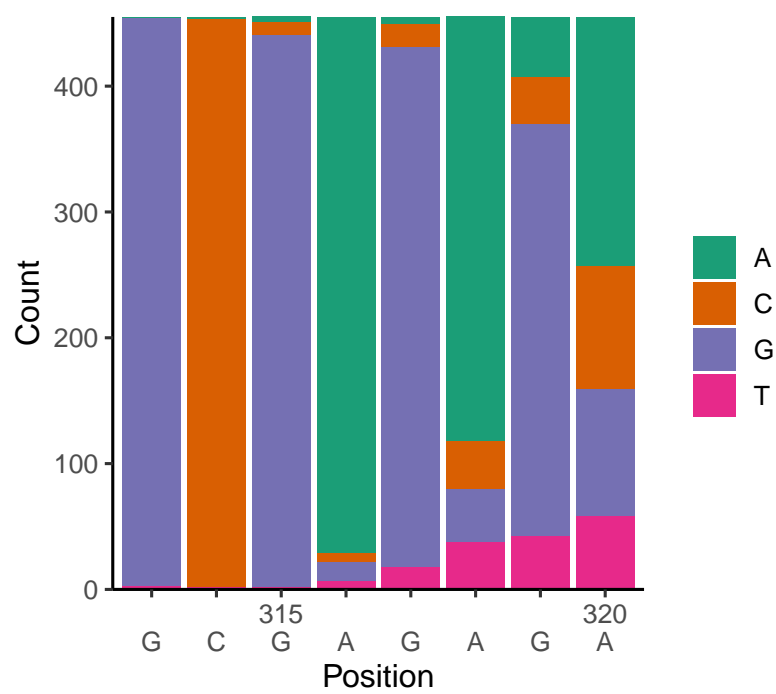
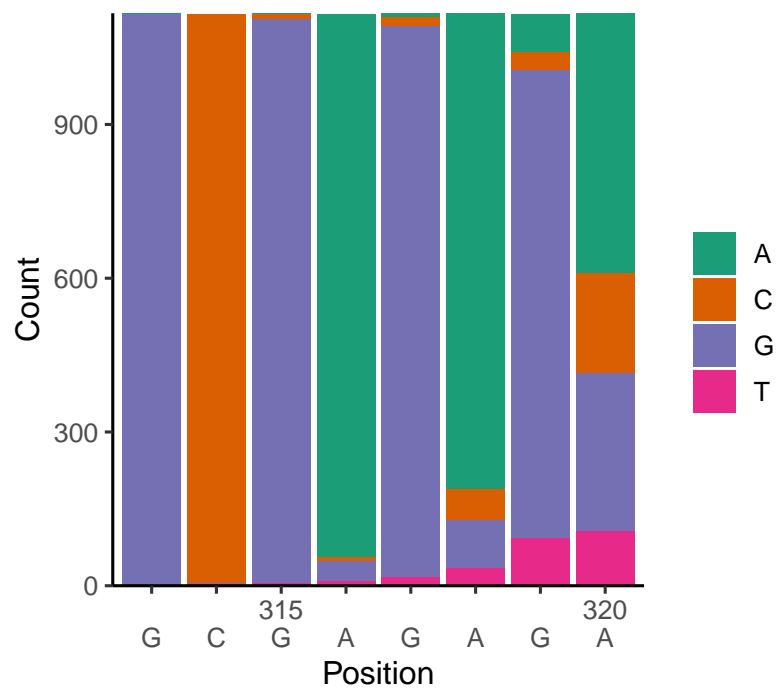


Gene IGHV1-69\*08\_C191T



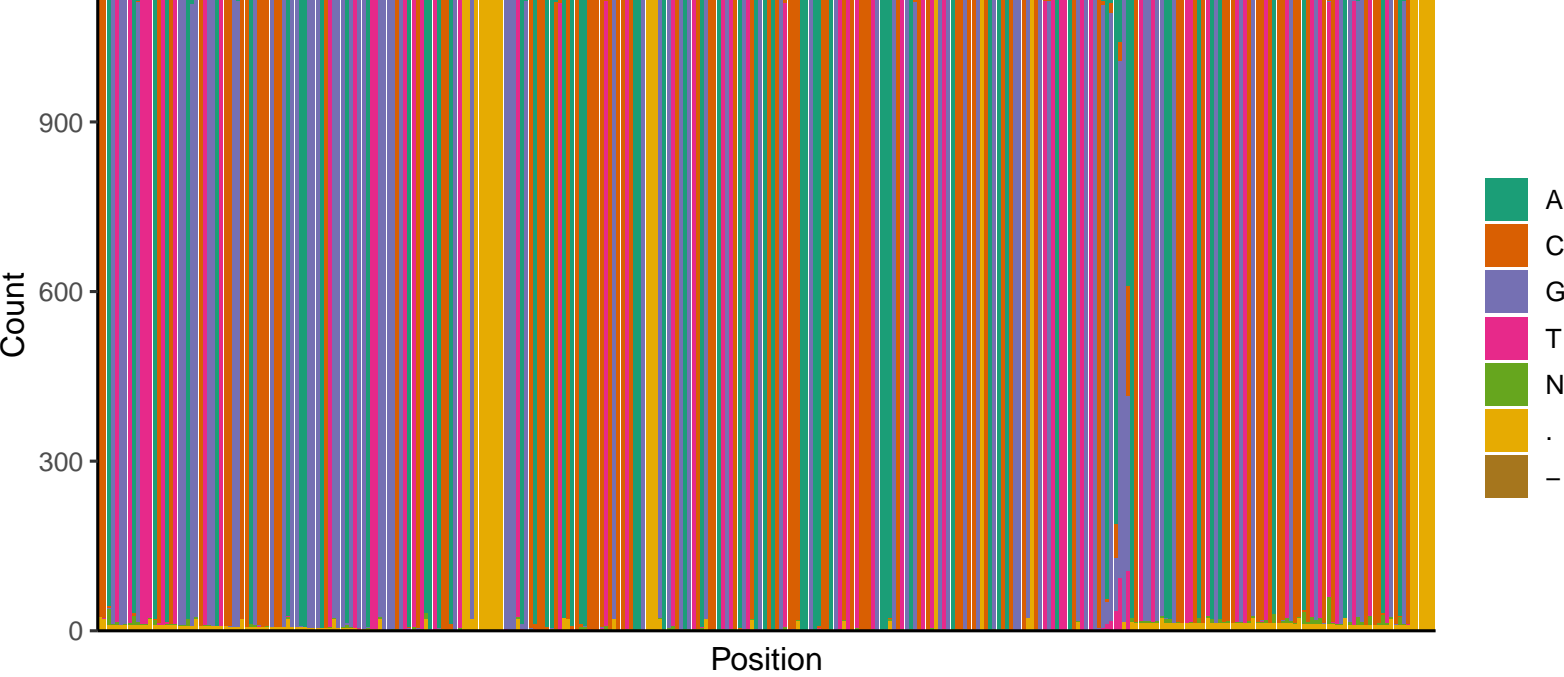
Gene IGHV4-61\*02\_A234G



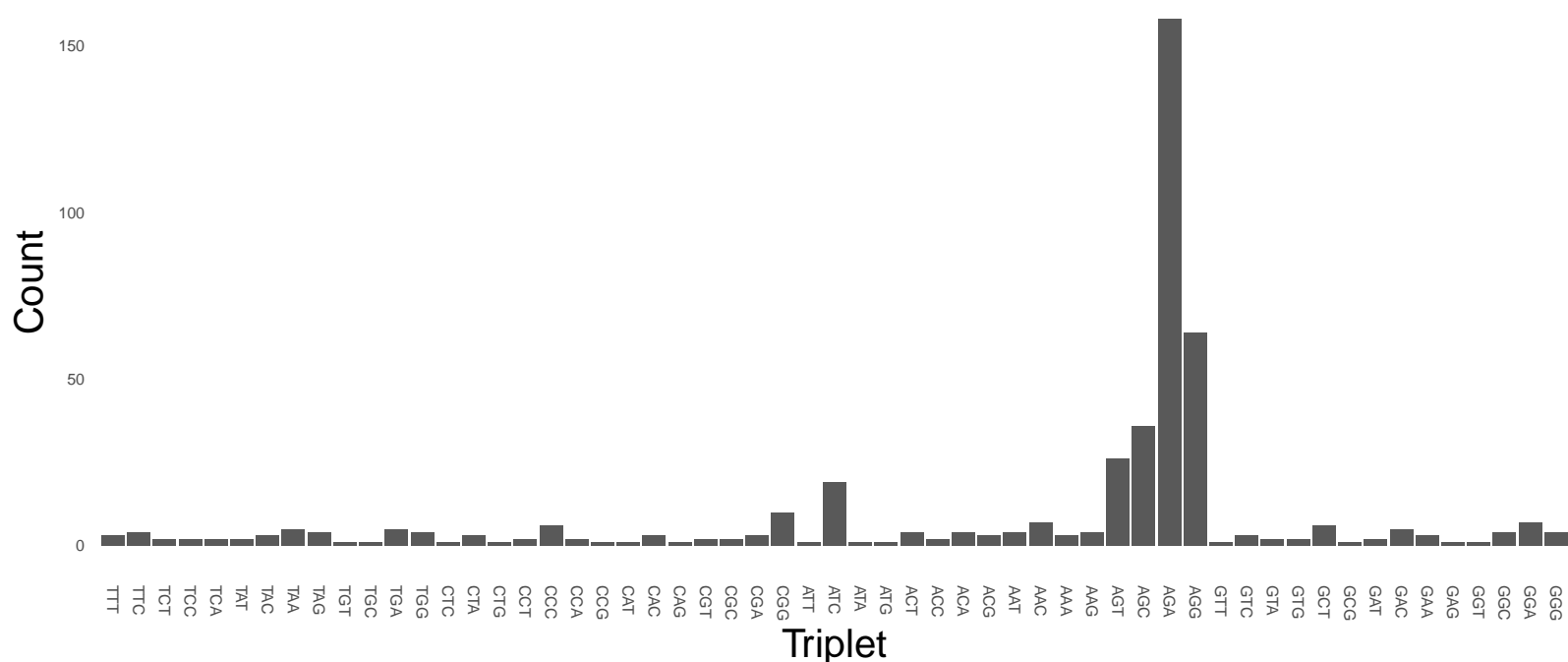
Gene IGHV1-69\*08\_C191T



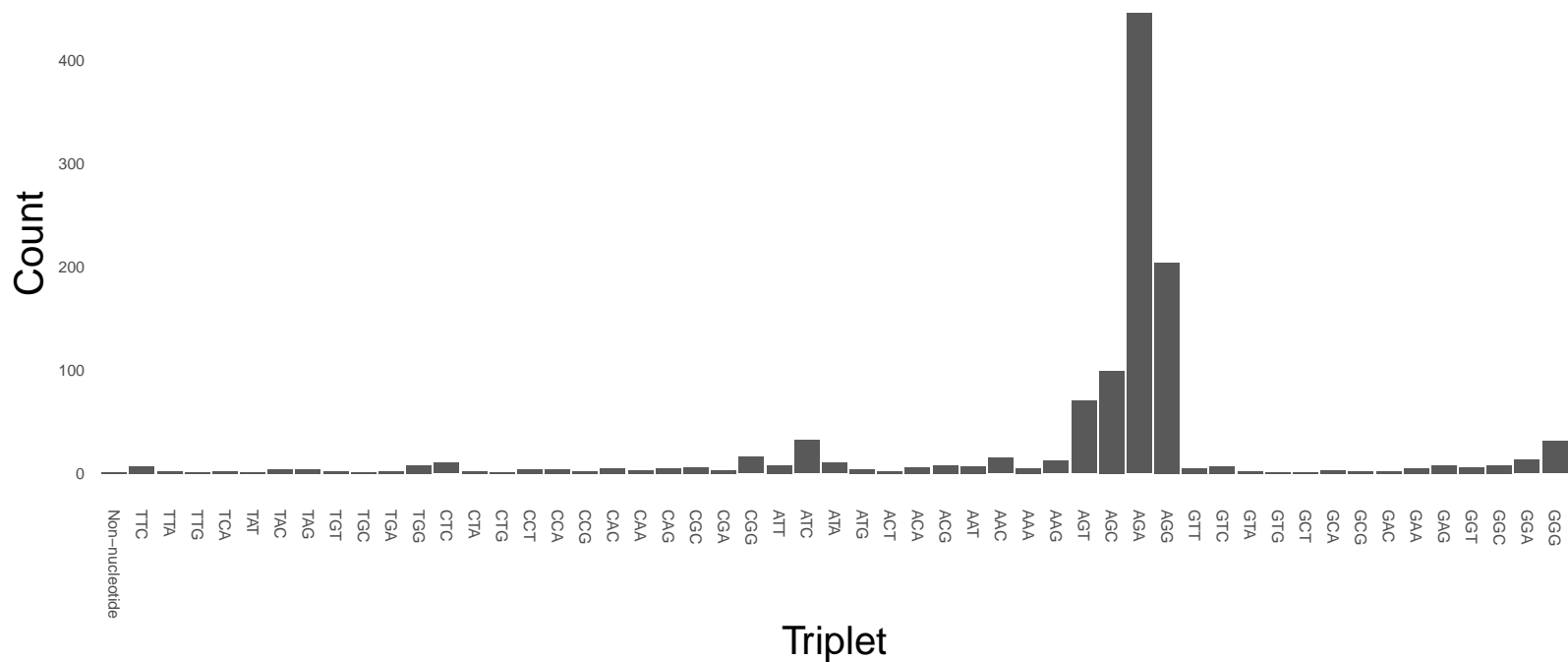
Gene IGHV4-61\*02\_A234G



IGHV1-69\*08\_C191T- Final 3 nucleotides as a triplet

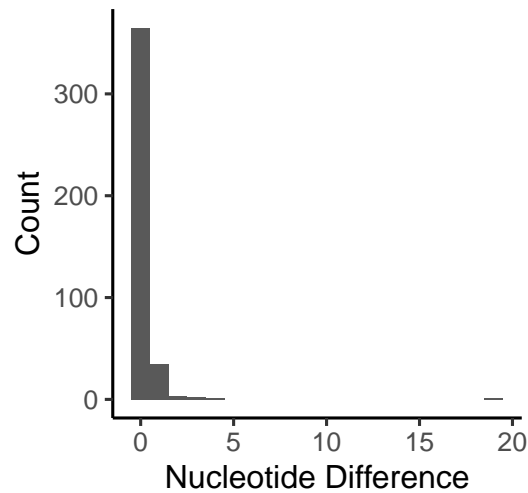


IGHV4-61\*02\_A234G- Final 3 nucleotides as a triplet



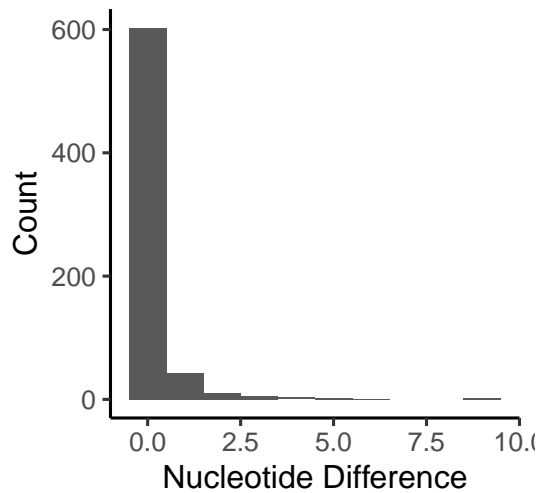
### IGHV1-2\*04

408 sequences assigned  
365 (89.5%) exact matches, in which:  
350 unique CDR3  
6 unique J



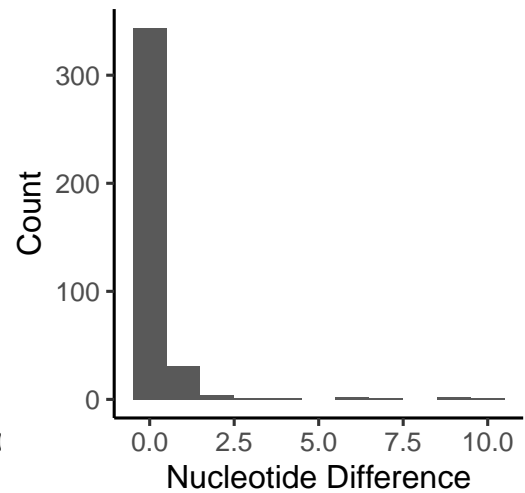
### IGHV1-18\*01

670 sequences assigned  
603 (90%) exact matches, in which:  
585 unique CDR3  
6 unique J



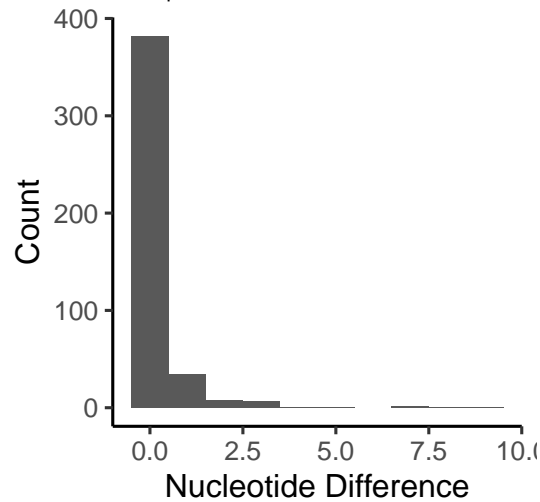
### IGHV1-46\*01

387 sequences assigned  
344 (88.9%) exact matches, in which:  
327 unique CDR3  
6 unique J



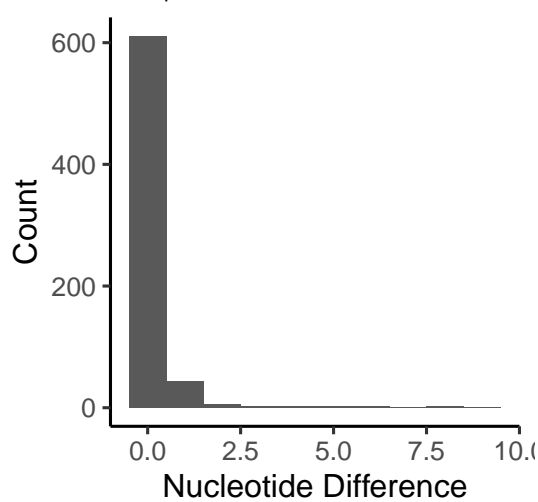
### IGHV1-3\*01

437 sequences assigned  
382 (87.4%) exact matches, in which:  
367 unique CDR3  
6 unique J



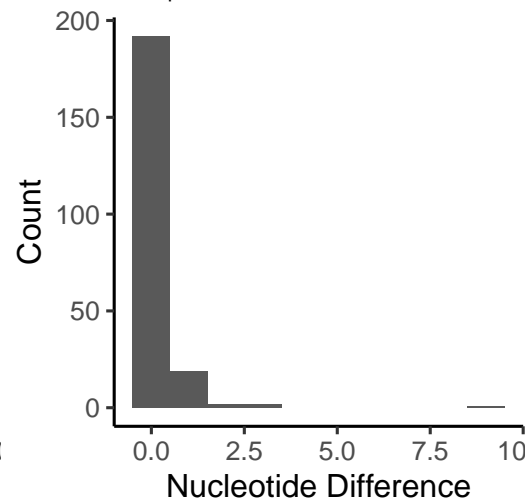
### IGHV1-18\*04

675 sequences assigned  
611 (90.5%) exact matches, in which:  
589 unique CDR3  
6 unique J



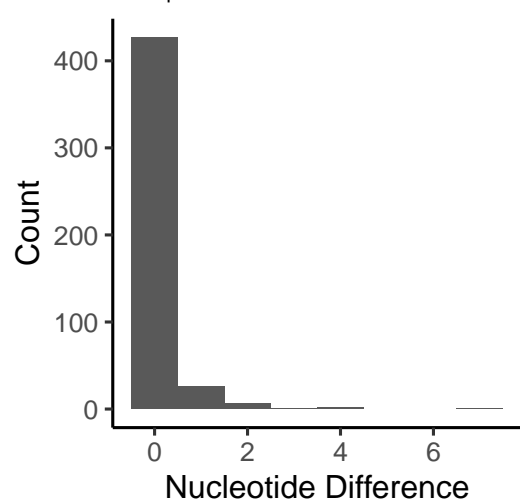
### IGHV1-46\*03

216 sequences assigned  
192 (88.9%) exact matches, in which:  
187 unique CDR3  
6 unique J



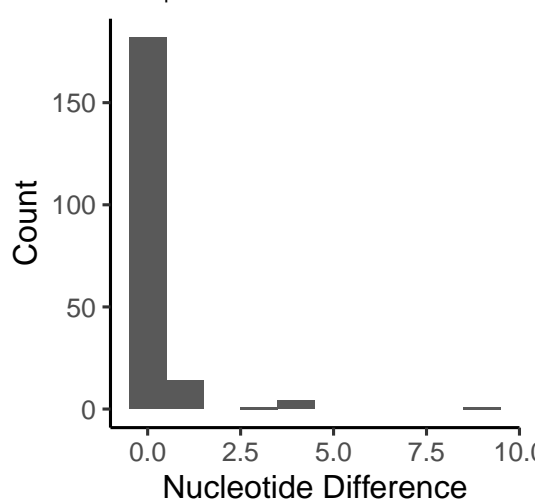
### IGHV1-8\*01

463 sequences assigned  
427 (92.2%) exact matches, in which:  
402 unique CDR3  
6 unique J



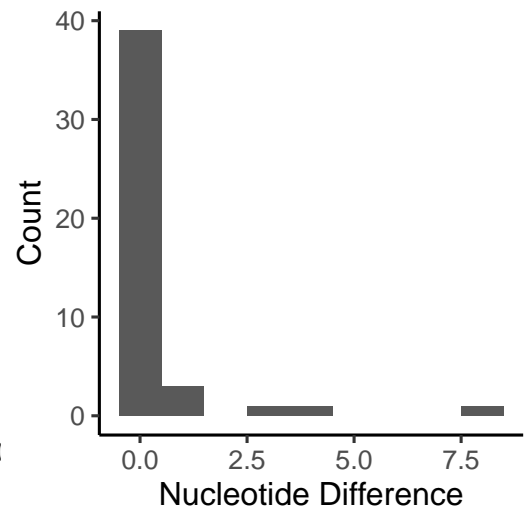
### IGHV1-24\*01

202 sequences assigned  
182 (90.1%) exact matches, in which:  
175 unique CDR3  
6 unique J



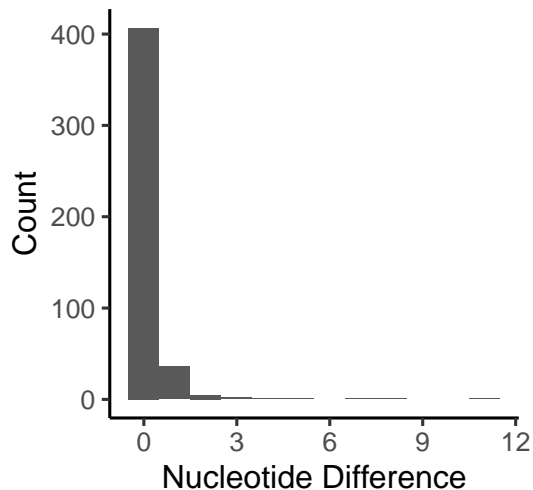
### IGHV1-58\*02

45 sequences assigned  
39 (86.7%) exact matches, in which:  
37 unique CDR3  
6 unique J



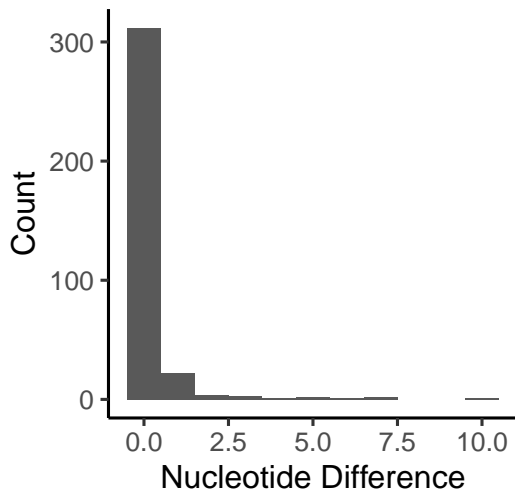
### IGHV1–69\*08\_C191T

455 sequences assigned  
407 (89.5%) exact matches, in which:  
382 unique CDR3  
6 unique J



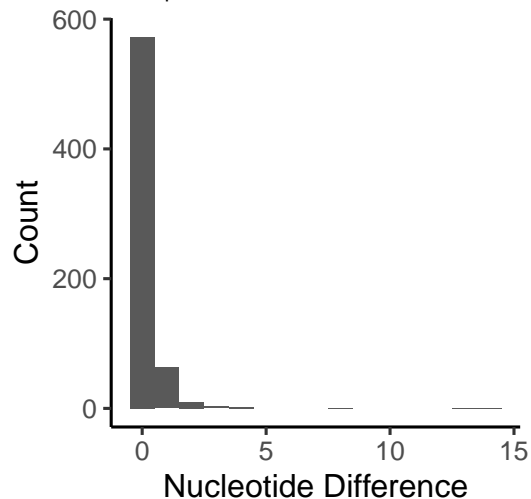
### IGHV2–26\*01

348 sequences assigned  
312 (89.7%) exact matches, in which:  
301 unique CDR3  
5 unique J



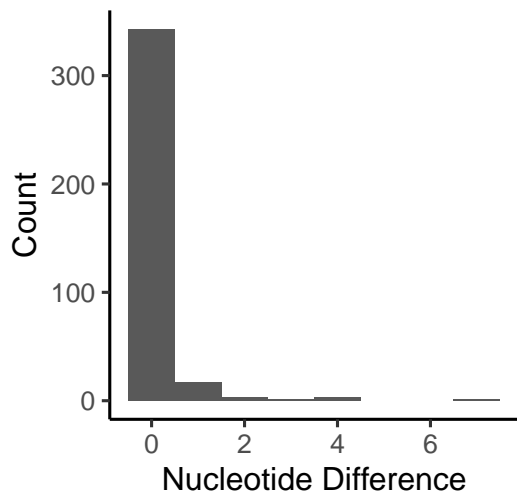
### IGHV3–7\*03

654 sequences assigned  
573 (87.6%) exact matches, in which:  
535 unique CDR3  
6 unique J



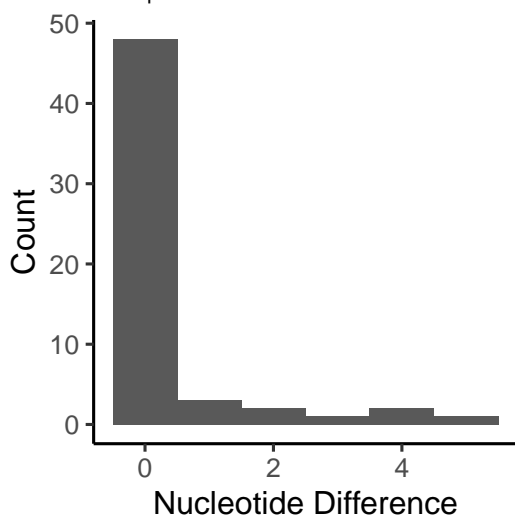
### IGHV2–5\*01

368 sequences assigned  
343 (93.2%) exact matches, in which:  
332 unique CDR3  
6 unique J



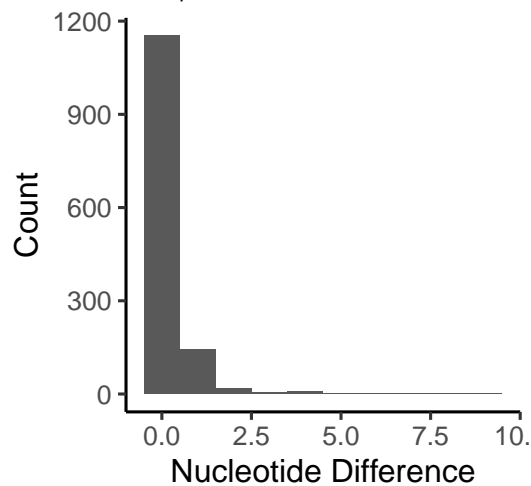
### IGHV2–70\*01

57 sequences assigned  
48 (84.2%) exact matches, in which:  
48 unique CDR3  
4 unique J



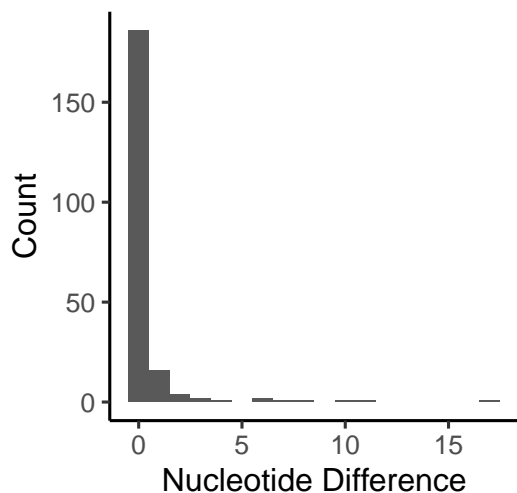
### IGHV3–9\*01

1340 sequences assigned  
1153 (86%) exact matches, in which:  
1045 unique CDR3  
6 unique J



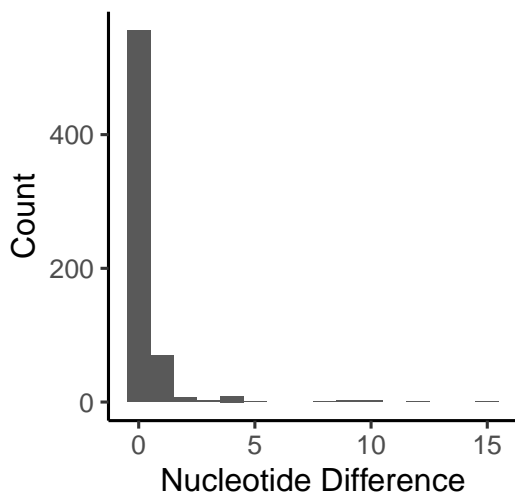
### IGHV2–5\*02

216 sequences assigned  
186 (86.1%) exact matches, in which:  
175 unique CDR3  
6 unique J



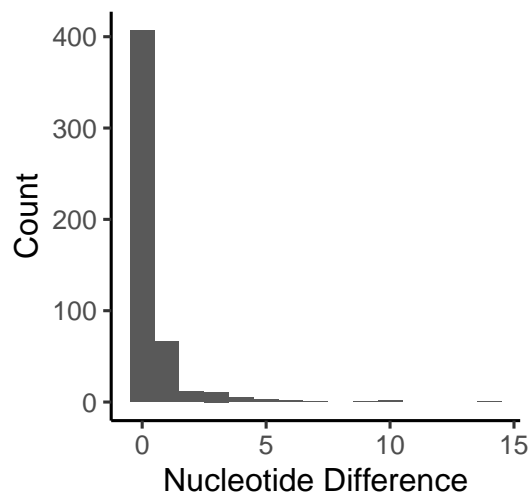
### IGHV3–7\*01

653 sequences assigned  
556 (85.1%) exact matches, in which:  
522 unique CDR3  
6 unique J



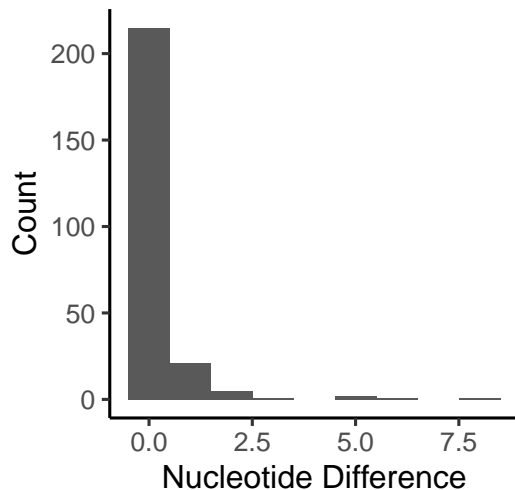
### IGHV3–11\*01

512 sequences assigned  
407 (79.5%) exact matches, in which:  
383 unique CDR3  
6 unique J



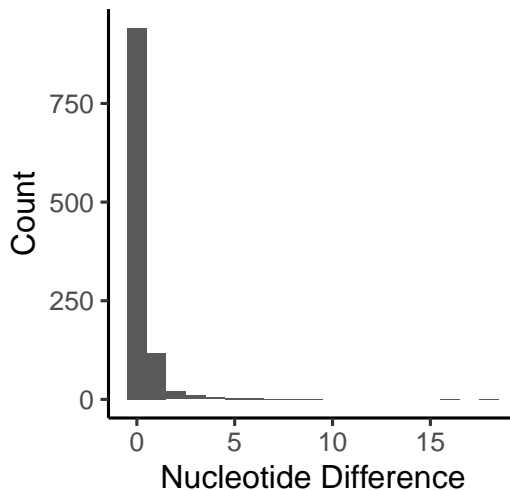
### IGHV3-11\*06

246 sequences assigned  
215 (87.4%) exact matches, in which:  
197 unique CDR3  
6 unique J



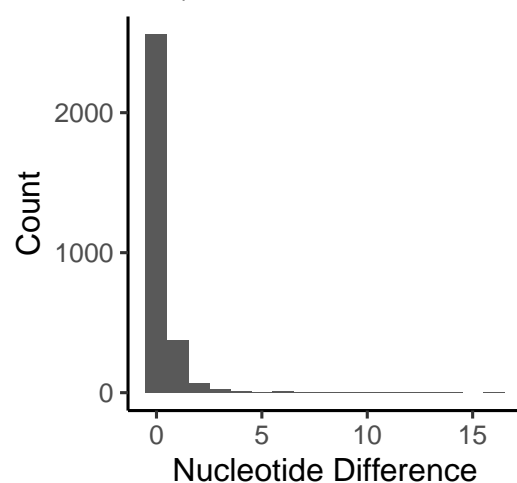
### IGHV3-15\*01

1111 sequences assigned  
942 (84.8%) exact matches, in which:  
876 unique CDR3  
6 unique J



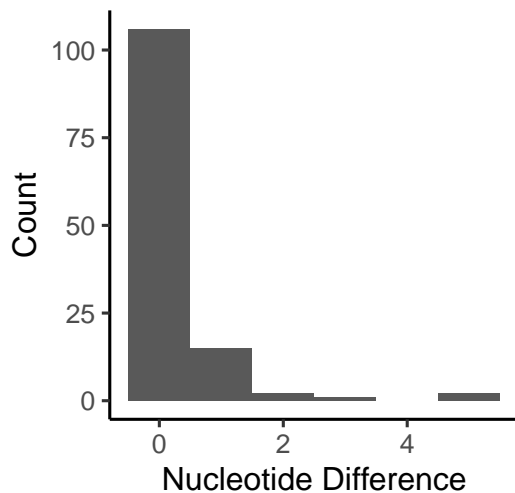
### IGHV3-30-3\*01

3075 sequences assigned  
2559 (83.2%) exact matches, in which:  
2365 unique CDR3  
6 unique J



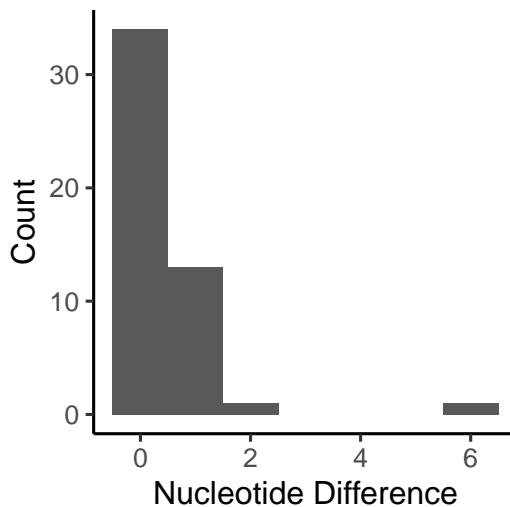
### IGHV3-13\*01

126 sequences assigned  
106 (84.1%) exact matches, in which:  
103 unique CDR3  
6 unique J



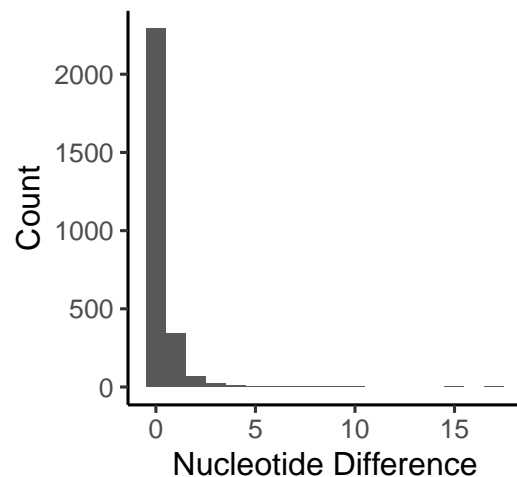
### IGHV3-20\*01

49 sequences assigned  
34 (69.4%) exact matches, in which:  
32 unique CDR3  
6 unique J



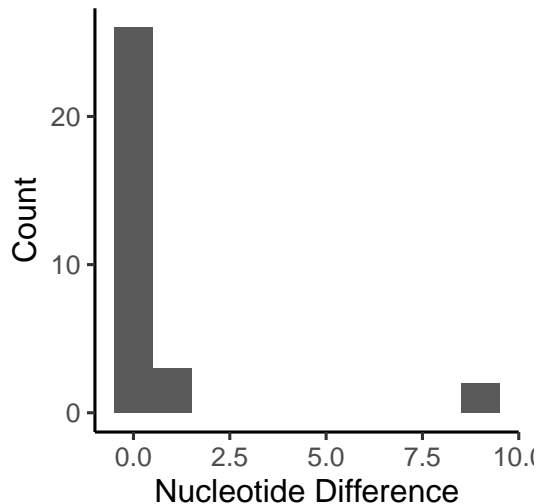
### IGHV3-33\*01

2755 sequences assigned  
2291 (83.2%) exact matches, in which:  
2109 unique CDR3  
6 unique J



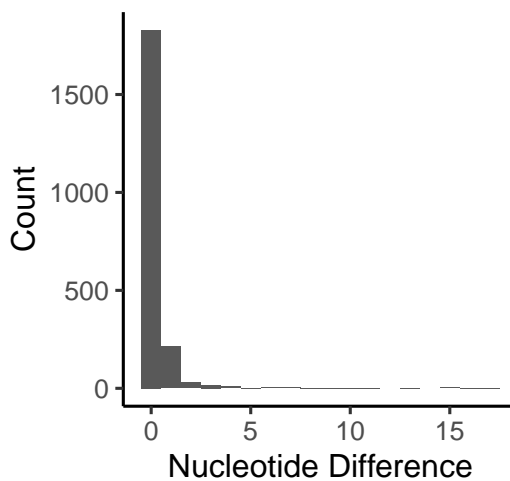
### IGHV3-13\*05

31 sequences assigned  
26 (83.9%) exact matches, in which:  
24 unique CDR3  
5 unique J



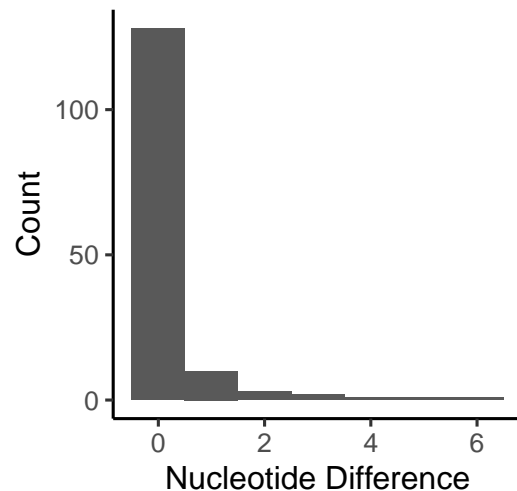
### IGHV3-21\*01

2127 sequences assigned  
1829 (86%) exact matches, in which:  
1688 unique CDR3  
6 unique J



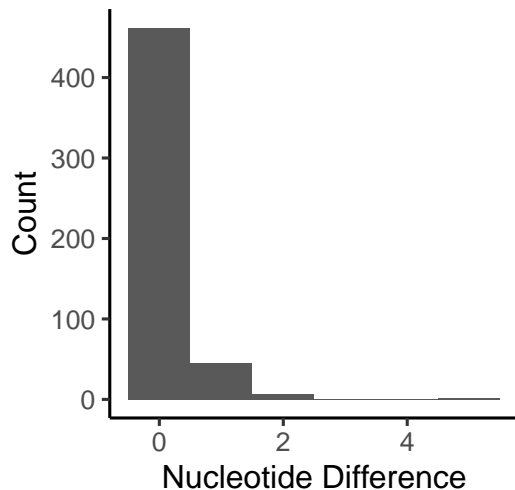
### IGHV3-43\*01

146 sequences assigned  
128 (87.7%) exact matches, in which:  
120 unique CDR3  
5 unique J



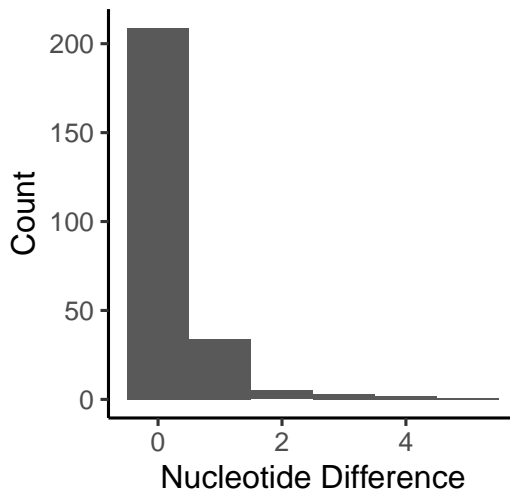
### IGHV3-48\*01

518 sequences assigned  
462 (89.2%) exact matches, in which:  
435 unique CDR3  
6 unique J



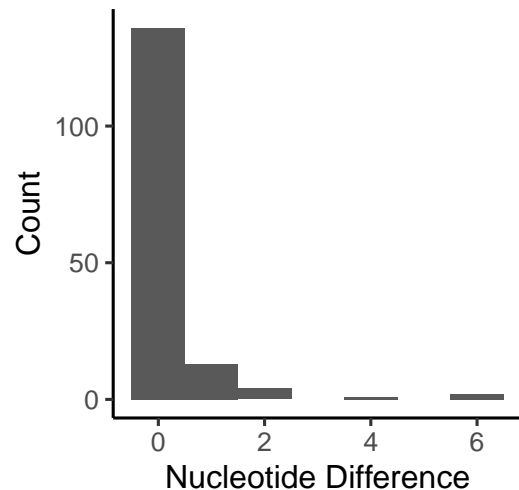
### IGHV3-49\*05

254 sequences assigned  
209 (82.3%) exact matches, in which:  
199 unique CDR3  
5 unique J



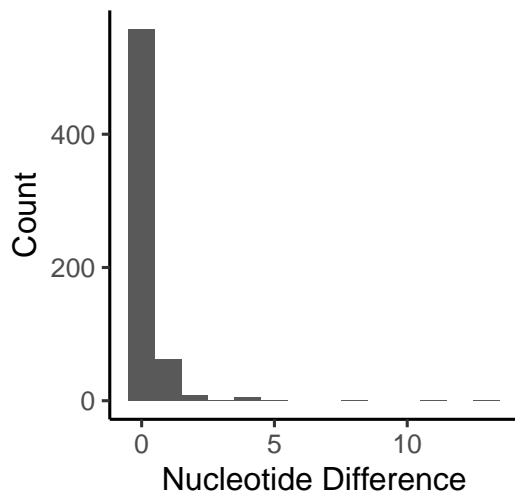
### IGHV3-53\*02

156 sequences assigned  
136 (87.2%) exact matches, in which:  
128 unique CDR3  
6 unique J



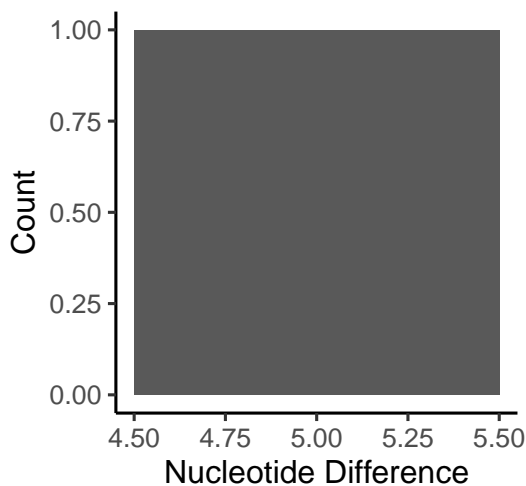
### IGHV3-48\*02

639 sequences assigned  
558 (87.3%) exact matches, in which:  
535 unique CDR3  
6 unique J



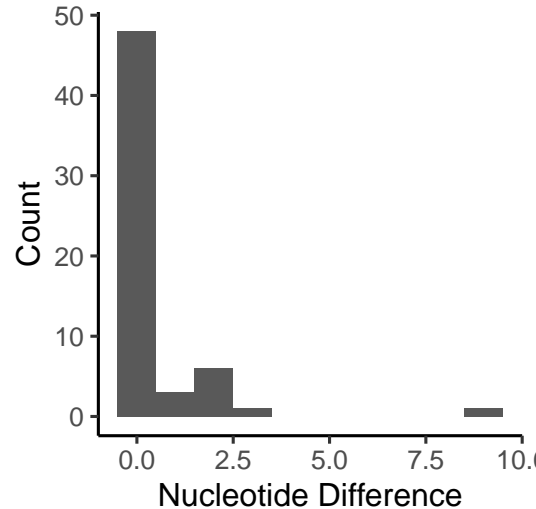
### IGHV3-52\*01

1 sequences assigned  
No exact matches.



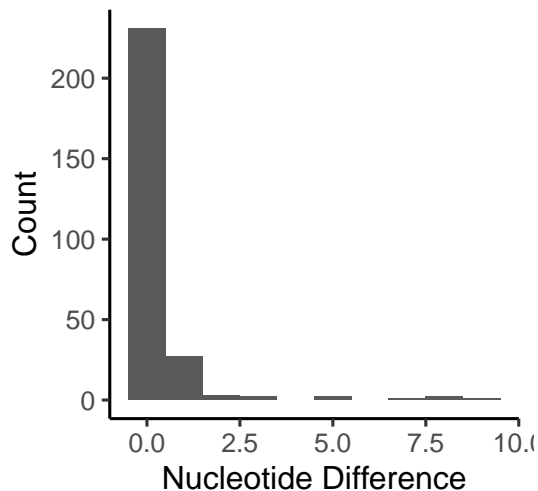
### IGHV3-64\*01

59 sequences assigned  
48 (81.4%) exact matches, in which:  
47 unique CDR3  
6 unique J



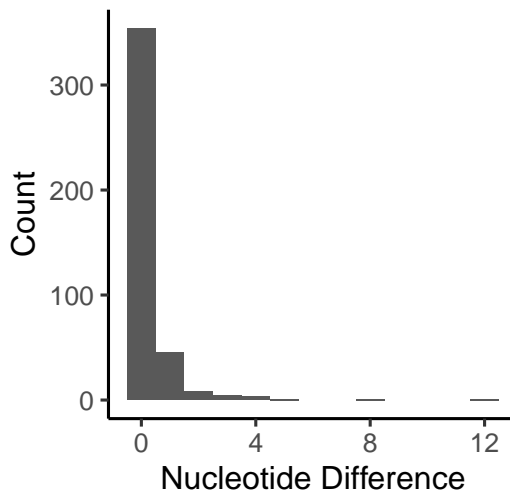
### IGHV3-49\*03

269 sequences assigned  
231 (85.9%) exact matches, in which:  
215 unique CDR3  
6 unique J



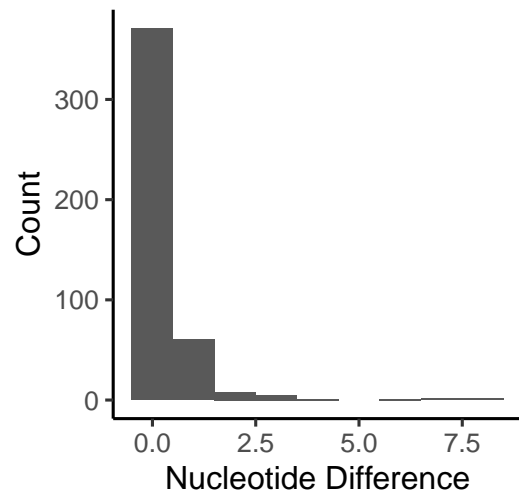
### IGHV3-53\*01

417 sequences assigned  
354 (84.9%) exact matches, in which:  
336 unique CDR3  
6 unique J



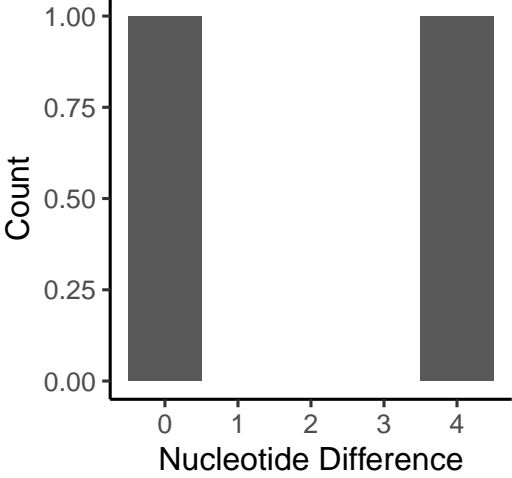
### IGHV3-66\*02

450 sequences assigned  
371 (82.4%) exact matches, in which:  
341 unique CDR3  
6 unique J



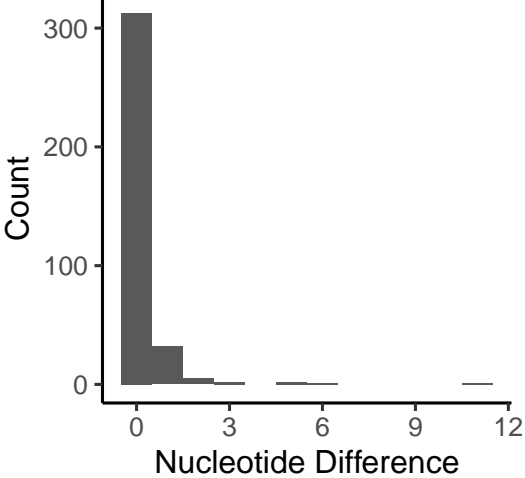
IGHV3-69-1\*01

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



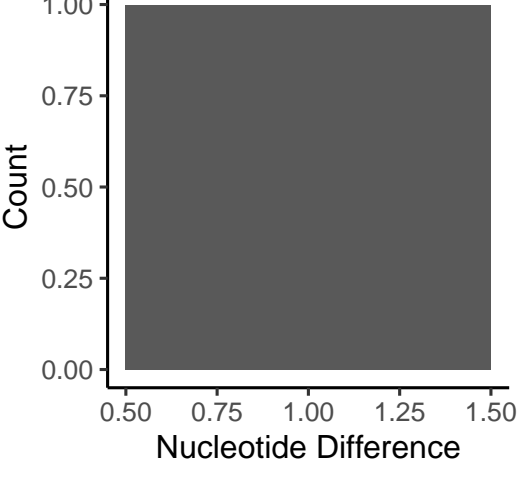
IGHV3-64D\*06

356 sequences assigned  
313 (87.9%) exact matches, in which:  
282 unique CDR3  
6 unique J



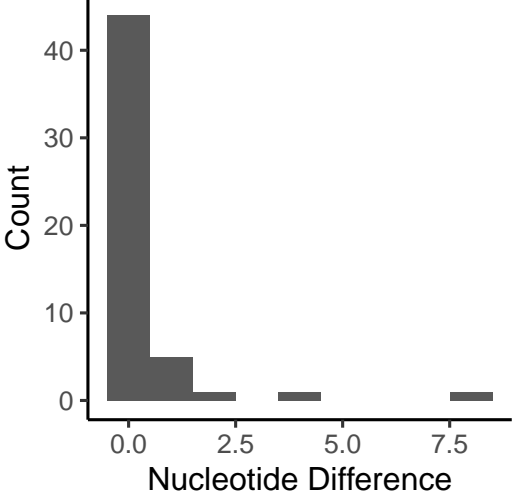
IGHV4-28\*04

1 sequences assigned  
No exact matches.



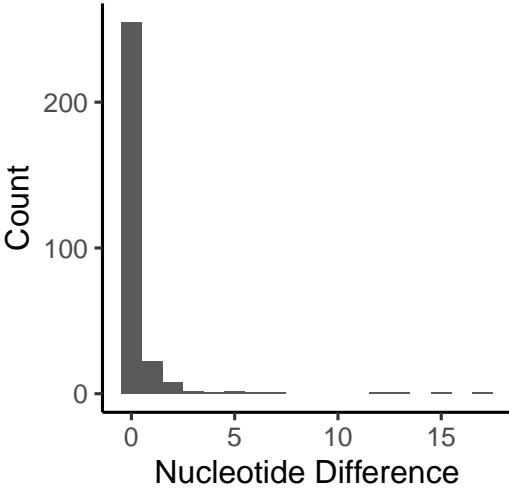
IGHV3-72\*01

52 sequences assigned  
44 (84.6%) exact matches, in which:  
40 unique CDR3  
5 unique J



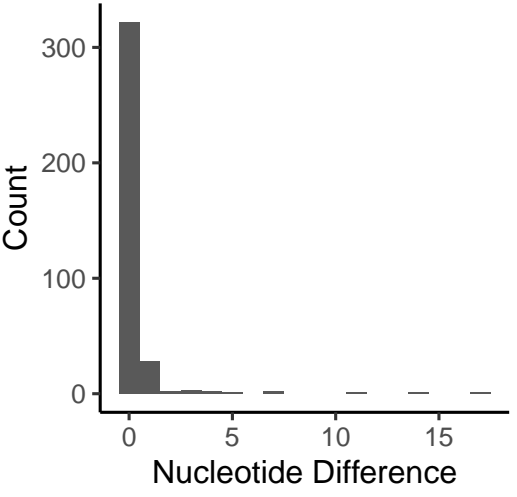
IGHV4-4\*02

296 sequences assigned  
255 (86.1%) exact matches, in which:  
251 unique CDR3  
6 unique J



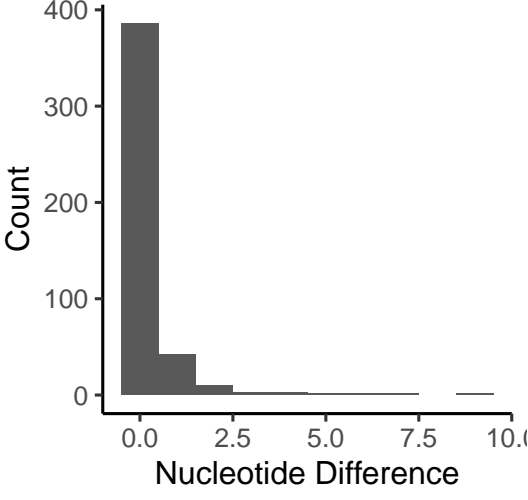
IGHV4-30-2\*01

363 sequences assigned  
322 (88.7%) exact matches, in which:  
312 unique CDR3  
6 unique J



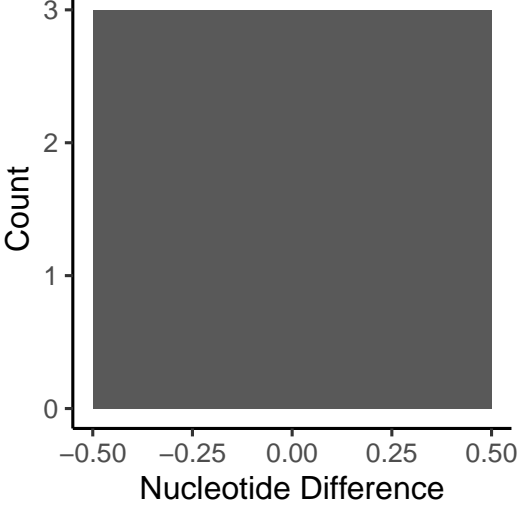
IGHV3-74\*01

452 sequences assigned  
386 (85.4%) exact matches, in which:  
374 unique CDR3  
6 unique J



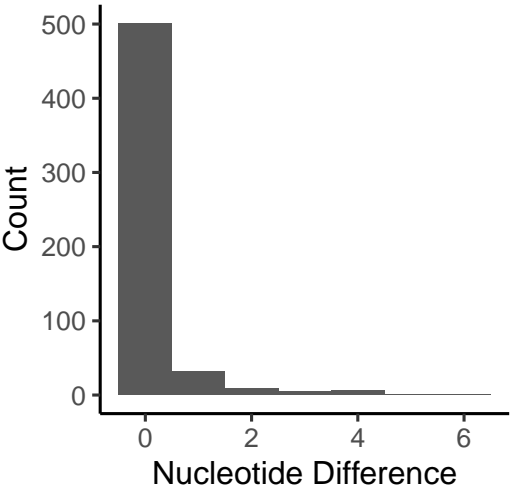
IGHV4-28\*01

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



IGHV4-30-4\*01

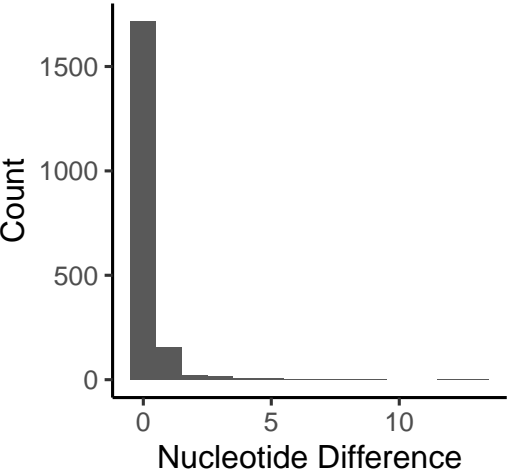
555 sequences assigned  
501 (90.3%) exact matches, in which:  
479 unique CDR3  
6 unique J





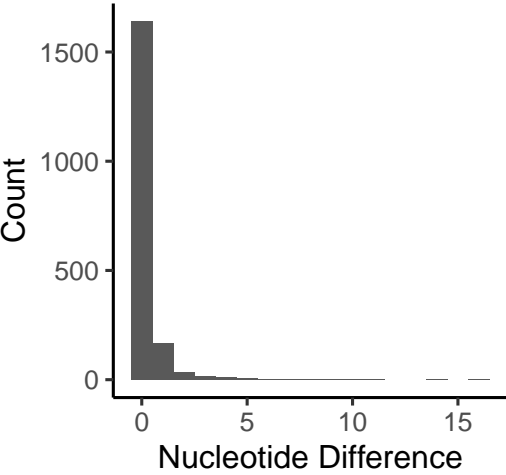
IGHV4-31\*03

1942 sequences assigned  
1716 (88.4%) exact matches, in which:  
1638 unique CDR3  
6 unique J



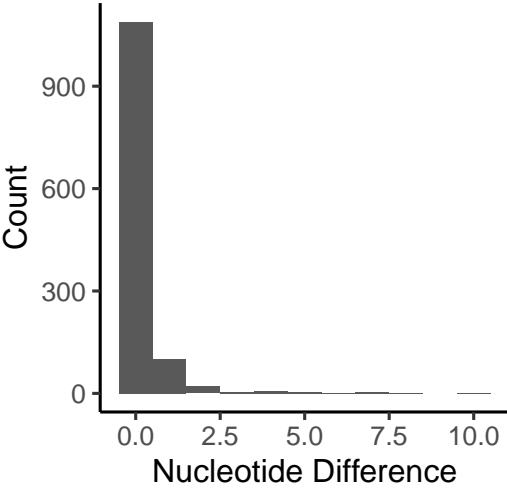
IGHV4-39\*01

1889 sequences assigned  
1640 (86.8%) exact matches, in which:  
1554 unique CDR3  
6 unique J



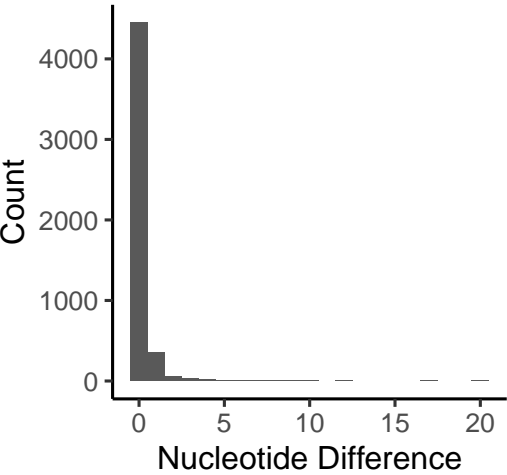
IGHV4-61\*02

1230 sequences assigned  
1089 (88.5%) exact matches, in which:  
1039 unique CDR3  
6 unique J



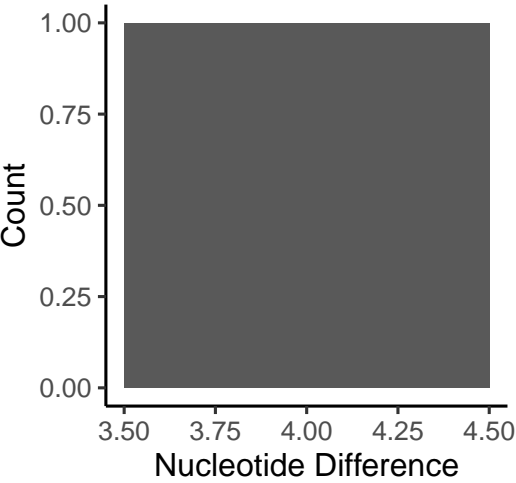
IGHV4-34\*01

4944 sequences assigned  
4449 (90%) exact matches, in which:  
4158 unique CDR3  
6 unique J



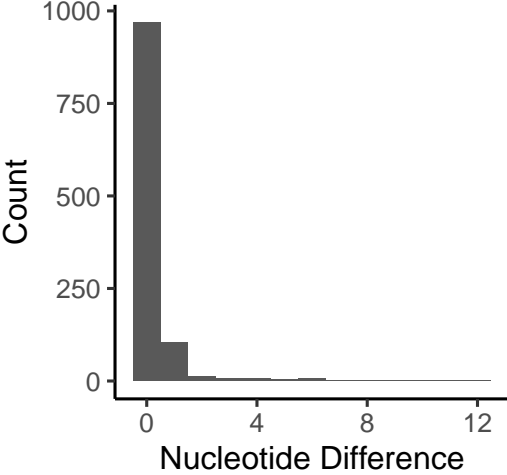
IGHV4-55\*08

1 sequences assigned  
No exact matches.



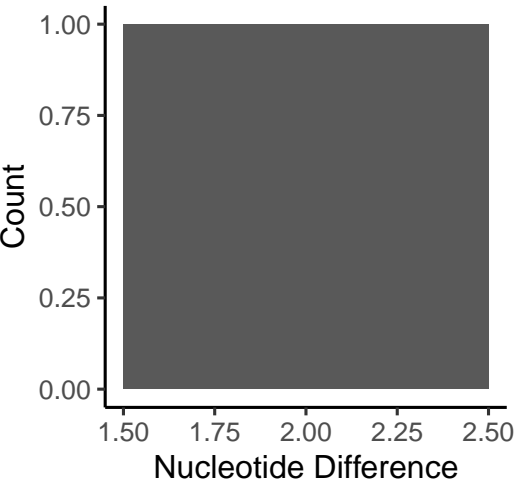
IGHV4-61\*02\_A234G

1117 sequences assigned  
968 (86.7%) exact matches, in which:  
918 unique CDR3  
6 unique J



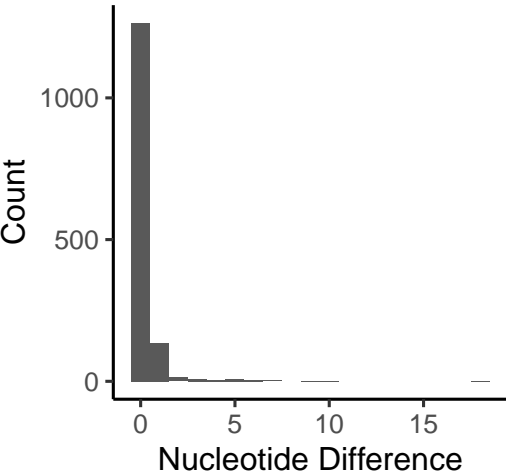
IGHV4-38-2\*02

1 sequences assigned  
No exact matches.



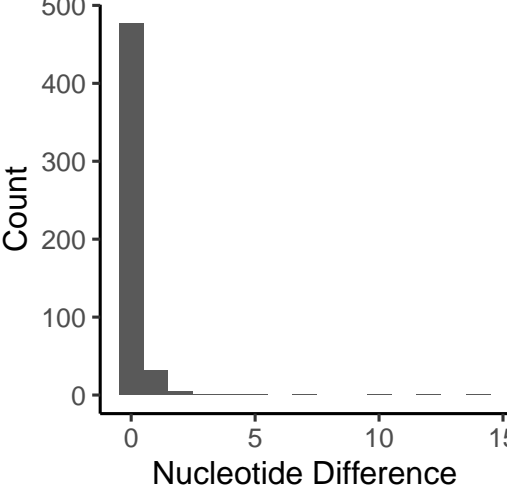
IGHV4-59\*01

1444 sequences assigned  
1264 (87.5%) exact matches, in which:  
1205 unique CDR3  
6 unique J



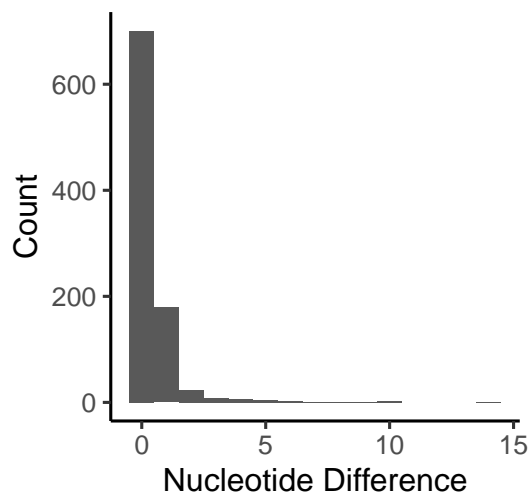
IGHV5-10-1\*03

520 sequences assigned  
477 (91.7%) exact matches, in which:  
456 unique CDR3  
6 unique J



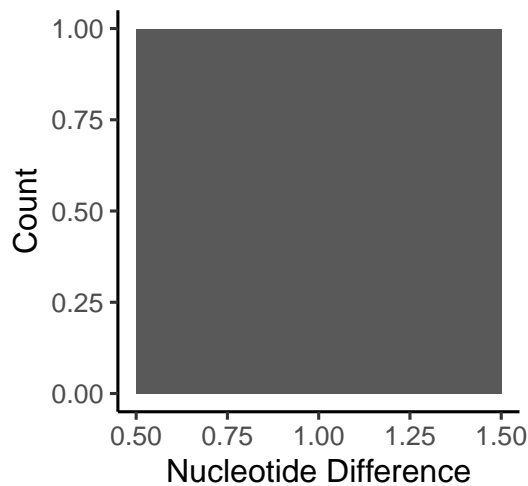
### IGHV5–51\*01

931 sequences assigned  
701 (75.3%) exact matches, in which:  
665 unique CDR3  
6 unique J



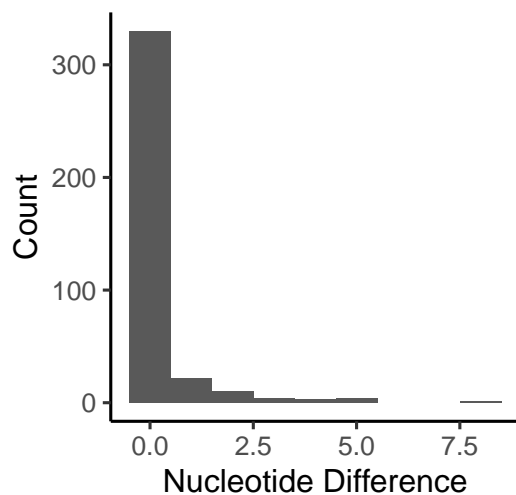
### IGHV3/OR16–12\*01

1 sequences assigned  
No exact matches.



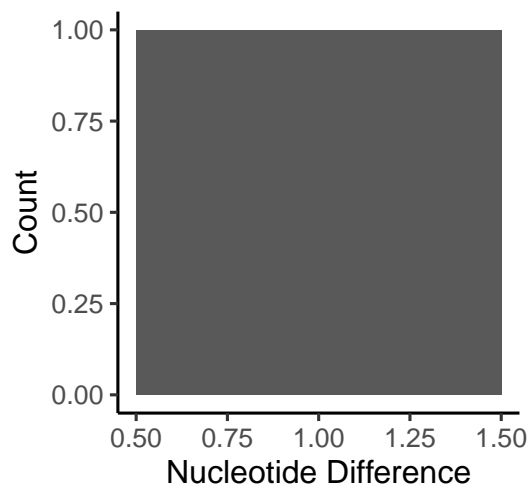
### IGHV5–51\*03

374 sequences assigned  
330 (88.2%) exact matches, in which:  
314 unique CDR3  
5 unique J



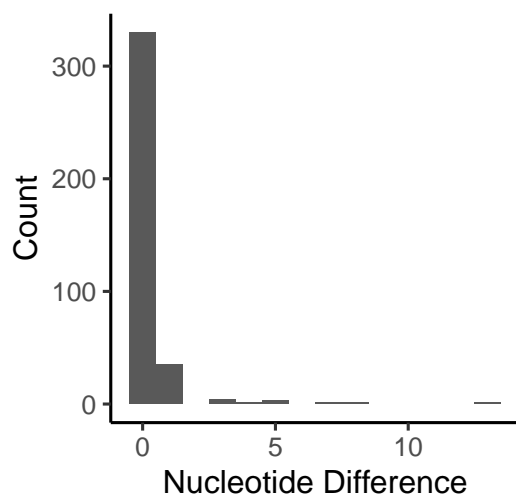
### IGHV3/OR16–13\*01

1 sequences assigned  
No exact matches.



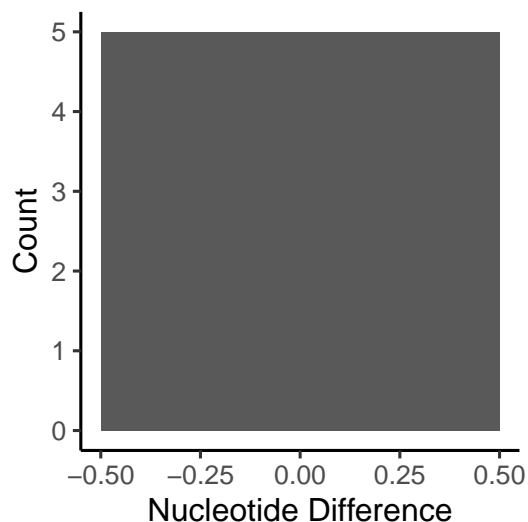
### IGHV6–1\*01

376 sequences assigned  
330 (87.8%) exact matches, in which:  
309 unique CDR3  
6 unique J

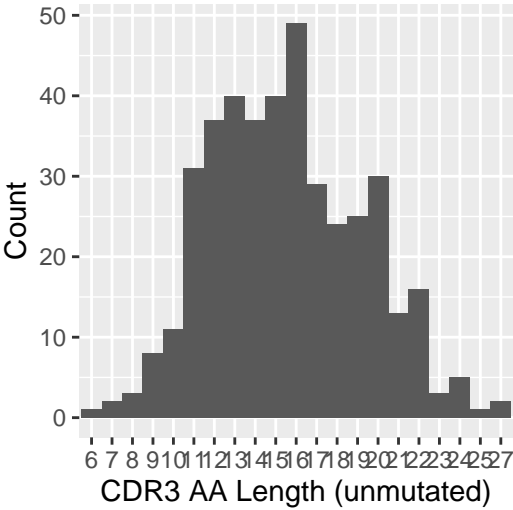


### IGHV7–4–1\*01

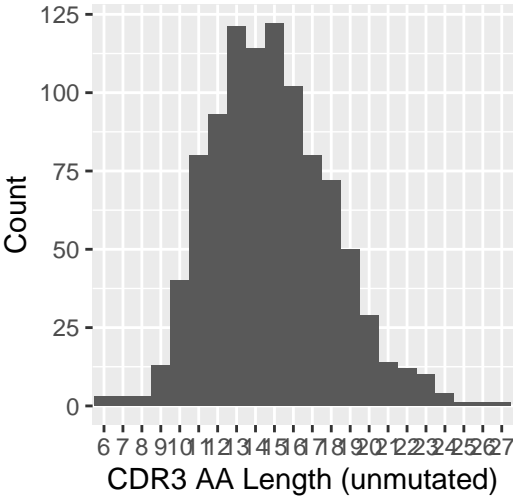
5 sequences assigned  
5 (100%) exact matches, in which:  
5 unique CDR3  
2 unique J



IGHV1-69\*08\_C191T



IGHV4-61\*02\_A234G





Warning – no inferred sequences found.

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