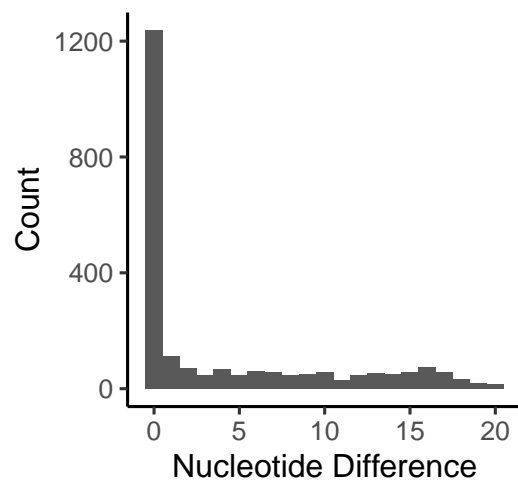


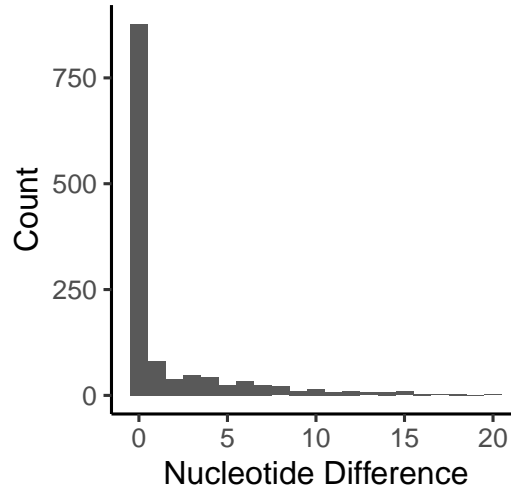
### IGHV1-2\*02

2344 sequences assigned  
1237 (52.8%) exact matches, in which:  
1228 unique CDR3  
6 unique J



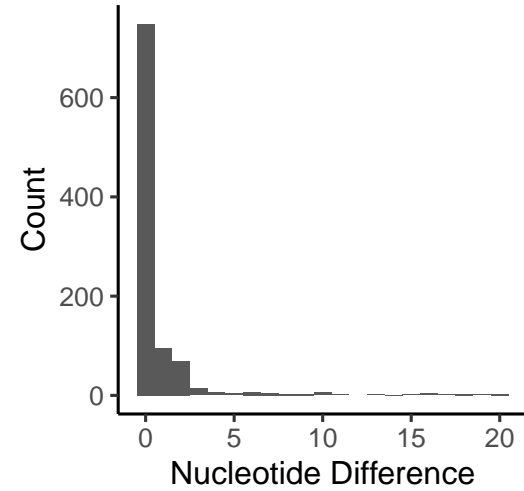
### IGHV1-8\*01

1286 sequences assigned  
878 (68.3%) exact matches, in which:  
871 unique CDR3  
6 unique J



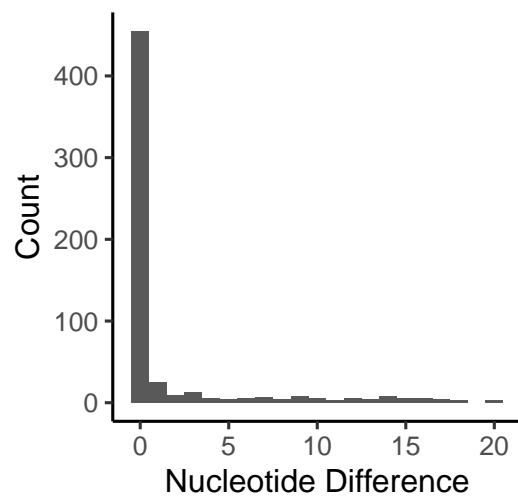
### IGHV1-24\*01

991 sequences assigned  
749 (75.6%) exact matches, in which:  
741 unique CDR3  
6 unique J



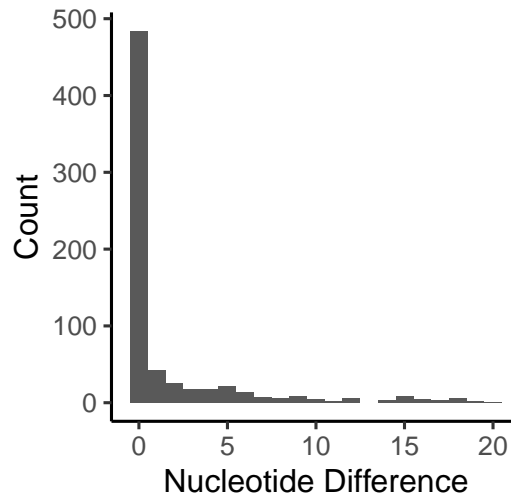
### IGHV1-2\*04

594 sequences assigned  
455 (76.6%) exact matches, in which:  
450 unique CDR3  
6 unique J



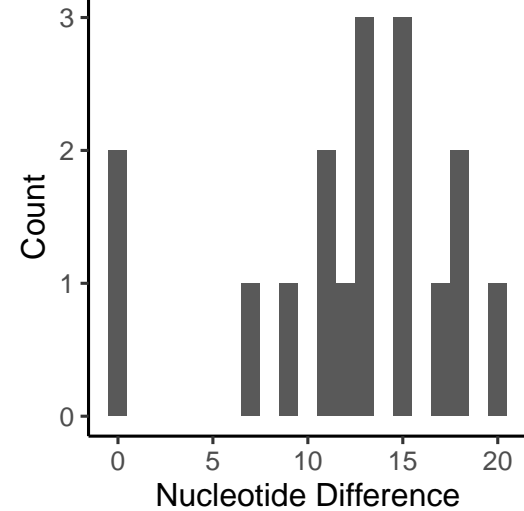
### IGHV1-8\*03

692 sequences assigned  
484 (69.9%) exact matches, in which:  
483 unique CDR3  
6 unique J



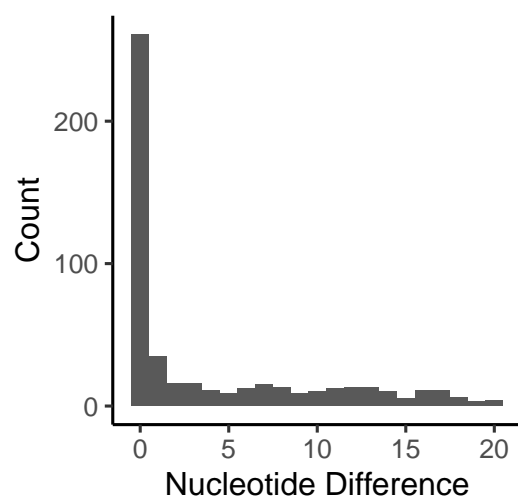
### IGHV1-45\*02

30 sequences assigned  
2 (6.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



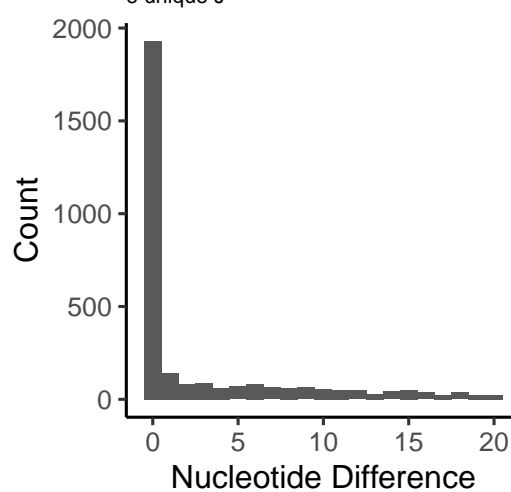
### IGHV1-3\*01\_05

514 sequences assigned  
261 (50.8%) exact matches, in which:  
255 unique CDR3  
6 unique J



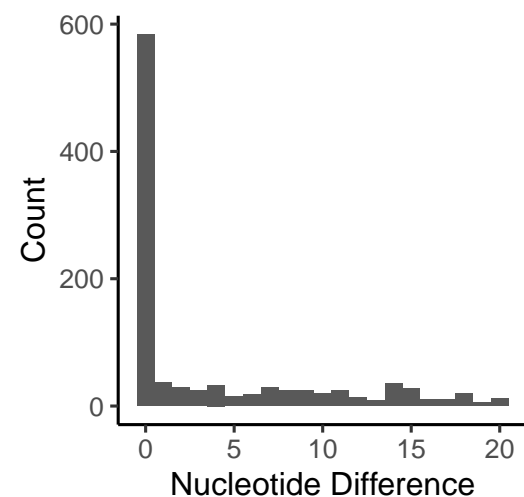
### IGHV1-18\*04

3181 sequences assigned  
1930 (60.7%) exact matches, in which:  
1918 unique CDR3  
6 unique J



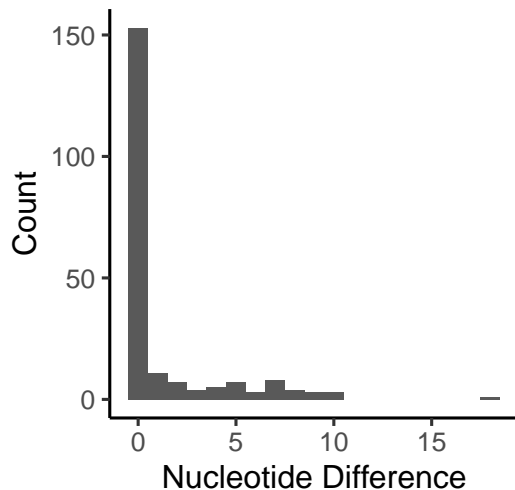
### IGHV1-46\*01

1085 sequences assigned  
584 (53.8%) exact matches, in which:  
578 unique CDR3  
6 unique J



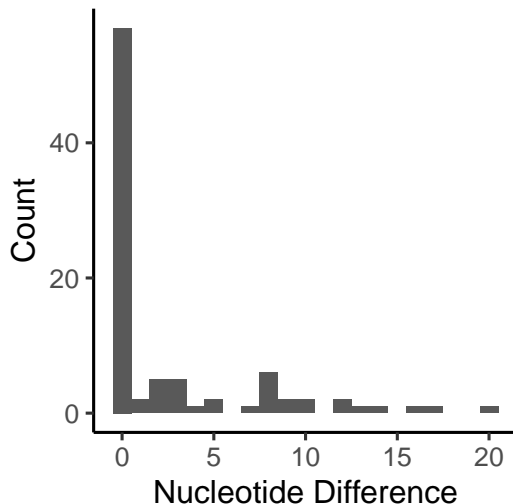
### IGHV1–58\*01\_03

210 sequences assigned  
153 (72.9%) exact matches, in which:  
153 unique CDR3  
6 unique J



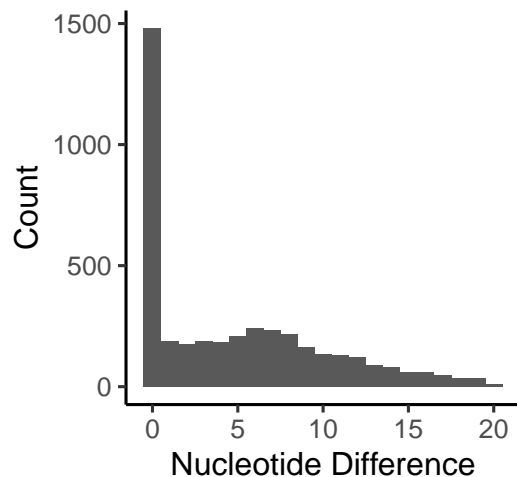
### IGHV2–26\*01

93 sequences assigned  
57 (61.3%) exact matches, in which:  
57 unique CDR3  
6 unique J



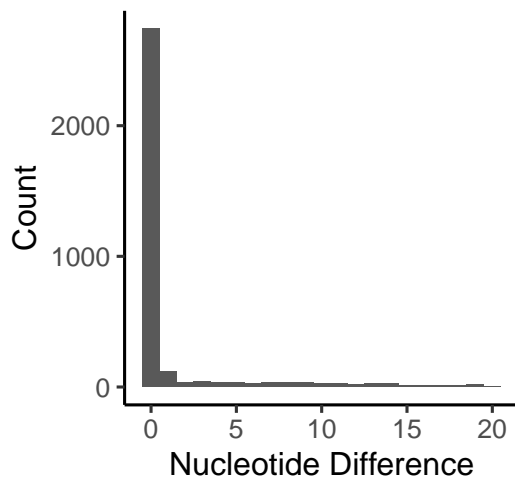
### IGHV3–7\*01

4143 sequences assigned  
1480 (35.7%) exact matches, in which:  
1419 unique CDR3  
6 unique J



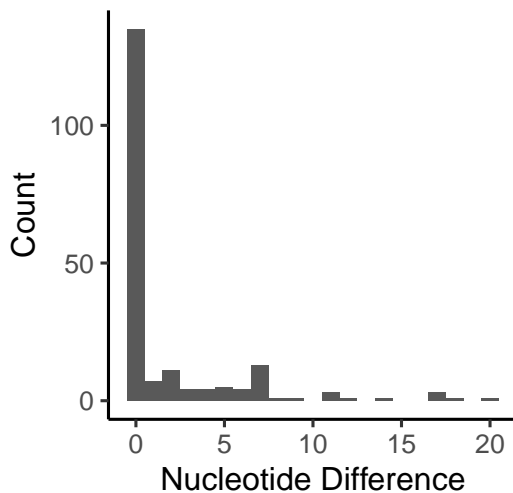
### IGHV1–69\*01\_12\_13

3428 sequences assigned  
2742 (80%) exact matches, in which:  
2730 unique CDR3  
6 unique J



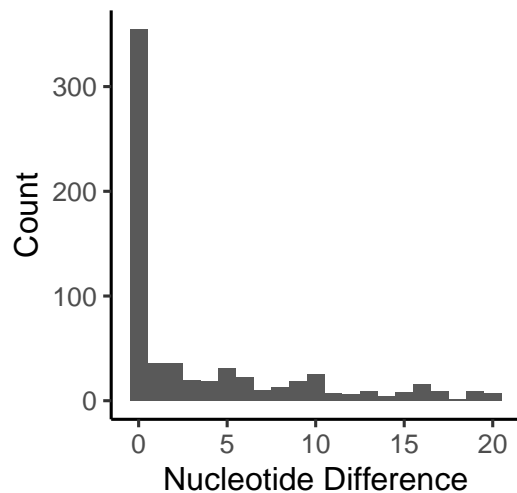
### IGHV2–70\*01

195 sequences assigned  
135 (69.2%) exact matches, in which:  
125 unique CDR3  
5 unique J



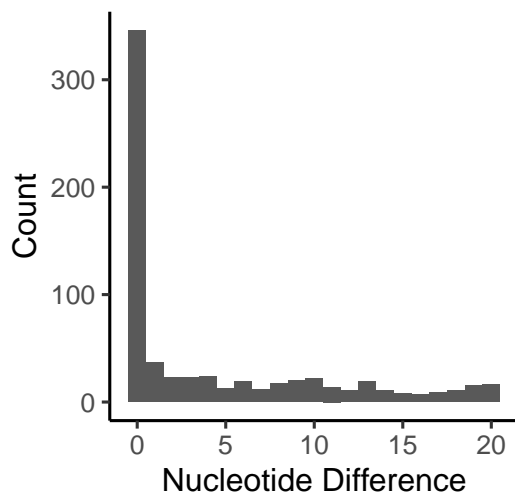
### IGHV3–9\*01

678 sequences assigned  
355 (52.4%) exact matches, in which:  
337 unique CDR3  
6 unique J



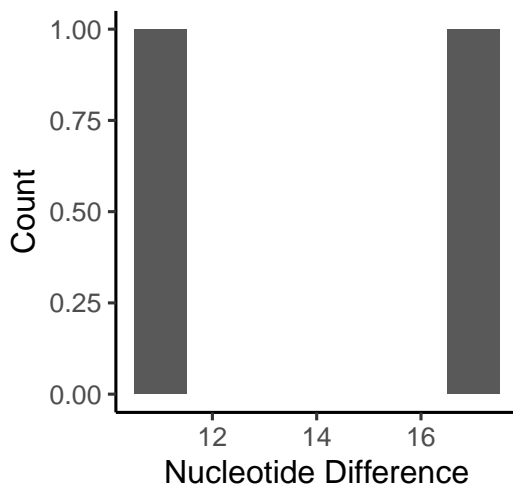
### IGHV2–5\*01

724 sequences assigned  
346 (47.8%) exact matches, in which:  
341 unique CDR3  
6 unique J



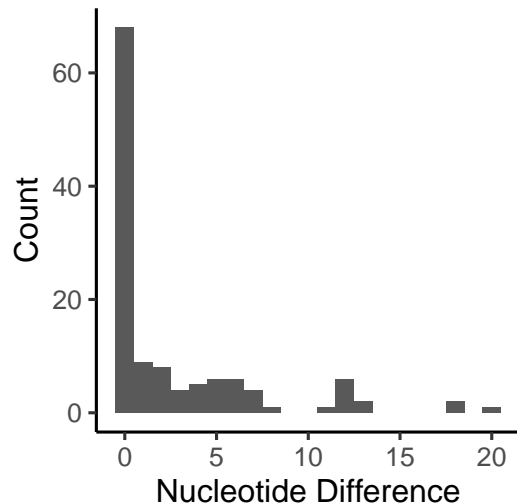
### IGHV2–70D\*04

2 sequences assigned  
No exact matches.



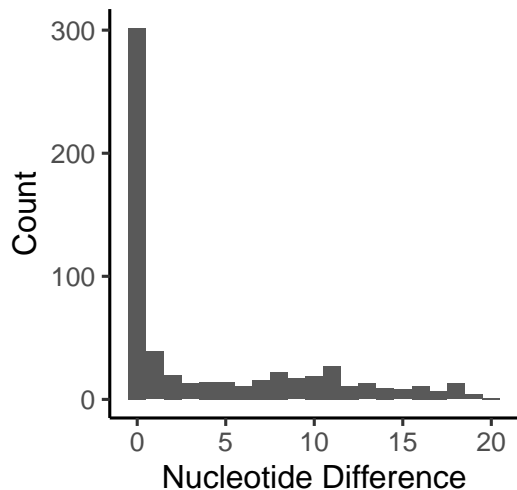
### IGHV3–9\*03

124 sequences assigned  
68 (54.8%) exact matches, in which:  
67 unique CDR3  
5 unique J



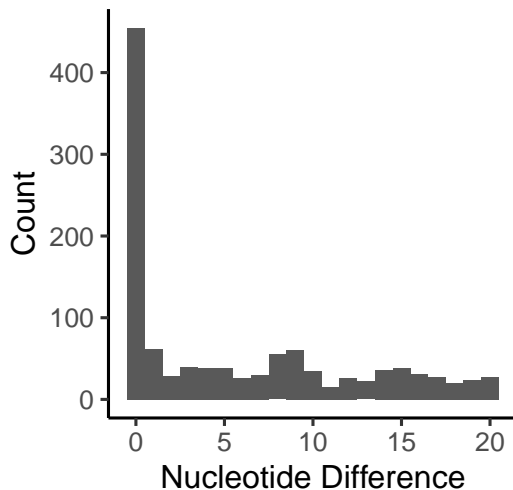
### IGHV3-11\*01

615 sequences assigned  
302 (49.1%) exact matches, in which:  
273 unique CDR3  
6 unique J



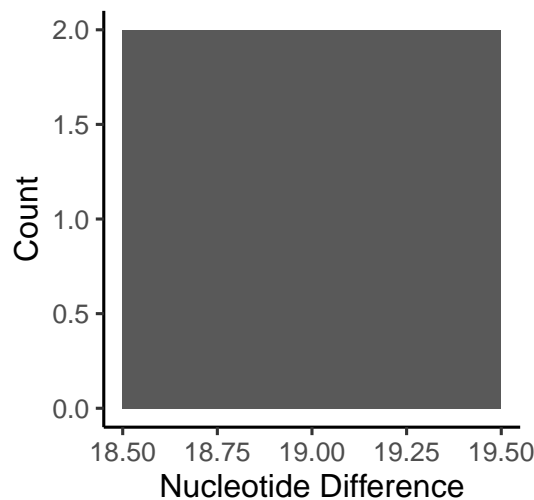
### IGHV3-15\*01\_02

1235 sequences assigned  
455 (36.8%) exact matches, in which:  
419 unique CDR3  
6 unique J



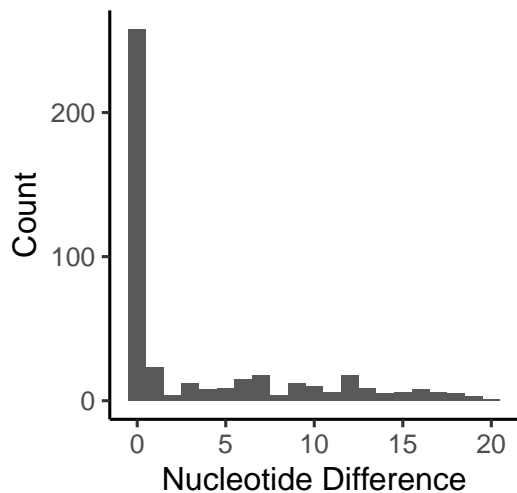
### IGHV3-22\*01\_02

2 sequences assigned  
No exact matches.



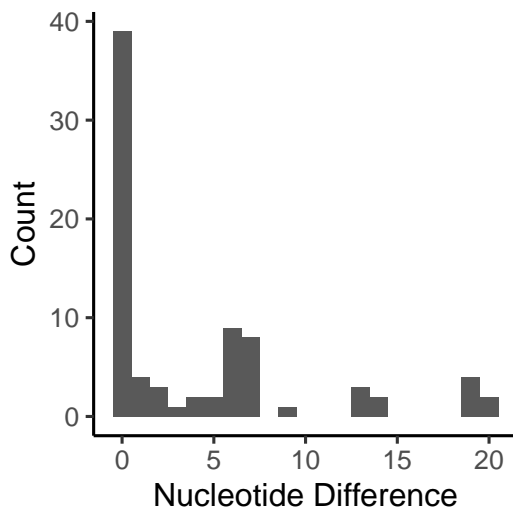
### IGHV3-11\*04

467 sequences assigned  
258 (55.2%) exact matches, in which:  
236 unique CDR3  
6 unique J



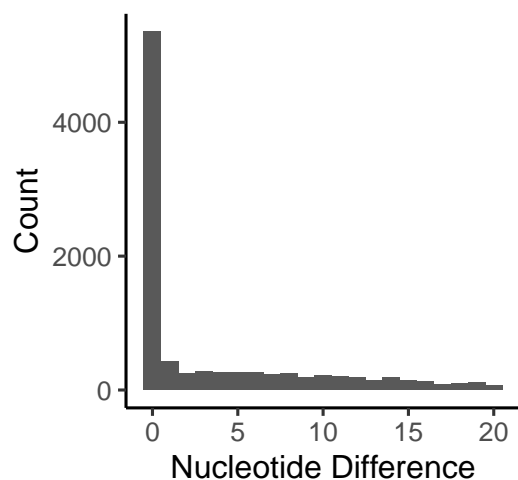
### IGHV3-20\*01\_02

80 sequences assigned  
39 (48.8%) exact matches, in which:  
36 unique CDR3  
5 unique J



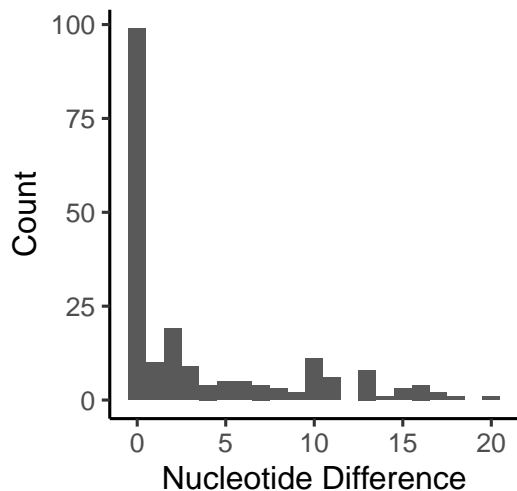
### IGHV3-23\*01\_04

9675 sequences assigned  
5353 (55.3%) exact matches, in which:  
5178 unique CDR3  
6 unique J



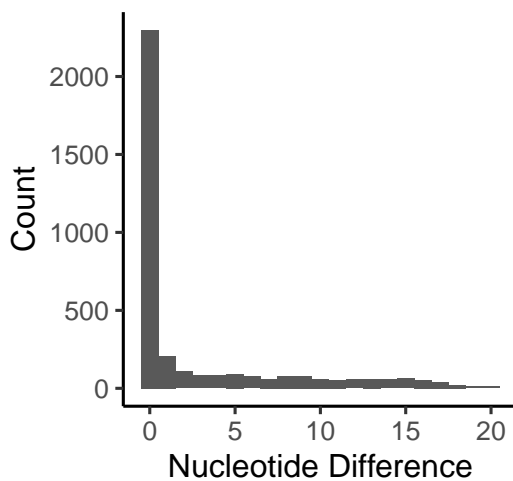
### IGHV3-13\*01

200 sequences assigned  
99 (49.5%) exact matches, in which:  
95 unique CDR3  
5 unique J



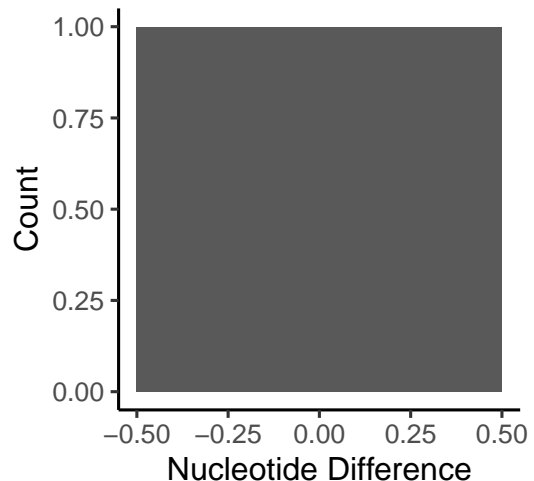
### IGHV3-21\*01\_02

3905 sequences assigned  
2298 (58.8%) exact matches, in which:  
2208 unique CDR3  
6 unique J



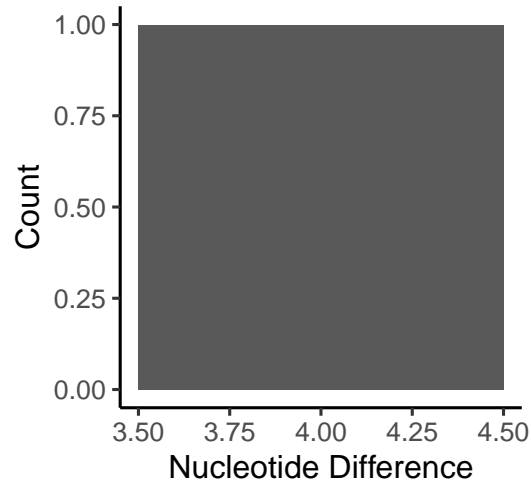
### IGHV3-30-3\*01

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



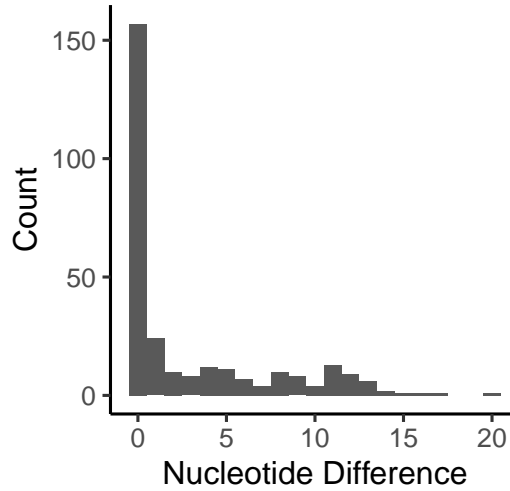
### IGHV3-30-3\*03

2 sequences assigned  
No exact matches.



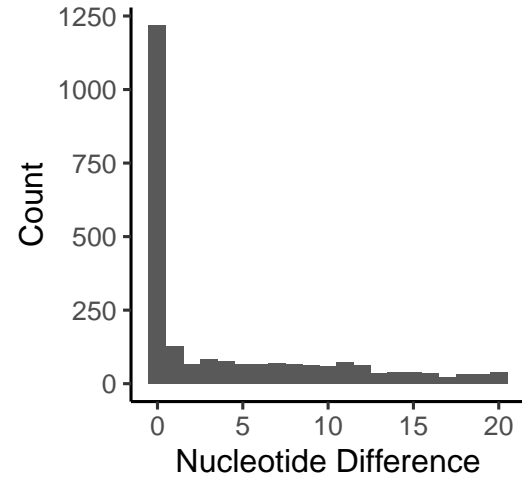
### IGHV3-43\*01

291 sequences assigned  
157 (54%) exact matches, in which:  
143 unique CDR3  
6 unique J



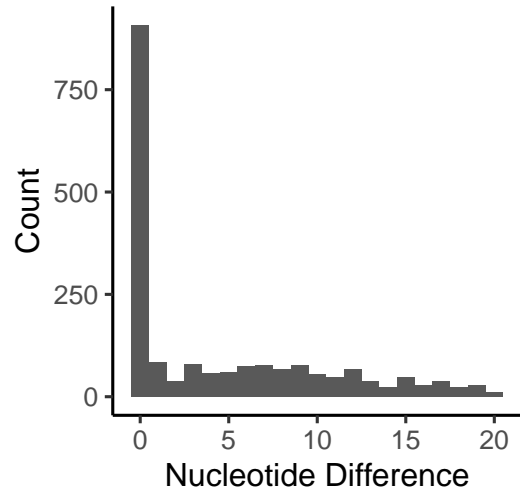
### IGHV3-53\*01\_02

2504 sequences assigned  
1218 (48.6%) exact matches, in which:  
1169 unique CDR3  
6 unique J



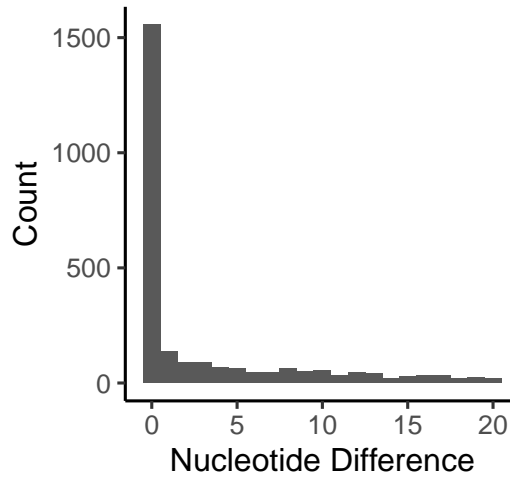
### IGHV3-33\*01

2032 sequences assigned  
908 (44.7%) exact matches, in which:  
873 unique CDR3  
6 unique J



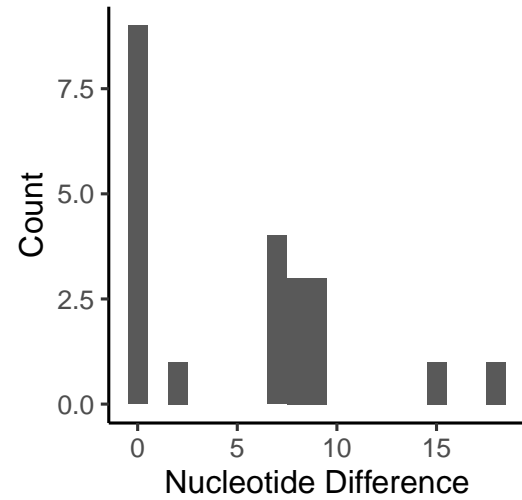
### IGHV3-48\*02

2609 sequences assigned  
1556 (59.6%) exact matches, in which:  
1459 unique CDR3  
6 unique J



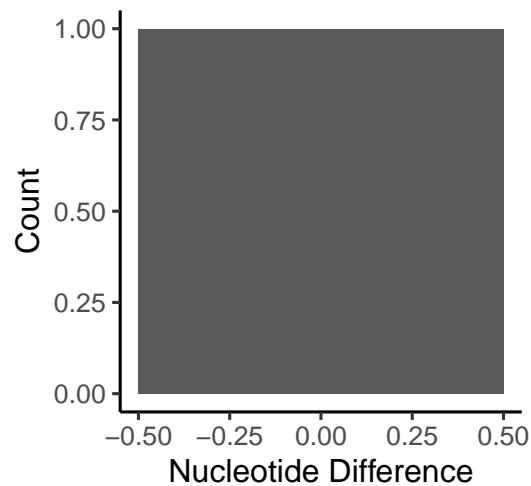
### IGHV3-64\*02\_07

22 sequences assigned  
9 (40.9%) exact matches, in which:  
9 unique CDR3  
3 unique J



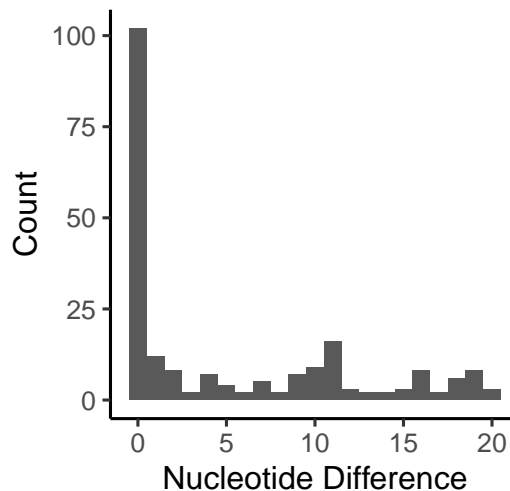
### IGHV3-35\*01

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



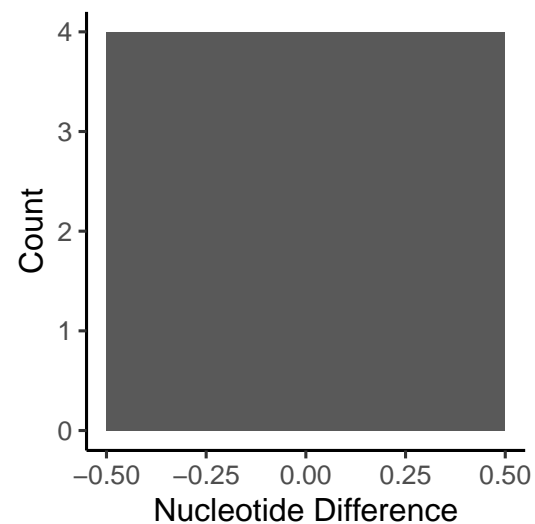
### IGHV3-49\*03\_05

235 sequences assigned  
102 (43.4%) exact matches, in which:  
95 unique CDR3  
5 unique J



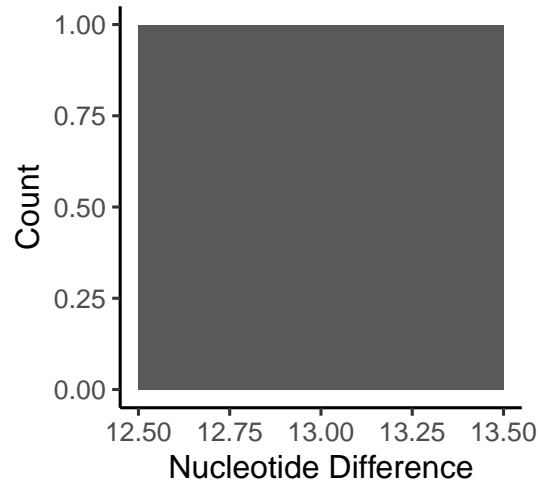
### IGHV3-66\*03

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
2 unique J



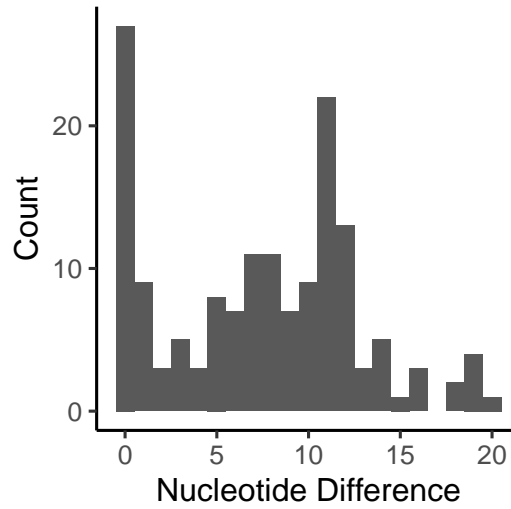
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



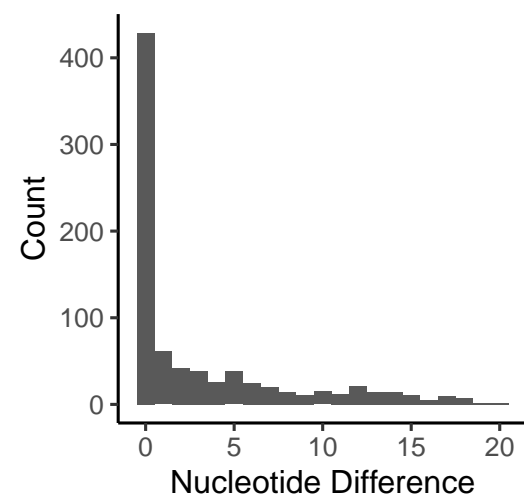
### IGHV3-72\*01

159 sequences assigned  
27 (17%) exact matches, in which:  
23 unique CDR3  
5 unique J



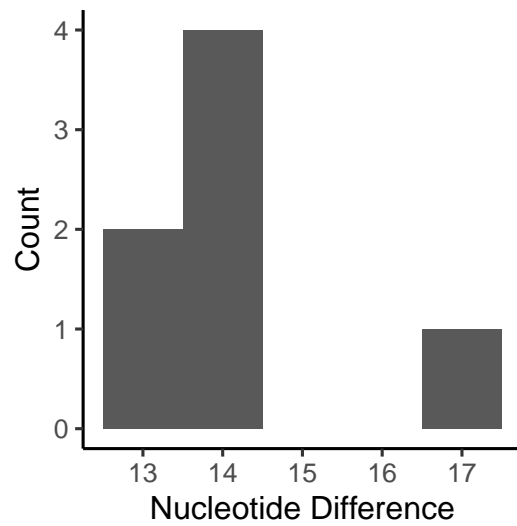
### IGHV3-74\*01\_02

835 sequences assigned  
429 (51.4%) exact matches, in which:  
406 unique CDR3  
6 unique J



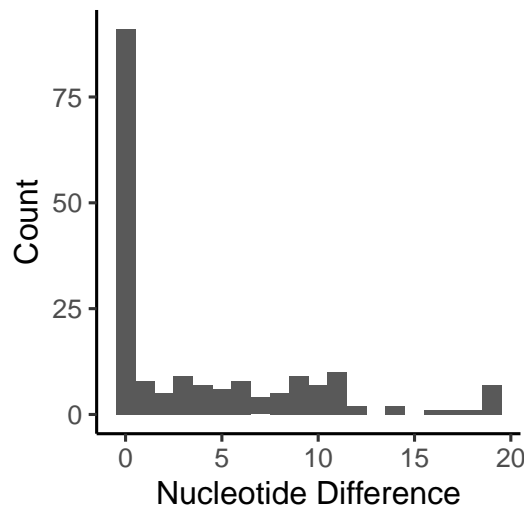
### IGHV3-69-1\*01

21 sequences assigned  
No exact matches.



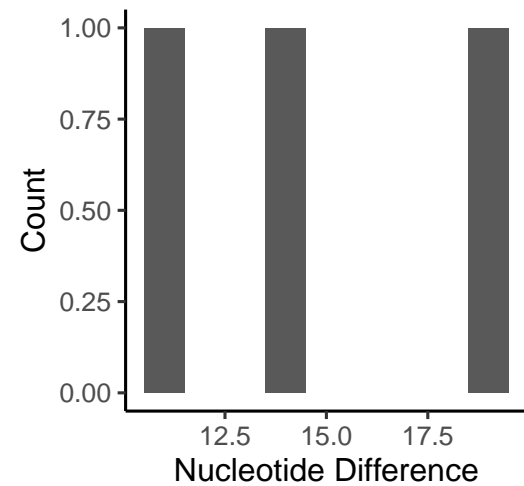
### IGHV3-73\*01\_02

186 sequences assigned  
91 (48.9%) exact matches, in which:  
90 unique CDR3  
6 unique J



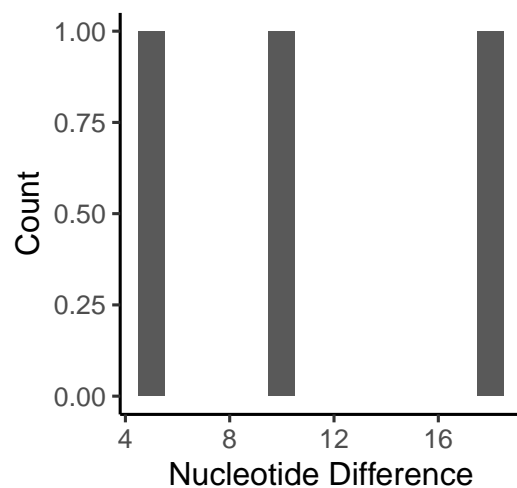
### IGHV3-64D\*06

3 sequences assigned  
No exact matches.



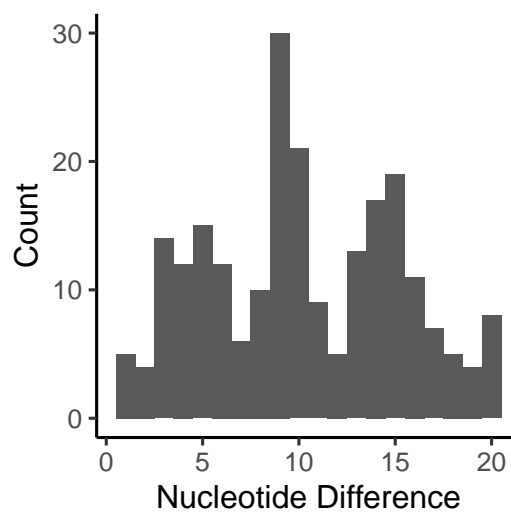
### IGHV3-69-1\*02

4 sequences assigned  
No exact matches.



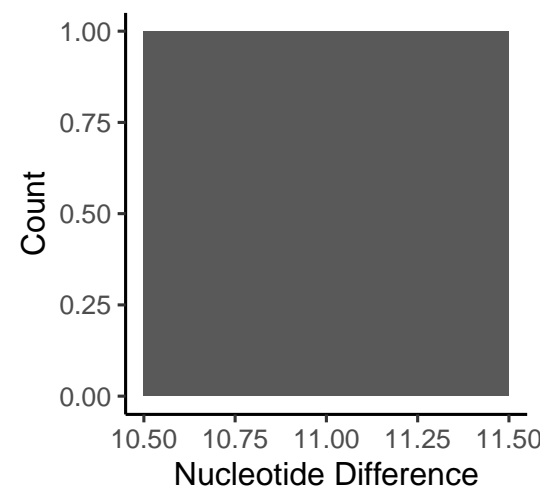
### IGHV3-74\*03

268 sequences assigned  
No exact matches.



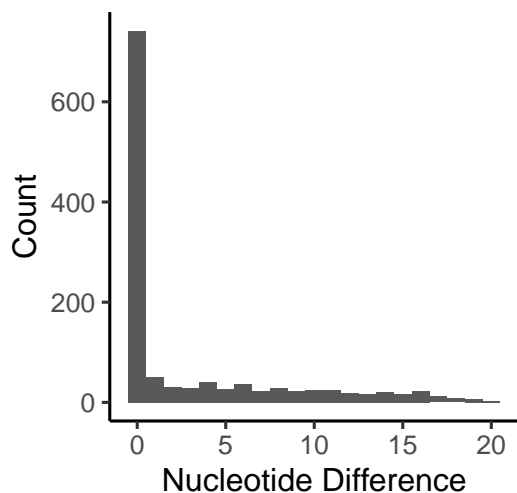
### IGHV3-64D\*09

1 sequences assigned  
No exact matches.



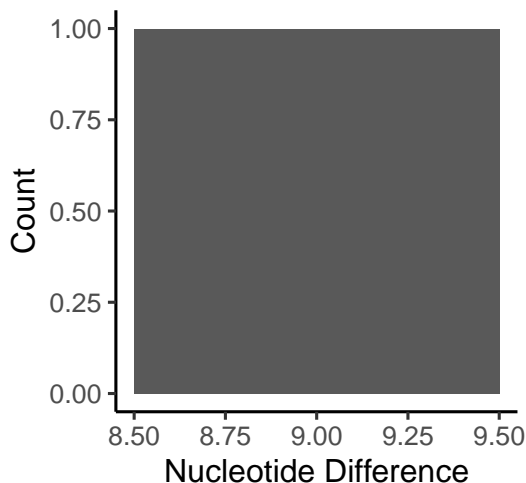
### IGHV4-4\*07

1240 sequences assigned  
742 (59.8%) exact matches, in which:  
709 unique CDR3  
6 unique J



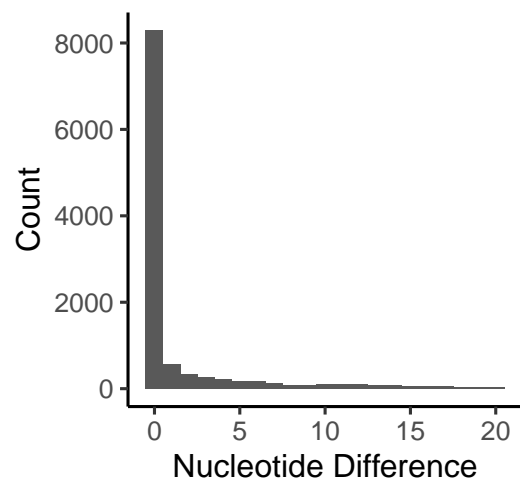
### IGHV4-30-4\*01

2 sequences assigned  
No exact matches.



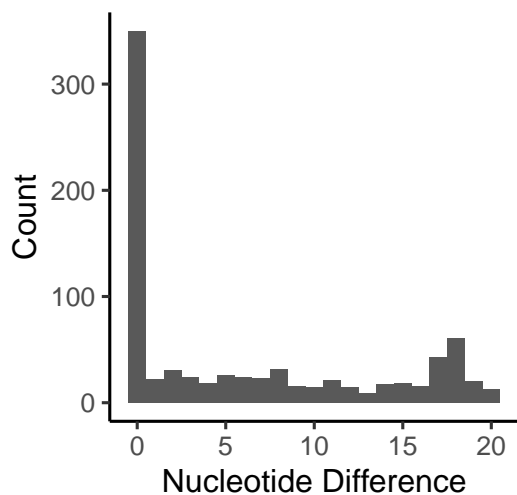
### IGHV4-34\*01\_02

11253 sequences assigned  
8291 (73.7%) exact matches, in which:  
8107 unique CDR3  
6 unique J



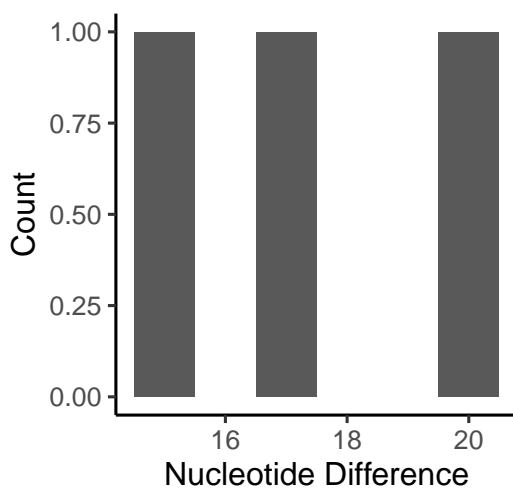
### IGHV4-4\*02\_03

887 sequences assigned  
350 (39.5%) exact matches, in which:  
345 unique CDR3  
6 unique J



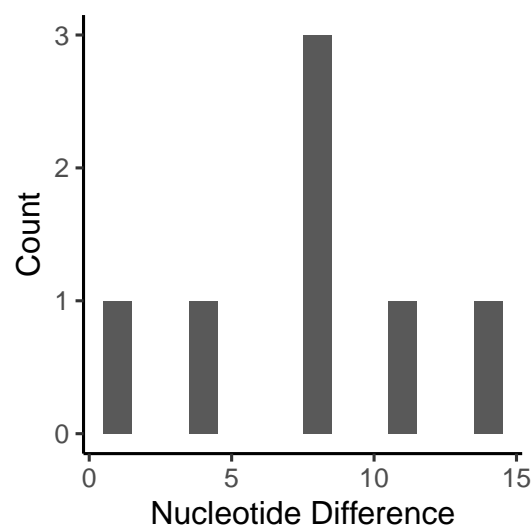
### IGHV4-30-2\*03

5 sequences assigned  
No exact matches.



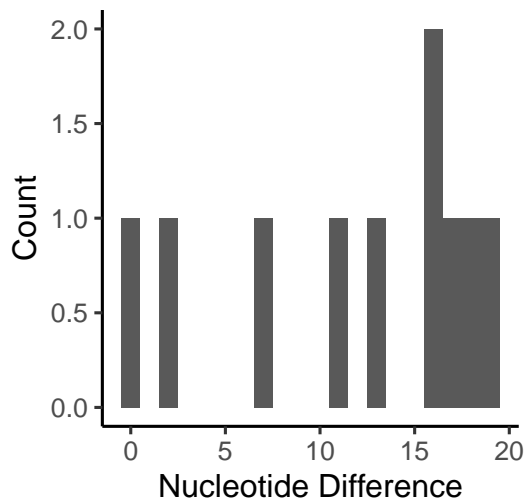
### IGHV4-38-2\*02

10 sequences assigned  
No exact matches.



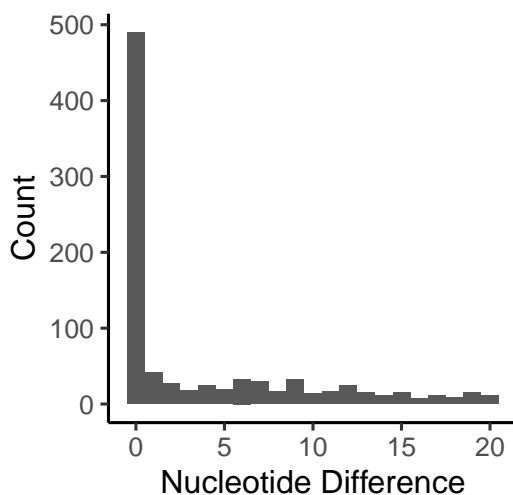
### IGHV4-28\*01\_07

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



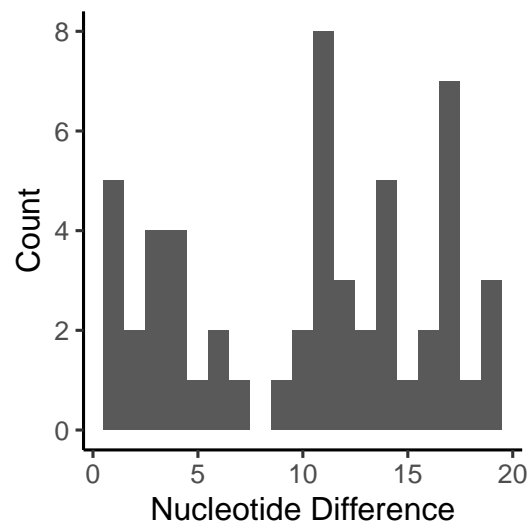
### IGHV4-31\*02

927 sequences assigned  
490 (52.9%) exact matches, in which:  
482 unique CDR3  
6 unique J



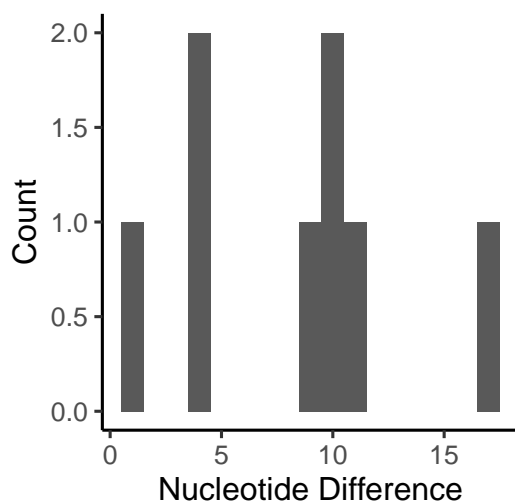
### IGHV4-39\*02

77 sequences assigned  
No exact matches.



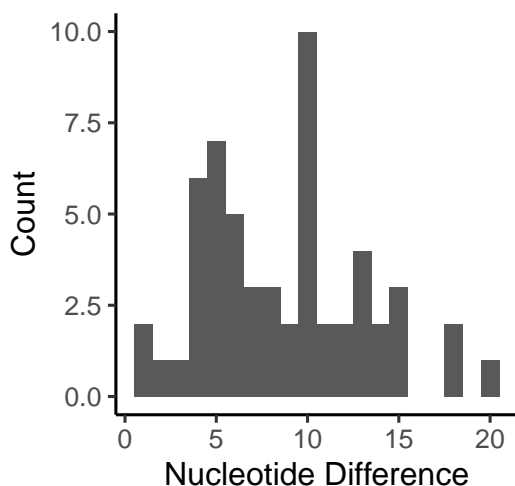
### IGHV4–39\*07

13 sequences assigned  
No exact matches.



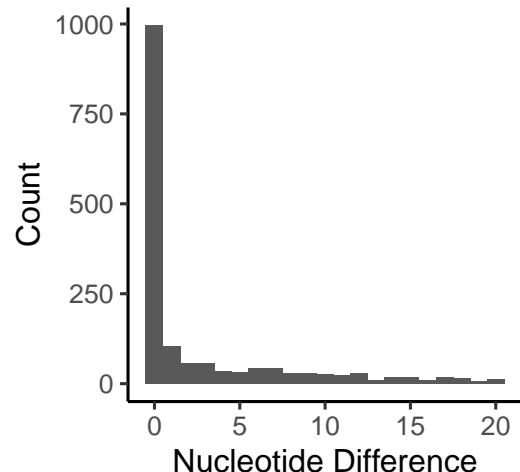
### IGHV4–59\*11

61 sequences assigned  
No exact matches.



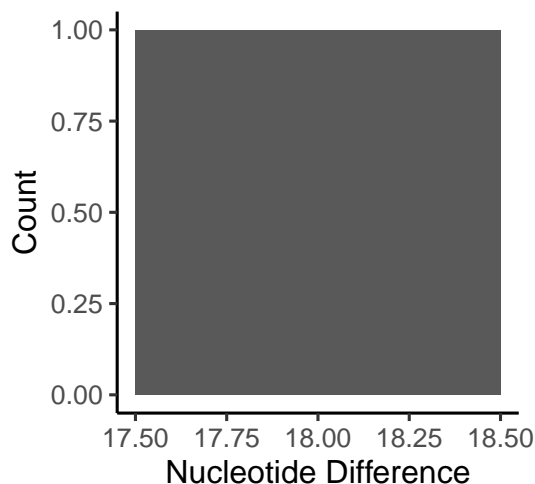
### IGHV4–61\*01

1680 sequences assigned  
996 (59.3%) exact matches, in which:  
964 unique CDR3  
6 unique J



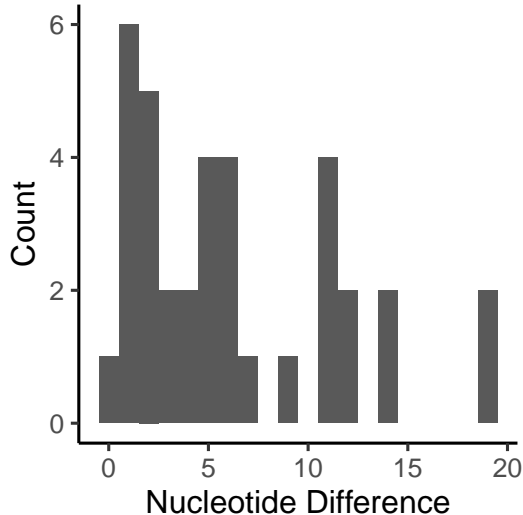
### IGHV4–55\*07

1 sequences assigned  
No exact matches.



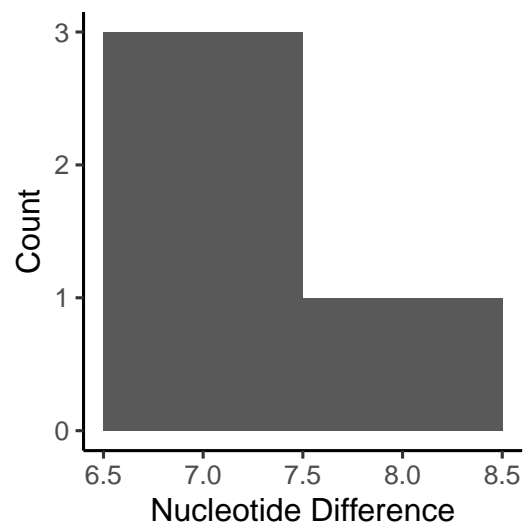
### IGHV4–59\*12

40 sequences assigned  
1 (2.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



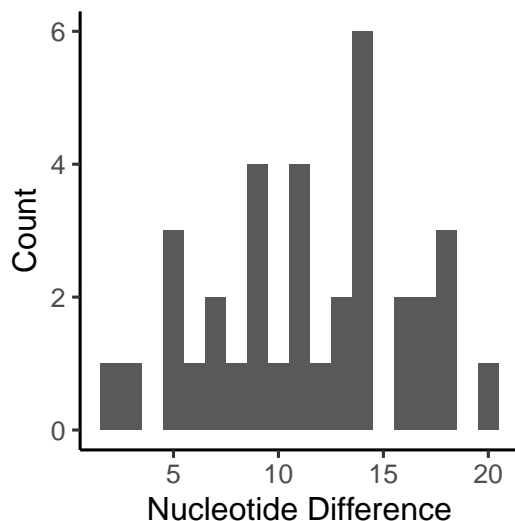
### IGHV4/OR15–8\*01

8 sequences assigned  
No exact matches.



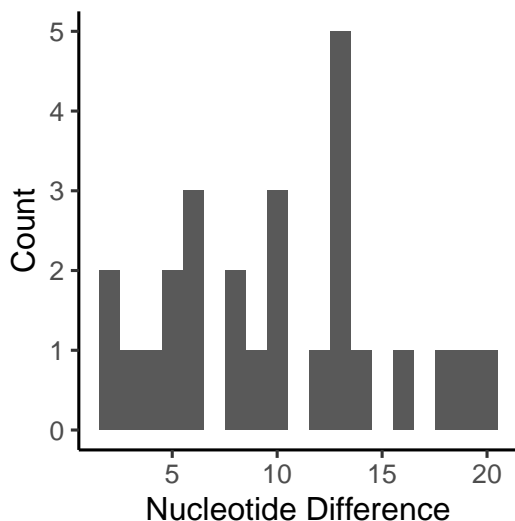
### IGHV4–59\*02

42 sequences assigned  
No exact matches.



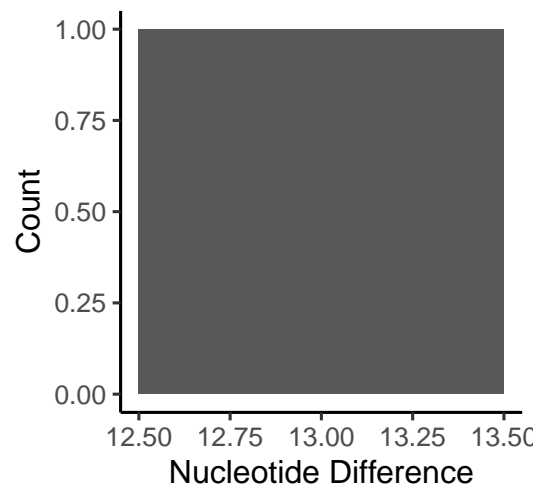
### IGHV4–59\*13

33 sequences assigned  
No exact matches.



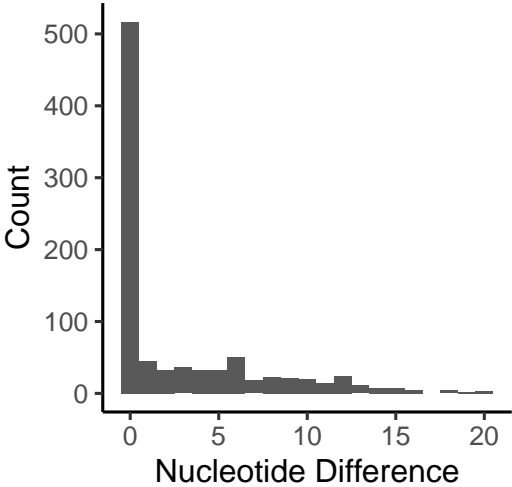
### IGHV4/OR15–8\*03

1 sequences assigned  
No exact matches.



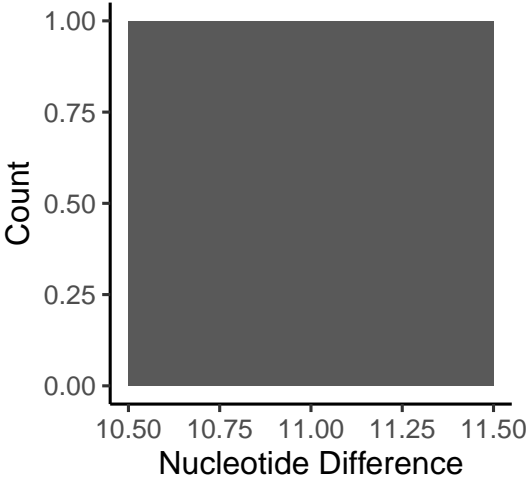
IGHV6-1\*01\_02

934 sequences assigned  
517 (55.4%) exact matches, in which:  
512 unique CDR3  
6 unique J



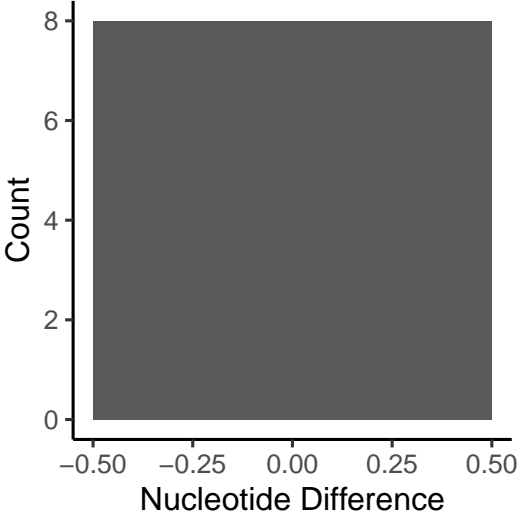
IGHV3/OR16-6\*02

1 sequences assigned  
No exact matches.



IGHV7-4-1\*01

8 sequences assigned  
8 (100%) exact matches, in which:  
8 unique CDR3  
4 unique J







Warning – no inferred sequences found.