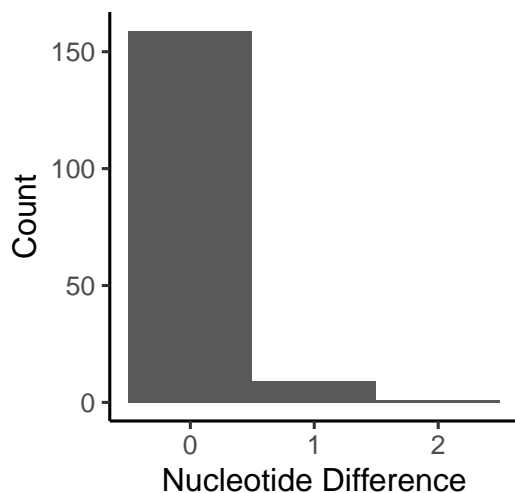


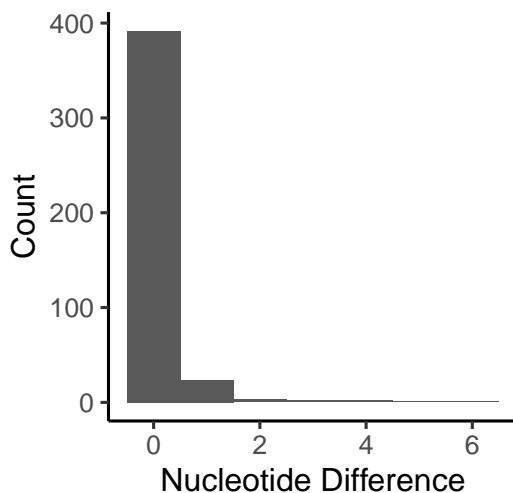
### IGHV1-2\*04

169 sequences assigned  
159 (94.1%) exact matches, in which:  
159 unique CDR3  
7 unique J



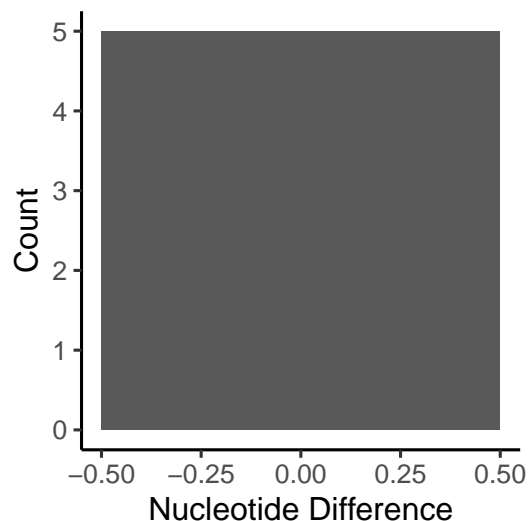
### IGHV1-18\*01

425 sequences assigned  
392 (92.2%) exact matches, in which:  
392 unique CDR3  
7 unique J



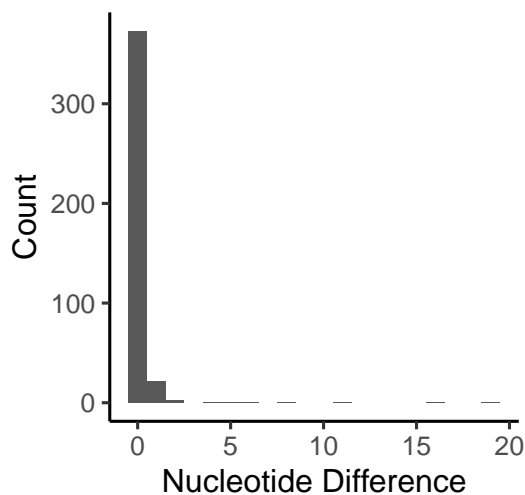
### IGHV1-45\*02

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



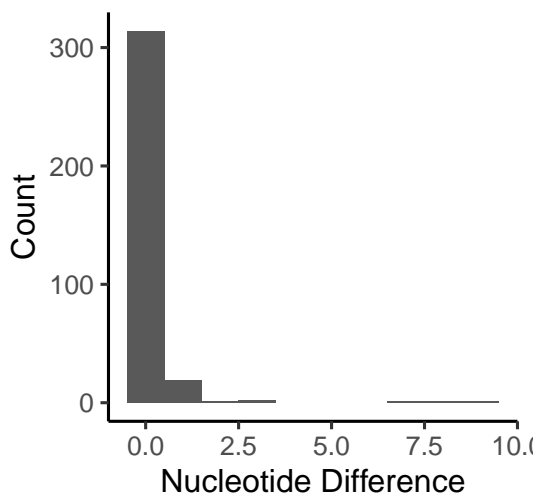
### IGHV1-3\*01

406 sequences assigned  
373 (91.9%) exact matches, in which:  
373 unique CDR3  
7 unique J



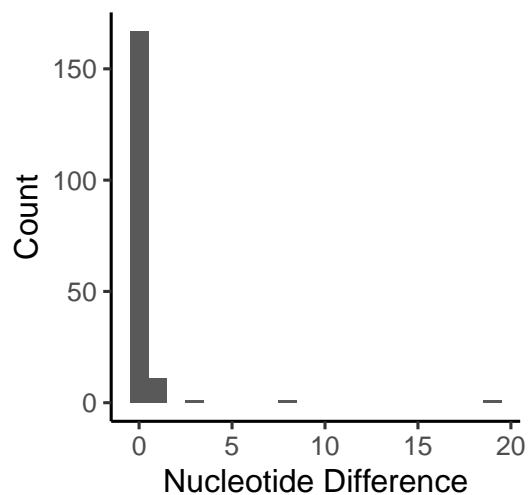
### IGHV1-18\*04

339 sequences assigned  
314 (92.6%) exact matches, in which:  
313 unique CDR3  
6 unique J



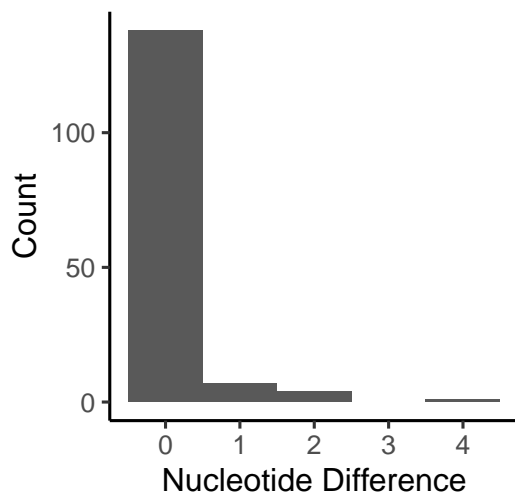
### IGHV1-46\*01

181 sequences assigned  
167 (92.3%) exact matches, in which:  
167 unique CDR3  
7 unique J



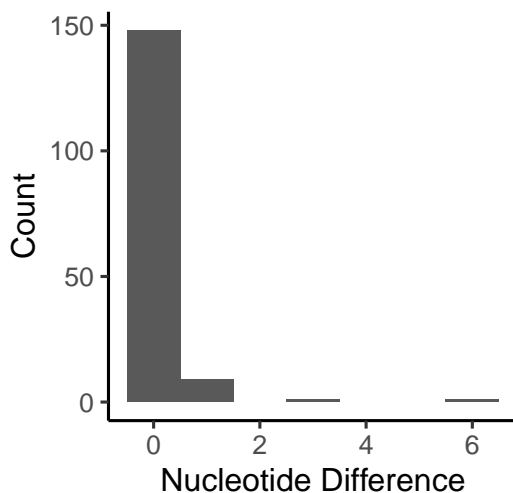
### IGHV1-8\*01

150 sequences assigned  
138 (92%) exact matches, in which:  
138 unique CDR3  
6 unique J



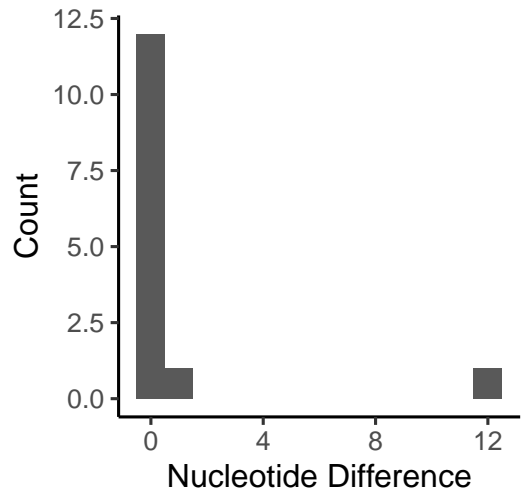
### IGHV1-24\*01

159 sequences assigned  
148 (93.1%) exact matches, in which:  
148 unique CDR3  
7 unique J



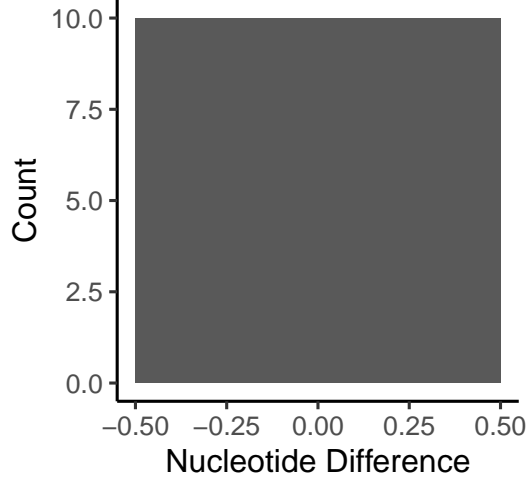
### IGHV1-58\*01

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



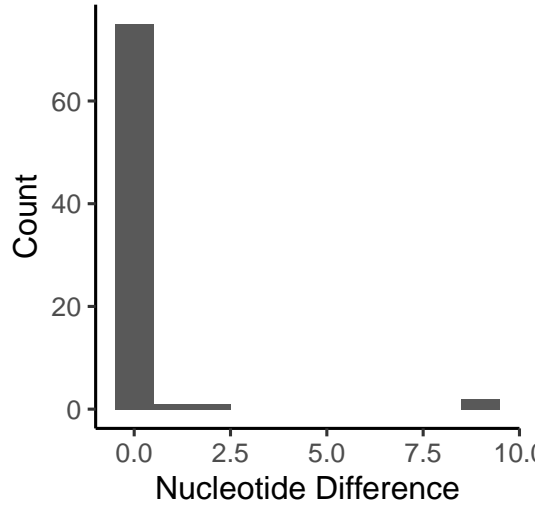
### IGHV1–58\*02

10 sequences assigned  
10 (100%) exact matches, in which:  
10 unique CDR3  
3 unique J



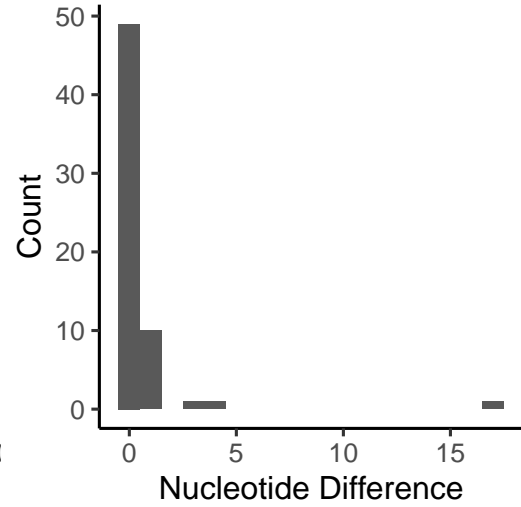
### IGHV2–26\*01

79 sequences assigned  
75 (94.9%) exact matches, in which:  
75 unique CDR3  
6 unique J



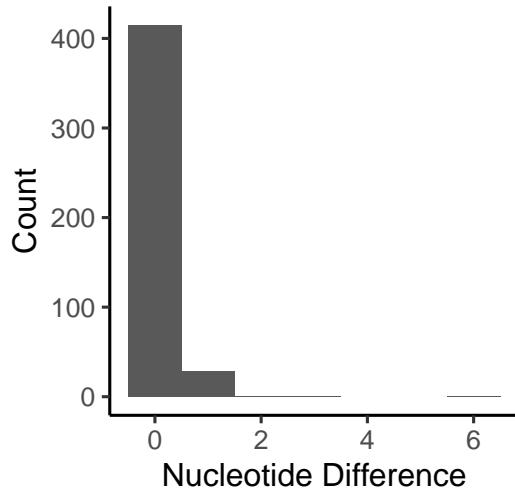
### IGHV3–7\*01

62 sequences assigned  
49 (79%) exact matches, in which:  
49 unique CDR3  
5 unique J



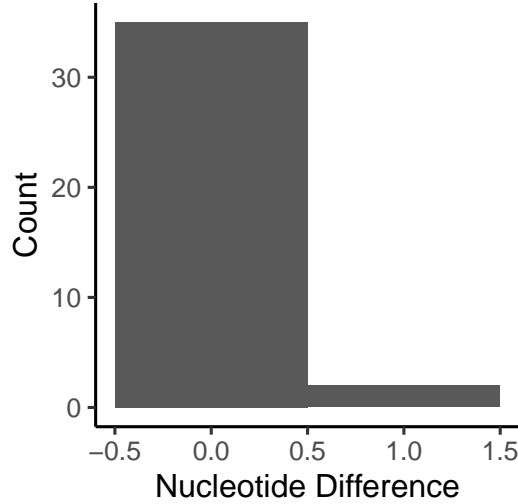
### IGHV1–69\*04

447 sequences assigned  
415 (92.8%) exact matches, in which:  
414 unique CDR3  
7 unique J



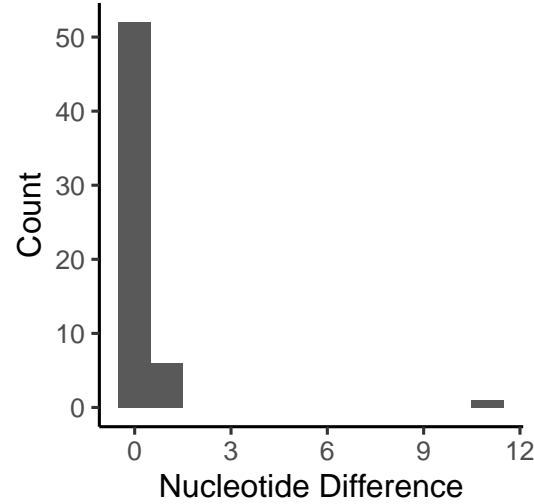
### IGHV2–70\*01

37 sequences assigned  
35 (94.6%) exact matches, in which:  
35 unique CDR3  
4 unique J



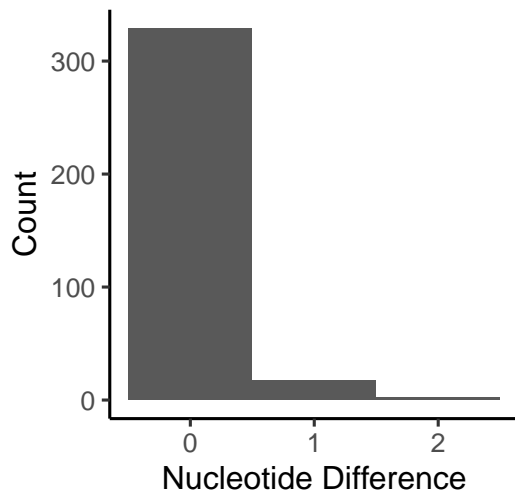
### IGHV3–7\*03

60 sequences assigned  
52 (86.7%) exact matches, in which:  
52 unique CDR3  
5 unique J



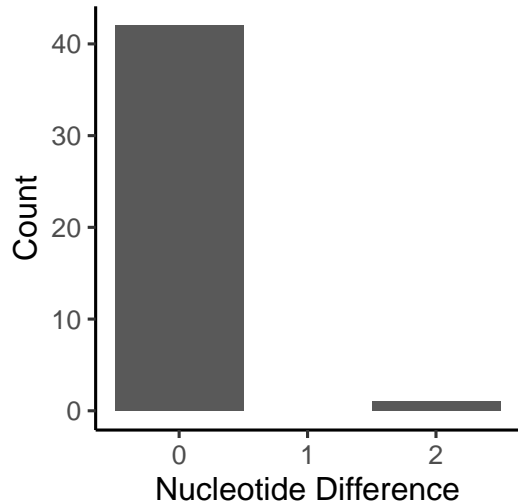
### IGHV2–5\*02

348 sequences assigned  
329 (94.5%) exact matches, in which:  
328 unique CDR3  
7 unique J



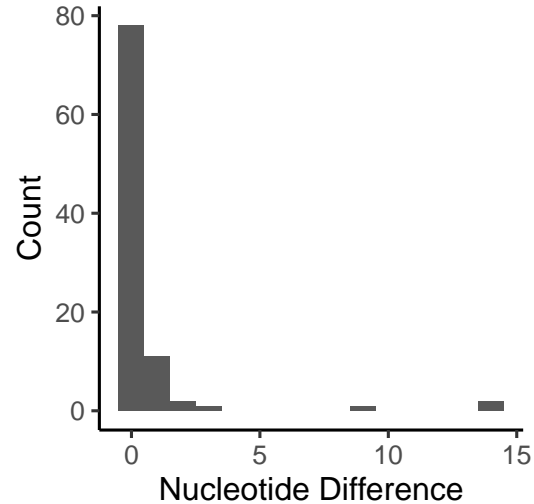
### IGHV2–70\*15

43 sequences assigned  
42 (97.7%) exact matches, in which:  
42 unique CDR3  
4 unique J



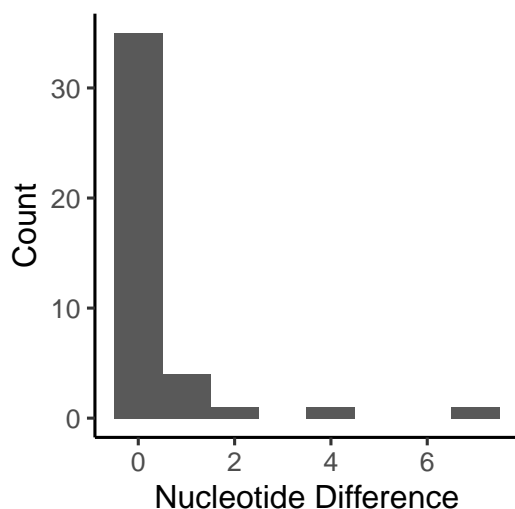
### IGHV3–9\*01

95 sequences assigned  
78 (82.1%) exact matches, in which:  
78 unique CDR3  
5 unique J



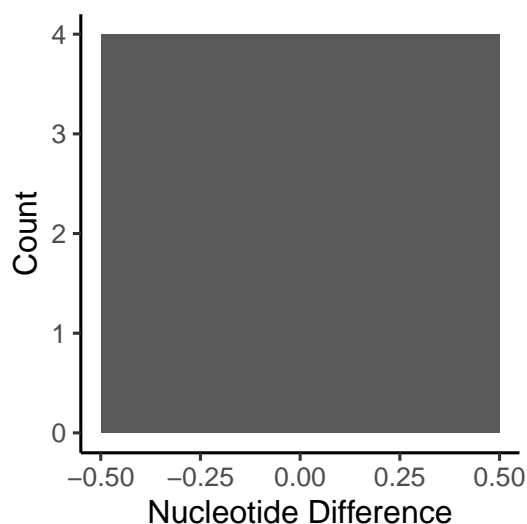
### IGHV3-11\*01

42 sequences assigned  
35 (83.3%) exact matches, in which:  
35 unique CDR3  
4 unique J



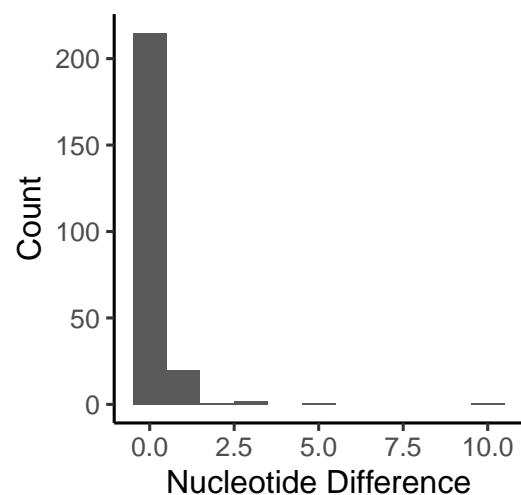
### IGHV3-13\*05

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



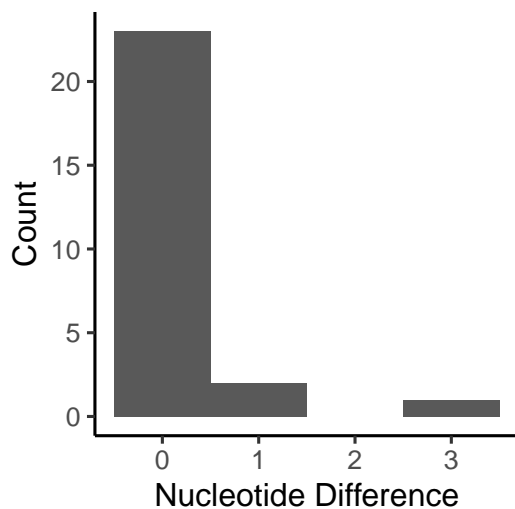
### IGHV3-21\*01

240 sequences assigned  
215 (89.6%) exact matches, in which:  
215 unique CDR3  
7 unique J



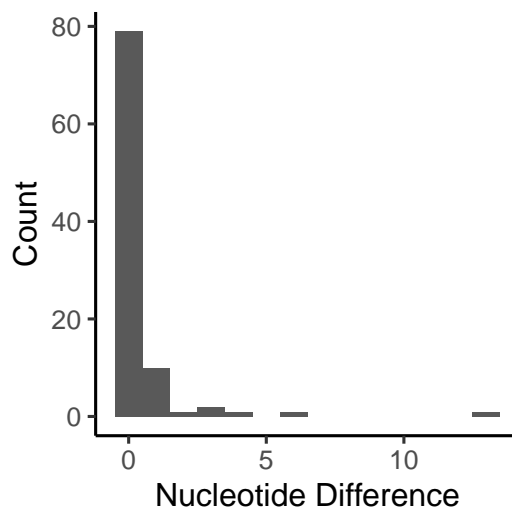
### IGHV3-11\*06

26 sequences assigned  
23 (88.5%) exact matches, in which:  
23 unique CDR3  
5 unique J



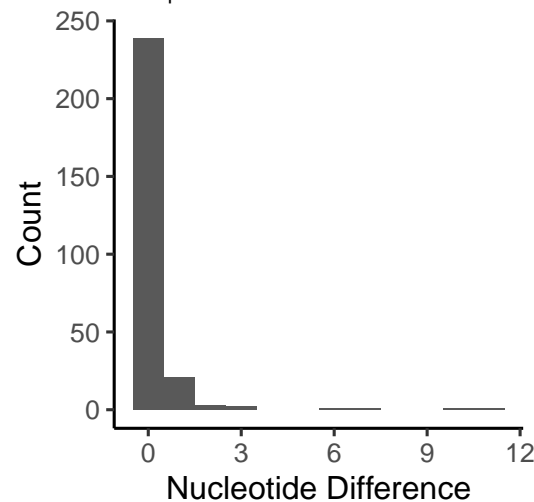
### IGHV3-15\*01

96 sequences assigned  
79 (82.3%) exact matches, in which:  
79 unique CDR3  
6 unique J



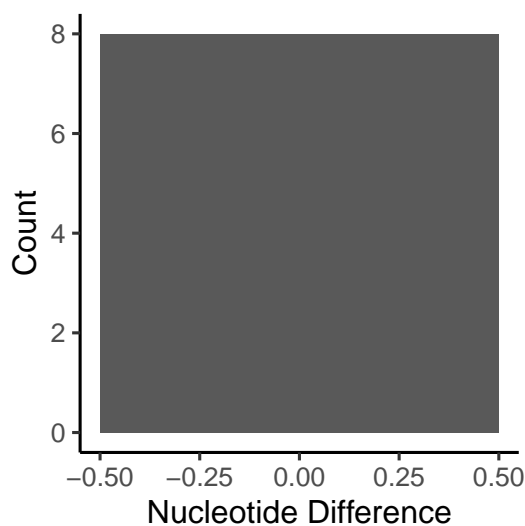
### IGHV3-23\*04

269 sequences assigned  
239 (88.8%) exact matches, in which:  
239 unique CDR3  
7 unique J



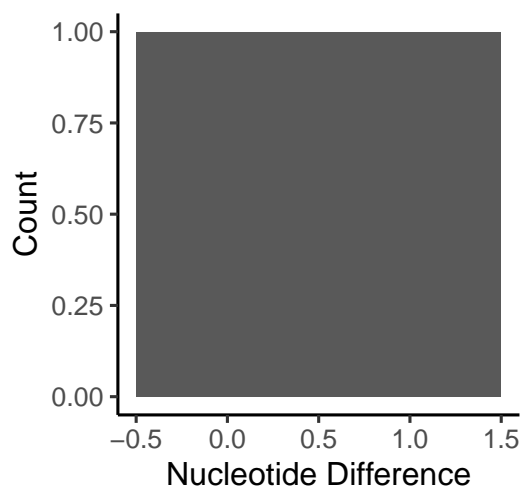
### IGHV3-13\*01

8 sequences assigned  
8 (100%) exact matches, in which:  
8 unique CDR3  
5 unique J



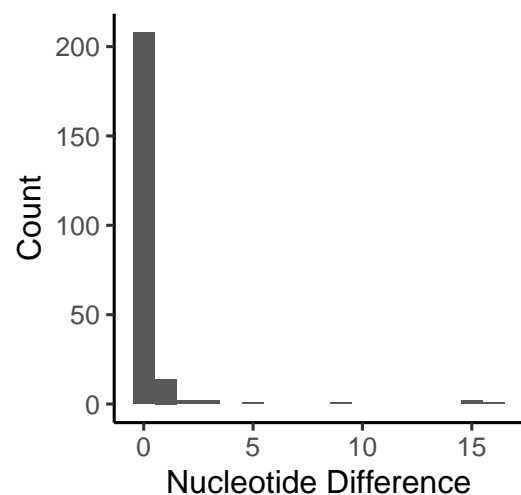
### IGHV3-20\*01

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



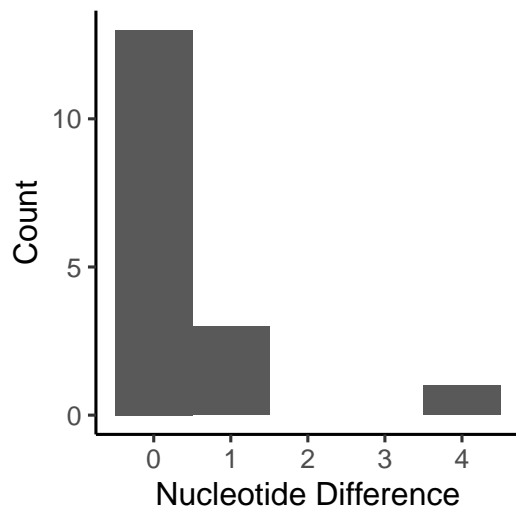
### IGHV3-33\*01

231 sequences assigned  
208 (90%) exact matches, in which:  
208 unique CDR3  
7 unique J



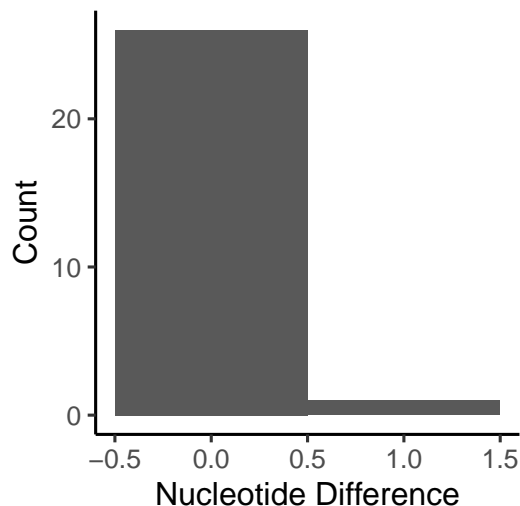
### IGHV3-43\*01

17 sequences assigned  
13 (76.5%) exact matches, in which:  
13 unique CDR3  
4 unique J



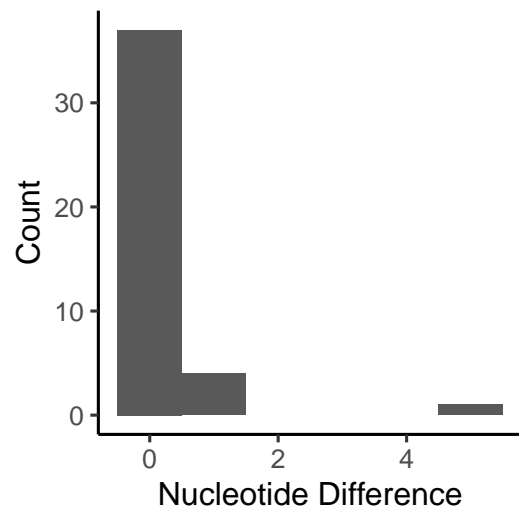
### IGHV3-49\*03

27 sequences assigned  
26 (96.3%) exact matches, in which:  
26 unique CDR3  
6 unique J



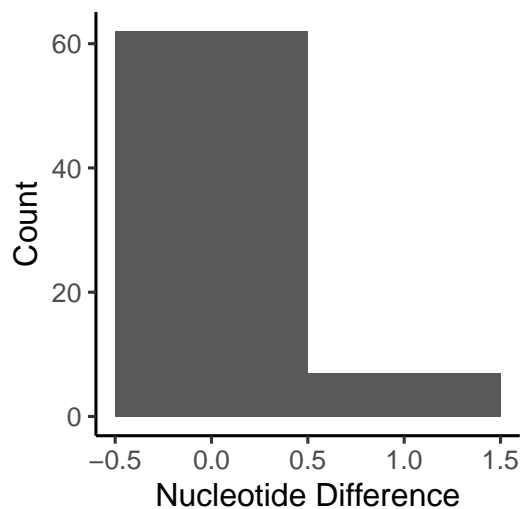
### IGHV3-53\*04

42 sequences assigned  
37 (88.1%) exact matches, in which:  
37 unique CDR3  
6 unique J



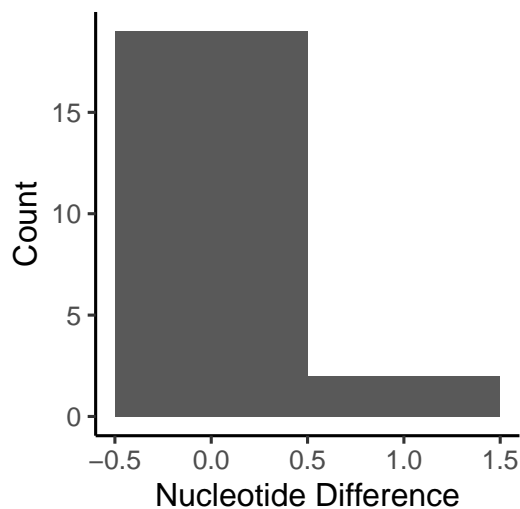
### IGHV3-48\*02

69 sequences assigned  
62 (89.9%) exact matches, in which:  
62 unique CDR3  
6 unique J



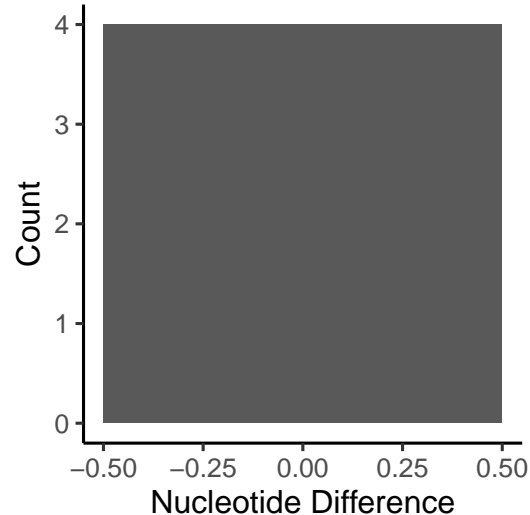
### IGHV3-49\*05

21 sequences assigned  
19 (90.5%) exact matches, in which:  
19 unique CDR3  
4 unique J



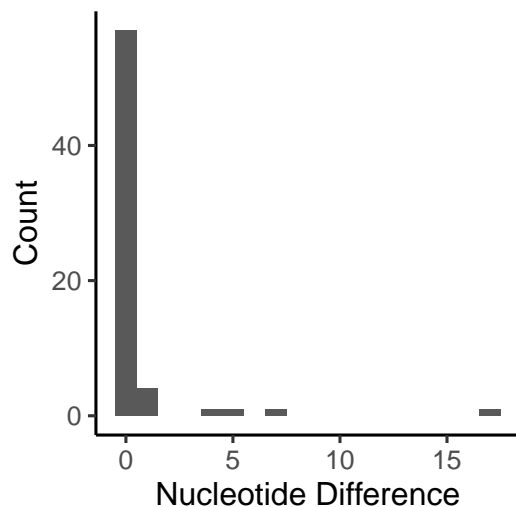
### IGHV3-64\*01

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



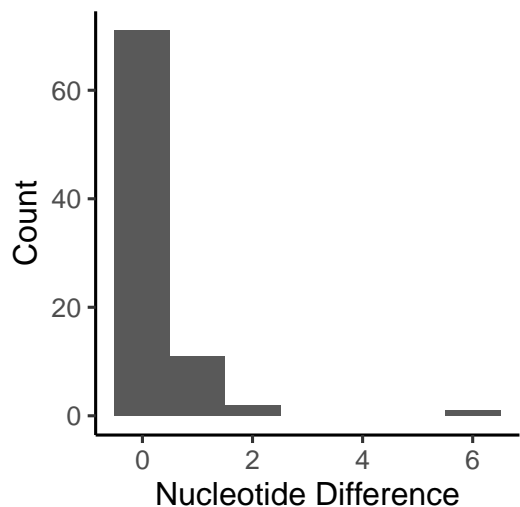
### IGHV3-48\*04

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



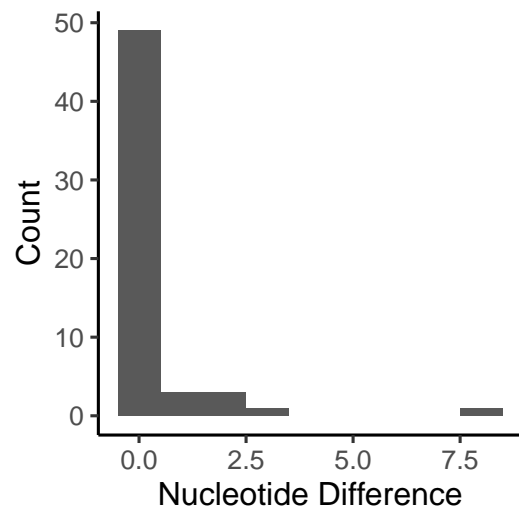
### IGHV3-53\*01

86 sequences assigned  
71 (82.6%) exact matches, in which:  
71 unique CDR3  
6 unique J



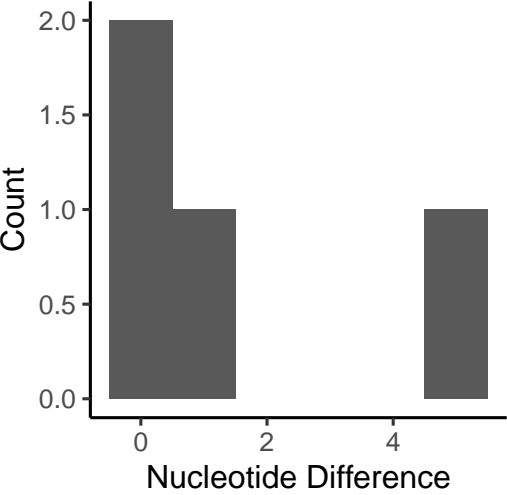
### IGHV3-66\*01

57 sequences assigned  
49 (86%) exact matches, in which:  
49 unique CDR3  
4 unique J



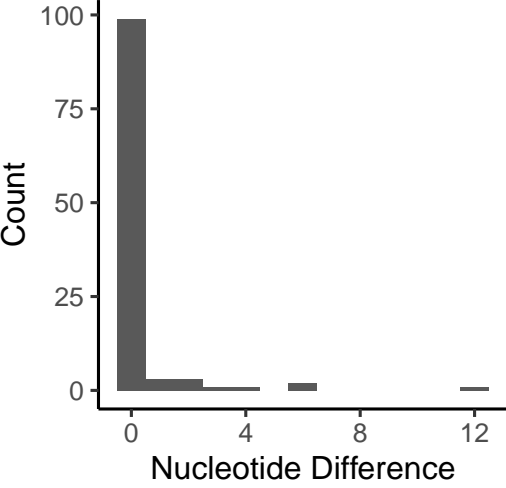
IGHV3-72\*01

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



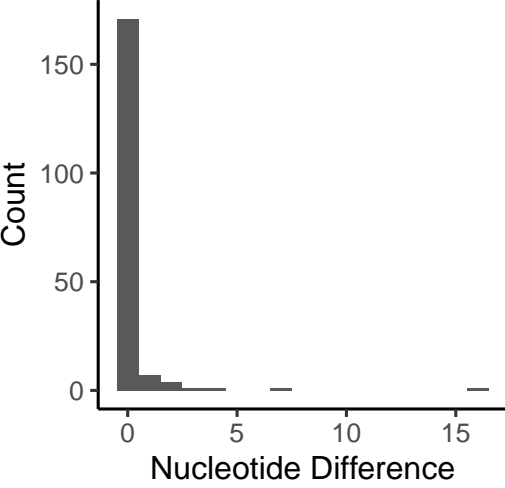
IGHV3-74\*01

110 sequences assigned  
99 (90%) exact matches, in which:  
99 unique CDR3  
7 unique J



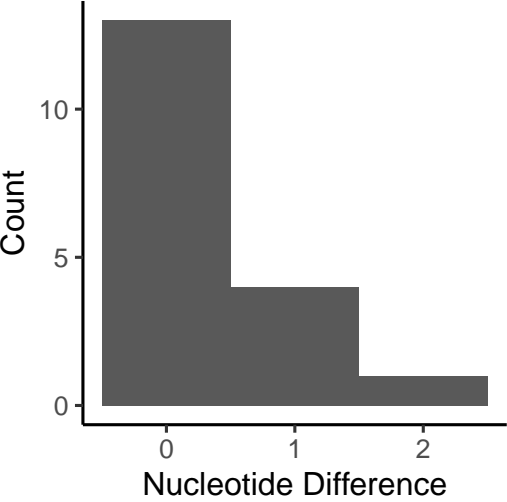
IGHV4-4\*02

186 sequences assigned  
171 (91.9%) exact matches, in which:  
171 unique CDR3  
7 unique J



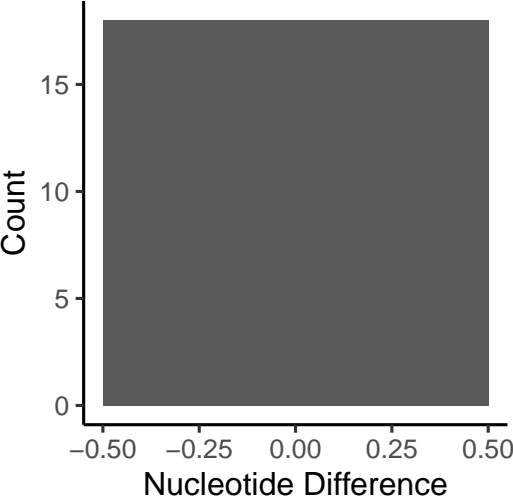
IGHV3-73\*01

18 sequences assigned  
13 (72.2%) exact matches, in which:  
13 unique CDR3  
5 unique J



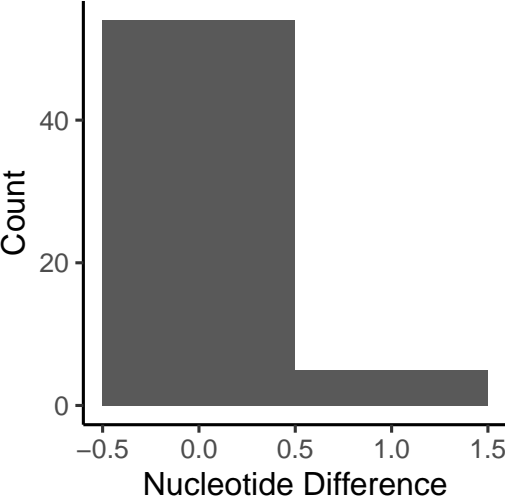
IGHV3-64D\*06

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



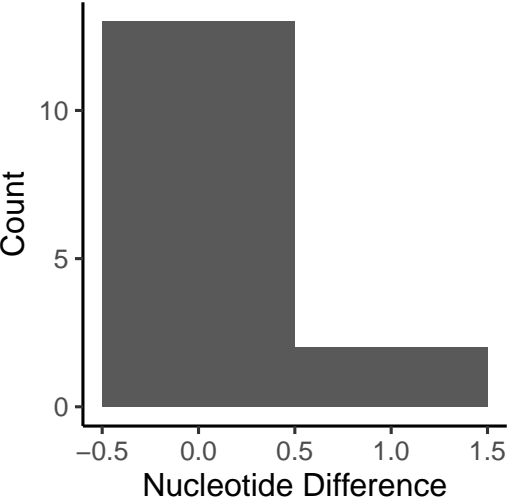
IGHV4-30-2\*01

59 sequences assigned  
54 (91.5%) exact matches, in which:  
54 unique CDR3  
5 unique J



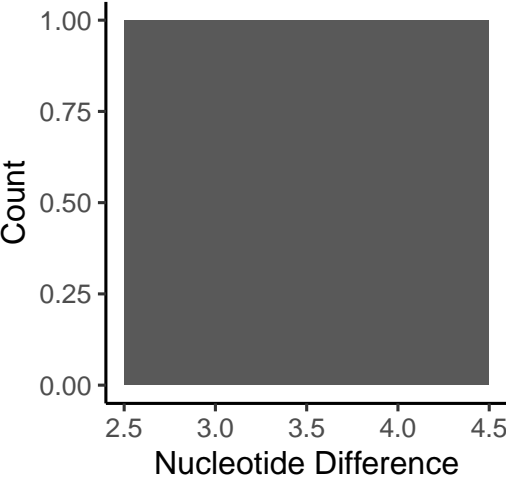
IGHV3-73\*02

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



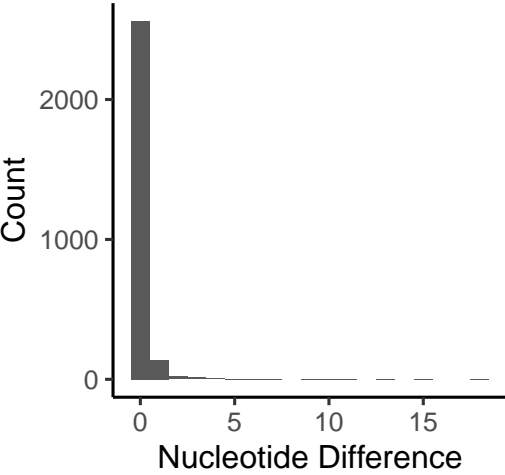
IGHV3-NL1\*01

2 sequences assigned  
No exact matches.



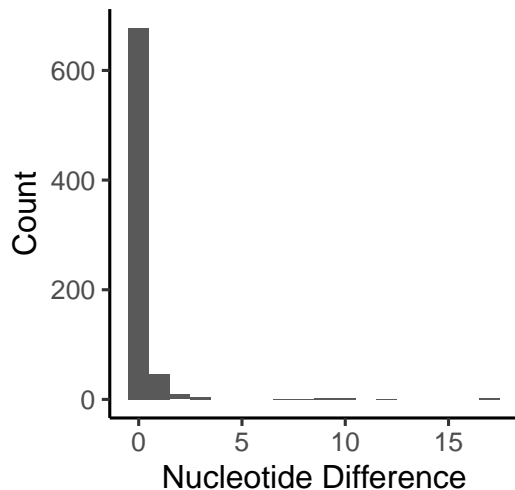
IGHV4-34\*01

2758 sequences assigned  
2561 (92.9%) exact matches, in which:  
2560 unique CDR3  
7 unique J



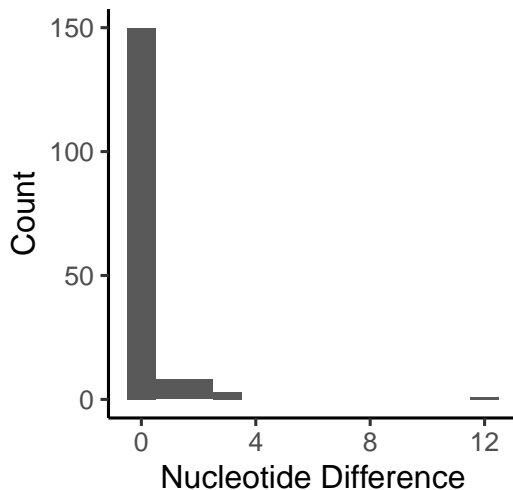
### IGHV4–39\*01

750 sequences assigned  
678 (90.4%) exact matches, in which:  
678 unique CDR3  
6 unique J



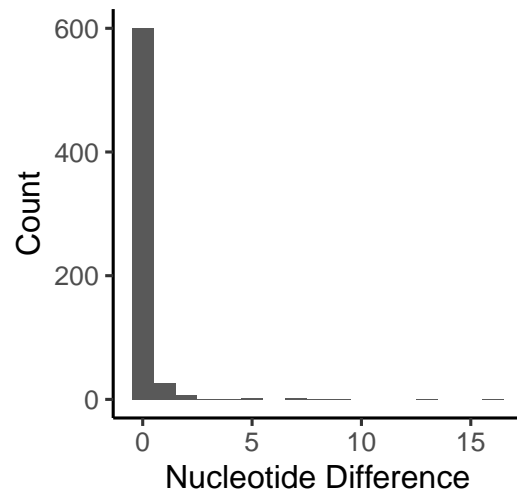
### IGHV4–59\*08

170 sequences assigned  
150 (88.2%) exact matches, in which:  
150 unique CDR3  
6 unique J



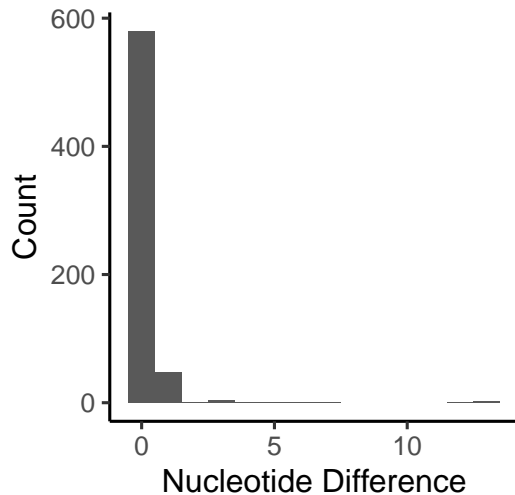
### IGHV5–51\*01

645 sequences assigned  
601 (93.2%) exact matches, in which:  
600 unique CDR3  
7 unique J



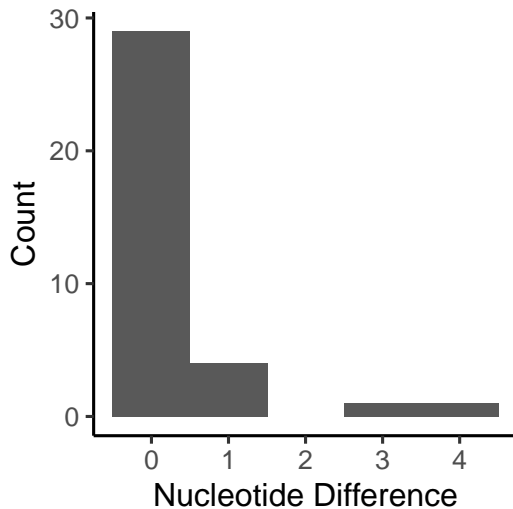
### IGHV4–39\*07

640 sequences assigned  
580 (90.6%) exact matches, in which:  
580 unique CDR3  
7 unique J



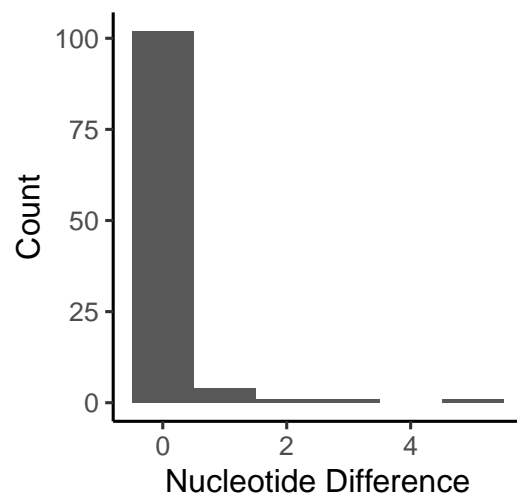
### IGHV4–61\*01

35 sequences assigned  
29 (82.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



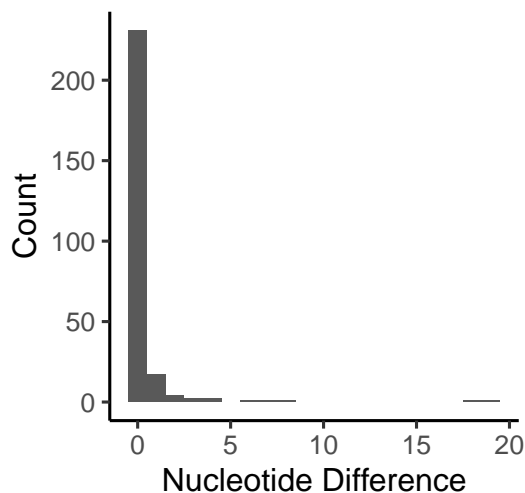
### IGHV6–1\*01

109 sequences assigned  
102 (93.6%) exact matches, in which:  
101 unique CDR3  
7 unique J



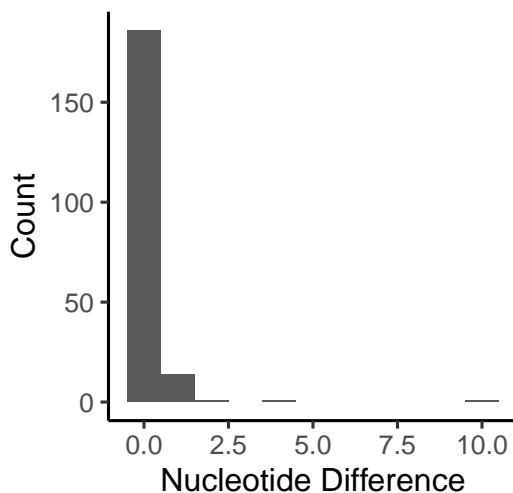
### IGHV4–59\*01

262 sequences assigned  
231 (88.2%) exact matches, in which:  
231 unique CDR3  
7 unique J



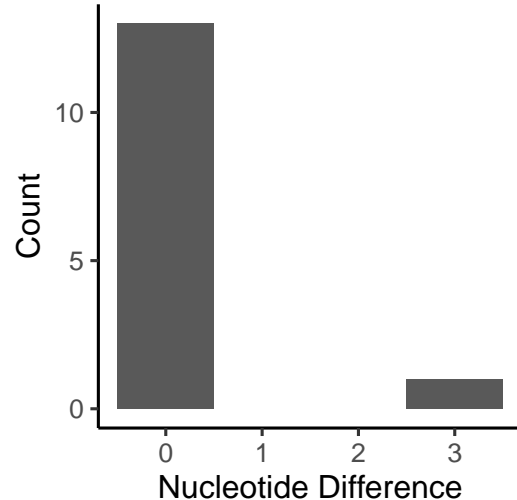
### IGHV5–10–1\*03

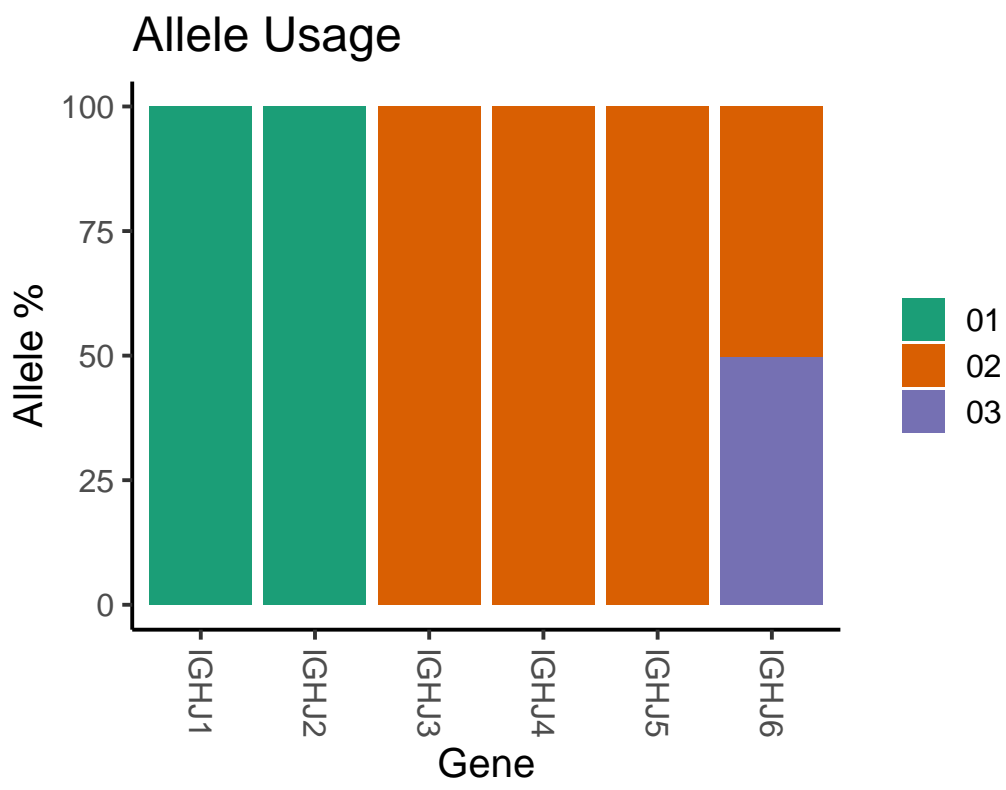
203 sequences assigned  
186 (91.6%) exact matches, in which:  
186 unique CDR3  
7 unique J



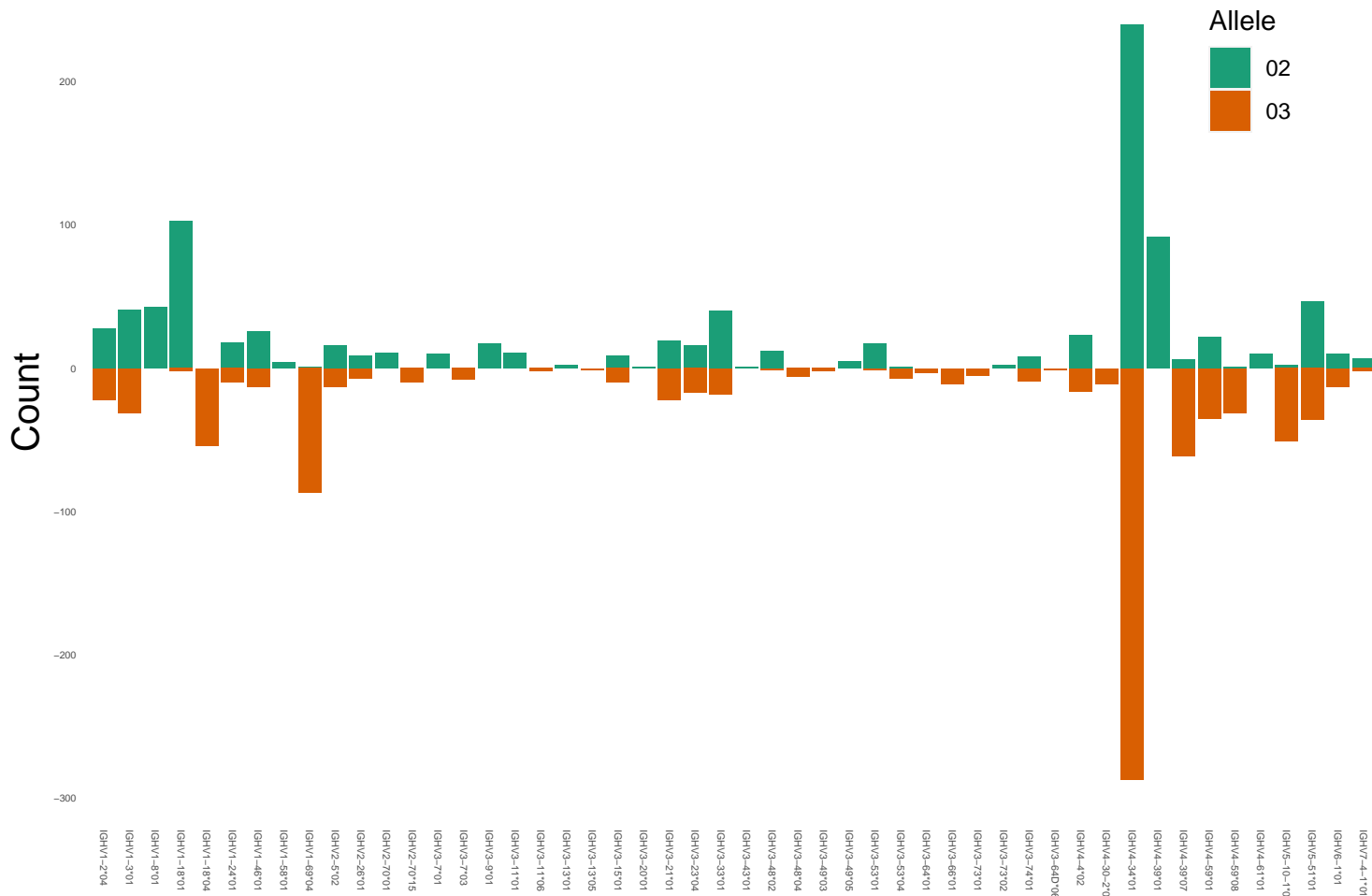
### IGHV7–4–1\*01

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





Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.