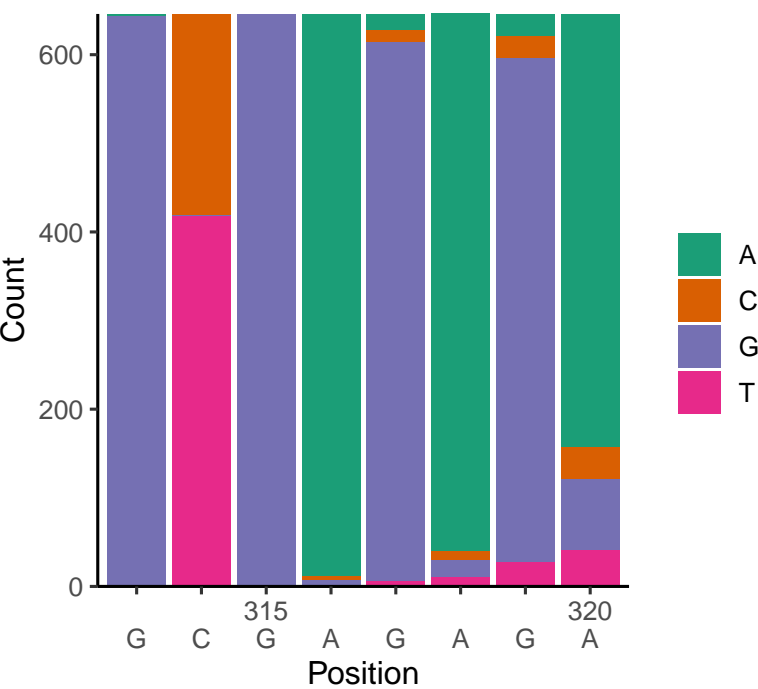
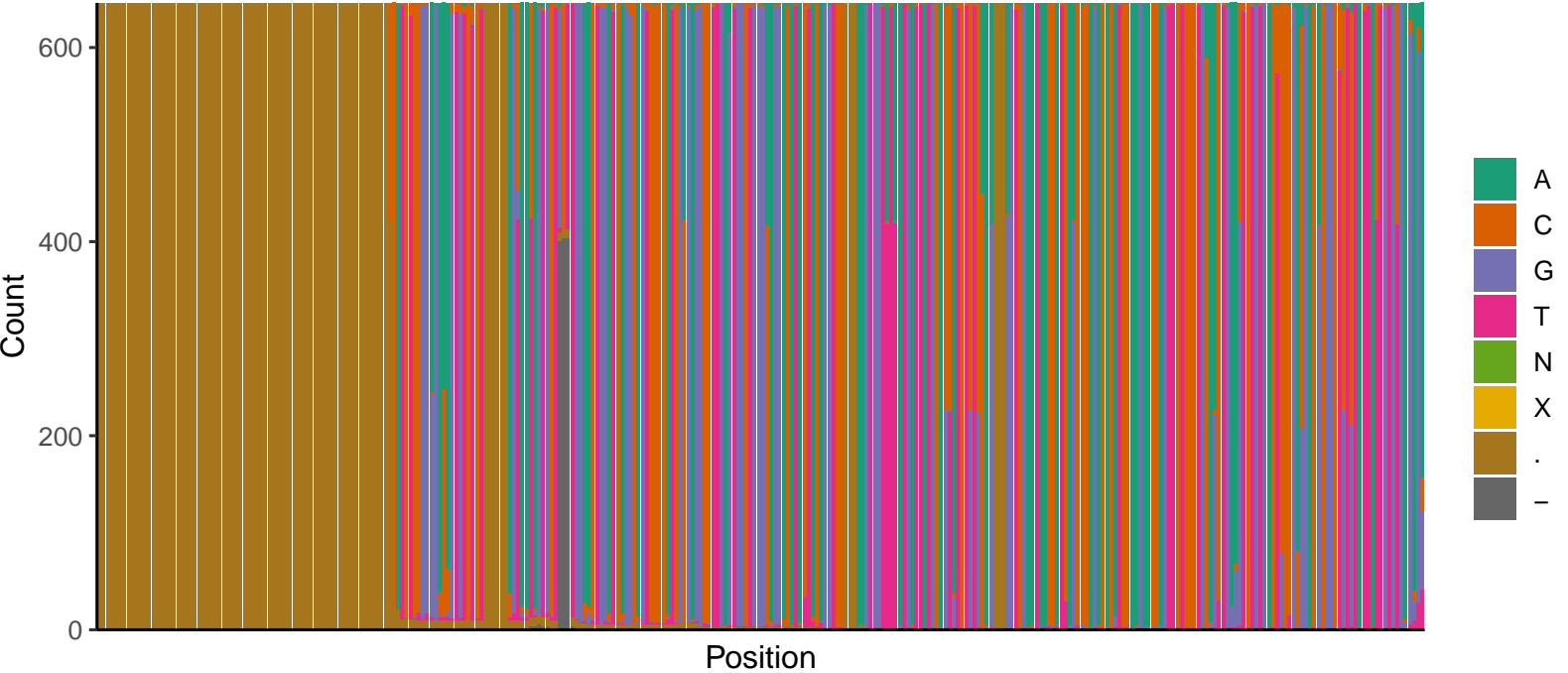


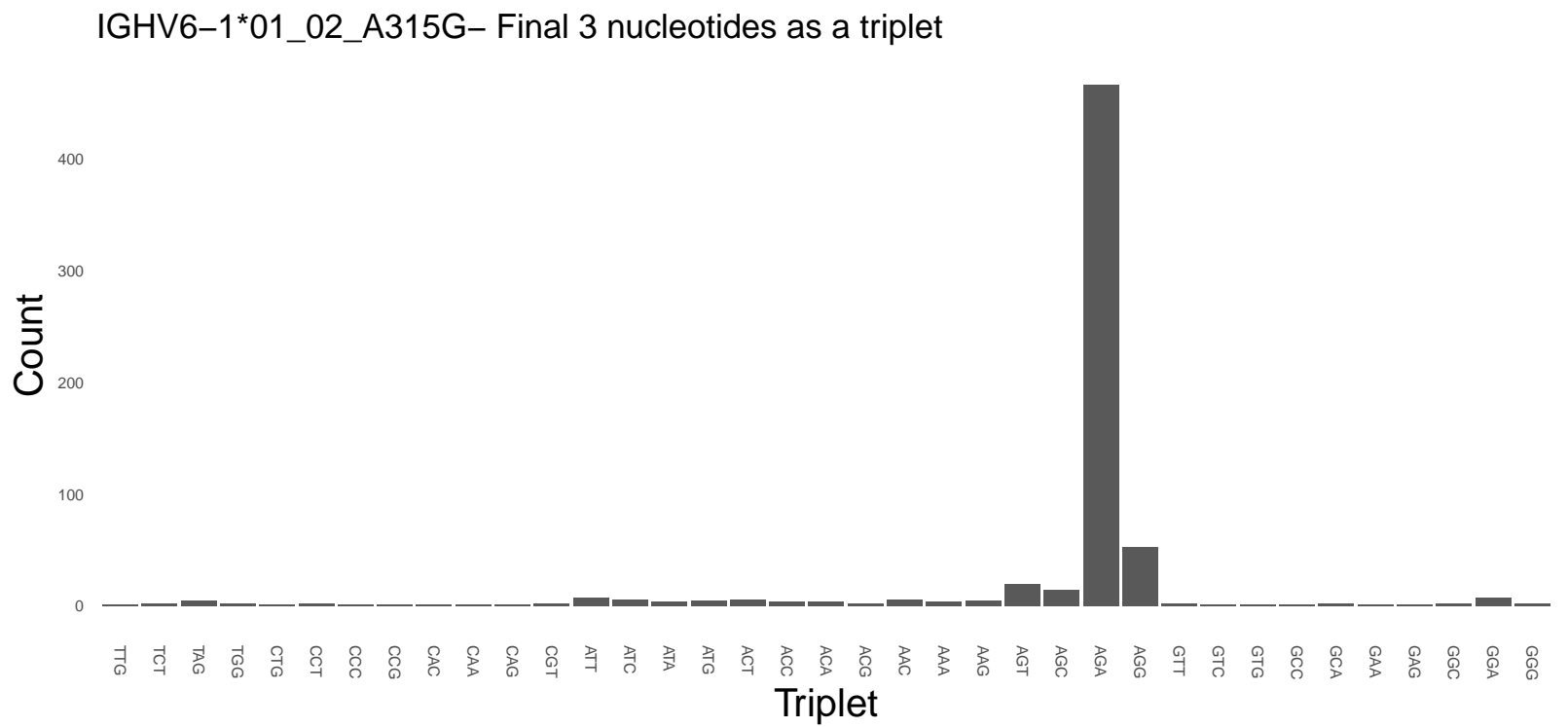
Gene IGHV6-1\*01\_02\_A315G



Gene IGHV6-1\*01\_02\_A315G

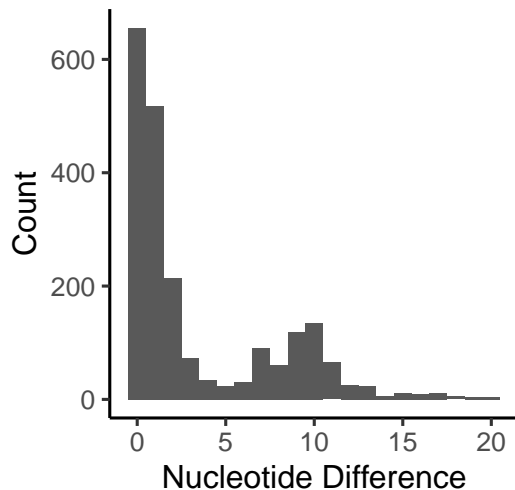


IGHV6-1\*01\_02\_A315G- Final 3 nucleotides as a triplet



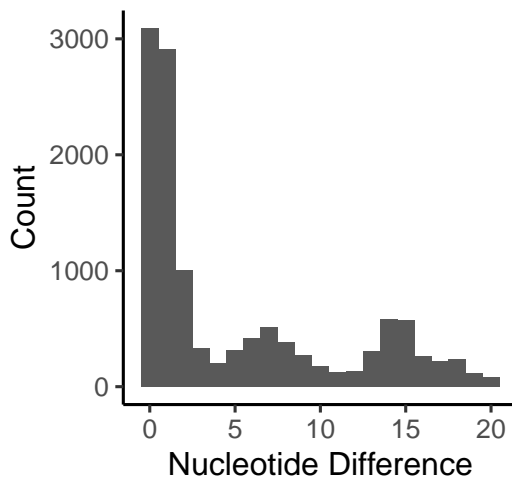
### IGHV1-2\*04

2297 sequences assigned  
656 (28.6%) exact matches, in which:  
564 unique CDR3  
6 unique J



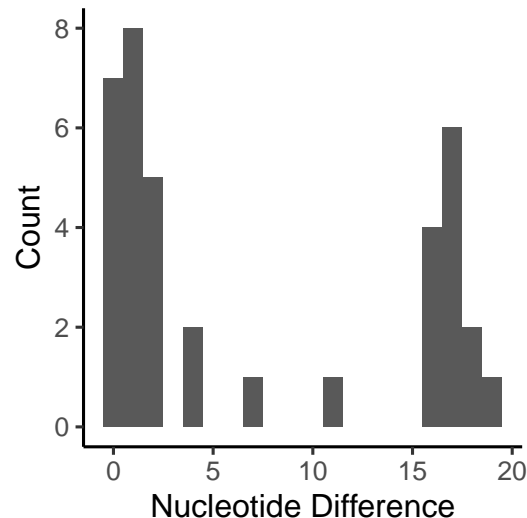
### IGHV1-8\*01

12894 sequences assigned  
3090 (24%) exact matches, in which:  
2612 unique CDR3  
6 unique J



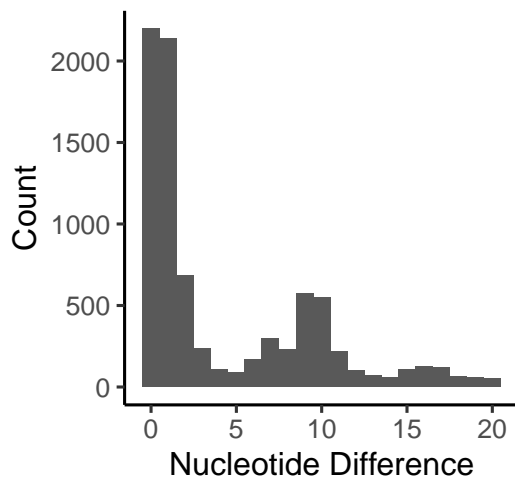
### IGHV1-45\*02

41 sequences assigned  
7 (17.1%) exact matches, in which:  
7 unique CDR3  
2 unique J



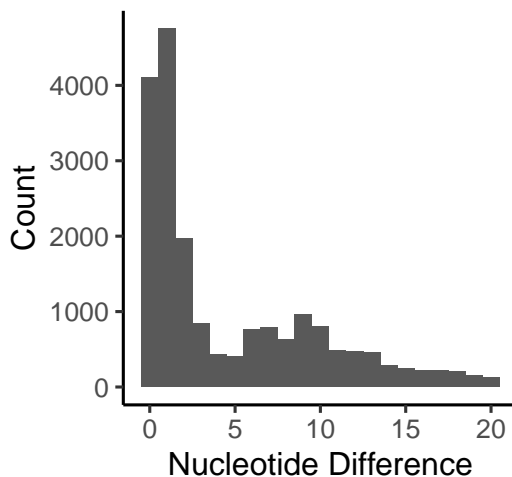
### IGHV1-2\*06

9249 sequences assigned  
2198 (23.8%) exact matches, in which:  
1853 unique CDR3  
6 unique J



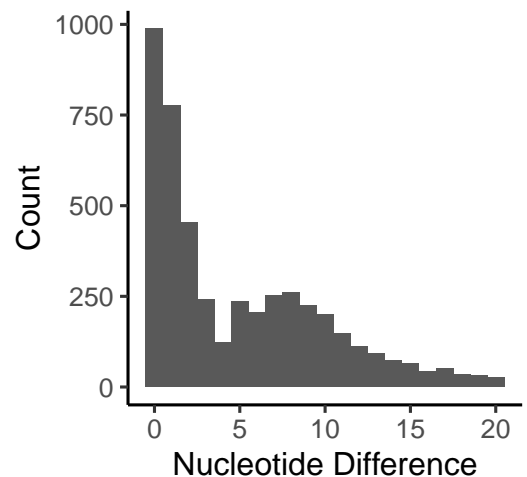
### IGHV1-18\*01

22781 sequences assigned  
4106 (18%) exact matches, in which:  
3327 unique CDR3  
6 unique J



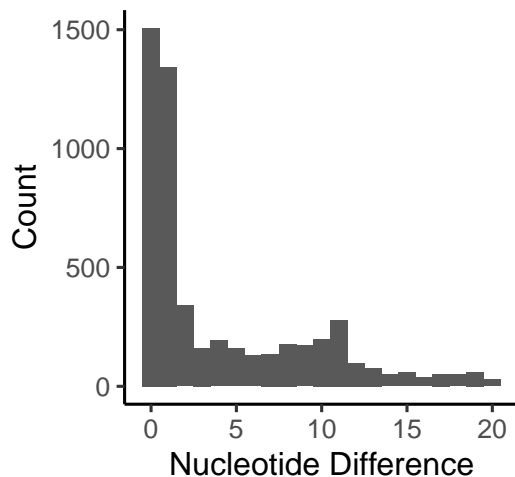
### IGHV1-46\*01

5434 sequences assigned  
988 (18.2%) exact matches, in which:  
906 unique CDR3  
6 unique J



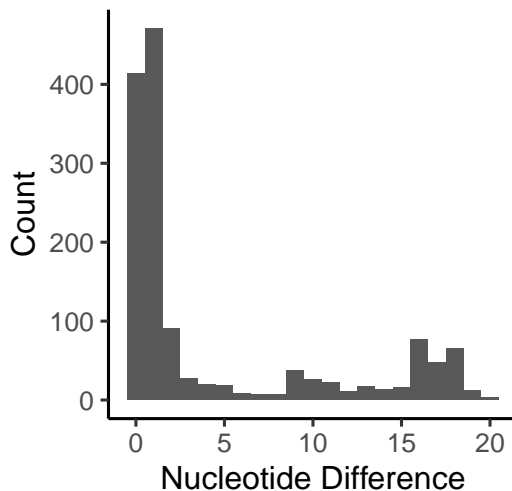
### IGHV1-3\*01\_05

5718 sequences assigned  
1507 (26.4%) exact matches, in which:  
1260 unique CDR3  
6 unique J



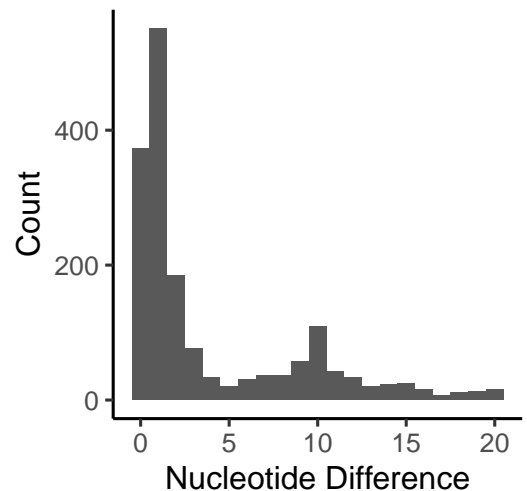
### IGHV1-24\*01

1421 sequences assigned  
414 (29.1%) exact matches, in which:  
302 unique CDR3  
6 unique J



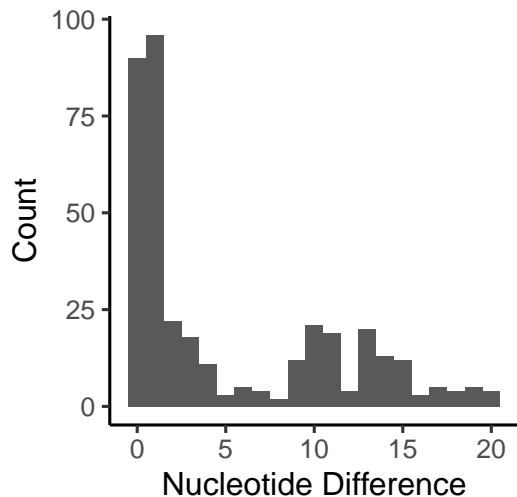
### IGHV1-46\*03

2089 sequences assigned  
373 (17.9%) exact matches, in which:  
261 unique CDR3  
6 unique J



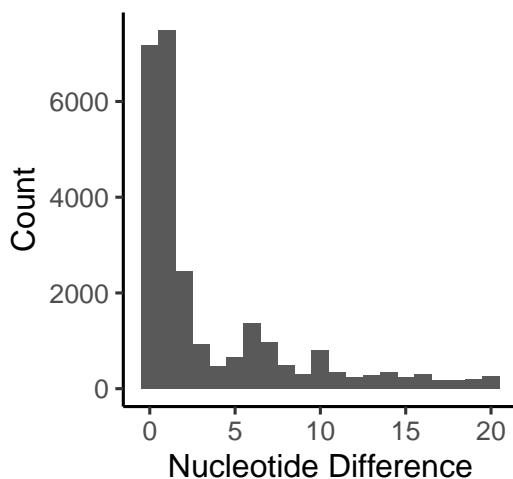
### IGHV1-58\*02

529 sequences assigned  
90 (17%) exact matches, in which:  
76 unique CDR3  
6 unique J



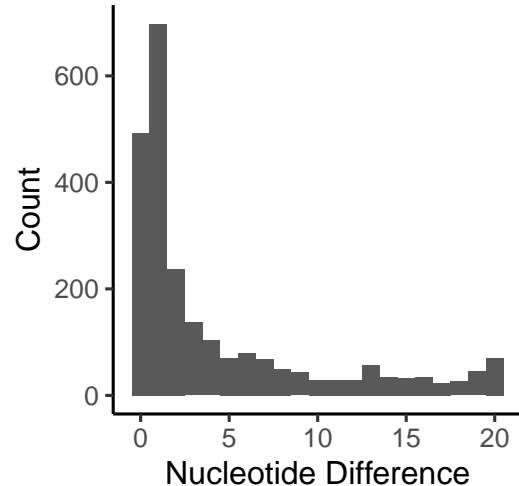
### IGHV1-69\*01\_12\_13

28053 sequences assigned  
7183 (25.6%) exact matches, in which:  
5861 unique CDR3  
6 unique J



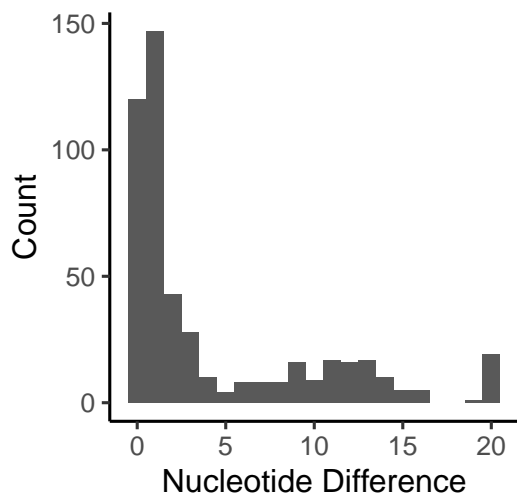
### IGHV2-5\*02

3038 sequences assigned  
492 (16.2%) exact matches, in which:  
383 unique CDR3  
6 unique J



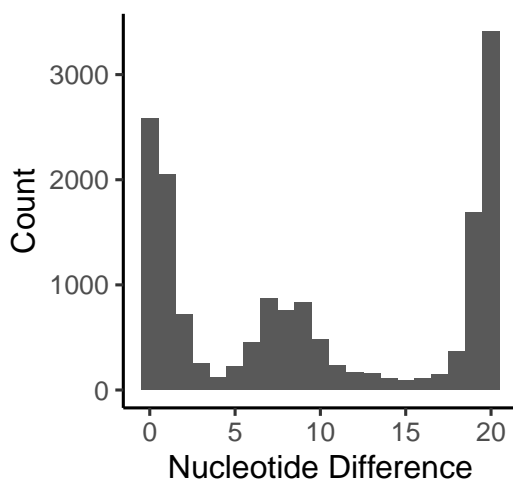
### IGHV1-58\*01\_03

554 sequences assigned  
120 (21.7%) exact matches, in which:  
109 unique CDR3  
5 unique J



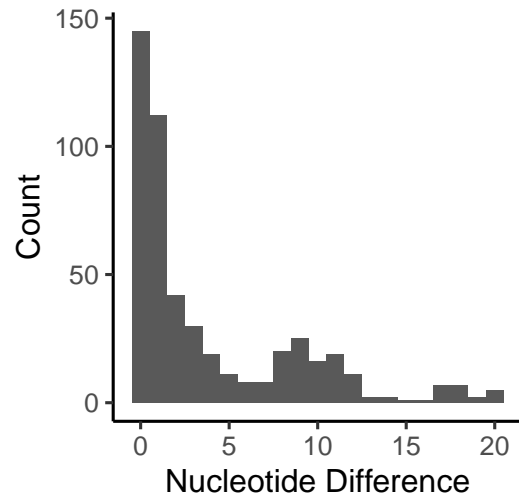
### IGHV1-69\*06\_14

22200 sequences assigned  
2587 (11.7%) exact matches, in which:  
2278 unique CDR3  
6 unique J



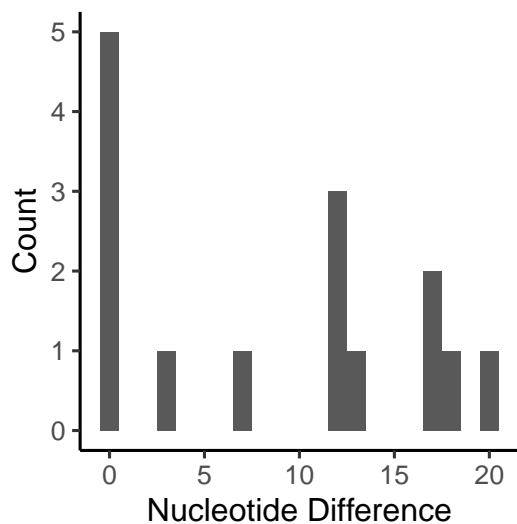
### IGHV2-26\*01

606 sequences assigned  
145 (23.9%) exact matches, in which:  
117 unique CDR3  
6 unique J



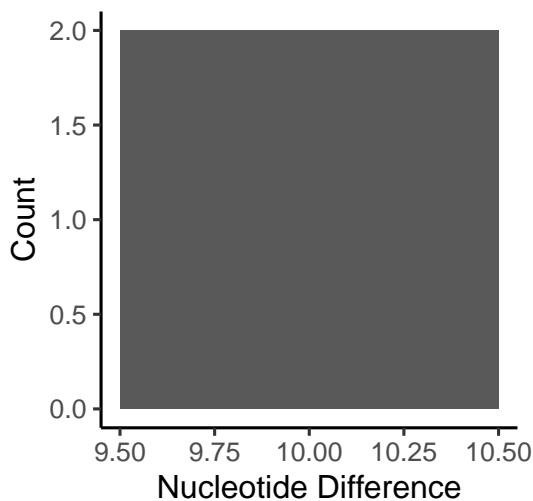
### IGHV1-69-2\*01

16 sequences assigned  
5 (31.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



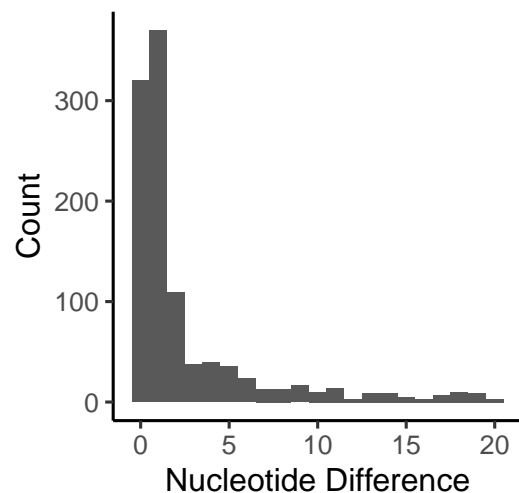
### IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



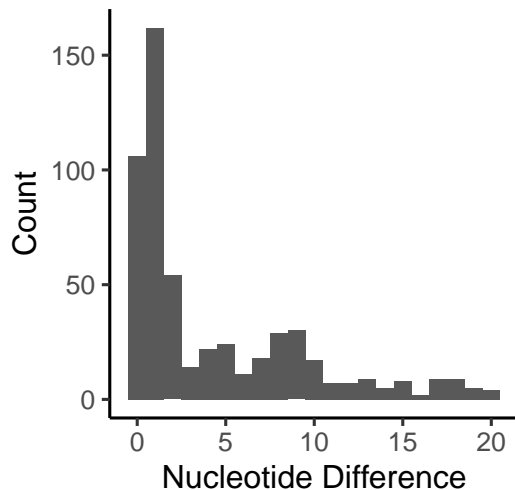
### IGHV2-70\*01

1102 sequences assigned  
320 (29%) exact matches, in which:  
237 unique CDR3  
6 unique J



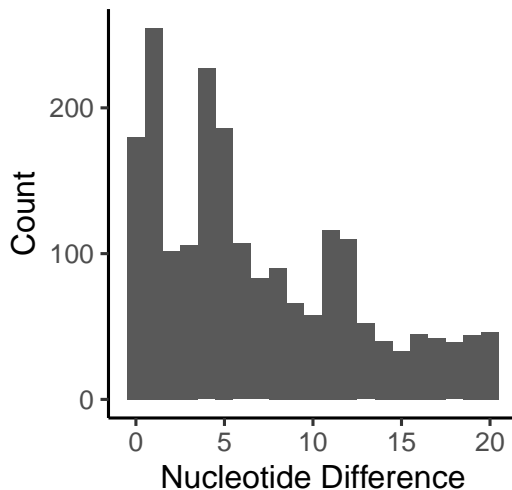
### IGHV2-70\*04

560 sequences assigned  
106 (18.9%) exact matches, in which:  
86 unique CDR3  
5 unique J



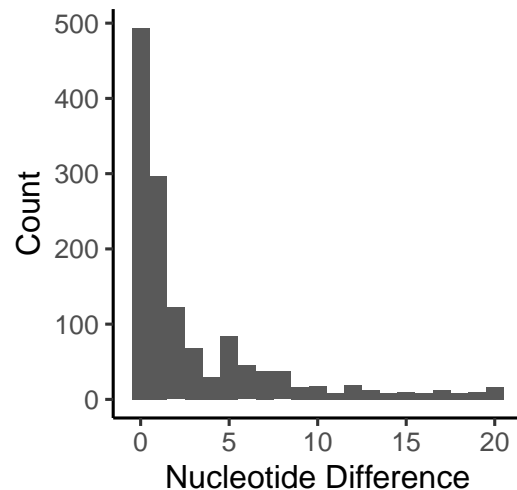
### IGHV3-7\*03

2518 sequences assigned  
180 (7.1%) exact matches, in which:  
168 unique CDR3  
6 unique J



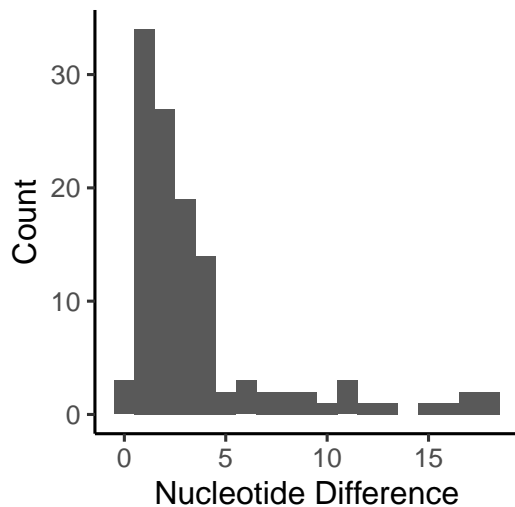
### IGHV3-11\*04

1472 sequences assigned  
494 (33.6%) exact matches, in which:  
465 unique CDR3  
6 unique J



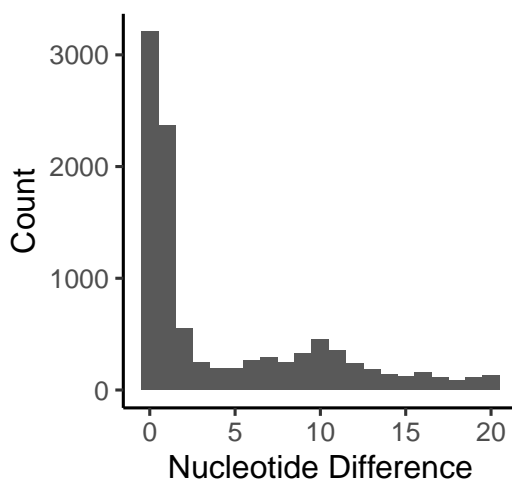
### IGHV2-70\*12

155 sequences assigned  
3 (1.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



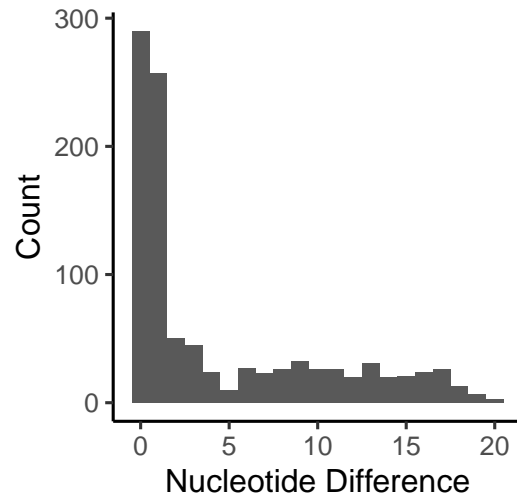
### IGHV3-9\*01

12105 sequences assigned  
3207 (26.5%) exact matches, in which:  
1808 unique CDR3  
6 unique J



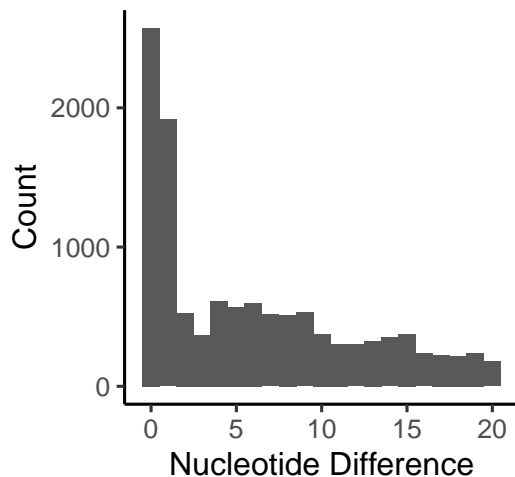
### IGHV3-13\*01

1560 sequences assigned  
290 (18.6%) exact matches, in which:  
151 unique CDR3  
5 unique J



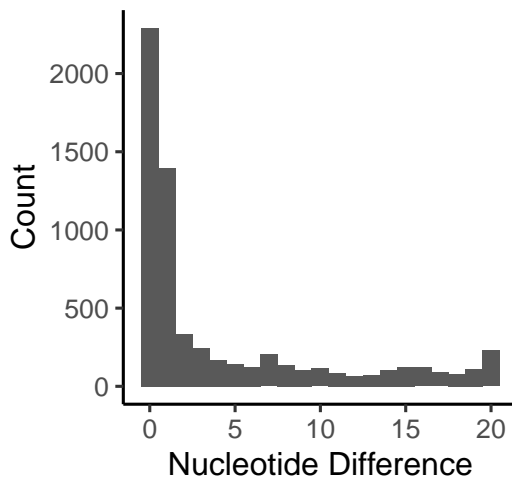
### IGHV3-7\*01

14203 sequences assigned  
2573 (18.1%) exact matches, in which:  
1754 unique CDR3  
6 unique J



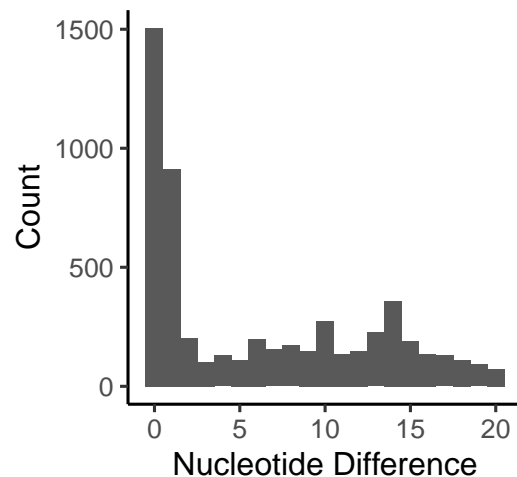
### IGHV3-11\*01

8682 sequences assigned  
2291 (26.4%) exact matches, in which:  
1532 unique CDR3  
6 unique J



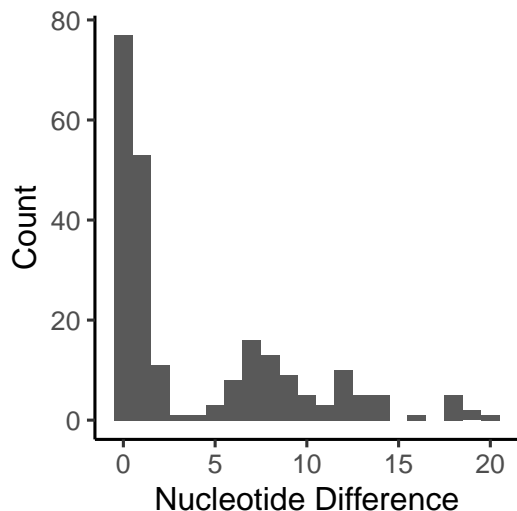
### IGHV3-15\*01\_02

6837 sequences assigned  
1505 (22%) exact matches, in which:  
886 unique CDR3  
6 unique J



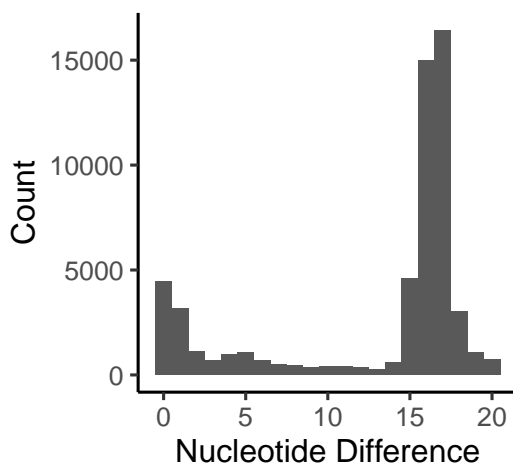
### IGHV3-20\*01\_02

230 sequences assigned  
77 (33.5%) exact matches, in which:  
47 unique CDR3  
5 unique J



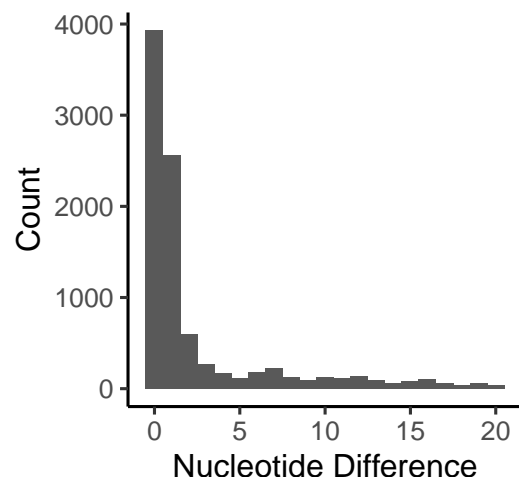
### IGHV3-21\*01\_02

59208 sequences assigned  
4449 (7.5%) exact matches, in which:  
2837 unique CDR3  
6 unique J



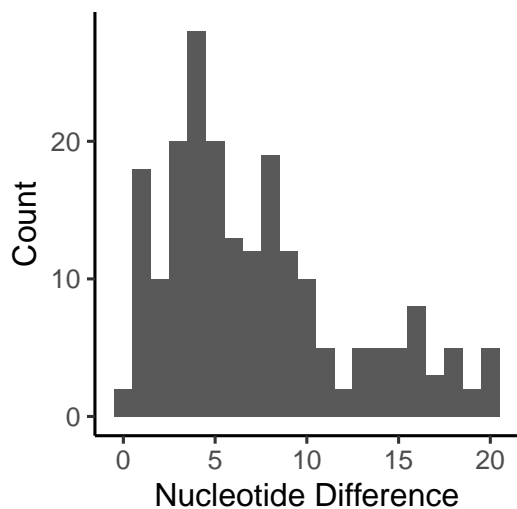
### IGHV3-30-3\*01

9861 sequences assigned  
3930 (39.9%) exact matches, in which:  
2426 unique CDR3  
6 unique J



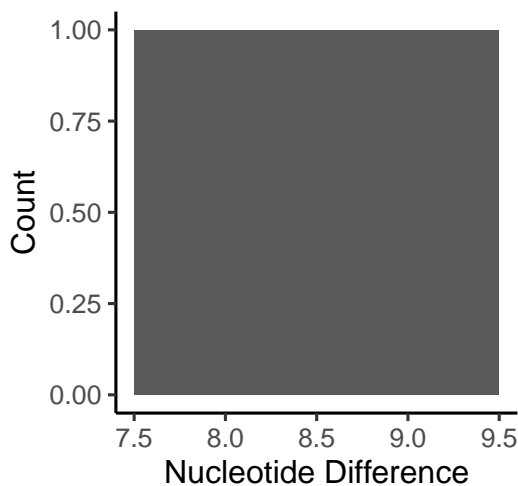
### IGHV3-20\*03\_04

246 sequences assigned  
2 (0.8%) exact matches, in which:  
2 unique CDR3  
1 unique J



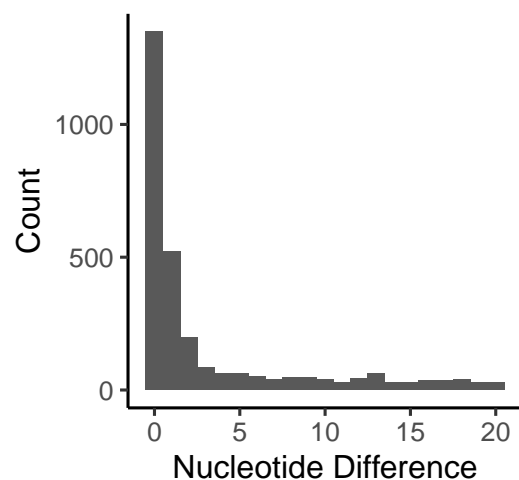
### IGHV3-22\*01\_02

2 sequences assigned  
No exact matches.



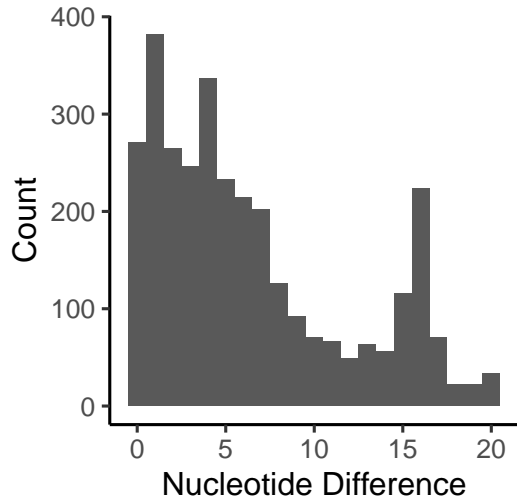
### IGHV3-30\*03

3413 sequences assigned  
1349 (39.5%) exact matches, in which:  
1187 unique CDR3  
6 unique J



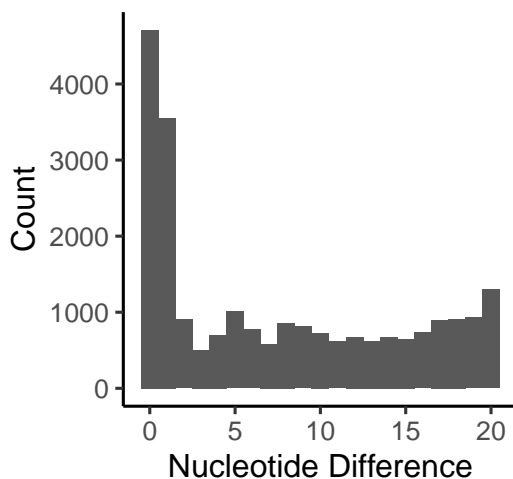
### IGHV3-21\*04

3479 sequences assigned  
271 (7.8%) exact matches, in which:  
246 unique CDR3  
6 unique J



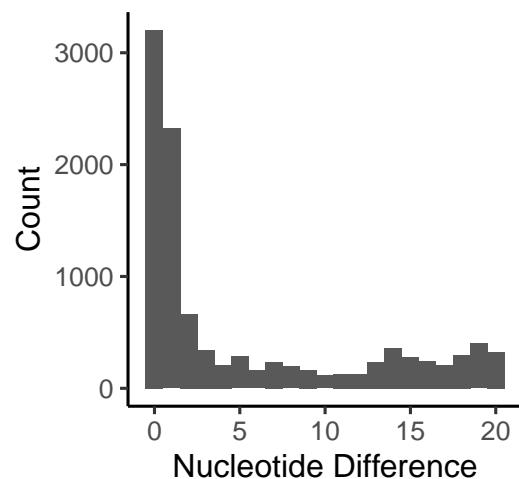
### IGHV3-23\*01\_04

33498 sequences assigned  
4709 (14.1%) exact matches, in which:  
2651 unique CDR3  
6 unique J



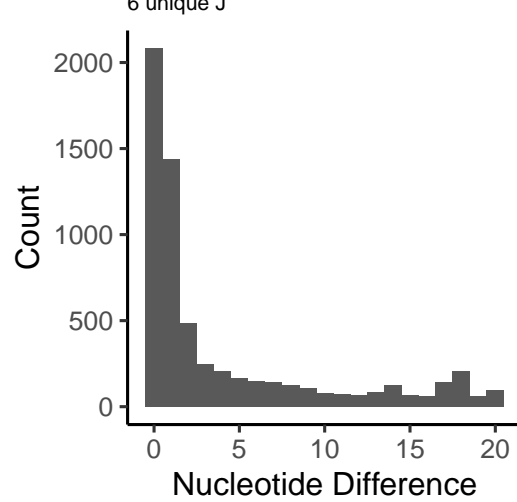
### IGHV3-30\*18

13437 sequences assigned  
3203 (23.8%) exact matches, in which:  
1827 unique CDR3  
6 unique J



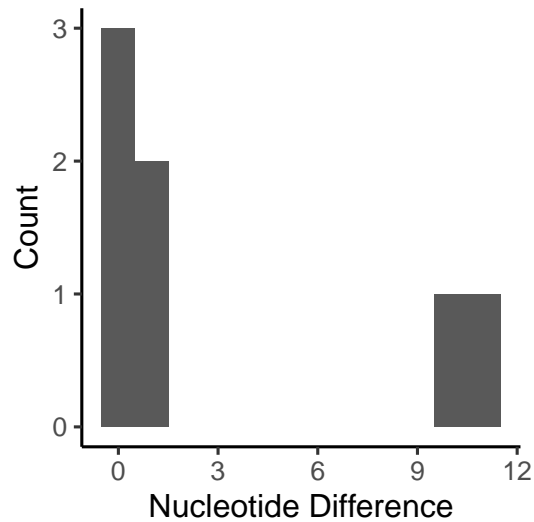
### IGHV3-33\*01

7737 sequences assigned  
2082 (26.9%) exact matches, in which:  
1393 unique CDR3  
6 unique J



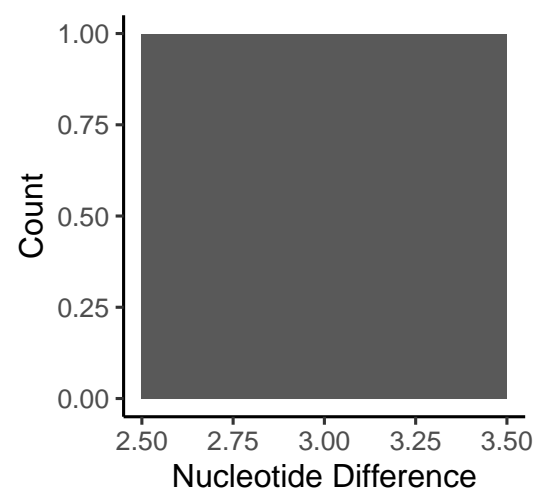
### IGHV3-35\*01

7 sequences assigned  
3 (42.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



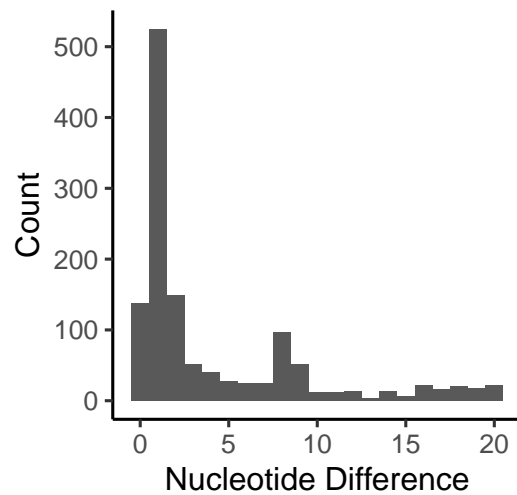
### IGHV3-47\*01

1 sequences assigned  
No exact matches.



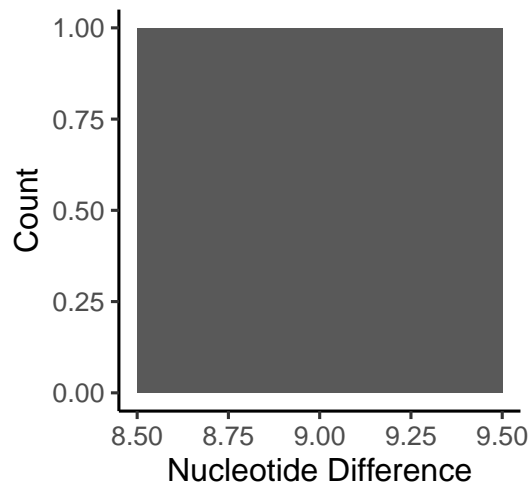
### IGHV3-33\*06

1382 sequences assigned  
138 (10%) exact matches, in which:  
134 unique CDR3  
6 unique J



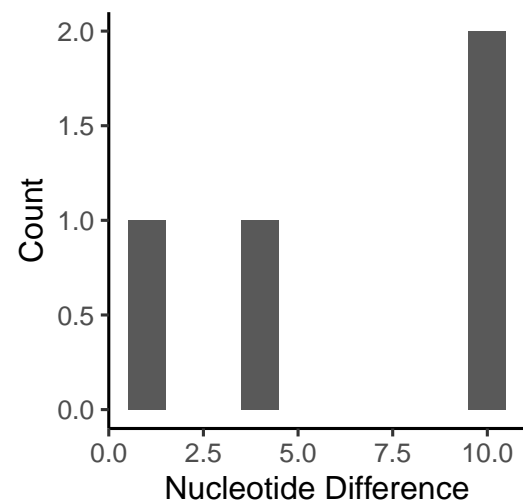
### IGHV3-38-3\*01

1 sequences assigned  
No exact matches.



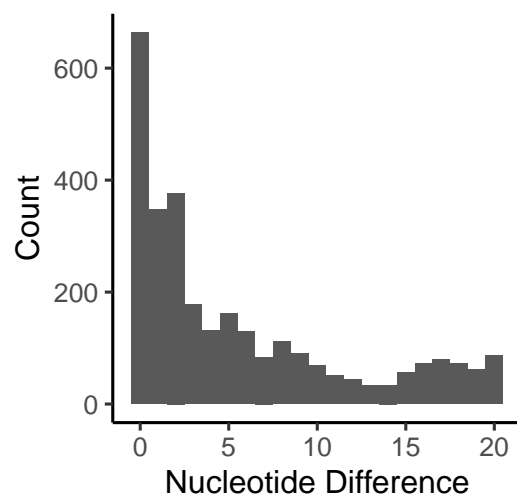
### IGHV3-47\*02

4 sequences assigned  
No exact matches.



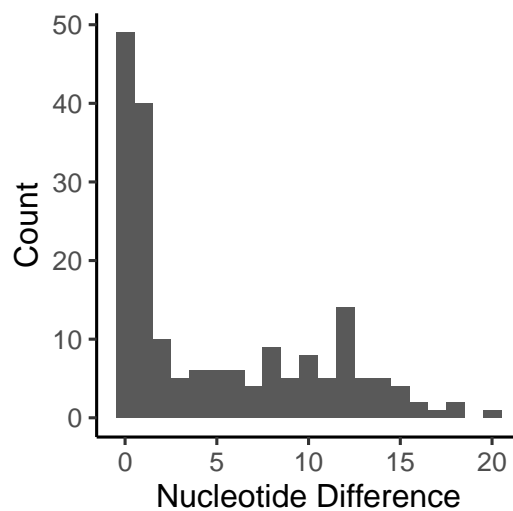
### IGHV3-33\*08

3735 sequences assigned  
664 (17.8%) exact matches, in which:  
532 unique CDR3  
6 unique J



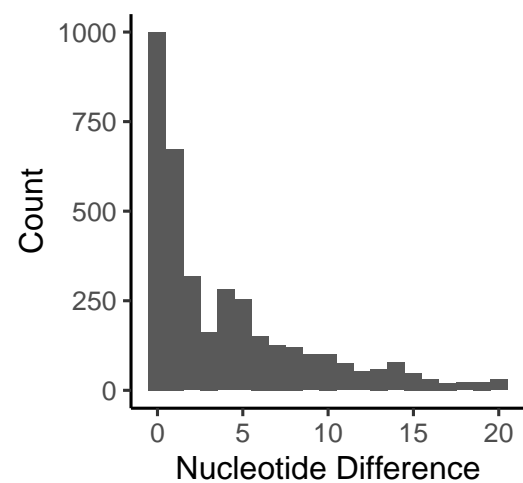
### IGHV3-43\*01

190 sequences assigned  
49 (25.8%) exact matches, in which:  
30 unique CDR3  
4 unique J



### IGHV3-48\*01

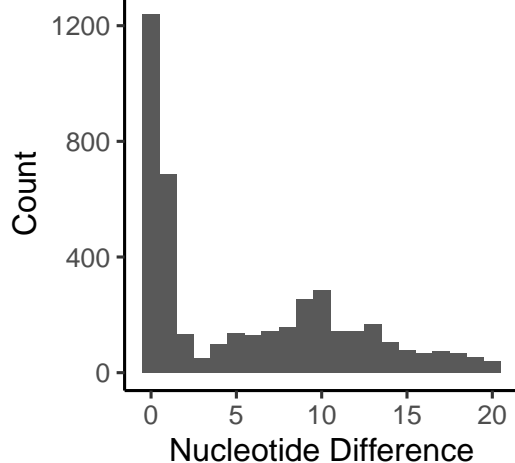
4363 sequences assigned  
1000 (22.9%) exact matches, in which:  
672 unique CDR3  
6 unique J





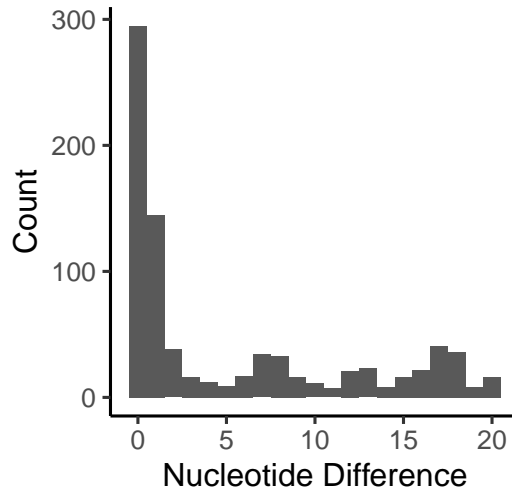
### IGHV3-48\*03

5432 sequences assigned  
1239 (22.8%) exact matches, in which:  
746 unique CDR3  
6 unique J



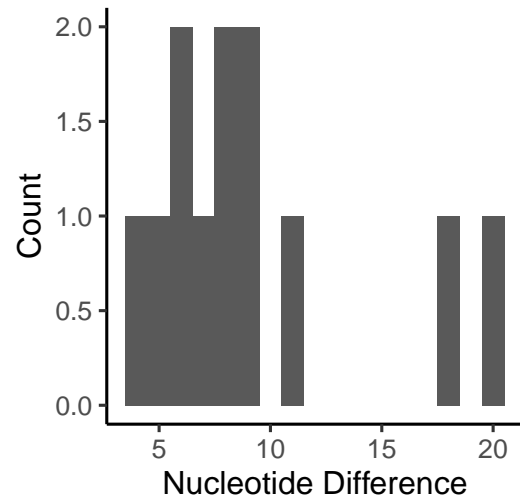
### IGHV3-49\*03\_05

977 sequences assigned  
295 (30.2%) exact matches, in which:  
194 unique CDR3  
6 unique J



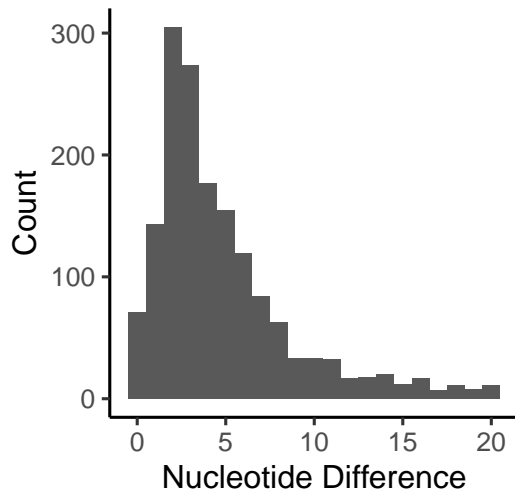
### IGHV3-64\*04

17 sequences assigned  
No exact matches.



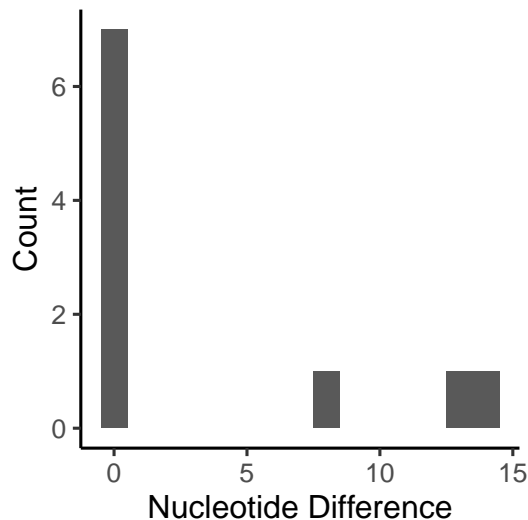
### IGHV3-48\*04

1735 sequences assigned  
71 (4.1%) exact matches, in which:  
70 unique CDR3  
5 unique J



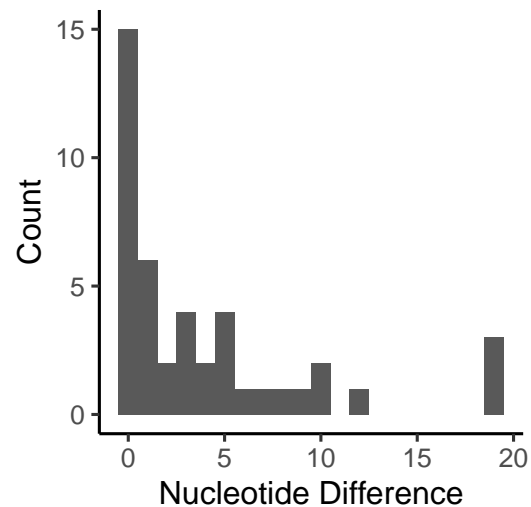
### IGHV3-52\*02

10 sequences assigned  
7 (70%) exact matches, in which:  
7 unique CDR3  
3 unique J



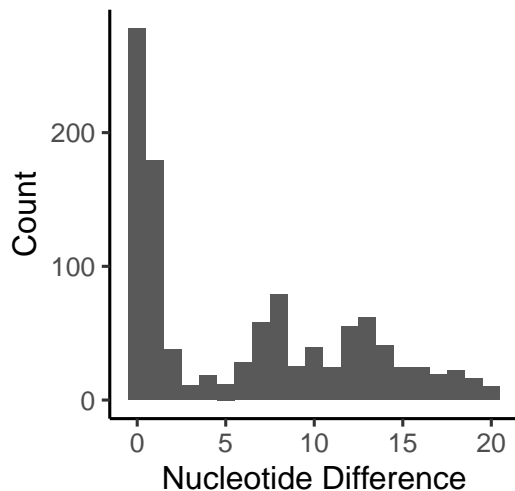
### IGHV3-64\*02\_07

44 sequences assigned  
15 (34.1%) exact matches, in which:  
14 unique CDR3  
4 unique J



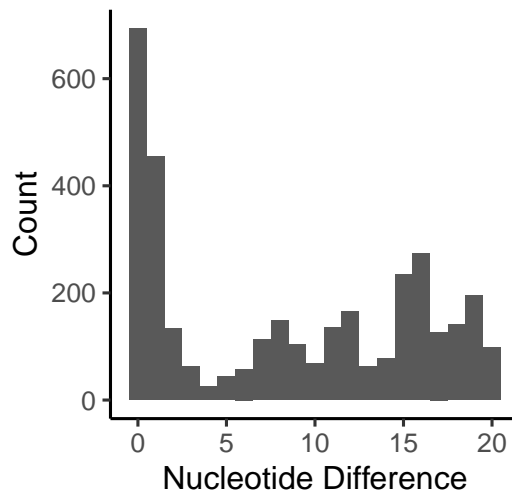
### IGHV3-49\*04

1282 sequences assigned  
278 (21.7%) exact matches, in which:  
170 unique CDR3  
6 unique J



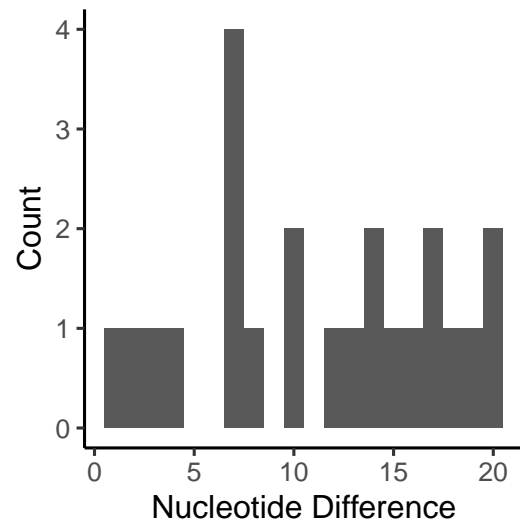
### IGHV3-53\*01\_02

4467 sequences assigned  
694 (15.5%) exact matches, in which:  
464 unique CDR3  
6 unique J



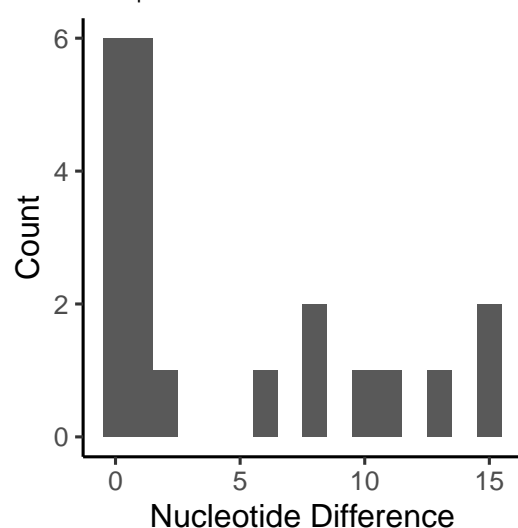
### IGHV3-66\*01

34 sequences assigned  
No exact matches.



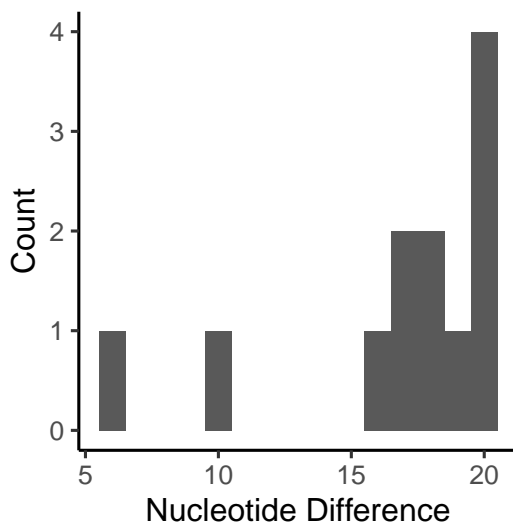
### IGHV3-66\*03

23 sequences assigned  
6 (26.1%) exact matches, in which:  
4 unique CDR3  
2 unique J



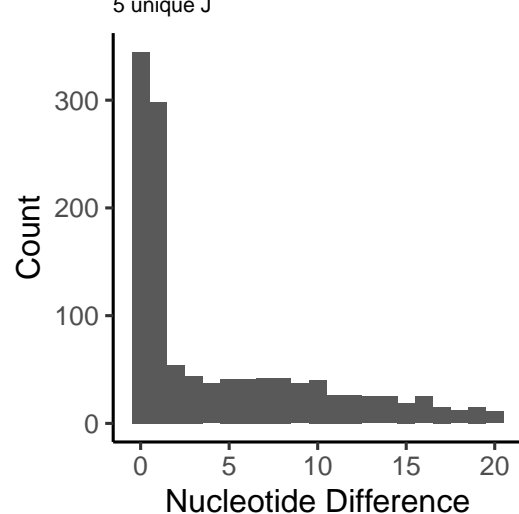
### IGHV3-69-1\*02

405 sequences assigned  
No exact matches.



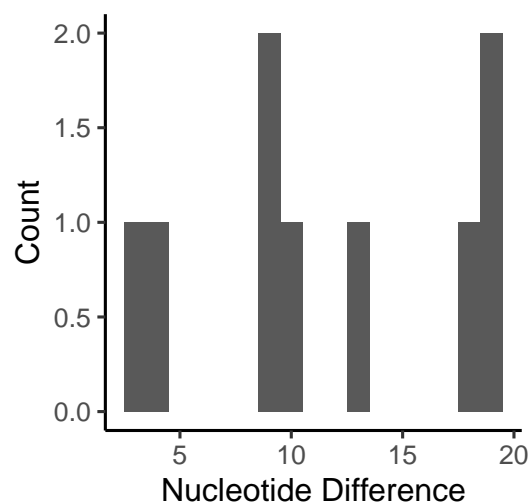
### IGHV3-73\*01\_02

1249 sequences assigned  
345 (27.6%) exact matches, in which:  
194 unique CDR3  
5 unique J



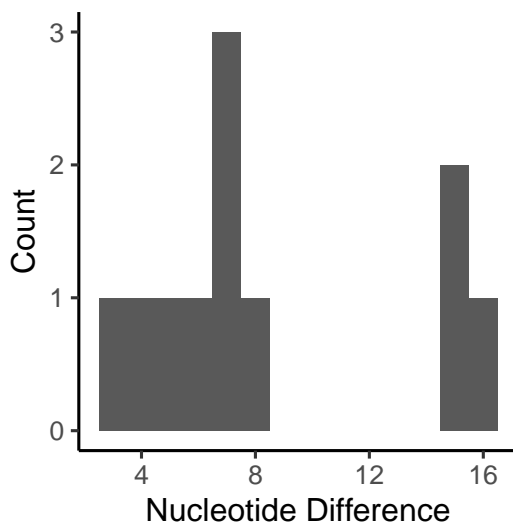
### IGHV3-66\*04

11 sequences assigned  
No exact matches.



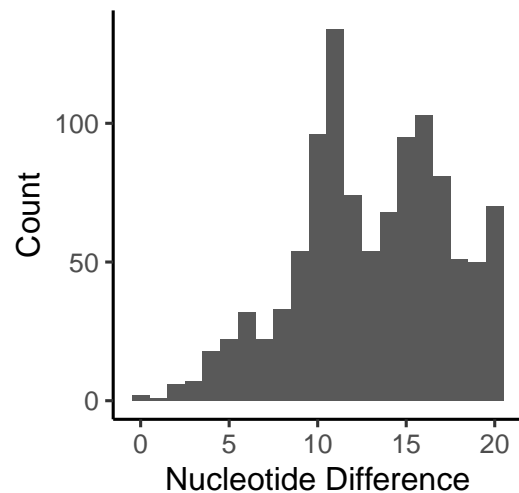
### IGHV3-71\*01\_04

12 sequences assigned  
No exact matches.



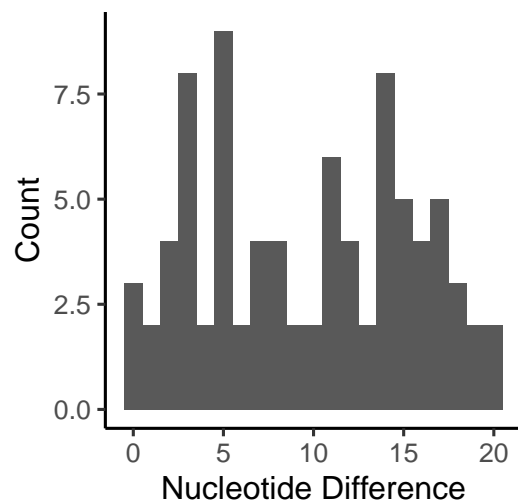
### IGHV3-74\*03

3533 sequences assigned  
2 (0.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



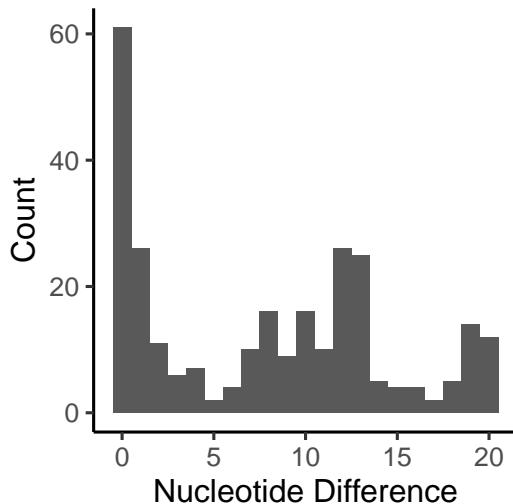
### IGHV3-69-1\*01

102 sequences assigned  
3 (2.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



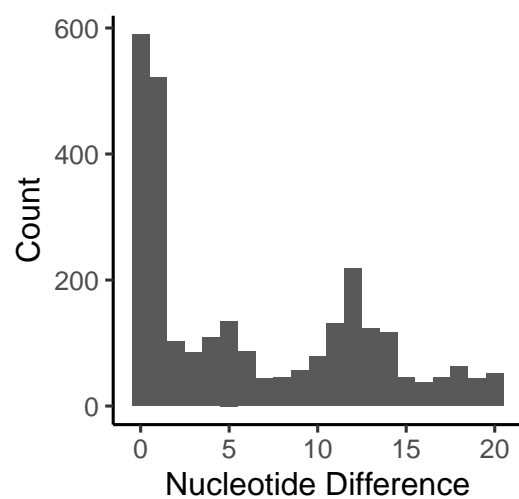
### IGHV3-72\*01

762 sequences assigned  
61 (8%) exact matches, in which:  
38 unique CDR3  
6 unique J



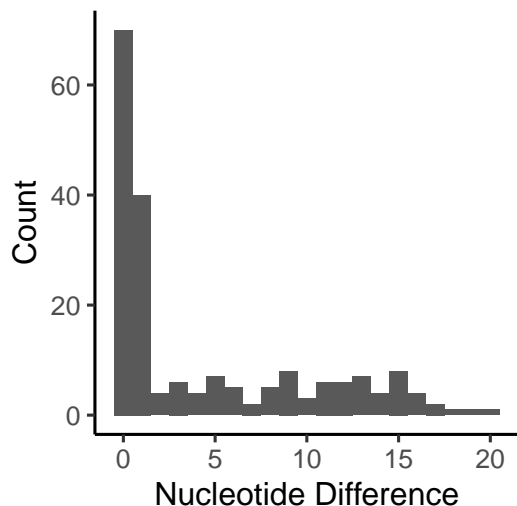
### IGHV3-74\*01\_02

3469 sequences assigned  
590 (17%) exact matches, in which:  
305 unique CDR3  
6 unique J



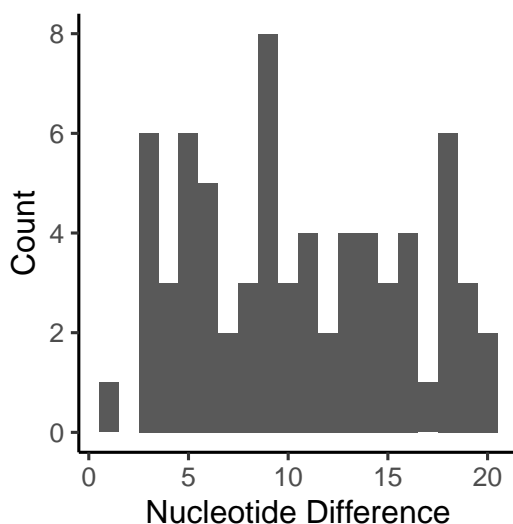
### IGHV3-43D\*04

204 sequences assigned  
70 (34.3%) exact matches, in which:  
39 unique CDR3  
5 unique J



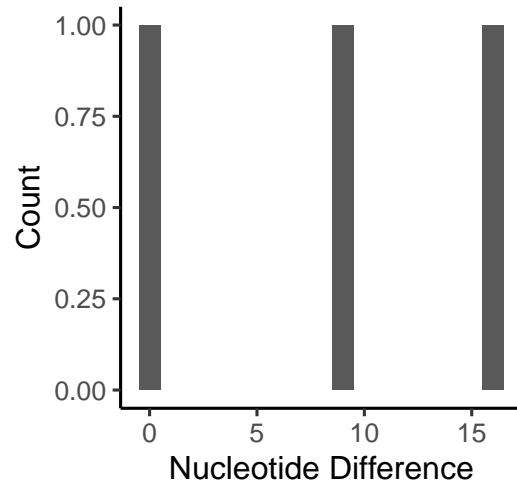
### IGHV3-NL1\*01

141 sequences assigned  
No exact matches.



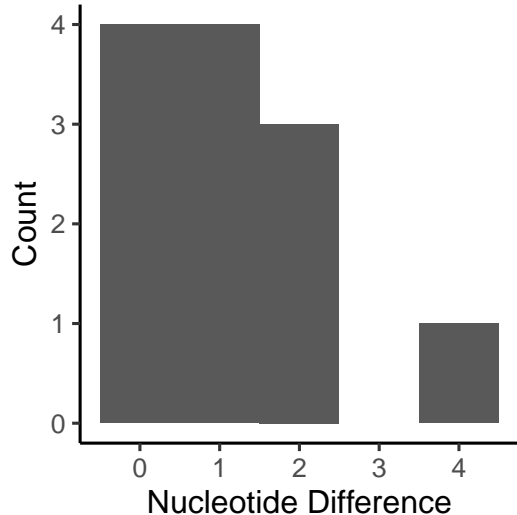
### IGHV4-28\*01\_07

20 sequences assigned  
1 (5%) exact matches, in which:  
1 unique CDR3  
1 unique J



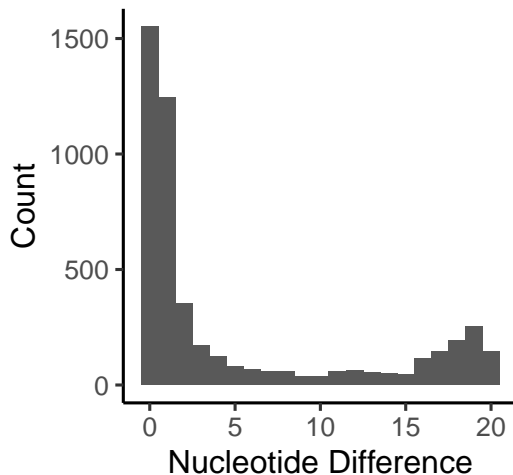
### IGHV3-64D\*06

13 sequences assigned  
4 (30.8%) exact matches, in which:  
2 unique CDR3  
1 unique J



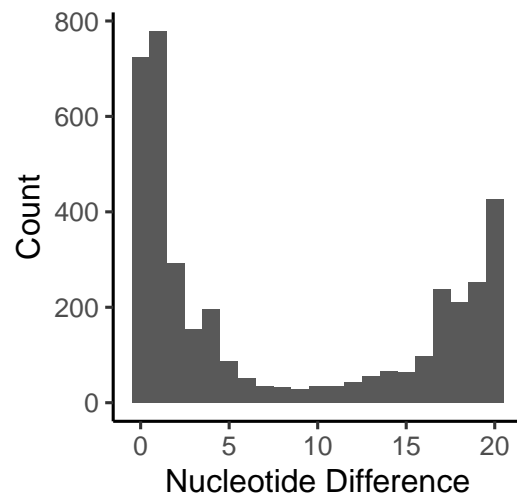
### IGHV4-4\*02\_03

6529 sequences assigned  
1551 (23.8%) exact matches, in which:  
1240 unique CDR3  
6 unique J



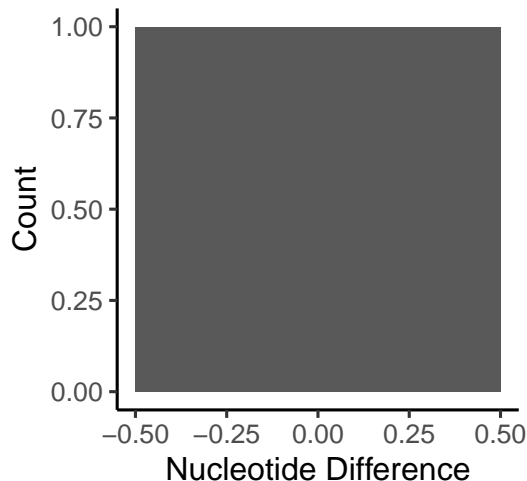
### IGHV4-30-4\*01

4466 sequences assigned  
724 (16.2%) exact matches, in which:  
575 unique CDR3  
6 unique J



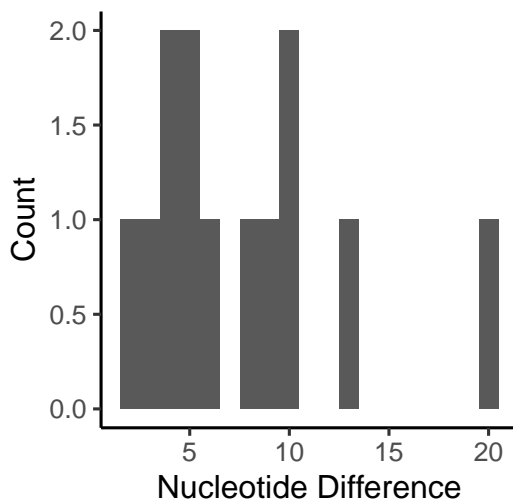
### IGHV3-64D\*08

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



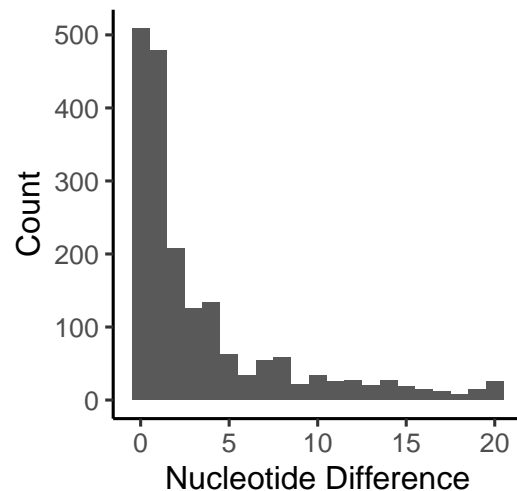
### IGHV4-28\*03

22 sequences assigned  
No exact matches.



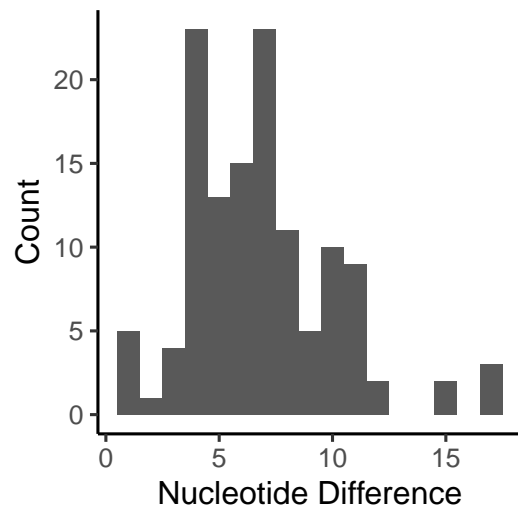
### IGHV4-30-2\*01

2284 sequences assigned  
509 (22.3%) exact matches, in which:  
297 unique CDR3  
6 unique J



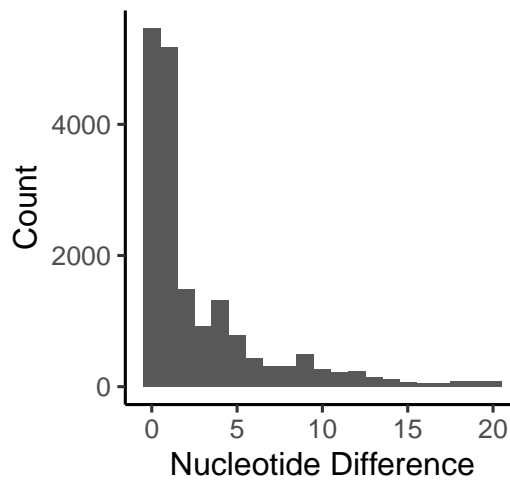
### IGHV4-30-2\*03

154 sequences assigned  
No exact matches.



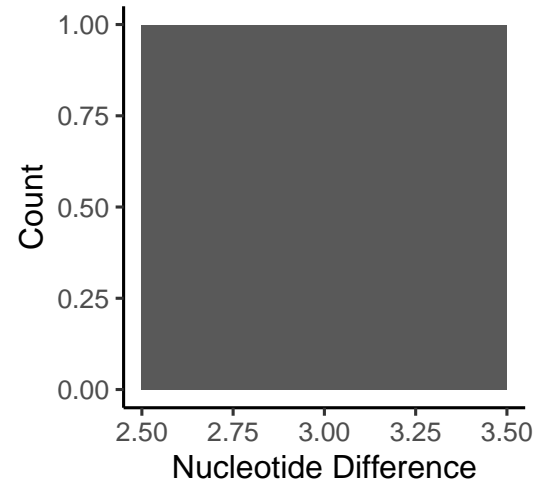
### IGHV4-34\*01\_02

19799 sequences assigned  
5463 (27.6%) exact matches, in which:  
4055 unique CDR3  
6 unique J



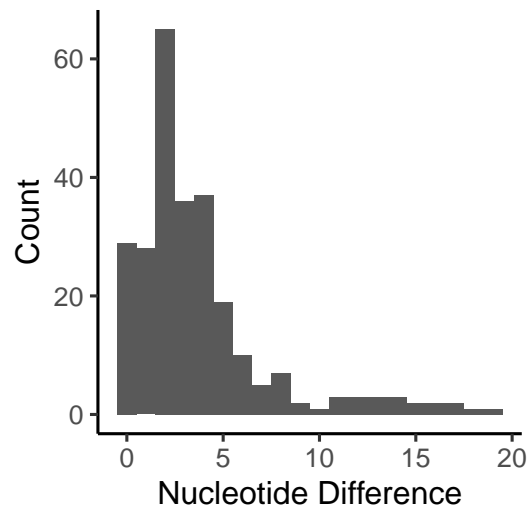
### IGHV4-55\*09

1 sequences assigned  
No exact matches.



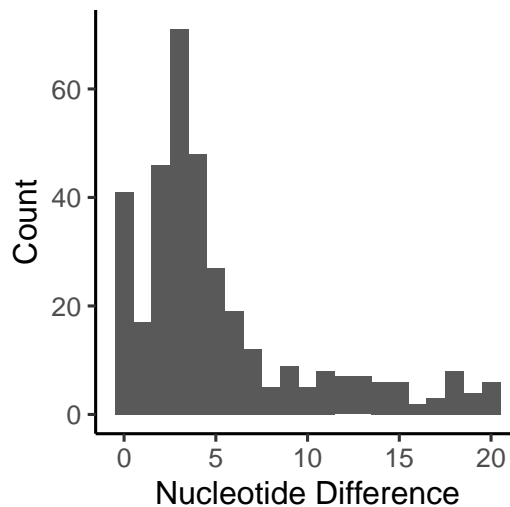
### IGHV4-30-2\*05

269 sequences assigned  
29 (10.8%) exact matches, in which:  
29 unique CDR3  
4 unique J



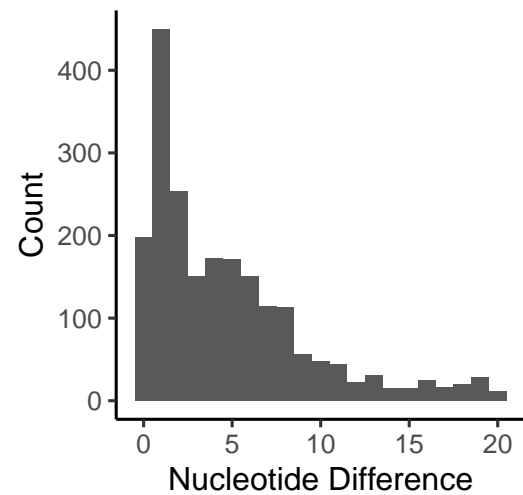
### IGHV4-38-2\*02

551 sequences assigned  
41 (7.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



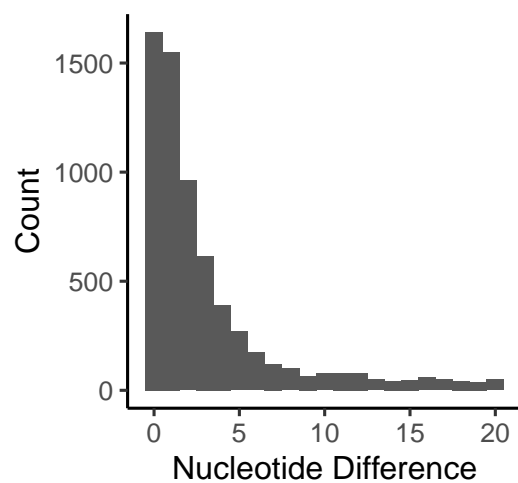
### IGHV4-59\*08

2398 sequences assigned  
198 (8.3%) exact matches, in which:  
191 unique CDR3  
6 unique J



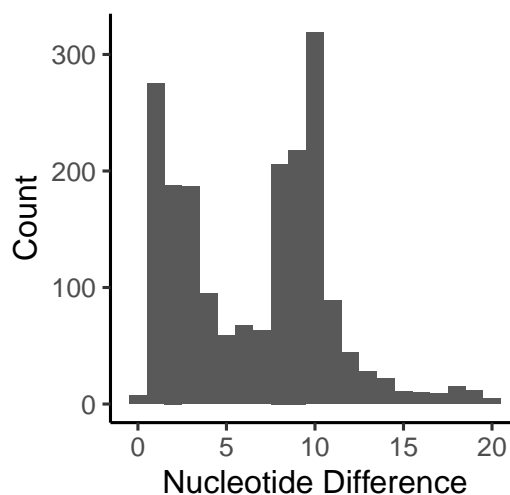
### IGHV4-31\*02

7896 sequences assigned  
1642 (20.8%) exact matches, in which:  
1368 unique CDR3  
6 unique J



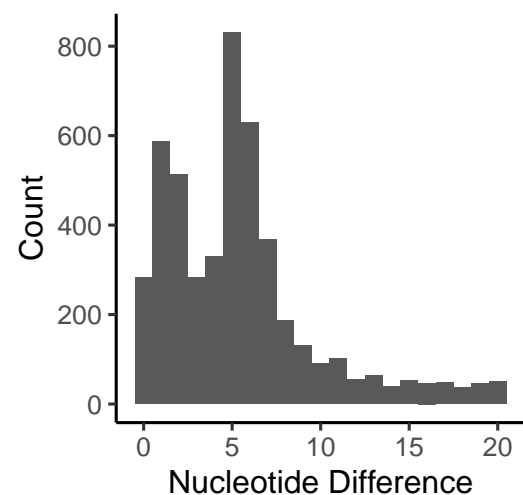
### IGHV4-39\*07

2214 sequences assigned  
7 (0.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



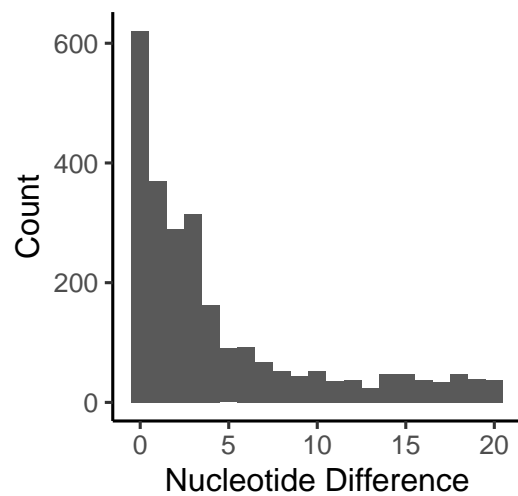
### IGHV4-59\*12

5821 sequences assigned  
282 (4.8%) exact matches, in which:  
276 unique CDR3  
5 unique J



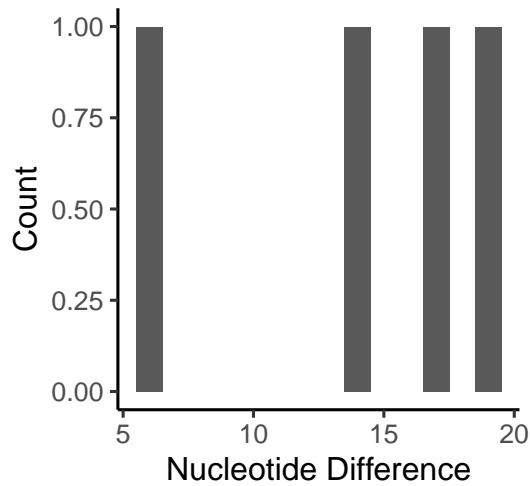
### IGHV4-61\*01

3227 sequences assigned  
621 (19.2%) exact matches, in which:  
577 unique CDR3  
6 unique J



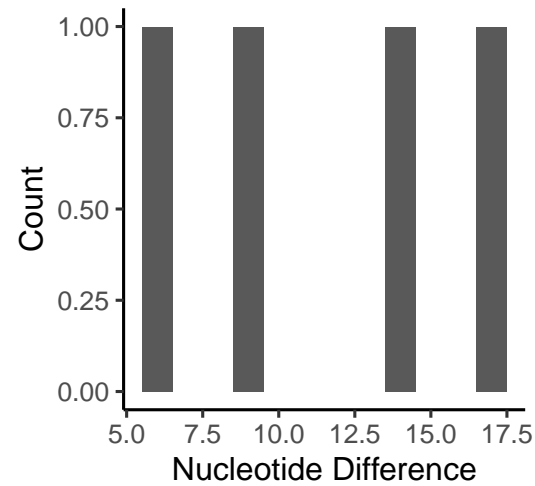
### IGHV1/OR15-1\*04

7 sequences assigned  
No exact matches.



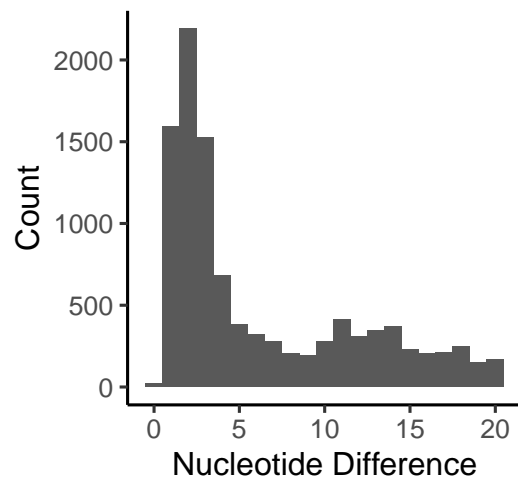
### IGHV1/OR15-4\*01

5 sequences assigned  
No exact matches.



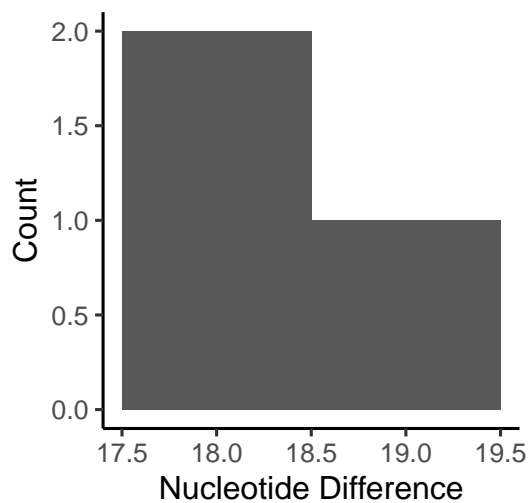
### IGHV4-61\*02

13122 sequences assigned  
20 (0.2%) exact matches, in which:  
20 unique CDR3  
4 unique J



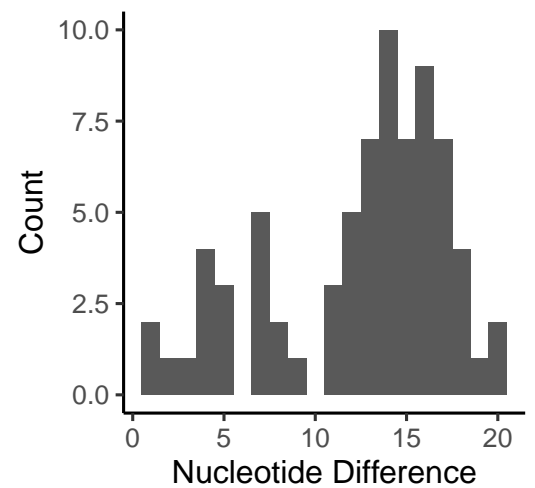
### IGHV1/OR15-2\*02\_03

10 sequences assigned  
No exact matches.



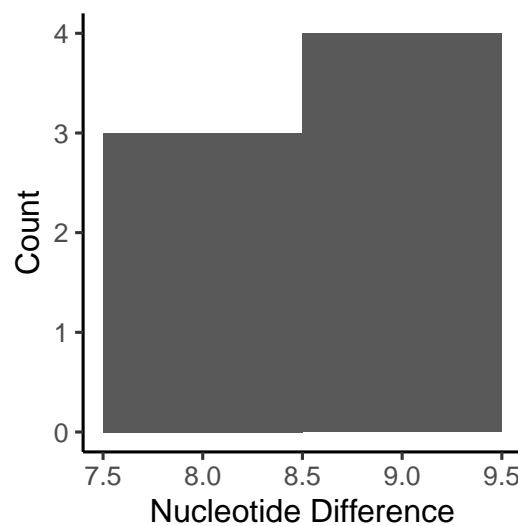
### IGHV4/OR15-8\*01

102 sequences assigned  
No exact matches.



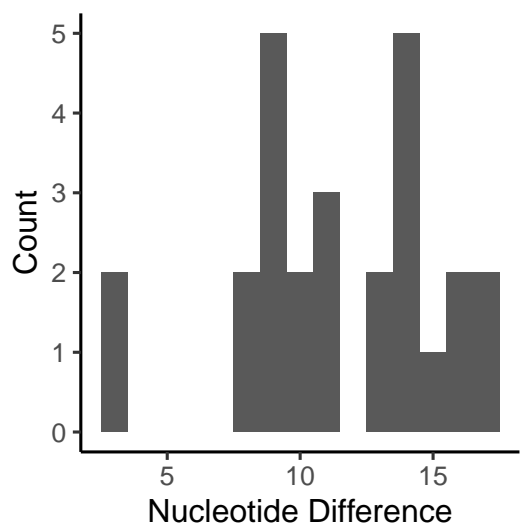
### IGHV1/OR15-1\*02

7 sequences assigned  
No exact matches.



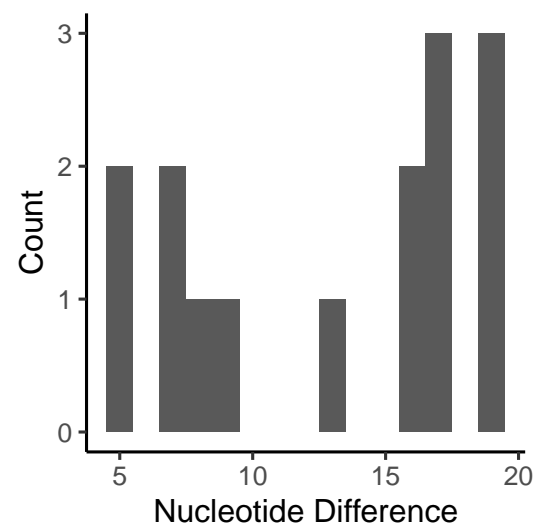
### IGHV1/OR15-3\*02

30 sequences assigned  
No exact matches.



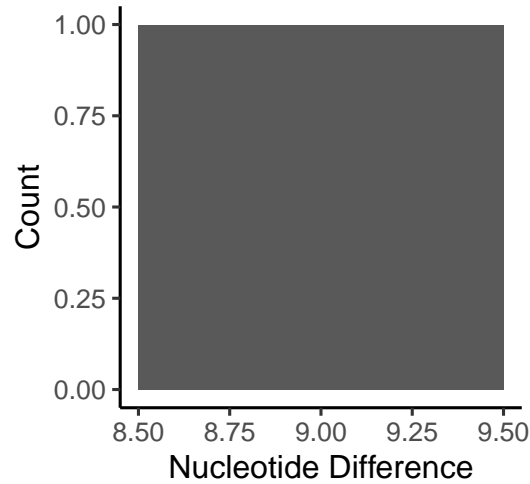
### IGHV4/OR15-8\*02

221 sequences assigned  
No exact matches.



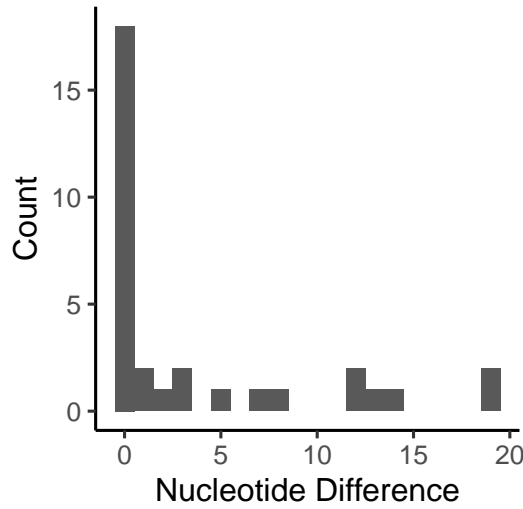
### IGHV5-10-1\*01\_03

1 sequences assigned  
No exact matches.



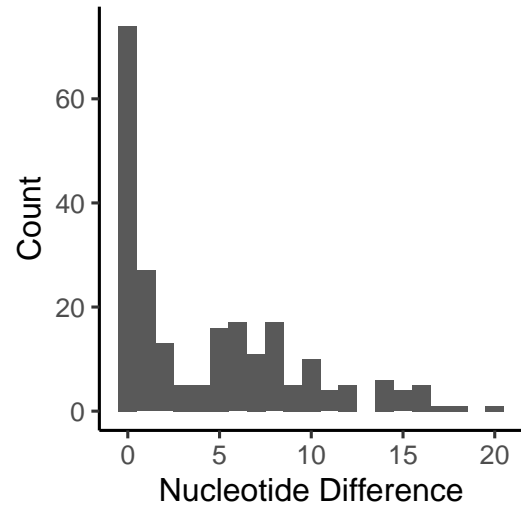
### IGHV5-51\*07

37 sequences assigned  
18 (48.6%) exact matches, in which:  
18 unique CDR3  
4 unique J



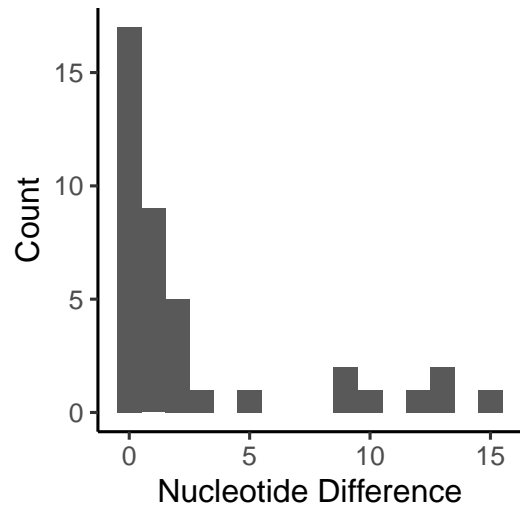
### IGHV6-1\*01\_02\_A315G

646 sequences assigned  
74 (11.5%) exact matches, in which:  
73 unique CDR3  
6 unique J



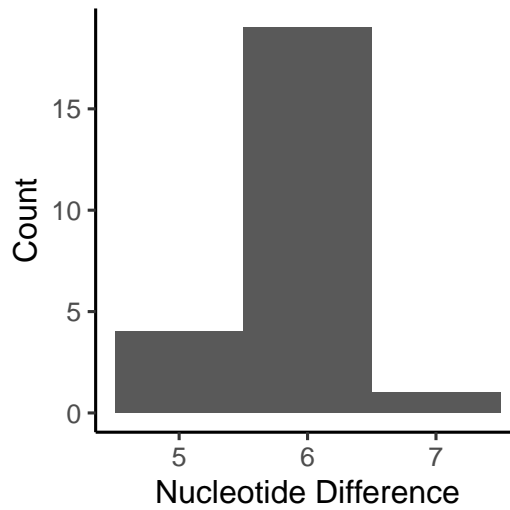
### IGHV5-51\*04

45 sequences assigned  
17 (37.8%) exact matches, in which:  
17 unique CDR3  
4 unique J



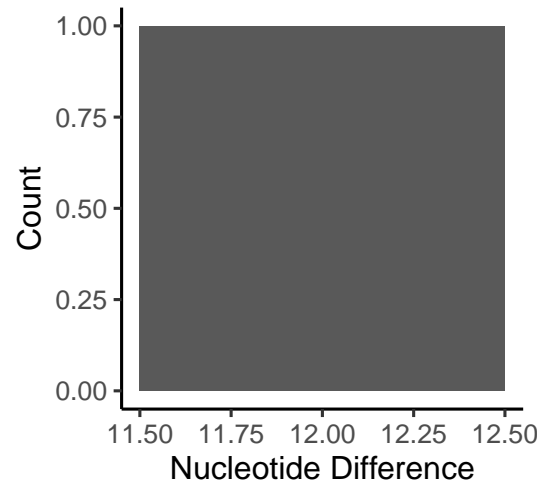
### IGHV5-78\*01

25 sequences assigned  
No exact matches.



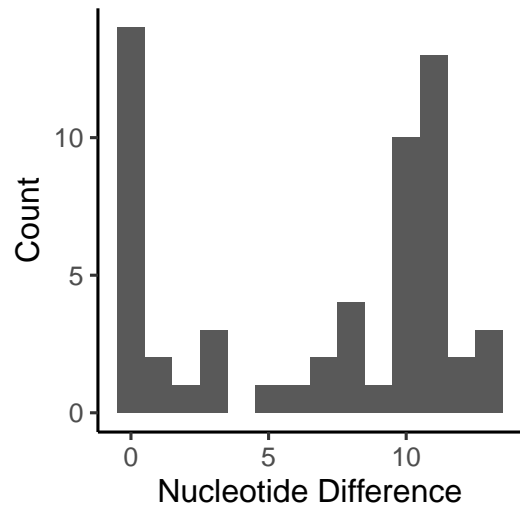
### IGHV3/OR16-6\*02

2 sequences assigned  
No exact matches.



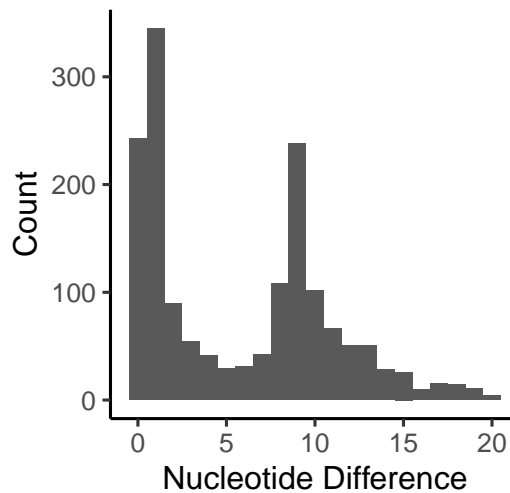
### IGHV5-51\*06

59 sequences assigned  
14 (23.7%) exact matches, in which:  
14 unique CDR3  
4 unique J



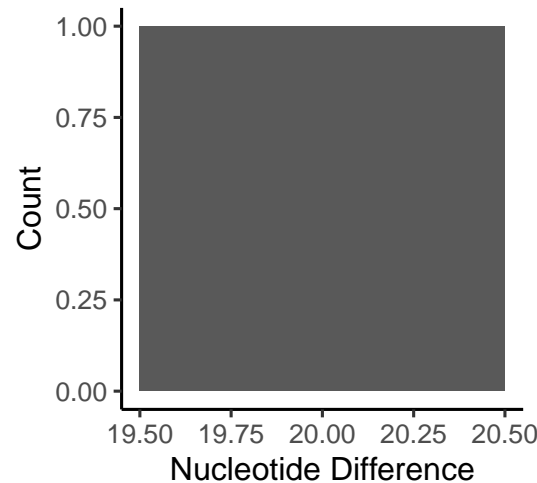
### IGHV6-1\*01\_02

1699 sequences assigned  
243 (14.3%) exact matches, in which:  
176 unique CDR3  
6 unique J



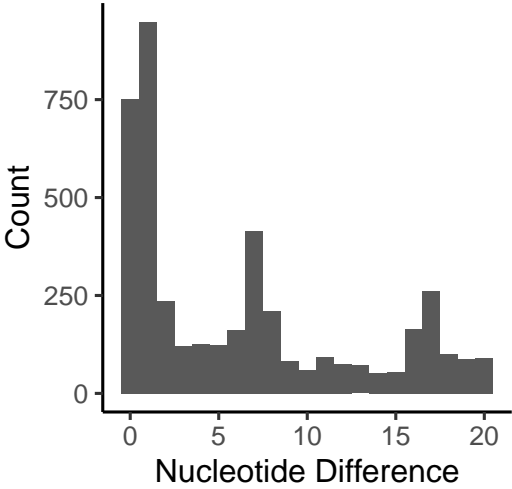
### IGHV3/OR16-10\*01\_03

4 sequences assigned  
No exact matches.



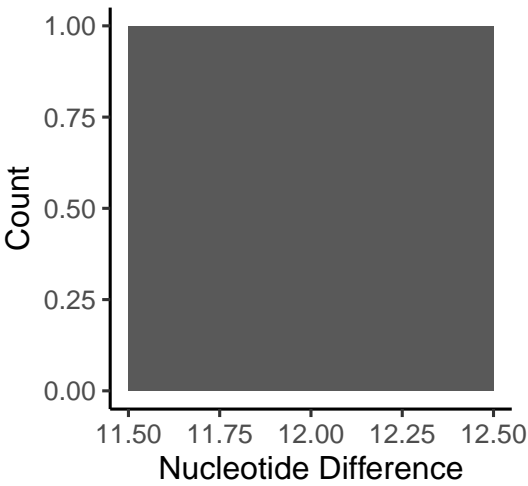
# IGHV7-4-1\*02

8065 sequences assigned  
752 (9.3%) exact matches, in which:  
575 unique CDR3  
6 unique J



# IGHV7-81\*01

1 sequences assigned  
No exact matches.



IGHV6-1\*01\_02\_A315G

