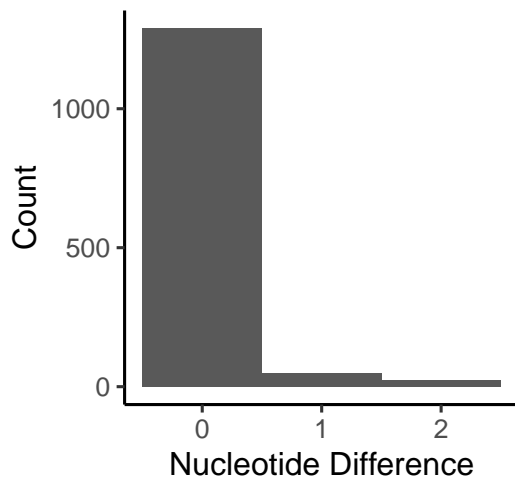


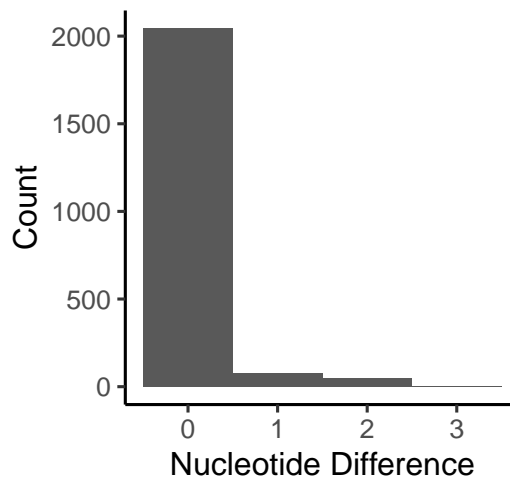
### IGHV1-2\*02

1360 sequences assigned  
1289 (94.8%) exact matches, in which:  
1281 unique CDR3  
6 unique J



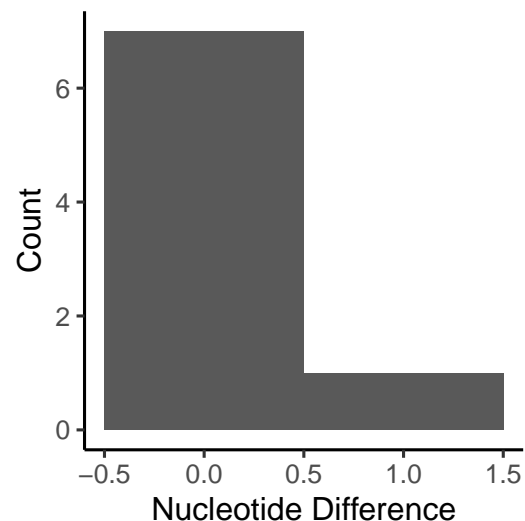
### IGHV1-8\*01

2168 sequences assigned  
2044 (94.3%) exact matches, in which:  
2023 unique CDR3  
6 unique J



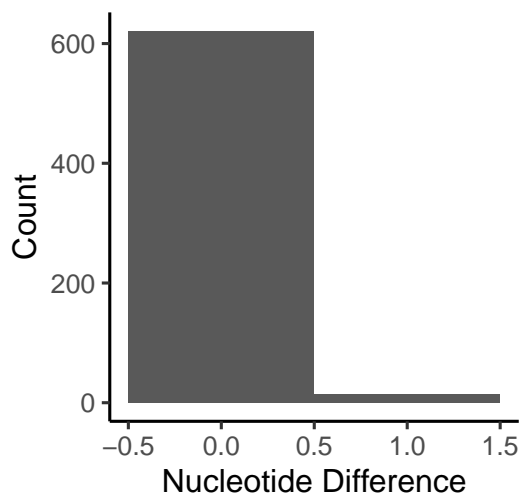
### IGHV1-45\*02

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



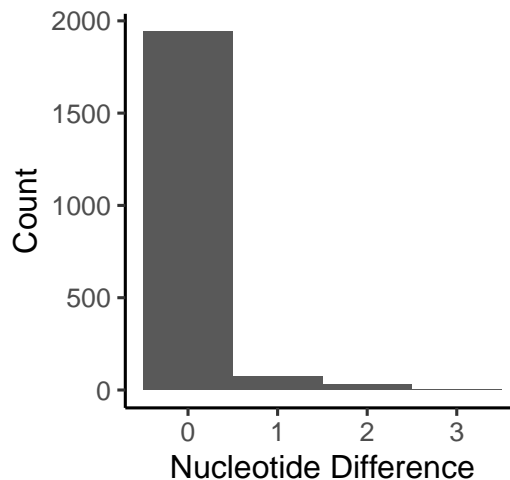
### IGHV1-2\*06

636 sequences assigned  
621 (97.6%) exact matches, in which:  
617 unique CDR3  
6 unique J



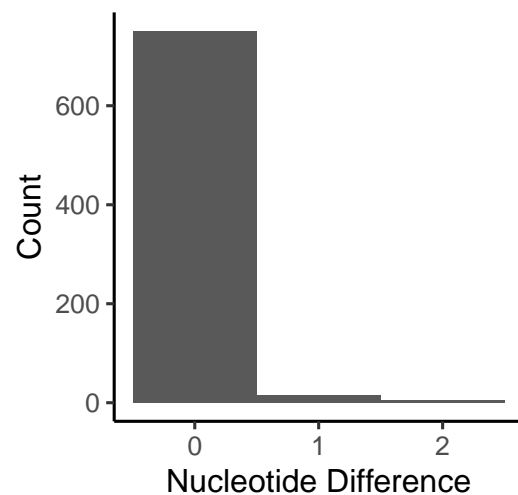
### IGHV1-18\*01

2046 sequences assigned  
1941 (94.9%) exact matches, in which:  
1927 unique CDR3  
6 unique J



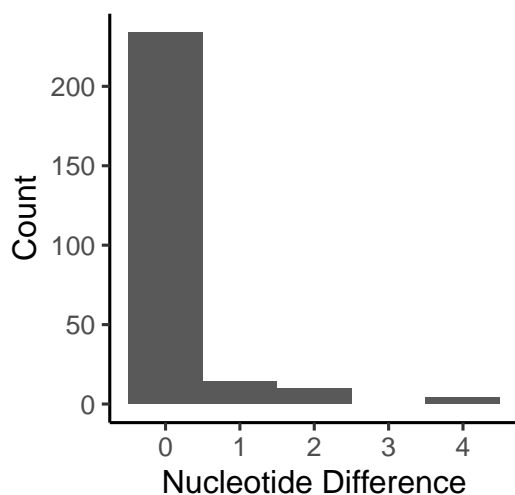
### IGHV1-46\*01

772 sequences assigned  
751 (97.3%) exact matches, in which:  
749 unique CDR3  
6 unique J



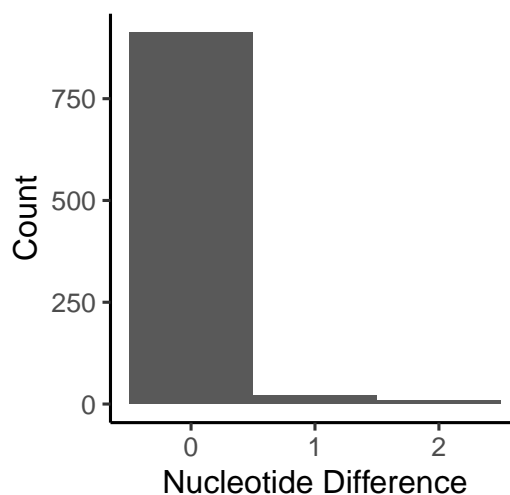
### IGHV1-3\*01\_05

262 sequences assigned  
234 (89.3%) exact matches, in which:  
233 unique CDR3  
6 unique J



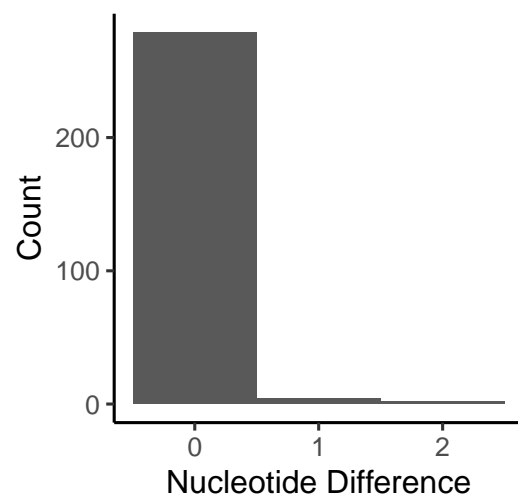
### IGHV1-24\*01

942 sequences assigned  
913 (96.9%) exact matches, in which:  
906 unique CDR3  
6 unique J



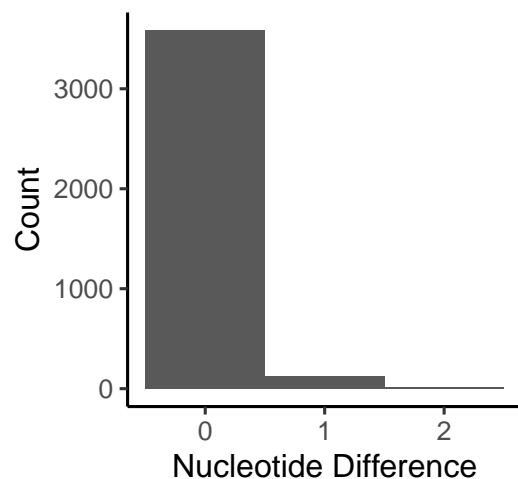
### IGHV1-58\*01\_03

285 sequences assigned  
279 (97.9%) exact matches, in which:  
276 unique CDR3  
6 unique J



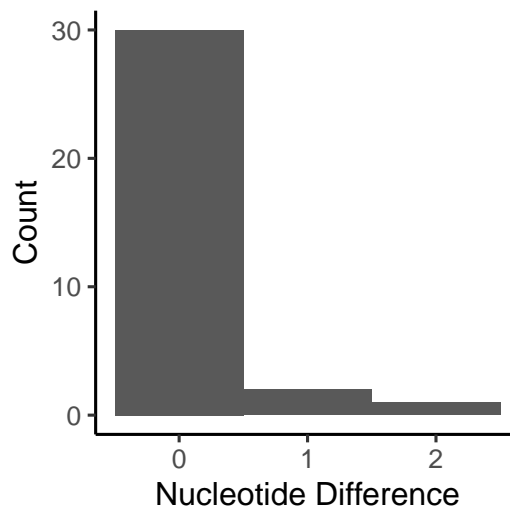
### IGHV1-69\*01\_12\_13

3720 sequences assigned  
3584 (96.3%) exact matches, in which:  
3549 unique CDR3  
6 unique J



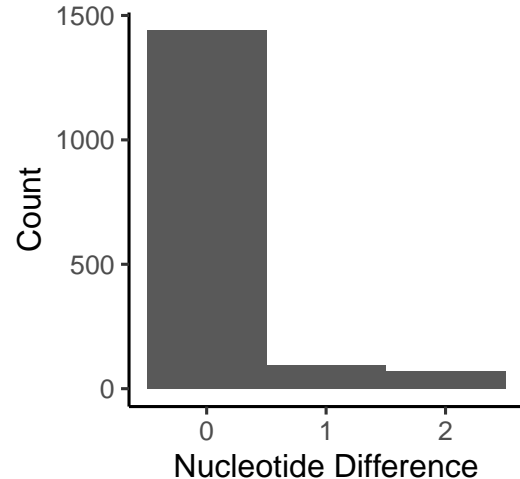
### IGHV2-26\*01

33 sequences assigned  
30 (90.9%) exact matches, in which:  
30 unique CDR3  
4 unique J



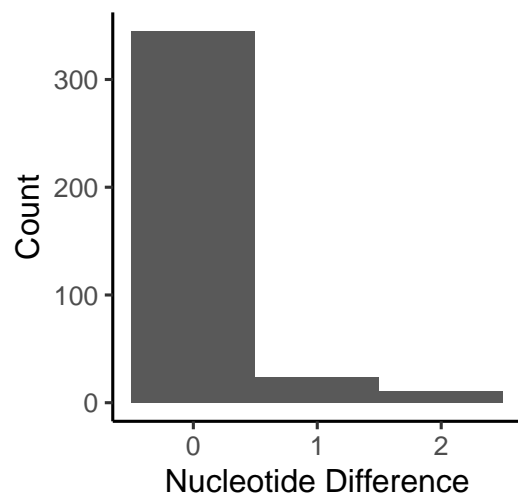
### IGHV3-7\*01

1608 sequences assigned  
1440 (89.6%) exact matches, in which:  
1360 unique CDR3  
6 unique J



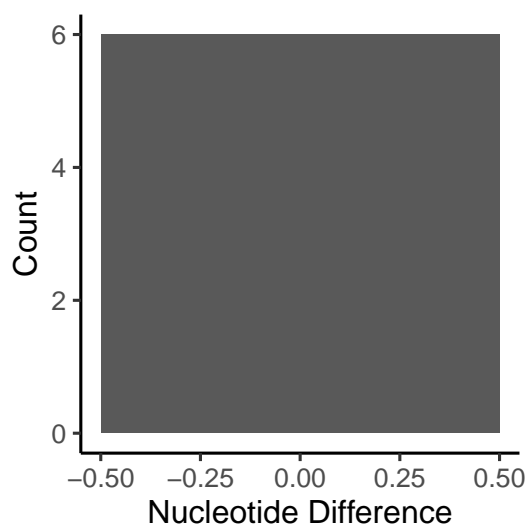
### IGHV2-5\*01

380 sequences assigned  
345 (90.8%) exact matches, in which:  
339 unique CDR3  
6 unique J



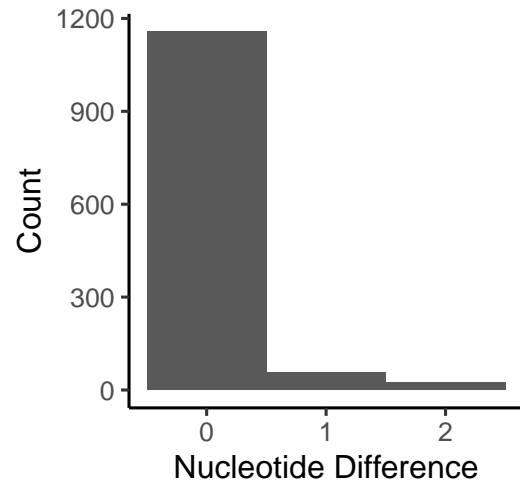
### IGHV2-26\*04

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



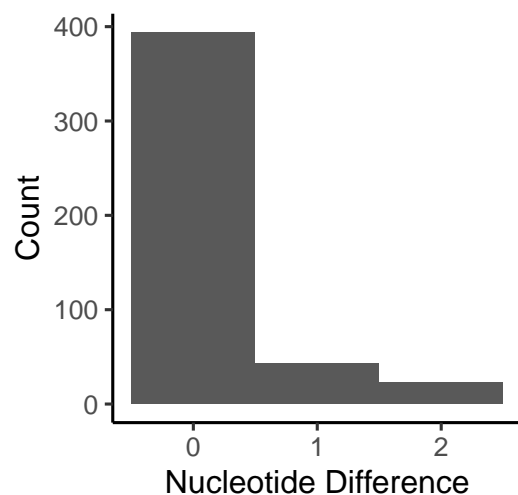
### IGHV3-9\*01

1239 sequences assigned  
1157 (93.4%) exact matches, in which:  
1114 unique CDR3  
6 unique J



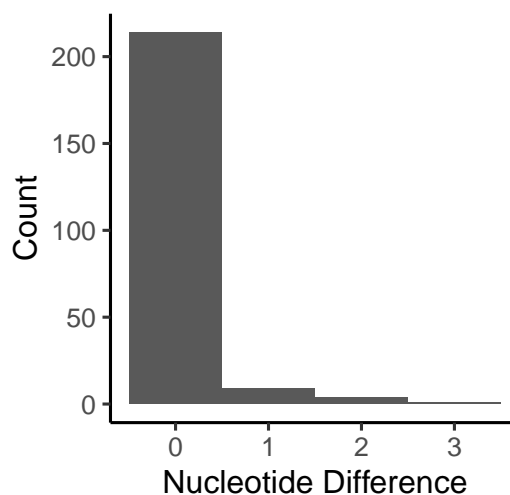
### IGHV2-5\*02

460 sequences assigned  
394 (85.7%) exact matches, in which:  
383 unique CDR3  
6 unique J



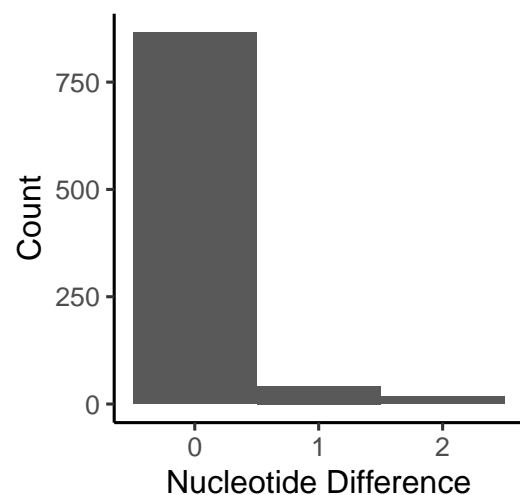
### IGHV2-70\*01

228 sequences assigned  
214 (93.9%) exact matches, in which:  
213 unique CDR3  
6 unique J



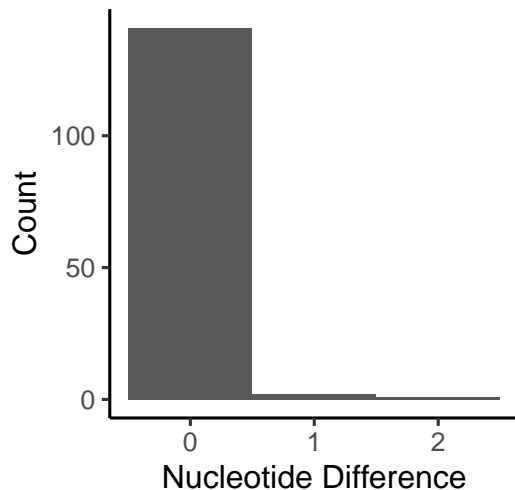
### IGHV3-11\*01

925 sequences assigned  
866 (93.6%) exact matches, in which:  
806 unique CDR3  
6 unique J



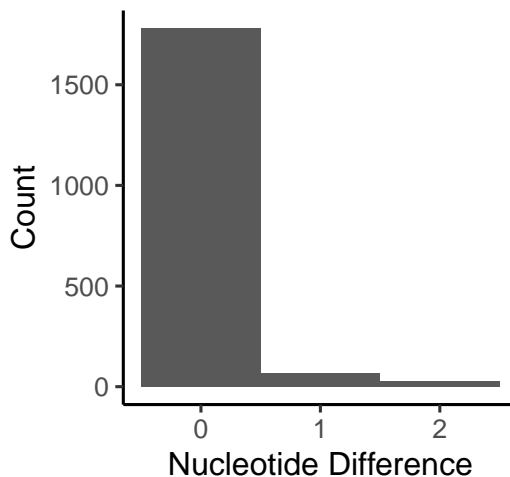
### IGHV3-13\*01

144 sequences assigned  
141 (97.9%) exact matches, in which:  
138 unique CDR3  
6 unique J



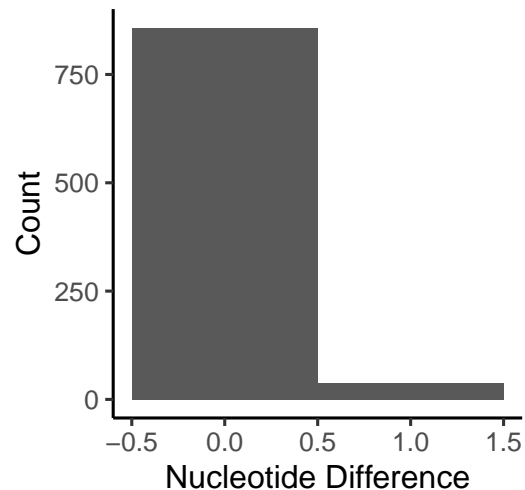
### IGHV3-21\*01\_02

1874 sequences assigned  
1780 (95%) exact matches, in which:  
1656 unique CDR3  
6 unique J



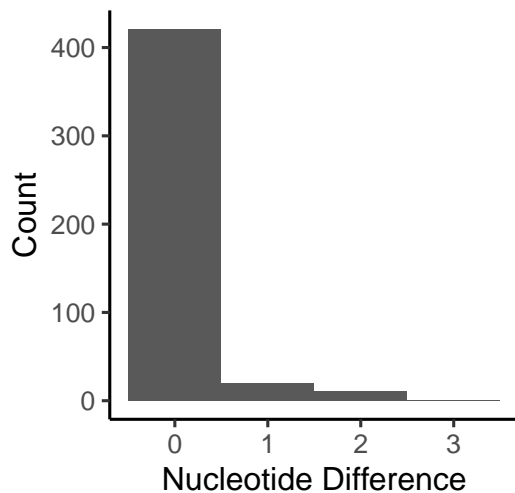
### IGHV3-33\*08

895 sequences assigned  
858 (95.9%) exact matches, in which:  
822 unique CDR3  
6 unique J



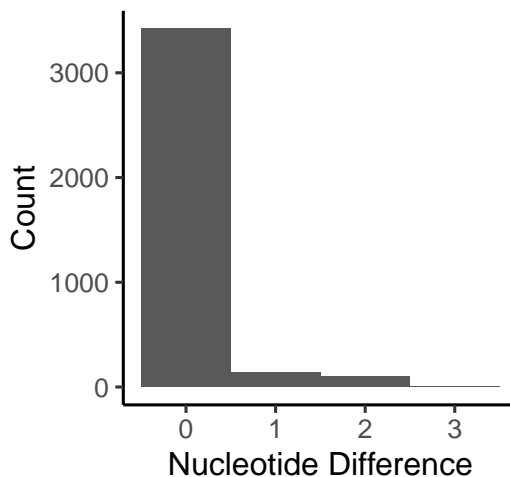
### IGHV3-15\*01\_02

453 sequences assigned  
421 (92.9%) exact matches, in which:  
405 unique CDR3  
6 unique J



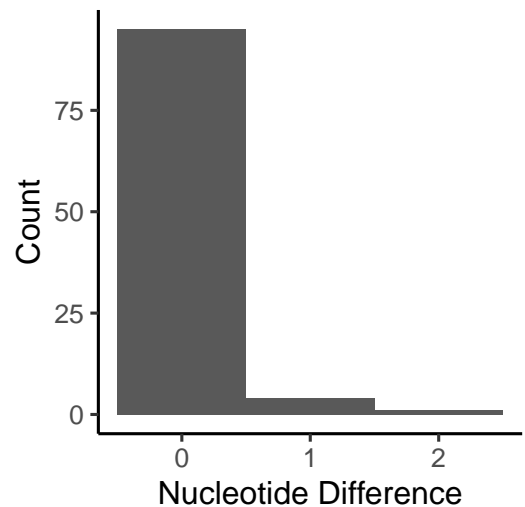
### IGHV3-23\*01\_04

3654 sequences assigned  
3421 (93.6%) exact matches, in which:  
3164 unique CDR3  
6 unique J



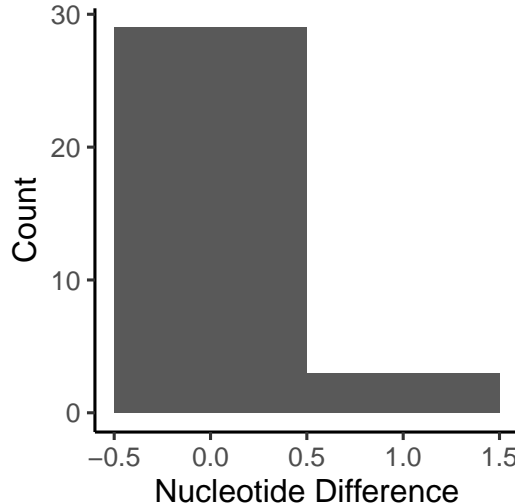
### IGHV3-43\*01

100 sequences assigned  
95 (95%) exact matches, in which:  
89 unique CDR3  
5 unique J



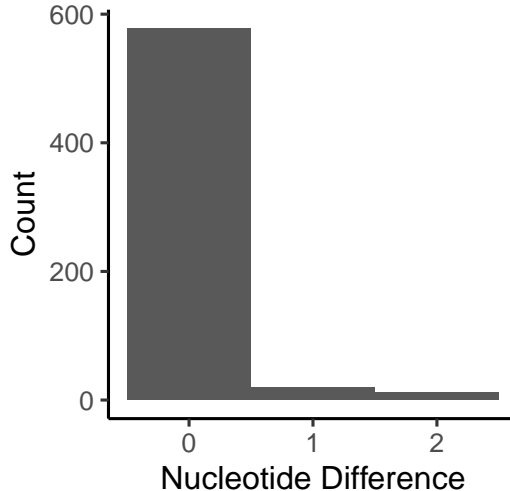
### IGHV3-20\*01\_02

32 sequences assigned  
29 (90.6%) exact matches, in which:  
28 unique CDR3  
5 unique J



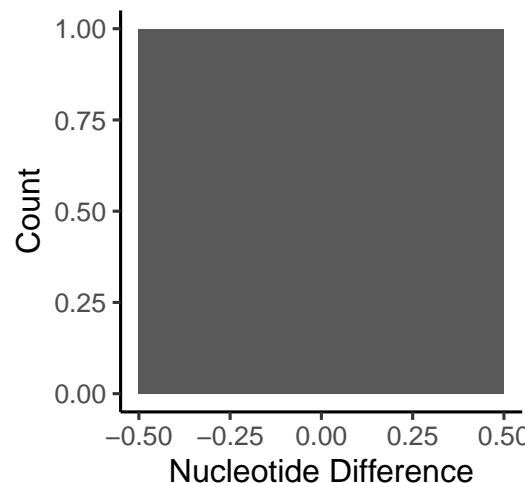
### IGHV3-33\*01

610 sequences assigned  
578 (94.8%) exact matches, in which:  
545 unique CDR3  
6 unique J



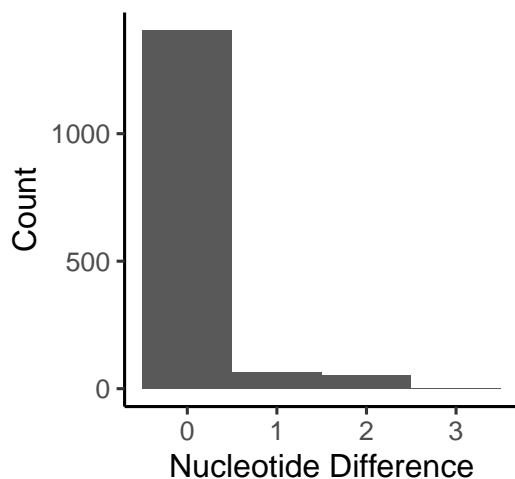
### IGHV3-47\*02

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



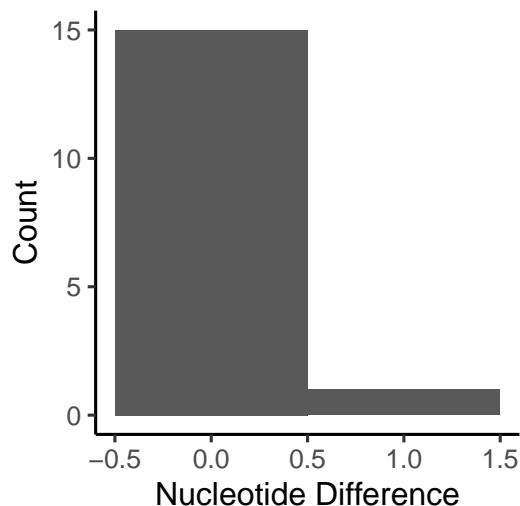
### IGHV3-48\*02

1522 sequences assigned  
1405 (92.3%) exact matches, in which:  
1273 unique CDR3  
6 unique J



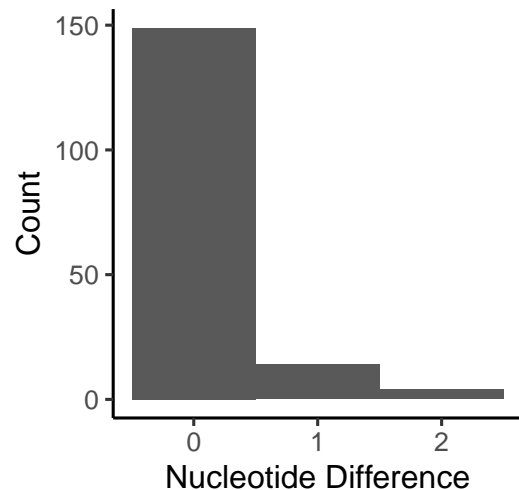
### IGHV3-64\*02\_07

16 sequences assigned  
15 (93.8%) exact matches, in which:  
13 unique CDR3  
4 unique J



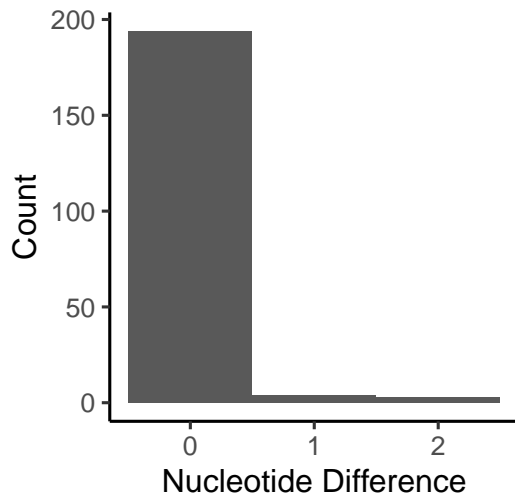
### IGHV3-73\*01\_02

167 sequences assigned  
149 (89.2%) exact matches, in which:  
138 unique CDR3  
5 unique J



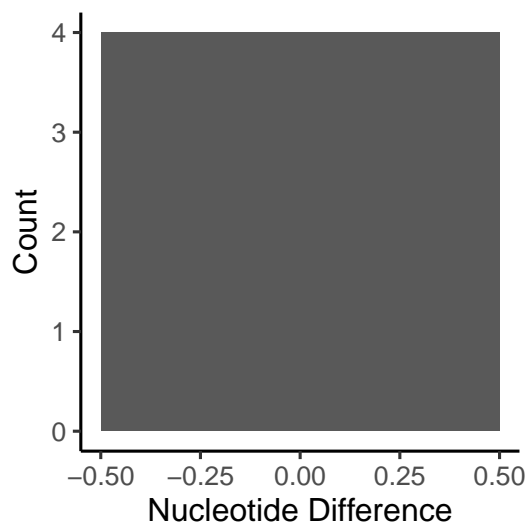
### IGHV3-49\*03\_05

201 sequences assigned  
194 (96.5%) exact matches, in which:  
190 unique CDR3  
6 unique J



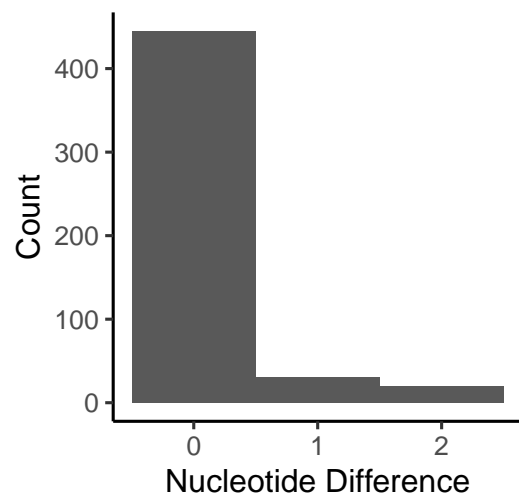
### IGHV3-66\*03

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



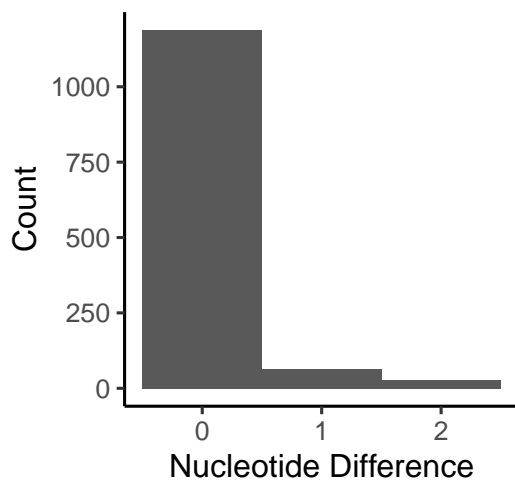
### IGHV3-74\*01\_02

495 sequences assigned  
445 (89.9%) exact matches, in which:  
425 unique CDR3  
6 unique J



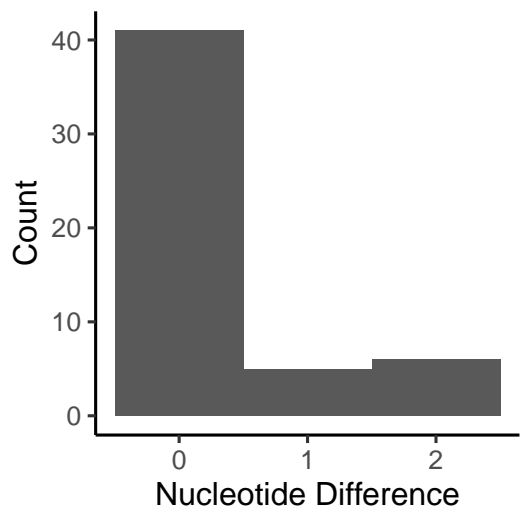
### IGHV3-53\*01\_02

1279 sequences assigned  
1188 (92.9%) exact matches, in which:  
1097 unique CDR3  
6 unique J



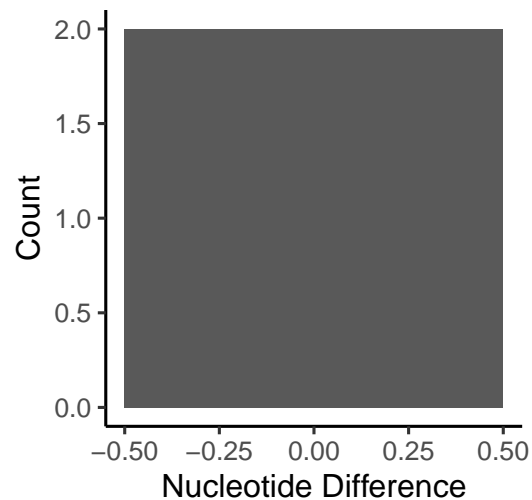
### IGHV3-72\*01

52 sequences assigned  
41 (78.8%) exact matches, in which:  
39 unique CDR3  
5 unique J



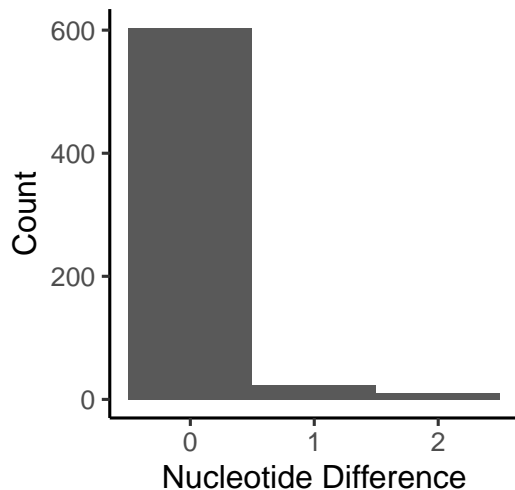
### IGHV3-64D\*06

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



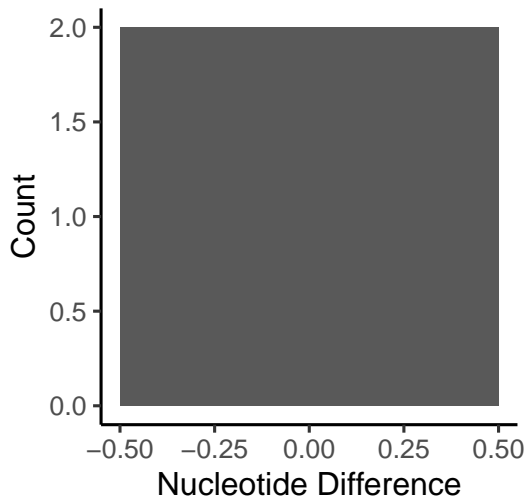
### IGHV4-4\*07

639 sequences assigned  
604 (94.5%) exact matches, in which:  
576 unique CDR3  
6 unique J



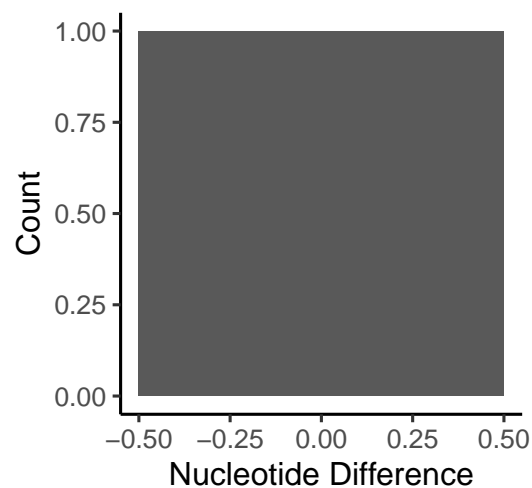
### IGHV4-28\*02\_05

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



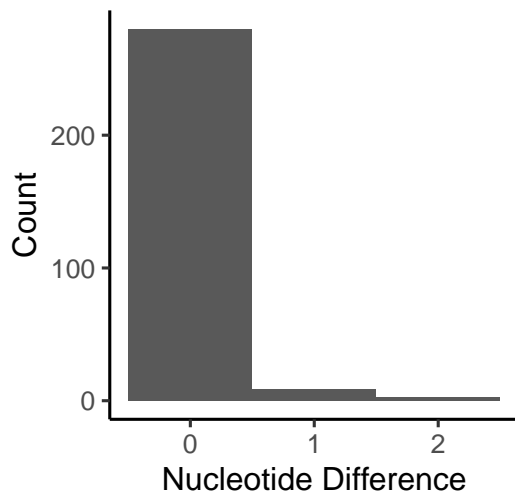
### IGHV4-38-2\*02

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



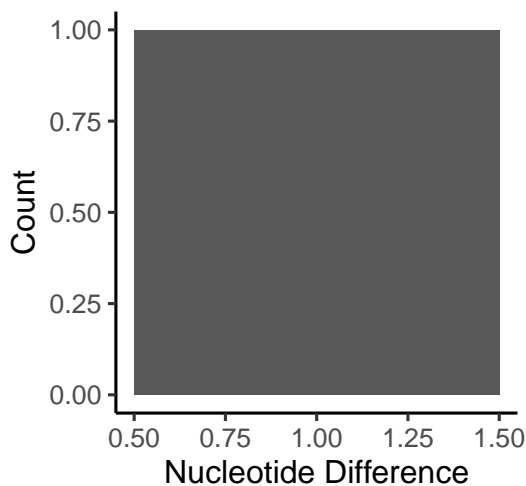
### IGHV4-4\*02\_03

292 sequences assigned  
280 (95.9%) exact matches, in which:  
275 unique CDR3  
6 unique J



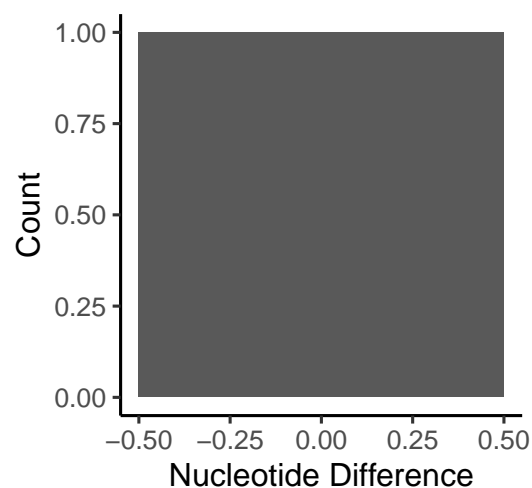
### IGHV4-31\*02

1 sequences assigned  
No exact matches.



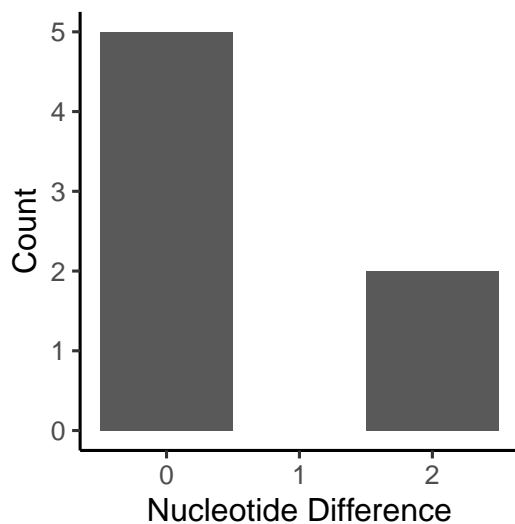
### IGHV4-39\*07

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



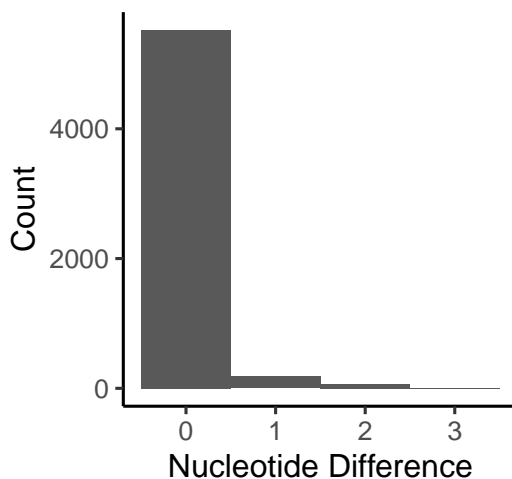
### IGHV4-28\*01\_07

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
4 unique J



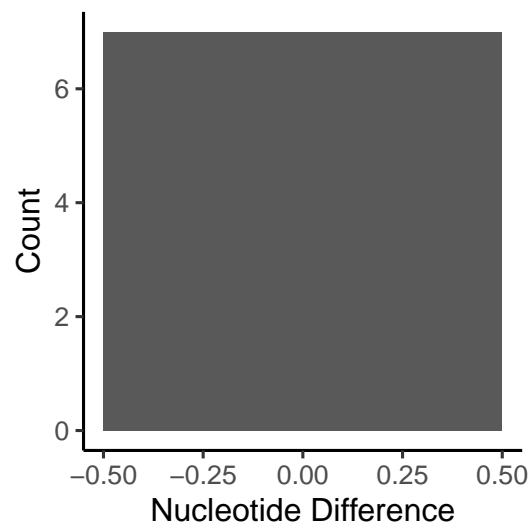
### IGHV4-34\*01\_02

5772 sequences assigned  
5522 (95.7%) exact matches, in which:  
5211 unique CDR3  
6 unique J



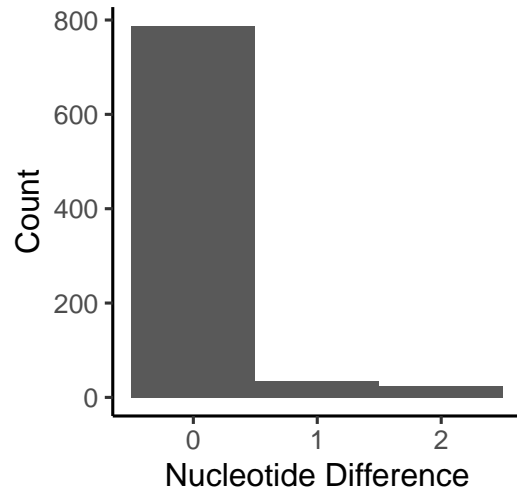
### IGHV4-59\*01\_07

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



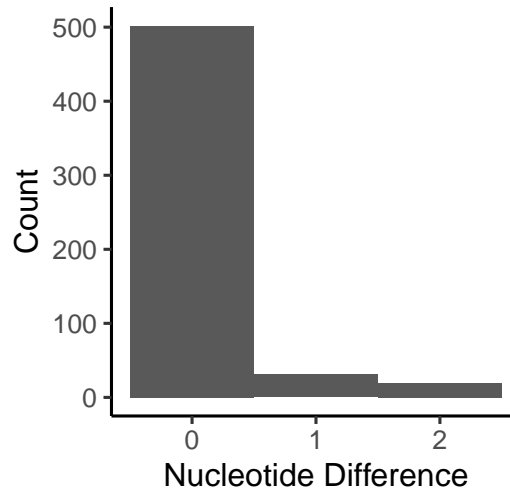
### IGHV4–61\*01

847 sequences assigned  
788 (93%) exact matches, in which:  
743 unique CDR3  
6 unique J



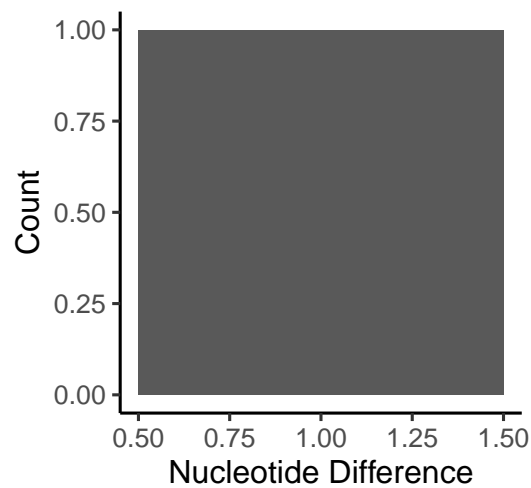
### IGHV6–1\*01\_02

553 sequences assigned  
502 (90.8%) exact matches, in which:  
497 unique CDR3  
6 unique J



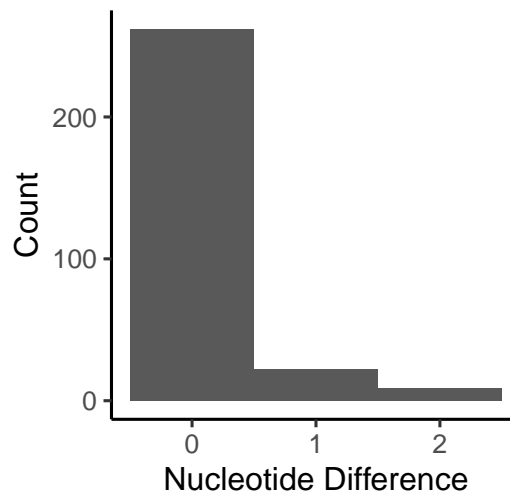
### IGHV5–51\*04

1 sequences assigned  
No exact matches.



### IGHV7–4–1\*02

293 sequences assigned  
262 (89.4%) exact matches, in which:  
255 unique CDR3  
6 unique J



### IGHV5–51\*01\_03

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

