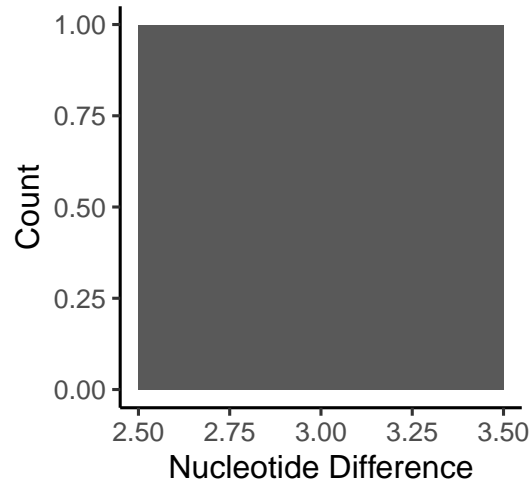


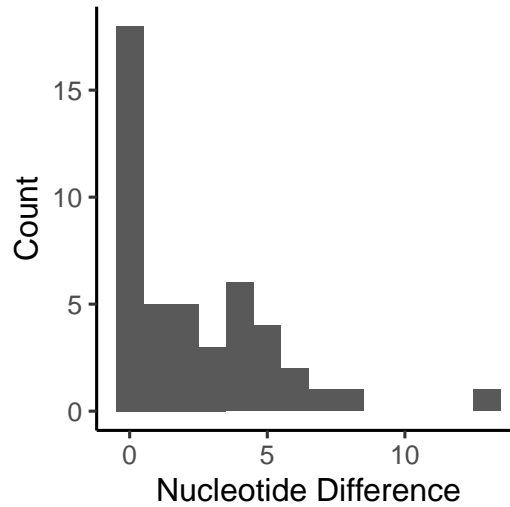
### IGHV1-60\*01\_S7602

1 sequences assigned  
No exact matches.



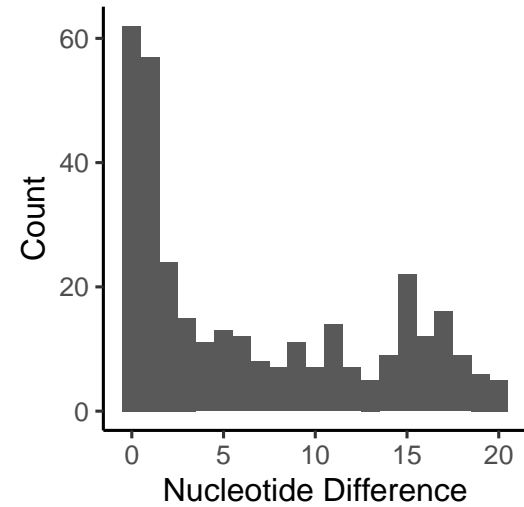
### IGHV1-124\*01\_S7834

47 sequences assigned  
18 (38.3%) exact matches, in which:  
17 unique CDR3  
4 unique J



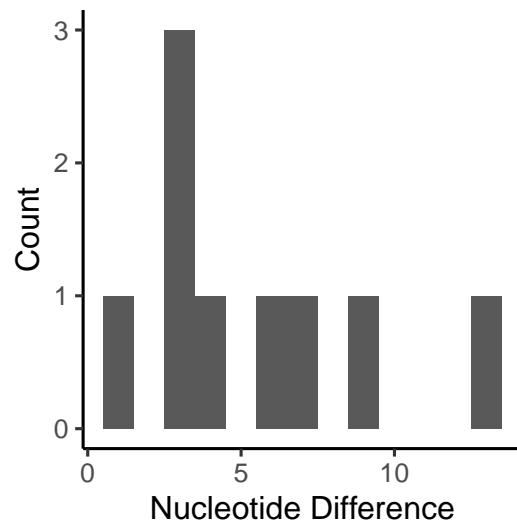
### IGHV1-NL\_1\*01\_S2052

407 sequences assigned  
62 (15.2%) exact matches, in which:  
44 unique CDR3  
6 unique J



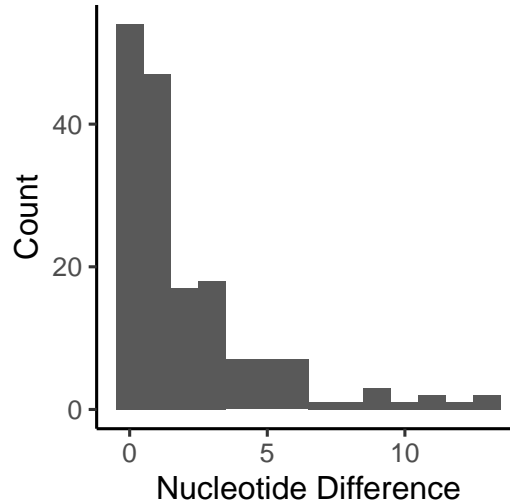
### IGHV1-60\*01\_S7772

9 sequences assigned  
No exact matches.



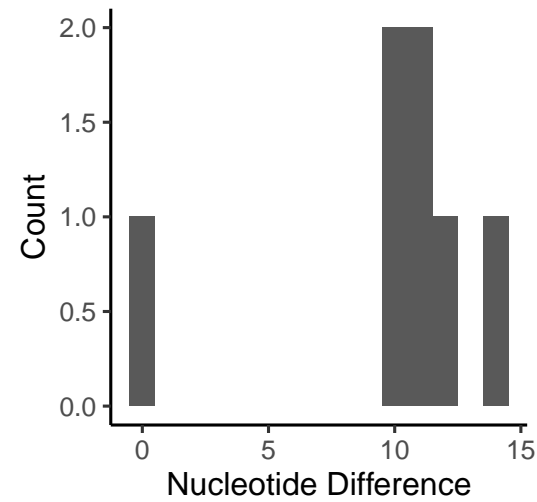
### IGHV1-138\*01\_S2054

169 sequences assigned  
54 (32%) exact matches, in which:  
49 unique CDR3  
7 unique J



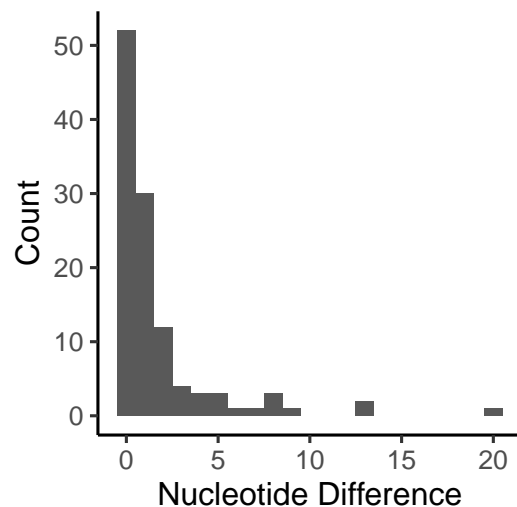
### IGHV1-NL\_2\*01\_S5797

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



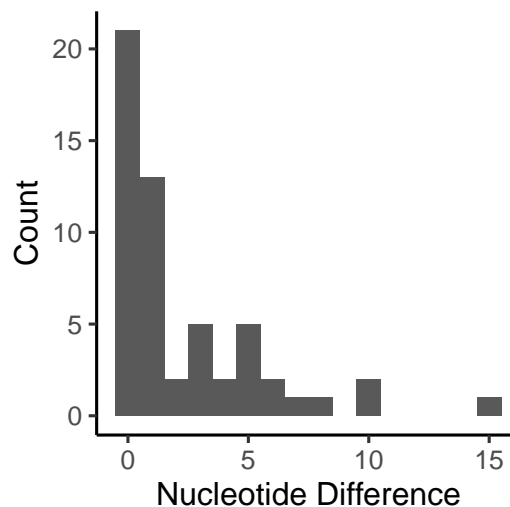
### IGHV1-84\*01\_S9171

182 sequences assigned  
52 (28.6%) exact matches, in which:  
25 unique CDR3  
6 unique J



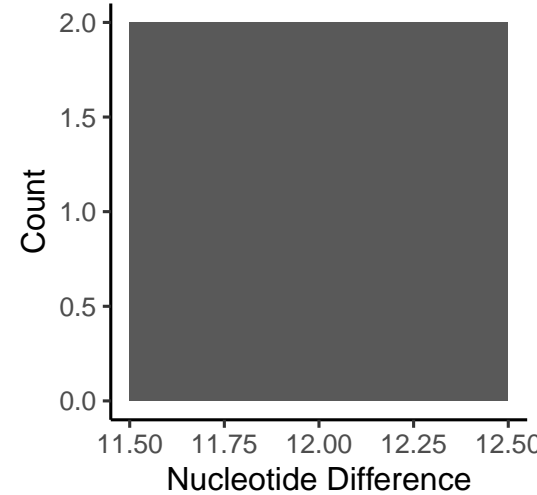
### IGHV1-138\*01\_S6073

56 sequences assigned  
21 (37.5%) exact matches, in which:  
19 unique CDR3  
3 unique J



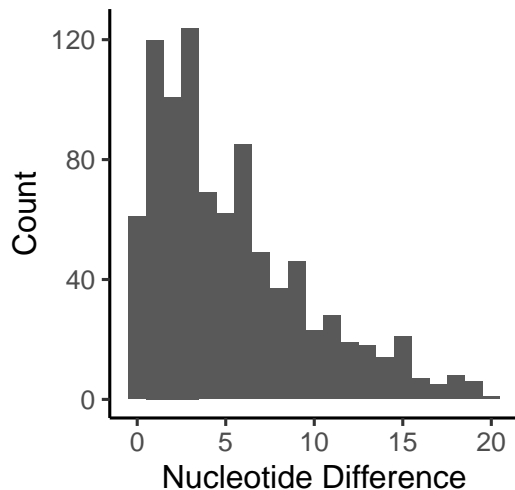
### IGHV1-NL\_2\*01\_S5959

12 sequences assigned  
No exact matches.



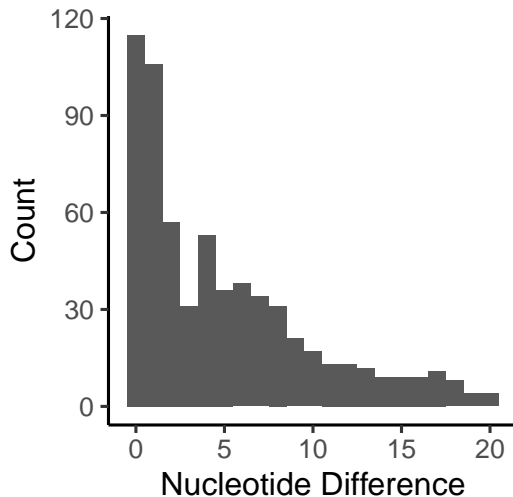
### IGHV2-7\*02\_S1732

919 sequences assigned  
61 (6.6%) exact matches, in which:  
37 unique CDR3  
6 unique J



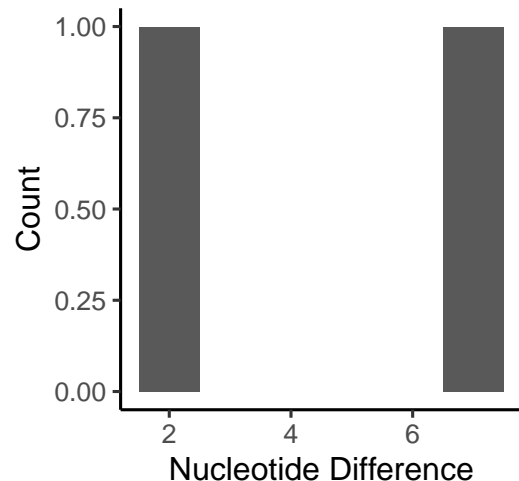
### IGHV2-69\*01\_S6153

659 sequences assigned  
115 (17.5%) exact matches, in which:  
75 unique CDR3  
7 unique J



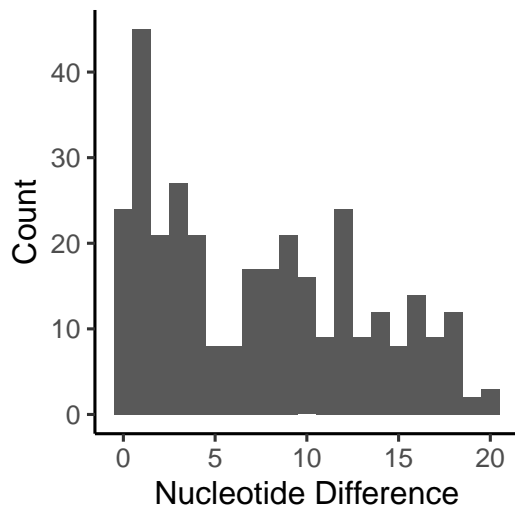
### IGHV2-173\*01\_S2781

3 sequences assigned  
No exact matches.



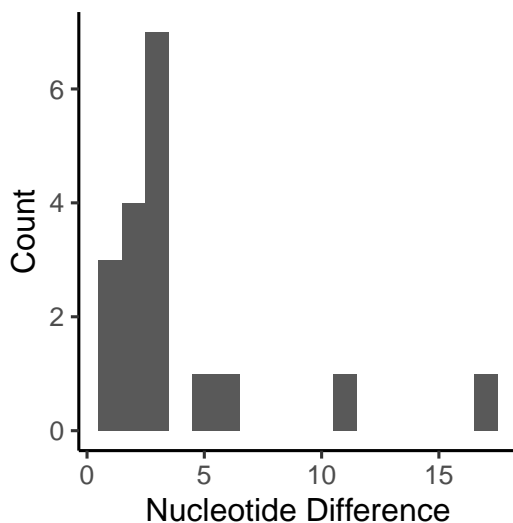
### IGHV2-7\*02\_S4285

354 sequences assigned  
24 (6.8%) exact matches, in which:  
19 unique CDR3  
4 unique J



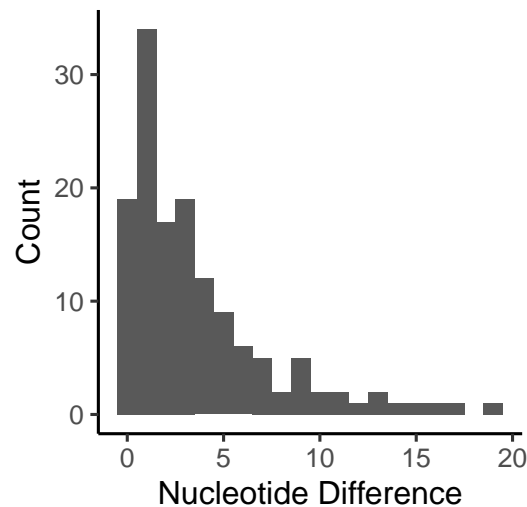
### IGHV2-118\*01\_S4632

18 sequences assigned  
No exact matches.



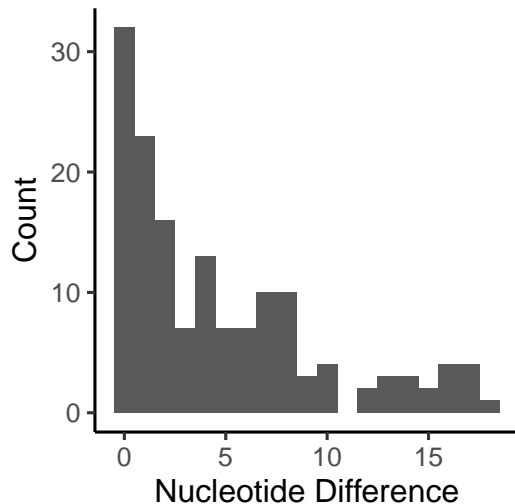
### IGHV2-NL\_1\*01\_S4514

163 sequences assigned  
19 (11.7%) exact matches, in which:  
10 unique CDR3  
3 unique J



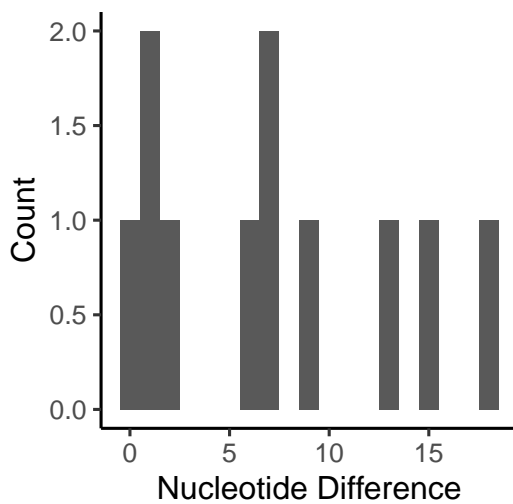
### IGHV2-69\*01\_C6G\_C36G

159 sequences assigned  
32 (20.1%) exact matches, in which:  
32 unique CDR3  
6 unique J



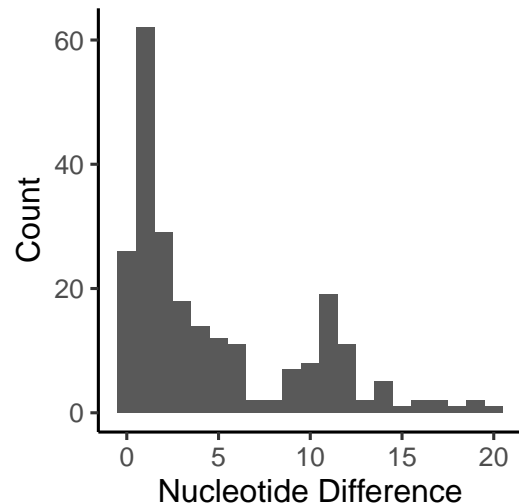
### IGHV2-118\*01\_S6364

11 sequences assigned  
1 (9.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



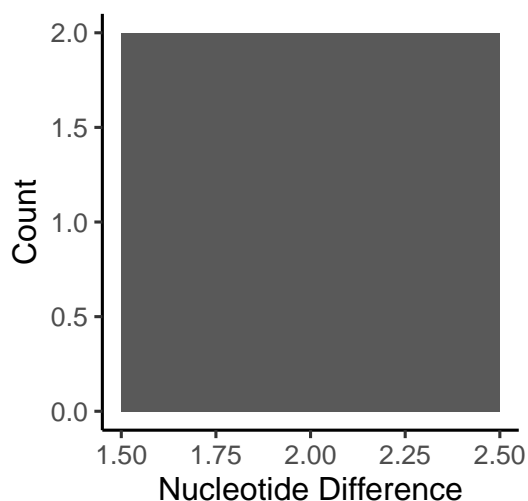
### IGHV2-NL\_1\*01\_S5211

304 sequences assigned  
26 (8.6%) exact matches, in which:  
18 unique CDR3  
6 unique J



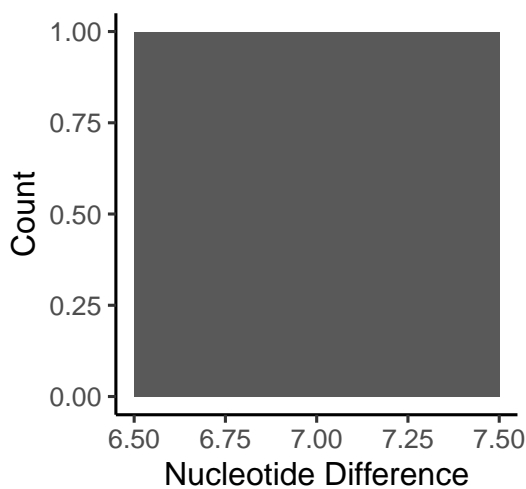
### IGHV2–NL\_2\*01\_S2193

2 sequences assigned  
No exact matches.



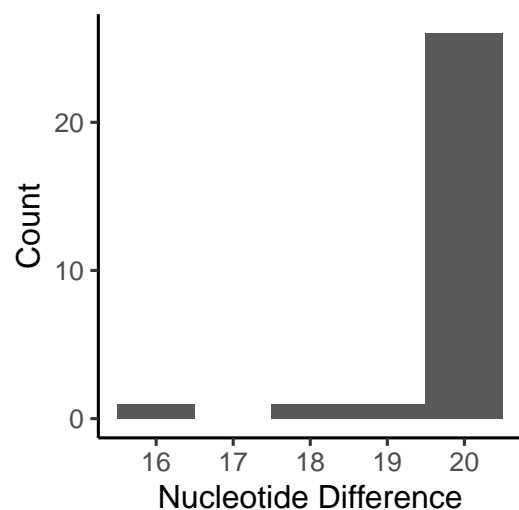
### IGHV3–34\*01\_S2915

1 sequences assigned  
No exact matches.



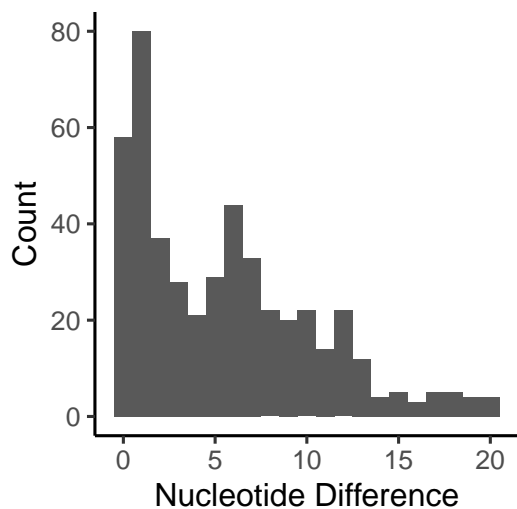
### IGHV3–37\*01\_S9699

223 sequences assigned  
No exact matches.



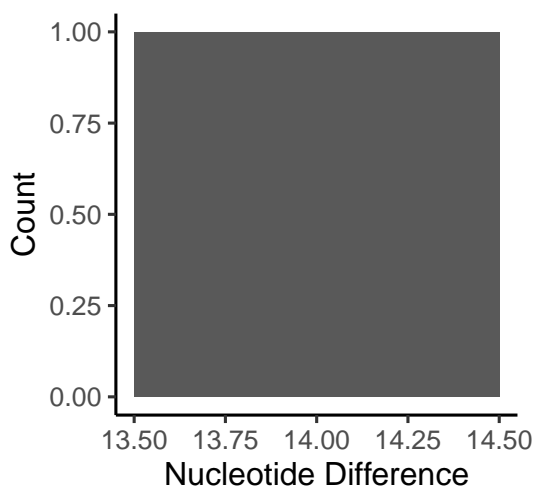
### IGHV3–5\*01\_S6059

596 sequences assigned  
58 (9.7%) exact matches, in which:  
43 unique CDR3  
6 unique J



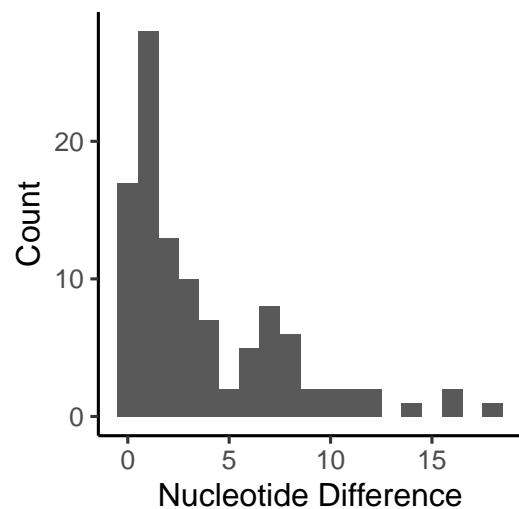
### IGHV3–36\*01\_S7141

1 sequences assigned  
No exact matches.



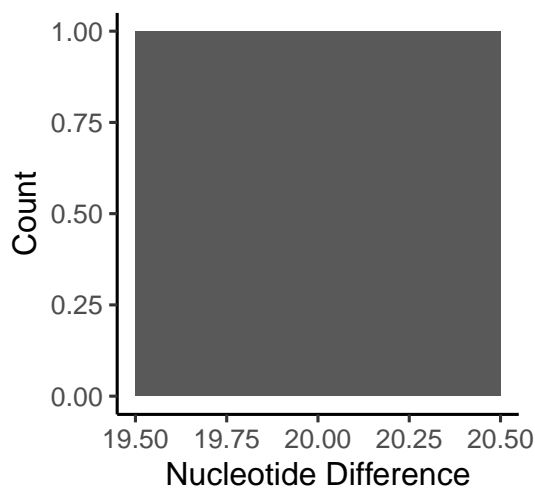
### IGHV3–52\*01\_S8160

109 sequences assigned  
17 (15.6%) exact matches, in which:  
12 unique CDR3  
4 unique J



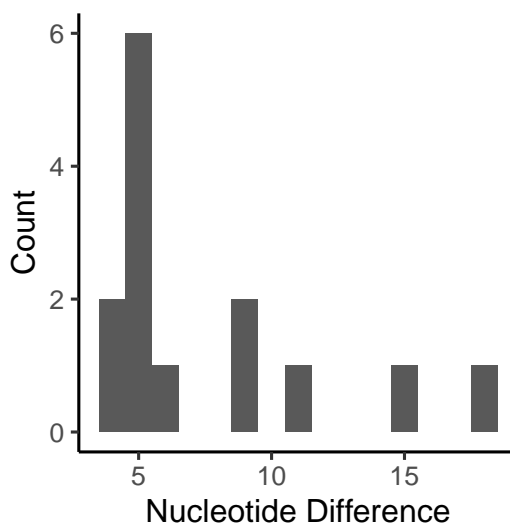
### IGHV3–28\*01\_S5703

1 sequences assigned  
No exact matches.



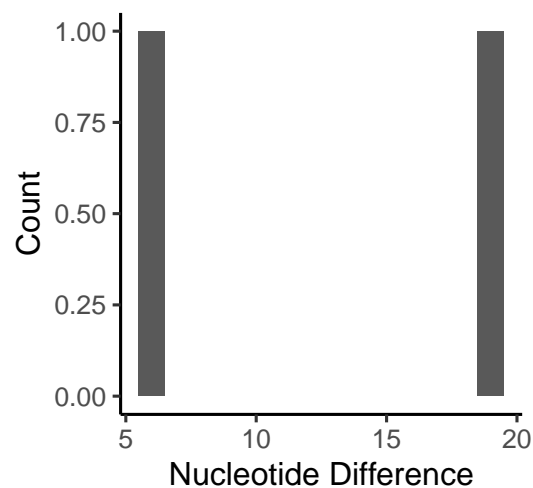
### IGHV3–37\*01\_S4420

19 sequences assigned  
No exact matches.



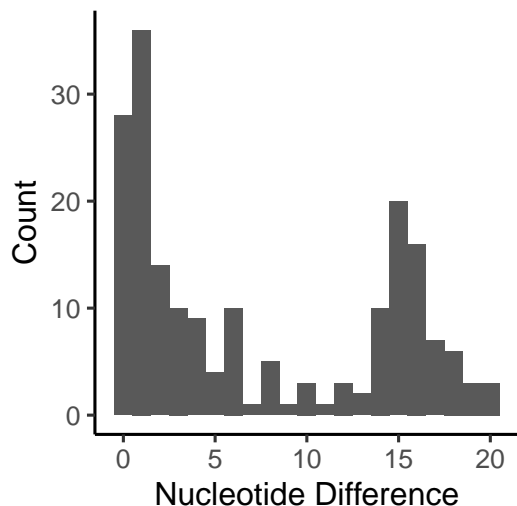
### IGHV3–53\*01\_S0543

2 sequences assigned  
No exact matches.



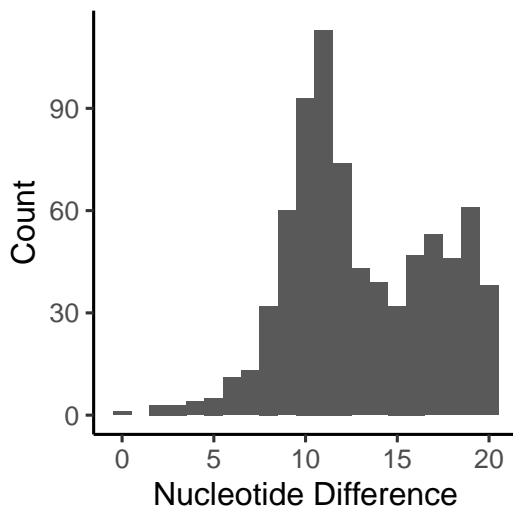
### IGHV3-53\*01\_S4256

219 sequences assigned  
28 (12.8%) exact matches, in which:  
17 unique CDR3  
4 unique J



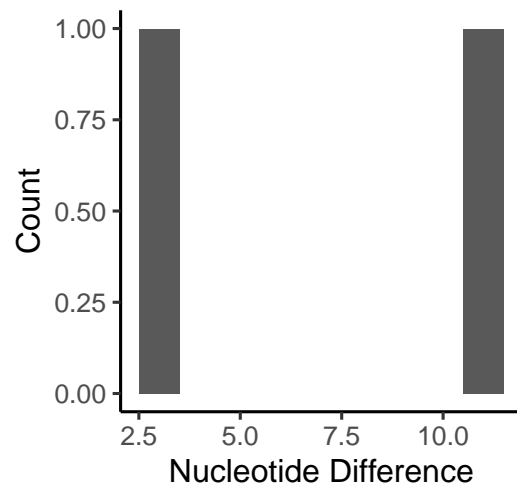
### IGHV3-88\*02\_S7485

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



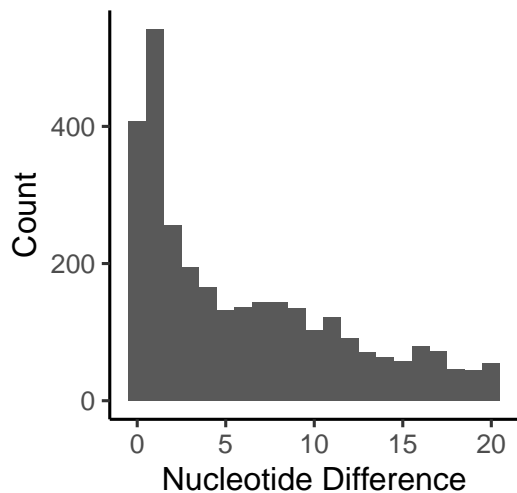
### IGHV3-94\*01\_S7982

5 sequences assigned  
No exact matches.



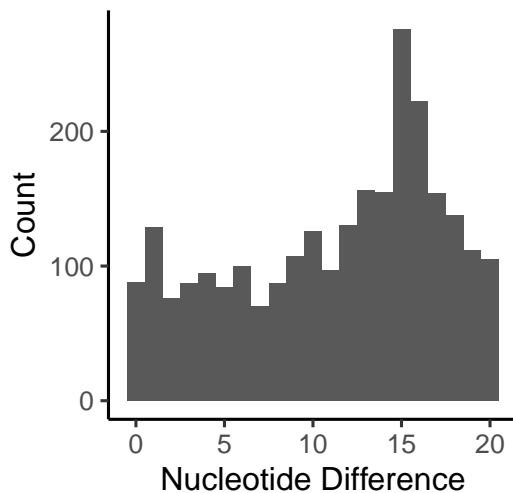
### IGHV3-76\*02\_S4190

3260 sequences assigned  
407 (12.5%) exact matches, in which:  
309 unique CDR3  
7 unique J



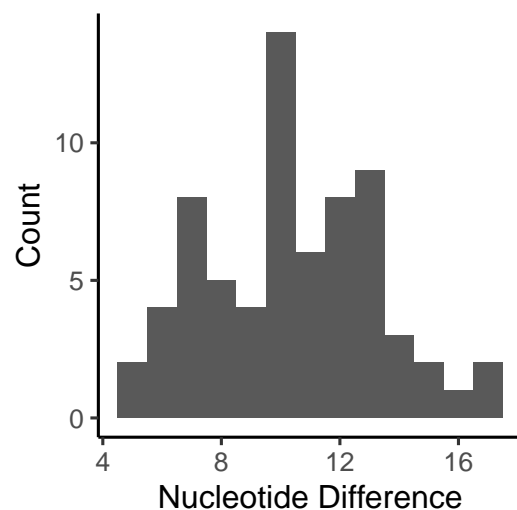
### IGHV3-88\*02\_S9033

3814 sequences assigned  
88 (2.3%) exact matches, in which:  
69 unique CDR3  
5 unique J



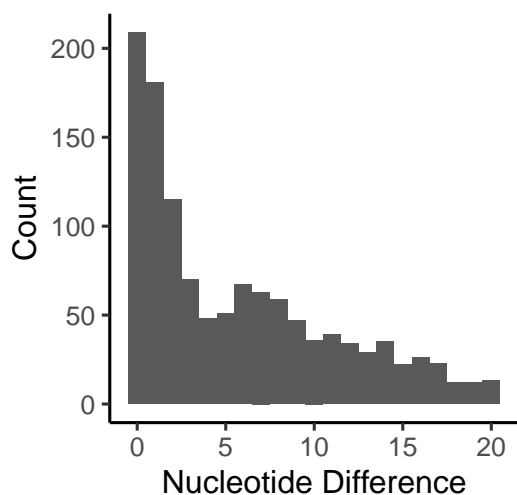
### IGHV3-100\*01\_S4205

89 sequences assigned  
No exact matches.



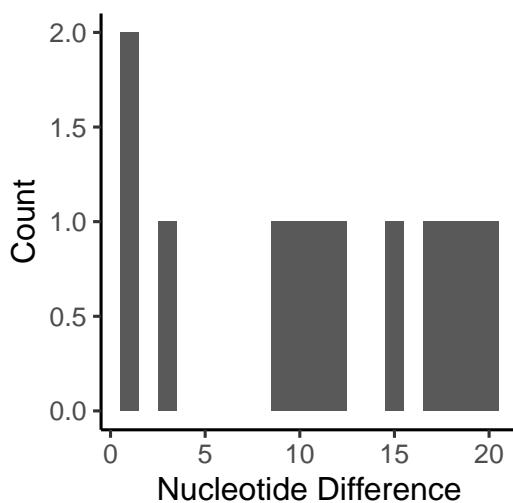
### IGHV3-76\*02\_S4190\_A2

1243 sequences assigned  
209 (16.8%) exact matches, in which:  
191 unique CDR3  
7 unique J



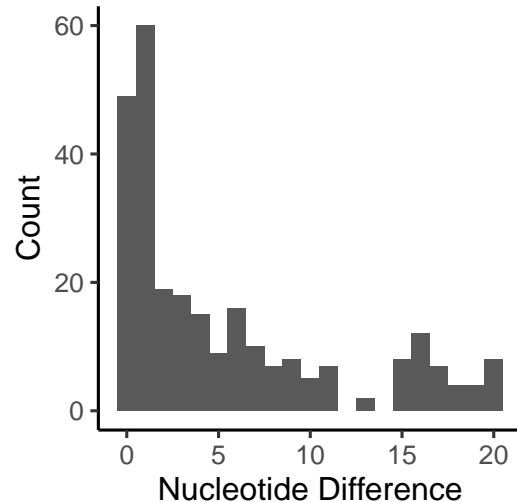
### IGHV3-94\*01\_S4458

21 sequences assigned  
No exact matches.



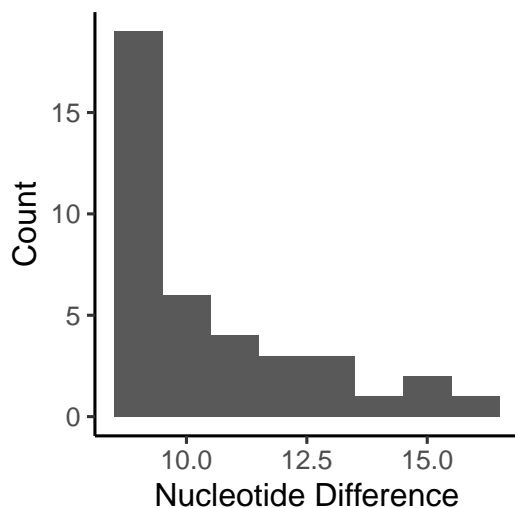
### IGHV3-100\*01\_S4375

331 sequences assigned  
49 (14.8%) exact matches, in which:  
38 unique CDR3  
6 unique J



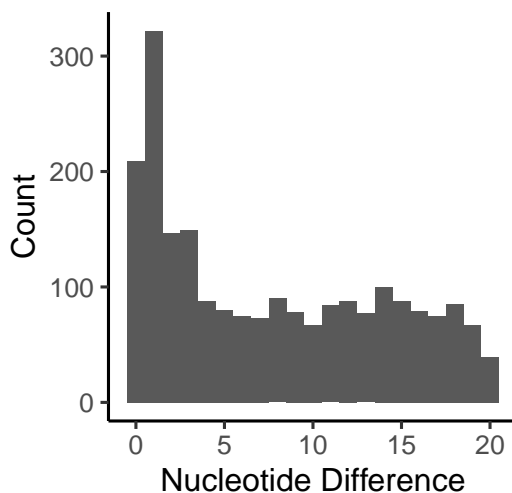
### IGHV3-103\*01\_S2756

45 sequences assigned  
No exact matches.



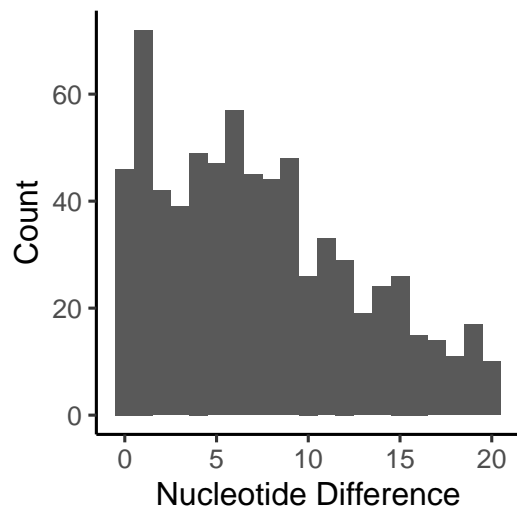
### IGHV3-122\*01\_S5299

2415 sequences assigned  
209 (8.7%) exact matches, in which:  
147 unique CDR3  
8 unique J



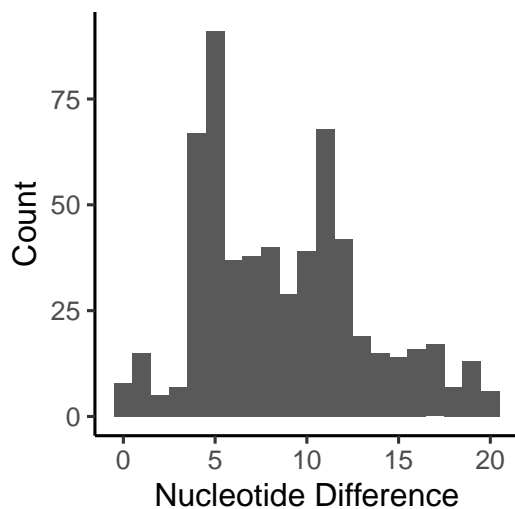
### IGHV3-128\*01\_S6966

755 sequences assigned  
46 (6.1%) exact matches, in which:  
33 unique CDR3  
4 unique J



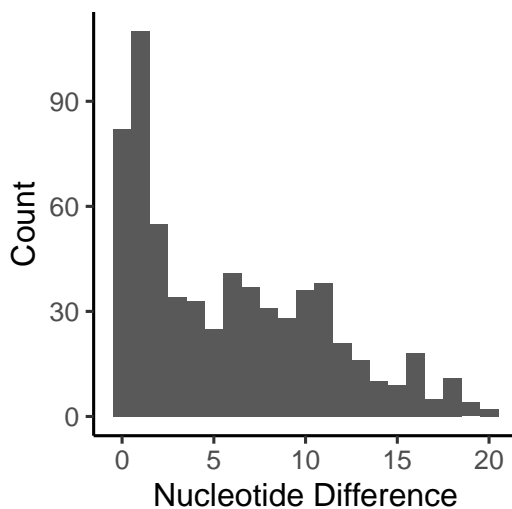
### IGHV3-119\*01\_S9769

638 sequences assigned  
8 (1.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



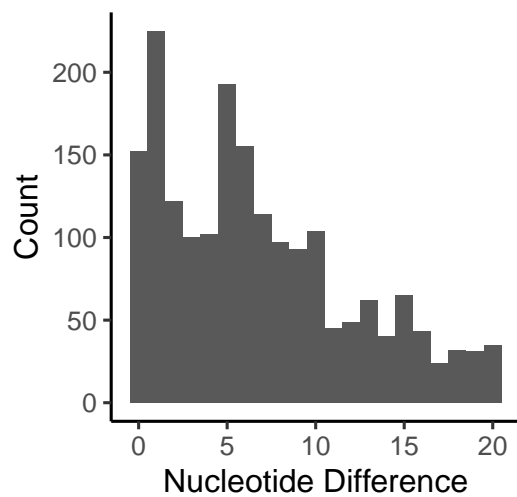
### IGHV3-122\*01\_S8388

692 sequences assigned  
82 (11.8%) exact matches, in which:  
63 unique CDR3  
7 unique J



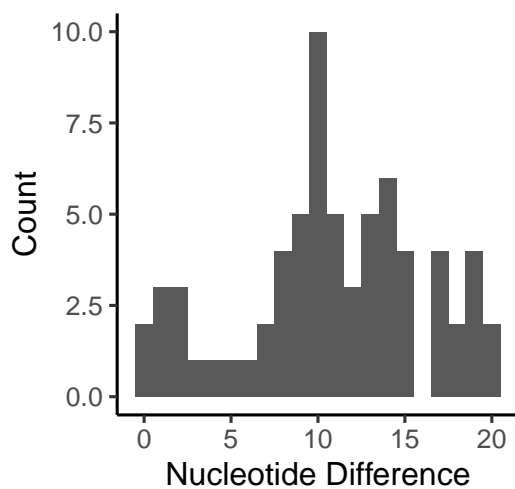
### IGHV3-128\*02\_S0204

2182 sequences assigned  
152 (7%) exact matches, in which:  
119 unique CDR3  
6 unique J



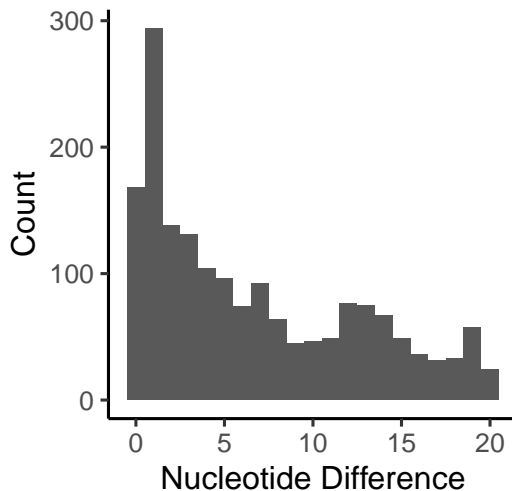
### IGHV3-120\*01\_S4231

78 sequences assigned  
2 (2.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



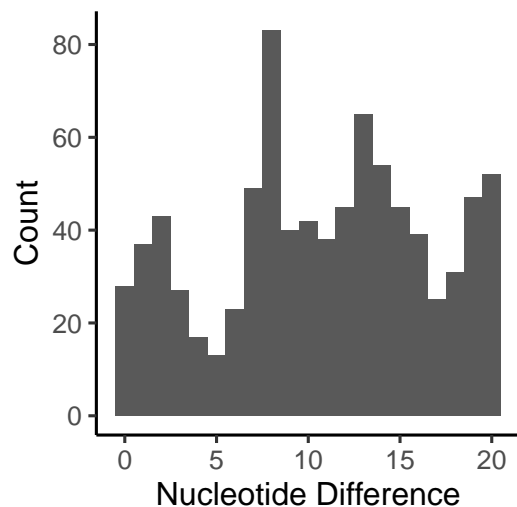
### IGHV3-127\*01\_S5510

2089 sequences assigned  
168 (8%) exact matches, in which:  
129 unique CDR3  
7 unique J



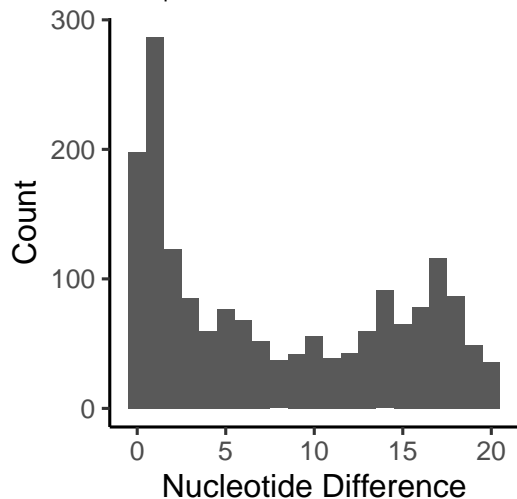
### IGHV3-152\*01\_S5891

1079 sequences assigned  
28 (2.6%) exact matches, in which:  
24 unique CDR3  
4 unique J



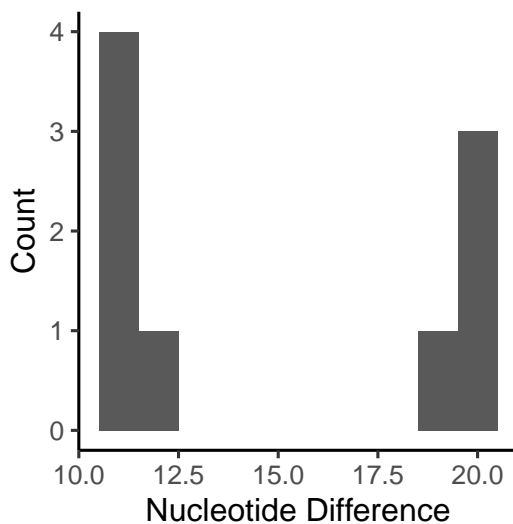
### IGHV3-172\*01\_S2175

2062 sequences assigned  
198 (9.6%) exact matches, in which:  
122 unique CDR3  
7 unique J



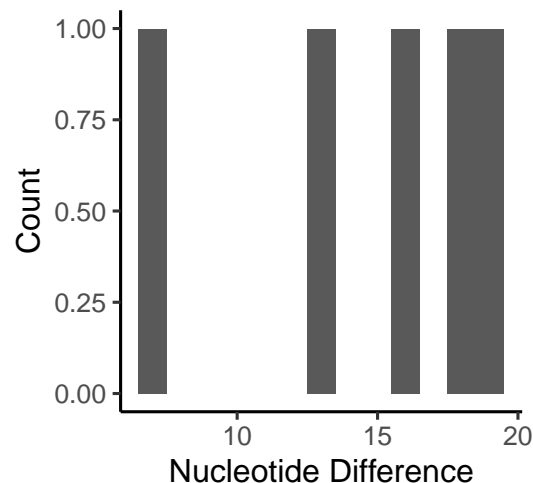
### IGHV3-177\*01\_S4102

933 sequences assigned  
No exact matches.



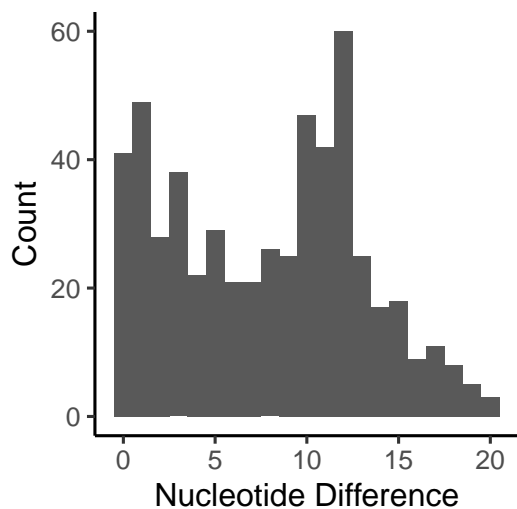
### IGHV3-187\*01\_S6840

7 sequences assigned  
No exact matches.



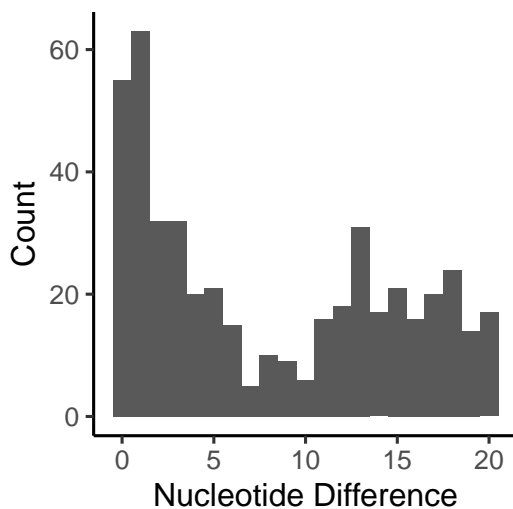
### IGHV3-172\*01\_S8488

797 sequences assigned  
41 (5.1%) exact matches, in which:  
30 unique CDR3  
7 unique J



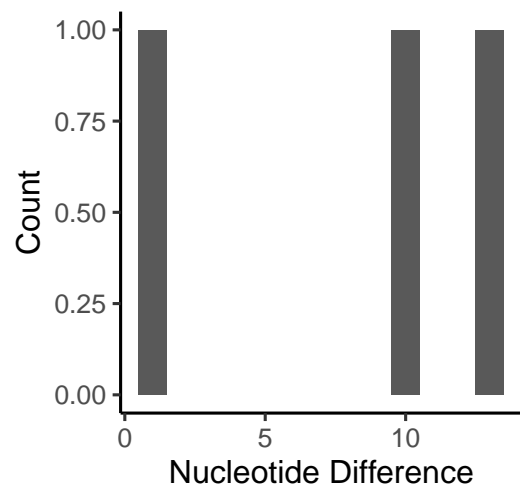
### IGHV3-177\*01\_S5369

624 sequences assigned  
55 (8.8%) exact matches, in which:  
39 unique CDR3  
7 unique J



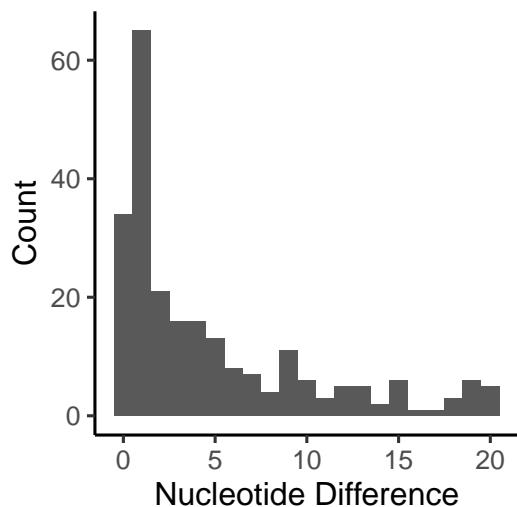
### IGHV3-187\*01\_S8951

8 sequences assigned  
No exact matches.



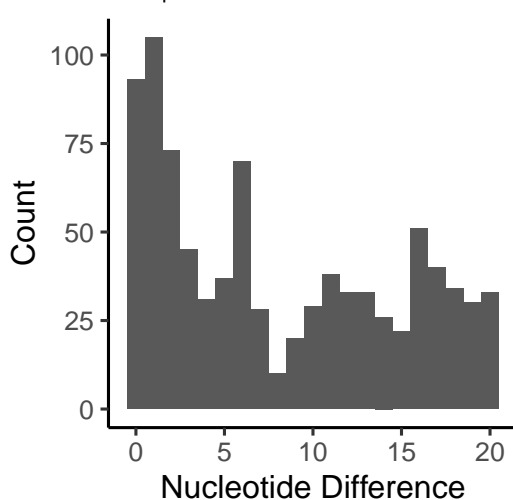
### IGHV3-175\*01\_S1614

255 sequences assigned  
34 (13.3%) exact matches, in which:  
25 unique CDR3  
5 unique J



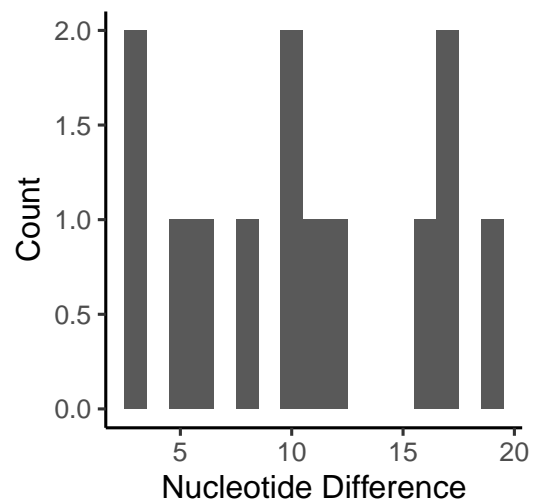
### IGHV3-177\*01\_S6408

1110 sequences assigned  
93 (8.4%) exact matches, in which:  
61 unique CDR3  
6 unique J



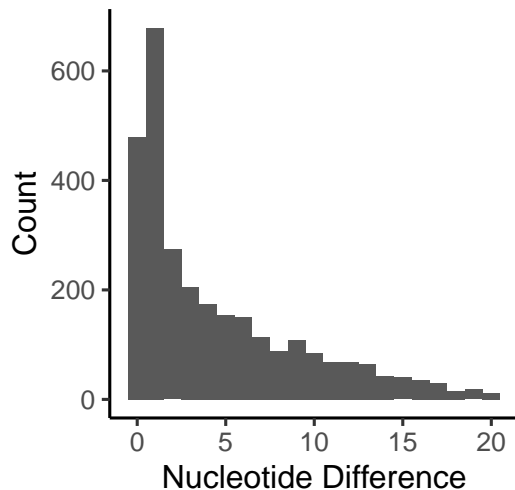
### IGHV3-187\*01\_S8972

22 sequences assigned  
No exact matches.



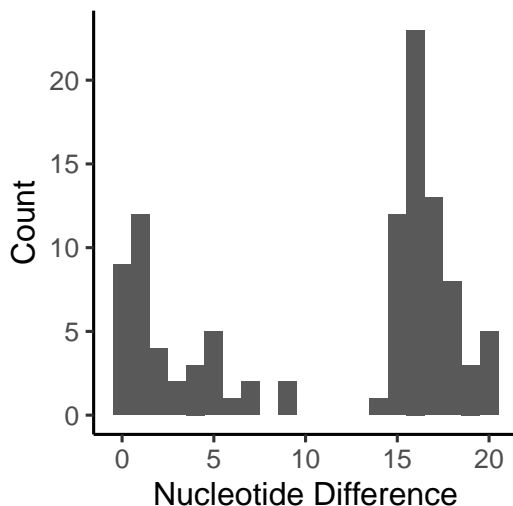
### IGHV3-NL\_1\*01\_S1080

3144 sequences assigned  
480 (15.3%) exact matches, in which:  
343 unique CDR3  
8 unique J



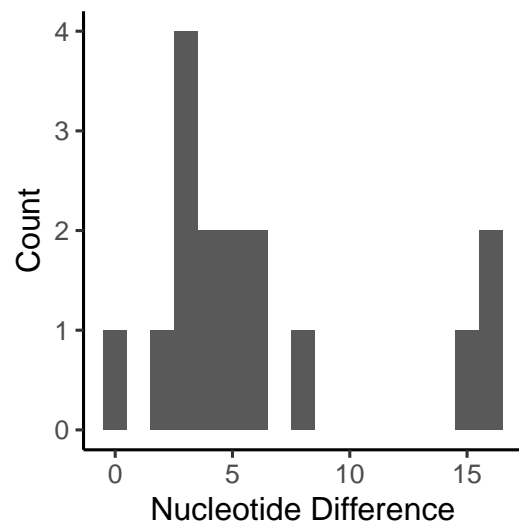
### IGHV3-NL\_13\*01\_S5549

123 sequences assigned  
9 (7.3%) exact matches, in which:  
8 unique CDR3  
4 unique J



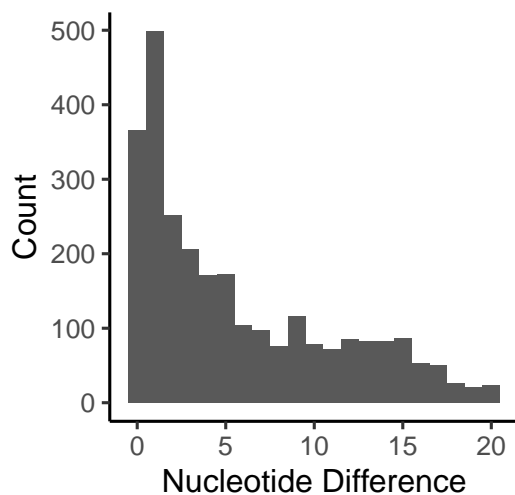
### IGHV3-NL\_16\*01\_S5133

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



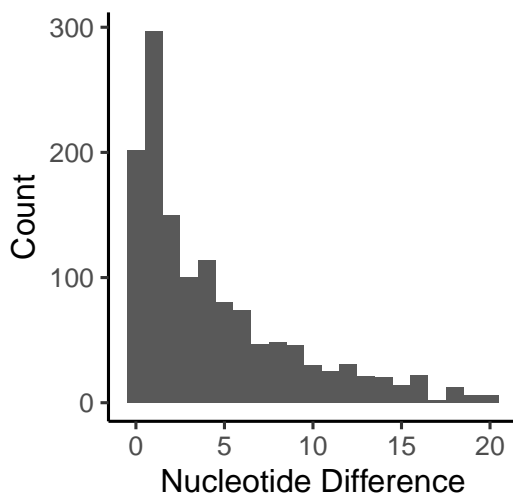
### IGHV3-NL\_1\*01\_S9854

2954 sequences assigned  
366 (12.4%) exact matches, in which:  
265 unique CDR3  
7 unique J



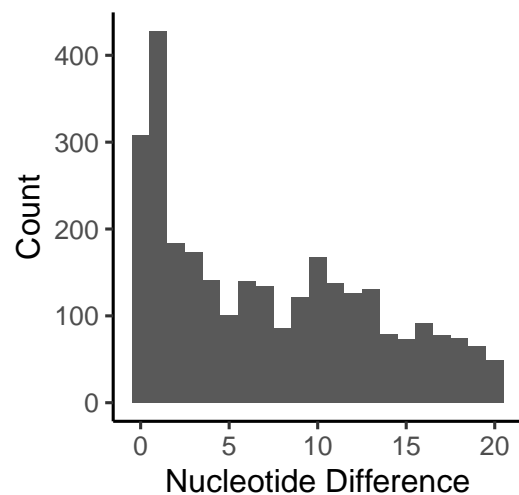
### IGHV3-NL\_14\*01\_S1113

1380 sequences assigned  
202 (14.6%) exact matches, in which:  
152 unique CDR3  
7 unique J



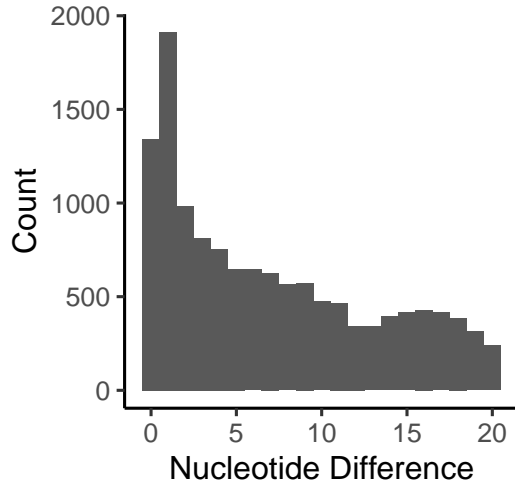
### IGHV3-NL\_17\*01\_S4250

3629 sequences assigned  
308 (8.5%) exact matches, in which:  
222 unique CDR3  
7 unique J



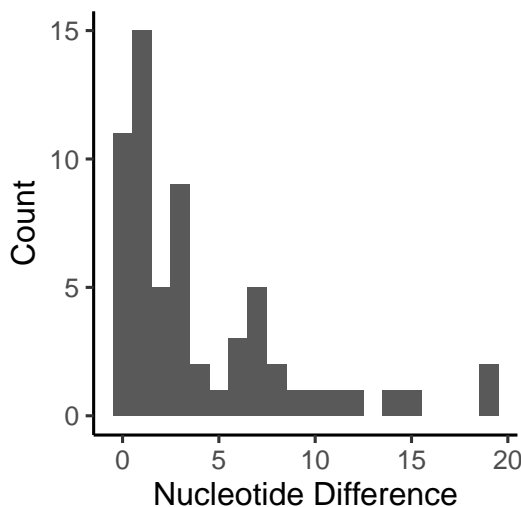
### IGHV3-NL\_11\*01\_S639

15056 sequences assigned  
1341 (8.9%) exact matches, in which:  
1006 unique CDR3  
8 unique J



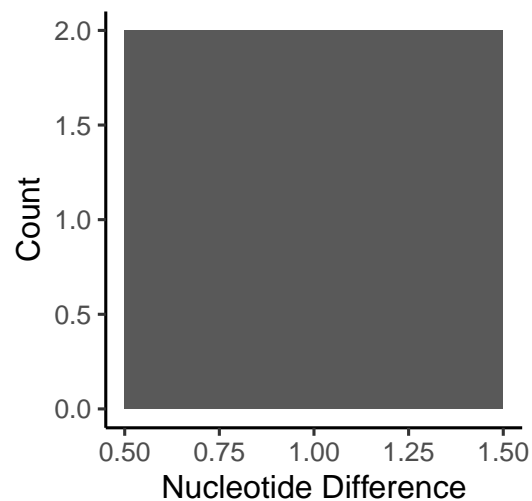
### IGHV3-NL\_15\*01\_S4749

62 sequences assigned  
11 (17.7%) exact matches, in which:  
7 unique CDR3  
5 unique J



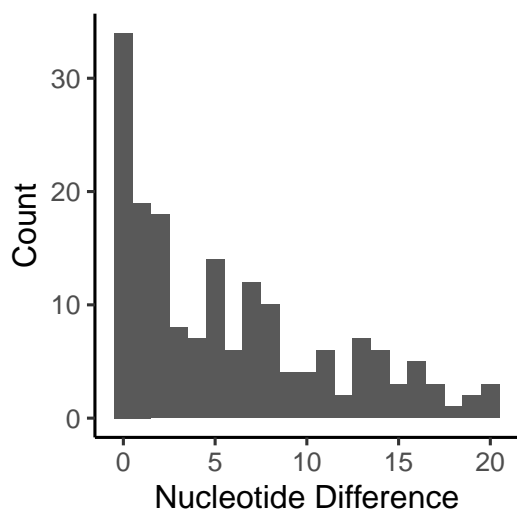
### IGHV3-NL\_18\*01\_S0984

2 sequences assigned  
No exact matches.



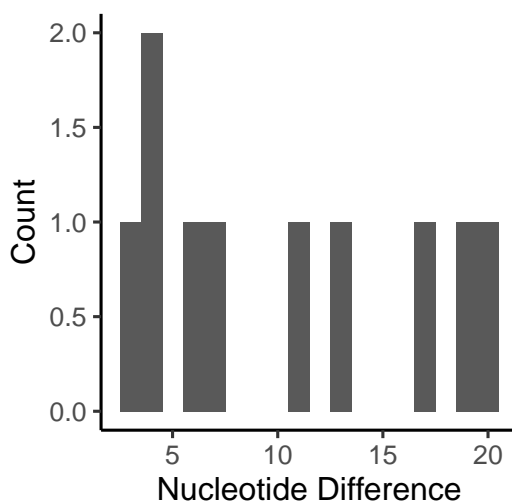
### IGHV3–NL\_19\*01\_S6894

185 sequences assigned  
34 (18.4%) exact matches, in which:  
31 unique CDR3  
6 unique J



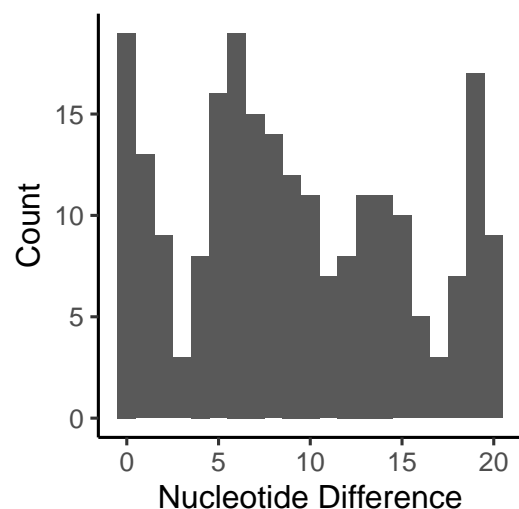
### IGHV3–NL\_5\*01\_S8361

11 sequences assigned  
No exact matches.



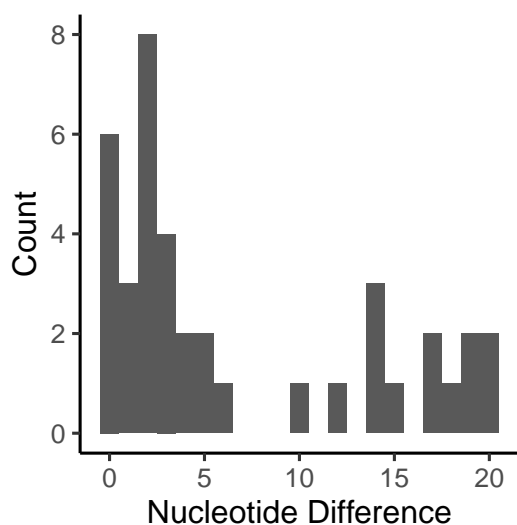
### IGHV3–NL\_8\*01\_S7474

290 sequences assigned  
19 (6.6%) exact matches, in which:  
14 unique CDR3  
3 unique J



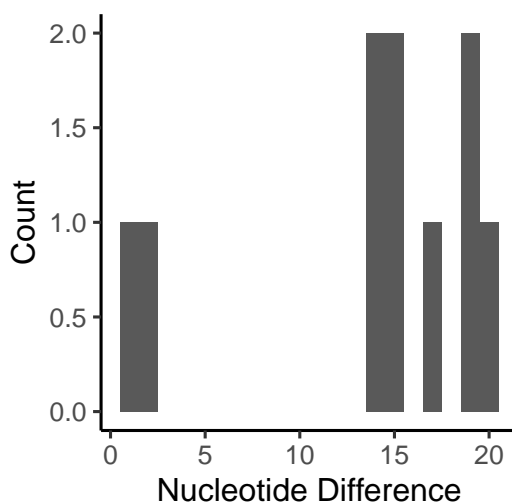
### IGHV3–NL\_2\*01\_S5884

48 sequences assigned  
6 (12.5%) exact matches, in which:  
6 unique CDR3  
4 unique J



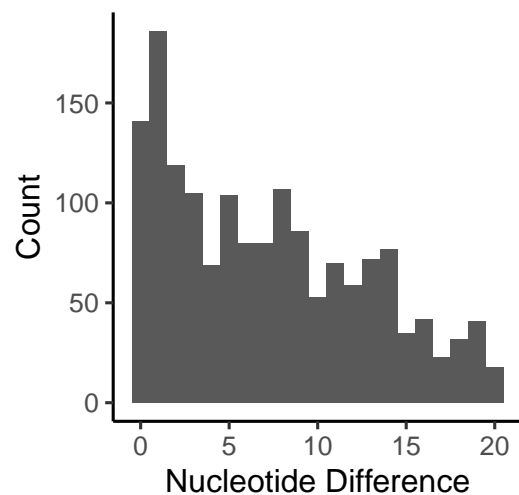
### IGHV3–NL\_6\*02\_S7808

219 sequences assigned  
No exact matches.



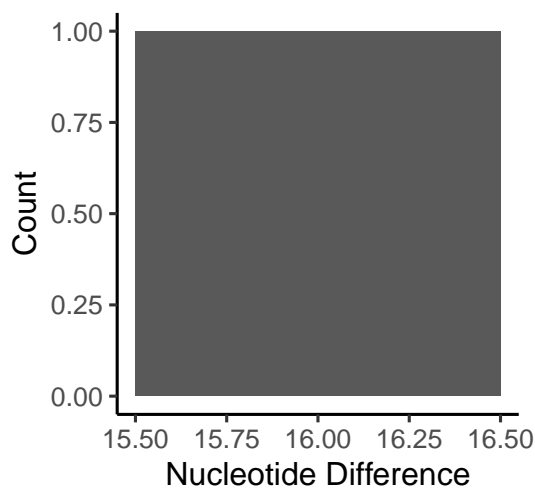
### IGHV3–NL\_9\*01\_S6098

2004 sequences assigned  
141 (7%) exact matches, in which:  
108 unique CDR3  
8 unique J



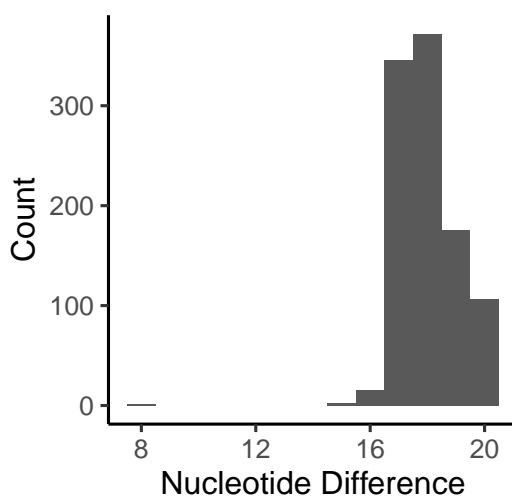
### IGHV3–NL\_4\*01\_S6405

1 sequences assigned  
No exact matches.



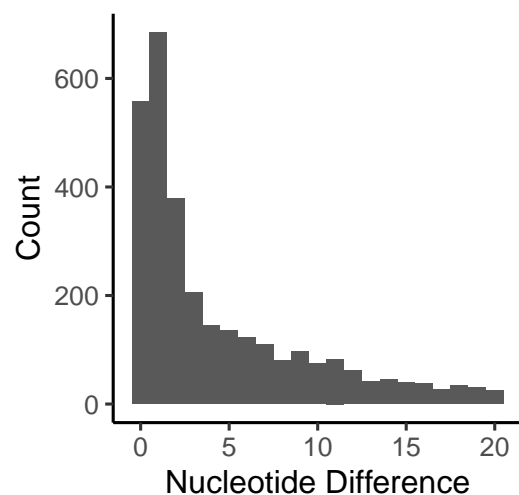
### IGHV3–NL\_7\*01\_S0199

2248 sequences assigned  
No exact matches.



### IGHV4–67\*01\_S4509

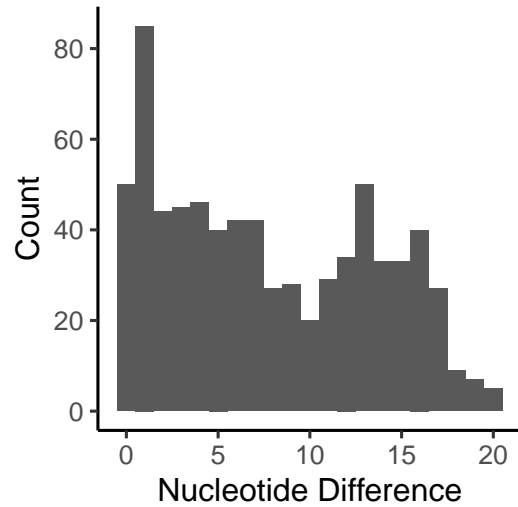
3348 sequences assigned  
557 (16.6%) exact matches, in which:  
475 unique CDR3  
7 unique J





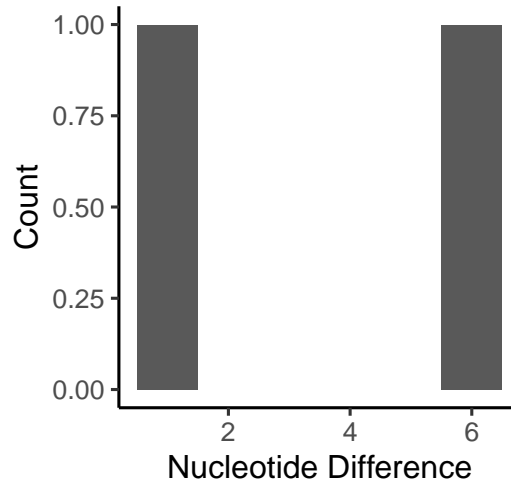
### IGHV4-72\*01\_S8261

794 sequences assigned  
50 (6.3%) exact matches, in which:  
40 unique CDR3  
6 unique J



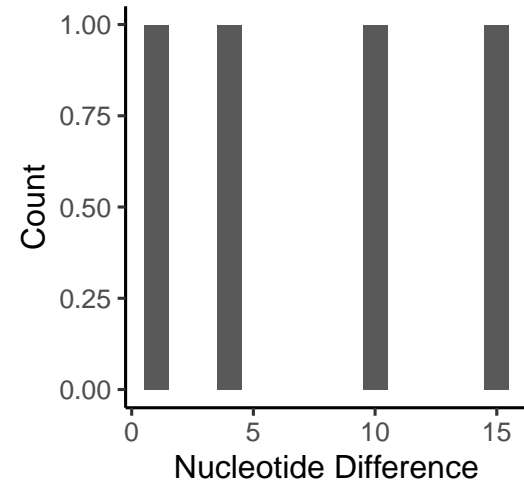
### IGHV4-93\*01\_S5203

2 sequences assigned  
No exact matches.



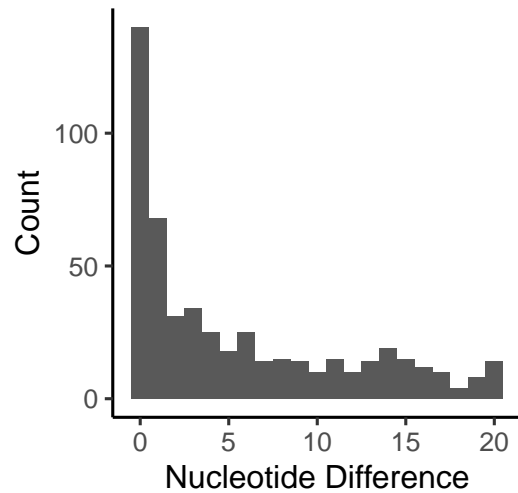
### IGHV4-149\*01\_S0794

4 sequences assigned  
No exact matches.



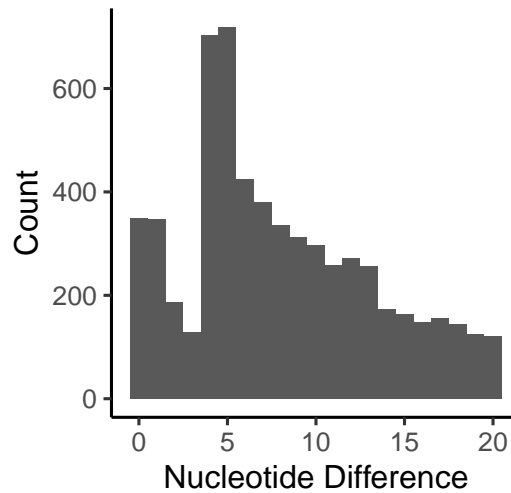
### IGHV4-79\*02\_S9501

620 sequences assigned  
140 (22.6%) exact matches, in which:  
124 unique CDR3  
8 unique J



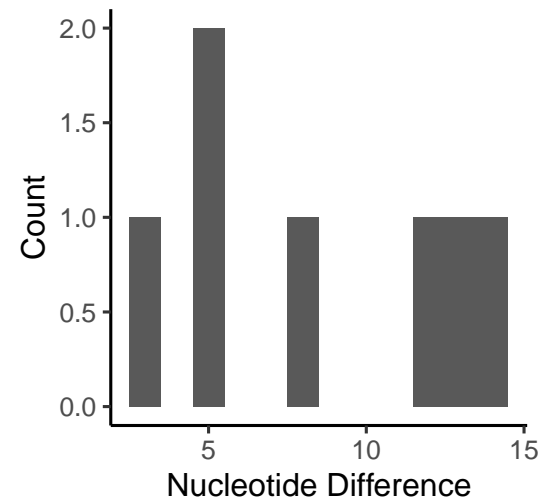
### IGHV4-117\*01\_S4879

7300 sequences assigned  
349 (4.8%) exact matches, in which:  
305 unique CDR3  
7 unique J



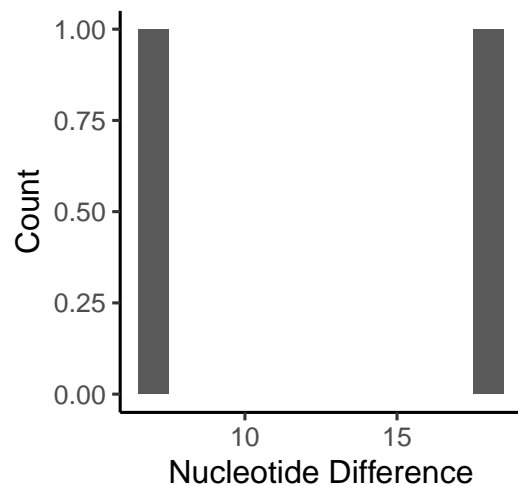
### IGHV4-149\*01\_S1992

9 sequences assigned  
No exact matches.



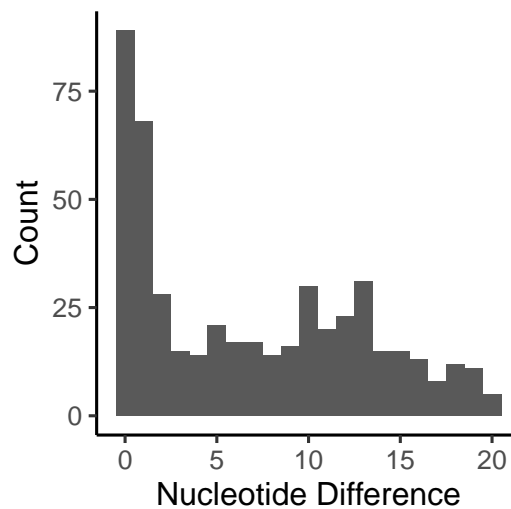
### IGHV4-93\*01\_S0054

2 sequences assigned  
No exact matches.



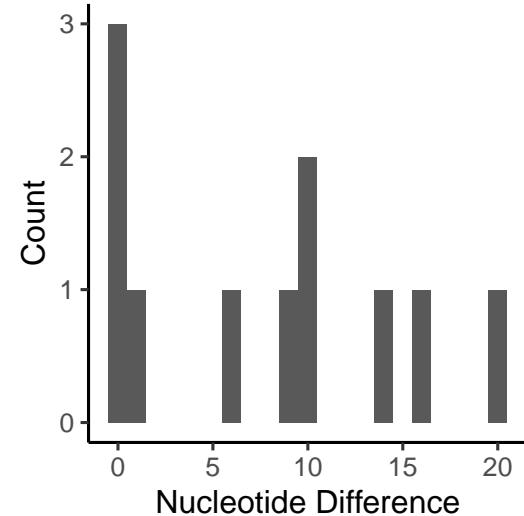
### IGHV4-144\*01\_S3008

580 sequences assigned  
89 (15.3%) exact matches, in which:  
83 unique CDR3  
7 unique J



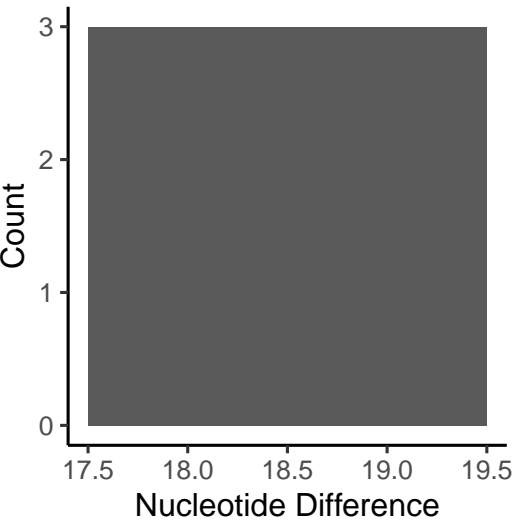
### IGHV4-149\*01\_S4098

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



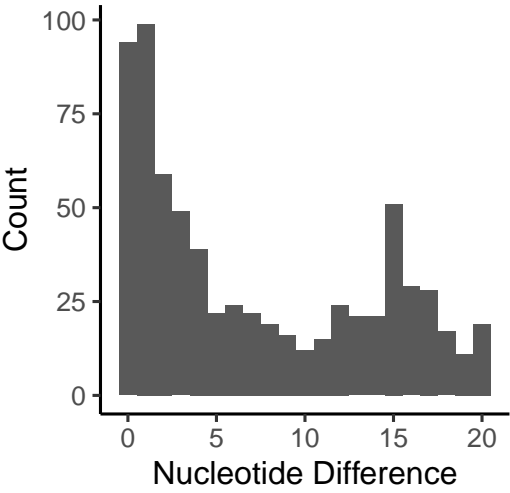
IGHV4-149\*01\_S7944

8 sequences assigned  
No exact matches.



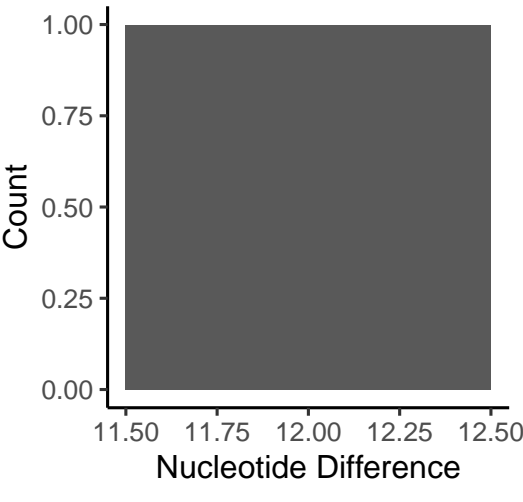
IGHV4-NL\_1\*02\_S1821

956 sequences assigned  
94 (9.8%) exact matches, in which:  
82 unique CDR3  
7 unique J



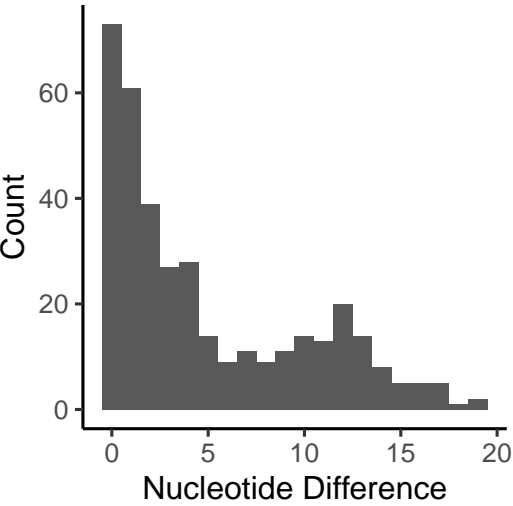
IGHV4-NL\_10\*01\_S6744

1 sequences assigned  
No exact matches.



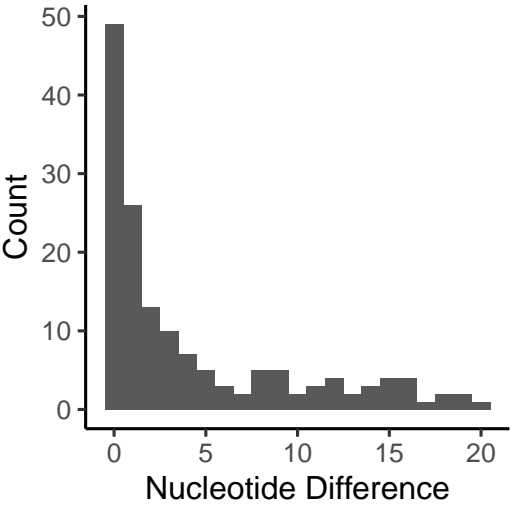
IGHV4-150\*01\_S0749

501 sequences assigned  
73 (14.6%) exact matches, in which:  
60 unique CDR3  
6 unique J



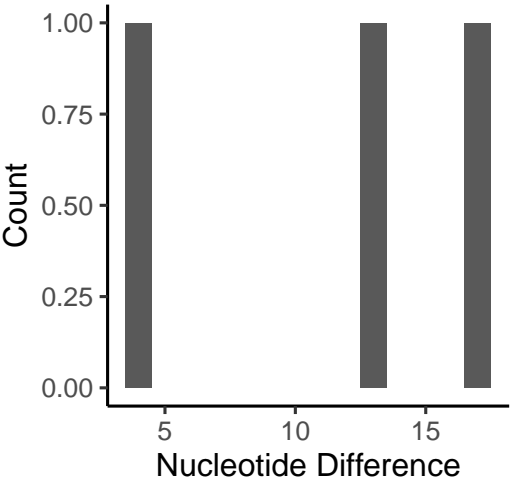
IGHV4-NL\_1\*02\_S5113

160 sequences assigned  
49 (30.6%) exact matches, in which:  
47 unique CDR3  
5 unique J



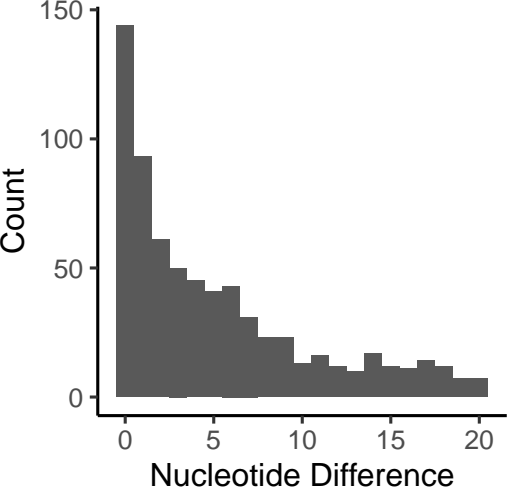
IGHV4-NL\_12\*01\_S5174

5 sequences assigned  
No exact matches.



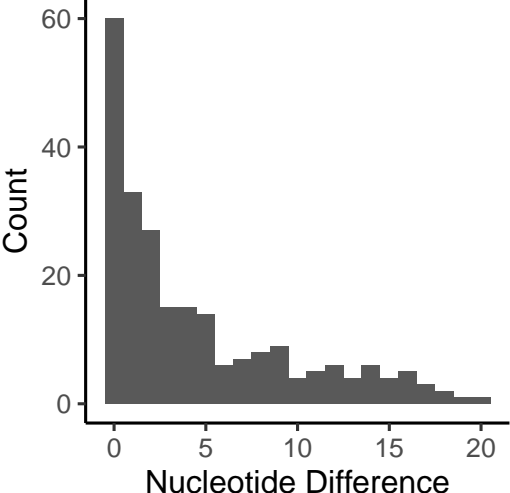
IGHV4-174\*02\_S3984

760 sequences assigned  
144 (18.9%) exact matches, in which:  
133 unique CDR3  
7 unique J



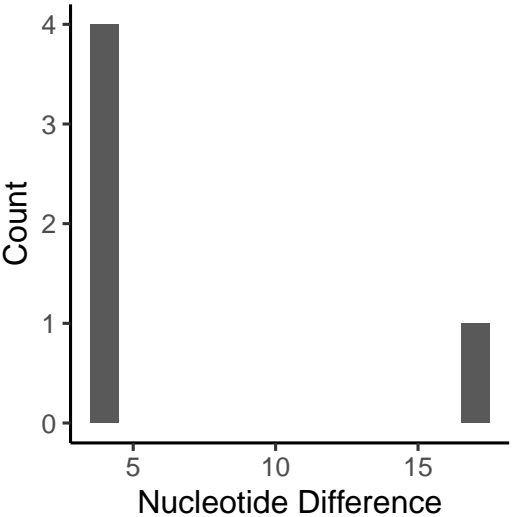
IGHV4-NL\_1\*02\_S5113\_1

245 sequences assigned  
60 (24.5%) exact matches, in which:  
55 unique CDR3  
7 unique J



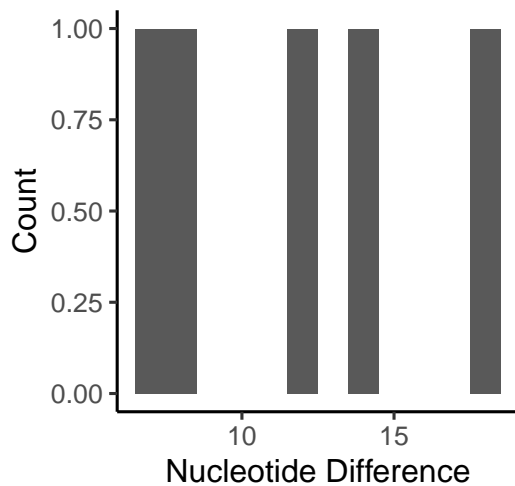
IGHV4-NL\_13\*01\_S9624

5 sequences assigned  
No exact matches.



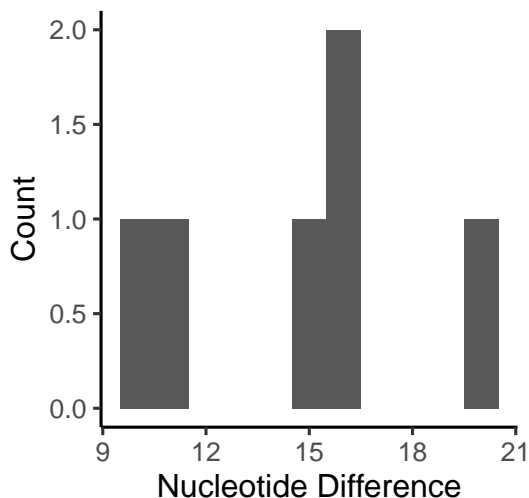
### IGHV4-NL\_16\*01\_S2324

5 sequences assigned  
No exact matches.



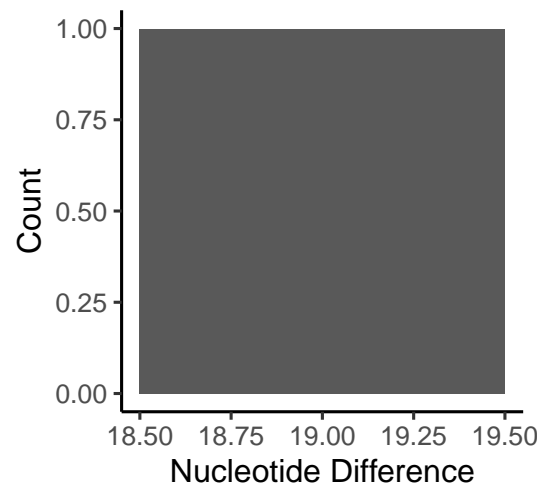
### IGHV4-NL\_19\*01\_S1944

7 sequences assigned  
No exact matches.



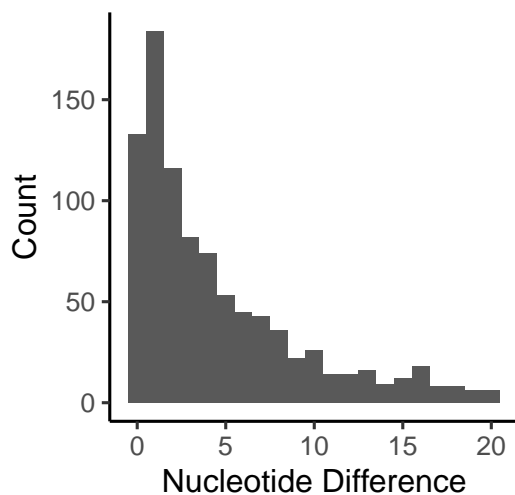
### IGHV4-NL\_20\*01\_S4754

2 sequences assigned  
No exact matches.



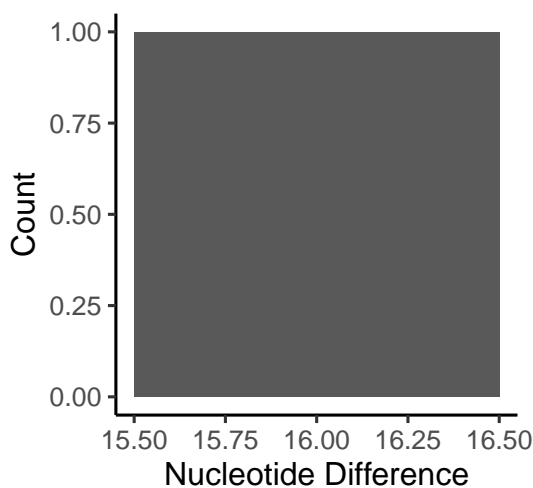
### IGHV4-NL\_17\*01\_S2469

1073 sequences assigned  
133 (12.4%) exact matches, in which:  
118 unique CDR3  
7 unique J



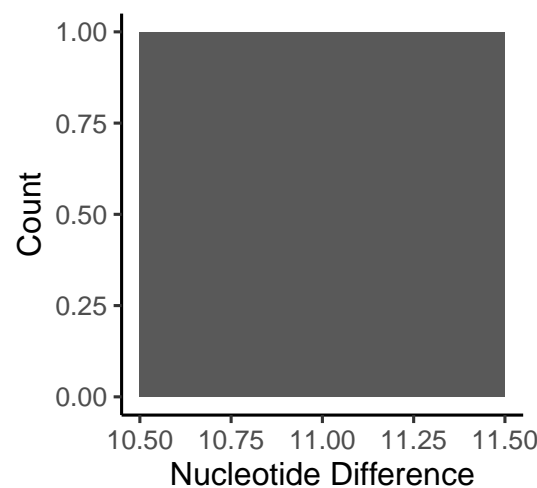
### IGHV4-NL\_20\*01\_S2908

2 sequences assigned  
No exact matches.



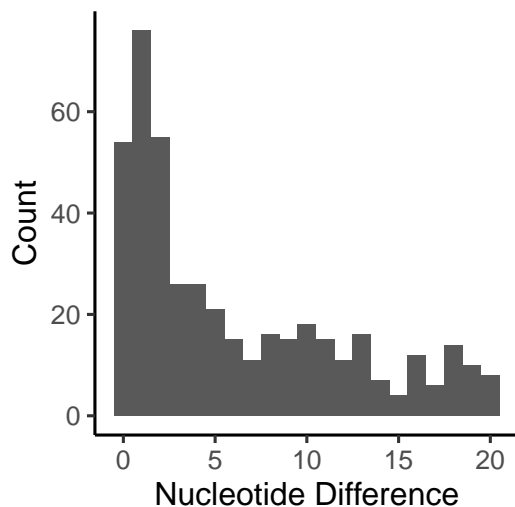
### IGHV4-NL\_20\*01\_S7244

1 sequences assigned  
No exact matches.



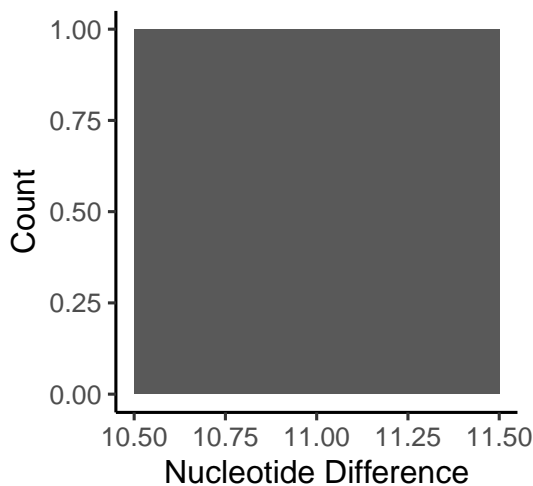
### IGHV4-NL\_17\*01\_S5431

511 sequences assigned  
54 (10.6%) exact matches, in which:  
49 unique CDR3  
6 unique J



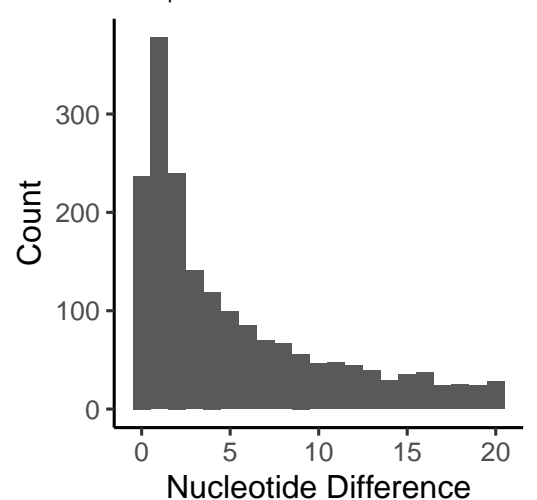
### IGHV4-NL\_20\*01\_S3862

1 sequences assigned  
No exact matches.



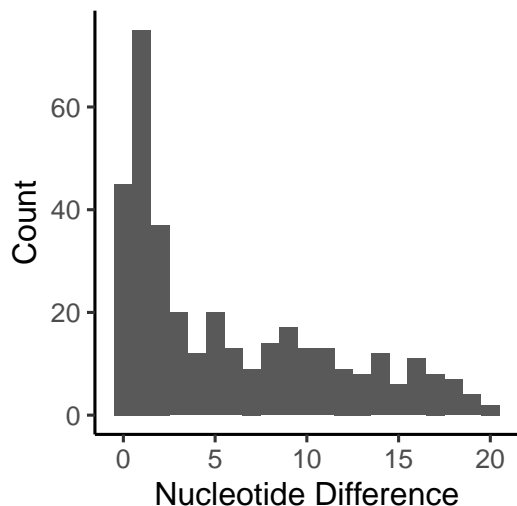
### IGHV4-NL\_21\*01\_S6650

2029 sequences assigned  
237 (11.7%) exact matches, in which:  
217 unique CDR3  
7 unique J



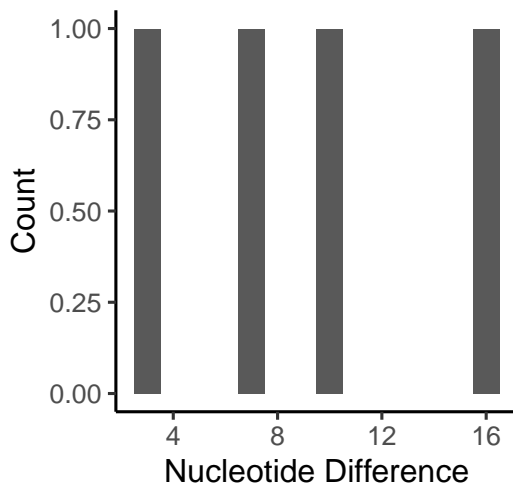
### IGHV4–NL\_22\*01\_S6977

406 sequences assigned  
45 (11.1%) exact matches, in which:  
43 unique CDR3  
7 unique J



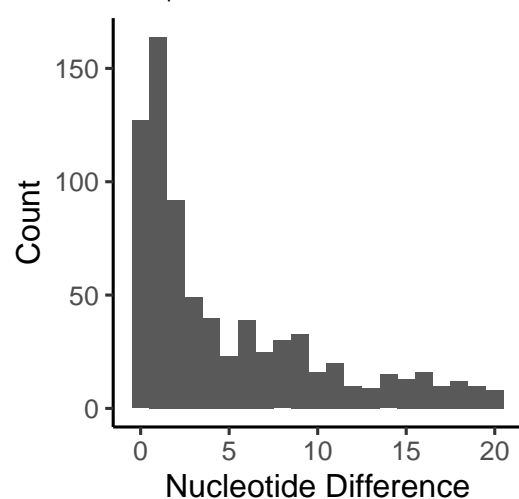
### IGHV4–NL\_25\*01\_S2780

7 sequences assigned  
No exact matches.



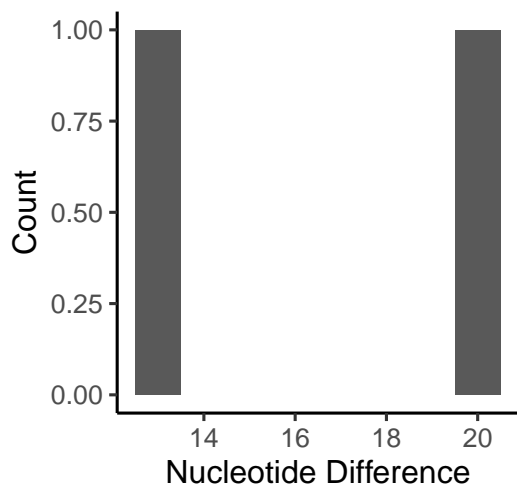
### IGHV4–NL\_27\*01\_S1458

789 sequences assigned  
127 (16.1%) exact matches, in which:  
110 unique CDR3  
7 unique J



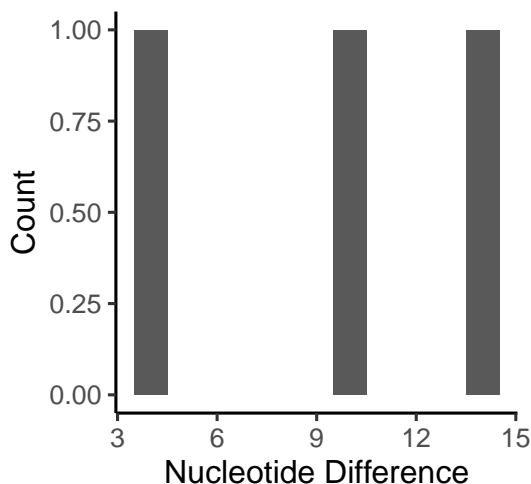
### IGHV4–NL\_23\*01\_S6914

2 sequences assigned  
No exact matches.



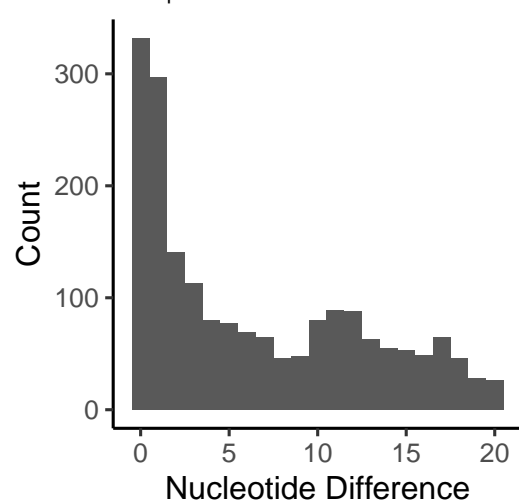
### IGHV4–NL\_25\*01\_S6383

3 sequences assigned  
No exact matches.



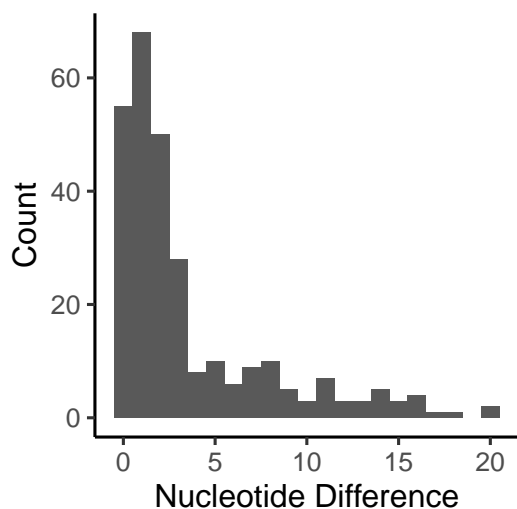
### IGHV4–NL\_27\*01\_S9001

2155 sequences assigned  
332 (15.4%) exact matches, in which:  
284 unique CDR3  
7 unique J



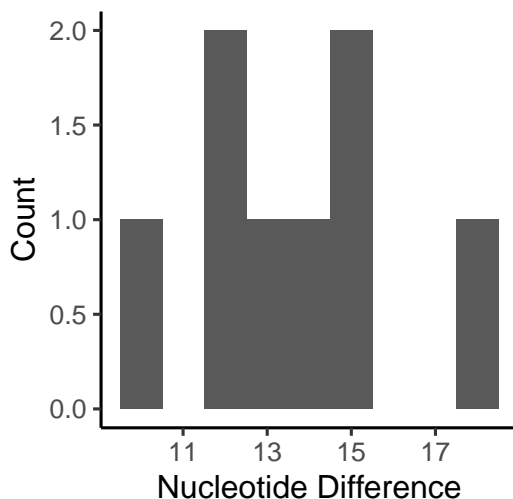
### IGHV4–NL\_24\*01\_S7595

284 sequences assigned  
55 (19.4%) exact matches, in which:  
45 unique CDR3  
5 unique J



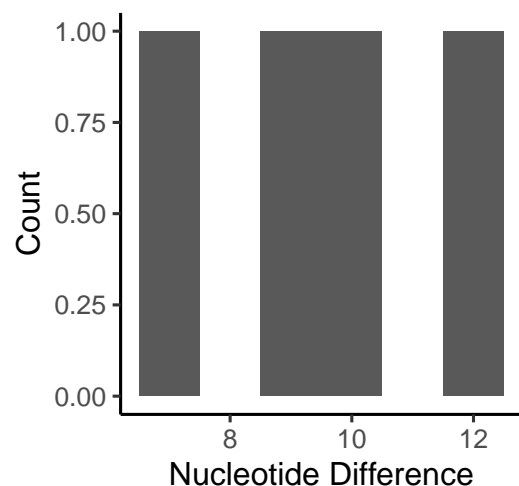
### IGHV4–NL\_26\*01\_S2261

11 sequences assigned  
No exact matches.



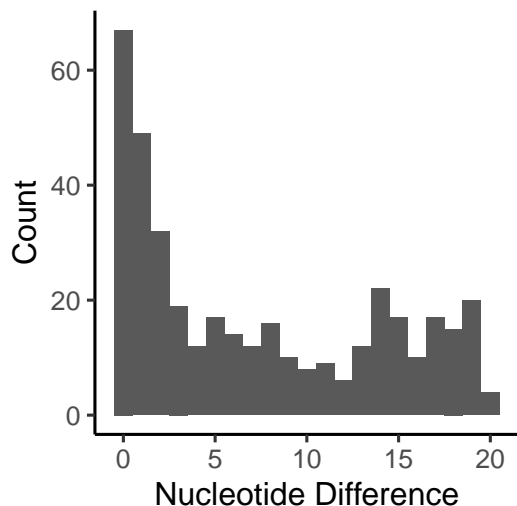
### IGHV4–NL\_28\*01\_S2610

4 sequences assigned  
No exact matches.



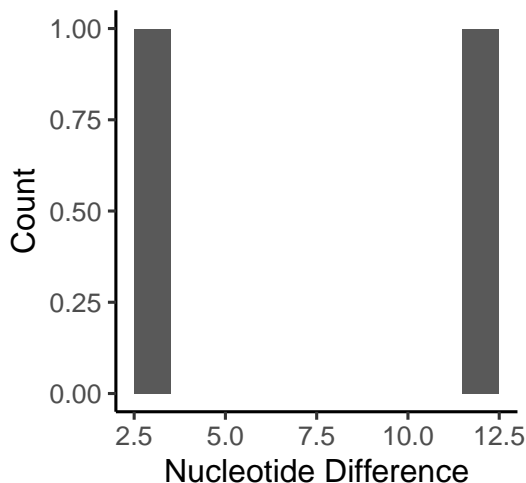
## IGHV4–NL\_29\*01\_S3761

434 sequences assigned  
67 (15.4%) exact matches, in which:  
60 unique CDR3  
7 unique J



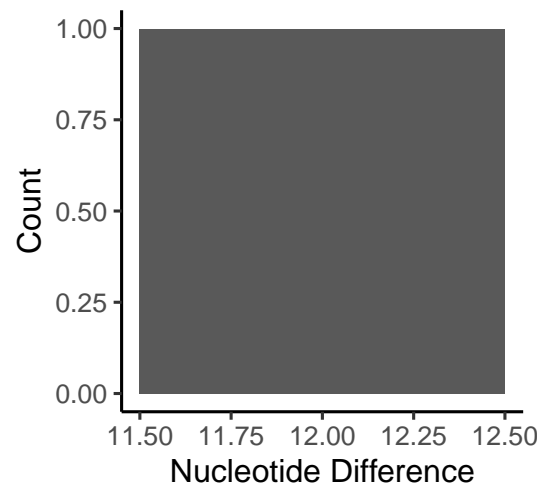
## IGHV4–NL\_30\*01\_S4257

2 sequences assigned  
No exact matches.



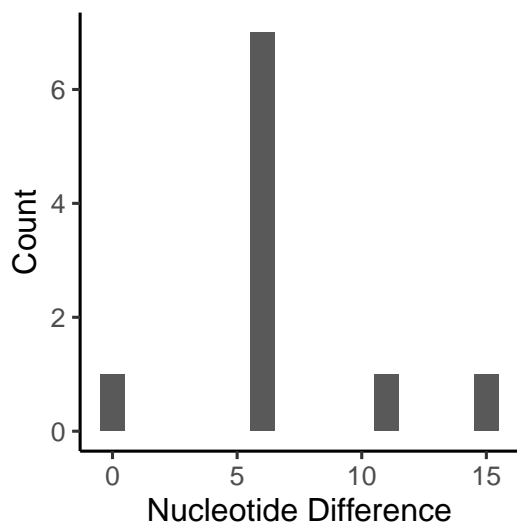
## IGHV4–NL\_32\*01\_S3033

12 sequences assigned  
No exact matches.



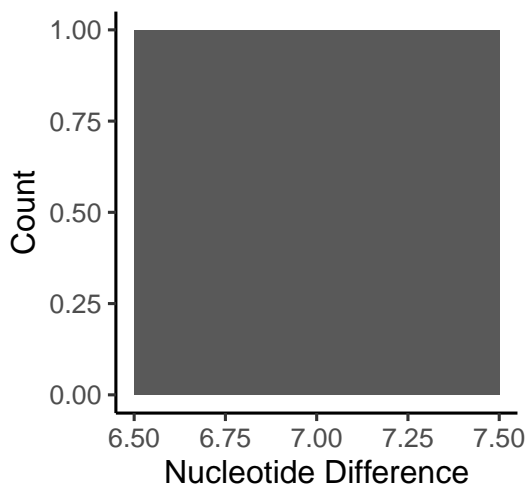
## IGHV4–NL\_3\*01\_S7576

11 sequences assigned  
1 (9.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



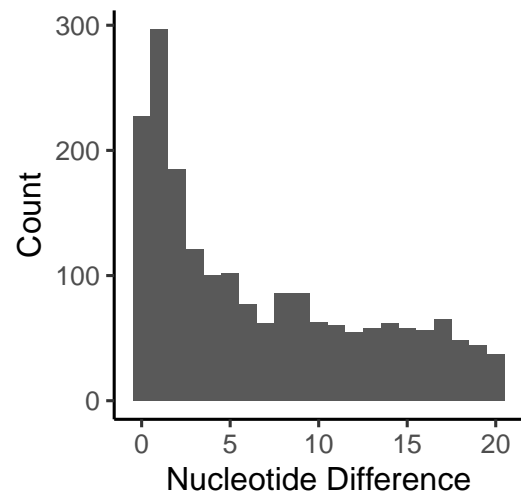
## IGHV4–NL\_31\*01\_S1675

2 sequences assigned  
No exact matches.



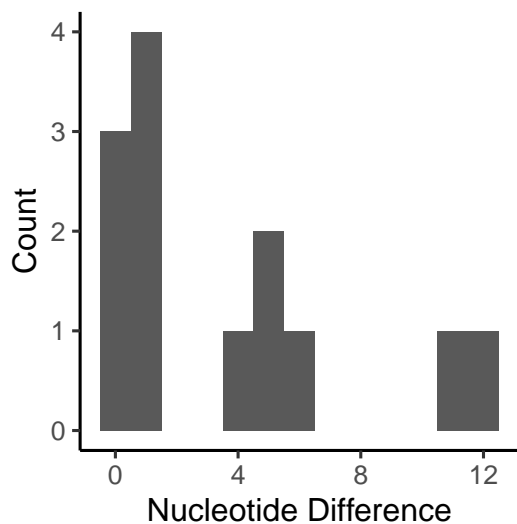
## IGHV4–NL\_33\*01\_S4467

2339 sequences assigned  
227 (9.7%) exact matches, in which:  
193 unique CDR3  
7 unique J



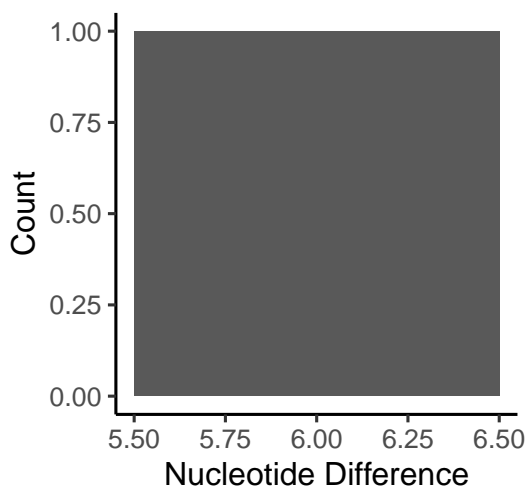
## IGHV4–NL\_3\*01\_S7864

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



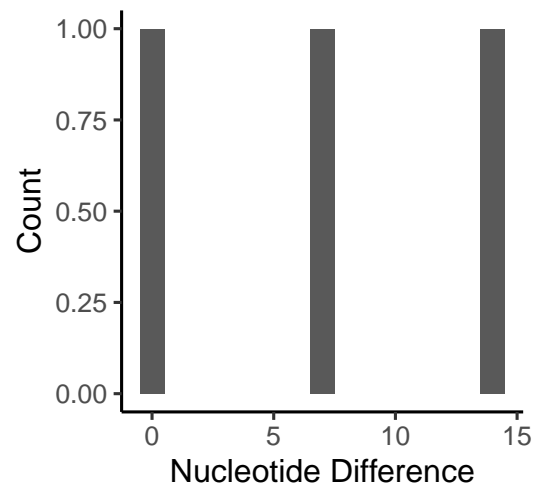
## IGHV4–NL\_31\*01\_S7693

1 sequences assigned  
No exact matches.



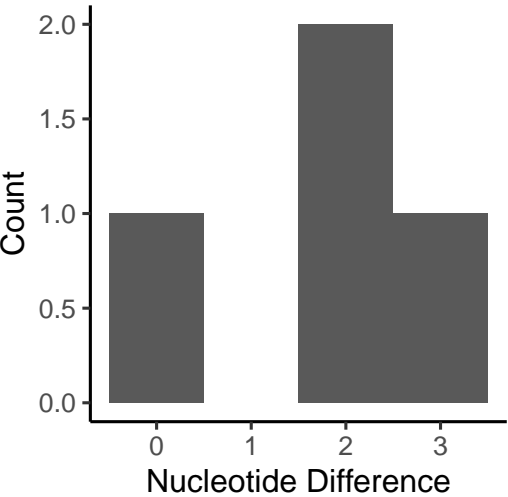
## IGHV4–NL\_34\*01\_S4637

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



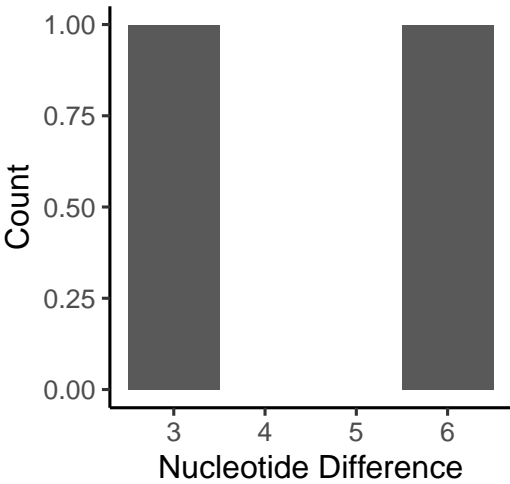
IGHV4-NL\_34\*01\_S4749

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



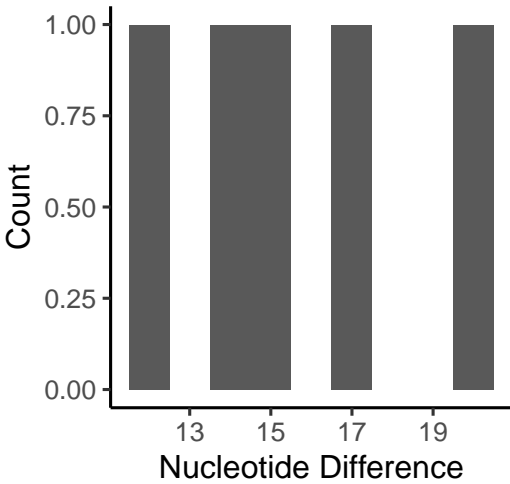
IGHV4-NL\_36\*01\_S5847

2 sequences assigned  
No exact matches.



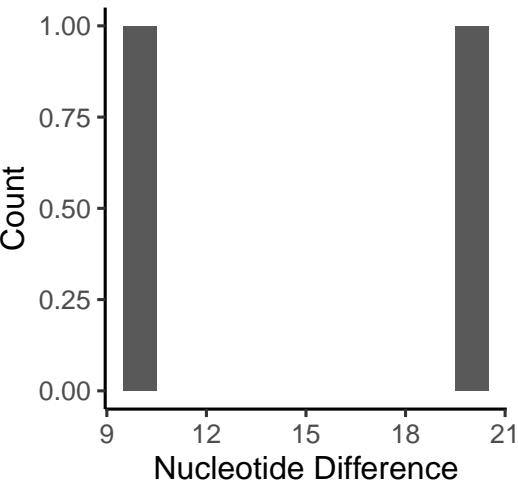
IGHV4-NL\_4\*01\_S5211

5 sequences assigned  
No exact matches.



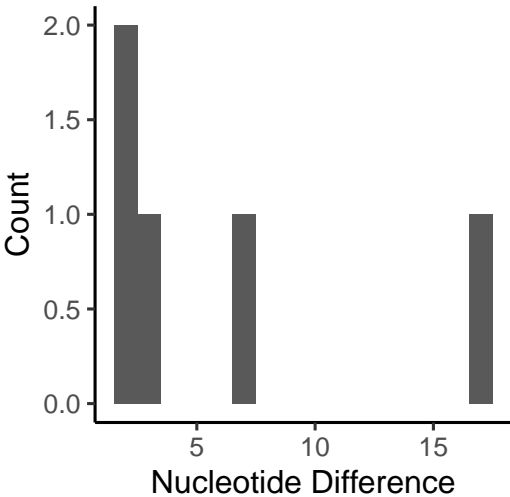
IGHV4-NL\_36\*01\_S0217

2 sequences assigned  
No exact matches.



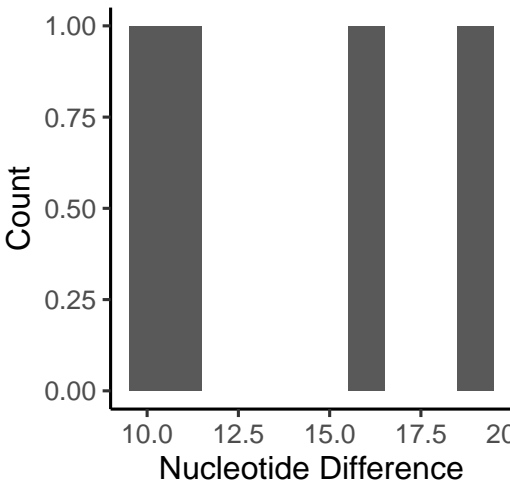
IGHV4-NL\_36\*01\_S8200

7 sequences assigned  
No exact matches.



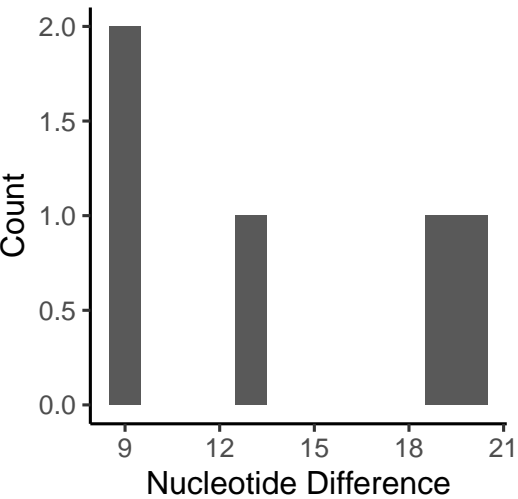
IGHV4-NL\_4\*01\_S8866

4 sequences assigned  
No exact matches.



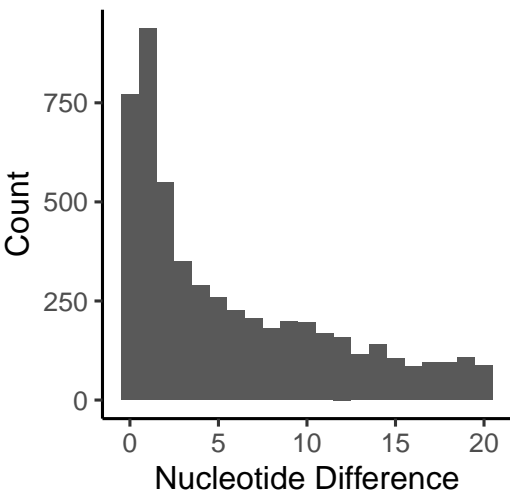
IGHV4-NL\_36\*01\_S3269

6 sequences assigned  
No exact matches.



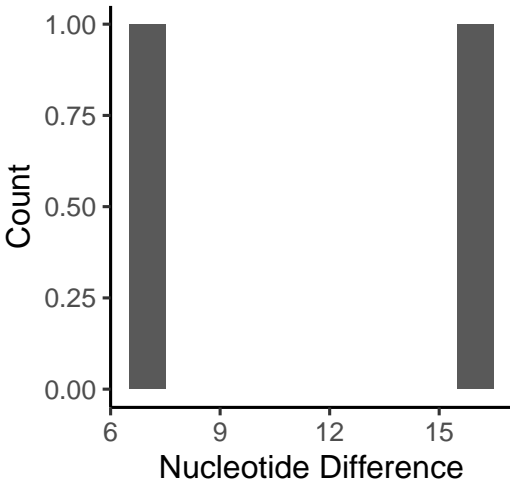
IGHV4-NL\_38\*01\_S9472

5917 sequences assigned  
770 (13%) exact matches, in which:  
664 unique CDR3  
7 unique J



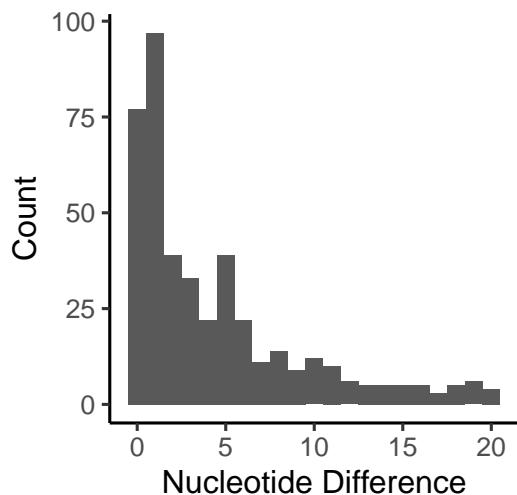
IGHV4-NL\_40\*01\_S0690

2 sequences assigned  
No exact matches.



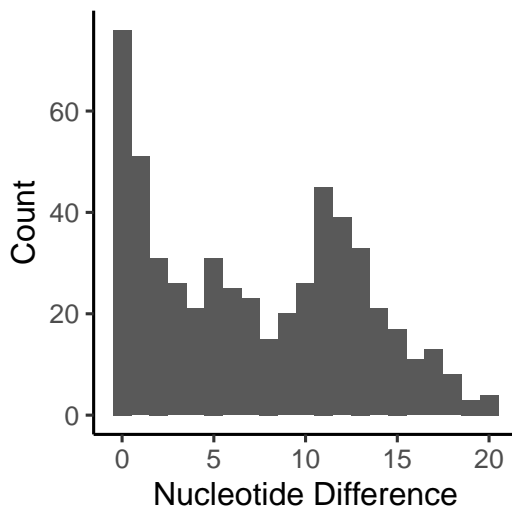
### IGHV4–NL\_42\*01\_S3572

543 sequences assigned  
77 (14.2%) exact matches, in which:  
73 unique CDR3  
7 unique J



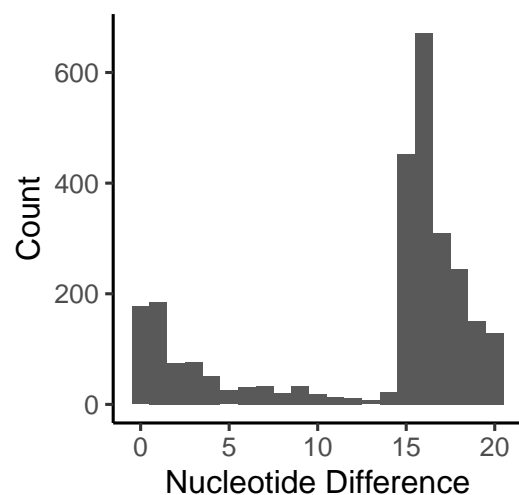
### IGHV4–NL\_5\*01\_S7147

593 sequences assigned  
76 (12.8%) exact matches, in which:  
68 unique CDR3  
7 unique J



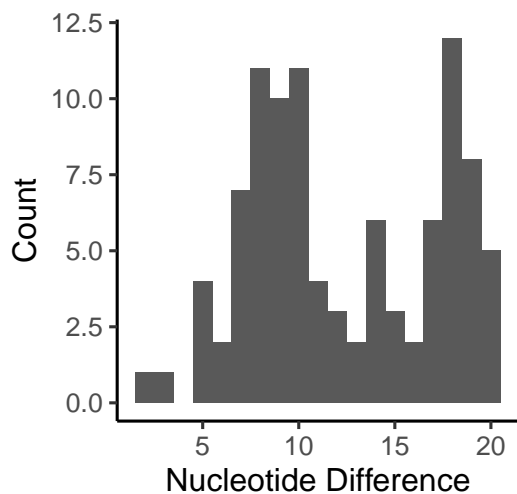
### IGHV5–157\*01\_S6479

3472 sequences assigned  
177 (5.1%) exact matches, in which:  
116 unique CDR3  
6 unique J



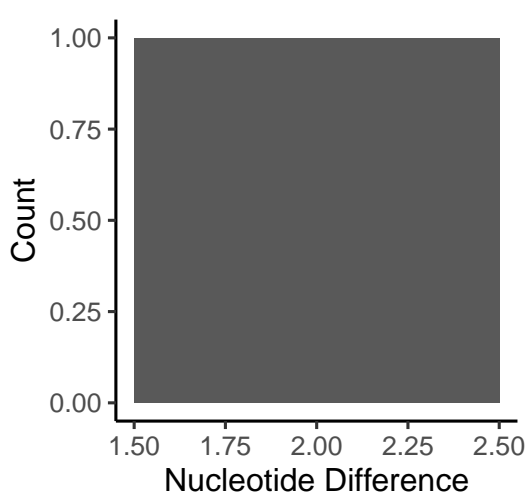
### IGHV4–NL\_42\*01\_S3666

125 sequences assigned  
No exact matches.



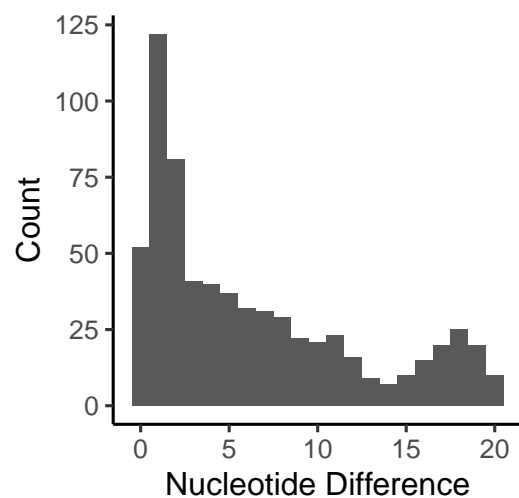
### IGHV4–NL\_6\*01\_S4760

1 sequences assigned  
No exact matches.



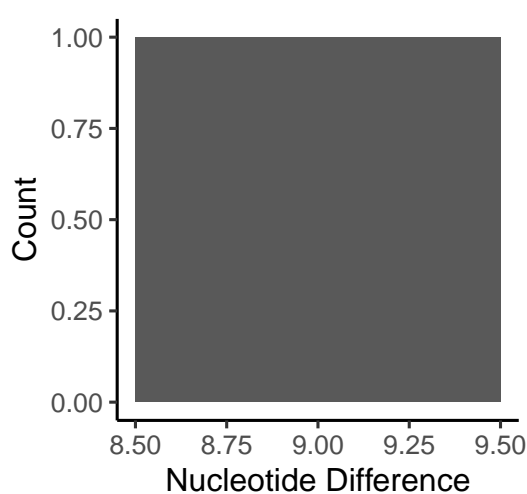
### IGHV6–1\*02\_G280T

692 sequences assigned  
52 (7.5%) exact matches, in which:  
42 unique CDR3  
7 unique J



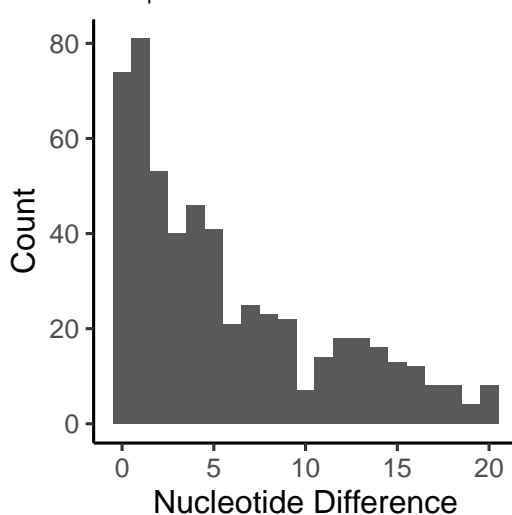
### IGHV4–NL\_43\*01\_S4510

1 sequences assigned  
No exact matches.



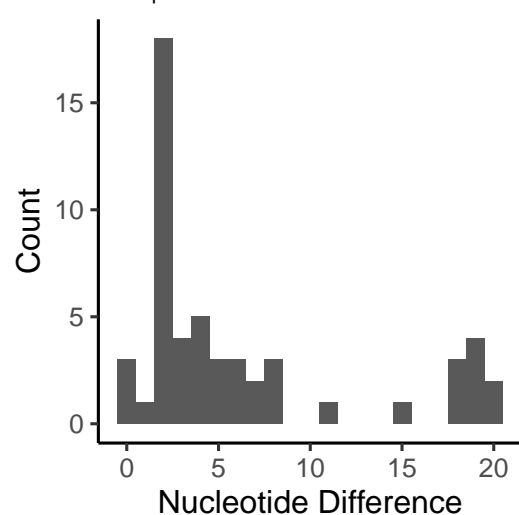
### IGHV4–NL\_9\*01\_S3502

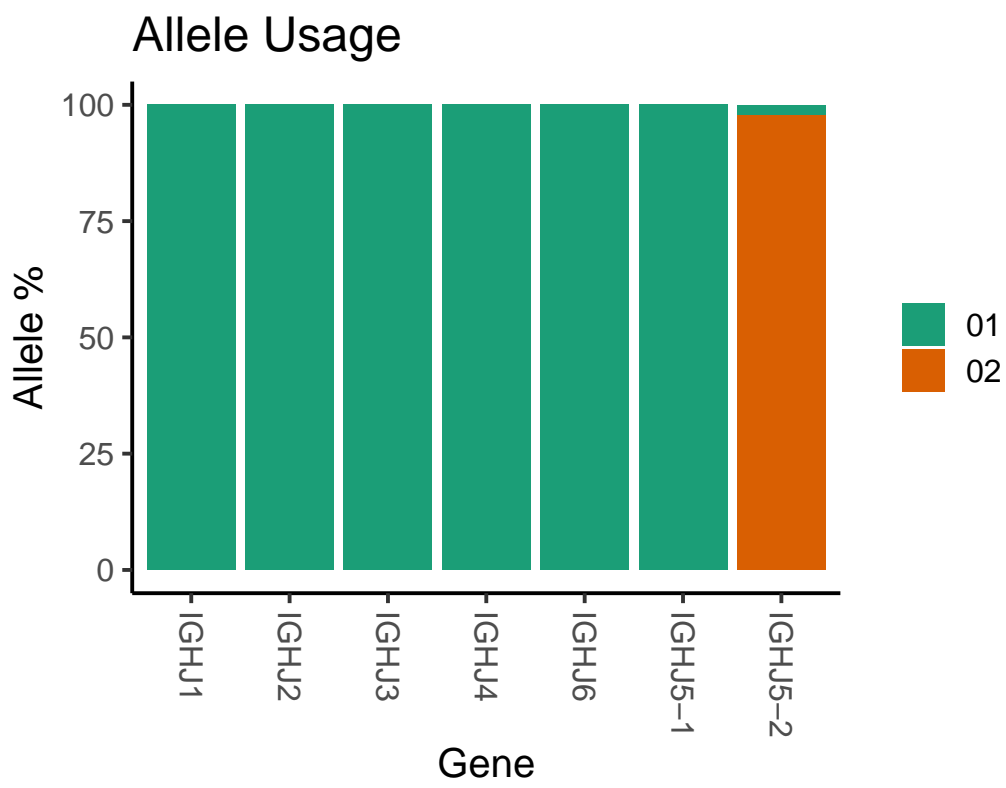
610 sequences assigned  
74 (12.1%) exact matches, in which:  
64 unique CDR3  
7 unique J



### IGHV7–135\*02\_S1424

125 sequences assigned  
3 (2.4%) exact matches, in which:  
2 unique CDR3  
2 unique J







Warning – no inferred sequences found.