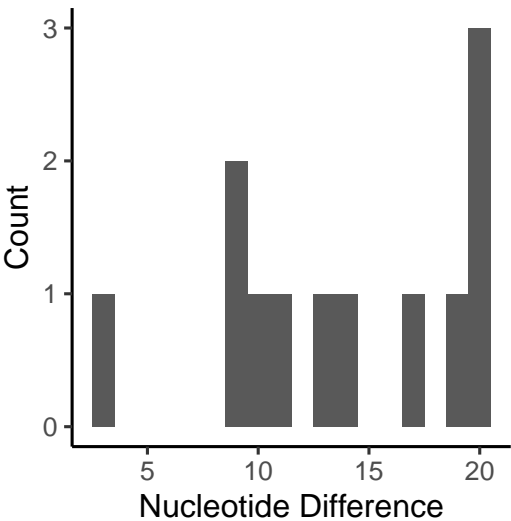
IGHV3-NL\_17\*01\_S240

6955 sequences assigned  
1304 (18.7%) exact matches, in which:  
829 unique CDR3  
10 unique J



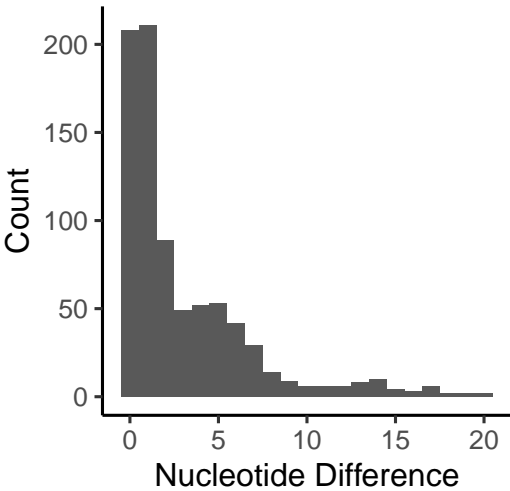
IGHV3-NL\_11\*01\_S7825

3087 sequences assigned  
No exact matches.



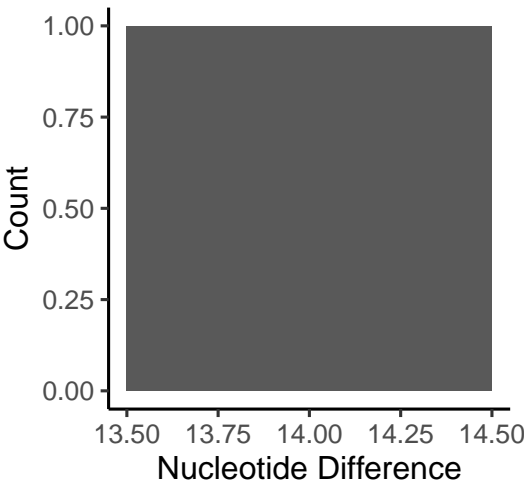
IGHV3-NL\_14\*01\_S9823

826 sequences assigned  
208 (25.2%) exact matches, in which:  
139 unique CDR3  
7 unique J



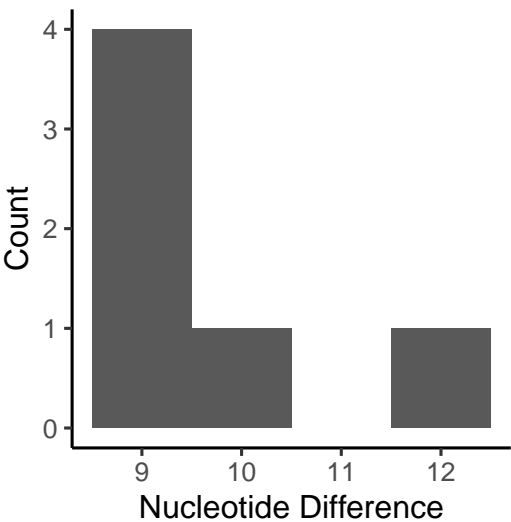
IGHV3-NL\_18\*01\_S3886

1 sequences assigned  
No exact matches.



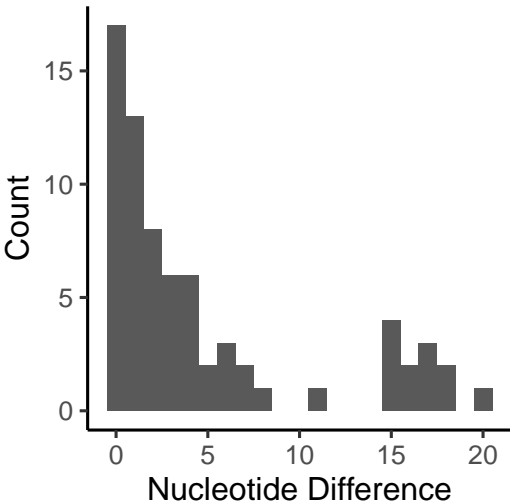
IGHV3-NL\_12\*02\_S5358

6 sequences assigned  
No exact matches.



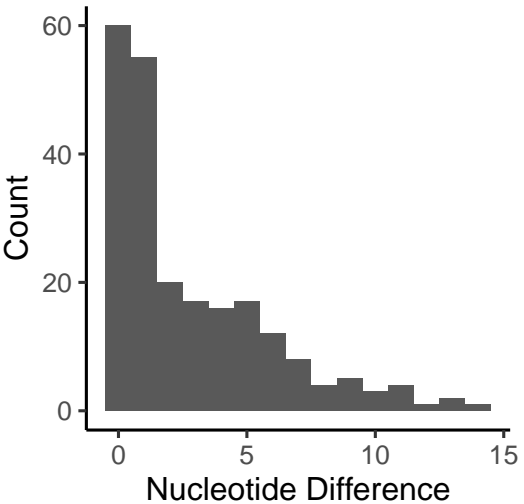
IGHV3-NL\_16\*01\_S4017

457 sequences assigned  
17 (3.7%) exact matches, in which:  
14 unique CDR3  
6 unique J



IGHV3-NL\_19\*01\_S8136

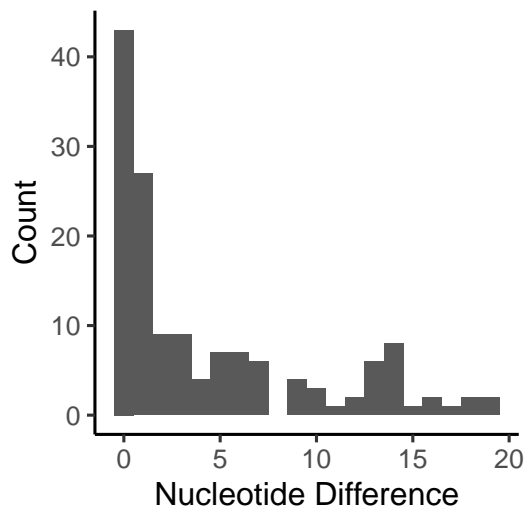
231 sequences assigned  
60 (26%) exact matches, in which:  
40 unique CDR3  
6 unique J





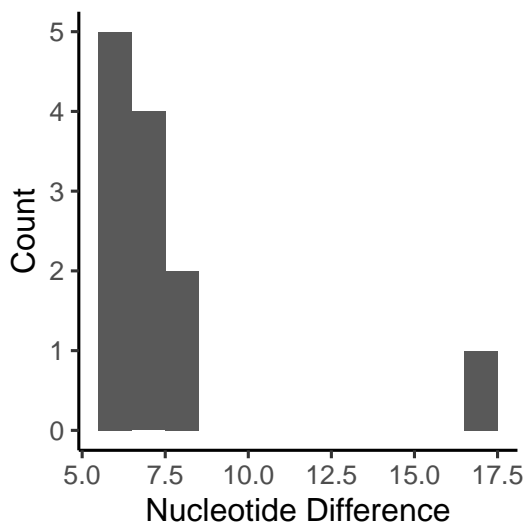
### IGHV3–NL\_19\*01\_S8248

150 sequences assigned  
43 (28.7%) exact matches, in which:  
32 unique CDR3  
5 unique J



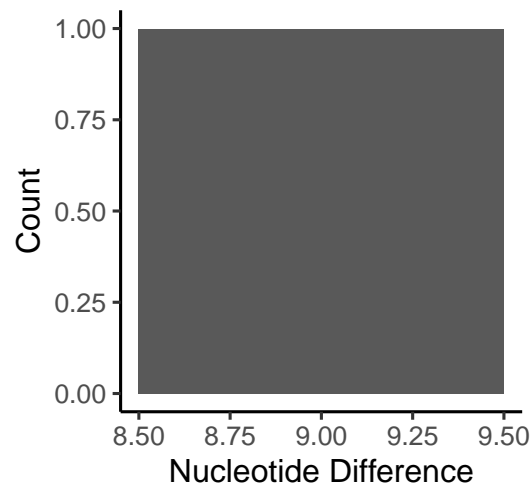
### IGHV3–NL\_4\*01\_S9635

13 sequences assigned  
No exact matches.



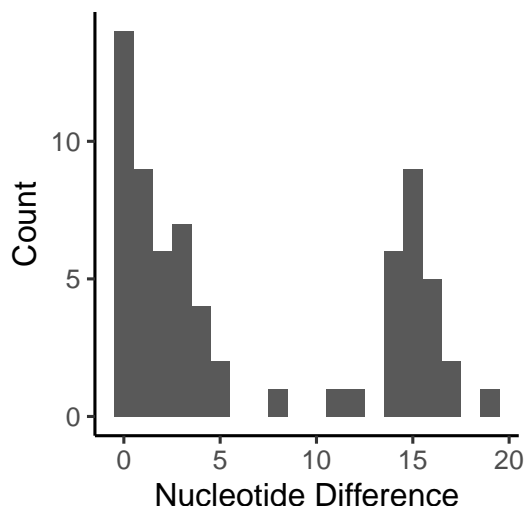
### IGHV3–NL\_6\*02\_S6474

3 sequences assigned  
No exact matches.



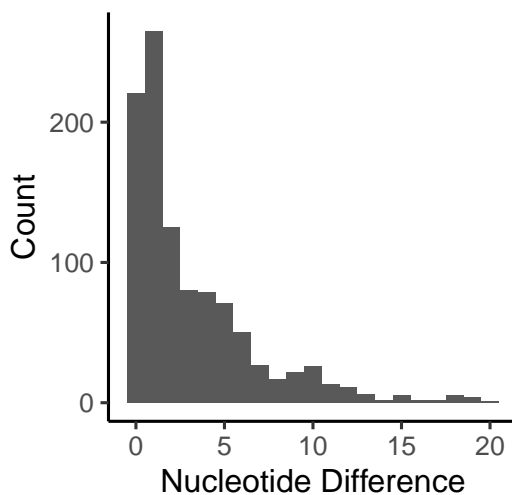
### IGHV3–NL\_2\*01\_S6231

71 sequences assigned  
14 (19.7%) exact matches, in which:  
8 unique CDR3  
3 unique J



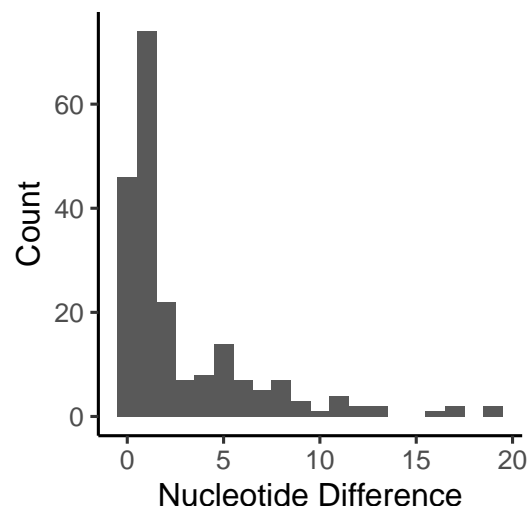
### IGHV3–NL\_5\*01\_S3315

1081 sequences assigned  
221 (20.4%) exact matches, in which:  
126 unique CDR3  
7 unique J



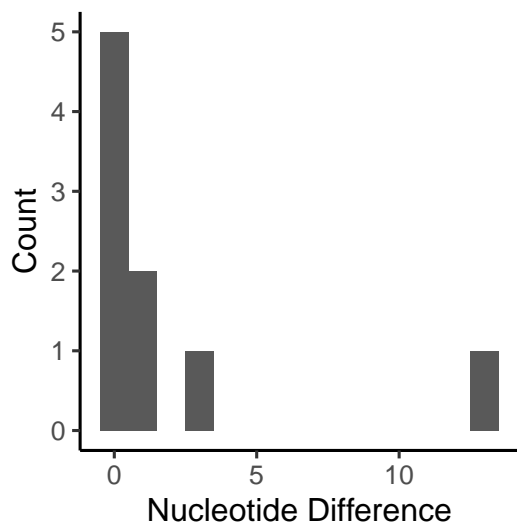
### IGHV3–NL\_8\*01\_S9584

226 sequences assigned  
46 (20.4%) exact matches, in which:  
31 unique CDR3  
6 unique J



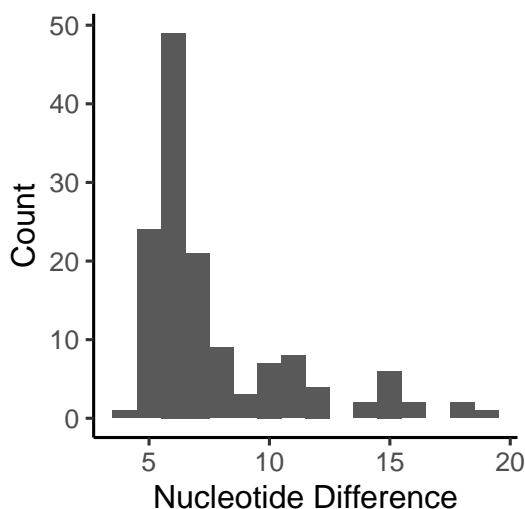
### IGHV3–NL\_2\*01\_S9948

10 sequences assigned  
5 (50%) exact matches, in which:  
4 unique CDR3  
2 unique J



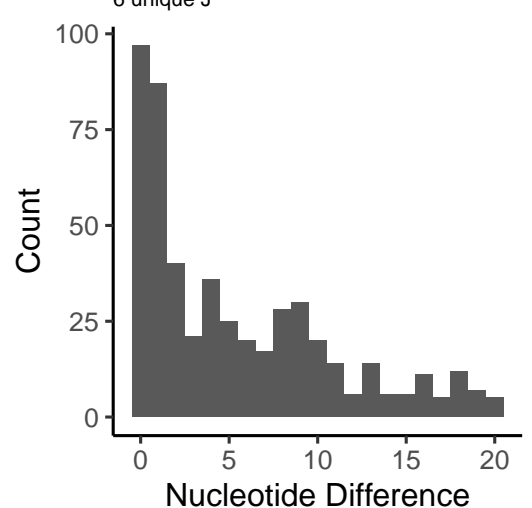
### IGHV3–NL\_5\*01\_S7761

159 sequences assigned  
No exact matches.



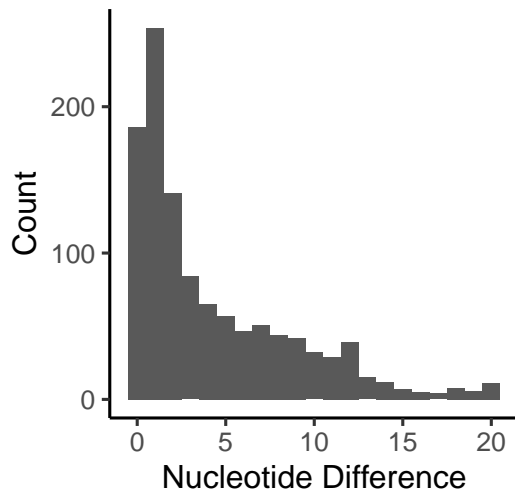
### IGHV3–NL\_9\*01\_S1652

542 sequences assigned  
97 (17.9%) exact matches, in which:  
66 unique CDR3  
6 unique J



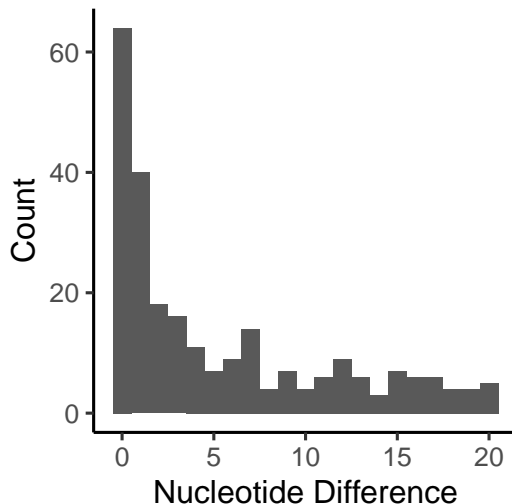
### IGHV3–NL\_9\*01\_S6098

1259 sequences assigned  
186 (14.8%) exact matches, in which:  
122 unique CDR3  
8 unique J



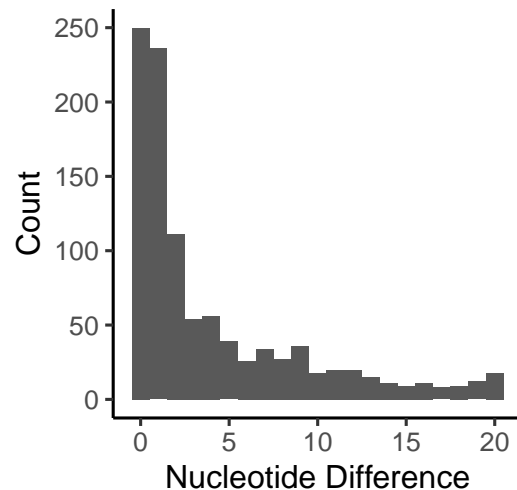
### IGHV4–93\*01\_S1335

256 sequences assigned  
64 (25%) exact matches, in which:  
55 unique CDR3  
8 unique J



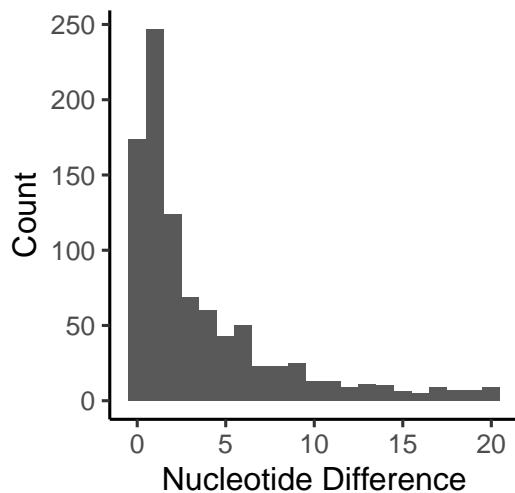
### IGHV4–117\*01\_S3417

1194 sequences assigned  
250 (20.9%) exact matches, in which:  
204 unique CDR3  
7 unique J



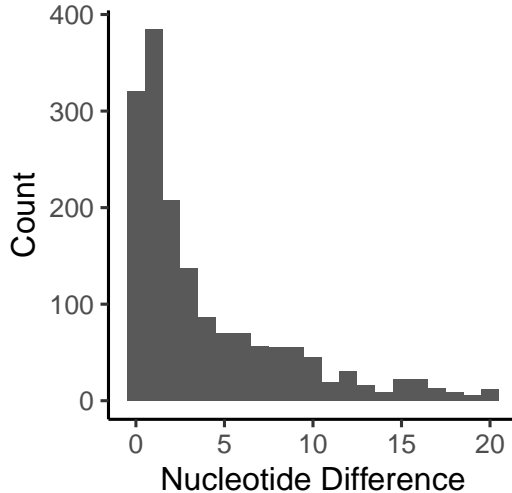
### IGHV4–67\*02\_S4494

1098 sequences assigned  
174 (15.8%) exact matches, in which:  
136 unique CDR3  
7 unique J



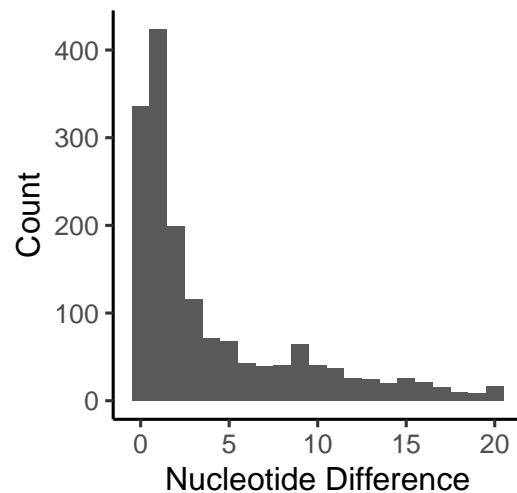
### IGHV4–117\*01\_S0406

1963 sequences assigned  
321 (16.4%) exact matches, in which:  
276 unique CDR3  
8 unique J



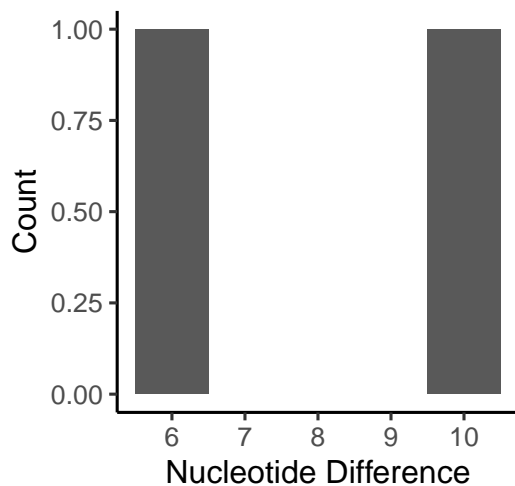
### IGHV4–144\*01\_S3577

1906 sequences assigned  
336 (17.6%) exact matches, in which:  
262 unique CDR3  
9 unique J



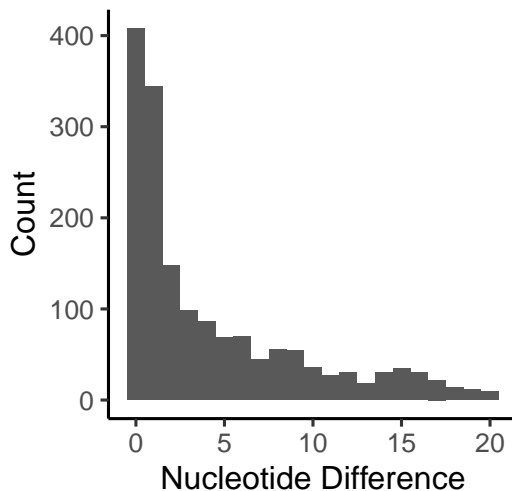
### IGHV4–72\*01\_S8261

2 sequences assigned  
No exact matches.



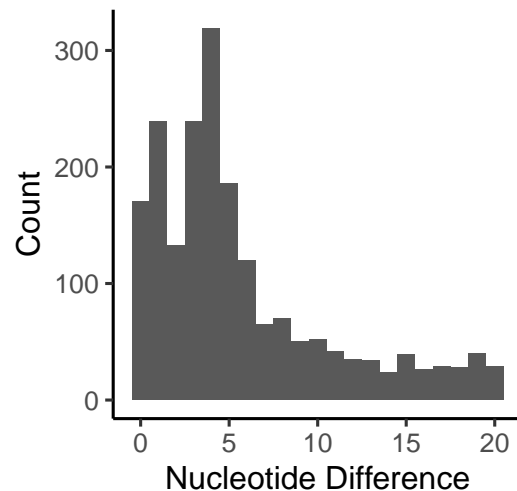
### IGHV4–117\*01\_S3378

1763 sequences assigned  
408 (23.1%) exact matches, in which:  
317 unique CDR3  
9 unique J



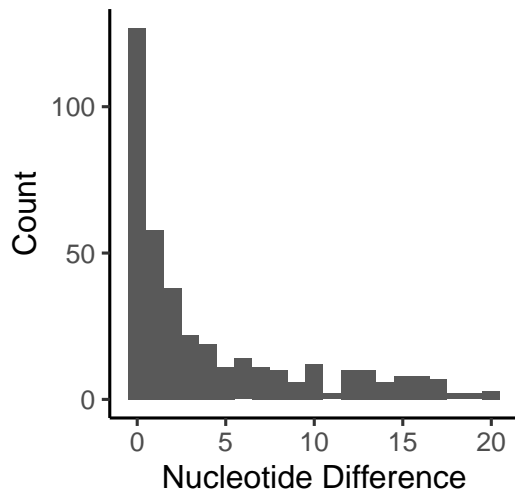
### IGHV4–144\*01\_S6192

2237 sequences assigned  
170 (7.6%) exact matches, in which:  
141 unique CDR3  
6 unique J



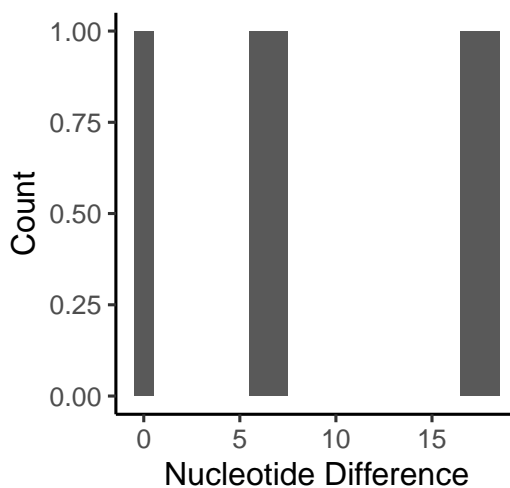
### IGHV4-149\*01\_S5969

433 sequences assigned  
127 (29.3%) exact matches, in which:  
115 unique CDR3  
7 unique J



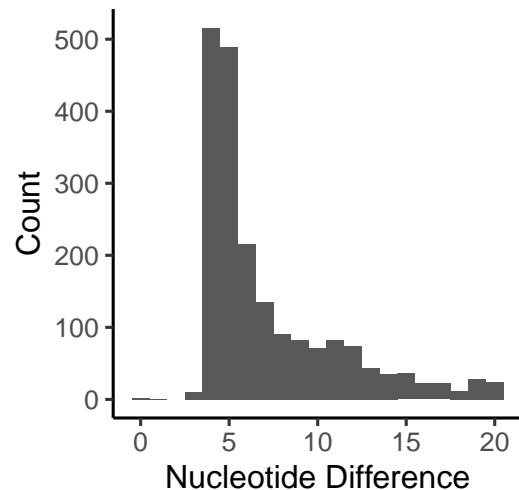
### IGHV4-174\*02\_S2437

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



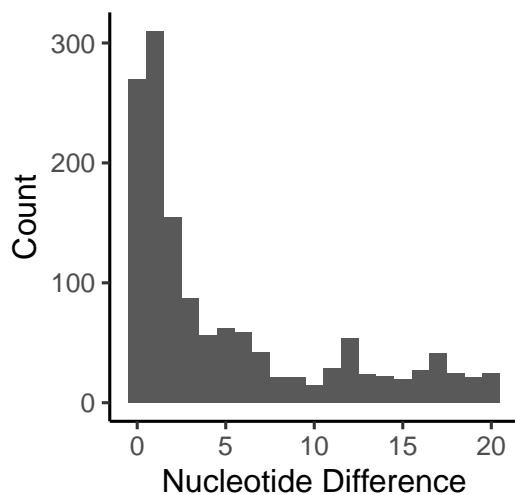
### IGHV4-174\*02\_S9172

2117 sequences assigned  
2 (0.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



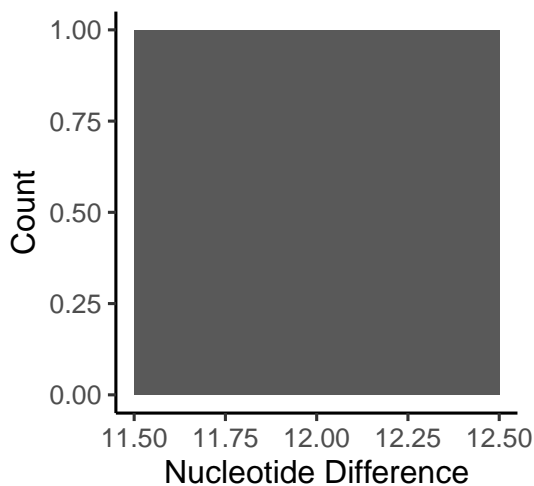
### IGHV4-150\*01\_S0928

1700 sequences assigned  
270 (15.9%) exact matches, in which:  
200 unique CDR3  
7 unique J



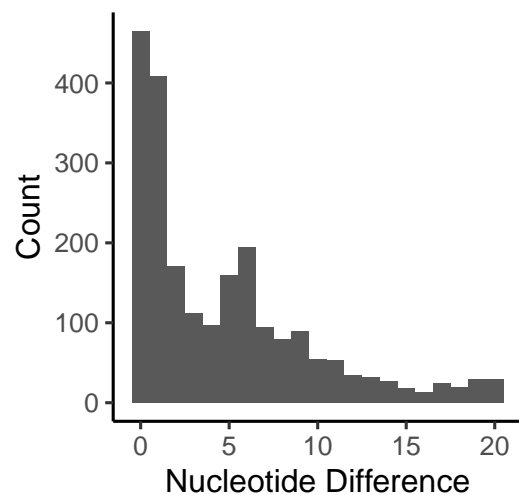
### IGHV4-174\*02\_S5700

1 sequences assigned  
No exact matches.



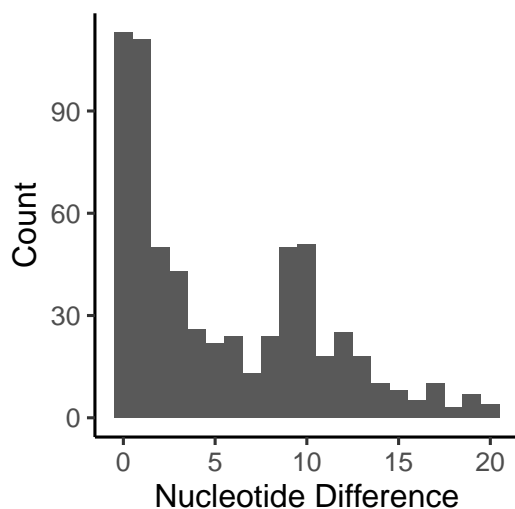
### IGHV4-NL\_1\*01\_S6348

2393 sequences assigned  
465 (19.4%) exact matches, in which:  
350 unique CDR3  
8 unique J



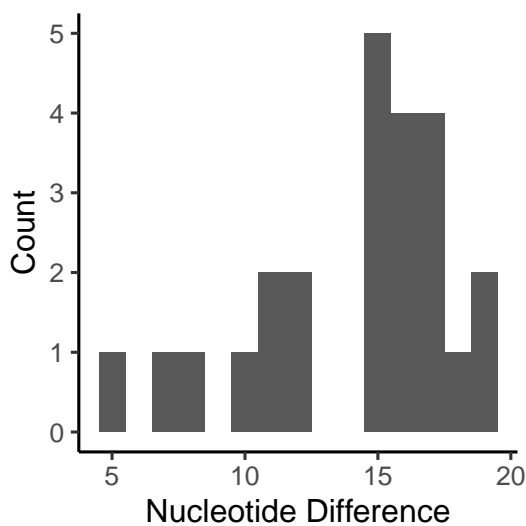
### IGHV4-150\*01\_S3982

697 sequences assigned  
113 (16.2%) exact matches, in which:  
90 unique CDR3  
7 unique J



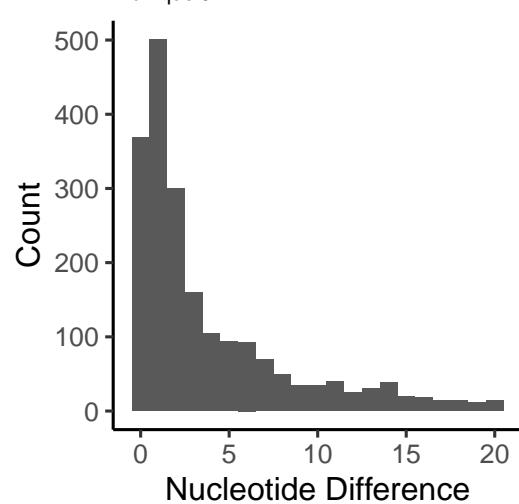
### IGHV4-174\*02\_S7573

26 sequences assigned  
No exact matches.



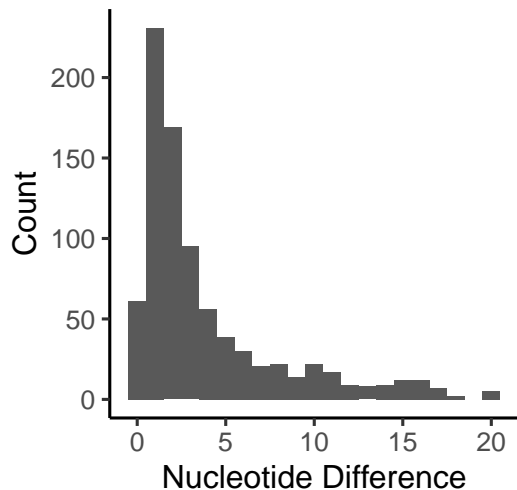
### IGHV4-NL\_12\*01\_S7070

2147 sequences assigned  
369 (17.2%) exact matches, in which:  
300 unique CDR3  
7 unique J



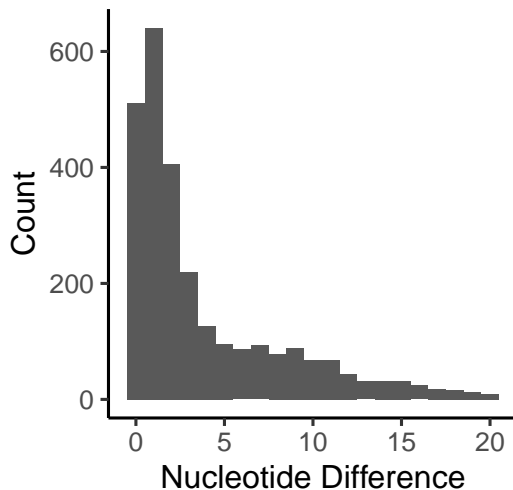
### IGHV4–NL\_13\*01\_S4123

875 sequences assigned  
61 (7%) exact matches, in which:  
54 unique CDR3  
6 unique J



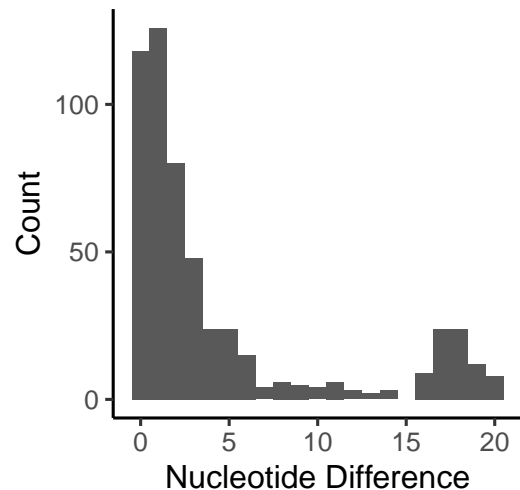
### IGHV4–NL\_16\*01\_S2138

2797 sequences assigned  
511 (18.3%) exact matches, in which:  
380 unique CDR3  
9 unique J



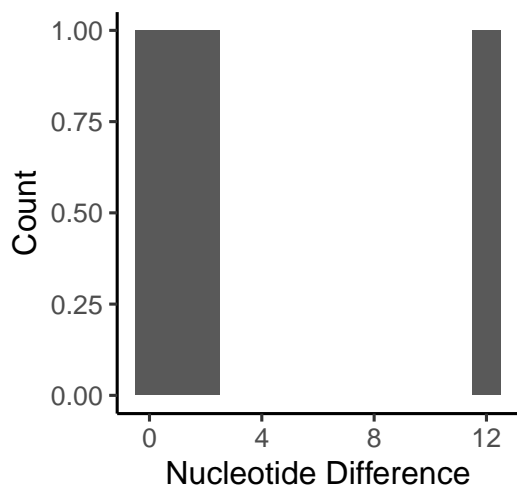
### IGHV4–NL\_17\*01\_S9085

602 sequences assigned  
118 (19.6%) exact matches, in which:  
98 unique CDR3  
8 unique J



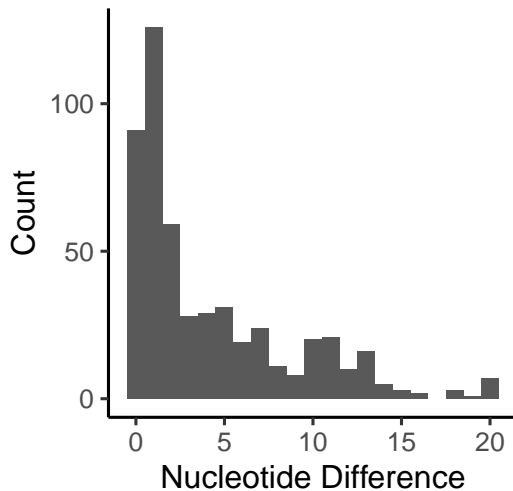
### IGHV4–NL\_14\*01\_S3059

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



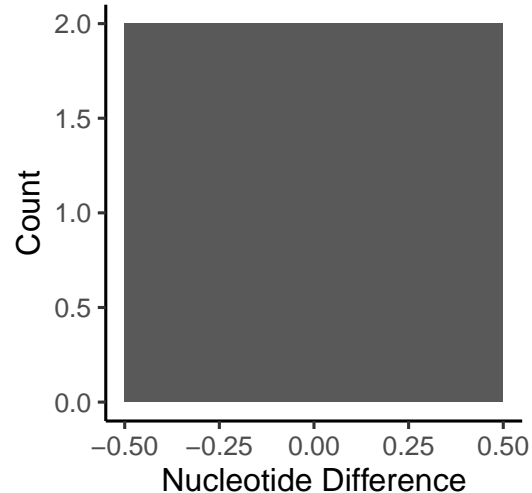
### IGHV4–NL\_16\*01\_S2324

534 sequences assigned  
91 (17%) exact matches, in which:  
75 unique CDR3  
7 unique J



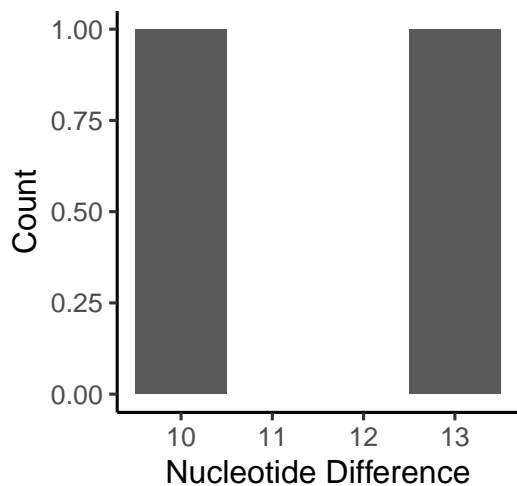
### IGHV4–NL\_18\*01\_S0143

56 sequences assigned  
2 (3.6%) exact matches, in which:  
2 unique CDR3  
1 unique J



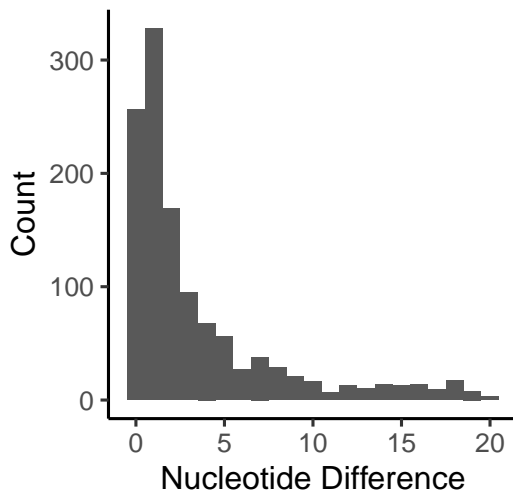
### IGHV4–NL\_14\*01\_S5312

2 sequences assigned  
No exact matches.



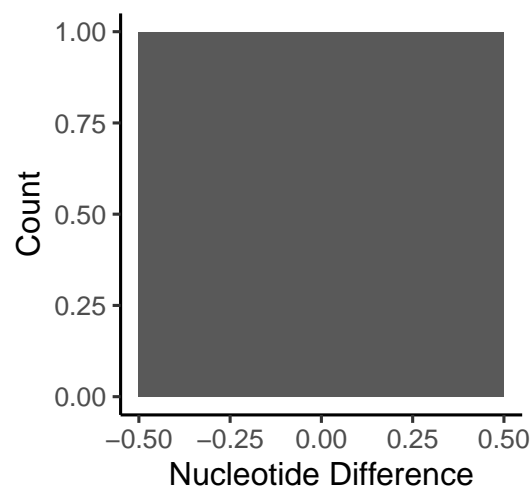
### IGHV4–NL\_17\*01\_S4099

1275 sequences assigned  
256 (20.1%) exact matches, in which:  
200 unique CDR3  
7 unique J



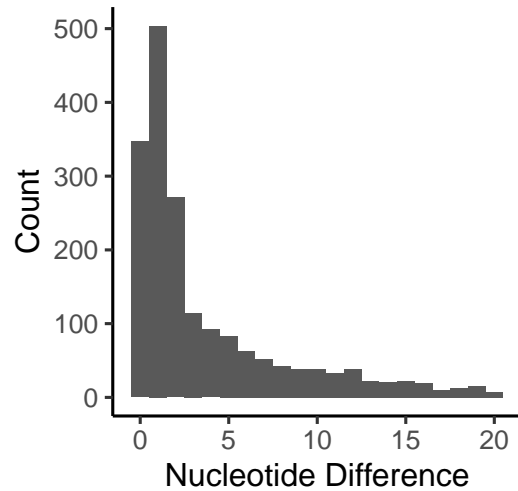
### IGHV4–NL\_2\*01\_S1268

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



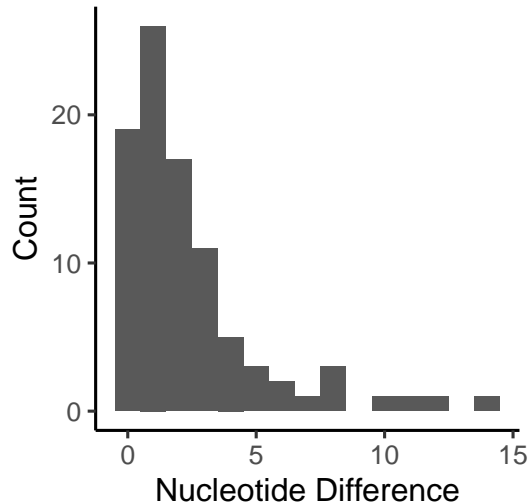
### IGHV4–NL\_21\*01\_S2225

2046 sequences assigned  
347 (17%) exact matches, in which:  
283 unique CDR3  
7 unique J



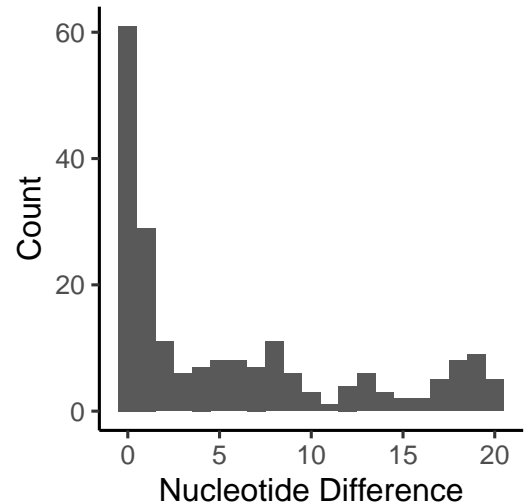
### IGHV4–NL\_24\*01\_S3447

138 sequences assigned  
19 (13.8%) exact matches, in which:  
18 unique CDR3  
5 unique J



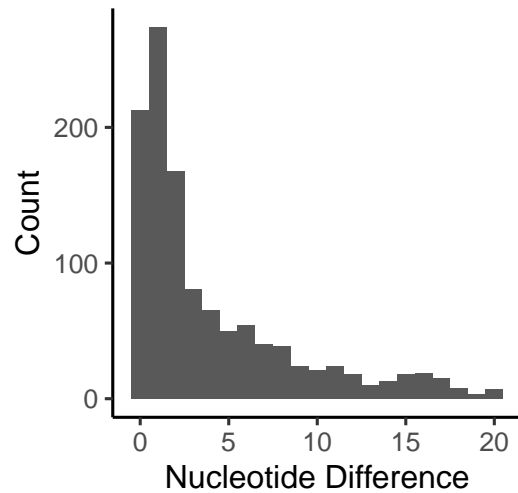
### IGHV4–NL\_28\*01\_S1005

270 sequences assigned  
61 (22.6%) exact matches, in which:  
53 unique CDR3  
6 unique J



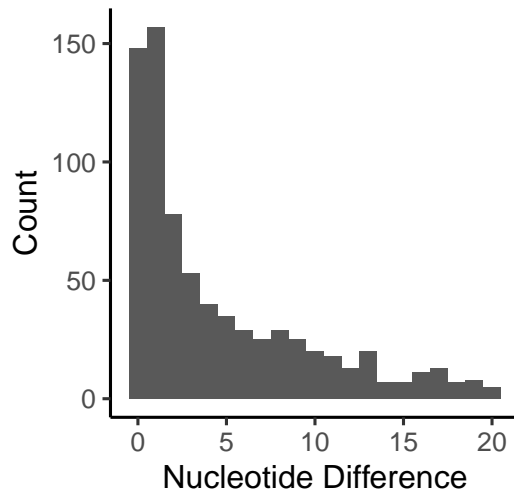
### IGHV4–NL\_22\*01\_S9255

1206 sequences assigned  
213 (17.7%) exact matches, in which:  
192 unique CDR3  
7 unique J



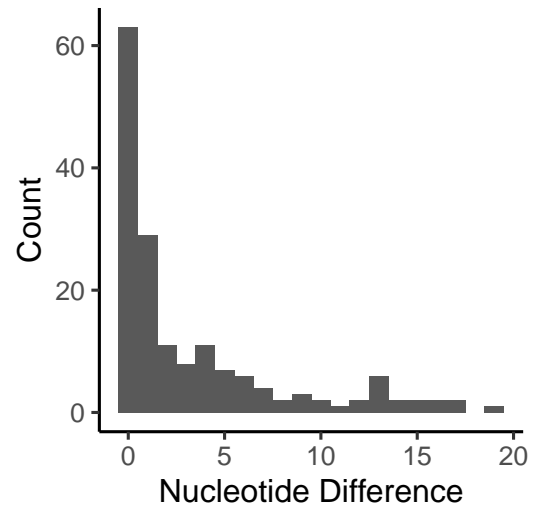
### IGHV4–NL\_27\*01\_S1767

811 sequences assigned  
148 (18.2%) exact matches, in which:  
114 unique CDR3  
9 unique J



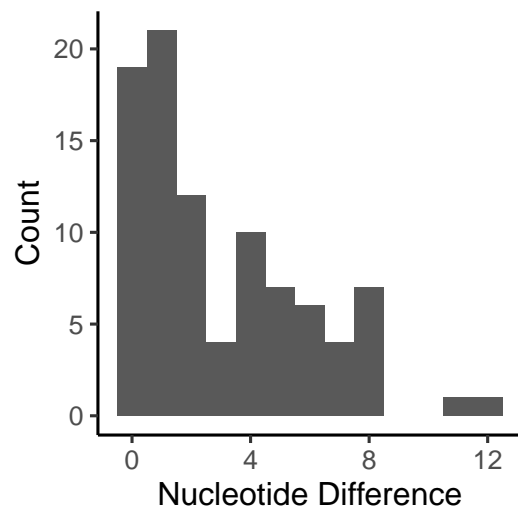
### IGHV4–NL\_28\*01\_S7478

187 sequences assigned  
63 (33.7%) exact matches, in which:  
55 unique CDR3  
7 unique J



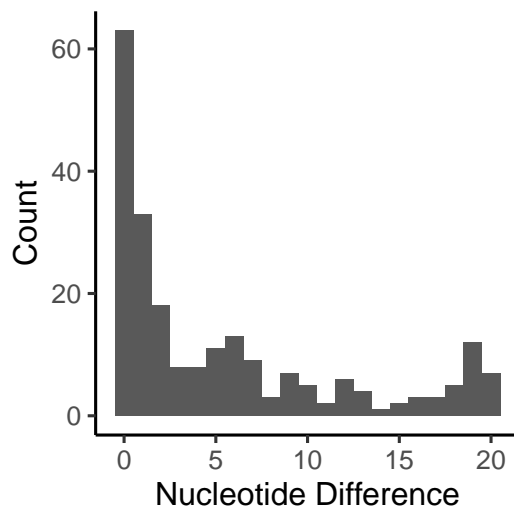
### IGHV4–NL\_23\*01\_S3043

94 sequences assigned  
19 (20.2%) exact matches, in which:  
18 unique CDR3  
4 unique J



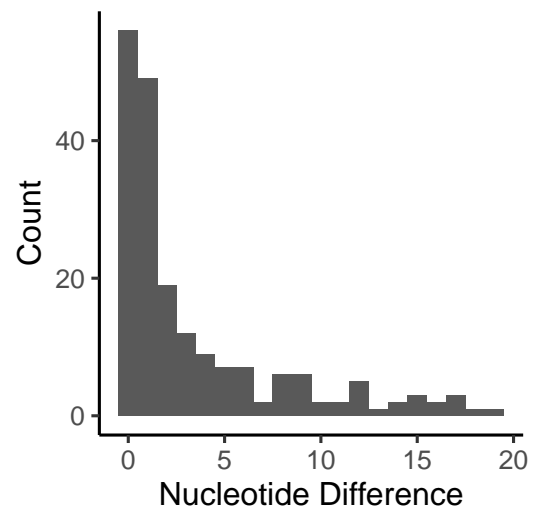
### IGHV4–NL\_28\*01\_S1005

281 sequences assigned  
63 (22.4%) exact matches, in which:  
52 unique CDR3  
6 unique J



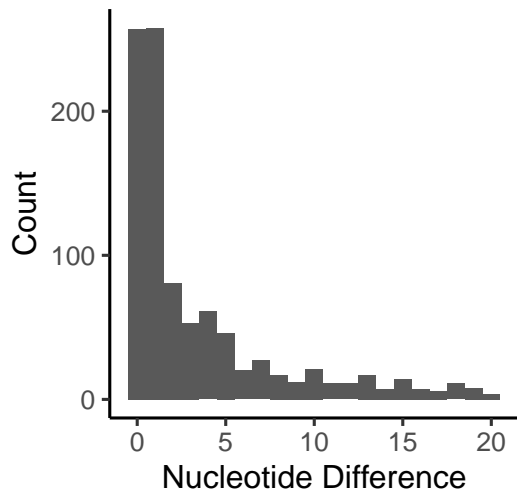
### IGHV4–NL\_28\*01\_S7478

235 sequences assigned  
56 (23.8%) exact matches, in which:  
53 unique CDR3  
7 unique J



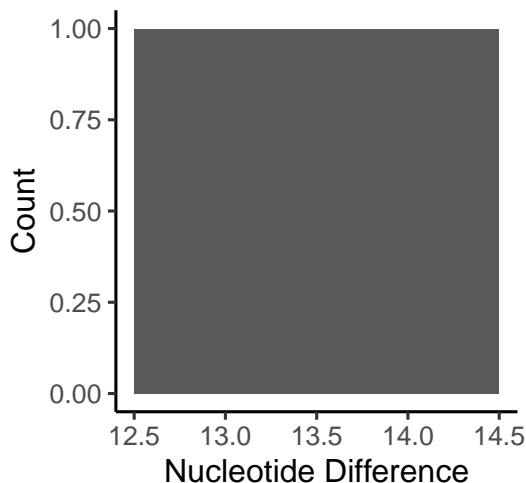
### IGHV4–NL\_29\*01\_S9610

963 sequences assigned  
257 (26.7%) exact matches, in which:  
200 unique CDR3  
7 unique J



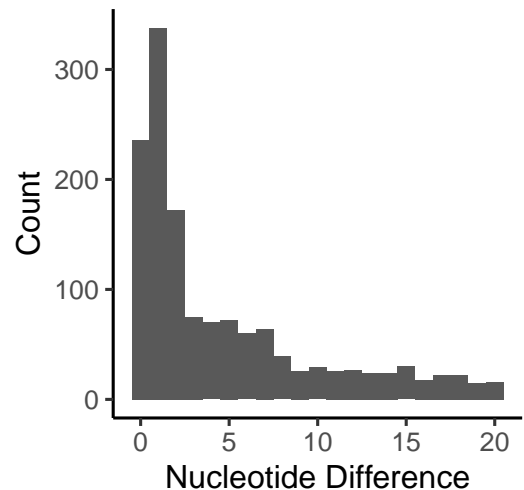
### IGHV4–NL\_30\*01\_S1240

22 sequences assigned  
No exact matches.



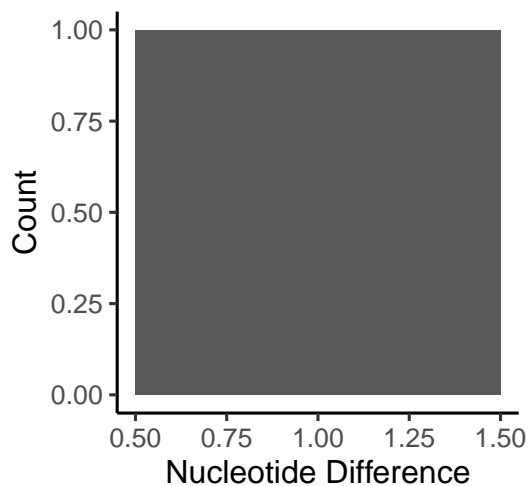
### IGHV4–NL\_33\*01\_S4287

1603 sequences assigned  
236 (14.7%) exact matches, in which:  
190 unique CDR3  
8 unique J



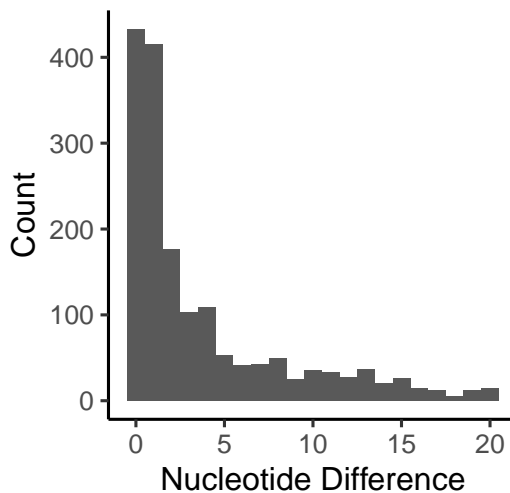
### IGHV4–NL\_3\*01\_S3122

1 sequences assigned  
No exact matches.



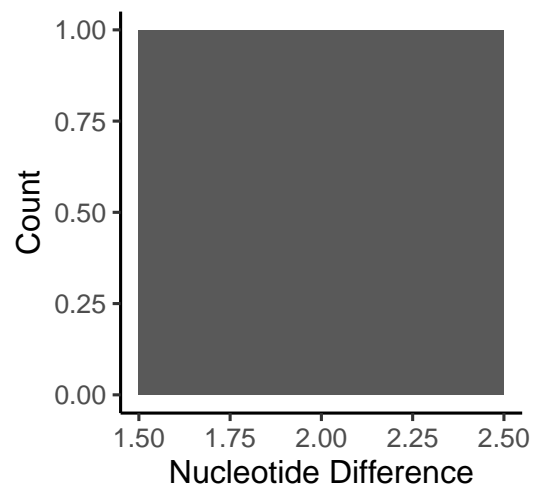
### IGHV4–NL\_31\*01\_S7693

1818 sequences assigned  
433 (23.8%) exact matches, in which:  
331 unique CDR3  
7 unique J



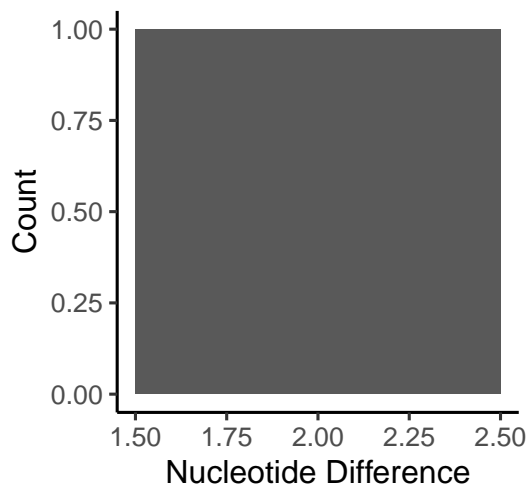
### IGHV4–NL\_35\*01\_S9510

1 sequences assigned  
No exact matches.



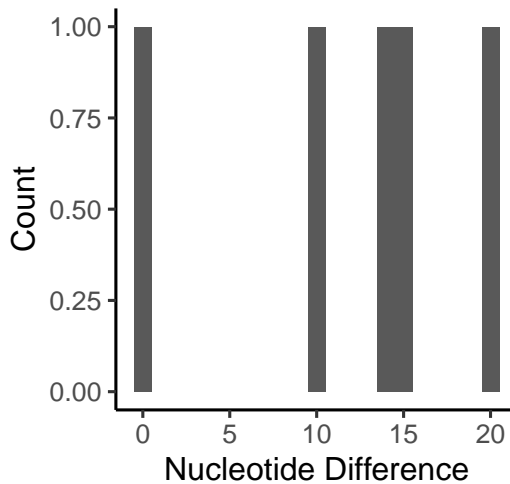
### IGHV4–NL\_3\*01\_S5200

2 sequences assigned  
No exact matches.



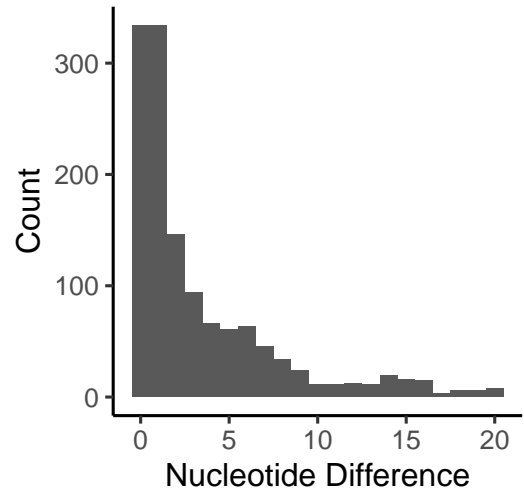
### IGHV4–NL\_32\*01\_S0782

12 sequences assigned  
1 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



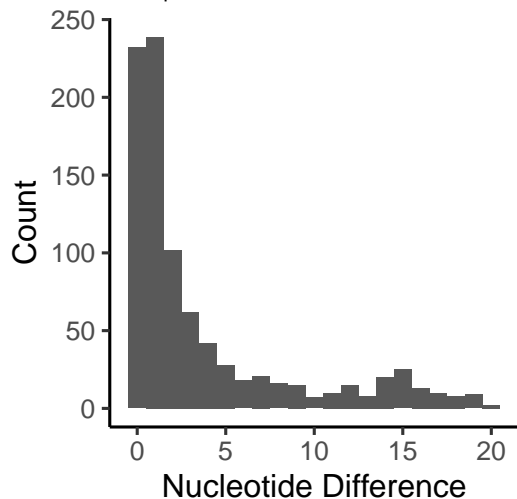
### IGHV4–NL\_36\*01\_S5319

1413 sequences assigned  
334 (23.6%) exact matches, in which:  
256 unique CDR3  
8 unique J



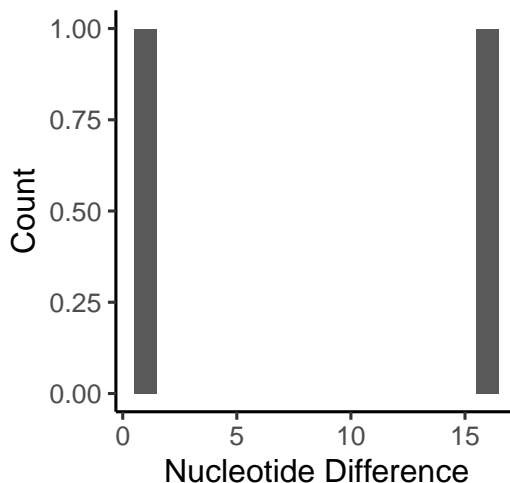
### IGHV4-NL\_36\*01\_S7873

980 sequences assigned  
232 (23.7%) exact matches, in which:  
180 unique CDR3  
8 unique J



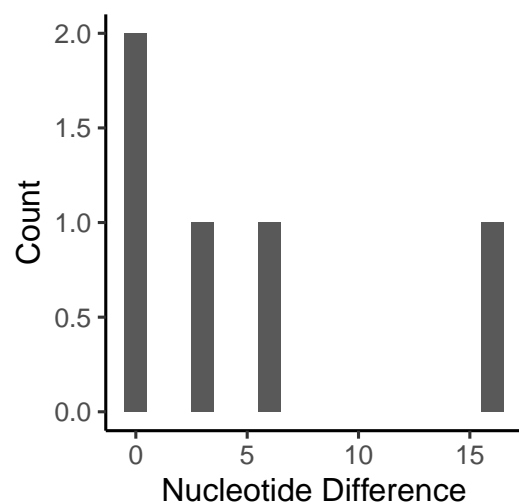
### IGHV4-NL\_39\*01\_S0397

2 sequences assigned  
No exact matches.



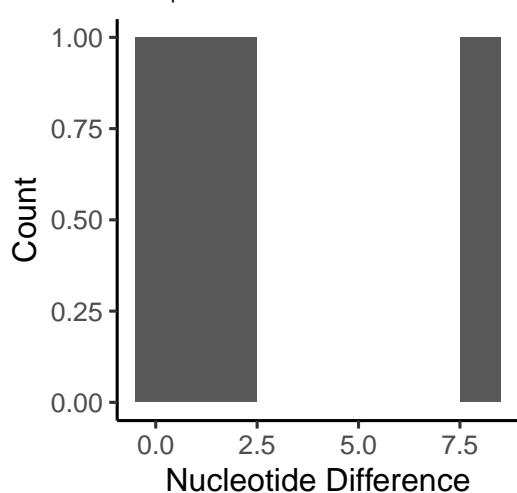
### IGHV4-NL\_4\*01\_S8866

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



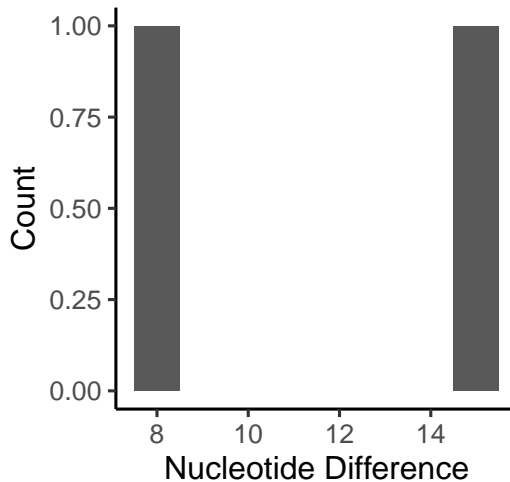
### IGHV4-NL\_37\*01\_S0997

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



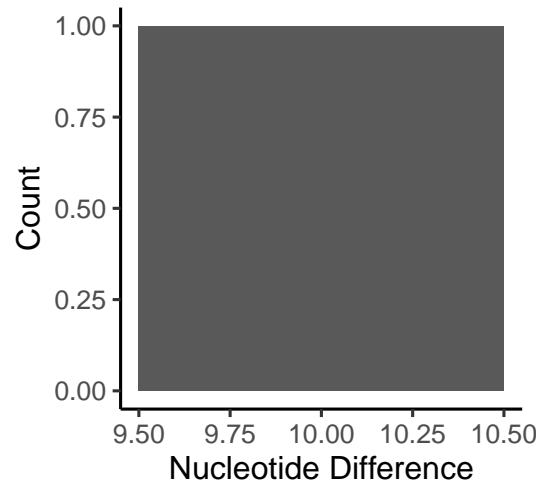
### IGHV4-NL\_4\*01\_S5211

4 sequences assigned  
No exact matches.



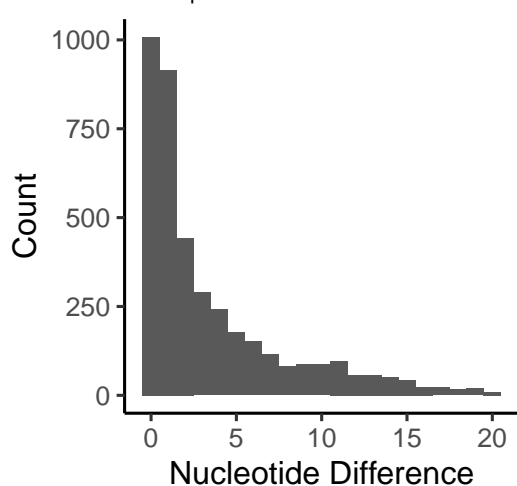
### IGHV4-NL\_41\*01\_S6928

1 sequences assigned  
No exact matches.



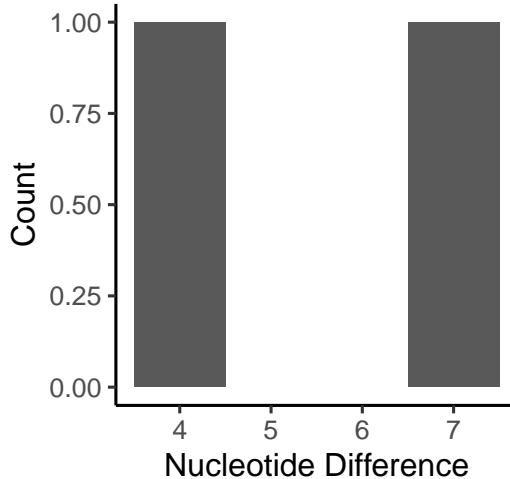
### IGHV4-NL\_38\*01\_S922

4130 sequences assigned  
1008 (24.4%) exact matches, in which:  
781 unique CDR3  
10 unique J



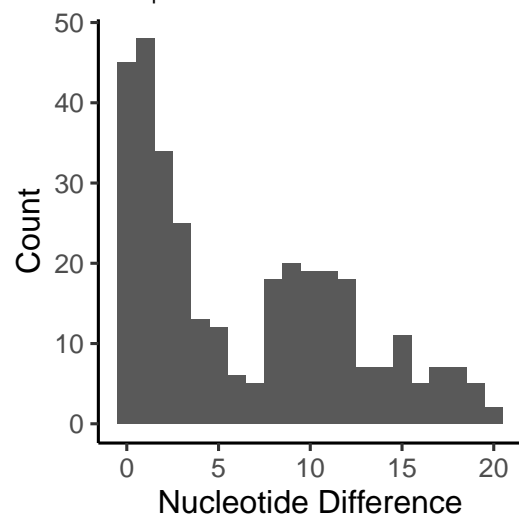
### IGHV4-NL\_4\*01\_S7226

2 sequences assigned  
No exact matches.



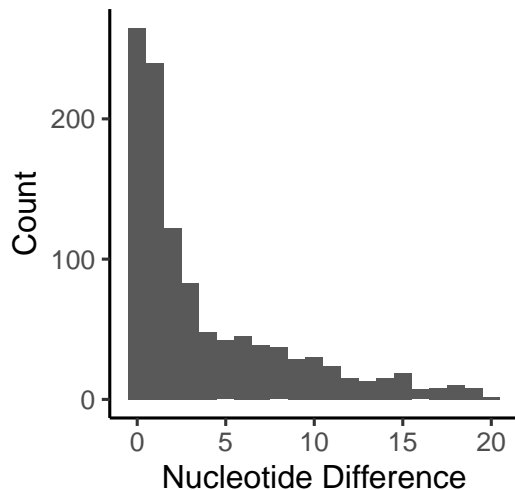
### IGHV4-NL\_42\*01\_S3655

354 sequences assigned  
45 (12.7%) exact matches, in which:  
37 unique CDR3  
5 unique J



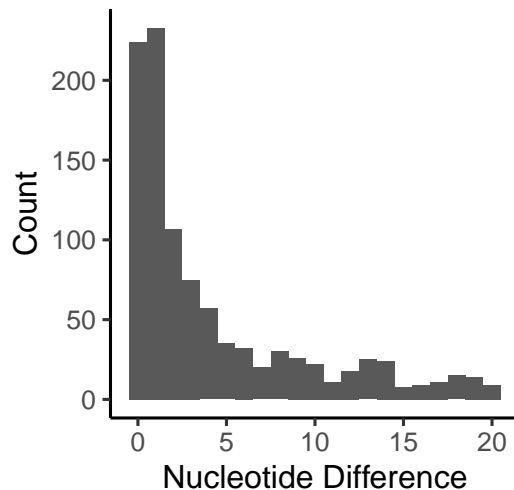
### IGHV4–NL\_42\*01\_S5701

1235 sequences assigned  
265 (21.5%) exact matches, in which:  
207 unique CDR3  
8 unique J



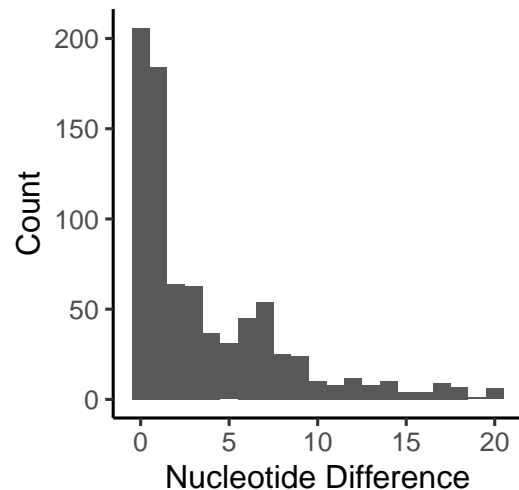
### IGHV4–NL\_5\*01\_S9199

1051 sequences assigned  
224 (21.3%) exact matches, in which:  
173 unique CDR3  
7 unique J



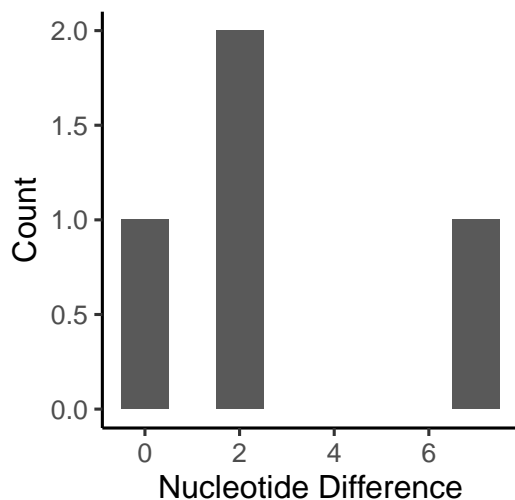
### IGHV4–NL\_9\*01\_S2406

864 sequences assigned  
206 (23.8%) exact matches, in which:  
166 unique CDR3  
8 unique J



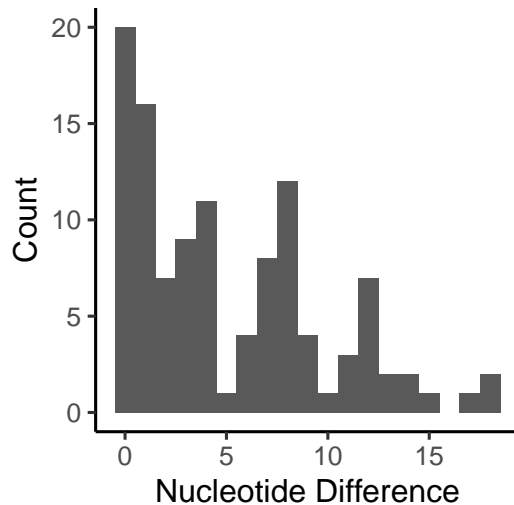
### IGHV4–NL\_43\*01\_S1860

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



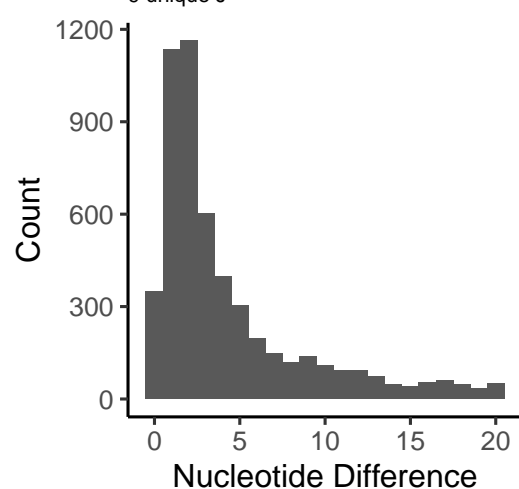
### IGHV4–NL\_6\*01\_S2831

113 sequences assigned  
20 (17.7%) exact matches, in which:  
18 unique CDR3  
5 unique J



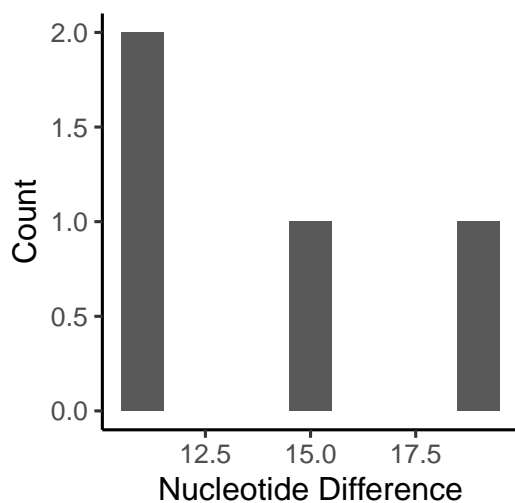
### IGHV5–15\*01\_S8767

5391 sequences assigned  
348 (6.5%) exact matches, in which:  
230 unique CDR3  
9 unique J



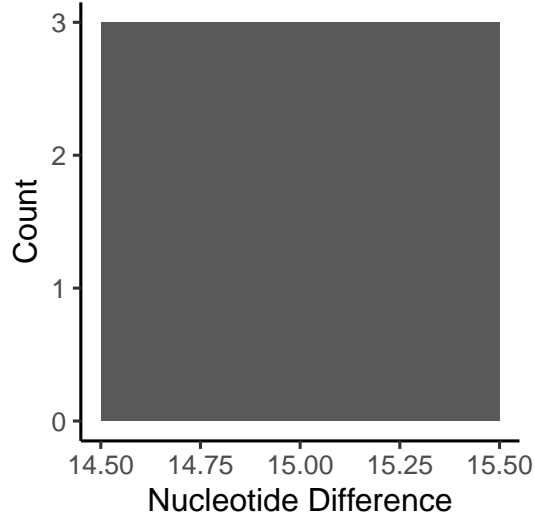
### IGHV4–NL\_43\*01\_S3820

4 sequences assigned  
No exact matches.



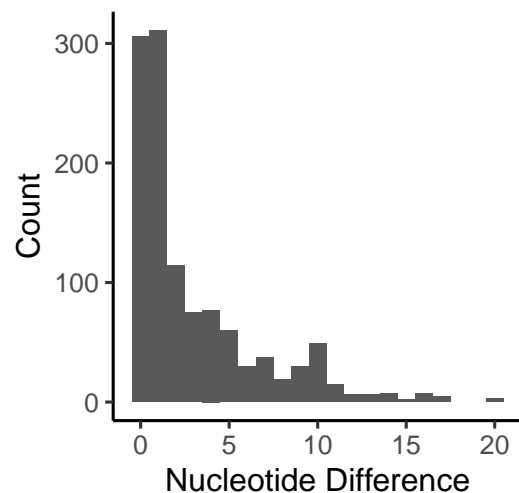
### IGHV4–NL\_8\*02\_S1704

3 sequences assigned  
No exact matches.



### IGHV5–157\*01\_S5960

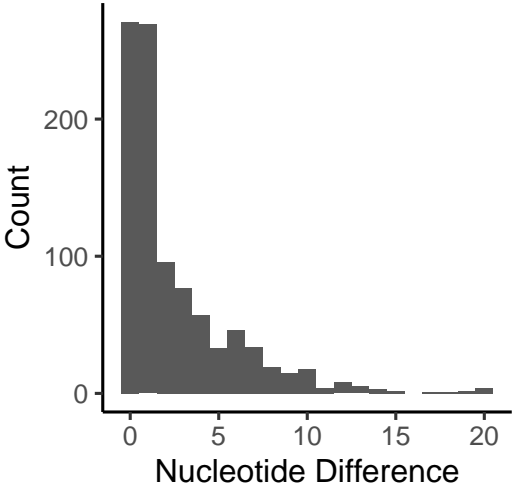
1163 sequences assigned  
306 (26.3%) exact matches, in which:  
149 unique CDR3  
8 unique J





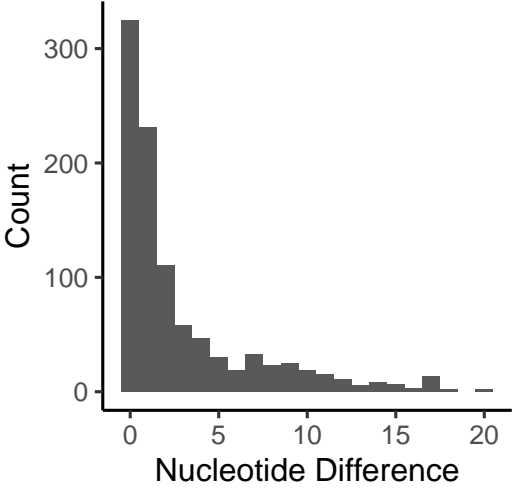
# IGHV5-157\*01\_S8626

979 sequences assigned  
271 (27.7%) exact matches, in which:  
181 unique CDR3  
8 unique J

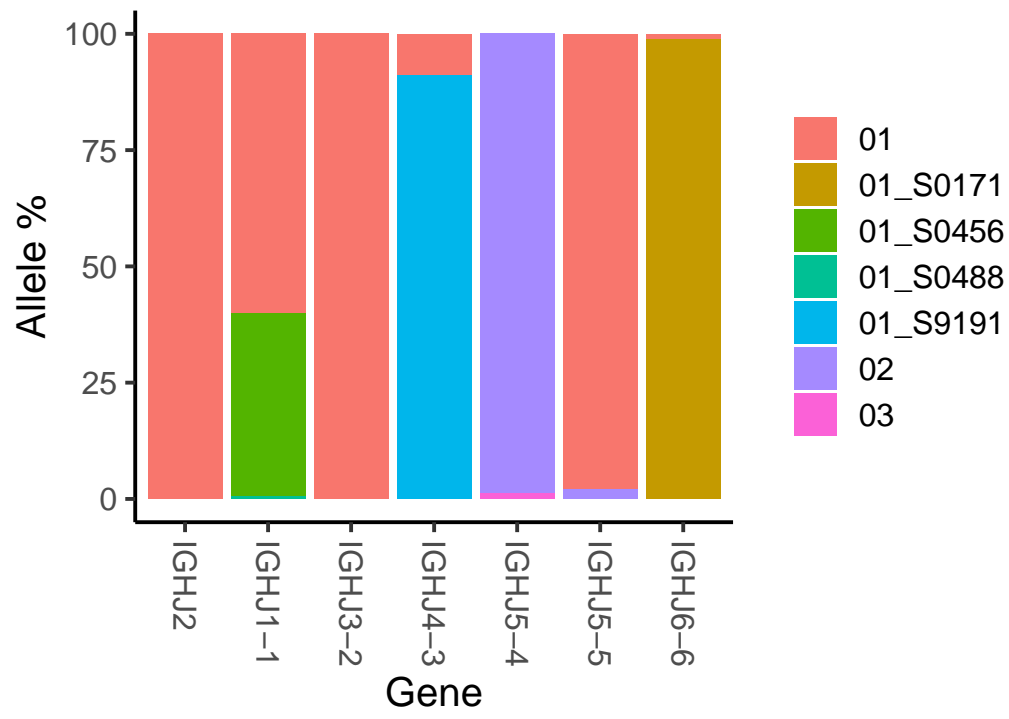


# IGHV7-86\*01\_S8793

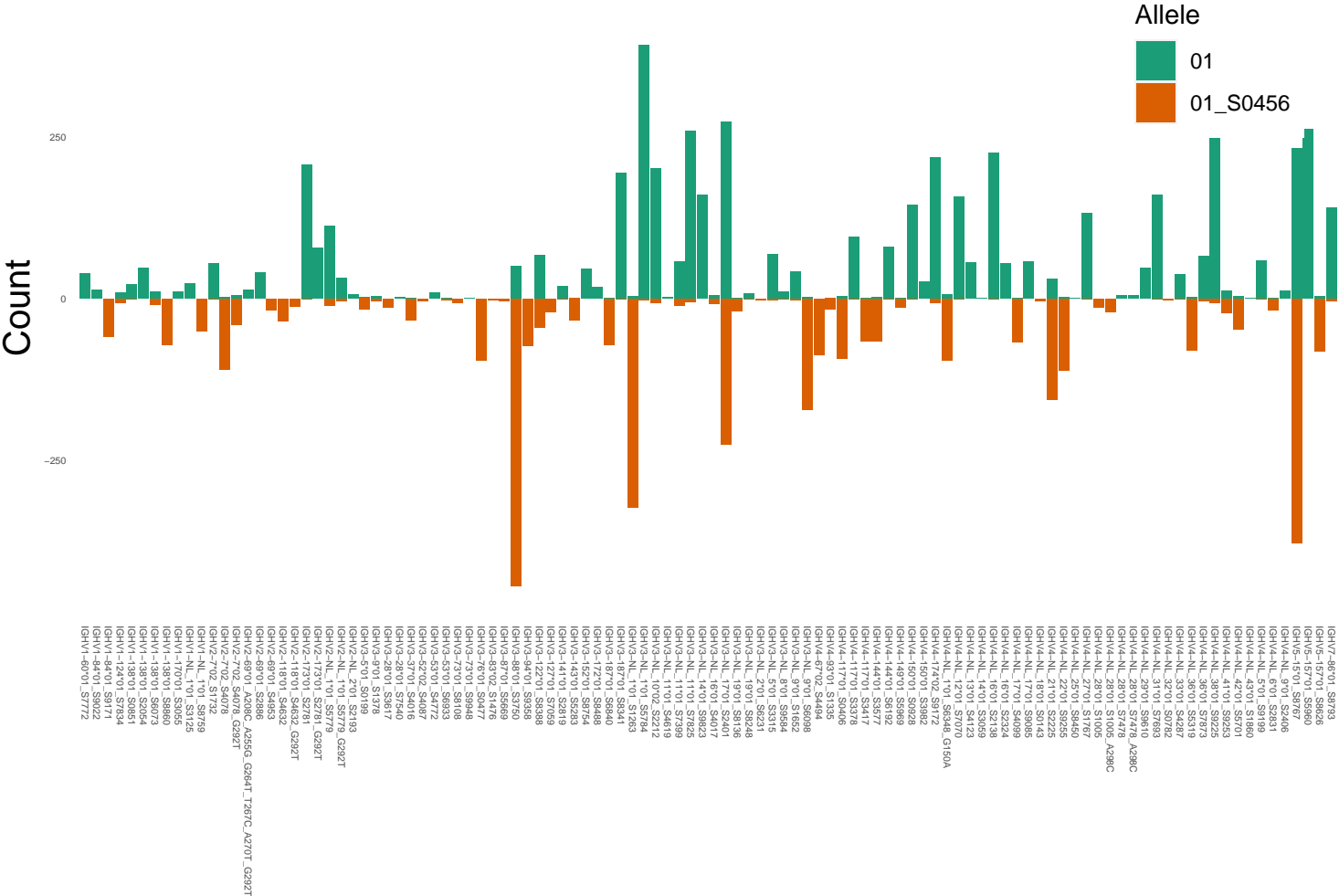
1053 sequences assigned  
325 (30.9%) exact matches, in which:  
190 unique CDR3  
7 unique J



# Allele Usage



### Sequence Count byIGHJ1-1 allele usage



Warning – no inferred sequences found.