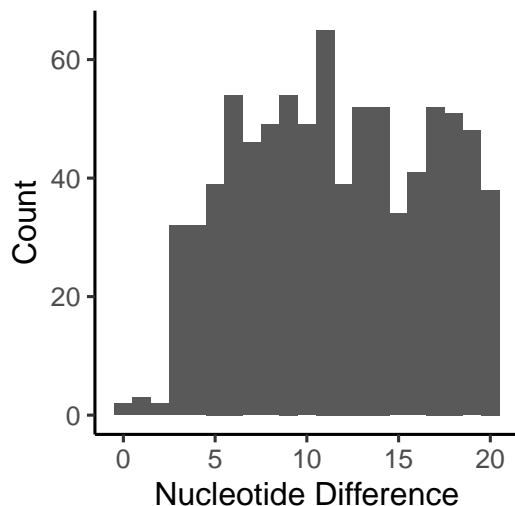


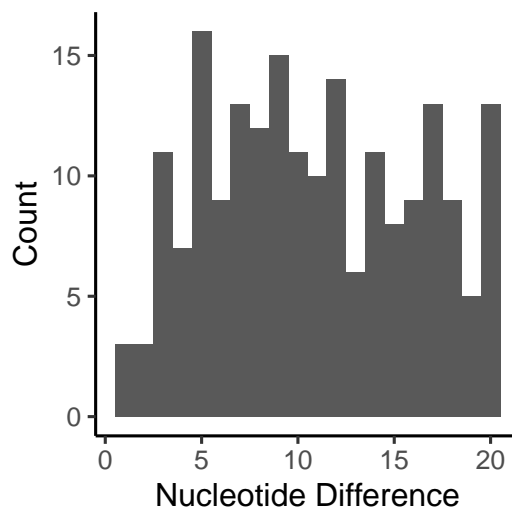
### IGHV1-2\*02

1083 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



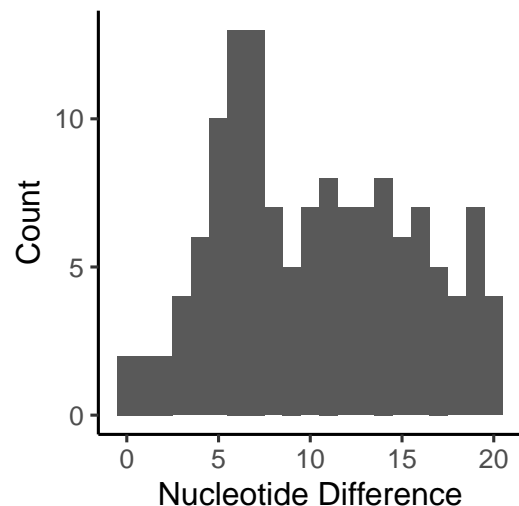
### IGHV1-3\*01\_05

234 sequences assigned  
No exact matches.



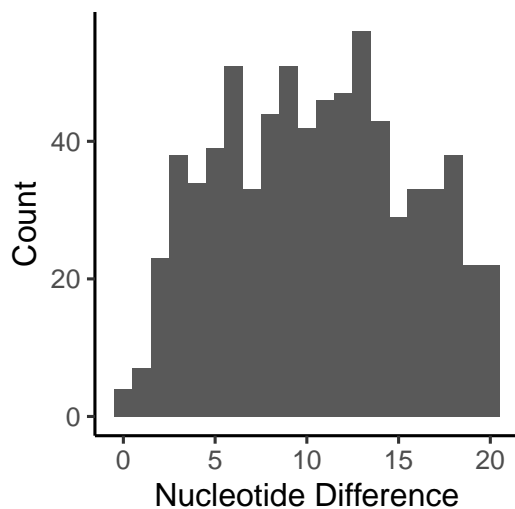
### IGHV1-24\*01

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



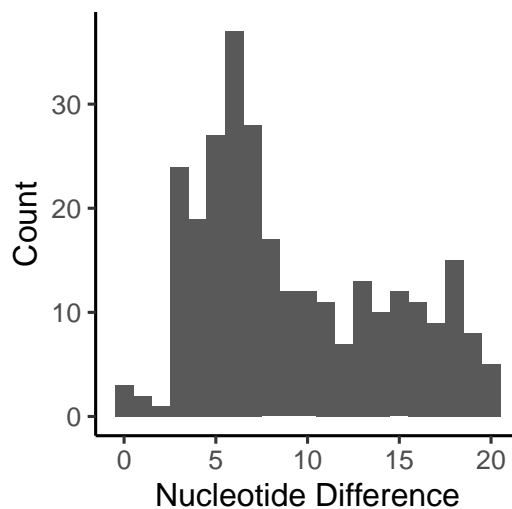
### IGHV1-2\*06

978 sequences assigned  
4 (0.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



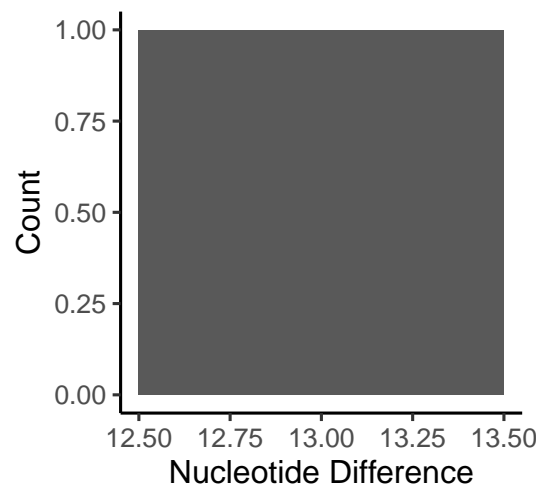
### IGHV1-8\*01

392 sequences assigned  
3 (0.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



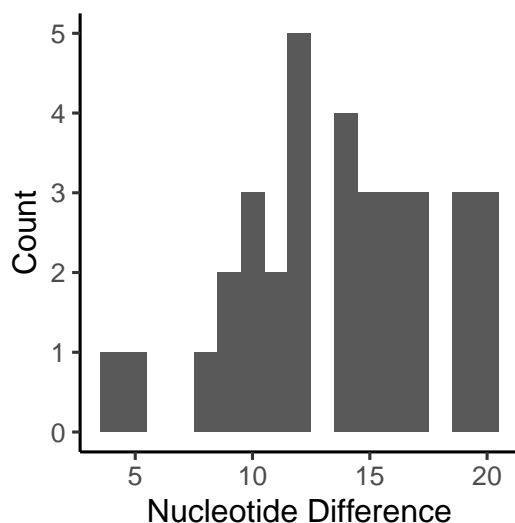
### IGHV1-45\*02

3 sequences assigned  
No exact matches.



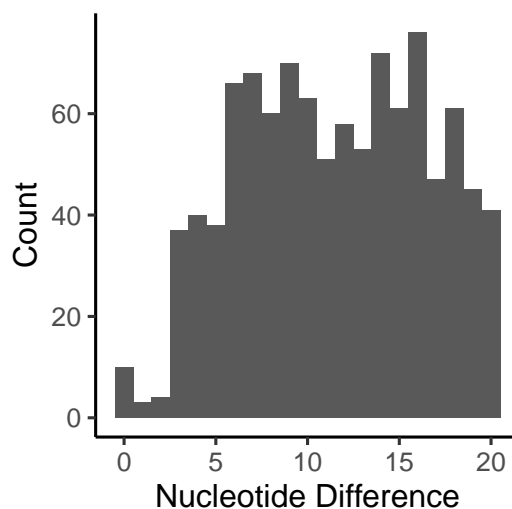
### IGHV1-3\*04

49 sequences assigned  
No exact matches.



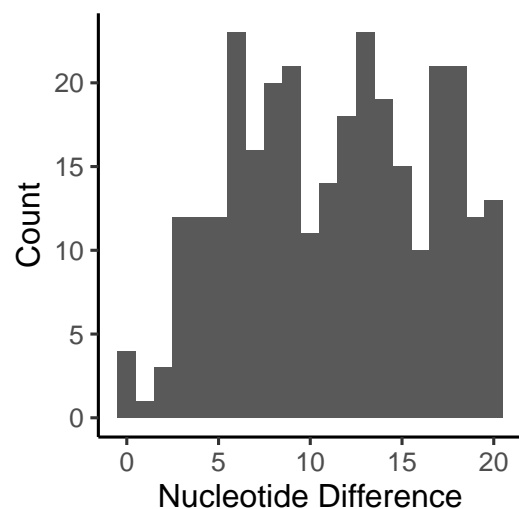
### IGHV1-18\*01

1399 sequences assigned  
10 (0.7%) exact matches, in which:  
10 unique CDR3  
3 unique J



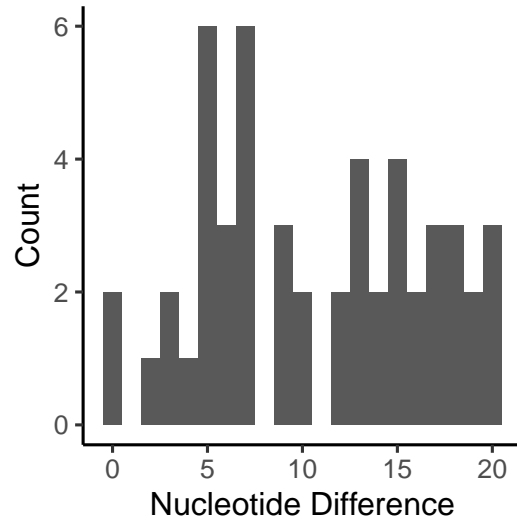
### IGHV1-46\*01

409 sequences assigned  
4 (1%) exact matches, in which:  
4 unique CDR3  
3 unique J



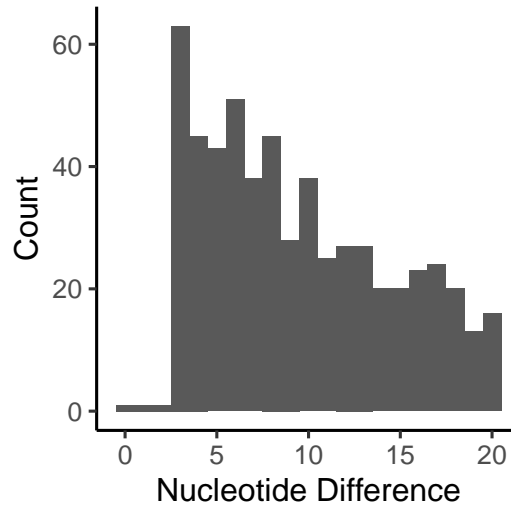
### IGHV1-58\*01\_03

71 sequences assigned  
2 (2.8%) exact matches, in which:  
2 unique CDR3  
2 unique J



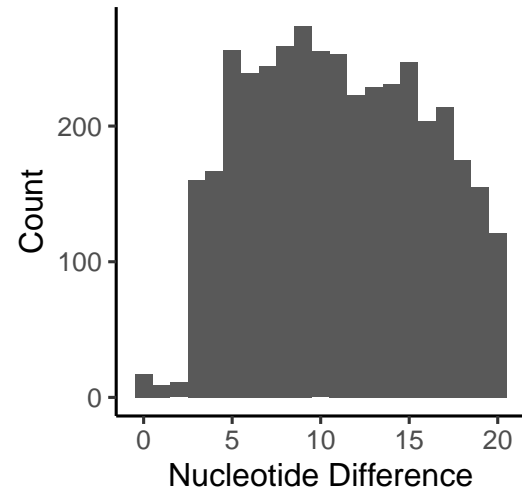
### IGHV2-5\*02

696 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



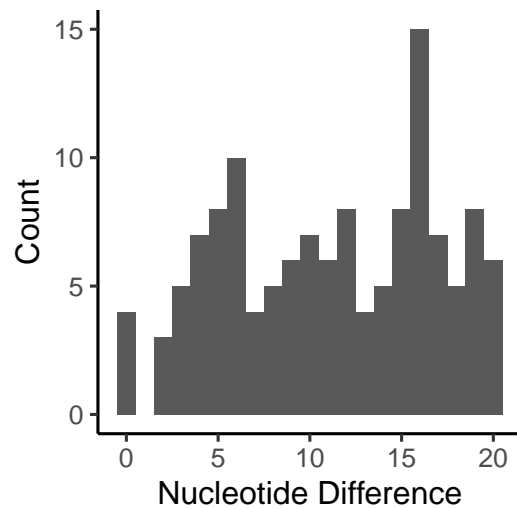
### IGHV3-7\*01

4580 sequences assigned  
17 (0.4%) exact matches, in which:  
12 unique CDR3  
4 unique J



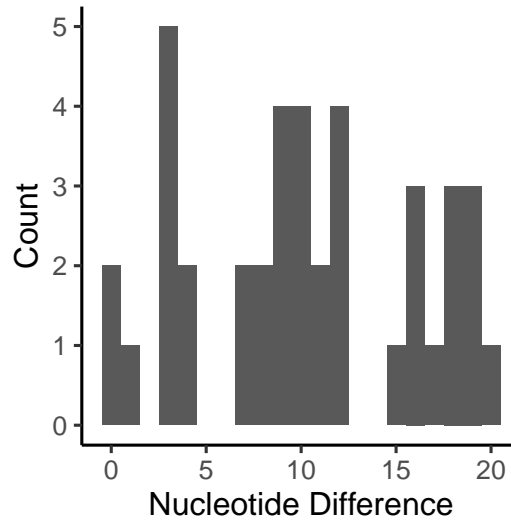
### IGHV1-69\*06\_14

261 sequences assigned  
4 (1.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



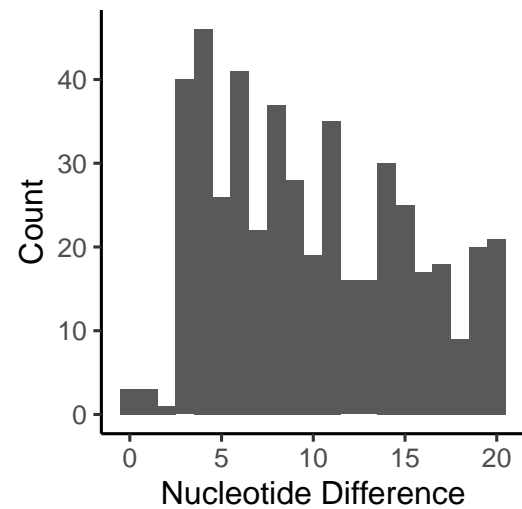
### IGHV2-26\*01

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



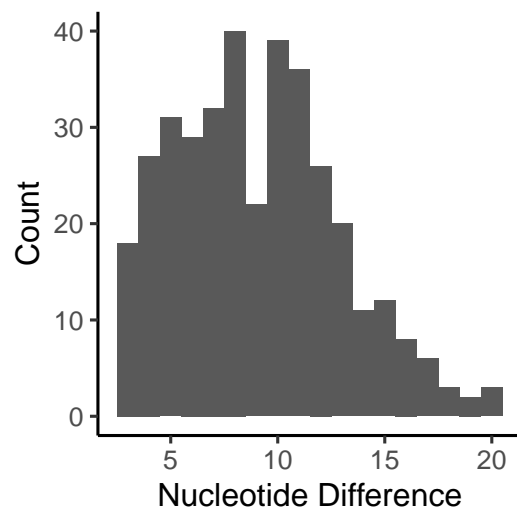
### IGHV3-9\*01

576 sequences assigned  
3 (0.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



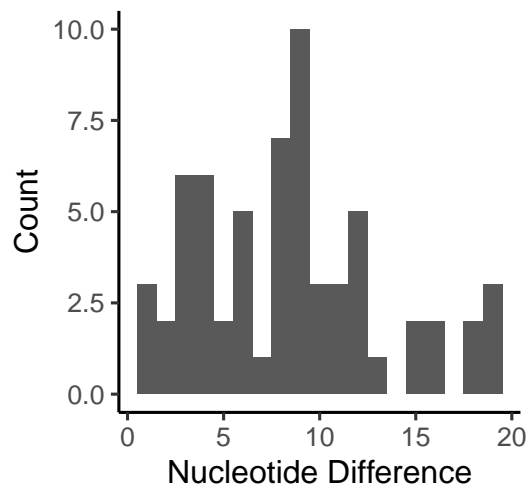
### IGHV2-5\*01

397 sequences assigned  
No exact matches.



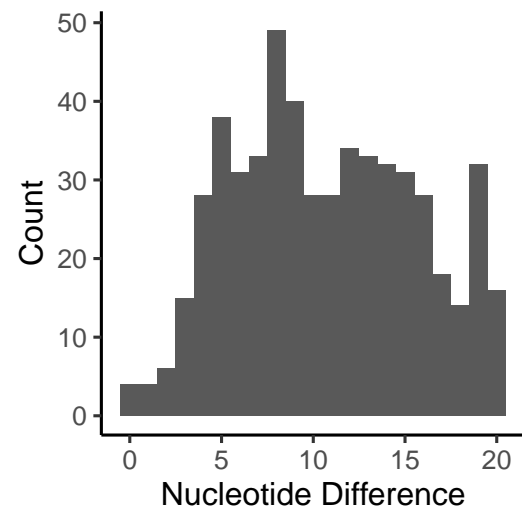
### IGHV2-70\*01

76 sequences assigned  
No exact matches.



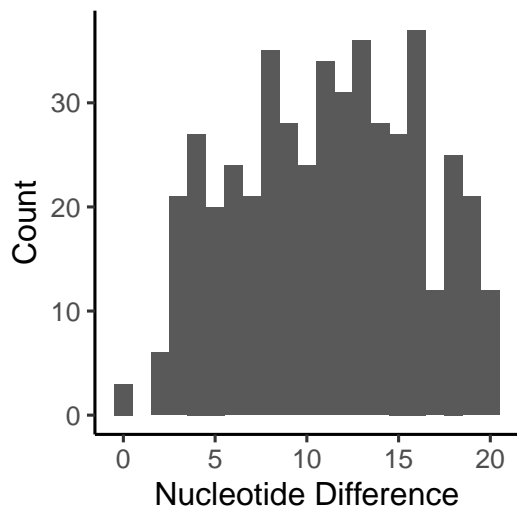
### IGHV3-11\*01

741 sequences assigned  
4 (0.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



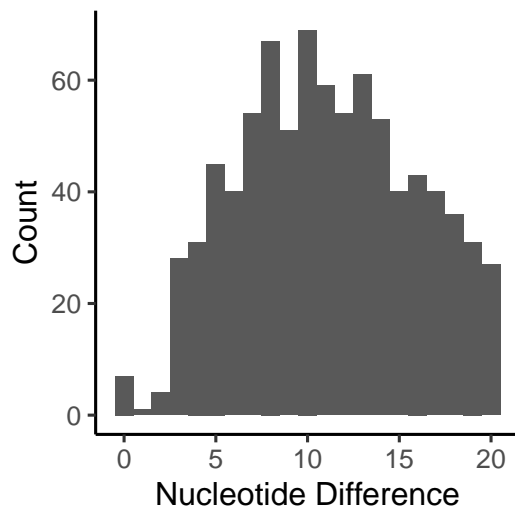
### IGHV3-11\*03\_05

645 sequences assigned  
3 (0.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



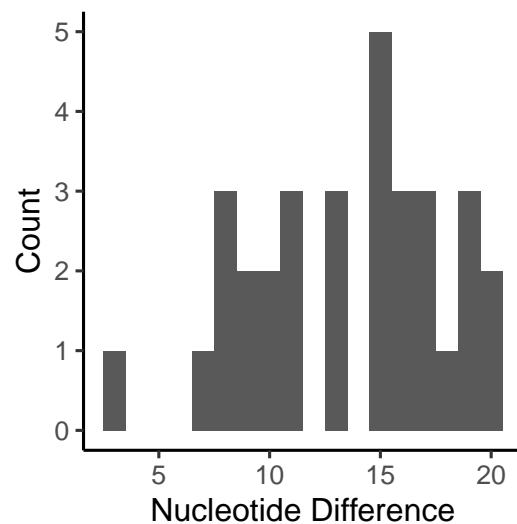
### IGHV3-15\*07

1026 sequences assigned  
7 (0.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



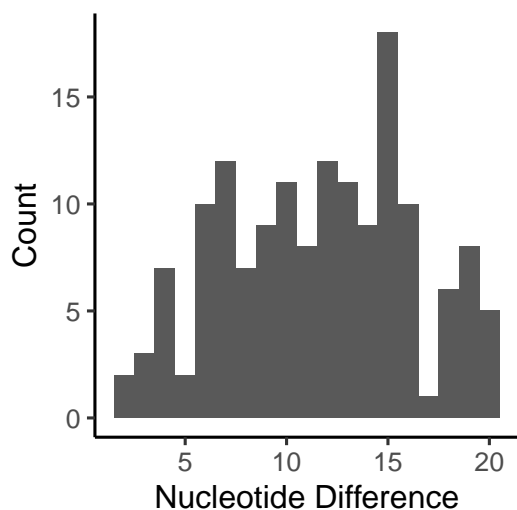
### IGHV3-20\*03\_04

50 sequences assigned  
No exact matches.



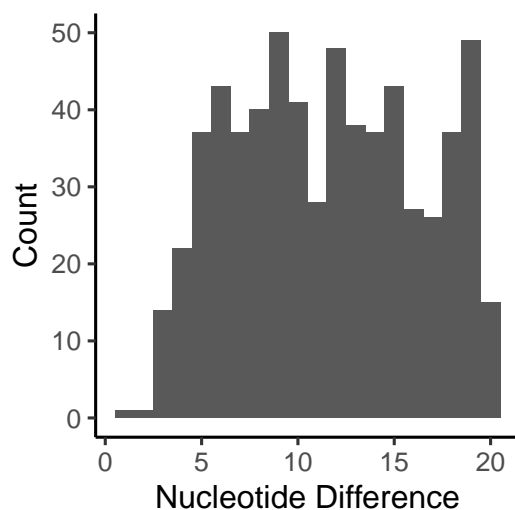
### IGHV3-13\*01

211 sequences assigned  
No exact matches.



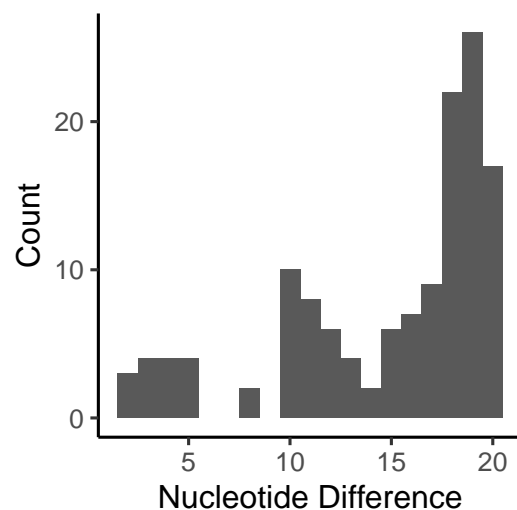
### IGHV3-15\*01\_02

751 sequences assigned  
No exact matches.



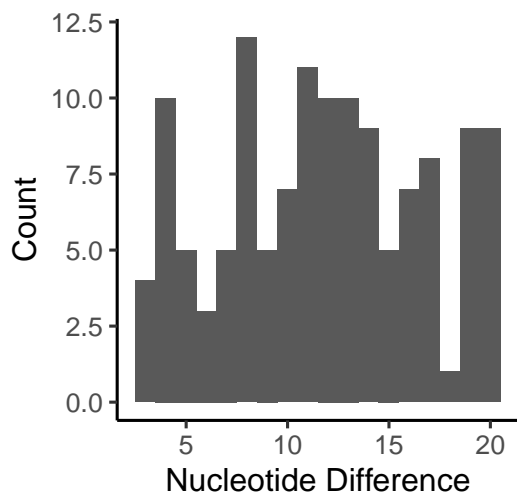
### IGHV3-21\*06

218 sequences assigned  
No exact matches.



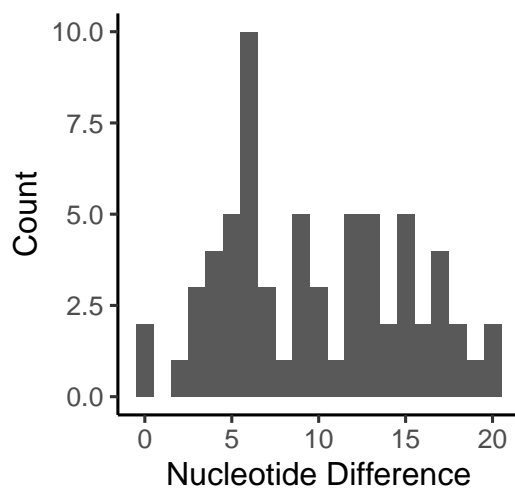
### IGHV3-13\*04

154 sequences assigned  
No exact matches.



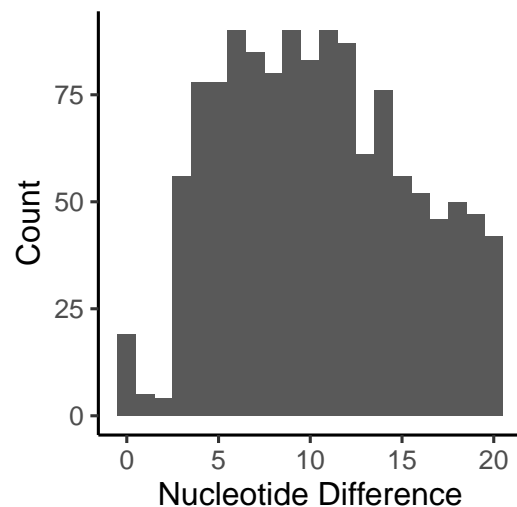
### IGHV3-20\*01\_02

74 sequences assigned  
2 (2.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



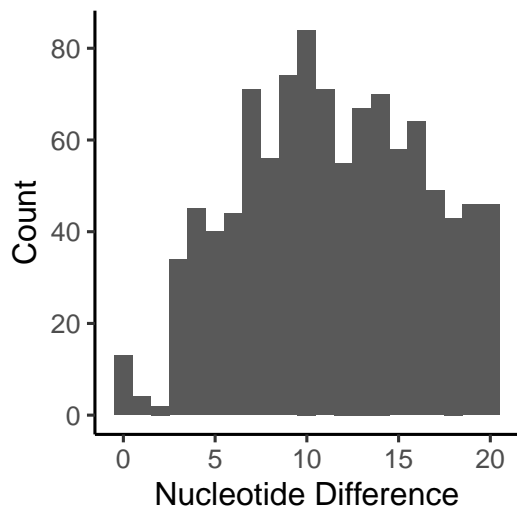
### IGHV3-21\*01\_02

1589 sequences assigned  
19 (1.2%) exact matches, in which:  
9 unique CDR3  
3 unique J



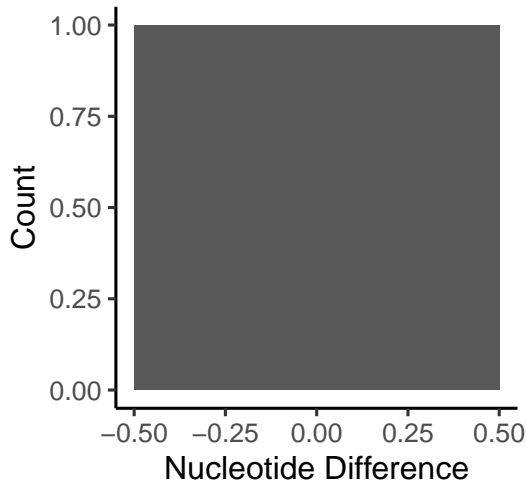
### IGHV3-30-3\*01

1353 sequences assigned  
13 (1%) exact matches, in which:  
8 unique CDR3  
3 unique J



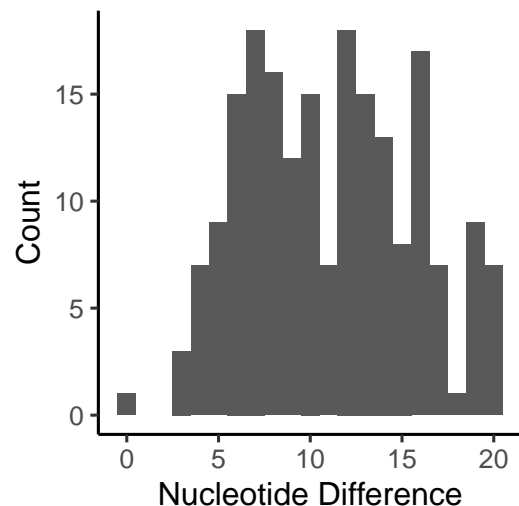
### IGHV3-47\*02

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



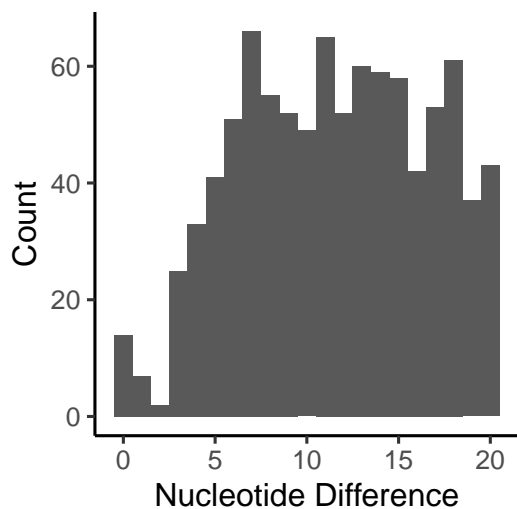
### IGHV3-49\*04

228 sequences assigned  
1 (0.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



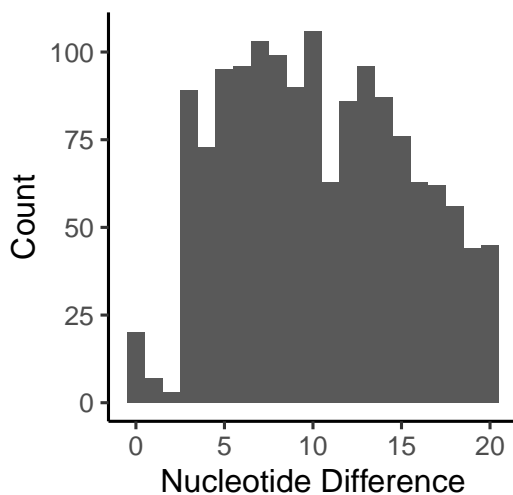
### IGHV3-33\*01

1239 sequences assigned  
14 (1.1%) exact matches, in which:  
9 unique CDR3  
2 unique J



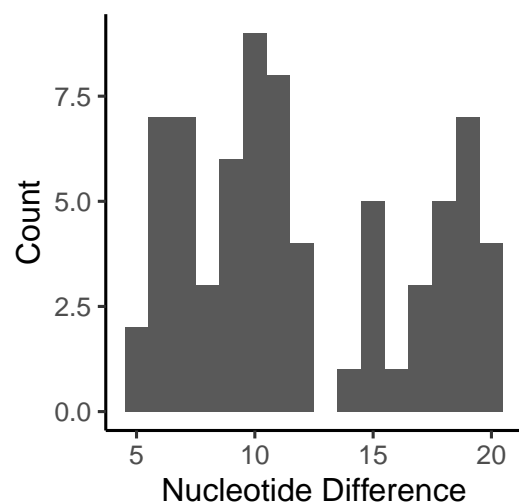
### IGHV3-48\*02

1875 sequences assigned  
20 (1.1%) exact matches, in which:  
9 unique CDR3  
4 unique J



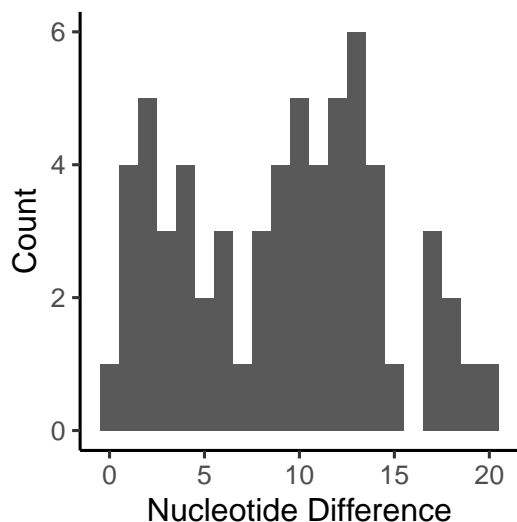
### IGHV3-49\*03\_05

87 sequences assigned  
No exact matches.



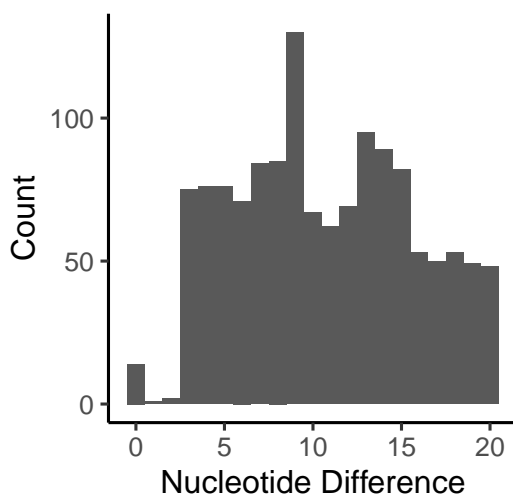
### IGHV3-43\*01

90 sequences assigned  
1 (1.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



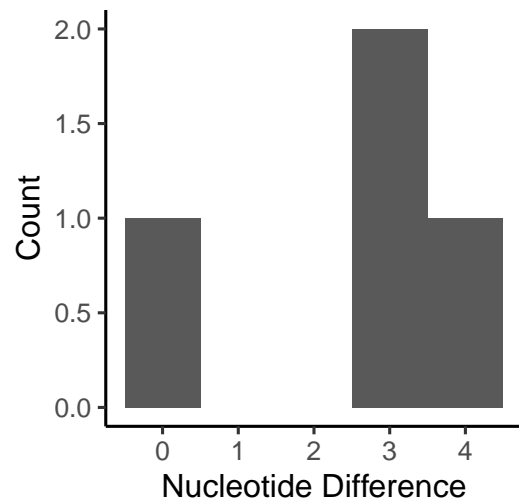
### IGHV3-48\*03

1649 sequences assigned  
14 (0.8%) exact matches, in which:  
7 unique CDR3  
3 unique J



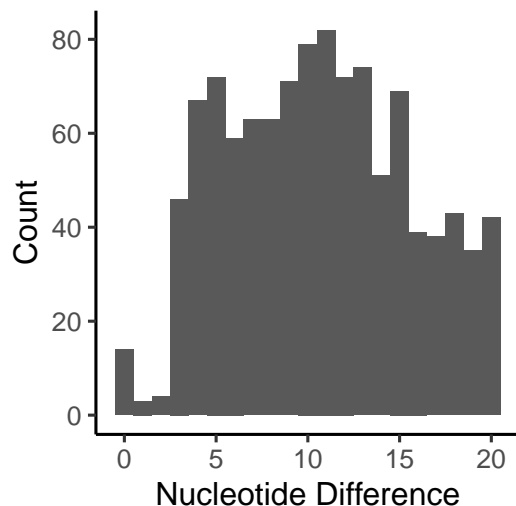
### IGHV3-52\*01\_03

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



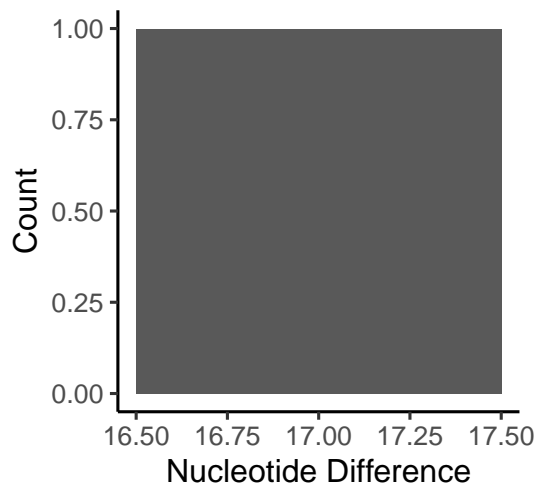
### IGHV3-53\*01\_02

1288 sequences assigned  
14 (1.1%) exact matches, in which:  
8 unique CDR3  
2 unique J



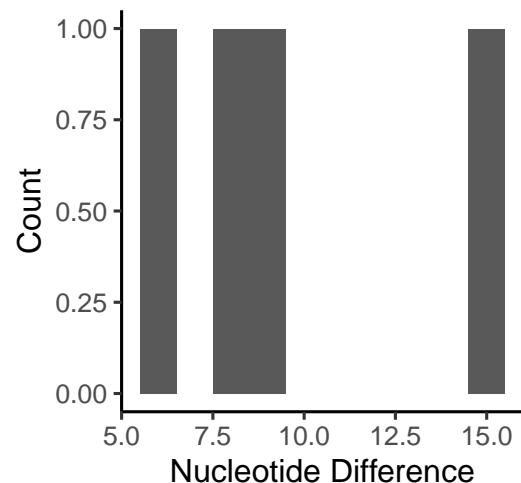
### IGHV3-66\*01

1 sequences assigned  
No exact matches.



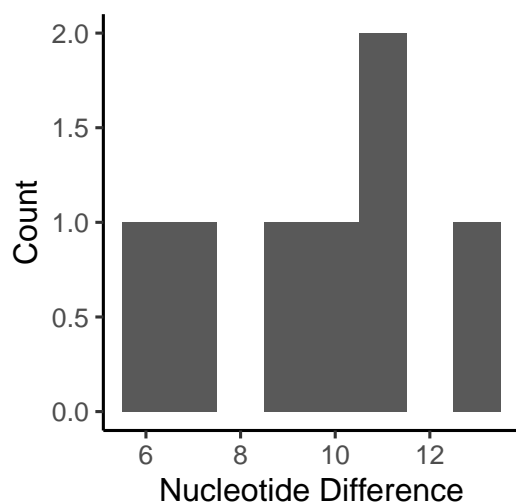
### IGHV3-69-1\*01

17 sequences assigned  
No exact matches.



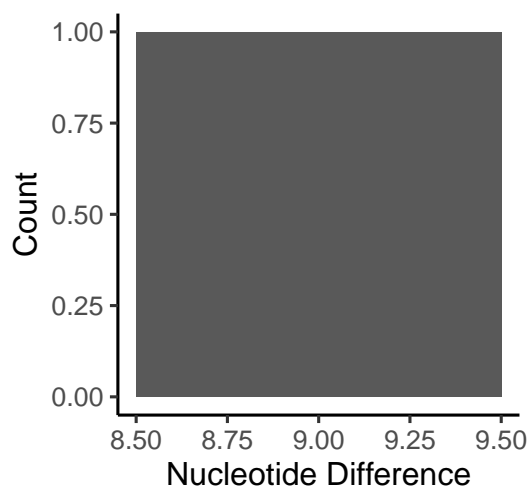
### IGHV3-64\*05

8 sequences assigned  
No exact matches.



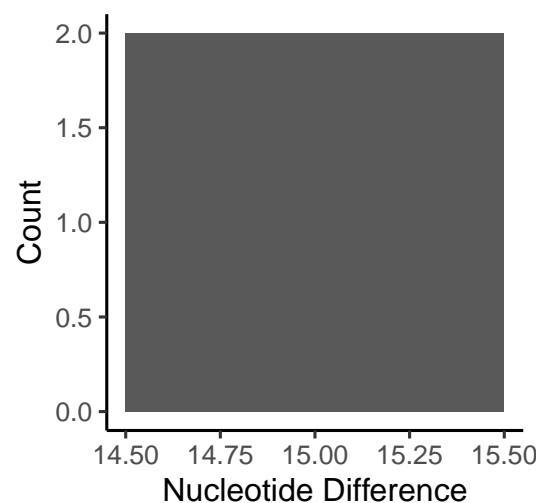
### IGHV3-66\*03

2 sequences assigned  
No exact matches.



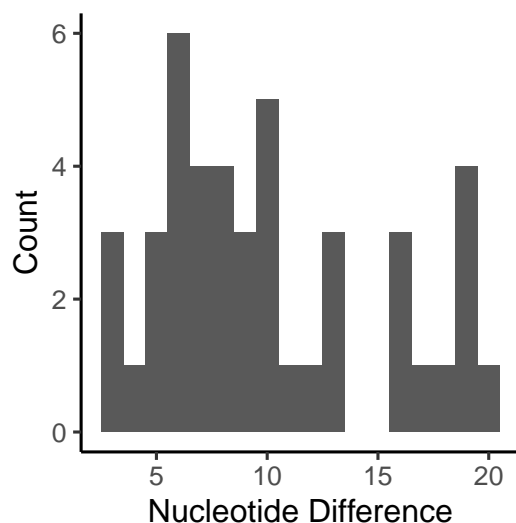
### IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



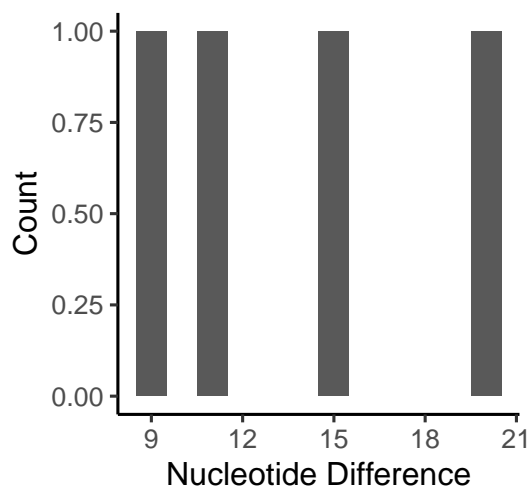
### IGHV3-64\*02\_07

49 sequences assigned  
No exact matches.



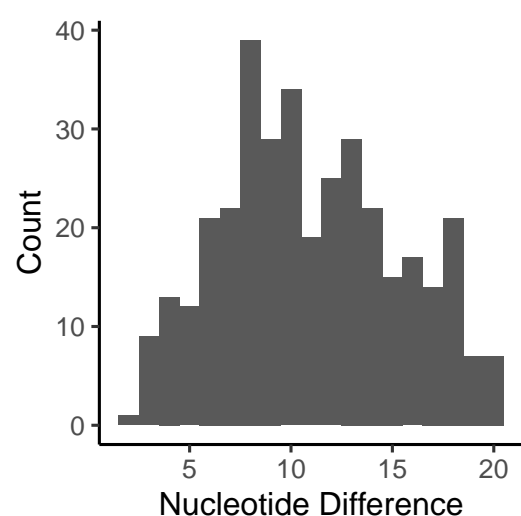
### IGHV3-66\*04

5 sequences assigned  
No exact matches.



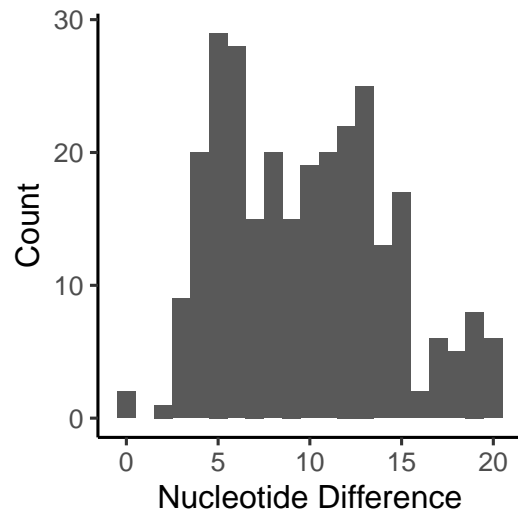
### IGHV3-72\*01

405 sequences assigned  
No exact matches.



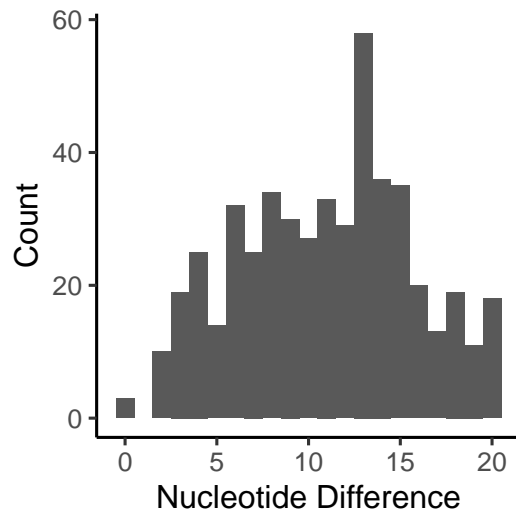
### IGHV3-73\*01\_02

365 sequences assigned  
2 (0.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



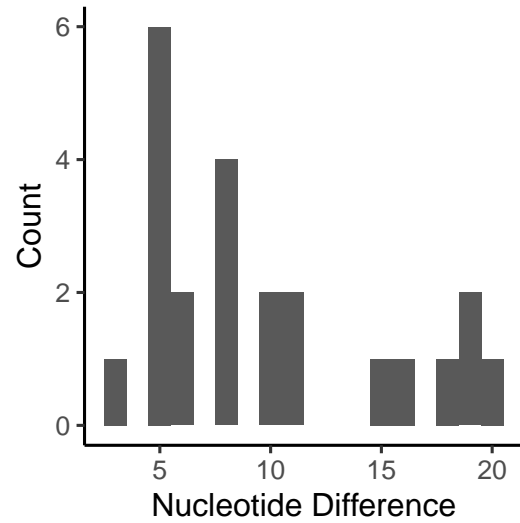
### IGHV3-64D\*09

706 sequences assigned  
3 (0.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



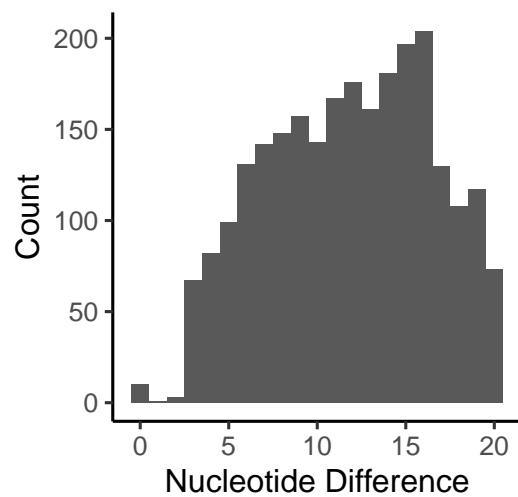
### IGHV4-28\*01\_07

26 sequences assigned  
No exact matches.



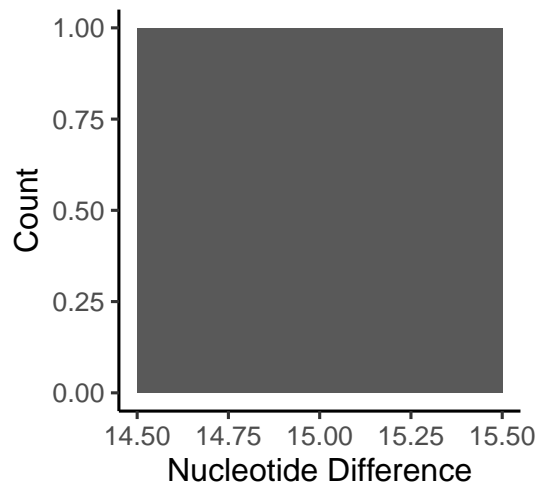
### IGHV3-74\*01\_02

3045 sequences assigned  
10 (0.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



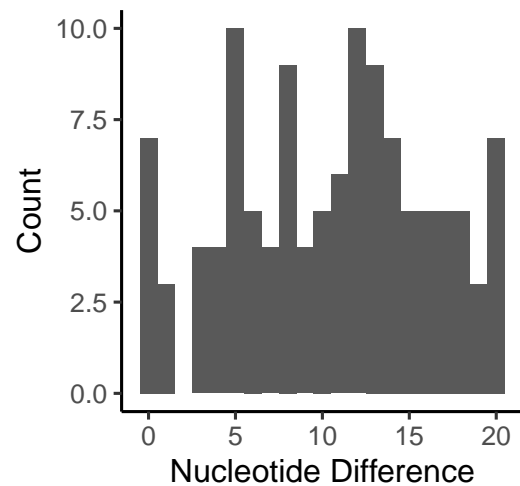
### IGHV3-NL1\*01

4 sequences assigned  
No exact matches.



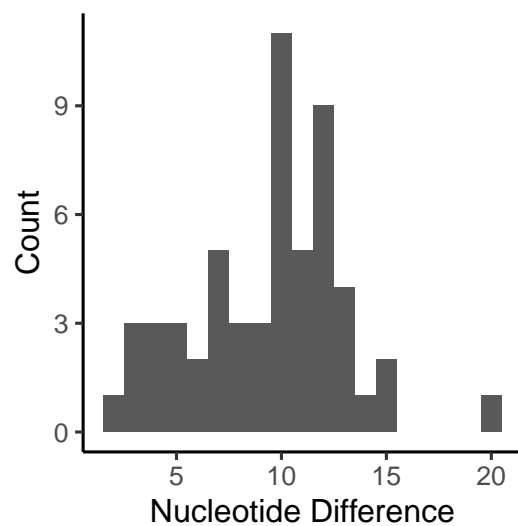
### IGHV4-30-2\*01

193 sequences assigned  
7 (3.6%) exact matches, in which:  
5 unique CDR3  
3 unique J



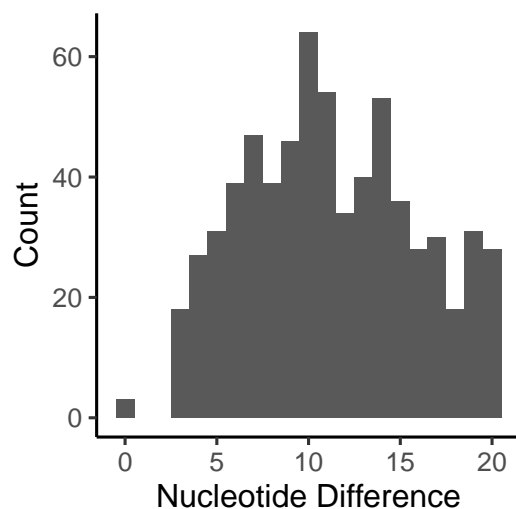
### IGHV3-43D\*04

68 sequences assigned  
No exact matches.



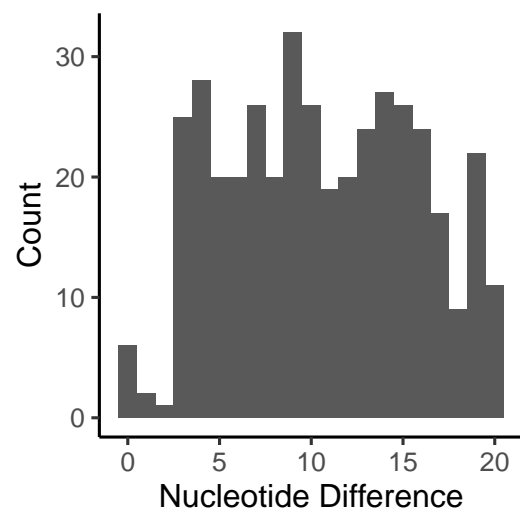
### IGHV4-4\*07

792 sequences assigned  
3 (0.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



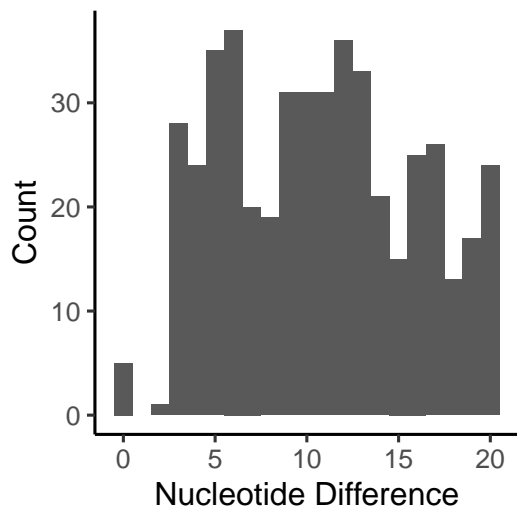
### IGHV4-30-4\*01

609 sequences assigned  
6 (1%) exact matches, in which:  
4 unique CDR3  
2 unique J



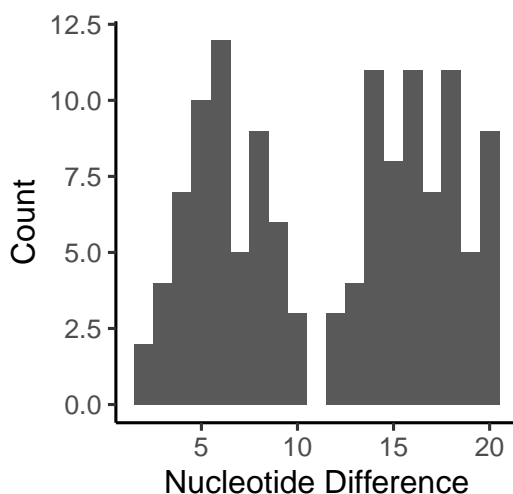
### IGHV4-31\*03\_04

736 sequences assigned  
5 (0.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



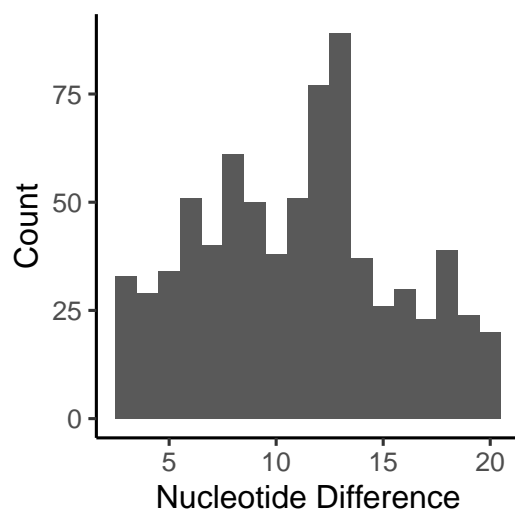
### IGHV4-38-2\*02

177 sequences assigned  
No exact matches.



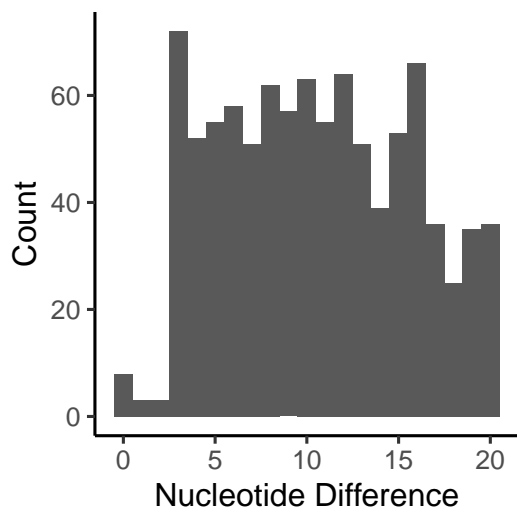
### IGHV4-61\*01

904 sequences assigned  
No exact matches.



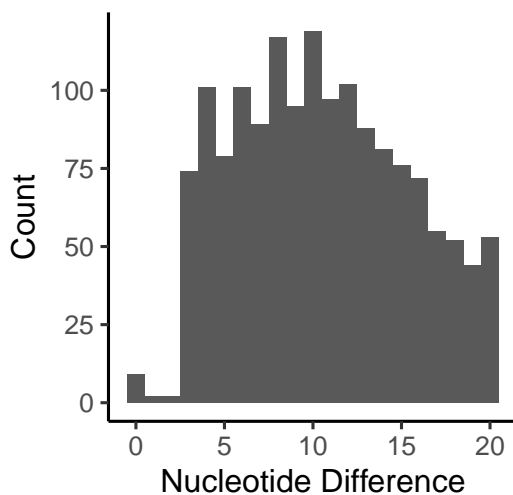
### IGHV4-34\*01\_02

1272 sequences assigned  
8 (0.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



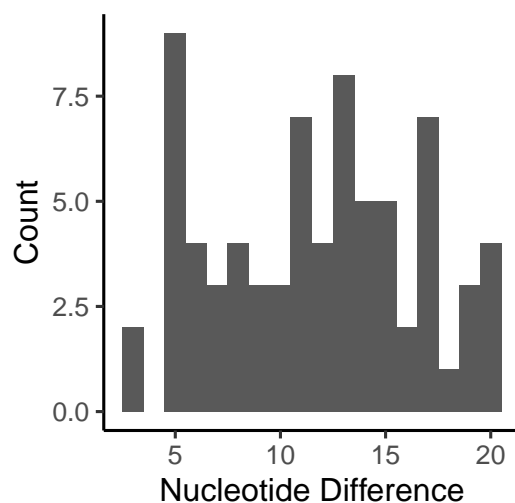
### IGHV4-39\*01\_05

1885 sequences assigned  
9 (0.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



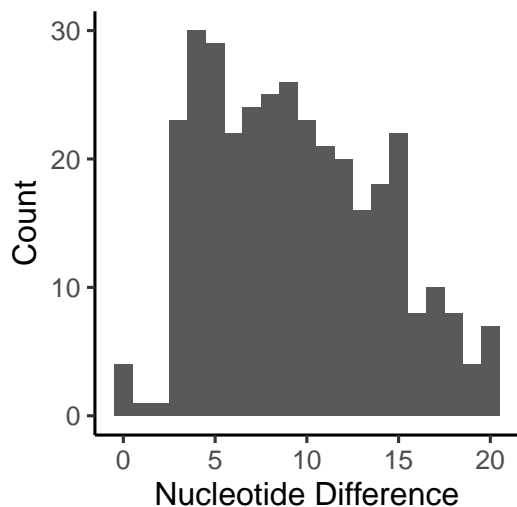
### IGHV4-61\*08

148 sequences assigned  
No exact matches.



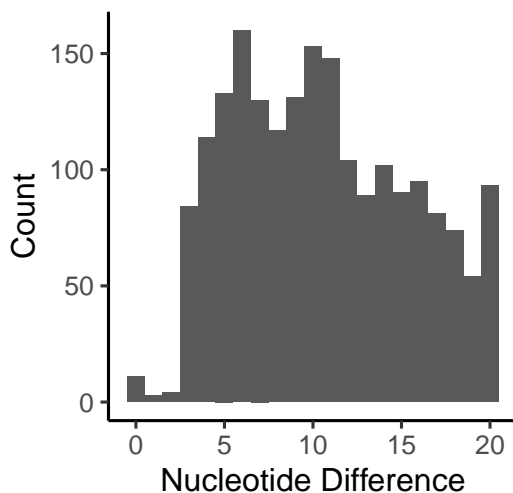
### IGHV4-38-2\*01

408 sequences assigned  
4 (1%) exact matches, in which:  
4 unique CDR3  
4 unique J



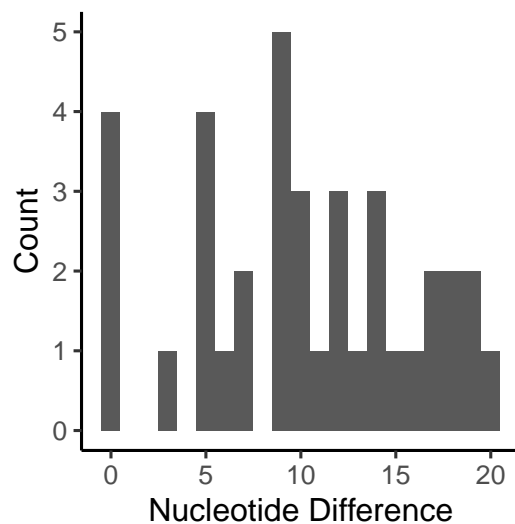
### IGHV4-59\*01\_07

2484 sequences assigned  
11 (0.4%) exact matches, in which:  
10 unique CDR3  
4 unique J



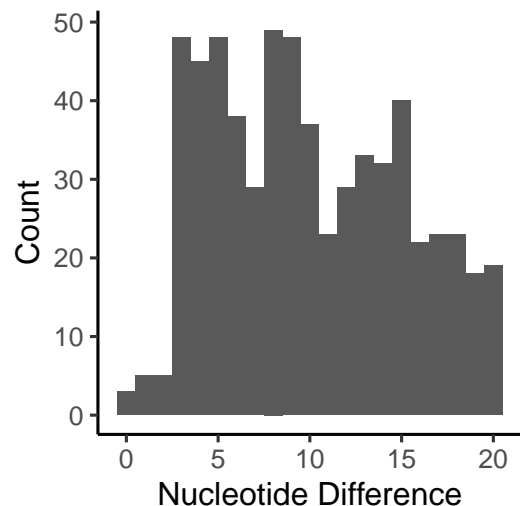
### IGHV5-10-1\*01\_03

61 sequences assigned  
4 (6.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



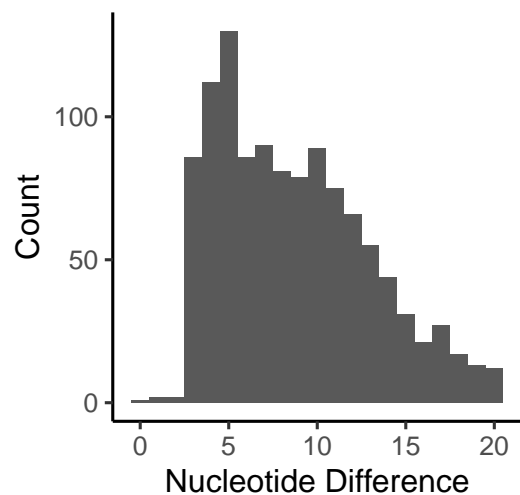
## IGHV5-51\*01\_03

730 sequences assigned  
3 (0.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



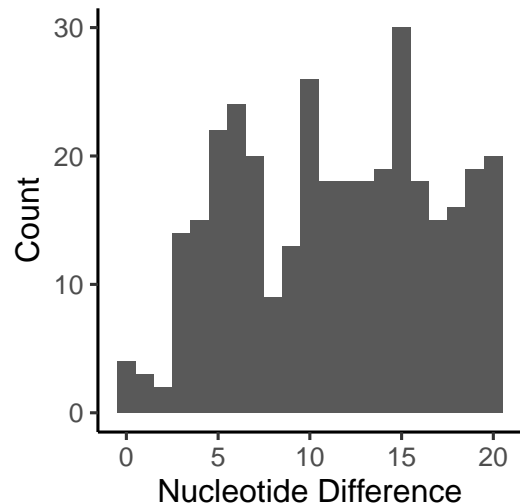
## IGHV6-1\*01\_02

1158 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



## IGHV7-4-1\*02

420 sequences assigned  
4 (1%) exact matches, in which:  
4 unique CDR3  
2 unique J







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\_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.