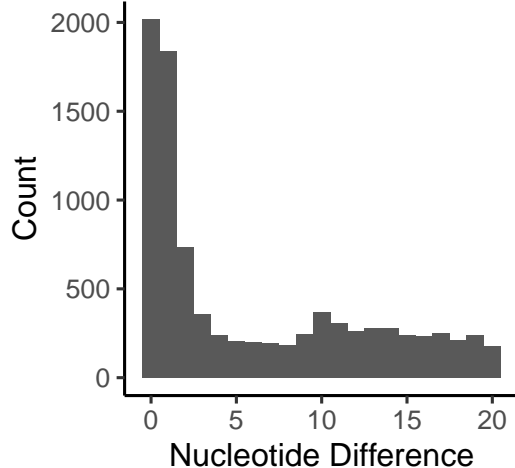


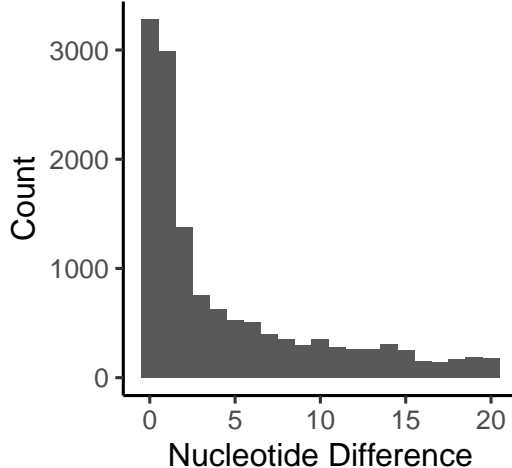
### IGHV1-2\*02

10669 sequences assigned  
2017 (18.9%) exact matches, in which:  
1681 unique CDR3  
6 unique J



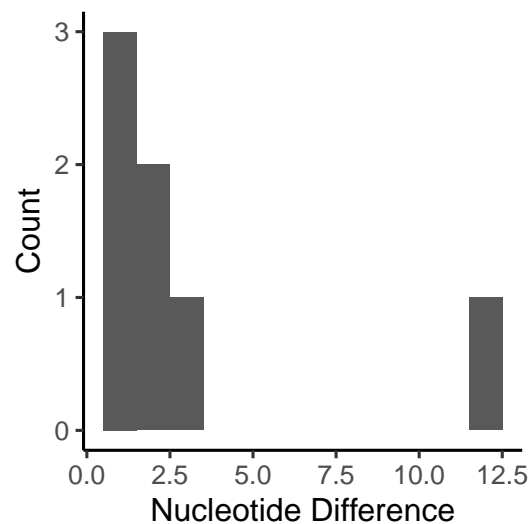
### IGHV1-8\*01

14720 sequences assigned  
3280 (22.3%) exact matches, in which:  
2717 unique CDR3  
6 unique J



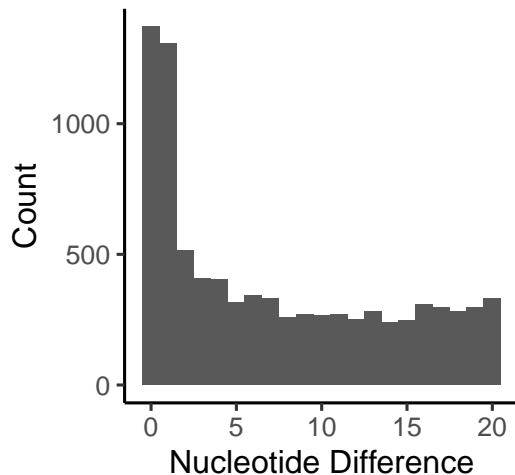
### IGHV1-45\*02

10 sequences assigned  
No exact matches.



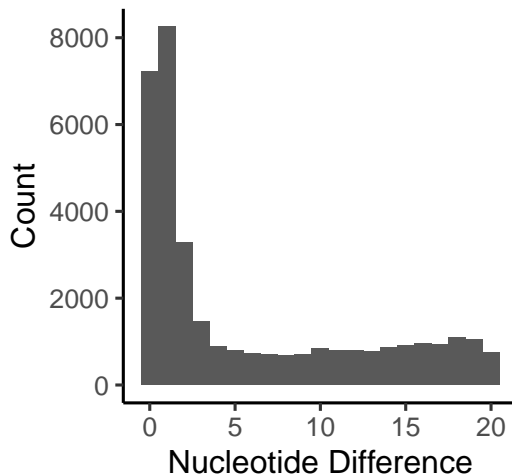
### IGHV1-2\*06

9618 sequences assigned  
1371 (14.3%) exact matches, in which:  
1121 unique CDR3  
6 unique J



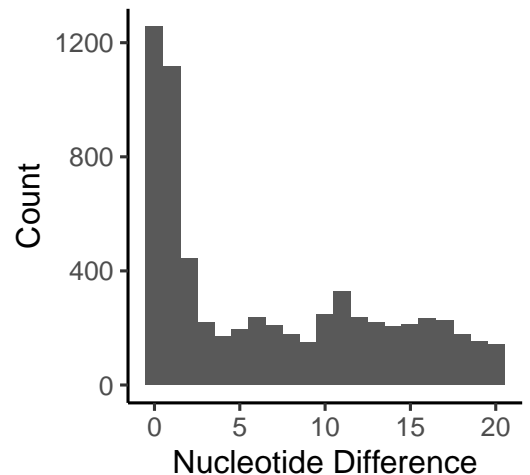
### IGHV1-18\*01

39753 sequences assigned  
7222 (18.2%) exact matches, in which:  
5675 unique CDR3  
6 unique J



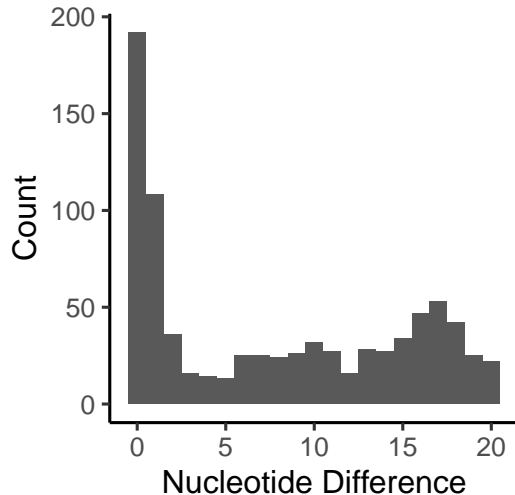
### IGHV1-46\*01

7741 sequences assigned  
1256 (16.2%) exact matches, in which:  
1049 unique CDR3  
6 unique J



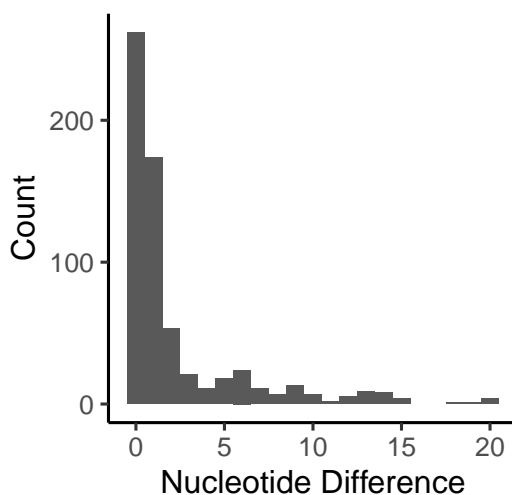
### IGHV1-3\*01\_05

1136 sequences assigned  
192 (16.9%) exact matches, in which:  
169 unique CDR3  
6 unique J



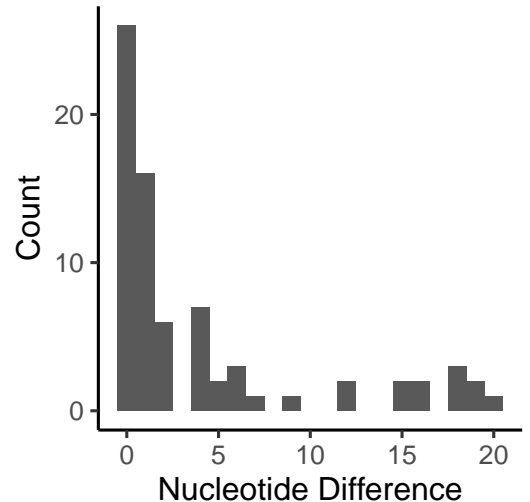
### IGHV1-24\*01

659 sequences assigned  
262 (39.8%) exact matches, in which:  
229 unique CDR3  
6 unique J



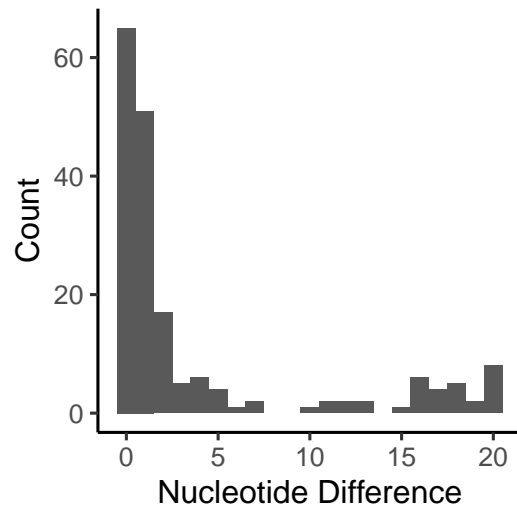
### IGHV1-58\*02

88 sequences assigned  
26 (29.5%) exact matches, in which:  
21 unique CDR3  
5 unique J



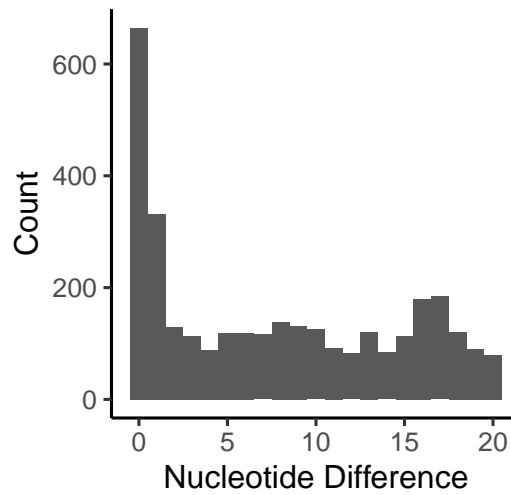
### IGHV1-58\*01\_03

240 sequences assigned  
65 (27.1%) exact matches, in which:  
61 unique CDR3  
5 unique J



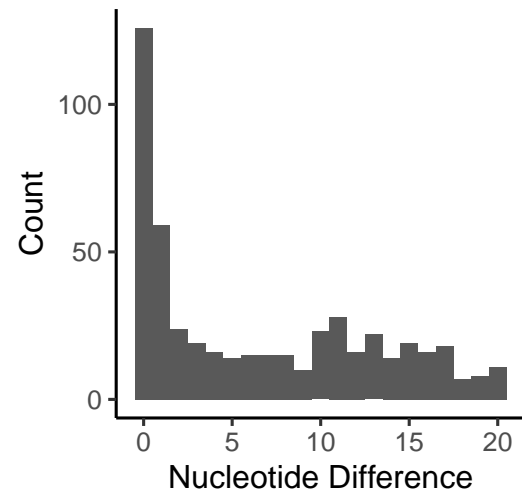
### IGHV2-5\*02

3700 sequences assigned  
665 (18%) exact matches, in which:  
587 unique CDR3  
6 unique J



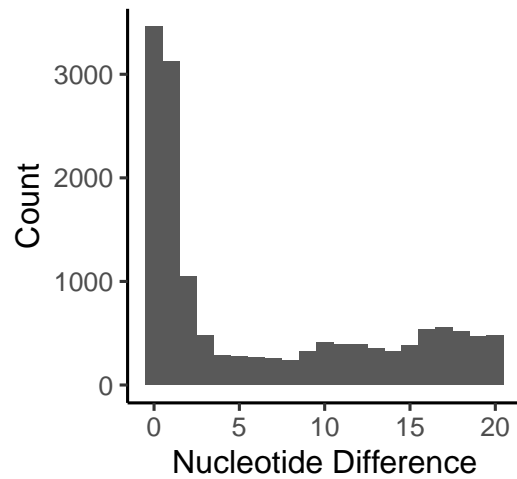
### IGHV2-70\*11\_15

538 sequences assigned  
126 (23.4%) exact matches, in which:  
115 unique CDR3  
6 unique J



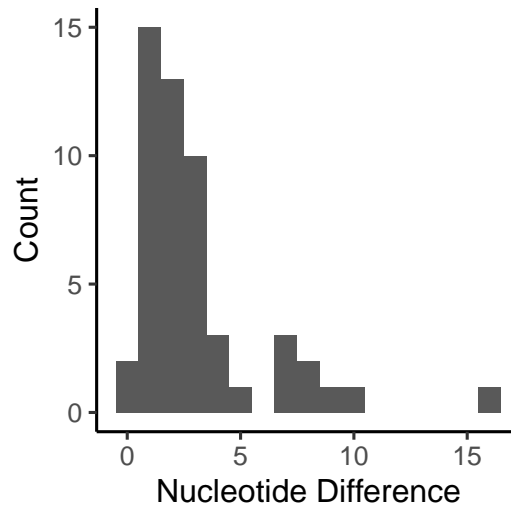
### IGHV1-69\*01\_12\_13

17757 sequences assigned  
3459 (19.5%) exact matches, in which:  
2864 unique CDR3  
6 unique J



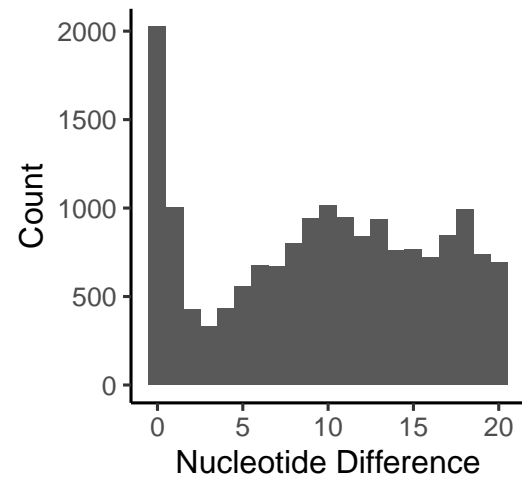
### IGHV2-26\*01

63 sequences assigned  
2 (3.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



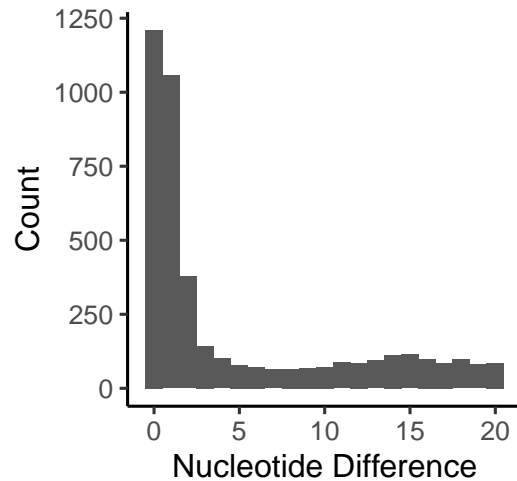
### IGHV3-7\*01

19314 sequences assigned  
2025 (10.5%) exact matches, in which:  
1798 unique CDR3  
6 unique J



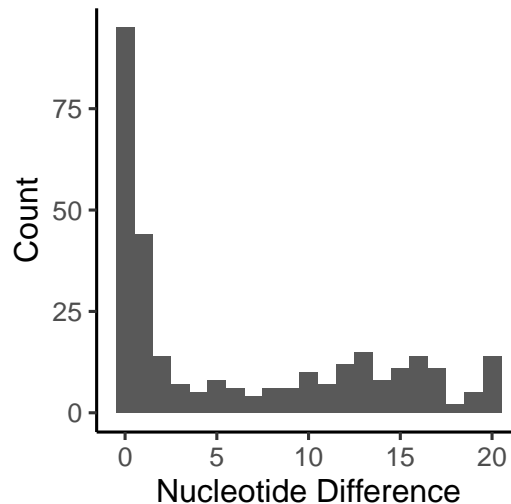
### IGHV1-69\*04\_09

5064 sequences assigned  
1210 (23.9%) exact matches, in which:  
1016 unique CDR3  
6 unique J



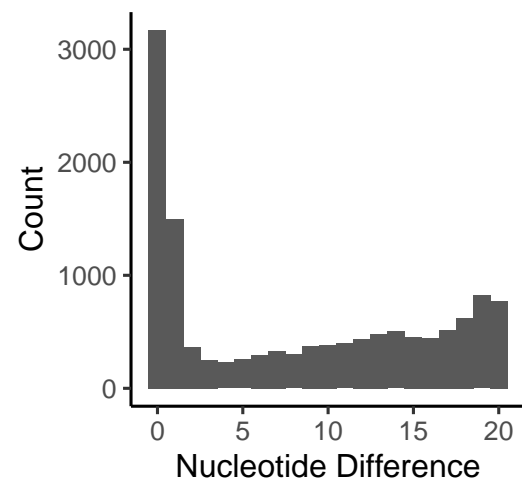
### IGHV2-70\*01

363 sequences assigned  
95 (26.2%) exact matches, in which:  
87 unique CDR3  
5 unique J



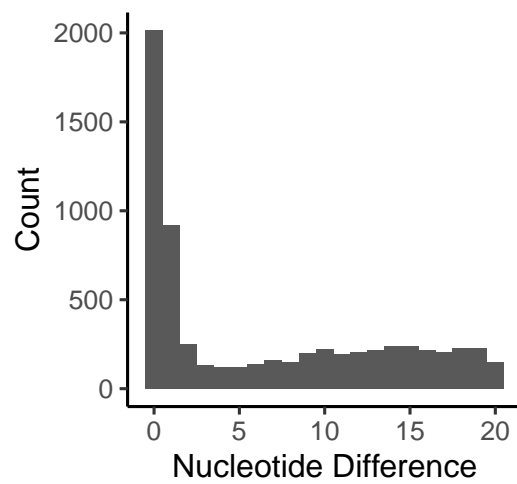
### IGHV3-9\*01

15979 sequences assigned  
3170 (19.8%) exact matches, in which:  
2807 unique CDR3  
6 unique J



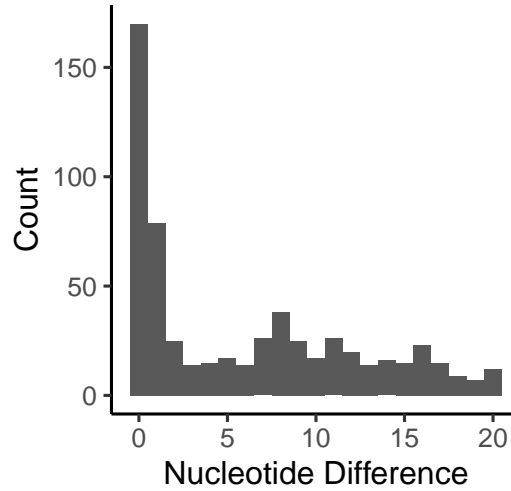
### IGHV3-11\*01

8198 sequences assigned  
2014 (24.6%) exact matches, in which:  
1794 unique CDR3  
6 unique J



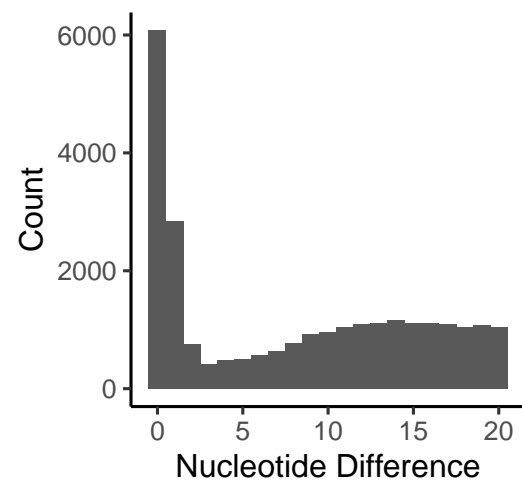
### IGHV3-20\*01\_02

668 sequences assigned  
170 (25.4%) exact matches, in which:  
153 unique CDR3  
5 unique J



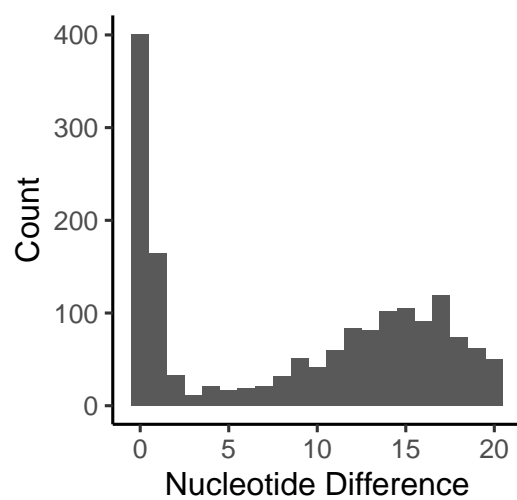
### IGHV3-23\*01\_04

33356 sequences assigned  
6078 (18.2%) exact matches, in which:  
5340 unique CDR3  
6 unique J



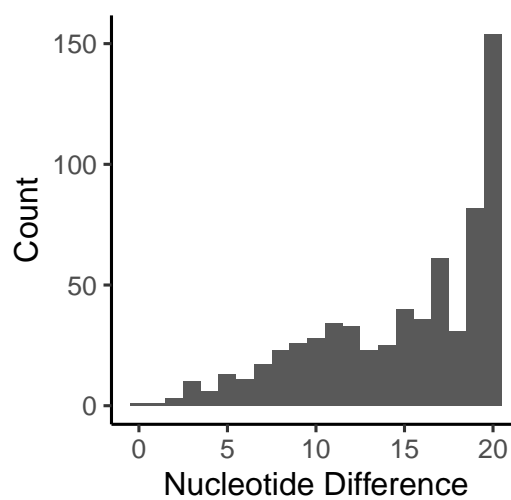
### IGHV3-13\*01

2003 sequences assigned  
401 (20%) exact matches, in which:  
341 unique CDR3  
5 unique J



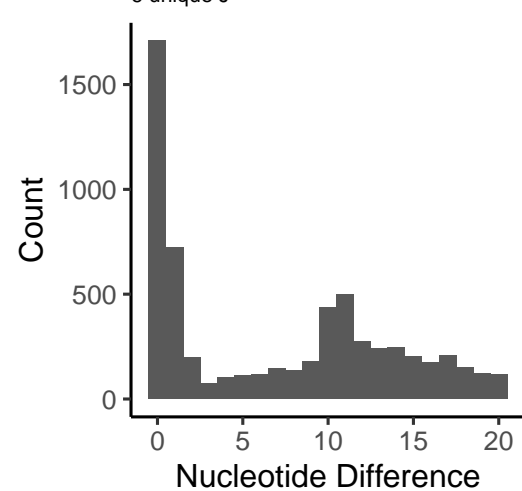
### IGHV3-20\*03\_04

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



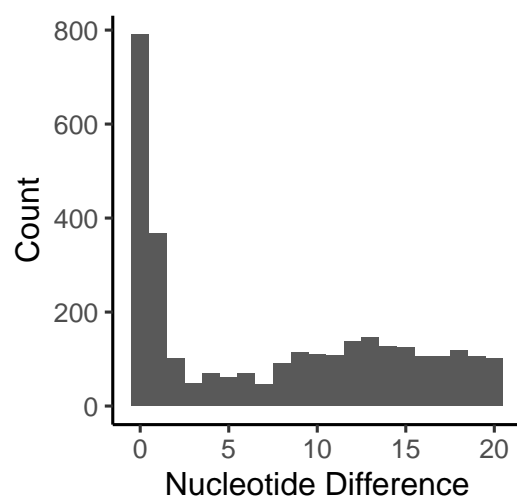
### IGHV3-30-3\*01

7119 sequences assigned  
1709 (24%) exact matches, in which:  
1560 unique CDR3  
6 unique J



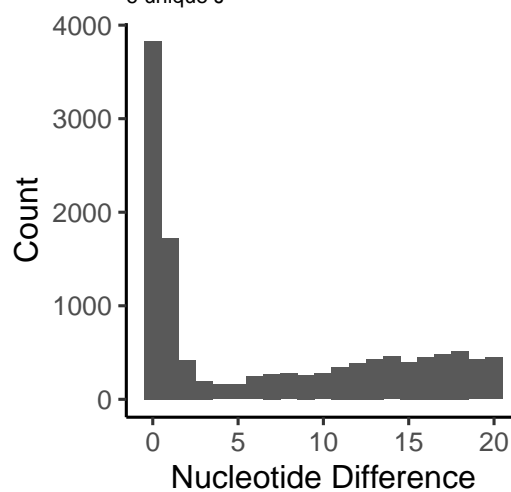
### IGHV3-15\*01\_02

3656 sequences assigned  
791 (21.6%) exact matches, in which:  
719 unique CDR3  
6 unique J



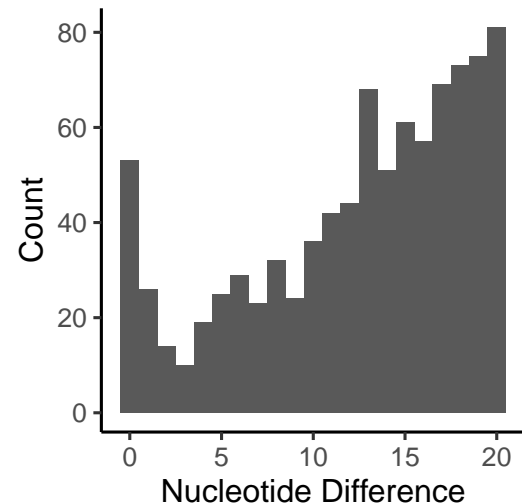
### IGHV3-21\*01\_02

16800 sequences assigned  
3830 (22.8%) exact matches, in which:  
3325 unique CDR3  
6 unique J



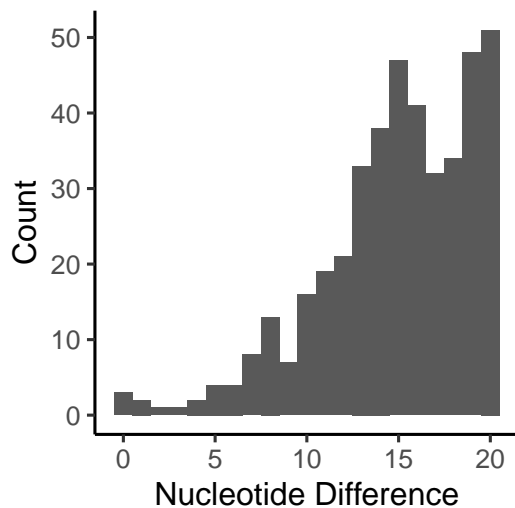
### IGHV3-30\*03

1476 sequences assigned  
53 (3.6%) exact matches, in which:  
51 unique CDR3  
4 unique J



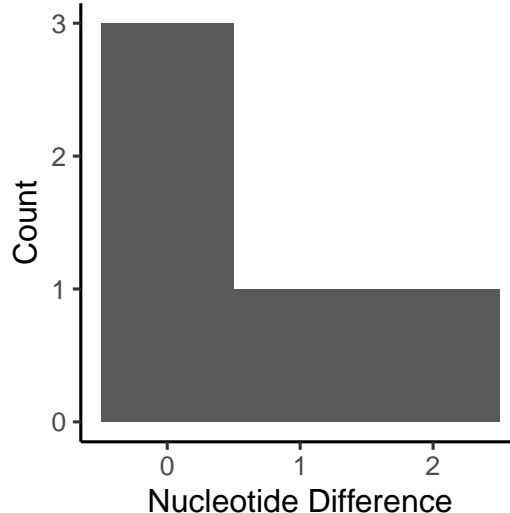
### IGHV3-30\*04

757 sequences assigned  
3 (0.4%) exact matches, in which:  
3 unique CDR3  
3 unique J



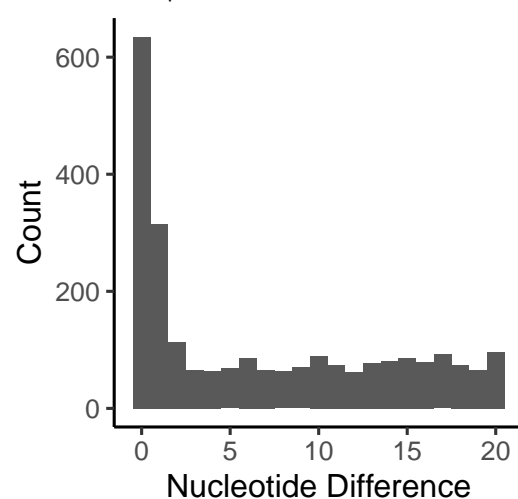
### IGHV3-35\*01

5 sequences assigned  
3 (60%) exact matches, in which:  
2 unique CDR3  
1 unique J



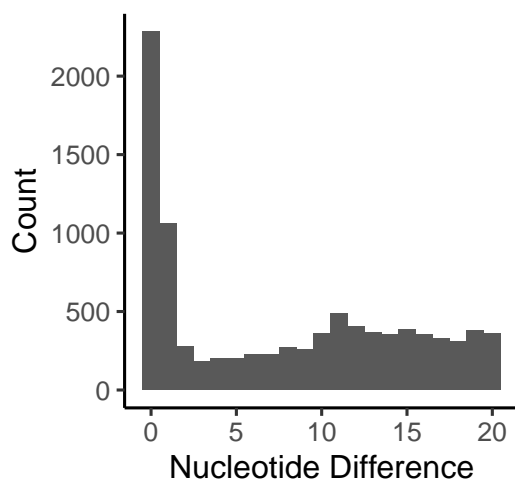
### IGHV3-49\*04

3272 sequences assigned  
635 (19.4%) exact matches, in which:  
579 unique CDR3  
6 unique J



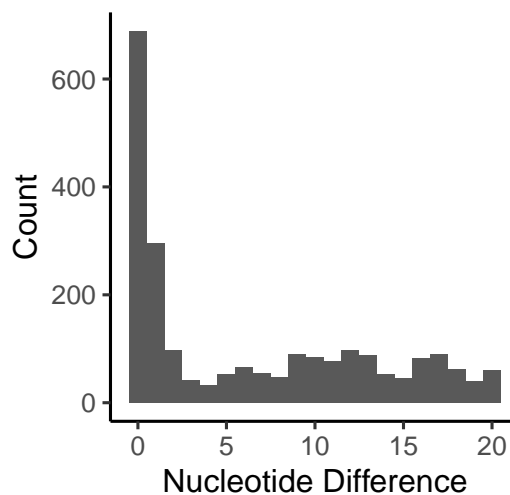
### IGHV3-30\*18

11385 sequences assigned  
2283 (20.1%) exact matches, in which:  
2073 unique CDR3  
6 unique J



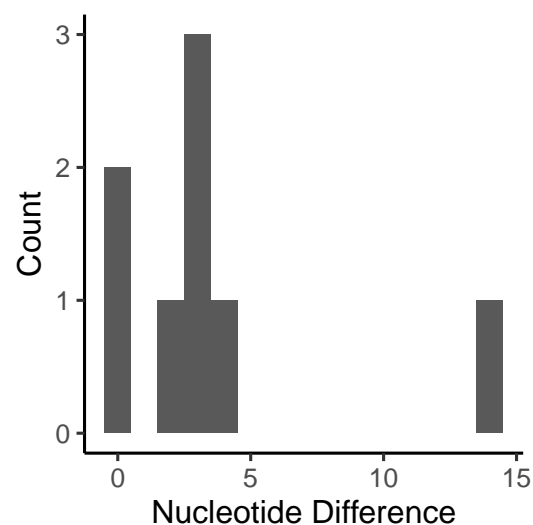
### IGHV3-43\*02

2668 sequences assigned  
689 (25.8%) exact matches, in which:  
617 unique CDR3  
6 unique J



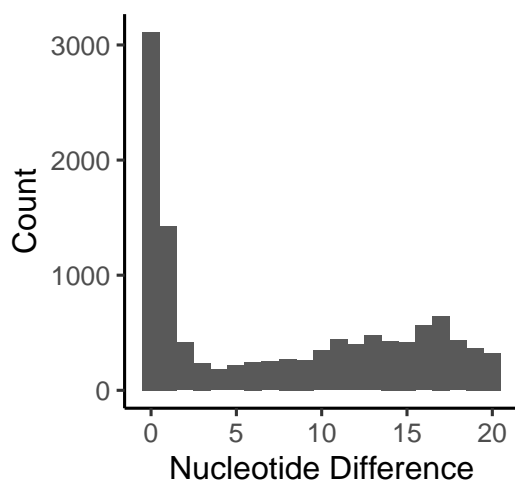
### IGHV3-52\*01\_03

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



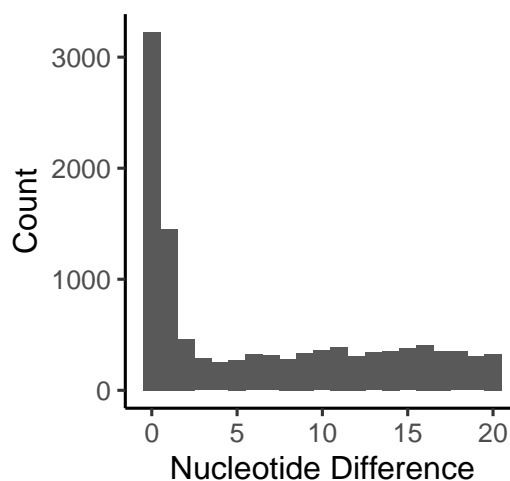
### IGHV3-33\*01

14380 sequences assigned  
3112 (21.6%) exact matches, in which:  
2403 unique CDR3  
6 unique J



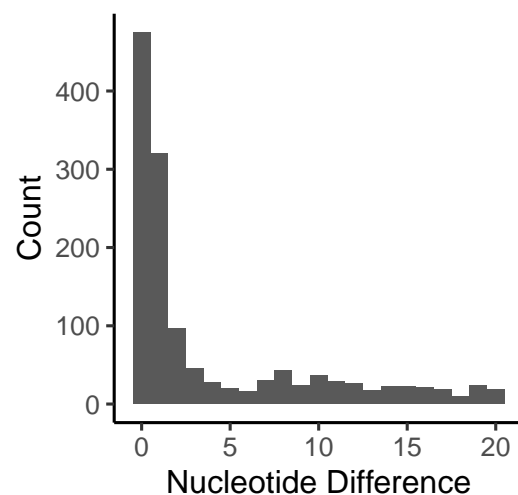
### IGHV3-48\*03

13303 sequences assigned  
3226 (24.3%) exact matches, in which:  
2862 unique CDR3  
6 unique J



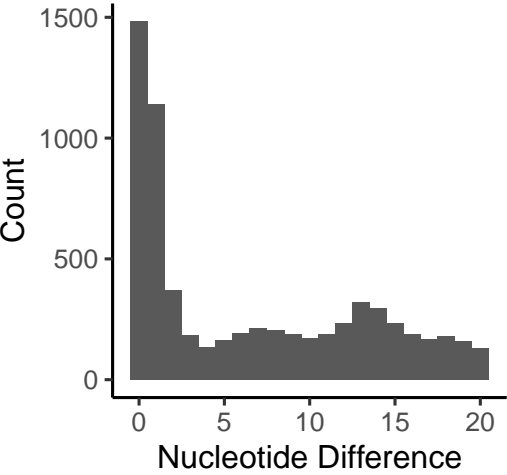
### IGHV3-53\*04

1554 sequences assigned  
475 (30.6%) exact matches, in which:  
394 unique CDR3  
6 unique J



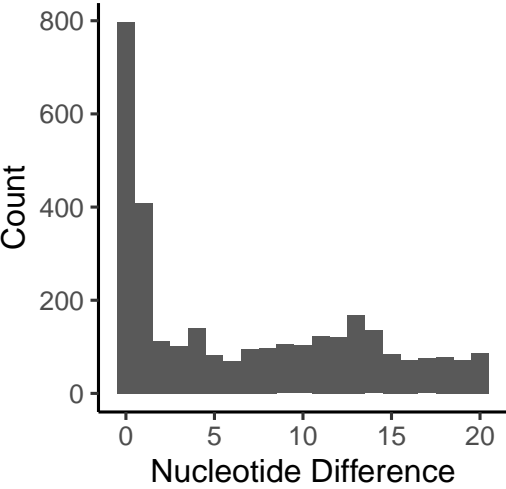
IGHV3-53\*01\_02

8712 sequences assigned  
1483 (17%) exact matches, in which:  
1212 unique CDR3  
6 unique J



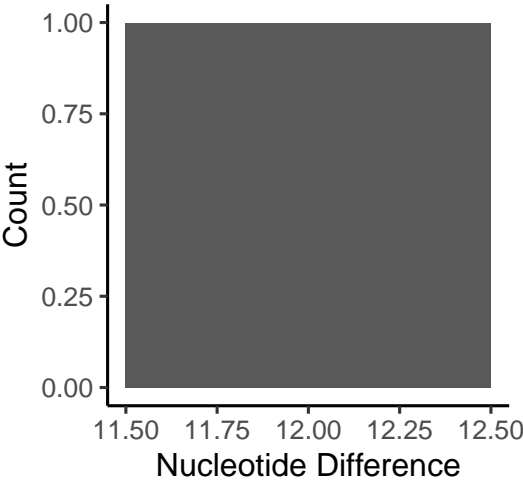
IGHV3-66\*01

3760 sequences assigned  
798 (21.2%) exact matches, in which:  
700 unique CDR3  
6 unique J



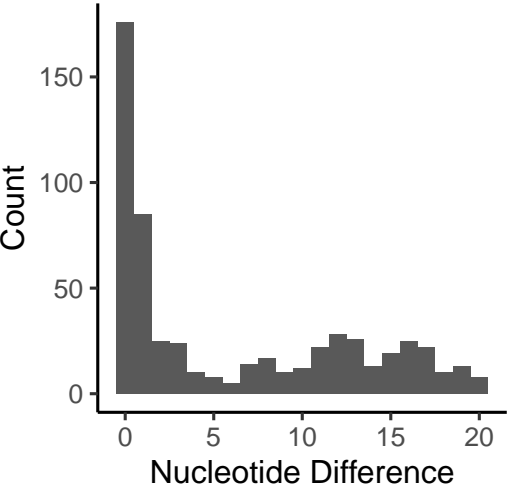
IGHV3-71\*01\_04

2 sequences assigned  
No exact matches.



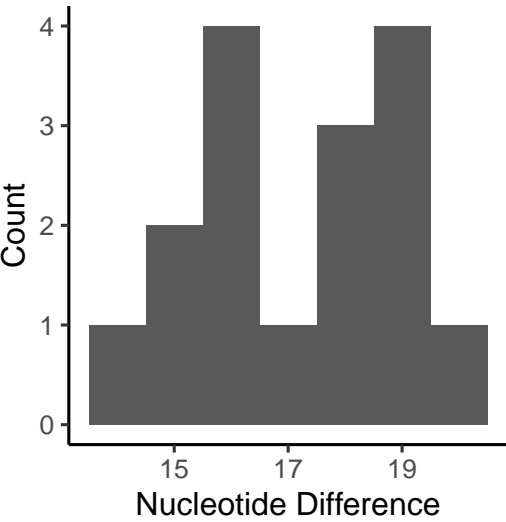
IGHV3-64\*01

617 sequences assigned  
176 (28.5%) exact matches, in which:  
156 unique CDR3  
6 unique J



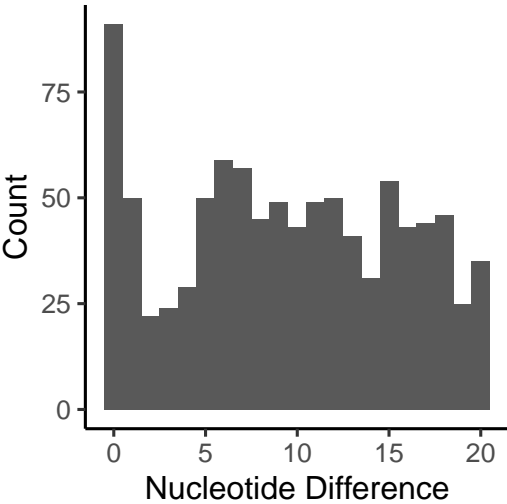
IGHV3-69-1\*01

24 sequences assigned  
No exact matches.



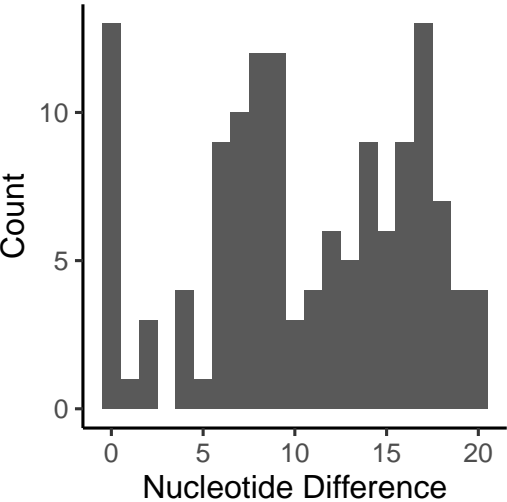
IGHV3-72\*01

1118 sequences assigned  
91 (8.1%) exact matches, in which:  
82 unique CDR3  
6 unique J



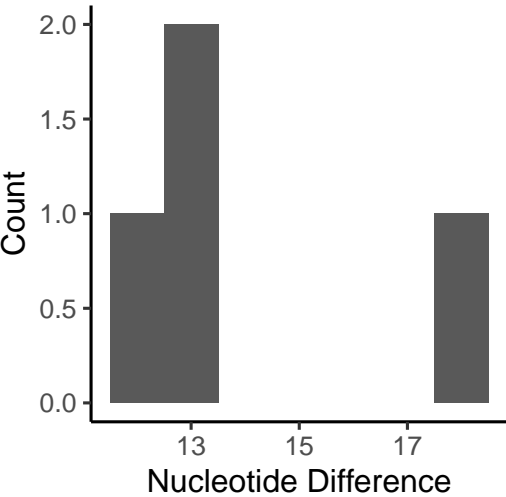
IGHV3-64\*02\_07

246 sequences assigned  
13 (5.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



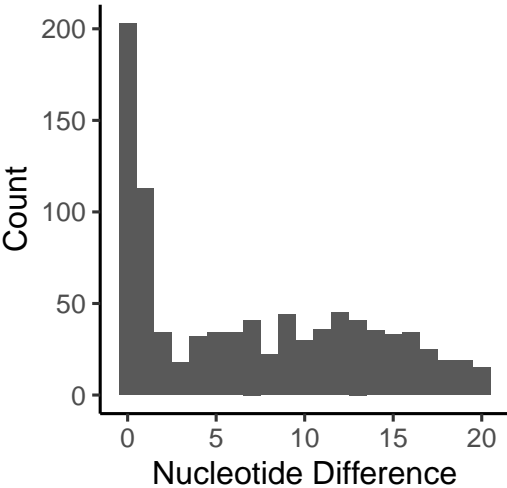
IGHV3-69-1\*02

19 sequences assigned  
No exact matches.



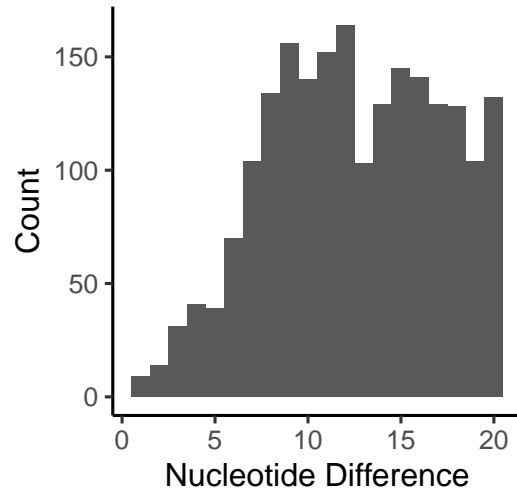
IGHV3-73\*01\_02

1013 sequences assigned  
203 (20%) exact matches, in which:  
179 unique CDR3  
6 unique J



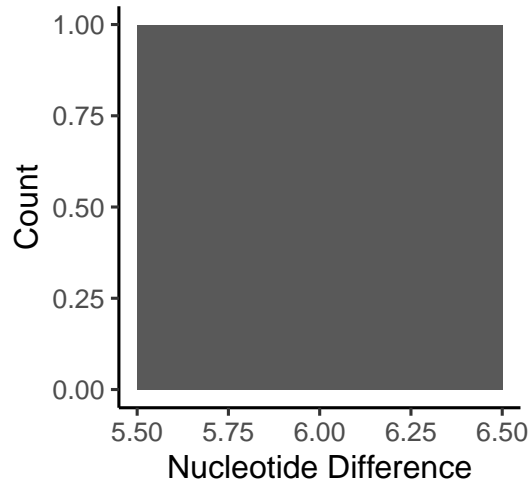
### IGHV3-74\*03

2762 sequences assigned  
No exact matches.



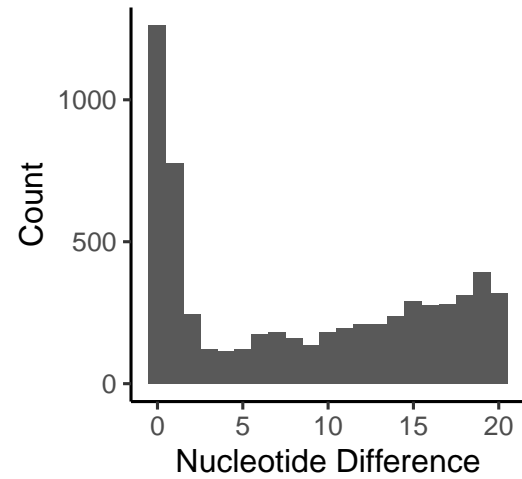
### IGHV3-64D\*06

1 sequences assigned  
No exact matches.



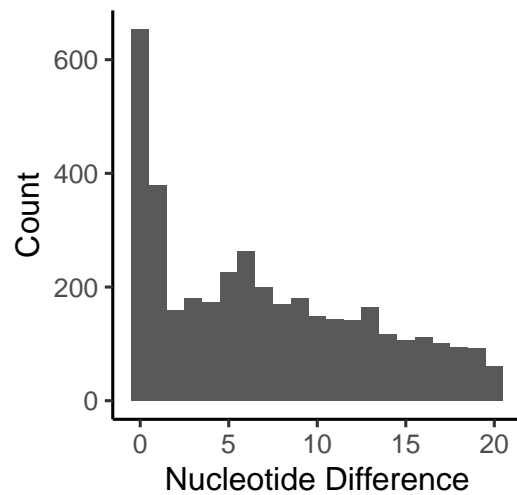
### IGHV4-4\*02\_03

8195 sequences assigned  
1262 (15.4%) exact matches, in which:  
950 unique CDR3  
6 unique J



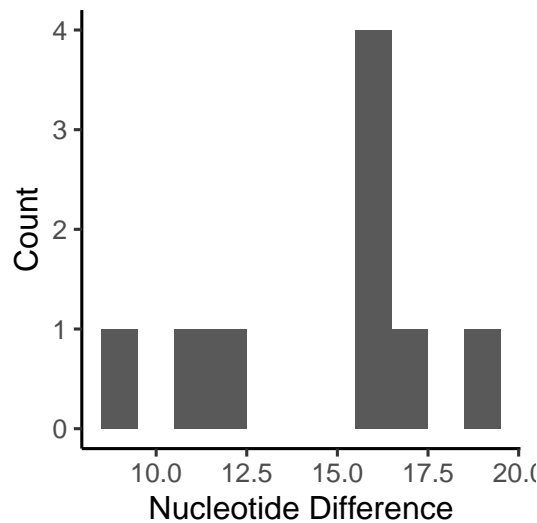
### IGHV3-74\*01\_02

4219 sequences assigned  
654 (15.5%) exact matches, in which:  
572 unique CDR3  
6 unique J



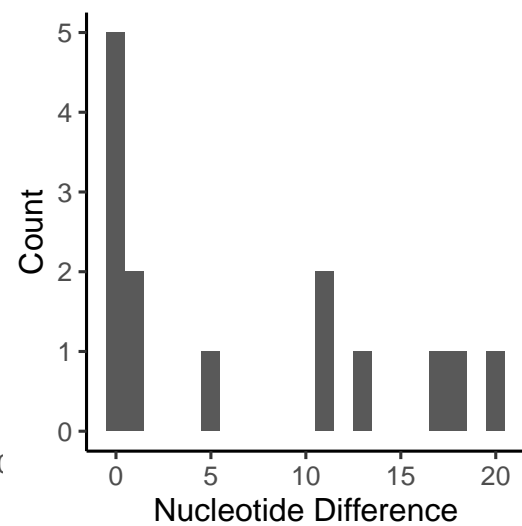
### IGHV3-NL1\*01

40 sequences assigned  
No exact matches.



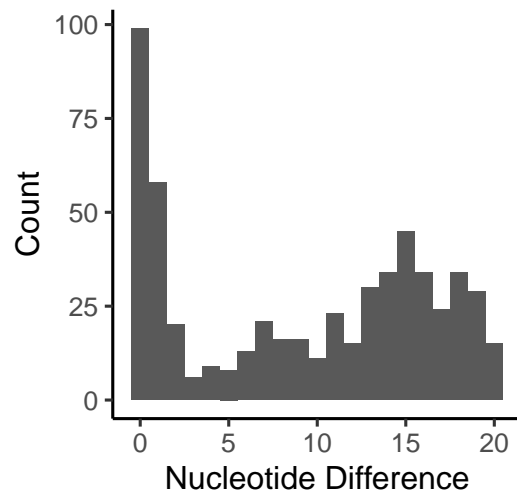
### IGHV4-28\*03

19 sequences assigned  
5 (26.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



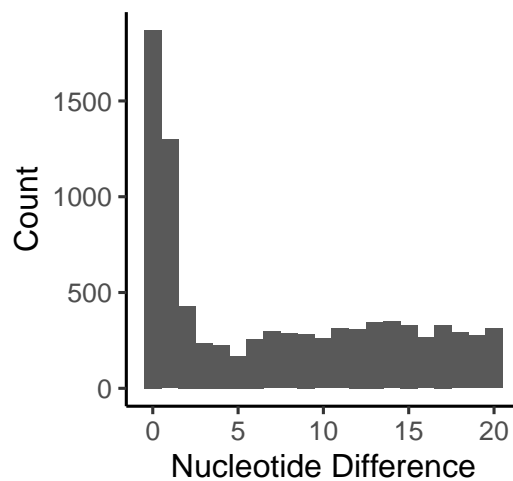
### IGHV3-43D\*04

602 sequences assigned  
99 (16.4%) exact matches, in which:  
87 unique CDR3  
5 unique J



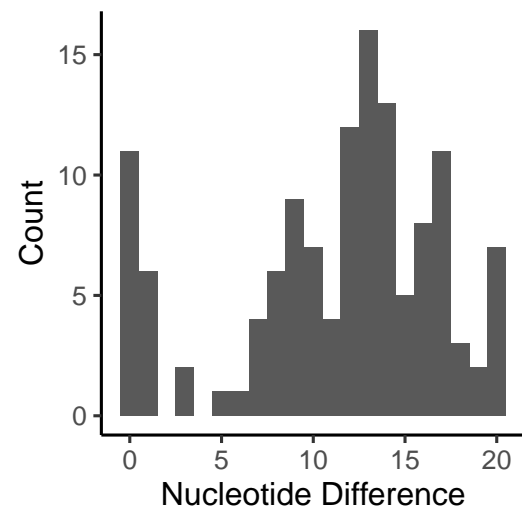
### IGHV4-4\*07

11607 sequences assigned  
1870 (16.1%) exact matches, in which:  
1383 unique CDR3  
6 unique J



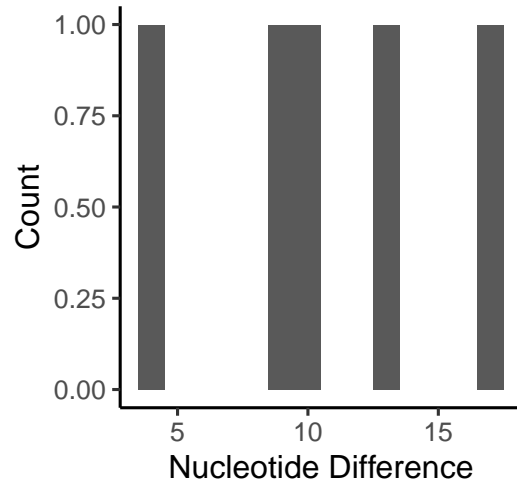
### IGHV4-28\*01\_07

142 sequences assigned  
11 (7.7%) exact matches, in which:  
7 unique CDR3  
3 unique J



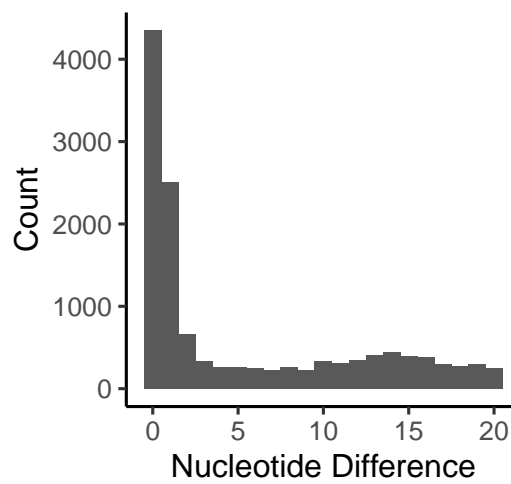
### IGHV4-28\*02\_05

7 sequences assigned  
No exact matches.



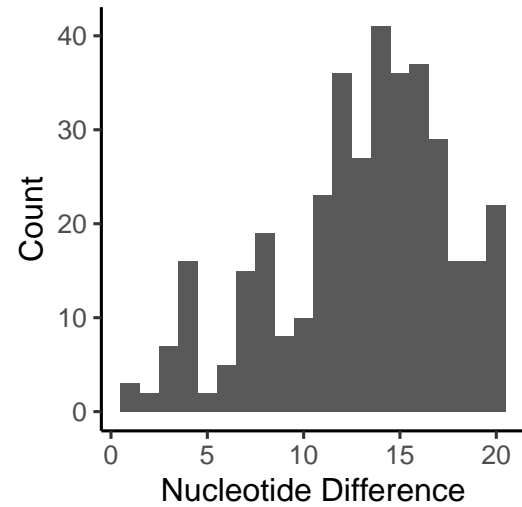
### IGHV4-31\*02

15584 sequences assigned  
4350 (27.9%) exact matches, in which:  
3245 unique CDR3  
6 unique J



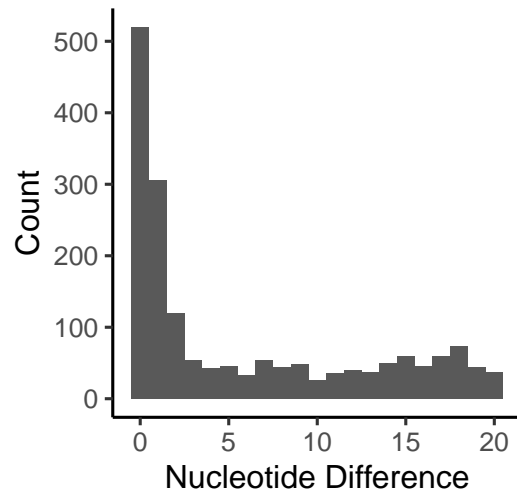
### IGHV4-39\*02

662 sequences assigned  
No exact matches.



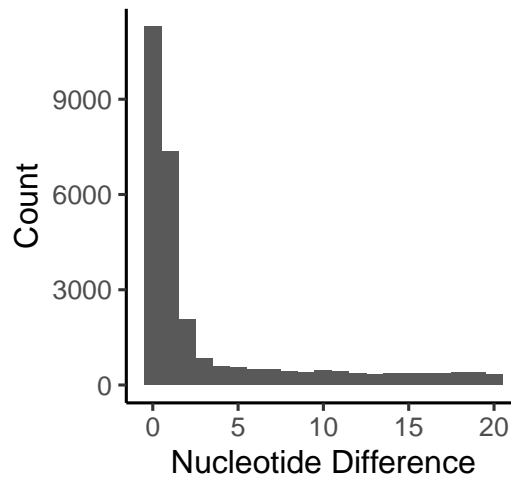
### IGHV4-30-2\*01

2303 sequences assigned  
520 (22.6%) exact matches, in which:  
384 unique CDR3  
6 unique J



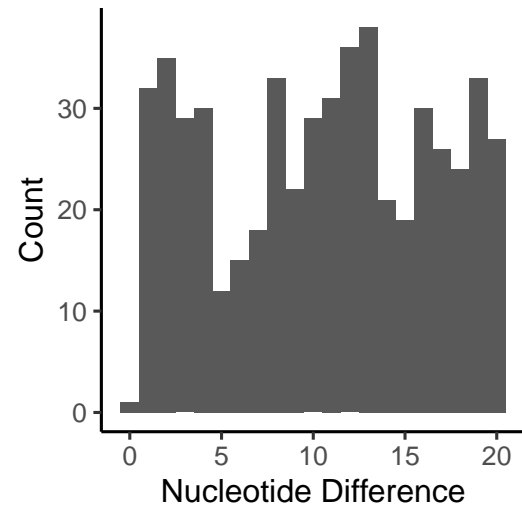
### IGHV4-34\*01\_02

32215 sequences assigned  
11284 (35%) exact matches, in which:  
8483 unique CDR3  
6 unique J



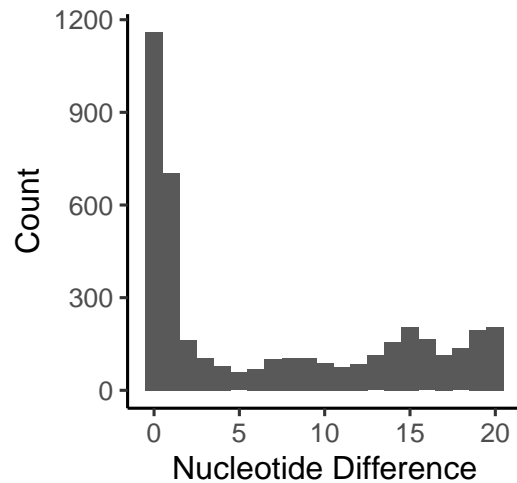
### IGHV4-39\*07

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



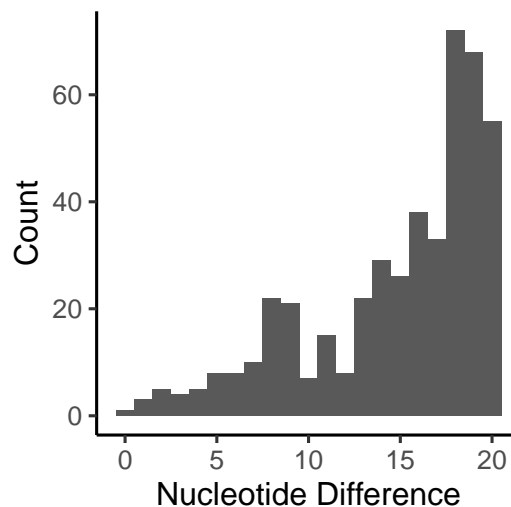
### IGHV4-30-4\*01

5476 sequences assigned  
1160 (21.2%) exact matches, in which:  
866 unique CDR3  
6 unique J



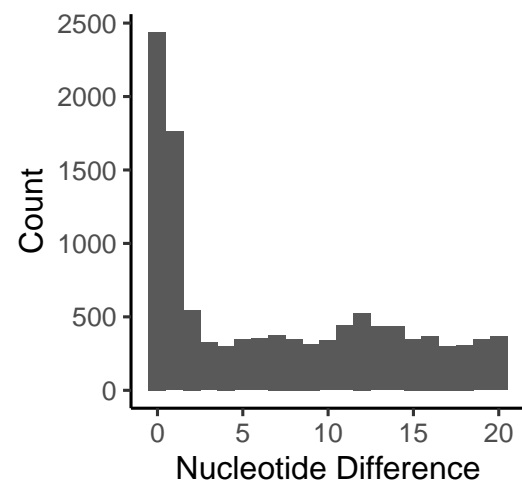
### IGHV4-38-2\*02

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



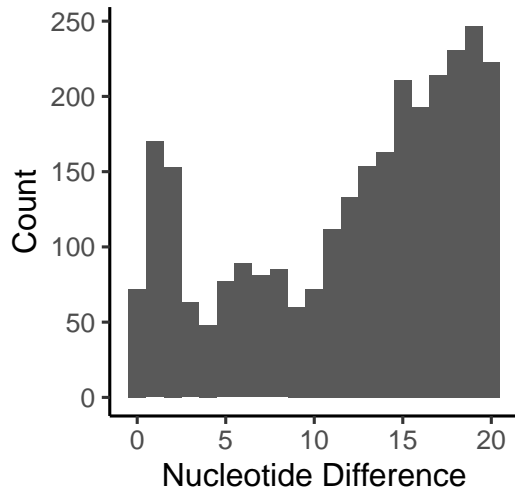
### IGHV4-59\*08

14346 sequences assigned  
2439 (17%) exact matches, in which:  
1759 unique CDR3  
6 unique J



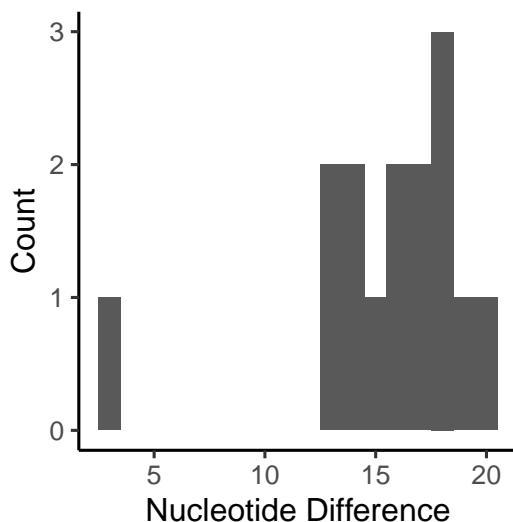
### IGHV4–59\*12

5608 sequences assigned  
72 (1.3%) exact matches, in which:  
69 unique CDR3  
6 unique J



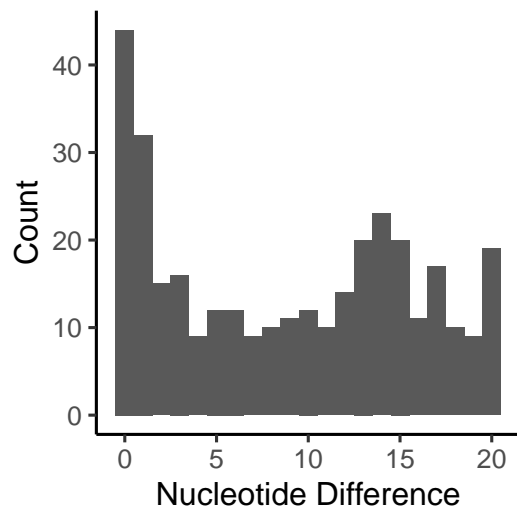
### IGHV4/OR15–8\*01

118 sequences assigned  
No exact matches.



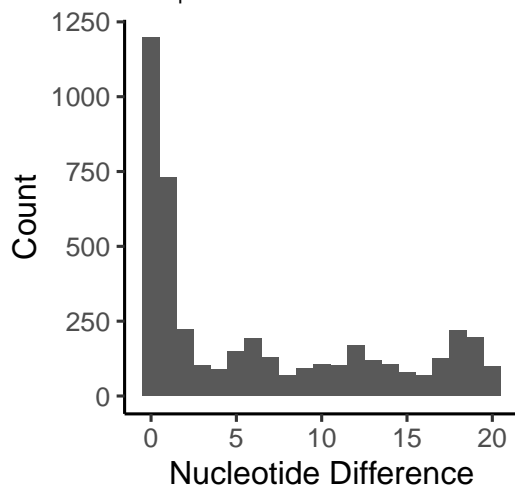
### IGHV5–51\*04

636 sequences assigned  
44 (6.9%) exact matches, in which:  
43 unique CDR3  
5 unique J



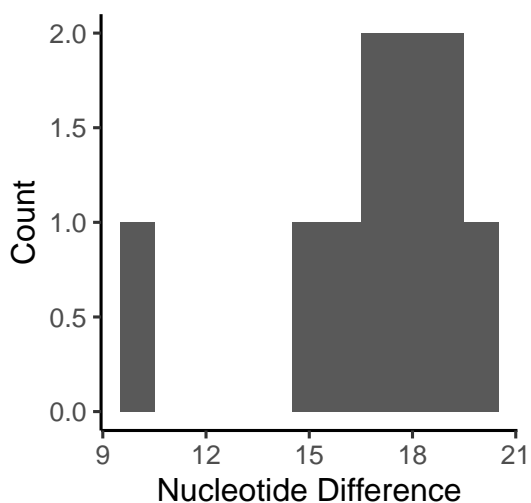
### IGHV4–61\*01

5058 sequences assigned  
1197 (23.7%) exact matches, in which:  
879 unique CDR3  
6 unique J



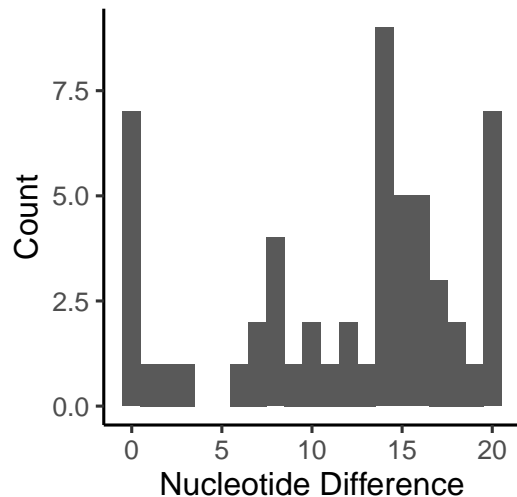
### IGHV4/OR15–8\*02

109 sequences assigned  
No exact matches.



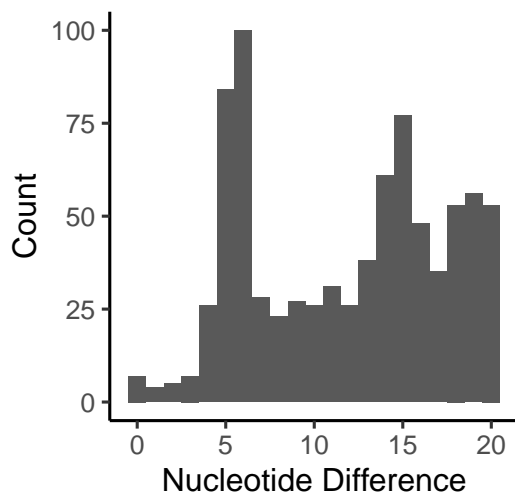
### IGHV5–51\*06

132 sequences assigned  
7 (5.3%) exact matches, in which:  
7 unique CDR3  
4 unique J



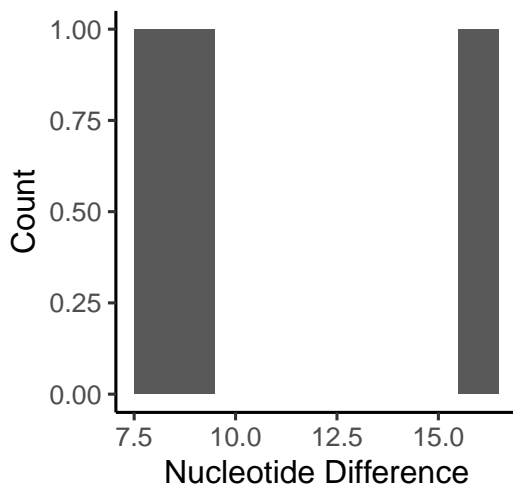
### IGHV4–61\*08

1456 sequences assigned  
7 (0.5%) exact matches, in which:  
7 unique CDR3  
4 unique J



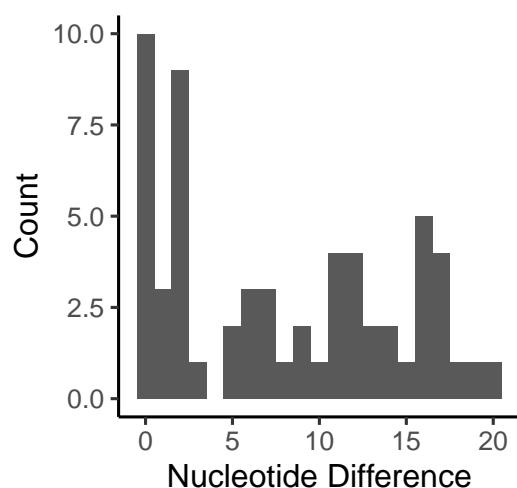
### IGHV5–10–1\*01\_03

7 sequences assigned  
No exact matches.



### IGHV5–51\*07

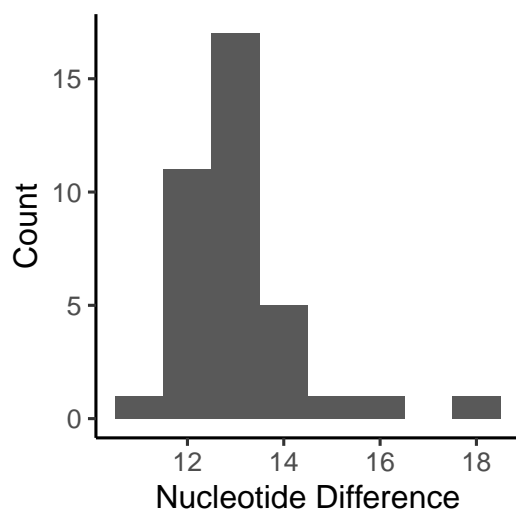
69 sequences assigned  
10 (14.5%) exact matches, in which:  
10 unique CDR3  
2 unique J





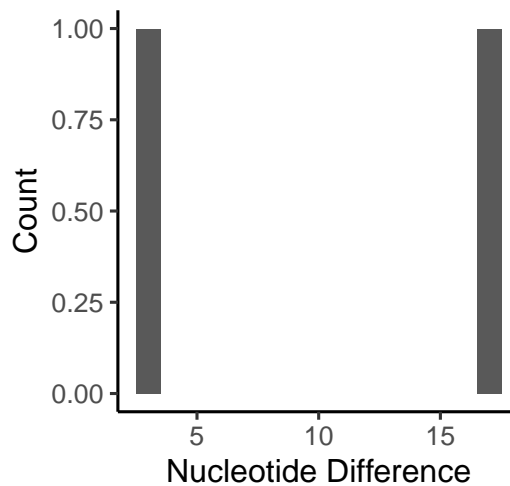
## IGHV5-78\*01

37 sequences assigned  
No exact matches.



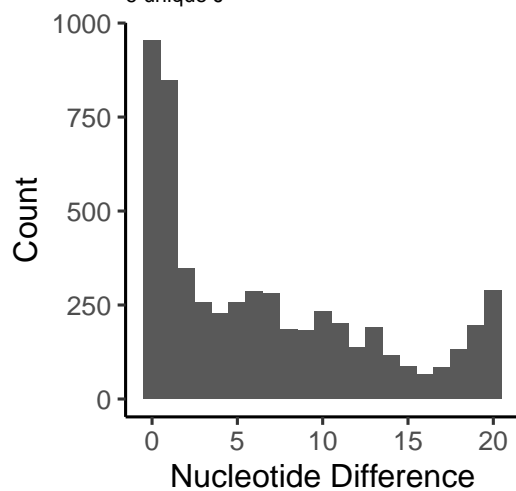
## IGHV7-4-1\*02

4 sequences assigned  
No exact matches.



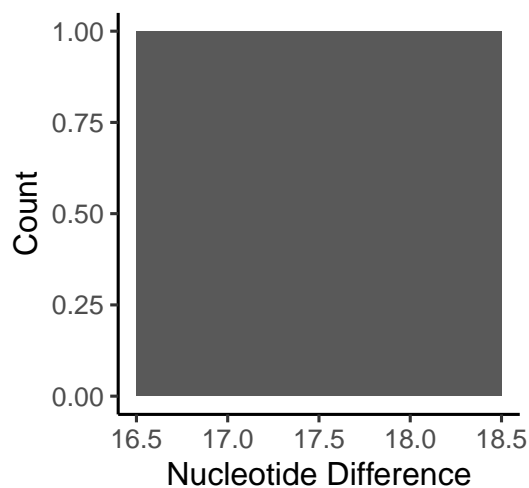
## IGHV6-1\*01\_02

6439 sequences assigned  
953 (14.8%) exact matches, in which:  
751 unique CDR3  
6 unique J



## IGHV3/OR16-13\*01

2 sequences assigned  
No exact matches.





Warning – no inferred sequences found.