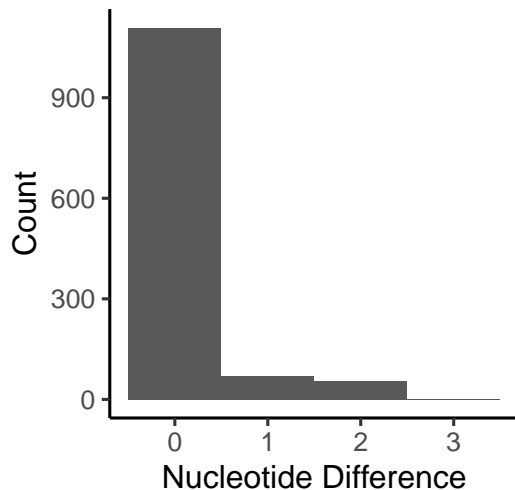


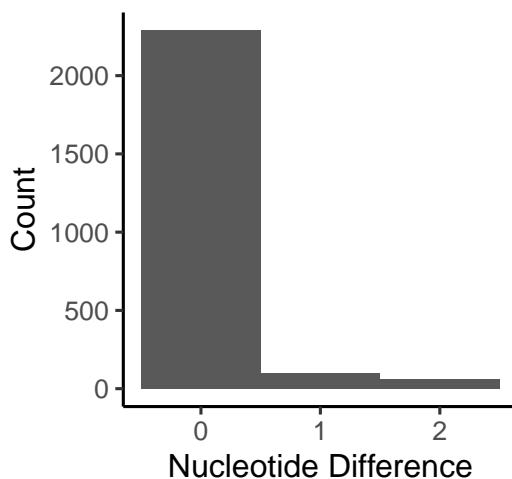
### IGHV1-2\*02

1235 sequences assigned  
1109 (89.8%) exact matches, in which:  
1107 unique CDR3  
6 unique J



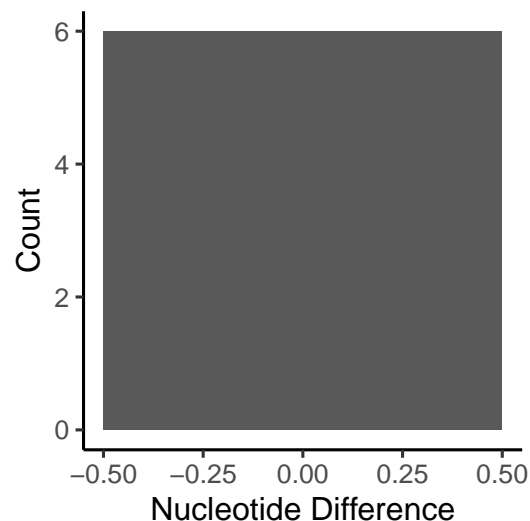
### IGHV1-8\*01

2445 sequences assigned  
2289 (93.6%) exact matches, in which:  
2283 unique CDR3  
6 unique J



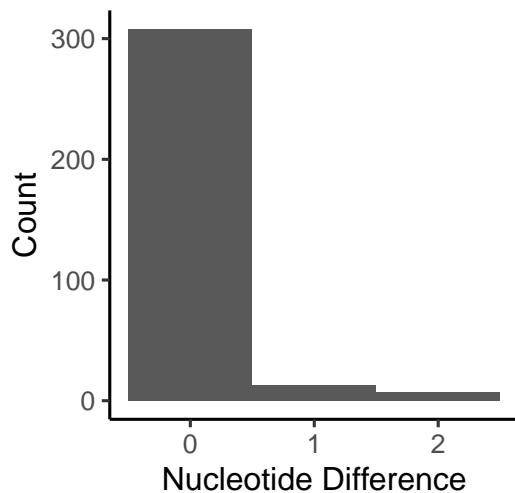
### IGHV1-45\*02

6 sequences assigned  
6 (100%) exact matches, in which:  
6 unique CDR3  
3 unique J



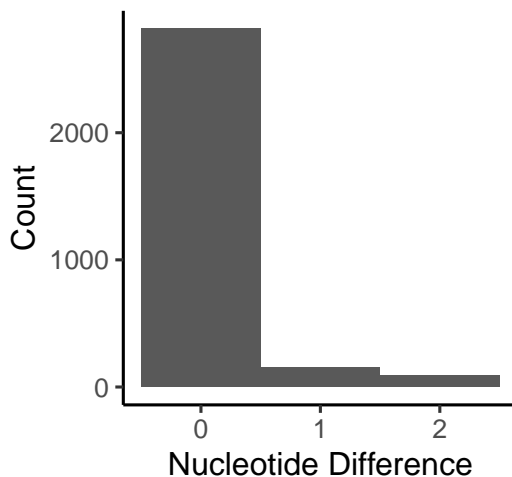
### IGHV1-2\*04

328 sequences assigned  
308 (93.9%) exact matches, in which:  
308 unique CDR3  
6 unique J



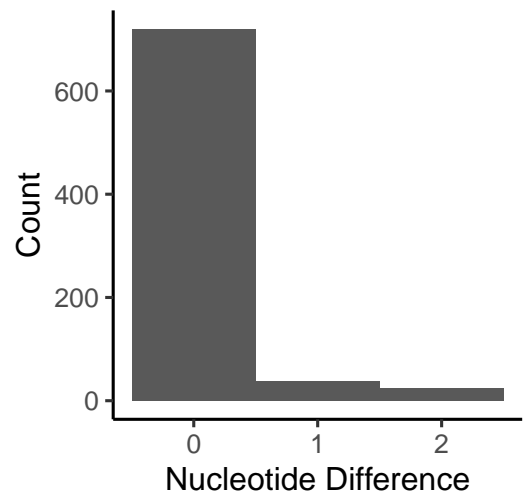
### IGHV1-18\*01

3058 sequences assigned  
2818 (92.2%) exact matches, in which:  
2800 unique CDR3  
6 unique J



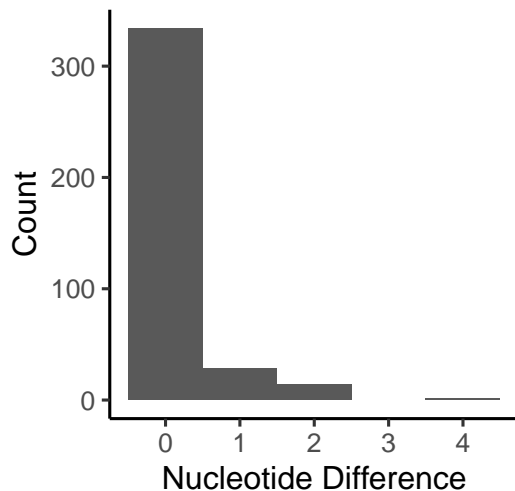
### IGHV1-46\*01

782 sequences assigned  
720 (92.1%) exact matches, in which:  
718 unique CDR3  
6 unique J



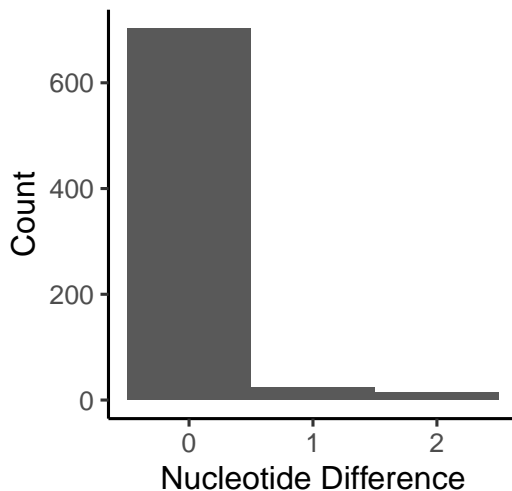
### IGHV1-3\*01\_05

377 sequences assigned  
334 (88.6%) exact matches, in which:  
334 unique CDR3  
6 unique J



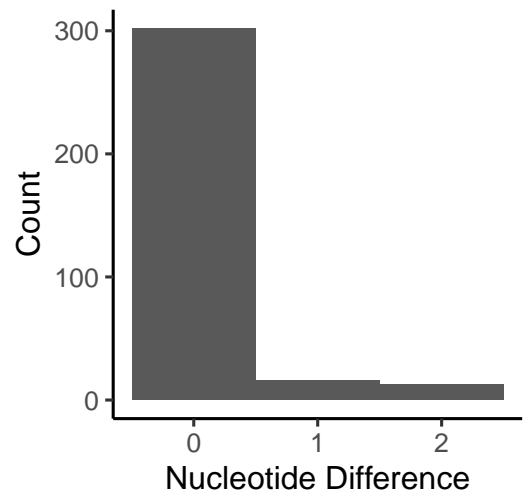
### IGHV1-24\*01

741 sequences assigned  
703 (94.9%) exact matches, in which:  
702 unique CDR3  
6 unique J



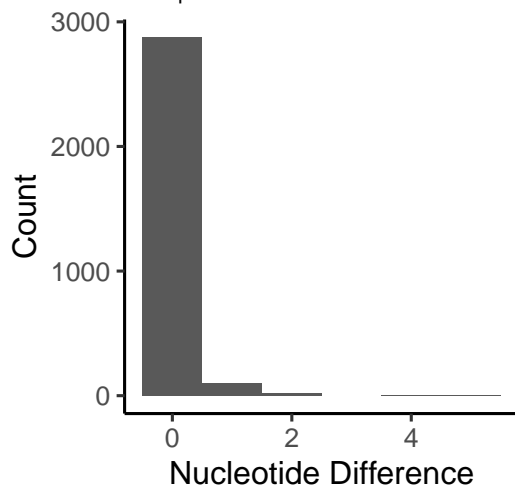
### IGHV1-58\*01\_03

331 sequences assigned  
302 (91.2%) exact matches, in which:  
302 unique CDR3  
6 unique J



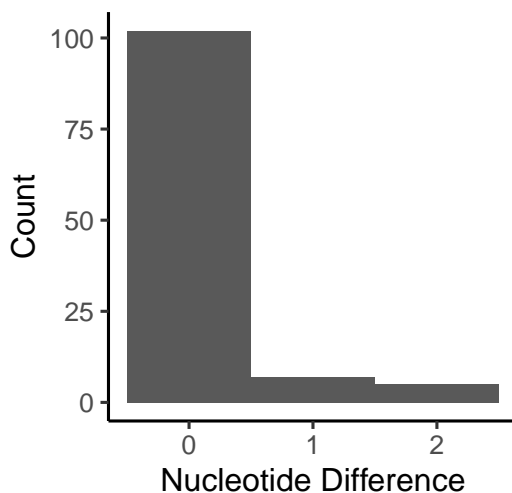
### IGHV1-69\*01\_12\_13

3000 sequences assigned  
2875 (95.8%) exact matches, in which:  
2870 unique CDR3  
6 unique J



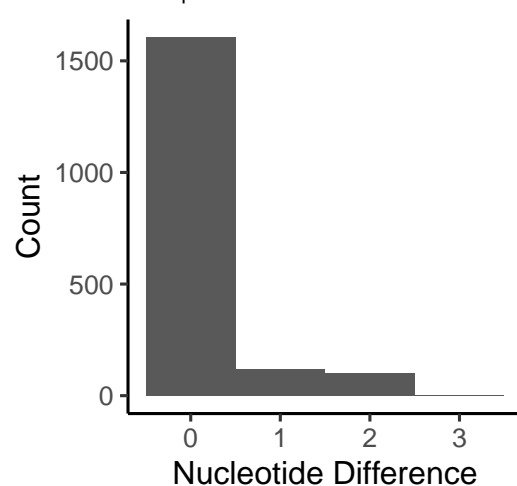
### IGHV2-26\*01

114 sequences assigned  
102 (89.5%) exact matches, in which:  
102 unique CDR3  
5 unique J



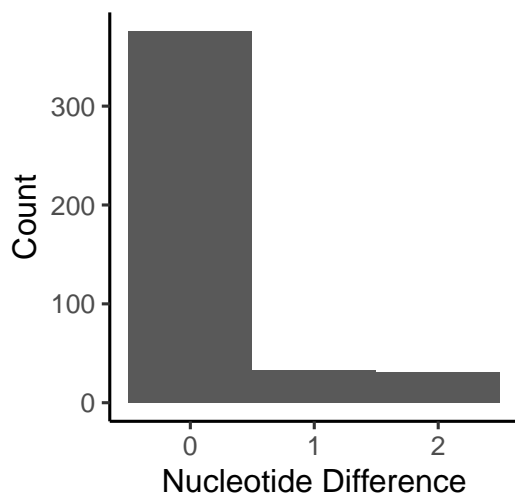
### IGHV3-9\*01

1826 sequences assigned  
1605 (87.9%) exact matches, in which:  
1561 unique CDR3  
6 unique J



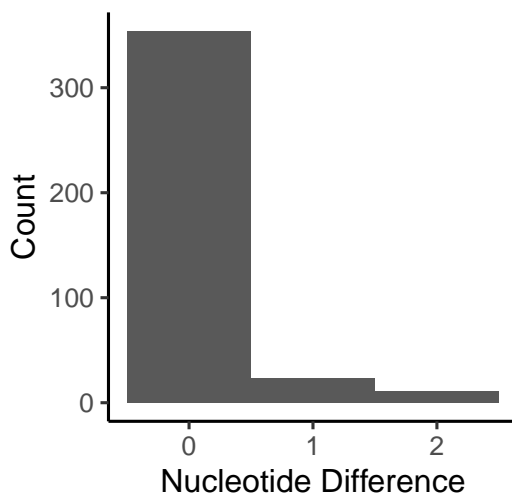
### IGHV2-5\*01

440 sequences assigned  
376 (85.5%) exact matches, in which:  
375 unique CDR3  
6 unique J



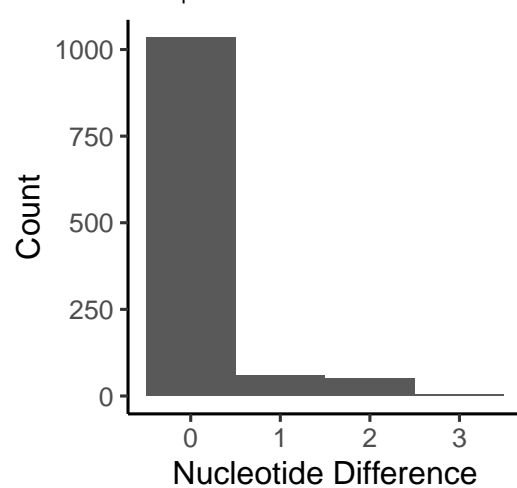
### IGHV2-70\*01

388 sequences assigned  
354 (91.2%) exact matches, in which:  
350 unique CDR3  
6 unique J



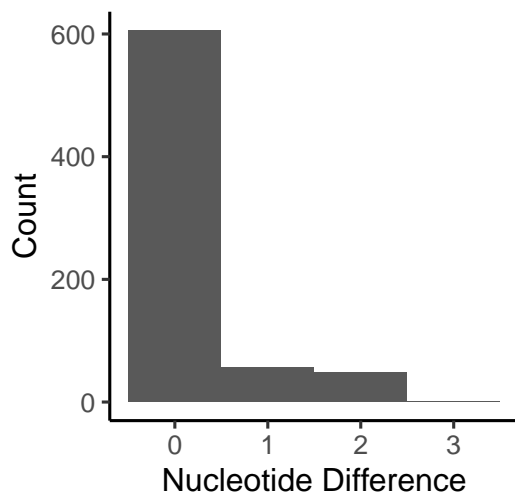
### IGHV3-11\*01

1148 sequences assigned  
1034 (90.1%) exact matches, in which:  
1005 unique CDR3  
6 unique J



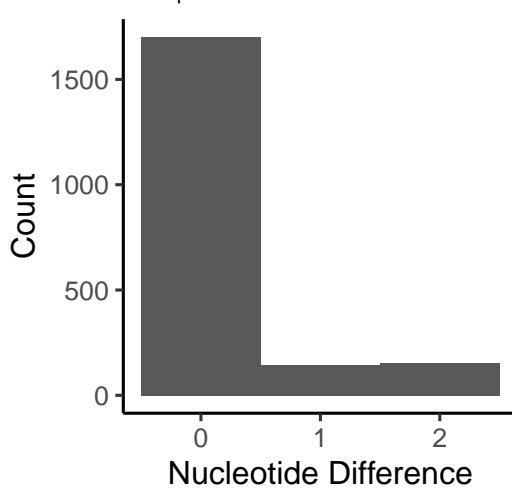
### IGHV2-5\*02

711 sequences assigned  
606 (85.2%) exact matches, in which:  
603 unique CDR3  
6 unique J



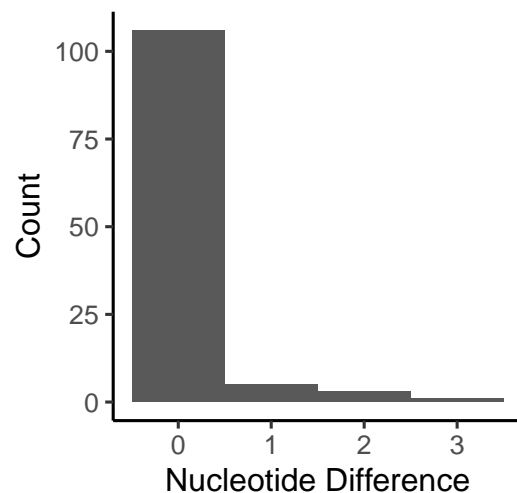
### IGHV3-7\*01

1997 sequences assigned  
1701 (85.2%) exact matches, in which:  
1618 unique CDR3  
6 unique J



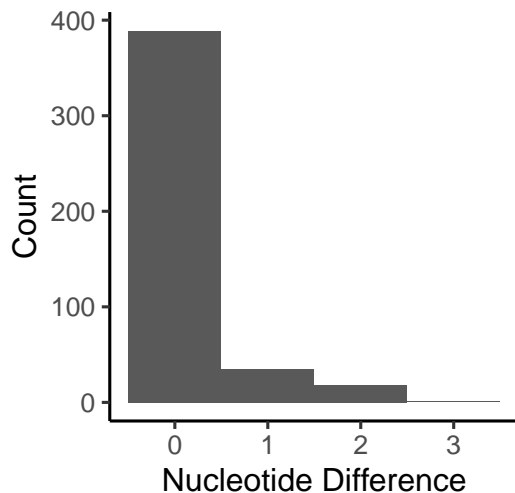
### IGHV3-13\*01

115 sequences assigned  
106 (92.2%) exact matches, in which:  
103 unique CDR3  
5 unique J



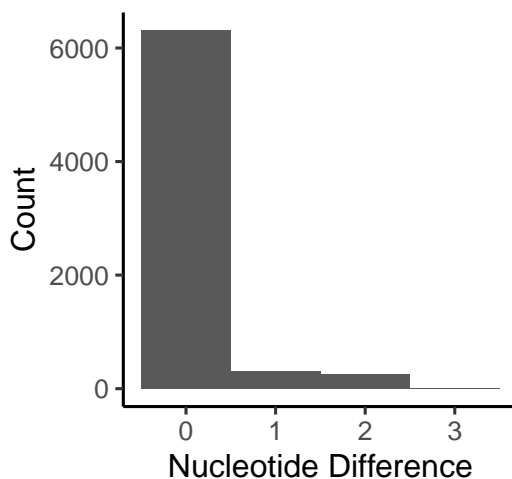
### IGHV3-15\*01\_02

443 sequences assigned  
389 (87.8%) exact matches, in which:  
383 unique CDR3  
6 unique J



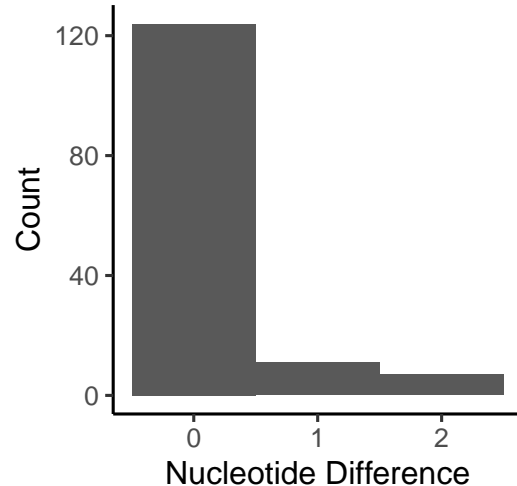
### IGHV3-23\*01\_04

6860 sequences assigned  
6310 (92%) exact matches, in which:  
6089 unique CDR3  
6 unique J



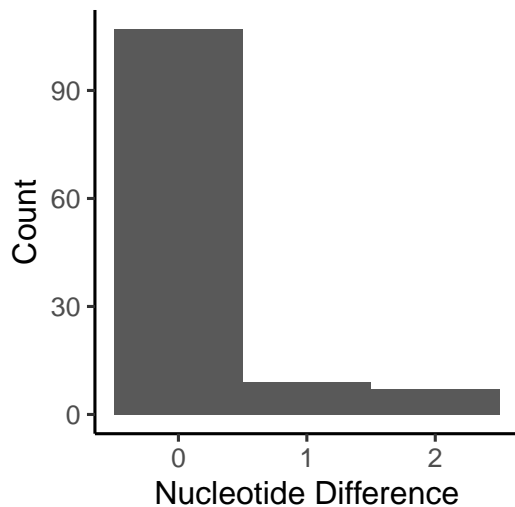
### IGHV3-43\*01

142 sequences assigned  
124 (87.3%) exact matches, in which:  
118 unique CDR3  
6 unique J



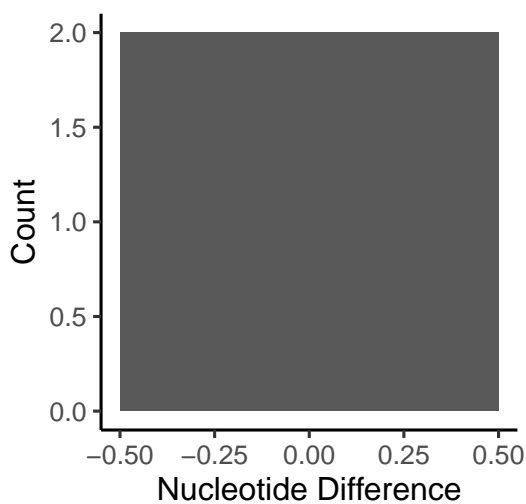
### IGHV3-20\*01\_02

123 sequences assigned  
107 (87%) exact matches, in which:  
101 unique CDR3  
5 unique J



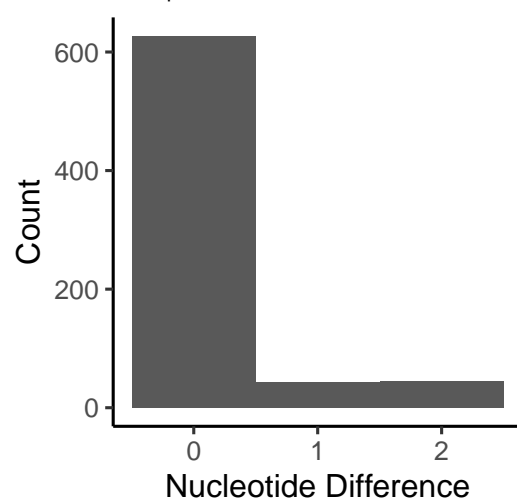
### IGHV3-30-3\*03

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



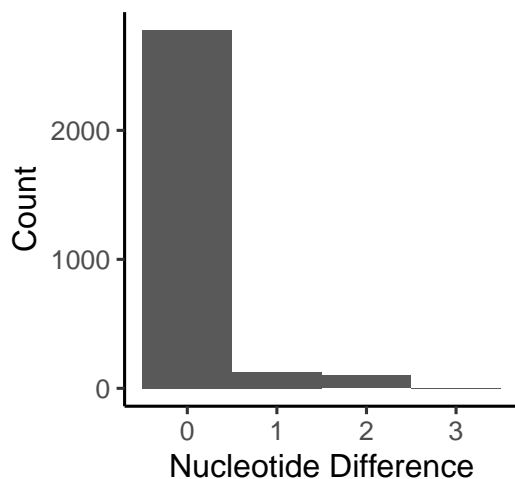
### IGHV3-48\*02

714 sequences assigned  
627 (87.8%) exact matches, in which:  
607 unique CDR3  
6 unique J



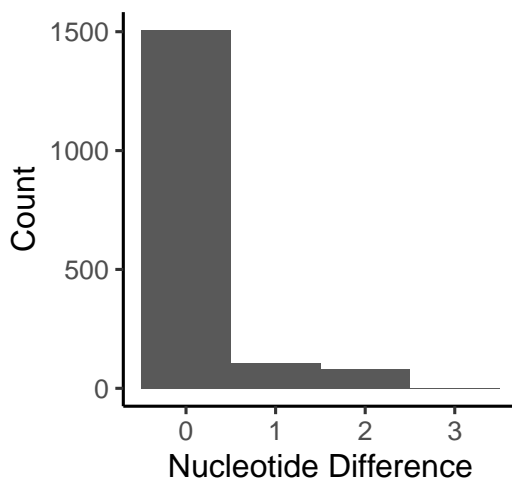
### IGHV3-21\*01\_02

3005 sequences assigned  
2778 (92.4%) exact matches, in which:  
2662 unique CDR3  
6 unique J



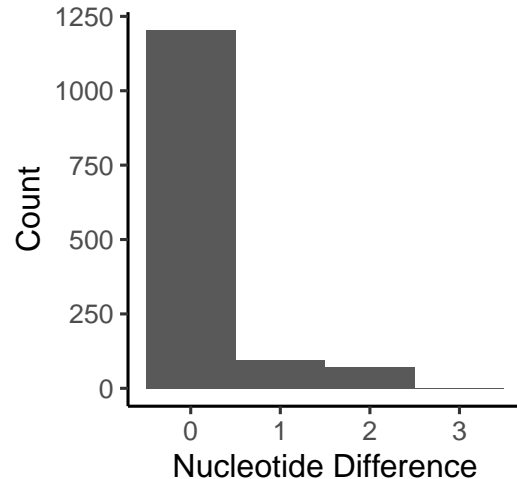
### IGHV3-33\*01

1698 sequences assigned  
1507 (88.8%) exact matches, in which:  
1476 unique CDR3  
6 unique J



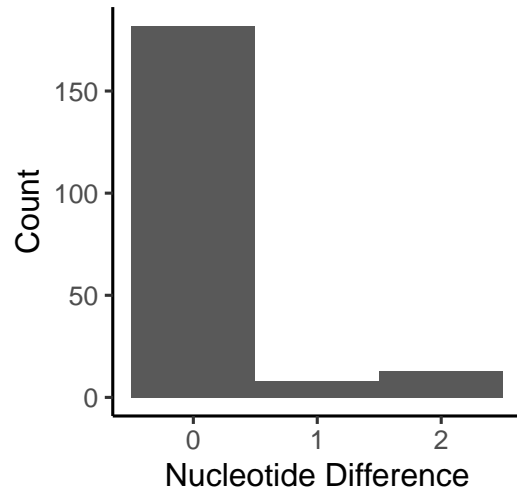
### IGHV3-48\*03

1371 sequences assigned  
1204 (87.8%) exact matches, in which:  
1170 unique CDR3  
6 unique J



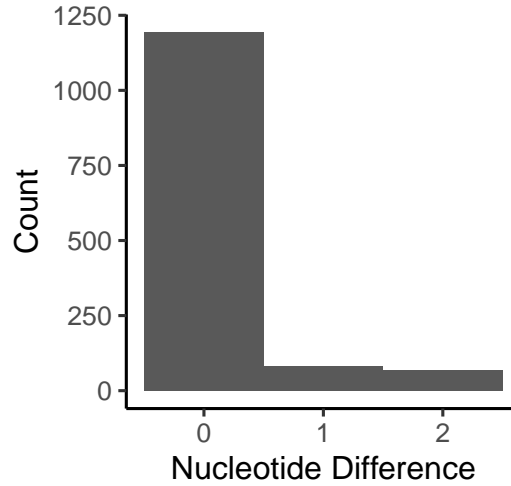
### IGHV3-49\*04

203 sequences assigned  
182 (89.7%) exact matches, in which:  
181 unique CDR3  
5 unique J



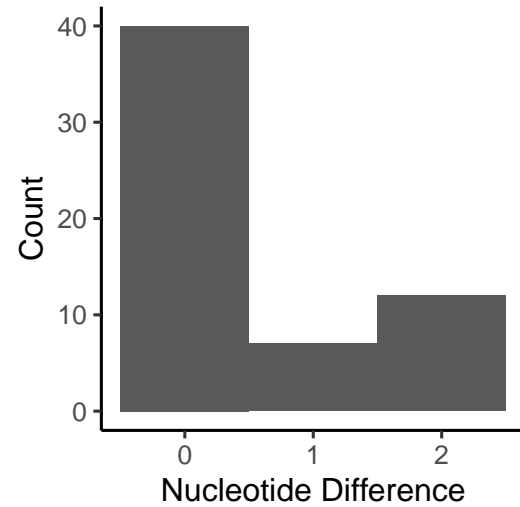
### IGHV3-53\*01\_02

1342 sequences assigned  
1193 (88.9%) exact matches, in which:  
1146 unique CDR3  
6 unique J



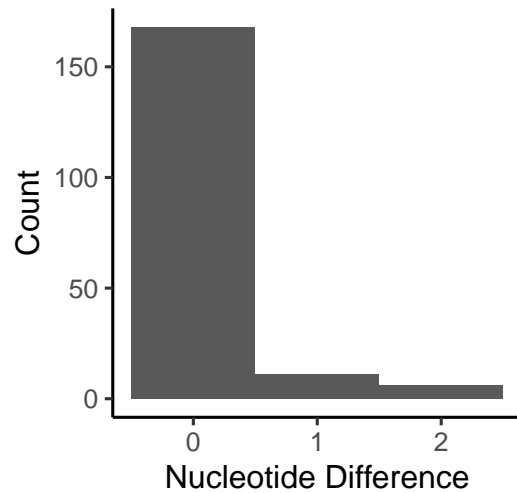
### IGHV3-72\*01

59 sequences assigned  
40 (67.8%) exact matches, in which:  
40 unique CDR3  
5 unique J



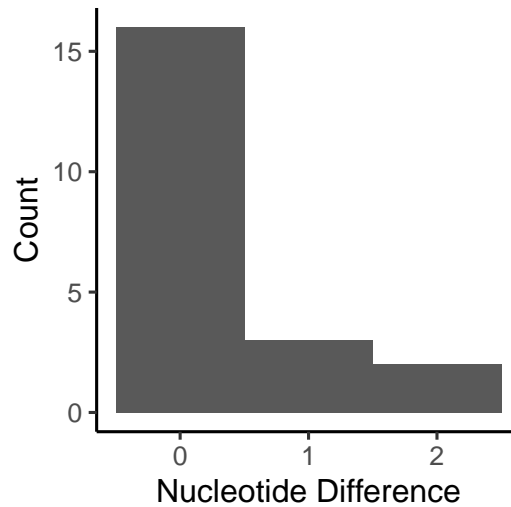
### IGHV3-49\*03\_05

185 sequences assigned  
168 (90.8%) exact matches, in which:  
164 unique CDR3  
6 unique J



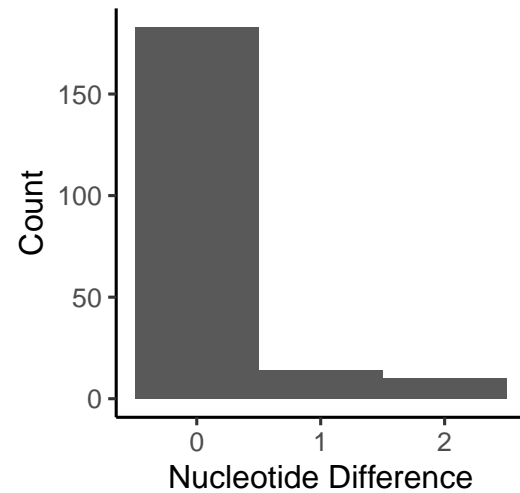
### IGHV3-64\*02\_07

21 sequences assigned  
16 (76.2%) exact matches, in which:  
16 unique CDR3  
4 unique J



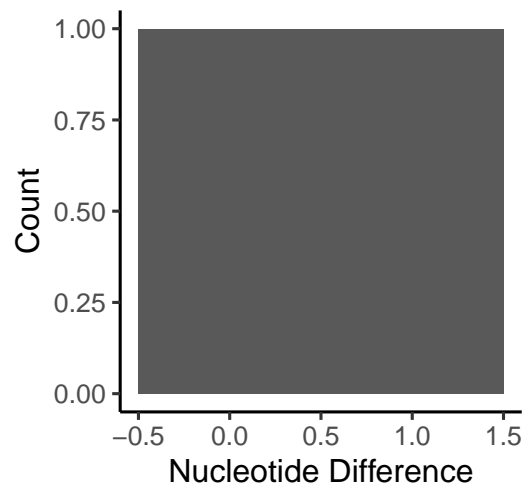
### IGHV3-73\*01\_02

207 sequences assigned  
183 (88.4%) exact matches, in which:  
180 unique CDR3  
6 unique J



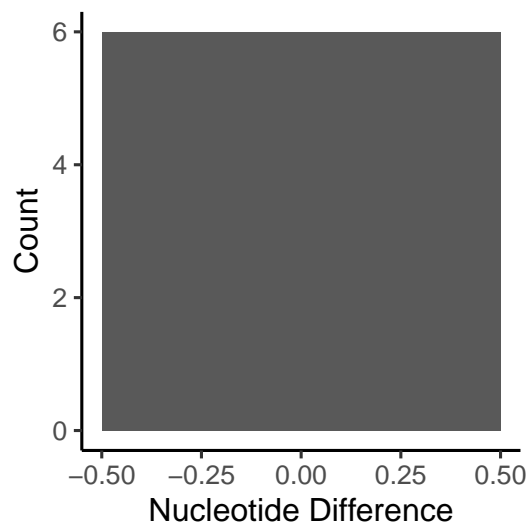
### IGHV3-52\*01\_03

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



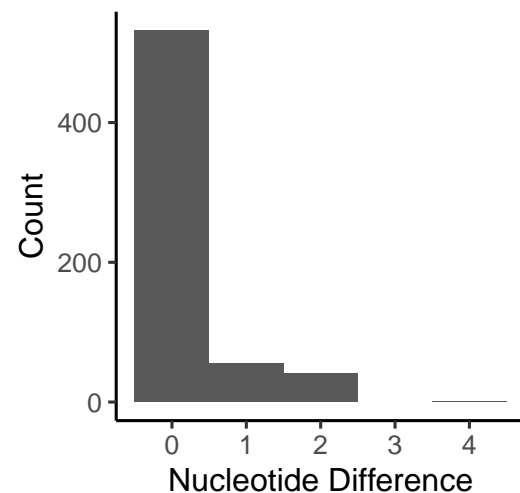
### IGHV3-66\*03

6 sequences assigned  
6 (100%) exact matches, in which:  
5 unique CDR3  
2 unique J



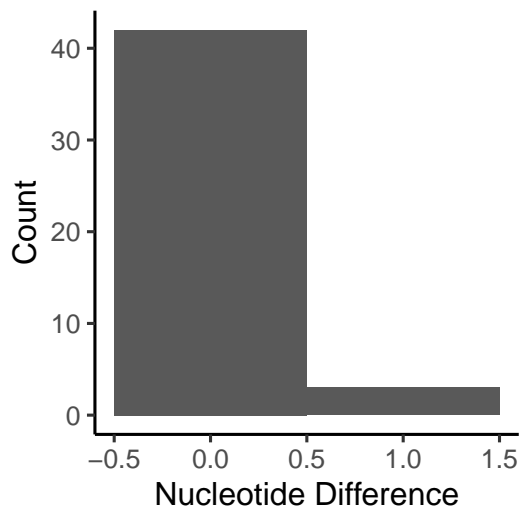
### IGHV3-74\*01\_02

629 sequences assigned  
532 (84.6%) exact matches, in which:  
518 unique CDR3  
6 unique J



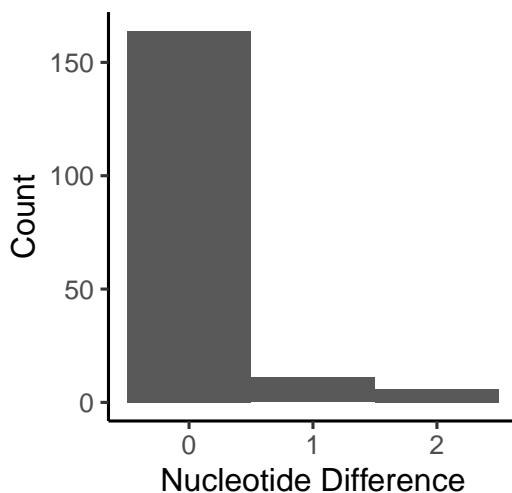
### IGHV3-43D\*04

45 sequences assigned  
42 (93.3%) exact matches, in which:  
42 unique CDR3  
4 unique J



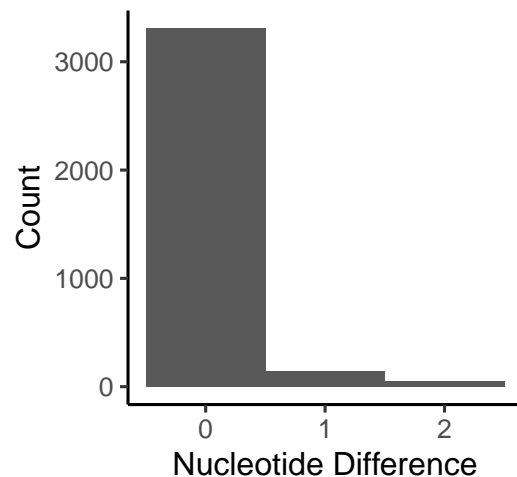
### IGHV4-4\*02\_03

181 sequences assigned  
164 (90.6%) exact matches, in which:  
161 unique CDR3  
6 unique J



### IGHV4-34\*01\_02

3503 sequences assigned  
3308 (94.4%) exact matches, in which:  
3224 unique CDR3  
6 unique J



### IGHV3-64D\*09

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



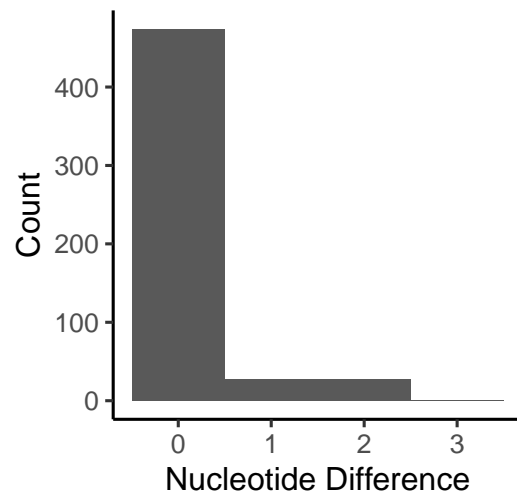
### IGHV4-28\*01\_07

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



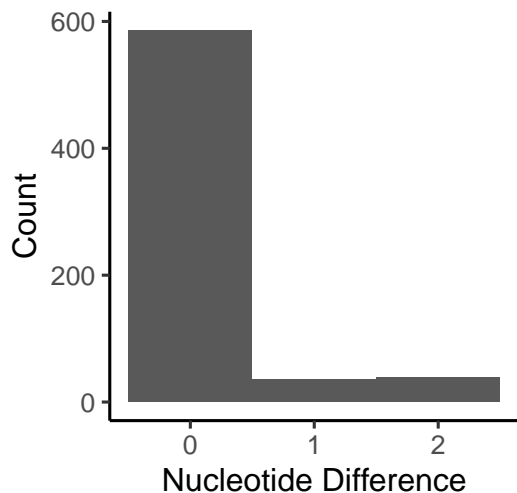
### IGHV4-38-2\*02\_A70G

530 sequences assigned  
474 (89.4%) exact matches, in which:  
467 unique CDR3  
6 unique J



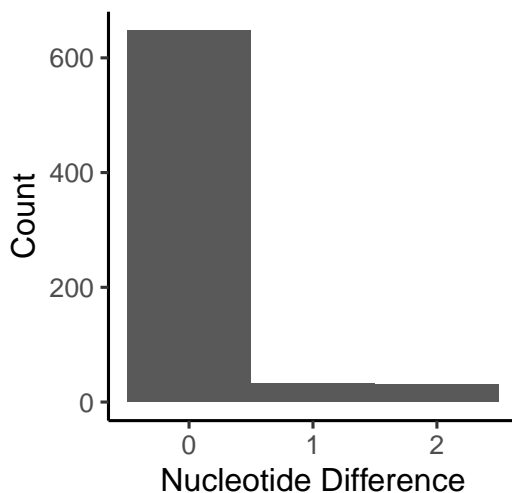
### IGHV4-4\*07

660 sequences assigned  
586 (88.8%) exact matches, in which:  
580 unique CDR3  
6 unique J



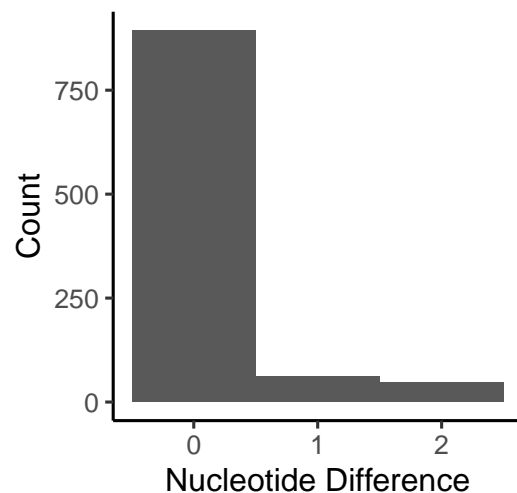
### IGHV4-31\*02

710 sequences assigned  
648 (91.3%) exact matches, in which:  
640 unique CDR3  
6 unique J



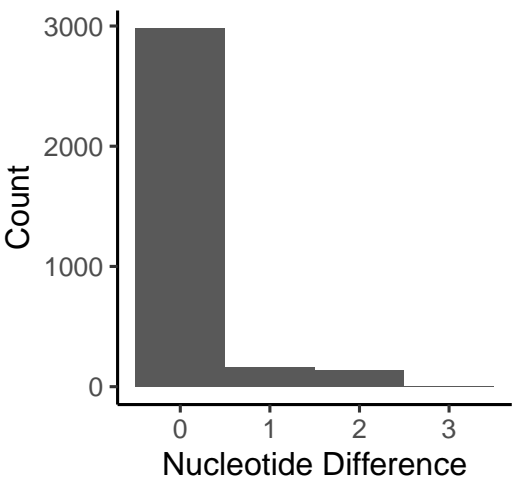
### IGHV4-39\*02\_C258G

1001 sequences assigned  
894 (89.3%) exact matches, in which:  
882 unique CDR3  
6 unique J



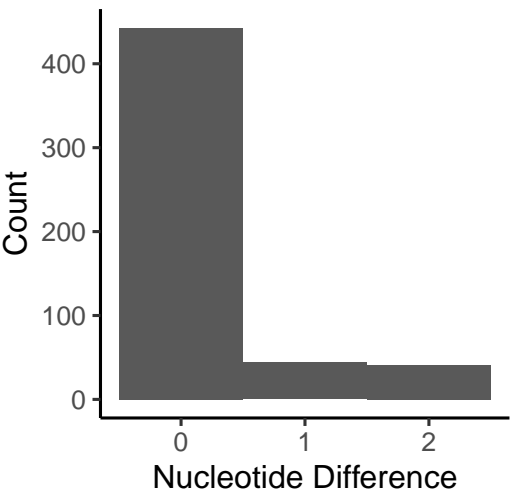
IGHV4-59\*02\_G88A

3282 sequences assigned  
2980 (90.8%) exact matches, in which:  
2891 unique CDR3  
6 unique J



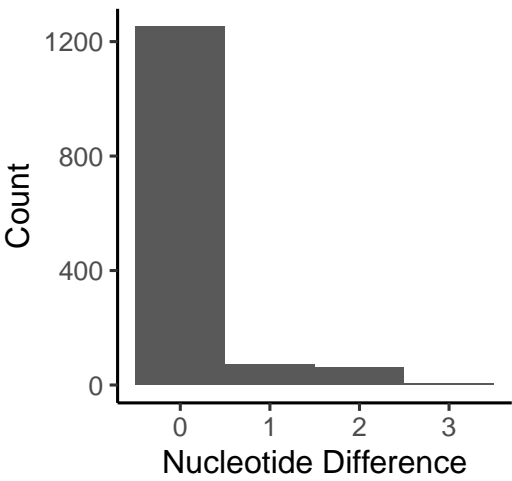
IGHV6-1\*01\_02

528 sequences assigned  
443 (83.9%) exact matches, in which:  
443 unique CDR3  
6 unique J



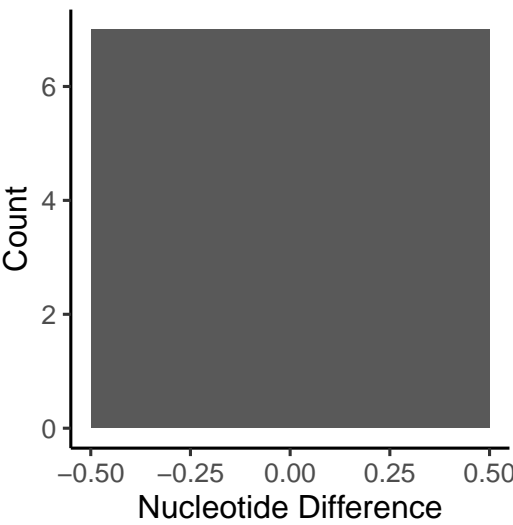
IGHV4-61\*01

1388 sequences assigned  
1252 (90.2%) exact matches, in which:  
1213 unique CDR3  
6 unique J



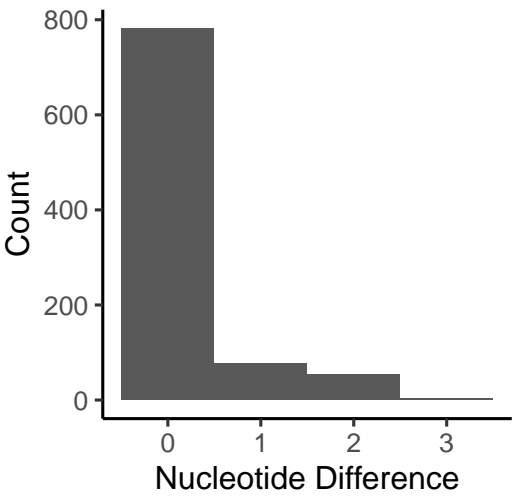
IGHV7-4-1\*01

7 sequences assigned  
7 (100%) exact matches, in which:  
7 unique CDR3  
3 unique J



IGHV5-51\*07\_A128G

915 sequences assigned  
782 (85.5%) exact matches, in which:  
782 unique CDR3  
6 unique J





Warning – no inferred sequences found.