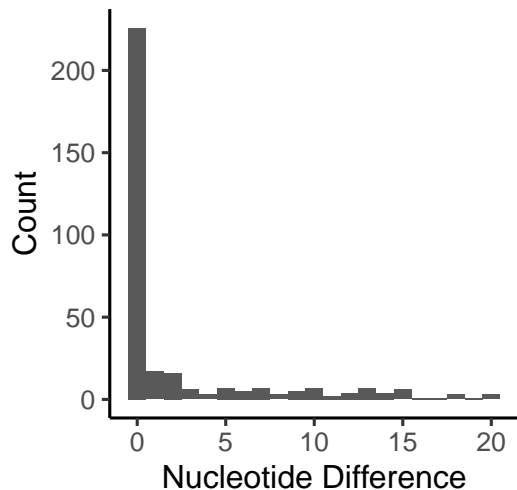


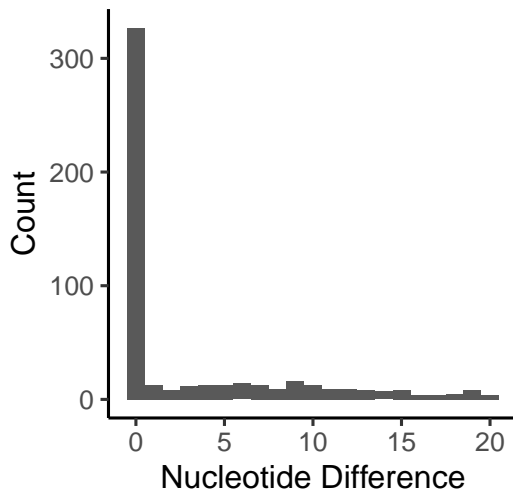
### IGHV1-2\*04

350 sequences assigned  
226 (64.6%) exact matches, in which:  
226 unique CDR3  
5 unique J



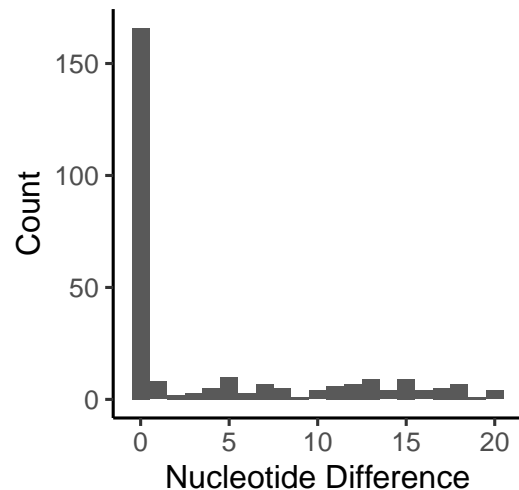
### IGHV1-18\*01

580 sequences assigned  
327 (56.4%) exact matches, in which:  
326 unique CDR3  
6 unique J



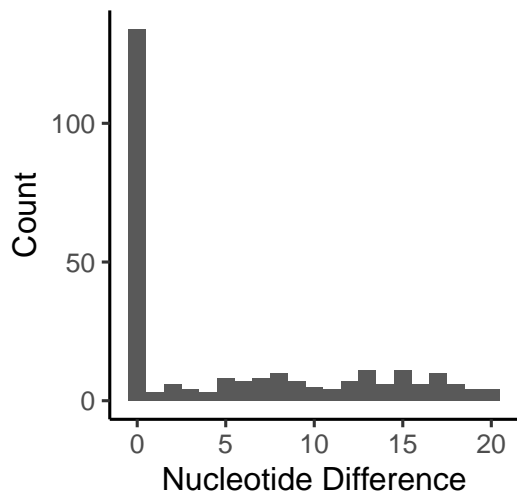
### IGHV1-46\*01

297 sequences assigned  
166 (55.9%) exact matches, in which:  
166 unique CDR3  
5 unique J



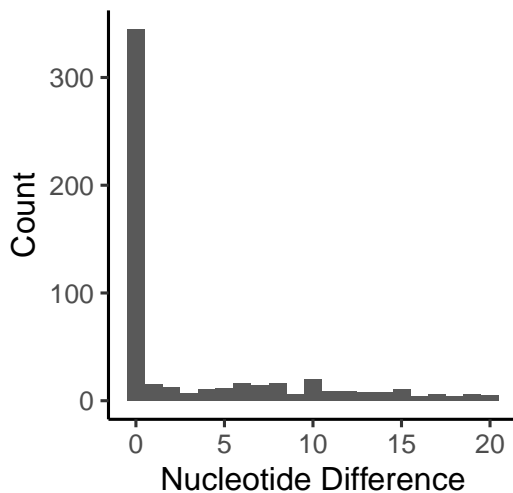
### IGHV1-3\*01\_05

300 sequences assigned  
134 (44.7%) exact matches, in which:  
134 unique CDR3  
6 unique J



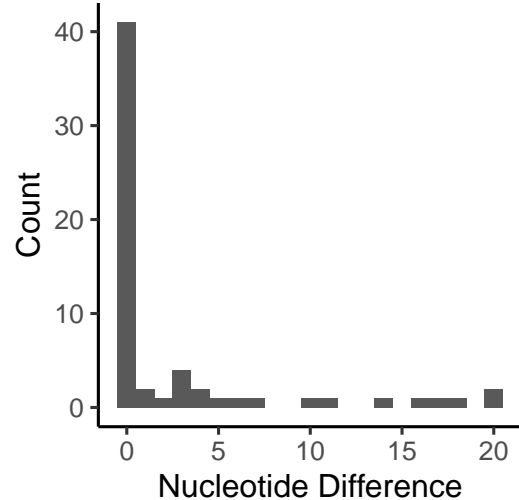
### IGHV1-18\*04

602 sequences assigned  
345 (57.3%) exact matches, in which:  
344 unique CDR3  
6 unique J



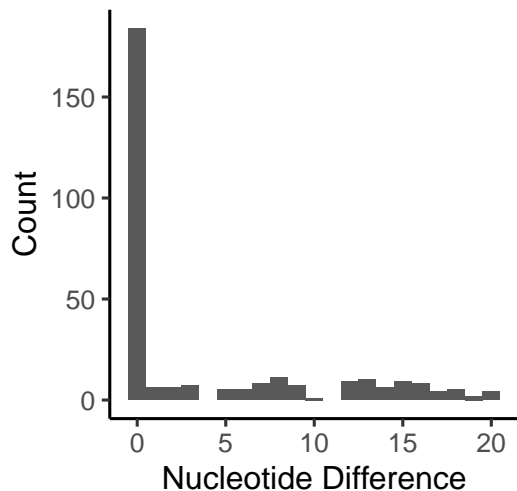
### IGHV1-58\*01\_03

66 sequences assigned  
41 (62.1%) exact matches, in which:  
41 unique CDR3  
4 unique J



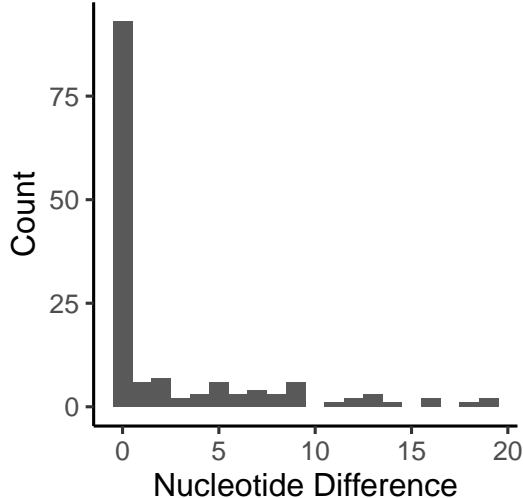
### IGHV1-8\*01

322 sequences assigned  
184 (57.1%) exact matches, in which:  
184 unique CDR3  
6 unique J



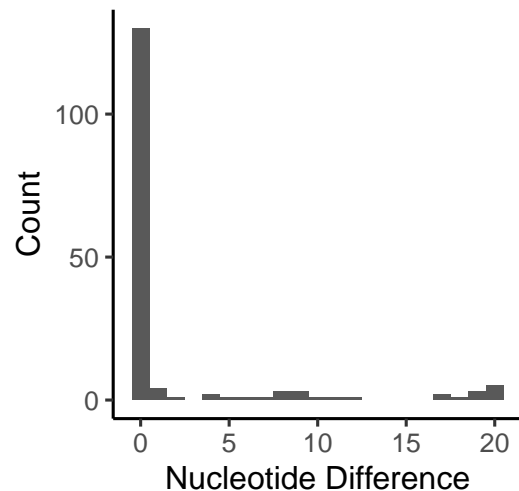
### IGHV1-24\*01

168 sequences assigned  
93 (55.4%) exact matches, in which:  
93 unique CDR3  
6 unique J



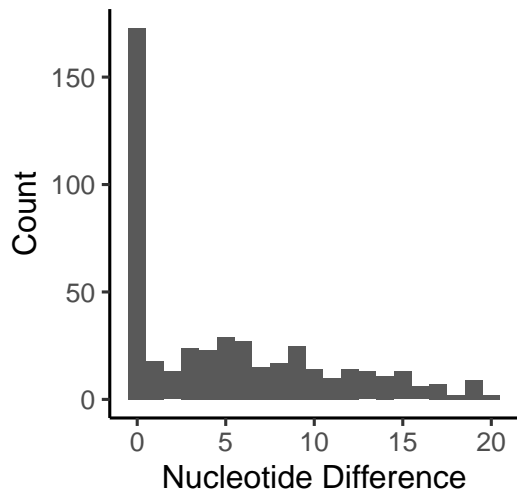
### IGHV1-69\*06\_14

182 sequences assigned  
130 (71.4%) exact matches, in which:  
130 unique CDR3  
5 unique J



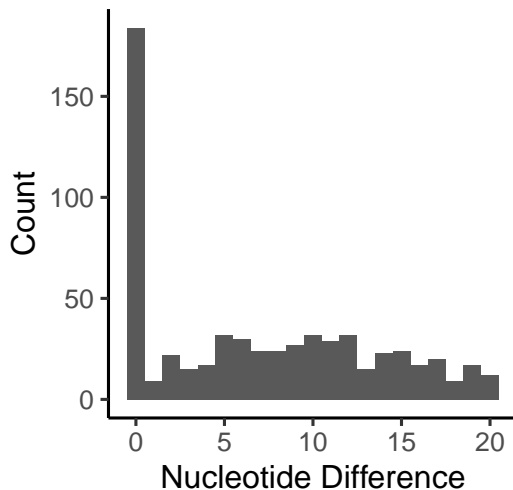
### IGHV2-5\*02

496 sequences assigned  
173 (34.9%) exact matches, in which:  
173 unique CDR3  
6 unique J



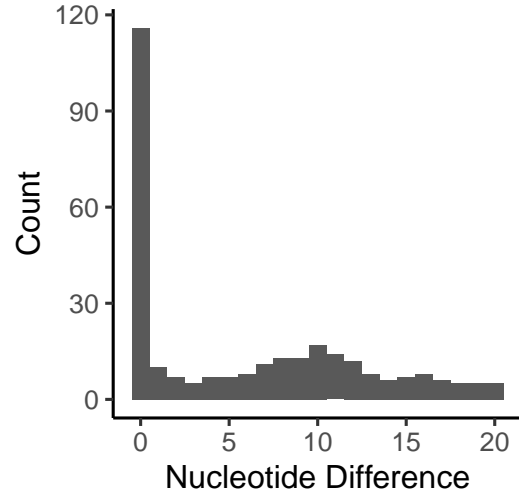
### IGHV3-7\*01

674 sequences assigned  
184 (27.3%) exact matches, in which:  
184 unique CDR3  
6 unique J



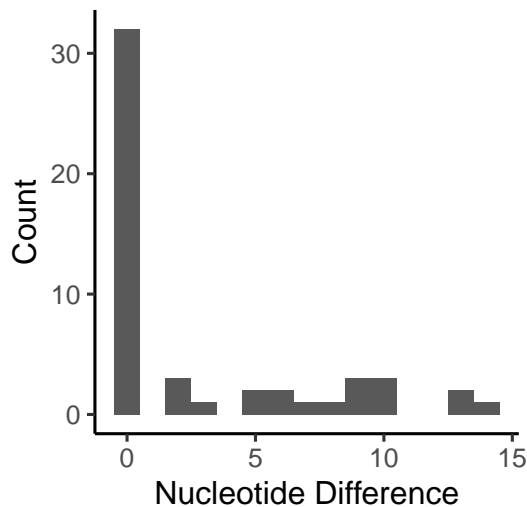
### IGHV3-11\*01

313 sequences assigned  
116 (37.1%) exact matches, in which:  
115 unique CDR3  
5 unique J



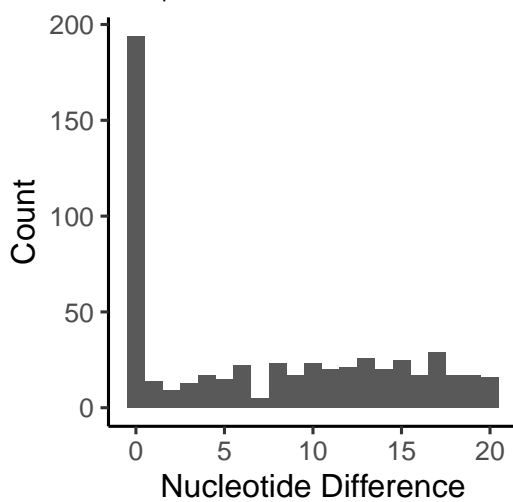
### IGHV2-26\*01

56 sequences assigned  
32 (57.1%) exact matches, in which:  
32 unique CDR3  
5 unique J



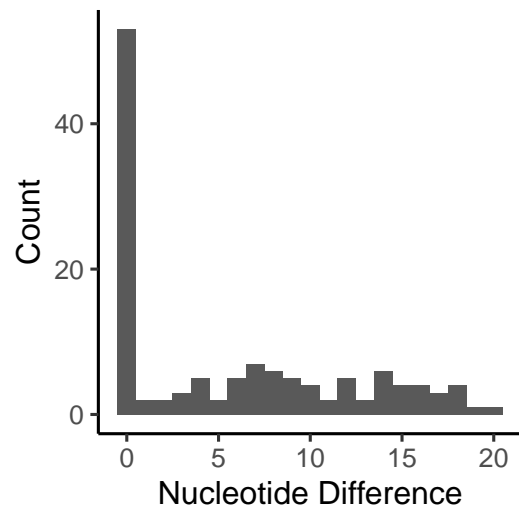
### IGHV3-7\*03

645 sequences assigned  
194 (30.1%) exact matches, in which:  
194 unique CDR3  
5 unique J



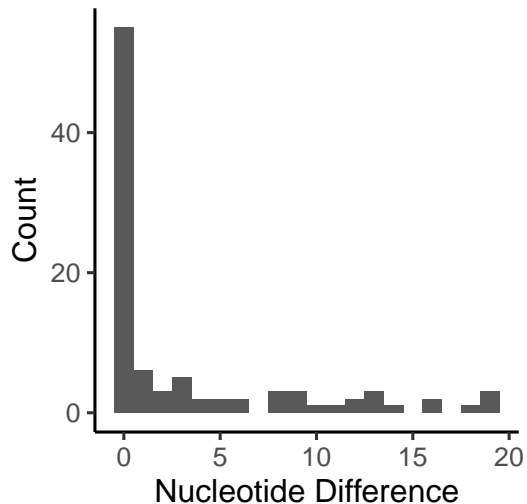
### IGHV3-11\*06

134 sequences assigned  
53 (39.6%) exact matches, in which:  
53 unique CDR3  
4 unique J



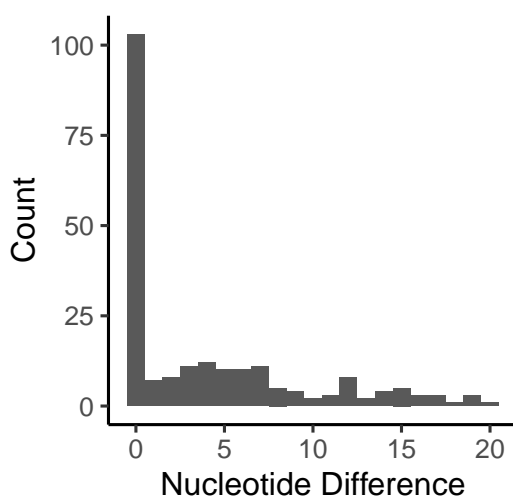
### IGHV2-70\*01

104 sequences assigned  
55 (52.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



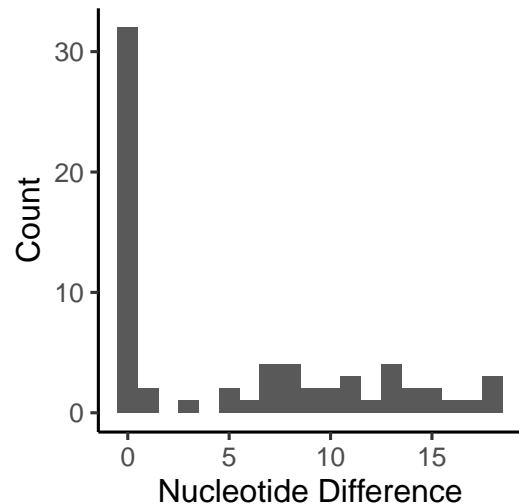
### IGHV3-9\*01

229 sequences assigned  
103 (45%) exact matches, in which:  
103 unique CDR3  
5 unique J



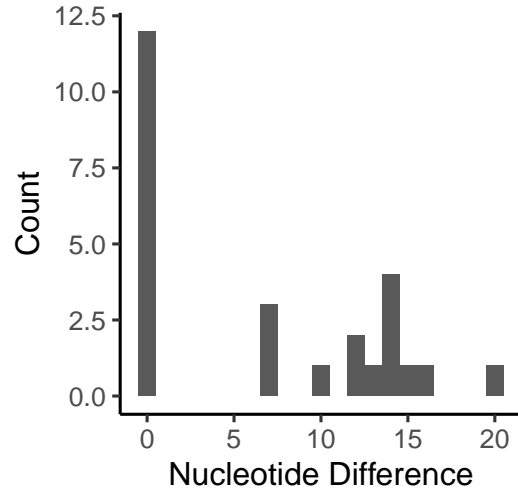
### IGHV3-13\*01

75 sequences assigned  
32 (42.7%) exact matches, in which:  
32 unique CDR3  
5 unique J



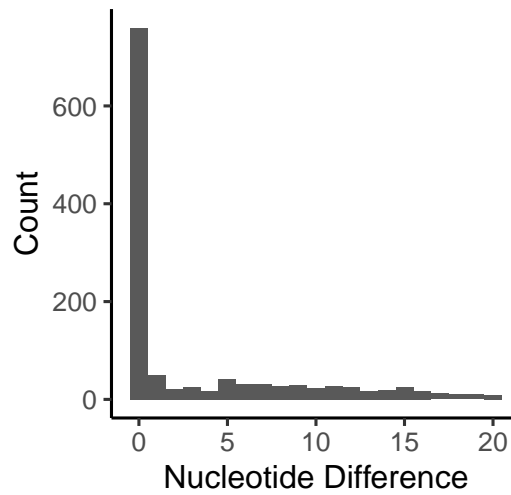
### IGHV3-13\*05

28 sequences assigned  
12 (42.9%) exact matches, in which:  
12 unique CDR3  
4 unique J



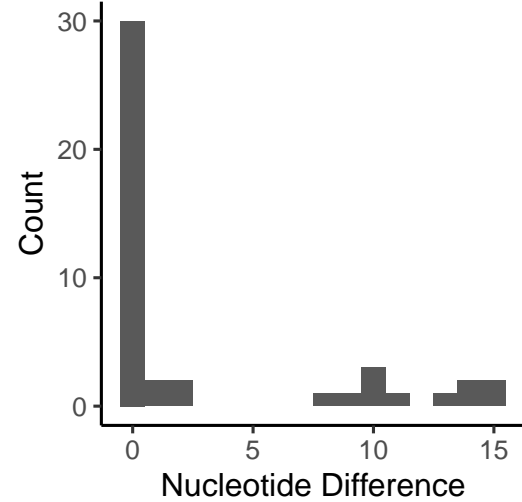
### IGHV3-21\*01\_02

1340 sequences assigned  
760 (56.7%) exact matches, in which:  
755 unique CDR3  
6 unique J



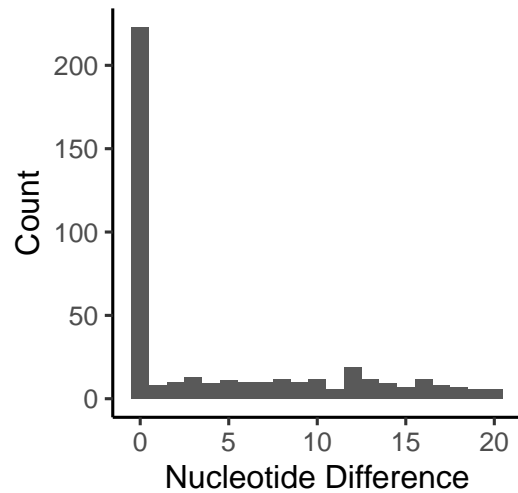
### IGHV3-43\*01

50 sequences assigned  
30 (60%) exact matches, in which:  
30 unique CDR3  
4 unique J



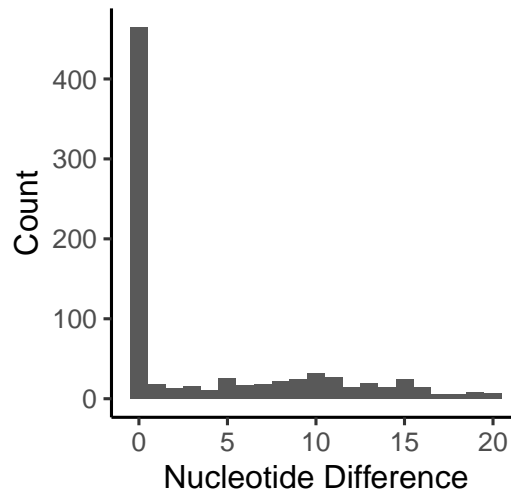
### IGHV3-15\*01\_02

477 sequences assigned  
223 (46.8%) exact matches, in which:  
223 unique CDR3  
6 unique J



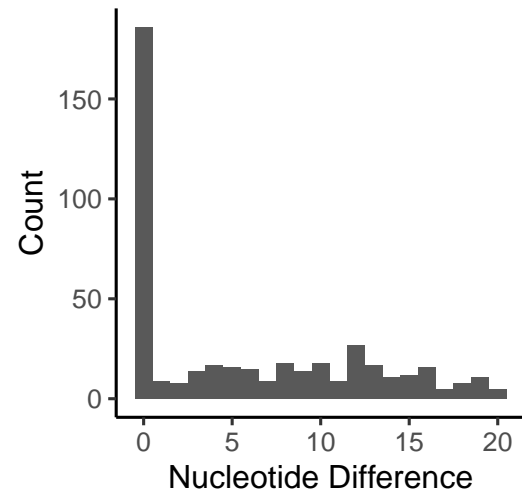
### IGHV3-30-3\*01

882 sequences assigned  
465 (52.7%) exact matches, in which:  
463 unique CDR3  
6 unique J



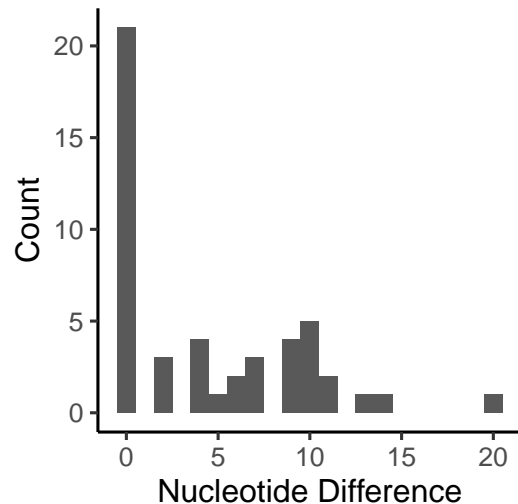
### IGHV3-48\*02

481 sequences assigned  
186 (38.7%) exact matches, in which:  
184 unique CDR3  
6 unique J



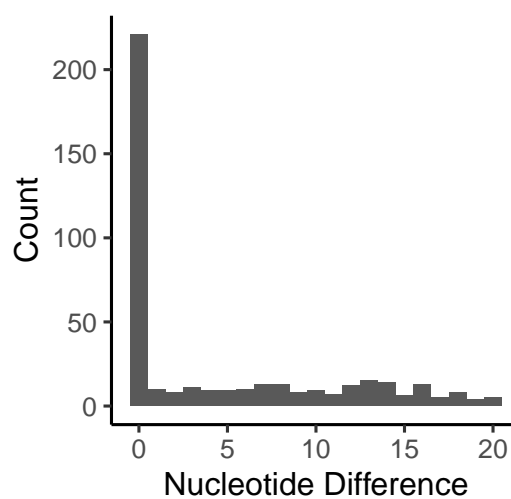
### IGHV3-20\*01\_02

48 sequences assigned  
21 (43.8%) exact matches, in which:  
21 unique CDR3  
5 unique J



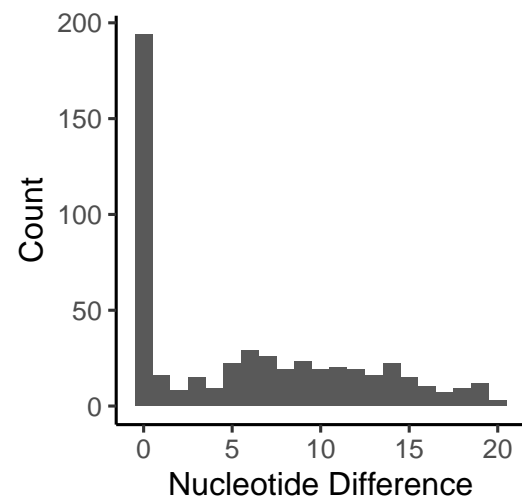
### IGHV3-33\*01

441 sequences assigned  
221 (50.1%) exact matches, in which:  
221 unique CDR3  
6 unique J



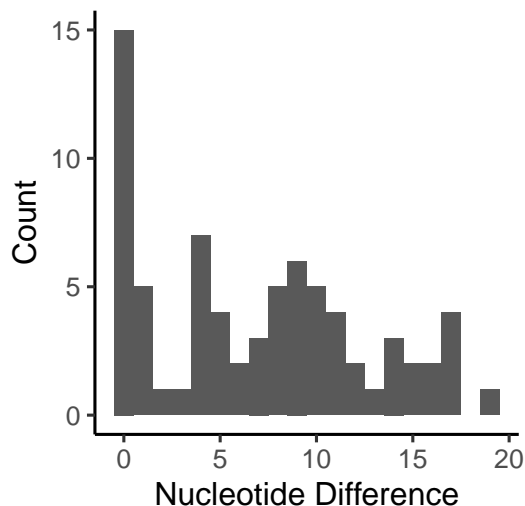
### IGHV3-48\*03

557 sequences assigned  
194 (34.8%) exact matches, in which:  
192 unique CDR3  
6 unique J



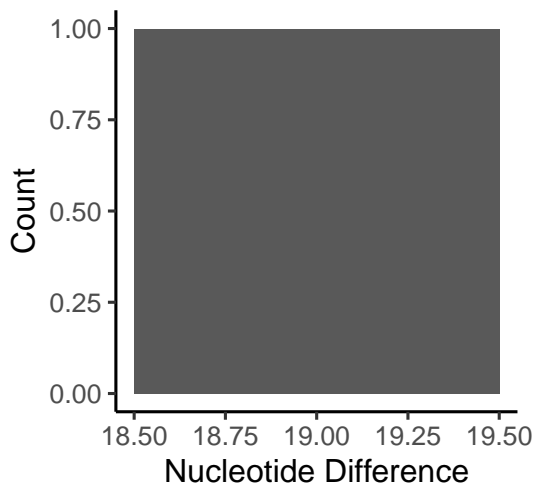
### IGHV3-49\*04

90 sequences assigned  
15 (16.7%) exact matches, in which:  
15 unique CDR3  
4 unique J



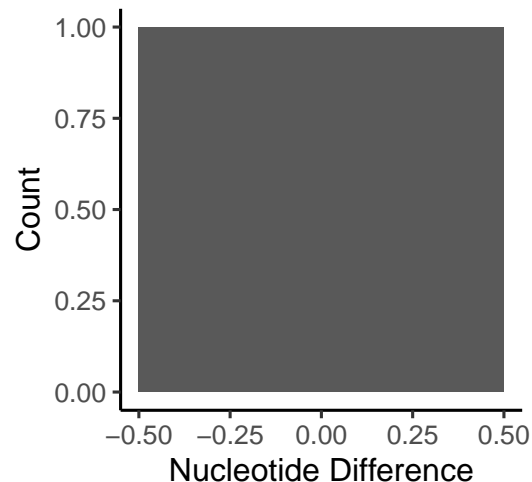
### IGHV3-64\*05

1 sequences assigned  
No exact matches.



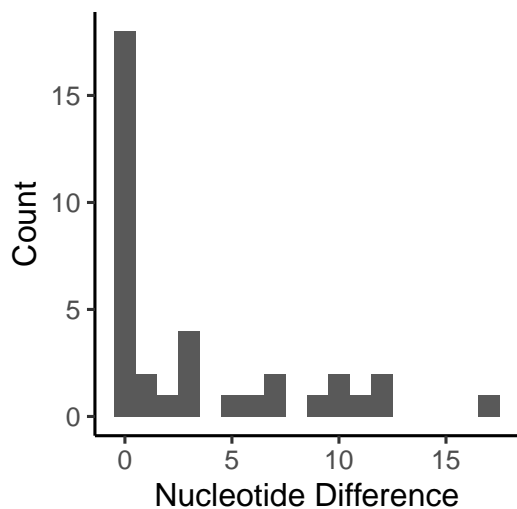
### IGHV3-69-1\*02

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



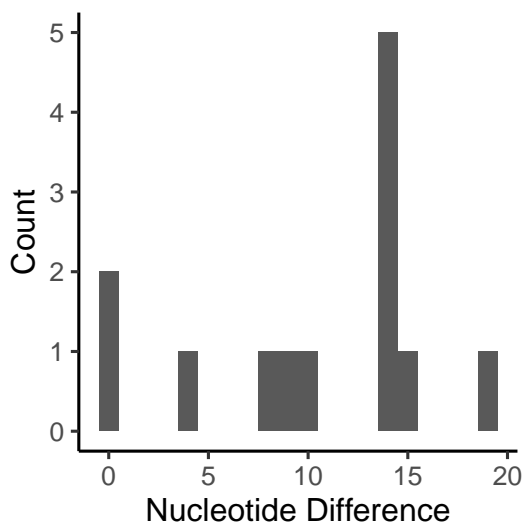
### IGHV3-49\*03\_05

42 sequences assigned  
18 (42.9%) exact matches, in which:  
18 unique CDR3  
4 unique J



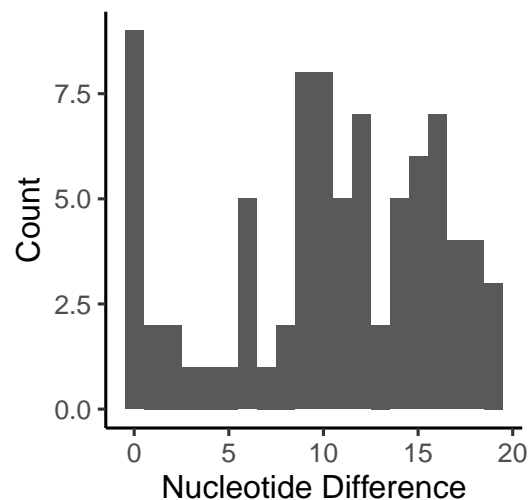
### IGHV3-64\*02\_07

14 sequences assigned  
2 (14.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



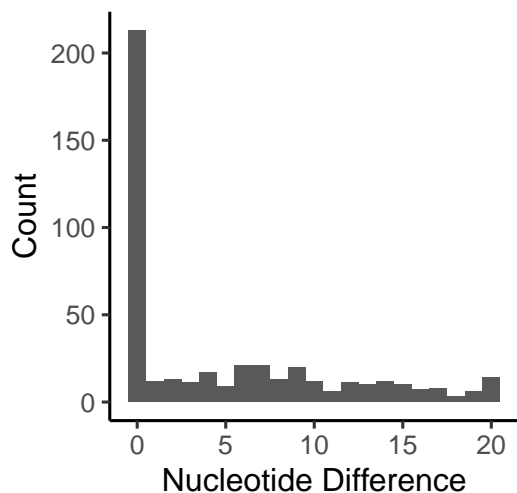
### IGHV3-72\*01

94 sequences assigned  
9 (9.6%) exact matches, in which:  
9 unique CDR3  
3 unique J



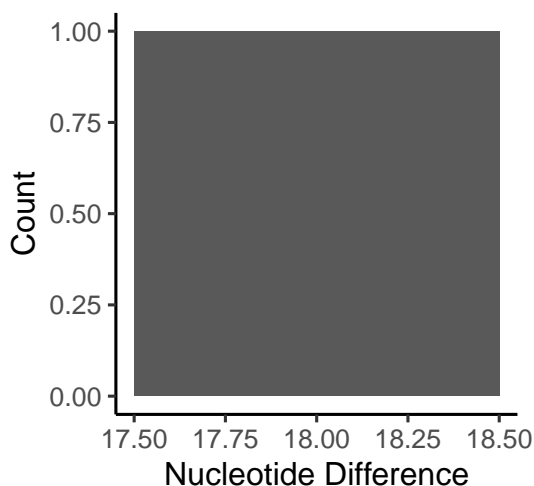
### IGHV3-53\*01\_02

502 sequences assigned  
213 (42.4%) exact matches, in which:  
213 unique CDR3  
6 unique J



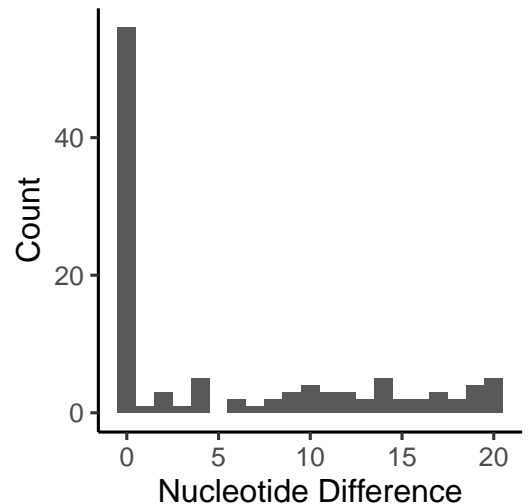
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



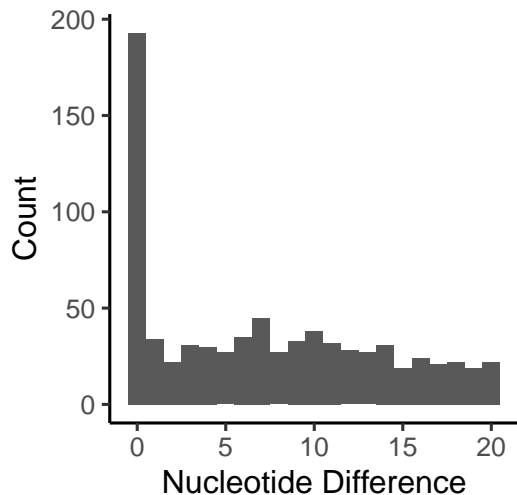
### IGHV3-73\*01\_02

116 sequences assigned  
56 (48.3%) exact matches, in which:  
56 unique CDR3  
5 unique J



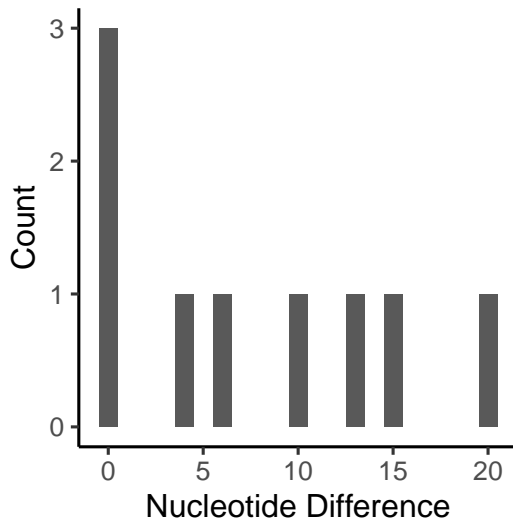
### IGHV3-74\*01\_02

847 sequences assigned  
193 (22.8%) exact matches, in which:  
189 unique CDR3  
6 unique J



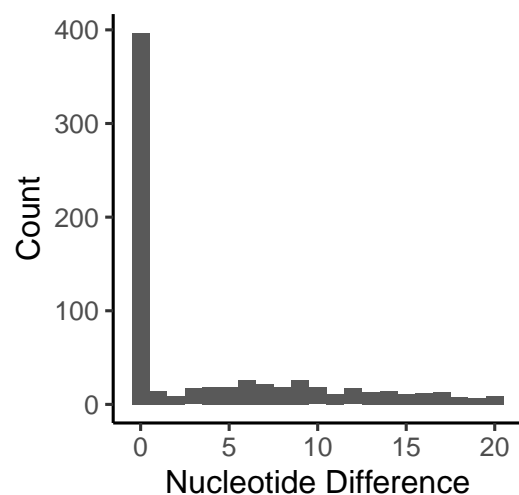
### IGHV4-28\*01\_07

10 sequences assigned  
3 (30%) exact matches, in which:  
3 unique CDR3  
2 unique J



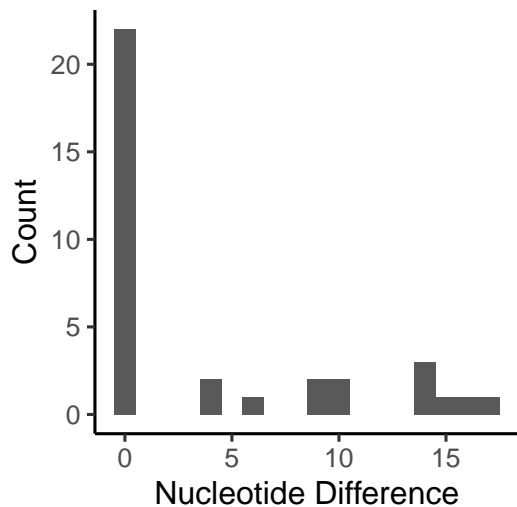
### IGHV4-31\*03\_04

772 sequences assigned  
397 (51.4%) exact matches, in which:  
396 unique CDR3  
6 unique J



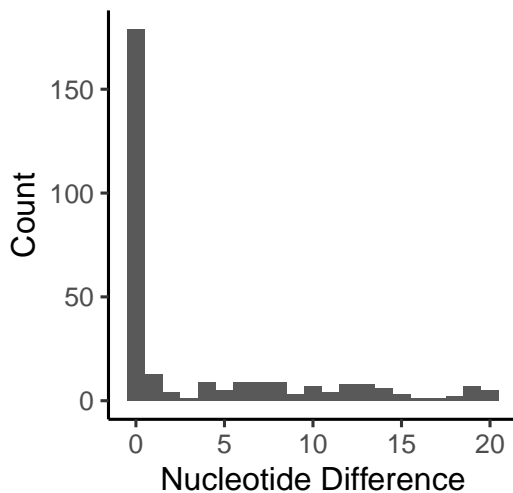
### IGHV3-43D\*04

37 sequences assigned  
22 (59.5%) exact matches, in which:  
22 unique CDR3  
4 unique J



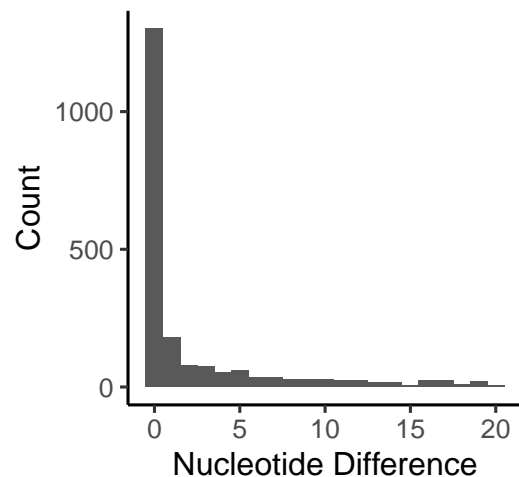
### IGHV4-30-2\*01

323 sequences assigned  
179 (55.4%) exact matches, in which:  
179 unique CDR3  
6 unique J



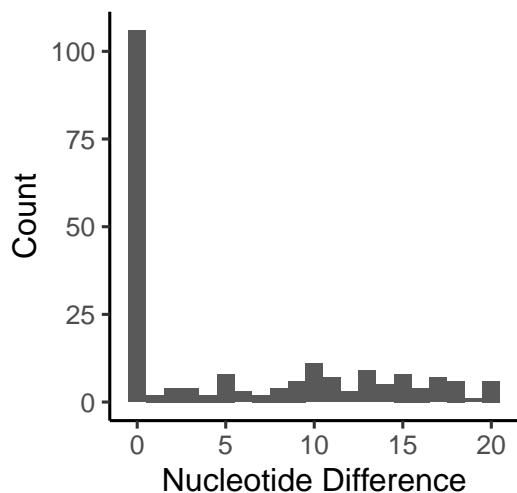
### IGHV4-34\*01\_02

2283 sequences assigned  
1301 (57%) exact matches, in which:  
1291 unique CDR3  
6 unique J



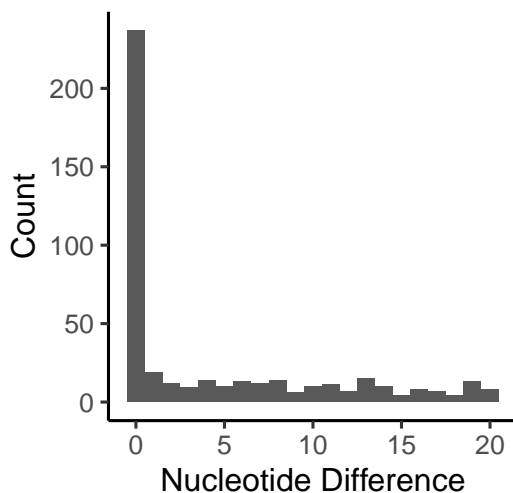
### IGHV3-64D\*06

231 sequences assigned  
106 (45.9%) exact matches, in which:  
106 unique CDR3  
6 unique J



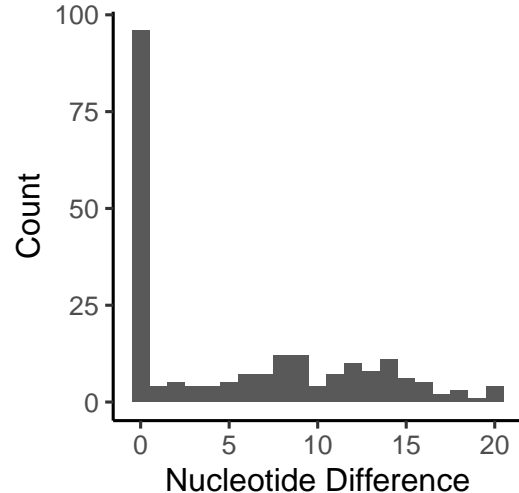
### IGHV4-30-4\*01

491 sequences assigned  
237 (48.3%) exact matches, in which:  
236 unique CDR3  
5 unique J



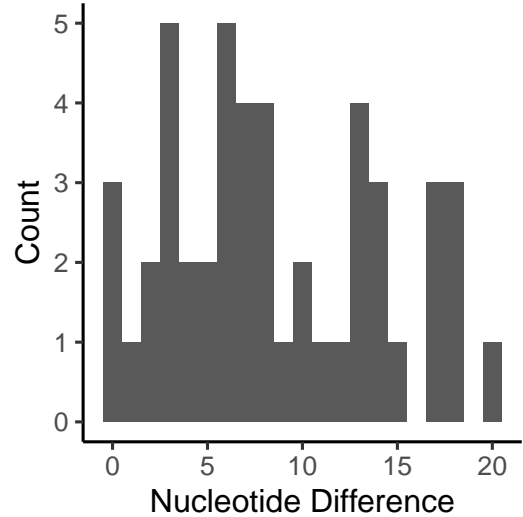
### IGHV4-38-2\*01

233 sequences assigned  
96 (41.2%) exact matches, in which:  
96 unique CDR3  
5 unique J



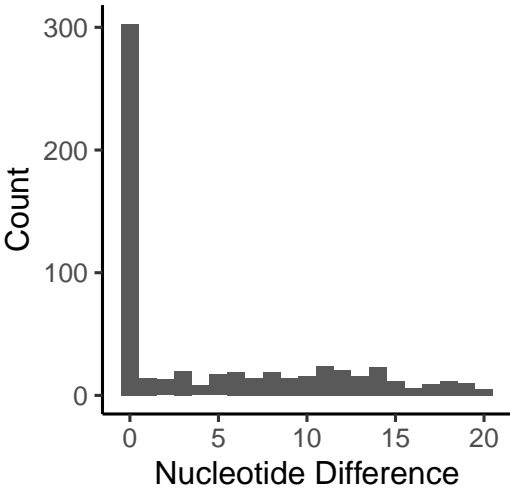
### IGHV4-38-2\*02

67 sequences assigned  
3 (4.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



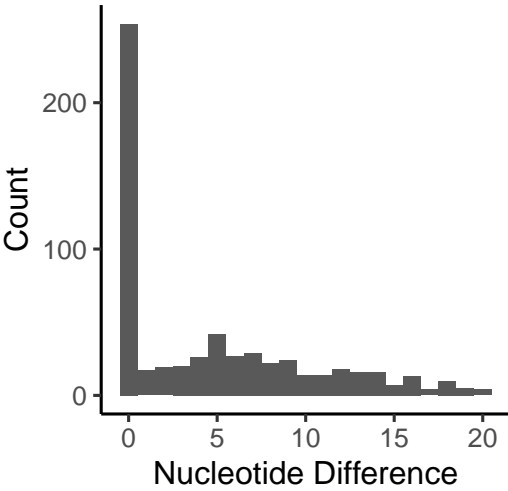
### IGHV4-61\*01

691 sequences assigned  
303 (43.8%) exact matches, in which:  
303 unique CDR3  
6 unique J



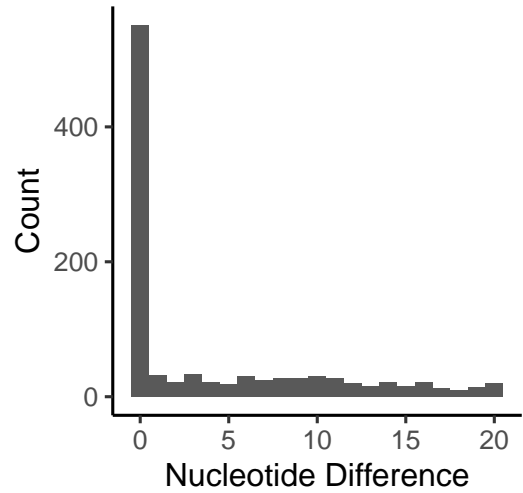
### IGHV6-1\*01\_02

640 sequences assigned  
254 (39.7%) exact matches, in which:  
254 unique CDR3  
6 unique J



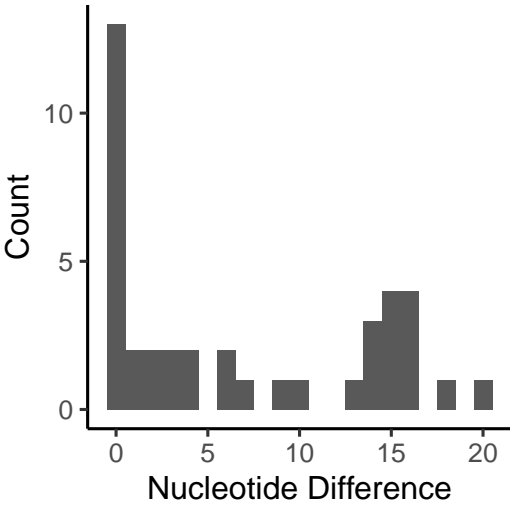
### IGHV4-39\*01\_05

1123 sequences assigned  
551 (49.1%) exact matches, in which:  
546 unique CDR3  
6 unique J



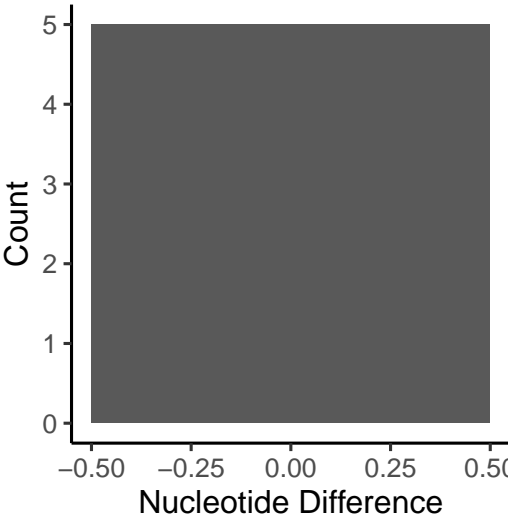
### IGHV5-10-1\*01\_03

45 sequences assigned  
13 (28.9%) exact matches, in which:  
13 unique CDR3  
4 unique J



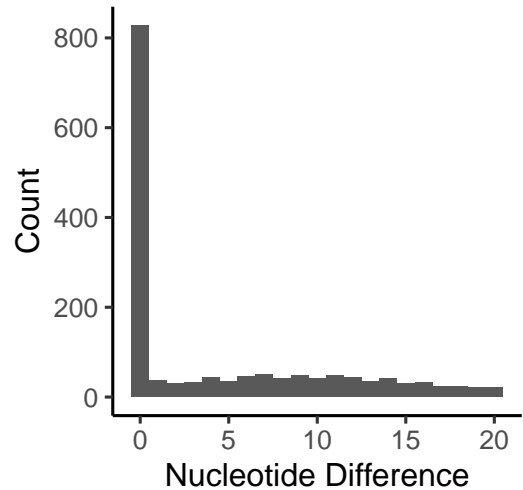
### IGHV7-4-1\*01

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



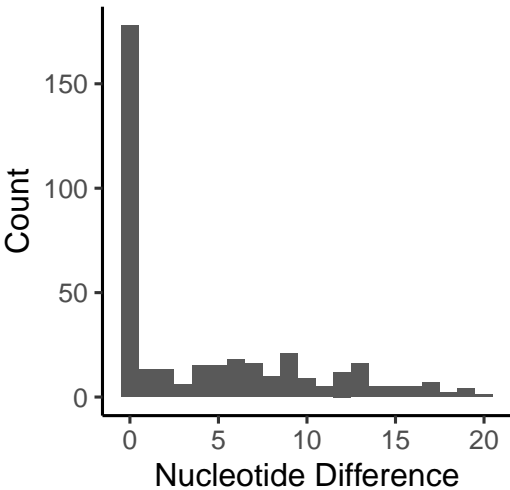
### IGHV4-59\*01\_07

1715 sequences assigned  
828 (48.3%) exact matches, in which:  
824 unique CDR3  
6 unique J



### IGHV5-51\*01\_03

398 sequences assigned  
178 (44.7%) exact matches, in which:  
178 unique CDR3  
6 unique J





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