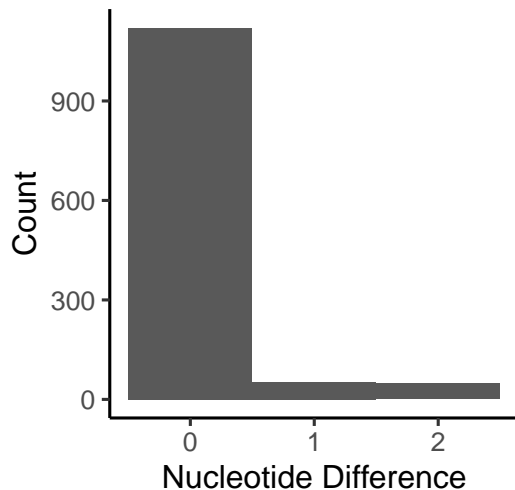


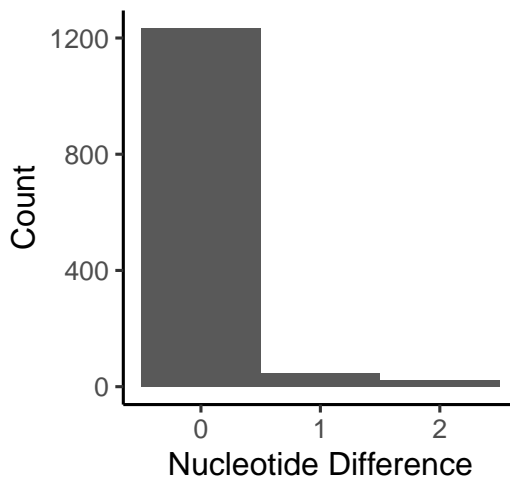
### IGHV1-2\*02

1221 sequences assigned  
1121 (91.8%) exact matches, in which:  
1119 unique CDR3  
6 unique J



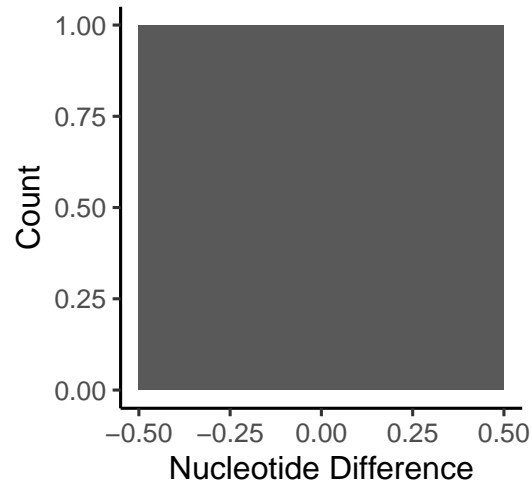
### IGHV1-8\*01

1300 sequences assigned  
1233 (94.8%) exact matches, in which:  
1232 unique CDR3  
6 unique J



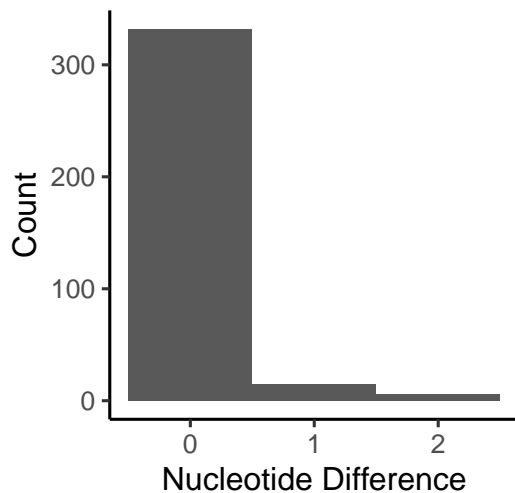
### IGHV1-45\*02

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



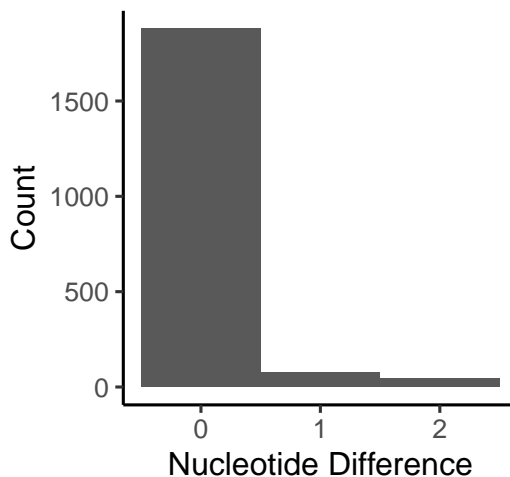
### IGHV1-2\*04

353 sequences assigned  
332 (94.1%) exact matches, in which:  
332 unique CDR3  
6 unique J



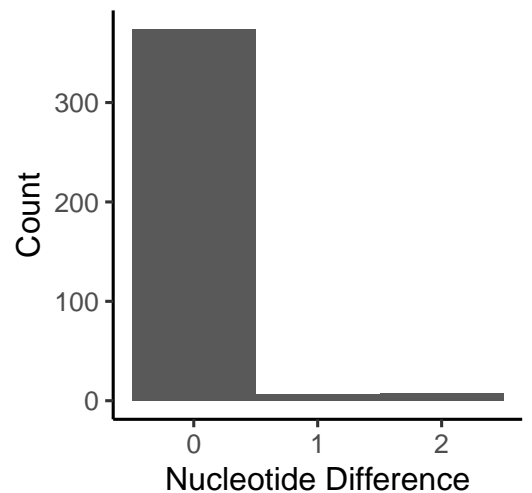
### IGHV1-18\*01

1999 sequences assigned  
1879 (94%) exact matches, in which:  
1877 unique CDR3  
6 unique J



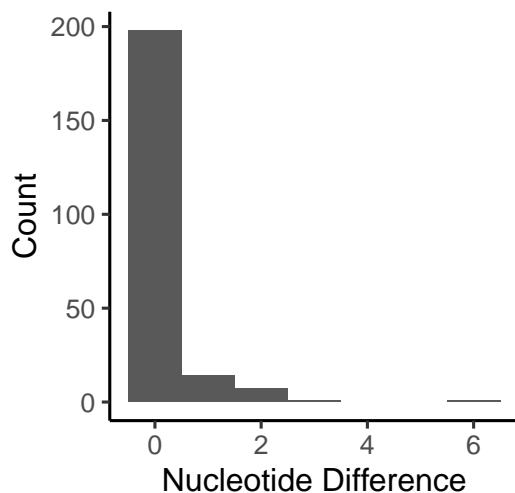
### IGHV1-46\*01

389 sequences assigned  
374 (96.1%) exact matches, in which:  
374 unique CDR3  
6 unique J



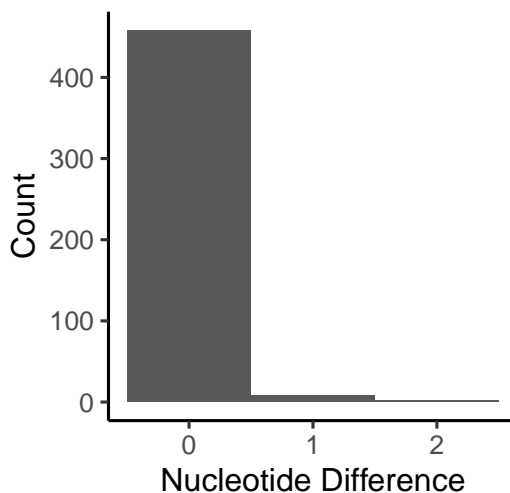
### IGHV1-3\*01\_05

221 sequences assigned  
198 (89.6%) exact matches, in which:  
198 unique CDR3  
6 unique J



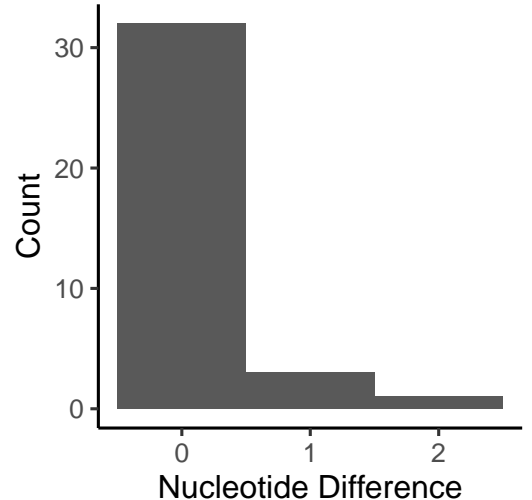
### IGHV1-24\*01

468 sequences assigned  
458 (97.9%) exact matches, in which:  
458 unique CDR3  
6 unique J



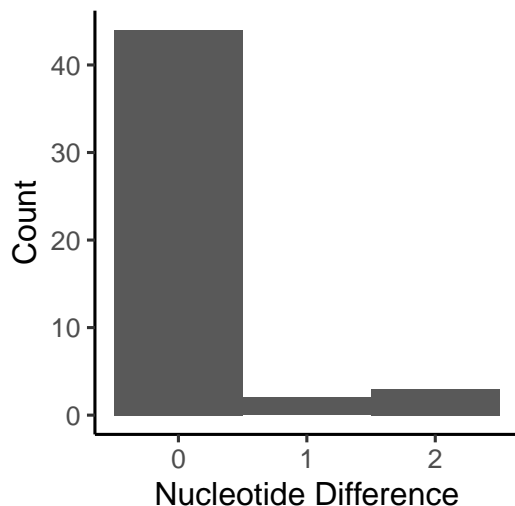
### IGHV1-58\*02

36 sequences assigned  
32 (88.9%) exact matches, in which:  
32 unique CDR3  
5 unique J



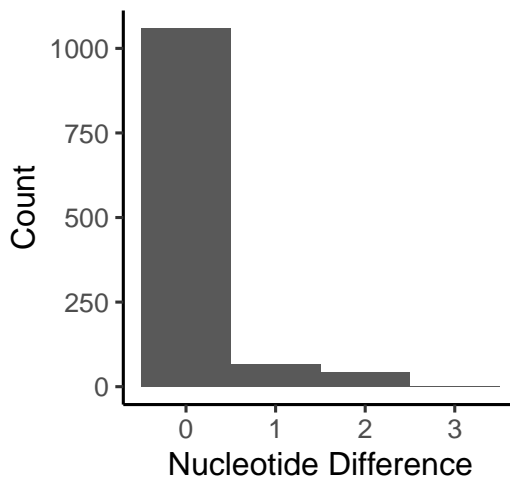
### IGHV1-58\*01\_03

49 sequences assigned  
44 (89.8%) exact matches, in which:  
44 unique CDR3  
5 unique J



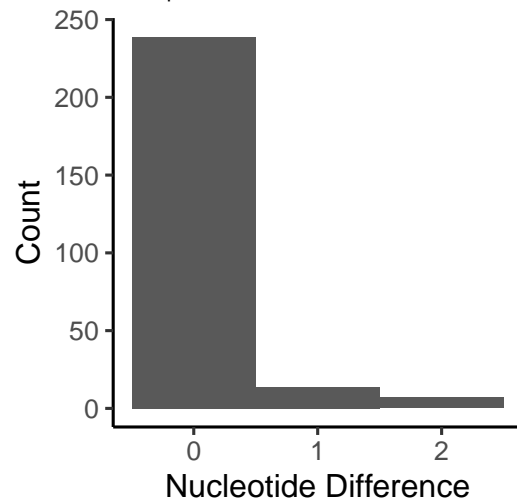
### IGHV2-5\*02

1170 sequences assigned  
1059 (90.5%) exact matches, in which:  
1056 unique CDR3  
6 unique J



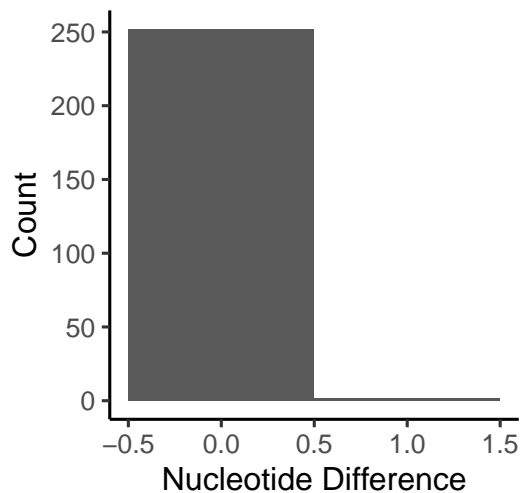
### IGHV2-70\*11\_15

260 sequences assigned  
239 (91.9%) exact matches, in which:  
239 unique CDR3  
5 unique J



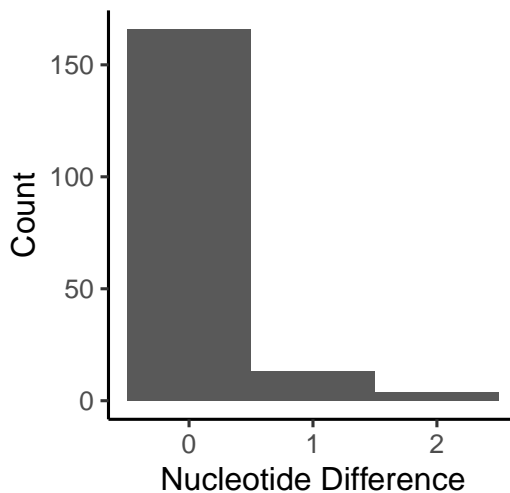
### IGHV1-69\*04\_09

254 sequences assigned  
252 (99.2%) exact matches, in which:  
252 unique CDR3  
6 unique J



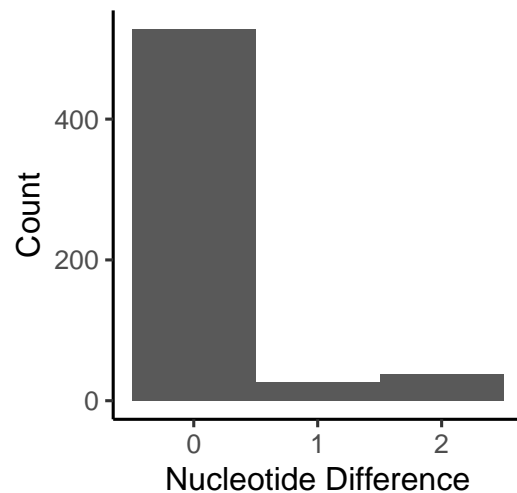
### IGHV2-26\*01

183 sequences assigned  
166 (90.7%) exact matches, in which:  
166 unique CDR3  
6 unique J



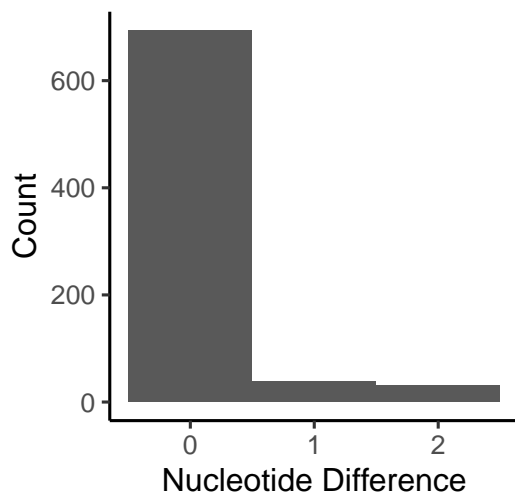
### IGHV3-7\*01

591 sequences assigned  
528 (89.3%) exact matches, in which:  
527 unique CDR3  
6 unique J



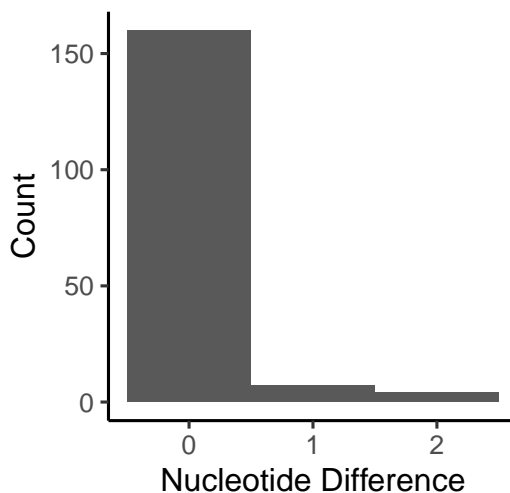
### IGHV2-5\*01

763 sequences assigned  
694 (91%) exact matches, in which:  
692 unique CDR3  
6 unique J



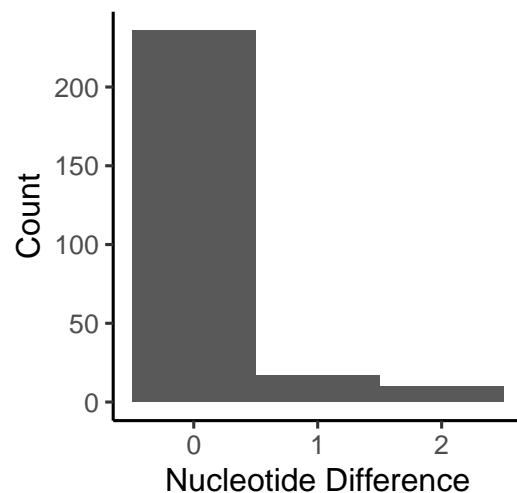
### IGHV2-70\*01

171 sequences assigned  
160 (93.6%) exact matches, in which:  
159 unique CDR3  
6 unique J



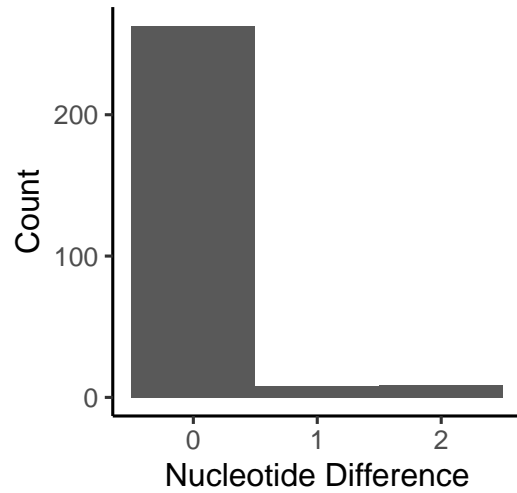
### IGHV3-9\*01

263 sequences assigned  
236 (89.7%) exact matches, in which:  
235 unique CDR3  
6 unique J



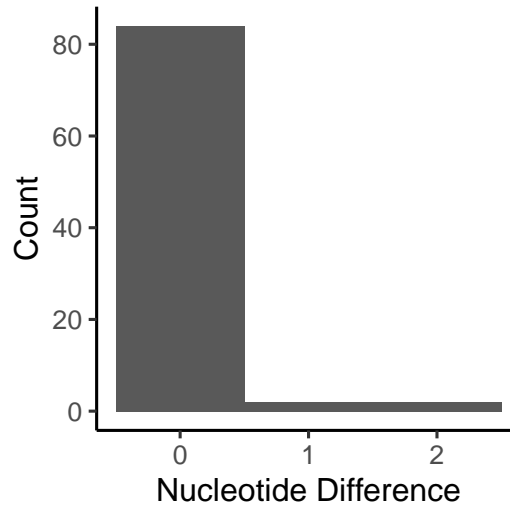
### IGHV3-11\*01

280 sequences assigned  
263 (93.9%) exact matches, in which:  
263 unique CDR3  
6 unique J



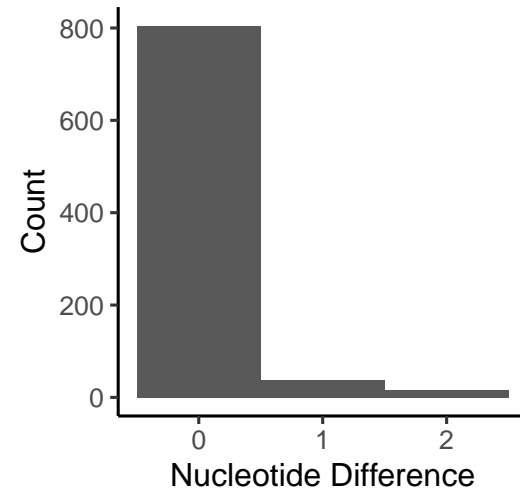
### IGHV3-15\*01\_02

88 sequences assigned  
84 (95.5%) exact matches, in which:  
84 unique CDR3  
5 unique J



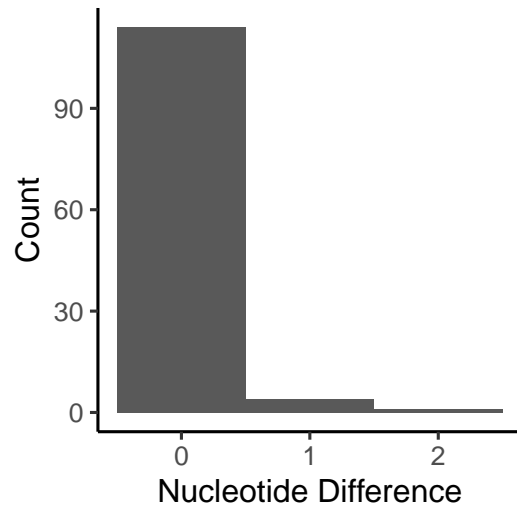
### IGHV3-21\*01\_02

859 sequences assigned  
805 (93.7%) exact matches, in which:  
804 unique CDR3  
6 unique J



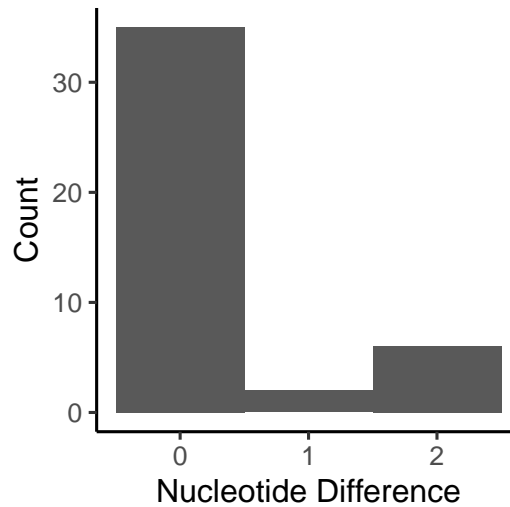
### IGHV3-13\*01

119 sequences assigned  
114 (95.8%) exact matches, in which:  
114 unique CDR3  
5 unique J



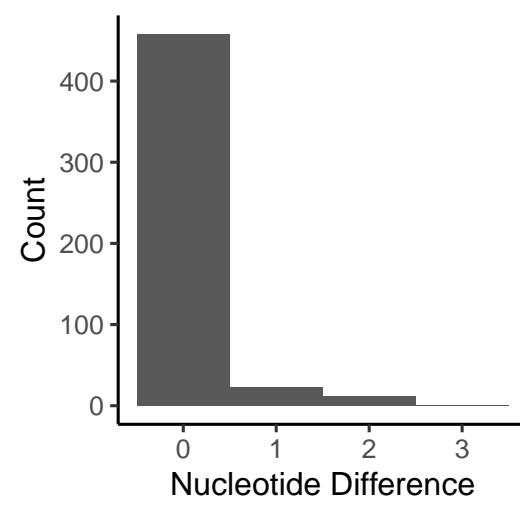
### IGHV3-20\*01\_02

43 sequences assigned  
35 (81.4%) exact matches, in which:  
35 unique CDR3  
5 unique J



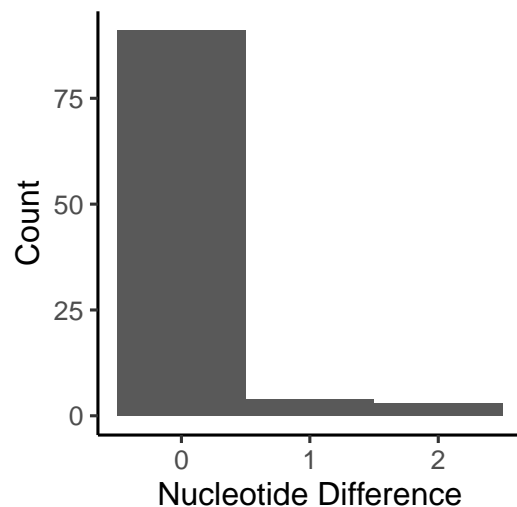
### IGHV3-30-3\*01

494 sequences assigned  
458 (92.7%) exact matches, in which:  
457 unique CDR3  
6 unique J



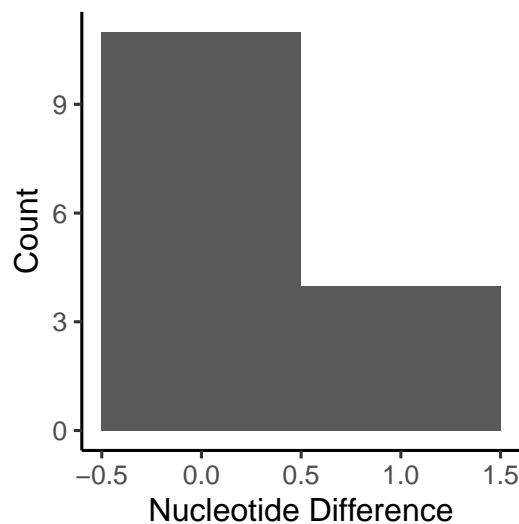
### IGHV3-15\*07

98 sequences assigned  
91 (92.9%) exact matches, in which:  
91 unique CDR3  
5 unique J



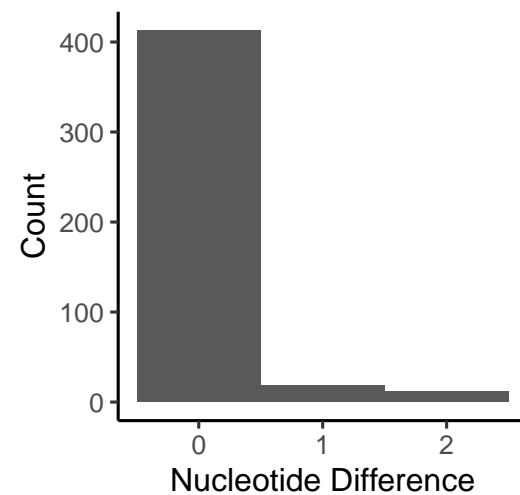
### IGHV3-20\*03\_04

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



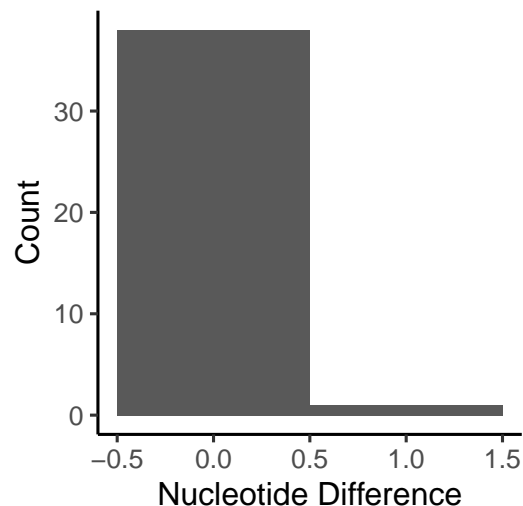
### IGHV3-33\*01

443 sequences assigned  
413 (93.2%) exact matches, in which:  
413 unique CDR3  
6 unique J



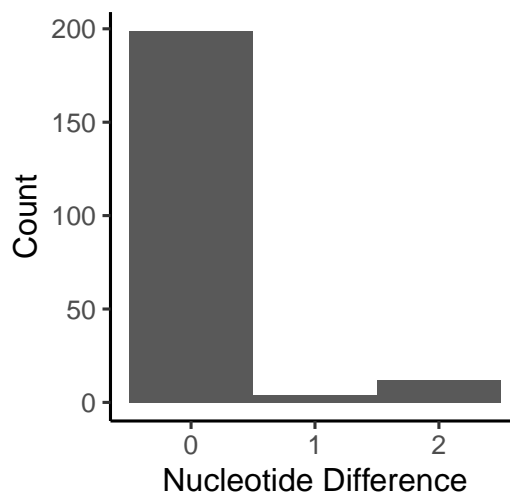
### IGHV3-43\*01

39 sequences assigned  
38 (97.4%) exact matches, in which:  
38 unique CDR3  
5 unique J



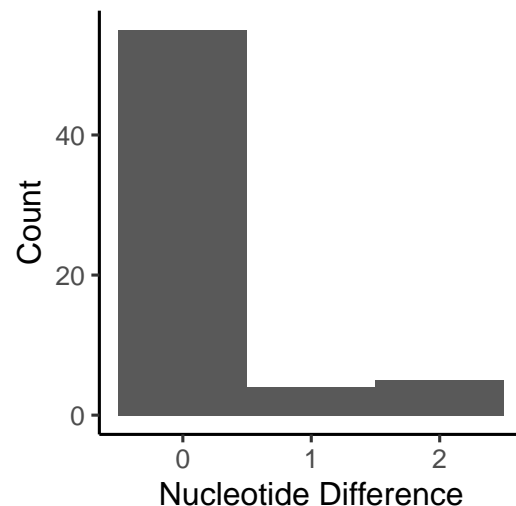
### IGHV3-48\*03

215 sequences assigned  
199 (92.6%) exact matches, in which:  
199 unique CDR3  
6 unique J



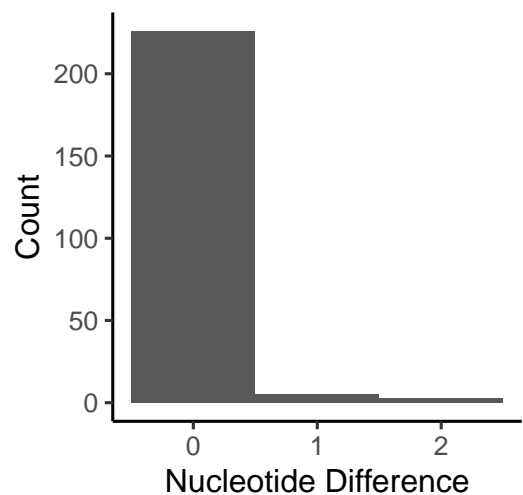
### IGHV3-53\*04

64 sequences assigned  
55 (85.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



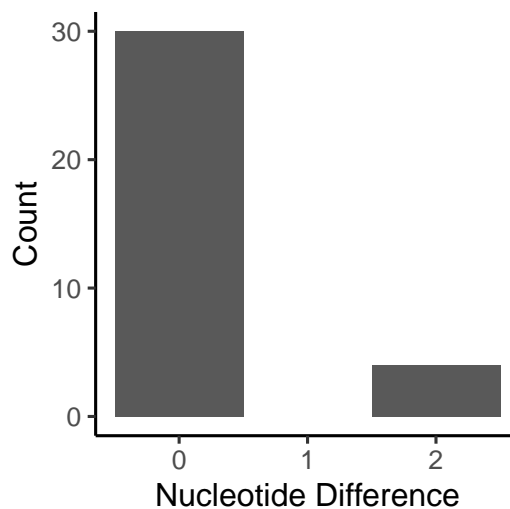
### IGHV3-43\*02

234 sequences assigned  
226 (96.6%) exact matches, in which:  
225 unique CDR3  
6 unique J



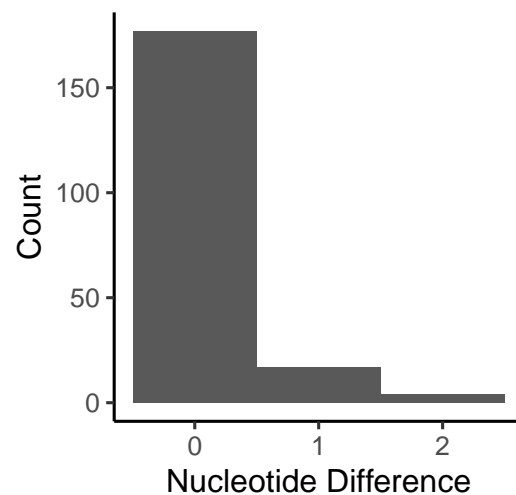
### IGHV3-49\*04

34 sequences assigned  
30 (88.2%) exact matches, in which:  
30 unique CDR3  
4 unique J



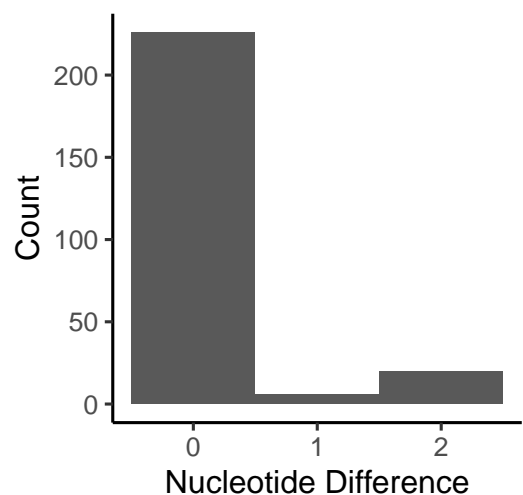
### IGHV3-53\*01\_02

198 sequences assigned  
177 (89.4%) exact matches, in which:  
175 unique CDR3  
5 unique J



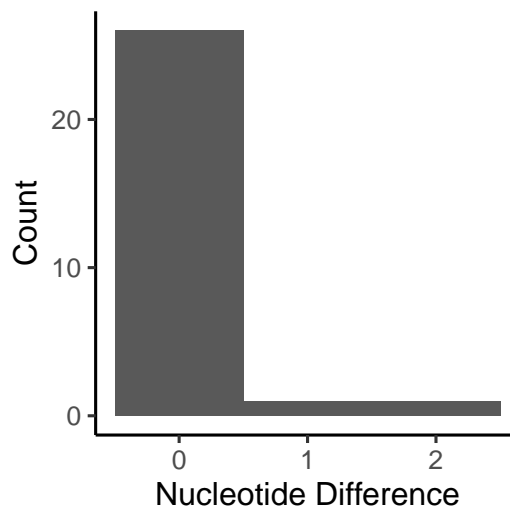
### IGHV3-48\*02

252 sequences assigned  
226 (89.7%) exact matches, in which:  
225 unique CDR3  
6 unique J



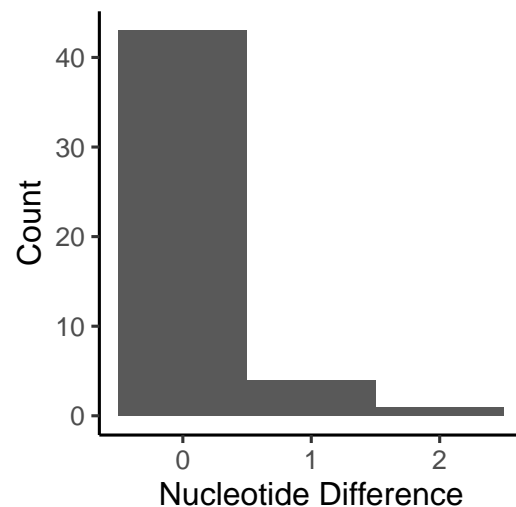
### IGHV3-49\*03\_05

28 sequences assigned  
26 (92.9%) exact matches, in which:  
26 unique CDR3  
5 unique J



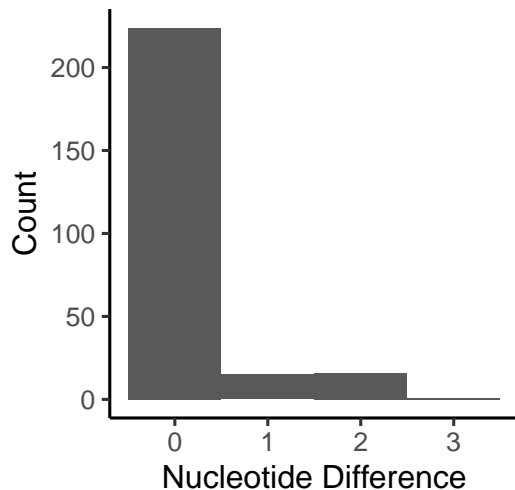
### IGHV3-64\*01

48 sequences assigned  
43 (89.6%) exact matches, in which:  
43 unique CDR3  
5 unique J



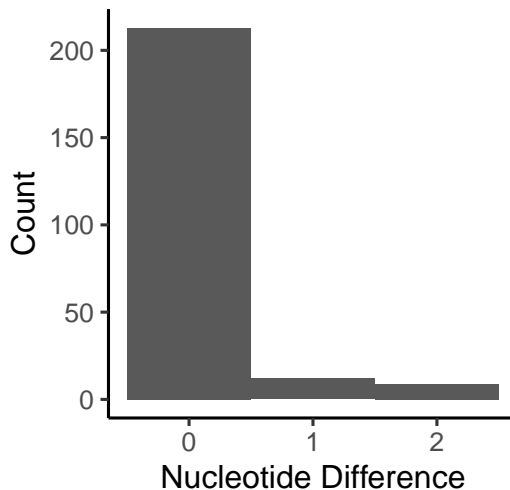
### IGHV3-66\*01

256 sequences assigned  
224 (87.5%) exact matches, in which:  
221 unique CDR3  
6 unique J



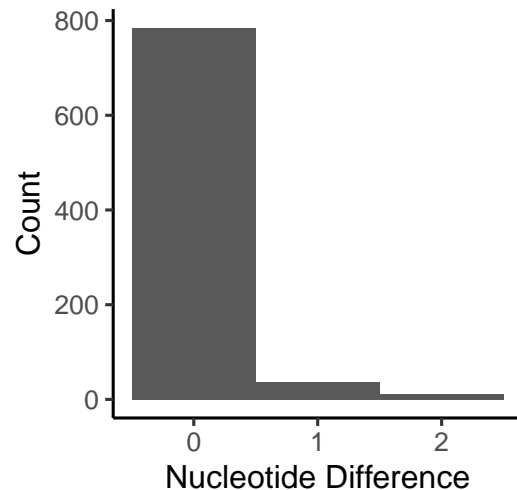
### IGHV3-74\*01\_02

234 sequences assigned  
213 (91%) exact matches, in which:  
209 unique CDR3  
5 unique J



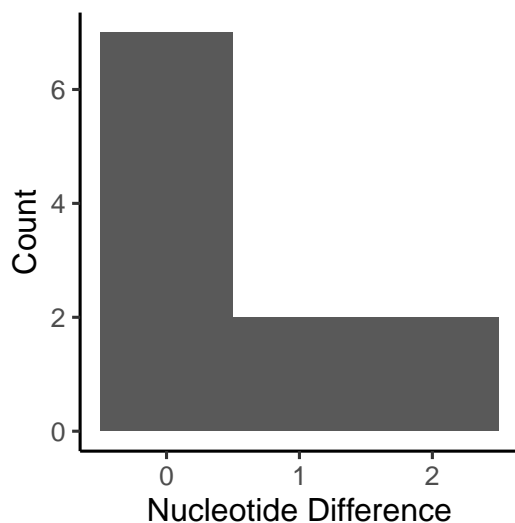
### IGHV4-30-2\*01

833 sequences assigned  
785 (94.2%) exact matches, in which:  
760 unique CDR3  
6 unique J



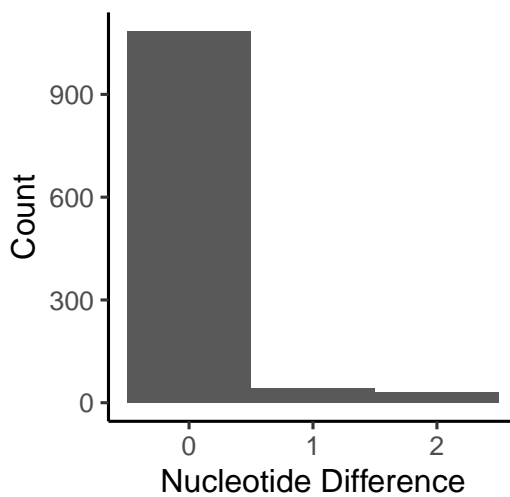
### IGHV3-72\*01

11 sequences assigned  
7 (63.6%) exact matches, in which:  
7 unique CDR3  
3 unique J



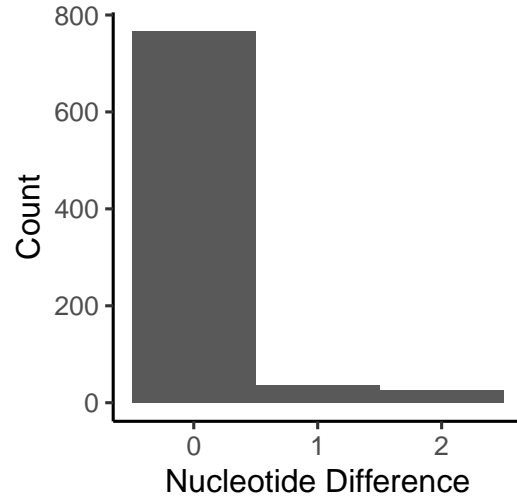
### IGHV4-4\*07

1156 sequences assigned  
1085 (93.9%) exact matches, in which:  
1072 unique CDR3  
6 unique J



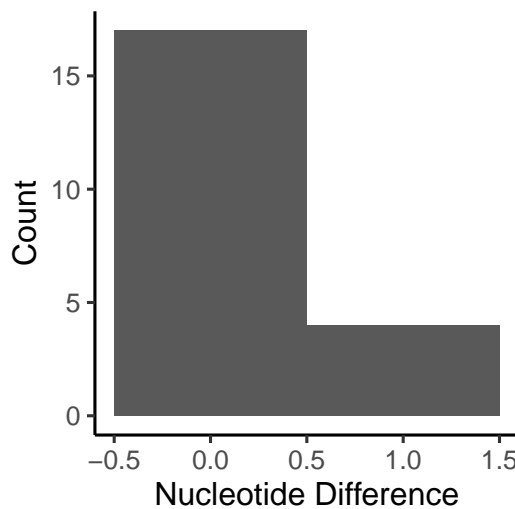
### IGHV4-30-4\*01

830 sequences assigned  
767 (92.4%) exact matches, in which:  
761 unique CDR3  
6 unique J



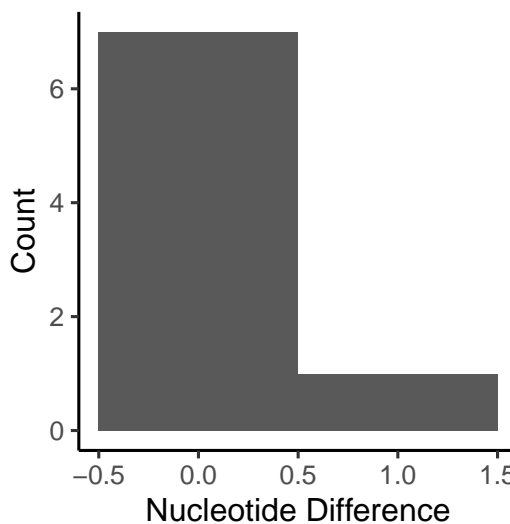
### IGHV3-73\*01\_02

21 sequences assigned  
17 (81%) exact matches, in which:  
17 unique CDR3  
4 unique J



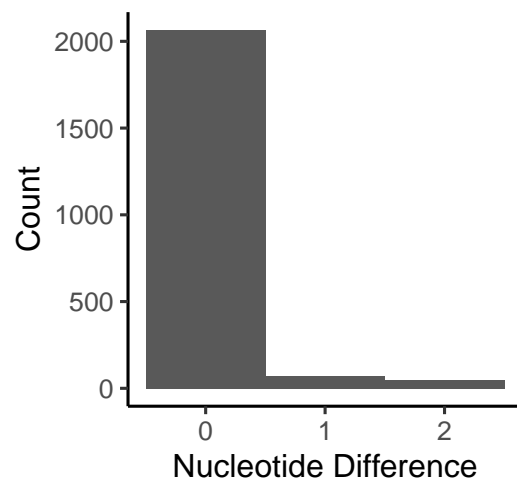
### IGHV4-28\*01\_07

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
5 unique J



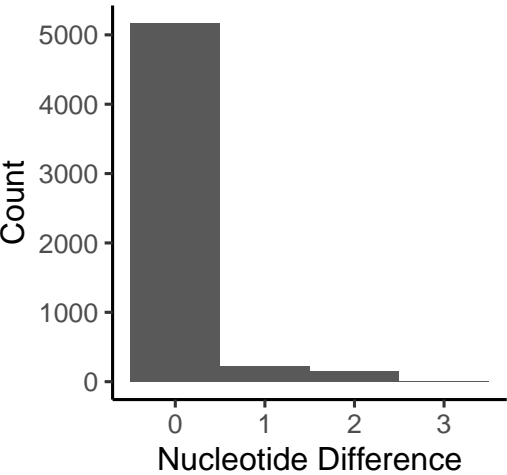
### IGHV4-31\*03\_04

2184 sequences assigned  
2065 (94.6%) exact matches, in which:  
2045 unique CDR3  
6 unique J



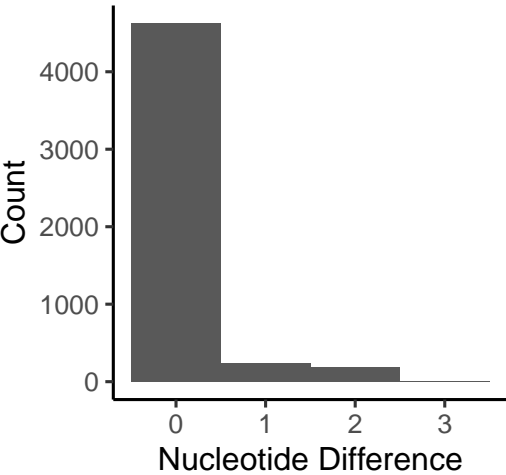
IGHV4-34\*01\_02

5553 sequences assigned  
5165 (93%) exact matches, in which:  
5078 unique CDR3  
6 unique J



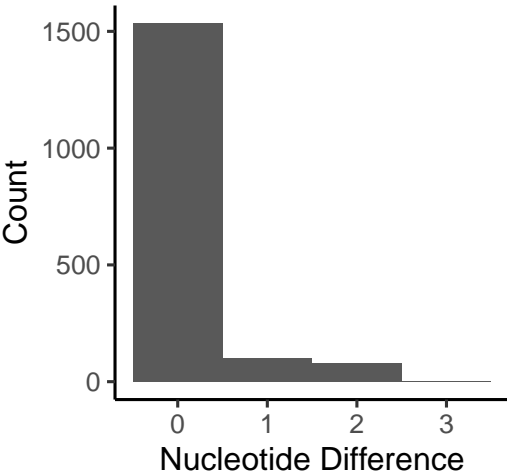
IGHV4-59\*01\_07

5045 sequences assigned  
4624 (91.7%) exact matches, in which:  
4546 unique CDR3  
6 unique J



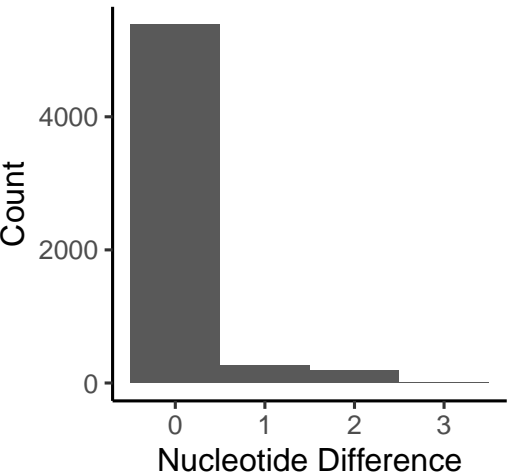
IGHV6-1\*01\_02

1713 sequences assigned  
1534 (89.6%) exact matches, in which:  
1529 unique CDR3  
6 unique J



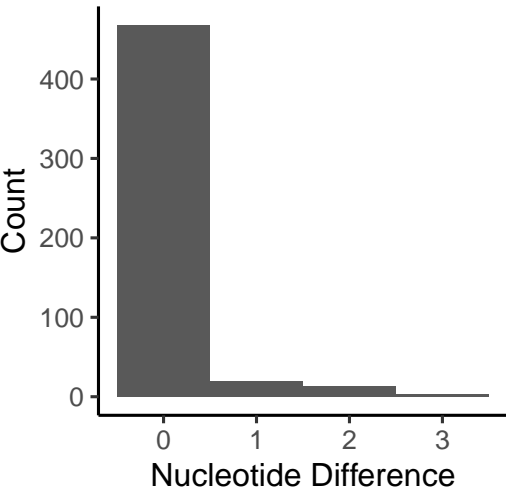
IGHV4-39\*01\_05

5831 sequences assigned  
5383 (92.3%) exact matches, in which:  
5298 unique CDR3  
6 unique J



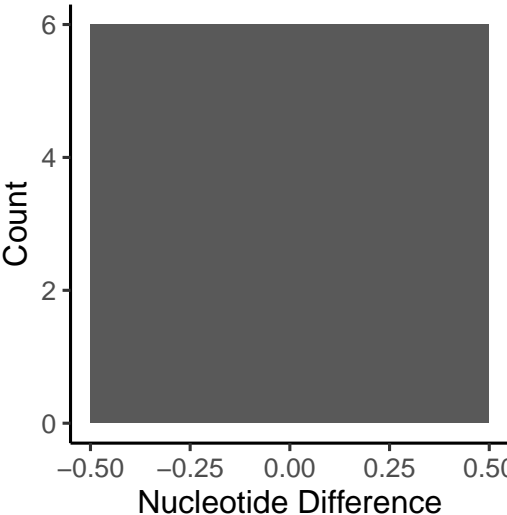
IGHV4-61\*01

504 sequences assigned  
468 (92.9%) exact matches, in which:  
463 unique CDR3  
6 unique J



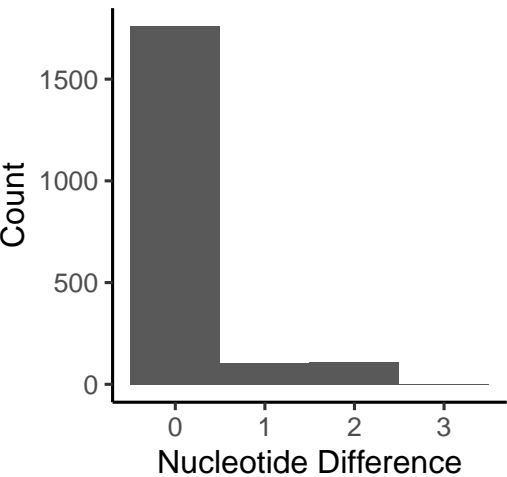
IGHV7-4-1\*01

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



IGHV4-59\*08

1978 sequences assigned  
1761 (89%) exact matches, in which:  
1735 unique CDR3  
6 unique J



IGHV5-51\*01\_03

698 sequences assigned  
623 (89.3%) exact matches, in which:  
623 unique CDR3  
6 unique J

