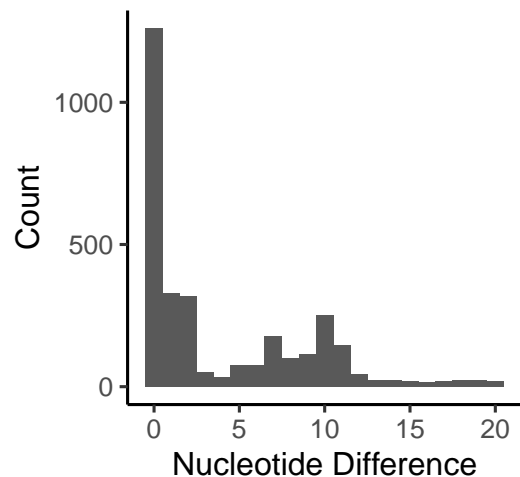


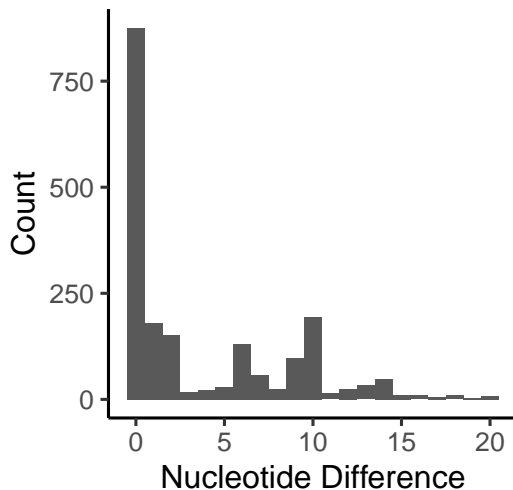
### IGHV1-2\*02

3201 sequences assigned  
1260 (39.4%) exact matches, in which:  
1199 unique CDR3  
6 unique J



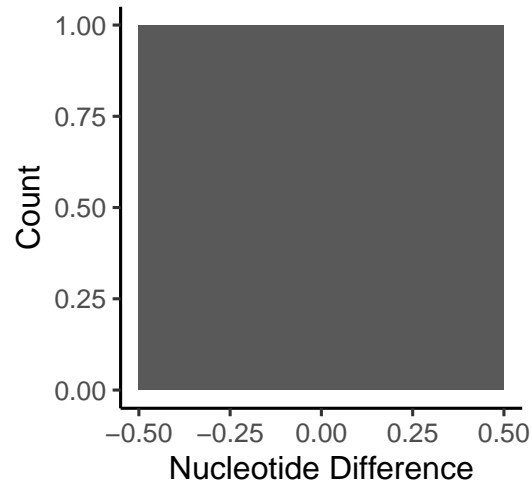
### IGHV1-18\*01

1981 sequences assigned  
876 (44.2%) exact matches, in which:  
843 unique CDR3  
6 unique J



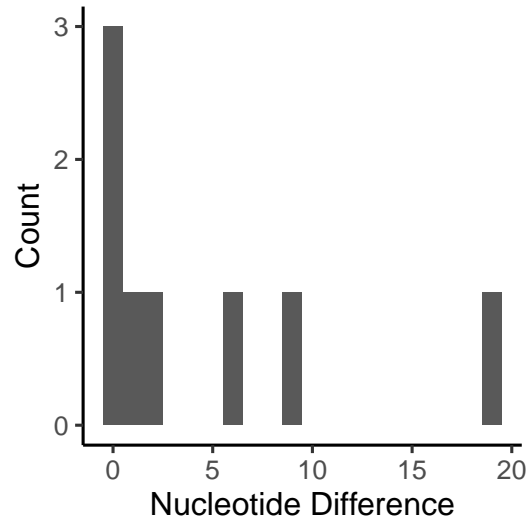
### IGHV1-45\*03

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



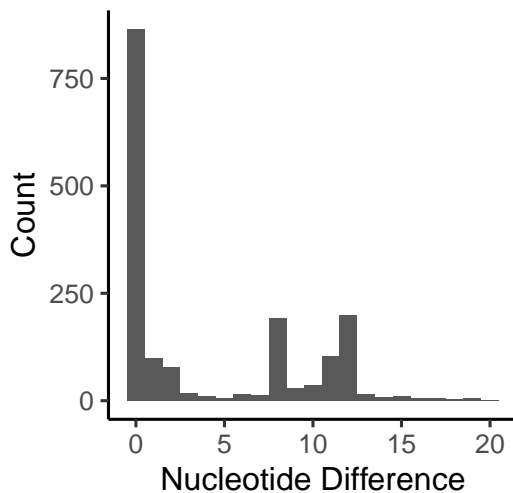
### IGHV1-3\*02

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



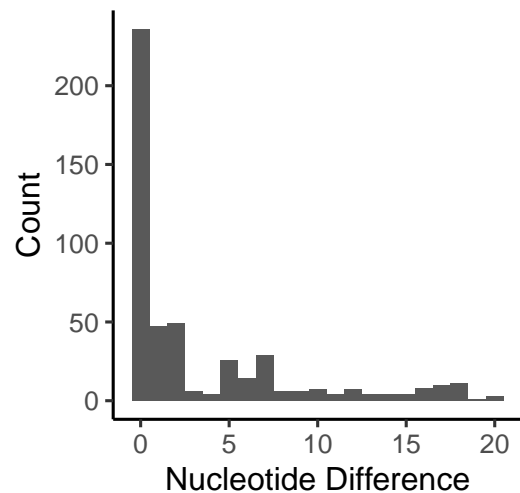
### IGHV1-18\*04

1783 sequences assigned  
865 (48.5%) exact matches, in which:  
836 unique CDR3  
6 unique J



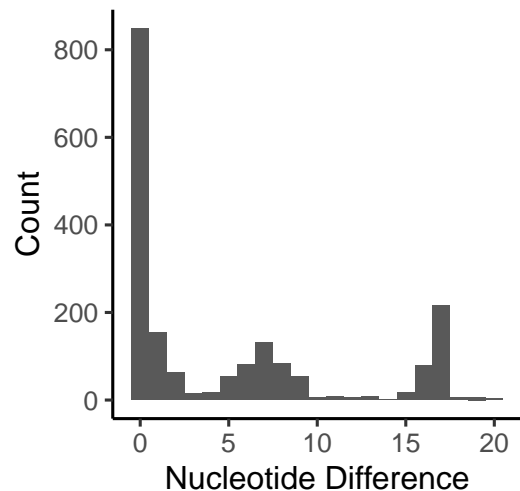
### IGHV1-46\*01

501 sequences assigned  
236 (47.1%) exact matches, in which:  
228 unique CDR3  
6 unique J



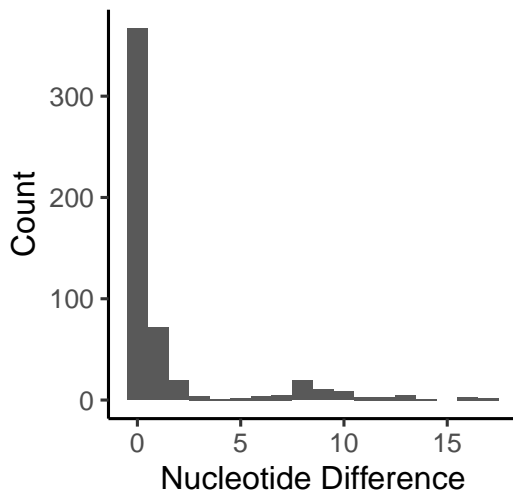
### IGHV1-8\*01

1891 sequences assigned  
849 (44.9%) exact matches, in which:  
827 unique CDR3  
6 unique J



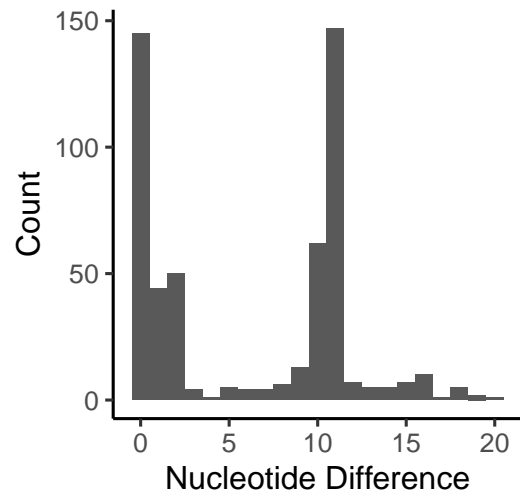
### IGHV1-24\*01

530 sequences assigned  
367 (69.2%) exact matches, in which:  
349 unique CDR3  
6 unique J



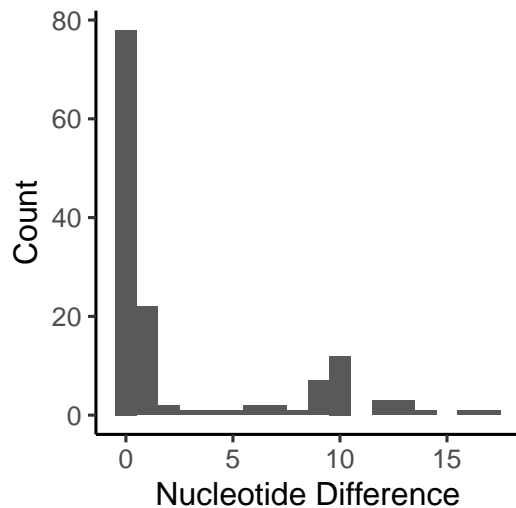
### IGHV1-46\*03

534 sequences assigned  
145 (27.2%) exact matches, in which:  
142 unique CDR3  
5 unique J



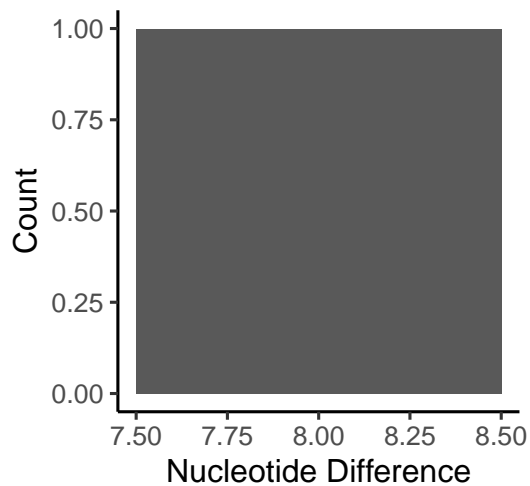
### IGHV1-58\*02

139 sequences assigned  
78 (56.1%) exact matches, in which:  
73 unique CDR3  
5 unique J



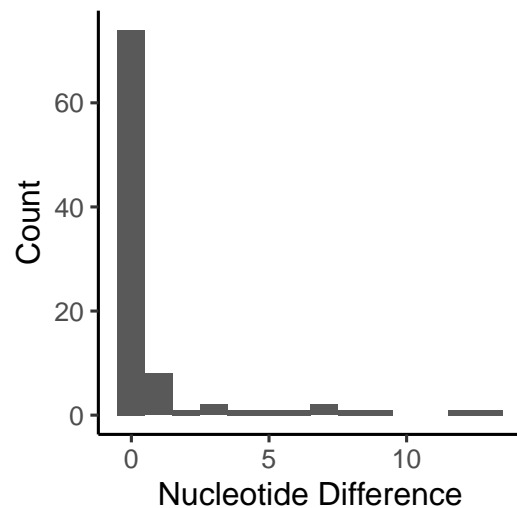
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



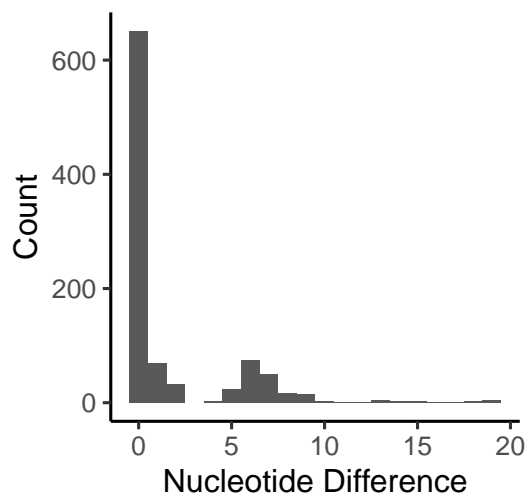
### IGHV2-26\*01

95 sequences assigned  
74 (77.9%) exact matches, in which:  
70 unique CDR3  
5 unique J



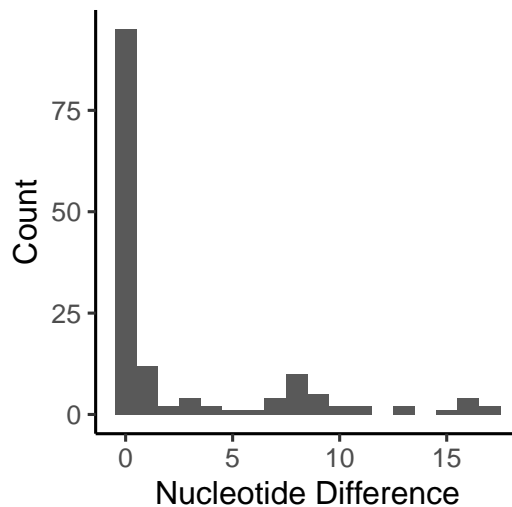
### IGHV1-69\*04\_09

958 sequences assigned  
651 (68%) exact matches, in which:  
641 unique CDR3  
6 unique J



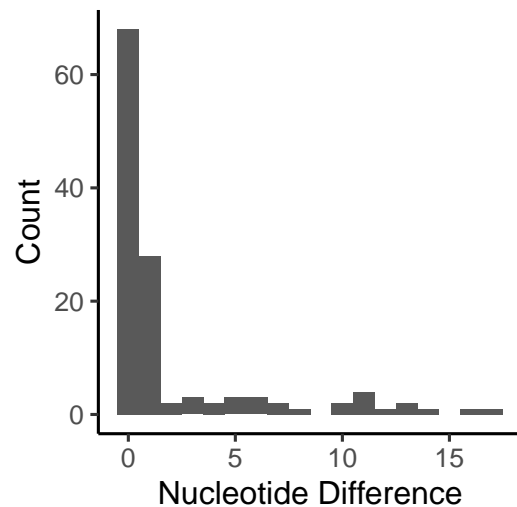
### IGHV2-5\*01

151 sequences assigned  
95 (62.9%) exact matches, in which:  
88 unique CDR3  
5 unique J



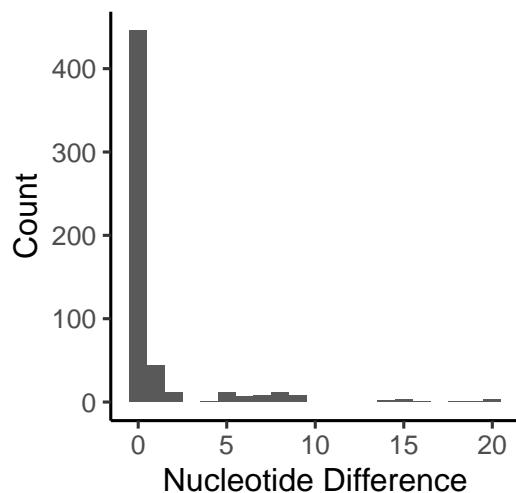
### IGHV2-70\*11\_15

133 sequences assigned  
68 (51.1%) exact matches, in which:  
63 unique CDR3  
5 unique J



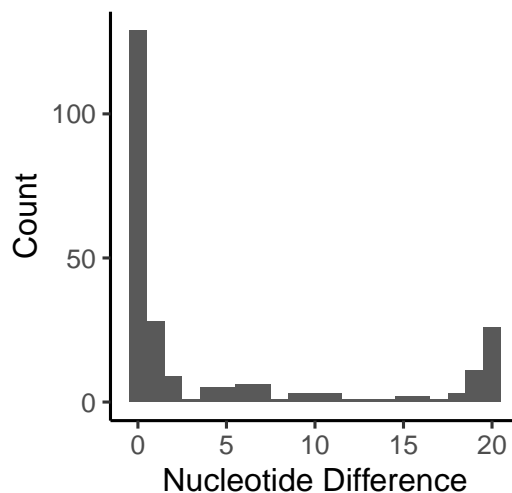
### IGHV1-69\*04\_09\_G112A

559 sequences assigned  
446 (79.8%) exact matches, in which:  
442 unique CDR3  
6 unique J



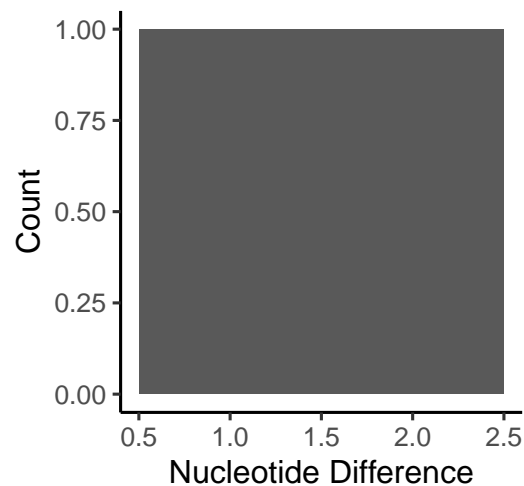
### IGHV2-5\*02

255 sequences assigned  
129 (50.6%) exact matches, in which:  
123 unique CDR3  
6 unique J



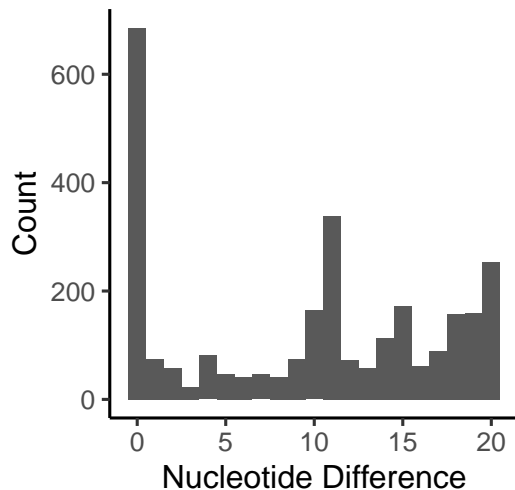
### IGHV2-70D\*04

2 sequences assigned  
No exact matches.



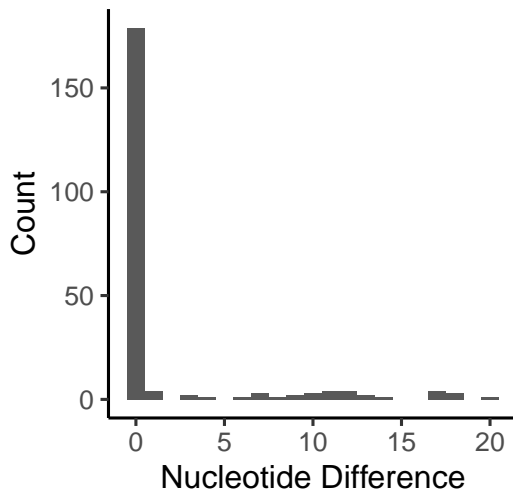
### IGHV3-7\*01

3442 sequences assigned  
686 (19.9%) exact matches, in which:  
428 unique CDR3  
6 unique J



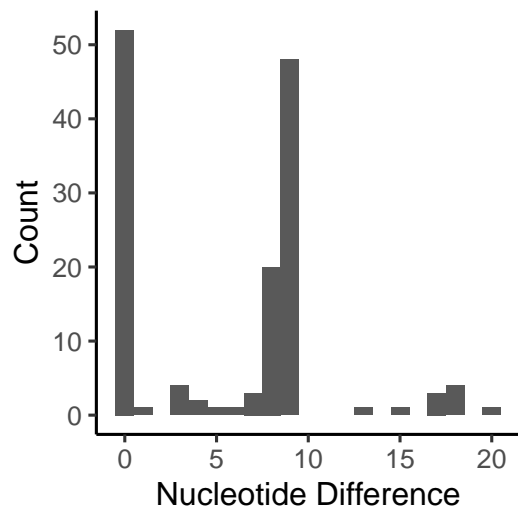
### IGHV3-13\*01

217 sequences assigned  
179 (82.5%) exact matches, in which:  
103 unique CDR3  
5 unique J



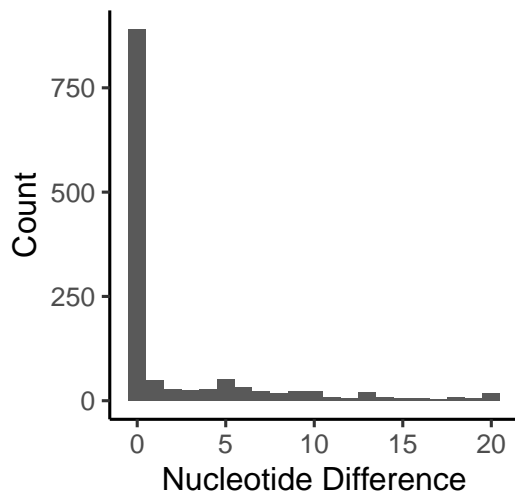
### IGHV3-20\*01\_02

143 sequences assigned  
52 (36.4%) exact matches, in which:  
32 unique CDR3  
5 unique J



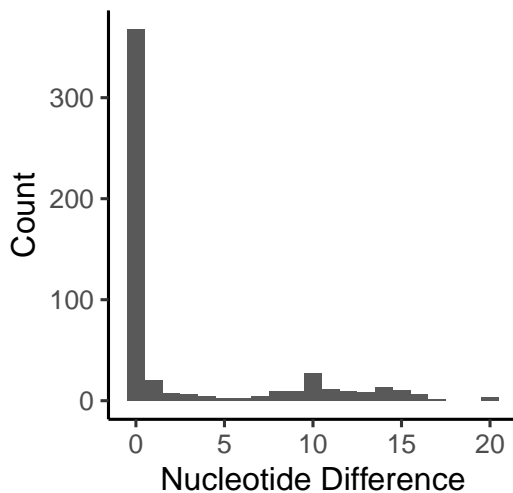
### IGHV3-9\*01

1483 sequences assigned  
891 (60.1%) exact matches, in which:  
538 unique CDR3  
6 unique J



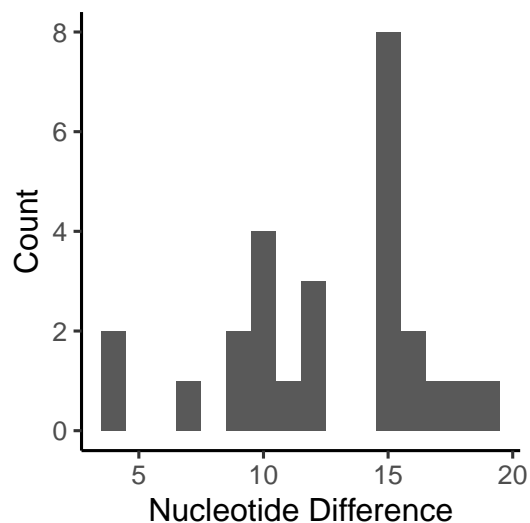
### IGHV3-15\*01\_02

581 sequences assigned  
368 (63.3%) exact matches, in which:  
249 unique CDR3  
6 unique J



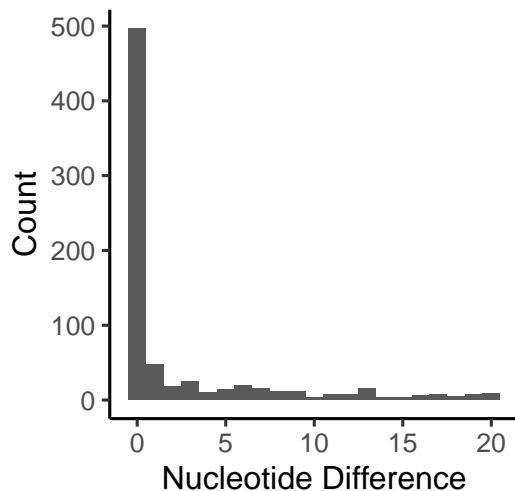
### IGHV3-20\*03\_04

33 sequences assigned  
No exact matches.



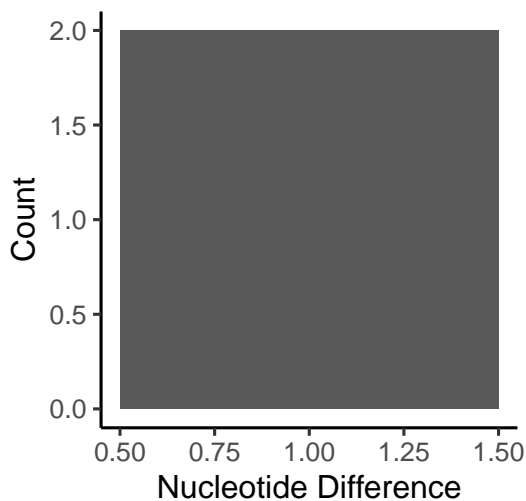
### IGHV3-11\*01

806 sequences assigned  
497 (61.7%) exact matches, in which:  
323 unique CDR3  
6 unique J



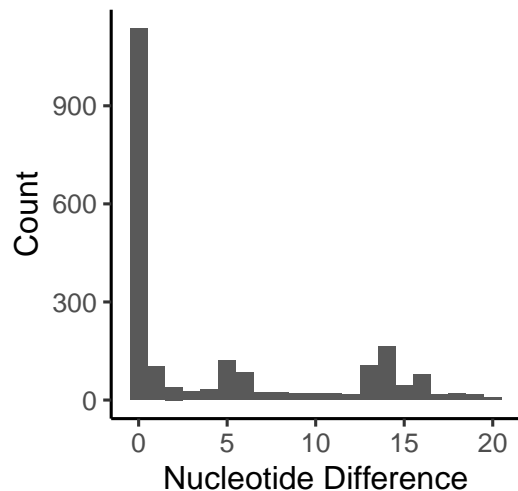
### IGHV3-19\*01

2 sequences assigned  
No exact matches.



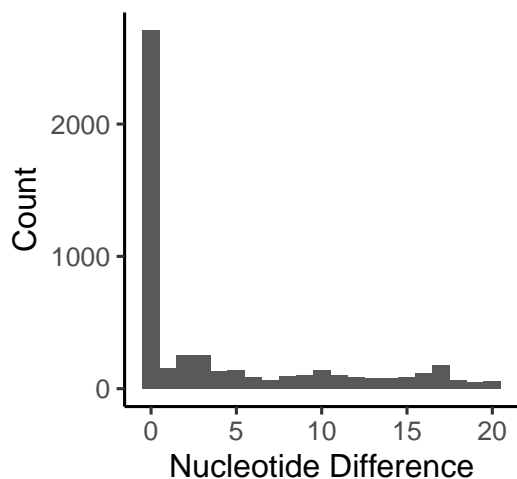
### IGHV3-21\*01\_02

2164 sequences assigned  
1137 (52.5%) exact matches, in which:  
705 unique CDR3  
6 unique J



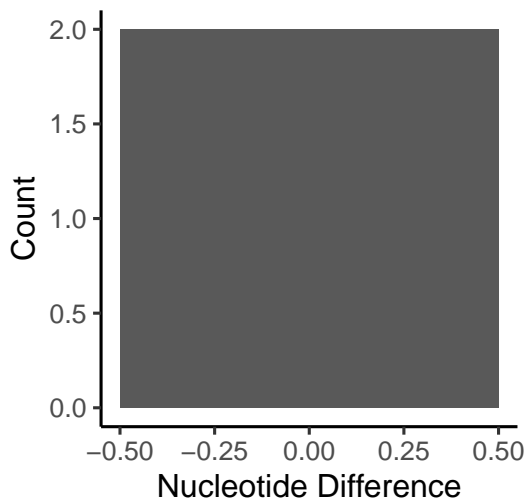
### IGHV3-23\*01\_04

5489 sequences assigned  
2708 (49.3%) exact matches, in which:  
1551 unique CDR3  
6 unique J



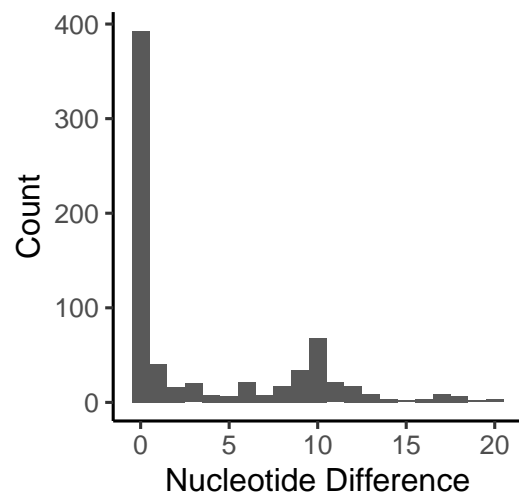
### IGHV3-38\*02

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



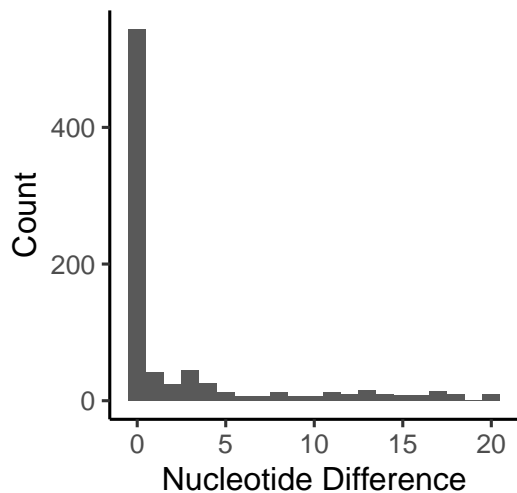
### IGHV3-48\*03

745 sequences assigned  
393 (52.8%) exact matches, in which:  
247 unique CDR3  
6 unique J



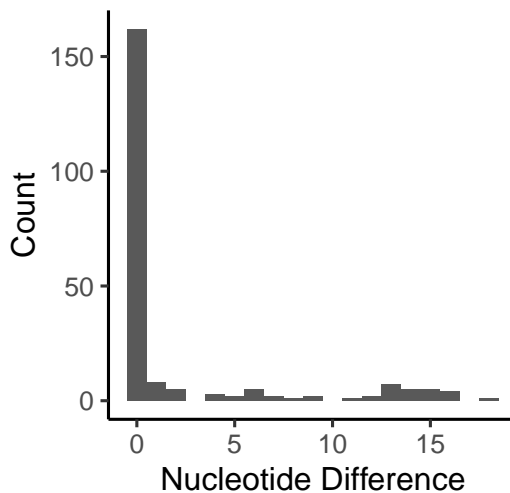
### IGHV3-30-3\*01

861 sequences assigned  
544 (63.2%) exact matches, in which:  
336 unique CDR3  
6 unique J



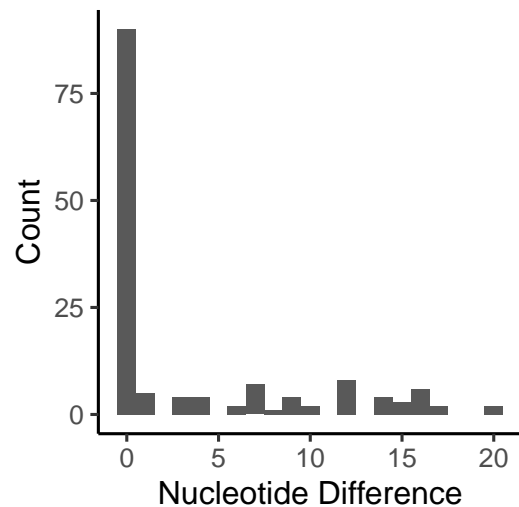
### IGHV3-43\*02

286 sequences assigned  
162 (56.6%) exact matches, in which:  
98 unique CDR3  
6 unique J



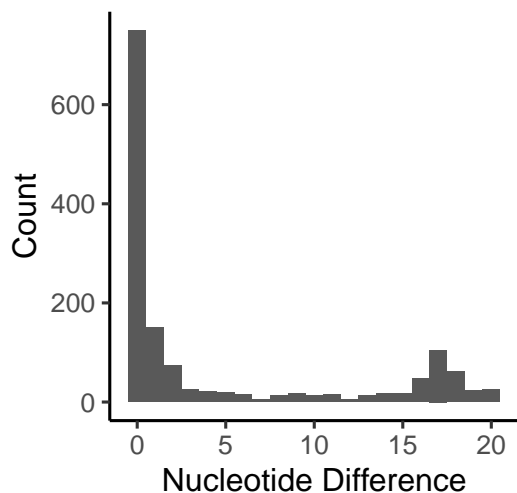
### IGHV3-49\*04

150 sequences assigned  
90 (60%) exact matches, in which:  
57 unique CDR3  
4 unique J



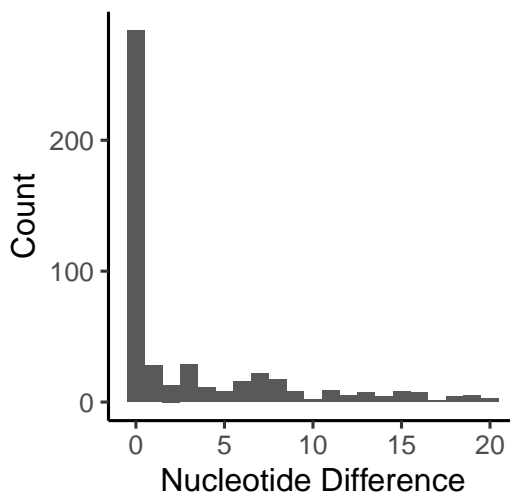
### IGHV3-33\*01

1520 sequences assigned  
750 (49.3%) exact matches, in which:  
489 unique CDR3  
6 unique J



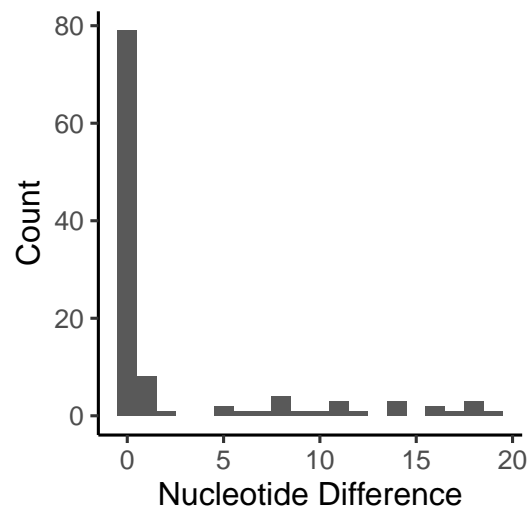
### IGHV3-48\*01

501 sequences assigned  
284 (56.7%) exact matches, in which:  
174 unique CDR3  
6 unique J



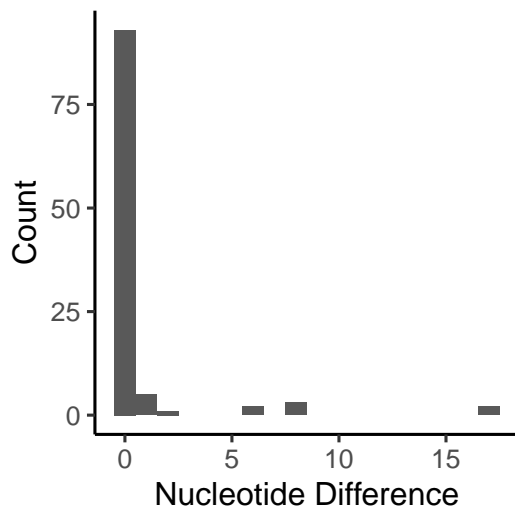
### IGHV3-49\*03\_05

113 sequences assigned  
79 (69.9%) exact matches, in which:  
53 unique CDR3  
5 unique J



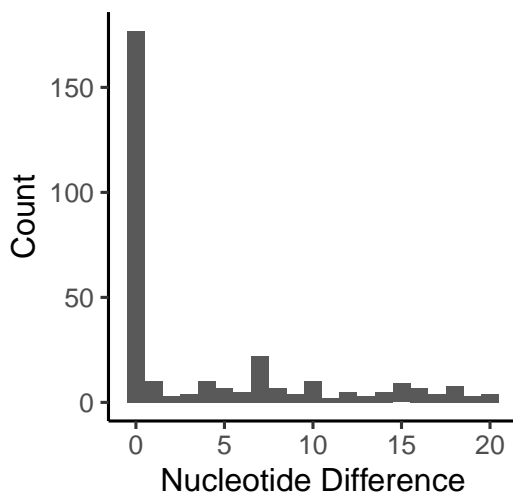
### IGHV3-53\*04

107 sequences assigned  
93 (86.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



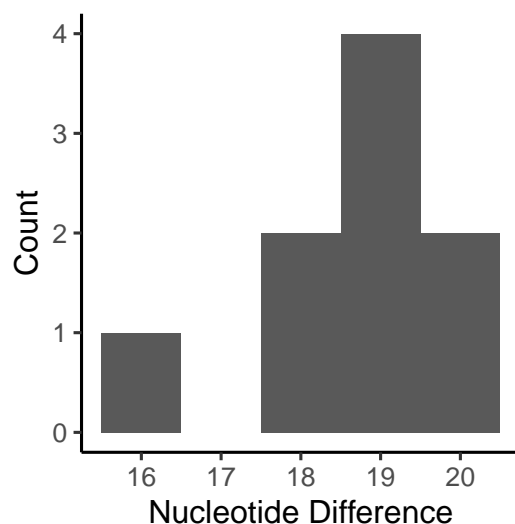
### IGHV3-66\*01

421 sequences assigned  
177 (42%) exact matches, in which:  
107 unique CDR3  
6 unique J



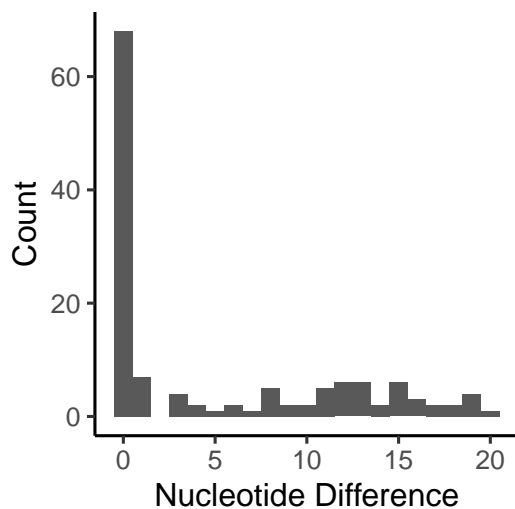
### IGHV3-69-1\*02

9 sequences assigned  
No exact matches.



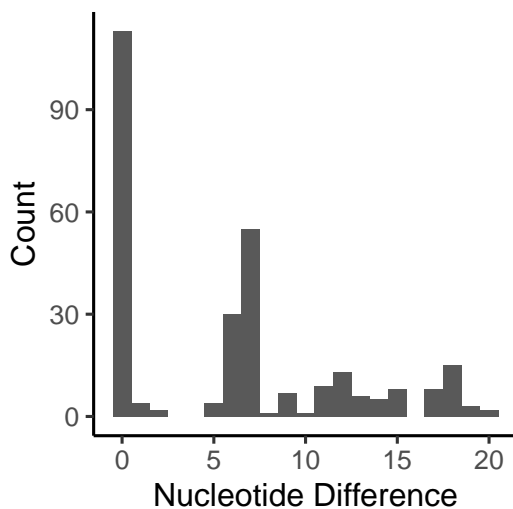
### IGHV3-53\*01\_02

138 sequences assigned  
68 (49.3%) exact matches, in which:  
44 unique CDR3  
6 unique J



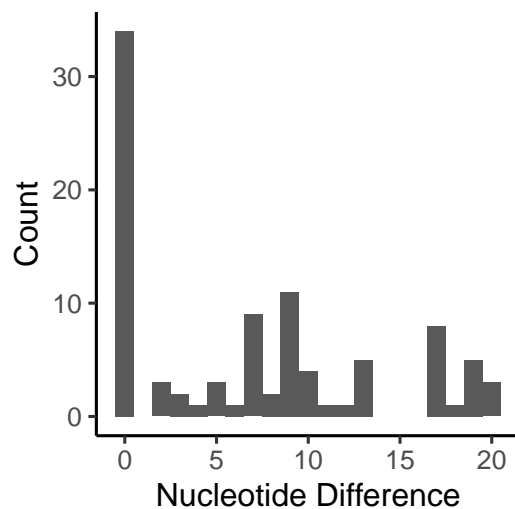
### IGHV3-66\*02

299 sequences assigned  
113 (37.8%) exact matches, in which:  
69 unique CDR3  
5 unique J



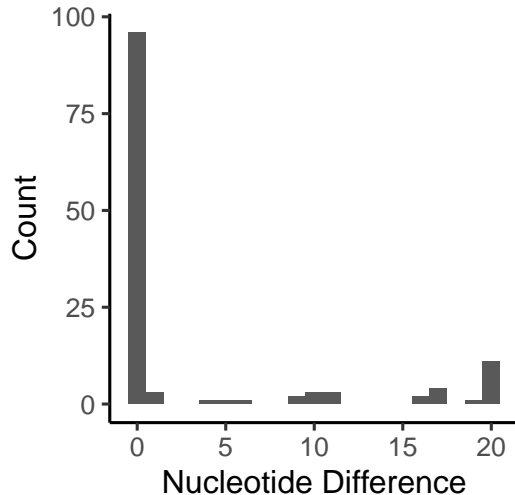
### IGHV3-72\*01

99 sequences assigned  
34 (34.3%) exact matches, in which:  
21 unique CDR3  
5 unique J



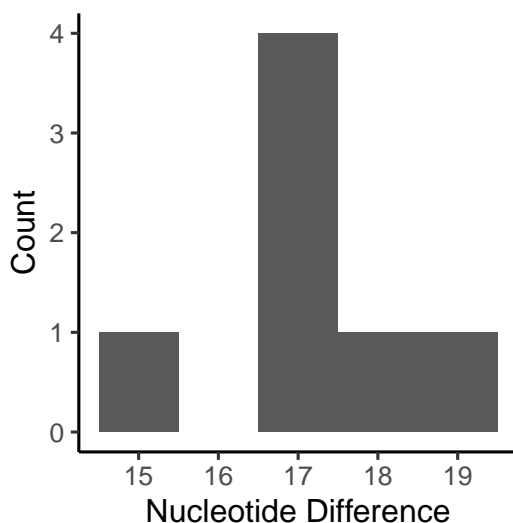
### IGHV3-64\*01

149 sequences assigned  
96 (64.4%) exact matches, in which:  
57 unique CDR3  
6 unique J



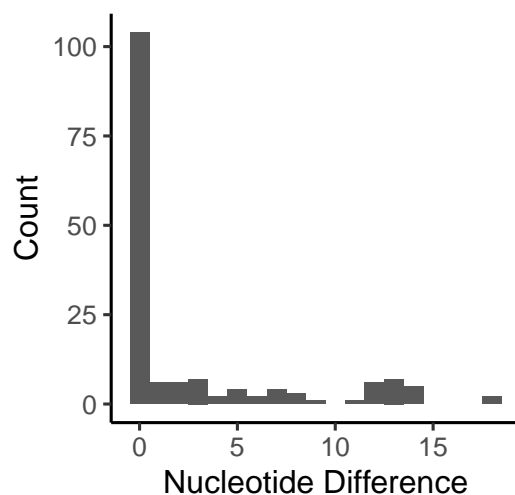
### IGHV3-69-1\*01

7 sequences assigned  
No exact matches.



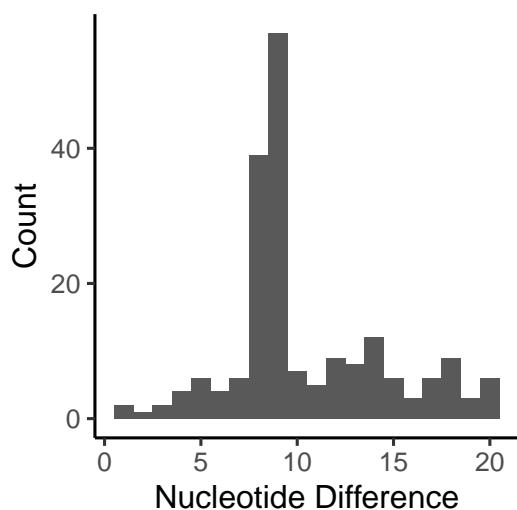
### IGHV3-73\*01\_02

160 sequences assigned  
104 (65%) exact matches, in which:  
65 unique CDR3  
5 unique J



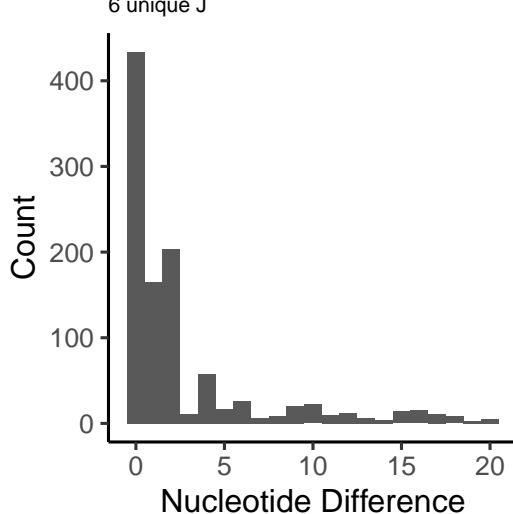
### IGHV3-74\*03

447 sequences assigned  
No exact matches.



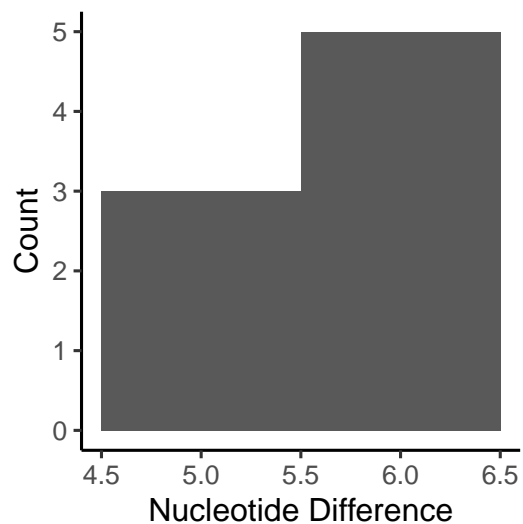
### IGHV4-4\*07

1163 sequences assigned  
434 (37.3%) exact matches, in which:  
404 unique CDR3  
6 unique J



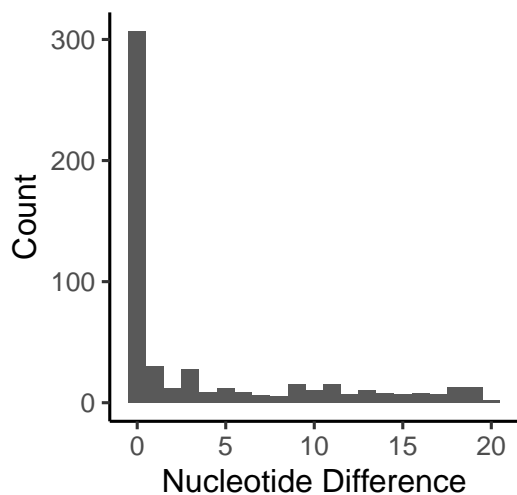
### IGHV4-30-4\*07

8 sequences assigned  
No exact matches.



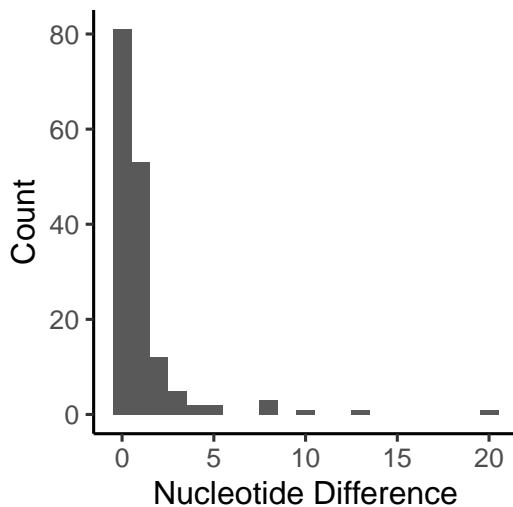
### IGHV3-74\*01\_02

555 sequences assigned  
307 (55.3%) exact matches, in which:  
174 unique CDR3  
6 unique J



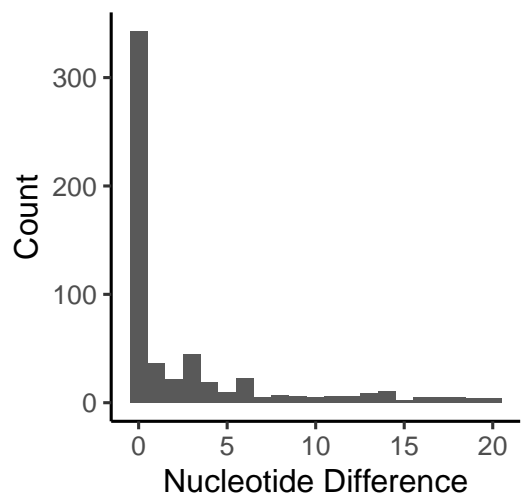
### IGHV4-4\*07\_C300T

162 sequences assigned  
81 (50%) exact matches, in which:  
81 unique CDR3  
5 unique J



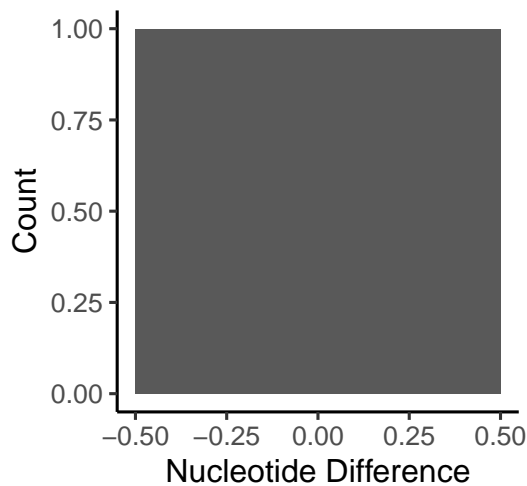
### IGHV4-31\*02

618 sequences assigned  
343 (55.5%) exact matches, in which:  
339 unique CDR3  
6 unique J



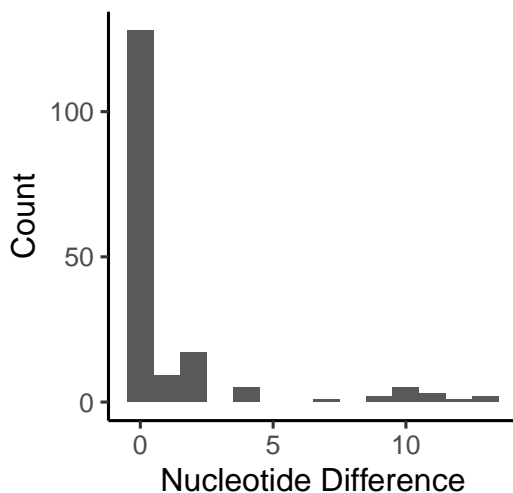
### IGHV3-64D\*06

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



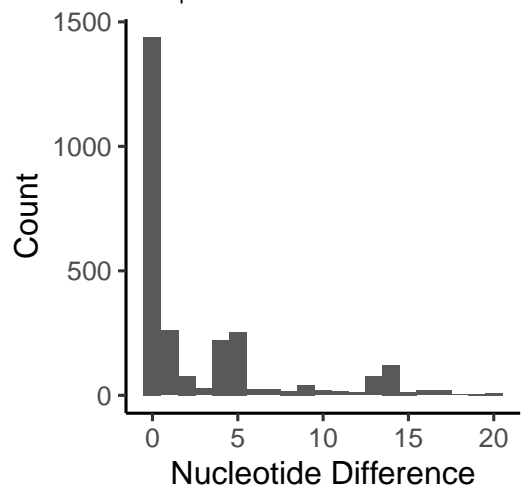
### IGHV4-30-2\*01

175 sequences assigned  
128 (73.1%) exact matches, in which:  
95 unique CDR3  
6 unique J



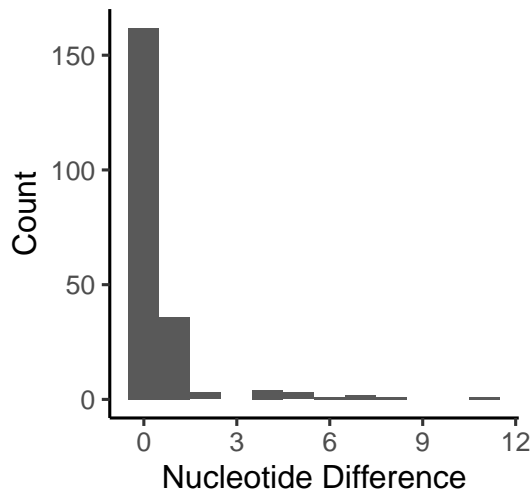
### IGHV4-34\*01\_02

2738 sequences assigned  
1439 (52.6%) exact matches, in which:  
1069 unique CDR3  
6 unique J



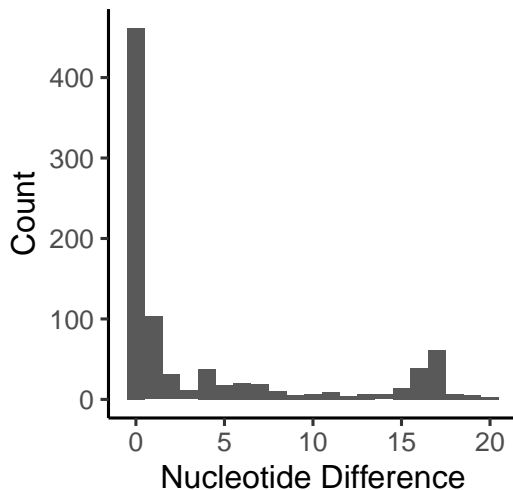
### IGHV4–34\*01\_02\_C288T

214 sequences assigned  
162 (75.7%) exact matches, in which:  
154 unique CDR3  
6 unique J



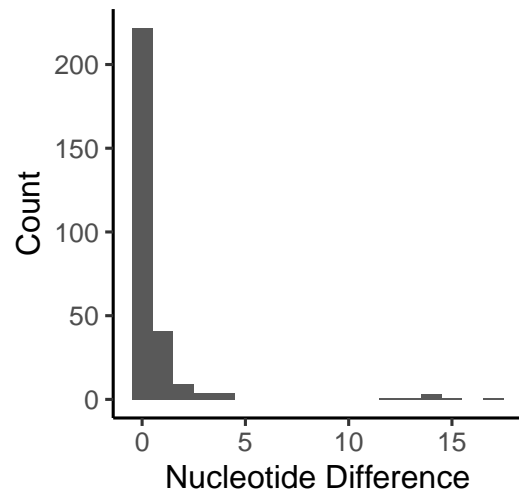
### IGHV4–59\*08

947 sequences assigned  
462 (48.8%) exact matches, in which:  
431 unique CDR3  
6 unique J



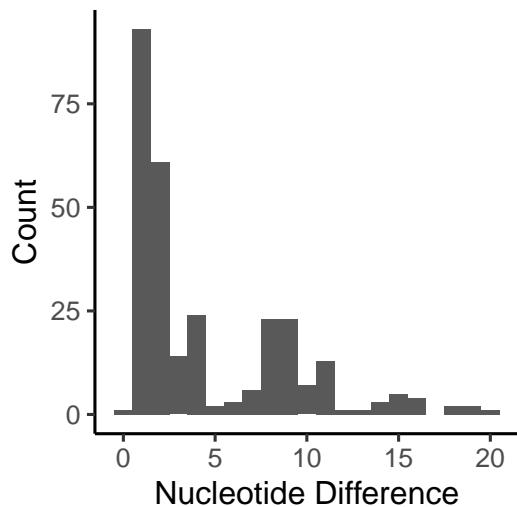
### IGHV4–59\*12\_C300T

287 sequences assigned  
222 (77.4%) exact matches, in which:  
220 unique CDR3  
6 unique J



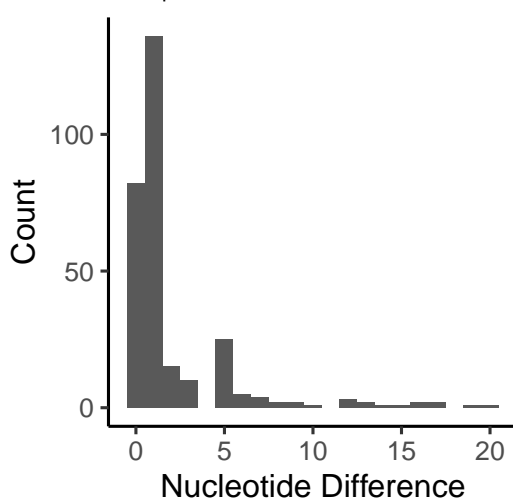
### IGHV4–39\*07

291 sequences assigned  
1 (0.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



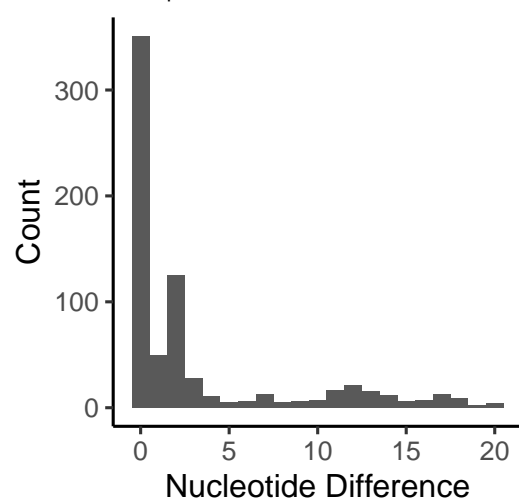
### IGHV4–59\*12

301 sequences assigned  
82 (27.2%) exact matches, in which:  
82 unique CDR3  
6 unique J



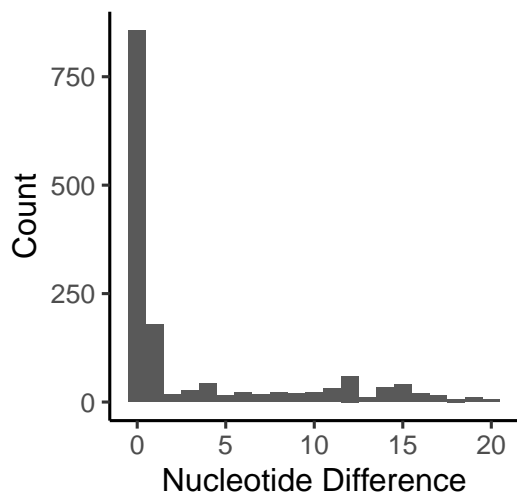
### IGHV4–61\*02

838 sequences assigned  
351 (41.9%) exact matches, in which:  
338 unique CDR3  
6 unique J



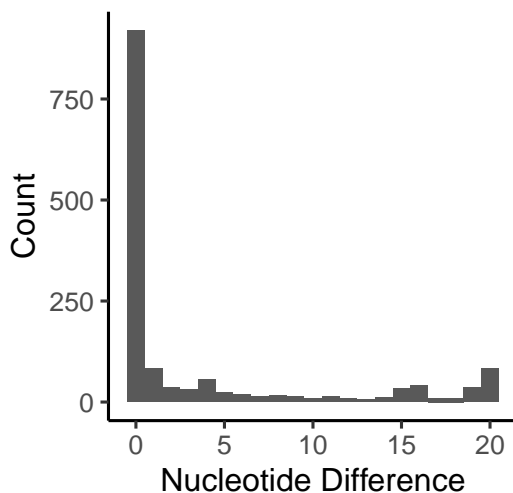
### IGHV4–39\*02\_C258G

1562 sequences assigned  
857 (54.9%) exact matches, in which:  
749 unique CDR3  
6 unique J



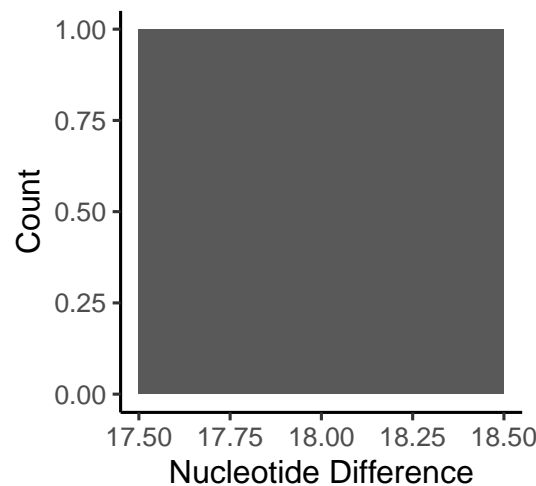
### IGHV4–59\*02\_G88A

1556 sequences assigned  
920 (59.1%) exact matches, in which:  
848 unique CDR3  
6 unique J



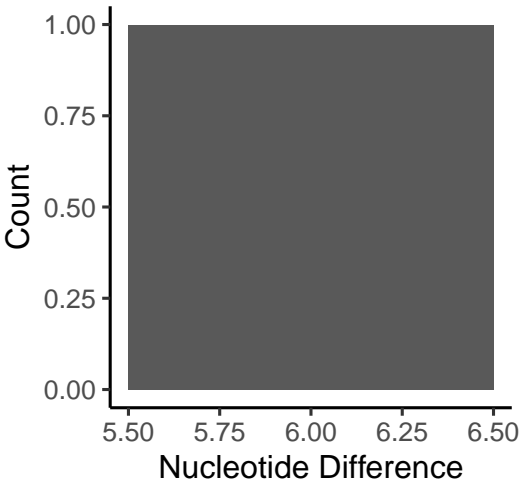
### IGHV1/OR15–1\*04

1 sequences assigned  
No exact matches.



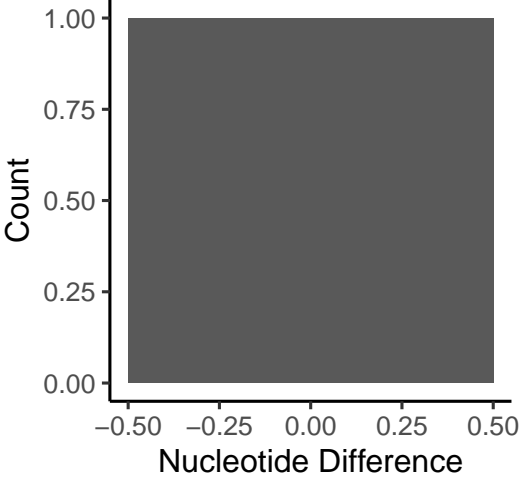
IGHV1/OR15-2\*02\_03

1 sequences assigned  
No exact matches.



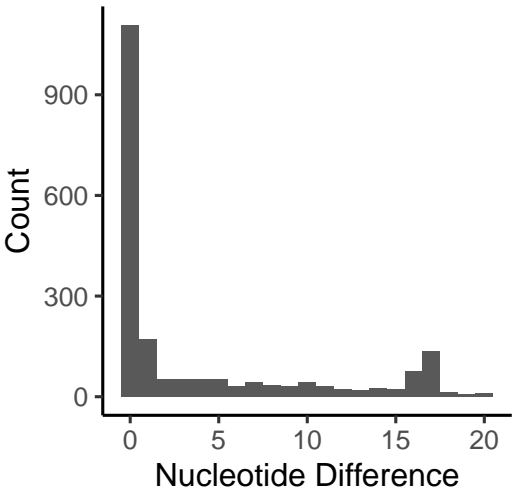
IGHV7-4-1\*02

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



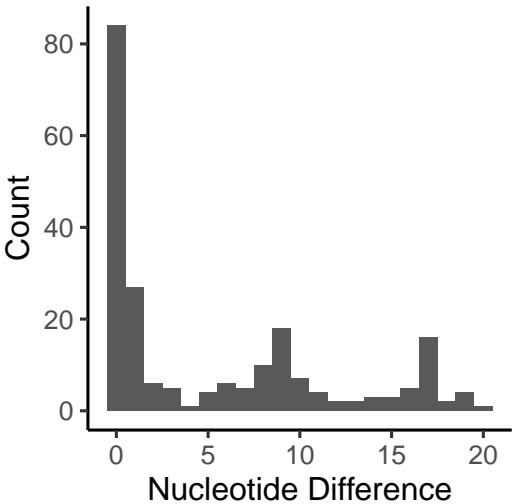
IGHV5-51\*07\_A128G

2064 sequences assigned  
1108 (53.7%) exact matches, in which:  
634 unique CDR3  
6 unique J



IGHV6-1\*01\_02

223 sequences assigned  
84 (37.7%) exact matches, in which:  
82 unique CDR3  
5 unique J







Warning – no inferred sequences found.