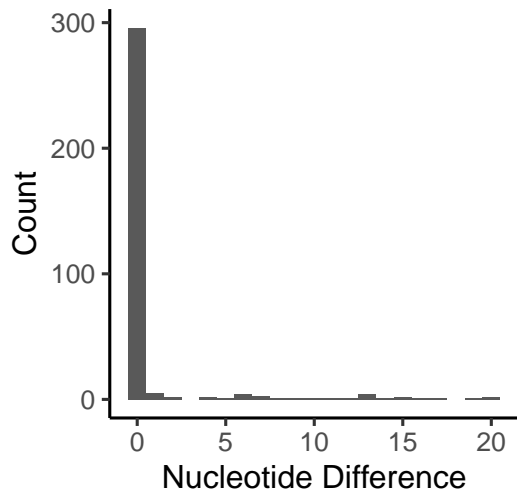


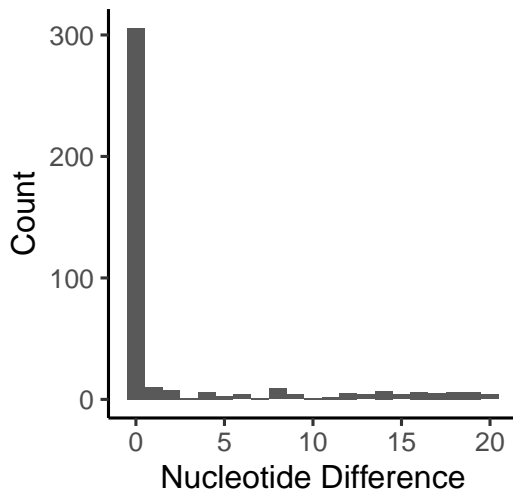
### IGHV1-2\*04

351 sequences assigned  
296 (84.3%) exact matches, in which:  
295 unique CDR3  
6 unique J



### IGHV1-8\*01

454 sequences assigned  
306 (67.4%) exact matches, in which:  
306 unique CDR3  
6 unique J



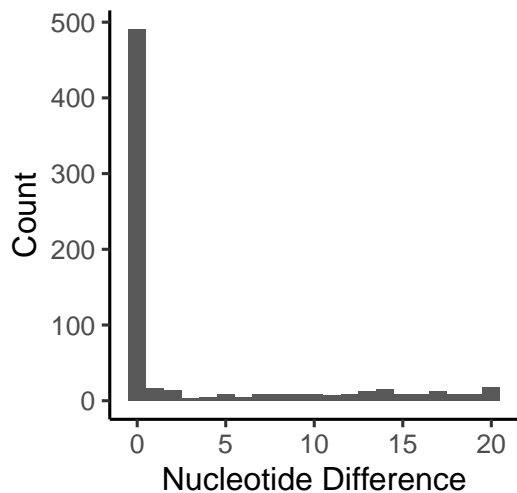
### IGHV1-38-4\*01

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



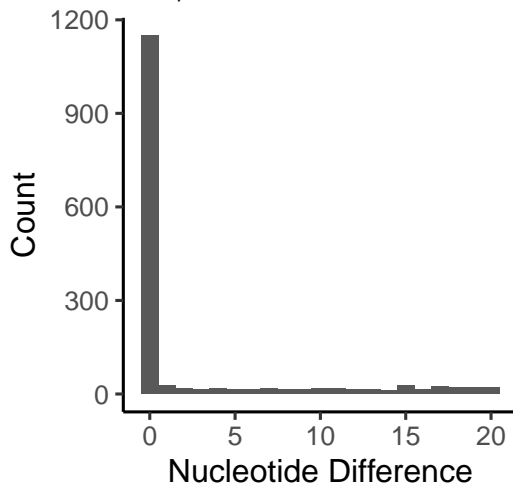
### IGHV1-2\*06

808 sequences assigned  
491 (60.8%) exact matches, in which:  
491 unique CDR3  
6 unique J



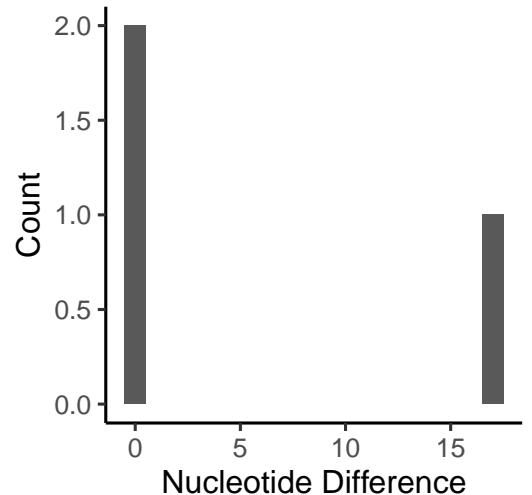
### IGHV1-18\*01

1757 sequences assigned  
1149 (65.4%) exact matches, in which:  
1148 unique CDR3  
6 unique J



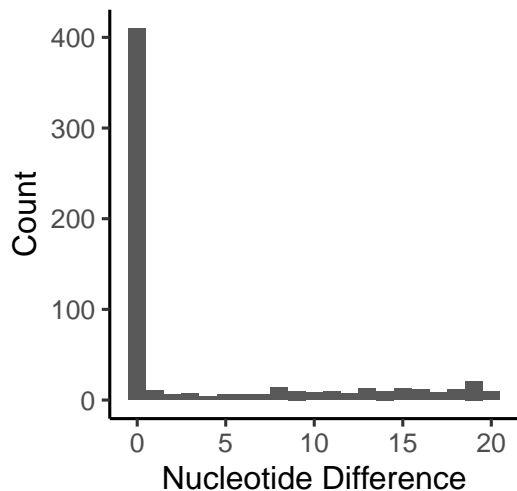
### IGHV1-45\*02

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



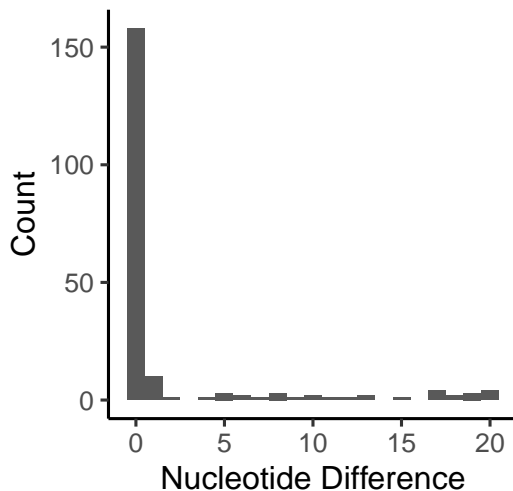
### IGHV1-3\*01\_05

688 sequences assigned  
410 (59.6%) exact matches, in which:  
410 unique CDR3  
6 unique J



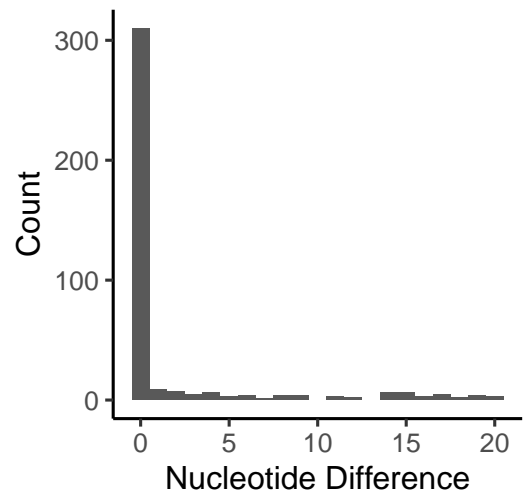
### IGHV1-24\*01

239 sequences assigned  
158 (66.1%) exact matches, in which:  
158 unique CDR3  
5 unique J



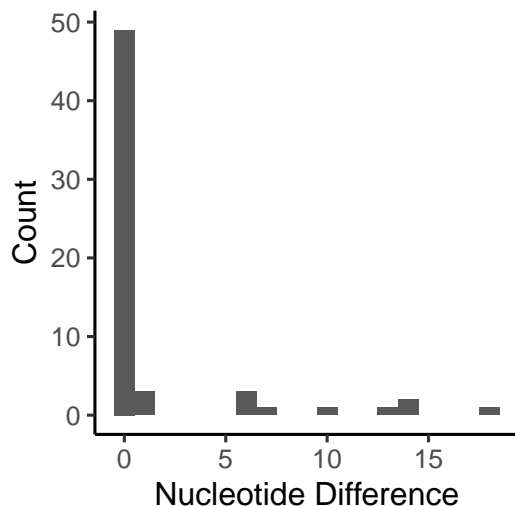
### IGHV1-46\*03

435 sequences assigned  
310 (71.3%) exact matches, in which:  
310 unique CDR3  
6 unique J



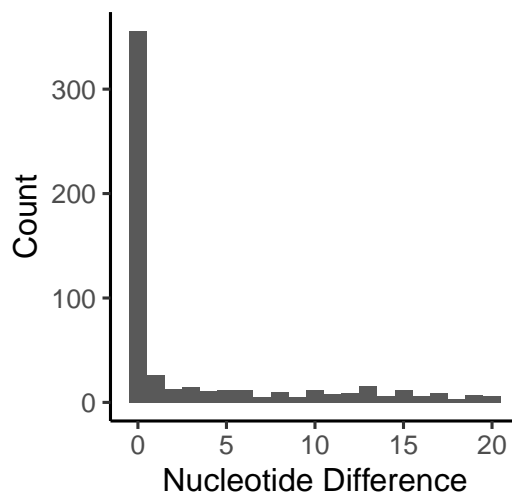
## IGHV1–58\*02

71 sequences assigned  
49 (69%) exact matches, in which:  
49 unique CDR3  
6 unique J



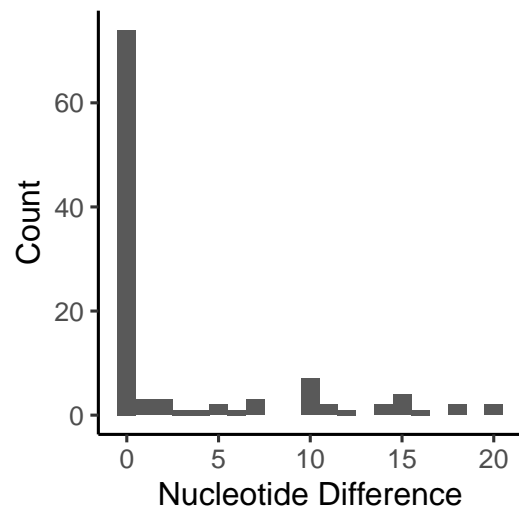
## IGHV2–5\*02

624 sequences assigned  
356 (57.1%) exact matches, in which:  
355 unique CDR3  
6 unique J



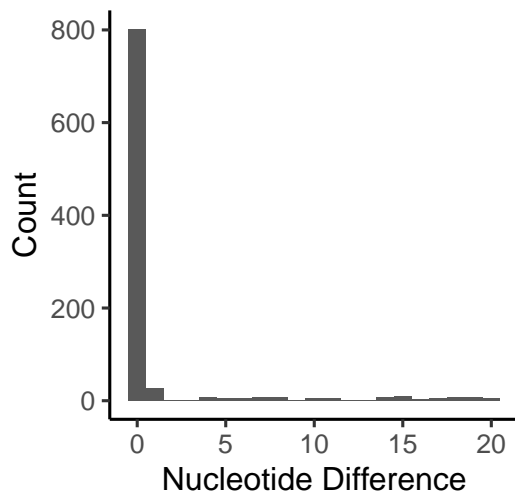
## IGHV2–70\*11\_15

119 sequences assigned  
74 (62.2%) exact matches, in which:  
73 unique CDR3  
5 unique J



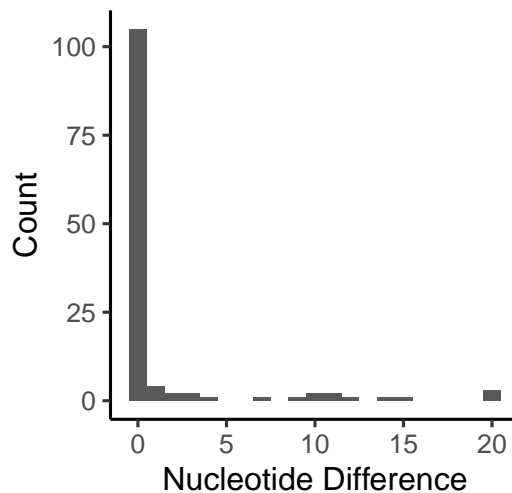
## IGHV1–69\*01\_12\_13

991 sequences assigned  
802 (80.9%) exact matches, in which:  
801 unique CDR3  
6 unique J



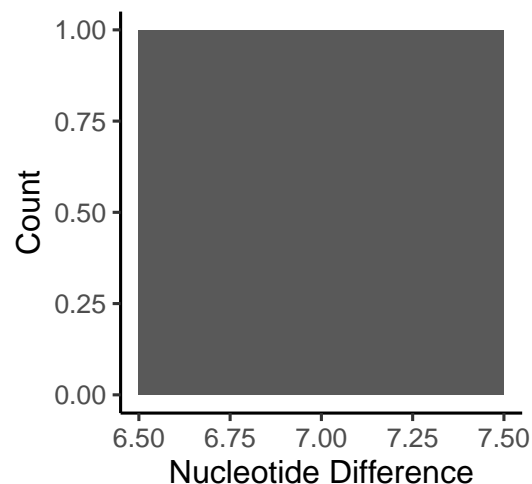
## IGHV2–26\*01

131 sequences assigned  
105 (80.2%) exact matches, in which:  
105 unique CDR3  
5 unique J



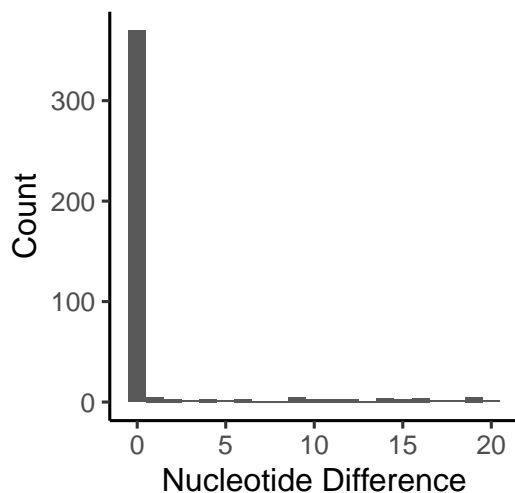
## IGHV2–70D\*04

1 sequences assigned  
No exact matches.



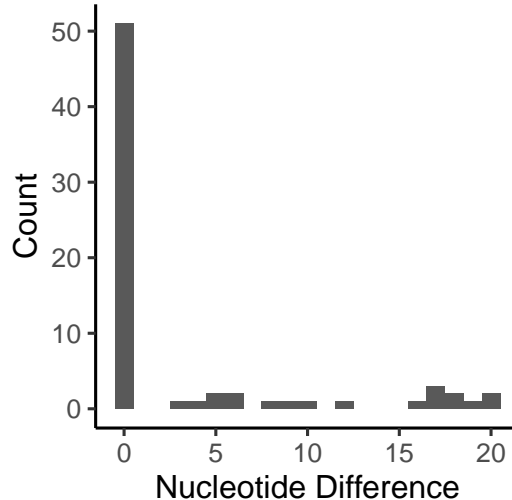
## IGHV1–69\*04\_09

473 sequences assigned  
370 (78.2%) exact matches, in which:  
370 unique CDR3  
6 unique J



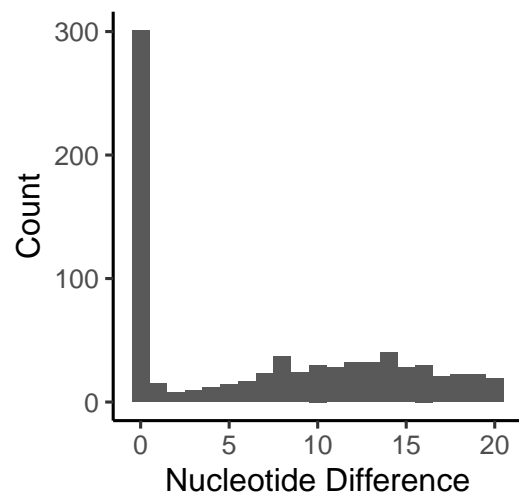
## IGHV2–70\*01

82 sequences assigned  
51 (62.2%) exact matches, in which:  
51 unique CDR3  
4 unique J



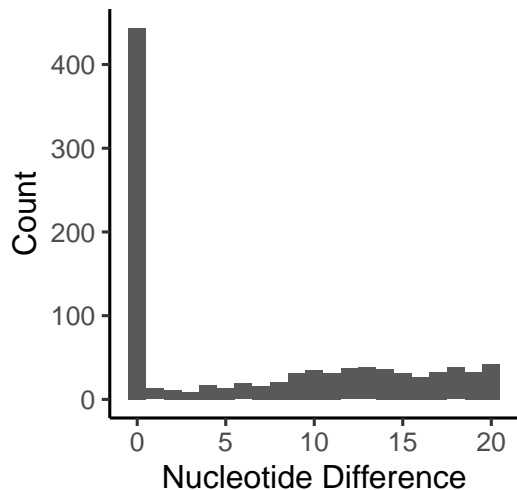
## IGHV3–7\*01

877 sequences assigned  
301 (34.3%) exact matches, in which:  
294 unique CDR3  
6 unique J



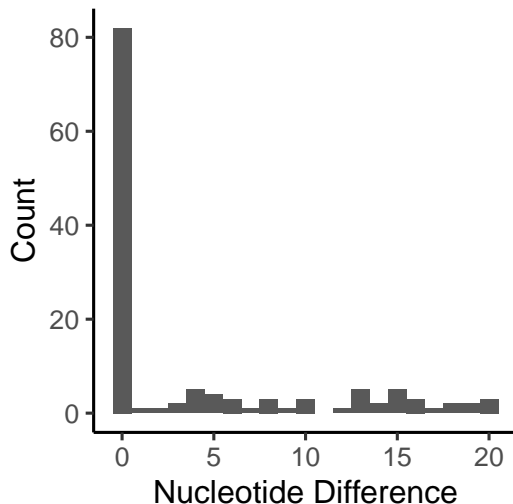
### IGHV3-7\*03

1217 sequences assigned  
444 (36.5%) exact matches, in which:  
436 unique CDR3  
6 unique J



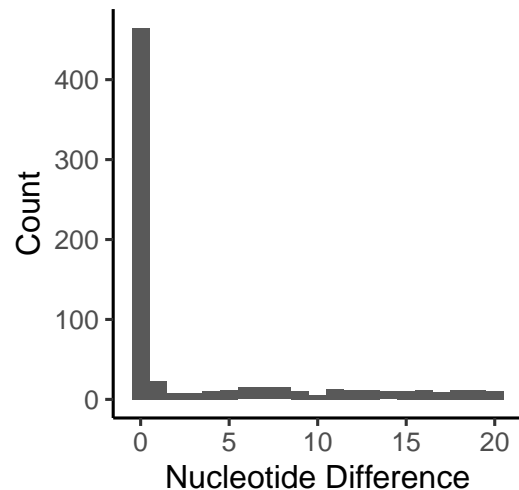
### IGHV3-11\*06

151 sequences assigned  
82 (54.3%) exact matches, in which:  
82 unique CDR3  
5 unique J



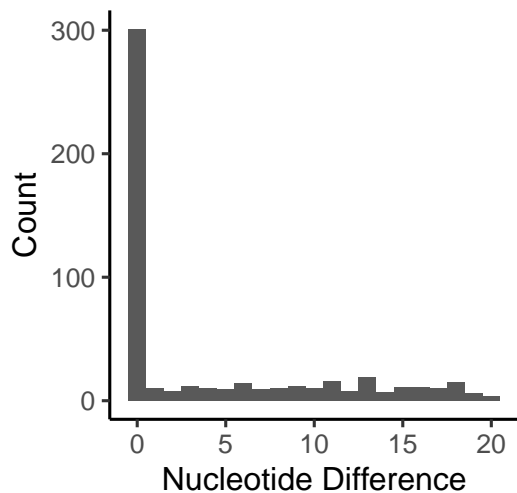
### IGHV3-15\*07

827 sequences assigned  
465 (56.2%) exact matches, in which:  
457 unique CDR3  
6 unique J



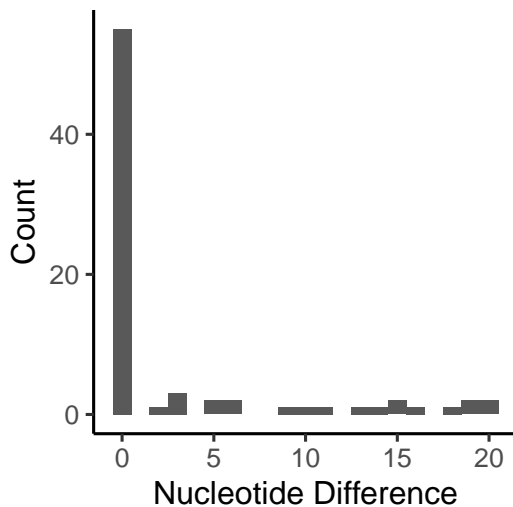
### IGHV3-9\*01

604 sequences assigned  
301 (49.8%) exact matches, in which:  
301 unique CDR3  
6 unique J



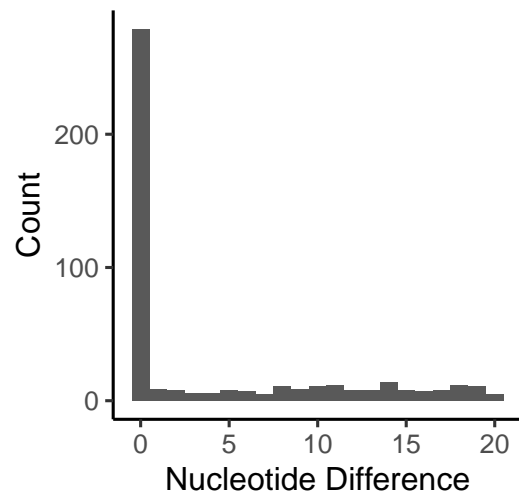
### IGHV3-13\*01

91 sequences assigned  
55 (60.4%) exact matches, in which:  
55 unique CDR3  
5 unique J



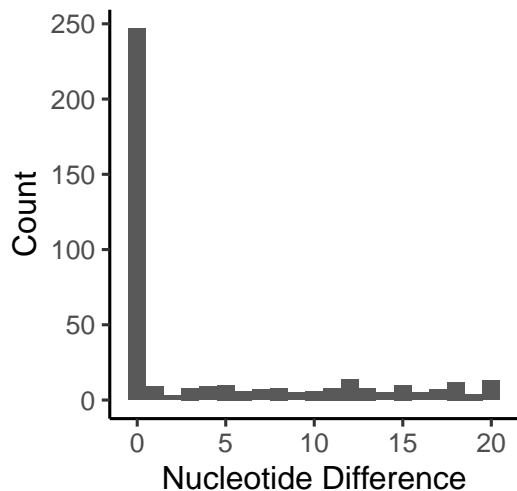
### IGHV3-15\*01\_02

526 sequences assigned  
279 (53%) exact matches, in which:  
274 unique CDR3  
6 unique J



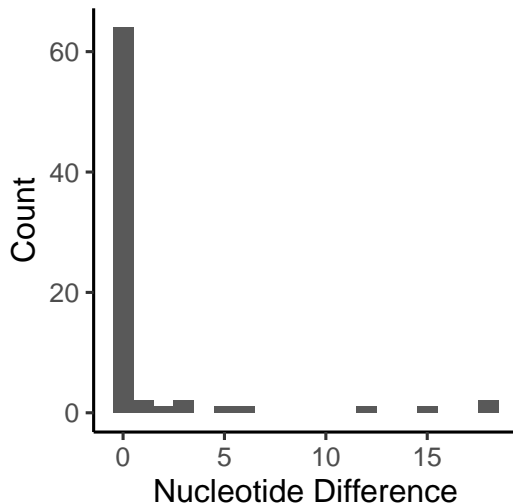
### IGHV3-11\*01

488 sequences assigned  
247 (50.6%) exact matches, in which:  
246 unique CDR3  
6 unique J



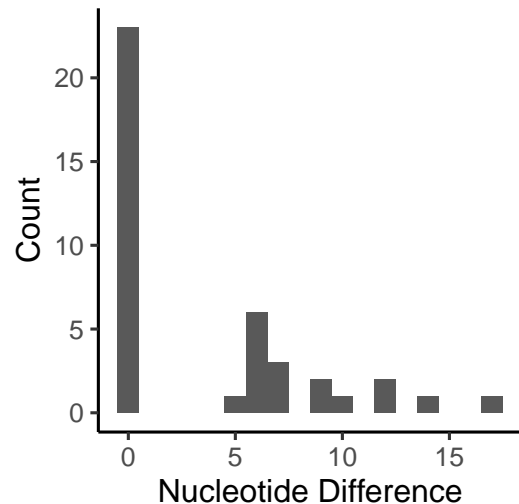
### IGHV3-13\*01\_G290A\_T300C

89 sequences assigned  
64 (71.9%) exact matches, in which:  
63 unique CDR3  
6 unique J



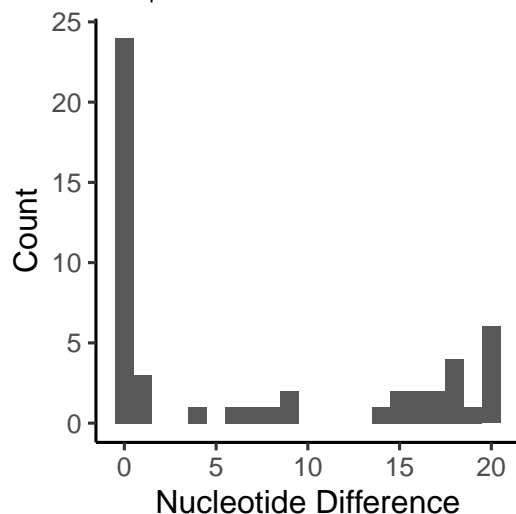
### IGHV3-20\*01\_02

51 sequences assigned  
23 (45.1%) exact matches, in which:  
22 unique CDR3  
5 unique J



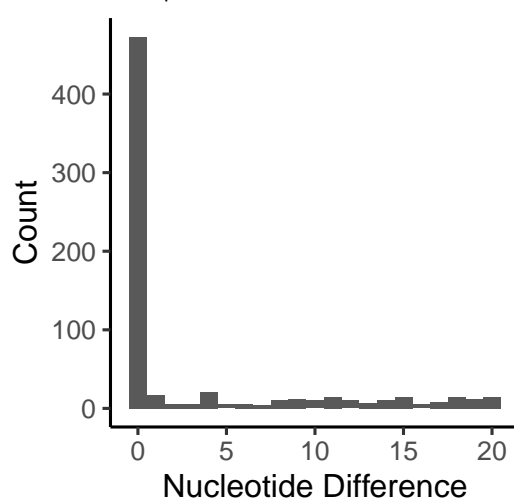
### IGHV3-20\*03\_04

78 sequences assigned  
24 (30.8%) exact matches, in which:  
24 unique CDR3  
4 unique J



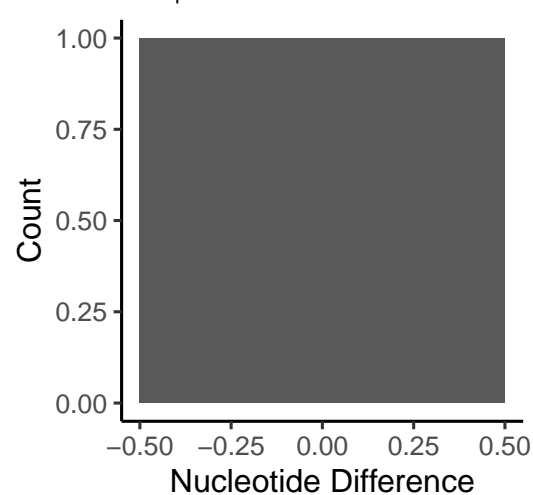
### IGHV3-33\*01

797 sequences assigned  
473 (59.3%) exact matches, in which:  
464 unique CDR3  
6 unique J



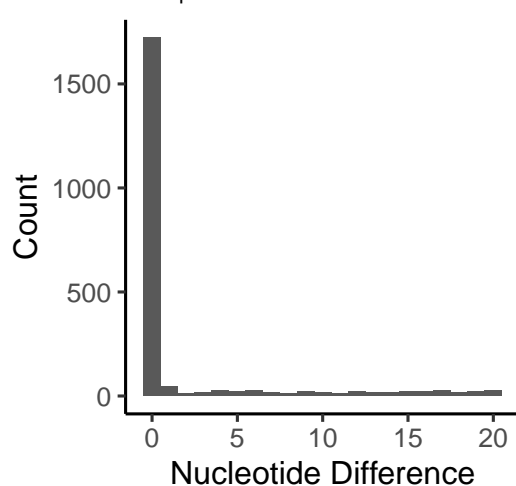
### IGHV3-47\*02

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



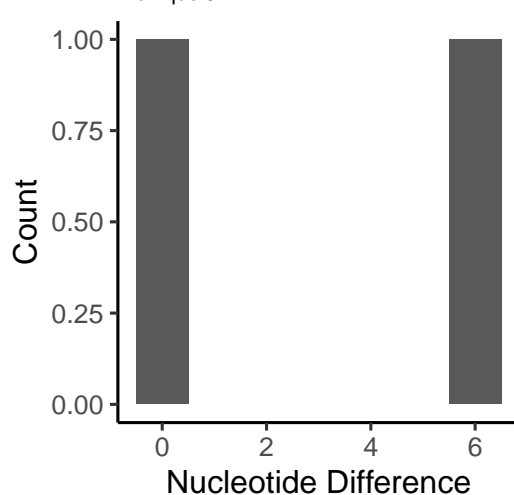
### IGHV3-21\*01\_02

2402 sequences assigned  
1722 (71.7%) exact matches, in which:  
1701 unique CDR3  
6 unique J



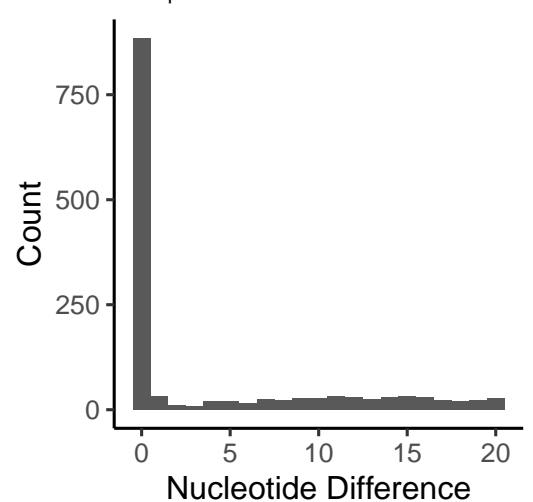
### IGHV3-38-3\*01

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



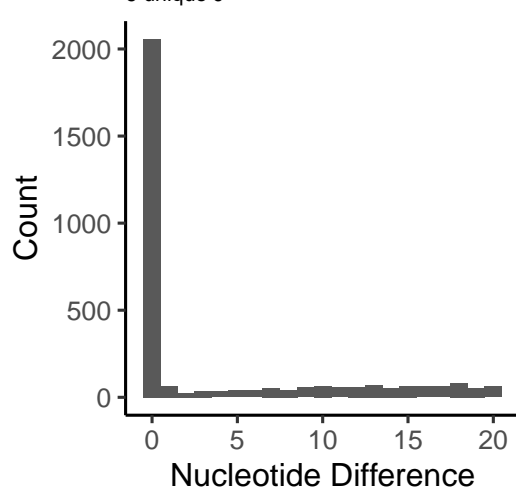
### IGHV3-48\*01

1605 sequences assigned  
885 (55.1%) exact matches, in which:  
869 unique CDR3  
6 unique J



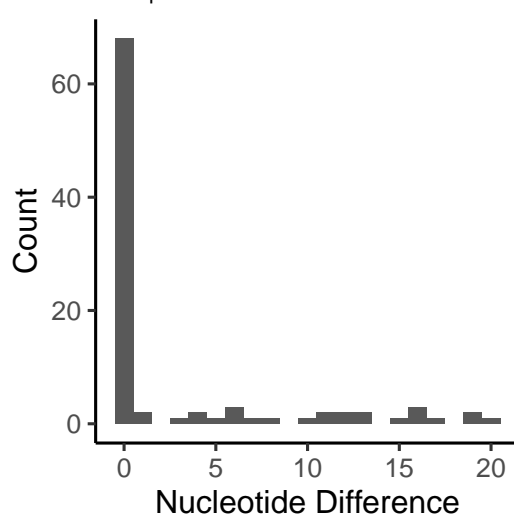
### IGHV3-23\*01\_04

3943 sequences assigned  
2057 (52.2%) exact matches, in which:  
2013 unique CDR3  
6 unique J



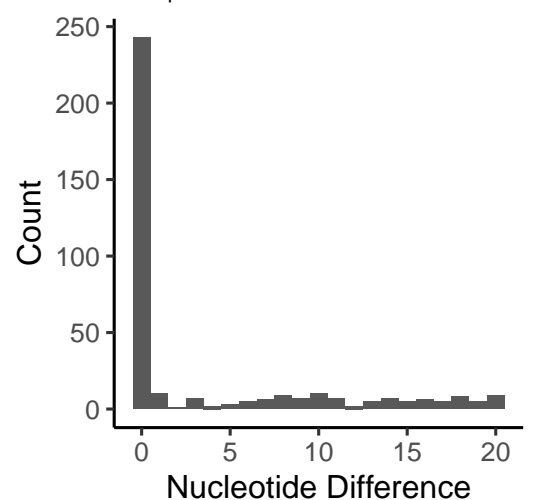
### IGHV3-43\*01

103 sequences assigned  
68 (66%) exact matches, in which:  
67 unique CDR3  
6 unique J



### IGHV3-49\*03\_05

418 sequences assigned  
243 (58.1%) exact matches, in which:  
242 unique CDR3  
6 unique J



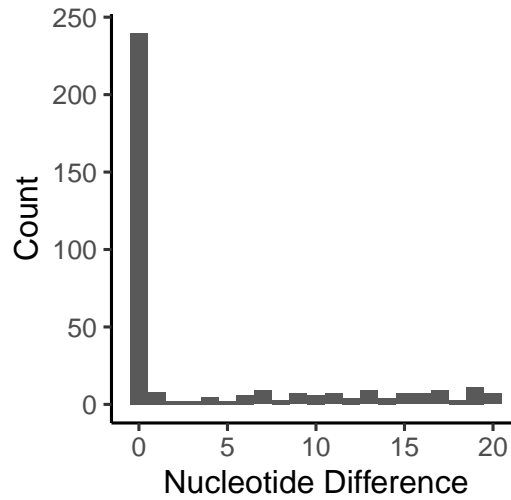
### IGHV3-52\*02

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



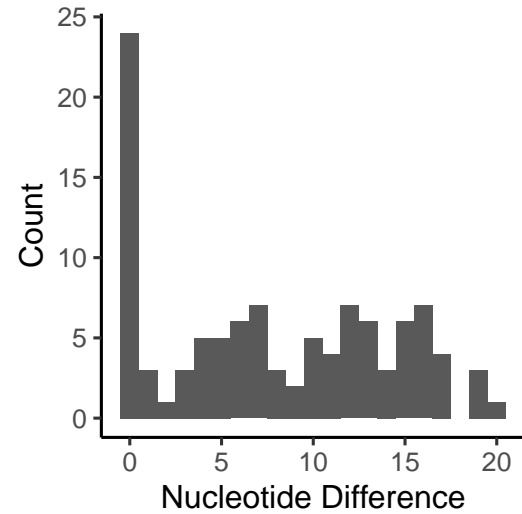
### IGHV3-66\*01

418 sequences assigned  
240 (57.4%) exact matches, in which:  
238 unique CDR3  
6 unique J



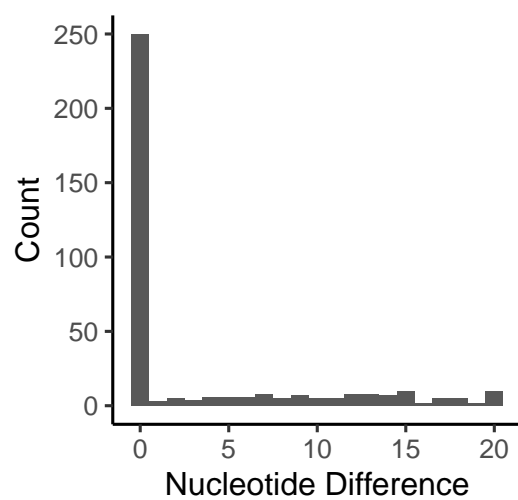
### IGHV3-72\*01

125 sequences assigned  
24 (19.2%) exact matches, in which:  
24 unique CDR3  
3 unique J



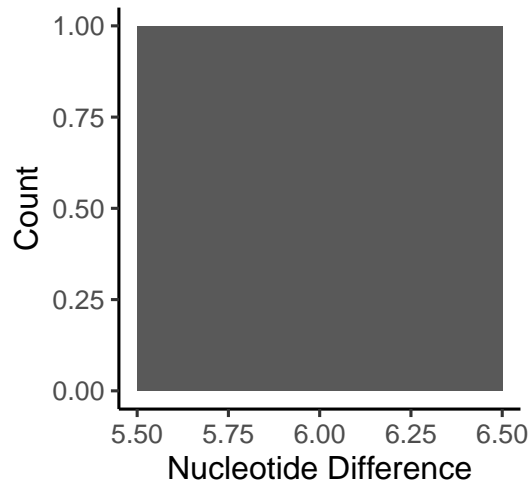
### IGHV3-53\*01\_02

458 sequences assigned  
250 (54.6%) exact matches, in which:  
245 unique CDR3  
6 unique J



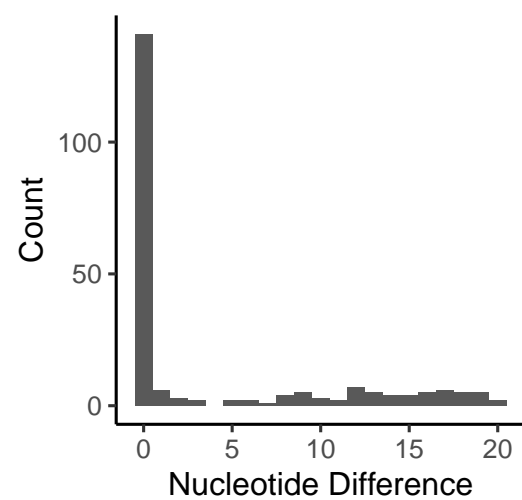
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



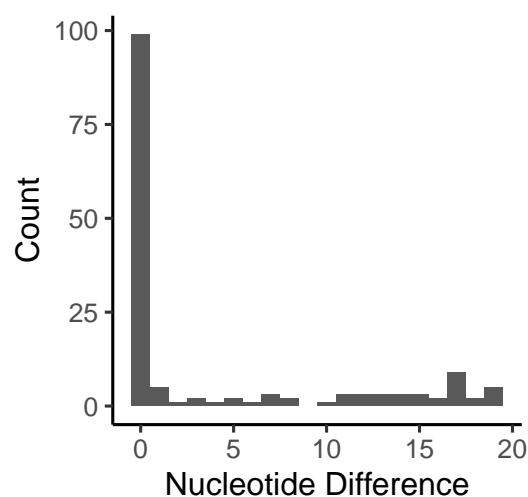
### IGHV3-73\*01\_02

259 sequences assigned  
141 (54.4%) exact matches, in which:  
140 unique CDR3  
6 unique J



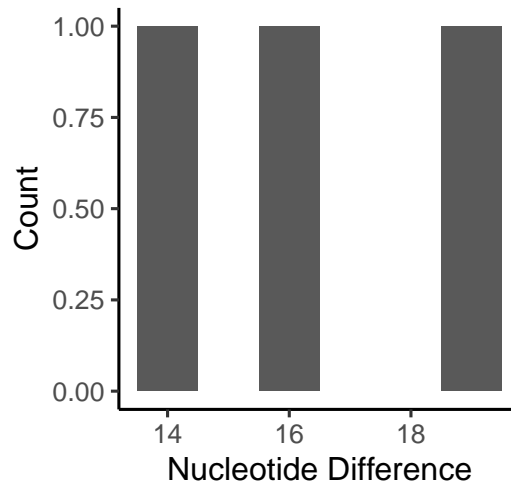
### IGHV3-64\*01

183 sequences assigned  
99 (54.1%) exact matches, in which:  
97 unique CDR3  
5 unique J



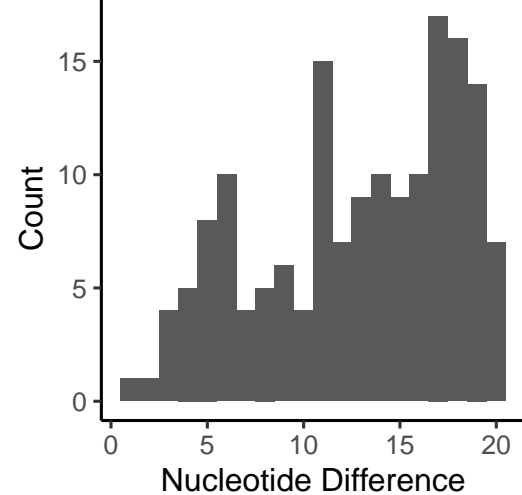
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



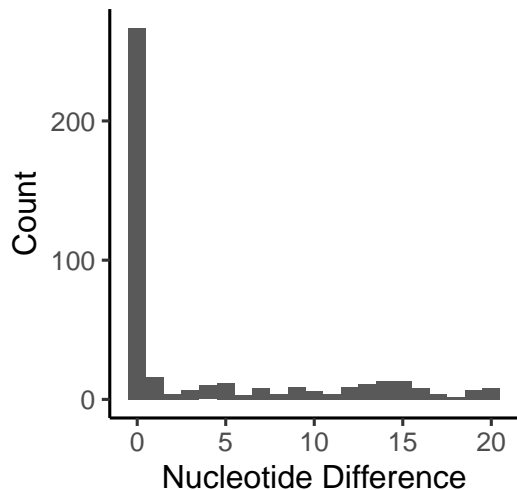
### IGHV3-74\*03

254 sequences assigned  
No exact matches.



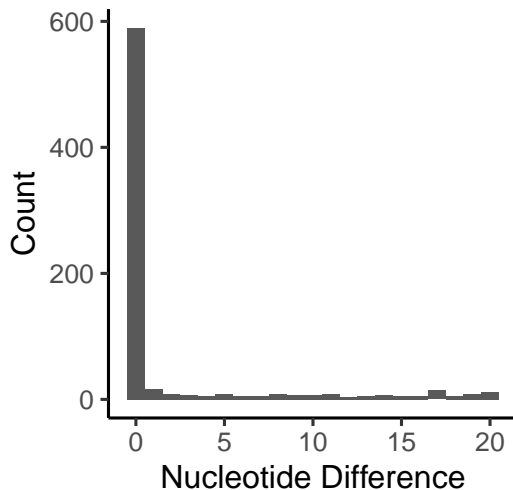
### IGHV3-74\*01\_02

504 sequences assigned  
267 (53%) exact matches, in which:  
262 unique CDR3  
6 unique J



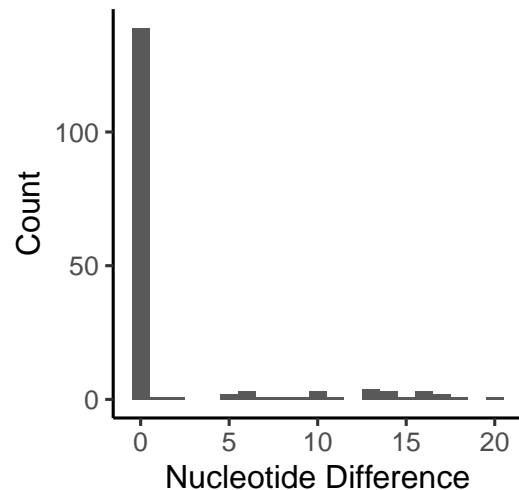
### IGHV4-4\*02\_03

839 sequences assigned  
590 (70.3%) exact matches, in which:  
586 unique CDR3  
6 unique J



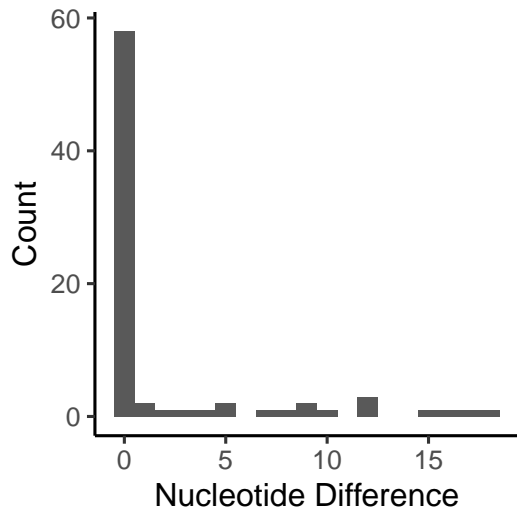
### IGHV4-30-4\*07

207 sequences assigned  
139 (67.1%) exact matches, in which:  
138 unique CDR3  
6 unique J



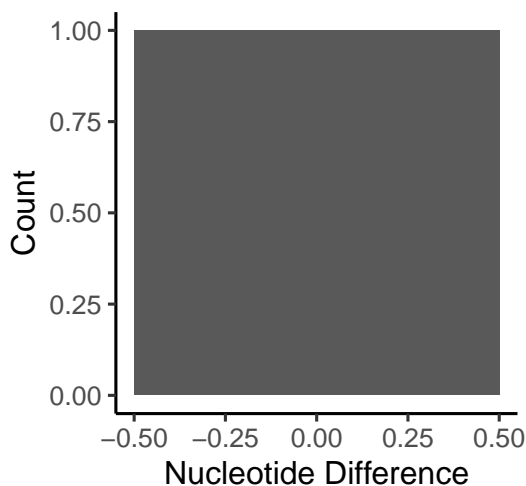
### IGHV3-43D\*03

84 sequences assigned  
58 (69%) exact matches, in which:  
57 unique CDR3  
4 unique J



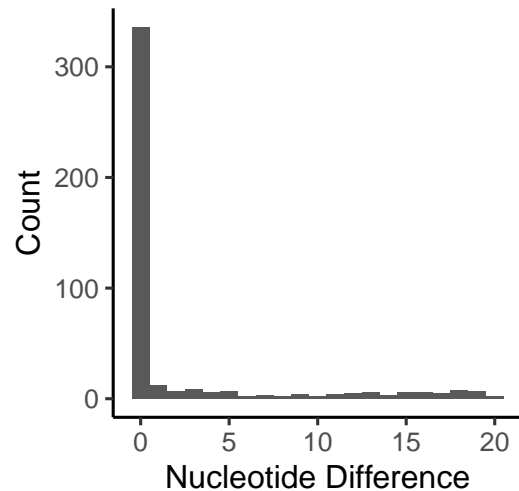
### IGHV4-28\*03

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



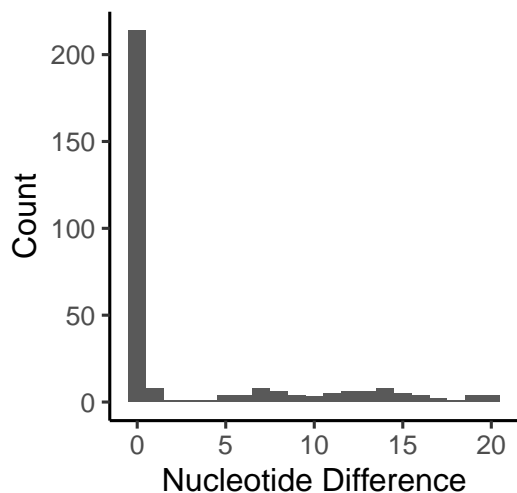
### IGHV4-31\*02

534 sequences assigned  
336 (62.9%) exact matches, in which:  
336 unique CDR3  
6 unique J



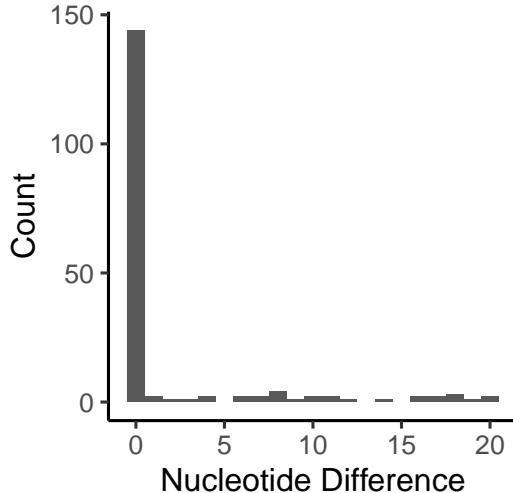
### IGHV3-64D\*06

384 sequences assigned  
214 (55.7%) exact matches, in which:  
212 unique CDR3  
5 unique J



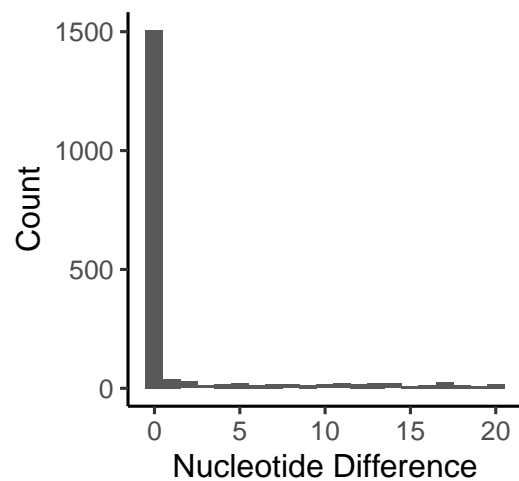
### IGHV4-30-2\*01

194 sequences assigned  
144 (74.2%) exact matches, in which:  
142 unique CDR3  
6 unique J



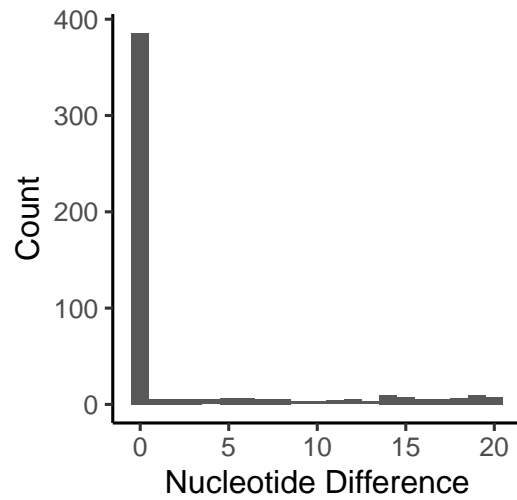
### IGHV4-34\*01\_02

2155 sequences assigned  
1507 (69.9%) exact matches, in which:  
1484 unique CDR3  
6 unique J



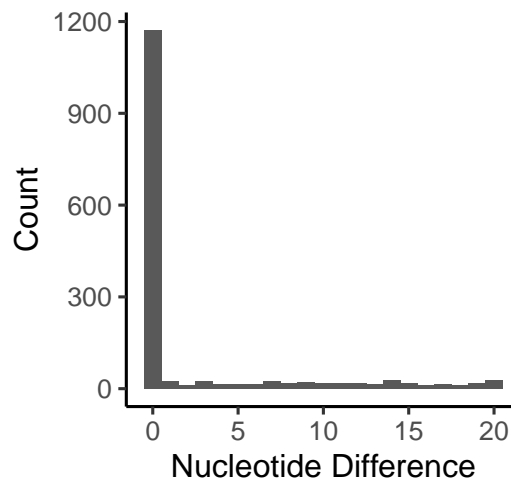
### IGHV4-38-2\*02

574 sequences assigned  
386 (67.2%) exact matches, in which:  
381 unique CDR3  
6 unique J



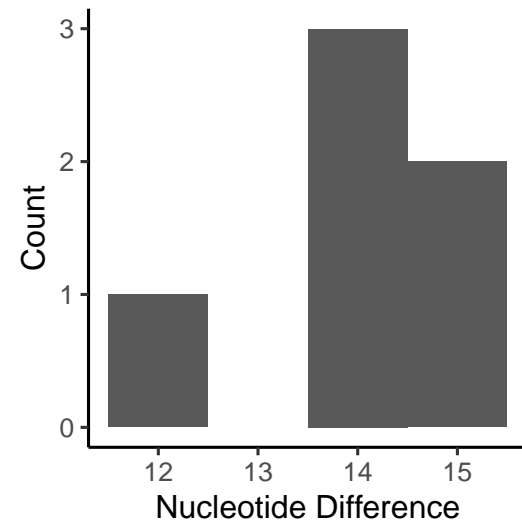
### IGHV4-59\*02\_G88A

1794 sequences assigned  
1171 (65.3%) exact matches, in which:  
1152 unique CDR3  
6 unique J



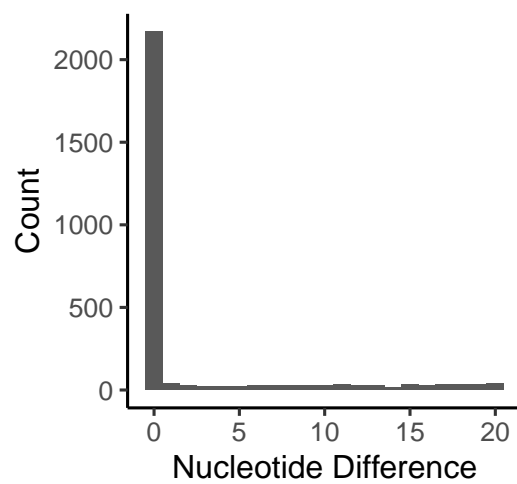
### IGHV4-61\*08

11 sequences assigned  
No exact matches.



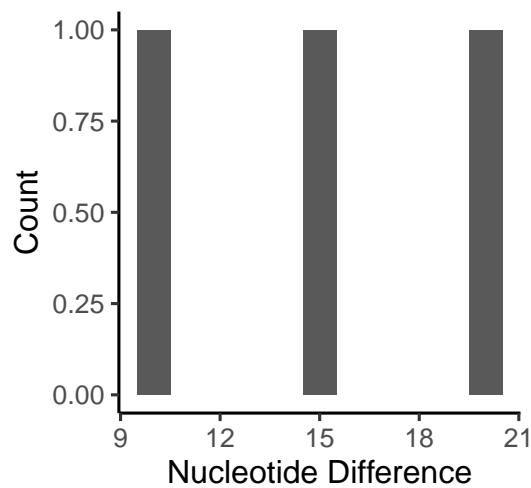
### IGHV4-39\*02\_C258G

3123 sequences assigned  
2169 (69.5%) exact matches, in which:  
2137 unique CDR3  
6 unique J



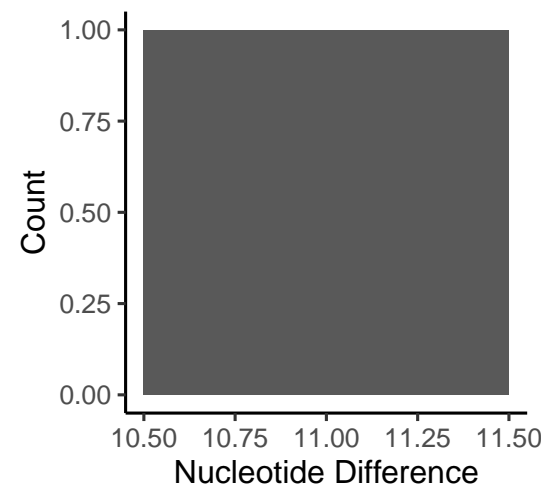
### IGHV4-61\*01

4 sequences assigned  
No exact matches.



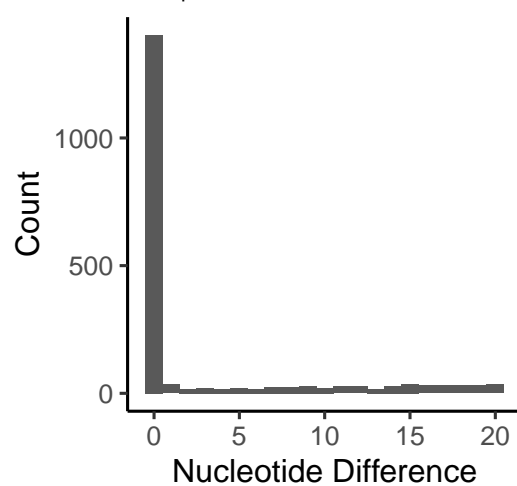
### IGHV4/OR15-8\*01

7 sequences assigned  
No exact matches.



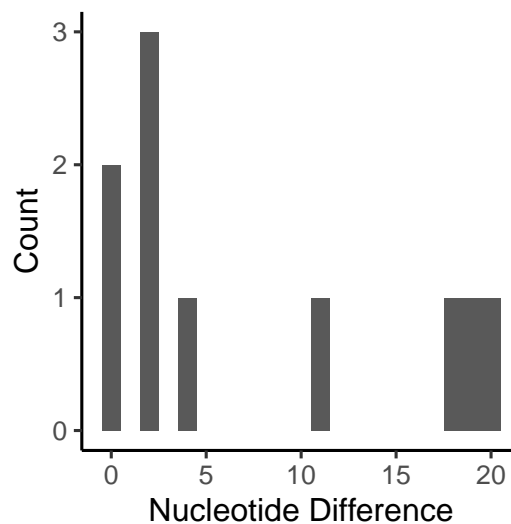
### IGHV4-59\*08

2259 sequences assigned  
1403 (62.1%) exact matches, in which:  
1390 unique CDR3  
6 unique J



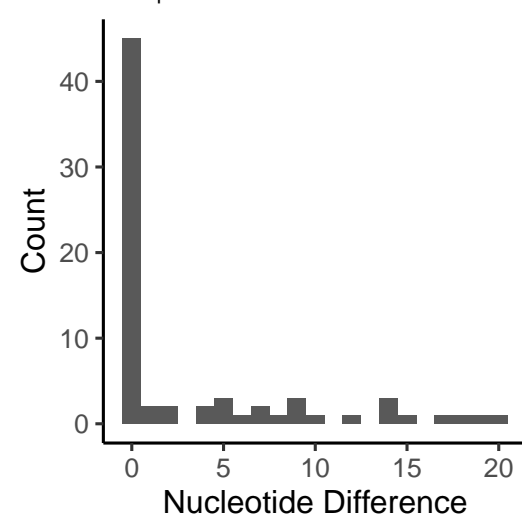
### IGHV4-61\*02

12 sequences assigned  
2 (16.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



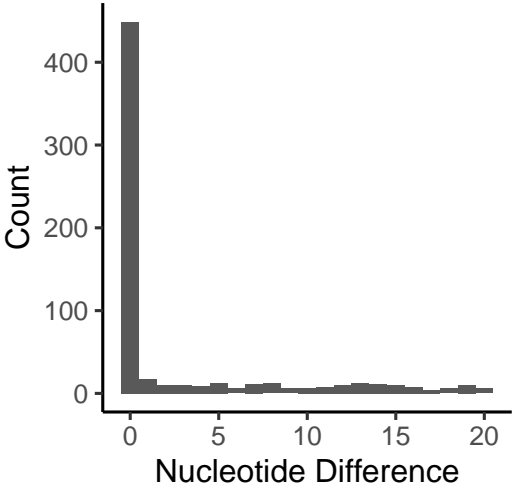
### IGHV5-10-1\*01\_03

85 sequences assigned  
45 (52.9%) exact matches, in which:  
45 unique CDR3  
5 unique J



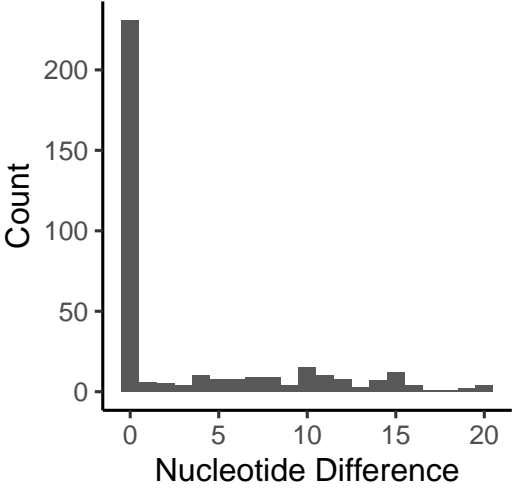
IGHV5–51\*07\_A128G

719 sequences assigned  
449 (62.4%) exact matches, in which:  
449 unique CDR3  
6 unique J



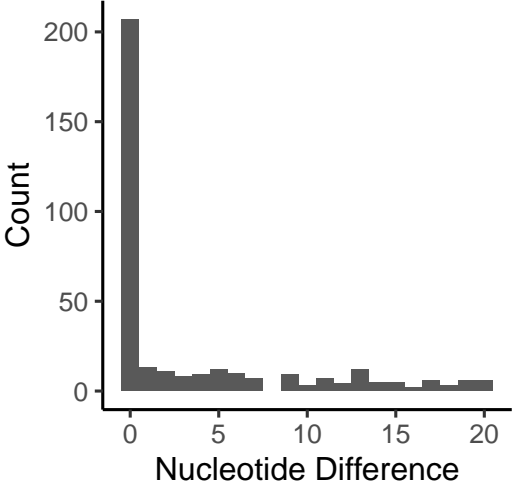
IGHV6–1\*01\_02

405 sequences assigned  
231 (57%) exact matches, in which:  
230 unique CDR3  
6 unique J



IGHV7–4–1\*02

391 sequences assigned  
207 (52.9%) exact matches, in which:  
206 unique CDR3  
6 unique J







Warning – no inferred sequences found.