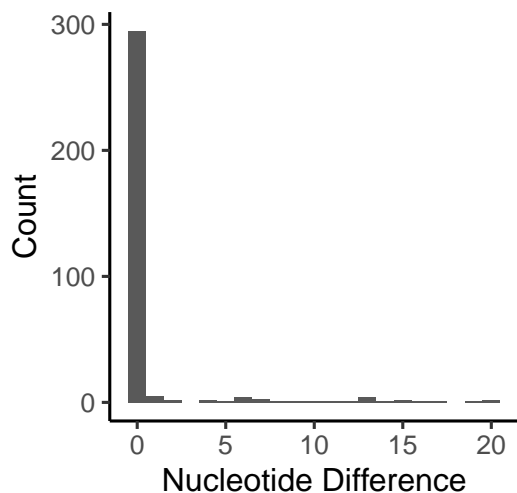


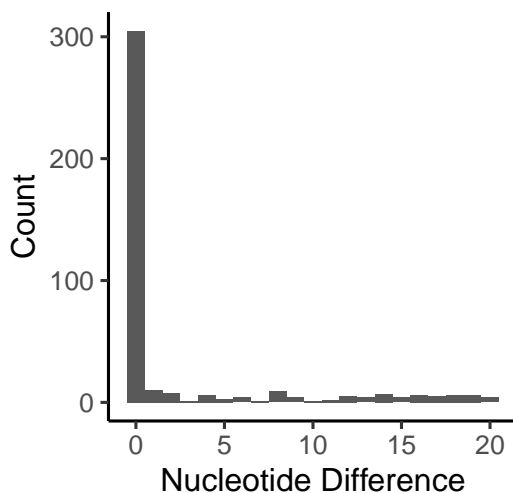
### IGHV1-2\*04

350 sequences assigned  
295 (84.3%) exact matches, in which:  
294 unique CDR3  
6 unique J



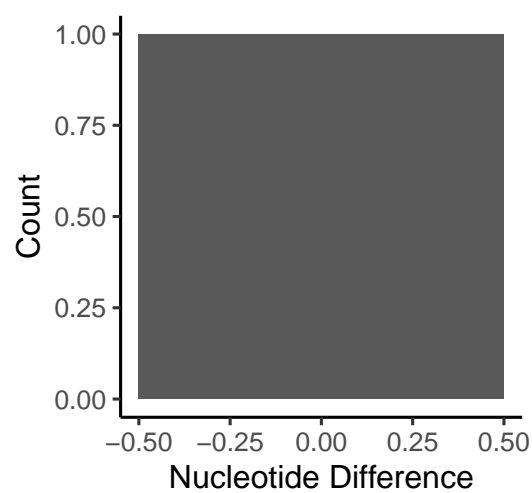
### IGHV1-8\*01

453 sequences assigned  
305 (67.3%) exact matches, in which:  
305 unique CDR3  
6 unique J



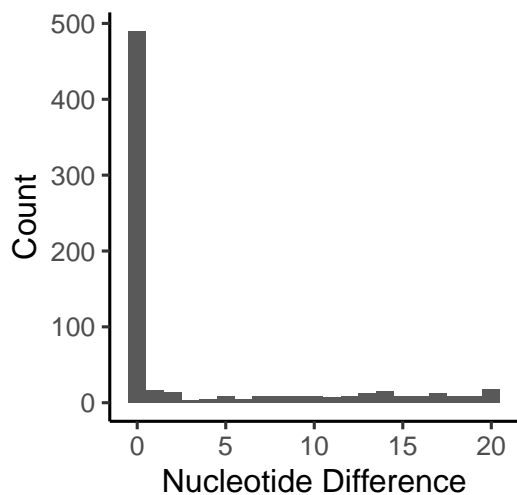
### IGHV1-38-4\*01

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



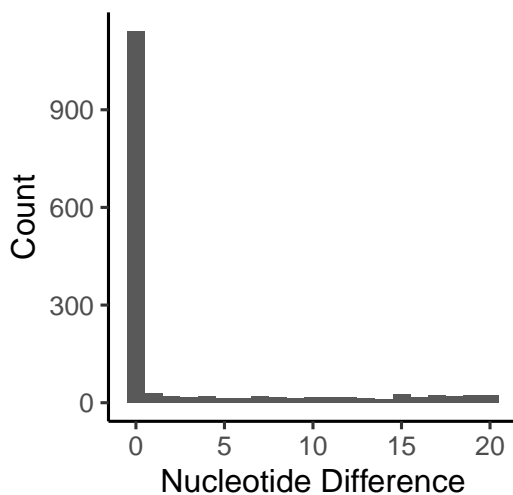
### IGHV1-2\*06

813 sequences assigned  
490 (60.3%) exact matches, in which:  
490 unique CDR3  
6 unique J



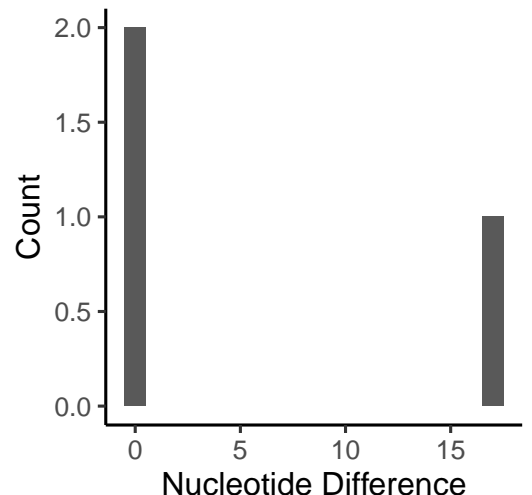
### IGHV1-18\*01

1749 sequences assigned  
1142 (65.3%) exact matches, in which:  
1141 unique CDR3  
6 unique J



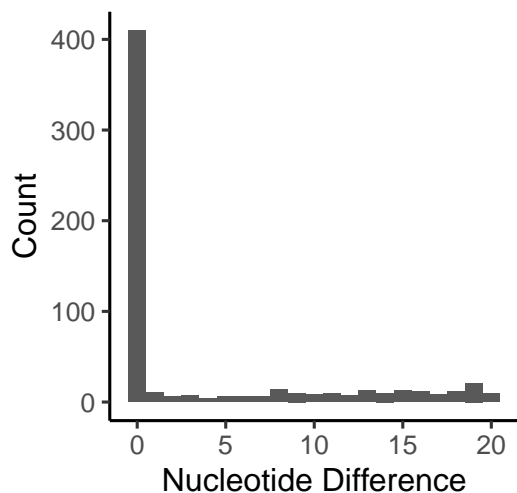
### IGHV1-45\*02

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



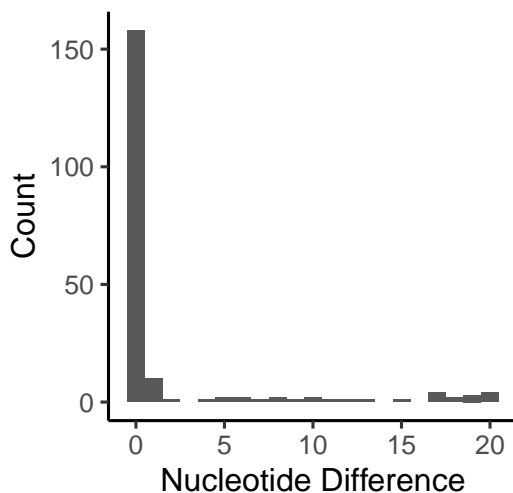
### IGHV1-3\*01\_05

687 sequences assigned  
410 (59.7%) exact matches, in which:  
410 unique CDR3  
6 unique J



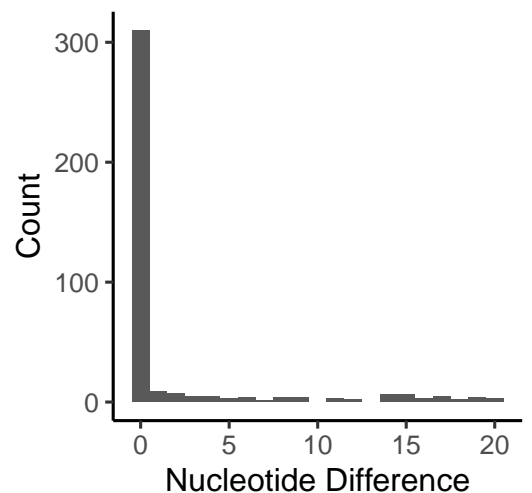
### IGHV1-24\*01

236 sequences assigned  
158 (66.9%) exact matches, in which:  
158 unique CDR3  
5 unique J



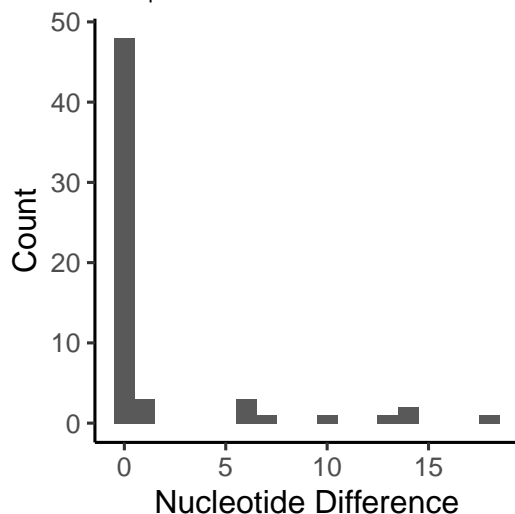
### IGHV1-46\*03

434 sequences assigned  
310 (71.4%) exact matches, in which:  
310 unique CDR3  
6 unique J



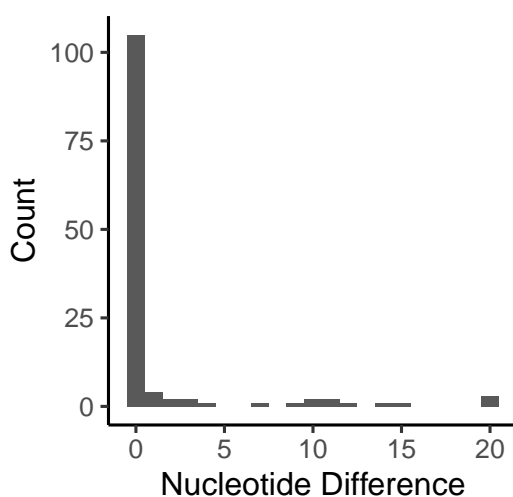
## IGHV1–58\*02

70 sequences assigned  
48 (68.6%) exact matches, in which:  
48 unique CDR3  
6 unique J



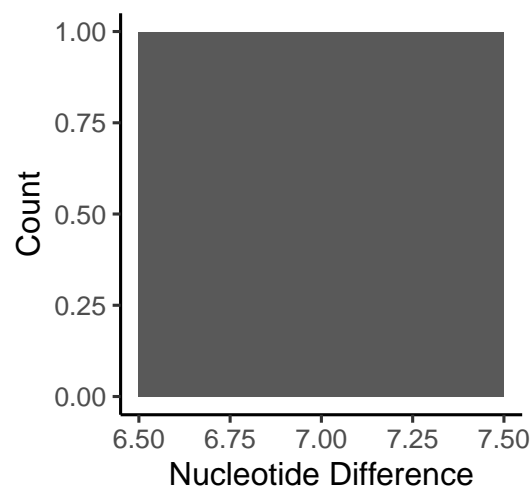
## IGHV2–26\*01

131 sequences assigned  
105 (80.2%) exact matches, in which:  
105 unique CDR3  
5 unique J



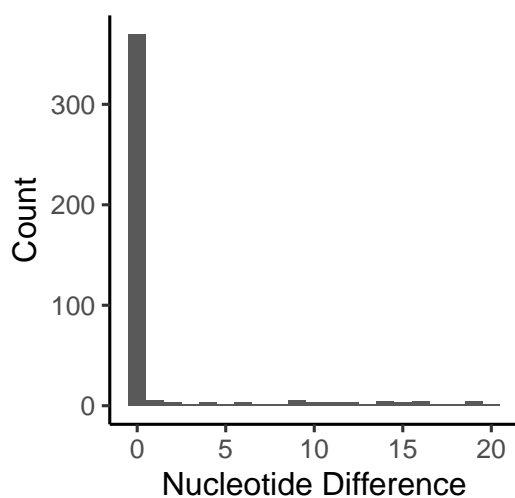
## IGHV2–70D\*04

1 sequences assigned  
No exact matches.



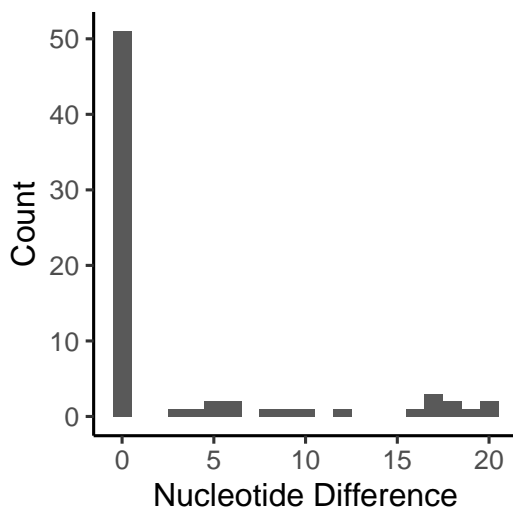
## IGHV1–69\*04\_09

472 sequences assigned  
370 (78.4%) exact matches, in which:  
370 unique CDR3  
6 unique J



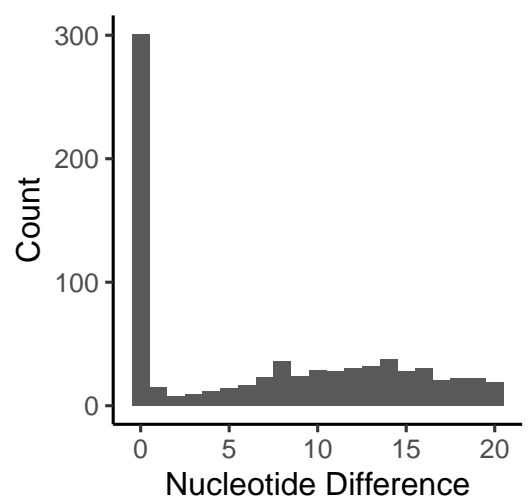
## IGHV2–70\*01

82 sequences assigned  
51 (62.2%) exact matches, in which:  
51 unique CDR3  
4 unique J



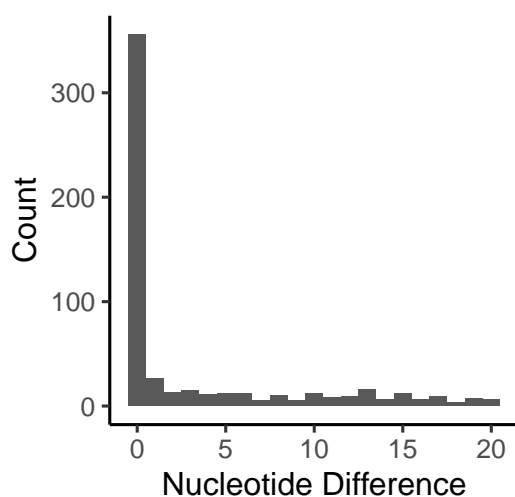
## IGHV3–7\*01

871 sequences assigned  
301 (34.6%) exact matches, in which:  
294 unique CDR3  
6 unique J



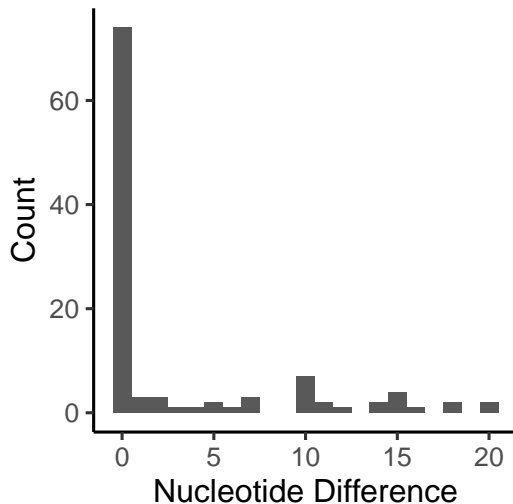
## IGHV2–5\*02

624 sequences assigned  
356 (57.1%) exact matches, in which:  
355 unique CDR3  
6 unique J



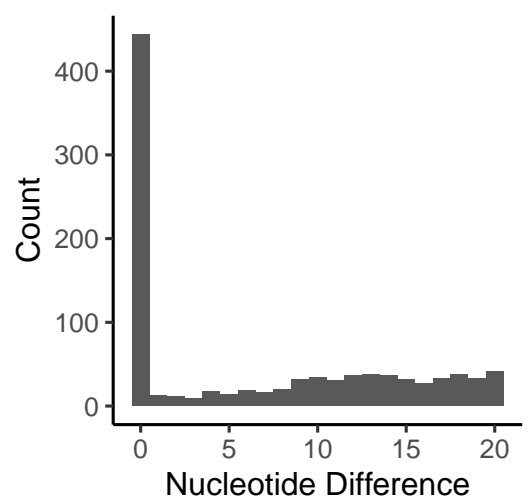
## IGHV2–70\*11\_15

119 sequences assigned  
74 (62.2%) exact matches, in which:  
73 unique CDR3  
5 unique J



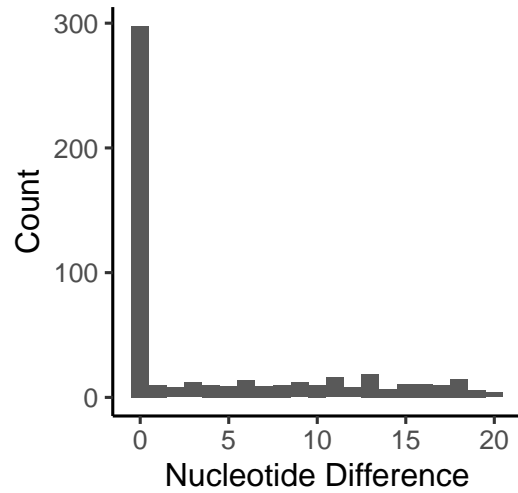
## IGHV3–7\*03

1212 sequences assigned  
444 (36.6%) exact matches, in which:  
436 unique CDR3  
6 unique J



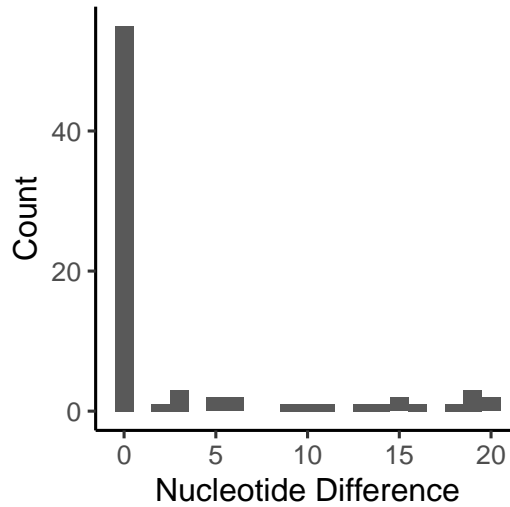
### IGHV3-9\*01

600 sequences assigned  
298 (49.7%) exact matches, in which:  
298 unique CDR3  
6 unique J



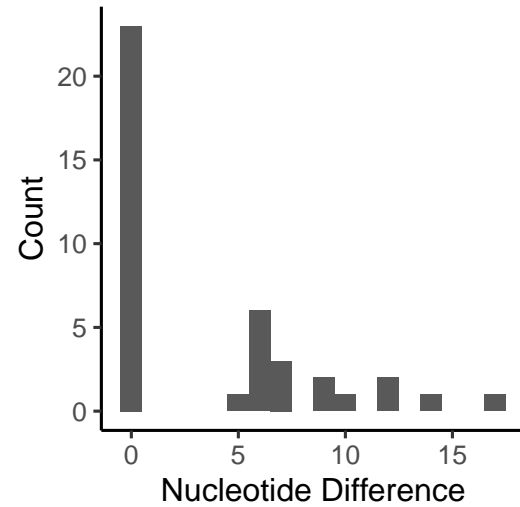
### IGHV3-13\*01

92 sequences assigned  
55 (59.8%) exact matches, in which:  
55 unique CDR3  
5 unique J



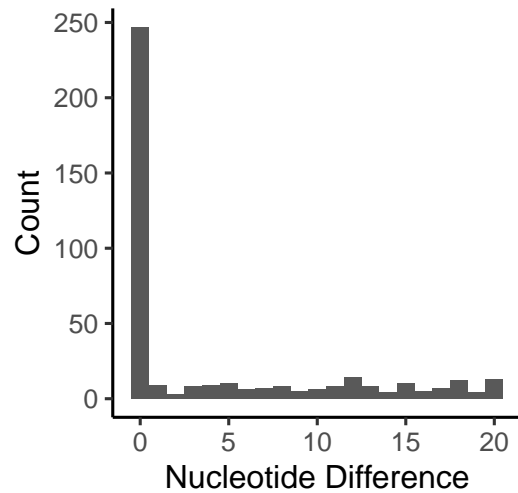
### IGHV3-20\*01\_02

51 sequences assigned  
23 (45.1%) exact matches, in which:  
22 unique CDR3  
5 unique J



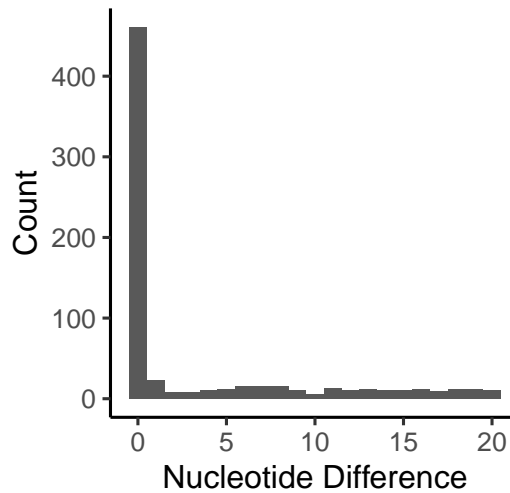
### IGHV3-11\*01

487 sequences assigned  
247 (50.7%) exact matches, in which:  
246 unique CDR3  
6 unique J



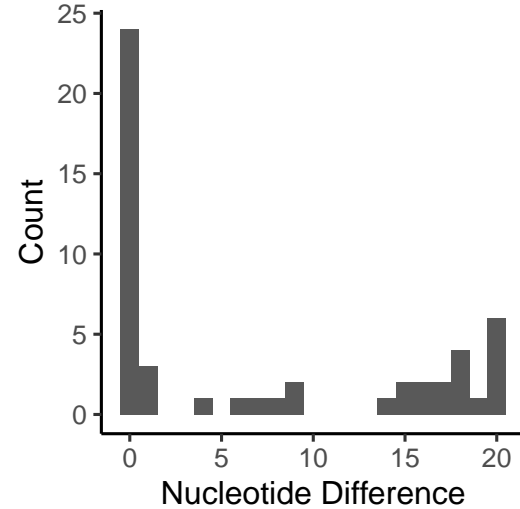
### IGHV3-15\*07

820 sequences assigned  
461 (56.2%) exact matches, in which:  
453 unique CDR3  
6 unique J



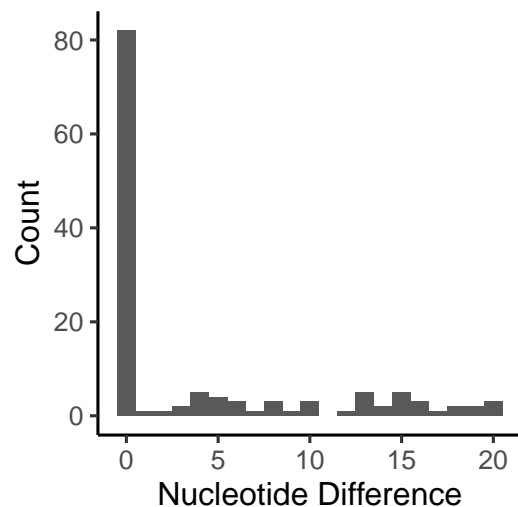
### IGHV3-20\*03\_04

77 sequences assigned  
24 (31.2%) exact matches, in which:  
24 unique CDR3  
4 unique J



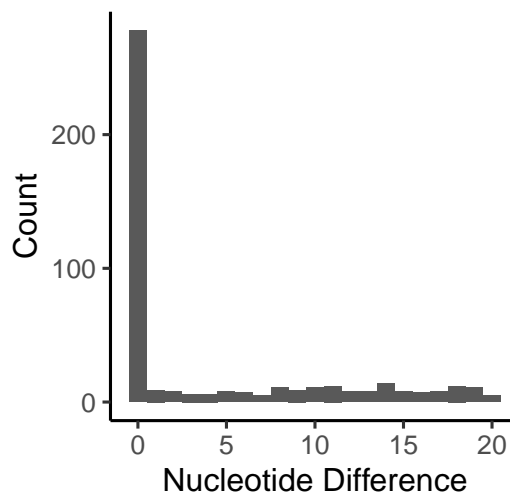
### IGHV3-11\*06

151 sequences assigned  
82 (54.3%) exact matches, in which:  
82 unique CDR3  
5 unique J



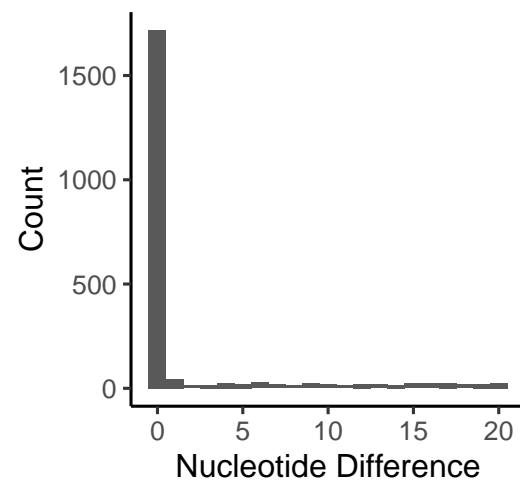
### IGHV3-15\*01\_02

524 sequences assigned  
278 (53.1%) exact matches, in which:  
273 unique CDR3  
6 unique J



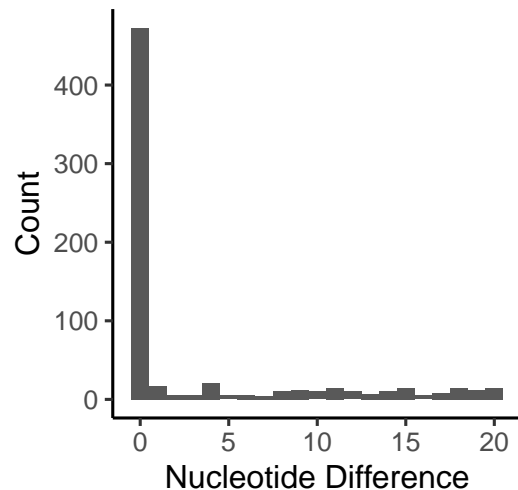
### IGHV3-21\*01\_02

2395 sequences assigned  
1718 (71.7%) exact matches, in which:  
1697 unique CDR3  
6 unique J



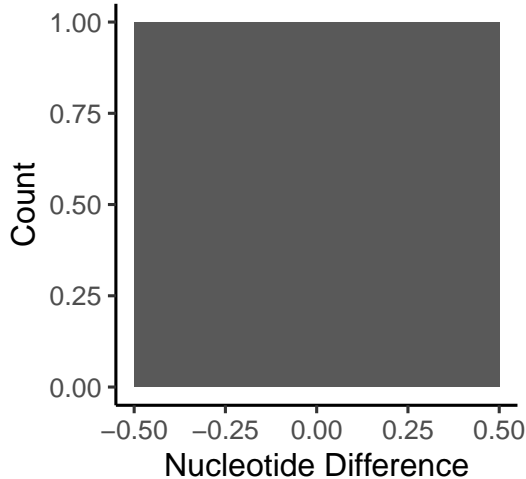
### IGHV3–33\*01

795 sequences assigned  
473 (59.5%) exact matches, in which:  
464 unique CDR3  
6 unique J



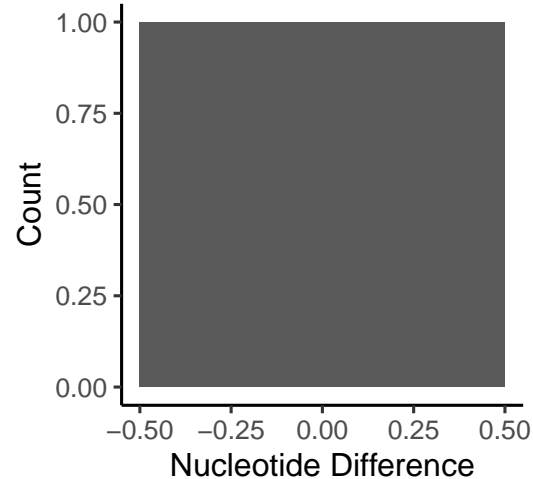
### IGHV3–47\*02

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



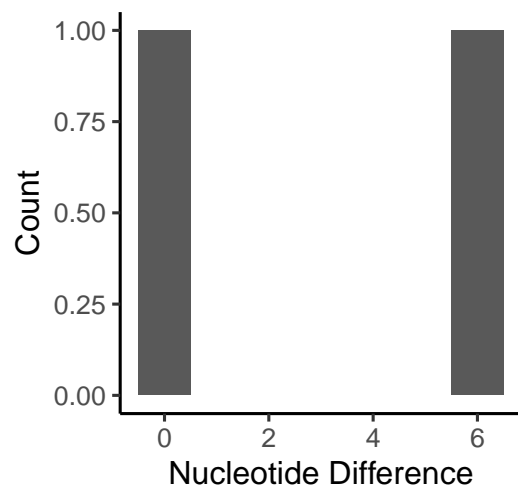
### IGHV3–52\*02

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



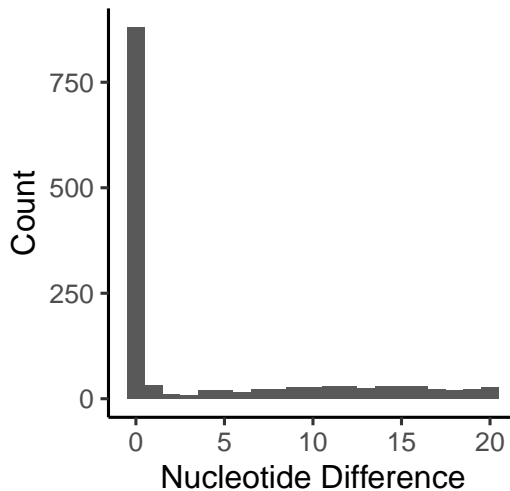
### IGHV3–38–3\*01

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



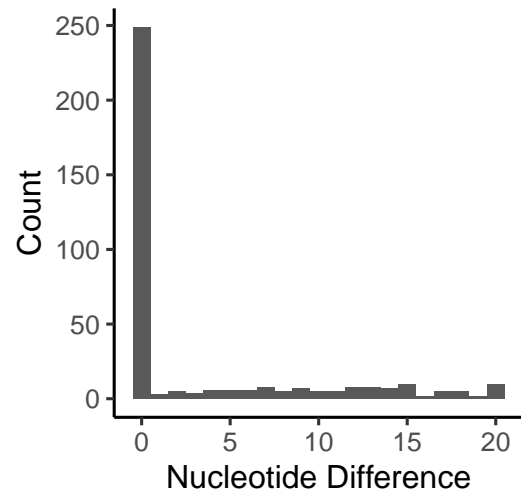
### IGHV3–48\*01

1590 sequences assigned  
881 (55.4%) exact matches, in which:  
865 unique CDR3  
6 unique J



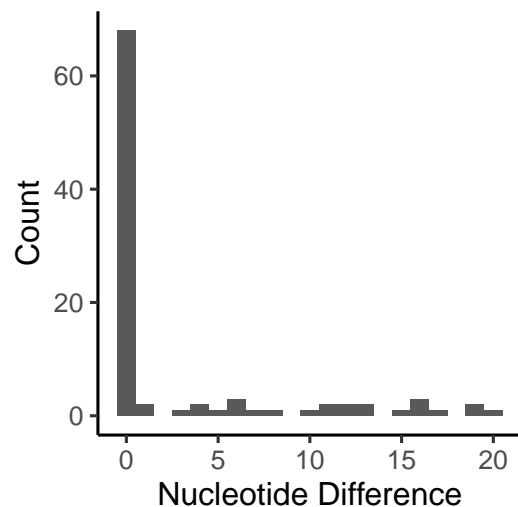
### IGHV3–53\*01\_02

456 sequences assigned  
249 (54.6%) exact matches, in which:  
244 unique CDR3  
6 unique J



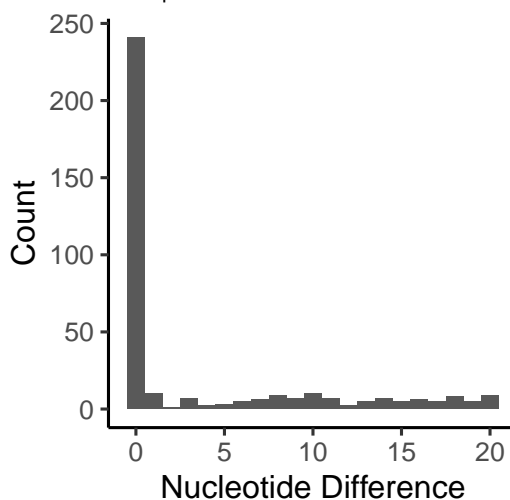
### IGHV3–43\*01

103 sequences assigned  
68 (66%) exact matches, in which:  
67 unique CDR3  
6 unique J



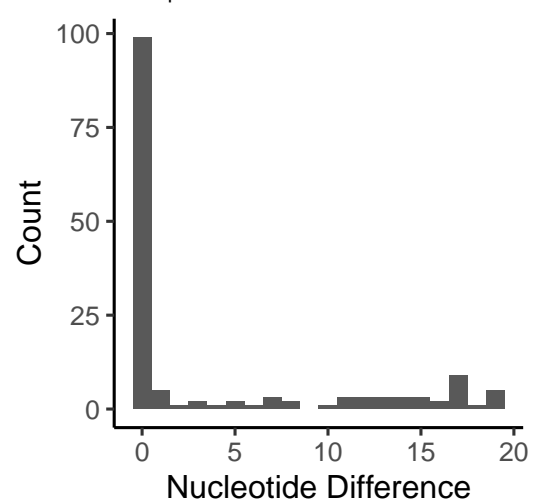
### IGHV3–49\*03\_05

415 sequences assigned  
241 (58.1%) exact matches, in which:  
240 unique CDR3  
6 unique J



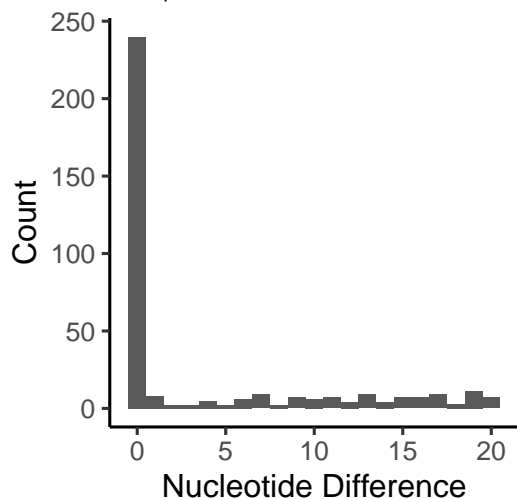
### IGHV3–64\*01

182 sequences assigned  
99 (54.4%) exact matches, in which:  
97 unique CDR3  
5 unique J



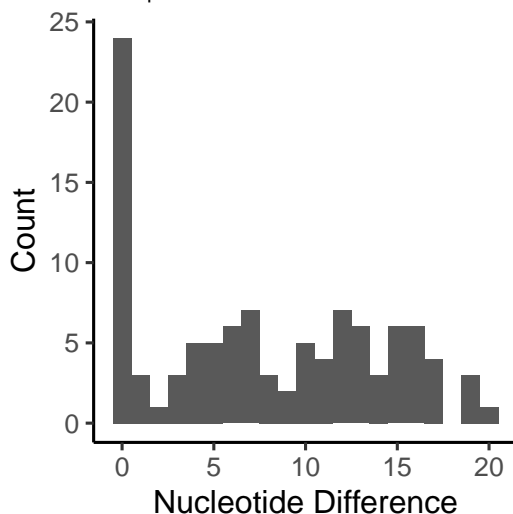
### IGHV3-66\*01

416 sequences assigned  
240 (57.7%) exact matches, in which:  
238 unique CDR3  
6 unique J



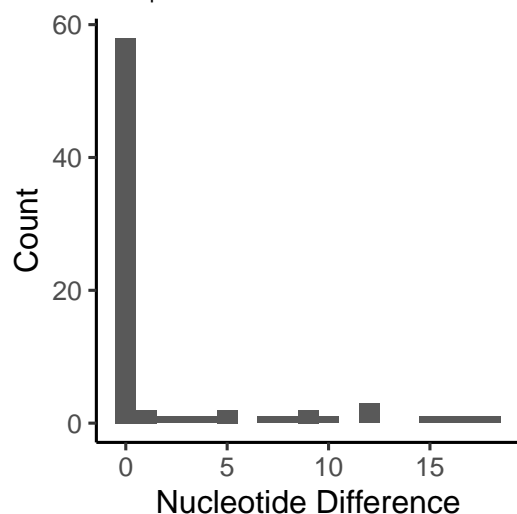
### IGHV3-72\*01

124 sequences assigned  
24 (19.4%) exact matches, in which:  
24 unique CDR3  
3 unique J



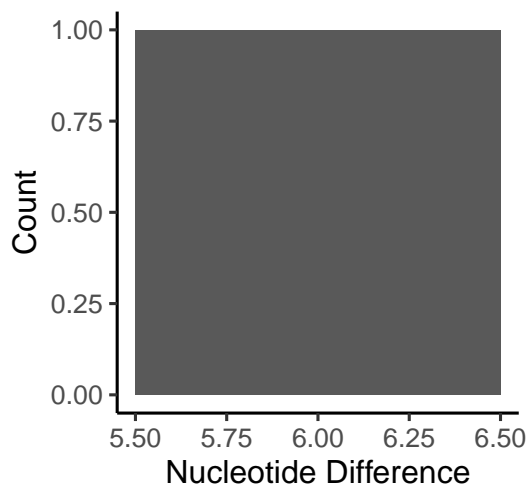
### IGHV3-43D\*03

84 sequences assigned  
58 (69%) exact matches, in which:  
57 unique CDR3  
4 unique J



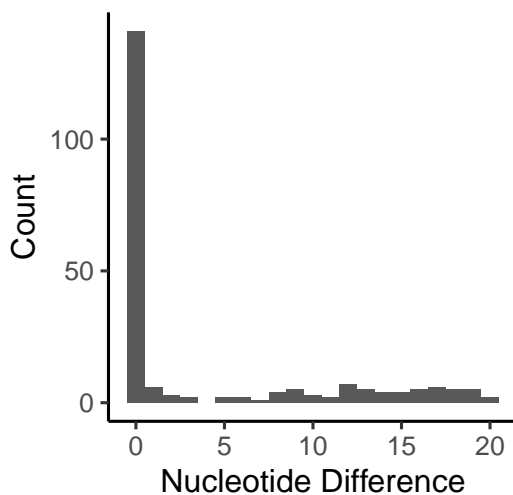
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



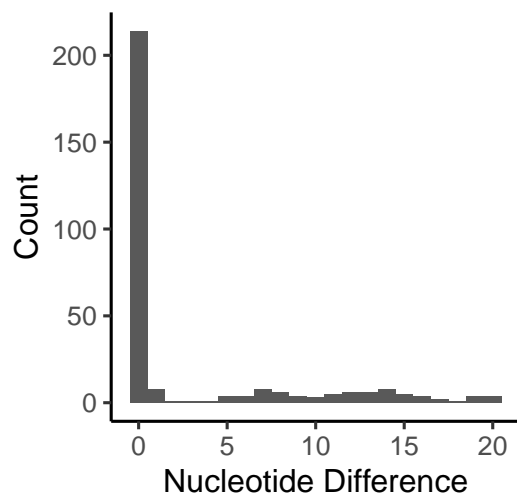
### IGHV3-73\*01\_02

259 sequences assigned  
141 (54.4%) exact matches, in which:  
140 unique CDR3  
6 unique J



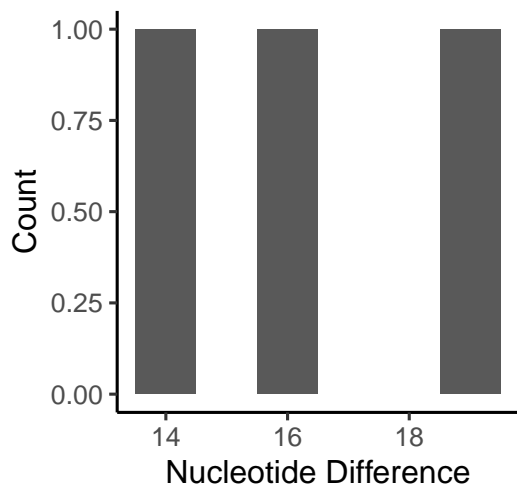
### IGHV3-64D\*06

384 sequences assigned  
214 (55.7%) exact matches, in which:  
212 unique CDR3  
5 unique J



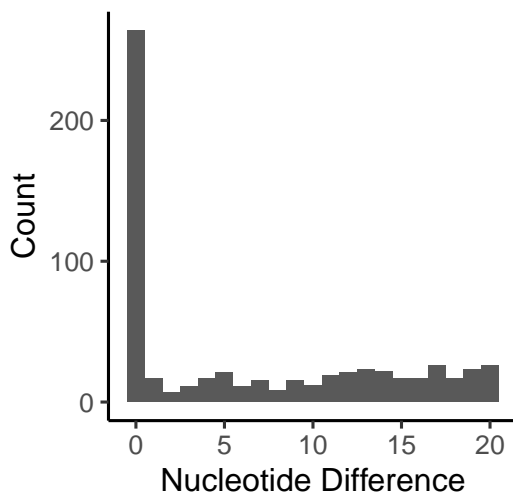
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



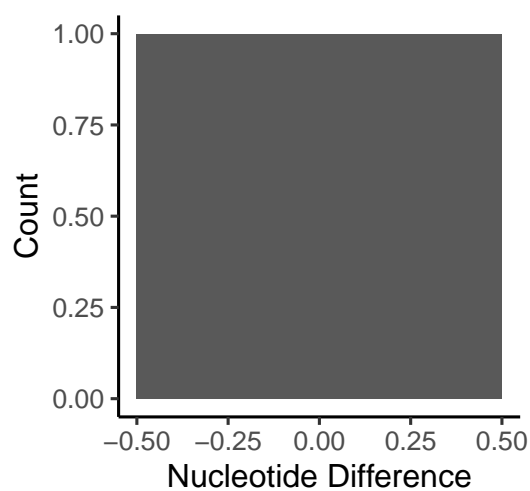
### IGHV3-74\*01\_02

809 sequences assigned  
264 (32.6%) exact matches, in which:  
259 unique CDR3  
6 unique J



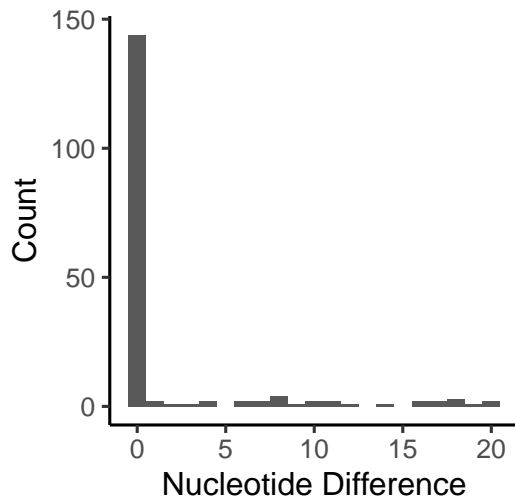
### IGHV4-28\*03

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



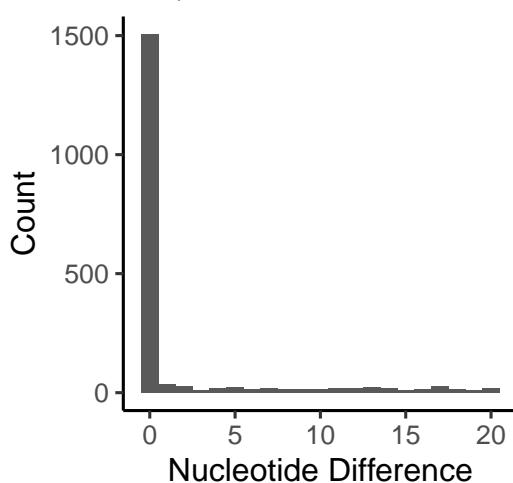
### IGHV4-30-2\*01

194 sequences assigned  
144 (74.2%) exact matches, in which:  
142 unique CDR3  
6 unique J



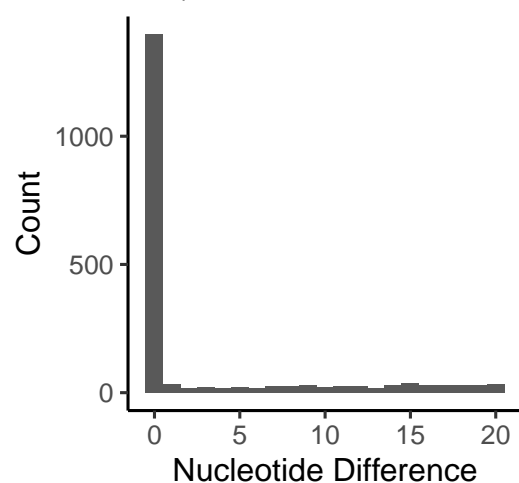
### IGHV4-34\*01\_02

2151 sequences assigned  
1505 (70%) exact matches, in which:  
1482 unique CDR3  
6 unique J



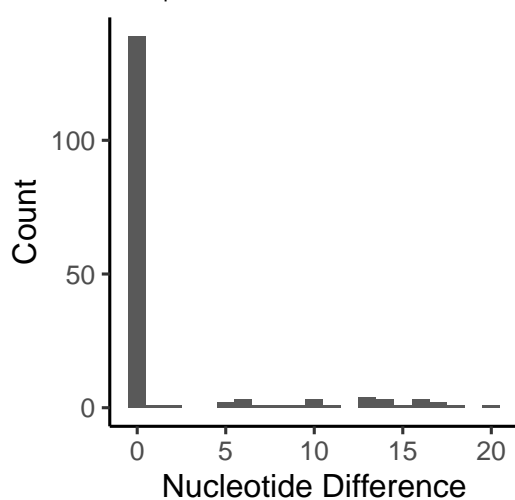
### IGHV4-59\*08

2251 sequences assigned  
1397 (62.1%) exact matches, in which:  
1384 unique CDR3  
6 unique J



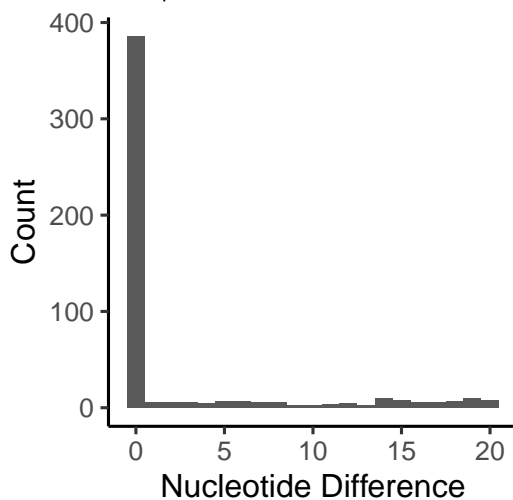
### IGHV4-30-4\*07

207 sequences assigned  
139 (67.1%) exact matches, in which:  
138 unique CDR3  
6 unique J



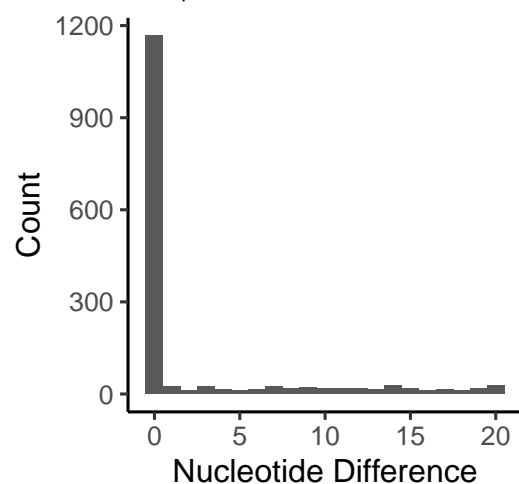
### IGHV4-38-2\*02

573 sequences assigned  
386 (67.4%) exact matches, in which:  
381 unique CDR3  
6 unique J



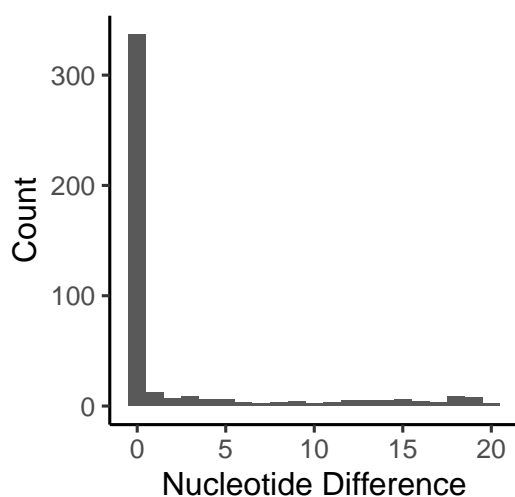
### IGHV4-59\*01\_07

1788 sequences assigned  
1167 (65.3%) exact matches, in which:  
1148 unique CDR3  
6 unique J



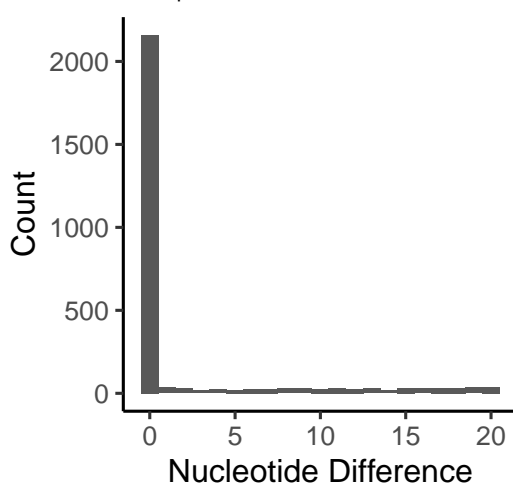
### IGHV4-31\*03\_04

531 sequences assigned  
337 (63.5%) exact matches, in which:  
335 unique CDR3  
6 unique J



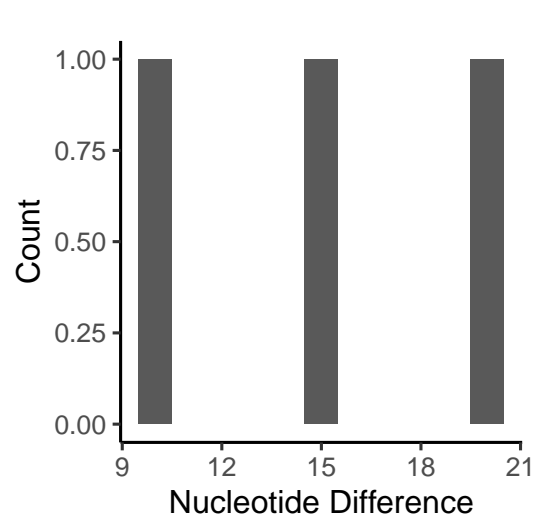
### IGHV4-39\*01\_05

3099 sequences assigned  
2159 (69.7%) exact matches, in which:  
2127 unique CDR3  
6 unique J



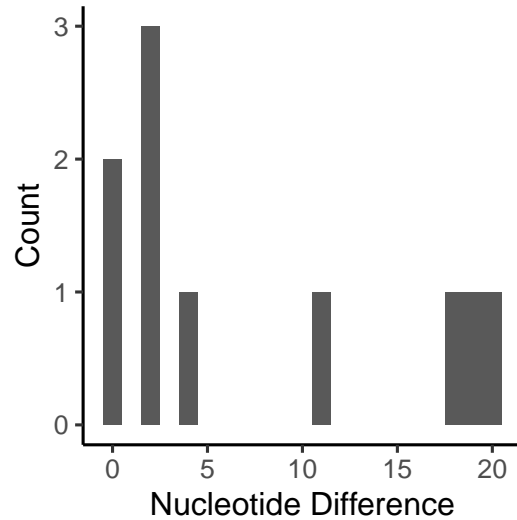
### IGHV4-61\*01

4 sequences assigned  
No exact matches.



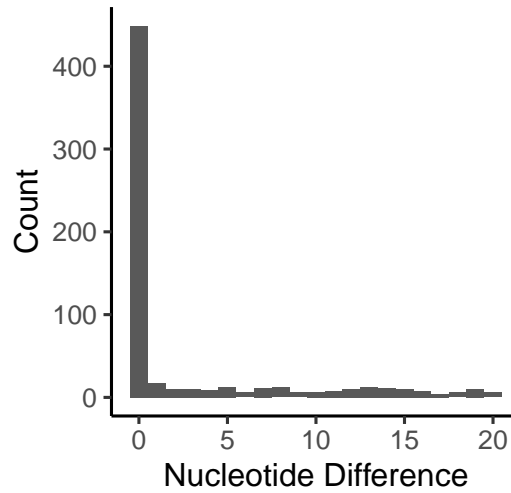
### IGHV4-61\*02

12 sequences assigned  
2 (16.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



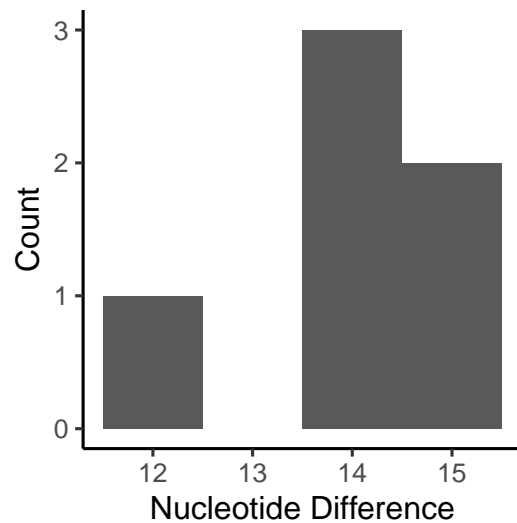
### IGHV5-51\*01\_03

719 sequences assigned  
449 (62.4%) exact matches, in which:  
449 unique CDR3  
6 unique J



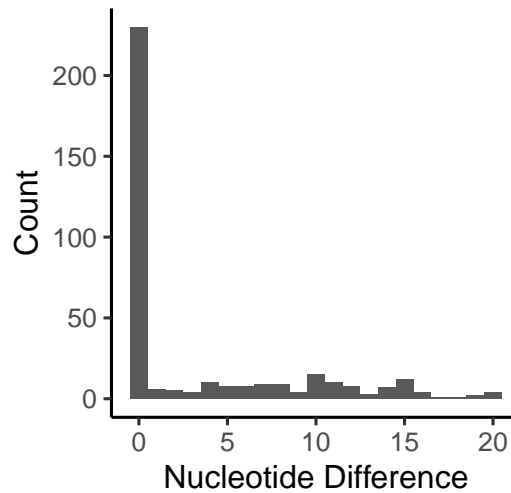
### IGHV4-61\*08

11 sequences assigned  
No exact matches.



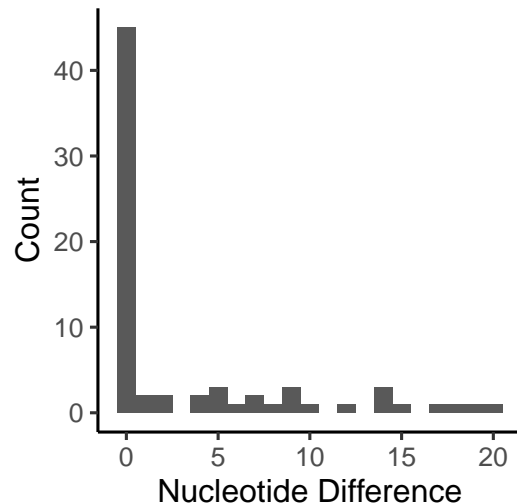
### IGHV6-1\*01\_02

403 sequences assigned  
230 (57.1%) exact matches, in which:  
229 unique CDR3  
6 unique J



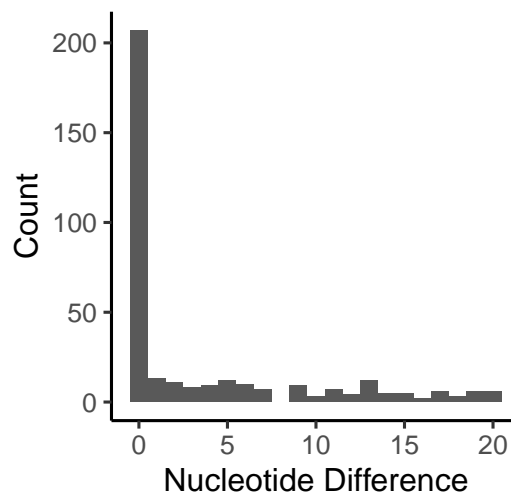
### IGHV5-10-1\*01\_03

85 sequences assigned  
45 (52.9%) exact matches, in which:  
45 unique CDR3  
5 unique J



### IGHV7-4-1\*02

391 sequences assigned  
207 (52.9%) exact matches, in which:  
206 unique CDR3  
6 unique J







Novel sequence(s)IGHV4-59\*02\_G88A are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

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.