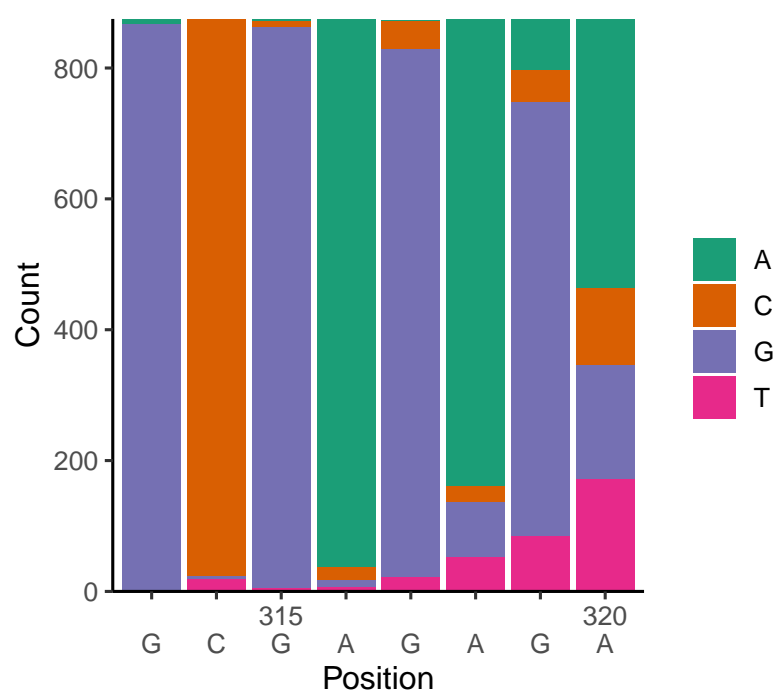
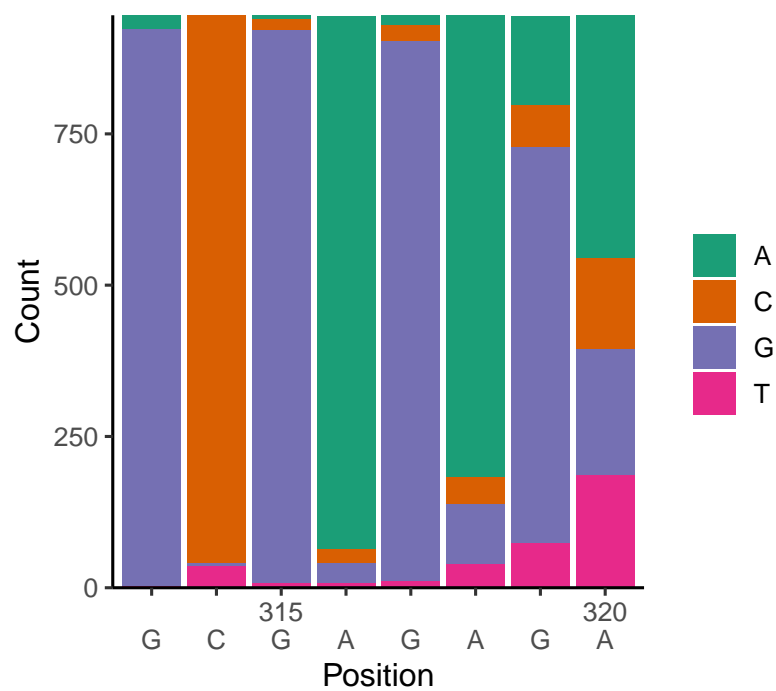


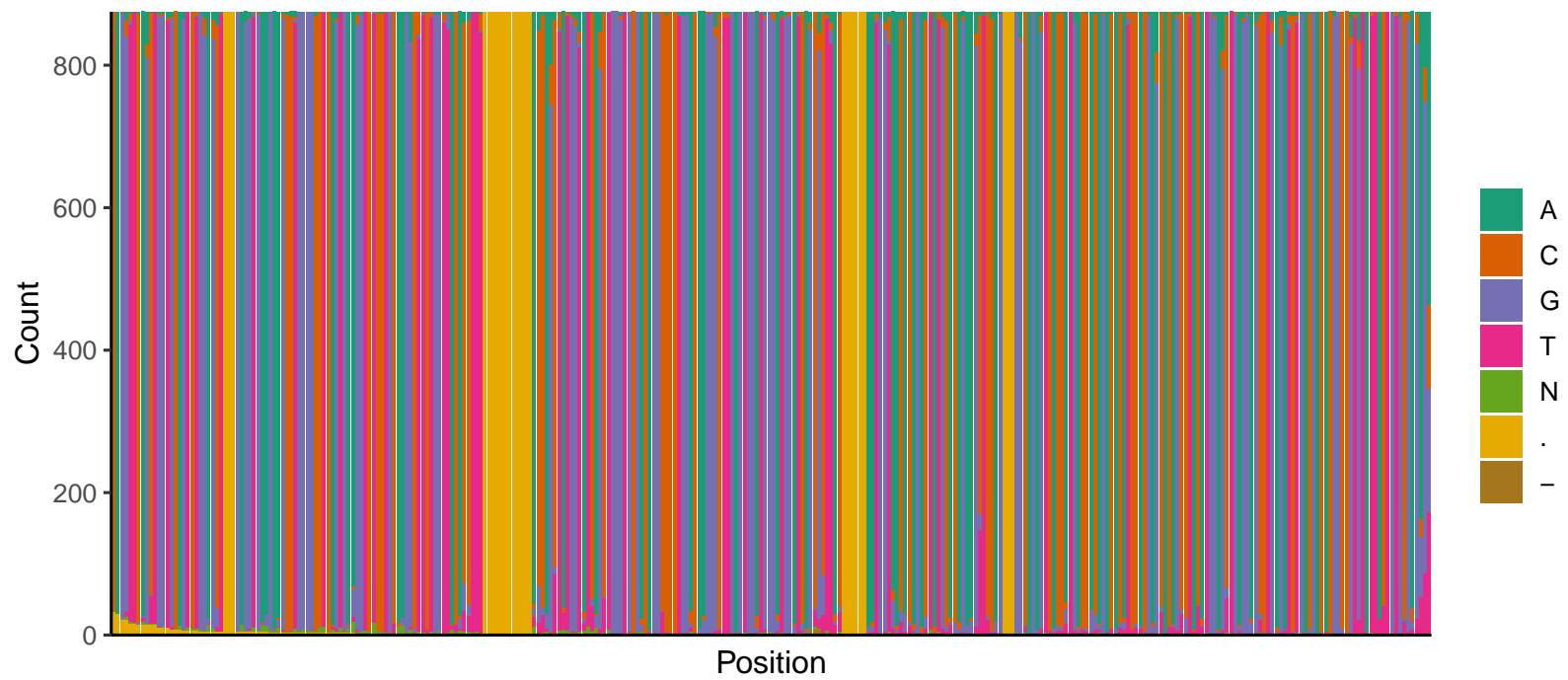
Gene IGHV1-18\*01\_A196G



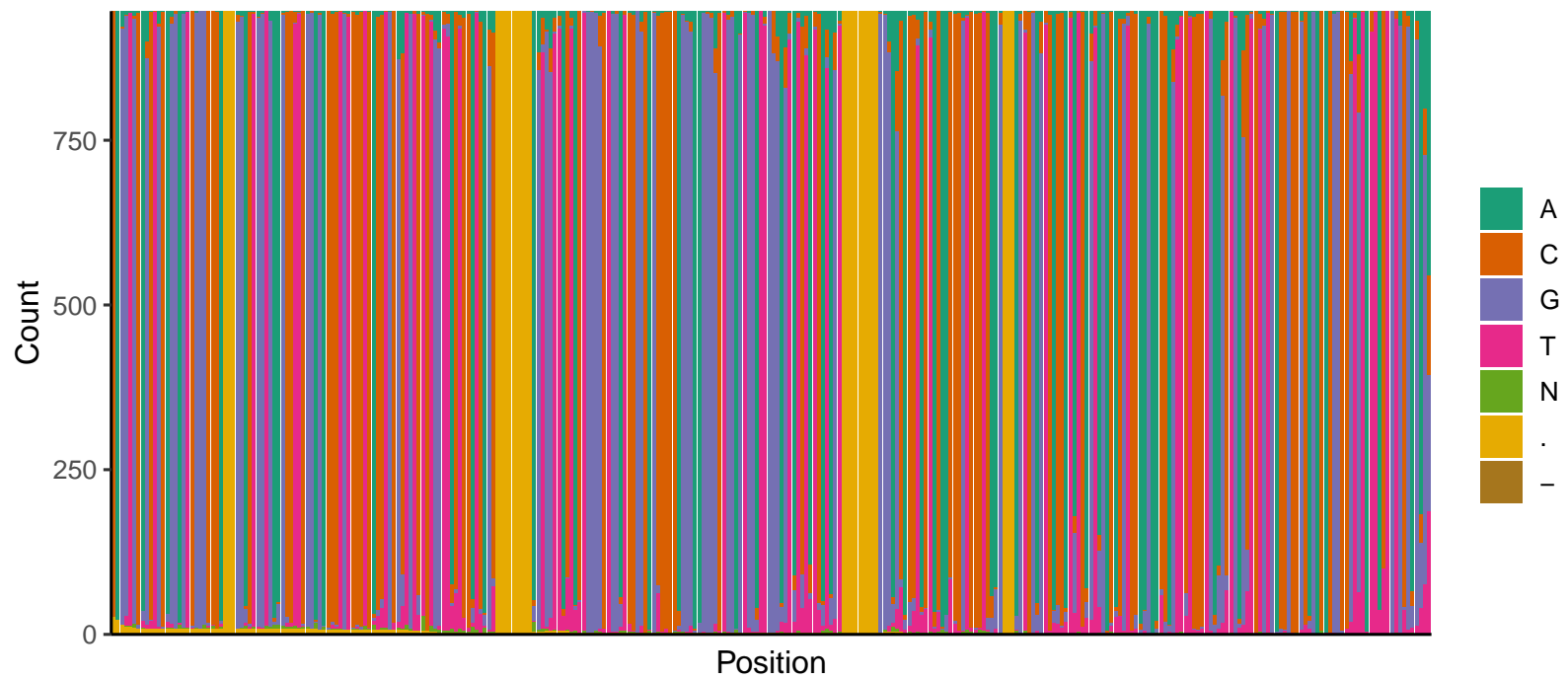
Gene IGHV4-38-2\*02\_A70G



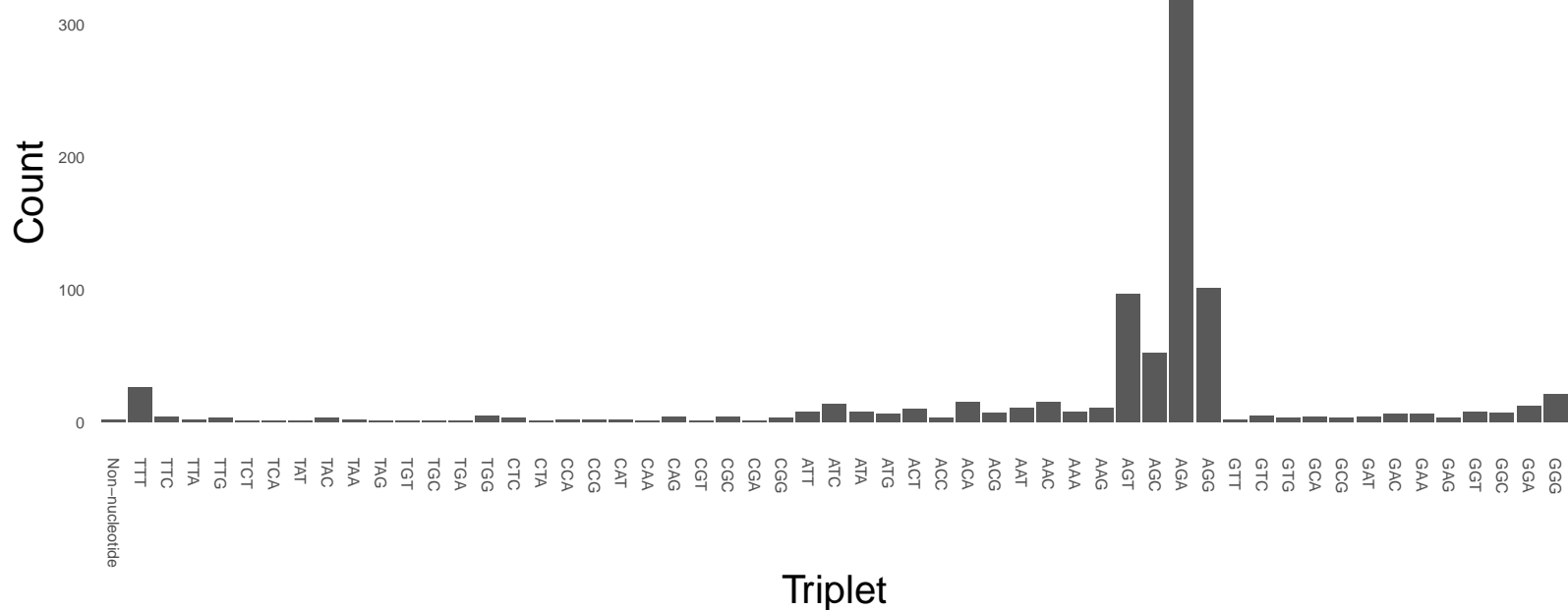
Gene IGHV1-18\*01\_A196G



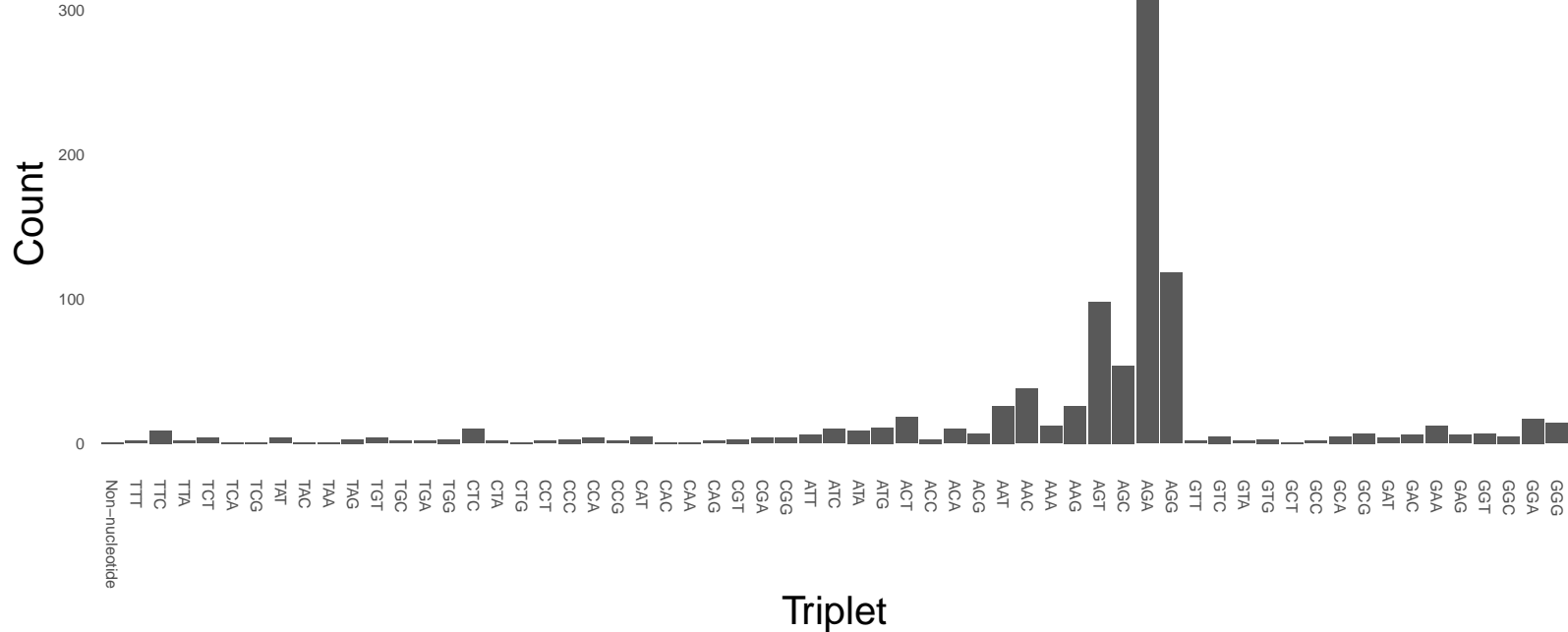
Gene IGHV4-38-2\*02\_A70G



IGHV1-18\*01\_A196G- Final 3 nucleotides as a triplet

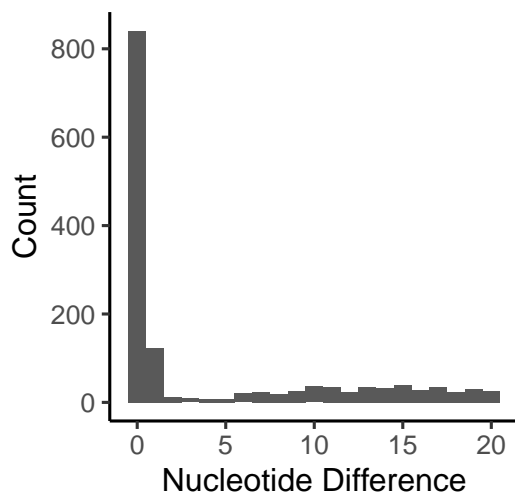


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



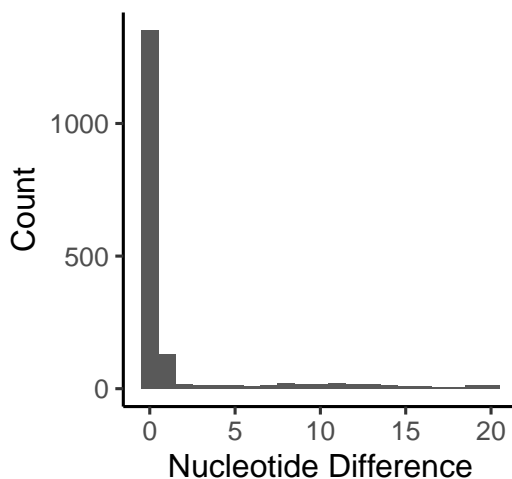
### IGHV1-2\*02

1699 sequences assigned  
841 (49.5%) exact matches, in which:  
836 unique CDR3  
6 unique J



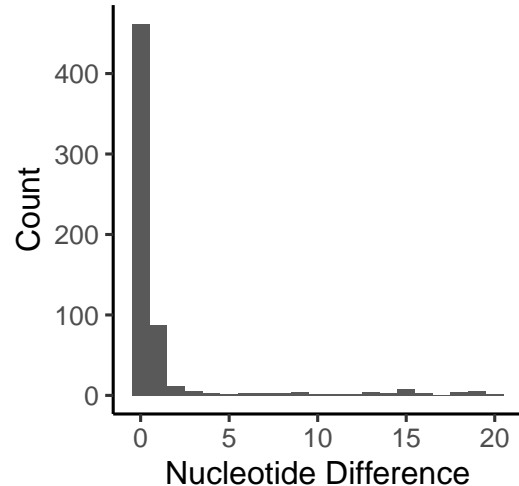
### IGHV1-8\*01

1836 sequences assigned  
1351 (73.6%) exact matches, in which:  
1342 unique CDR3  
7 unique J



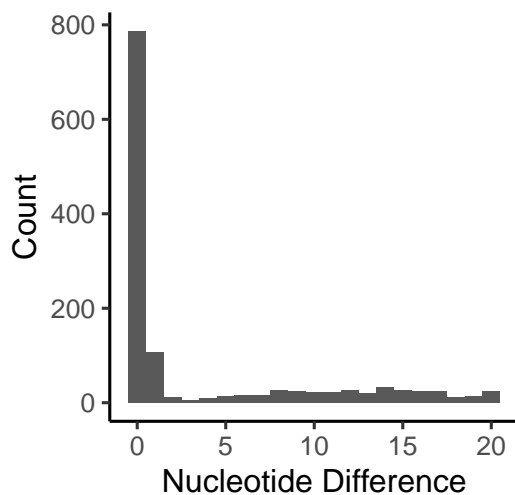
### IGHV1-24\*01

668 sequences assigned  
462 (69.2%) exact matches, in which:  
459 unique CDR3  
7 unique J



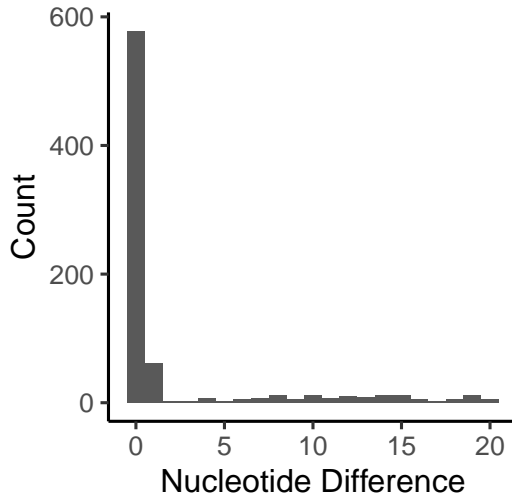
### IGHV1-2\*06

1507 sequences assigned  
787 (52.2%) exact matches, in which:  
782 unique CDR3  
6 unique J



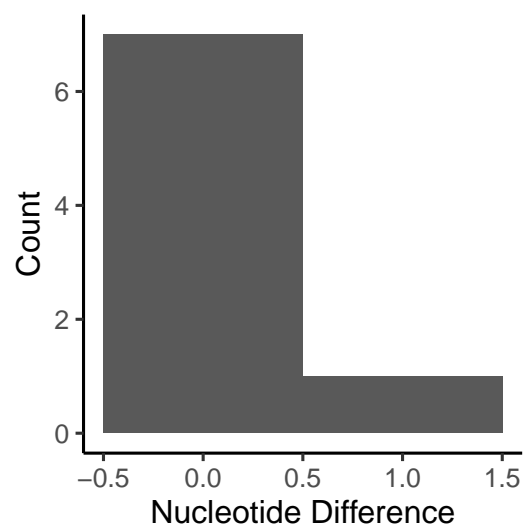
### IGHV1-18\*01

873 sequences assigned  
578 (66.2%) exact matches, in which:  
577 unique CDR3  
7 unique J



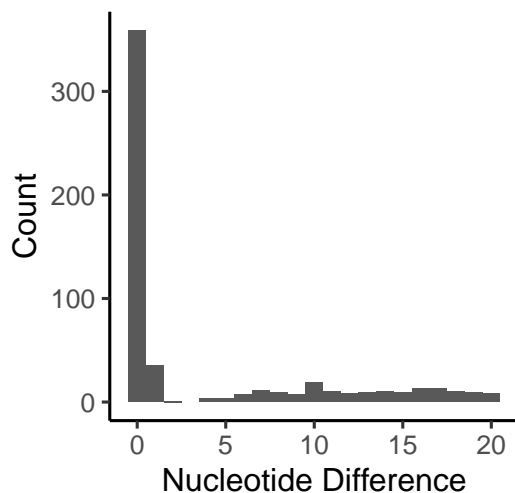
### IGHV1-45\*02

11 sequences assigned  
7 (63.6%) exact matches, in which:  
7 unique CDR3  
3 unique J



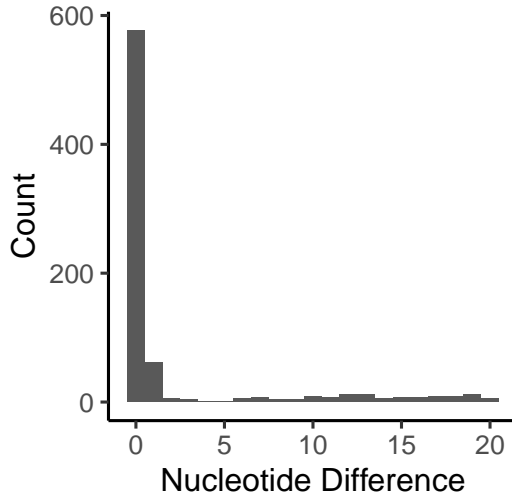
### IGHV1-3\*01

629 sequences assigned  
359 (57.1%) exact matches, in which:  
358 unique CDR3  
6 unique J



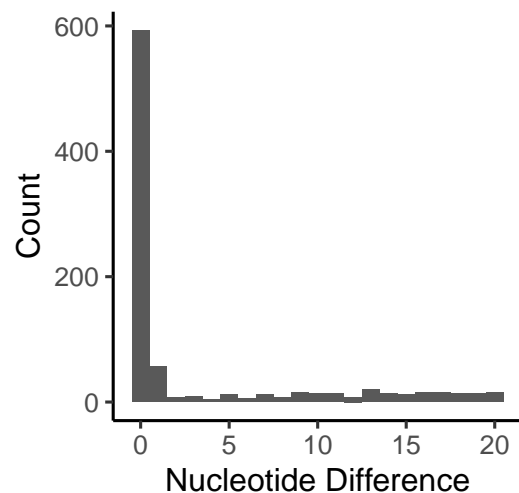
### IGHV1-18\*01\_A196G

875 sequences assigned  
577 (65.9%) exact matches, in which:  
573 unique CDR3  
6 unique J



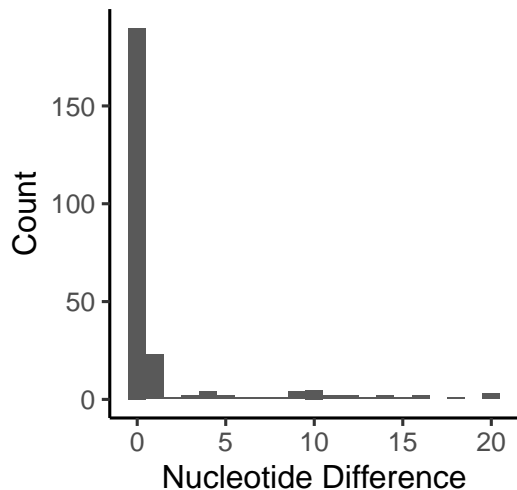
### IGHV1-46\*01

981 sequences assigned  
593 (60.4%) exact matches, in which:  
588 unique CDR3  
7 unique J



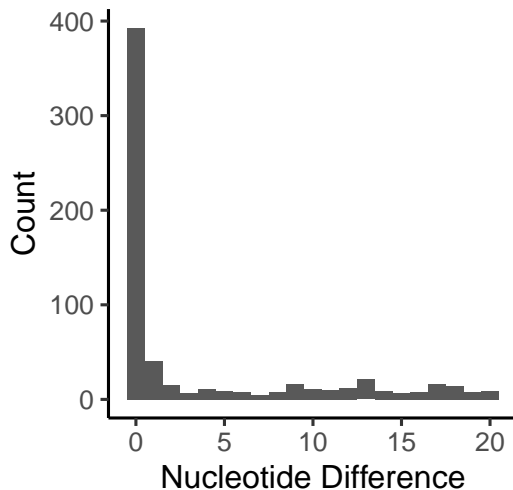
### IGHV1–58\*01

289 sequences assigned  
190 (65.7%) exact matches, in which:  
190 unique CDR3  
7 unique J



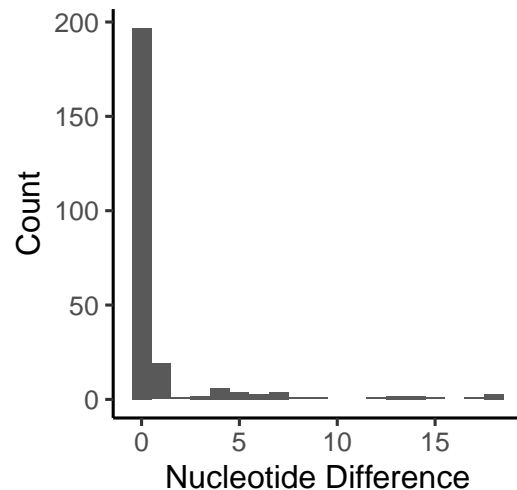
### IGHV2–5\*01

677 sequences assigned  
393 (58.1%) exact matches, in which:  
390 unique CDR3  
6 unique J



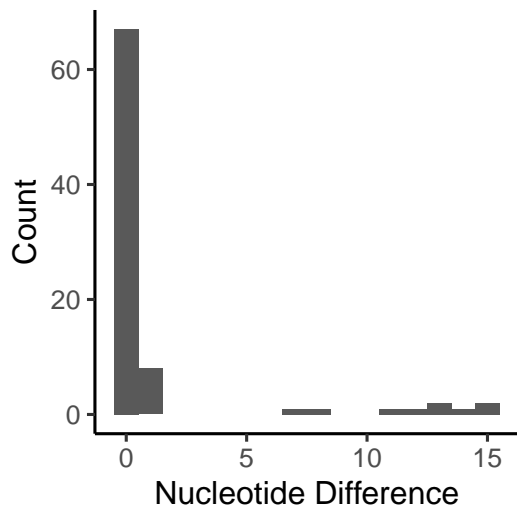
### IGHV2–70\*01

264 sequences assigned  
197 (74.6%) exact matches, in which:  
197 unique CDR3  
6 unique J



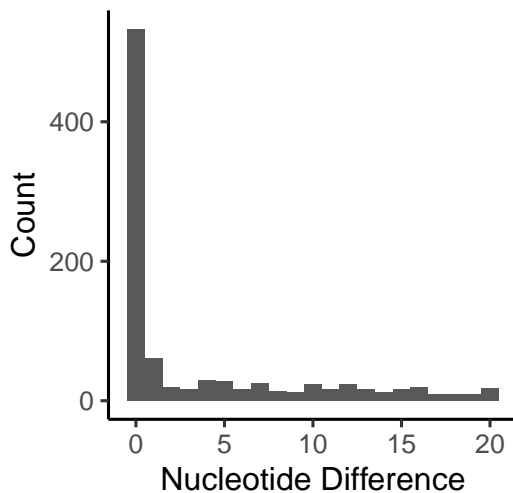
### IGHV1–69–2\*01

91 sequences assigned  
67 (73.6%) exact matches, in which:  
67 unique CDR3  
6 unique J



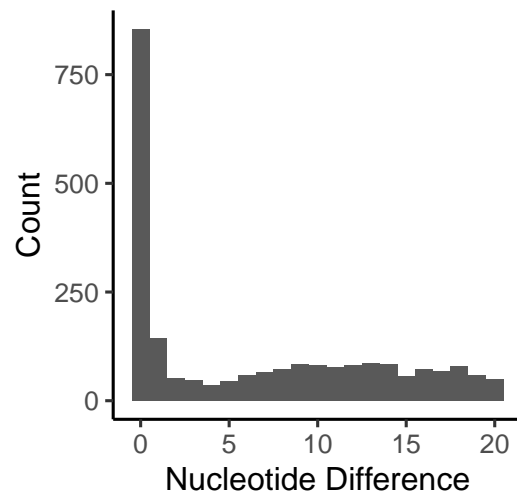
### IGHV2–5\*02

1086 sequences assigned  
533 (49.1%) exact matches, in which:  
527 unique CDR3  
6 unique J



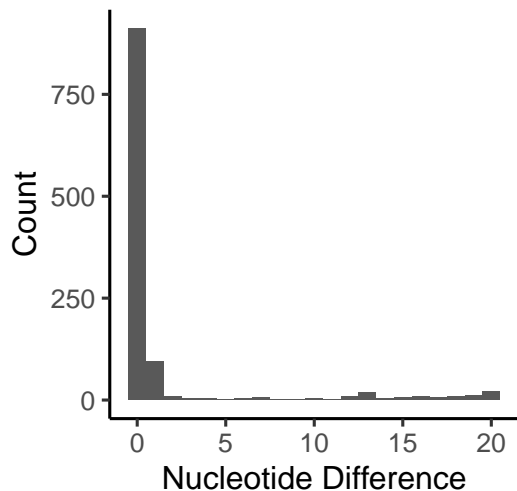
### IGHV3–7\*01

2564 sequences assigned  
855 (33.3%) exact matches, in which:  
853 unique CDR3  
7 unique J



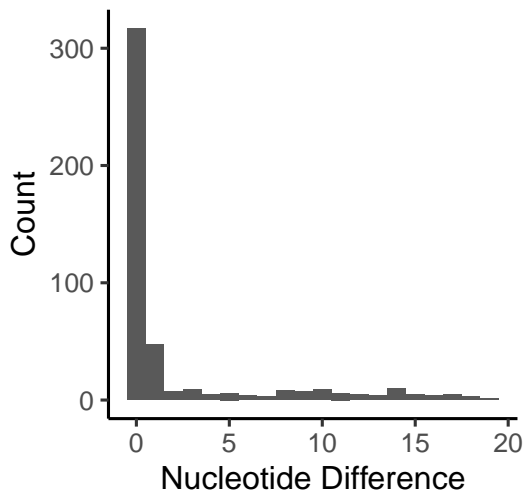
### IGHV1–69\*06

1331 sequences assigned  
912 (68.5%) exact matches, in which:  
900 unique CDR3  
7 unique J



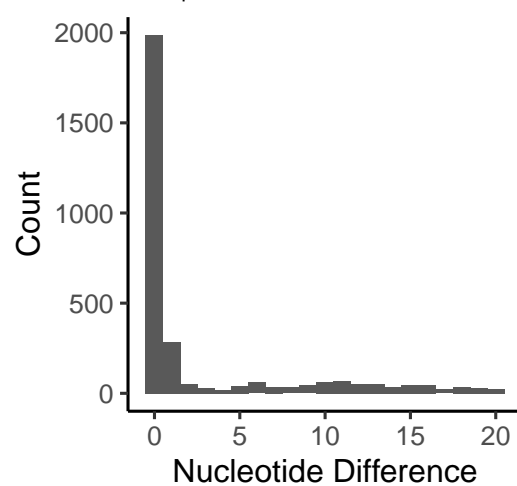
### IGHV2–26\*01

486 sequences assigned  
317 (65.2%) exact matches, in which:  
317 unique CDR3  
7 unique J



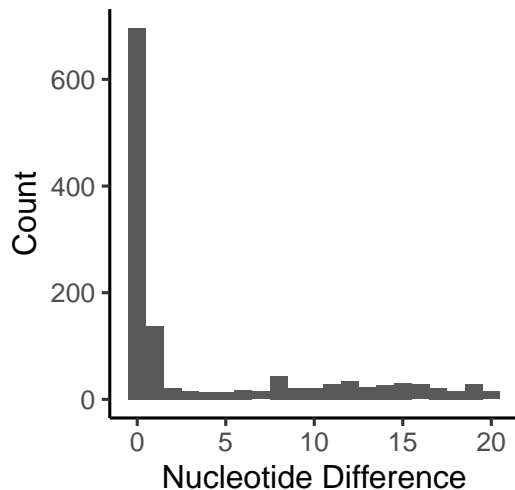
### IGHV3–9\*01

3281 sequences assigned  
1987 (60.6%) exact matches, in which:  
1973 unique CDR3  
7 unique J



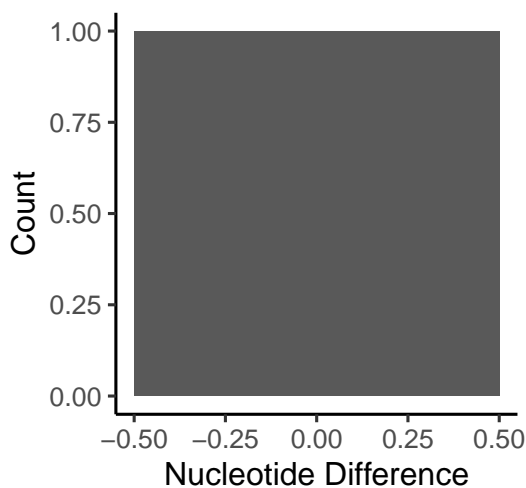
### IGHV3-11\*01

1384 sequences assigned  
697 (50.4%) exact matches, in which:  
693 unique CDR3  
7 unique J



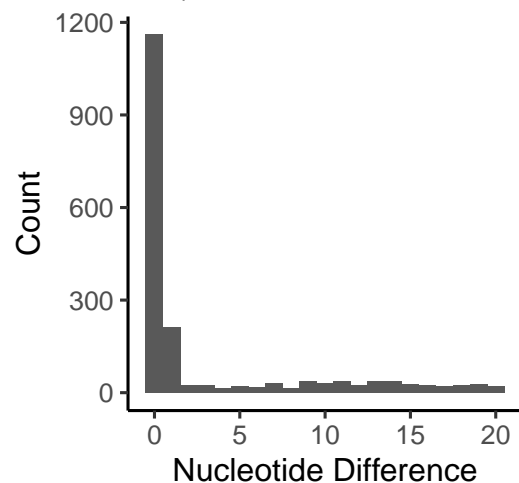
### IGHV3-19\*01

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



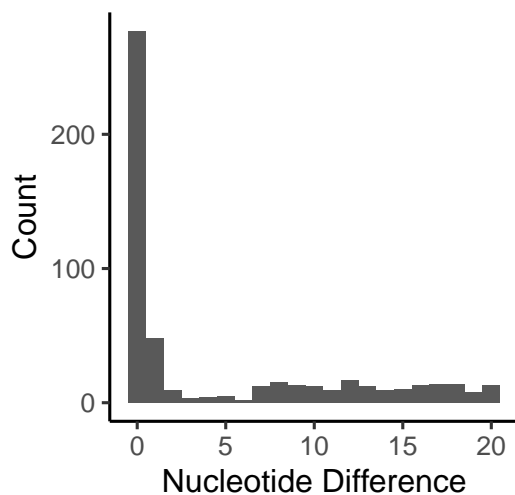
### IGHV3-30-3\*01

2099 sequences assigned  
1161 (55.3%) exact matches, in which:  
1151 unique CDR3  
7 unique J



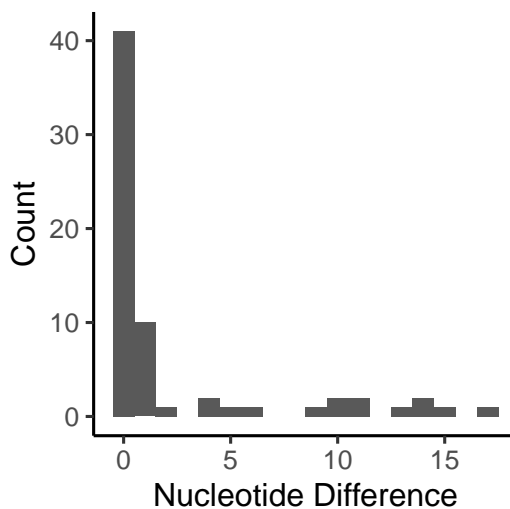
### IGHV3-13\*01

583 sequences assigned  
277 (47.5%) exact matches, in which:  
276 unique CDR3  
7 unique J



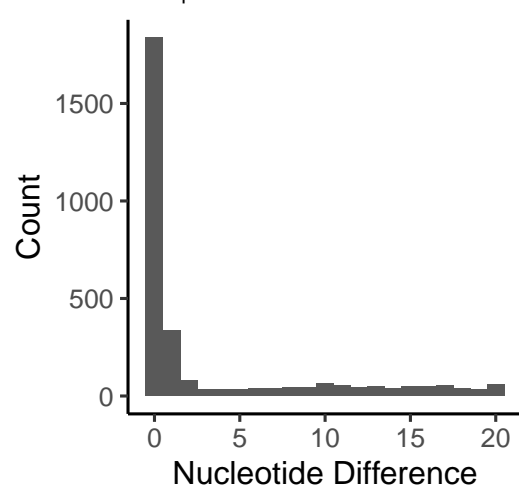
### IGHV3-20\*01

74 sequences assigned  
41 (55.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



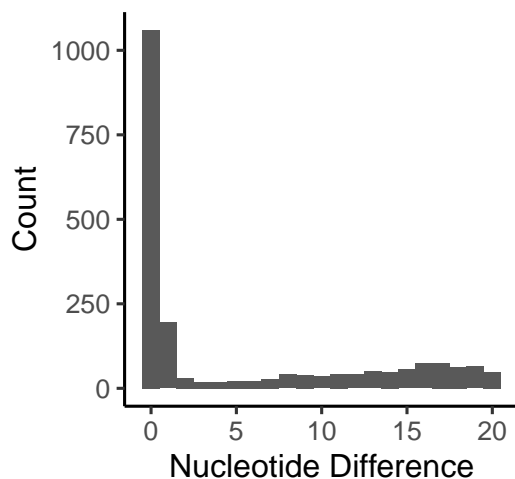
### IGHV3-33\*01

3348 sequences assigned  
1837 (54.9%) exact matches, in which:  
1824 unique CDR3  
7 unique J



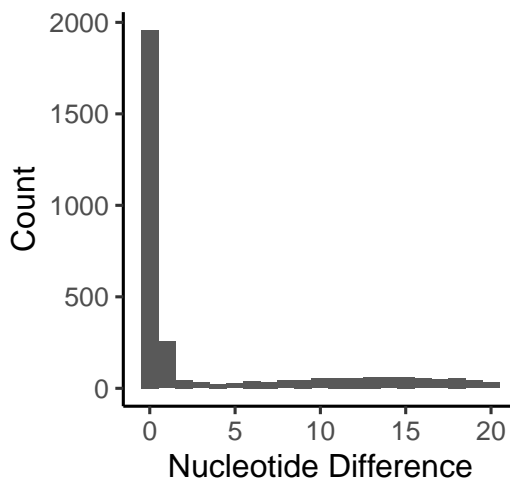
### IGHV3-15\*01

2440 sequences assigned  
1060 (43.4%) exact matches, in which:  
1058 unique CDR3  
7 unique J



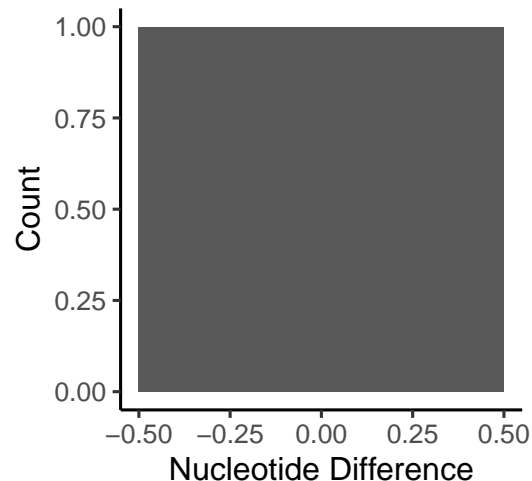
### IGHV3-21\*01

3384 sequences assigned  
1958 (57.9%) exact matches, in which:  
1950 unique CDR3  
7 unique J



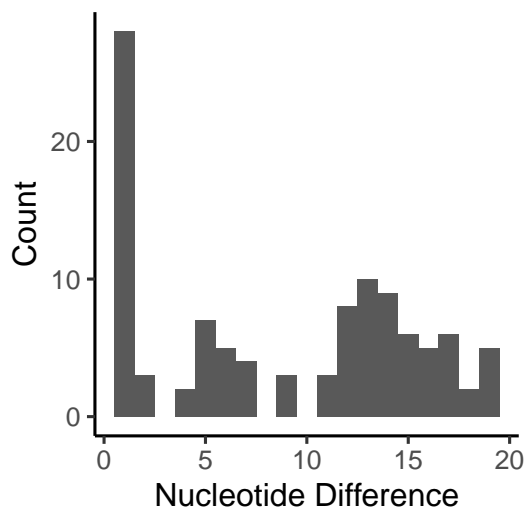
### IGHV3-35\*01

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



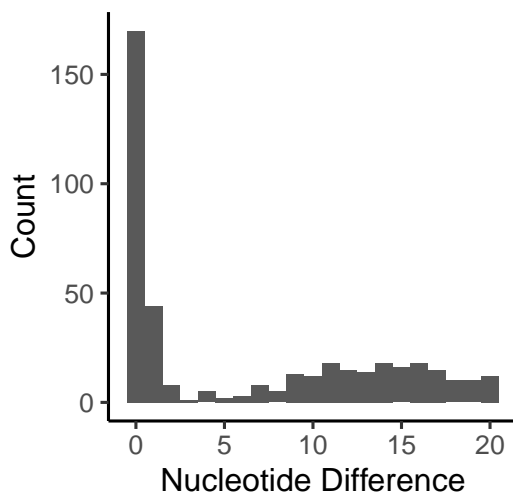
### IGHV3-43\*01

117 sequences assigned  
No exact matches.



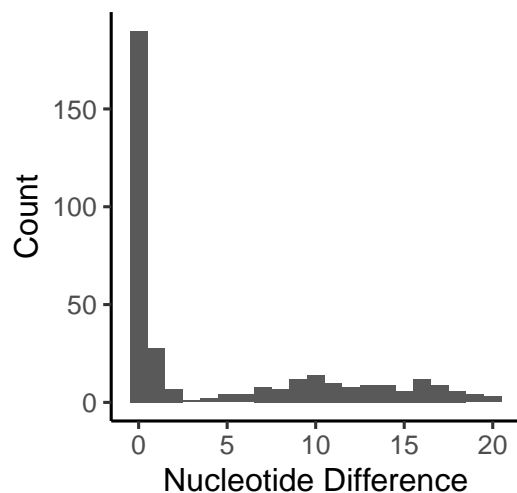
### IGHV3-49\*04

494 sequences assigned  
170 (34.4%) exact matches, in which:  
169 unique CDR3  
6 unique J



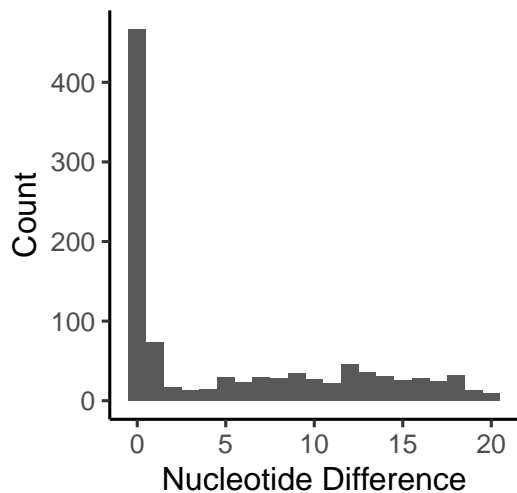
### IGHV3-53\*02

408 sequences assigned  
190 (46.6%) exact matches, in which:  
189 unique CDR3  
6 unique J



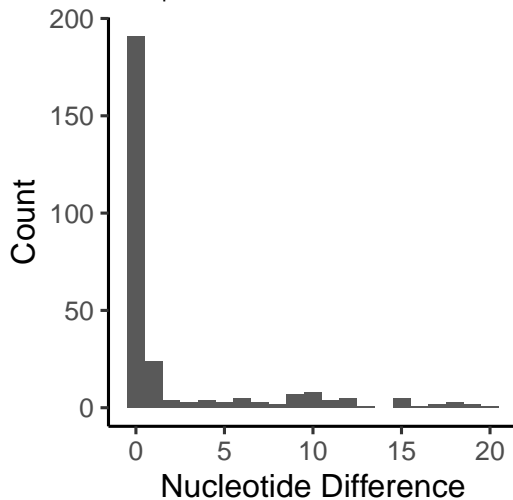
### IGHV3-48\*02

1131 sequences assigned  
467 (41.3%) exact matches, in which:  
466 unique CDR3  
6 unique J



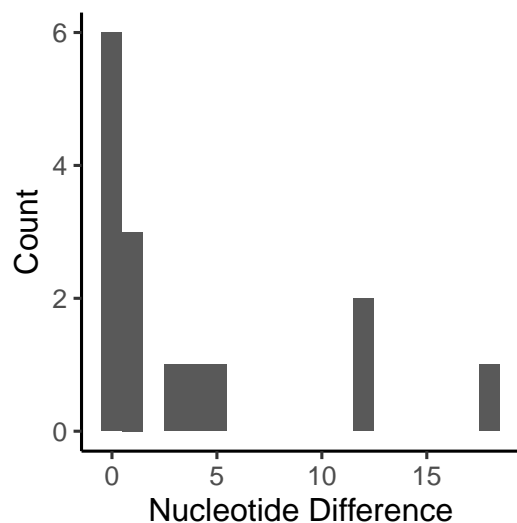
### IGHV3-49\*05

315 sequences assigned  
191 (60.6%) exact matches, in which:  
189 unique CDR3  
6 unique J



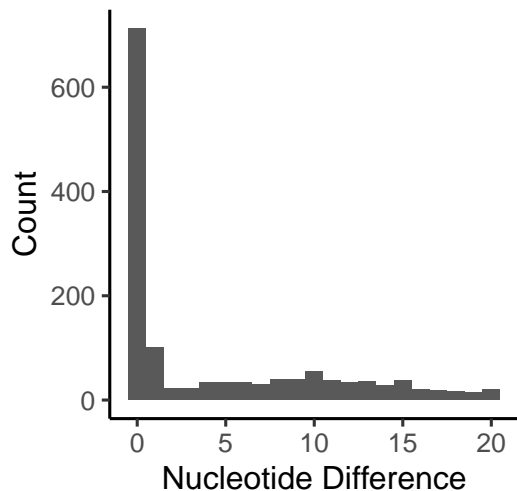
### IGHV3-64\*02

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



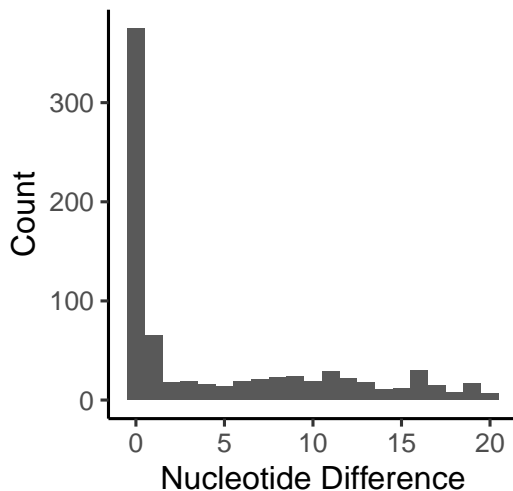
### IGHV3-48\*03

1525 sequences assigned  
713 (46.8%) exact matches, in which:  
709 unique CDR3  
6 unique J



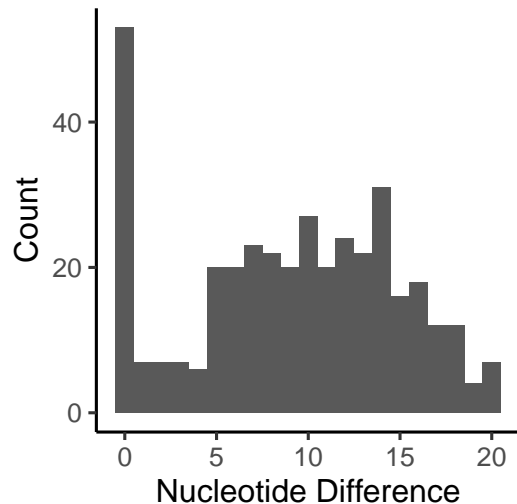
### IGHV3-53\*01

900 sequences assigned  
375 (41.7%) exact matches, in which:  
374 unique CDR3  
7 unique J



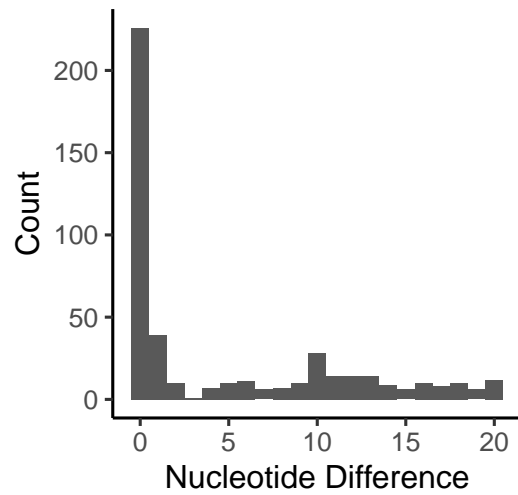
### IGHV3-72\*01

405 sequences assigned  
53 (13.1%) exact matches, in which:  
53 unique CDR3  
7 unique J



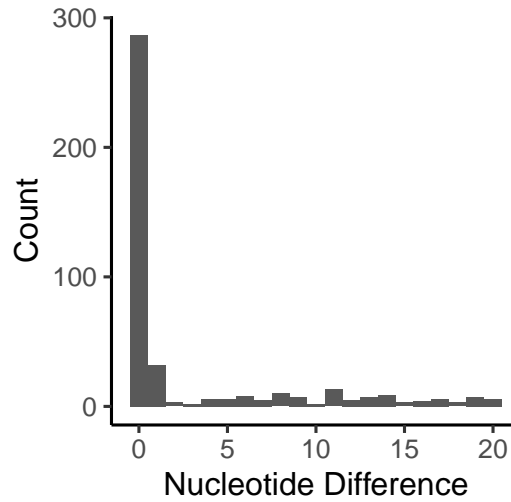
### IGHV3-73\*02

496 sequences assigned  
226 (45.6%) exact matches, in which:  
225 unique CDR3  
7 unique J



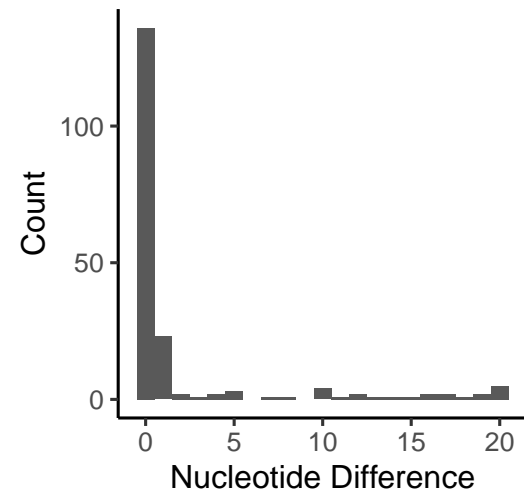
### IGHV4-4\*02

504 sequences assigned  
287 (56.9%) exact matches, in which:  
286 unique CDR3  
6 unique J



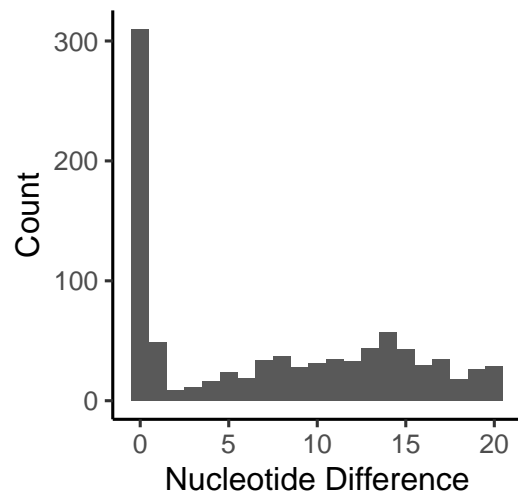
### IGHV4-30-2\*01

218 sequences assigned  
136 (62.4%) exact matches, in which:  
134 unique CDR3  
5 unique J



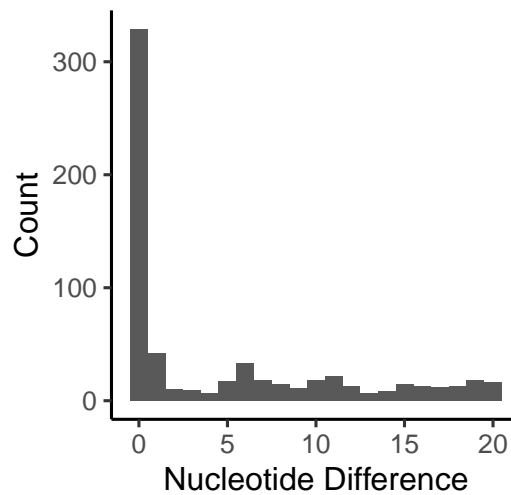
### IGHV3-74\*01

1080 sequences assigned  
310 (28.7%) exact matches, in which:  
310 unique CDR3  
7 unique J



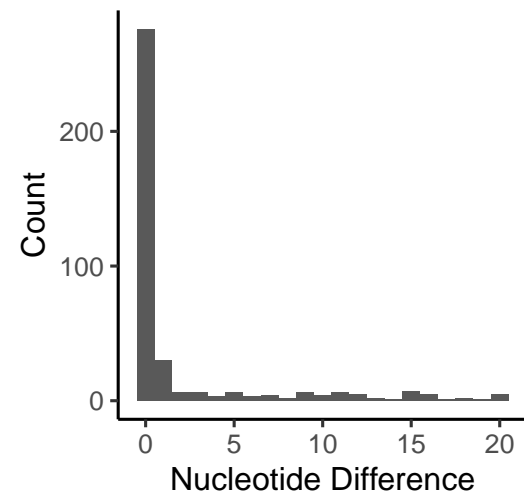
### IGHV4-4\*07

731 sequences assigned  
329 (45%) exact matches, in which:  
328 unique CDR3  
6 unique J



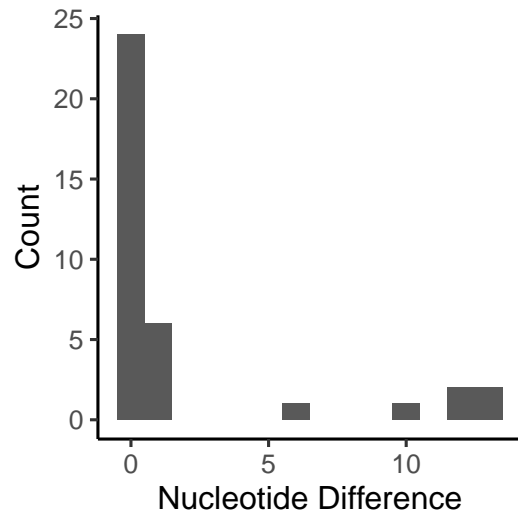
### IGHV4-30-4\*01

425 sequences assigned  
276 (64.9%) exact matches, in which:  
274 unique CDR3  
7 unique J



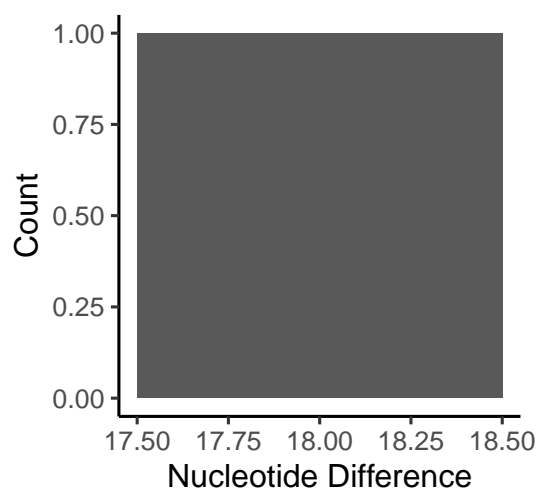
### IGHV3-43D\*04

47 sequences assigned  
24 (51.1%) exact matches, in which:  
24 unique CDR3  
6 unique J



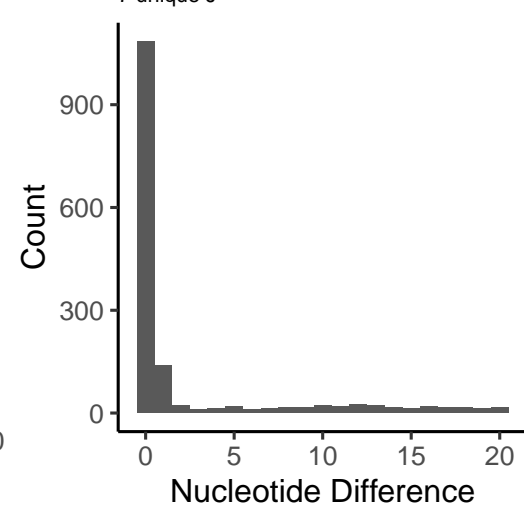
### IGHV4-28\*01

1 sequences assigned  
No exact matches.



### IGHV4-31\*03

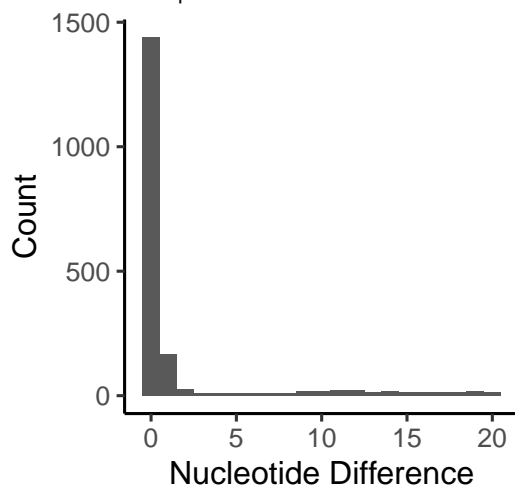
1785 sequences assigned  
1085 (60.8%) exact matches, in which:  
1077 unique CDR3  
7 unique J





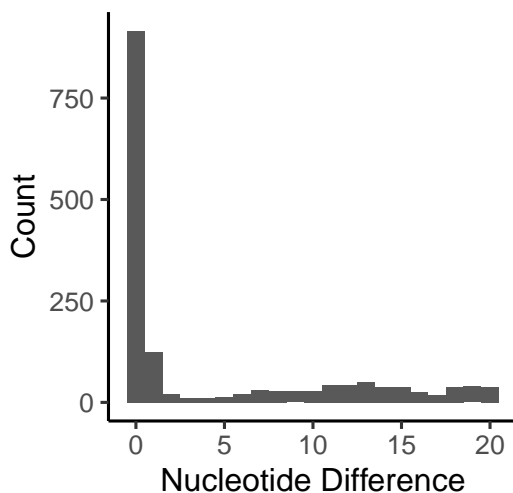
### IGHV4-34\*01

2075 sequences assigned  
1439 (69.3%) exact matches, in which:  
1430 unique CDR3  
7 unique J



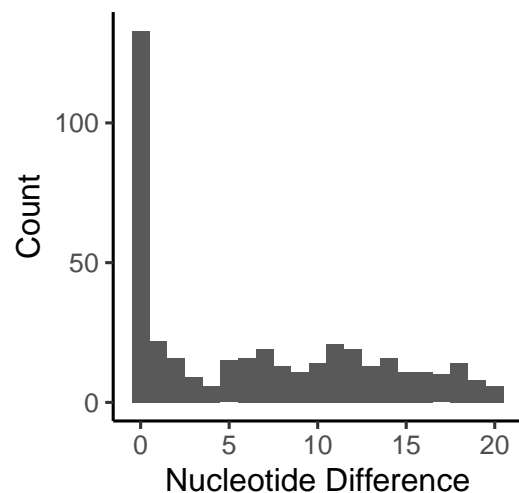
### IGHV4-59\*01

1913 sequences assigned  
916 (47.9%) exact matches, in which:  
914 unique CDR3  
7 unique J



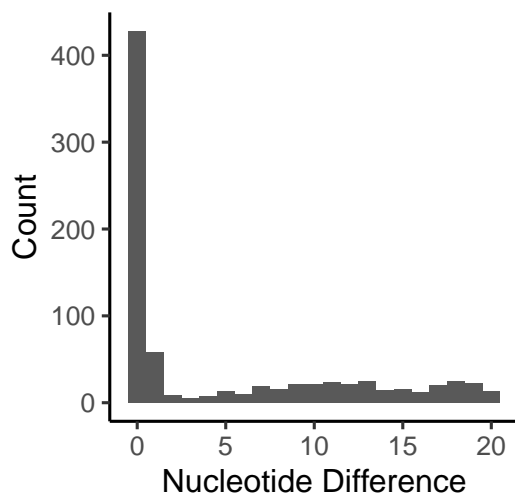
### IGHV6-1\*01

434 sequences assigned  
133 (30.6%) exact matches, in which:  
131 unique CDR3  
6 unique J



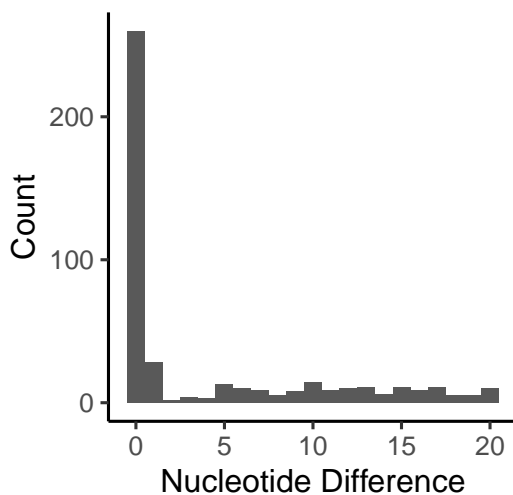
### IGHV4-38-2\*02\_A70G

946 sequences assigned  
428 (45.2%) exact matches, in which:  
422 unique CDR3  
6 unique J



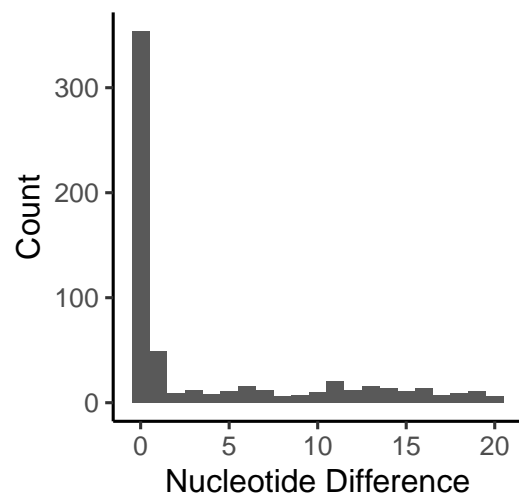
### IGHV4-61\*01

532 sequences assigned  
260 (48.9%) exact matches, in which:  
260 unique CDR3  
7 unique J



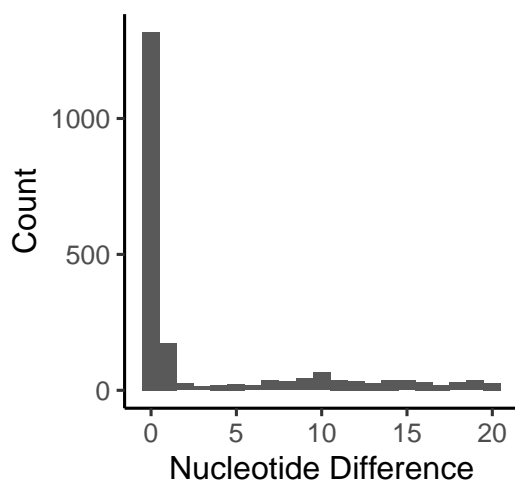
### IGHV7-4-1\*02

670 sequences assigned  
354 (52.8%) exact matches, in which:  
353 unique CDR3  
7 unique J



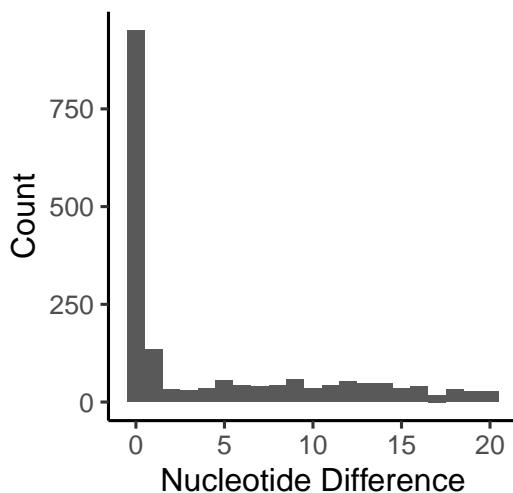
### IGHV4-39\*01

2445 sequences assigned  
1318 (53.9%) exact matches, in which:  
1312 unique CDR3  
7 unique J

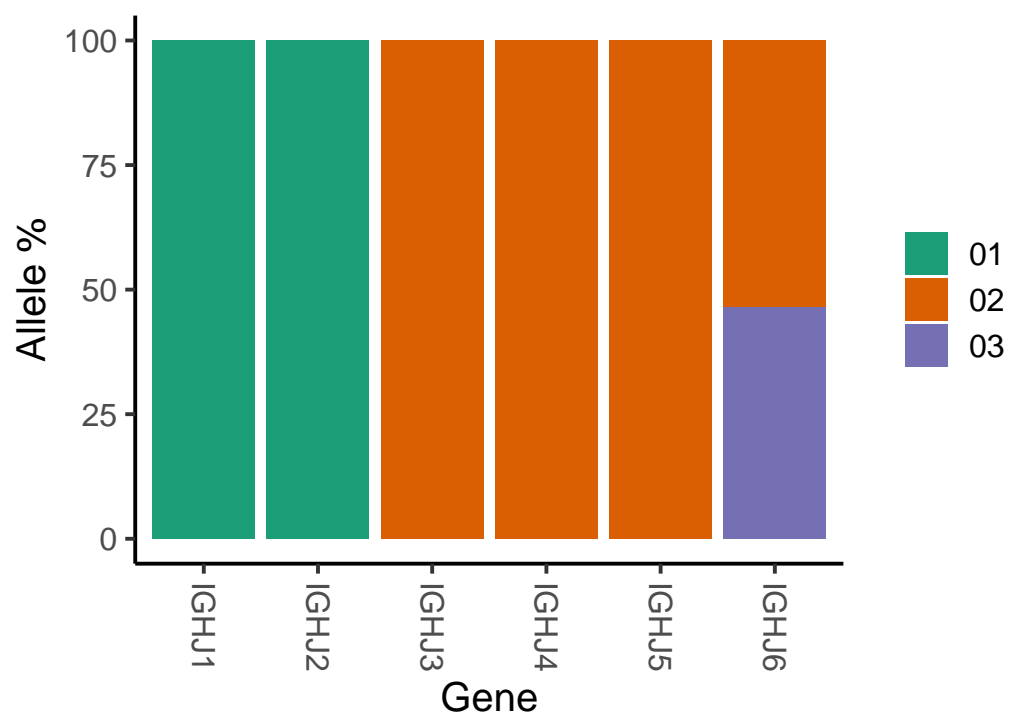


### IGHV5-51\*01

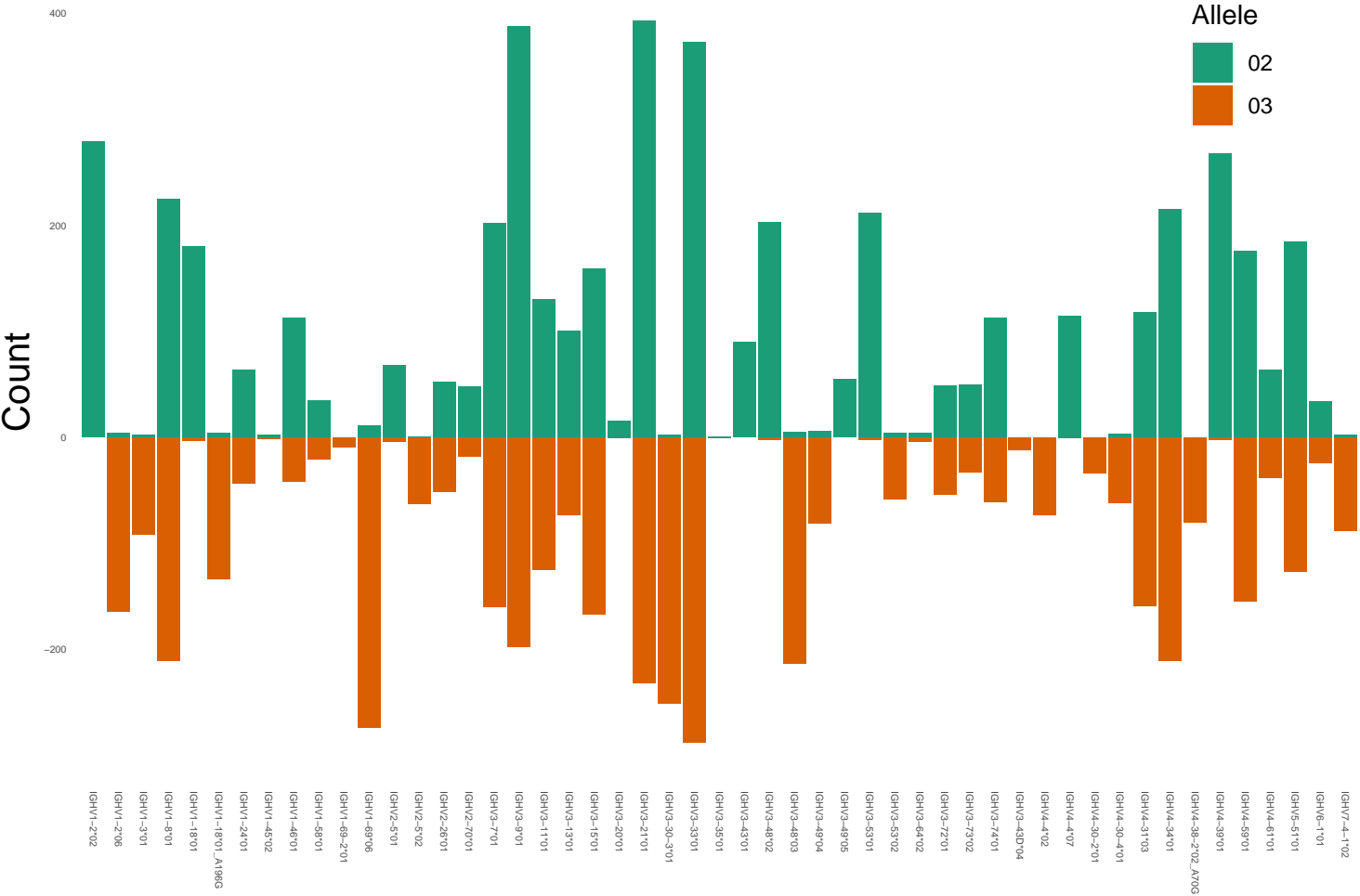
2008 sequences assigned  
951 (47.4%) exact matches, in which:  
944 unique CDR3  
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

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