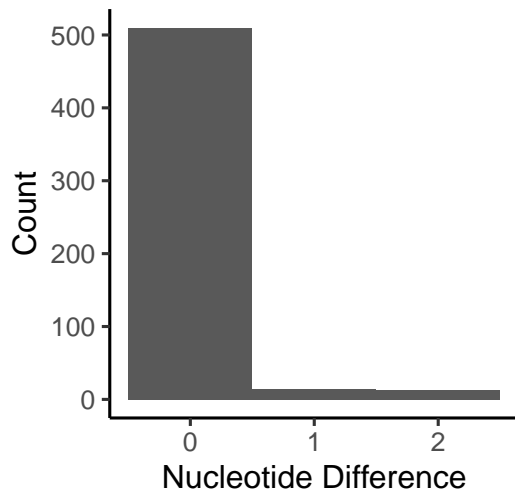


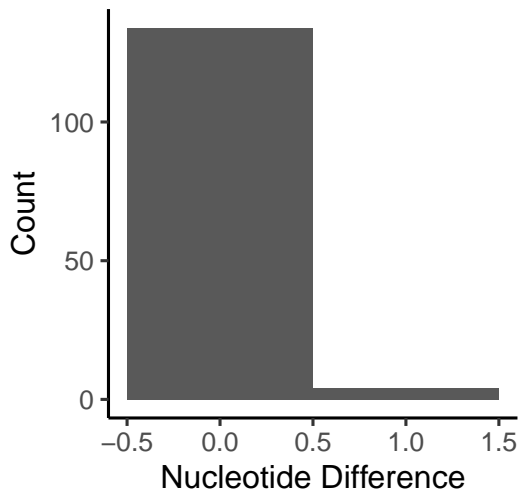
### IGHV1-2\*02

537 sequences assigned  
510 (95%) exact matches, in which:  
510 unique CDR3  
6 unique J



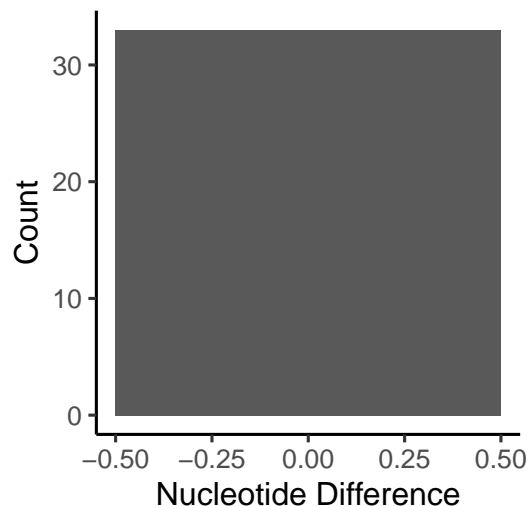
### IGHV1-24\*01

138 sequences assigned  
134 (97.1%) exact matches, in which:  
134 unique CDR3  
6 unique J



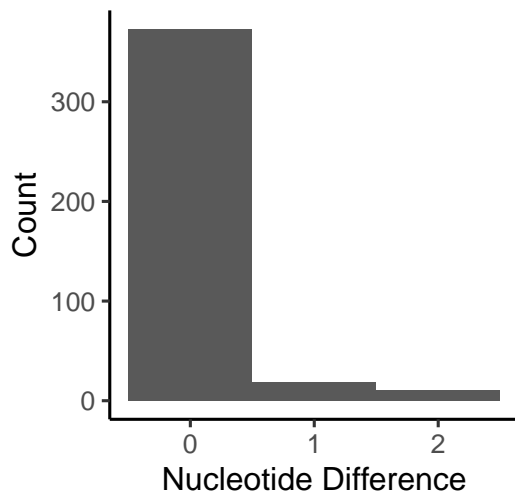
### IGHV1-58\*01\_03

33 sequences assigned  
33 (100%) exact matches, in which:  
33 unique CDR3  
4 unique J



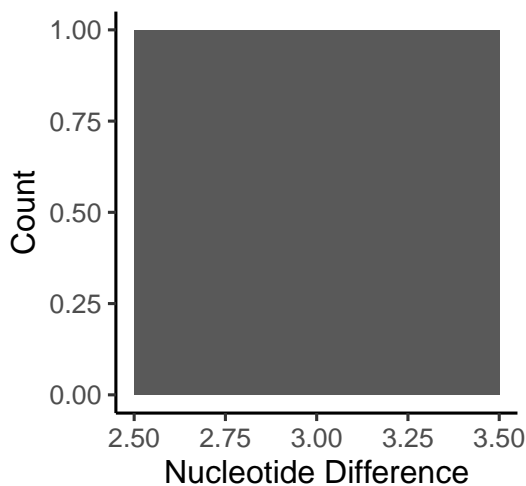
### IGHV1-8\*01

403 sequences assigned  
373 (92.6%) exact matches, in which:  
373 unique CDR3  
6 unique J



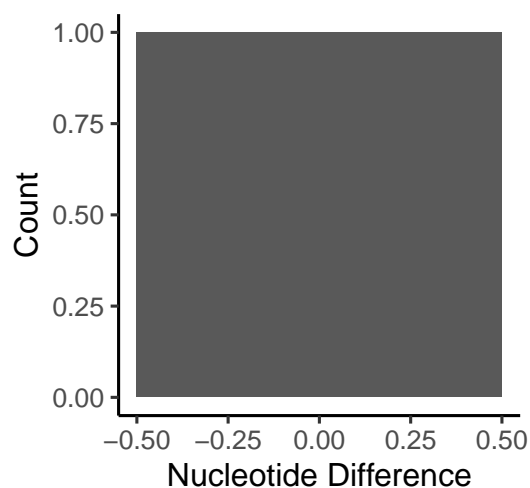
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



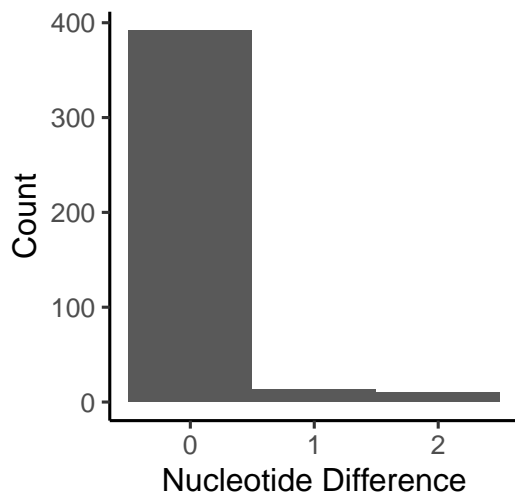
### IGHV1-69-2\*01

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



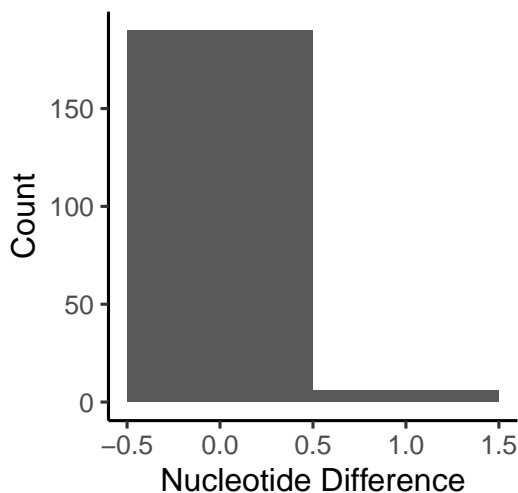
### IGHV1-18\*01

415 sequences assigned  
392 (94.5%) exact matches, in which:  
392 unique CDR3  
6 unique J



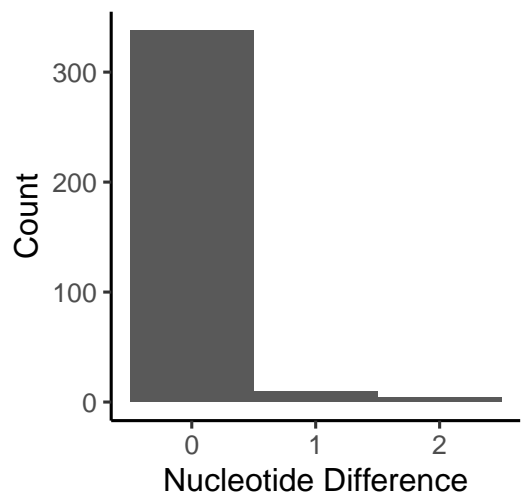
### IGHV1-46\*01

196 sequences assigned  
190 (96.9%) exact matches, in which:  
190 unique CDR3  
6 unique J



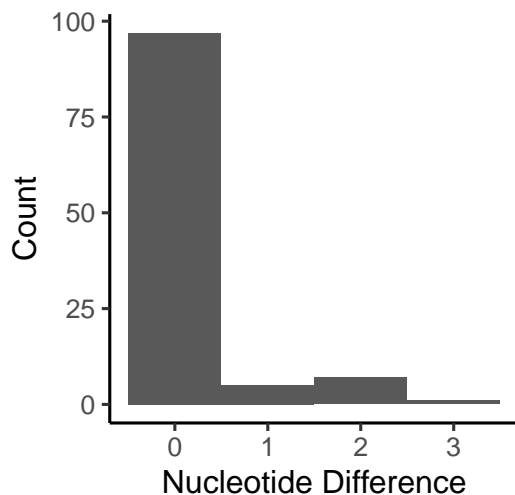
### IGHV1-69\*06\_14

352 sequences assigned  
338 (96%) exact matches, in which:  
338 unique CDR3  
6 unique J



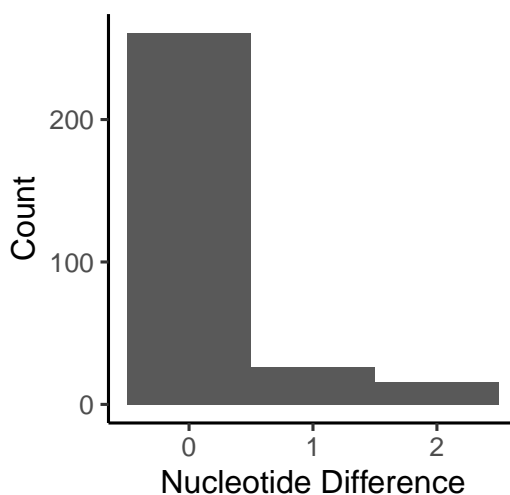
### IGHV2-5\*01

110 sequences assigned  
97 (88.2%) exact matches, in which:  
97 unique CDR3  
6 unique J



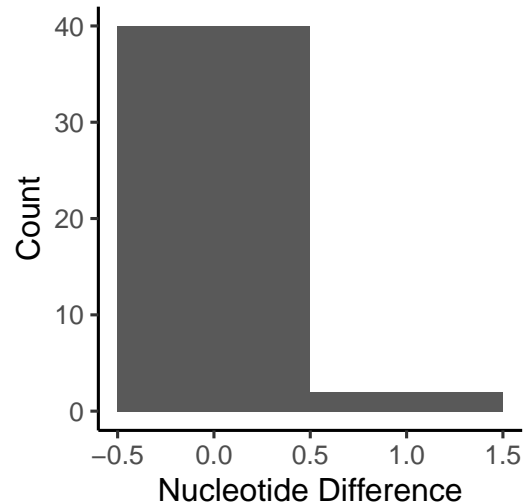
### IGHV3-7\*01

303 sequences assigned  
261 (86.1%) exact matches, in which:  
254 unique CDR3  
6 unique J



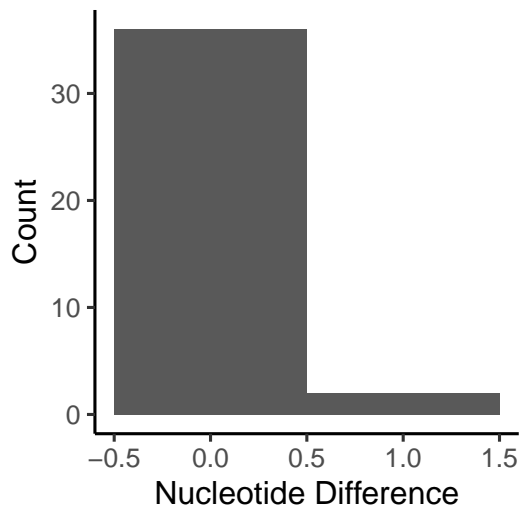
### IGHV3-13\*01

42 sequences assigned  
40 (95.2%) exact matches, in which:  
39 unique CDR3  
5 unique J



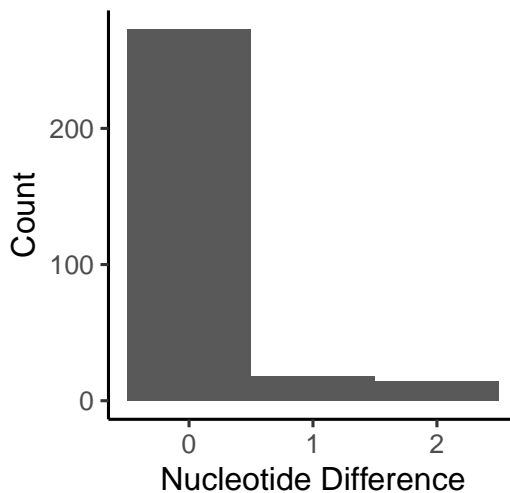
### IGHV2-26\*01

38 sequences assigned  
36 (94.7%) exact matches, in which:  
36 unique CDR3  
5 unique J



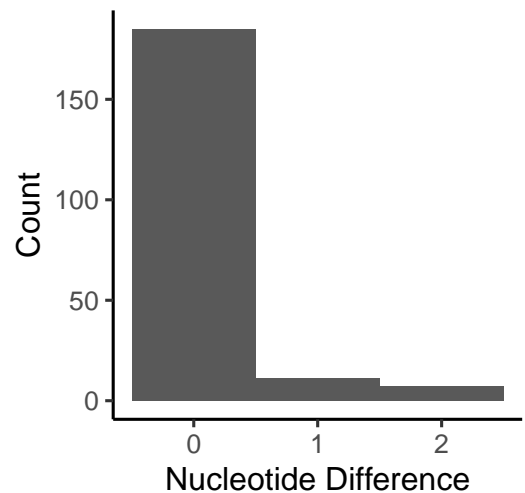
### IGHV3-9\*01

305 sequences assigned  
273 (89.5%) exact matches, in which:  
268 unique CDR3  
6 unique J



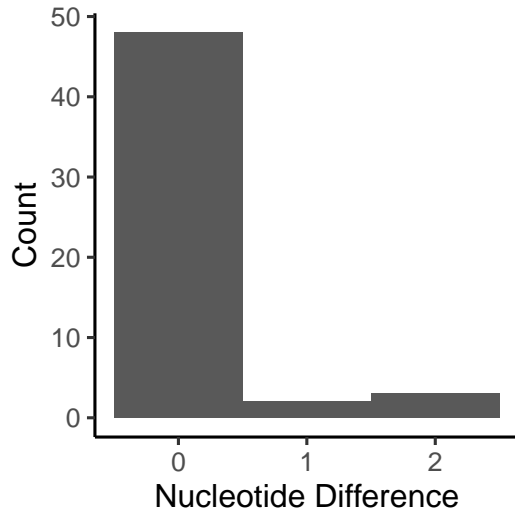
### IGHV3-15\*01\_02

203 sequences assigned  
185 (91.1%) exact matches, in which:  
184 unique CDR3  
6 unique J



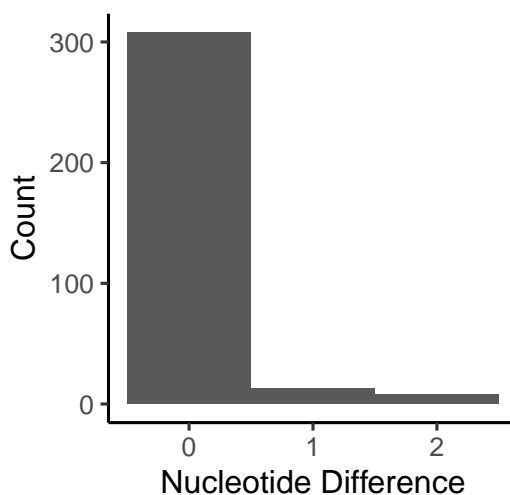
### IGHV2-70\*01

53 sequences assigned  
48 (90.6%) exact matches, in which:  
48 unique CDR3  
5 unique J



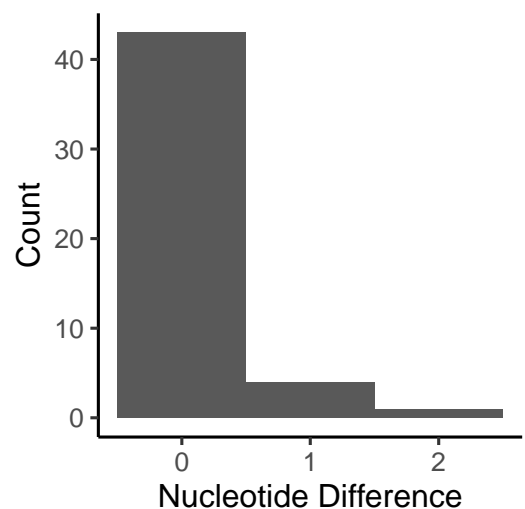
### IGHV3-11\*01

329 sequences assigned  
308 (93.6%) exact matches, in which:  
304 unique CDR3  
6 unique J



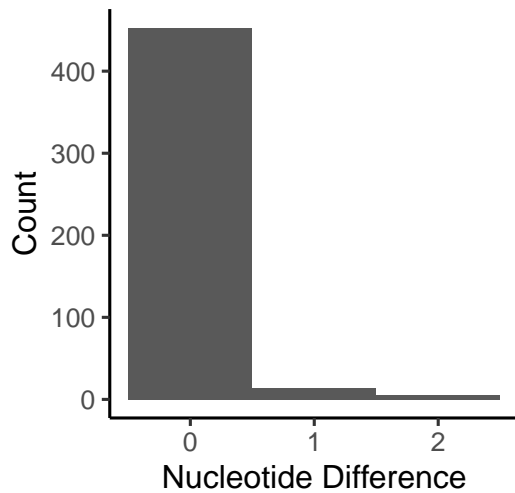
### IGHV3-20\*01\_02

48 sequences assigned  
43 (89.6%) exact matches, in which:  
43 unique CDR3  
5 unique J



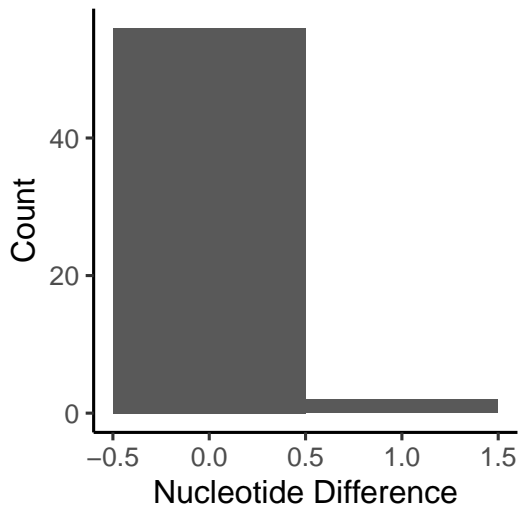
### IGHV3-21\*01\_02

472 sequences assigned  
453 (96%) exact matches, in which:  
444 unique CDR3  
6 unique J



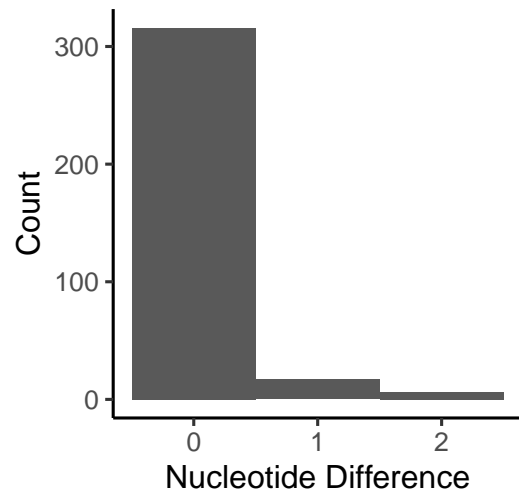
### IGHV3-43\*01

58 sequences assigned  
56 (96.6%) exact matches, in which:  
56 unique CDR3  
6 unique J



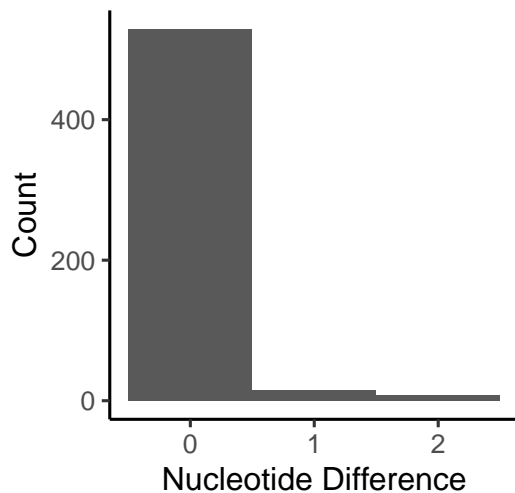
### IGHV3-53\*01\_02

339 sequences assigned  
316 (93.2%) exact matches, in which:  
308 unique CDR3  
6 unique J



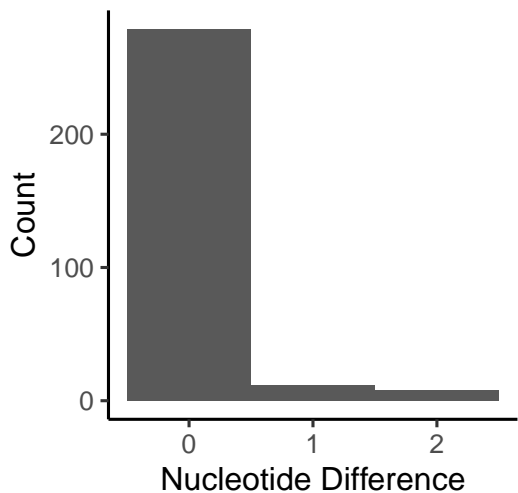
### IGHV3-30-3\*01

552 sequences assigned  
529 (95.8%) exact matches, in which:  
524 unique CDR3  
6 unique J



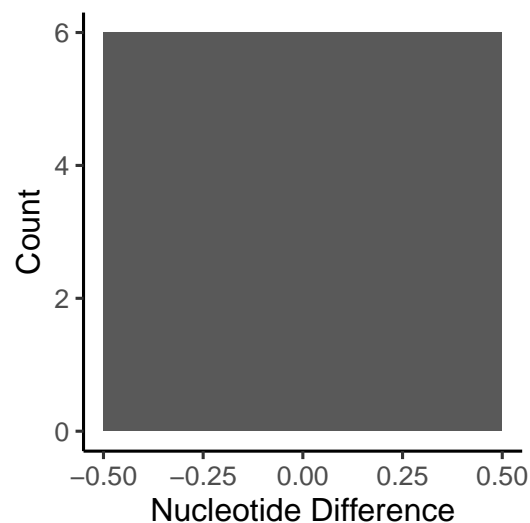
### IGHV3-48\*02

299 sequences assigned  
279 (93.3%) exact matches, in which:  
274 unique CDR3  
6 unique J



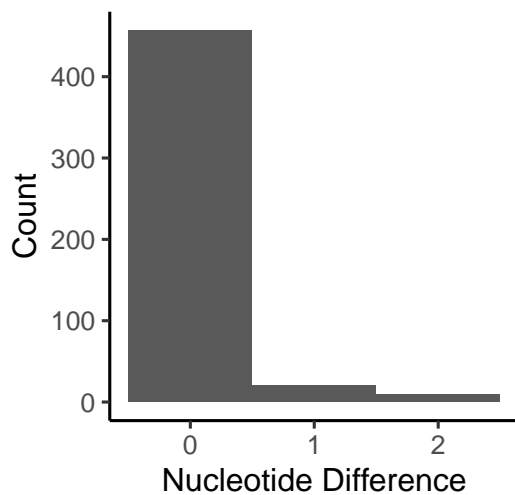
### IGHV3-64\*02\_07

6 sequences assigned  
6 (100%) exact matches, in which:  
6 unique CDR3  
3 unique J



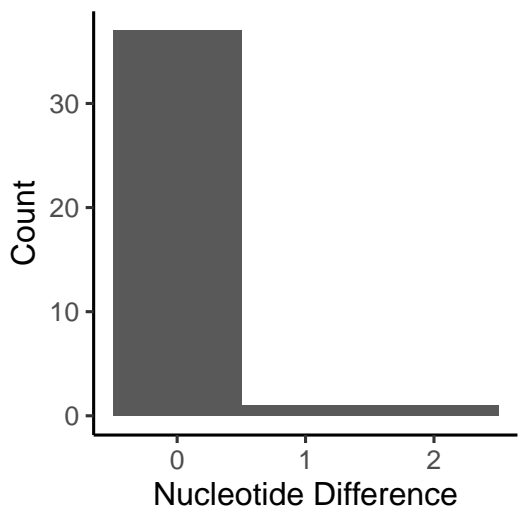
### IGHV3-33\*01

486 sequences assigned  
457 (94%) exact matches, in which:  
447 unique CDR3  
6 unique J



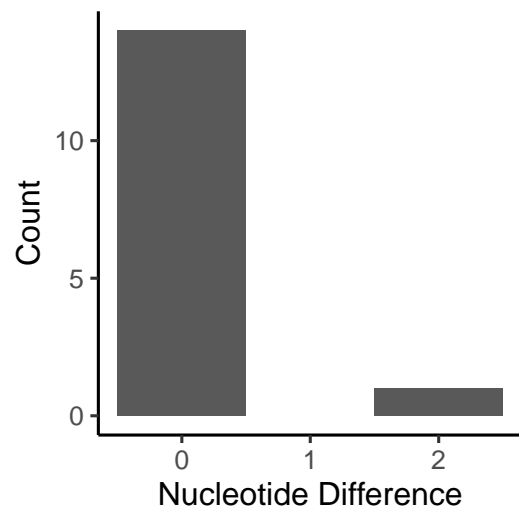
### IGHV3-49\*03\_05

39 sequences assigned  
37 (94.9%) exact matches, in which:  
36 unique CDR3  
4 unique J



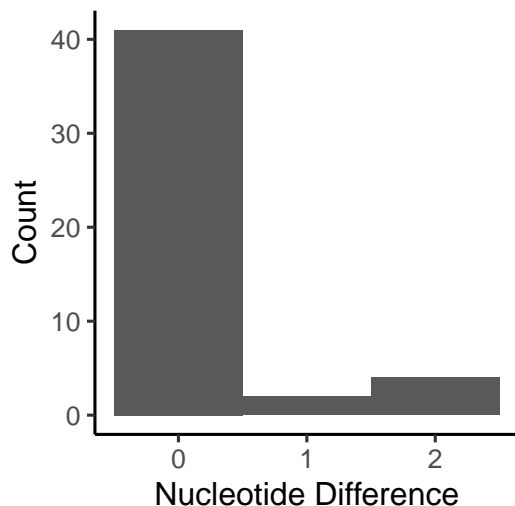
### IGHV3-72\*01

15 sequences assigned  
14 (93.3%) exact matches, in which:  
14 unique CDR3  
3 unique J



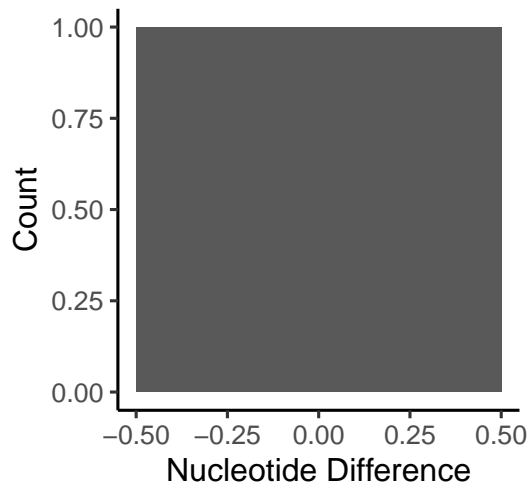
### IGHV3-73\*01\_02

47 sequences assigned  
41 (87.2%) exact matches, in which:  
41 unique CDR3  
5 unique J



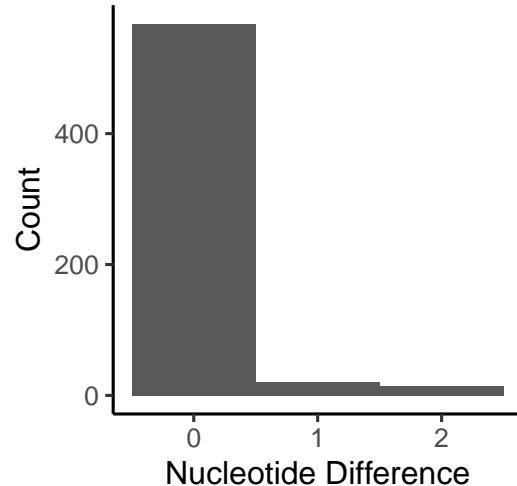
### IGHV4-28\*01\_07

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



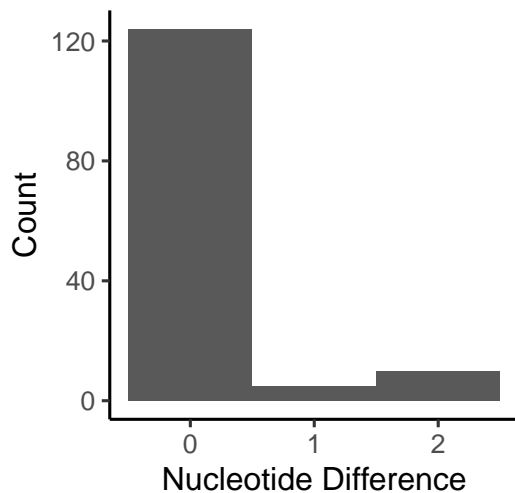
### IGHV4-31\*03\_04

603 sequences assigned  
568 (94.2%) exact matches, in which:  
563 unique CDR3  
6 unique J



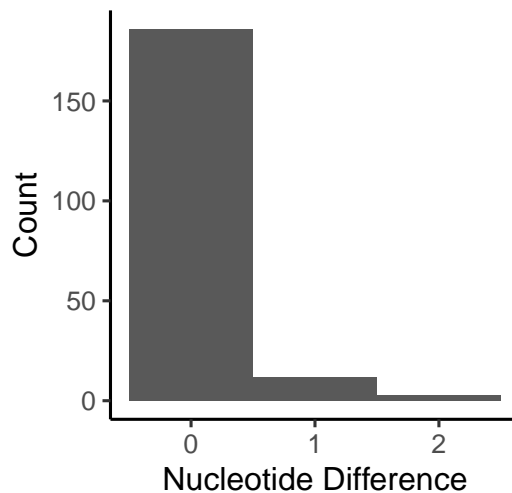
### IGHV3-74\*01\_02

139 sequences assigned  
124 (89.2%) exact matches, in which:  
115 unique CDR3  
5 unique J



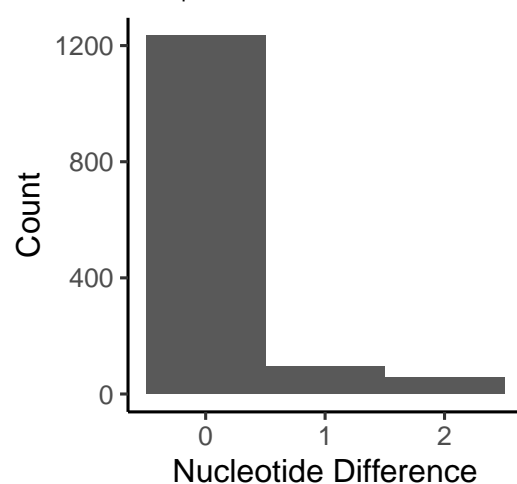
### IGHV4-30-2\*01

201 sequences assigned  
186 (92.5%) exact matches, in which:  
180 unique CDR3  
6 unique J



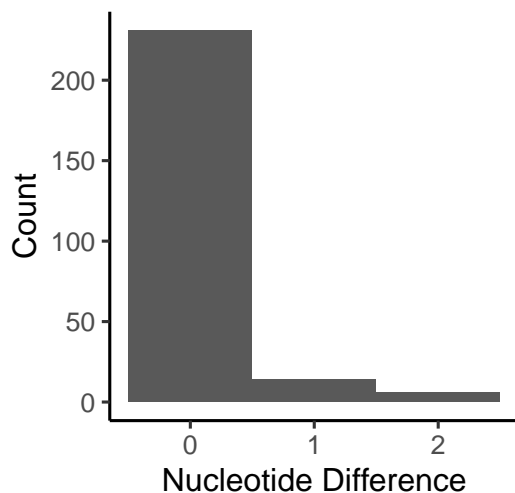
### IGHV4-34\*01\_02

1388 sequences assigned  
1234 (88.9%) exact matches, in which:  
1207 unique CDR3  
6 unique J



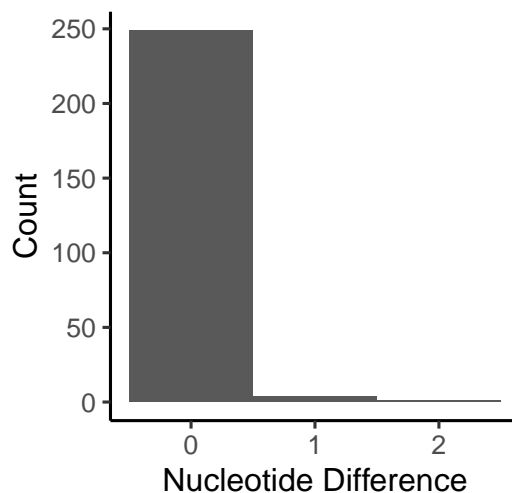
### IGHV4-4\*07

251 sequences assigned  
231 (92%) exact matches, in which:  
228 unique CDR3  
6 unique J



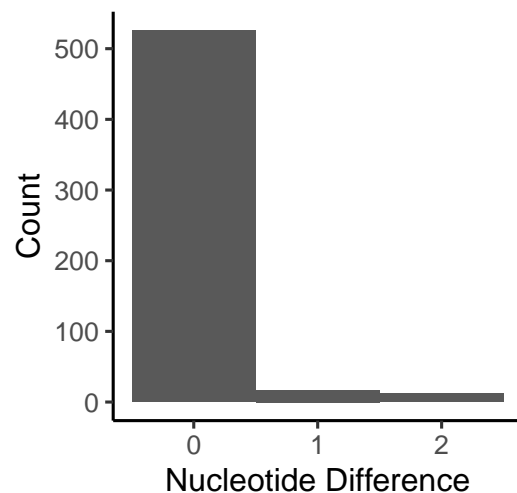
### IGHV4-30-4\*01

254 sequences assigned  
249 (98%) exact matches, in which:  
245 unique CDR3  
6 unique J



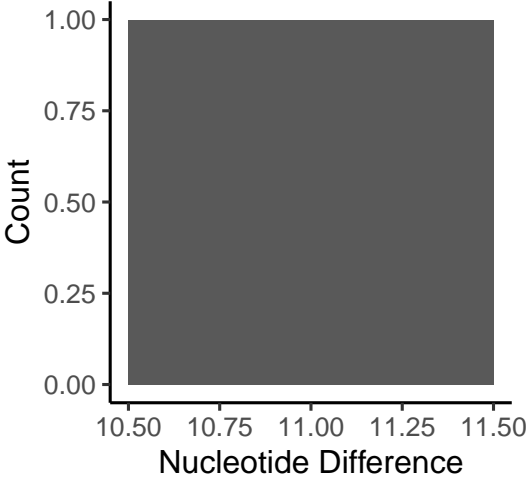
### IGHV4-39\*01\_05

555 sequences assigned  
526 (94.8%) exact matches, in which:  
519 unique CDR3  
6 unique J



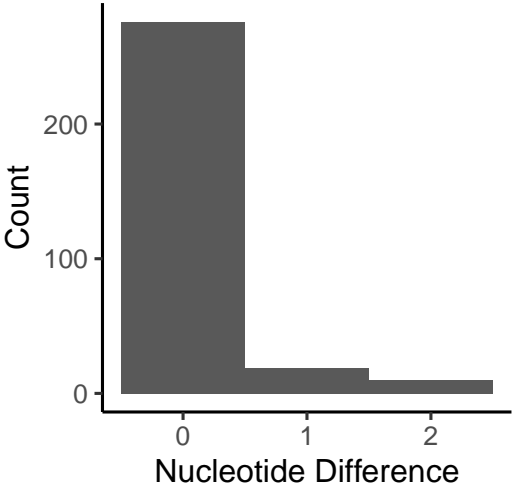
IGHV4-55\*02\_04\_08

1 sequences assigned  
No exact matches.



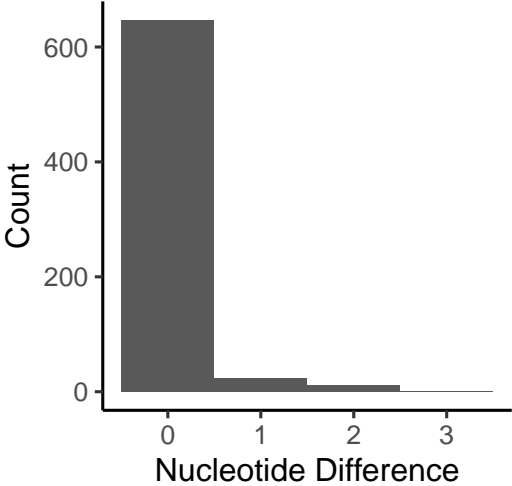
IGHV5-51\*01\_03

305 sequences assigned  
276 (90.5%) exact matches, in which:  
275 unique CDR3  
6 unique J



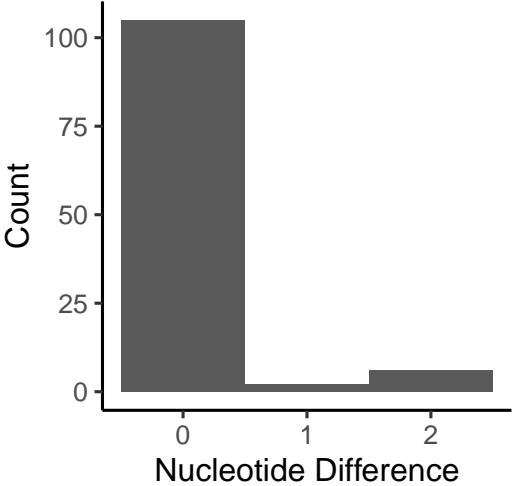
IGHV4-59\*01\_07

683 sequences assigned  
647 (94.7%) exact matches, in which:  
633 unique CDR3  
6 unique J



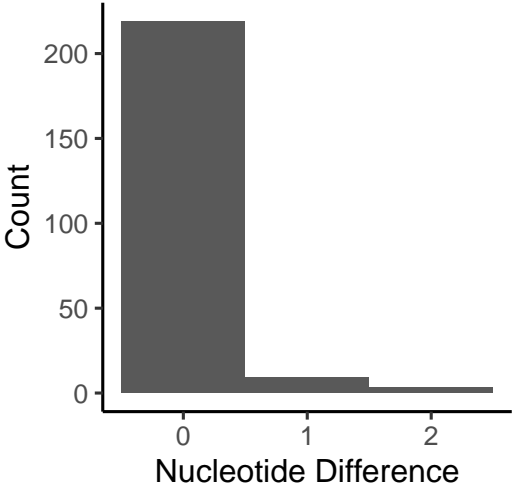
IGHV6-1\*01\_02

113 sequences assigned  
105 (92.9%) exact matches, in which:  
105 unique CDR3  
6 unique J

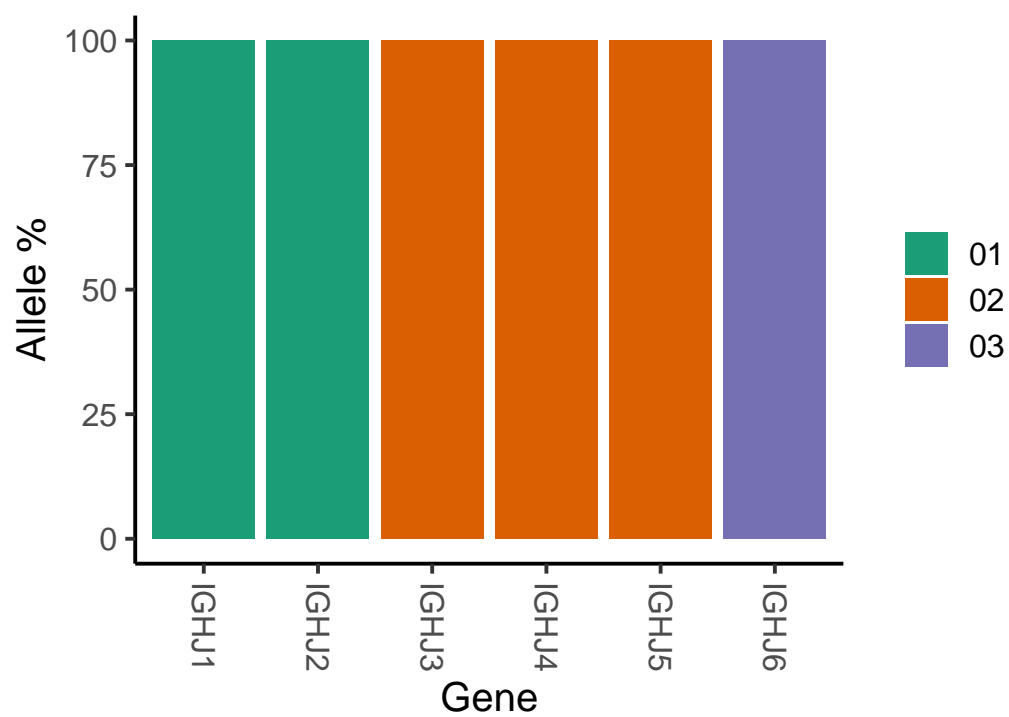


IGHV4-61\*01

231 sequences assigned  
219 (94.8%) exact matches, in which:  
218 unique CDR3  
6 unique J



Allele Usage



Novel sequence(s)IGHV3–11\*06\_T300CIGHV4–38–2\*02\_A70GIGHV4–39\*02\_C258GIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–39\*02\_C258GIGHV4–59\*02\_G88AIGHV5–51\*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.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*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\_G88AIGHV5–51\*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.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–39\*02\_C258GIGHV5–51\*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.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.