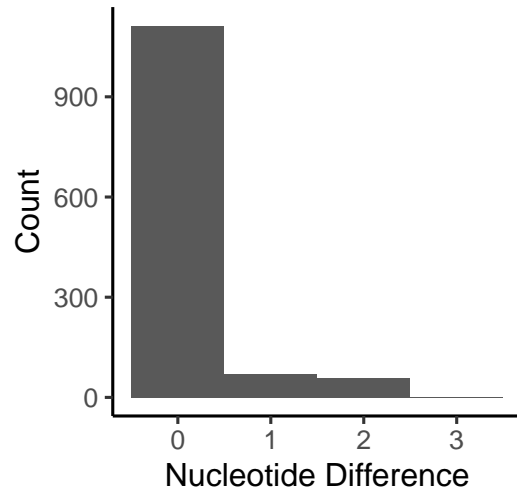


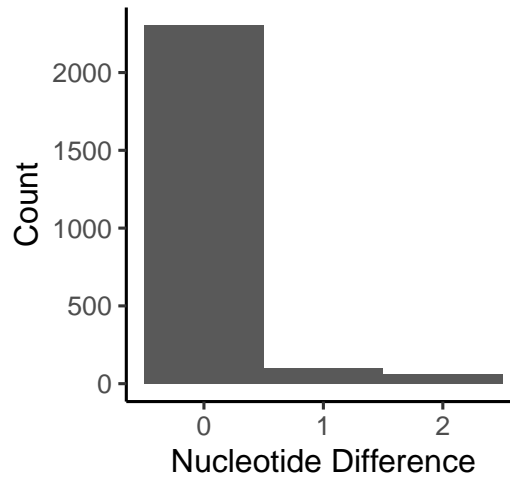
### IGHV1-2\*02

1240 sequences assigned  
1113 (89.8%) exact matches, in which:  
1106 unique CDR3  
6 unique J



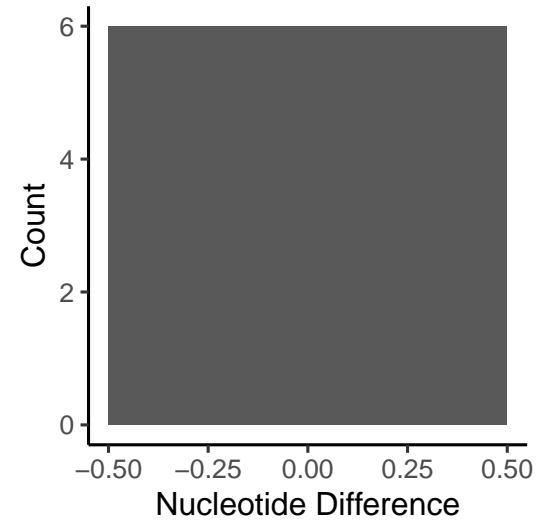
### IGHV1-8\*01

2459 sequences assigned  
2303 (93.7%) exact matches, in which:  
2284 unique CDR3  
6 unique J



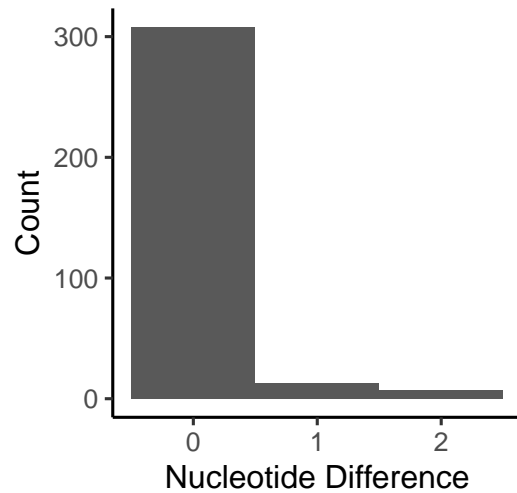
### IGHV1-45\*02

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



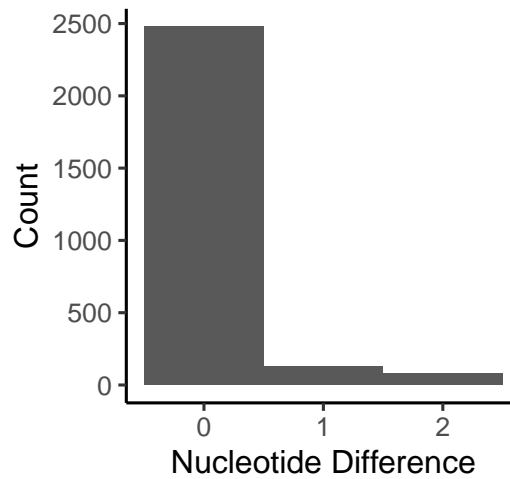
### IGHV1-2\*04

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



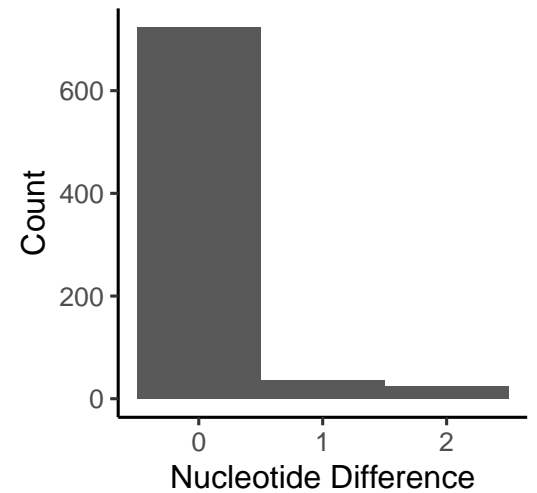
### IGHV1-18\*01

2683 sequences assigned  
2478 (92.4%) exact matches, in which:  
2444 unique CDR3  
6 unique J



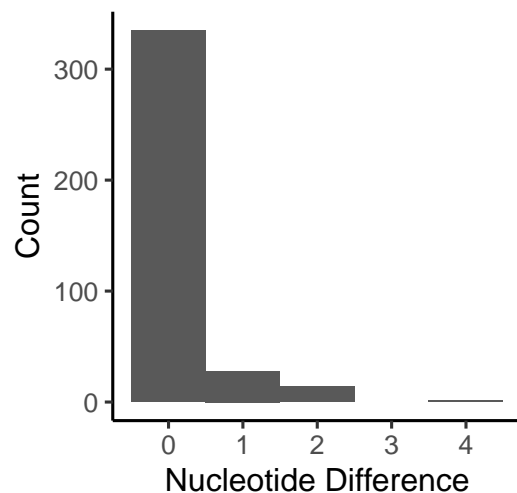
### IGHV1-46\*01

785 sequences assigned  
724 (92.2%) exact matches, in which:  
720 unique CDR3  
6 unique J



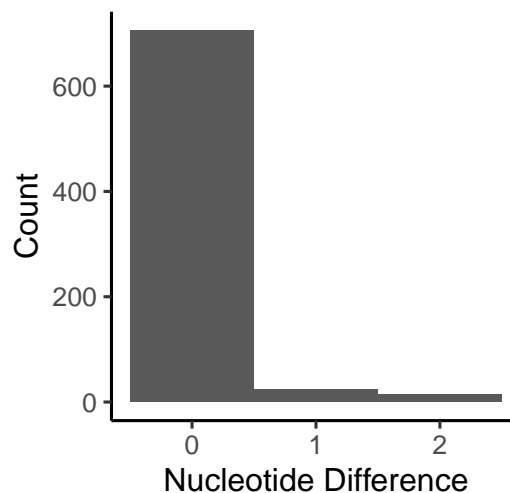
### IGHV1-3\*01\_05

378 sequences assigned  
335 (88.6%) exact matches, in which:  
334 unique CDR3  
6 unique J



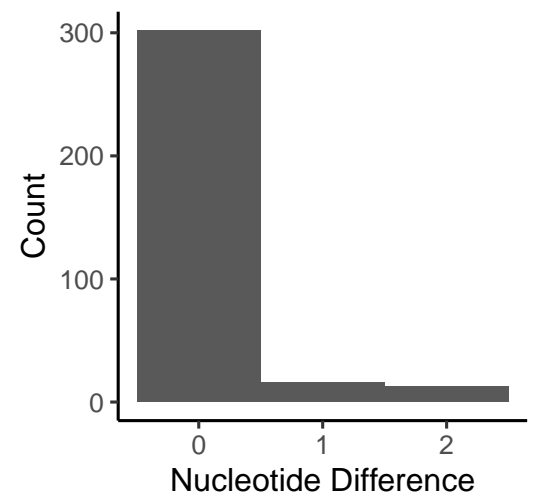
### IGHV1-24\*01

743 sequences assigned  
706 (95%) exact matches, in which:  
701 unique CDR3  
6 unique J



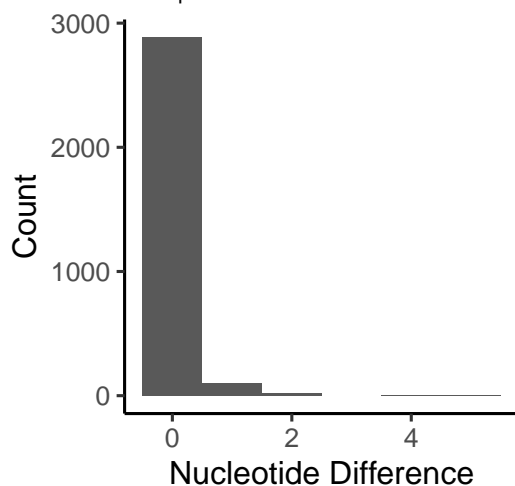
### IGHV1-58\*01\_03

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



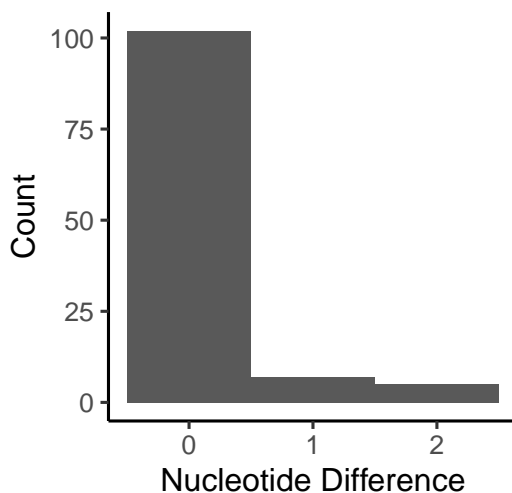
### IGHV1-69\*01\_12\_13

3010 sequences assigned  
2885 (95.8%) exact matches, in which:  
2872 unique CDR3  
6 unique J



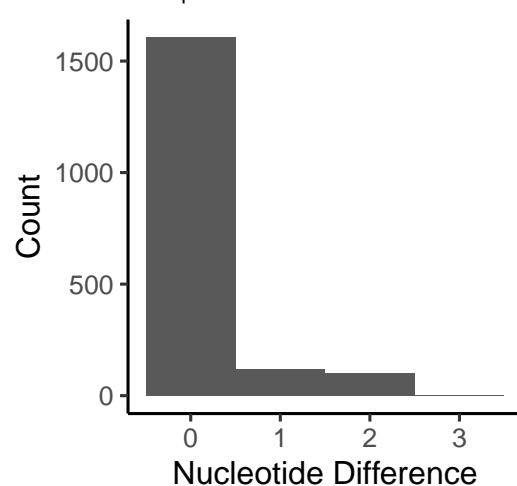
### IGHV2-26\*01

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



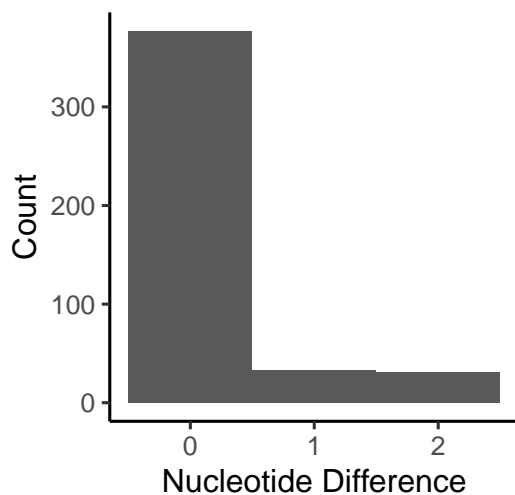
### IGHV3-9\*01

1827 sequences assigned  
1606 (87.9%) exact matches, in which:  
1558 unique CDR3  
6 unique J



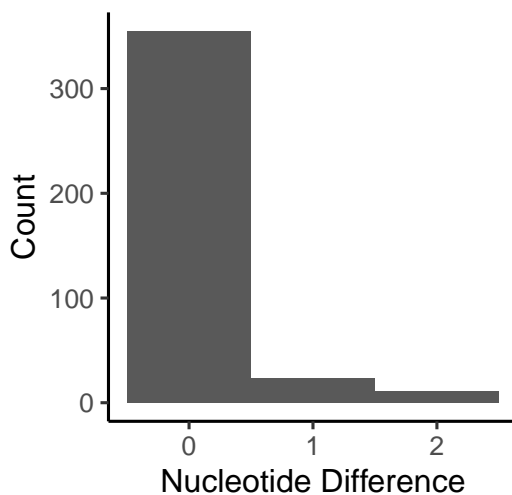
### IGHV2-5\*01

441 sequences assigned  
377 (85.5%) exact matches, in which:  
375 unique CDR3  
6 unique J



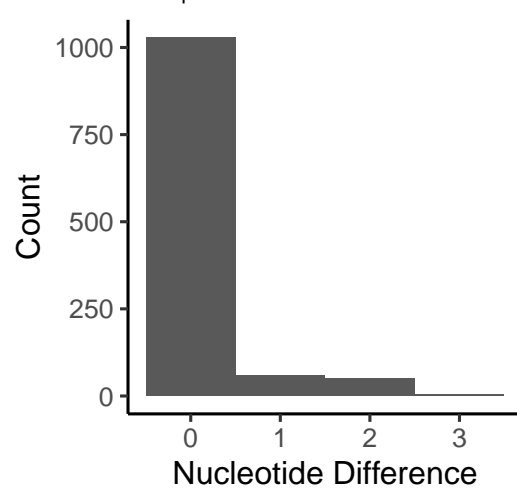
### IGHV2-70\*01

389 sequences assigned  
355 (91.3%) exact matches, in which:  
350 unique CDR3  
6 unique J



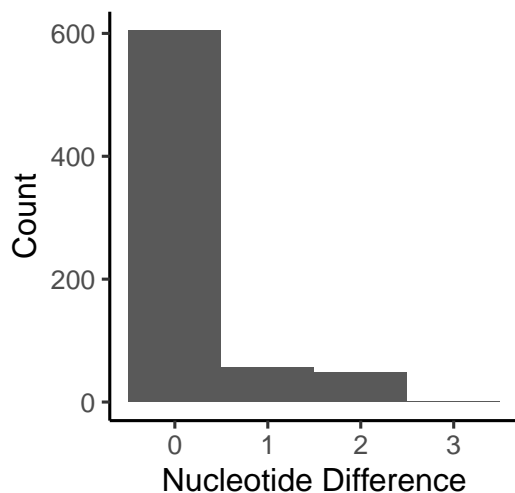
### IGHV3-11\*01

1140 sequences assigned  
1028 (90.2%) exact matches, in which:  
999 unique CDR3  
6 unique J



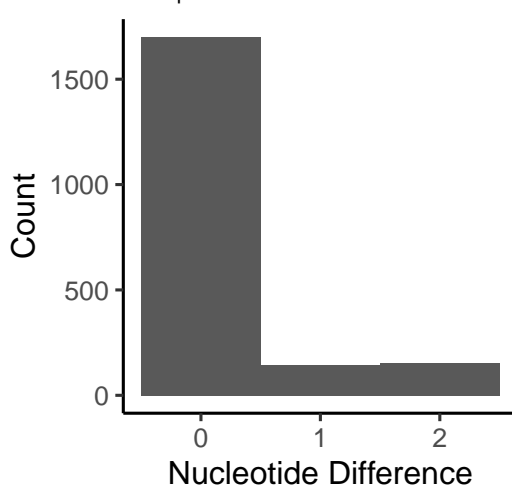
### IGHV2-5\*02

710 sequences assigned  
605 (85.2%) exact matches, in which:  
602 unique CDR3  
6 unique J



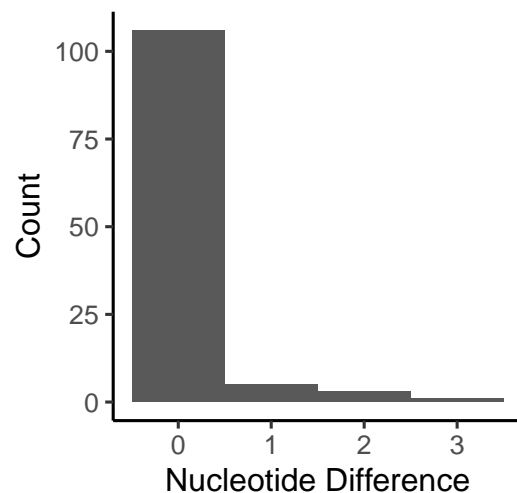
### IGHV3-7\*01

1996 sequences assigned  
1700 (85.2%) exact matches, in which:  
1615 unique CDR3  
6 unique J



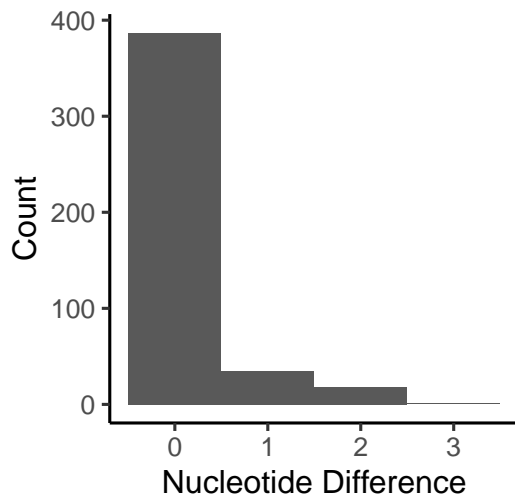
### IGHV3-13\*01

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



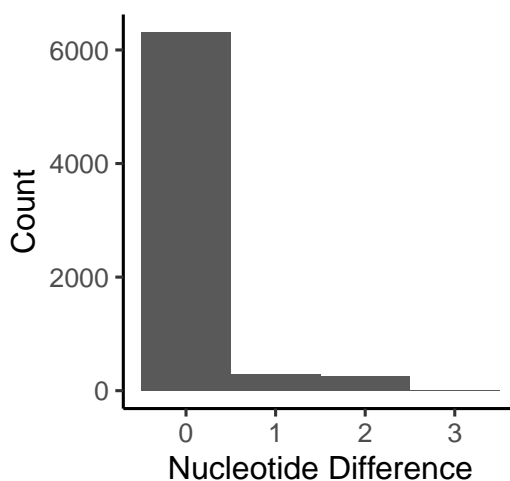
### IGHV3-15\*01\_02

441 sequences assigned  
387 (87.8%) exact matches, in which:  
381 unique CDR3  
6 unique J



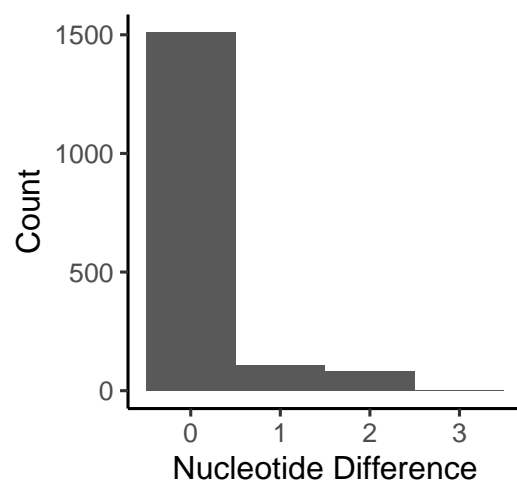
### IGHV3-23\*01\_04

6856 sequences assigned  
6309 (92%) exact matches, in which:  
6076 unique CDR3  
6 unique J



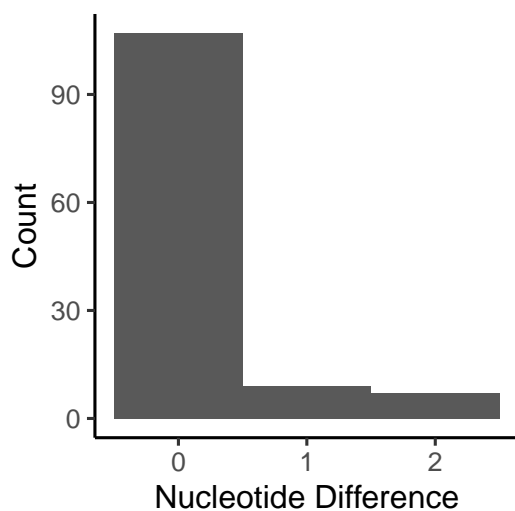
### IGHV3-33\*01

1701 sequences assigned  
1510 (88.8%) exact matches, in which:  
1476 unique CDR3  
6 unique J



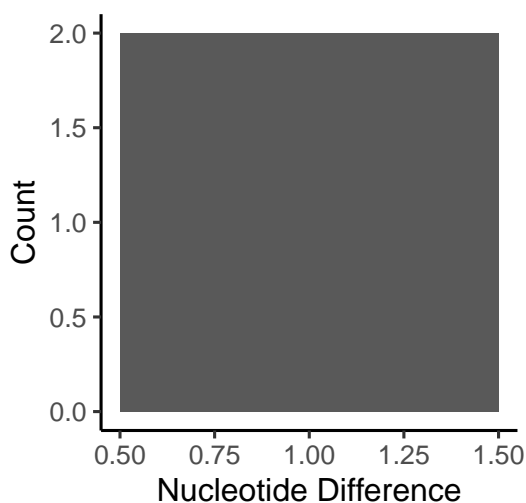
### IGHV3-20\*01\_02

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



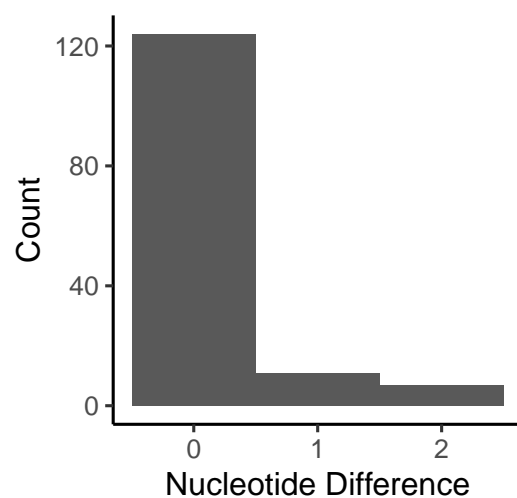
### IGHV3-30-3\*01

2 sequences assigned  
No exact matches.



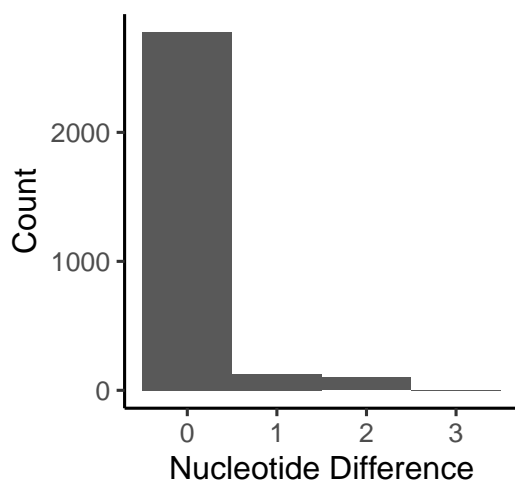
### IGHV3-43\*01

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



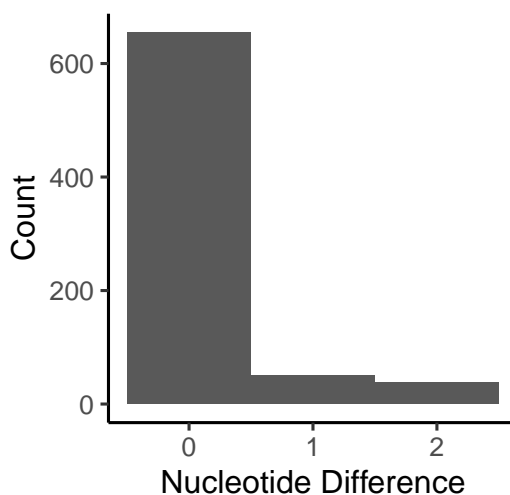
### IGHV3-21\*01\_02

3005 sequences assigned  
2778 (92.4%) exact matches, in which:  
2656 unique CDR3  
6 unique J



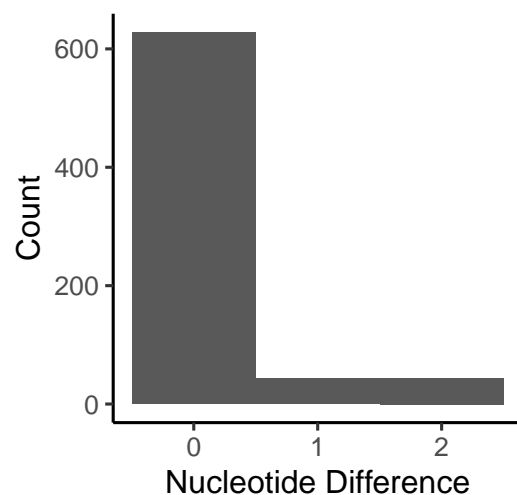
### IGHV3-30\*18

743 sequences assigned  
655 (88.2%) exact matches, in which:  
637 unique CDR3  
6 unique J



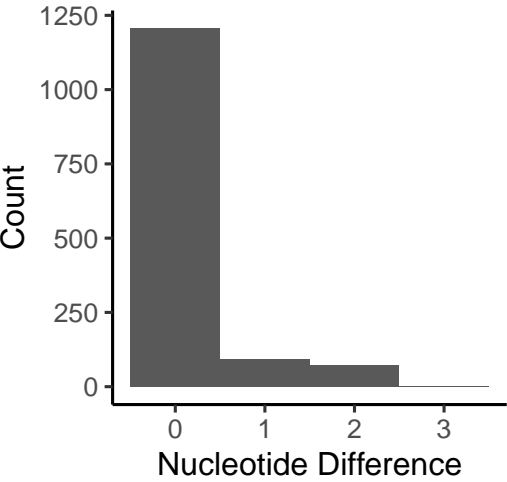
### IGHV3-48\*02

715 sequences assigned  
628 (87.8%) exact matches, in which:  
605 unique CDR3  
6 unique J



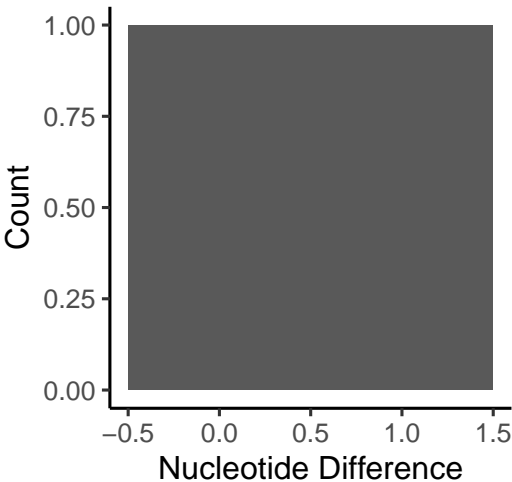
IGHV3-48\*03

1372 sequences assigned  
1206 (87.9%) exact matches, in which:  
1167 unique CDR3  
6 unique J



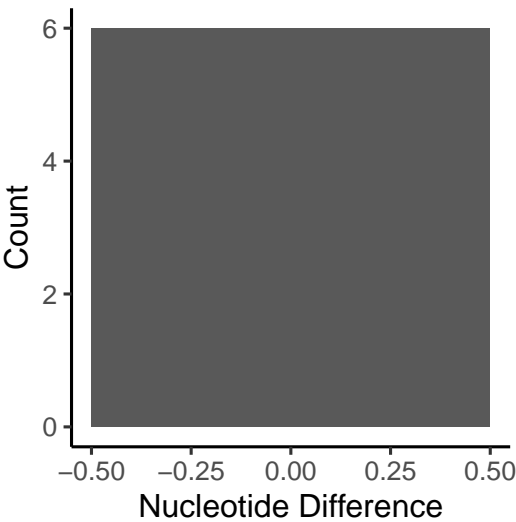
IGHV3-52\*01\_03

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



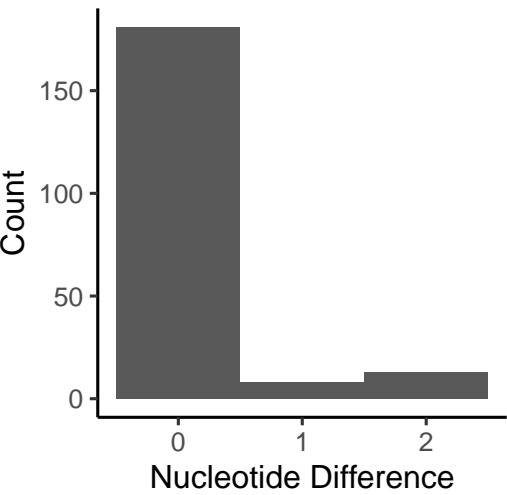
IGHV3-66\*03

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



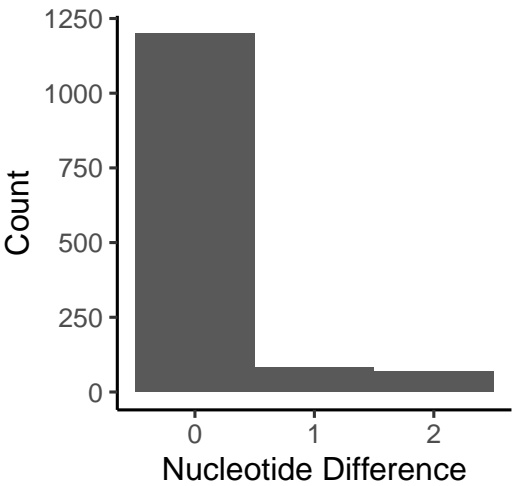
IGHV3-49\*04

202 sequences assigned  
181 (89.6%) exact matches, in which:  
180 unique CDR3  
5 unique J



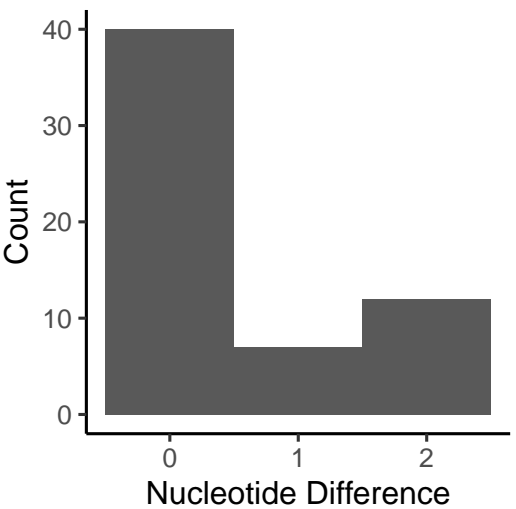
IGHV3-53\*01\_02

1348 sequences assigned  
1199 (88.9%) exact matches, in which:  
1147 unique CDR3  
6 unique J



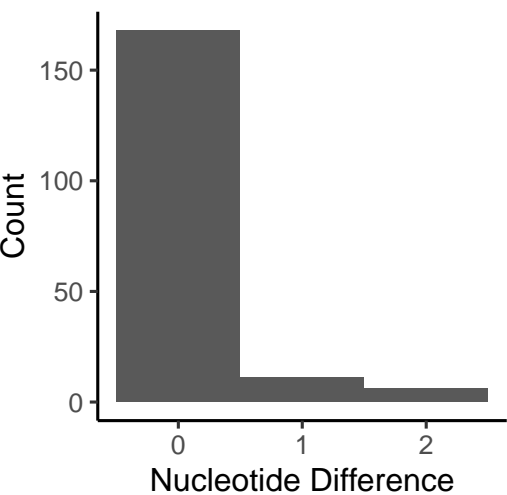
IGHV3-72\*01

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



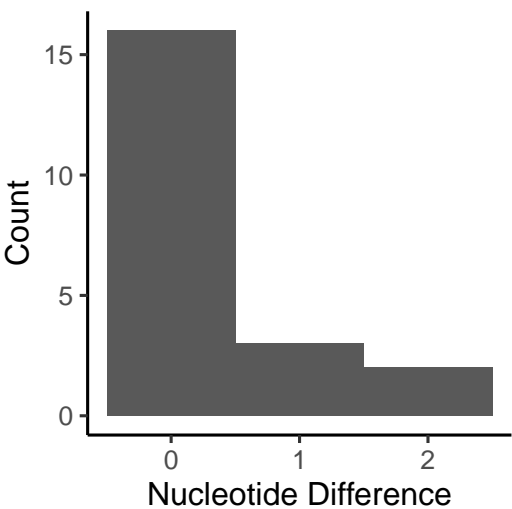
IGHV3-49\*03\_05

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



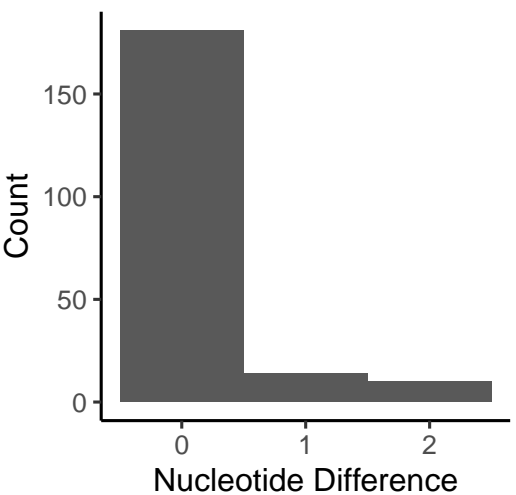
IGHV3-64\*02\_07

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



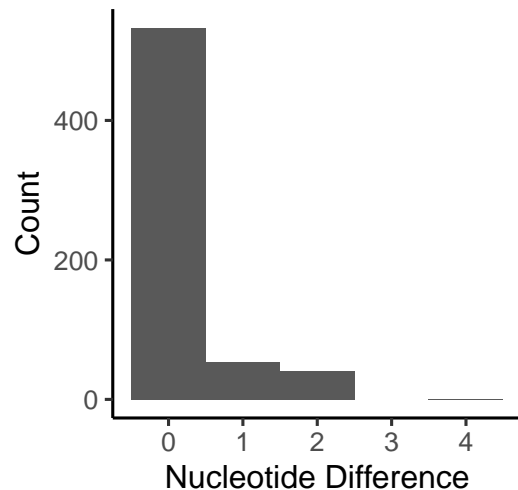
IGHV3-73\*01\_02

205 sequences assigned  
181 (88.3%) exact matches, in which:  
178 unique CDR3  
6 unique J



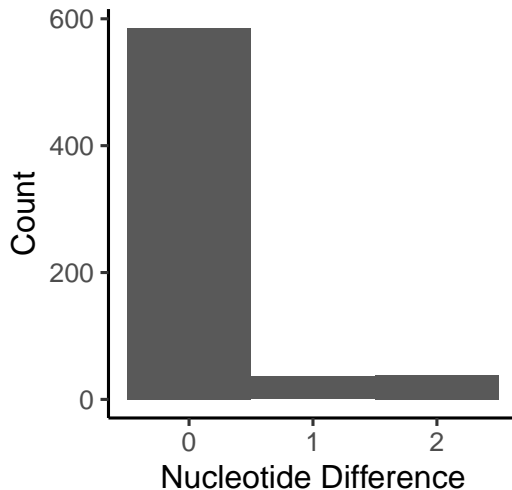
### IGHV3-74\*01\_02

629 sequences assigned  
533 (84.7%) exact matches, in which:  
516 unique CDR3  
6 unique J



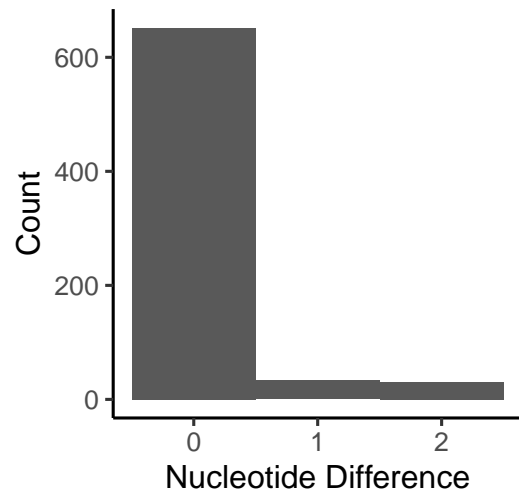
### IGHV4-4\*07

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



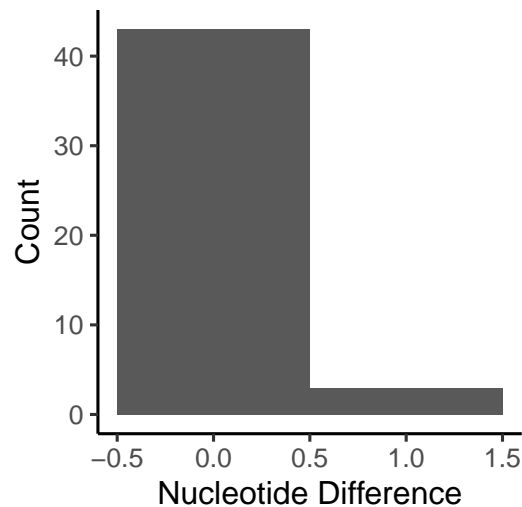
### IGHV4-31\*02

715 sequences assigned  
652 (91.2%) exact matches, in which:  
641 unique CDR3  
6 unique J



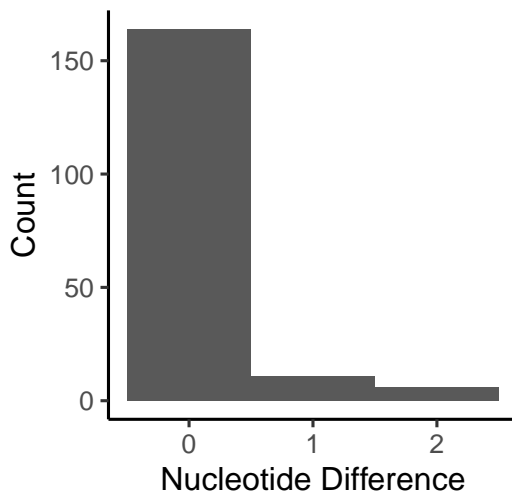
### IGHV3-43D\*04

46 sequences assigned  
43 (93.5%) exact matches, in which:  
42 unique CDR3  
4 unique J



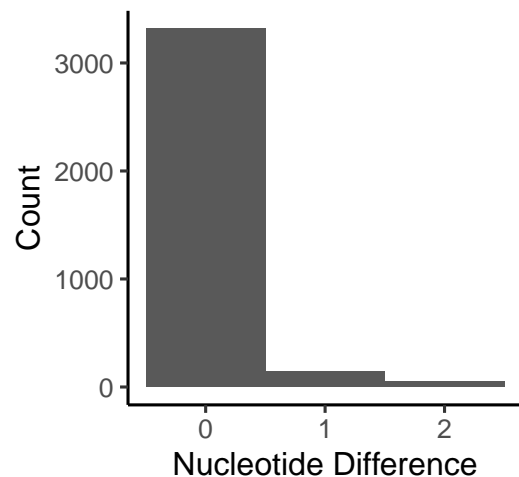
### IGHV4-4\*02\_03

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



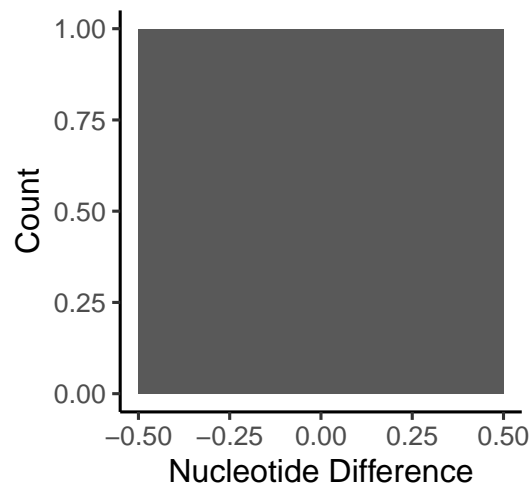
### IGHV4-34\*01\_02

3511 sequences assigned  
3317 (94.5%) exact matches, in which:  
3218 unique CDR3  
6 unique J



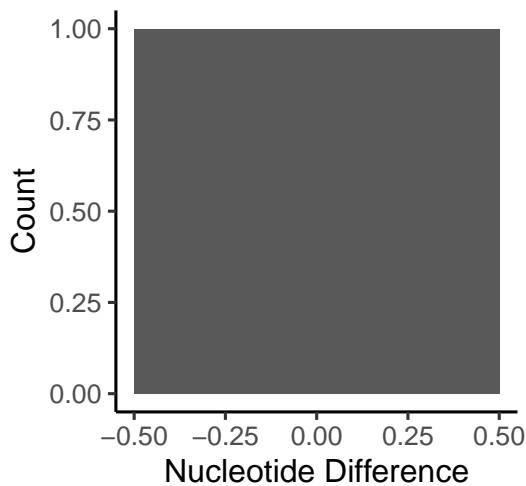
### IGHV3-64D\*09

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



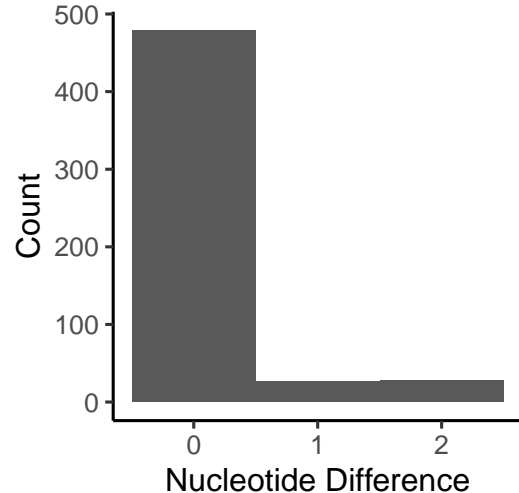
### IGHV4-28\*01\_07

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



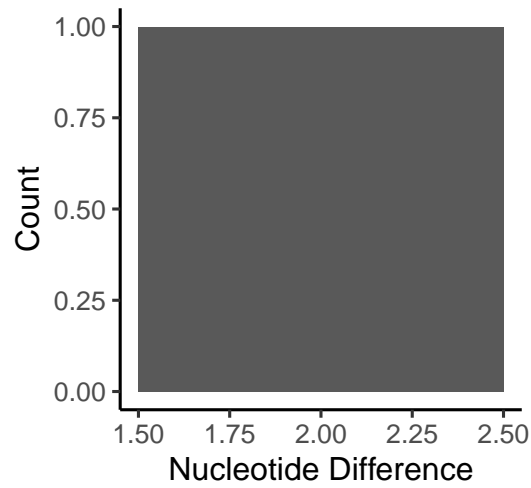
### IGHV4-38-2\*01

533 sequences assigned  
479 (89.9%) exact matches, in which:  
470 unique CDR3  
6 unique J



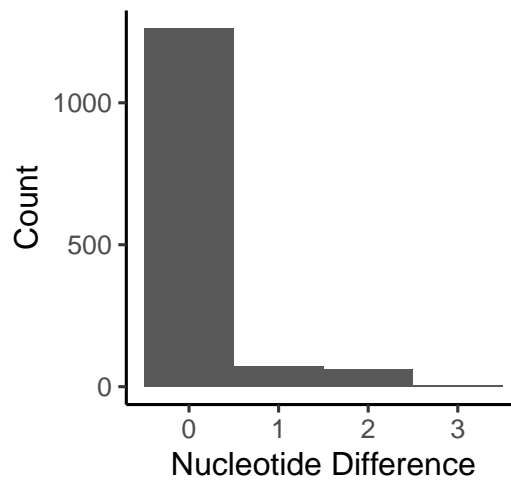
### IGHV4–59\*02

1 sequences assigned  
No exact matches.



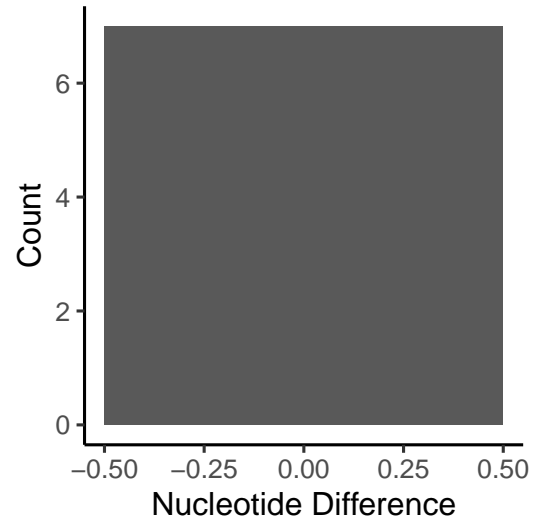
### IGHV4–61\*01

1399 sequences assigned  
1262 (90.2%) exact matches, in which:  
1214 unique CDR3  
6 unique J



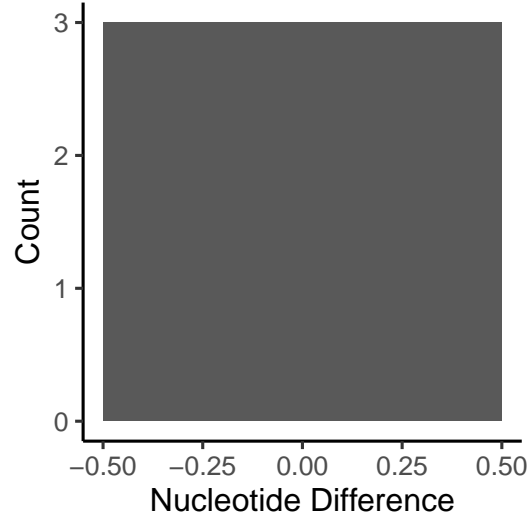
### IGHV7–4–1\*01

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



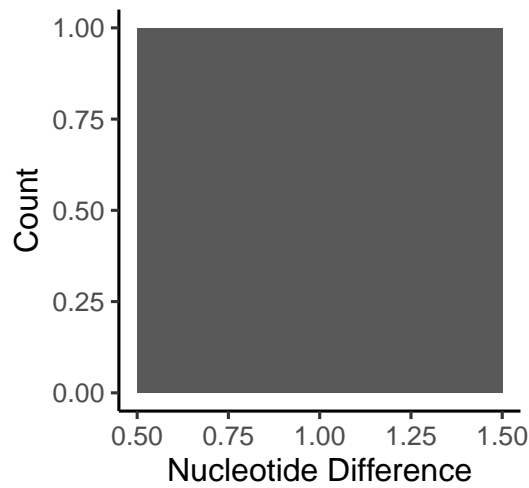
### IGHV4–59\*08

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



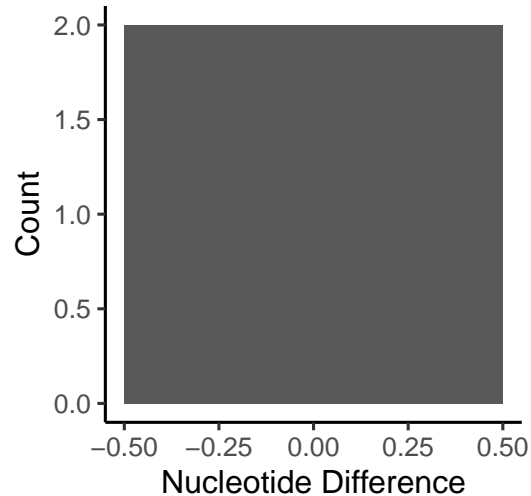
### IGHV5–51\*01\_03

1 sequences assigned  
No exact matches.



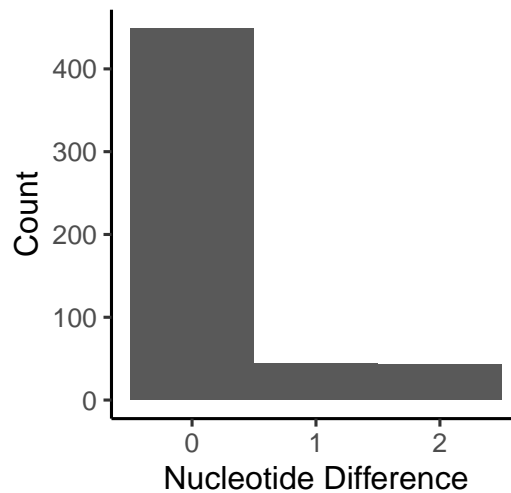
### IGHV4–59\*11

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



### IGHV6–1\*01\_02

536 sequences assigned  
449 (83.8%) exact matches, in which:  
443 unique CDR3  
6 unique J





Warning – no inferred sequences found.