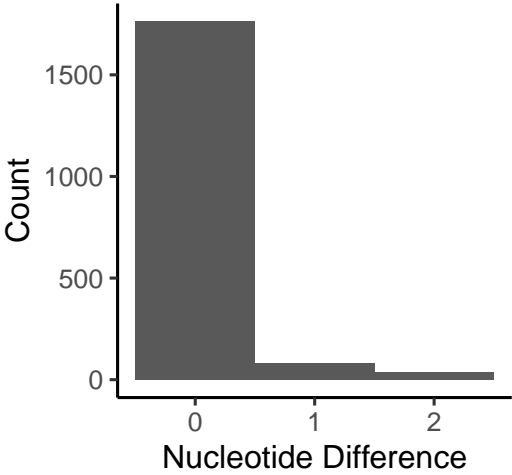


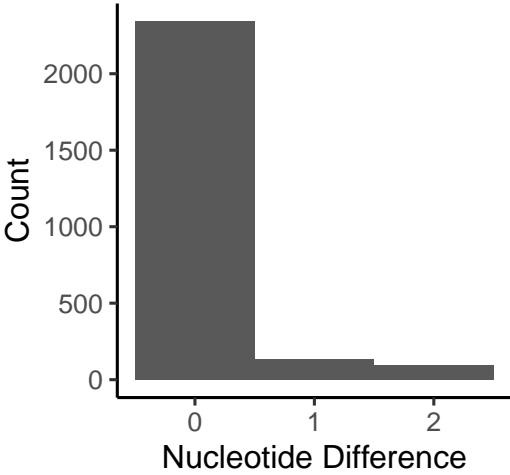
IGHV1-2\*02

1879 sequences assigned  
1763 (93.8%) exact matches, in which:  
1757 unique CDR3  
6 unique J



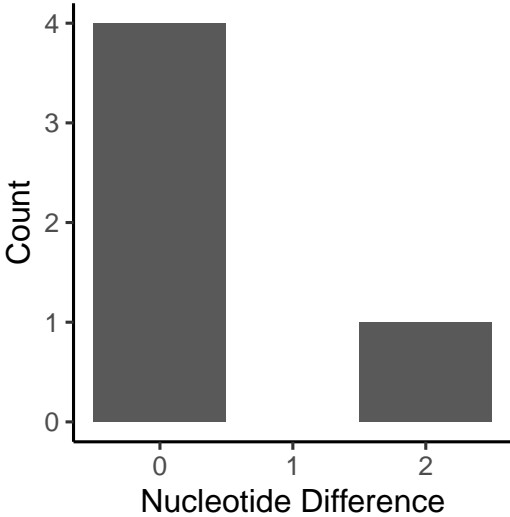
IGHV1-8\*01

2567 sequences assigned  
2342 (91.2%) exact matches, in which:  
2331 unique CDR3  
6 unique J



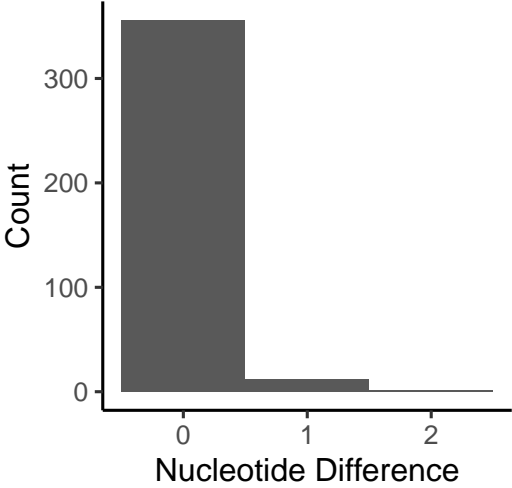
IGHV1-45\*02

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



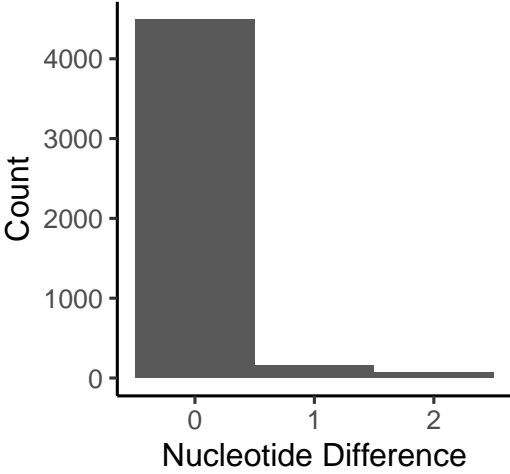
IGHV1-2\*04

369 sequences assigned  
356 (96.5%) exact matches, in which:  
355 unique CDR3  
6 unique J



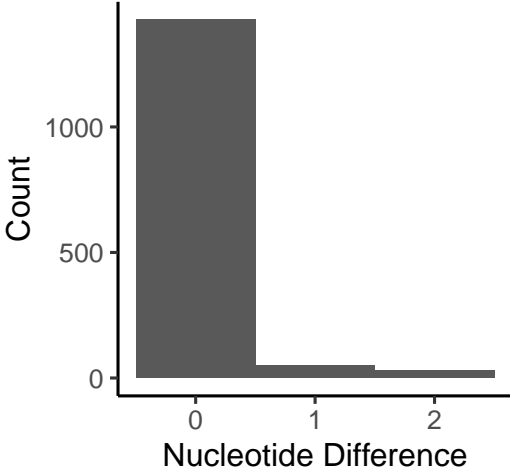
IGHV1-18\*01

4716 sequences assigned  
4489 (95.2%) exact matches, in which:  
4473 unique CDR3  
6 unique J



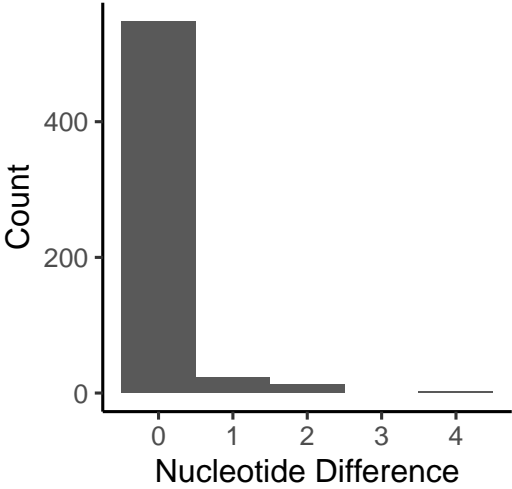
IGHV1-46\*01

1507 sequences assigned  
1427 (94.7%) exact matches, in which:  
1425 unique CDR3  
6 unique J



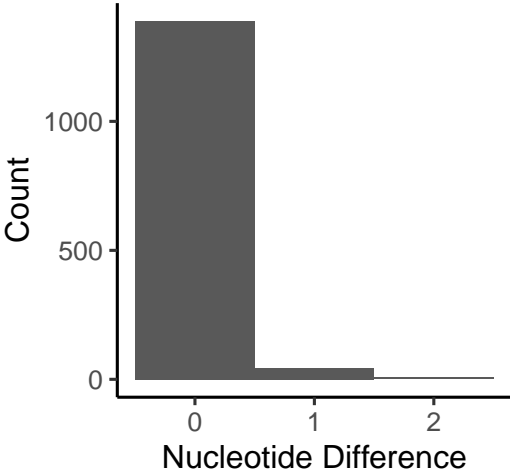
IGHV1-3\*01\_05

586 sequences assigned  
548 (93.5%) exact matches, in which:  
548 unique CDR3  
6 unique J



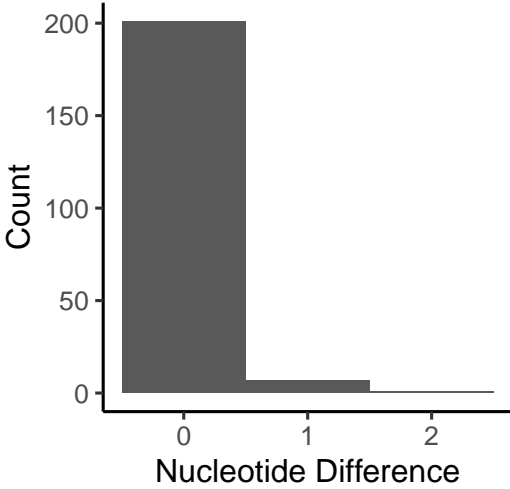
IGHV1-24\*01

1439 sequences assigned  
1389 (96.5%) exact matches, in which:  
1382 unique CDR3  
6 unique J



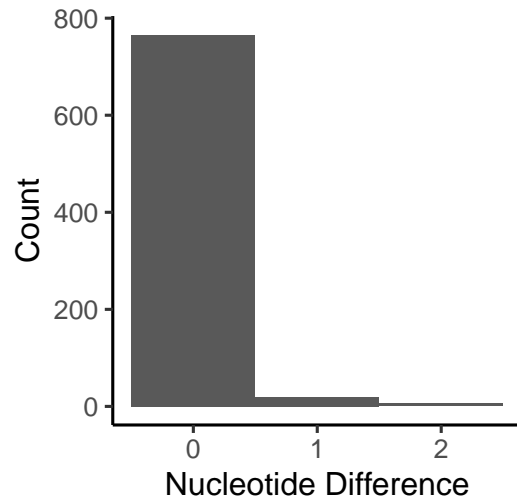
IGHV1-58\*02

209 sequences assigned  
201 (96.2%) exact matches, in which:  
201 unique CDR3  
5 unique J



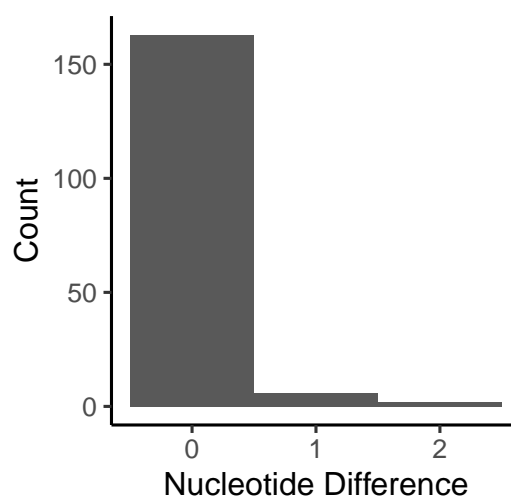
### IGHV1–69\*02

792 sequences assigned  
766 (96.7%) exact matches, in which:  
763 unique CDR3  
6 unique J



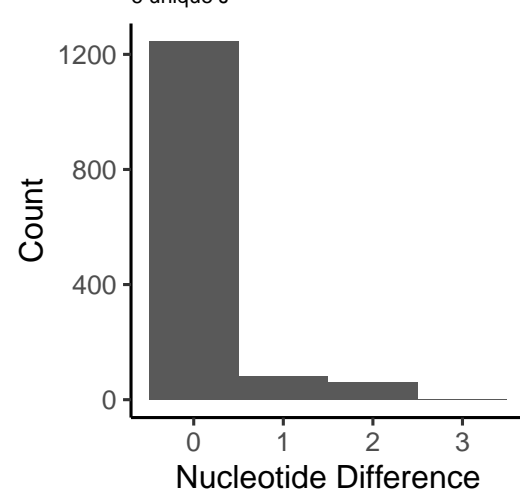
### IGHV2–26\*01

171 sequences assigned  
163 (95.3%) exact matches, in which:  
163 unique CDR3  
5 unique J



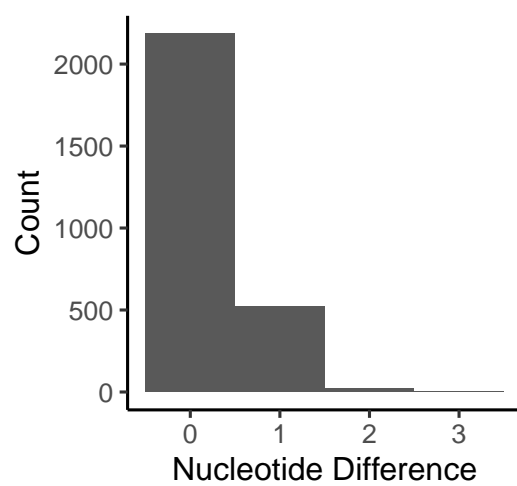
### IGHV3–7\*01

1387 sequences assigned  
1245 (89.8%) exact matches, in which:  
1215 unique CDR3  
6 unique J



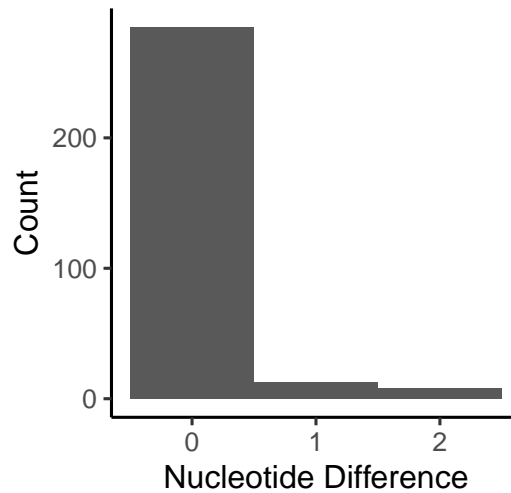
### IGHV1–69\*04\_09

2735 sequences assigned  
2185 (79.9%) exact matches, in which:  
2175 unique CDR3  
6 unique J



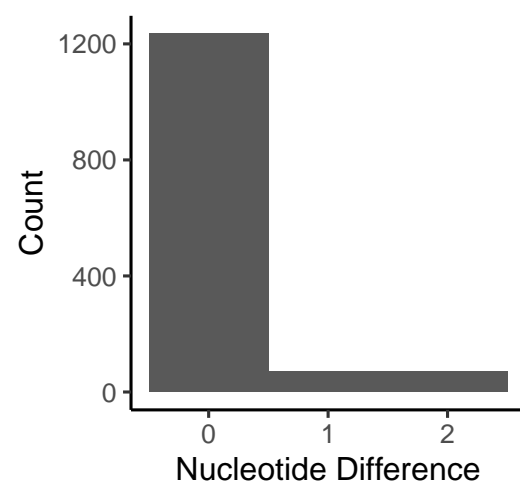
### IGHV2–70\*11\_15

306 sequences assigned  
285 (93.1%) exact matches, in which:  
284 unique CDR3  
4 unique J



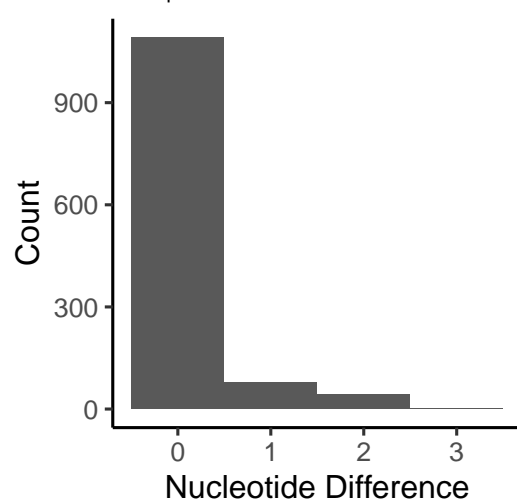
### IGHV3–7\*03

1375 sequences assigned  
1235 (89.8%) exact matches, in which:  
1209 unique CDR3  
6 unique J



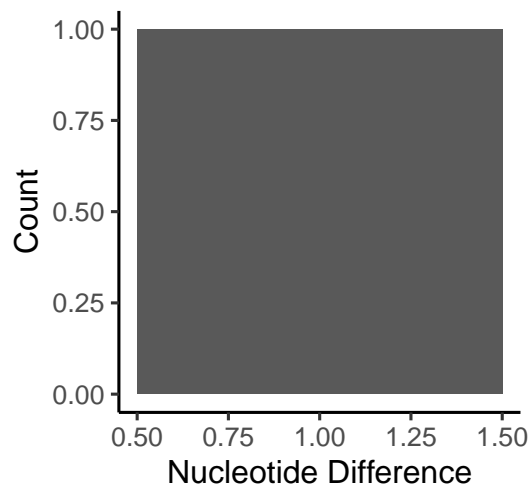
### IGHV2–5\*02

1214 sequences assigned  
1092 (90%) exact matches, in which:  
1087 unique CDR3  
6 unique J



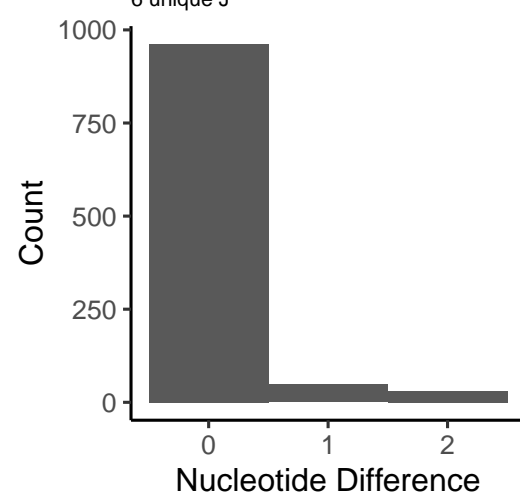
### IGHV2–70D\*04

1 sequences assigned  
No exact matches.



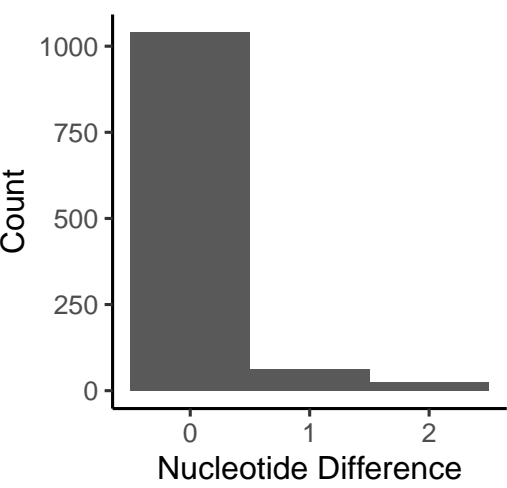
### IGHV3–9\*01

1041 sequences assigned  
962 (92.4%) exact matches, in which:  
949 unique CDR3  
6 unique J



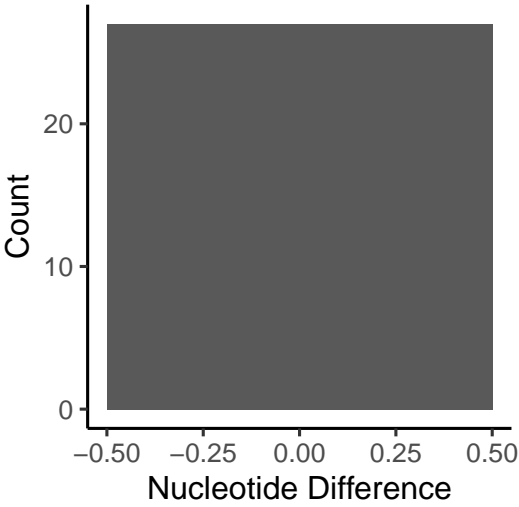
IGHV3-11\*01

1128 sequences assigned  
1040 (92.2%) exact matches, in which:  
1022 unique CDR3  
6 unique J



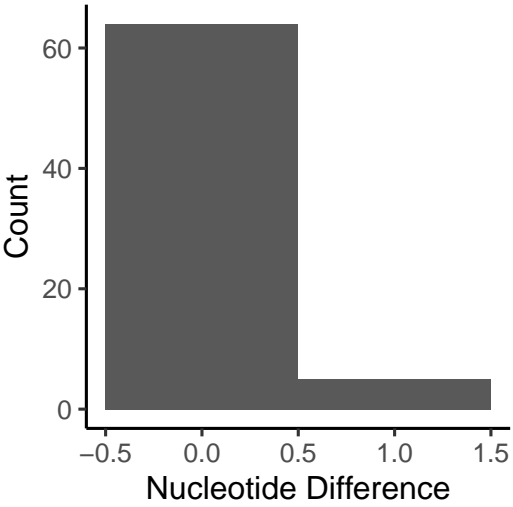
IGHV3-13\*05

27 sequences assigned  
27 (100%) exact matches, in which:  
27 unique CDR3  
5 unique J



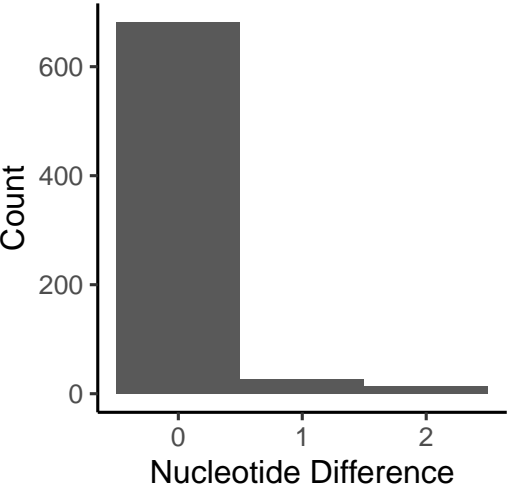
IGHV3-20\*01\_02

69 sequences assigned  
64 (92.8%) exact matches, in which:  
63 unique CDR3  
5 unique J



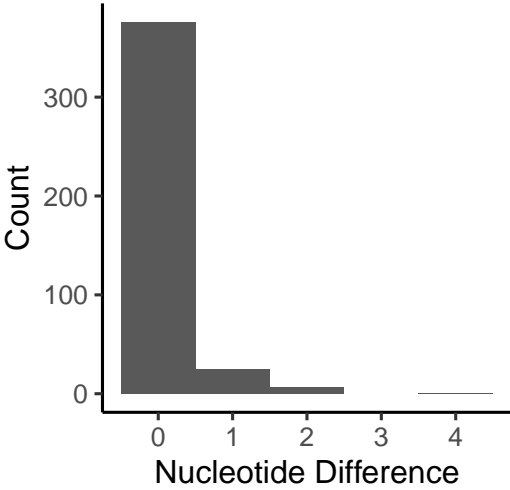
IGHV3-11\*06

722 sequences assigned  
682 (94.5%) exact matches, in which:  
666 unique CDR3  
6 unique J



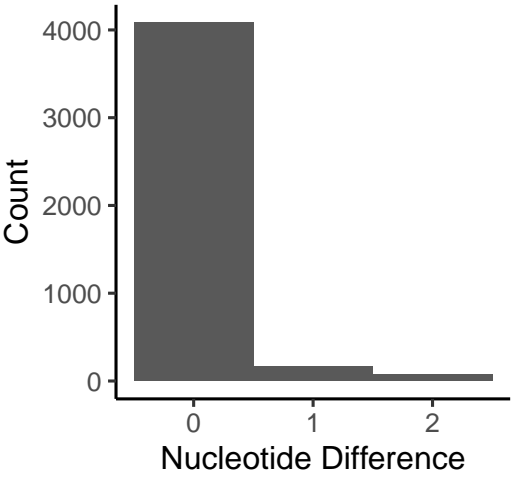
IGHV3-15\*01\_02

409 sequences assigned  
376 (91.9%) exact matches, in which:  
374 unique CDR3  
6 unique J



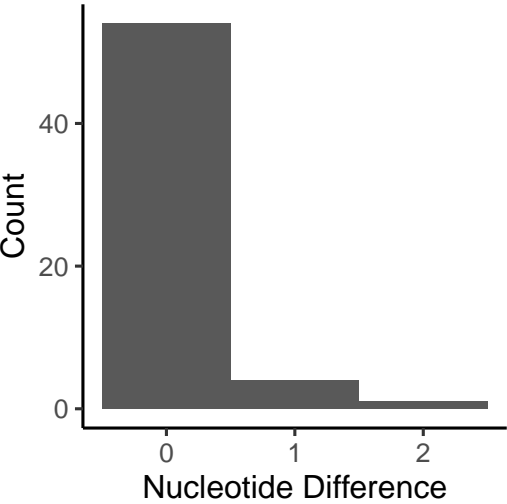
IGHV3-21\*01\_02

4325 sequences assigned  
4082 (94.4%) exact matches, in which:  
3960 unique CDR3  
6 unique J



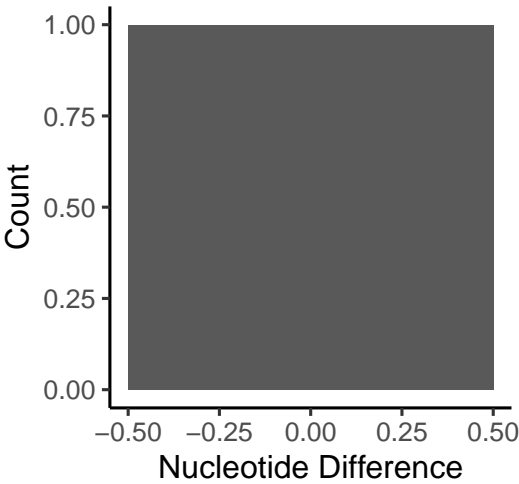
IGHV3-13\*01

59 sequences assigned  
54 (91.5%) exact matches, in which:  
52 unique CDR3  
5 unique J



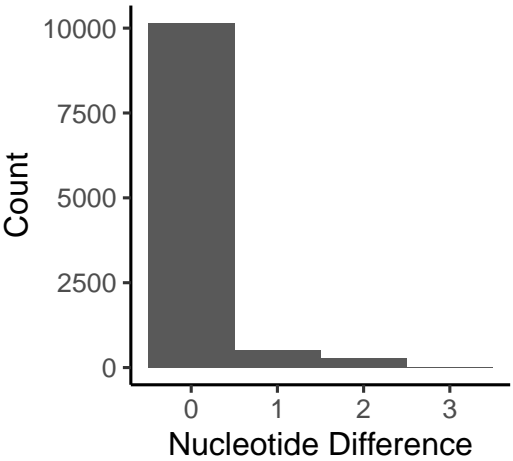
IGHV3-19\*01

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



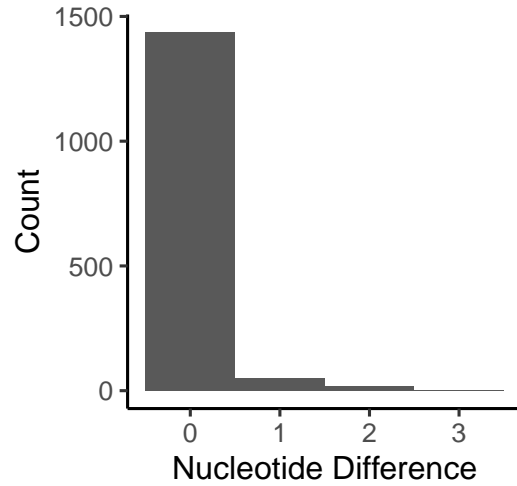
IGHV3-23\*01\_04

10955 sequences assigned  
10157 (92.7%) exact matches, in which:  
9852 unique CDR3  
6 unique J



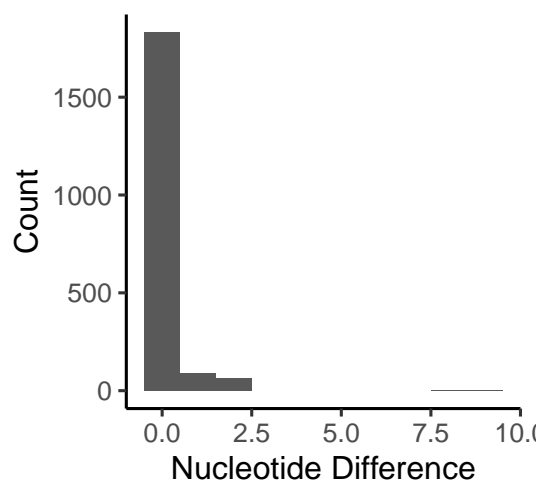
### IGHV3-30-3\*01

1508 sequences assigned  
1436 (95.2%) exact matches, in which:  
1417 unique CDR3  
6 unique J



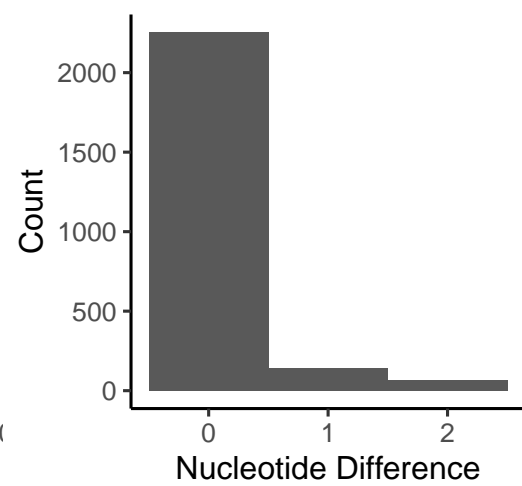
### IGHV3-48\*02

1984 sequences assigned  
1831 (92.3%) exact matches, in which:  
1776 unique CDR3  
6 unique J



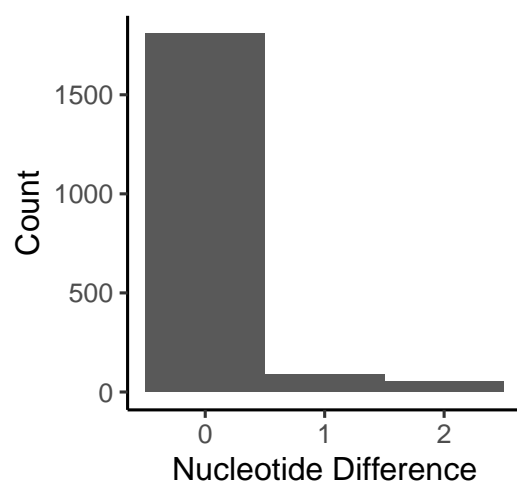
### IGHV3-53\*01\_02

2459 sequences assigned  
2253 (91.6%) exact matches, in which:  
2180 unique CDR3  
6 unique J



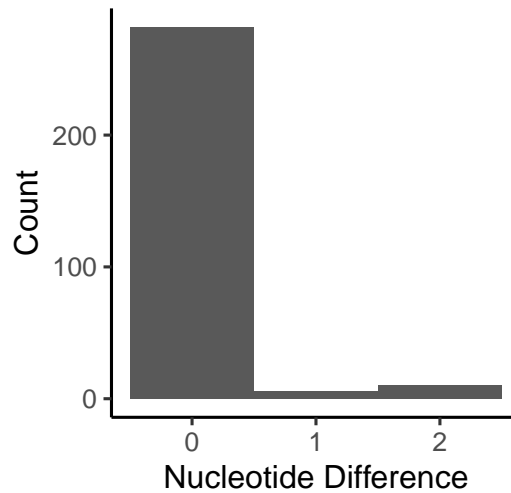
### IGHV3-33\*01

1947 sequences assigned  
1808 (92.9%) exact matches, in which:  
1777 unique CDR3  
6 unique J



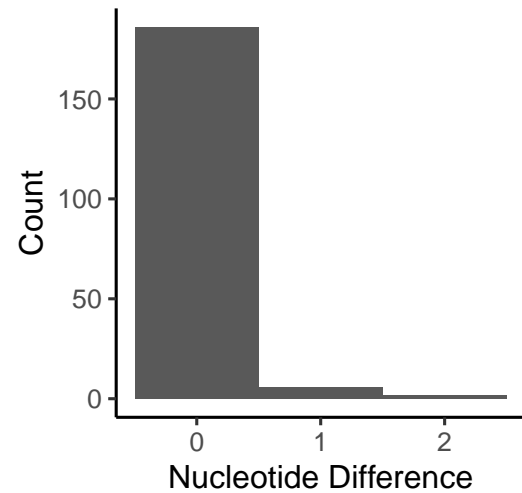
### IGHV3-49\*03\_05

298 sequences assigned  
282 (94.6%) exact matches, in which:  
278 unique CDR3  
5 unique J



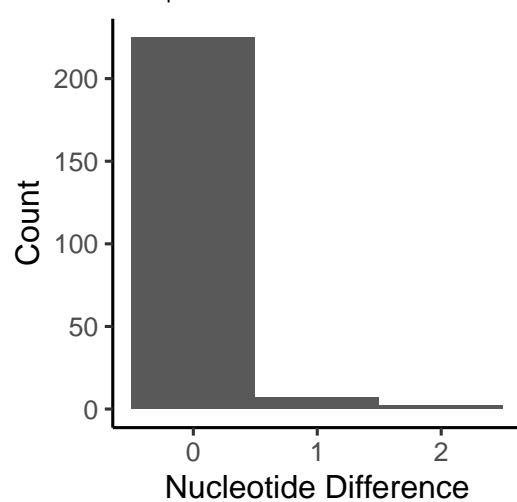
### IGHV3-64\*01

194 sequences assigned  
186 (95.9%) exact matches, in which:  
184 unique CDR3  
5 unique J



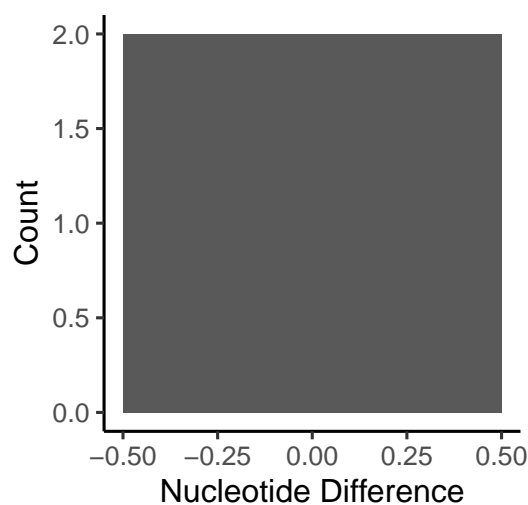
### IGHV3-43\*01

234 sequences assigned  
225 (96.2%) exact matches, in which:  
223 unique CDR3  
6 unique J



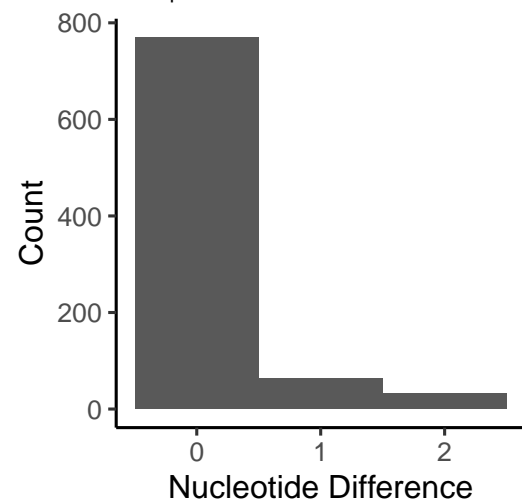
### IGHV3-52\*01\_03

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



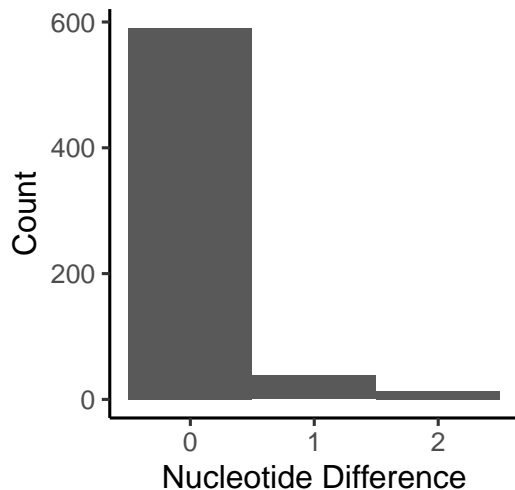
### IGHV3-66\*01

865 sequences assigned  
770 (89%) exact matches, in which:  
743 unique CDR3  
6 unique J



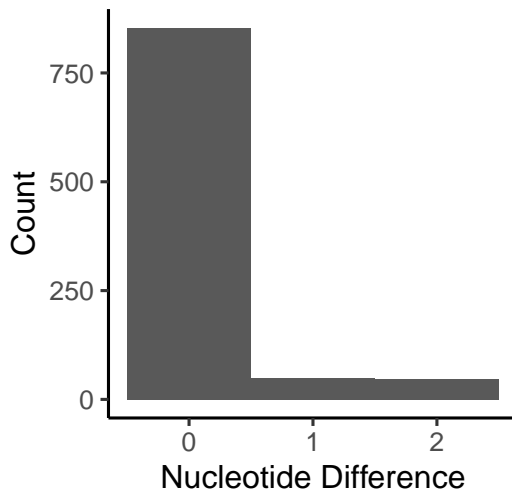
### IGHV3-66\*02

643 sequences assigned  
591 (91.9%) exact matches, in which:  
575 unique CDR3  
6 unique J



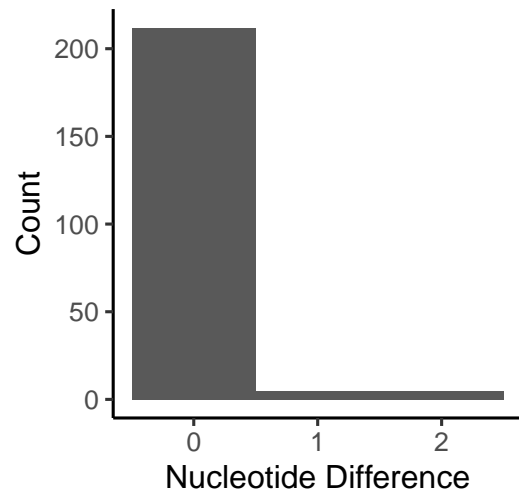
### IGHV3-74\*01\_02

950 sequences assigned  
854 (89.9%) exact matches, in which:  
835 unique CDR3  
6 unique J



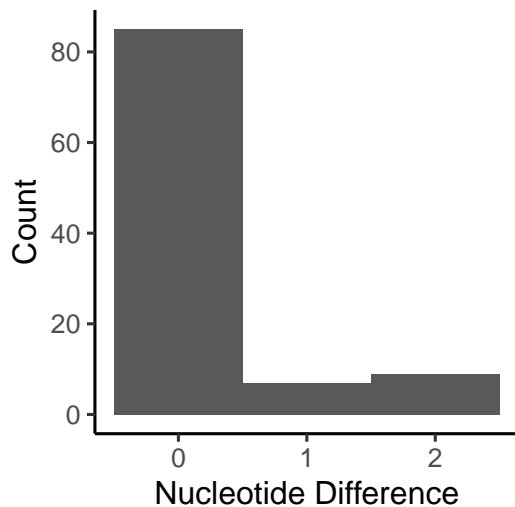
### IGHV4-4\*02\_03

222 sequences assigned  
212 (95.5%) exact matches, in which:  
209 unique CDR3  
6 unique J



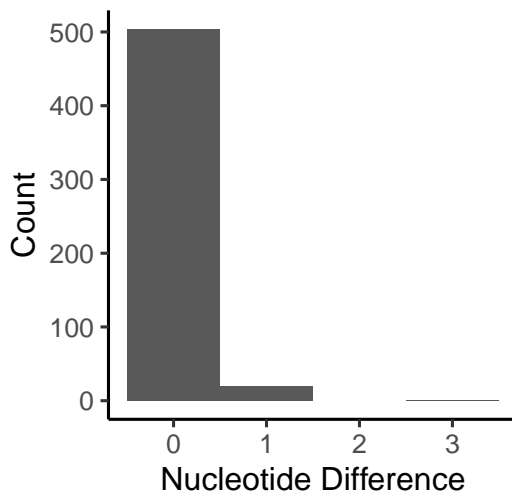
### IGHV3-72\*01

101 sequences assigned  
85 (84.2%) exact matches, in which:  
84 unique CDR3  
6 unique J



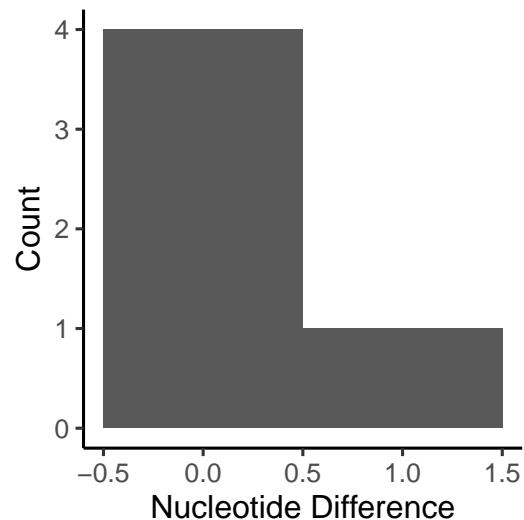
### IGHV3-64D\*09

525 sequences assigned  
504 (96%) exact matches, in which:  
494 unique CDR3  
6 unique J



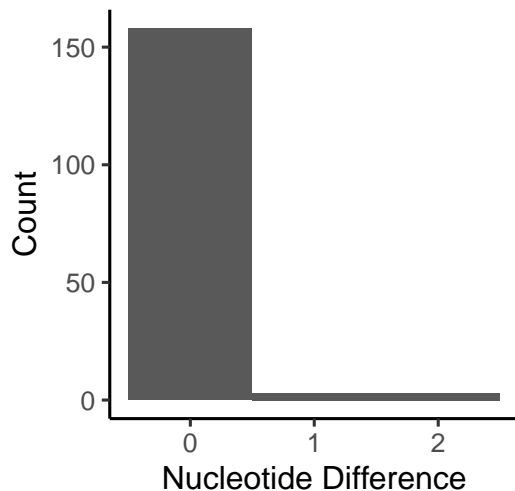
### IGHV4-28\*01\_07

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



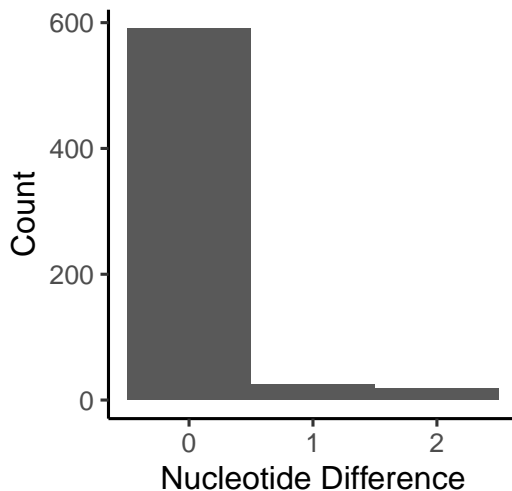
### IGHV3-73\*01\_02

164 sequences assigned  
158 (96.3%) exact matches, in which:  
154 unique CDR3  
5 unique J



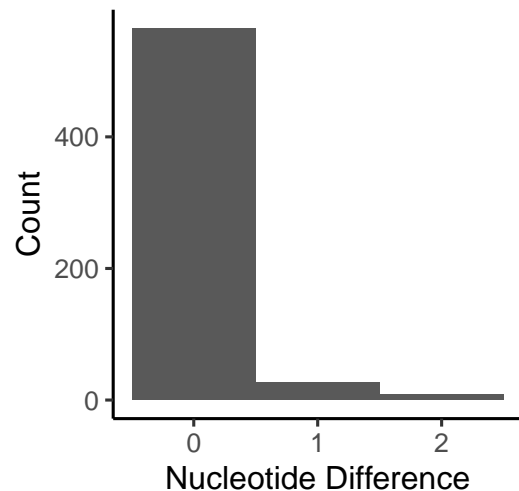
### IGHV4-4\*07

634 sequences assigned  
591 (93.2%) exact matches, in which:  
579 unique CDR3  
6 unique J



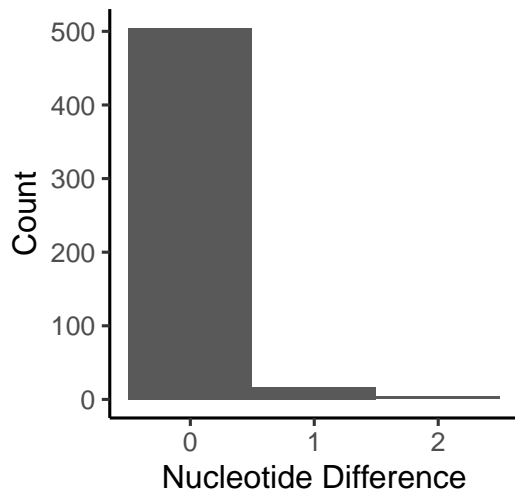
### IGHV4-30-4\*01

600 sequences assigned  
565 (94.2%) exact matches, in which:  
558 unique CDR3  
6 unique J



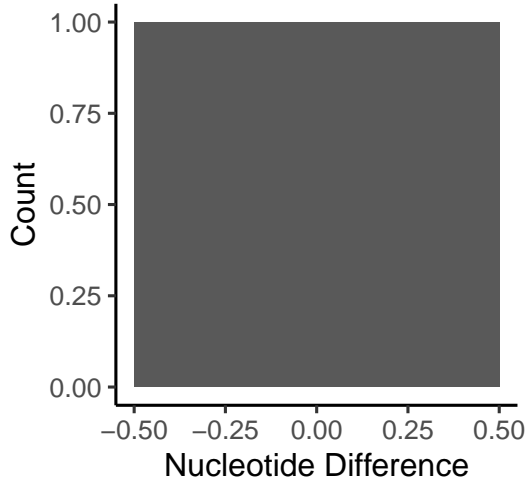
### IGHV4-30-2\*01

526 sequences assigned  
505 (96%) exact matches, in which:  
500 unique CDR3  
6 unique J



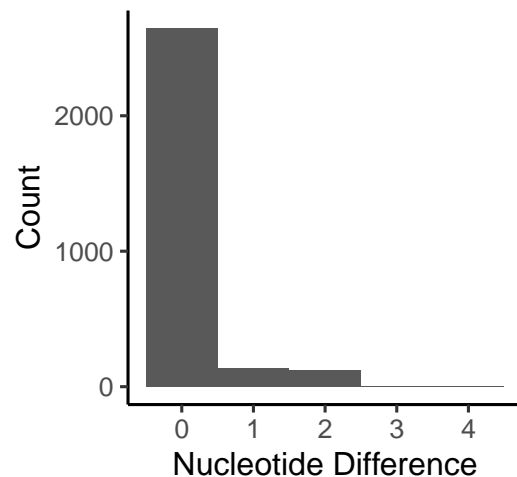
### IGHV4-38-2\*01

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



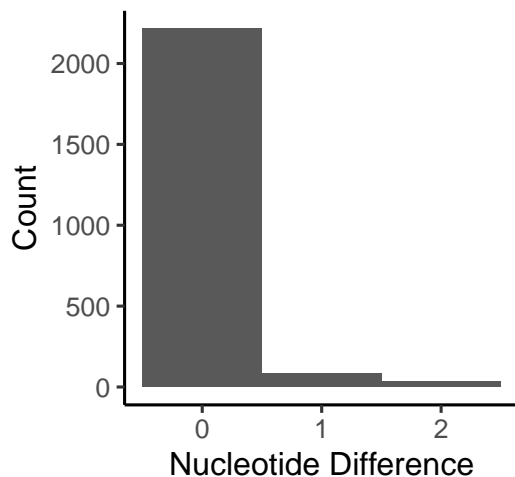
### IGHV4-59\*08

2914 sequences assigned  
2645 (90.8%) exact matches, in which:  
2562 unique CDR3  
6 unique J



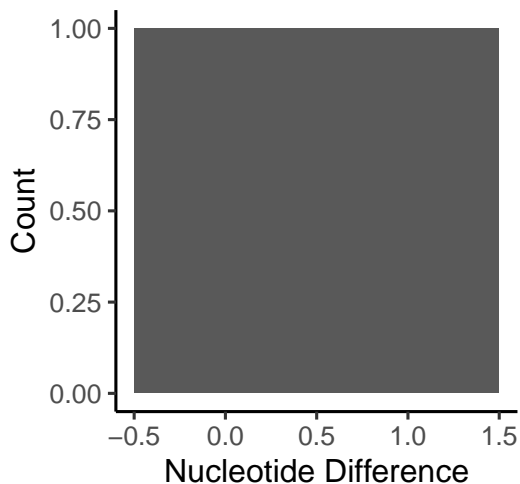
### IGHV4-31\*02

2333 sequences assigned  
2215 (94.9%) exact matches, in which:  
2195 unique CDR3  
6 unique J



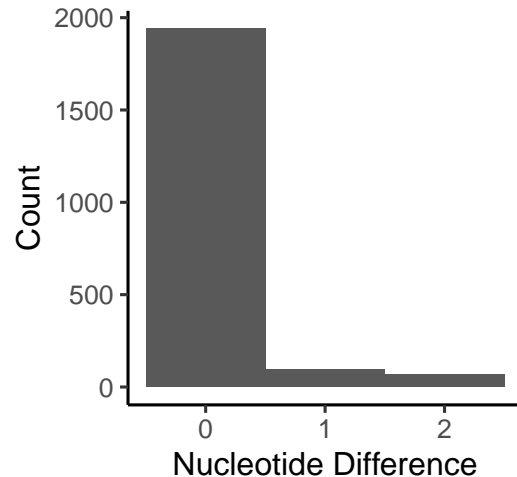
### IGHV4-39\*02

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



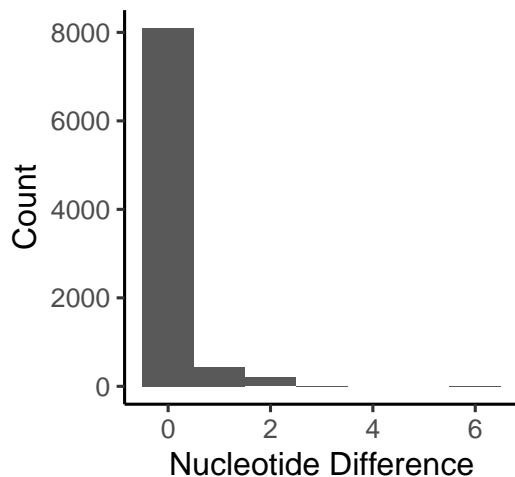
### IGHV4-61\*02

2099 sequences assigned  
1940 (92.4%) exact matches, in which:  
1909 unique CDR3  
6 unique J



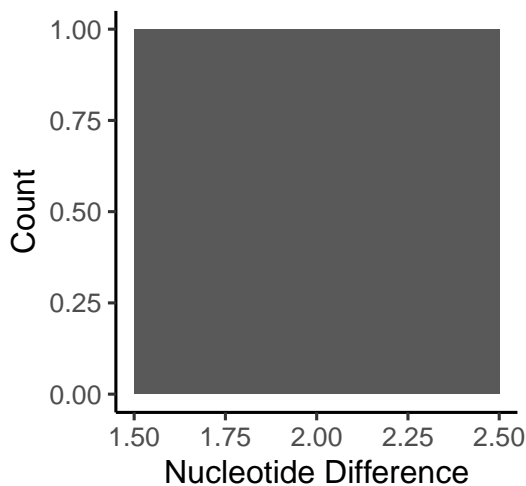
### IGHV4-34\*01\_02

8734 sequences assigned  
8098 (92.7%) exact matches, in which:  
7982 unique CDR3  
6 unique J



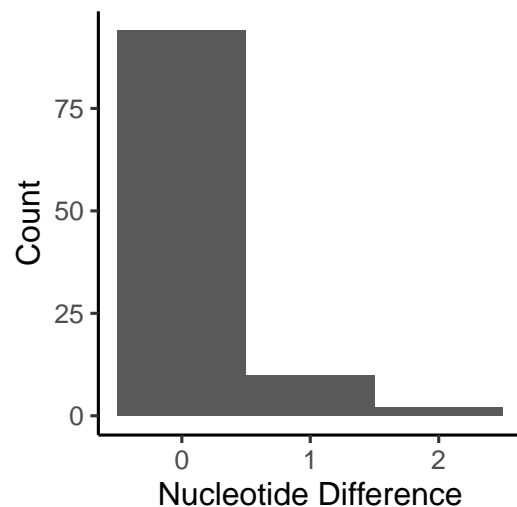
### IGHV4-39\*07

1 sequences assigned  
No exact matches.



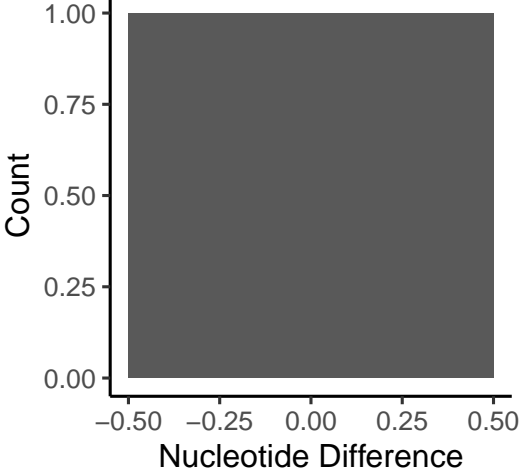
### IGHV5-10-1\*01\_03

106 sequences assigned  
94 (88.7%) exact matches, in which:  
94 unique CDR3  
5 unique J



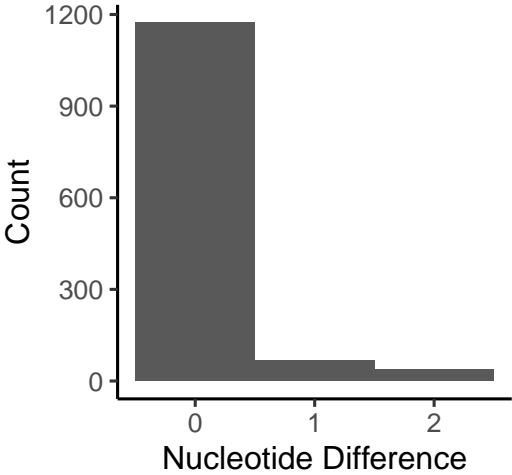
IGHV5-51\*01\_03

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



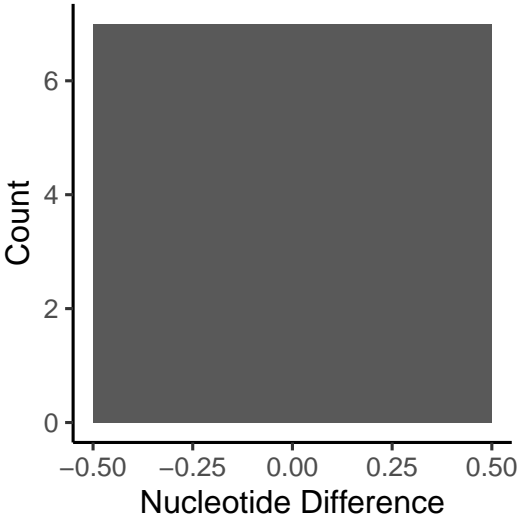
IGHV6-1\*01\_02

1280 sequences assigned  
1173 (91.6%) exact matches, in which:  
1164 unique CDR3  
6 unique J



IGHV7-4-1\*01

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







Warning – no inferred sequences found.