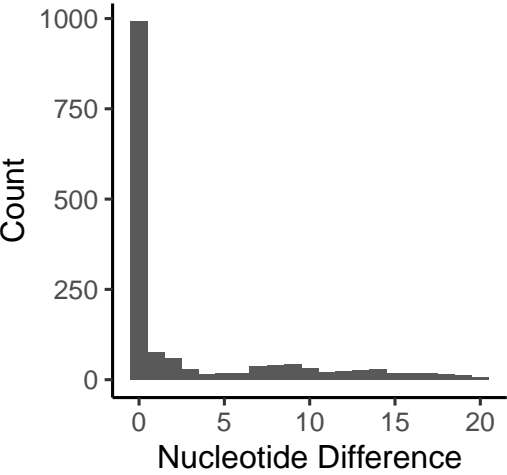


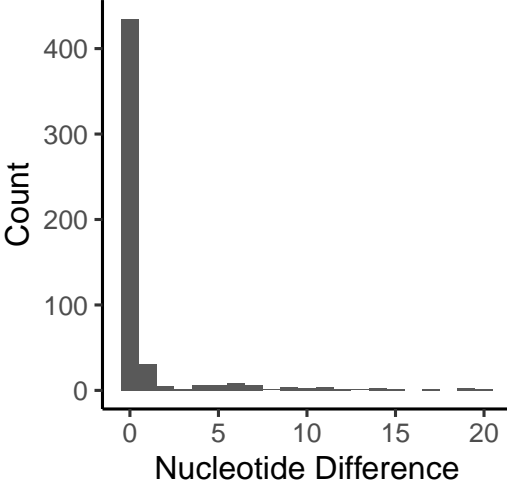
IGHV1-2\*02

1754 sequences assigned  
992 (56.6%) exact matches, in which:  
987 unique CDR3  
6 unique J



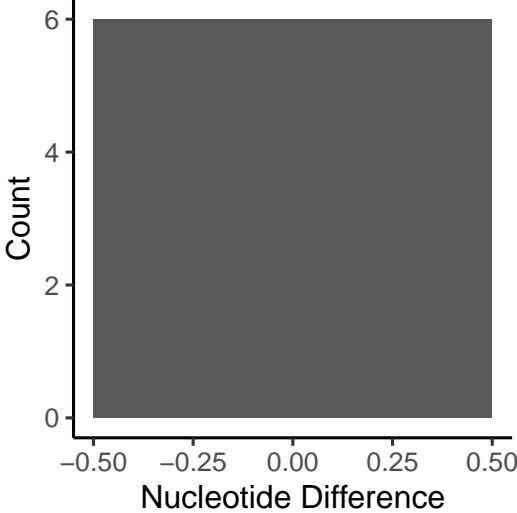
IGHV1-8\*02

542 sequences assigned  
435 (80.3%) exact matches, in which:  
435 unique CDR3  
6 unique J



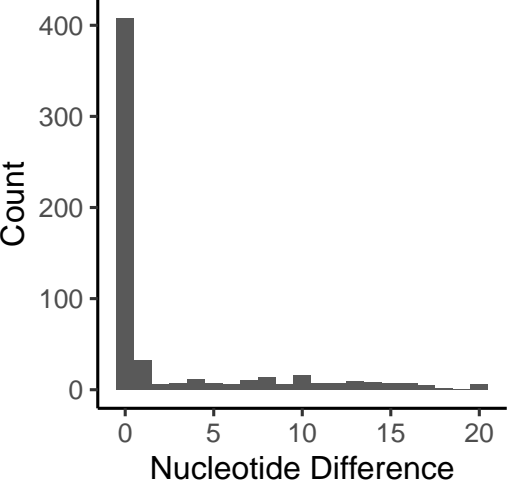
IGHV1-45\*02

9 sequences assigned  
6 (66.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



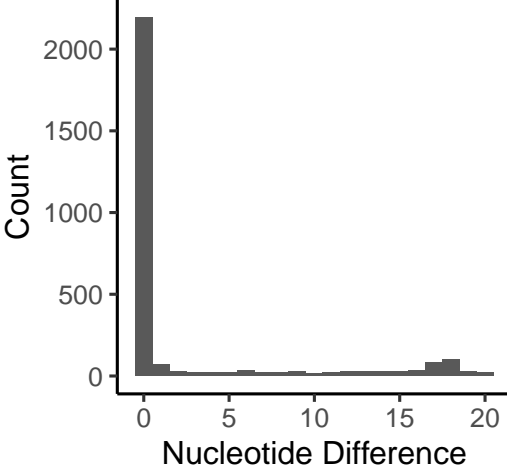
IGHV1-3\*01\_05

652 sequences assigned  
408 (62.6%) exact matches, in which:  
405 unique CDR3  
6 unique J



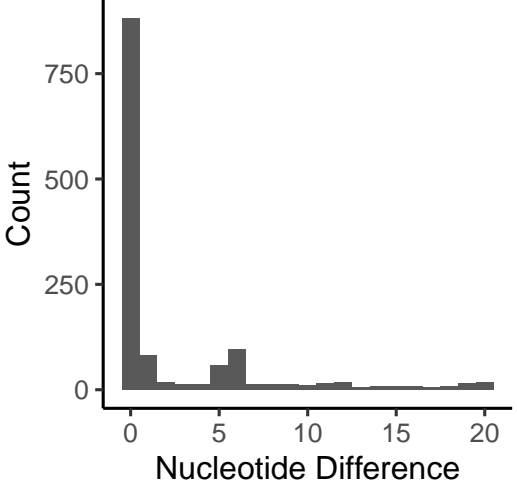
IGHV1-18\*01

3061 sequences assigned  
2192 (71.6%) exact matches, in which:  
2181 unique CDR3  
6 unique J



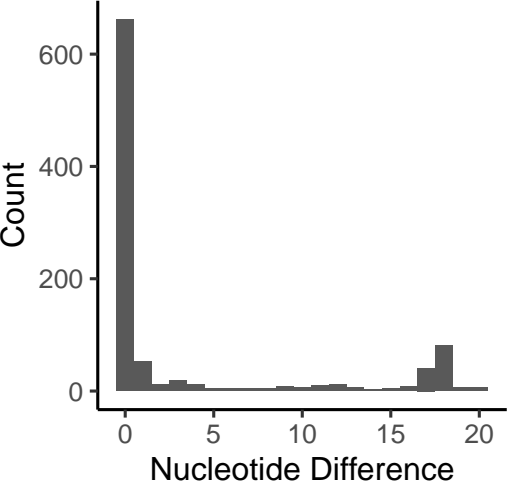
IGHV1-46\*01

1421 sequences assigned  
882 (62.1%) exact matches, in which:  
880 unique CDR3  
6 unique J



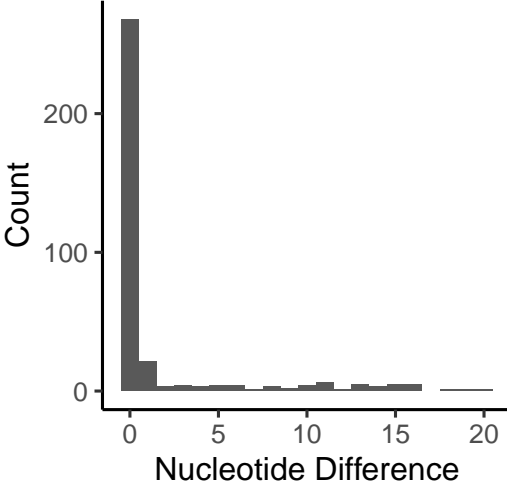
IGHV1-8\*01

1012 sequences assigned  
662 (65.4%) exact matches, in which:  
659 unique CDR3  
6 unique J



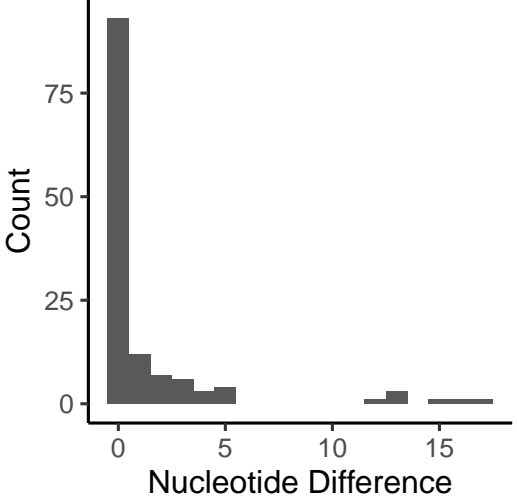
IGHV1-24\*01

383 sequences assigned  
268 (70%) exact matches, in which:  
266 unique CDR3  
6 unique J



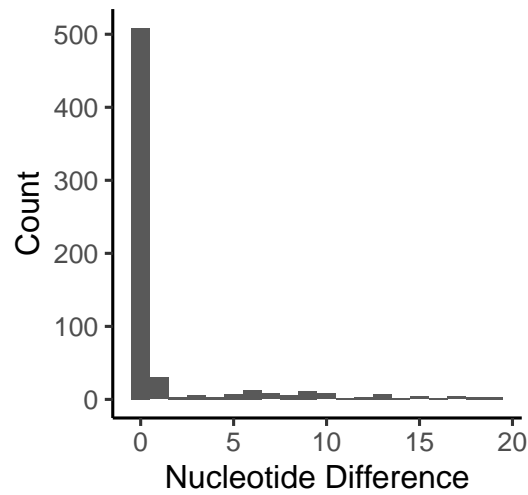
IGHV1-58\*02

132 sequences assigned  
93 (70.5%) exact matches, in which:  
92 unique CDR3  
5 unique J



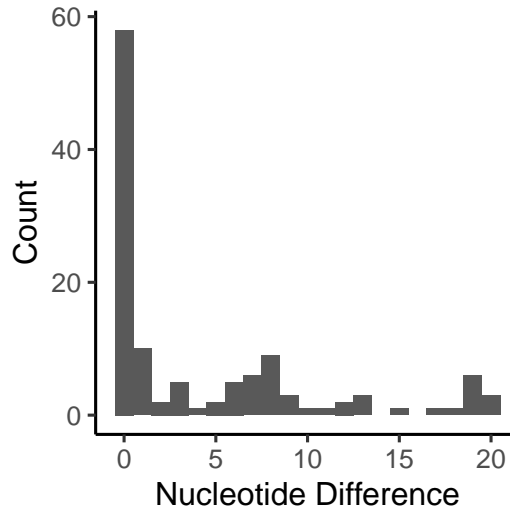
### IGHV1–69\*10

676 sequences assigned  
509 (75.3%) exact matches, in which:  
507 unique CDR3  
6 unique J



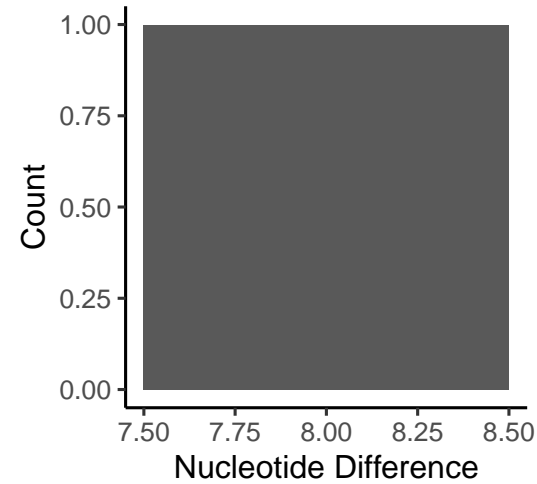
### IGHV2–5\*01

136 sequences assigned  
58 (42.6%) exact matches, in which:  
56 unique CDR3  
5 unique J



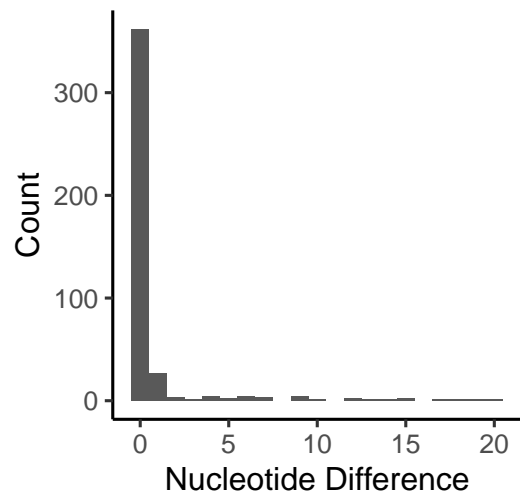
### IGHV2–70\*12

1 sequences assigned  
No exact matches.



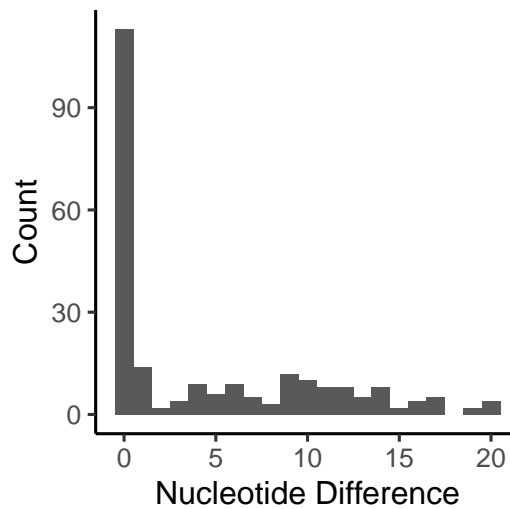
### IGHV1–69\*04\_09\_G112A

463 sequences assigned  
362 (78.2%) exact matches, in which:  
361 unique CDR3  
6 unique J



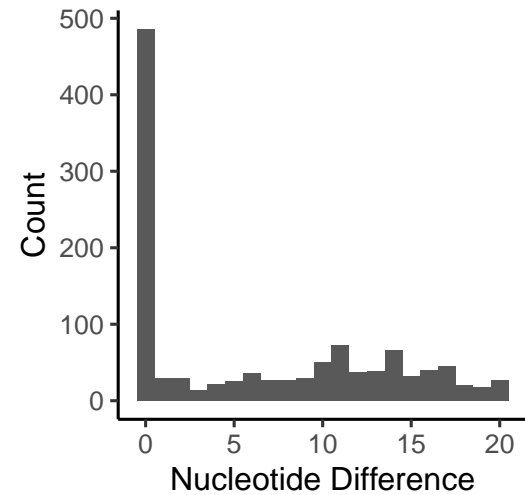
### IGHV2–5\*02

256 sequences assigned  
113 (44.1%) exact matches, in which:  
113 unique CDR3  
6 unique J



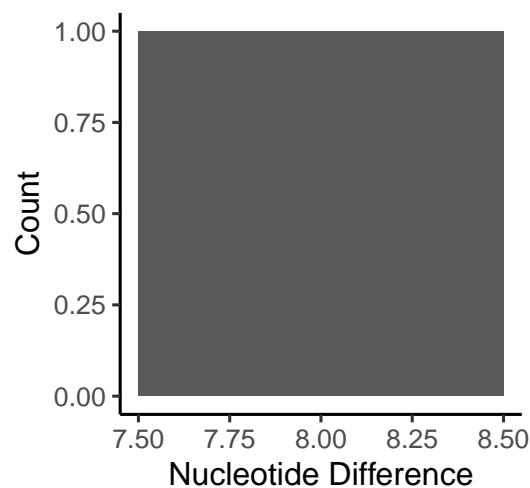
### IGHV3–7\*01

1334 sequences assigned  
486 (36.4%) exact matches, in which:  
399 unique CDR3  
6 unique J



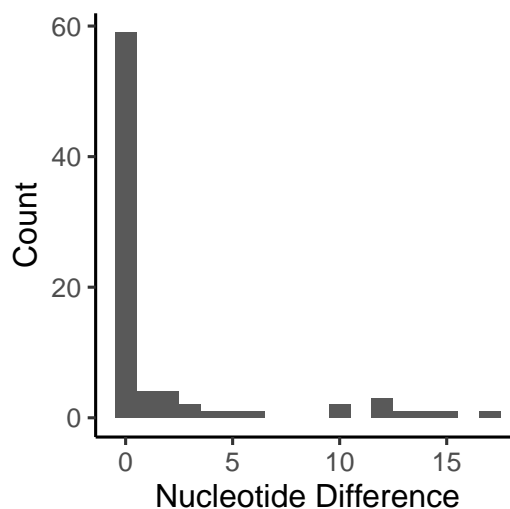
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



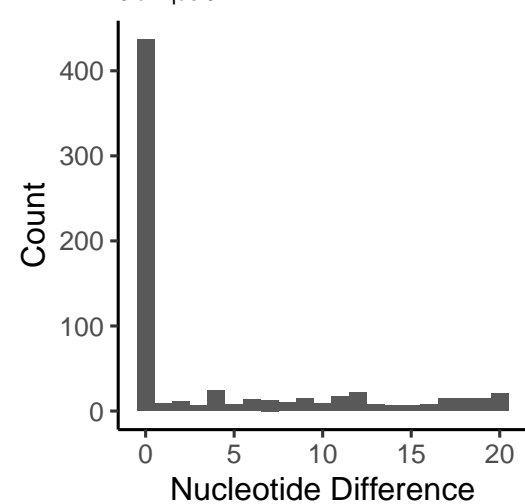
### IGHV2–26\*01

89 sequences assigned  
59 (66.3%) exact matches, in which:  
59 unique CDR3  
6 unique J



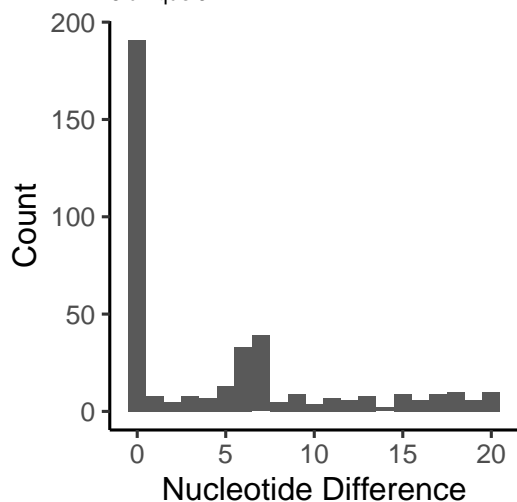
### IGHV3–9\*01

805 sequences assigned  
437 (54.3%) exact matches, in which:  
362 unique CDR3  
6 unique J



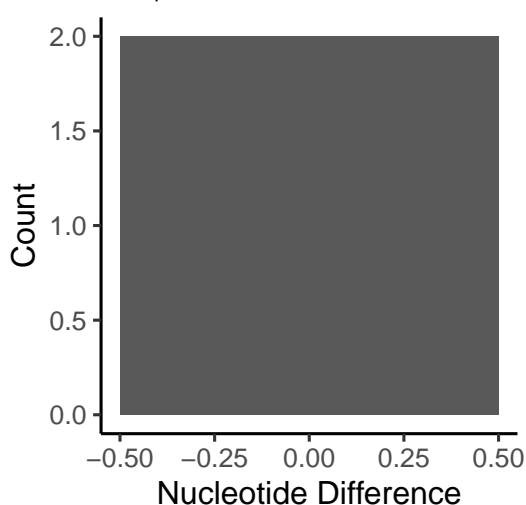
### IGHV3-11\*01

484 sequences assigned  
191 (39.5%) exact matches, in which:  
156 unique CDR3  
6 unique J



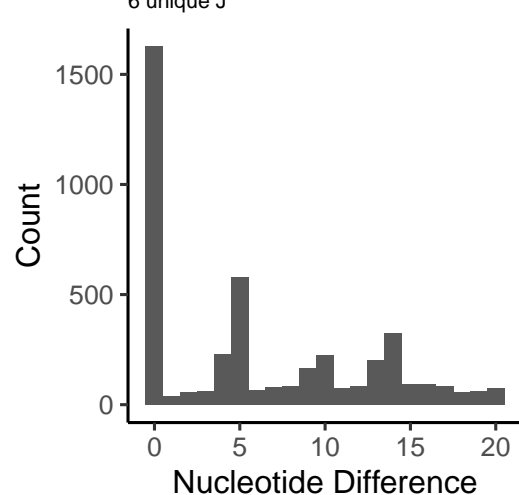
### IGHV3-19\*01

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



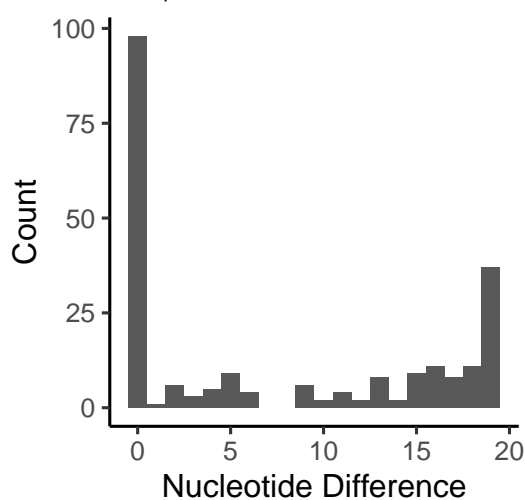
### IGHV3-23\*01\_04

5231 sequences assigned  
1627 (31.1%) exact matches, in which:  
1366 unique CDR3  
6 unique J



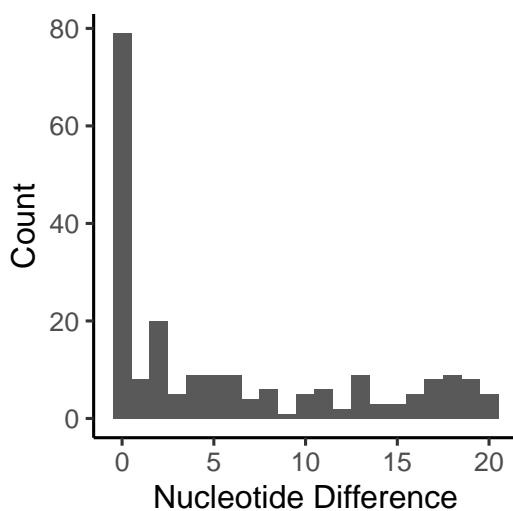
### IGHV3-13\*01

261 sequences assigned  
98 (37.5%) exact matches, in which:  
80 unique CDR3  
5 unique J



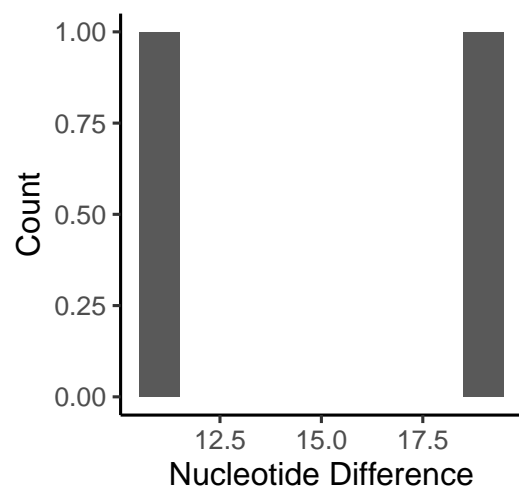
### IGHV3-20\*03\_04\_A104G

273 sequences assigned  
79 (28.9%) exact matches, in which:  
65 unique CDR3  
4 unique J



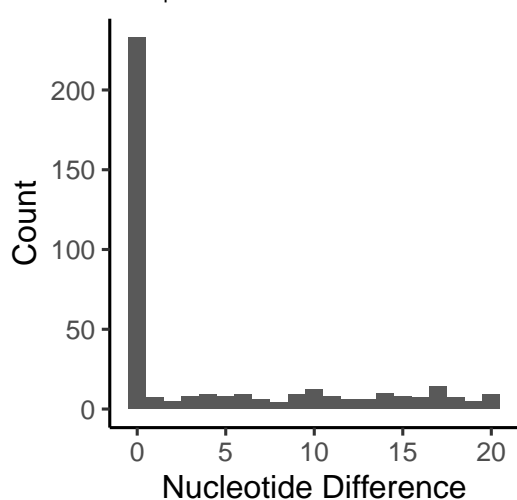
### IGHV3-30-5\*01

20 sequences assigned  
No exact matches.



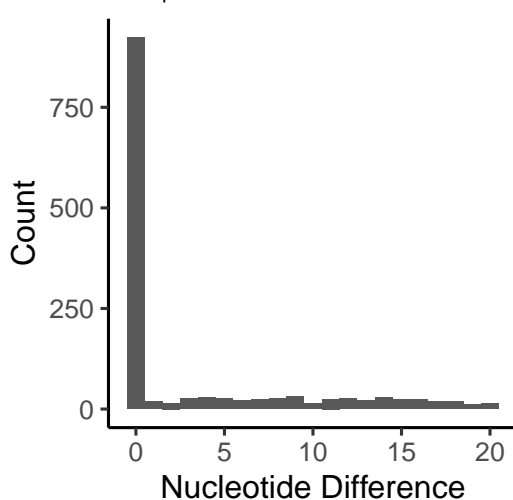
### IGHV3-15\*01\_02

495 sequences assigned  
233 (47.1%) exact matches, in which:  
205 unique CDR3  
6 unique J



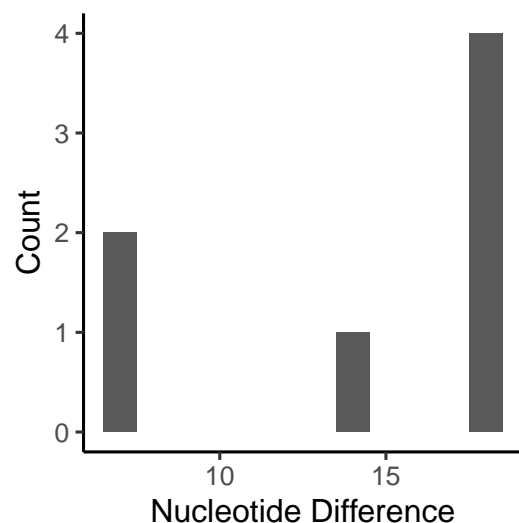
### IGHV3-21\*01\_02

1549 sequences assigned  
924 (59.7%) exact matches, in which:  
746 unique CDR3  
6 unique J



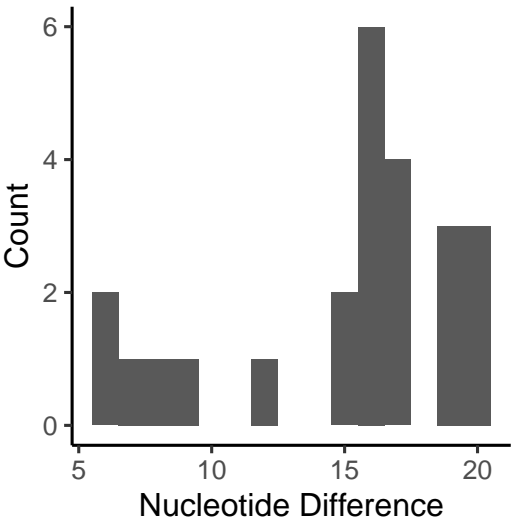
### IGHV3-30-3\*01

8 sequences assigned  
No exact matches.



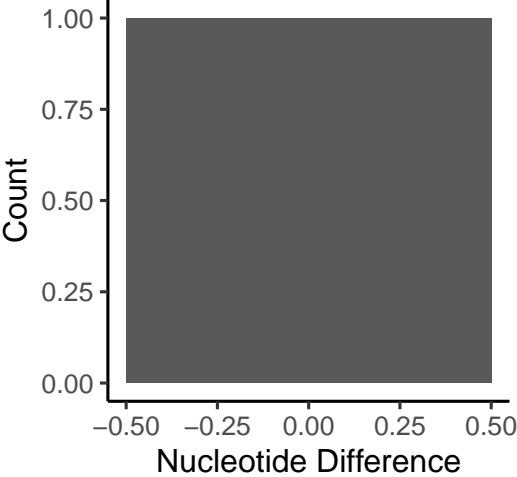
IGHV3-30-3\*03

65 sequences assigned  
No exact matches.



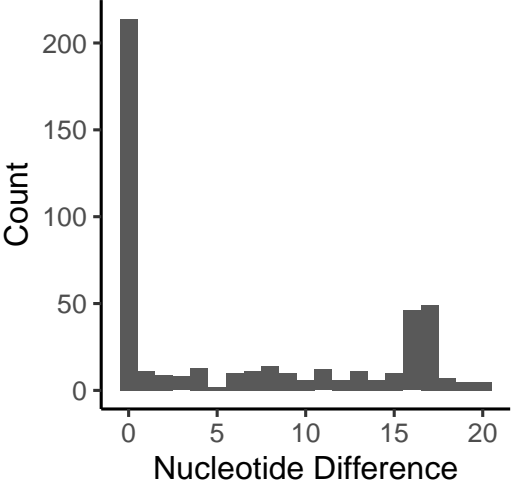
IGHV3-38-3\*01

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



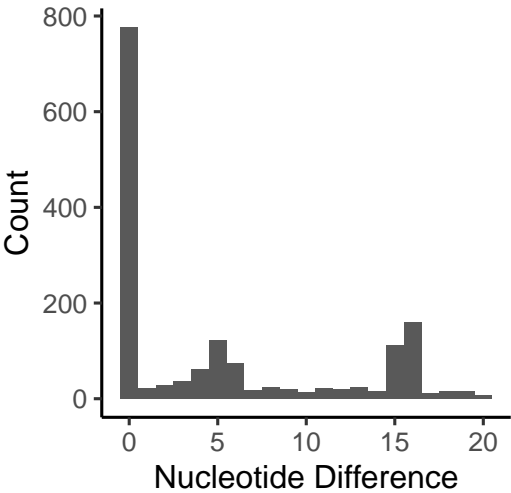
IGHV3-48\*04

510 sequences assigned  
214 (42%) exact matches, in which:  
173 unique CDR3  
6 unique J



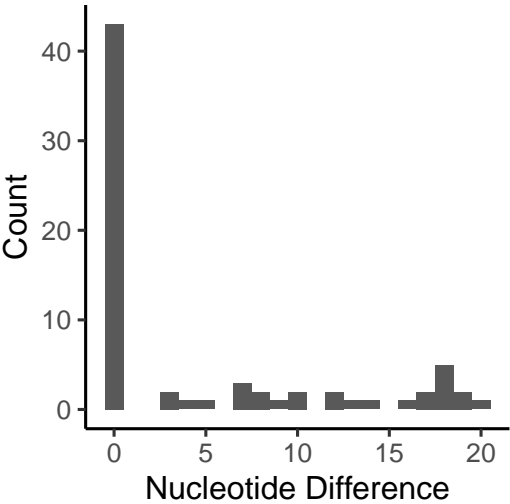
IGHV3-30\*04\_C203T

1735 sequences assigned  
777 (44.8%) exact matches, in which:  
662 unique CDR3  
6 unique J



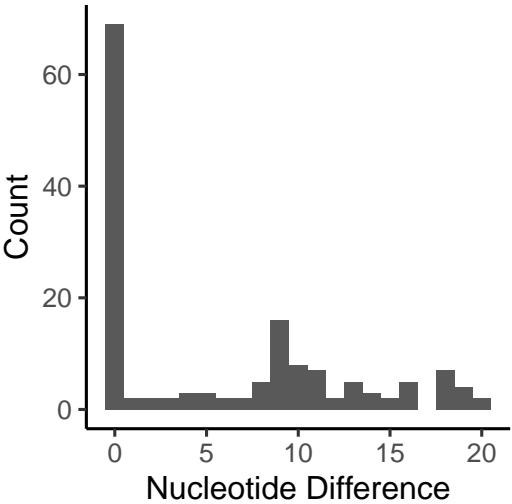
IGHV3-43\*01

104 sequences assigned  
43 (41.3%) exact matches, in which:  
36 unique CDR3  
5 unique J



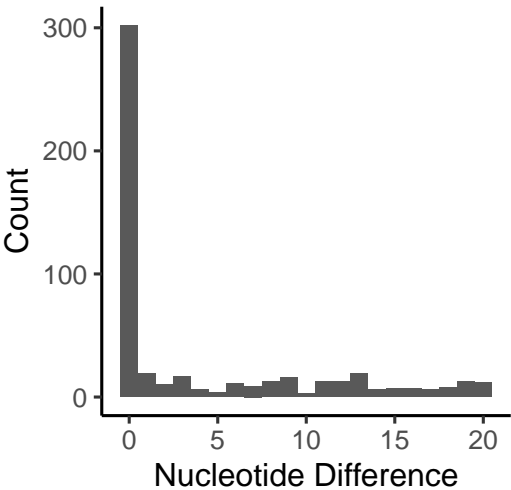
IGHV3-49\*03\_05

184 sequences assigned  
69 (37.5%) exact matches, in which:  
61 unique CDR3  
4 unique J



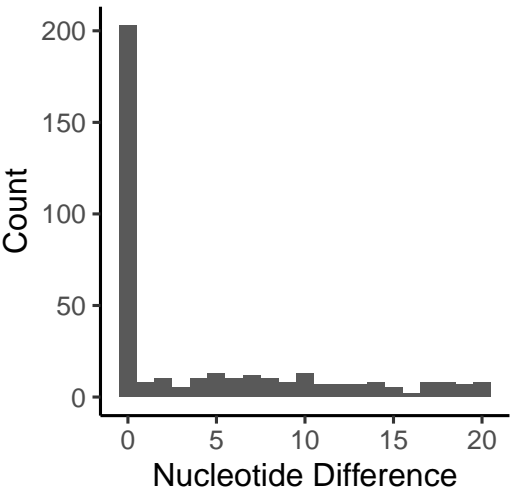
IGHV3-33\*06

654 sequences assigned  
302 (46.2%) exact matches, in which:  
257 unique CDR3  
6 unique J



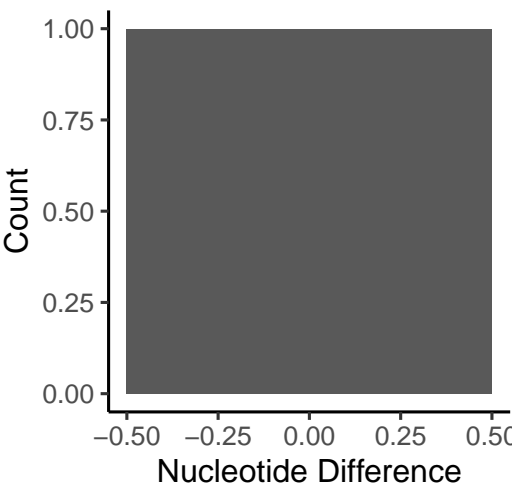
IGHV3-48\*02

427 sequences assigned  
203 (47.5%) exact matches, in which:  
167 unique CDR3  
6 unique J



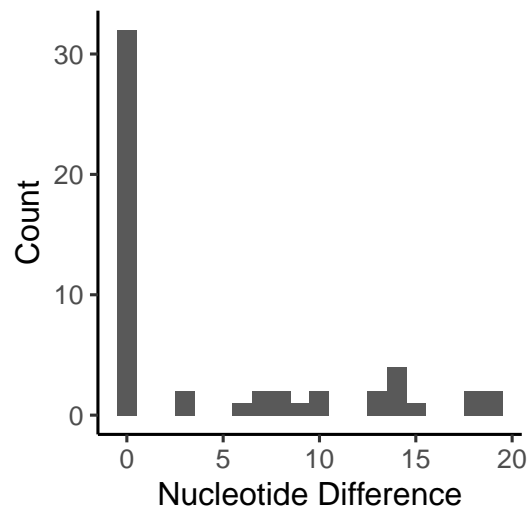
IGHV3-52\*01\_03

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



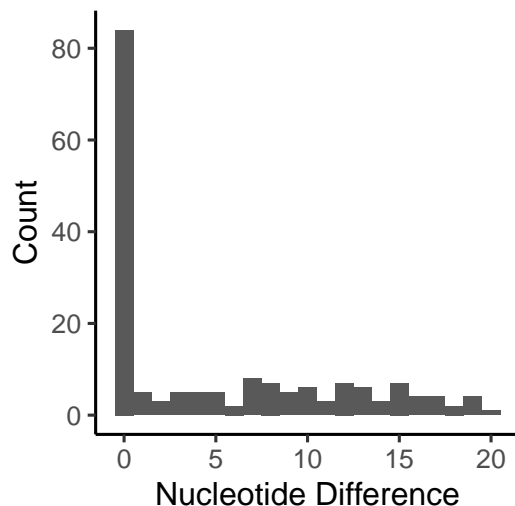
### IGHV3-53\*04

67 sequences assigned  
32 (47.8%) exact matches, in which:  
27 unique CDR3  
4 unique J



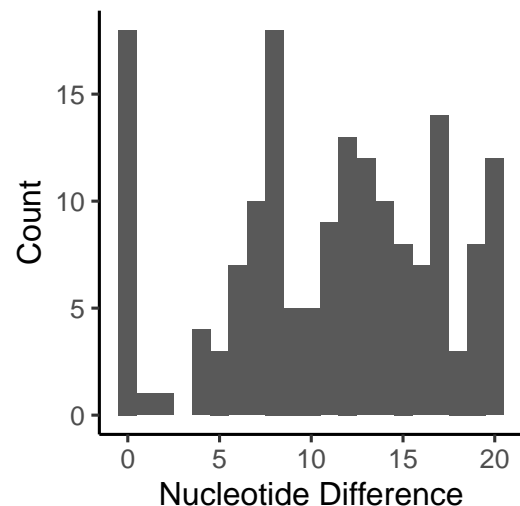
### IGHV3-66\*02

205 sequences assigned  
84 (41%) exact matches, in which:  
69 unique CDR3  
5 unique J



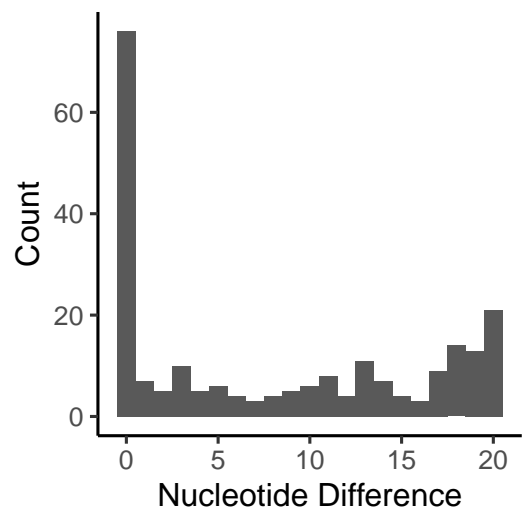
### IGHV3-72\*01

197 sequences assigned  
18 (9.1%) exact matches, in which:  
16 unique CDR3  
3 unique J



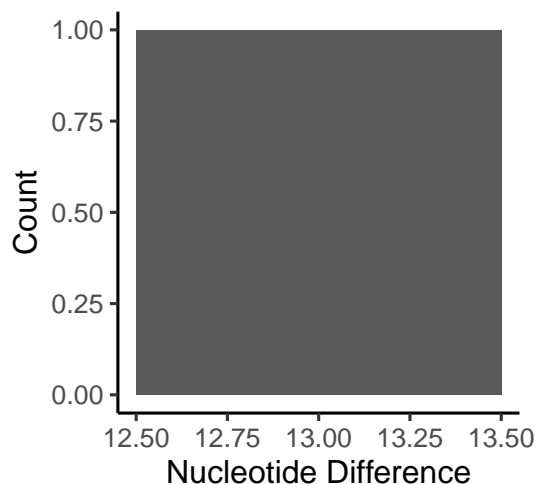
### IGHV3-53\*01\_02

299 sequences assigned  
76 (25.4%) exact matches, in which:  
67 unique CDR3  
5 unique J



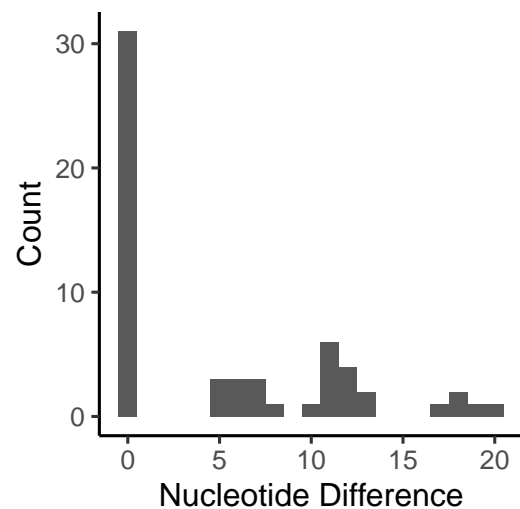
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



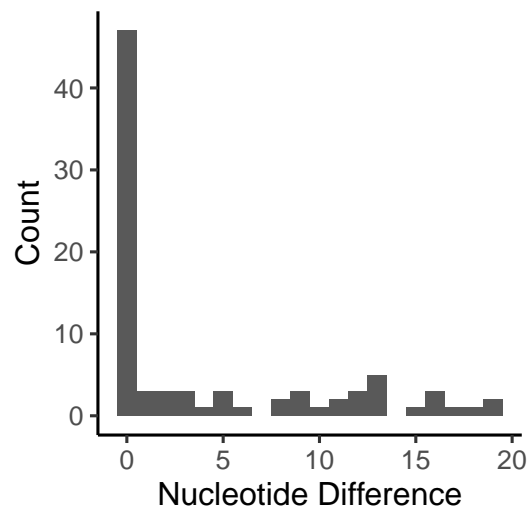
### IGHV3-73\*01\_02

64 sequences assigned  
31 (48.4%) exact matches, in which:  
25 unique CDR3  
4 unique J



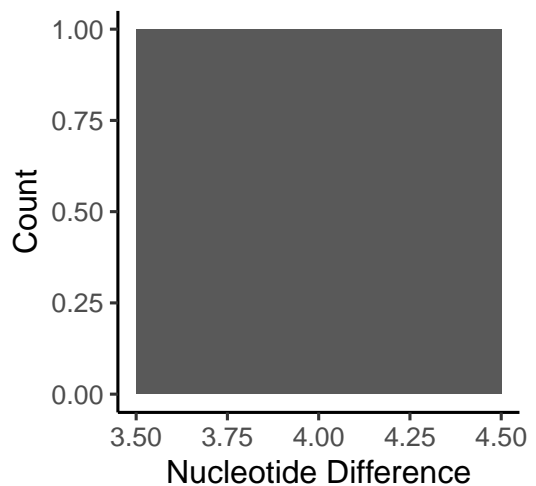
### IGHV3-64\*01

110 sequences assigned  
47 (42.7%) exact matches, in which:  
40 unique CDR3  
5 unique J



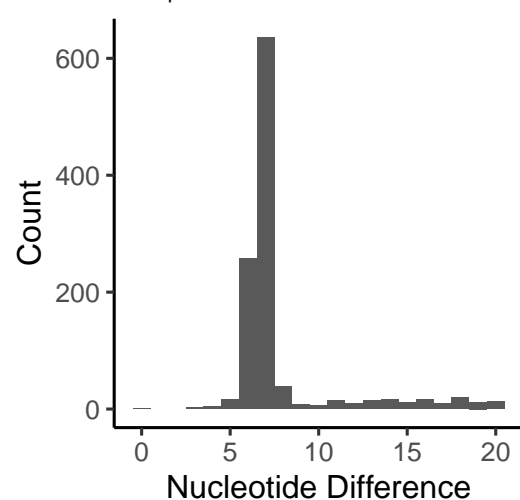
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



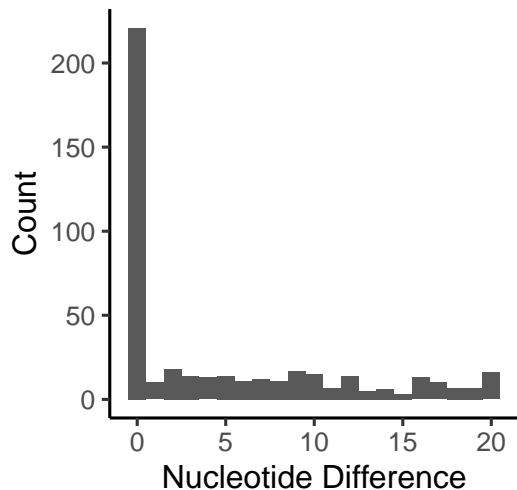
### IGHV3-74\*03

1213 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



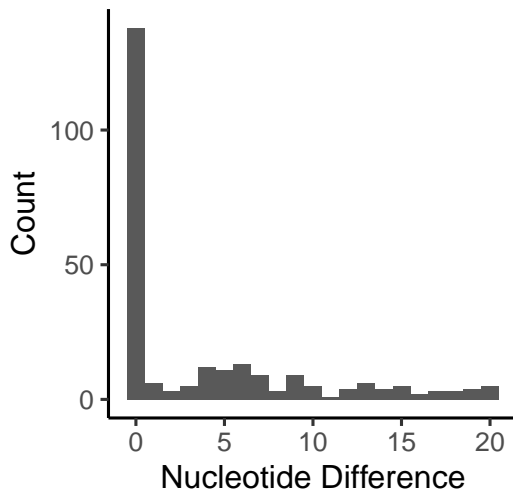
### IGHV3–74\*01\_02

508 sequences assigned  
221 (43.5%) exact matches, in which:  
184 unique CDR3  
6 unique J



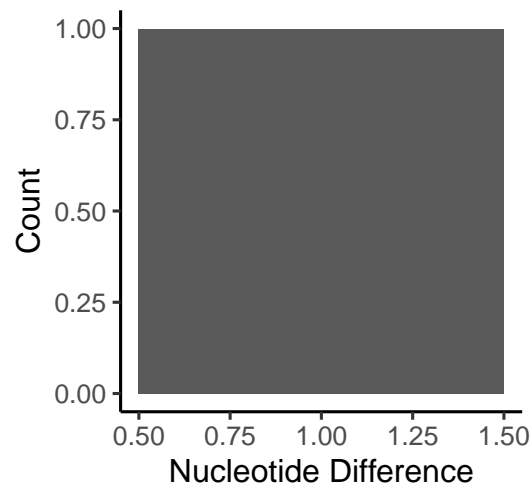
### IGHV4–4\*02\_03

311 sequences assigned  
138 (44.4%) exact matches, in which:  
131 unique CDR3  
5 unique J



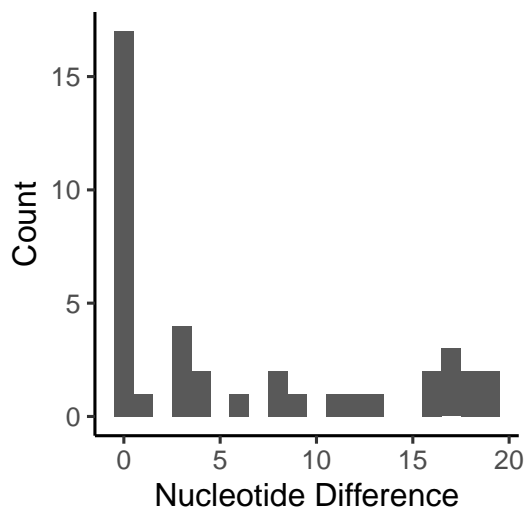
### IGHV4–30–2\*03

1 sequences assigned  
No exact matches.



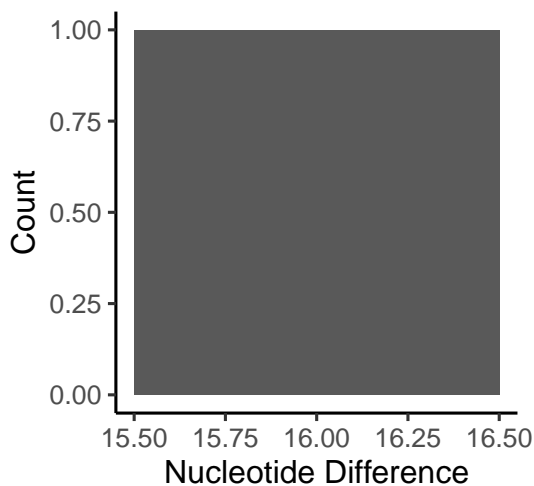
### IGHV3–43D\*03

47 sequences assigned  
17 (36.2%) exact matches, in which:  
15 unique CDR3  
3 unique J



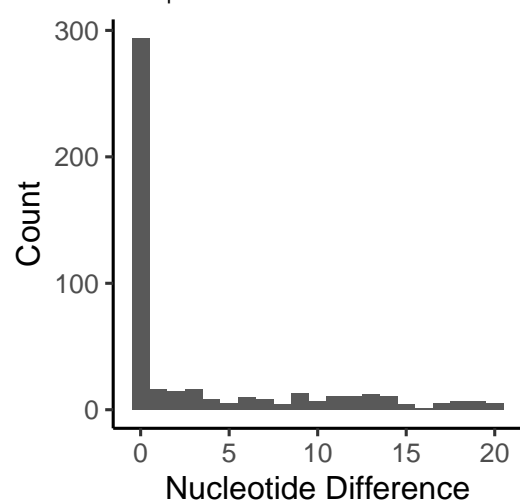
### IGHV4–28\*02\_05

1 sequences assigned  
No exact matches.



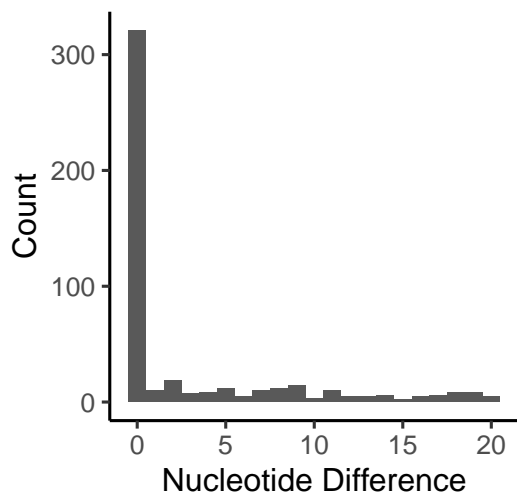
### IGHV4–31\*02

576 sequences assigned  
294 (51%) exact matches, in which:  
291 unique CDR3  
6 unique J



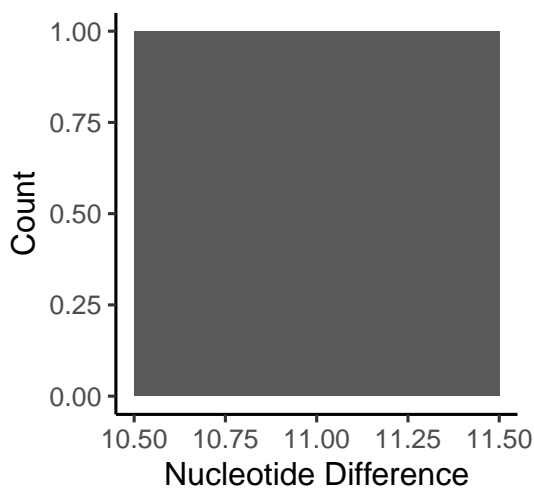
### IGHV4–4\*07

591 sequences assigned  
321 (54.3%) exact matches, in which:  
317 unique CDR3  
5 unique J



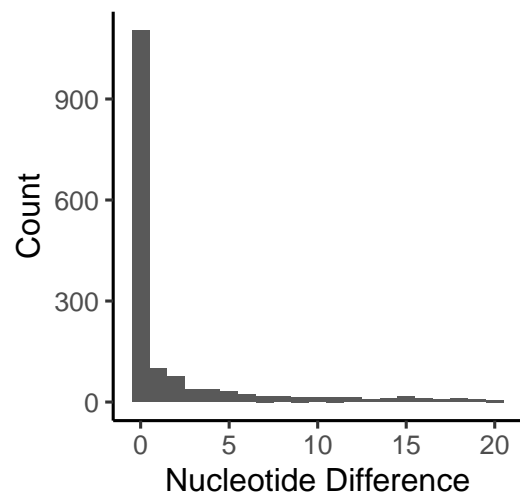
### IGHV4–30–4\*01

6 sequences assigned  
No exact matches.



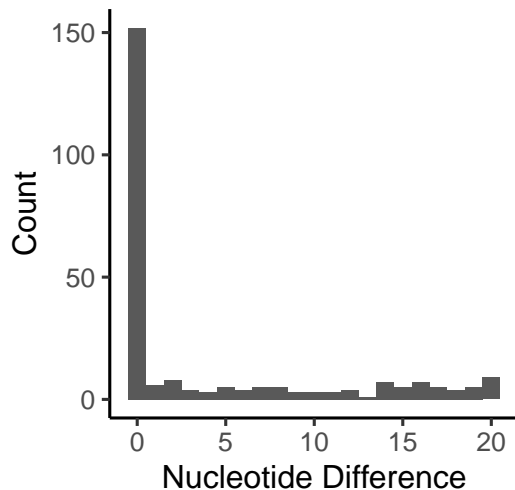
### IGHV4–34\*01\_02

1787 sequences assigned  
1104 (61.8%) exact matches, in which:  
1077 unique CDR3  
6 unique J



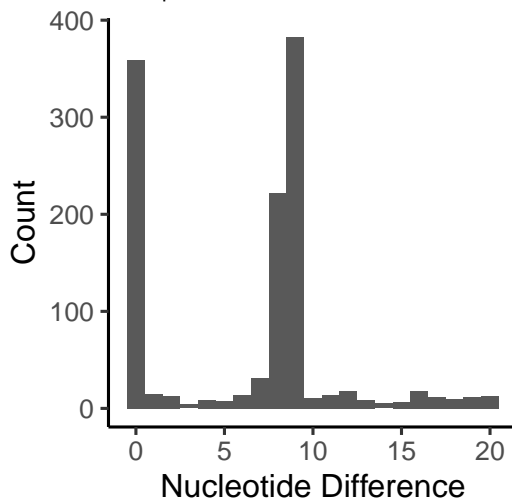
### IGHV4-38-2\*02

299 sequences assigned  
152 (50.8%) exact matches, in which:  
151 unique CDR3  
6 unique J



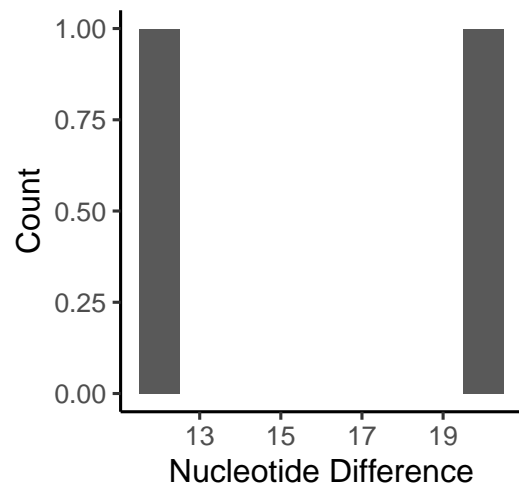
### IGHV4-59\*08

1303 sequences assigned  
359 (27.6%) exact matches, in which:  
355 unique CDR3  
6 unique J



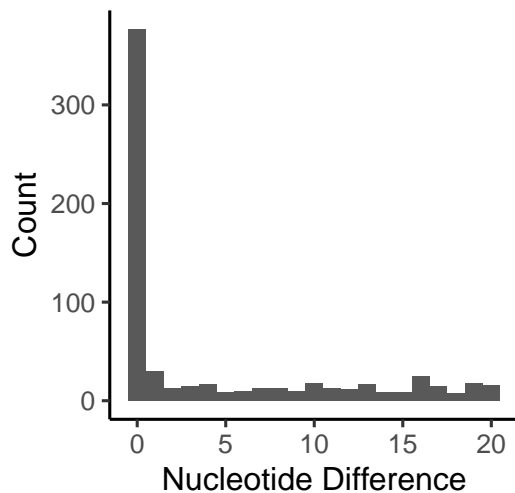
### IGHV4/OR15-8\*01

6 sequences assigned  
No exact matches.



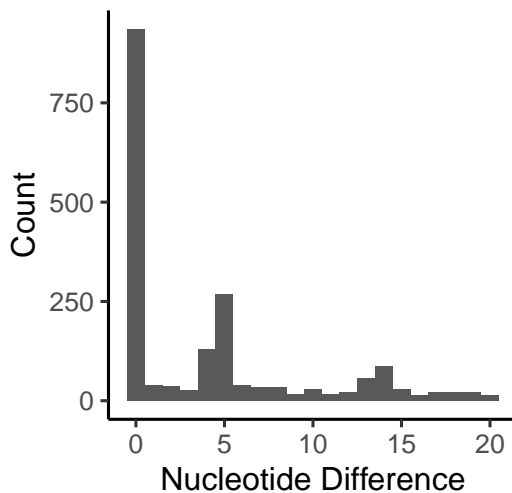
### IGHV4-39\*07

800 sequences assigned  
377 (47.1%) exact matches, in which:  
369 unique CDR3  
6 unique J



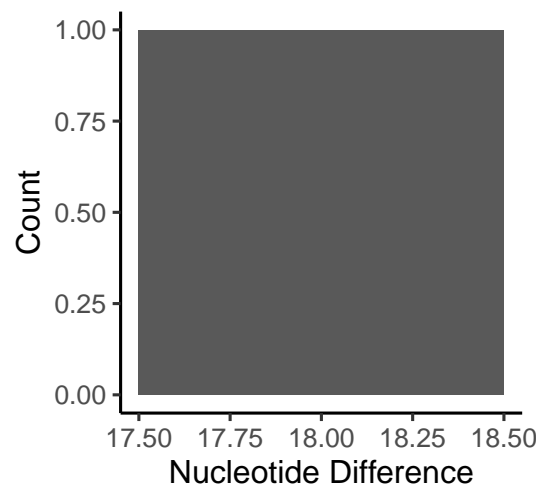
### IGHV4-59\*02\_G88A

2090 sequences assigned  
936 (44.8%) exact matches, in which:  
920 unique CDR3  
6 unique J



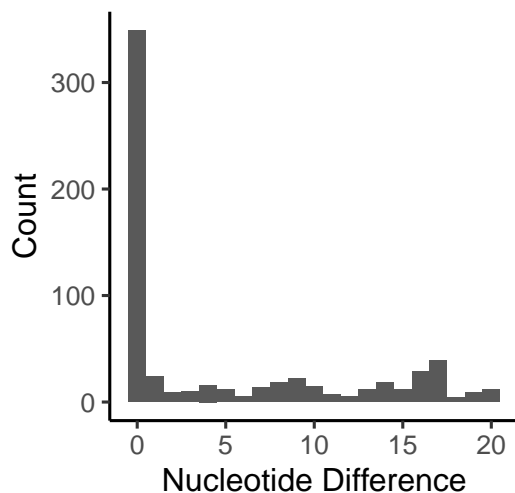
### IGHV4/OR15-8\*02

1 sequences assigned  
No exact matches.



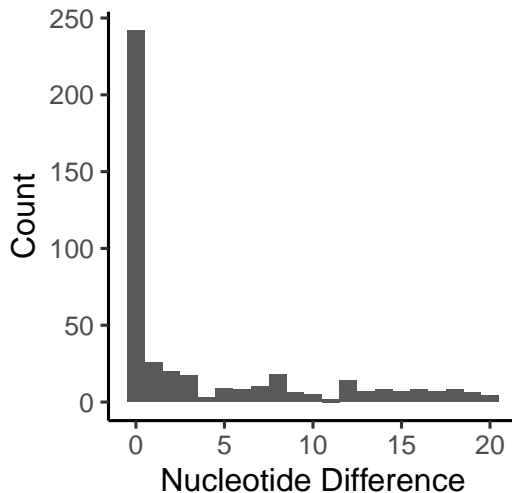
### IGHV4-39\*02\_C258G

753 sequences assigned  
349 (46.3%) exact matches, in which:  
341 unique CDR3  
6 unique J



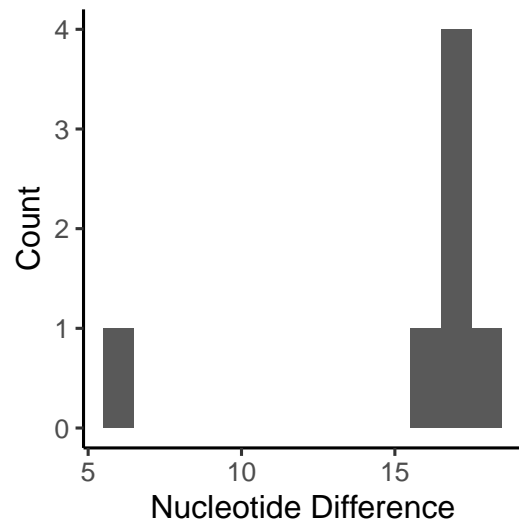
### IGHV4-61\*02

523 sequences assigned  
242 (46.3%) exact matches, in which:  
237 unique CDR3  
6 unique J



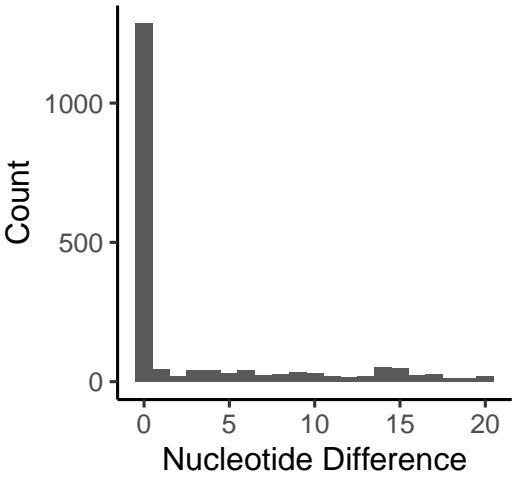
### IGHV5-10-1\*01\_03

7 sequences assigned  
No exact matches.



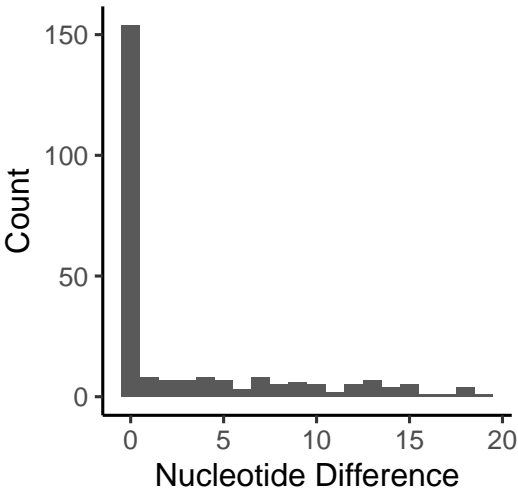
# IGHV5-51\*07\_A128G

2077 sequences assigned  
1286 (61.9%) exact matches, in which:  
1210 unique CDR3  
6 unique J



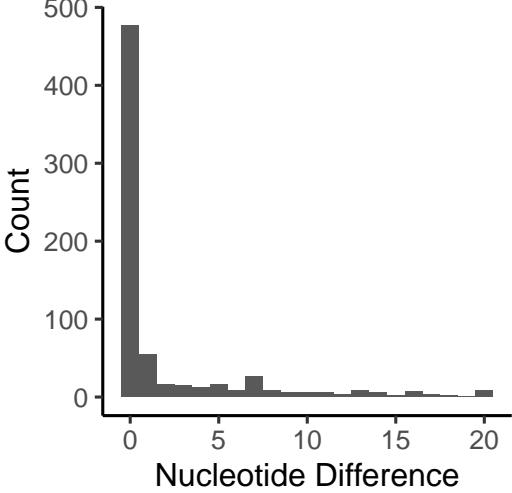
# IGHV6-1\*01\_02

260 sequences assigned  
154 (59.2%) exact matches, in which:  
152 unique CDR3  
6 unique J



# IGHV7-4-1\*02

788 sequences assigned  
477 (60.5%) exact matches, in which:  
477 unique CDR3  
6 unique J







Warning – no inferred sequences found.