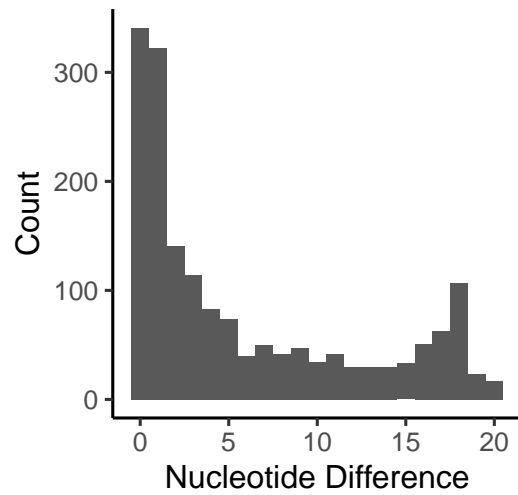


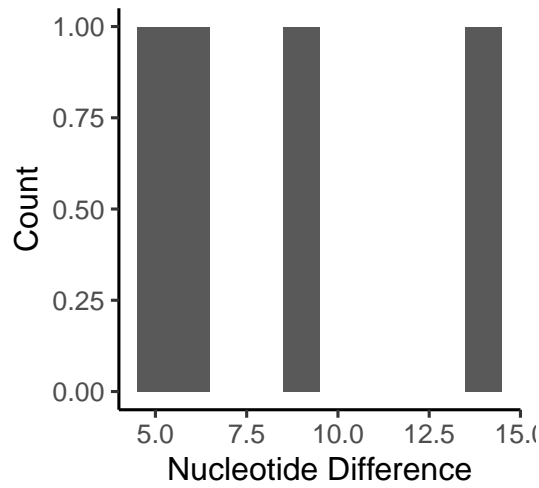
### IGHV1-2\*04

2136 sequences assigned  
341 (16%) exact matches, in which:  
301 unique CDR3  
6 unique J



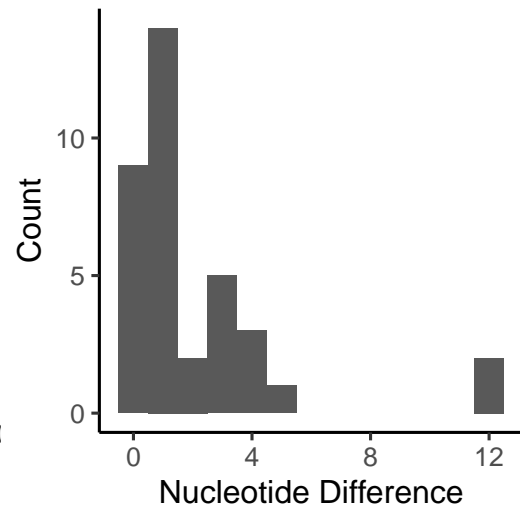
### IGHV1-8\*02

4 sequences assigned  
No exact matches.



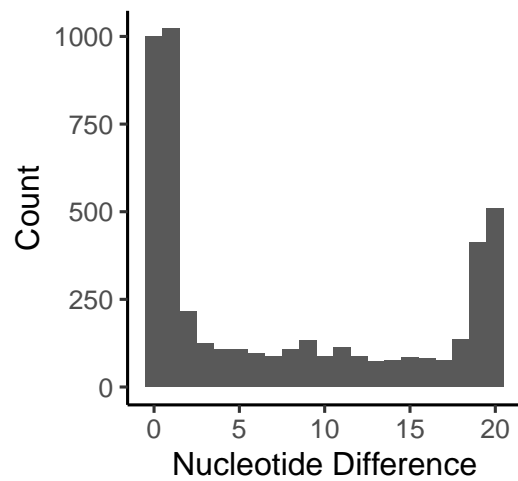
### IGHV1-45\*02

37 sequences assigned  
9 (24.3%) exact matches, in which:  
7 unique CDR3  
1 unique J



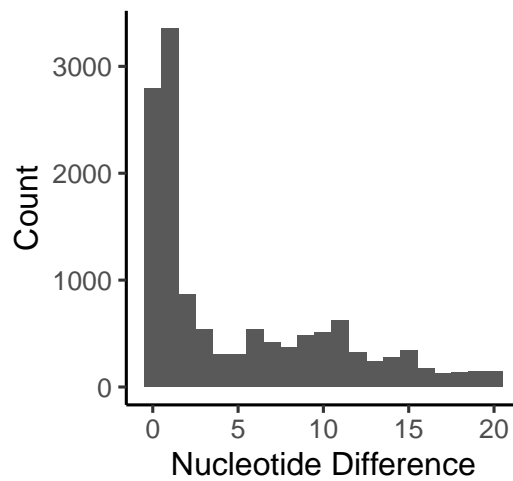
### IGHV1-3\*01\_05

5743 sequences assigned  
1001 (17.4%) exact matches, in which:  
855 unique CDR3  
6 unique J



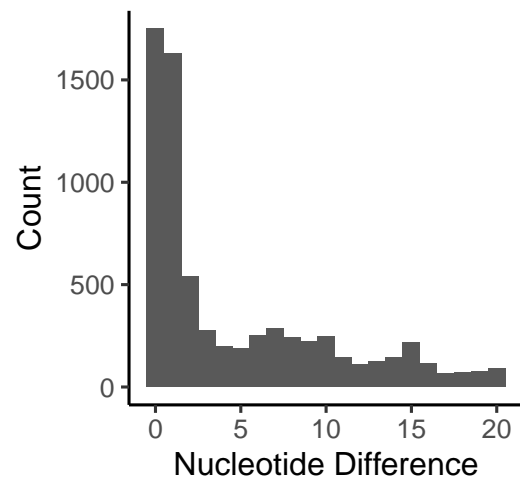
### IGHV1-18\*01

15094 sequences assigned  
2797 (18.5%) exact matches, in which:  
2285 unique CDR3  
6 unique J



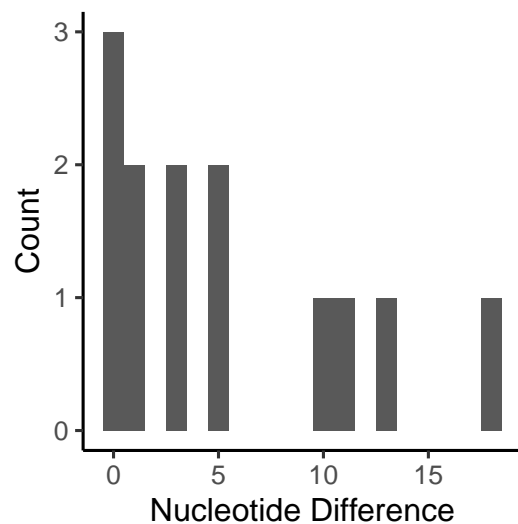
### IGHV1-46\*01

7905 sequences assigned  
1750 (22.1%) exact matches, in which:  
1456 unique CDR3  
6 unique J



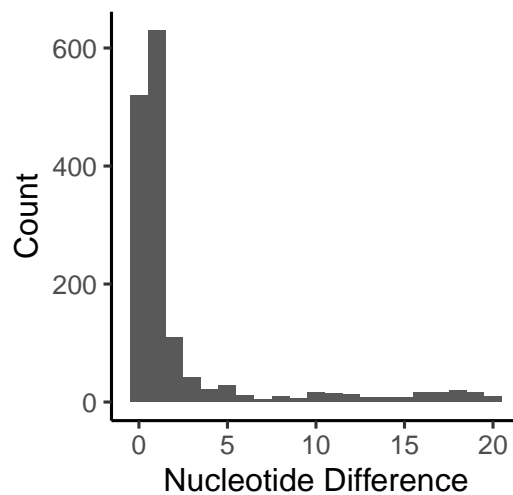
### IGHV1-8\*01

13 sequences assigned  
3 (23.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



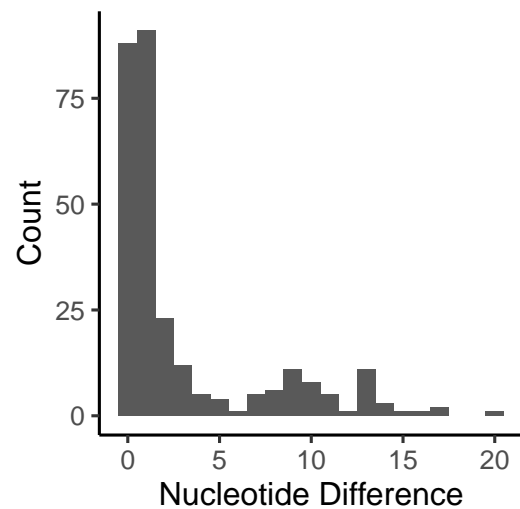
### IGHV1-24\*01

2108 sequences assigned  
520 (24.7%) exact matches, in which:  
429 unique CDR3  
6 unique J



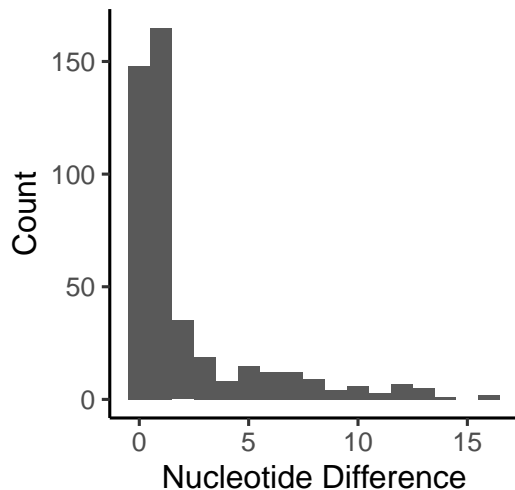
### IGHV1-58\*02

285 sequences assigned  
88 (30.9%) exact matches, in which:  
74 unique CDR3  
5 unique J



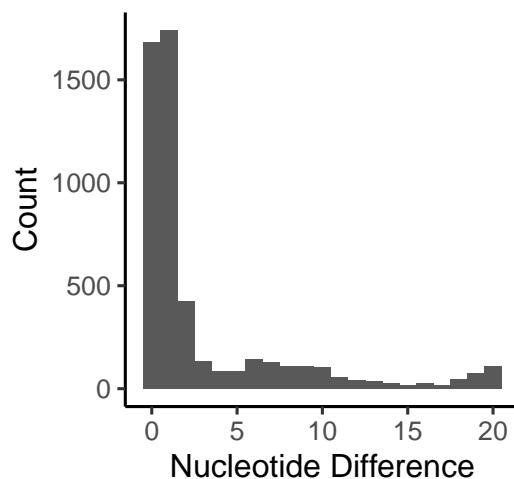
### IGHV1-58\*01\_03

465 sequences assigned  
148 (31.8%) exact matches, in which:  
122 unique CDR3  
5 unique J



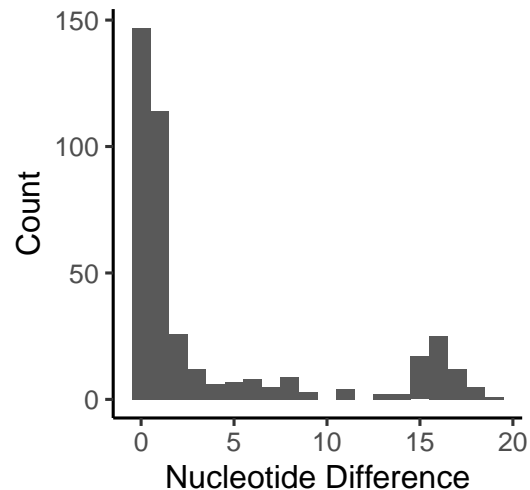
### IGHV1-69\*04\_09

5716 sequences assigned  
1683 (29.4%) exact matches, in which:  
1458 unique CDR3  
6 unique J



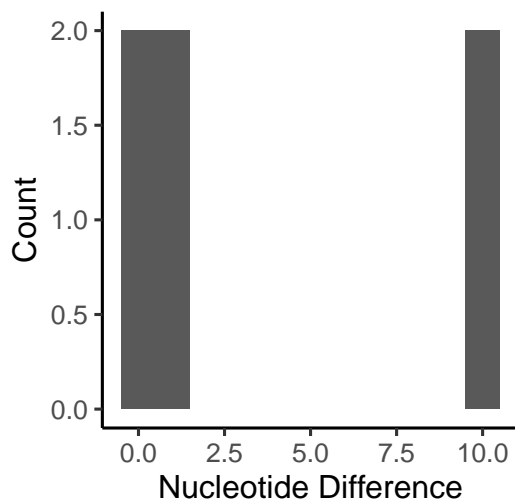
### IGHV2-26\*01

405 sequences assigned  
147 (36.3%) exact matches, in which:  
123 unique CDR3  
5 unique J



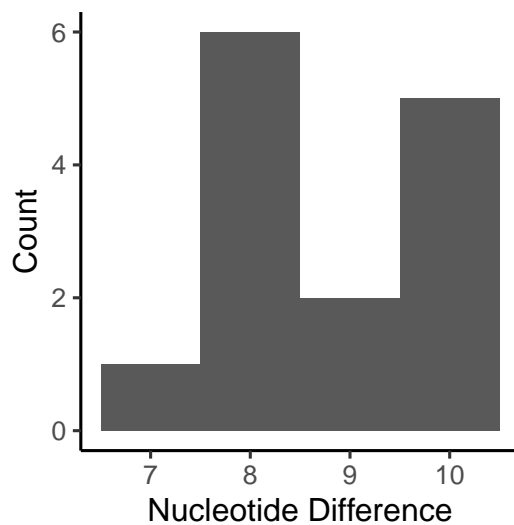
### IGHV1-68\*01

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
1 unique J



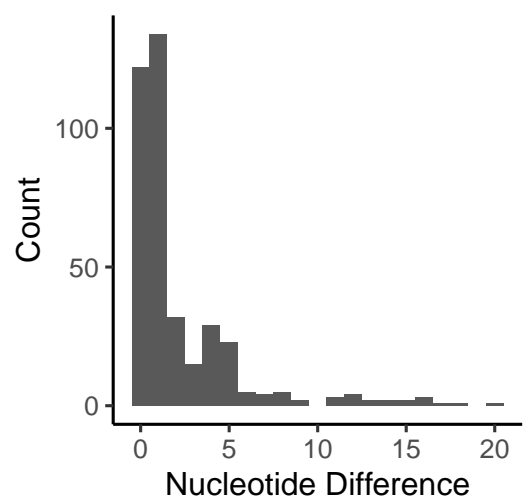
### IGHV1-NL1\*01

14 sequences assigned  
No exact matches.



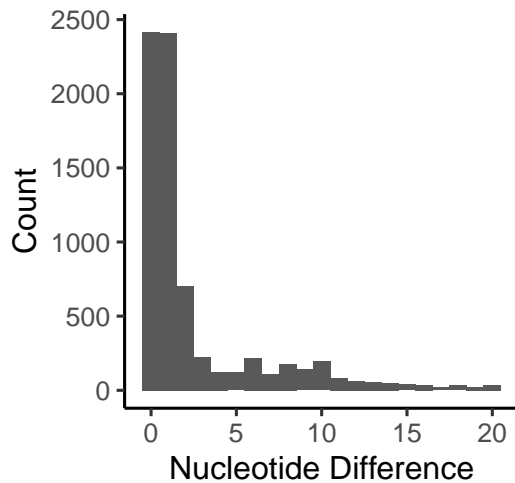
### IGHV2-70\*01

453 sequences assigned  
122 (26.9%) exact matches, in which:  
103 unique CDR3  
5 unique J



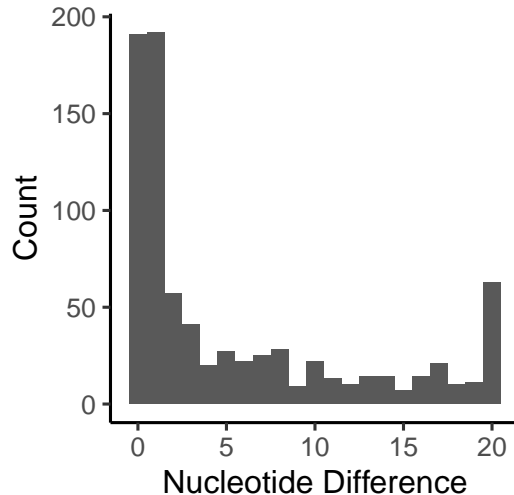
### IGHV1-69\*01\_12\_13

8046 sequences assigned  
2416 (30%) exact matches, in which:  
2114 unique CDR3  
6 unique J



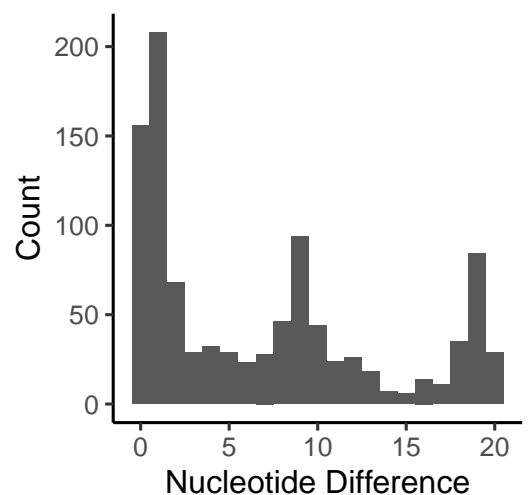
### IGHV2-5\*02

1551 sequences assigned  
191 (12.3%) exact matches, in which:  
166 unique CDR3  
6 unique J



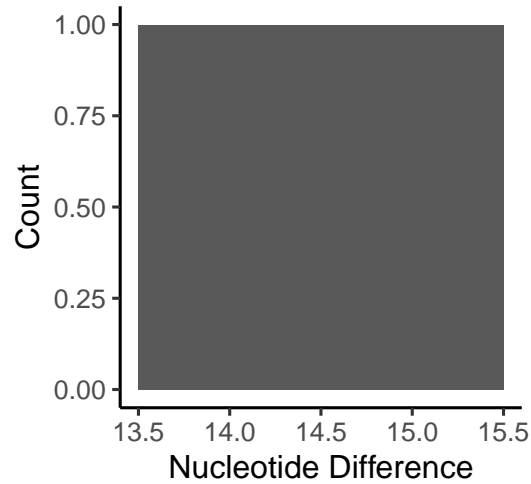
### IGHV2-70\*11\_15

1041 sequences assigned  
156 (15%) exact matches, in which:  
134 unique CDR3  
5 unique J



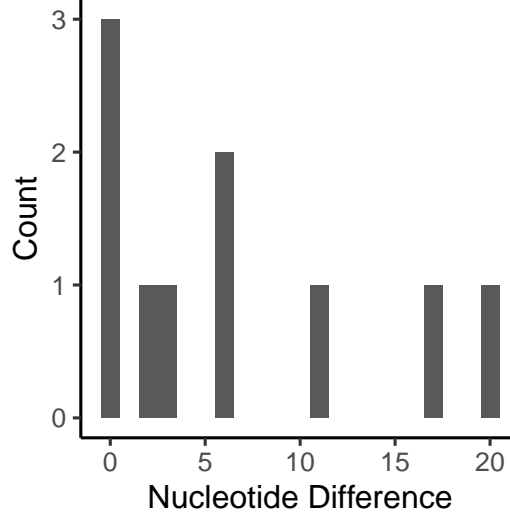
### IGHV2-70D\*14

2 sequences assigned  
No exact matches.



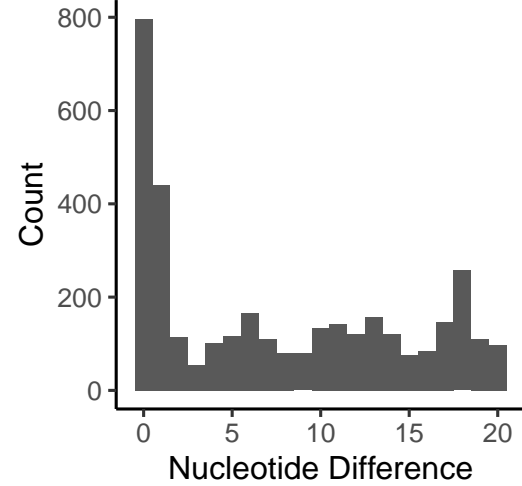
### IGHV3-9\*01

14 sequences assigned  
3 (21.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



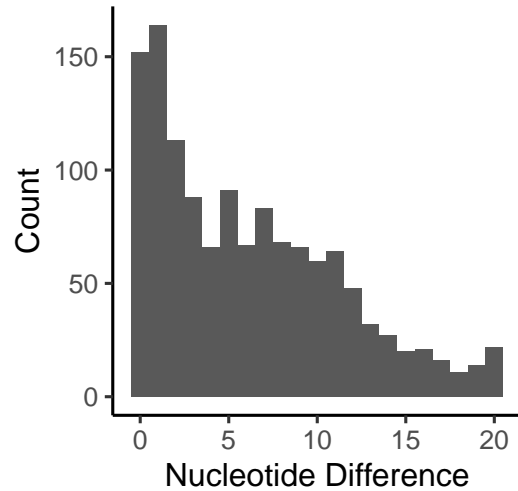
### IGHV3-15\*01\_02

4675 sequences assigned  
797 (17%) exact matches, in which:  
480 unique CDR3  
6 unique J



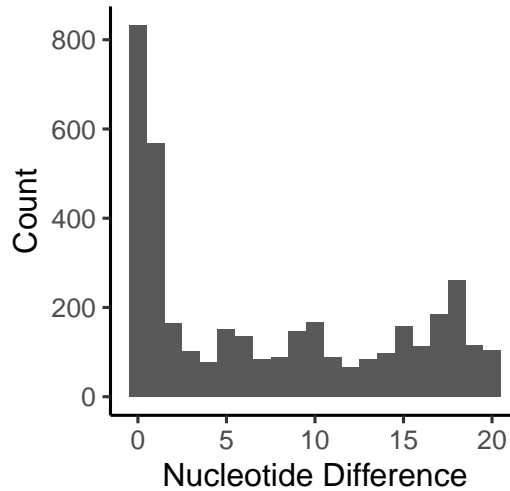
### IGHV3-7\*01

1355 sequences assigned  
152 (11.2%) exact matches, in which:  
146 unique CDR3  
5 unique J



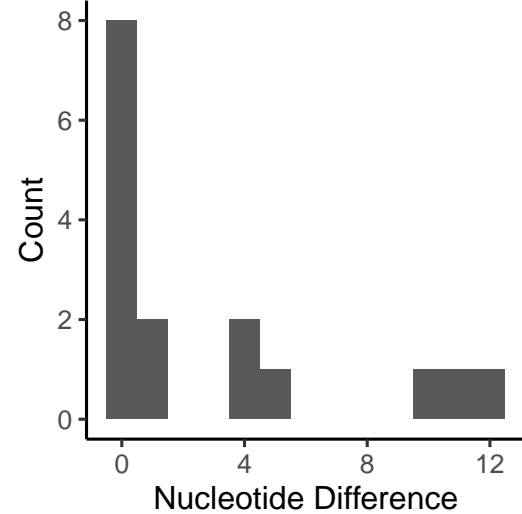
### IGHV3-11\*06

5637 sequences assigned  
833 (14.8%) exact matches, in which:  
522 unique CDR3  
6 unique J



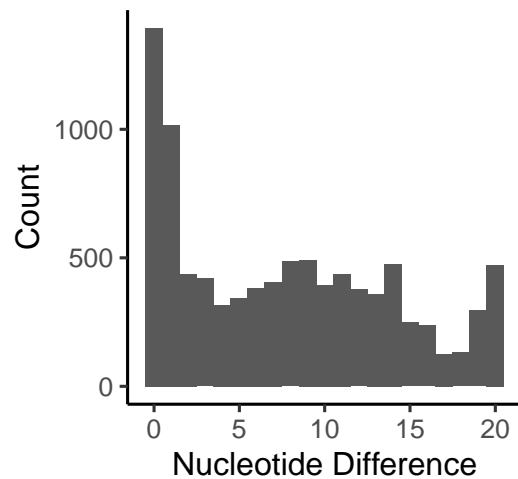
### IGHV3-19\*01

16 sequences assigned  
8 (50%) exact matches, in which:  
7 unique CDR3  
3 unique J



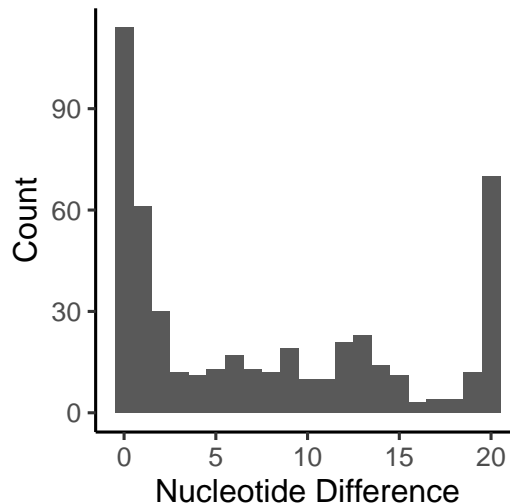
### IGHV3-7\*03

10743 sequences assigned  
1394 (13%) exact matches, in which:  
865 unique CDR3  
6 unique J



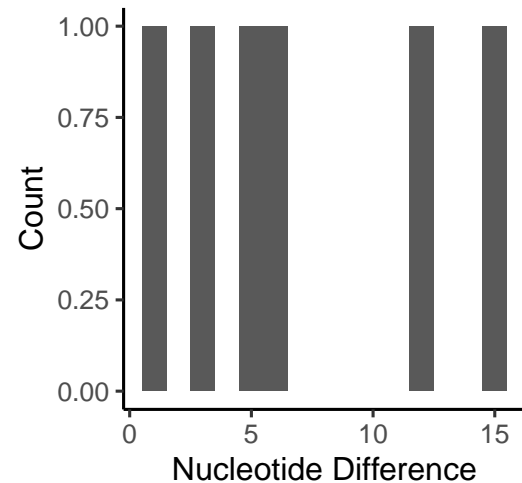
### IGHV3-13\*05

705 sequences assigned  
114 (16.2%) exact matches, in which:  
80 unique CDR3  
5 unique J



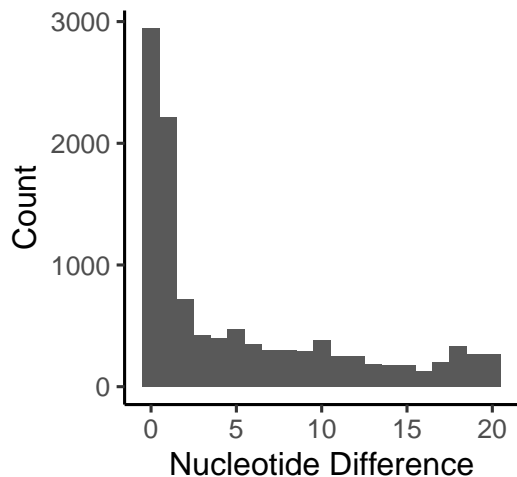
### IGHV3-20\*03\_04

12 sequences assigned  
No exact matches.



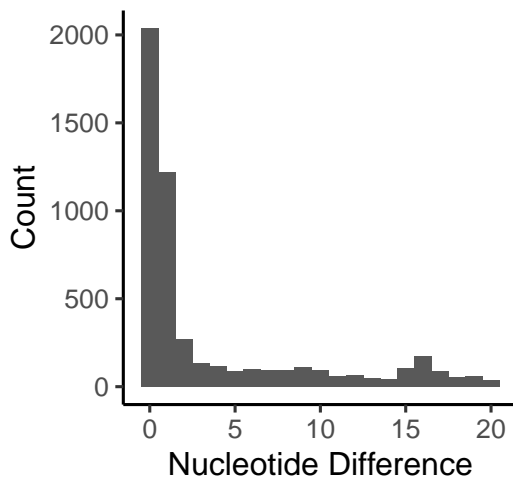
### IGHV3-21\*01\_02

13717 sequences assigned  
2944 (21.5%) exact matches, in which:  
1766 unique CDR3  
6 unique J



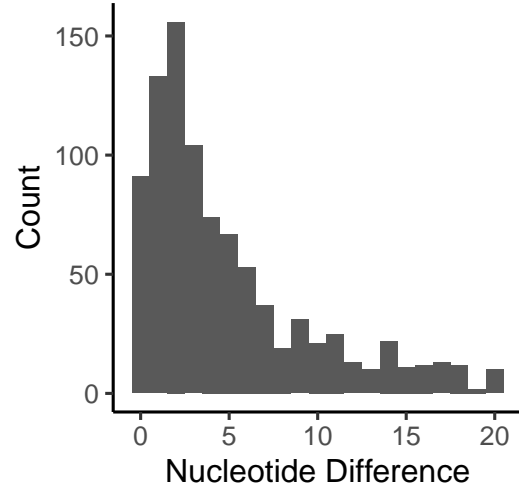
### IGHV3-30-3\*01

6024 sequences assigned  
2037 (33.8%) exact matches, in which:  
1259 unique CDR3  
6 unique J



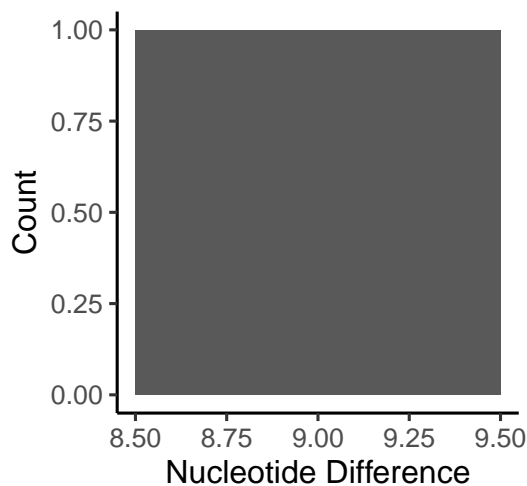
### IGHV3-30\*07

968 sequences assigned  
91 (9.4%) exact matches, in which:  
86 unique CDR3  
6 unique J



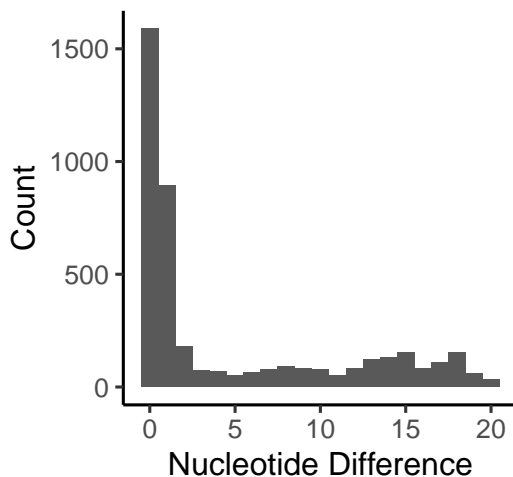
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



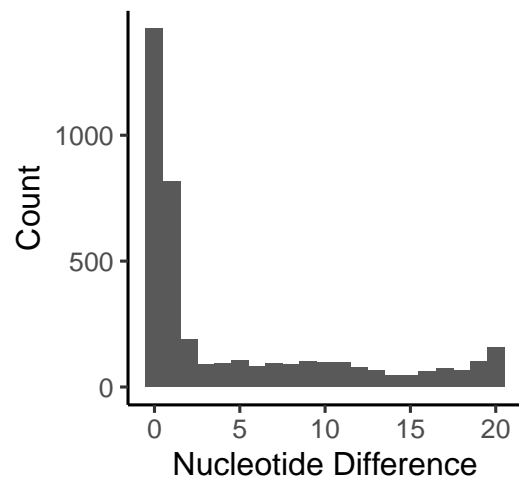
### IGHV3-30\*01

4964 sequences assigned  
1589 (32%) exact matches, in which:  
1035 unique CDR3  
6 unique J



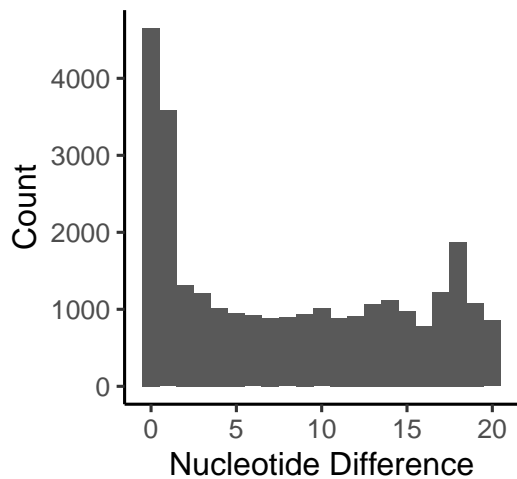
### IGHV3-30\*18

5262 sequences assigned  
1423 (27%) exact matches, in which:  
815 unique CDR3  
6 unique J



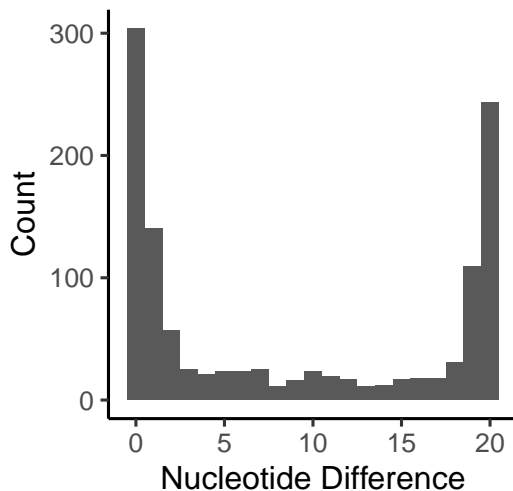
### IGHV3-23\*01\_04

39951 sequences assigned  
4653 (11.6%) exact matches, in which:  
2656 unique CDR3  
6 unique J



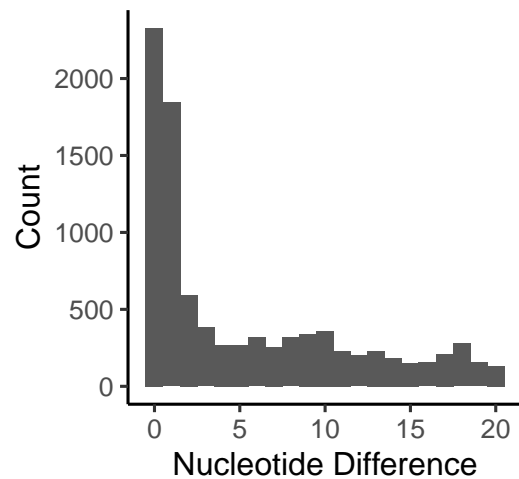
### IGHV3-30\*03

1550 sequences assigned  
304 (19.6%) exact matches, in which:  
292 unique CDR3  
6 unique J



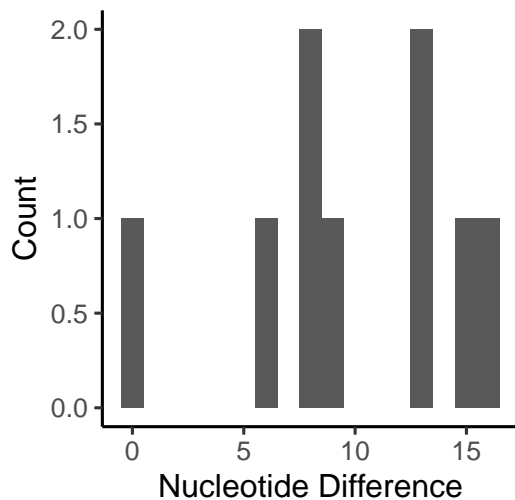
### IGHV3-33\*01

10841 sequences assigned  
2328 (21.5%) exact matches, in which:  
1466 unique CDR3  
6 unique J



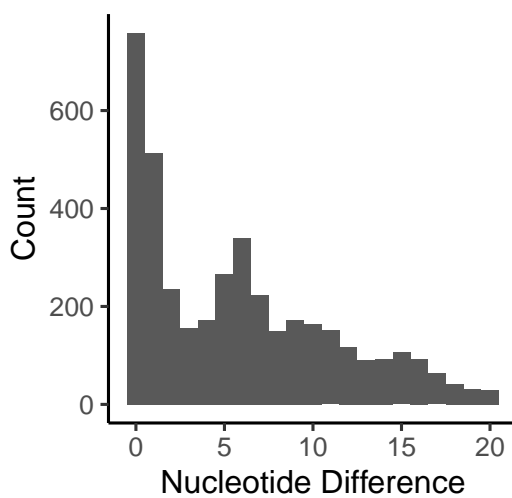
### IGHV3–35\*01

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



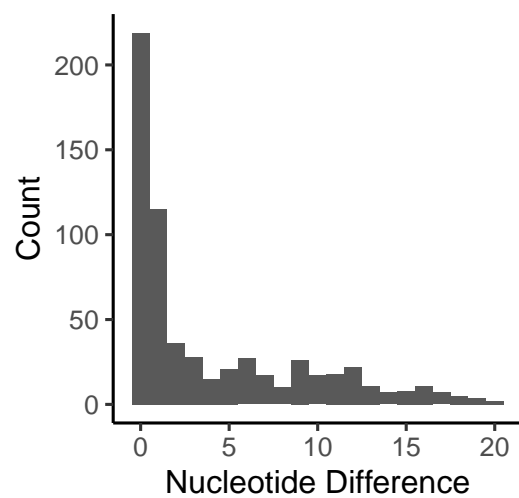
### IGHV3–48\*01

4885 sequences assigned  
759 (15.5%) exact matches, in which:  
463 unique CDR3  
6 unique J



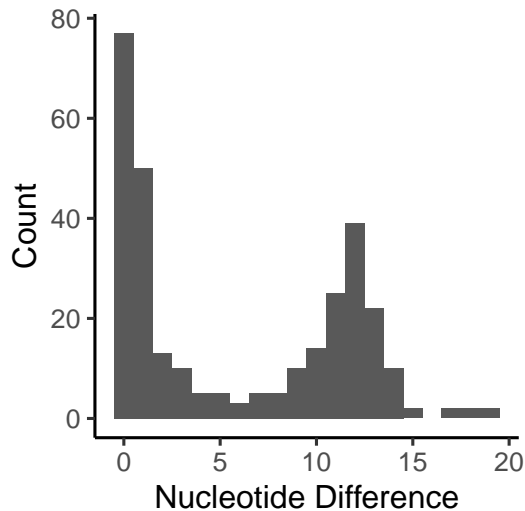
### IGHV3–49\*03\_05

689 sequences assigned  
219 (31.8%) exact matches, in which:  
127 unique CDR3  
6 unique J



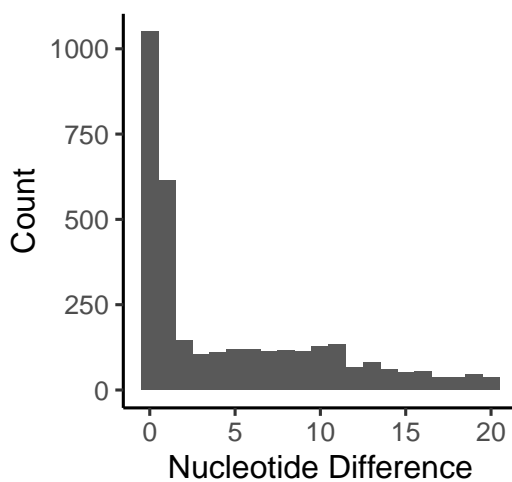
### IGHV3–43\*01

394 sequences assigned  
77 (19.5%) exact matches, in which:  
45 unique CDR3  
5 unique J



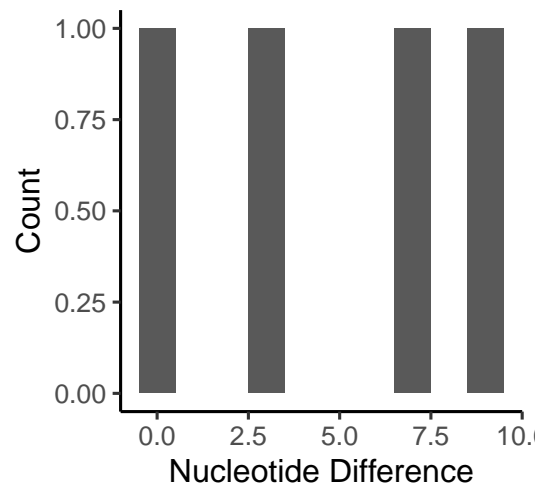
### IGHV3–48\*03

4836 sequences assigned  
1050 (21.7%) exact matches, in which:  
637 unique CDR3  
6 unique J



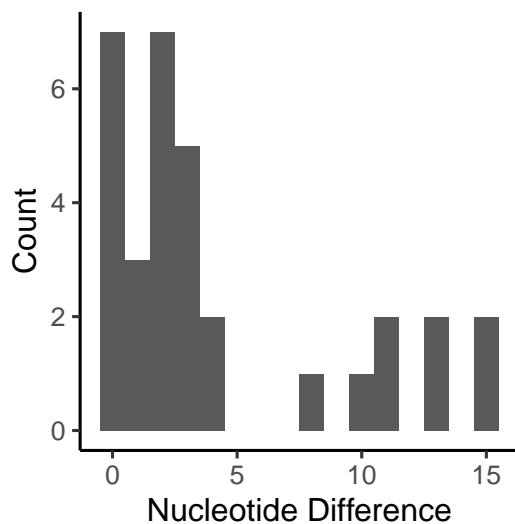
### IGHV3–52\*02

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



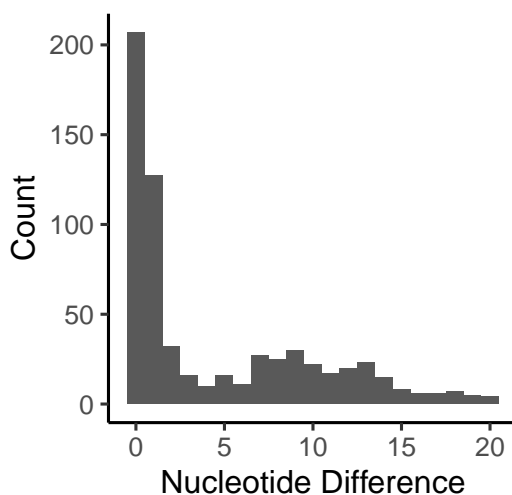
### IGHV3–47\*02

32 sequences assigned  
7 (21.9%) exact matches, in which:  
4 unique CDR3  
2 unique J



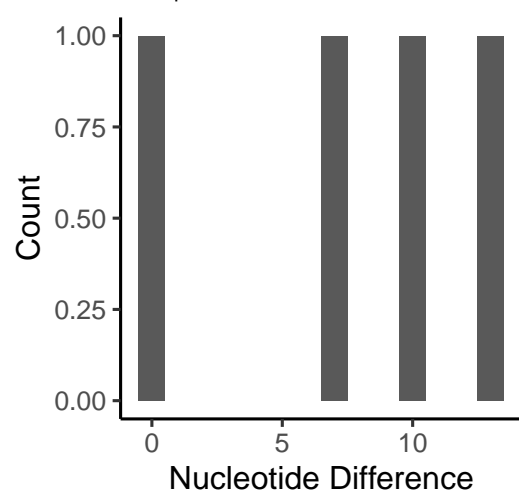
### IGHV3–49\*04

660 sequences assigned  
207 (31.4%) exact matches, in which:  
120 unique CDR3  
6 unique J



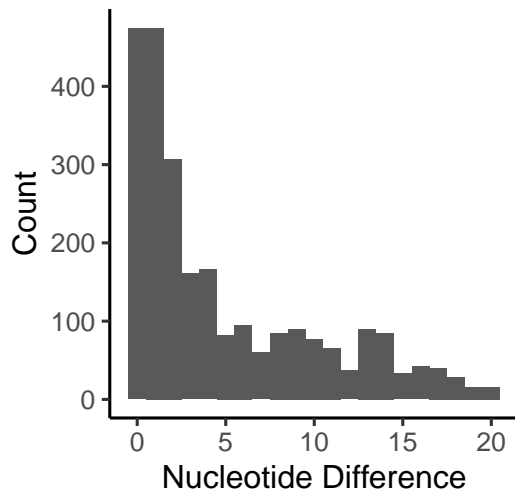
### IGHV3–52\*01\_03

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



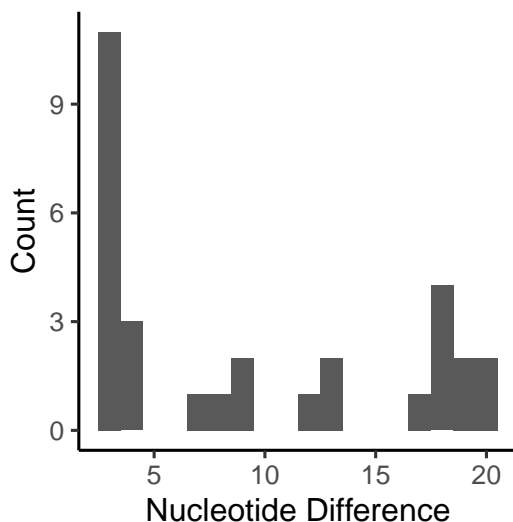
### IGHV3-53\*01\_02

2883 sequences assigned  
474 (16.4%) exact matches, in which:  
292 unique CDR3  
6 unique J



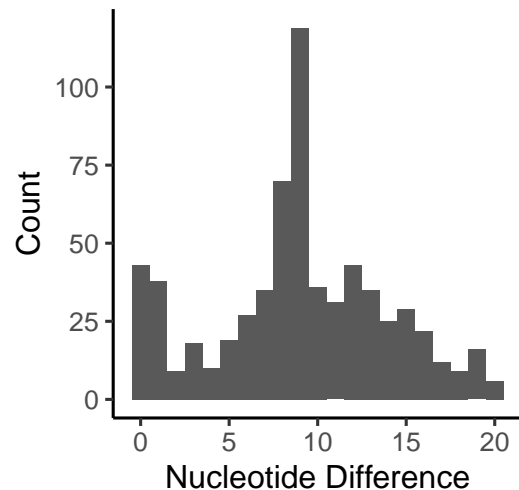
### IGHV3-69-1\*01

554 sequences assigned  
No exact matches.



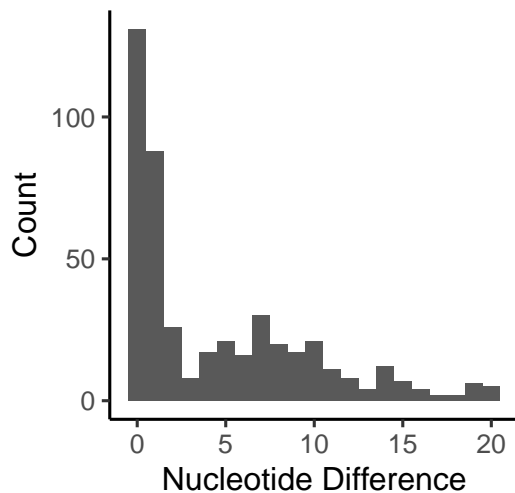
### IGHV3-72\*01

762 sequences assigned  
43 (5.6%) exact matches, in which:  
24 unique CDR3  
5 unique J



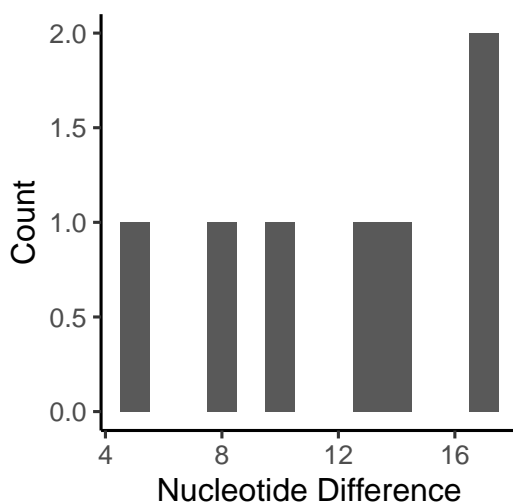
### IGHV3-64\*01

811 sequences assigned  
131 (16.2%) exact matches, in which:  
83 unique CDR3  
5 unique J



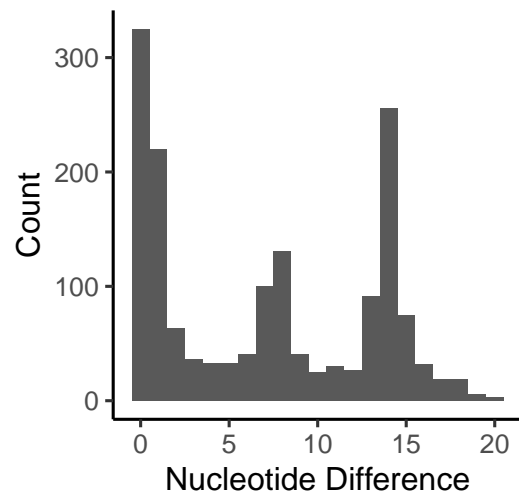
### IGHV3-69-1\*02

20 sequences assigned  
No exact matches.



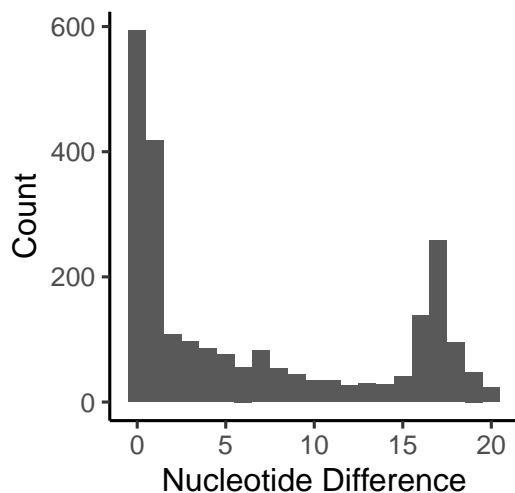
### IGHV3-73\*01\_02

2325 sequences assigned  
325 (14%) exact matches, in which:  
195 unique CDR3  
6 unique J



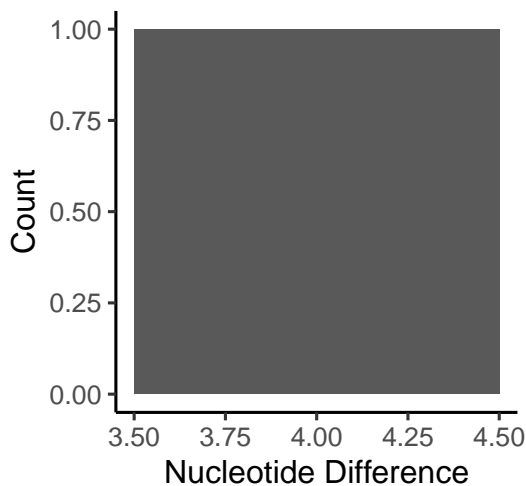
### IGHV3-66\*01

2650 sequences assigned  
594 (22.4%) exact matches, in which:  
384 unique CDR3  
6 unique J



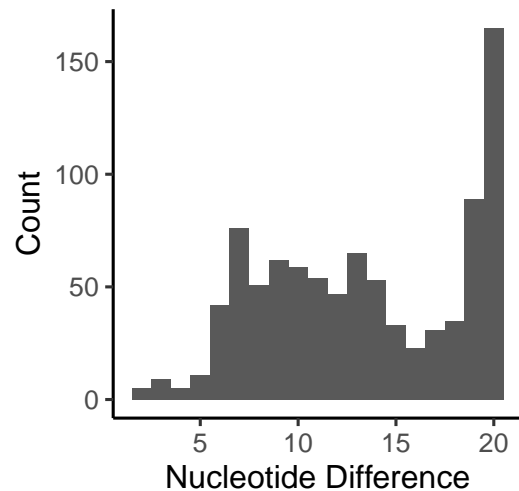
### IGHV3-71\*01\_04

2 sequences assigned  
No exact matches.



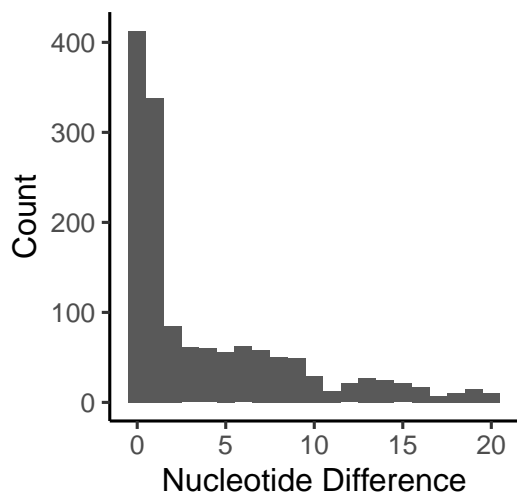
### IGHV3-74\*03

1943 sequences assigned  
No exact matches.



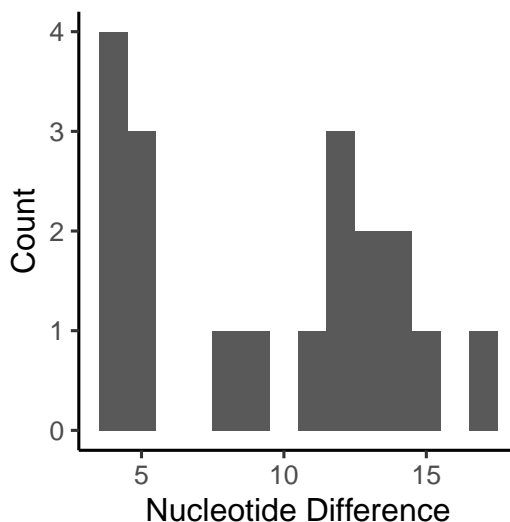
### IGHV3-74\*01\_02

1474 sequences assigned  
413 (28%) exact matches, in which:  
225 unique CDR3  
6 unique J



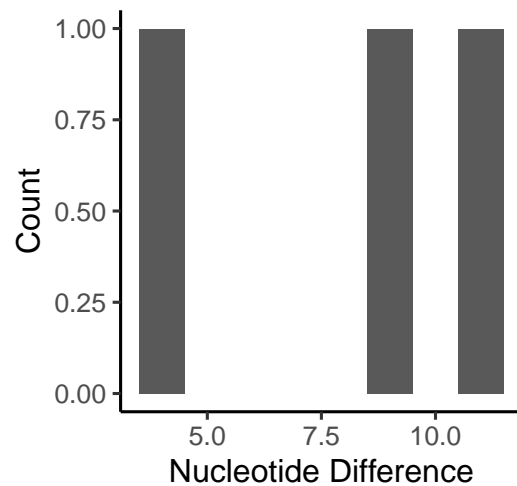
### IGHV3-NL1\*01

29 sequences assigned  
No exact matches.



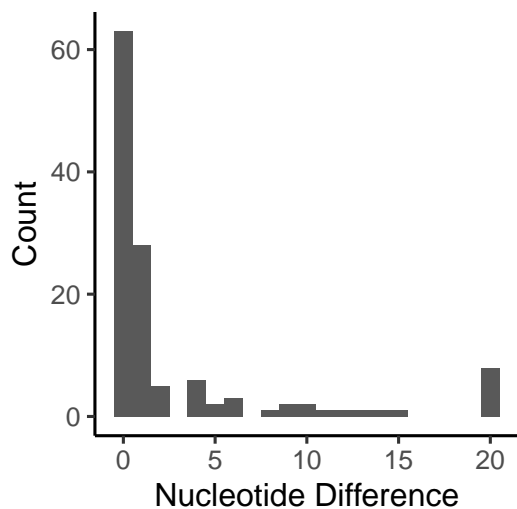
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



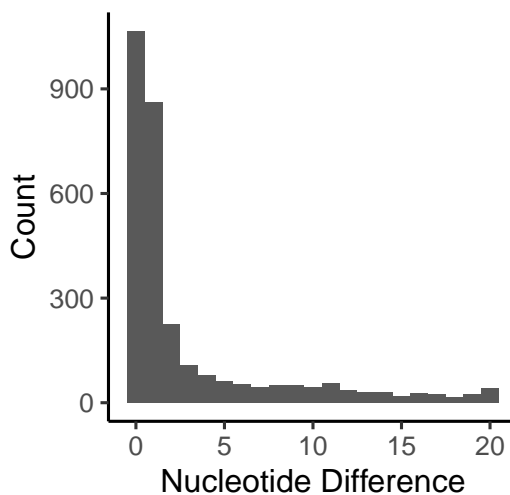
### IGHV3-43D\*04

143 sequences assigned  
63 (44.1%) exact matches, in which:  
35 unique CDR3  
3 unique J



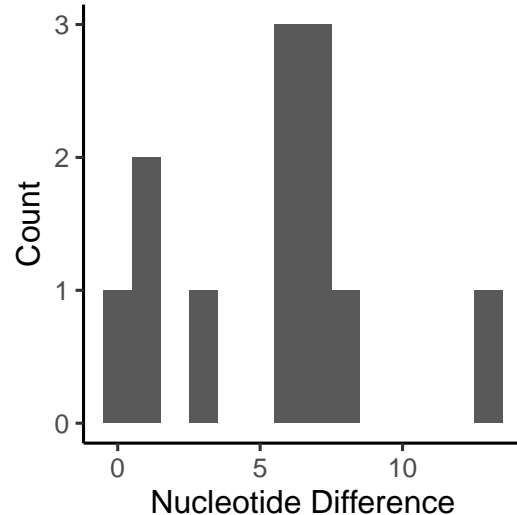
### IGHV4-4\*02\_03

4528 sequences assigned  
1066 (23.5%) exact matches, in which:  
870 unique CDR3  
6 unique J



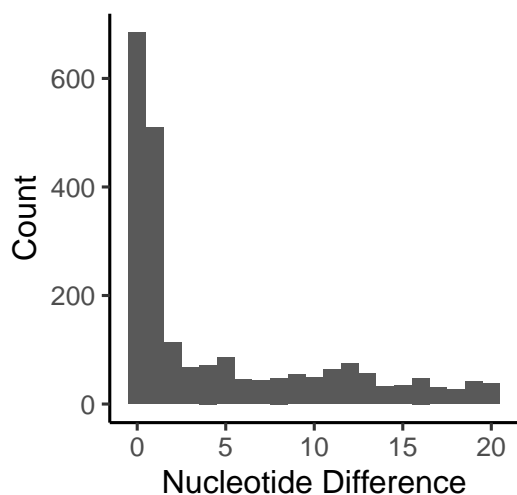
### IGHV4-28\*02\_05

12 sequences assigned  
1 (8.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



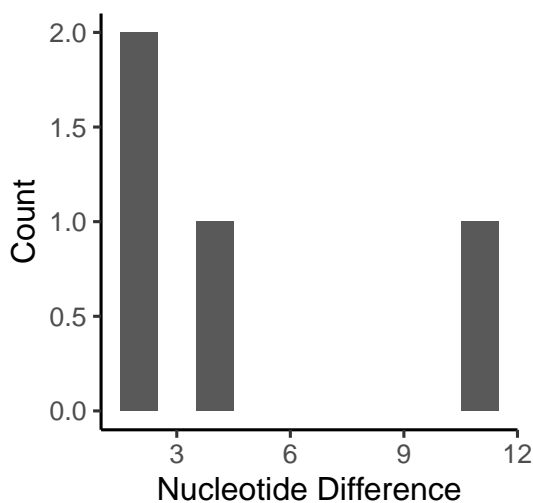
### IGHV3-64D\*06

3034 sequences assigned  
685 (22.6%) exact matches, in which:  
381 unique CDR3  
6 unique J



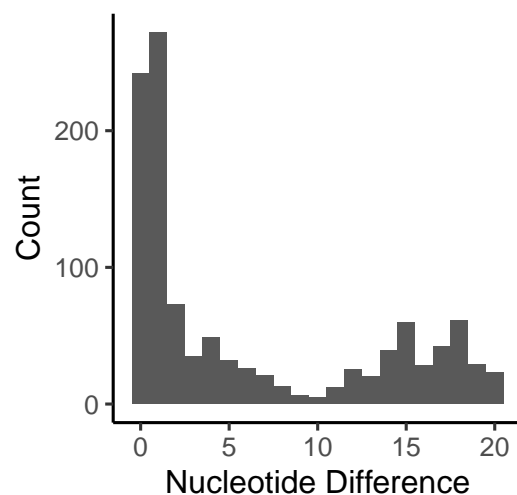
### IGHV4-28\*03

4 sequences assigned  
No exact matches.



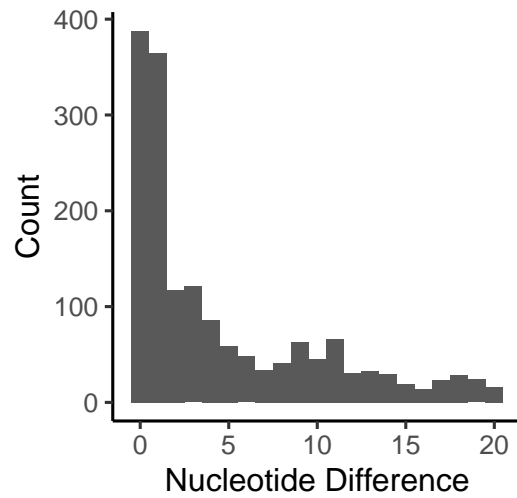
### IGHV4-30-2\*01

1681 sequences assigned  
242 (14.4%) exact matches, in which:  
174 unique CDR3  
6 unique J



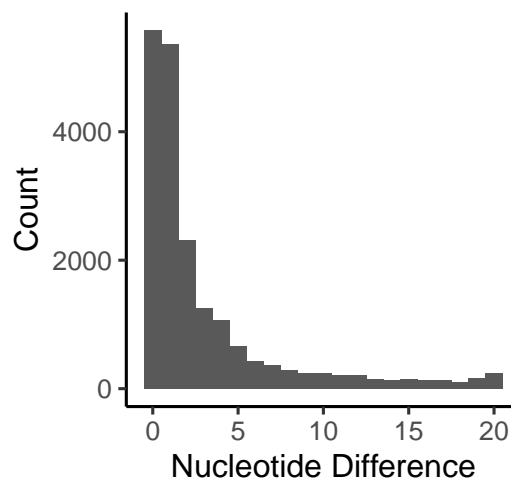
### IGHV4-30-4\*01

1995 sequences assigned  
388 (19.4%) exact matches, in which:  
319 unique CDR3  
6 unique J



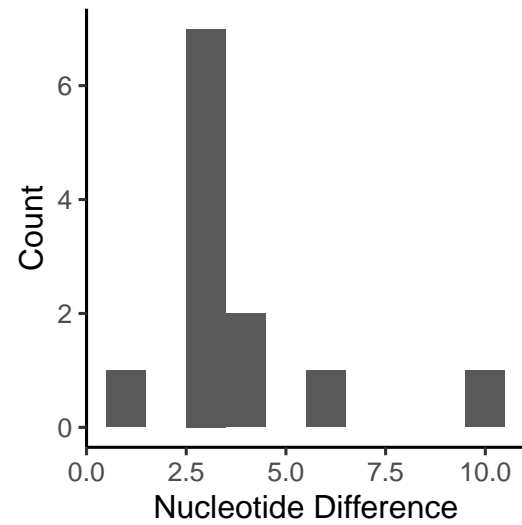
### IGHV4-34\*01\_02

22005 sequences assigned  
5577 (25.3%) exact matches, in which:  
4449 unique CDR3  
6 unique J



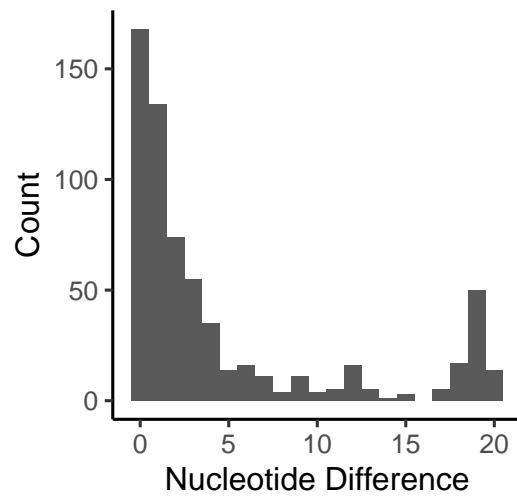
### IGHV4-55\*09

12 sequences assigned  
No exact matches.



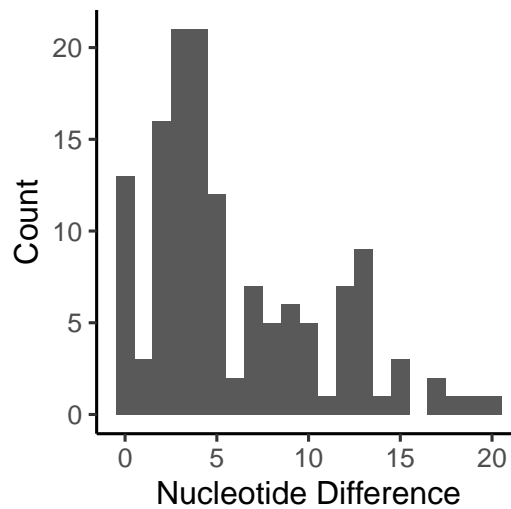
### IGHV4-31\*01

667 sequences assigned  
168 (25.2%) exact matches, in which:  
142 unique CDR3  
5 unique J



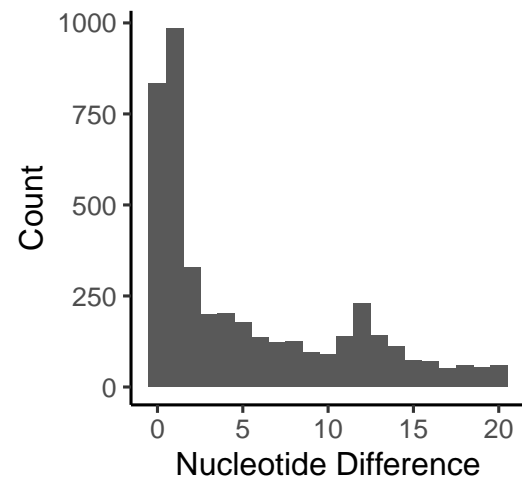
### IGHV4-38-2\*02

213 sequences assigned  
13 (6.1%) exact matches, in which:  
13 unique CDR3  
4 unique J



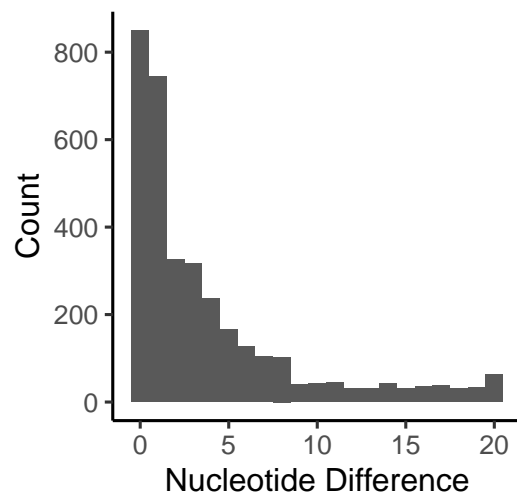
### IGHV4-59\*08

7314 sequences assigned  
834 (11.4%) exact matches, in which:  
691 unique CDR3  
6 unique J



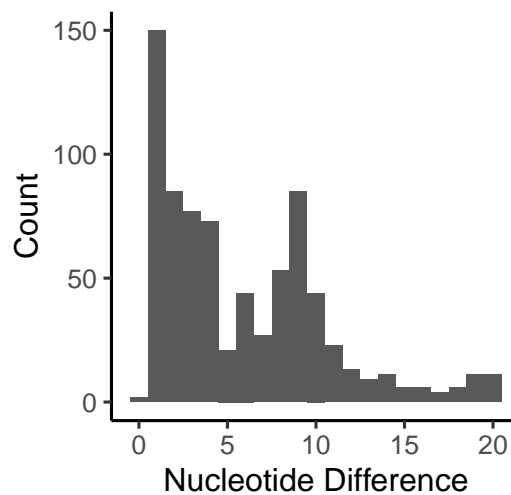
### IGHV4-31\*02

4063 sequences assigned  
850 (20.9%) exact matches, in which:  
732 unique CDR3  
6 unique J



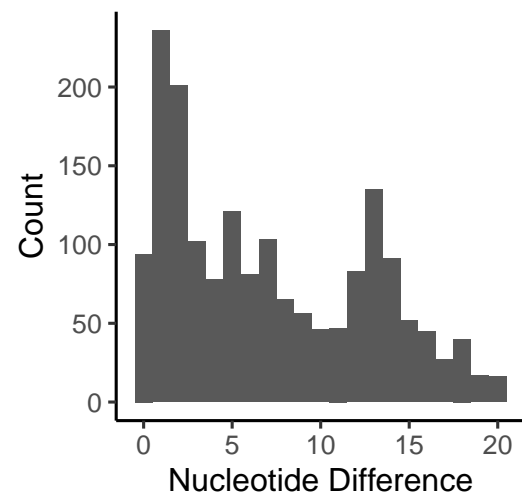
### IGHV4-39\*07

1390 sequences assigned  
2 (0.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



### IGHV4-59\*12

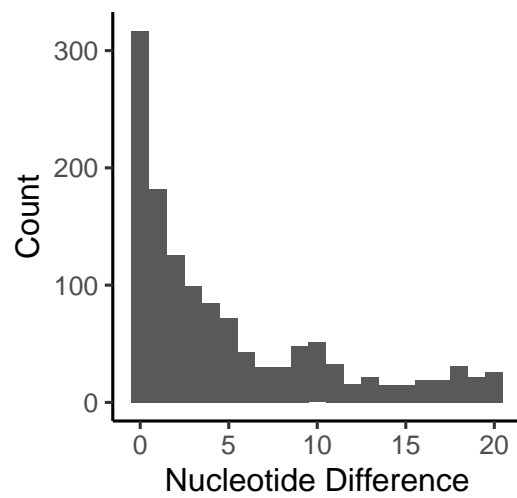
2167 sequences assigned  
94 (4.3%) exact matches, in which:  
94 unique CDR3  
5 unique J





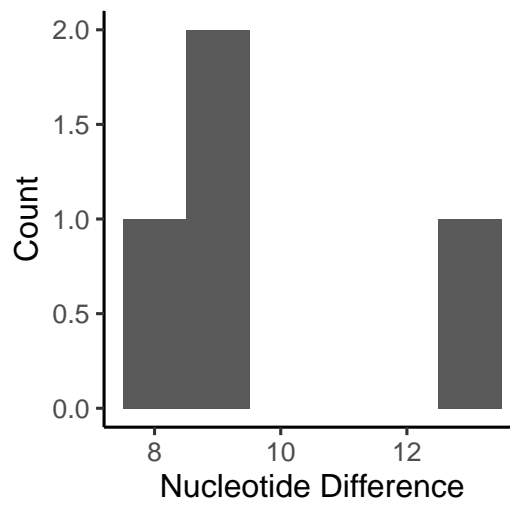
### IGHV4-61\*01

1824 sequences assigned  
317 (17.4%) exact matches, in which:  
271 unique CDR3  
6 unique J



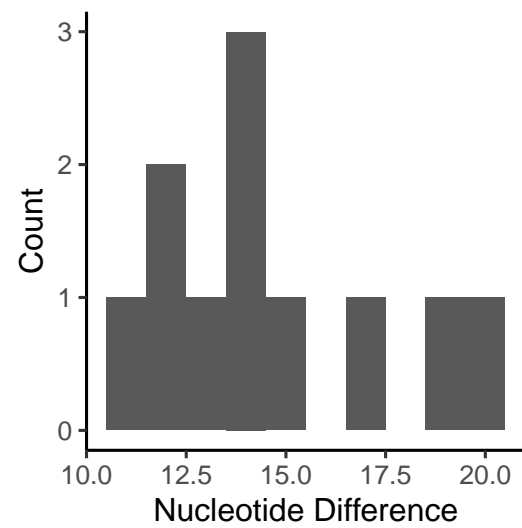
### IGHV1/OR15-3\*02

5 sequences assigned  
No exact matches.



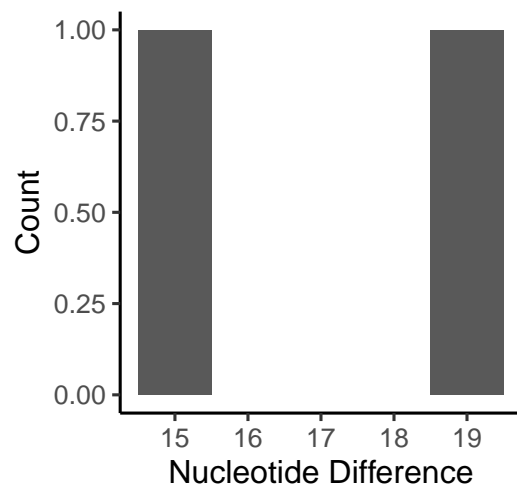
### IGHV4/OR15-8\*02

50 sequences assigned  
No exact matches.



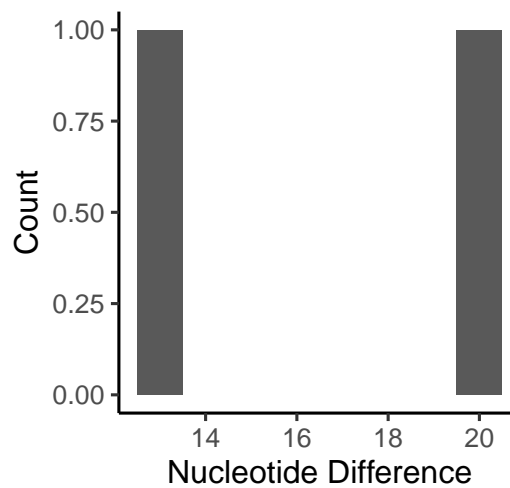
### IGHV1/OR15-1\*04

2 sequences assigned  
No exact matches.



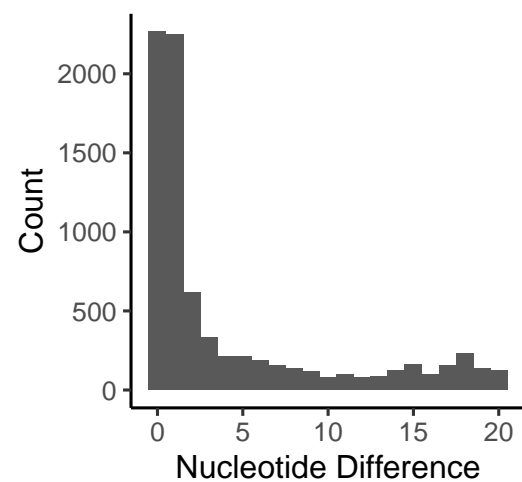
### IGHV1/OR15-4\*01

2 sequences assigned  
No exact matches.



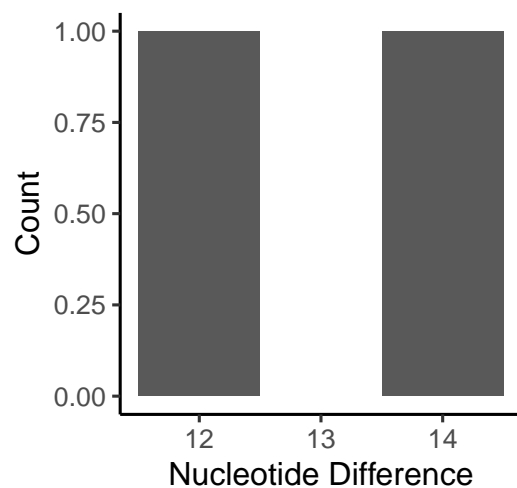
### IGHV5-10-1\*01\_03

9407 sequences assigned  
2266 (24.1%) exact matches, in which:  
1582 unique CDR3  
6 unique J



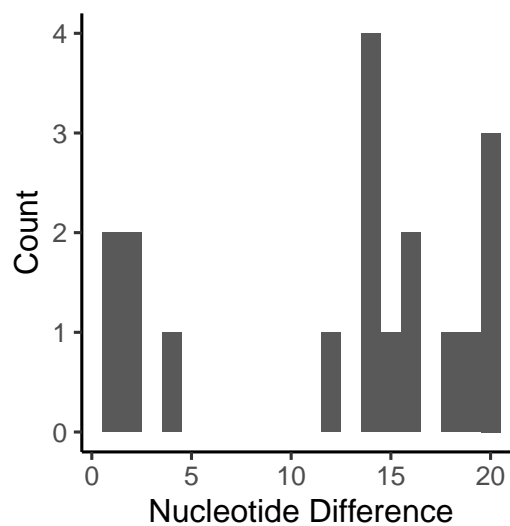
### IGHV1/OR15-2\*02\_03

6 sequences assigned  
No exact matches.



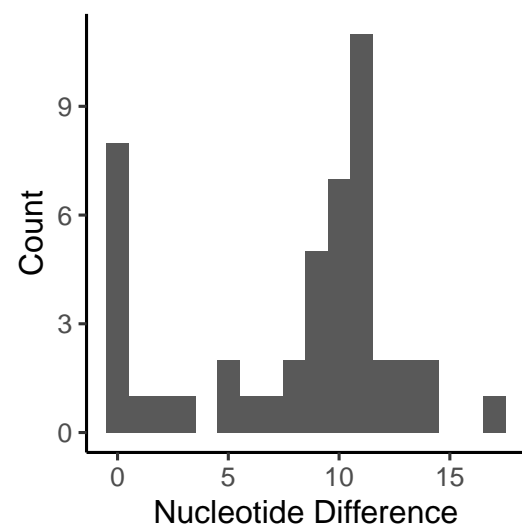
### IGHV4/OR15-8\*01

50 sequences assigned  
No exact matches.



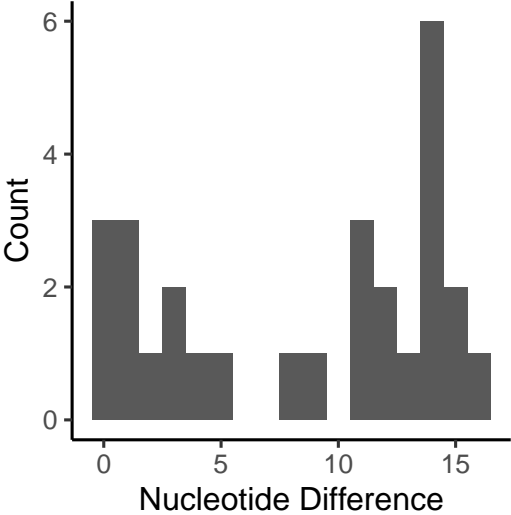
### IGHV5-51\*04

74 sequences assigned  
8 (10.8%) exact matches, in which:  
8 unique CDR3  
3 unique J



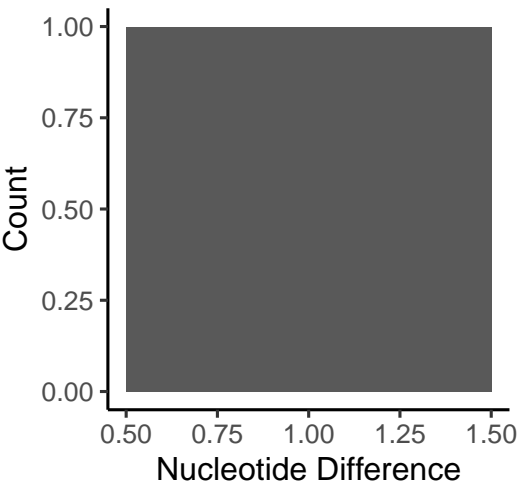
IGHV5-51\*06

35 sequences assigned  
3 (8.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



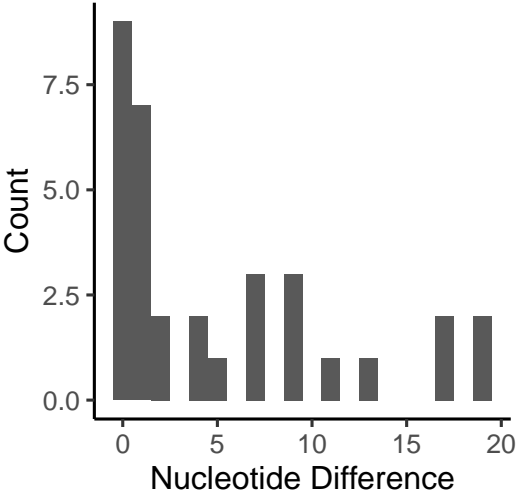
IGHV3/OR16-9\*01

1 sequences assigned  
No exact matches.



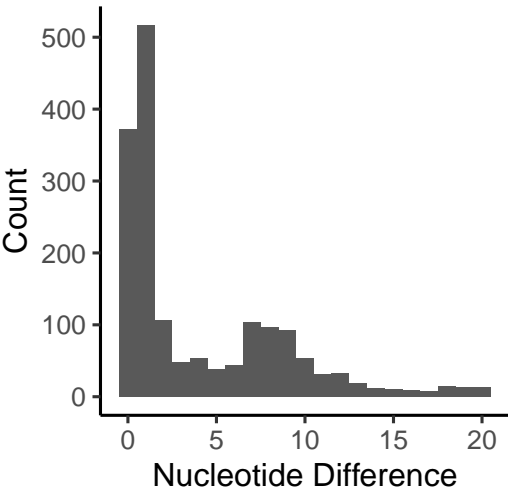
IGHV5-51\*07

41 sequences assigned  
9 (22%) exact matches, in which:  
9 unique CDR3  
4 unique J



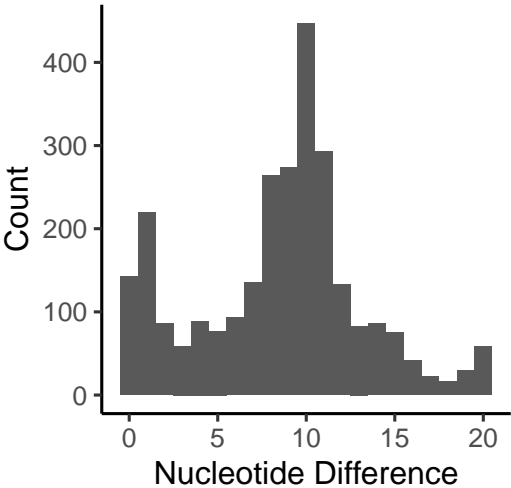
IGHV7-4-1\*02

1835 sequences assigned  
372 (20.3%) exact matches, in which:  
313 unique CDR3  
5 unique J



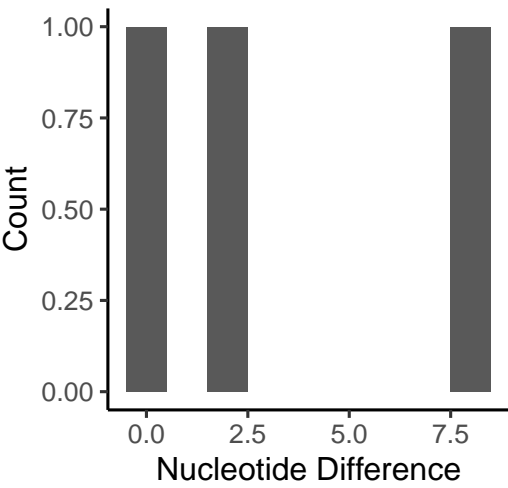
IGHV6-1\*01\_02

3000 sequences assigned  
142 (4.7%) exact matches, in which:  
121 unique CDR3  
5 unique J



IGHV7-81\*01

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J





Warning – no inferred sequences found.