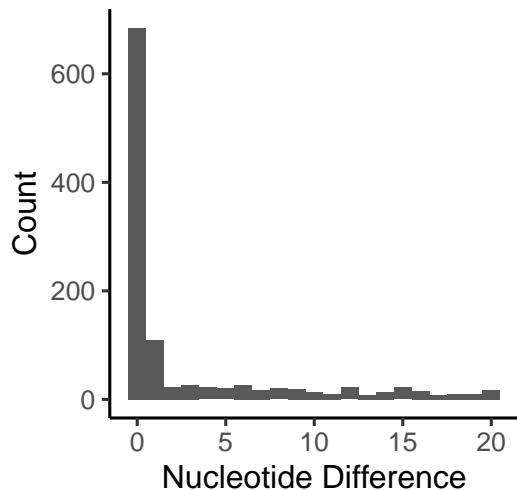


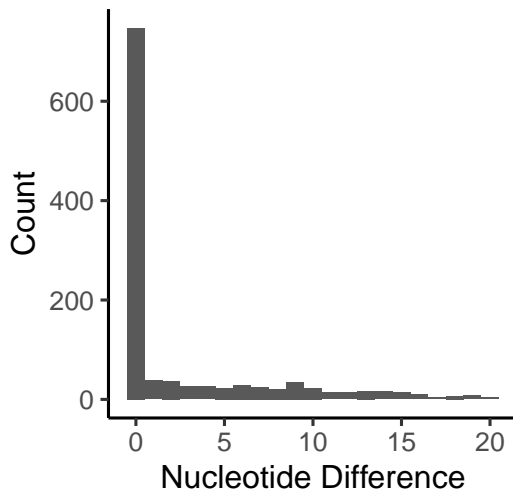
### IGHV1-2\*02

1200 sequences assigned  
685 (57.1%) exact matches, in which:  
683 unique CDR3  
6 unique J



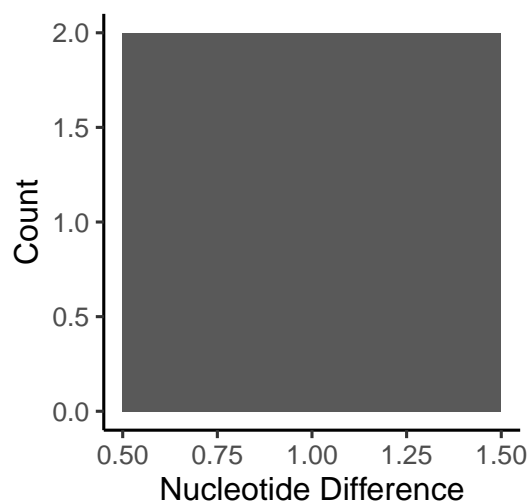
### IGHV1-18\*01

1184 sequences assigned  
748 (63.2%) exact matches, in which:  
744 unique CDR3  
6 unique J



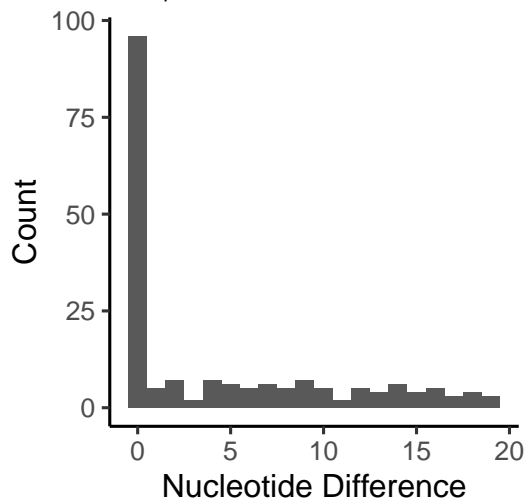
### IGHV1-38-4\*01

2 sequences assigned  
No exact matches.



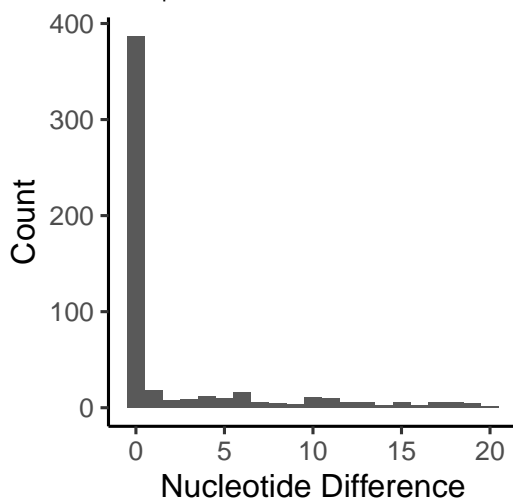
### IGHV1-3\*01\_05

200 sequences assigned  
96 (48%) exact matches, in which:  
94 unique CDR3  
5 unique J



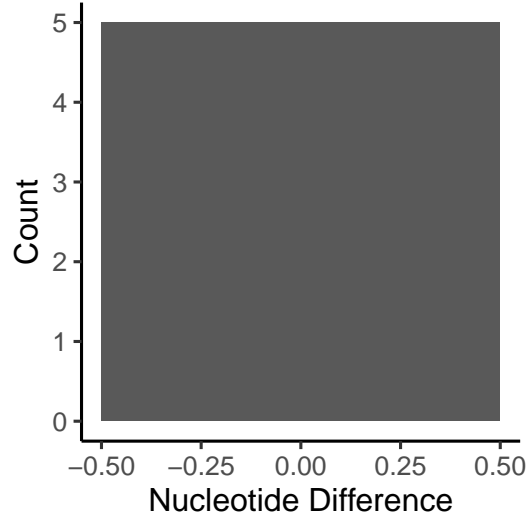
### IGHV1-18\*04

565 sequences assigned  
387 (68.5%) exact matches, in which:  
386 unique CDR3  
6 unique J



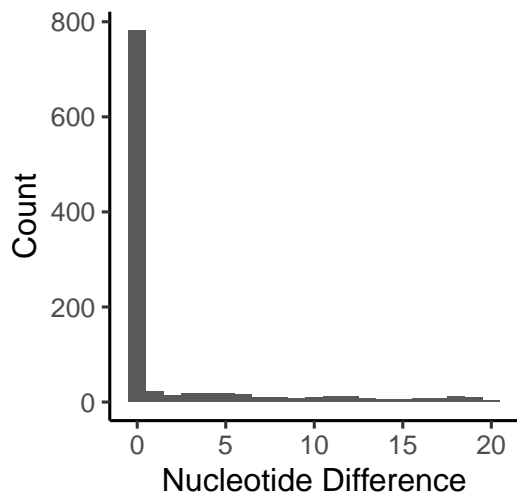
### IGHV1-45\*02

5 sequences assigned  
5 (100%) exact matches, in which:  
5 unique CDR3  
3 unique J



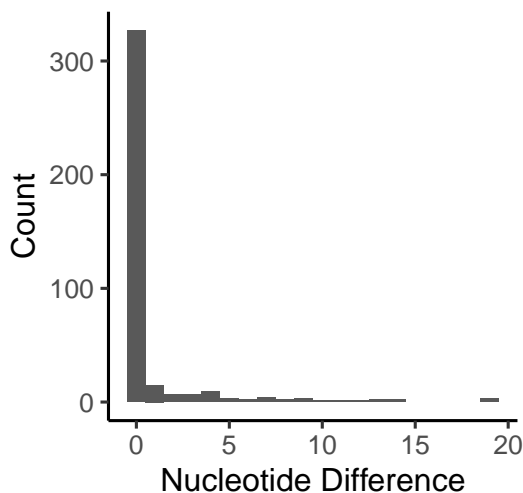
### IGHV1-8\*01

1034 sequences assigned  
782 (75.6%) exact matches, in which:  
781 unique CDR3  
6 unique J



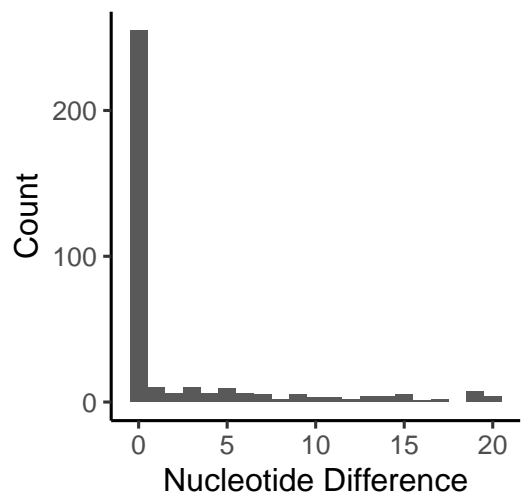
### IGHV1-24\*01

404 sequences assigned  
327 (80.9%) exact matches, in which:  
327 unique CDR3  
6 unique J



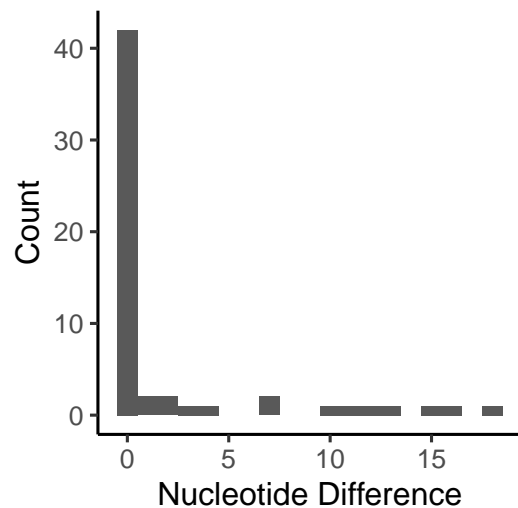
### IGHV1-46\*03

377 sequences assigned  
255 (67.6%) exact matches, in which:  
255 unique CDR3  
6 unique J



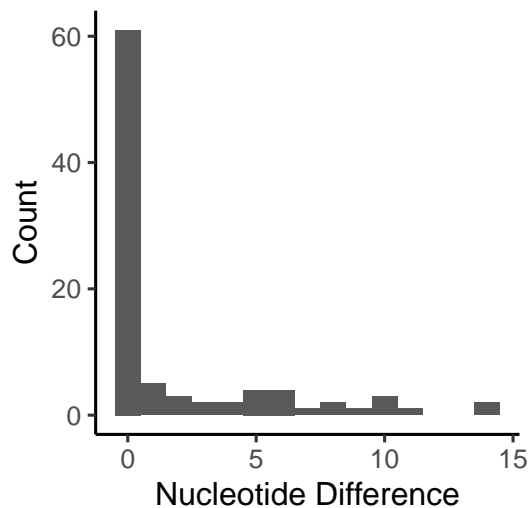
### IGHV1-58\*02

61 sequences assigned  
42 (68.9%) exact matches, in which:  
42 unique CDR3  
5 unique J



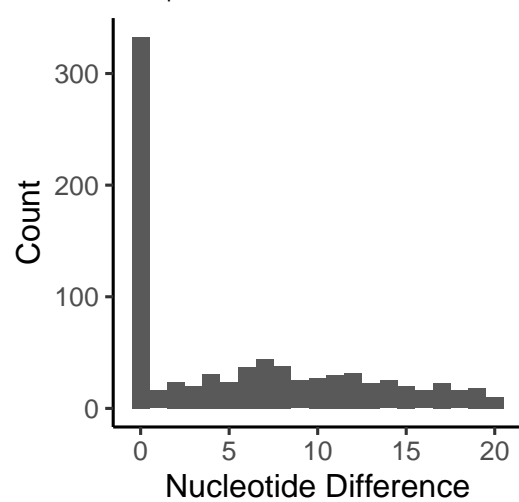
### IGHV2-26\*01

91 sequences assigned  
61 (67%) exact matches, in which:  
61 unique CDR3  
4 unique J



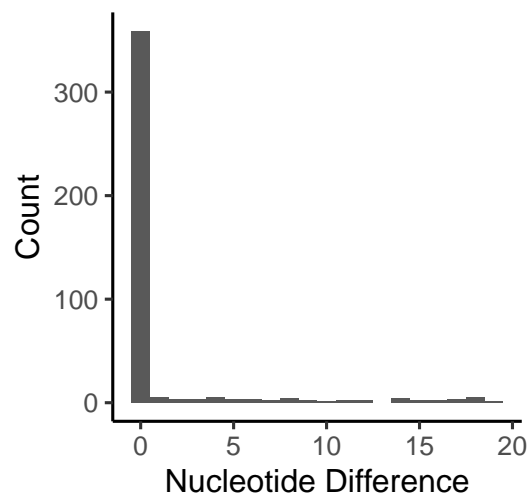
### IGHV3-7\*01

906 sequences assigned  
333 (36.8%) exact matches, in which:  
323 unique CDR3  
6 unique J



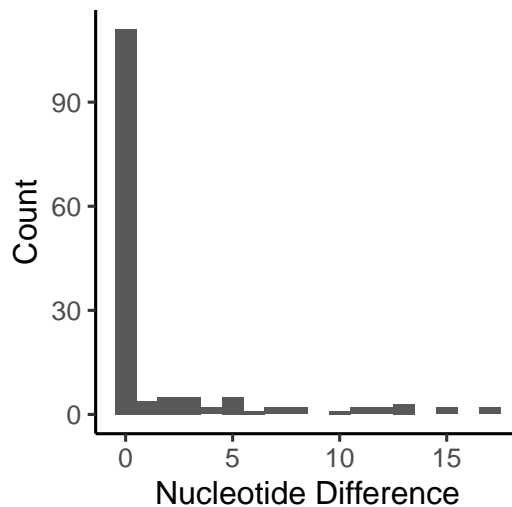
### IGHV1-69\*05

432 sequences assigned  
359 (83.1%) exact matches, in which:  
359 unique CDR3  
6 unique J



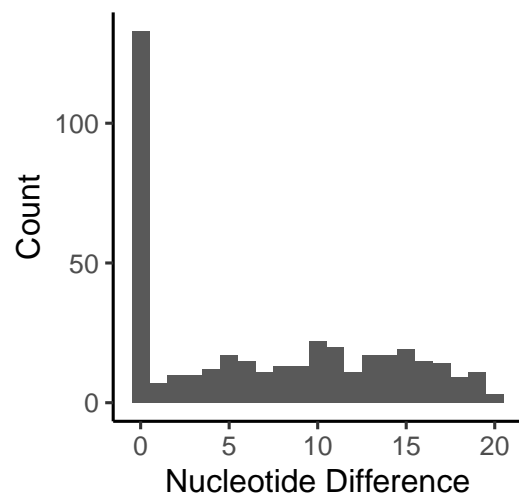
### IGHV2-70\*11\_15

150 sequences assigned  
111 (74%) exact matches, in which:  
109 unique CDR3  
5 unique J



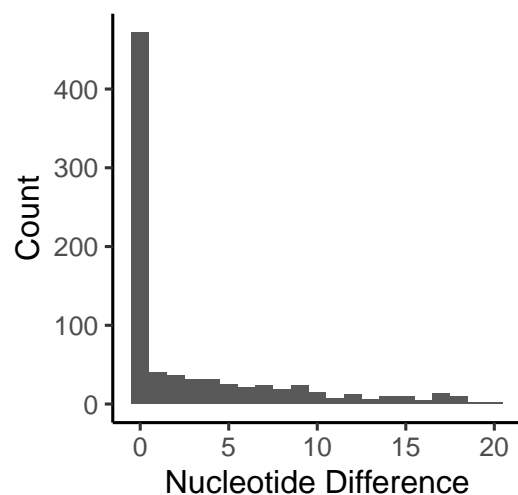
### IGHV3-7\*05

414 sequences assigned  
133 (32.1%) exact matches, in which:  
128 unique CDR3  
5 unique J



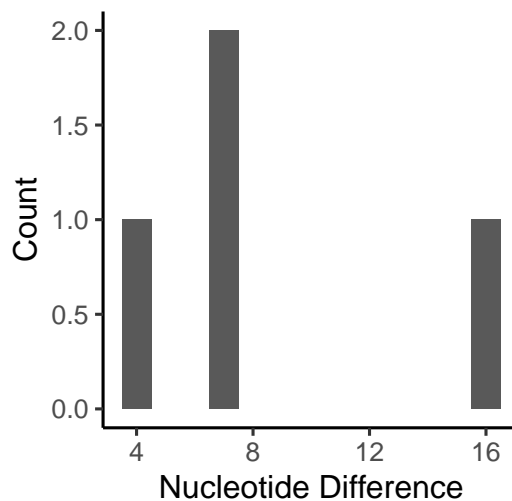
### IGHV2-5\*01

823 sequences assigned  
472 (57.4%) exact matches, in which:  
467 unique CDR3  
6 unique J



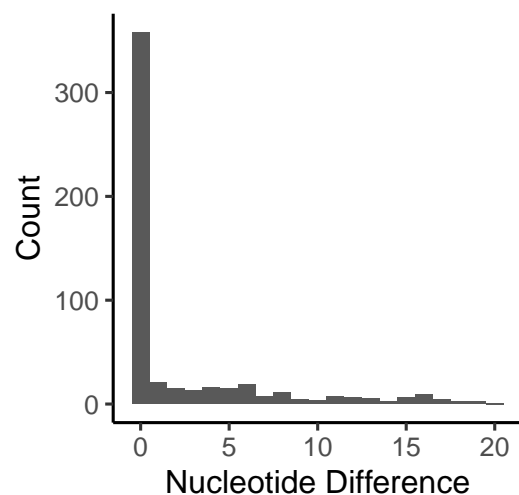
### IGHV2-70D\*04

5 sequences assigned  
No exact matches.



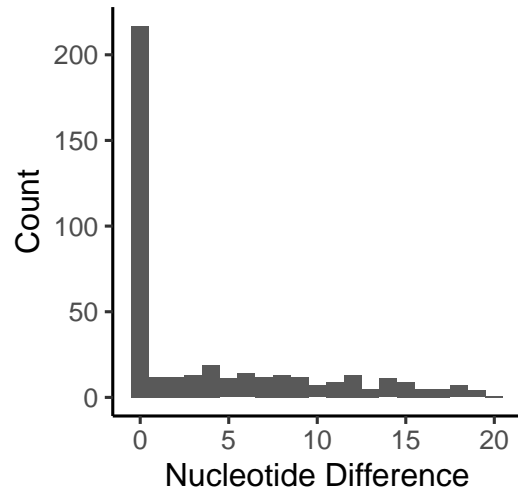
### IGHV3-9\*01

538 sequences assigned  
358 (66.5%) exact matches, in which:  
346 unique CDR3  
6 unique J



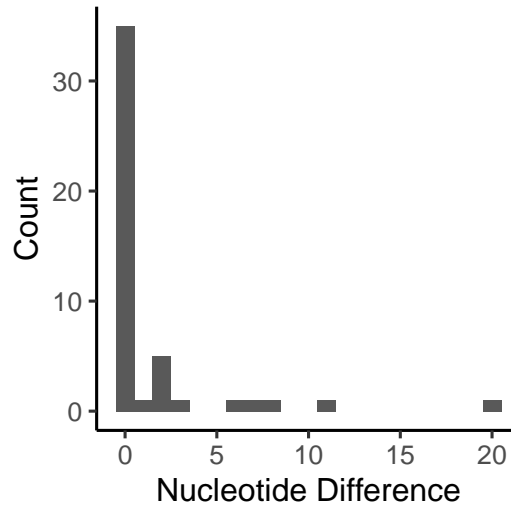
### IGHV3-11\*01

444 sequences assigned  
217 (48.9%) exact matches, in which:  
211 unique CDR3  
6 unique J



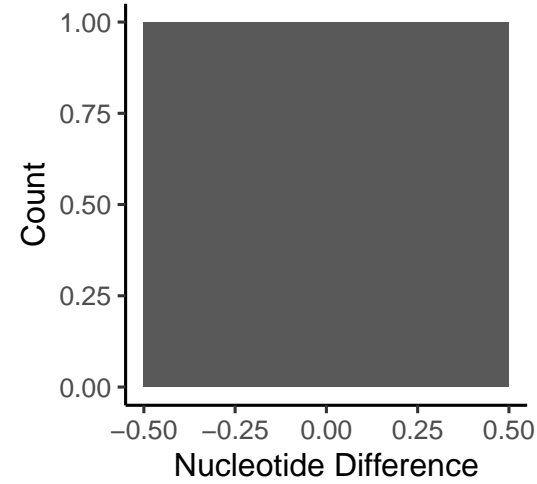
### IGHV3-20\*01\_02

47 sequences assigned  
35 (74.5%) exact matches, in which:  
34 unique CDR3  
5 unique J



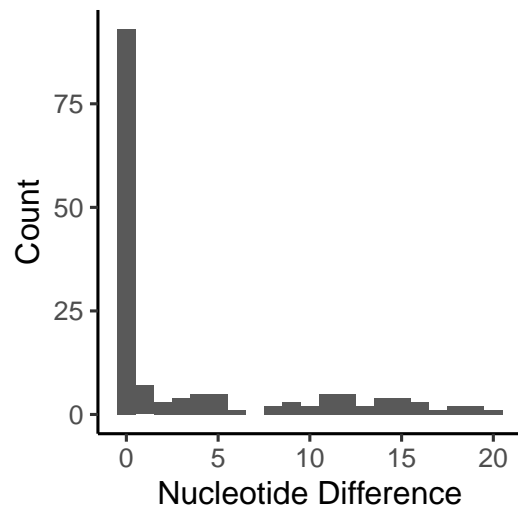
### IGHV3-38-3\*01

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



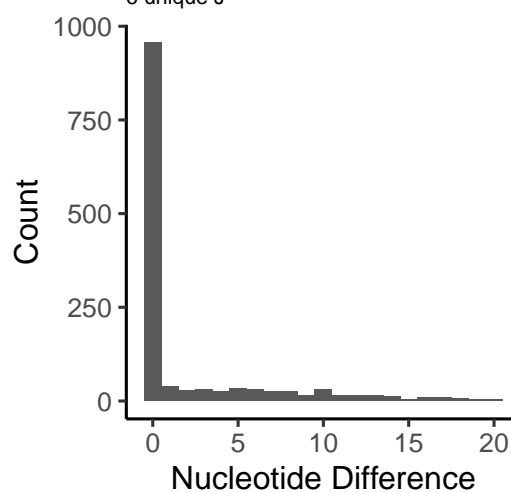
### IGHV3-13\*01

165 sequences assigned  
93 (56.4%) exact matches, in which:  
89 unique CDR3  
5 unique J



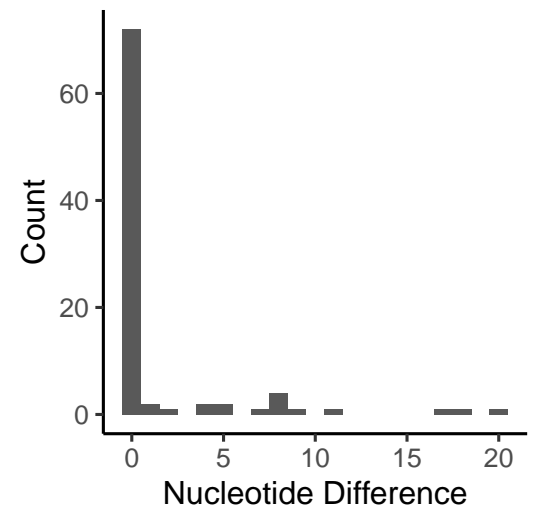
### IGHV3-21\*01\_02

1402 sequences assigned  
956 (68.2%) exact matches, in which:  
905 unique CDR3  
6 unique J



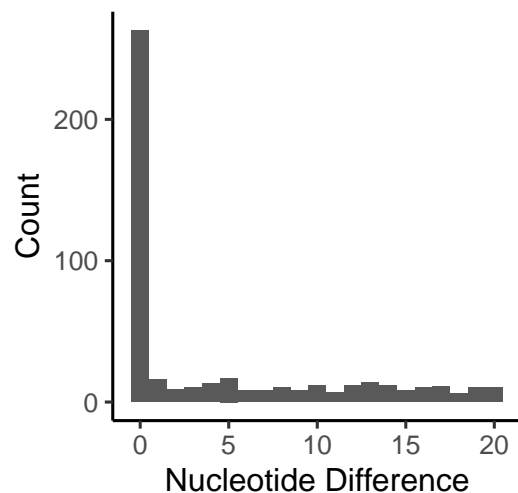
### IGHV3-43\*01

94 sequences assigned  
72 (76.6%) exact matches, in which:  
70 unique CDR3  
6 unique J



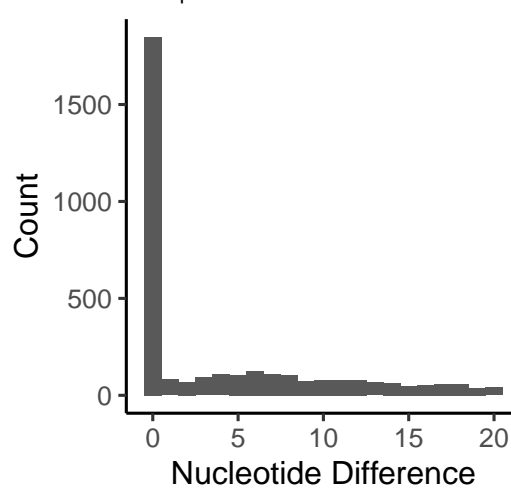
### IGHV3-15\*01\_02

543 sequences assigned  
263 (48.4%) exact matches, in which:  
261 unique CDR3  
6 unique J



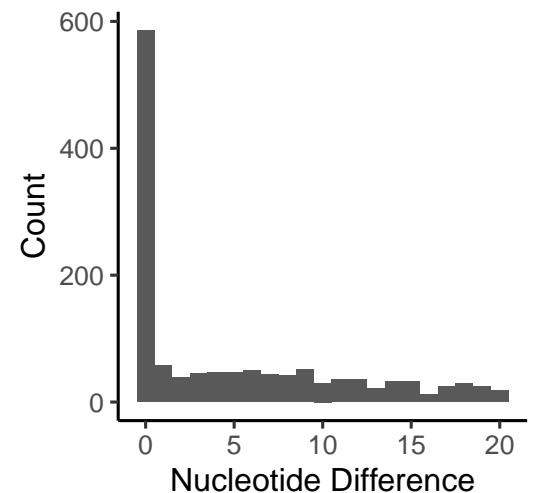
### IGHV3-23\*01\_04

3664 sequences assigned  
1848 (50.4%) exact matches, in which:  
1772 unique CDR3  
6 unique J



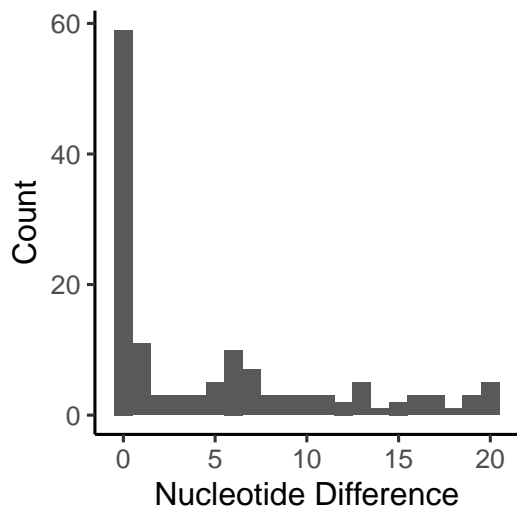
### IGHV3-48\*01

1441 sequences assigned  
586 (40.7%) exact matches, in which:  
565 unique CDR3  
6 unique J



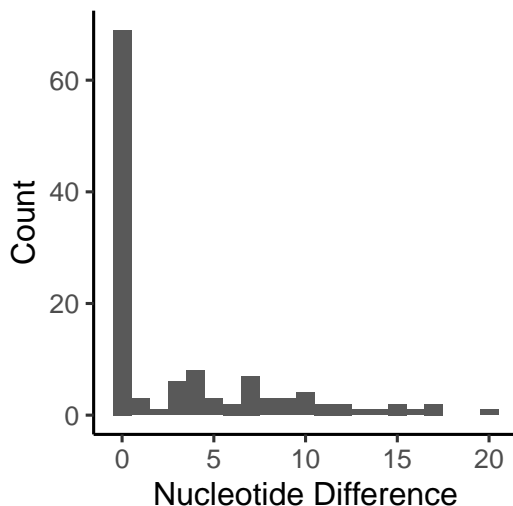
### IGHV3-49\*03\_05

147 sequences assigned  
59 (40.1%) exact matches, in which:  
59 unique CDR3  
5 unique J



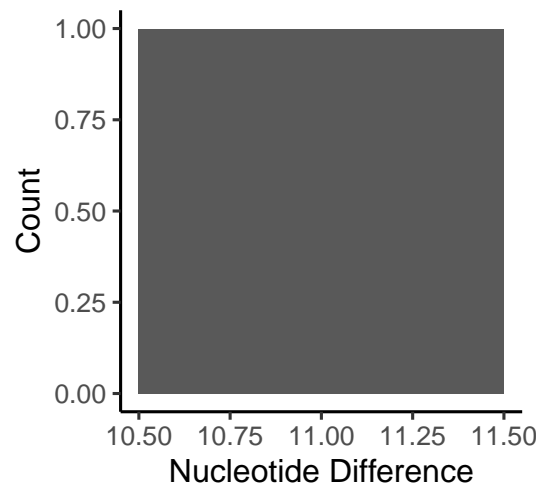
### IGHV3-64\*01

122 sequences assigned  
69 (56.6%) exact matches, in which:  
66 unique CDR3  
5 unique J



### IGHV3-69-1\*02

1 sequences assigned  
No exact matches.



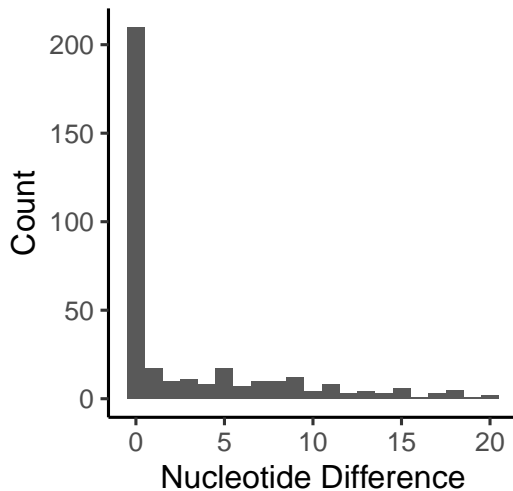
### IGHV3-52\*02

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



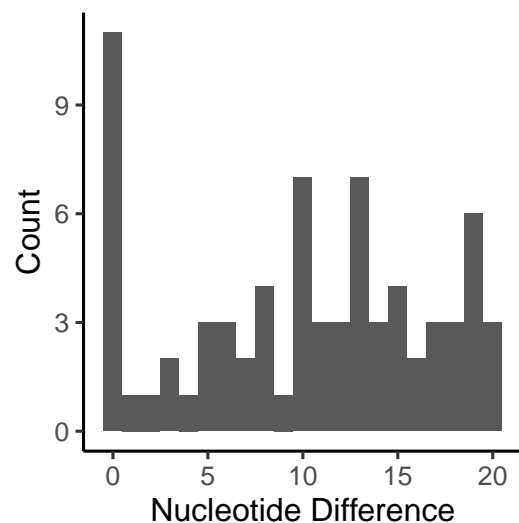
### IGHV3-66\*02

371 sequences assigned  
210 (56.6%) exact matches, in which:  
200 unique CDR3  
6 unique J



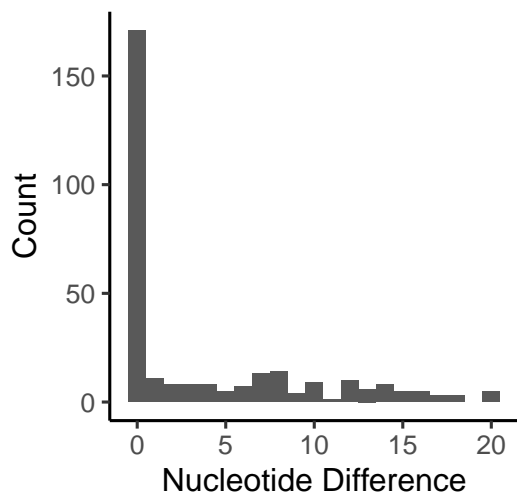
### IGHV3-72\*01

77 sequences assigned  
11 (14.3%) exact matches, in which:  
11 unique CDR3  
5 unique J



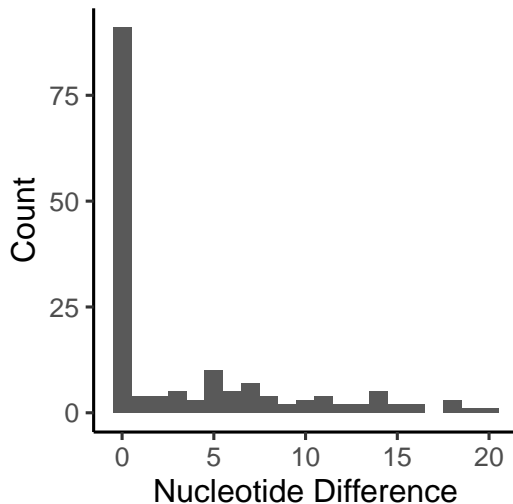
### IGHV3-53\*01\_02

322 sequences assigned  
171 (53.1%) exact matches, in which:  
163 unique CDR3  
6 unique J



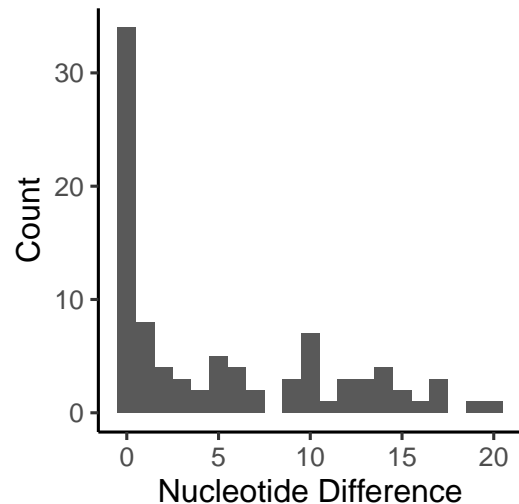
### IGHV3-66\*01\_A193G

182 sequences assigned  
91 (50%) exact matches, in which:  
86 unique CDR3  
6 unique J



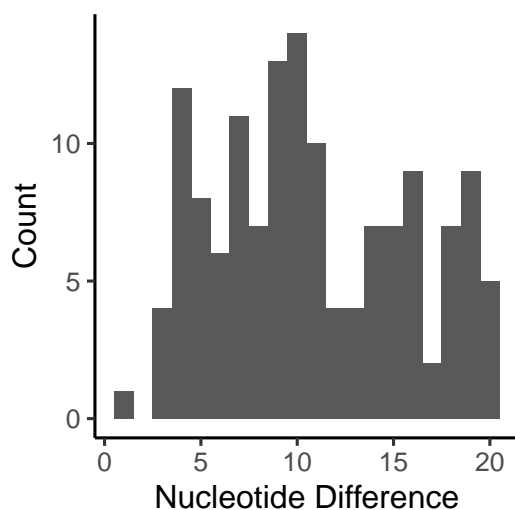
### IGHV3-73\*01\_02

94 sequences assigned  
34 (36.2%) exact matches, in which:  
34 unique CDR3  
5 unique J



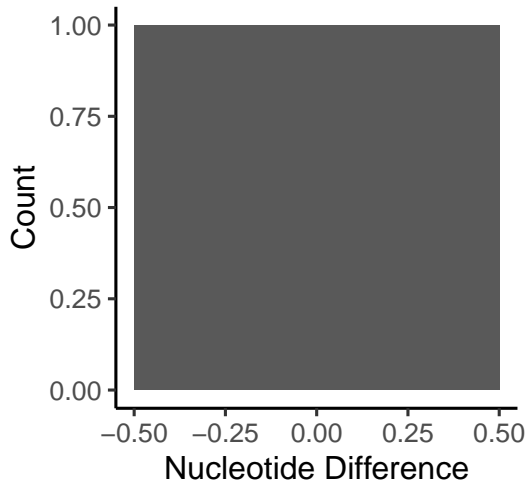
### IGHV3-74\*03

164 sequences assigned  
No exact matches.



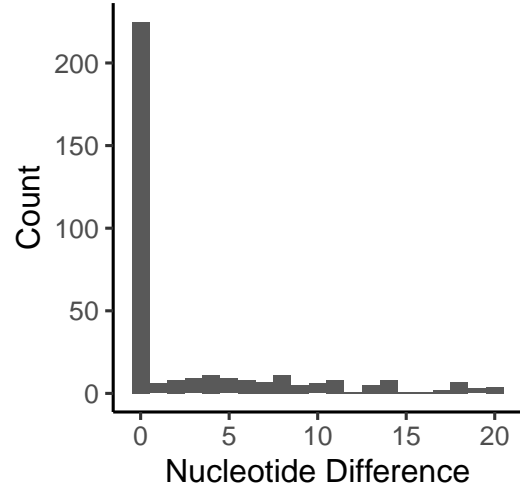
### IGHV3-64D\*06

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



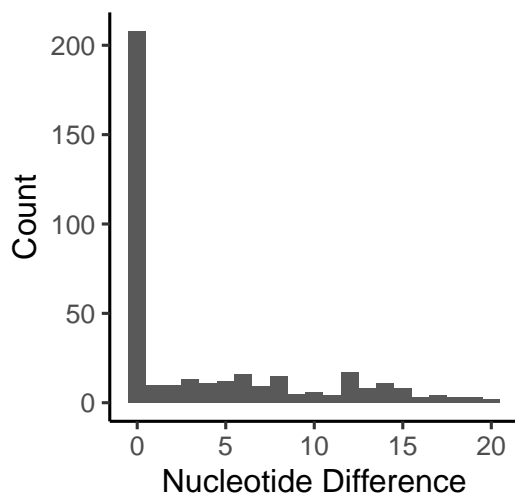
### IGHV4-4\*02\_03

390 sequences assigned  
225 (57.7%) exact matches, in which:  
218 unique CDR3  
6 unique J



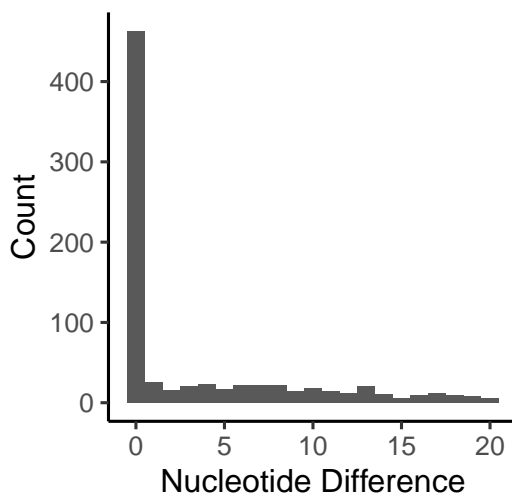
### IGHV3-74\*01\_02

398 sequences assigned  
208 (52.3%) exact matches, in which:  
201 unique CDR3  
6 unique J



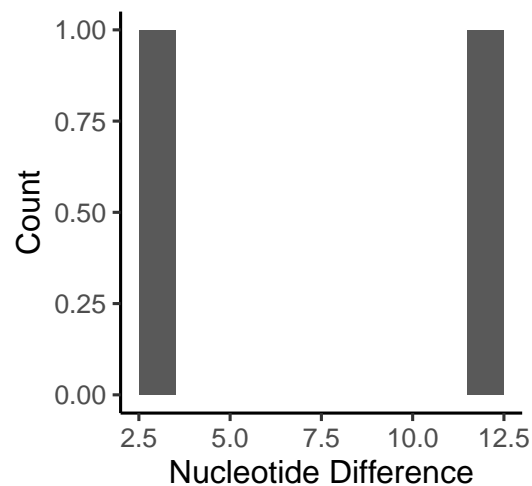
### IGHV4-4\*07

827 sequences assigned  
463 (56%) exact matches, in which:  
446 unique CDR3  
5 unique J



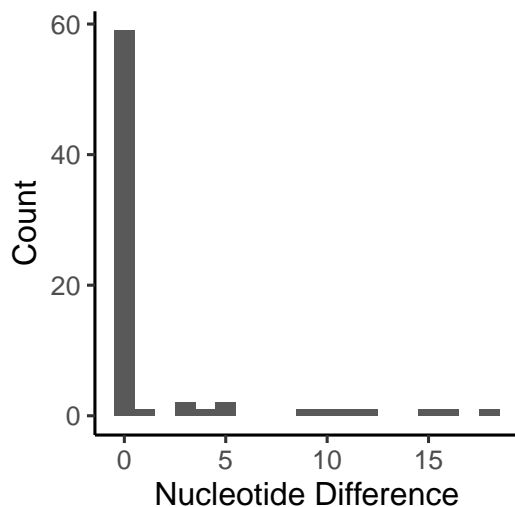
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



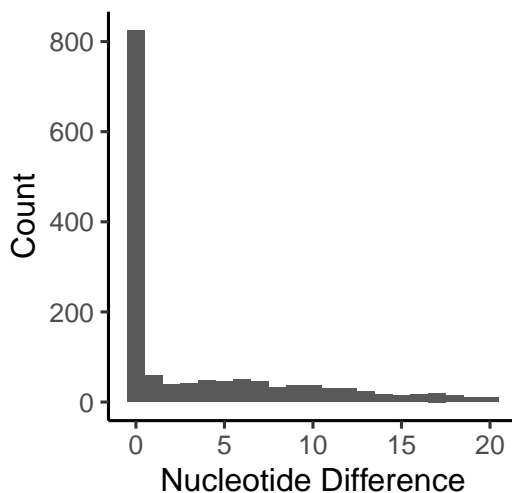
### IGHV3-43D\*04

77 sequences assigned  
59 (76.6%) exact matches, in which:  
58 unique CDR3  
4 unique J



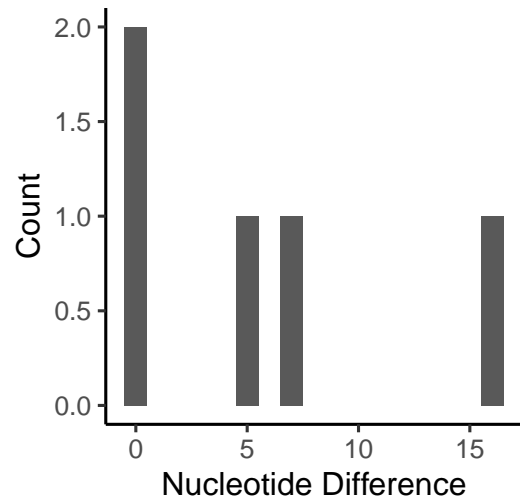
### IGHV4-4\*09

1558 sequences assigned  
825 (53%) exact matches, in which:  
803 unique CDR3  
6 unique J



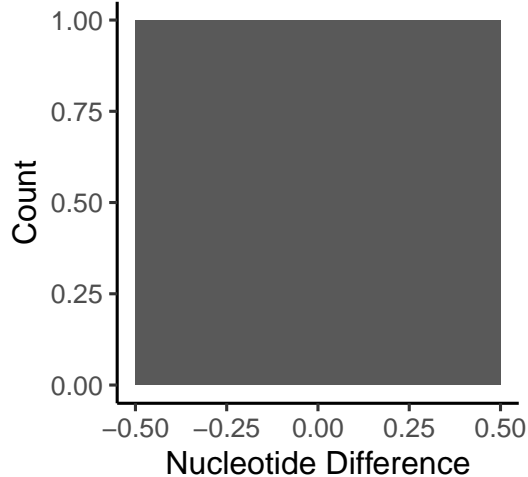
### IGHV4-28\*02\_05

5 sequences assigned  
2 (40%) exact matches, in which:  
2 unique CDR3  
2 unique J



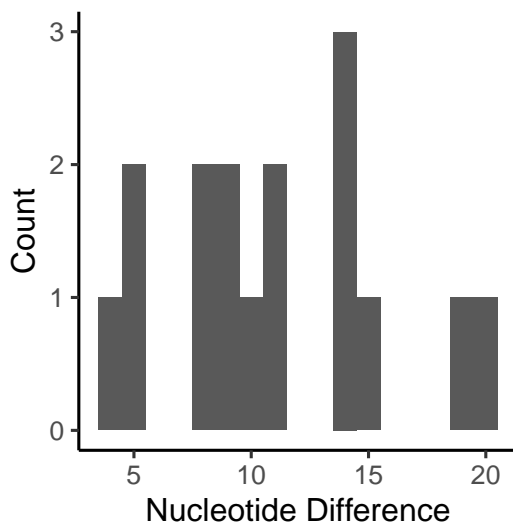
### IGHV4-30-2\*01

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



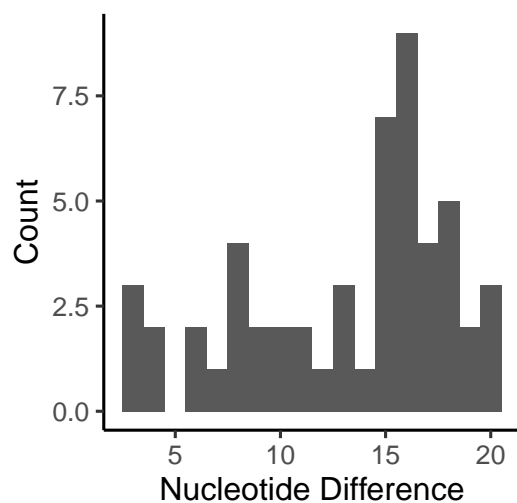
### IGHV4-38-2\*02

23 sequences assigned  
No exact matches.



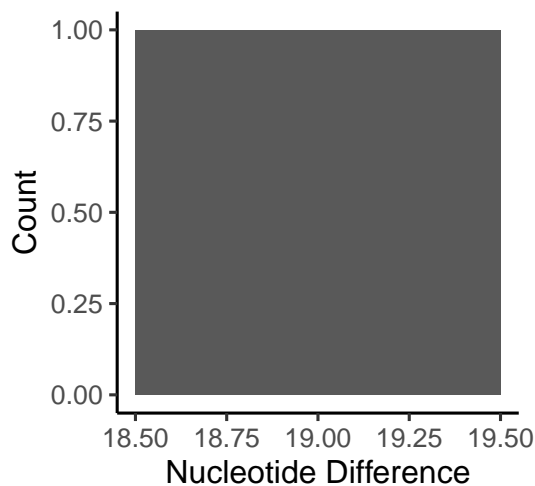
### IGHV4-59\*08

96 sequences assigned  
No exact matches.



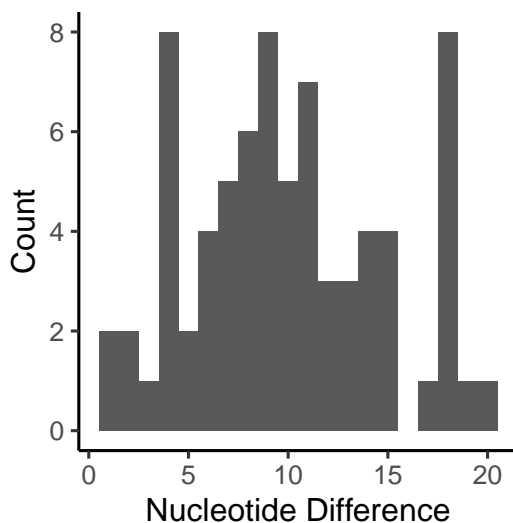
### IGHV4-31\*02

1 sequences assigned  
No exact matches.



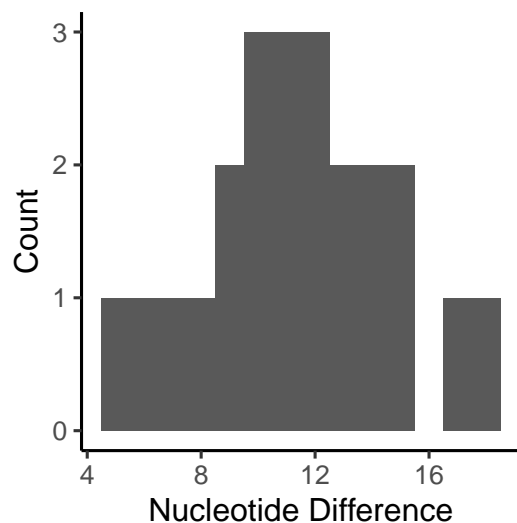
### IGHV4-39\*02

98 sequences assigned  
No exact matches.



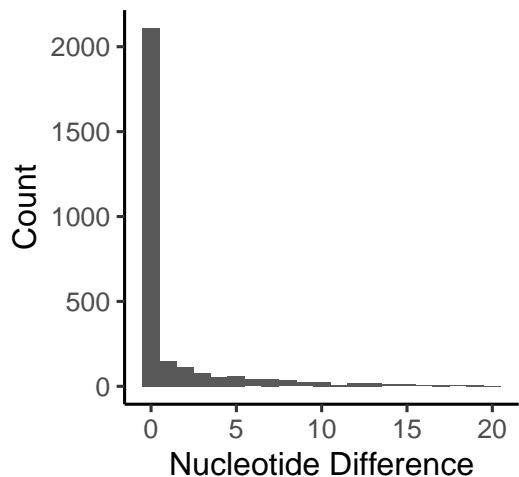
### IGHV4-59\*11

38 sequences assigned  
No exact matches.



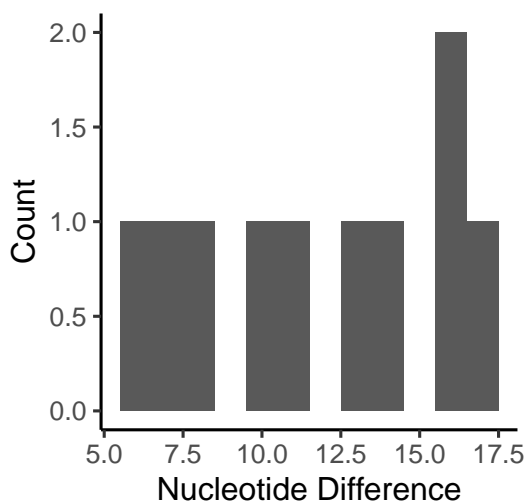
### IGHV4-34\*01\_02

2863 sequences assigned  
2110 (73.7%) exact matches, in which:  
2011 unique CDR3  
6 unique J



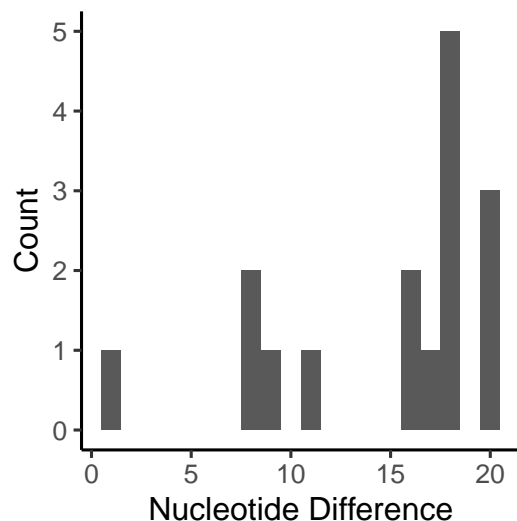
### IGHV4-59\*02

18 sequences assigned  
No exact matches.



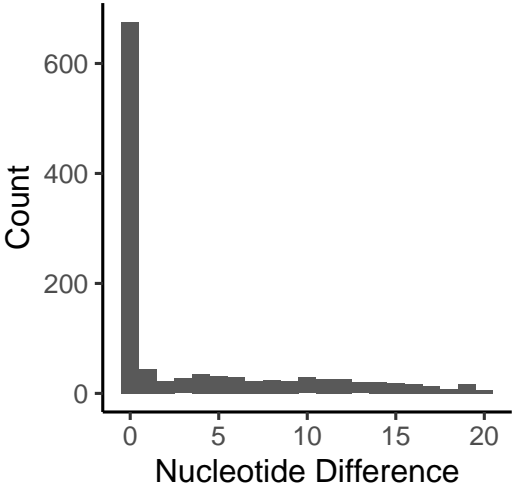
### IGHV4-59\*12

21 sequences assigned  
No exact matches.



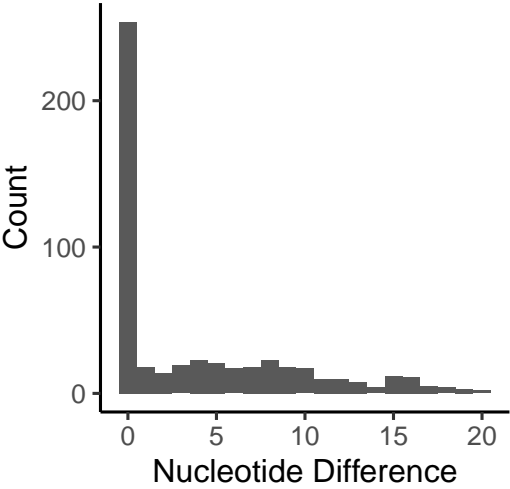
IGHV4–61\*02

1221 sequences assigned  
676 (55.4%) exact matches, in which:  
659 unique CDR3  
6 unique J



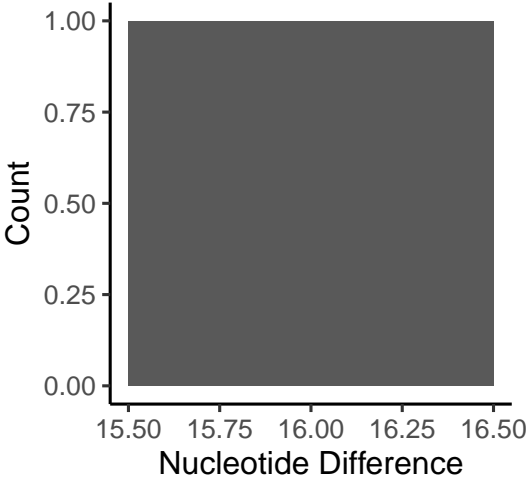
IGHV6–1\*01\_02

523 sequences assigned  
254 (48.6%) exact matches, in which:  
253 unique CDR3  
6 unique J



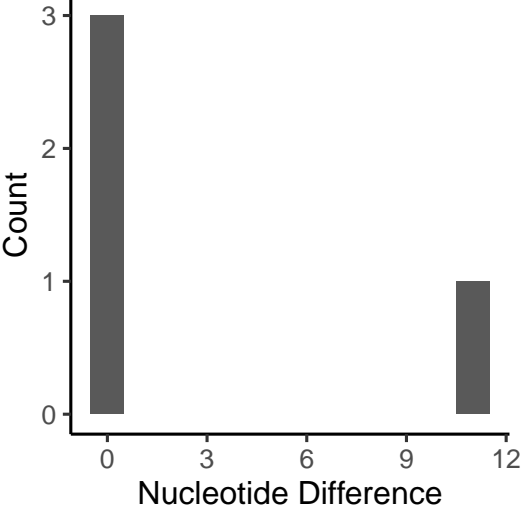
IGHV4/OR15–8\*02

1 sequences assigned  
No exact matches.



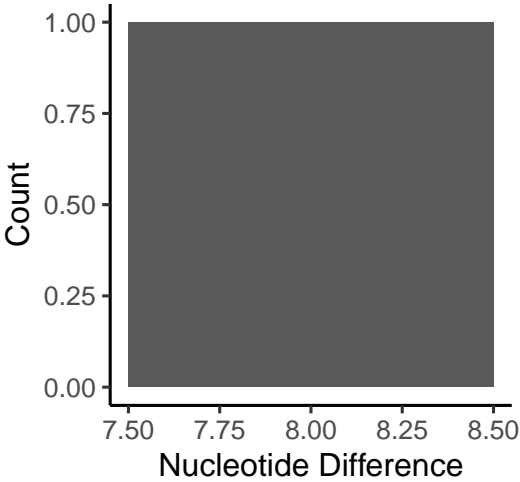
IGHV7–4–1\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



IGHV5–51\*06

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.