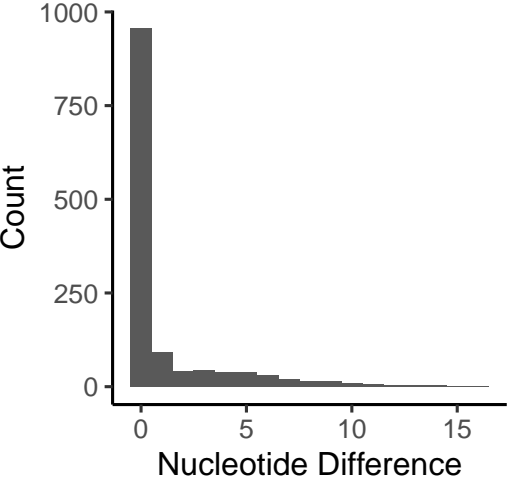


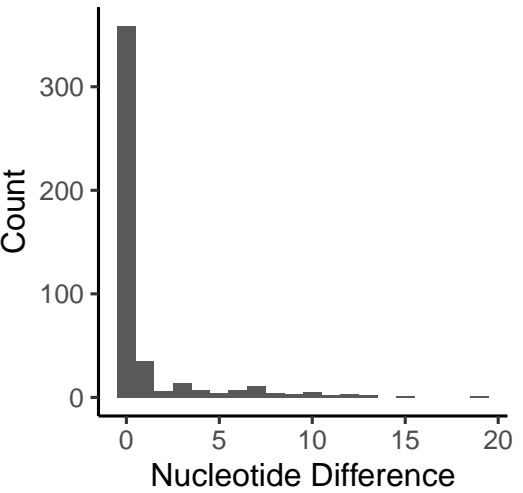
IGHV1-2\*02

1329 sequences assigned  
956 (71.9%) exact matches, in which:  
908 unique CDR3  
6 unique J



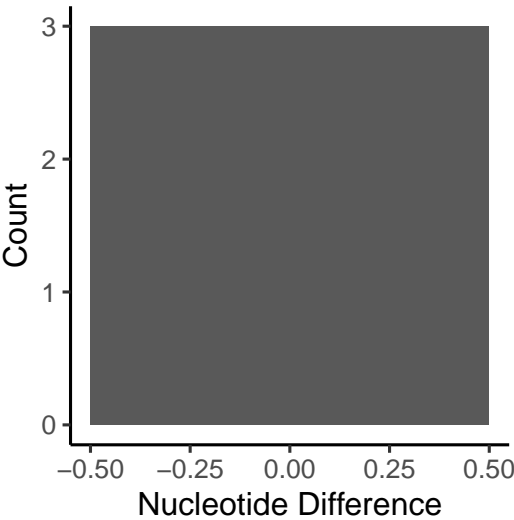
IGHV1-18\*01

465 sequences assigned  
359 (77.2%) exact matches, in which:  
344 unique CDR3  
6 unique J



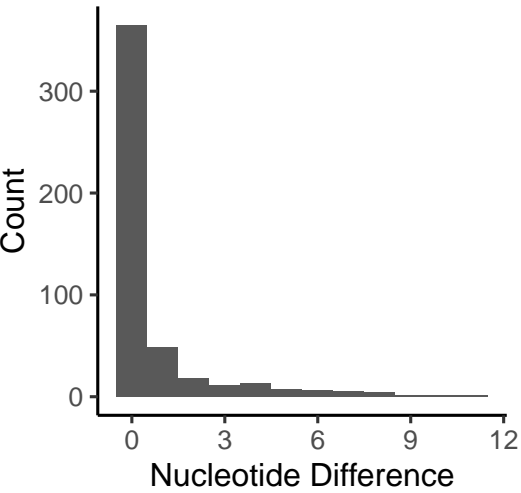
IGHV1-45\*02

3 sequences assigned  
3 (100%) exact matches, in which:  
3 unique CDR3  
3 unique J



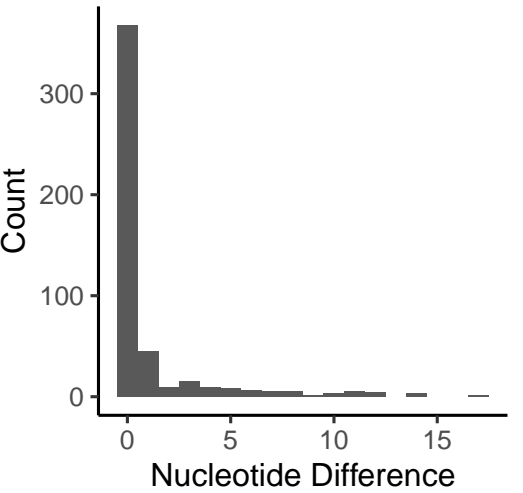
IGHV1-8\*01

481 sequences assigned  
365 (75.9%) exact matches, in which:  
343 unique CDR3  
6 unique J



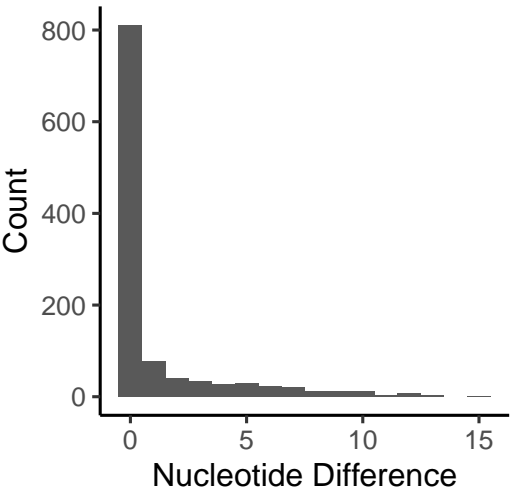
IGHV1-18\*04

487 sequences assigned  
368 (75.6%) exact matches, in which:  
352 unique CDR3  
6 unique J



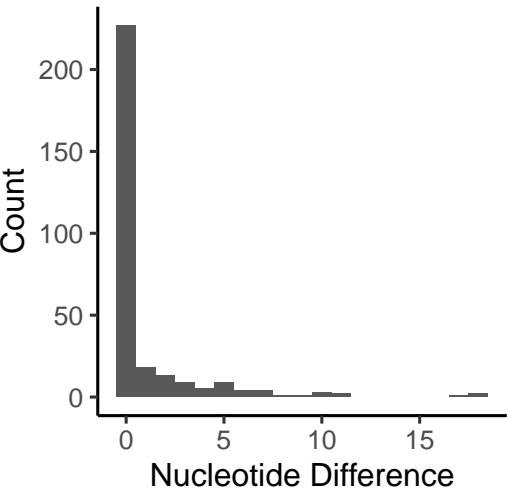
IGHV1-46\*01

1113 sequences assigned  
811 (72.9%) exact matches, in which:  
763 unique CDR3  
6 unique J



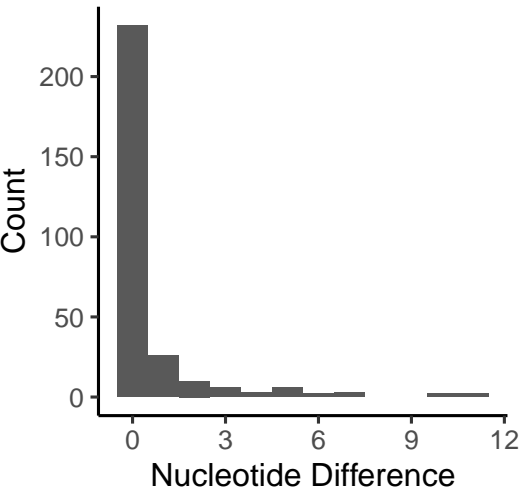
IGHV1-8\*03

299 sequences assigned  
227 (75.9%) exact matches, in which:  
214 unique CDR3  
6 unique J



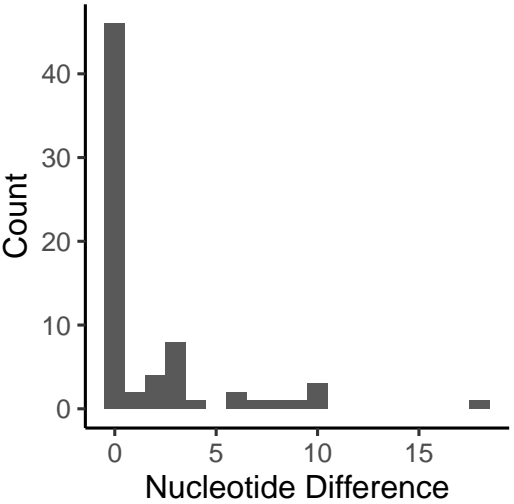
IGHV1-24\*01

292 sequences assigned  
232 (79.5%) exact matches, in which:  
214 unique CDR3  
6 unique J



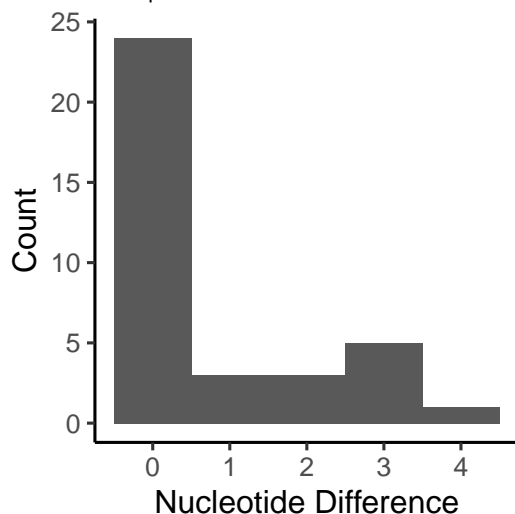
IGHV1-58\*01

71 sequences assigned  
46 (64.8%) exact matches, in which:  
44 unique CDR3  
5 unique J



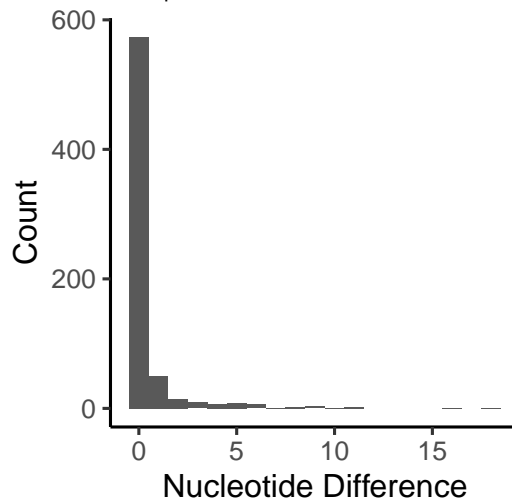
### IGHV1-58\*02

36 sequences assigned  
24 (66.7%) exact matches, in which:  
24 unique CDR3  
5 unique J



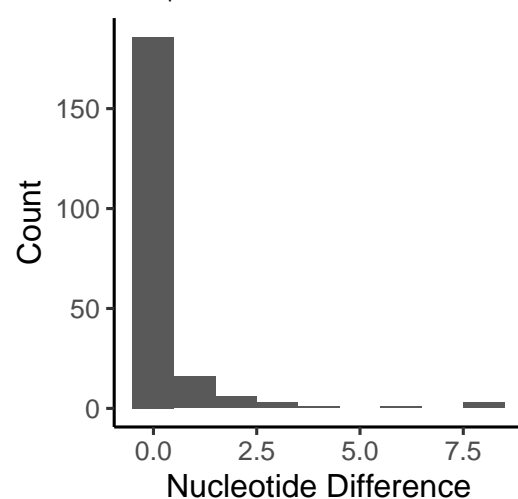
### IGHV1-69\*06

679 sequences assigned  
574 (84.5%) exact matches, in which:  
531 unique CDR3  
6 unique J



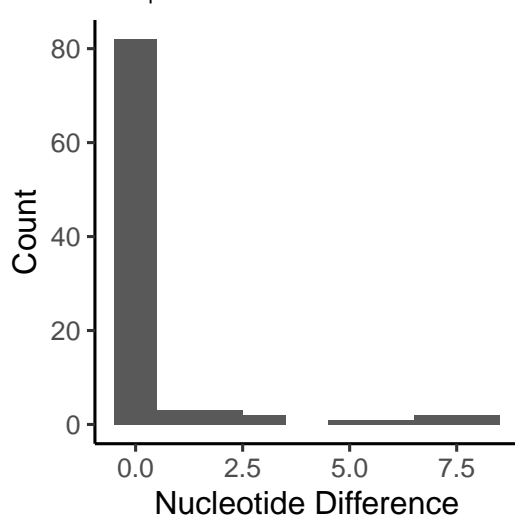
### IGHV2-26\*01

216 sequences assigned  
186 (86.1%) exact matches, in which:  
181 unique CDR3  
6 unique J



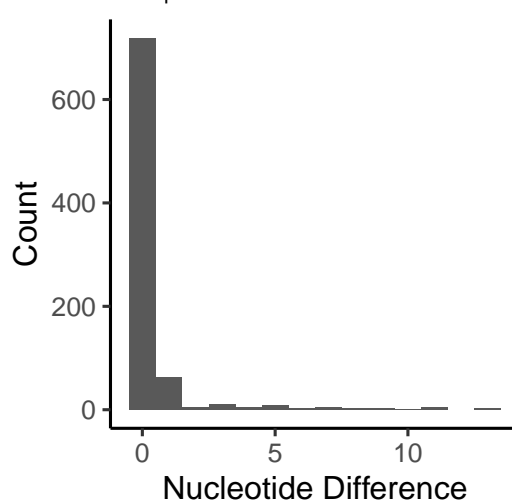
### IGHV1-69-2\*01

96 sequences assigned  
82 (85.4%) exact matches, in which:  
79 unique CDR3  
6 unique J



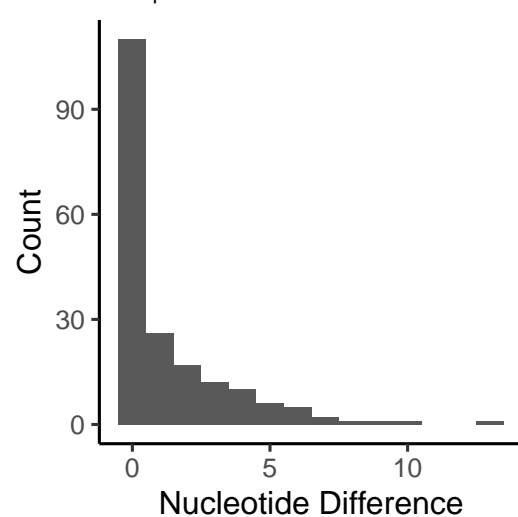
### IGHV1-69\*09

828 sequences assigned  
719 (86.8%) exact matches, in which:  
675 unique CDR3  
6 unique J



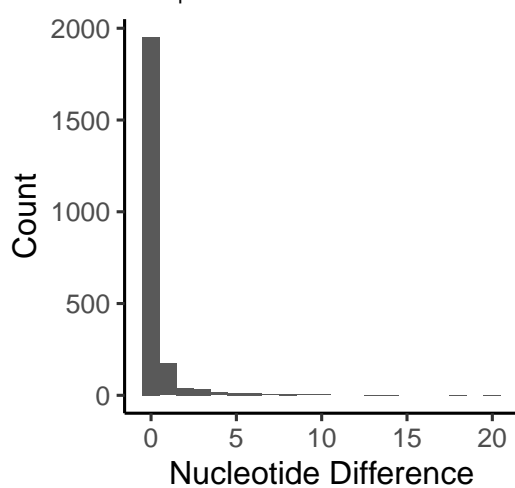
### IGHV2-70\*01

193 sequences assigned  
110 (57%) exact matches, in which:  
107 unique CDR3  
5 unique J



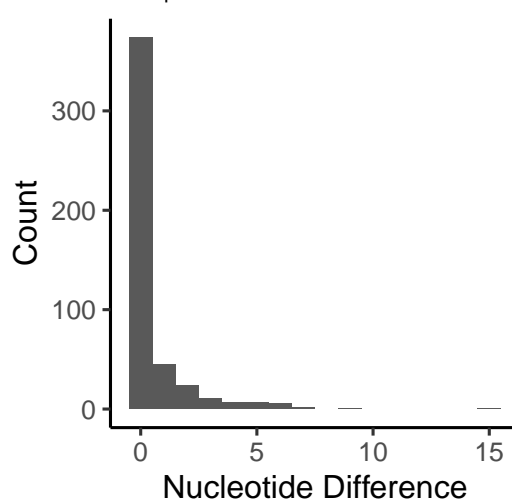
### IGHV1-69\*01

2269 sequences assigned  
1952 (86%) exact matches, in which:  
1831 unique CDR3  
6 unique J



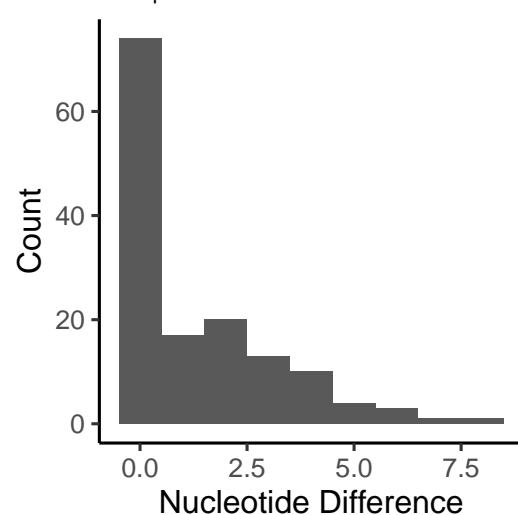
### IGHV2-5\*01

478 sequences assigned  
374 (78.2%) exact matches, in which:  
364 unique CDR3  
6 unique J



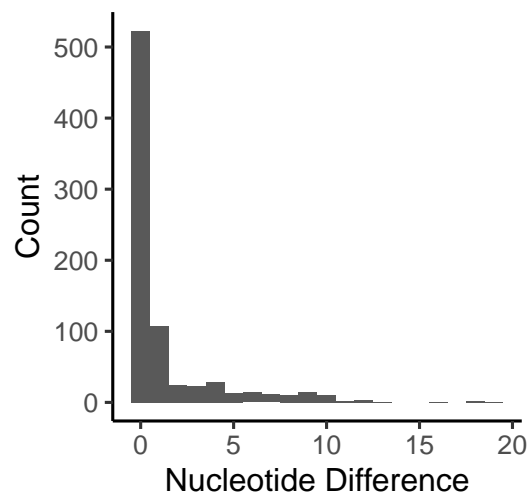
### IGHV2-70\*04

143 sequences assigned  
74 (51.7%) exact matches, in which:  
74 unique CDR3  
6 unique J



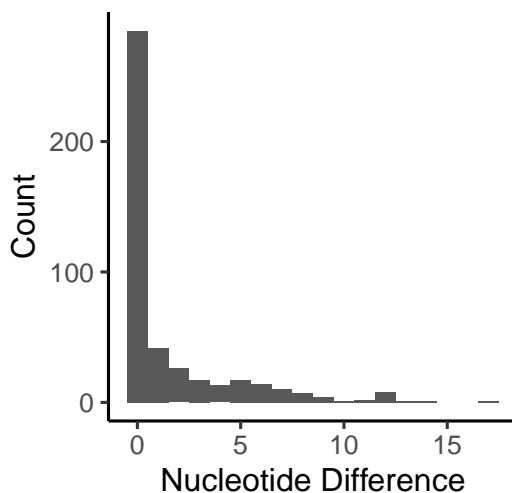
### IGHV3-7\*01

790 sequences assigned  
523 (66.2%) exact matches, in which:  
489 unique CDR3  
6 unique J



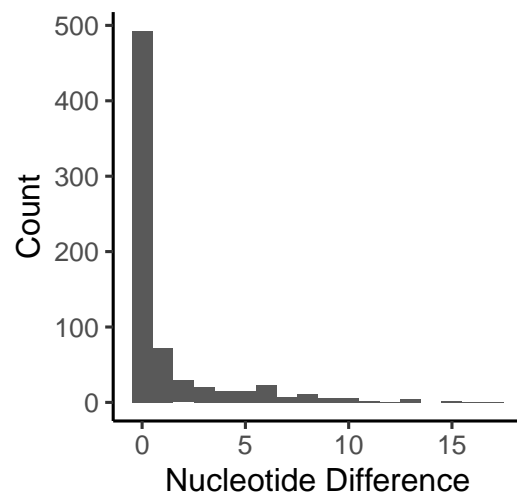
### IGHV3-11\*01

450 sequences assigned  
285 (63.3%) exact matches, in which:  
265 unique CDR3  
6 unique J



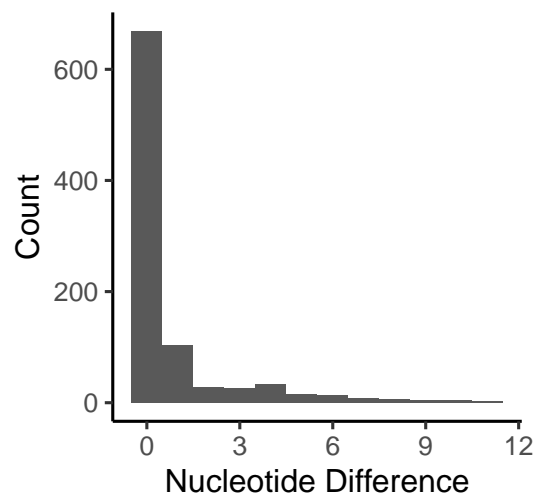
### IGHV3-15\*01

708 sequences assigned  
493 (69.6%) exact matches, in which:  
450 unique CDR3  
6 unique J



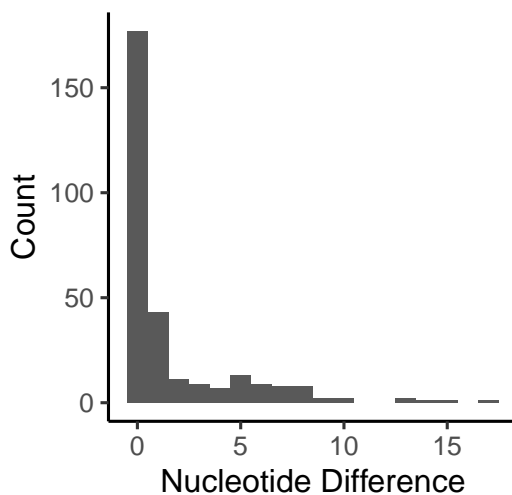
### IGHV3-9\*01

916 sequences assigned  
669 (73%) exact matches, in which:  
608 unique CDR3  
6 unique J



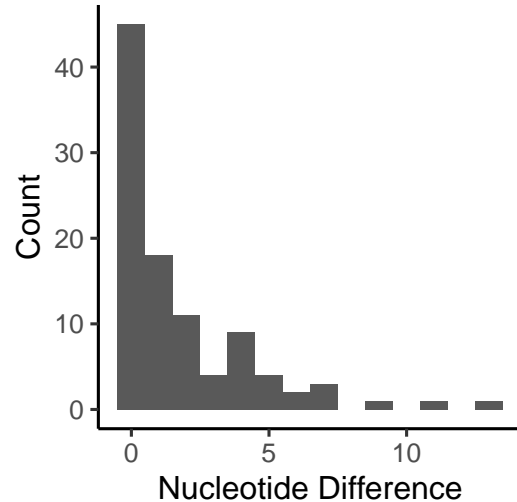
### IGHV3-11\*04

294 sequences assigned  
177 (60.2%) exact matches, in which:  
164 unique CDR3  
5 unique J



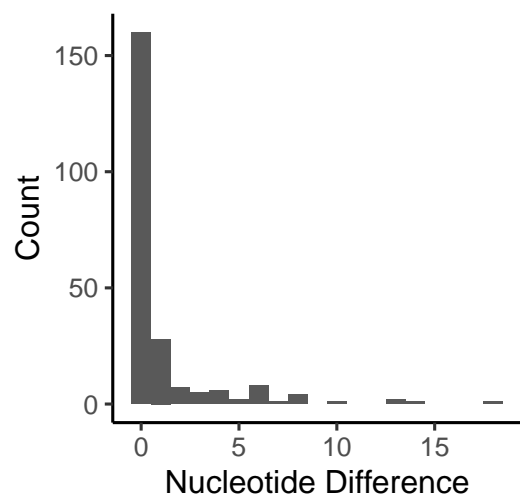
### IGHV3-20\*01

99 sequences assigned  
45 (45.5%) exact matches, in which:  
41 unique CDR3  
5 unique J



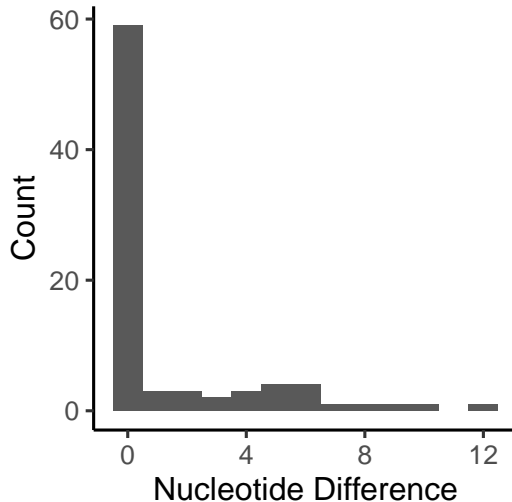
### IGHV3-9\*03

226 sequences assigned  
160 (70.8%) exact matches, in which:  
144 unique CDR3  
6 unique J



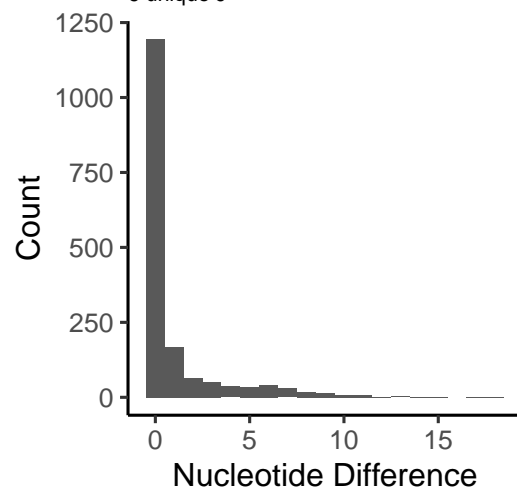
### IGHV3-13\*01

83 sequences assigned  
59 (71.1%) exact matches, in which:  
54 unique CDR3  
5 unique J



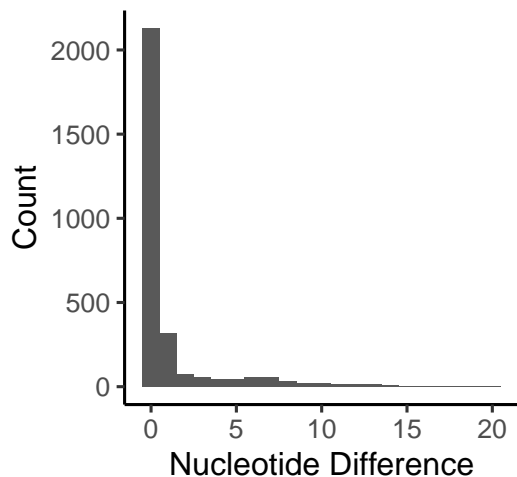
### IGHV3-21\*01

1678 sequences assigned  
1195 (71.2%) exact matches, in which:  
1083 unique CDR3  
6 unique J



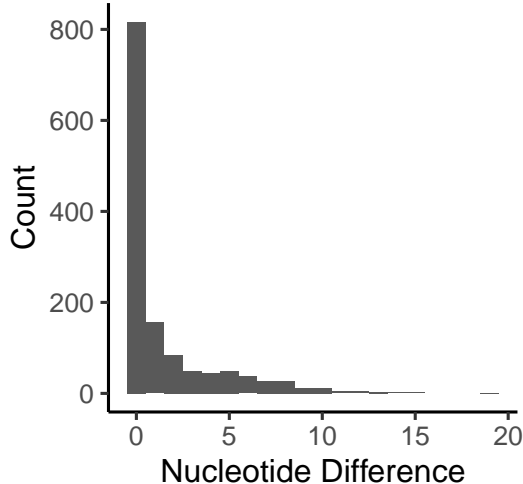
### IGHV3-23\*01

2931 sequences assigned  
2128 (72.6%) exact matches, in which:  
1972 unique CDR3  
6 unique J



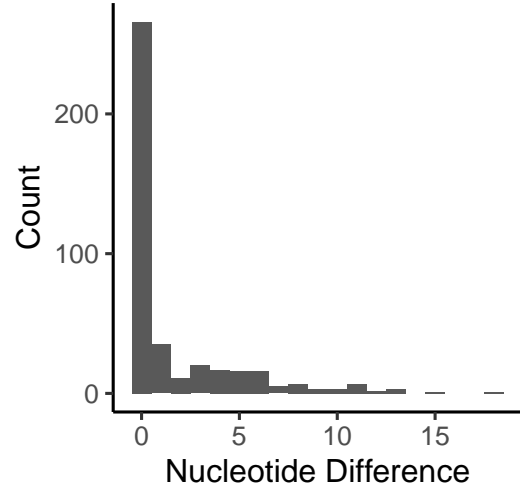
### IGHV3-33\*01

1338 sequences assigned  
817 (61.1%) exact matches, in which:  
751 unique CDR3  
6 unique J



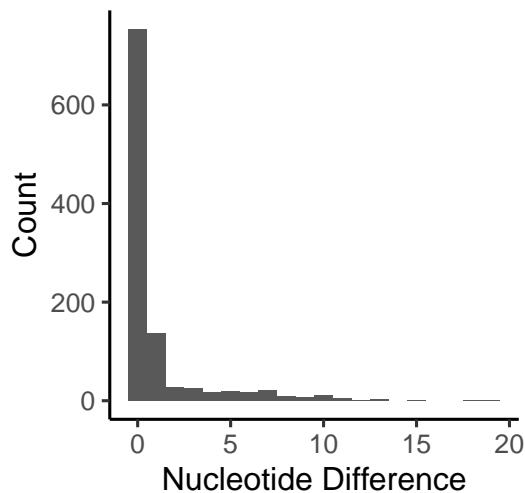
### IGHV3-48\*02

413 sequences assigned  
266 (64.4%) exact matches, in which:  
252 unique CDR3  
5 unique J



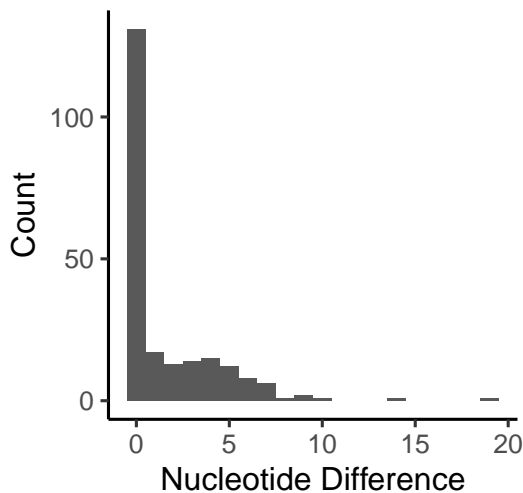
### IGHV3-30-3\*01

1065 sequences assigned  
754 (70.8%) exact matches, in which:  
696 unique CDR3  
6 unique J



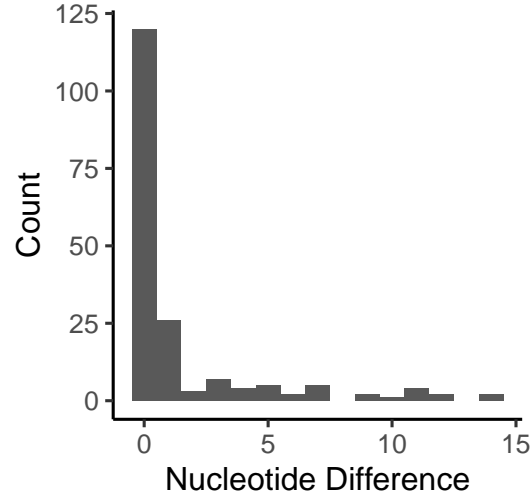
### IGHV3-43\*01

223 sequences assigned  
131 (58.7%) exact matches, in which:  
118 unique CDR3  
6 unique J



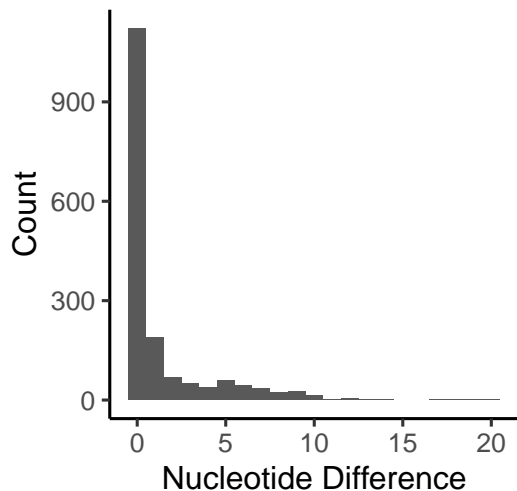
### IGHV3-49\*03

183 sequences assigned  
120 (65.6%) exact matches, in which:  
113 unique CDR3  
6 unique J



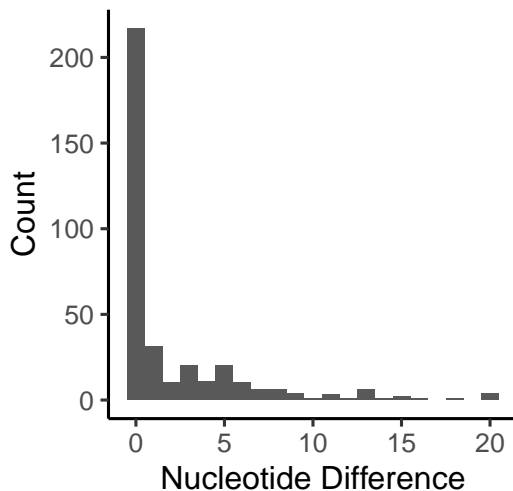
### IGHV3-30\*18

1688 sequences assigned  
1122 (66.5%) exact matches, in which:  
1044 unique CDR3  
6 unique J



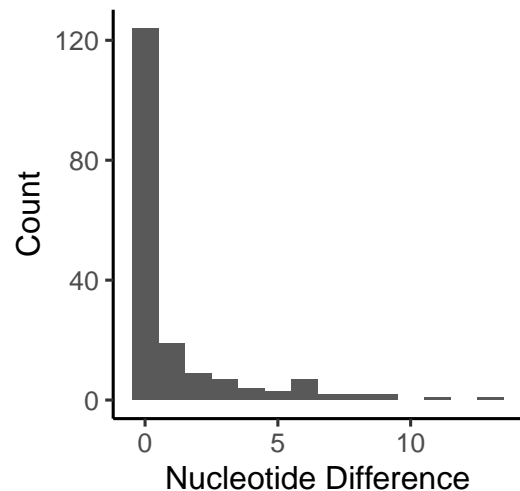
### IGHV3-48\*01

369 sequences assigned  
217 (58.8%) exact matches, in which:  
203 unique CDR3  
6 unique J



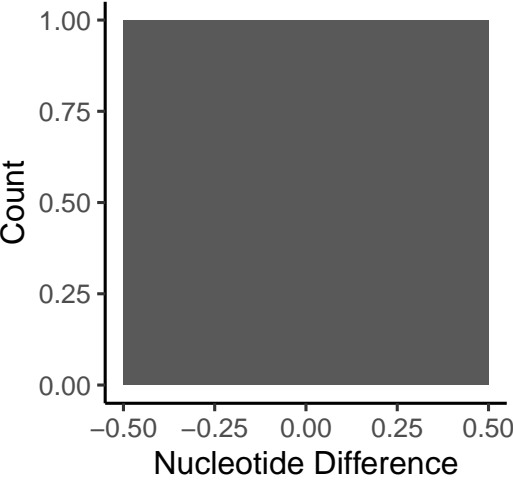
### IGHV3-49\*05

181 sequences assigned  
124 (68.5%) exact matches, in which:  
116 unique CDR3  
6 unique J



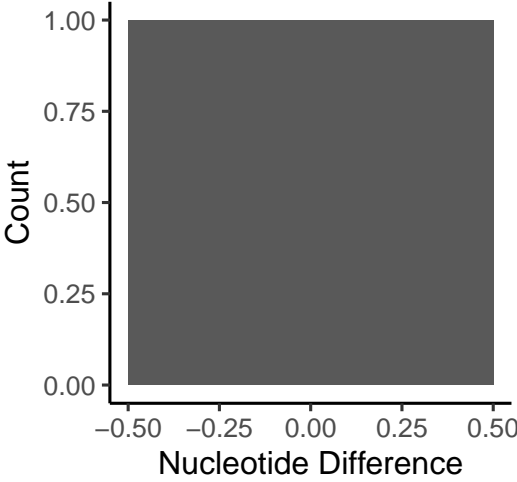
IGHV3-52\*01

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



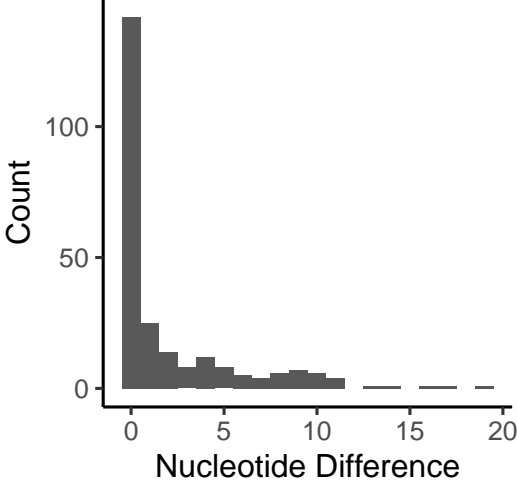
IGHV3-66\*04

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



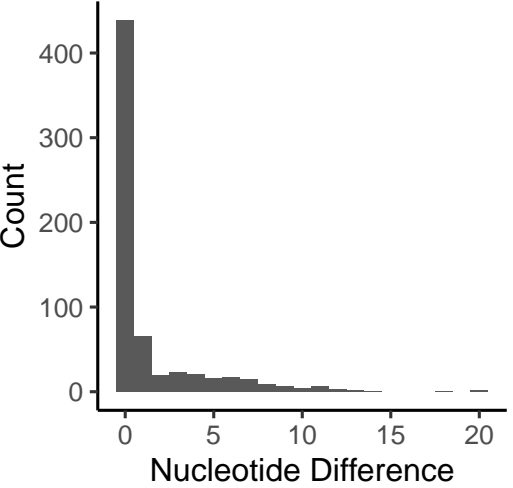
IGHV3-74\*01

248 sequences assigned  
142 (57.3%) exact matches, in which:  
136 unique CDR3  
6 unique J



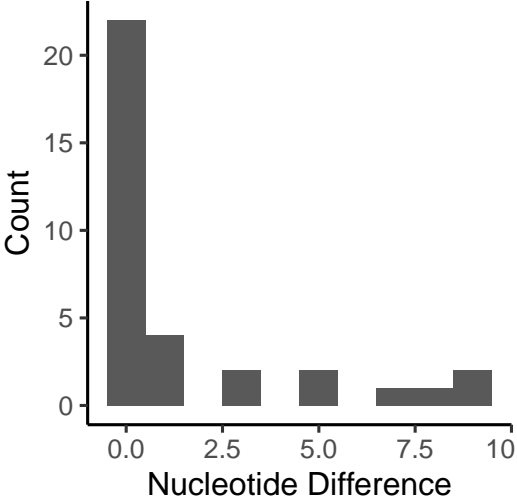
IGHV3-53\*01

654 sequences assigned  
439 (67.1%) exact matches, in which:  
414 unique CDR3  
6 unique J



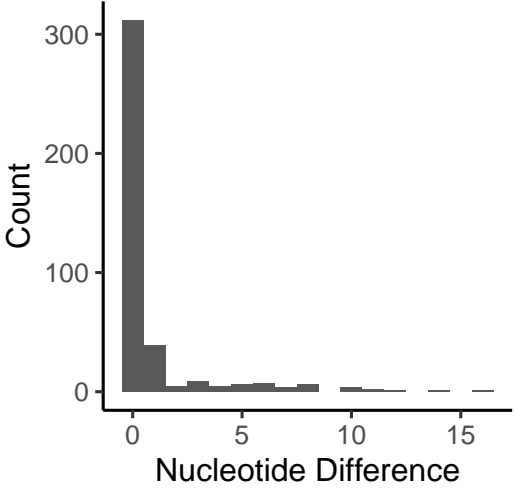
IGHV3-72\*01

36 sequences assigned  
22 (61.1%) exact matches, in which:  
21 unique CDR3  
5 unique J



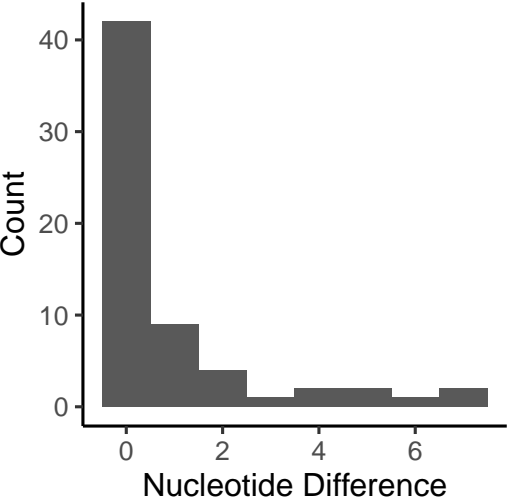
IGHV4-4\*07

403 sequences assigned  
312 (77.4%) exact matches, in which:  
296 unique CDR3  
6 unique J



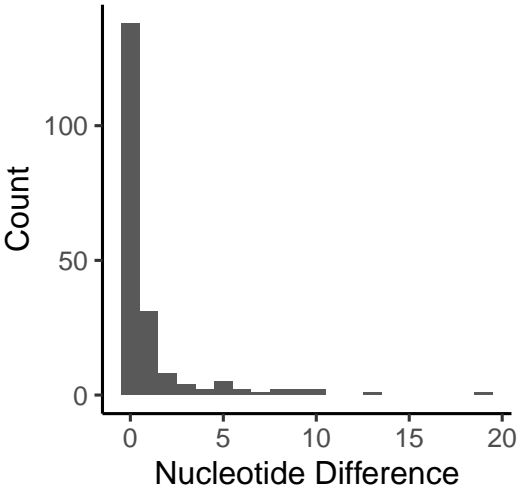
IGHV3-64\*01

63 sequences assigned  
42 (66.7%) exact matches, in which:  
37 unique CDR3  
5 unique J



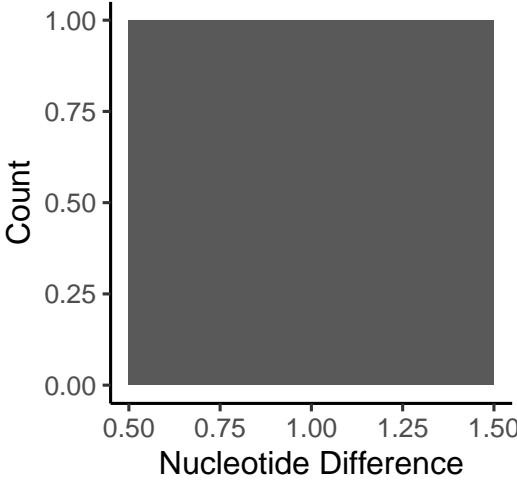
IGHV3-73\*02

199 sequences assigned  
138 (69.3%) exact matches, in which:  
125 unique CDR3  
6 unique J



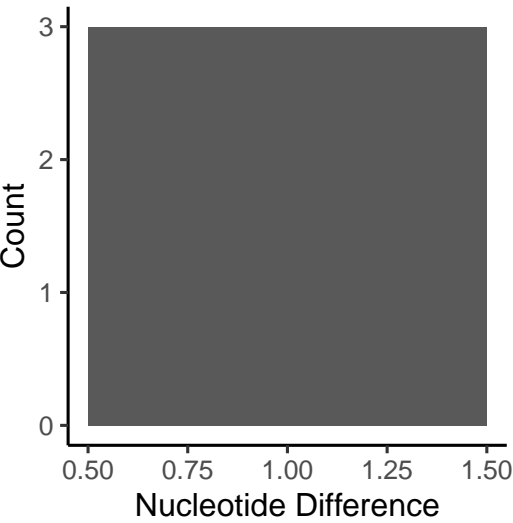
IGHV4-28\*01

1 sequences assigned  
No exact matches.



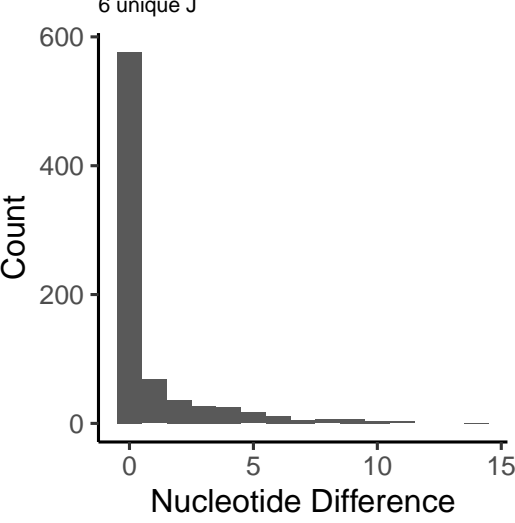
IGHV4-28\*04

3 sequences assigned  
No exact matches.



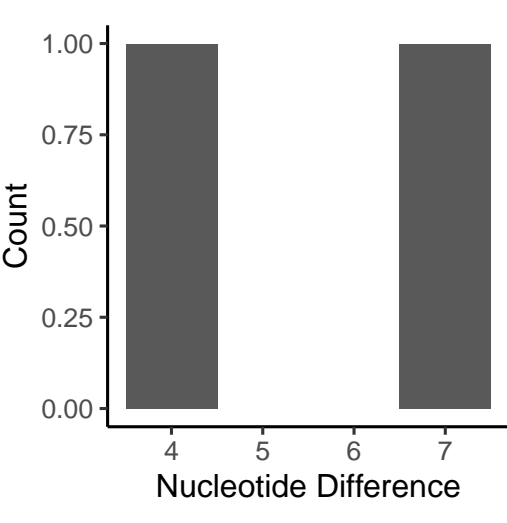
IGHV4-31\*03

787 sequences assigned  
577 (73.3%) exact matches, in which:  
549 unique CDR3  
6 unique J



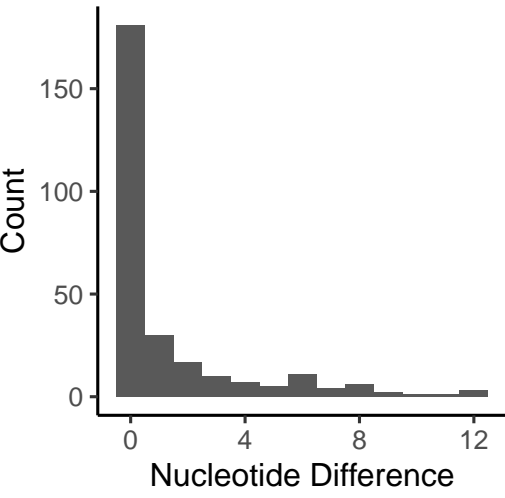
IGHV4-55\*08

2 sequences assigned  
No exact matches.



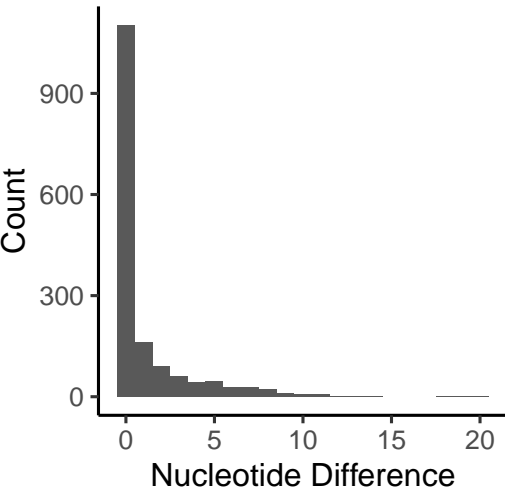
IGHV4-30-4\*01

279 sequences assigned  
181 (64.9%) exact matches, in which:  
170 unique CDR3  
6 unique J



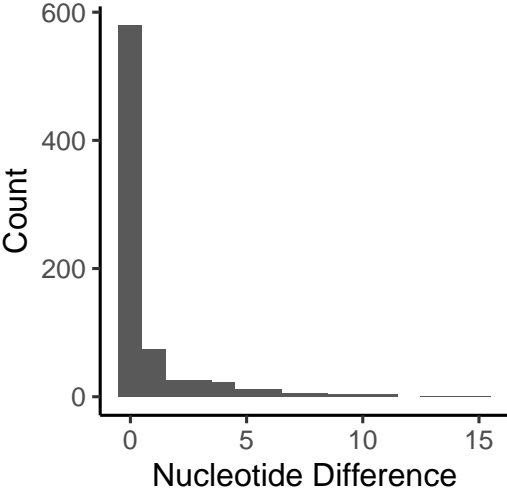
IGHV4-34\*01

1620 sequences assigned  
1103 (68.1%) exact matches, in which:  
1011 unique CDR3  
6 unique J



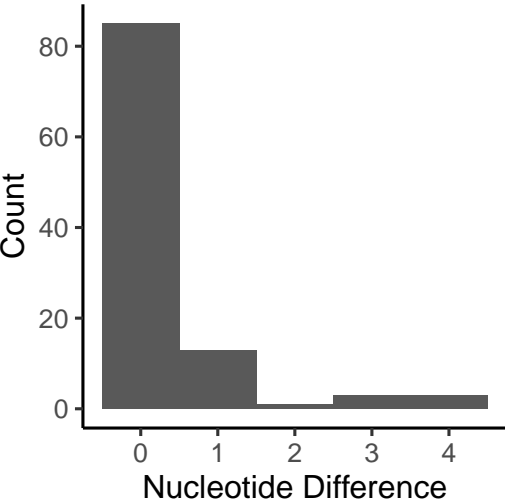
IGHV4-59\*01

775 sequences assigned  
580 (74.8%) exact matches, in which:  
562 unique CDR3  
6 unique J



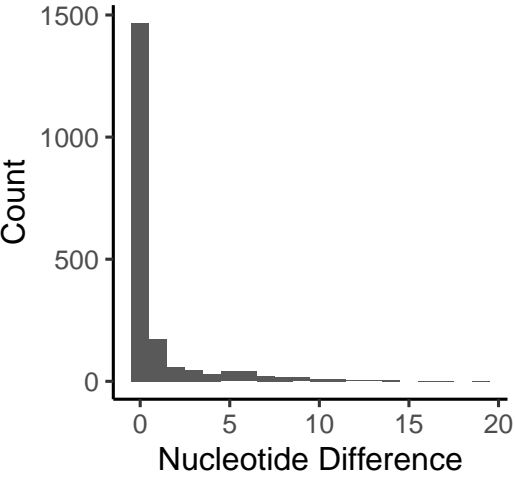
IGHV4-30-2\*01

105 sequences assigned  
85 (81%) exact matches, in which:  
81 unique CDR3  
5 unique J



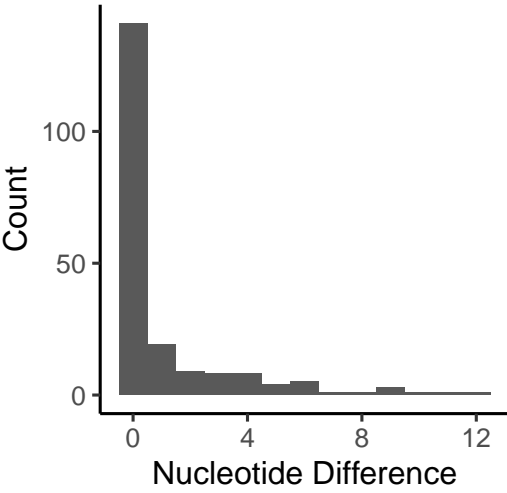
IGHV4-39\*01

1951 sequences assigned  
1467 (75.2%) exact matches, in which:  
1341 unique CDR3  
6 unique J



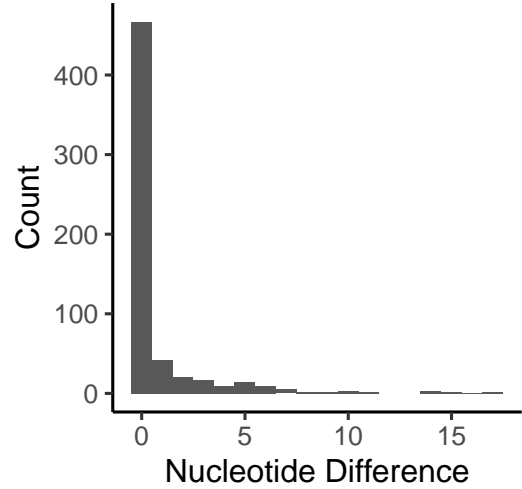
IGHV4-61\*01

202 sequences assigned  
141 (69.8%) exact matches, in which:  
133 unique CDR3  
6 unique J



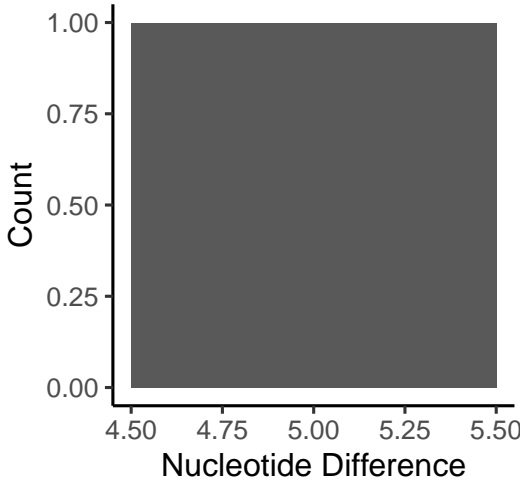
IGHV4–61\*02

601 sequences assigned  
467 (77.7%) exact matches, in which:  
448 unique CDR3  
6 unique J



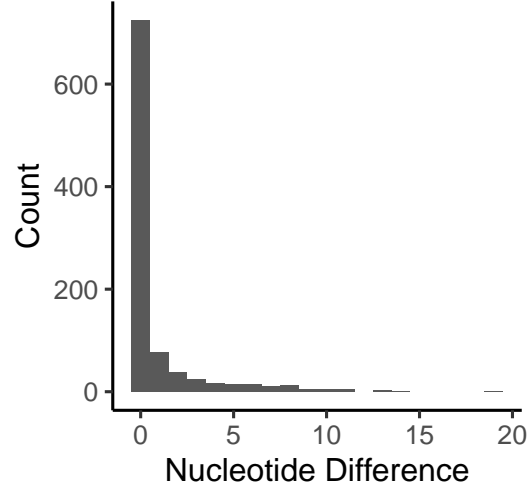
IGHV3/OR16–15\*02

1 sequences assigned  
No exact matches.



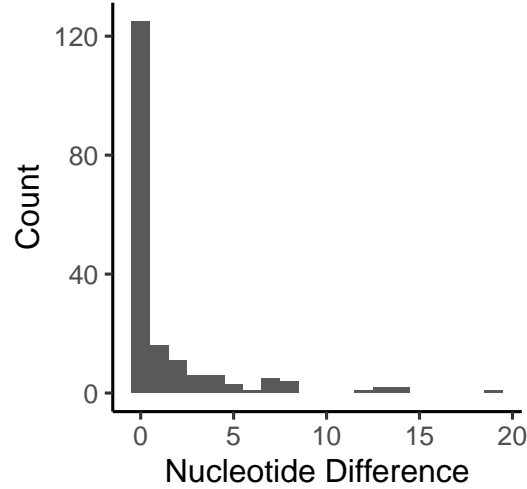
IGHV5–51\*01

953 sequences assigned  
725 (76.1%) exact matches, in which:  
683 unique CDR3  
6 unique J



IGHV6–1\*01

183 sequences assigned  
125 (68.3%) exact matches, in which:  
114 unique CDR3  
5 unique J







Warning – no inferred sequences found.