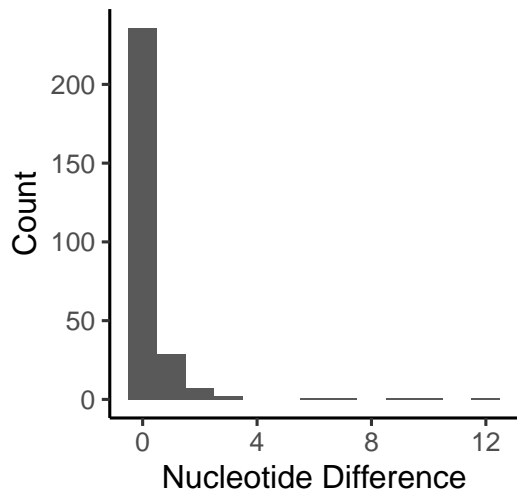


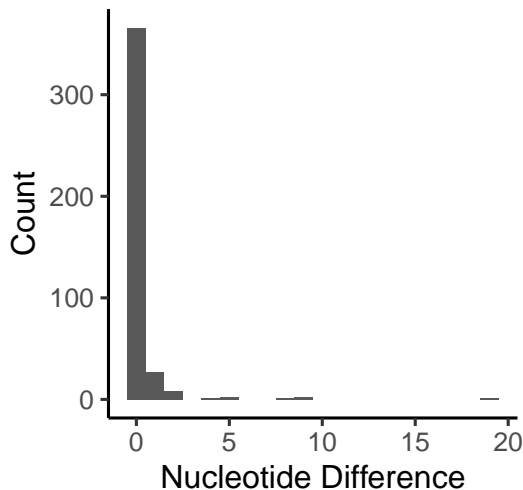
### IGHV1-2\*02

279 sequences assigned  
236 (84.6%) exact matches, in which:  
234 unique CDR3  
6 unique J



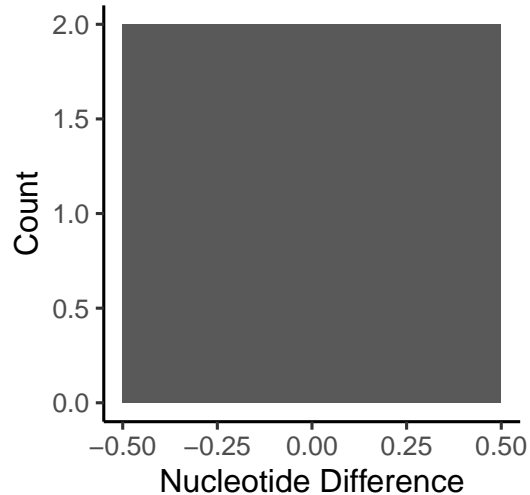
### IGHV1-8\*01

408 sequences assigned  
366 (89.7%) exact matches, in which:  
364 unique CDR3  
7 unique J



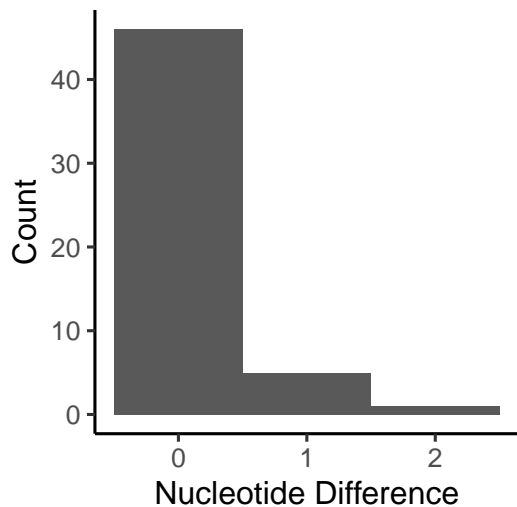
### IGHV1-45\*02

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



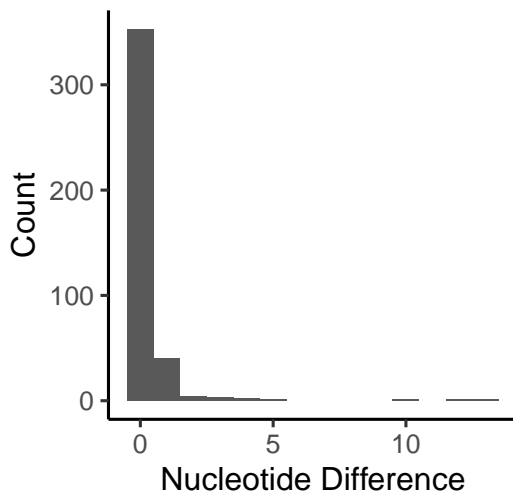
### IGHV1-2\*04

52 sequences assigned  
46 (88.5%) exact matches, in which:  
45 unique CDR3  
5 unique J



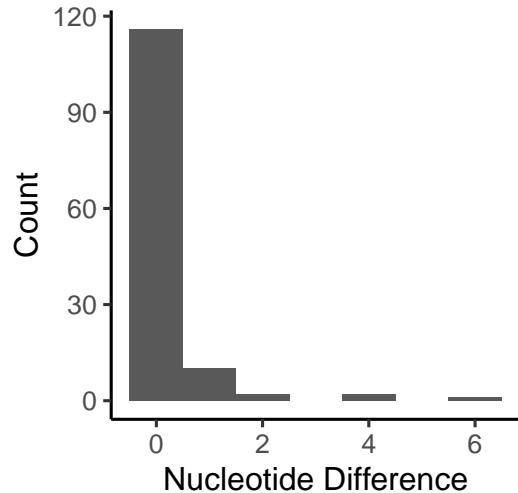
### IGHV1-18\*01

407 sequences assigned  
353 (86.7%) exact matches, in which:  
351 unique CDR3  
7 unique J



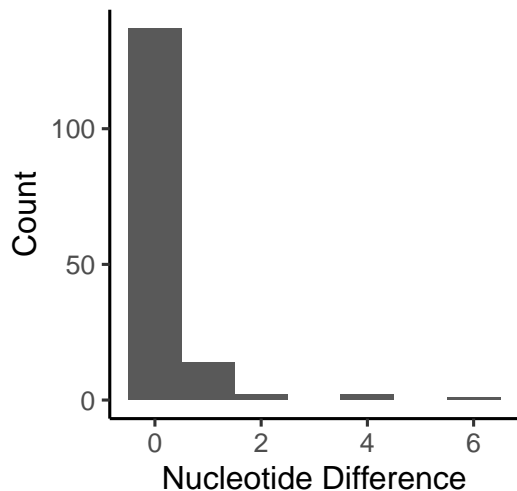
### IGHV1-46\*01

131 sequences assigned  
116 (88.5%) exact matches, in which:  
116 unique CDR3  
5 unique J



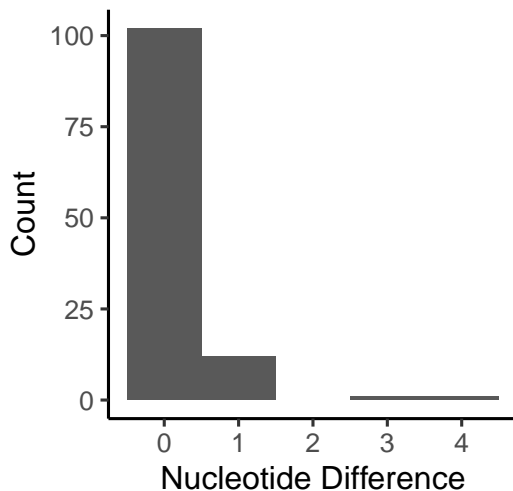
### IGHV1-3\*01

159 sequences assigned  
137 (86.2%) exact matches, in which:  
136 unique CDR3  
6 unique J



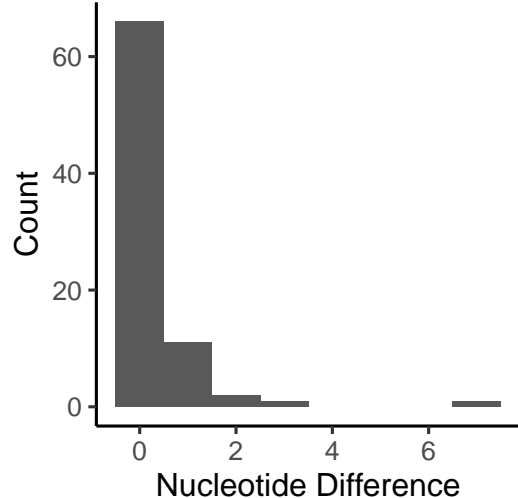
### IGHV1-24\*01

116 sequences assigned  
102 (87.9%) exact matches, in which:  
101 unique CDR3  
6 unique J



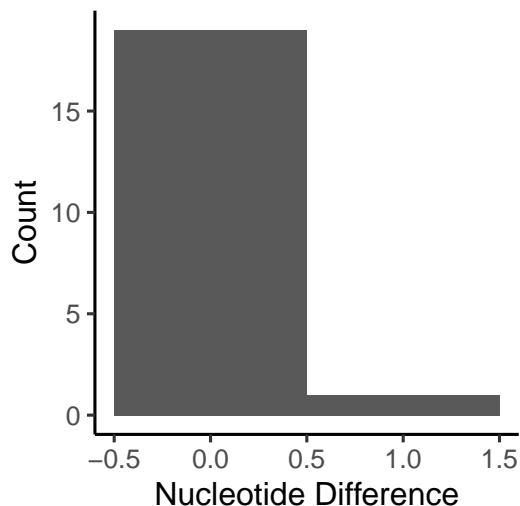
### IGHV1-46\*03

81 sequences assigned  
66 (81.5%) exact matches, in which:  
66 unique CDR3  
4 unique J



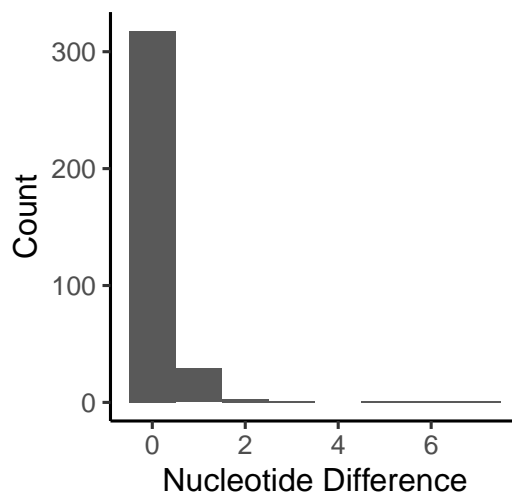
### IGHV1-58\*01

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



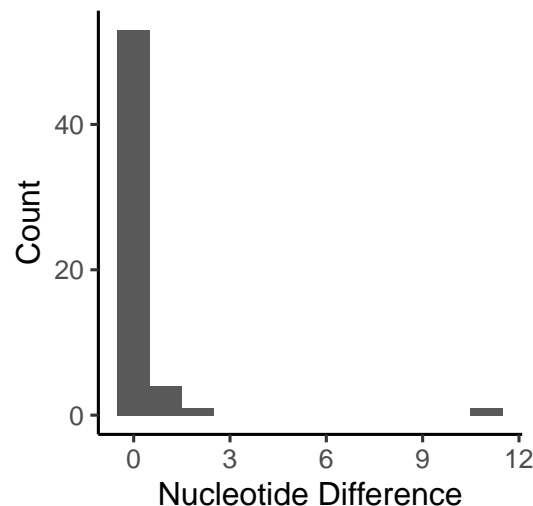
### IGHV1-69\*09

359 sequences assigned  
318 (88.6%) exact matches, in which:  
315 unique CDR3  
7 unique J



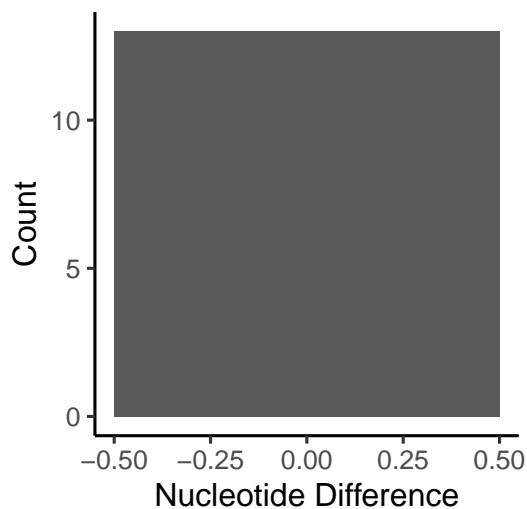
### IGHV2-26\*01

59 sequences assigned  
53 (89.8%) exact matches, in which:  
52 unique CDR3  
7 unique J



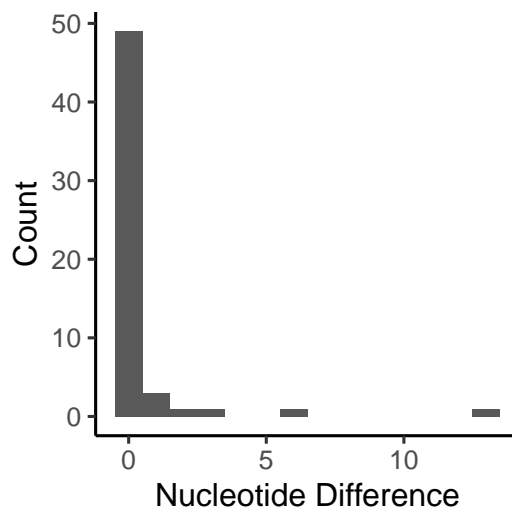
### IGHV1-58\*02

13 sequences assigned  
13 (100%) exact matches, in which:  
13 unique CDR3  
4 unique J



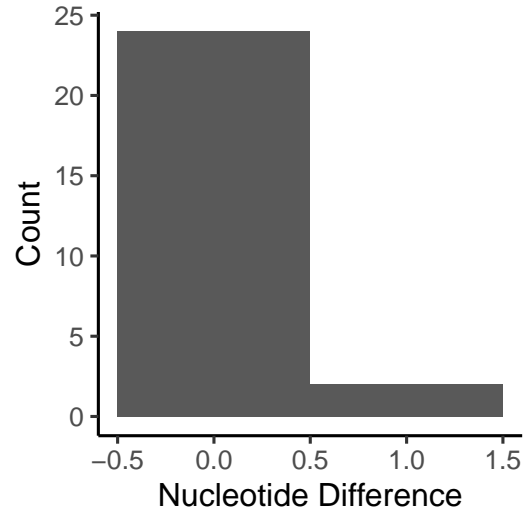
### IGHV2-5\*01

56 sequences assigned  
49 (87.5%) exact matches, in which:  
49 unique CDR3  
4 unique J



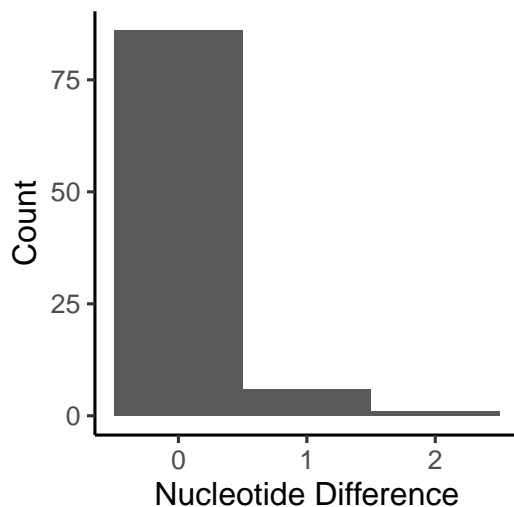
### IGHV2-70\*01

26 sequences assigned  
24 (92.3%) exact matches, in which:  
24 unique CDR3  
5 unique J



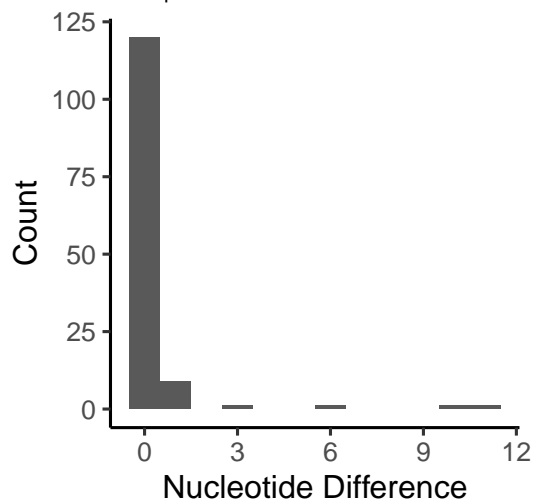
### IGHV1-69\*02

93 sequences assigned  
86 (92.5%) exact matches, in which:  
85 unique CDR3  
6 unique J



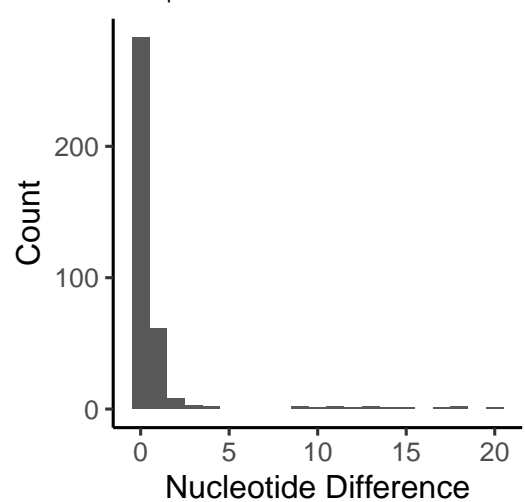
### IGHV2-5\*02

133 sequences assigned  
120 (90.2%) exact matches, in which:  
120 unique CDR3  
6 unique J



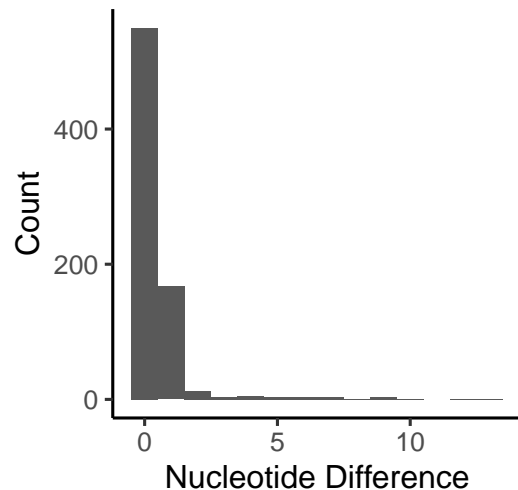
### IGHV3-7\*01

380 sequences assigned  
283 (74.5%) exact matches, in which:  
282 unique CDR3  
7 unique J



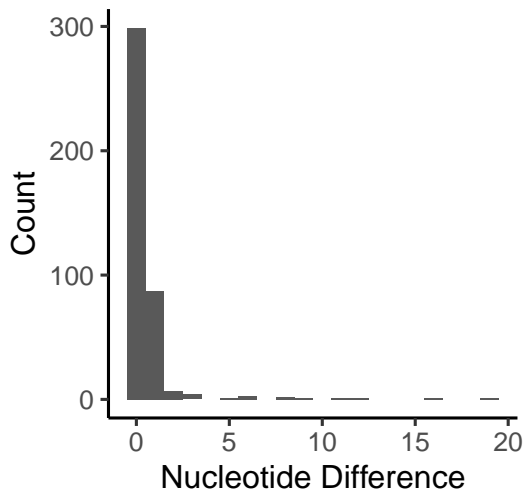
### IGHV3-9\*01

756 sequences assigned  
550 (72.8%) exact matches, in which:  
535 unique CDR3  
7 unique J



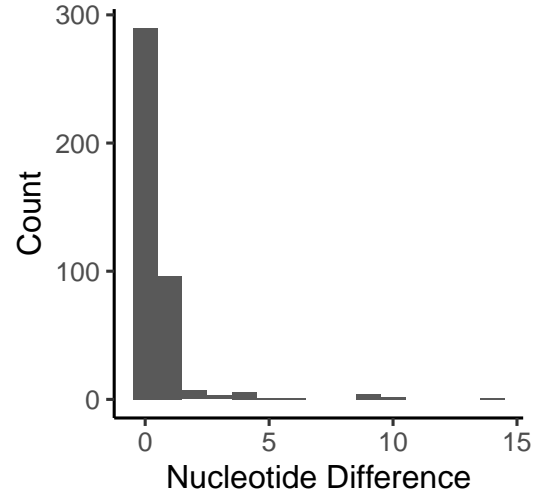
### IGHV3-15\*01

409 sequences assigned  
299 (73.1%) exact matches, in which:  
295 unique CDR3  
7 unique J



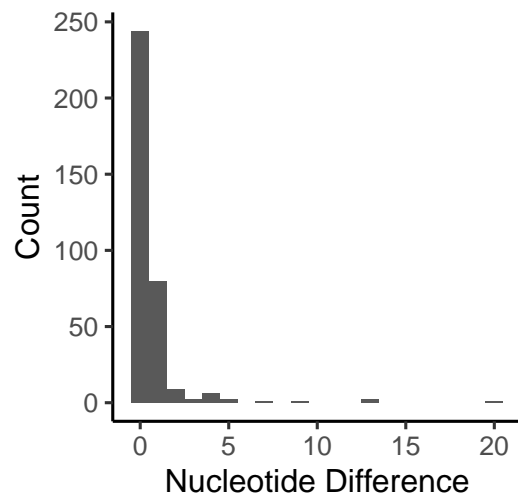
### IGHV3-30-3\*01

412 sequences assigned  
290 (70.4%) exact matches, in which:  
289 unique CDR3  
6 unique J



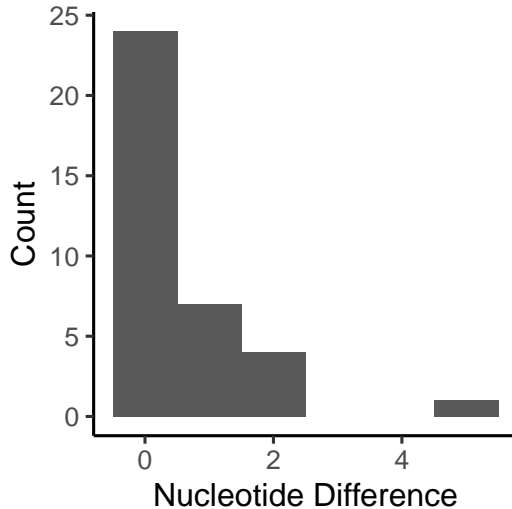
### IGHV3-11\*01

348 sequences assigned  
244 (70.1%) exact matches, in which:  
243 unique CDR3  
7 unique J



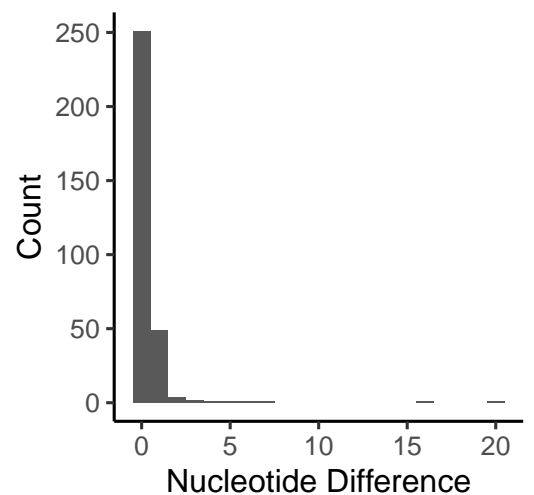
### IGHV3-20\*01

36 sequences assigned  
24 (66.7%) exact matches, in which:  
23 unique CDR3  
5 unique J



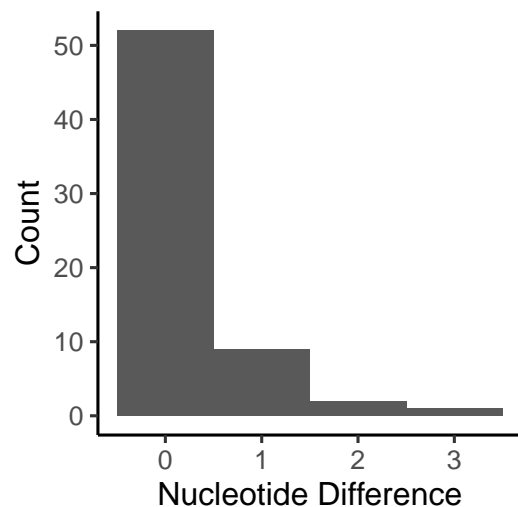
### IGHV3-30\*01

315 sequences assigned  
251 (79.7%) exact matches, in which:  
247 unique CDR3  
7 unique J



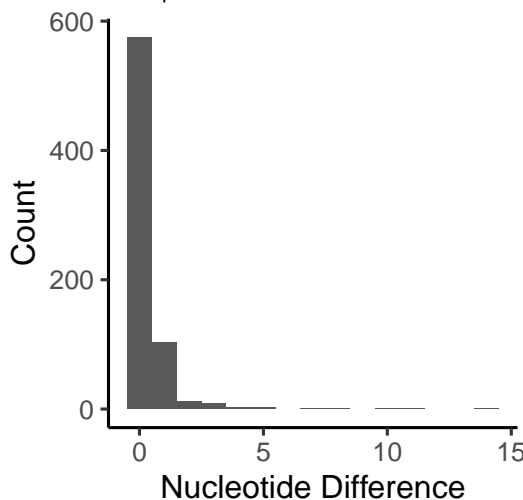
### IGHV3-13\*01

64 sequences assigned  
52 (81.2%) exact matches, in which:  
51 unique CDR3  
7 unique J



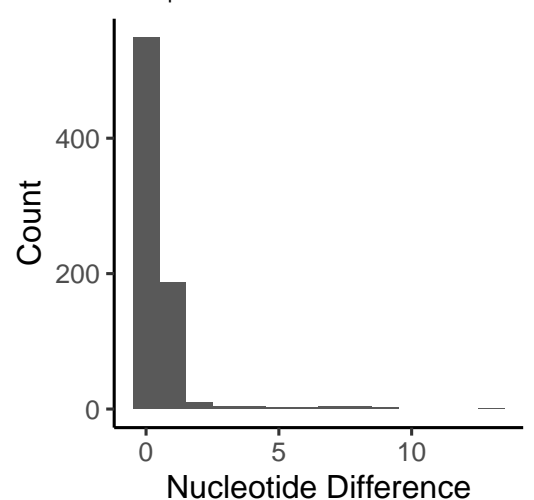
### IGHV3-21\*01

710 sequences assigned  
575 (81%) exact matches, in which:  
568 unique CDR3  
7 unique J



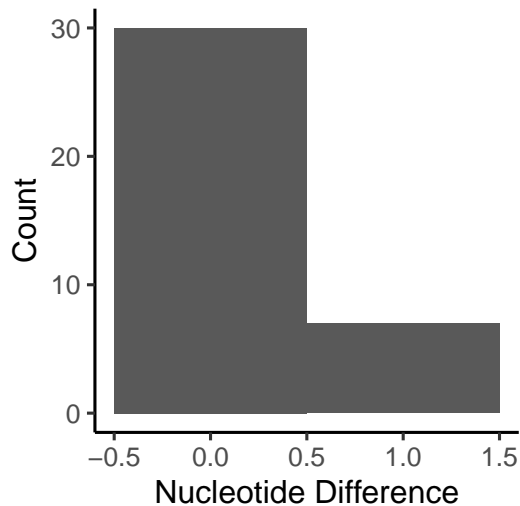
### IGHV3-33\*01

769 sequences assigned  
549 (71.4%) exact matches, in which:  
542 unique CDR3  
7 unique J



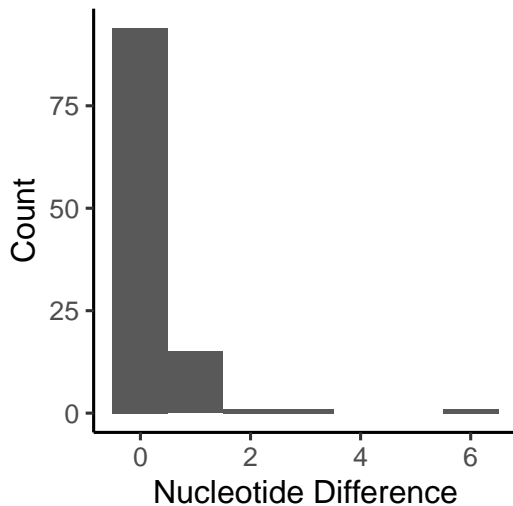
### IGHV3-43\*01

37 sequences assigned  
30 (81.1%) exact matches, in which:  
30 unique CDR3  
6 unique J



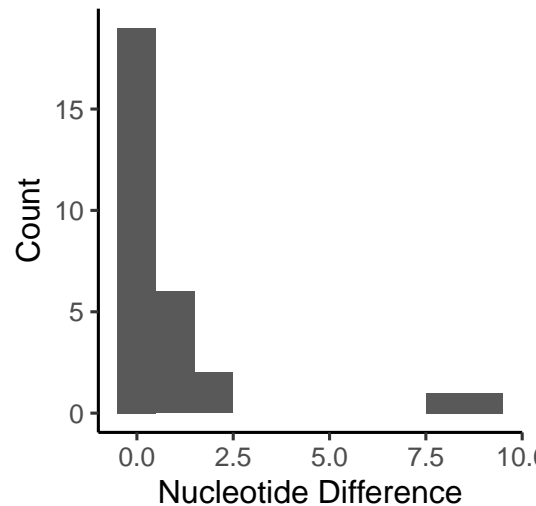
### IGHV3-49\*03

112 sequences assigned  
94 (83.9%) exact matches, in which:  
94 unique CDR3  
6 unique J



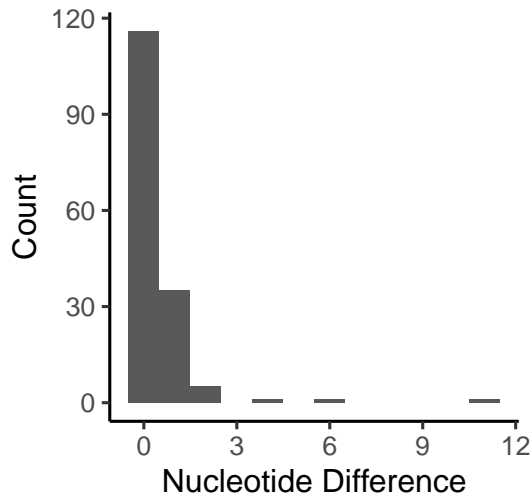
### IGHV3-64\*01

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



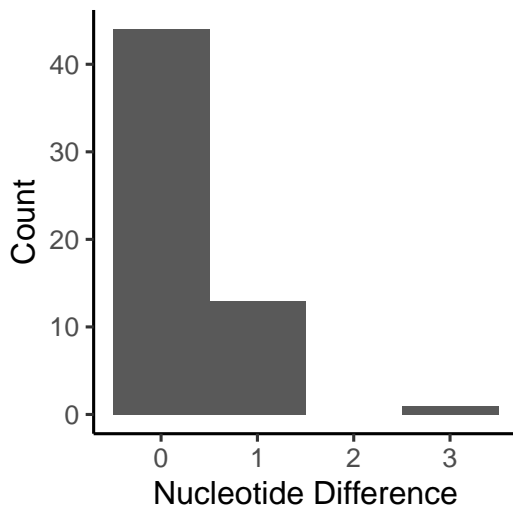
### IGHV3-48\*01

159 sequences assigned  
116 (73%) exact matches, in which:  
114 unique CDR3  
6 unique J



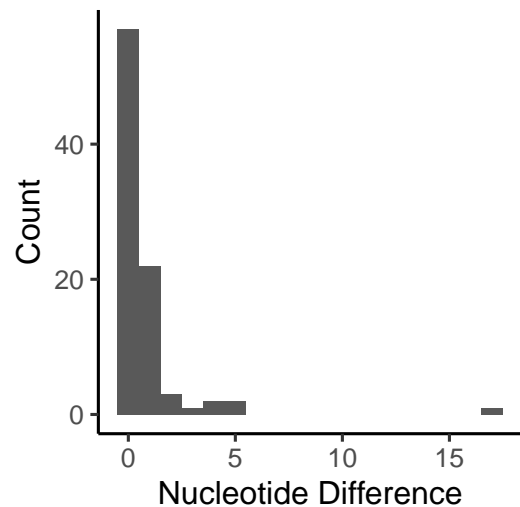
### IGHV3-49\*05

58 sequences assigned  
44 (75.9%) exact matches, in which:  
44 unique CDR3  
6 unique J



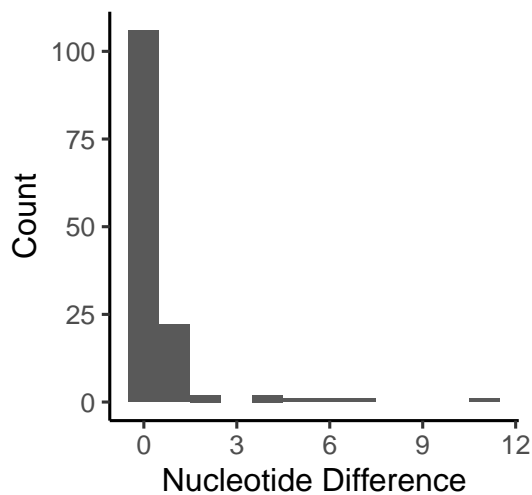
### IGHV3-66\*02

88 sequences assigned  
57 (64.8%) exact matches, in which:  
56 unique CDR3  
4 unique J



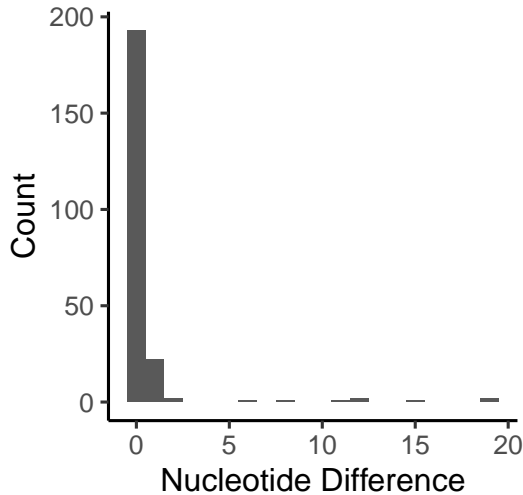
### IGHV3-48\*02

136 sequences assigned  
106 (77.9%) exact matches, in which:  
105 unique CDR3  
5 unique J



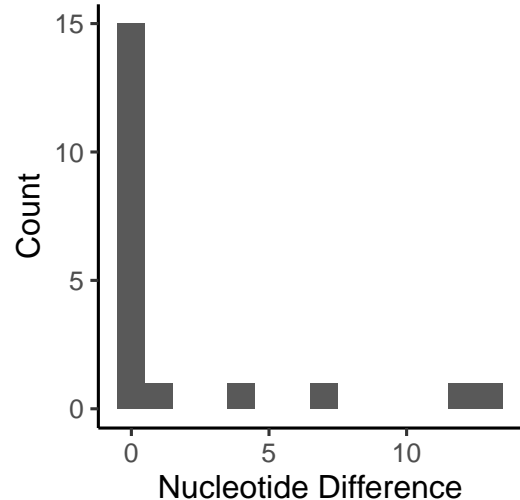
### IGHV3-53\*01

225 sequences assigned  
193 (85.8%) exact matches, in which:  
192 unique CDR3  
7 unique J



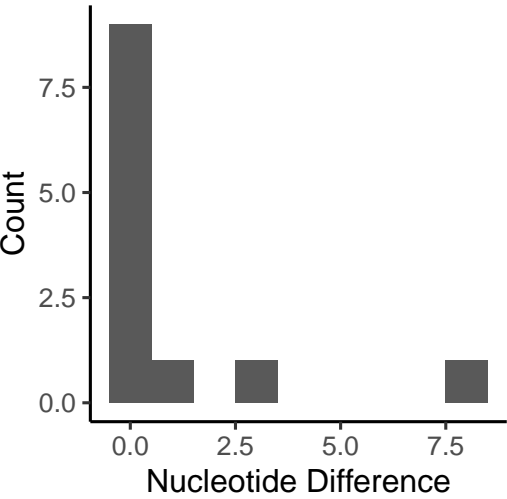
### IGHV3-72\*01

20 sequences assigned  
15 (75%) exact matches, in which:  
15 unique CDR3  
5 unique J



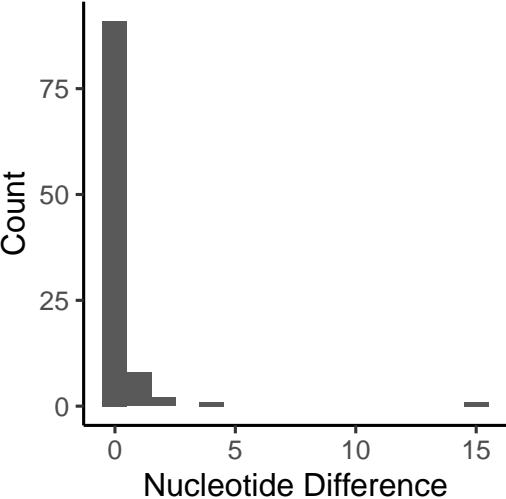
IGHV3-73\*01

12 sequences assigned  
9 (75%) exact matches, in which:  
9 unique CDR3  
2 unique J



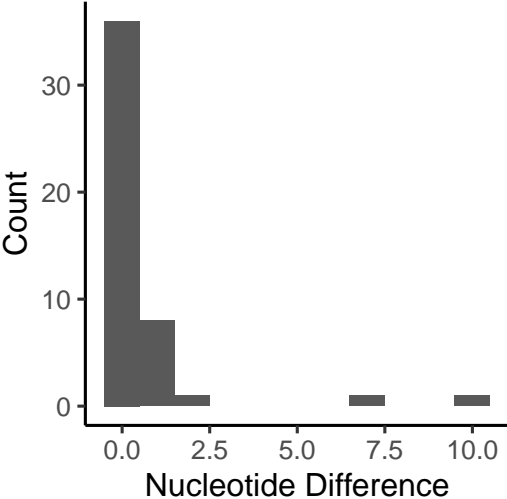
IGHV4-4\*02

103 sequences assigned  
91 (88.3%) exact matches, in which:  
91 unique CDR3  
5 unique J



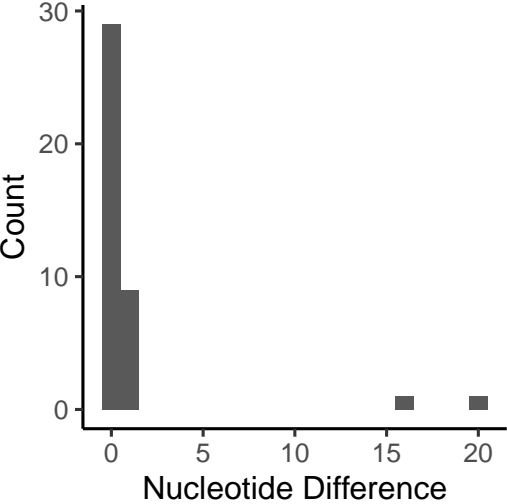
IGHV4-30-2\*01

47 sequences assigned  
36 (76.6%) exact matches, in which:  
36 unique CDR3  
6 unique J



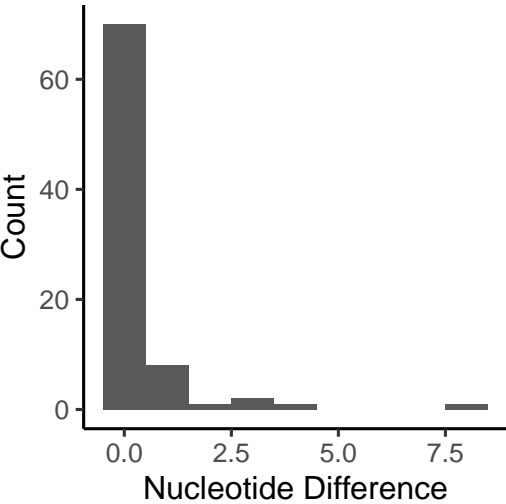
IGHV3-73\*02

40 sequences assigned  
29 (72.5%) exact matches, in which:  
29 unique CDR3  
4 unique J



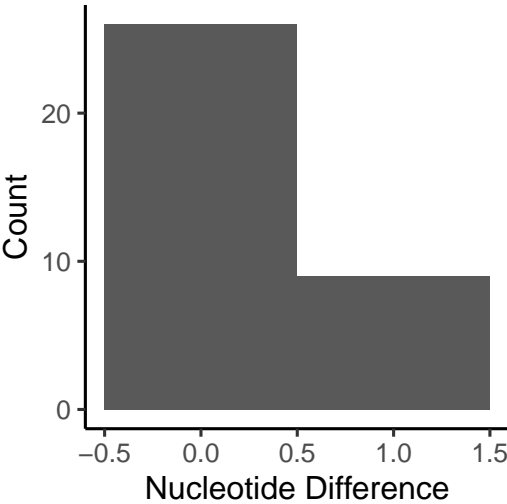
IGHV4-4\*07

83 sequences assigned  
70 (84.3%) exact matches, in which:  
70 unique CDR3  
6 unique J



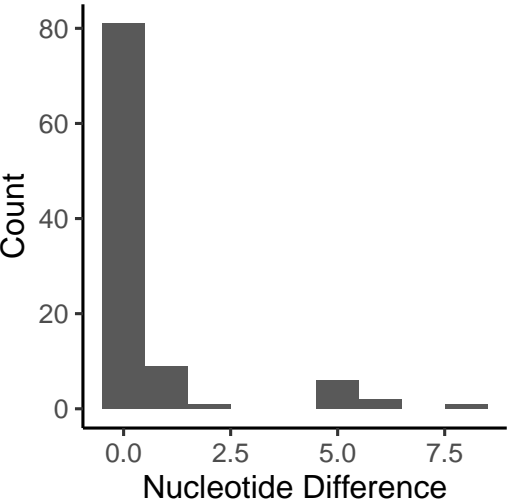
IGHV4-31\*01

35 sequences assigned  
26 (74.3%) exact matches, in which:  
26 unique CDR3  
5 unique J



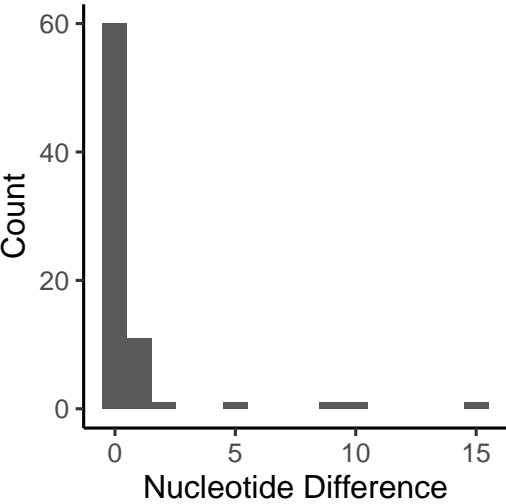
IGHV3-74\*01

101 sequences assigned  
81 (80.2%) exact matches, in which:  
81 unique CDR3  
7 unique J



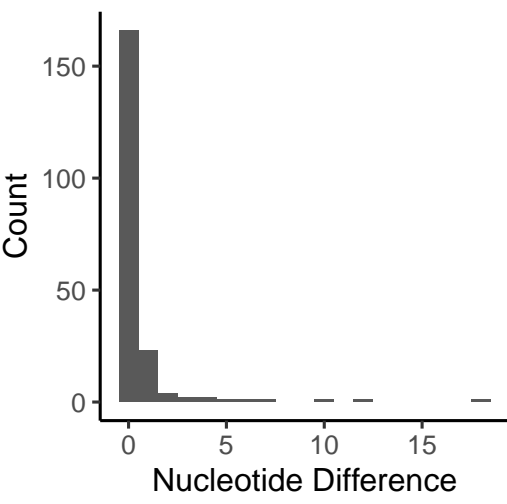
IGHV4-30-4\*01

76 sequences assigned  
60 (78.9%) exact matches, in which:  
60 unique CDR3  
6 unique J



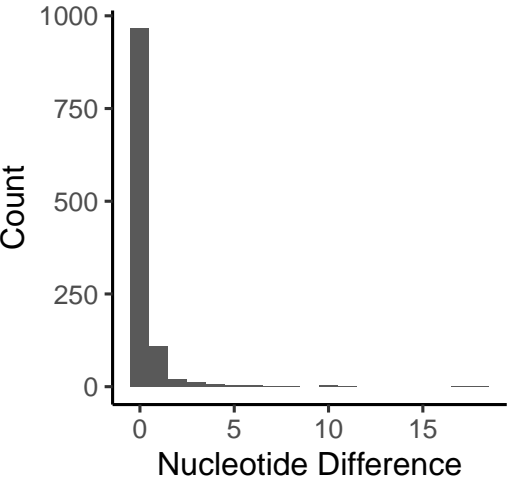
IGHV4-31\*03

203 sequences assigned  
166 (81.8%) exact matches, in which:  
165 unique CDR3  
6 unique J



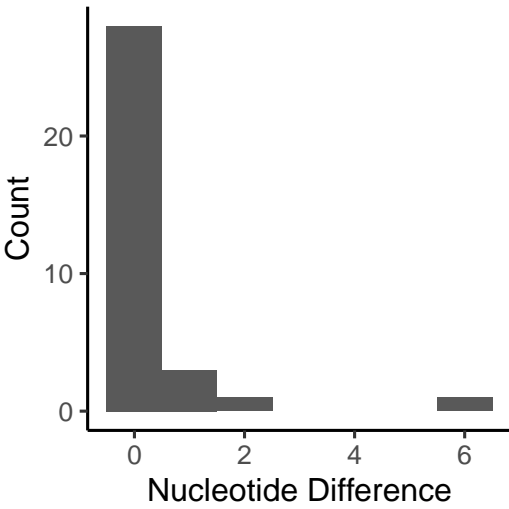
IGHV4-34\*01

1128 sequences assigned  
966 (85.6%) exact matches, in which:  
954 unique CDR3  
7 unique J



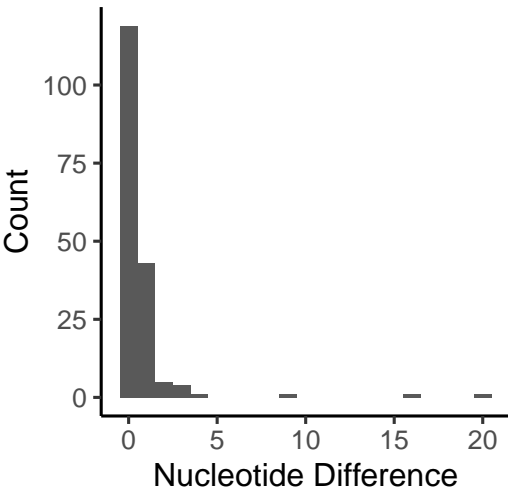
IGHV4-61\*01

33 sequences assigned  
28 (84.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



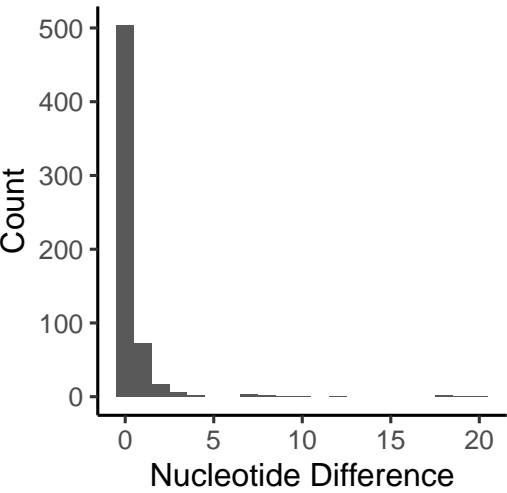
IGHV5-51\*01

175 sequences assigned  
119 (68%) exact matches, in which:  
118 unique CDR3  
7 unique J



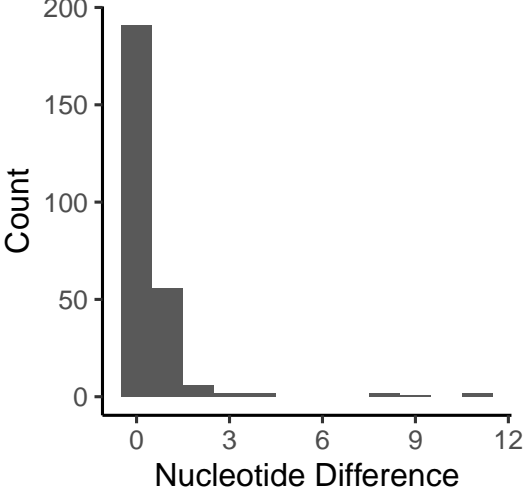
IGHV4-39\*01

613 sequences assigned  
504 (82.2%) exact matches, in which:  
501 unique CDR3  
7 unique J



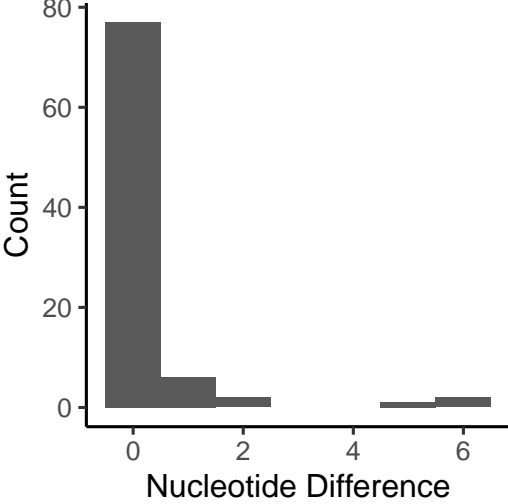
IGHV4-61\*02

262 sequences assigned  
191 (72.9%) exact matches, in which:  
191 unique CDR3  
6 unique J



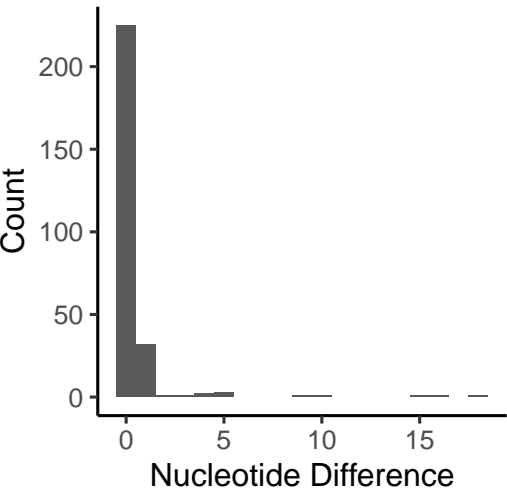
IGHV5-51\*03

88 sequences assigned  
77 (87.5%) exact matches, in which:  
76 unique CDR3  
7 unique J



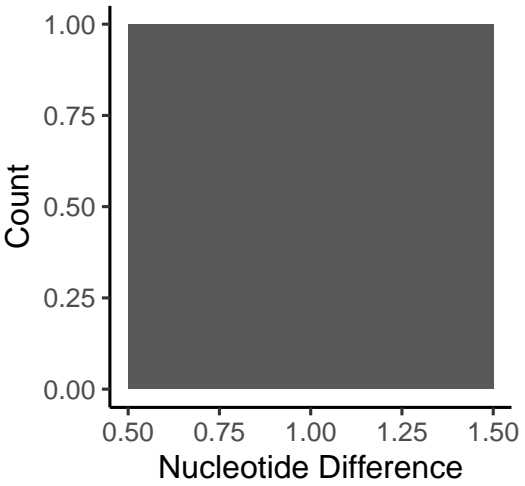
IGHV4-59\*01

272 sequences assigned  
225 (82.7%) exact matches, in which:  
224 unique CDR3  
6 unique J



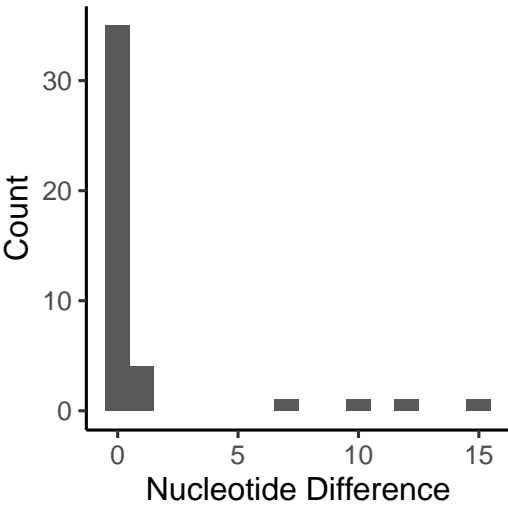
IGHV1/OR15-2\*01

1 sequences assigned  
No exact matches.



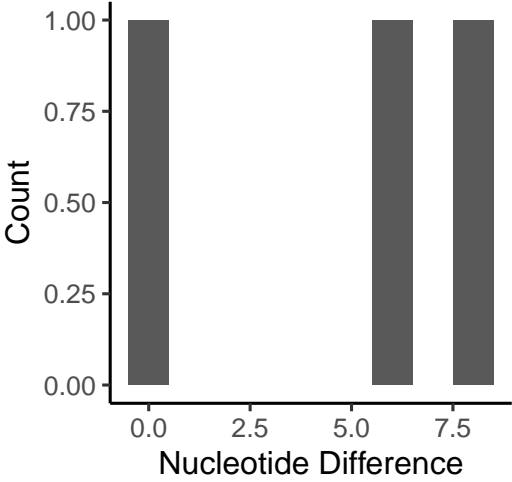
IGHV6-1\*01

43 sequences assigned  
35 (81.4%) exact matches, in which:  
35 unique CDR3  
6 unique J

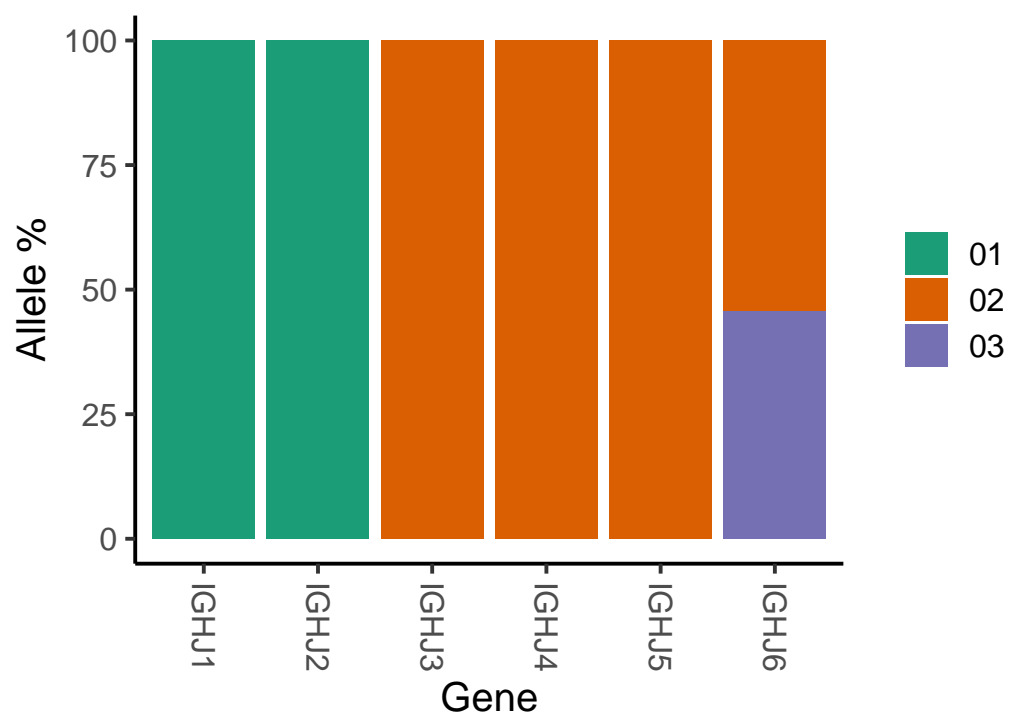


# IGHV7-4-1\*01

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J

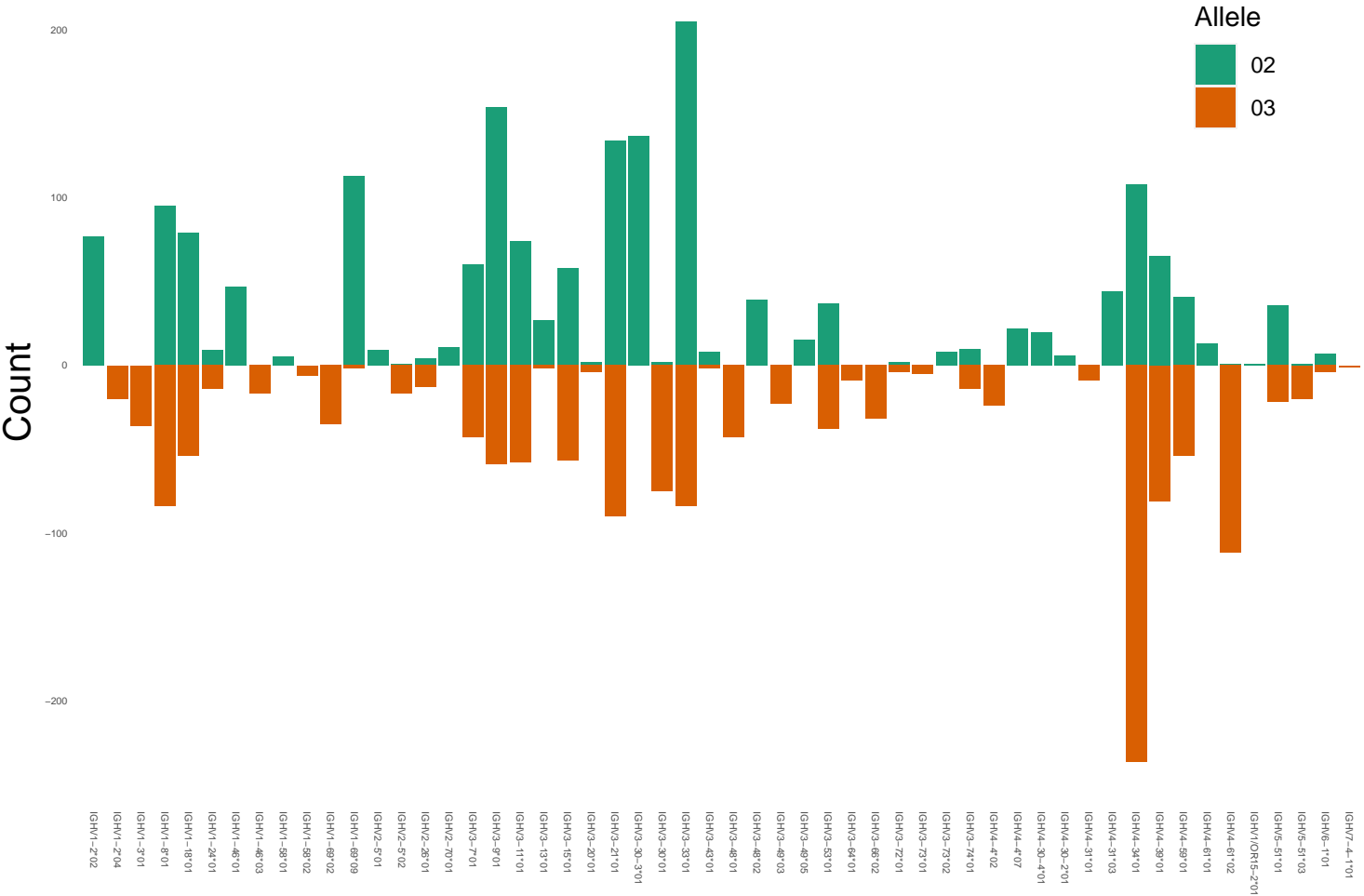


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.