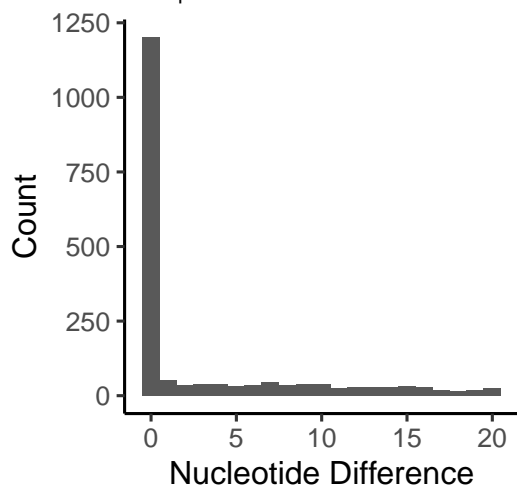


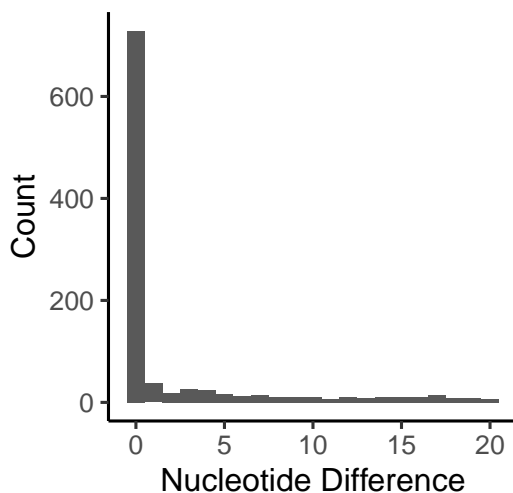
### IGHV1-2\*02

2032 sequences assigned  
1201 (59.1%) exact matches, in which:  
1197 unique CDR3  
6 unique J



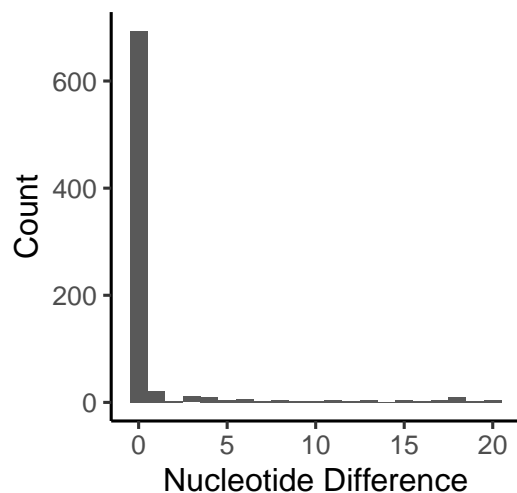
### IGHV1-8\*01

1073 sequences assigned  
729 (67.9%) exact matches, in which:  
725 unique CDR3  
6 unique J



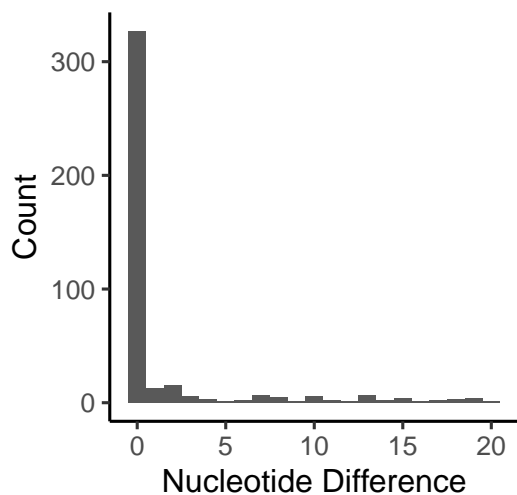
### IGHV1-24\*01

838 sequences assigned  
694 (82.8%) exact matches, in which:  
693 unique CDR3  
6 unique J



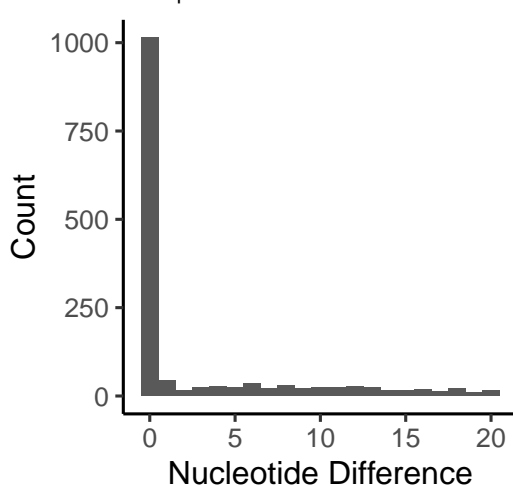
### IGHV1-2\*04

445 sequences assigned  
327 (73.5%) exact matches, in which:  
327 unique CDR3  
6 unique J



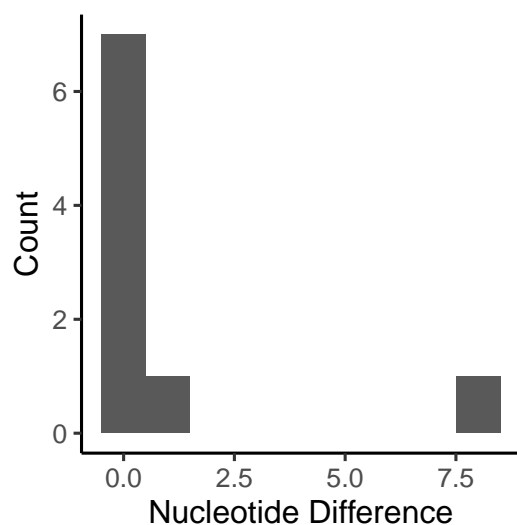
### IGHV1-18\*01

1621 sequences assigned  
1014 (62.6%) exact matches, in which:  
1011 unique CDR3  
6 unique J



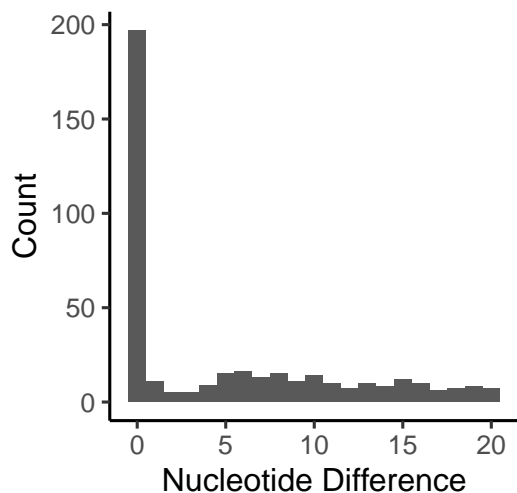
### IGHV1-45\*02

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



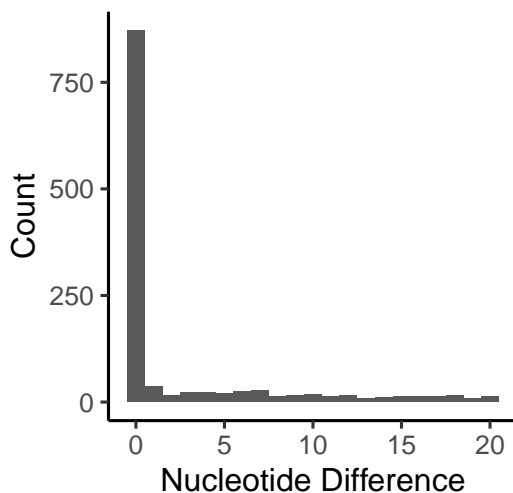
### IGHV1-3\*01\_05

460 sequences assigned  
197 (42.8%) exact matches, in which:  
197 unique CDR3  
6 unique J



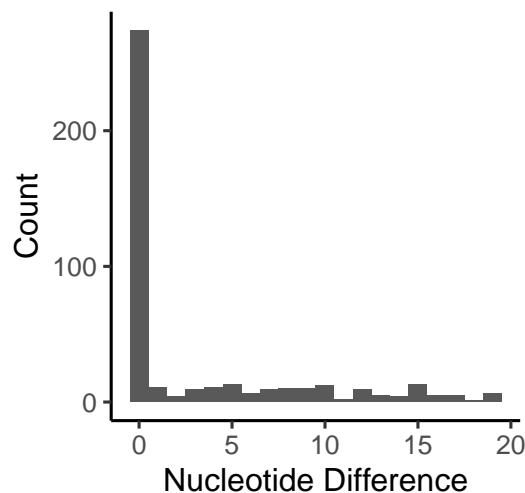
### IGHV1-18\*04

1326 sequences assigned  
872 (65.8%) exact matches, in which:  
870 unique CDR3  
6 unique J



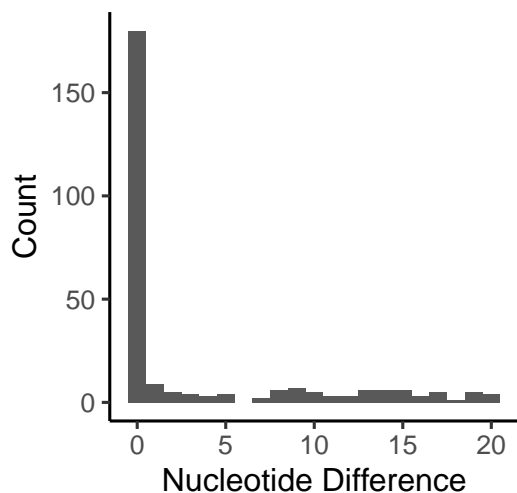
### IGHV1-46\*01

478 sequences assigned  
274 (57.3%) exact matches, in which:  
273 unique CDR3  
6 unique J



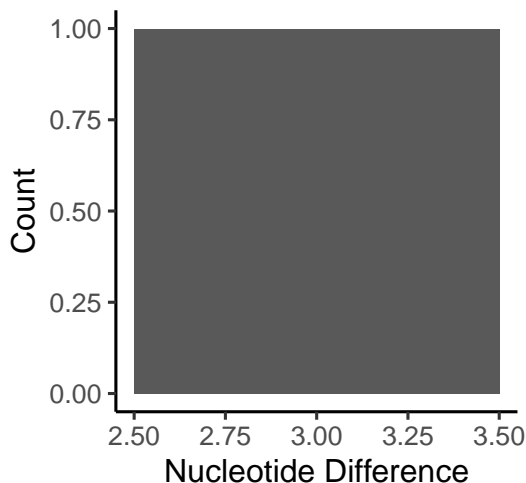
### IGHV1–46\*03

310 sequences assigned  
180 (58.1%) exact matches, in which:  
180 unique CDR3  
6 unique J



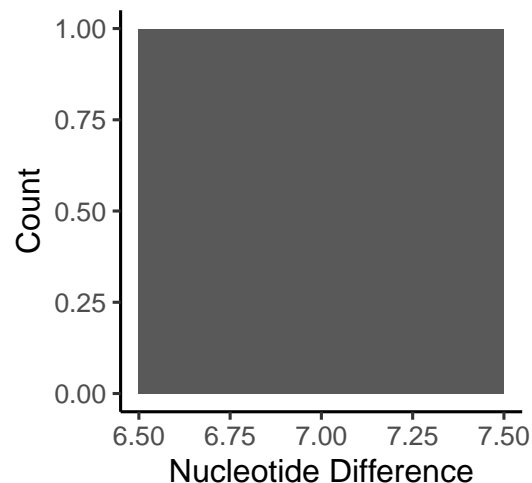
### IGHV1–68\*02

2 sequences assigned  
No exact matches.



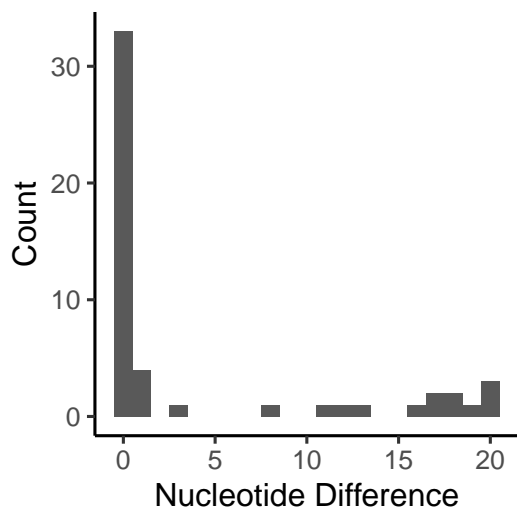
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



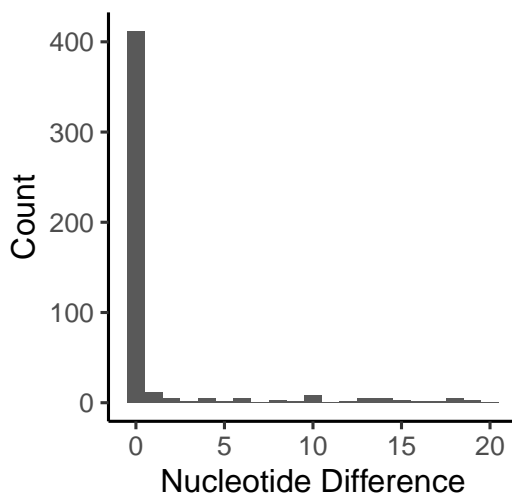
### IGHV1–58\*02

78 sequences assigned  
33 (42.3%) exact matches, in which:  
33 unique CDR3  
5 unique J



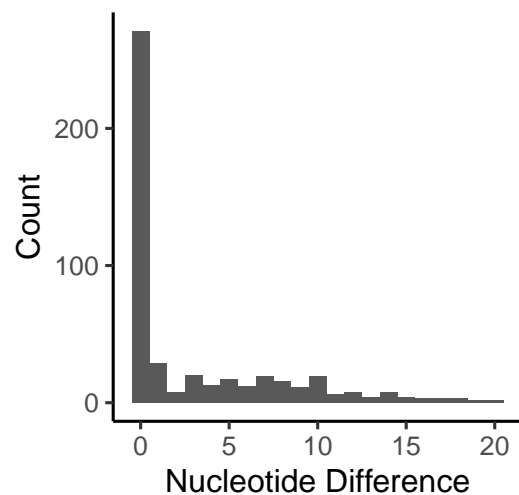
### IGHV1–69\*04\_09

542 sequences assigned  
412 (76%) exact matches, in which:  
411 unique CDR3  
6 unique J



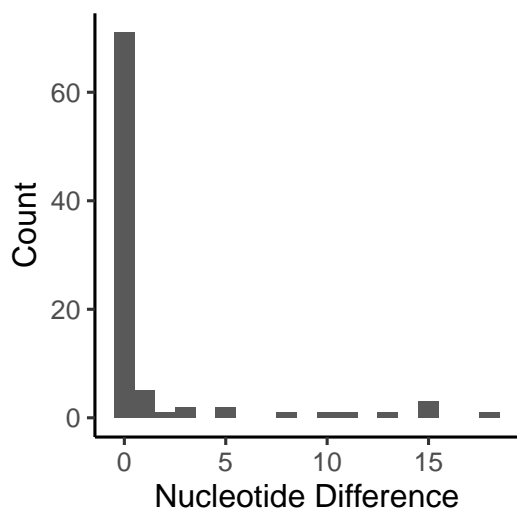
### IGHV2–5\*01

522 sequences assigned  
271 (51.9%) exact matches, in which:  
270 unique CDR3  
6 unique J



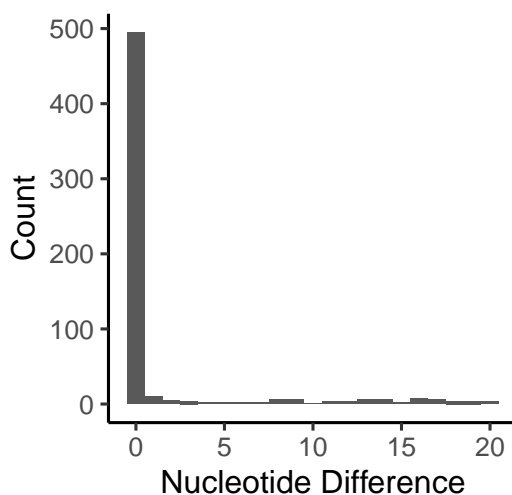
### IGHV1–58\*01\_03

94 sequences assigned  
71 (75.5%) exact matches, in which:  
71 unique CDR3  
6 unique J



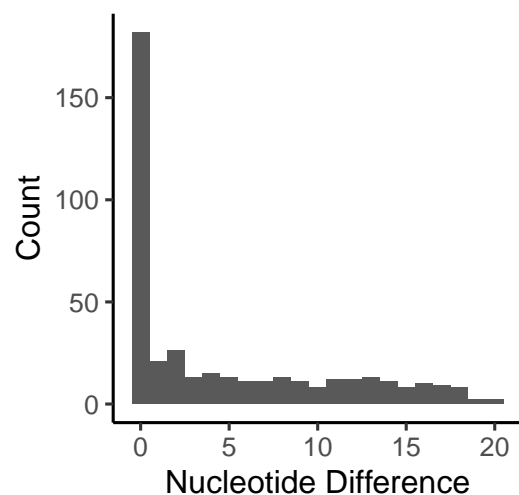
### IGHV1–69\*06\_14

651 sequences assigned  
495 (76%) exact matches, in which:  
493 unique CDR3  
6 unique J



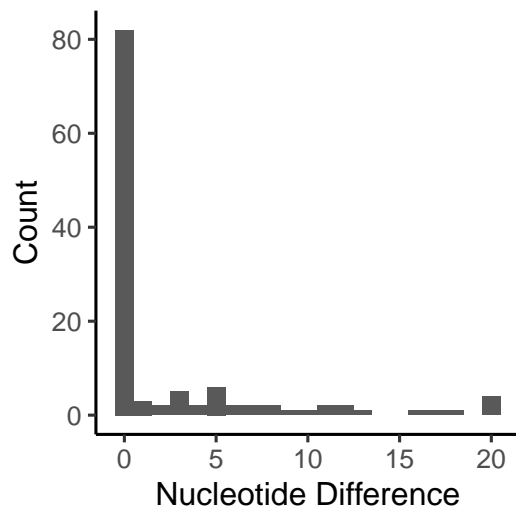
### IGHV2–5\*02

473 sequences assigned  
182 (38.5%) exact matches, in which:  
182 unique CDR3  
6 unique J



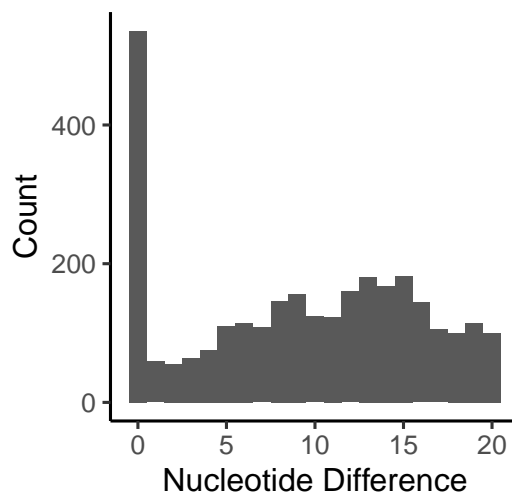
### IGHV2-26\*01

141 sequences assigned  
82 (58.2%) exact matches, in which:  
82 unique CDR3  
6 unique J



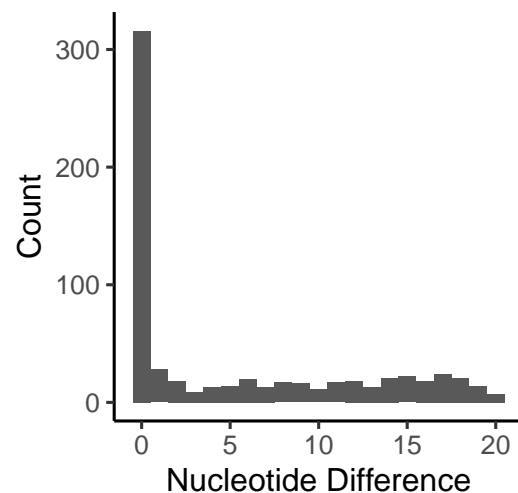
### IGHV3-7\*01

3402 sequences assigned  
536 (15.8%) exact matches, in which:  
518 unique CDR3  
6 unique J



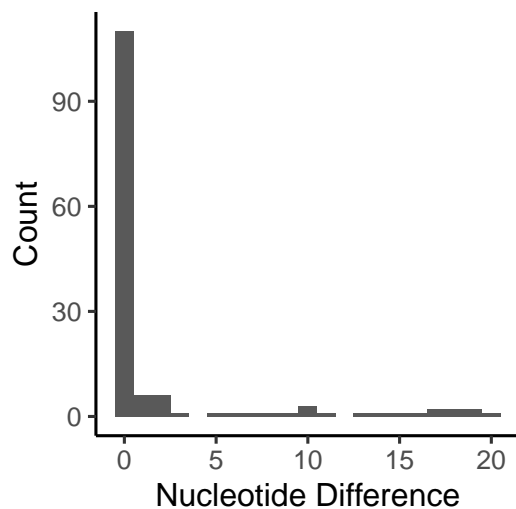
### IGHV3-11\*01

753 sequences assigned  
316 (42%) exact matches, in which:  
313 unique CDR3  
6 unique J



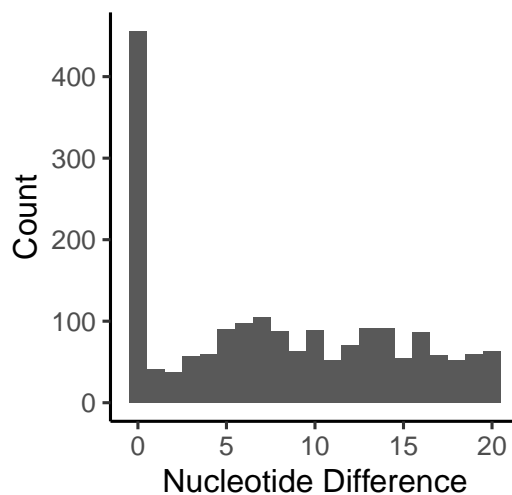
### IGHV2-70\*01

146 sequences assigned  
110 (75.3%) exact matches, in which:  
109 unique CDR3  
6 unique J



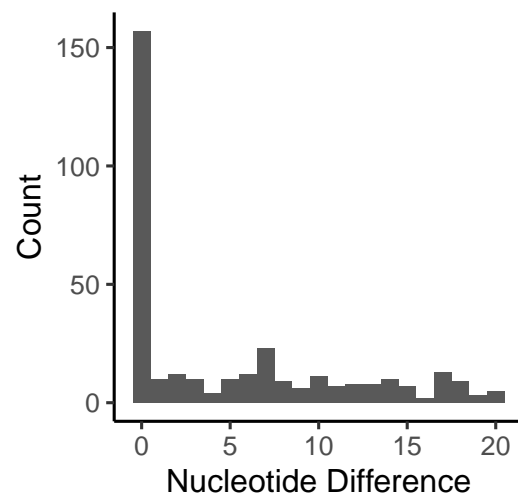
### IGHV3-7\*03

2102 sequences assigned  
456 (21.7%) exact matches, in which:  
434 unique CDR3  
6 unique J



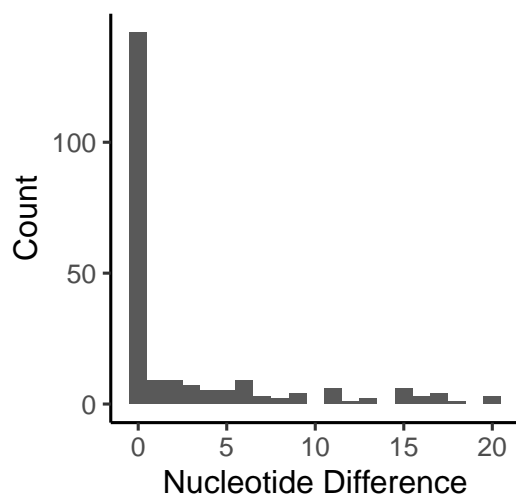
### IGHV3-11\*06

395 sequences assigned  
157 (39.7%) exact matches, in which:  
155 unique CDR3  
6 unique J



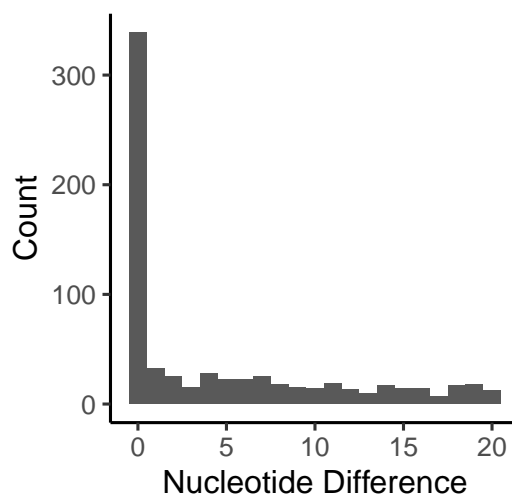
### IGHV2-70\*11\_15

228 sequences assigned  
142 (62.3%) exact matches, in which:  
141 unique CDR3  
5 unique J



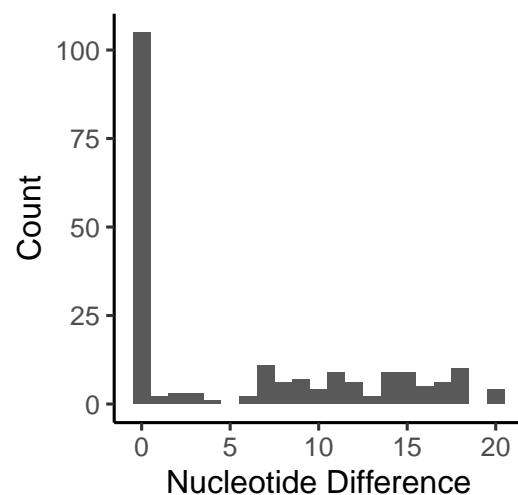
### IGHV3-9\*01

824 sequences assigned  
339 (41.1%) exact matches, in which:  
334 unique CDR3  
6 unique J



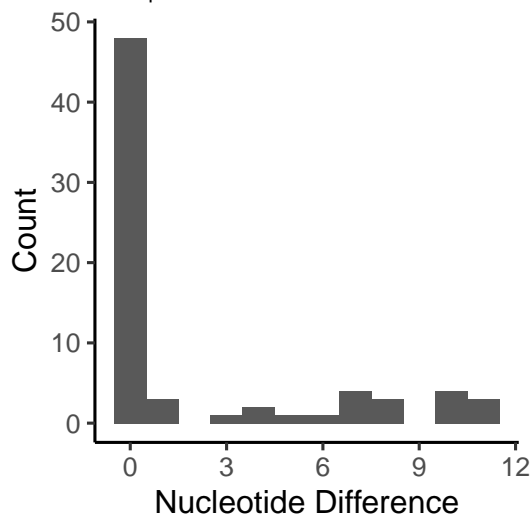
### IGHV3-13\*01

225 sequences assigned  
105 (46.7%) exact matches, in which:  
103 unique CDR3  
5 unique J



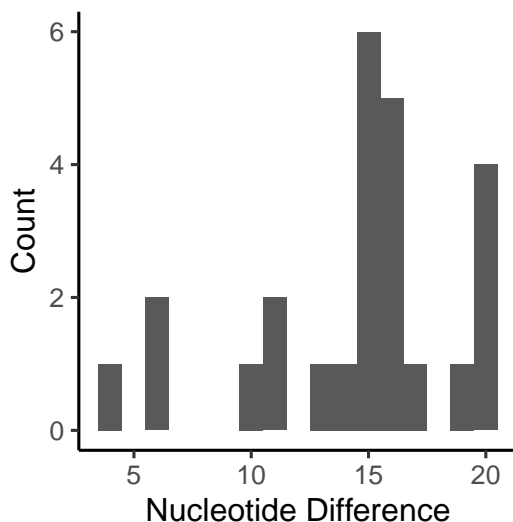
### IGHV3-13\*05

72 sequences assigned  
48 (66.7%) exact matches, in which:  
46 unique CDR3  
4 unique J



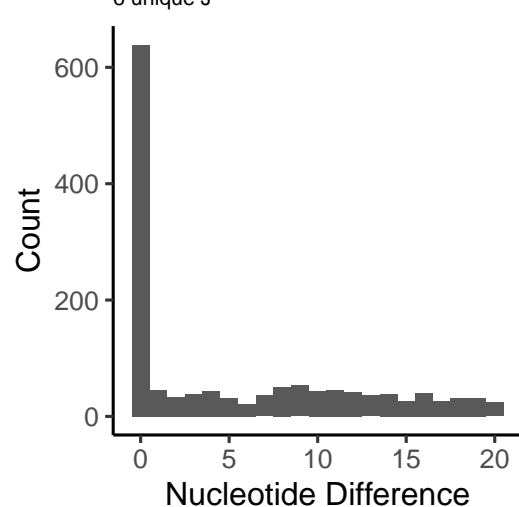
### IGHV3-20\*03\_04

52 sequences assigned  
No exact matches.



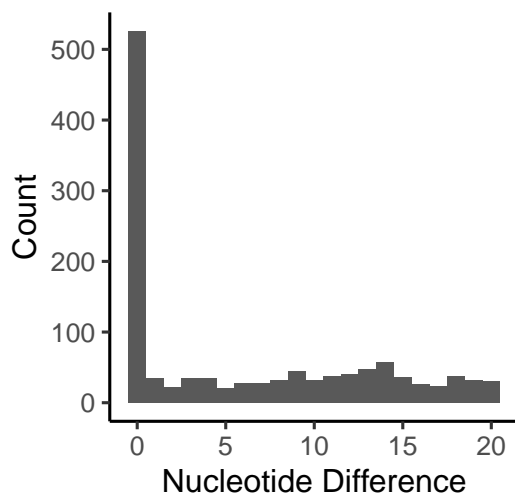
### IGHV3-33\*01

1682 sequences assigned  
639 (38%) exact matches, in which:  
632 unique CDR3  
6 unique J



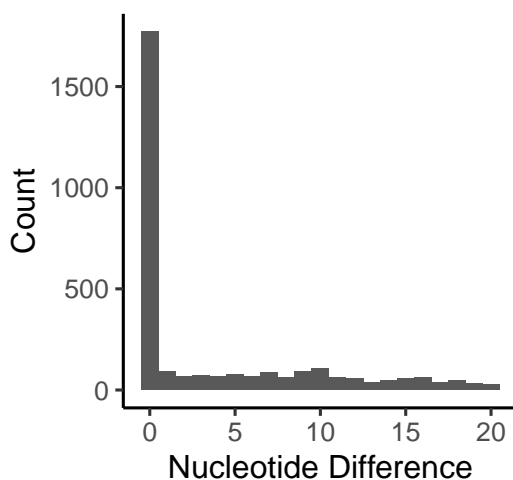
### IGHV3-15\*01\_02

1421 sequences assigned  
526 (37%) exact matches, in which:  
514 unique CDR3  
6 unique J



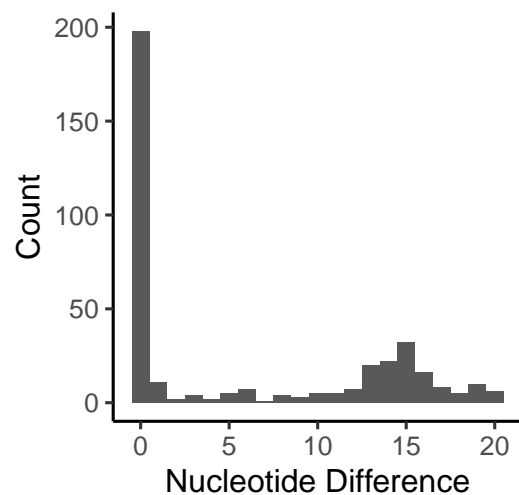
### IGHV3-21\*01\_02

3429 sequences assigned  
1771 (51.6%) exact matches, in which:  
1698 unique CDR3  
6 unique J



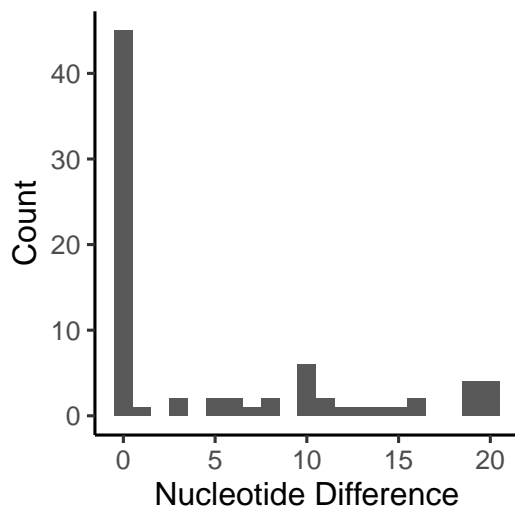
### IGHV3-43\*01

442 sequences assigned  
198 (44.8%) exact matches, in which:  
192 unique CDR3  
6 unique J



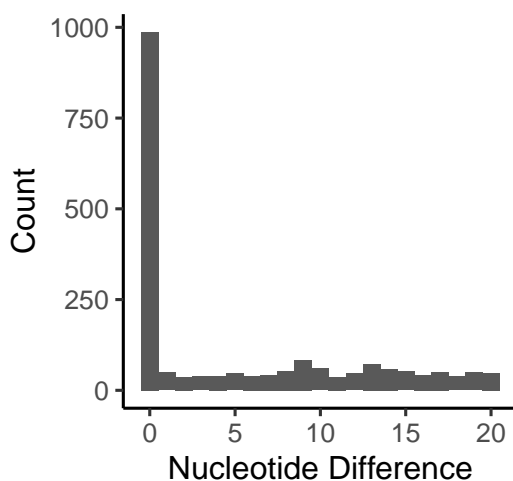
### IGHV3-20\*01\_02

85 sequences assigned  
45 (52.9%) exact matches, in which:  
43 unique CDR3  
5 unique J



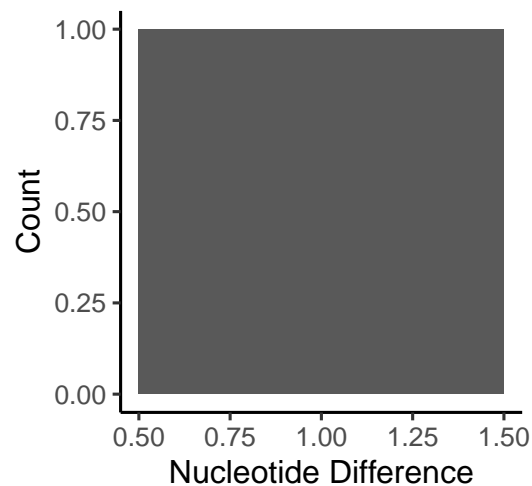
### IGHV3-30-3\*01

2358 sequences assigned  
987 (41.9%) exact matches, in which:  
969 unique CDR3  
6 unique J



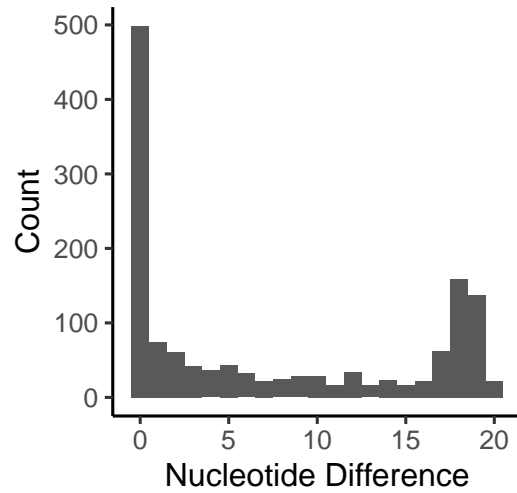
### IGHV3-47\*02

1 sequences assigned  
No exact matches.



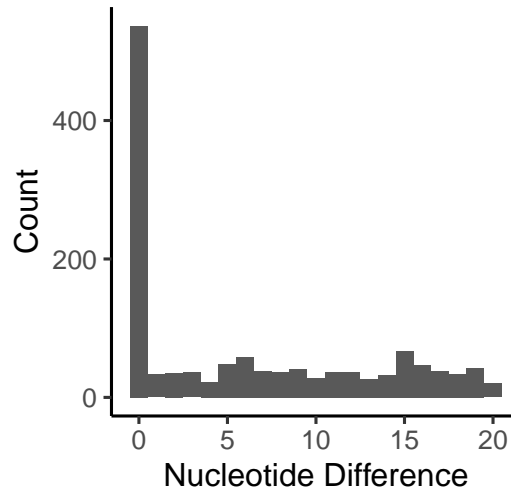
### IGHV3-48\*01

1545 sequences assigned  
499 (32.3%) exact matches, in which:  
451 unique CDR3  
6 unique J



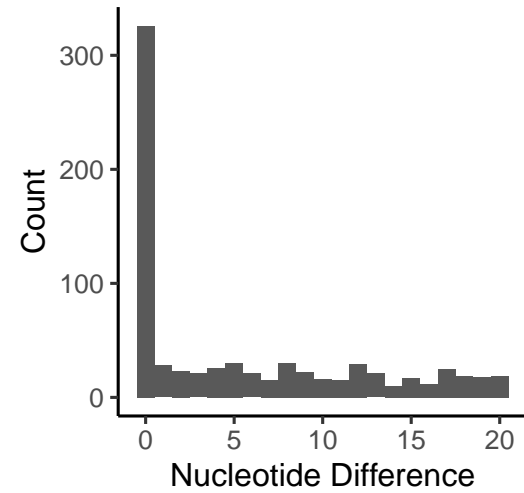
### IGHV3-53\*01\_02

1493 sequences assigned  
537 (36%) exact matches, in which:  
525 unique CDR3  
6 unique J



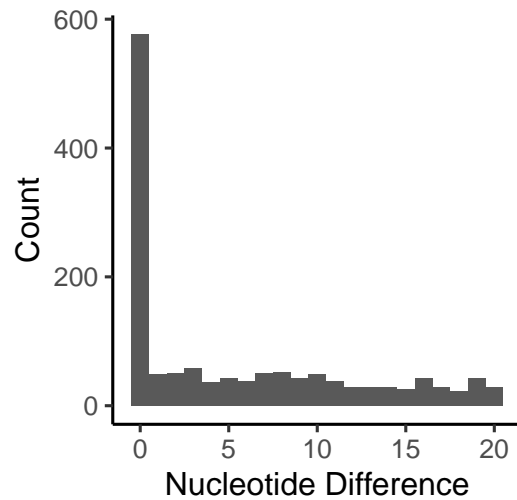
### IGHV3-66\*01

879 sequences assigned  
326 (37.1%) exact matches, in which:  
315 unique CDR3  
6 unique J



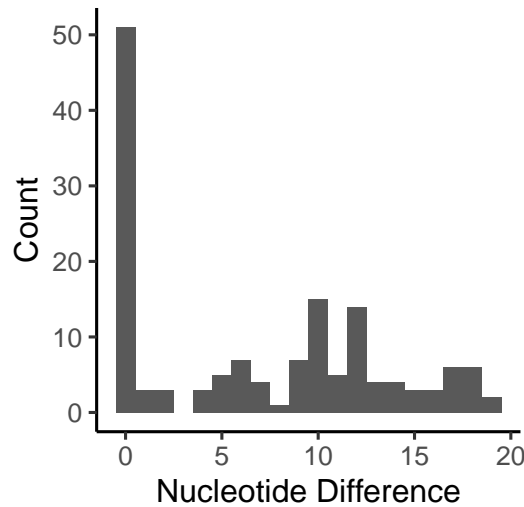
### IGHV3-48\*02

1536 sequences assigned  
577 (37.6%) exact matches, in which:  
539 unique CDR3  
6 unique J



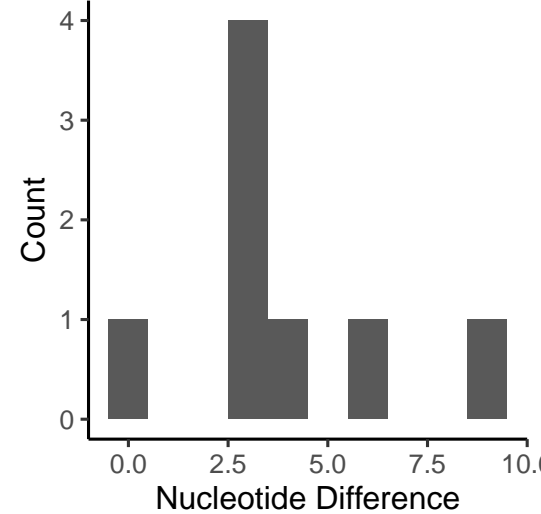
### IGHV3-64\*01

160 sequences assigned  
51 (31.9%) exact matches, in which:  
50 unique CDR3  
6 unique J



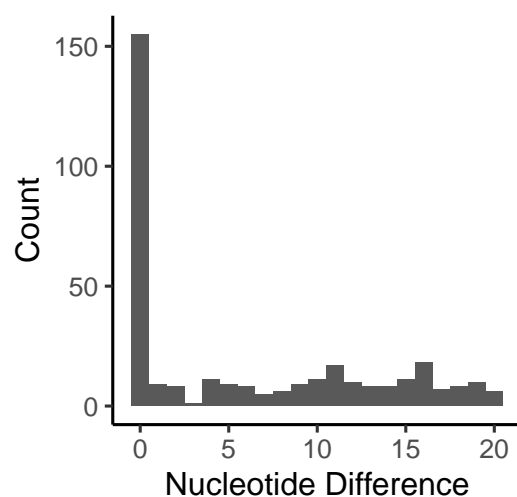
### IGHV3-69-1\*01

14 sequences assigned  
1 (7.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



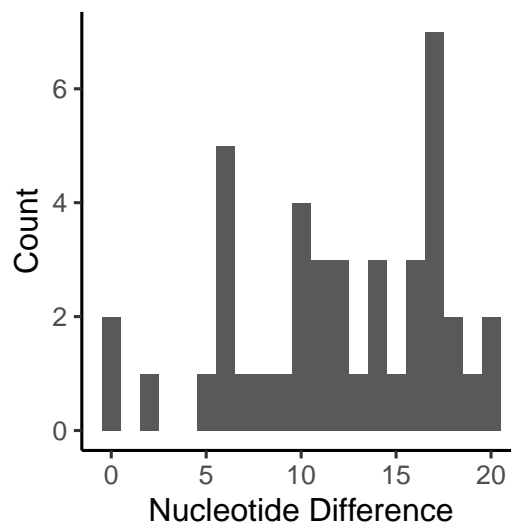
### IGHV3-49\*03\_05

404 sequences assigned  
155 (38.4%) exact matches, in which:  
154 unique CDR3  
6 unique J



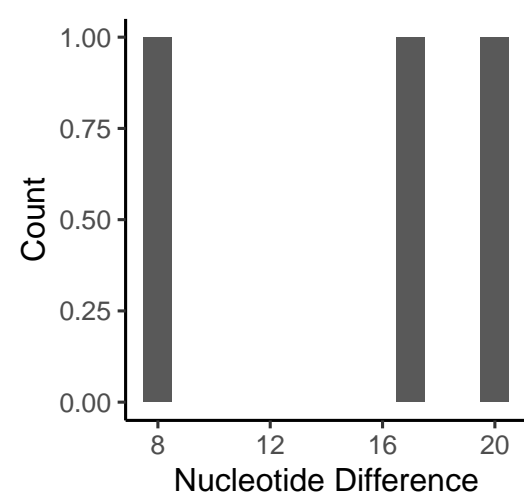
### IGHV3-64\*02\_07

58 sequences assigned  
2 (3.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



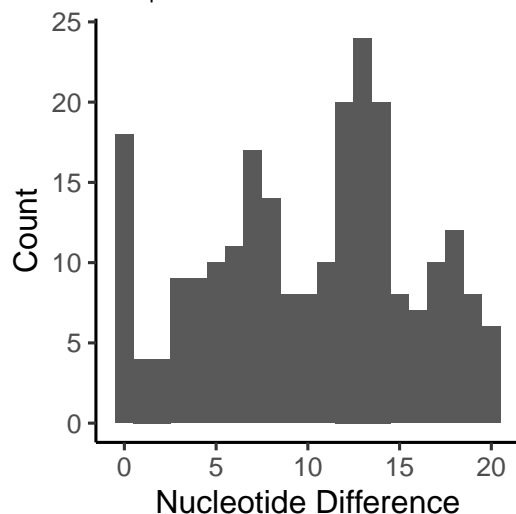
### IGHV3-69-1\*02

15 sequences assigned  
No exact matches.



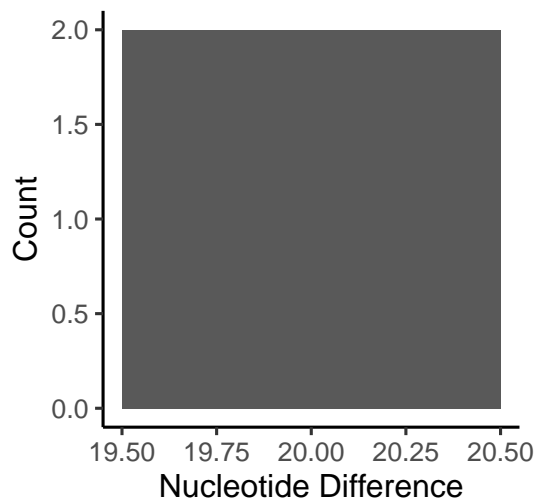
### IGHV3-72\*01

339 sequences assigned  
18 (5.3%) exact matches, in which:  
18 unique CDR3  
5 unique J



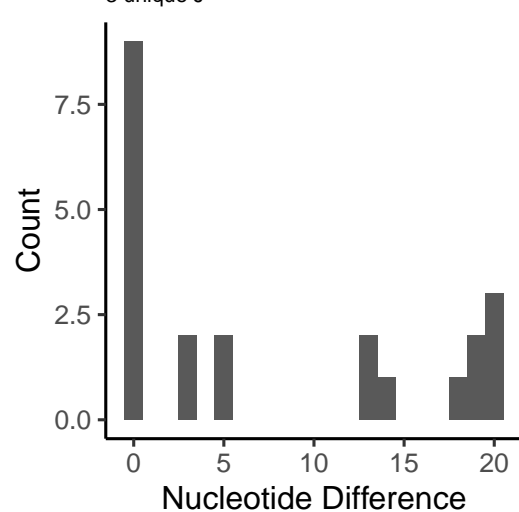
### IGHV3-43D\*04

3 sequences assigned  
No exact matches.



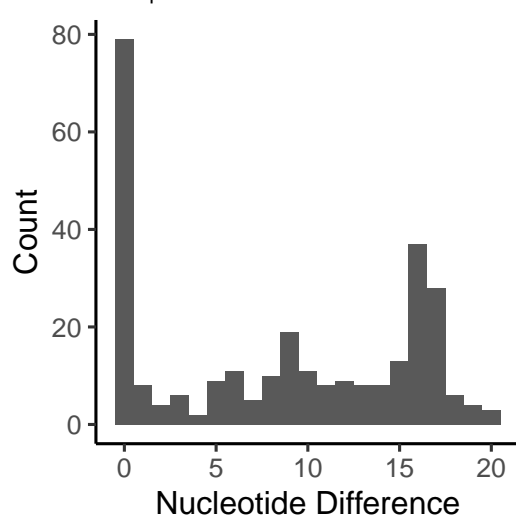
### IGHV4-28\*01\_07

31 sequences assigned  
9 (29%) exact matches, in which:  
9 unique CDR3  
3 unique J



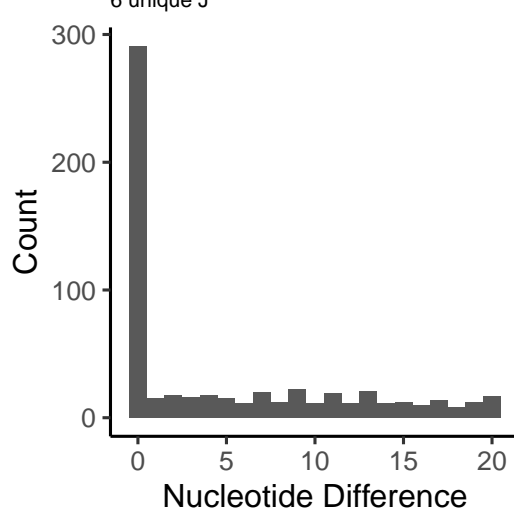
### IGHV3-73\*01\_02

335 sequences assigned  
79 (23.6%) exact matches, in which:  
79 unique CDR3  
5 unique J



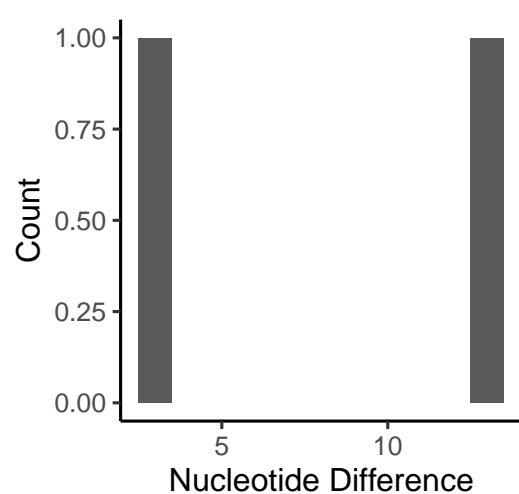
### IGHV3-64D\*06

694 sequences assigned  
291 (41.9%) exact matches, in which:  
285 unique CDR3  
6 unique J



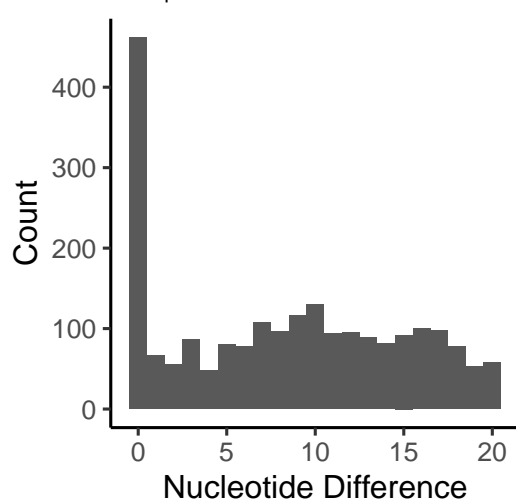
### IGHV4-28\*02\_05

2 sequences assigned  
No exact matches.



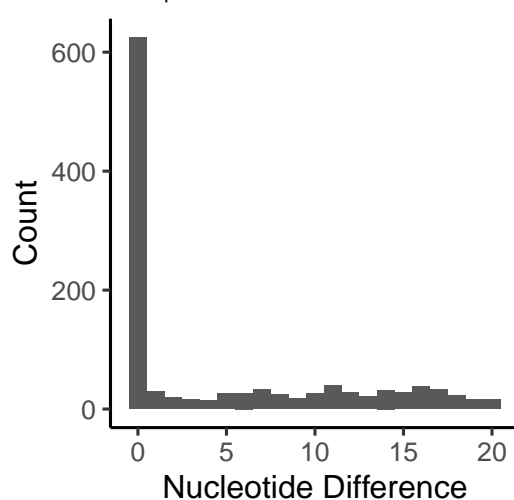
### IGHV3-74\*01\_02

2555 sequences assigned  
462 (18.1%) exact matches, in which:  
438 unique CDR3  
6 unique J



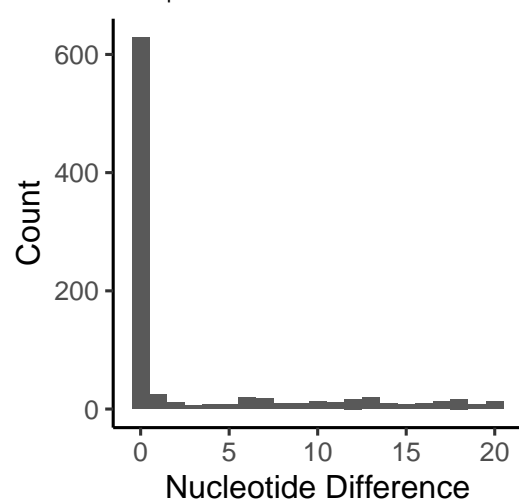
### IGHV4-4\*07

1291 sequences assigned  
625 (48.4%) exact matches, in which:  
605 unique CDR3  
6 unique J



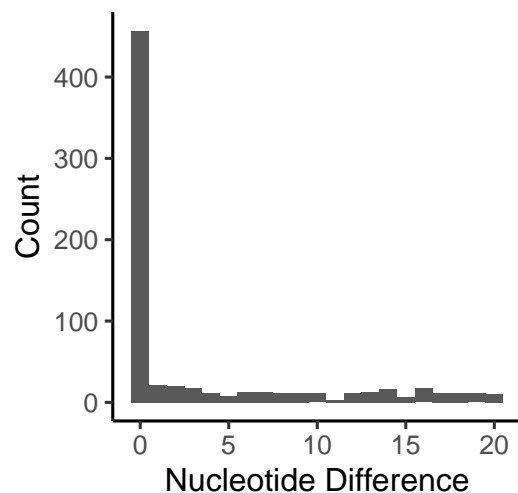
### IGHV4-30-2\*01

1000 sequences assigned  
629 (62.9%) exact matches, in which:  
620 unique CDR3  
6 unique J



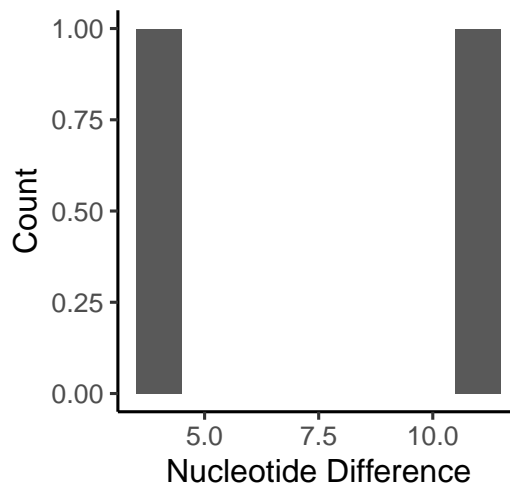
### IGHV4-30-4\*01

848 sequences assigned  
457 (53.9%) exact matches, in which:  
451 unique CDR3  
6 unique J



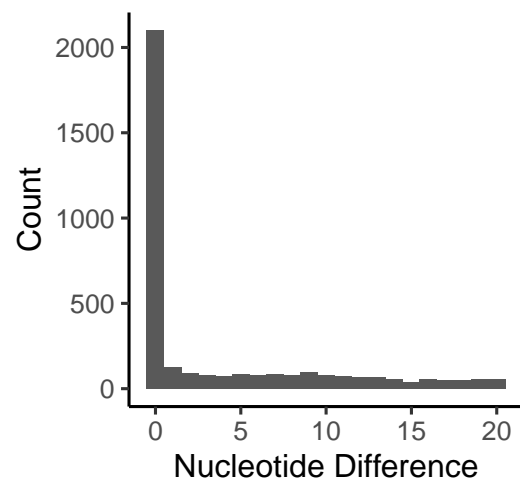
### IGHV4-38-2\*02

6 sequences assigned  
No exact matches.



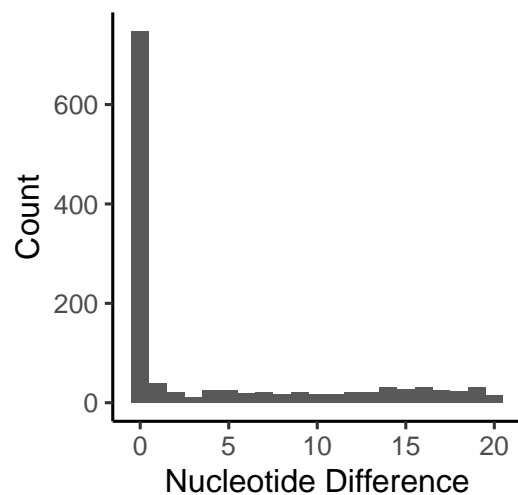
### IGHV4-59\*01\_07

4090 sequences assigned  
2100 (51.3%) exact matches, in which:  
2048 unique CDR3  
6 unique J



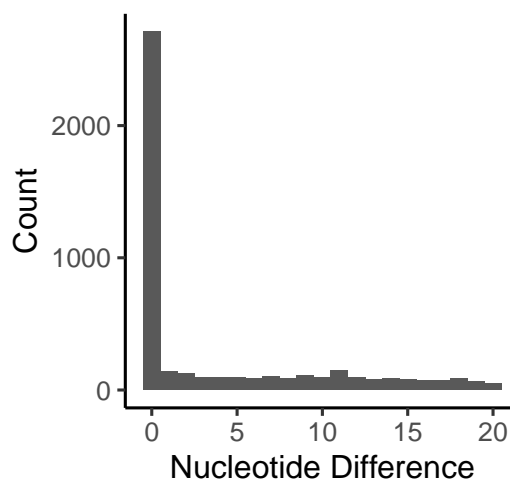
### IGHV4-31\*03\_04

1458 sequences assigned  
748 (51.3%) exact matches, in which:  
741 unique CDR3  
6 unique J



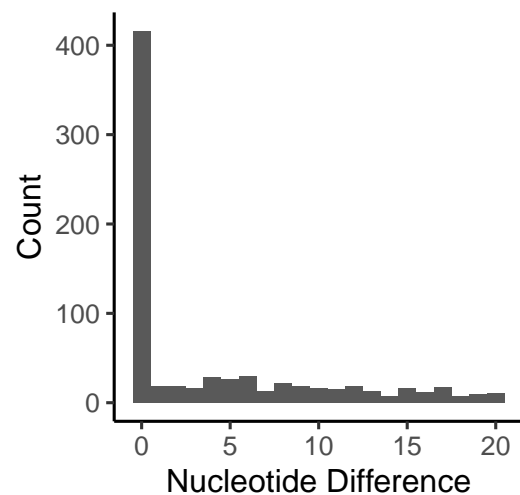
### IGHV4-39\*01\_05

5291 sequences assigned  
2710 (51.2%) exact matches, in which:  
2632 unique CDR3  
6 unique J



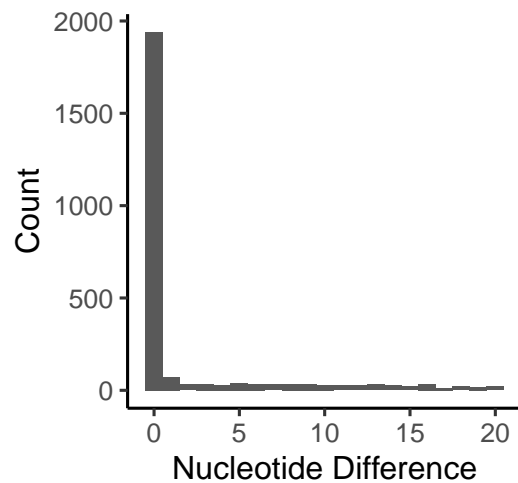
### IGHV4-61\*01

851 sequences assigned  
416 (48.9%) exact matches, in which:  
405 unique CDR3  
6 unique J



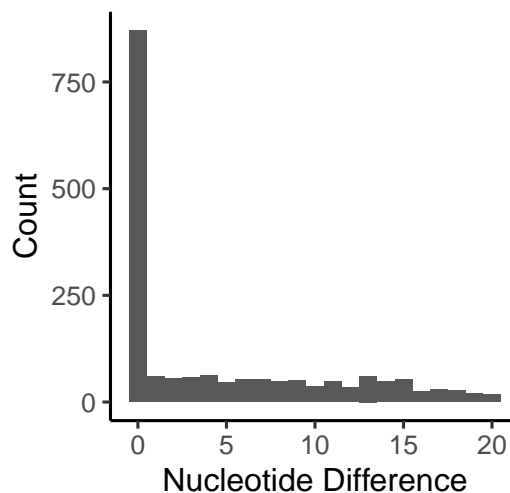
### IGHV4-34\*01\_02

2754 sequences assigned  
1940 (70.4%) exact matches, in which:  
1917 unique CDR3  
6 unique J



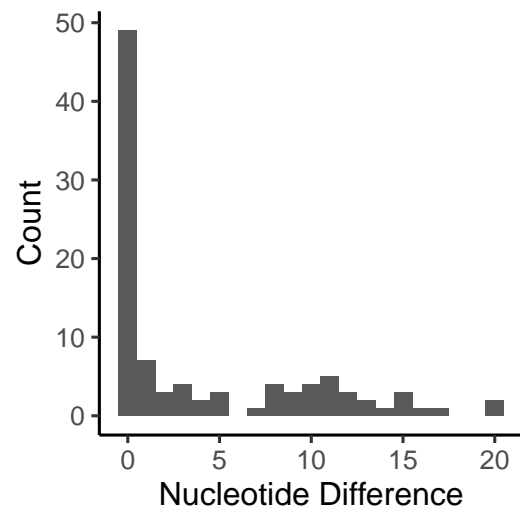
### IGHV4-59\*08

1956 sequences assigned  
871 (44.5%) exact matches, in which:  
850 unique CDR3  
6 unique J



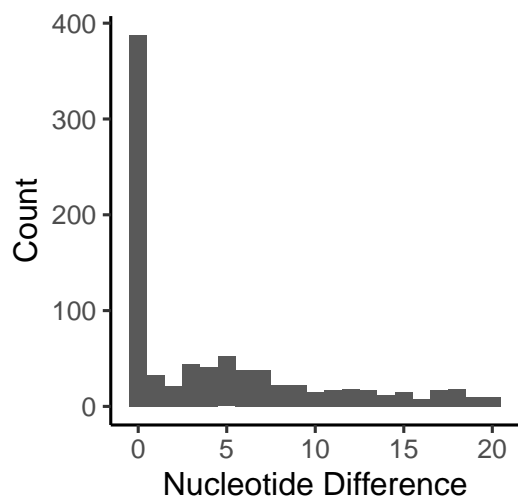
### IGHV5-10-1\*01\_03

114 sequences assigned  
49 (43%) exact matches, in which:  
49 unique CDR3  
5 unique J



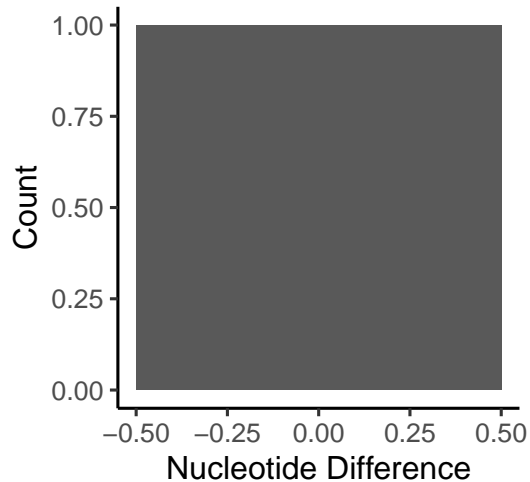
### IGHV5–51\*01\_03

926 sequences assigned  
388 (41.9%) exact matches, in which:  
387 unique CDR3  
6 unique J



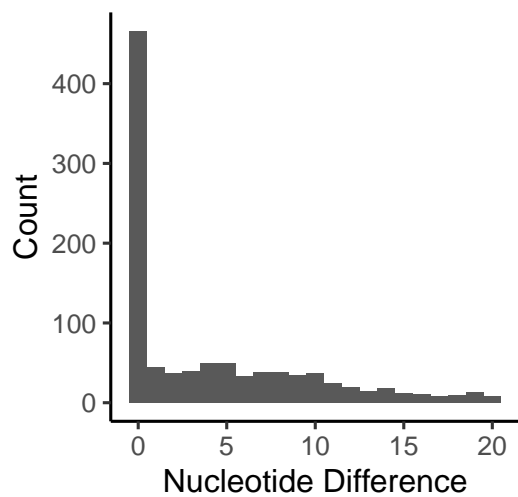
### IGHV7–81\*01

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



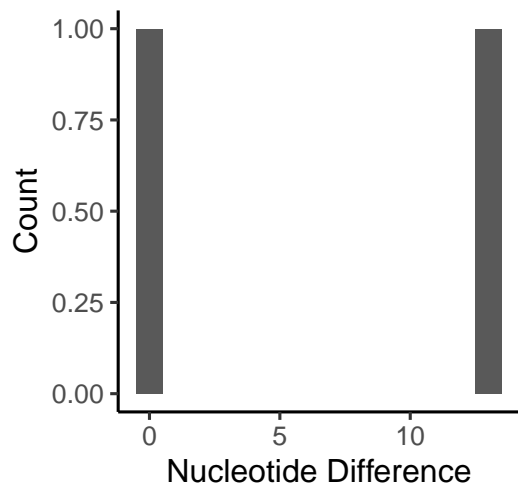
### IGHV6–1\*01\_02

1043 sequences assigned  
466 (44.7%) exact matches, in which:  
464 unique CDR3  
6 unique J



### IGHV7–4–1\*01

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







Novel sequence(s)IGHV4-39 02\_G88A IGHV5-51 07\_A128G are not listed in the genotype and will be ignored.