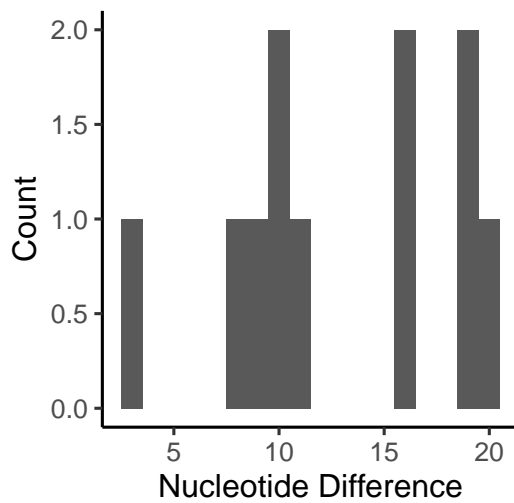


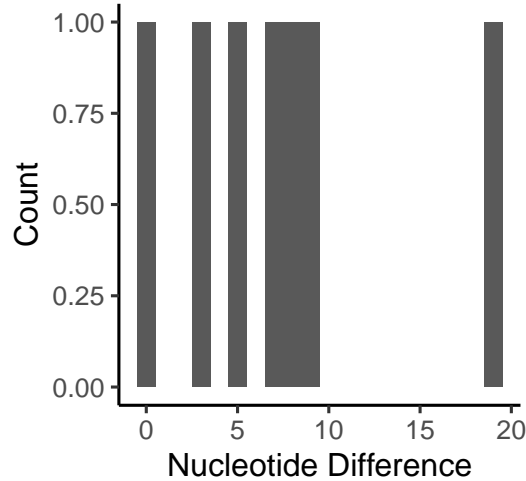
### IGHV1-2\*02

21 sequences assigned  
No exact matches.



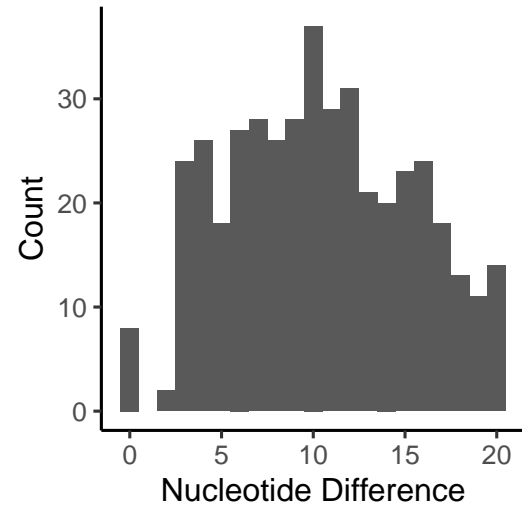
### IGHV1-8\*01

8 sequences assigned  
1 (12.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



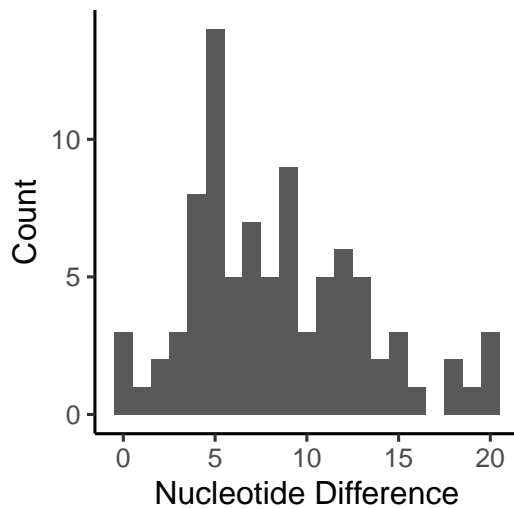
### IGHV1-18\*04

501 sequences assigned  
8 (1.6%) exact matches, in which:  
8 unique CDR3  
2 unique J



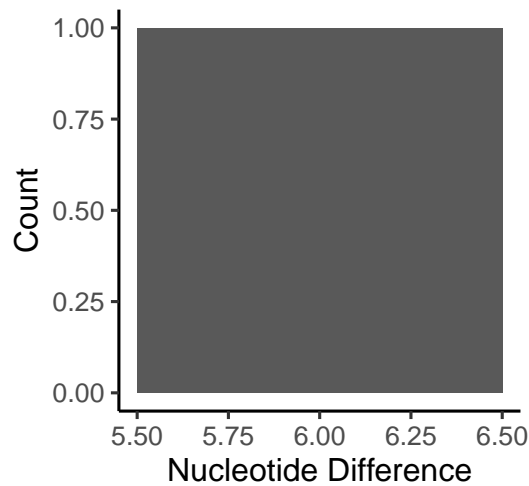
### IGHV1-2\*04

94 sequences assigned  
3 (3.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



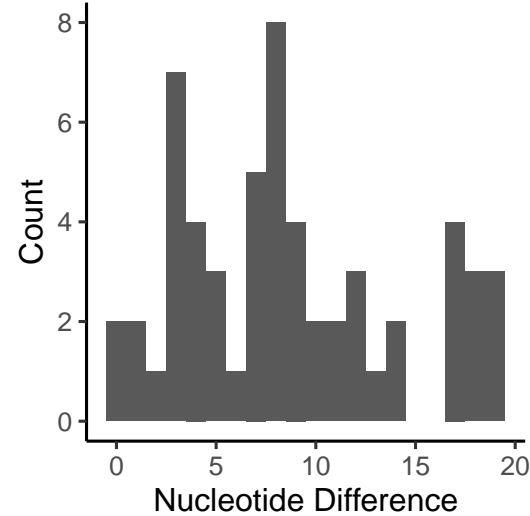
### IGHV1-8\*02

1 sequences assigned  
No exact matches.



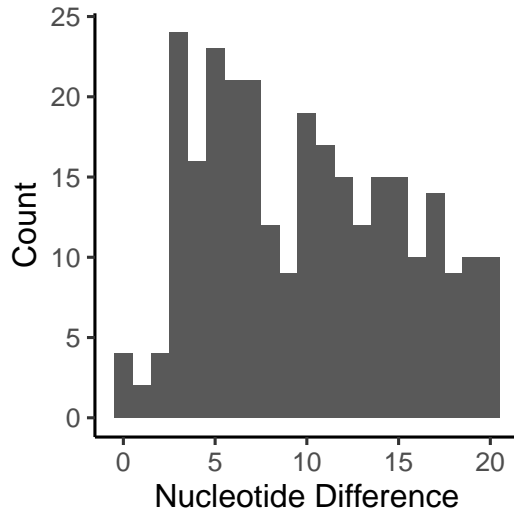
### IGHV1-24\*01

65 sequences assigned  
2 (3.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



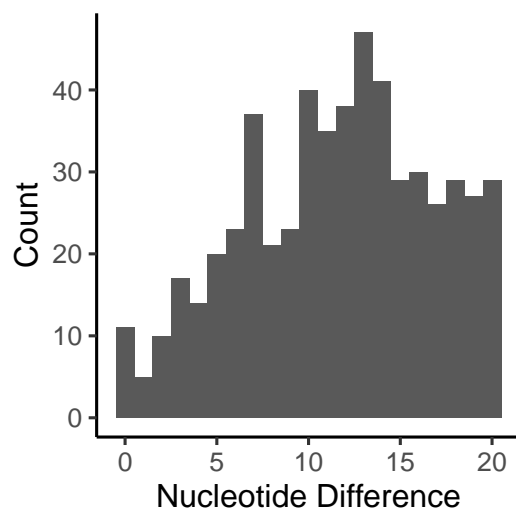
### IGHV1-3\*01\_05

332 sequences assigned  
4 (1.2%) exact matches, in which:  
4 unique CDR3  
2 unique J



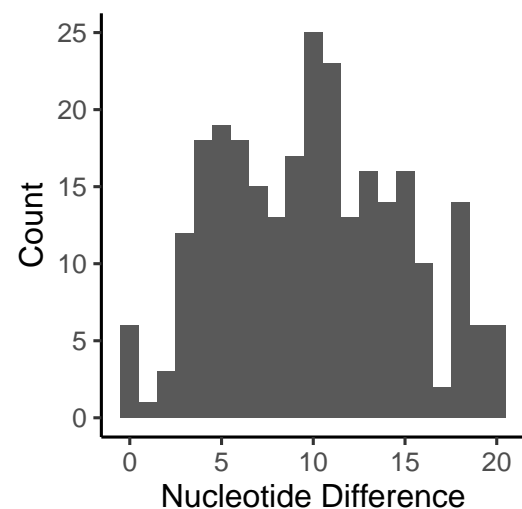
### IGHV1-18\*01

675 sequences assigned  
11 (1.6%) exact matches, in which:  
10 unique CDR3  
3 unique J



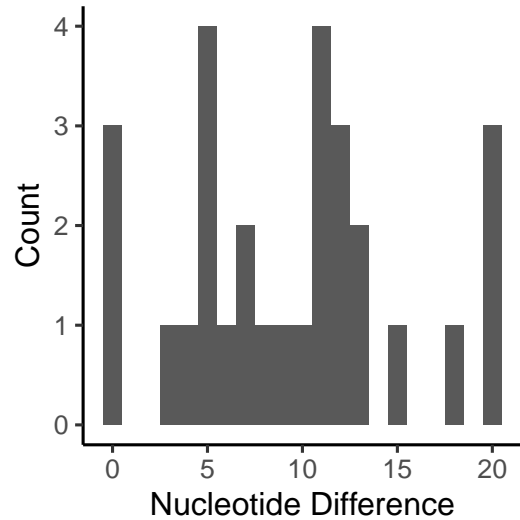
### IGHV1-46\*01

317 sequences assigned  
6 (1.9%) exact matches, in which:  
5 unique CDR3  
2 unique J



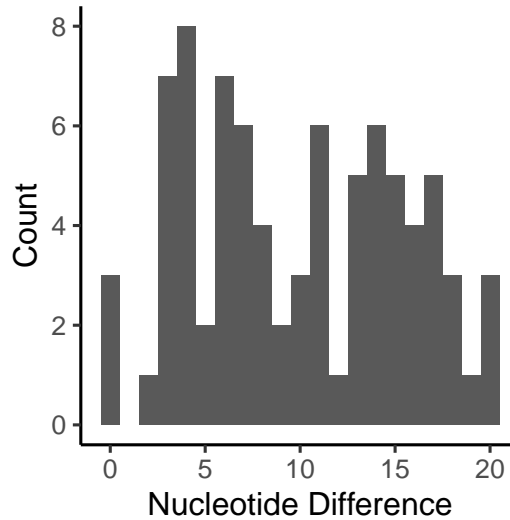
### IGHV1-58\*01\_03

32 sequences assigned  
3 (9.4%) exact matches, in which:  
3 unique CDR3  
3 unique J



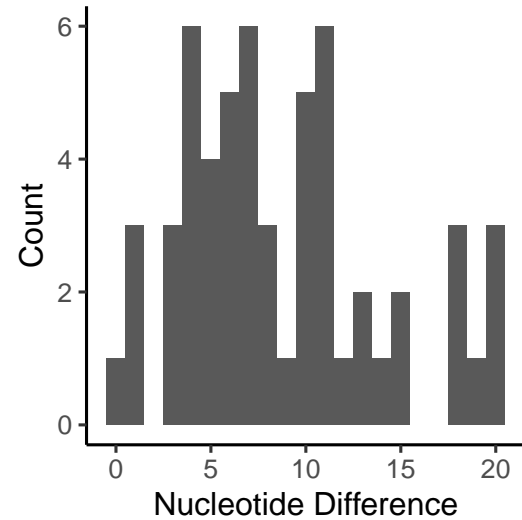
### IGHV1-69\*06\_14

117 sequences assigned  
3 (2.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



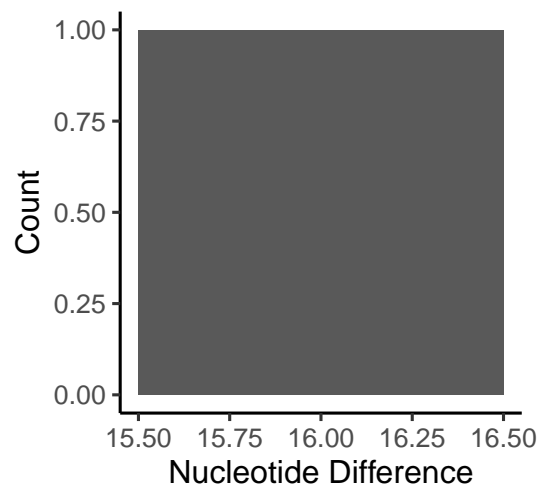
### IGHV2-70\*01

60 sequences assigned  
1 (1.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



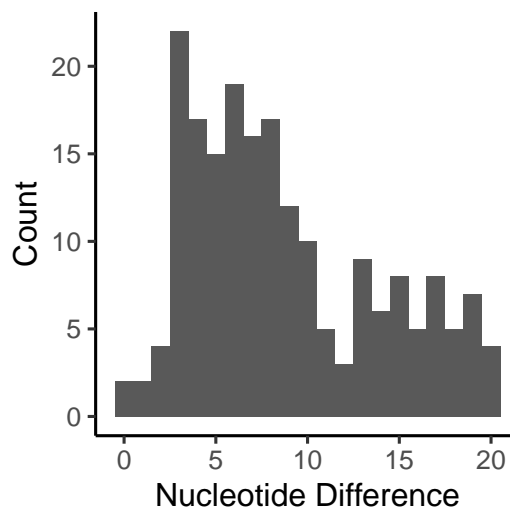
### IGHV1-69-2\*01

3 sequences assigned  
No exact matches.



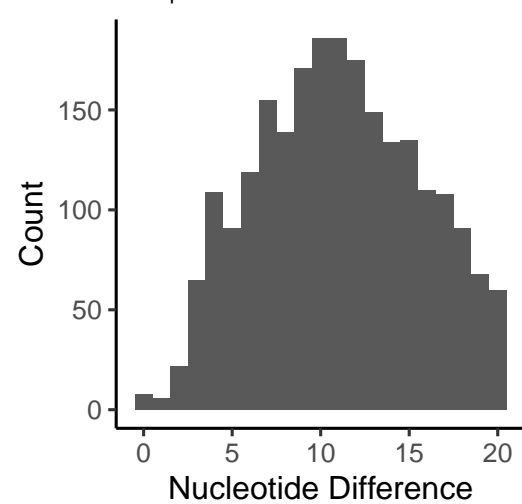
### IGHV2-5\*02

217 sequences assigned  
2 (0.9%) exact matches, in which:  
2 unique CDR3  
1 unique J



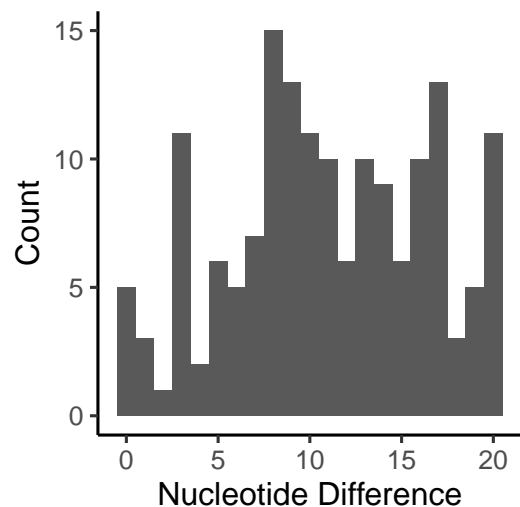
### IGHV3-7\*03

2530 sequences assigned  
8 (0.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



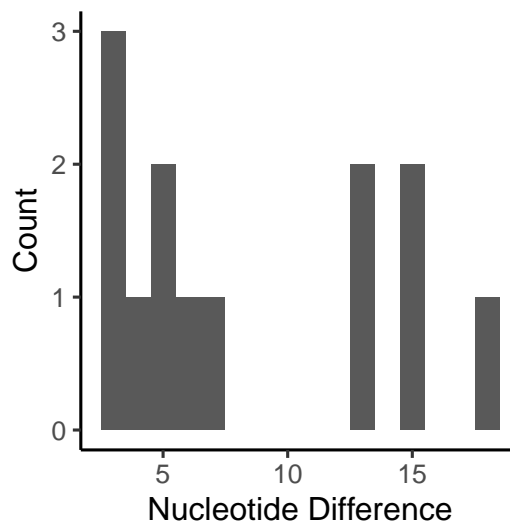
### IGHV1-69\*01\_12\_13

280 sequences assigned  
5 (1.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



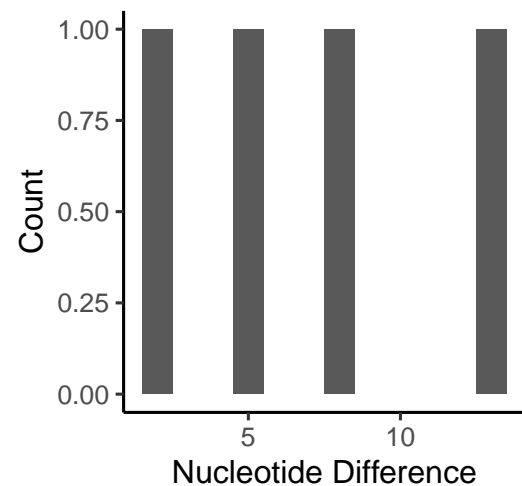
### IGHV2-26\*01

15 sequences assigned  
No exact matches.



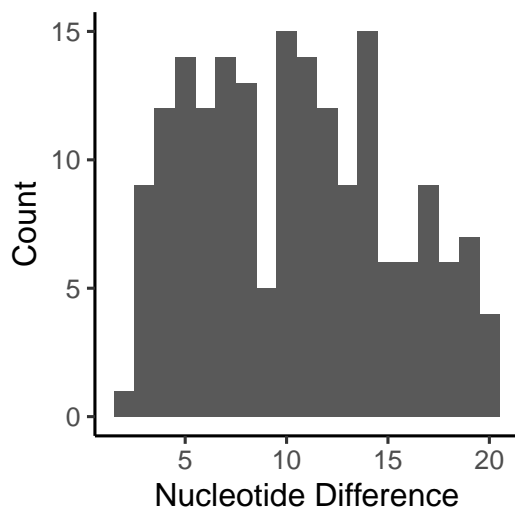
### IGHV3-9\*01

4 sequences assigned  
No exact matches.



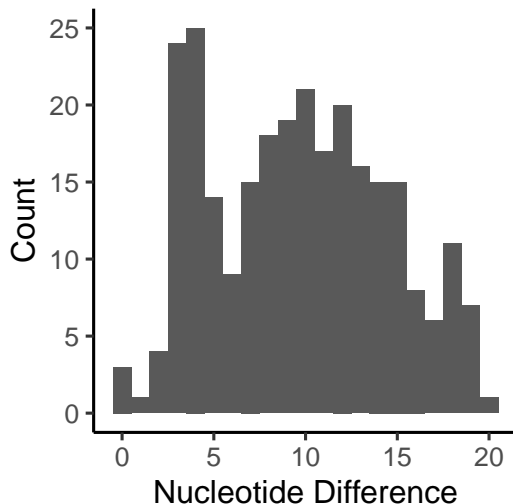
### IGHV3-11\*06

222 sequences assigned  
No exact matches.



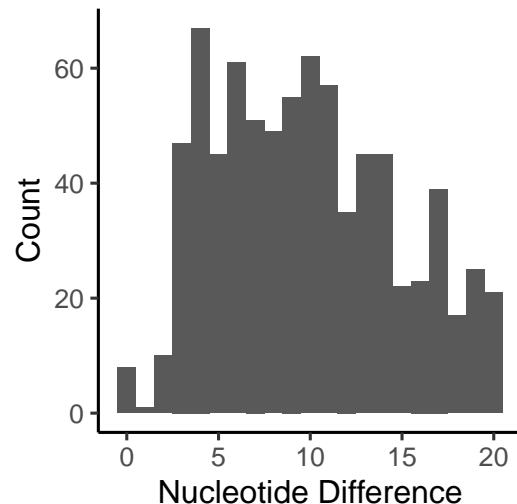
### IGHV3-15\*07

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



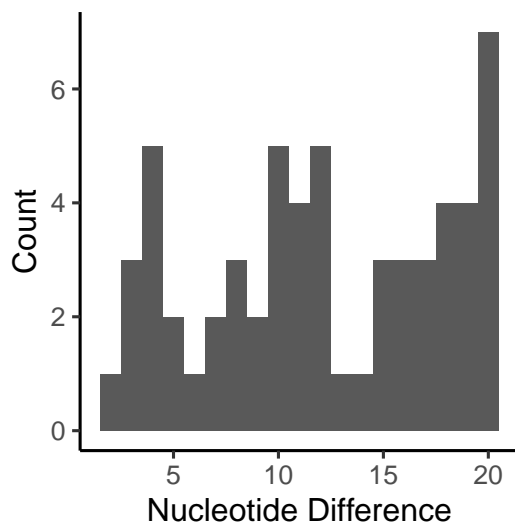
### IGHV3-21\*01\_02

862 sequences assigned  
8 (0.9%) exact matches, in which:  
5 unique CDR3  
2 unique J



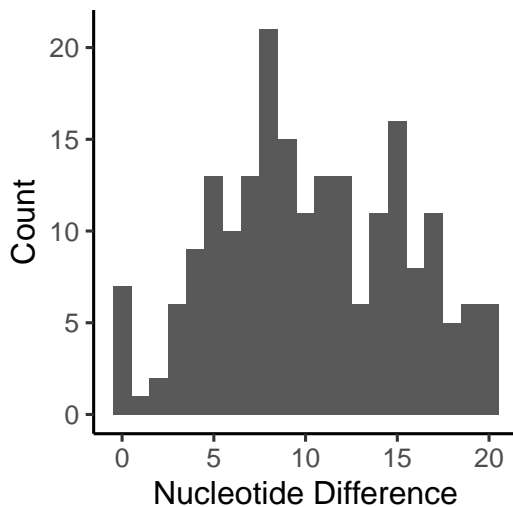
### IGHV3-13\*01

70 sequences assigned  
No exact matches.



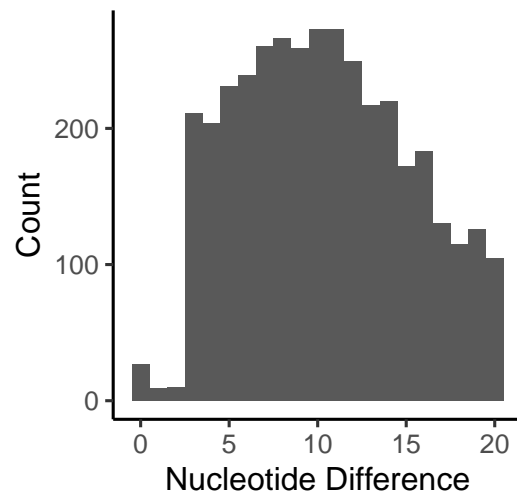
### IGHV3-15\*01\_02

240 sequences assigned  
7 (2.9%) exact matches, in which:  
6 unique CDR3  
4 unique J



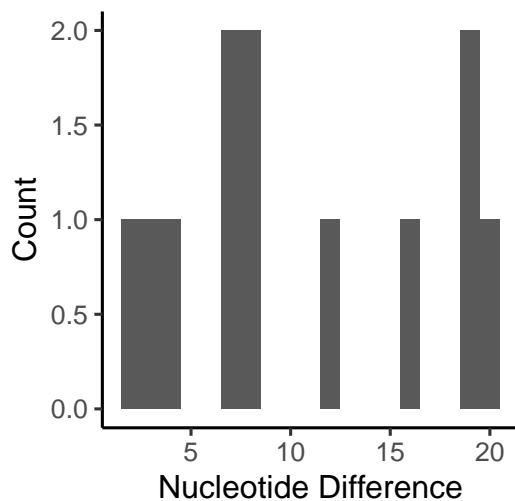
### IGHV3-23\*01\_04

4306 sequences assigned  
27 (0.6%) exact matches, in which:  
18 unique CDR3  
5 unique J



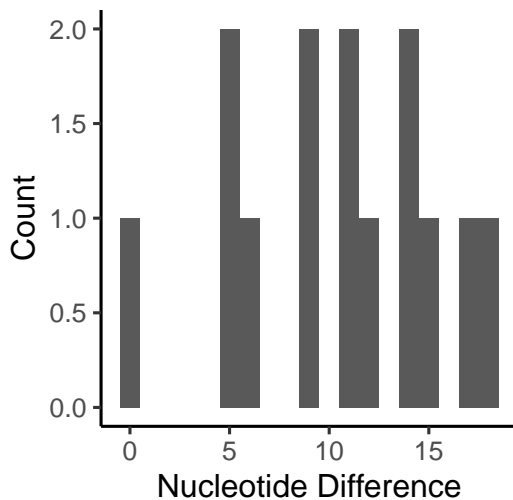
### IGHV3-13\*05

15 sequences assigned  
No exact matches.



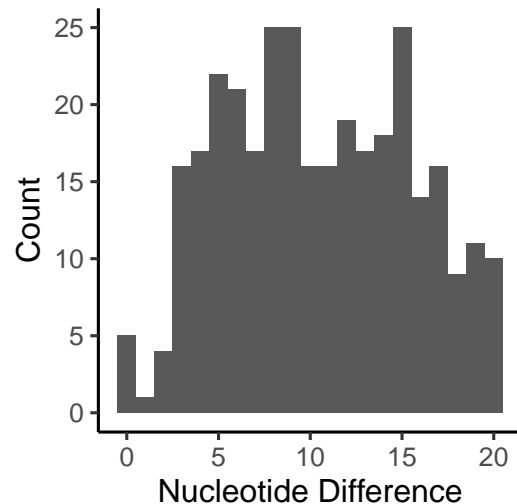
### IGHV3-20\*03\_04

16 sequences assigned  
1 (6.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



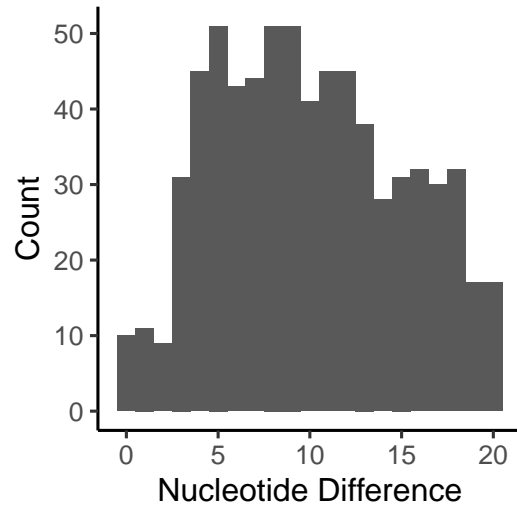
### IGHV3-30-3\*01

366 sequences assigned  
5 (1.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



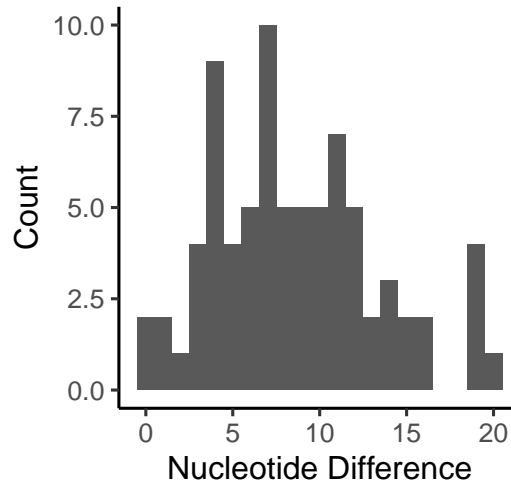
### IGHV3-33\*01

775 sequences assigned  
10 (1.3%) exact matches, in which:  
8 unique CDR3  
3 unique J



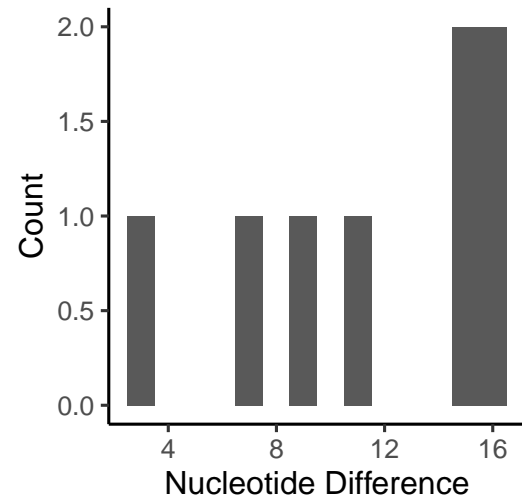
### IGHV3-49\*03\_05

84 sequences assigned  
2 (2.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



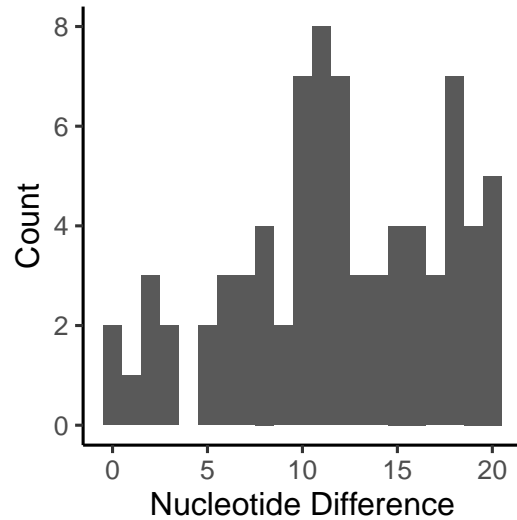
### IGHV3-64\*02\_07

8 sequences assigned  
No exact matches.



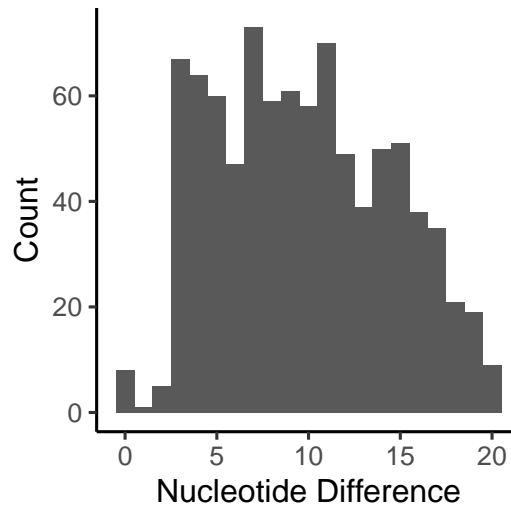
### IGHV3-43\*01

88 sequences assigned  
2 (2.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



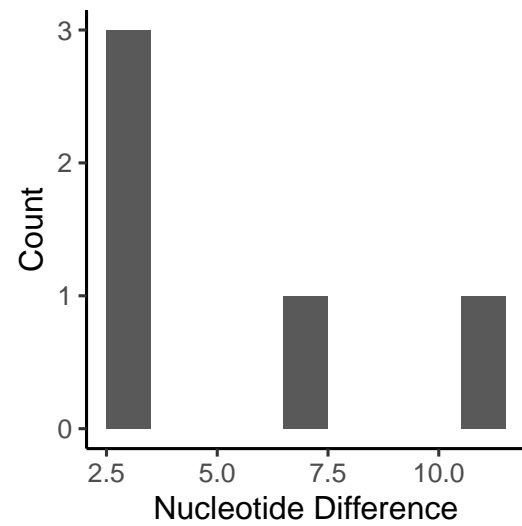
### IGHV3-53\*01\_02

970 sequences assigned  
8 (0.8%) exact matches, in which:  
7 unique CDR3  
4 unique J



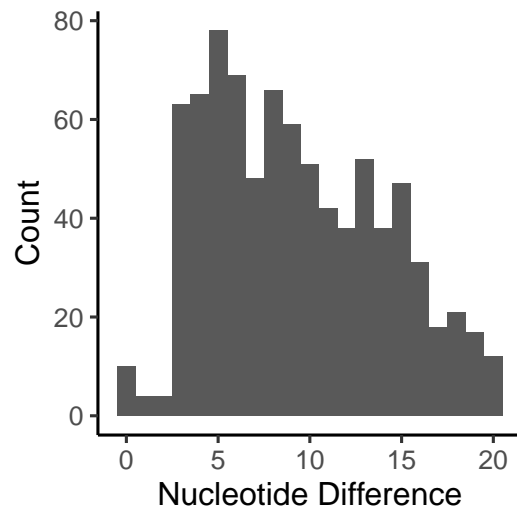
### IGHV3-66\*03

5 sequences assigned  
No exact matches.



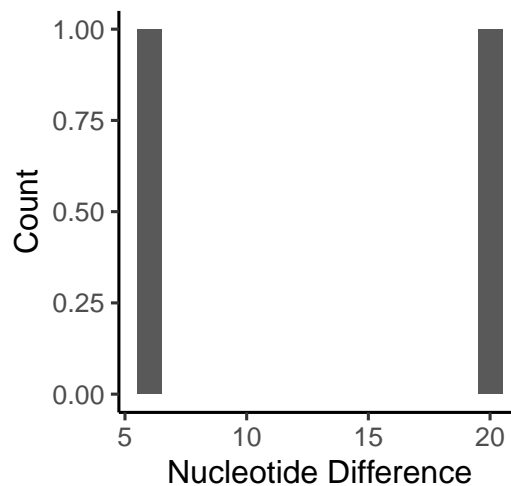
### IGHV3-48\*02

918 sequences assigned  
10 (1.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



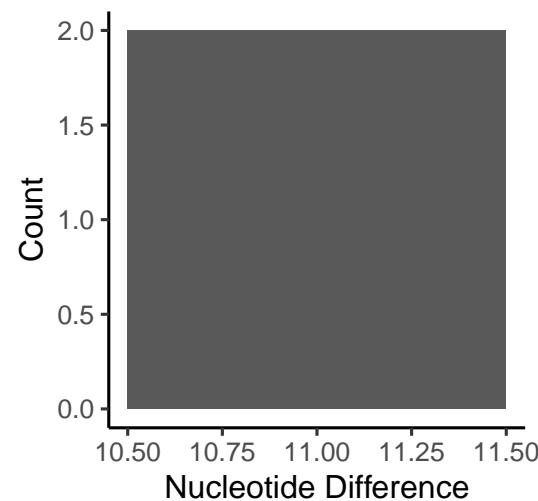
### IGHV3-64\*04

2 sequences assigned  
No exact matches.



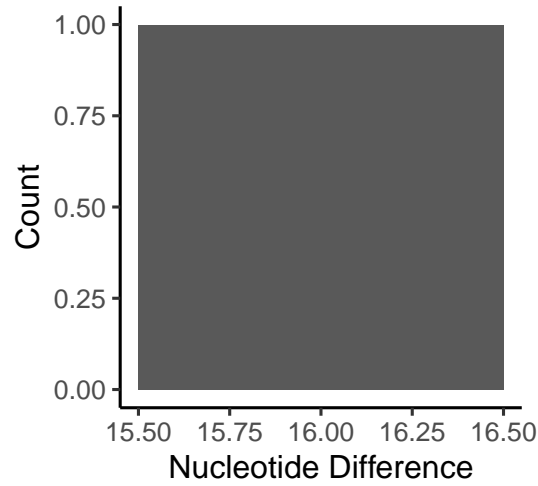
### IGHV3-66\*04

2 sequences assigned  
No exact matches.



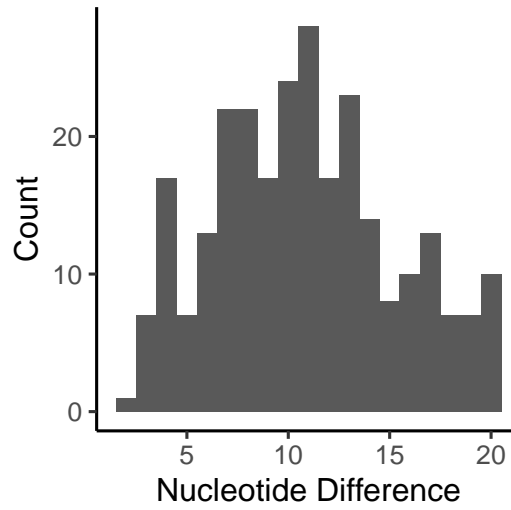
### IGHV3-69-1\*02

1 sequences assigned  
No exact matches.



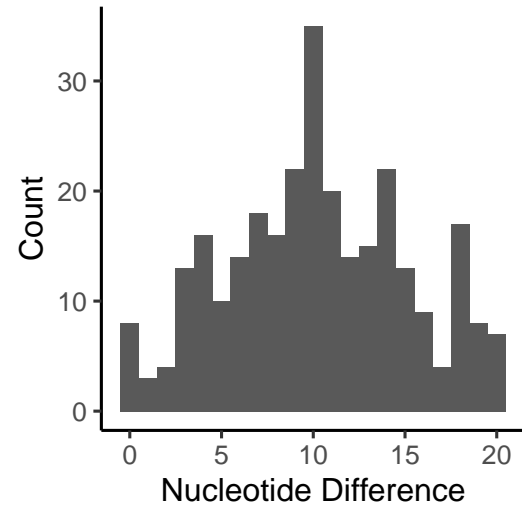
### IGHV3-74\*03

306 sequences assigned  
No exact matches.



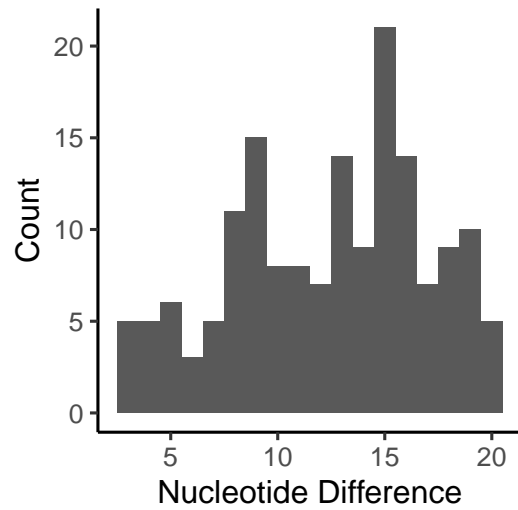
### IGHV4-4\*02\_03

354 sequences assigned  
8 (2.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



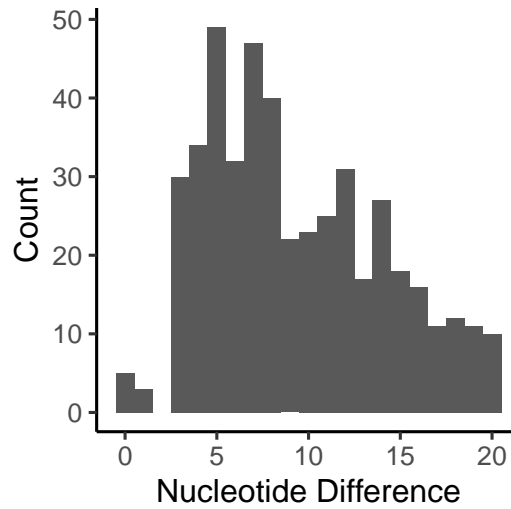
### IGHV3-72\*01

171 sequences assigned  
No exact matches.



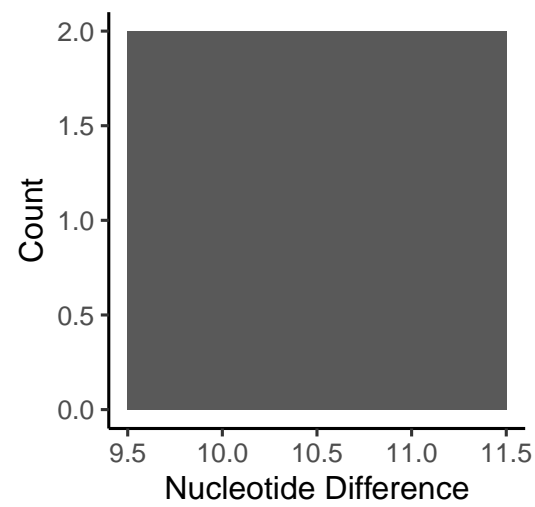
### IGHV3-74\*01\_02

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



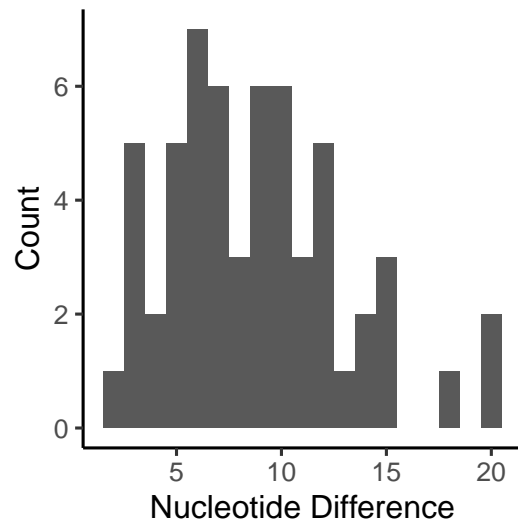
### IGHV4-28\*03

4 sequences assigned  
No exact matches.



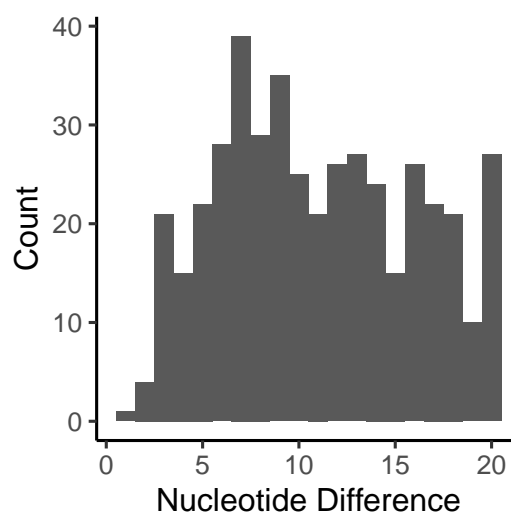
### IGHV3-73\*01\_02

61 sequences assigned  
No exact matches.



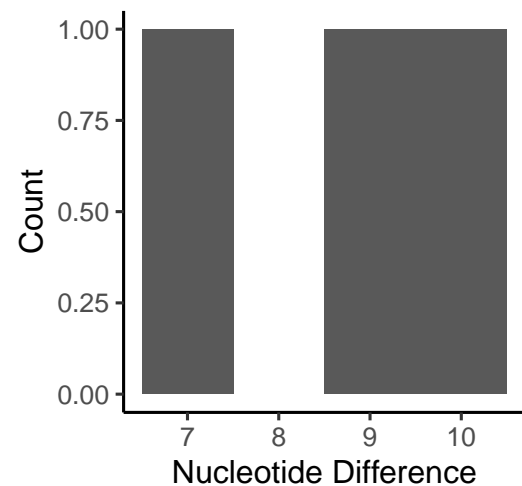
### IGHV3-64D\*06

510 sequences assigned  
No exact matches.



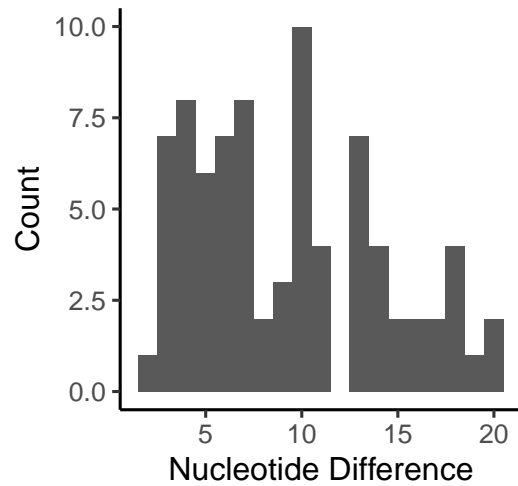
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



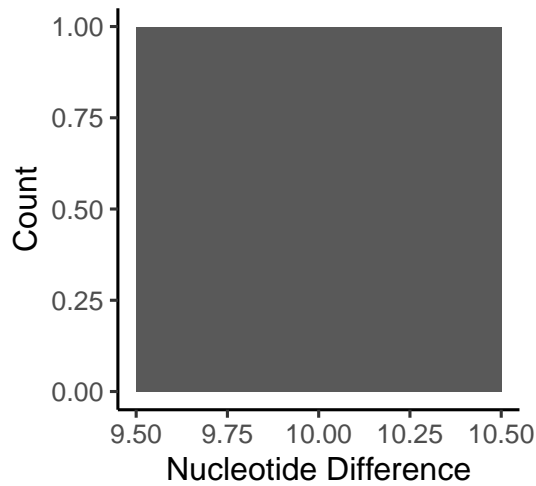
### IGHV4-30-2\*01

90 sequences assigned  
No exact matches.



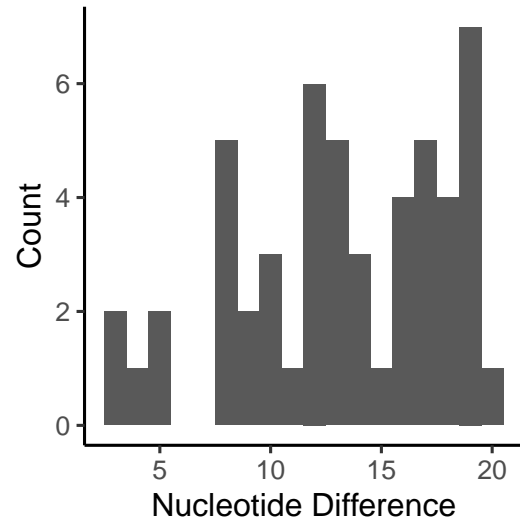
### IGHV4-38-2\*01

1 sequences assigned  
No exact matches.



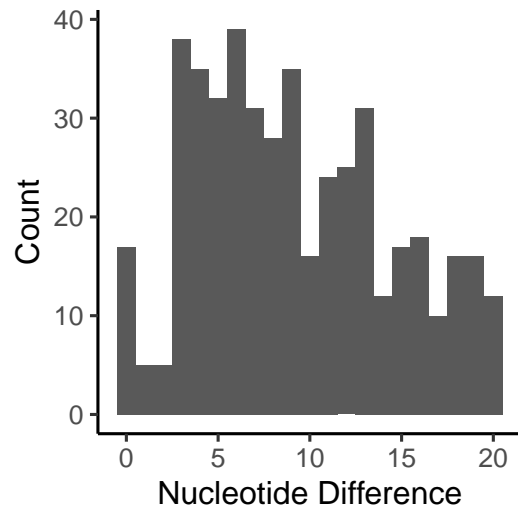
### IGHV4-59\*02

64 sequences assigned  
No exact matches.



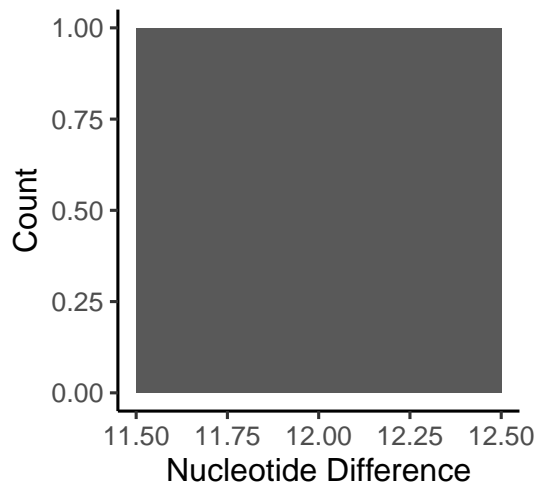
### IGHV4-31\*02

558 sequences assigned  
17 (3%) exact matches, in which:  
16 unique CDR3  
5 unique J



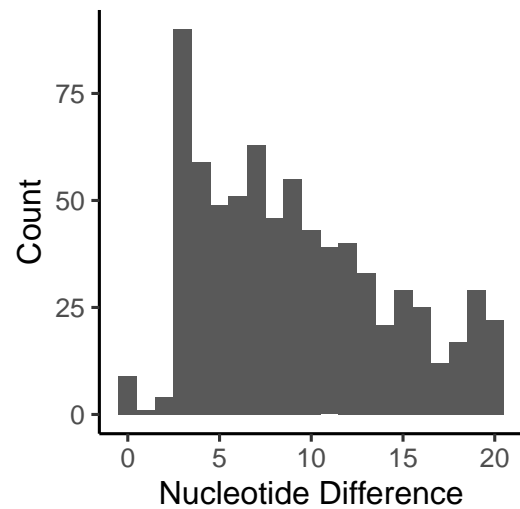
### IGHV4-38-2\*02

3 sequences assigned  
No exact matches.



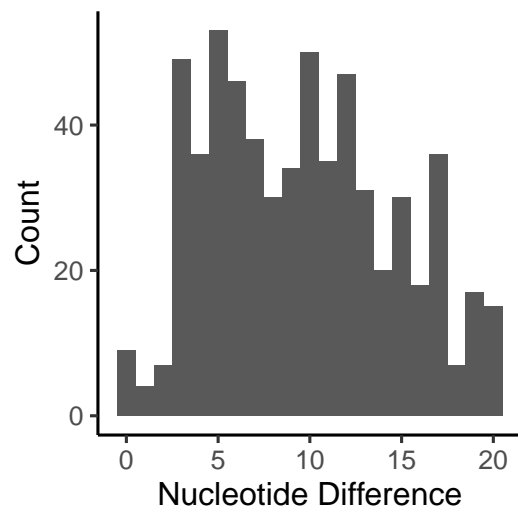
### IGHV4-59\*01\_07

840 sequences assigned  
9 (1.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



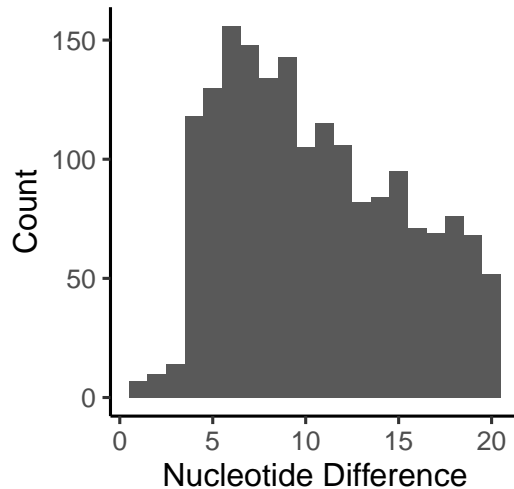
### IGHV4-34\*01\_02

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



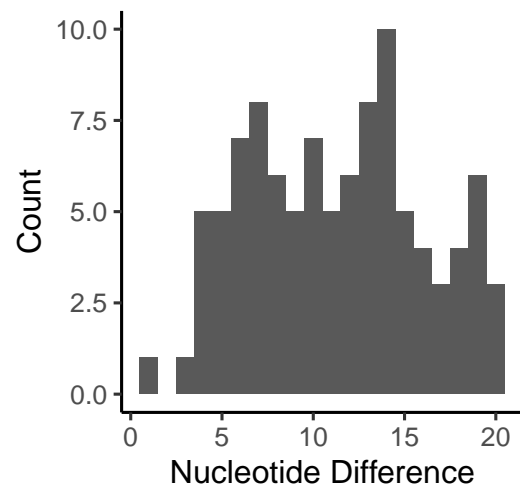
### IGHV4-39\*02

2072 sequences assigned  
No exact matches.



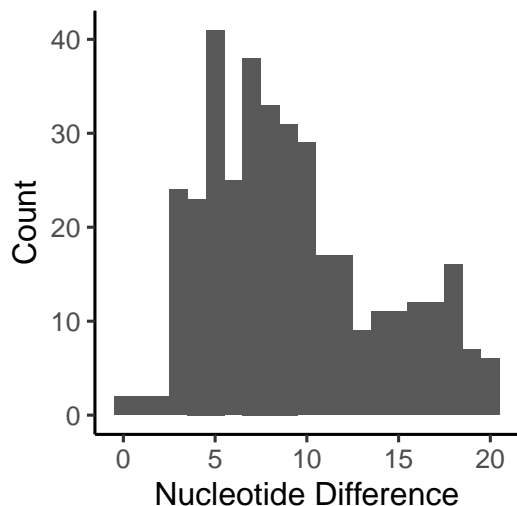
### IGHV4-59\*11

127 sequences assigned  
No exact matches.



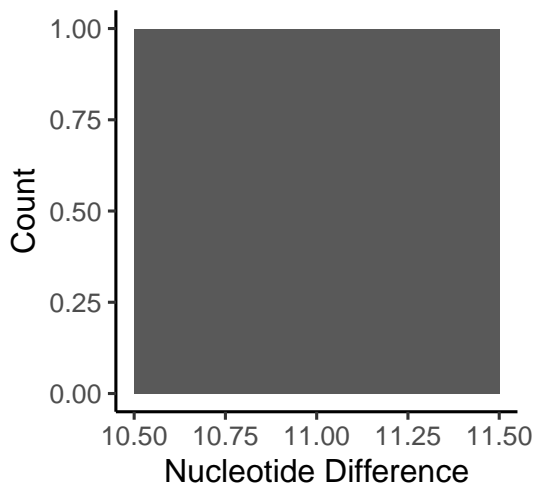
### IGHV4-61\*01

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



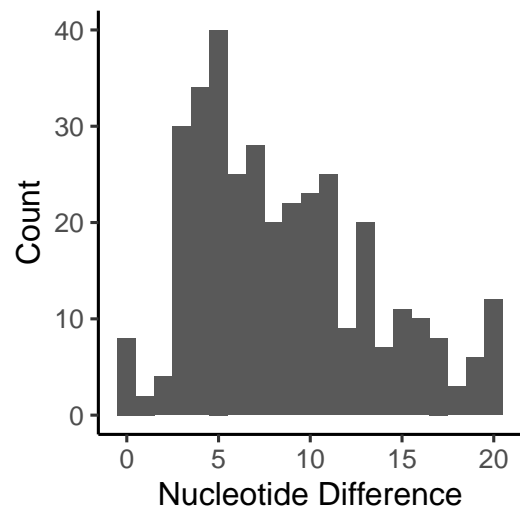
### IGHV4/OR15-8\*02

10 sequences assigned  
No exact matches.



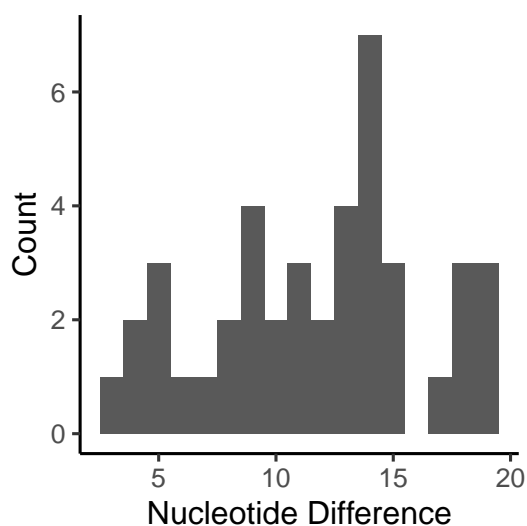
### IGHV5-51\*01\_03

378 sequences assigned  
8 (2.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



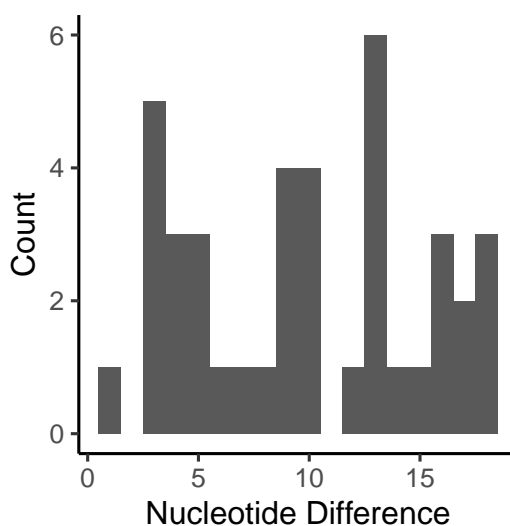
### IGHV4-61\*08

52 sequences assigned  
No exact matches.



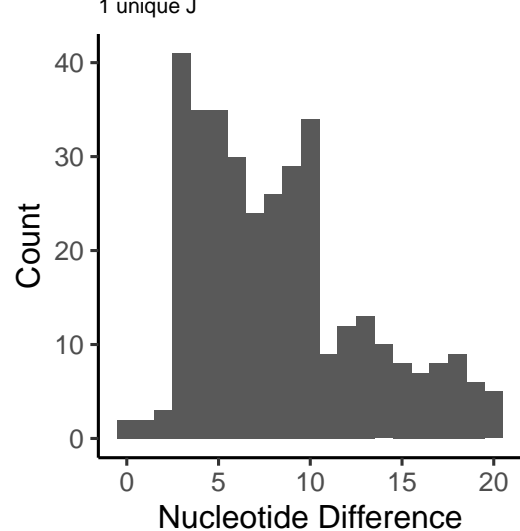
### IGHV5-10-1\*01\_03

47 sequences assigned  
No exact matches.



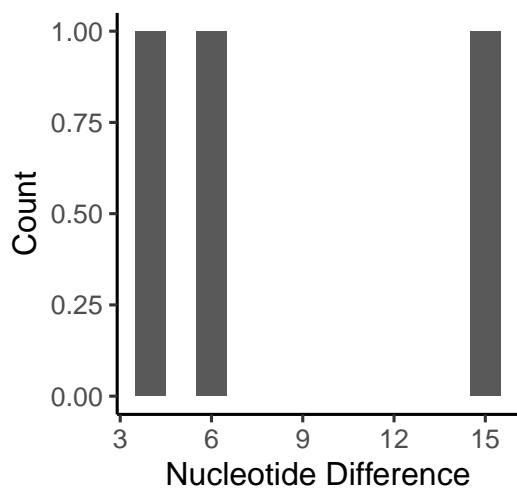
### IGHV6-1\*01\_02

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



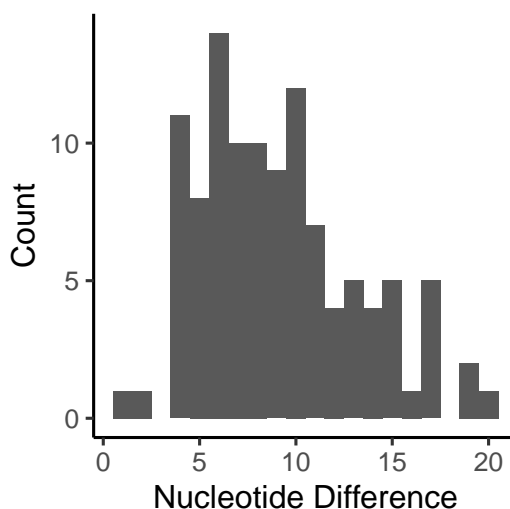
### IGHV4/OR15-8\*01

4 sequences assigned  
No exact matches.



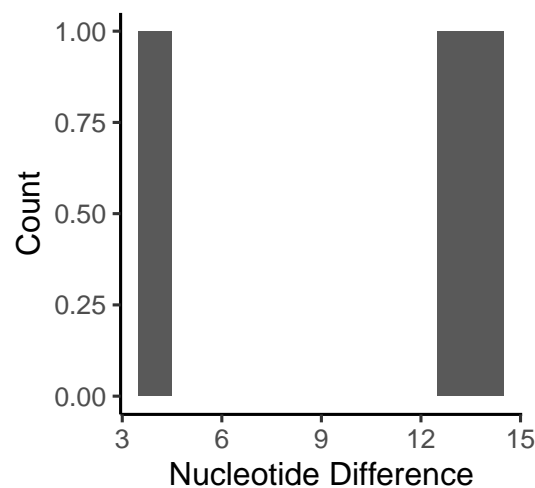
### IGHV5-51\*07

119 sequences assigned  
No exact matches.



### IGHV7-4-1\*01

3 sequences assigned  
No exact matches.







[illegible]