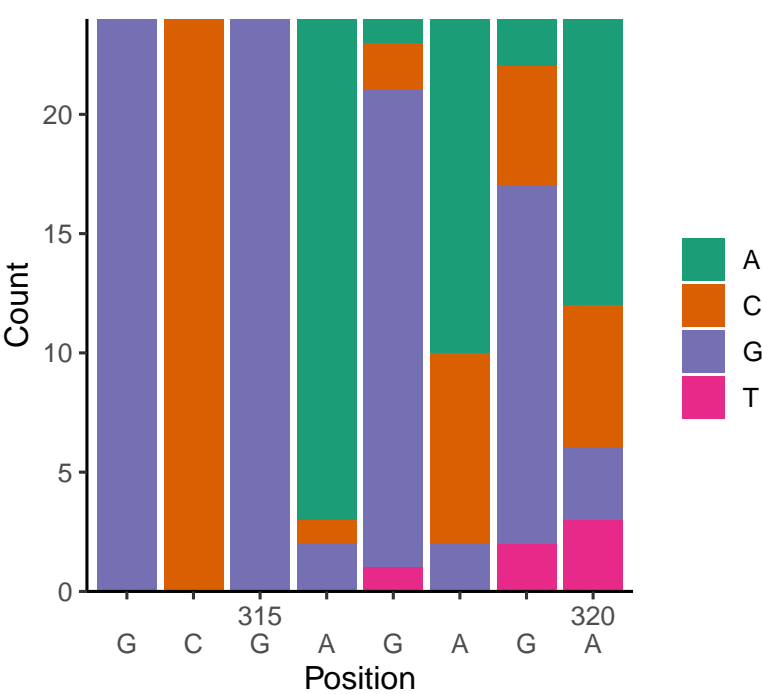
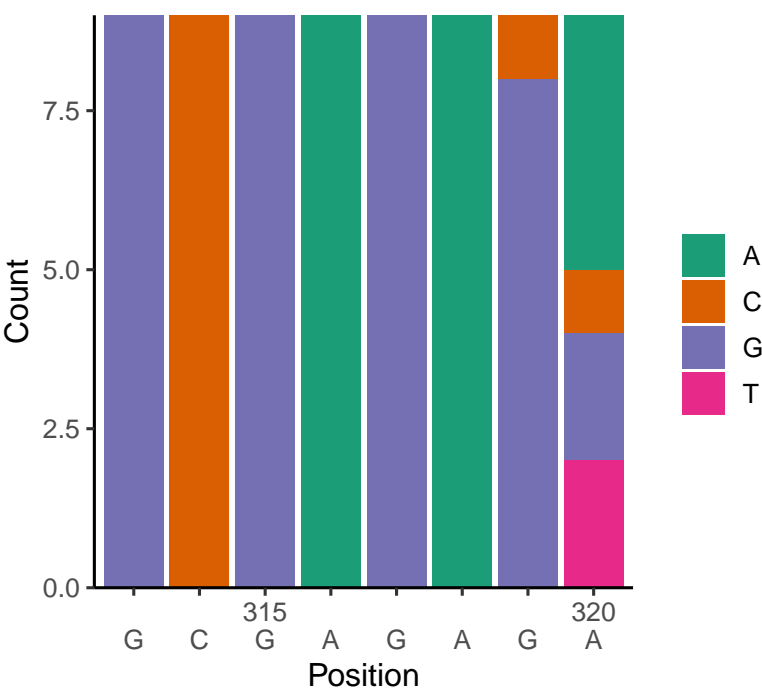


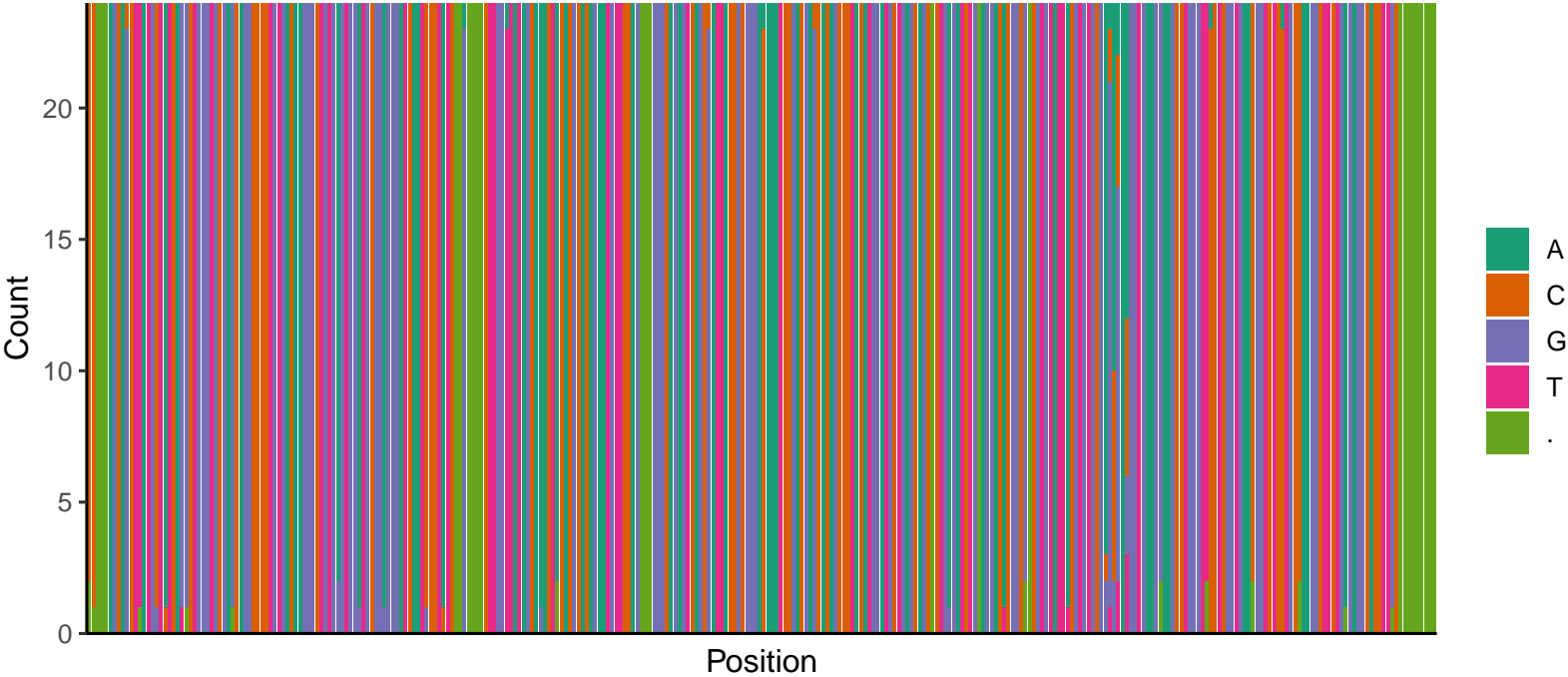
Gene IGHV1-69\*10\_A54G



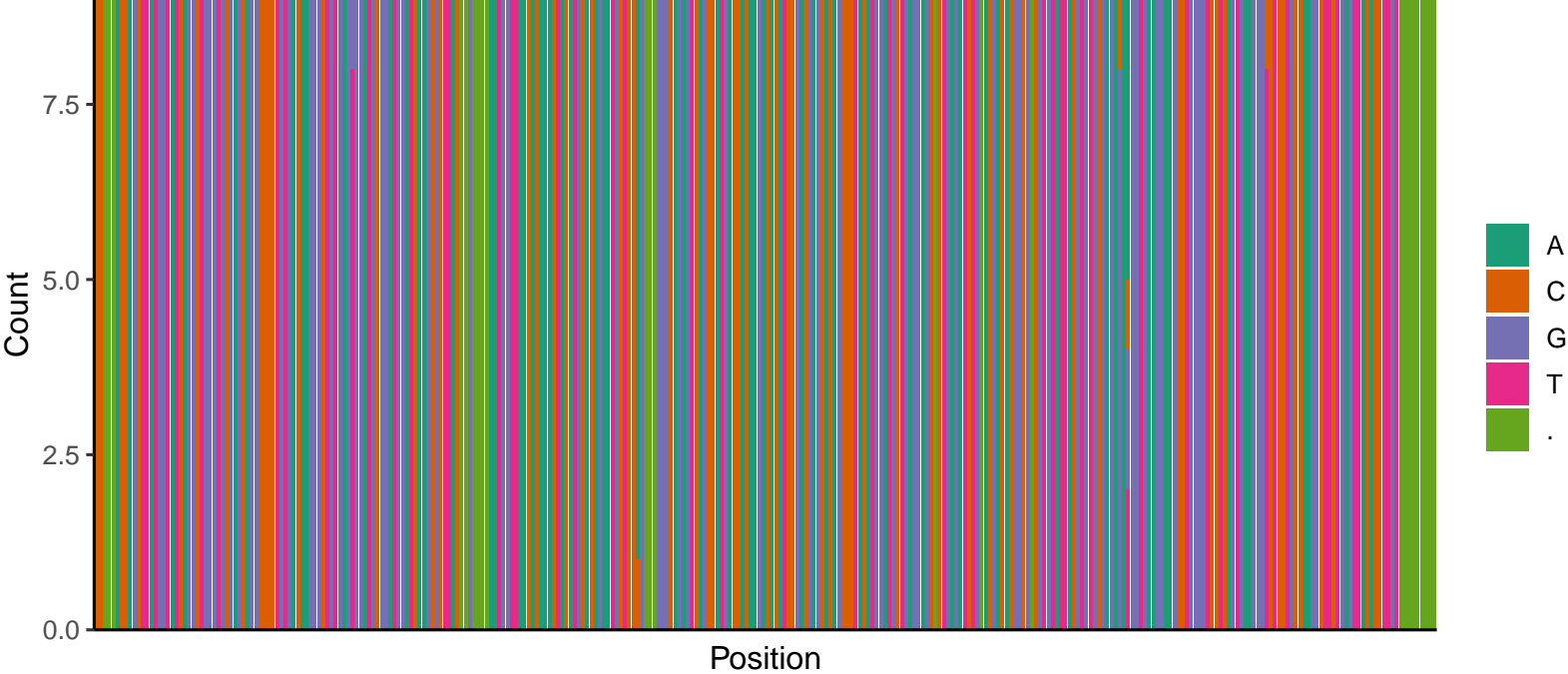
Gene IGHV1-18\*01\_T6G



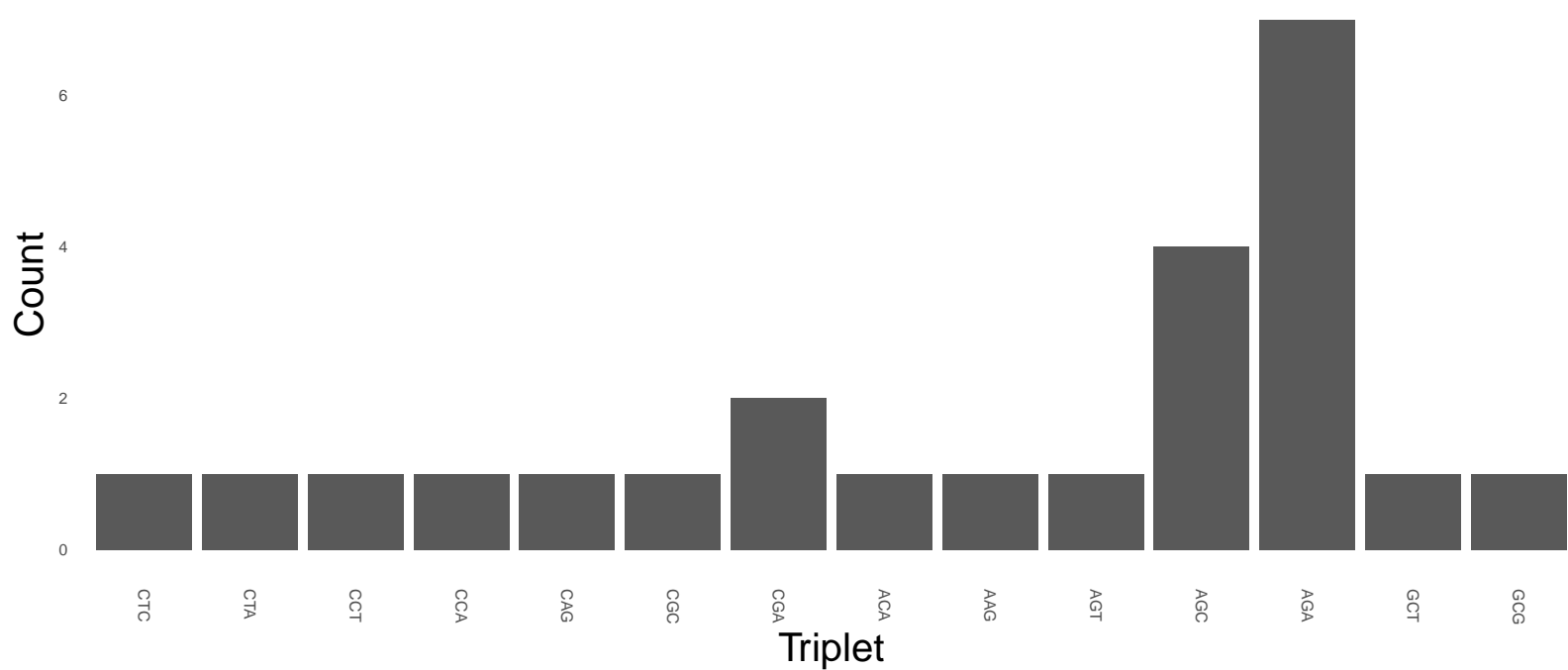
Gene IGHV1-69\*10\_A54G



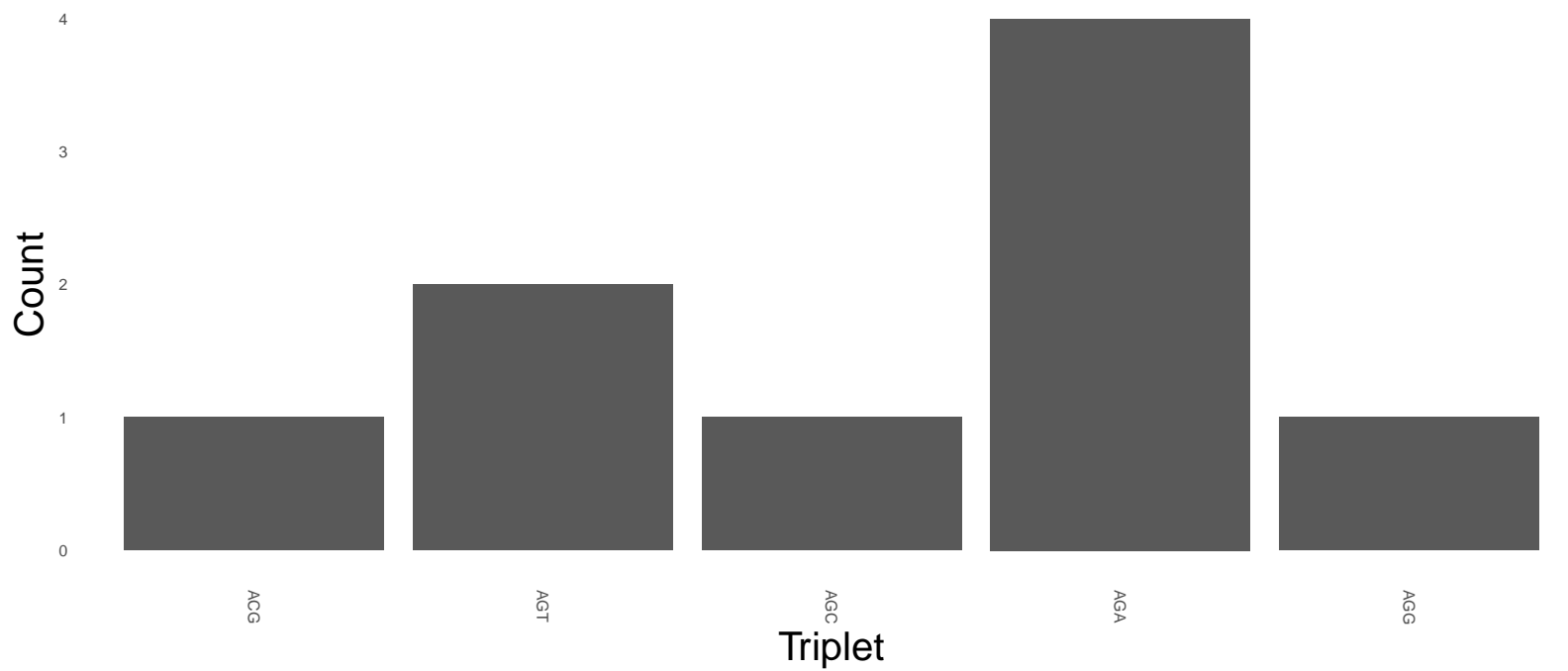
Gene IGHV1-18\*01\_T6G



IGHV1-69\*10\_A54G- Final 3 nucleotides as a triplet

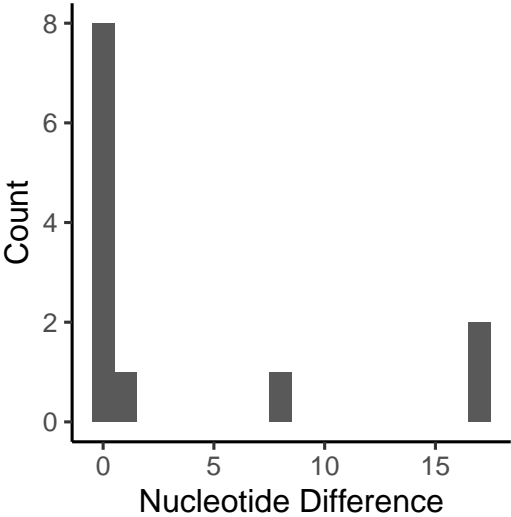


IGHV1-18\*01\_T6G- Final 3 nucleotides as a triplet



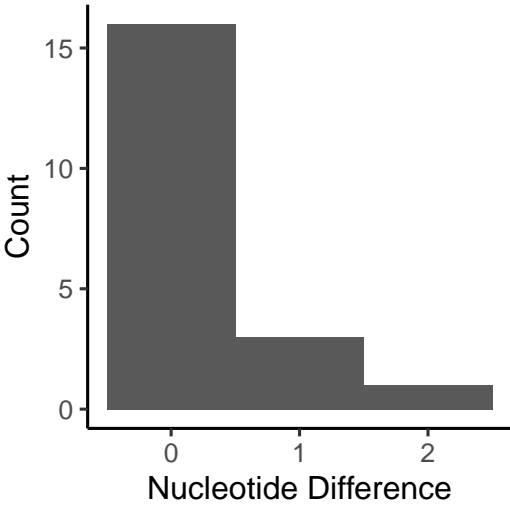
IGHV1-2\*02

13 sequences assigned  
8 (61.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



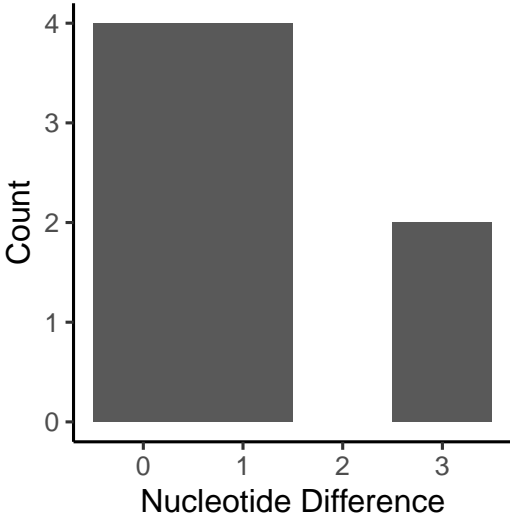
IGHV1-8\*03

20 sequences assigned  
16 (80%) exact matches, in which:  
16 unique CDR3  
5 unique J



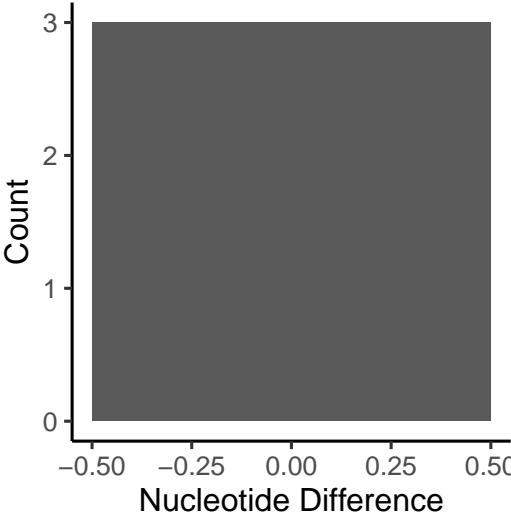
IGHV1-24\*01

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



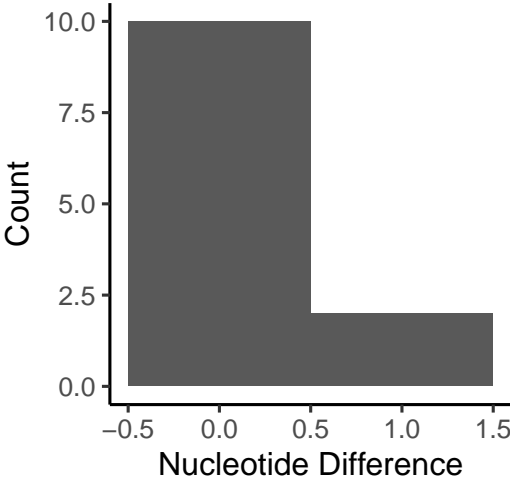
IGHV1-2\*04

3 sequences assigned  
3 (100%) exact matches, in which:  
3 unique CDR3  
3 unique J



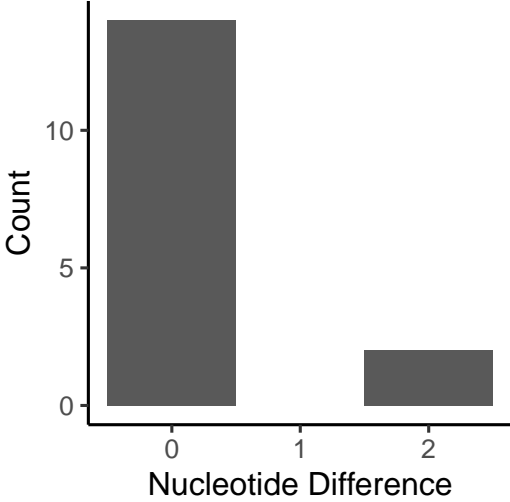
IGHV1-18\*01

12 sequences assigned  
10 (83.3%) exact matches, in which:  
10 unique CDR3  
4 unique J



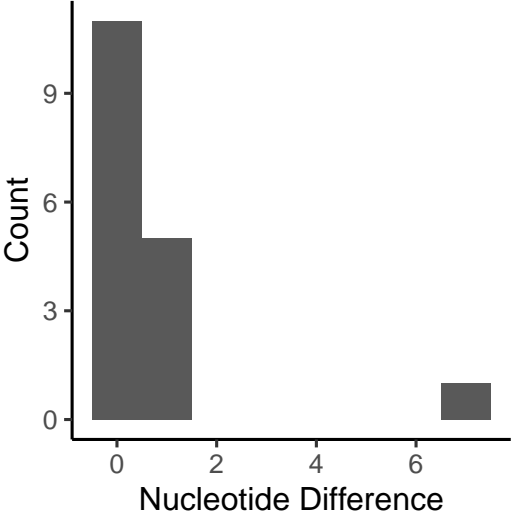
IGHV1-46\*01

16 sequences assigned  
14 (87.5%) exact matches, in which:  
14 unique CDR3  
5 unique J



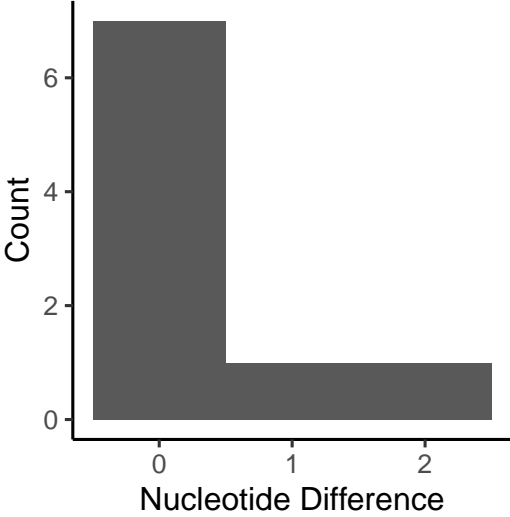
IGHV1-3\*01

17 sequences assigned  
11 (64.7%) exact matches, in which:  
10 unique CDR3  
3 unique J



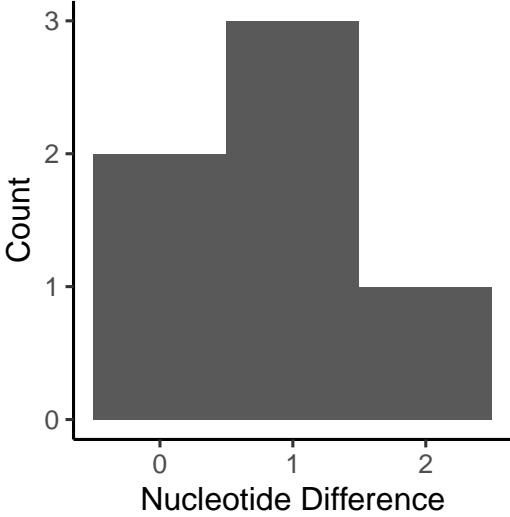
IGHV1-18\*01\_T6G

9 sequences assigned  
7 (77.8%) exact matches, in which:  
7 unique CDR3  
3 unique J



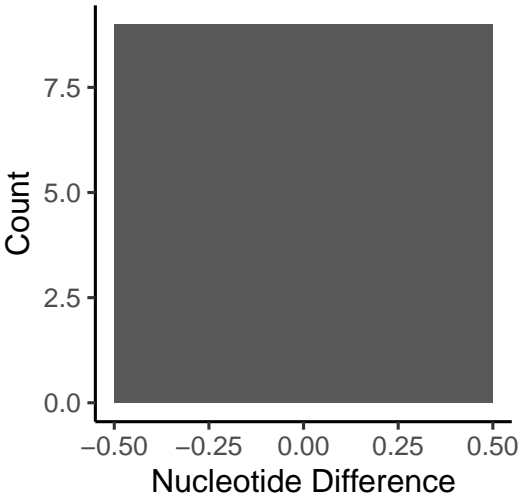
IGHV1-69-2\*01

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



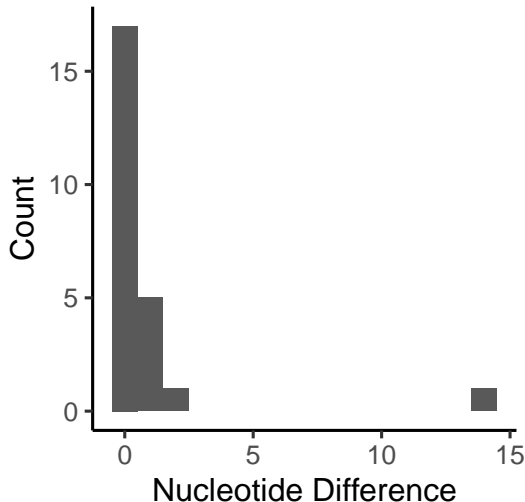
### IGHV1-69\*02

9 sequences assigned  
9 (100%) exact matches, in which:  
9 unique CDR3  
4 unique J



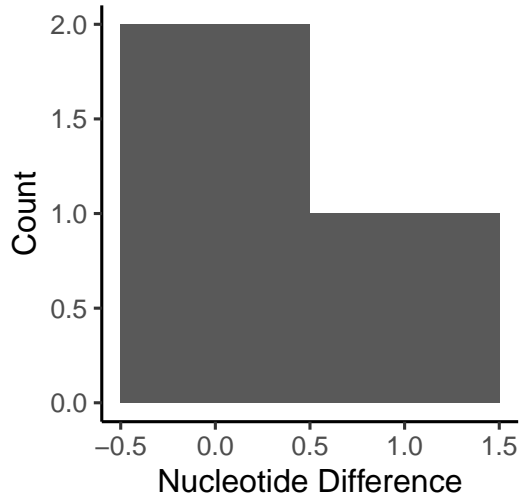
### IGHV1-69\*10\_A54G

24 sequences assigned  
17 (70.8%) exact matches, in which:  
16 unique CDR3  
4 unique J



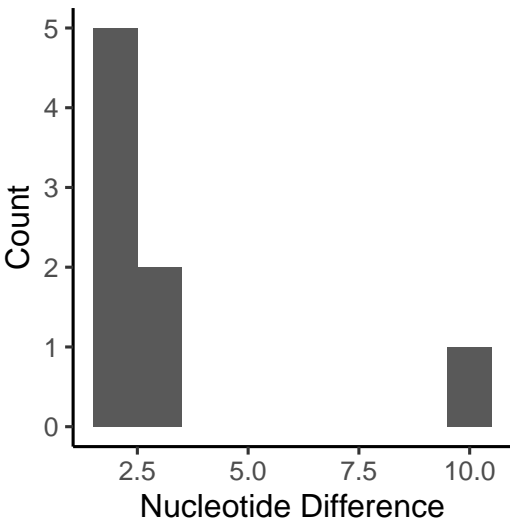
### IGHV2-70\*15

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



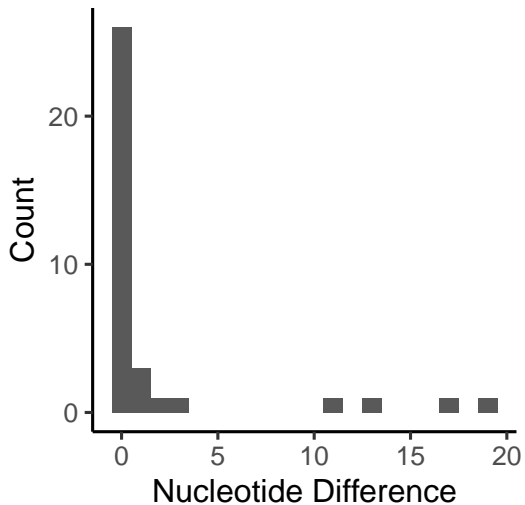
### IGHV1-69\*04

8 sequences assigned  
No exact matches.



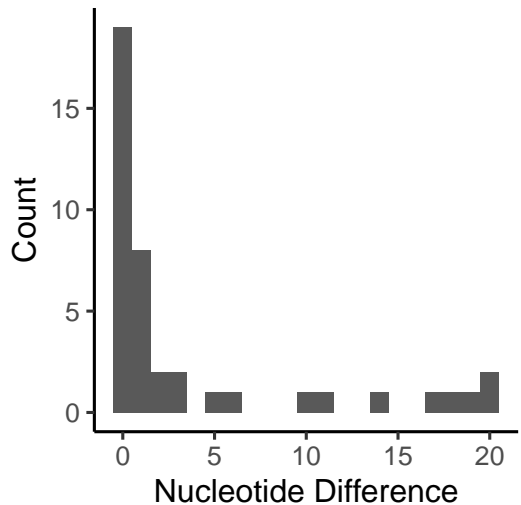
### IGHV2-5\*01

35 sequences assigned  
26 (74.3%) exact matches, in which:  
26 unique CDR3  
4 unique J



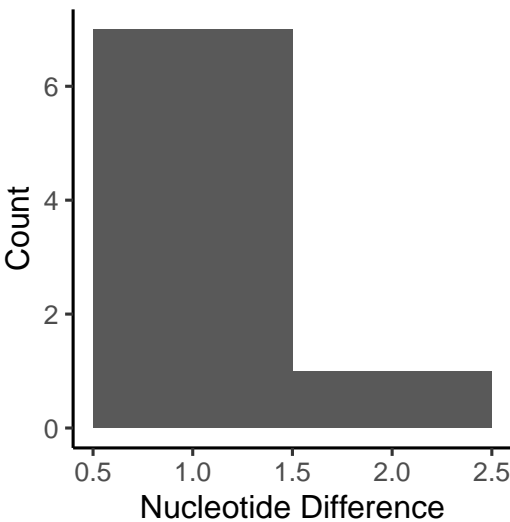
### IGHV3-7\*01

47 sequences assigned  
19 (40.4%) exact matches, in which:  
19 unique CDR3  
6 unique J



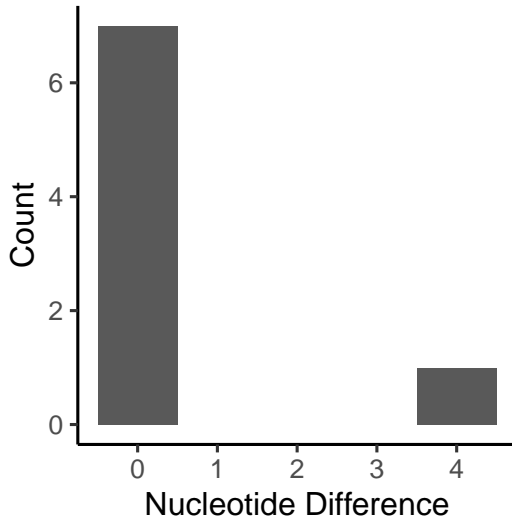
### IGHV1-69\*08

8 sequences assigned  
No exact matches.



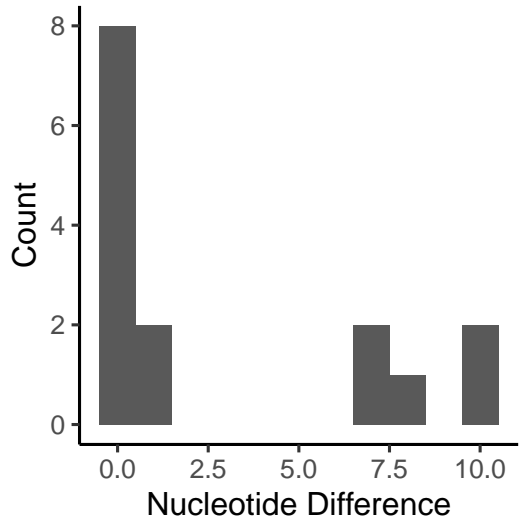
### IGHV2-26\*01

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
4 unique J



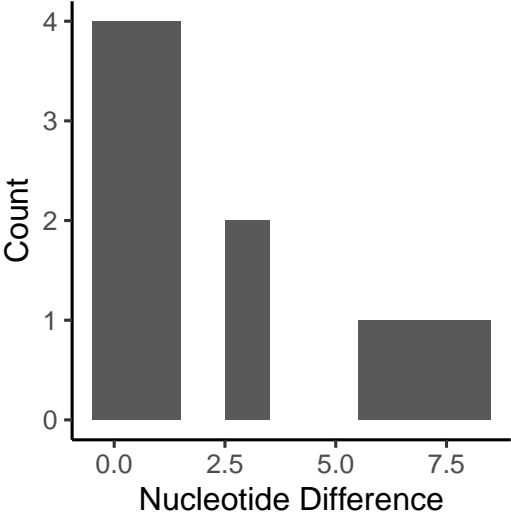
### IGHV3-9\*03

15 sequences assigned  
8 (53.3%) exact matches, in which:  
8 unique CDR3  
2 unique J



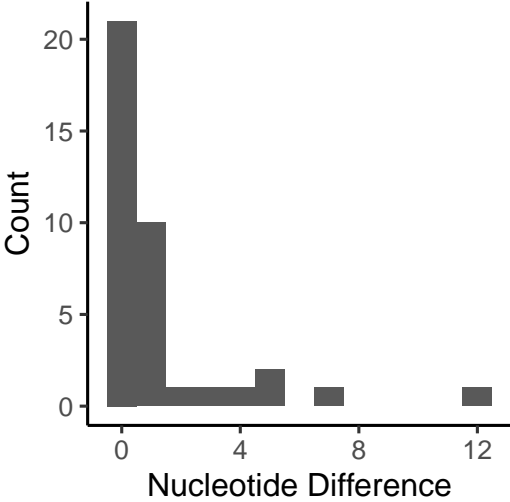
IGHV3-11\*04

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



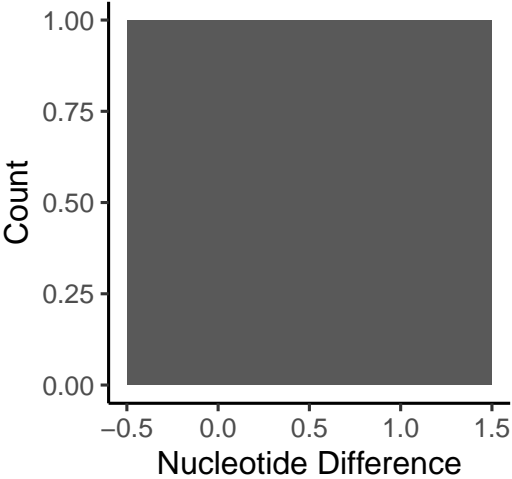
IGHV3-21\*01

38 sequences assigned  
21 (55.3%) exact matches, in which:  
21 unique CDR3  
4 unique J



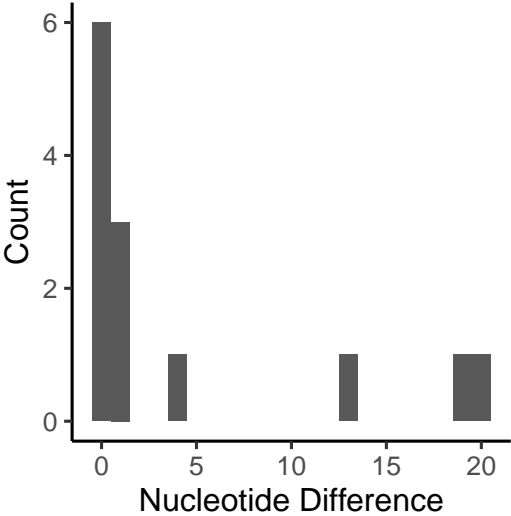
IGHV3-33\*01

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



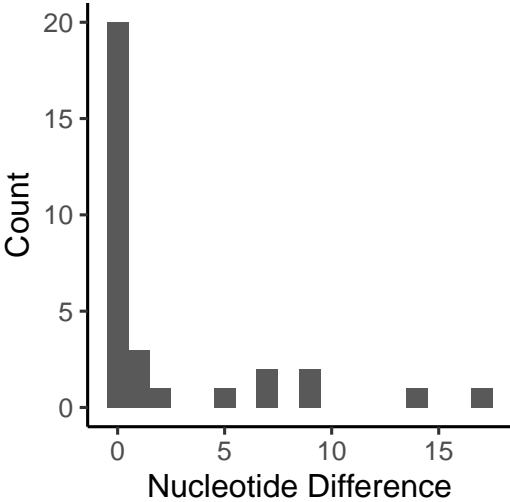
IGHV3-15\*01

13 sequences assigned  
6 (46.2%) exact matches, in which:  
6 unique CDR3  
3 unique J



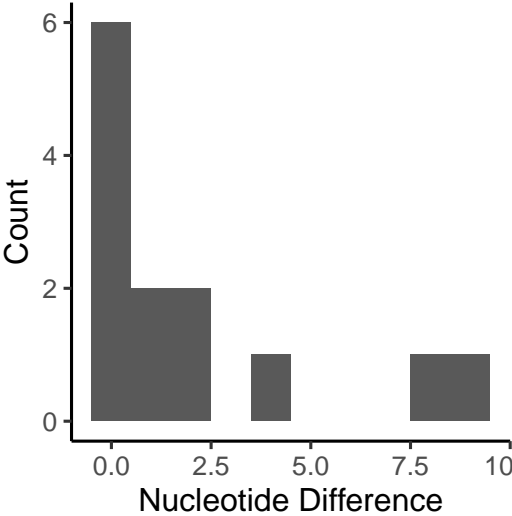
IGHV3-30\*01

31 sequences assigned  
20 (64.5%) exact matches, in which:  
20 unique CDR3  
4 unique J



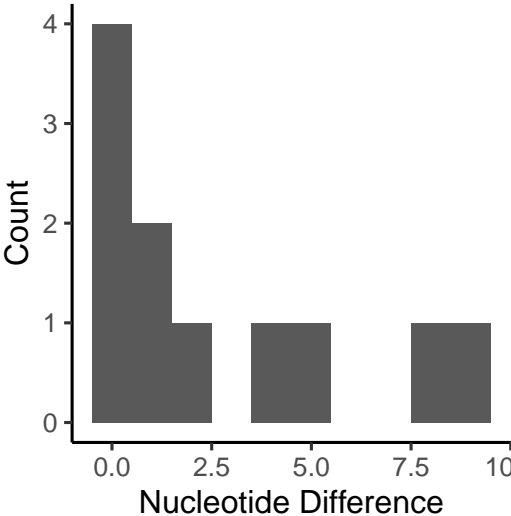
IGHV3-33\*06

13 sequences assigned  
6 (46.2%) exact matches, in which:  
6 unique CDR3  
3 unique J



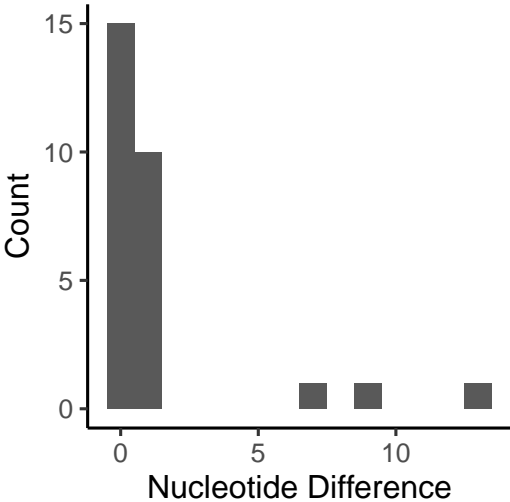
IGHV3-20\*04

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



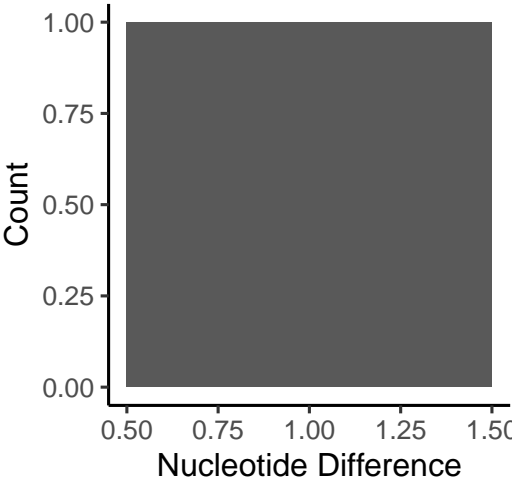
IGHV3-30-3\*01

28 sequences assigned  
15 (53.6%) exact matches, in which:  
15 unique CDR3  
3 unique J



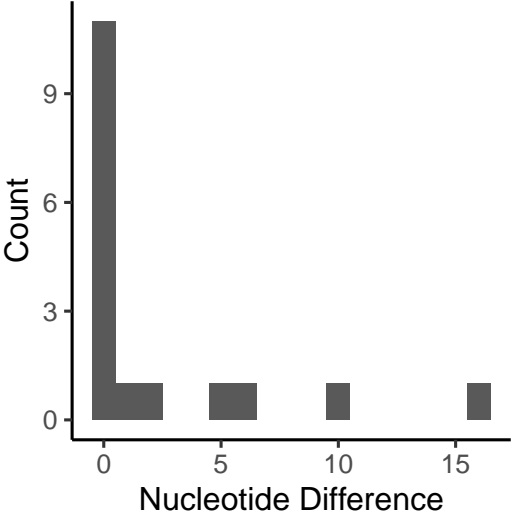
IGHV3-43\*01

2 sequences assigned  
No exact matches.



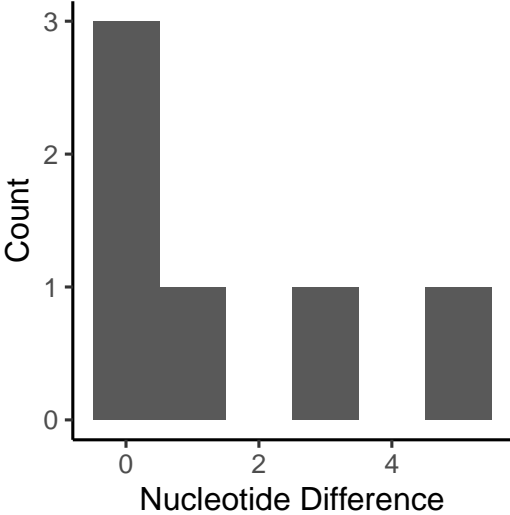
IGHV3-48\*03

18 sequences assigned  
11 (61.1%) exact matches, in which:  
11 unique CDR3  
3 unique J



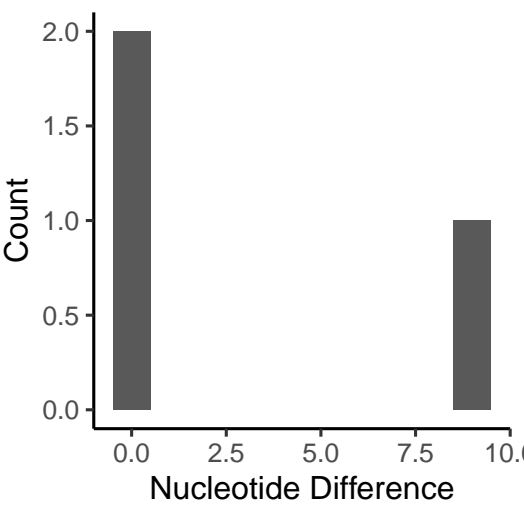
IGHV3-49\*04

6 sequences assigned  
3 (50%) exact matches, in which:  
3 unique CDR3  
2 unique J



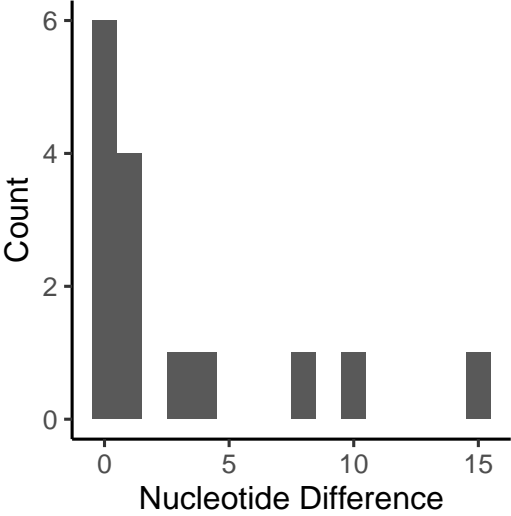
IGHV3-64\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



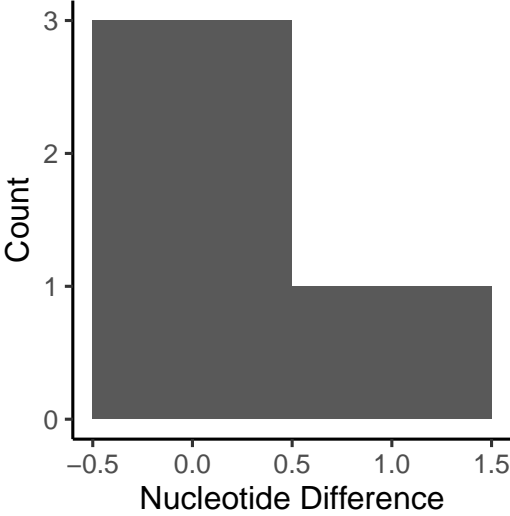
IGHV3-48\*04

18 sequences assigned  
6 (33.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



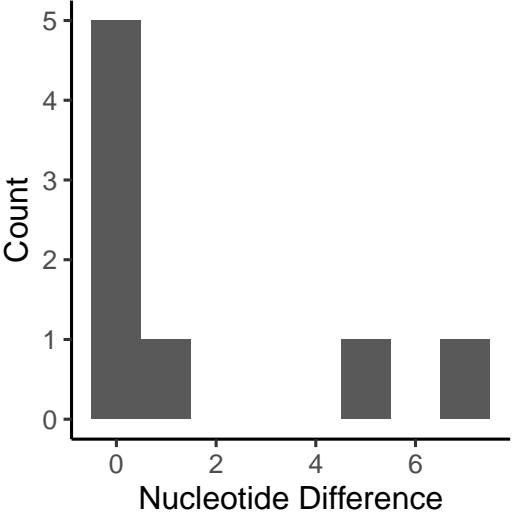
IGHV3-53\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



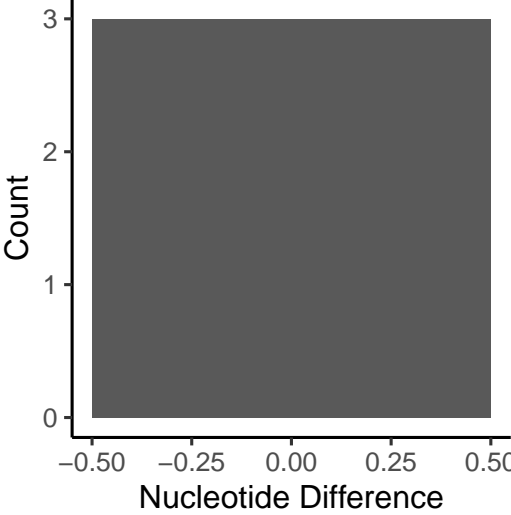
IGHV3-66\*02

8 sequences assigned  
5 (62.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



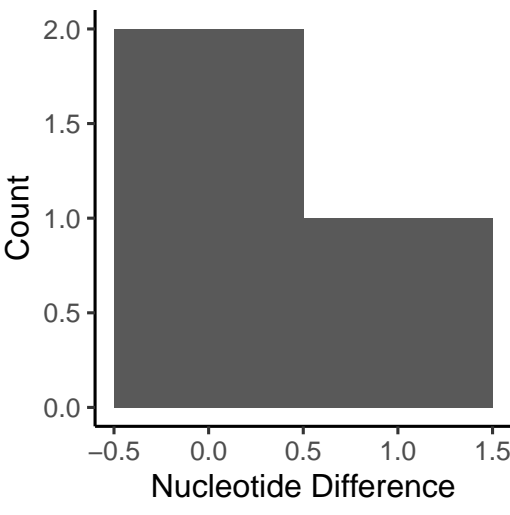
IGHV3-49\*03

3 sequences assigned  
3 (100%) exact matches, in which:  
3 unique CDR3  
2 unique J



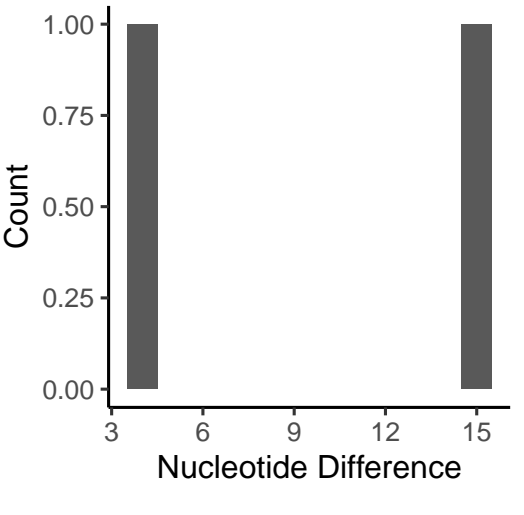
IGHV3-53\*04

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



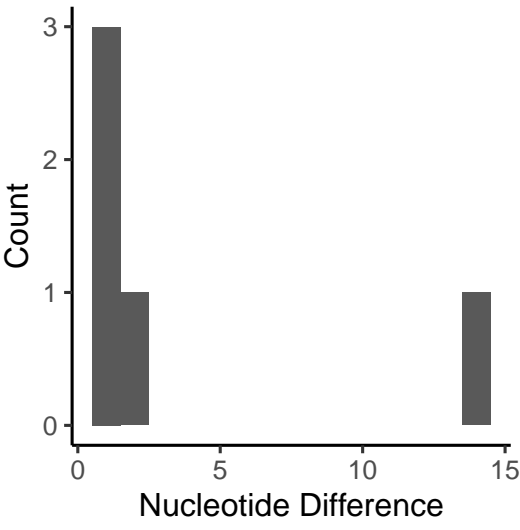
IGHV3-72\*01

2 sequences assigned  
No exact matches.



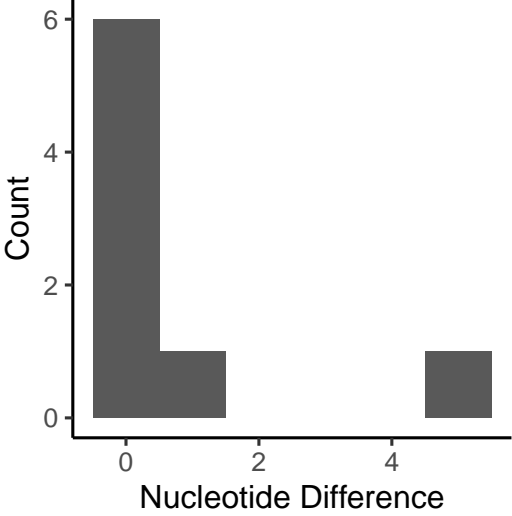
IGHV3-73\*01

5 sequences assigned  
No exact matches.



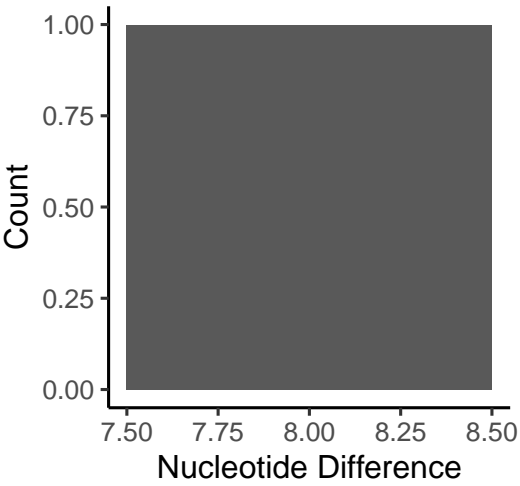
IGHV3-43D\*04

8 sequences assigned  
6 (75%) exact matches, in which:  
6 unique CDR3  
1 unique J



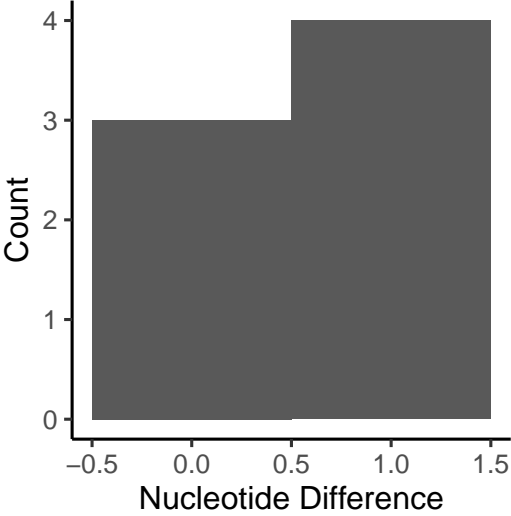
IGHV4-30-4\*01

1 sequences assigned  
No exact matches.



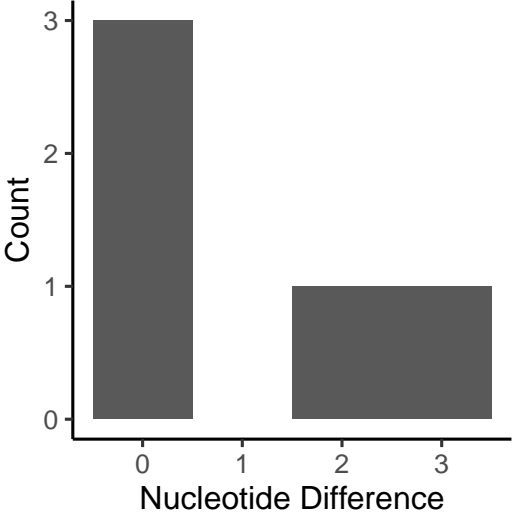
IGHV3-74\*01

7 sequences assigned  
3 (42.9%) exact matches, in which:  
3 unique CDR3  
3 unique J



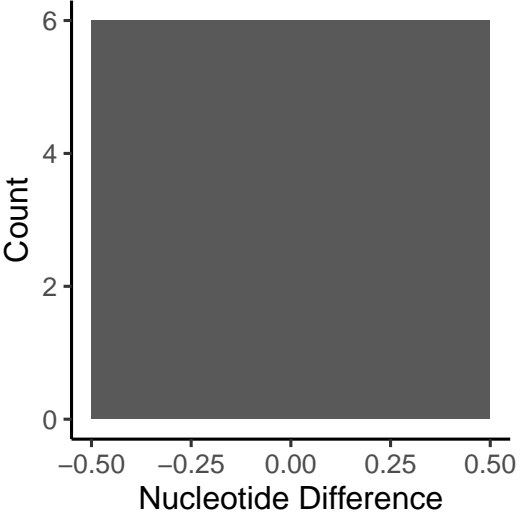
IGHV4-4\*02

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
3 unique J



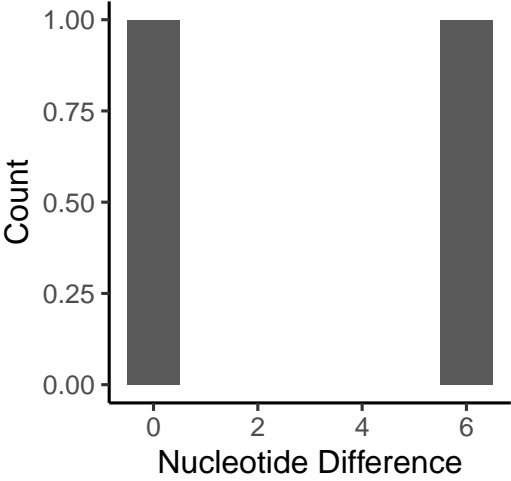
IGHV4-30-4\*08

6 sequences assigned  
6 (100%) exact matches, in which:  
6 unique CDR3  
4 unique J



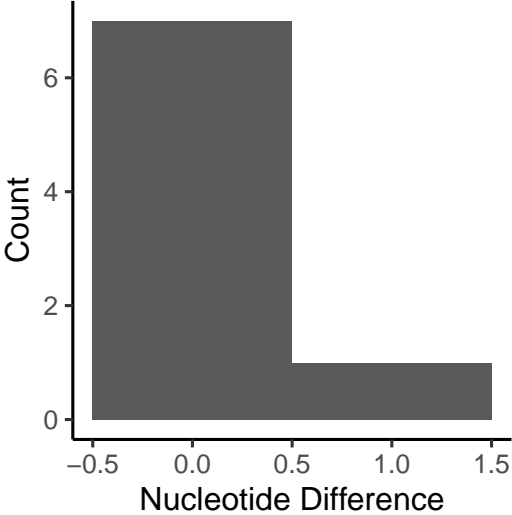
IGHV3-74\*02

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



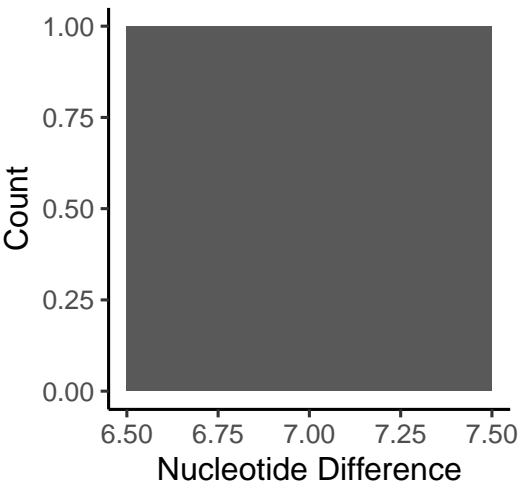
IGHV4-4\*07

9 sequences assigned  
7 (77.8%) exact matches, in which:  
7 unique CDR3  
5 unique J



IGHV4-31\*01

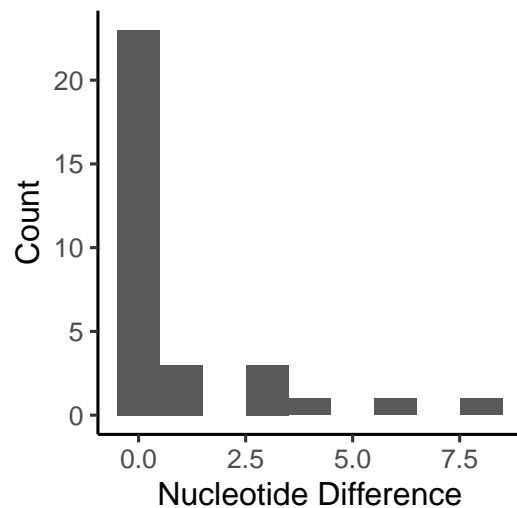
1 sequences assigned  
No exact matches.





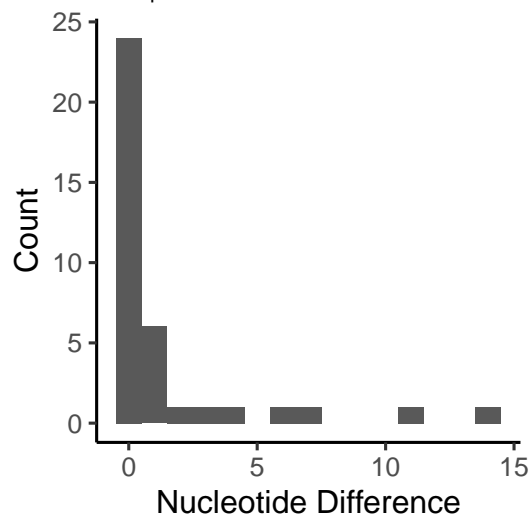
### IGHV4-34\*01

33 sequences assigned  
23 (69.7%) exact matches, in which:  
23 unique CDR3  
5 unique J



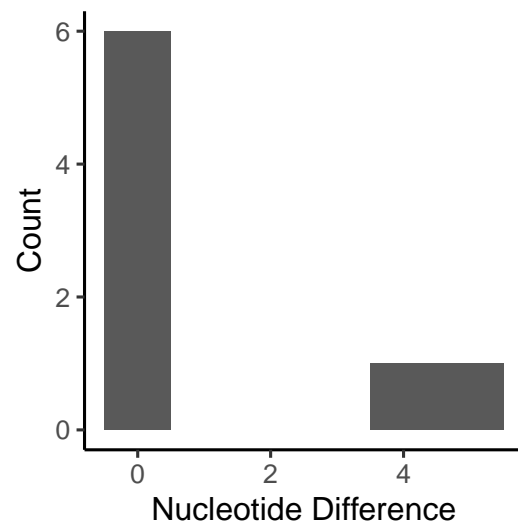
### IGHV4-39\*07

40 sequences assigned  
24 (60%) exact matches, in which:  
24 unique CDR3  
5 unique J



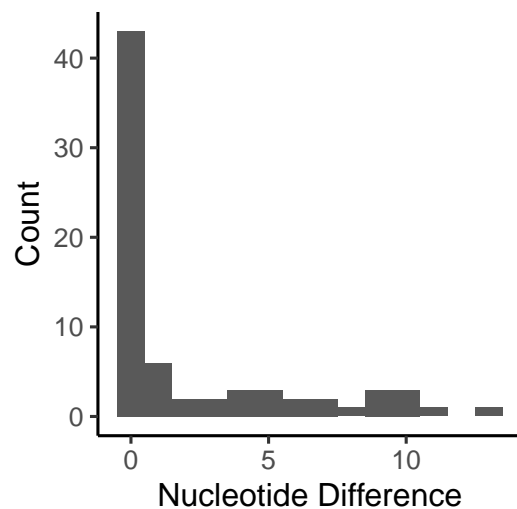
### IGHV4-59\*11

8 sequences assigned  
6 (75%) exact matches, in which:  
6 unique CDR3  
4 unique J



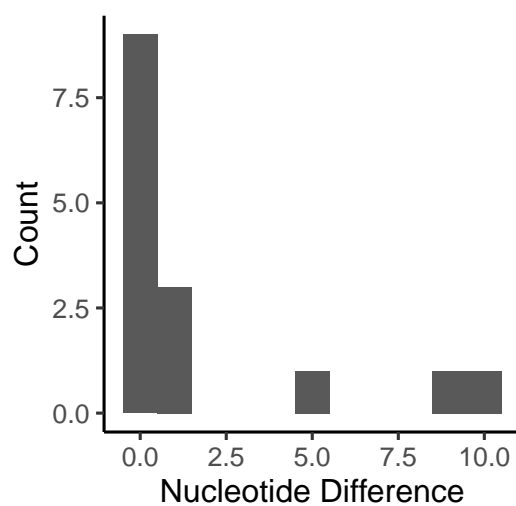
### IGHV4-38-2\*01

72 sequences assigned  
43 (59.7%) exact matches, in which:  
43 unique CDR3  
6 unique J



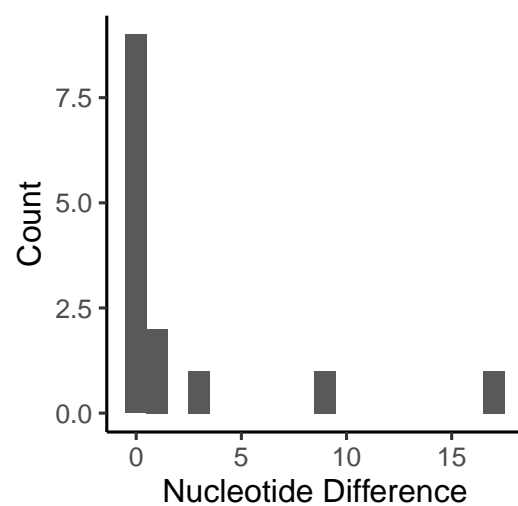
### IGHV4-59\*01

15 sequences assigned  
9 (60%) exact matches, in which:  
9 unique CDR3  
4 unique J



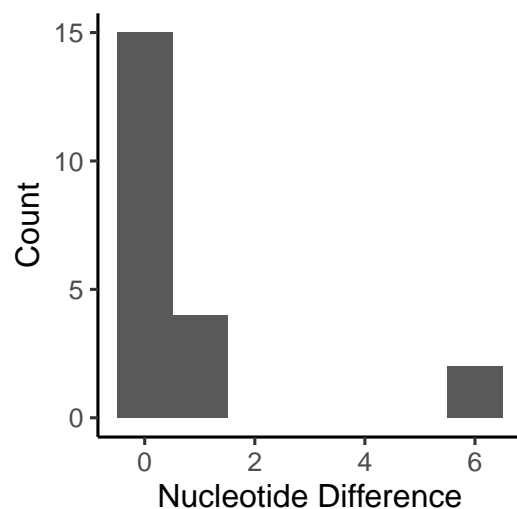
### IGHV4-61\*02

14 sequences assigned  
9 (64.3%) exact matches, in which:  
9 unique CDR3  
3 unique J



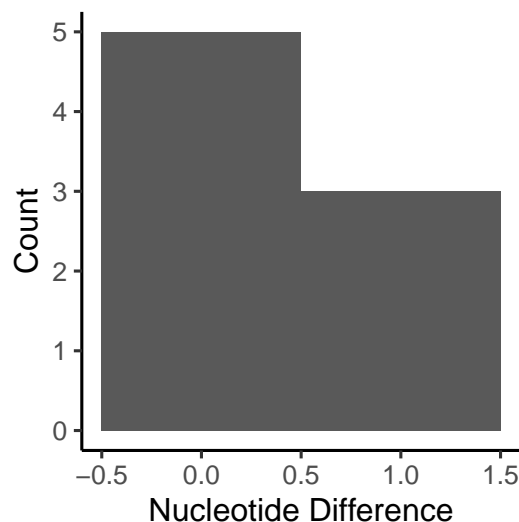
### IGHV4-39\*01

21 sequences assigned  
15 (71.4%) exact matches, in which:  
14 unique CDR3  
5 unique J



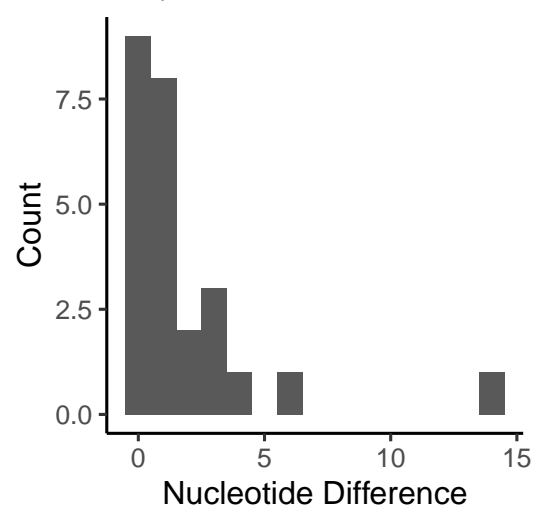
### IGHV4-59\*08

8 sequences assigned  
5 (62.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



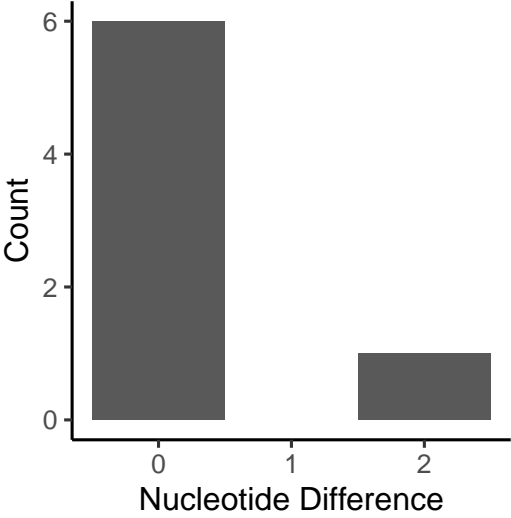
### IGHV5-51\*01

28 sequences assigned  
9 (32.1%) exact matches, in which:  
9 unique CDR3  
3 unique J

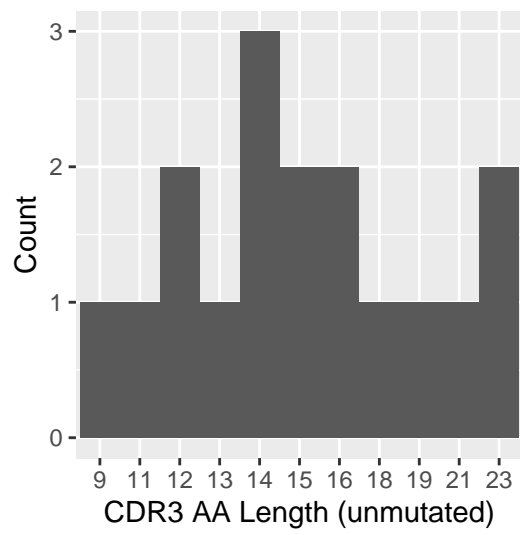


# IGHV6-1\*01

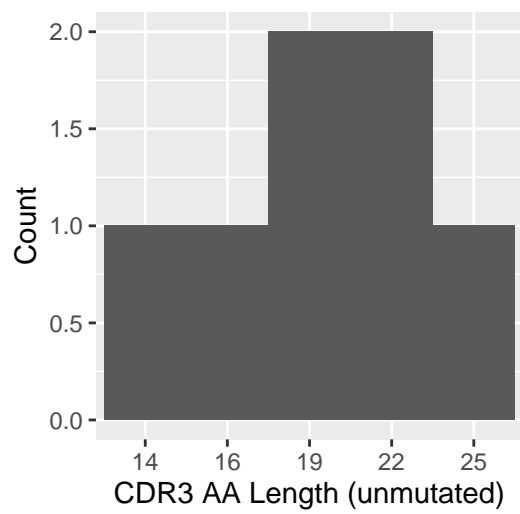
7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



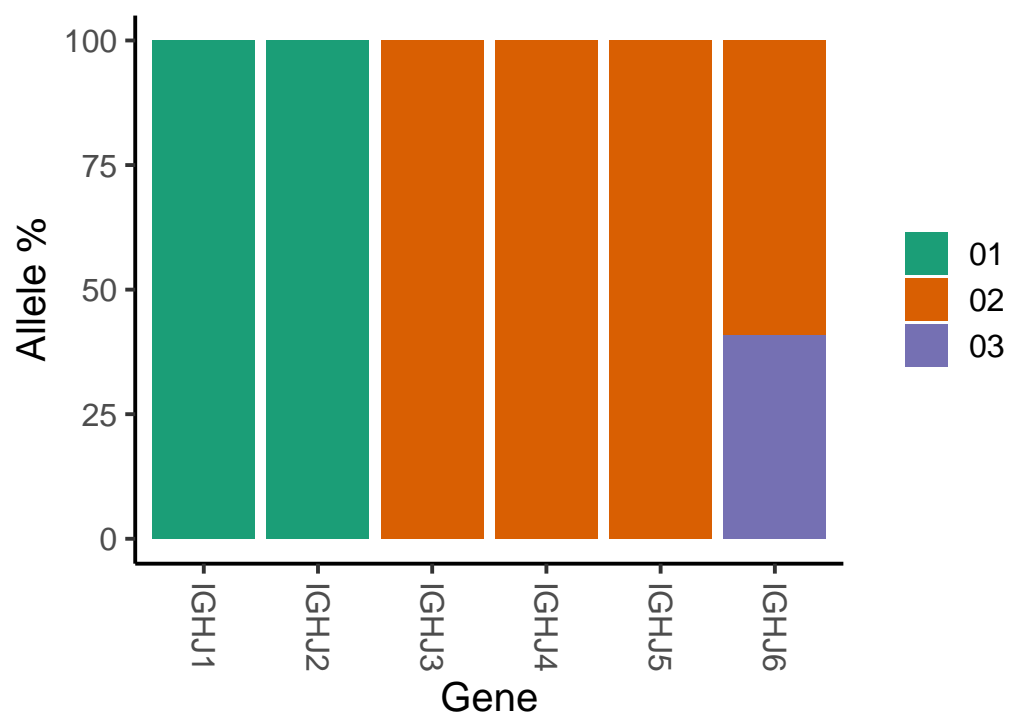
IGHV1-69\*10\_A54G



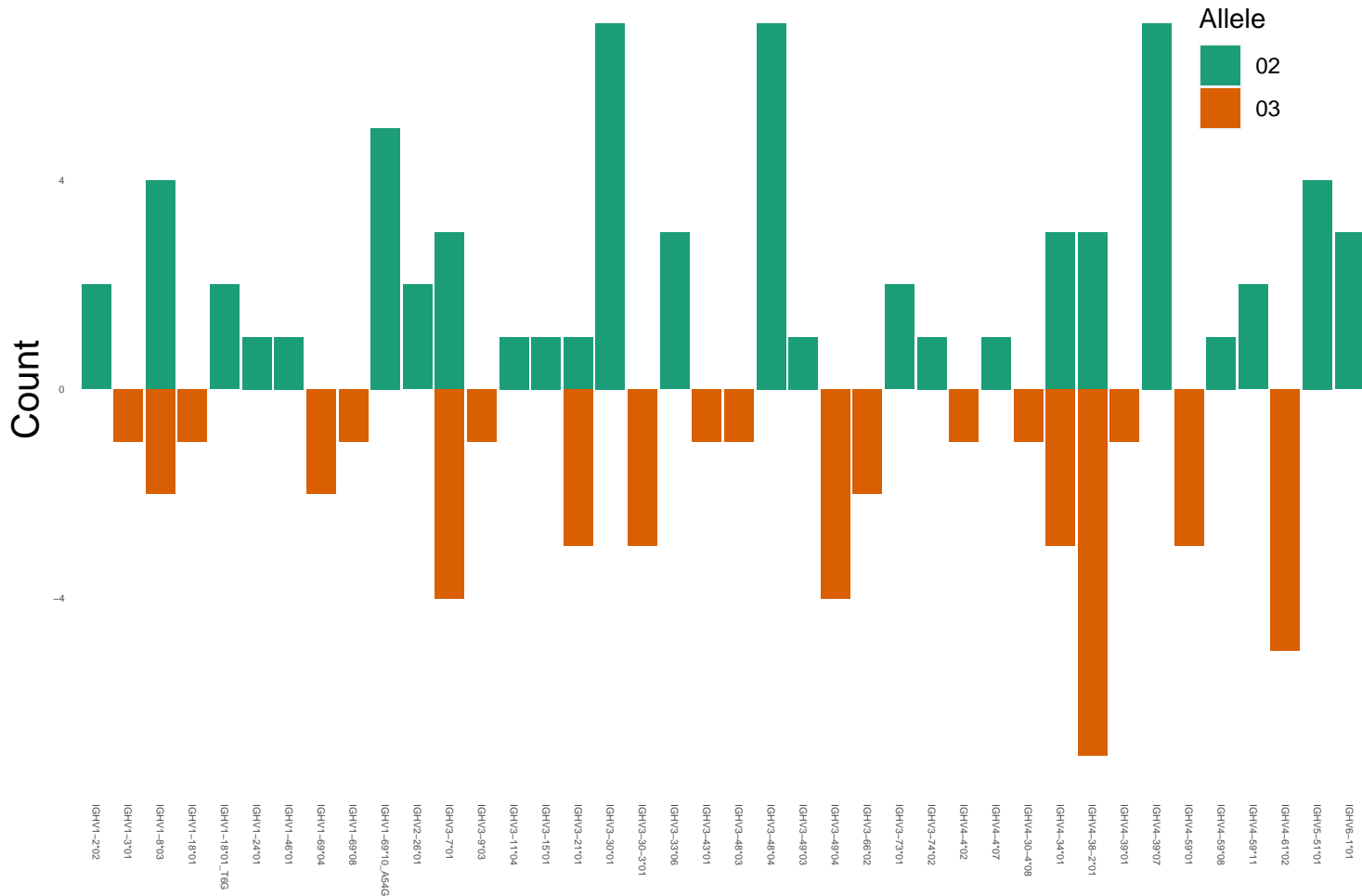
IGHV1-18\*01\_T6G



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]