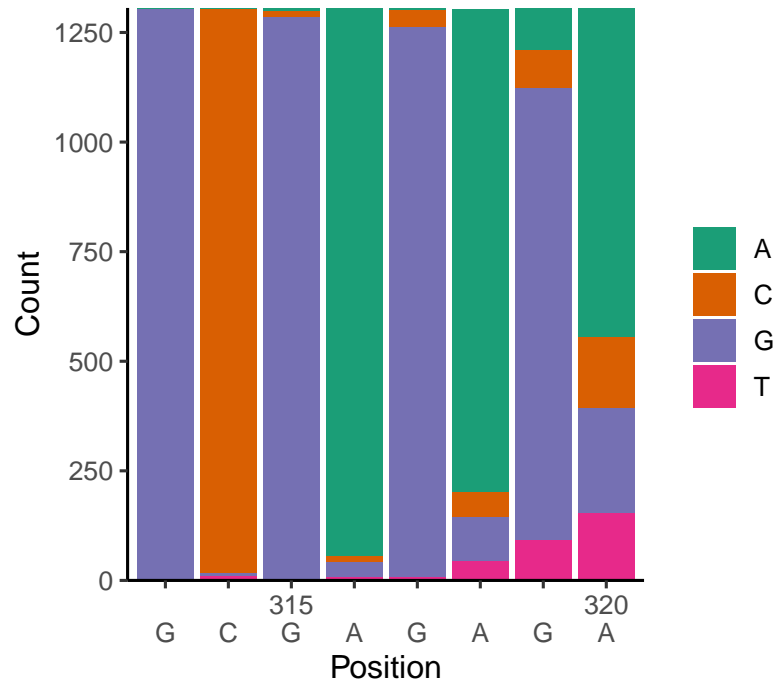
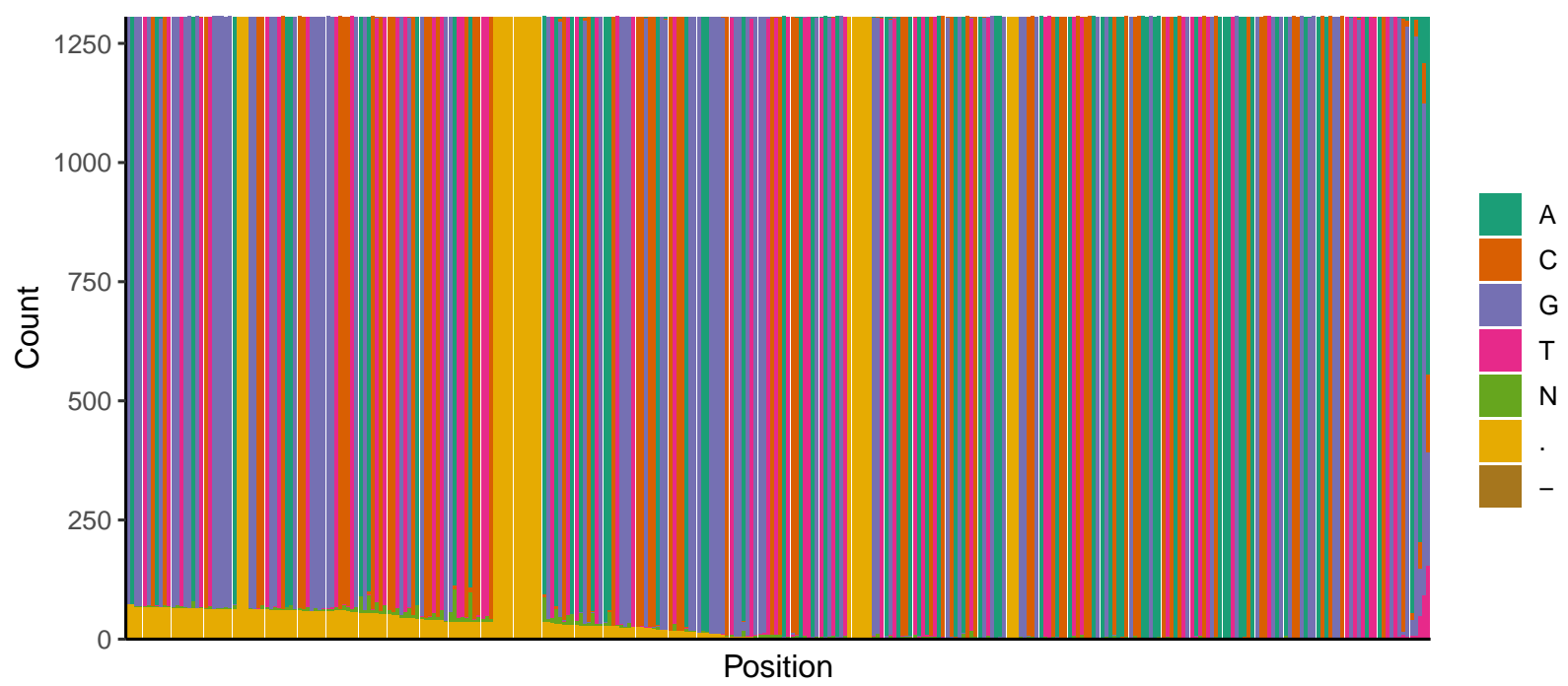


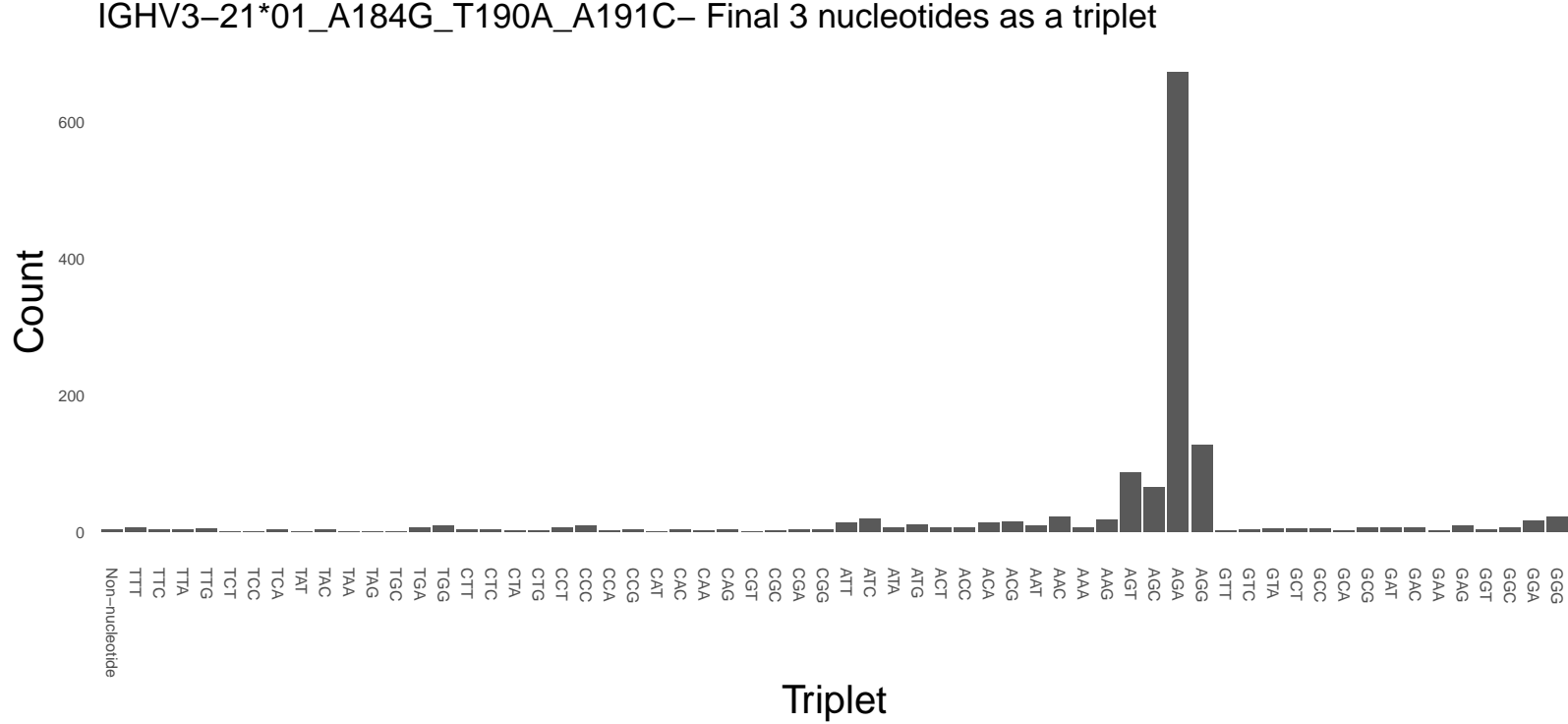
# Gene IGHV3-21\*01\_A184G\_T190A\_A191C



# Gene IGHV3-21\*01\_A184G\_T190A\_A191C

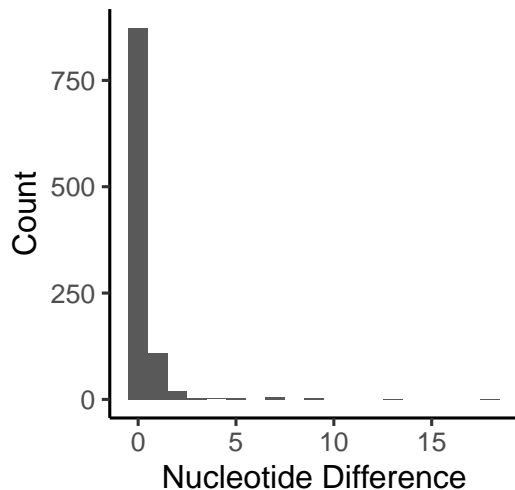


IGHV3-21\*01\_A184G\_T190A\_A191C- Final 3 nucleotides as a triplet



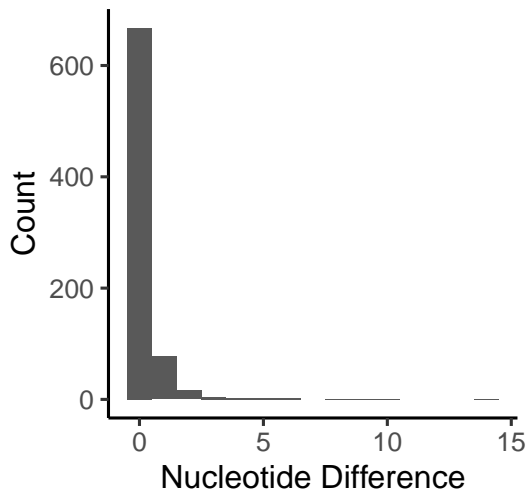
### IGHV1-2\*04

1023 sequences assigned  
874 (85.4%) exact matches, in which:  
860 unique CDR3  
6 unique J



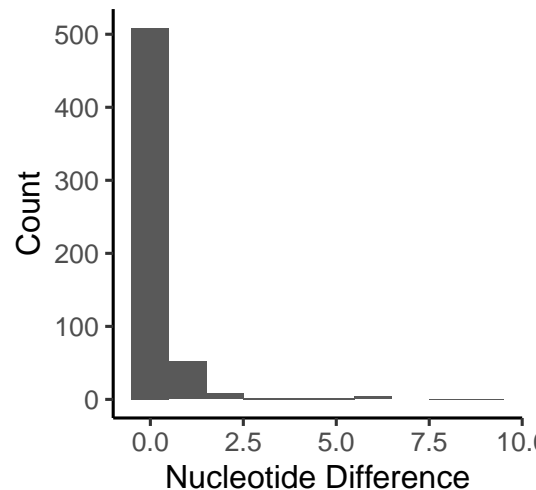
### IGHV1-18\*04

777 sequences assigned  
668 (86%) exact matches, in which:  
659 unique CDR3  
6 unique J



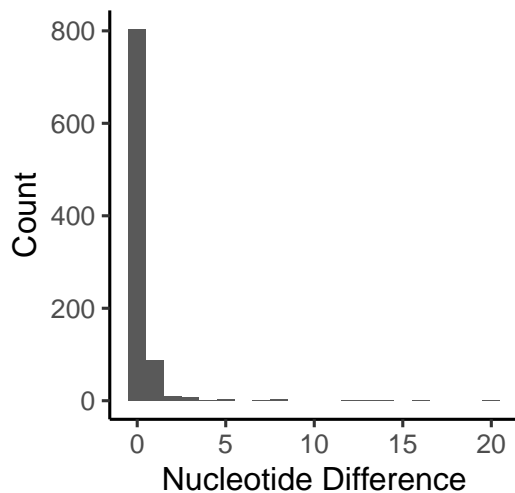
### IGHV1-46\*01

581 sequences assigned  
509 (87.6%) exact matches, in which:  
496 unique CDR3  
6 unique J



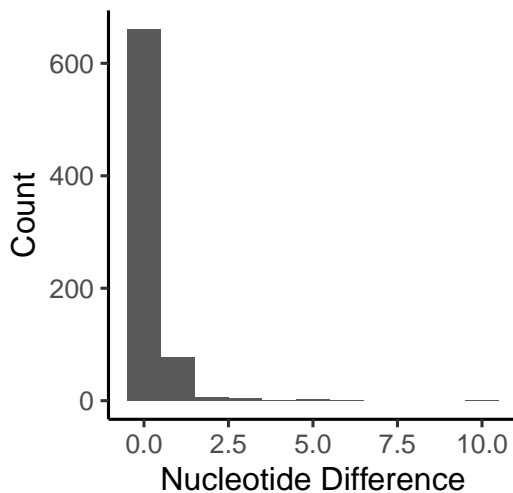
### IGHV1-3\*01

926 sequences assigned  
804 (86.8%) exact matches, in which:  
787 unique CDR3  
6 unique J



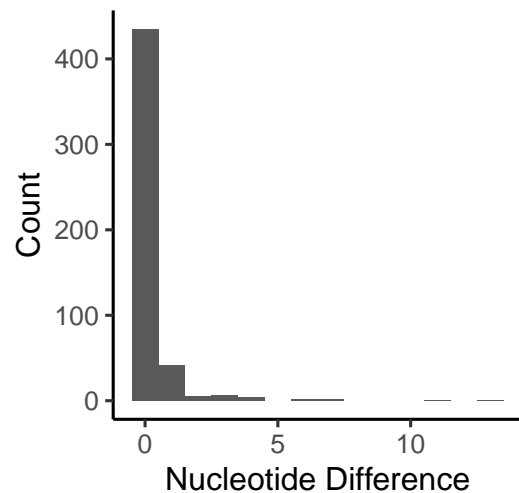
### IGHV1-24\*01

755 sequences assigned  
661 (87.5%) exact matches, in which:  
650 unique CDR3  
6 unique J



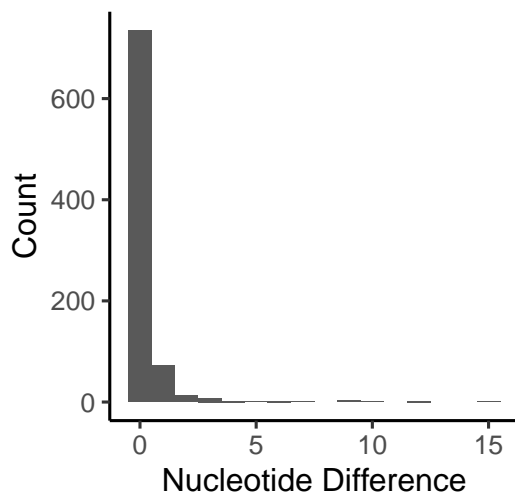
### IGHV1-46\*03

499 sequences assigned  
435 (87.2%) exact matches, in which:  
425 unique CDR3  
6 unique J



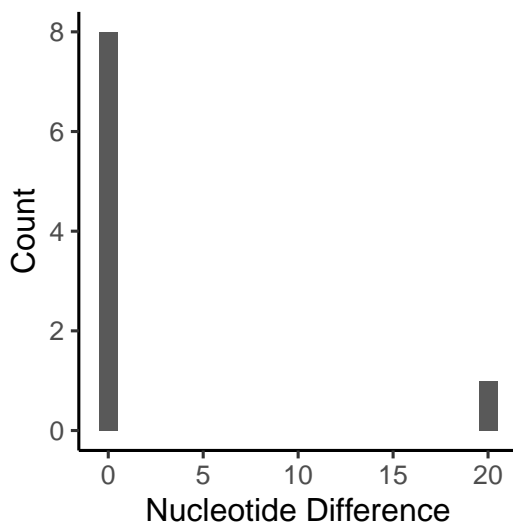
### IGHV1-18\*01

841 sequences assigned  
735 (87.4%) exact matches, in which:  
728 unique CDR3  
6 unique J



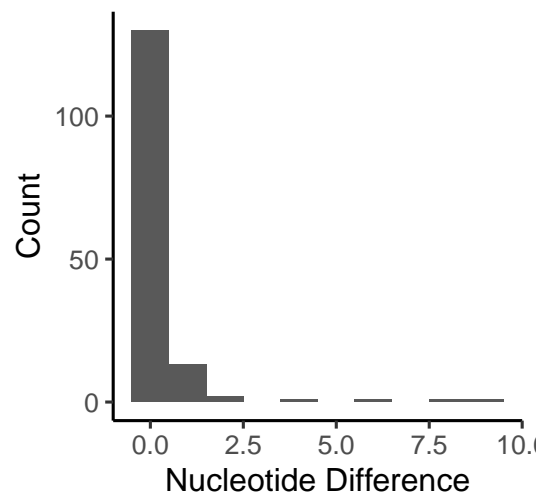
### IGHV1-45\*02

9 sequences assigned  
8 (88.9%) exact matches, in which:  
8 unique CDR3  
4 unique J



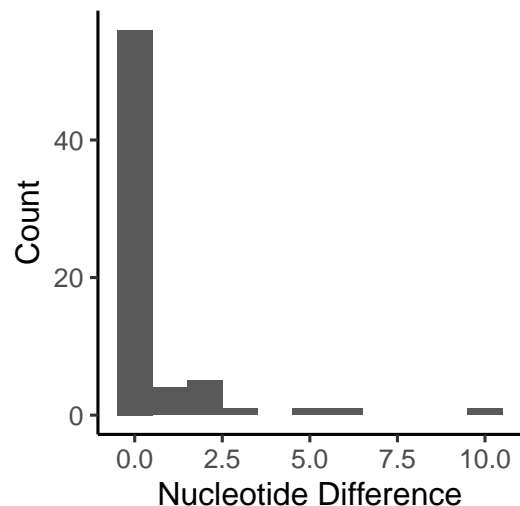
### IGHV1-58\*01

149 sequences assigned  
130 (87.2%) exact matches, in which:  
127 unique CDR3  
5 unique J



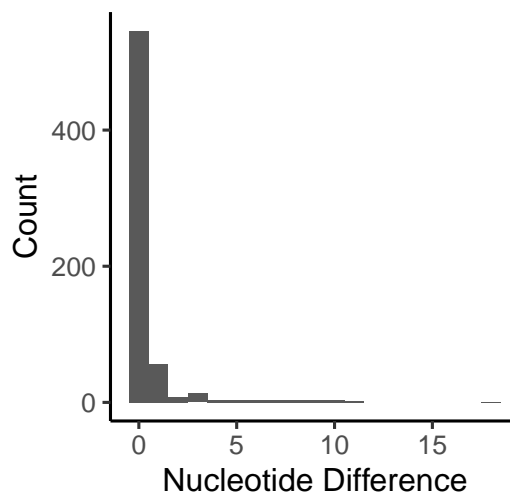
### IGHV1-58\*02

69 sequences assigned  
56 (81.2%) exact matches, in which:  
56 unique CDR3  
5 unique J



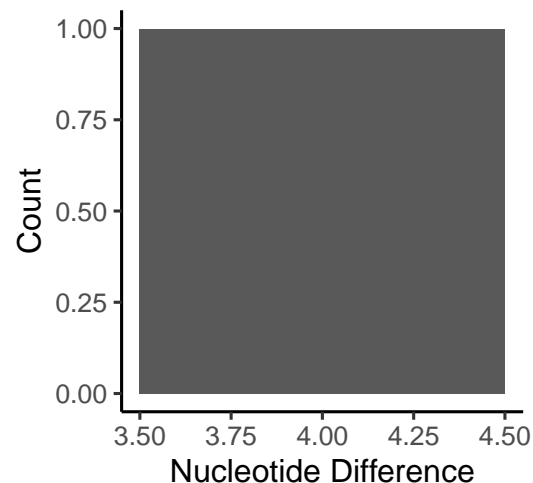
### IGHV2-5\*02

650 sequences assigned  
546 (84%) exact matches, in which:  
535 unique CDR3  
6 unique J



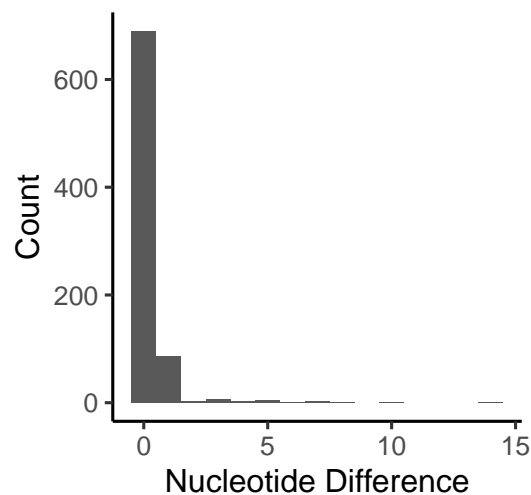
### IGHV2-70D\*04

1 sequences assigned  
No exact matches.



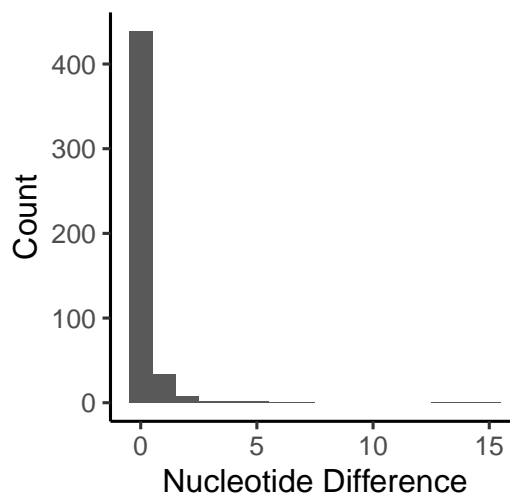
### IGHV1-69\*02

798 sequences assigned  
690 (86.5%) exact matches, in which:  
673 unique CDR3  
6 unique J



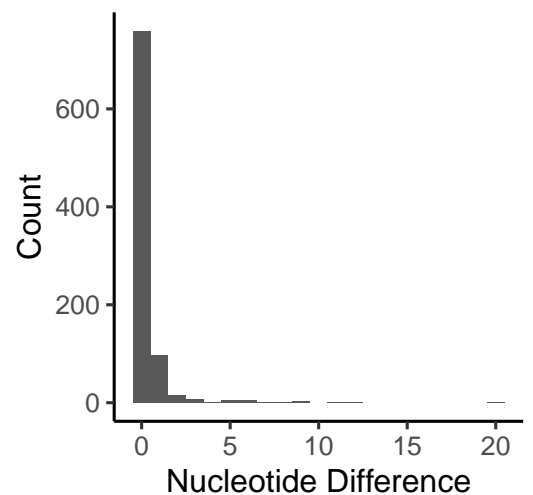
### IGHV2-26\*01

492 sequences assigned  
439 (89.2%) exact matches, in which:  
431 unique CDR3  
6 unique J



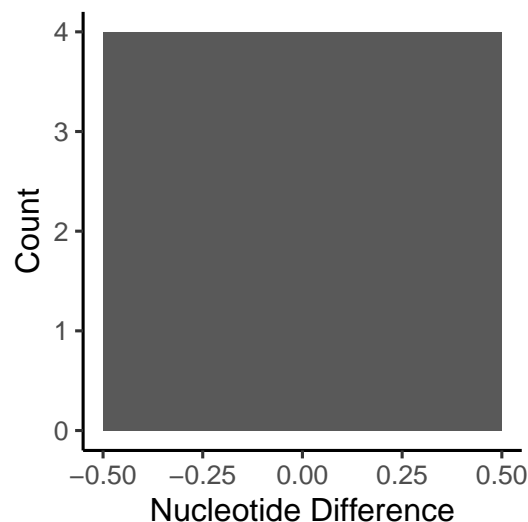
### IGHV3-7\*03

904 sequences assigned  
759 (84%) exact matches, in which:  
742 unique CDR3  
6 unique J



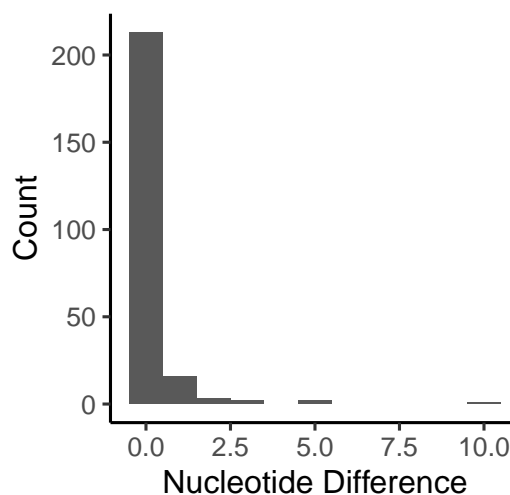
### IGHV1-NL1\*01

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



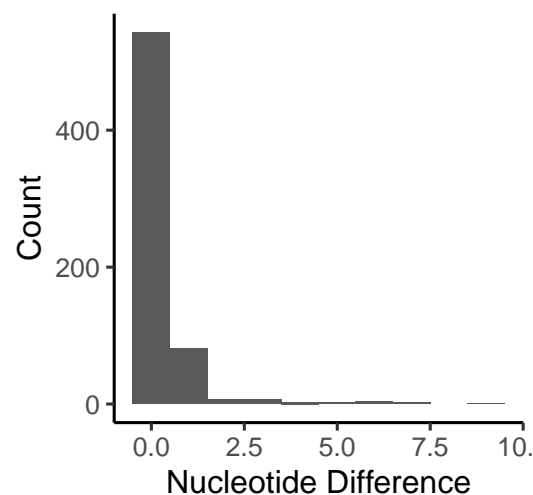
### IGHV2-70\*01

237 sequences assigned  
213 (89.9%) exact matches, in which:  
212 unique CDR3  
5 unique J



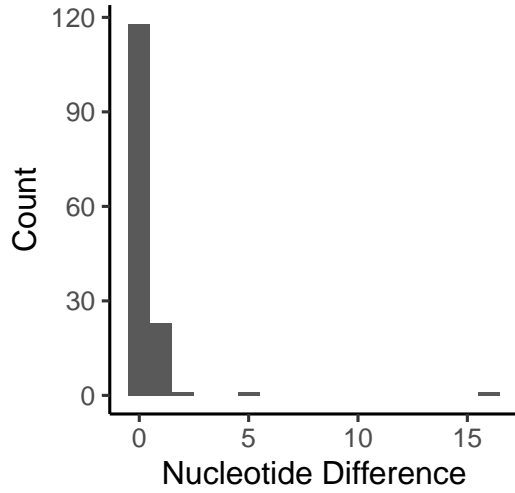
### IGHV3-11\*06

654 sequences assigned  
543 (83%) exact matches, in which:  
533 unique CDR3  
6 unique J



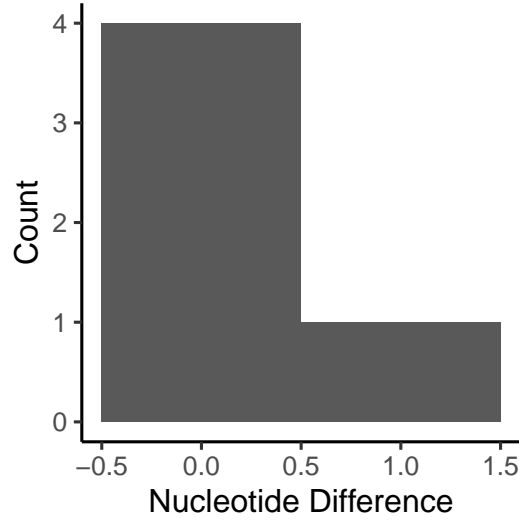
### IGHV3-13\*05

144 sequences assigned  
118 (81.9%) exact matches, in which:  
117 unique CDR3  
5 unique J



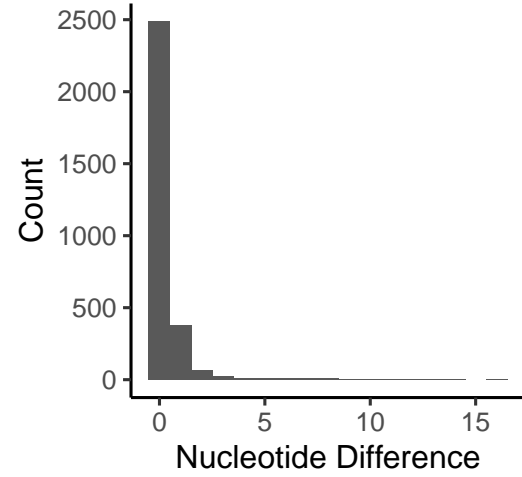
### IGHV3-20\*02

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



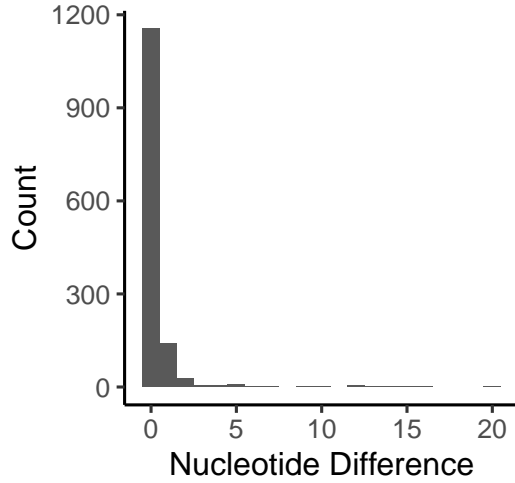
### IGHV3-23\*04

3031 sequences assigned  
2488 (82.1%) exact matches, in which:  
2469 unique CDR3  
6 unique J



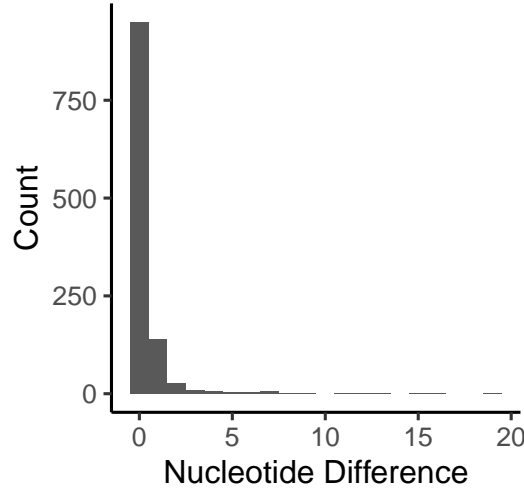
### IGHV3-15\*01

1360 sequences assigned  
1155 (84.9%) exact matches, in which:  
1125 unique CDR3  
6 unique J



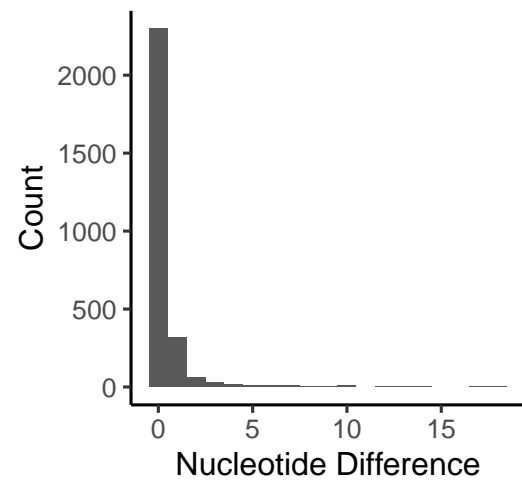
### IGHV3-21\*01

1155 sequences assigned  
950 (82.3%) exact matches, in which:  
937 unique CDR3  
6 unique J



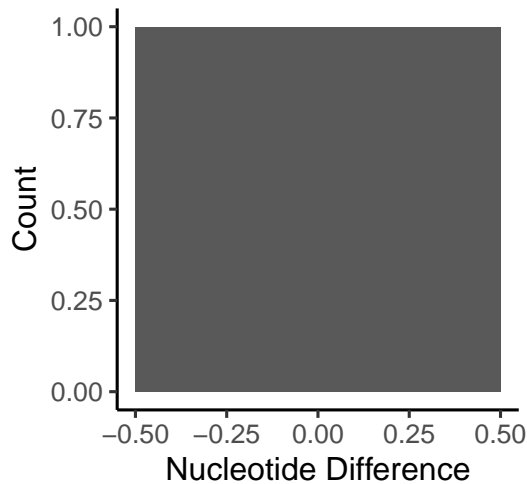
### IGHV3-30\*01

2770 sequences assigned  
2298 (83%) exact matches, in which:  
2242 unique CDR3  
6 unique J



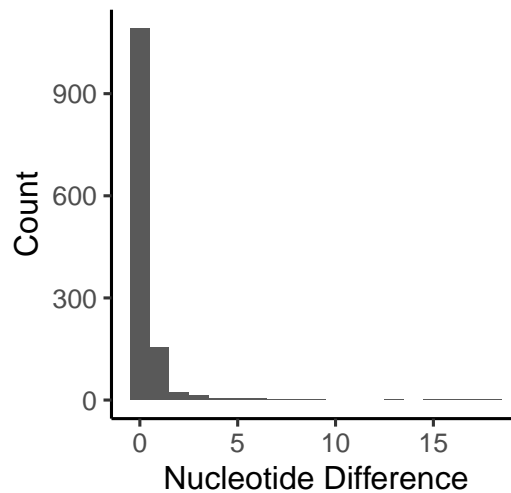
### IGHV3-19\*01

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



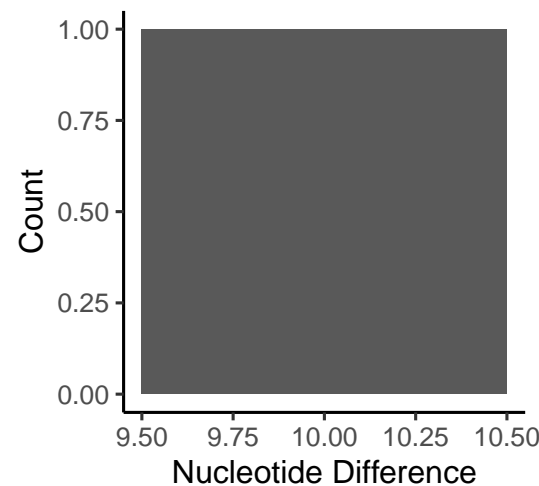
### IGHV3-21\*01\_A184G\_T1

1306 sequences assigned  
1092 (83.6%) exact matches, in which:  
1069 unique CDR3  
6 unique J



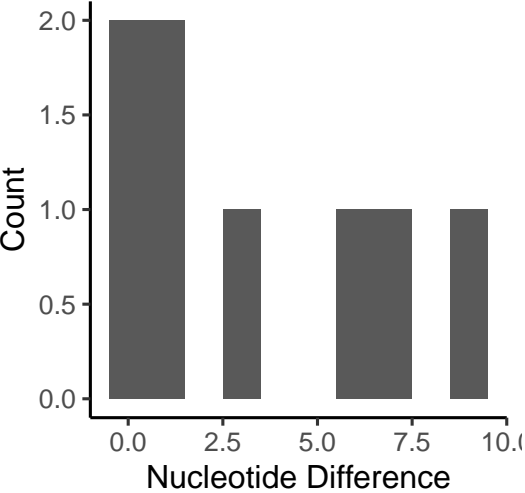
### IGHV3-30-3\*01

1 sequences assigned  
No exact matches.



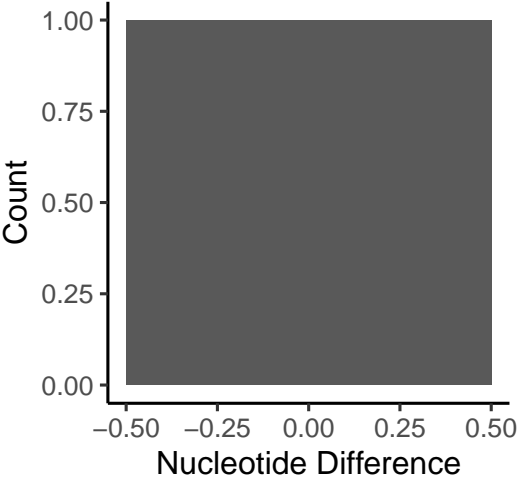
IGHV3-30-3\*03

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



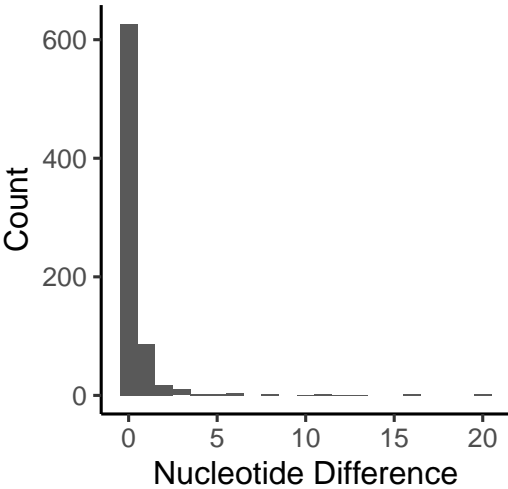
IGHV3-38-3\*01

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



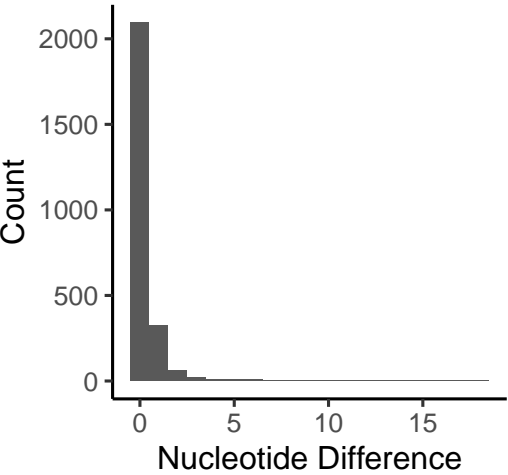
IGHV3-48\*02

763 sequences assigned  
627 (82.2%) exact matches, in which:  
614 unique CDR3  
6 unique J



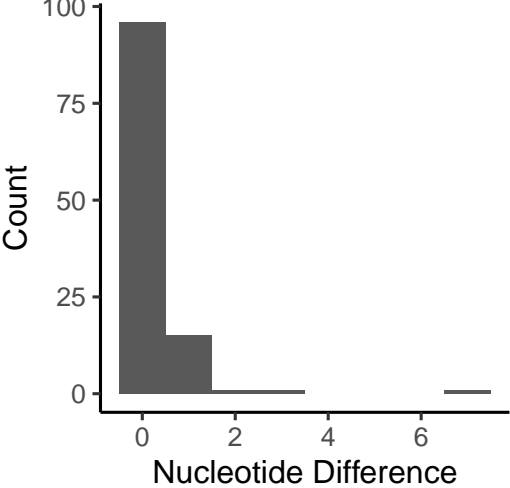
IGHV3-33\*01

2554 sequences assigned  
2094 (82%) exact matches, in which:  
2021 unique CDR3  
6 unique J



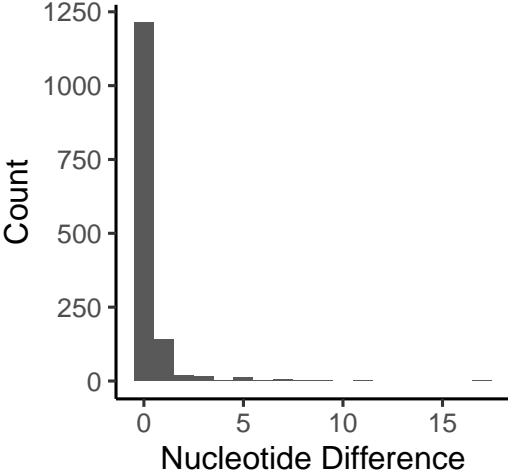
IGHV3-43\*01

114 sequences assigned  
96 (84.2%) exact matches, in which:  
96 unique CDR3  
6 unique J



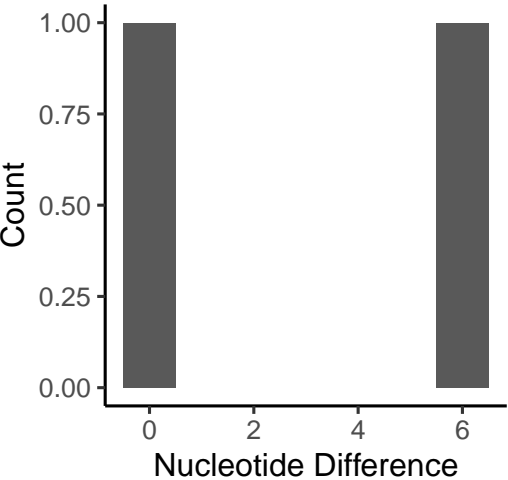
IGHV3-48\*03

1416 sequences assigned  
1213 (85.7%) exact matches, in which:  
1208 unique CDR3  
6 unique J



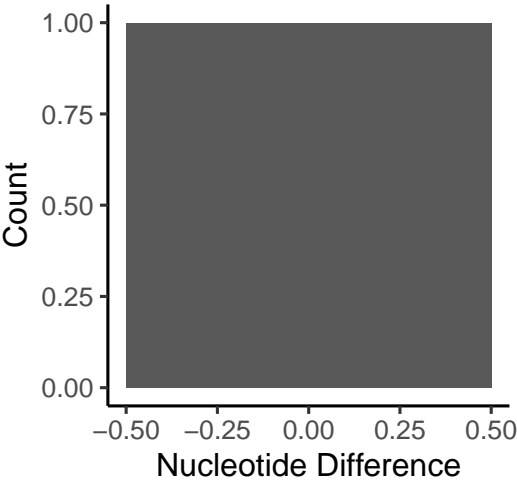
IGHV3-35\*01

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



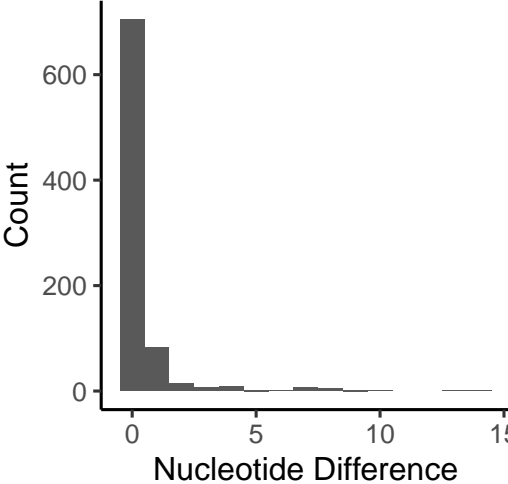
IGHV3-47\*02

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



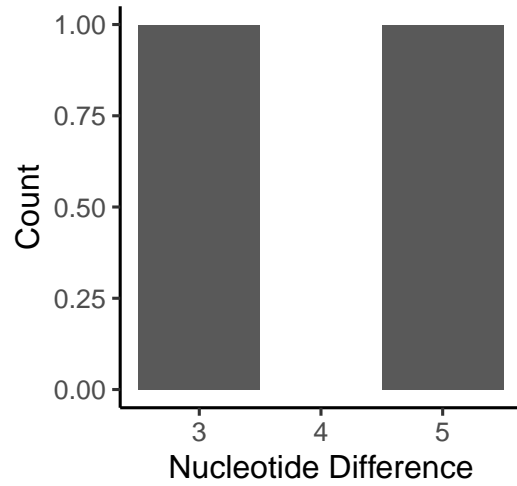
IGHV3-49\*04

838 sequences assigned  
705 (84.1%) exact matches, in which:  
682 unique CDR3  
6 unique J



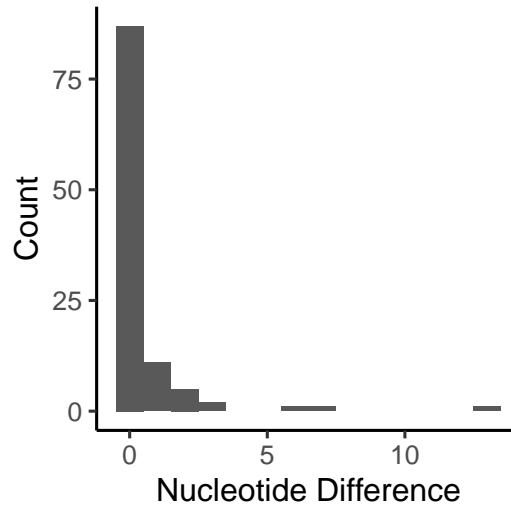
### IGHV3-52\*01

3 sequences assigned  
No exact matches.



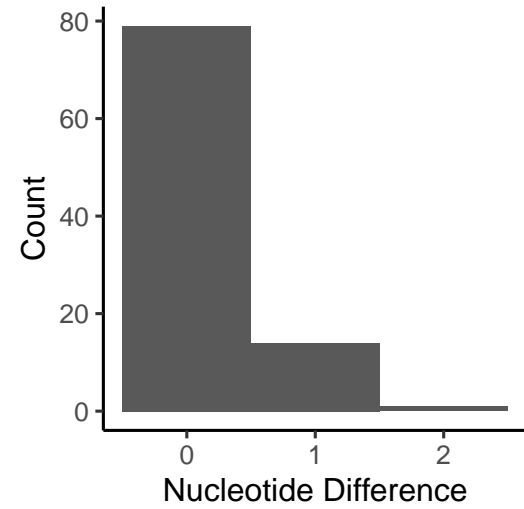
### IGHV3-64\*01

108 sequences assigned  
87 (80.6%) exact matches, in which:  
85 unique CDR3  
6 unique J



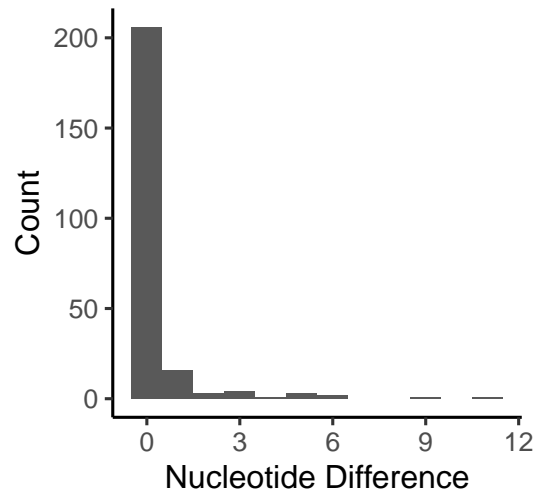
### IGHV3-73\*01

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



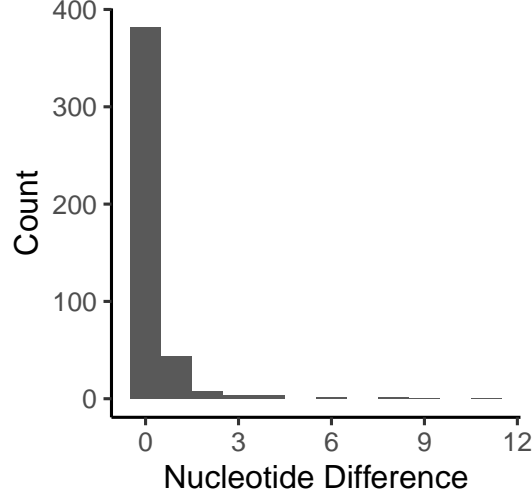
### IGHV3-53\*02

237 sequences assigned  
206 (86.9%) exact matches, in which:  
202 unique CDR3  
5 unique J



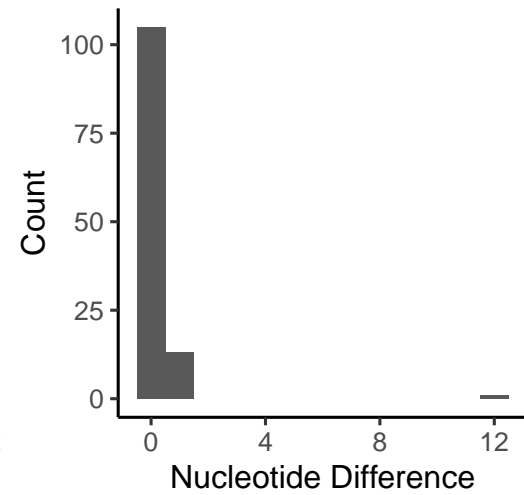
### IGHV3-66\*02

448 sequences assigned  
382 (85.3%) exact matches, in which:  
374 unique CDR3  
6 unique J



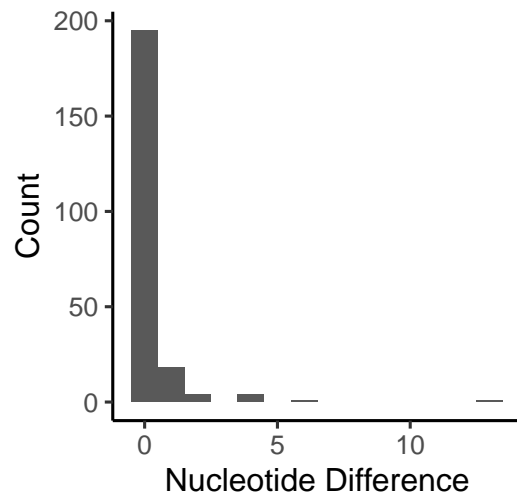
### IGHV3-73\*02

119 sequences assigned  
105 (88.2%) exact matches, in which:  
105 unique CDR3  
5 unique J



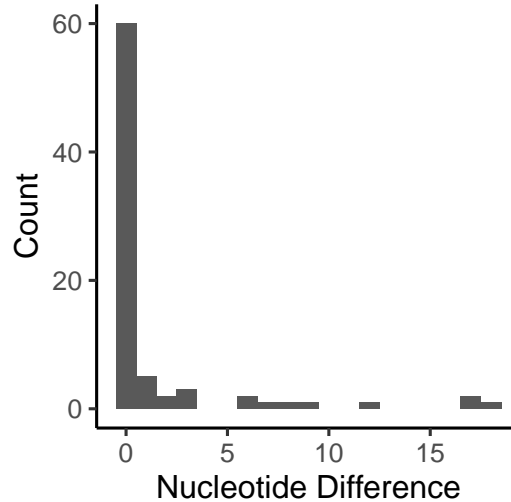
### IGHV3-53\*04

223 sequences assigned  
195 (87.4%) exact matches, in which:  
191 unique CDR3  
6 unique J



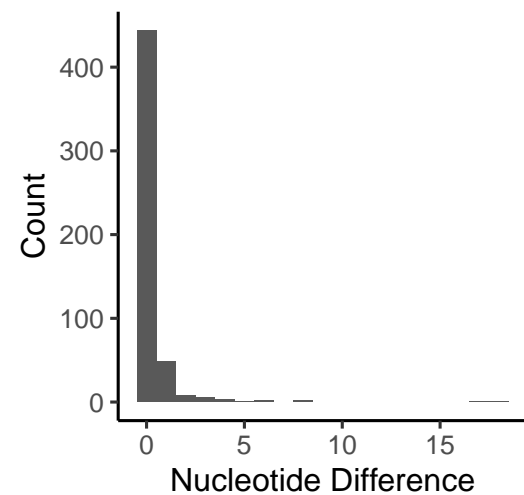
### IGHV3-72\*01

80 sequences assigned  
60 (75%) exact matches, in which:  
59 unique CDR3  
5 unique J



### IGHV3-74\*01

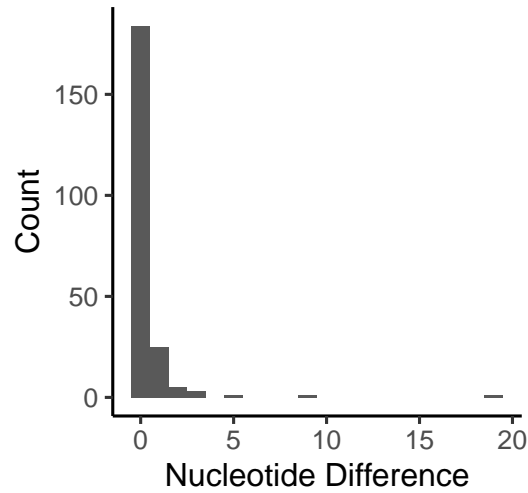
519 sequences assigned  
444 (85.5%) exact matches, in which:  
435 unique CDR3  
6 unique J





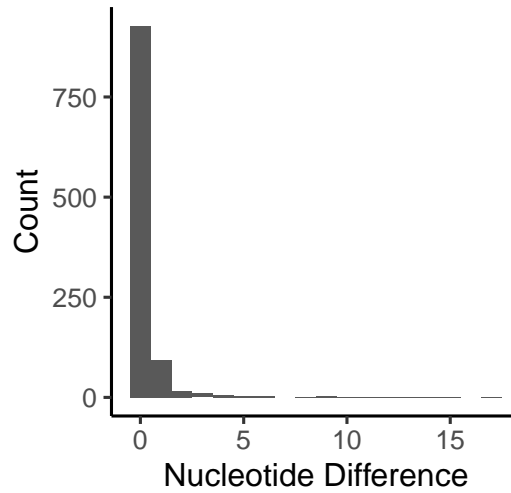
### IGHV3-43D\*03

224 sequences assigned  
184 (82.1%) exact matches, in which:  
181 unique CDR3  
6 unique J



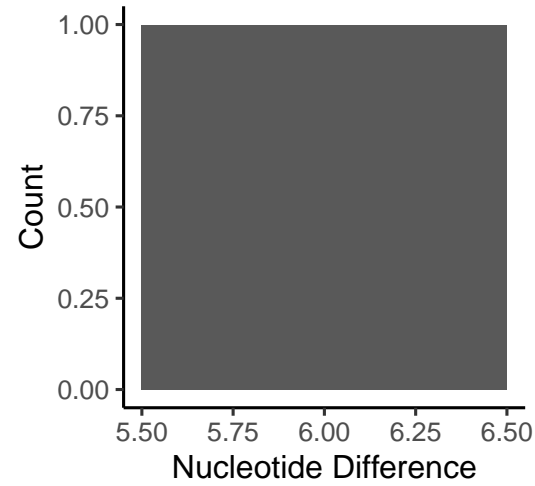
### IGHV4-4\*02

1077 sequences assigned  
928 (86.2%) exact matches, in which:  
907 unique CDR3  
6 unique J



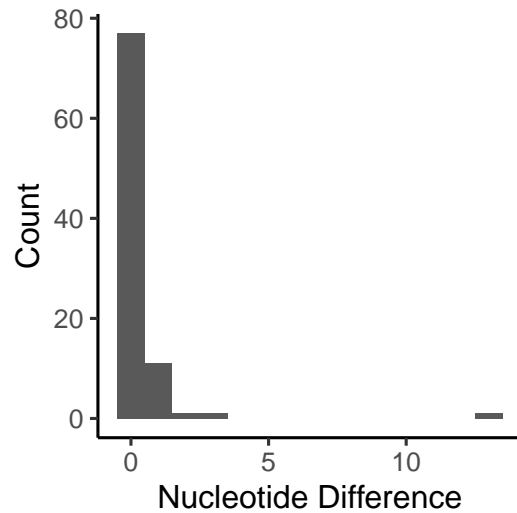
### IGHV4-30-2\*04

1 sequences assigned  
No exact matches.



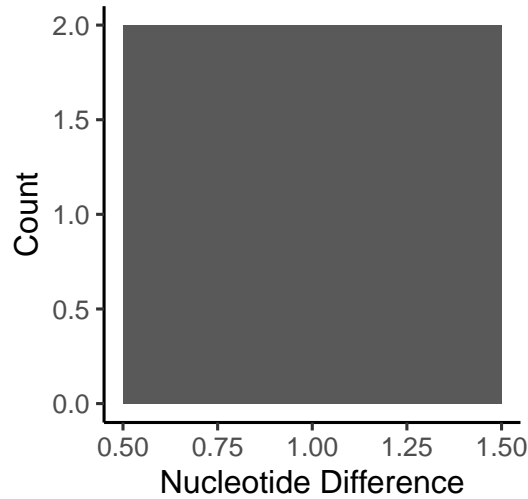
### IGHV3-43D\*04

91 sequences assigned  
77 (84.6%) exact matches, in which:  
77 unique CDR3  
5 unique J



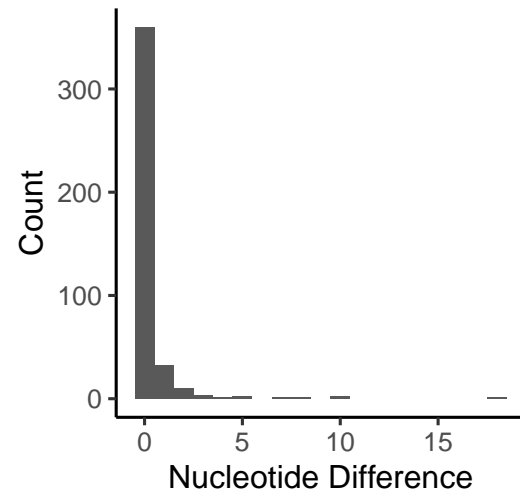
### IGHV4-28\*04

2 sequences assigned  
No exact matches.



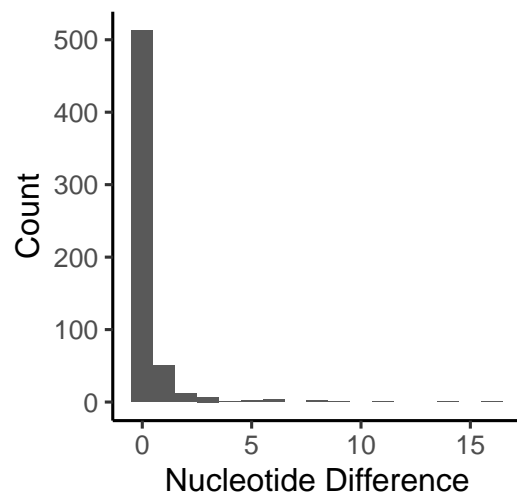
### IGHV4-31\*01

413 sequences assigned  
360 (87.2%) exact matches, in which:  
348 unique CDR3  
6 unique J



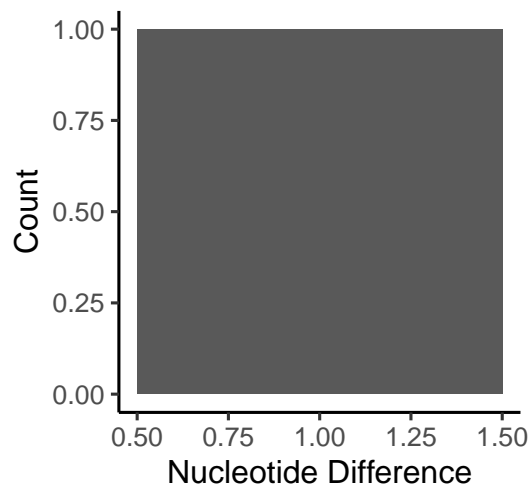
### IGHV3-64D\*06

596 sequences assigned  
513 (86.1%) exact matches, in which:  
497 unique CDR3  
6 unique J



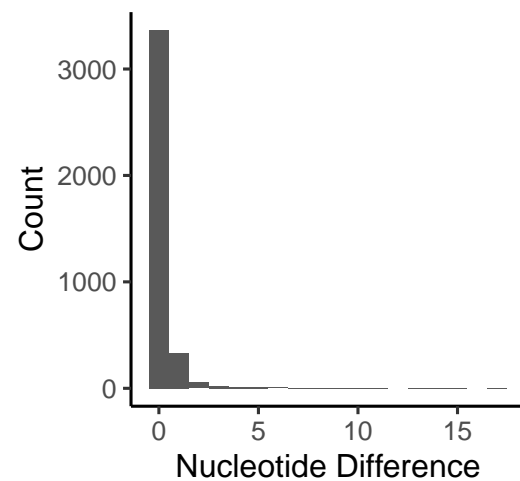
### IGHV4-28\*06

1 sequences assigned  
No exact matches.



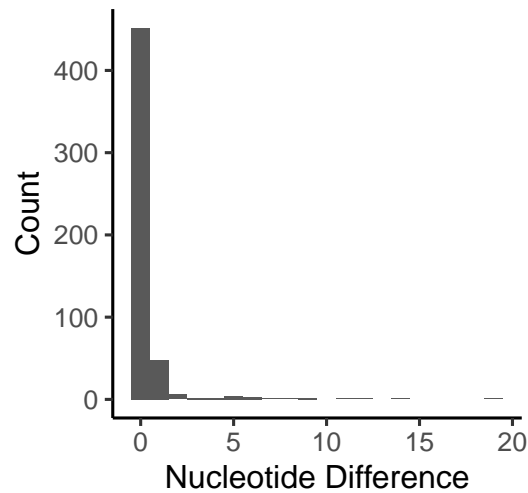
### IGHV4-34\*01

3830 sequences assigned  
3366 (87.9%) exact matches, in which:  
3258 unique CDR3  
6 unique J



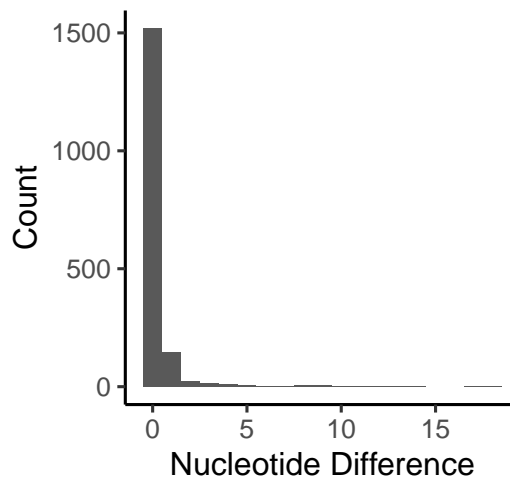
### IGHV4-38-2\*01

526 sequences assigned  
452 (85.9%) exact matches, in which:  
449 unique CDR3  
6 unique J



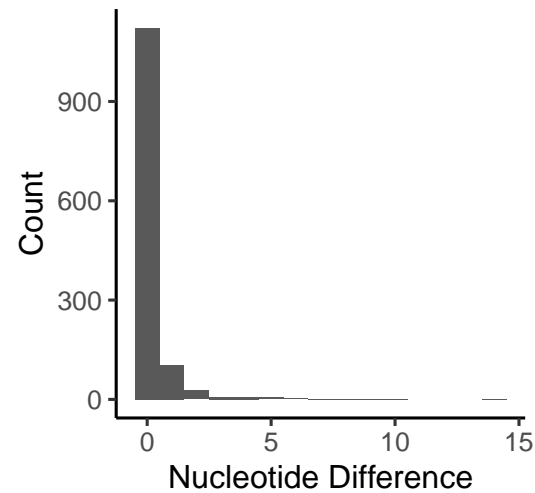
### IGHV4-59\*01

1756 sequences assigned  
1519 (86.5%) exact matches, in which:  
1507 unique CDR3  
6 unique J



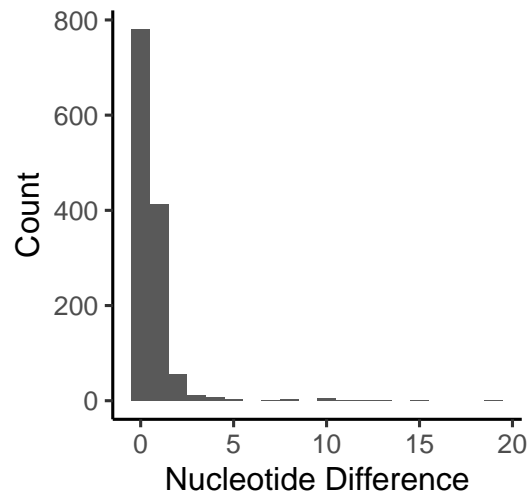
### IGHV5-10-1\*03

1285 sequences assigned  
1123 (87.4%) exact matches, in which:  
1081 unique CDR3  
6 unique J



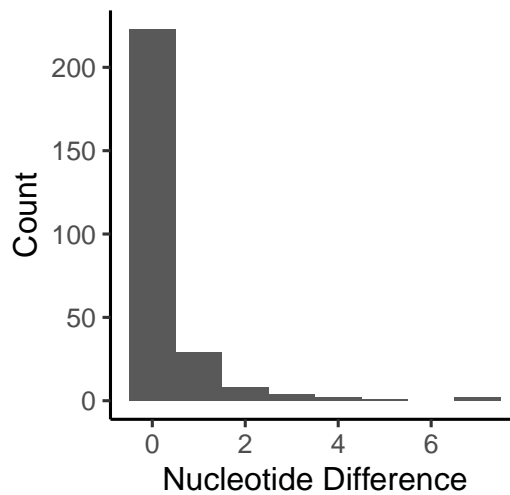
### IGHV4-38-2\*02

1290 sequences assigned  
781 (60.5%) exact matches, in which:  
763 unique CDR3  
6 unique J



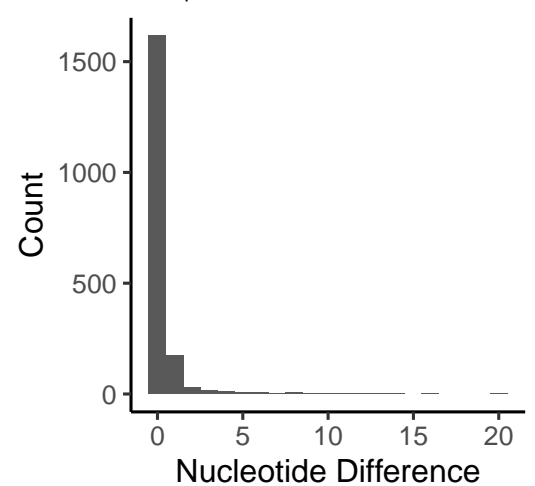
### IGHV4-61\*01

269 sequences assigned  
223 (82.9%) exact matches, in which:  
222 unique CDR3  
6 unique J



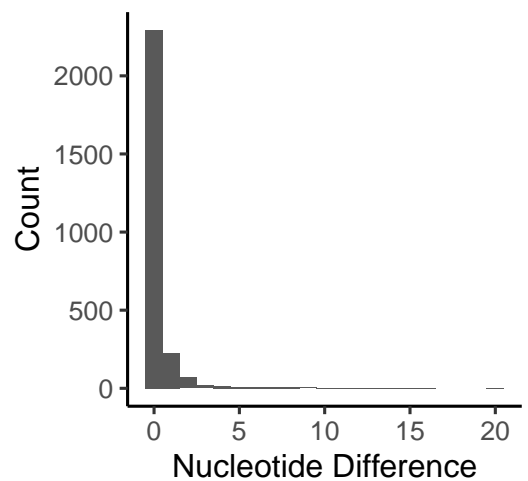
### IGHV5-51\*01

1899 sequences assigned  
1617 (85.2%) exact matches, in which:  
1573 unique CDR3  
6 unique J



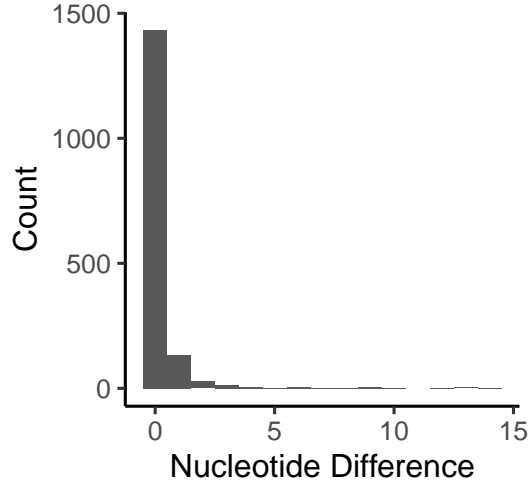
### IGHV4-39\*01

2684 sequences assigned  
2293 (85.4%) exact matches, in which:  
2198 unique CDR3  
6 unique J



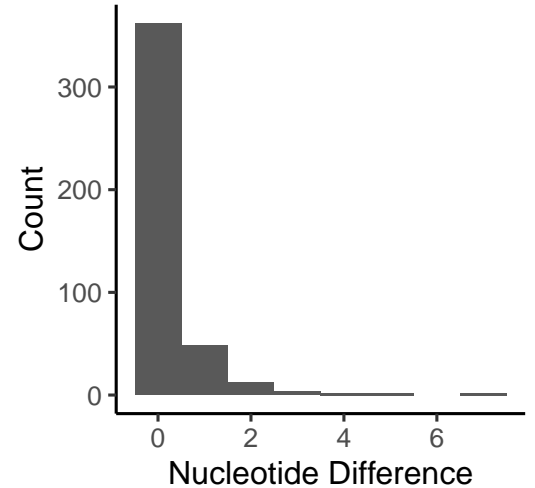
### IGHV4-61\*02

1640 sequences assigned  
1433 (87.4%) exact matches, in which:  
1408 unique CDR3  
6 unique J



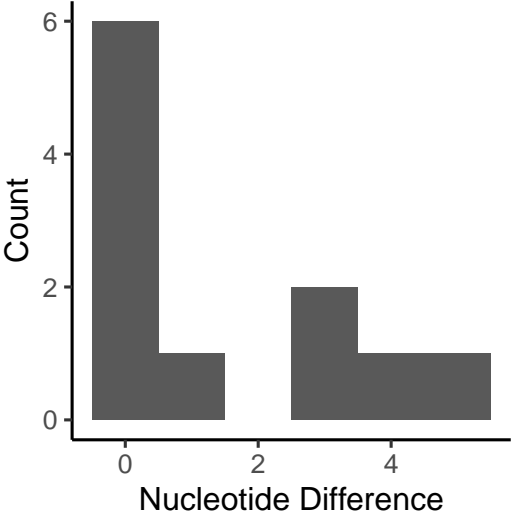
### IGHV6-1\*01

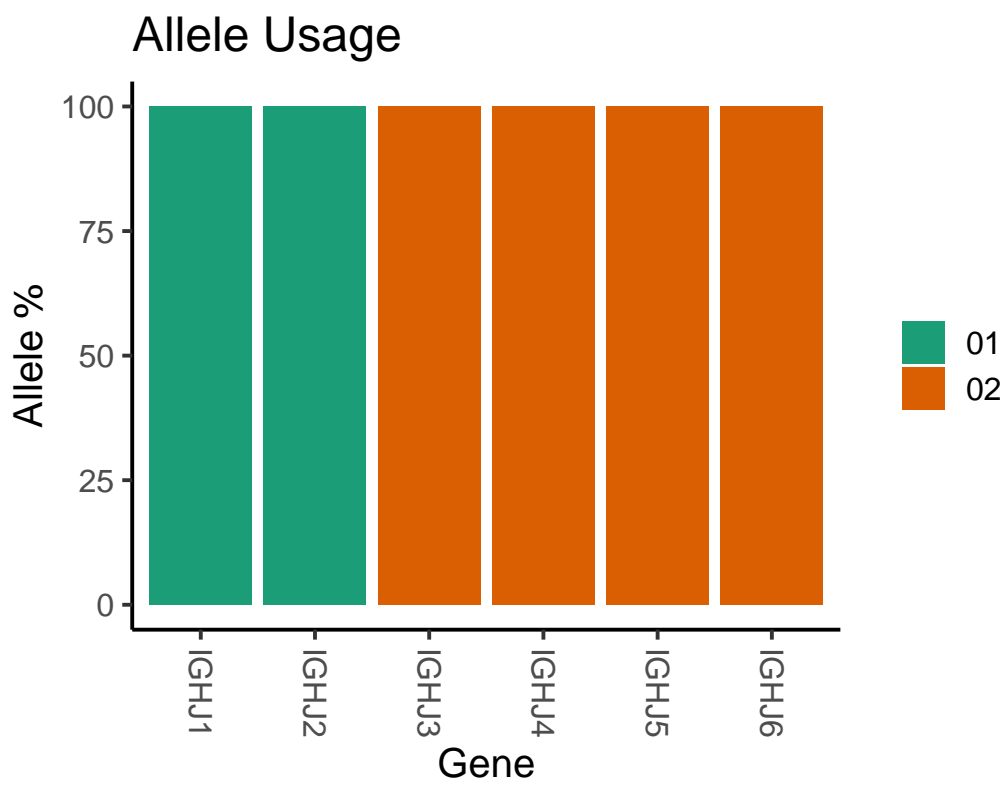
431 sequences assigned  
362 (84%) exact matches, in which:  
354 unique CDR3  
6 unique J



# IGHV7-4-1\*01

11 sequences assigned  
6 (54.5%) exact matches, in which:  
6 unique CDR3  
4 unique J





[illegible]