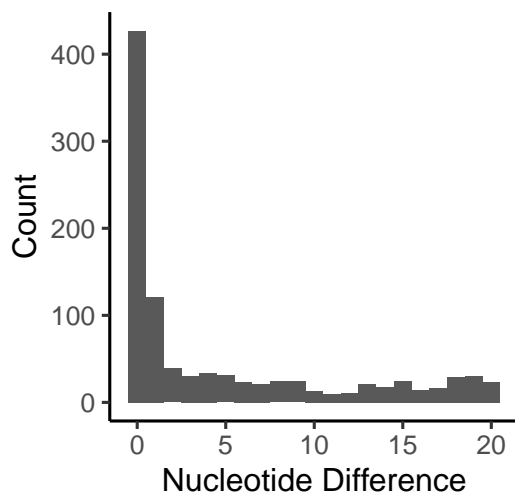


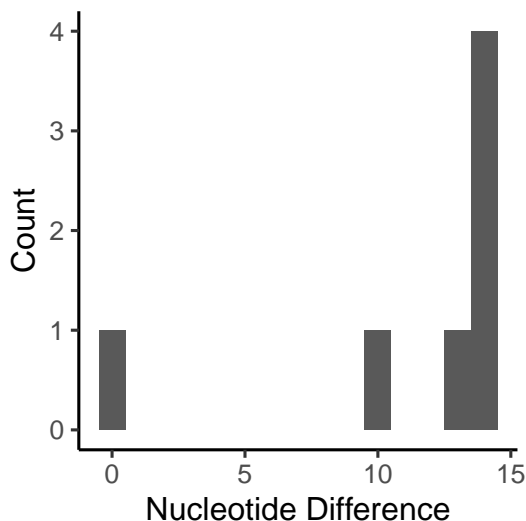
### IGHV1-2\*02

1269 sequences assigned  
427 (33.6%) exact matches, in which:  
427 unique CDR3  
7 unique J



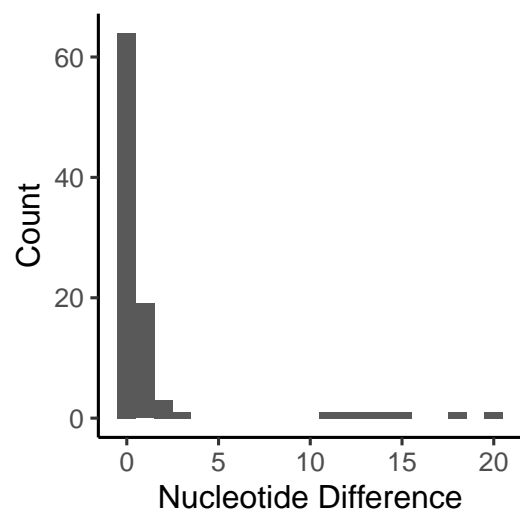
### IGHV1-3\*02

10 sequences assigned  
1 (10%) exact matches, in which:  
1 unique CDR3  
1 unique J



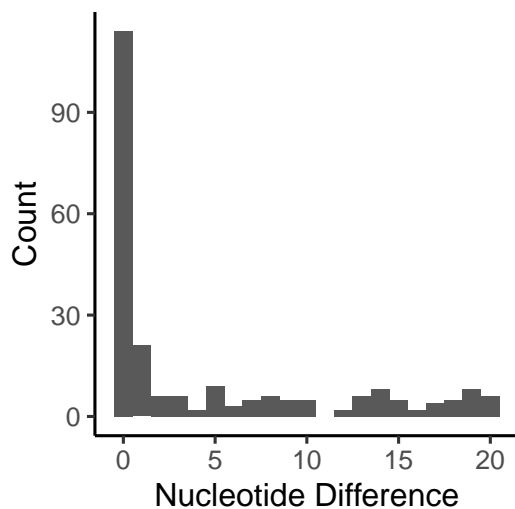
### IGHV1-24\*01

124 sequences assigned  
64 (51.6%) exact matches, in which:  
64 unique CDR3  
7 unique J



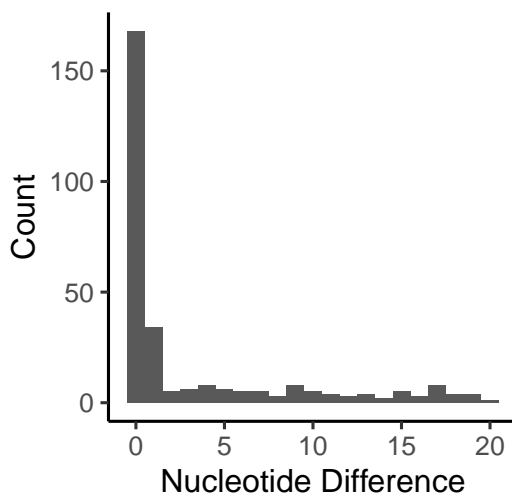
### IGHV1-2\*02\_T174C

304 sequences assigned  
114 (37.5%) exact matches, in which:  
114 unique CDR3  
7 unique J



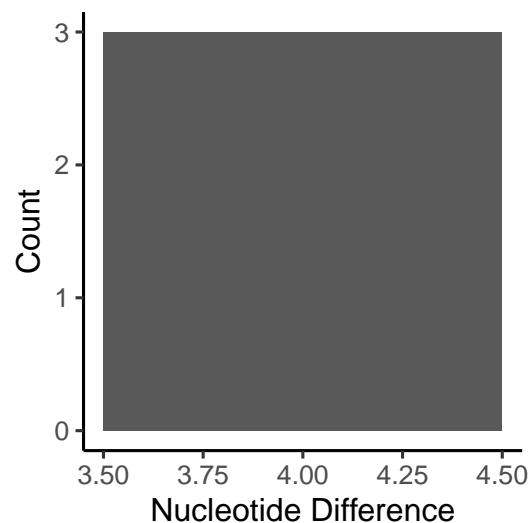
### IGHV1-8\*01

365 sequences assigned  
168 (46%) exact matches, in which:  
166 unique CDR3  
7 unique J



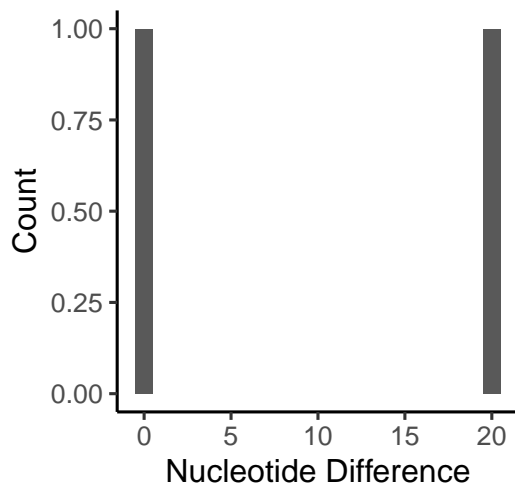
### IGHV1-45\*02

15 sequences assigned  
No exact matches.



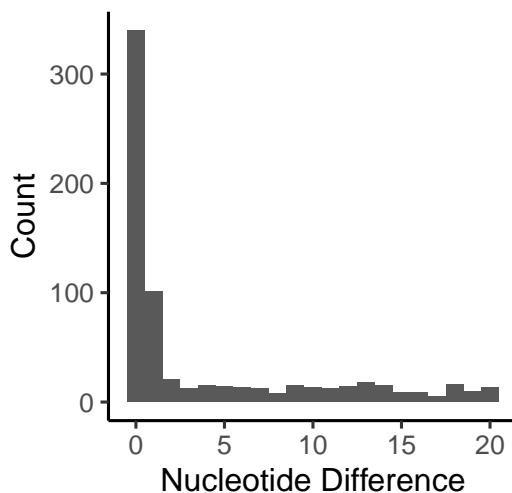
### IGHV1-3\*01

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



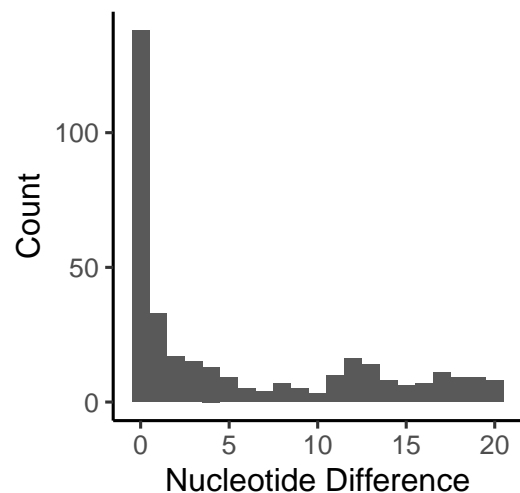
### IGHV1-18\*01

992 sequences assigned  
340 (34.3%) exact matches, in which:  
338 unique CDR3  
7 unique J



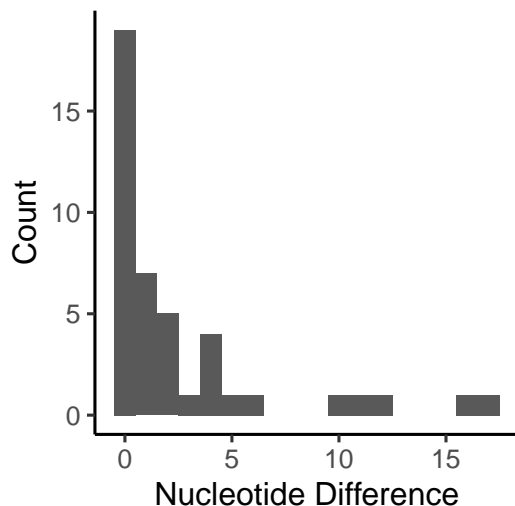
### IGHV1-46\*03

518 sequences assigned  
138 (26.6%) exact matches, in which:  
136 unique CDR3  
7 unique J



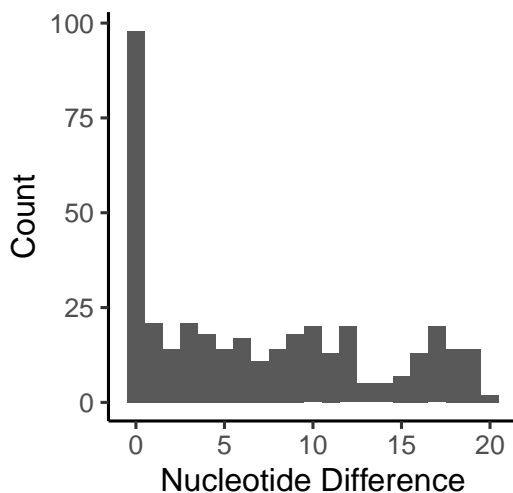
## IGHV1-58\*02

62 sequences assigned  
19 (30.6%) exact matches, in which:  
18 unique CDR3  
5 unique J



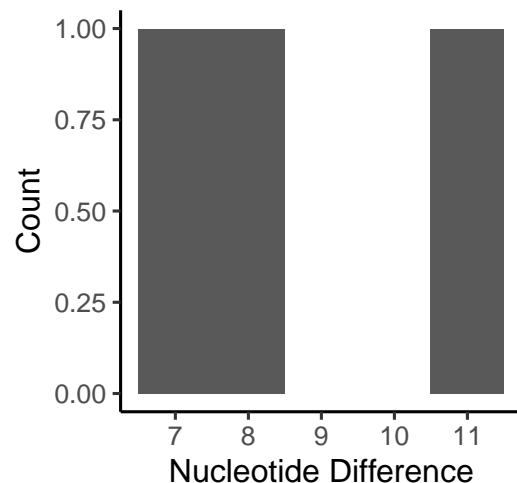
## IGHV2-5\*02

598 sequences assigned  
98 (16.4%) exact matches, in which:  
98 unique CDR3  
5 unique J



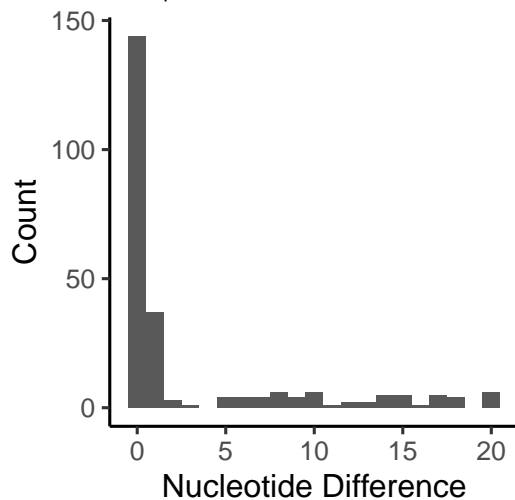
## IGHV2-70D\*04

3 sequences assigned  
No exact matches.



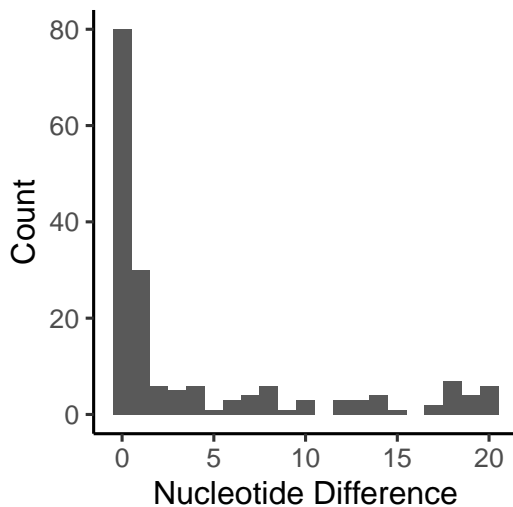
## IGHV1-69\*08\_C191T

367 sequences assigned  
144 (39.2%) exact matches, in which:  
139 unique CDR3  
6 unique J



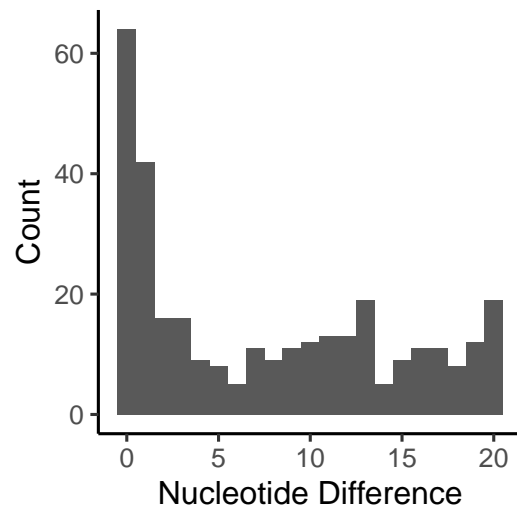
## IGHV2-26\*01

219 sequences assigned  
80 (36.5%) exact matches, in which:  
80 unique CDR3  
6 unique J



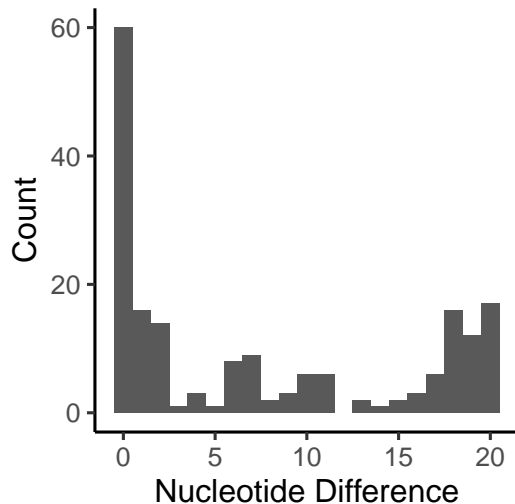
## IGHV3-7\*01

604 sequences assigned  
64 (10.6%) exact matches, in which:  
64 unique CDR3  
5 unique J



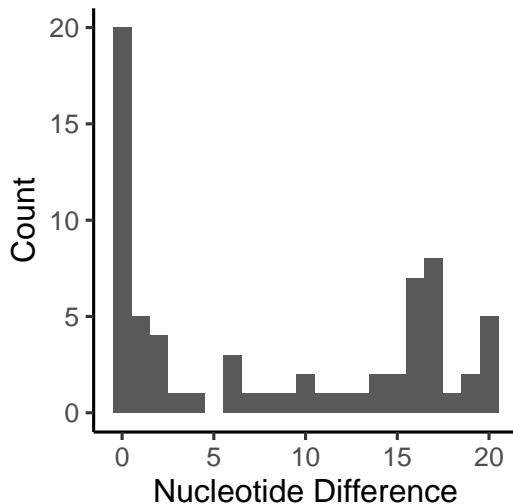
## IGHV2-5\*01

269 sequences assigned  
60 (22.3%) exact matches, in which:  
60 unique CDR3  
5 unique J



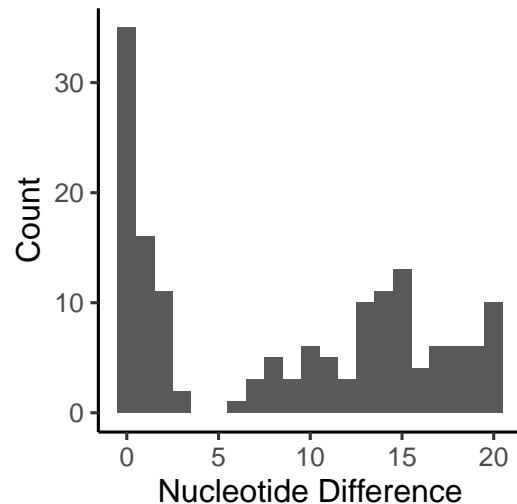
## IGHV2-70\*01

98 sequences assigned  
20 (20.4%) exact matches, in which:  
20 unique CDR3  
5 unique J



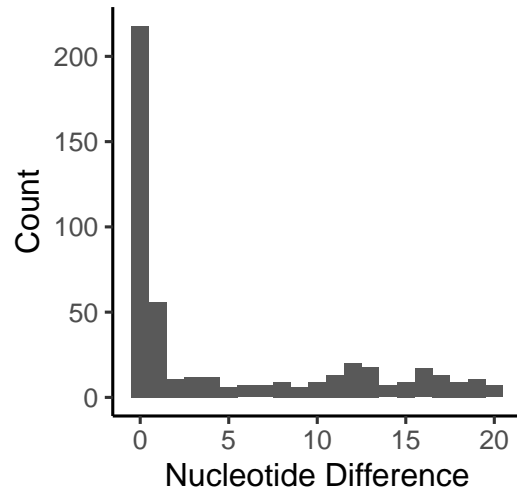
## IGHV3-7\*04

232 sequences assigned  
35 (15.1%) exact matches, in which:  
35 unique CDR3  
6 unique J



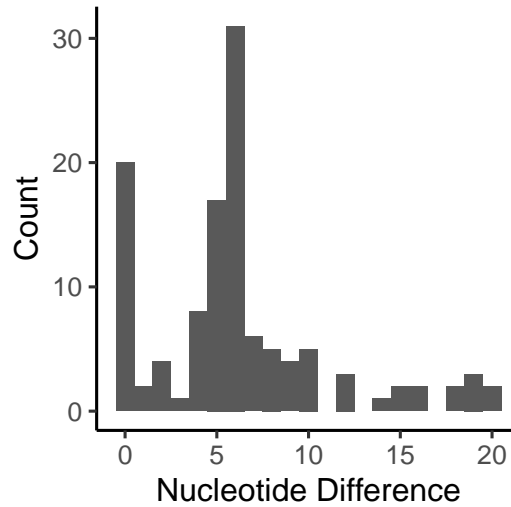
### IGHV3-9\*01

837 sequences assigned  
218 (26%) exact matches, in which:  
216 unique CDR3  
7 unique J



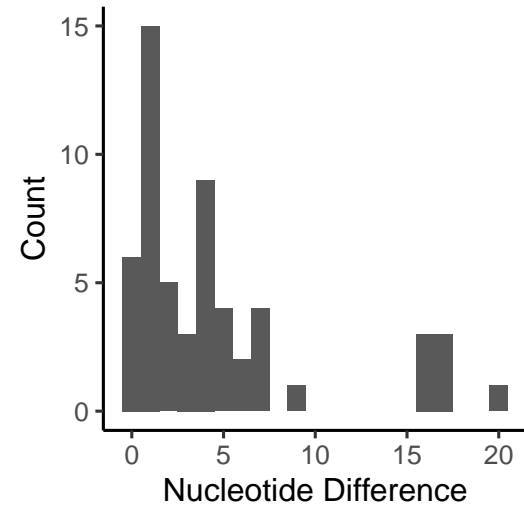
### IGHV3-13\*01

129 sequences assigned  
20 (15.5%) exact matches, in which:  
20 unique CDR3  
4 unique J



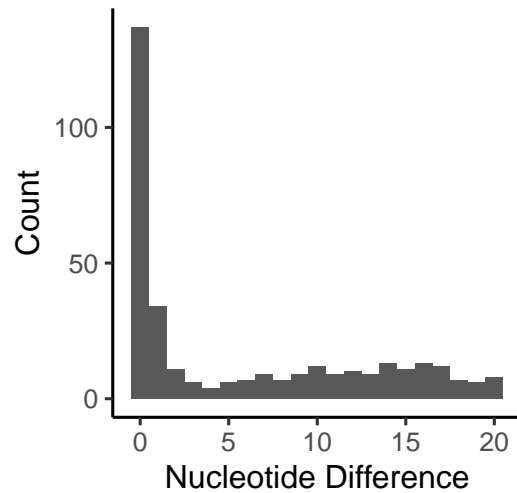
### IGHV3-20\*01

58 sequences assigned  
6 (10.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



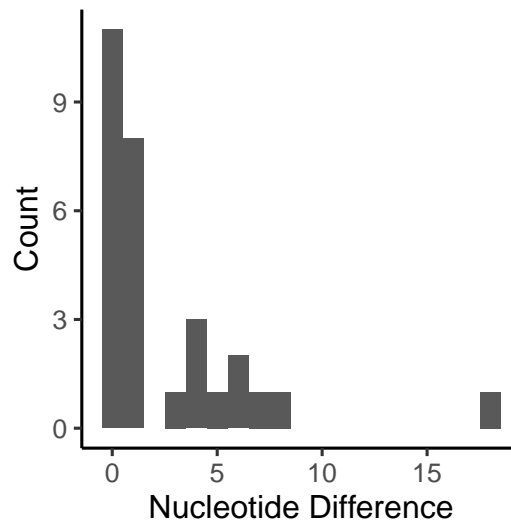
### IGHV3-11\*01

613 sequences assigned  
137 (22.3%) exact matches, in which:  
136 unique CDR3  
6 unique J



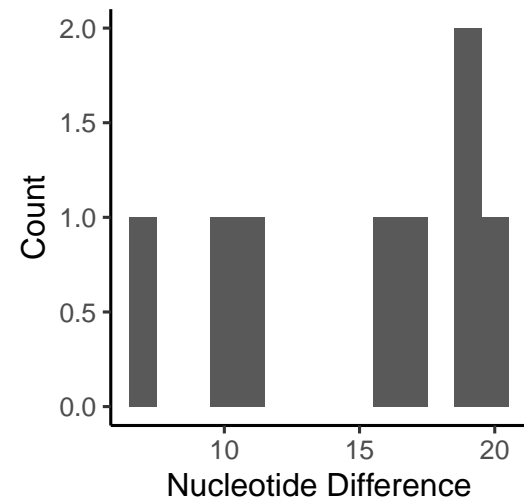
### IGHV3-13\*05

30 sequences assigned  
11 (36.7%) exact matches, in which:  
11 unique CDR3  
4 unique J



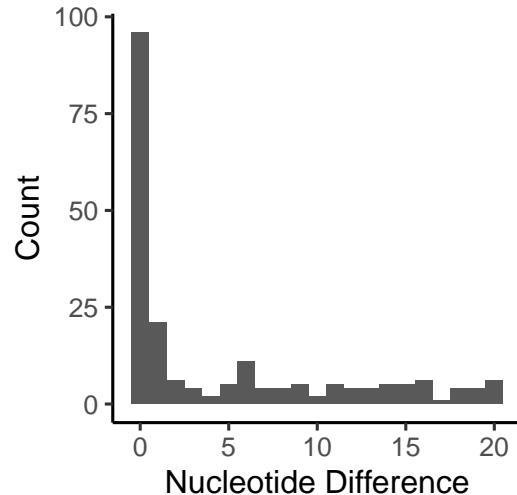
### IGHV3-20\*04

83 sequences assigned  
No exact matches.



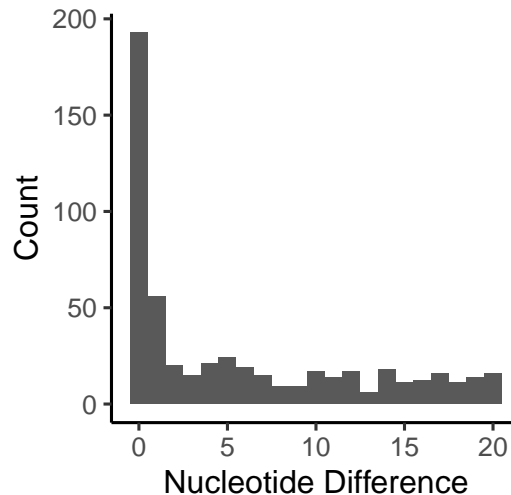
### IGHV3-11\*06

297 sequences assigned  
96 (32.3%) exact matches, in which:  
96 unique CDR3  
5 unique J



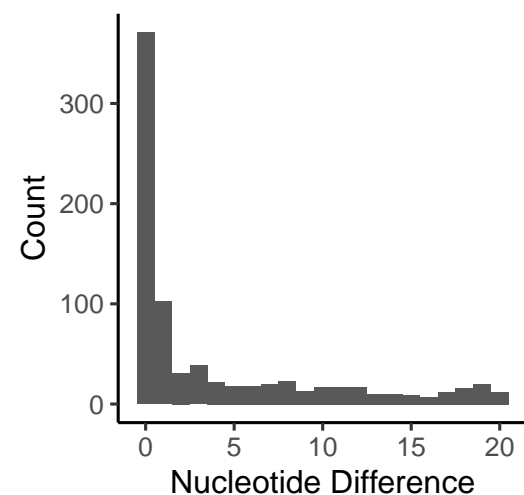
### IGHV3-15\*01

842 sequences assigned  
193 (22.9%) exact matches, in which:  
193 unique CDR3  
6 unique J



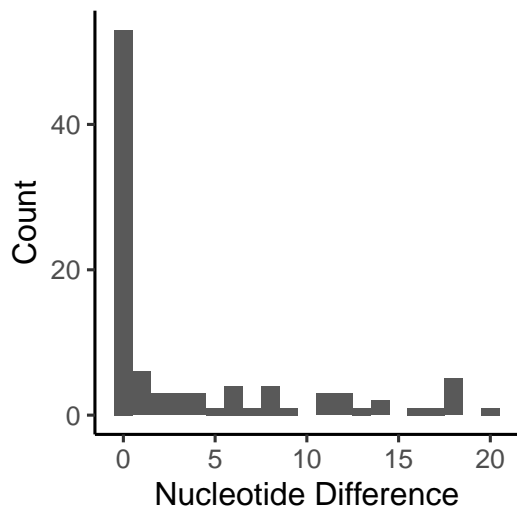
### IGHV3-21\*01

1104 sequences assigned  
371 (33.6%) exact matches, in which:  
371 unique CDR3  
7 unique J



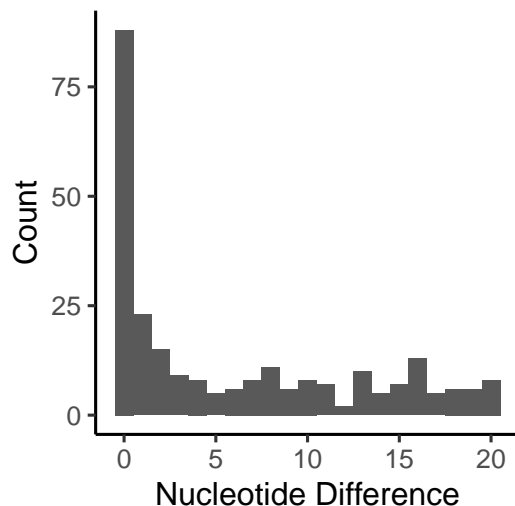
### IGHV3-21\*01\_T158G

145 sequences assigned  
53 (36.6%) exact matches, in which:  
53 unique CDR3  
6 unique J



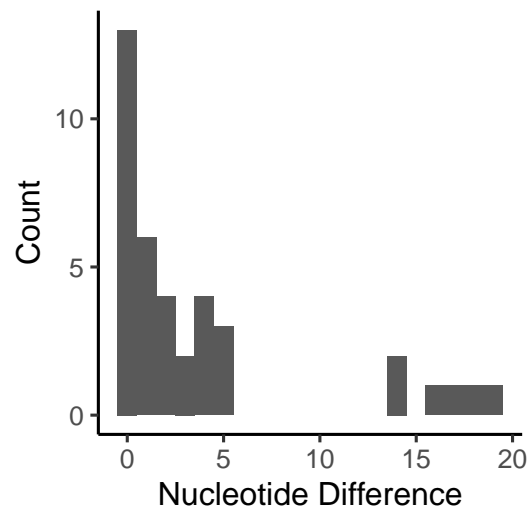
### IGHV3-30\*18\_T158G

438 sequences assigned  
88 (20.1%) exact matches, in which:  
88 unique CDR3  
7 unique J



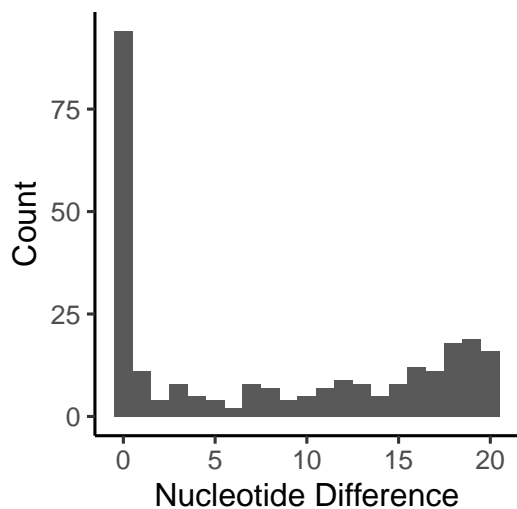
### IGHV3-43\*01

43 sequences assigned  
13 (30.2%) exact matches, in which:  
13 unique CDR3  
3 unique J



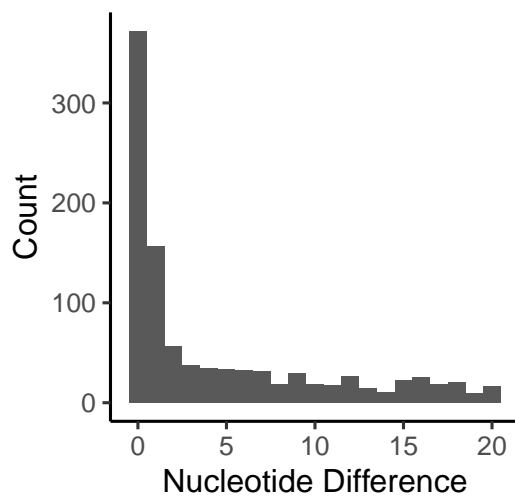
### IGHV3-23\*01\_T158G

489 sequences assigned  
94 (19.2%) exact matches, in which:  
94 unique CDR3  
6 unique J



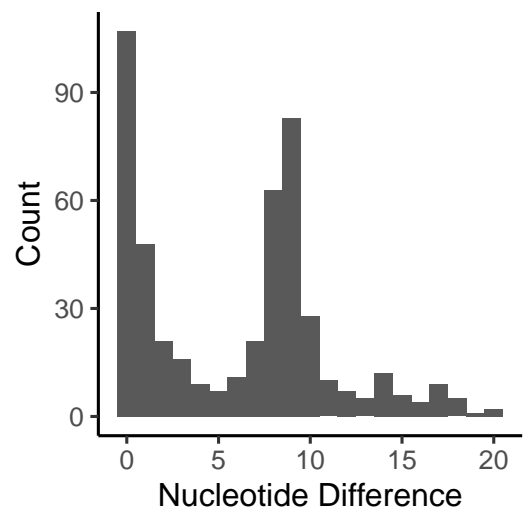
### IGHV3-33\*01

2000 sequences assigned  
372 (18.6%) exact matches, in which:  
370 unique CDR3  
7 unique J



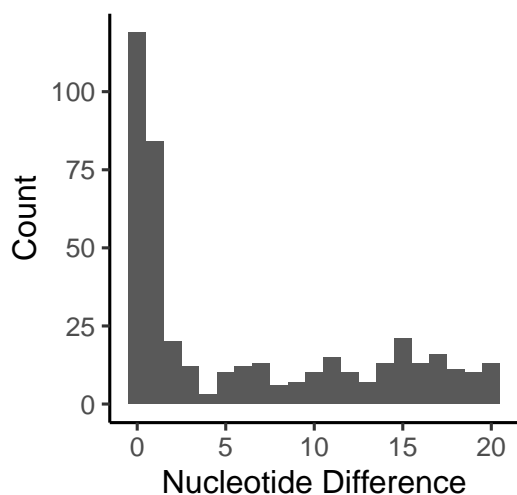
### IGHV3-48\*01

663 sequences assigned  
107 (16.1%) exact matches, in which:  
104 unique CDR3  
7 unique J



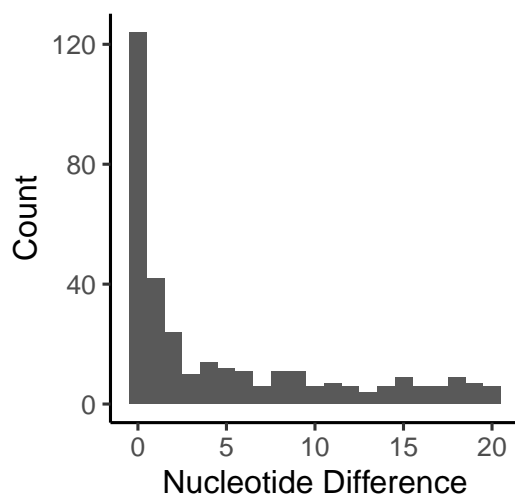
### IGHV3-30-3\*01

730 sequences assigned  
119 (16.3%) exact matches, in which:  
119 unique CDR3  
5 unique J



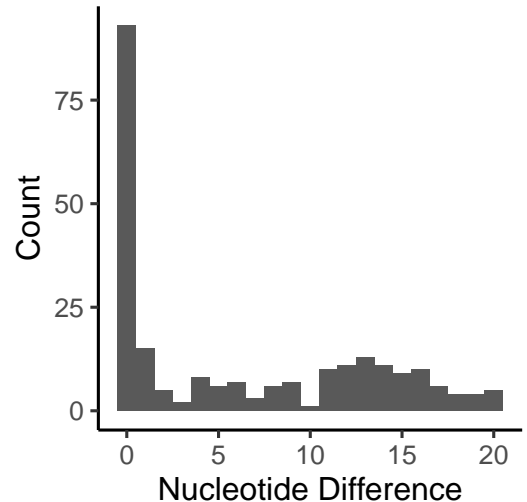
### IGHV3-33\*01\_T158G

591 sequences assigned  
124 (21%) exact matches, in which:  
124 unique CDR3  
7 unique J



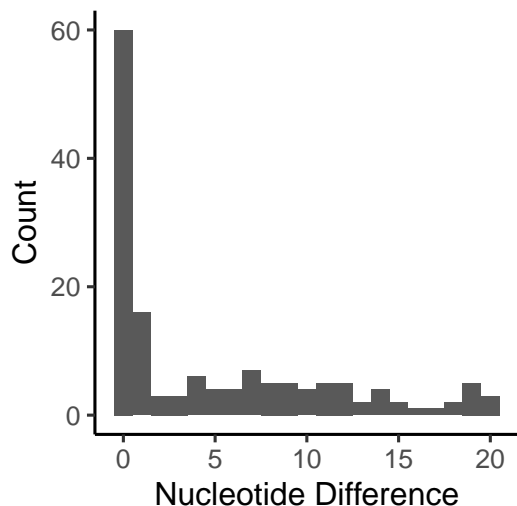
### IGHV3-49\*03

317 sequences assigned  
93 (29.3%) exact matches, in which:  
93 unique CDR3  
7 unique J



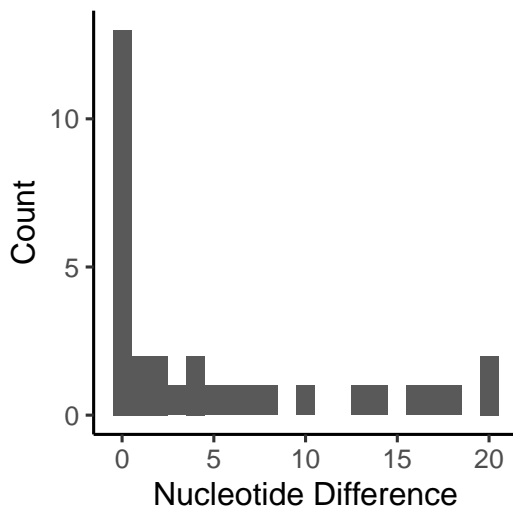
### IGHV3-53\*02

217 sequences assigned  
60 (27.6%) exact matches, in which:  
60 unique CDR3  
6 unique J



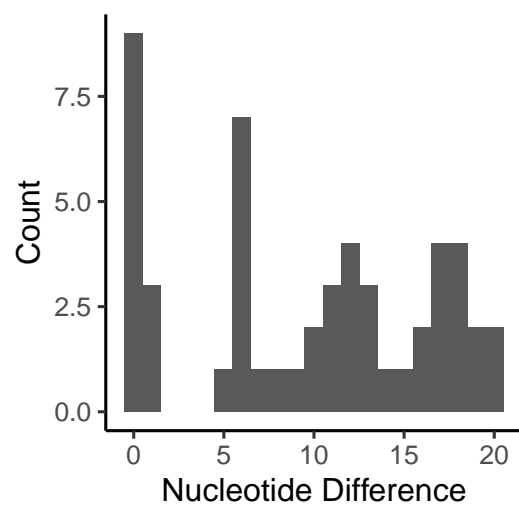
### IGHV3-66\*02\_T158G

58 sequences assigned  
13 (22.4%) exact matches, in which:  
13 unique CDR3  
4 unique J



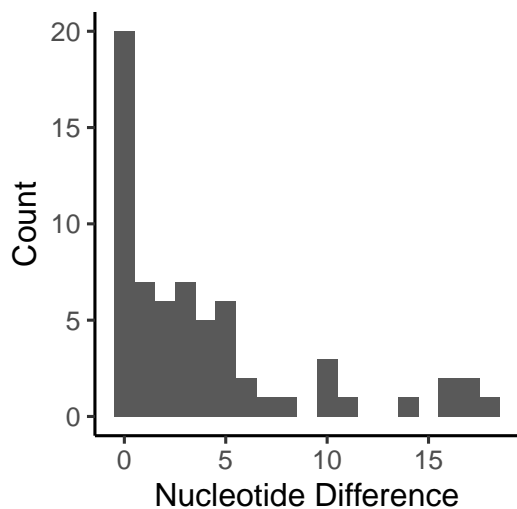
### IGHV3-73\*02

90 sequences assigned  
9 (10%) exact matches, in which:  
9 unique CDR3  
2 unique J



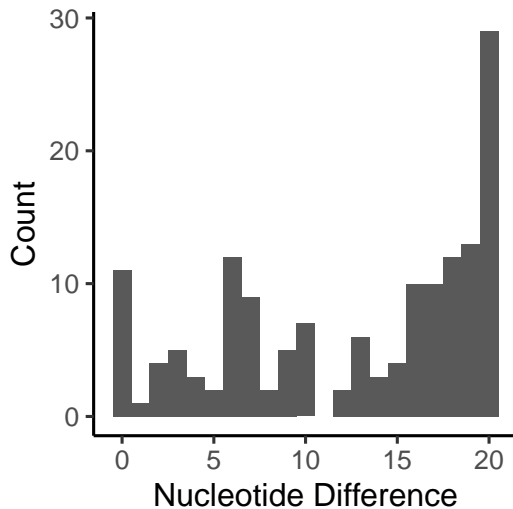
### IGHV3-64\*01

76 sequences assigned  
20 (26.3%) exact matches, in which:  
20 unique CDR3  
3 unique J



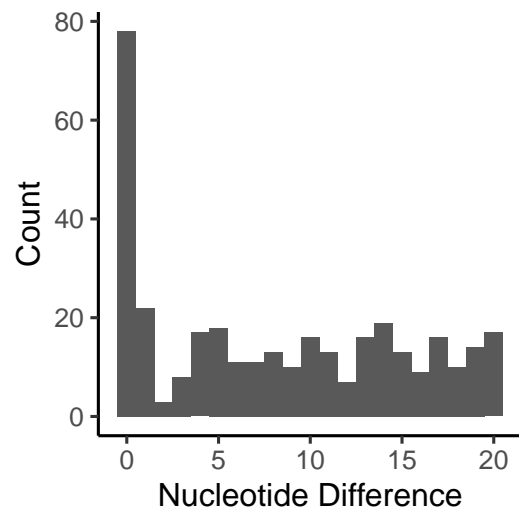
### IGHV3-72\*01

216 sequences assigned  
11 (5.1%) exact matches, in which:  
11 unique CDR3  
3 unique J



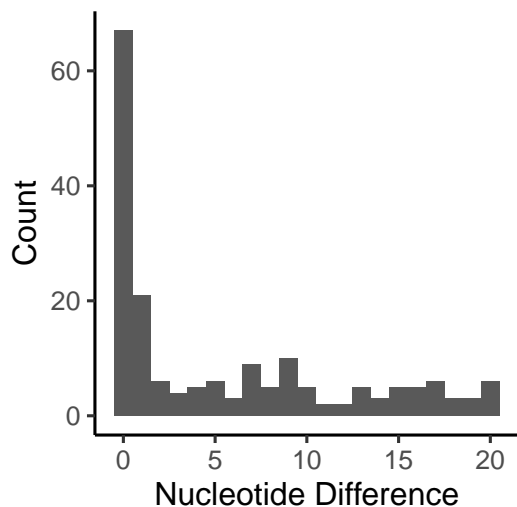
### IGHV3-74\*01

514 sequences assigned  
78 (15.2%) exact matches, in which:  
78 unique CDR3  
6 unique J



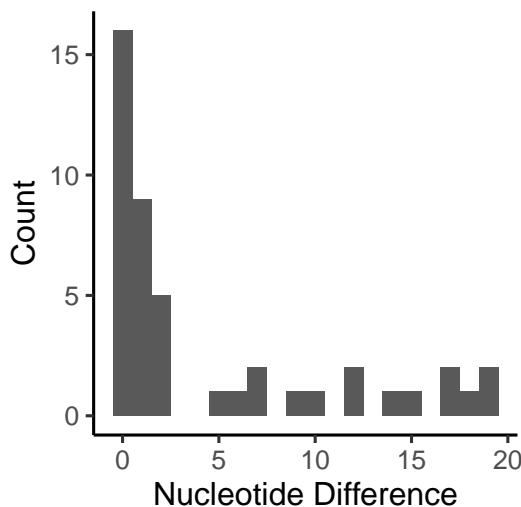
### IGHV3-66\*02

297 sequences assigned  
67 (22.6%) exact matches, in which:  
67 unique CDR3  
6 unique J



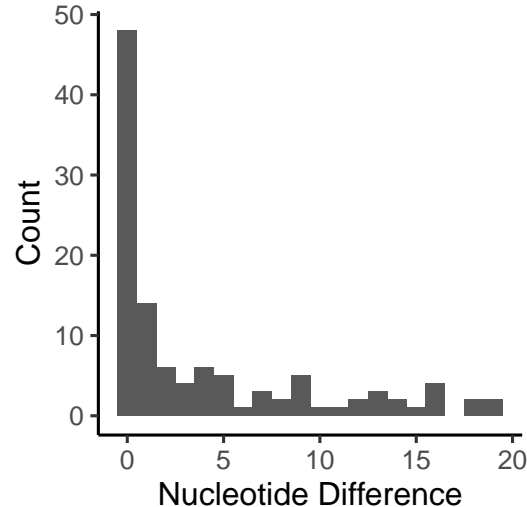
### IGHV3-73\*01

85 sequences assigned  
16 (18.8%) exact matches, in which:  
16 unique CDR3  
4 unique J



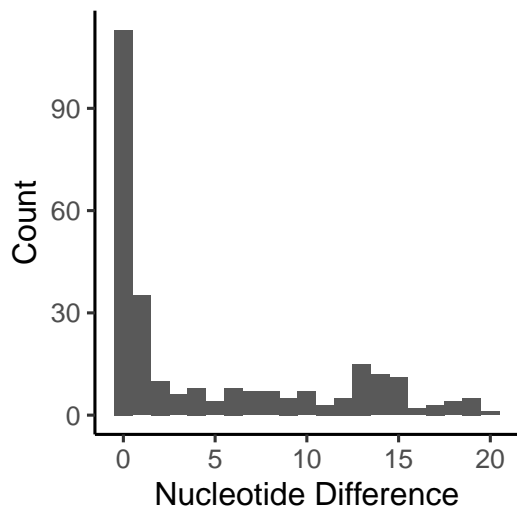
### IGHV3-64D\*06

224 sequences assigned  
48 (21.4%) exact matches, in which:  
47 unique CDR3  
5 unique J



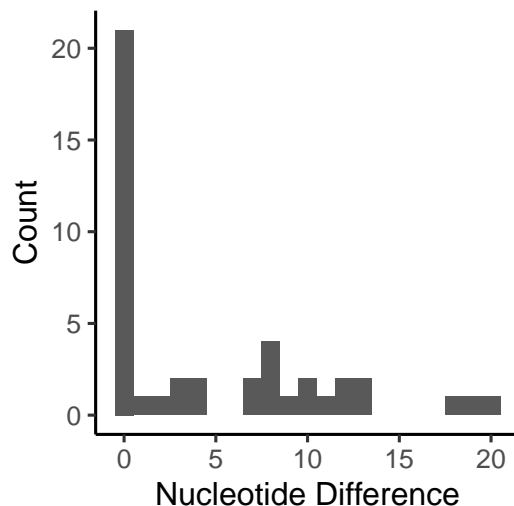
### IGHV4-4\*07

437 sequences assigned  
113 (25.9%) exact matches, in which:  
113 unique CDR3  
7 unique J



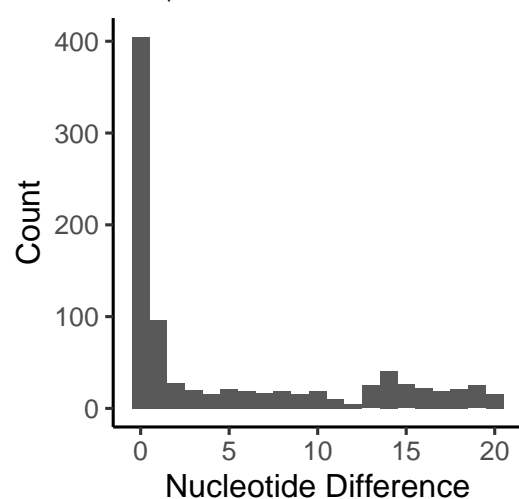
### IGHV4-30-2\*01

67 sequences assigned  
21 (31.3%) exact matches, in which:  
21 unique CDR3  
5 unique J



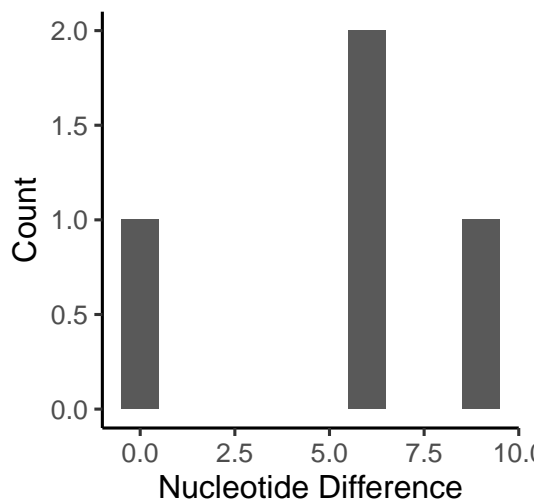
### IGHV4-39\*01

1512 sequences assigned  
405 (26.8%) exact matches, in which:  
403 unique CDR3  
6 unique J



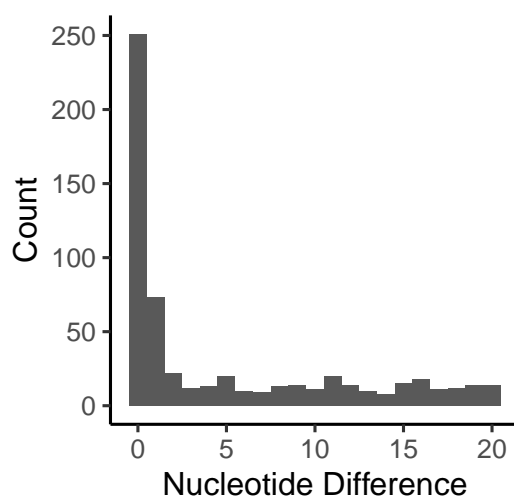
### IGHV4-28\*01

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



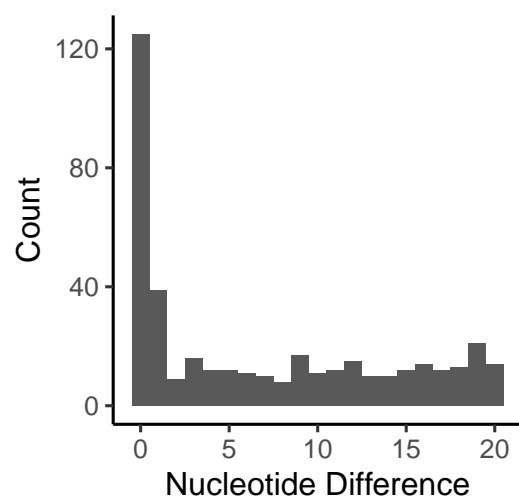
### IGHV4-31\*03

886 sequences assigned  
251 (28.3%) exact matches, in which:  
249 unique CDR3  
7 unique J



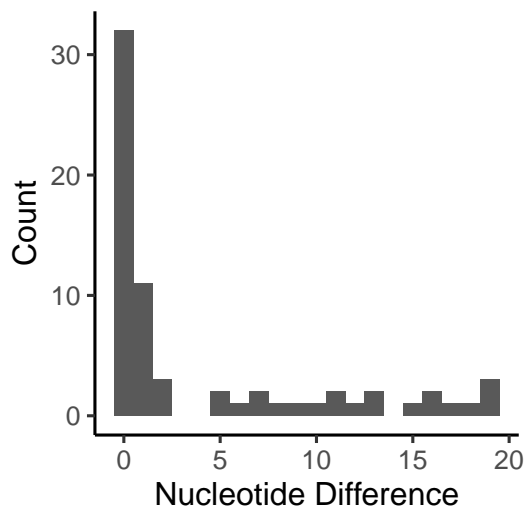
### IGHV4-59\*01

651 sequences assigned  
125 (19.2%) exact matches, in which:  
125 unique CDR3  
6 unique J



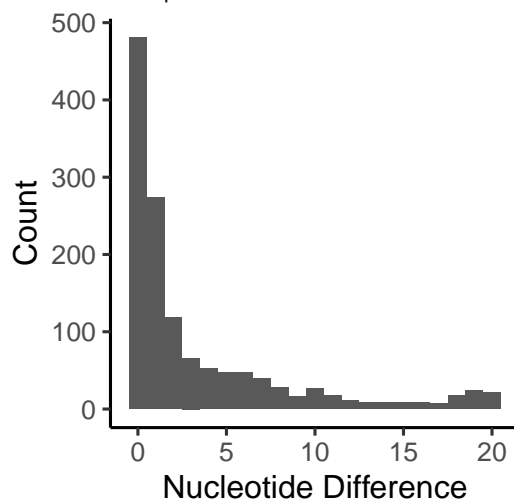
### IGHV4-30-4\*01

160 sequences assigned  
32 (20%) exact matches, in which:  
31 unique CDR3  
6 unique J



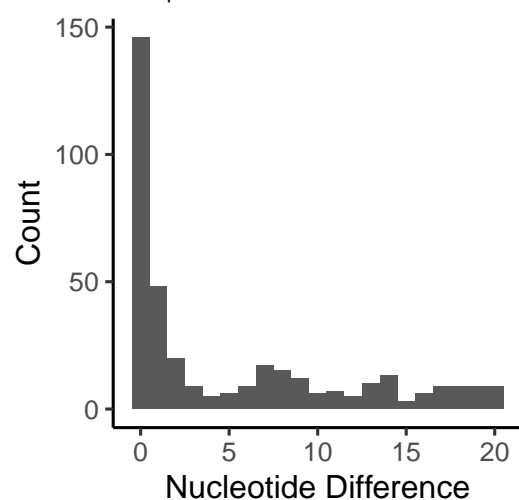
### IGHV4-34\*01

1842 sequences assigned  
481 (26.1%) exact matches, in which:  
472 unique CDR3  
7 unique J



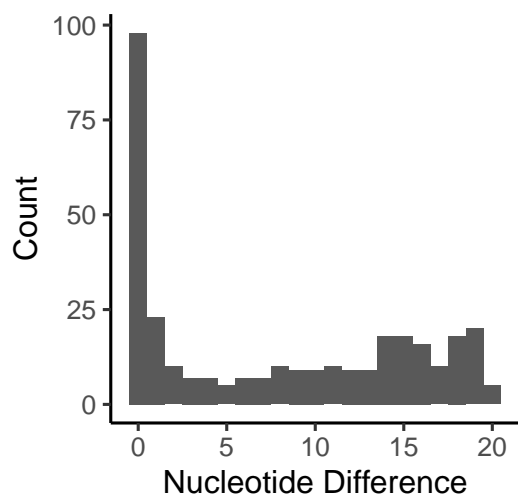
### IGHV4-61\*02

480 sequences assigned  
146 (30.4%) exact matches, in which:  
146 unique CDR3  
6 unique J



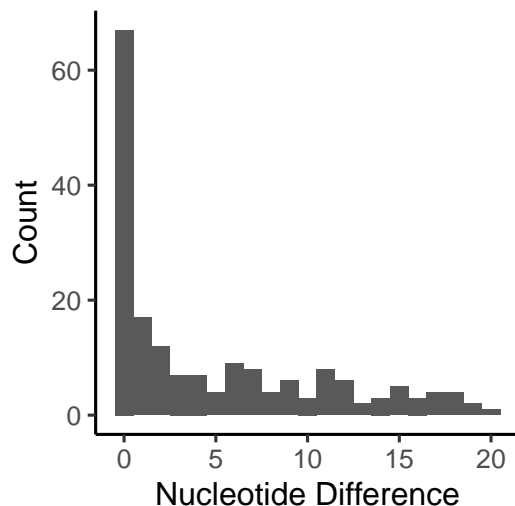
## IGHV4-61\*02\_A234G

848 sequences assigned  
98 (11.6%) exact matches, in which:  
94 unique CDR3  
5 unique J



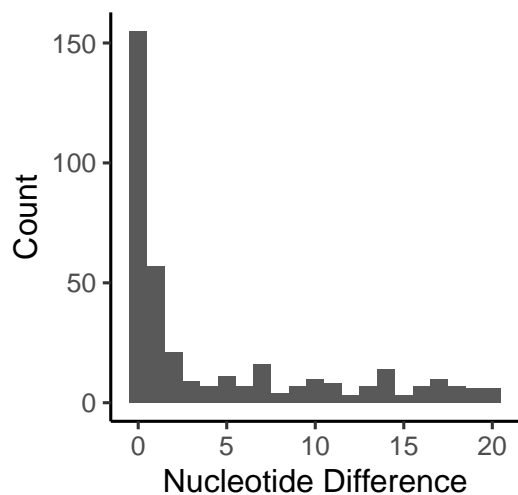
## IGHV6-1\*01

224 sequences assigned  
67 (29.9%) exact matches, in which:  
66 unique CDR3  
6 unique J



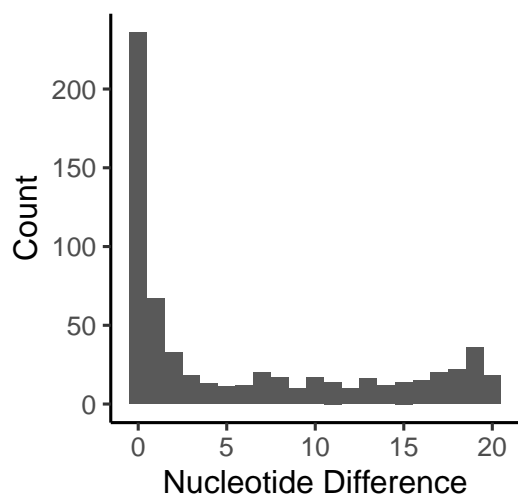
## IGHV5-10-1\*03

577 sequences assigned  
155 (26.9%) exact matches, in which:  
154 unique CDR3  
6 unique J

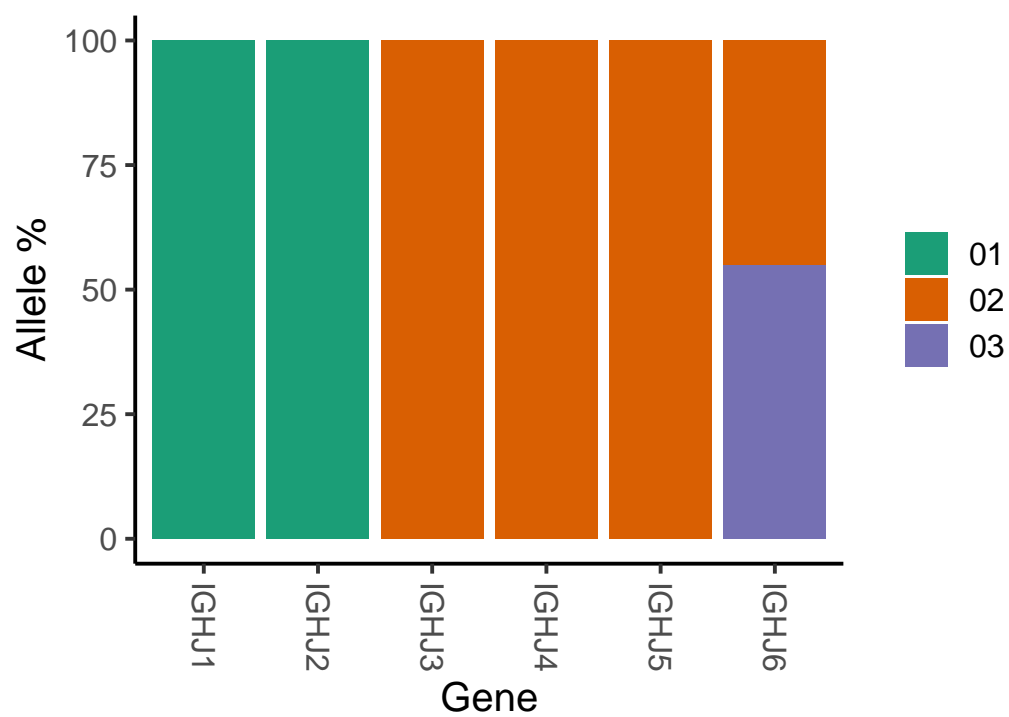


## IGHV5-51\*01\_C45G

866 sequences assigned  
236 (27.3%) exact matches, in which:  
235 unique CDR3  
7 unique J

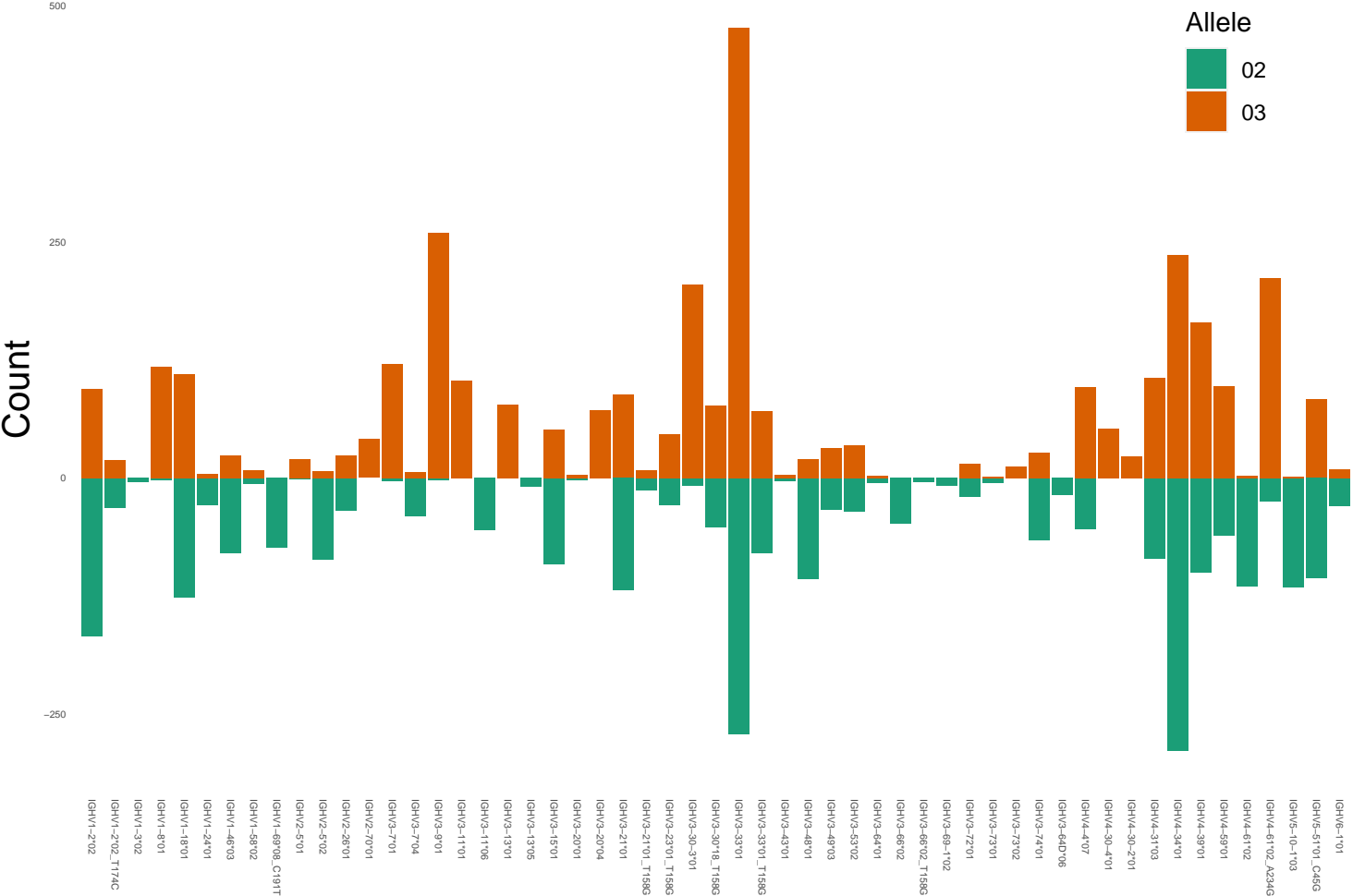


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.