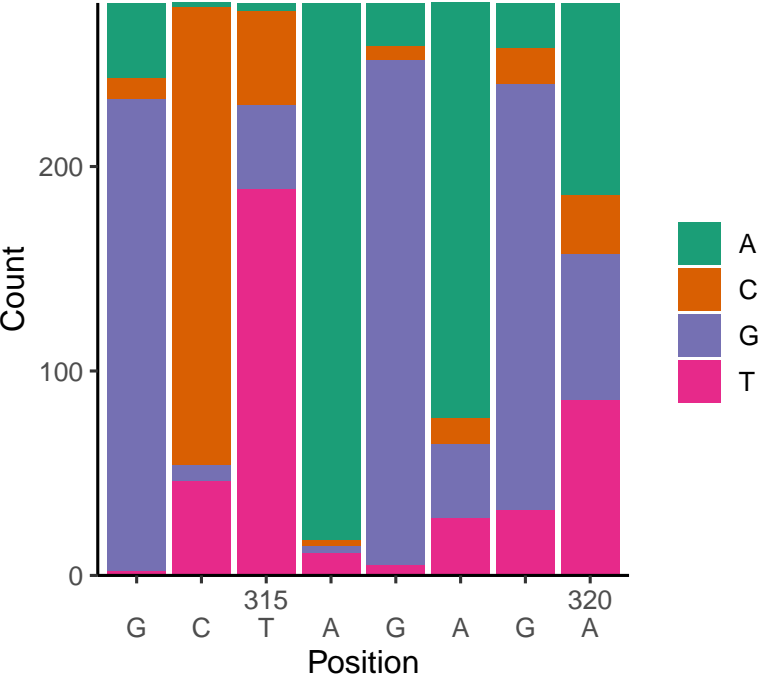
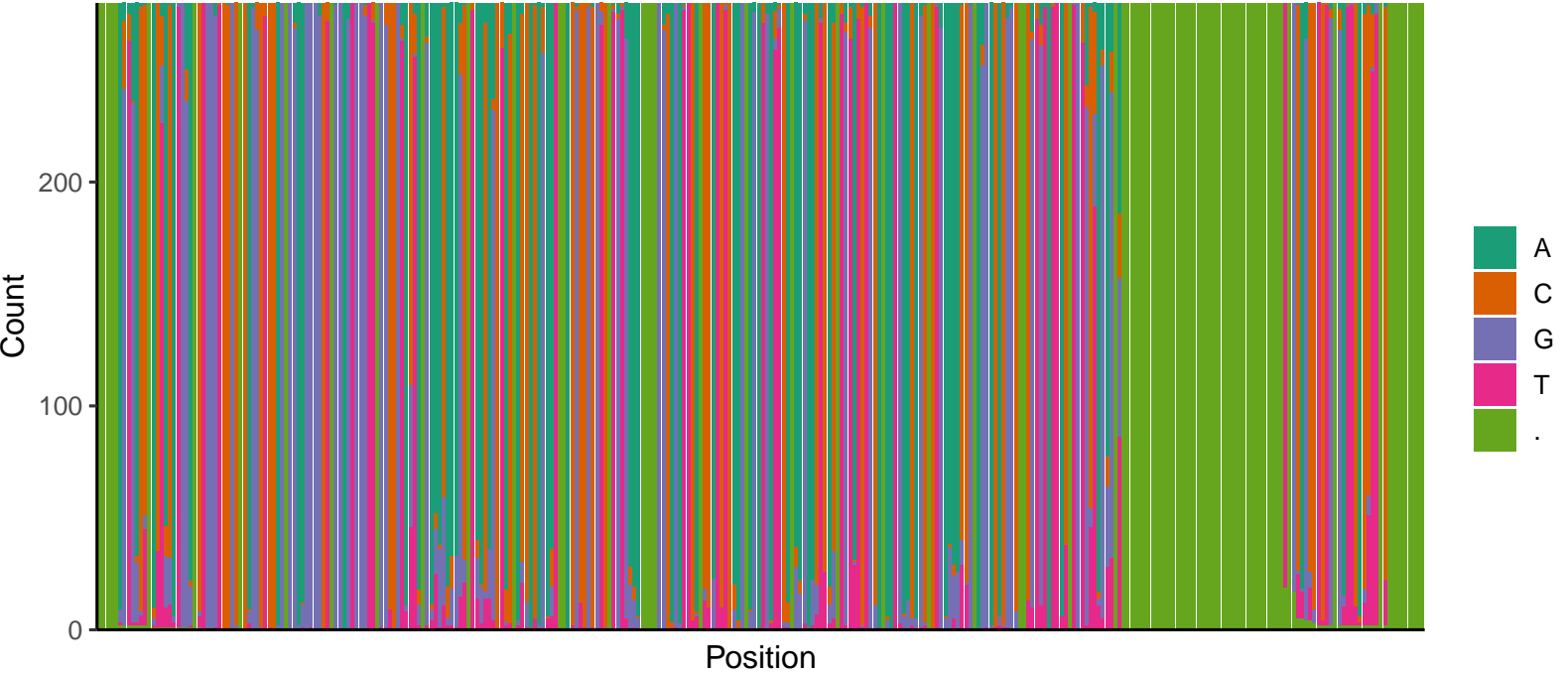


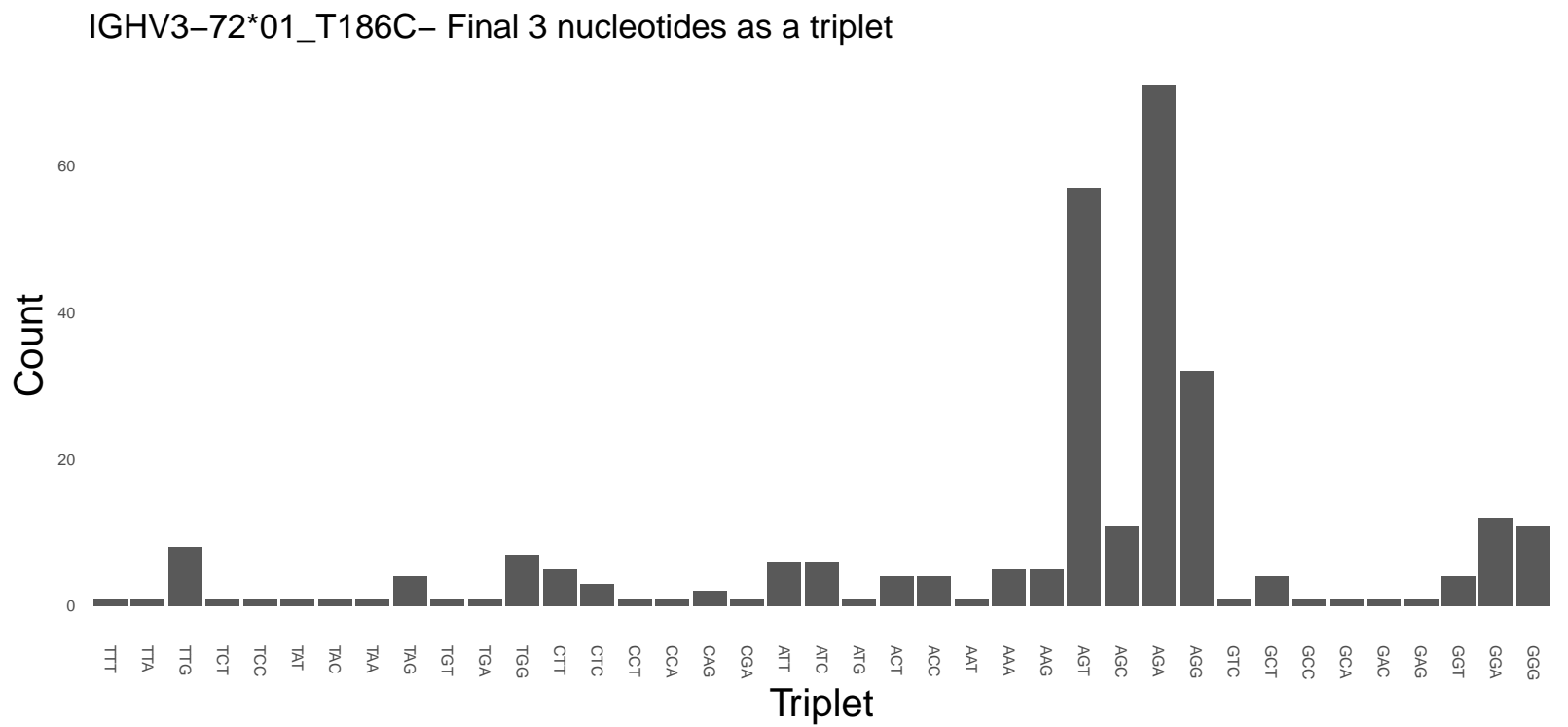
Gene IGHV3-72\*01\_T186C



Gene IGHV3-72\*01\_T186C

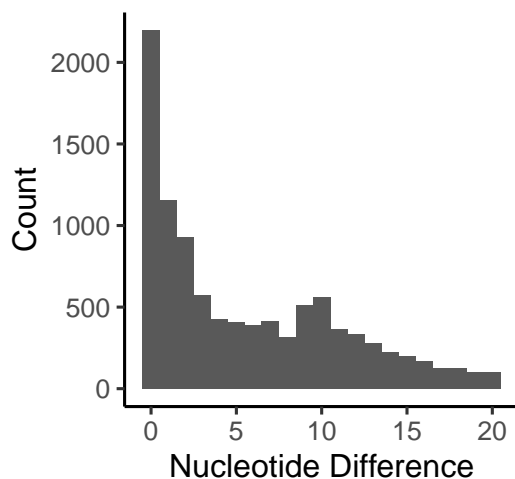


IGHV3-72\*01\_T186C- Final 3 nucleotides as a triplet



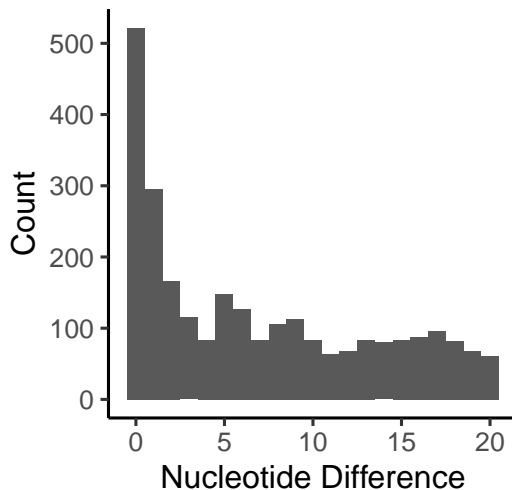
### IGHV1-2\*02

10269 sequences assigned  
2196 (21.4%) exact matches, in which:  
2077 unique CDR3  
6 unique J



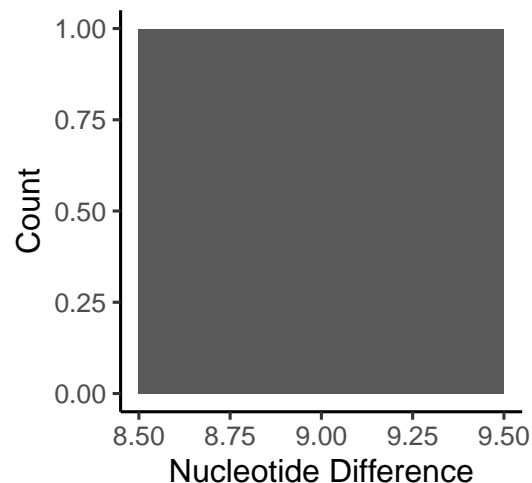
### IGHV1-8\*03

2851 sequences assigned  
522 (18.3%) exact matches, in which:  
496 unique CDR3  
6 unique J



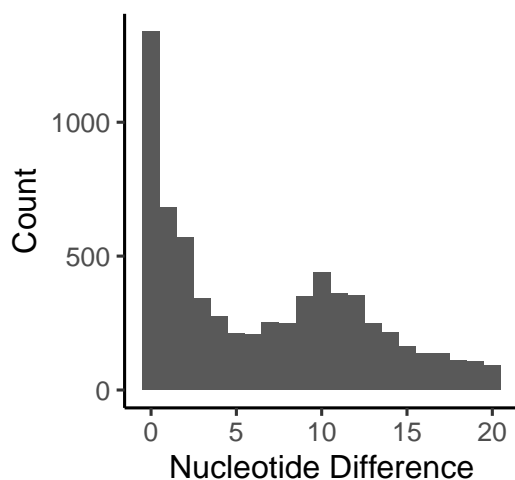
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



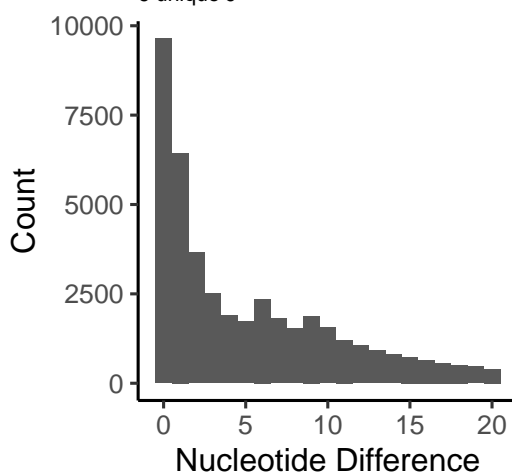
### IGHV1-2\*06

7207 sequences assigned  
1338 (18.6%) exact matches, in which:  
1293 unique CDR3  
6 unique J



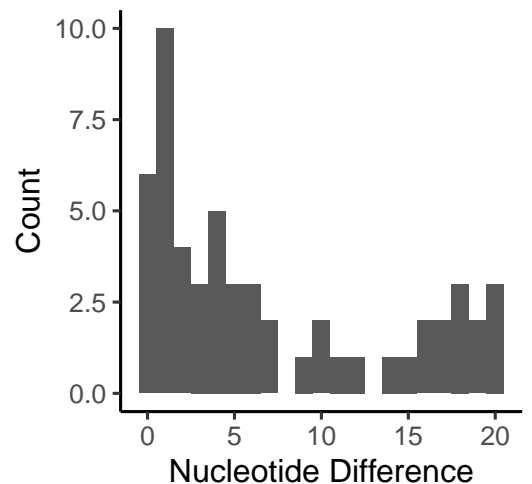
### IGHV1-18\*01

44844 sequences assigned  
9644 (21.5%) exact matches, in which:  
8640 unique CDR3  
6 unique J



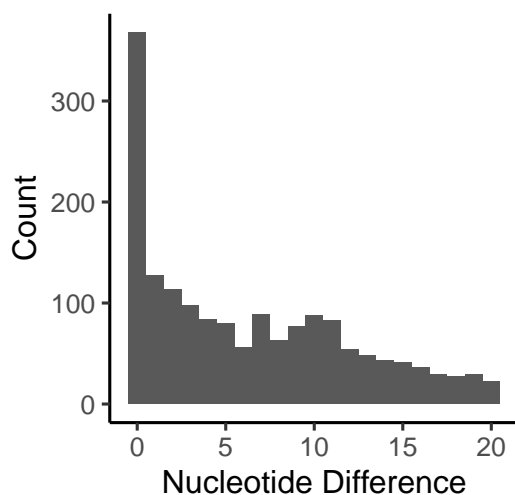
### IGHV1-45\*02

62 sequences assigned  
6 (9.7%) exact matches, in which:  
6 unique CDR3  
3 unique J



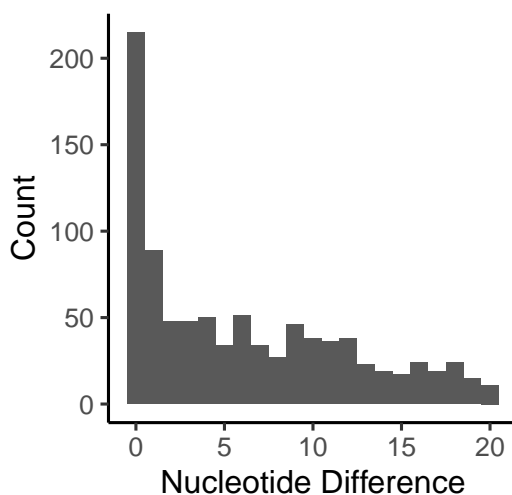
### IGHV1-3\*01\_05

1825 sequences assigned  
368 (20.2%) exact matches, in which:  
360 unique CDR3  
6 unique J



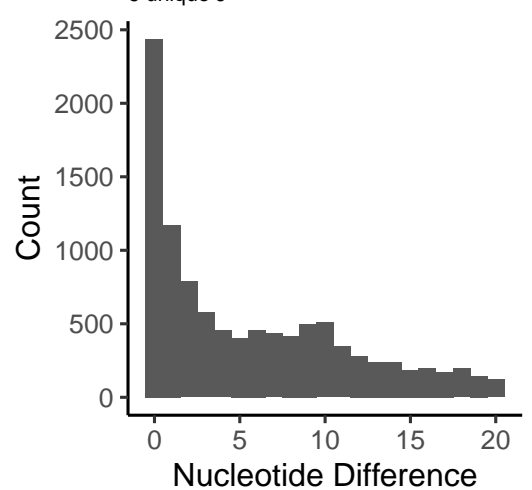
### IGHV1-24\*01

939 sequences assigned  
215 (22.9%) exact matches, in which:  
207 unique CDR3  
6 unique J



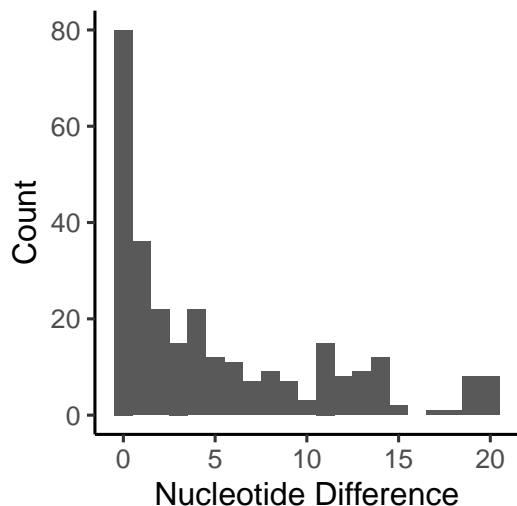
### IGHV1-46\*01

10948 sequences assigned  
2437 (22.3%) exact matches, in which:  
2301 unique CDR3  
6 unique J



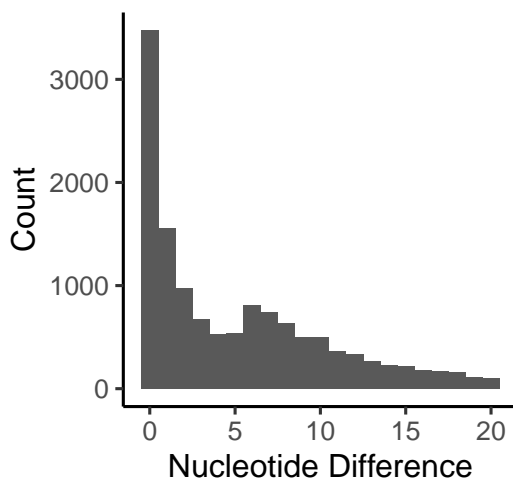
## IGHV1-58\*02

326 sequences assigned  
80 (24.5%) exact matches, in which:  
78 unique CDR3  
5 unique J



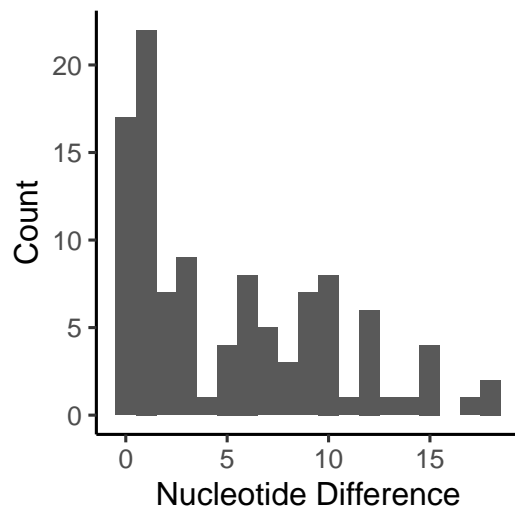
## IGHV1-69\*05

13663 sequences assigned  
3475 (25.4%) exact matches, in which:  
3324 unique CDR3  
6 unique J



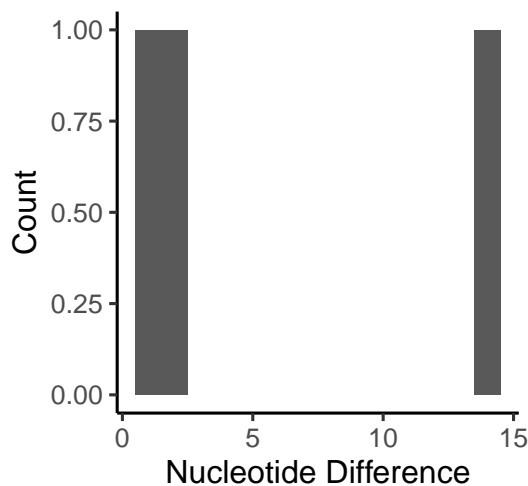
## IGHV2-5\*01

110 sequences assigned  
17 (15.5%) exact matches, in which:  
17 unique CDR3  
6 unique J



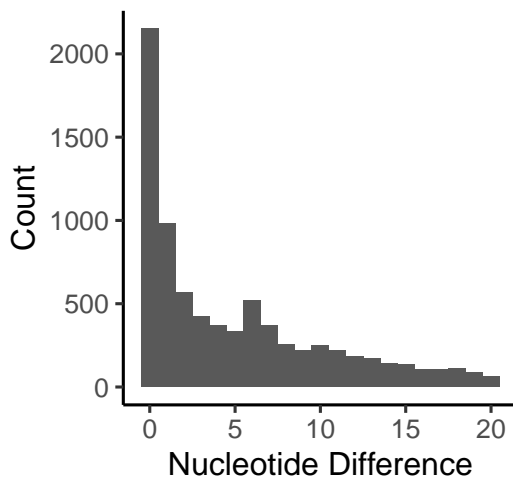
## IGHV1-68\*02\_03

3 sequences assigned  
No exact matches.



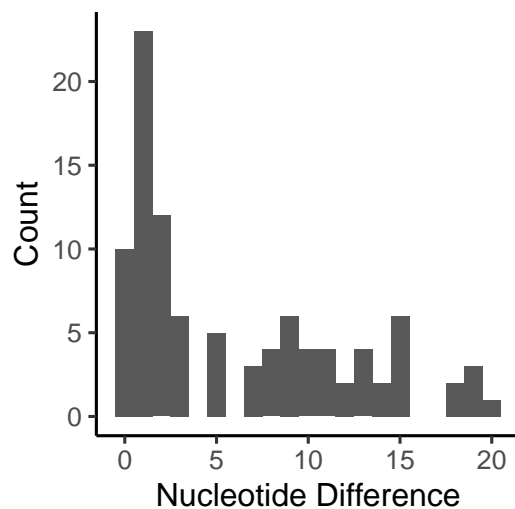
## IGHV1-69\*01\_12\_13

8164 sequences assigned  
2151 (26.3%) exact matches, in which:  
2064 unique CDR3  
6 unique J



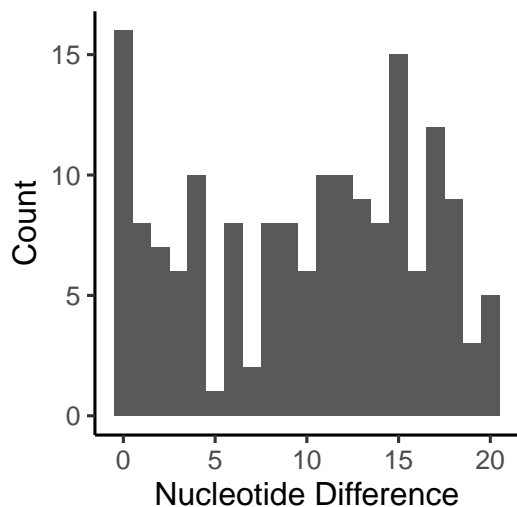
## IGHV2-5\*02

97 sequences assigned  
10 (10.3%) exact matches, in which:  
10 unique CDR3  
4 unique J



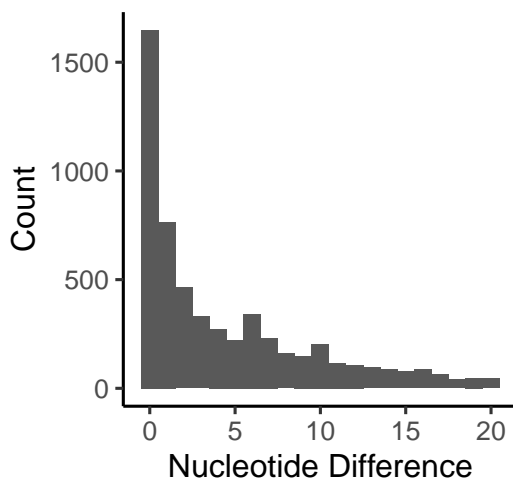
## IGHV1-69-2\*01

197 sequences assigned  
16 (8.1%) exact matches, in which:  
16 unique CDR3  
4 unique J



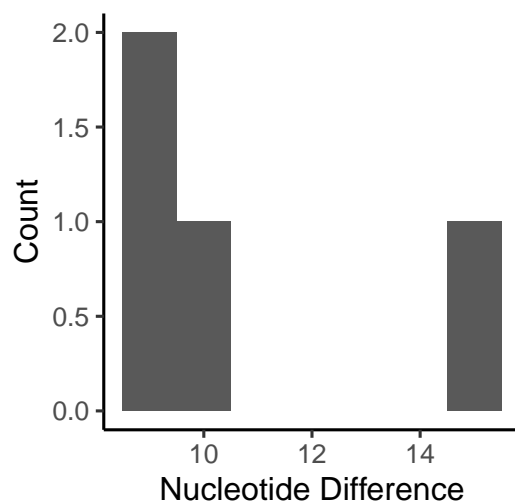
## IGHV1-69\*15\_18

5808 sequences assigned  
1648 (28.4%) exact matches, in which:  
1588 unique CDR3  
6 unique J



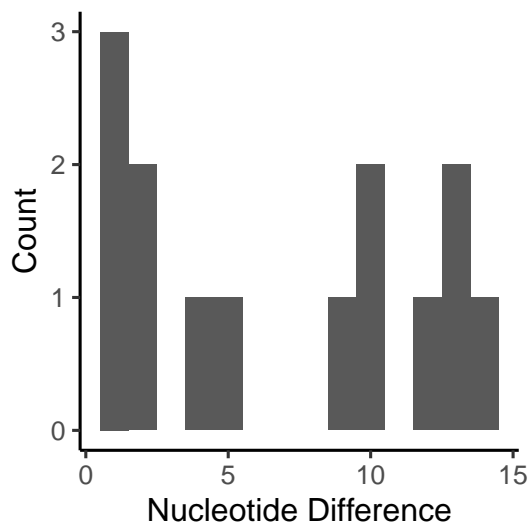
## IGHV2-26\*01

5 sequences assigned  
No exact matches.



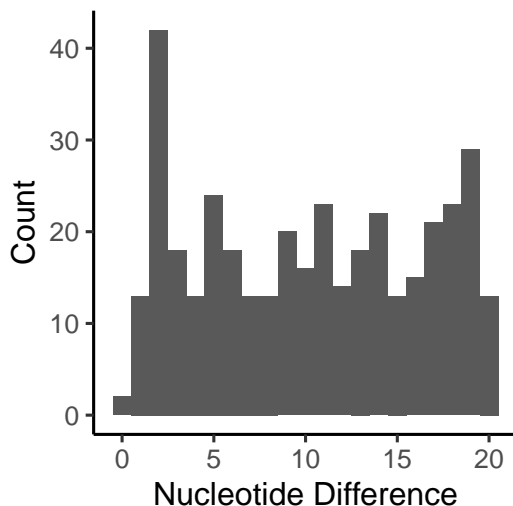
### IGHV2-70\*20

14 sequences assigned  
No exact matches.



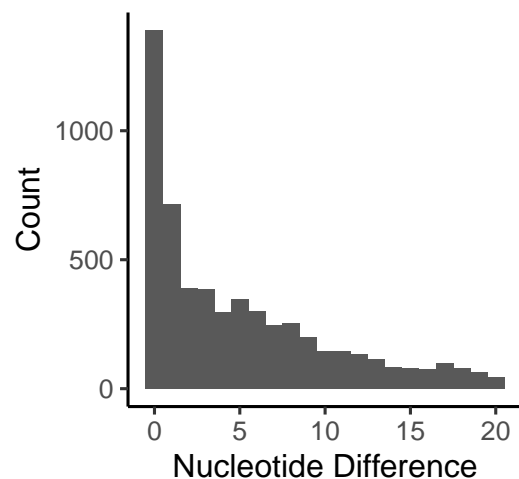
### IGHV3-9\*01

433 sequences assigned  
2 (0.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



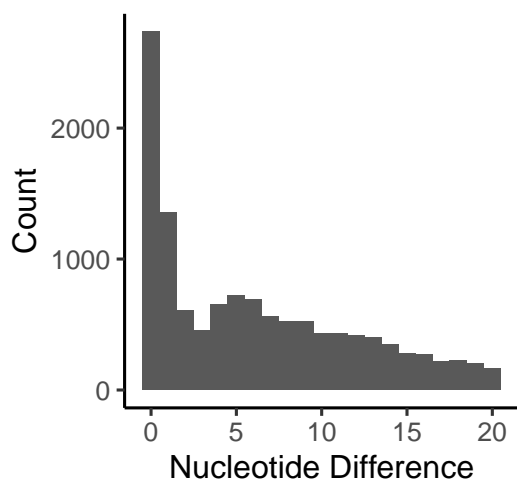
### IGHV3-11\*06

5842 sequences assigned  
1389 (23.8%) exact matches, in which:  
1321 unique CDR3  
6 unique J



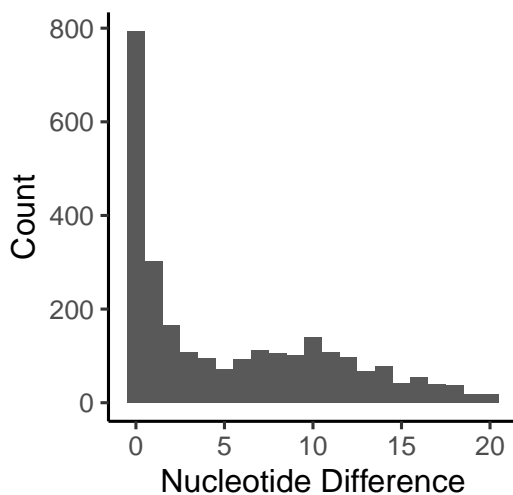
### IGHV3-7\*01

12866 sequences assigned  
2736 (21.3%) exact matches, in which:  
2615 unique CDR3  
6 unique J



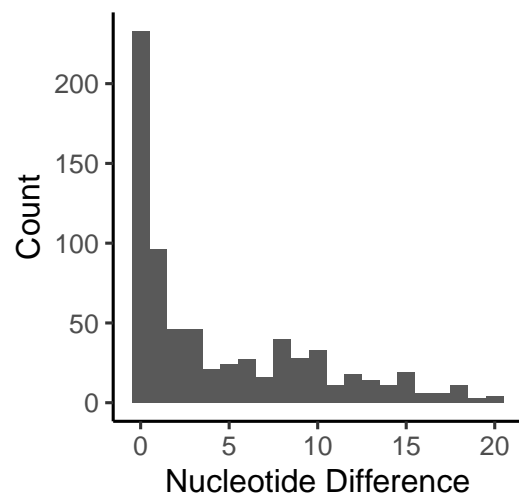
### IGHV3-9\*03

2710 sequences assigned  
794 (29.3%) exact matches, in which:  
743 unique CDR3  
6 unique J



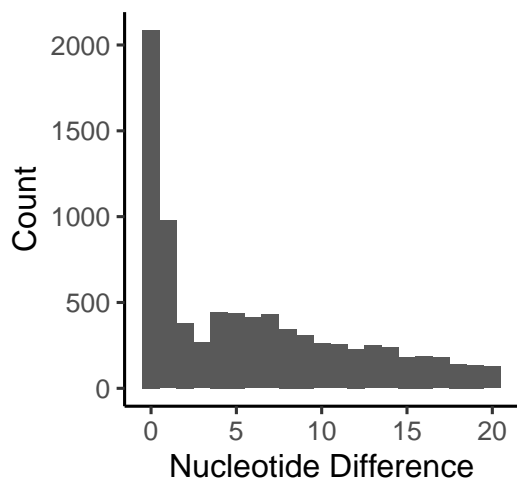
### IGHV3-13\*05

739 sequences assigned  
233 (31.5%) exact matches, in which:  
218 unique CDR3  
6 unique J



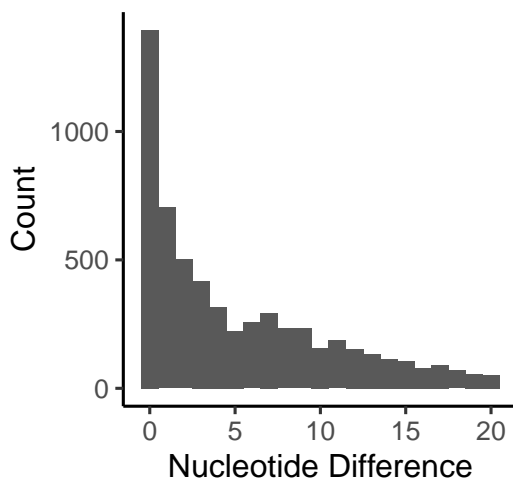
### IGHV3-7\*03

8726 sequences assigned  
2087 (23.9%) exact matches, in which:  
1994 unique CDR3  
6 unique J



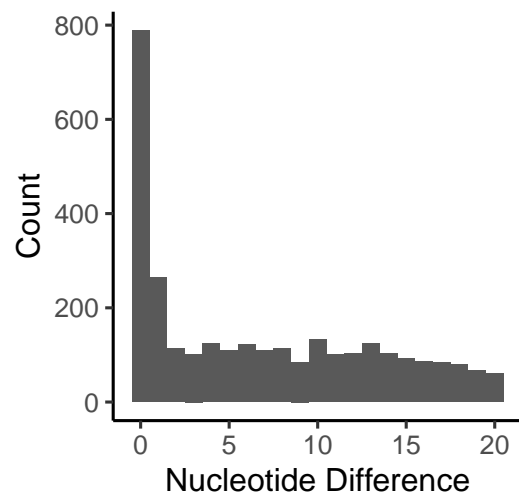
### IGHV3-11\*04

5971 sequences assigned  
1395 (23.4%) exact matches, in which:  
1326 unique CDR3  
6 unique J



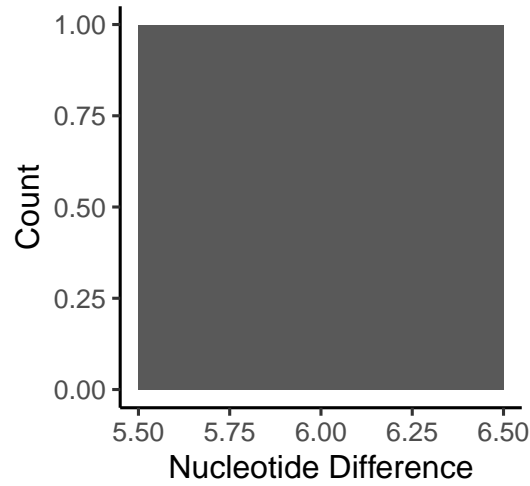
### IGHV3-15\*01\_02

3408 sequences assigned  
789 (23.2%) exact matches, in which:  
770 unique CDR3  
6 unique J



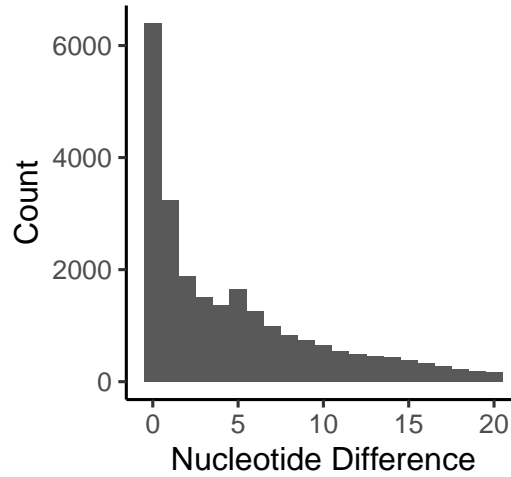
### IGHV3-19\*01

1 sequences assigned  
No exact matches.



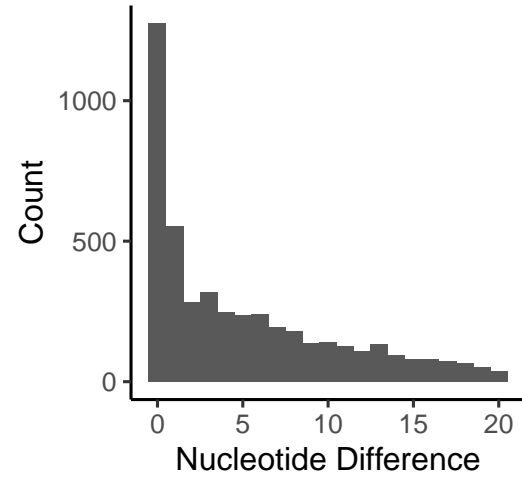
### IGHV3-21\*01\_02

24736 sequences assigned  
6395 (25.9%) exact matches, in which:  
5987 unique CDR3  
6 unique J



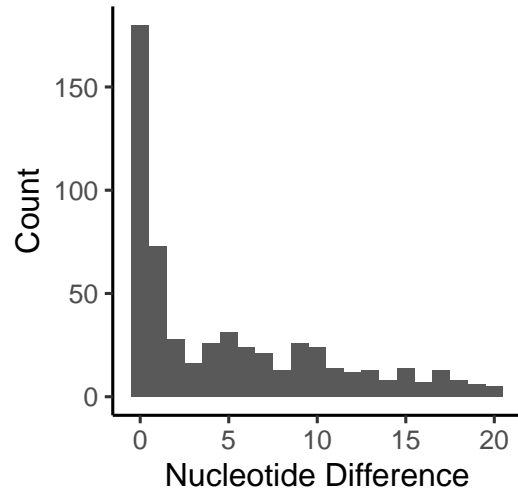
### IGHV3-30-5\*01

4819 sequences assigned  
1275 (26.5%) exact matches, in which:  
1218 unique CDR3  
6 unique J



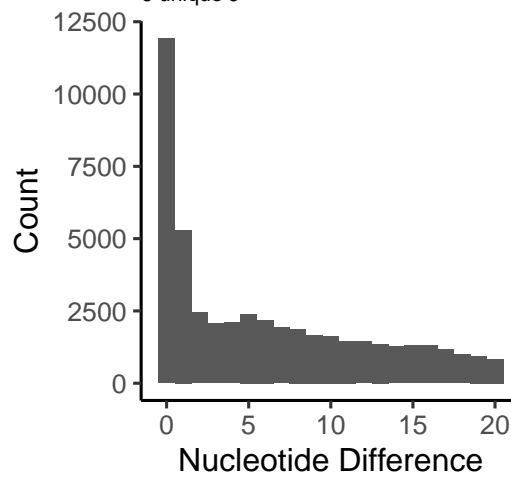
### IGHV3-20\*01\_02

570 sequences assigned  
180 (31.6%) exact matches, in which:  
163 unique CDR3  
6 unique J



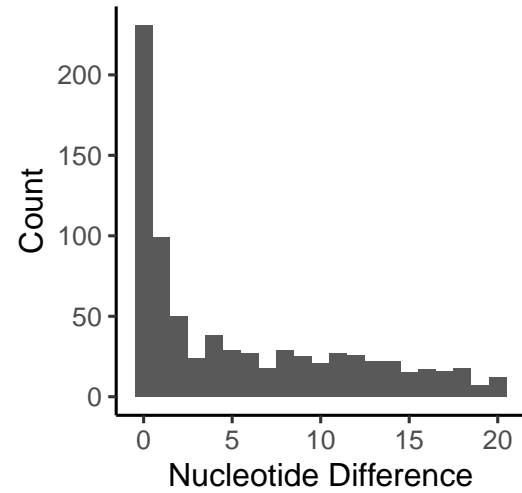
### IGHV3-23\*01\_04

52419 sequences assigned  
11921 (22.7%) exact matches, in which:  
11185 unique CDR3  
6 unique J



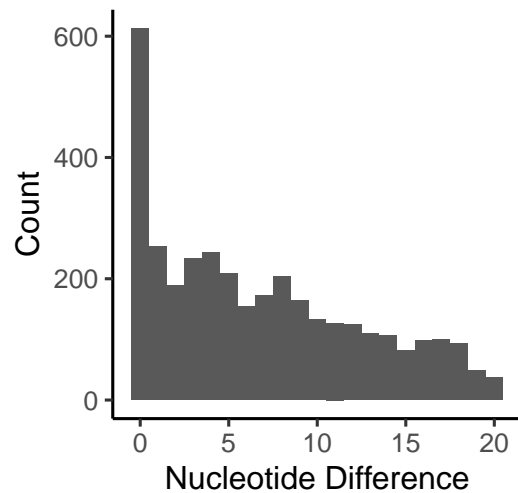
### IGHV3-30\*03

832 sequences assigned  
231 (27.8%) exact matches, in which:  
229 unique CDR3  
6 unique J



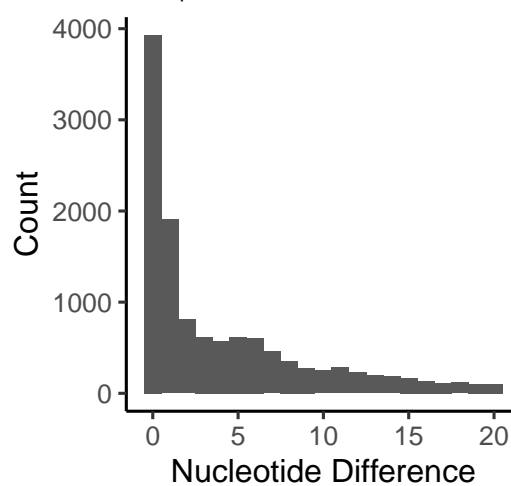
### IGHV3-20\*03\_04

3606 sequences assigned  
613 (17%) exact matches, in which:  
584 unique CDR3  
6 unique J



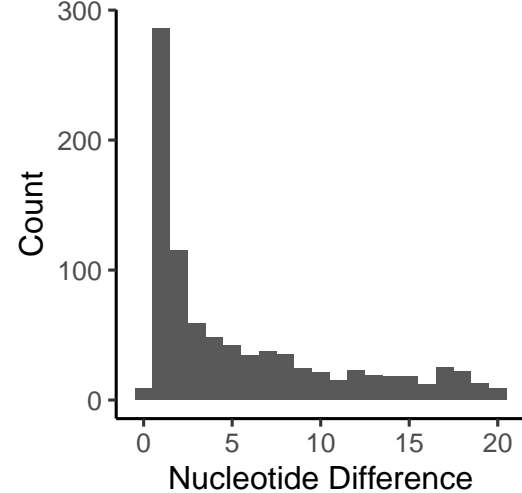
### IGHV3-30-3\*01

12541 sequences assigned  
3930 (31.3%) exact matches, in which:  
3749 unique CDR3  
6 unique J



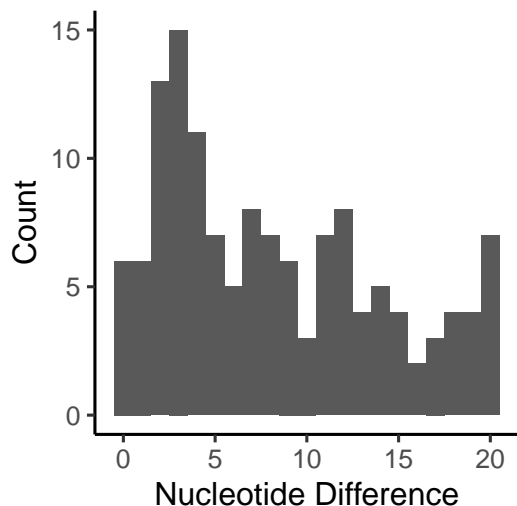
### IGHV3-30\*19

918 sequences assigned  
9 (1%) exact matches, in which:  
9 unique CDR3  
3 unique J



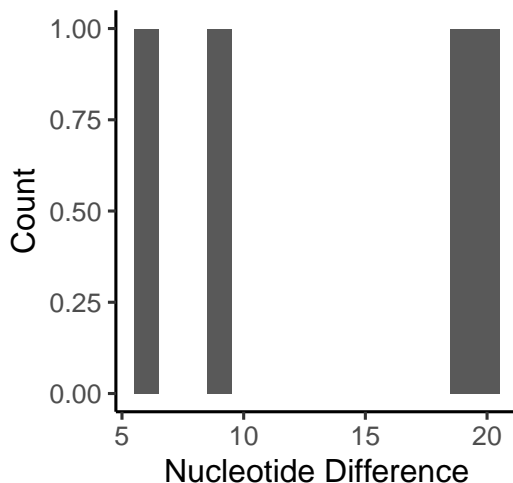
### IGHV3-33\*05

156 sequences assigned  
6 (3.8%) exact matches, in which:  
6 unique CDR3  
3 unique J



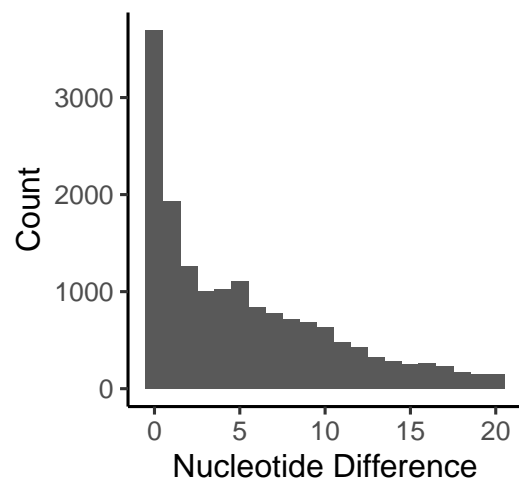
### IGHV3-38\*03

5 sequences assigned  
No exact matches.



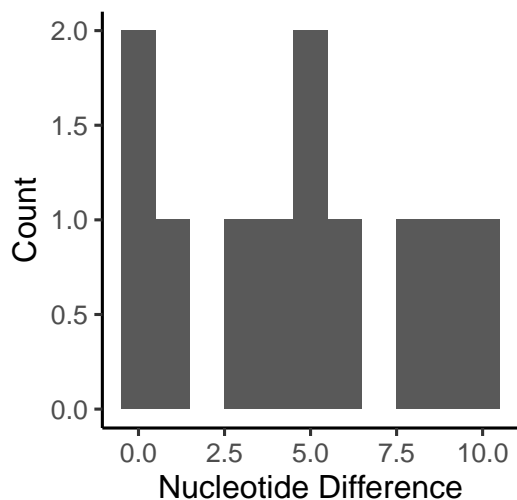
### IGHV3-48\*01

17150 sequences assigned  
3692 (21.5%) exact matches, in which:  
3515 unique CDR3  
6 unique J



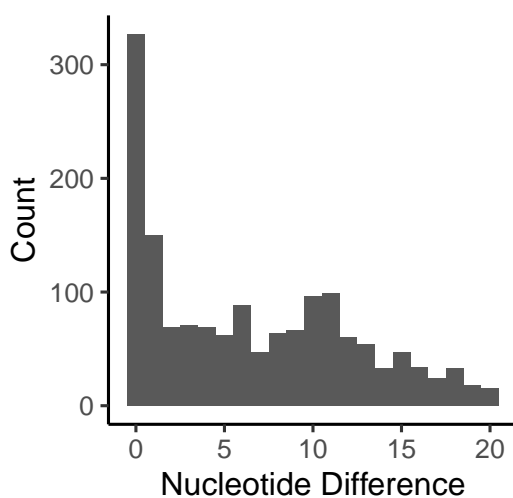
### IGHV3-35\*01

11 sequences assigned  
2 (18.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



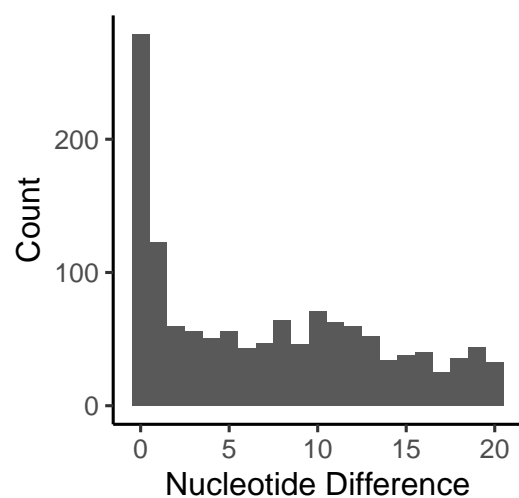
### IGHV3-43\*01

1622 sequences assigned  
327 (20.2%) exact matches, in which:  
313 unique CDR3  
6 unique J



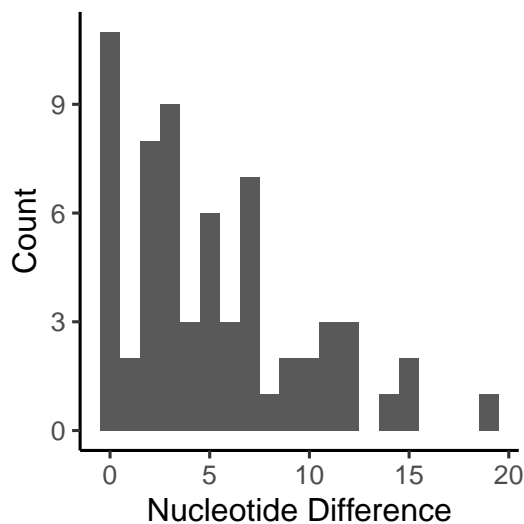
### IGHV3-49\*04

1455 sequences assigned  
279 (19.2%) exact matches, in which:  
266 unique CDR3  
6 unique J



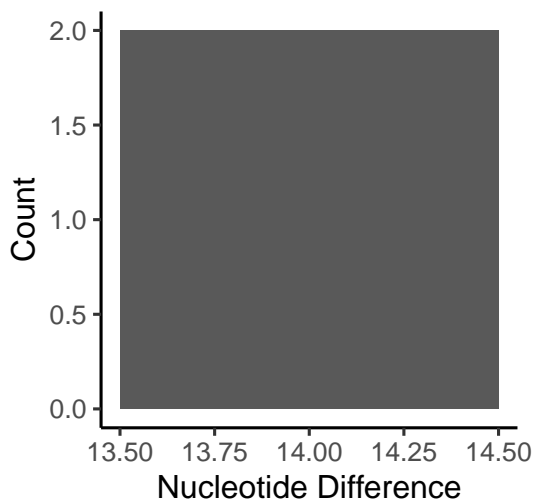
### IGHV3-38-3\*01

65 sequences assigned  
11 (16.9%) exact matches, in which:  
11 unique CDR3  
4 unique J



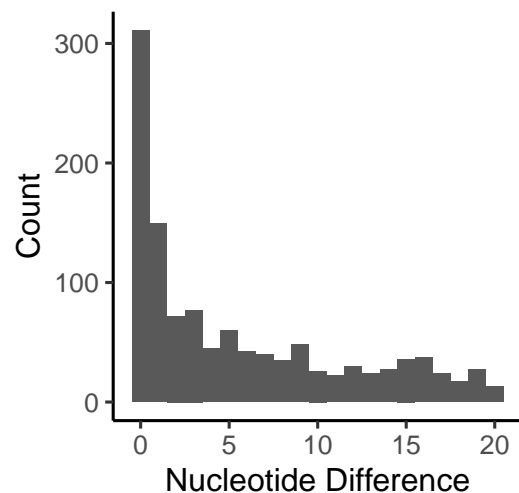
### IGHV3-47\*02

2 sequences assigned  
No exact matches.



### IGHV3-49\*03\_05

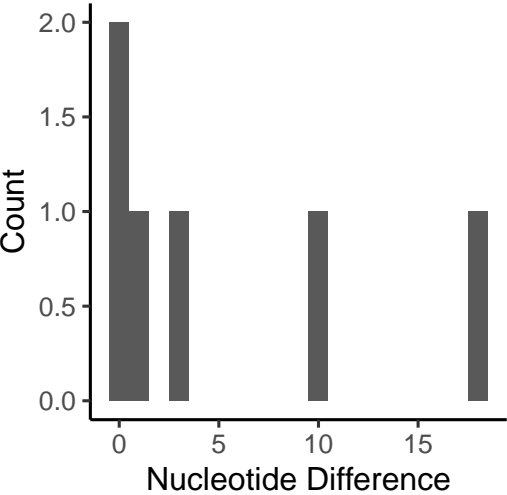
1223 sequences assigned  
311 (25.4%) exact matches, in which:  
305 unique CDR3  
6 unique J





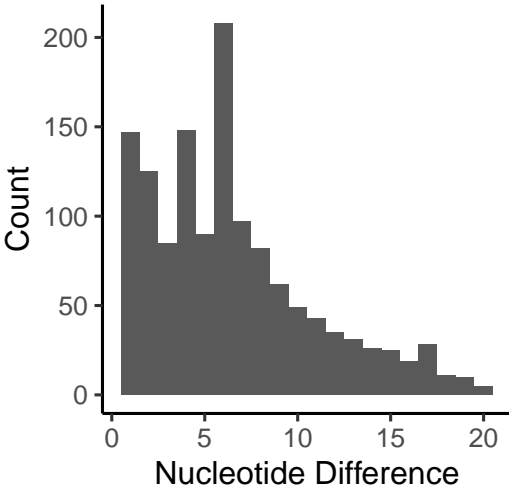
IGHV3-52\*01\_03

7 sequences assigned  
2 (28.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



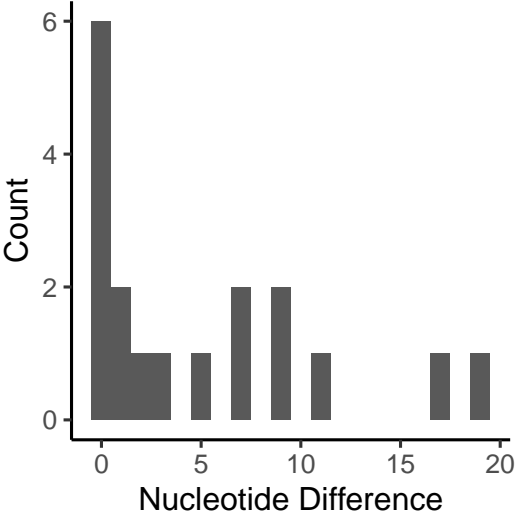
IGHV3-64\*04

1370 sequences assigned  
No exact matches.



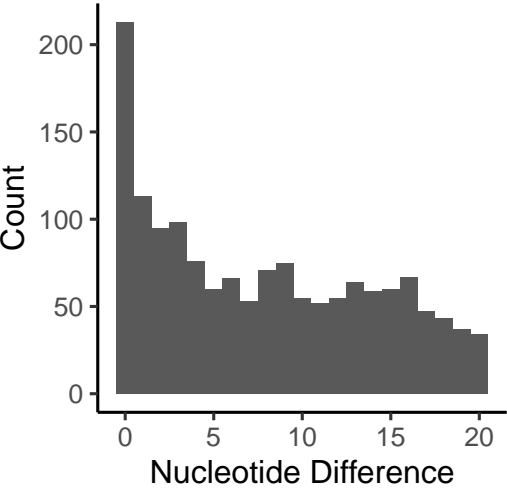
IGHV3-69-1\*02

25 sequences assigned  
6 (24%) exact matches, in which:  
5 unique CDR3  
2 unique J



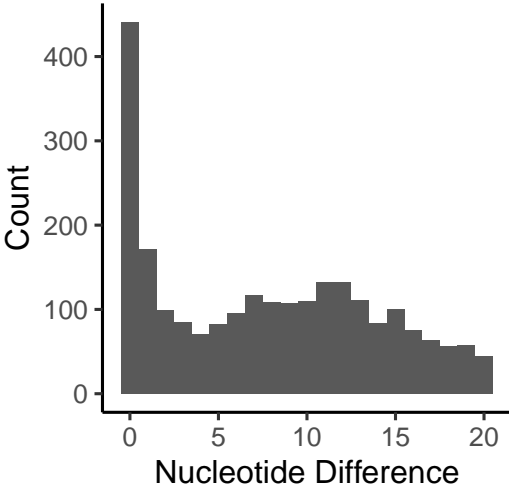
IGHV3-53\*01\_02

1601 sequences assigned  
213 (13.3%) exact matches, in which:  
203 unique CDR3  
6 unique J



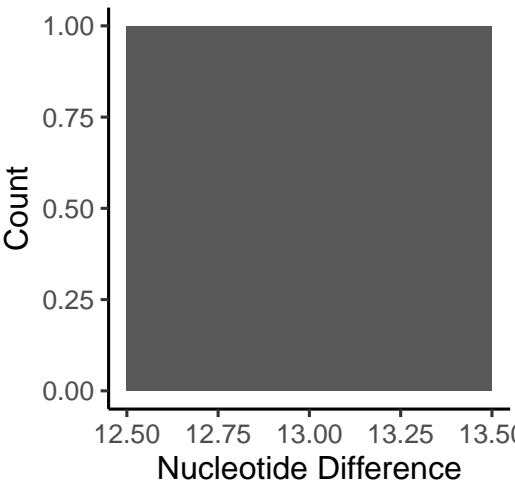
IGHV3-66\*02

2603 sequences assigned  
441 (16.9%) exact matches, in which:  
423 unique CDR3  
6 unique J



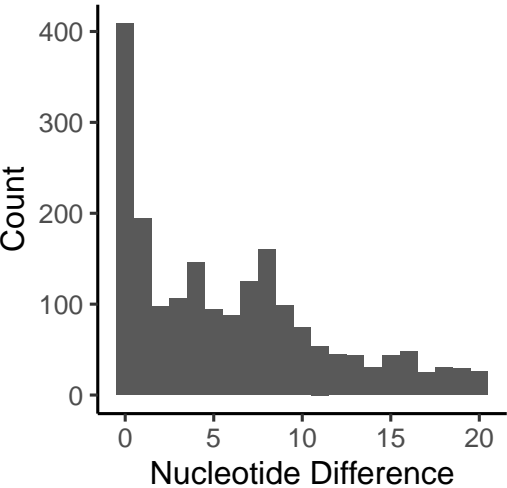
IGHV3-71\*03

5 sequences assigned  
No exact matches.



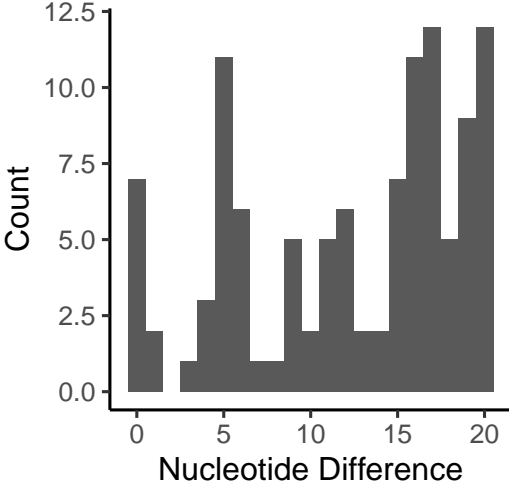
IGHV3-64\*01

2083 sequences assigned  
409 (19.6%) exact matches, in which:  
388 unique CDR3  
6 unique J



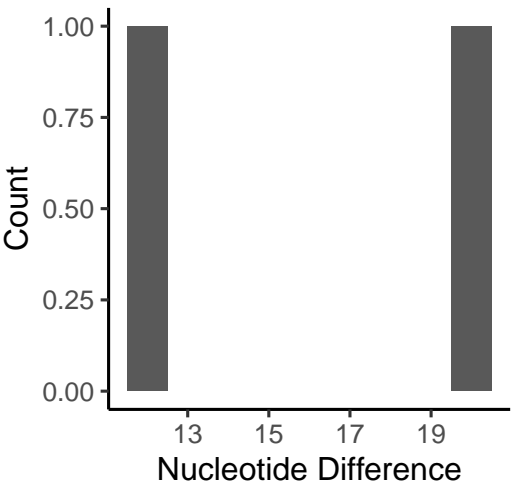
IGHV3-69-1\*01

134 sequences assigned  
7 (5.2%) exact matches, in which:  
7 unique CDR3  
3 unique J



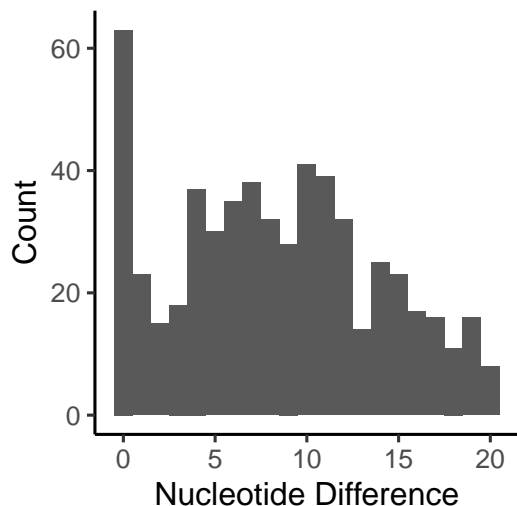
IGHV3-71\*01\_04

5 sequences assigned  
No exact matches.



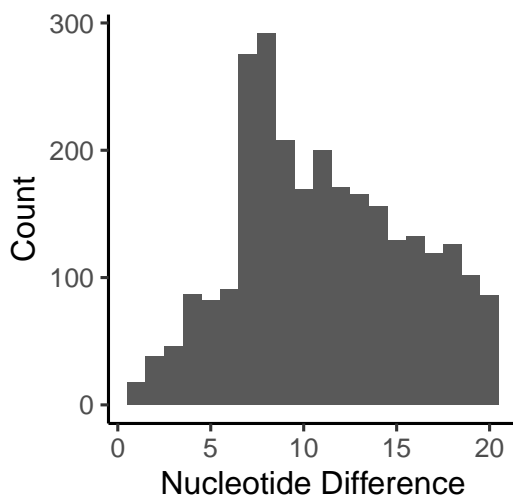
### IGHV3-72\*01

637 sequences assigned  
63 (9.9%) exact matches, in which:  
58 unique CDR3  
4 unique J



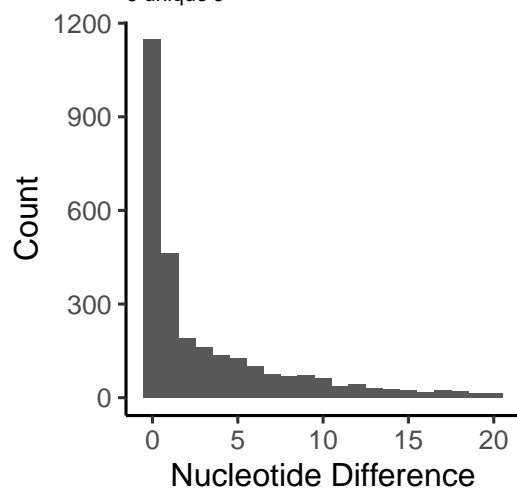
### IGHV3-74\*03

3067 sequences assigned  
No exact matches.



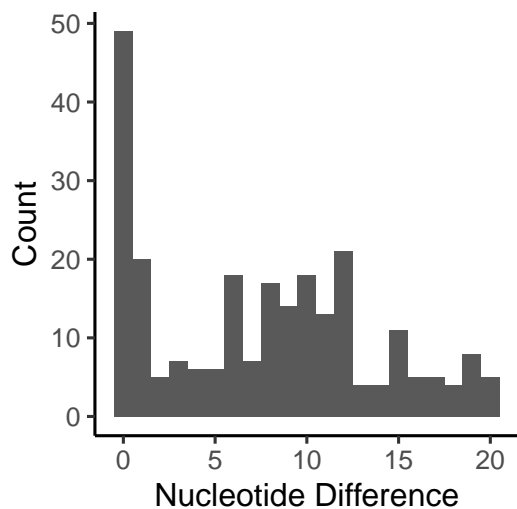
### IGHV3-64D\*06

2913 sequences assigned  
1148 (39.4%) exact matches, in which:  
1036 unique CDR3  
6 unique J



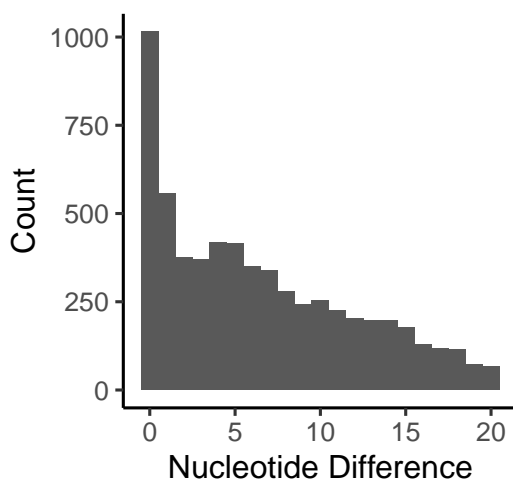
### IGHV3-72\*01\_T186C

280 sequences assigned  
49 (17.5%) exact matches, in which:  
47 unique CDR3  
5 unique J



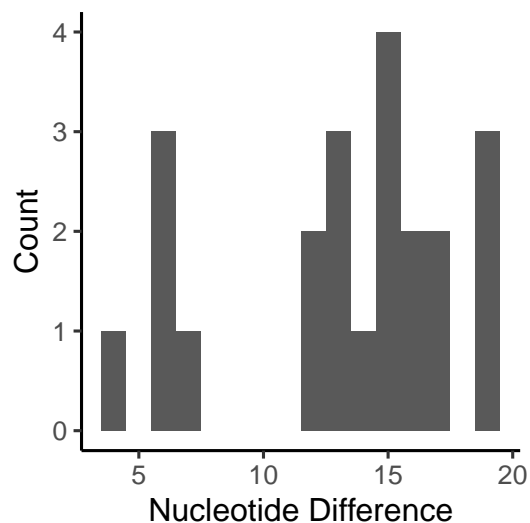
### IGHV3-74\*01\_02

6302 sequences assigned  
1015 (16.1%) exact matches, in which:  
943 unique CDR3  
6 unique J



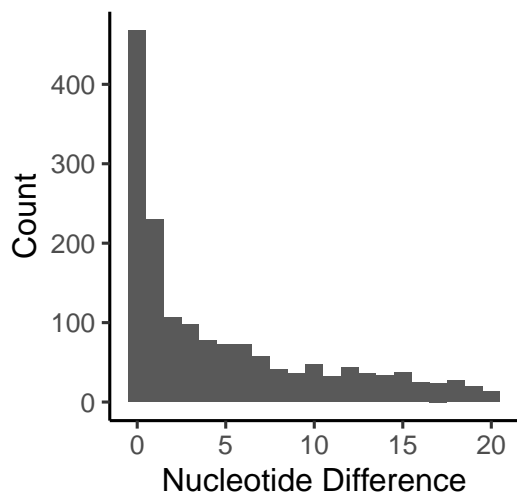
### IGHV3-64D\*08

57 sequences assigned  
No exact matches.



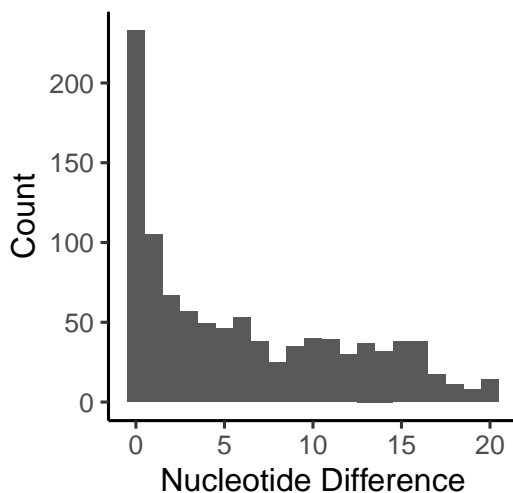
### IGHV3-73\*01\_02

1706 sequences assigned  
468 (27.4%) exact matches, in which:  
446 unique CDR3  
6 unique J



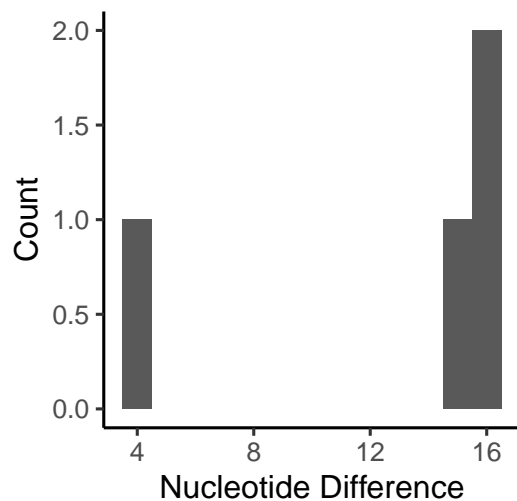
### IGHV3-43D\*03

1071 sequences assigned  
233 (21.8%) exact matches, in which:  
219 unique CDR3  
6 unique J



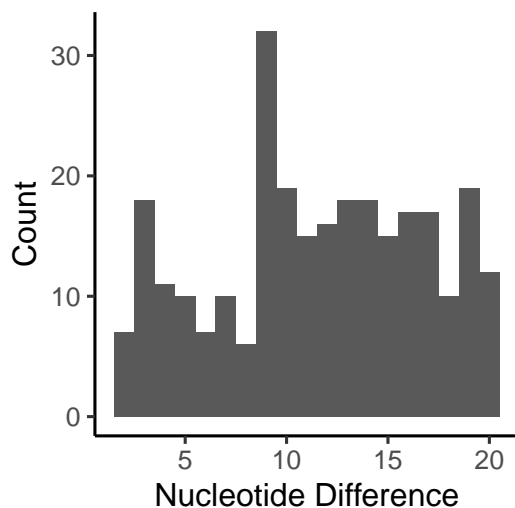
### IGHV3-64D\*09

5 sequences assigned  
No exact matches.



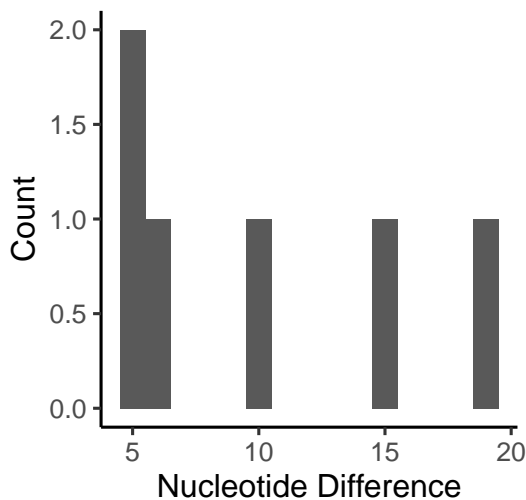
### IGHV3–NL1\*01

345 sequences assigned  
No exact matches.



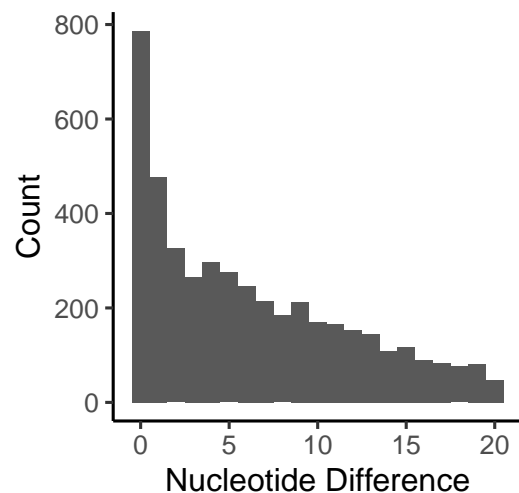
### IGHV4–28\*03

10 sequences assigned  
No exact matches.



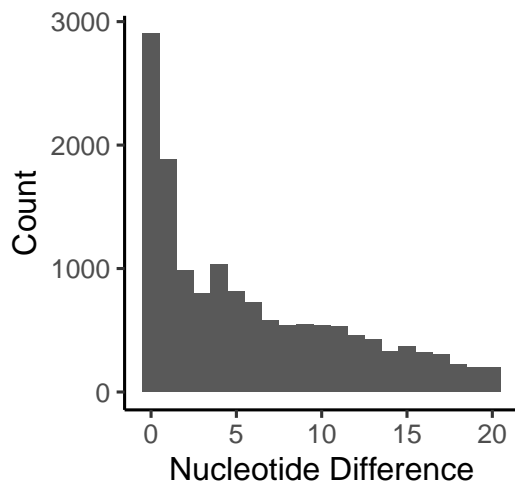
### IGHV4–30–4\*08

4836 sequences assigned  
787 (16.3%) exact matches, in which:  
713 unique CDR3  
6 unique J



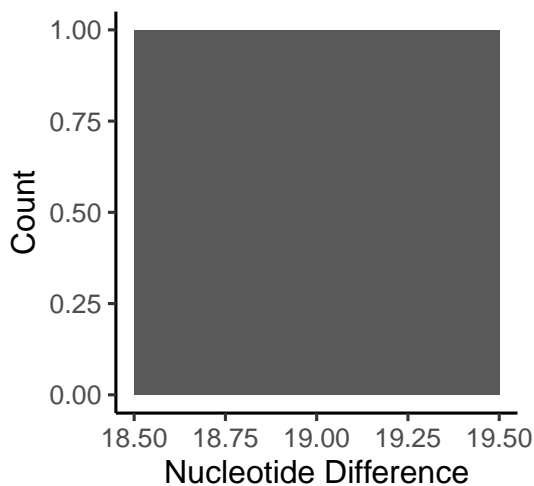
### IGHV4–4\*09

15528 sequences assigned  
2902 (18.7%) exact matches, in which:  
2520 unique CDR3  
6 unique J



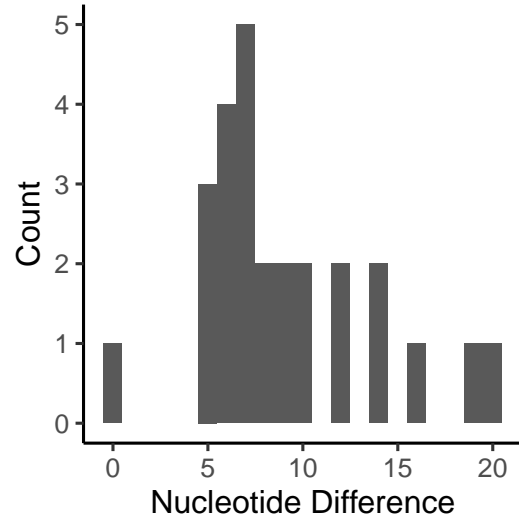
### IGHV4–28\*01\_07

3 sequences assigned  
No exact matches.



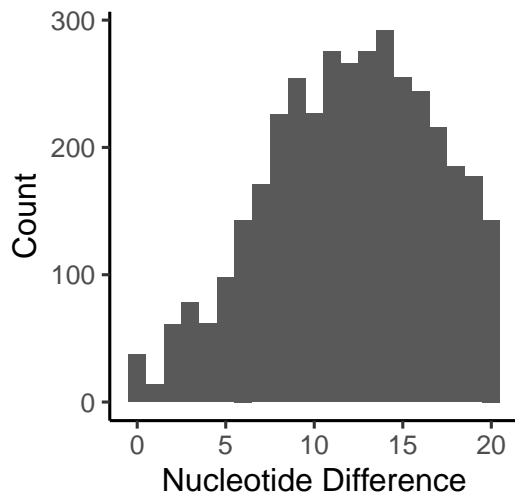
### IGHV4–31\*02

29 sequences assigned  
1 (3.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



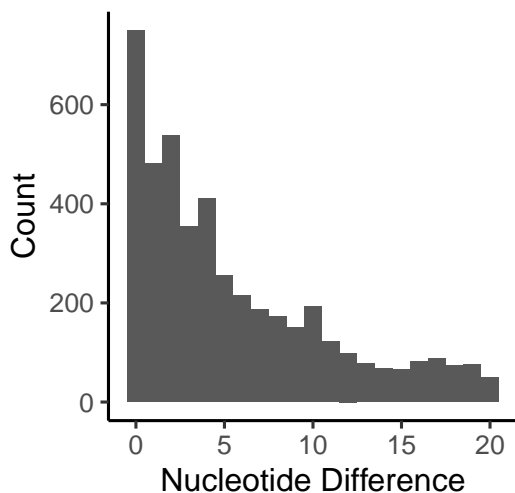
### IGHV4–4\*02\_03

4501 sequences assigned  
37 (0.8%) exact matches, in which:  
36 unique CDR3  
4 unique J



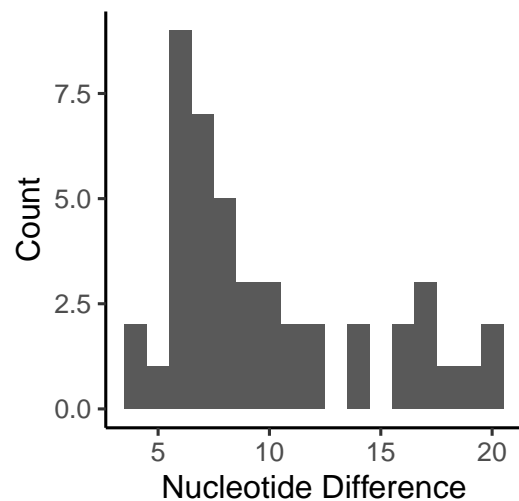
### IGHV4–30–2\*01

4656 sequences assigned  
750 (16.1%) exact matches, in which:  
667 unique CDR3  
6 unique J



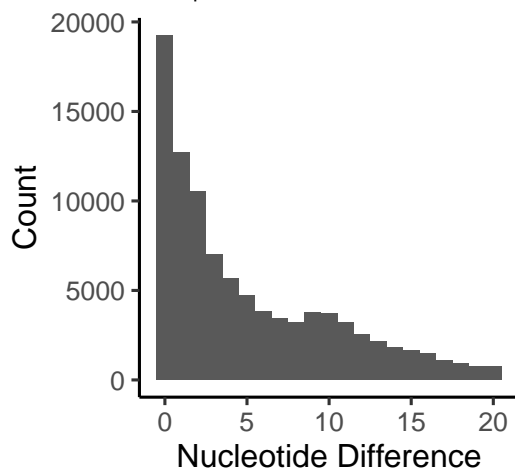
### IGHV4–31\*11

50 sequences assigned  
No exact matches.



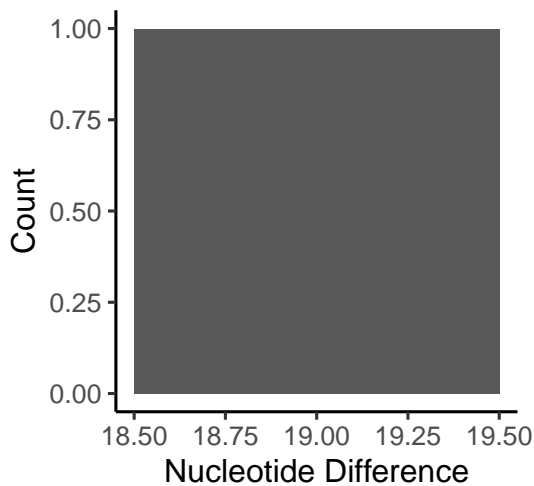
### IGHV4-34\*01\_02

98594 sequences assigned  
19262 (19.5%) exact matches, in which:  
16212 unique CDR3  
6 unique J



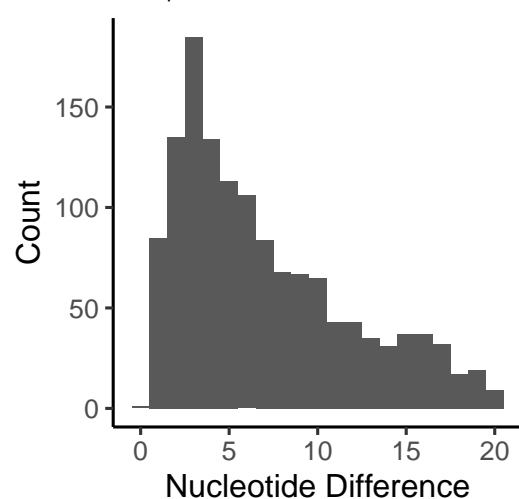
### IGHV4-55\*09

2 sequences assigned  
No exact matches.



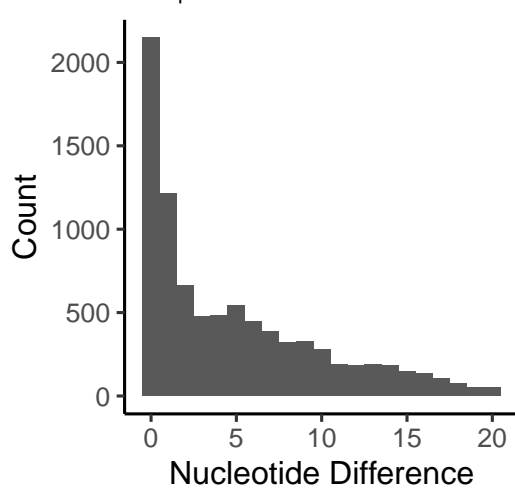
### IGHV4-61\*01

1398 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



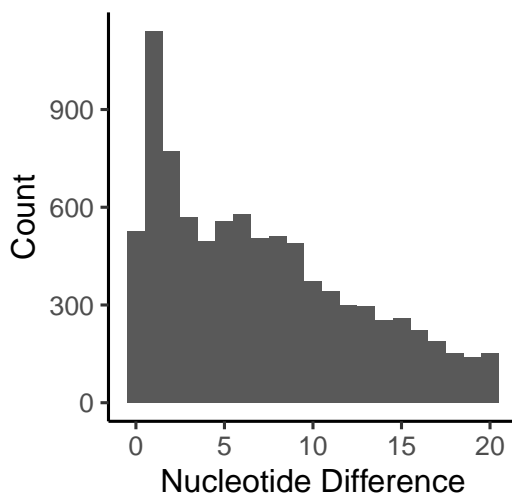
### IGHV4-38-2\*02

8900 sequences assigned  
2148 (24.1%) exact matches, in which:  
1880 unique CDR3  
6 unique J



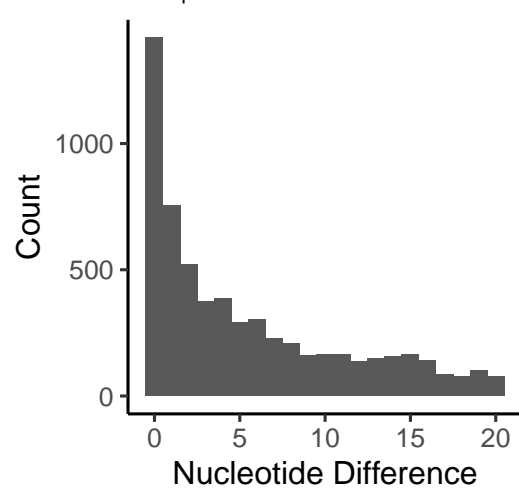
### IGHV4-59\*08

9394 sequences assigned  
526 (5.6%) exact matches, in which:  
516 unique CDR3  
6 unique J



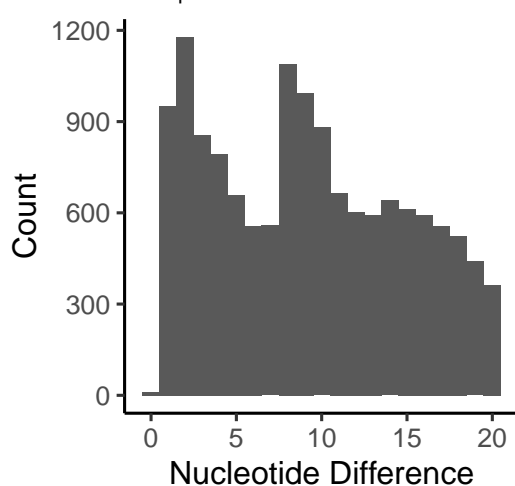
### IGHV4-61\*02

6352 sequences assigned  
1419 (22.3%) exact matches, in which:  
1241 unique CDR3  
6 unique J



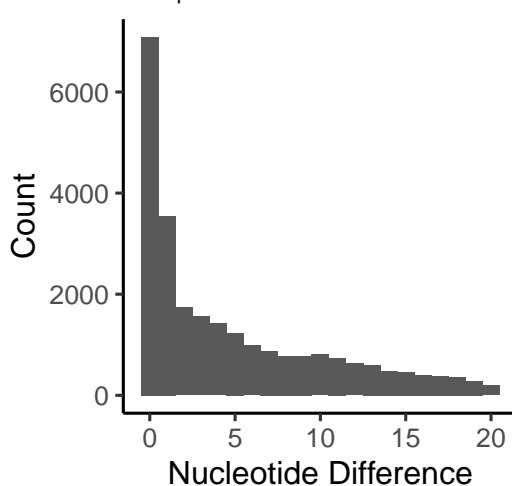
### IGHV4-39\*07

15970 sequences assigned  
11 (0.1%) exact matches, in which:  
11 unique CDR3  
2 unique J



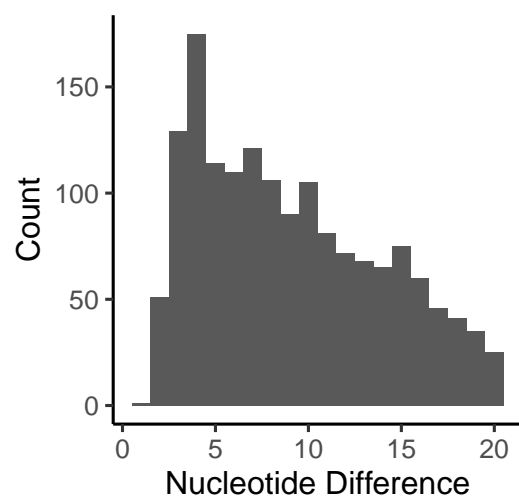
### IGHV4-59\*11

26371 sequences assigned  
7087 (26.9%) exact matches, in which:  
6057 unique CDR3  
6 unique J



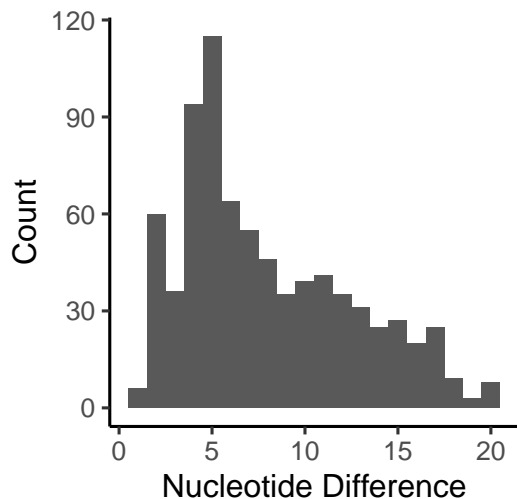
### IGHV4-61\*05

1665 sequences assigned  
No exact matches.



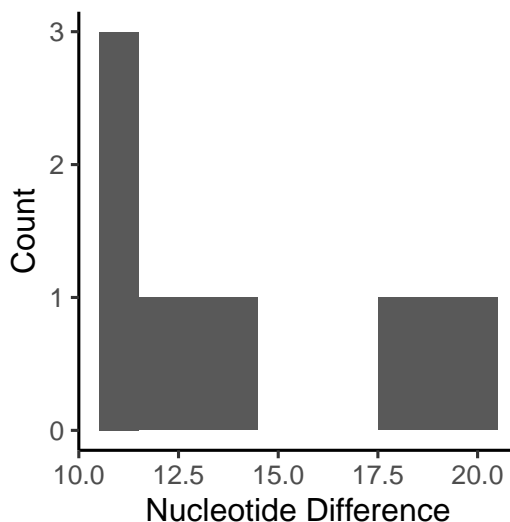
### IGHV4-61\*08

800 sequences assigned  
No exact matches.



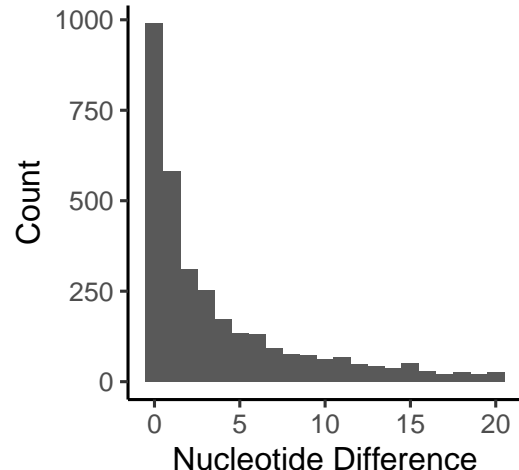
### IGHV1/OR15-3\*02

10 sequences assigned  
No exact matches.



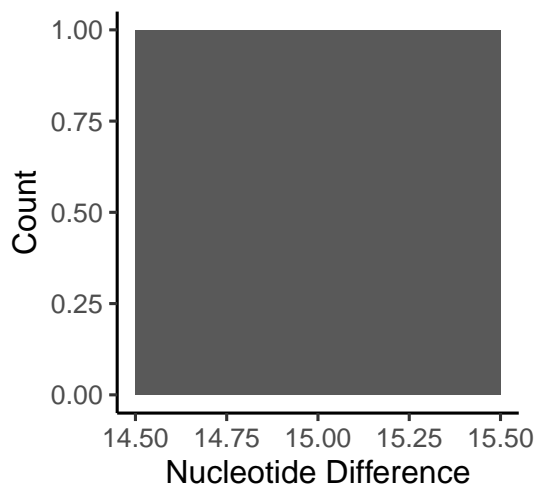
### IGHV5-10-1\*01\_03

3306 sequences assigned  
990 (29.9%) exact matches, in which:  
949 unique CDR3  
6 unique J



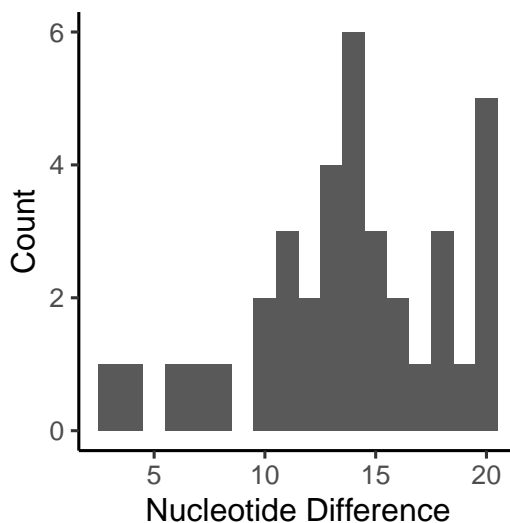
### IGHV1/OR15-1\*04

1 sequences assigned  
No exact matches.



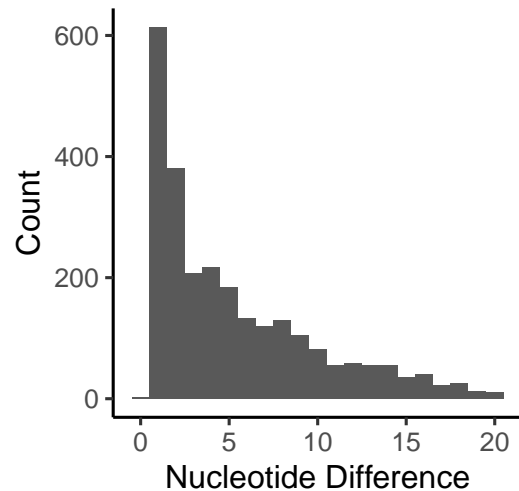
### IGHV4/OR15-8\*01

54 sequences assigned  
No exact matches.



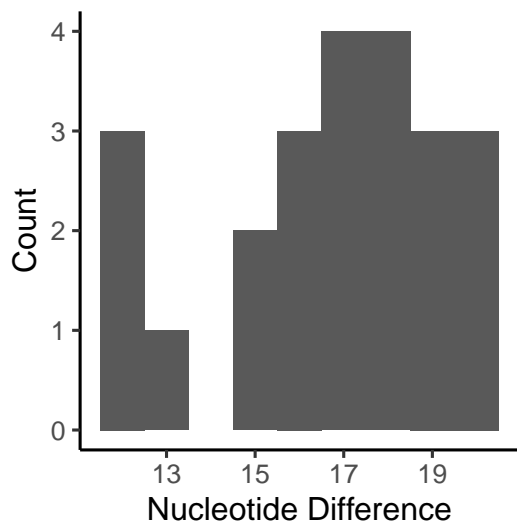
### IGHV5-51\*07

2640 sequences assigned  
3 (0.1%) exact matches, in which:  
3 unique CDR3  
1 unique J



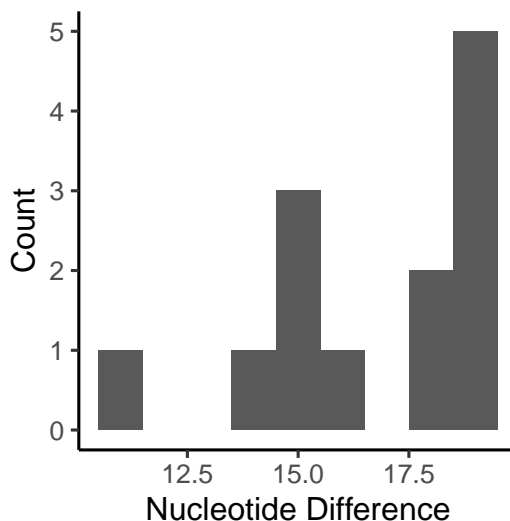
### IGHV1/OR15-2\*02\_03

28 sequences assigned  
No exact matches.



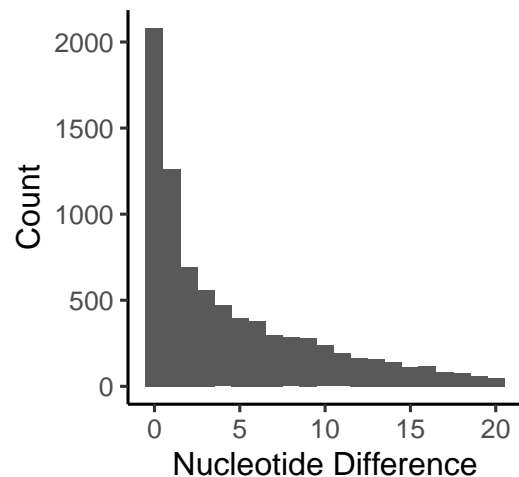
### IGHV4/OR15-8\*02

23 sequences assigned  
No exact matches.



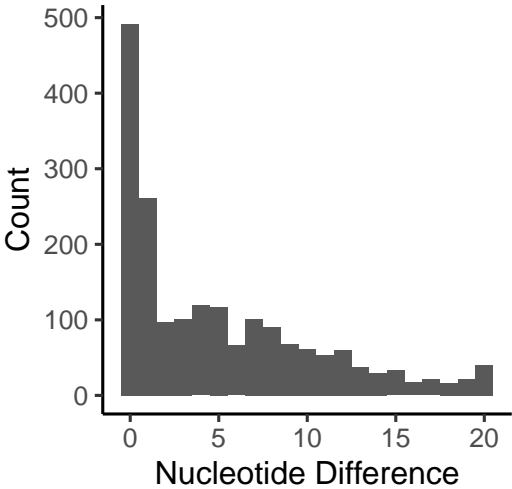
### IGHV5-51\*01\_03

8275 sequences assigned  
2081 (25.1%) exact matches, in which:  
1959 unique CDR3  
6 unique J



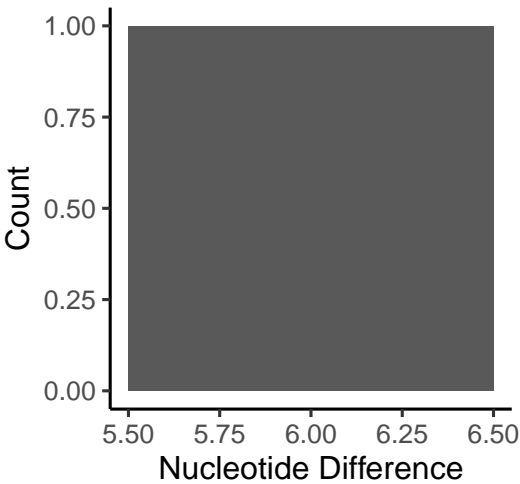
### IGHV6-1\*01\_02

1945 sequences assigned  
492 (25.3%) exact matches, in which:  
454 unique CDR3  
6 unique J



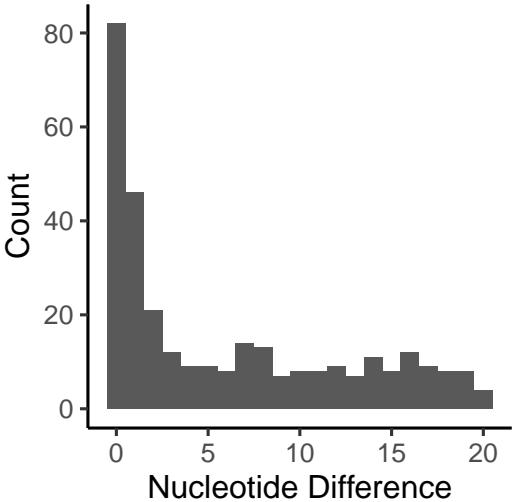
### IGHV3/OR16-13\*01

2 sequences assigned  
No exact matches.

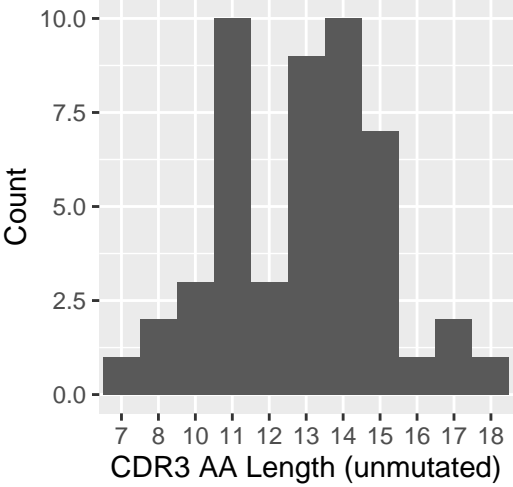


### IGHV7-4-1\*02

351 sequences assigned  
82 (23.4%) exact matches, in which:  
82 unique CDR3  
5 unique J



IGHV3-72\*01\_T186C







[illegible]