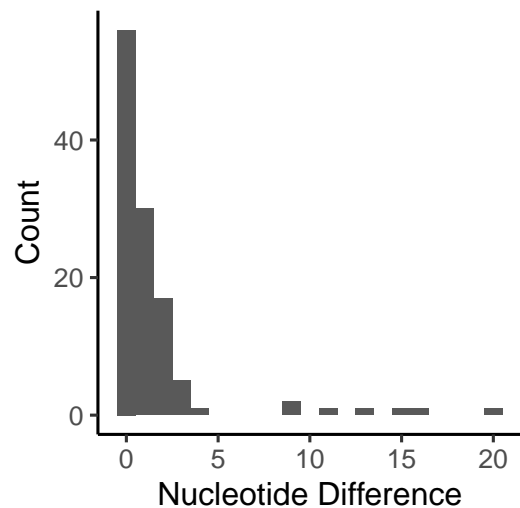


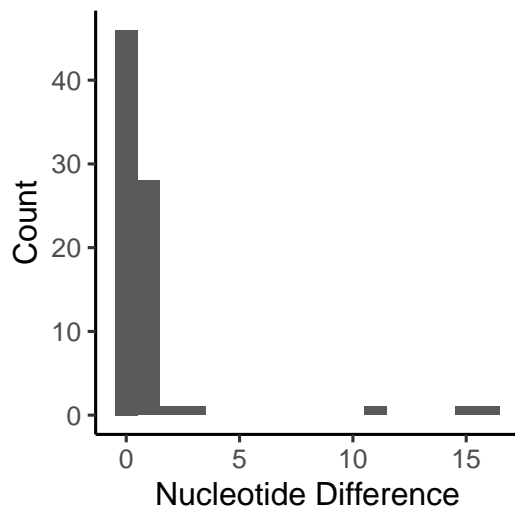
### IGHV1-2\*06

123 sequences assigned  
56 (45.5%) exact matches, in which:  
56 unique CDR3  
6 unique J



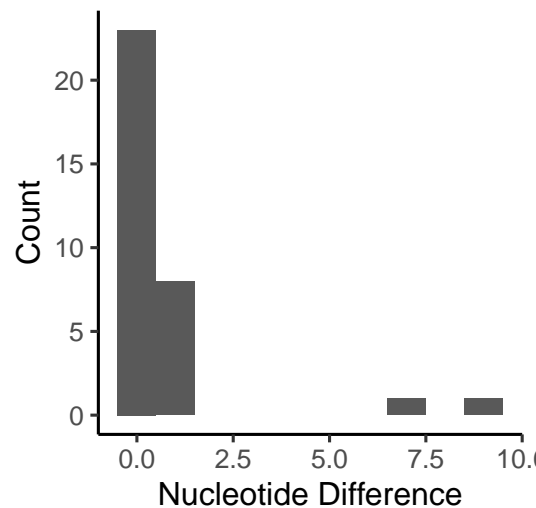
### IGHV1-18\*01

83 sequences assigned  
46 (55.4%) exact matches, in which:  
46 unique CDR3  
6 unique J



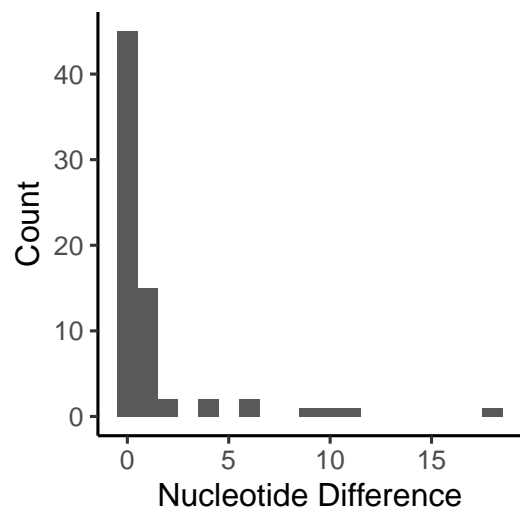
### IGHV1-46\*01

35 sequences assigned  
23 (65.7%) exact matches, in which:  
23 unique CDR3  
4 unique J



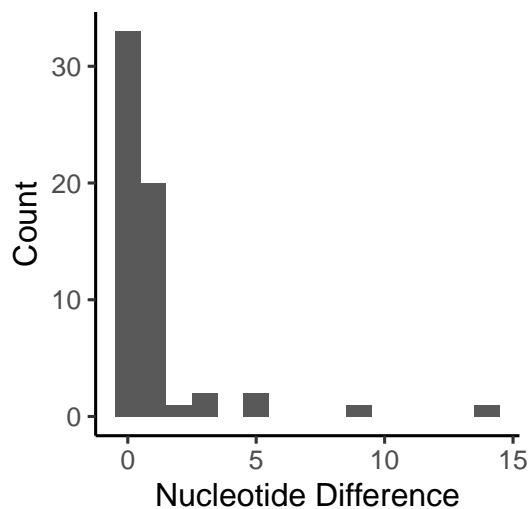
### IGHV1-3\*01

73 sequences assigned  
45 (61.6%) exact matches, in which:  
45 unique CDR3  
6 unique J



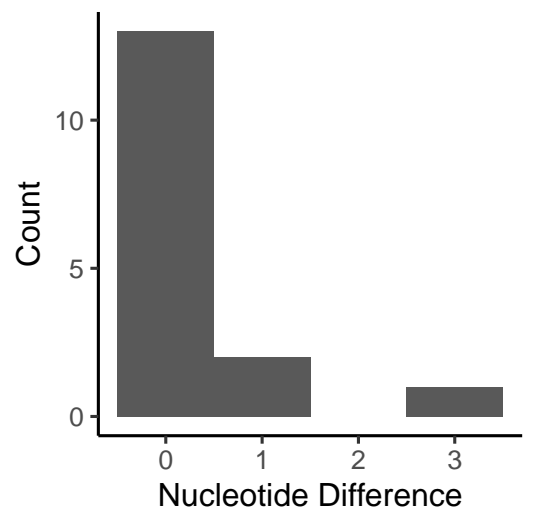
### IGHV1-18\*04

61 sequences assigned  
33 (54.1%) exact matches, in which:  
33 unique CDR3  
4 unique J



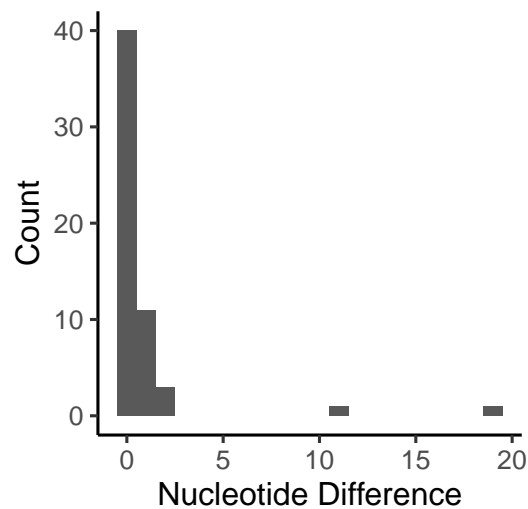
### IGHV1-46\*03

19 sequences assigned  
13 (68.4%) exact matches, in which:  
13 unique CDR3  
5 unique J



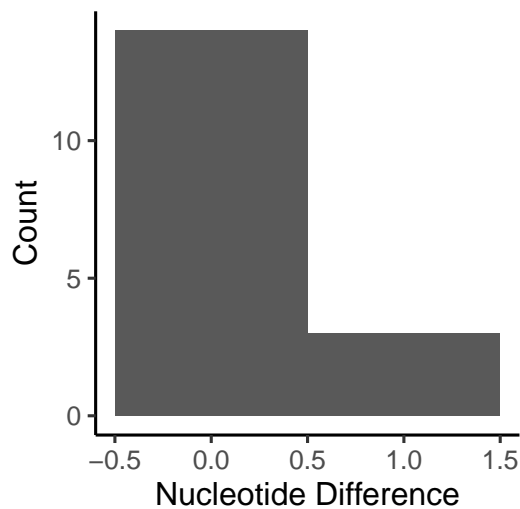
### IGHV1-8\*01

56 sequences assigned  
40 (71.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



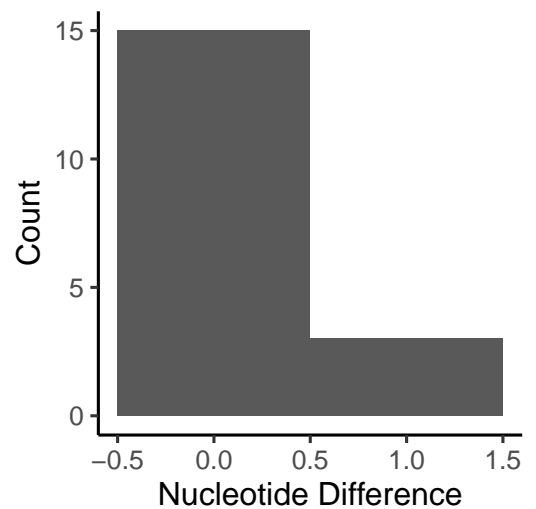
### IGHV1-24\*01

17 sequences assigned  
14 (82.4%) exact matches, in which:  
14 unique CDR3  
4 unique J



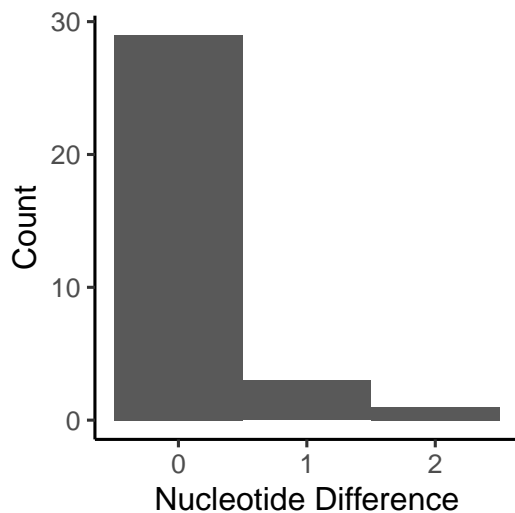
### IGHV1-58\*01

18 sequences assigned  
15 (83.3%) exact matches, in which:  
15 unique CDR3  
5 unique J



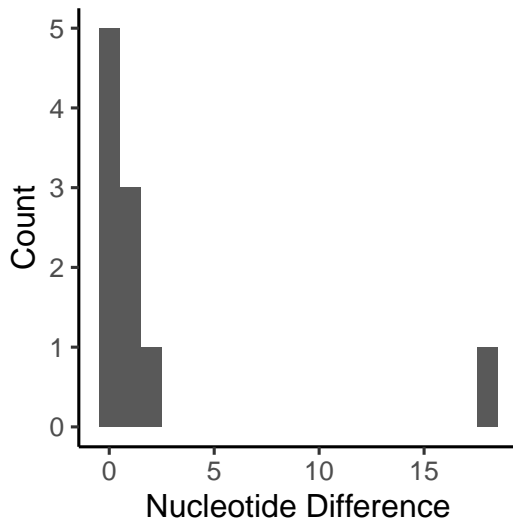
### IGHV2-5\*01

33 sequences assigned  
29 (87.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



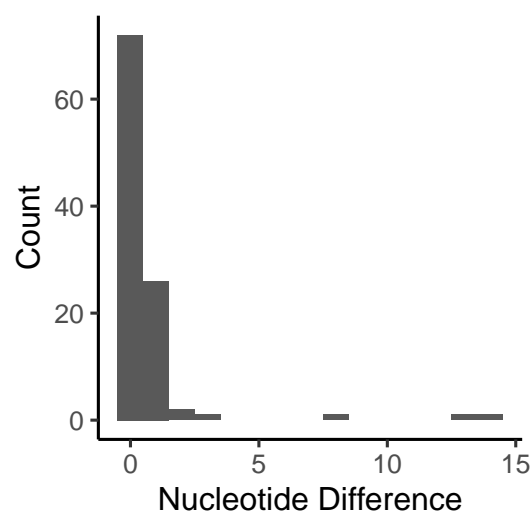
### IGHV2-70\*01

10 sequences assigned  
5 (50%) exact matches, in which:  
5 unique CDR3  
4 unique J



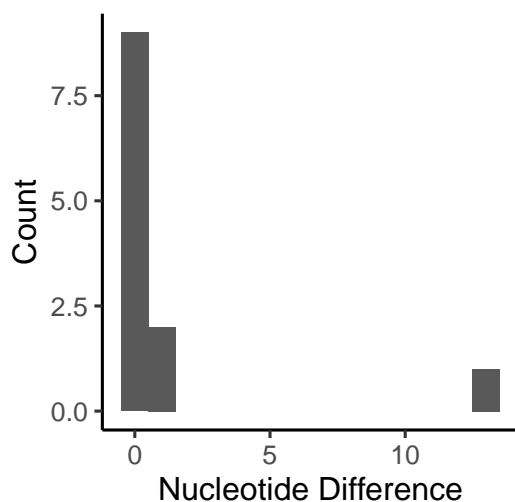
### IGHV3-9\*01

105 sequences assigned  
72 (68.6%) exact matches, in which:  
72 unique CDR3  
5 unique J



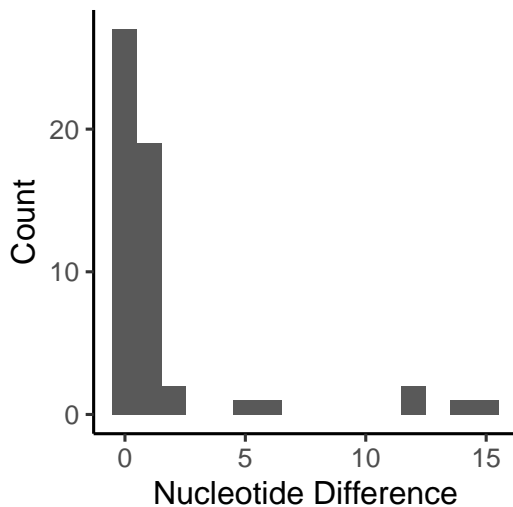
### IGHV2-5\*02

12 sequences assigned  
9 (75%) exact matches, in which:  
9 unique CDR3  
3 unique J



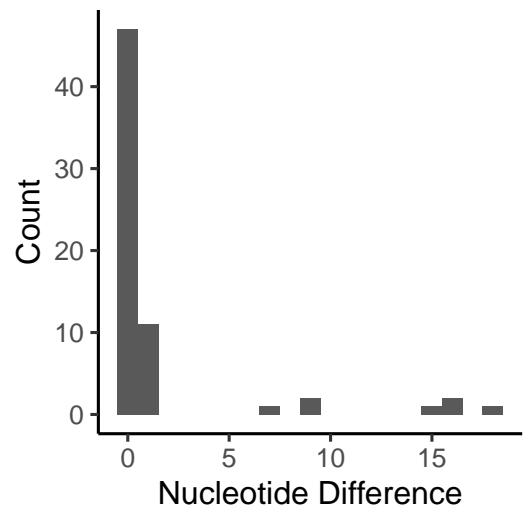
### IGHV3-7\*01

57 sequences assigned  
27 (47.4%) exact matches, in which:  
27 unique CDR3  
4 unique J



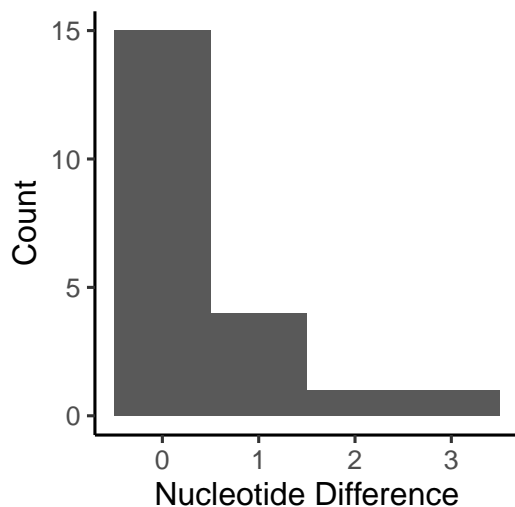
### IGHV3-11\*01

74 sequences assigned  
47 (63.5%) exact matches, in which:  
47 unique CDR3  
5 unique J



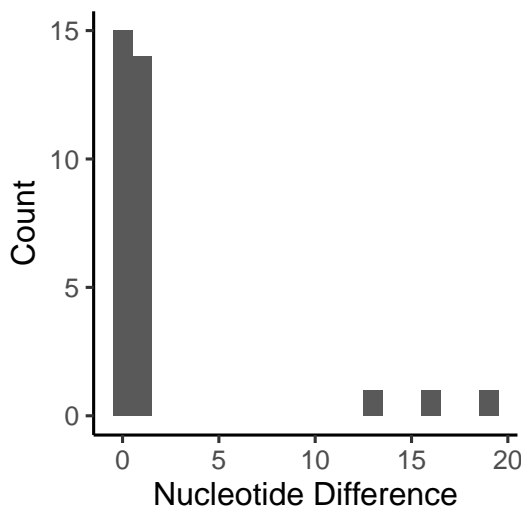
### IGHV2-26\*01

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



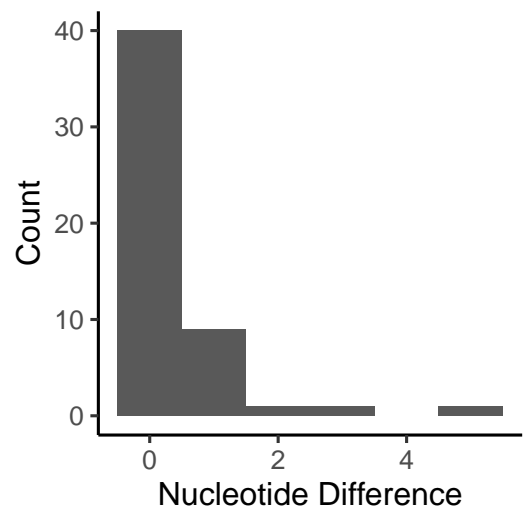
### IGHV3-7\*03

37 sequences assigned  
15 (40.5%) exact matches, in which:  
15 unique CDR3  
4 unique J



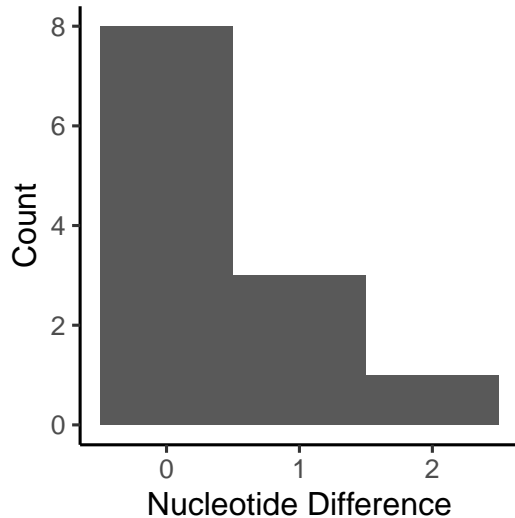
### IGHV3-11\*06

53 sequences assigned  
40 (75.5%) exact matches, in which:  
40 unique CDR3  
5 unique J



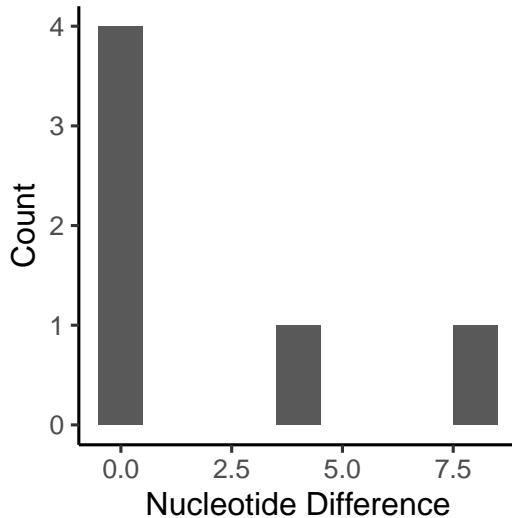
### IGHV3-13\*01

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



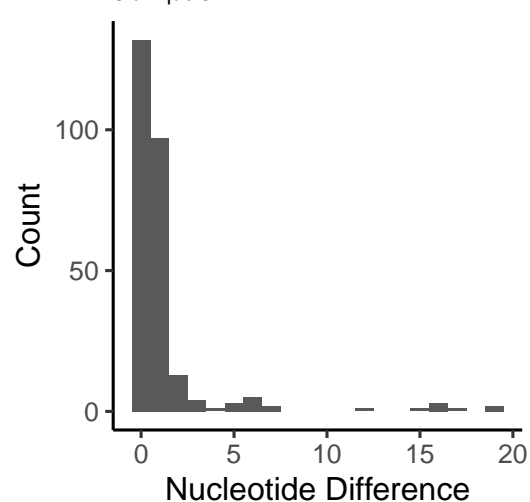
### IGHV3-20\*01

6 sequences assigned  
4 (66.7%) exact matches, in which:  
4 unique CDR3  
3 unique J



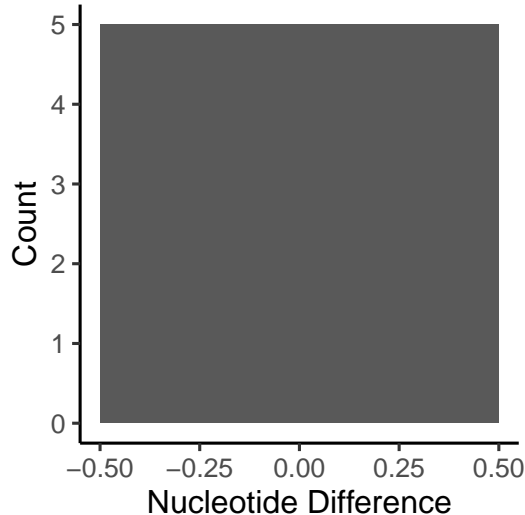
### IGHV3-33\*01

271 sequences assigned  
132 (48.7%) exact matches, in which:  
128 unique CDR3  
6 unique J



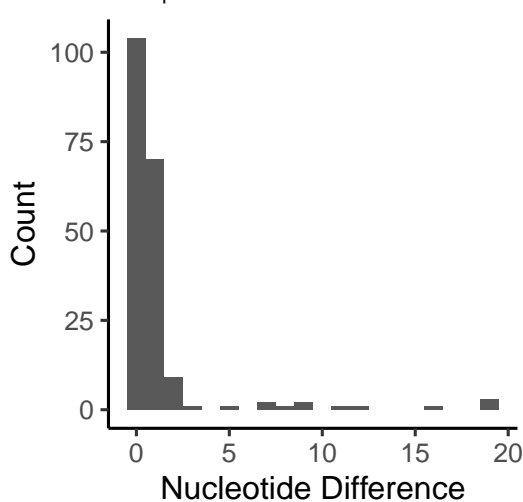
### IGHV3-13\*05

5 sequences assigned  
5 (100%) exact matches, in which:  
5 unique CDR3  
4 unique J



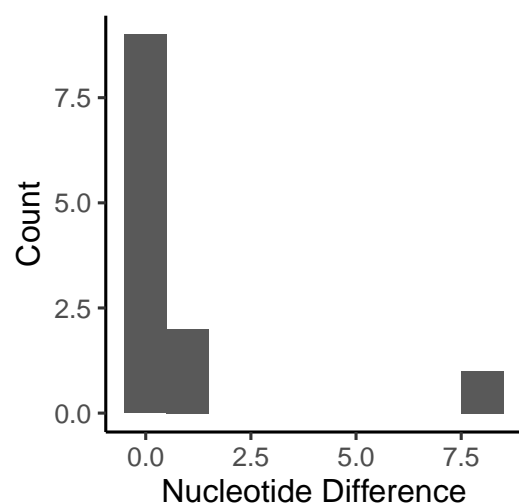
### IGHV3-21\*01

197 sequences assigned  
104 (52.8%) exact matches, in which:  
104 unique CDR3  
7 unique J



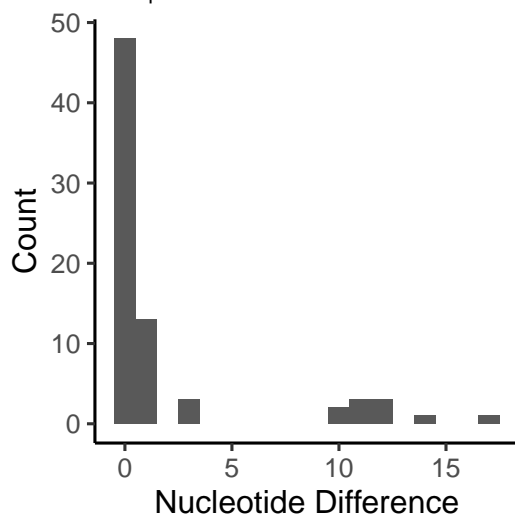
### IGHV3-43\*01

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



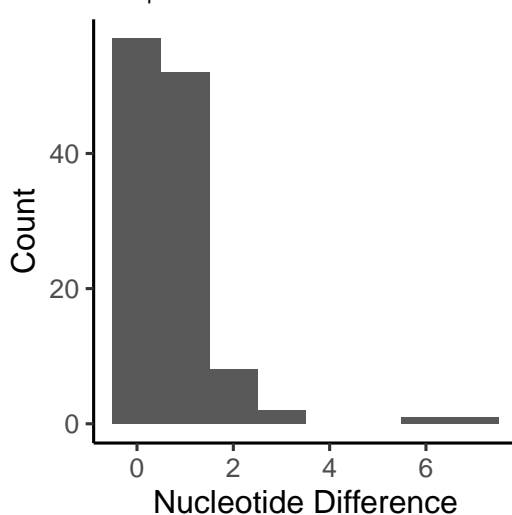
### IGHV3-15\*01

77 sequences assigned  
48 (62.3%) exact matches, in which:  
48 unique CDR3  
5 unique J



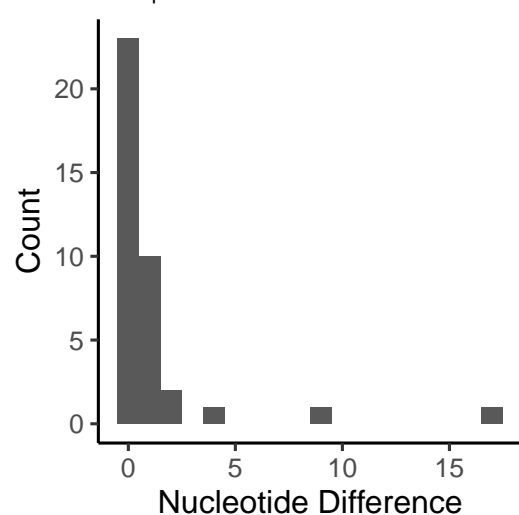
### IGHV3-30-3\*01

128 sequences assigned  
57 (44.5%) exact matches, in which:  
56 unique CDR3  
5 unique J



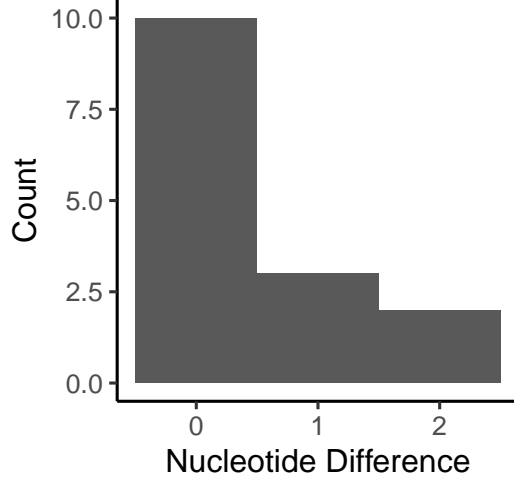
### IGHV3-48\*01

39 sequences assigned  
23 (59%) exact matches, in which:  
23 unique CDR3  
5 unique J



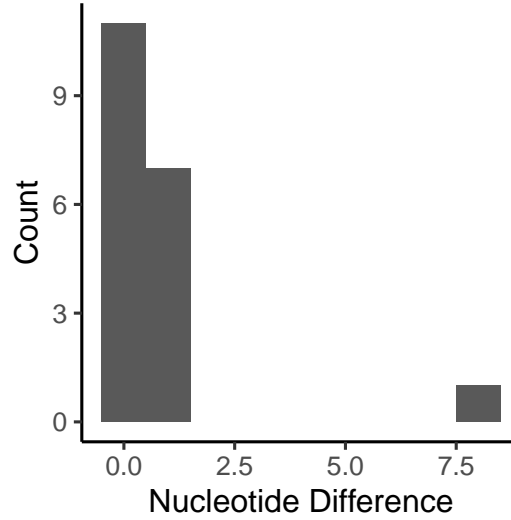
### IGHV3-48\*02

16 sequences assigned  
10 (62.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



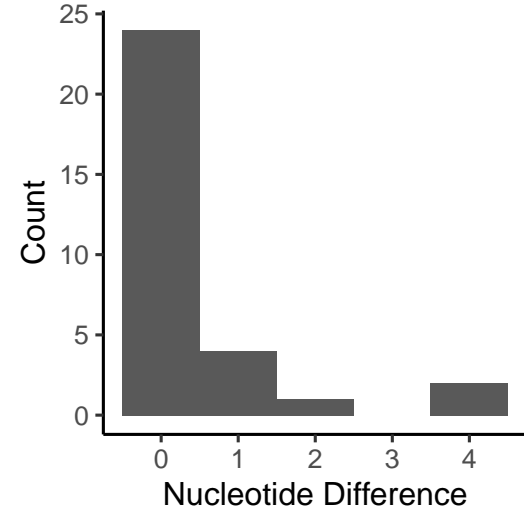
### IGHV3-53\*02

19 sequences assigned  
11 (57.9%) exact matches, in which:  
11 unique CDR3  
5 unique J



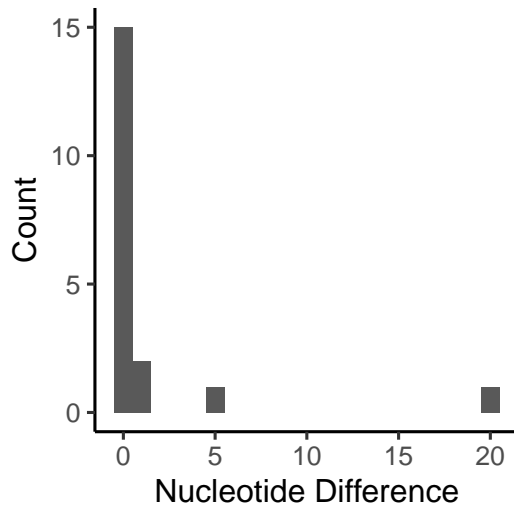
### IGHV3-74\*01

31 sequences assigned  
24 (77.4%) exact matches, in which:  
23 unique CDR3  
6 unique J



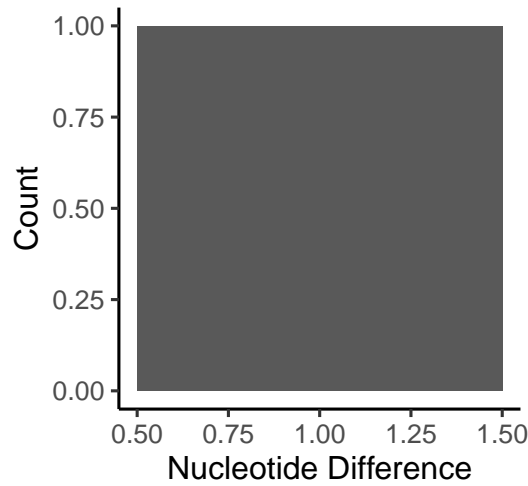
### IGHV3-49\*05

19 sequences assigned  
15 (78.9%) exact matches, in which:  
15 unique CDR3  
6 unique J



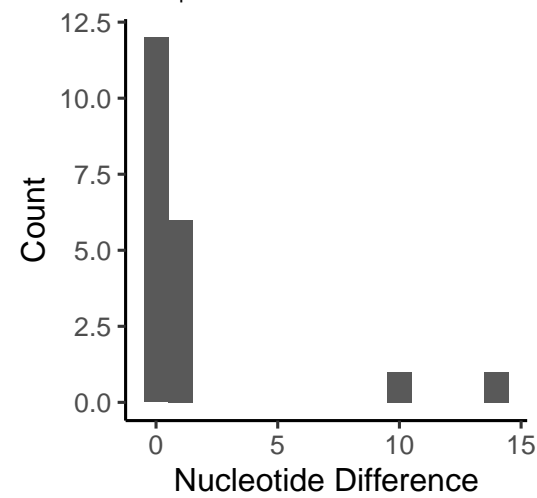
### IGHV3-72\*01

1 sequences assigned  
No exact matches.



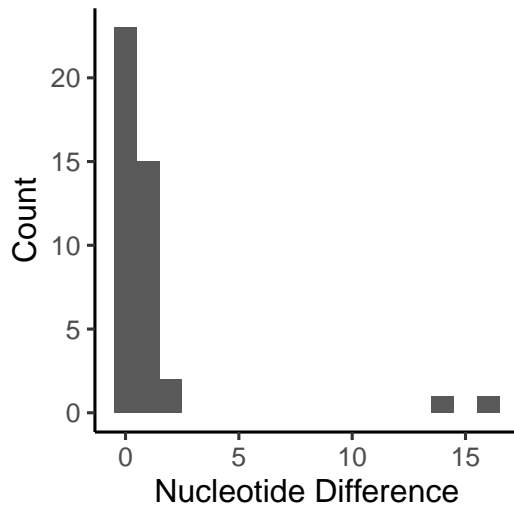
### IGHV3-64D\*06

20 sequences assigned  
12 (60%) exact matches, in which:  
12 unique CDR3  
3 unique J



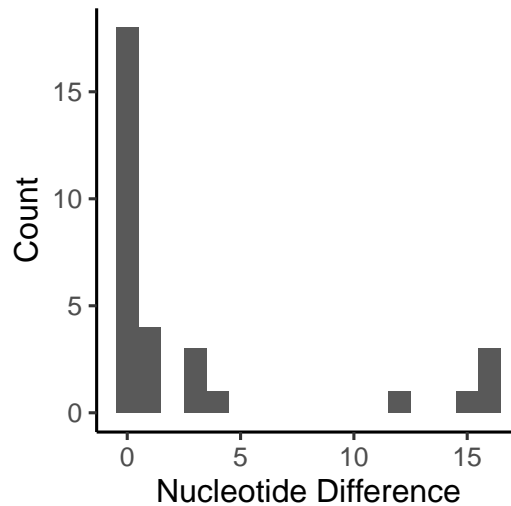
### IGHV3-53\*01

48 sequences assigned  
23 (47.9%) exact matches, in which:  
23 unique CDR3  
5 unique J



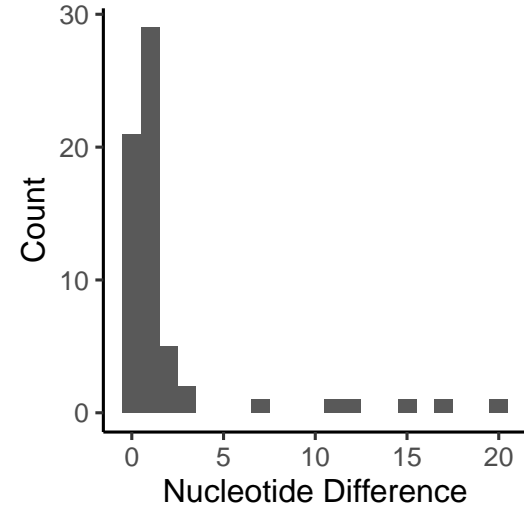
### IGHV3-73\*02

32 sequences assigned  
18 (56.2%) exact matches, in which:  
18 unique CDR3  
5 unique J



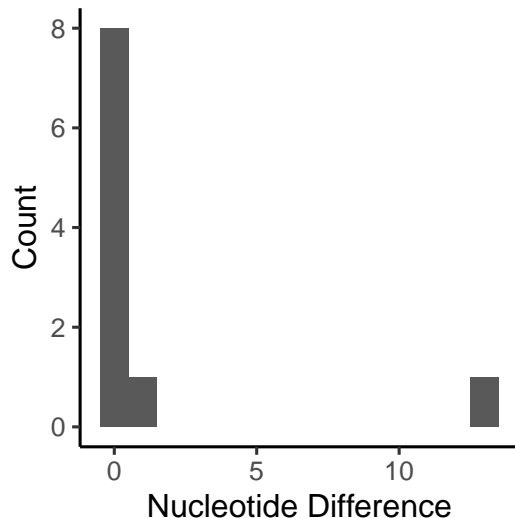
### IGHV4-4\*02

65 sequences assigned  
21 (32.3%) exact matches, in which:  
21 unique CDR3  
6 unique J



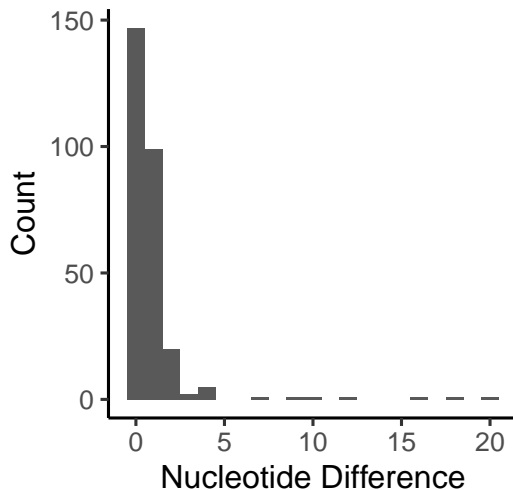
### IGHV4-30-2\*01

10 sequences assigned  
8 (80%) exact matches, in which:  
8 unique CDR3  
5 unique J



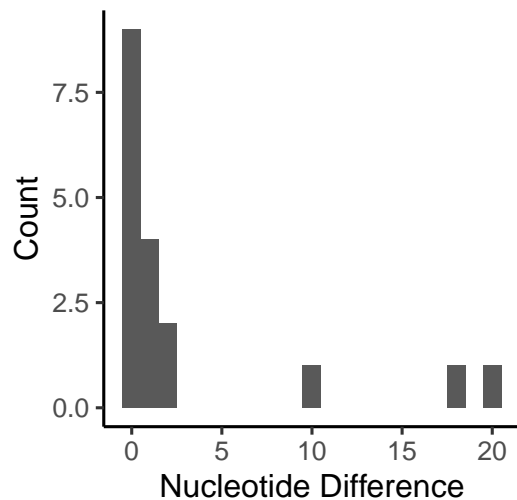
### IGHV4-34\*01

284 sequences assigned  
147 (51.8%) exact matches, in which:  
146 unique CDR3  
7 unique J



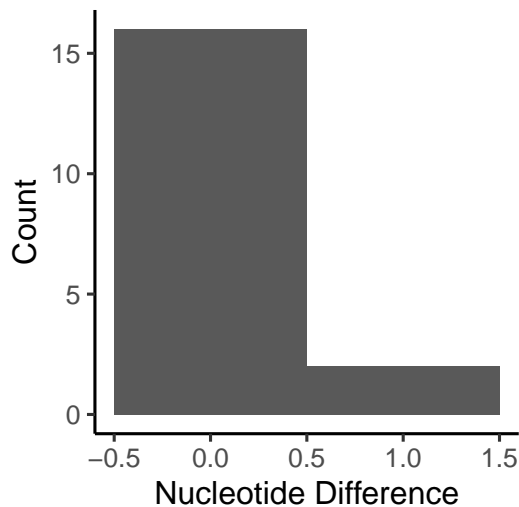
### IGHV4-61\*01

19 sequences assigned  
9 (47.4%) exact matches, in which:  
9 unique CDR3  
4 unique J



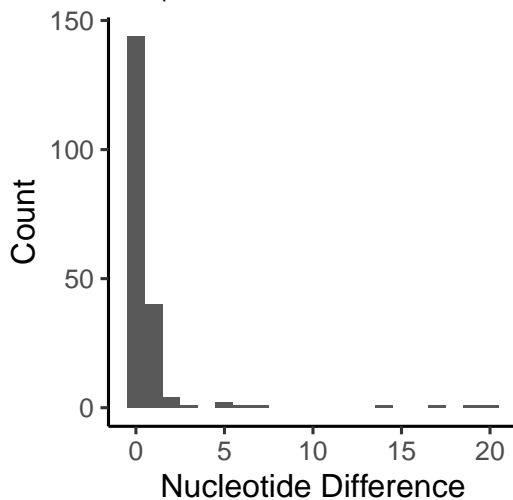
### IGHV4-30-4\*01

18 sequences assigned  
16 (88.9%) exact matches, in which:  
16 unique CDR3  
5 unique J



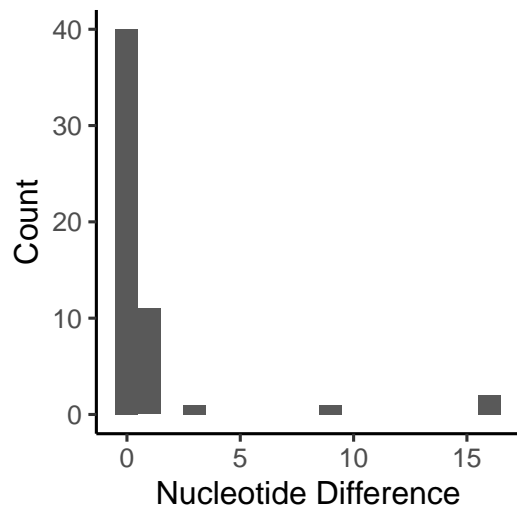
### IGHV4-39\*01

215 sequences assigned  
144 (67%) exact matches, in which:  
144 unique CDR3  
7 unique J



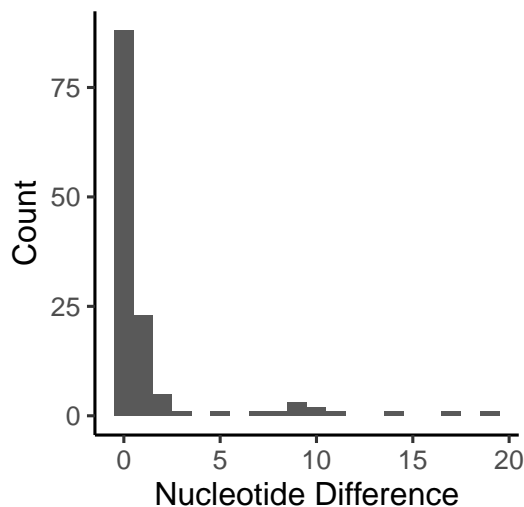
### IGHV5-10-1\*03

58 sequences assigned  
40 (69%) exact matches, in which:  
40 unique CDR3  
5 unique J



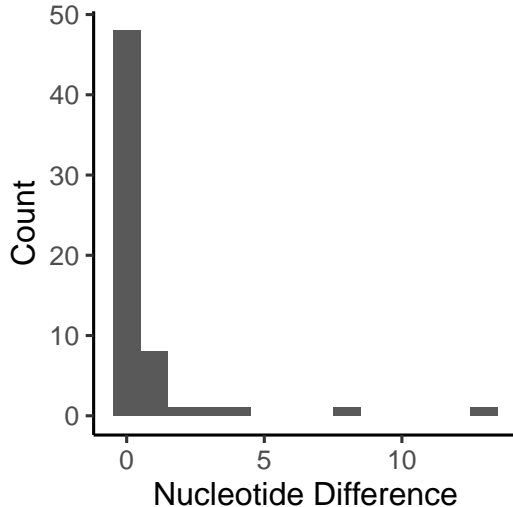
### IGHV4-31\*03

141 sequences assigned  
88 (62.4%) exact matches, in which:  
88 unique CDR3  
6 unique J



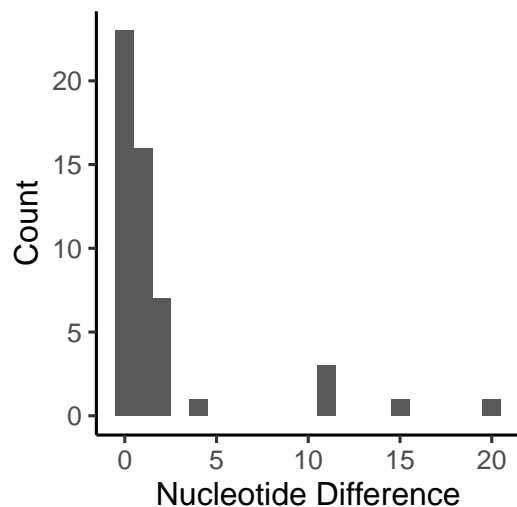
### IGHV4-59\*01

62 sequences assigned  
48 (77.4%) exact matches, in which:  
47 unique CDR3  
6 unique J



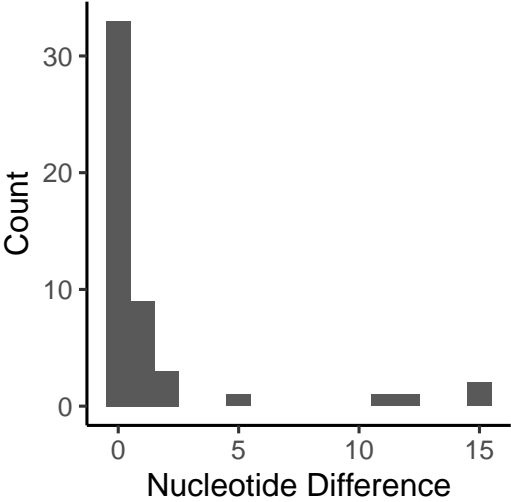
### IGHV5-51\*01

56 sequences assigned  
23 (41.1%) exact matches, in which:  
23 unique CDR3  
5 unique J



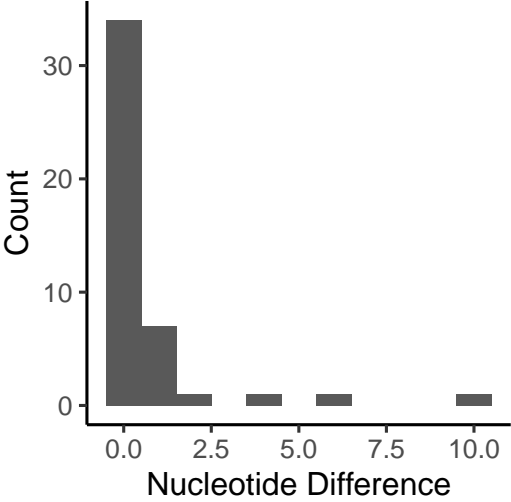
# IGHV5-51\*03

56 sequences assigned  
33 (58.9%) exact matches, in which:  
33 unique CDR3  
6 unique J



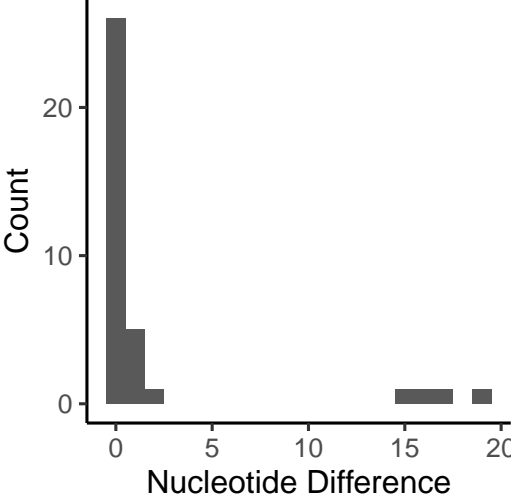
# IGHV6-1\*01

45 sequences assigned  
34 (75.6%) exact matches, in which:  
34 unique CDR3  
6 unique J

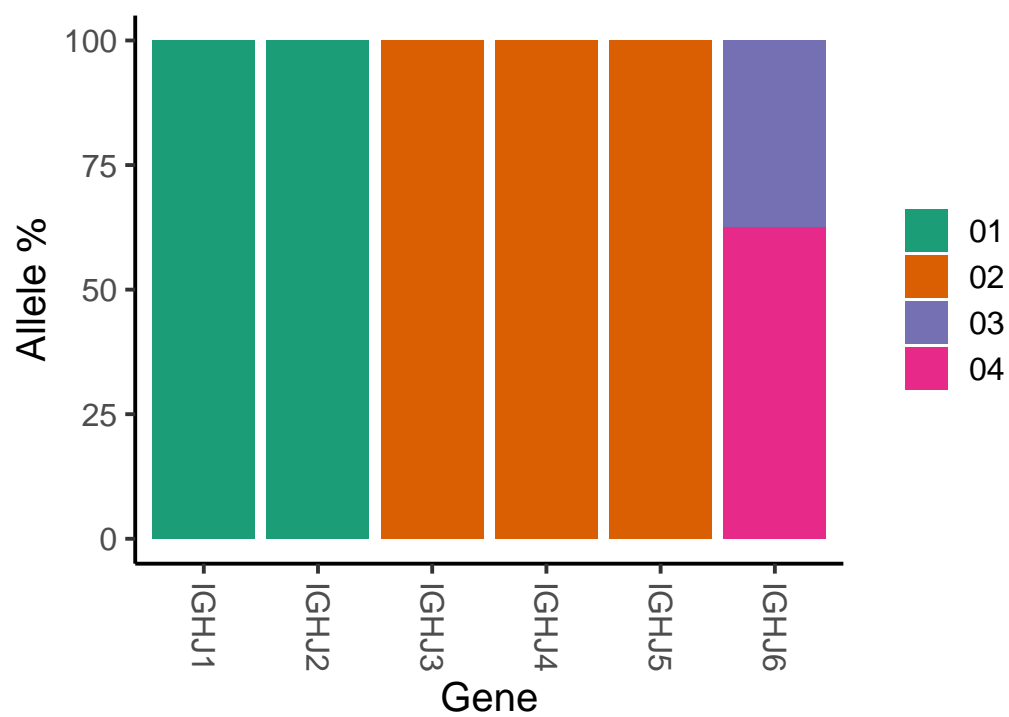


# IGHV7-4-1\*02

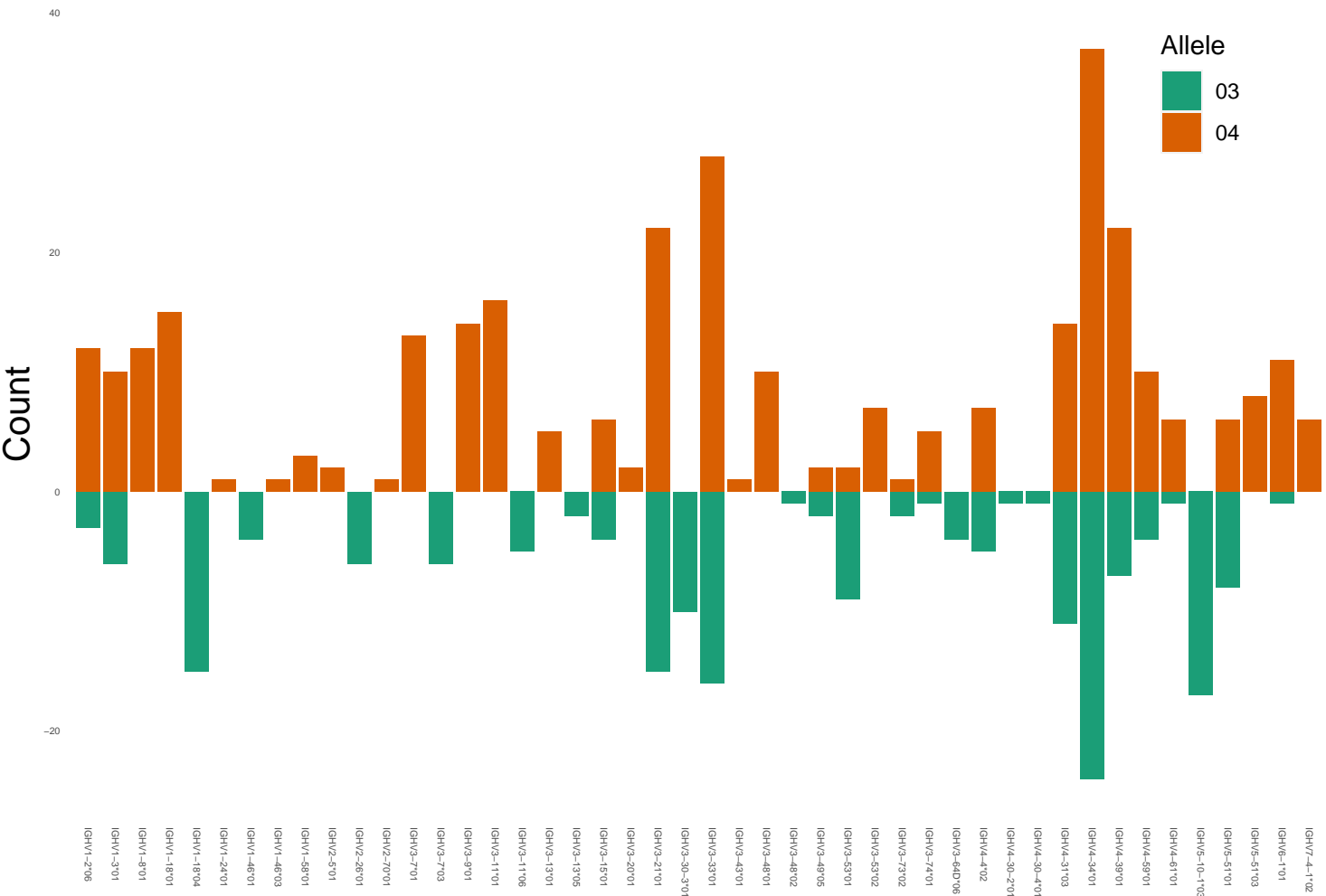
46 sequences assigned  
26 (56.5%) exact matches, in which:  
26 unique CDR3  
5 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.

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