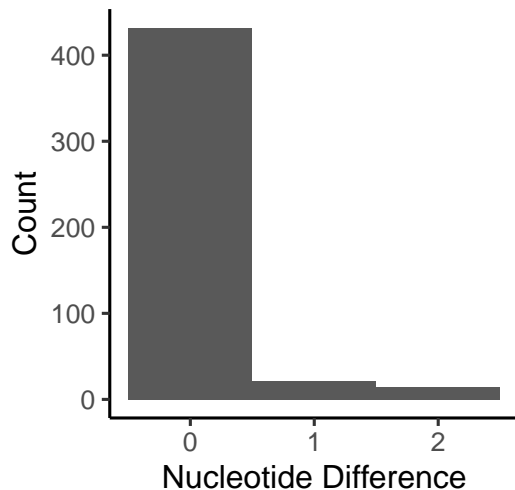


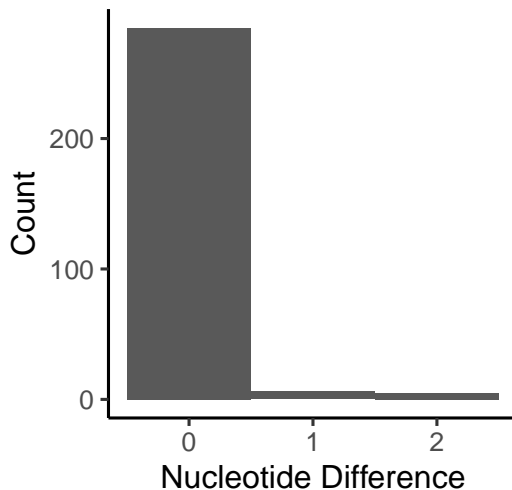
IGHV1-2*04

467 sequences assigned
432 (92.5%) exact matches, in which:
424 unique CDR3
6 unique J



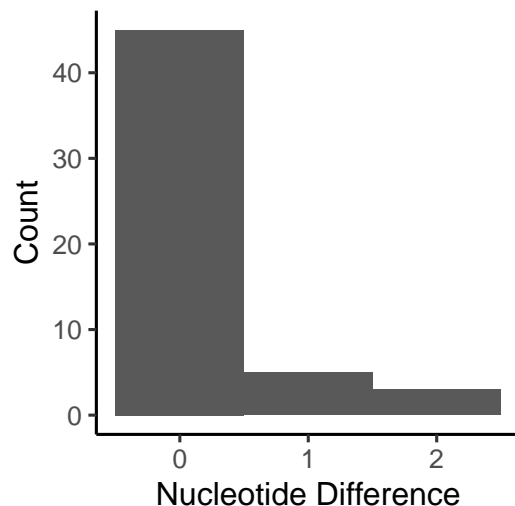
IGHV1-24*01

296 sequences assigned
285 (96.3%) exact matches, in which:
281 unique CDR3
7 unique J



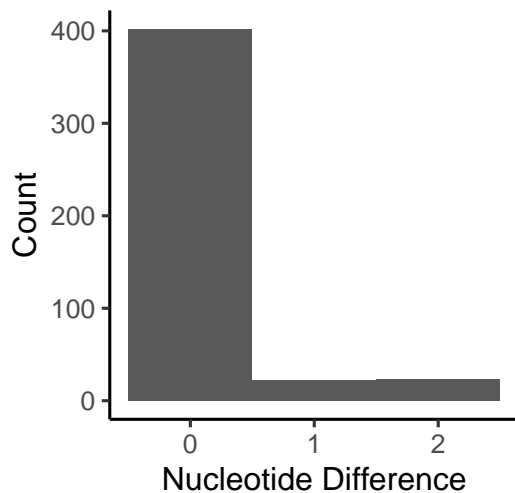
IGHV1-58*02

53 sequences assigned
45 (84.9%) exact matches, in which:
44 unique CDR3
5 unique J



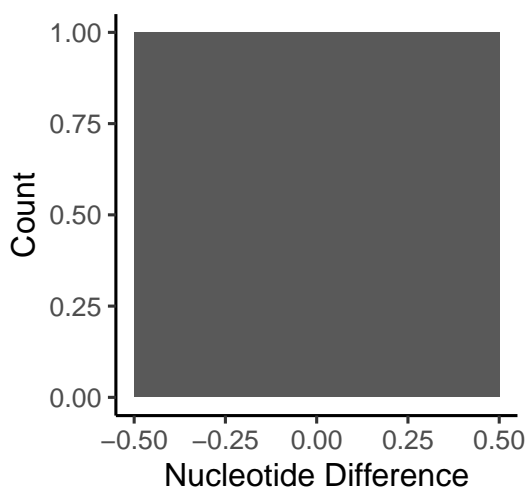
IGHV1-3*01_05

447 sequences assigned
402 (89.9%) exact matches, in which:
397 unique CDR3
7 unique J



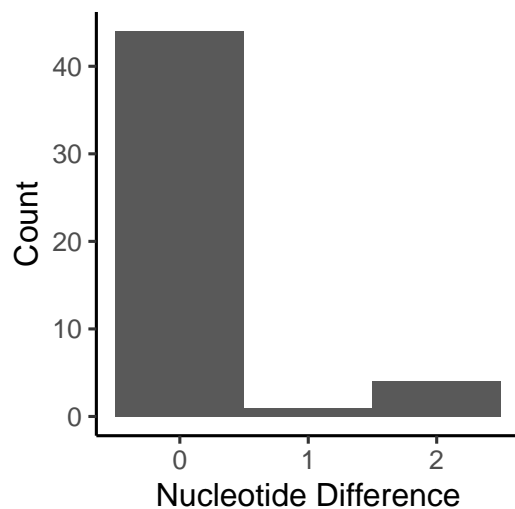
IGHV1-45*02

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



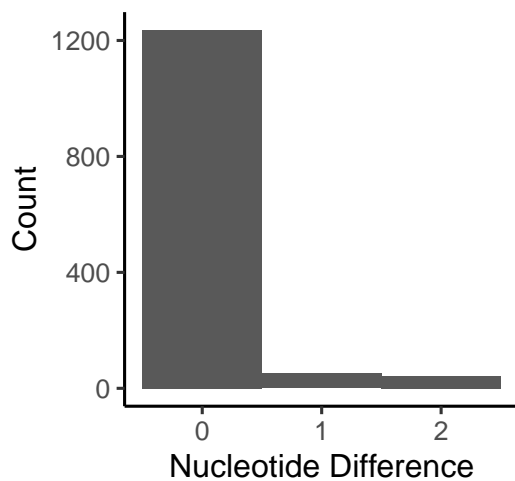
IGHV1-58*01_03

49 sequences assigned
44 (89.8%) exact matches, in which:
44 unique CDR3
4 unique J



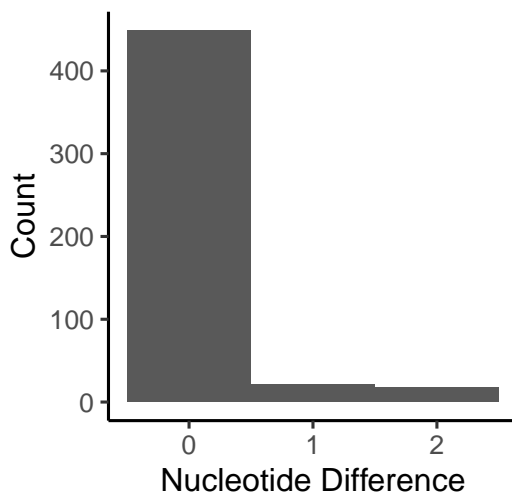
IGHV1-18*01

1330 sequences assigned
1236 (92.9%) exact matches, in which:
1227 unique CDR3
7 unique J



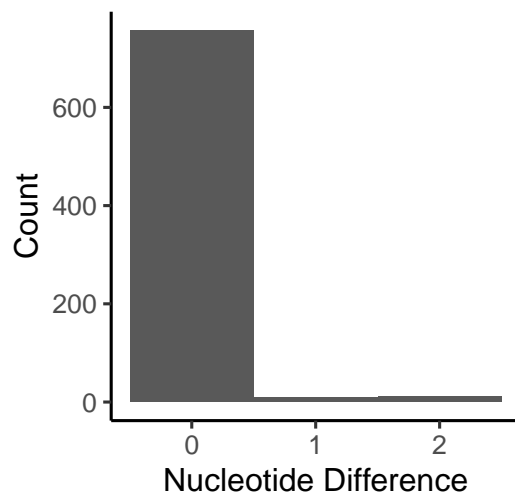
IGHV1-46*01

488 sequences assigned
449 (92%) exact matches, in which:
442 unique CDR3
7 unique J



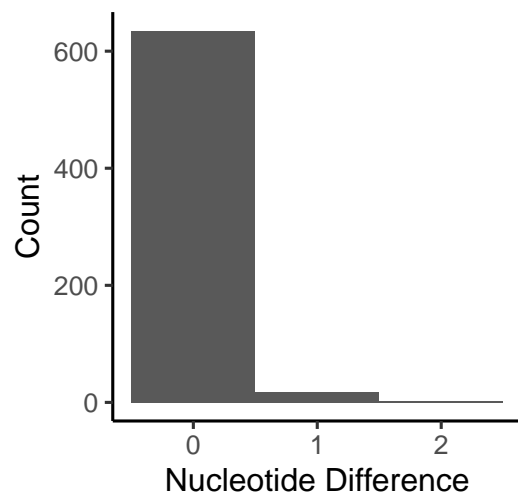
IGHV1-69*01_12_13

777 sequences assigned
757 (97.4%) exact matches, in which:
752 unique CDR3
7 unique J



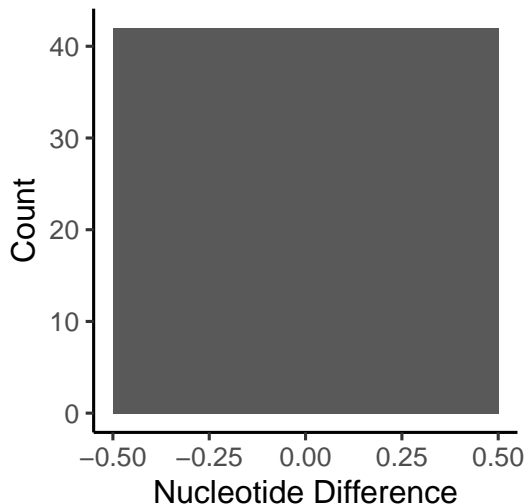
IGHV1-69*04_09

655 sequences assigned
635 (96.9%) exact matches, in which:
631 unique CDR3
7 unique J



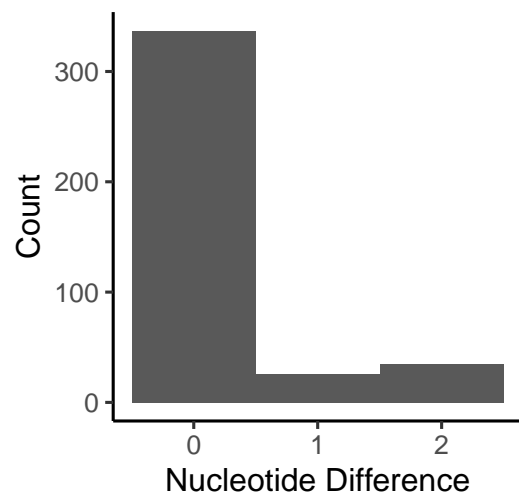
IGHV2-26*01

42 sequences assigned
42 (100%) exact matches, in which:
42 unique CDR3
5 unique J



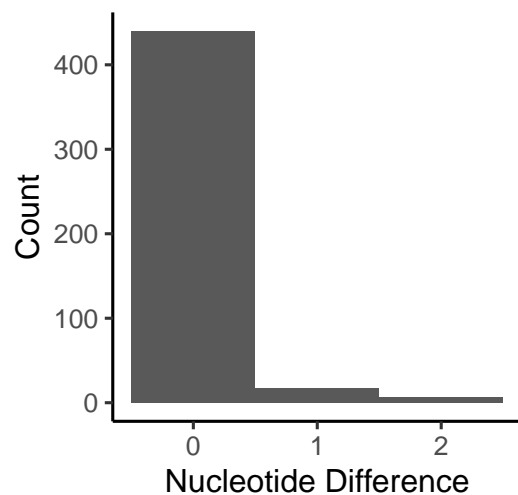
IGHV3-7*03

398 sequences assigned
337 (84.7%) exact matches, in which:
324 unique CDR3
7 unique J



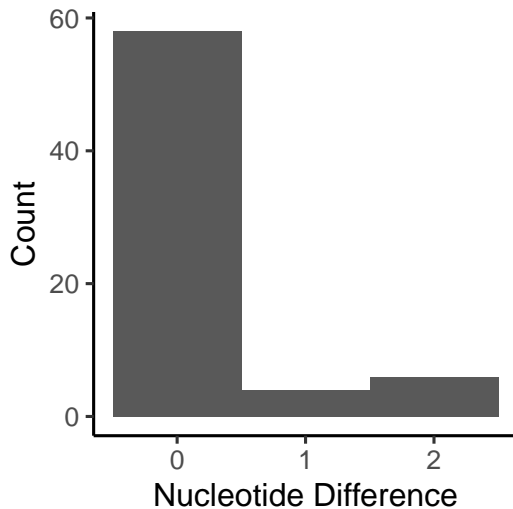
IGHV1-69*06_14

464 sequences assigned
440 (94.8%) exact matches, in which:
436 unique CDR3
6 unique J



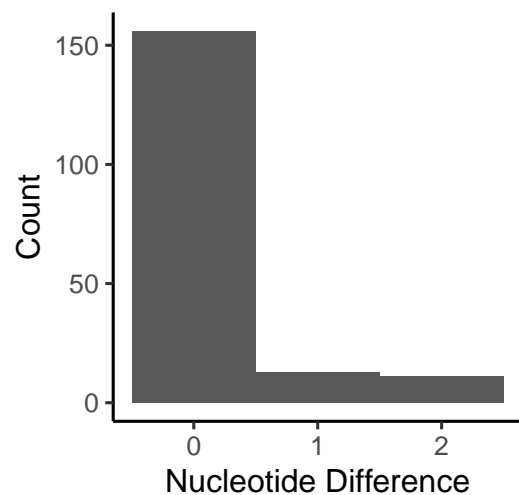
IGHV2-70*01

68 sequences assigned
58 (85.3%) exact matches, in which:
57 unique CDR3
4 unique J



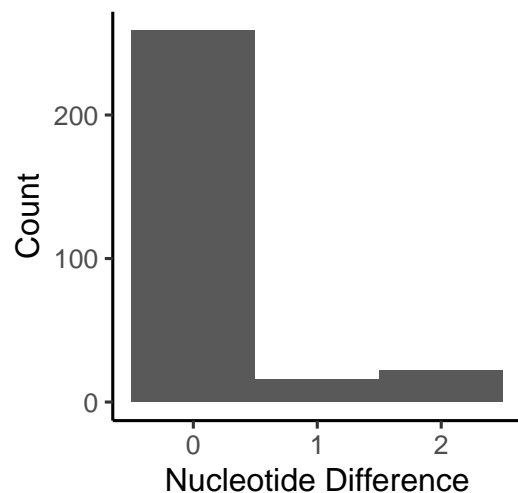
IGHV3-7*04

180 sequences assigned
156 (86.7%) exact matches, in which:
151 unique CDR3
6 unique J



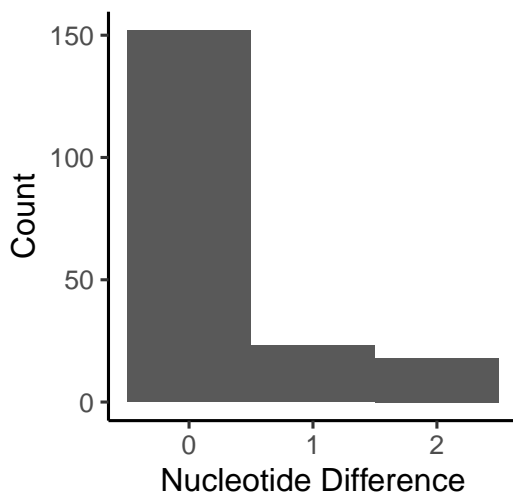
IGHV2-5*02

297 sequences assigned
259 (87.2%) exact matches, in which:
255 unique CDR3
7 unique J



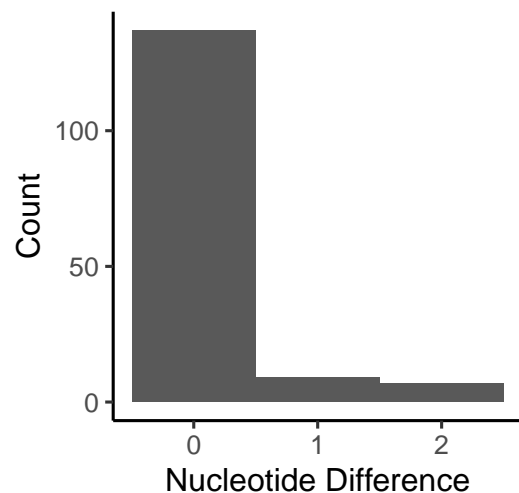
IGHV2-70*11_15

193 sequences assigned
152 (78.8%) exact matches, in which:
149 unique CDR3
5 unique J



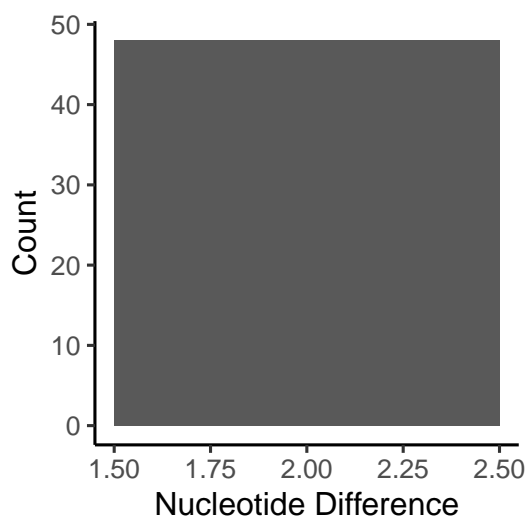
IGHV3-11*06

153 sequences assigned
137 (89.5%) exact matches, in which:
137 unique CDR3
6 unique J



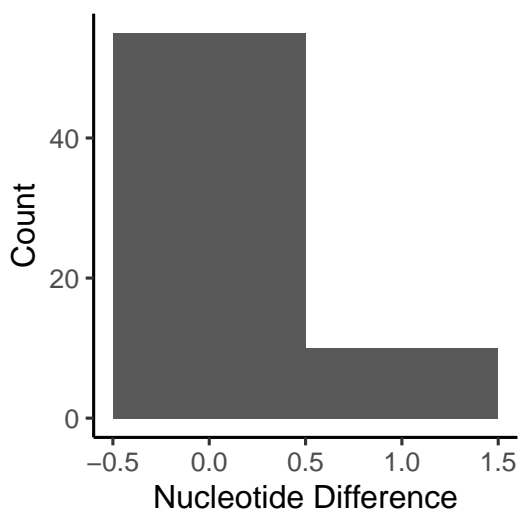
IGHV3-13*01

48 sequences assigned
No exact matches.



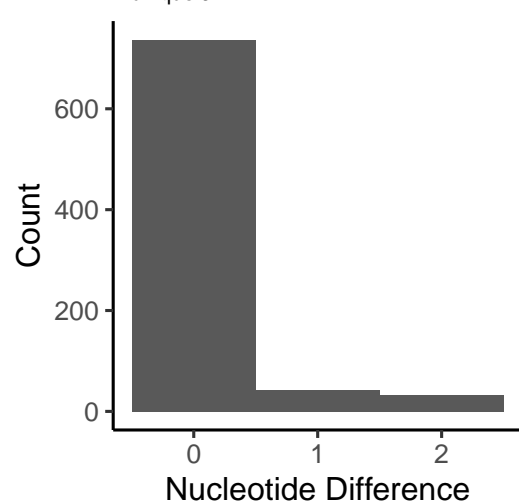
IGHV3-20*03_04

65 sequences assigned
55 (84.6%) exact matches, in which:
53 unique CDR3
6 unique J



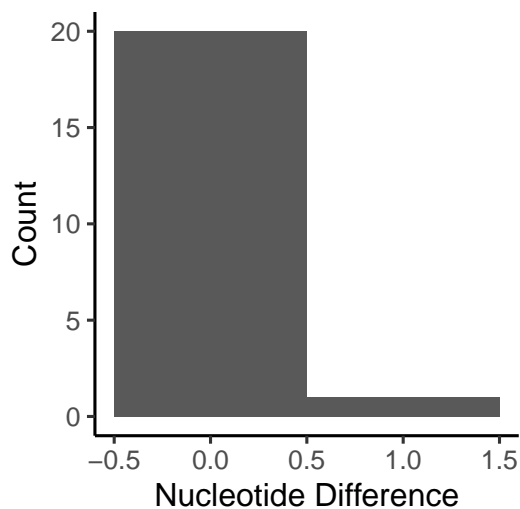
IGHV3-30-3*01

812 sequences assigned
737 (90.8%) exact matches, in which:
724 unique CDR3
7 unique J



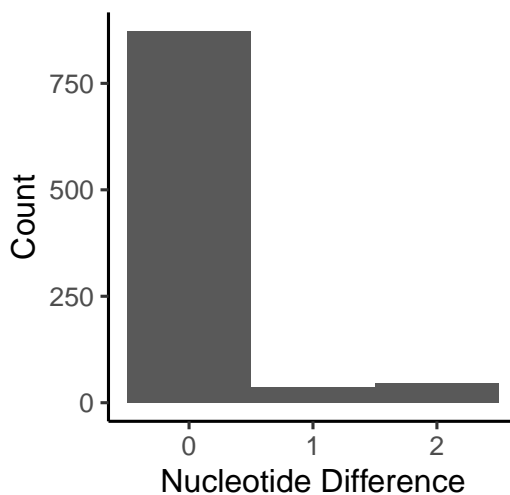
IGHV3-13*05

21 sequences assigned
20 (95.2%) exact matches, in which:
19 unique CDR3
4 unique J



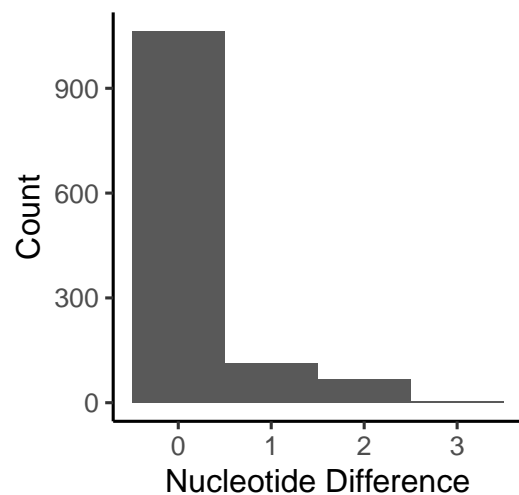
IGHV3-21*01_02

955 sequences assigned
873 (91.4%) exact matches, in which:
834 unique CDR3
7 unique J



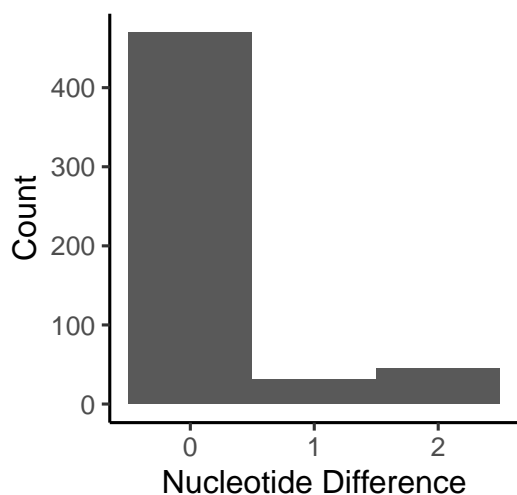
IGHV3-33*01

1247 sequences assigned
1064 (85.3%) exact matches, in which:
1032 unique CDR3
7 unique J



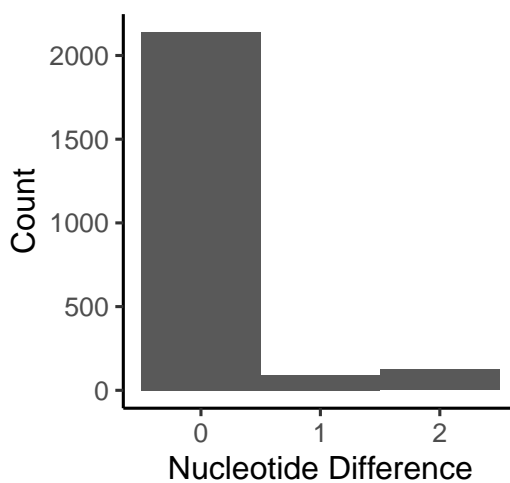
IGHV3-15*07

546 sequences assigned
470 (86.1%) exact matches, in which:
455 unique CDR3
7 unique J



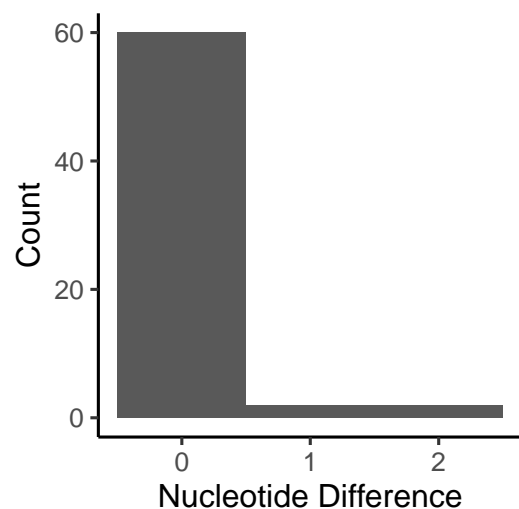
IGHV3-23*01_04

2356 sequences assigned
2140 (90.8%) exact matches, in which:
2074 unique CDR3
7 unique J



IGHV3-43*01

64 sequences assigned
60 (93.8%) exact matches, in which:
60 unique CDR3
6 unique J



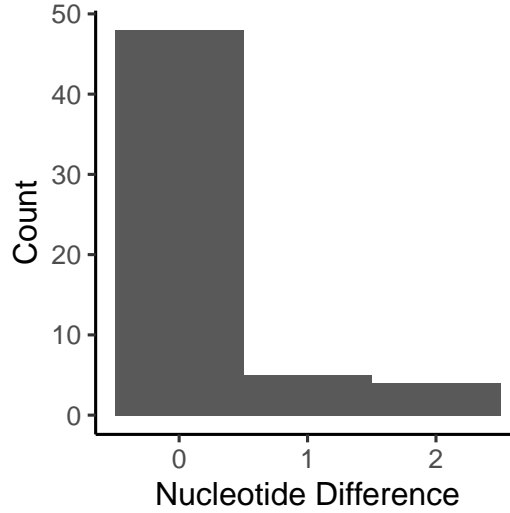
IGHV3-47*02

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



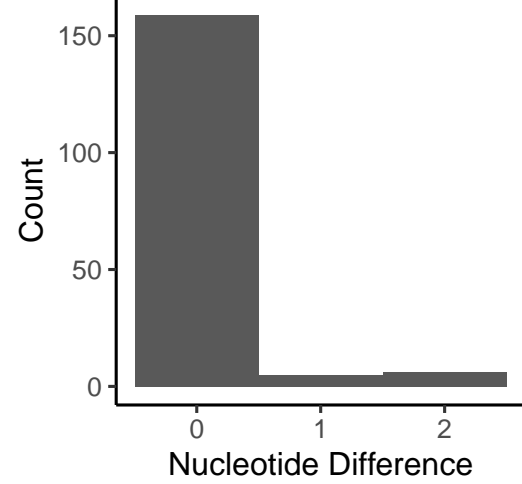
IGHV3-49*04

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



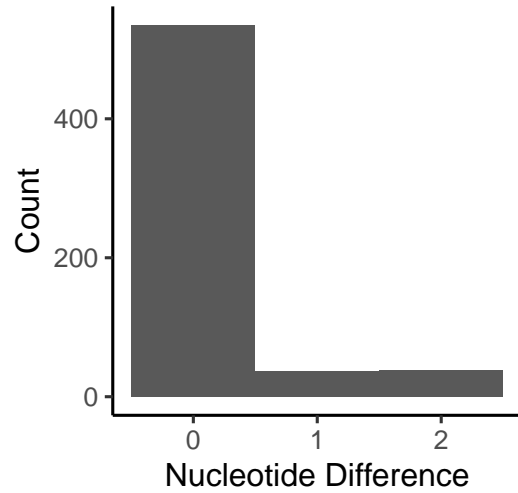
IGHV3-53*01_02

170 sequences assigned
159 (93.5%) exact matches, in which:
155 unique CDR3
6 unique J



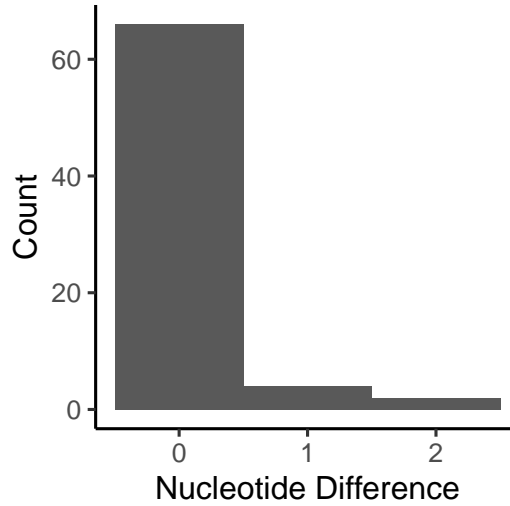
IGHV3-48*02

609 sequences assigned
535 (87.8%) exact matches, in which:
511 unique CDR3
6 unique J



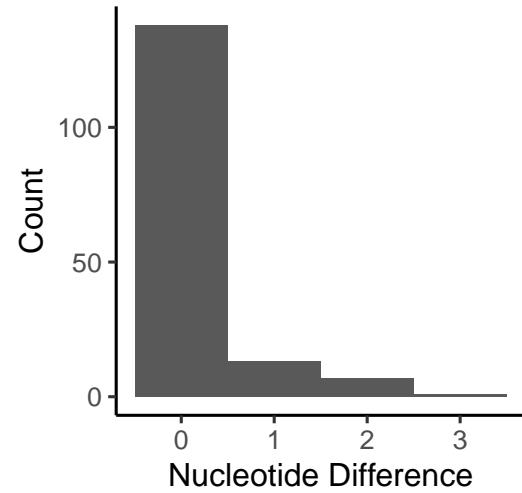
IGHV3-49*03_05

72 sequences assigned
66 (91.7%) exact matches, in which:
66 unique CDR3
4 unique J



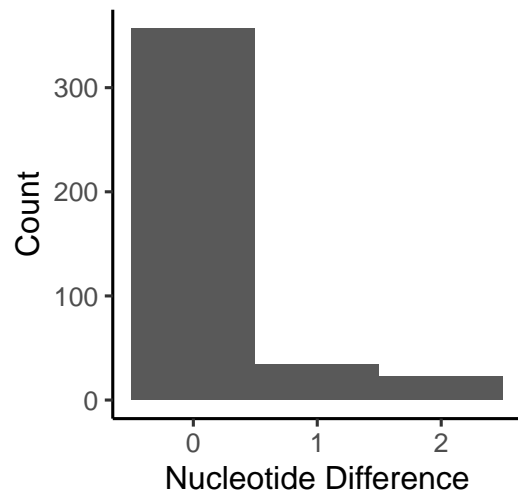
IGHV3-64*01

159 sequences assigned
138 (86.8%) exact matches, in which:
128 unique CDR3
6 unique J



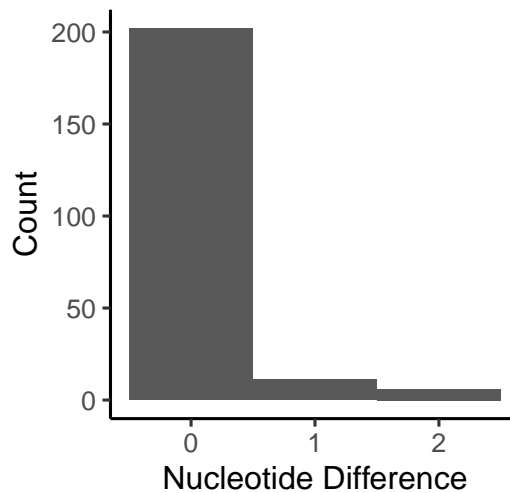
IGHV3-48*03

414 sequences assigned
357 (86.2%) exact matches, in which:
344 unique CDR3
6 unique J



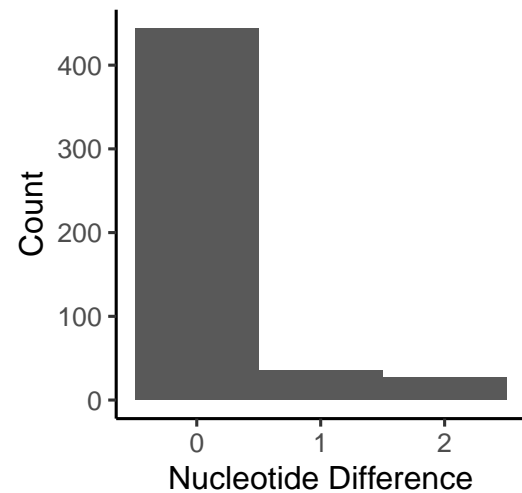
IGHV3-53*04

219 sequences assigned
202 (92.2%) exact matches, in which:
192 unique CDR3
6 unique J



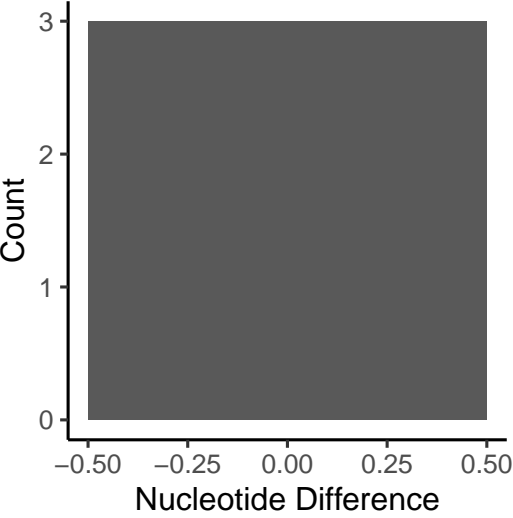
IGHV3-66*01

506 sequences assigned
444 (87.7%) exact matches, in which:
421 unique CDR3
6 unique J



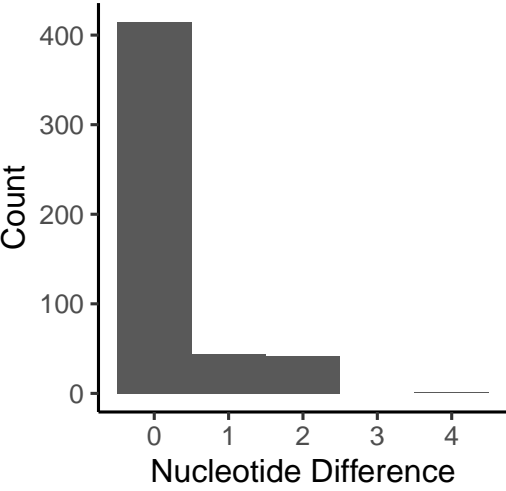
IGHV3-69-1*01

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



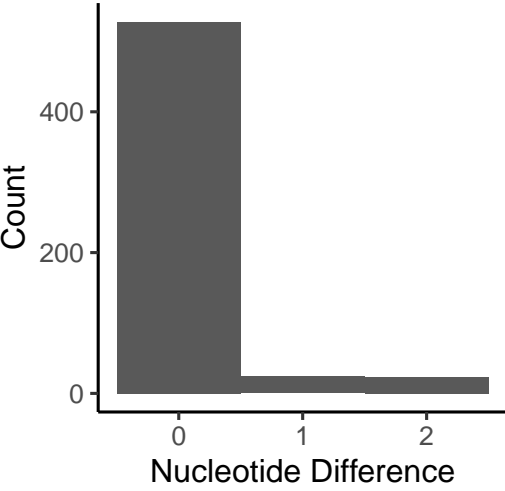
IGHV3-74*01_02

502 sequences assigned
415 (82.7%) exact matches, in which:
392 unique CDR3
7 unique J



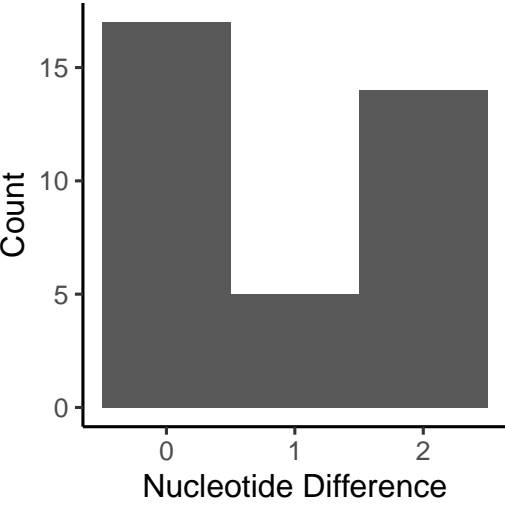
IGHV4-4*02_03

575 sequences assigned
528 (91.8%) exact matches, in which:
518 unique CDR3
7 unique J



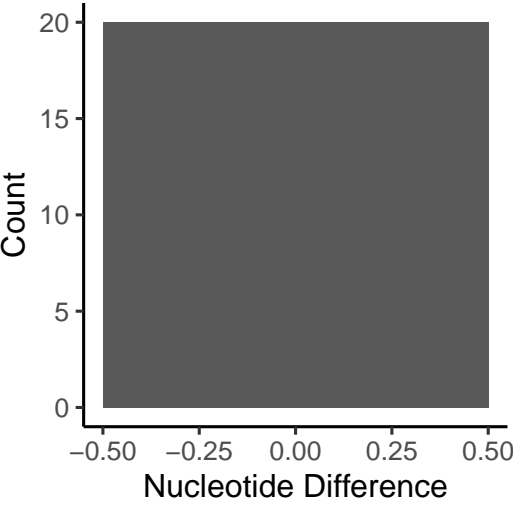
IGHV3-72*01

36 sequences assigned
17 (47.2%) exact matches, in which:
17 unique CDR3
5 unique J



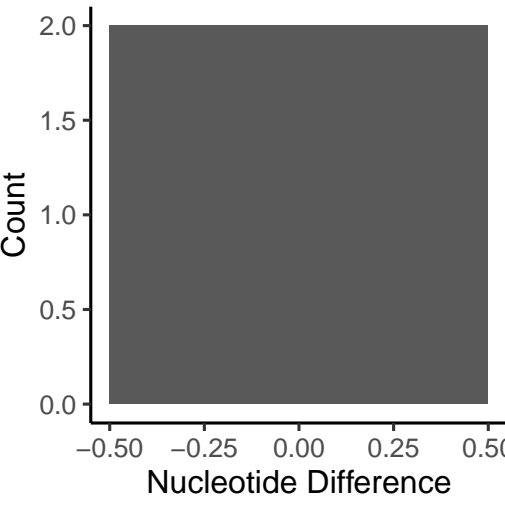
IGHV3-43D*04

20 sequences assigned
20 (100%) exact matches, in which:
19 unique CDR3
3 unique J



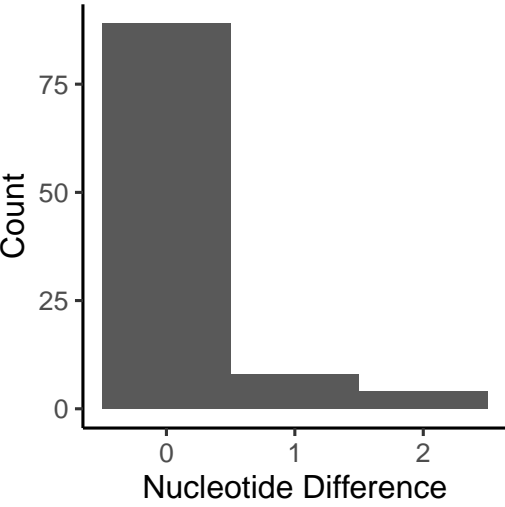
IGHV4-28*03

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



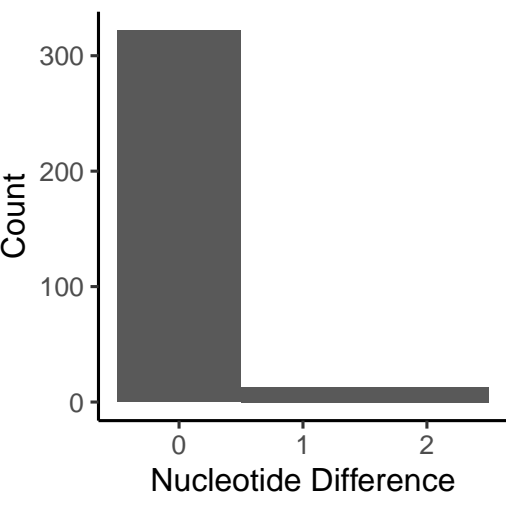
IGHV3-73*01_02

101 sequences assigned
89 (88.1%) exact matches, in which:
88 unique CDR3
5 unique J



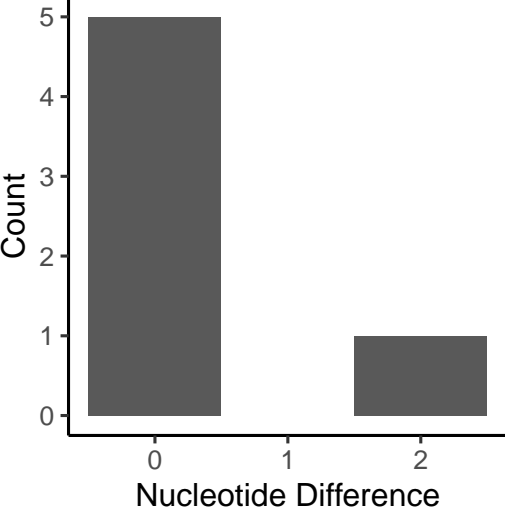
IGHV3-64D*06

348 sequences assigned
322 (92.5%) exact matches, in which:
310 unique CDR3
7 unique J



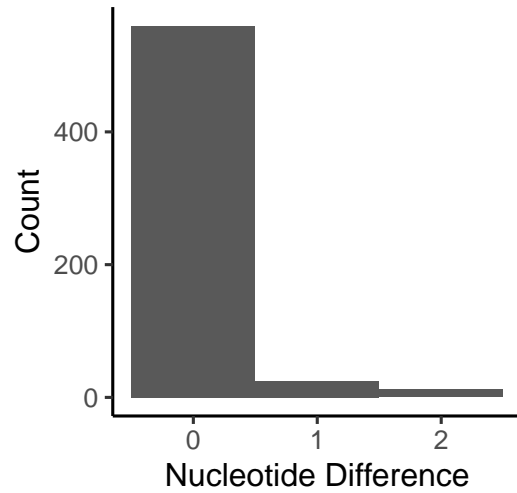
IGHV4-28*01_07

6 sequences assigned
5 (83.3%) exact matches, in which:
4 unique CDR3
4 unique J



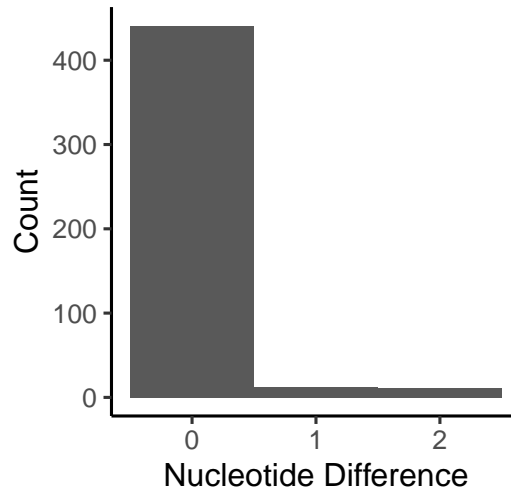
IGHV4-30-2*01

597 sequences assigned
560 (93.8%) exact matches, in which:
540 unique CDR3
7 unique J



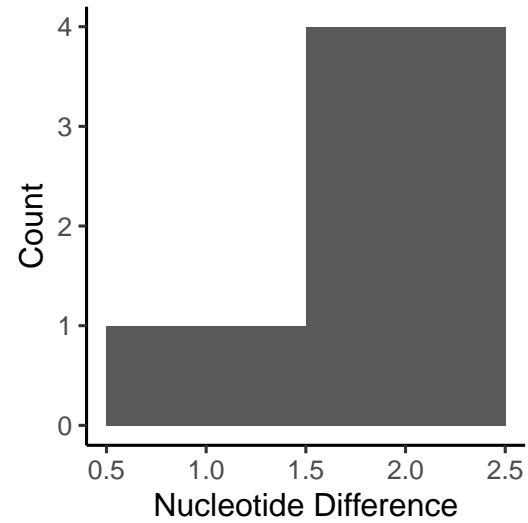
IGHV4-31*02

464 sequences assigned
441 (95%) exact matches, in which:
431 unique CDR3
7 unique J



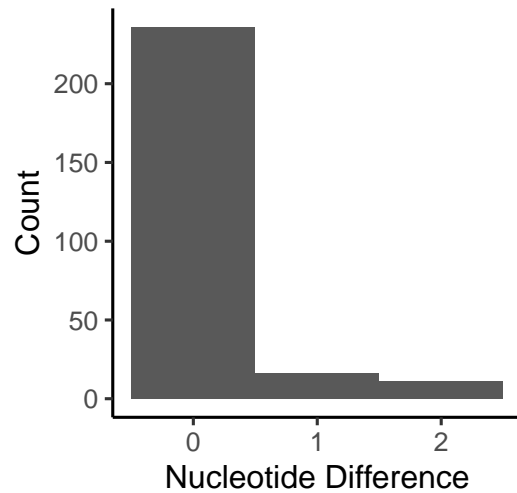
IGHV4-39*02

5 sequences assigned
No exact matches.



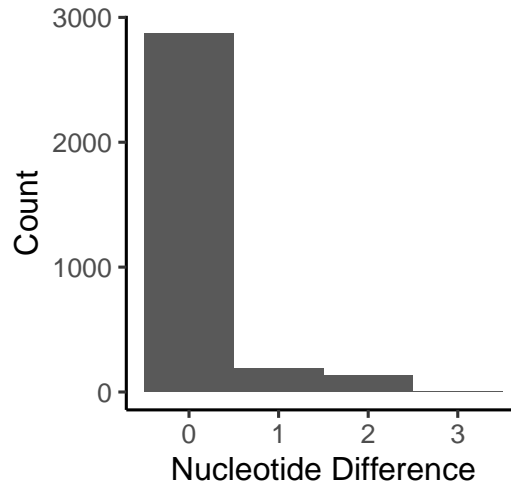
IGHV4-30-4*01

263 sequences assigned
236 (89.7%) exact matches, in which:
229 unique CDR3
5 unique J



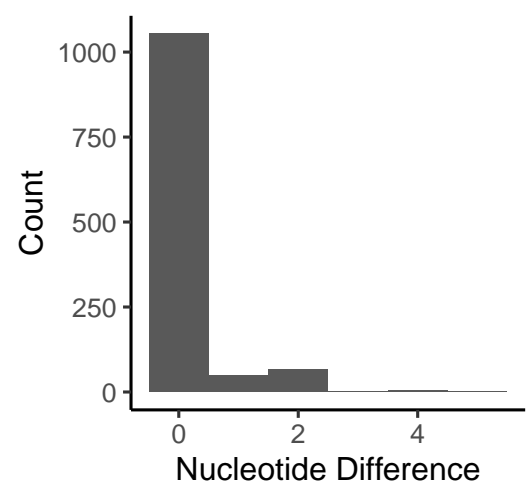
IGHV4-34*01_02

3194 sequences assigned
2869 (89.8%) exact matches, in which:
2737 unique CDR3
7 unique J



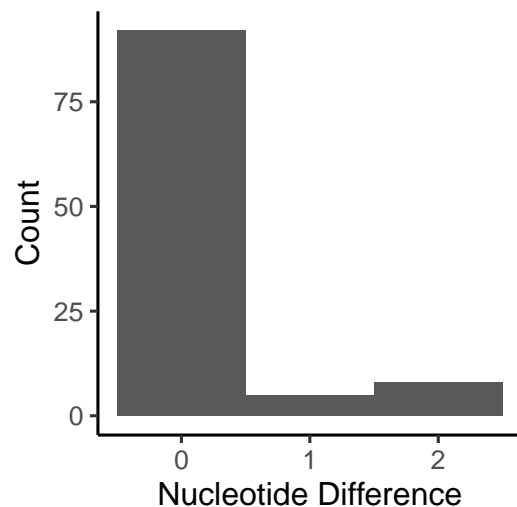
IGHV4-59*08

1173 sequences assigned
1054 (89.9%) exact matches, in which:
1010 unique CDR3
7 unique J



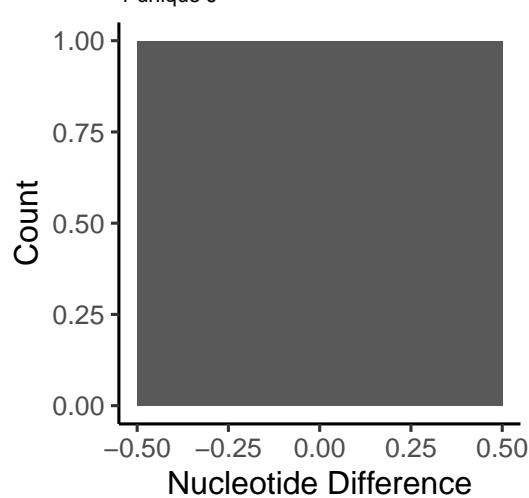
IGHV4-31*01

105 sequences assigned
92 (87.6%) exact matches, in which:
91 unique CDR3
5 unique J



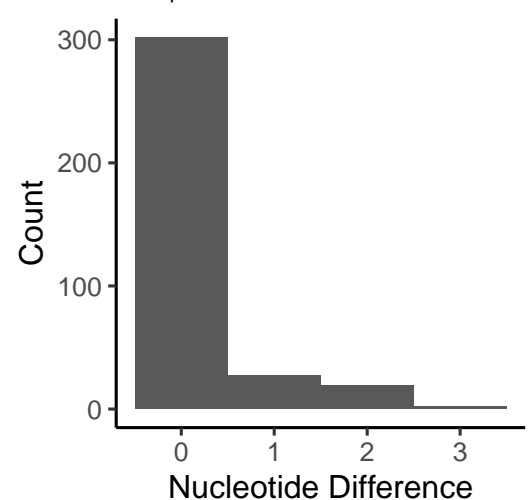
IGHV4-38-2*01

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



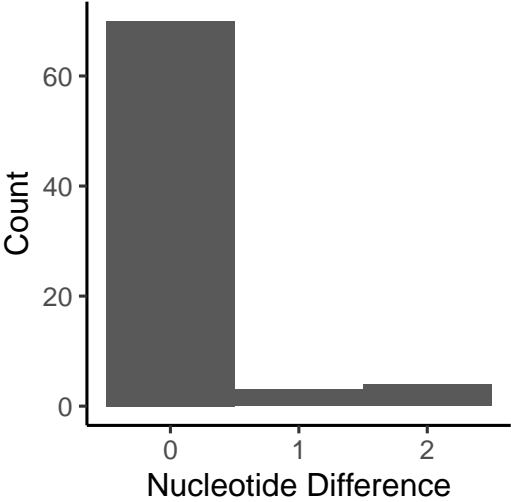
IGHV4-61*01

350 sequences assigned
302 (86.3%) exact matches, in which:
294 unique CDR3
7 unique J



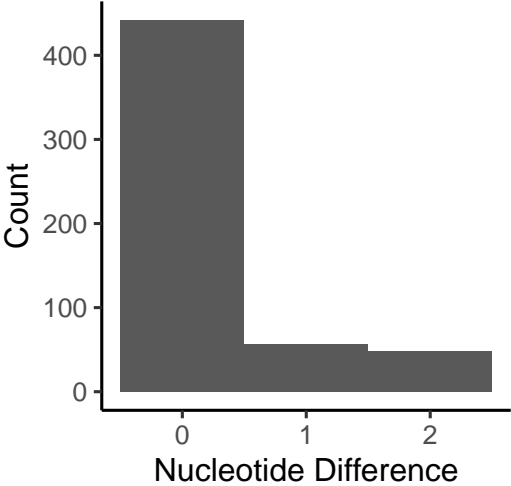
IGHV5-10-1*01_03

77 sequences assigned
70 (90.9%) exact matches, in which:
70 unique CDR3
5 unique J



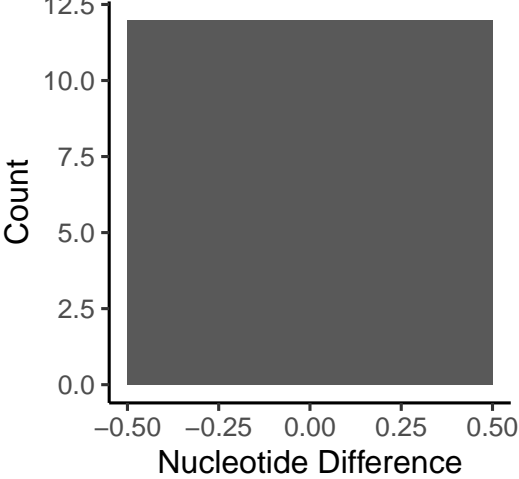
IGHV6-1*01_02

547 sequences assigned
442 (80.8%) exact matches, in which:
435 unique CDR3
7 unique J

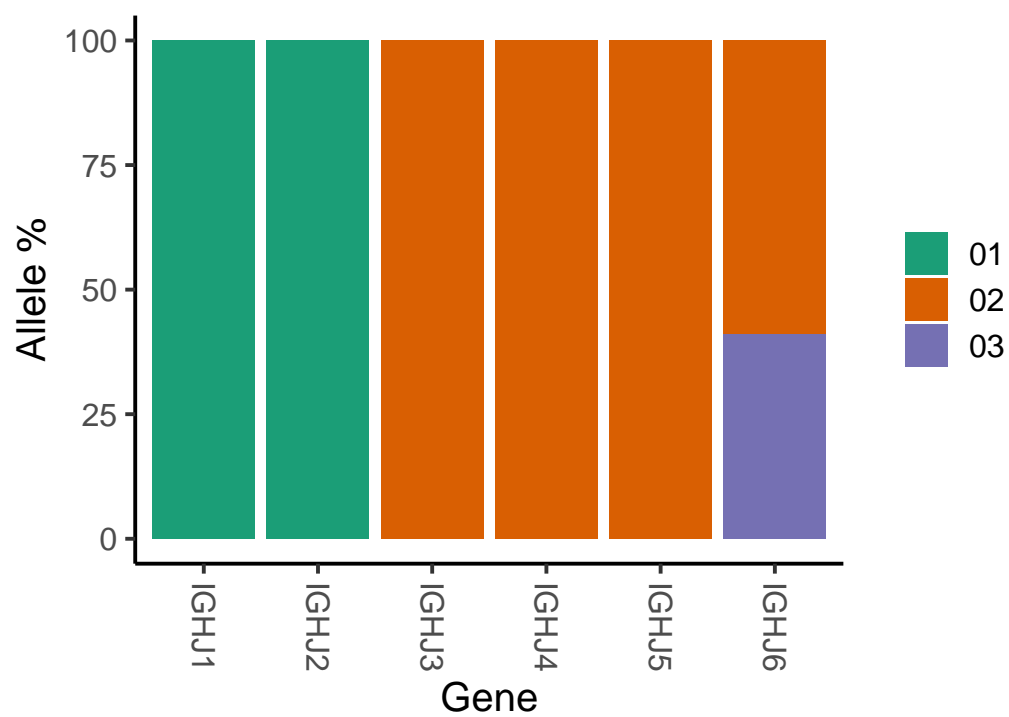


IGHV7-4-1*01

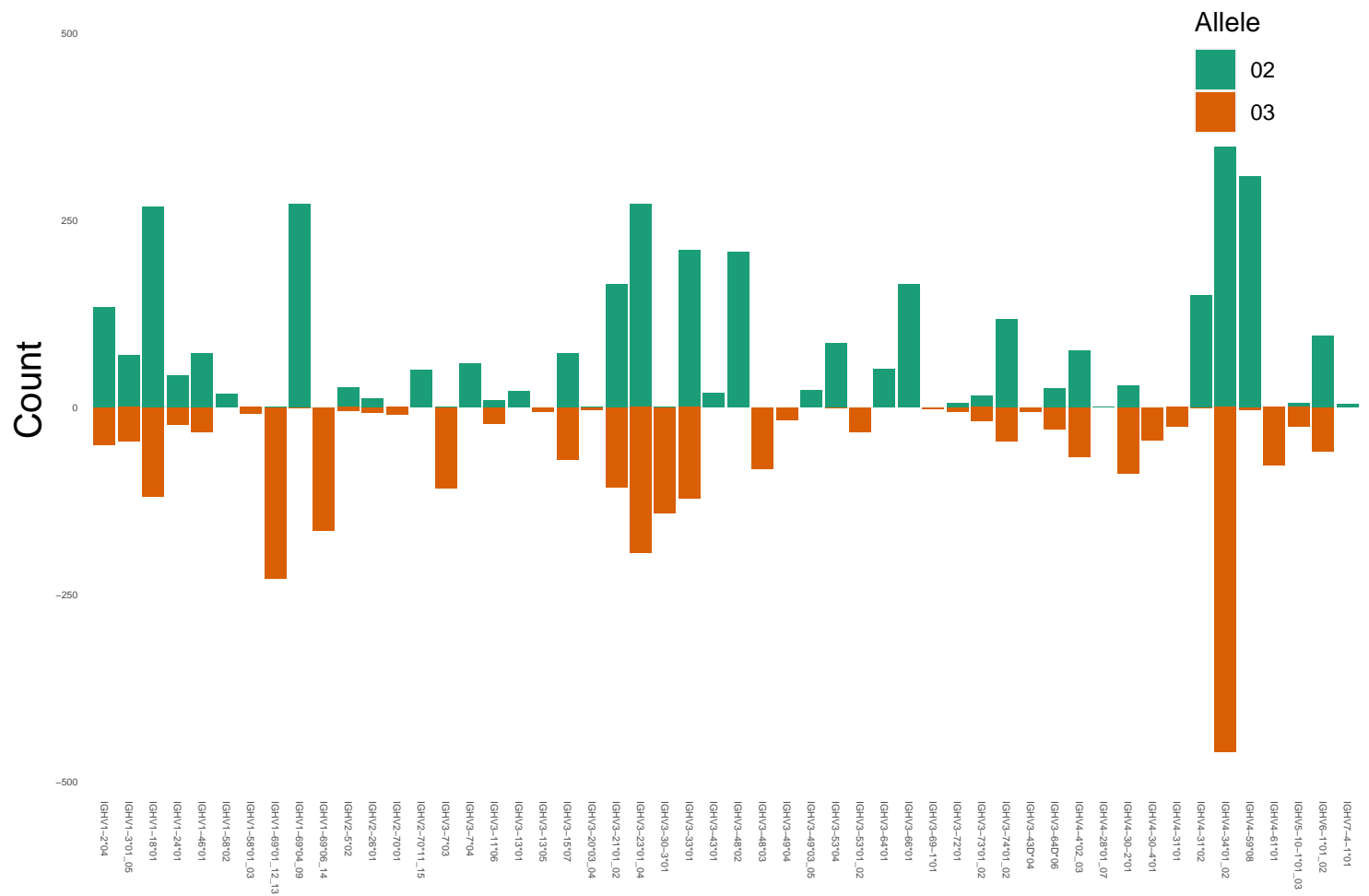
12 sequences assigned
12 (100%) exact matches, in which:
12 unique CDR3
4 unique J



Allele Usage



Sequence Count byIGHJ6 allele usage



[illegible]