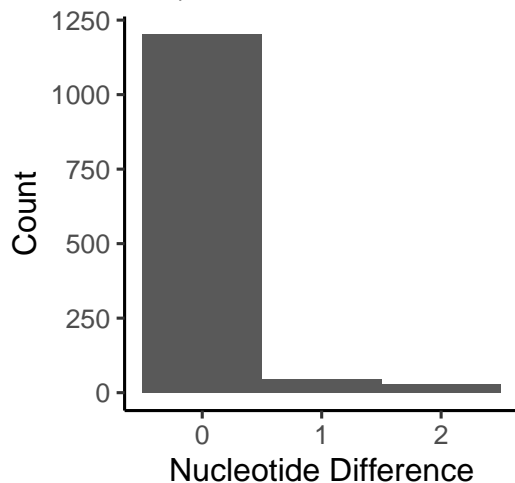


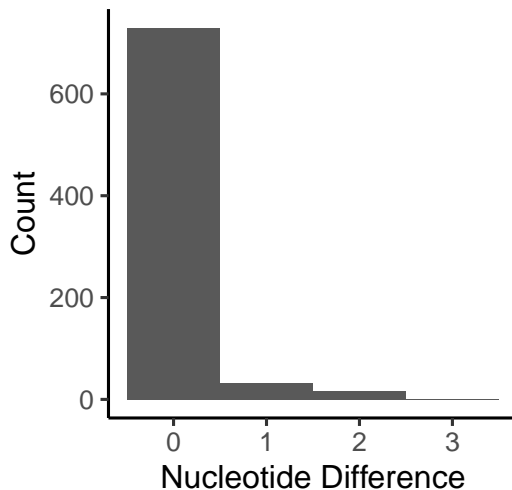
IGHV1-2*02

1277 sequences assigned
1202 (94.1%) exact matches, in which:
1198 unique CDR3
6 unique J



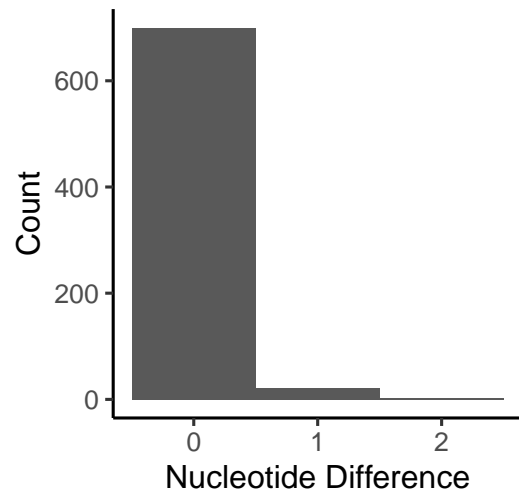
IGHV1-8*01

780 sequences assigned
730 (93.6%) exact matches, in which:
726 unique CDR3
6 unique J



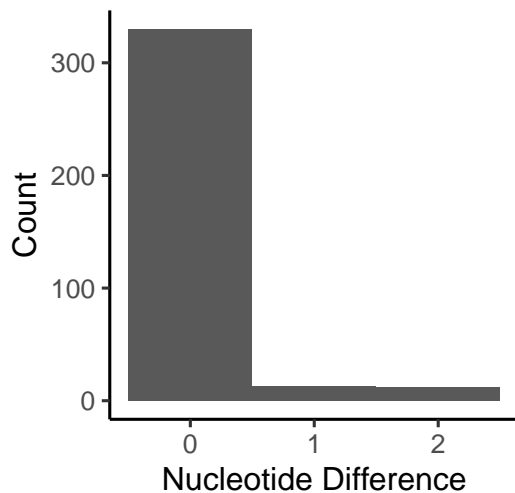
IGHV1-24*01

724 sequences assigned
700 (96.7%) exact matches, in which:
699 unique CDR3
6 unique J



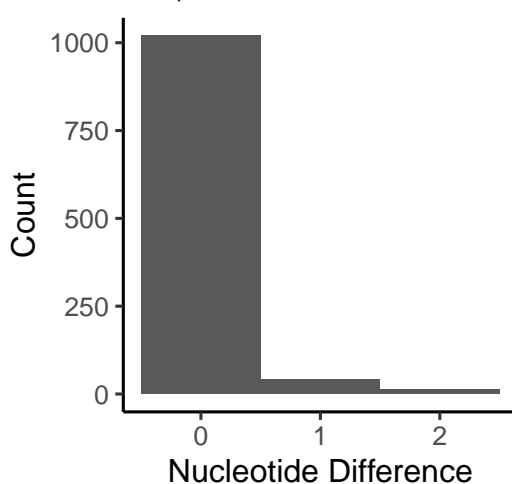
IGHV1-2*04

355 sequences assigned
330 (93%) exact matches, in which:
330 unique CDR3
6 unique J



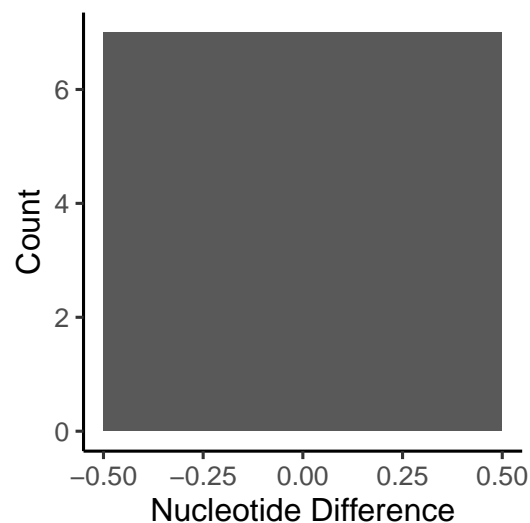
IGHV1-18*01

1076 sequences assigned
1020 (94.8%) exact matches, in which:
1017 unique CDR3
6 unique J



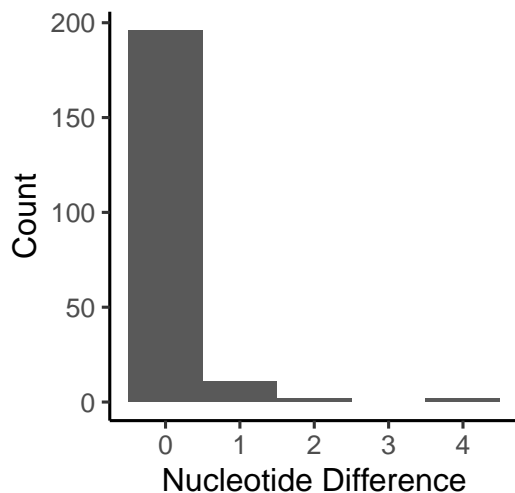
IGHV1-45*02

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



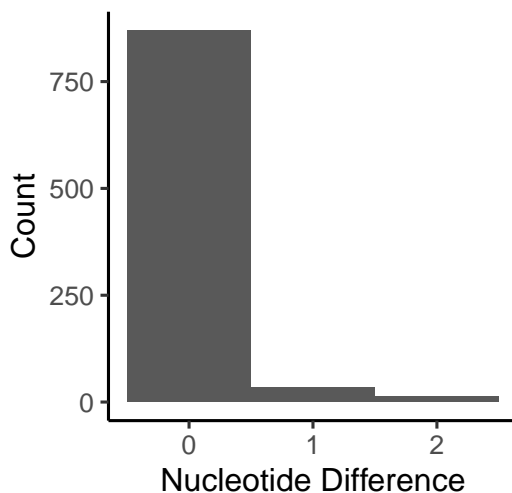
IGHV1-3*01_05

211 sequences assigned
196 (92.9%) exact matches, in which:
196 unique CDR3
6 unique J



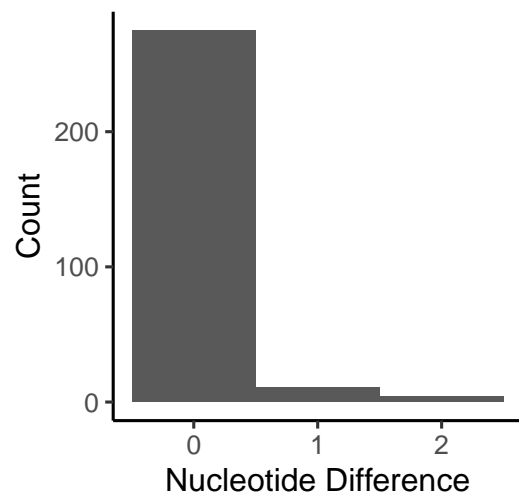
IGHV1-18*04

916 sequences assigned
870 (95%) exact matches, in which:
869 unique CDR3
6 unique J



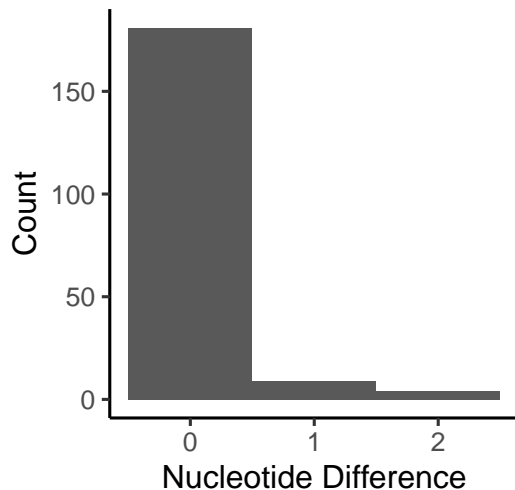
IGHV1-46*01

290 sequences assigned
275 (94.8%) exact matches, in which:
275 unique CDR3
6 unique J



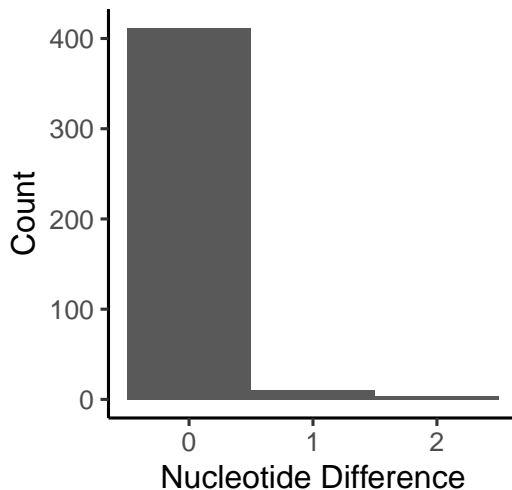
IGHV1-46*03

194 sequences assigned
181 (93.3%) exact matches, in which:
181 unique CDR3
6 unique J



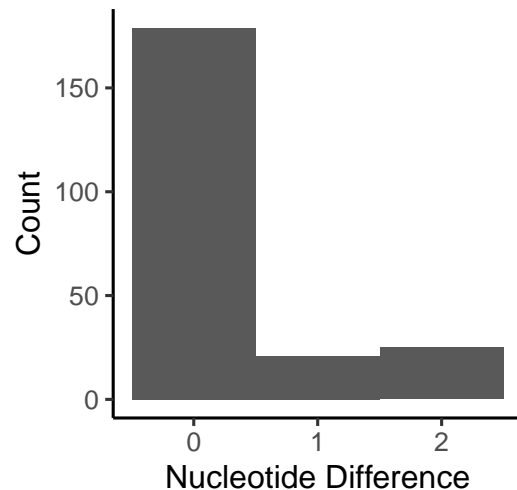
IGHV1-69*04_09

426 sequences assigned
412 (96.7%) exact matches, in which:
412 unique CDR3
6 unique J



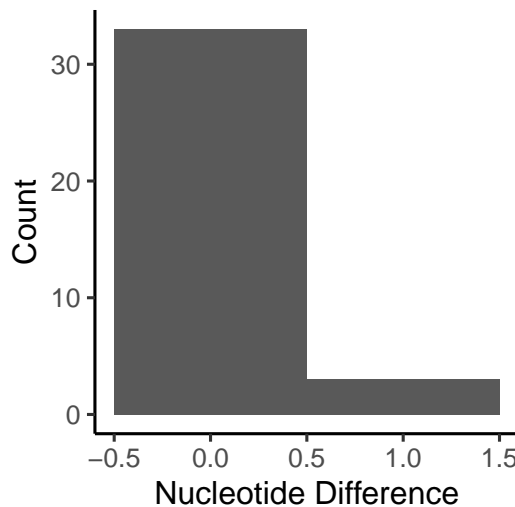
IGHV2-5*02

225 sequences assigned
179 (79.6%) exact matches, in which:
179 unique CDR3
6 unique J



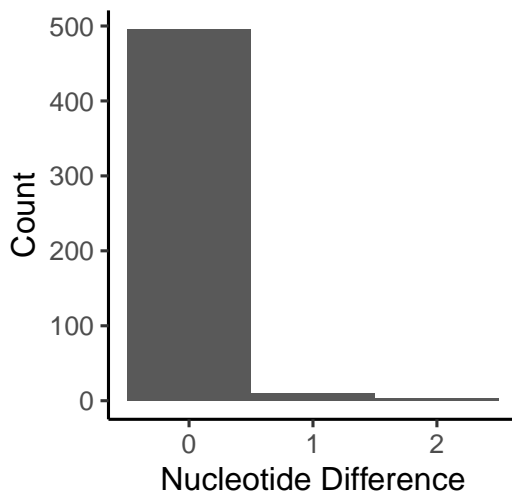
IGHV1-58*02

36 sequences assigned
33 (91.7%) exact matches, in which:
33 unique CDR3
5 unique J



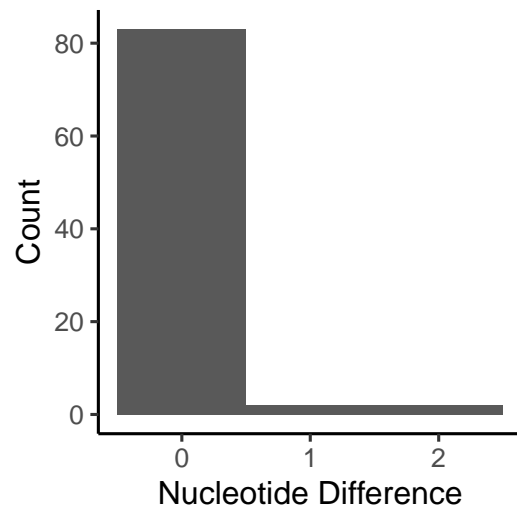
IGHV1-69*06_14

510 sequences assigned
496 (97.3%) exact matches, in which:
494 unique CDR3
6 unique J



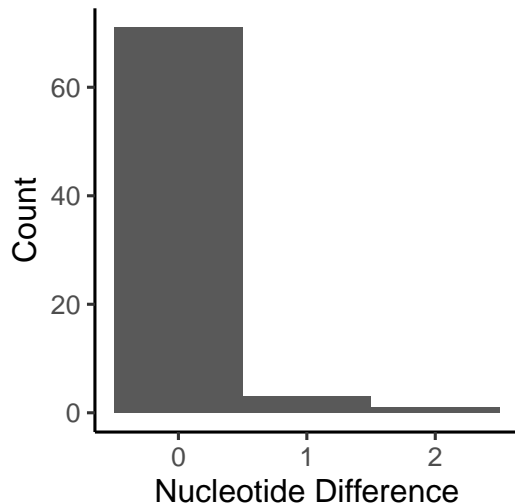
IGHV2-26*01

87 sequences assigned
83 (95.4%) exact matches, in which:
83 unique CDR3
6 unique J



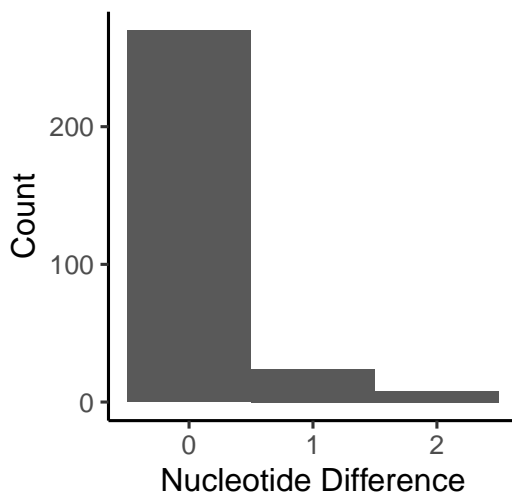
IGHV1-58*01_03

75 sequences assigned
71 (94.7%) exact matches, in which:
71 unique CDR3
5 unique J



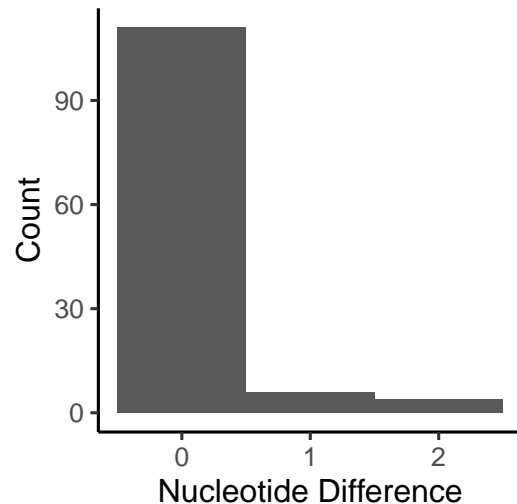
IGHV2-5*01

302 sequences assigned
270 (89.4%) exact matches, in which:
269 unique CDR3
6 unique J



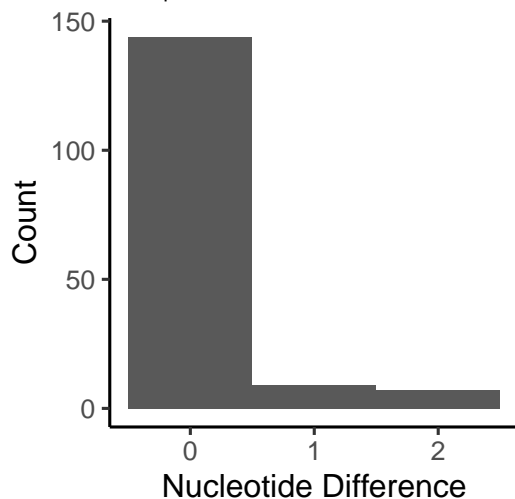
IGHV2-70*01

121 sequences assigned
111 (91.7%) exact matches, in which:
110 unique CDR3
6 unique J



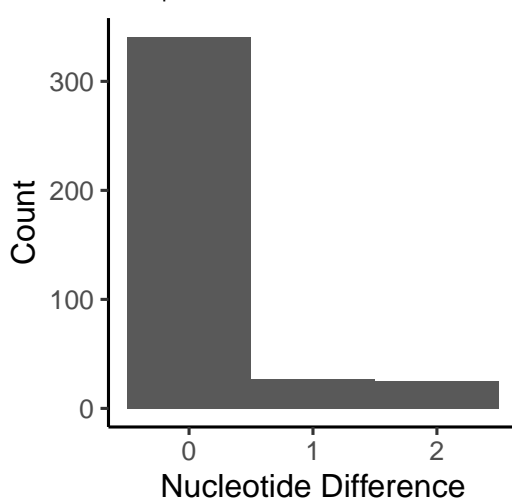
IGHV2–70*11_15

160 sequences assigned
144 (90%) exact matches, in which:
143 unique CDR3
5 unique J



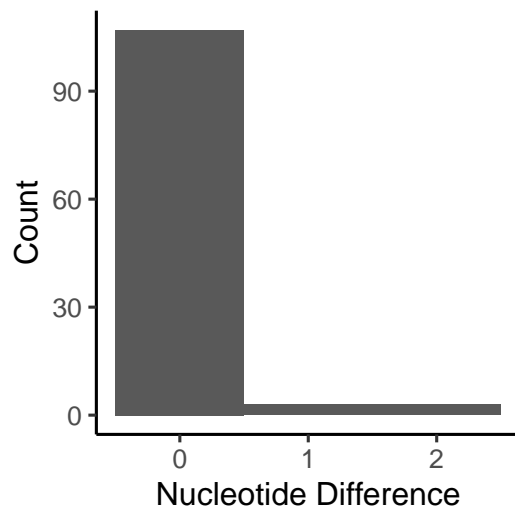
IGHV3–9*01

393 sequences assigned
341 (86.8%) exact matches, in which:
338 unique CDR3
6 unique J



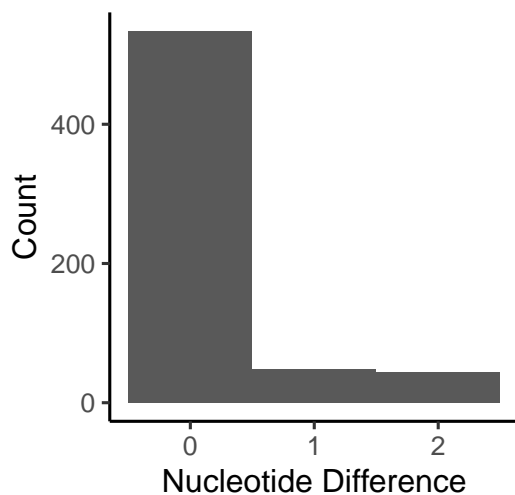
IGHV3–13*01

113 sequences assigned
107 (94.7%) exact matches, in which:
105 unique CDR3
5 unique J



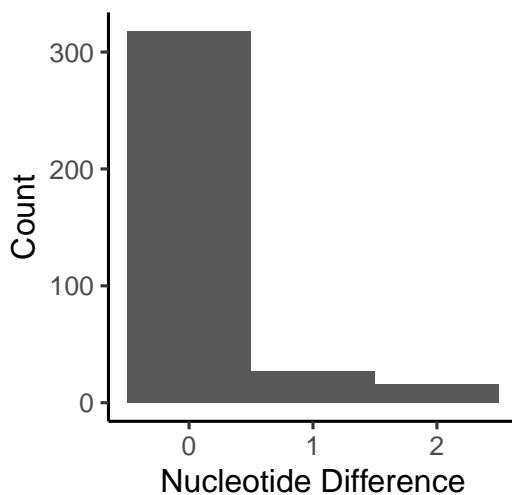
IGHV3–7*01

626 sequences assigned
534 (85.3%) exact matches, in which:
518 unique CDR3
6 unique J



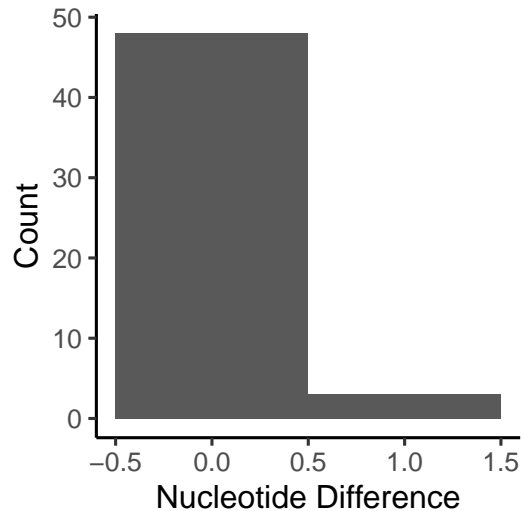
IGHV3–11*01

361 sequences assigned
318 (88.1%) exact matches, in which:
315 unique CDR3
6 unique J



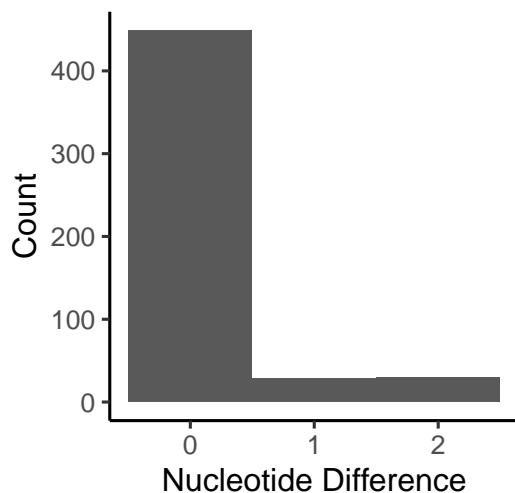
IGHV3–13*05

51 sequences assigned
48 (94.1%) exact matches, in which:
46 unique CDR3
4 unique J



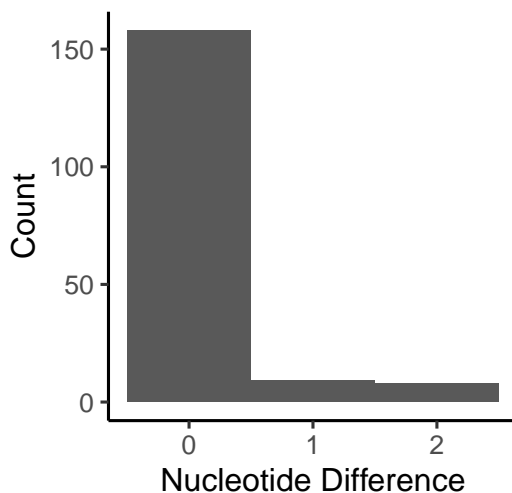
IGHV3–7*03

508 sequences assigned
449 (88.4%) exact matches, in which:
431 unique CDR3
6 unique J



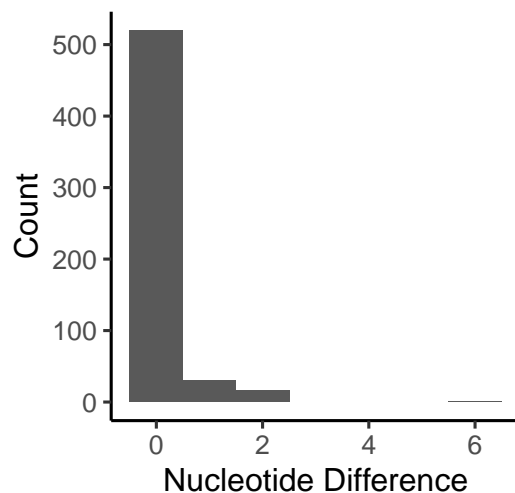
IGHV3–11*06

175 sequences assigned
158 (90.3%) exact matches, in which:
155 unique CDR3
6 unique J



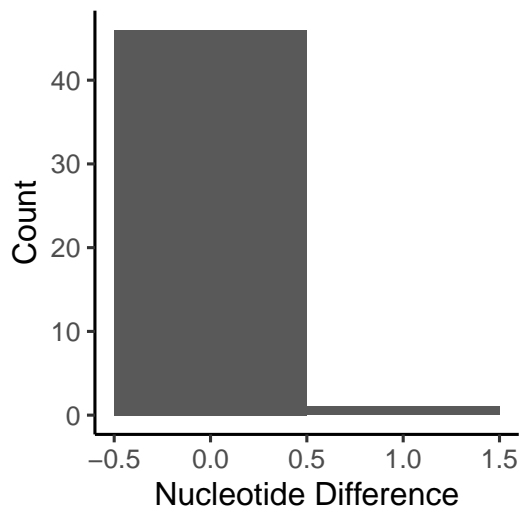
IGHV3–15*01_02

567 sequences assigned
520 (91.7%) exact matches, in which:
510 unique CDR3
6 unique J



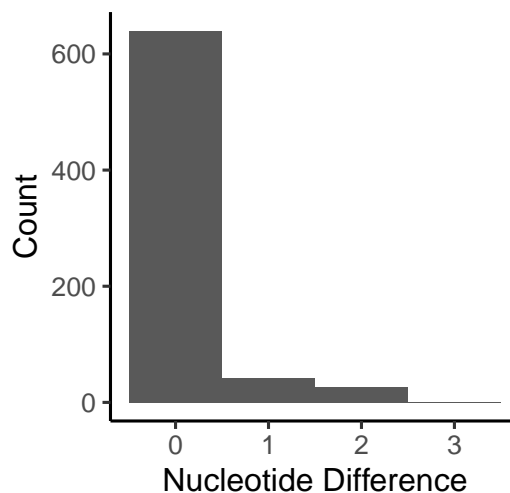
IGHV3–20*01_02

47 sequences assigned
46 (97.9%) exact matches, in which:
44 unique CDR3
5 unique J



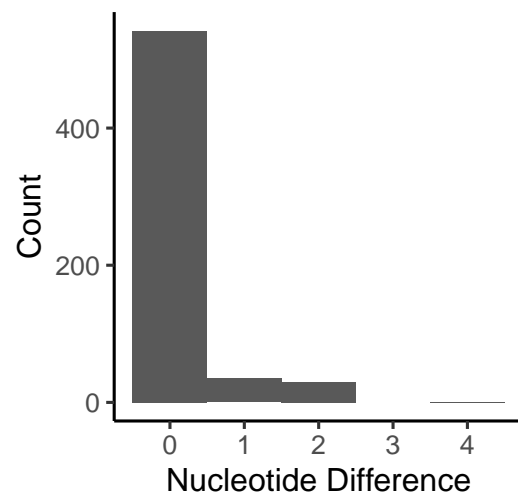
IGHV3–33*01

709 sequences assigned
640 (90.3%) exact matches, in which:
635 unique CDR3
6 unique J



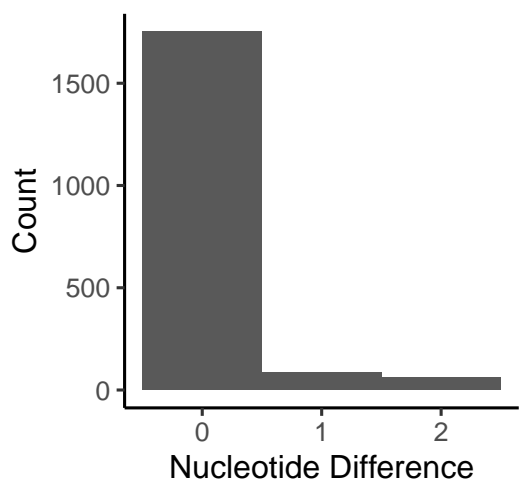
IGHV3–48*02

608 sequences assigned
542 (89.1%) exact matches, in which:
525 unique CDR3
6 unique J



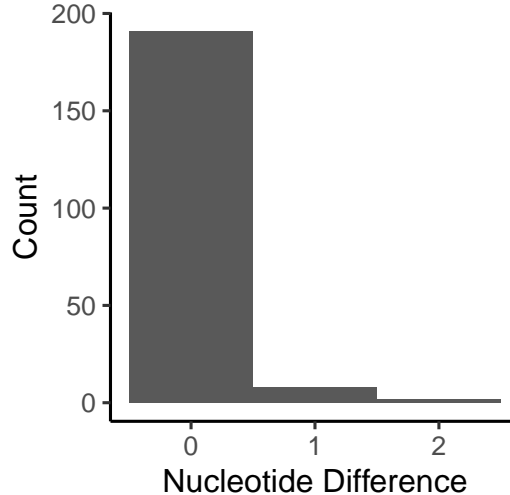
IGHV3–21*01_02

1897 sequences assigned
1752 (92.4%) exact matches, in which:
1697 unique CDR3
6 unique J



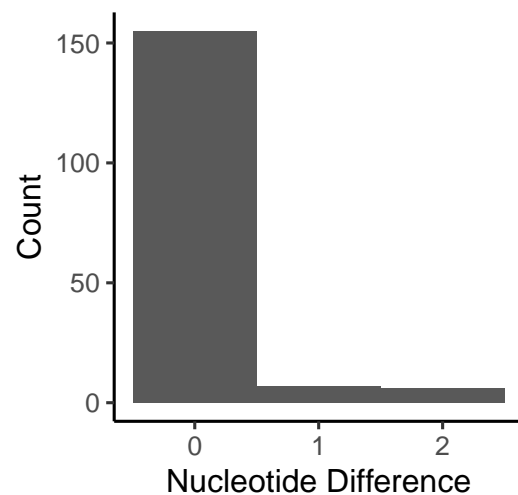
IGHV3–43*01

201 sequences assigned
191 (95%) exact matches, in which:
189 unique CDR3
6 unique J



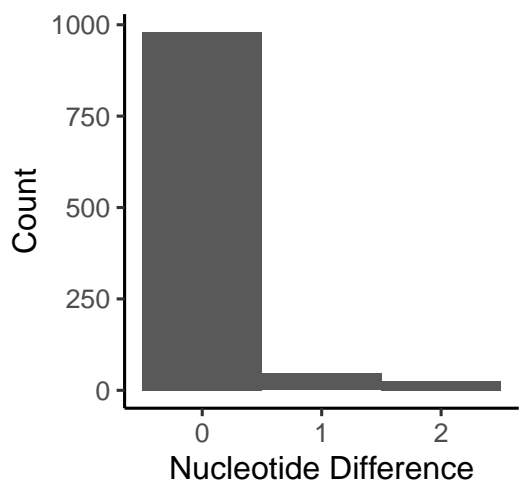
IGHV3–49*03_05

168 sequences assigned
155 (92.3%) exact matches, in which:
154 unique CDR3
6 unique J



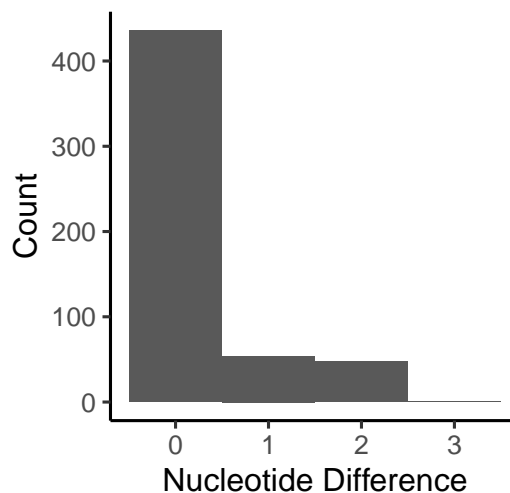
IGHV3–30–3*01

1052 sequences assigned
980 (93.2%) exact matches, in which:
968 unique CDR3
6 unique J



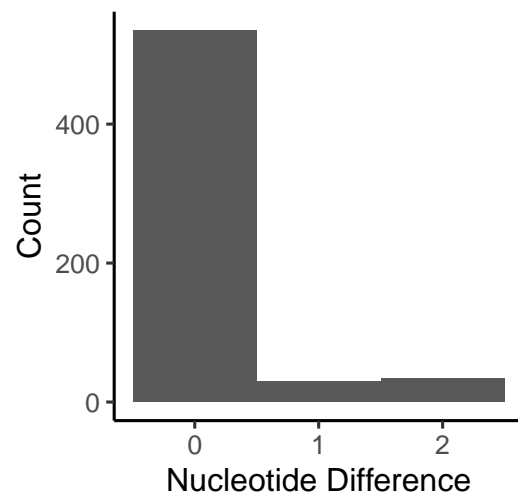
IGHV3–48*01

538 sequences assigned
436 (81%) exact matches, in which:
428 unique CDR3
6 unique J



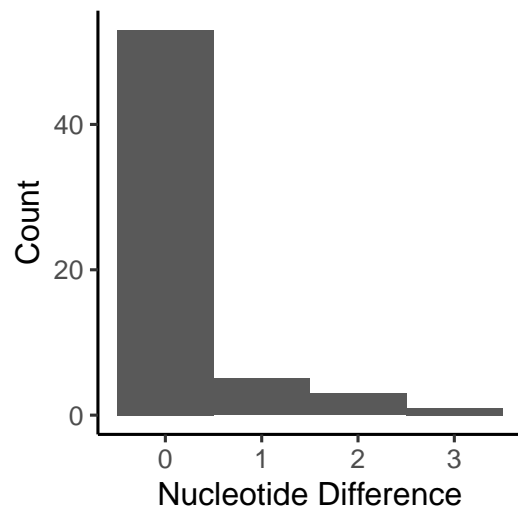
IGHV3–53*01_02

599 sequences assigned
535 (89.3%) exact matches, in which:
524 unique CDR3
6 unique J



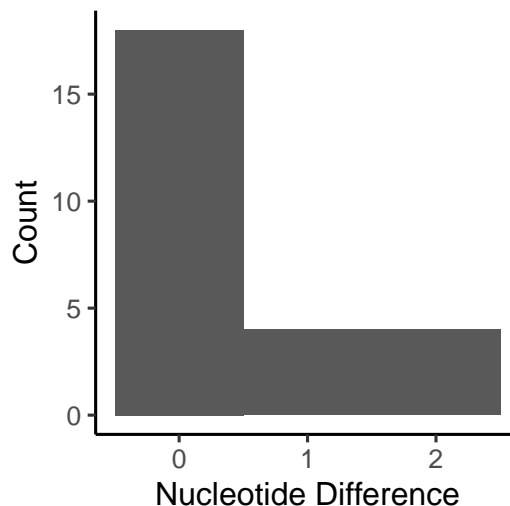
IGHV3-64*01

62 sequences assigned
53 (85.5%) exact matches, in which:
52 unique CDR3
6 unique J



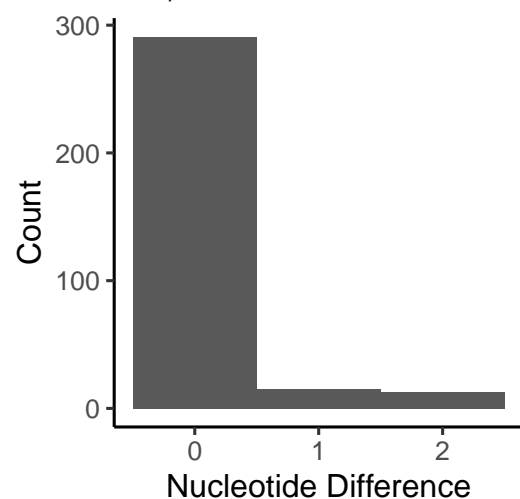
IGHV3-72*01

26 sequences assigned
18 (69.2%) exact matches, in which:
18 unique CDR3
5 unique J



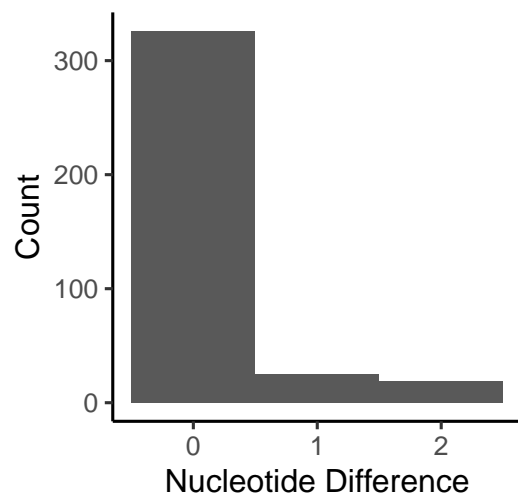
IGHV3-64D*06

319 sequences assigned
291 (91.2%) exact matches, in which:
286 unique CDR3
6 unique J



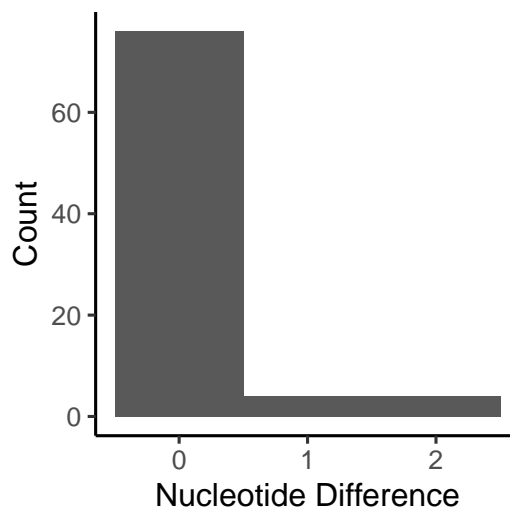
IGHV3-66*01

370 sequences assigned
326 (88.1%) exact matches, in which:
315 unique CDR3
6 unique J



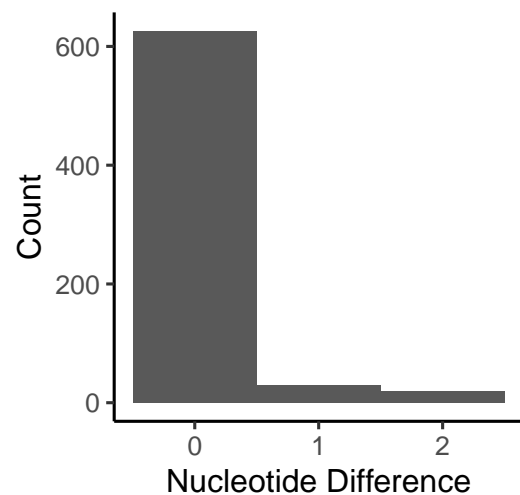
IGHV3-73*01_02

84 sequences assigned
76 (90.5%) exact matches, in which:
76 unique CDR3
5 unique J



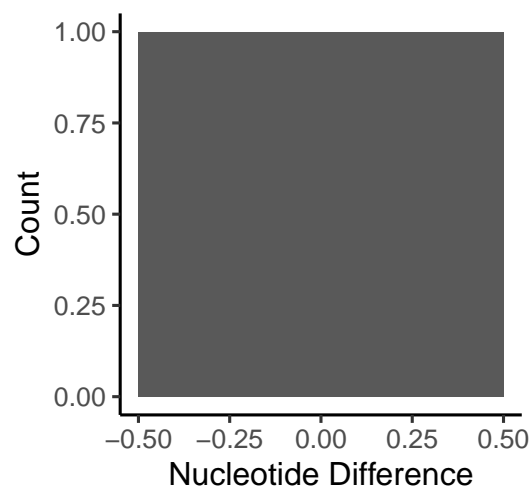
IGHV4-4*07

674 sequences assigned
626 (92.9%) exact matches, in which:
606 unique CDR3
6 unique J



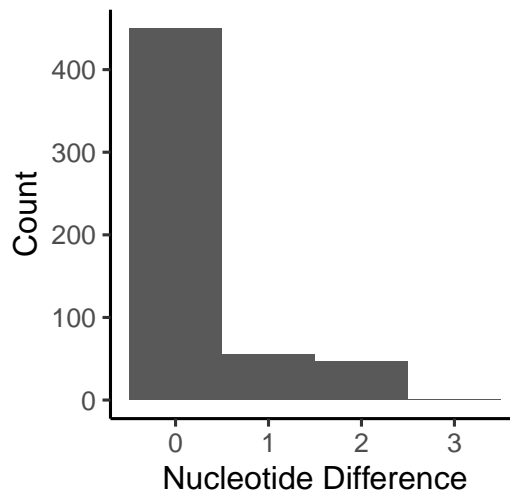
IGHV3-69-1*01

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



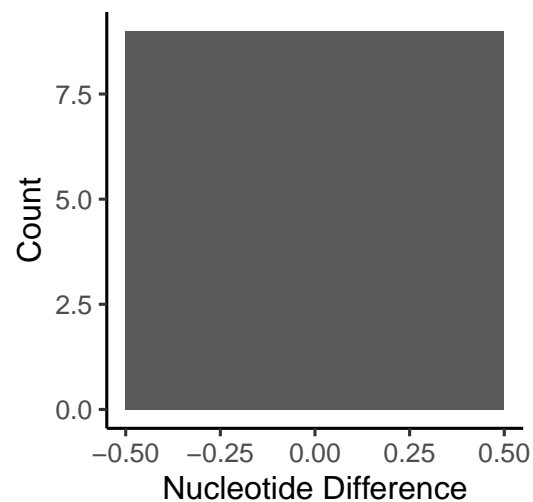
IGHV3-74*01_02

553 sequences assigned
450 (81.4%) exact matches, in which:
431 unique CDR3
6 unique J



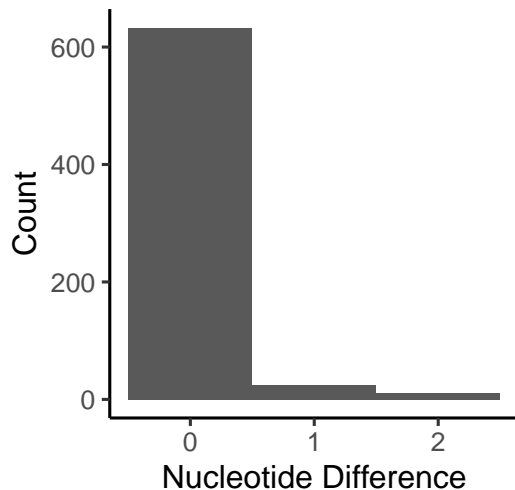
IGHV4-28*01_07

9 sequences assigned
9 (100%) exact matches, in which:
9 unique CDR3
3 unique J



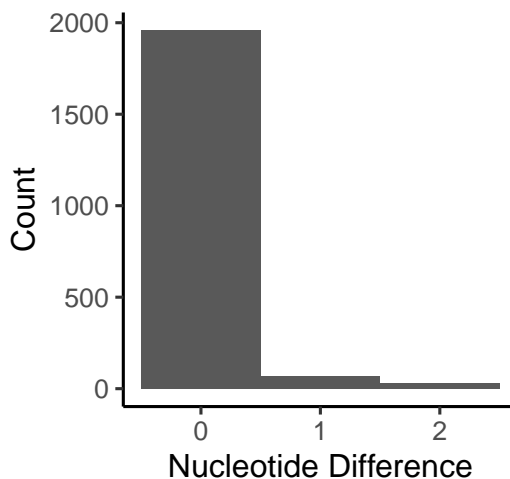
IGHV4-30-2*01

668 sequences assigned
633 (94.8%) exact matches, in which:
624 unique CDR3
6 unique J



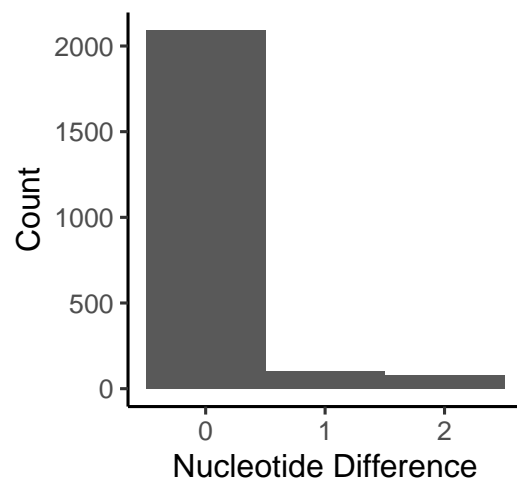
IGHV4-34*01_02

2054 sequences assigned
1958 (95.3%) exact matches, in which:
1935 unique CDR3
6 unique J



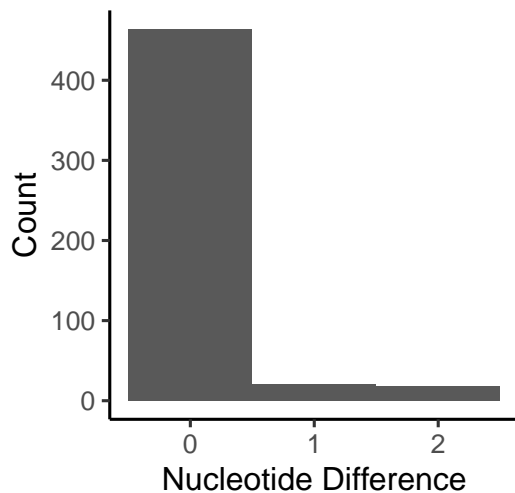
IGHV4-59*01_07

2273 sequences assigned
2091 (92%) exact matches, in which:
2049 unique CDR3
6 unique J



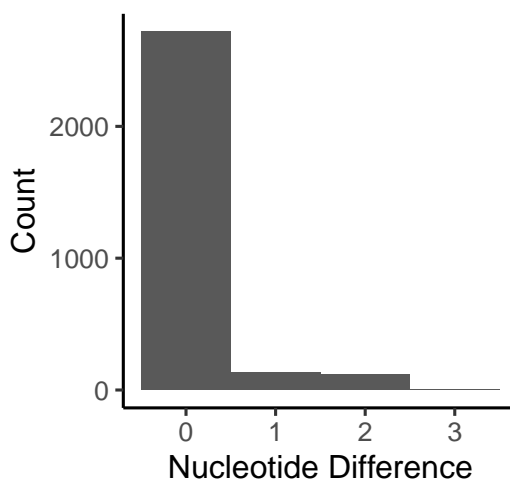
IGHV4-30-4*01

502 sequences assigned
464 (92.4%) exact matches, in which:
458 unique CDR3
6 unique J



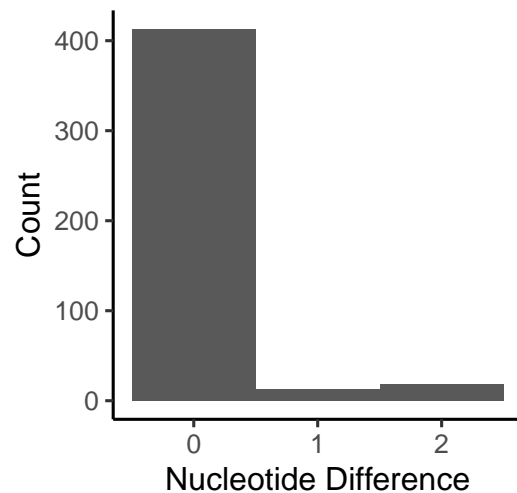
IGHV4-39*01_05

2971 sequences assigned
2718 (91.5%) exact matches, in which:
2646 unique CDR3
6 unique J



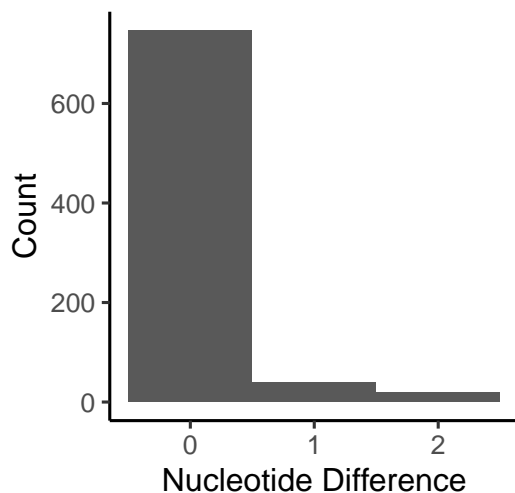
IGHV4-61*01

444 sequences assigned
413 (93%) exact matches, in which:
404 unique CDR3
6 unique J



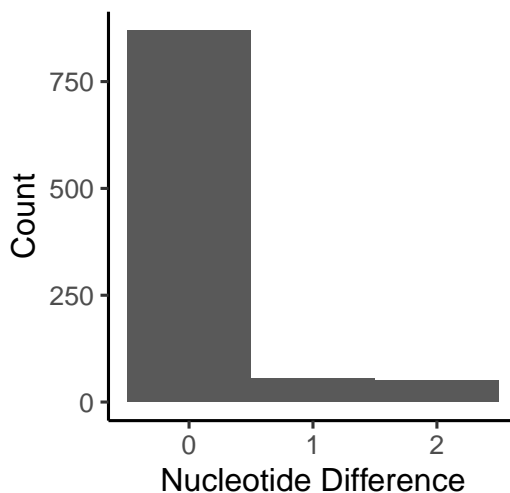
IGHV4-31*03_04

805 sequences assigned
747 (92.8%) exact matches, in which:
740 unique CDR3
6 unique J



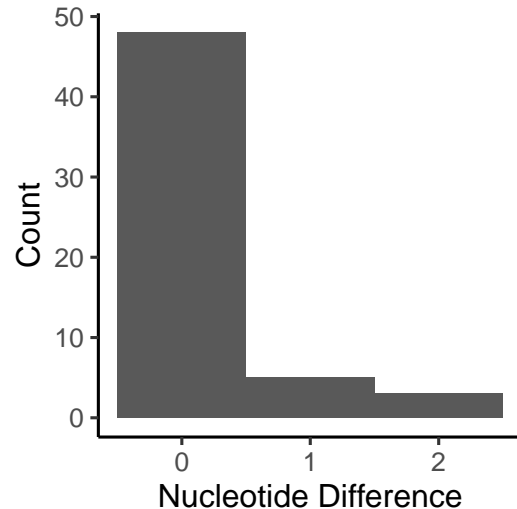
IGHV4-59*08

977 sequences assigned
870 (89%) exact matches, in which:
852 unique CDR3
6 unique J



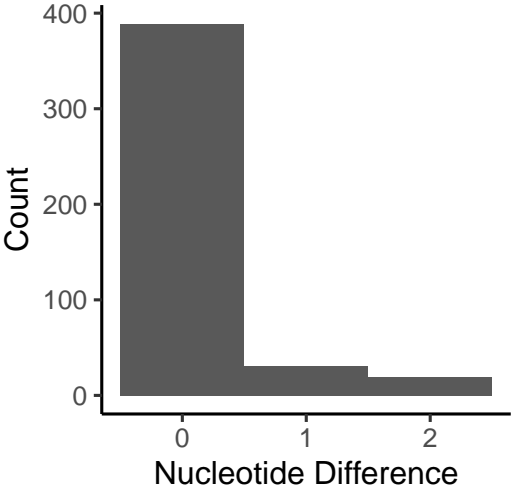
IGHV5-10-1*01_03

56 sequences assigned
48 (85.7%) exact matches, in which:
48 unique CDR3
5 unique J



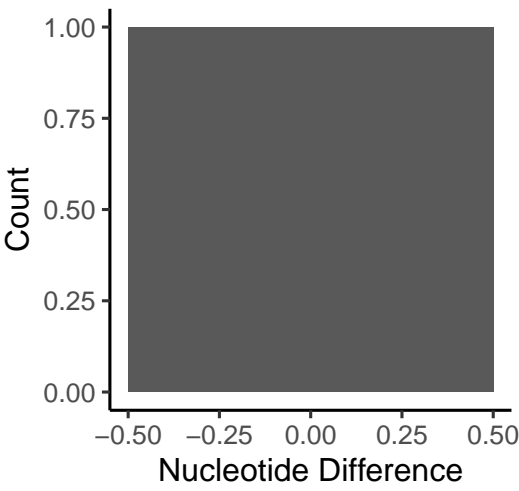
IGHV5–51*01_03

439 sequences assigned
389 (88.6%) exact matches, in which:
388 unique CDR3
6 unique J



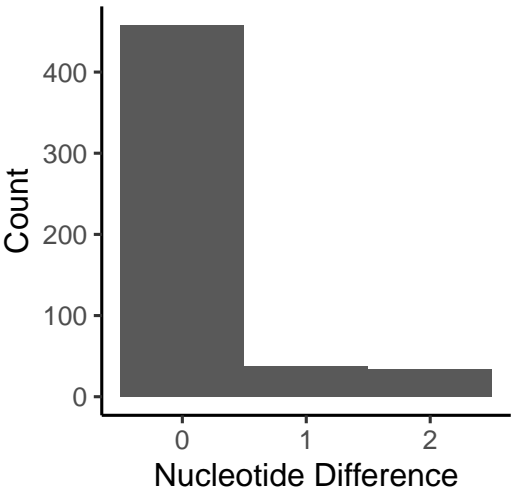
IGHV7–81*01

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



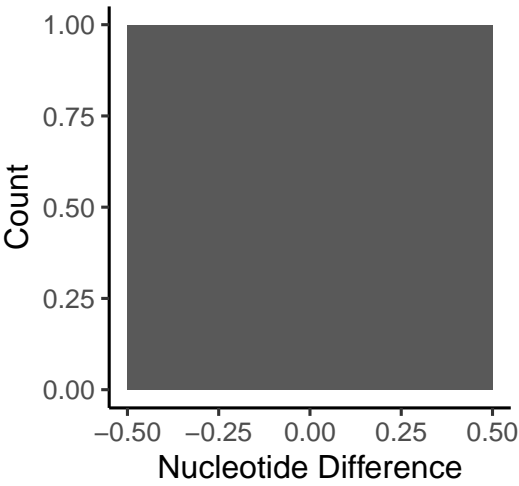
IGHV6–1*01_02

530 sequences assigned
458 (86.4%) exact matches, in which:
456 unique CDR3
6 unique J



IGHV7–4–1*01

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





Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69*04_09_G112A IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–39*02_C258G IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.