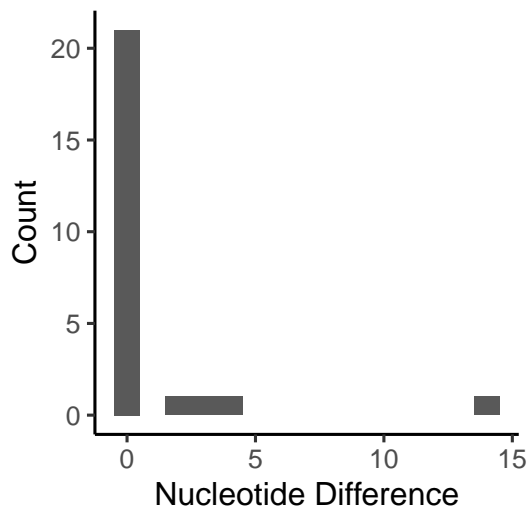


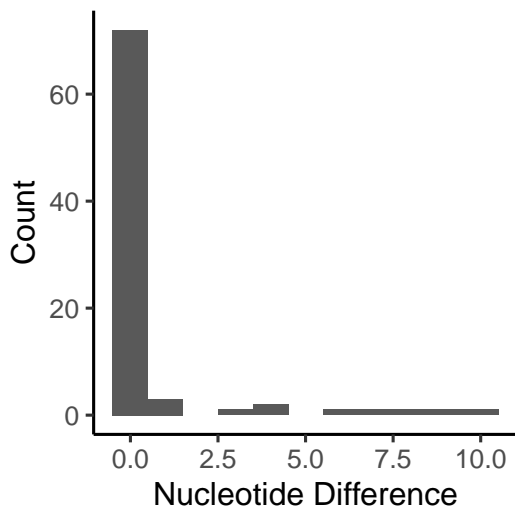
### IGHV1-2\*04

25 sequences assigned  
21 (84%) exact matches, in which:  
21 unique CDR3  
5 unique J



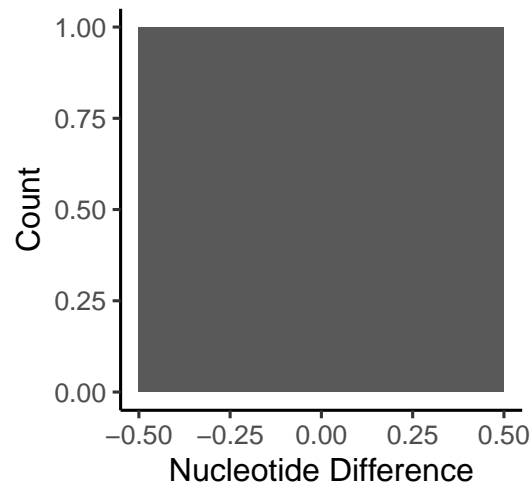
### IGHV1-18\*01

83 sequences assigned  
72 (86.7%) exact matches, in which:  
72 unique CDR3  
6 unique J



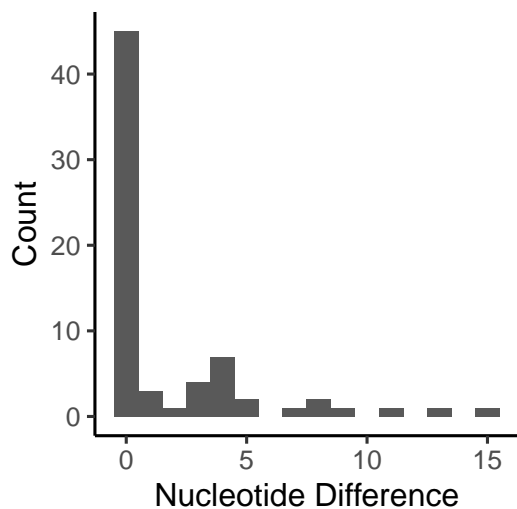
### IGHV1-45\*02

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



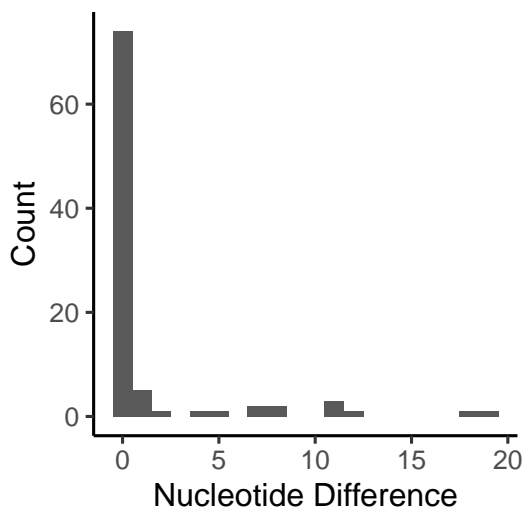
### IGHV1-3\*01\_05

69 sequences assigned  
45 (65.2%) exact matches, in which:  
45 unique CDR3  
5 unique J



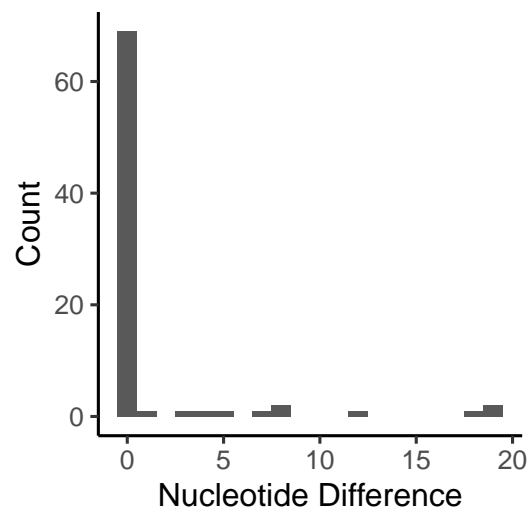
### IGHV1-18\*04

92 sequences assigned  
74 (80.4%) exact matches, in which:  
73 unique CDR3  
6 unique J



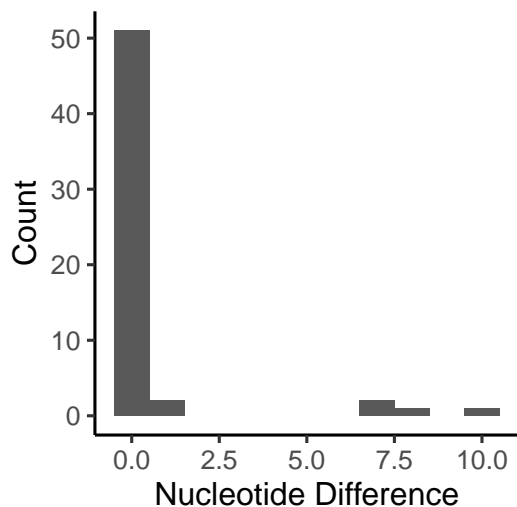
### IGHV1-46\*01

86 sequences assigned  
69 (80.2%) exact matches, in which:  
69 unique CDR3  
6 unique J



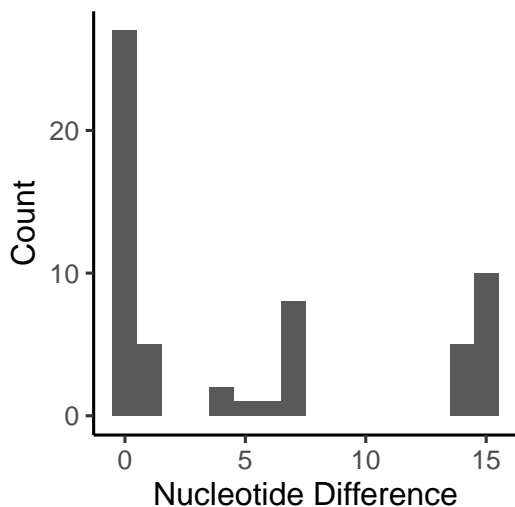
### IGHV1-8\*01

57 sequences assigned  
51 (89.5%) exact matches, in which:  
51 unique CDR3  
7 unique J



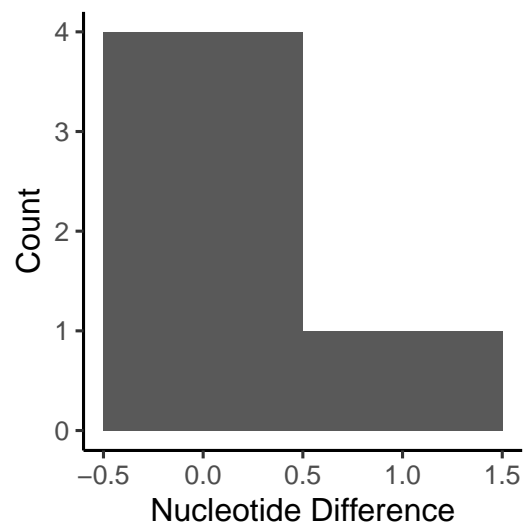
### IGHV1-24\*01

59 sequences assigned  
27 (45.8%) exact matches, in which:  
26 unique CDR3  
5 unique J



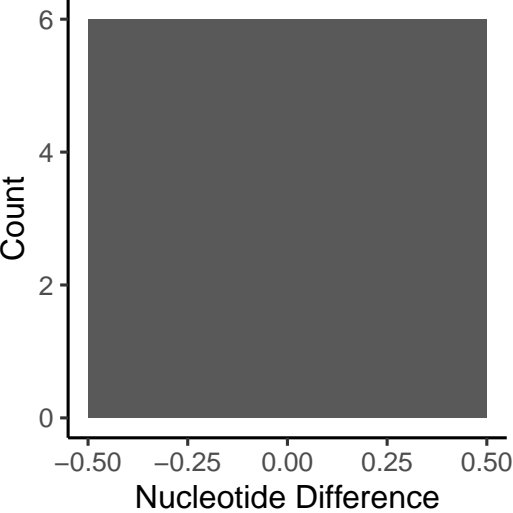
### IGHV1-58\*02

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



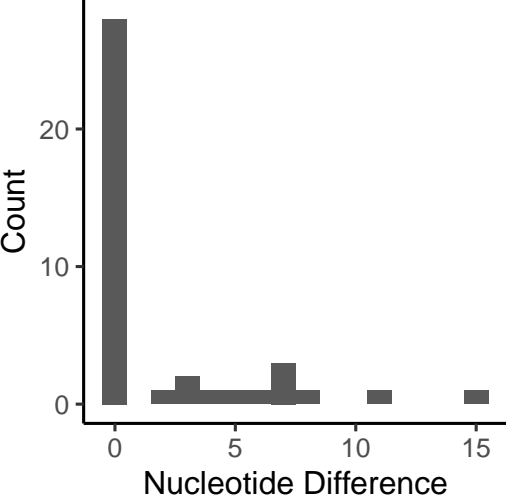
IGHV1-58\*01\_03

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



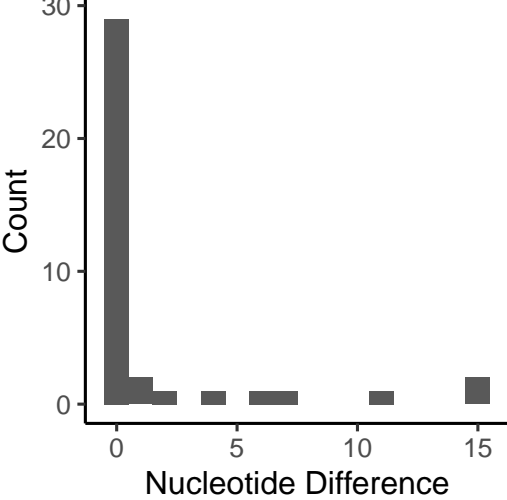
IGHV2-5\*02

40 sequences assigned  
28 (70%) exact matches, in which:  
28 unique CDR3  
5 unique J



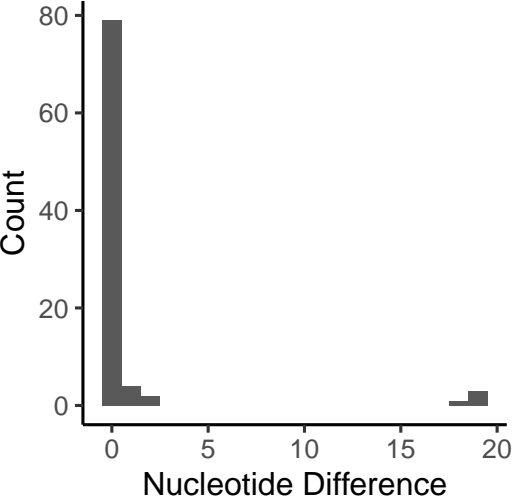
IGHV3-7\*01

39 sequences assigned  
29 (74.4%) exact matches, in which:  
29 unique CDR3  
5 unique J



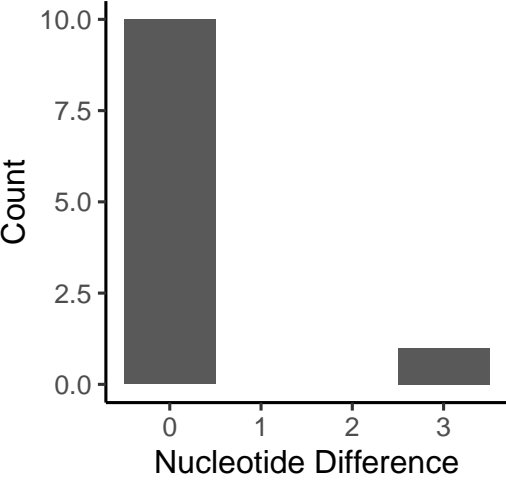
IGHV1-69\*01\_12\_13

92 sequences assigned  
79 (85.9%) exact matches, in which:  
79 unique CDR3  
5 unique J



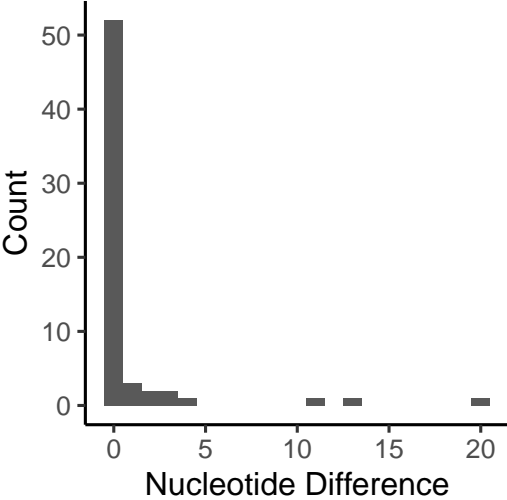
IGHV2-26\*01

11 sequences assigned  
10 (90.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



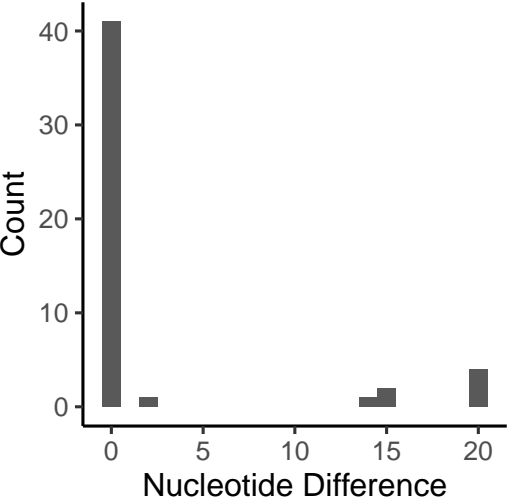
IGHV3-7\*03

63 sequences assigned  
52 (82.5%) exact matches, in which:  
52 unique CDR3  
5 unique J



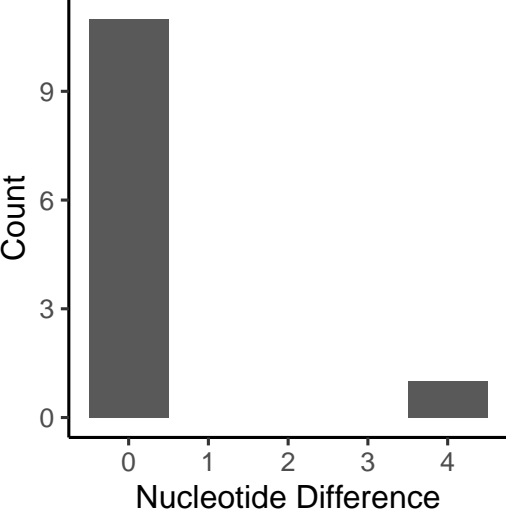
IGHV1-69\*10

56 sequences assigned  
41 (73.2%) exact matches, in which:  
41 unique CDR3  
4 unique J



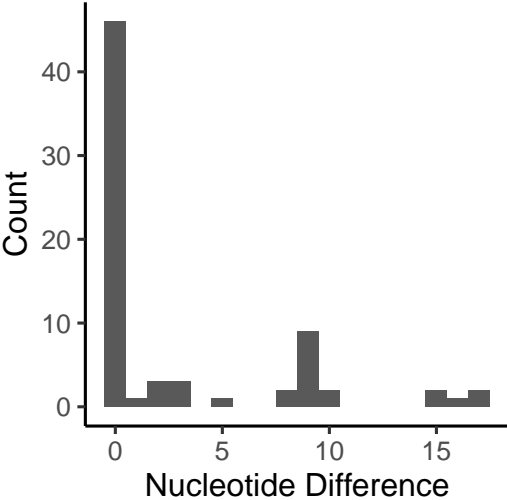
IGHV2-70\*01

12 sequences assigned  
11 (91.7%) exact matches, in which:  
11 unique CDR3  
3 unique J



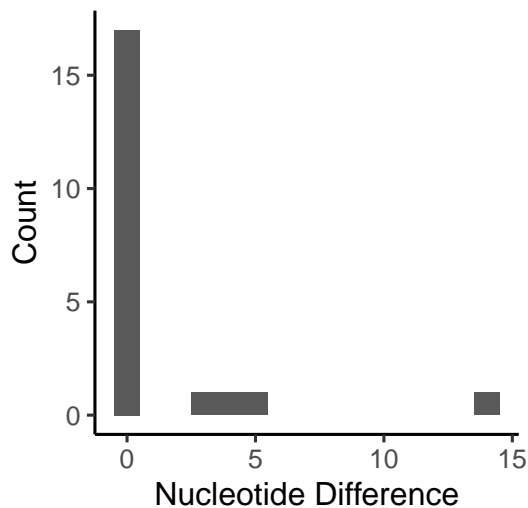
IGHV3-9\*01

72 sequences assigned  
46 (63.9%) exact matches, in which:  
46 unique CDR3  
5 unique J



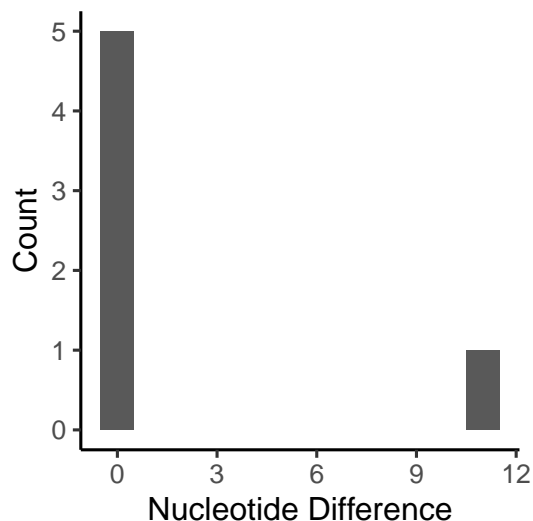
### IGHV3-11\*01

21 sequences assigned  
17 (81%) exact matches, in which:  
17 unique CDR3  
3 unique J



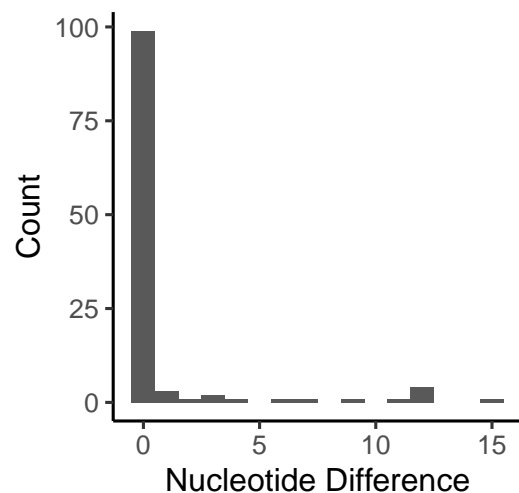
### IGHV3-13\*05

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



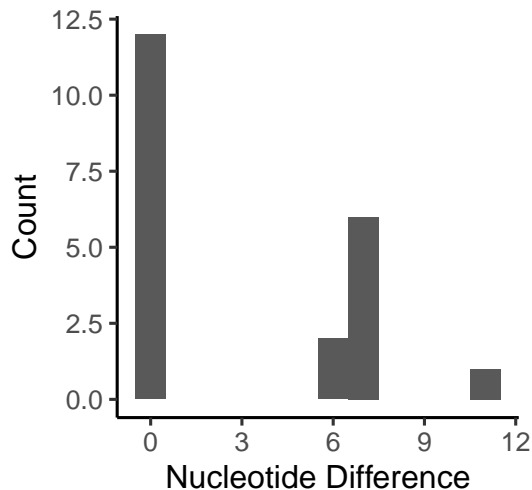
### IGHV3-21\*01\_02

119 sequences assigned  
99 (83.2%) exact matches, in which:  
99 unique CDR3  
6 unique J



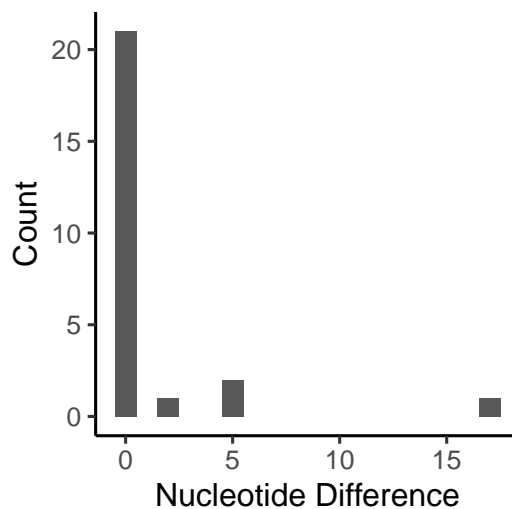
### IGHV3-11\*06

21 sequences assigned  
12 (57.1%) exact matches, in which:  
12 unique CDR3  
4 unique J



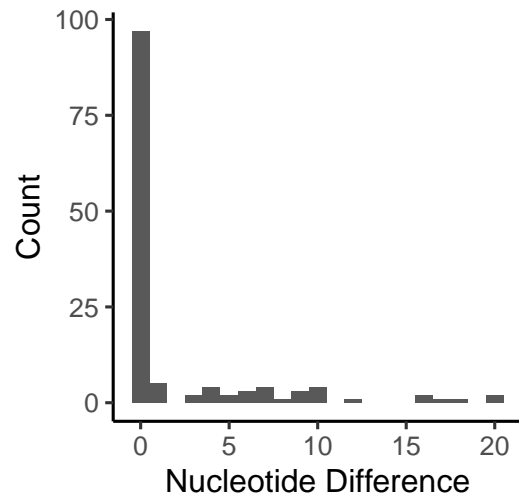
### IGHV3-15\*01\_02

25 sequences assigned  
21 (84%) exact matches, in which:  
21 unique CDR3  
5 unique J



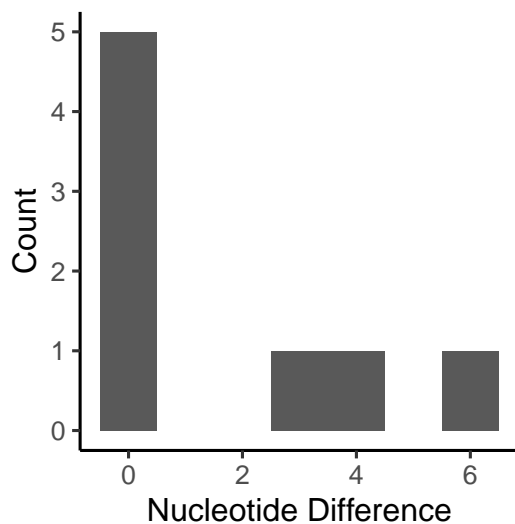
### IGHV3-23\*01\_04

137 sequences assigned  
97 (70.8%) exact matches, in which:  
97 unique CDR3  
7 unique J



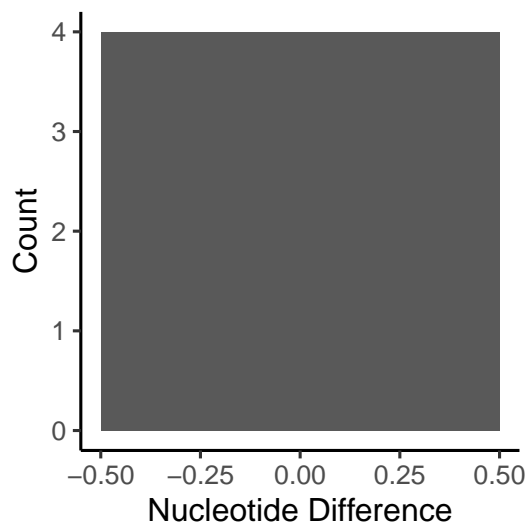
### IGHV3-13\*01

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



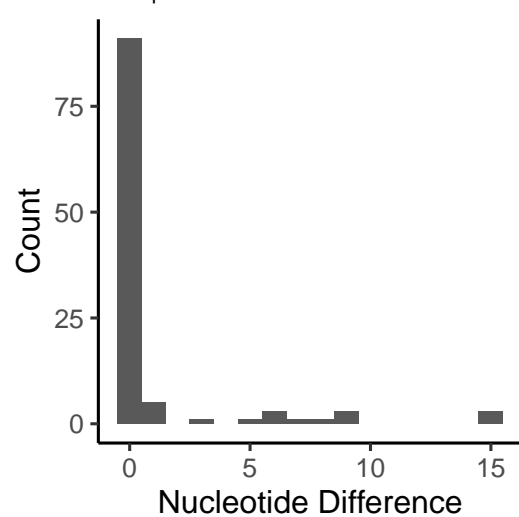
### IGHV3-20\*01\_02

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



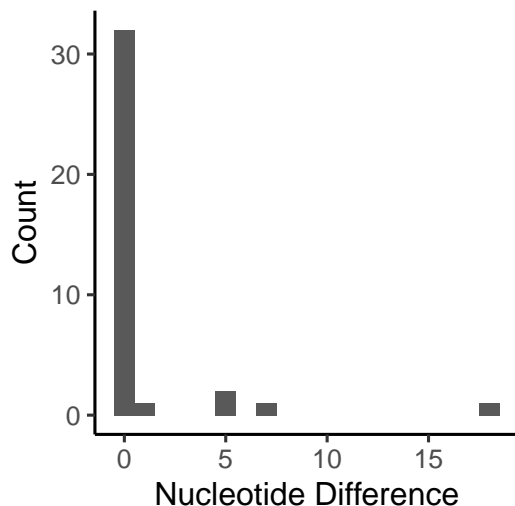
### IGHV3-30-3\*01

110 sequences assigned  
91 (82.7%) exact matches, in which:  
91 unique CDR3  
5 unique J



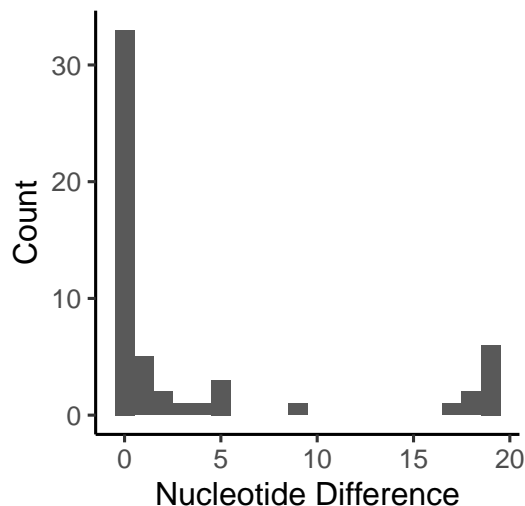
### IGHV3-33\*01

37 sequences assigned  
32 (86.5%) exact matches, in which:  
32 unique CDR3  
3 unique J



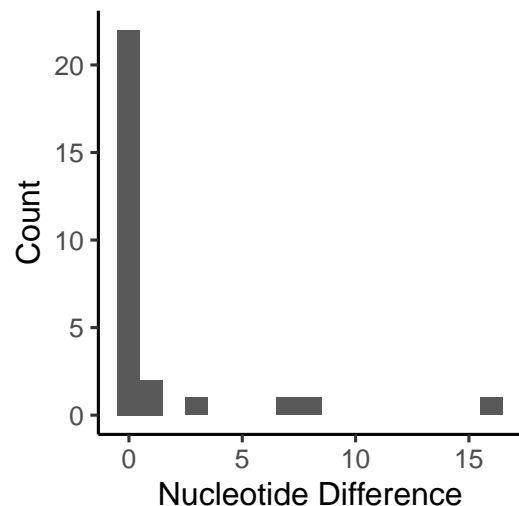
### IGHV3-48\*04

55 sequences assigned  
33 (60%) exact matches, in which:  
33 unique CDR3  
6 unique J



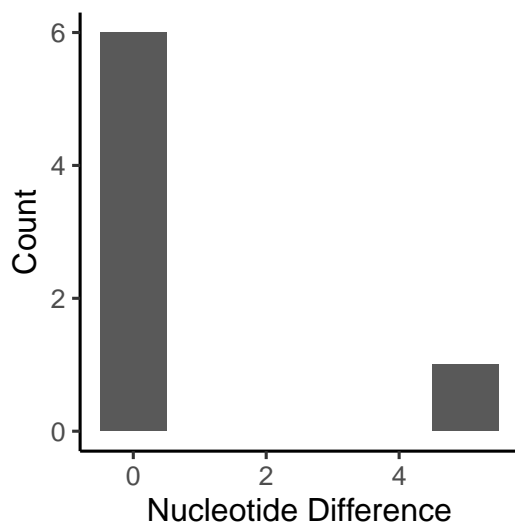
### IGHV3-53\*01\_02

54 sequences assigned  
22 (40.7%) exact matches, in which:  
22 unique CDR3  
5 unique J



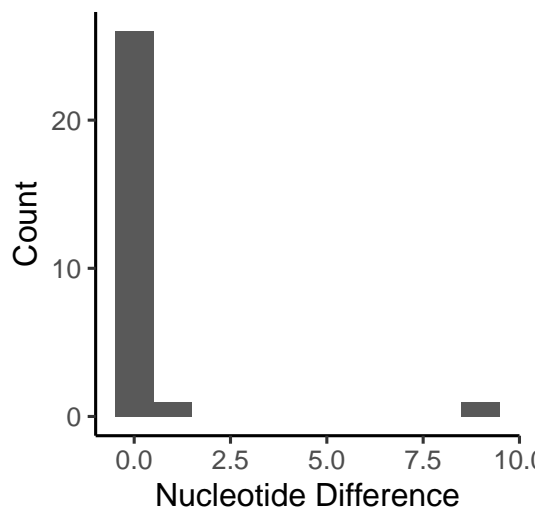
### IGHV3-43\*01

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



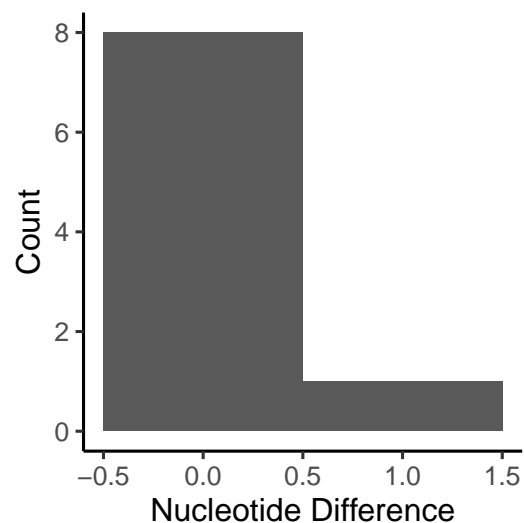
### IGHV3-49\*03\_05

28 sequences assigned  
26 (92.9%) exact matches, in which:  
26 unique CDR3  
5 unique J



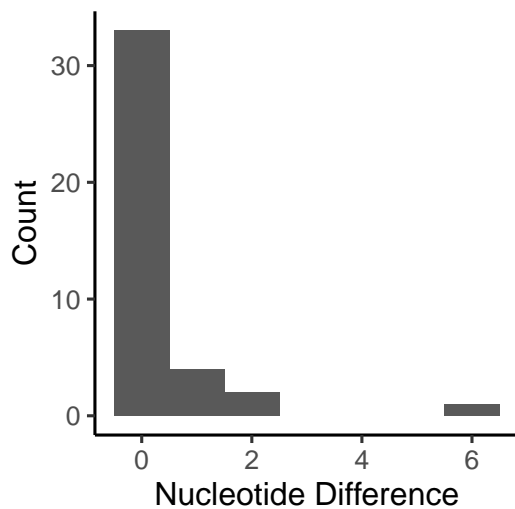
### IGHV3-64\*01

9 sequences assigned  
8 (88.9%) exact matches, in which:  
8 unique CDR3  
4 unique J



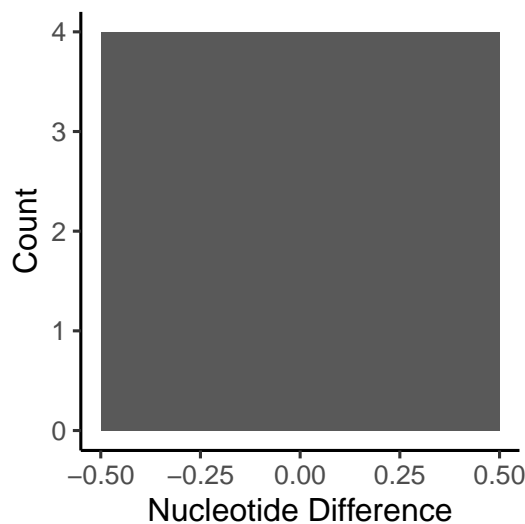
### IGHV3-48\*02

40 sequences assigned  
33 (82.5%) exact matches, in which:  
33 unique CDR3  
3 unique J



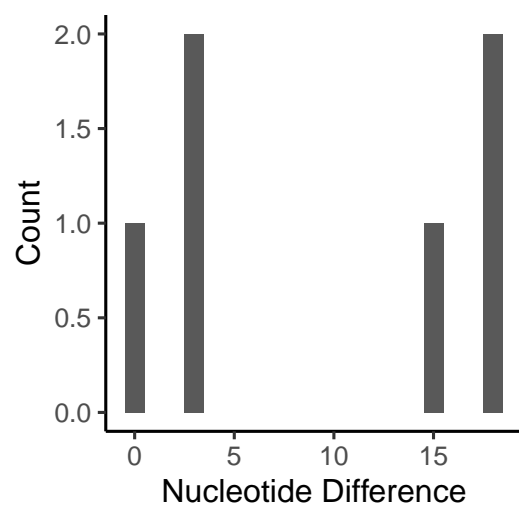
### IGHV3-53\*04

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



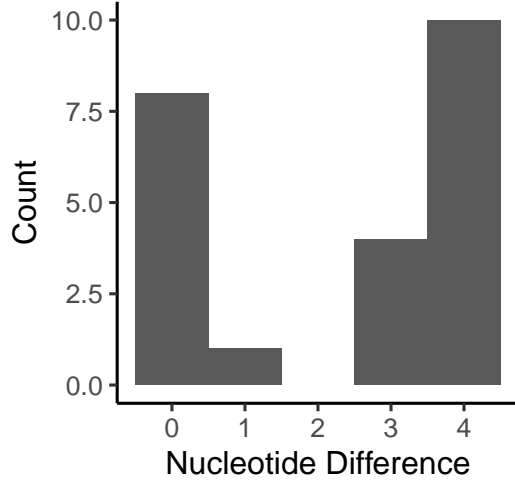
### IGHV3-72\*01

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



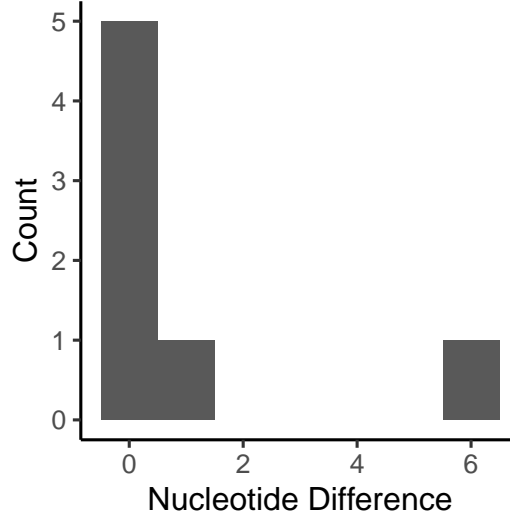
### IGHV3-73\*01\_02

23 sequences assigned  
8 (34.8%) exact matches, in which:  
8 unique CDR3  
4 unique J



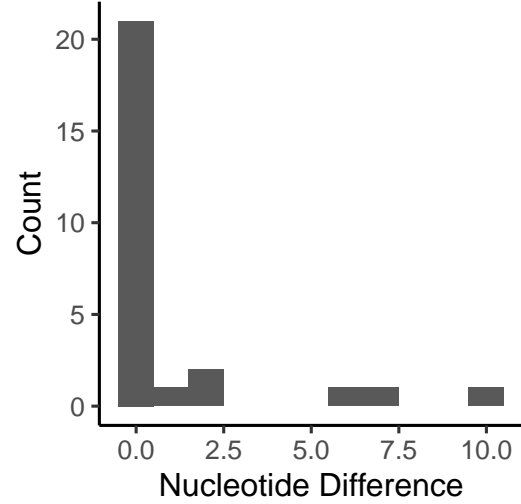
### IGHV3-43D\*03

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



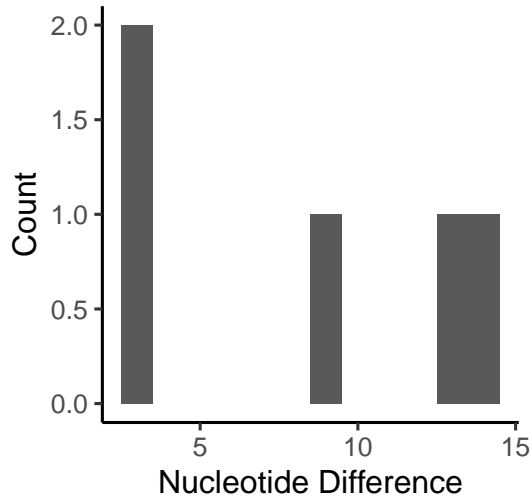
### IGHV4-30-4\*01

27 sequences assigned  
21 (77.8%) exact matches, in which:  
21 unique CDR3  
4 unique J



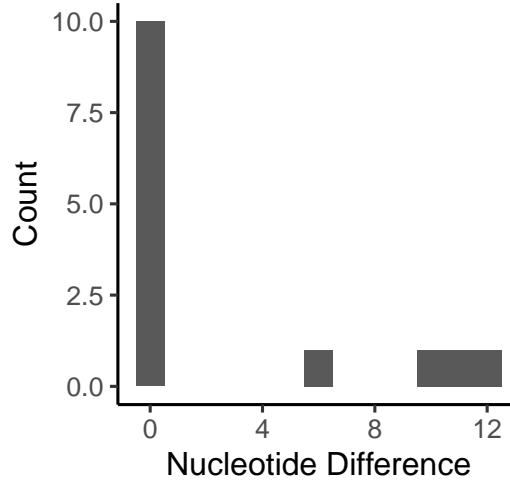
### IGHV3-74\*03

18 sequences assigned  
No exact matches.



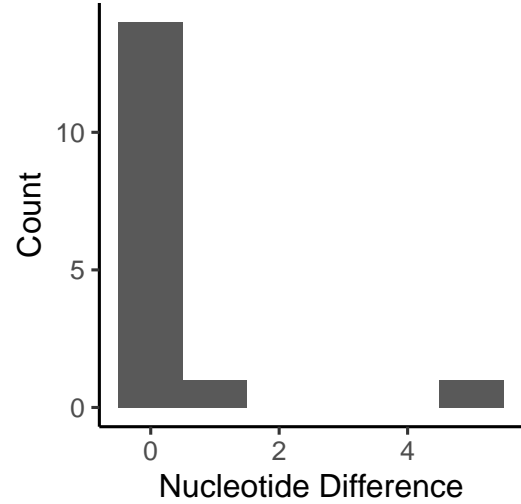
### IGHV3-64D\*06

14 sequences assigned  
10 (71.4%) exact matches, in which:  
10 unique CDR3  
2 unique J



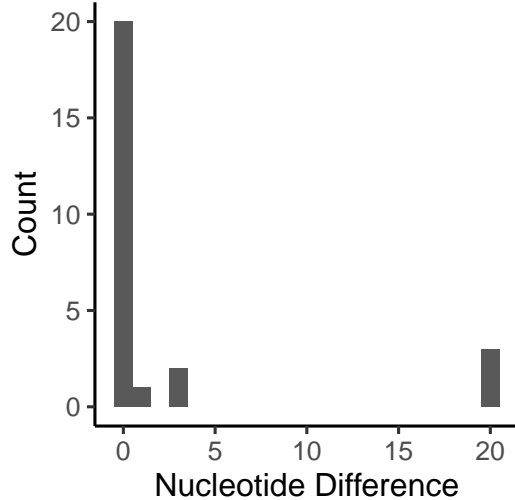
### IGHV4-30-2\*01

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



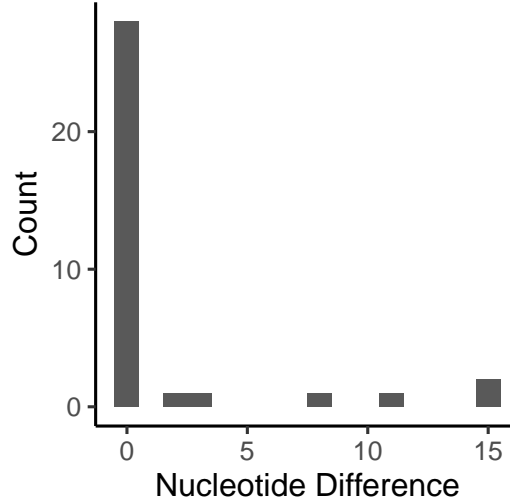
### IGHV3-74\*01\_02

33 sequences assigned  
20 (60.6%) exact matches, in which:  
20 unique CDR3  
5 unique J



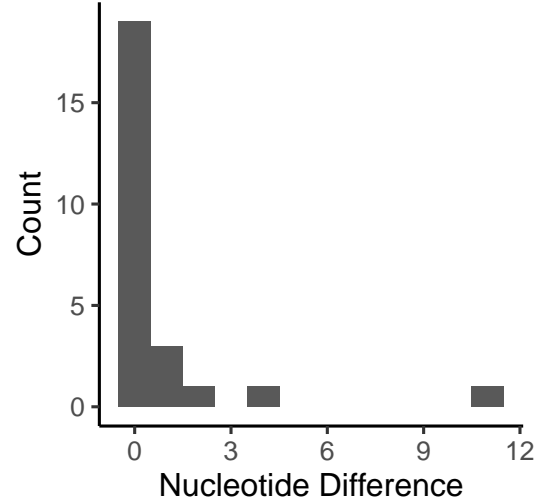
### IGHV4-4\*02\_03

34 sequences assigned  
28 (82.4%) exact matches, in which:  
28 unique CDR3  
6 unique J



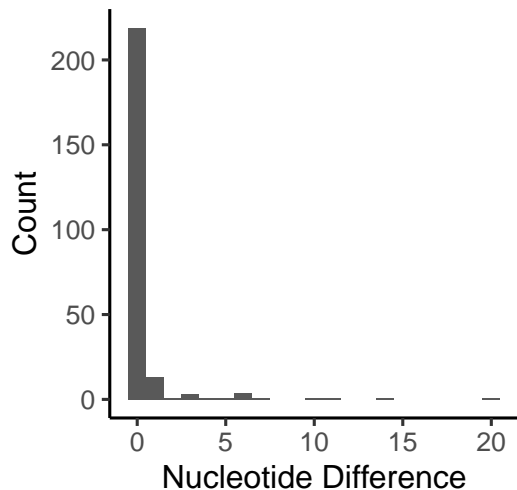
### IGHV4-31\*02

25 sequences assigned  
19 (76%) exact matches, in which:  
19 unique CDR3  
4 unique J



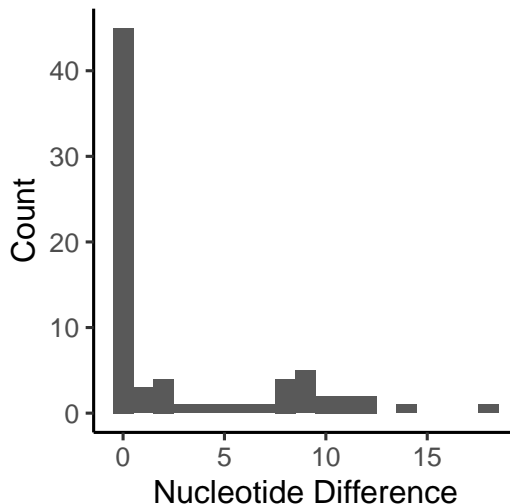
### IGHV4-34\*01\_02

249 sequences assigned  
219 (88%) exact matches, in which:  
215 unique CDR3  
7 unique J



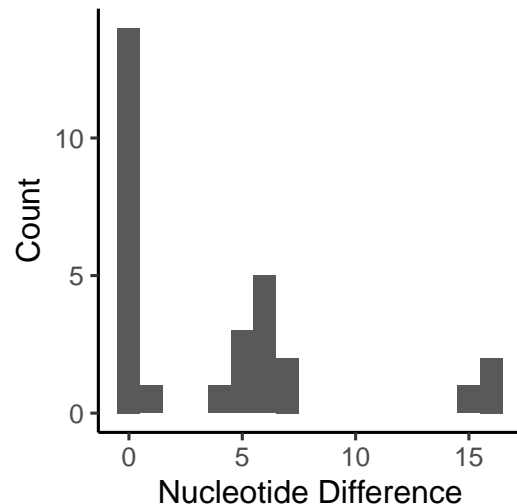
### IGHV4-39\*02\_C258G

74 sequences assigned  
45 (60.8%) exact matches, in which:  
45 unique CDR3  
5 unique J



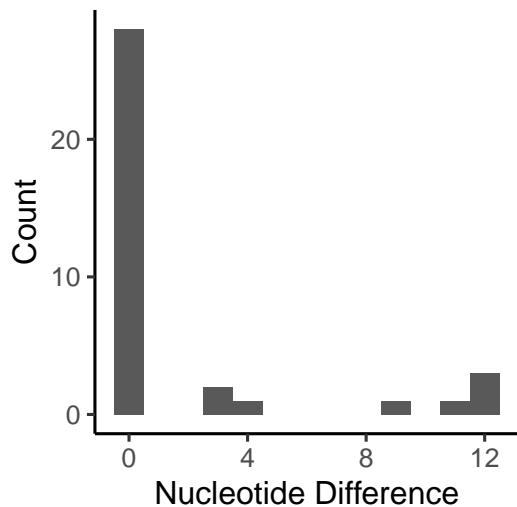
### IGHV4-61\*01

30 sequences assigned  
14 (46.7%) exact matches, in which:  
14 unique CDR3  
4 unique J



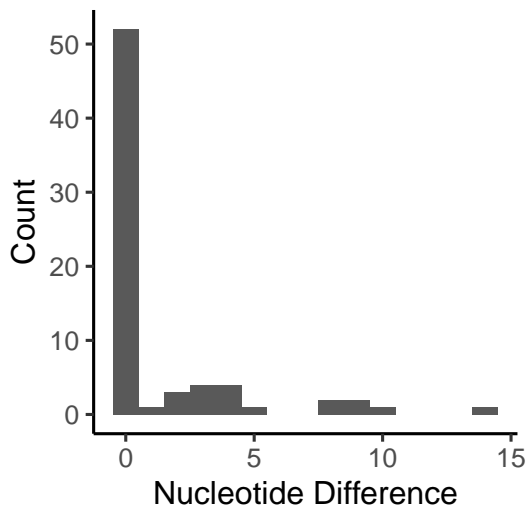
### IGHV4-38-2\*02

36 sequences assigned  
28 (77.8%) exact matches, in which:  
28 unique CDR3  
5 unique J



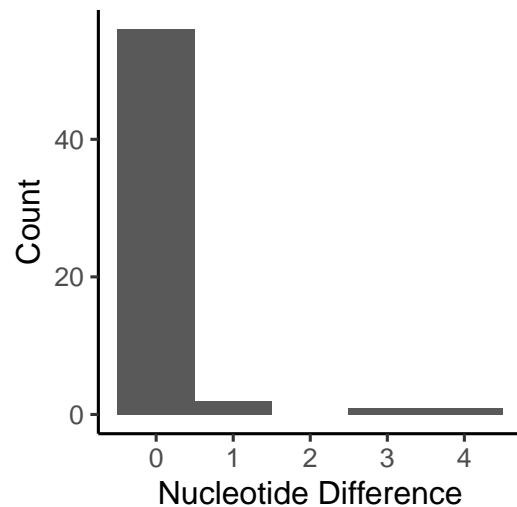
### IGHV4-59\*08

124 sequences assigned  
52 (41.9%) exact matches, in which:  
52 unique CDR3  
6 unique J



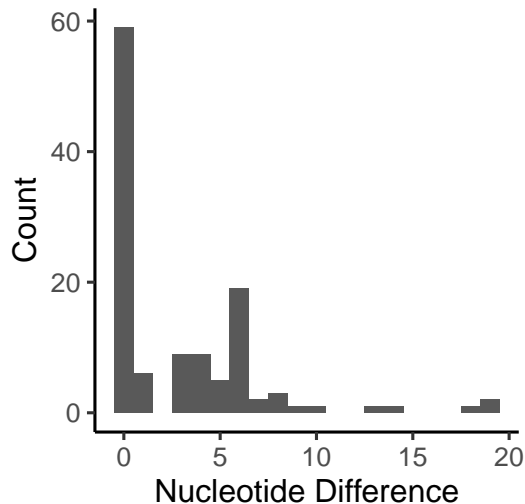
### IGHV5-10-1\*01\_03

60 sequences assigned  
56 (93.3%) exact matches, in which:  
56 unique CDR3  
5 unique J



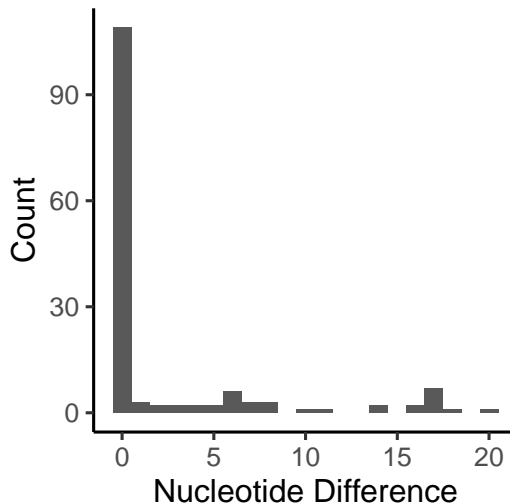
### IGHV4-39\*07

124 sequences assigned  
59 (47.6%) exact matches, in which:  
59 unique CDR3  
6 unique J



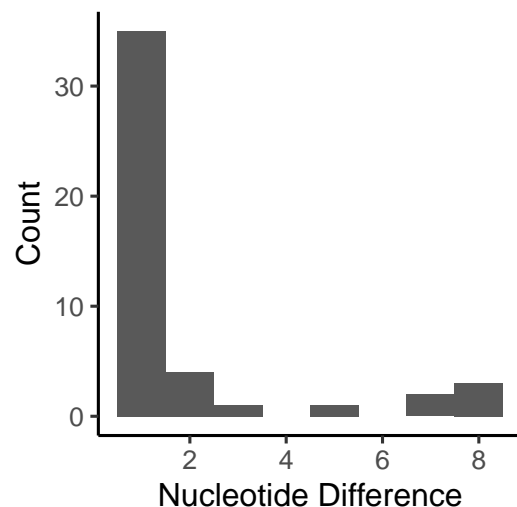
### IGHV4-59\*02\_G88A

163 sequences assigned  
109 (66.9%) exact matches, in which:  
109 unique CDR3  
7 unique J



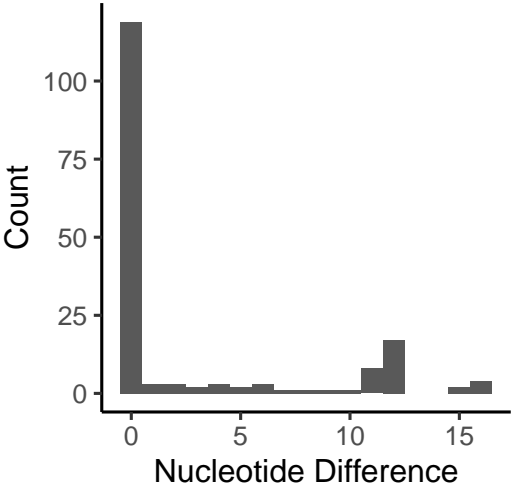
### IGHV5-51\*07

46 sequences assigned  
No exact matches.



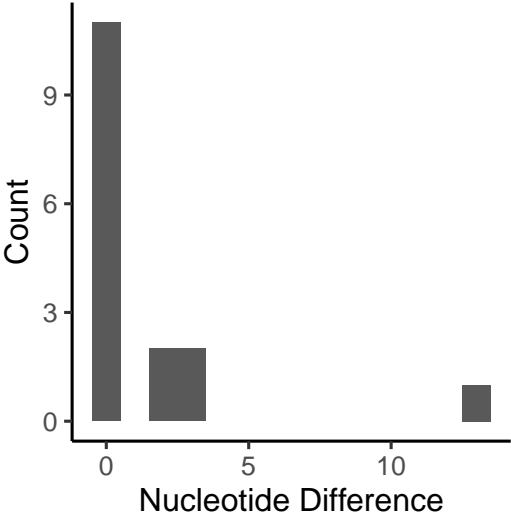
IGHV5–51\*01\_03

190 sequences assigned  
119 (62.6%) exact matches, in which:  
119 unique CDR3  
7 unique J



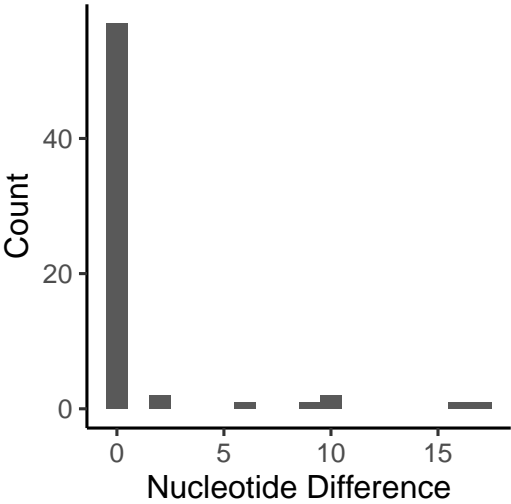
IGHV6–1\*01\_02

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

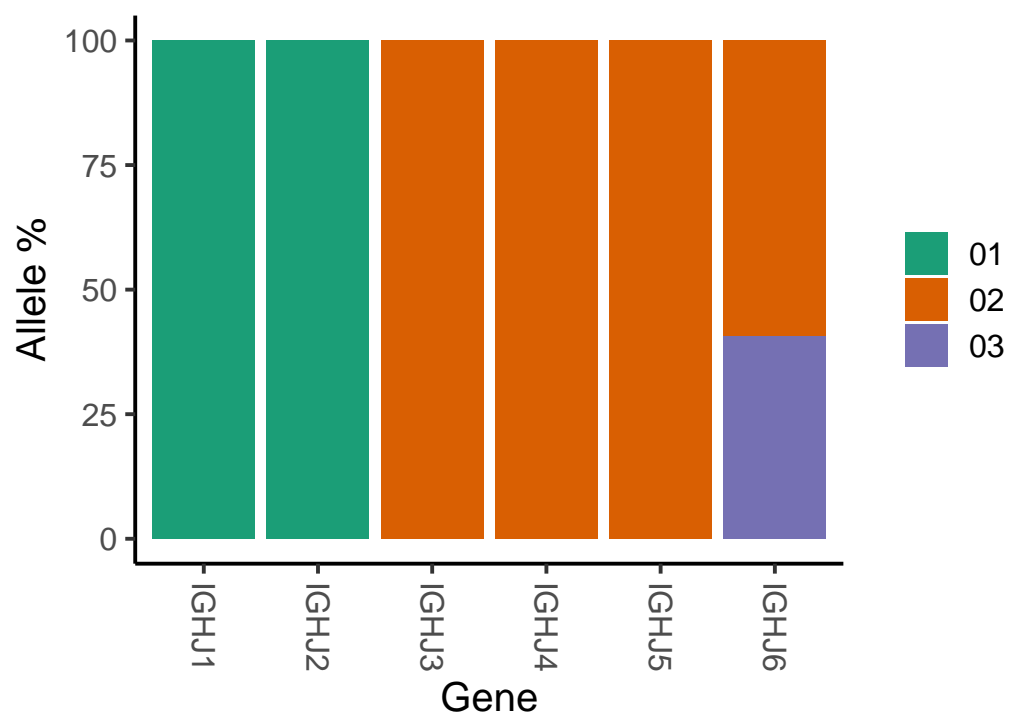


IGHV7–4–1\*02\_T63C

65 sequences assigned  
57 (87.7%) exact matches, in which:  
57 unique CDR3  
6 unique J

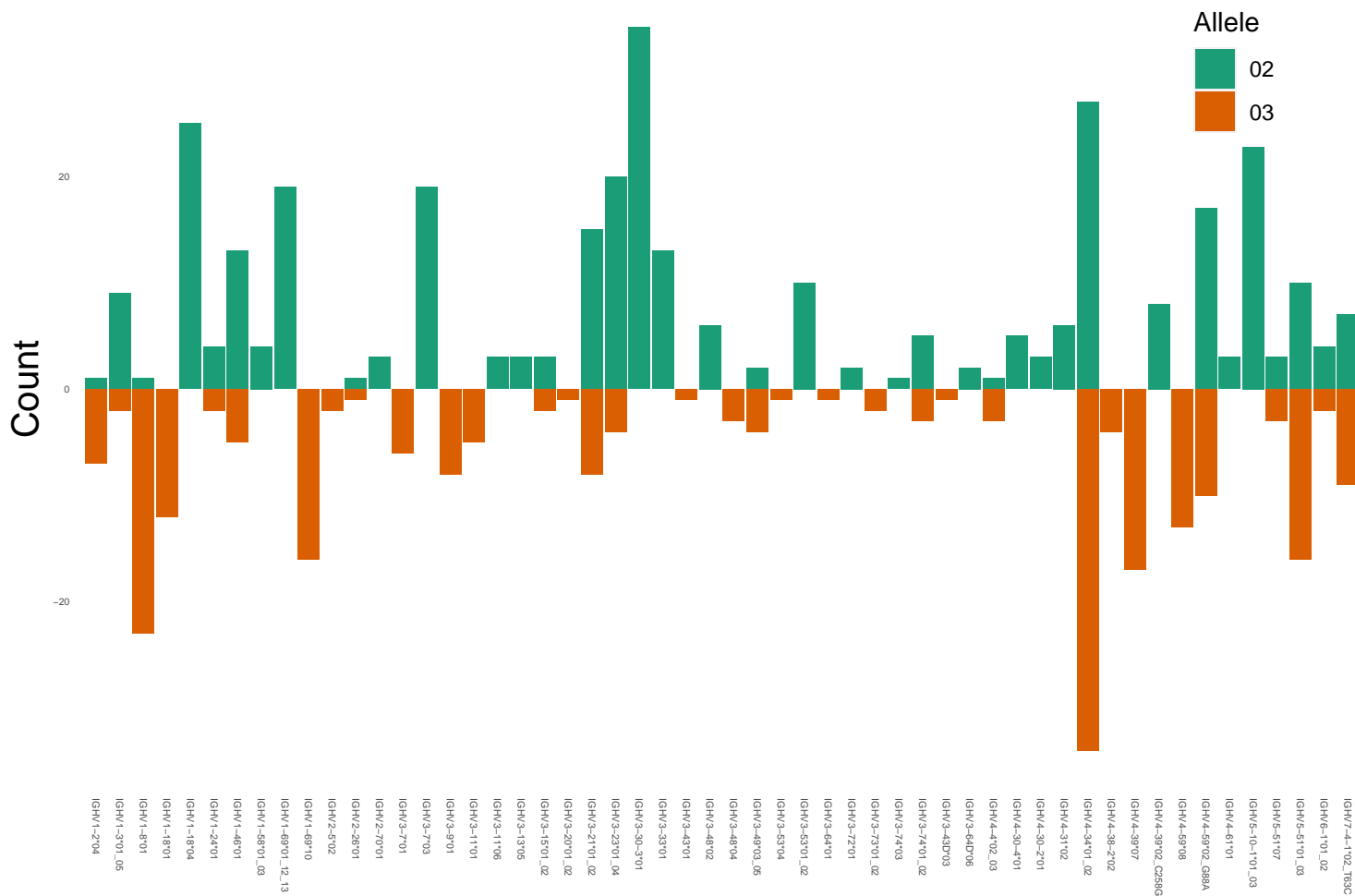


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.