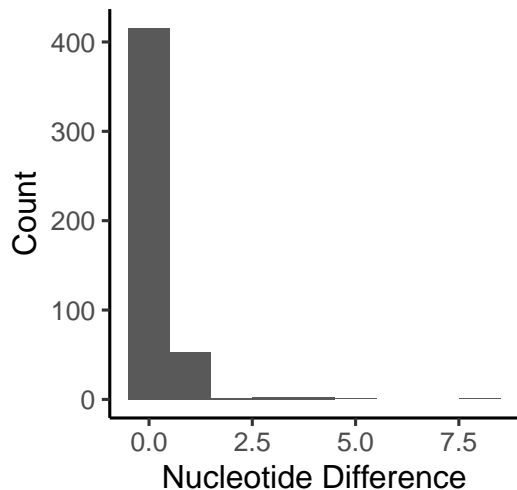


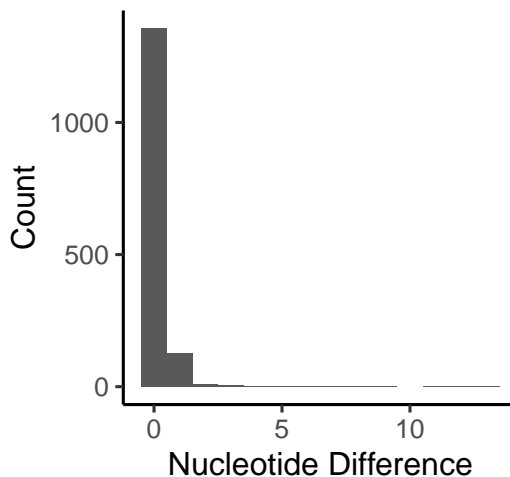
### IGHV1-2\*04

479 sequences assigned  
416 (86.8%) exact matches, in which:  
387 unique CDR3  
6 unique J



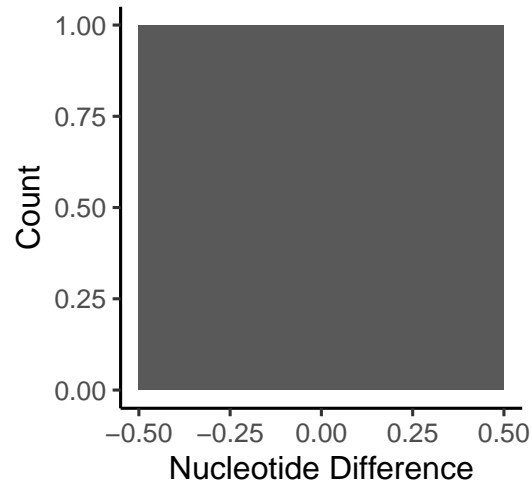
### IGHV1-8\*01

1515 sequences assigned  
1356 (89.5%) exact matches, in which:  
1238 unique CDR3  
6 unique J



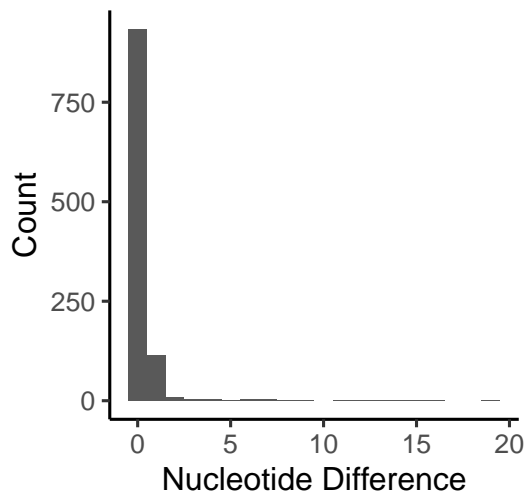
### IGHV1-45\*03

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



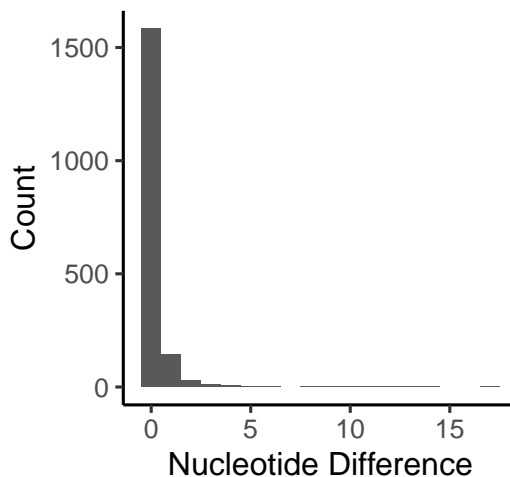
### IGHV1-2\*06

1090 sequences assigned  
934 (85.7%) exact matches, in which:  
851 unique CDR3  
6 unique J



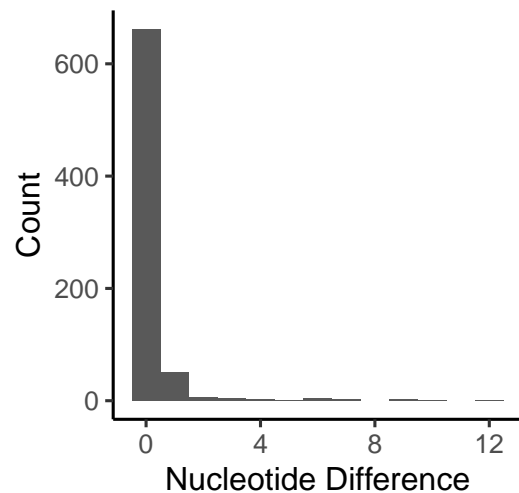
### IGHV1-18\*01

1799 sequences assigned  
1583 (88%) exact matches, in which:  
1476 unique CDR3  
6 unique J



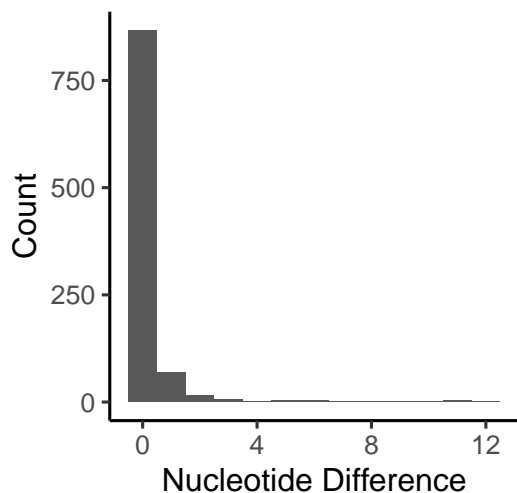
### IGHV1-46\*01

739 sequences assigned  
662 (89.6%) exact matches, in which:  
603 unique CDR3  
6 unique J



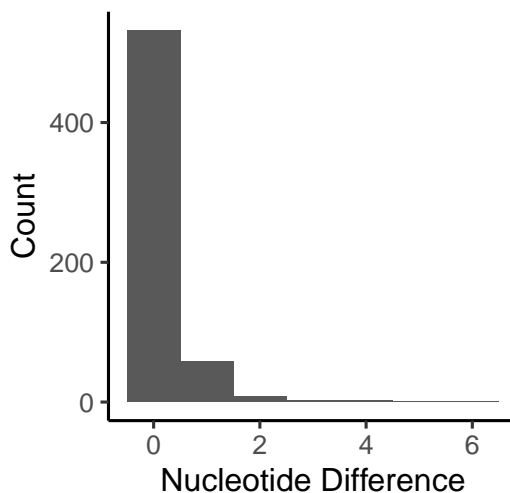
### IGHV1-3\*01

979 sequences assigned  
867 (88.6%) exact matches, in which:  
813 unique CDR3  
6 unique J



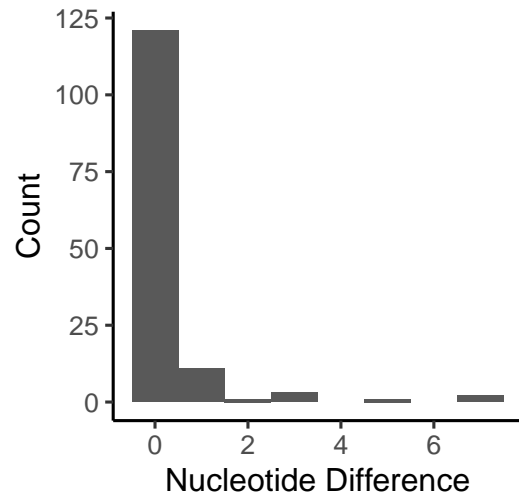
### IGHV1-24\*01

605 sequences assigned  
532 (87.9%) exact matches, in which:  
494 unique CDR3  
6 unique J



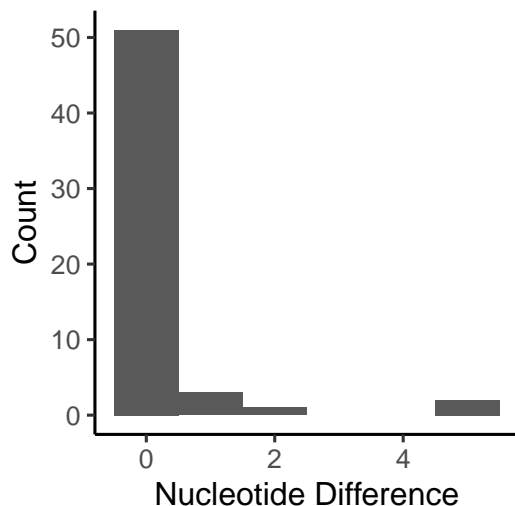
### IGHV1-58\*01

139 sequences assigned  
121 (87.1%) exact matches, in which:  
112 unique CDR3  
5 unique J



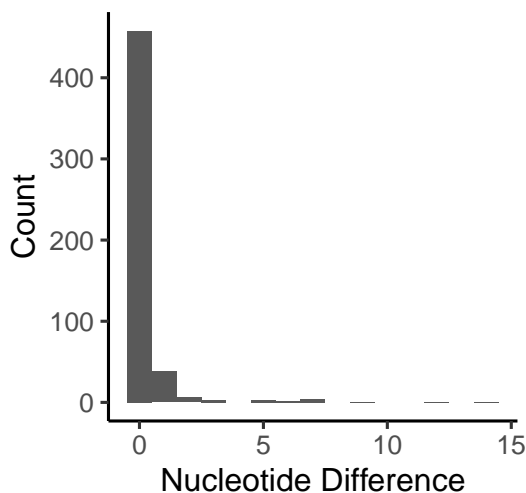
## IGHV1-58\*02

57 sequences assigned  
51 (89.5%) exact matches, in which:  
47 unique CDR3  
4 unique J



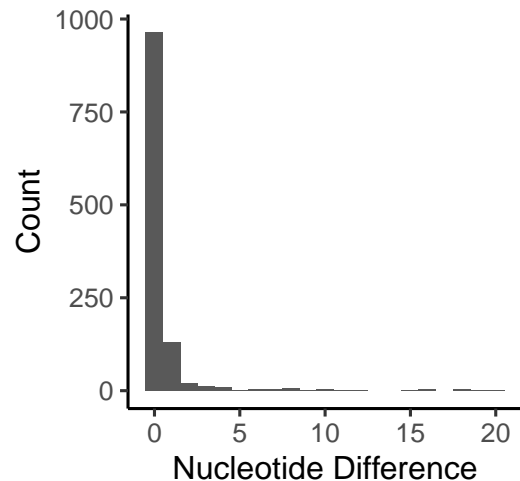
## IGHV2-26\*01

518 sequences assigned  
458 (88.4%) exact matches, in which:  
430 unique CDR3  
6 unique J



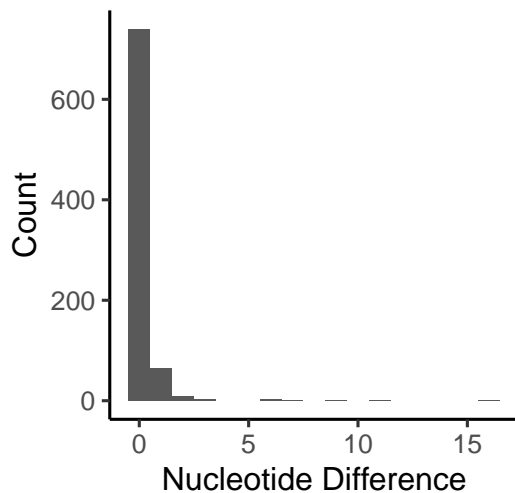
## IGHV3-7\*01

1177 sequences assigned  
964 (81.9%) exact matches, in which:  
884 unique CDR3  
6 unique J



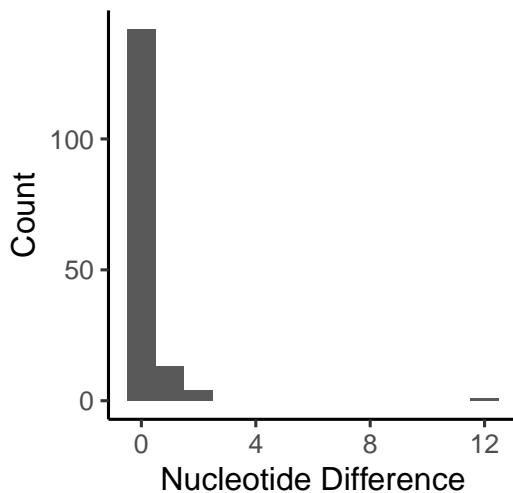
## IGHV1-69\*04

822 sequences assigned  
740 (90%) exact matches, in which:  
676 unique CDR3  
6 unique J



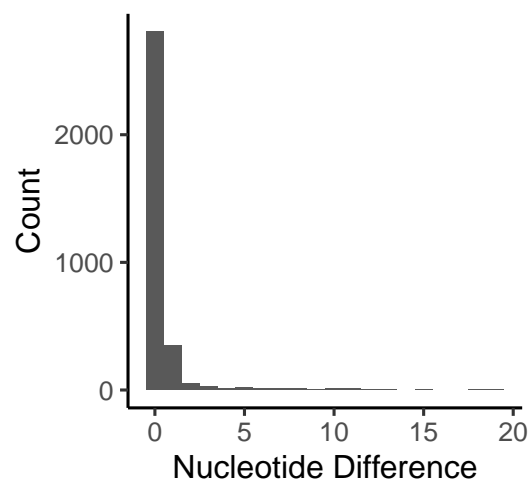
## IGHV2-70\*01

160 sequences assigned  
142 (88.8%) exact matches, in which:  
138 unique CDR3  
5 unique J



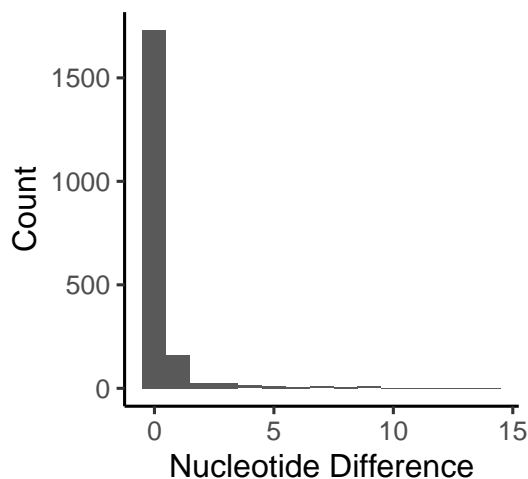
## IGHV3-9\*01

3331 sequences assigned  
2807 (84.3%) exact matches, in which:  
2452 unique CDR3  
6 unique J



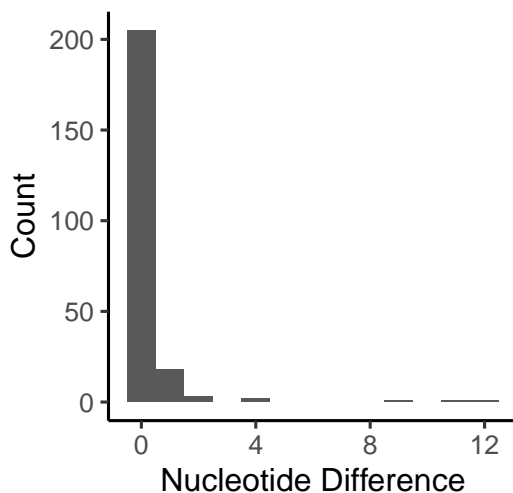
## IGHV2-5\*02

2010 sequences assigned  
1731 (86.1%) exact matches, in which:  
1615 unique CDR3  
6 unique J



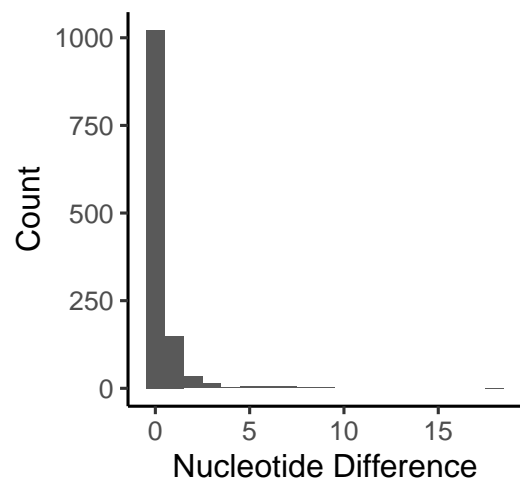
## IGHV2-70\*15

231 sequences assigned  
205 (88.7%) exact matches, in which:  
198 unique CDR3  
6 unique J



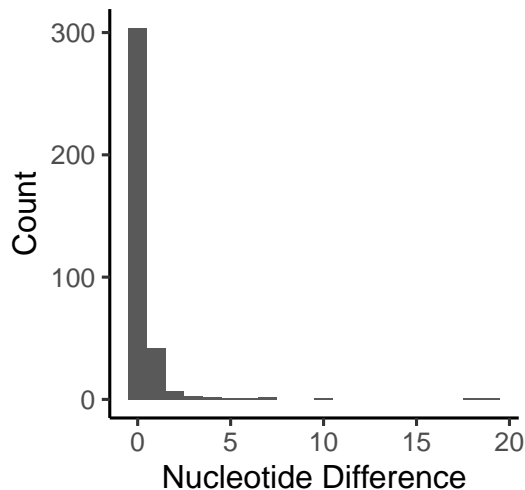
## IGHV3-11\*01

1243 sequences assigned  
1022 (82.2%) exact matches, in which:  
928 unique CDR3  
6 unique J



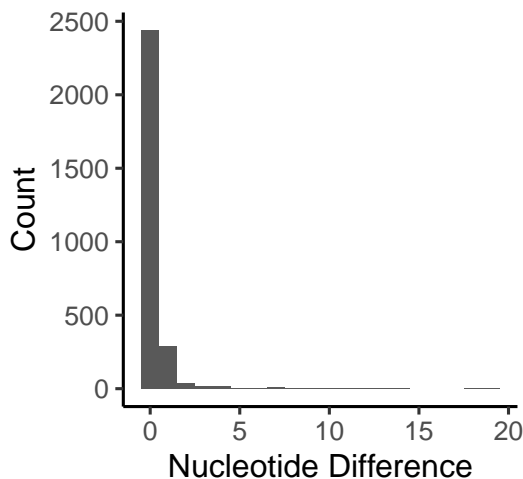
### IGHV3-13\*01

365 sequences assigned  
304 (83.3%) exact matches, in which:  
265 unique CDR3  
6 unique J



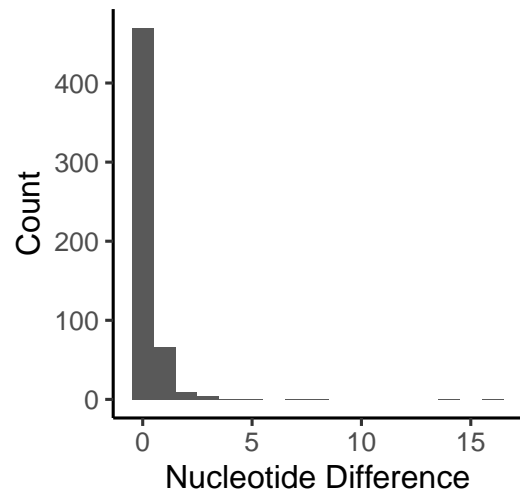
### IGHV3-21\*01

2836 sequences assigned  
2438 (86%) exact matches, in which:  
2156 unique CDR3  
6 unique J



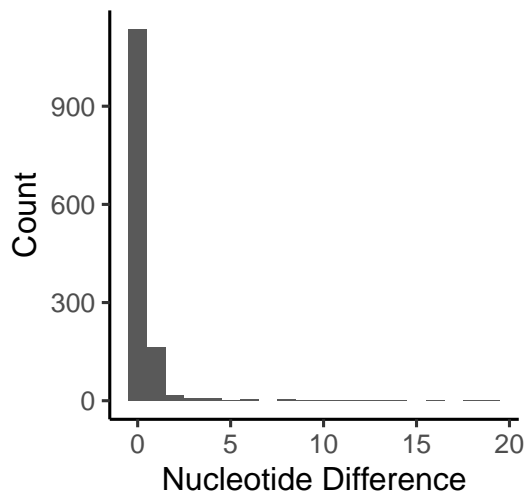
### IGHV3-43\*02

555 sequences assigned  
470 (84.7%) exact matches, in which:  
412 unique CDR3  
6 unique J



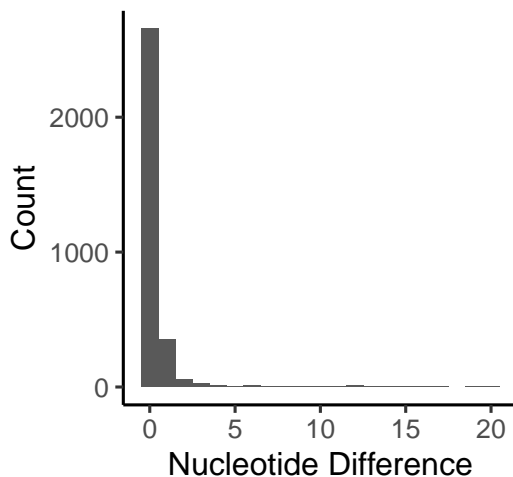
### IGHV3-15\*01

1355 sequences assigned  
1136 (83.8%) exact matches, in which:  
1020 unique CDR3  
6 unique J



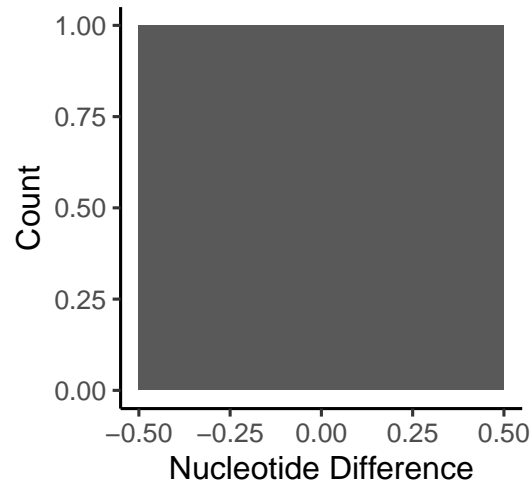
### IGHV3-30-3\*01

3164 sequences assigned  
2656 (83.9%) exact matches, in which:  
2342 unique CDR3  
6 unique J



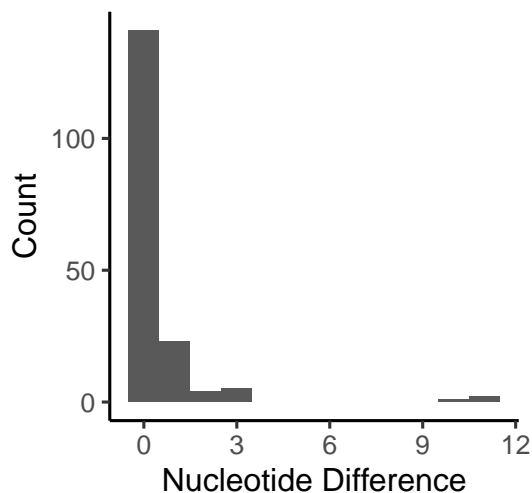
### IGHV3-47\*01

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



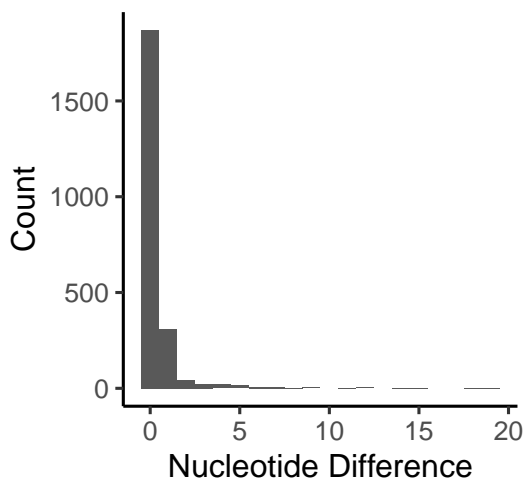
### IGHV3-20\*01

176 sequences assigned  
141 (80.1%) exact matches, in which:  
128 unique CDR3  
6 unique J



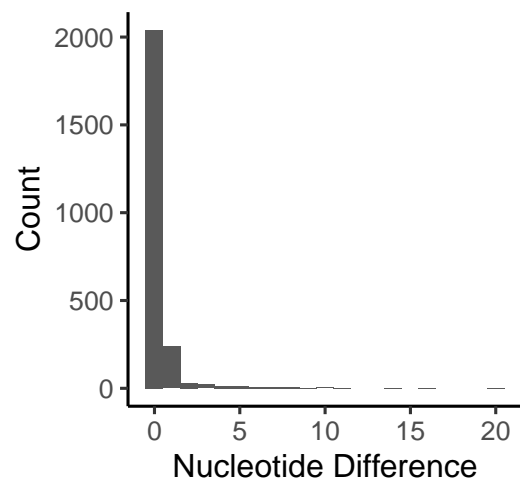
### IGHV3-33\*01

2322 sequences assigned  
1870 (80.5%) exact matches, in which:  
1670 unique CDR3  
6 unique J



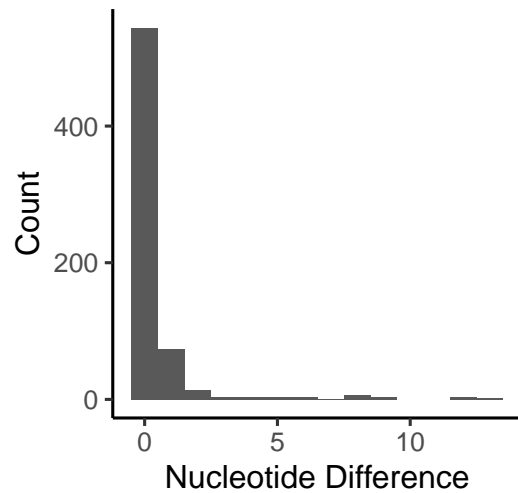
### IGHV3-48\*03

2390 sequences assigned  
2040 (85.4%) exact matches, in which:  
1833 unique CDR3  
6 unique J



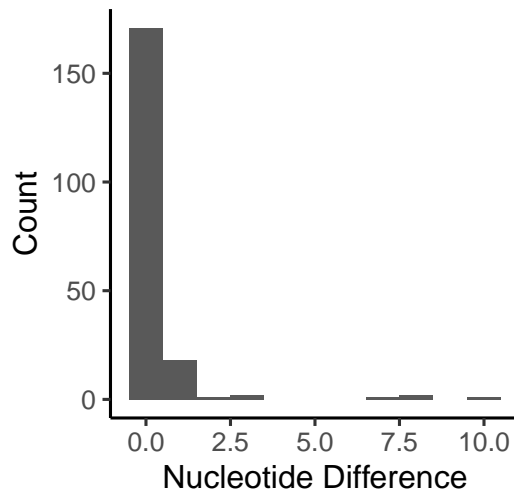
### IGHV3–49\*04

664 sequences assigned  
544 (81.9%) exact matches, in which:  
488 unique CDR3  
6 unique J



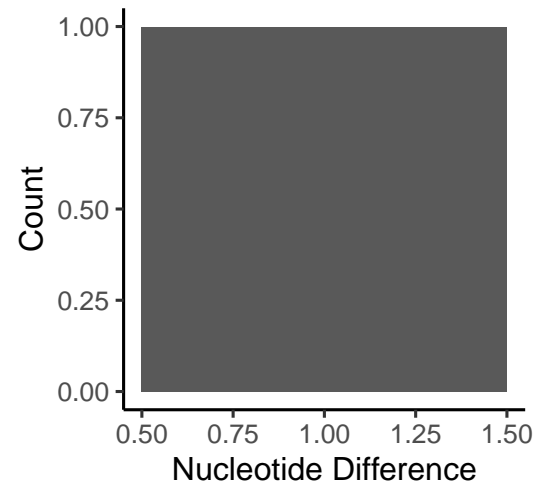
### IGHV3–53\*04

196 sequences assigned  
171 (87.2%) exact matches, in which:  
157 unique CDR3  
6 unique J



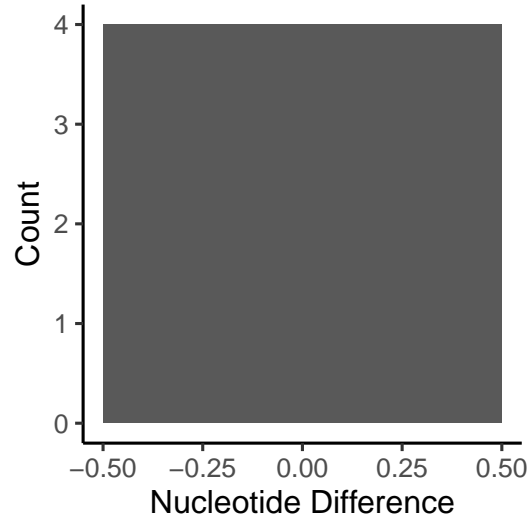
### IGHV3–69–1\*02

1 sequences assigned  
No exact matches.



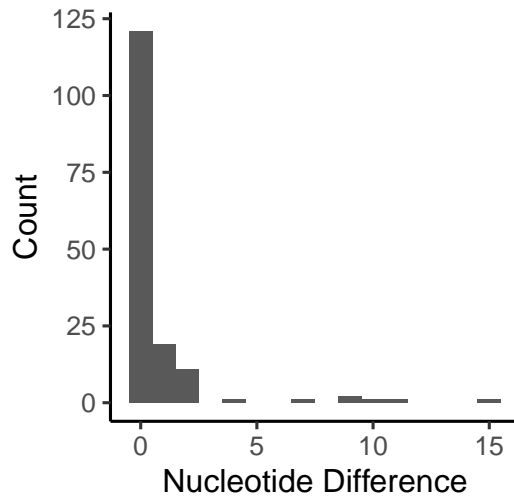
### IGHV3–52\*01

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
2 unique J



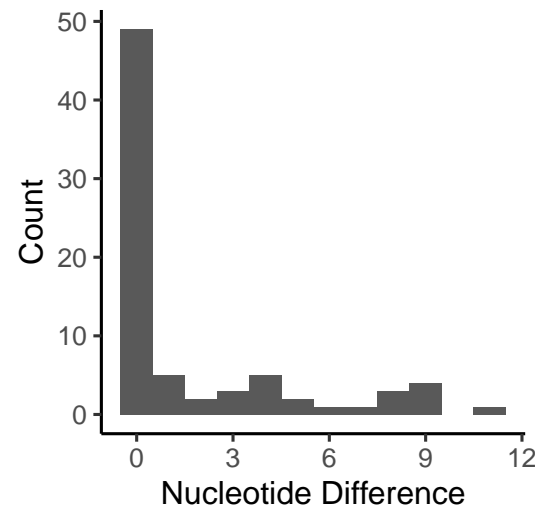
### IGHV3–64\*01

158 sequences assigned  
121 (76.6%) exact matches, in which:  
109 unique CDR3  
6 unique J



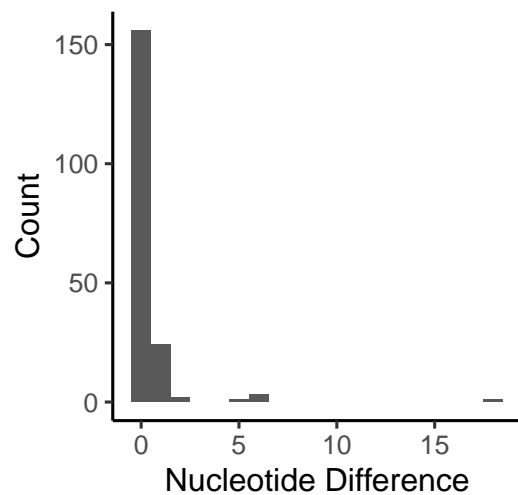
### IGHV3–72\*01

78 sequences assigned  
49 (62.8%) exact matches, in which:  
46 unique CDR3  
5 unique J



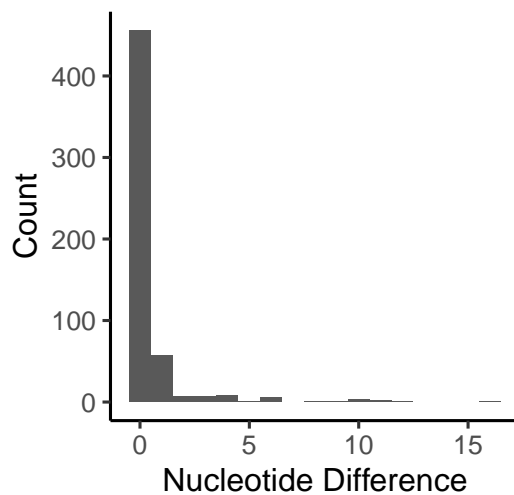
### IGHV3–53\*02

187 sequences assigned  
156 (83.4%) exact matches, in which:  
145 unique CDR3  
5 unique J



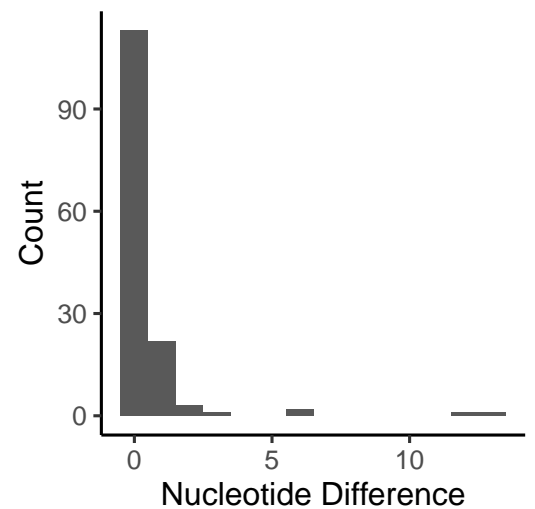
### IGHV3–66\*01

550 sequences assigned  
456 (82.9%) exact matches, in which:  
402 unique CDR3  
6 unique J



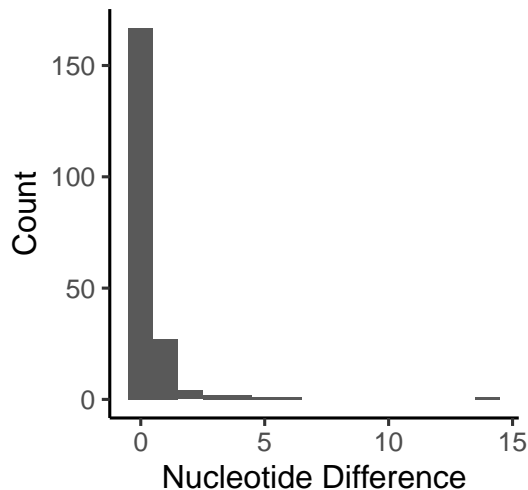
### IGHV3–73\*01

143 sequences assigned  
113 (79%) exact matches, in which:  
100 unique CDR3  
4 unique J



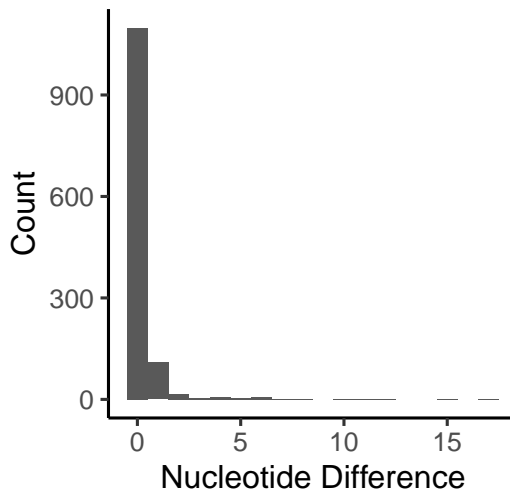
### IGHV3-73\*02

205 sequences assigned  
167 (81.5%) exact matches, in which:  
155 unique CDR3  
6 unique J



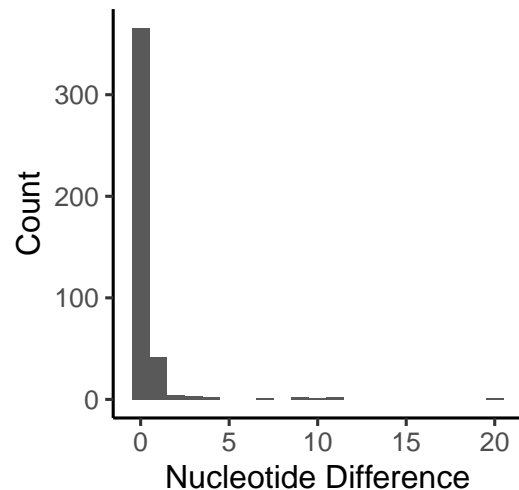
### IGHV4-4\*02

1258 sequences assigned  
1099 (87.4%) exact matches, in which:  
999 unique CDR3  
6 unique J



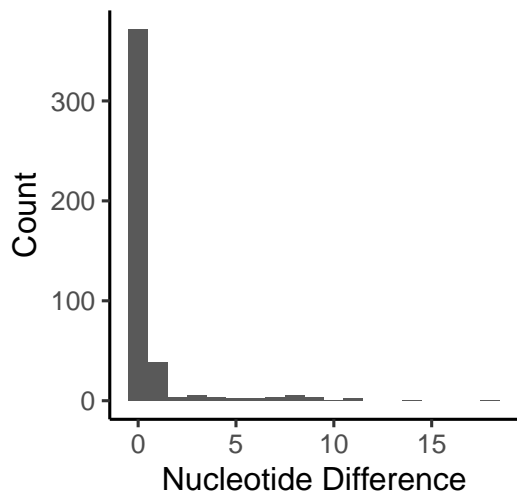
### IGHV4-30-2\*01

424 sequences assigned  
366 (86.3%) exact matches, in which:  
340 unique CDR3  
6 unique J



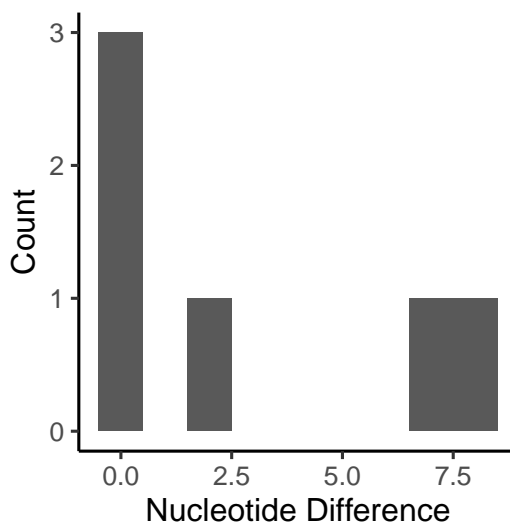
### IGHV3-74\*01

451 sequences assigned  
372 (82.5%) exact matches, in which:  
344 unique CDR3  
6 unique J



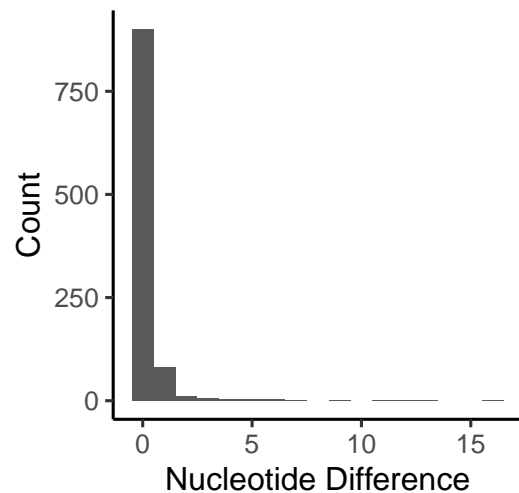
### IGHV4-28\*01

6 sequences assigned  
3 (50%) exact matches, in which:  
3 unique CDR3  
2 unique J



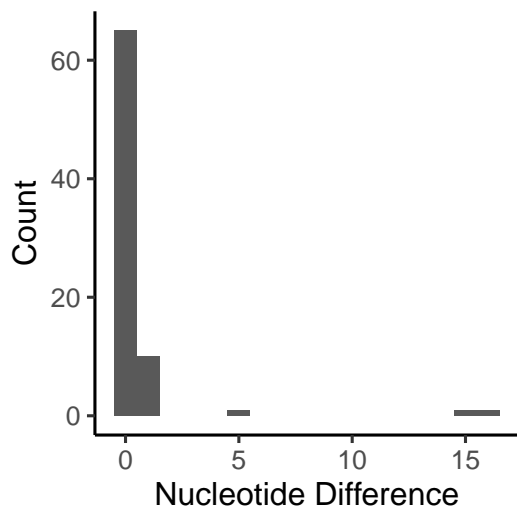
### IGHV4-30-4\*01

1016 sequences assigned  
901 (88.7%) exact matches, in which:  
840 unique CDR3  
6 unique J



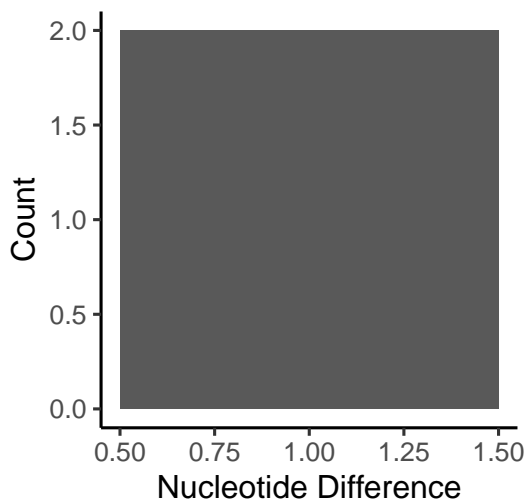
### IGHV3-43D\*04

78 sequences assigned  
65 (83.3%) exact matches, in which:  
58 unique CDR3  
4 unique J



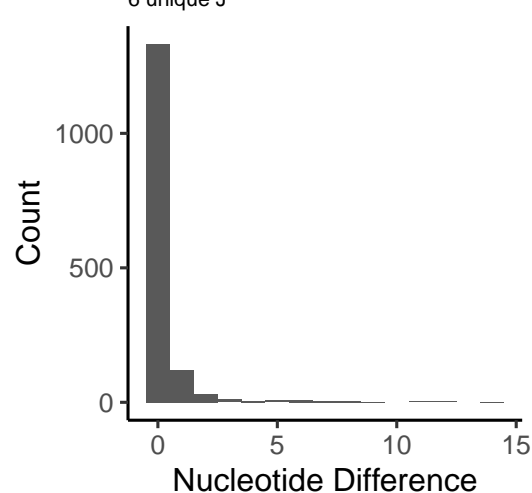
### IGHV4-28\*04

2 sequences assigned  
No exact matches.



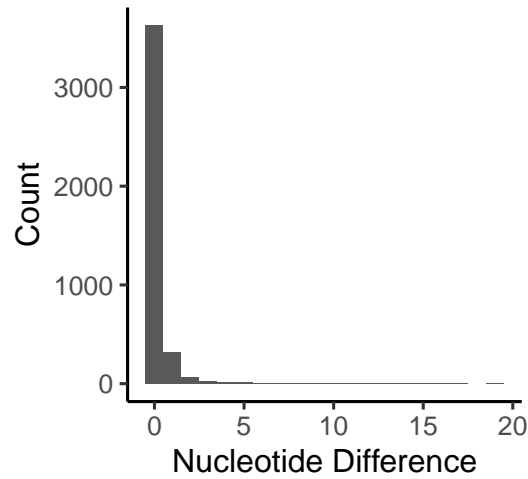
### IGHV4-31\*03

1530 sequences assigned  
1332 (87.1%) exact matches, in which:  
1228 unique CDR3  
6 unique J



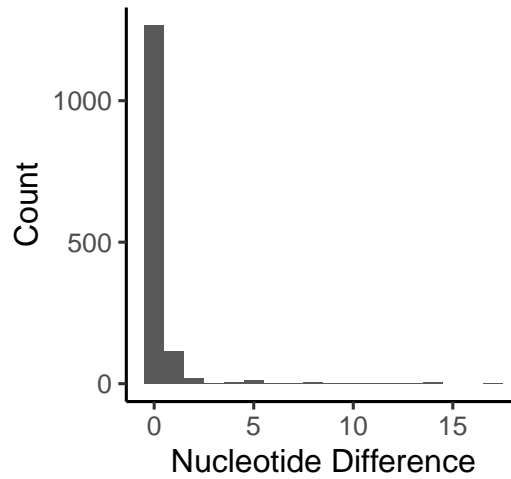
### IGHV4–34\*01

4111 sequences assigned  
3628 (88.3%) exact matches, in which:  
3248 unique CDR3  
6 unique J



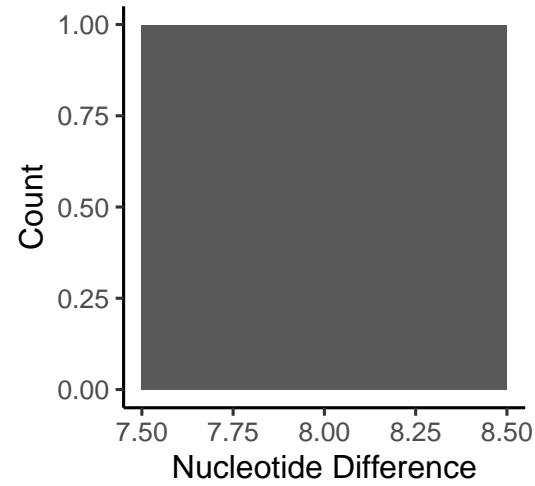
### IGHV4–59\*01

1445 sequences assigned  
1266 (87.6%) exact matches, in which:  
1190 unique CDR3  
6 unique J



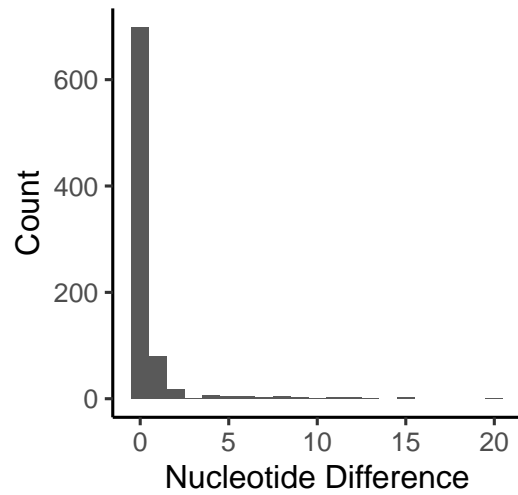
### IGHV1/OR15–2\*01

1 sequences assigned  
No exact matches.



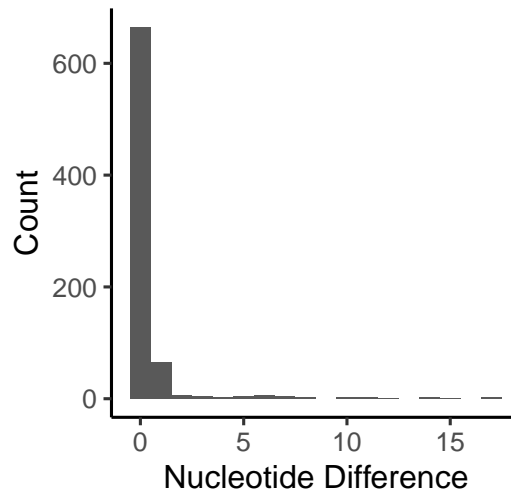
### IGHV4–38–2\*02\_A70G

832 sequences assigned  
699 (84%) exact matches, in which:  
624 unique CDR3  
6 unique J



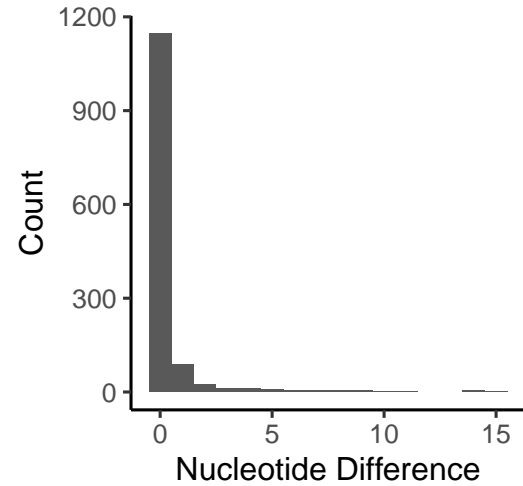
### IGHV4–59\*08

775 sequences assigned  
665 (85.8%) exact matches, in which:  
617 unique CDR3  
6 unique J



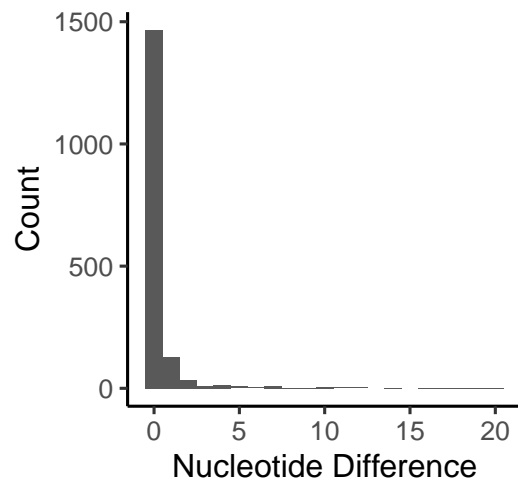
### IGHV5–51\*01

1318 sequences assigned  
1146 (86.9%) exact matches, in which:  
1044 unique CDR3  
6 unique J



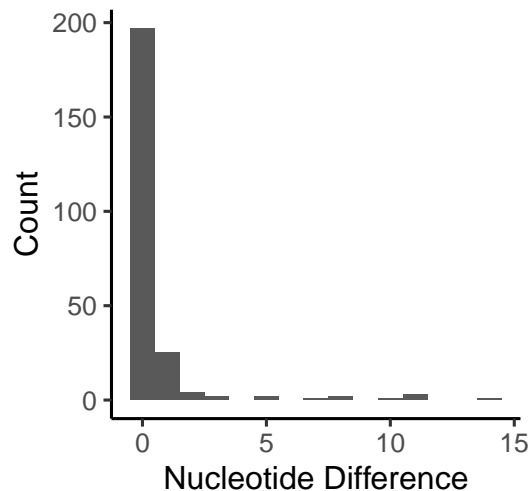
### IGHV4–39\*01

1694 sequences assigned  
1466 (86.5%) exact matches, in which:  
1315 unique CDR3  
6 unique J



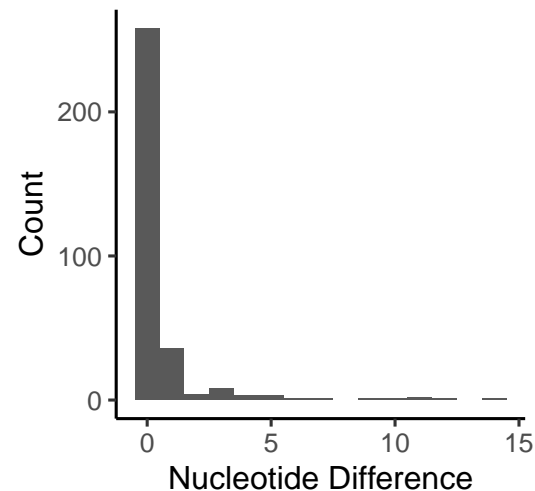
### IGHV4–61\*01

238 sequences assigned  
197 (82.8%) exact matches, in which:  
190 unique CDR3  
6 unique J



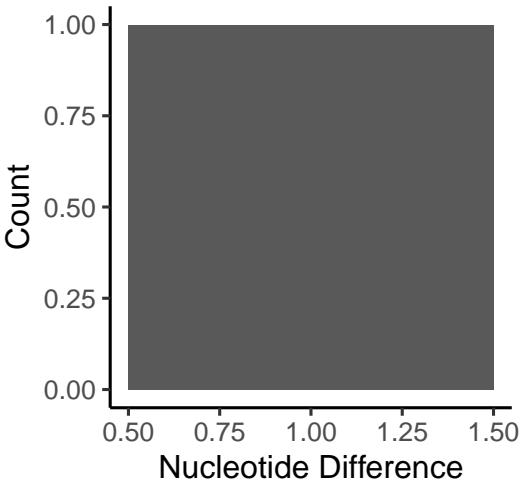
### IGHV6–1\*01

320 sequences assigned  
258 (80.6%) exact matches, in which:  
236 unique CDR3  
6 unique J



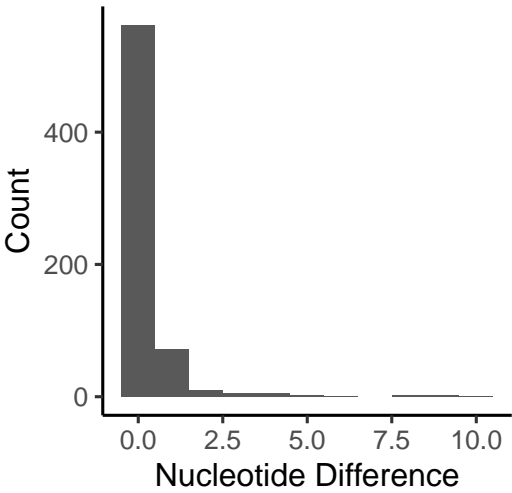
IGHV3/OR16-12\*01

1 sequences assigned  
No exact matches.



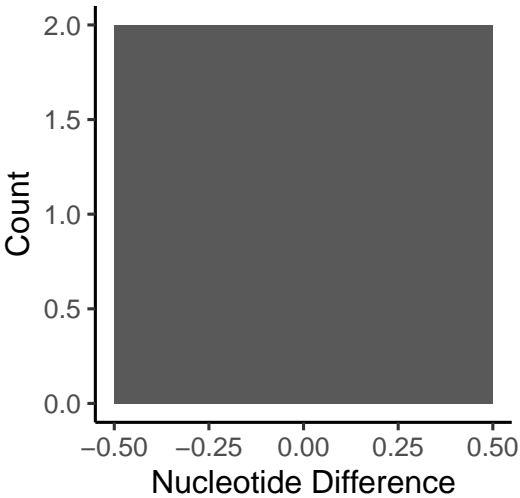
IGHV7-4-1\*02

663 sequences assigned  
562 (84.8%) exact matches, in which:  
524 unique CDR3  
6 unique J



IGHV7-81\*01

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







Warning – no inferred sequences found.