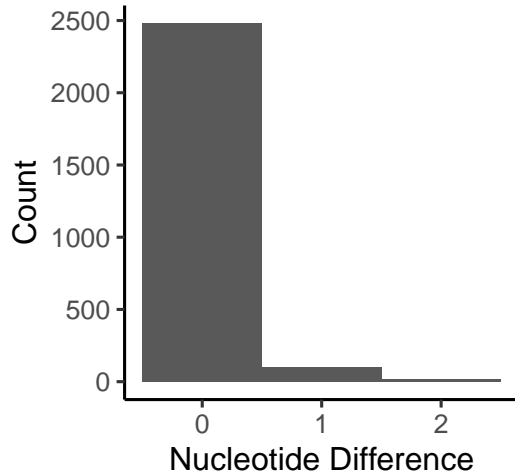


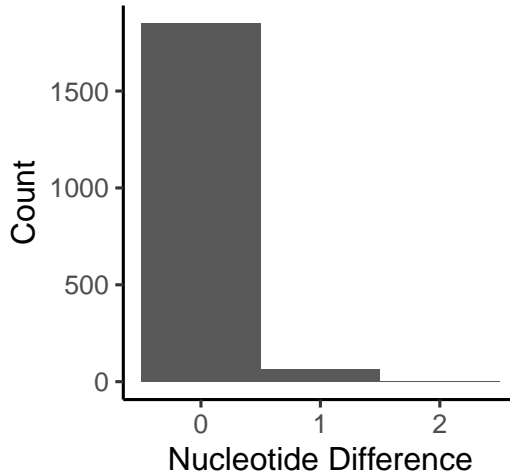
### IGHV1-2\*02

2596 sequences assigned  
2480 (95.5%) exact matches, in which:  
2472 unique CDR3  
6 unique J



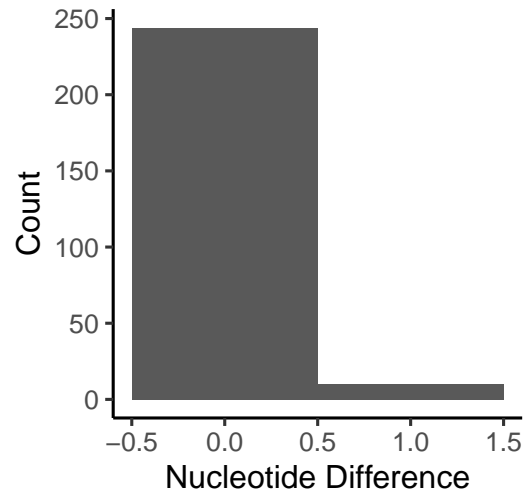
### IGHV1-18\*01

1917 sequences assigned  
1849 (96.5%) exact matches, in which:  
1846 unique CDR3  
6 unique J



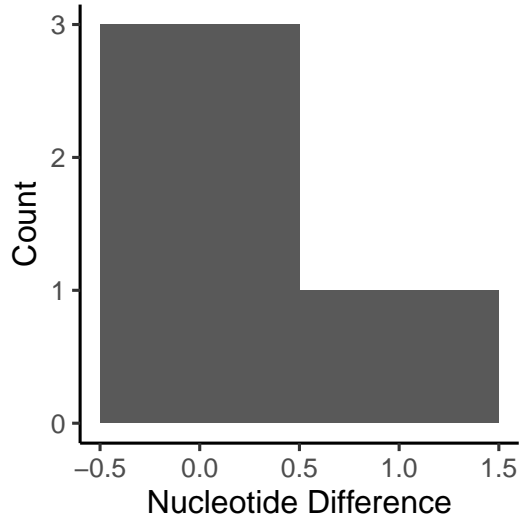
### IGHV1-46\*01

254 sequences assigned  
244 (96.1%) exact matches, in which:  
244 unique CDR3  
6 unique J



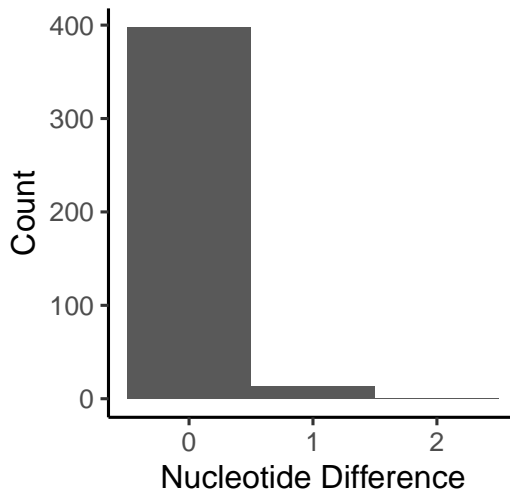
### IGHV1-3\*02

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



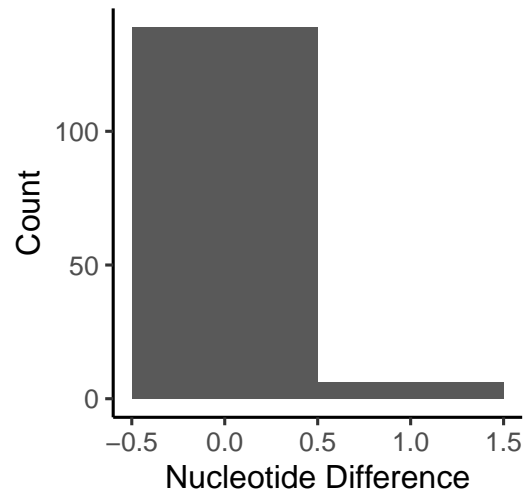
### IGHV1-24\*01

412 sequences assigned  
398 (96.6%) exact matches, in which:  
396 unique CDR3  
6 unique J



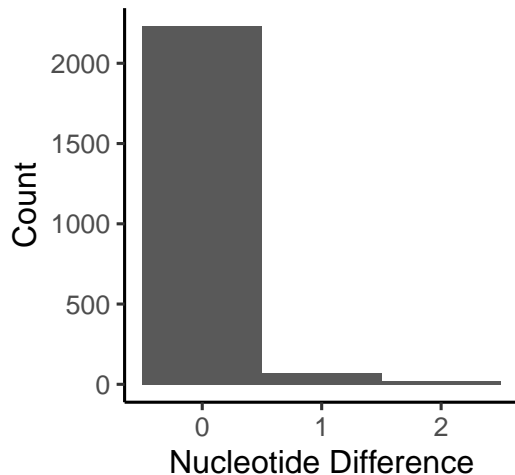
### IGHV1-46\*03

145 sequences assigned  
139 (95.9%) exact matches, in which:  
139 unique CDR3  
5 unique J



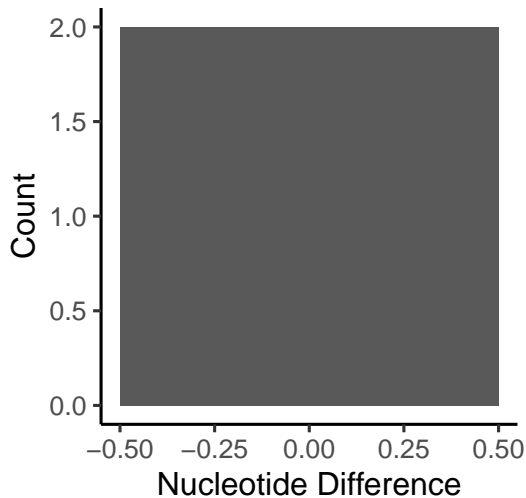
### IGHV1-8\*01

2324 sequences assigned  
2232 (96%) exact matches, in which:  
2225 unique CDR3  
6 unique J



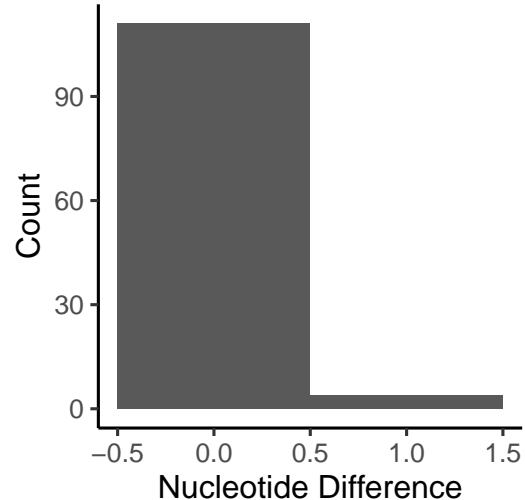
### IGHV1-45\*02

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



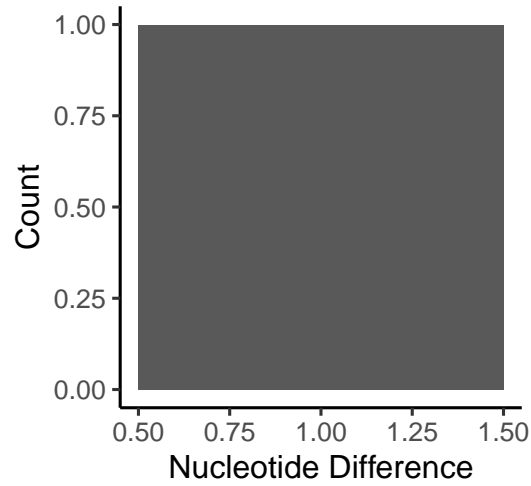
### IGHV1-58\*01\_03

115 sequences assigned  
111 (96.5%) exact matches, in which:  
111 unique CDR3  
5 unique J



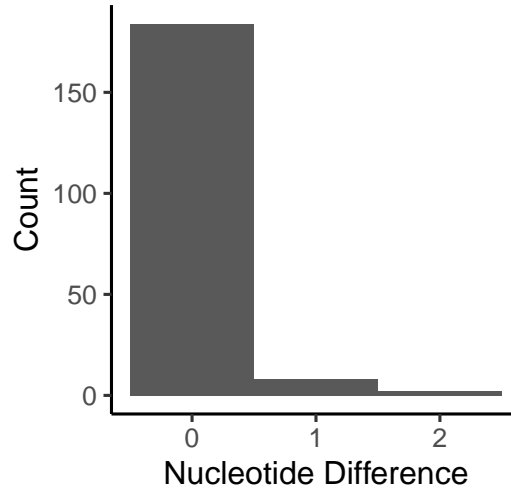
### IGHV1-68\*01

1 sequences assigned  
No exact matches.



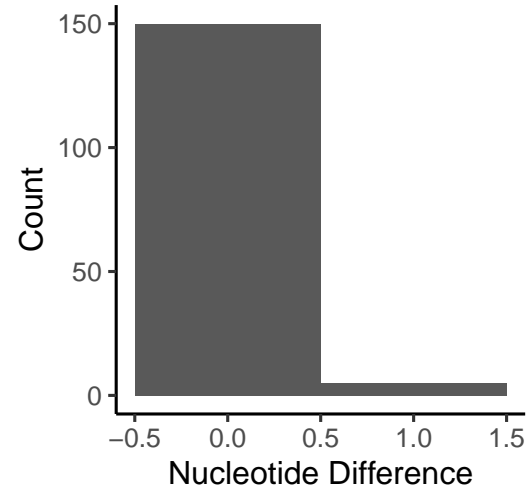
### IGHV2-5\*01

194 sequences assigned  
184 (94.8%) exact matches, in which:  
180 unique CDR3  
6 unique J



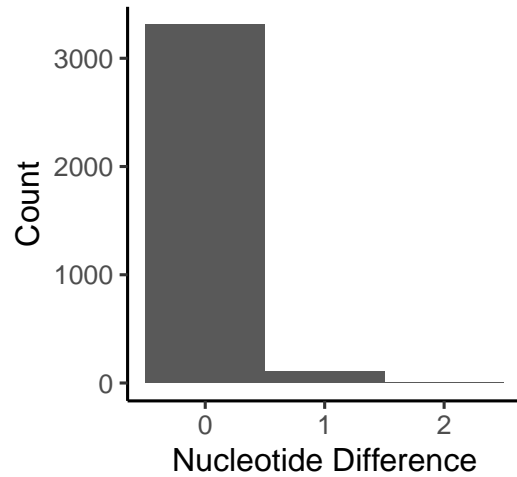
### IGHV2-70\*01

155 sequences assigned  
150 (96.8%) exact matches, in which:  
149 unique CDR3  
5 unique J



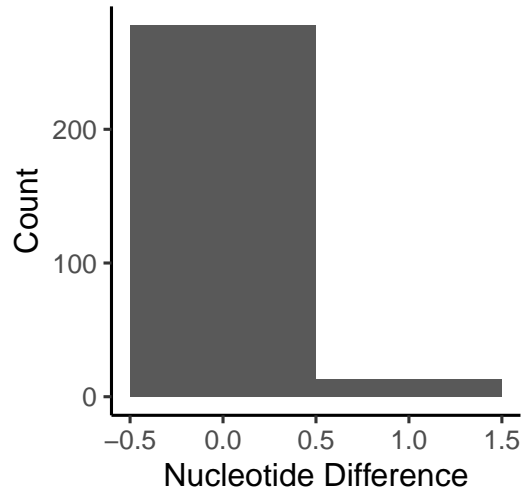
### IGHV1-69\*01\_12\_13

3424 sequences assigned  
3310 (96.7%) exact matches, in which:  
3306 unique CDR3  
6 unique J



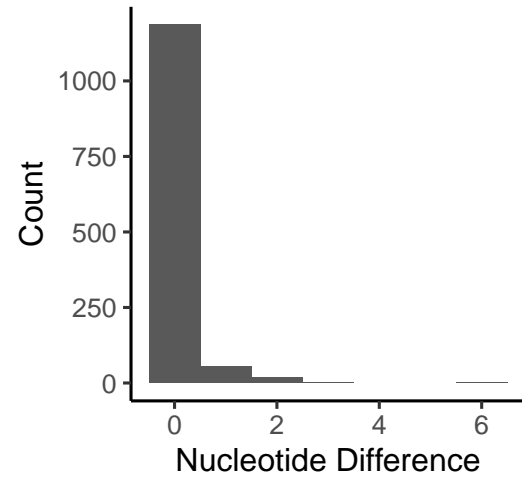
### IGHV2-5\*02

291 sequences assigned  
278 (95.5%) exact matches, in which:  
278 unique CDR3  
6 unique J



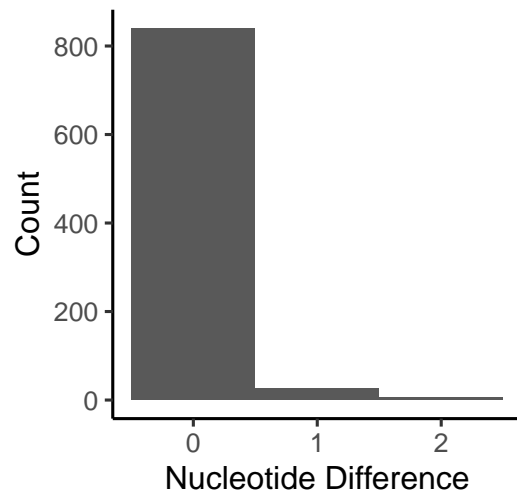
### IGHV3-7\*01

1261 sequences assigned  
1186 (94.1%) exact matches, in which:  
1163 unique CDR3  
6 unique J



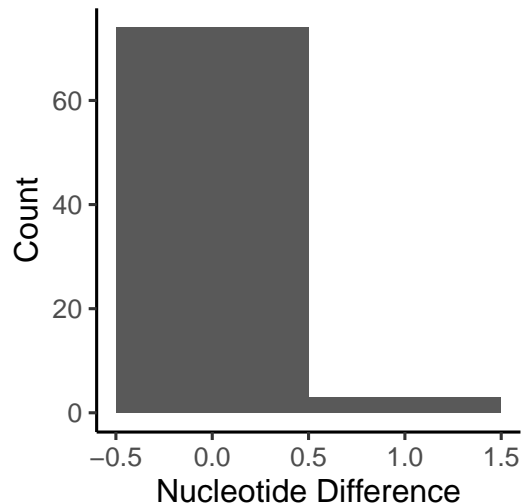
### IGHV1-69\*06\_14

872 sequences assigned  
840 (96.3%) exact matches, in which:  
840 unique CDR3  
6 unique J



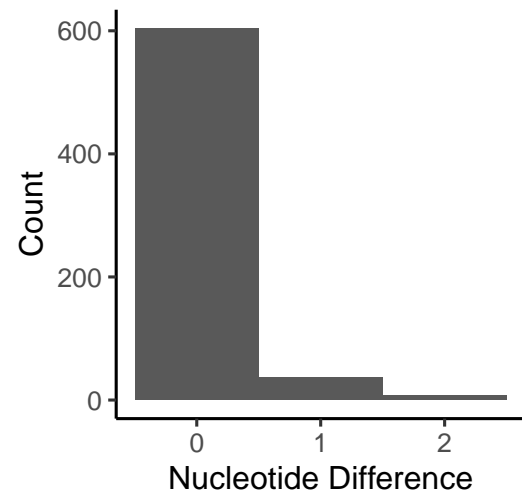
### IGHV2-26\*01

77 sequences assigned  
74 (96.1%) exact matches, in which:  
73 unique CDR3  
5 unique J



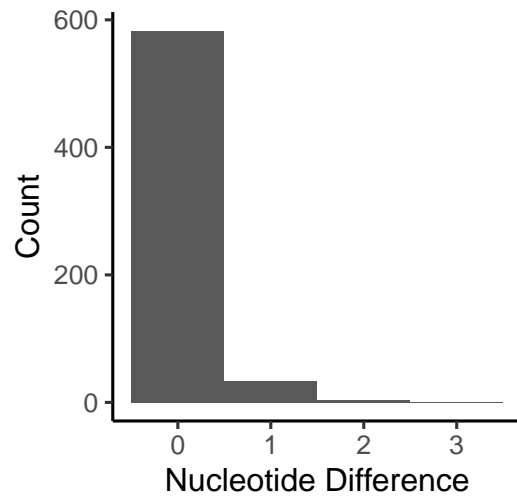
### IGHV3-9\*01

647 sequences assigned  
604 (93.4%) exact matches, in which:  
596 unique CDR3  
6 unique J



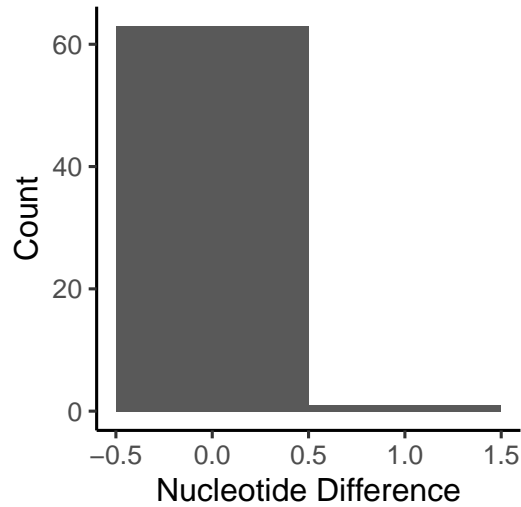
### IGHV3-11\*01

621 sequences assigned  
583 (93.9%) exact matches, in which:  
578 unique CDR3  
6 unique J



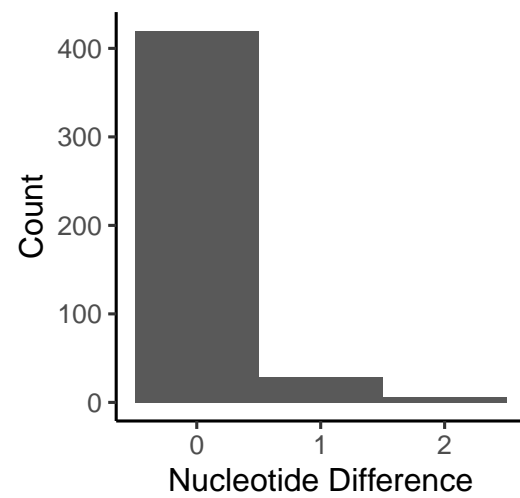
### IGHV3-20\*01\_02

64 sequences assigned  
63 (98.4%) exact matches, in which:  
63 unique CDR3  
6 unique J



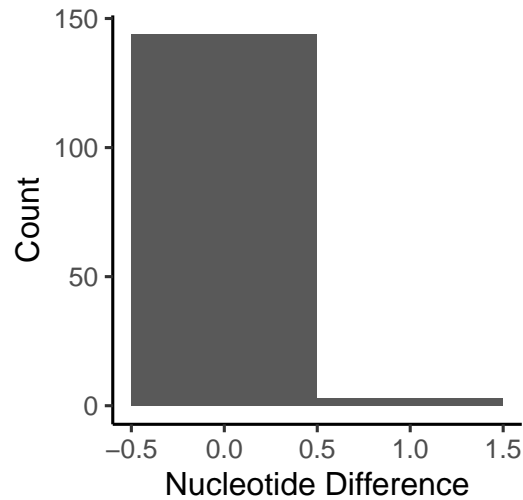
### IGHV3-30\*03

455 sequences assigned  
420 (92.3%) exact matches, in which:  
419 unique CDR3  
6 unique J



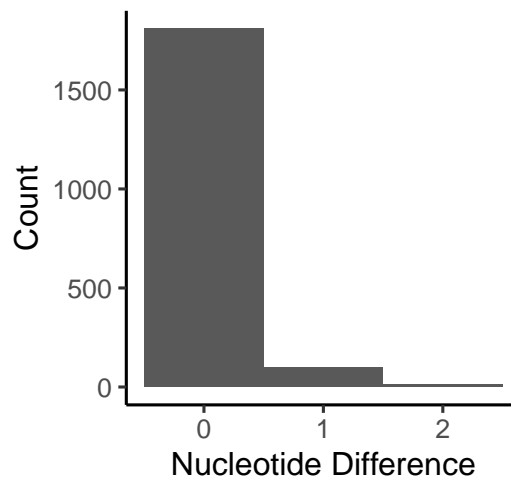
### IGHV3-13\*01

147 sequences assigned  
144 (98%) exact matches, in which:  
143 unique CDR3  
5 unique J



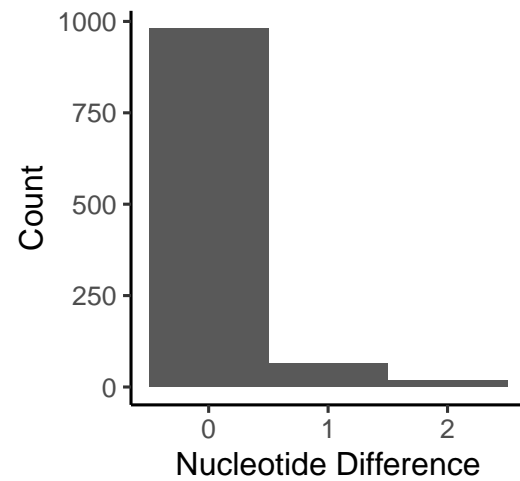
### IGHV3-21\*01\_02

1924 sequences assigned  
1809 (94%) exact matches, in which:  
1792 unique CDR3  
6 unique J



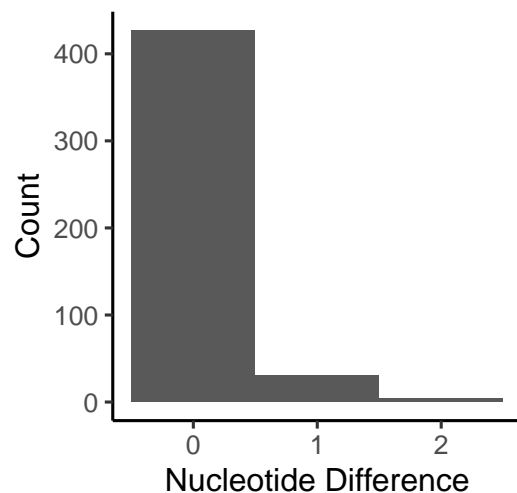
### IGHV3-33\*01

1063 sequences assigned  
980 (92.2%) exact matches, in which:  
976 unique CDR3  
6 unique J



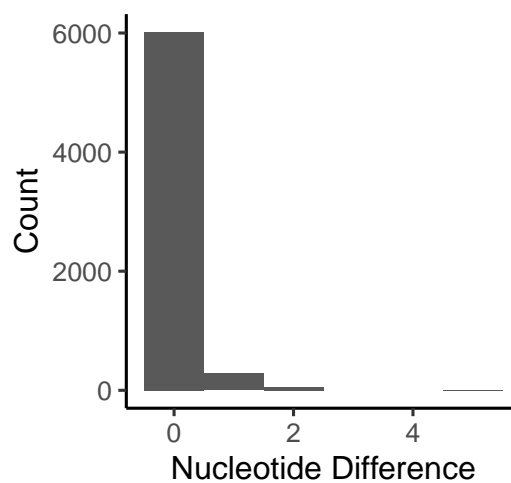
### IGHV3-15\*01\_02

461 sequences assigned  
427 (92.6%) exact matches, in which:  
424 unique CDR3  
6 unique J



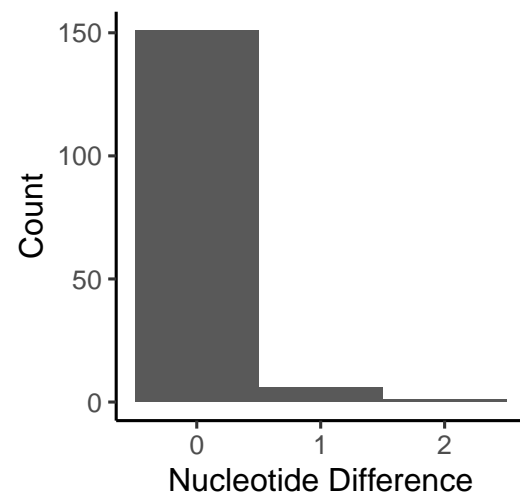
### IGHV3-23\*01\_04

6350 sequences assigned  
6016 (94.7%) exact matches, in which:  
5958 unique CDR3  
6 unique J



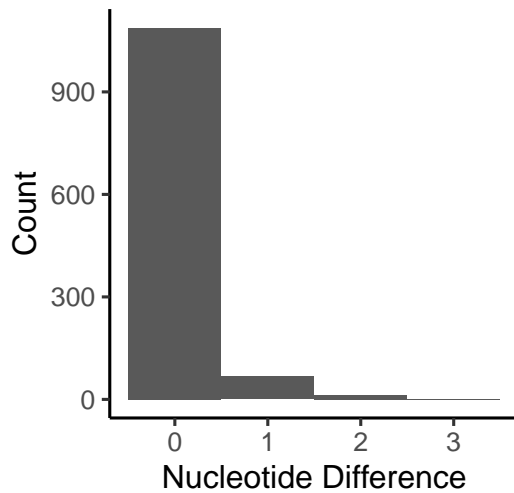
### IGHV3-43\*01

158 sequences assigned  
151 (95.6%) exact matches, in which:  
151 unique CDR3  
6 unique J



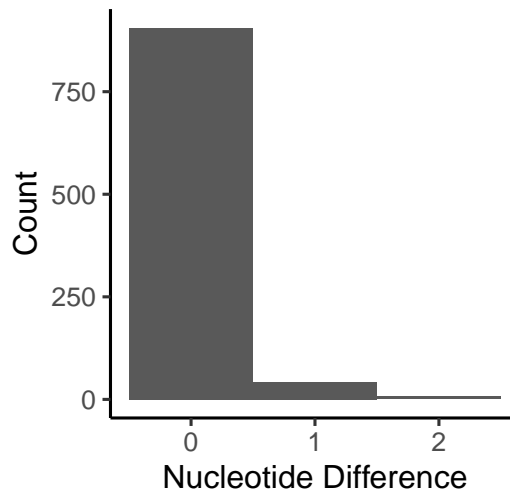
### IGHV3-48\*02

1170 sequences assigned  
1088 (93%) exact matches, in which:  
1069 unique CDR3  
6 unique J



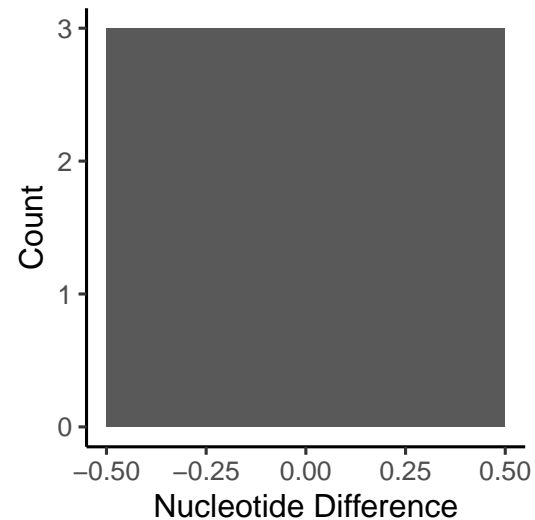
### IGHV3-53\*01\_02

955 sequences assigned  
906 (94.9%) exact matches, in which:  
897 unique CDR3  
6 unique J



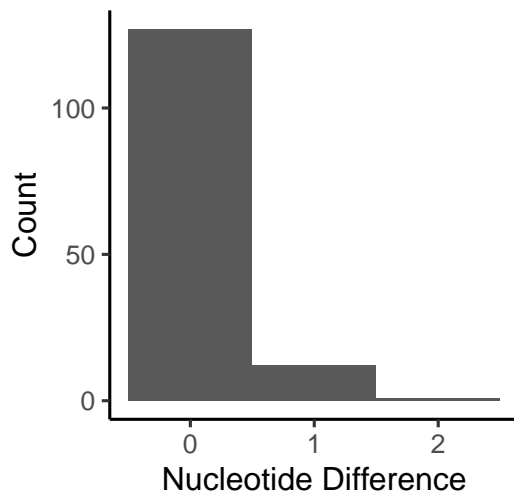
### IGHV3-69-1\*01

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



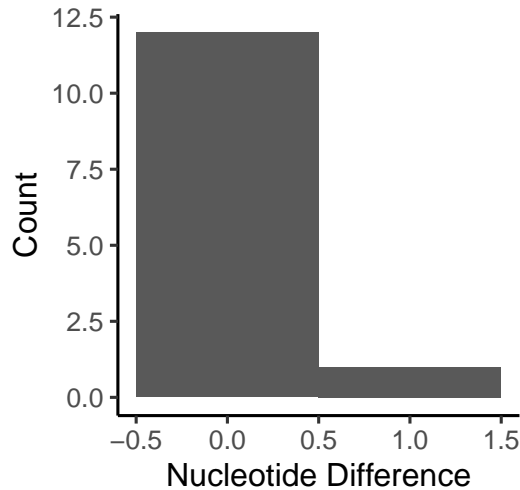
### IGHV3-49\*03\_05

140 sequences assigned  
127 (90.7%) exact matches, in which:  
127 unique CDR3  
6 unique J



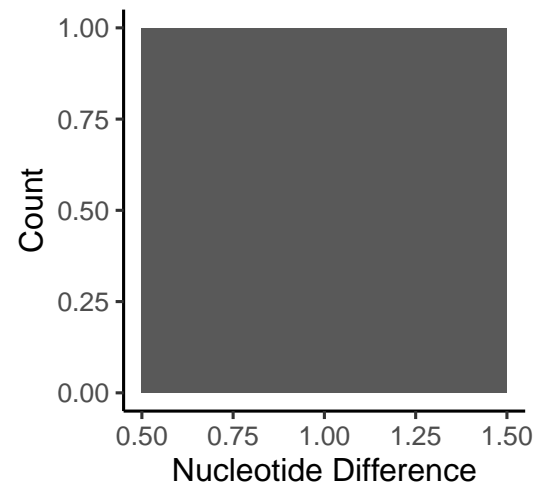
### IGHV3-64\*02\_07

13 sequences assigned  
12 (92.3%) exact matches, in which:  
12 unique CDR3  
3 unique J



### IGHV3-71\*01\_04

1 sequences assigned  
No exact matches.



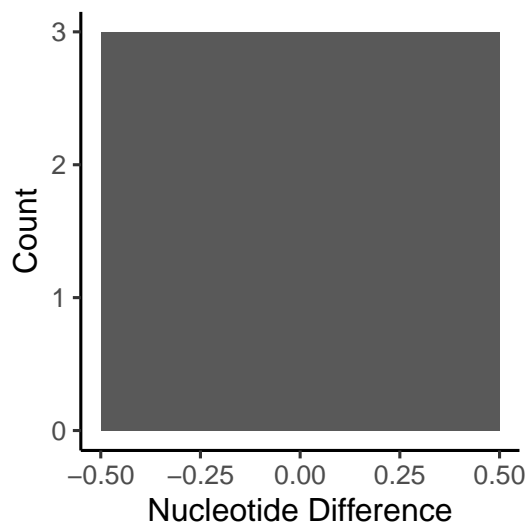
### IGHV3-52\*01\_03

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



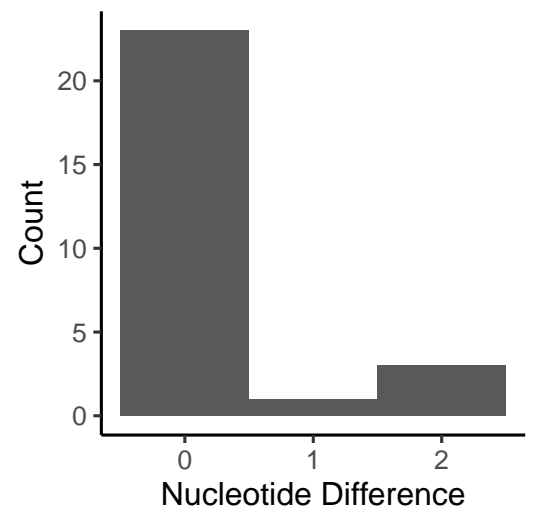
### IGHV3-66\*03

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



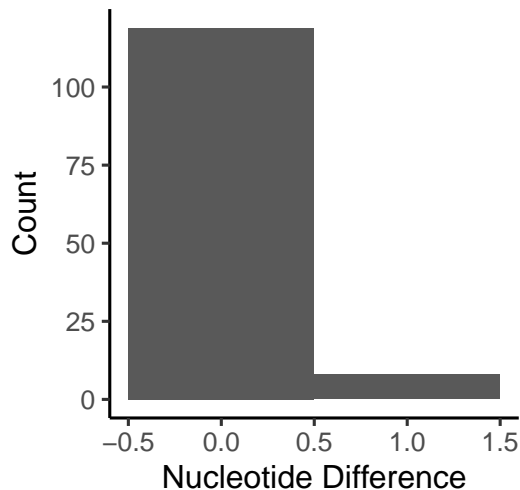
### IGHV3-72\*01

27 sequences assigned  
23 (85.2%) exact matches, in which:  
23 unique CDR3  
4 unique J



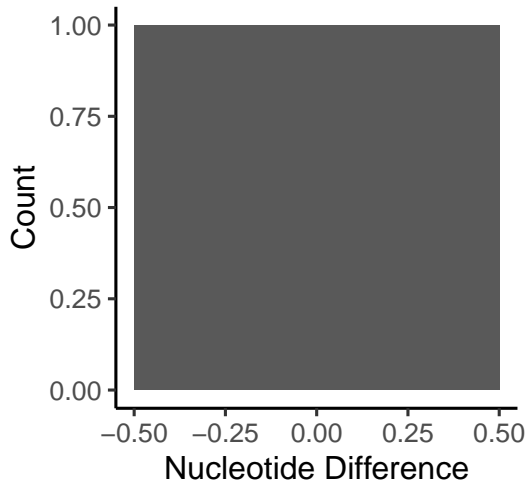
### IGHV3-73\*01\_02

127 sequences assigned  
119 (93.7%) exact matches, in which:  
118 unique CDR3  
6 unique J



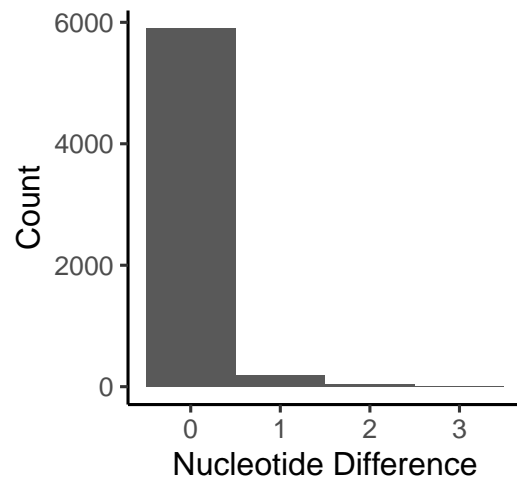
### IGHV4-28\*03

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



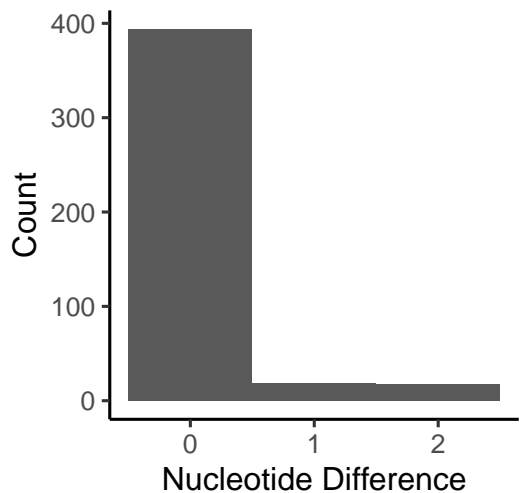
### IGHV4-34\*01\_02

6130 sequences assigned  
5900 (96.2%) exact matches, in which:  
5828 unique CDR3  
6 unique J



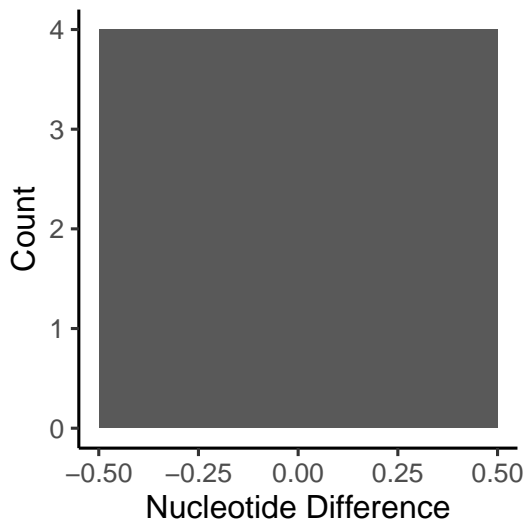
### IGHV3-74\*01\_02

431 sequences assigned  
394 (91.4%) exact matches, in which:  
385 unique CDR3  
6 unique J



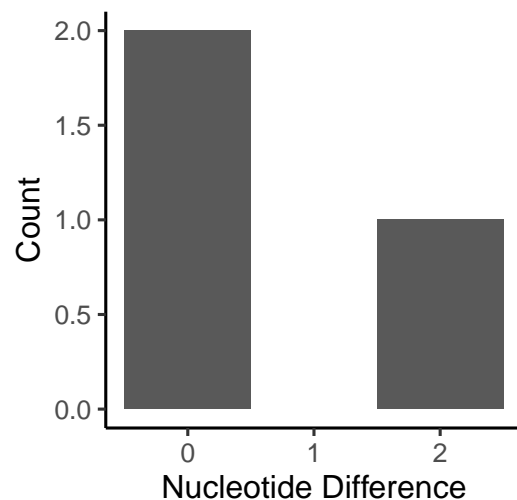
### IGHV4-28\*01\_07

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



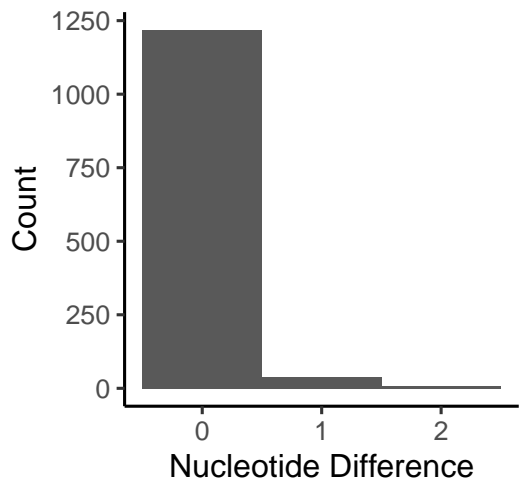
### IGHV4-39\*07

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



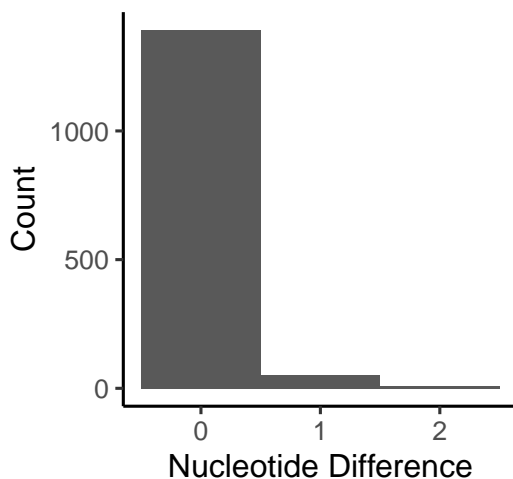
### IGHV4-4\*07

1265 sequences assigned  
1218 (96.3%) exact matches, in which:  
1207 unique CDR3  
6 unique J



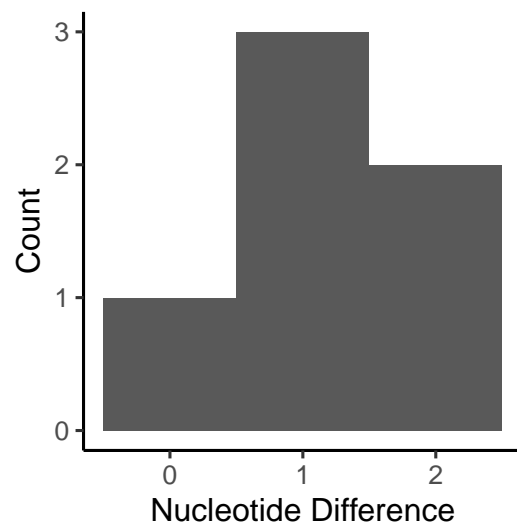
### IGHV4-31\*02

1452 sequences assigned  
1392 (95.9%) exact matches, in which:  
1385 unique CDR3  
6 unique J



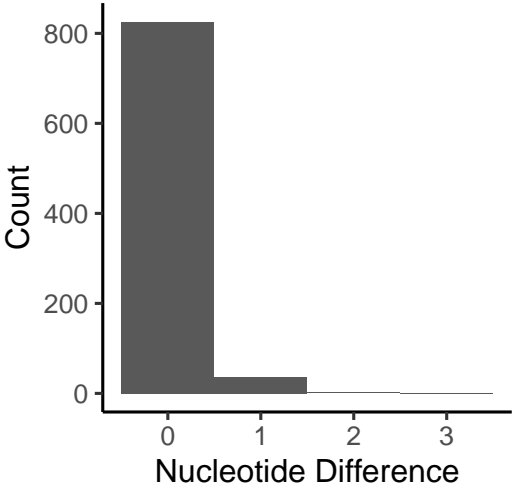
### IGHV4-59\*12

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



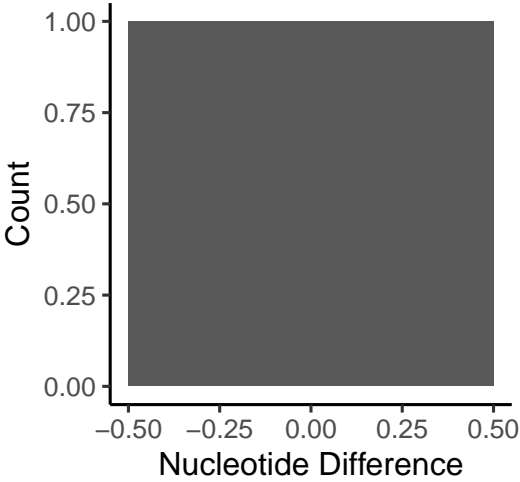
IGHV4–61\*01

866 sequences assigned  
826 (95.4%) exact matches, in which:  
820 unique CDR3  
6 unique J



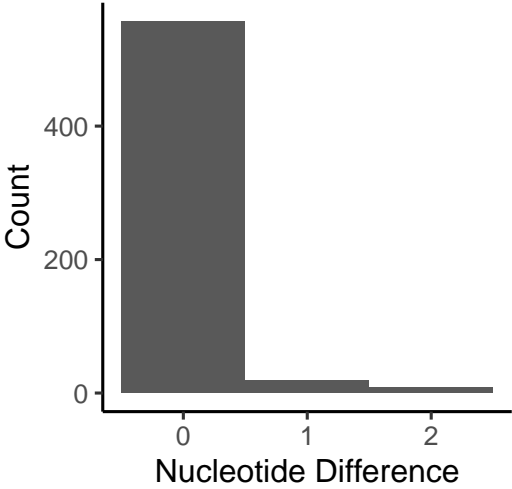
IGHV5–51\*01\_03

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



IGHV6–1\*01\_02

584 sequences assigned  
557 (95.4%) exact matches, in which:  
553 unique CDR3  
6 unique J





[illegible]