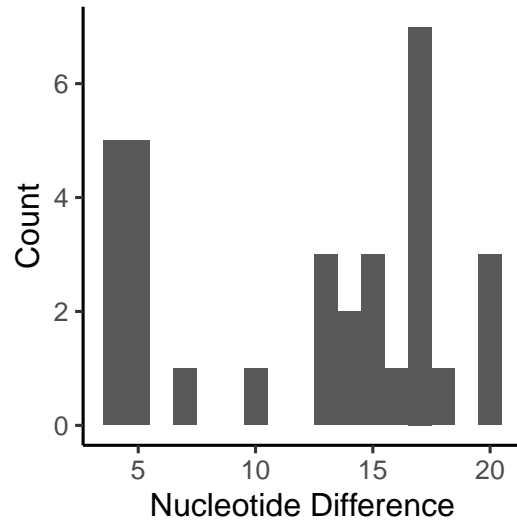


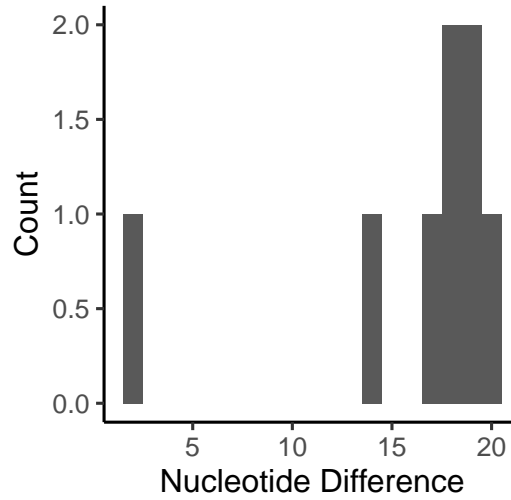
### IGHV1-2\*02

56 sequences assigned  
No exact matches.



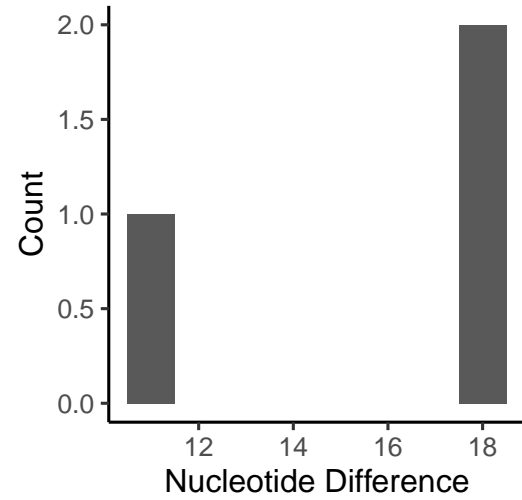
### IGHV1-3\*01

13 sequences assigned  
No exact matches.



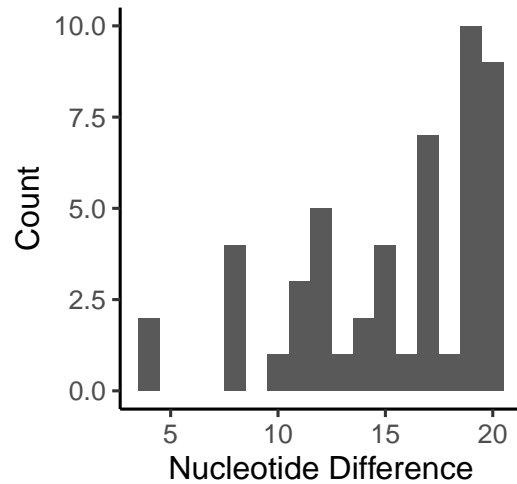
### IGHV1-8\*02

3 sequences assigned  
No exact matches.



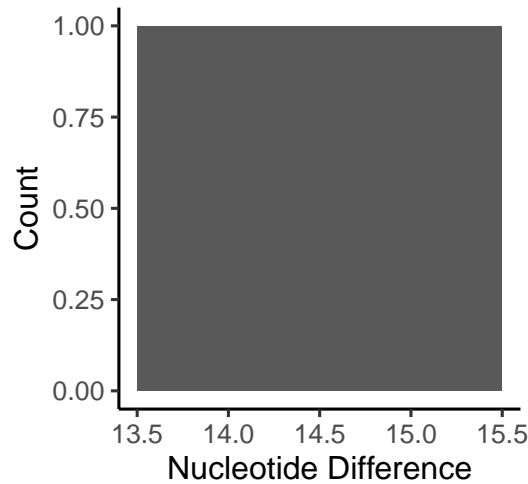
### IGHV1-2\*04

61 sequences assigned  
No exact matches.



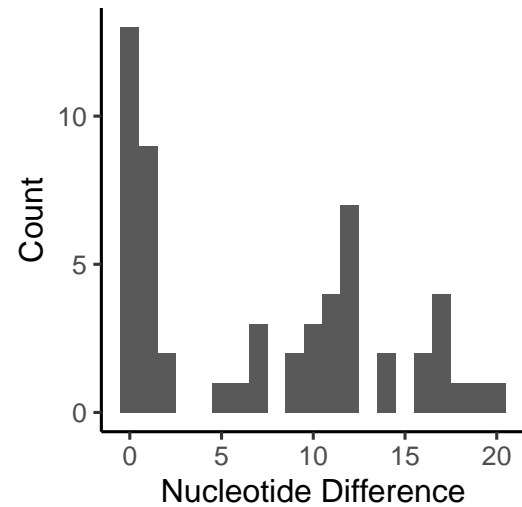
### IGHV1-3\*04

4 sequences assigned  
No exact matches.



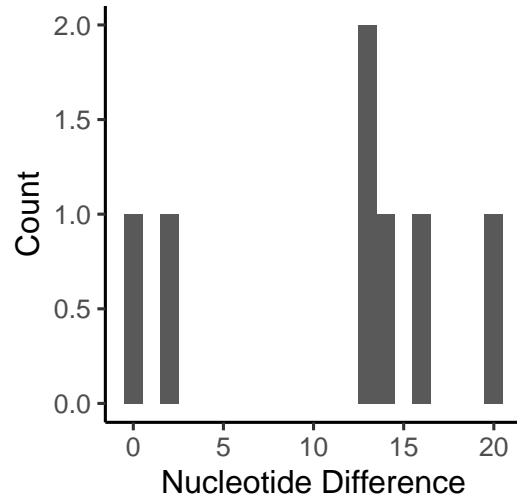
### IGHV1-18\*01

78 sequences assigned  
13 (16.7%) exact matches, in which:  
7 unique CDR3  
3 unique J



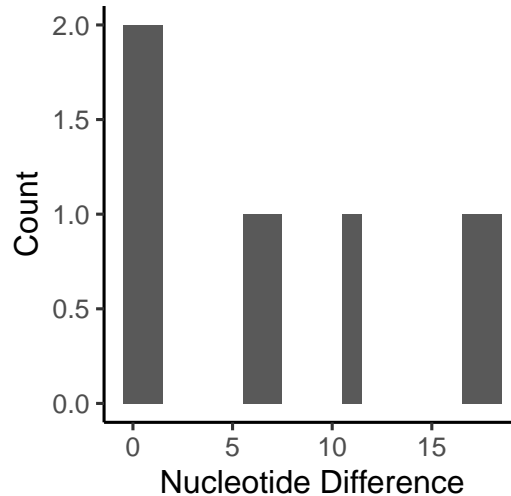
### IGHV1-2\*06

17 sequences assigned  
1 (5.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



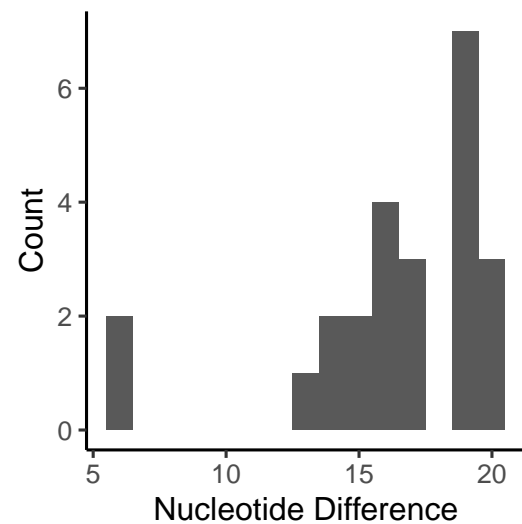
### IGHV1-8\*01

37 sequences assigned  
2 (5.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



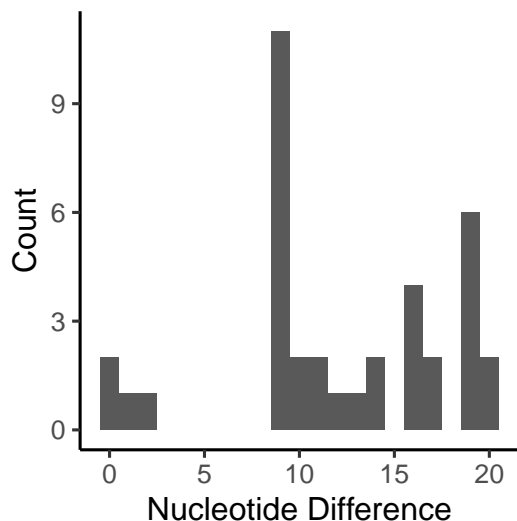
### IGHV1-18\*04

33 sequences assigned  
No exact matches.



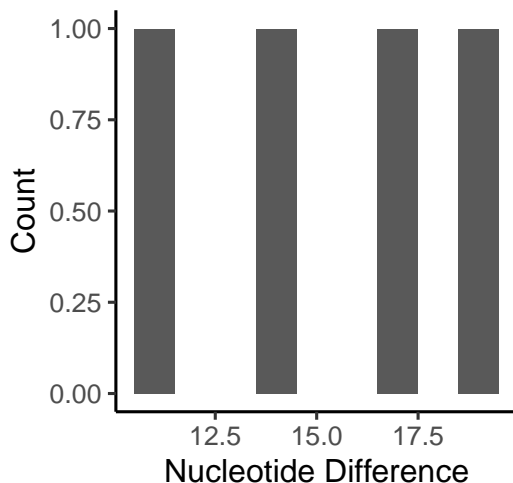
### IGHV1–24\*01

41 sequences assigned  
2 (4.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



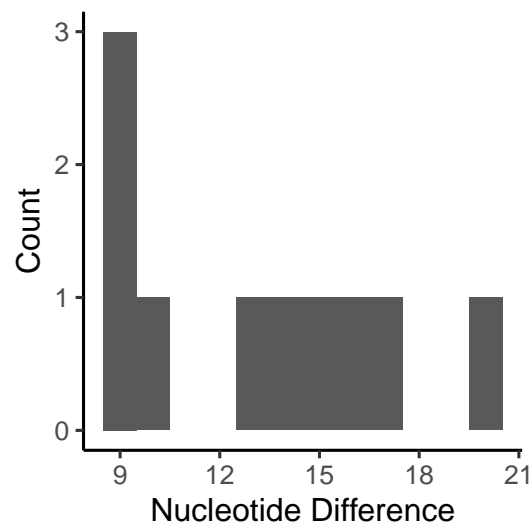
### IGHV1–46\*03

8 sequences assigned  
No exact matches.



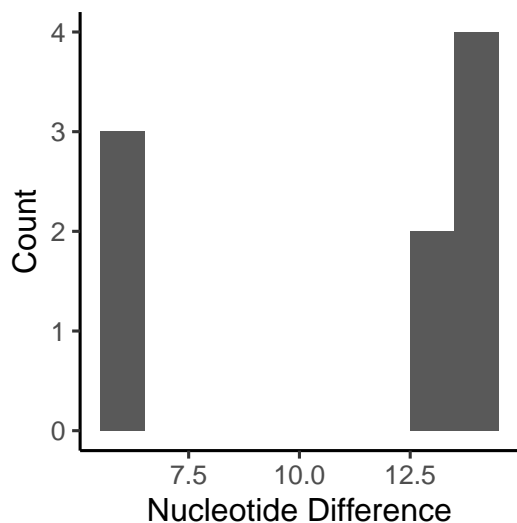
### IGHV2–5\*02

16 sequences assigned  
No exact matches.



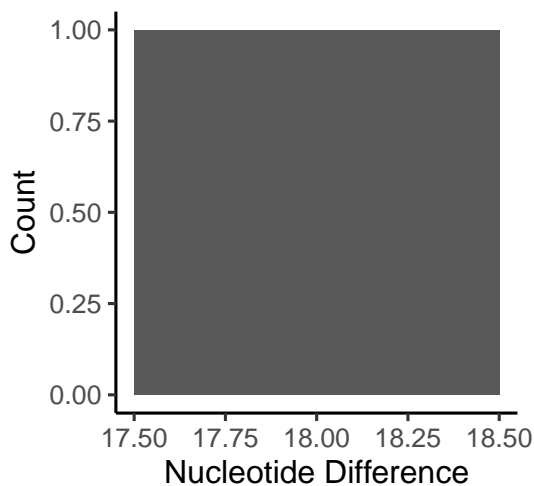
### IGHV1–45\*02

10 sequences assigned  
No exact matches.



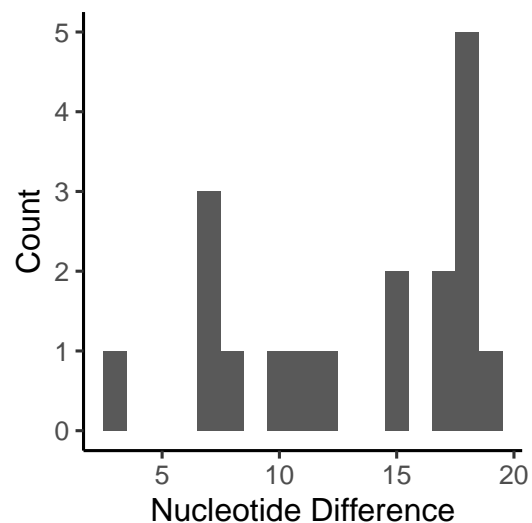
### IGHV1–58\*01

1 sequences assigned  
No exact matches.



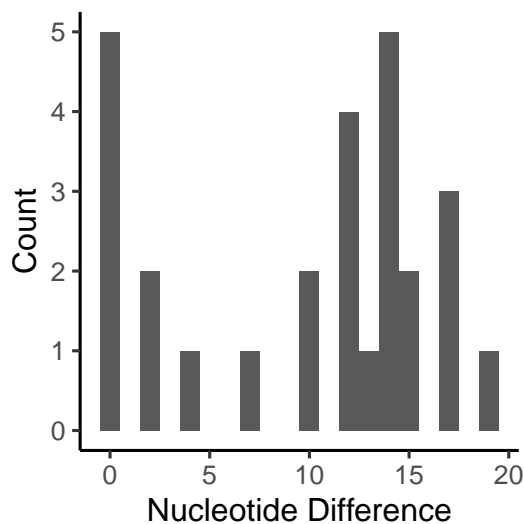
### IGHV2–26\*01

20 sequences assigned  
No exact matches.



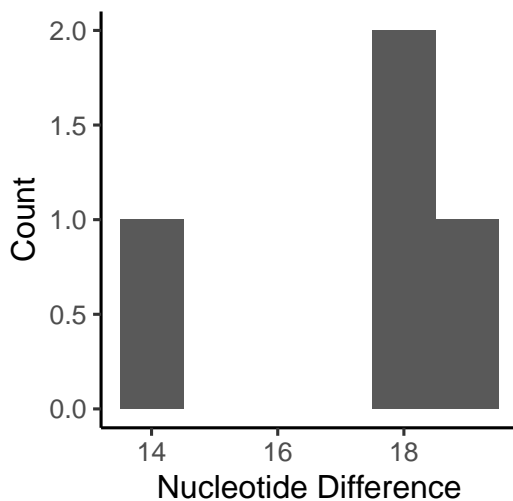
### IGHV1–46\*01

51 sequences assigned  
5 (9.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



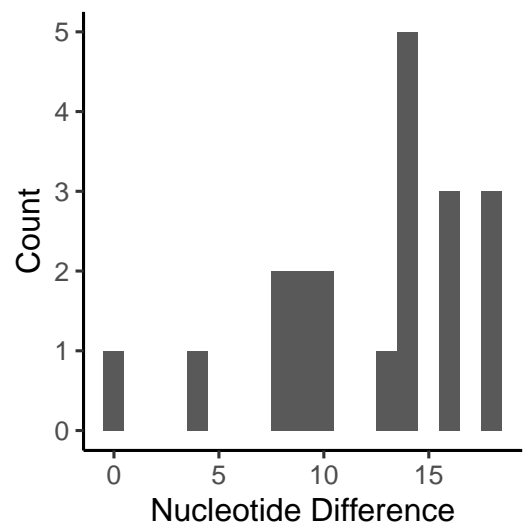
### IGHV2–5\*01

5 sequences assigned  
No exact matches.



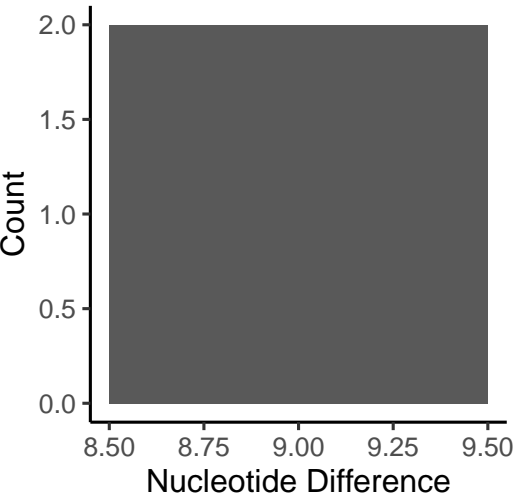
### IGHV2–70\*01

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



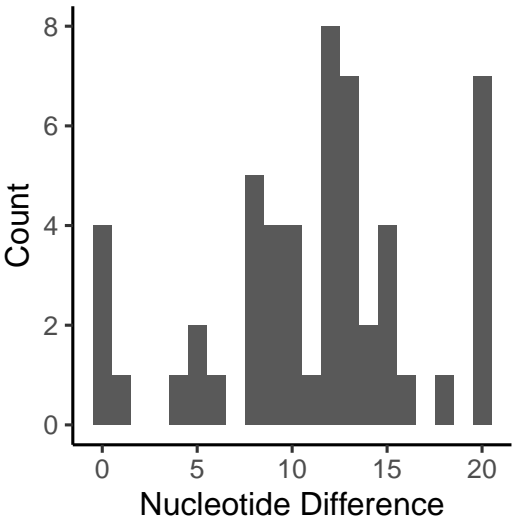
IGHV2-70\*13

6 sequences assigned  
No exact matches.



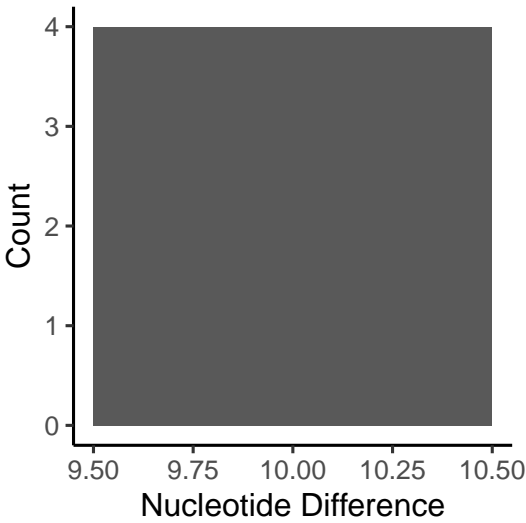
IGHV3-9\*01

64 sequences assigned  
4 (6.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



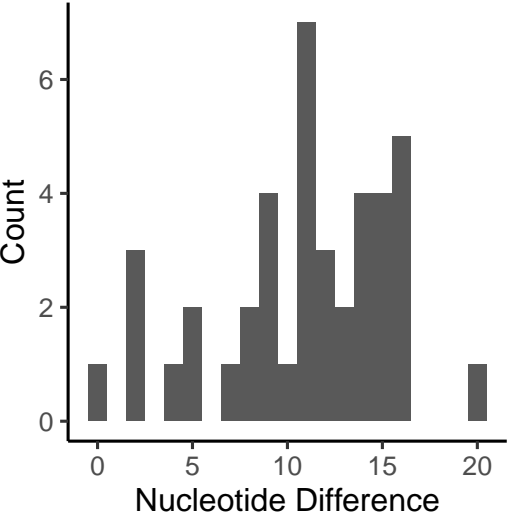
IGHV3-13\*05

4 sequences assigned  
No exact matches.



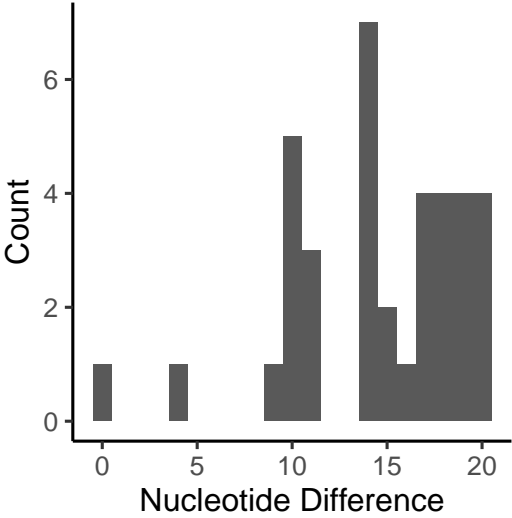
IGHV3-7\*01

46 sequences assigned  
1 (2.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



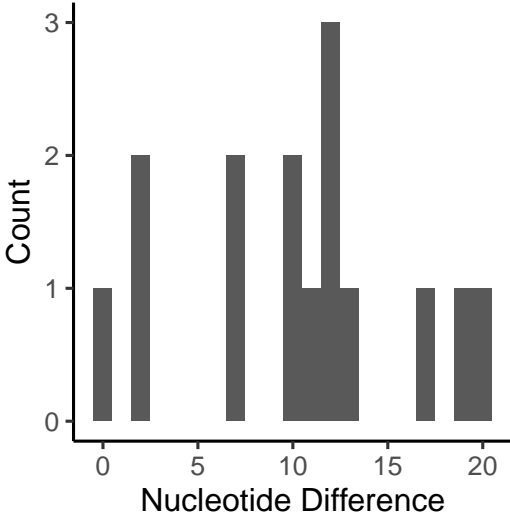
IGHV3-11\*01

48 sequences assigned  
1 (2.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



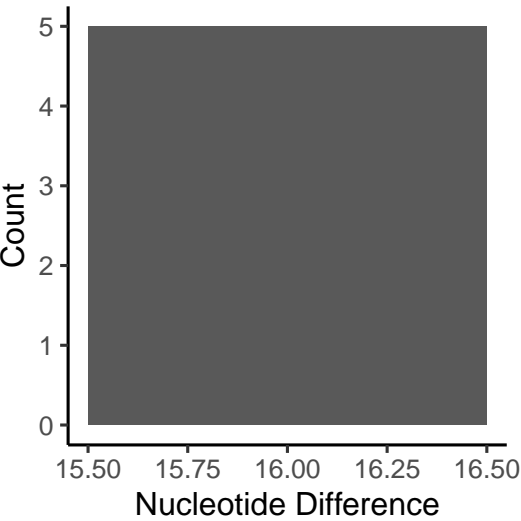
IGHV3-15\*01

29 sequences assigned  
1 (3.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



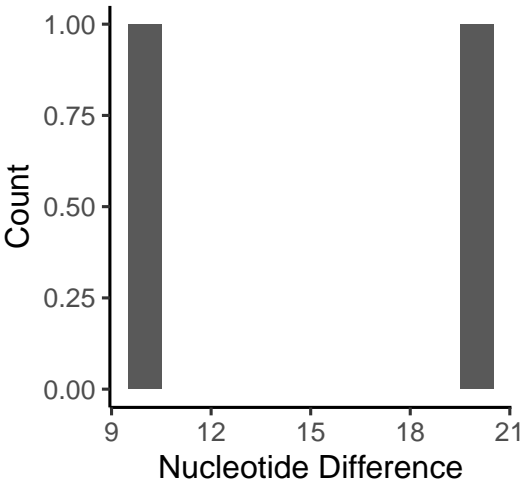
IGHV3-7\*03

8 sequences assigned  
No exact matches.



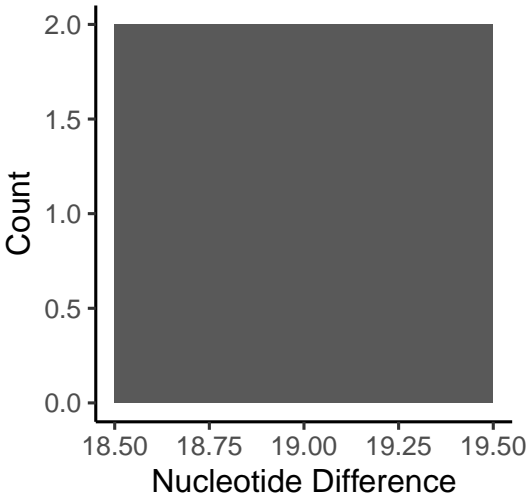
IGHV3-13\*01

2 sequences assigned  
No exact matches.



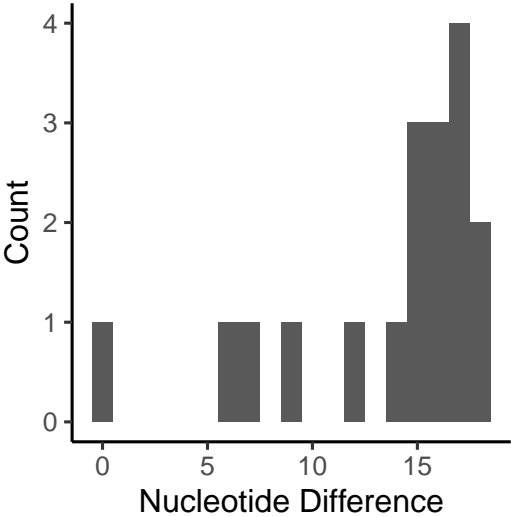
IGHV3-20\*01

2 sequences assigned  
No exact matches.



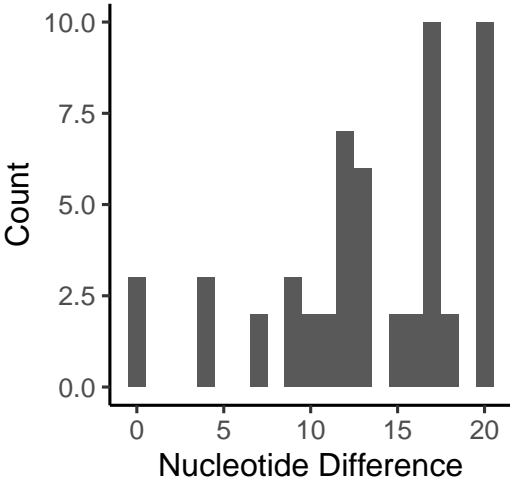
IGHV3-30-3\*01

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



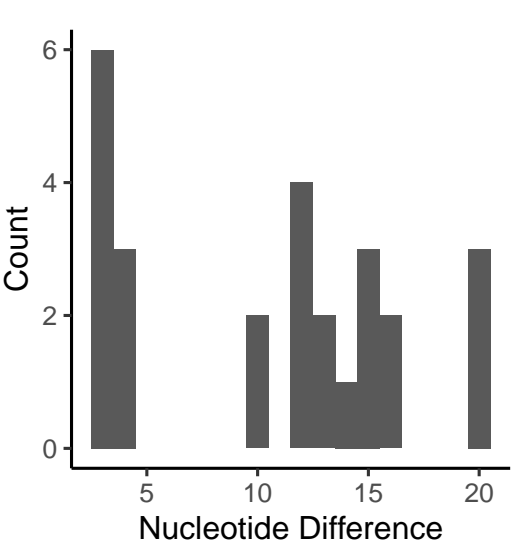
IGHV3-33\*01

85 sequences assigned  
3 (3.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



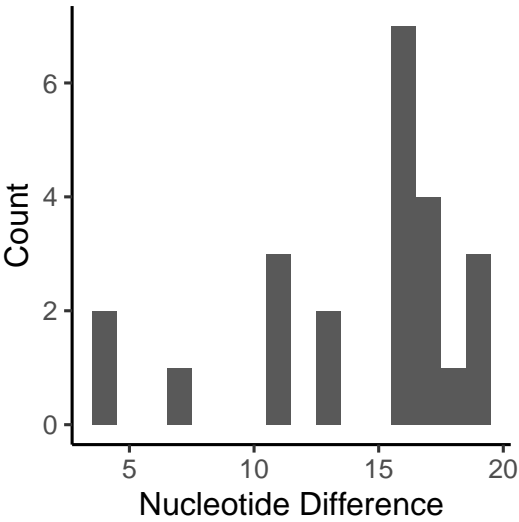
IGHV3-48\*02

65 sequences assigned  
No exact matches.



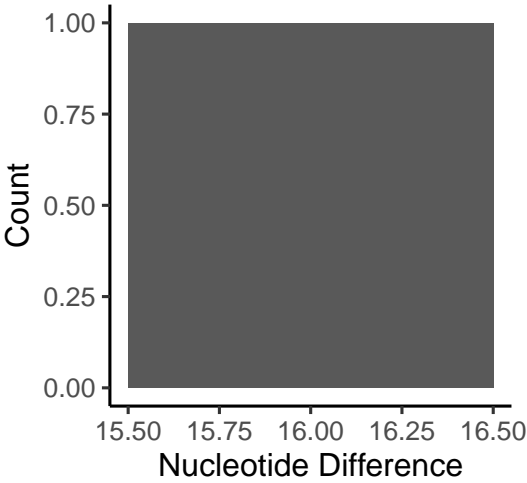
IGHV3-30\*01

24 sequences assigned  
No exact matches.



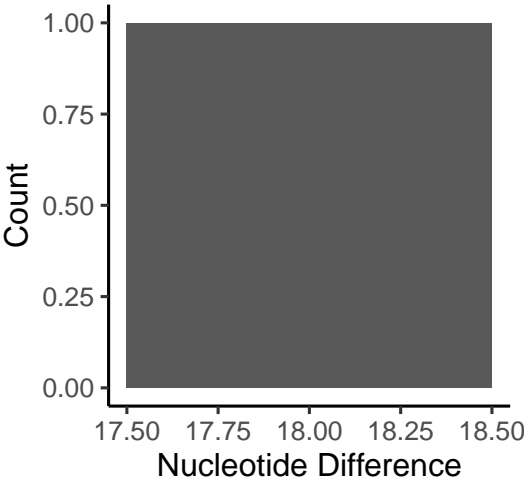
IGHV3-43\*01

3 sequences assigned  
No exact matches.



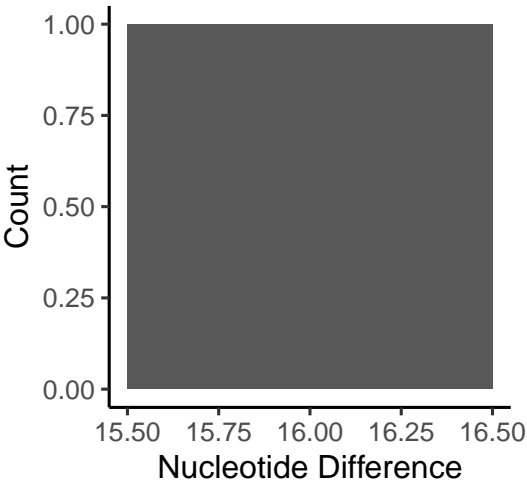
IGHV3-49\*03

1 sequences assigned  
No exact matches.



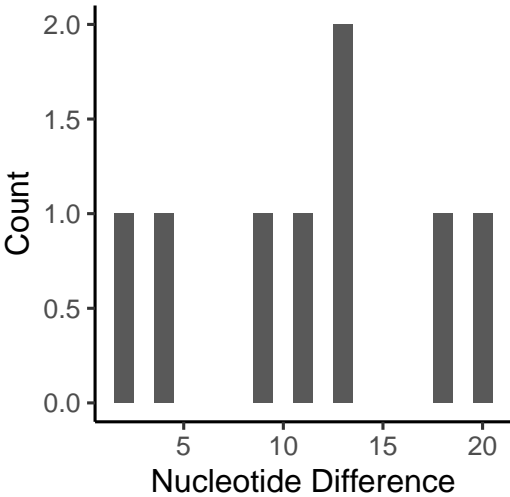
IGHV3-30\*04

3 sequences assigned  
No exact matches.



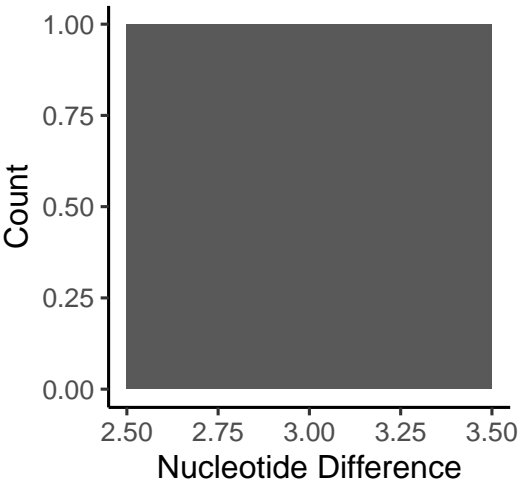
IGHV3-48\*01

8 sequences assigned  
No exact matches.



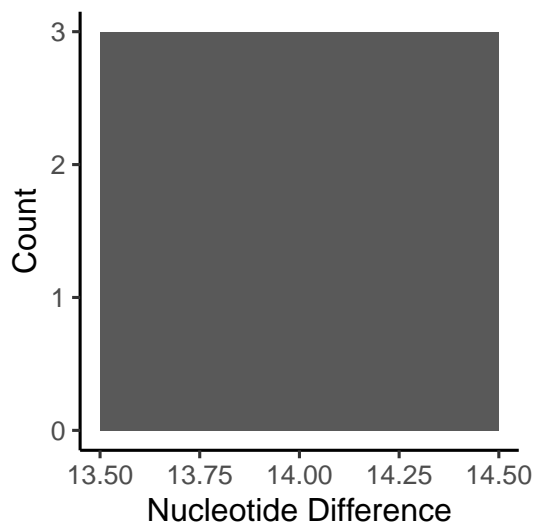
IGHV3-49\*04

1 sequences assigned  
No exact matches.



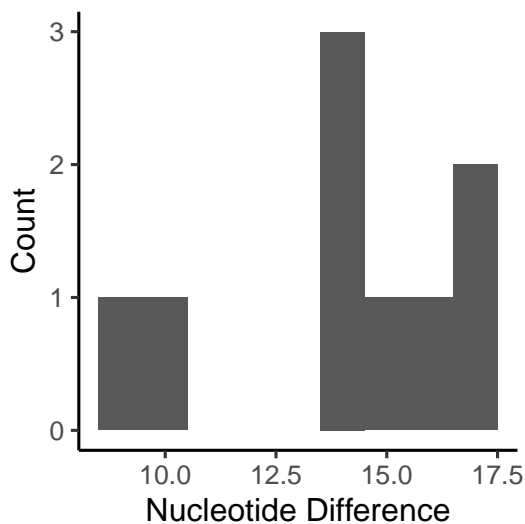
### IGHV3-49\*05

3 sequences assigned  
No exact matches.



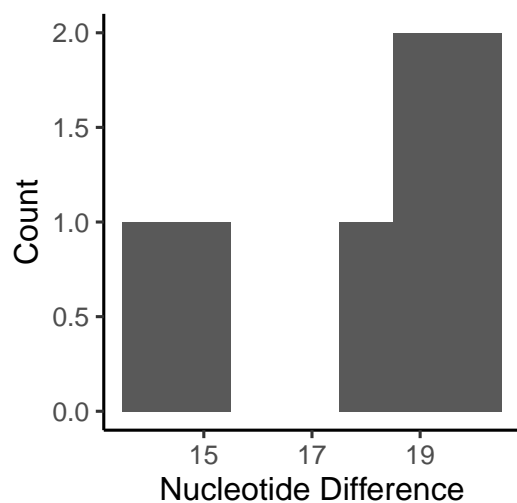
### IGHV3-72\*01

12 sequences assigned  
No exact matches.



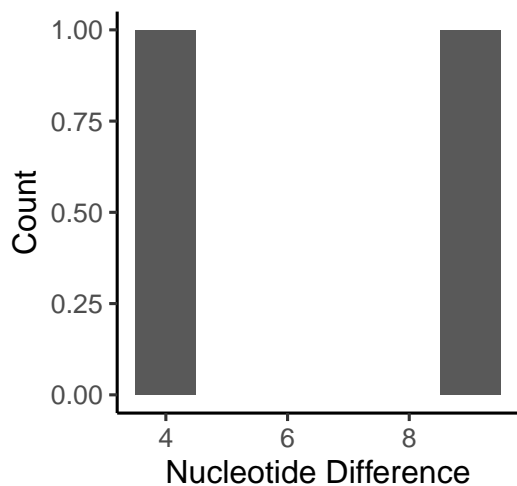
### IGHV3-74\*03

7 sequences assigned  
No exact matches.



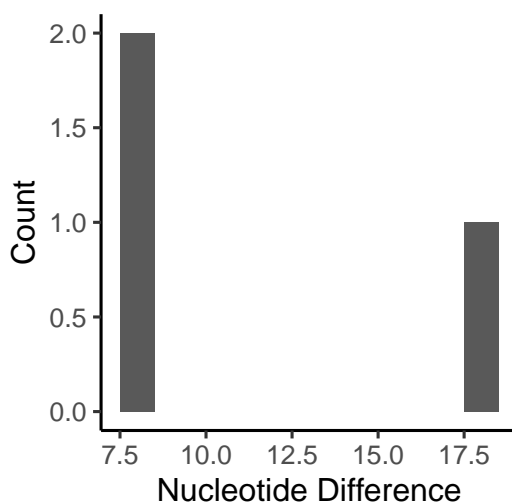
### IGHV3-64\*01

2 sequences assigned  
No exact matches.



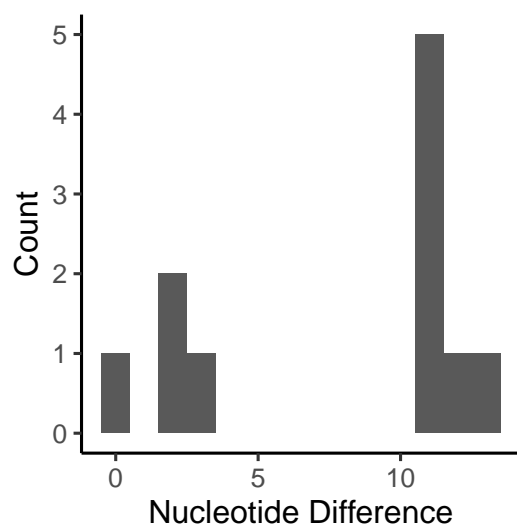
### IGHV3-73\*01

11 sequences assigned  
No exact matches.



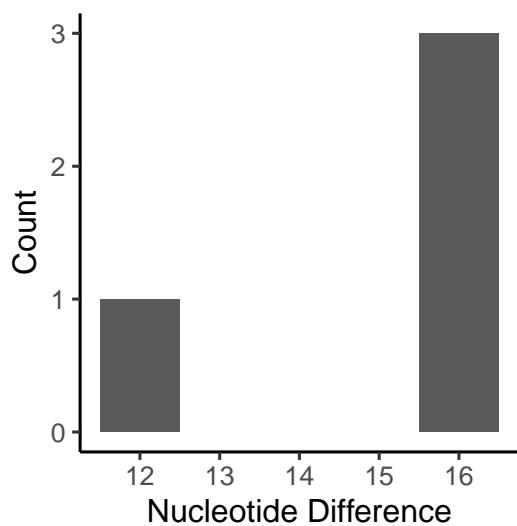
### IGHV3-43D\*03

11 sequences assigned  
1 (9.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



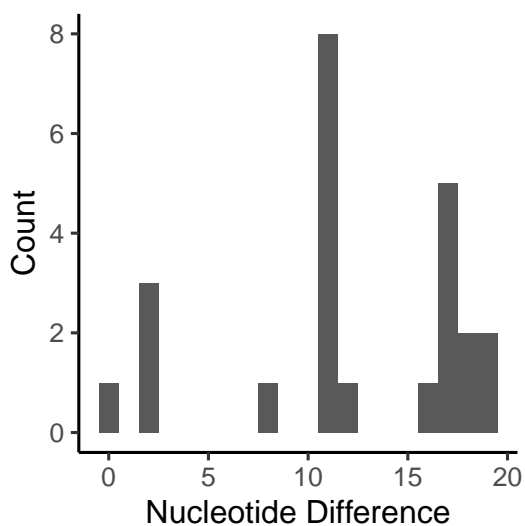
### IGHV3-66\*02

6 sequences assigned  
No exact matches.



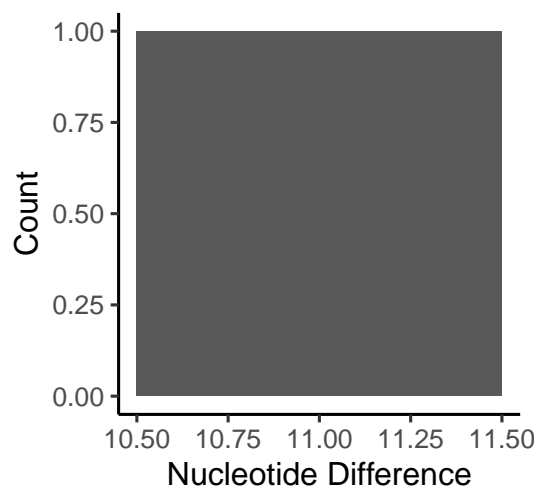
### IGHV3-74\*01

52 sequences assigned  
1 (1.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



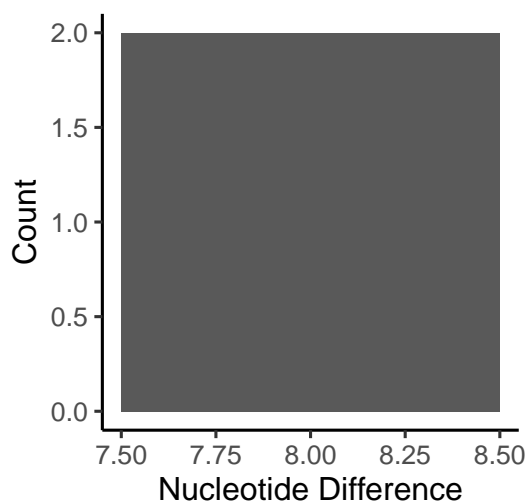
### IGHV3-43D\*04

1 sequences assigned  
No exact matches.



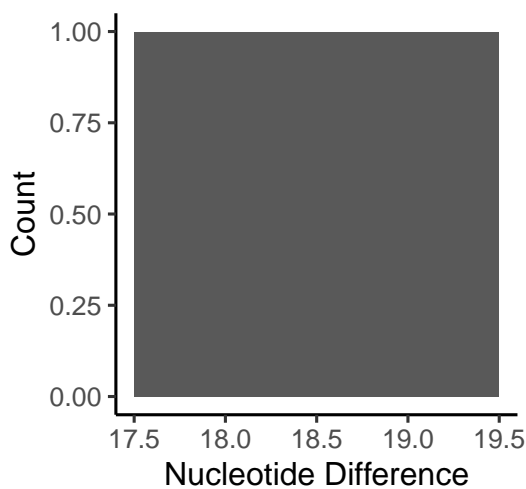
### IGHV3-64D\*09

2 sequences assigned  
No exact matches.



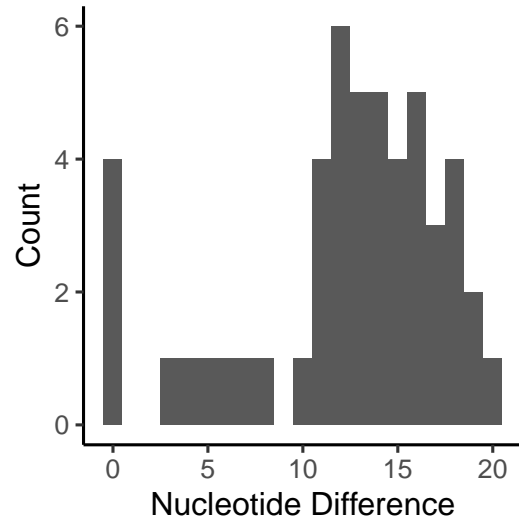
### IGHV4-30-2\*01

3 sequences assigned  
No exact matches.



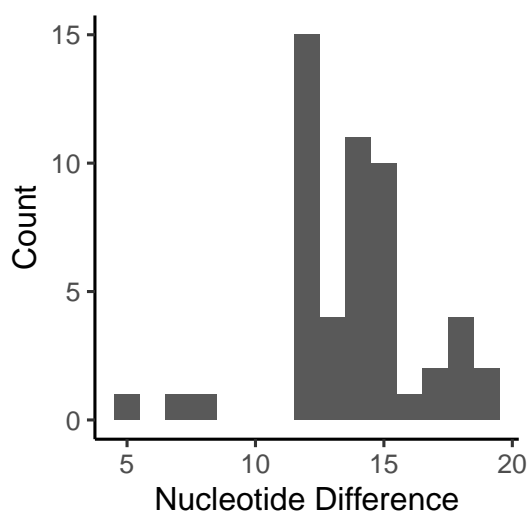
### IGHV4-39\*01

87 sequences assigned  
4 (4.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



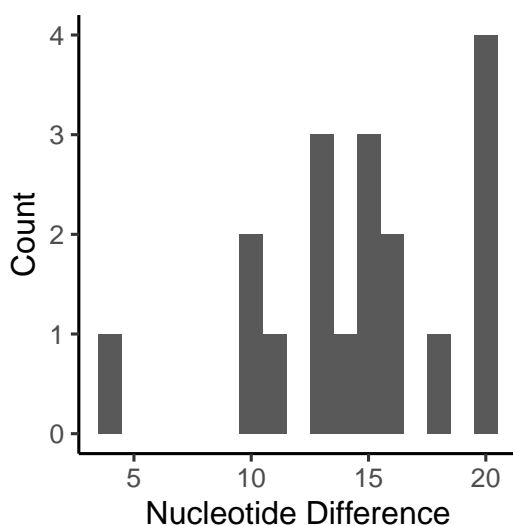
### IGHV4-4\*02

63 sequences assigned  
No exact matches.



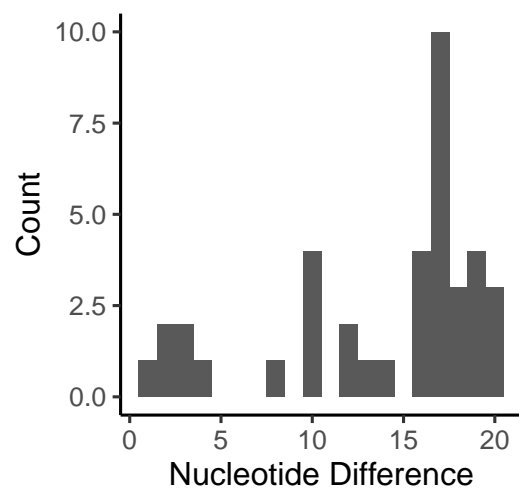
### IGHV4-30-4\*01

24 sequences assigned  
No exact matches.



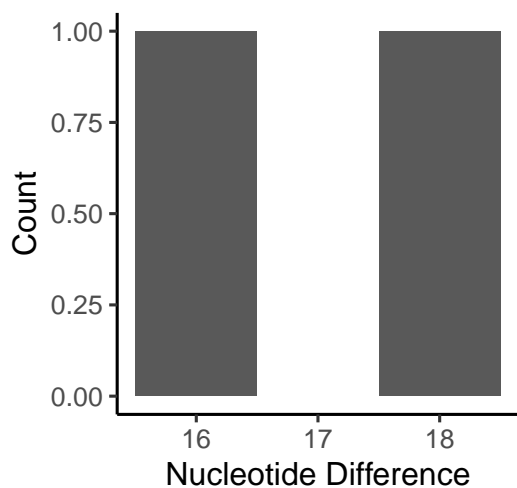
### IGHV4-59\*01

68 sequences assigned  
No exact matches.



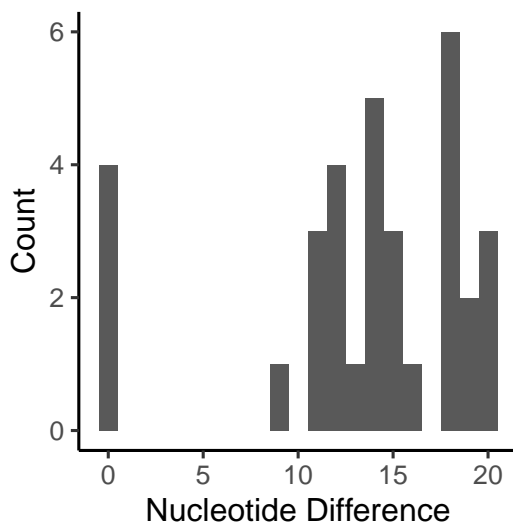
### IGHV4-4\*07

7 sequences assigned  
No exact matches.



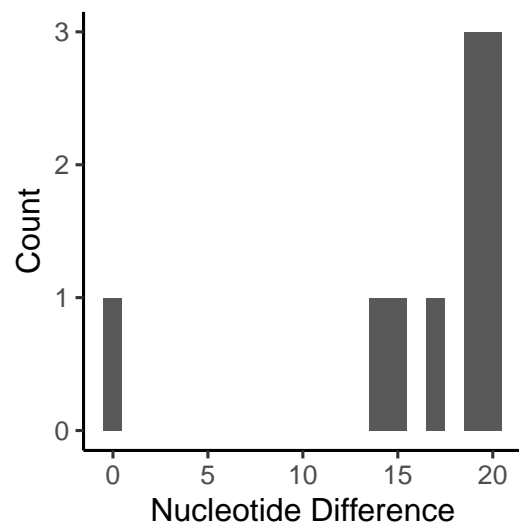
### IGHV4-31\*03

47 sequences assigned  
4 (8.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



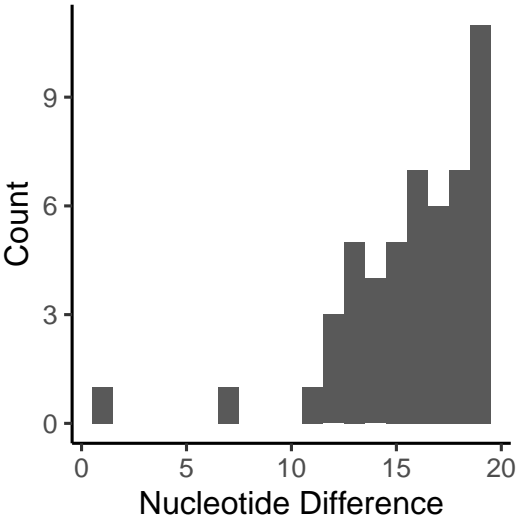
### IGHV4-61\*01

19 sequences assigned  
1 (5.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



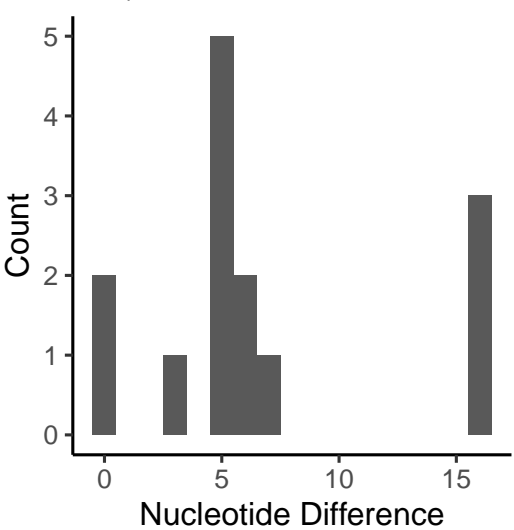
IGHV4-61\*02

74 sequences assigned  
No exact matches.



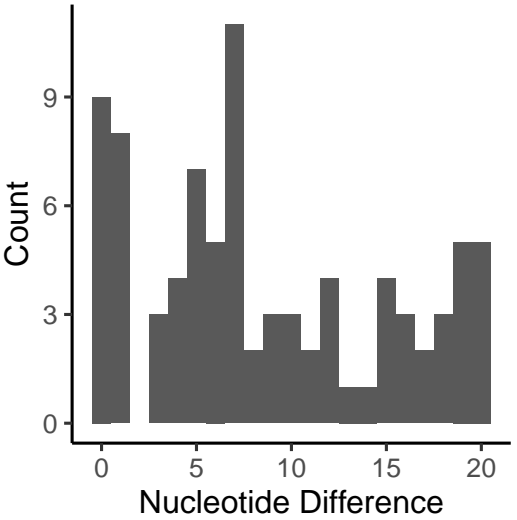
IGHV6-1\*01

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



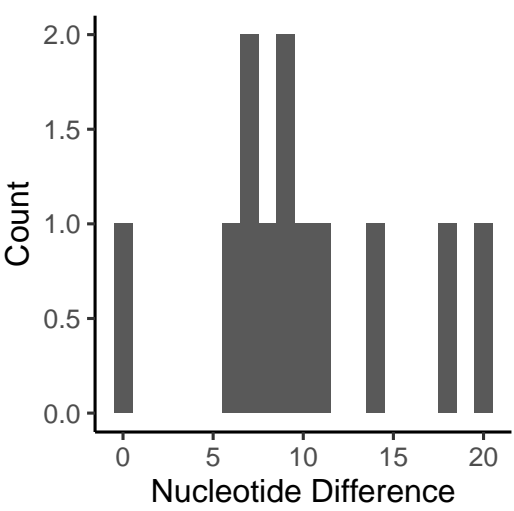
IGHV5-51\*01

93 sequences assigned  
9 (9.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



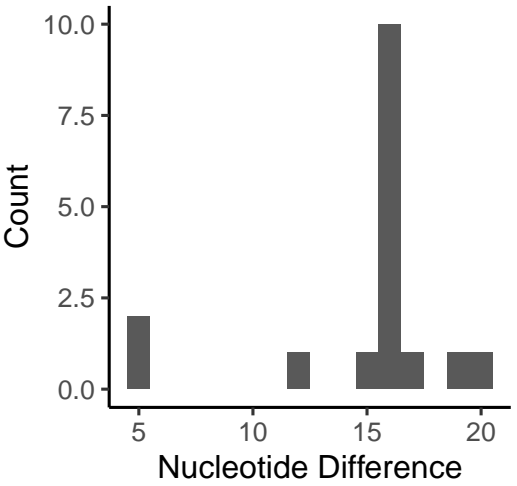
IGHV7-4-1\*02

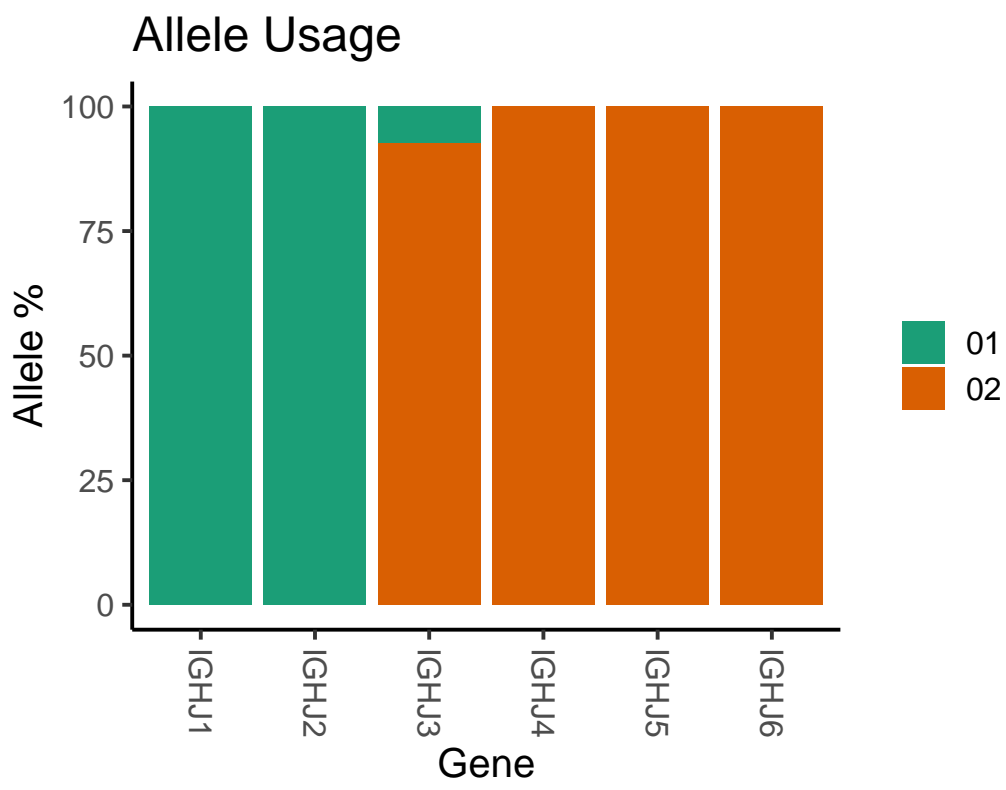
14 sequences assigned  
1 (7.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



IGHV5-51\*03

25 sequences assigned  
No exact matches.







[illegible]