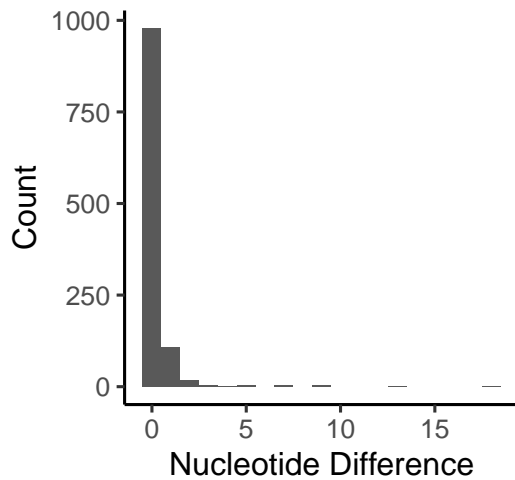


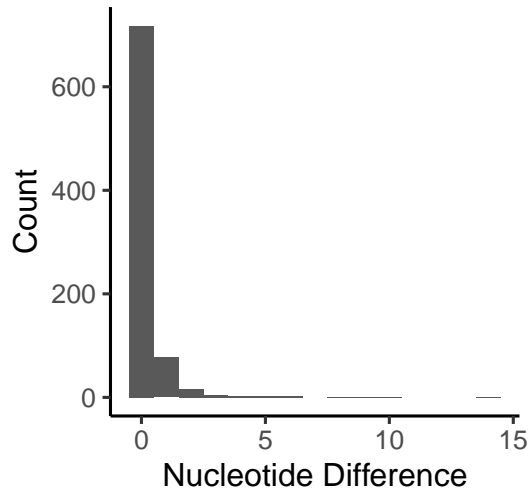
### IGHV1-2\*04

1127 sequences assigned  
978 (86.8%) exact matches, in which:  
871 unique CDR3  
6 unique J



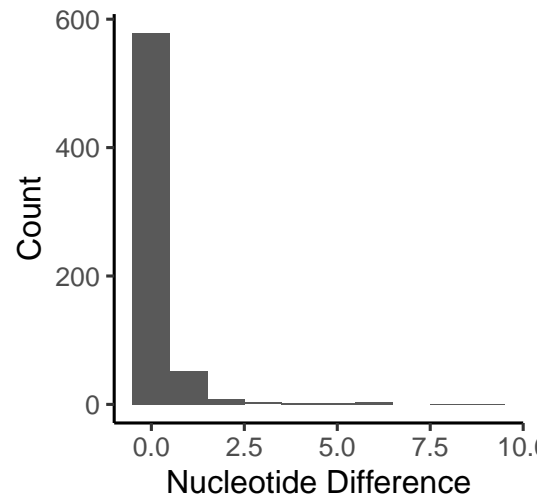
### IGHV1-18\*04

827 sequences assigned  
718 (86.8%) exact matches, in which:  
664 unique CDR3  
6 unique J



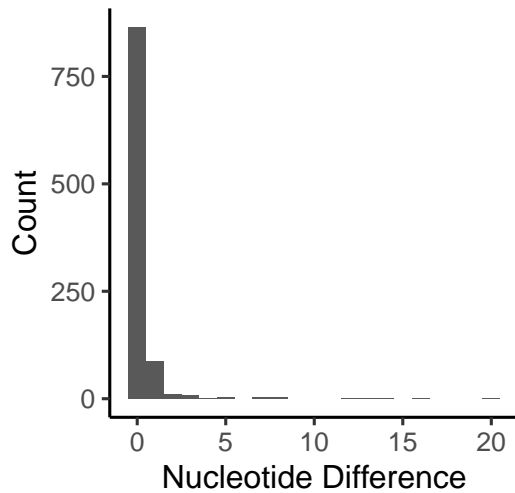
### IGHV1-46\*01

652 sequences assigned  
579 (88.8%) exact matches, in which:  
505 unique CDR3  
6 unique J



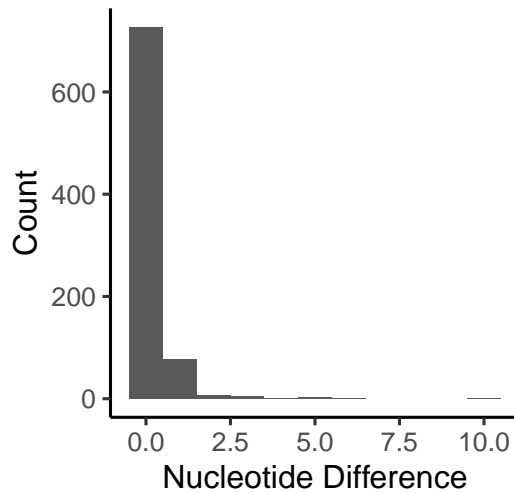
### IGHV1-3\*01

988 sequences assigned  
865 (87.6%) exact matches, in which:  
795 unique CDR3  
6 unique J



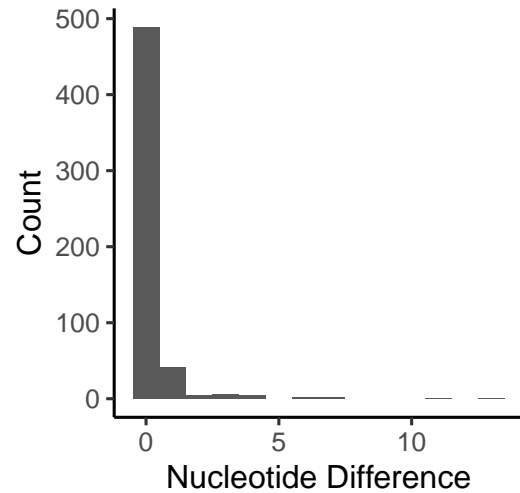
### IGHV1-24\*01

820 sequences assigned  
727 (88.7%) exact matches, in which:  
649 unique CDR3  
6 unique J



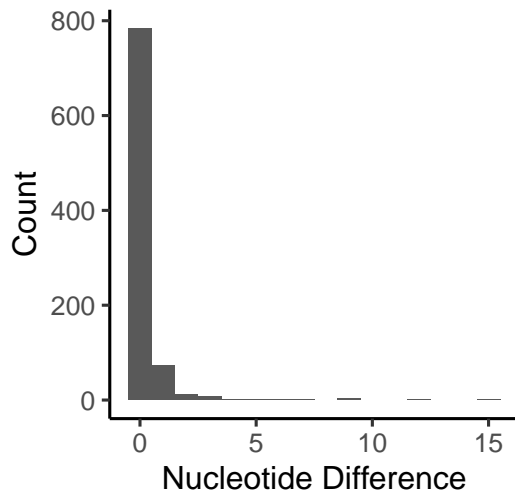
### IGHV1-46\*03

554 sequences assigned  
489 (88.3%) exact matches, in which:  
429 unique CDR3  
6 unique J



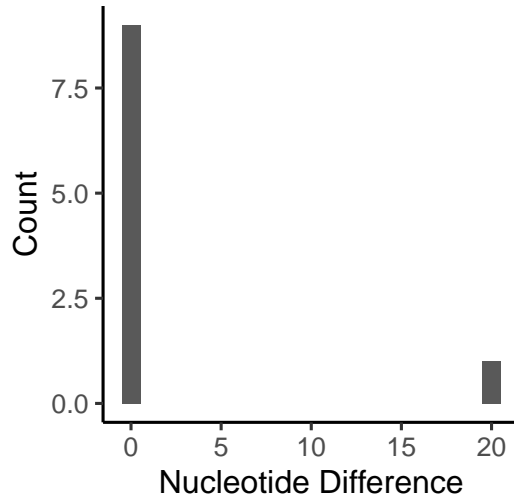
### IGHV1-18\*01

889 sequences assigned  
784 (88.2%) exact matches, in which:  
735 unique CDR3  
6 unique J



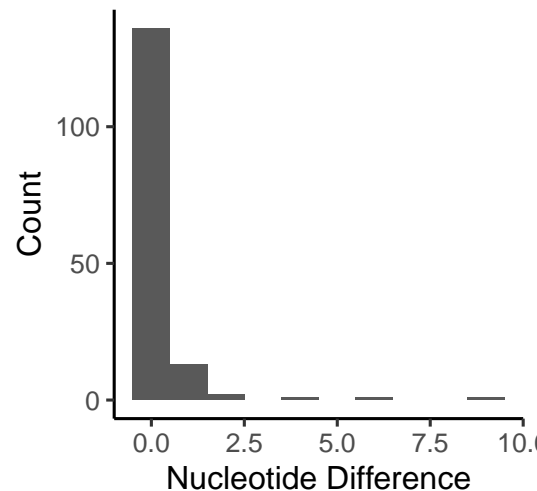
### IGHV1-45\*02

10 sequences assigned  
9 (90%) exact matches, in which:  
8 unique CDR3  
4 unique J



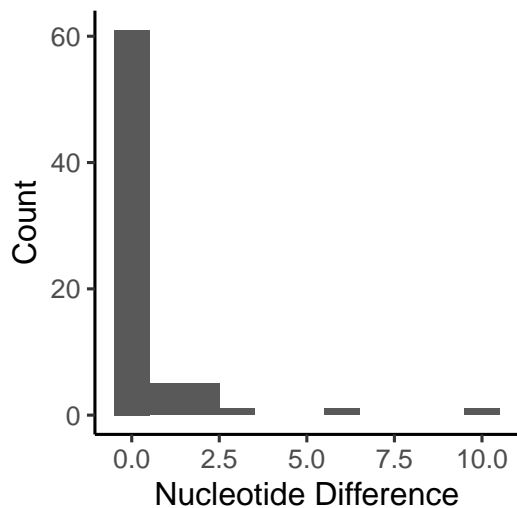
### IGHV1-58\*01

154 sequences assigned  
136 (88.3%) exact matches, in which:  
127 unique CDR3  
5 unique J



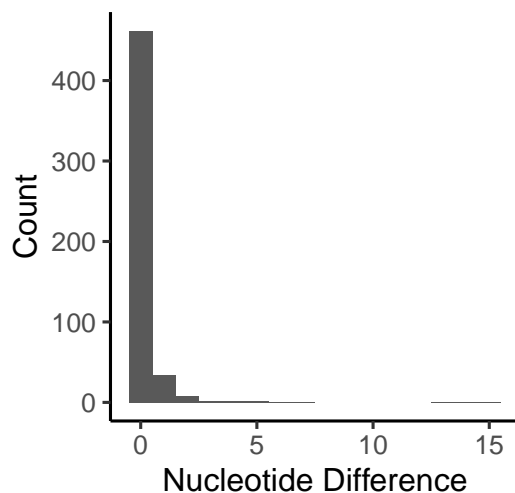
## IGHV1-58\*02

74 sequences assigned  
61 (82.4%) exact matches, in which:  
56 unique CDR3  
5 unique J



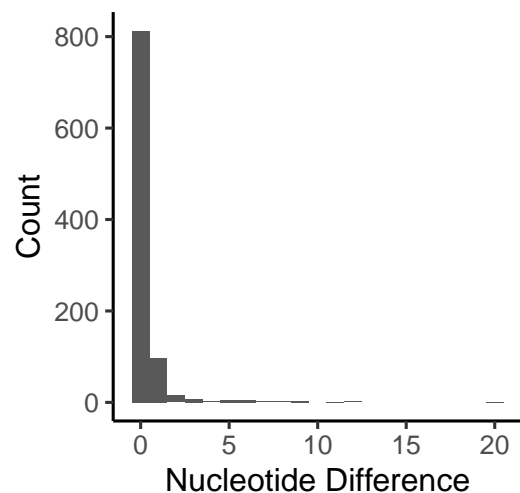
## IGHV2-26\*01

515 sequences assigned  
462 (89.7%) exact matches, in which:  
435 unique CDR3  
6 unique J



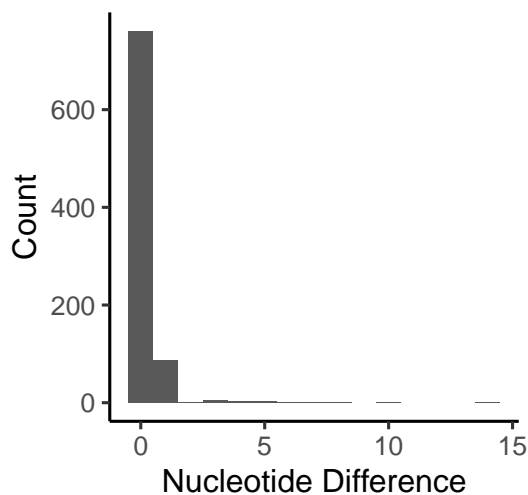
## IGHV3-7\*03

959 sequences assigned  
813 (84.8%) exact matches, in which:  
746 unique CDR3  
6 unique J



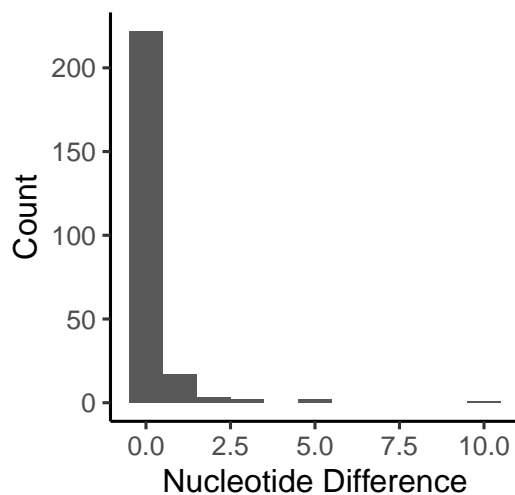
## IGHV1-69\*08\_C191T

869 sequences assigned  
761 (87.6%) exact matches, in which:  
683 unique CDR3  
6 unique J



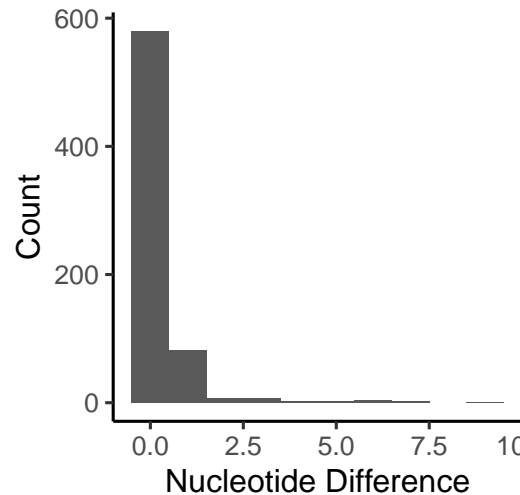
## IGHV2-70\*01

247 sequences assigned  
222 (89.9%) exact matches, in which:  
211 unique CDR3  
5 unique J



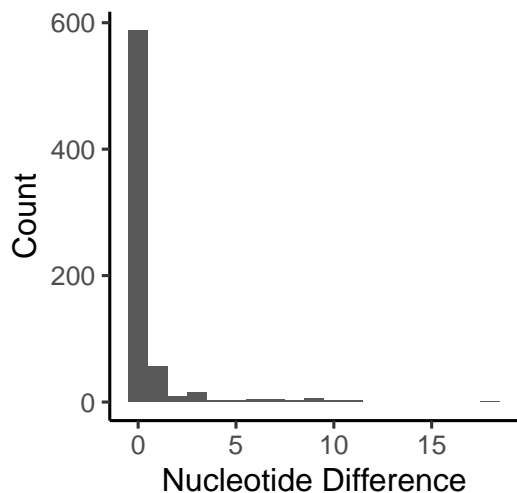
## IGHV3-11\*06

691 sequences assigned  
580 (83.9%) exact matches, in which:  
531 unique CDR3  
6 unique J



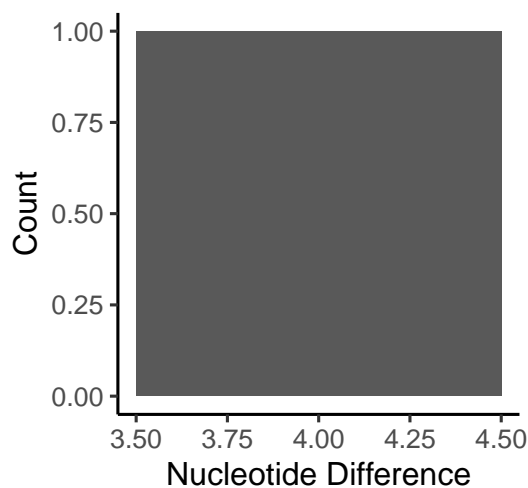
## IGHV2-5\*02

695 sequences assigned  
588 (84.6%) exact matches, in which:  
541 unique CDR3  
6 unique J



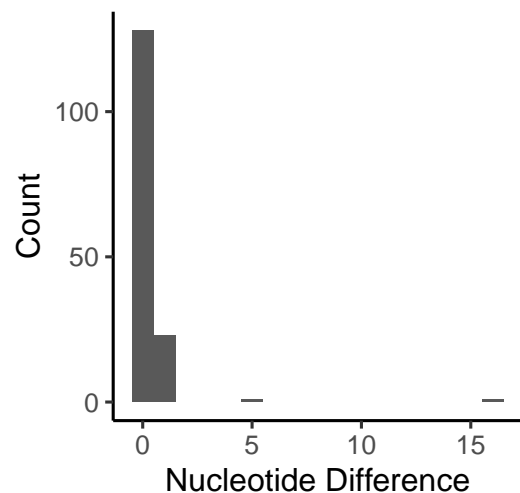
## IGHV2-70D\*04

1 sequences assigned  
No exact matches.



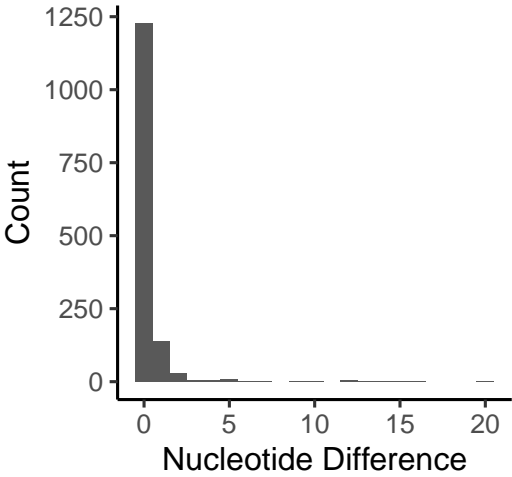
## IGHV3-13\*05

153 sequences assigned  
128 (83.7%) exact matches, in which:  
115 unique CDR3  
5 unique J



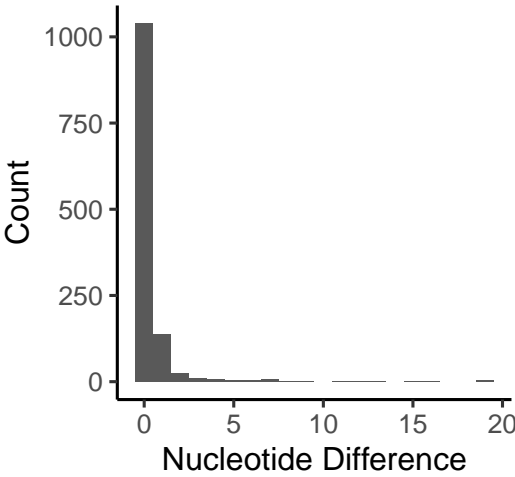
IGHV3-15\*01

1432 sequences assigned  
1227 (85.7%) exact matches, in which:  
1129 unique CDR3  
6 unique J



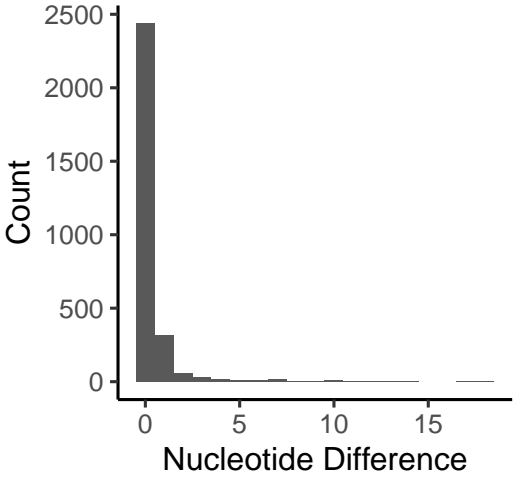
IGHV3-21\*01

1244 sequences assigned  
1039 (83.5%) exact matches, in which:  
938 unique CDR3  
6 unique J



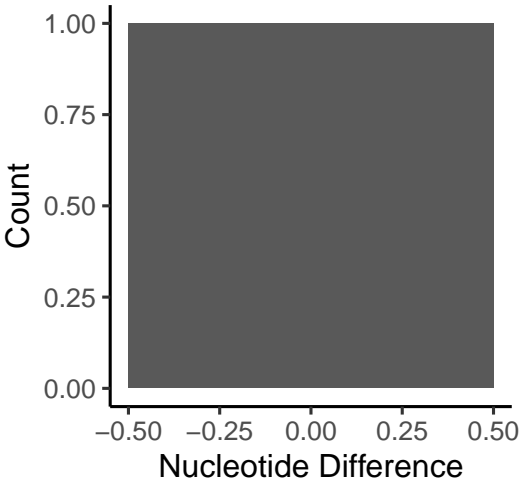
IGHV3-30\*01

2919 sequences assigned  
2438 (83.5%) exact matches, in which:  
2257 unique CDR3  
6 unique J



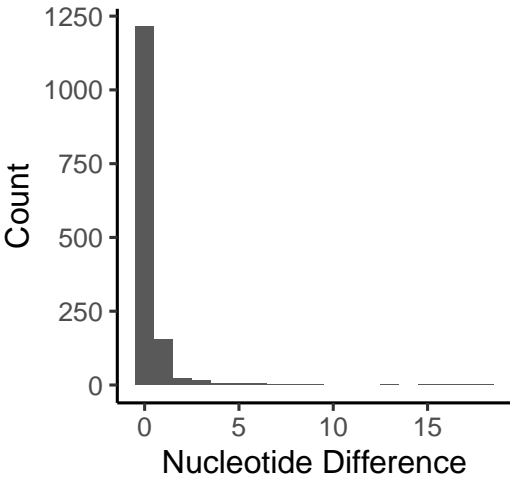
IGHV3-19\*01

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



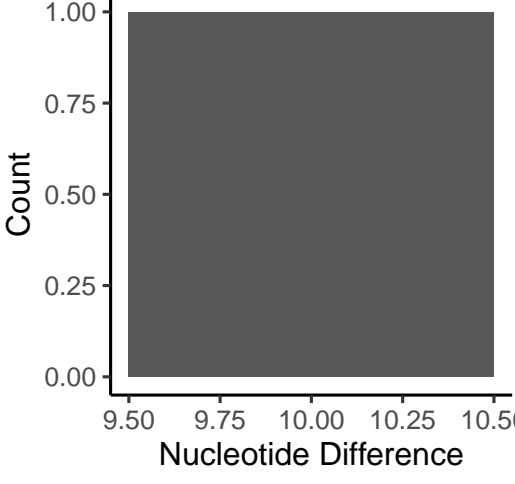
IGHV3-21\*01\_A184G\_T

1433 sequences assigned  
1214 (84.7%) exact matches, in which:  
1079 unique CDR3  
6 unique J



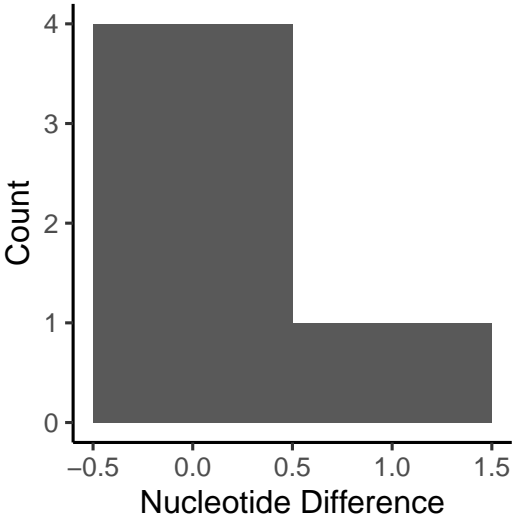
IGHV3-30-3\*01

1 sequences assigned  
No exact matches.



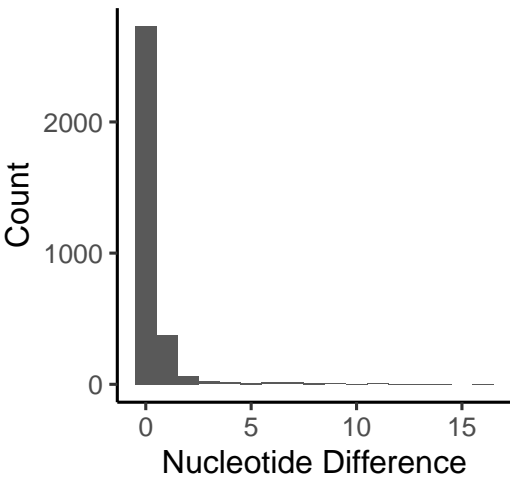
IGHV3-20\*02

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
2 unique J



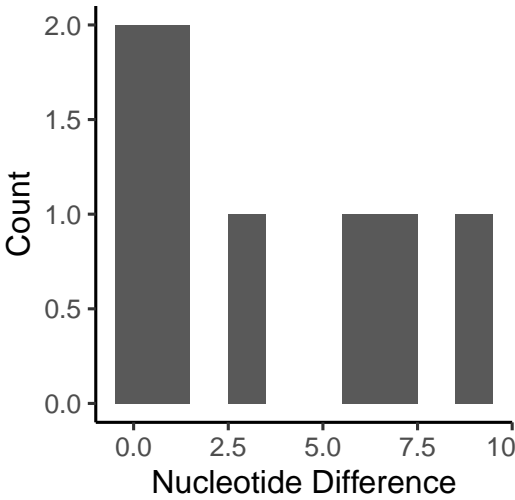
IGHV3-23\*04

3285 sequences assigned  
2731 (83.1%) exact matches, in which:  
2483 unique CDR3  
6 unique J



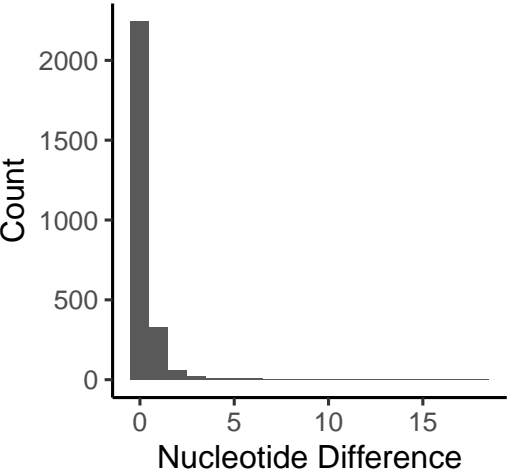
IGHV3-30-3\*03

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



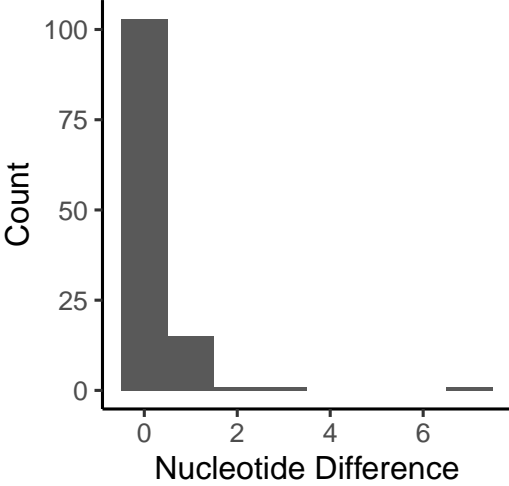
IGHV3-33\*01

2712 sequences assigned  
2244 (82.7%) exact matches, in which:  
2019 unique CDR3  
6 unique J



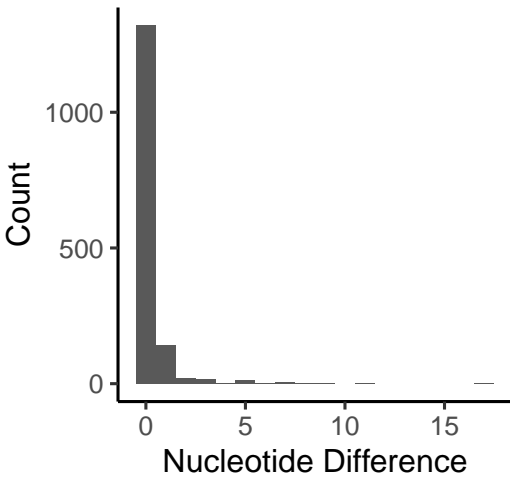
IGHV3-43\*01

121 sequences assigned  
103 (85.1%) exact matches, in which:  
96 unique CDR3  
6 unique J



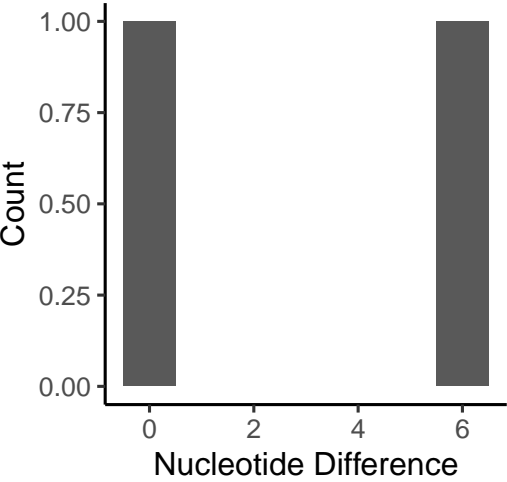
IGHV3-48\*03

1526 sequences assigned  
1320 (86.5%) exact matches, in which:  
1212 unique CDR3  
6 unique J



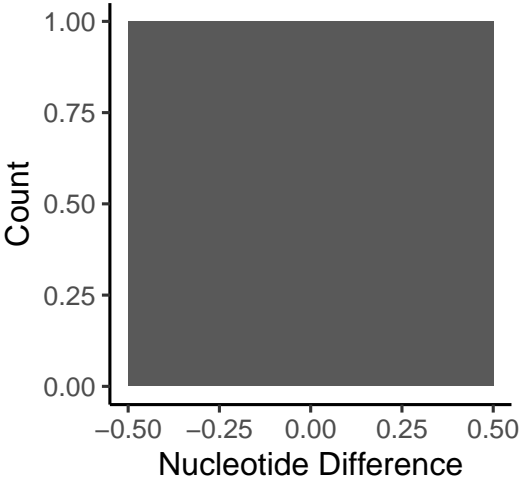
IGHV3-35\*01

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



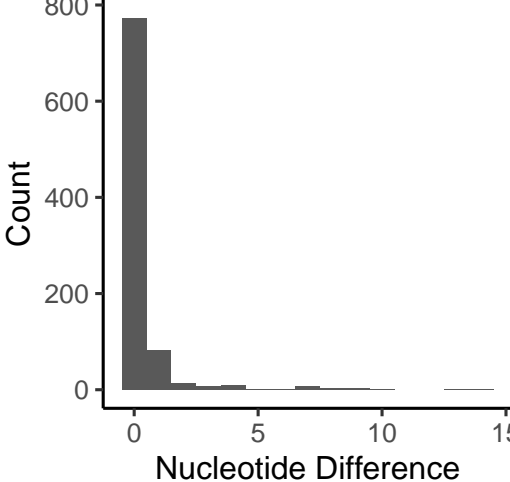
IGHV3-47\*02

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



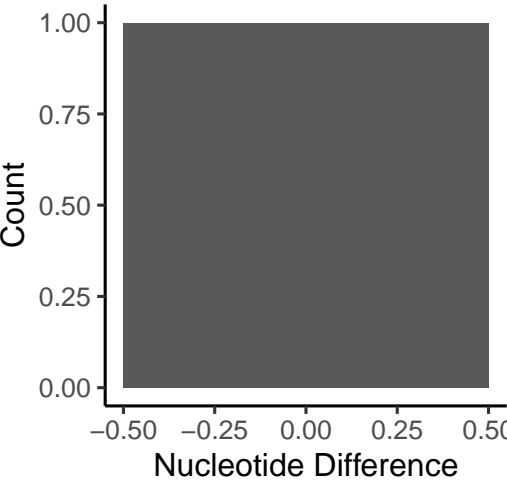
IGHV3-49\*04

908 sequences assigned  
773 (85.1%) exact matches, in which:  
682 unique CDR3  
6 unique J



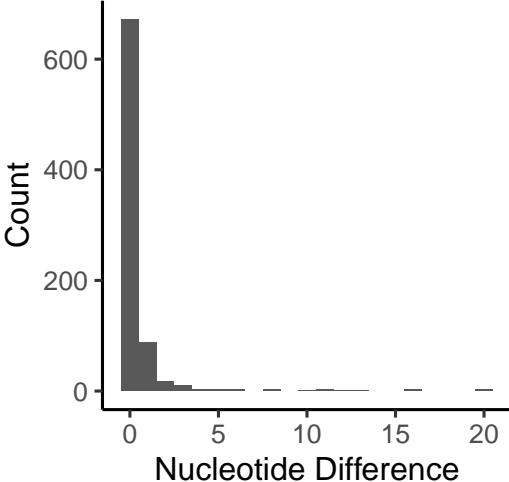
IGHV3-38-3\*01

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



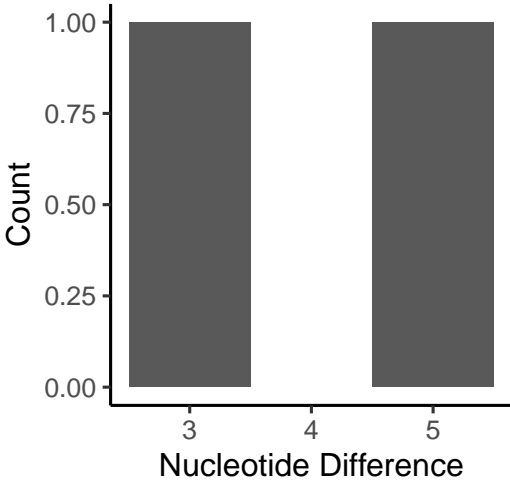
IGHV3-48\*02

806 sequences assigned  
672 (83.4%) exact matches, in which:  
614 unique CDR3  
6 unique J



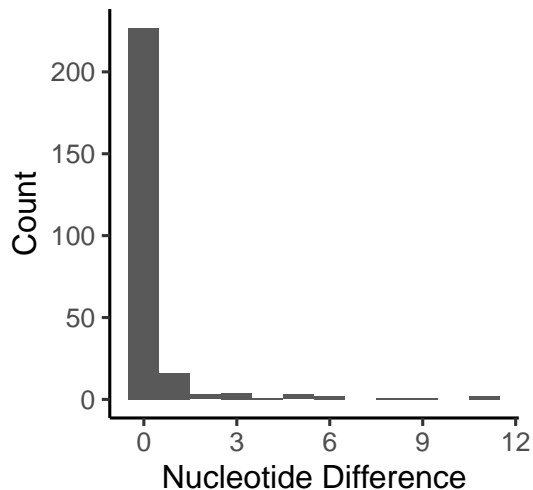
IGHV3-52\*01

3 sequences assigned  
No exact matches.



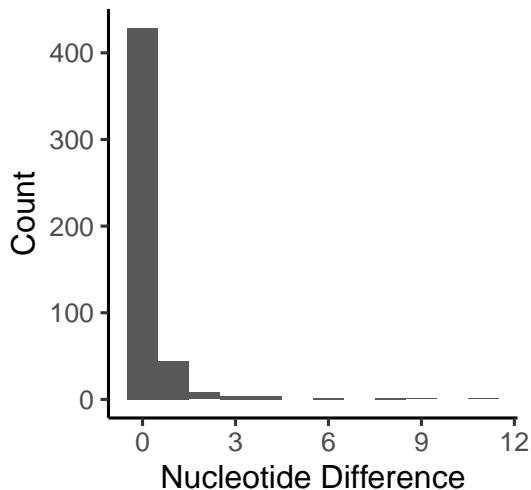
### IGHV3–53\*02

260 sequences assigned  
227 (87.3%) exact matches, in which:  
206 unique CDR3  
5 unique J



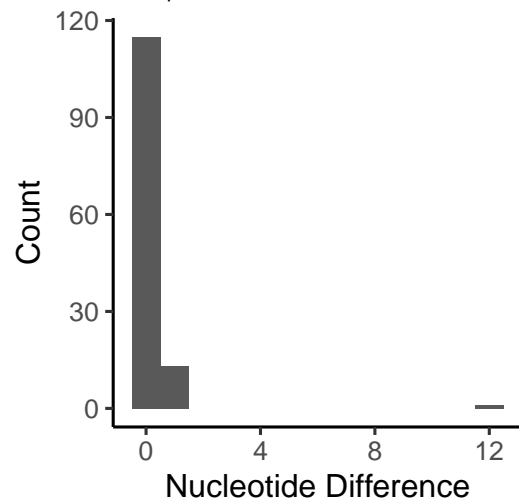
### IGHV3–66\*02

495 sequences assigned  
429 (86.7%) exact matches, in which:  
378 unique CDR3  
6 unique J



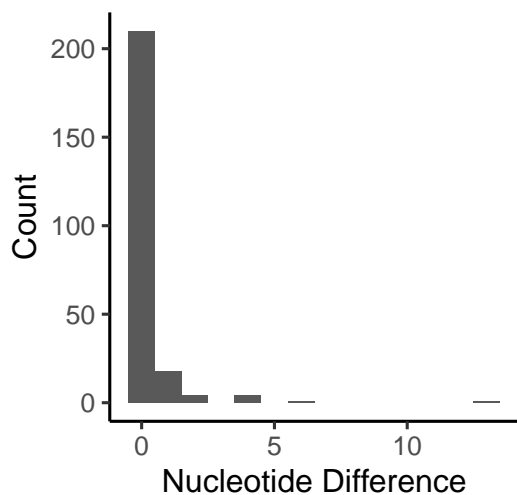
### IGHV3–73\*02

129 sequences assigned  
115 (89.1%) exact matches, in which:  
106 unique CDR3  
5 unique J



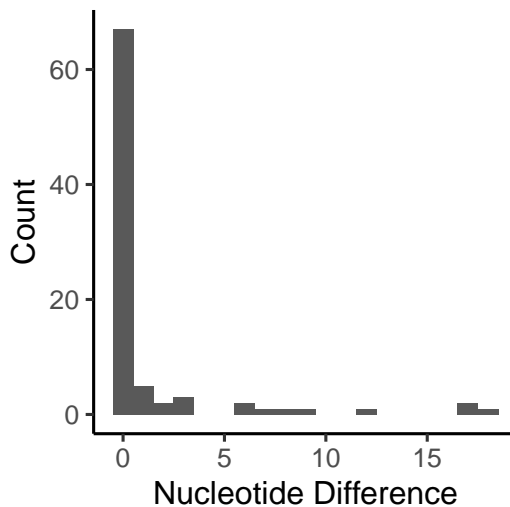
### IGHV3–53\*04

238 sequences assigned  
210 (88.2%) exact matches, in which:  
193 unique CDR3  
6 unique J



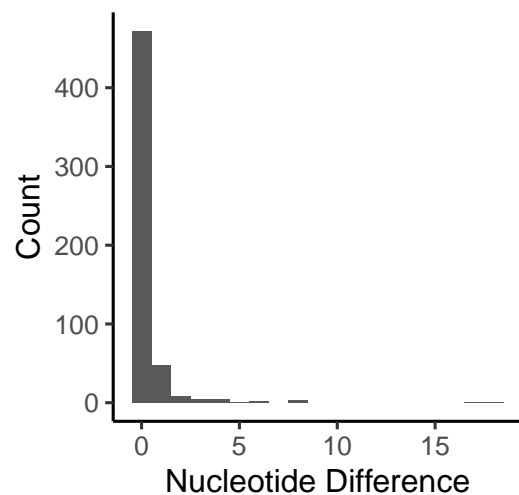
### IGHV3–72\*01

87 sequences assigned  
67 (77%) exact matches, in which:  
61 unique CDR3  
5 unique J



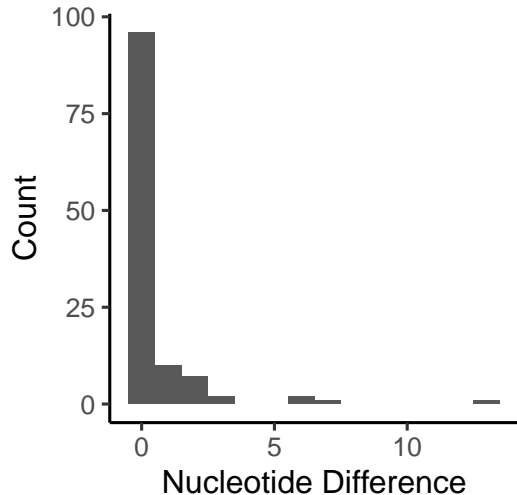
### IGHV3–74\*01

548 sequences assigned  
472 (86.1%) exact matches, in which:  
435 unique CDR3  
6 unique J



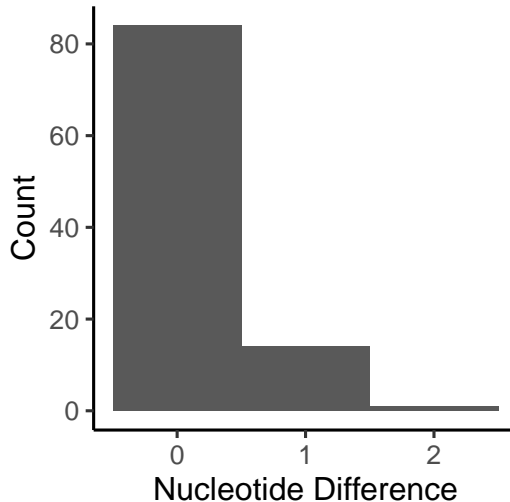
### IGHV3–64\*01

119 sequences assigned  
96 (80.7%) exact matches, in which:  
85 unique CDR3  
6 unique J



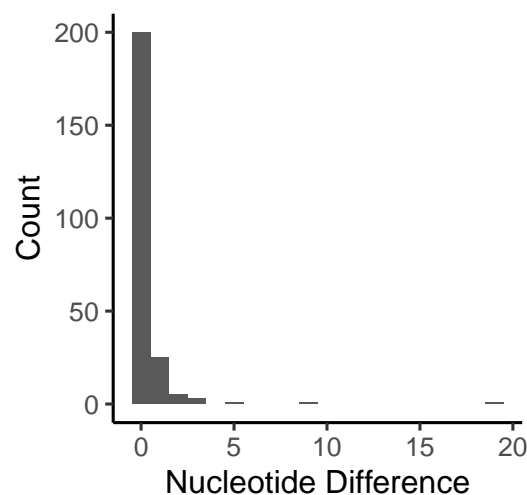
### IGHV3–73\*01

99 sequences assigned  
84 (84.8%) exact matches, in which:  
79 unique CDR3  
5 unique J



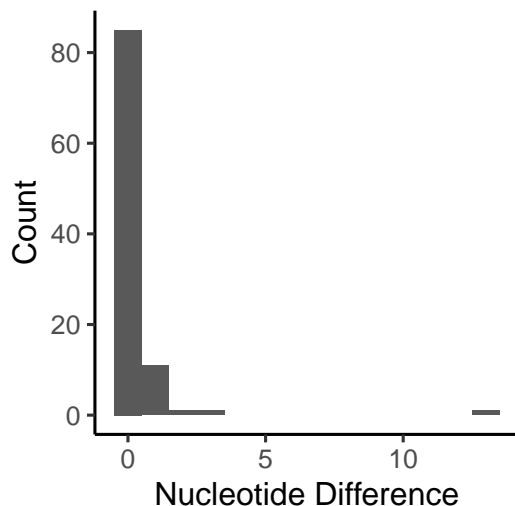
### IGHV3–43D\*03

240 sequences assigned  
200 (83.3%) exact matches, in which:  
182 unique CDR3  
6 unique J



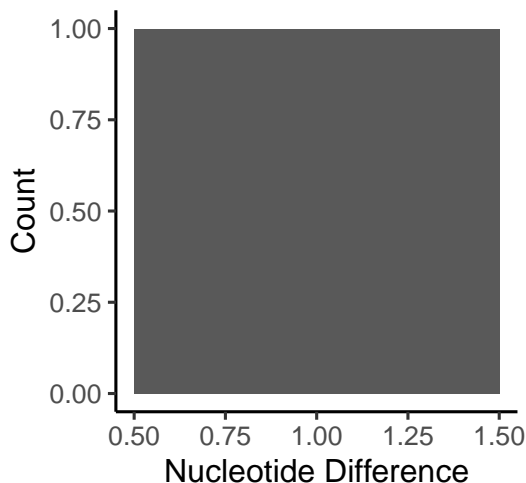
### IGHV3-43D\*04

99 sequences assigned  
85 (85.9%) exact matches, in which:  
77 unique CDR3  
5 unique J



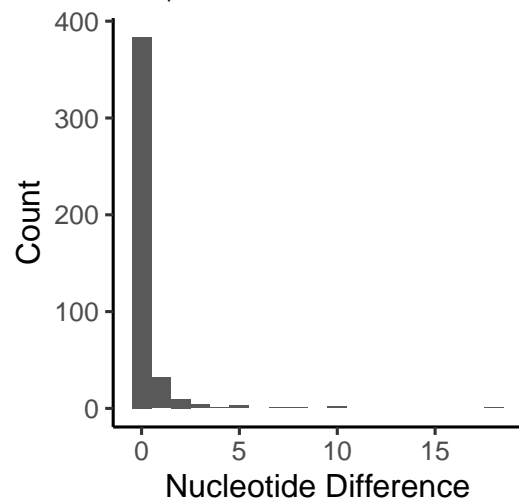
### IGHV4-28\*04

1 sequences assigned  
No exact matches.



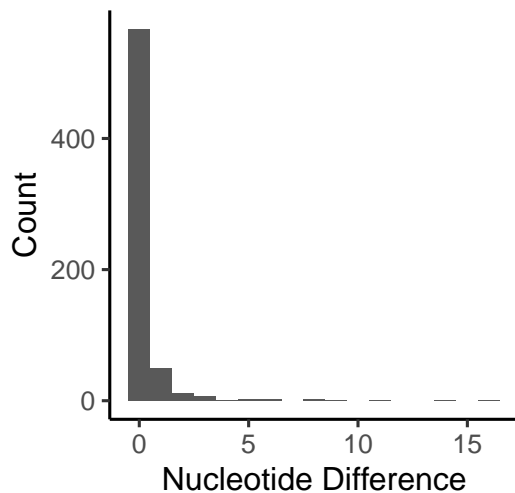
### IGHV4-31\*01

439 sequences assigned  
384 (87.5%) exact matches, in which:  
351 unique CDR3  
6 unique J



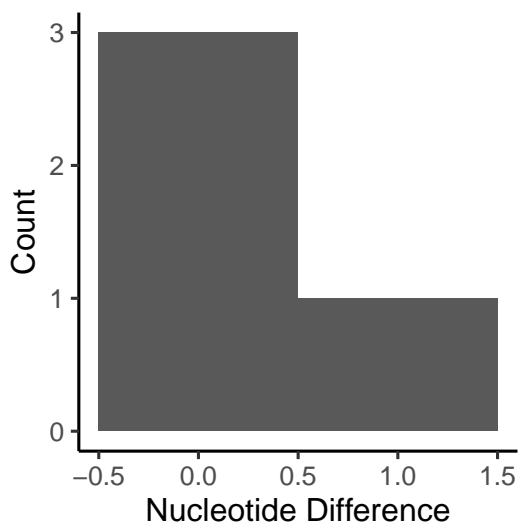
### IGHV3-64D\*06

649 sequences assigned  
567 (87.4%) exact matches, in which:  
501 unique CDR3  
6 unique J



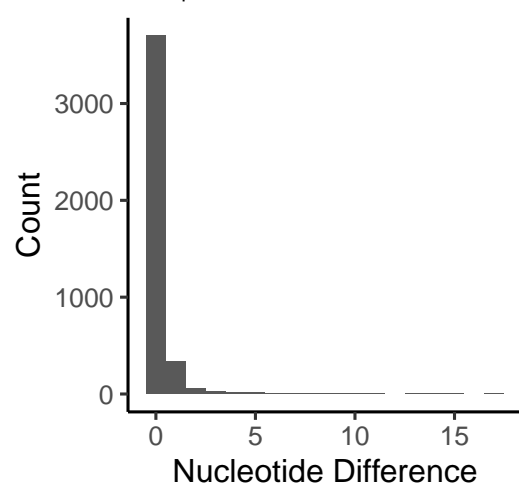
### IGHV4-28\*06

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



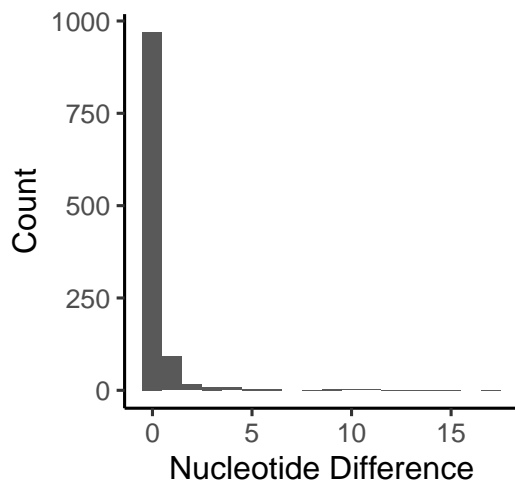
### IGHV4-34\*01

4171 sequences assigned  
3700 (88.7%) exact matches, in which:  
3286 unique CDR3  
6 unique J



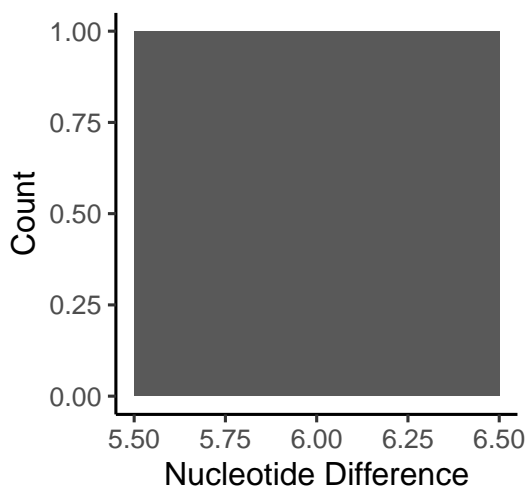
### IGHV4-4\*02

1117 sequences assigned  
970 (86.8%) exact matches, in which:  
907 unique CDR3  
6 unique J



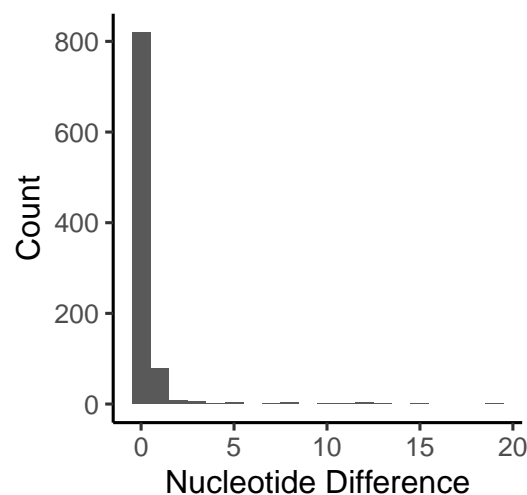
### IGHV4-30-2\*04

1 sequences assigned  
No exact matches.



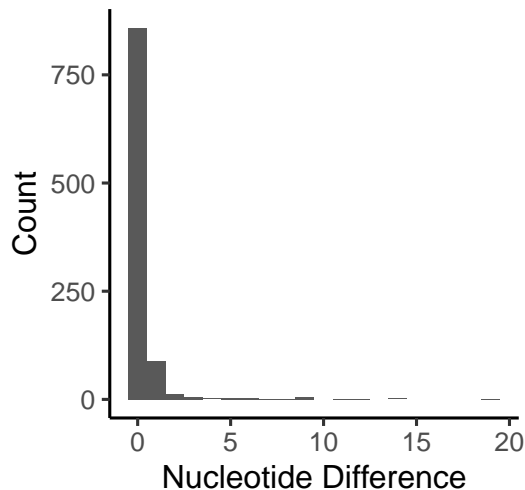
### IGHV4-38-2\*02

933 sequences assigned  
820 (87.9%) exact matches, in which:  
735 unique CDR3  
6 unique J



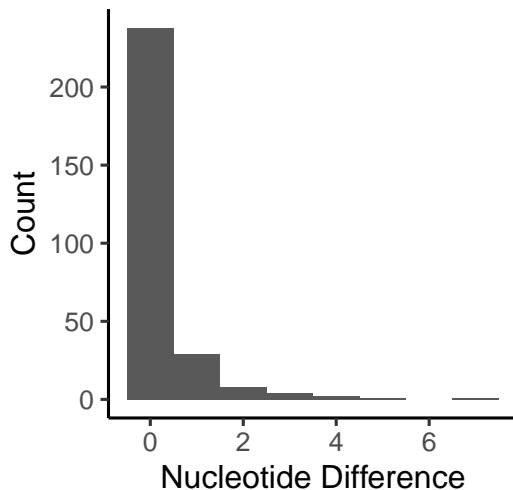
### IGHV4–38–2\*02\_A70G

986 sequences assigned  
859 (87.1%) exact matches, in which:  
765 unique CDR3  
6 unique J



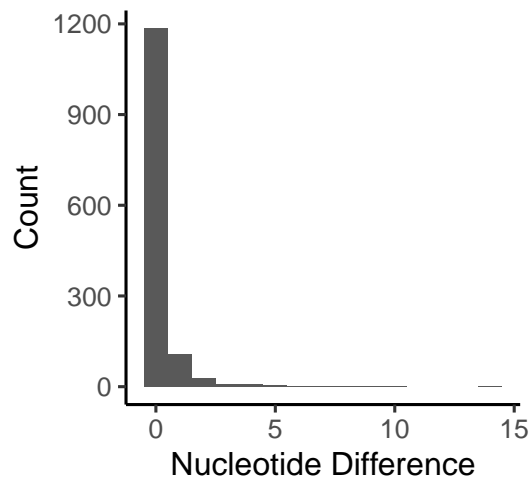
### IGHV4–61\*01

283 sequences assigned  
238 (84.1%) exact matches, in which:  
223 unique CDR3  
6 unique J



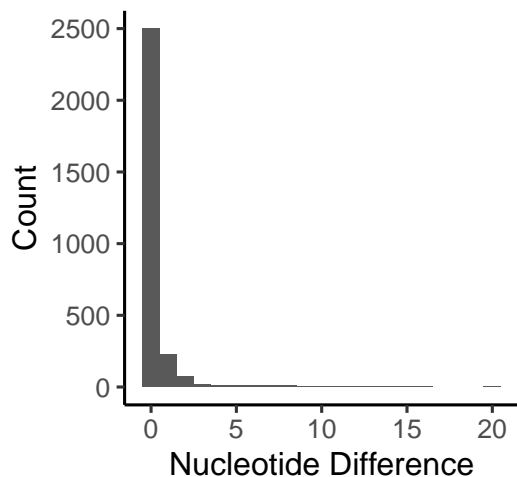
### IGHV5–10–1\*03

1349 sequences assigned  
1185 (87.8%) exact matches, in which:  
1088 unique CDR3  
6 unique J



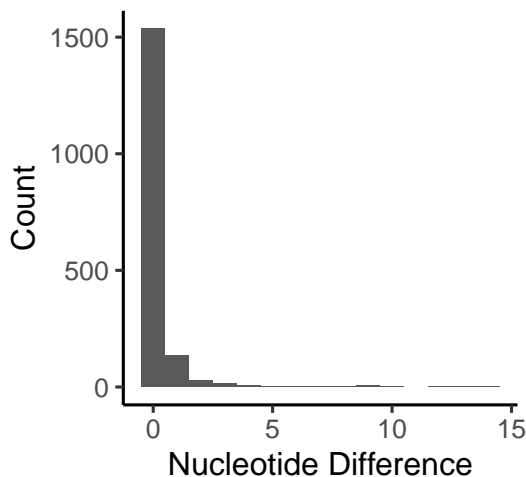
### IGHV4–39\*01

2887 sequences assigned  
2499 (86.6%) exact matches, in which:  
2218 unique CDR3  
6 unique J



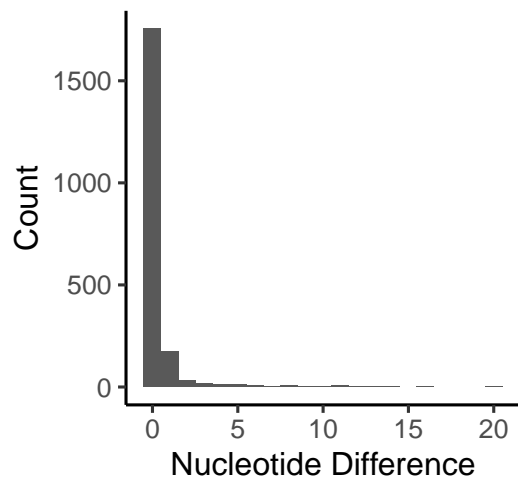
### IGHV4–61\*02

1743 sequences assigned  
1536 (88.1%) exact matches, in which:  
1417 unique CDR3  
6 unique J



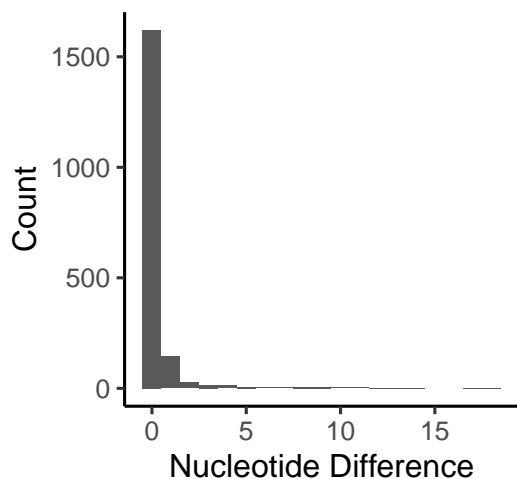
### IGHV5–51\*01

2042 sequences assigned  
1755 (85.9%) exact matches, in which:  
1585 unique CDR3  
6 unique J



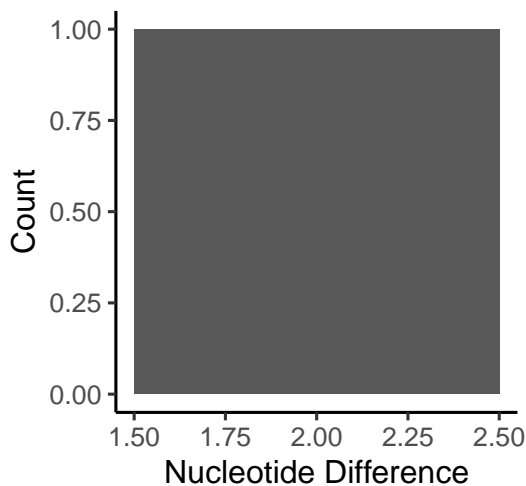
### IGHV4–59\*01

1857 sequences assigned  
1621 (87.3%) exact matches, in which:  
1522 unique CDR3  
6 unique J



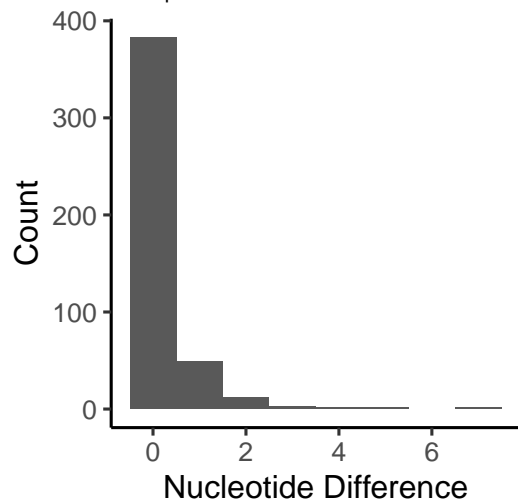
### IGHV1/OR15–1\*03

1 sequences assigned  
No exact matches.



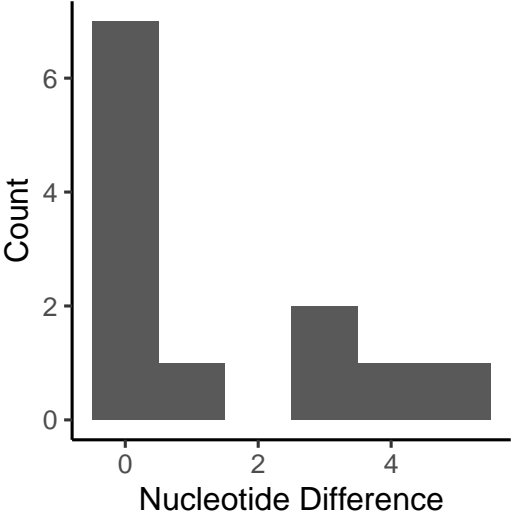
### IGHV6–1\*01

453 sequences assigned  
383 (84.5%) exact matches, in which:  
360 unique CDR3  
6 unique J



# IGHV7-4-1\*01

12 sequences assigned  
7 (58.3%) exact matches, in which:  
6 unique CDR3  
4 unique J







Warning – no inferred sequences found.