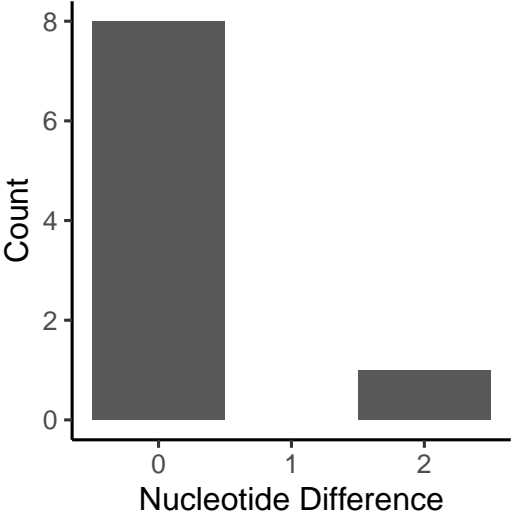


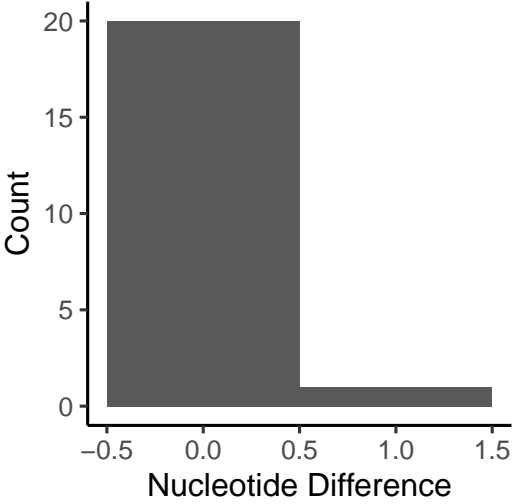
IGHV1-2\*04

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



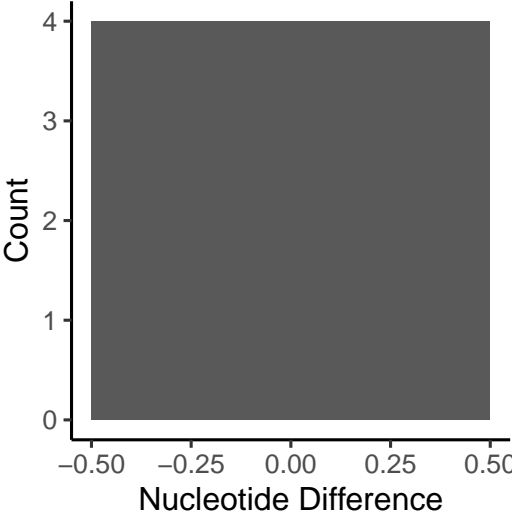
IGHV1-24\*01

21 sequences assigned  
20 (95.2%) exact matches, in which:  
20 unique CDR3  
4 unique J



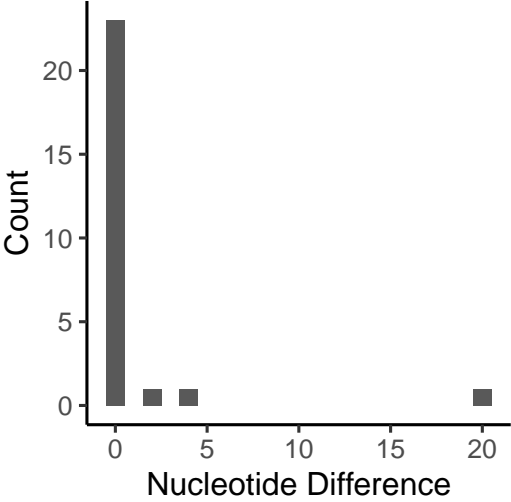
IGHV1-58\*01

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



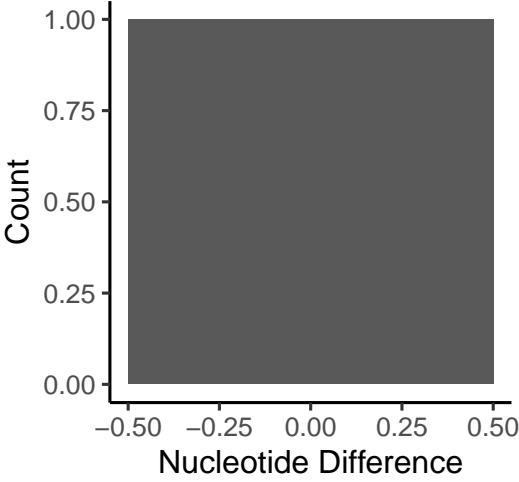
IGHV1-3\*01

28 sequences assigned  
23 (82.1%) exact matches, in which:  
23 unique CDR3  
6 unique J



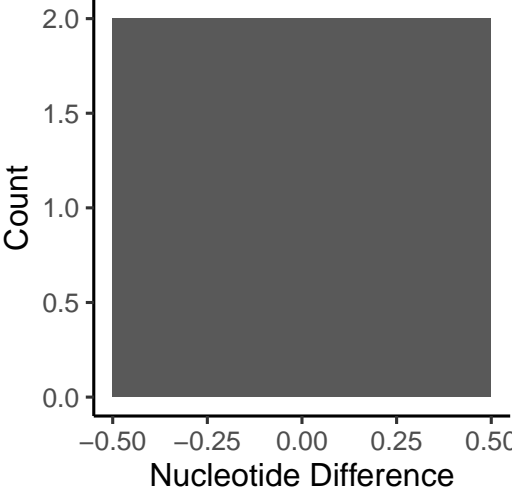
IGHV1-45\*02

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



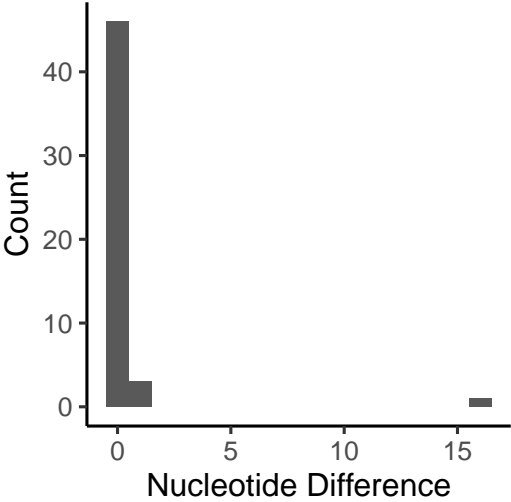
IGHV1-69-2\*01

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



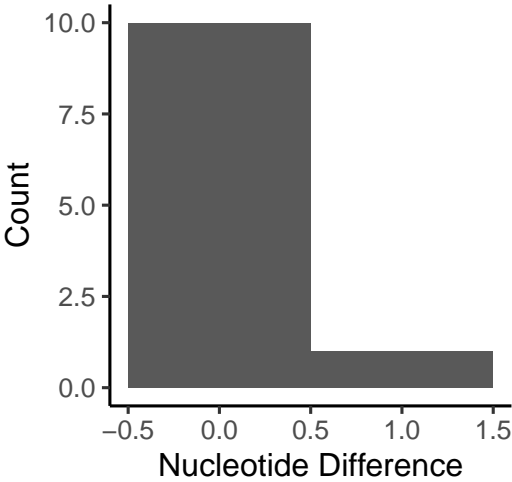
IGHV1-18\*04

50 sequences assigned  
46 (92%) exact matches, in which:  
46 unique CDR3  
5 unique J



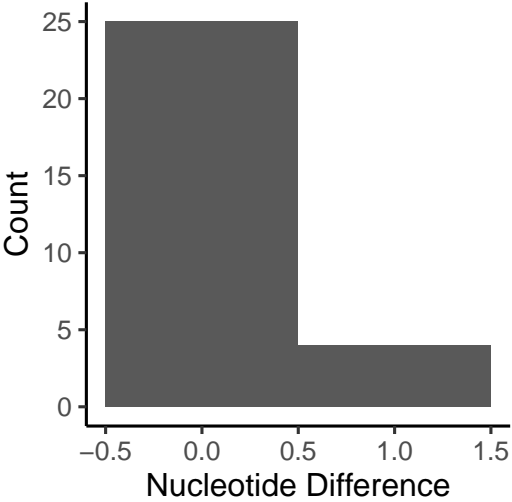
IGHV1-46\*01

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



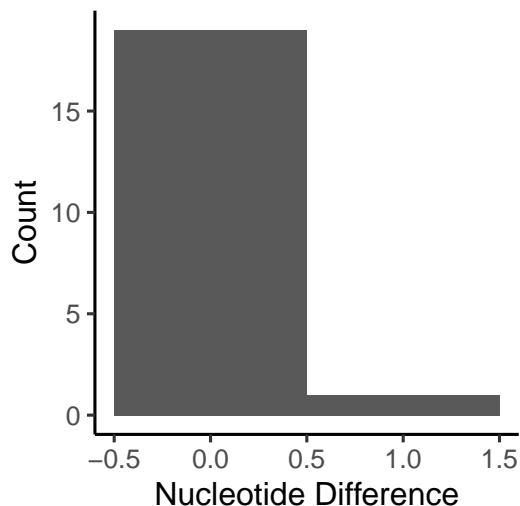
IGHV1-69\*06

29 sequences assigned  
25 (86.2%) exact matches, in which:  
25 unique CDR3  
4 unique J



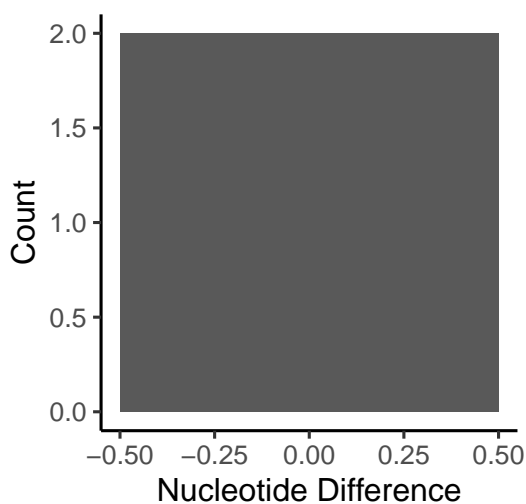
### IGHV1-69\*17

20 sequences assigned  
19 (95%) exact matches, in which:  
19 unique CDR3  
5 unique J



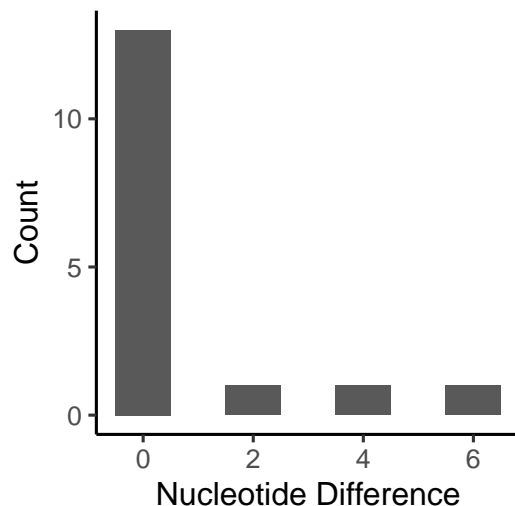
### IGHV2-70\*01

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



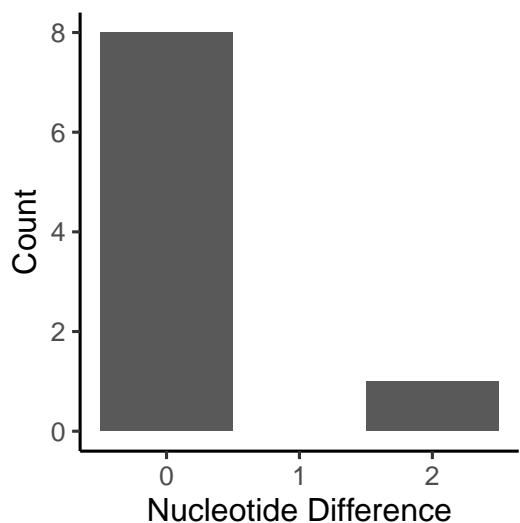
### IGHV3-15\*01

16 sequences assigned  
13 (81.2%) exact matches, in which:  
13 unique CDR3  
5 unique J



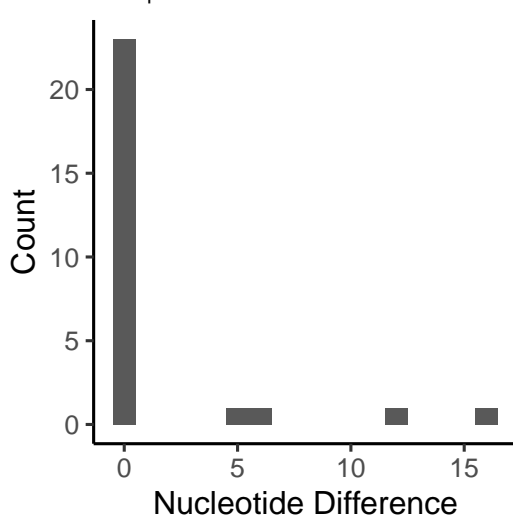
### IGHV2-5\*02

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



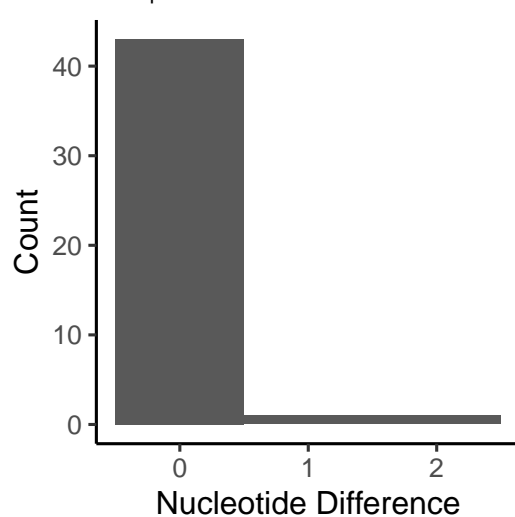
### IGHV3-7\*03

28 sequences assigned  
23 (82.1%) exact matches, in which:  
23 unique CDR3  
6 unique J



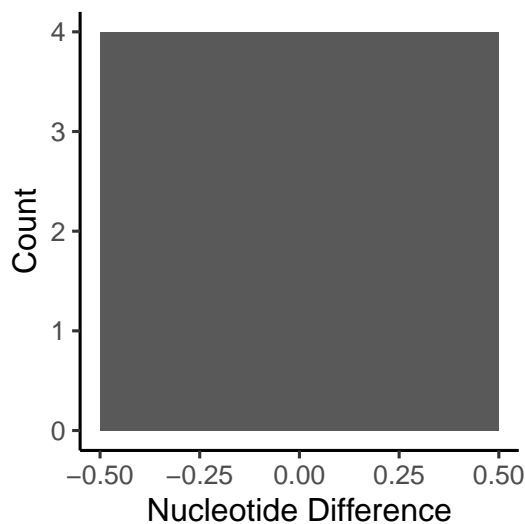
### IGHV3-21\*01

45 sequences assigned  
43 (95.6%) exact matches, in which:  
43 unique CDR3  
6 unique J



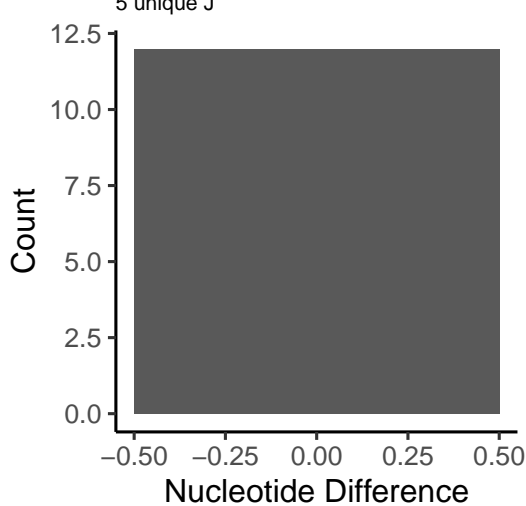
### IGHV2-26\*01

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



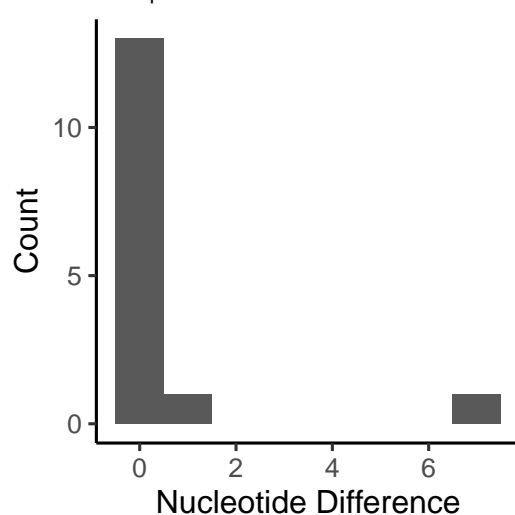
### IGHV3-11\*06

12 sequences assigned  
12 (100%) exact matches, in which:  
12 unique CDR3  
5 unique J



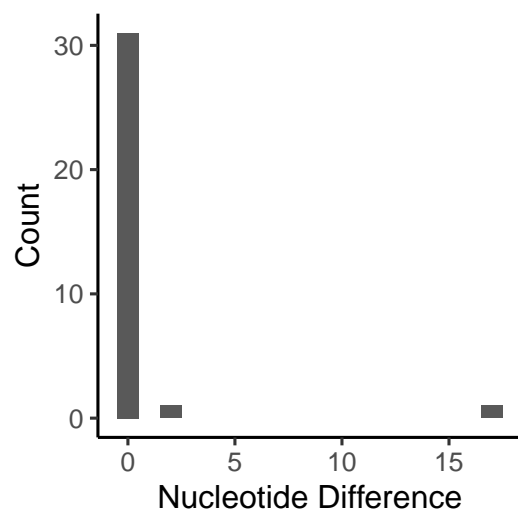
### IGHV3-30-3\*01

15 sequences assigned  
13 (86.7%) exact matches, in which:  
13 unique CDR3  
3 unique J



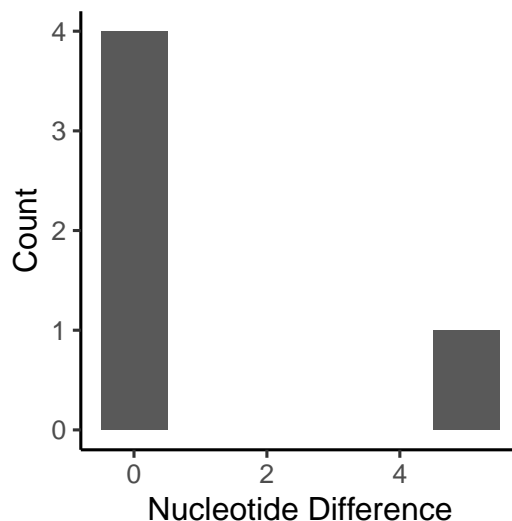
### IGHV3–33\*01

34 sequences assigned  
31 (91.2%) exact matches, in which:  
31 unique CDR3  
4 unique J



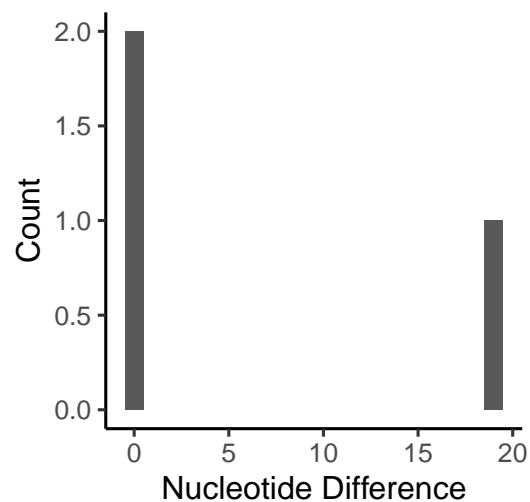
### IGHV3–49\*05

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



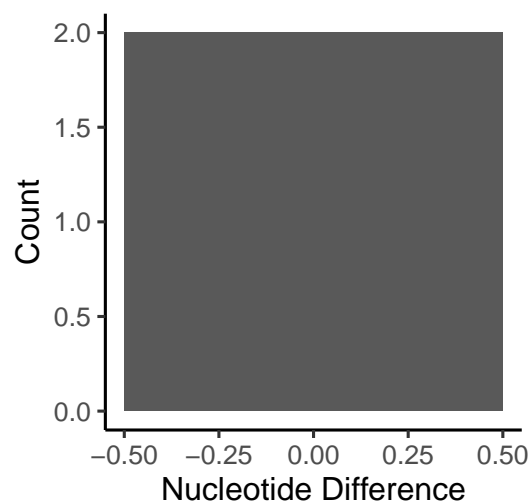
### IGHV3–72\*01

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



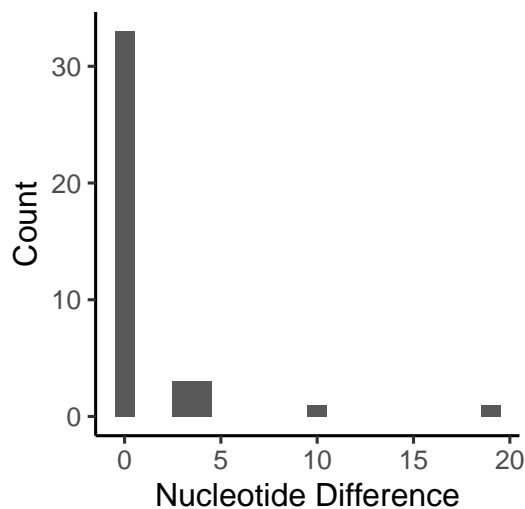
### IGHV3–43\*01

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



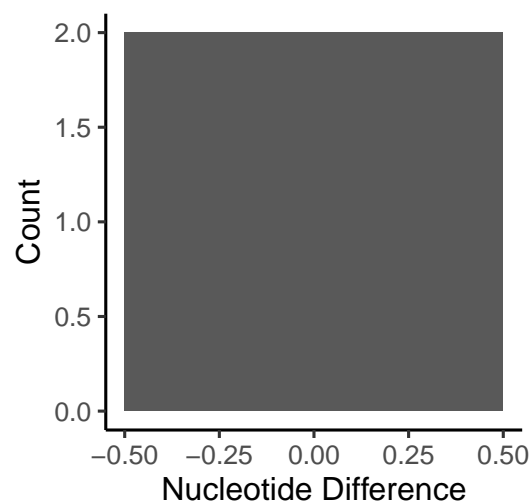
### IGHV3–53\*01

41 sequences assigned  
33 (80.5%) exact matches, in which:  
33 unique CDR3  
6 unique J



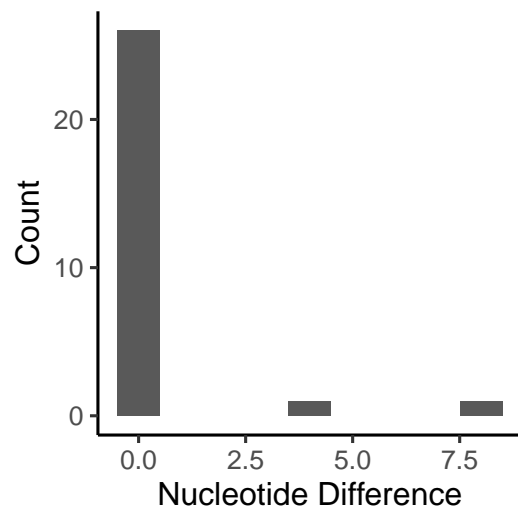
### IGHV3–73\*02

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



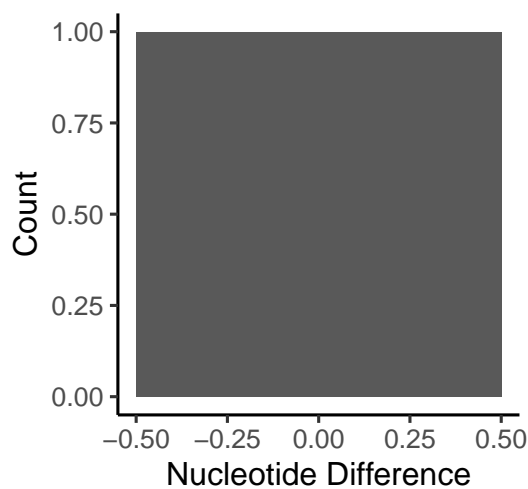
### IGHV3–48\*02

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



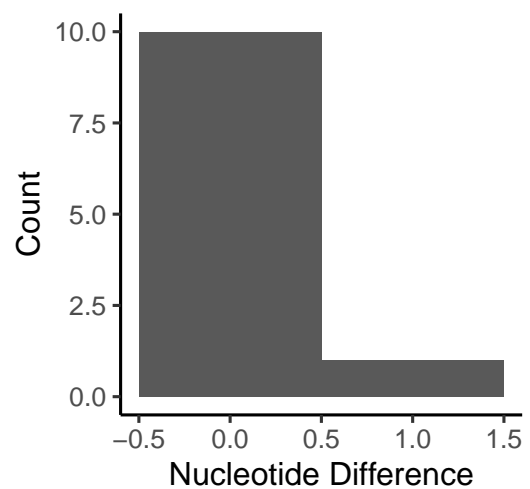
### IGHV3–64\*02

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



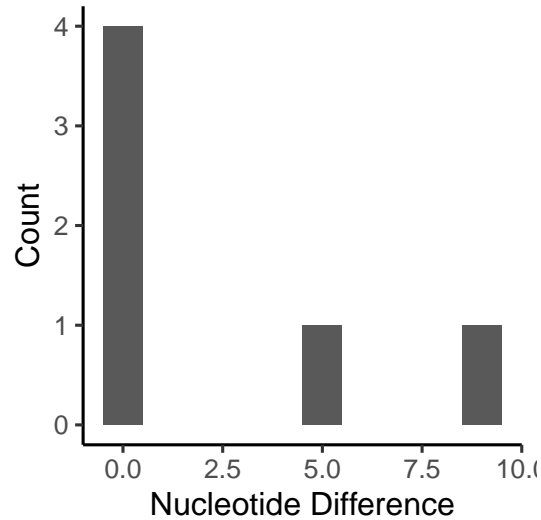
### IGHV3–74\*01

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



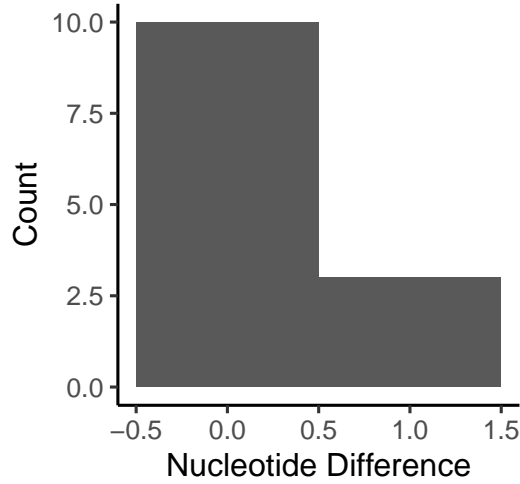
### IGHV3-64D\*06

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



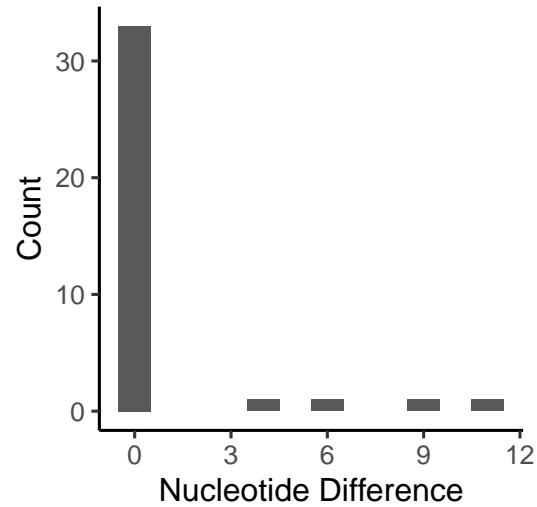
### IGHV4-30-2\*01

13 sequences assigned  
10 (76.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



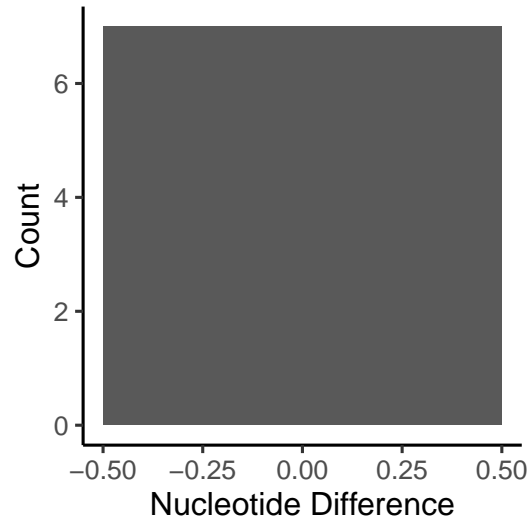
### IGHV4-34\*01

37 sequences assigned  
33 (89.2%) exact matches, in which:  
33 unique CDR3  
5 unique J



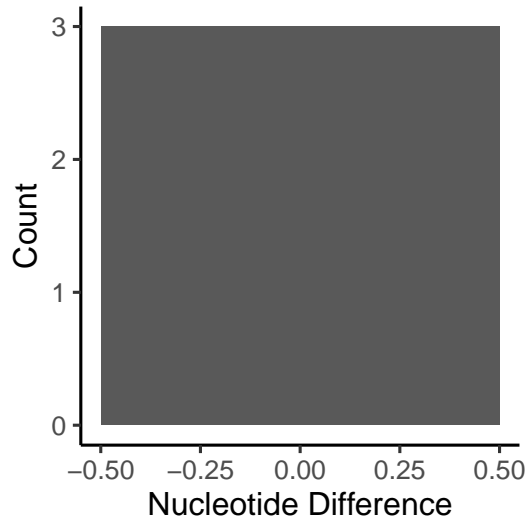
### IGHV3-64D\*09

7 sequences assigned  
7 (100%) exact matches, in which:  
7 unique CDR3  
2 unique J



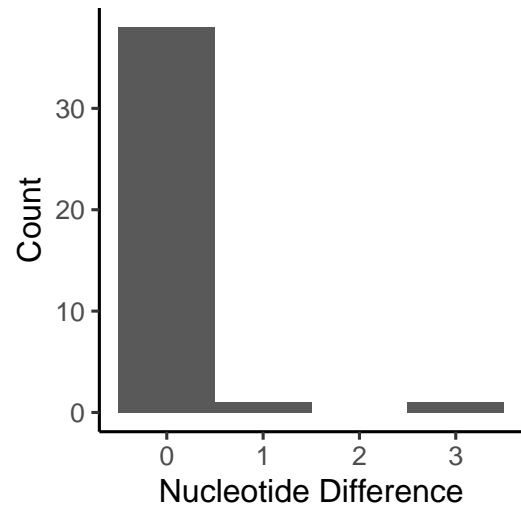
### IGHV4-30-4\*01

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



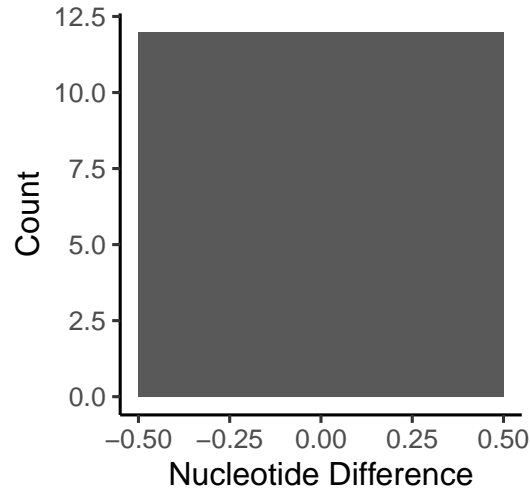
### IGHV4-39\*01

40 sequences assigned  
38 (95%) exact matches, in which:  
38 unique CDR3  
6 unique J



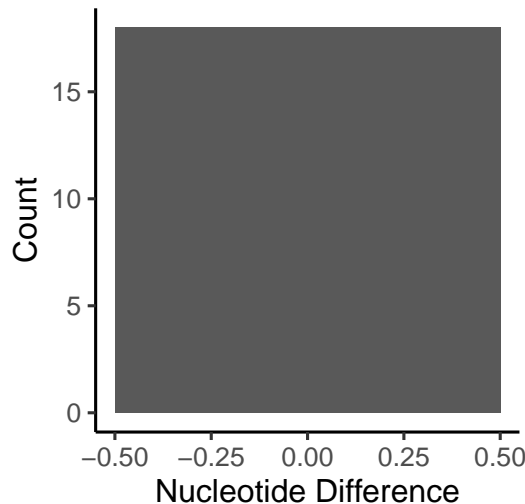
### IGHV4-4\*02

12 sequences assigned  
12 (100%) exact matches, in which:  
12 unique CDR3  
3 unique J



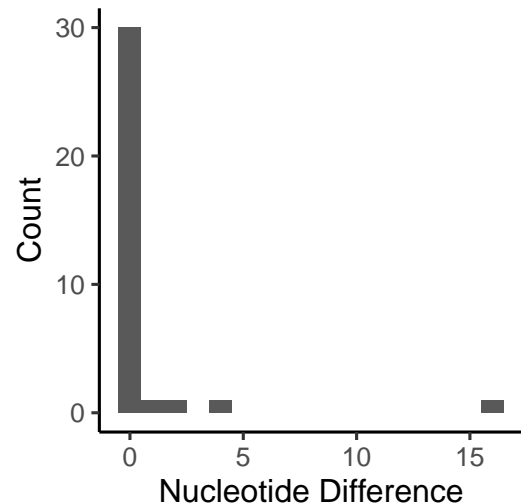
### IGHV4-31\*03

18 sequences assigned  
18 (100%) exact matches, in which:  
18 unique CDR3  
4 unique J



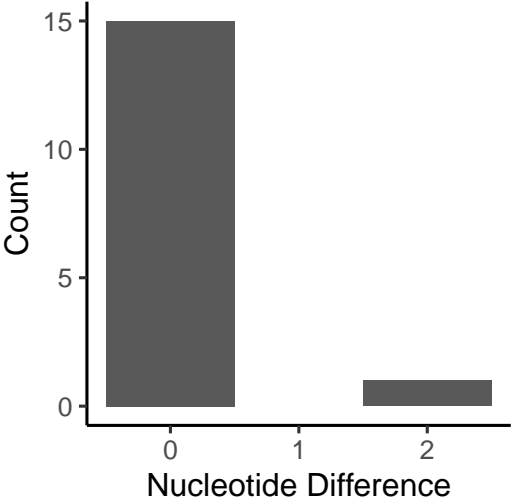
### IGHV4-39\*07

34 sequences assigned  
30 (88.2%) exact matches, in which:  
30 unique CDR3  
4 unique J



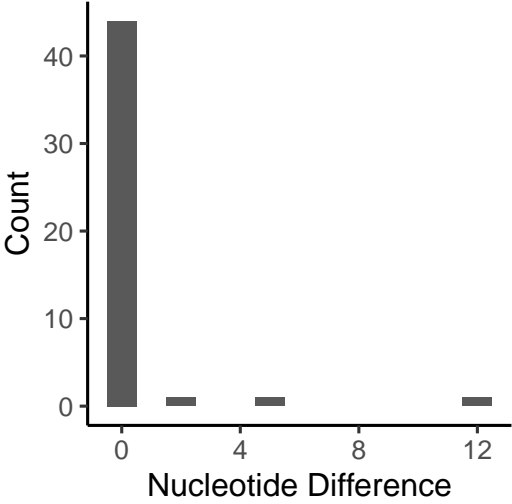
IGHV4–59\*01

16 sequences assigned  
15 (93.8%) exact matches, in which:  
15 unique CDR3  
6 unique J



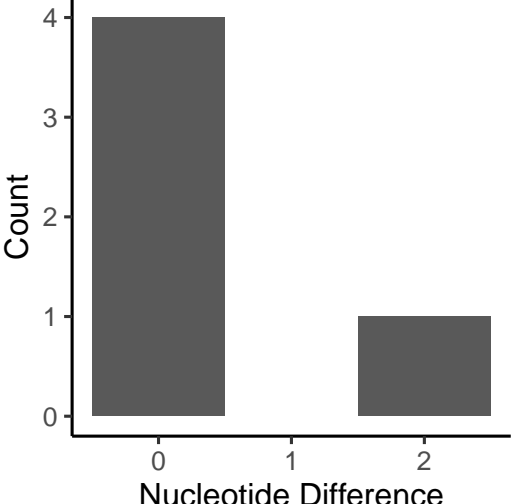
IGHV5–51\*01

47 sequences assigned  
44 (93.6%) exact matches, in which:  
44 unique CDR3  
6 unique J



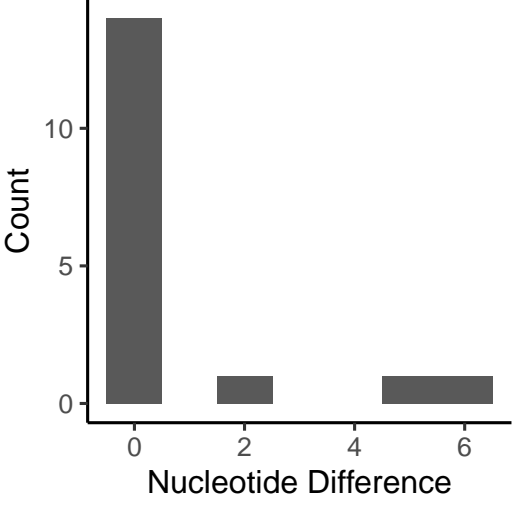
IGHV4–61\*01

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



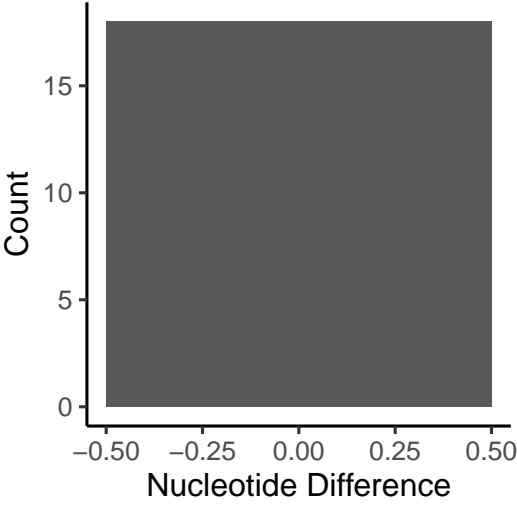
IGHV6–1\*01

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

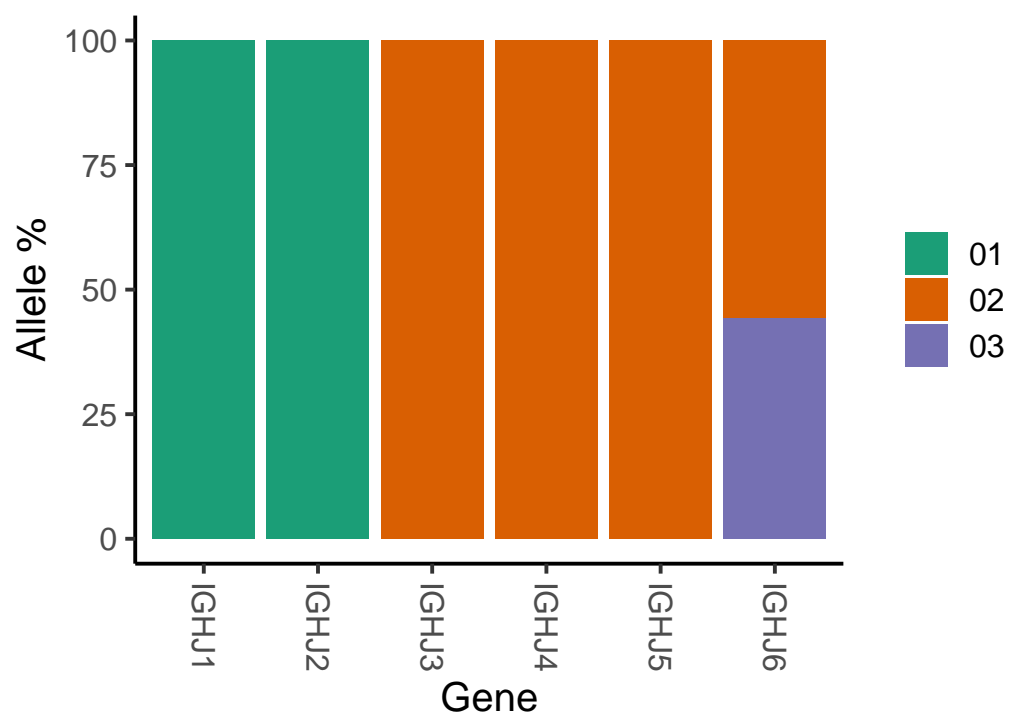


IGHV5–10–1\*03

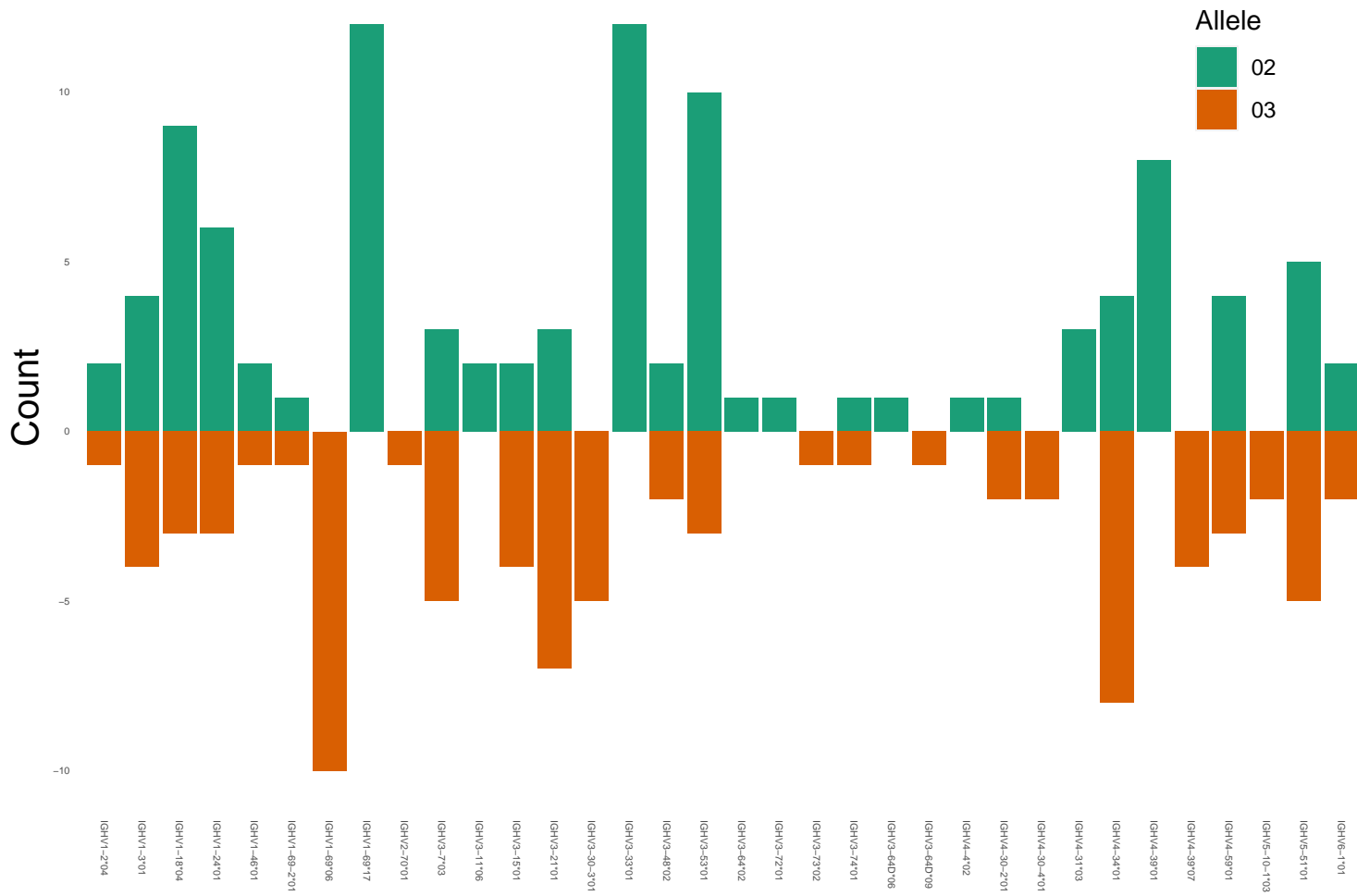
18 sequences assigned  
18 (100%) exact matches, in which:  
18 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.