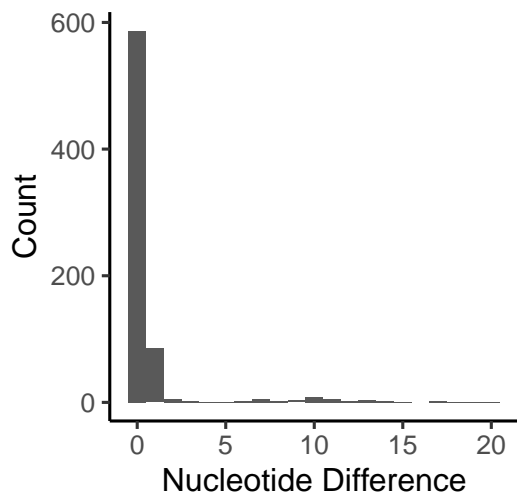


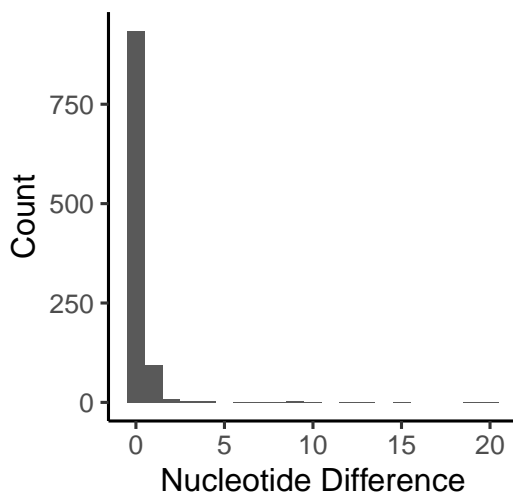
### IGHV1-2\*02

728 sequences assigned  
587 (80.6%) exact matches, in which:  
582 unique CDR3  
6 unique J



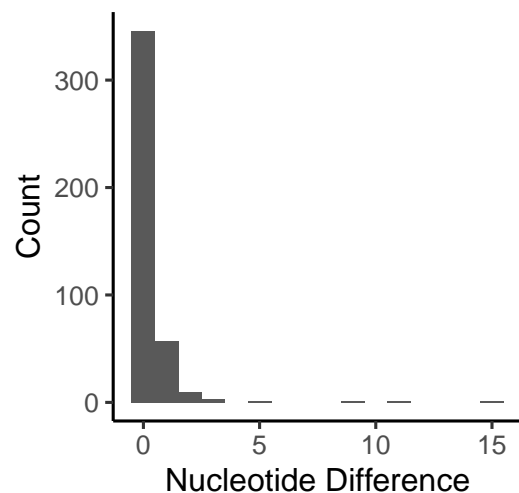
### IGHV1-8\*01

1062 sequences assigned  
935 (88%) exact matches, in which:  
927 unique CDR3  
7 unique J



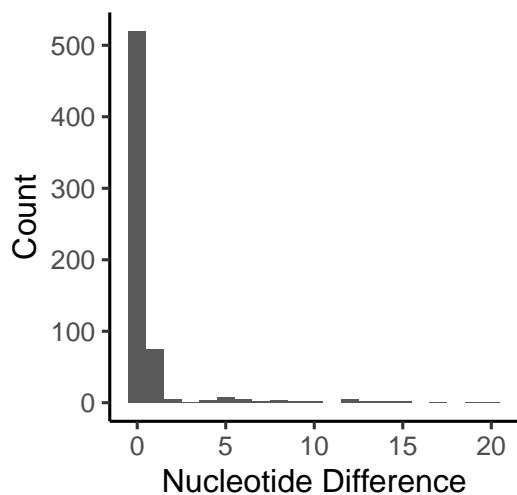
### IGHV1-24\*01

420 sequences assigned  
346 (82.4%) exact matches, in which:  
343 unique CDR3  
7 unique J



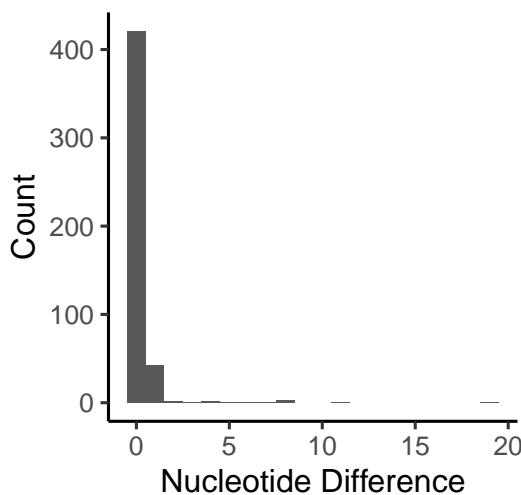
### IGHV1-2\*06

643 sequences assigned  
520 (80.9%) exact matches, in which:  
515 unique CDR3  
6 unique J



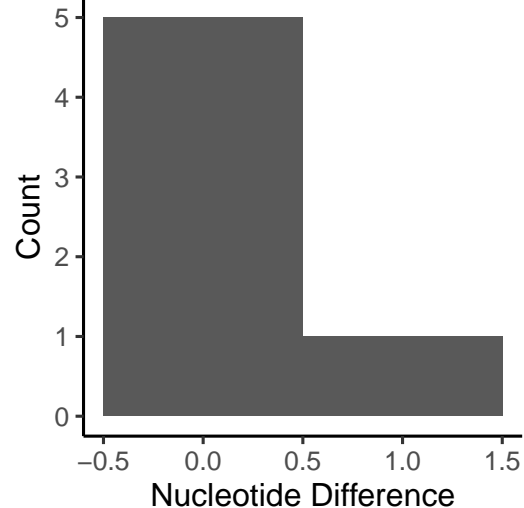
### IGHV1-18\*01

478 sequences assigned  
421 (88.1%) exact matches, in which:  
420 unique CDR3  
6 unique J



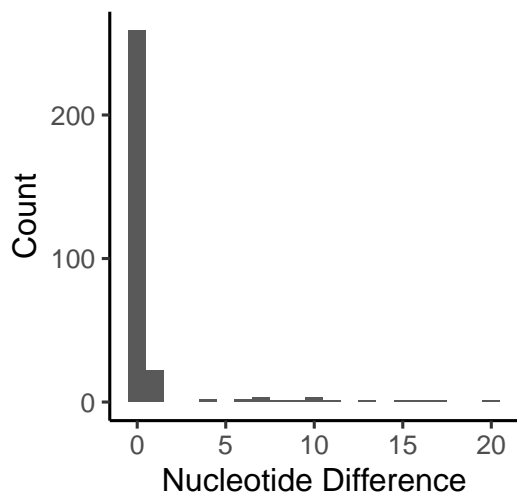
### IGHV1-45\*02

7 sequences assigned  
5 (71.4%) exact matches, in which:  
5 unique CDR3  
3 unique J



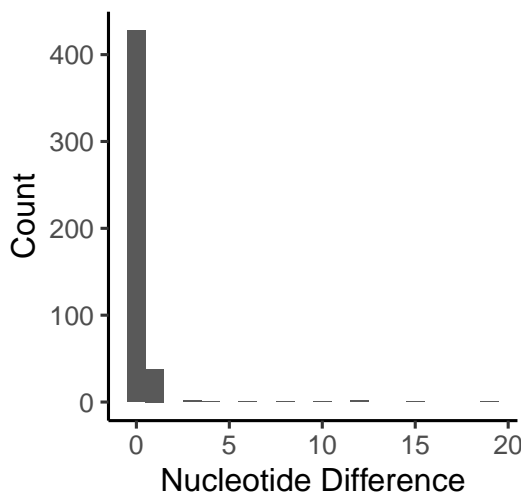
### IGHV1-3\*01

301 sequences assigned  
259 (86%) exact matches, in which:  
259 unique CDR3  
6 unique J



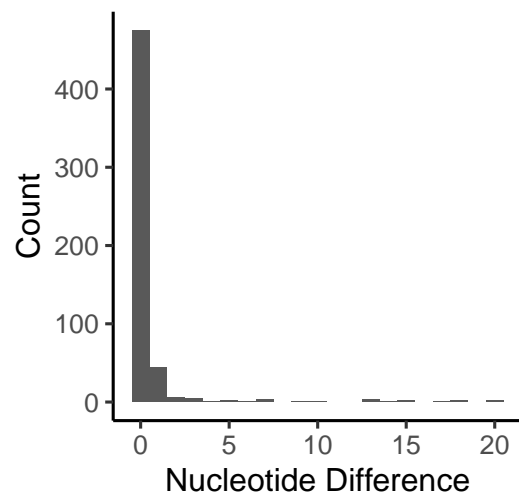
### IGHV1-18\*01\_A196G

477 sequences assigned  
428 (89.7%) exact matches, in which:  
424 unique CDR3  
6 unique J



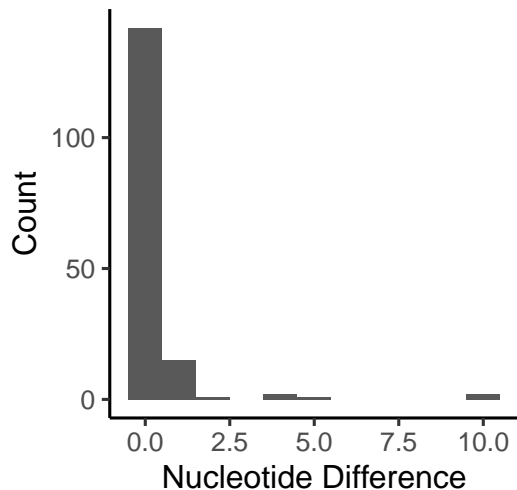
### IGHV1-46\*01

549 sequences assigned  
475 (86.5%) exact matches, in which:  
470 unique CDR3  
7 unique J



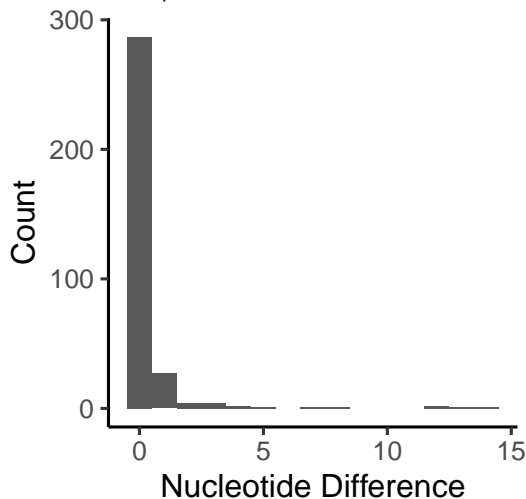
### IGHV1–58\*01

165 sequences assigned  
142 (86.1%) exact matches, in which:  
142 unique CDR3  
6 unique J



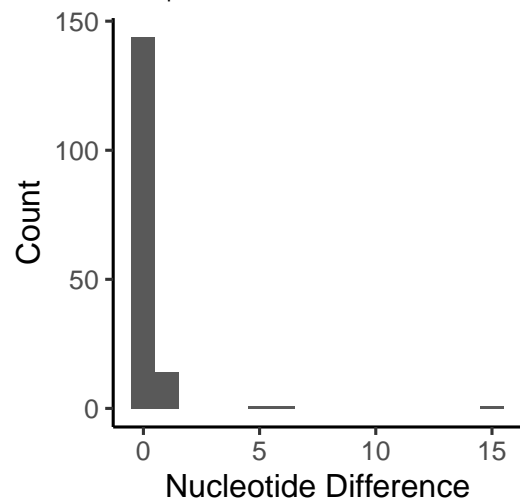
### IGHV2–5\*01

331 sequences assigned  
287 (86.7%) exact matches, in which:  
284 unique CDR3  
6 unique J



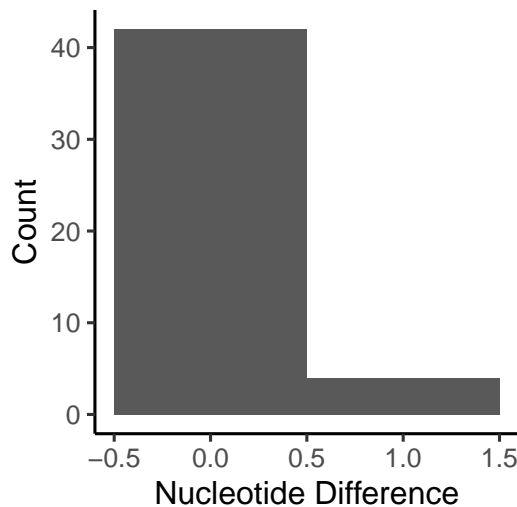
### IGHV2–70\*01

161 sequences assigned  
144 (89.4%) exact matches, in which:  
144 unique CDR3  
6 unique J



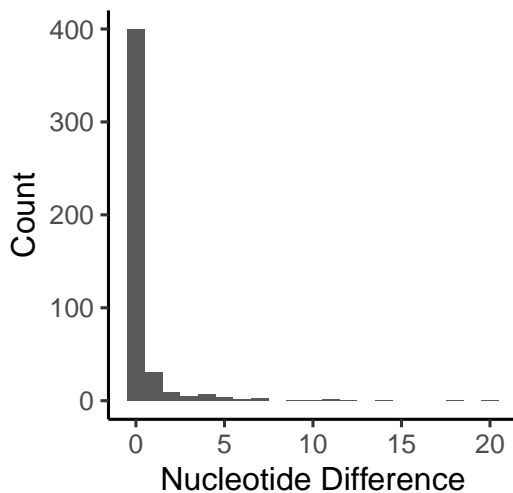
### IGHV1–69–2\*01

46 sequences assigned  
42 (91.3%) exact matches, in which:  
42 unique CDR3  
6 unique J



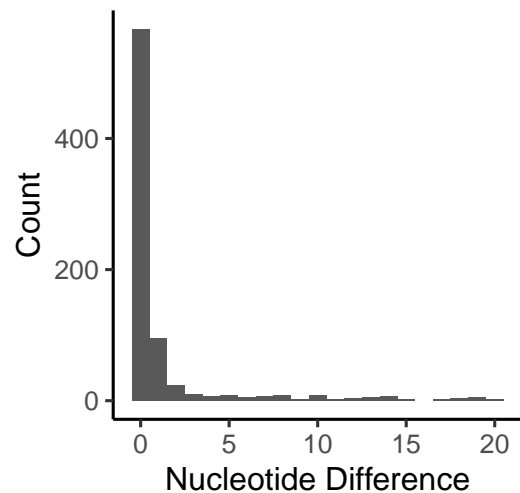
### IGHV2–5\*02

470 sequences assigned  
400 (85.1%) exact matches, in which:  
394 unique CDR3  
6 unique J



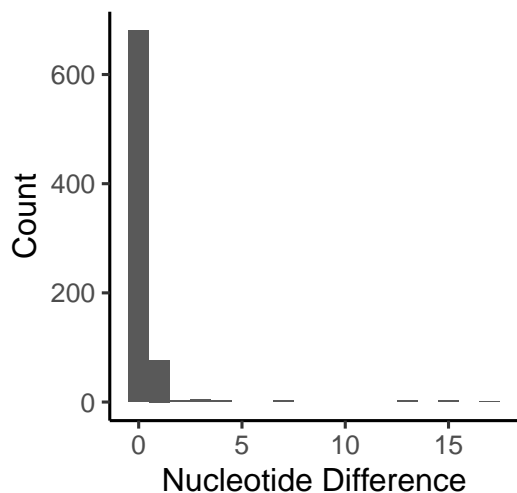
### IGHV3–7\*01

791 sequences assigned  
567 (71.7%) exact matches, in which:  
565 unique CDR3  
7 unique J



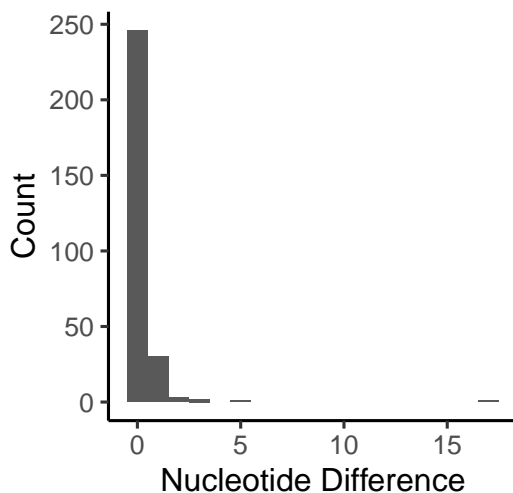
### IGHV1–69\*06

778 sequences assigned  
681 (87.5%) exact matches, in which:  
670 unique CDR3  
7 unique J



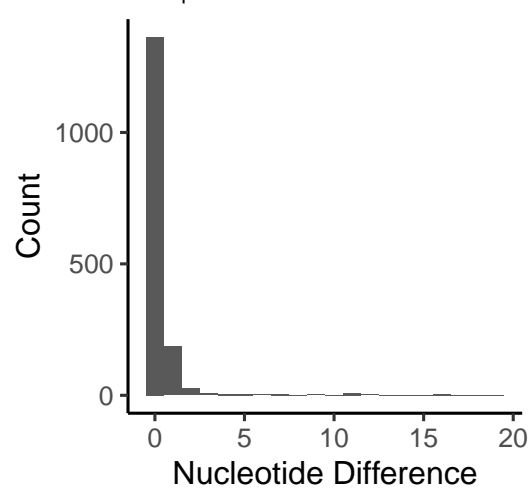
### IGHV2–26\*01

283 sequences assigned  
246 (86.9%) exact matches, in which:  
246 unique CDR3  
7 unique J



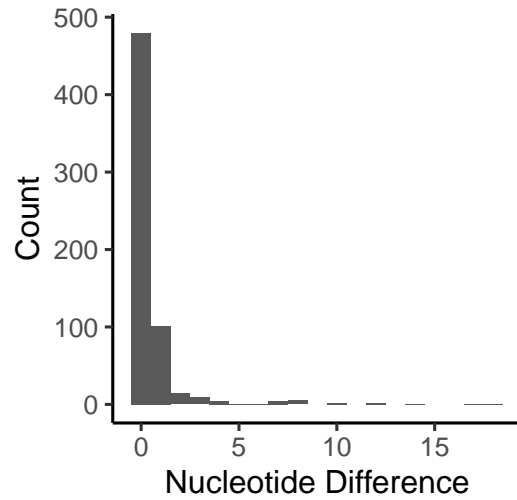
### IGHV3–9\*01

1633 sequences assigned  
1363 (83.5%) exact matches, in which:  
1352 unique CDR3  
7 unique J



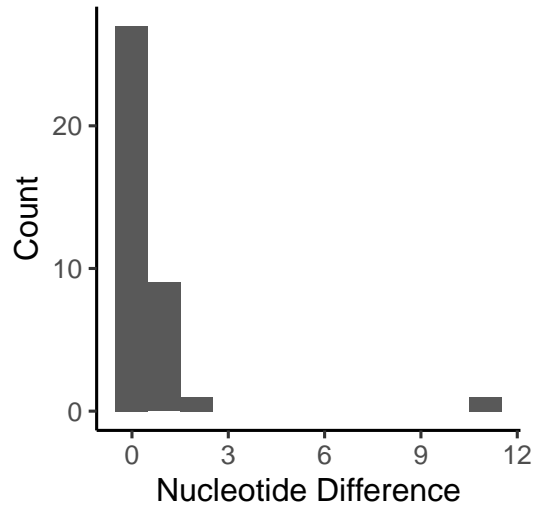
### IGHV3-11\*01

627 sequences assigned  
480 (76.6%) exact matches, in which:  
476 unique CDR3  
7 unique J



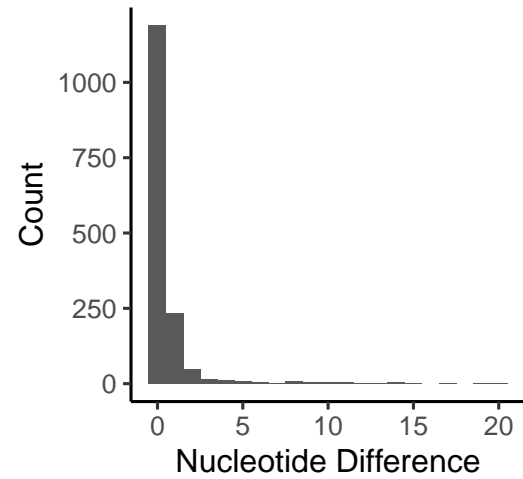
### IGHV3-20\*01

38 sequences assigned  
27 (71.1%) exact matches, in which:  
27 unique CDR3  
4 unique J



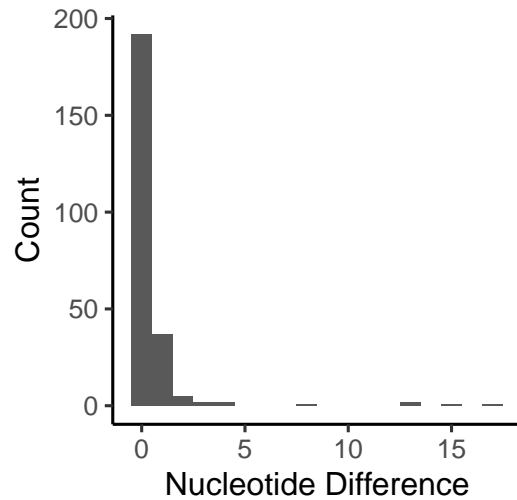
### IGHV3-33\*01

1555 sequences assigned  
1189 (76.5%) exact matches, in which:  
1178 unique CDR3  
7 unique J



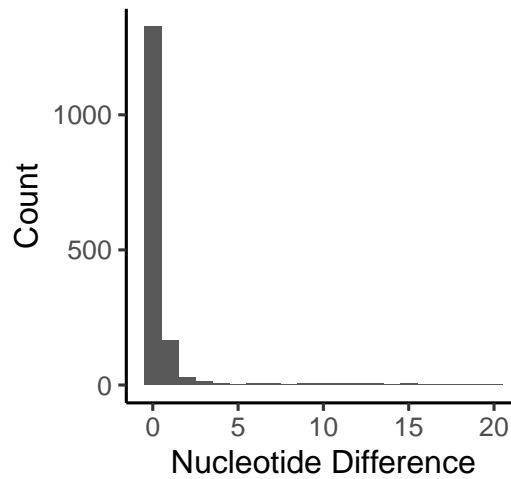
### IGHV3-13\*01

243 sequences assigned  
192 (79%) exact matches, in which:  
191 unique CDR3  
7 unique J



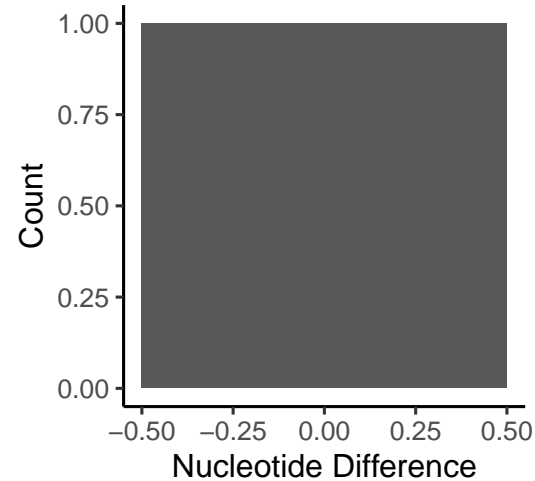
### IGHV3-21\*01

1592 sequences assigned  
1326 (83.3%) exact matches, in which:  
1319 unique CDR3  
7 unique J



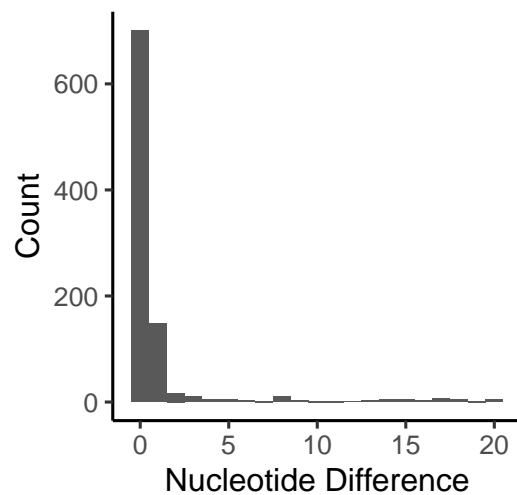
### IGHV3-35\*01

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



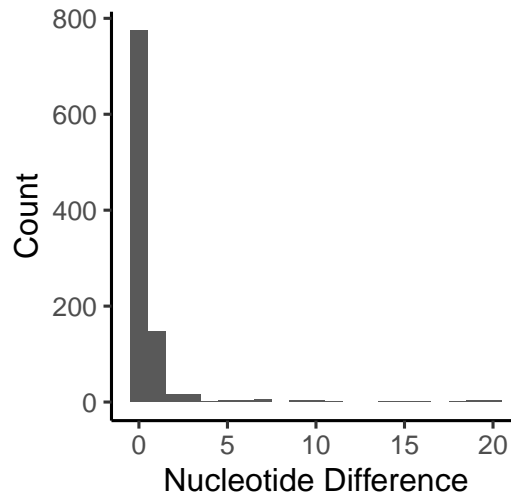
### IGHV3-15\*01

967 sequences assigned  
701 (72.5%) exact matches, in which:  
699 unique CDR3  
7 unique J



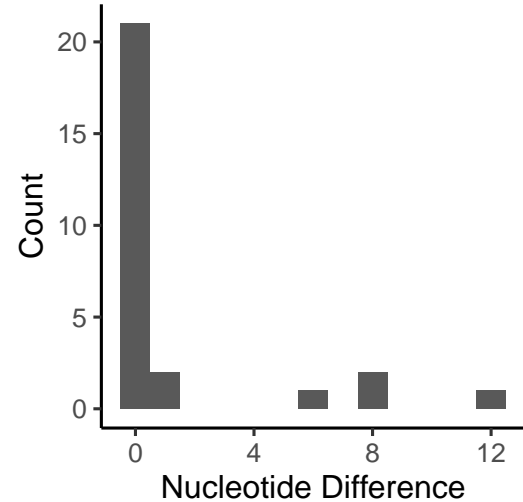
### IGHV3-30-3\*01

990 sequences assigned  
775 (78.3%) exact matches, in which:  
768 unique CDR3  
7 unique J



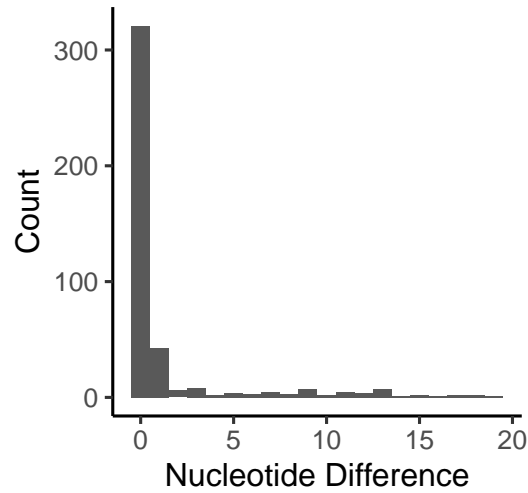
### IGHV3-43\*01\_T177A

27 sequences assigned  
21 (77.8%) exact matches, in which:  
21 unique CDR3  
4 unique J



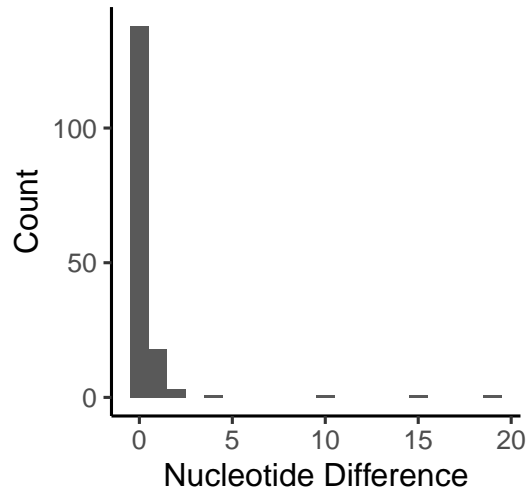
### IGHV3-48\*02

430 sequences assigned  
321 (74.7%) exact matches, in which:  
320 unique CDR3  
6 unique J



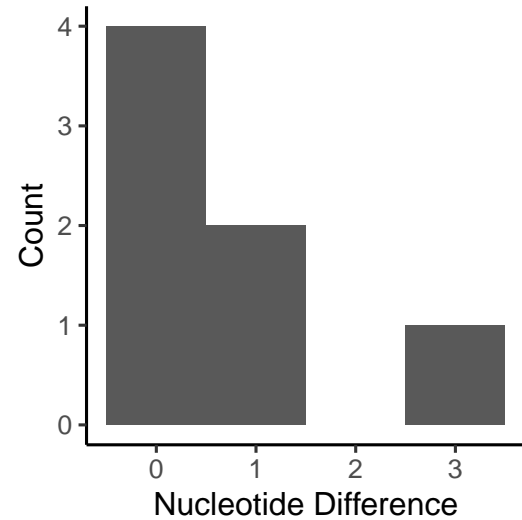
### IGHV3-49\*05

166 sequences assigned  
138 (83.1%) exact matches, in which:  
136 unique CDR3  
6 unique J



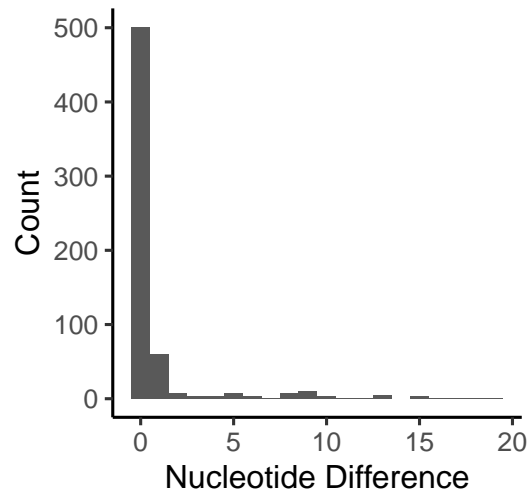
### IGHV3-64\*02

7 sequences assigned  
4 (57.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



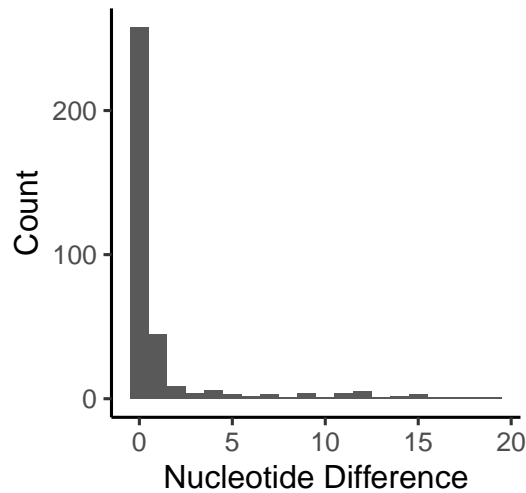
### IGHV3-48\*03

624 sequences assigned  
501 (80.3%) exact matches, in which:  
497 unique CDR3  
6 unique J



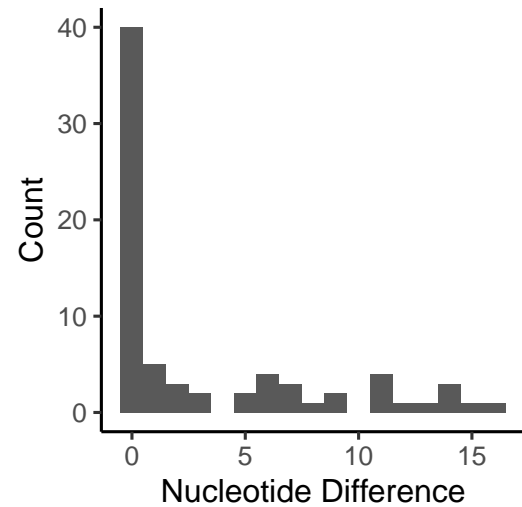
### IGHV3-53\*01

358 sequences assigned  
258 (72.1%) exact matches, in which:  
257 unique CDR3  
6 unique J



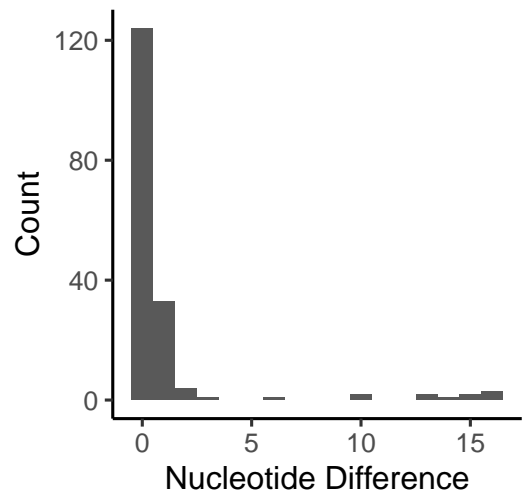
### IGHV3-72\*01

74 sequences assigned  
40 (54.1%) exact matches, in which:  
40 unique CDR3  
7 unique J



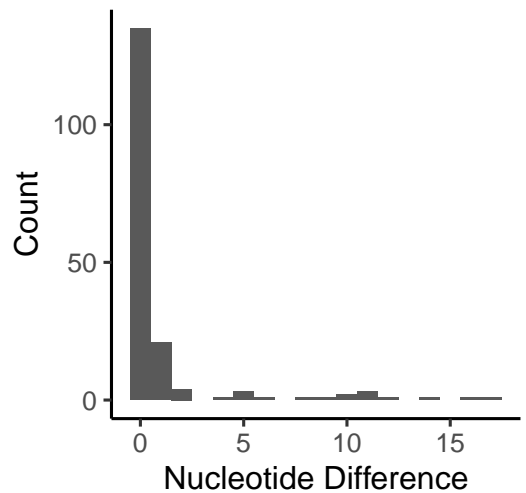
### IGHV3-49\*04

175 sequences assigned  
124 (70.9%) exact matches, in which:  
123 unique CDR3  
6 unique J



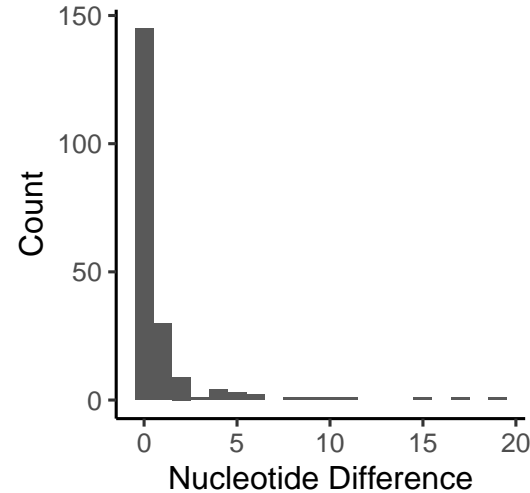
### IGHV3-53\*02

176 sequences assigned  
135 (76.7%) exact matches, in which:  
135 unique CDR3  
6 unique J



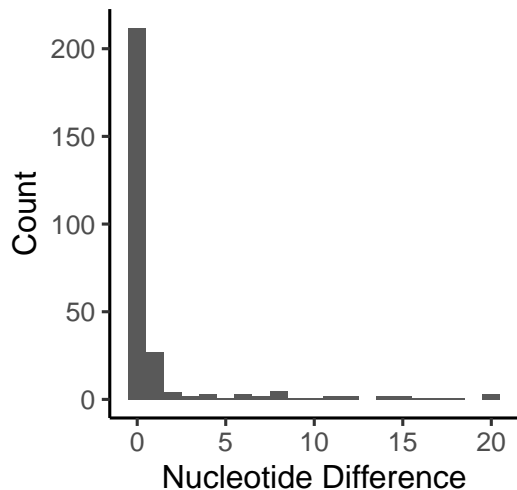
### IGHV3-73\*02

201 sequences assigned  
145 (72.1%) exact matches, in which:  
144 unique CDR3  
7 unique J



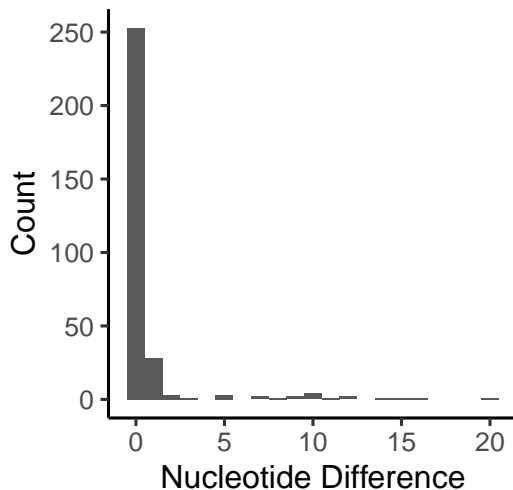
### IGHV3-74\*01

281 sequences assigned  
212 (75.4%) exact matches, in which:  
212 unique CDR3  
7 unique J



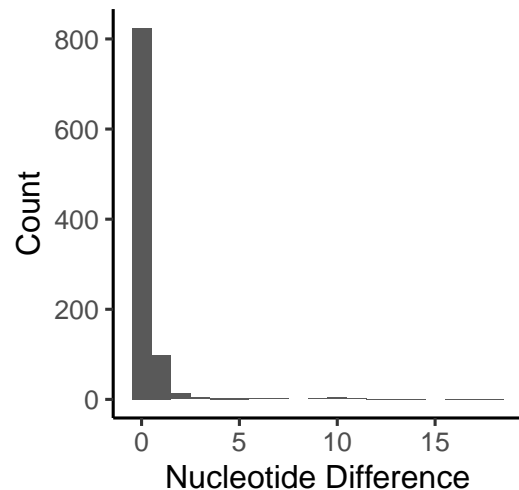
### IGHV4-4\*07

307 sequences assigned  
253 (82.4%) exact matches, in which:  
252 unique CDR3  
6 unique J



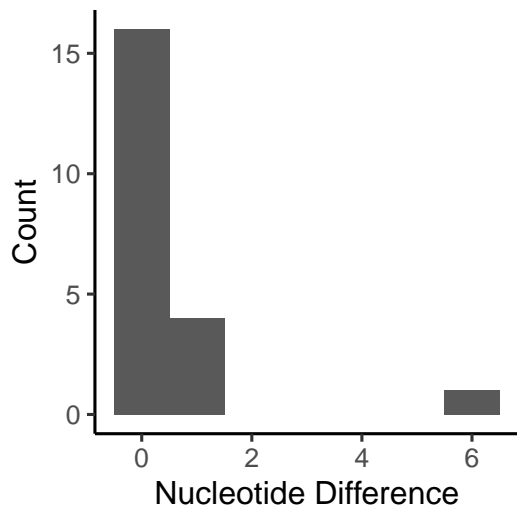
### IGHV4-31\*03

966 sequences assigned  
825 (85.4%) exact matches, in which:  
818 unique CDR3  
7 unique J



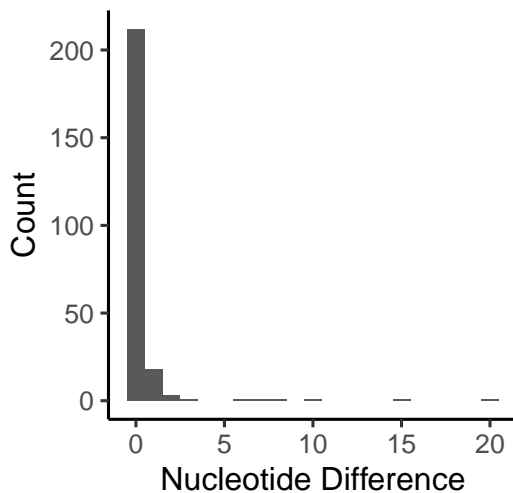
### IGHV3-43D\*04

21 sequences assigned  
16 (76.2%) exact matches, in which:  
16 unique CDR3  
6 unique J



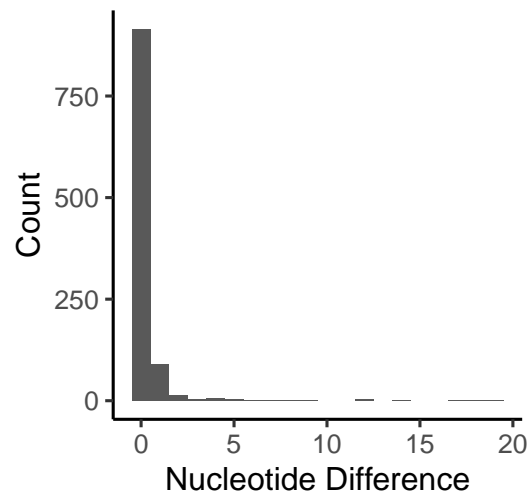
### IGHV4-30-4\*01

240 sequences assigned  
212 (88.3%) exact matches, in which:  
210 unique CDR3  
7 unique J



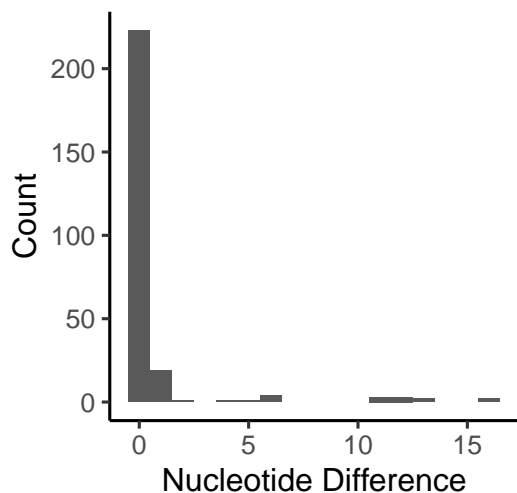
### IGHV4-34\*01

1050 sequences assigned  
915 (87.1%) exact matches, in which:  
910 unique CDR3  
7 unique J



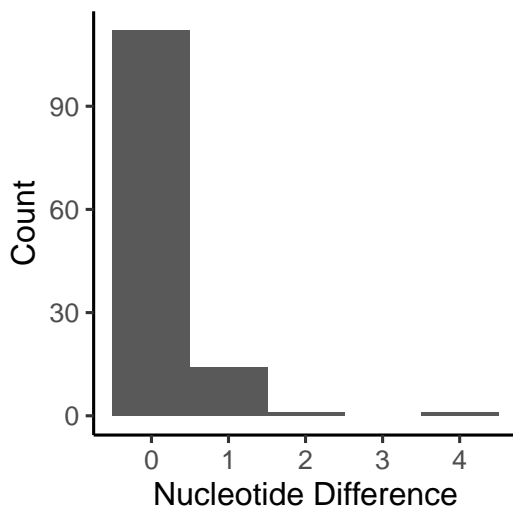
### IGHV4-4\*02

260 sequences assigned  
223 (85.8%) exact matches, in which:  
222 unique CDR3  
6 unique J



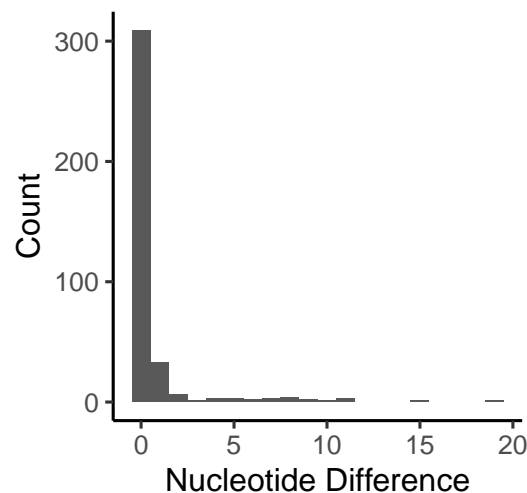
### IGHV4-30-2\*01

128 sequences assigned  
112 (87.5%) exact matches, in which:  
110 unique CDR3  
5 unique J



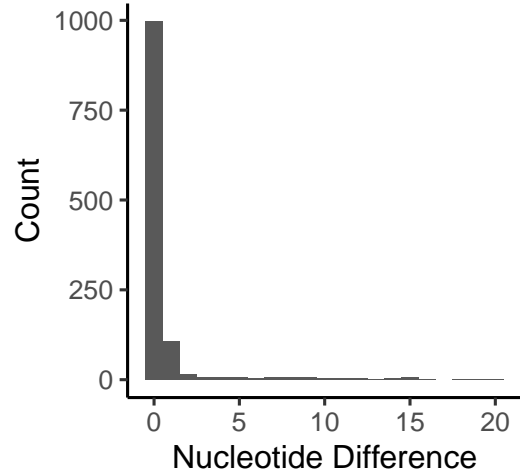
### IGHV4-38-2\*02\_A70G

373 sequences assigned  
309 (82.8%) exact matches, in which:  
303 unique CDR3  
6 unique J



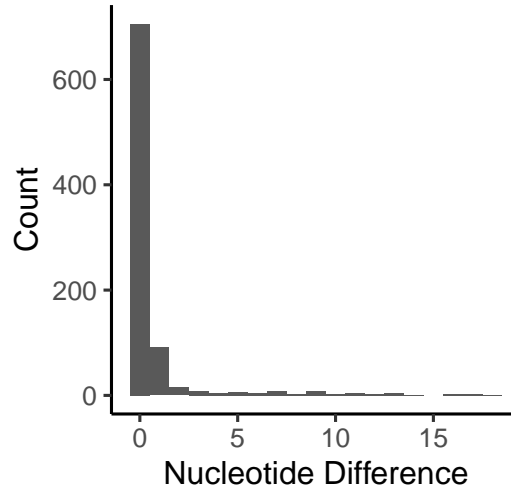
### IGHV4-39\*01

1200 sequences assigned  
997 (83.1%) exact matches, in which:  
992 unique CDR3  
7 unique J



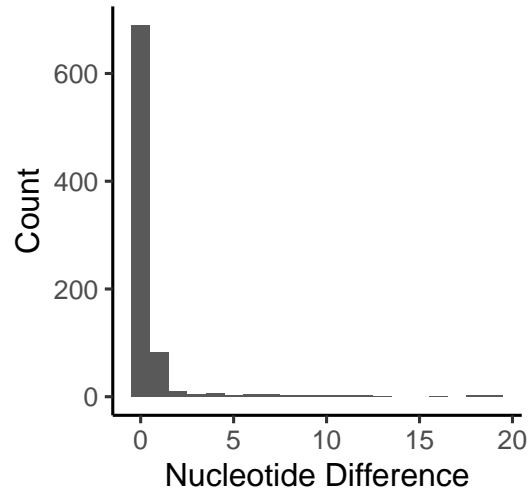
### IGHV5-51\*01

882 sequences assigned  
706 (80%) exact matches, in which:  
700 unique CDR3  
7 unique J



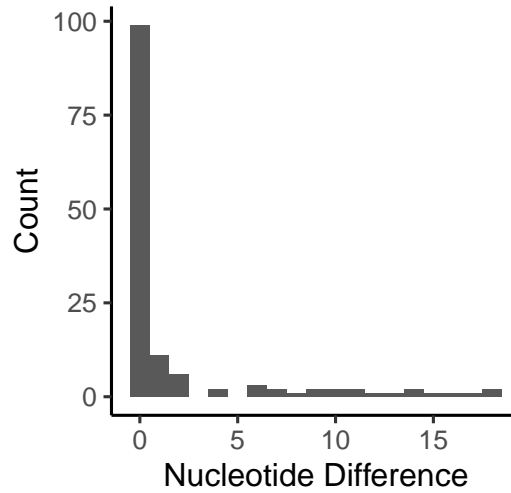
### IGHV4-59\*01

834 sequences assigned  
690 (82.7%) exact matches, in which:  
688 unique CDR3  
7 unique J



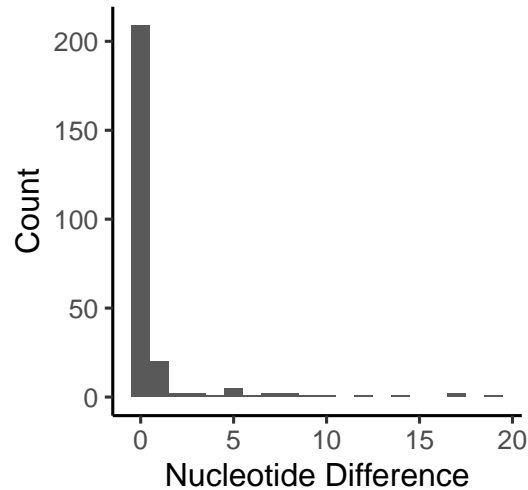
### IGHV6-1\*01

139 sequences assigned  
99 (71.2%) exact matches, in which:  
97 unique CDR3  
6 unique J



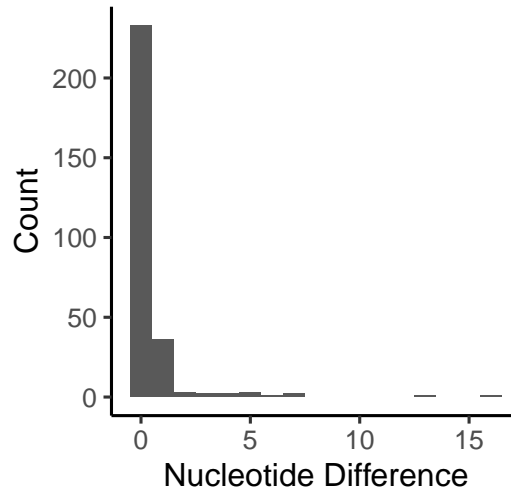
### IGHV4-61\*01

252 sequences assigned  
209 (82.9%) exact matches, in which:  
209 unique CDR3  
7 unique J

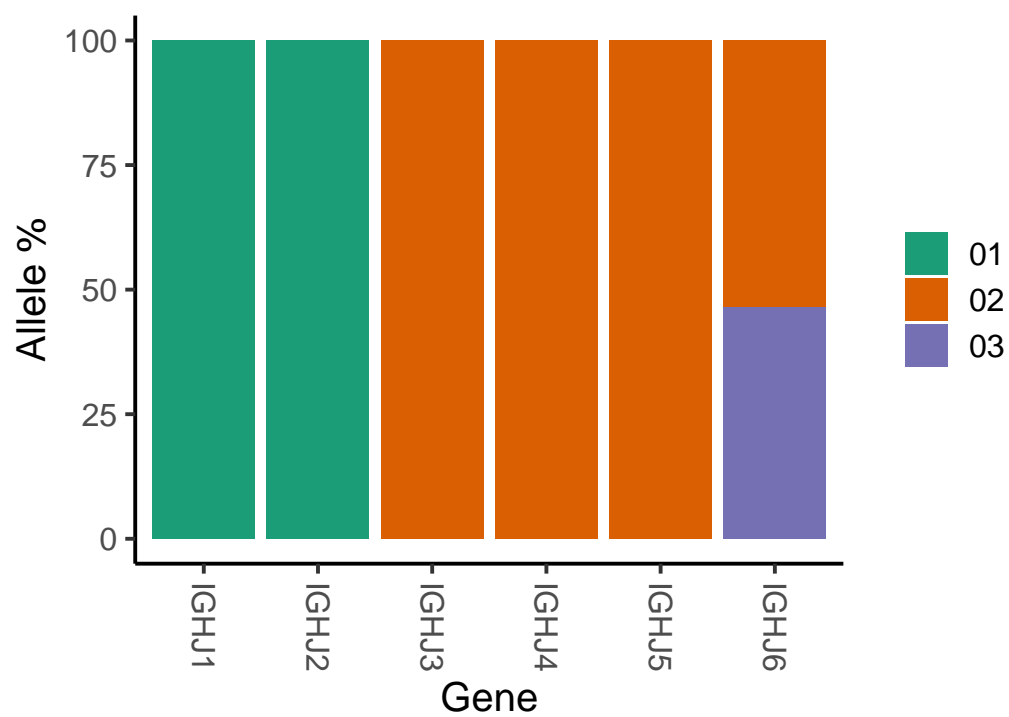


### IGHV7-4-1\*02

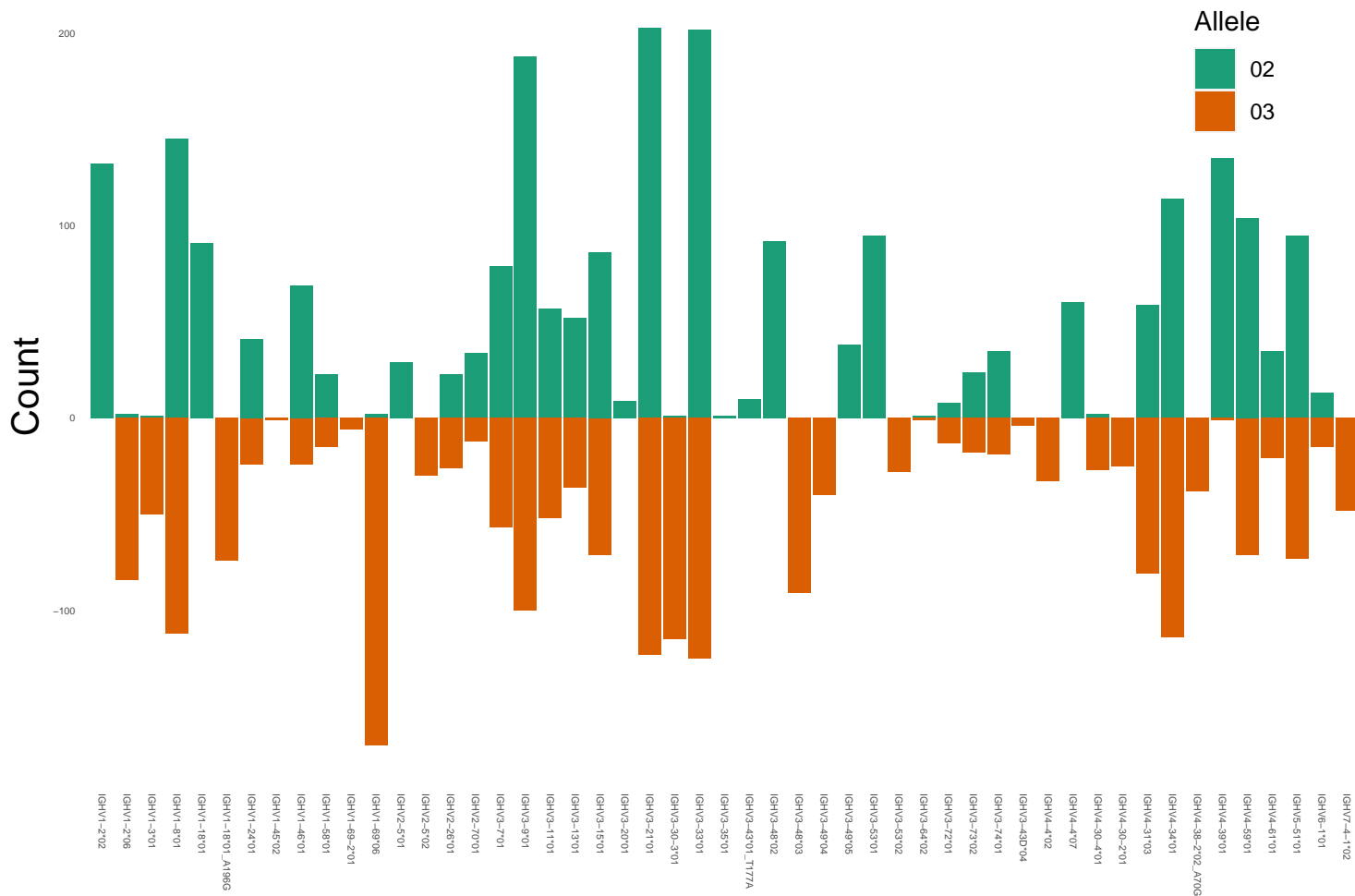
284 sequences assigned  
233 (82%) exact matches, in which:  
232 unique CDR3  
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage





Warning – no inferred sequences found.