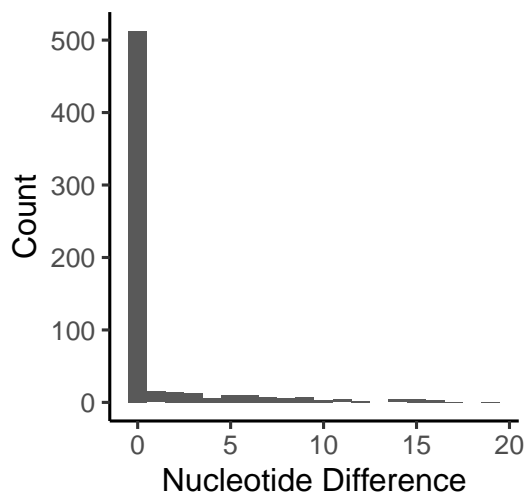


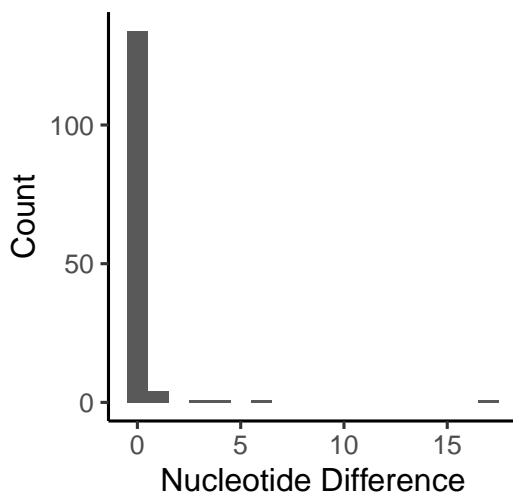
### IGHV1-2\*02

631 sequences assigned  
513 (81.3%) exact matches, in which:  
513 unique CDR3  
6 unique J



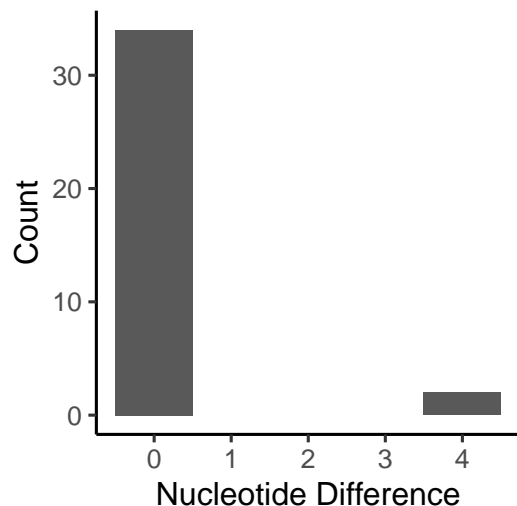
### IGHV1-24\*01

142 sequences assigned  
134 (94.4%) exact matches, in which:  
134 unique CDR3  
6 unique J



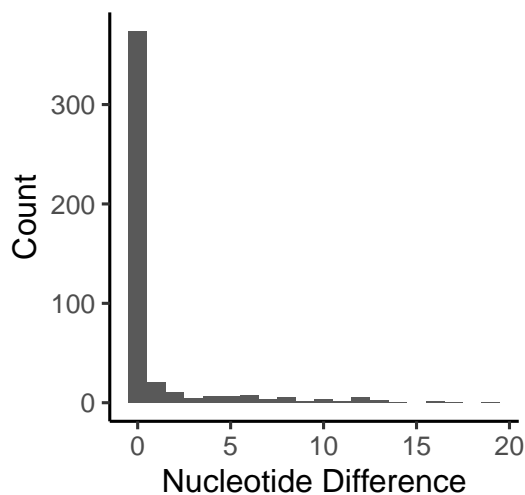
### IGHV1-58\*01\_03

37 sequences assigned  
34 (91.9%) exact matches, in which:  
34 unique CDR3  
4 unique J



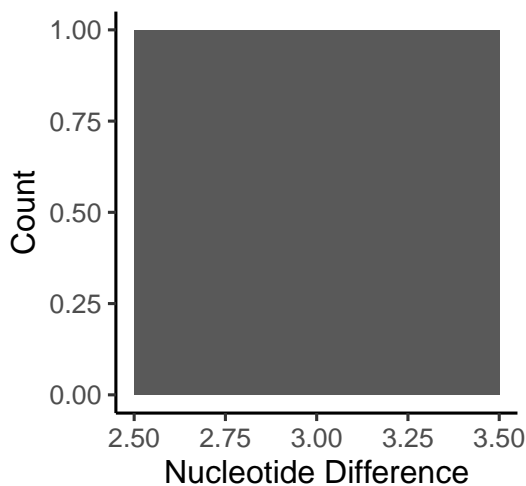
### IGHV1-8\*01

465 sequences assigned  
374 (80.4%) exact matches, in which:  
374 unique CDR3  
6 unique J



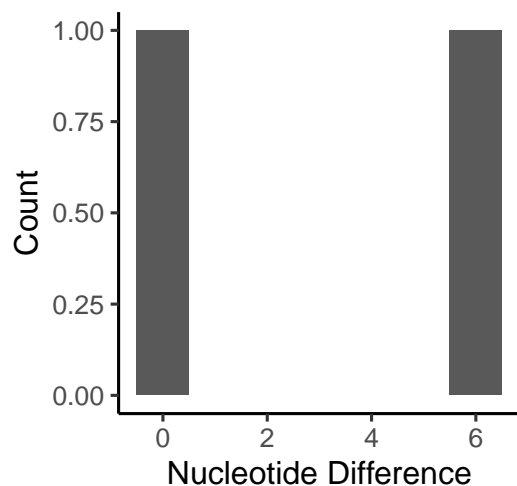
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



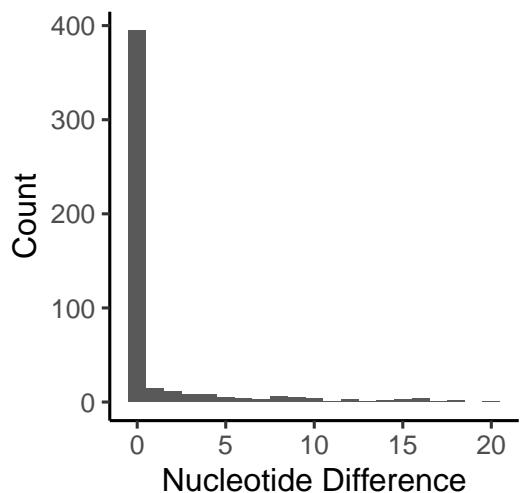
### IGHV1-69-2\*01

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



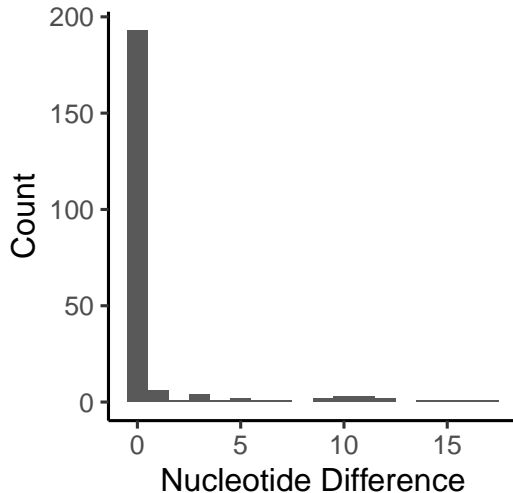
### IGHV1-18\*01

486 sequences assigned  
395 (81.3%) exact matches, in which:  
395 unique CDR3  
6 unique J



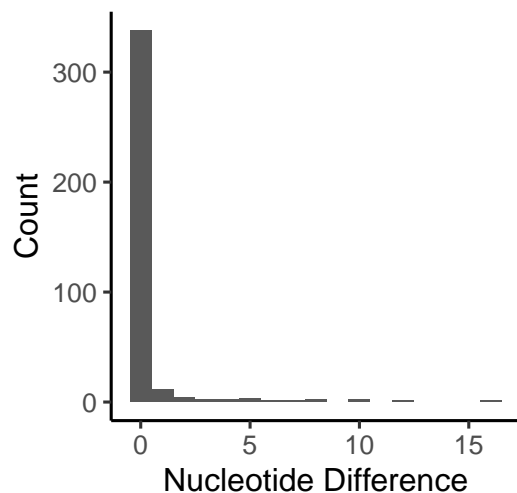
### IGHV1-46\*01

225 sequences assigned  
193 (85.8%) exact matches, in which:  
193 unique CDR3  
6 unique J



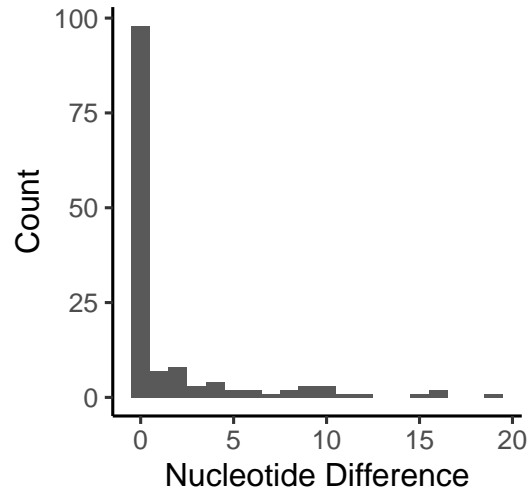
### IGHV1-69\*06\_14

371 sequences assigned  
338 (91.1%) exact matches, in which:  
338 unique CDR3  
6 unique J



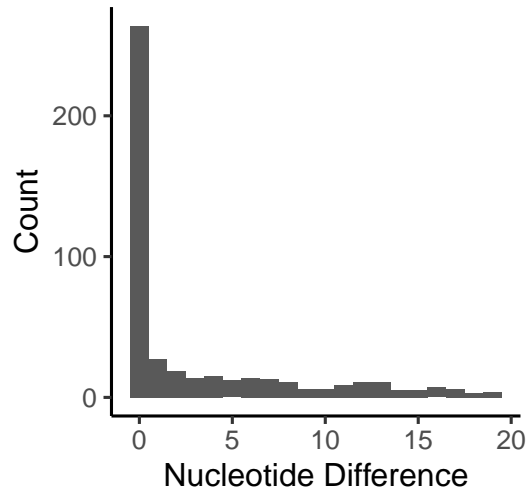
### IGHV2-5\*01

149 sequences assigned  
98 (65.8%) exact matches, in which:  
98 unique CDR3  
6 unique J



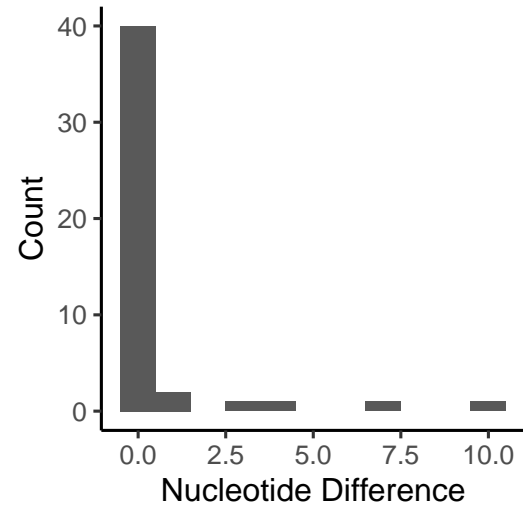
### IGHV3-7\*01

464 sequences assigned  
264 (56.9%) exact matches, in which:  
257 unique CDR3  
6 unique J



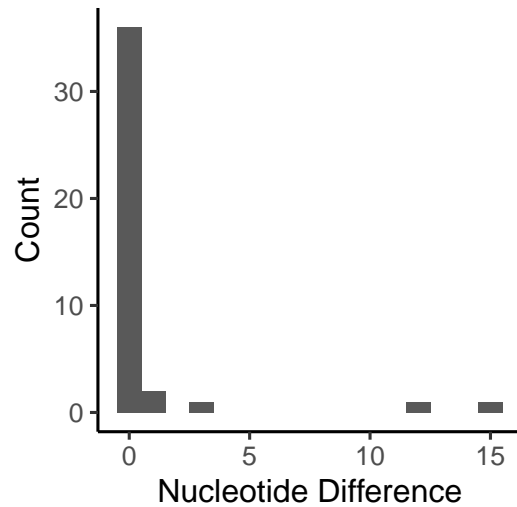
### IGHV3-13\*01

46 sequences assigned  
40 (87%) exact matches, in which:  
39 unique CDR3  
5 unique J



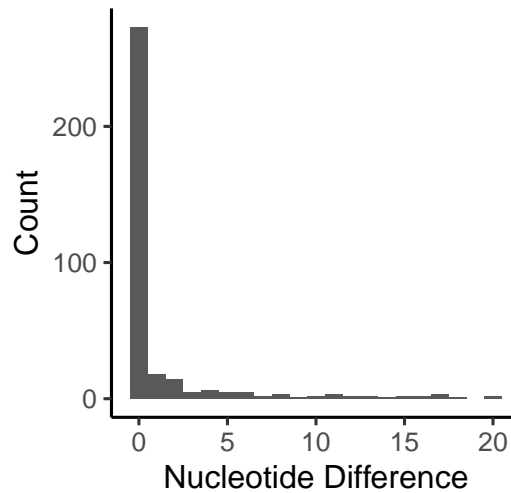
### IGHV2-26\*01

42 sequences assigned  
36 (85.7%) exact matches, in which:  
36 unique CDR3  
5 unique J



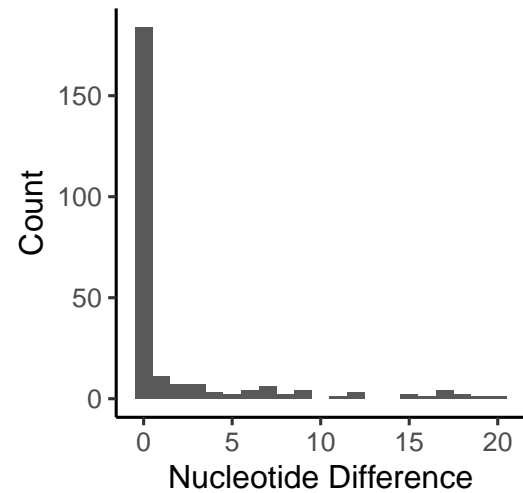
### IGHV3-9\*01

356 sequences assigned  
273 (76.7%) exact matches, in which:  
268 unique CDR3  
6 unique J



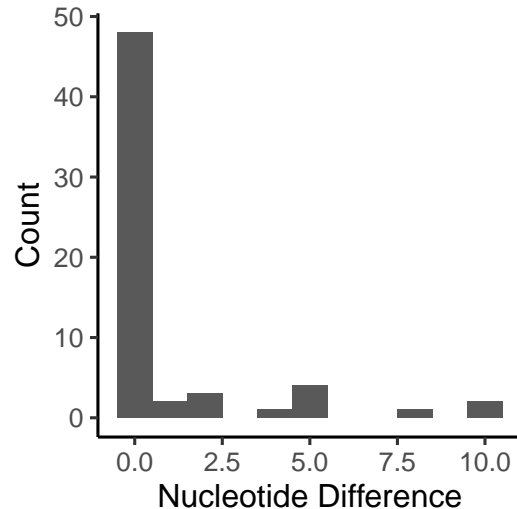
### IGHV3-15\*01\_02

252 sequences assigned  
184 (73%) exact matches, in which:  
183 unique CDR3  
6 unique J



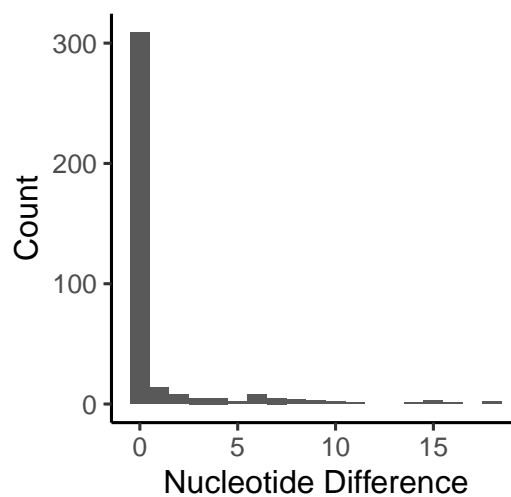
### IGHV2-70\*01

61 sequences assigned  
48 (78.7%) exact matches, in which:  
48 unique CDR3  
5 unique J



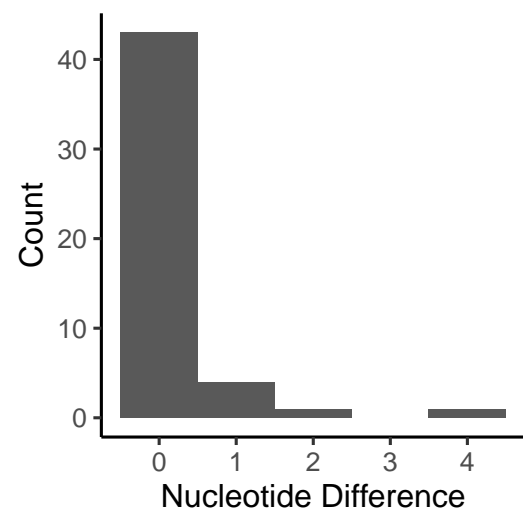
### IGHV3-11\*01

374 sequences assigned  
309 (82.6%) exact matches, in which:  
305 unique CDR3  
6 unique J



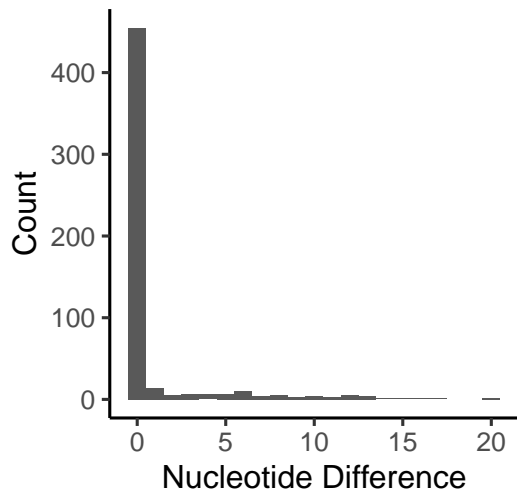
### IGHV3-20\*01\_02

51 sequences assigned  
43 (84.3%) exact matches, in which:  
43 unique CDR3  
5 unique J



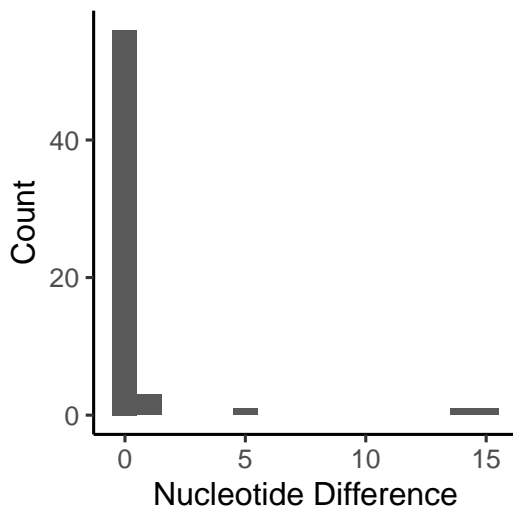
### IGHV3-21\*01\_02

543 sequences assigned  
455 (83.8%) exact matches, in which:  
446 unique CDR3  
6 unique J



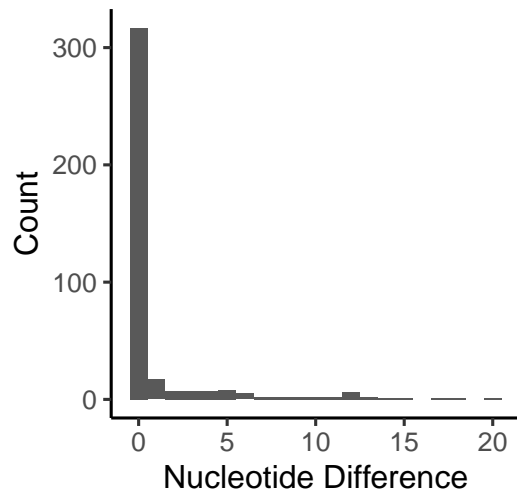
### IGHV3-43\*01

62 sequences assigned  
56 (90.3%) exact matches, in which:  
56 unique CDR3  
6 unique J



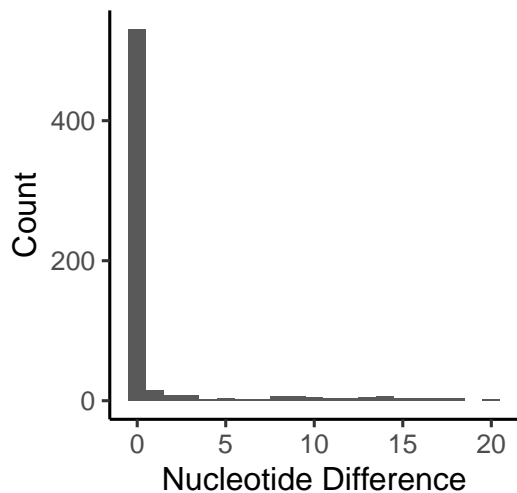
### IGHV3-53\*01\_02

391 sequences assigned  
317 (81.1%) exact matches, in which:  
309 unique CDR3  
6 unique J



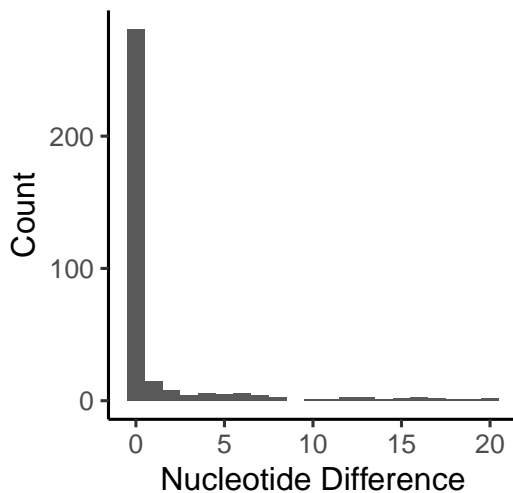
### IGHV3-30-3\*01

637 sequences assigned  
531 (83.4%) exact matches, in which:  
525 unique CDR3  
6 unique J



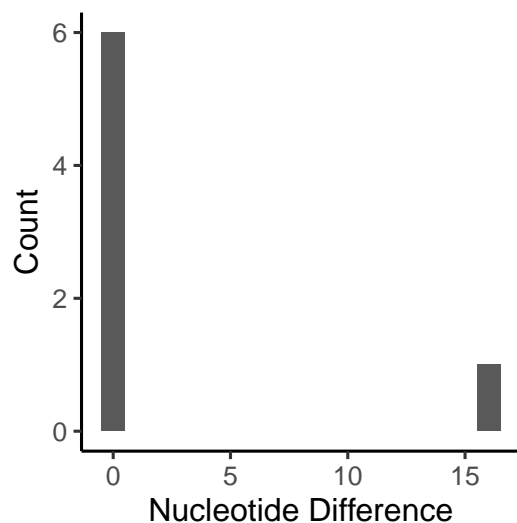
### IGHV3-48\*02

361 sequences assigned  
281 (77.8%) exact matches, in which:  
276 unique CDR3  
6 unique J



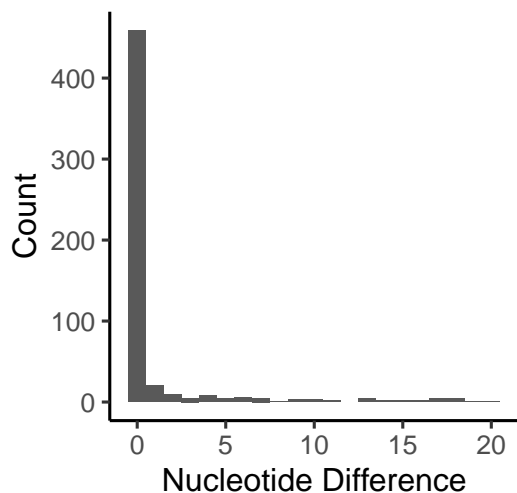
### IGHV3-64\*02\_07

7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



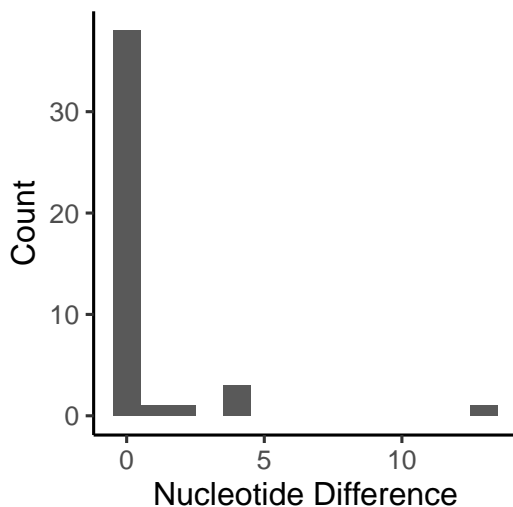
### IGHV3-33\*01

553 sequences assigned  
459 (83%) exact matches, in which:  
449 unique CDR3  
6 unique J



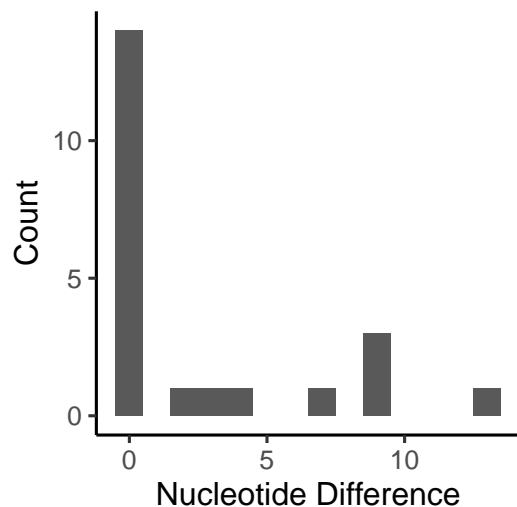
### IGHV3-49\*03\_05

45 sequences assigned  
38 (84.4%) exact matches, in which:  
37 unique CDR3  
4 unique J



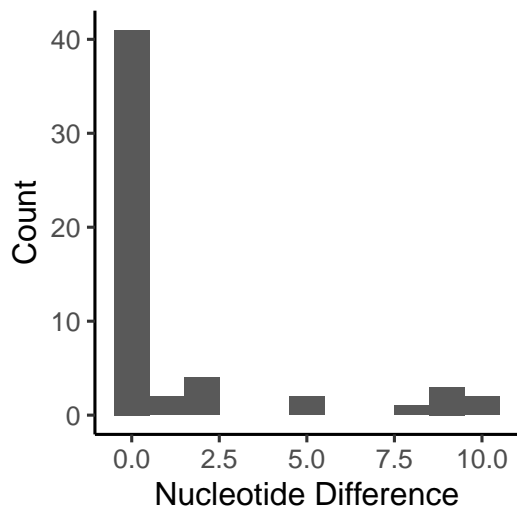
### IGHV3-72\*01

23 sequences assigned  
14 (60.9%) exact matches, in which:  
14 unique CDR3  
3 unique J



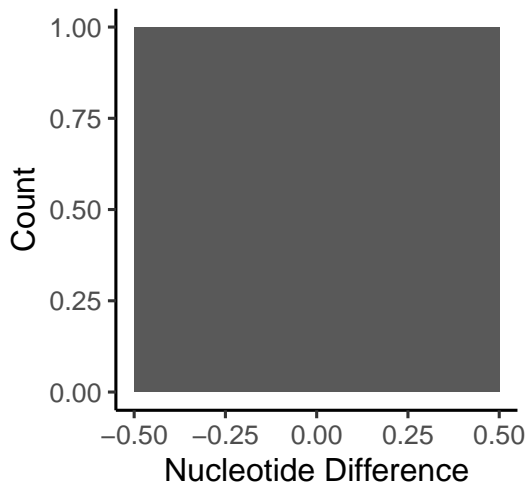
### IGHV3-73\*01\_02

55 sequences assigned  
41 (74.5%) exact matches, in which:  
41 unique CDR3  
5 unique J



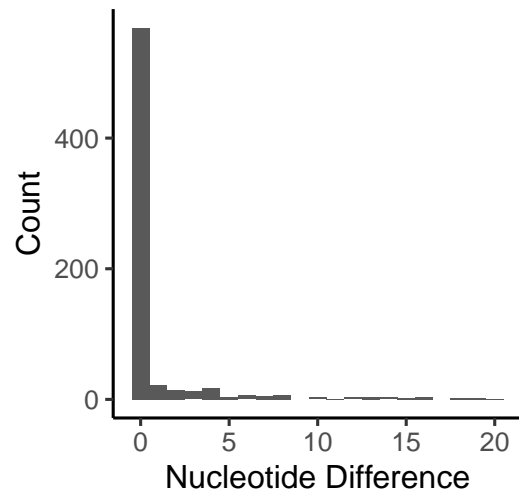
### IGHV4-28\*01\_07

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



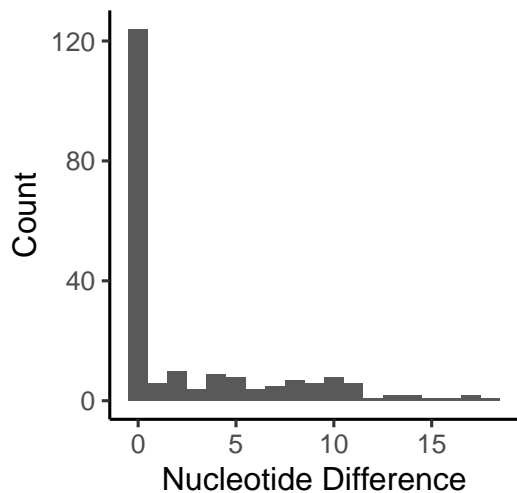
### IGHV4-31\*03\_04

695 sequences assigned  
569 (81.9%) exact matches, in which:  
564 unique CDR3  
6 unique J



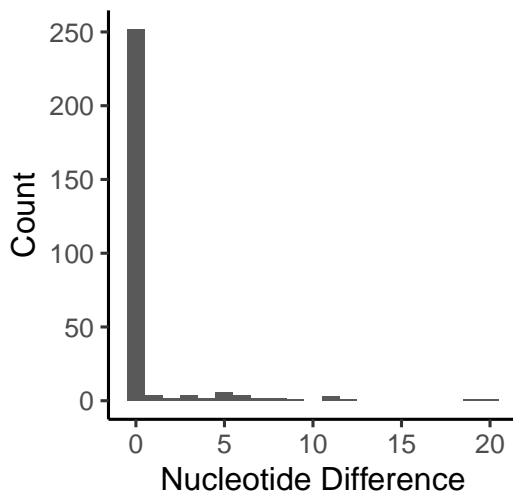
### IGHV3-74\*01\_02

213 sequences assigned  
124 (58.2%) exact matches, in which:  
115 unique CDR3  
5 unique J



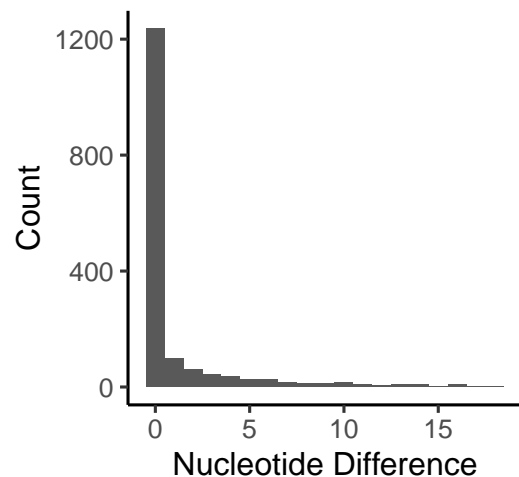
### IGHV4-30-4\*01

289 sequences assigned  
252 (87.2%) exact matches, in which:  
247 unique CDR3  
6 unique J



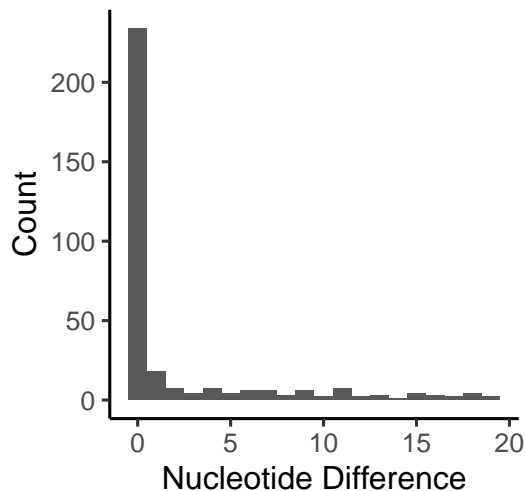
### IGHV4-34\*01\_02

1628 sequences assigned  
1236 (75.9%) exact matches, in which:  
1208 unique CDR3  
6 unique J



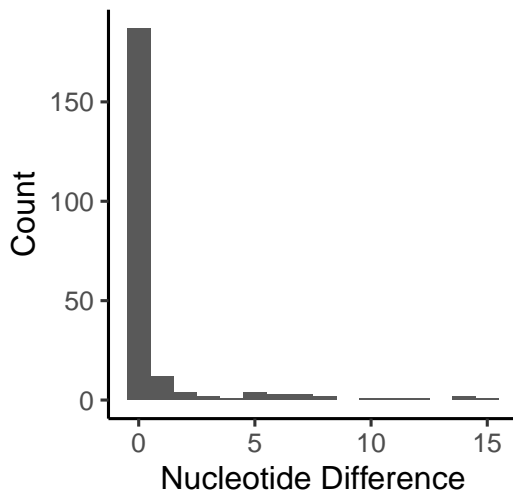
### IGHV4-4\*07

326 sequences assigned  
234 (71.8%) exact matches, in which:  
229 unique CDR3  
6 unique J



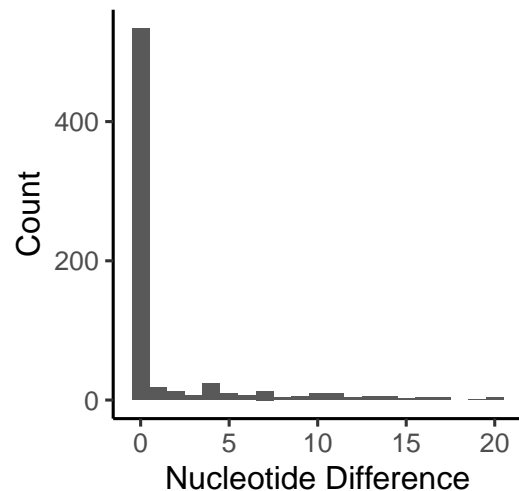
### IGHV4-30-2\*01

229 sequences assigned  
187 (81.7%) exact matches, in which:  
181 unique CDR3  
6 unique J



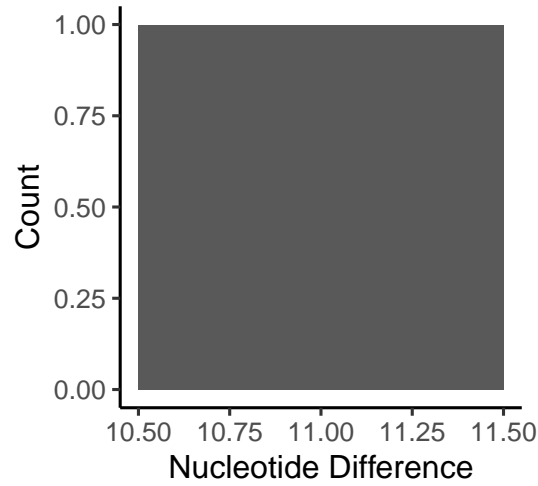
### IGHV4-39\*01\_05

687 sequences assigned  
534 (77.7%) exact matches, in which:  
525 unique CDR3  
6 unique J



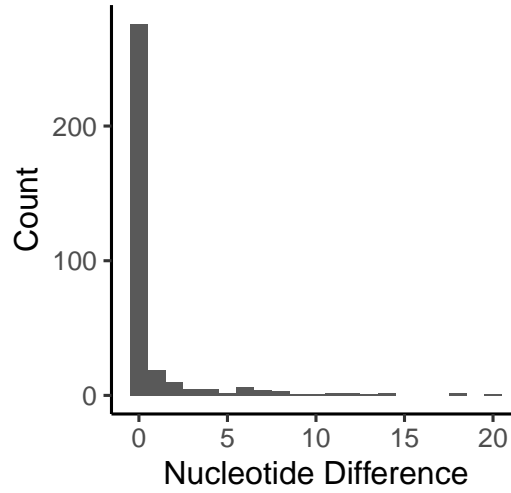
### IGHV4-55\*02\_04\_08

1 sequences assigned  
No exact matches.



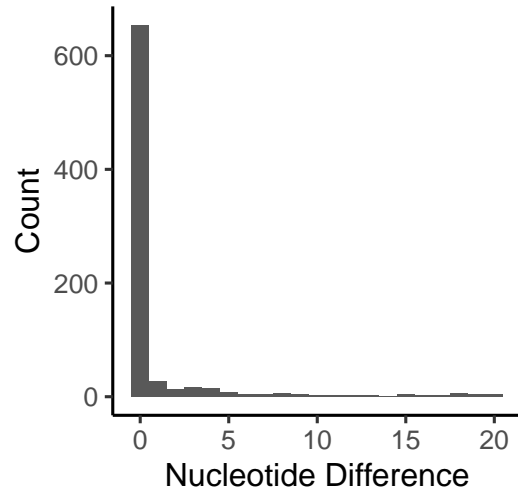
### IGHV5-51\*01\_03

343 sequences assigned  
276 (80.5%) exact matches, in which:  
275 unique CDR3  
6 unique J



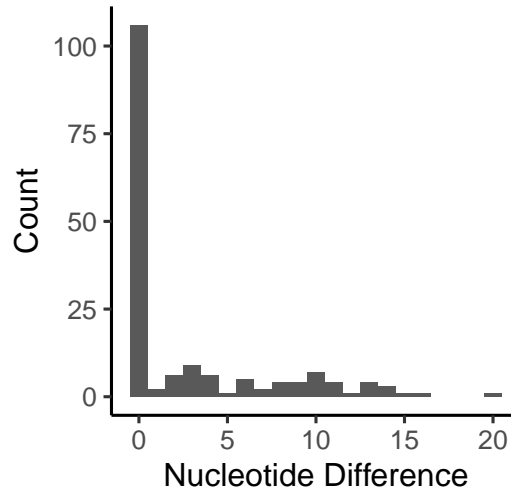
### IGHV4-59\*01\_07

792 sequences assigned  
654 (82.6%) exact matches, in which:  
639 unique CDR3  
6 unique J



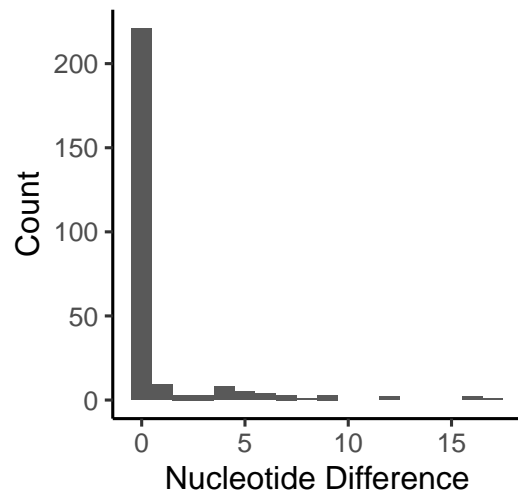
### IGHV6-1\*01\_02

167 sequences assigned  
106 (63.5%) exact matches, in which:  
106 unique CDR3  
6 unique J

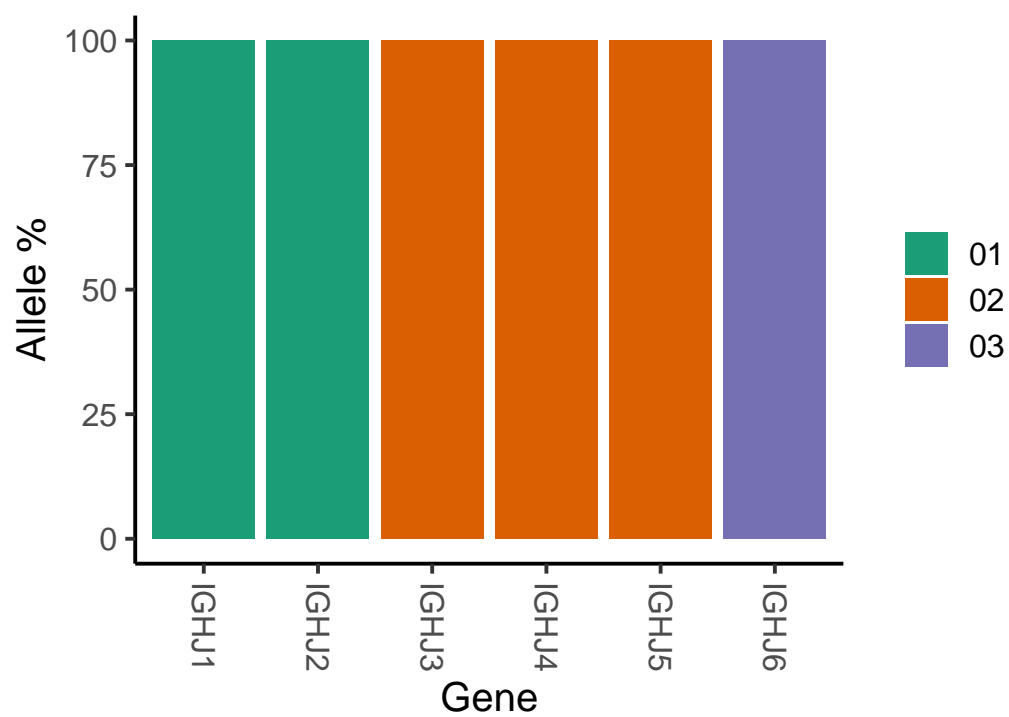


### IGHV4-61\*01

269 sequences assigned  
221 (82.2%) exact matches, in which:  
220 unique CDR3  
6 unique J



Allele Usage



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.

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.