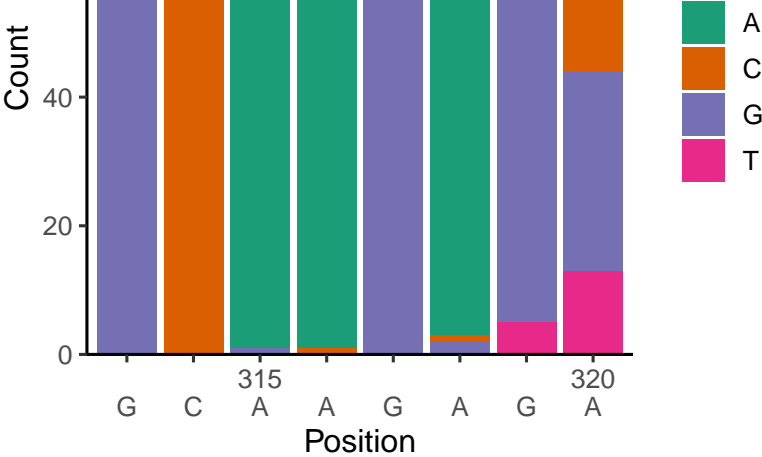


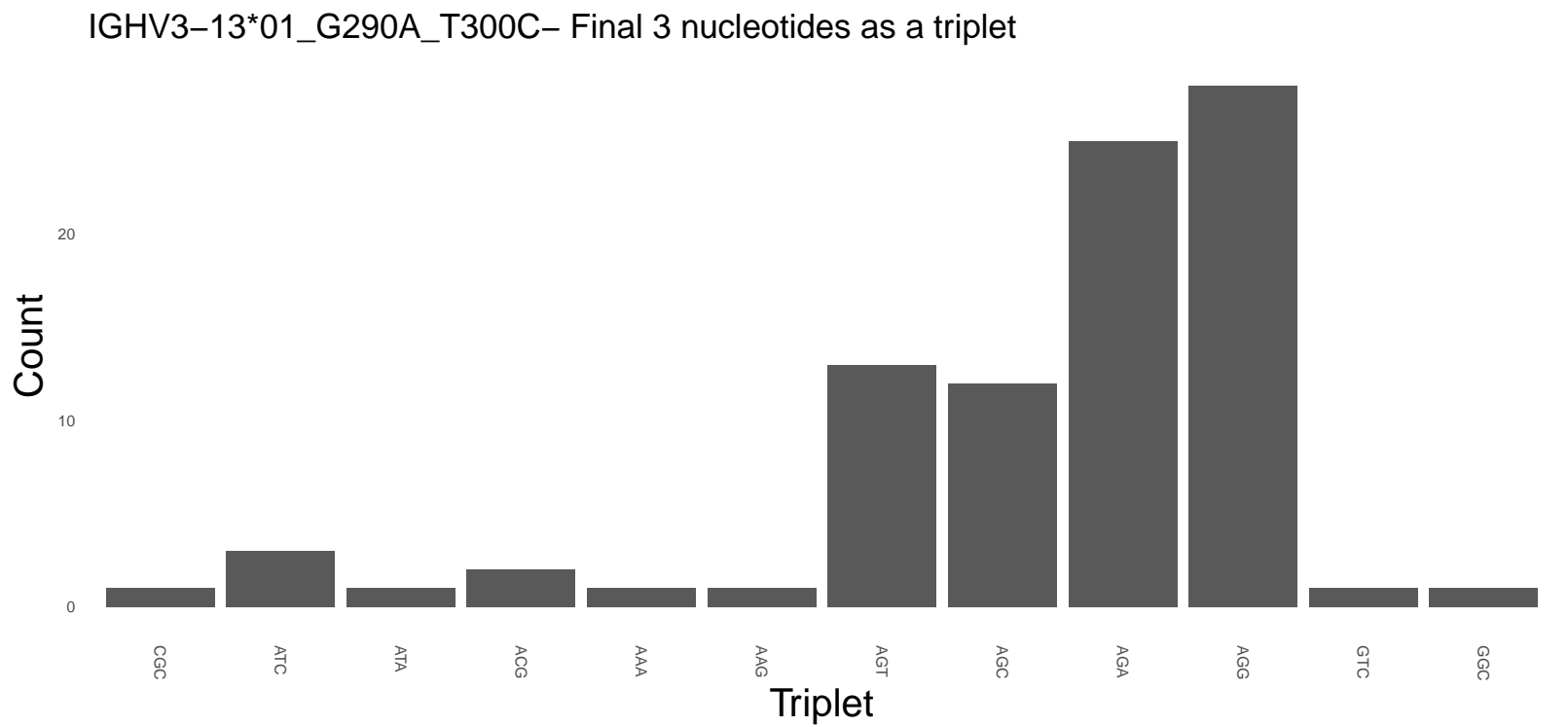
Gene IGHV3-13\*01\_G290A\_T300C



Gene IGHV3-13\*01\_G290A\_T300C

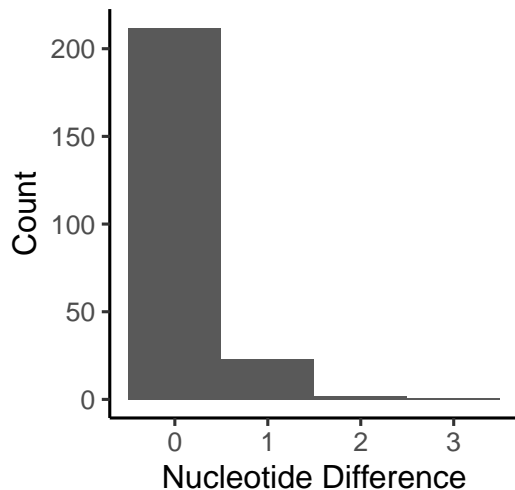


IGHV3-13\*01\_G290A\_T300C- Final 3 nucleotides as a triplet



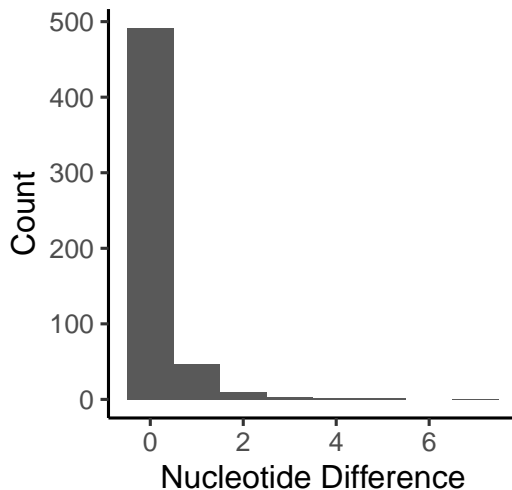
### IGHV1–2\*04

238 sequences assigned  
212 (89.1%) exact matches, in which:  
205 unique CDR3  
6 unique J



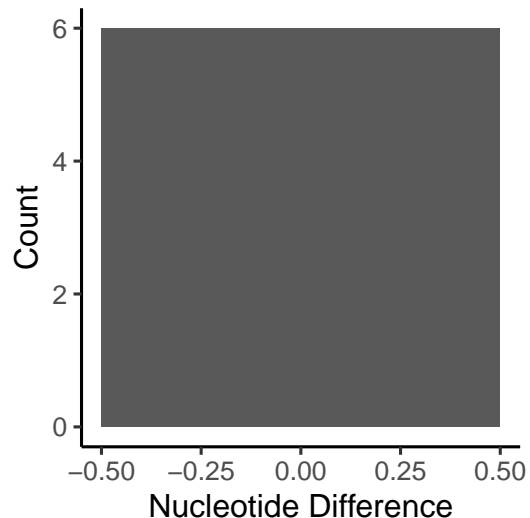
### IGHV1–8\*01

557 sequences assigned  
492 (88.3%) exact matches, in which:  
472 unique CDR3  
6 unique J



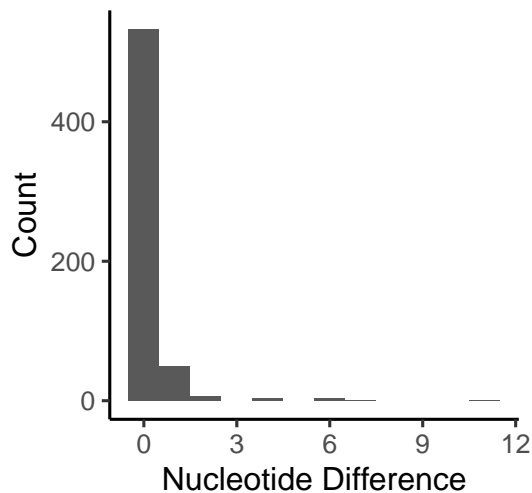
### IGHV1–45\*02

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



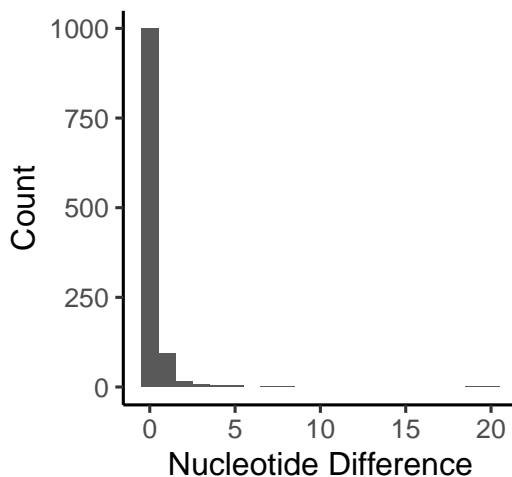
### IGHV1–2\*06

598 sequences assigned  
533 (89.1%) exact matches, in which:  
514 unique CDR3  
6 unique J



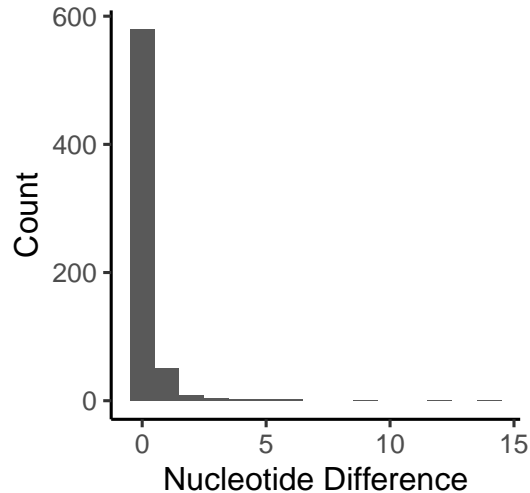
### IGHV1–18\*01

1128 sequences assigned  
999 (88.6%) exact matches, in which:  
955 unique CDR3  
6 unique J



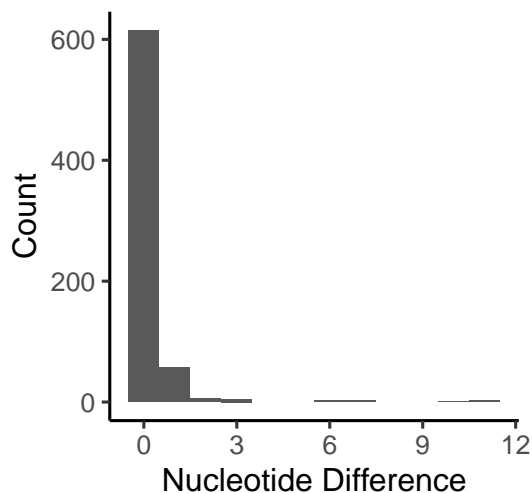
### IGHV1–46\*01

654 sequences assigned  
580 (88.7%) exact matches, in which:  
562 unique CDR3  
6 unique J



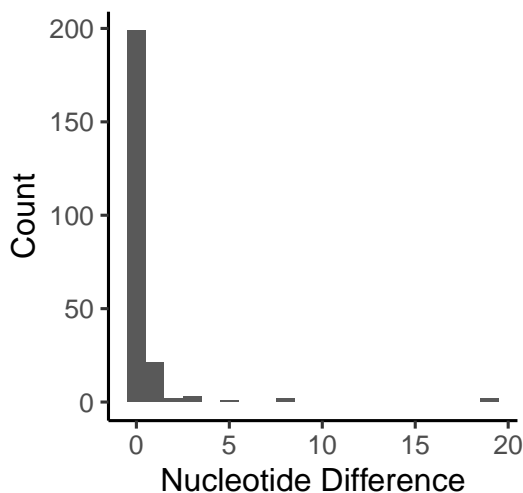
### IGHV1–3\*01

692 sequences assigned  
615 (88.9%) exact matches, in which:  
593 unique CDR3  
6 unique J



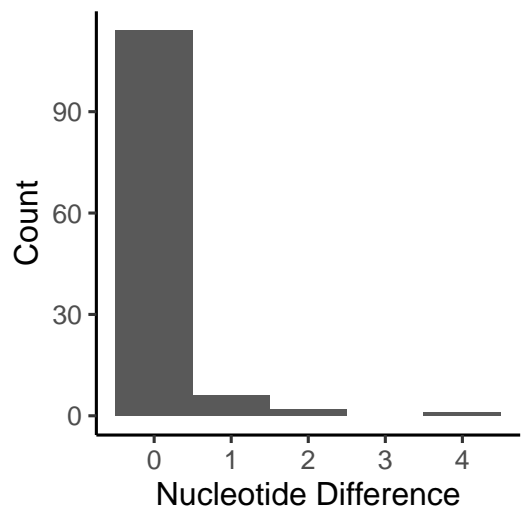
### IGHV1–24\*01

230 sequences assigned  
199 (86.5%) exact matches, in which:  
194 unique CDR3  
6 unique J



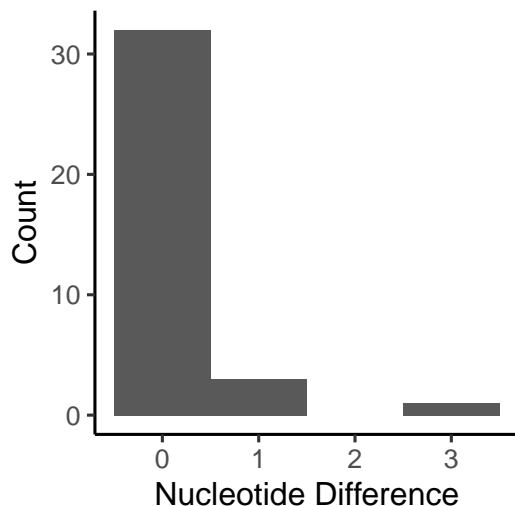
### IGHV1–58\*01

123 sequences assigned  
114 (92.7%) exact matches, in which:  
109 unique CDR3  
5 unique J



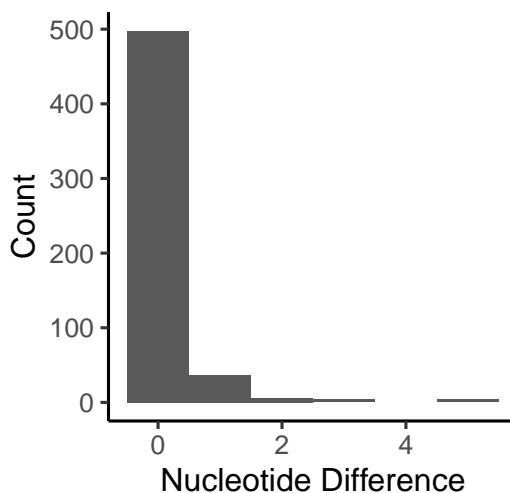
### IGHV1-69-2\*01

37 sequences assigned  
32 (86.5%) exact matches, in which:  
32 unique CDR3  
5 unique J



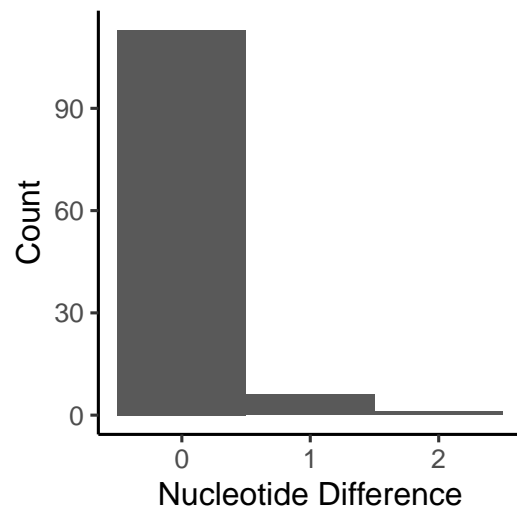
### IGHV2-5\*02

549 sequences assigned  
498 (90.7%) exact matches, in which:  
482 unique CDR3  
6 unique J



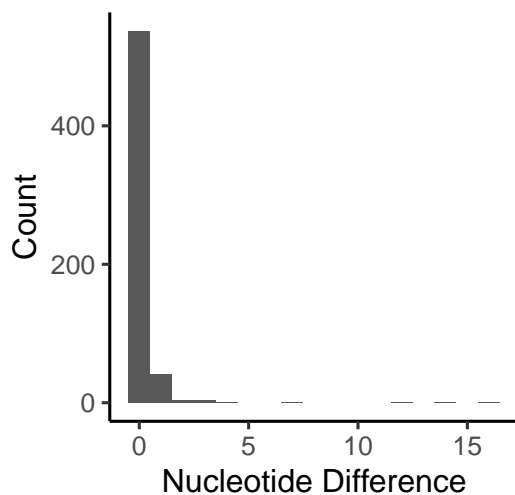
### IGHV2-70\*15

120 sequences assigned  
113 (94.2%) exact matches, in which:  
110 unique CDR3  
6 unique J



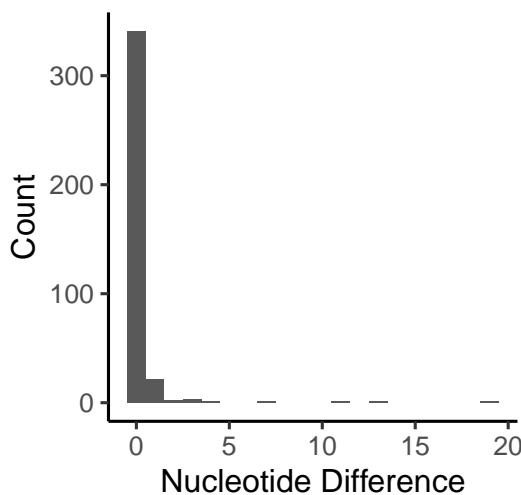
### IGHV1-69\*06

590 sequences assigned  
537 (91%) exact matches, in which:  
507 unique CDR3  
6 unique J



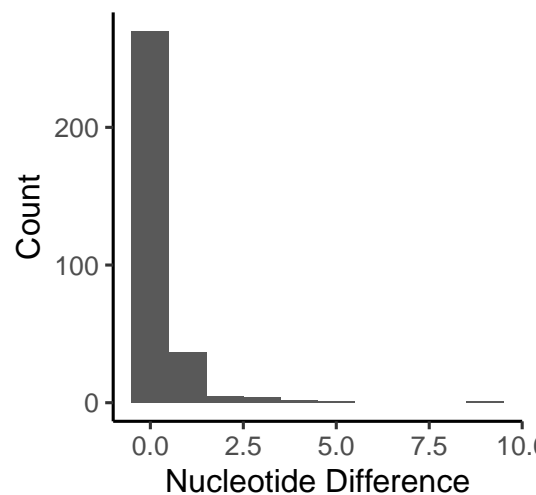
### IGHV2-26\*01

373 sequences assigned  
341 (91.4%) exact matches, in which:  
321 unique CDR3  
6 unique J



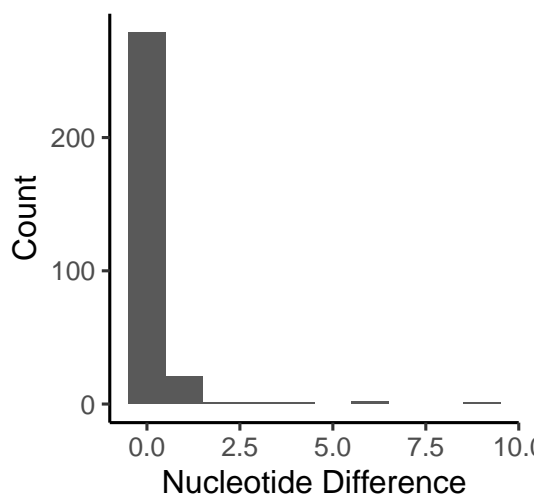
### IGHV3-7\*01

320 sequences assigned  
270 (84.4%) exact matches, in which:  
258 unique CDR3  
6 unique J



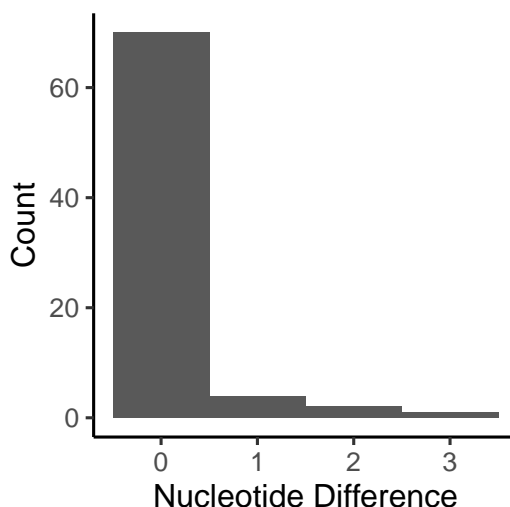
### IGHV2-5\*01

306 sequences assigned  
279 (91.2%) exact matches, in which:  
269 unique CDR3  
6 unique J



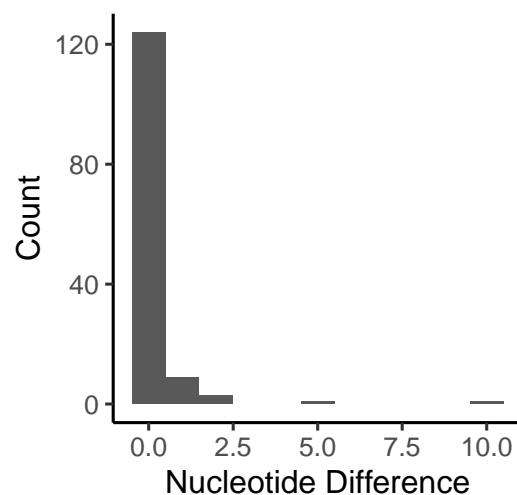
### IGHV2-70\*01

77 sequences assigned  
70 (90.9%) exact matches, in which:  
70 unique CDR3  
5 unique J



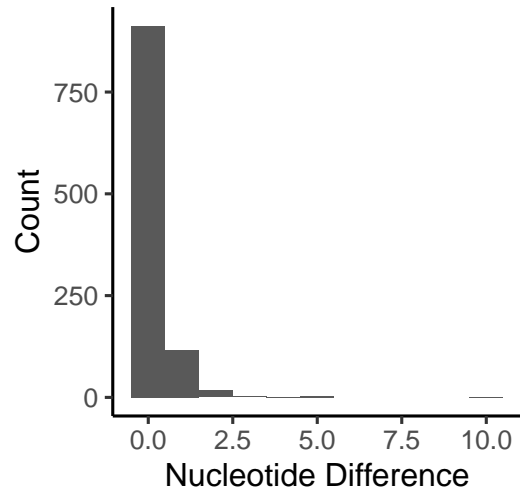
### IGHV3-7\*05

138 sequences assigned  
124 (89.9%) exact matches, in which:  
119 unique CDR3  
6 unique J



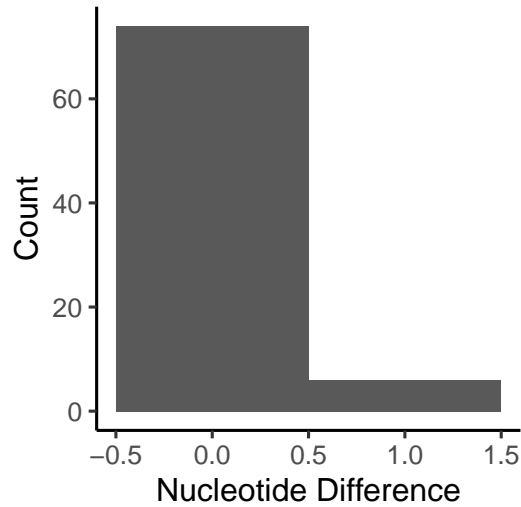
### IGHV3-9\*01

1054 sequences assigned  
913 (86.6%) exact matches, in which:  
860 unique CDR3  
6 unique J



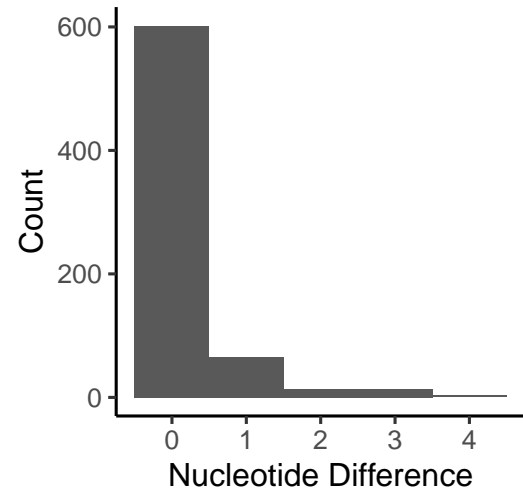
### IGHV3-13\*01

80 sequences assigned  
74 (92.5%) exact matches, in which:  
72 unique CDR3  
5 unique J



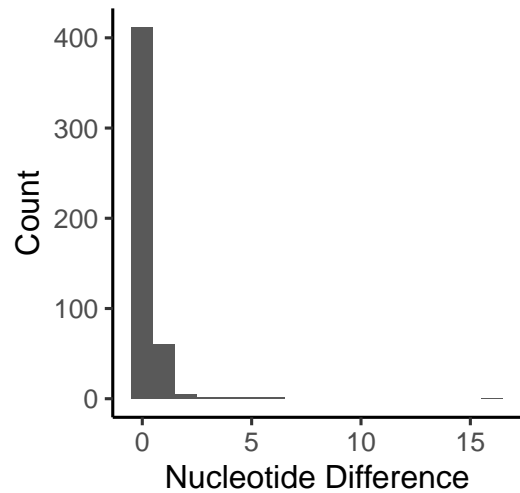
### IGHV3-15\*07

697 sequences assigned  
602 (86.4%) exact matches, in which:  
586 unique CDR3  
6 unique J



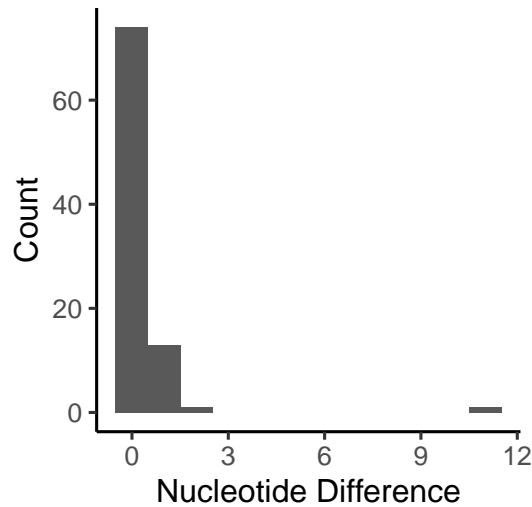
### IGHV3-11\*01

486 sequences assigned  
412 (84.8%) exact matches, in which:  
401 unique CDR3  
6 unique J



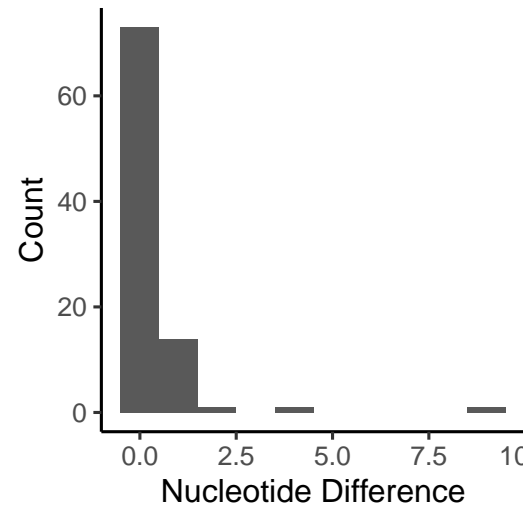
### IGHV3-13\*01\_G290A\_T301

89 sequences assigned  
74 (83.1%) exact matches, in which:  
70 unique CDR3  
5 unique J



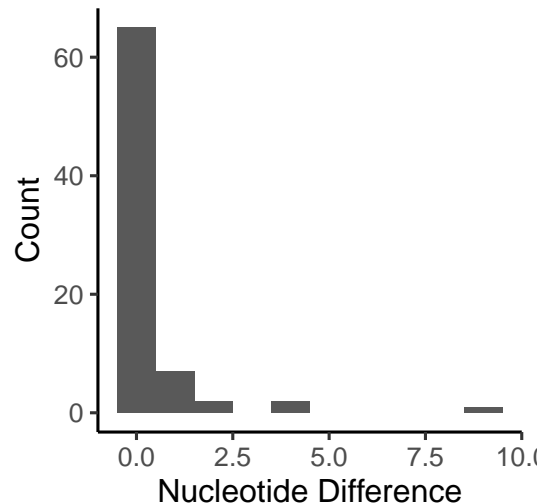
### IGHV3-20\*01

90 sequences assigned  
73 (81.1%) exact matches, in which:  
68 unique CDR3  
5 unique J



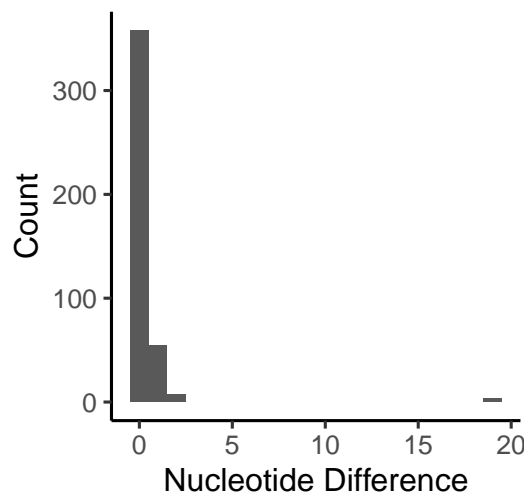
### IGHV3-11\*06

77 sequences assigned  
65 (84.4%) exact matches, in which:  
62 unique CDR3  
5 unique J



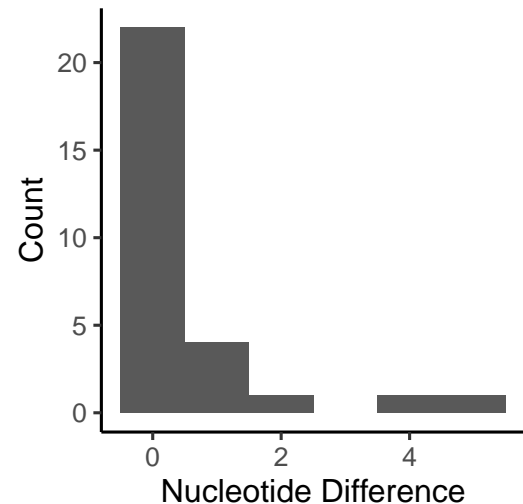
### IGHV3-15\*01

431 sequences assigned  
358 (83.1%) exact matches, in which:  
347 unique CDR3  
6 unique J



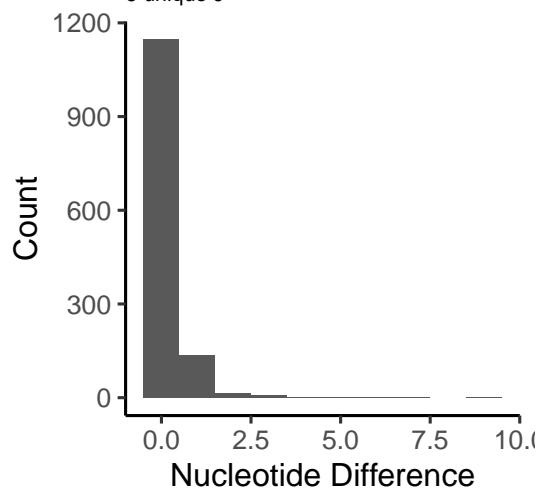
### IGHV3-20\*04

29 sequences assigned  
22 (75.9%) exact matches, in which:  
22 unique CDR3  
6 unique J



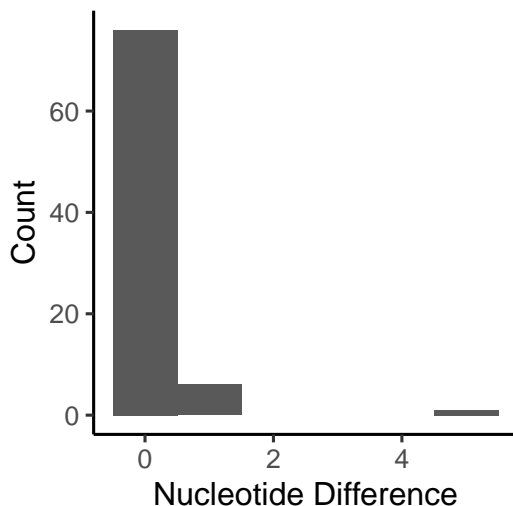
### IGHV3-21\*01

1319 sequences assigned  
1147 (87%) exact matches, in which:  
1090 unique CDR3  
6 unique J



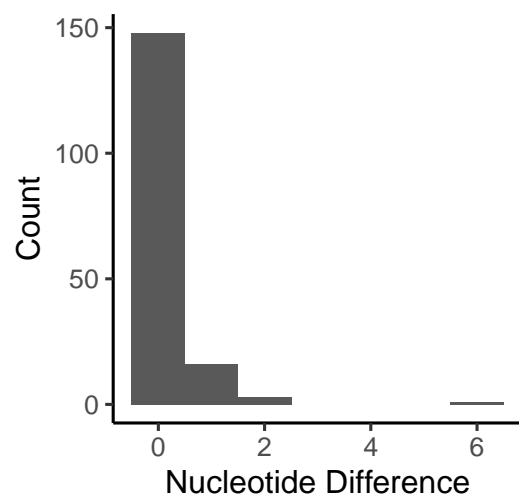
### IGHV3-43\*01

83 sequences assigned  
76 (91.6%) exact matches, in which:  
74 unique CDR3  
5 unique J



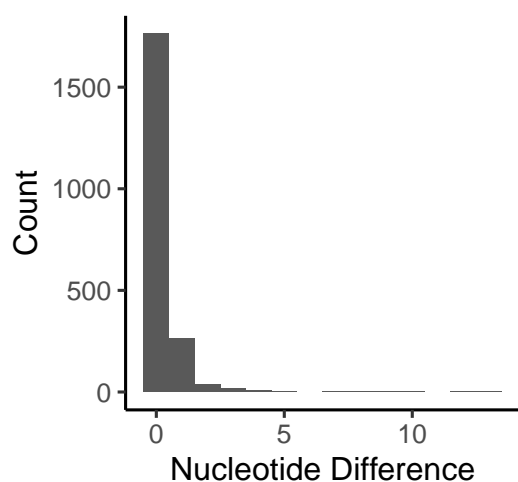
### IGHV3-49\*03

168 sequences assigned  
148 (88.1%) exact matches, in which:  
141 unique CDR3  
6 unique J



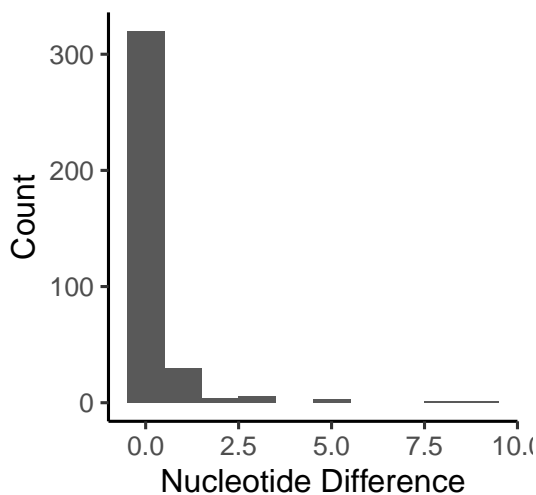
### IGHV3-30-3\*01

2102 sequences assigned  
1763 (83.9%) exact matches, in which:  
1698 unique CDR3  
6 unique J



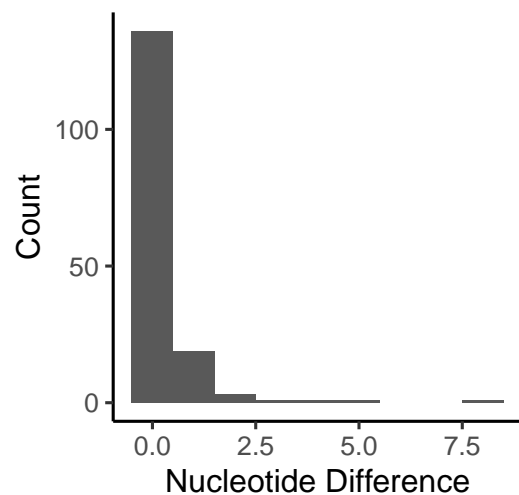
### IGHV3-48\*01

365 sequences assigned  
320 (87.7%) exact matches, in which:  
305 unique CDR3  
6 unique J



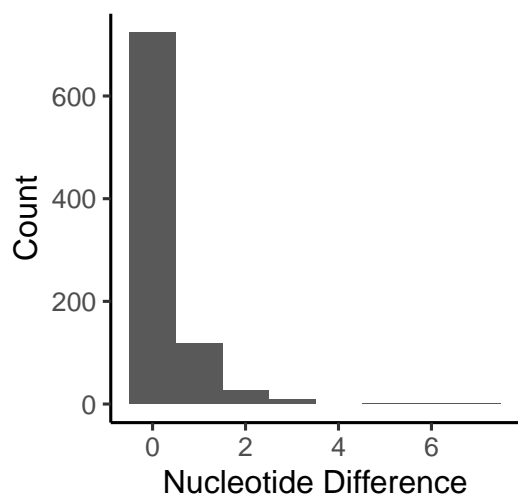
### IGHV3-49\*04

162 sequences assigned  
136 (84%) exact matches, in which:  
134 unique CDR3  
6 unique J



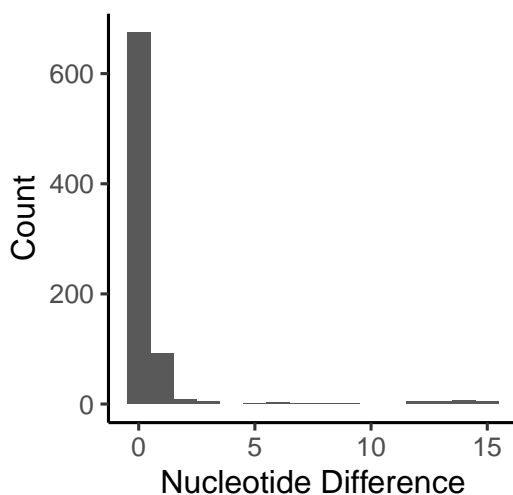
### IGHV3-33\*01

878 sequences assigned  
724 (82.5%) exact matches, in which:  
692 unique CDR3  
6 unique J



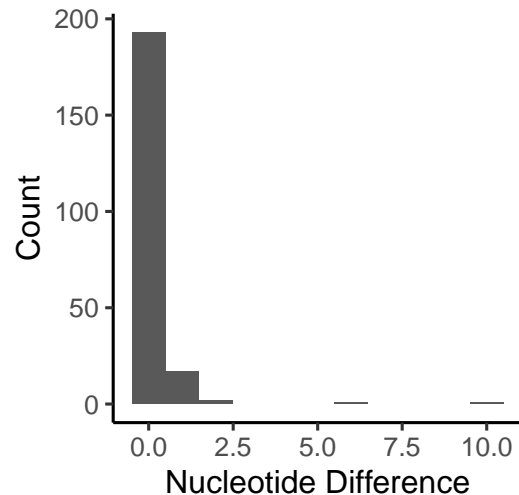
### IGHV3-48\*03

810 sequences assigned  
675 (83.3%) exact matches, in which:  
645 unique CDR3  
6 unique J



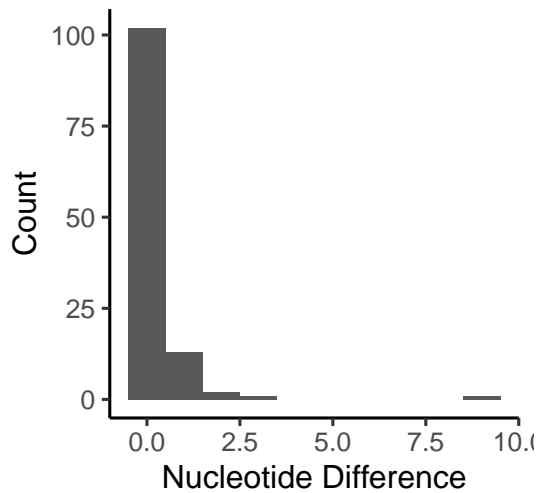
### IGHV3-53\*01

214 sequences assigned  
193 (90.2%) exact matches, in which:  
182 unique CDR3  
6 unique J



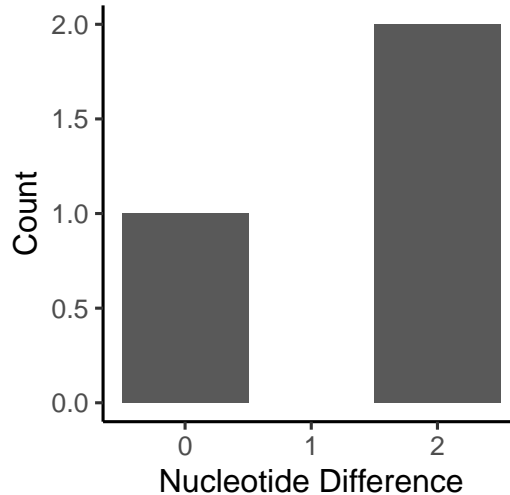
### IGHV3-53\*02

119 sequences assigned  
102 (85.7%) exact matches, in which:  
99 unique CDR3  
5 unique J



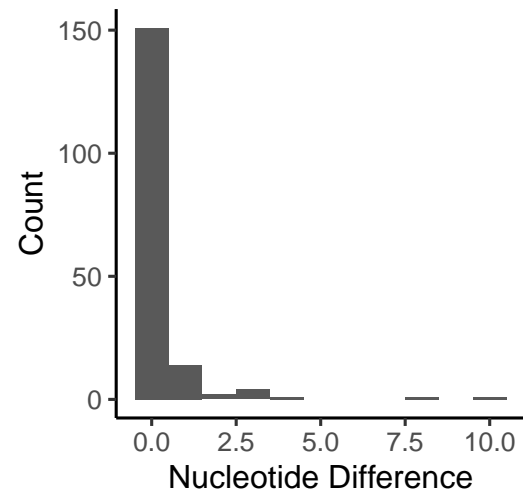
### IGHV3-71\*03

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



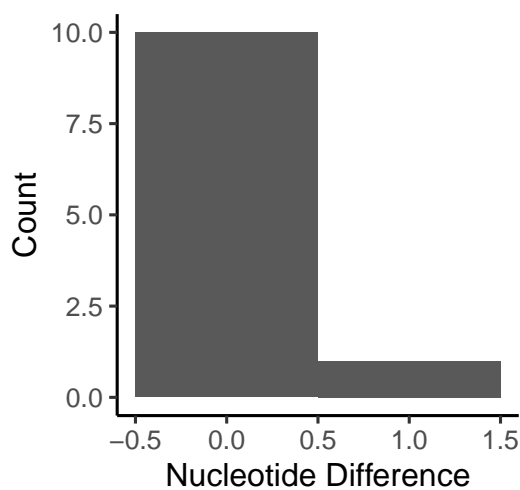
### IGHV3-74\*01

174 sequences assigned  
151 (86.8%) exact matches, in which:  
146 unique CDR3  
6 unique J



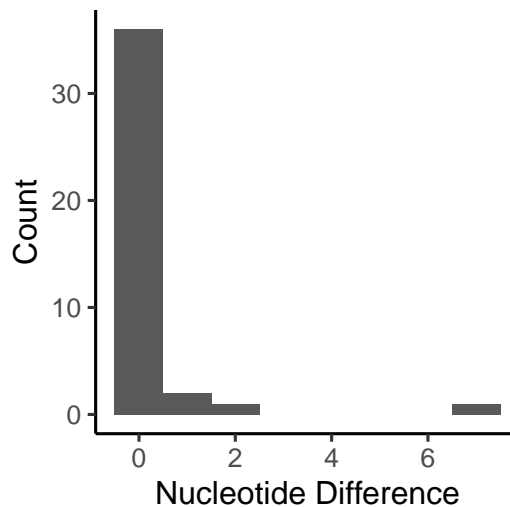
### IGHV3-64\*02

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



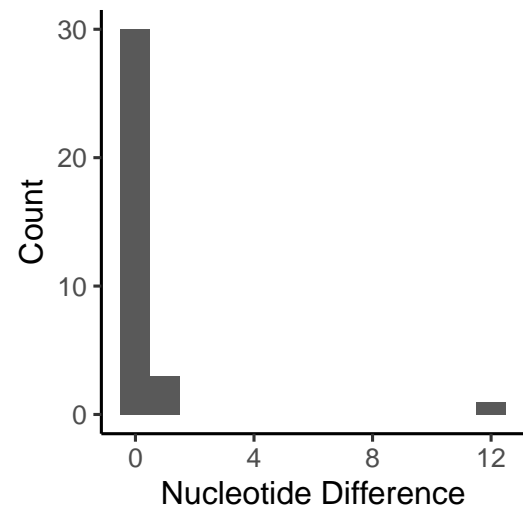
### IGHV3-72\*01

40 sequences assigned  
36 (90%) exact matches, in which:  
34 unique CDR3  
4 unique J



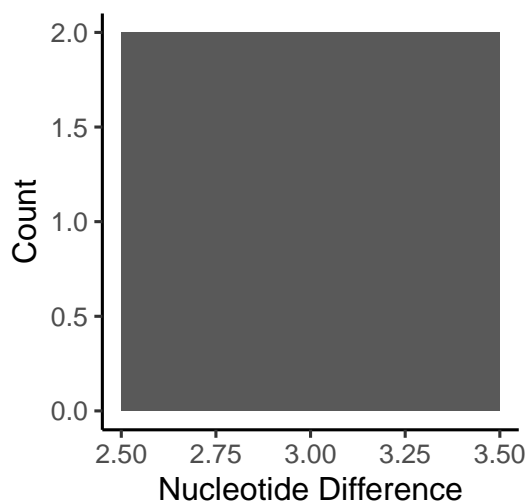
### IGHV3-43D\*04

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



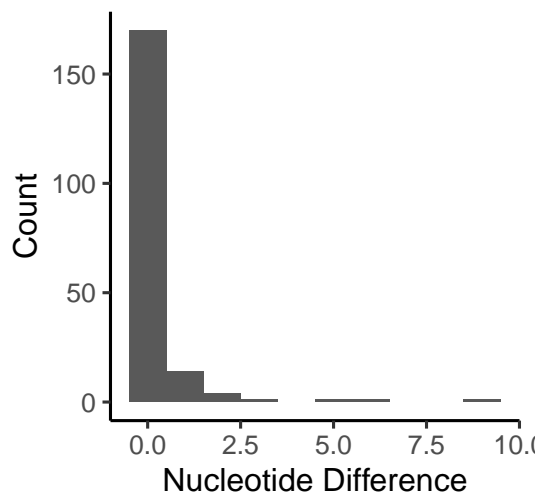
### IGHV3-64\*04

2 sequences assigned  
No exact matches.



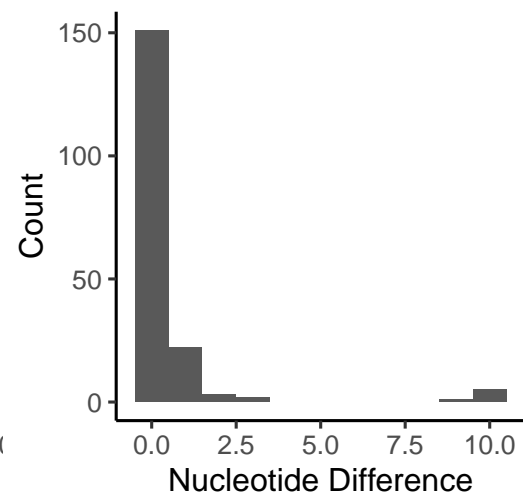
### IGHV3-73\*02

192 sequences assigned  
170 (88.5%) exact matches, in which:  
165 unique CDR3  
6 unique J



### IGHV3-64D\*08

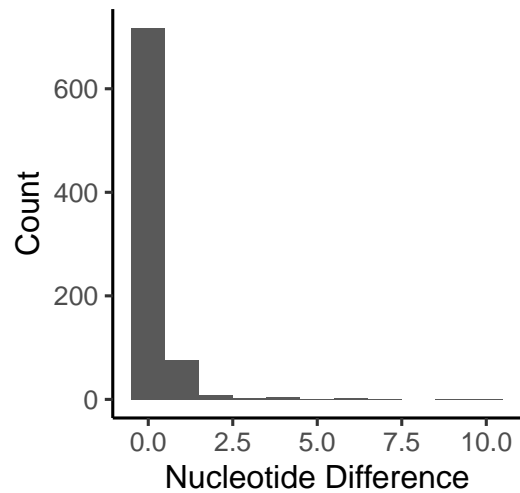
184 sequences assigned  
151 (82.1%) exact matches, in which:  
143 unique CDR3  
6 unique J





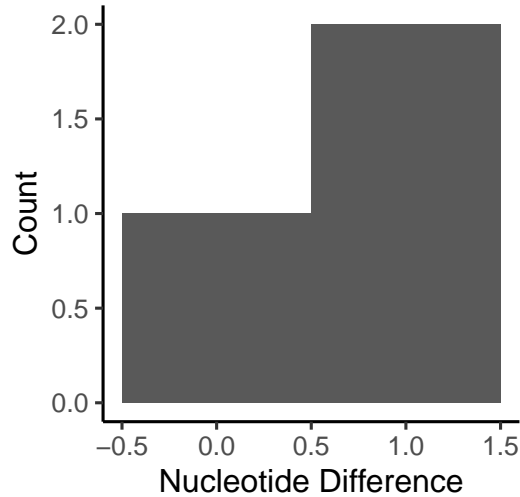
### IGHV4-4\*02

816 sequences assigned  
718 (88%) exact matches, in which:  
701 unique CDR3  
6 unique J



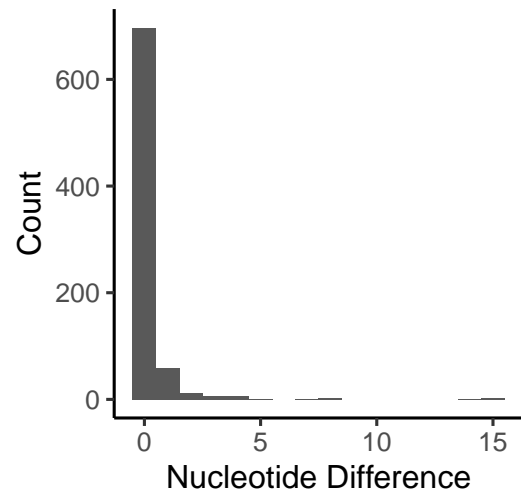
### IGHV4-28\*04

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



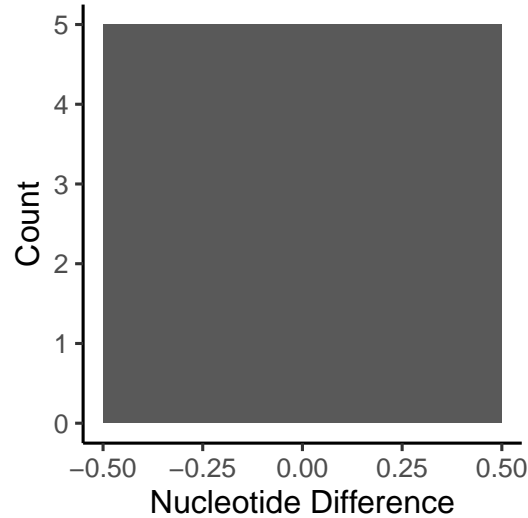
### IGHV4-31\*03

788 sequences assigned  
697 (88.5%) exact matches, in which:  
669 unique CDR3  
6 unique J



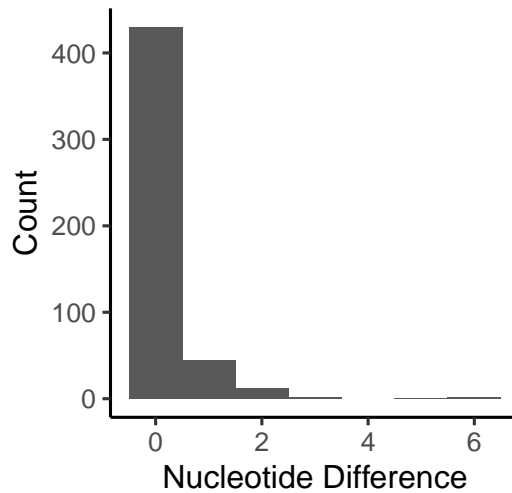
### IGHV4-28\*01

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



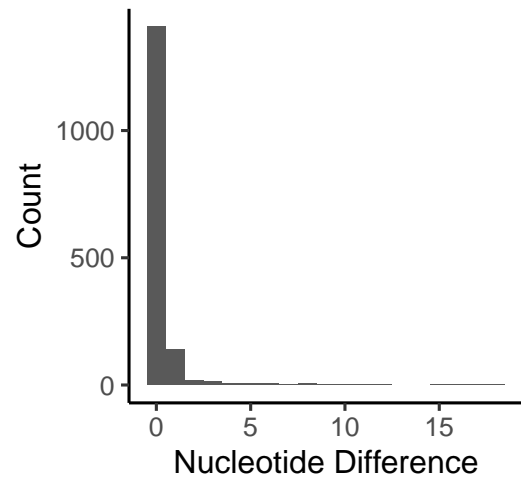
### IGHV4-30-2\*01

491 sequences assigned  
430 (87.6%) exact matches, in which:  
417 unique CDR3  
6 unique J



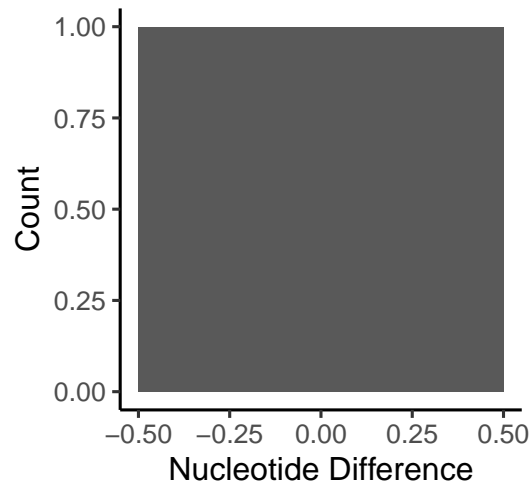
### IGHV4-34\*01

1627 sequences assigned  
1408 (86.5%) exact matches, in which:  
1319 unique CDR3  
6 unique J



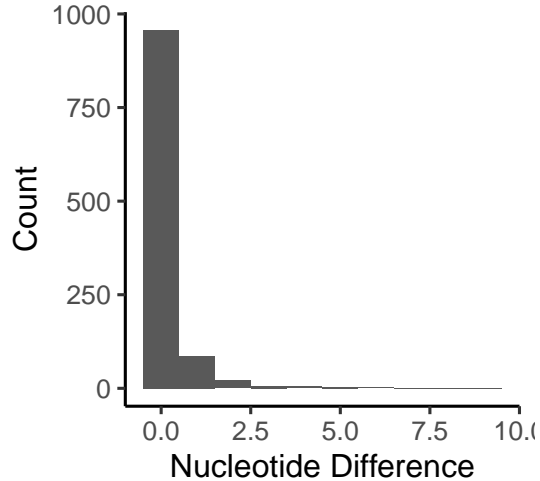
### IGHV4-28\*03

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



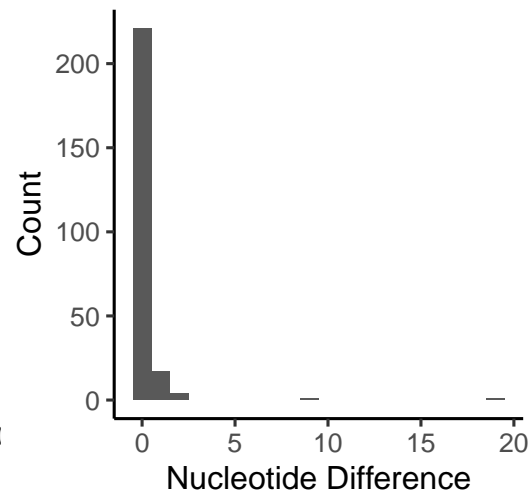
### IGHV4-30-4\*01

1083 sequences assigned  
957 (88.4%) exact matches, in which:  
926 unique CDR3  
6 unique J



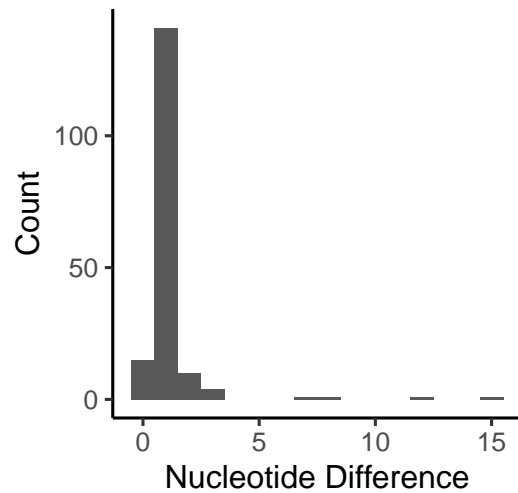
### IGHV4-38-2\*01

244 sequences assigned  
221 (90.6%) exact matches, in which:  
207 unique CDR3  
6 unique J



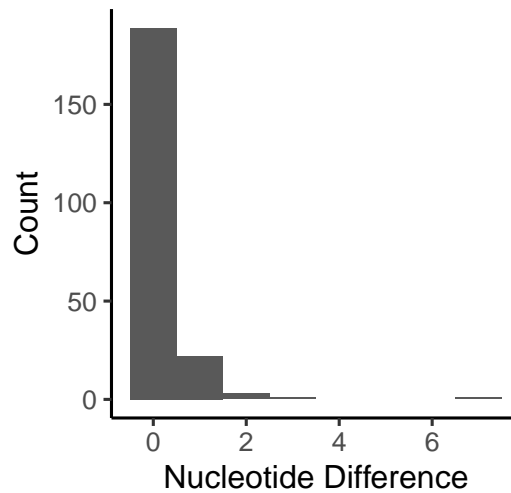
### IGHV4-38-2\*02

174 sequences assigned  
15 (8.6%) exact matches, in which:  
15 unique CDR3  
4 unique J



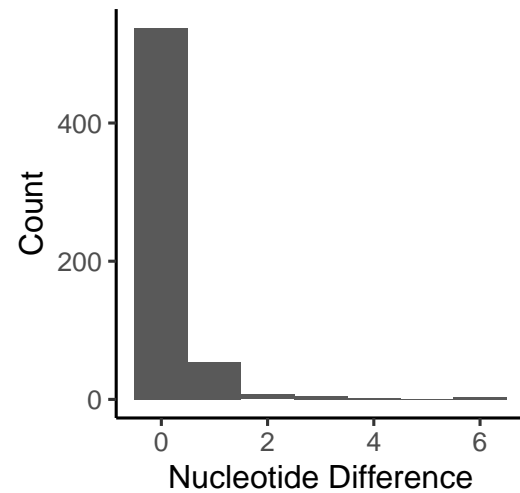
### IGHV4-61\*01

218 sequences assigned  
189 (86.7%) exact matches, in which:  
188 unique CDR3  
5 unique J



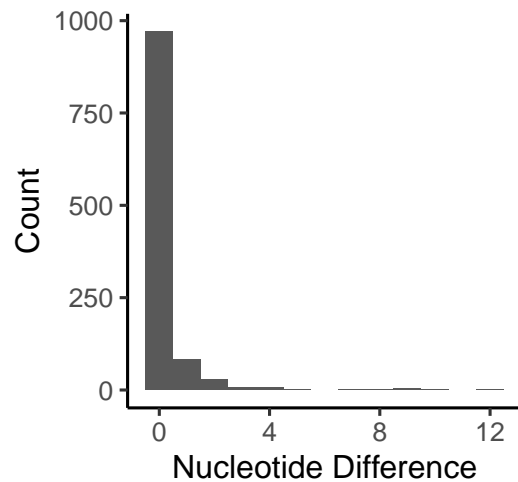
### IGHV5-51\*01

611 sequences assigned  
538 (88.1%) exact matches, in which:  
519 unique CDR3  
6 unique J



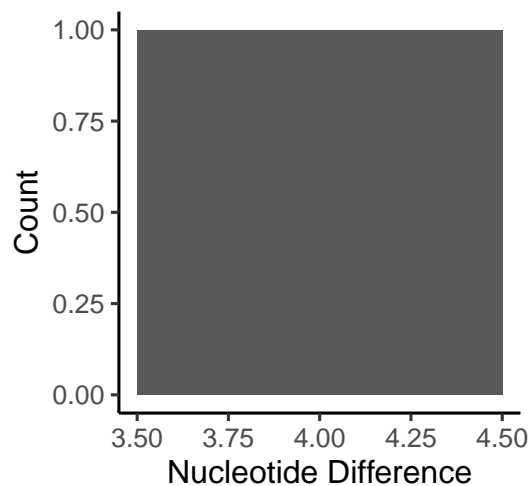
### IGHV4-39\*01

1112 sequences assigned  
970 (87.2%) exact matches, in which:  
917 unique CDR3  
6 unique J



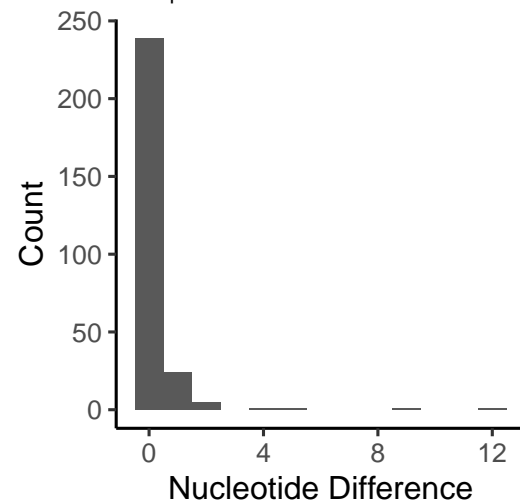
### IGHV1/OR15-4\*01

1 sequences assigned  
No exact matches.



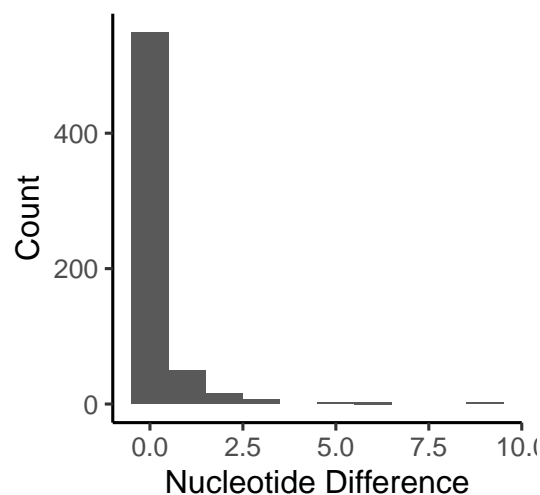
### IGHV6-1\*01

272 sequences assigned  
239 (87.9%) exact matches, in which:  
220 unique CDR3  
6 unique J



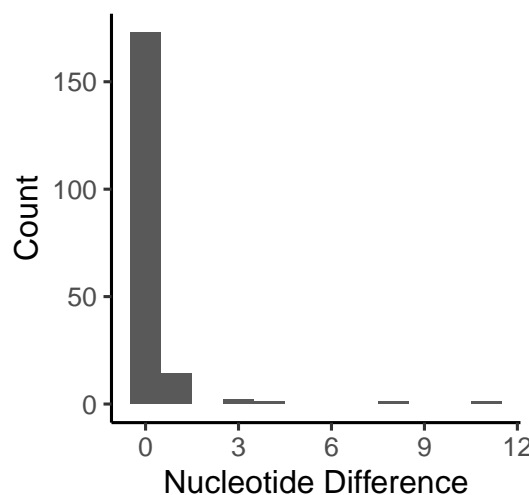
### IGHV4-59\*01

629 sequences assigned  
549 (87.3%) exact matches, in which:  
528 unique CDR3  
6 unique J



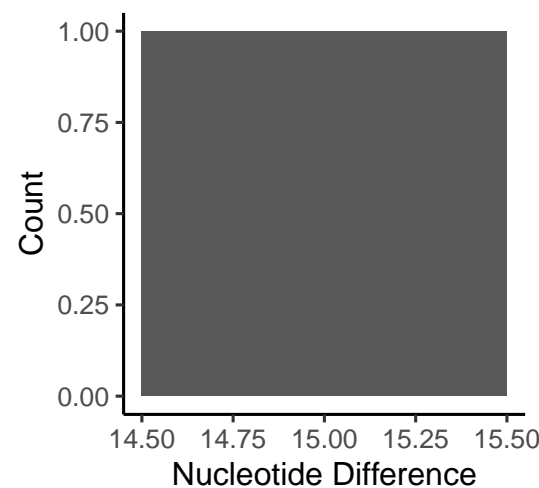
### IGHV5-10-1\*03

192 sequences assigned  
173 (90.1%) exact matches, in which:  
166 unique CDR3  
6 unique J



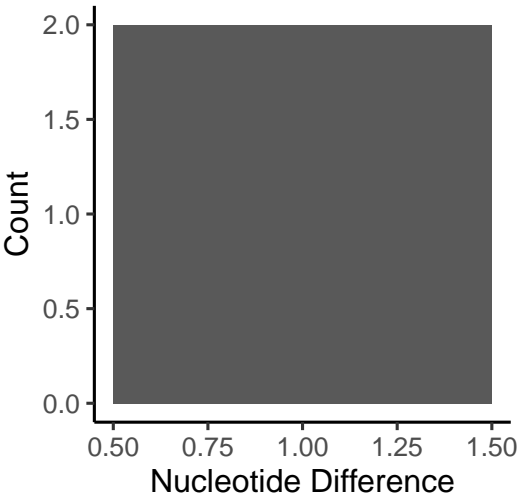
### IGHV3/OR16-9\*01

1 sequences assigned  
No exact matches.



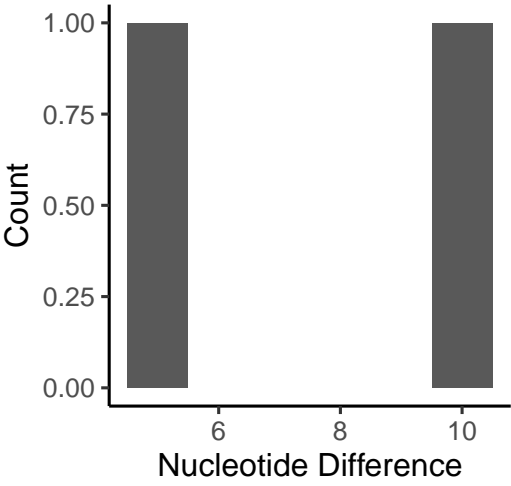
IGHV3/OR16-12\*01

2 sequences assigned  
No exact matches.



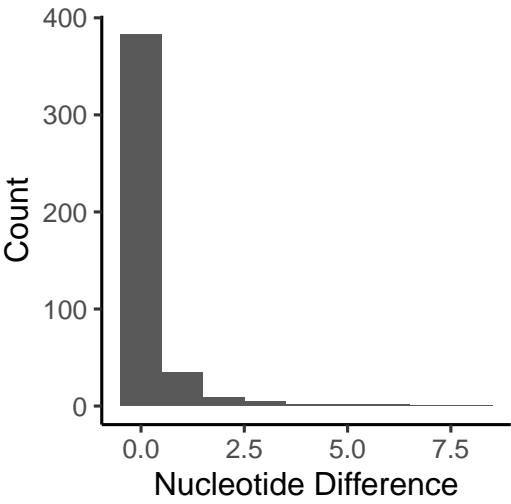
IGHV3/OR16-15\*02

2 sequences assigned  
No exact matches.

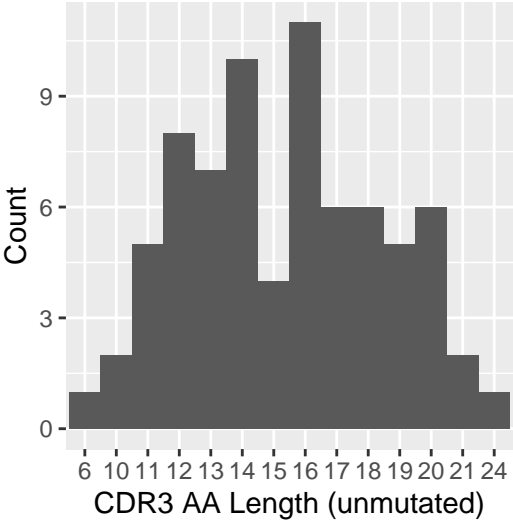


IGHV7-4-1\*02

440 sequences assigned  
383 (87%) exact matches, in which:  
374 unique CDR3  
6 unique J



IGHV3-13\*01\_G290A\_T300C





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