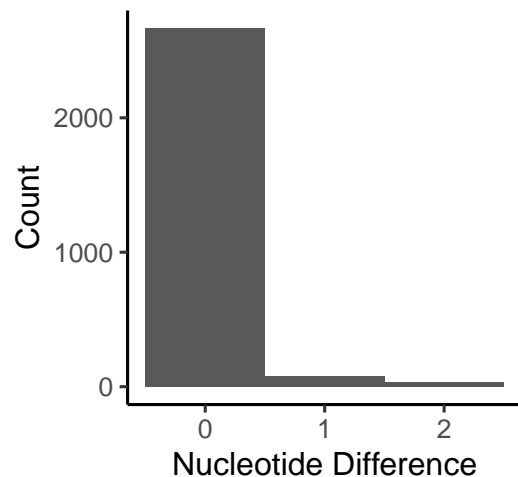


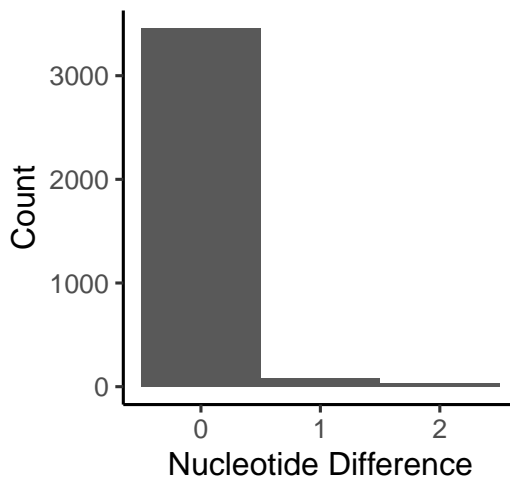
IGHV1-2*02

2780 sequences assigned
2665 (95.9%) exact matches, in which:
2615 unique CDR3
6 unique J



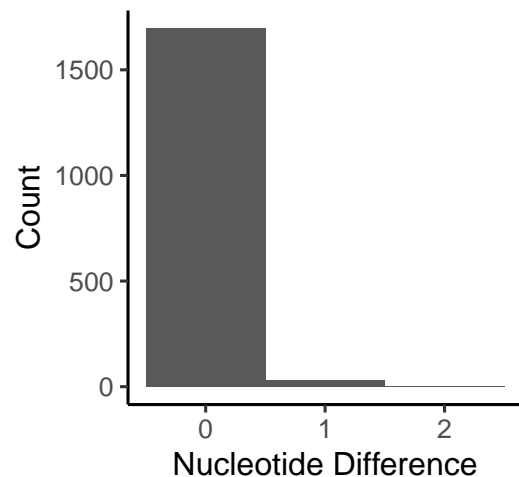
IGHV1-8*01

3568 sequences assigned
3456 (96.9%) exact matches, in which:
3384 unique CDR3
6 unique J



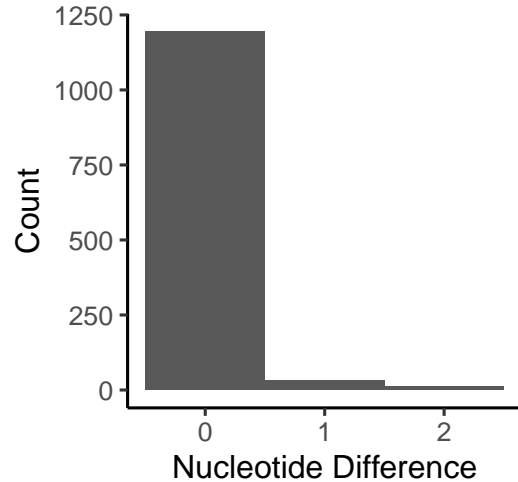
IGHV1-24*01

1730 sequences assigned
1696 (98%) exact matches, in which:
1674 unique CDR3
6 unique J



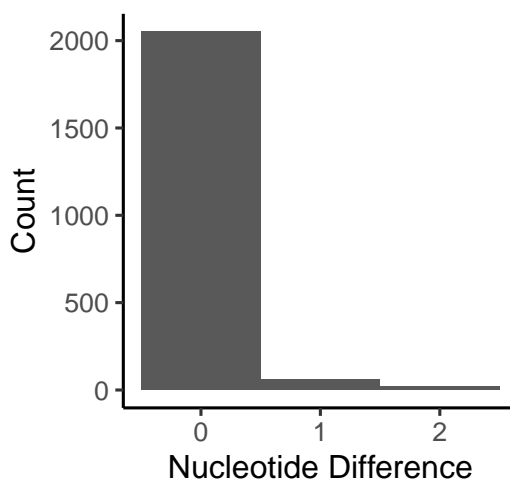
IGHV1-2*04

1239 sequences assigned
1194 (96.4%) exact matches, in which:
1178 unique CDR3
6 unique J



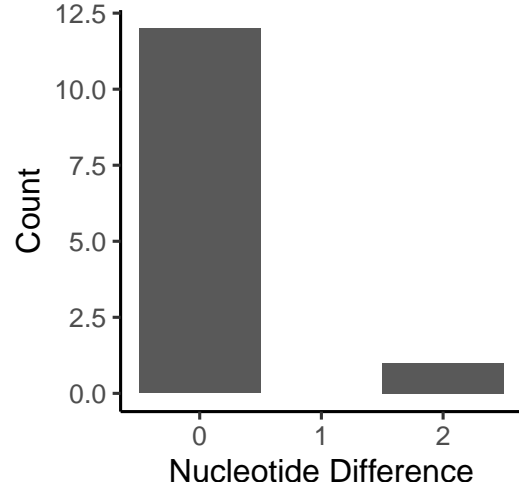
IGHV1-18*01

2132 sequences assigned
2051 (96.2%) exact matches, in which:
2009 unique CDR3
6 unique J



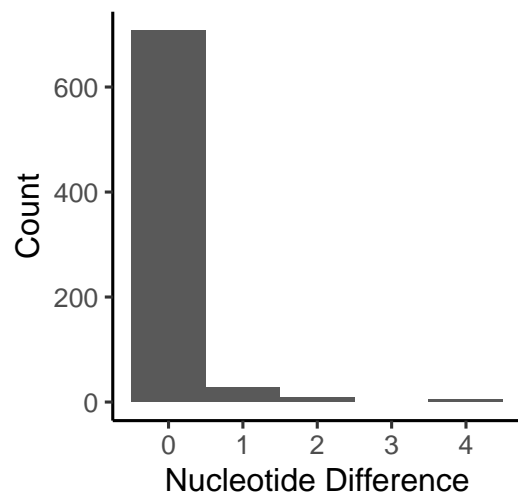
IGHV1-45*02

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



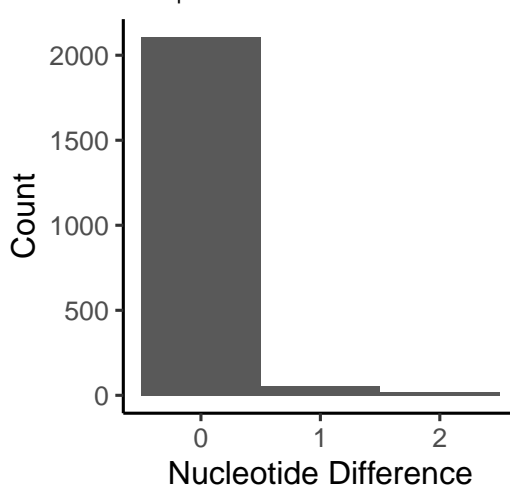
IGHV1-3*01_05

749 sequences assigned
708 (94.5%) exact matches, in which:
703 unique CDR3
6 unique J



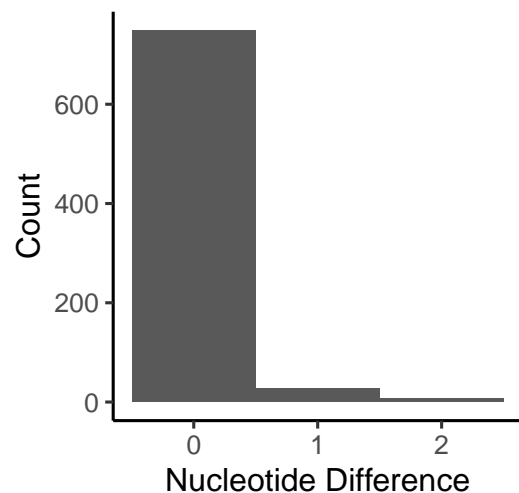
IGHV1-18*04

2184 sequences assigned
2107 (96.5%) exact matches, in which:
2064 unique CDR3
6 unique J



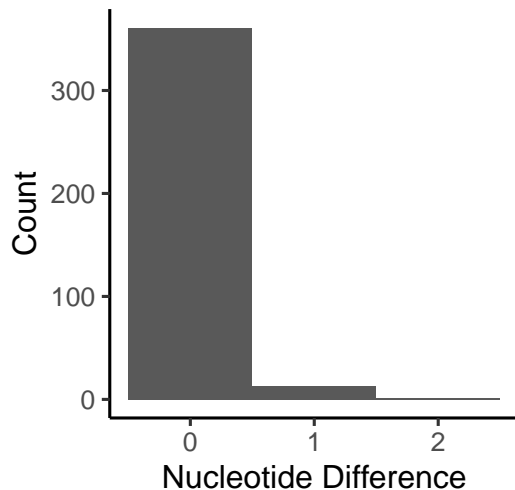
IGHV1-46*01

784 sequences assigned
749 (95.5%) exact matches, in which:
744 unique CDR3
6 unique J



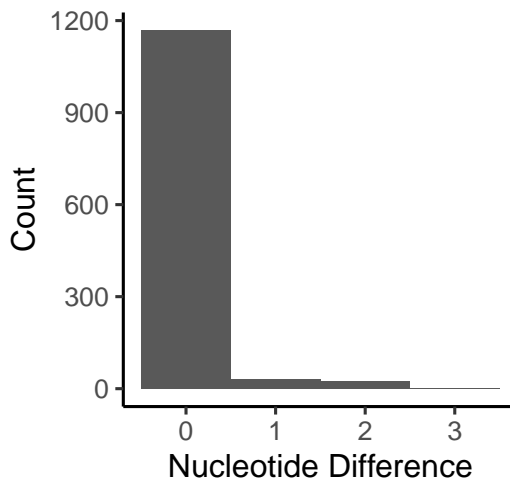
IGHV1-46*03

375 sequences assigned
361 (96.3%) exact matches, in which:
354 unique CDR3
6 unique J



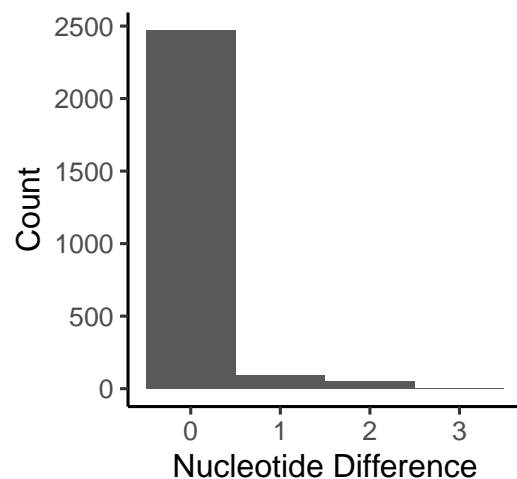
IGHV2-5*01

1224 sequences assigned
1168 (95.4%) exact matches, in which:
1155 unique CDR3
6 unique J



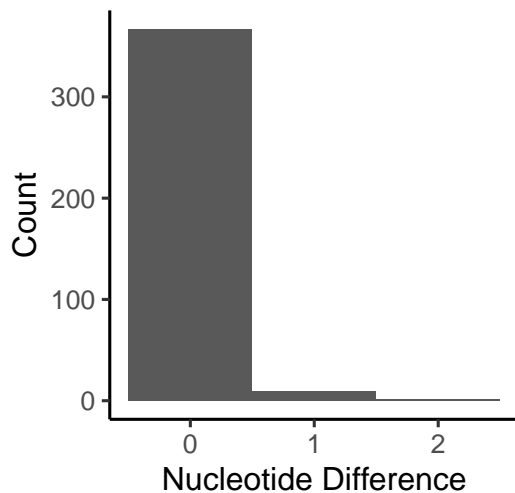
IGHV3-7*01

2613 sequences assigned
2470 (94.5%) exact matches, in which:
2310 unique CDR3
6 unique J



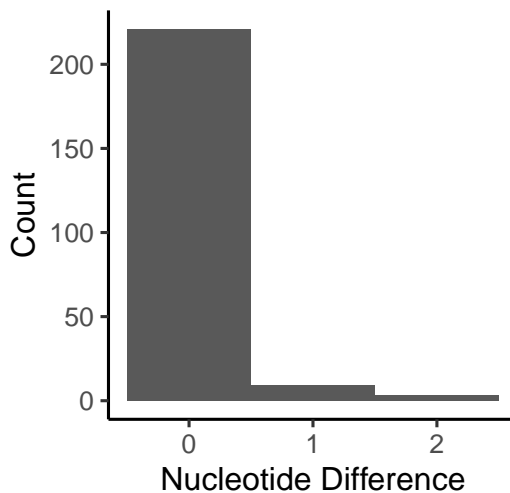
IGHV1-58*01_03

377 sequences assigned
367 (97.3%) exact matches, in which:
360 unique CDR3
6 unique J



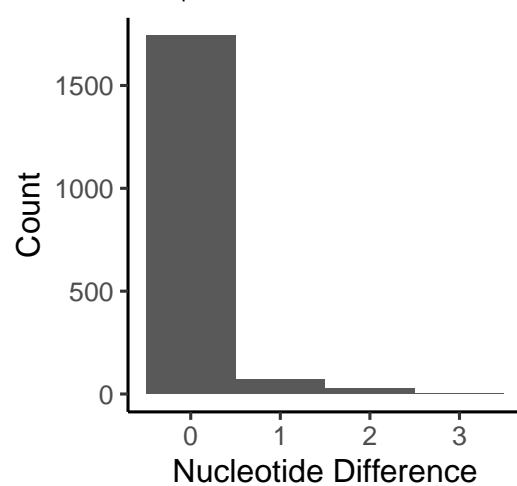
IGHV2-26*01

233 sequences assigned
221 (94.8%) exact matches, in which:
218 unique CDR3
6 unique J



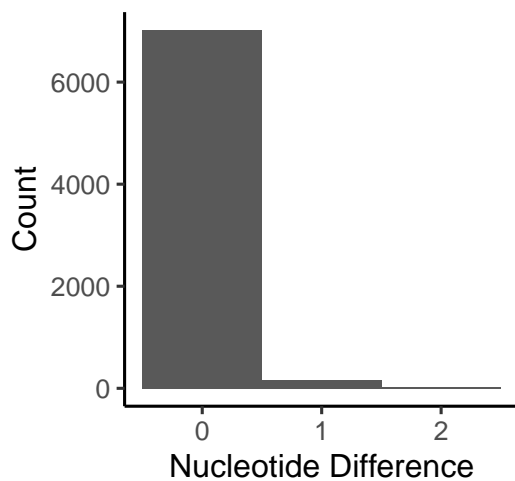
IGHV3-9*01

1840 sequences assigned
1742 (94.7%) exact matches, in which:
1685 unique CDR3
6 unique J



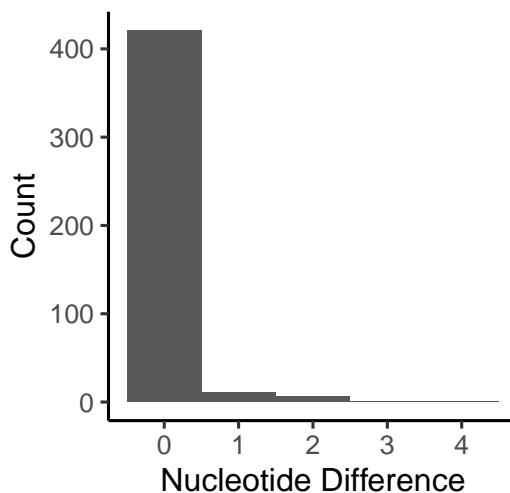
IGHV1-69*01_12_13

7209 sequences assigned
7020 (97.4%) exact matches, in which:
6949 unique CDR3
6 unique J



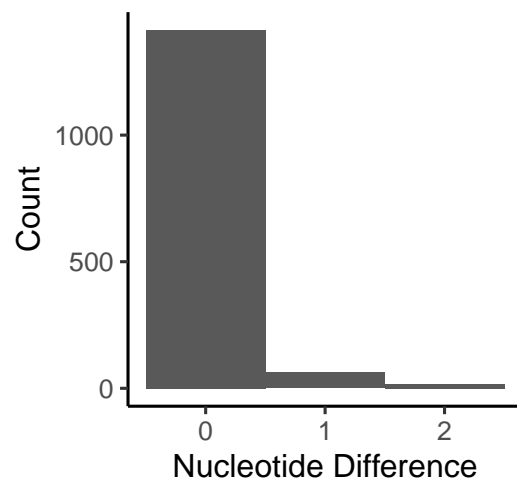
IGHV2-70*01

440 sequences assigned
421 (95.7%) exact matches, in which:
417 unique CDR3
5 unique J



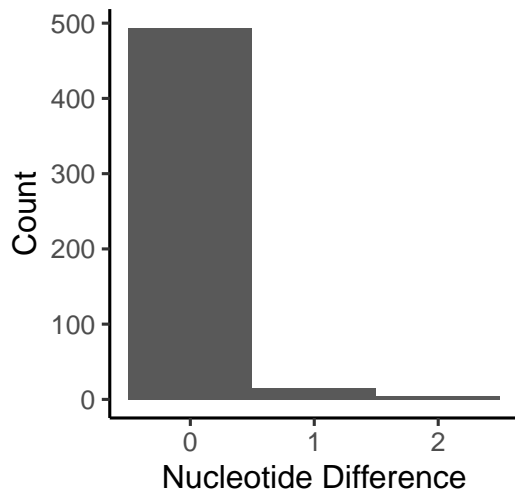
IGHV3-11*01

1494 sequences assigned
1415 (94.7%) exact matches, in which:
1348 unique CDR3
6 unique J



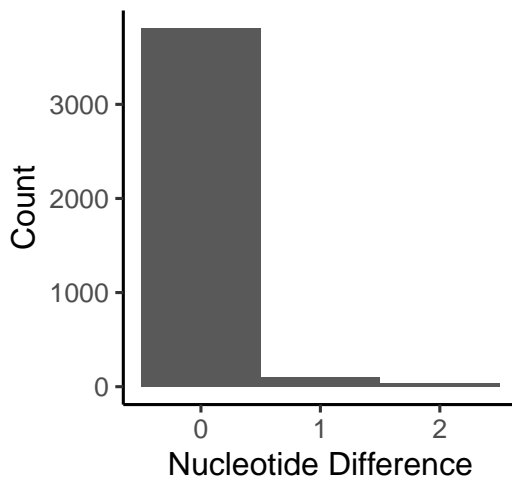
IGHV3-13*01

514 sequences assigned
494 (96.1%) exact matches, in which:
467 unique CDR3
5 unique J



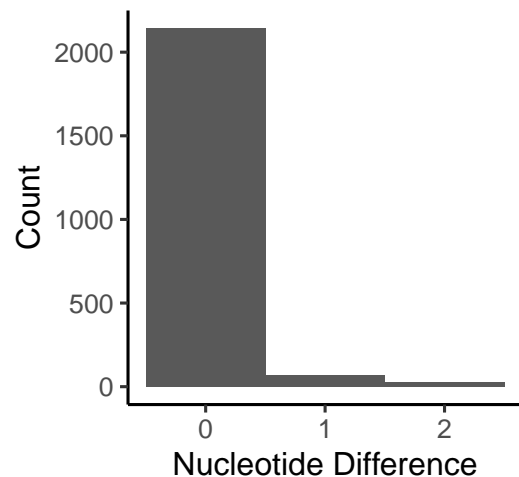
IGHV3-21*01_02

3945 sequences assigned
3807 (96.5%) exact matches, in which:
3540 unique CDR3
6 unique J



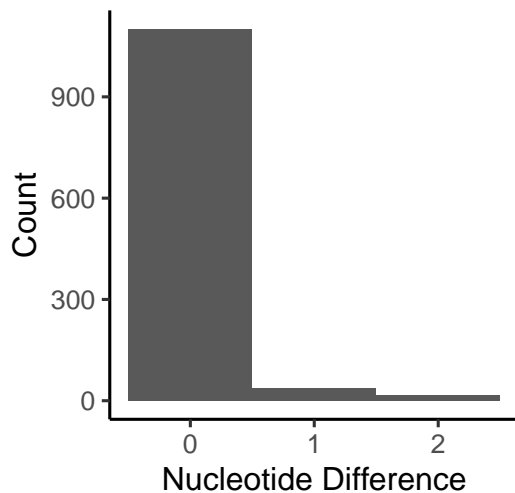
IGHV3-33*01

2239 sequences assigned
2142 (95.7%) exact matches, in which:
2070 unique CDR3
6 unique J



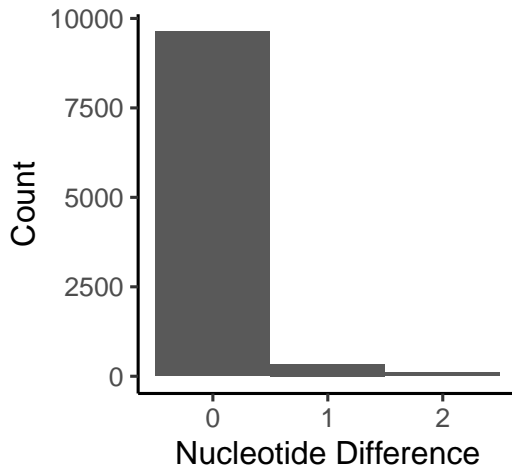
IGHV3-15*01_02

1154 sequences assigned
1101 (95.4%) exact matches, in which:
1051 unique CDR3
6 unique J



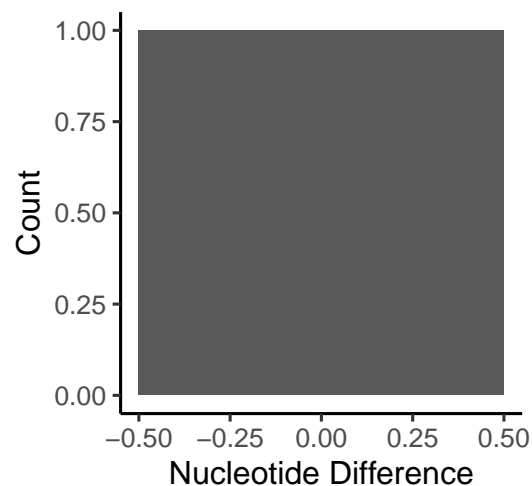
IGHV3-23*01_04

10083 sequences assigned
9636 (95.6%) exact matches, in which:
8938 unique CDR3
6 unique J



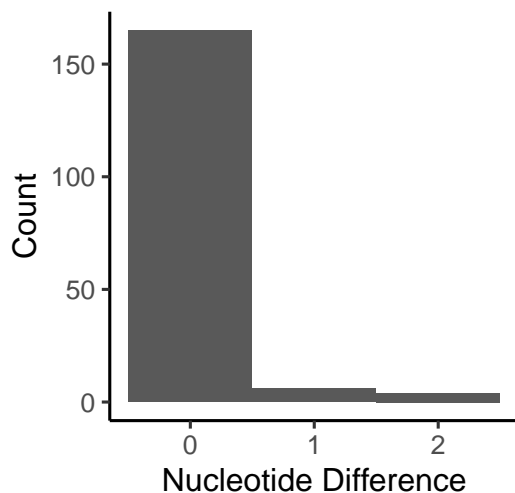
IGHV3-35*01

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



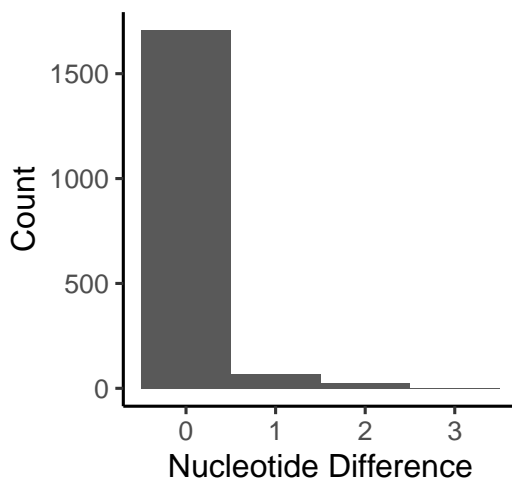
IGHV3-20*01_02

175 sequences assigned
165 (94.3%) exact matches, in which:
158 unique CDR3
5 unique J



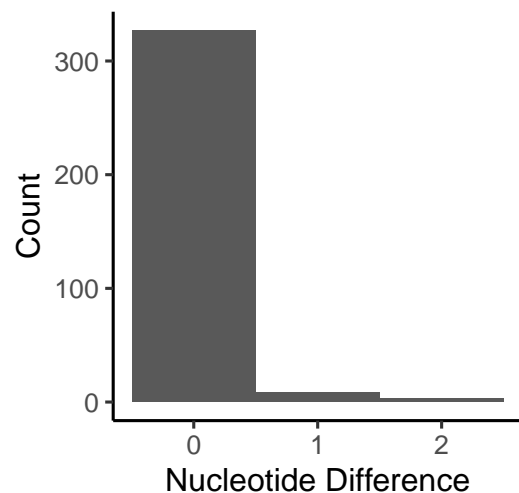
IGHV3-30-3*01

1802 sequences assigned
1708 (94.8%) exact matches, in which:
1648 unique CDR3
6 unique J



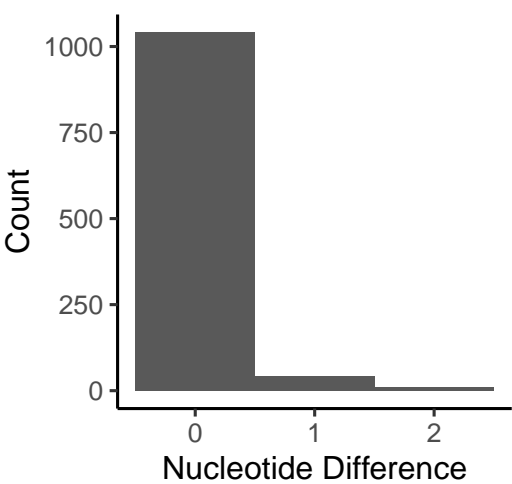
IGHV3-43*01

338 sequences assigned
327 (96.7%) exact matches, in which:
304 unique CDR3
6 unique J



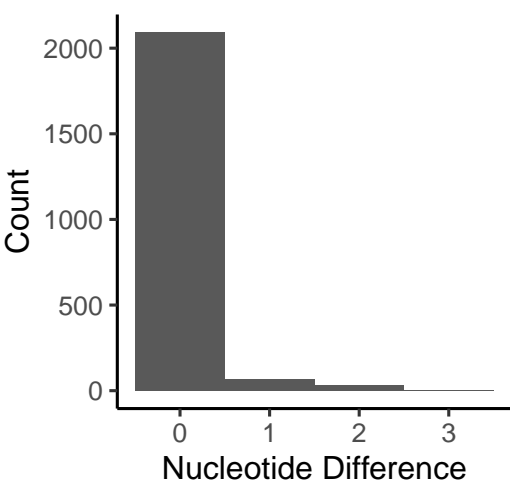
IGHV3-48*01

1093 sequences assigned
1041 (95.2%) exact matches, in which:
968 unique CDR3
6 unique J



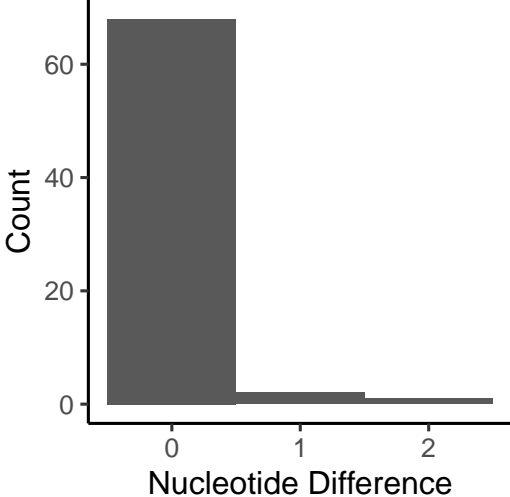
IGHV3-53*01_02

2194 sequences assigned
2092 (95.4%) exact matches, in which:
1927 unique CDR3
6 unique J



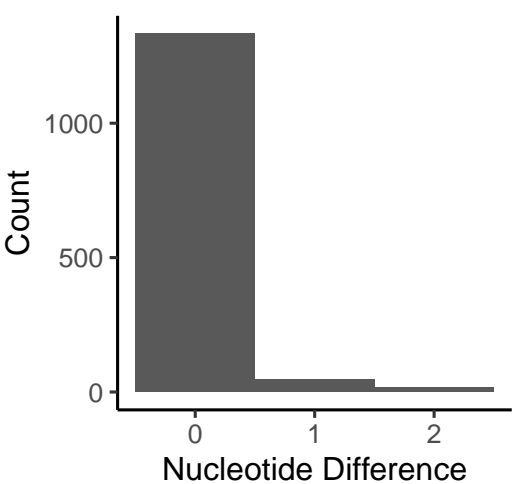
IGHV3-72*01

71 sequences assigned
68 (95.8%) exact matches, in which:
65 unique CDR3
6 unique J



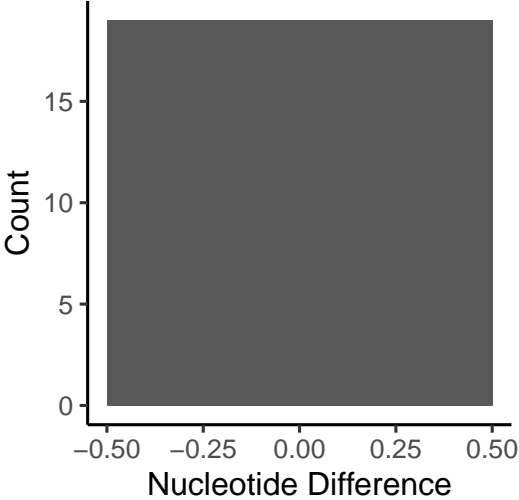
IGHV3-48*02

1393 sequences assigned
1333 (95.7%) exact matches, in which:
1234 unique CDR3
6 unique J



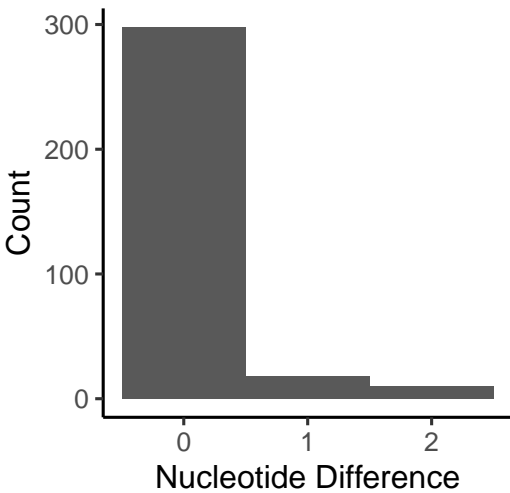
IGHV3-64*02_07

19 sequences assigned
19 (100%) exact matches, in which:
18 unique CDR3
5 unique J



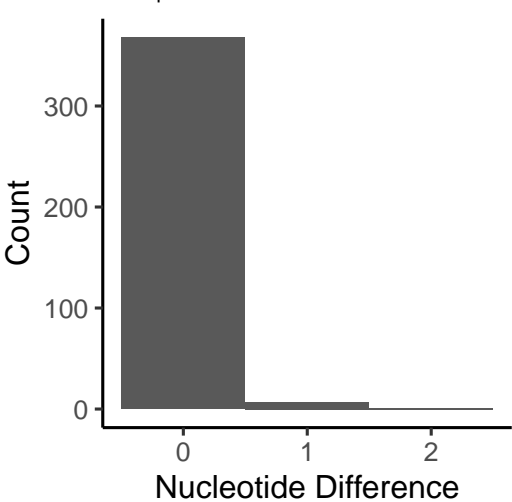
IGHV3-73*01_02

326 sequences assigned
298 (91.4%) exact matches, in which:
274 unique CDR3
6 unique J



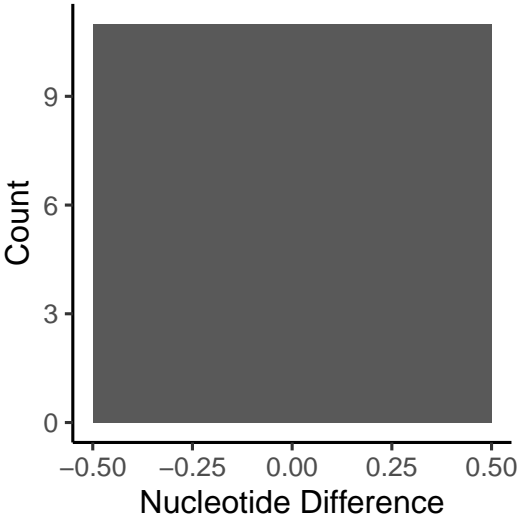
IGHV3-49*03_05

376 sequences assigned
368 (97.9%) exact matches, in which:
362 unique CDR3
6 unique J



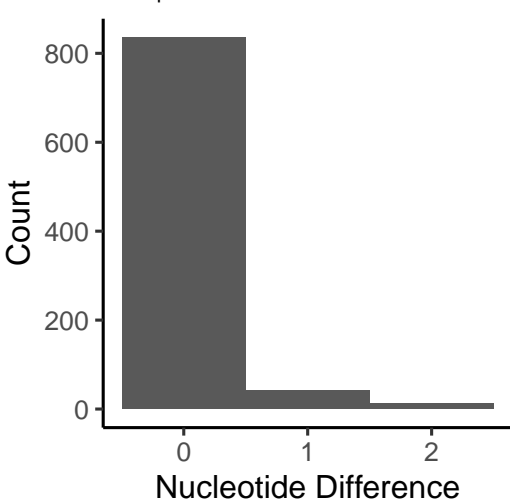
IGHV3-66*03

11 sequences assigned
11 (100%) exact matches, in which:
11 unique CDR3
2 unique J



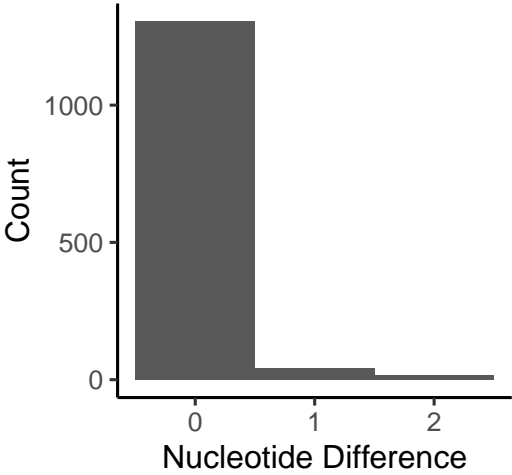
IGHV3-74*01_02

890 sequences assigned
836 (93.9%) exact matches, in which:
797 unique CDR3
6 unique J



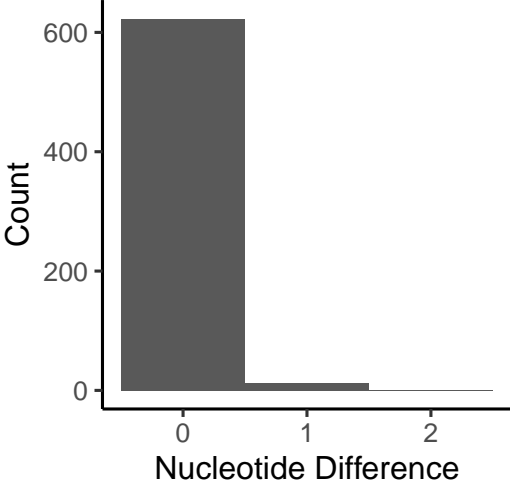
IGHV4-4*07

1365 sequences assigned
1305 (95.6%) exact matches, in which:
1215 unique CDR3
6 unique J



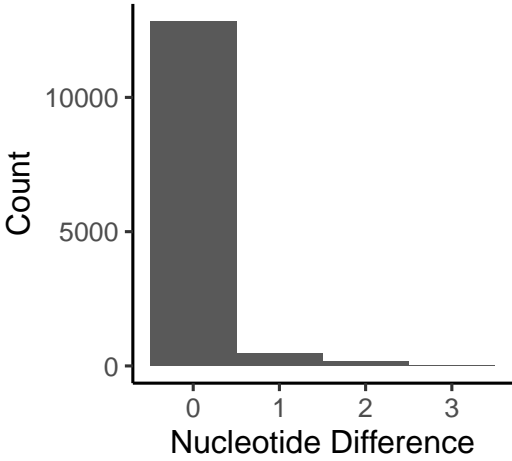
IGHV4-30-4*01

636 sequences assigned
623 (98%) exact matches, in which:
602 unique CDR3
6 unique J



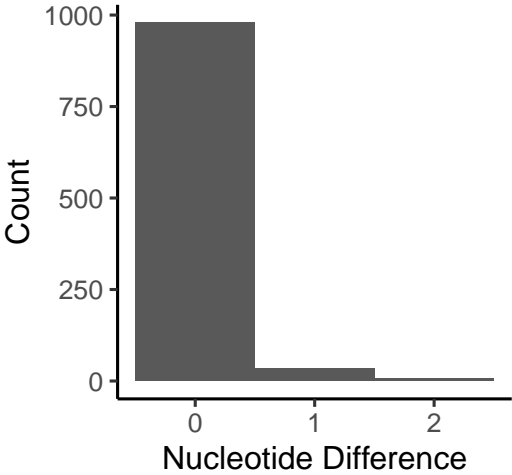
IGHV4-34*01_02

13451 sequences assigned
12840 (95.5%) exact matches, in which:
11776 unique CDR3
6 unique J



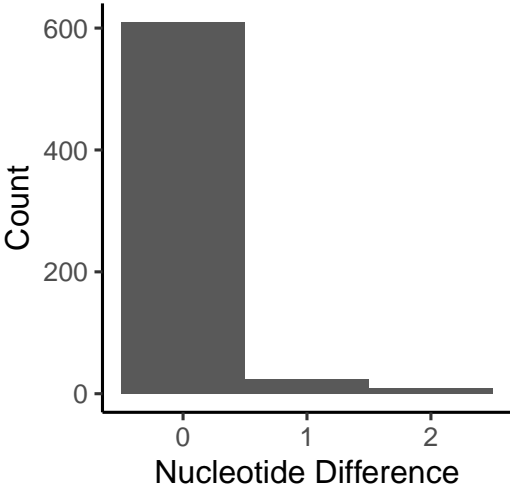
IGHV4-4*02_03

1019 sequences assigned
979 (96.1%) exact matches, in which:
937 unique CDR3
6 unique J



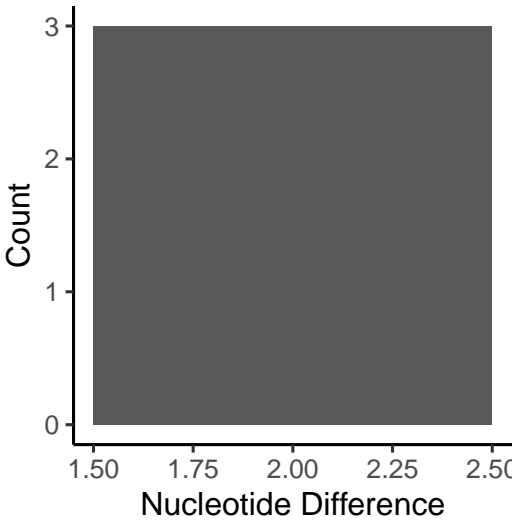
IGHV4-30-2*01

643 sequences assigned
610 (94.9%) exact matches, in which:
557 unique CDR3
6 unique J



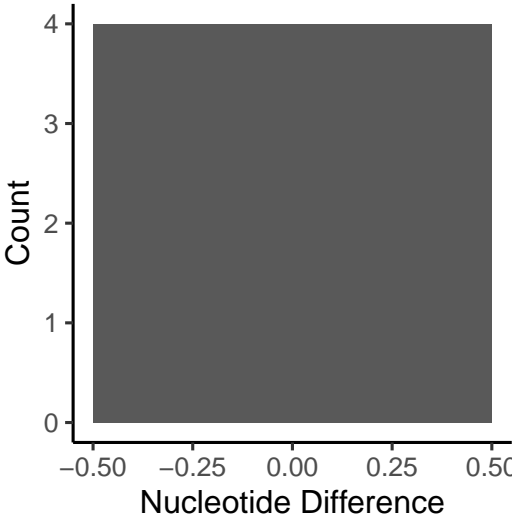
IGHV4-39*02

3 sequences assigned
No exact matches.



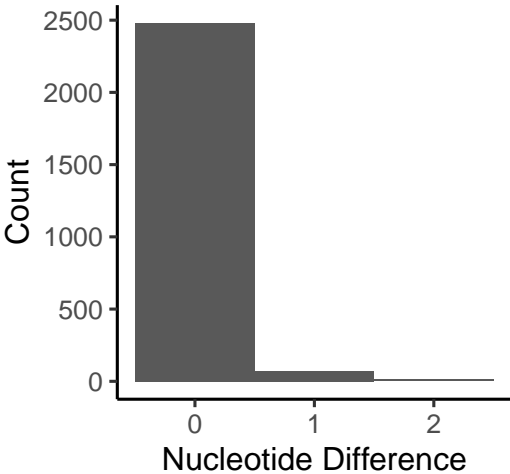
IGHV4-28*01_07

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



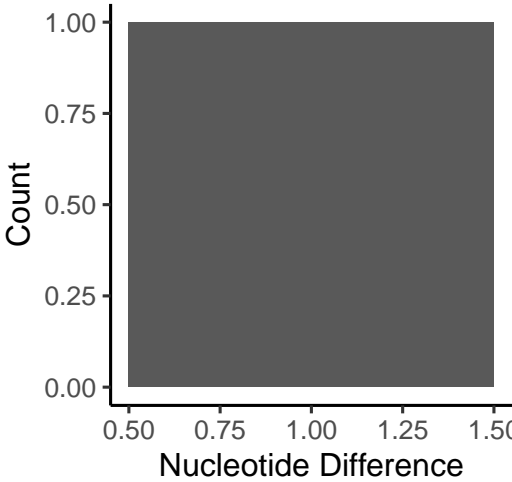
IGHV4-31*02

2563 sequences assigned
2480 (96.8%) exact matches, in which:
2392 unique CDR3
6 unique J



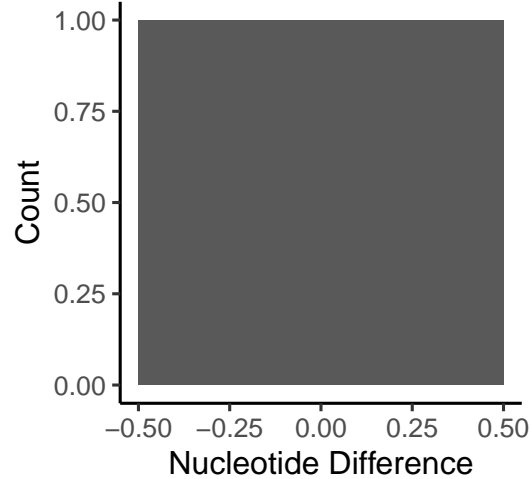
IGHV4-59*08

1 sequences assigned
No exact matches.



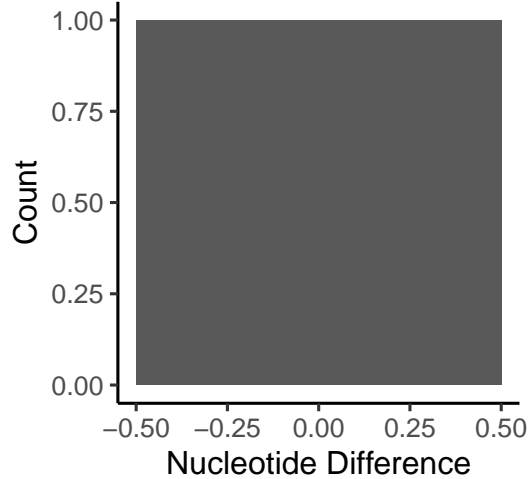
IGHV4-59*11

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



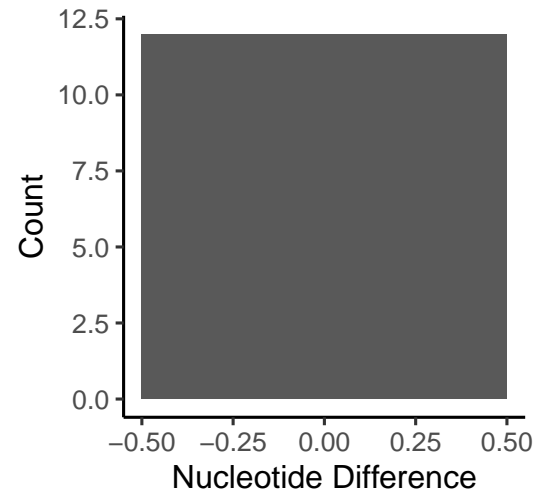
IGHV5-51*07

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



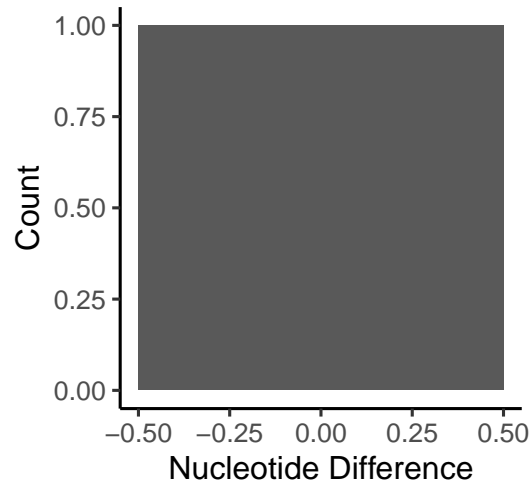
IGHV7-4-1*01

12 sequences assigned
12 (100%) exact matches, in which:
12 unique CDR3
4 unique J



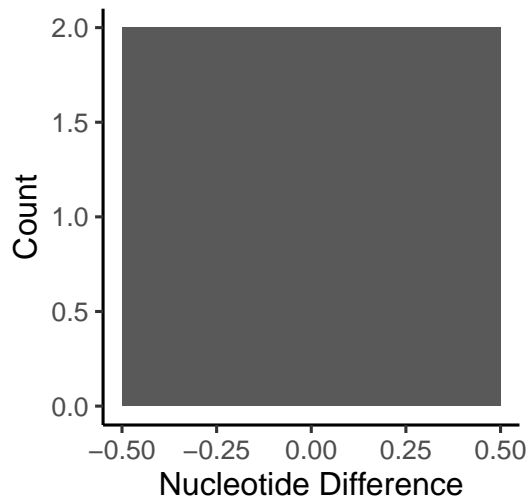
IGHV4-59*13

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



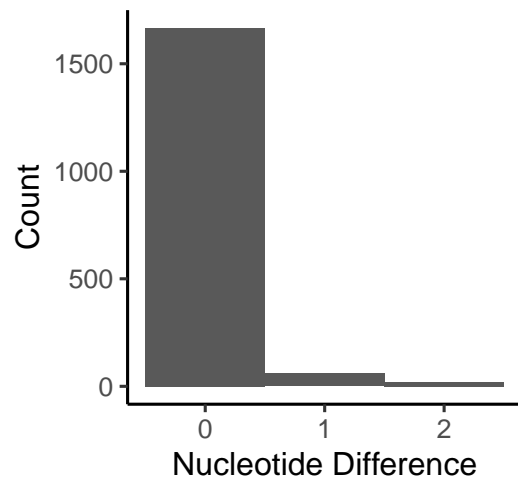
IGHV5-51*01_03

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



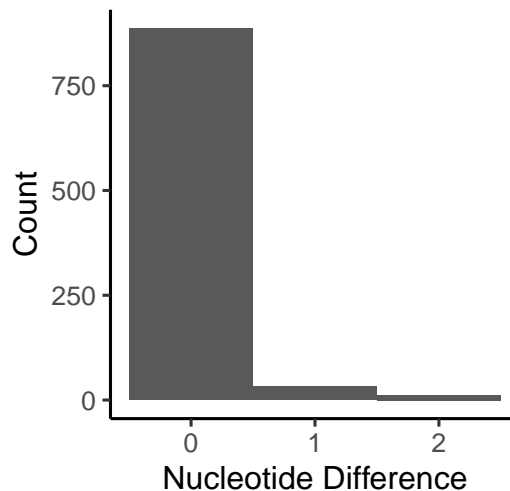
IGHV4-61*01

1745 sequences assigned
1666 (95.5%) exact matches, in which:
1564 unique CDR3
6 unique J



IGHV6-1*01_02

932 sequences assigned
887 (95.2%) exact matches, in which:
856 unique CDR3
6 unique J





[illegible]