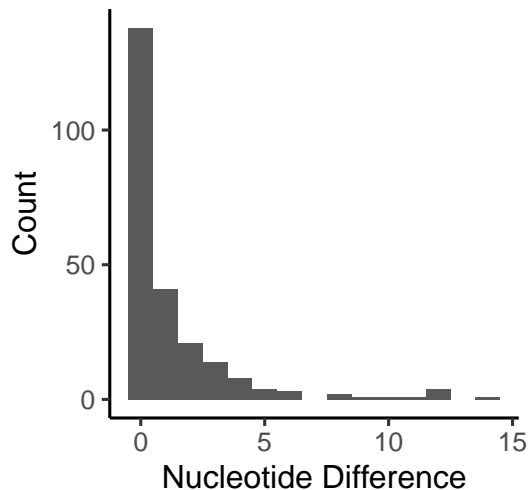


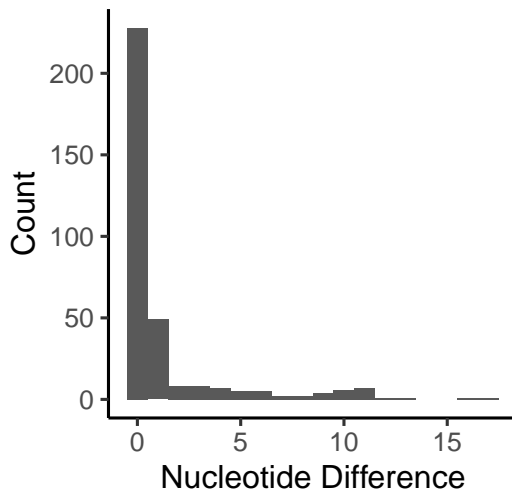
### IGHV1-2\*04

239 sequences assigned  
138 (57.7%) exact matches, in which:  
126 unique CDR3  
6 unique J



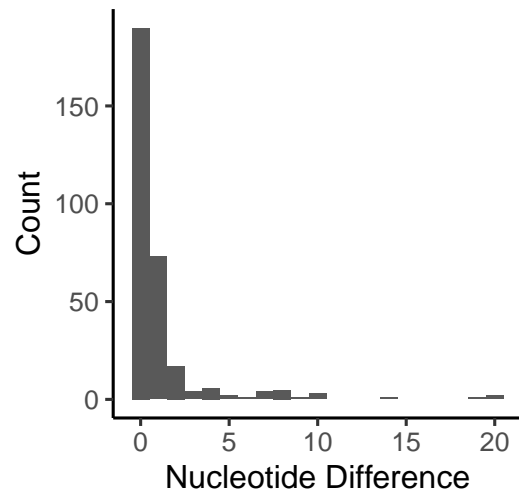
### IGHV1-8\*01

337 sequences assigned  
228 (67.7%) exact matches, in which:  
213 unique CDR3  
7 unique J



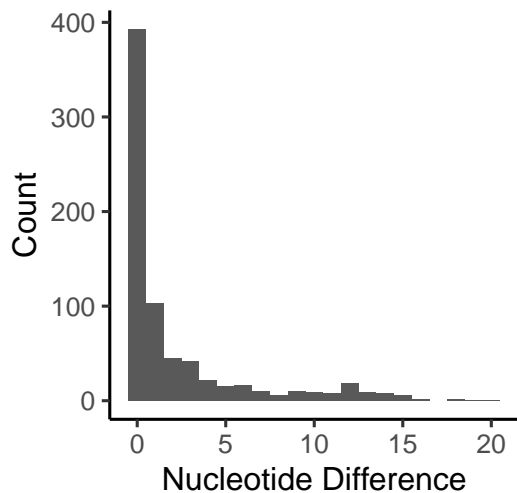
### IGHV1-24\*01

313 sequences assigned  
190 (60.7%) exact matches, in which:  
170 unique CDR3  
7 unique J



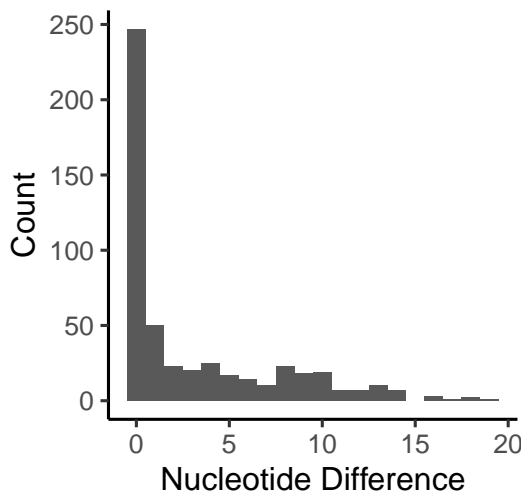
### IGHV1-2\*06

728 sequences assigned  
393 (54%) exact matches, in which:  
354 unique CDR3  
7 unique J



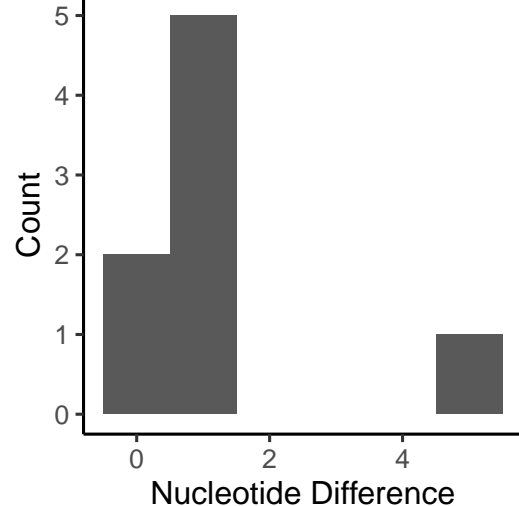
### IGHV1-18\*01

504 sequences assigned  
247 (49%) exact matches, in which:  
231 unique CDR3  
7 unique J



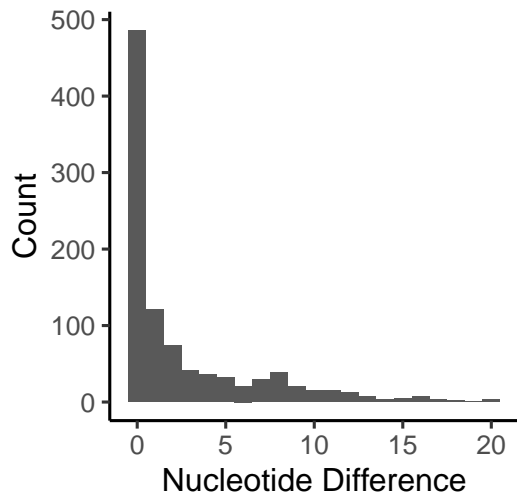
### IGHV1-38-4\*01

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



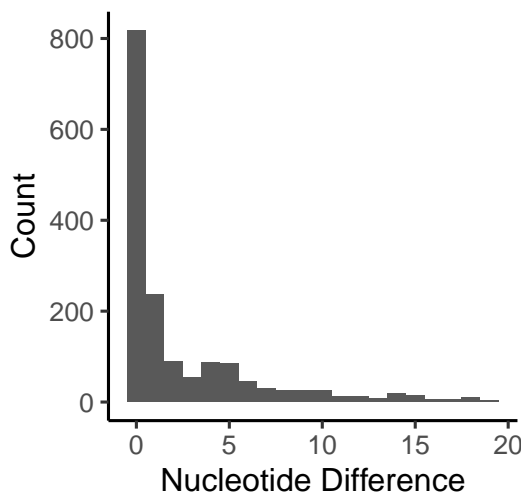
### IGHV1-3\*01

978 sequences assigned  
486 (49.7%) exact matches, in which:  
439 unique CDR3  
7 unique J



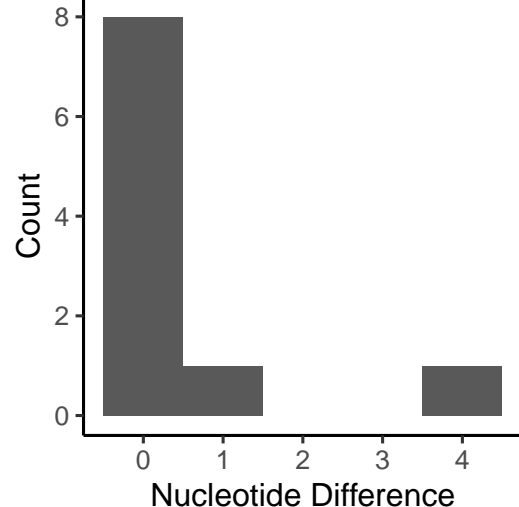
### IGHV1-18\*04

1614 sequences assigned  
818 (50.7%) exact matches, in which:  
735 unique CDR3  
7 unique J



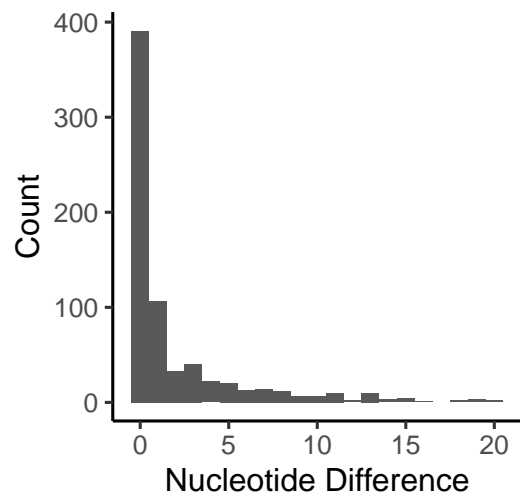
### IGHV1-45\*02

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



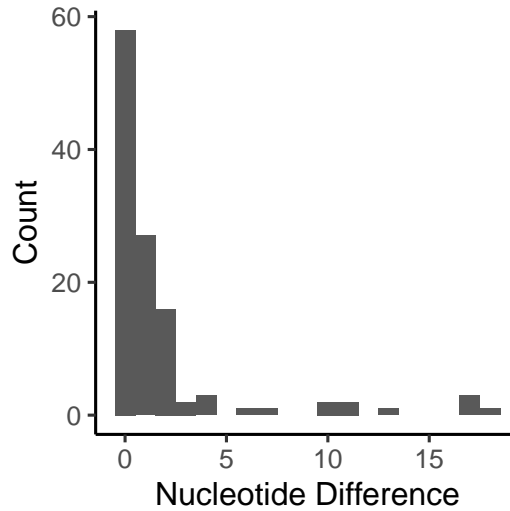
### IGHV1-46\*01

706 sequences assigned  
391 (55.4%) exact matches, in which:  
357 unique CDR3  
7 unique J



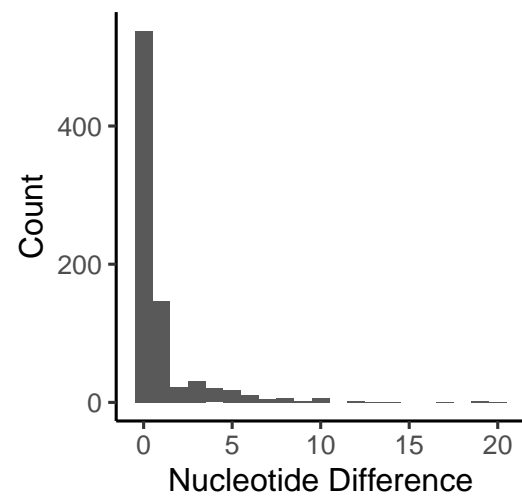
### IGHV1-58\*02

117 sequences assigned  
58 (49.6%) exact matches, in which:  
50 unique CDR3  
5 unique J



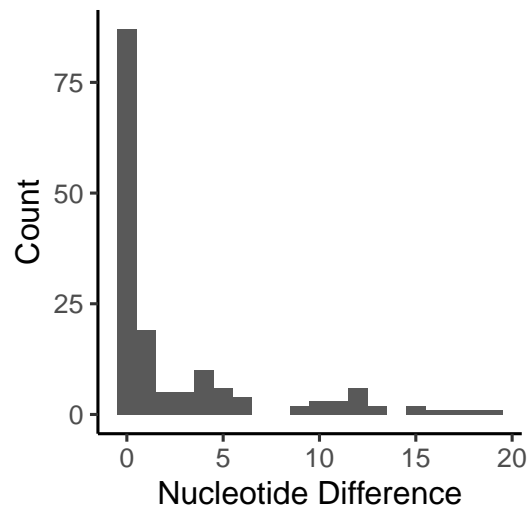
### IGHV1-69\*13

816 sequences assigned  
538 (65.9%) exact matches, in which:  
469 unique CDR3  
7 unique J



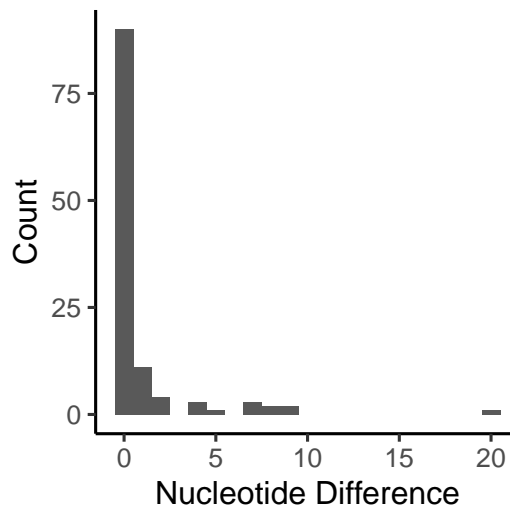
### IGHV1-46\*03

159 sequences assigned  
87 (54.7%) exact matches, in which:  
78 unique CDR3  
5 unique J



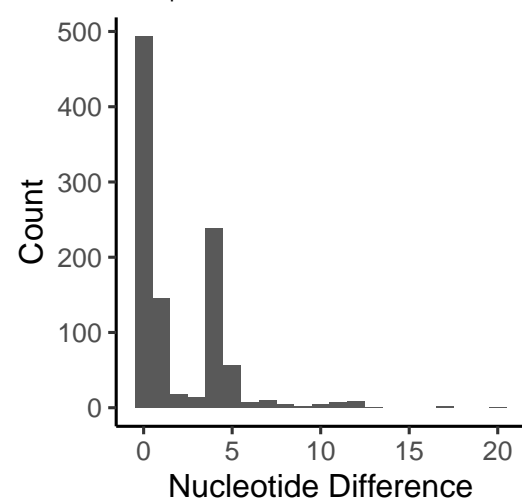
### IGHV1-69-2\*01

117 sequences assigned  
90 (76.9%) exact matches, in which:  
84 unique CDR3  
7 unique J



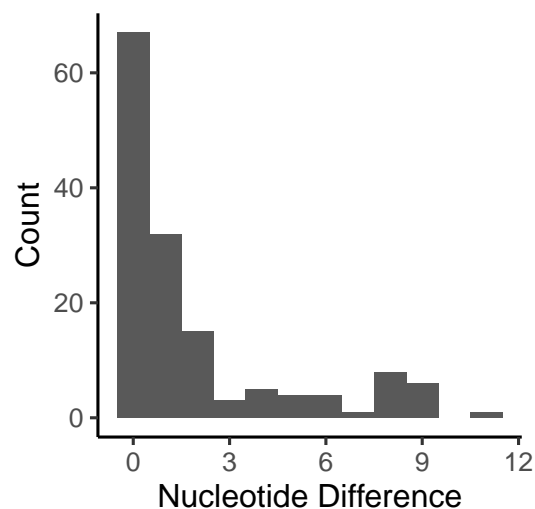
### IGHV1-69\*14\_G163A

1016 sequences assigned  
494 (48.6%) exact matches, in which:  
418 unique CDR3  
7 unique J



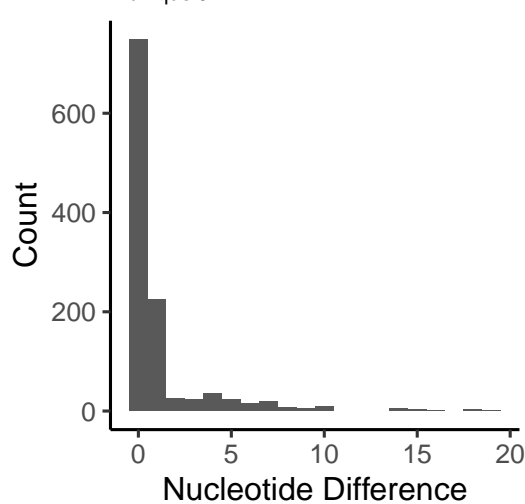
### IGHV1-58\*01

146 sequences assigned  
67 (45.9%) exact matches, in which:  
55 unique CDR3  
6 unique J



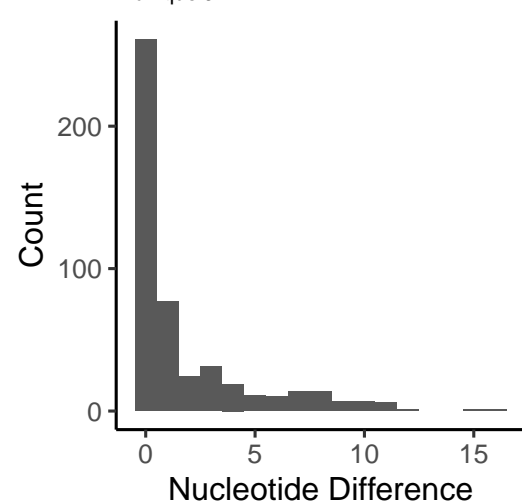
### IGHV1-69\*06

1160 sequences assigned  
749 (64.6%) exact matches, in which:  
650 unique CDR3  
7 unique J



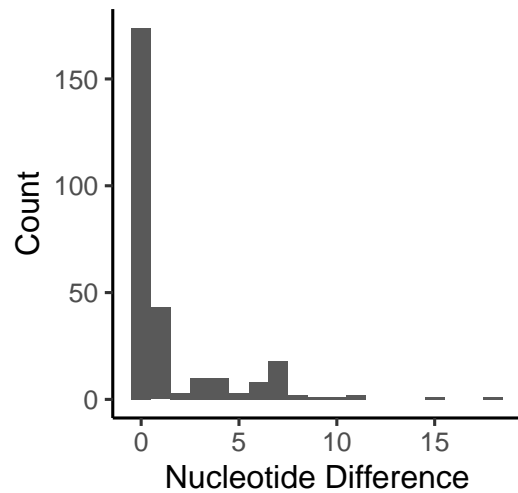
### IGHV2-5\*02

486 sequences assigned  
261 (53.7%) exact matches, in which:  
243 unique CDR3  
7 unique J



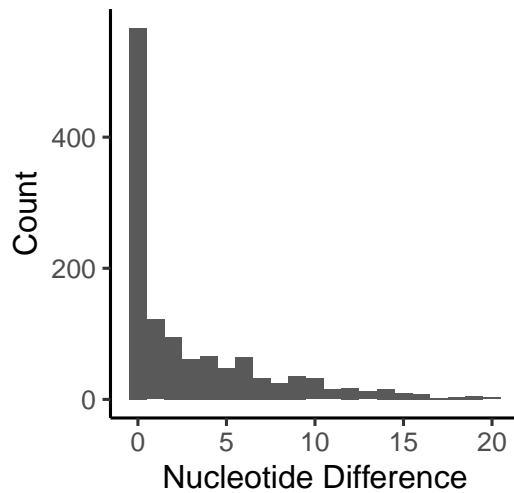
### IGHV2-26\*01

277 sequences assigned  
174 (62.8%) exact matches, in which:  
166 unique CDR3  
6 unique J



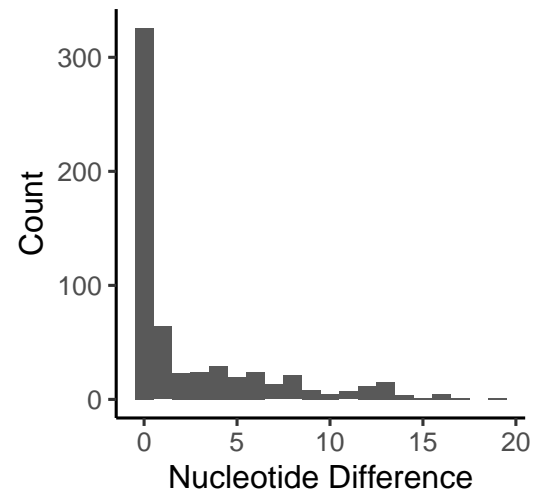
### IGHV3-7\*03

1272 sequences assigned  
567 (44.6%) exact matches, in which:  
540 unique CDR3  
7 unique J



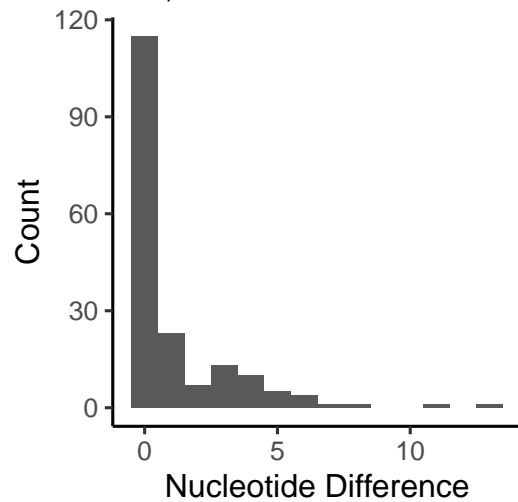
### IGHV3-11\*06

603 sequences assigned  
326 (54.1%) exact matches, in which:  
278 unique CDR3  
6 unique J



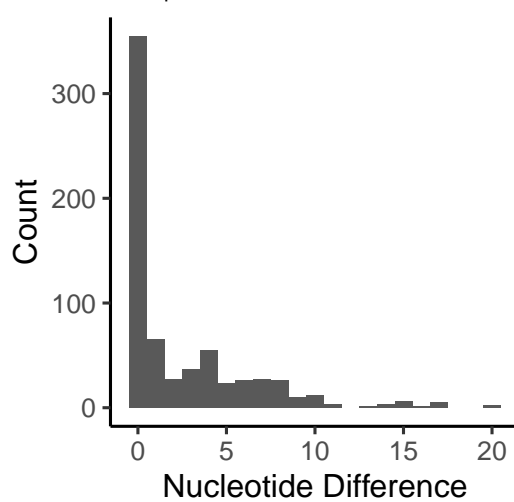
### IGHV2-70\*01

181 sequences assigned  
115 (63.5%) exact matches, in which:  
106 unique CDR3  
5 unique J



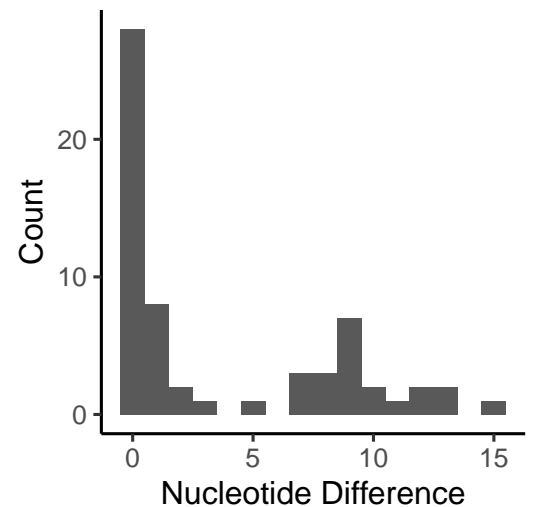
### IGHV3-9\*01\_C246T

685 sequences assigned  
355 (51.8%) exact matches, in which:  
327 unique CDR3  
7 unique J



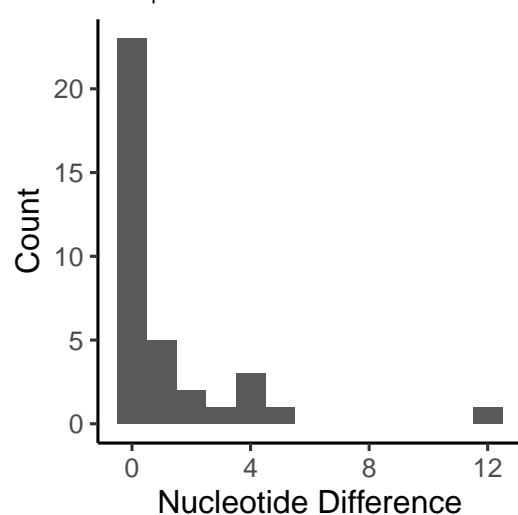
### IGHV3-13\*01

62 sequences assigned  
28 (45.2%) exact matches, in which:  
27 unique CDR3  
5 unique J



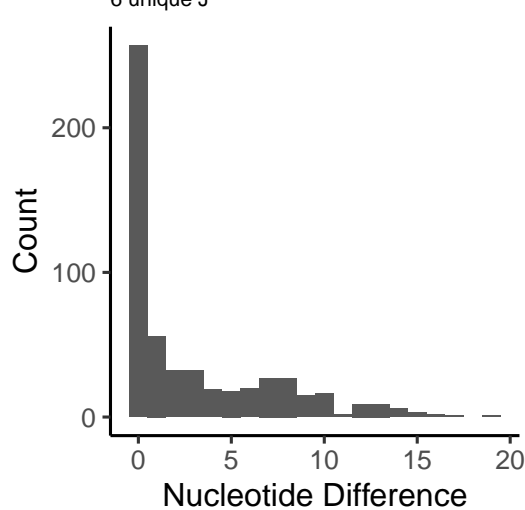
### IGHV2-70\*20

36 sequences assigned  
23 (63.9%) exact matches, in which:  
21 unique CDR3  
4 unique J



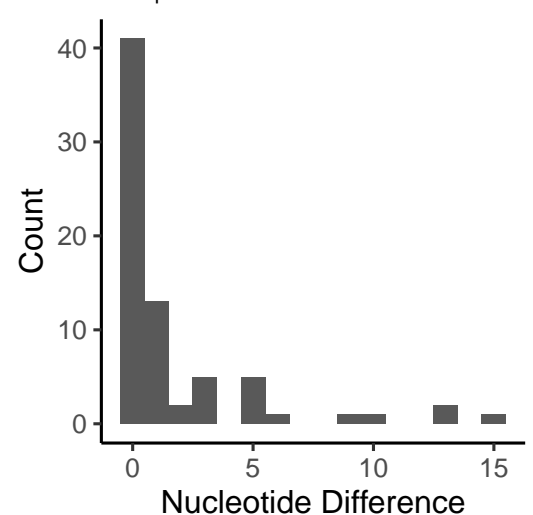
### IGHV3-11\*01

553 sequences assigned  
257 (46.5%) exact matches, in which:  
217 unique CDR3  
6 unique J



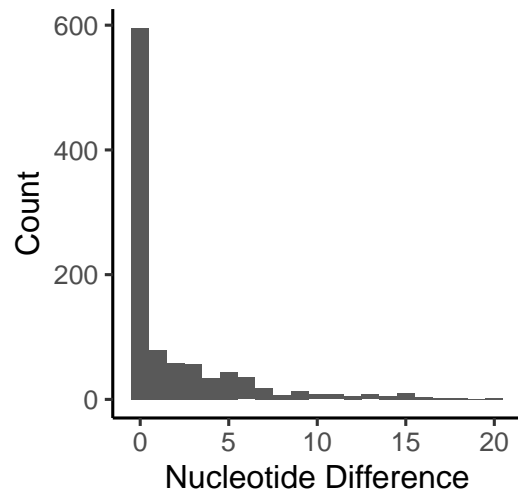
### IGHV3-13\*05

72 sequences assigned  
41 (56.9%) exact matches, in which:  
39 unique CDR3  
5 unique J



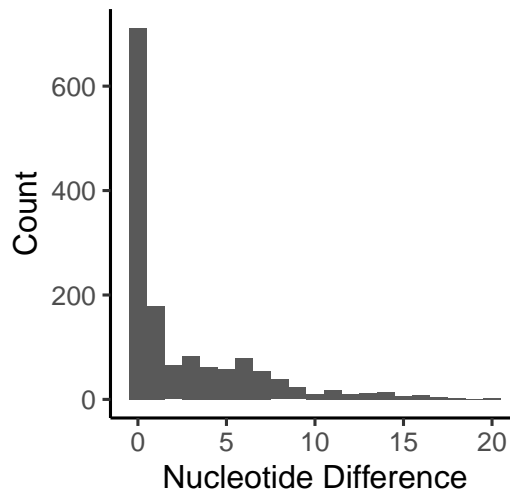
### IGHV3-15\*01

1003 sequences assigned  
596 (59.4%) exact matches, in which:  
563 unique CDR3  
7 unique J



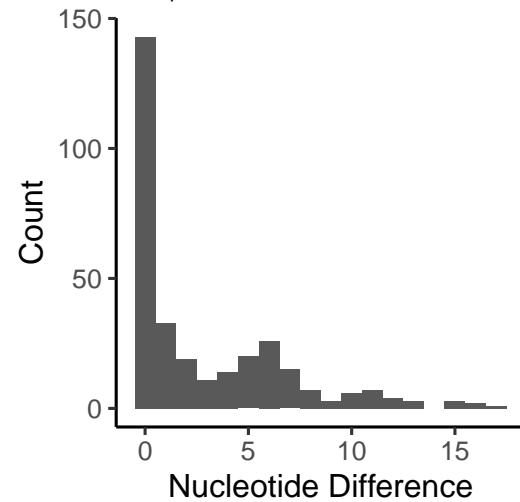
### IGHV3-33\*01

1454 sequences assigned  
712 (49%) exact matches, in which:  
602 unique CDR3  
7 unique J



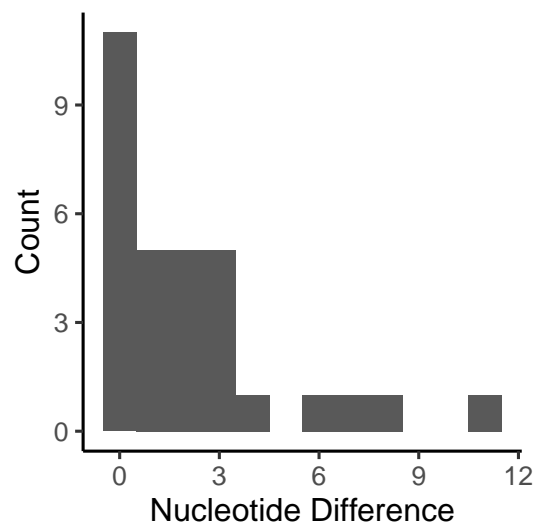
### IGHV3-48\*01

318 sequences assigned  
143 (45%) exact matches, in which:  
133 unique CDR3  
6 unique J



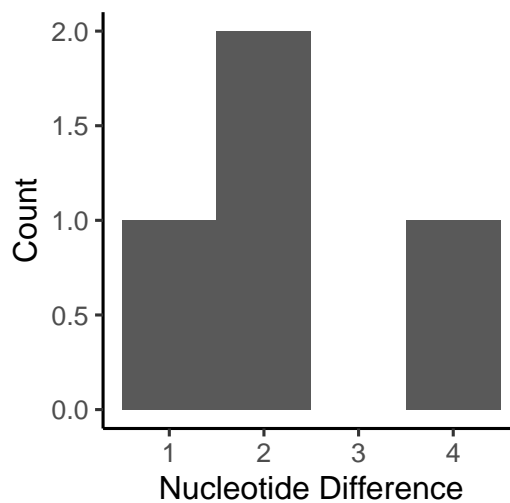
### IGHV3-20\*01

31 sequences assigned  
11 (35.5%) exact matches, in which:  
10 unique CDR3  
3 unique J



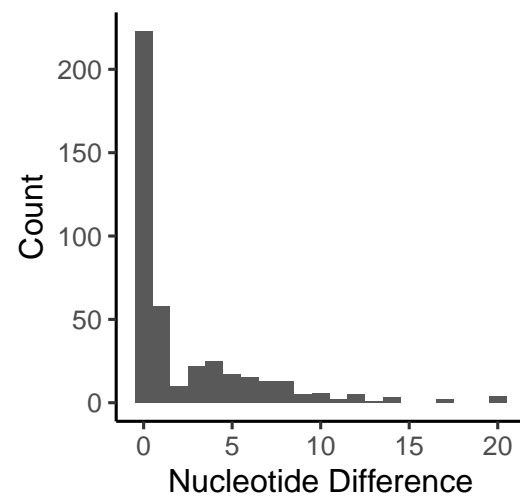
### IGHV3-38-3\*01

4 sequences assigned  
No exact matches.



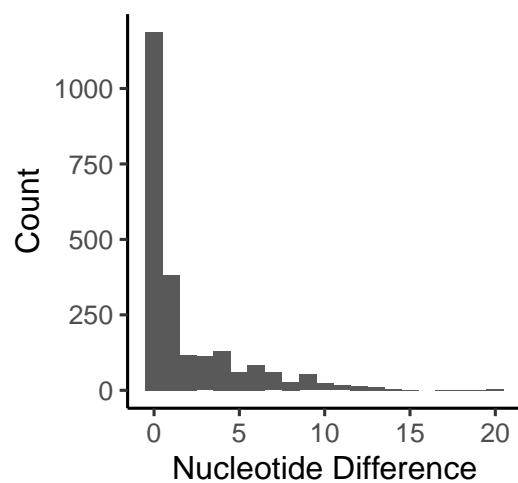
### IGHV3-48\*02

430 sequences assigned  
223 (51.9%) exact matches, in which:  
209 unique CDR3  
6 unique J



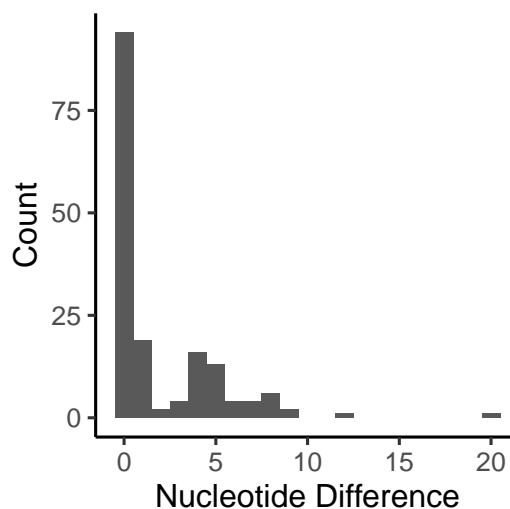
### IGHV3-21\*01

2288 sequences assigned  
1187 (51.9%) exact matches, in which:  
1104 unique CDR3  
7 unique J



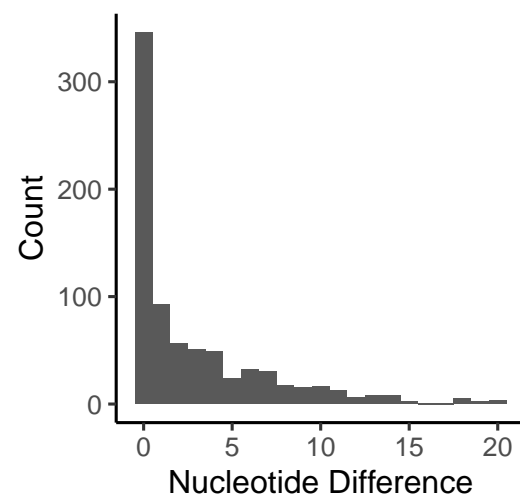
### IGHV3-43\*01

166 sequences assigned  
94 (56.6%) exact matches, in which:  
90 unique CDR3  
7 unique J



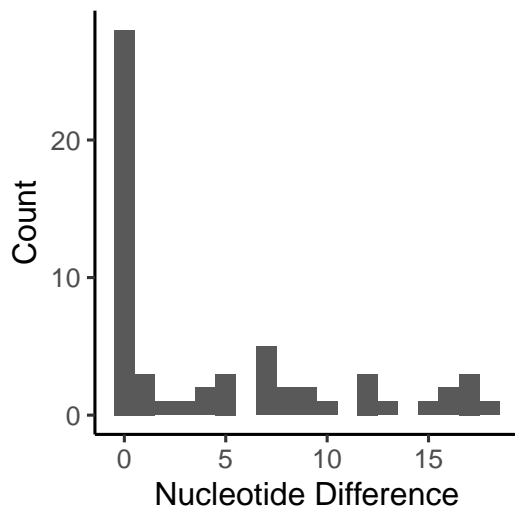
### IGHV3-48\*03

784 sequences assigned  
346 (44.1%) exact matches, in which:  
328 unique CDR3  
7 unique J



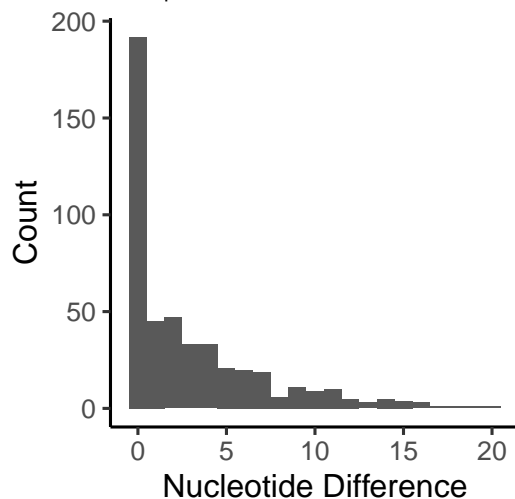
### IGHV3-49\*03

59 sequences assigned  
28 (47.5%) exact matches, in which:  
26 unique CDR3  
5 unique J



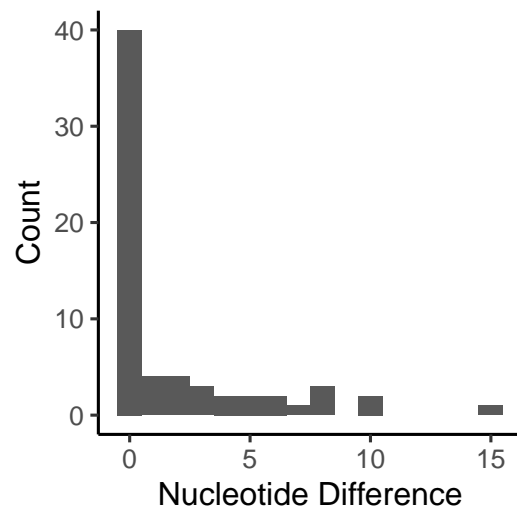
### IGHV3-53\*01

474 sequences assigned  
192 (40.5%) exact matches, in which:  
176 unique CDR3  
6 unique J



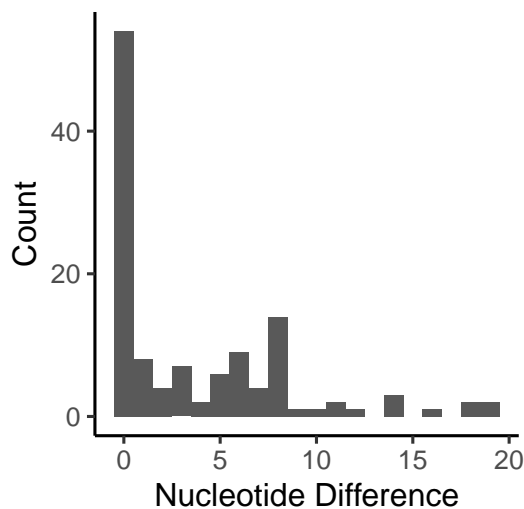
### IGHV3-64\*07

65 sequences assigned  
40 (61.5%) exact matches, in which:  
39 unique CDR3  
6 unique J



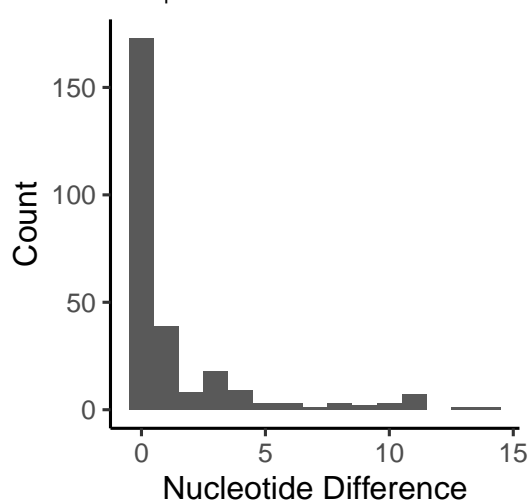
### IGHV3-49\*04

124 sequences assigned  
54 (43.5%) exact matches, in which:  
53 unique CDR3  
5 unique J



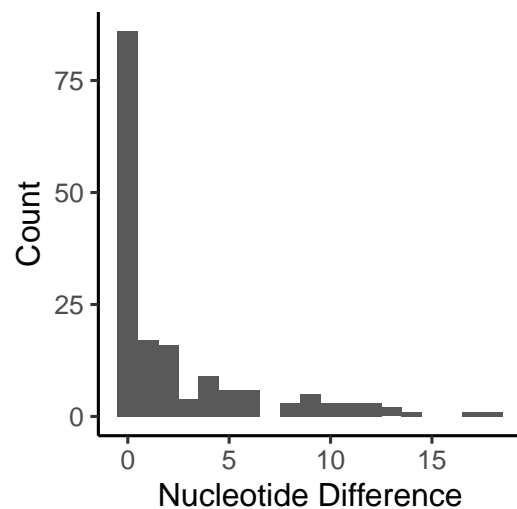
### IGHV3-53\*04

271 sequences assigned  
173 (63.8%) exact matches, in which:  
156 unique CDR3  
7 unique J



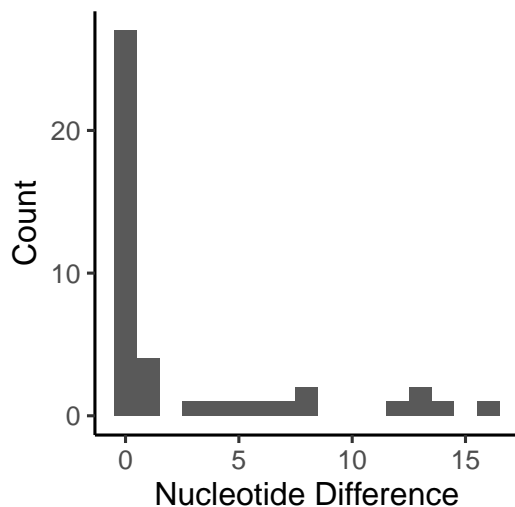
### IGHV3-66\*02

166 sequences assigned  
86 (51.8%) exact matches, in which:  
78 unique CDR3  
6 unique J



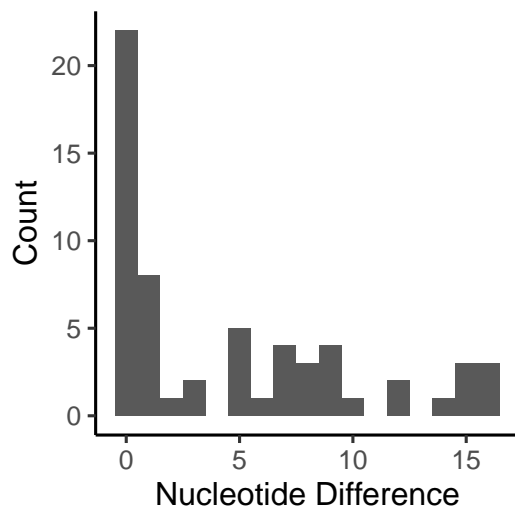
### IGHV3-49\*05

43 sequences assigned  
27 (62.8%) exact matches, in which:  
25 unique CDR3  
6 unique J



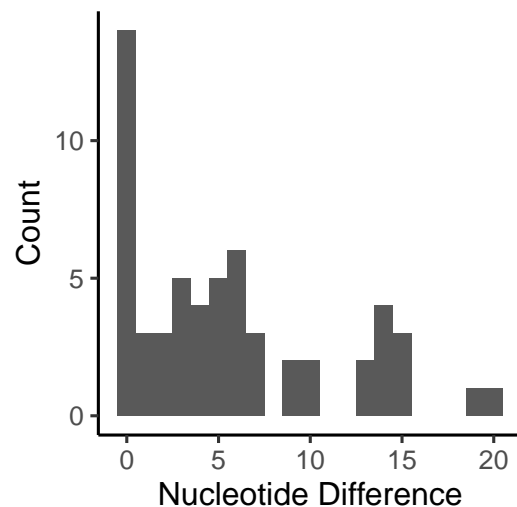
### IGHV3-64\*01

61 sequences assigned  
22 (36.1%) exact matches, in which:  
22 unique CDR3  
4 unique J



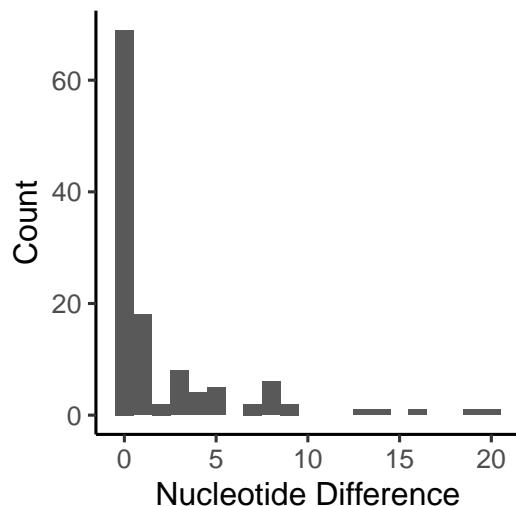
### IGHV3-72\*01

58 sequences assigned  
14 (24.1%) exact matches, in which:  
12 unique CDR3  
4 unique J



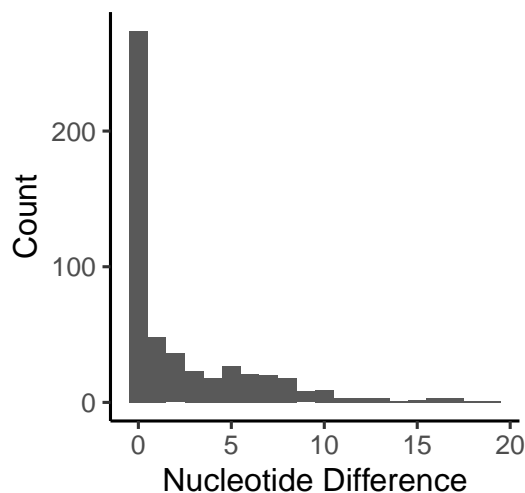
### IGHV3-73\*02

122 sequences assigned  
69 (56.6%) exact matches, in which:  
64 unique CDR3  
7 unique J



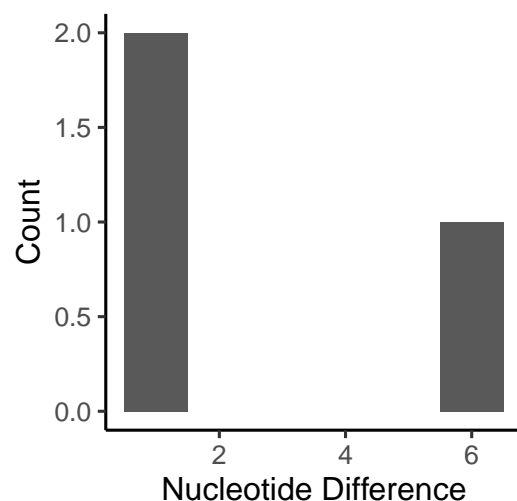
### IGHV3-64D\*06

524 sequences assigned  
274 (52.3%) exact matches, in which:  
257 unique CDR3  
6 unique J



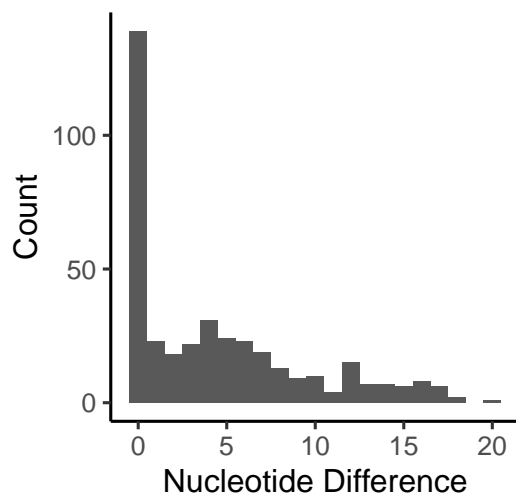
### IGHV4-28\*06

3 sequences assigned  
No exact matches.



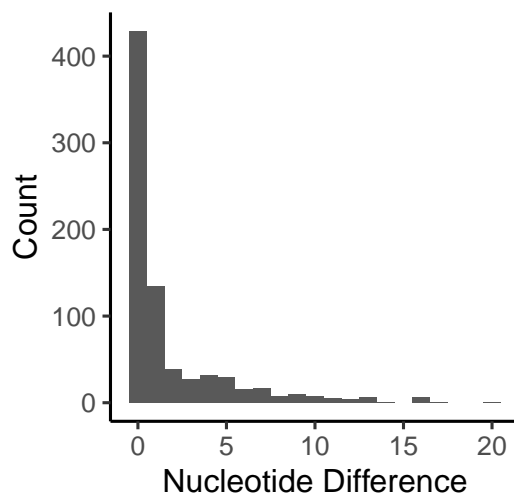
### IGHV3-74\*01

391 sequences assigned  
139 (35.5%) exact matches, in which:  
134 unique CDR3  
7 unique J



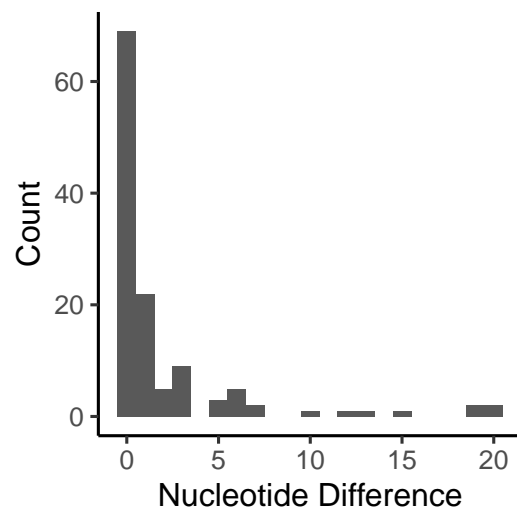
### IGHV4-4\*02

776 sequences assigned  
429 (55.3%) exact matches, in which:  
403 unique CDR3  
7 unique J



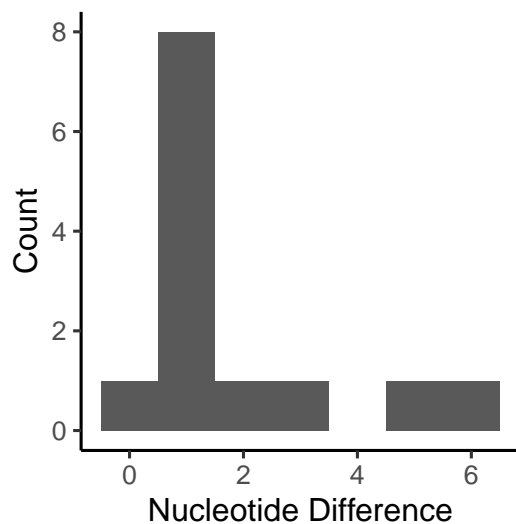
### IGHV4-30-2\*01

126 sequences assigned  
69 (54.8%) exact matches, in which:  
61 unique CDR3  
5 unique J



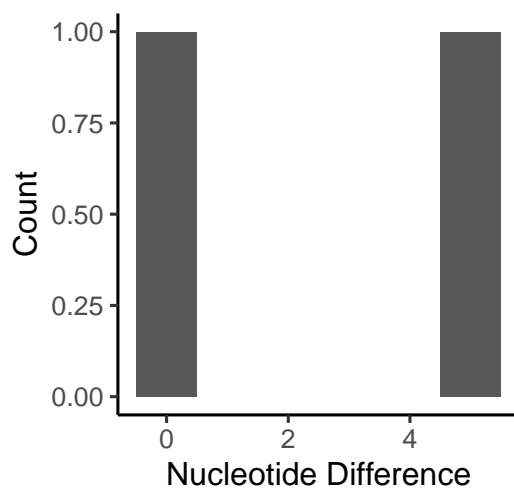
### IGHV3-43D\*04

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



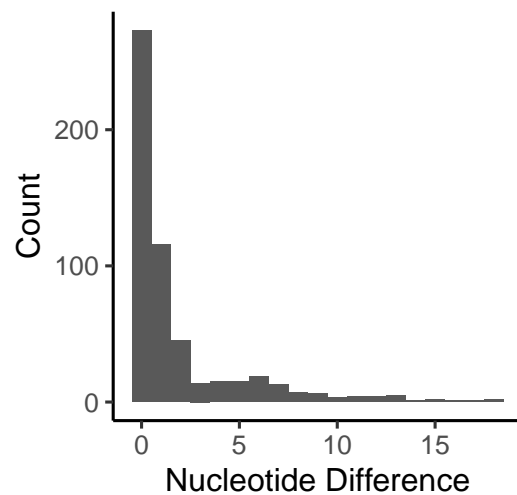
### IGHV4-28\*01

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



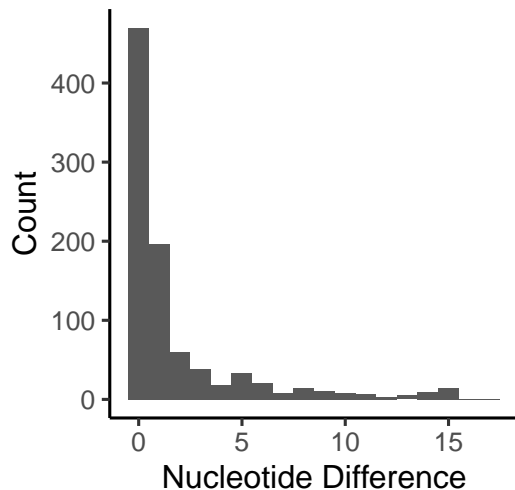
### IGHV4-31\*03

555 sequences assigned  
273 (49.2%) exact matches, in which:  
241 unique CDR3  
6 unique J



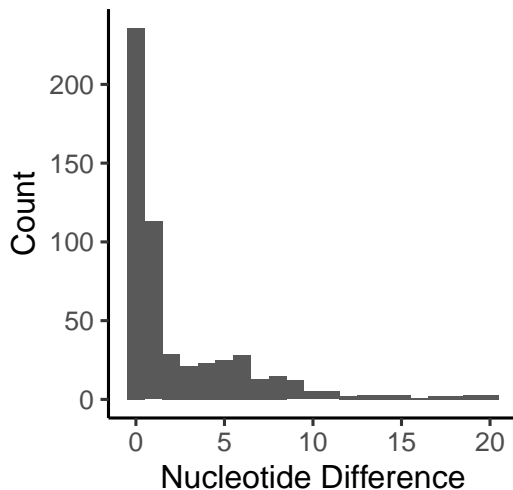
### IGHV4-34\*01

919 sequences assigned  
470 (51.1%) exact matches, in which:  
421 unique CDR3  
7 unique J



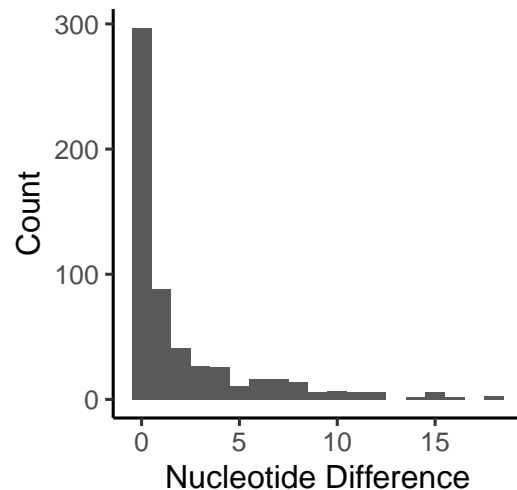
### IGHV4-39\*07

552 sequences assigned  
236 (42.8%) exact matches, in which:  
216 unique CDR3  
7 unique J



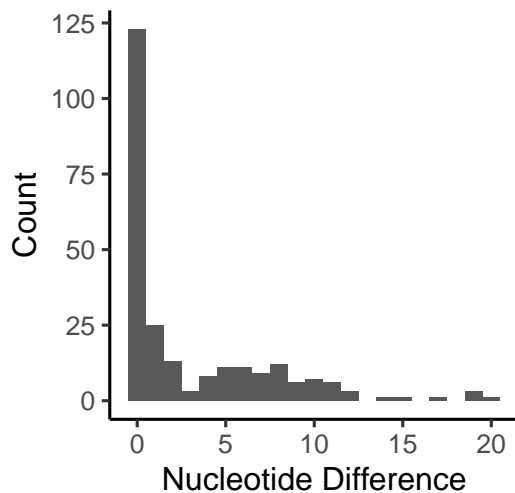
### IGHV4-61\*02

576 sequences assigned  
297 (51.6%) exact matches, in which:  
281 unique CDR3  
6 unique J



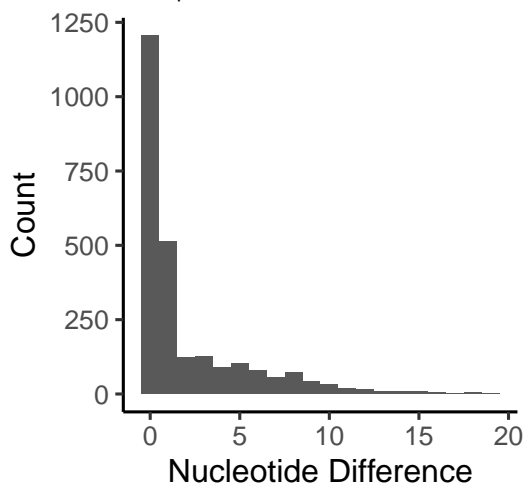
### IGHV4-38-2\*02\_A70G

244 sequences assigned  
123 (50.4%) exact matches, in which:  
114 unique CDR3  
6 unique J



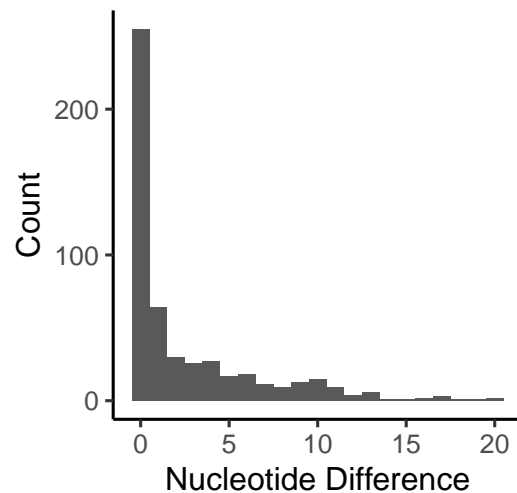
### IGHV4-59\*01

2515 sequences assigned  
1205 (47.9%) exact matches, in which:  
1063 unique CDR3  
7 unique J



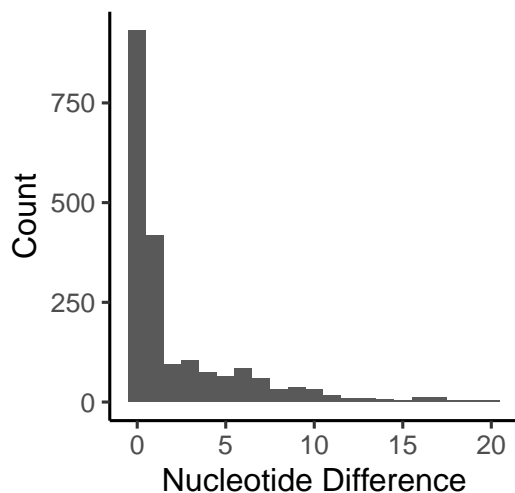
### IGHV4-61\*10\_C93T

519 sequences assigned  
255 (49.1%) exact matches, in which:  
238 unique CDR3  
6 unique J



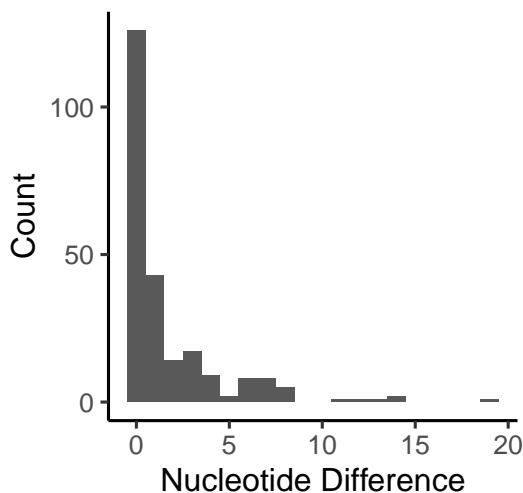
### IGHV4-39\*01

2021 sequences assigned  
932 (46.1%) exact matches, in which:  
871 unique CDR3  
7 unique J



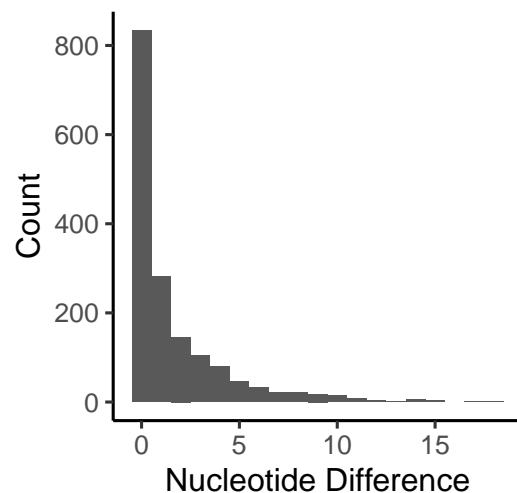
### IGHV4-61\*01

240 sequences assigned  
126 (52.5%) exact matches, in which:  
110 unique CDR3  
6 unique J



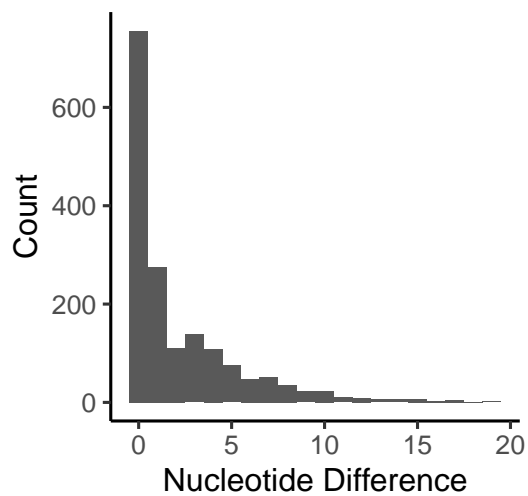
### IGHV5-10-1\*03

1626 sequences assigned  
834 (51.3%) exact matches, in which:  
774 unique CDR3  
7 unique J



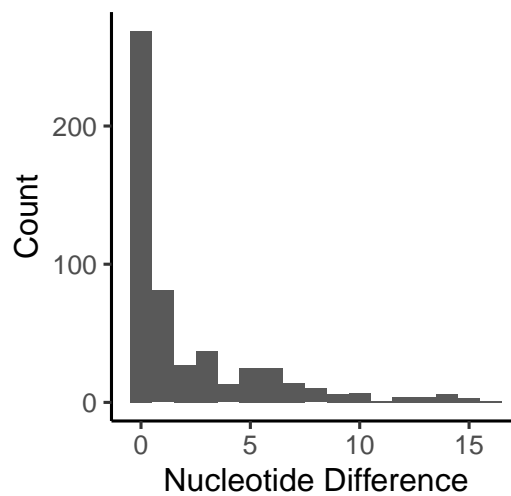
## IGHV5-51\*01

1692 sequences assigned  
756 (44.7%) exact matches, in which:  
696 unique CDR3  
7 unique J



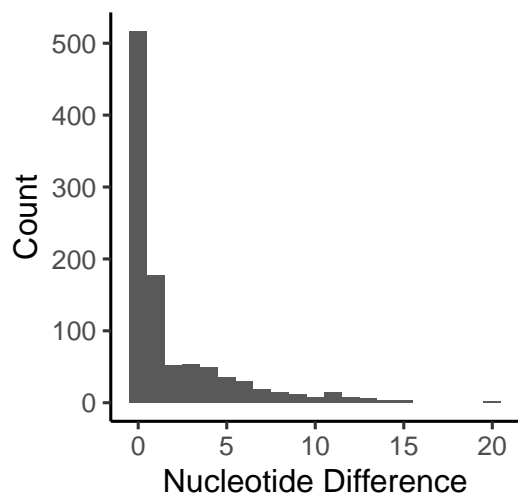
## IGHV7-4-1\*02

533 sequences assigned  
269 (50.5%) exact matches, in which:  
250 unique CDR3  
7 unique J



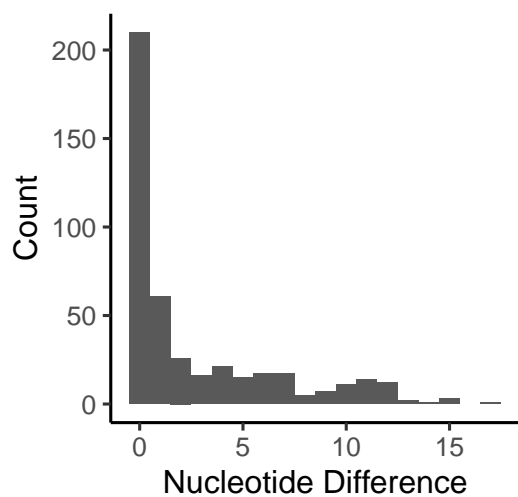
## IGHV5-51\*01\_C45G

1009 sequences assigned  
517 (51.2%) exact matches, in which:  
479 unique CDR3  
7 unique J



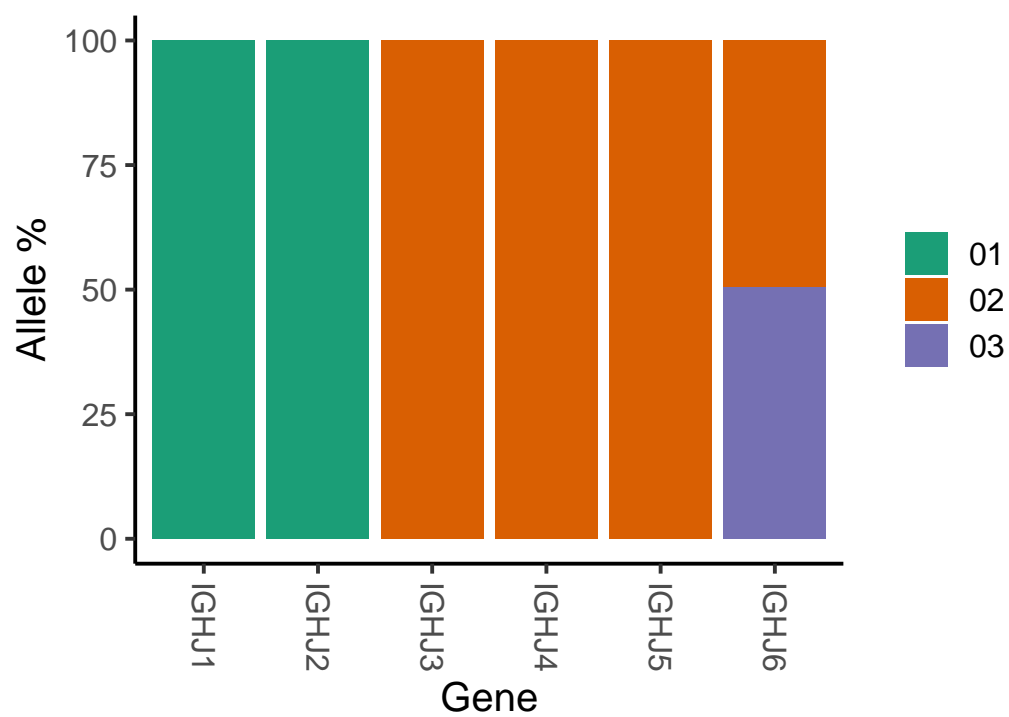
## IGHV6-1\*01

439 sequences assigned  
210 (47.8%) exact matches, in which:  
197 unique CDR3  
7 unique J

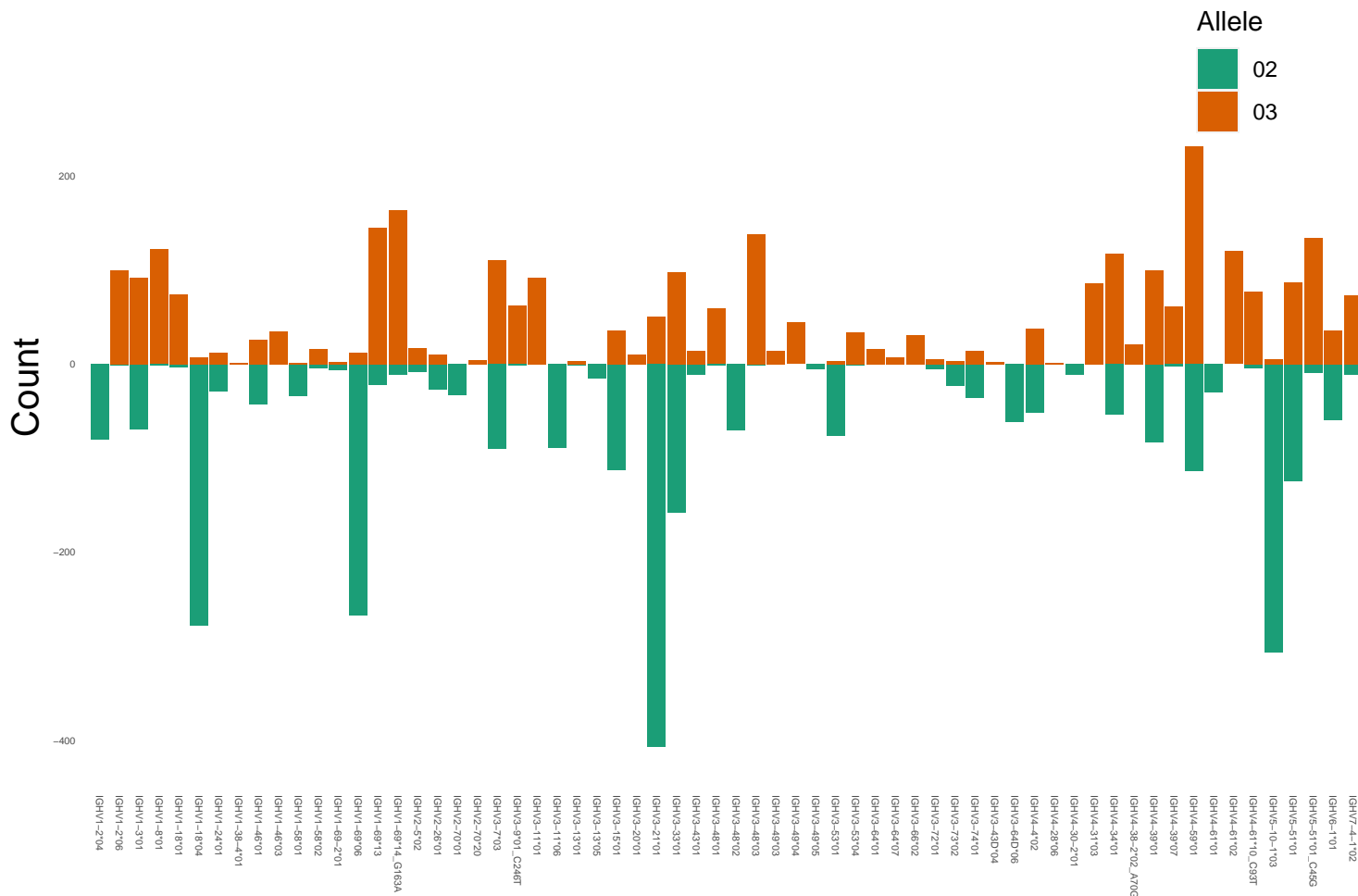




Allele Usage



Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.