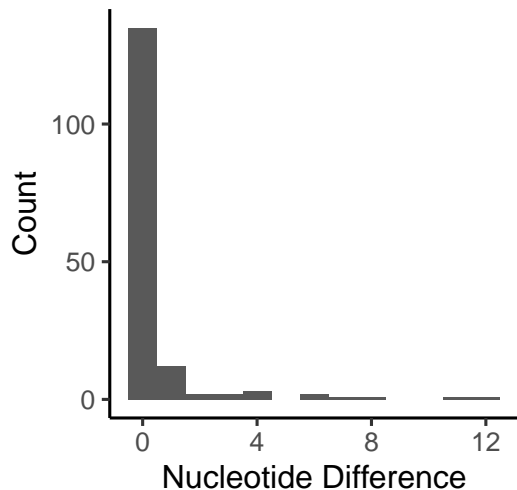


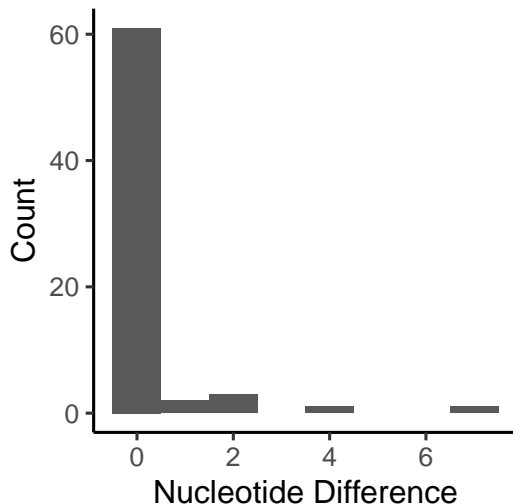
### IGHV1-2\*02

160 sequences assigned  
135 (84.4%) exact matches, in which:  
135 unique CDR3  
6 unique J



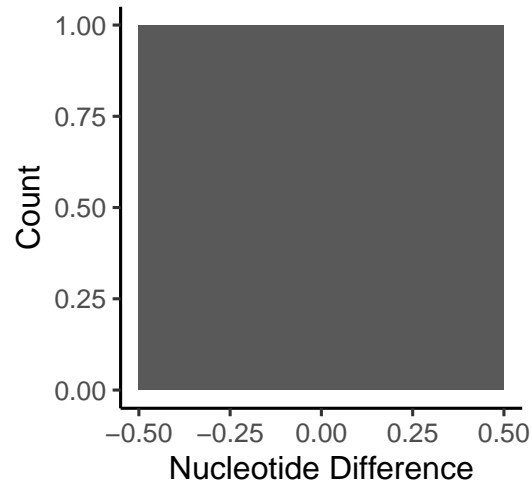
### IGHV1-8\*01

69 sequences assigned  
61 (88.4%) exact matches, in which:  
61 unique CDR3  
4 unique J



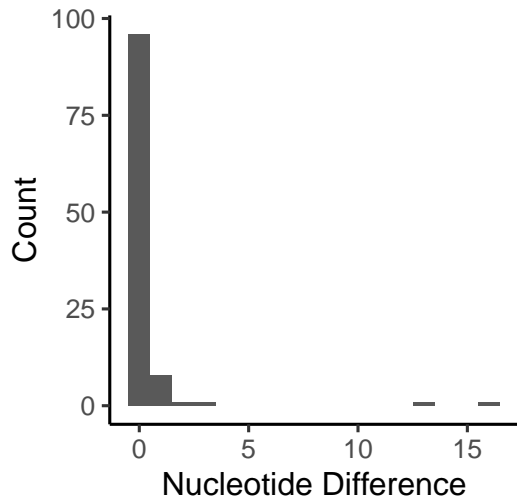
### IGHV1-45\*02

1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



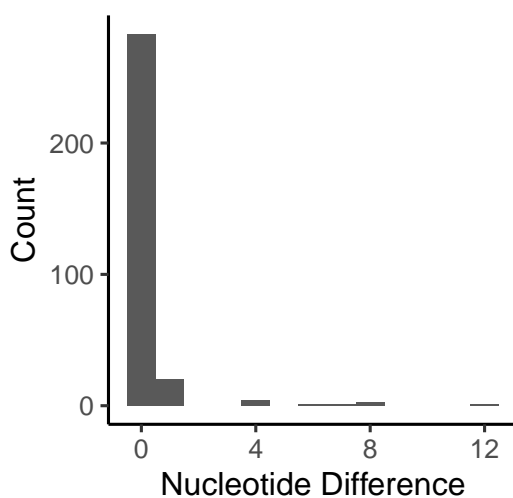
### IGHV1-2\*06

109 sequences assigned  
96 (88.1%) exact matches, in which:  
96 unique CDR3  
5 unique J



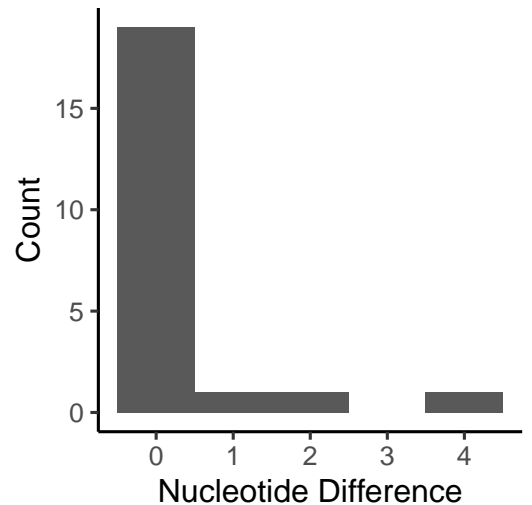
### IGHV1-18\*01

316 sequences assigned  
283 (89.6%) exact matches, in which:  
283 unique CDR3  
7 unique J



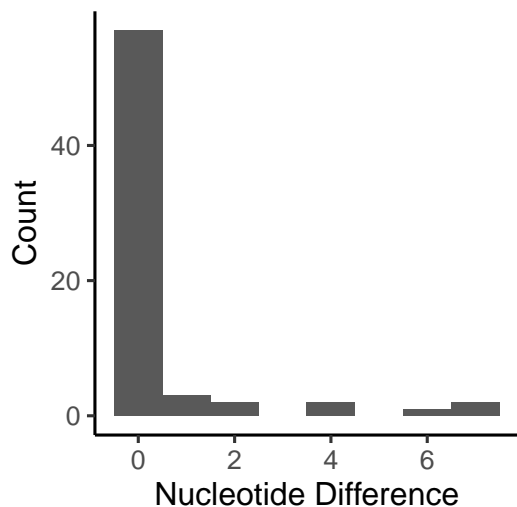
### IGHV1-46\*01

22 sequences assigned  
19 (86.4%) exact matches, in which:  
19 unique CDR3  
5 unique J



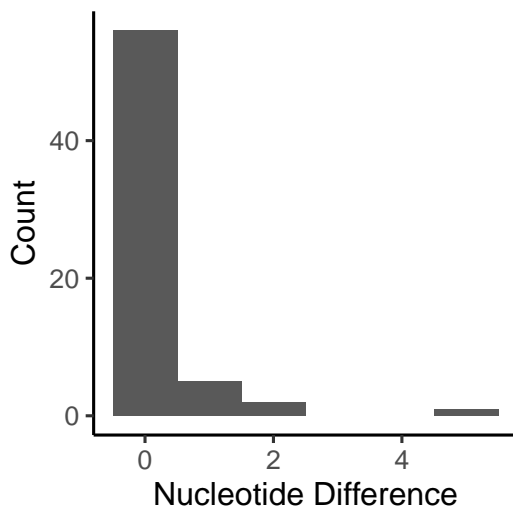
### IGHV1-3\*01

67 sequences assigned  
57 (85.1%) exact matches, in which:  
57 unique CDR3  
5 unique J



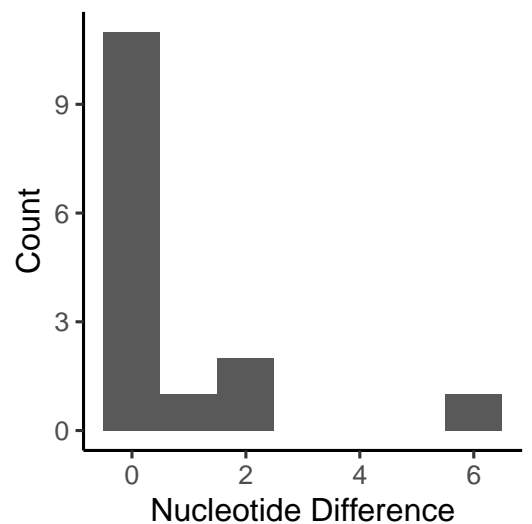
### IGHV1-24\*01

64 sequences assigned  
56 (87.5%) exact matches, in which:  
56 unique CDR3  
6 unique J



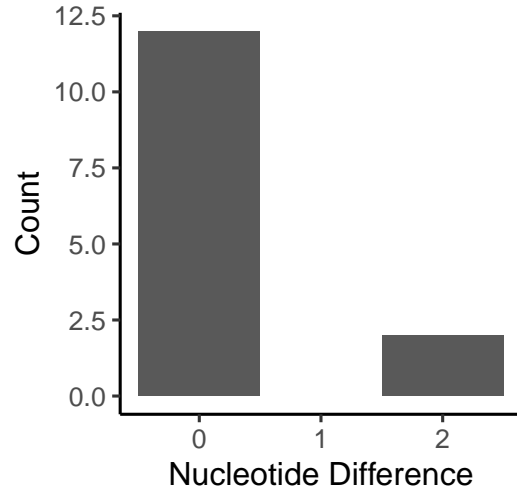
### IGHV1-46\*03

15 sequences assigned  
11 (73.3%) exact matches, in which:  
11 unique CDR3  
5 unique J



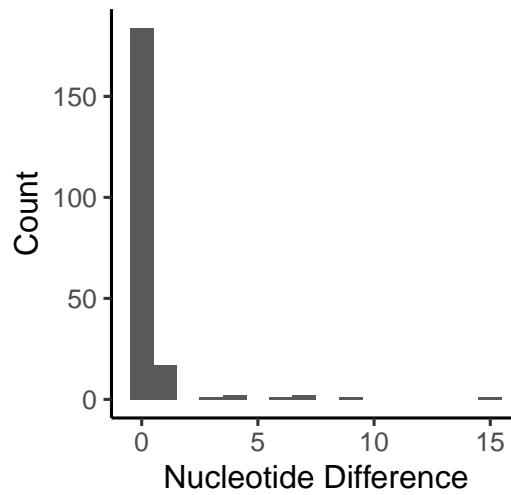
### IGHV1-58\*01

14 sequences assigned  
12 (85.7%) exact matches, in which:  
12 unique CDR3  
4 unique J



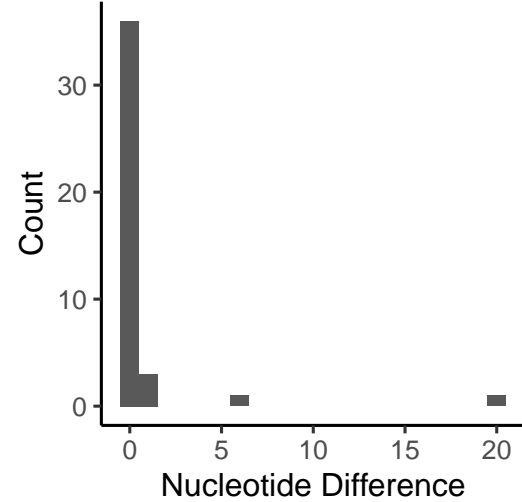
### IGHV1-69\*06

209 sequences assigned  
184 (88%) exact matches, in which:  
184 unique CDR3  
7 unique J



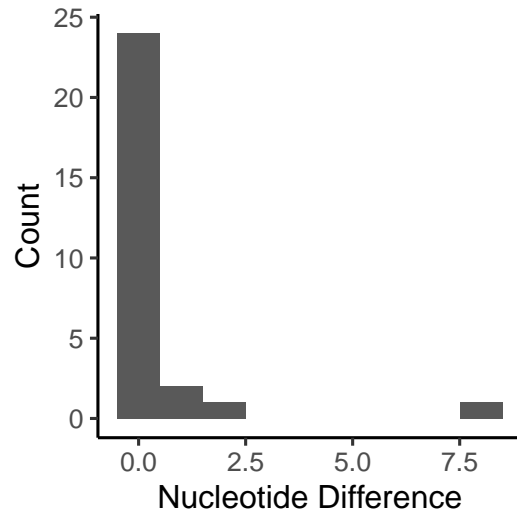
### IGHV2-26\*01

41 sequences assigned  
36 (87.8%) exact matches, in which:  
36 unique CDR3  
6 unique J



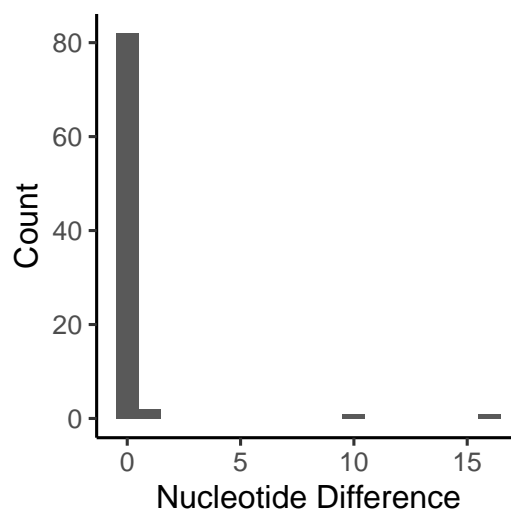
### IGHV1-69-2\*01

28 sequences assigned  
24 (85.7%) exact matches, in which:  
24 unique CDR3  
6 unique J



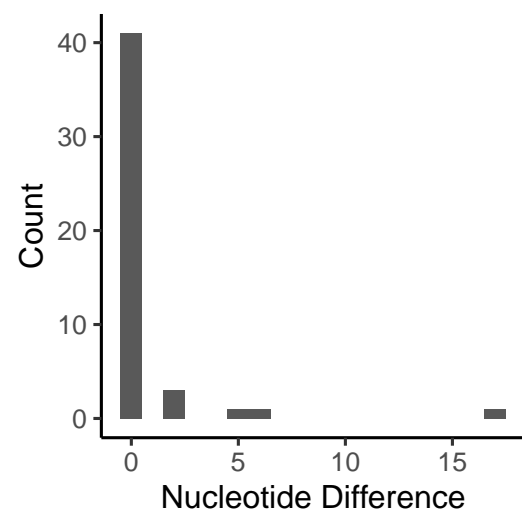
### IGHV2-5\*01

86 sequences assigned  
82 (95.3%) exact matches, in which:  
82 unique CDR3  
6 unique J



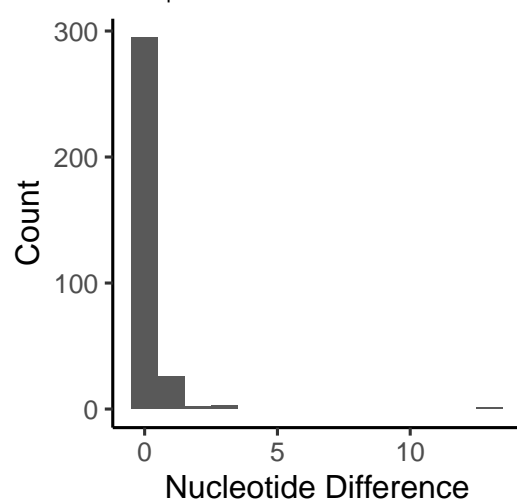
### IGHV2-70\*01

47 sequences assigned  
41 (87.2%) exact matches, in which:  
41 unique CDR3  
6 unique J



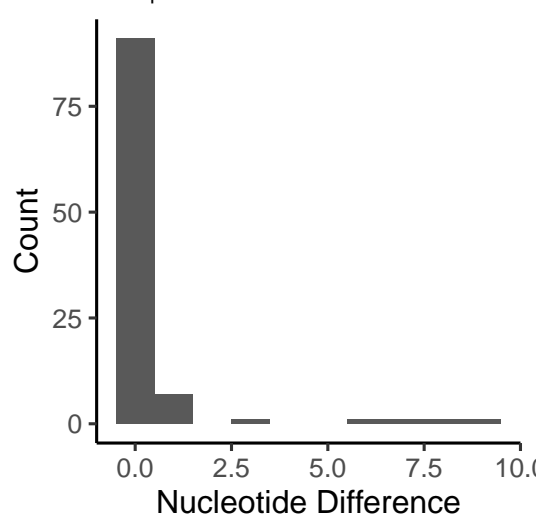
### IGHV1-69\*01

327 sequences assigned  
295 (90.2%) exact matches, in which:  
295 unique CDR3  
7 unique J



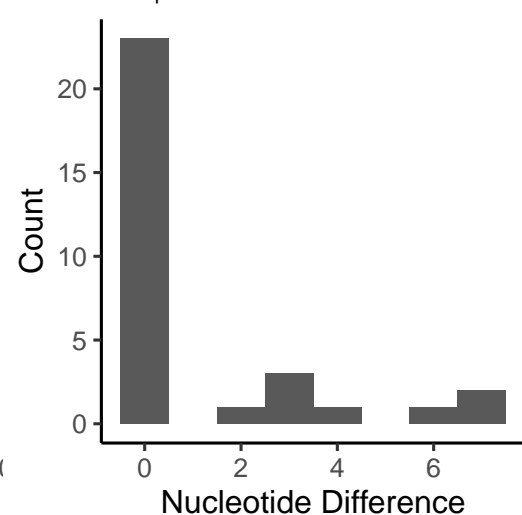
### IGHV2-5\*02

103 sequences assigned  
91 (88.3%) exact matches, in which:  
91 unique CDR3  
7 unique J



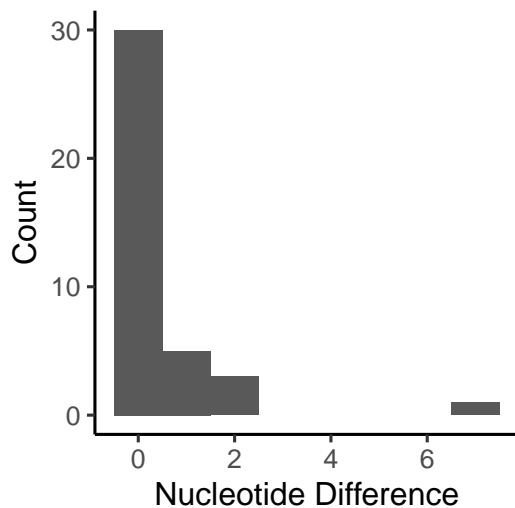
### IGHV2-70\*04

31 sequences assigned  
23 (74.2%) exact matches, in which:  
23 unique CDR3  
3 unique J



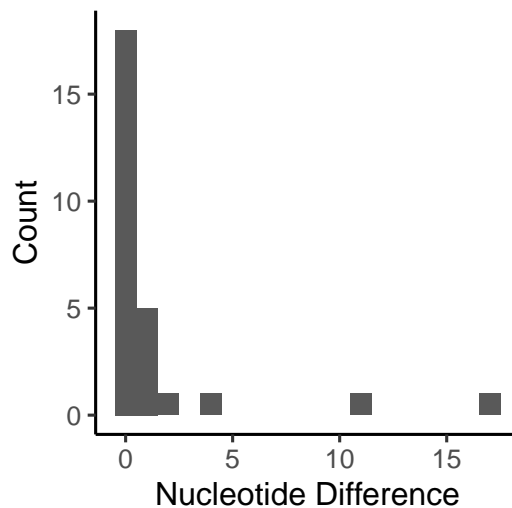
### IGHV3-7\*01

40 sequences assigned  
30 (75%) exact matches, in which:  
30 unique CDR3  
6 unique J



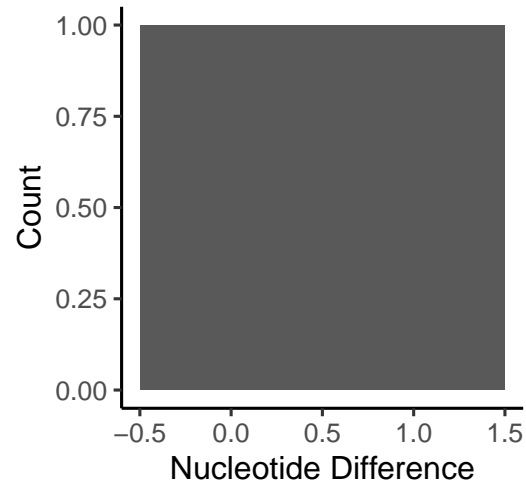
### IGHV3-11\*01

27 sequences assigned  
18 (66.7%) exact matches, in which:  
18 unique CDR3  
5 unique J



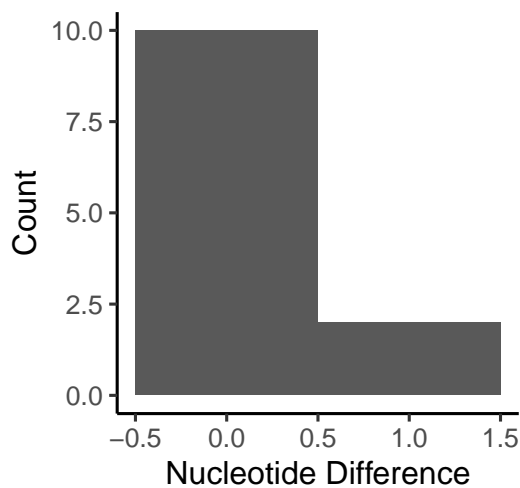
### IGHV3-13\*05

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



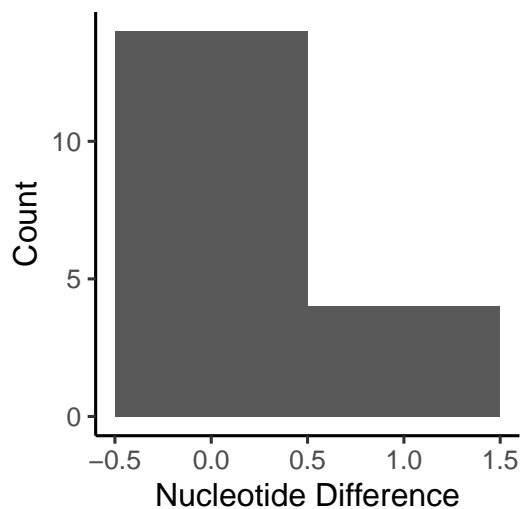
### IGHV3-7\*04

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



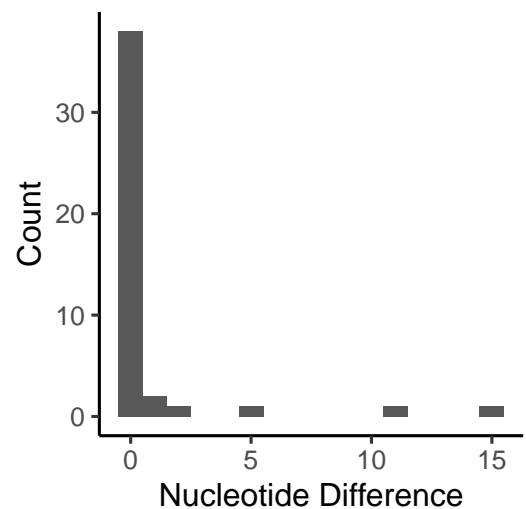
### IGHV3-11\*06

18 sequences assigned  
14 (77.8%) exact matches, in which:  
14 unique CDR3  
3 unique J



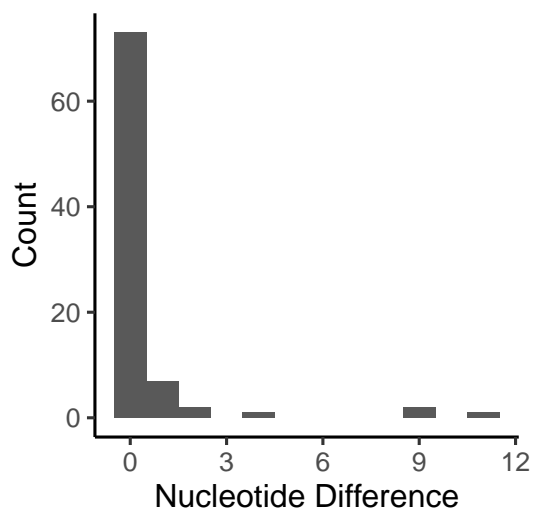
### IGHV3-15\*01

44 sequences assigned  
38 (86.4%) exact matches, in which:  
38 unique CDR3  
7 unique J



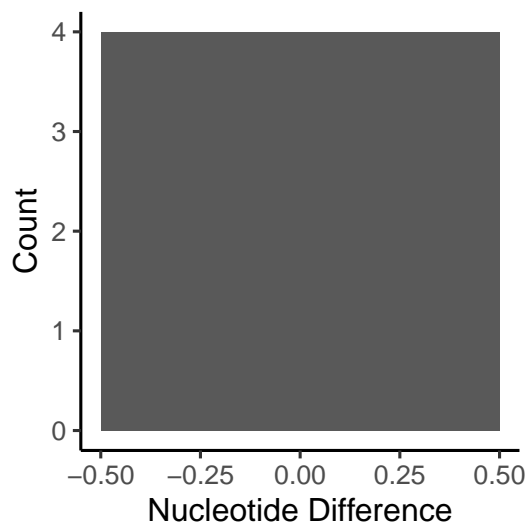
### IGHV3-9\*01

86 sequences assigned  
73 (84.9%) exact matches, in which:  
73 unique CDR3  
6 unique J



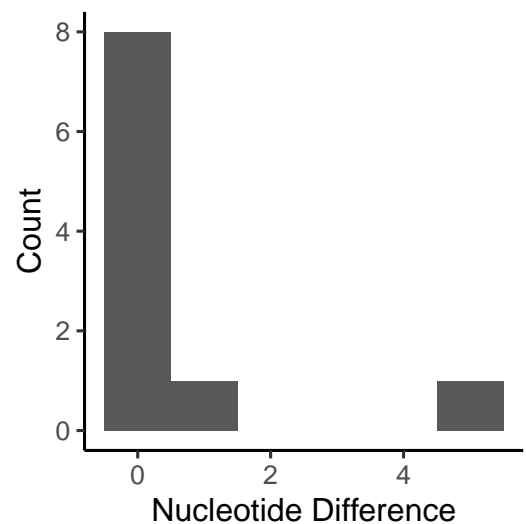
### IGHV3-13\*01

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



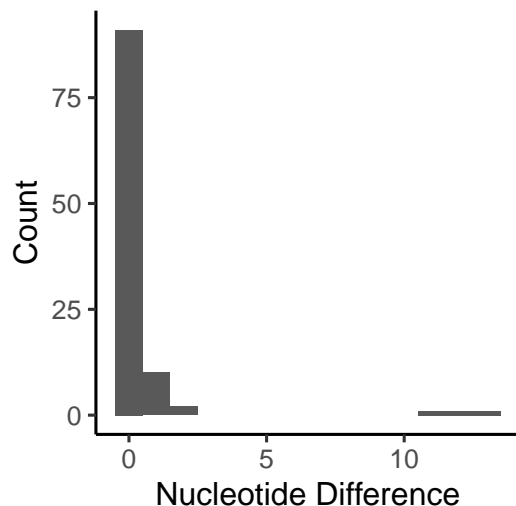
### IGHV3-20\*01

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



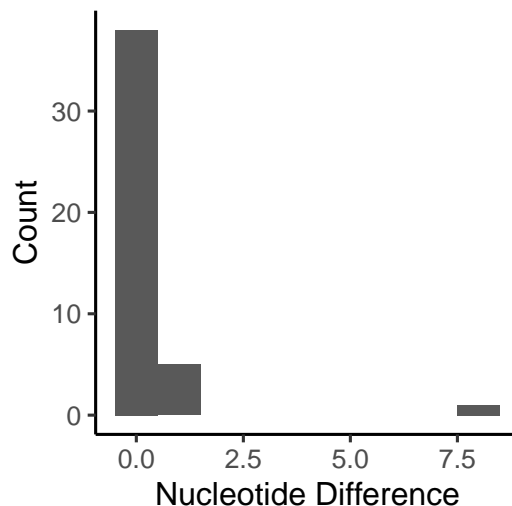
### IGHV3-21\*01

106 sequences assigned  
91 (85.8%) exact matches, in which:  
91 unique CDR3  
6 unique J



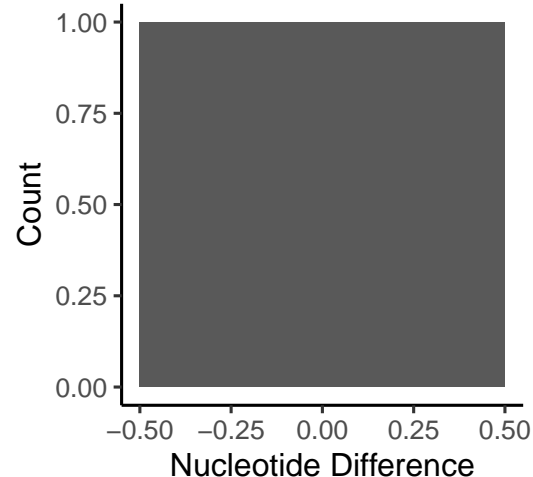
### IGHV3-30\*18

44 sequences assigned  
38 (86.4%) exact matches, in which:  
38 unique CDR3  
4 unique J



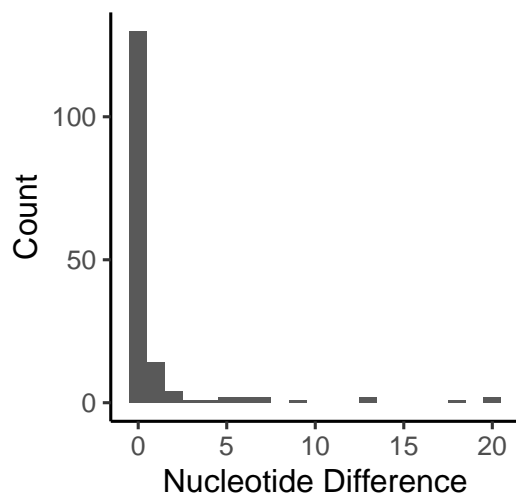
### IGHV3-47\*02

1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



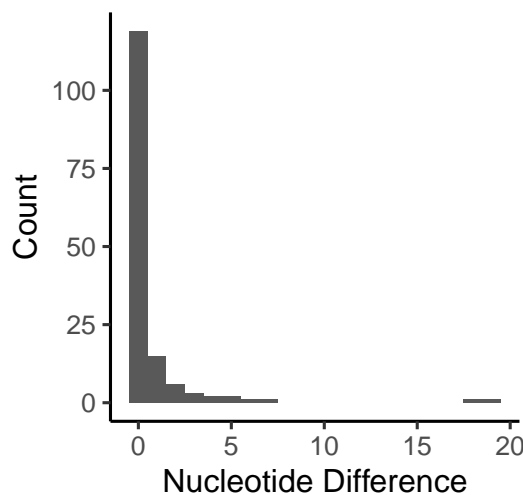
### IGHV3-23\*01

164 sequences assigned  
130 (79.3%) exact matches, in which:  
130 unique CDR3  
7 unique J



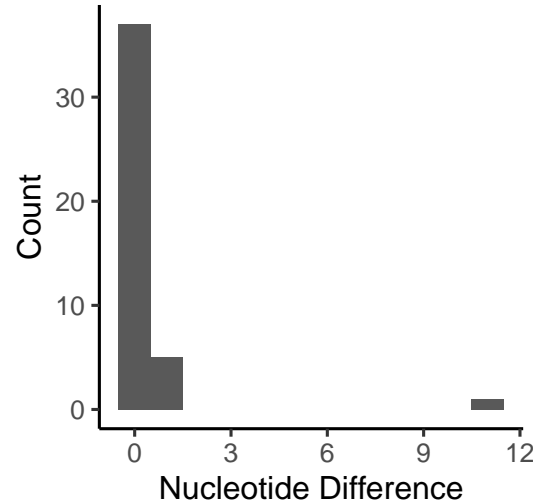
### IGHV3-33\*01

151 sequences assigned  
119 (78.8%) exact matches, in which:  
119 unique CDR3  
7 unique J



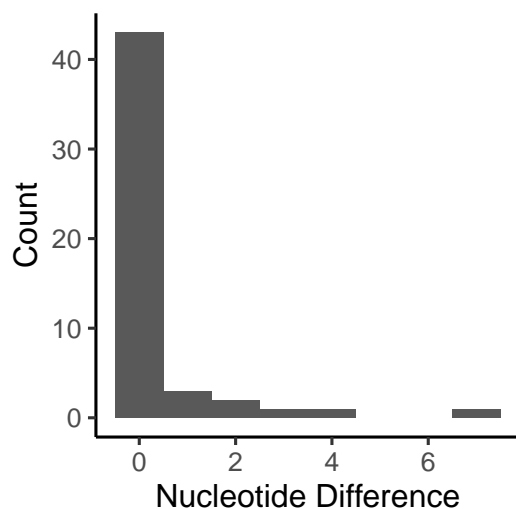
### IGHV3-48\*02

44 sequences assigned  
37 (84.1%) exact matches, in which:  
37 unique CDR3  
7 unique J



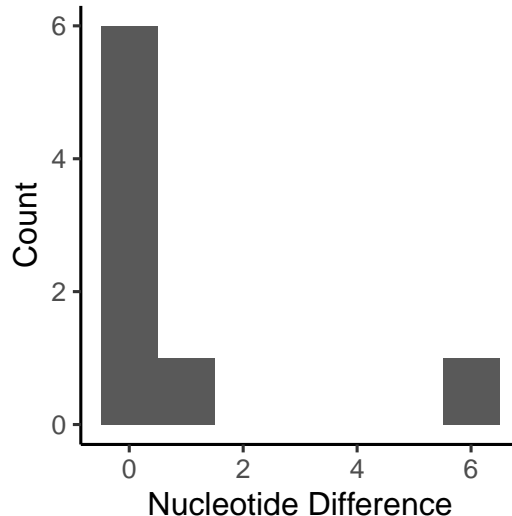
### IGHV3-30\*01

51 sequences assigned  
43 (84.3%) exact matches, in which:  
43 unique CDR3  
5 unique J



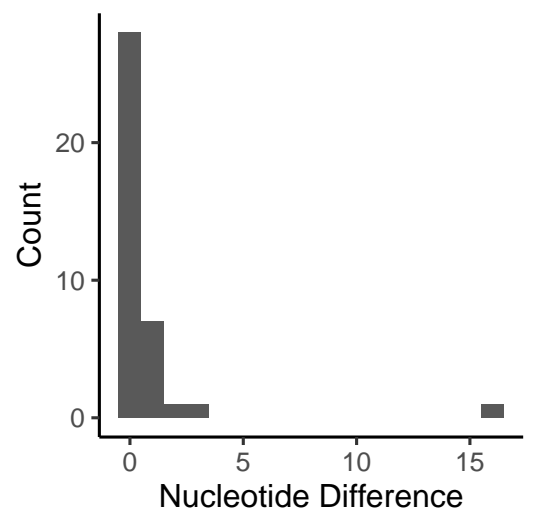
### IGHV3-43\*01

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



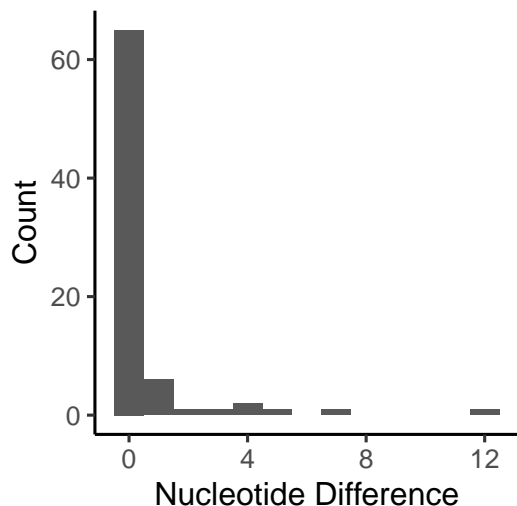
### IGHV3-49\*05

38 sequences assigned  
28 (73.7%) exact matches, in which:  
28 unique CDR3  
5 unique J



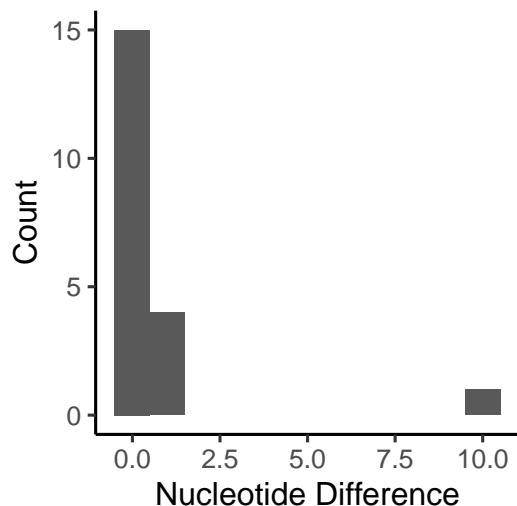
### IGHV3-53\*01

78 sequences assigned  
65 (83.3%) exact matches, in which:  
65 unique CDR3  
7 unique J



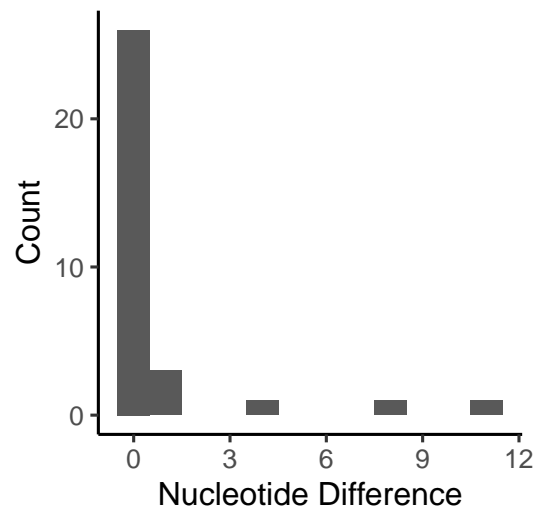
### IGHV3-73\*02

20 sequences assigned  
15 (75%) exact matches, in which:  
15 unique CDR3  
5 unique J



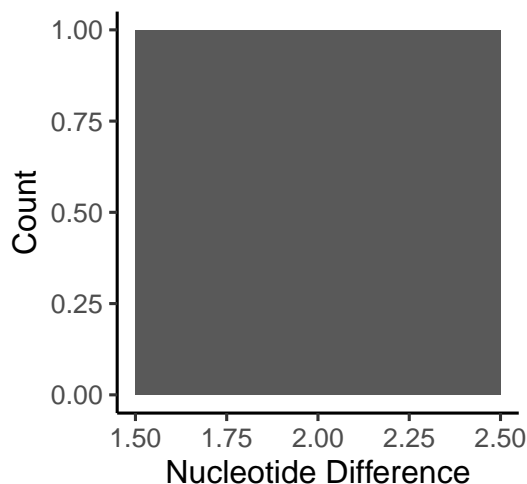
### IGHV4-4\*02

32 sequences assigned  
26 (81.2%) exact matches, in which:  
26 unique CDR3  
6 unique J



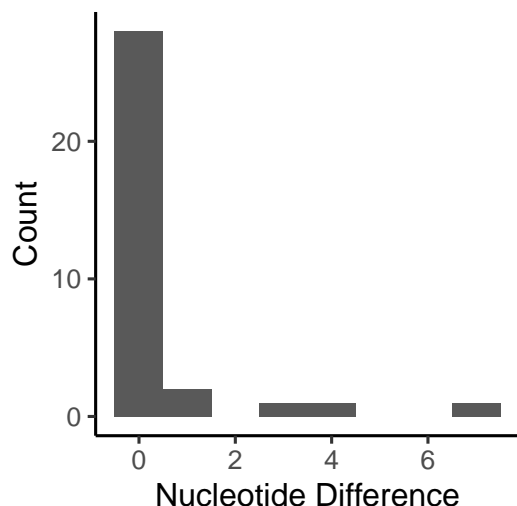
### IGHV3-66\*03

1 sequences assigned  
No exact matches.



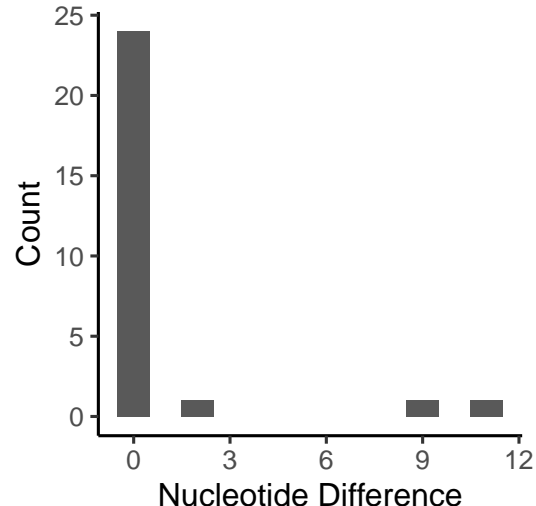
### IGHV3-74\*01

33 sequences assigned  
28 (84.8%) exact matches, in which:  
28 unique CDR3  
5 unique J



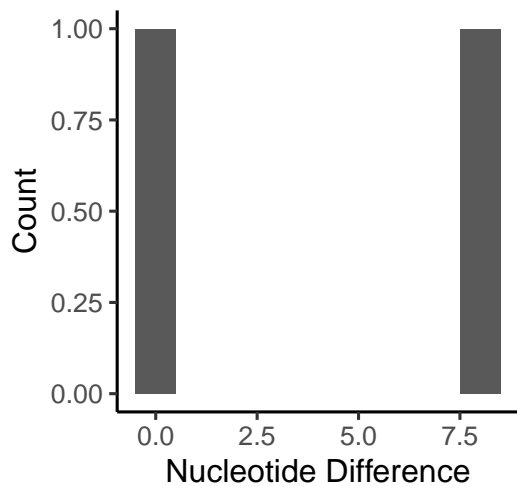
### IGHV4-4\*07

28 sequences assigned  
24 (85.7%) exact matches, in which:  
24 unique CDR3  
5 unique J



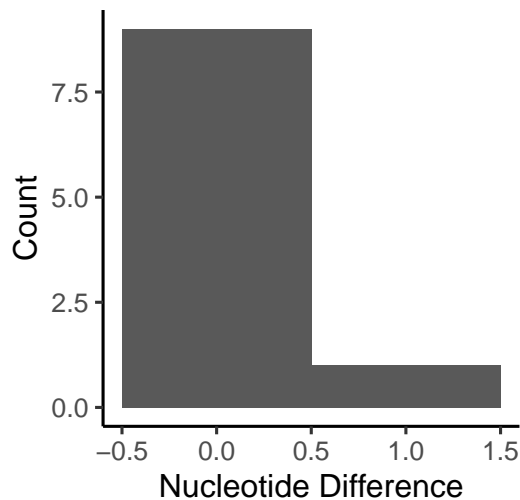
### IGHV3-72\*01

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



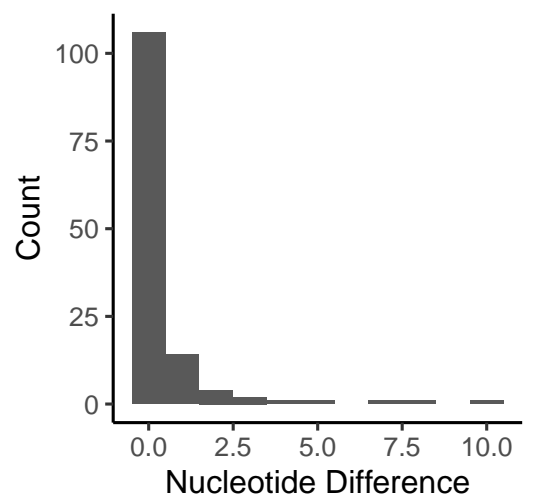
### IGHV3-64D\*06

10 sequences assigned  
9 (90%) exact matches, in which:  
9 unique CDR3  
4 unique J



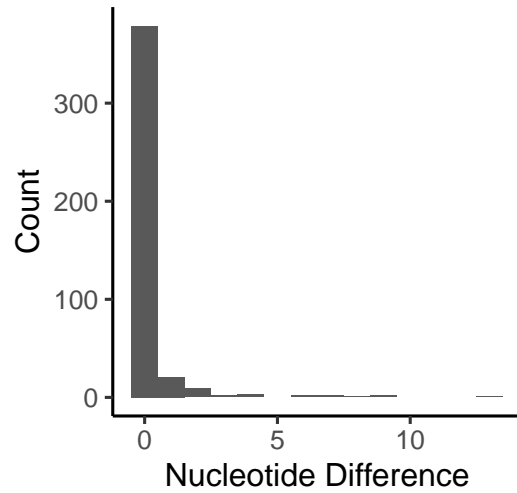
### IGHV4-31\*03

131 sequences assigned  
106 (80.9%) exact matches, in which:  
105 unique CDR3  
7 unique J



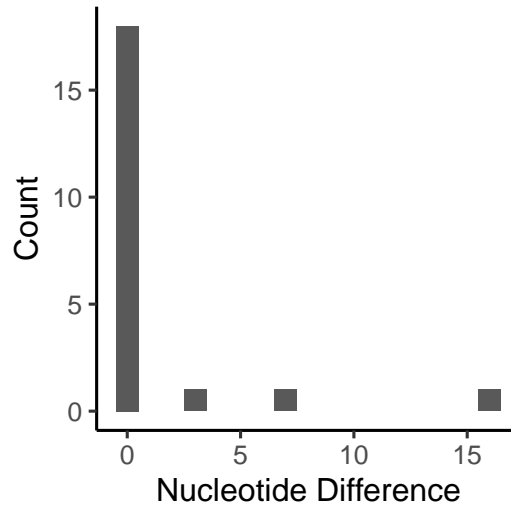
### IGHV4-34\*01

422 sequences assigned  
379 (89.8%) exact matches, in which:  
378 unique CDR3  
7 unique J



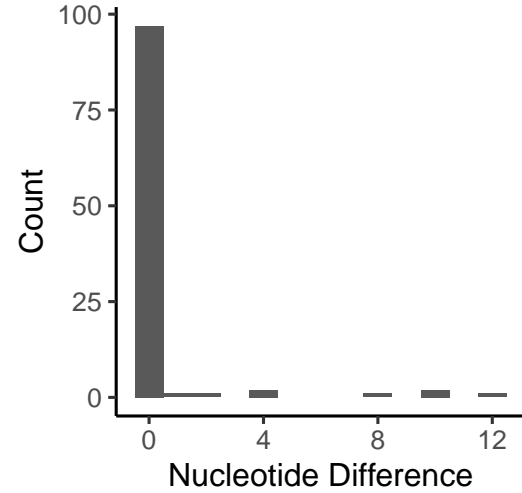
### IGHV4-61\*01

22 sequences assigned  
18 (81.8%) exact matches, in which:  
18 unique CDR3  
7 unique J



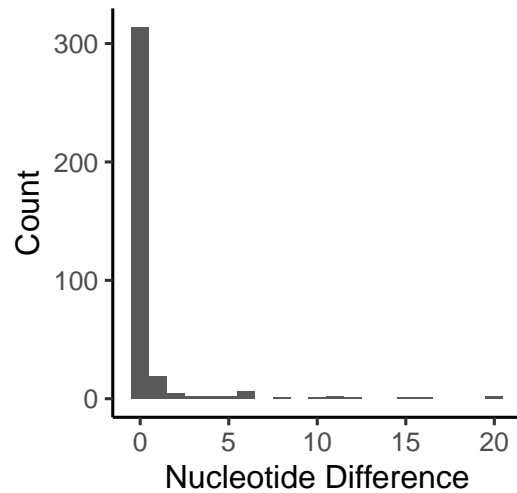
### IGHV6-1\*01

105 sequences assigned  
97 (92.4%) exact matches, in which:  
97 unique CDR3  
6 unique J



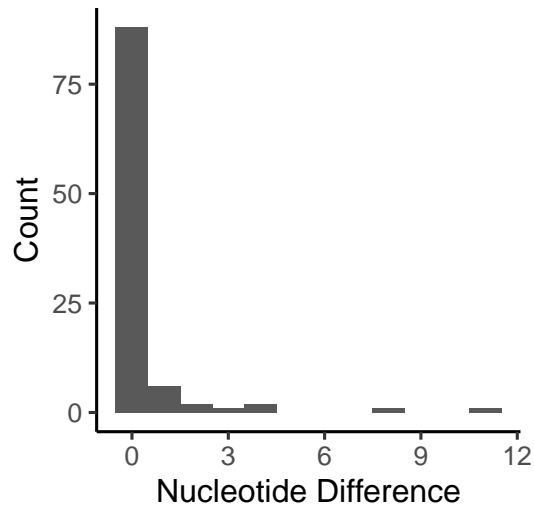
### IGHV4-39\*01

360 sequences assigned  
314 (87.2%) exact matches, in which:  
313 unique CDR3  
6 unique J



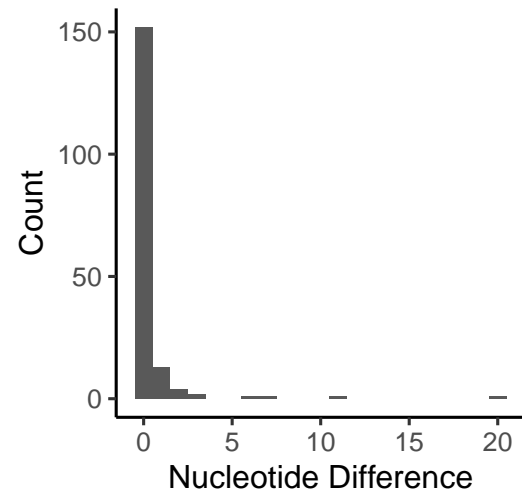
### IGHV5-10-1\*03

101 sequences assigned  
88 (87.1%) exact matches, in which:  
86 unique CDR3  
6 unique J



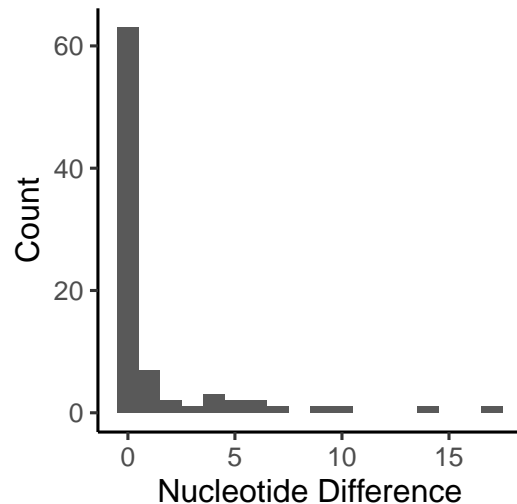
### IGHV7-4-1\*02

175 sequences assigned  
152 (86.9%) exact matches, in which:  
152 unique CDR3  
6 unique J



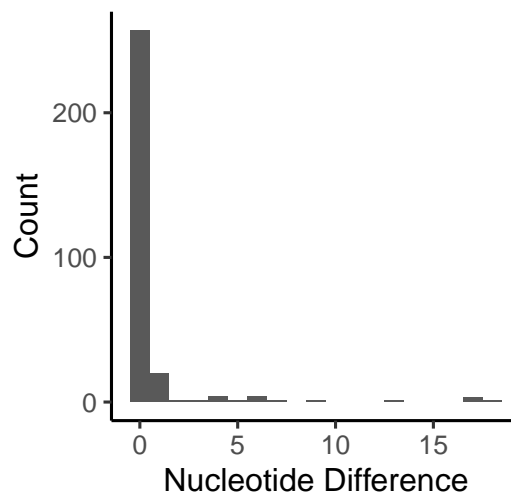
### IGHV4-59\*01

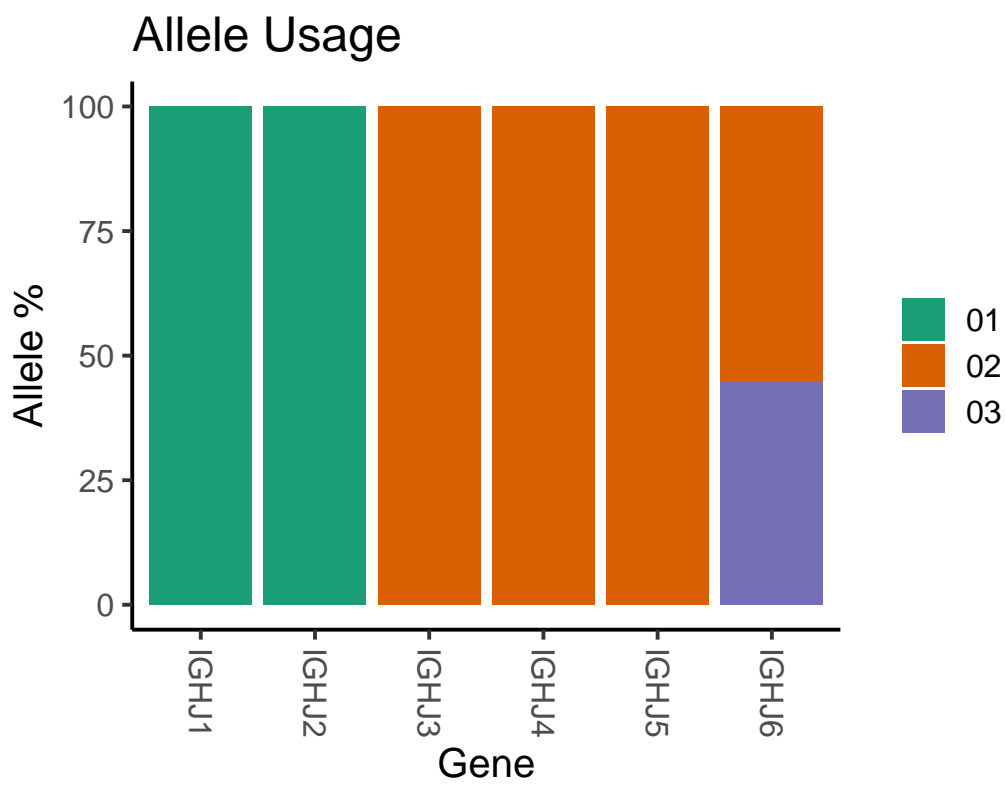
85 sequences assigned  
63 (74.1%) exact matches, in which:  
63 unique CDR3  
6 unique J



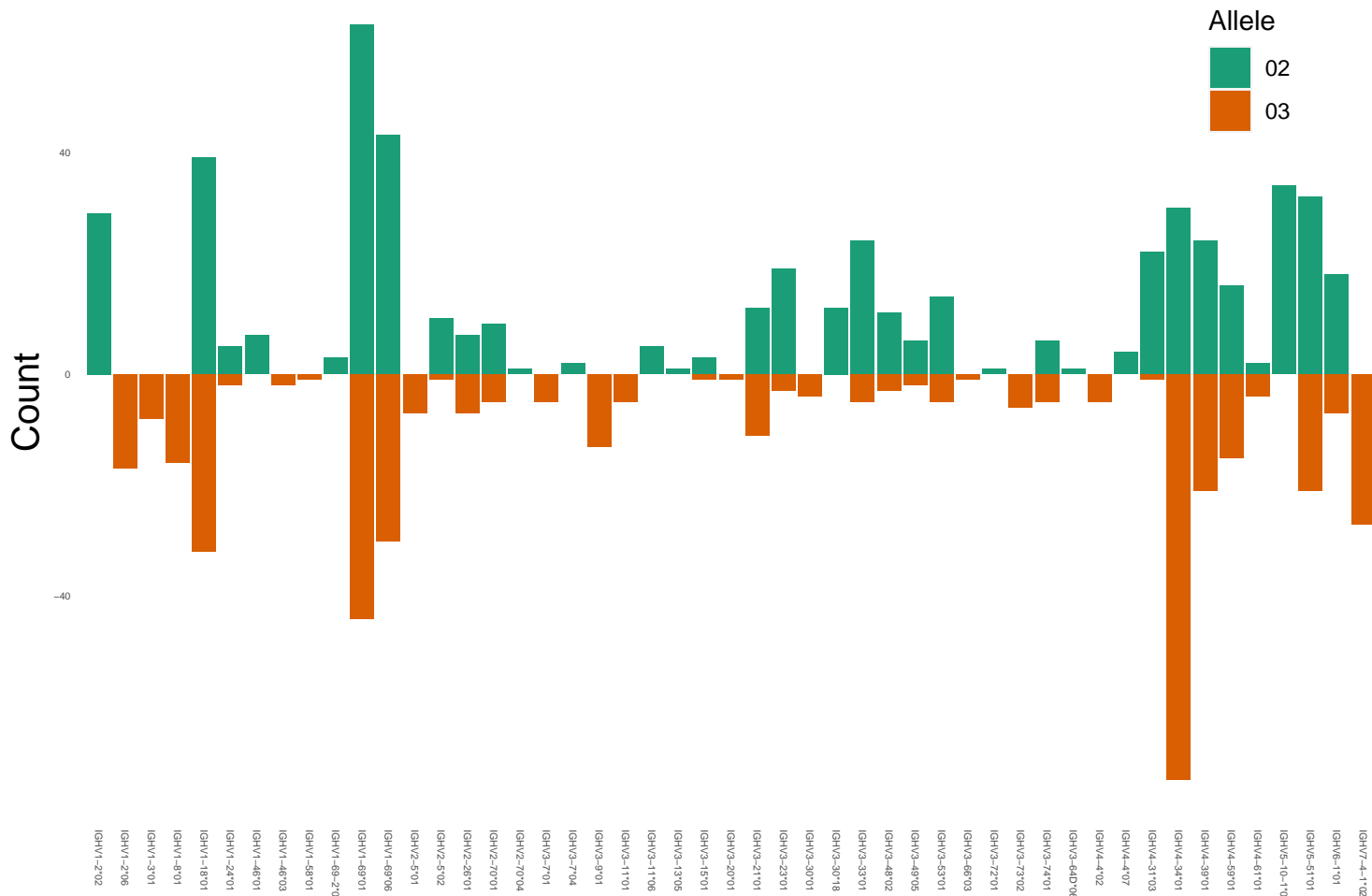
### IGHV5-51\*01

295 sequences assigned  
257 (87.1%) exact matches, in which:  
257 unique CDR3  
7 unique J





Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.