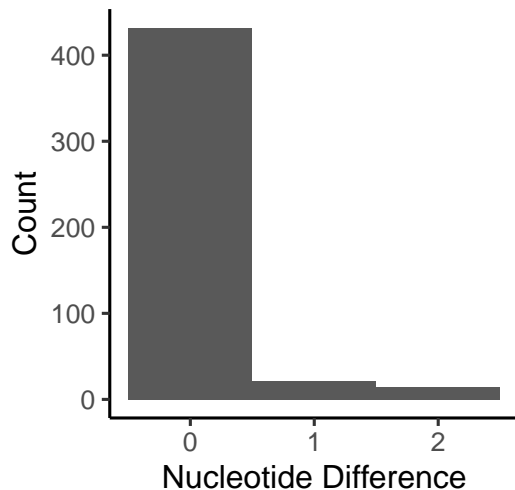


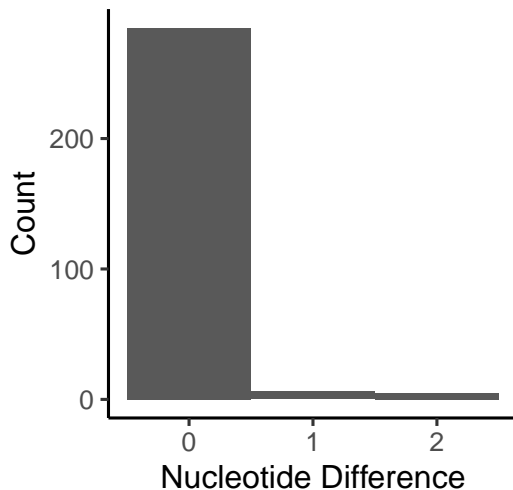
### IGHV1-2\*04

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



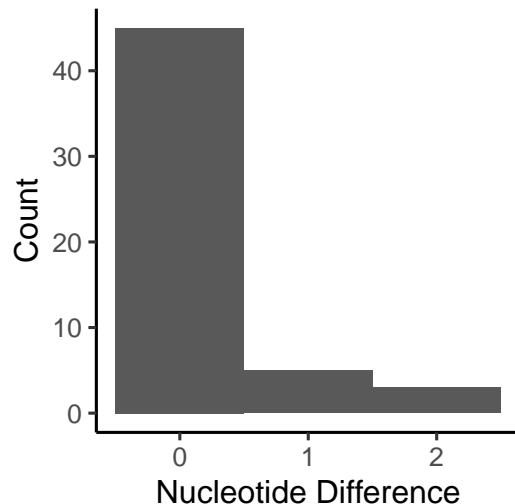
### IGHV1-24\*01

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



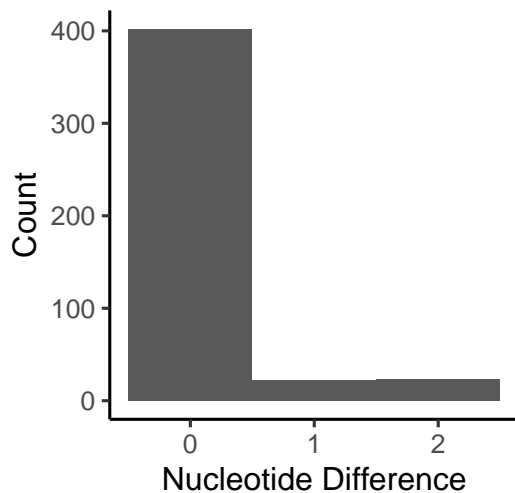
### IGHV1-58\*02

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



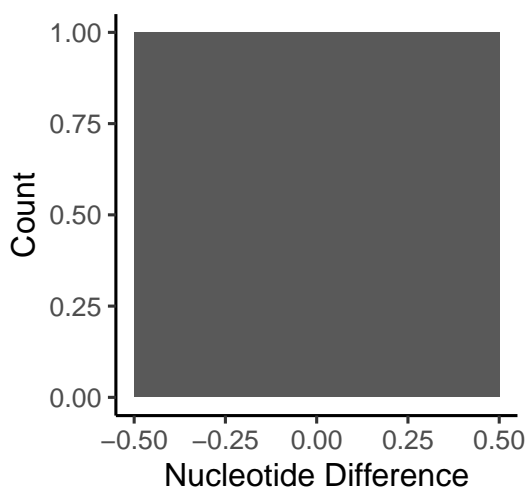
### IGHV1-3\*01\_05

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



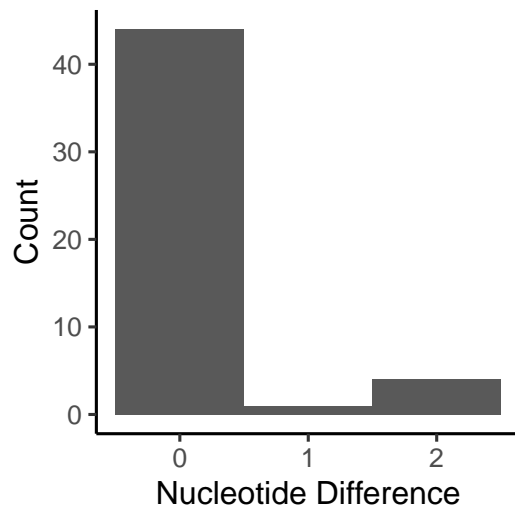
### IGHV1-45\*02

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



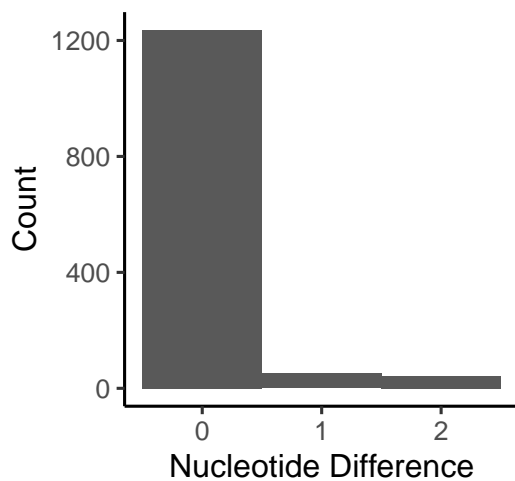
### IGHV1-58\*01\_03

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



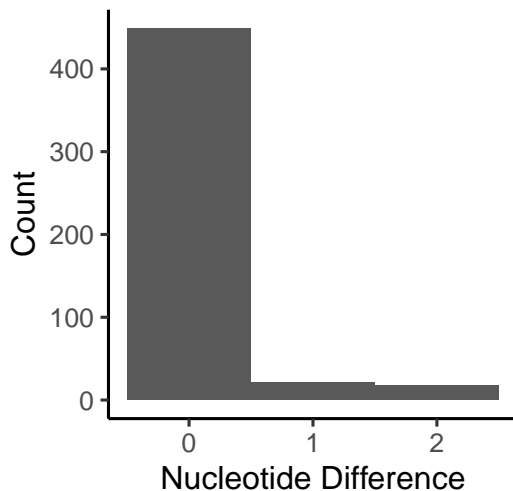
### IGHV1-18\*01

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



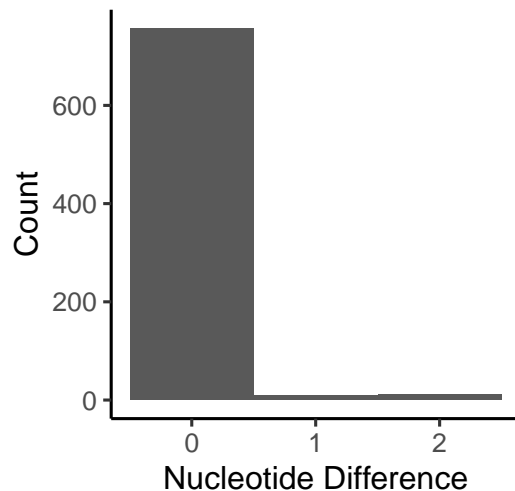
### IGHV1-46\*01

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



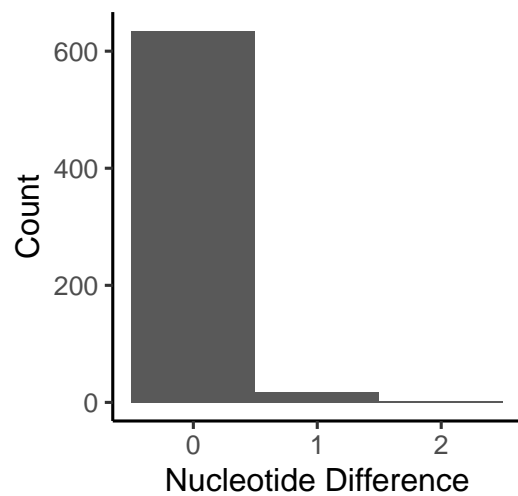
### IGHV1-69\*01\_12\_13

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



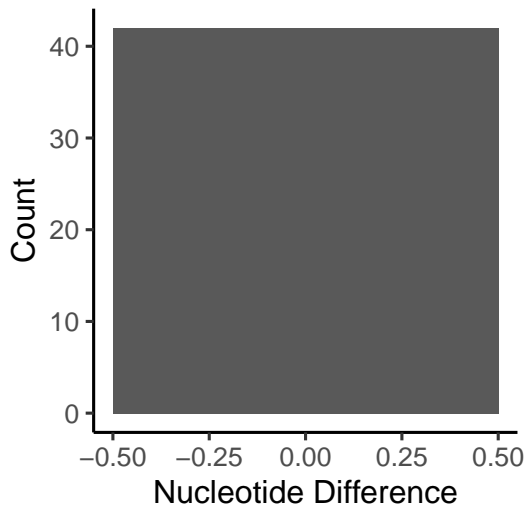
### IGHV1-69\*04\_09

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



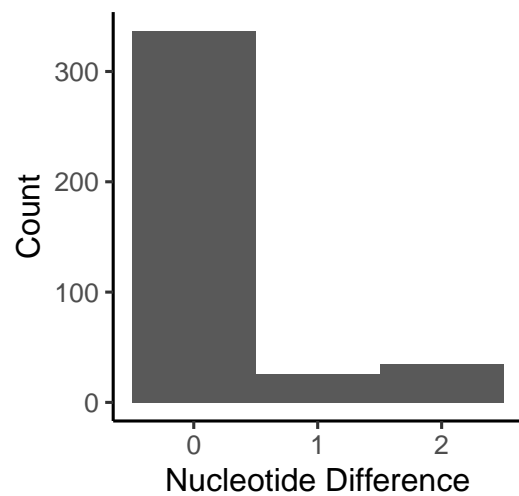
### IGHV2-26\*01

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



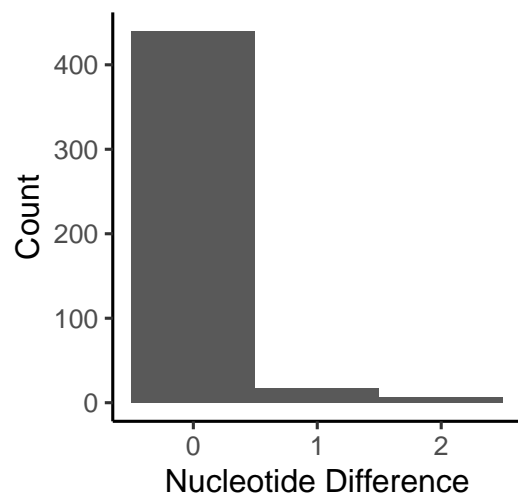
### IGHV3-7\*03

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



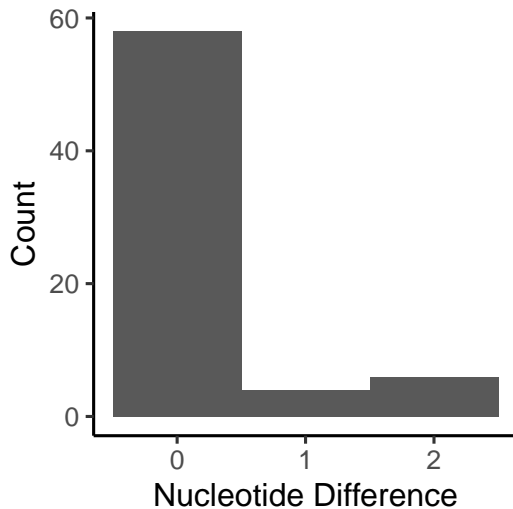
### IGHV1-69\*06\_14

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



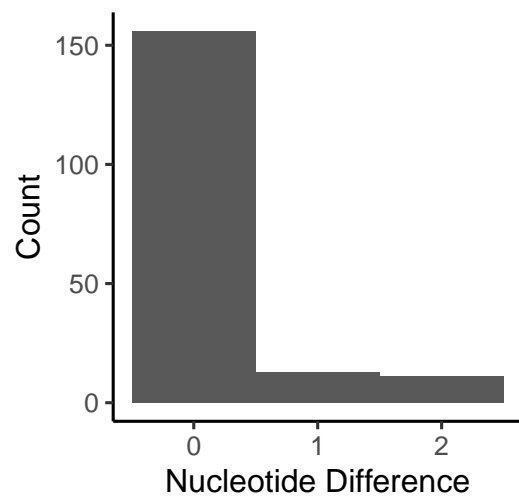
### IGHV2-70\*01

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



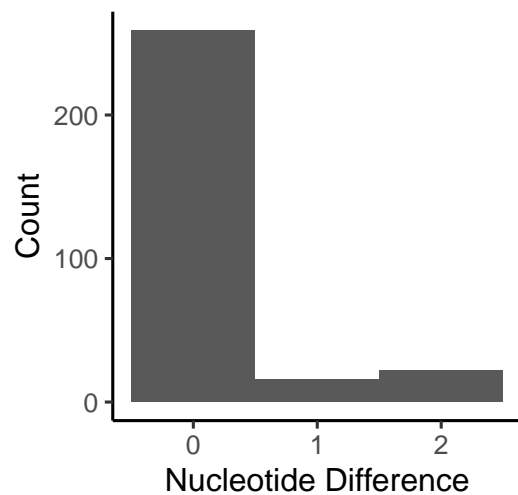
### IGHV3-7\*04

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



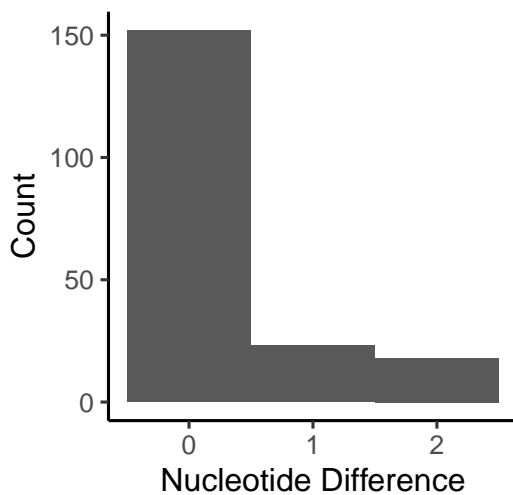
### IGHV2-5\*02

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



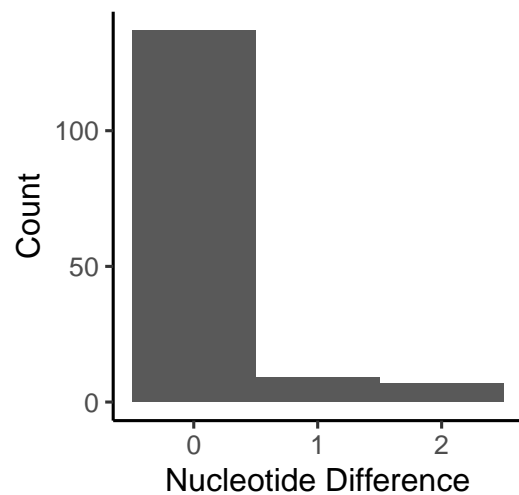
### IGHV2-70\*11\_15

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



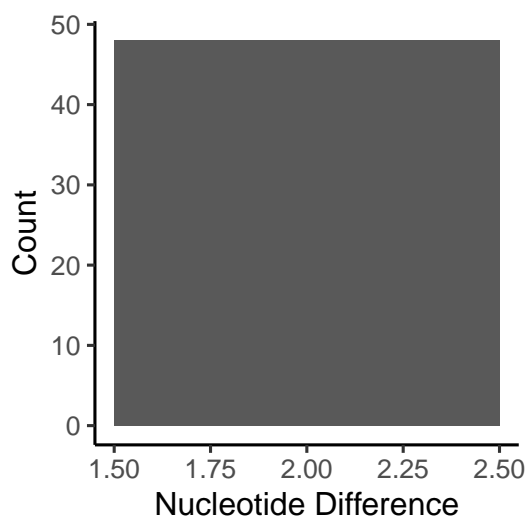
### IGHV3-11\*06

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



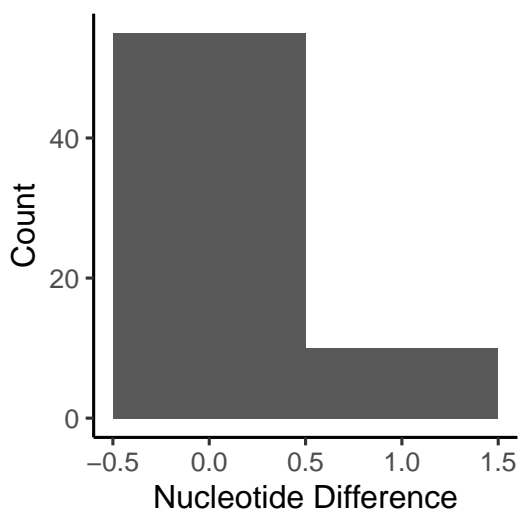
### IGHV3-13\*01

48 sequences assigned  
No exact matches.



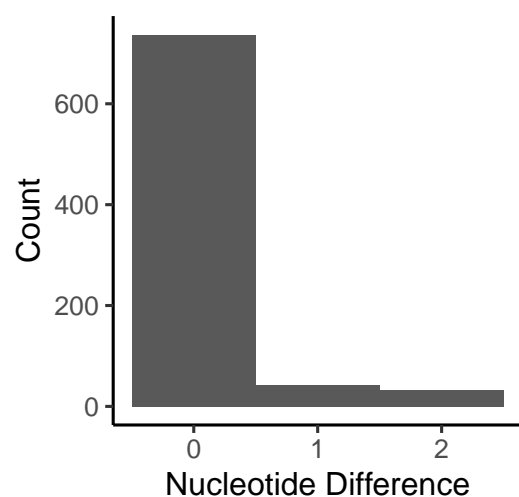
### IGHV3-20\*03\_04

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



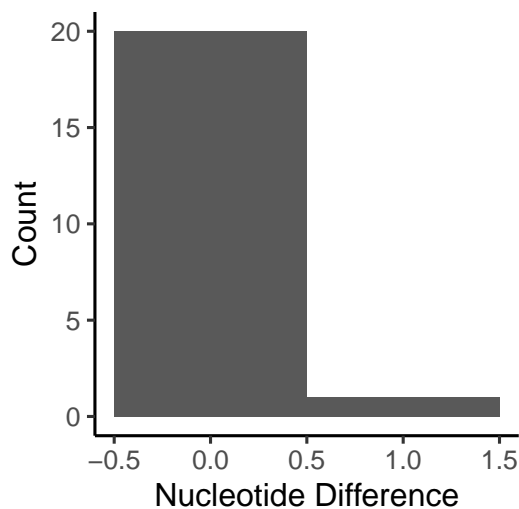
### IGHV3-30-3\*01

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



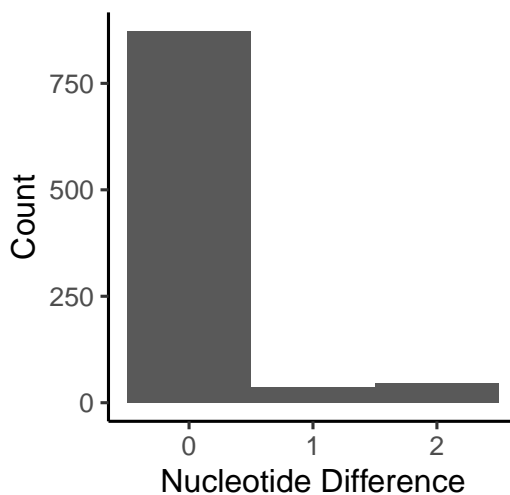
### IGHV3-13\*05

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



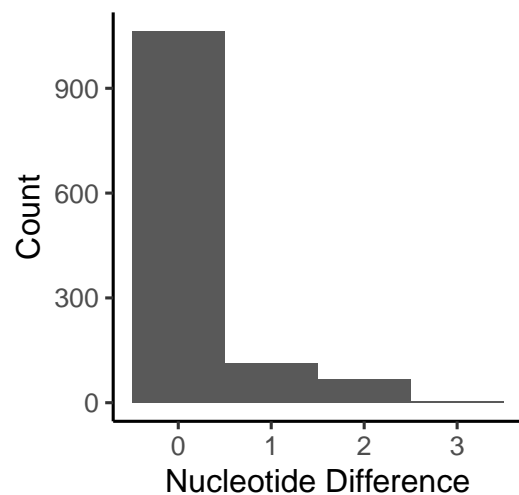
### IGHV3-21\*01\_02

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



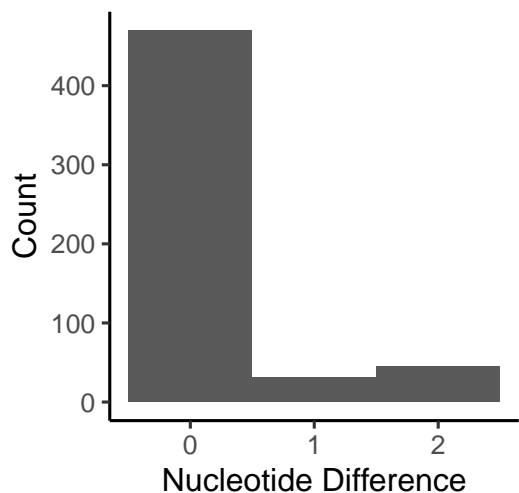
### IGHV3-33\*01

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



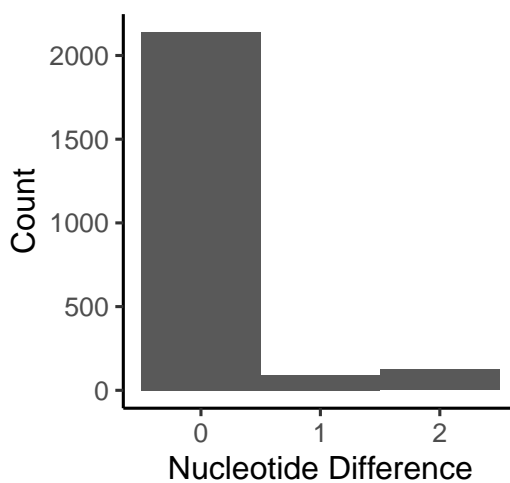
### IGHV3-15\*07

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



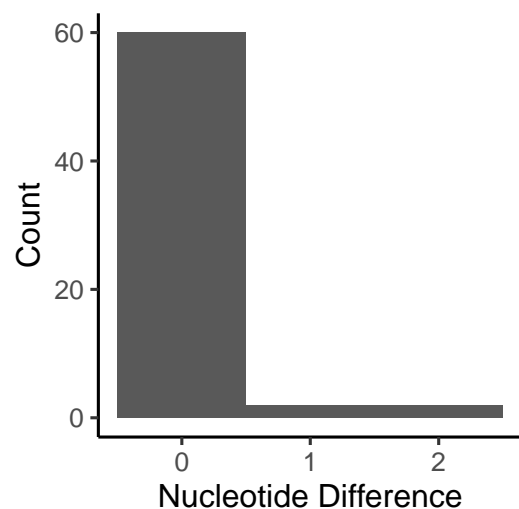
### IGHV3-23\*01\_04

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



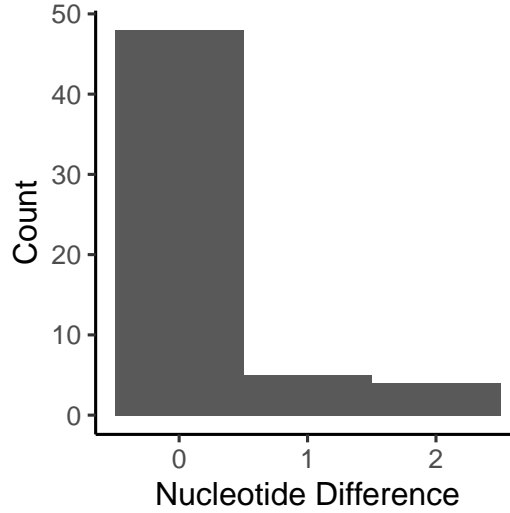
### IGHV3-47\*02

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



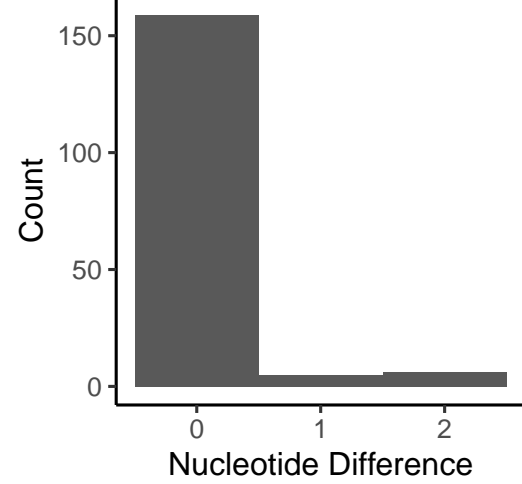
### IGHV3-49\*04

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



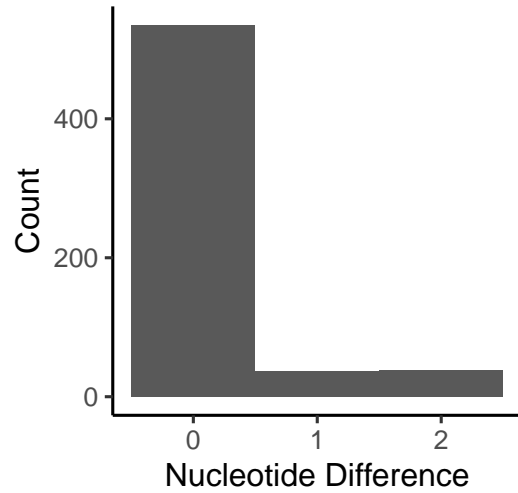
### IGHV3-53\*01\_02

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



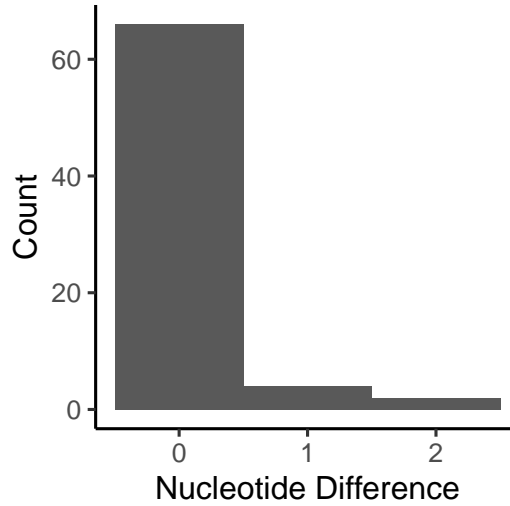
### IGHV3-48\*02

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



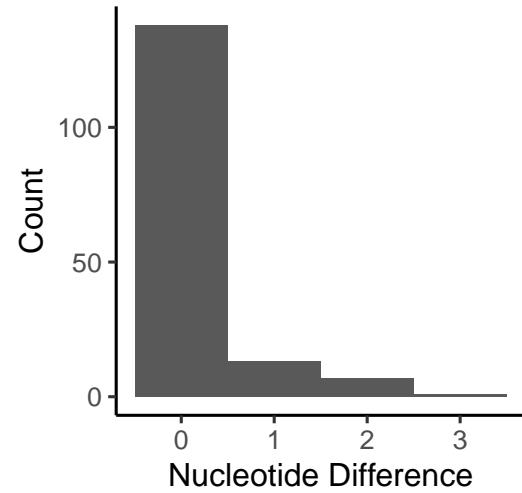
### IGHV3-49\*03\_05

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



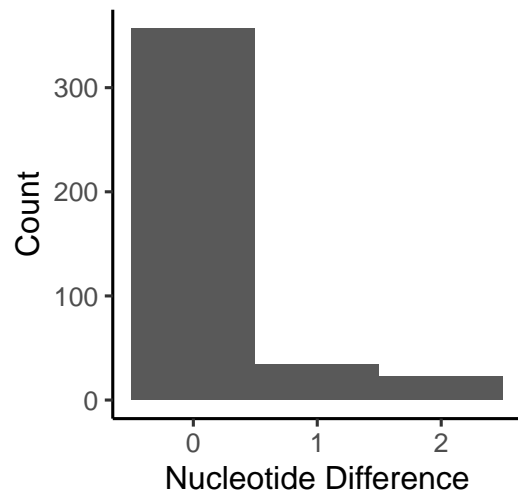
### IGHV3-64\*01

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



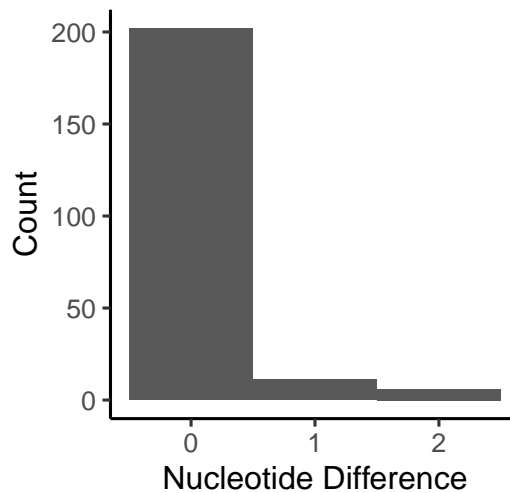
### IGHV3-48\*03

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



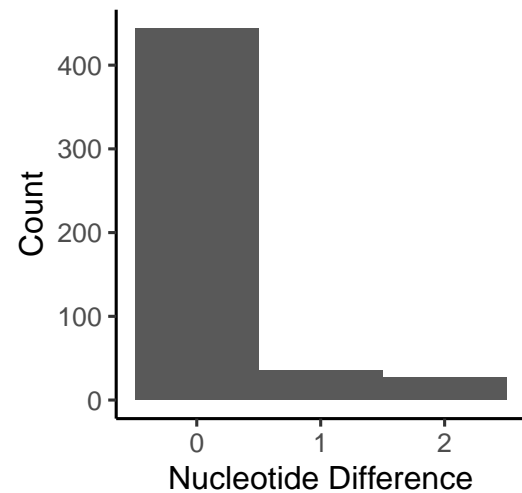
### IGHV3-53\*04

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



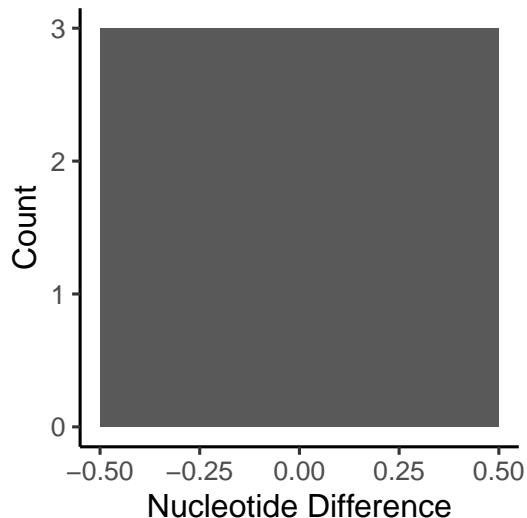
### IGHV3-66\*01

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



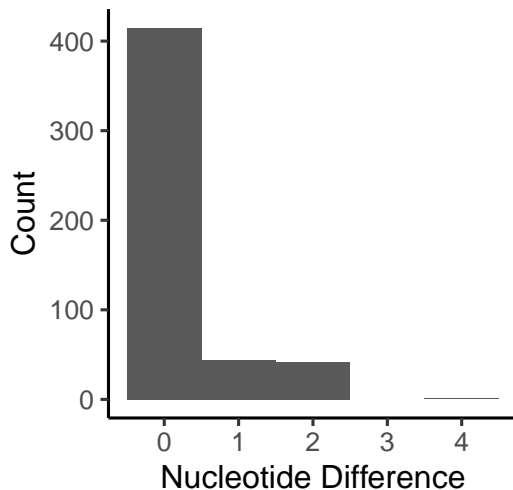
### IGHV3-69-1\*01

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



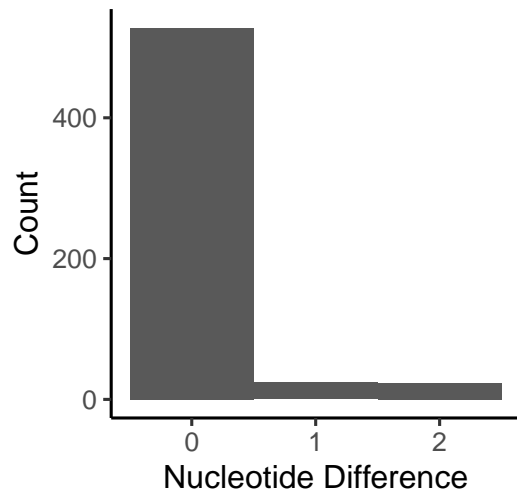
### IGHV3-74\*01\_02

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



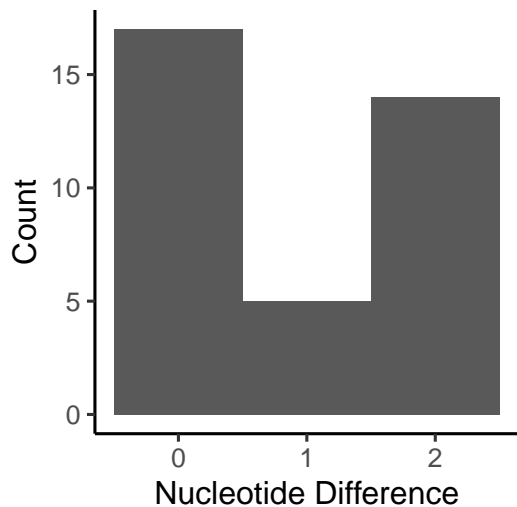
### IGHV4-4\*02\_03

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



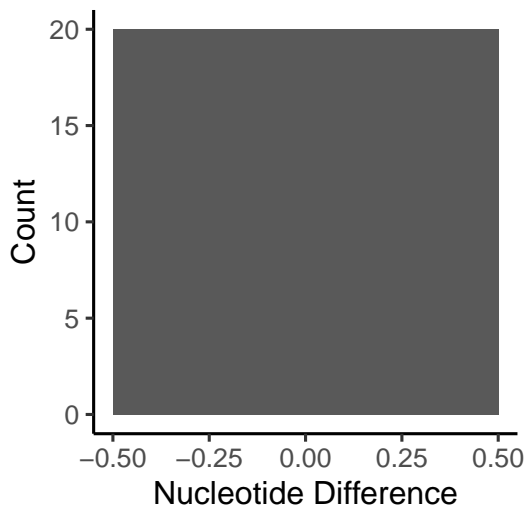
### IGHV3-72\*01

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



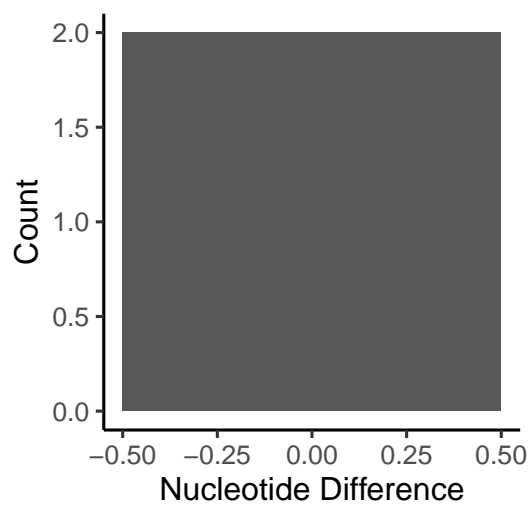
### IGHV3-43D\*04

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



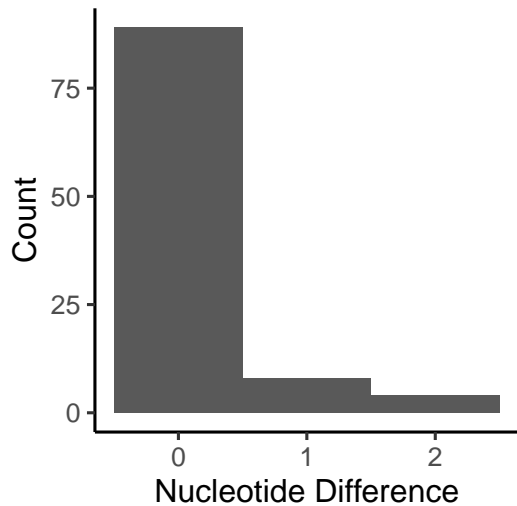
### IGHV4-28\*03

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



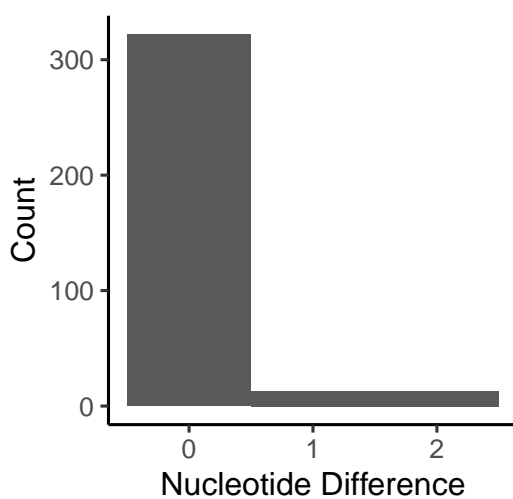
### IGHV3-73\*01\_02

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



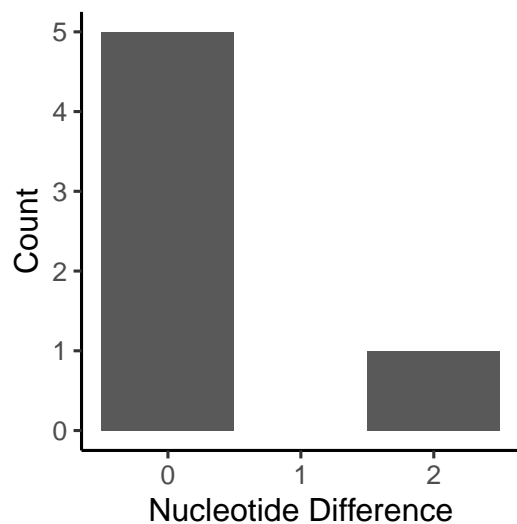
### IGHV3-64D\*06

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



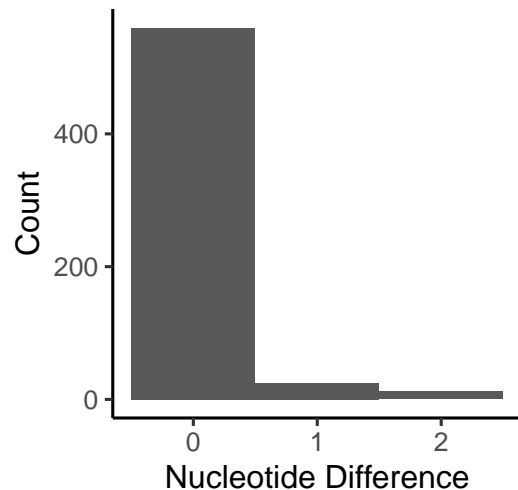
### IGHV4-28\*01\_07

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



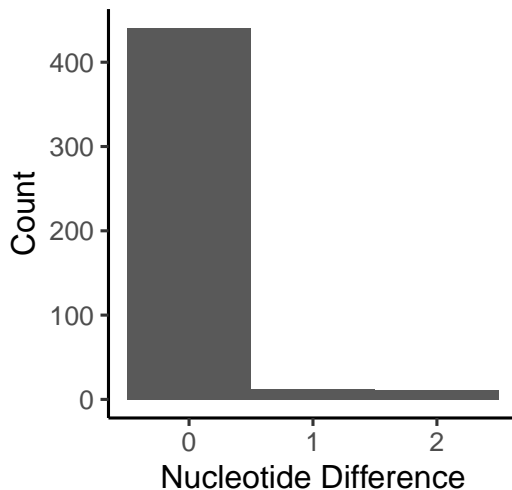
### IGHV4-30-2\*01

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



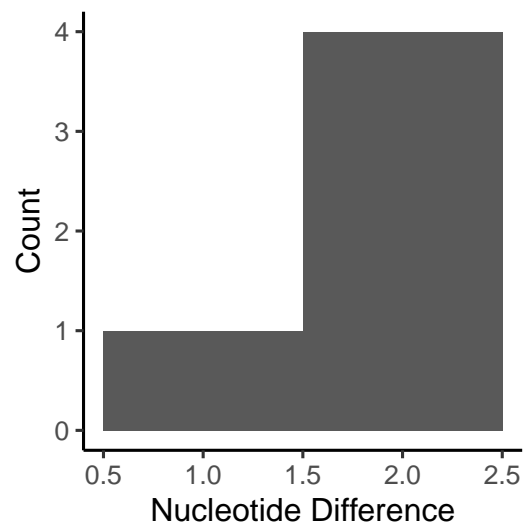
### IGHV4-31\*02

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



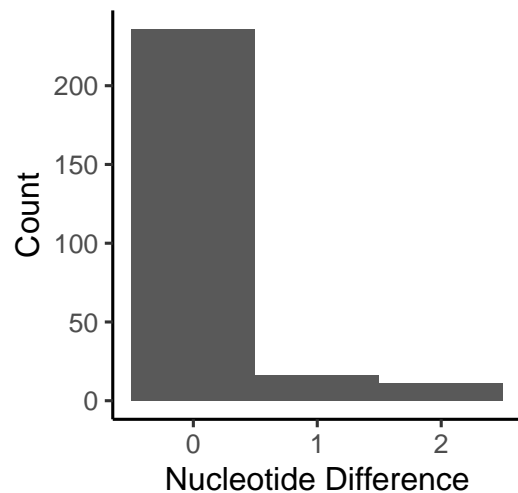
### IGHV4-39\*02

5 sequences assigned  
No exact matches.



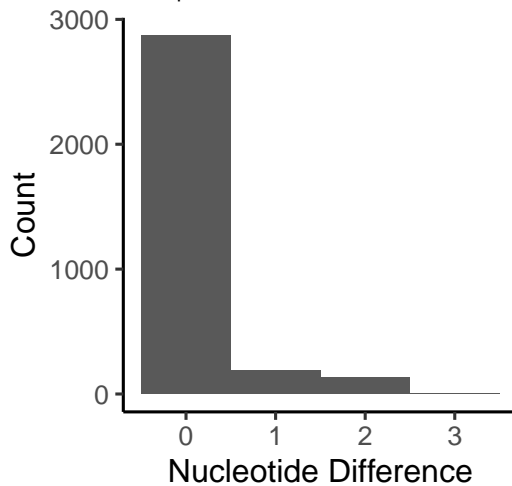
### IGHV4-30-4\*01

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



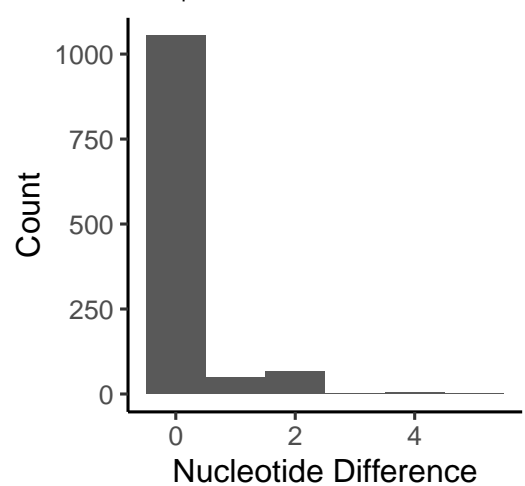
### IGHV4-34\*01\_02

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



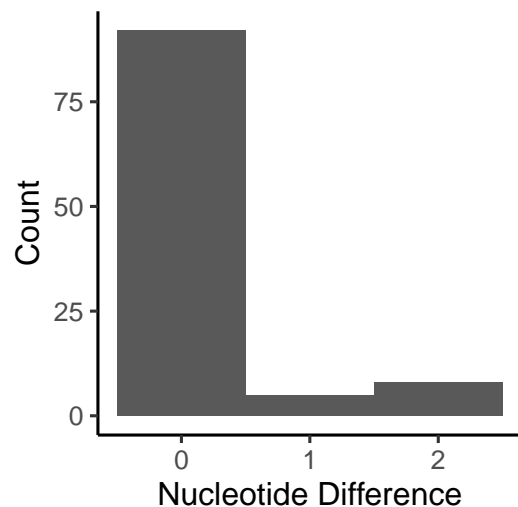
### IGHV4-59\*08

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



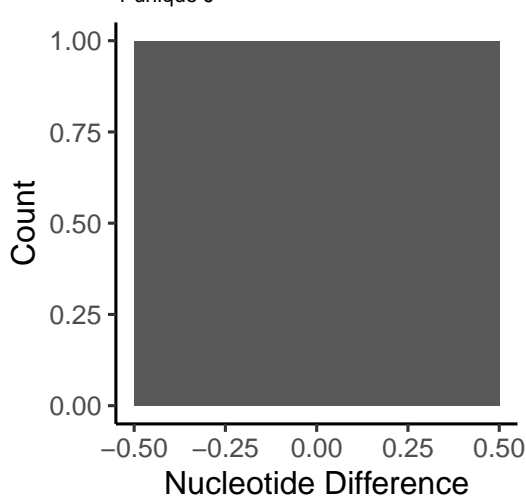
### IGHV4-31\*01

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



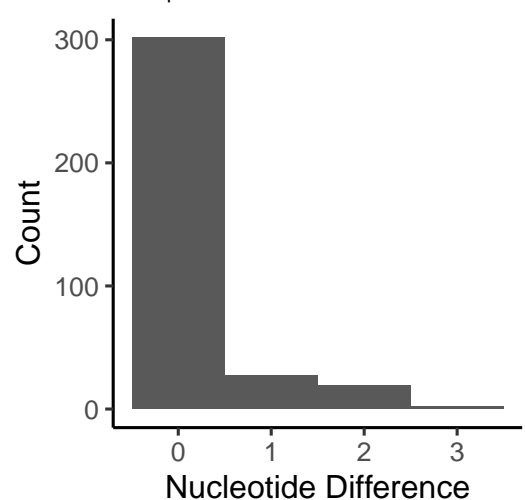
### IGHV4-38-2\*01

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



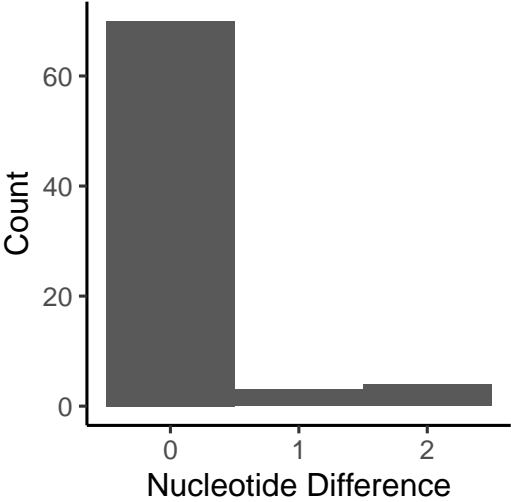
### IGHV4-61\*01

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



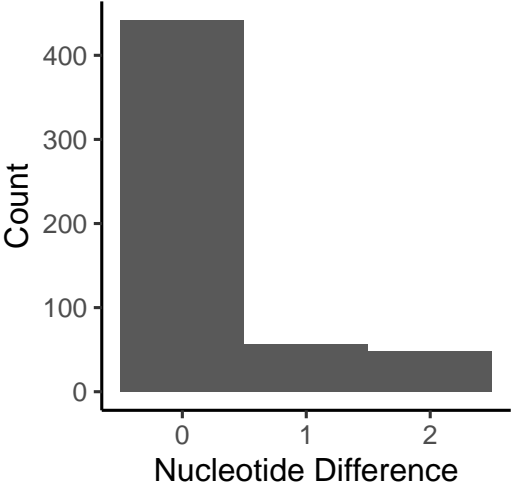
IGHV5-10-1\*01\_03

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



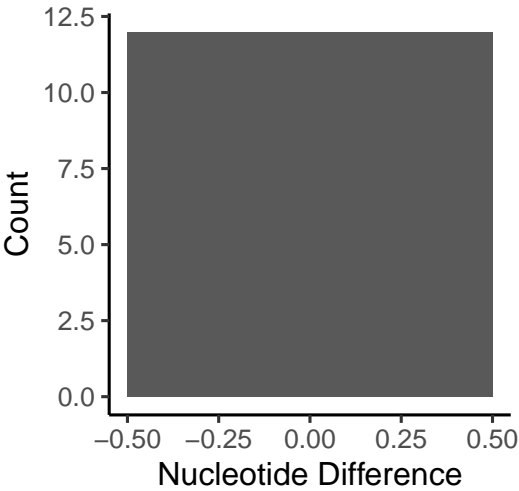
IGHV6-1\*01\_02

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

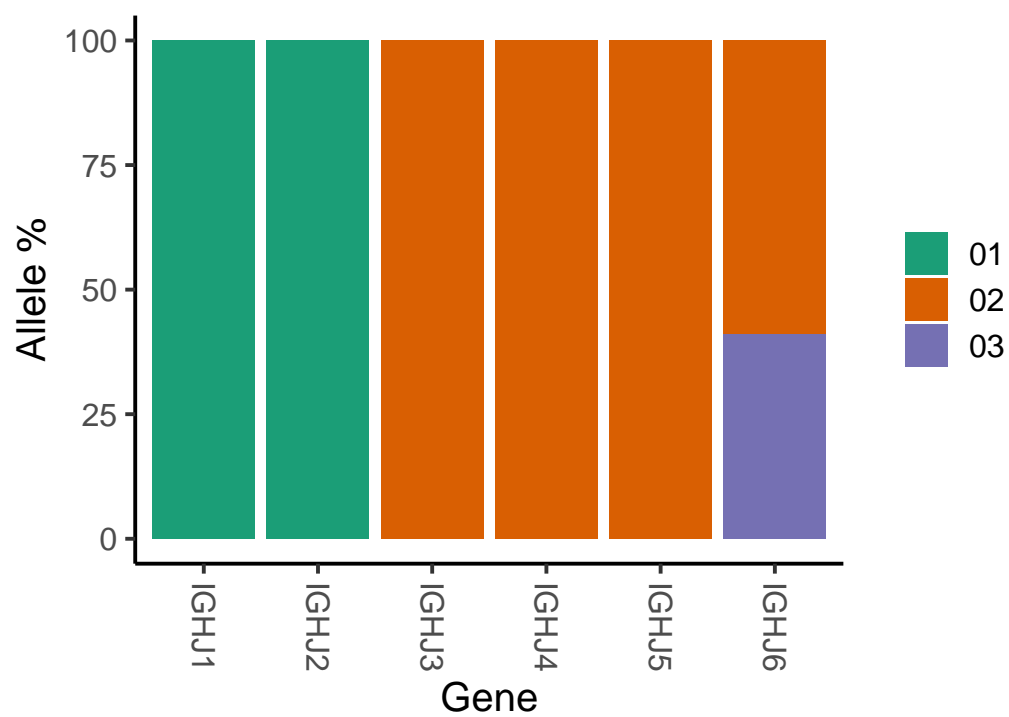


IGHV7-4-1\*01

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

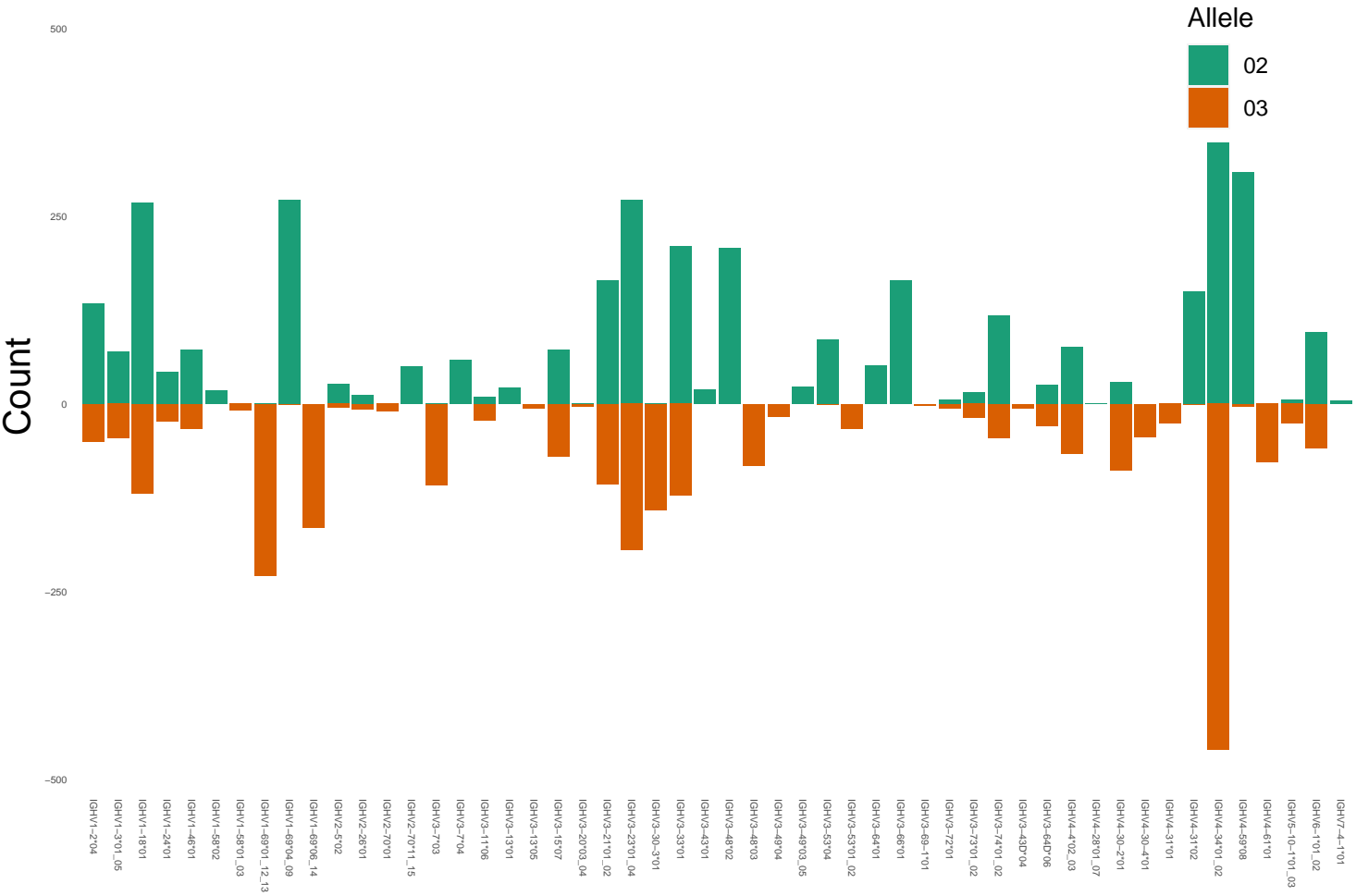


Allele Usage





Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.