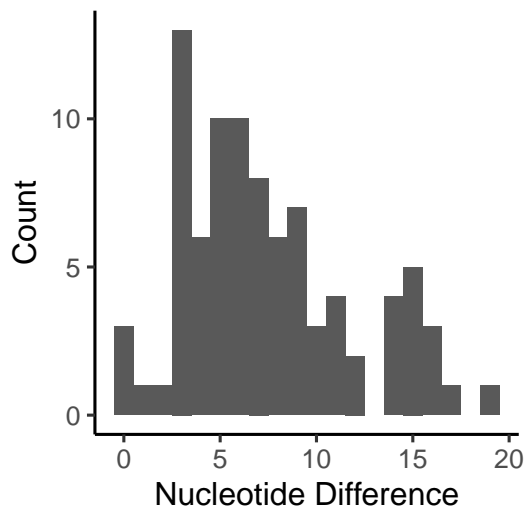


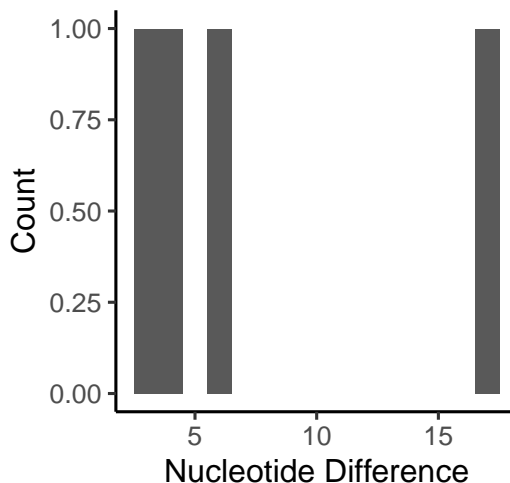
### IGHV1-2\*02

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



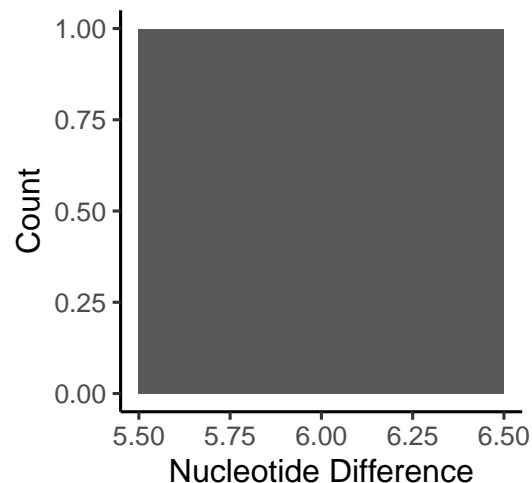
### IGHV1-24\*01

4 sequences assigned  
No exact matches.



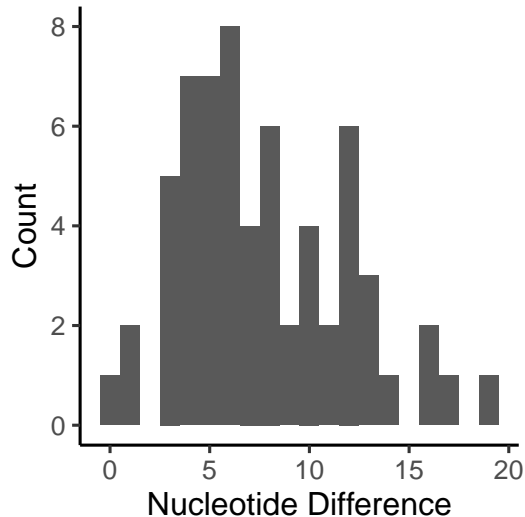
### IGHV1-69-2\*01

1 sequences assigned  
No exact matches.



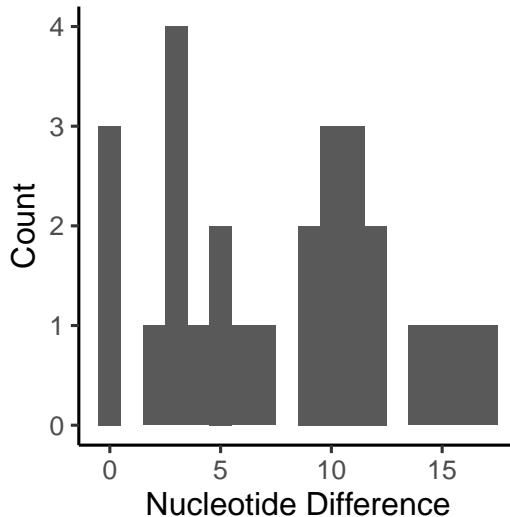
### IGHV1-8\*01

62 sequences assigned  
1 (1.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



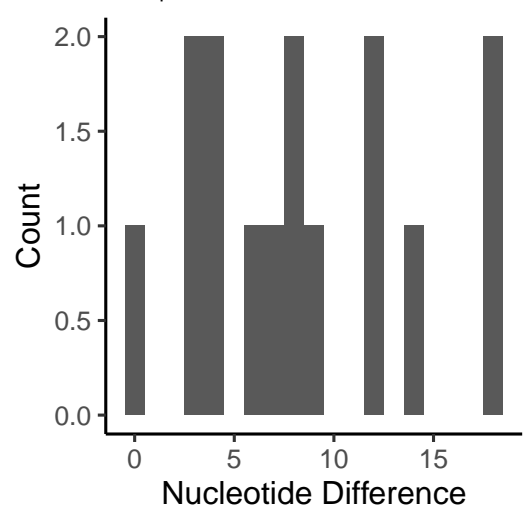
### IGHV1-46\*01

29 sequences assigned  
3 (10.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



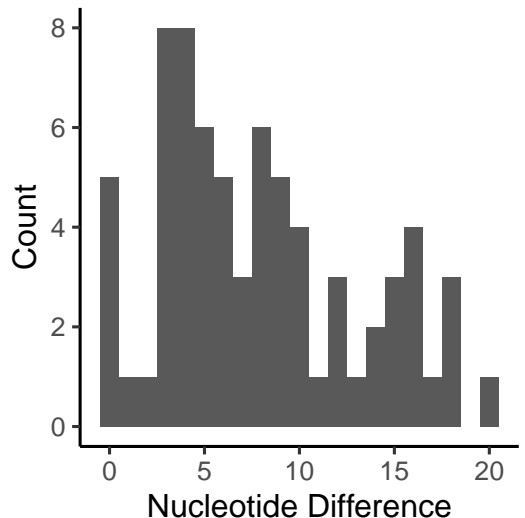
### IGHV1-69\*01\_12\_13

15 sequences assigned  
1 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



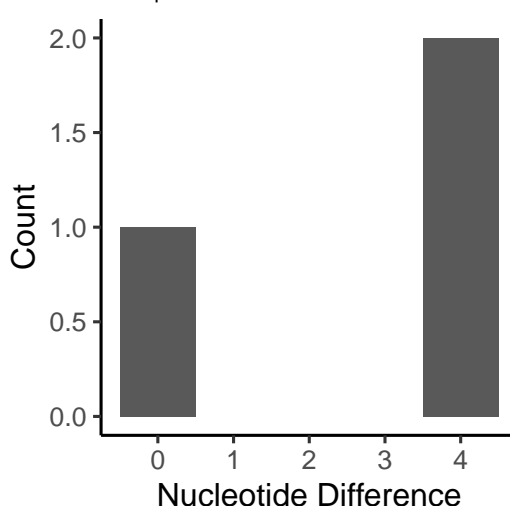
### IGHV1-18\*01

76 sequences assigned  
5 (6.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



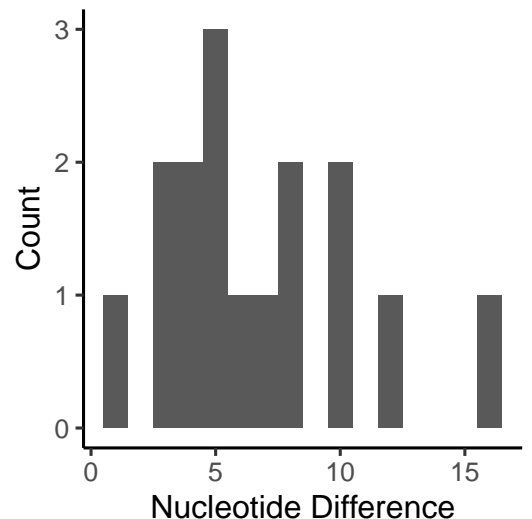
### IGHV1-58\*01\_03

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



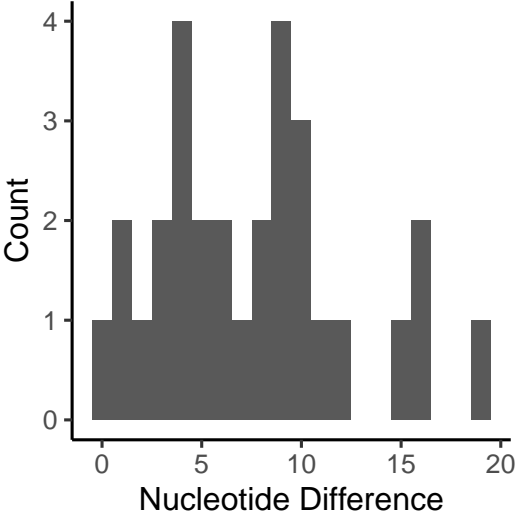
### IGHV1-69\*06\_14

19 sequences assigned  
No exact matches.



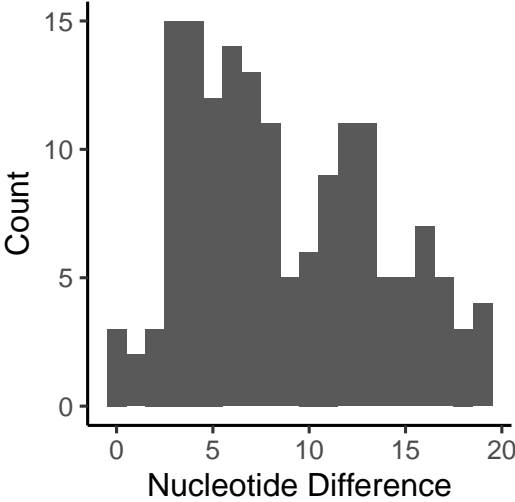
IGHV2-5\*01

40 sequences assigned  
1 (2.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



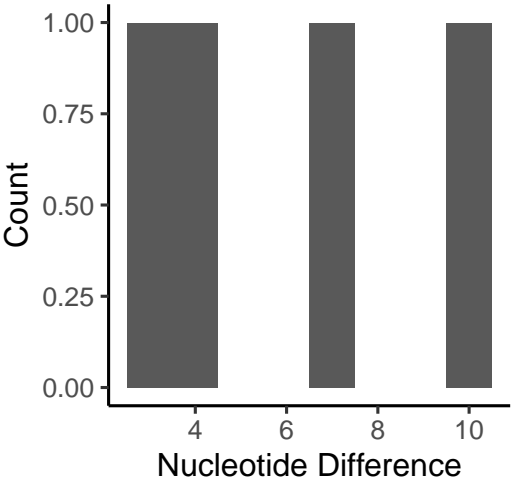
IGHV3-7\*01

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



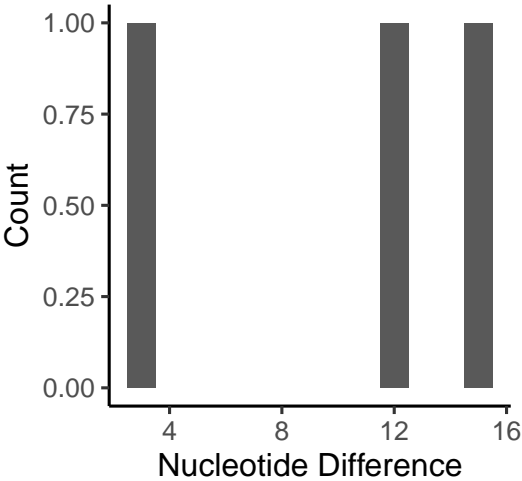
IGHV3-13\*01

4 sequences assigned  
No exact matches.



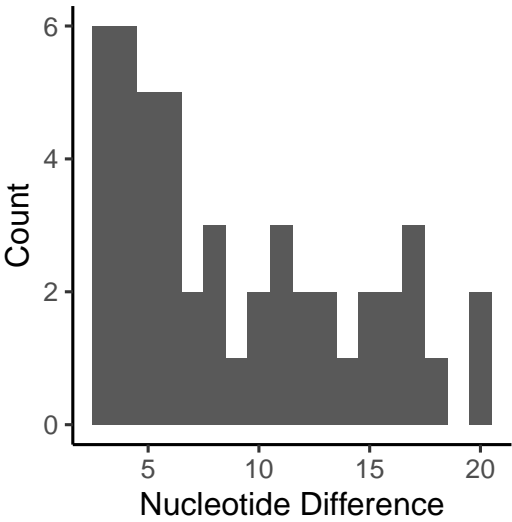
IGHV2-26\*01

5 sequences assigned  
No exact matches.



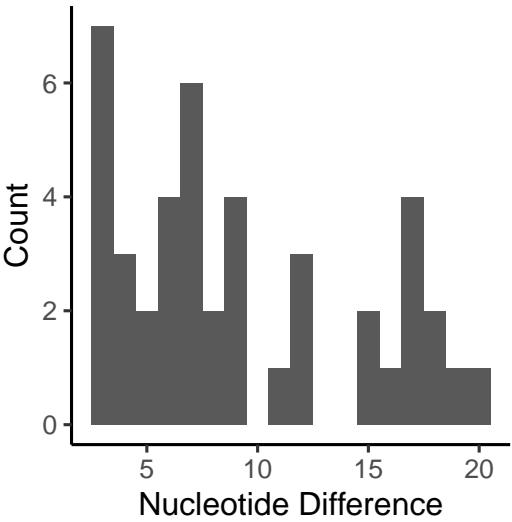
IGHV3-9\*01

52 sequences assigned  
No exact matches.



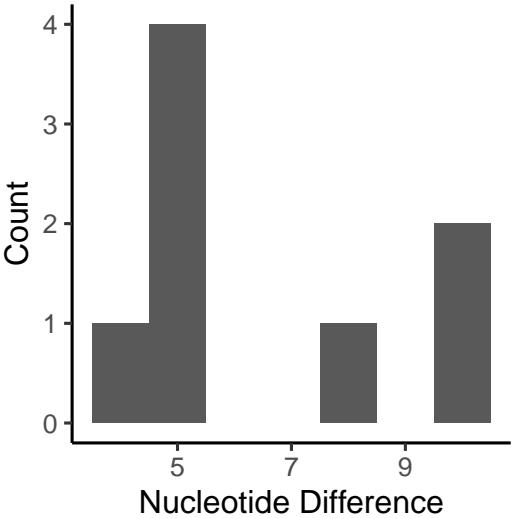
IGHV3-15\*01\_02

47 sequences assigned  
No exact matches.



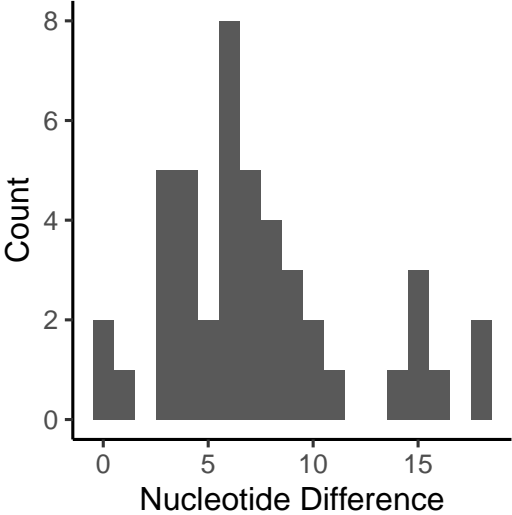
IGHV2-70\*01

8 sequences assigned  
No exact matches.



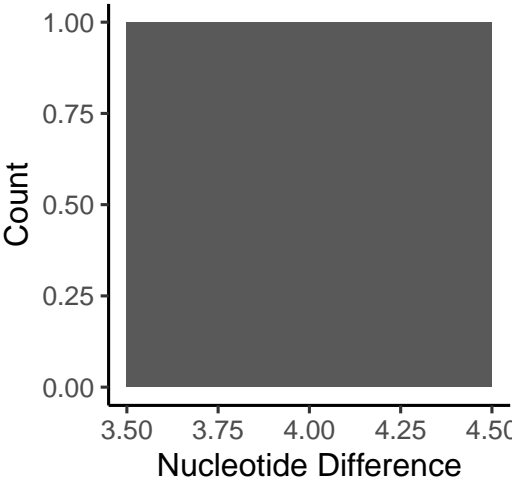
IGHV3-11\*01

46 sequences assigned  
2 (4.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



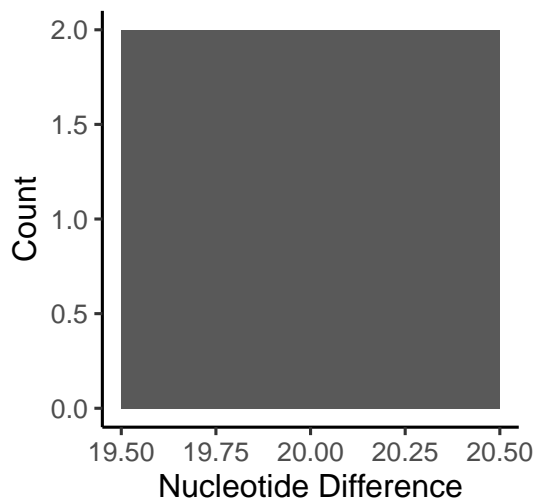
IGHV3-20\*01\_02

1 sequences assigned  
No exact matches.



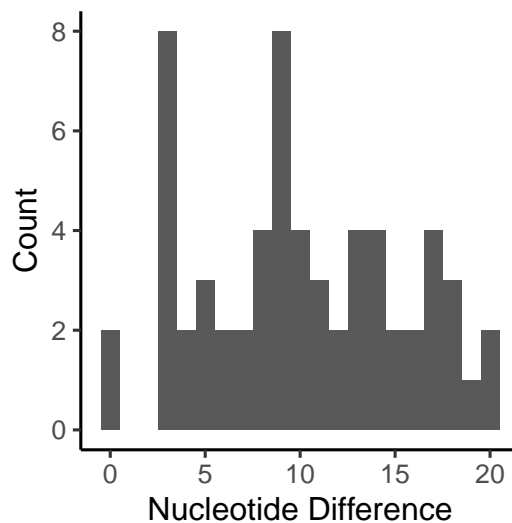
### IGHV3-20\*03\_04

2 sequences assigned  
No exact matches.



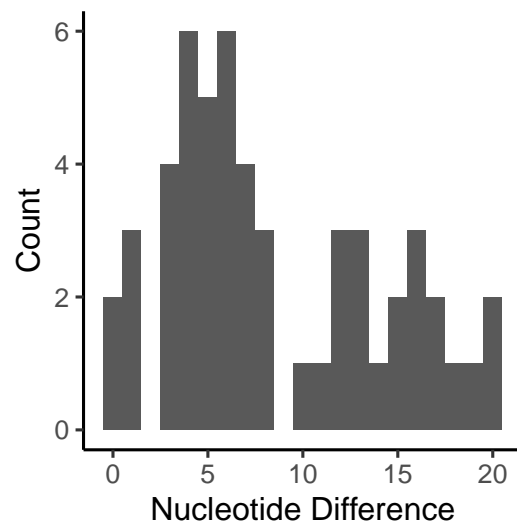
### IGHV3-30-3\*01

68 sequences assigned  
2 (2.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



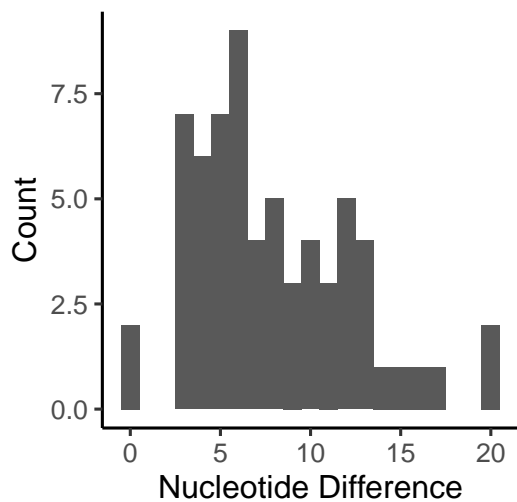
### IGHV3-48\*02

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



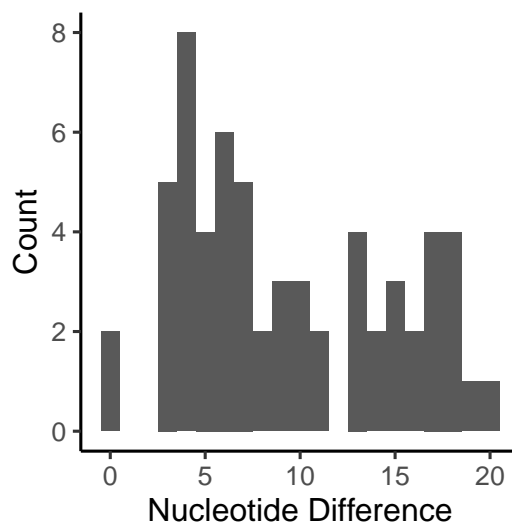
### IGHV3-21\*01\_02

70 sequences assigned  
2 (2.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



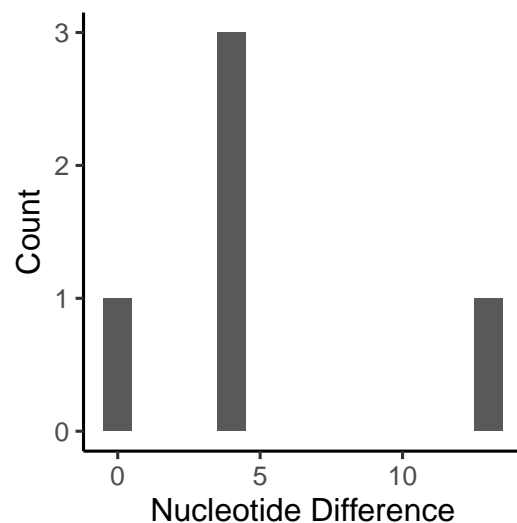
### IGHV3-33\*01

69 sequences assigned  
2 (2.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



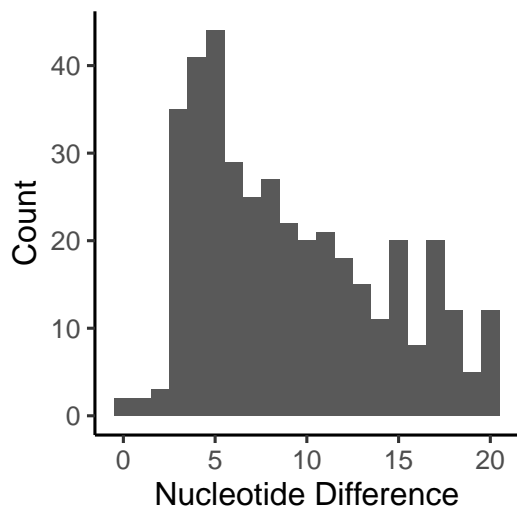
### IGHV3-49\*03\_05

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



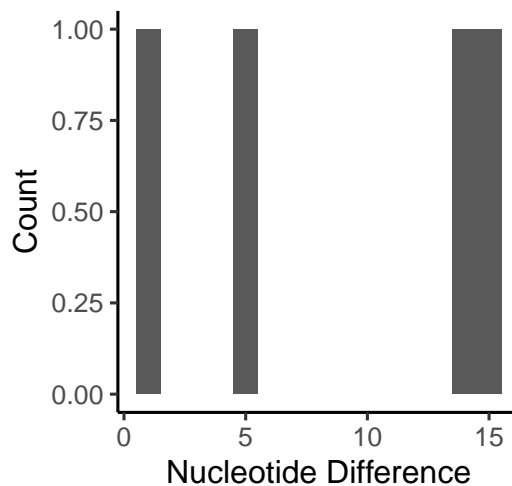
### IGHV3-23\*01\_04

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



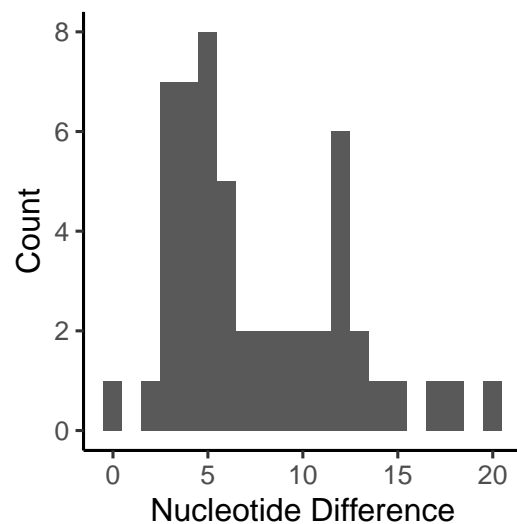
### IGHV3-43\*01

4 sequences assigned  
No exact matches.



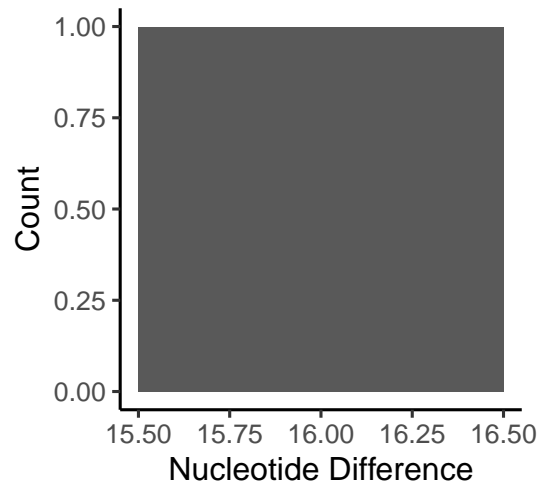
### IGHV3-53\*01\_02

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



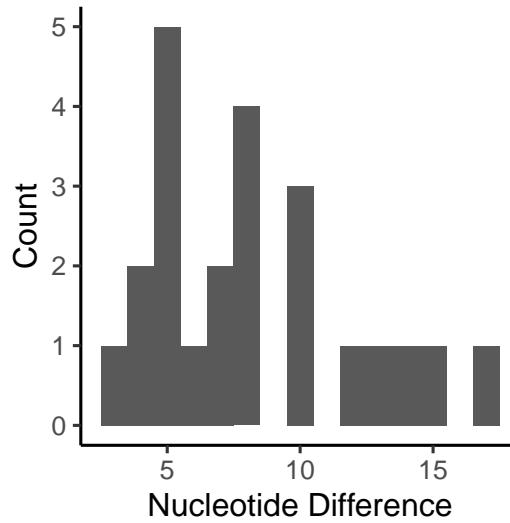
### IGHV3-64\*02\_07

1 sequences assigned  
No exact matches.



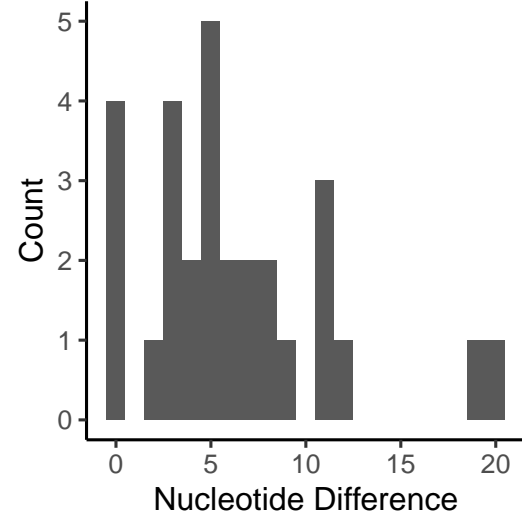
### IGHV3-74\*03

25 sequences assigned  
No exact matches.



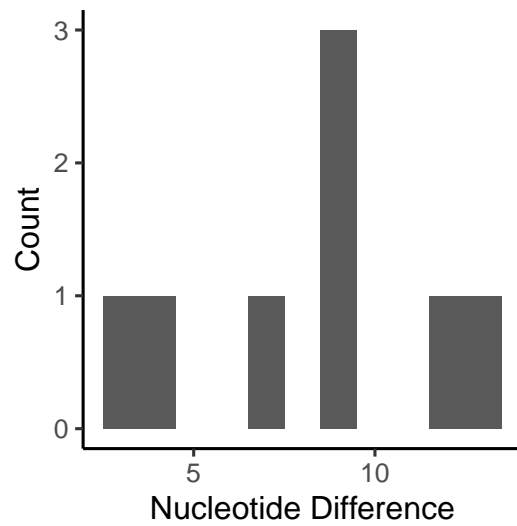
### IGHV4-30-4\*01

33 sequences assigned  
4 (12.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



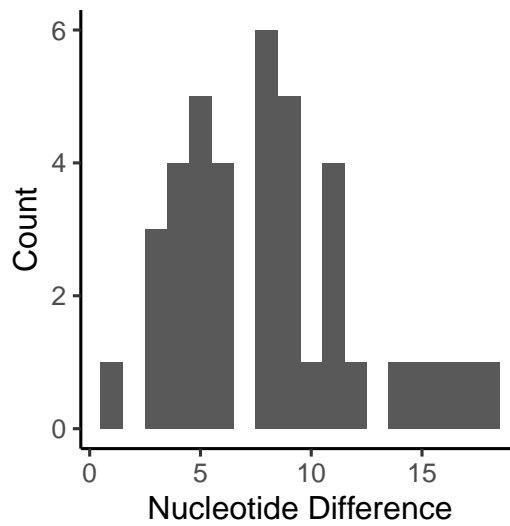
### IGHV3-72\*01

9 sequences assigned  
No exact matches.



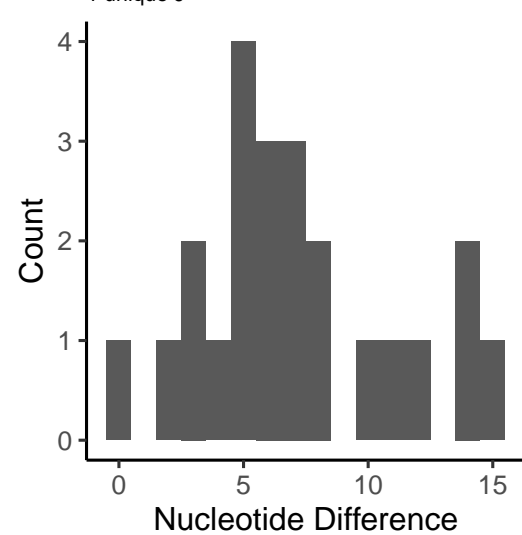
### IGHV3-74\*01\_02

42 sequences assigned  
No exact matches.



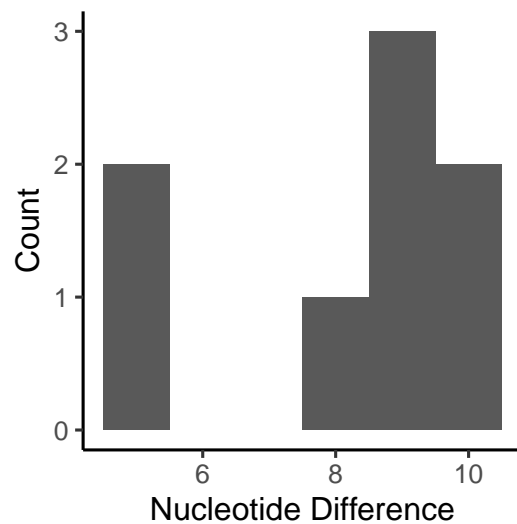
### IGHV4-30-2\*01

28 sequences assigned  
1 (3.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



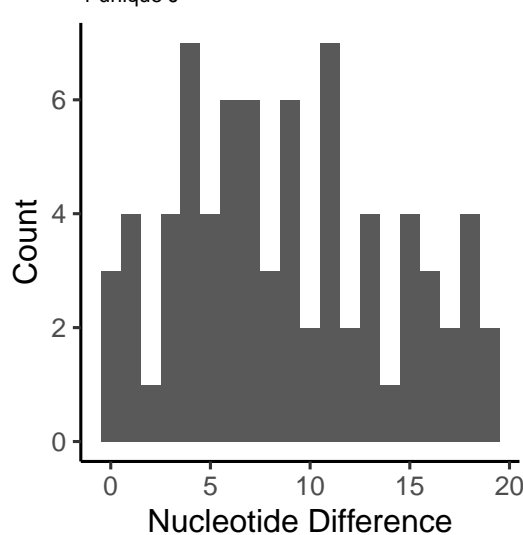
### IGHV3-73\*01\_02

8 sequences assigned  
No exact matches.



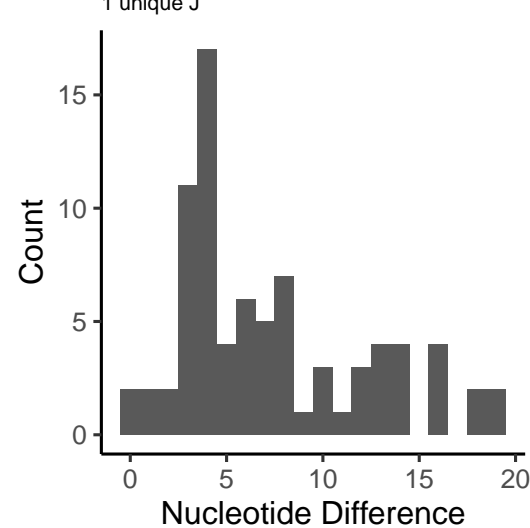
### IGHV4-4\*07

76 sequences assigned  
3 (3.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



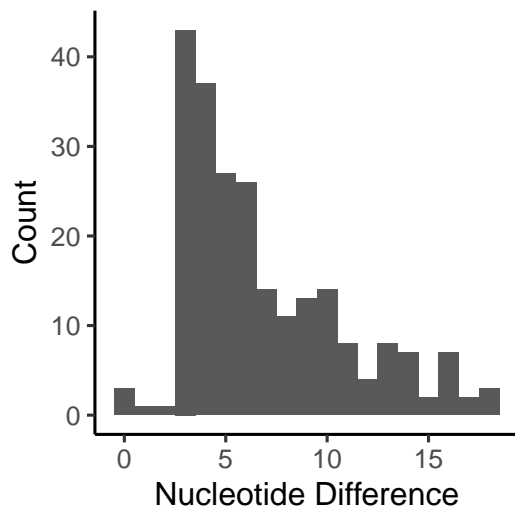
### IGHV4-31\*02

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



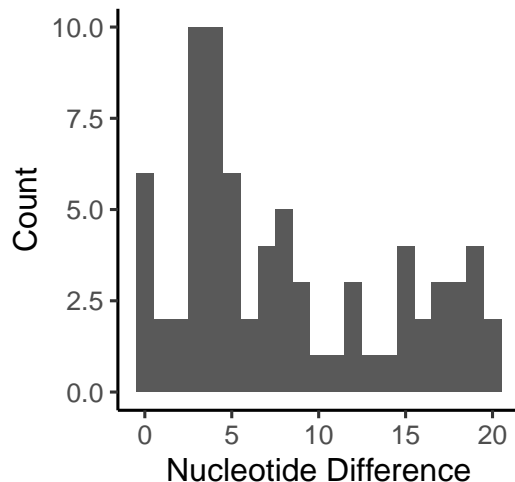
### IGHV4-34\*01\_02

242 sequences assigned  
3 (1.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



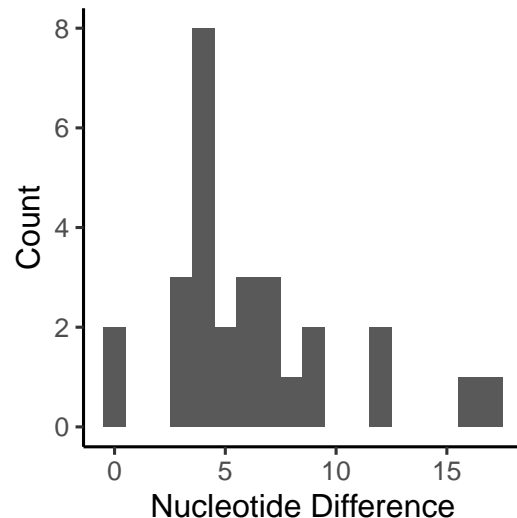
### IGHV4-59\*01\_07

77 sequences assigned  
6 (7.8%) exact matches, in which:  
5 unique CDR3  
3 unique J



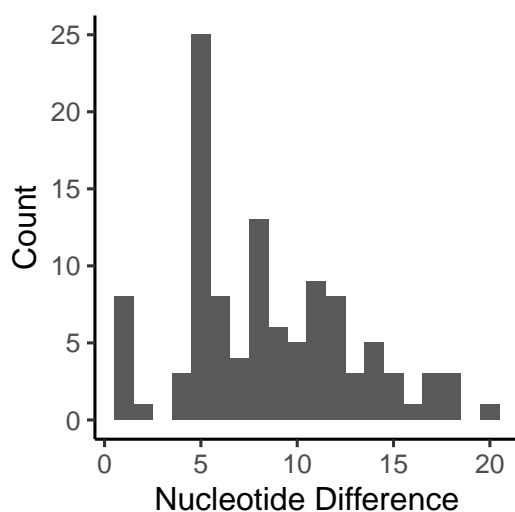
### IGHV4-61\*01

31 sequences assigned  
2 (6.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



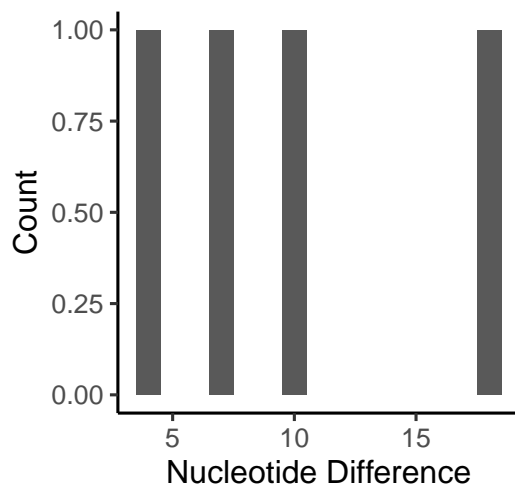
### IGHV4-39\*02

119 sequences assigned  
No exact matches.



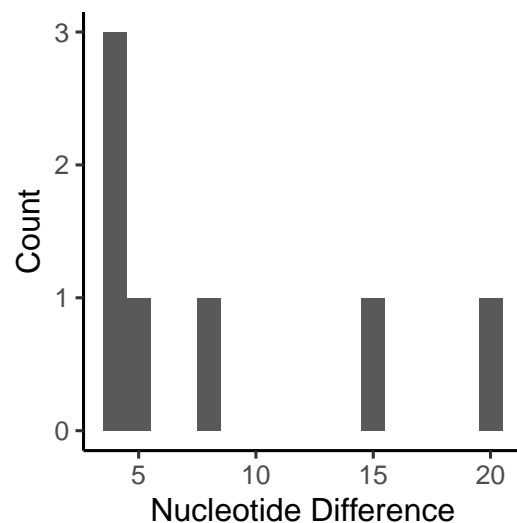
### IGHV4-59\*11

6 sequences assigned  
No exact matches.



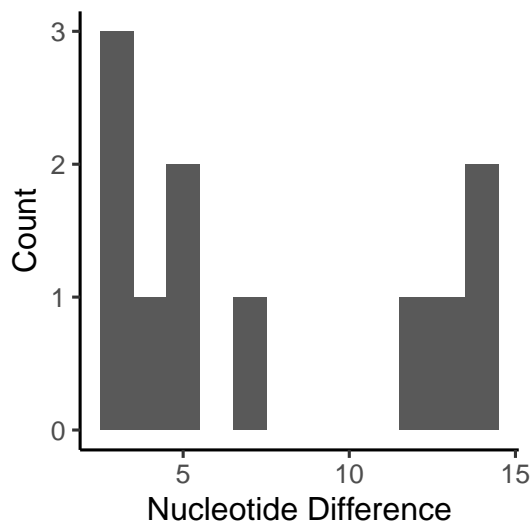
### IGHV4-61\*08

7 sequences assigned  
No exact matches.



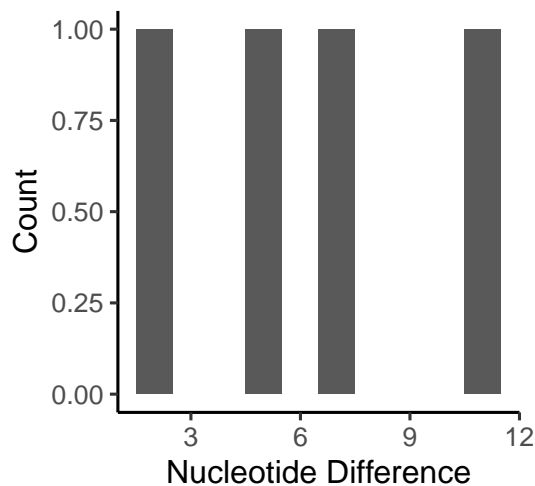
### IGHV4-39\*01\_05

14 sequences assigned  
No exact matches.



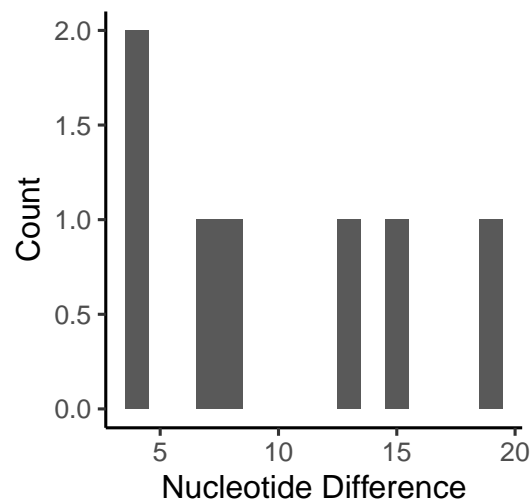
### IGHV4-59\*12

5 sequences assigned  
No exact matches.



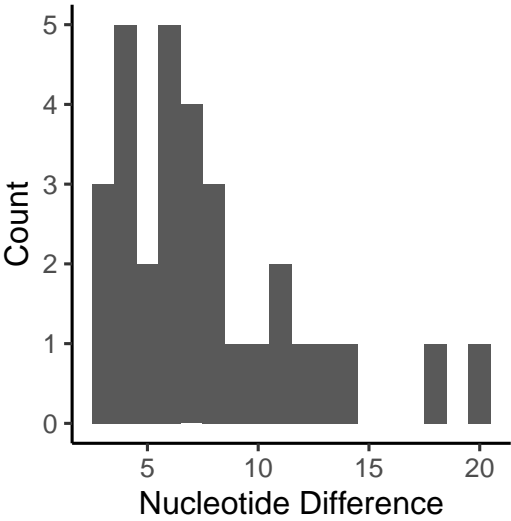
### IGHV5-51\*07

8 sequences assigned  
No exact matches.



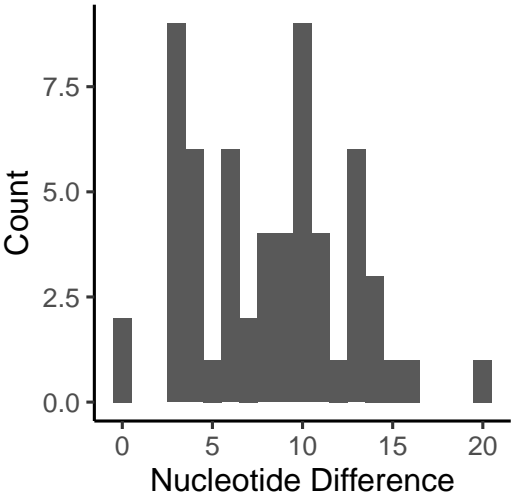
IGHV5–51\*01\_03

31 sequences assigned  
No exact matches.

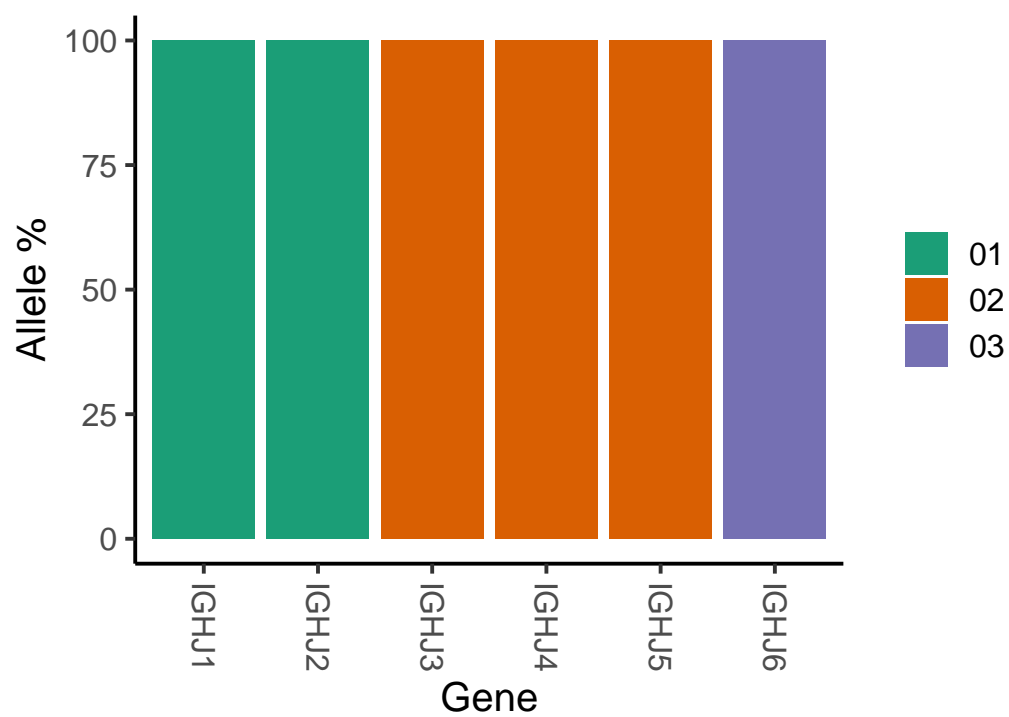


IGHV6–1\*01\_02

60 sequences assigned  
2 (3.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



Allele Usage



Warning – no inferred sequences found.