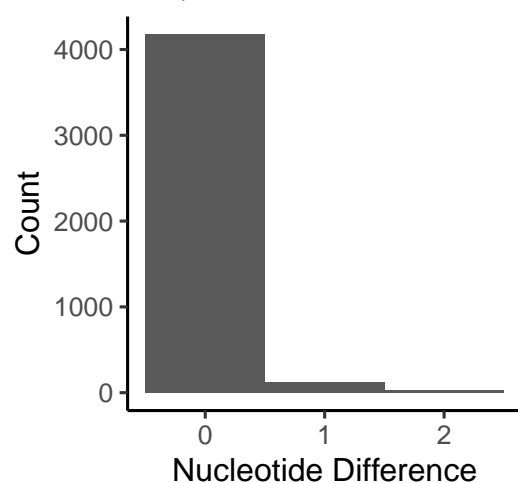


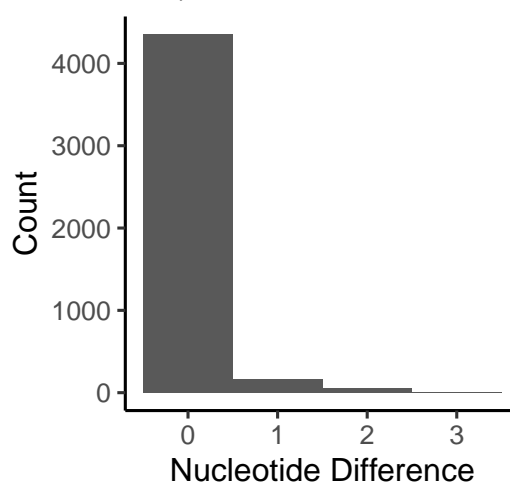
### IGHV1-2\*02

4331 sequences assigned  
4176 (96.4%) exact matches, in which:  
4112 unique CDR3  
6 unique J



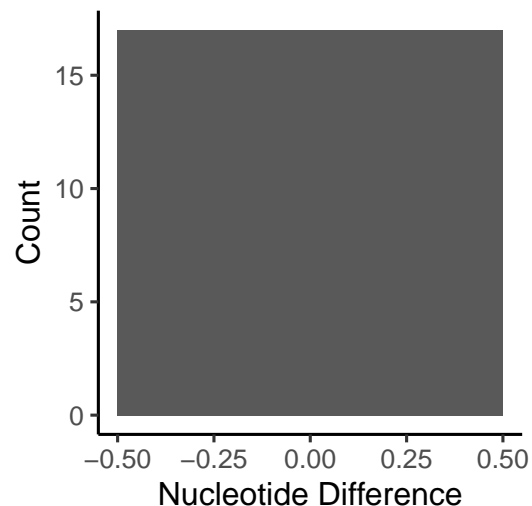
### IGHV1-8\*01

4575 sequences assigned  
4352 (95.1%) exact matches, in which:  
4297 unique CDR3  
6 unique J



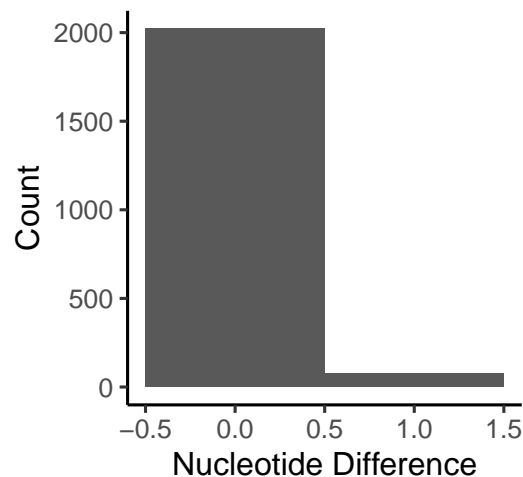
### IGHV1-45\*02

17 sequences assigned  
17 (100%) exact matches, in which:  
17 unique CDR3  
3 unique J



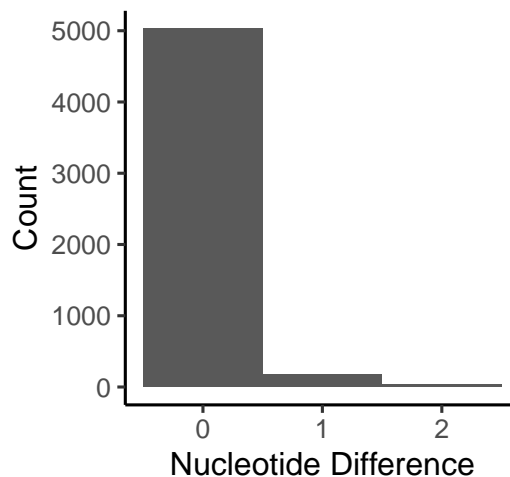
### IGHV1-2\*06

2097 sequences assigned  
2022 (96.4%) exact matches, in which:  
2003 unique CDR3  
6 unique J



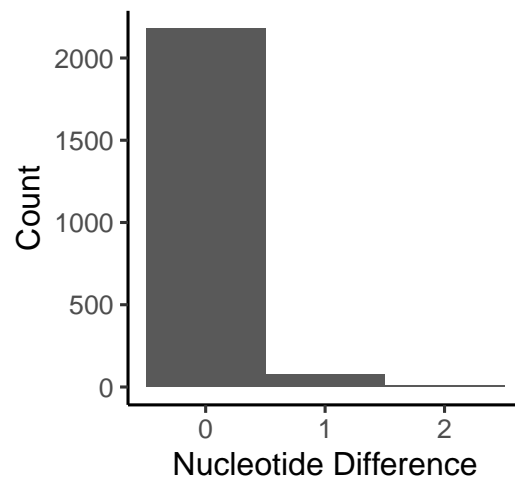
### IGHV1-18\*01

5236 sequences assigned  
5028 (96%) exact matches, in which:  
4962 unique CDR3  
6 unique J



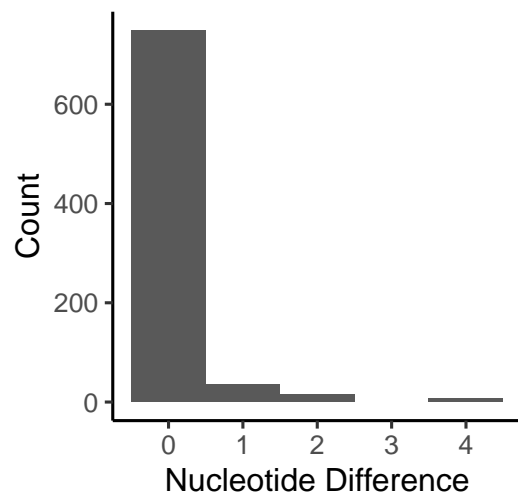
### IGHV1-46\*01

2265 sequences assigned  
2178 (96.2%) exact matches, in which:  
2156 unique CDR3  
6 unique J



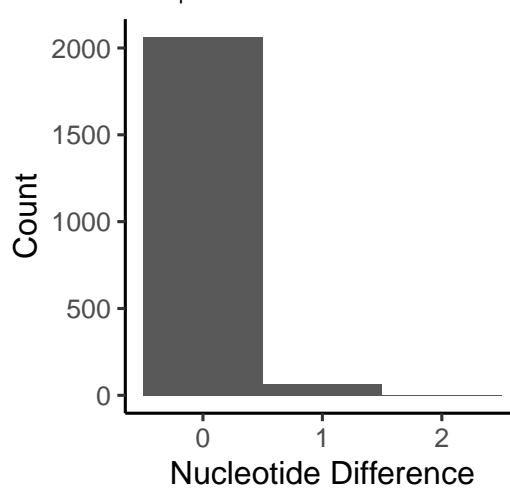
### IGHV1-3\*01\_05

808 sequences assigned  
749 (92.7%) exact matches, in which:  
743 unique CDR3  
6 unique J



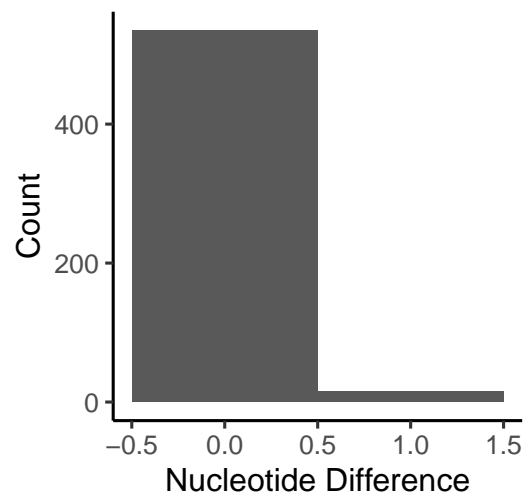
### IGHV1-24\*01

2131 sequences assigned  
2063 (96.8%) exact matches, in which:  
2029 unique CDR3  
6 unique J



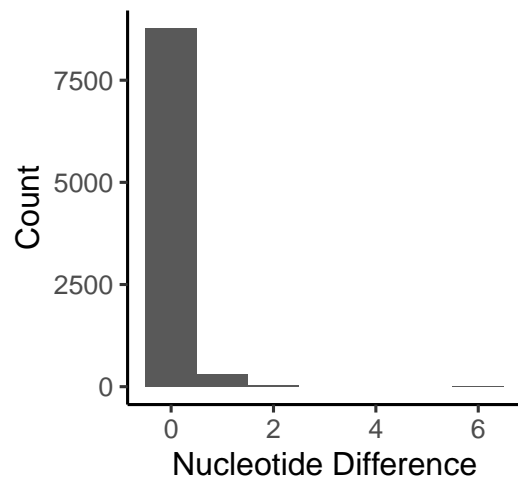
### IGHV1-58\*01\_03

550 sequences assigned  
535 (97.3%) exact matches, in which:  
530 unique CDR3  
6 unique J



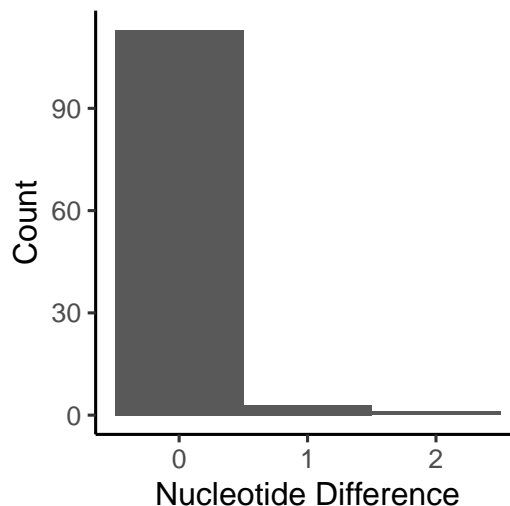
### IGHV1-69\*01\_12\_13

9108 sequences assigned  
8768 (96.3%) exact matches, in which:  
8686 unique CDR3  
6 unique J



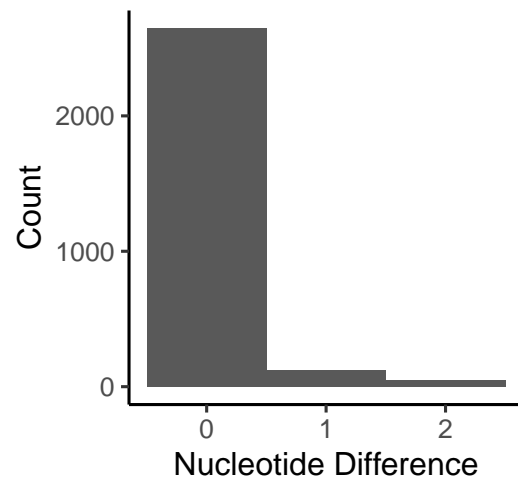
### IGHV2-26\*01

117 sequences assigned  
113 (96.6%) exact matches, in which:  
113 unique CDR3  
5 unique J



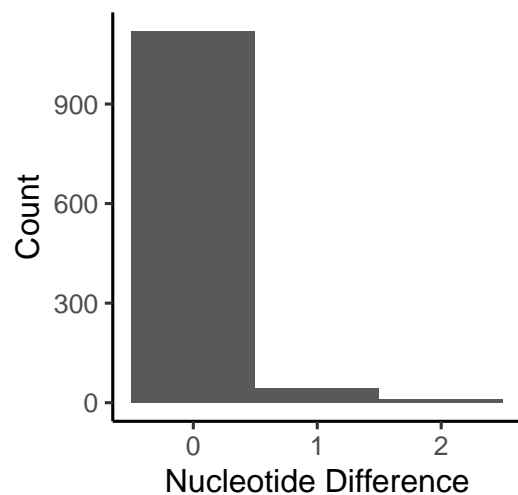
### IGHV3-7\*01

2819 sequences assigned  
2646 (93.9%) exact matches, in which:  
2506 unique CDR3  
6 unique J



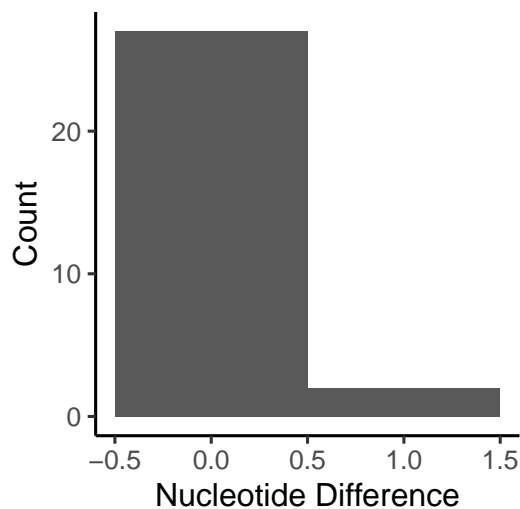
### IGHV2-5\*01

1177 sequences assigned  
1120 (95.2%) exact matches, in which:  
1105 unique CDR3  
6 unique J



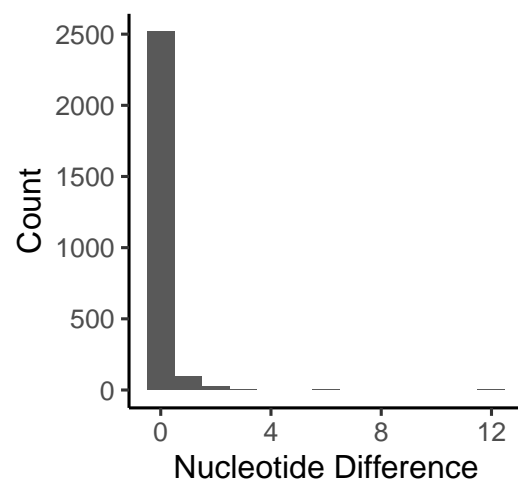
### IGHV2-26\*04

29 sequences assigned  
27 (93.1%) exact matches, in which:  
27 unique CDR3  
4 unique J



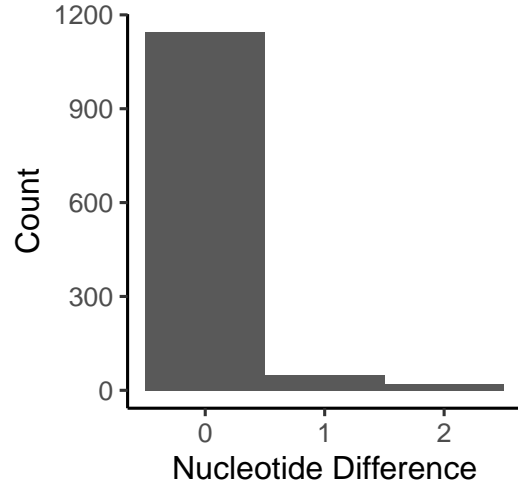
### IGHV3-9\*01

2644 sequences assigned  
2517 (95.2%) exact matches, in which:  
2419 unique CDR3  
6 unique J



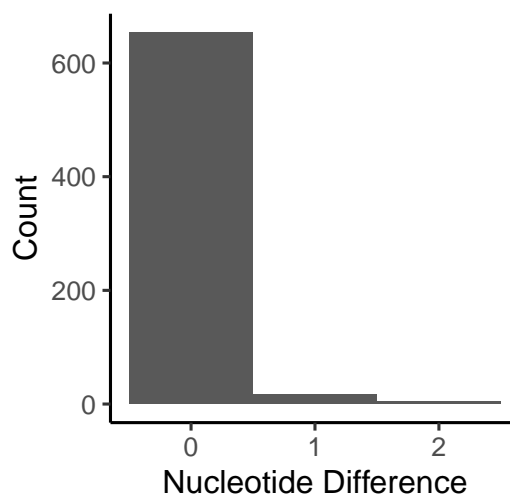
### IGHV2-5\*02

1215 sequences assigned  
1145 (94.2%) exact matches, in which:  
1127 unique CDR3  
6 unique J



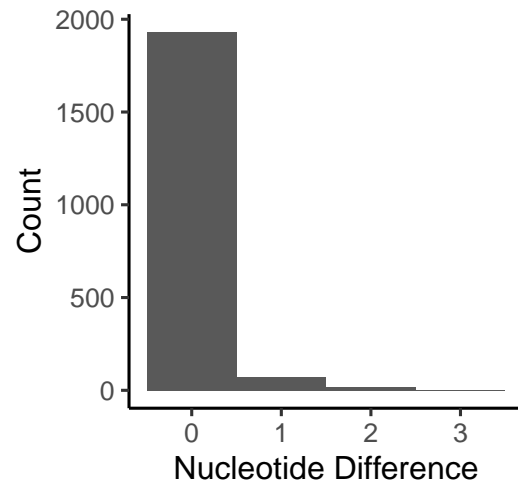
### IGHV2-70\*01

675 sequences assigned  
654 (96.9%) exact matches, in which:  
646 unique CDR3  
6 unique J



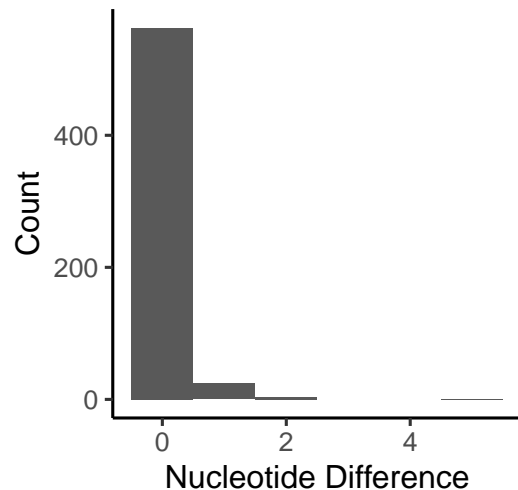
### IGHV3-11\*01

2023 sequences assigned  
1931 (95.5%) exact matches, in which:  
1834 unique CDR3  
6 unique J



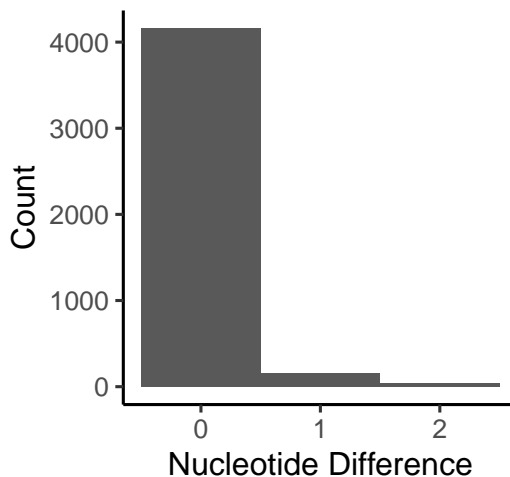
### IGHV3-13\*01

592 sequences assigned  
563 (95.1%) exact matches, in which:  
531 unique CDR3  
5 unique J



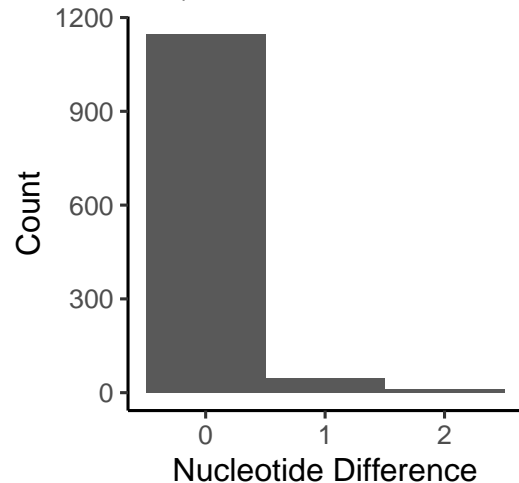
### IGHV3-21\*01\_02

4351 sequences assigned  
4159 (95.6%) exact matches, in which:  
3890 unique CDR3  
6 unique J



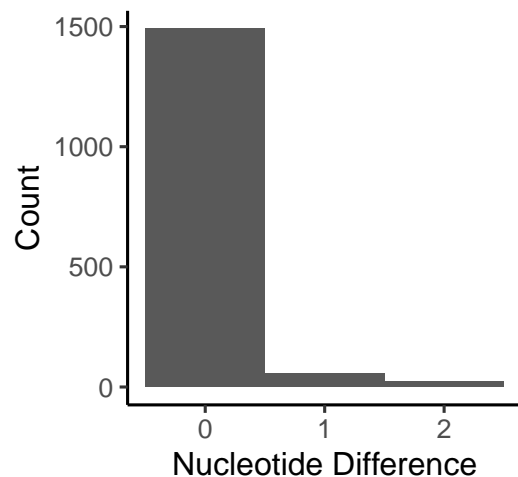
### IGHV3-33\*01

1202 sequences assigned  
1146 (95.3%) exact matches, in which:  
1113 unique CDR3  
6 unique J



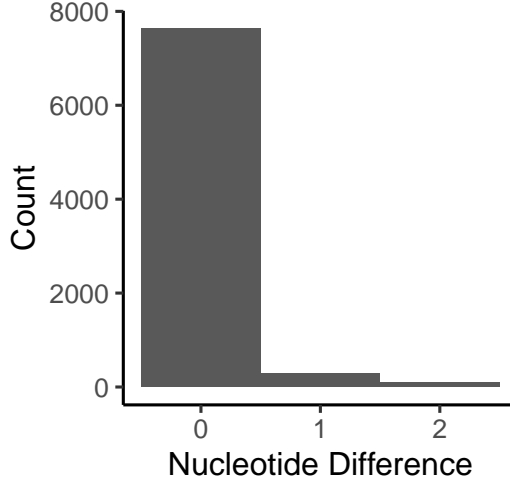
### IGHV3-15\*01\_02

1569 sequences assigned  
1491 (95%) exact matches, in which:  
1445 unique CDR3  
6 unique J



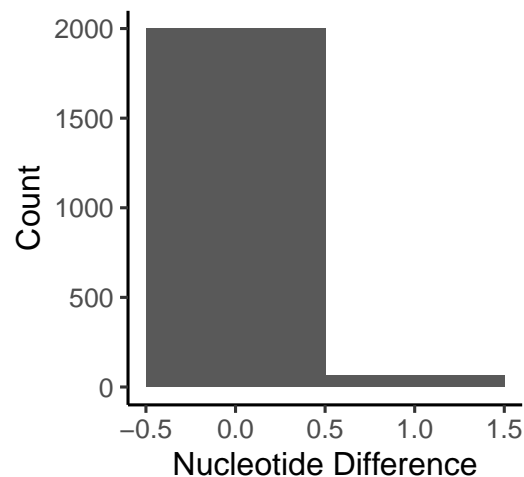
### IGHV3-23\*01\_04

8014 sequences assigned  
7630 (95.2%) exact matches, in which:  
6985 unique CDR3  
6 unique J



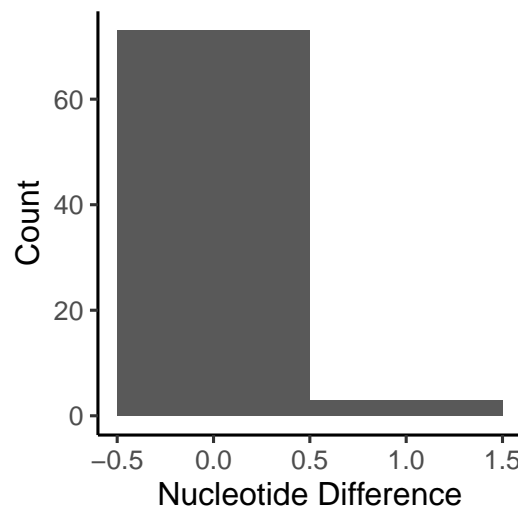
### IGHV3-33\*08

2063 sequences assigned  
1999 (96.9%) exact matches, in which:  
1909 unique CDR3  
6 unique J



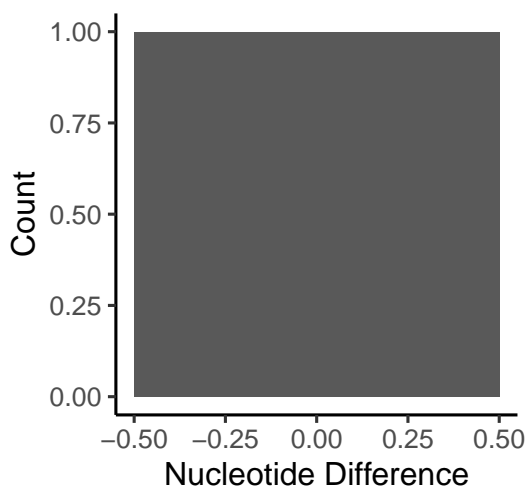
### IGHV3-20\*01\_02

76 sequences assigned  
73 (96.1%) exact matches, in which:  
73 unique CDR3  
6 unique J



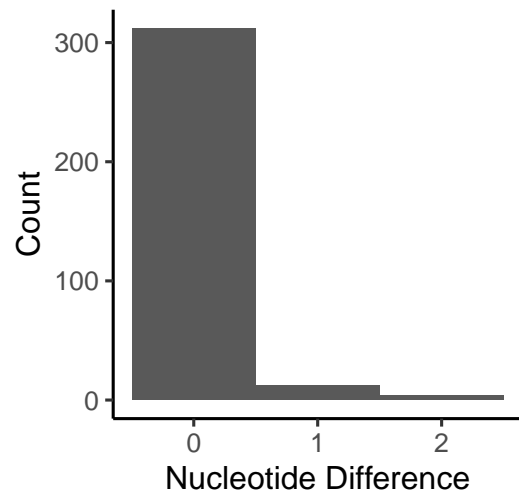
### IGHV3-30-3\*01

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



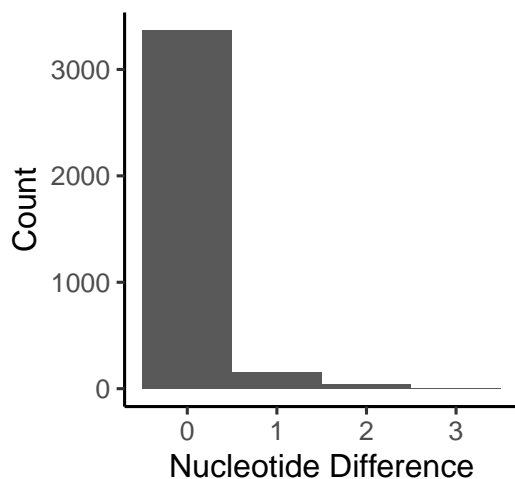
### IGHV3-43\*01

328 sequences assigned  
312 (95.1%) exact matches, in which:  
294 unique CDR3  
6 unique J



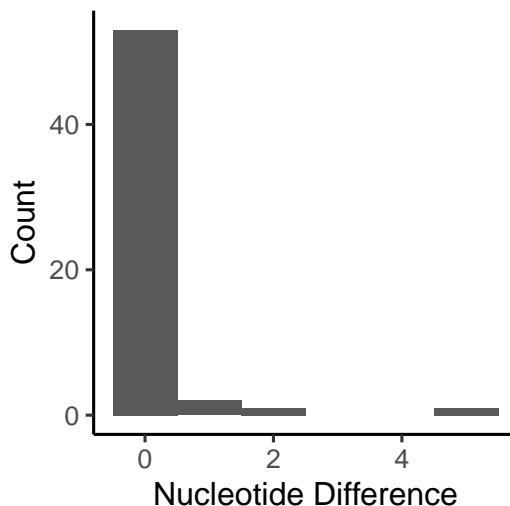
### IGHV3-48\*02

3559 sequences assigned  
3367 (94.6%) exact matches, in which:  
3151 unique CDR3  
6 unique J



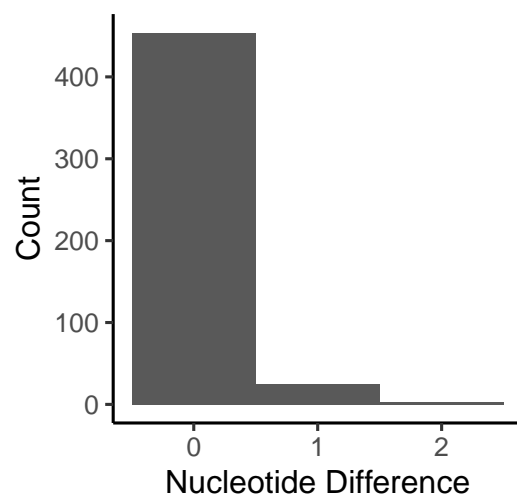
### IGHV3-64\*02\_07

57 sequences assigned  
53 (93%) exact matches, in which:  
47 unique CDR3  
5 unique J



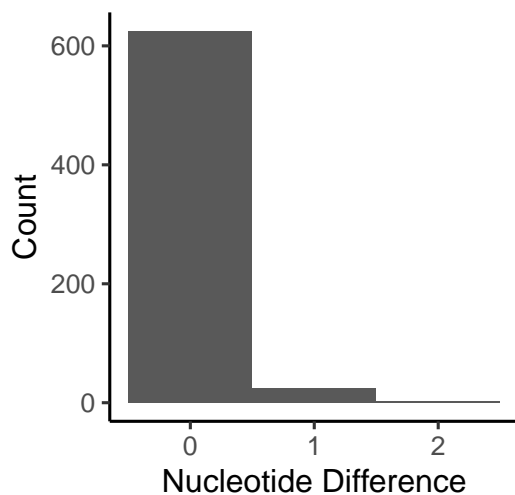
### IGHV3-73\*01\_02

482 sequences assigned  
454 (94.2%) exact matches, in which:  
422 unique CDR3  
6 unique J



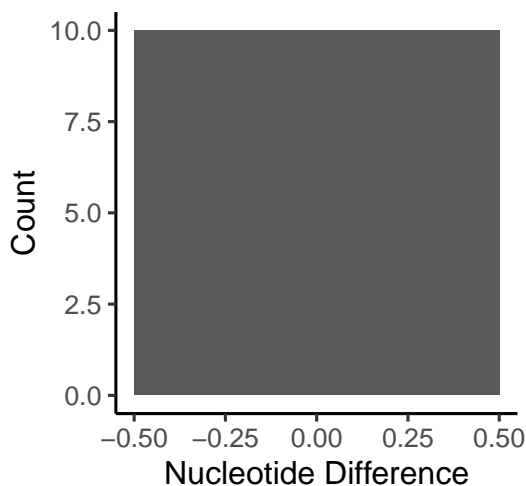
### IGHV3-49\*03\_05

653 sequences assigned  
625 (95.7%) exact matches, in which:  
607 unique CDR3  
6 unique J



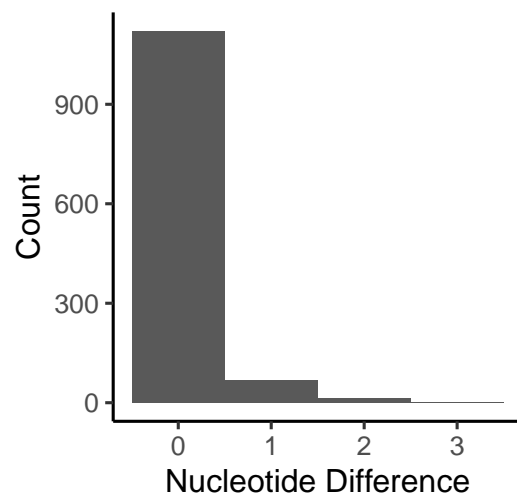
### IGHV3-66\*03

10 sequences assigned  
10 (100%) exact matches, in which:  
10 unique CDR3  
4 unique J



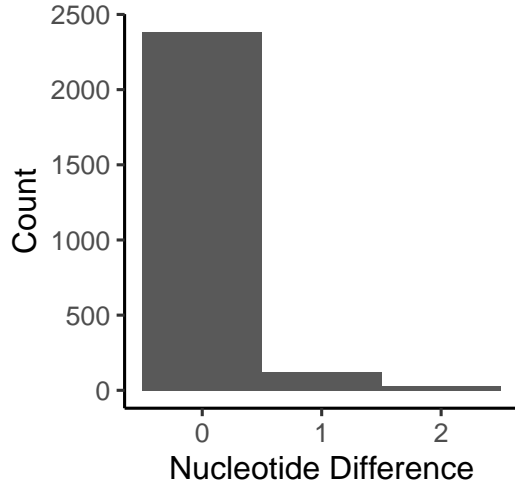
### IGHV3-74\*01\_02

1205 sequences assigned  
1121 (93%) exact matches, in which:  
1043 unique CDR3  
6 unique J



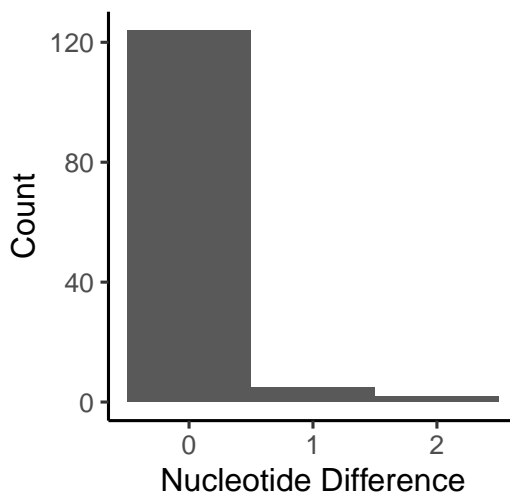
### IGHV3-53\*01\_02

2530 sequences assigned  
2383 (94.2%) exact matches, in which:  
2216 unique CDR3  
6 unique J



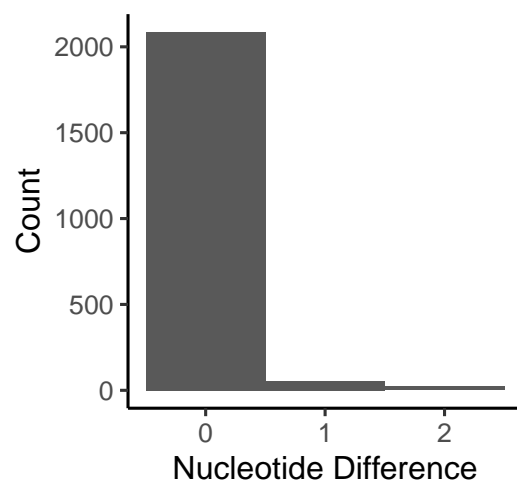
### IGHV3-72\*01

131 sequences assigned  
124 (94.7%) exact matches, in which:  
118 unique CDR3  
5 unique J



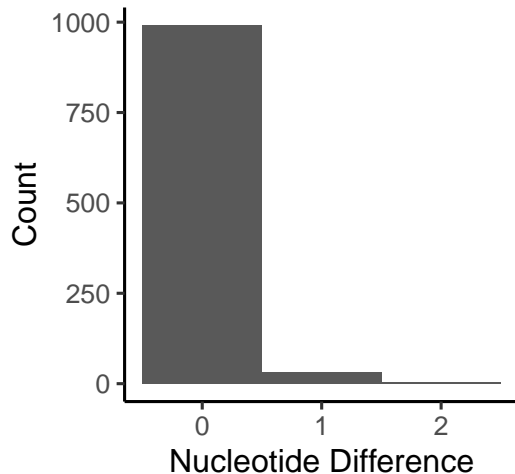
### IGHV4-4\*07

2163 sequences assigned  
2086 (96.4%) exact matches, in which:  
1932 unique CDR3  
6 unique J



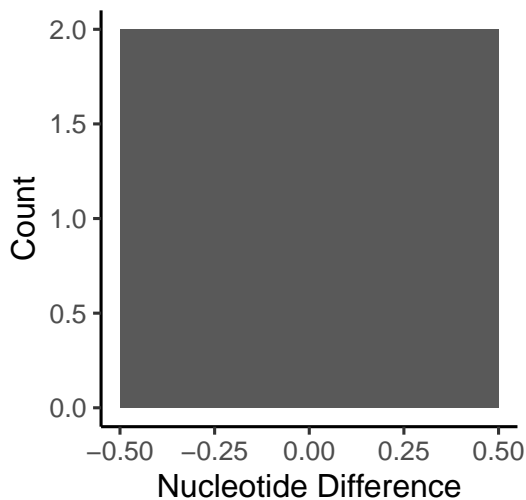
### IGHV4-4\*02\_03

1026 sequences assigned  
991 (96.6%) exact matches, in which:  
956 unique CDR3  
6 unique J



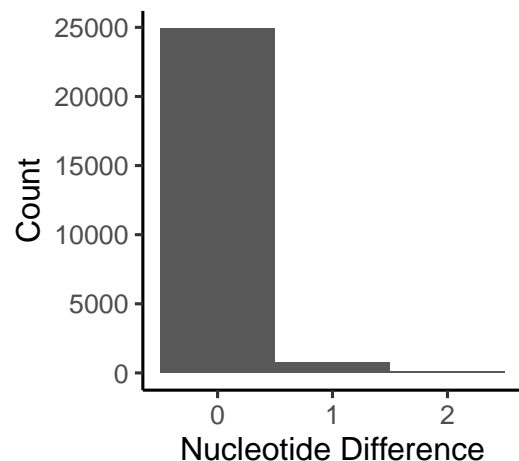
### IGHV4-30-4\*01

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



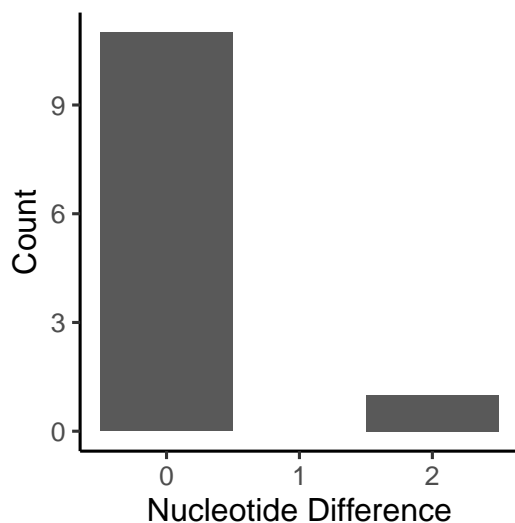
### IGHV4-34\*01\_02

25844 sequences assigned  
24942 (96.5%) exact matches, in which:  
22720 unique CDR3  
6 unique J



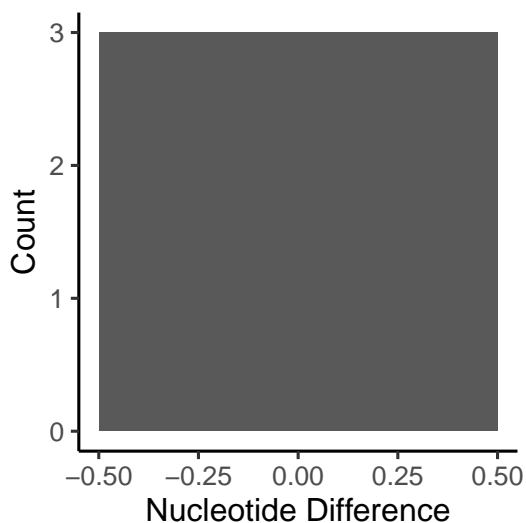
### IGHV4-28\*01\_07

12 sequences assigned  
11 (91.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



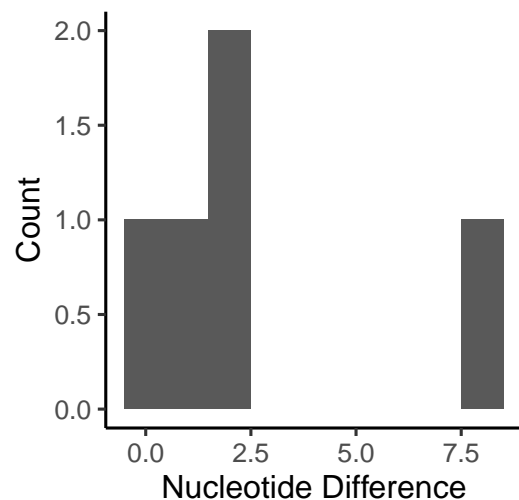
### IGHV4-30-2\*01

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



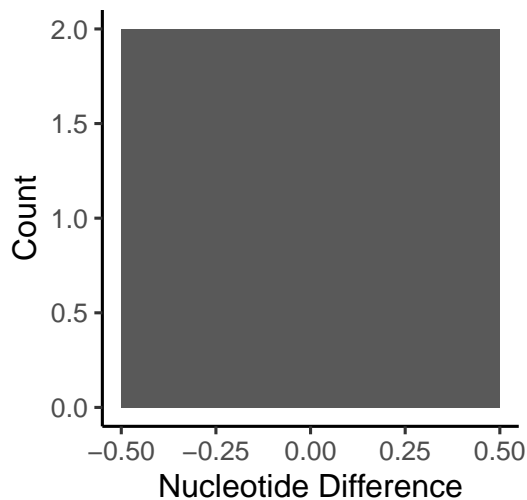
### IGHV4-39\*02

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



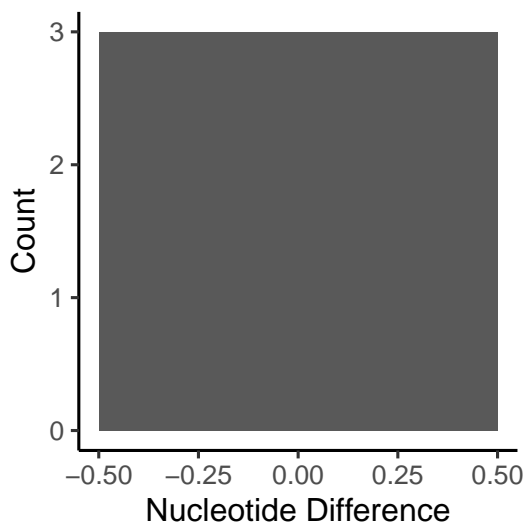
### IGHV4-28\*02\_05

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



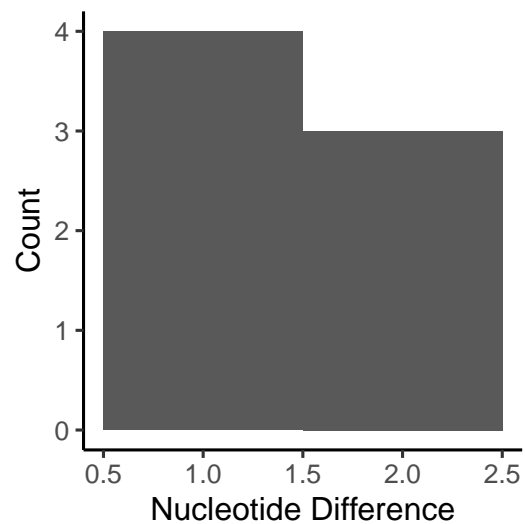
### IGHV4-31\*02

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



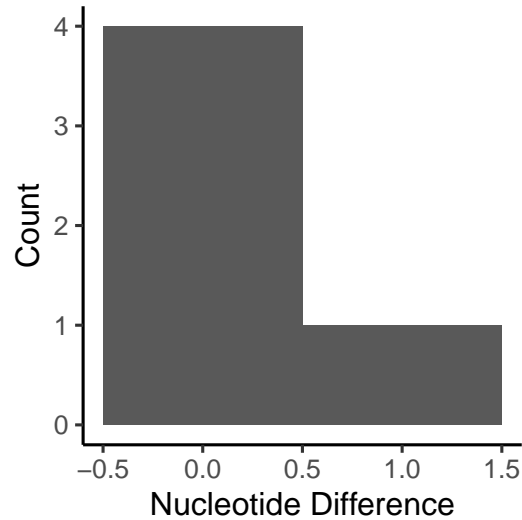
### IGHV4-39\*07

7 sequences assigned  
No exact matches.



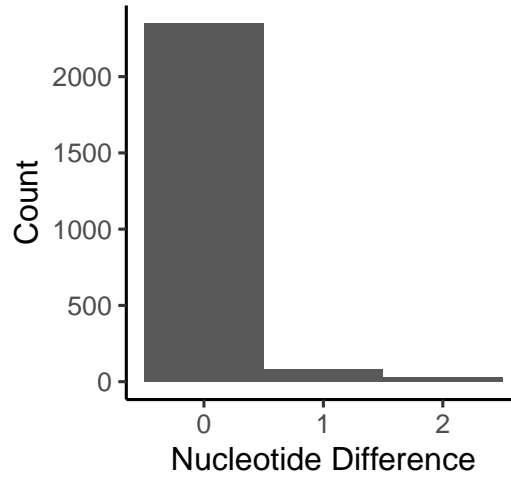
### IGHV4-59\*08

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



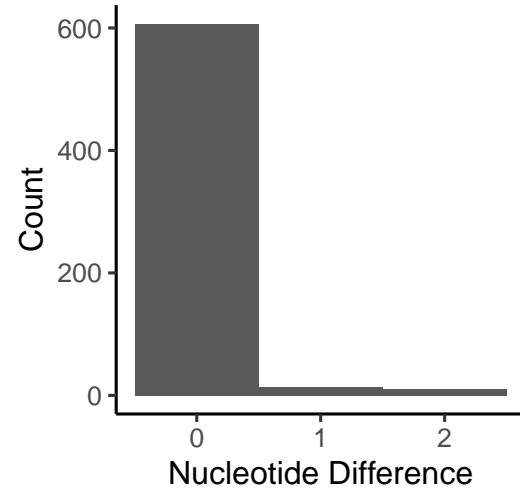
### IGHV4-61\*01

2461 sequences assigned  
2349 (95.4%) exact matches, in which:  
2224 unique CDR3  
6 unique J



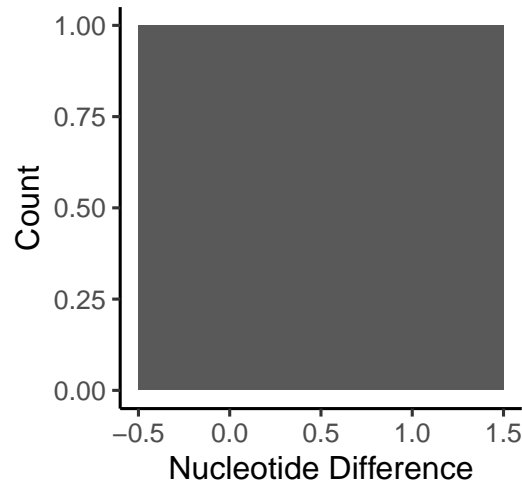
### IGHV7-4-1\*02

631 sequences assigned  
607 (96.2%) exact matches, in which:  
604 unique CDR3  
6 unique J



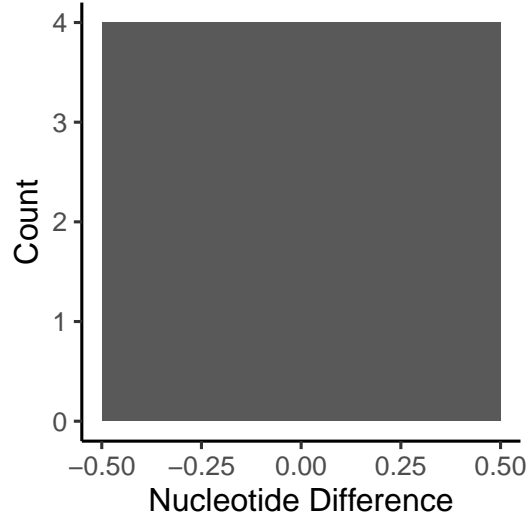
### IGHV4-59\*11

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



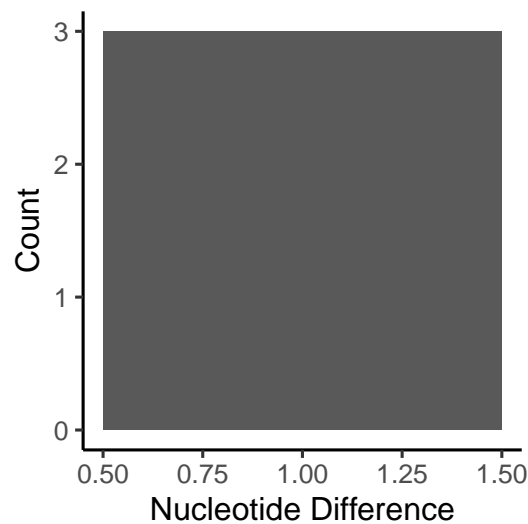
### IGHV5-51\*01\_03

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



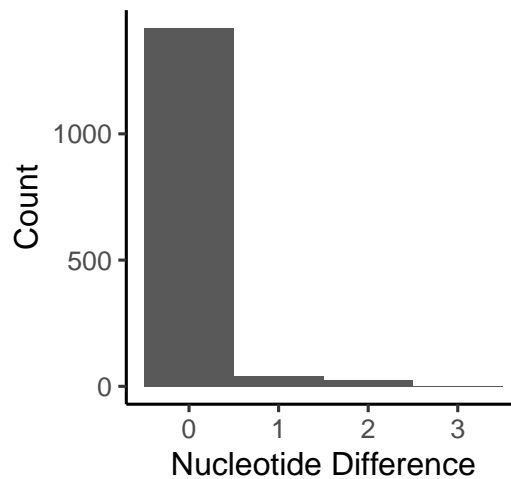
### IGHV4-59\*12

3 sequences assigned  
No exact matches.



### IGHV6-1\*01\_02

1485 sequences assigned  
1419 (95.6%) exact matches, in which:  
1386 unique CDR3  
6 unique J





Warning – no inferred sequences found.