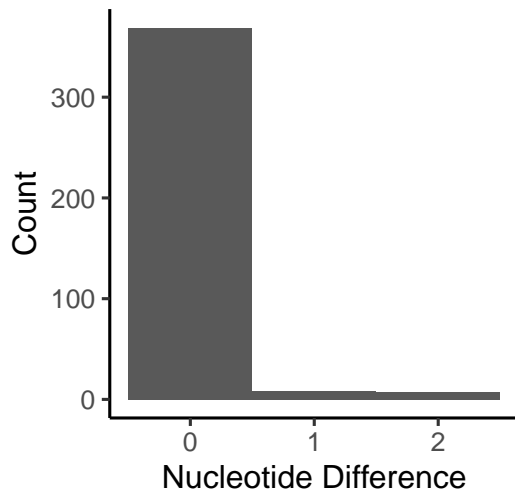


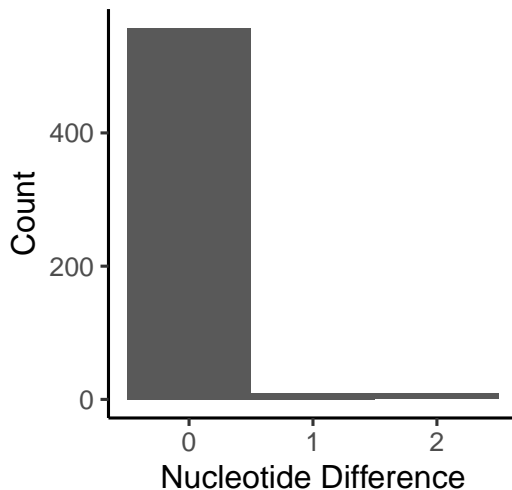
### IGHV1-2\*02

384 sequences assigned  
369 (96.1%) exact matches, in which:  
369 unique CDR3  
6 unique J



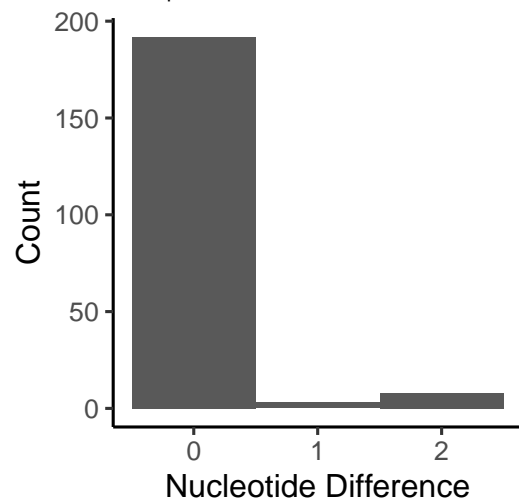
### IGHV1-8\*01

577 sequences assigned  
558 (96.7%) exact matches, in which:  
558 unique CDR3  
7 unique J



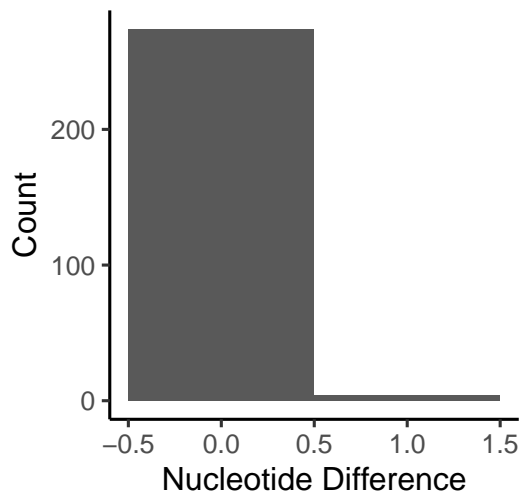
### IGHV1-46\*01

203 sequences assigned  
192 (94.6%) exact matches, in which:  
192 unique CDR3  
6 unique J



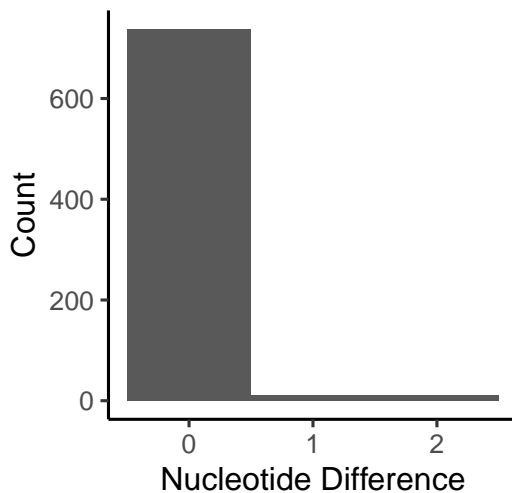
### IGHV1-2\*06

278 sequences assigned  
274 (98.6%) exact matches, in which:  
274 unique CDR3  
7 unique J



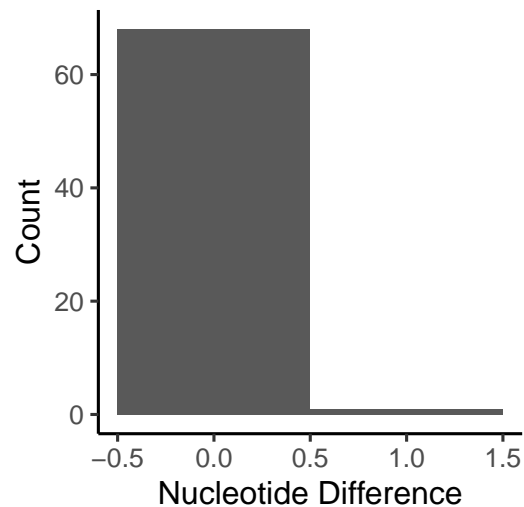
### IGHV1-18\*01

759 sequences assigned  
738 (97.2%) exact matches, in which:  
738 unique CDR3  
7 unique J



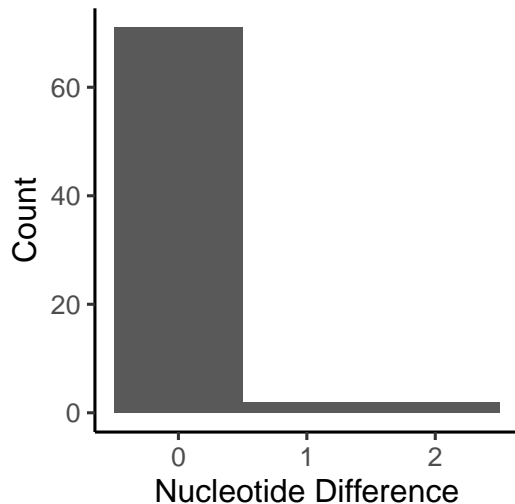
### IGHV1-46\*03

69 sequences assigned  
68 (98.6%) exact matches, in which:  
68 unique CDR3  
6 unique J



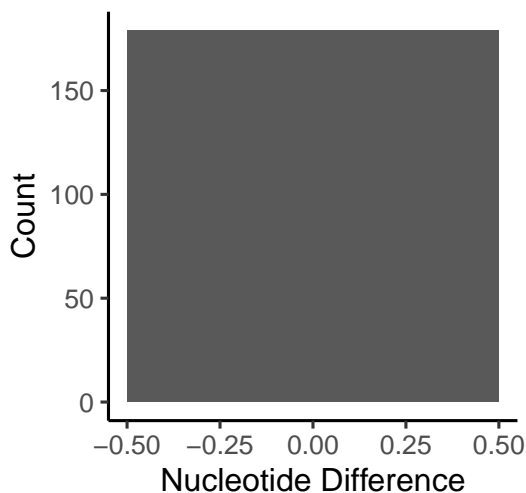
### IGHV1-3\*01\_05

75 sequences assigned  
71 (94.7%) exact matches, in which:  
71 unique CDR3  
5 unique J



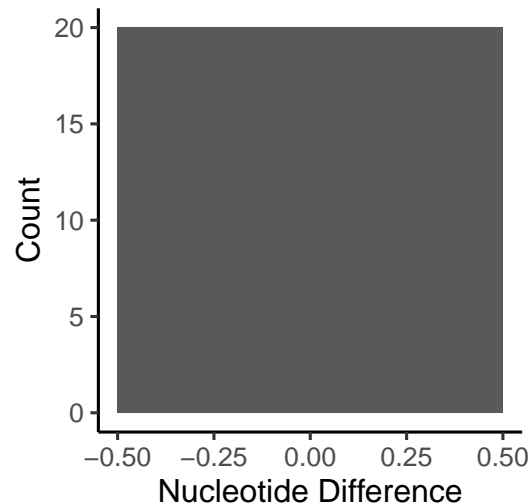
### IGHV1-24\*01

179 sequences assigned  
179 (100%) exact matches, in which:  
179 unique CDR3  
7 unique J



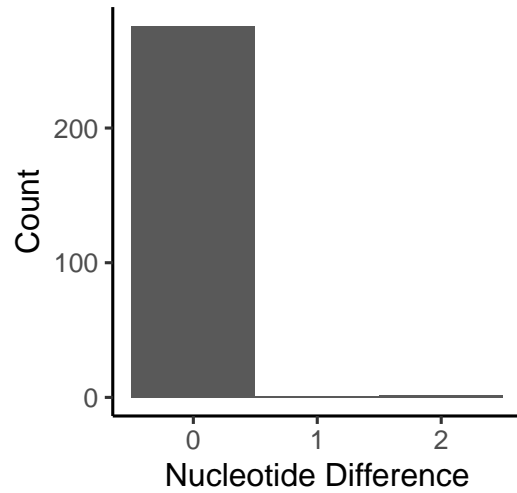
### IGHV1-58\*02

20 sequences assigned  
20 (100%) exact matches, in which:  
20 unique CDR3  
5 unique J



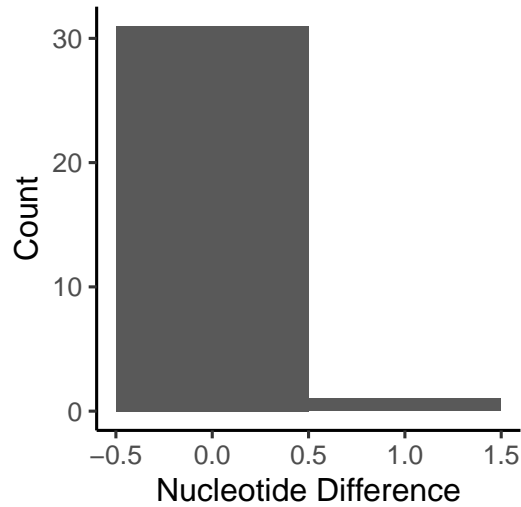
### IGHV1–69\*05

279 sequences assigned  
276 (98.9%) exact matches, in which:  
276 unique CDR3  
6 unique J



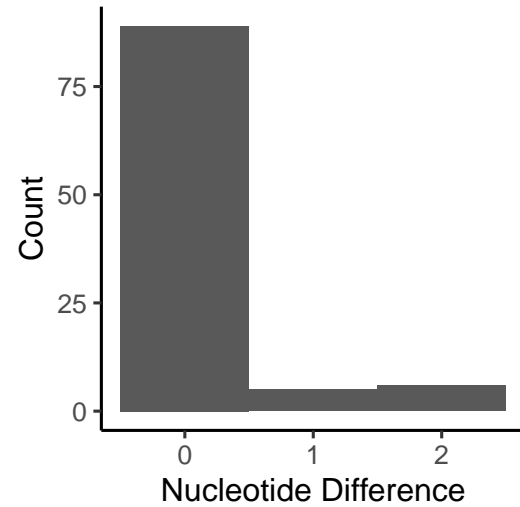
### IGHV2–26\*01

32 sequences assigned  
31 (96.9%) exact matches, in which:  
31 unique CDR3  
5 unique J



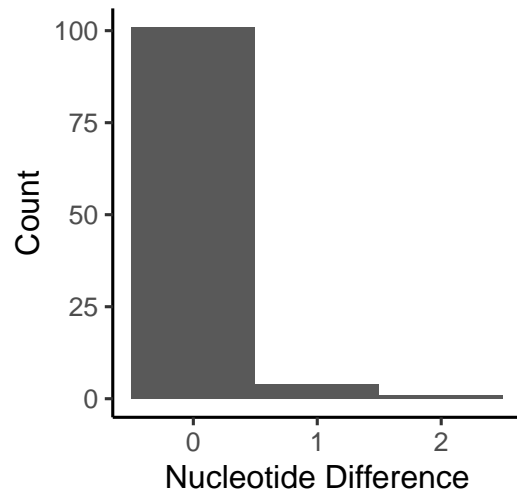
### IGHV3–7\*01

100 sequences assigned  
89 (89%) exact matches, in which:  
89 unique CDR3  
5 unique J



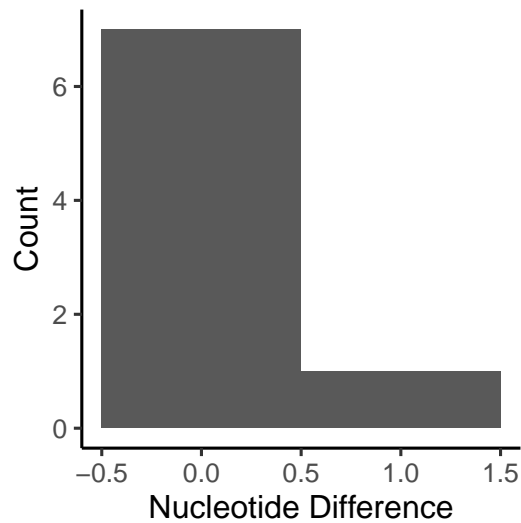
### IGHV1–69\*04\_09

106 sequences assigned  
101 (95.3%) exact matches, in which:  
101 unique CDR3  
6 unique J



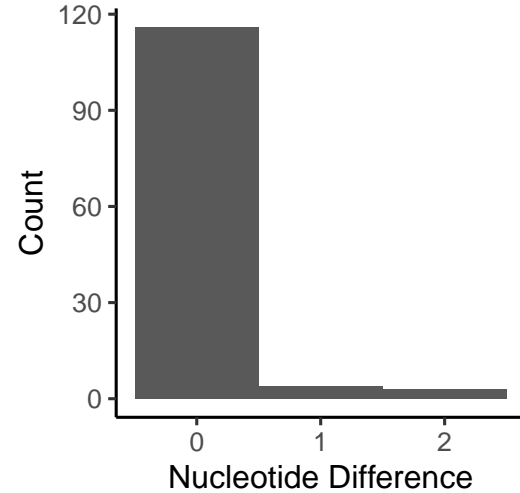
### IGHV2–26\*02

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
2 unique J



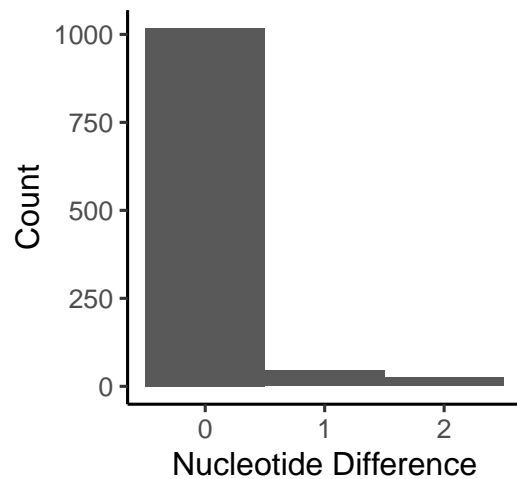
### IGHV3–7\*03

123 sequences assigned  
116 (94.3%) exact matches, in which:  
116 unique CDR3  
6 unique J



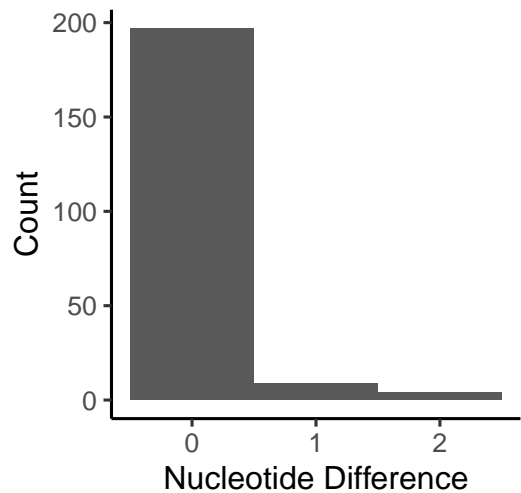
### IGHV2–5\*02

1088 sequences assigned  
1018 (93.6%) exact matches, in which:  
1016 unique CDR3  
7 unique J



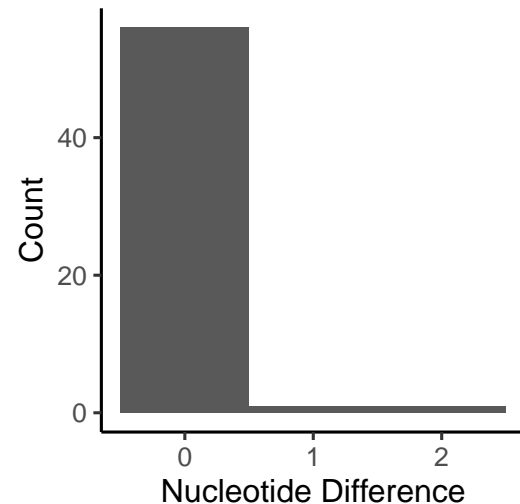
### IGHV2–70\*11\_15

210 sequences assigned  
197 (93.8%) exact matches, in which:  
196 unique CDR3  
7 unique J



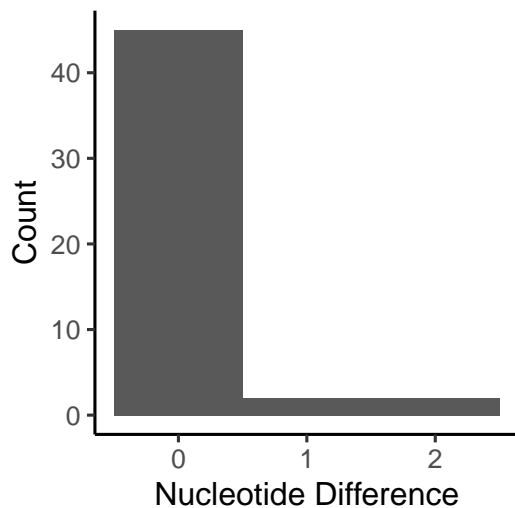
### IGHV3–9\*01

58 sequences assigned  
56 (96.6%) exact matches, in which:  
56 unique CDR3  
6 unique J



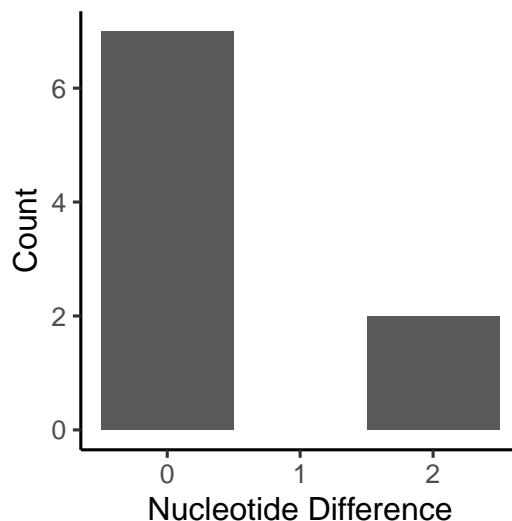
### IGHV3-11\*01

49 sequences assigned  
45 (91.8%) exact matches, in which:  
44 unique CDR3  
5 unique J



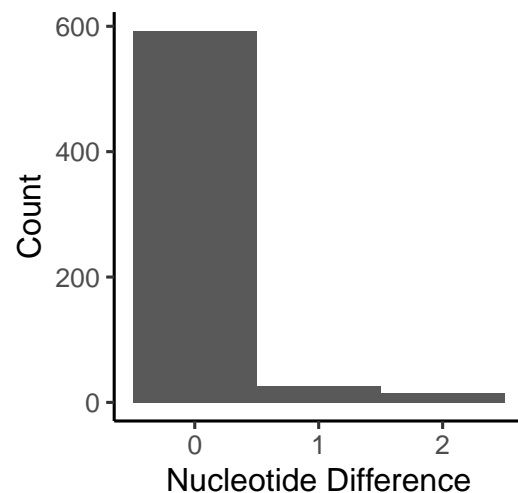
### IGHV3-20\*01\_02

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



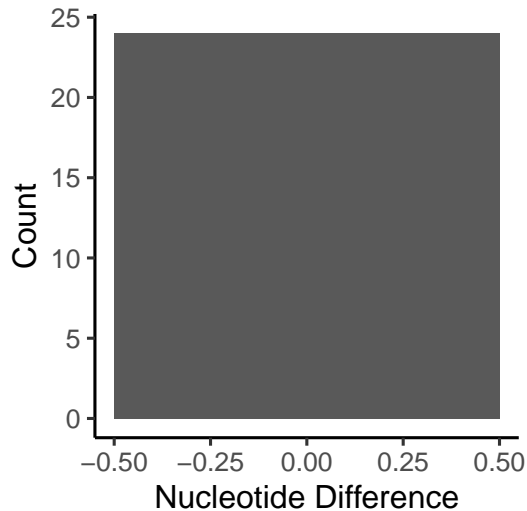
### IGHV3-23\*01\_04

634 sequences assigned  
593 (93.5%) exact matches, in which:  
588 unique CDR3  
7 unique J



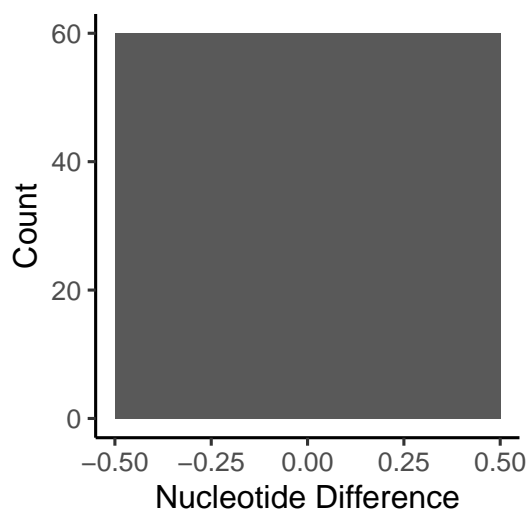
### IGHV3-13\*01

24 sequences assigned  
24 (100%) exact matches, in which:  
24 unique CDR3  
6 unique J



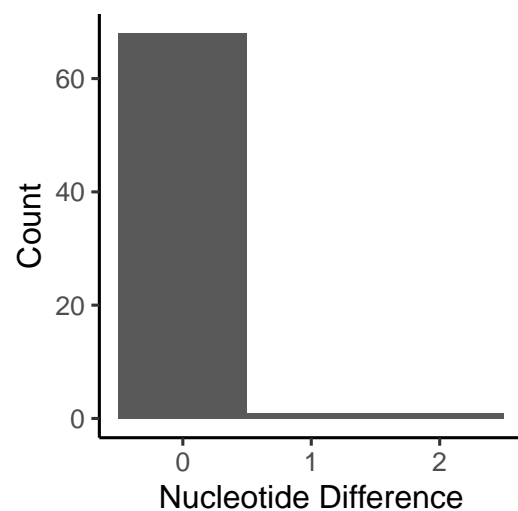
### IGHV3-20\*03\_04

60 sequences assigned  
60 (100%) exact matches, in which:  
60 unique CDR3  
5 unique J



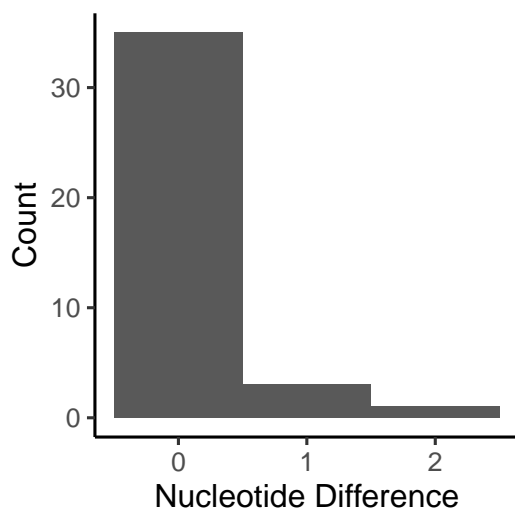
### IGHV3-33\*01

70 sequences assigned  
68 (97.1%) exact matches, in which:  
68 unique CDR3  
6 unique J



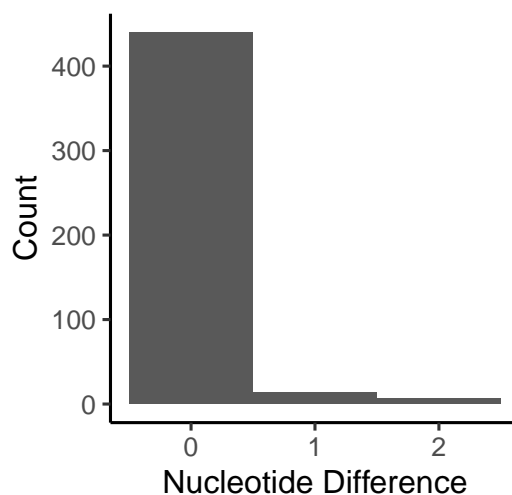
### IGHV3-15\*01\_02

39 sequences assigned  
35 (89.7%) exact matches, in which:  
35 unique CDR3  
6 unique J



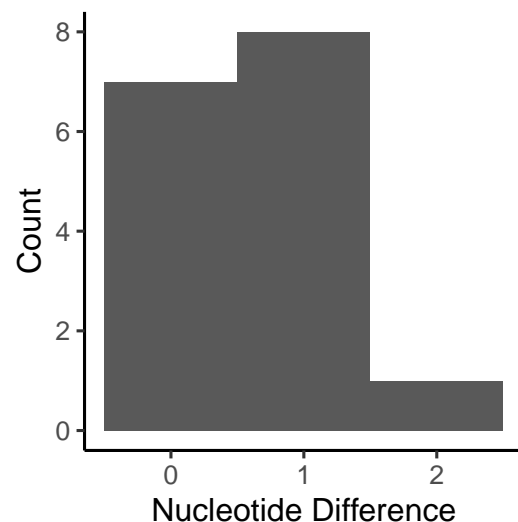
### IGHV3-21\*01\_02

461 sequences assigned  
440 (95.4%) exact matches, in which:  
432 unique CDR3  
7 unique J



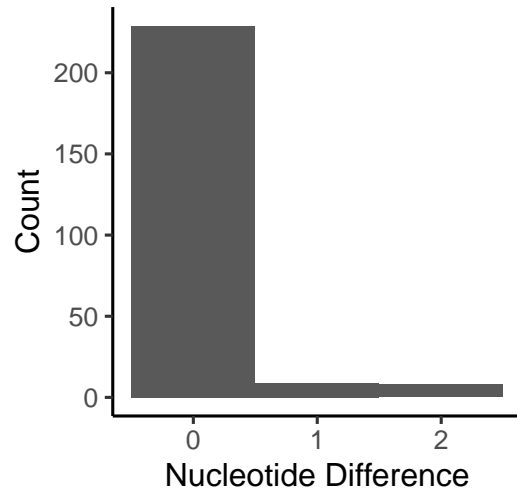
### IGHV3-43\*01

16 sequences assigned  
7 (43.8%) exact matches, in which:  
7 unique CDR3  
3 unique J



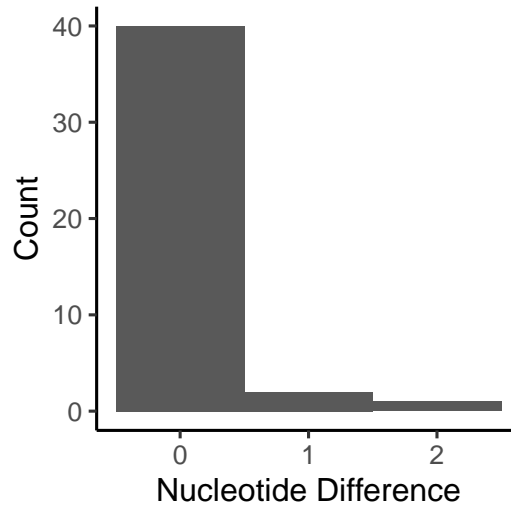
### IGHV3-48\*01

246 sequences assigned  
229 (93.1%) exact matches, in which:  
228 unique CDR3  
7 unique J



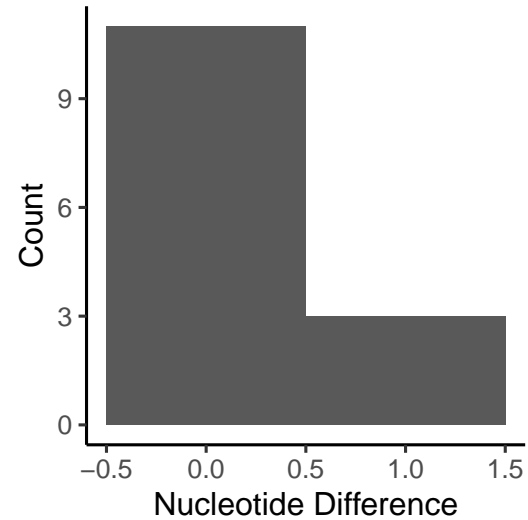
### IGHV3-64\*01

43 sequences assigned  
40 (93%) exact matches, in which:  
38 unique CDR3  
7 unique J



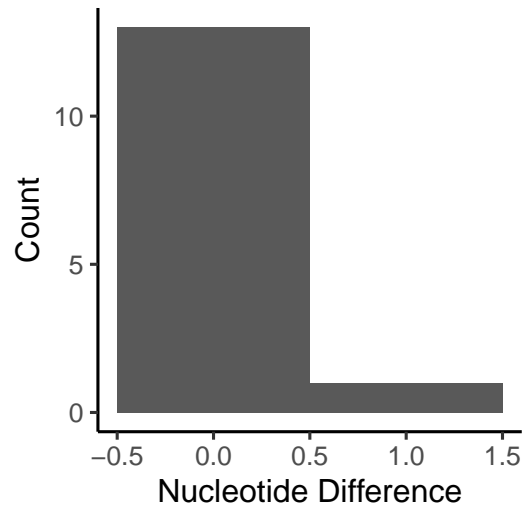
### IGHV3-73\*01\_02

14 sequences assigned  
11 (78.6%) exact matches, in which:  
11 unique CDR3  
4 unique J



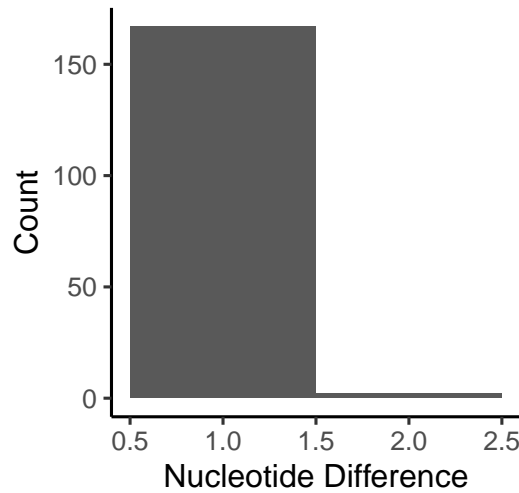
### IGHV3-49\*03\_05

14 sequences assigned  
13 (92.9%) exact matches, in which:  
13 unique CDR3  
5 unique J



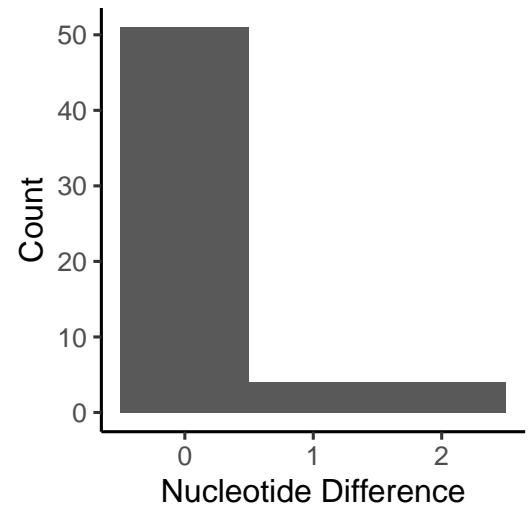
### IGHV3-66\*01

169 sequences assigned  
No exact matches.



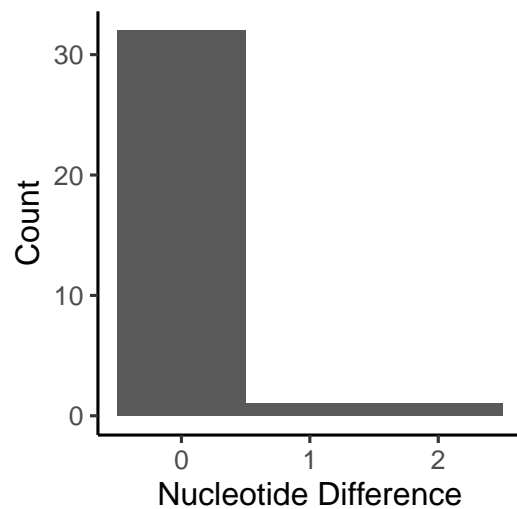
### IGHV3-74\*01\_02

59 sequences assigned  
51 (86.4%) exact matches, in which:  
51 unique CDR3  
6 unique J



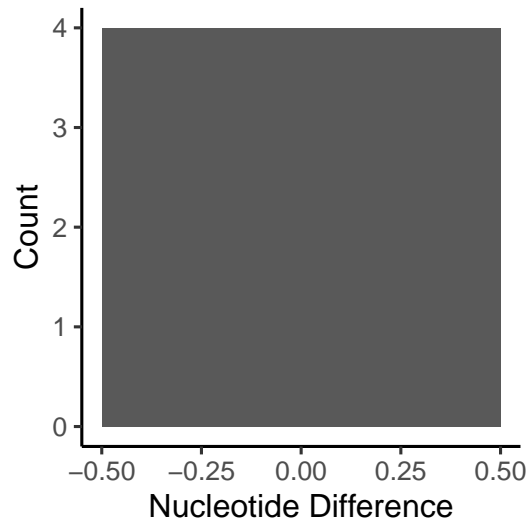
### IGHV3-53\*04

34 sequences assigned  
32 (94.1%) exact matches, in which:  
30 unique CDR3  
5 unique J



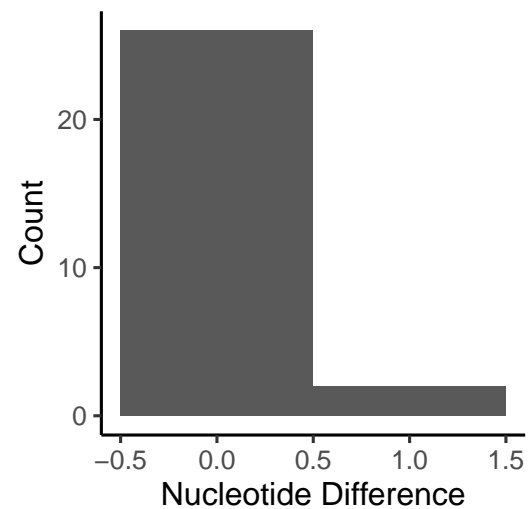
### IGHV3-72\*01

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



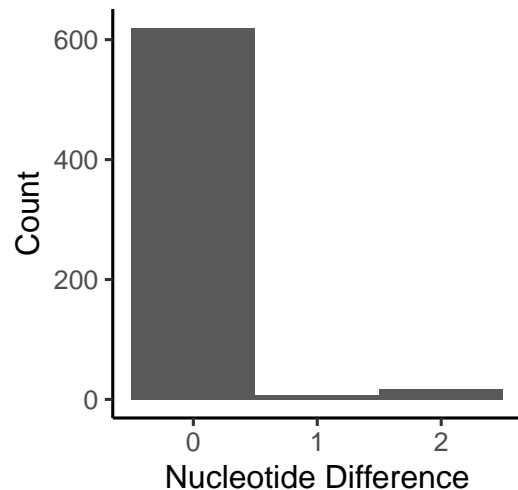
### IGHV3-43D\*04

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



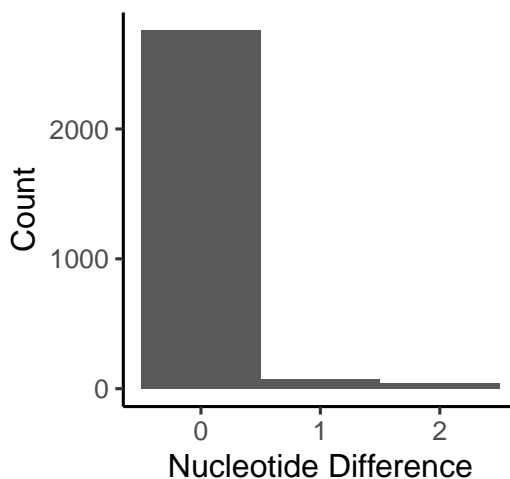
### IGHV4-4\*07

645 sequences assigned  
620 (96.1%) exact matches, in which:  
618 unique CDR3  
7 unique J



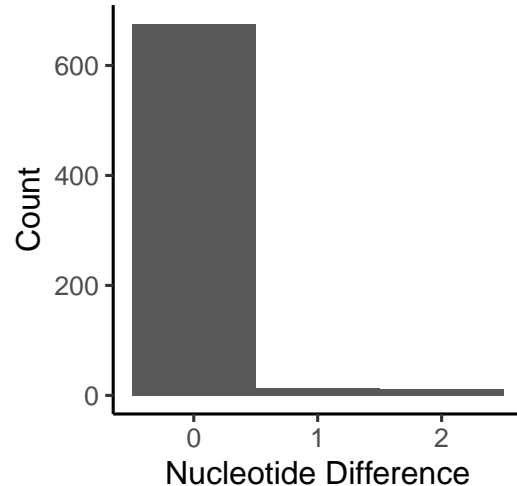
### IGHV4-34\*01\_02

2870 sequences assigned  
2759 (96.1%) exact matches, in which:  
2745 unique CDR3  
7 unique J



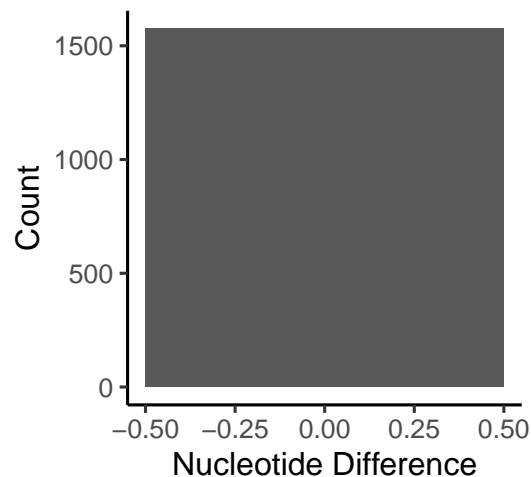
### IGHV4-39\*02\_C258G

701 sequences assigned  
676 (96.4%) exact matches, in which:  
673 unique CDR3  
6 unique J



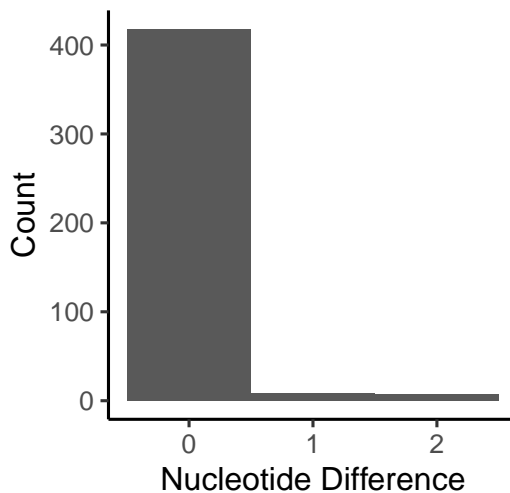
### IGHV4-4\*09

1575 sequences assigned  
1575 (100%) exact matches, in which:  
1557 unique CDR3  
7 unique J



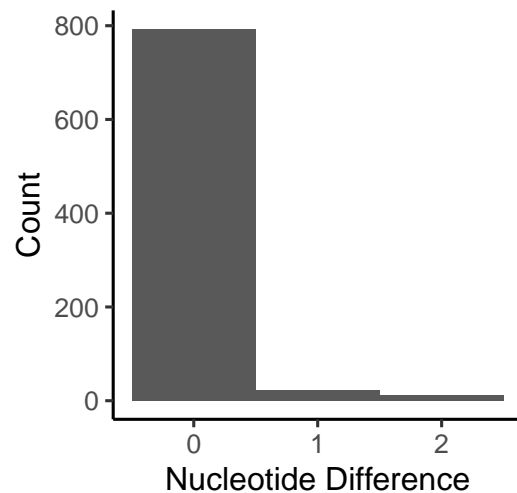
### IGHV4-38-2\*02\_A70G

433 sequences assigned  
418 (96.5%) exact matches, in which:  
415 unique CDR3  
6 unique J



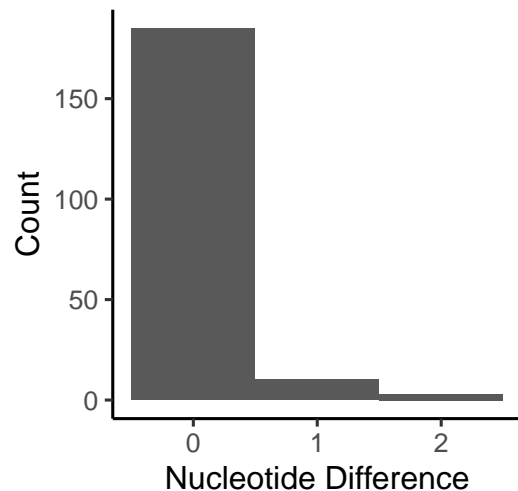
### IGHV4-59\*08

827 sequences assigned  
793 (95.9%) exact matches, in which:  
788 unique CDR3  
7 unique J



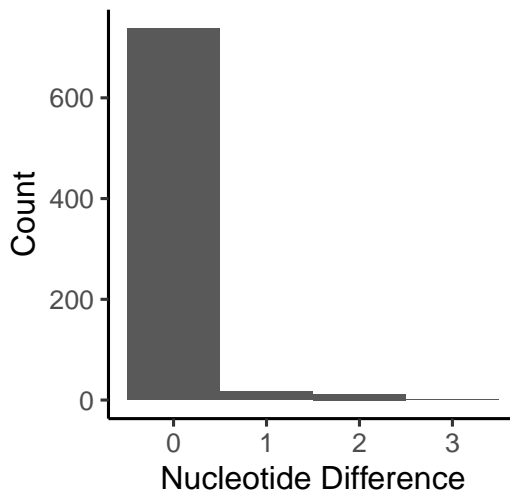
### IGHV4-31\*02

198 sequences assigned  
185 (93.4%) exact matches, in which:  
184 unique CDR3  
6 unique J



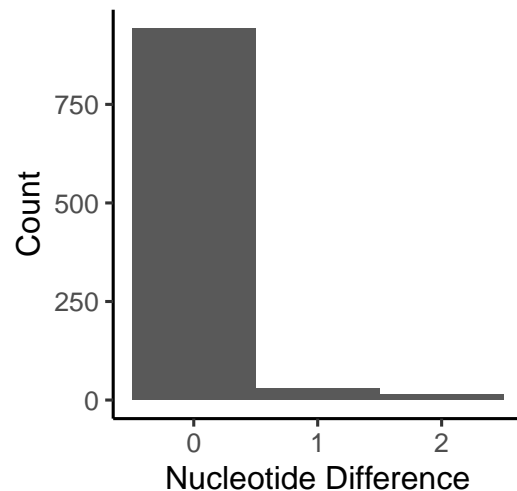
### IGHV4-39\*07

768 sequences assigned  
738 (96.1%) exact matches, in which:  
734 unique CDR3  
6 unique J



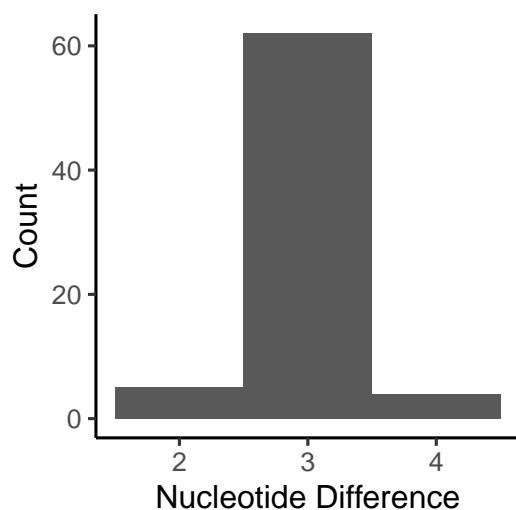
### IGHV4-59\*02\_G88A

985 sequences assigned  
943 (95.7%) exact matches, in which:  
938 unique CDR3  
6 unique J



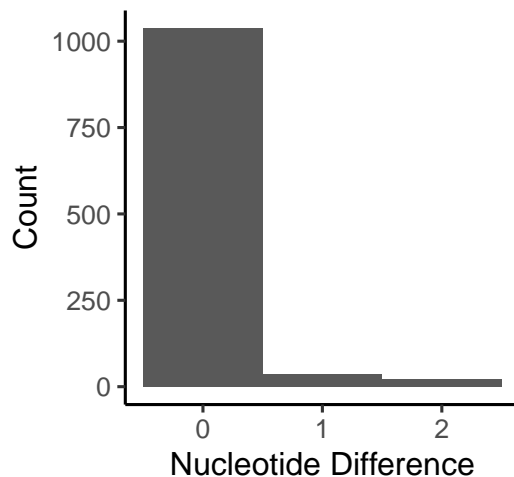
## IGHV4/OR15–8\*01

71 sequences assigned  
No exact matches.



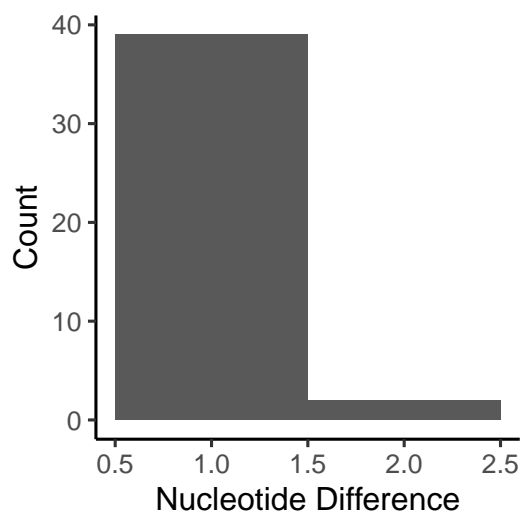
## IGHV6–1\*01\_02

1093 sequences assigned  
1037 (94.9%) exact matches, in which:  
1036 unique CDR3  
7 unique J



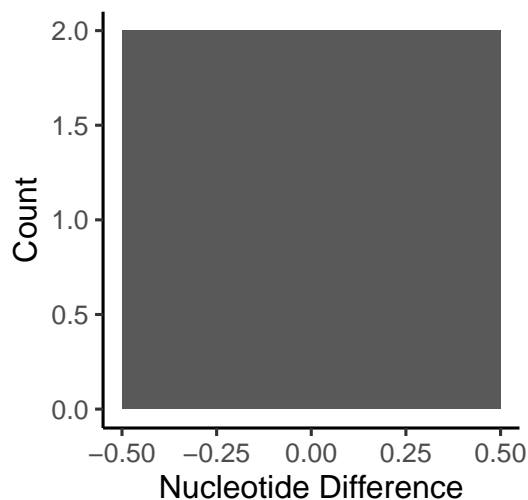
## IGHV5–51\*07

41 sequences assigned  
No exact matches.



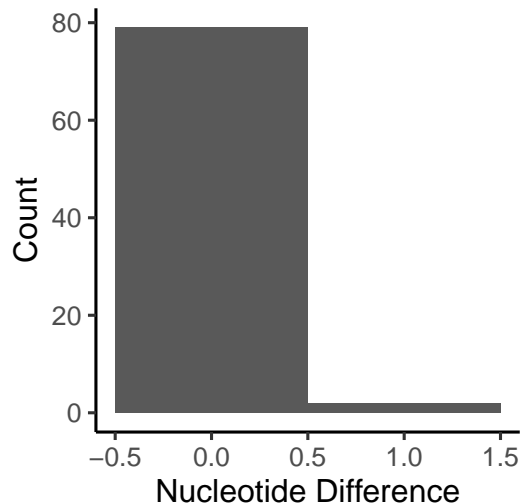
## IGHV7–4–1\*01

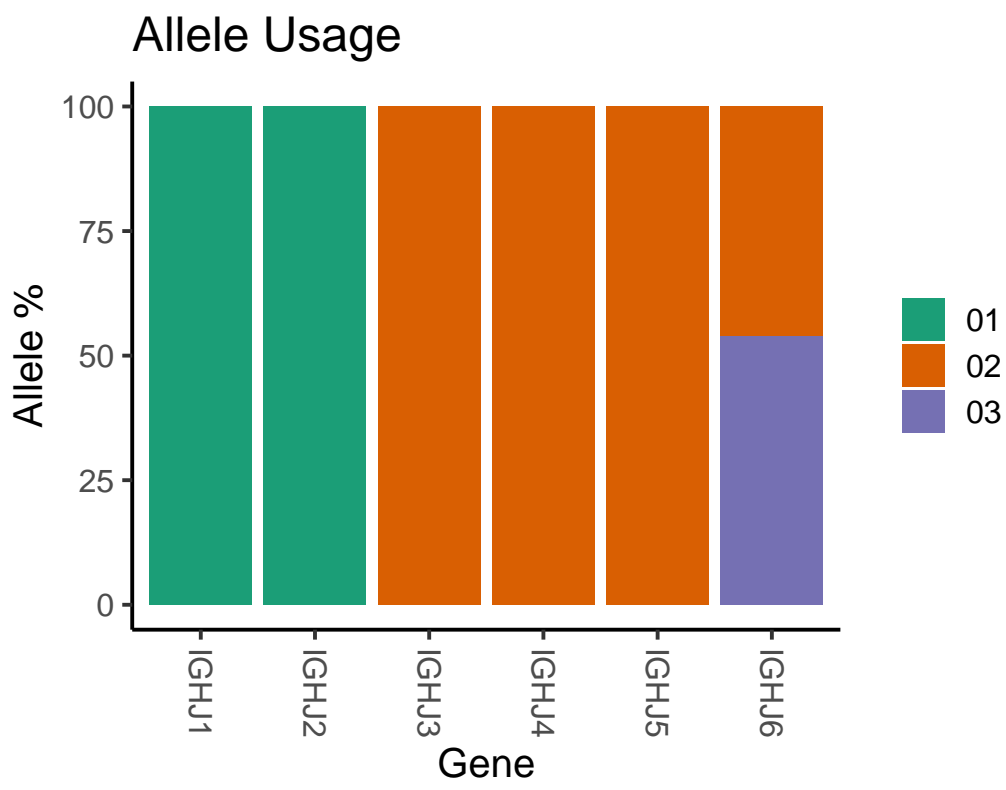
2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



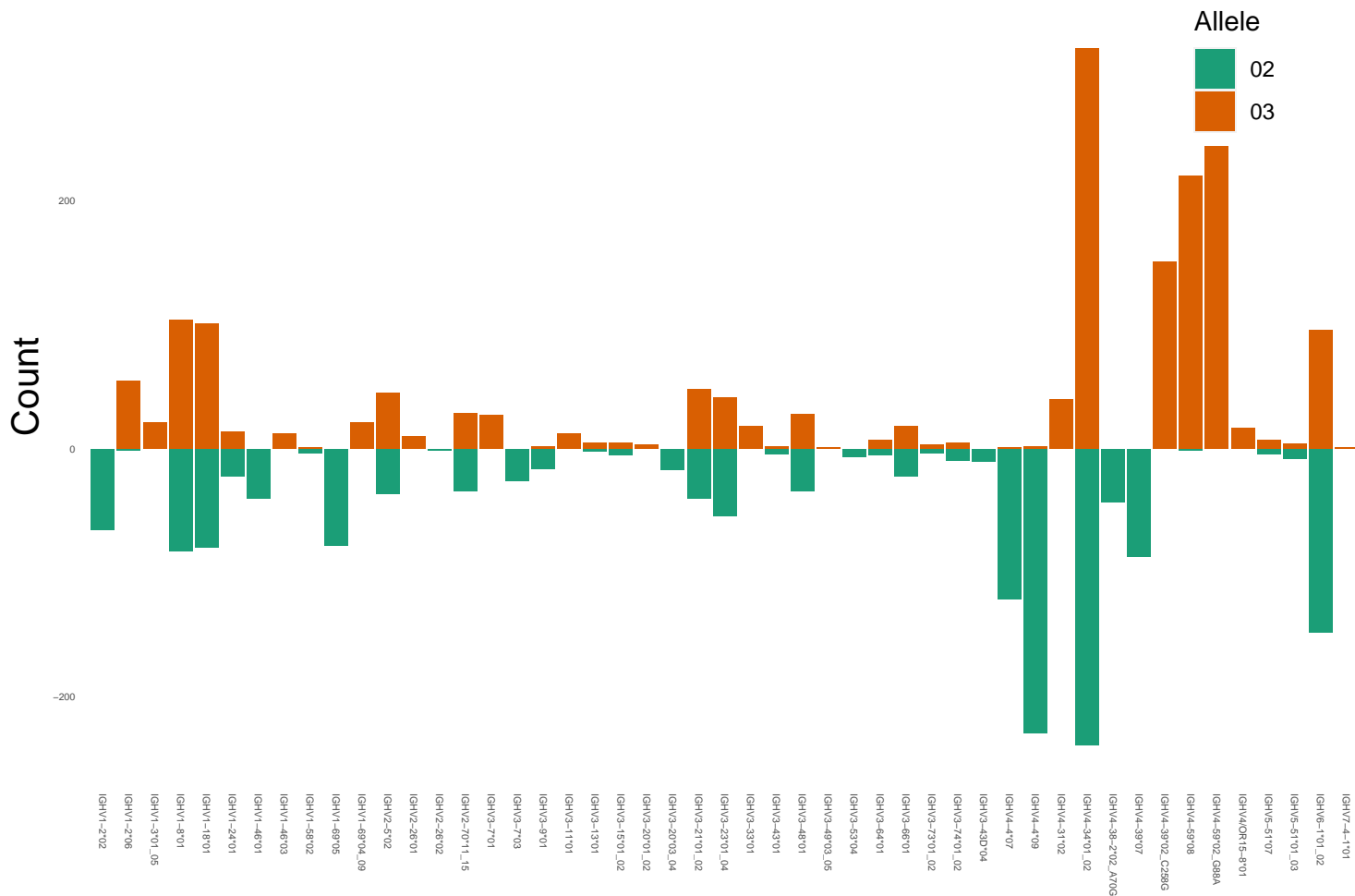
## IGHV5–51\*01\_03

81 sequences assigned  
79 (97.5%) exact matches, in which:  
79 unique CDR3  
7 unique J





Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.