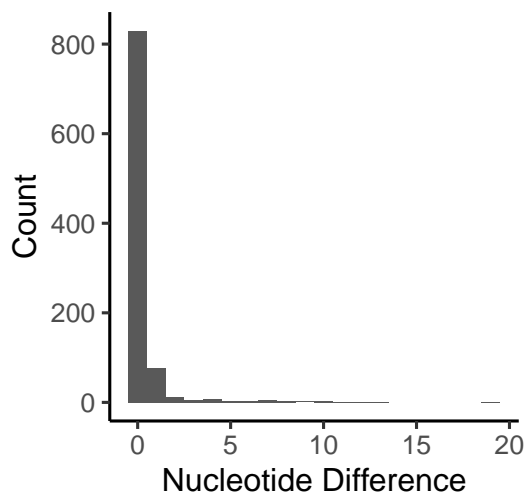


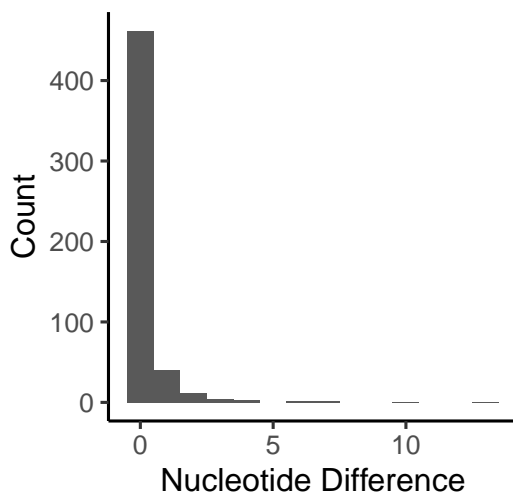
### IGHV1-2\*02

961 sequences assigned  
830 (86.4%) exact matches, in which:  
797 unique CDR3  
6 unique J



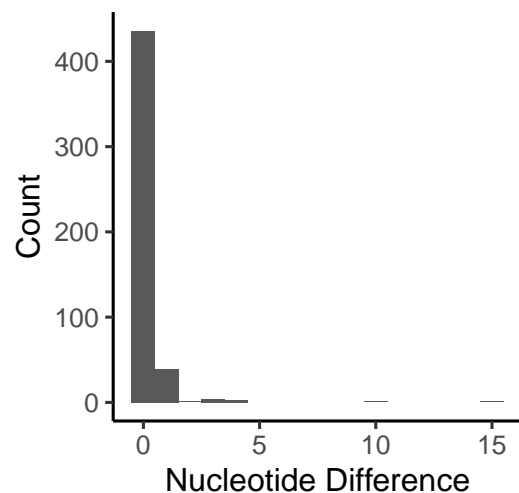
### IGHV1-8\*01

527 sequences assigned  
462 (87.7%) exact matches, in which:  
441 unique CDR3  
6 unique J



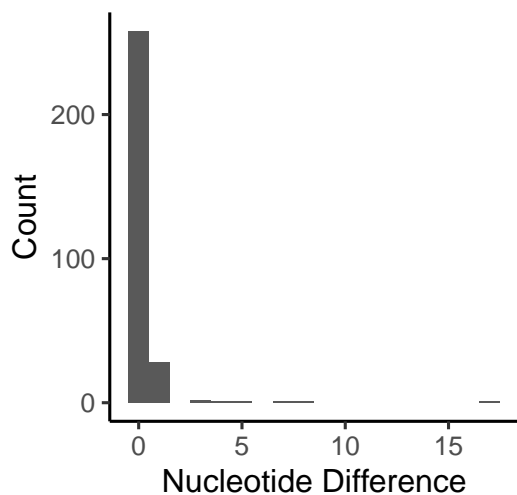
### IGHV1-24\*01

486 sequences assigned  
436 (89.7%) exact matches, in which:  
418 unique CDR3  
6 unique J



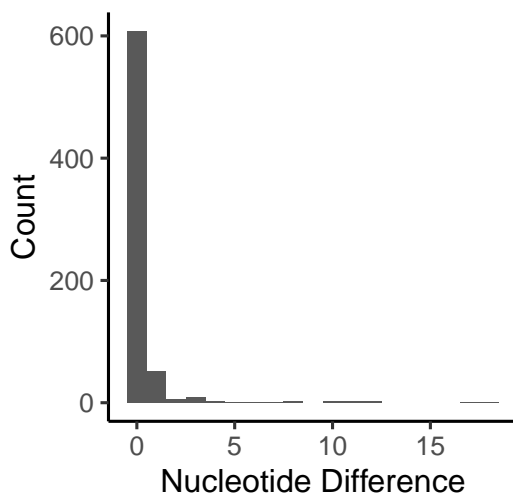
### IGHV1-2\*04

293 sequences assigned  
258 (88.1%) exact matches, in which:  
247 unique CDR3  
6 unique J



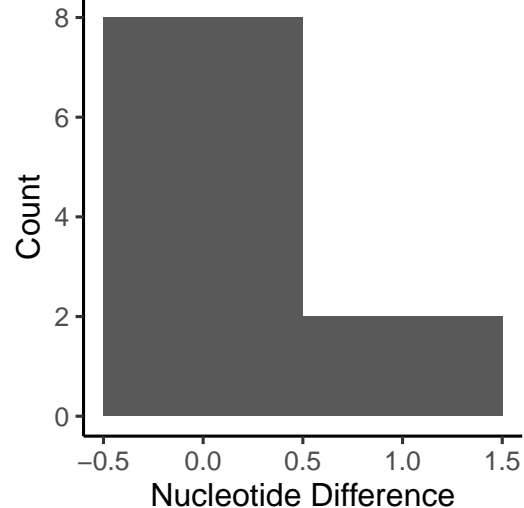
### IGHV1-18\*01

692 sequences assigned  
608 (87.9%) exact matches, in which:  
592 unique CDR3  
6 unique J



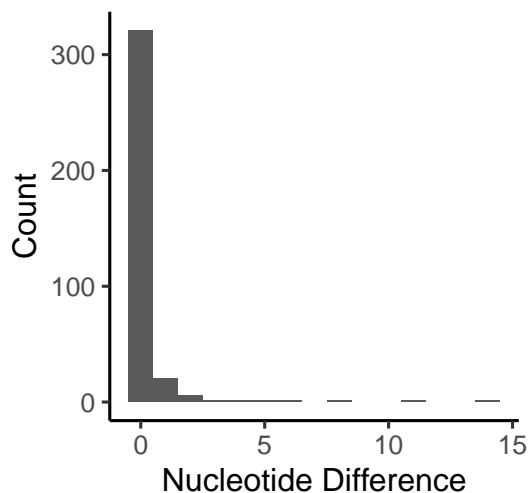
### IGHV1-45\*02

10 sequences assigned  
8 (80%) exact matches, in which:  
8 unique CDR3  
3 unique J



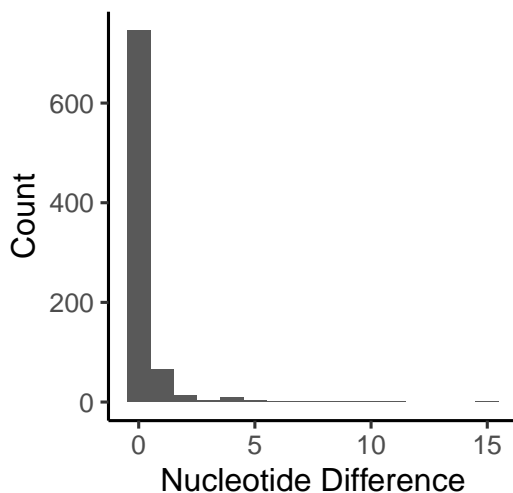
### IGHV1-3\*01

355 sequences assigned  
321 (90.4%) exact matches, in which:  
316 unique CDR3  
6 unique J



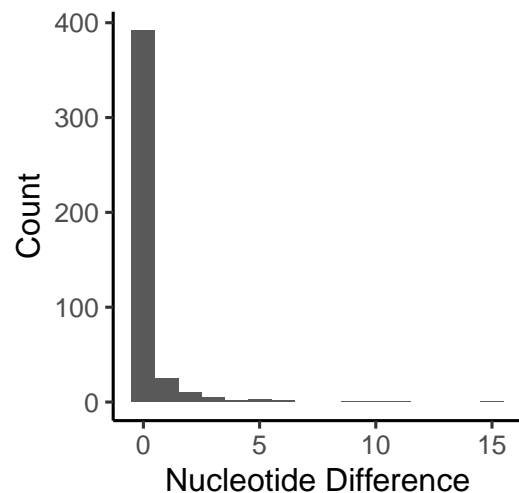
### IGHV1-18\*04

851 sequences assigned  
746 (87.7%) exact matches, in which:  
726 unique CDR3  
6 unique J



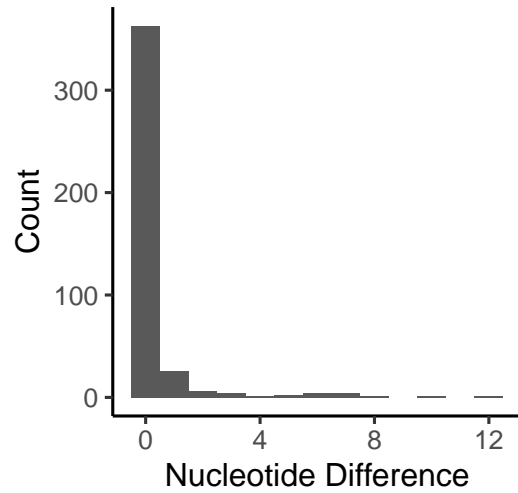
### IGHV1-46\*01

446 sequences assigned  
392 (87.9%) exact matches, in which:  
375 unique CDR3  
6 unique J



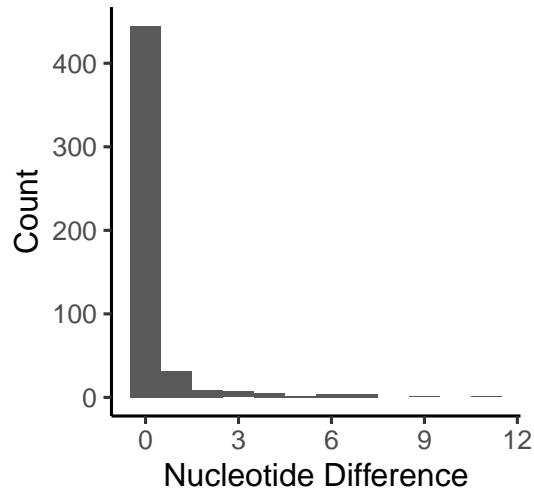
### IGHV1-46\*03

413 sequences assigned  
363 (87.9%) exact matches, in which:  
349 unique CDR3  
6 unique J



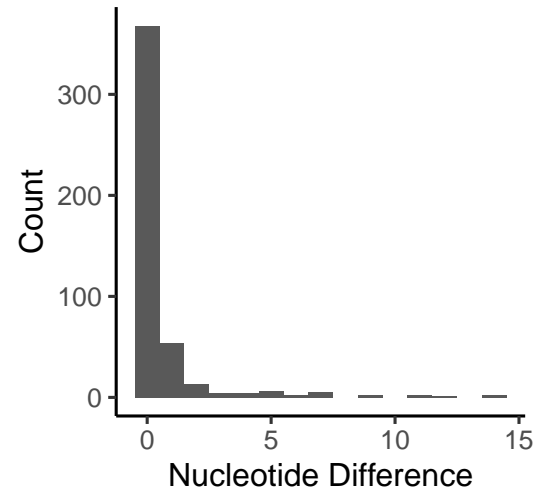
### IGHV2-5\*01

510 sequences assigned  
445 (87.3%) exact matches, in which:  
439 unique CDR3  
6 unique J



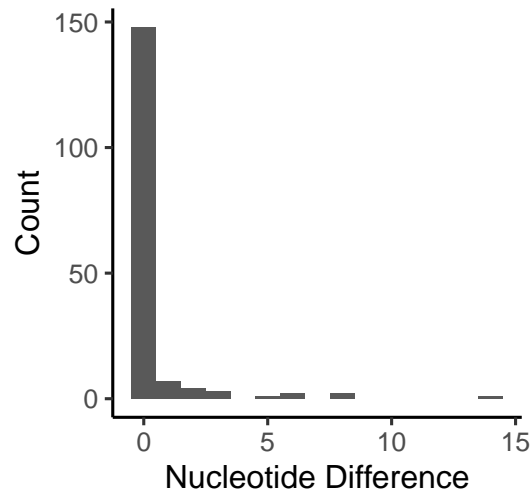
### IGHV3-7\*01

463 sequences assigned  
368 (79.5%) exact matches, in which:  
353 unique CDR3  
6 unique J



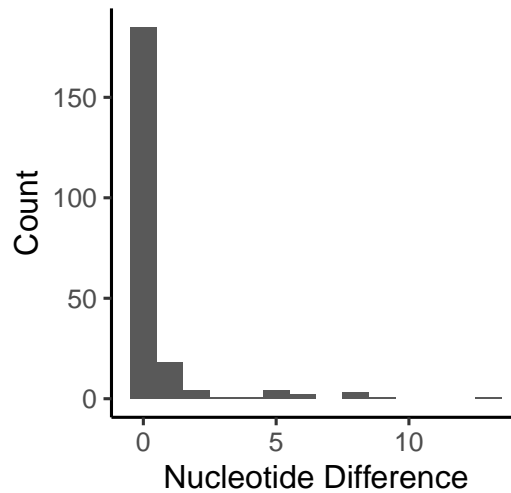
### IGHV1-58\*01

171 sequences assigned  
148 (86.5%) exact matches, in which:  
139 unique CDR3  
6 unique J



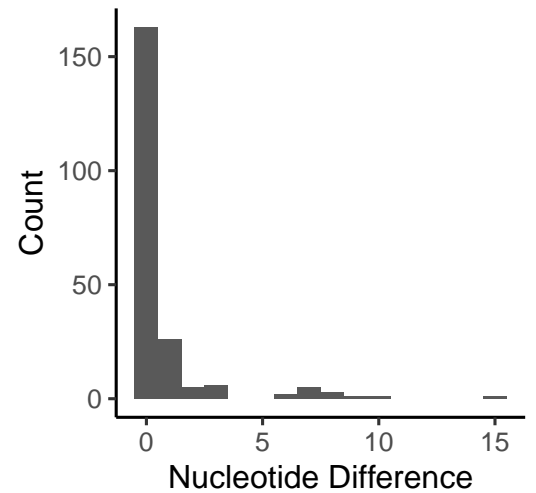
### IGHV2-26\*01

220 sequences assigned  
185 (84.1%) exact matches, in which:  
180 unique CDR3  
6 unique J



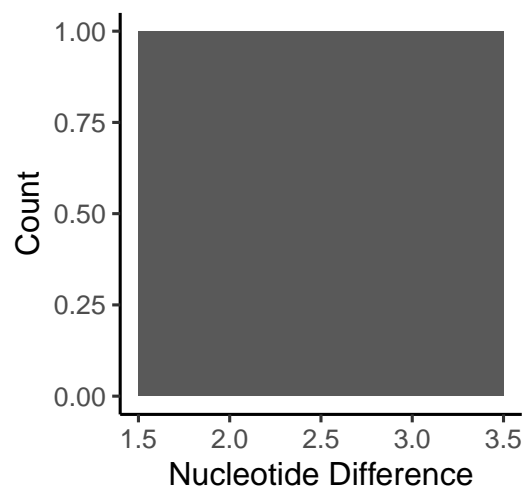
### IGHV3-7\*05

213 sequences assigned  
163 (76.5%) exact matches, in which:  
158 unique CDR3  
6 unique J



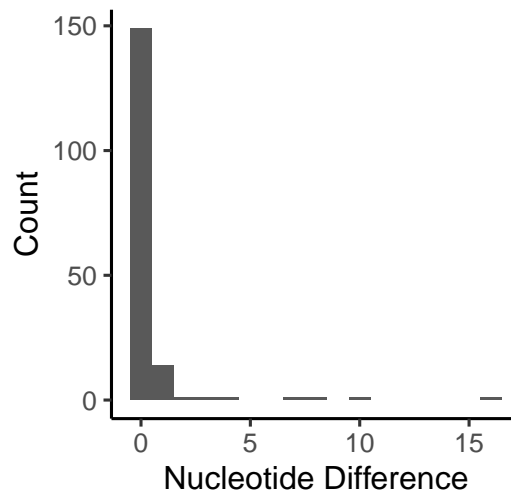
### IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



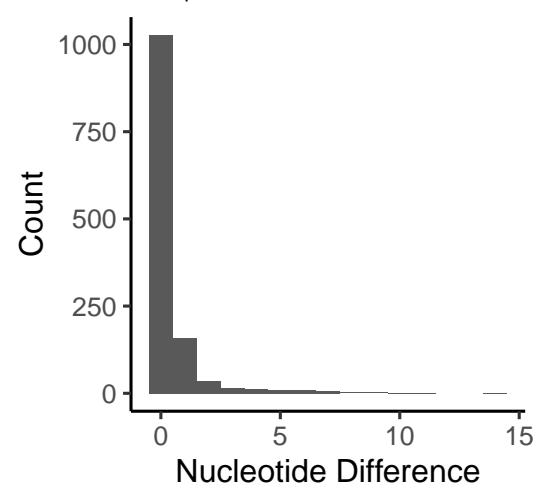
### IGHV2-70\*01

170 sequences assigned  
149 (87.6%) exact matches, in which:  
146 unique CDR3  
6 unique J



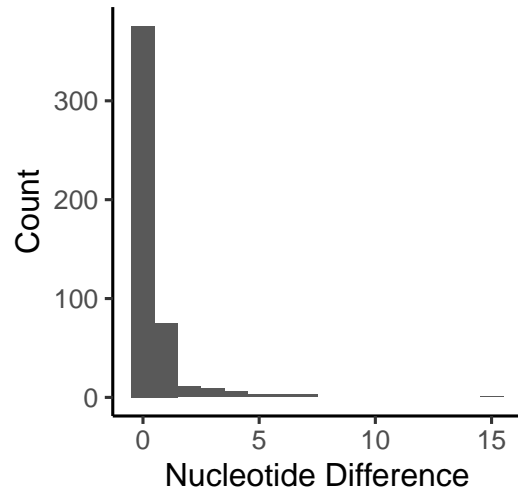
### IGHV3-9\*01

1280 sequences assigned  
1027 (80.2%) exact matches, in which:  
968 unique CDR3  
6 unique J



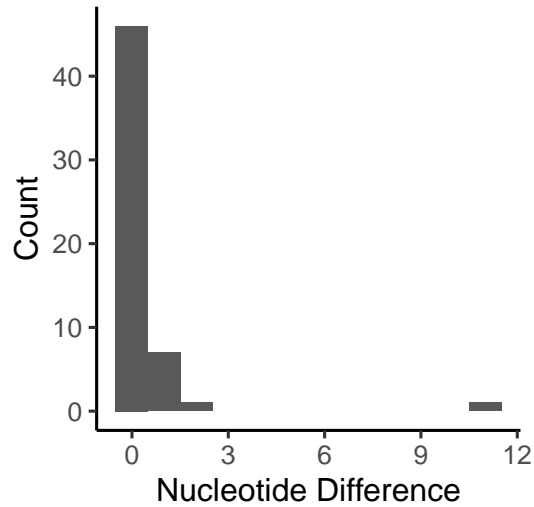
### IGHV3-11\*01

487 sequences assigned  
376 (77.2%) exact matches, in which:  
360 unique CDR3  
6 unique J



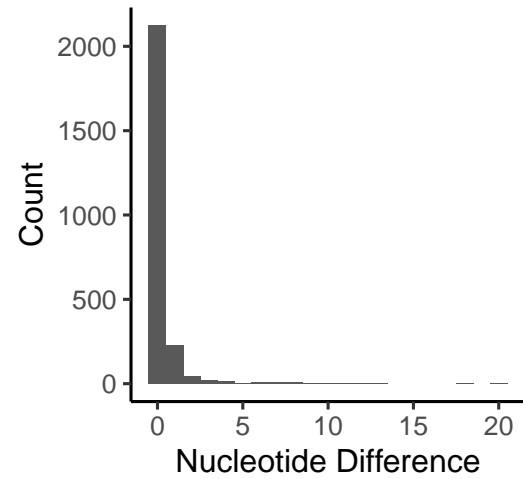
### IGHV3-13\*05

55 sequences assigned  
46 (83.6%) exact matches, in which:  
44 unique CDR3  
4 unique J



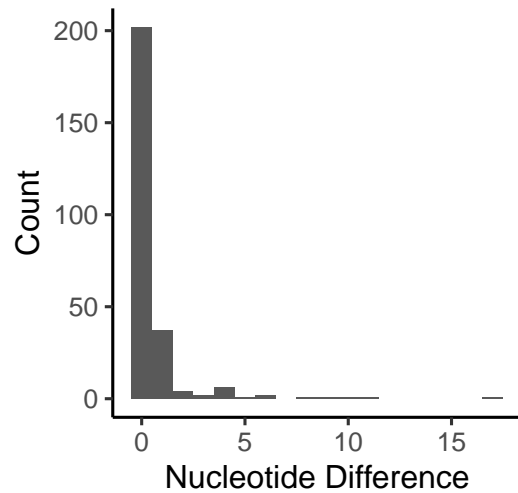
### IGHV3-21\*01

2475 sequences assigned  
2124 (85.8%) exact matches, in which:  
2016 unique CDR3  
6 unique J



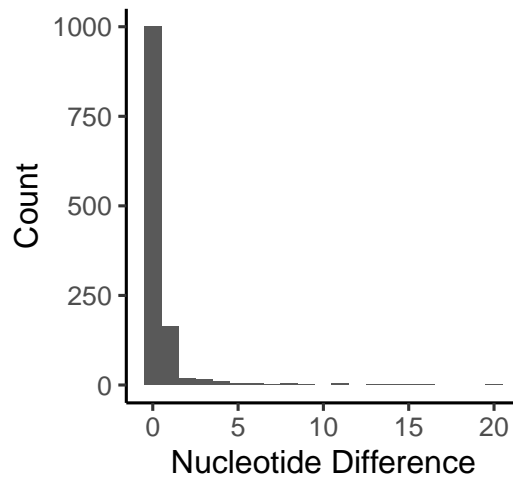
### IGHV3-11\*06

259 sequences assigned  
202 (78%) exact matches, in which:  
194 unique CDR3  
6 unique J



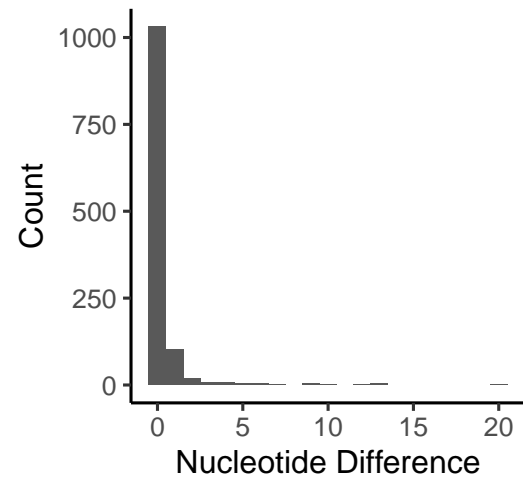
### IGHV3-15\*01

1233 sequences assigned  
1000 (81.1%) exact matches, in which:  
971 unique CDR3  
6 unique J



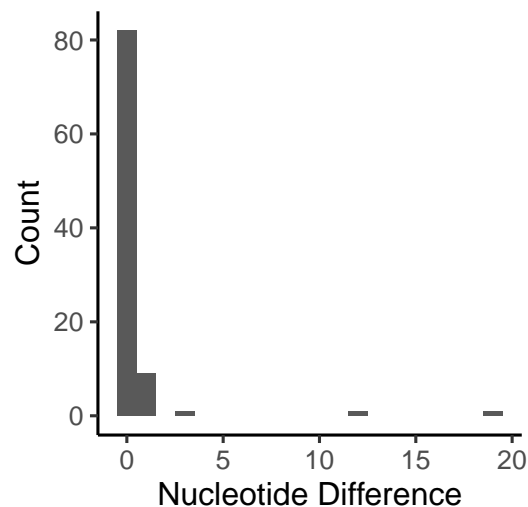
### IGHV3-30\*01

1184 sequences assigned  
1031 (87.1%) exact matches, in which:  
982 unique CDR3  
6 unique J



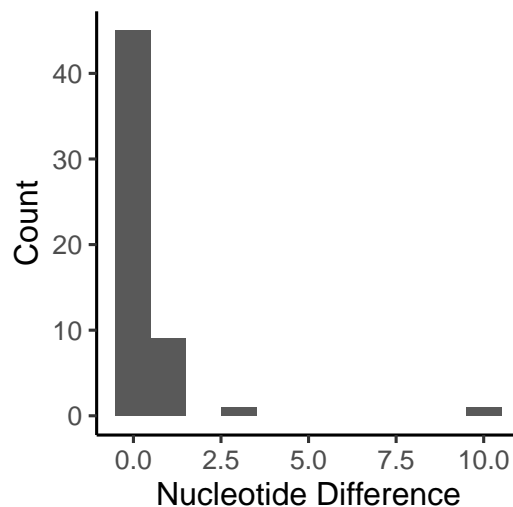
### IGHV3-13\*01

95 sequences assigned  
82 (86.3%) exact matches, in which:  
80 unique CDR3  
6 unique J



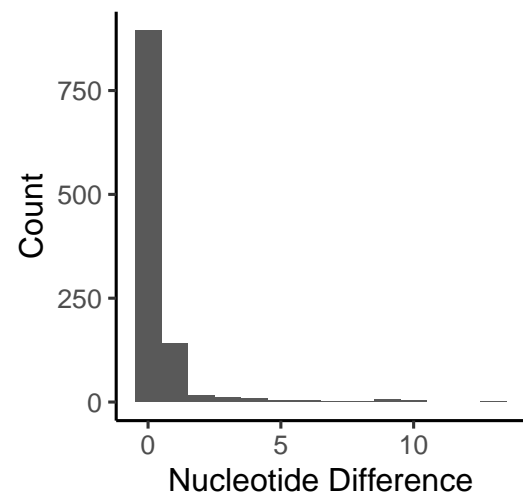
### IGHV3-20\*01

56 sequences assigned  
45 (80.4%) exact matches, in which:  
42 unique CDR3  
5 unique J



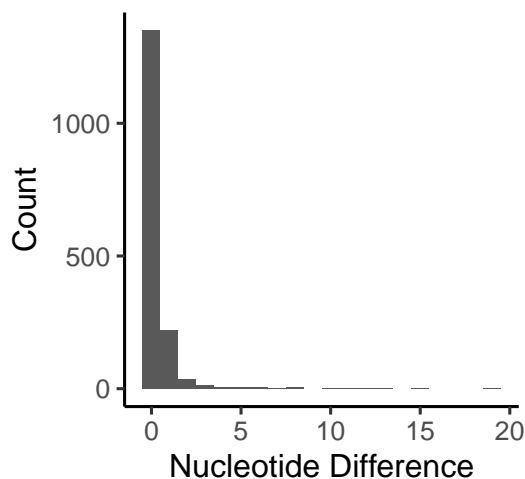
### IGHV3-30-3\*01

1093 sequences assigned  
895 (81.9%) exact matches, in which:  
852 unique CDR3  
6 unique J



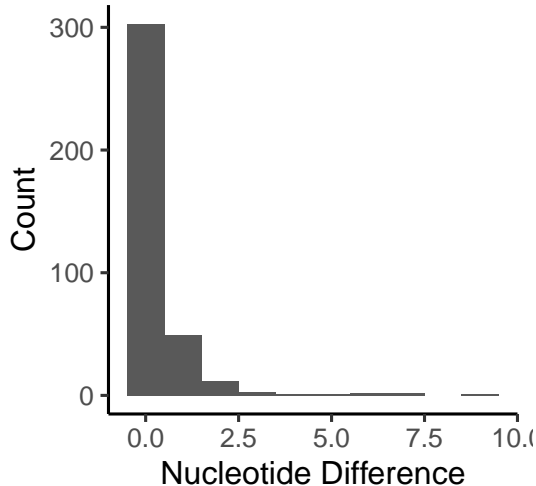
### IGHV3-33\*01

1651 sequences assigned  
1350 (81.8%) exact matches, in which:  
1276 unique CDR3  
6 unique J



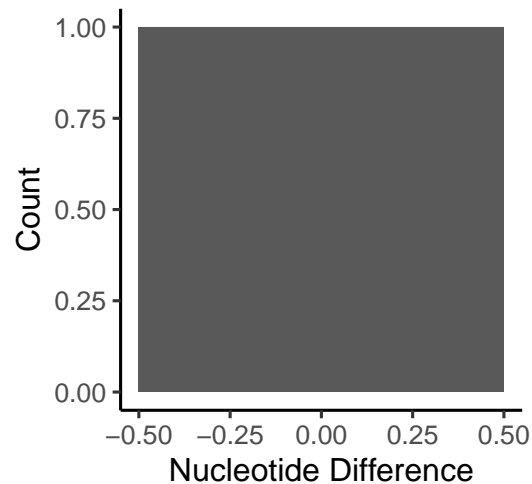
### IGHV3-49\*05

374 sequences assigned  
303 (81%) exact matches, in which:  
283 unique CDR3  
6 unique J



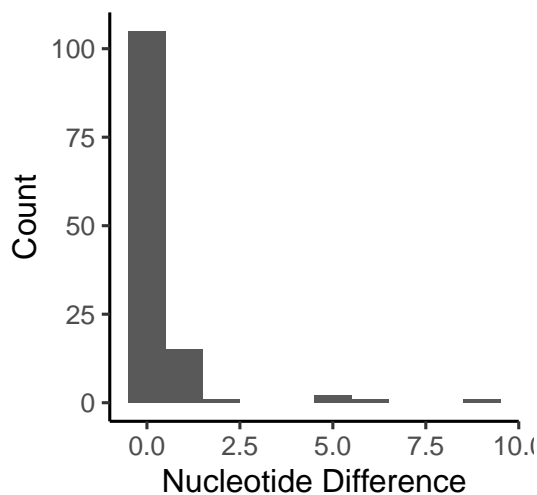
### IGHV3-66\*04

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



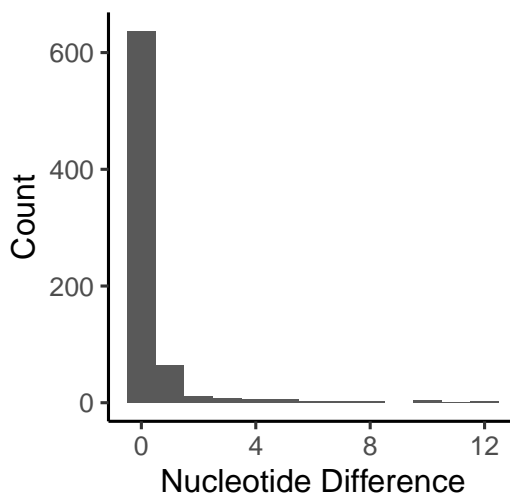
### IGHV3-43\*01

127 sequences assigned  
105 (82.7%) exact matches, in which:  
102 unique CDR3  
6 unique J



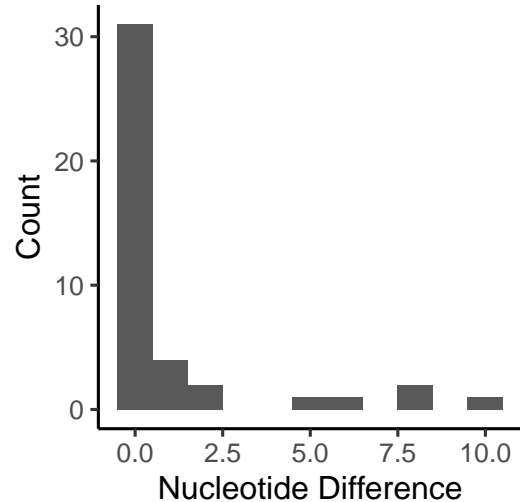
### IGHV3-53\*01

745 sequences assigned  
637 (85.5%) exact matches, in which:  
607 unique CDR3  
6 unique J



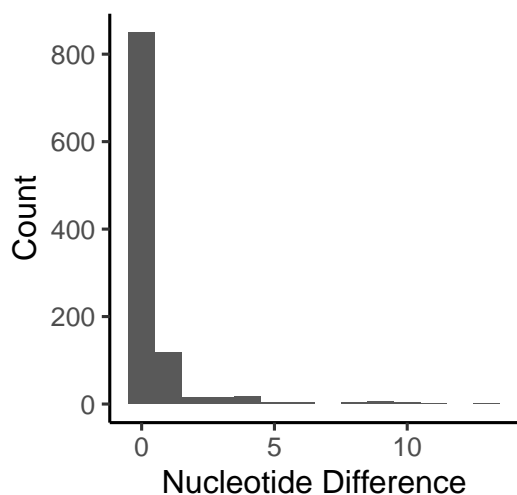
### IGHV3-72\*01

42 sequences assigned  
31 (73.8%) exact matches, in which:  
31 unique CDR3  
4 unique J



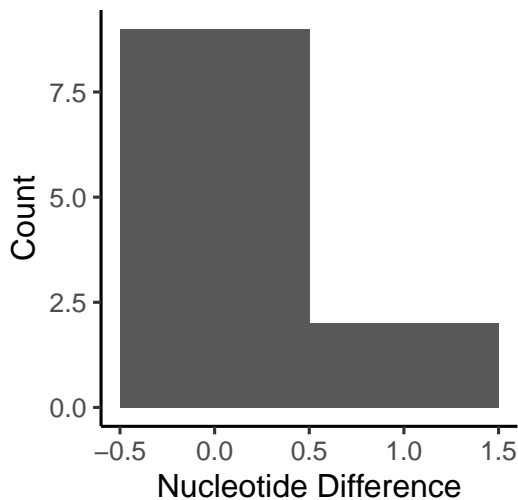
### IGHV3-48\*02

1039 sequences assigned  
850 (81.8%) exact matches, in which:  
810 unique CDR3  
6 unique J



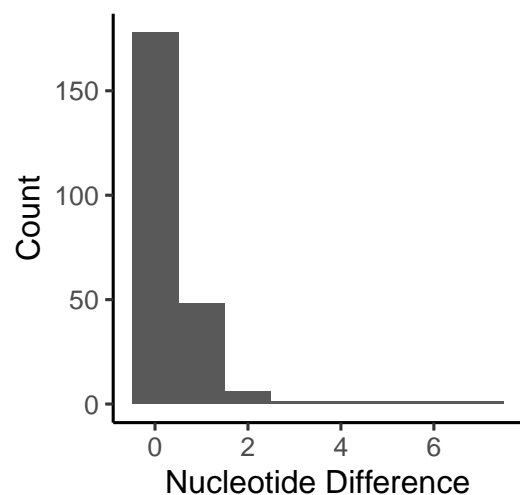
### IGHV3-64\*02

11 sequences assigned  
9 (81.8%) exact matches, in which:  
8 unique CDR3  
3 unique J



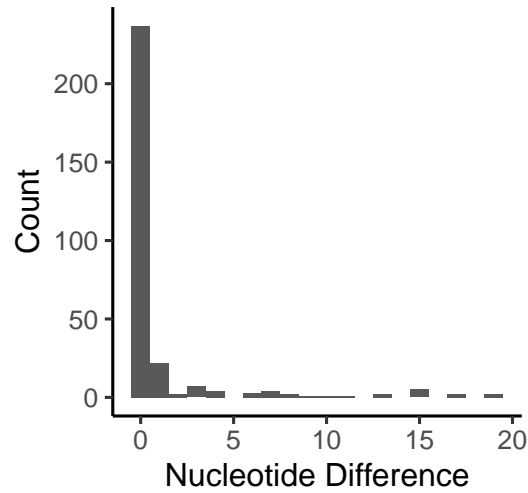
### IGHV3-73\*02

238 sequences assigned  
178 (74.8%) exact matches, in which:  
157 unique CDR3  
5 unique J



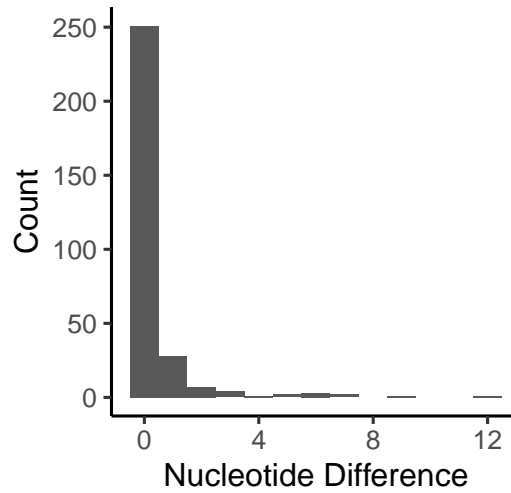
### IGHV3-74\*01

301 sequences assigned  
237 (78.7%) exact matches, in which:  
227 unique CDR3  
6 unique J



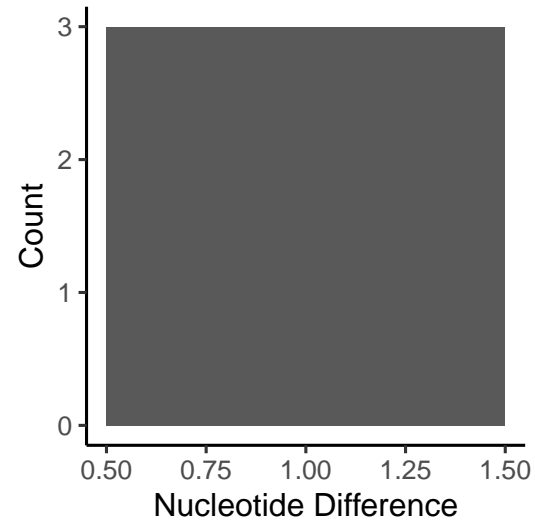
### IGHV4-4\*07

302 sequences assigned  
251 (83.1%) exact matches, in which:  
241 unique CDR3  
6 unique J



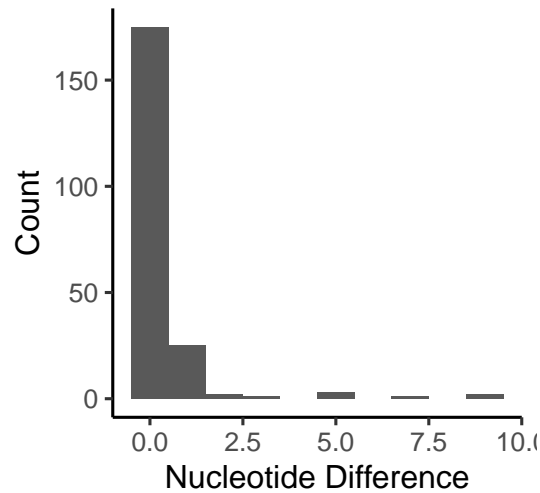
### IGHV4-28\*04

3 sequences assigned  
No exact matches.



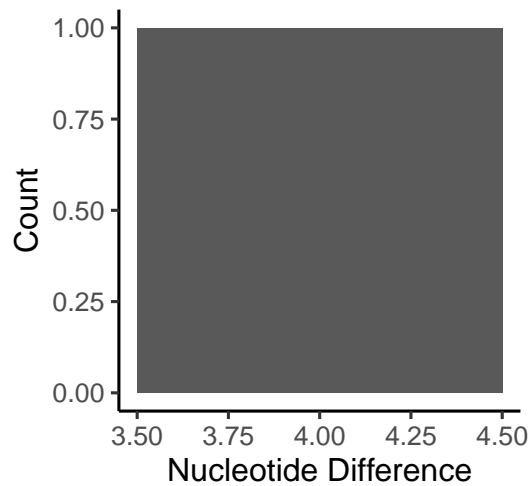
### IGHV3-64D\*08

209 sequences assigned  
175 (83.7%) exact matches, in which:  
165 unique CDR3  
6 unique J



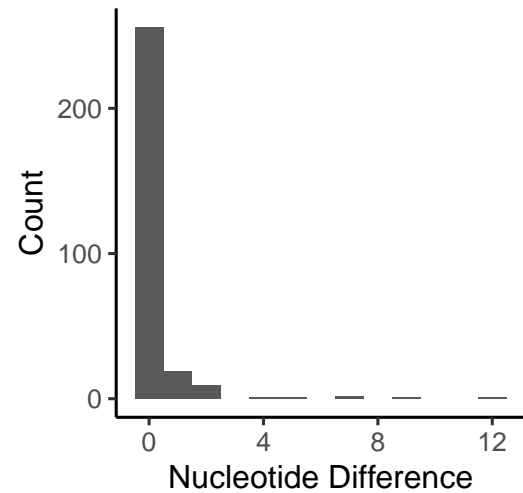
### IGHV4-28\*01

1 sequences assigned  
No exact matches.



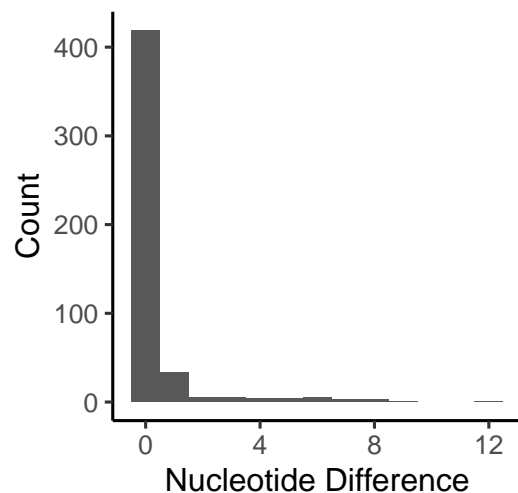
### IGHV4-30-4\*01

290 sequences assigned  
256 (88.3%) exact matches, in which:  
249 unique CDR3  
6 unique J



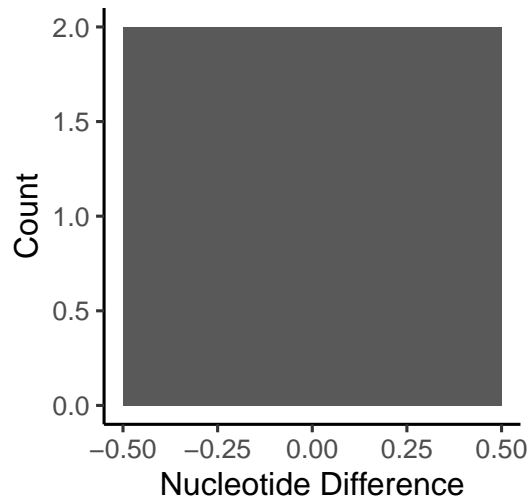
### IGHV4-4\*02

483 sequences assigned  
419 (86.7%) exact matches, in which:  
406 unique CDR3  
6 unique J



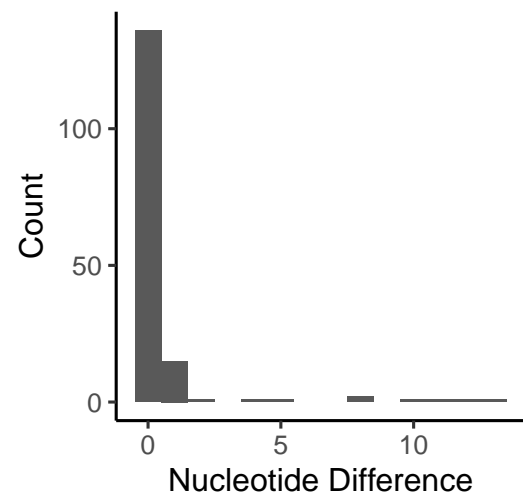
### IGHV4-28\*02

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



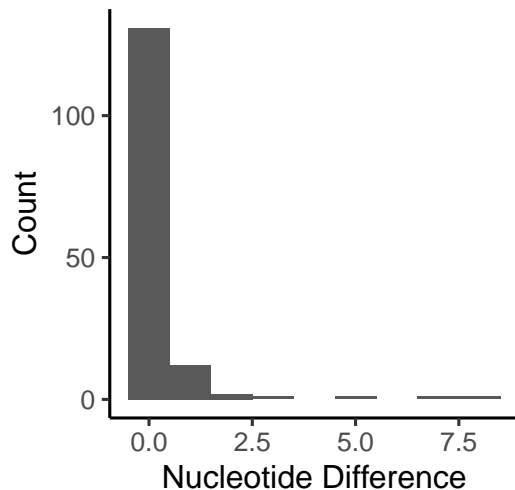
### IGHV4-30-2\*01

160 sequences assigned  
136 (85%) exact matches, in which:  
131 unique CDR3  
6 unique J



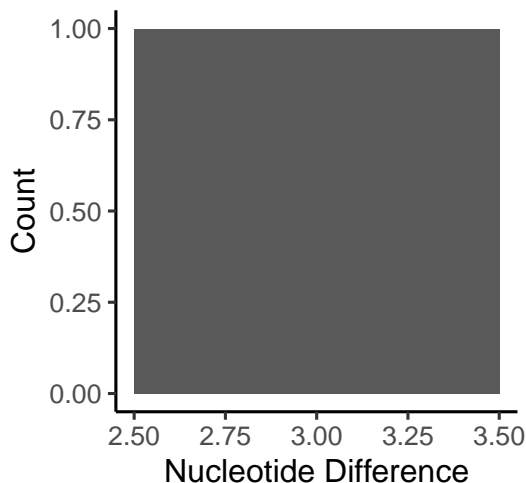
### IGHV4-31\*01

149 sequences assigned  
131 (87.9%) exact matches, in which:  
128 unique CDR3  
6 unique J



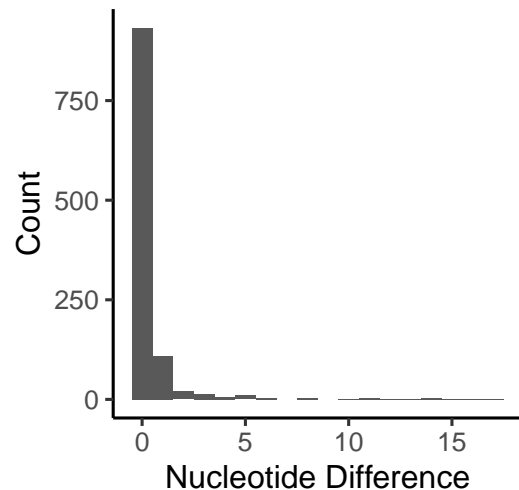
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



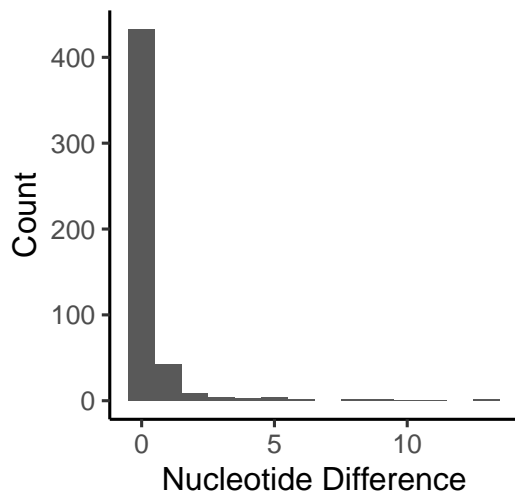
### IGHV4-59\*01

1113 sequences assigned  
933 (83.8%) exact matches, in which:  
913 unique CDR3  
6 unique J



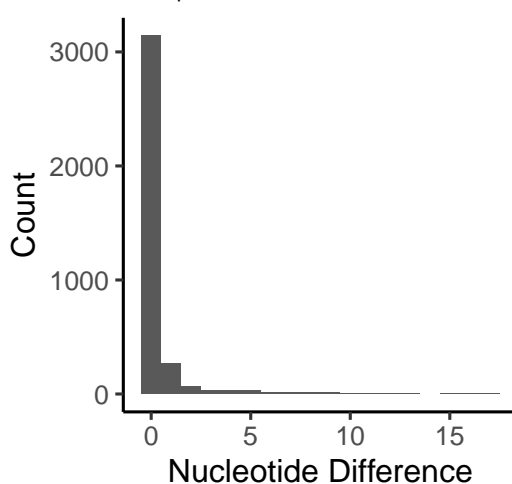
### IGHV4-31\*03

505 sequences assigned  
433 (85.7%) exact matches, in which:  
418 unique CDR3  
6 unique J



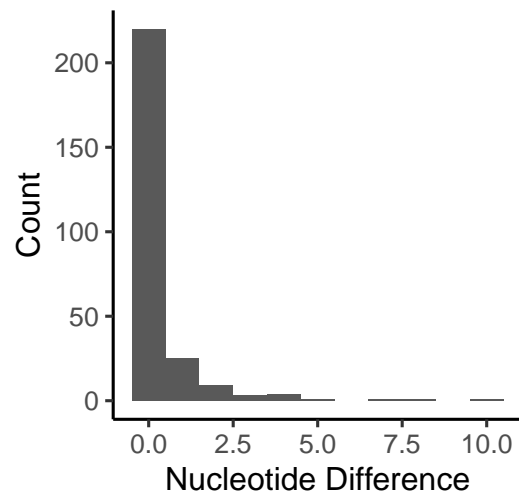
### IGHV4-39\*01

3636 sequences assigned  
3142 (86.4%) exact matches, in which:  
2977 unique CDR3  
6 unique J



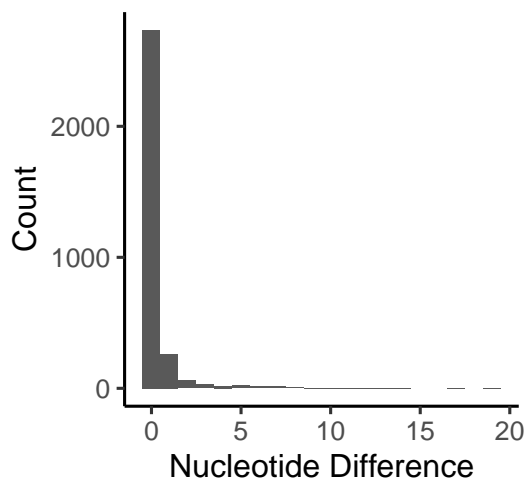
### IGHV4-61\*01

267 sequences assigned  
220 (82.4%) exact matches, in which:  
216 unique CDR3  
6 unique J



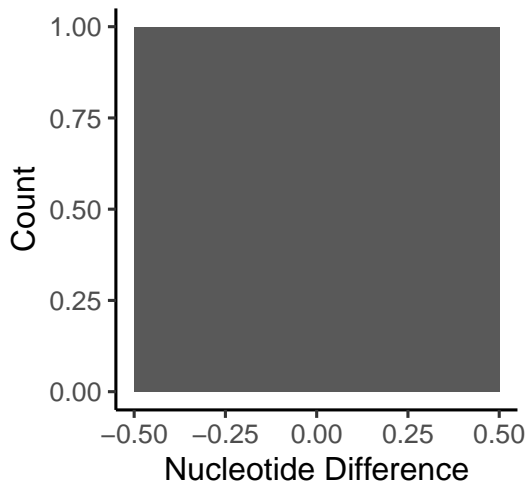
### IGHV4-34\*01

3172 sequences assigned  
2735 (86.2%) exact matches, in which:  
2604 unique CDR3  
6 unique J



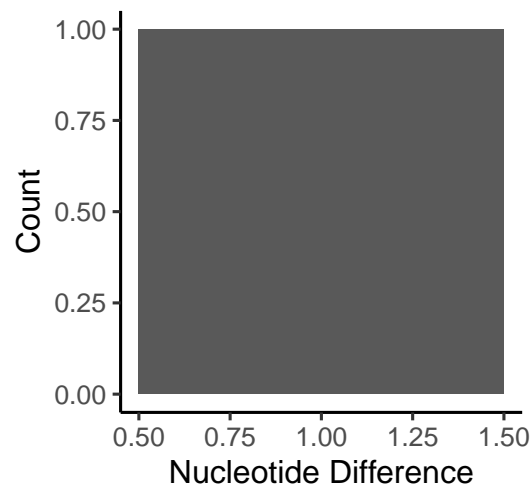
### IGHV4-55\*08

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



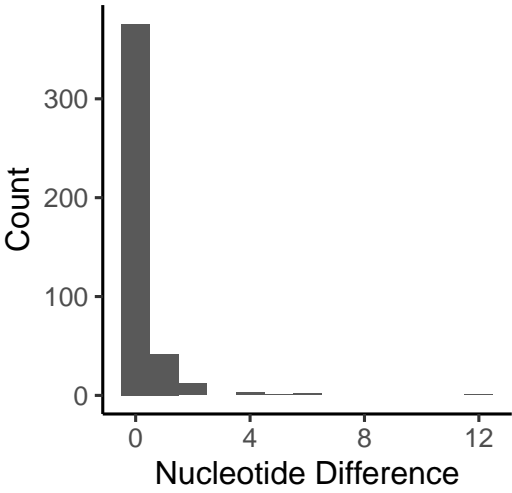
### IGHV1/OR15-1\*03

1 sequences assigned  
No exact matches.



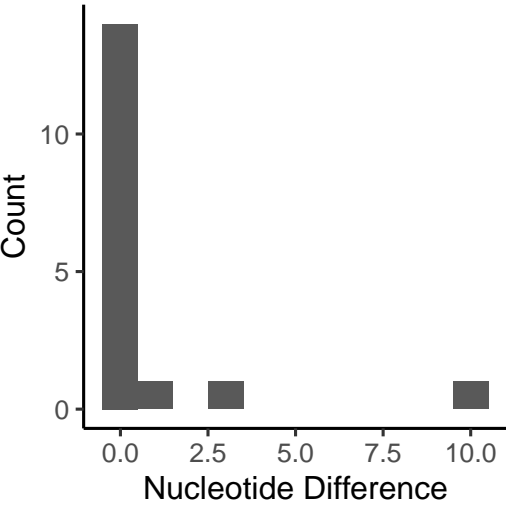
### IGHV5-10-1\*03

437 sequences assigned  
376 (86%) exact matches, in which:  
364 unique CDR3  
5 unique J



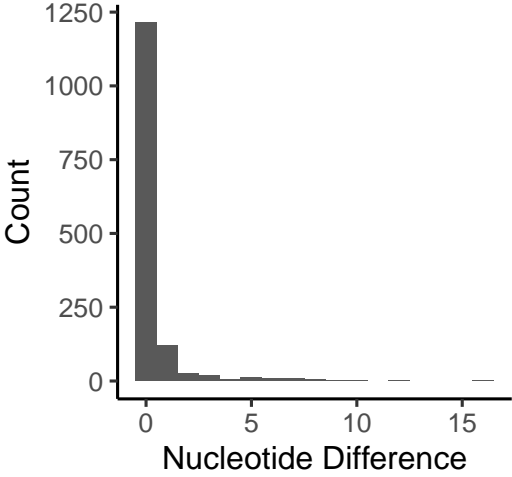
### IGHV7-4-1\*01

17 sequences assigned  
14 (82.4%) exact matches, in which:  
13 unique CDR3  
3 unique J



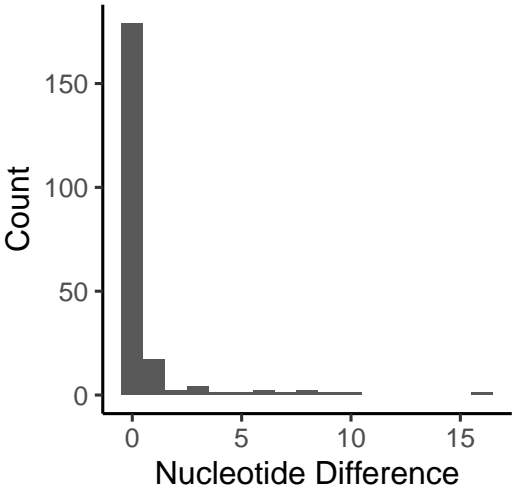
### IGHV5-51\*01

1430 sequences assigned  
1214 (84.9%) exact matches, in which:  
1173 unique CDR3  
6 unique J



### IGHV6-1\*01

213 sequences assigned  
179 (84%) exact matches, in which:  
168 unique CDR3  
6 unique J







Warning – no inferred sequences found.