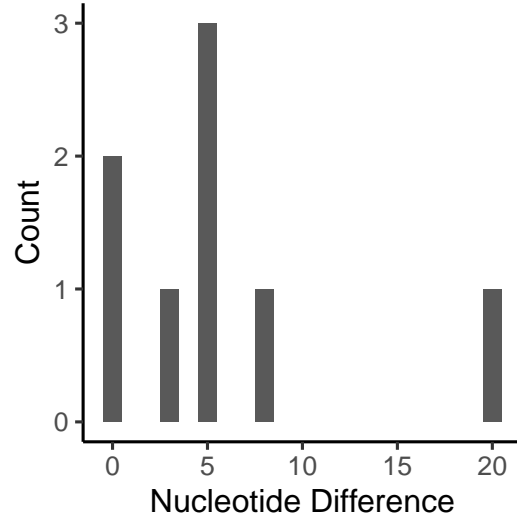


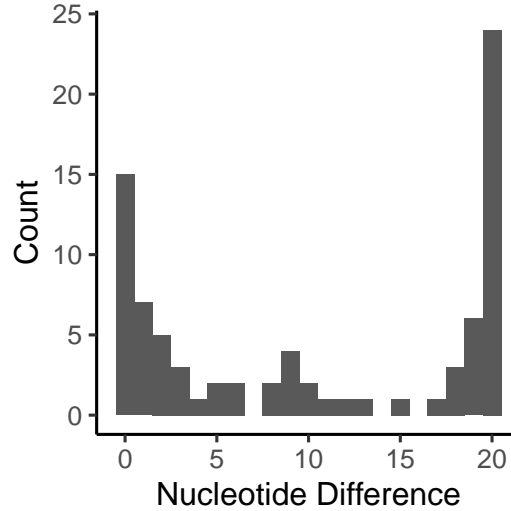
### IGHV1-2\*02

9 sequences assigned  
2 (22.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



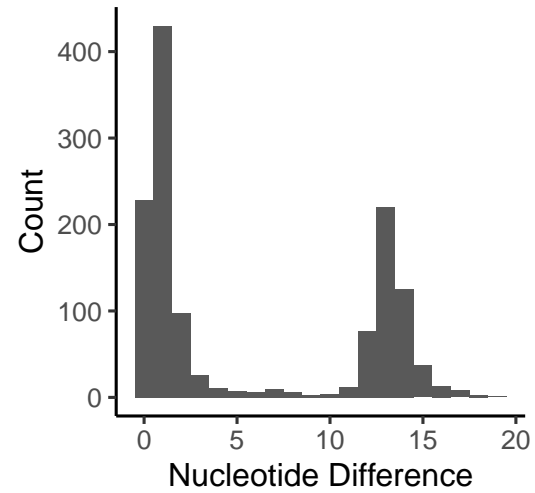
### IGHV1-8\*01

91 sequences assigned  
15 (16.5%) exact matches, in which:  
15 unique CDR3  
5 unique J



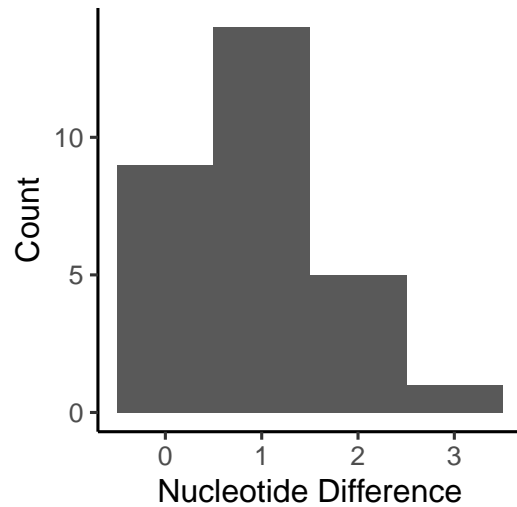
### IGHV1-46\*01

1327 sequences assigned  
228 (17.2%) exact matches, in which:  
157 unique CDR3  
4 unique J



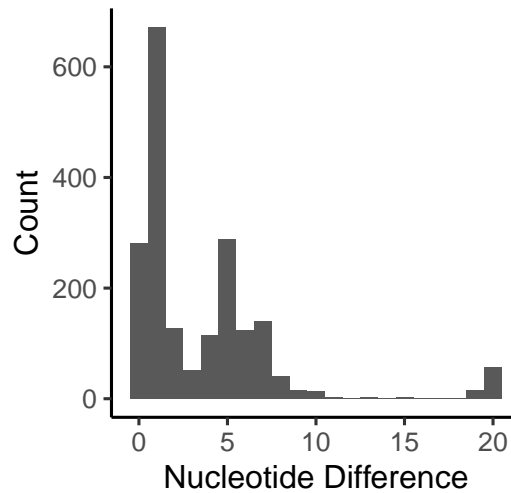
### IGHV1-2\*04

29 sequences assigned  
9 (31%) exact matches, in which:  
7 unique CDR3  
3 unique J



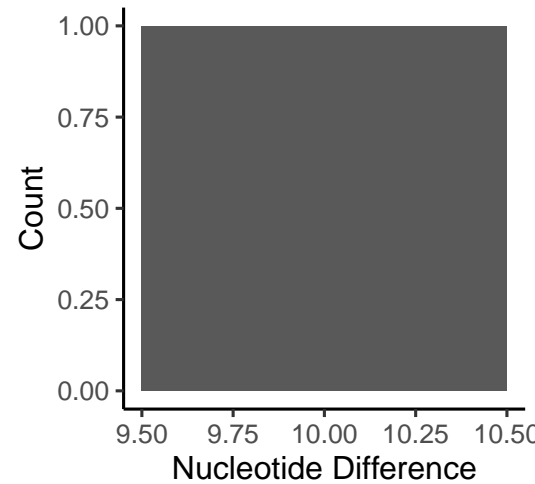
### IGHV1-18\*01

2412 sequences assigned  
281 (11.7%) exact matches, in which:  
182 unique CDR3  
4 unique J



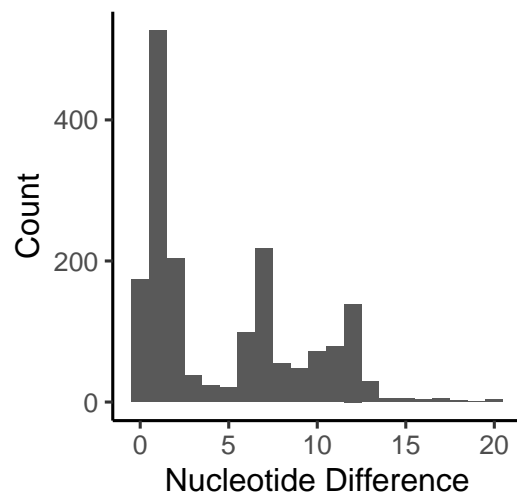
### IGHV2-5\*01

119 sequences assigned  
No exact matches.



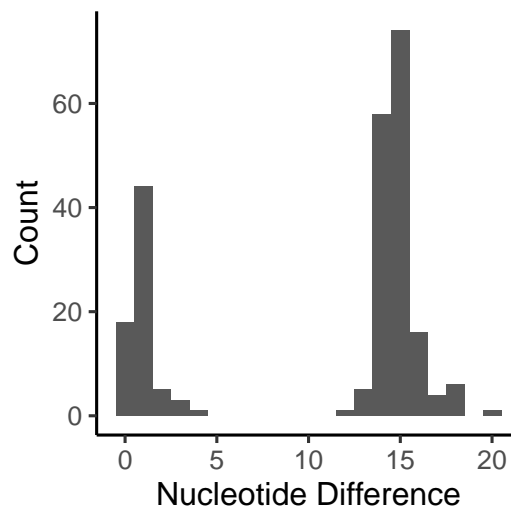
### IGHV1-3\*01\_05

1745 sequences assigned  
174 (10%) exact matches, in which:  
108 unique CDR3  
4 unique J



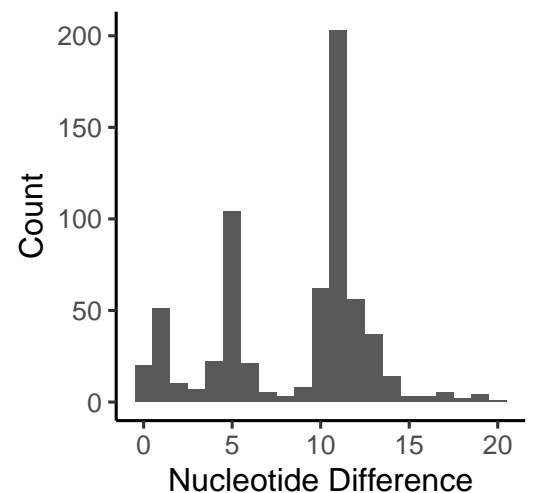
### IGHV1-24\*01

362 sequences assigned  
18 (5%) exact matches, in which:  
10 unique CDR3  
2 unique J



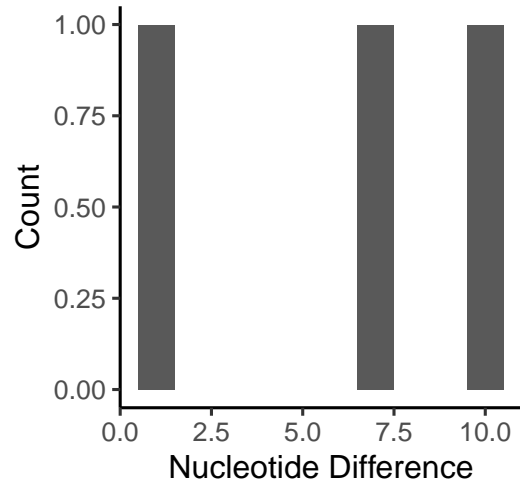
### IGHV2-5\*02

644 sequences assigned  
20 (3.1%) exact matches, in which:  
15 unique CDR3  
2 unique J



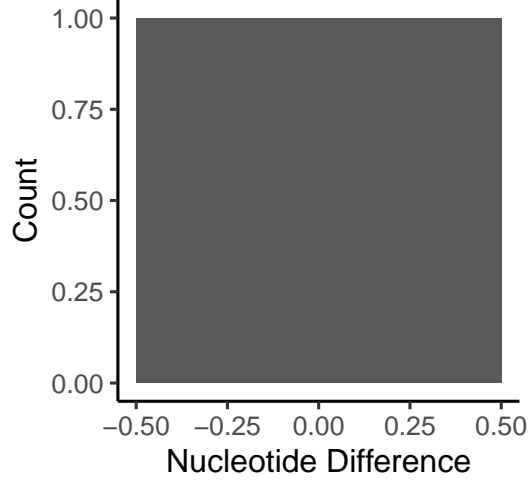
### IGHV2-5\*05\_06\_09

3 sequences assigned  
No exact matches.



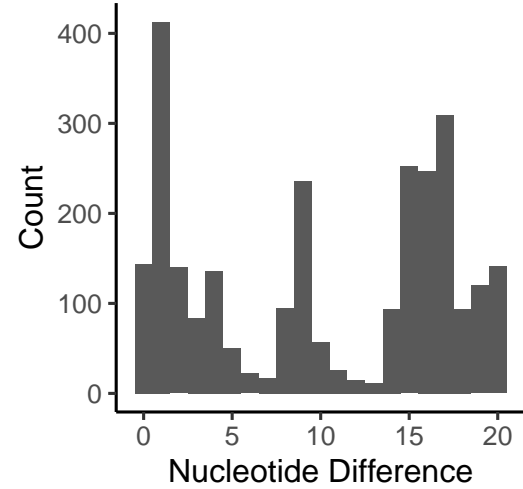
### IGHV2-70\*02

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



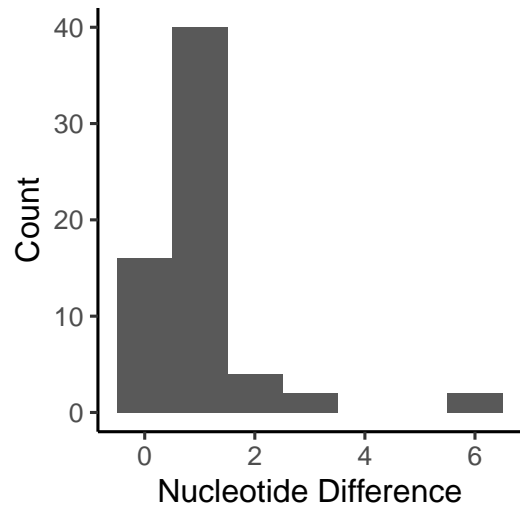
### IGHV3-7\*03

2953 sequences assigned  
144 (4.9%) exact matches, in which:  
68 unique CDR3  
4 unique J



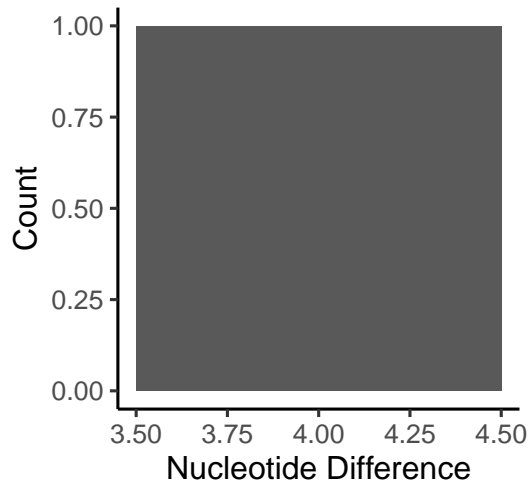
### IGHV2-26\*01

64 sequences assigned  
16 (25%) exact matches, in which:  
7 unique CDR3  
2 unique J



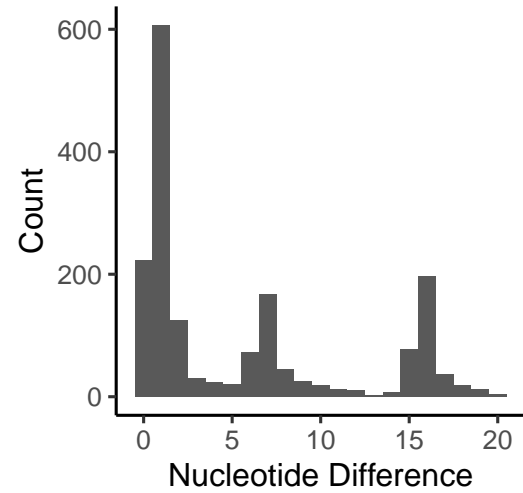
### IGHV2-70\*12

1 sequences assigned  
No exact matches.



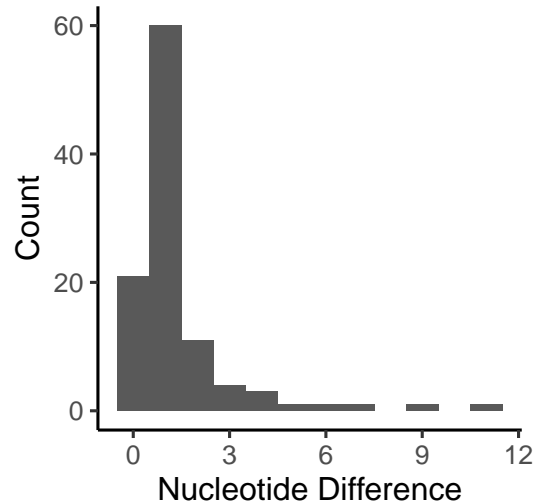
### IGHV3-9\*01

1745 sequences assigned  
223 (12.8%) exact matches, in which:  
102 unique CDR3  
4 unique J



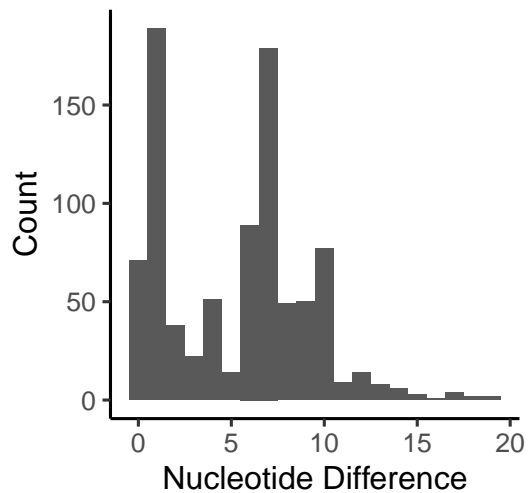
### IGHV2-70\*01

104 sequences assigned  
21 (20.2%) exact matches, in which:  
12 unique CDR3  
2 unique J



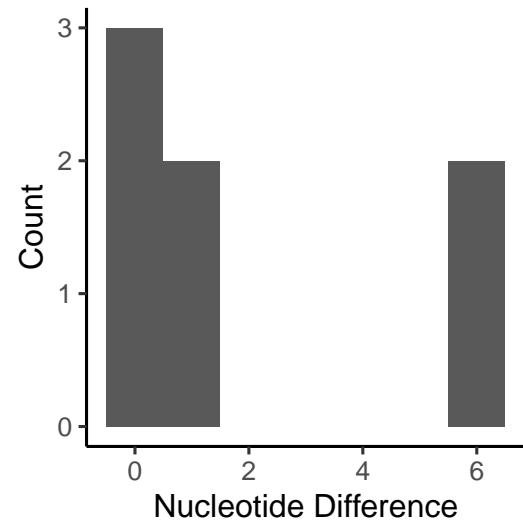
### IGHV3-7\*01

882 sequences assigned  
71 (8%) exact matches, in which:  
42 unique CDR3  
2 unique J



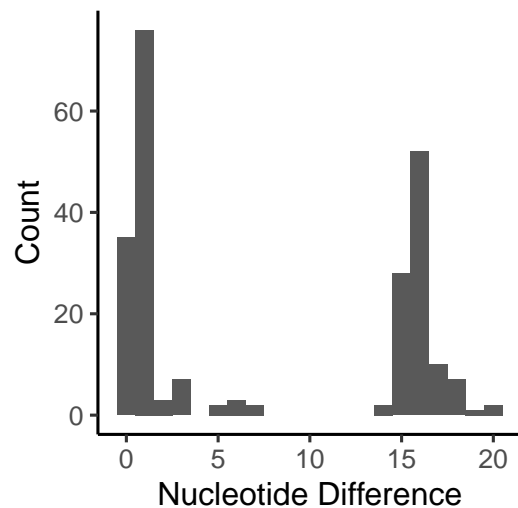
### IGHV3-11\*01

141 sequences assigned  
3 (2.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



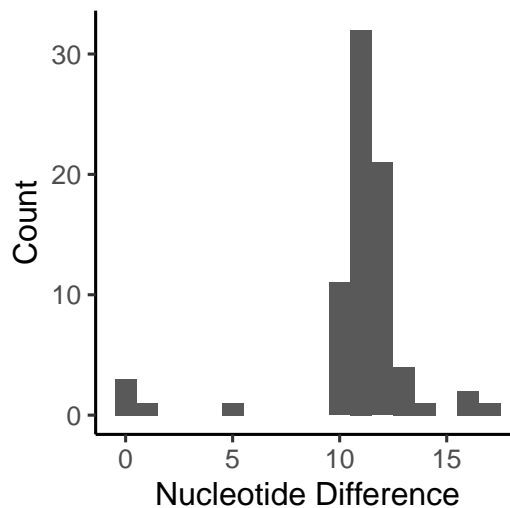
### IGHV3-11\*06

232 sequences assigned  
35 (15.1%) exact matches, in which:  
13 unique CDR3  
1 unique J



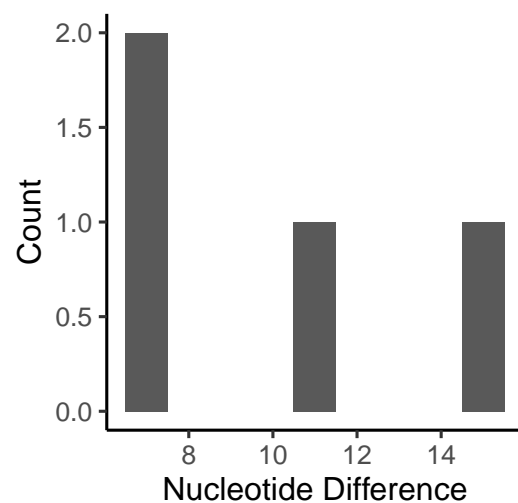
### IGHV3-15\*07

81 sequences assigned  
3 (3.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



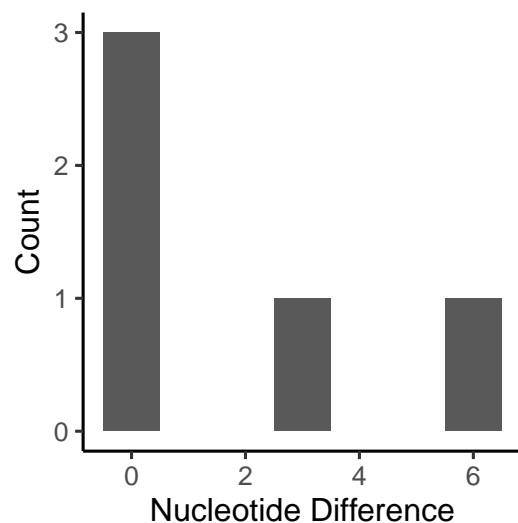
### IGHV3-21\*06

93 sequences assigned  
No exact matches.



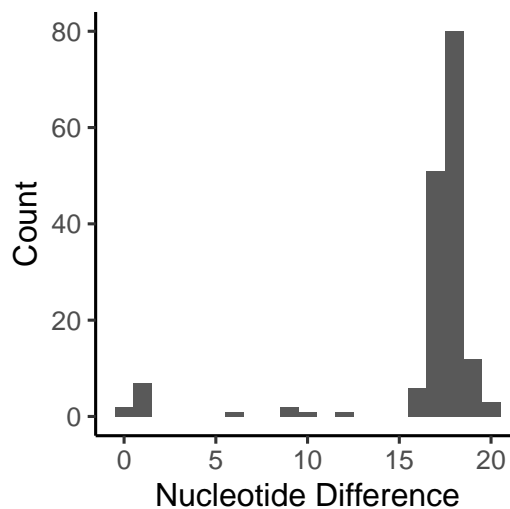
### IGHV3-11\*03\_05

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
1 unique J



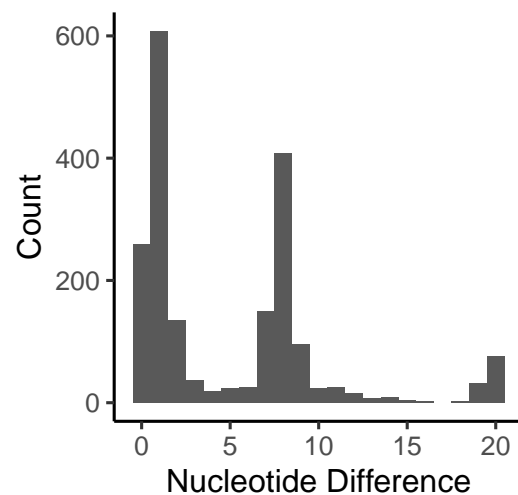
### IGHV3-15\*01\_02

168 sequences assigned  
2 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



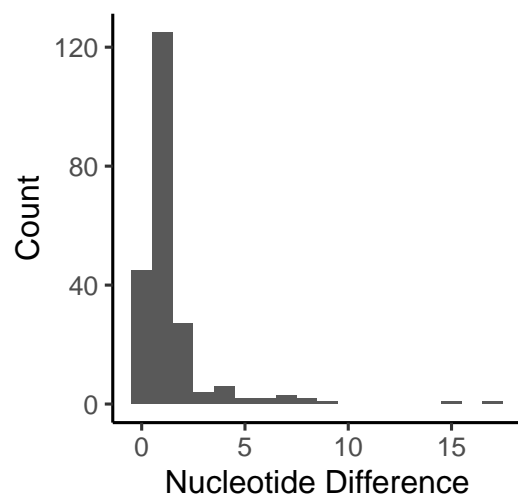
### IGHV3-21\*01\_02

1998 sequences assigned  
259 (13%) exact matches, in which:  
141 unique CDR3  
4 unique J



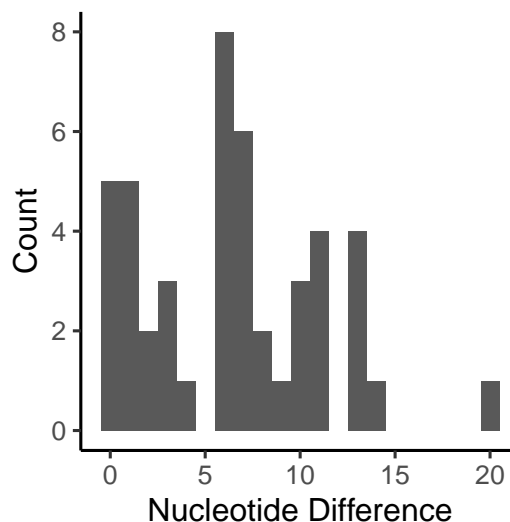
### IGHV3-13\*01

596 sequences assigned  
45 (7.6%) exact matches, in which:  
19 unique CDR3  
2 unique J



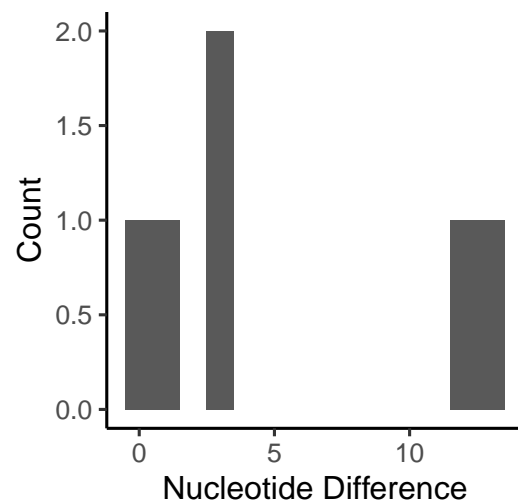
### IGHV3-21\*04

46 sequences assigned  
5 (10.9%) exact matches, in which:  
4 unique CDR3  
4 unique J



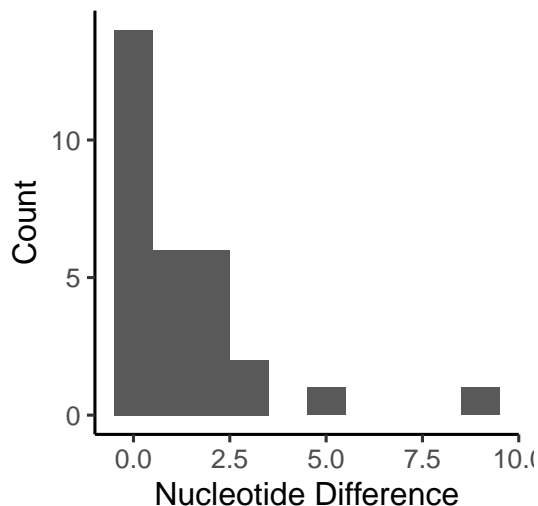
### IGHV3-30-3\*01

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



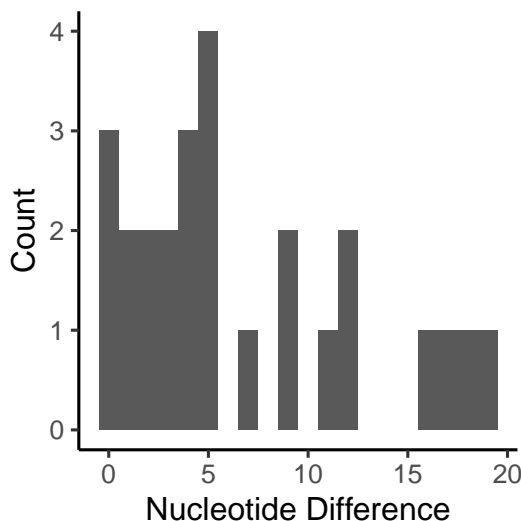
### IGHV3-30\*03

85 sequences assigned  
14 (16.5%) exact matches, in which:  
14 unique CDR3  
4 unique J



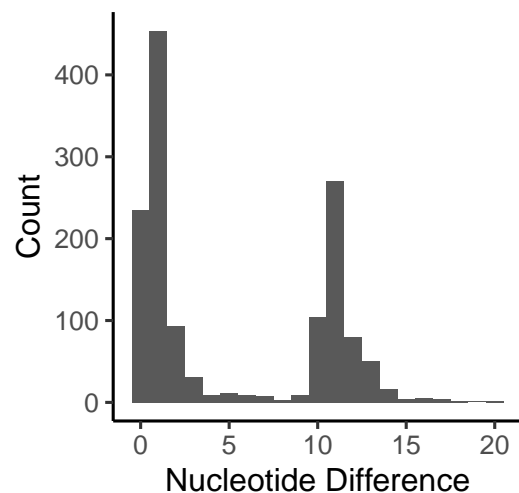
### IGHV3-33\*06

27 sequences assigned  
3 (11.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



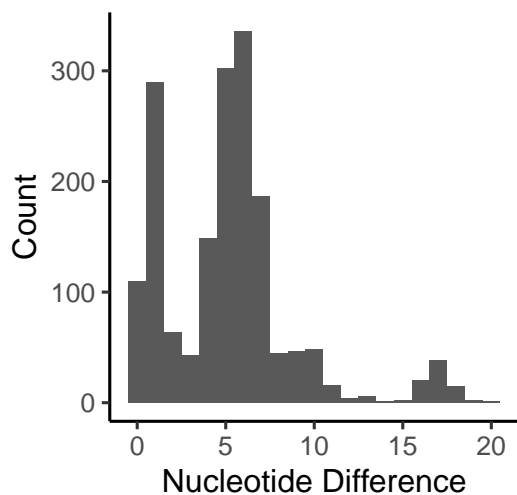
### IGHV3-48\*02

1628 sequences assigned  
235 (14.4%) exact matches, in which:  
118 unique CDR3  
5 unique J



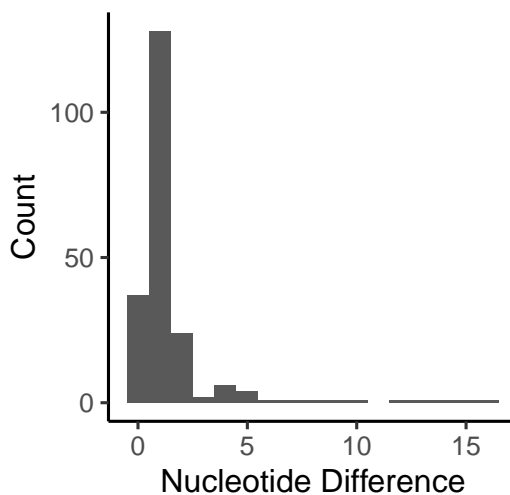
### IGHV3-33\*01

1730 sequences assigned  
110 (6.4%) exact matches, in which:  
60 unique CDR3  
4 unique J



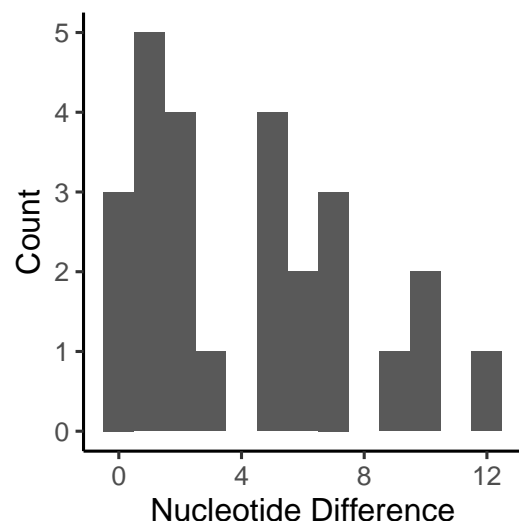
### IGHV3-43\*01

211 sequences assigned  
37 (17.5%) exact matches, in which:  
17 unique CDR3  
3 unique J



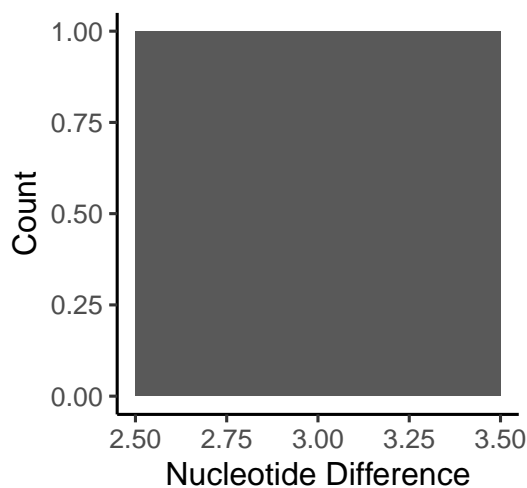
### IGHV3-48\*04

27 sequences assigned  
3 (11.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



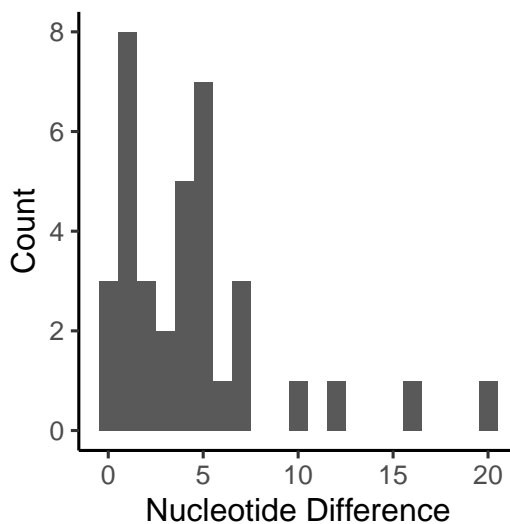
### IGHV3-33\*05

1 sequences assigned  
No exact matches.



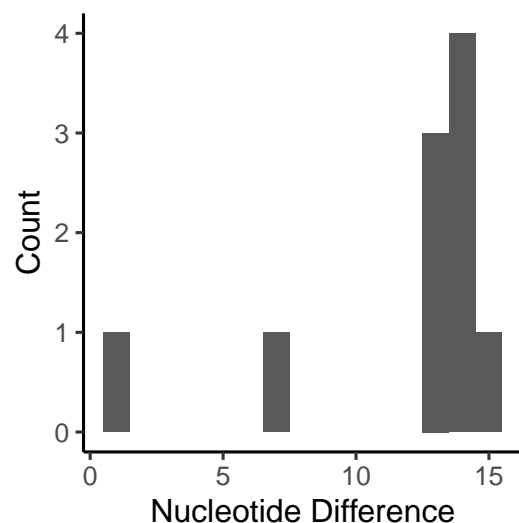
### IGHV3-48\*01

38 sequences assigned  
3 (7.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



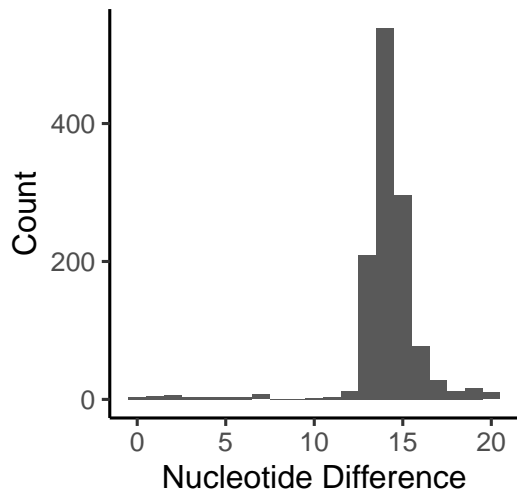
### IGHV3-53\*05

11 sequences assigned  
No exact matches.



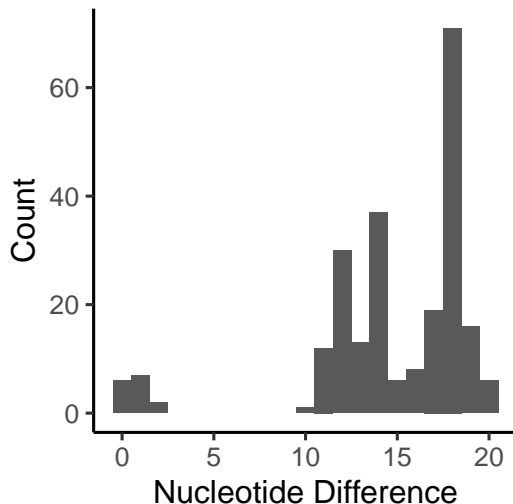
### IGHV3-53\*01\_02

1273 sequences assigned  
3 (0.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



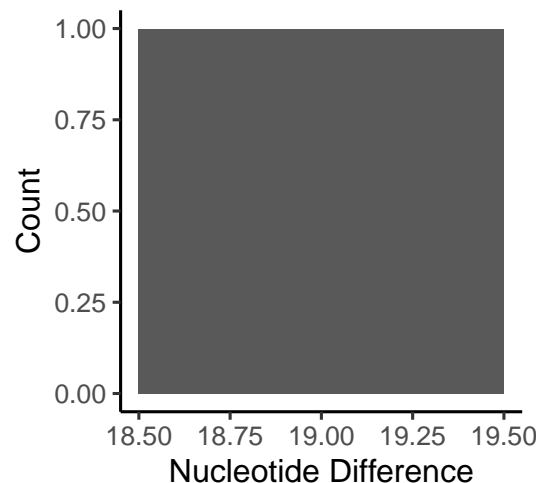
### IGHV3-73\*01\_02

239 sequences assigned  
6 (2.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



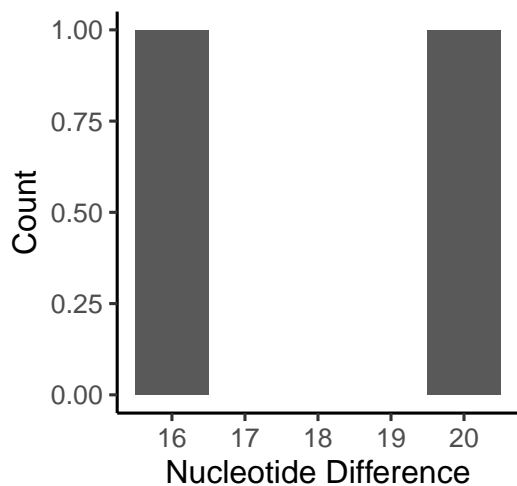
### IGHV4-30-4\*08

1 sequences assigned  
No exact matches.



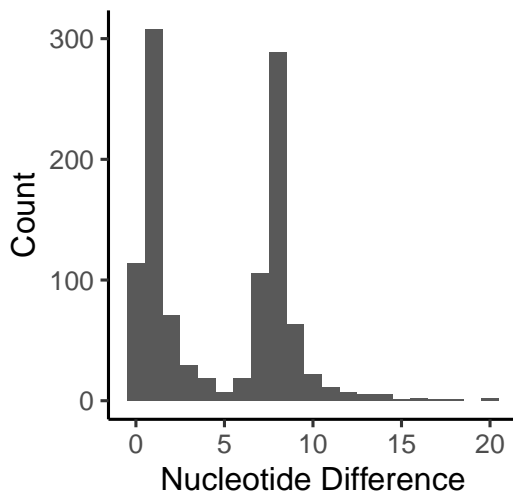
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



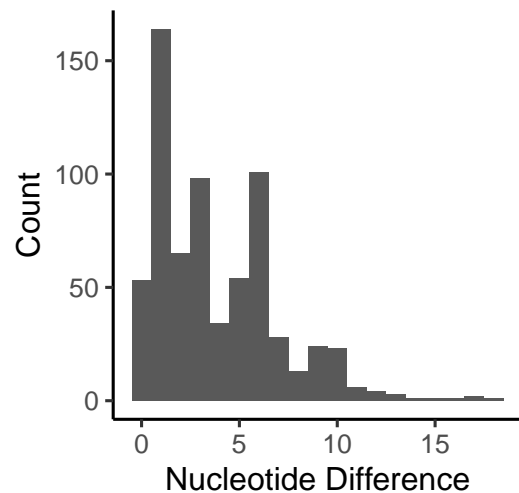
### IGHV3-74\*01\_02

1150 sequences assigned  
114 (9.9%) exact matches, in which:  
56 unique CDR3  
3 unique J



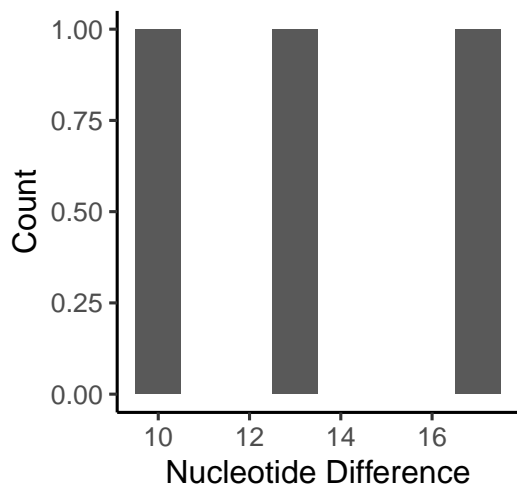
### IGHV4-31\*03\_04

685 sequences assigned  
53 (7.7%) exact matches, in which:  
33 unique CDR3  
3 unique J



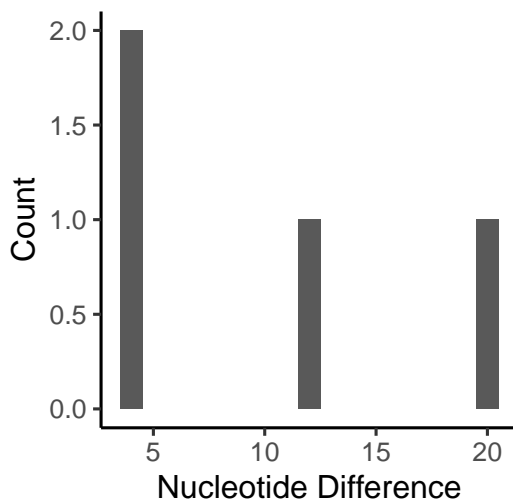
### IGHV3-72\*01

3 sequences assigned  
No exact matches.



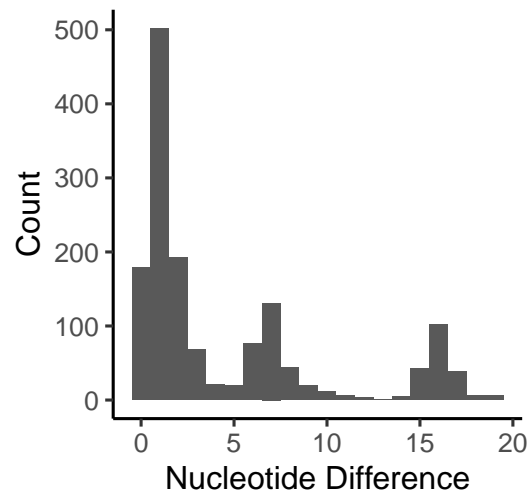
### IGHV4-4\*07

4 sequences assigned  
No exact matches.



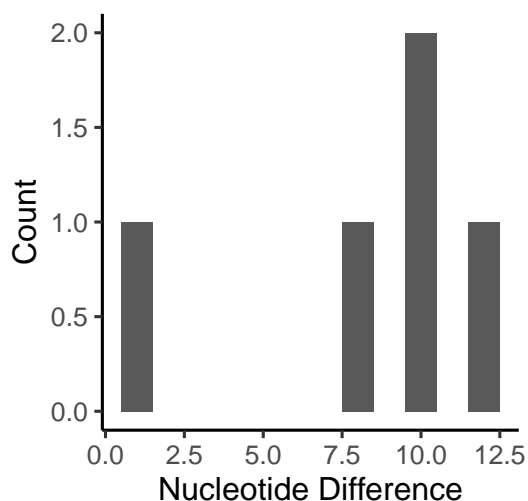
### IGHV4-34\*01\_02

1486 sequences assigned  
179 (12%) exact matches, in which:  
117 unique CDR3  
6 unique J



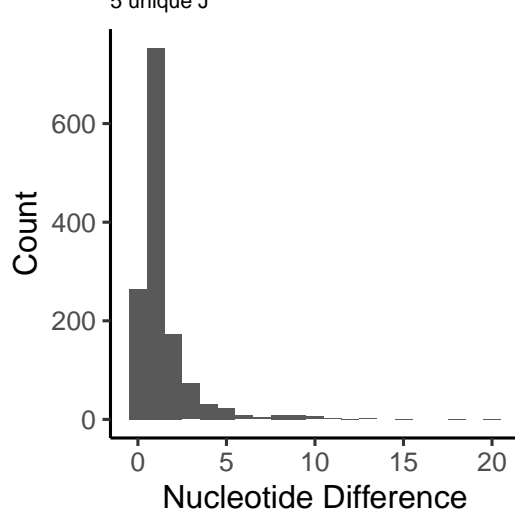
### IGHV4-38-2\*02

5 sequences assigned  
No exact matches.



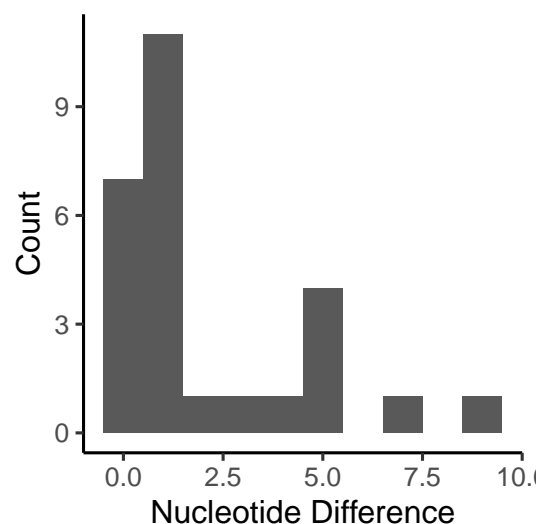
### IGHV4-59\*01\_07

1375 sequences assigned  
264 (19.2%) exact matches, in which:  
163 unique CDR3  
5 unique J



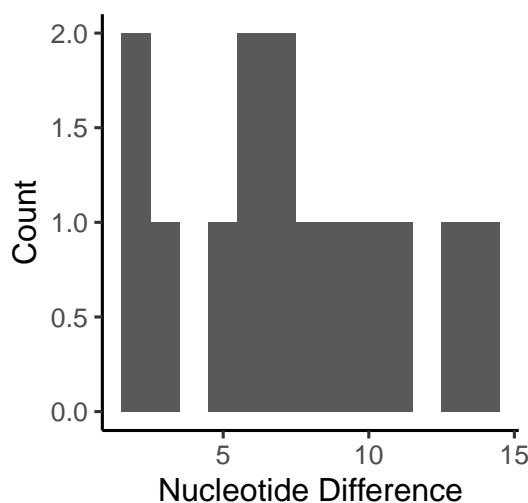
### IGHV4-61\*01

28 sequences assigned  
7 (25%) exact matches, in which:  
5 unique CDR3  
3 unique J



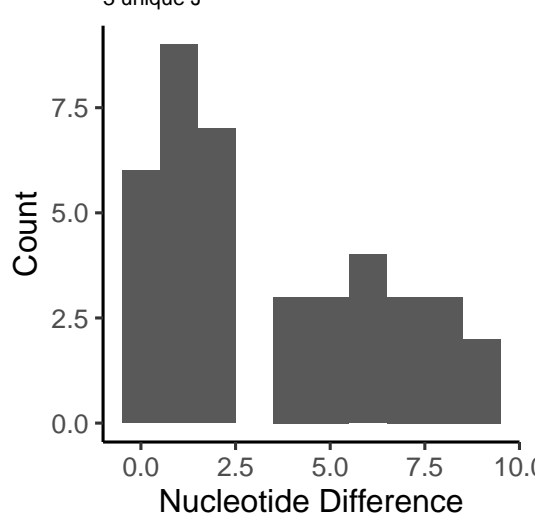
### IGHV4-39\*07

15 sequences assigned  
No exact matches.



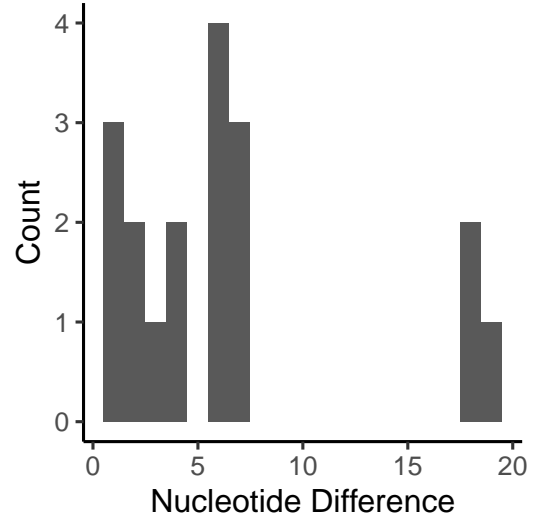
### IGHV4-59\*12

40 sequences assigned  
6 (15%) exact matches, in which:  
6 unique CDR3  
3 unique J



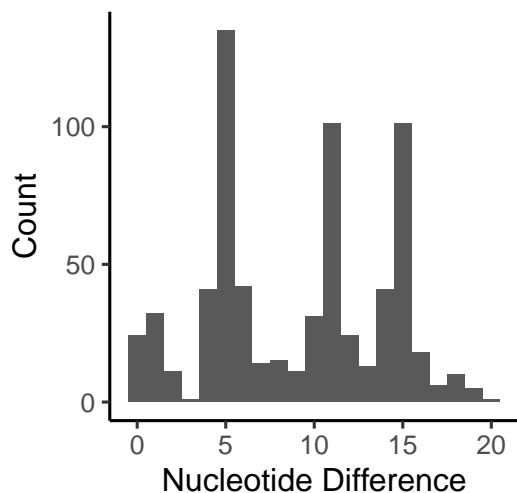
### IGHV4-61\*08

309 sequences assigned  
No exact matches.



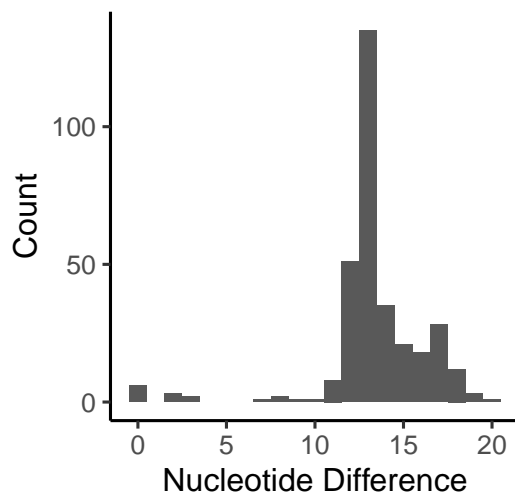
### IGHV4-39\*01\_05

694 sequences assigned  
24 (3.5%) exact matches, in which:  
15 unique CDR3  
4 unique J



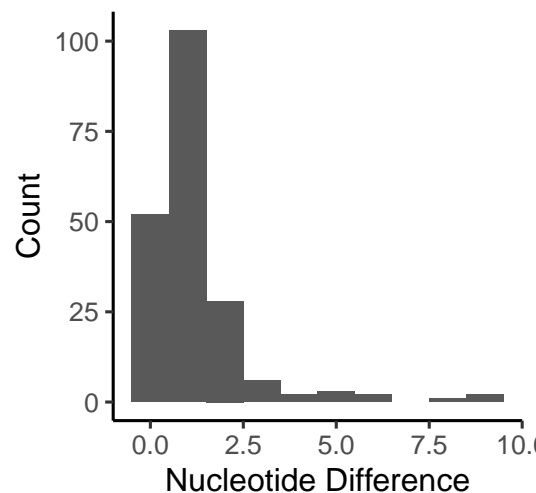
### IGHV4-59\*13

1006 sequences assigned  
6 (0.6%) exact matches, in which:  
6 unique CDR3  
3 unique J



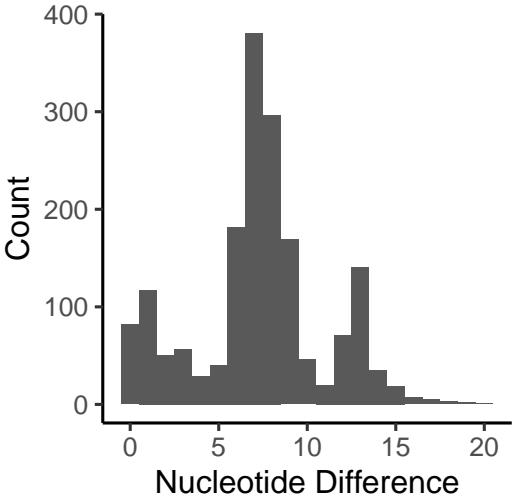
### IGHV5-10-1\*01\_03

442 sequences assigned  
52 (11.8%) exact matches, in which:  
29 unique CDR3  
3 unique J



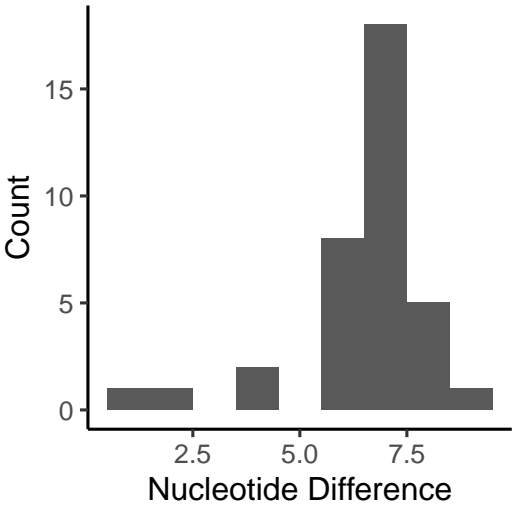
IGHV5–51\*01\_03

2144 sequences assigned  
82 (3.8%) exact matches, in which:  
45 unique CDR3  
4 unique J



IGHV6–1\*01\_02

36 sequences assigned  
No exact matches.







Novel sequence(s)IGHV1–69\*01\_12\_13\_G238AIGHV3–48\*03\_T303G 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)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s)IGHV3–30–3\*01\_T288CIGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3–30\*03\_T288C 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.