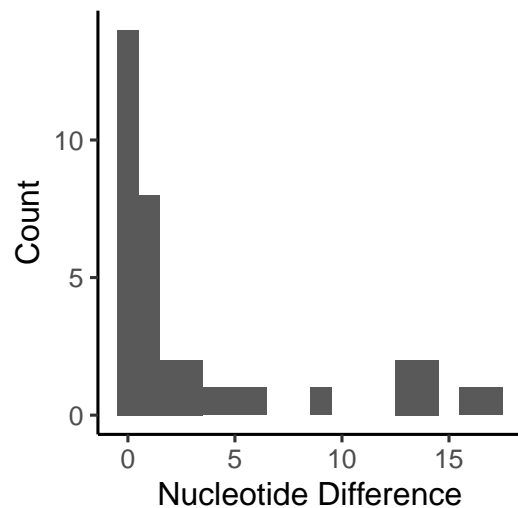


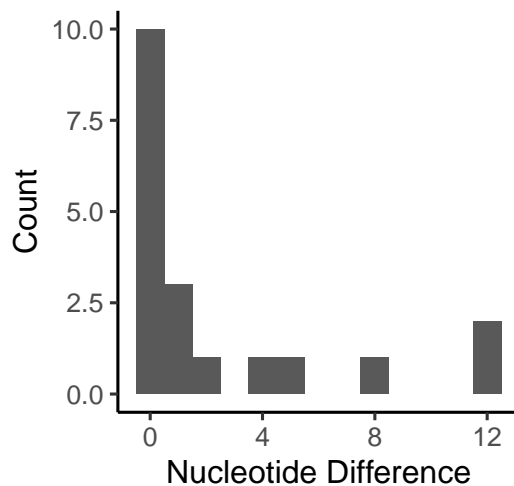
### IGHV1-2\*02

37 sequences assigned  
14 (37.8%) exact matches, in which:  
14 unique CDR3  
3 unique J



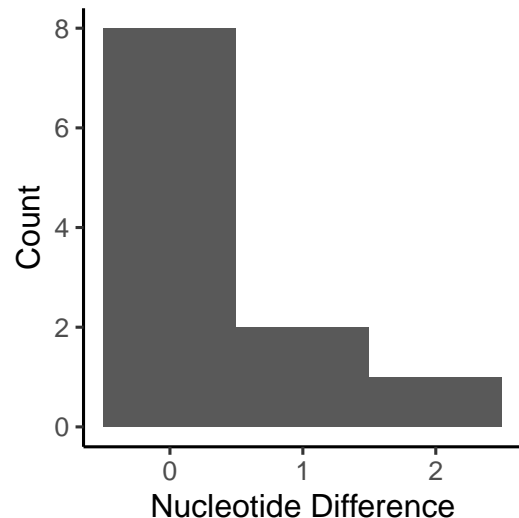
### IGHV1-8\*01

19 sequences assigned  
10 (52.6%) exact matches, in which:  
10 unique CDR3  
5 unique J



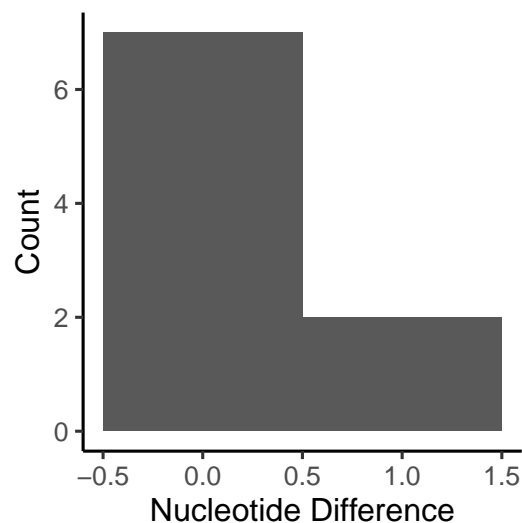
### IGHV1-24\*01

11 sequences assigned  
8 (72.7%) exact matches, in which:  
8 unique CDR3  
2 unique J



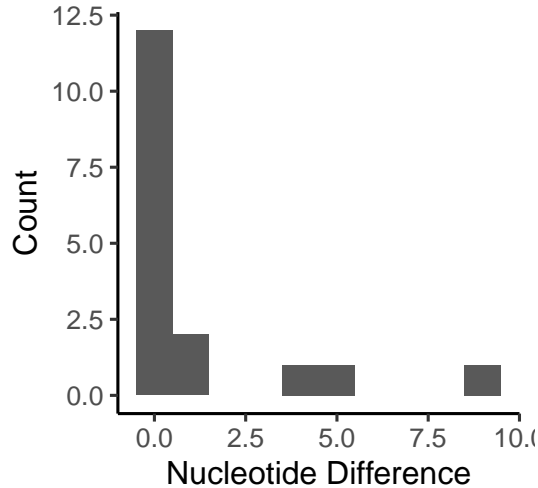
### IGHV1-2\*04

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



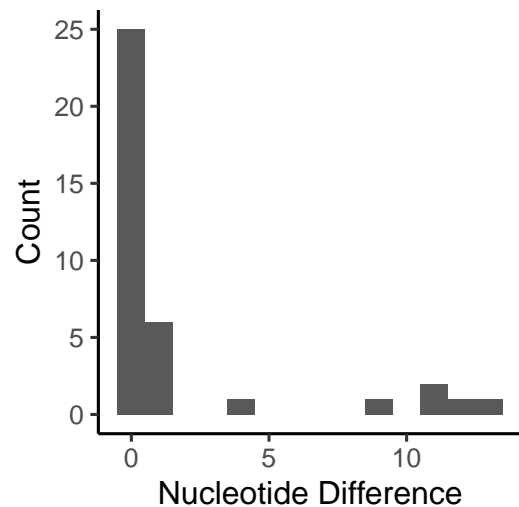
### IGHV1-18\*01

19 sequences assigned  
12 (63.2%) exact matches, in which:  
12 unique CDR3  
3 unique J



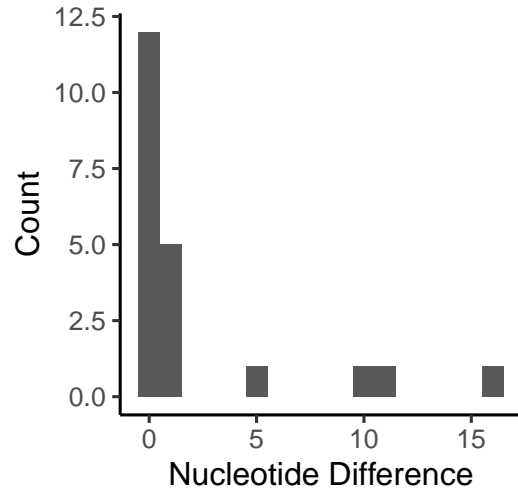
### IGHV1-46\*01

37 sequences assigned  
25 (67.6%) exact matches, in which:  
25 unique CDR3  
5 unique J



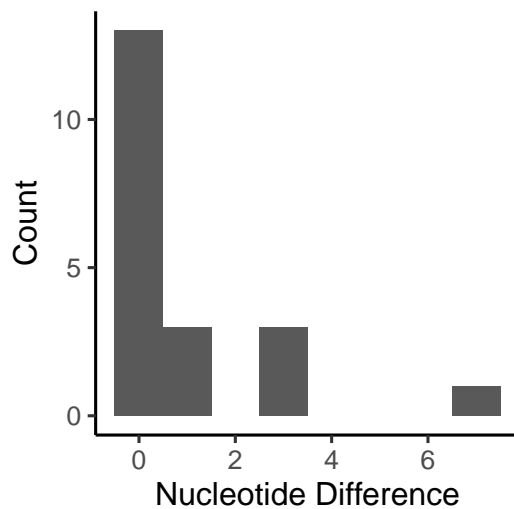
### IGHV1-3\*01

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



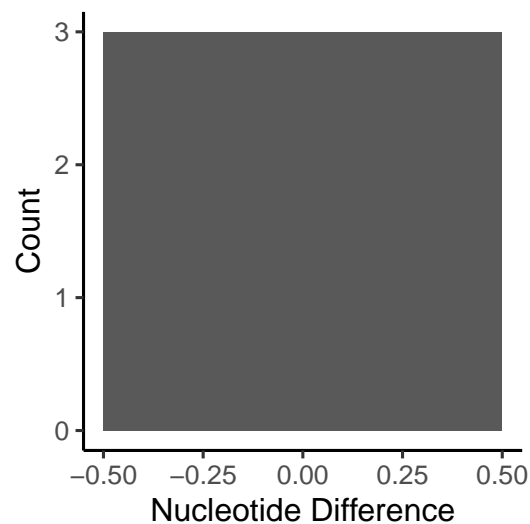
### IGHV1-18\*04

20 sequences assigned  
13 (65%) exact matches, in which:  
13 unique CDR3  
4 unique J



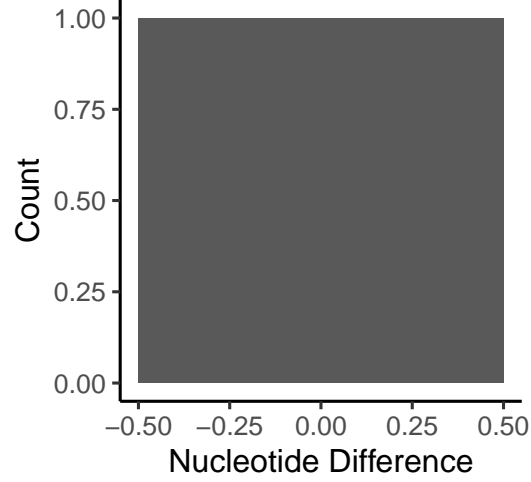
### IGHV1-58\*01

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



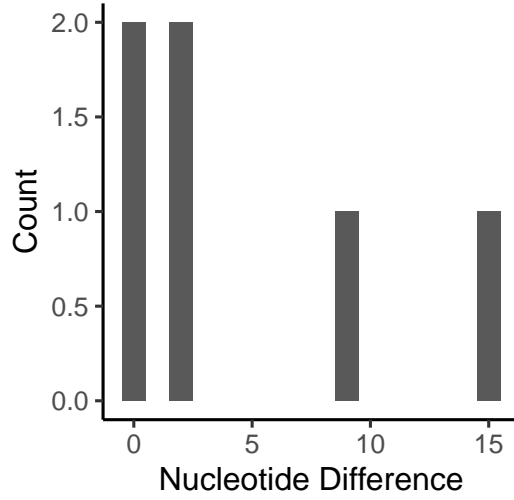
### IGHV1–69–2\*01

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



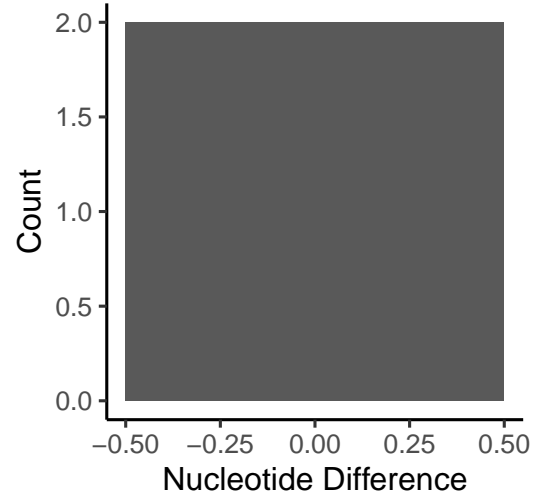
### IGHV2–5\*02

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



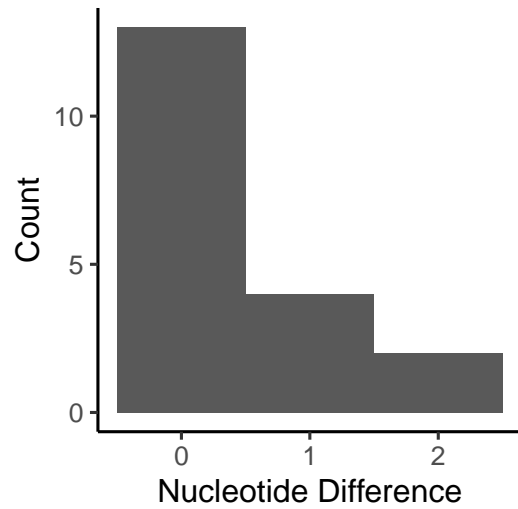
### IGHV2–70\*15

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



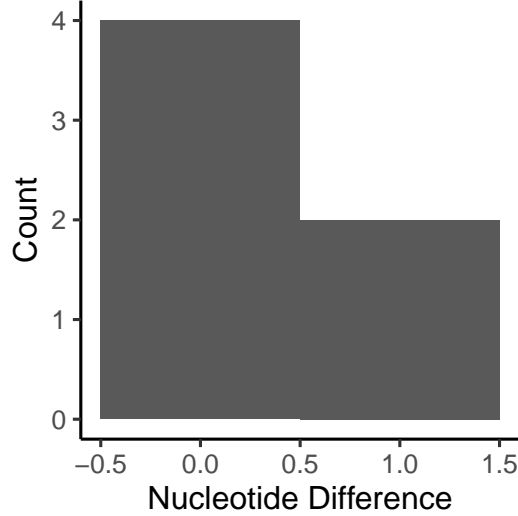
### IGHV1–69\*06

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



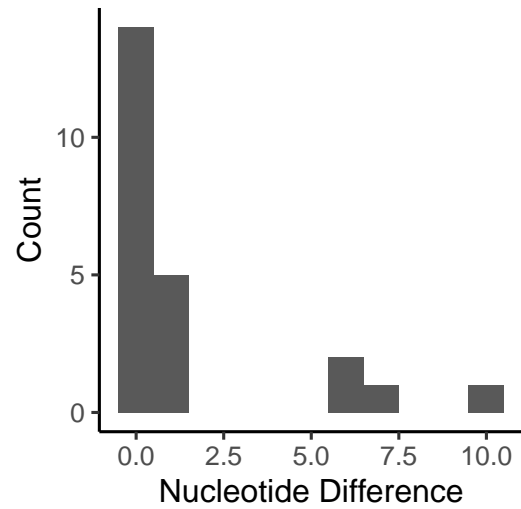
### IGHV2–26\*01

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



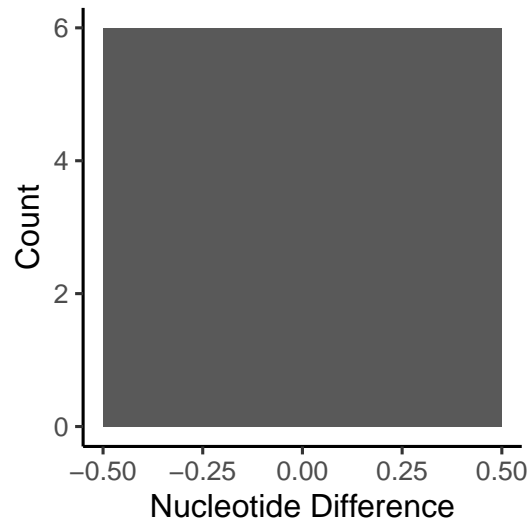
### IGHV3–7\*01

23 sequences assigned  
14 (60.9%) exact matches, in which:  
14 unique CDR3  
4 unique J



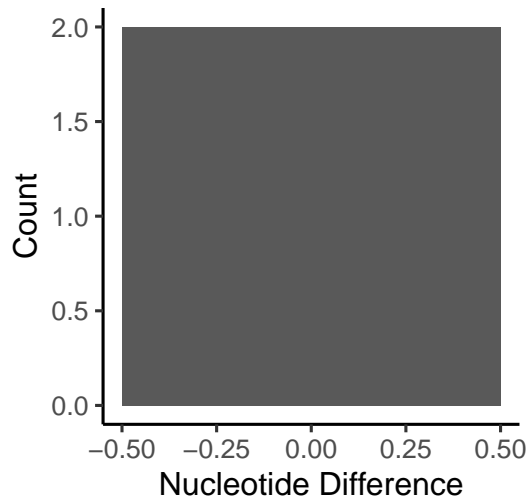
### IGHV2–5\*01

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



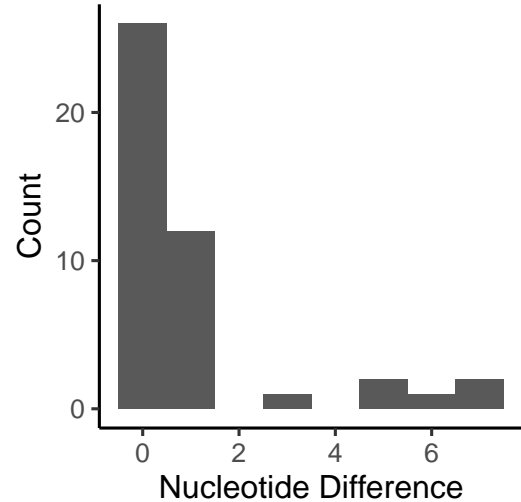
### IGHV2–70\*01

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



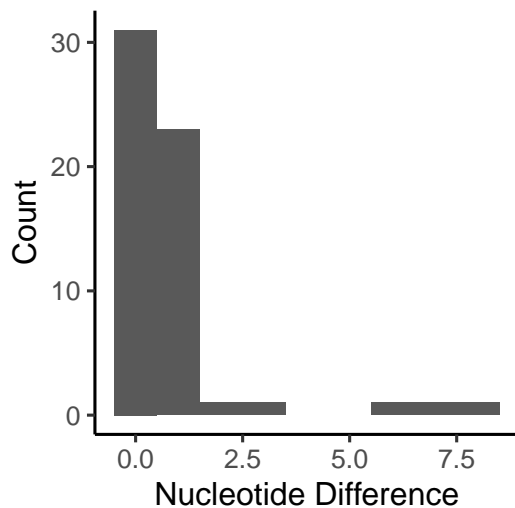
### IGHV3–7\*03

44 sequences assigned  
26 (59.1%) exact matches, in which:  
26 unique CDR3  
5 unique J



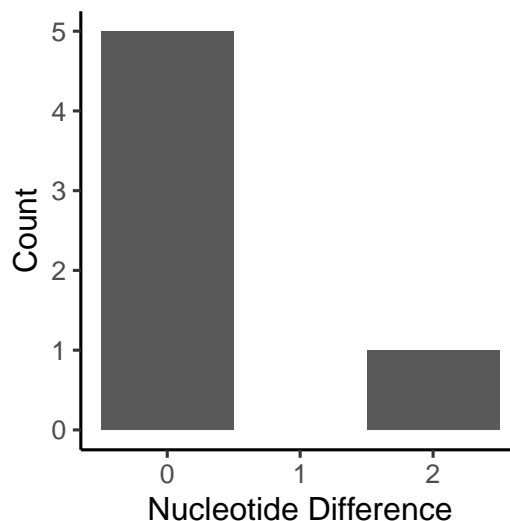
### IGHV3-9\*01

59 sequences assigned  
31 (52.5%) exact matches, in which:  
31 unique CDR3  
5 unique J



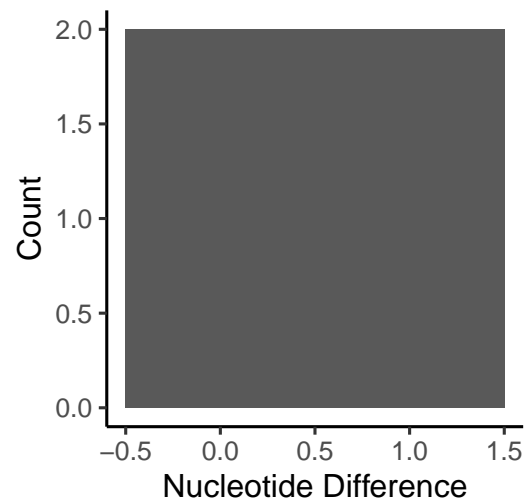
### IGHV3-13\*01

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



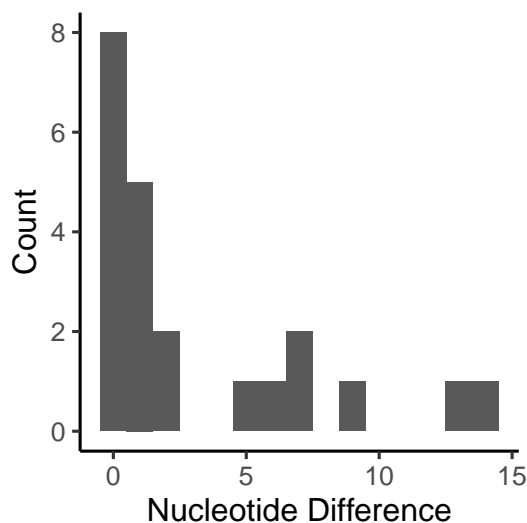
### IGHV3-20\*01

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



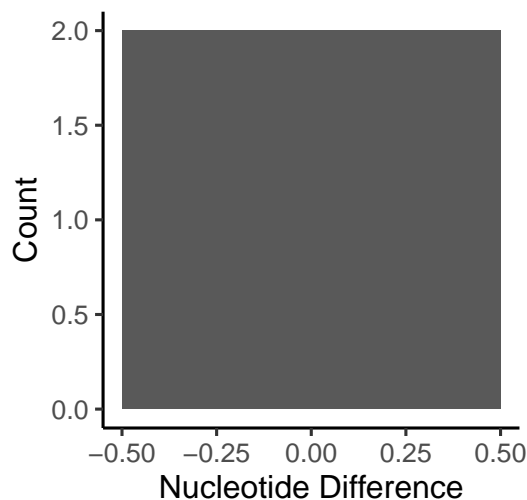
### IGHV3-11\*01

22 sequences assigned  
8 (36.4%) exact matches, in which:  
8 unique CDR3  
3 unique J



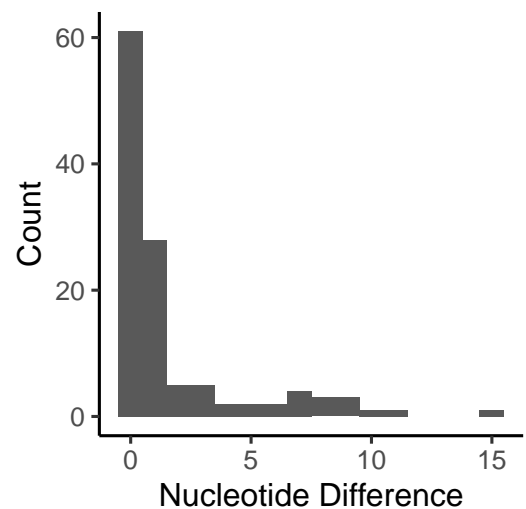
### IGHV3-13\*05

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



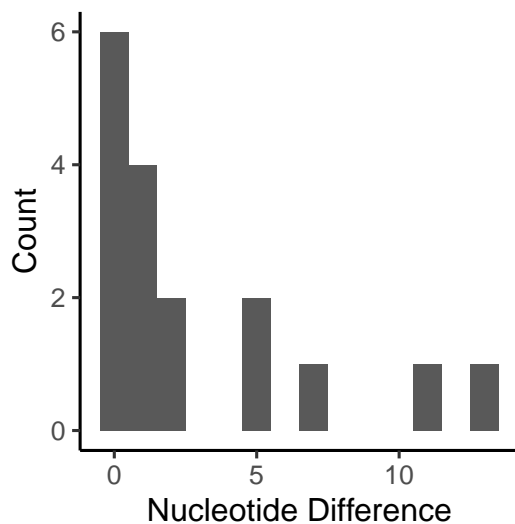
### IGHV3-21\*01

118 sequences assigned  
61 (51.7%) exact matches, in which:  
61 unique CDR3  
6 unique J



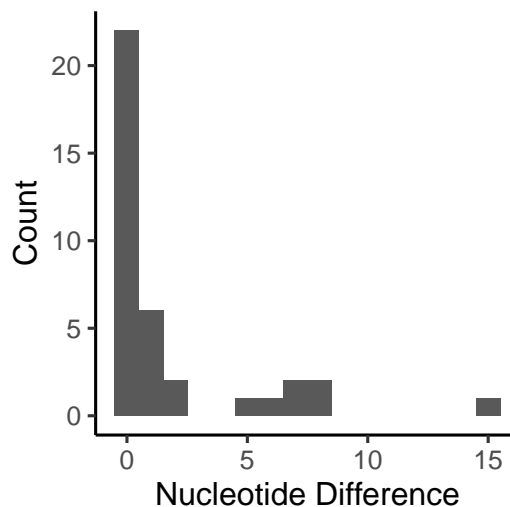
### IGHV3-11\*06

17 sequences assigned  
6 (35.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



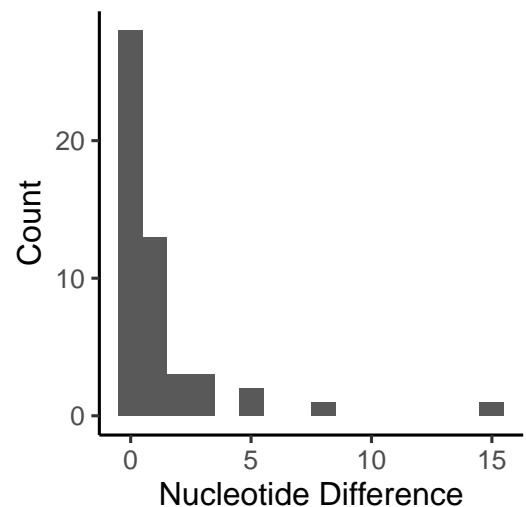
### IGHV3-15\*01

38 sequences assigned  
22 (57.9%) exact matches, in which:  
21 unique CDR3  
5 unique J



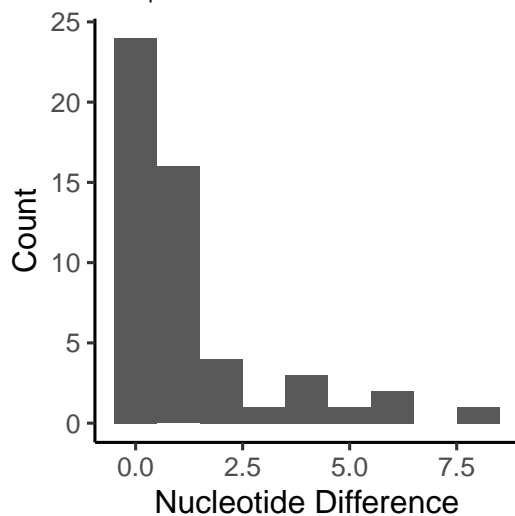
### IGHV3-30-3\*01

53 sequences assigned  
28 (52.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



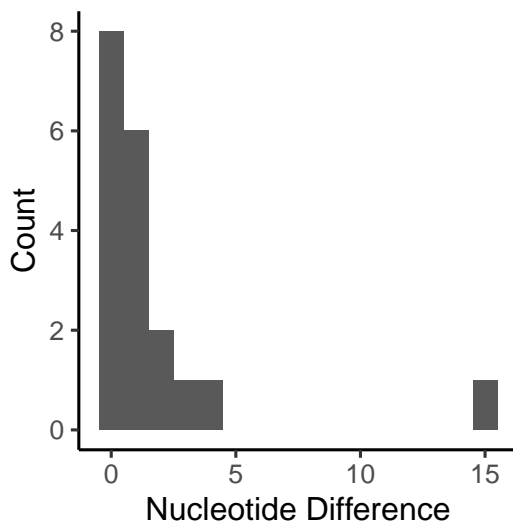
### IGHV3-33\*01

53 sequences assigned  
24 (45.3%) exact matches, in which:  
24 unique CDR3  
4 unique J



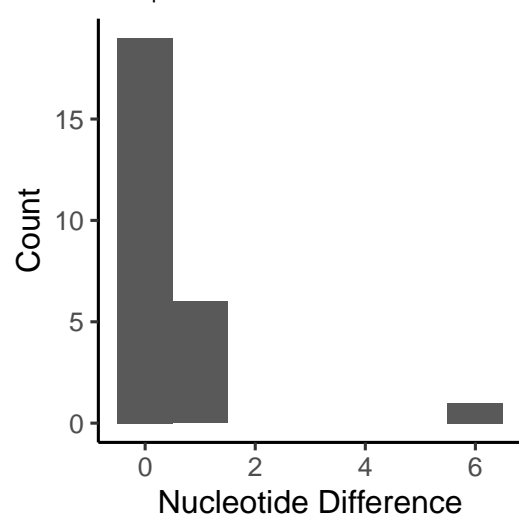
### IGHV3-48\*02

19 sequences assigned  
8 (42.1%) exact matches, in which:  
8 unique CDR3  
4 unique J



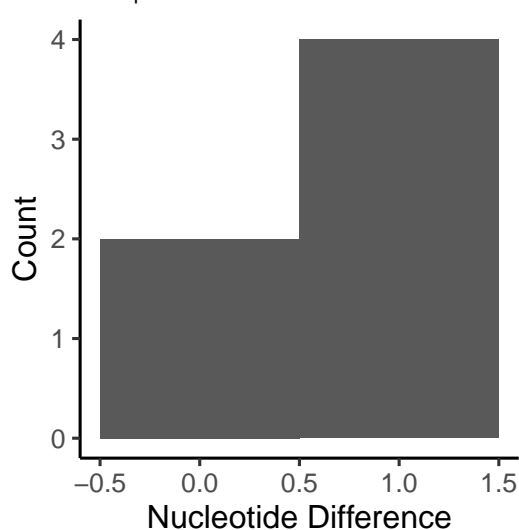
### IGHV3-53\*01

26 sequences assigned  
19 (73.1%) exact matches, in which:  
19 unique CDR3  
4 unique J



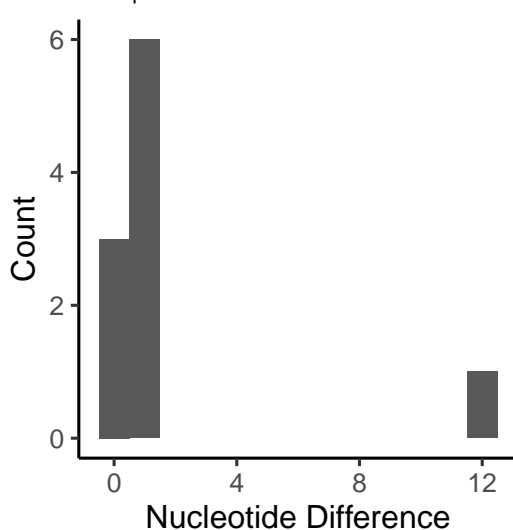
### IGHV3-43\*01

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



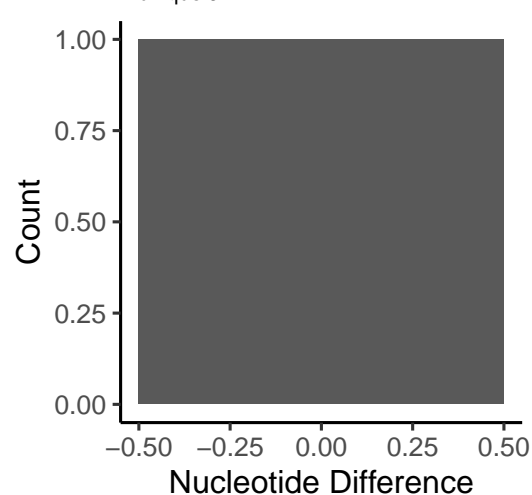
### IGHV3-49\*03

10 sequences assigned  
3 (30%) exact matches, in which:  
3 unique CDR3  
2 unique J



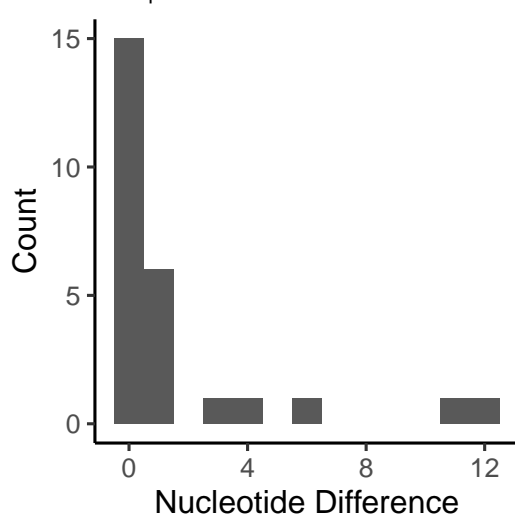
### IGHV3-64\*02

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



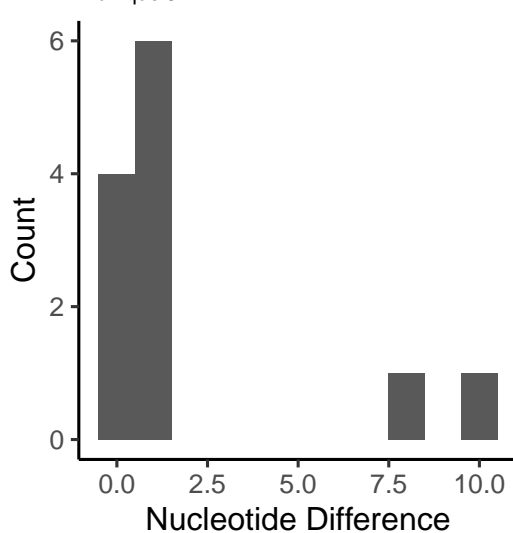
### IGHV3-48\*01

26 sequences assigned  
15 (57.7%) exact matches, in which:  
15 unique CDR3  
4 unique J



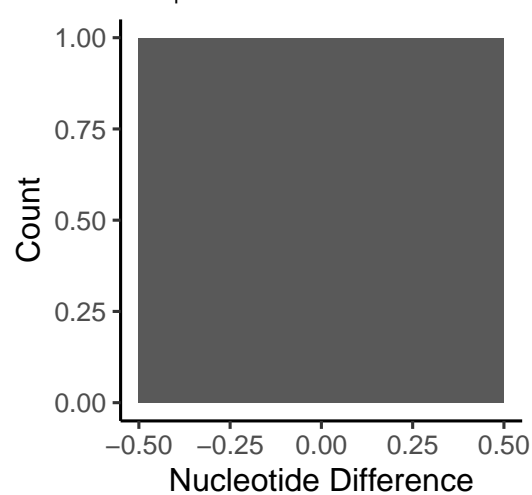
### IGHV3-49\*05

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



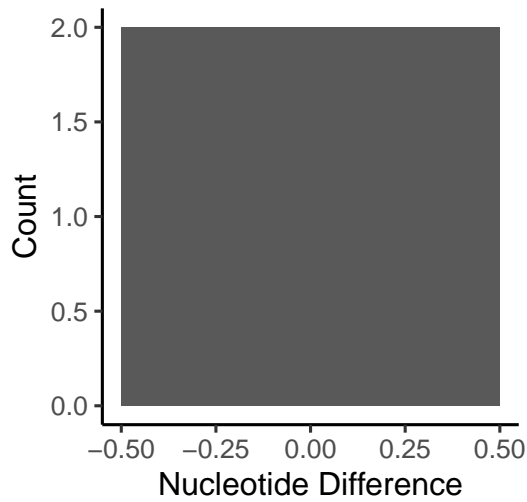
### IGHV3-71\*03

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



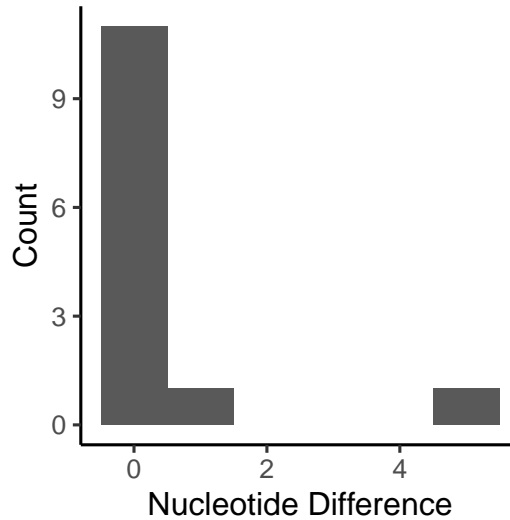
### IGHV3-72\*01

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



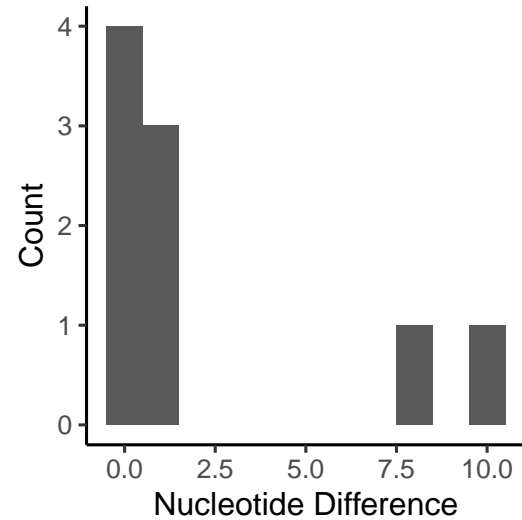
### IGHV3-64D\*06

13 sequences assigned  
11 (84.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



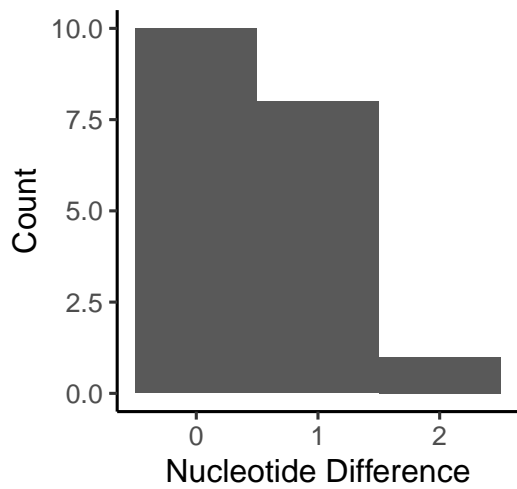
### IGHV4-30-2\*01

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



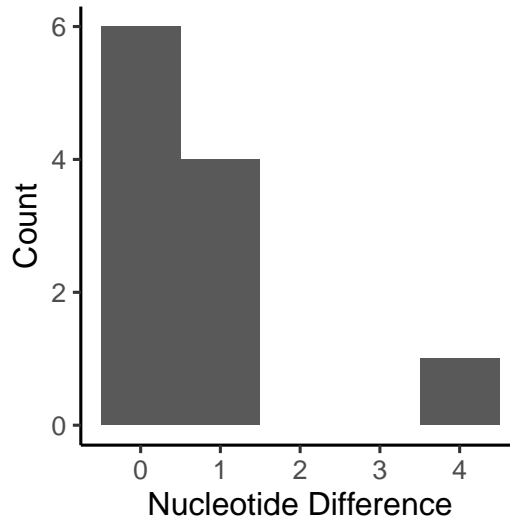
### IGHV3-73\*02

19 sequences assigned  
10 (52.6%) exact matches, in which:  
10 unique CDR3  
3 unique J



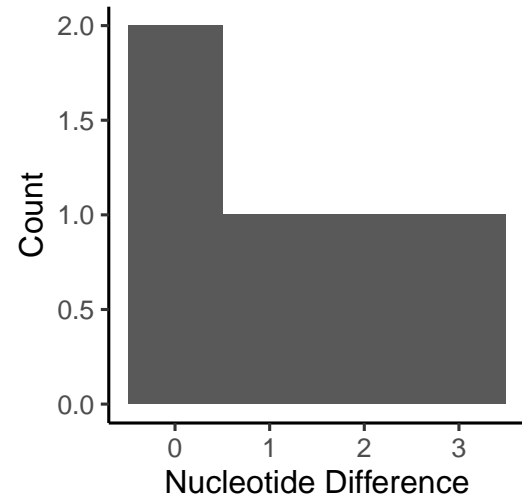
### IGHV4-4\*02

11 sequences assigned  
6 (54.5%) exact matches, in which:  
6 unique CDR3  
3 unique J



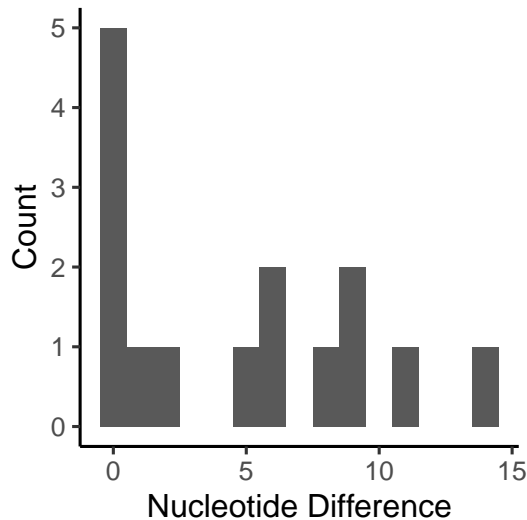
### IGHV4-30-4\*01

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



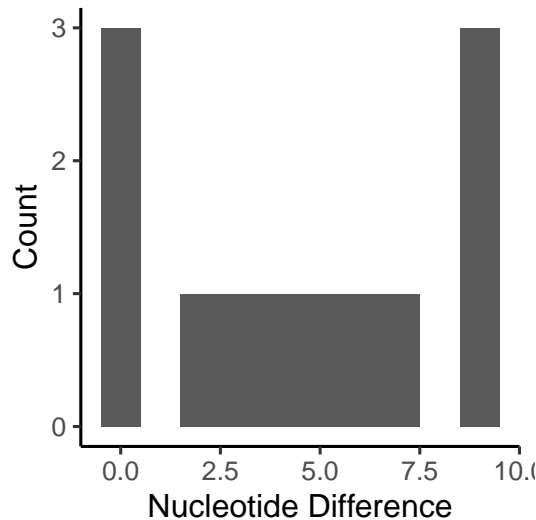
### IGHV3-74\*01

15 sequences assigned  
5 (33.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



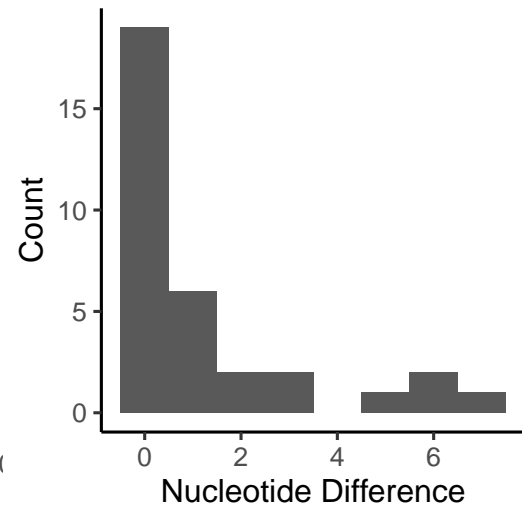
### IGHV4-4\*07

12 sequences assigned  
3 (25%) exact matches, in which:  
3 unique CDR3  
2 unique J



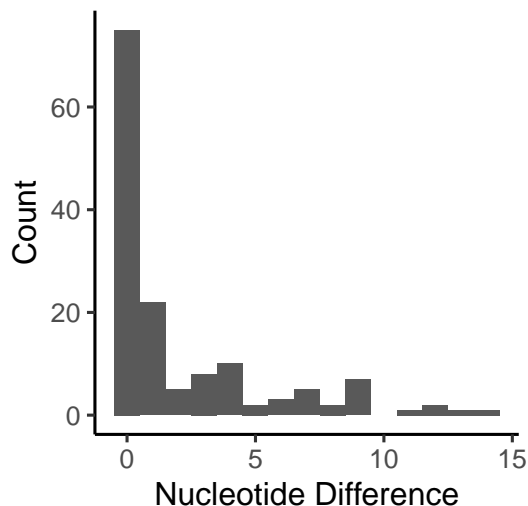
### IGHV4-31\*03

33 sequences assigned  
19 (57.6%) exact matches, in which:  
18 unique CDR3  
5 unique J



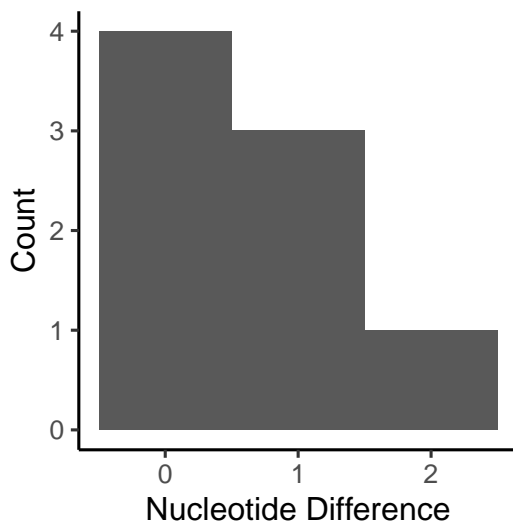
### IGHV4-34\*01

144 sequences assigned  
75 (52.1%) exact matches, in which:  
73 unique CDR3  
6 unique J



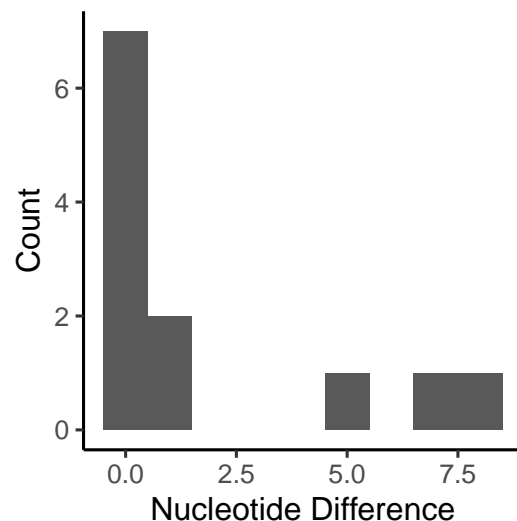
### IGHV4-61\*01

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



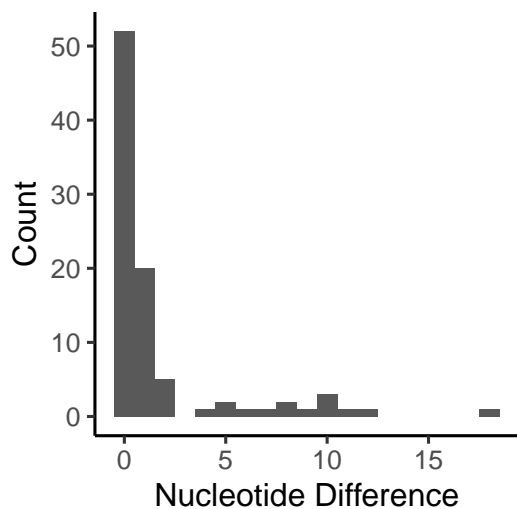
### IGHV6-1\*01

12 sequences assigned  
7 (58.3%) exact matches, in which:  
7 unique CDR3  
4 unique J



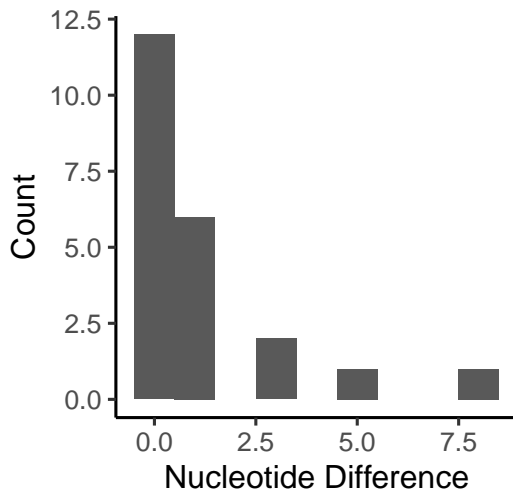
### IGHV4-39\*01

91 sequences assigned  
52 (57.1%) exact matches, in which:  
52 unique CDR3  
6 unique J



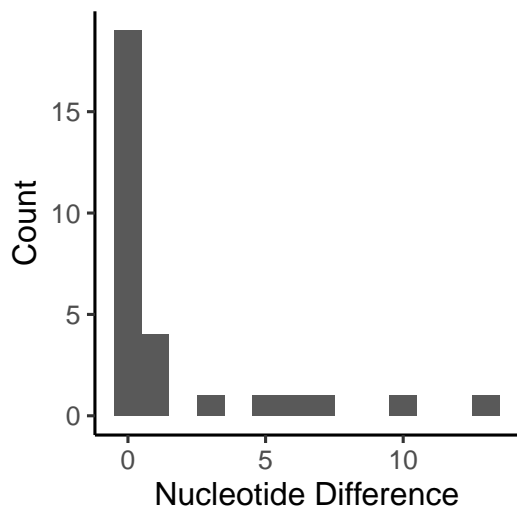
### IGHV5-10-1\*03

22 sequences assigned  
12 (54.5%) exact matches, in which:  
11 unique CDR3  
3 unique J



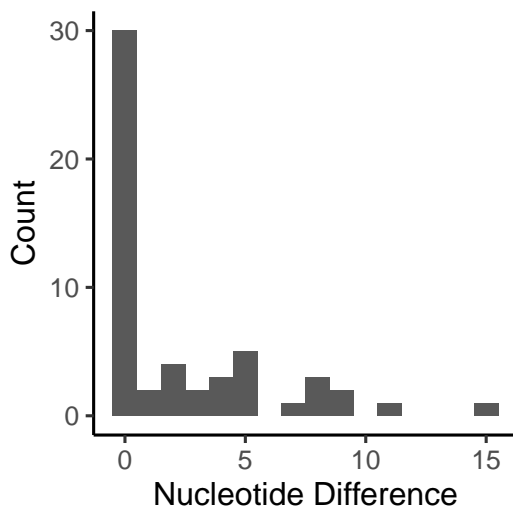
### IGHV4-59\*01

29 sequences assigned  
19 (65.5%) exact matches, in which:  
19 unique CDR3  
5 unique J



### IGHV5-51\*01

54 sequences assigned  
30 (55.6%) exact matches, in which:  
29 unique CDR3  
5 unique J





[illegible]