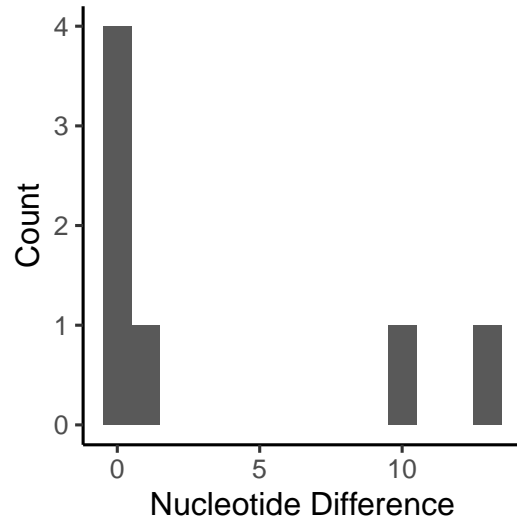


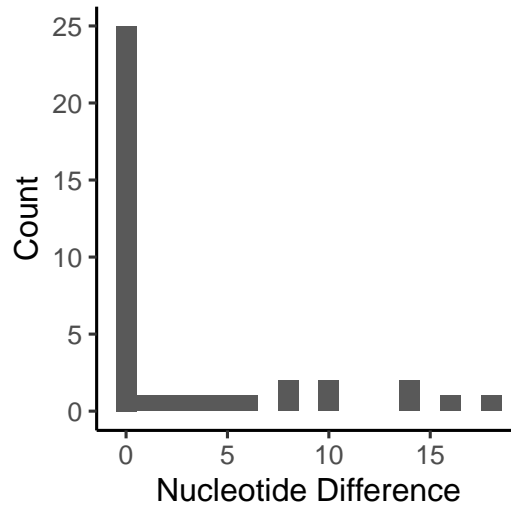
### IGHV1-2\*04

9 sequences assigned  
4 (44.4%) exact matches, in which:  
4 unique CDR3  
2 unique J



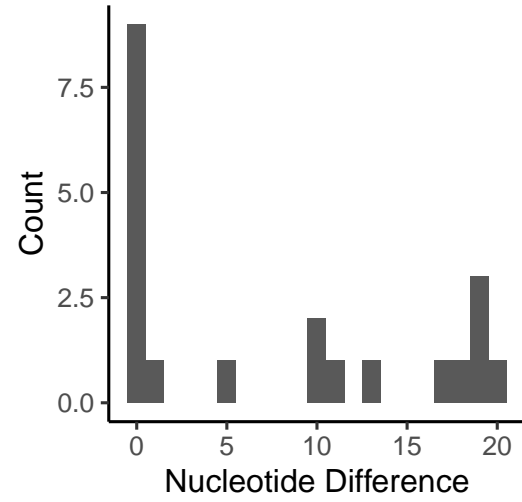
### IGHV1-8\*01

40 sequences assigned  
25 (62.5%) exact matches, in which:  
25 unique CDR3  
6 unique J



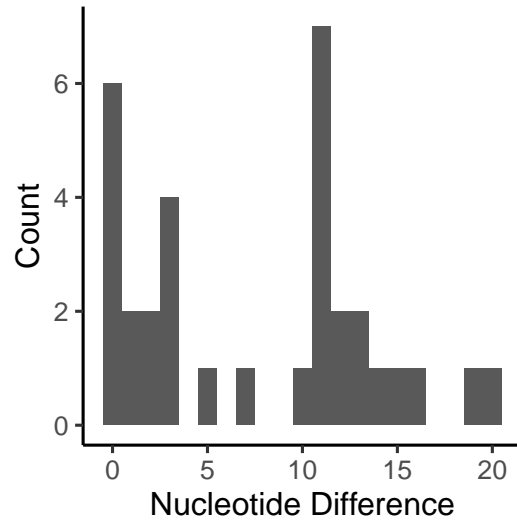
### IGHV1-46\*01

24 sequences assigned  
9 (37.5%) exact matches, in which:  
9 unique CDR3  
3 unique J



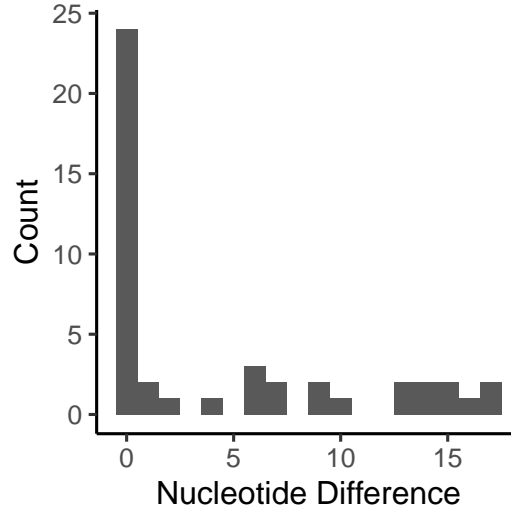
### IGHV1-2\*06

39 sequences assigned  
6 (15.4%) exact matches, in which:  
6 unique CDR3  
4 unique J



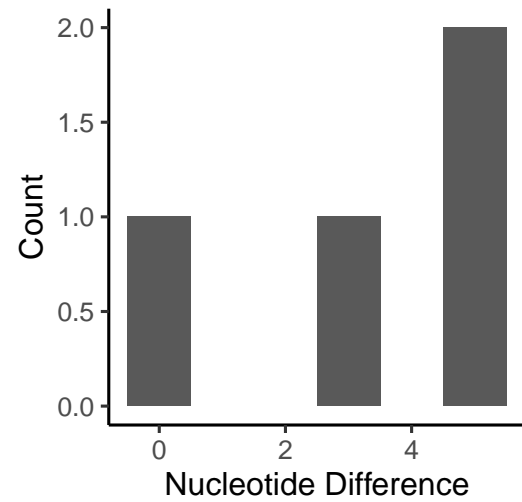
### IGHV1-18\*01

55 sequences assigned  
24 (43.6%) exact matches, in which:  
23 unique CDR3  
6 unique J



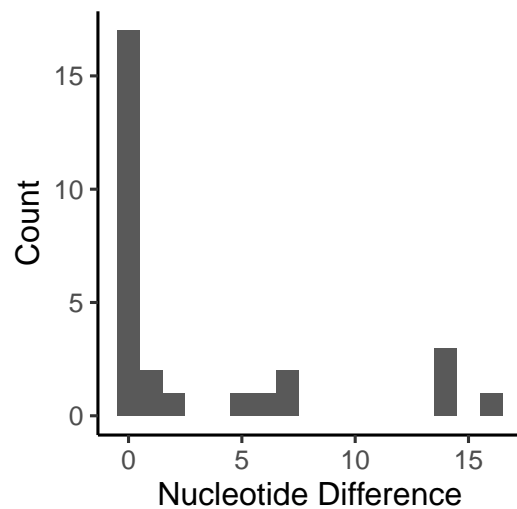
### IGHV1-58\*01

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



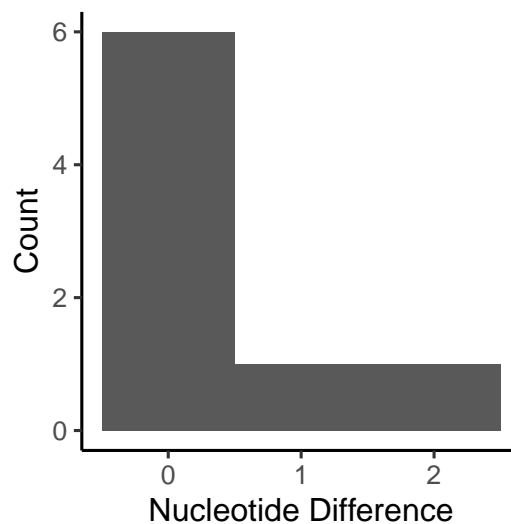
### IGHV1-3\*01

33 sequences assigned  
17 (51.5%) exact matches, in which:  
17 unique CDR3  
6 unique J



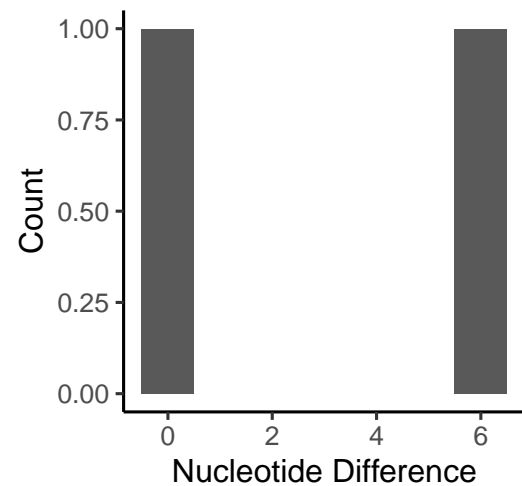
### IGHV1-24\*01

9 sequences assigned  
6 (66.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



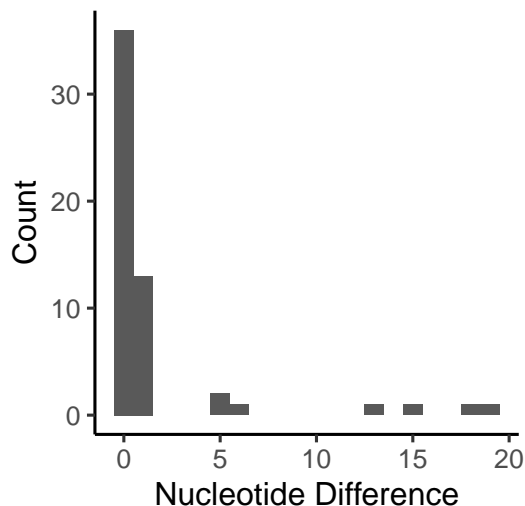
### IGHV1-69-2\*01

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



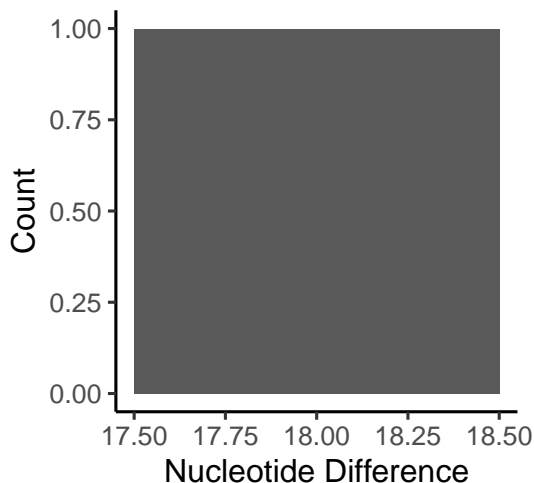
### IGHV1–69\*06

64 sequences assigned  
36 (56.2%) exact matches, in which:  
36 unique CDR3  
7 unique J



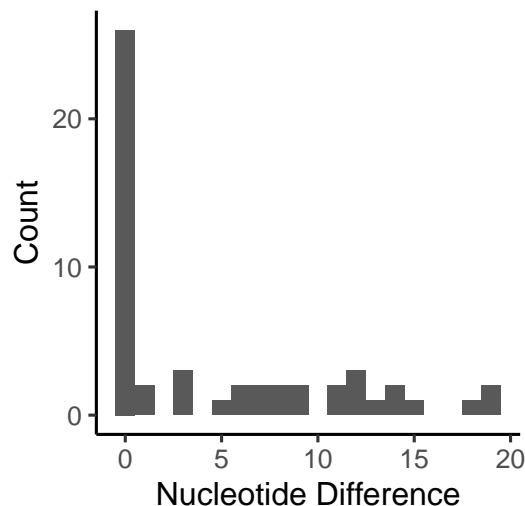
### IGHV2–26\*03

1 sequences assigned  
No exact matches.



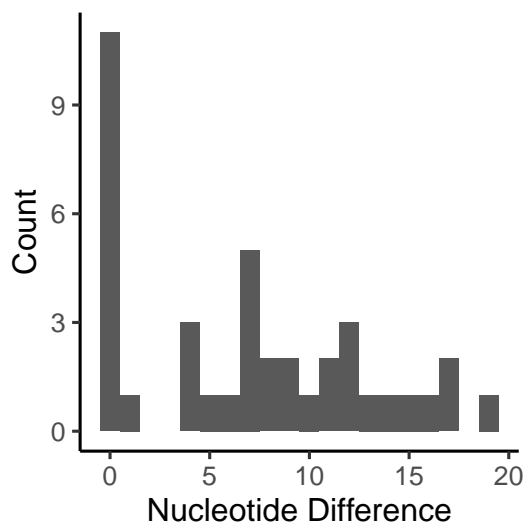
### IGHV3–9\*01

61 sequences assigned  
26 (42.6%) exact matches, in which:  
26 unique CDR3  
5 unique J



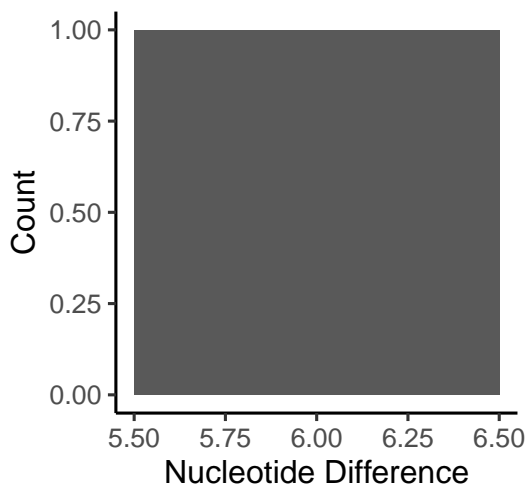
### IGHV2–5\*02

48 sequences assigned  
11 (22.9%) exact matches, in which:  
11 unique CDR3  
3 unique J



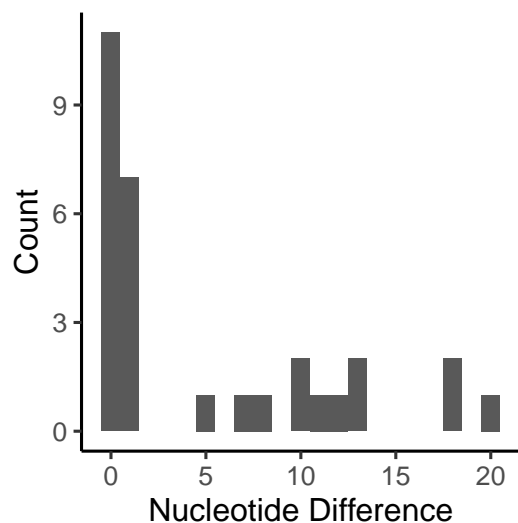
### IGHV2–70\*13

1 sequences assigned  
No exact matches.



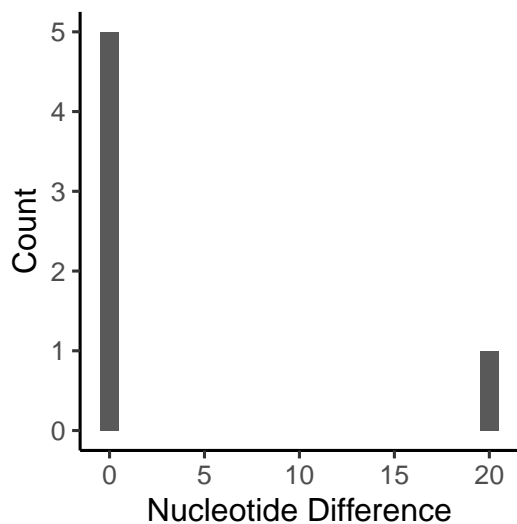
### IGHV3–11\*01

39 sequences assigned  
11 (28.2%) exact matches, in which:  
11 unique CDR3  
5 unique J



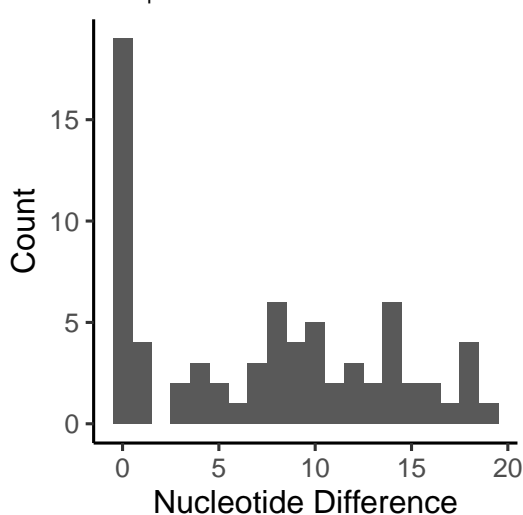
### IGHV2–26\*01

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



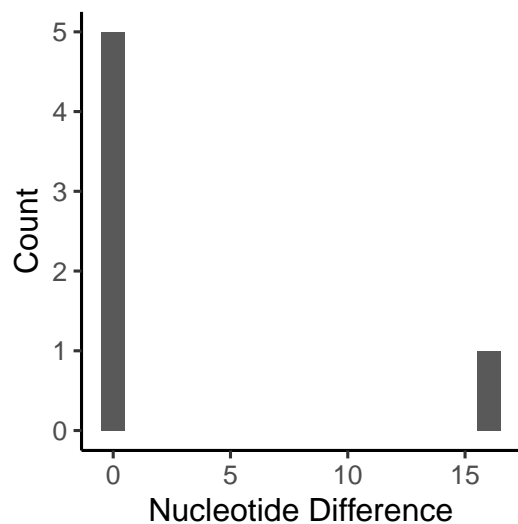
### IGHV3–7\*01

86 sequences assigned  
19 (22.1%) exact matches, in which:  
19 unique CDR3  
5 unique J



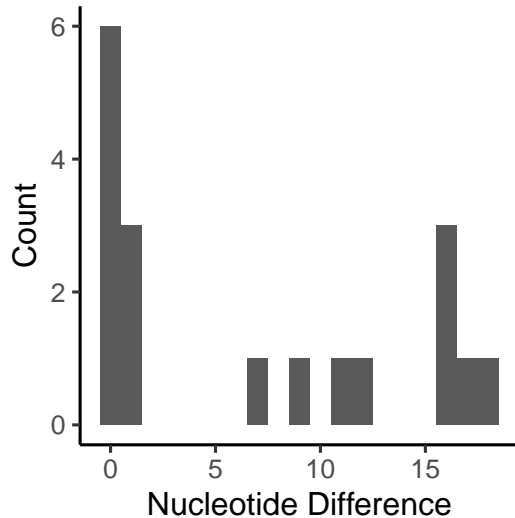
### IGHV3–13\*01

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



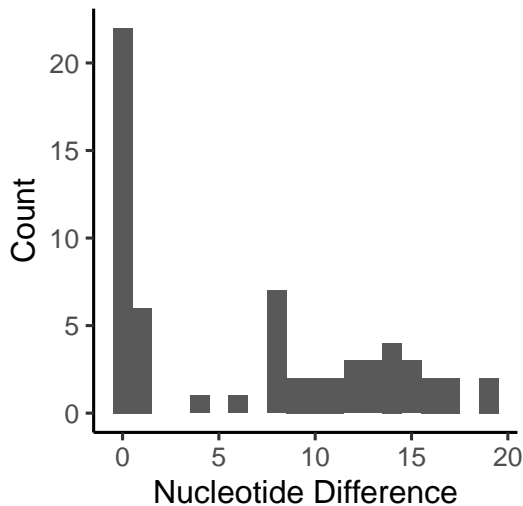
### IGHV3-15\*01

22 sequences assigned  
6 (27.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



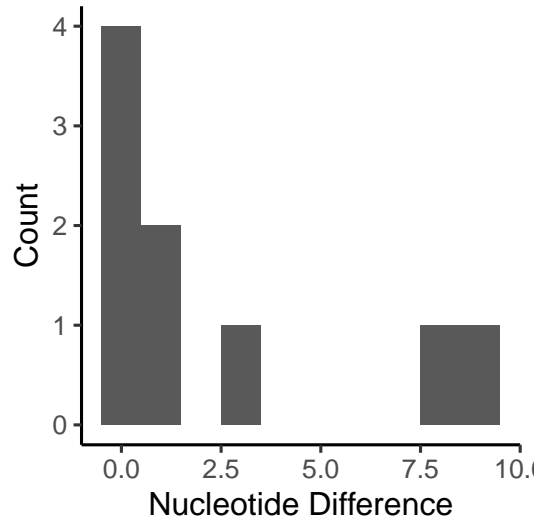
### IGHV3-23\*04

84 sequences assigned  
22 (26.2%) exact matches, in which:  
22 unique CDR3  
3 unique J



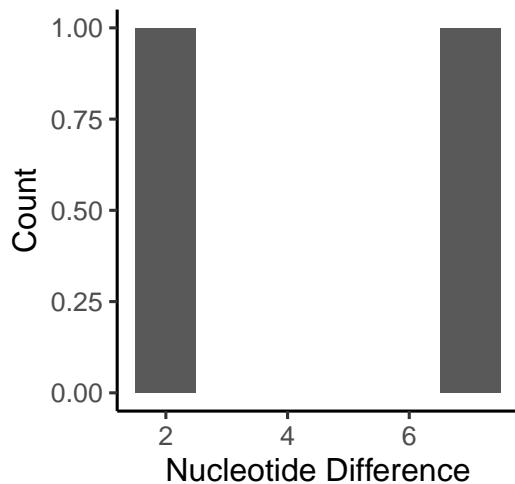
### IGHV3-43\*02

15 sequences assigned  
4 (26.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



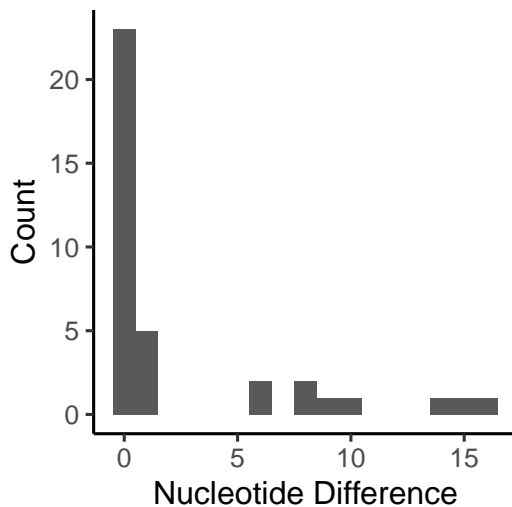
### IGHV3-20\*01

2 sequences assigned  
No exact matches.



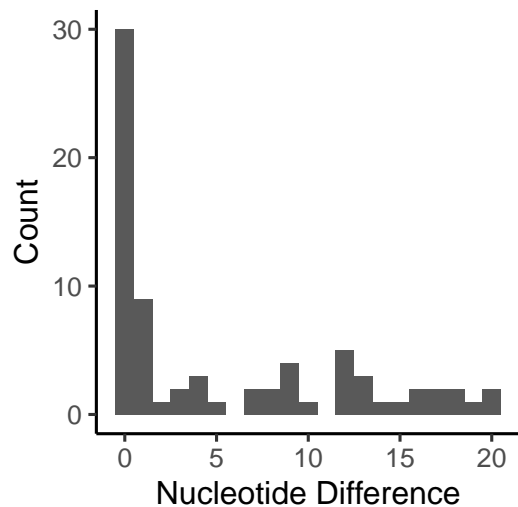
### IGHV3-30-3\*01

41 sequences assigned  
23 (56.1%) exact matches, in which:  
23 unique CDR3  
5 unique J



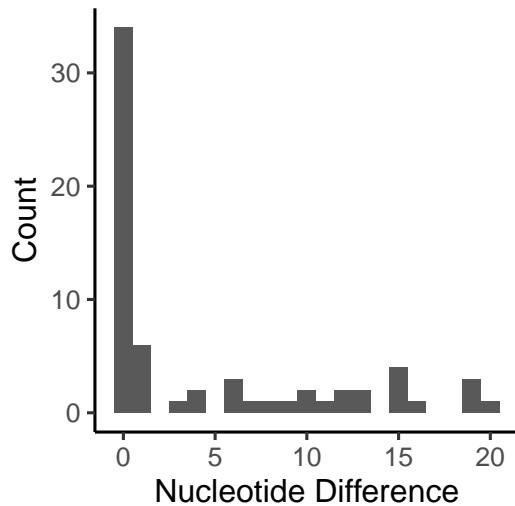
### IGHV3-48\*03

86 sequences assigned  
30 (34.9%) exact matches, in which:  
30 unique CDR3  
5 unique J



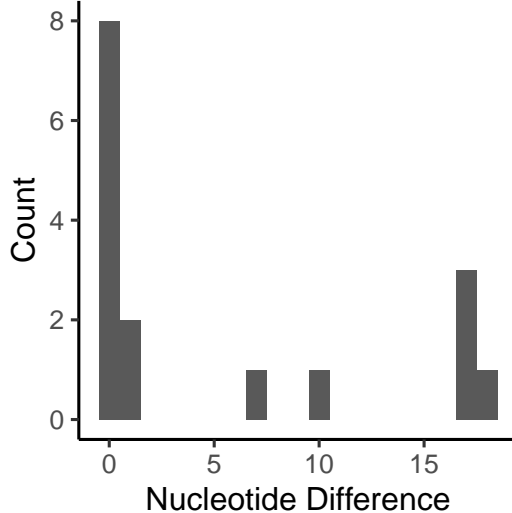
### IGHV3-21\*01

78 sequences assigned  
34 (43.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



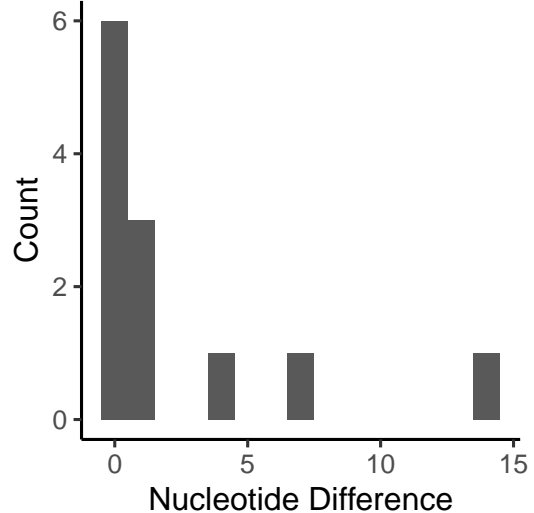
### IGHV3-33\*01

25 sequences assigned  
8 (32%) exact matches, in which:  
8 unique CDR3  
4 unique J



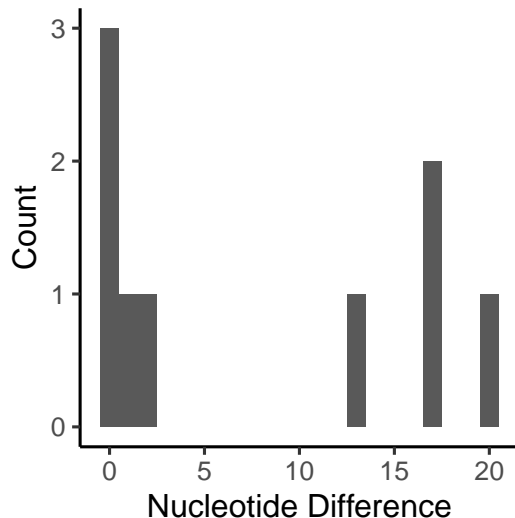
### IGHV3-49\*04

21 sequences assigned  
6 (28.6%) exact matches, in which:  
6 unique CDR3  
2 unique J



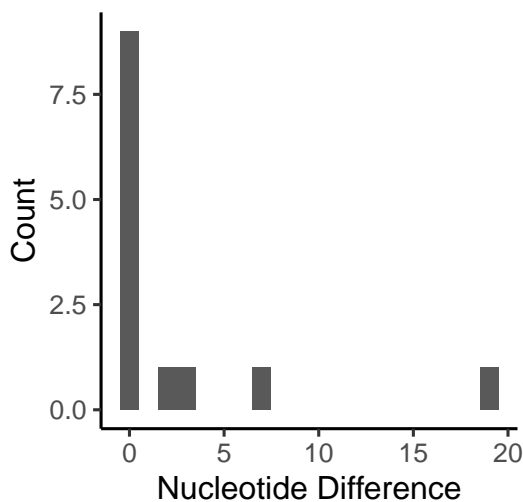
### IGHV3-53\*02

11 sequences assigned  
3 (27.3%) exact matches, in which:  
3 unique CDR3  
3 unique J



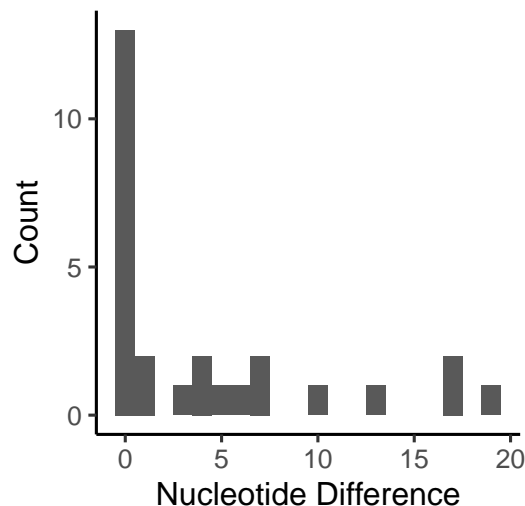
### IGHV3-73\*02

18 sequences assigned  
9 (50%) exact matches, in which:  
9 unique CDR3  
4 unique J



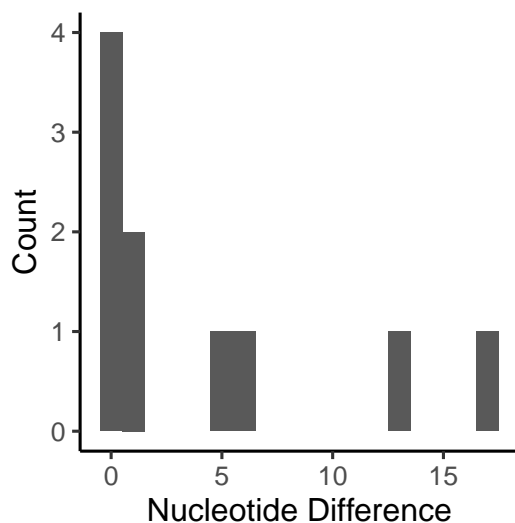
### IGHV4-4\*02

33 sequences assigned  
13 (39.4%) exact matches, in which:  
13 unique CDR3  
3 unique J



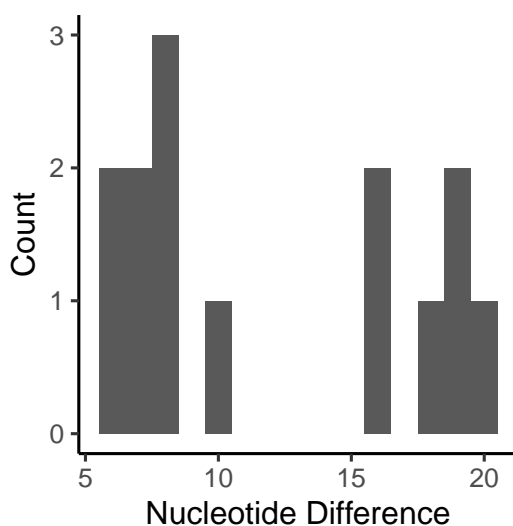
### IGHV3-53\*04

11 sequences assigned  
4 (36.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



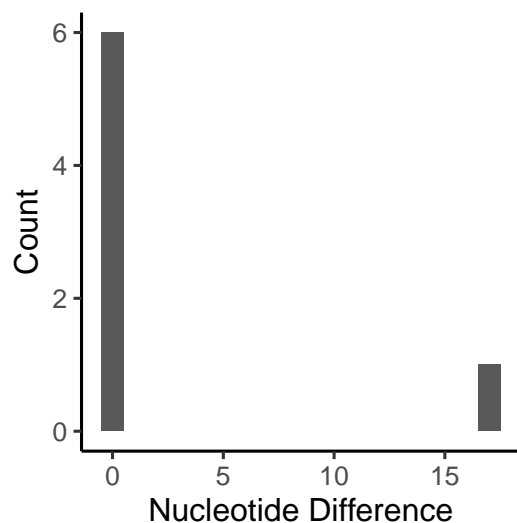
### IGHV3-74\*01

19 sequences assigned  
No exact matches.



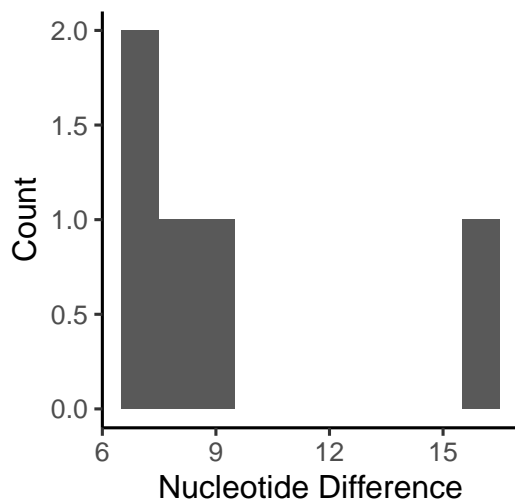
### IGHV4-30-2\*01

7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
4 unique J



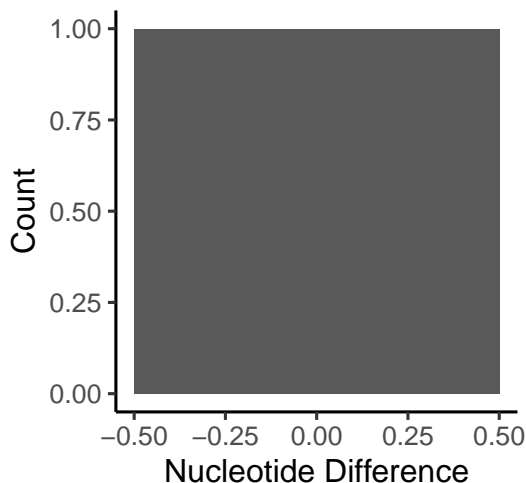
### IGHV3-72\*01

8 sequences assigned  
No exact matches.



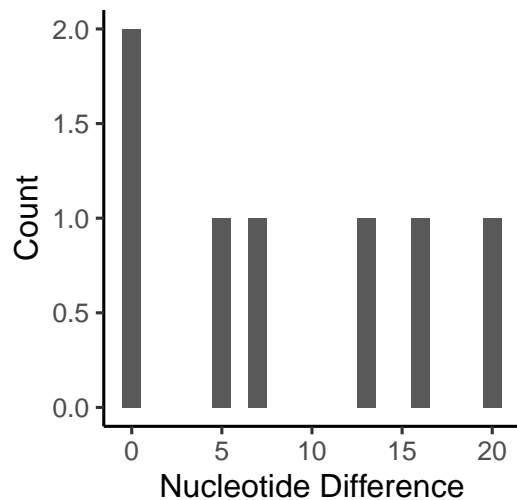
### IGHV3-43D\*04

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



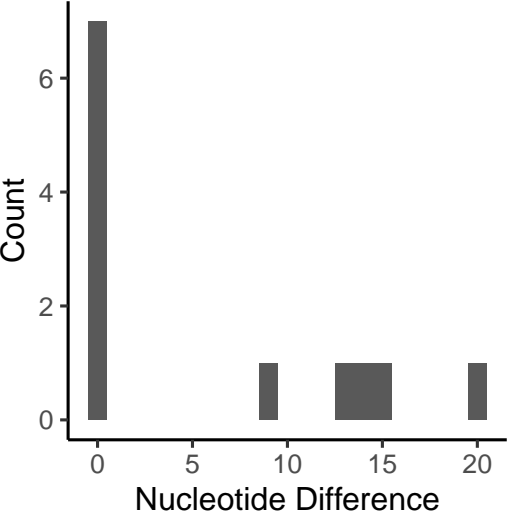
### IGHV4-30-4\*01

12 sequences assigned  
2 (16.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



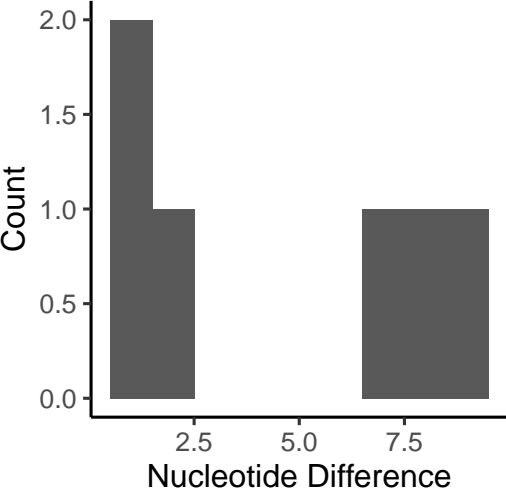
IGHV4-31\*03

14 sequences assigned  
7 (50%) exact matches, in which:  
7 unique CDR3  
4 unique J



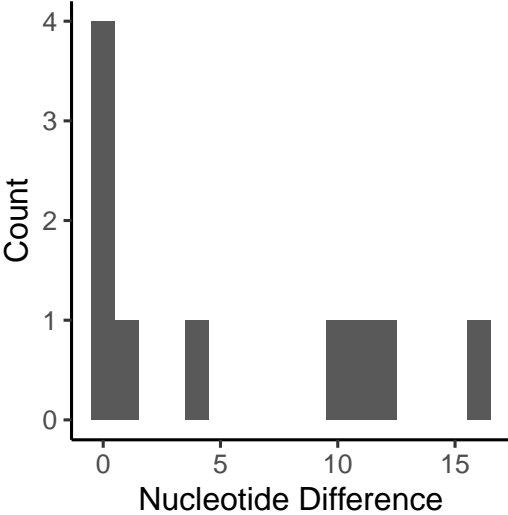
IGHV4-38-2\*02

8 sequences assigned  
No exact matches.



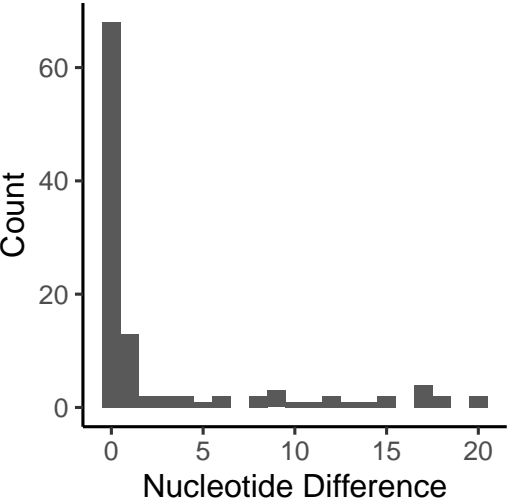
IGHV4-61\*01

18 sequences assigned  
4 (22.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



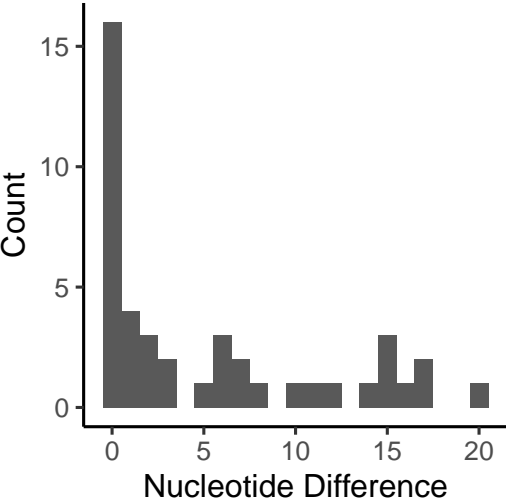
IGHV4-34\*01

128 sequences assigned  
68 (53.1%) exact matches, in which:  
68 unique CDR3  
7 unique J



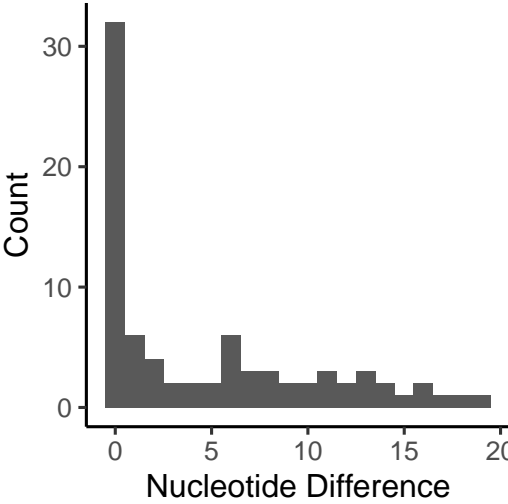
IGHV4-39\*01

53 sequences assigned  
16 (30.2%) exact matches, in which:  
16 unique CDR3  
4 unique J



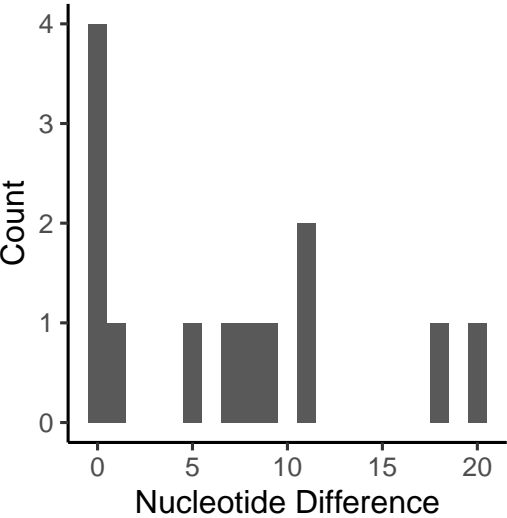
IGHV5-51\*01

92 sequences assigned  
32 (34.8%) exact matches, in which:  
32 unique CDR3  
6 unique J



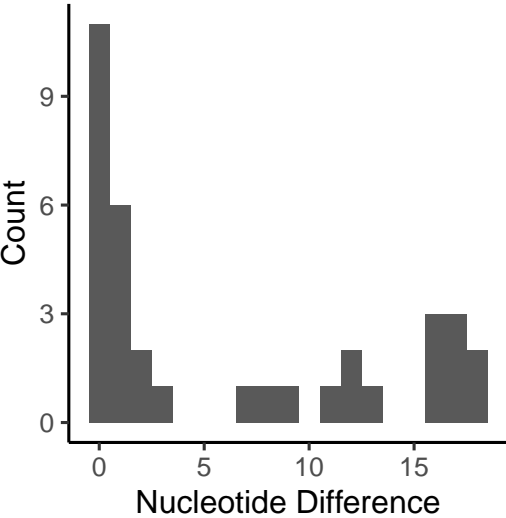
IGHV4-38-2\*01

14 sequences assigned  
4 (28.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



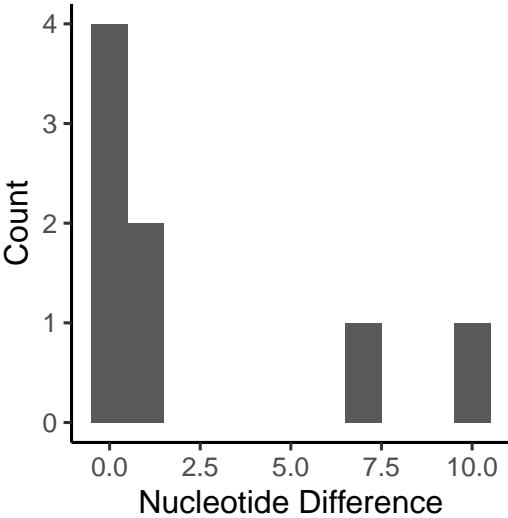
IGHV4-59\*01

40 sequences assigned  
11 (27.5%) exact matches, in which:  
11 unique CDR3  
4 unique J



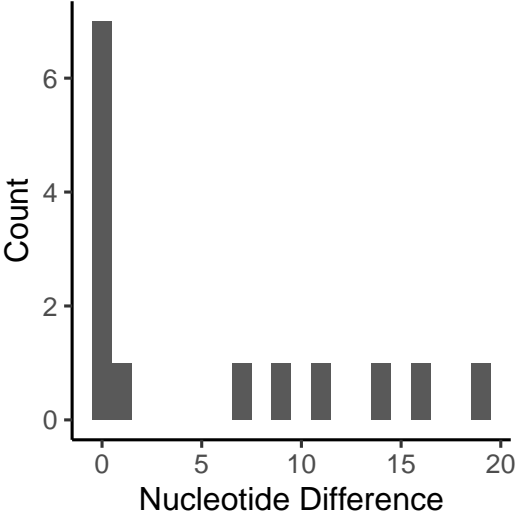
IGHV6-1\*01

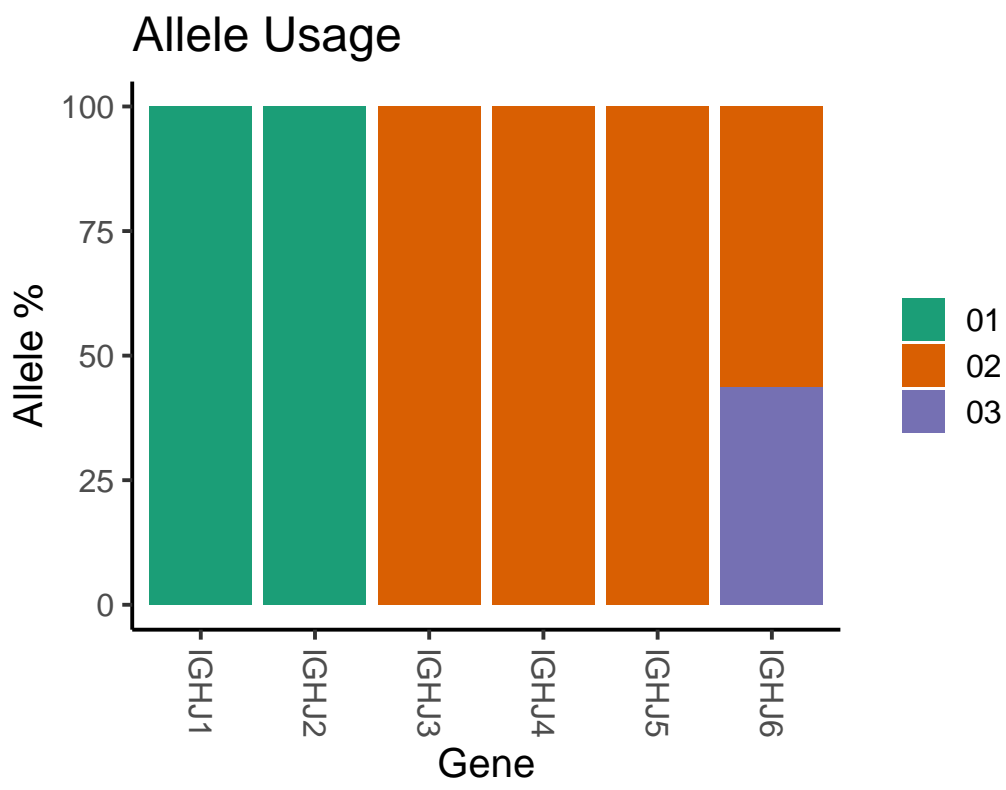
8 sequences assigned  
4 (50%) exact matches, in which:  
4 unique CDR3  
2 unique J



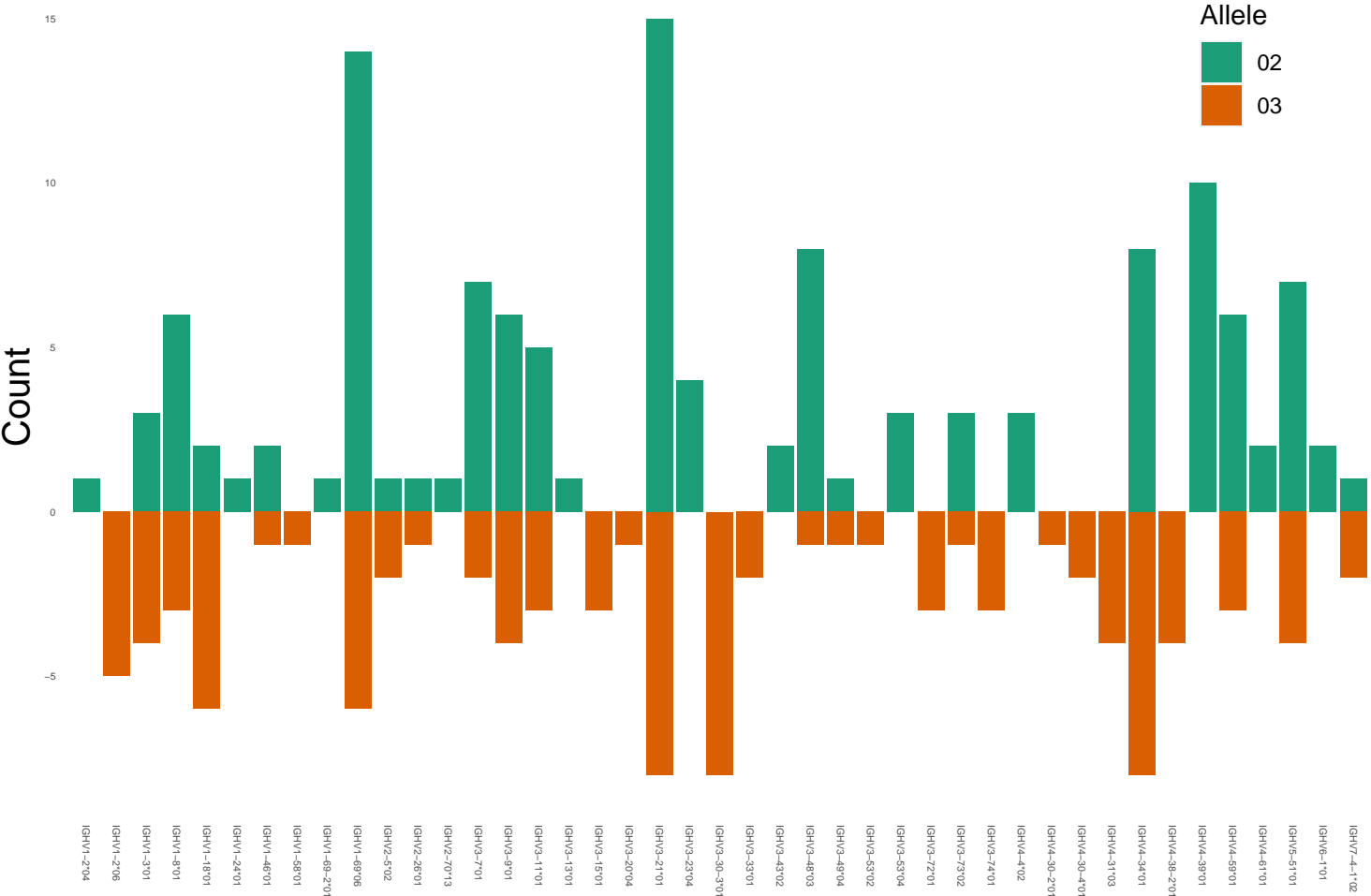
# IGHV7-4-1\*02

22 sequences assigned  
7 (31.8%) exact matches, in which:  
7 unique CDR3  
4 unique J





Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.