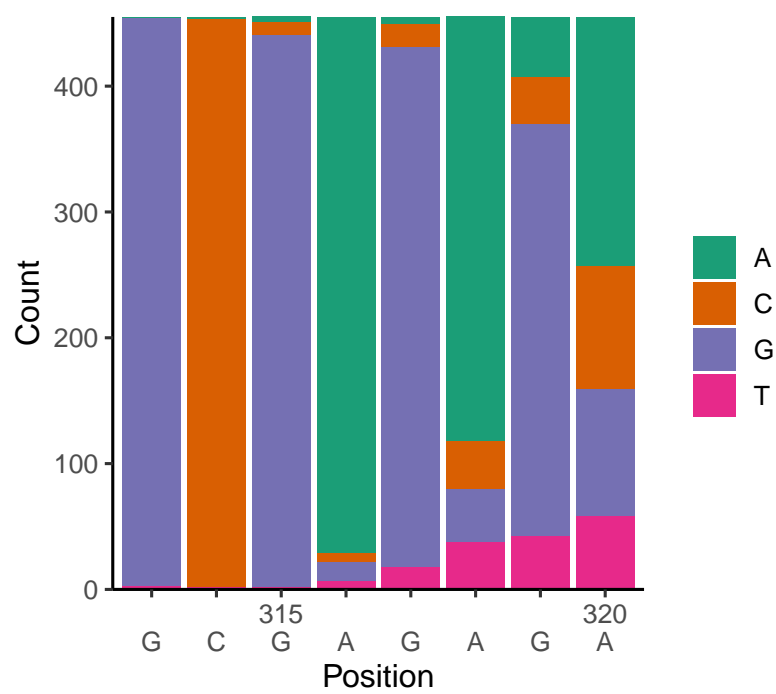
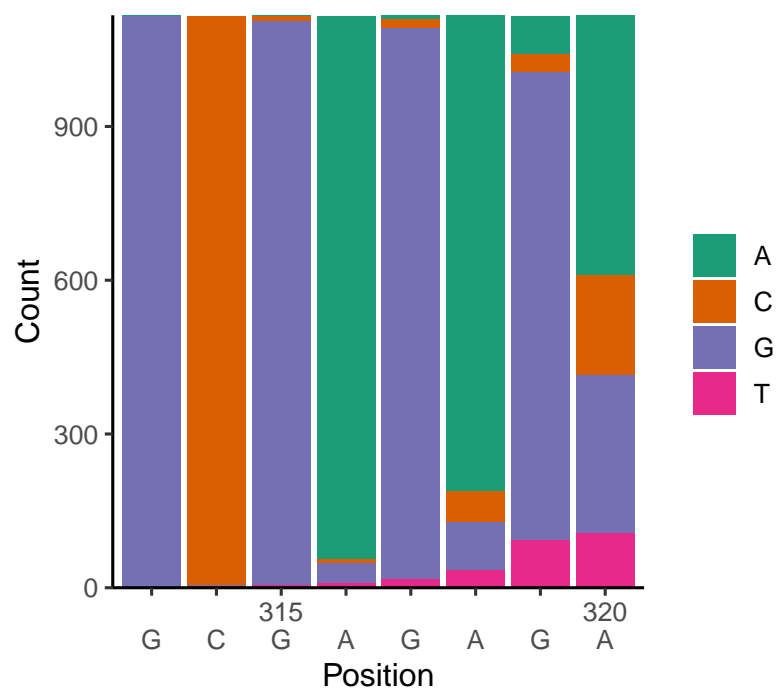


Gene IGHV1-69*08_C191T



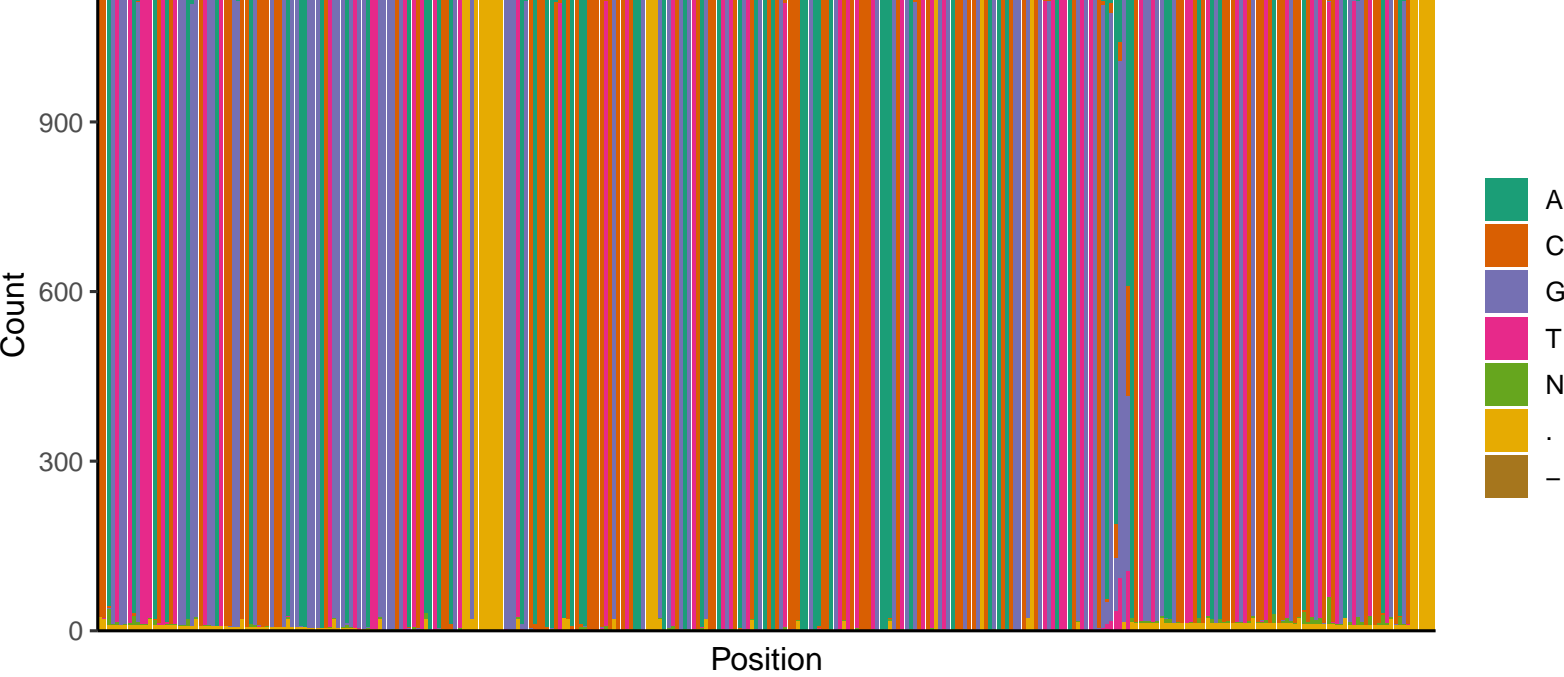
Gene IGHV4-61*02_A234G



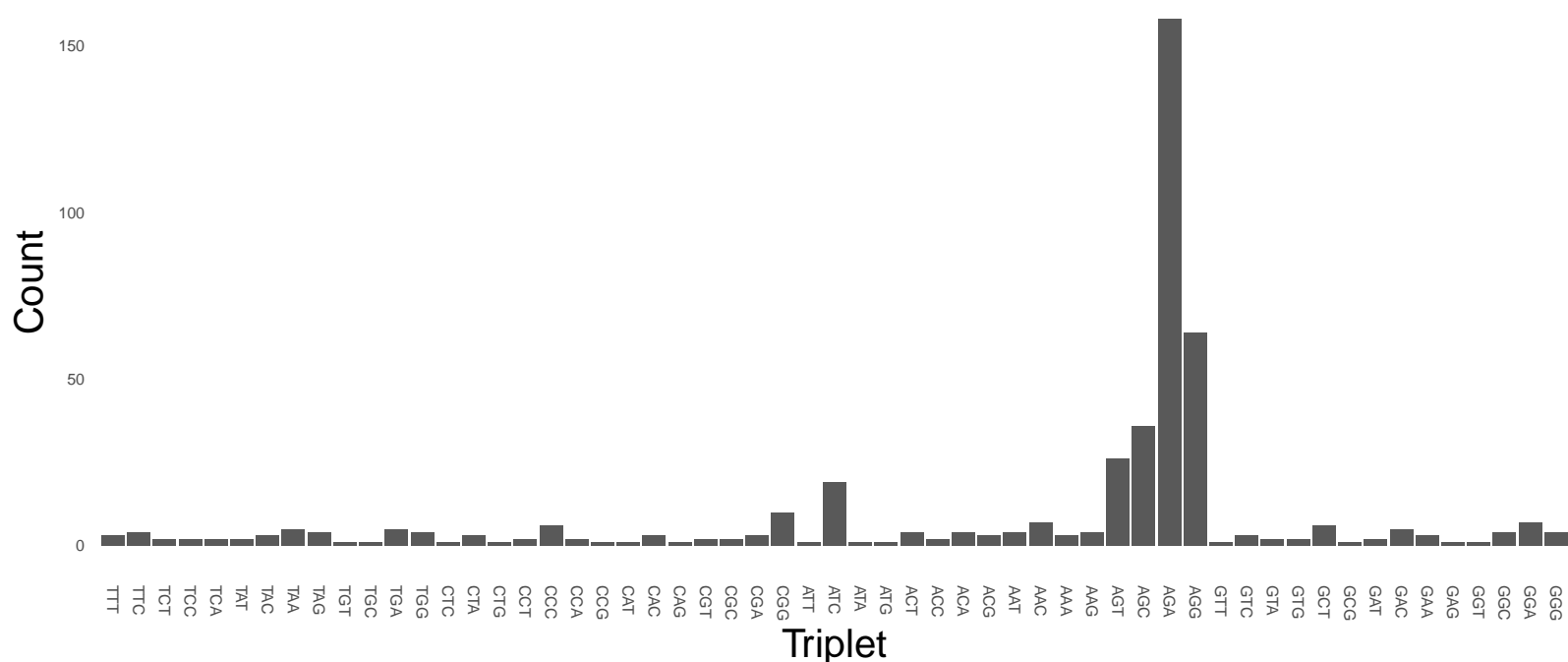
Gene IGHV1-69*08_C191T



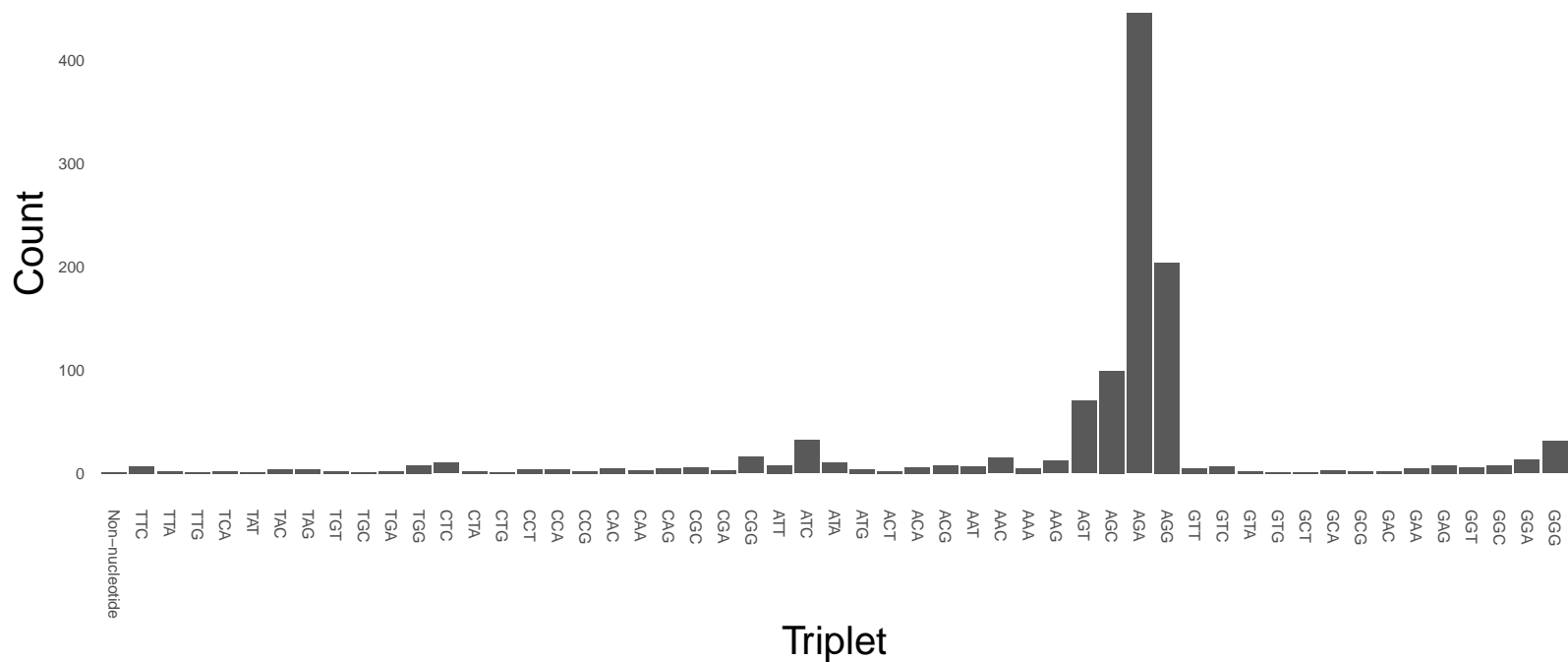
Gene IGHV4-61*02_A234G



IGHV1-69*08_C191T- Final 3 nucleotides as a triplet

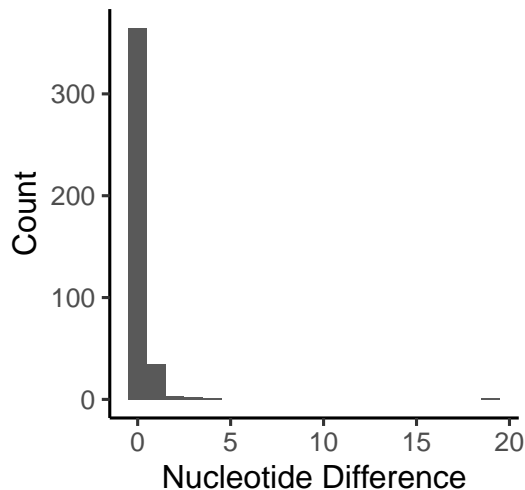


IGHV4-61*02_A234G- Final 3 nucleotides as a triplet



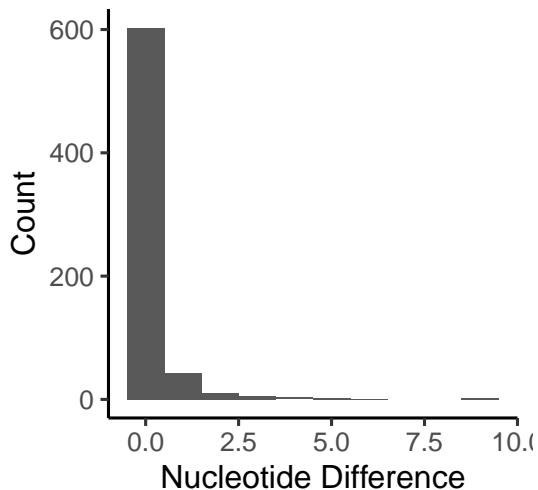
IGHV1-2*04

408 sequences assigned
365 (89.5%) exact matches, in which:
350 unique CDR3
6 unique J



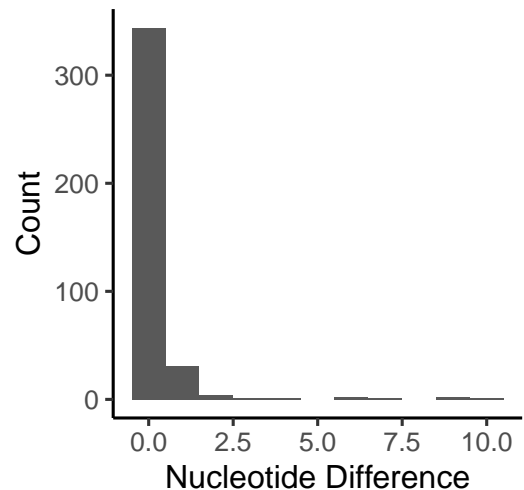
IGHV1-18*01

670 sequences assigned
603 (90%) exact matches, in which:
585 unique CDR3
6 unique J



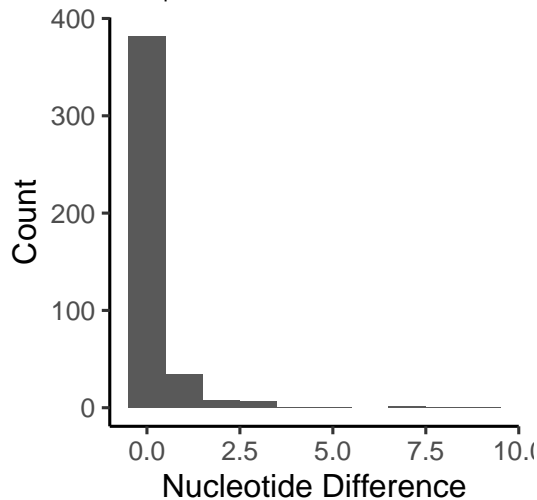
IGHV1-46*01

387 sequences assigned
344 (88.9%) exact matches, in which:
327 unique CDR3
6 unique J



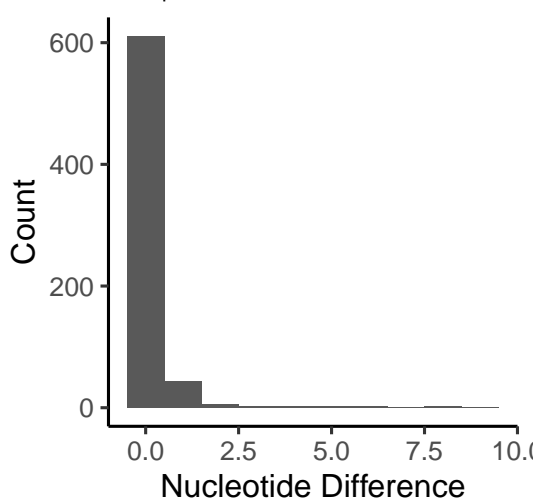
IGHV1-3*01

437 sequences assigned
382 (87.4%) exact matches, in which:
367 unique CDR3
6 unique J



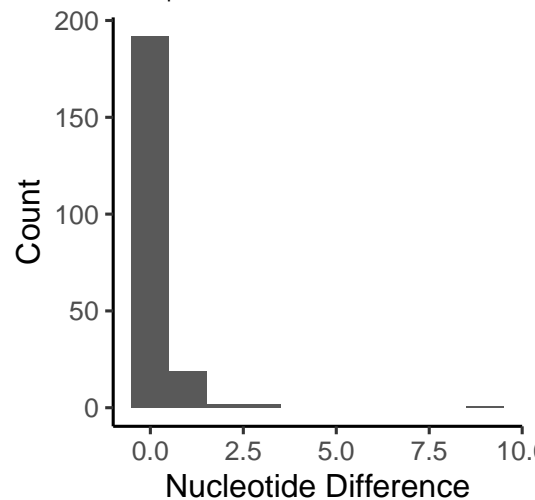
IGHV1-18*04

675 sequences assigned
611 (90.5%) exact matches, in which:
589 unique CDR3
6 unique J



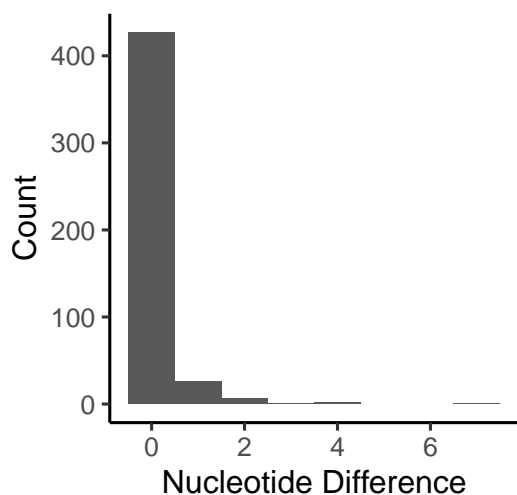
IGHV1-46*03

216 sequences assigned
192 (88.9%) exact matches, in which:
187 unique CDR3
6 unique J



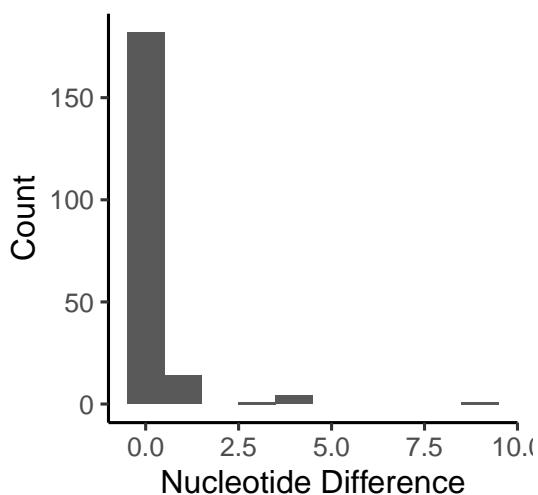
IGHV1-8*01

463 sequences assigned
427 (92.2%) exact matches, in which:
402 unique CDR3
6 unique J



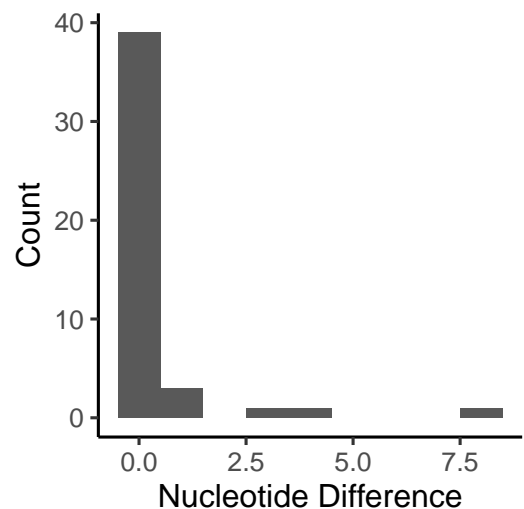
IGHV1-24*01

202 sequences assigned
182 (90.1%) exact matches, in which:
175 unique CDR3
6 unique J



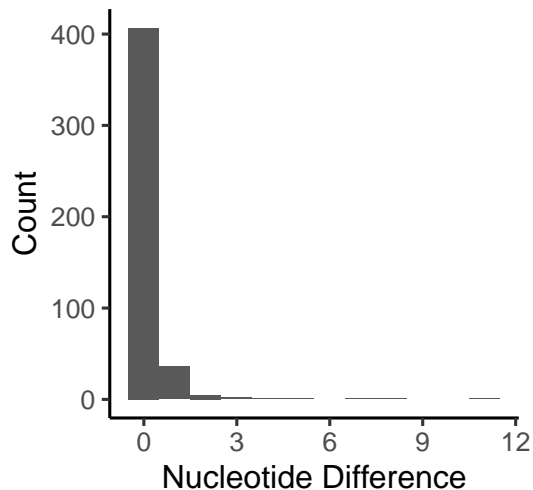
IGHV1-58*02

45 sequences assigned
39 (86.7%) exact matches, in which:
37 unique CDR3
6 unique J



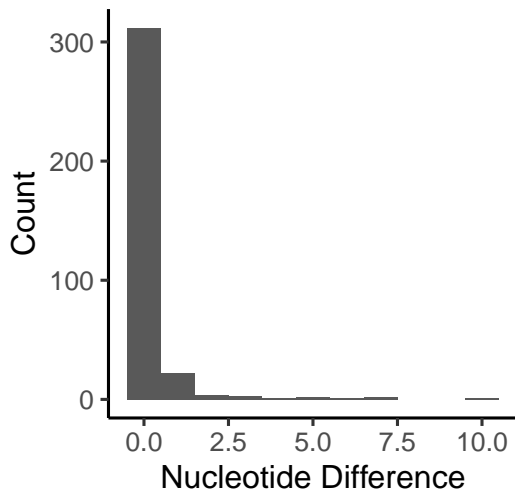
IGHV1–69*08_C191T

455 sequences assigned
407 (89.5%) exact matches, in which:
382 unique CDR3
6 unique J



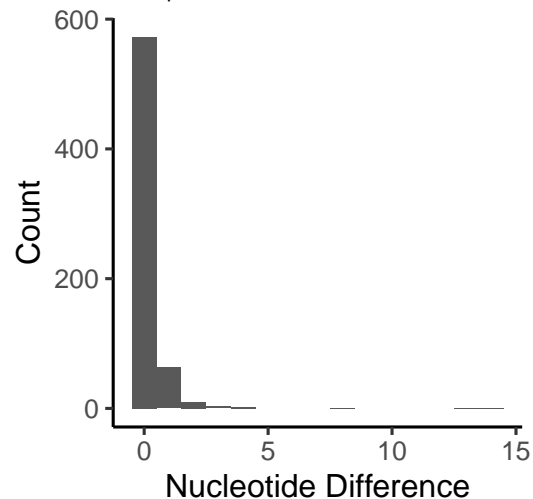
IGHV2–26*01

348 sequences assigned
312 (89.7%) exact matches, in which:
301 unique CDR3
5 unique J



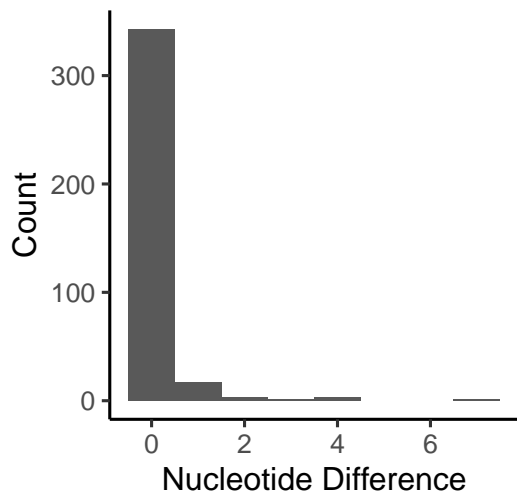
IGHV3–7*03

654 sequences assigned
573 (87.6%) exact matches, in which:
535 unique CDR3
6 unique J



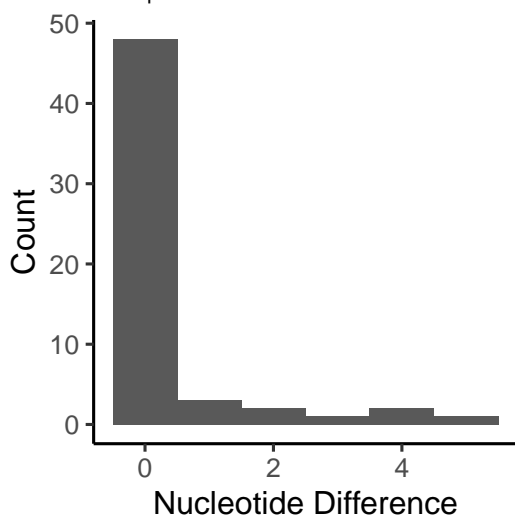
IGHV2–5*01

368 sequences assigned
343 (93.2%) exact matches, in which:
332 unique CDR3
6 unique J



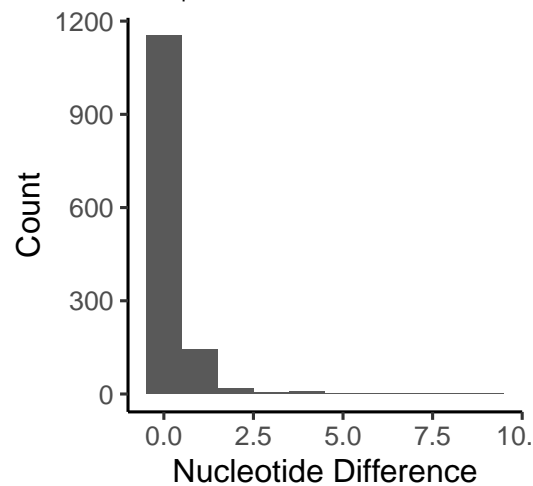
IGHV2–70*01

57 sequences assigned
48 (84.2%) exact matches, in which:
48 unique CDR3
4 unique J



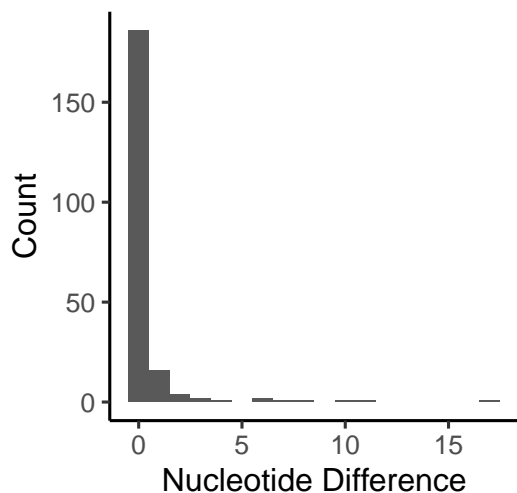
IGHV3–9*01

1340 sequences assigned
1153 (86%) exact matches, in which:
1045 unique CDR3
6 unique J



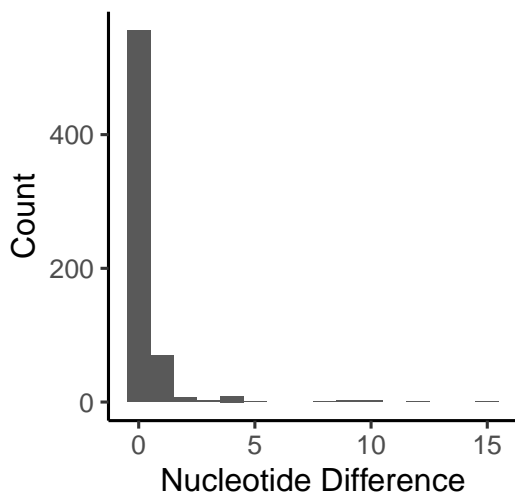
IGHV2–5*02

216 sequences assigned
186 (86.1%) exact matches, in which:
175 unique CDR3
6 unique J



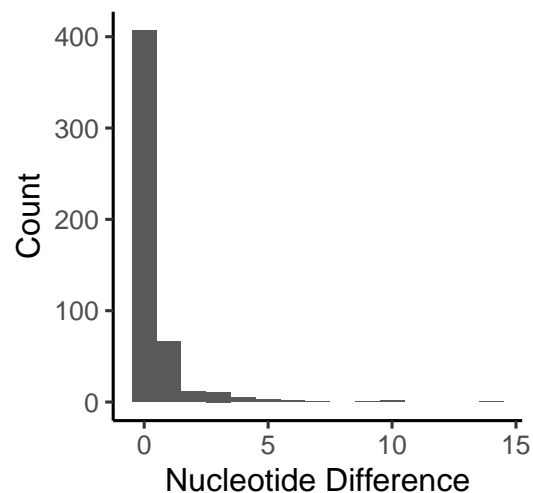
IGHV3–7*01

653 sequences assigned
556 (85.1%) exact matches, in which:
522 unique CDR3
6 unique J



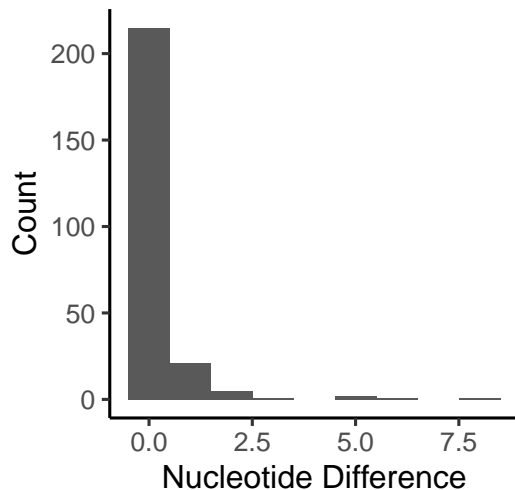
IGHV3–11*01

512 sequences assigned
407 (79.5%) exact matches, in which:
383 unique CDR3
6 unique J



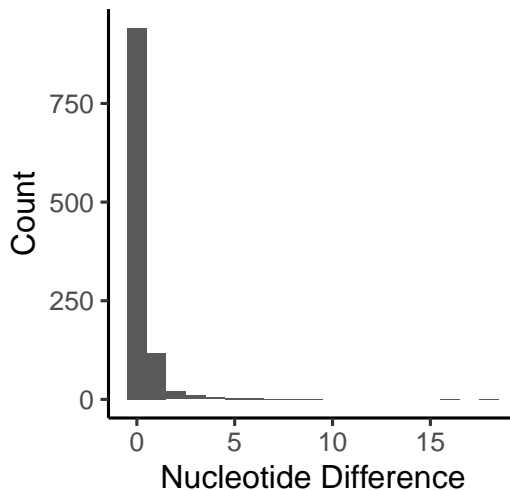
IGHV3-11*06

246 sequences assigned
215 (87.4%) exact matches, in which:
197 unique CDR3
6 unique J



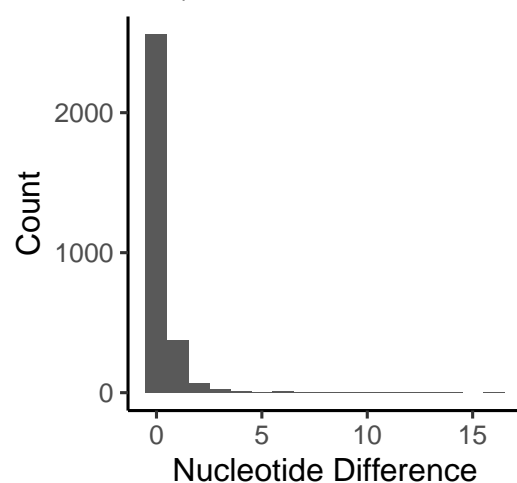
IGHV3-15*01

1111 sequences assigned
942 (84.8%) exact matches, in which:
876 unique CDR3
6 unique J



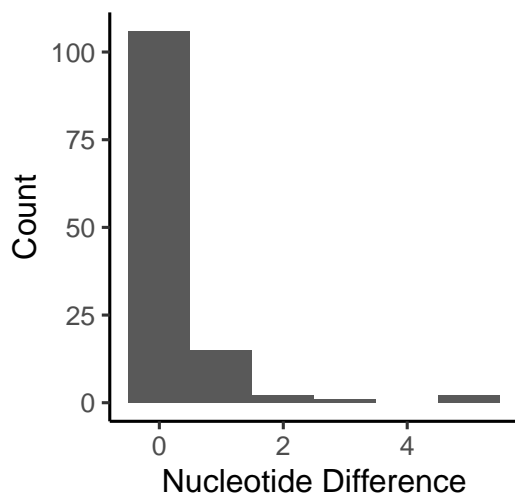
IGHV3-30-3*01

3075 sequences assigned
2559 (83.2%) exact matches, in which:
2365 unique CDR3
6 unique J



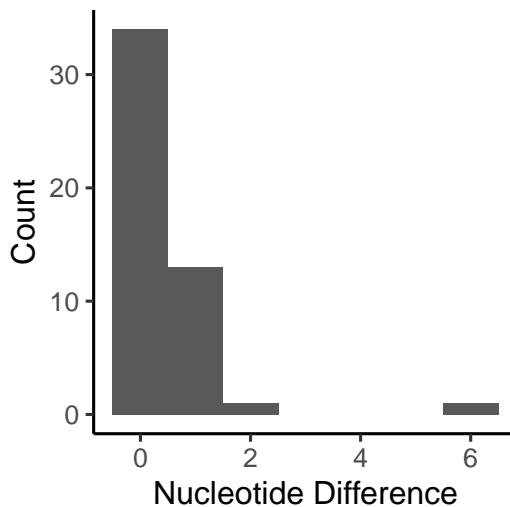
IGHV3-13*01

126 sequences assigned
106 (84.1%) exact matches, in which:
103 unique CDR3
6 unique J



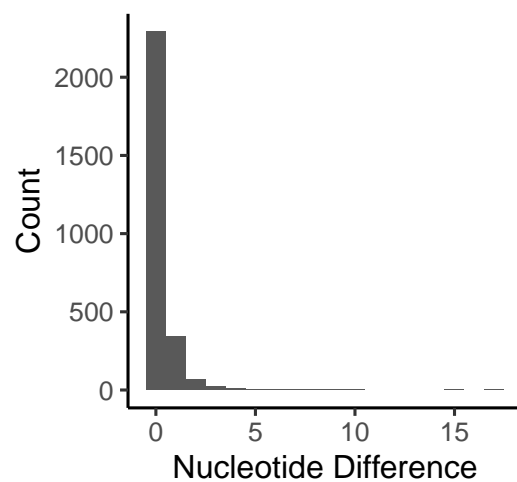
IGHV3-20*01

49 sequences assigned
34 (69.4%) exact matches, in which:
32 unique CDR3
6 unique J



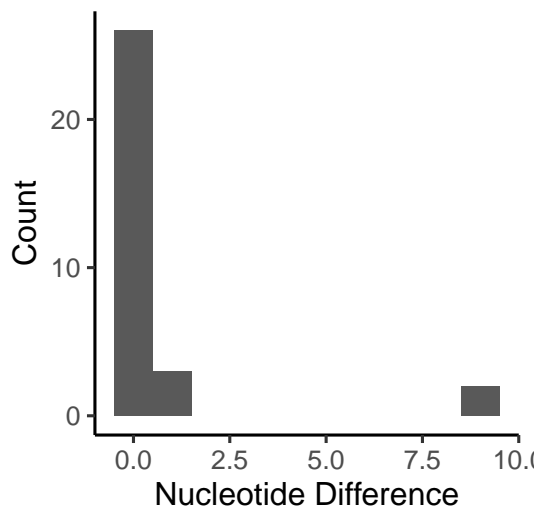
IGHV3-33*01

2755 sequences assigned
2291 (83.2%) exact matches, in which:
2109 unique CDR3
6 unique J



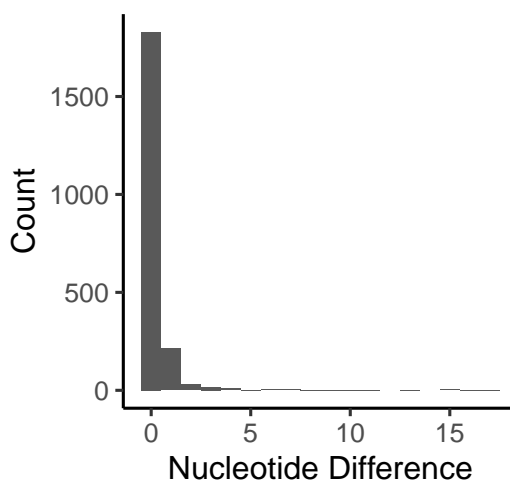
IGHV3-13*05

31 sequences assigned
26 (83.9%) exact matches, in which:
24 unique CDR3
5 unique J



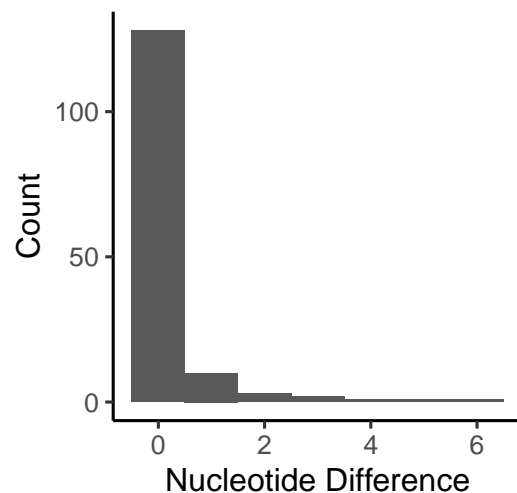
IGHV3-21*01

2127 sequences assigned
1829 (86%) exact matches, in which:
1688 unique CDR3
6 unique J



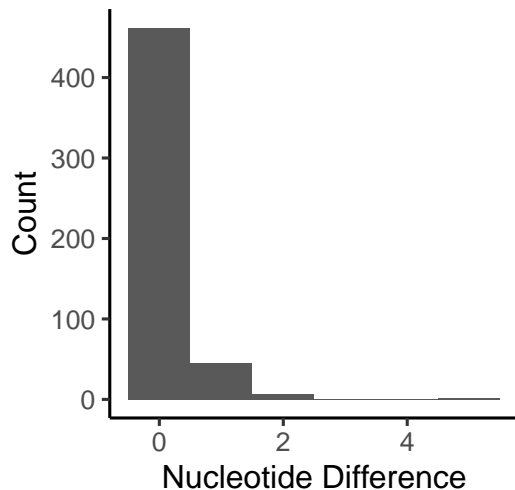
IGHV3-43*01

146 sequences assigned
128 (87.7%) exact matches, in which:
120 unique CDR3
5 unique J



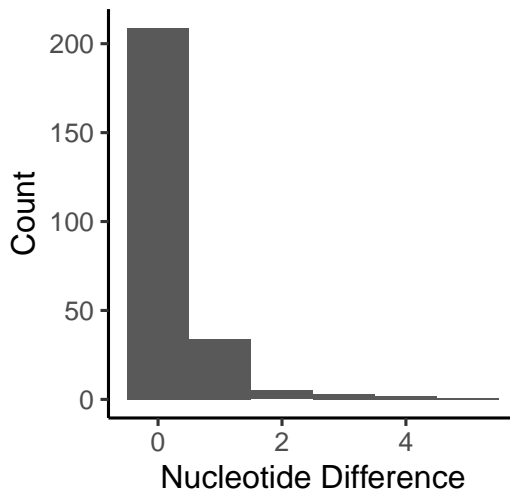
IGHV3-48*01

518 sequences assigned
462 (89.2%) exact matches, in which:
435 unique CDR3
6 unique J



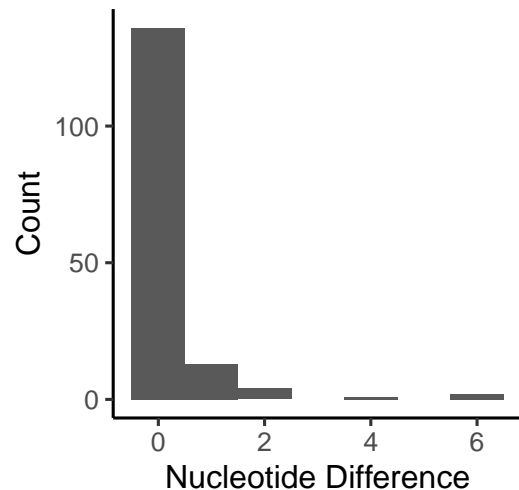
IGHV3-49*05

254 sequences assigned
209 (82.3%) exact matches, in which:
199 unique CDR3
5 unique J



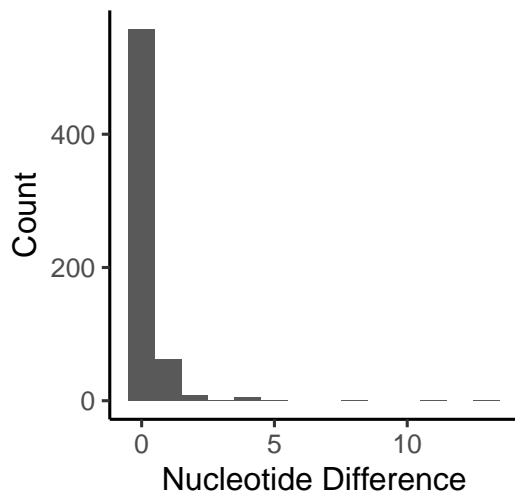
IGHV3-53*02

156 sequences assigned
136 (87.2%) exact matches, in which:
128 unique CDR3
6 unique J



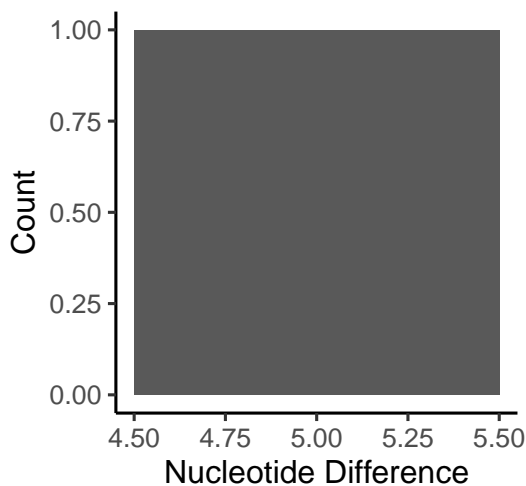
IGHV3-48*02

639 sequences assigned
558 (87.3%) exact matches, in which:
535 unique CDR3
6 unique J



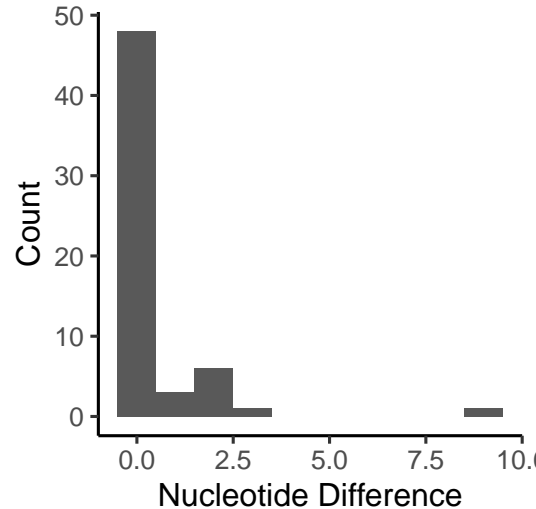
IGHV3-52*01

1 sequences assigned
No exact matches.



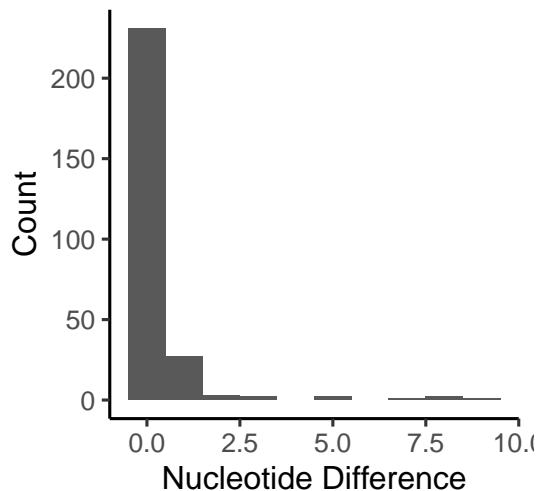
IGHV3-64*01

59 sequences assigned
48 (81.4%) exact matches, in which:
47 unique CDR3
6 unique J



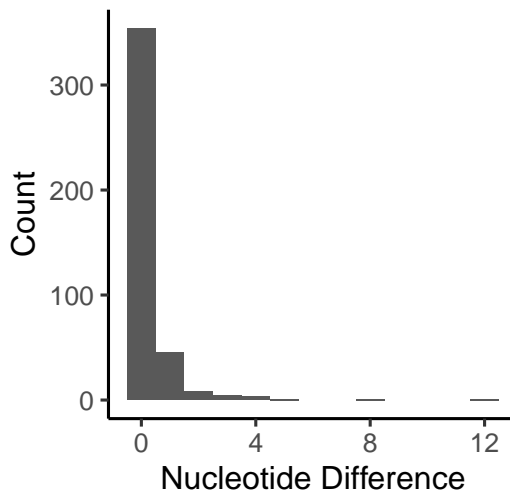
IGHV3-49*03

269 sequences assigned
231 (85.9%) exact matches, in which:
215 unique CDR3
6 unique J



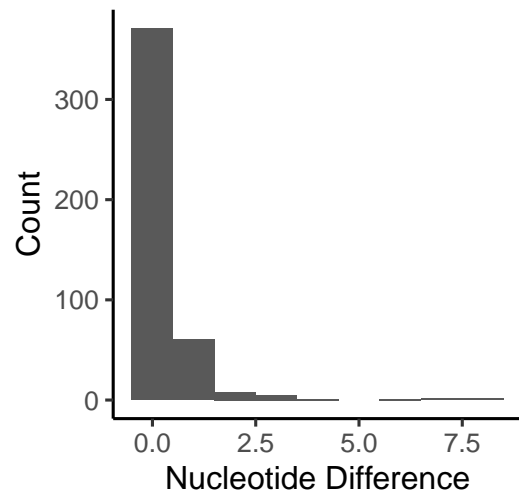
IGHV3-53*01

417 sequences assigned
354 (84.9%) exact matches, in which:
336 unique CDR3
6 unique J



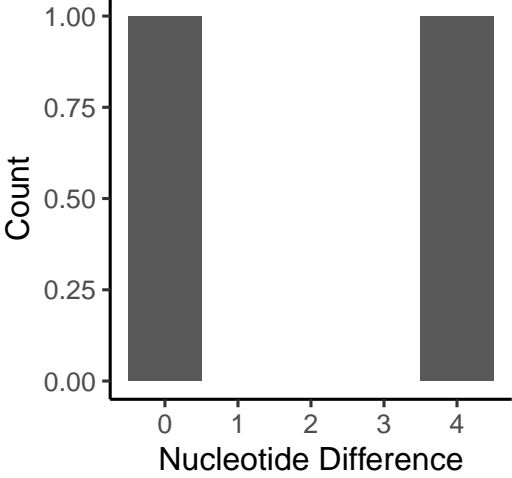
IGHV3-66*02

450 sequences assigned
371 (82.4%) exact matches, in which:
341 unique CDR3
6 unique J



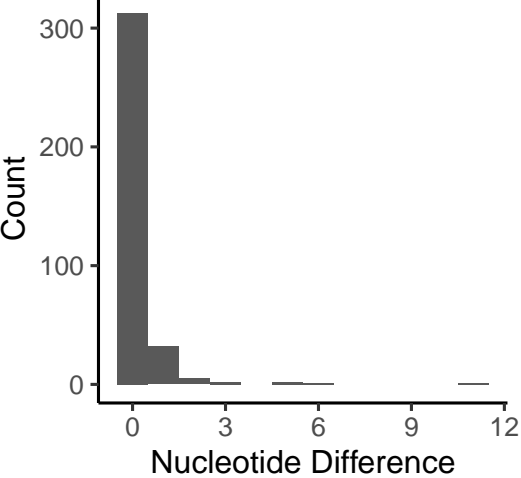
IGHV3-69-1*01

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



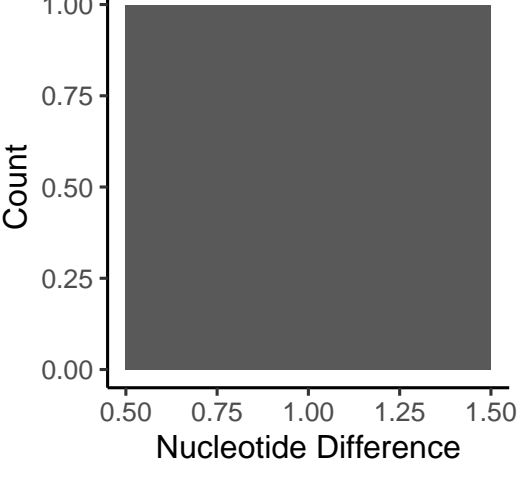
IGHV3-64D*06

356 sequences assigned
313 (87.9%) exact matches, in which:
282 unique CDR3
6 unique J



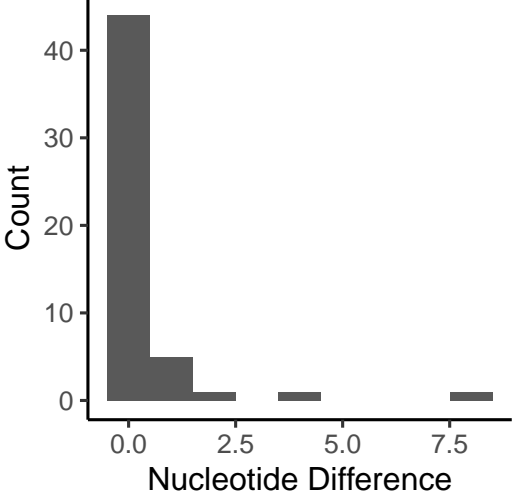
IGHV4-28*04

1 sequences assigned
No exact matches.



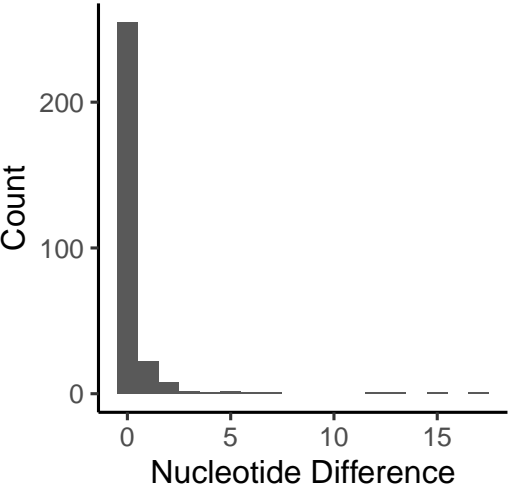
IGHV3-72*01

52 sequences assigned
44 (84.6%) exact matches, in which:
40 unique CDR3
5 unique J



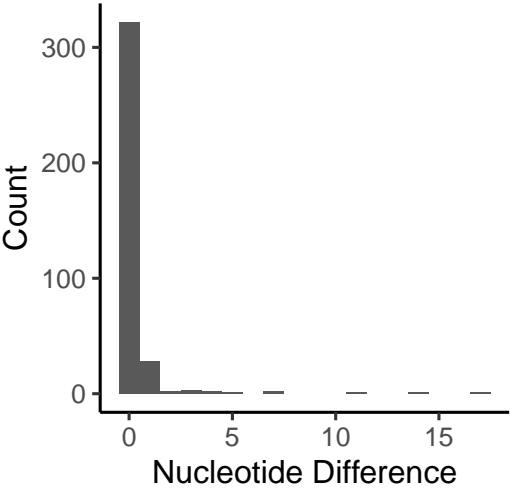
IGHV4-4*02

296 sequences assigned
255 (86.1%) exact matches, in which:
251 unique CDR3
6 unique J



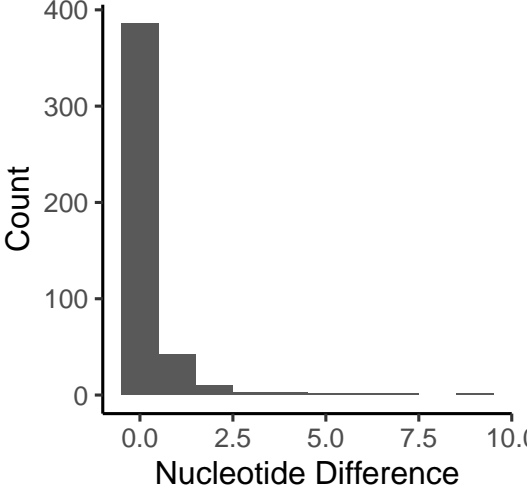
IGHV4-30-2*01

363 sequences assigned
322 (88.7%) exact matches, in which:
312 unique CDR3
6 unique J



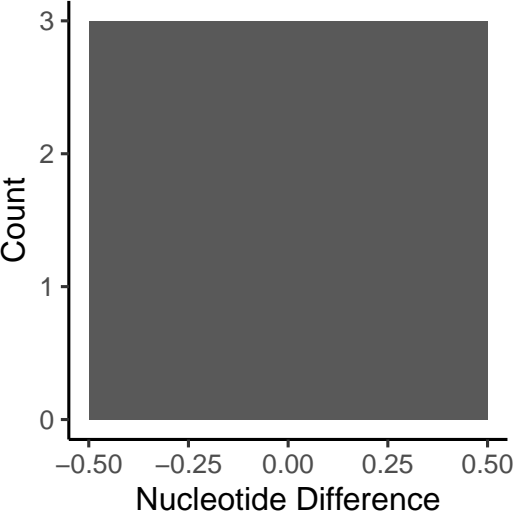
IGHV3-74*01

452 sequences assigned
386 (85.4%) exact matches, in which:
374 unique CDR3
6 unique J



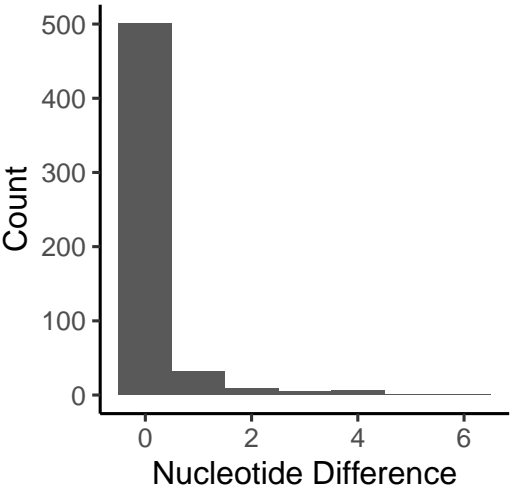
IGHV4-28*01

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



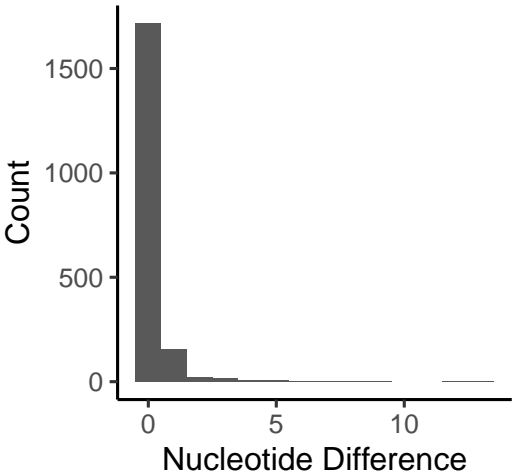
IGHV4-30-4*01

555 sequences assigned
501 (90.3%) exact matches, in which:
479 unique CDR3
6 unique J



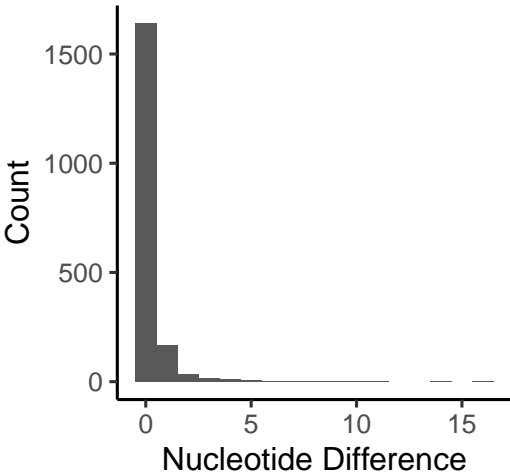
IGHV4-31*03

1942 sequences assigned
1716 (88.4%) exact matches, in which:
1638 unique CDR3
6 unique J



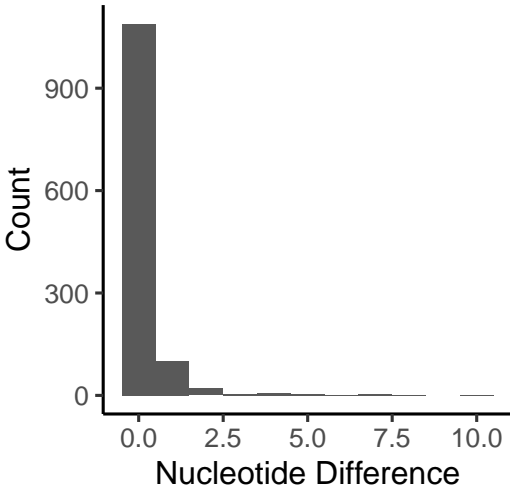
IGHV4-39*01

1889 sequences assigned
1640 (86.8%) exact matches, in which:
1554 unique CDR3
6 unique J



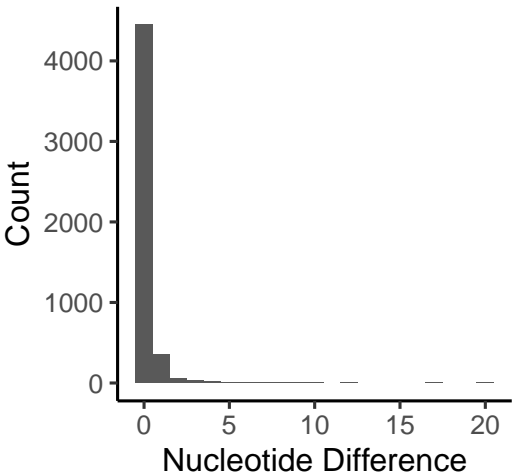
IGHV4-61*02

1230 sequences assigned
1089 (88.5%) exact matches, in which:
1039 unique CDR3
6 unique J



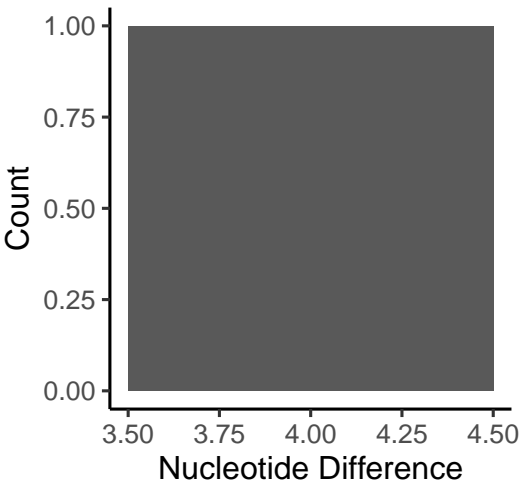
IGHV4-34*01

4944 sequences assigned
4449 (90%) exact matches, in which:
4158 unique CDR3
6 unique J



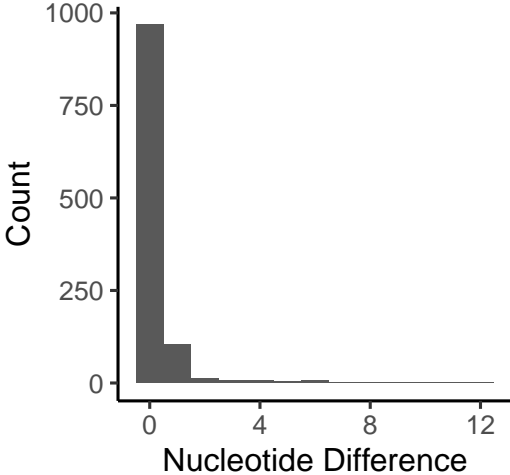
IGHV4-55*08

1 sequences assigned
No exact matches.



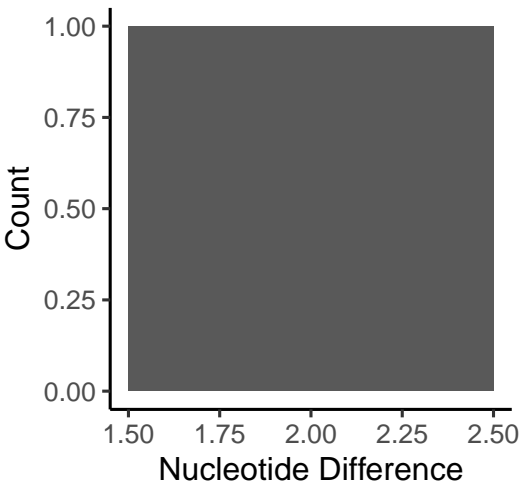
IGHV4-61*02_A234G

1117 sequences assigned
968 (86.7%) exact matches, in which:
918 unique CDR3
6 unique J



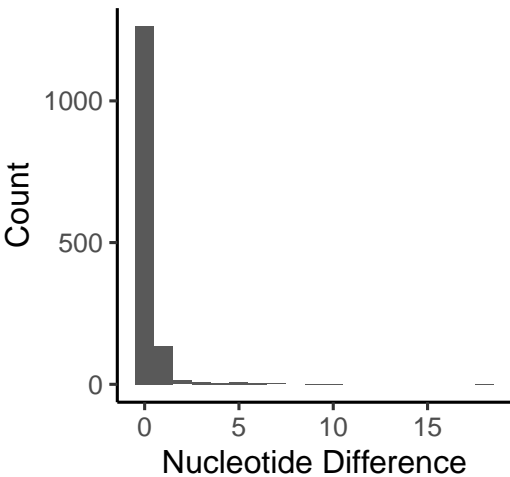
IGHV4-38-2*02

1 sequences assigned
No exact matches.



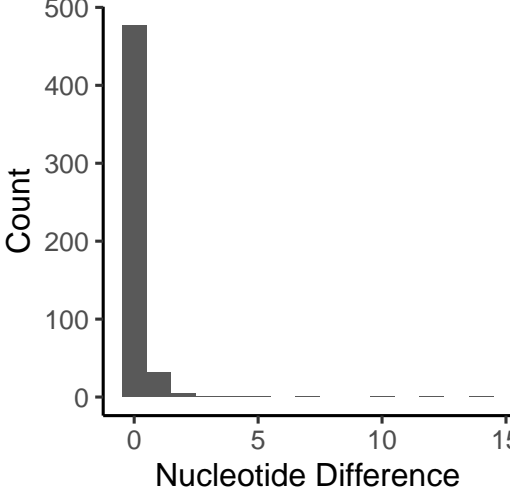
IGHV4-59*01

1444 sequences assigned
1264 (87.5%) exact matches, in which:
1205 unique CDR3
6 unique J



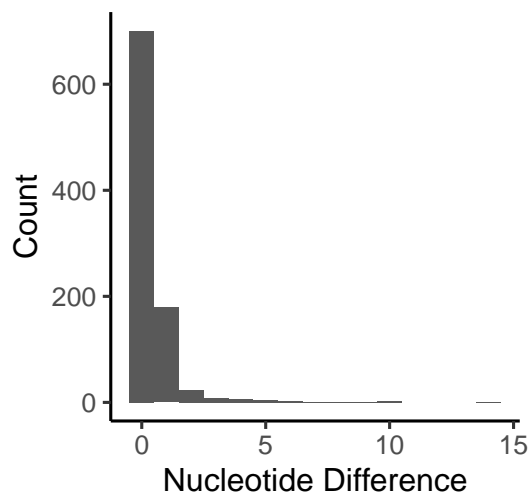
IGHV5-10-1*03

520 sequences assigned
477 (91.7%) exact matches, in which:
456 unique CDR3
6 unique J



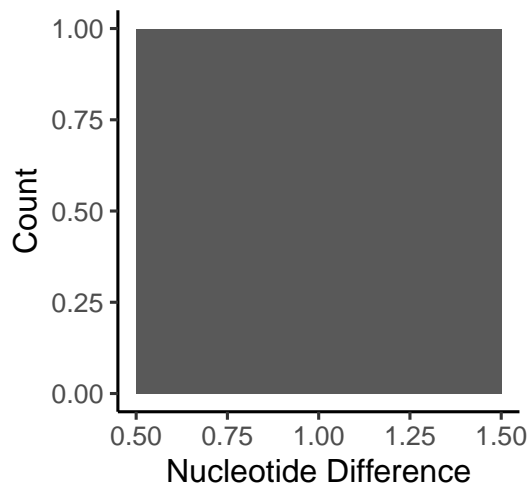
IGHV5–51*01

931 sequences assigned
701 (75.3%) exact matches, in which:
665 unique CDR3
6 unique J



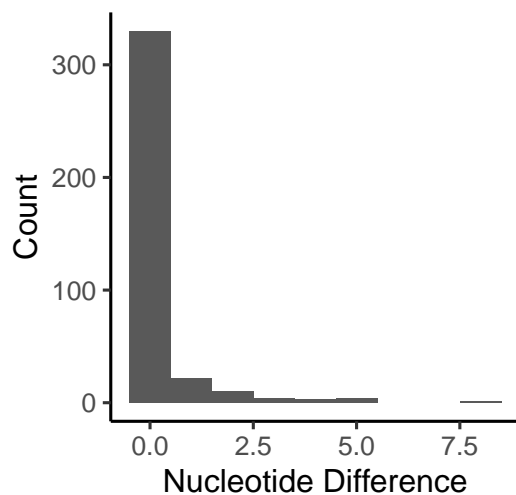
IGHV3/OR16–12*01

1 sequences assigned
No exact matches.



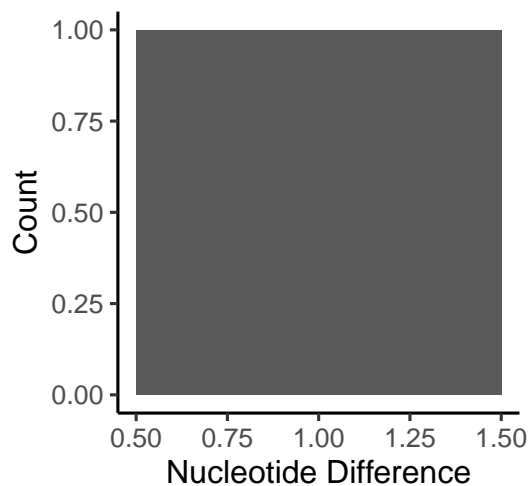
IGHV5–51*03

374 sequences assigned
330 (88.2%) exact matches, in which:
314 unique CDR3
5 unique J



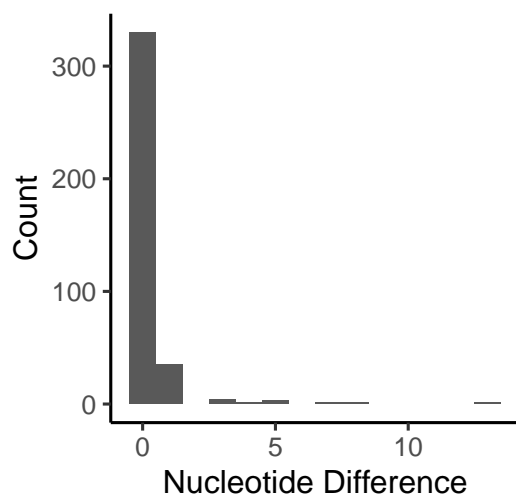
IGHV3/OR16–13*01

1 sequences assigned
No exact matches.



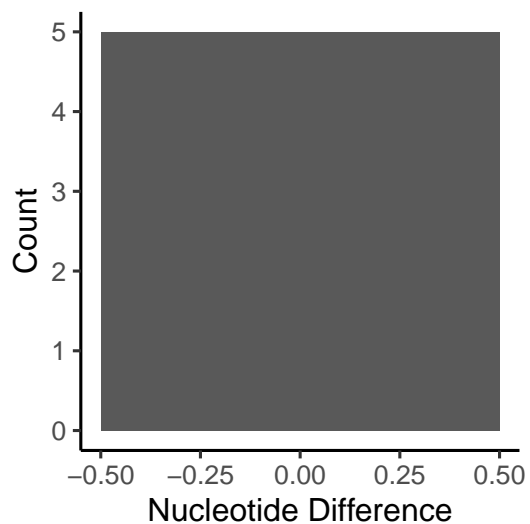
IGHV6–1*01

376 sequences assigned
330 (87.8%) exact matches, in which:
309 unique CDR3
6 unique J

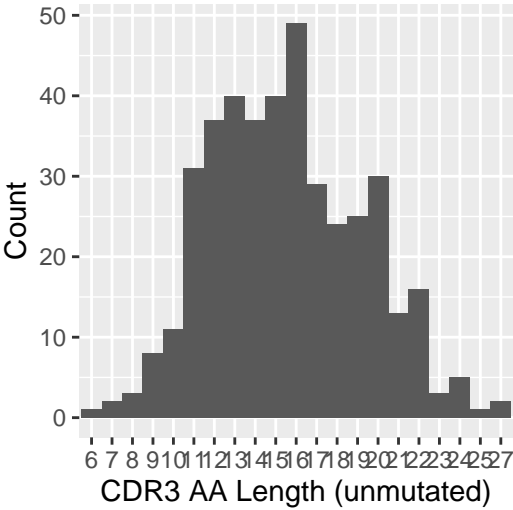


IGHV7–4–1*01

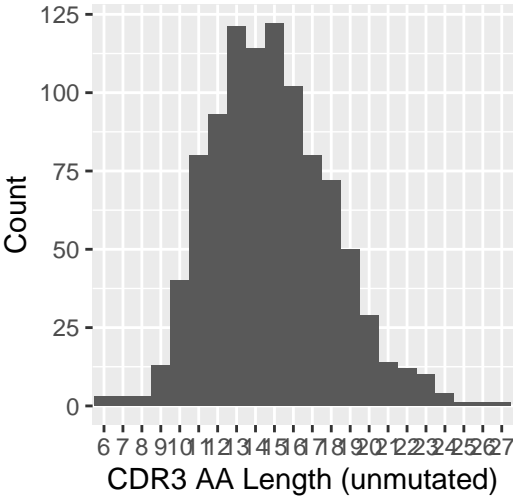
5 sequences assigned
5 (100%) exact matches, in which:
5 unique CDR3
2 unique J



IGHV1-69*08_C191T



IGHV4-61*02_A234G





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