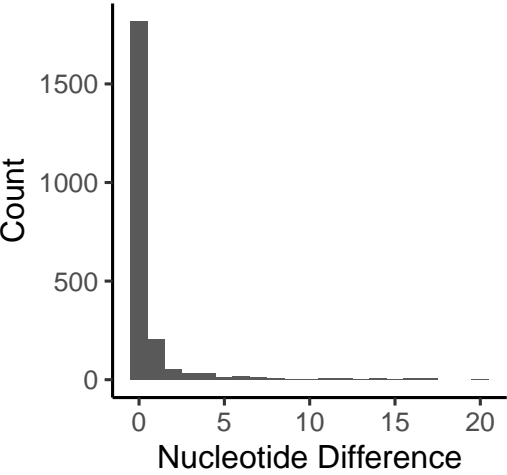


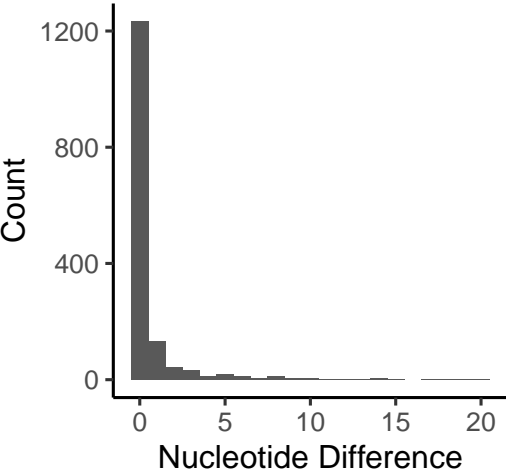
IGHV1-2\*02

2271 sequences assigned  
1817 (80%) exact matches, in which:  
1698 unique CDR3  
6 unique J



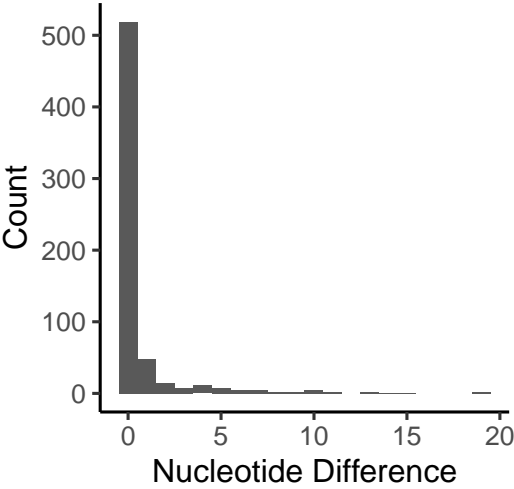
IGHV1-18\*01

1535 sequences assigned  
1233 (80.3%) exact matches, in which:  
1182 unique CDR3  
6 unique J



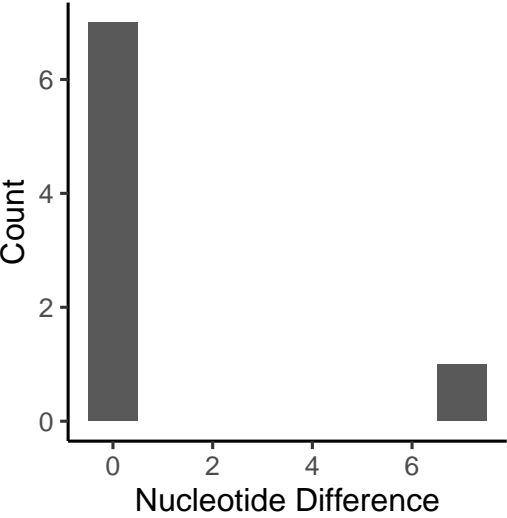
IGHV1-46\*03

635 sequences assigned  
519 (81.7%) exact matches, in which:  
483 unique CDR3  
6 unique J



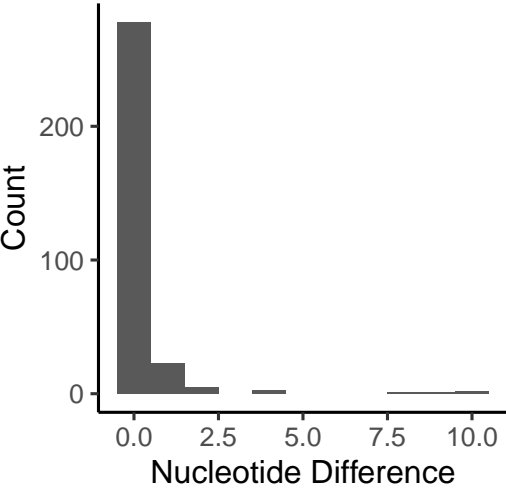
IGHV1-3\*02

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
3 unique J



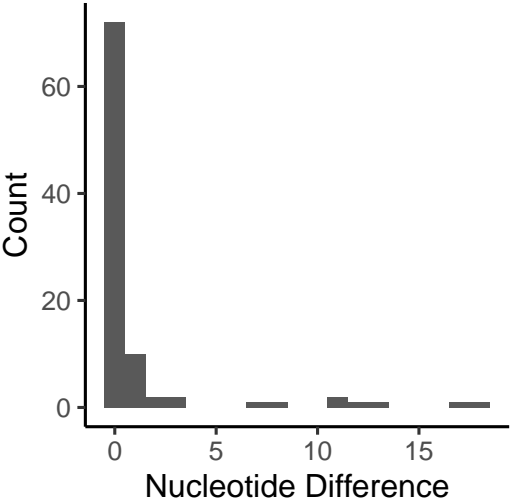
IGHV1-24\*01

313 sequences assigned  
278 (88.8%) exact matches, in which:  
265 unique CDR3  
6 unique J



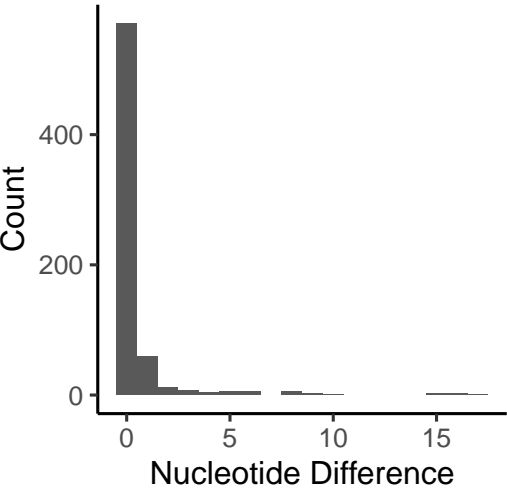
IGHV1-58\*02

96 sequences assigned  
72 (75%) exact matches, in which:  
69 unique CDR3  
5 unique J



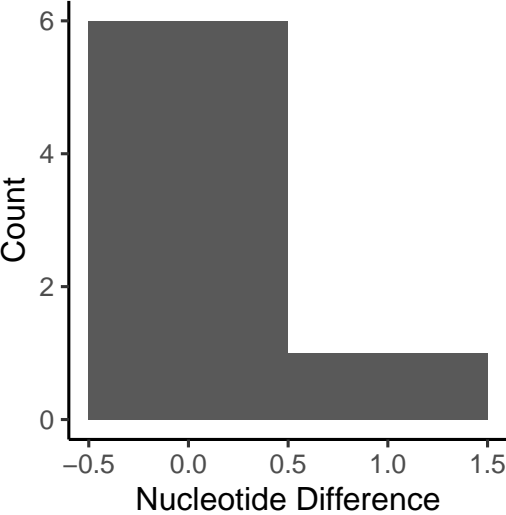
IGHV1-8\*01

680 sequences assigned  
571 (84%) exact matches, in which:  
535 unique CDR3  
6 unique J



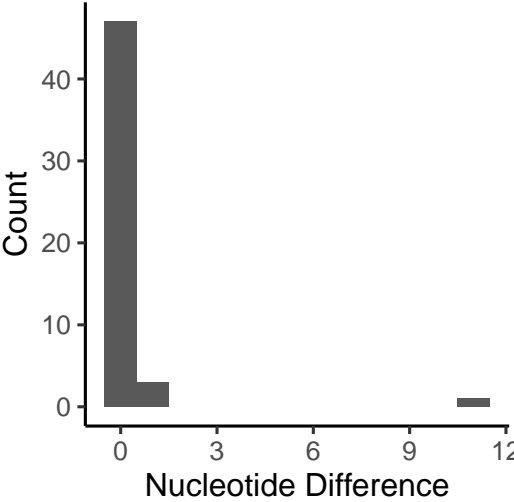
IGHV1-45\*02

7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
2 unique J



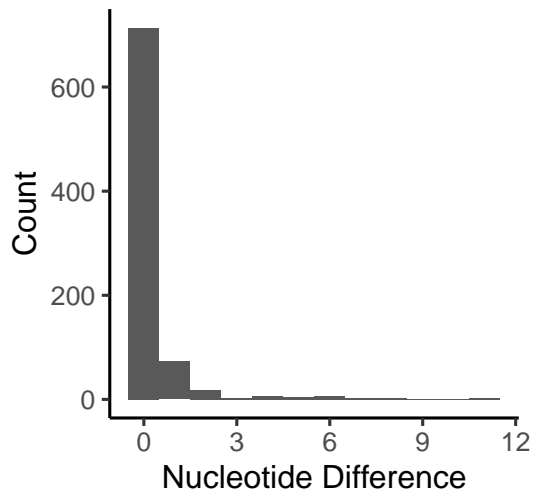
IGHV1-69-2\*01

51 sequences assigned  
47 (92.2%) exact matches, in which:  
47 unique CDR3  
5 unique J



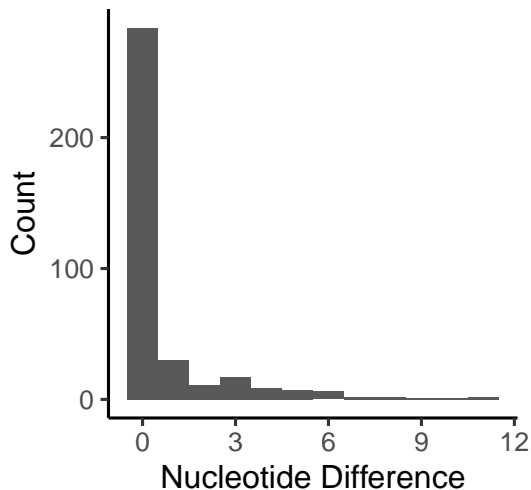
### IGHV1–69\*02

834 sequences assigned  
714 (85.6%) exact matches, in which:  
678 unique CDR3  
6 unique J



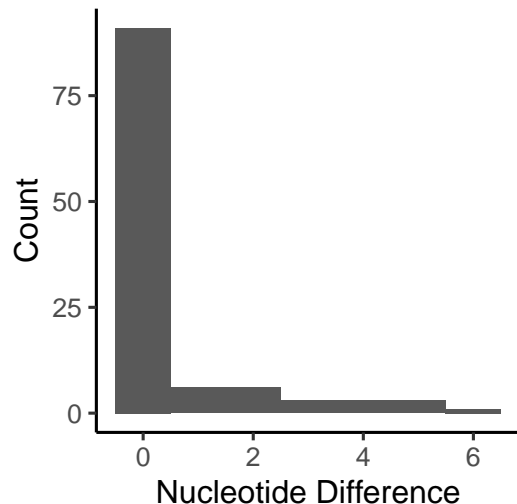
### IGHV2–5\*02

373 sequences assigned  
284 (76.1%) exact matches, in which:  
277 unique CDR3  
6 unique J



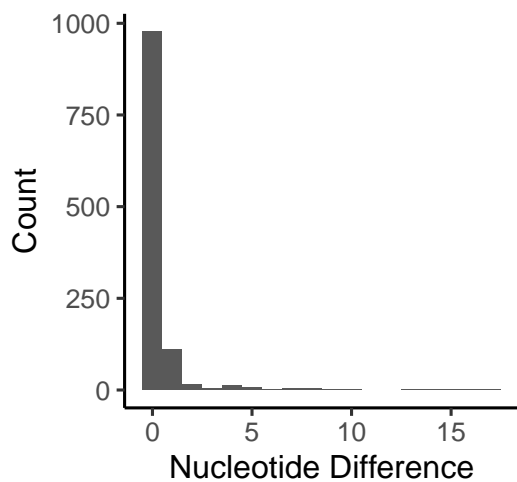
### IGHV2–70\*15

113 sequences assigned  
91 (80.5%) exact matches, in which:  
86 unique CDR3  
6 unique J



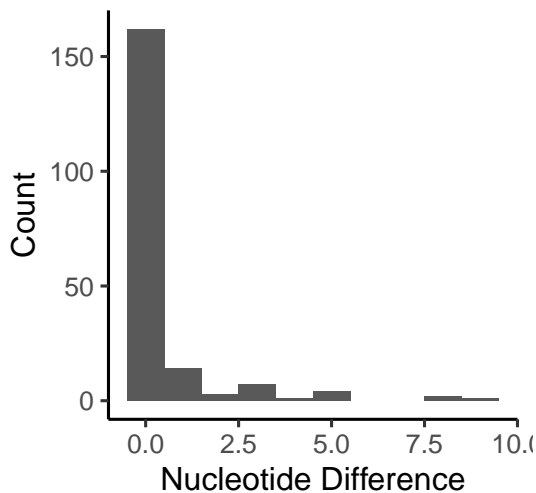
### IGHV1–69\*09

1149 sequences assigned  
977 (85%) exact matches, in which:  
910 unique CDR3  
6 unique J



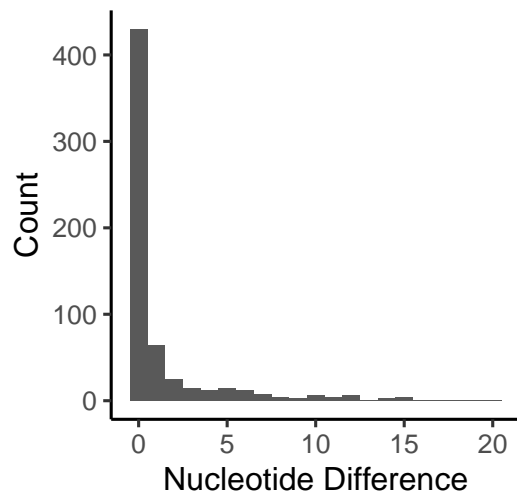
### IGHV2–26\*01

194 sequences assigned  
162 (83.5%) exact matches, in which:  
156 unique CDR3  
6 unique J



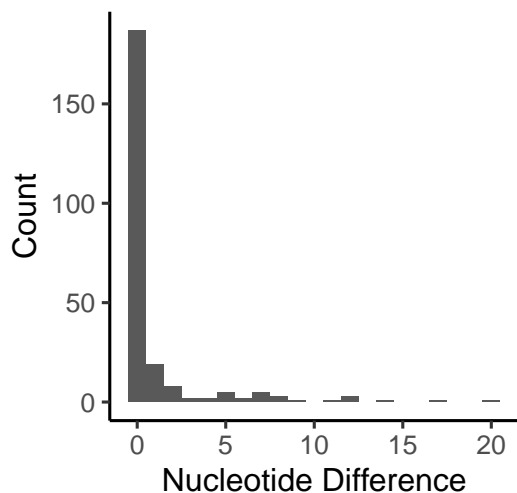
### IGHV3–7\*01

626 sequences assigned  
430 (68.7%) exact matches, in which:  
412 unique CDR3  
6 unique J



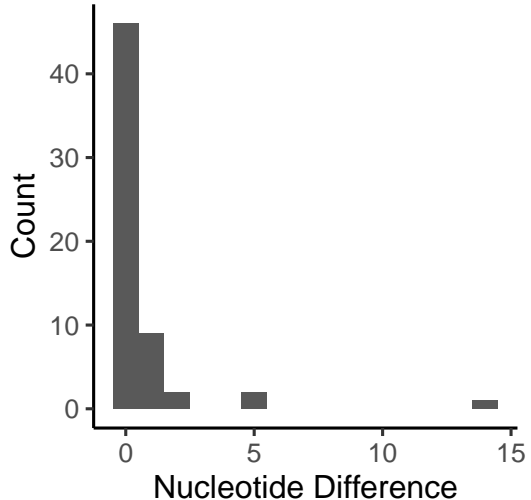
### IGHV2–5\*01

243 sequences assigned  
187 (77%) exact matches, in which:  
181 unique CDR3  
6 unique J



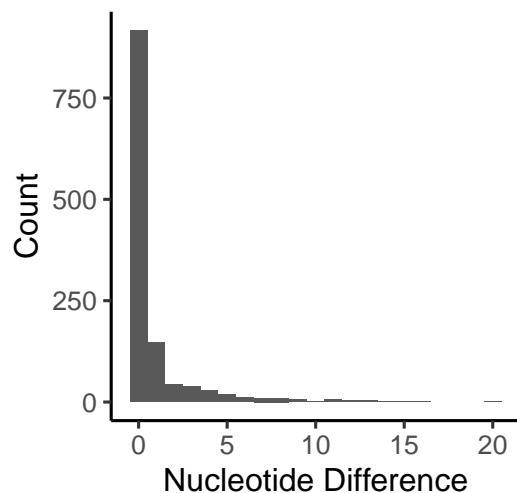
### IGHV2–70\*01

61 sequences assigned  
46 (75.4%) exact matches, in which:  
46 unique CDR3  
4 unique J



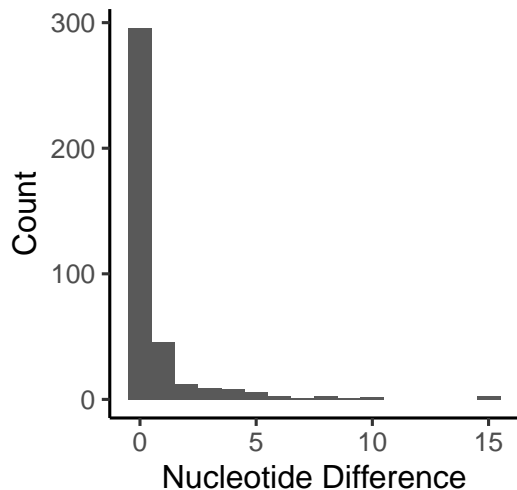
### IGHV3–9\*01

1249 sequences assigned  
917 (73.4%) exact matches, in which:  
853 unique CDR3  
6 unique J



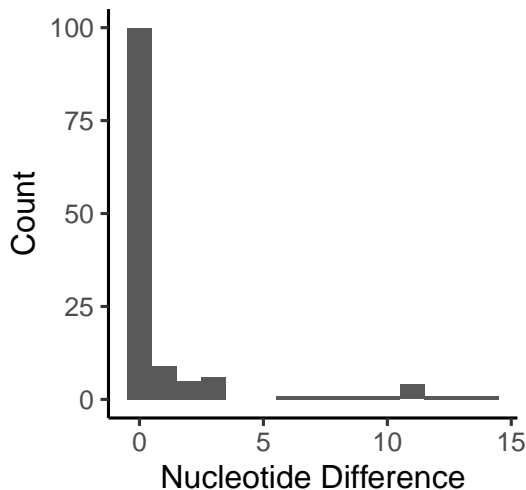
### IGHV3-11\*01

394 sequences assigned  
296 (75.1%) exact matches, in which:  
284 unique CDR3  
6 unique J



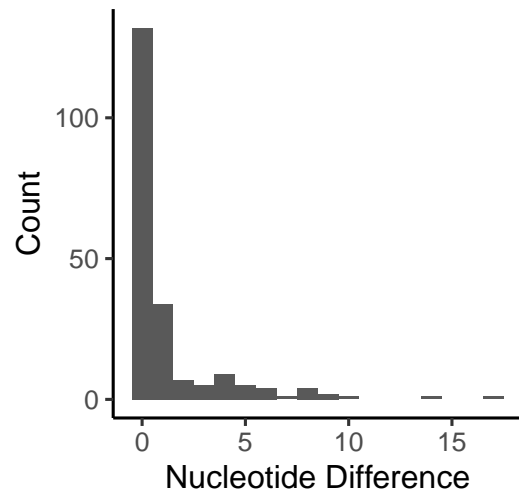
### IGHV3-13\*04

132 sequences assigned  
100 (75.8%) exact matches, in which:  
91 unique CDR3  
5 unique J



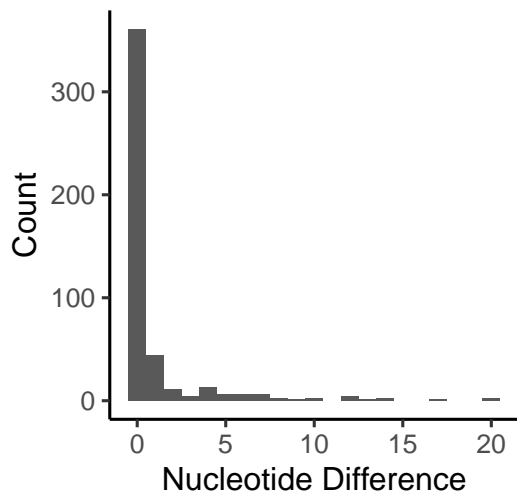
### IGHV3-20\*04

207 sequences assigned  
132 (63.8%) exact matches, in which:  
123 unique CDR3  
5 unique J



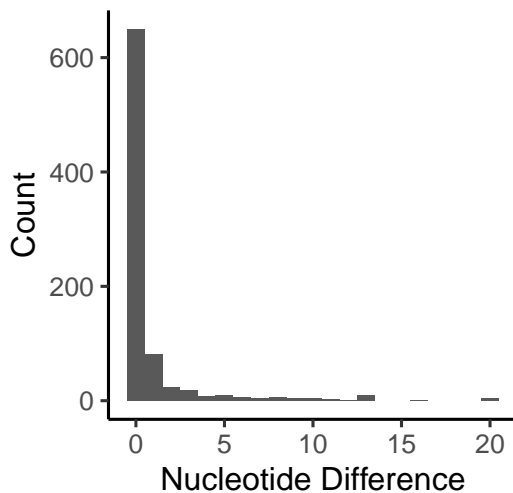
### IGHV3-11\*05

471 sequences assigned  
361 (76.6%) exact matches, in which:  
344 unique CDR3  
6 unique J



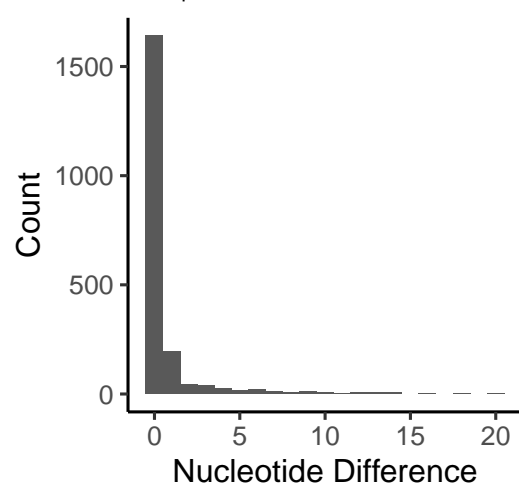
### IGHV3-15\*01

847 sequences assigned  
650 (76.7%) exact matches, in which:  
616 unique CDR3  
6 unique J



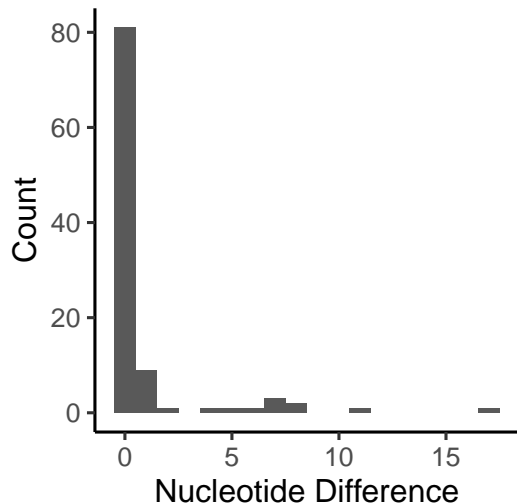
### IGHV3-21\*01

2049 sequences assigned  
1641 (80.1%) exact matches, in which:  
1540 unique CDR3  
6 unique J



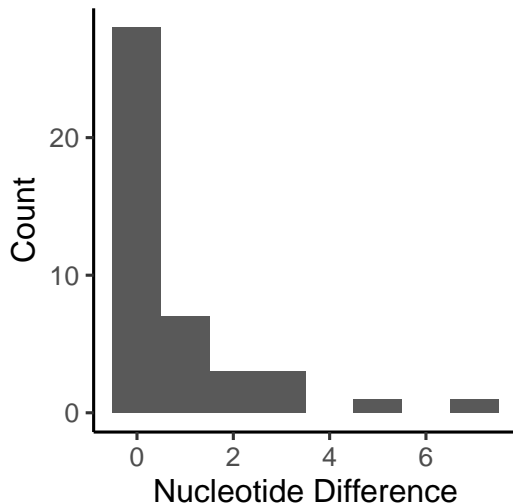
### IGHV3-13\*01

101 sequences assigned  
81 (80.2%) exact matches, in which:  
77 unique CDR3  
5 unique J



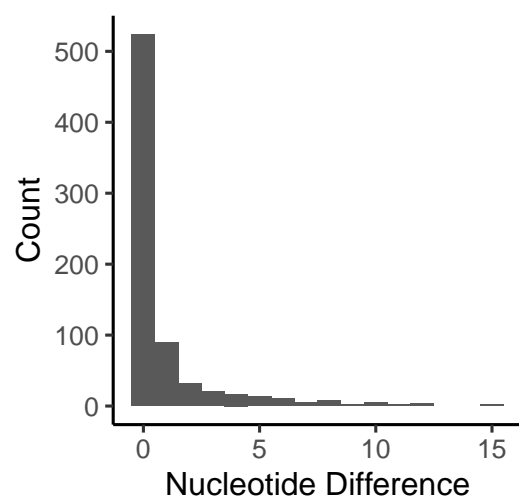
### IGHV3-20\*01

43 sequences assigned  
28 (65.1%) exact matches, in which:  
26 unique CDR3  
4 unique J



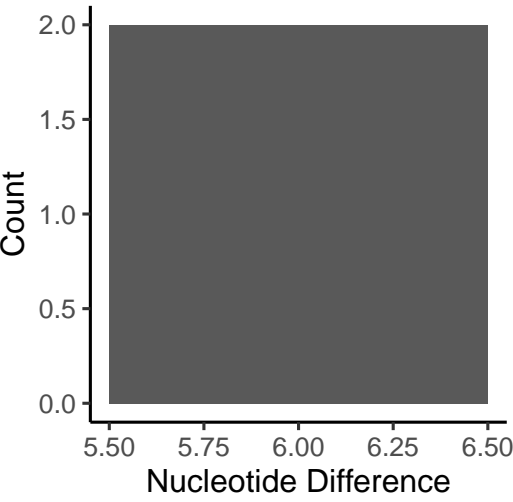
### IGHV3-33\*01

740 sequences assigned  
524 (70.8%) exact matches, in which:  
493 unique CDR3  
6 unique J



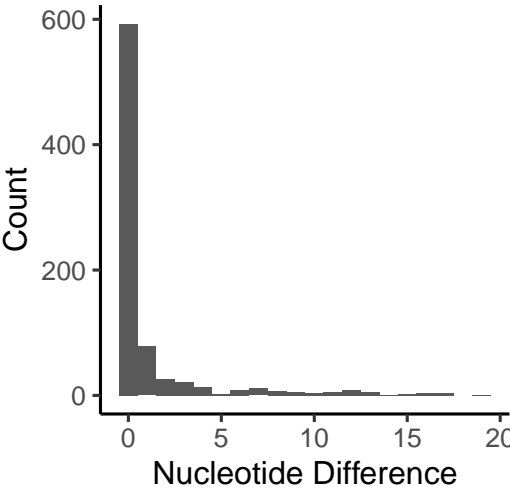
IGHV3-41\*02

2 sequences assigned  
No exact matches.



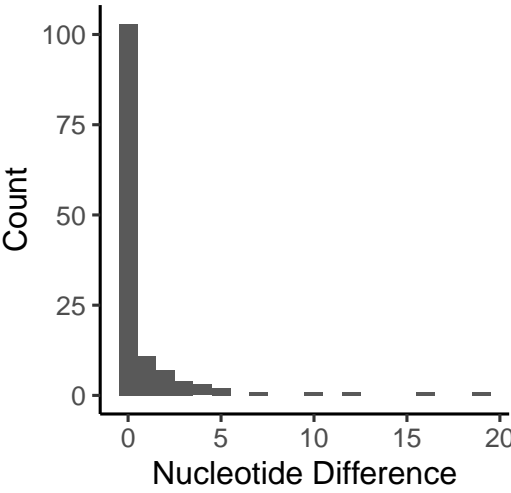
IGHV3-48\*01

801 sequences assigned  
593 (74%) exact matches, in which:  
562 unique CDR3  
6 unique J



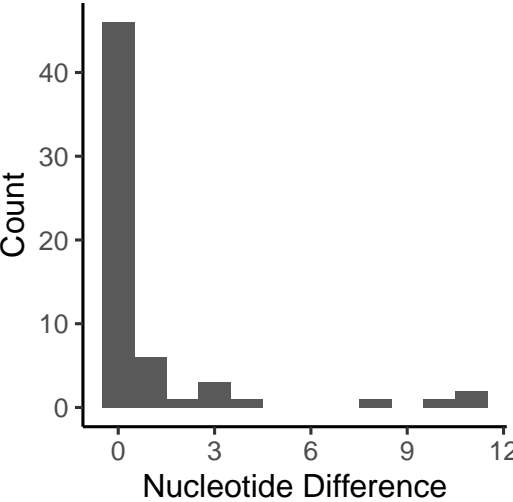
IGHV3-53\*02

135 sequences assigned  
103 (76.3%) exact matches, in which:  
94 unique CDR3  
5 unique J



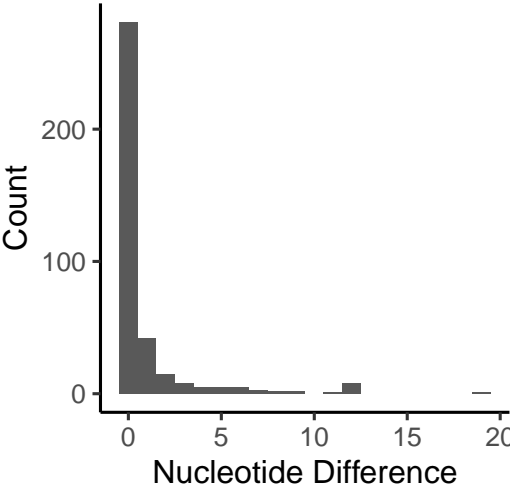
IGHV3-43\*01

61 sequences assigned  
46 (75.4%) exact matches, in which:  
45 unique CDR3  
4 unique J



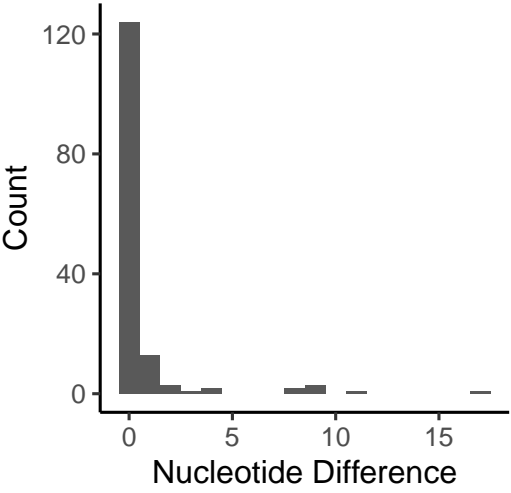
IGHV3-49\*03

378 sequences assigned  
281 (74.3%) exact matches, in which:  
264 unique CDR3  
5 unique J



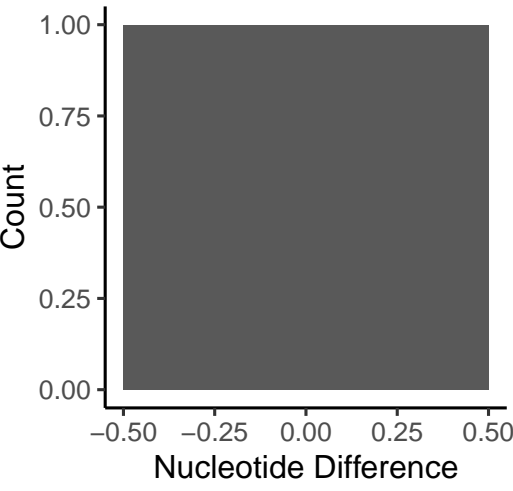
IGHV3-53\*04

152 sequences assigned  
124 (81.6%) exact matches, in which:  
116 unique CDR3  
6 unique J



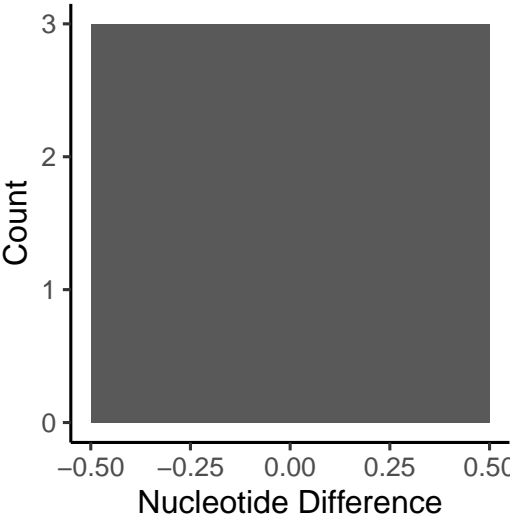
IGHV3-47\*02

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



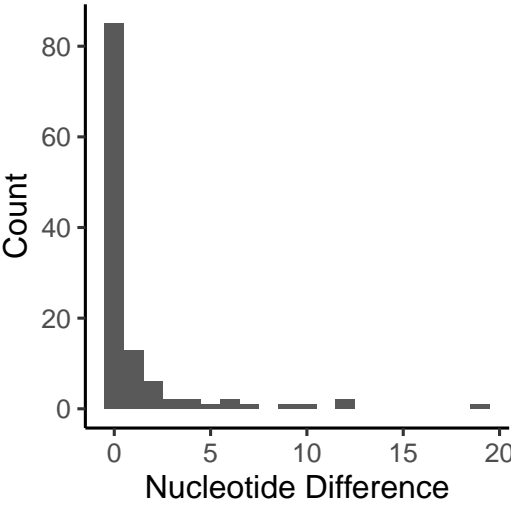
IGHV3-52\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



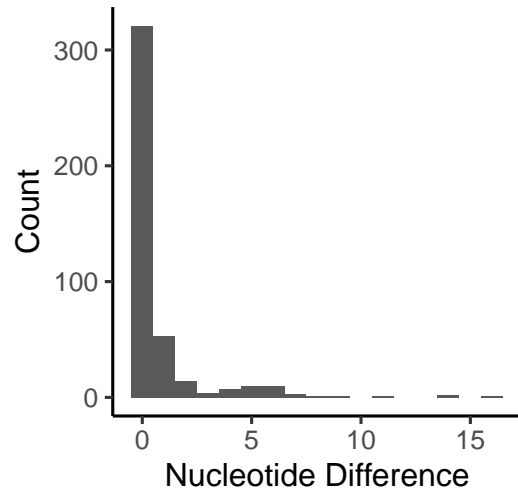
IGHV3-64\*01

126 sequences assigned  
85 (67.5%) exact matches, in which:  
81 unique CDR3  
5 unique J



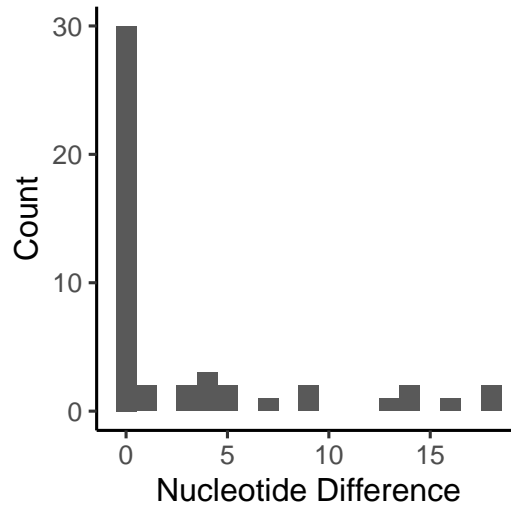
### IGHV3-66\*01

429 sequences assigned  
321 (74.8%) exact matches, in which:  
298 unique CDR3  
6 unique J



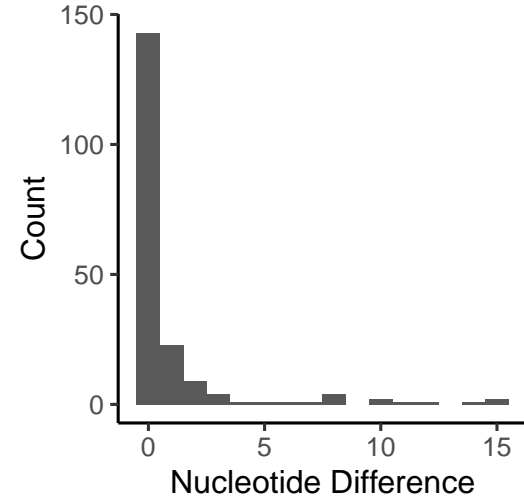
### IGHV3-72\*01

49 sequences assigned  
30 (61.2%) exact matches, in which:  
28 unique CDR3  
5 unique J



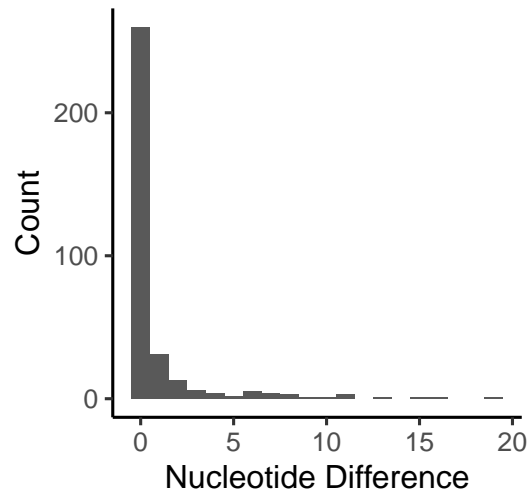
### IGHV3-64D\*09

195 sequences assigned  
143 (73.3%) exact matches, in which:  
134 unique CDR3  
5 unique J



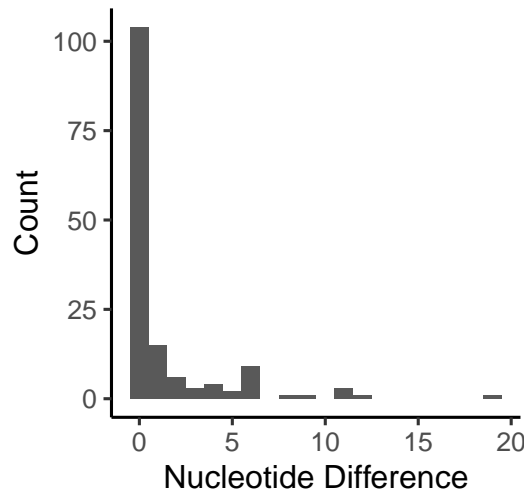
### IGHV3-66\*02

338 sequences assigned  
260 (76.9%) exact matches, in which:  
247 unique CDR3  
6 unique J



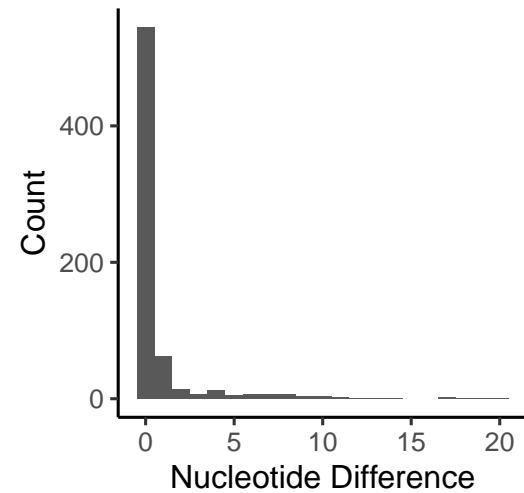
### IGHV3-73\*01

151 sequences assigned  
104 (68.9%) exact matches, in which:  
99 unique CDR3  
5 unique J



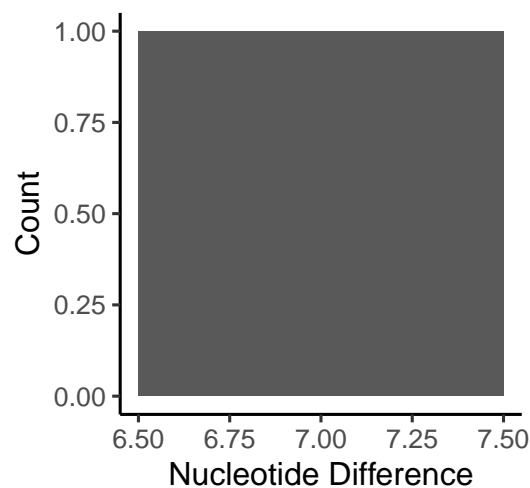
### IGHV4-4\*07

686 sequences assigned  
545 (79.4%) exact matches, in which:  
525 unique CDR3  
6 unique J



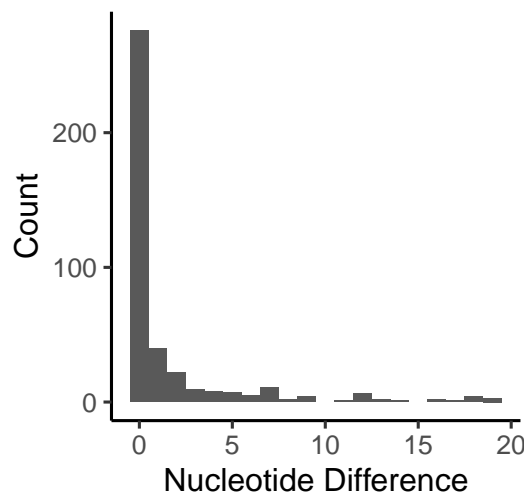
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



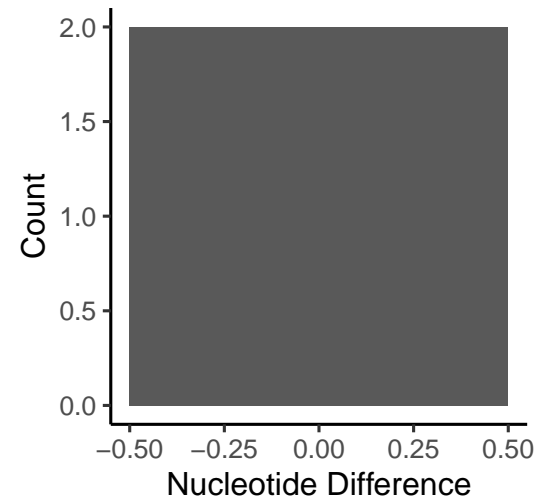
### IGHV3-74\*01

405 sequences assigned  
276 (68.1%) exact matches, in which:  
256 unique CDR3  
6 unique J



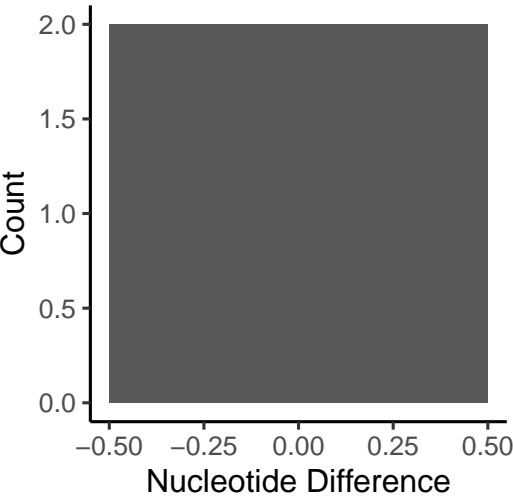
### IGHV4-28\*01

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



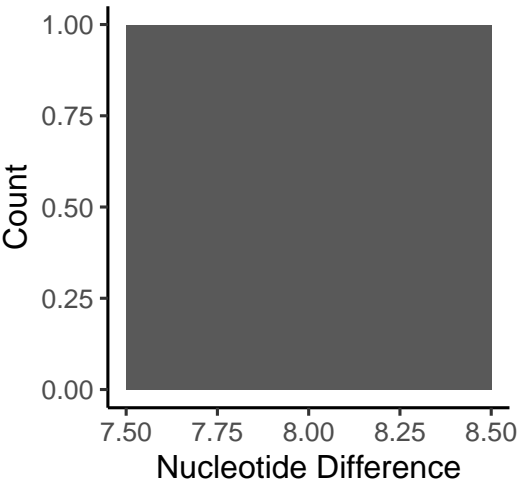
IGHV4-28\*03

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



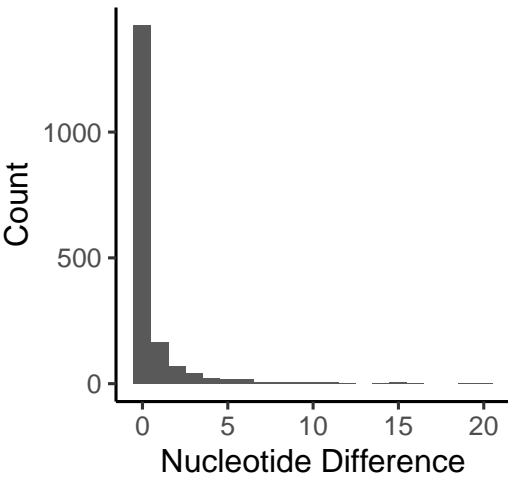
IGHV4-30-4\*02

1 sequences assigned  
No exact matches.



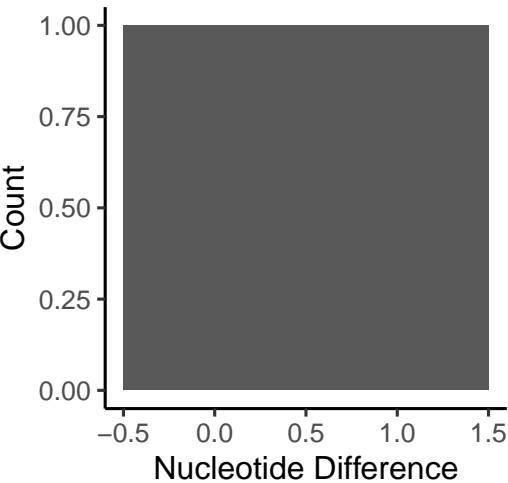
IGHV4-34\*01

1810 sequences assigned  
1424 (78.7%) exact matches, in which:  
1320 unique CDR3  
6 unique J



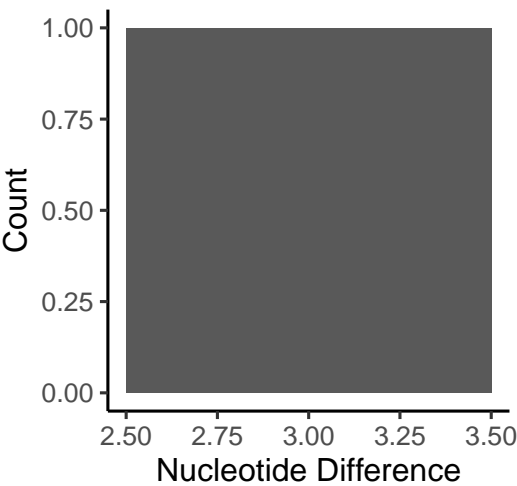
IGHV4-28\*04

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



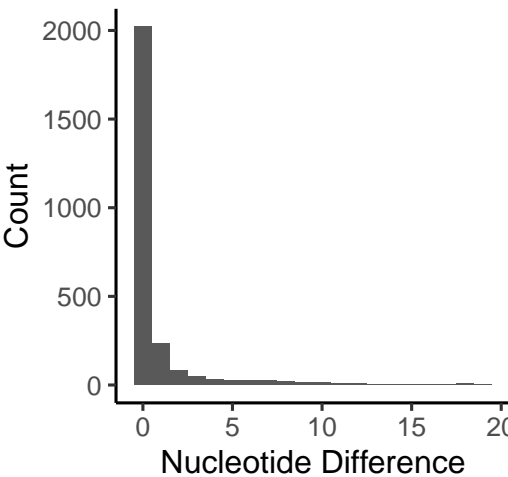
IGHV4-30-2\*03

1 sequences assigned  
No exact matches.



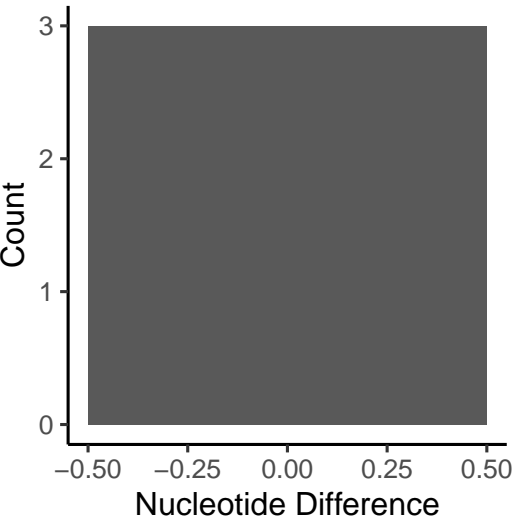
IGHV4-39\*01

2579 sequences assigned  
2021 (78.4%) exact matches, in which:  
1880 unique CDR3  
6 unique J



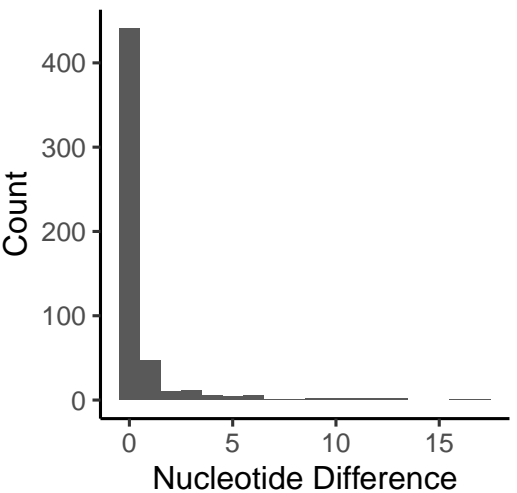
IGHV4-28\*07

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



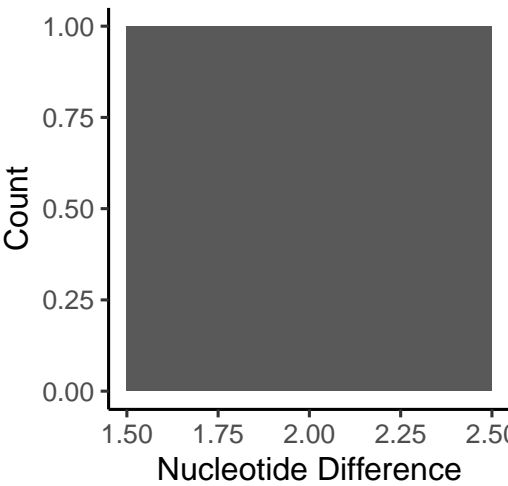
IGHV4-31\*03

539 sequences assigned  
441 (81.8%) exact matches, in which:  
419 unique CDR3  
6 unique J



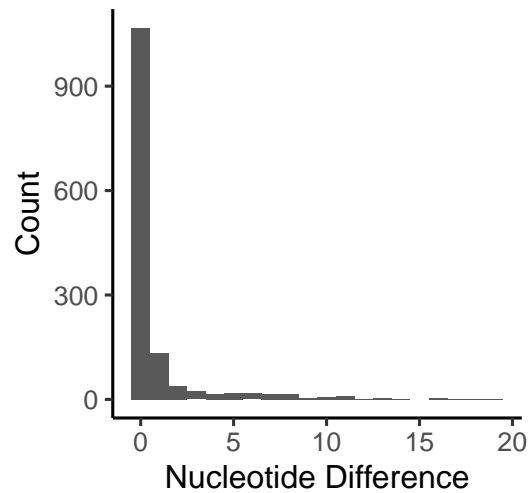
IGHV4-55\*08

1 sequences assigned  
No exact matches.



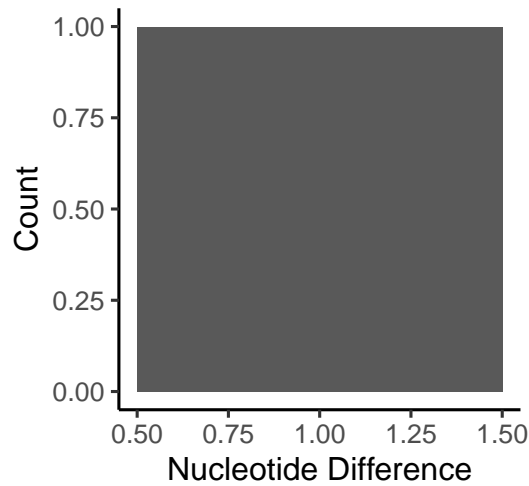
### IGHV4–59\*01

1384 sequences assigned  
1068 (77.2%) exact matches, in which:  
1013 unique CDR3  
6 unique J



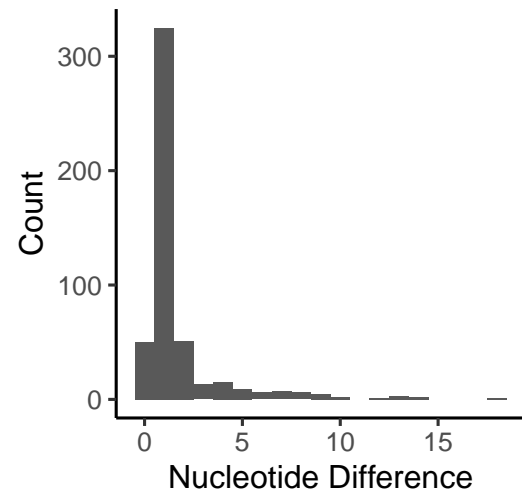
### IGHV1/OR15–1\*03

1 sequences assigned  
No exact matches.



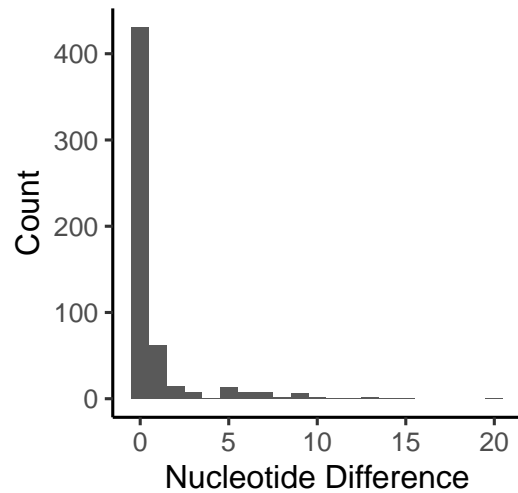
### IGHV5–51\*01

496 sequences assigned  
50 (10.1%) exact matches, in which:  
50 unique CDR3  
5 unique J



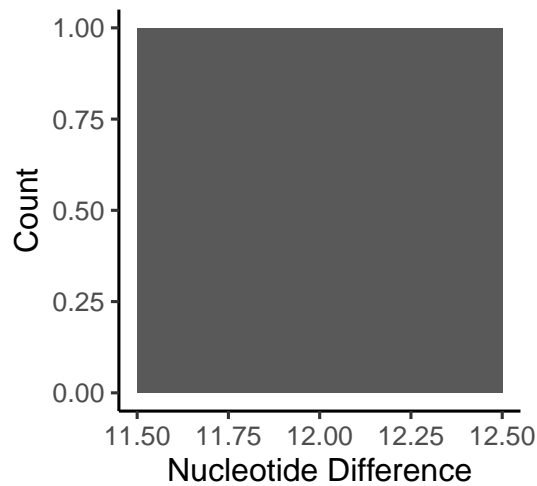
### IGHV4–59\*08

563 sequences assigned  
431 (76.6%) exact matches, in which:  
414 unique CDR3  
6 unique J



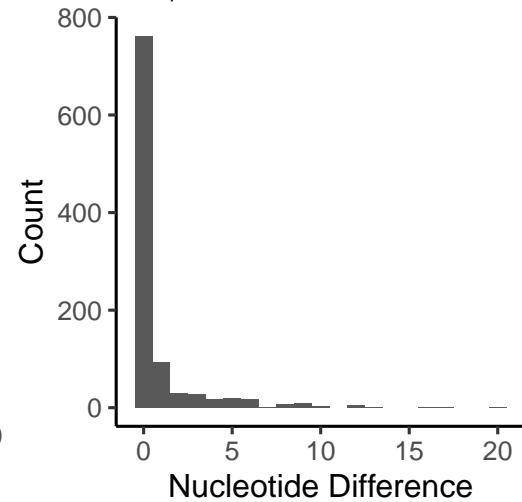
### IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



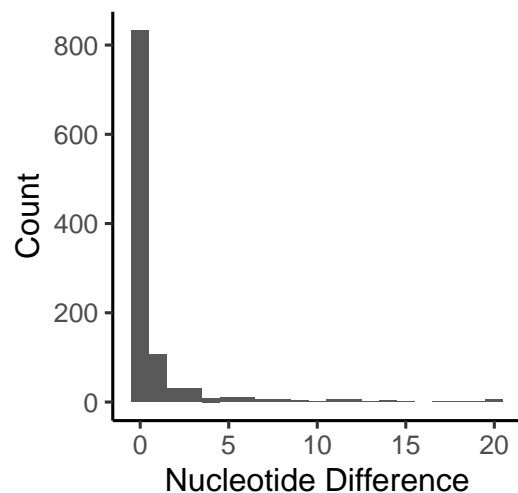
### IGHV5–51\*03

1008 sequences assigned  
762 (75.6%) exact matches, in which:  
716 unique CDR3  
6 unique J



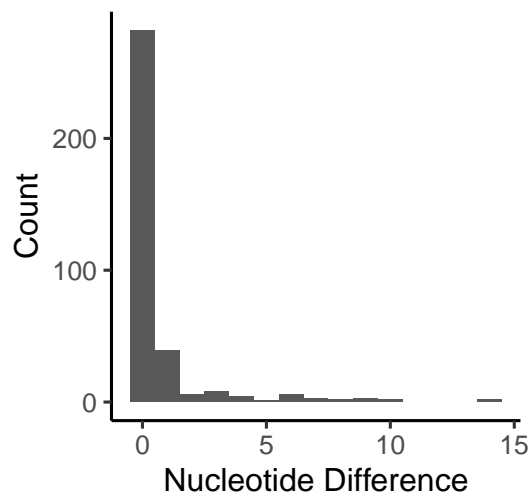
### IGHV4–61\*02

1086 sequences assigned  
833 (76.7%) exact matches, in which:  
807 unique CDR3  
6 unique J



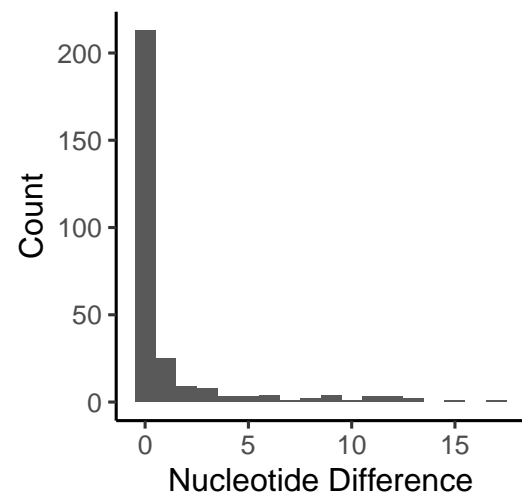
### IGHV5–10–1\*01

358 sequences assigned  
282 (78.8%) exact matches, in which:  
266 unique CDR3  
5 unique J



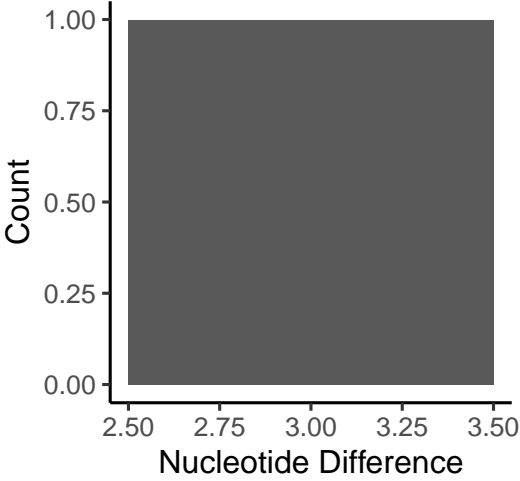
### IGHV6–1\*01

285 sequences assigned  
213 (74.7%) exact matches, in which:  
202 unique CDR3  
6 unique J



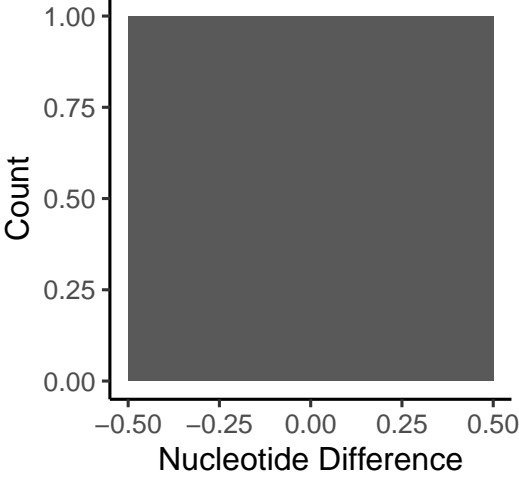
IGHV3/OR16-6\*02

1 sequences assigned  
No exact matches.



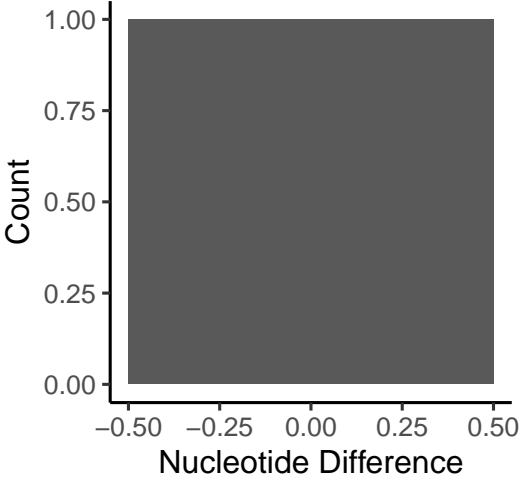
IGHV7-81\*01

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



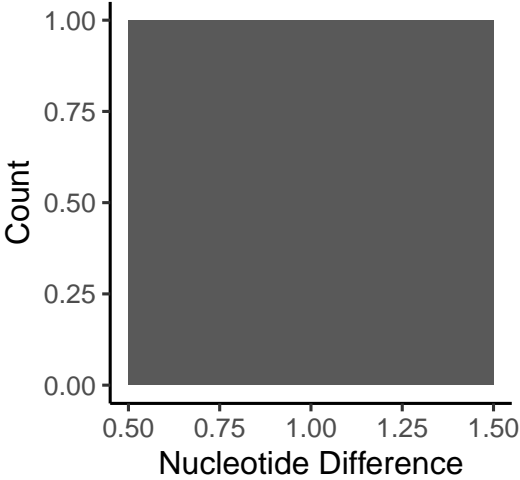
IGHV3/OR16-9\*01

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



IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.

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