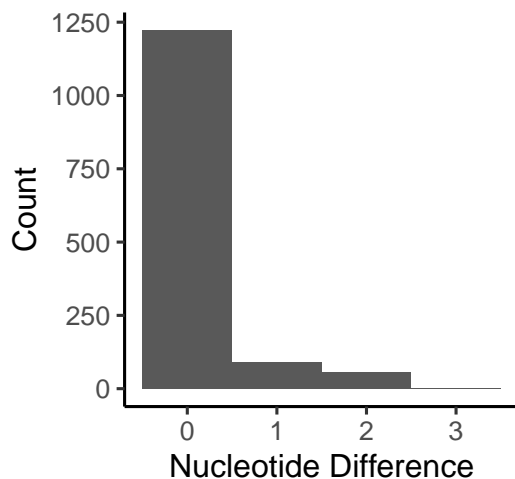


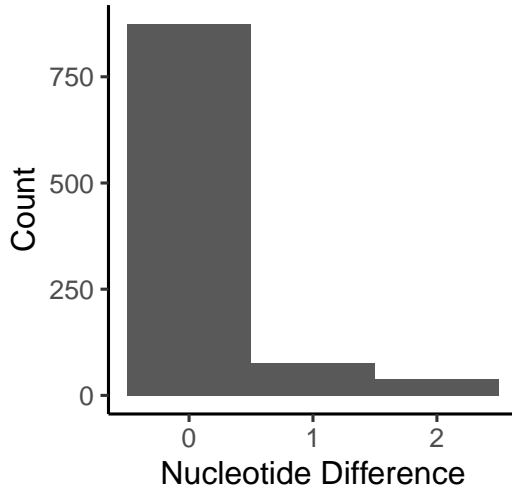
### IGHV1-2\*02

1369 sequences assigned  
1222 (89.3%) exact matches, in which:  
1217 unique CDR3  
6 unique J



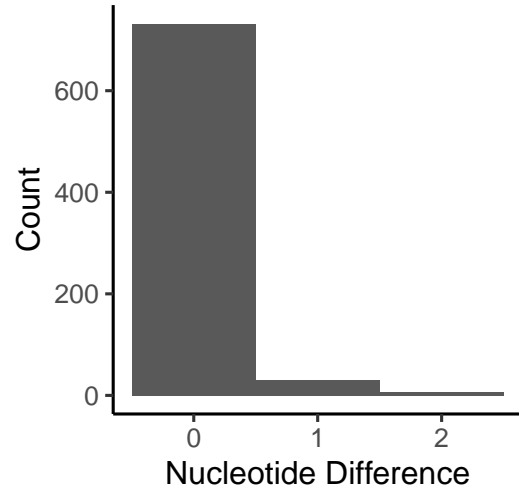
### IGHV1-8\*01

989 sequences assigned  
875 (88.5%) exact matches, in which:  
868 unique CDR3  
6 unique J



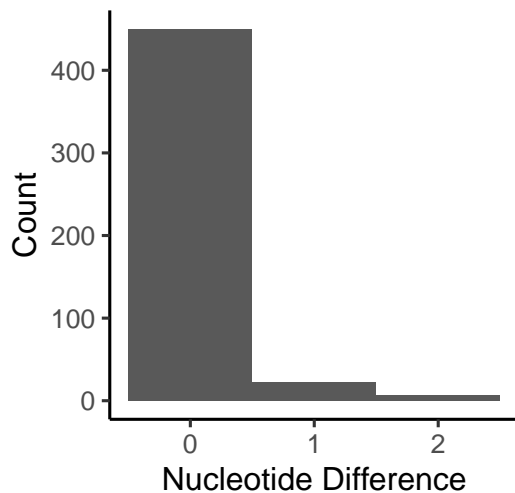
### IGHV1-24\*01

769 sequences assigned  
732 (95.2%) exact matches, in which:  
730 unique CDR3  
6 unique J



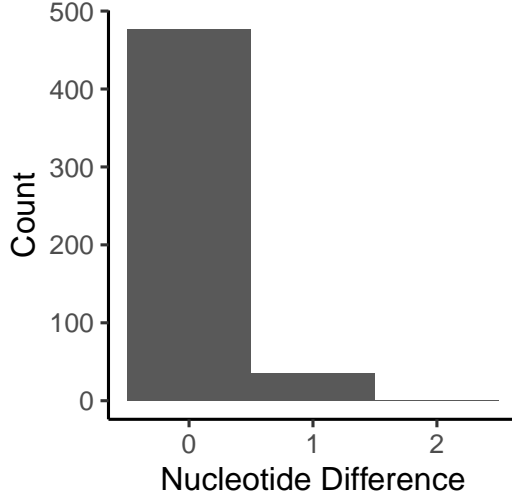
### IGHV1-2\*04

479 sequences assigned  
450 (93.9%) exact matches, in which:  
447 unique CDR3  
6 unique J



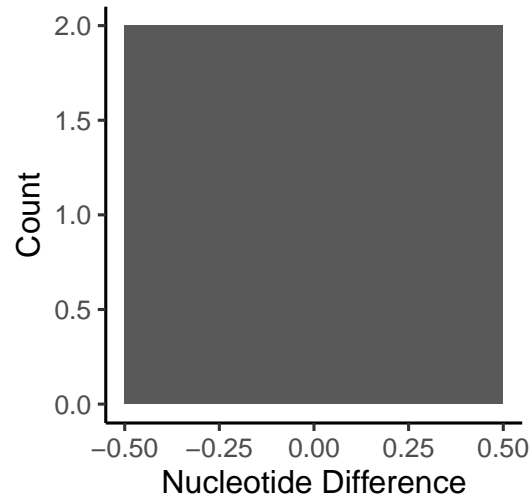
### IGHV1-8\*03

513 sequences assigned  
477 (93%) exact matches, in which:  
476 unique CDR3  
6 unique J



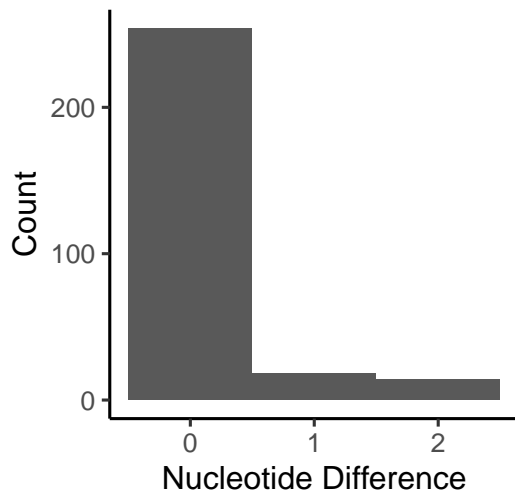
### IGHV1-45\*02

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



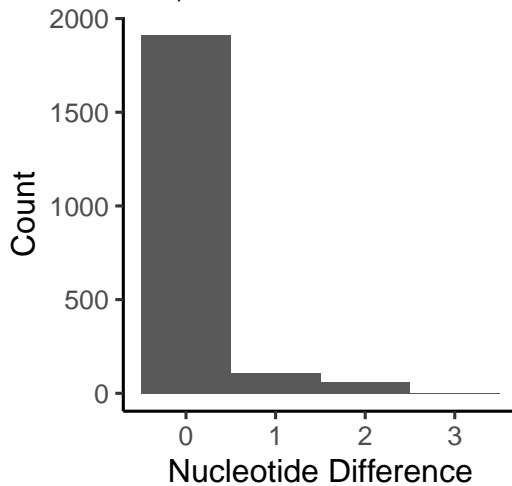
### IGHV1-3\*01\_05

286 sequences assigned  
254 (88.8%) exact matches, in which:  
253 unique CDR3  
6 unique J



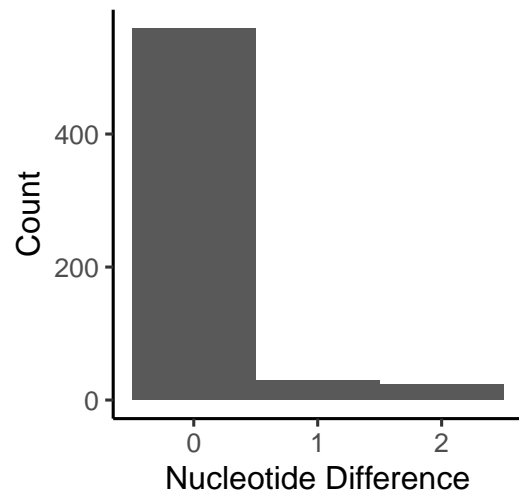
### IGHV1-18\*04

2082 sequences assigned  
1912 (91.8%) exact matches, in which:  
1906 unique CDR3  
6 unique J



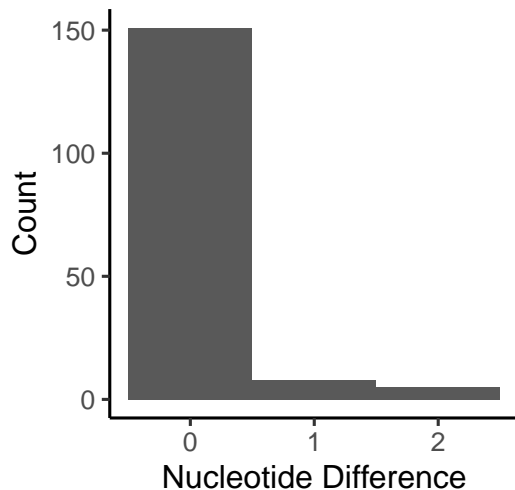
### IGHV1-46\*01

613 sequences assigned  
559 (91.2%) exact matches, in which:  
559 unique CDR3  
6 unique J



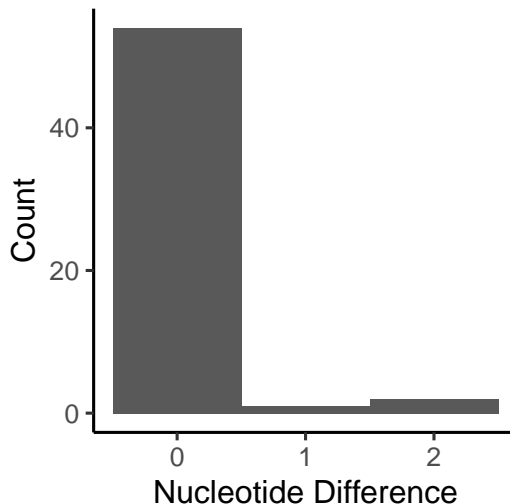
### IGHV1–58\*01\_03

164 sequences assigned  
151 (92.1%) exact matches, in which:  
151 unique CDR3  
6 unique J



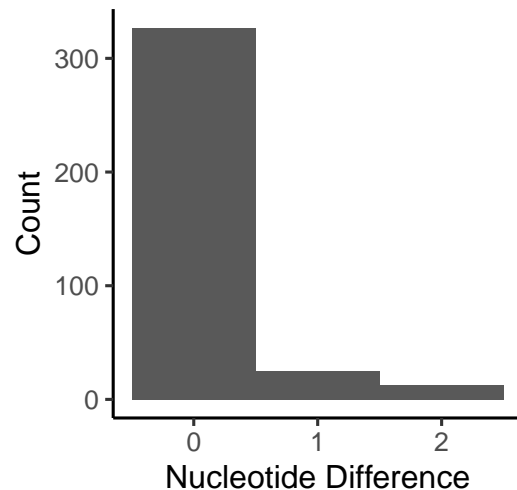
### IGHV2–26\*01

57 sequences assigned  
54 (94.7%) exact matches, in which:  
54 unique CDR3  
6 unique J



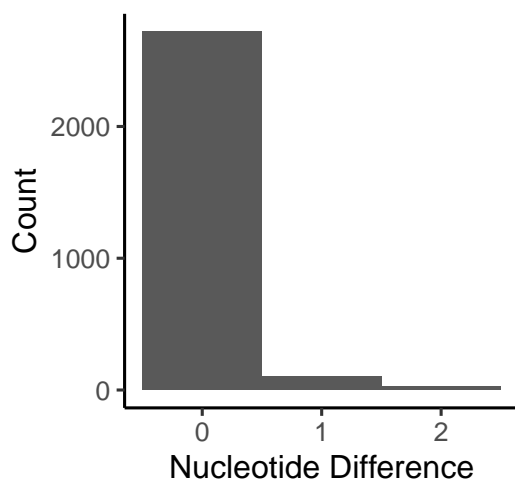
### IGHV3–9\*01

365 sequences assigned  
327 (89.6%) exact matches, in which:  
323 unique CDR3  
6 unique J



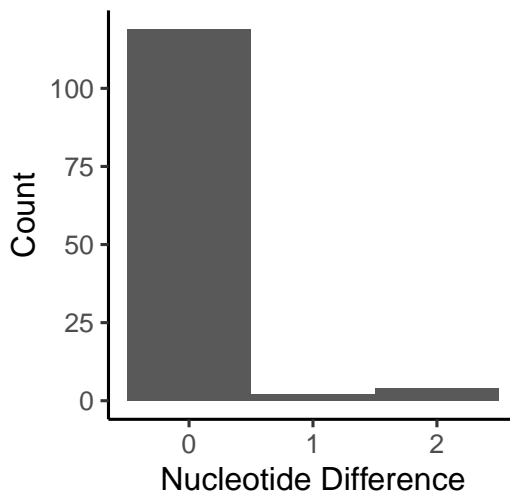
### IGHV1–69\*01\_12\_13

2849 sequences assigned  
2719 (95.4%) exact matches, in which:  
2712 unique CDR3  
6 unique J



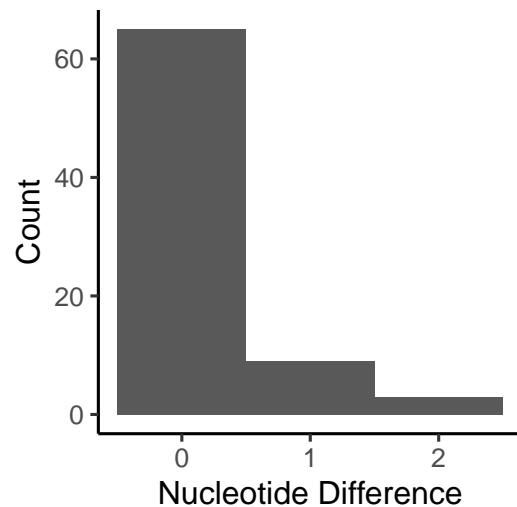
### IGHV2–70\*01

125 sequences assigned  
119 (95.2%) exact matches, in which:  
119 unique CDR3  
5 unique J



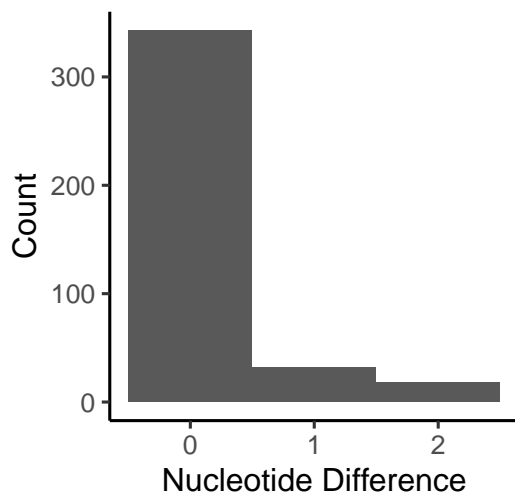
### IGHV3–9\*03

77 sequences assigned  
65 (84.4%) exact matches, in which:  
65 unique CDR3  
6 unique J



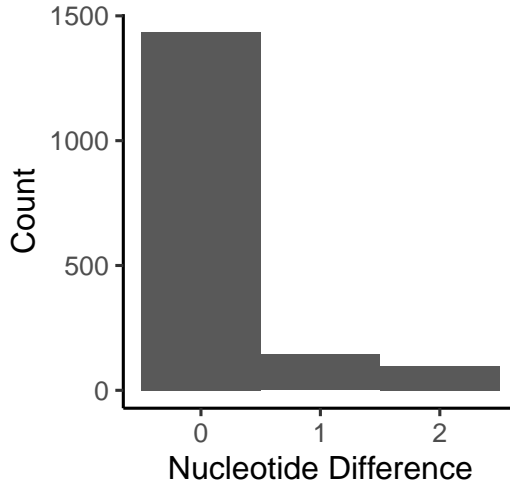
### IGHV2–5\*01

393 sequences assigned  
343 (87.3%) exact matches, in which:  
339 unique CDR3  
6 unique J



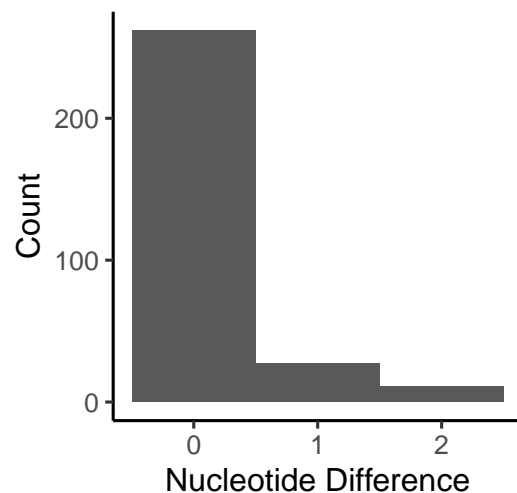
### IGHV3–7\*01

1677 sequences assigned  
1435 (85.6%) exact matches, in which:  
1398 unique CDR3  
6 unique J



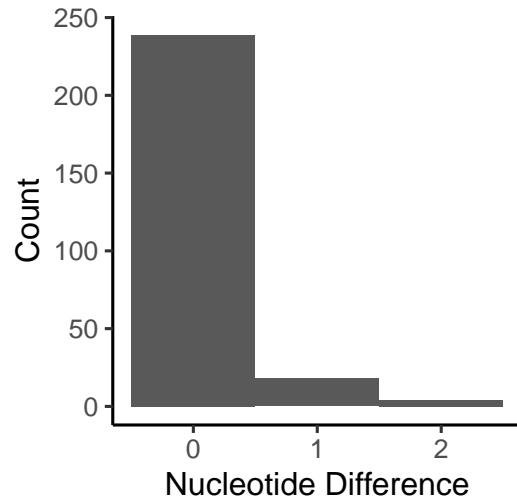
### IGHV3–11\*01

300 sequences assigned  
262 (87.3%) exact matches, in which:  
258 unique CDR3  
6 unique J



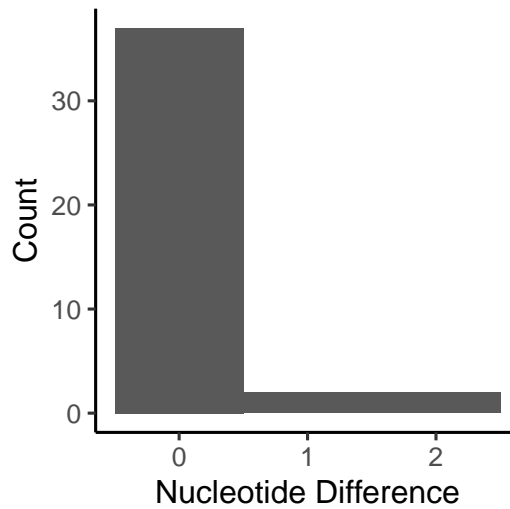
### IGHV3-11\*04

261 sequences assigned  
239 (91.6%) exact matches, in which:  
230 unique CDR3  
6 unique J



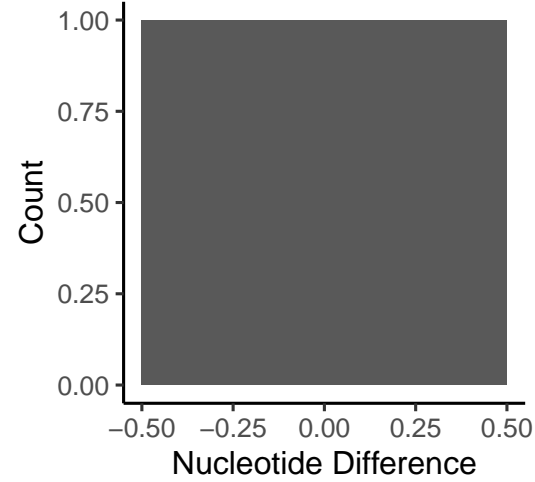
### IGHV3-20\*01\_02

41 sequences assigned  
37 (90.2%) exact matches, in which:  
36 unique CDR3  
5 unique J



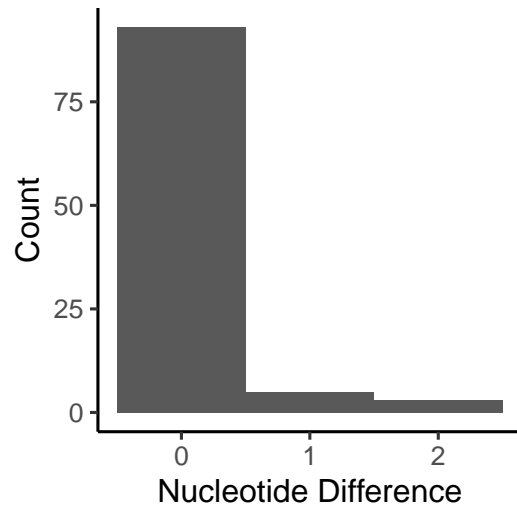
### IGHV3-30-3\*01

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



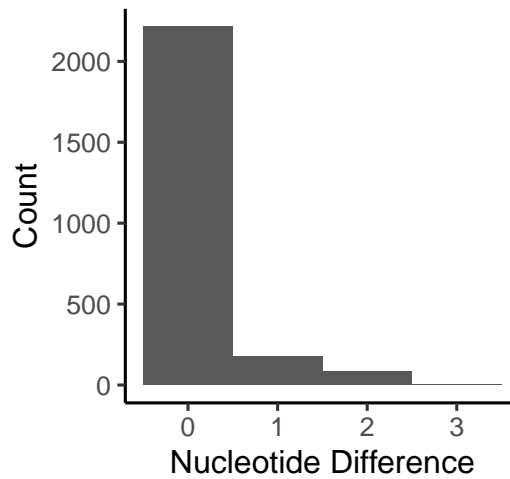
### IGHV3-13\*01

101 sequences assigned  
93 (92.1%) exact matches, in which:  
91 unique CDR3  
5 unique J



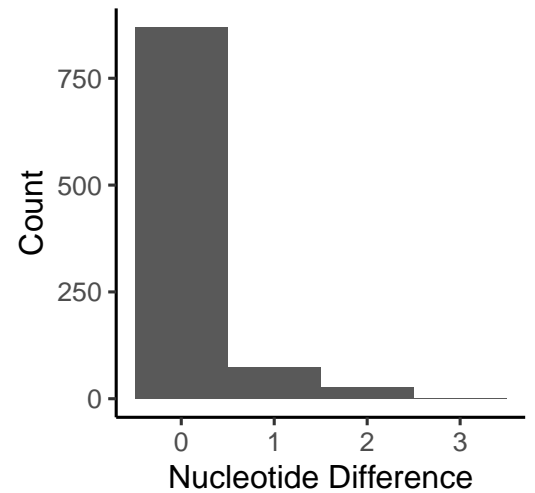
### IGHV3-21\*01\_02

2473 sequences assigned  
2214 (89.5%) exact matches, in which:  
2173 unique CDR3  
6 unique J



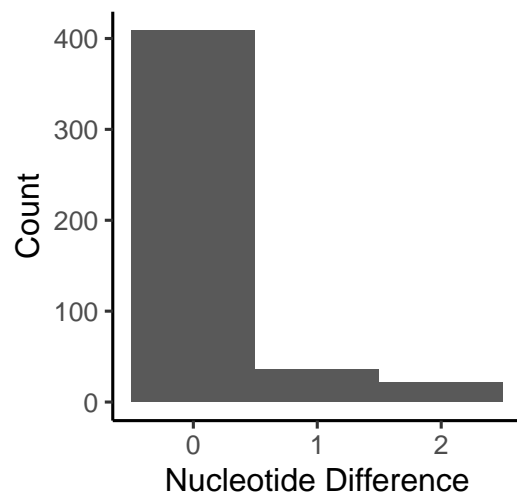
### IGHV3-33\*01

970 sequences assigned  
870 (89.7%) exact matches, in which:  
853 unique CDR3  
6 unique J



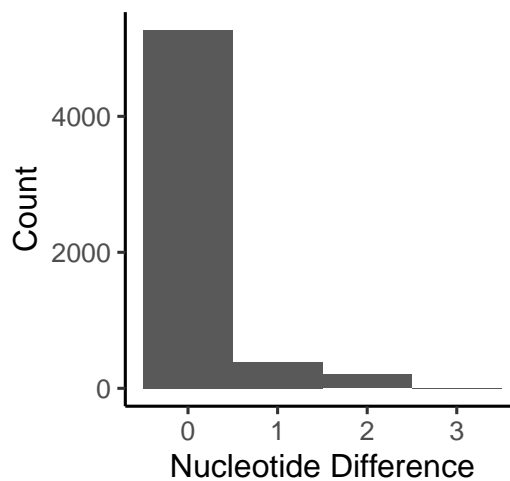
### IGHV3-15\*01\_02

466 sequences assigned  
409 (87.8%) exact matches, in which:  
402 unique CDR3  
6 unique J



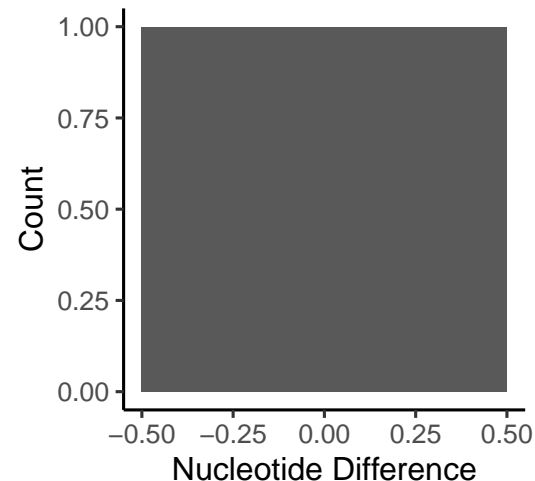
### IGHV3-23\*01\_04

5856 sequences assigned  
5269 (90%) exact matches, in which:  
5153 unique CDR3  
6 unique J



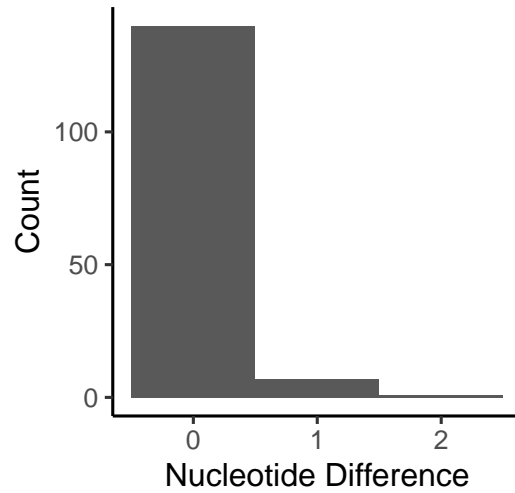
### IGHV3-35\*01

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



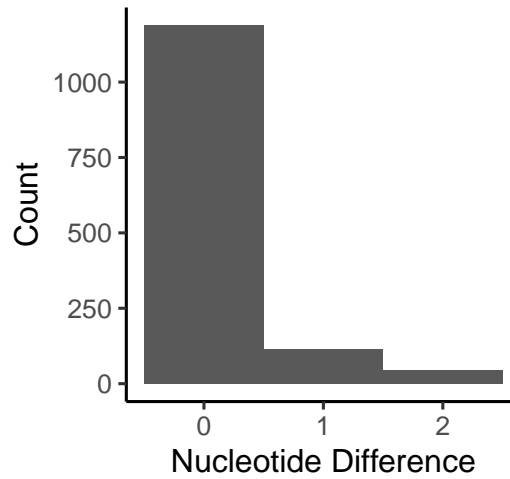
### IGHV3-43\*01

148 sequences assigned  
140 (94.6%) exact matches, in which:  
134 unique CDR3  
6 unique J



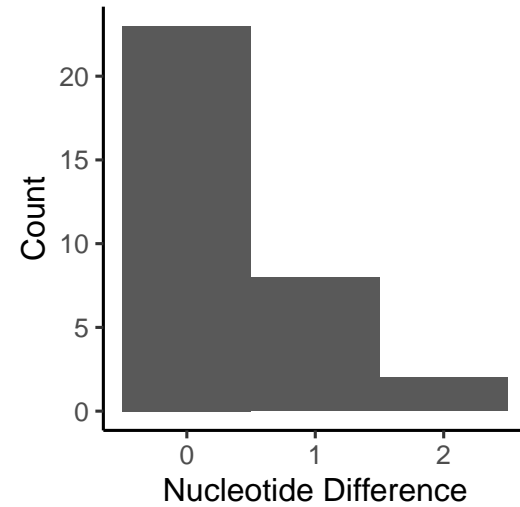
### IGHV3-53\*01\_02

1349 sequences assigned  
1188 (88.1%) exact matches, in which:  
1157 unique CDR3  
6 unique J



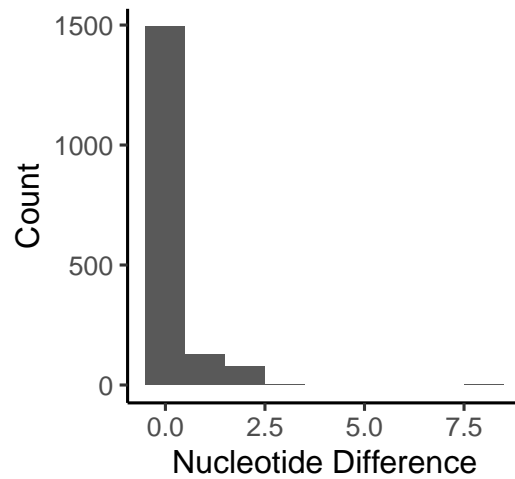
### IGHV3-72\*01

33 sequences assigned  
23 (69.7%) exact matches, in which:  
21 unique CDR3  
5 unique J



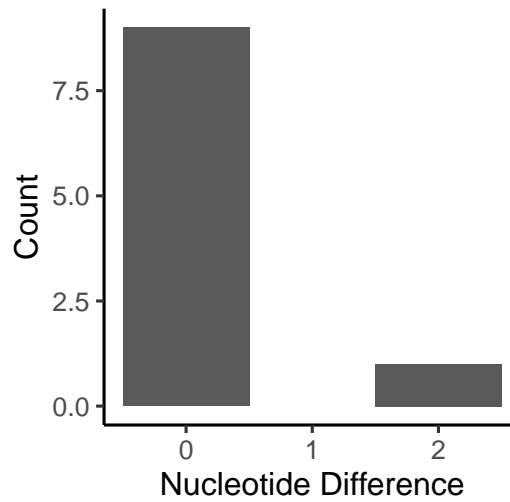
### IGHV3-48\*02

1701 sequences assigned  
1493 (87.8%) exact matches, in which:  
1427 unique CDR3  
6 unique J



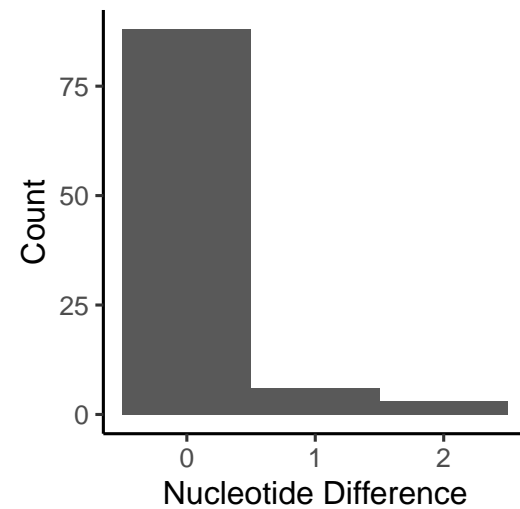
### IGHV3-64\*02\_07

10 sequences assigned  
9 (90%) exact matches, in which:  
9 unique CDR3  
3 unique J



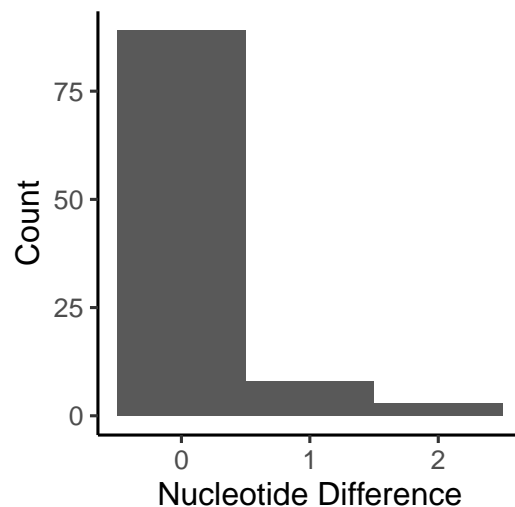
### IGHV3-73\*01\_02

97 sequences assigned  
88 (90.7%) exact matches, in which:  
88 unique CDR3  
6 unique J



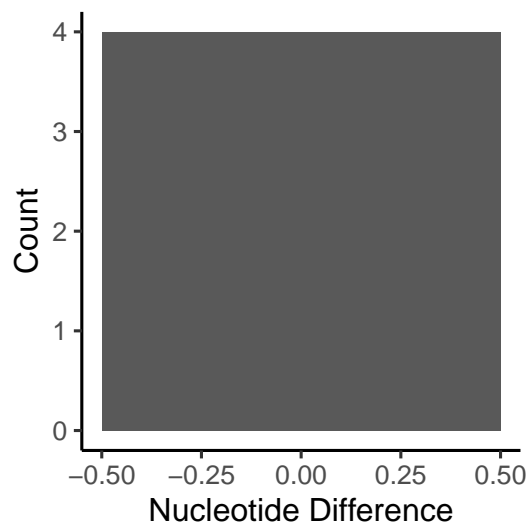
### IGHV3-49\*03\_05

100 sequences assigned  
89 (89%) exact matches, in which:  
88 unique CDR3  
5 unique J



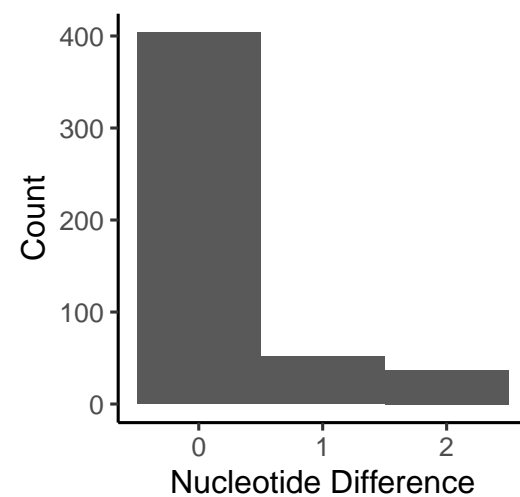
### IGHV3-66\*03

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



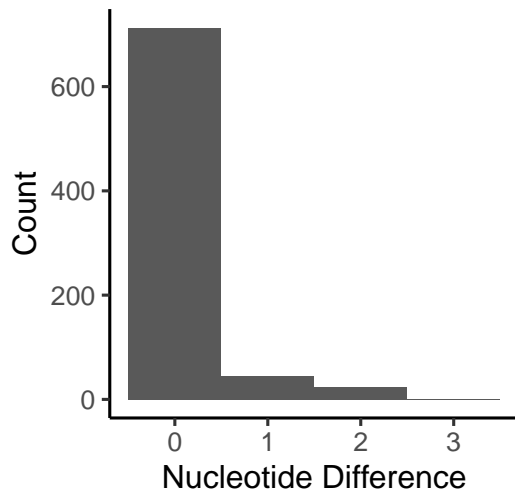
### IGHV3-74\*01\_02

493 sequences assigned  
404 (81.9%) exact matches, in which:  
394 unique CDR3  
6 unique J



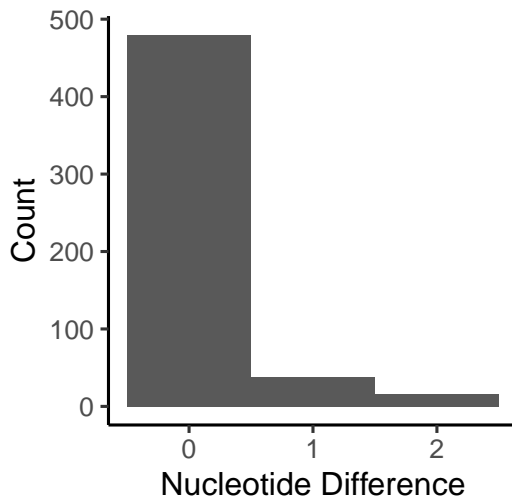
### IGHV4-4\*07

783 sequences assigned  
713 (91.1%) exact matches, in which:  
695 unique CDR3  
6 unique J



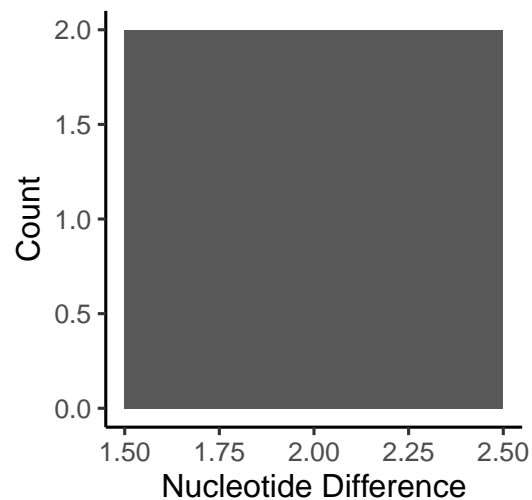
### IGHV4-31\*02

534 sequences assigned  
480 (89.9%) exact matches, in which:  
475 unique CDR3  
6 unique J



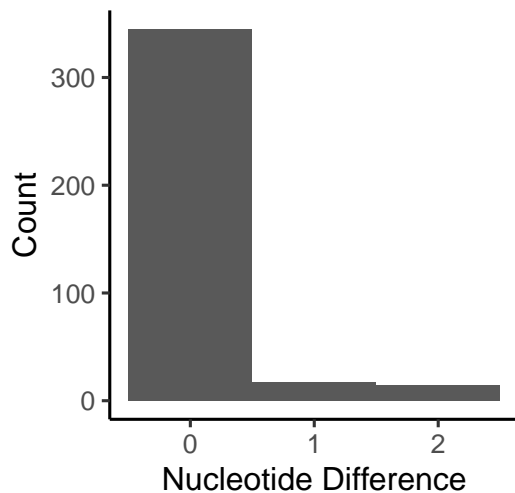
### IGHV4-39\*02

2 sequences assigned  
No exact matches.



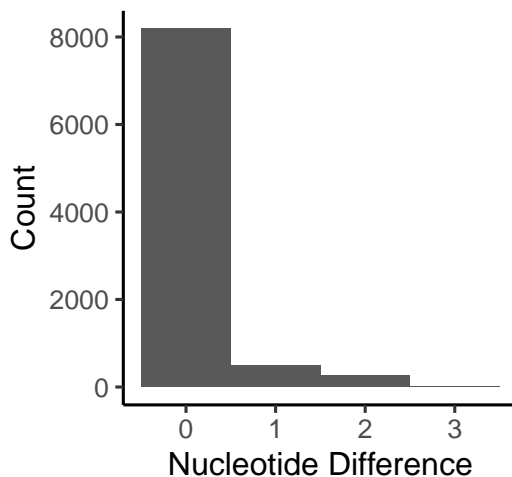
### IGHV4-4\*02\_03

376 sequences assigned  
345 (91.8%) exact matches, in which:  
342 unique CDR3  
6 unique J



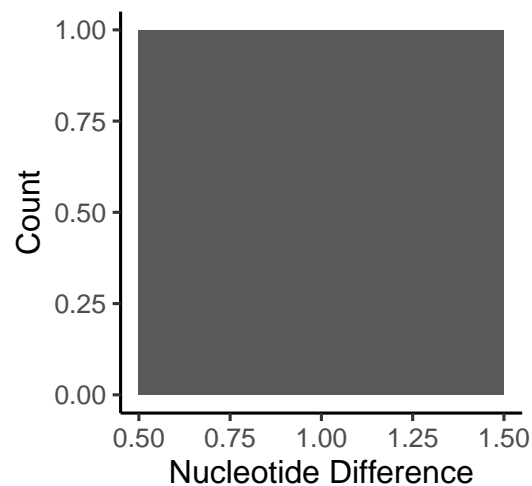
### IGHV4-34\*01\_02

8930 sequences assigned  
8188 (91.7%) exact matches, in which:  
8064 unique CDR3  
6 unique J



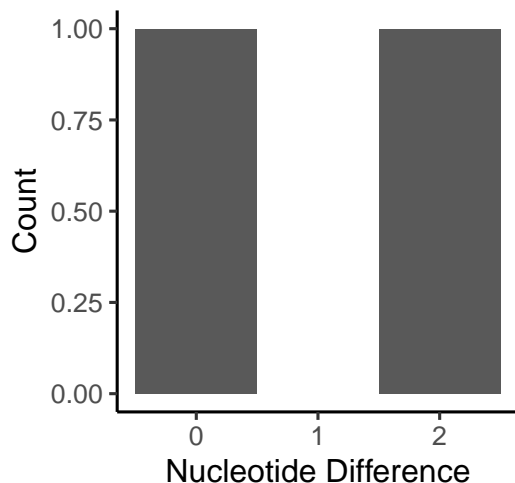
### IGHV4-39\*07

1 sequences assigned  
No exact matches.



### IGHV4-28\*01\_07

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



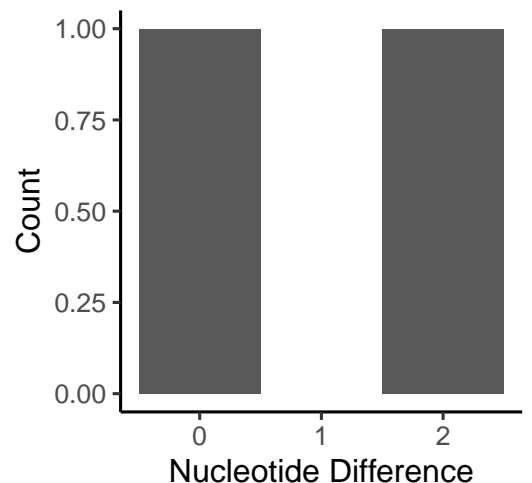
### IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



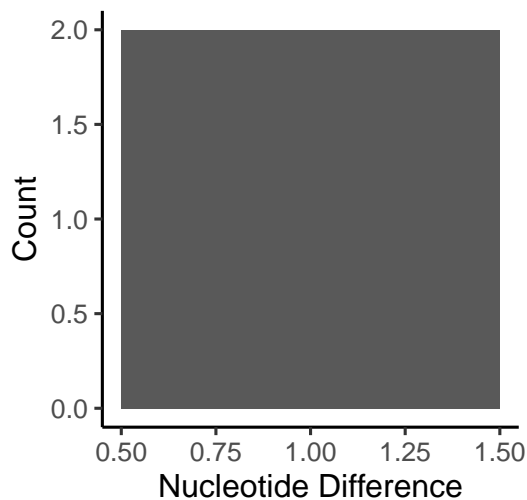
### IGHV4-59\*08

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



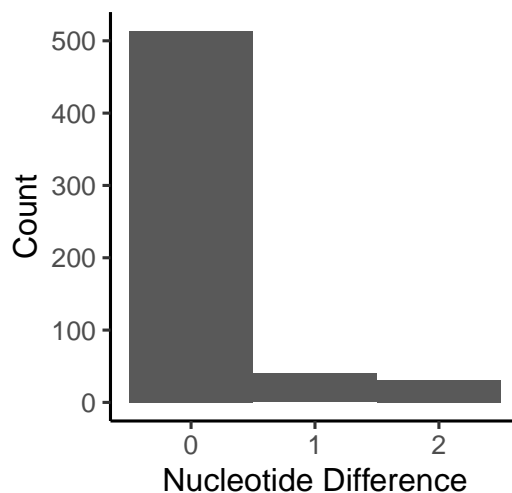
### IGHV4-59\*11

2 sequences assigned  
No exact matches.



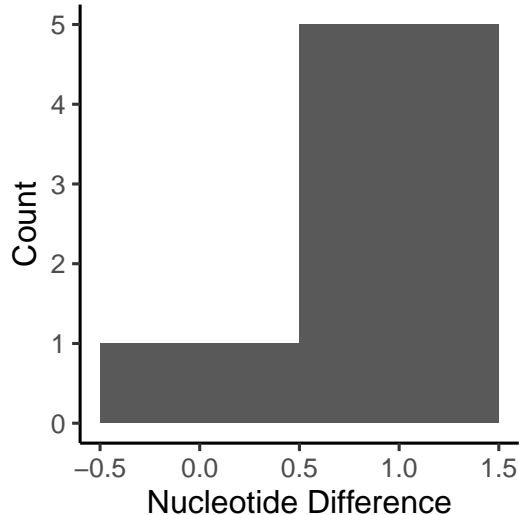
### IGHV6-1\*01\_02

585 sequences assigned  
514 (87.9%) exact matches, in which:  
509 unique CDR3  
6 unique J



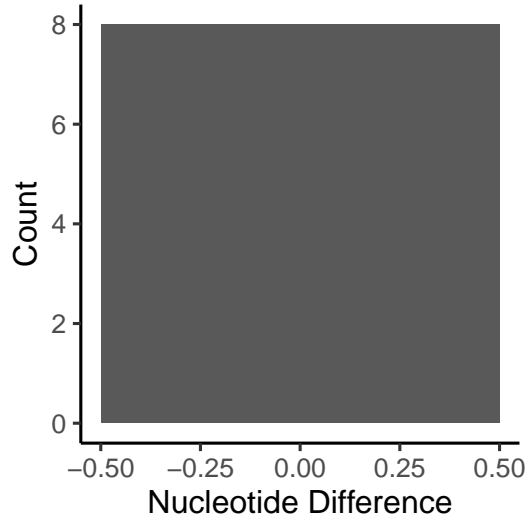
### IGHV4-59\*12

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



### IGHV7-4-1\*01

8 sequences assigned  
8 (100%) exact matches, in which:  
8 unique CDR3  
4 unique J



### IGHV4-61\*01

1125 sequences assigned  
985 (87.6%) exact matches, in which:  
961 unique CDR3  
6 unique J

