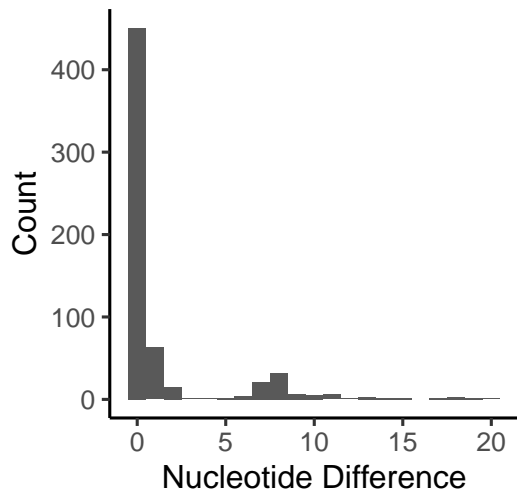


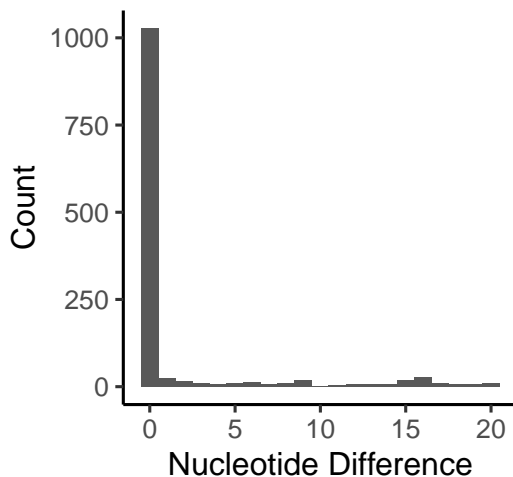
### IGHV1-2\*04

632 sequences assigned  
451 (71.4%) exact matches, in which:  
448 unique CDR3  
6 unique J



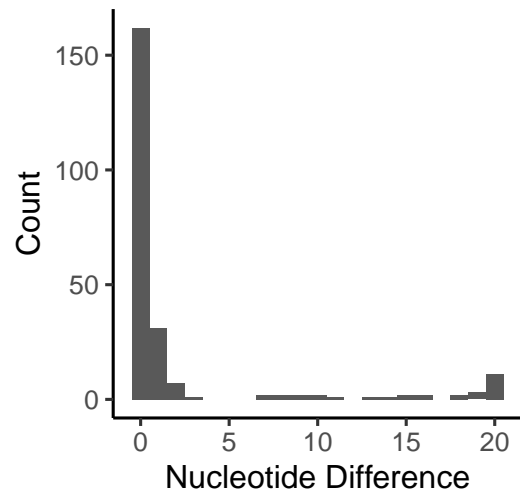
### IGHV1-18\*01

1334 sequences assigned  
1027 (77%) exact matches, in which:  
1021 unique CDR3  
6 unique J



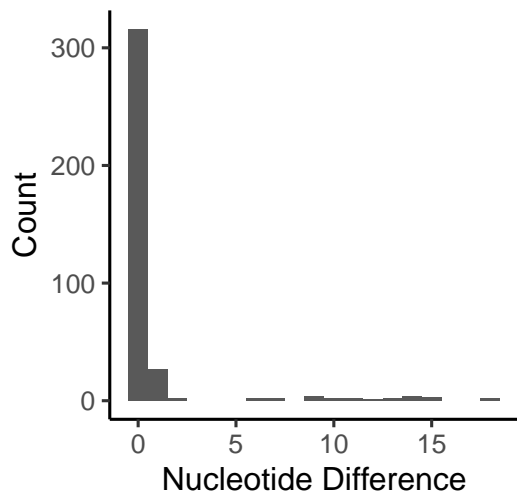
### IGHV1-46\*03

271 sequences assigned  
162 (59.8%) exact matches, in which:  
159 unique CDR3  
5 unique J



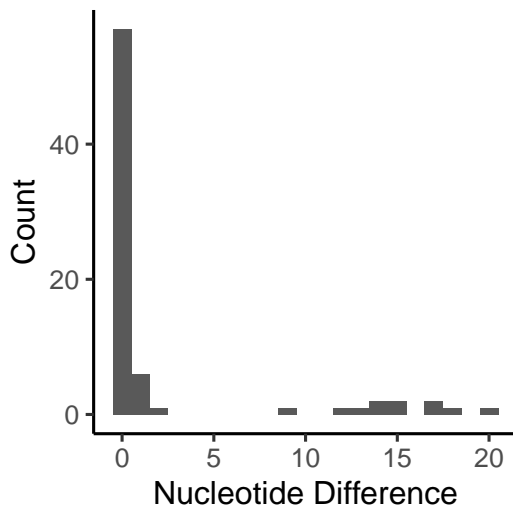
### IGHV1-3\*01\_05

373 sequences assigned  
316 (84.7%) exact matches, in which:  
311 unique CDR3  
6 unique J



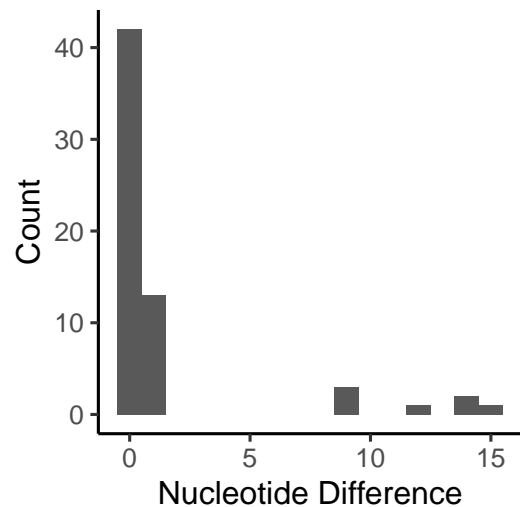
### IGHV1-24\*01

82 sequences assigned  
57 (69.5%) exact matches, in which:  
57 unique CDR3  
4 unique J



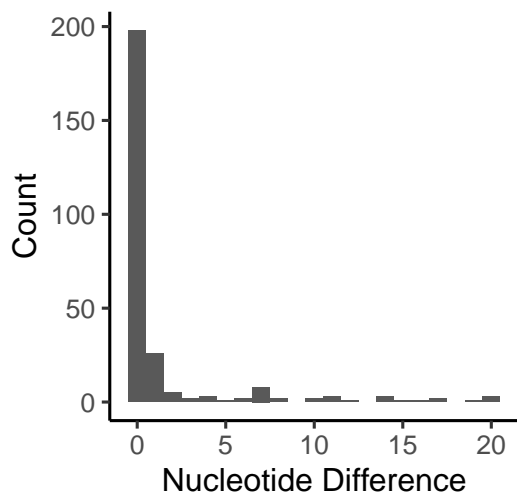
### IGHV1-58\*02

63 sequences assigned  
42 (66.7%) exact matches, in which:  
42 unique CDR3  
4 unique J



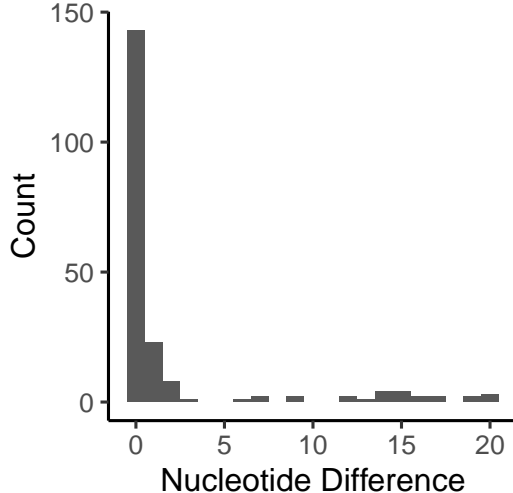
### IGHV1-8\*01

269 sequences assigned  
198 (73.6%) exact matches, in which:  
198 unique CDR3  
6 unique J



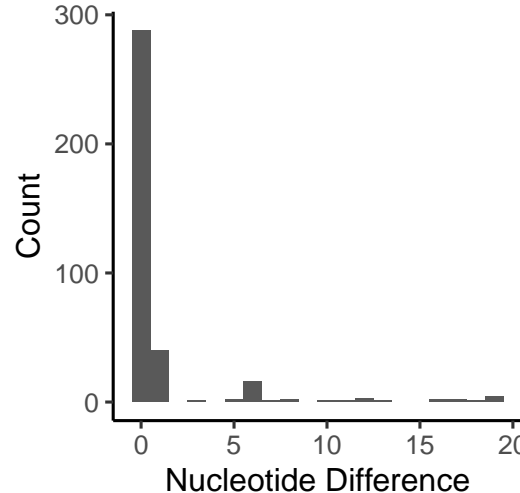
### IGHV1-46\*01

207 sequences assigned  
143 (69.1%) exact matches, in which:  
143 unique CDR3  
5 unique J



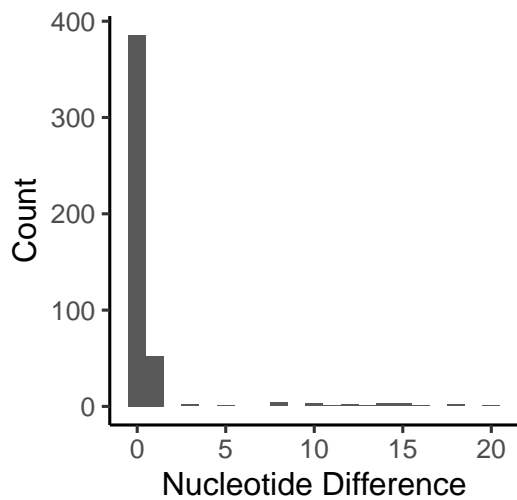
### IGHV1-69\*04\_09

378 sequences assigned  
288 (76.2%) exact matches, in which:  
288 unique CDR3  
6 unique J



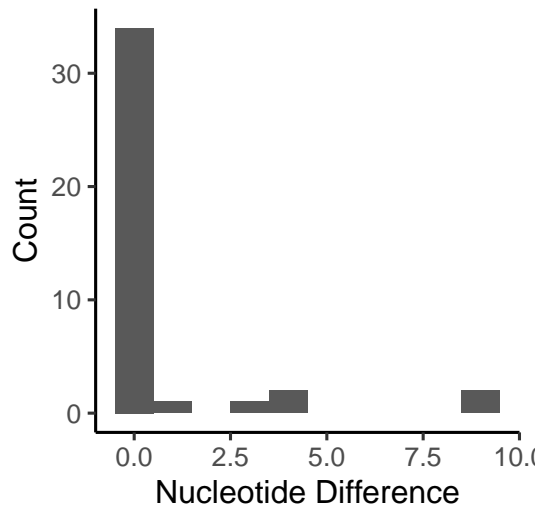
### IGHV1–69\*04\_09\_G112A

478 sequences assigned  
386 (80.8%) exact matches, in which:  
385 unique CDR3  
6 unique J



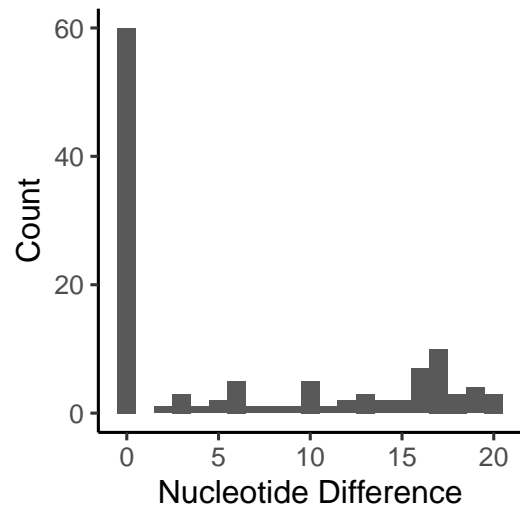
### IGHV2–26\*01

40 sequences assigned  
34 (85%) exact matches, in which:  
33 unique CDR3  
4 unique J



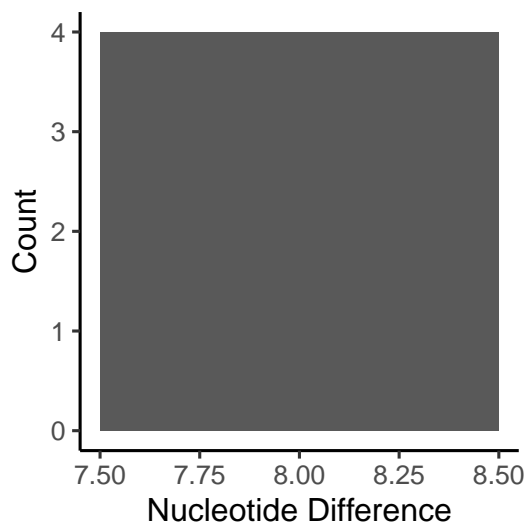
### IGHV3–7\*04

126 sequences assigned  
60 (47.6%) exact matches, in which:  
44 unique CDR3  
4 unique J



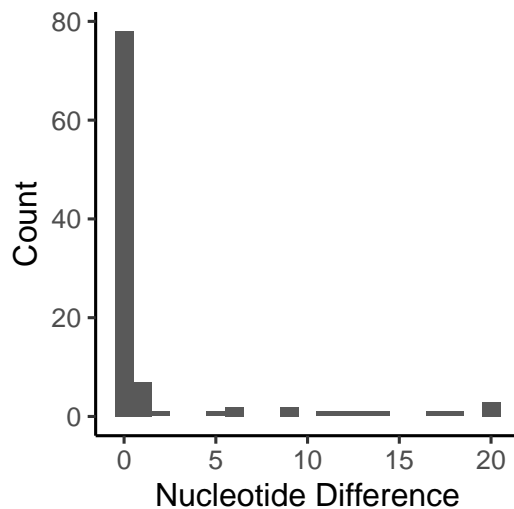
### IGHV1–NL1\*01

4 sequences assigned  
No exact matches.



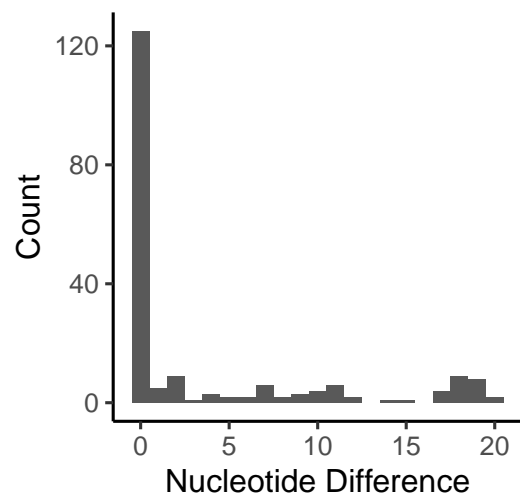
### IGHV2–70\*11\_15

101 sequences assigned  
78 (77.2%) exact matches, in which:  
76 unique CDR3  
4 unique J



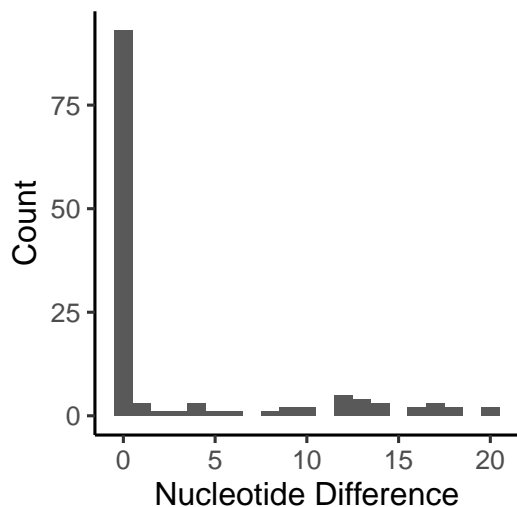
### IGHV3–9\*01

333 sequences assigned  
125 (37.5%) exact matches, in which:  
88 unique CDR3  
5 unique J



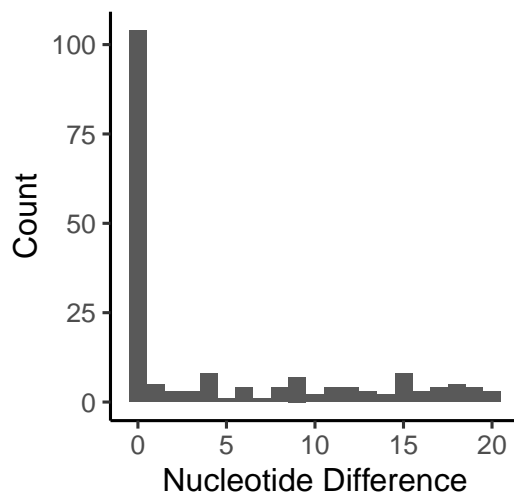
### IGHV2–5\*02

132 sequences assigned  
93 (70.5%) exact matches, in which:  
93 unique CDR3  
5 unique J



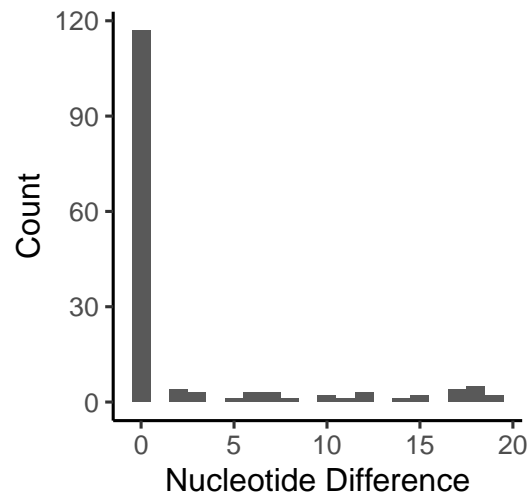
### IGHV3–7\*01

192 sequences assigned  
104 (54.2%) exact matches, in which:  
74 unique CDR3  
5 unique J



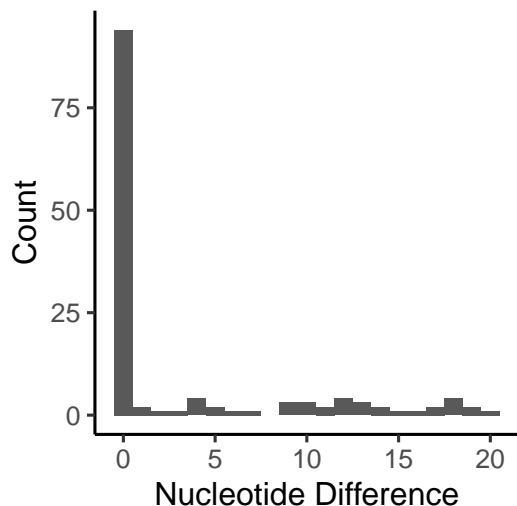
### IGHV3–11\*01

157 sequences assigned  
117 (74.5%) exact matches, in which:  
90 unique CDR3  
5 unique J



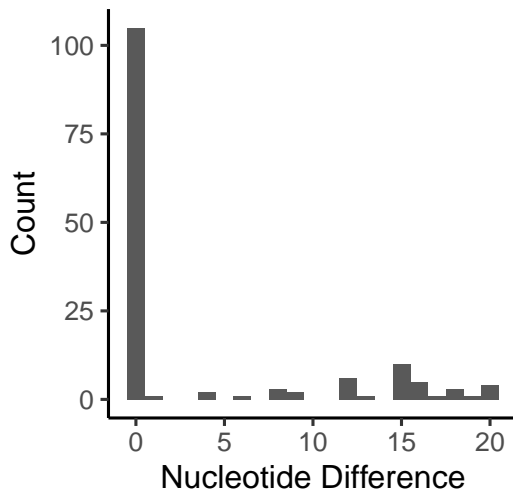
### IGHV3-11\*06\_T300C

160 sequences assigned  
94 (58.8%) exact matches, in which:  
73 unique CDR3  
4 unique J



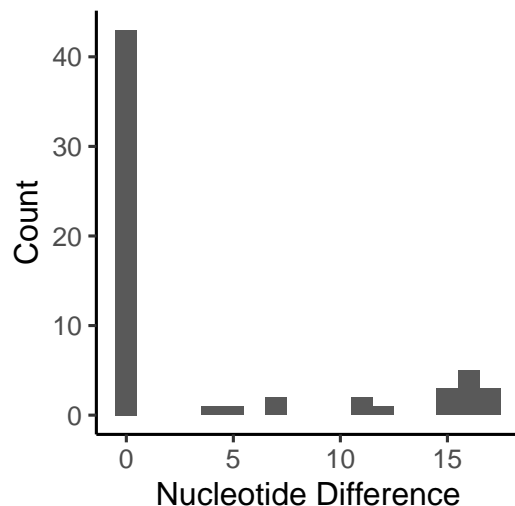
### IGHV3-15\*01\_02

174 sequences assigned  
105 (60.3%) exact matches, in which:  
93 unique CDR3  
5 unique J



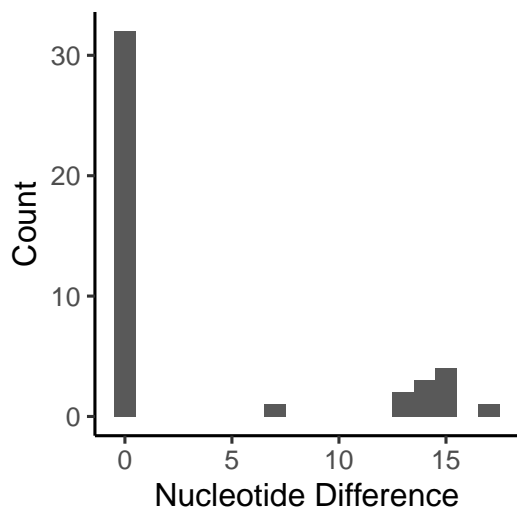
### IGHV3-20\*03\_04

69 sequences assigned  
43 (62.3%) exact matches, in which:  
33 unique CDR3  
5 unique J



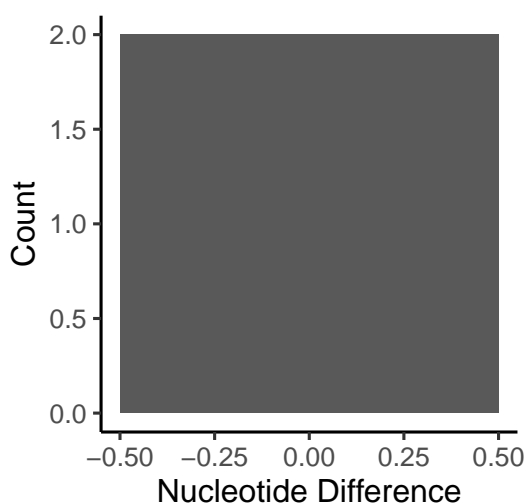
### IGHV3-13\*01

50 sequences assigned  
32 (64%) exact matches, in which:  
22 unique CDR3  
5 unique J



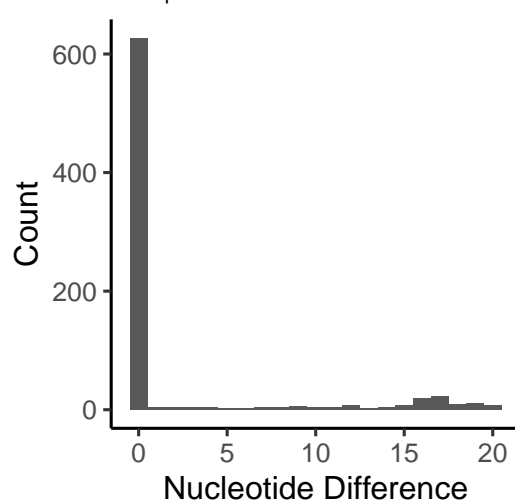
### IGHV3-19\*01

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



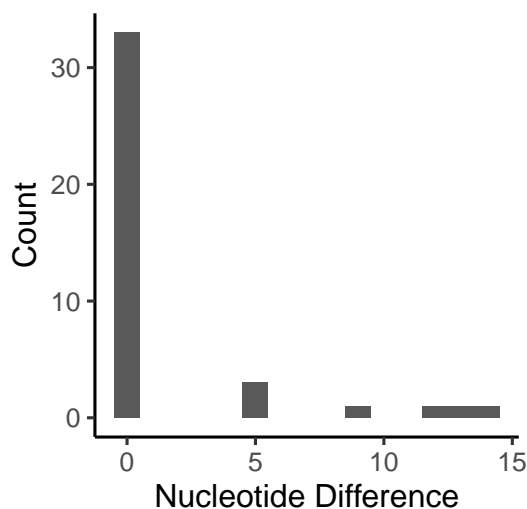
### IGHV3-21\*01\_02

839 sequences assigned  
627 (74.7%) exact matches, in which:  
479 unique CDR3  
6 unique J



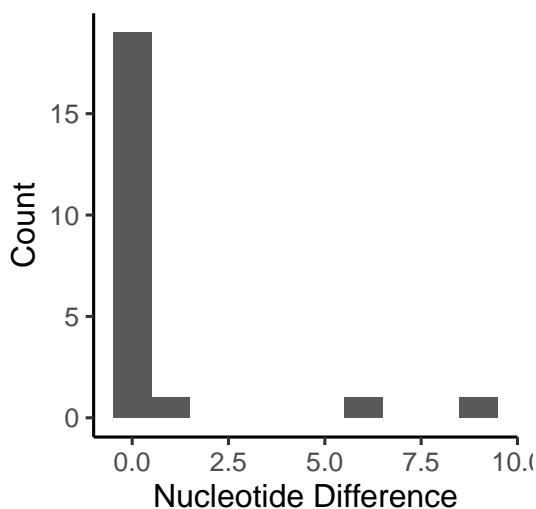
### IGHV3-13\*04

42 sequences assigned  
33 (78.6%) exact matches, in which:  
21 unique CDR3  
3 unique J



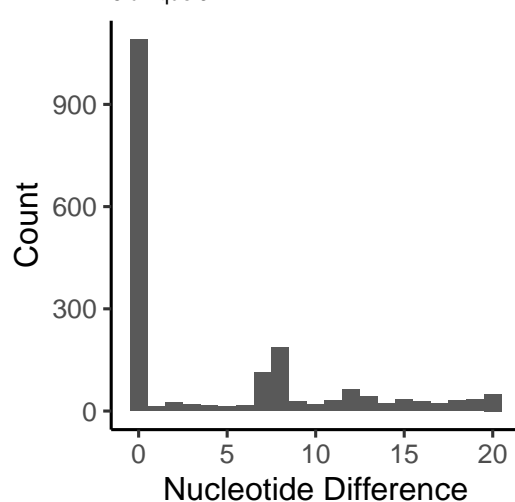
### IGHV3-20\*01\_02

22 sequences assigned  
19 (86.4%) exact matches, in which:  
16 unique CDR3  
4 unique J



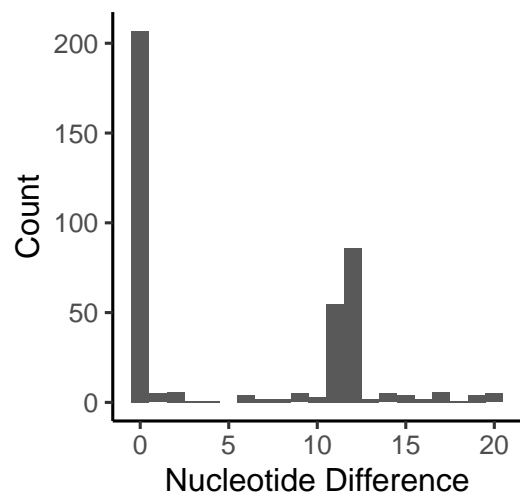
### IGHV3-23\*01\_04

2036 sequences assigned  
1091 (53.6%) exact matches, in which:  
854 unique CDR3  
6 unique J



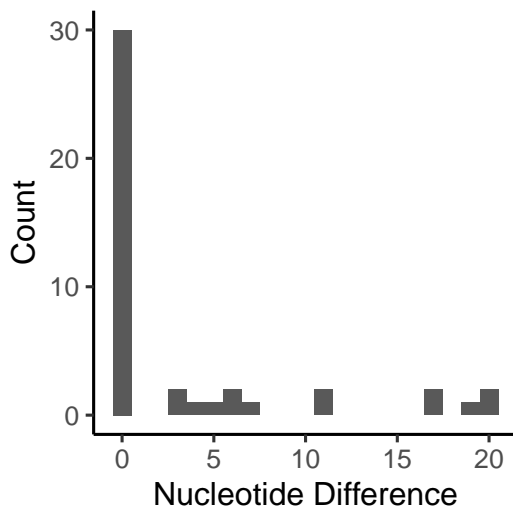
### IGHV3–30–3\*01

435 sequences assigned  
207 (47.6%) exact matches, in which:  
152 unique CDR3  
6 unique J



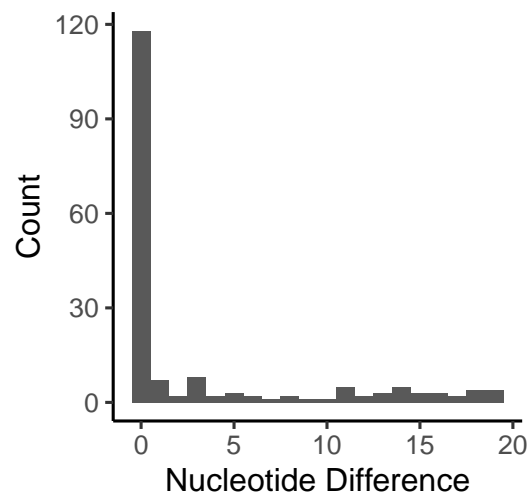
### IGHV3–43\*02

45 sequences assigned  
30 (66.7%) exact matches, in which:  
26 unique CDR3  
4 unique J



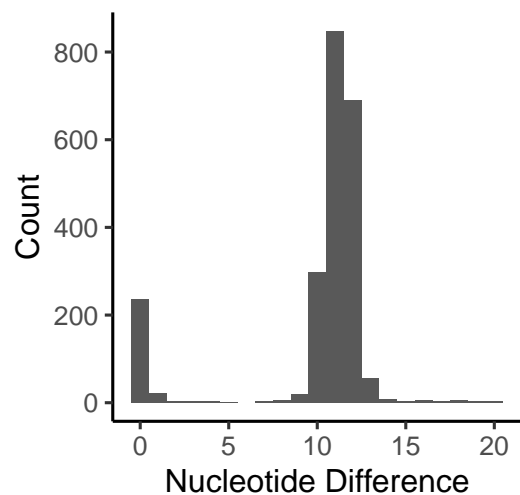
### IGHV3–48\*03

190 sequences assigned  
118 (62.1%) exact matches, in which:  
94 unique CDR3  
4 unique J



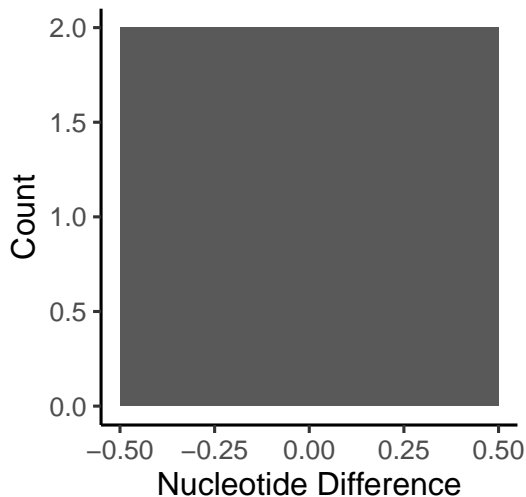
### IGHV3–33\*01

2237 sequences assigned  
237 (10.6%) exact matches, in which:  
181 unique CDR3  
5 unique J



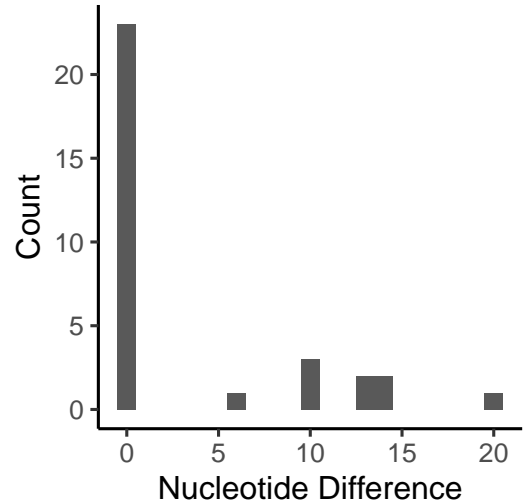
### IGHV3–47\*02

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



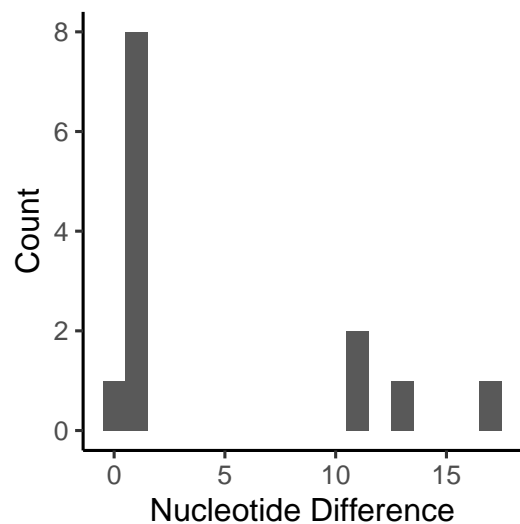
### IGHV3–49\*04

34 sequences assigned  
23 (67.6%) exact matches, in which:  
17 unique CDR3  
4 unique J



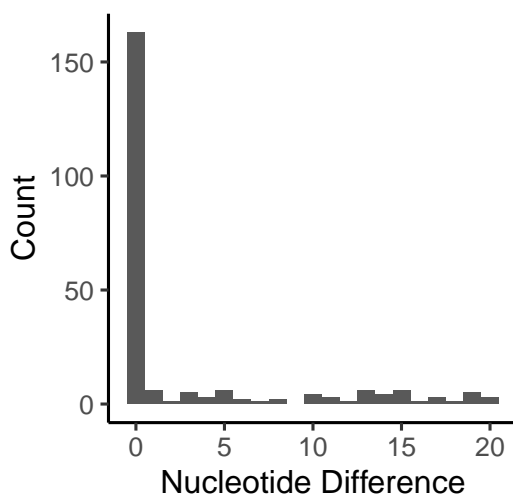
### IGHV3–33\*05

15 sequences assigned  
1 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



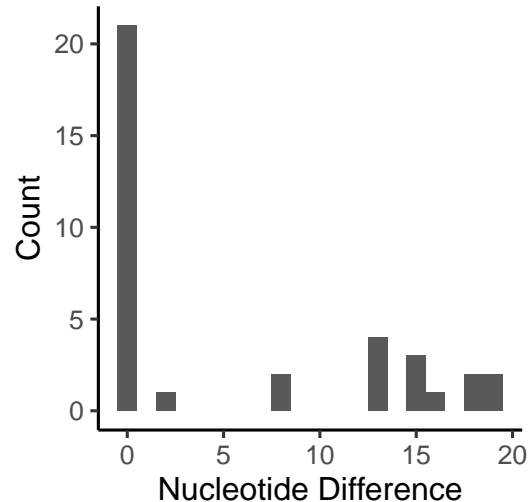
### IGHV3–48\*01

249 sequences assigned  
163 (65.5%) exact matches, in which:  
129 unique CDR3  
5 unique J



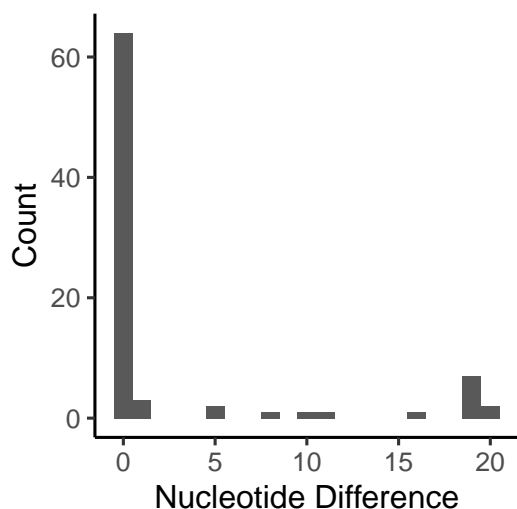
### IGHV3–49\*03\_05

44 sequences assigned  
21 (47.7%) exact matches, in which:  
16 unique CDR3  
5 unique J



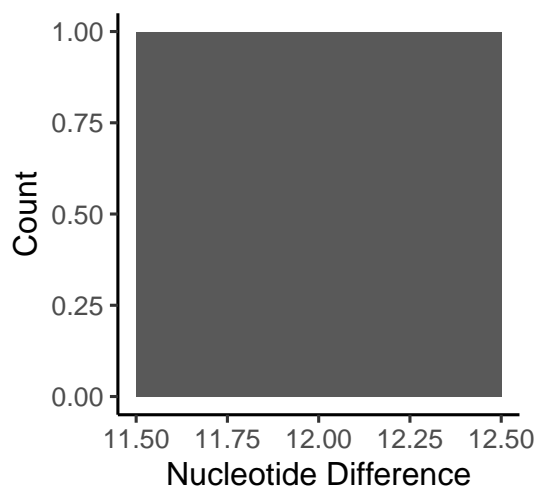
### IGHV3-53\*04

106 sequences assigned  
64 (60.4%) exact matches, in which:  
48 unique CDR3  
5 unique J



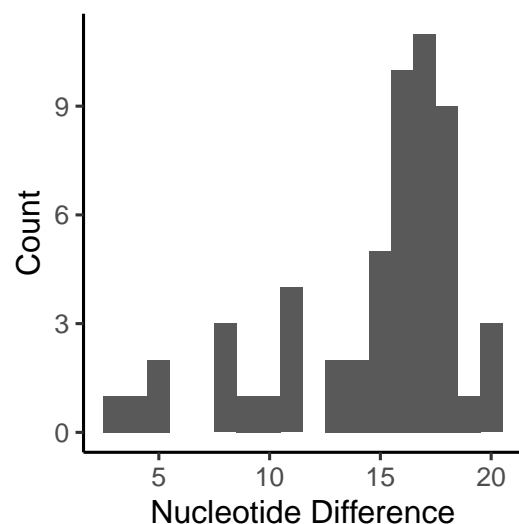
### IGHV3-69-1\*02

1 sequences assigned  
No exact matches.



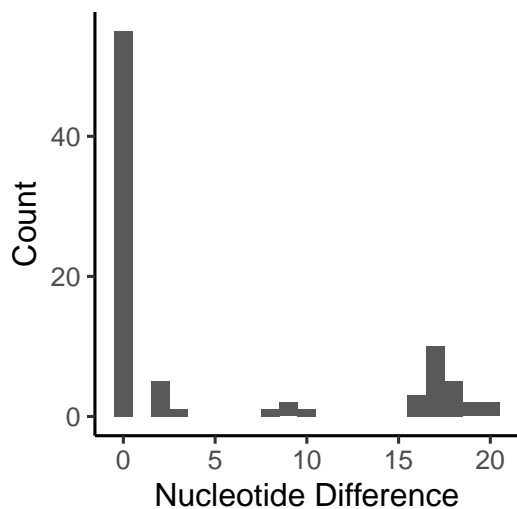
### IGHV3-74\*03

188 sequences assigned  
No exact matches.



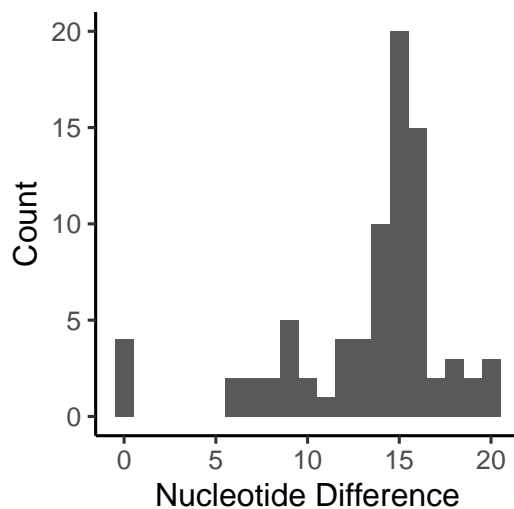
### IGHV3-64\*01

126 sequences assigned  
55 (43.7%) exact matches, in which:  
42 unique CDR3  
5 unique J



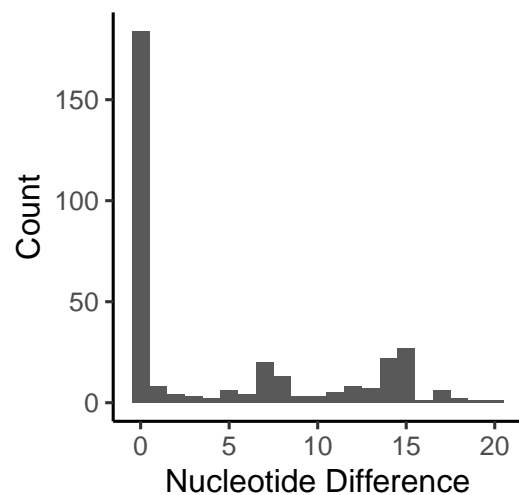
### IGHV3-72\*01

109 sequences assigned  
4 (3.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



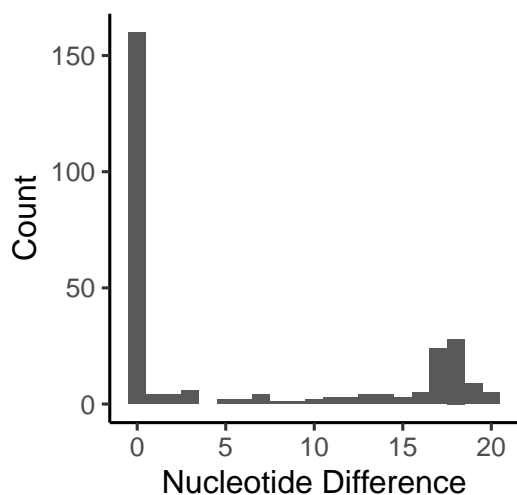
### IGHV3-74\*01\_02

385 sequences assigned  
184 (47.8%) exact matches, in which:  
129 unique CDR3  
5 unique J



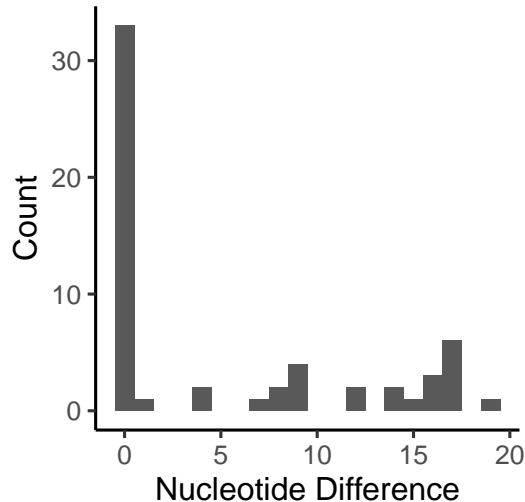
### IGHV3-66\*01

352 sequences assigned  
160 (45.5%) exact matches, in which:  
129 unique CDR3  
6 unique J



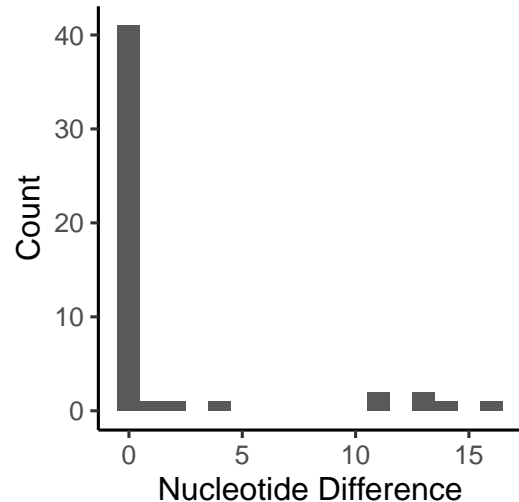
### IGHV3-73\*01\_02

67 sequences assigned  
33 (49.3%) exact matches, in which:  
31 unique CDR3  
4 unique J



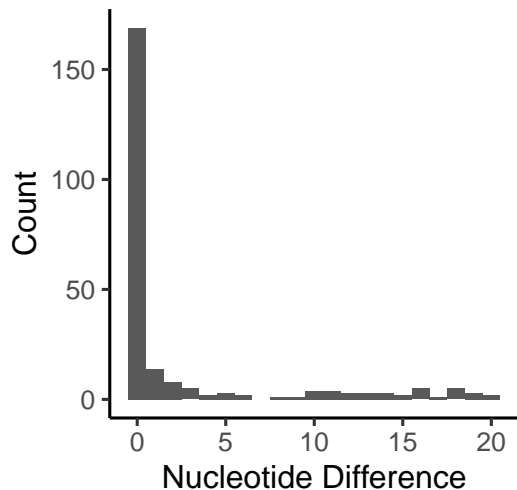
### IGHV3-64D\*06

69 sequences assigned  
41 (59.4%) exact matches, in which:  
33 unique CDR3  
5 unique J



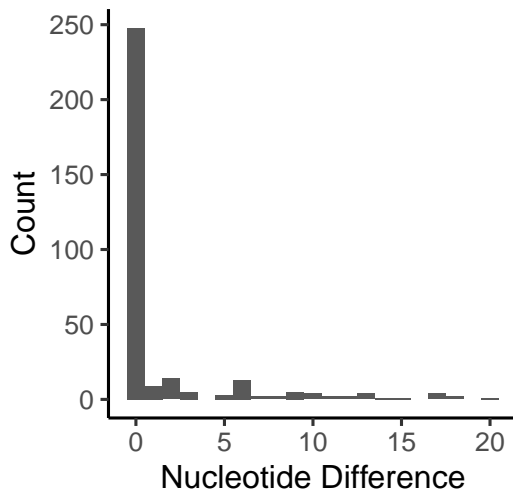
### IGHV4-4\*02\_03

272 sequences assigned  
169 (62.1%) exact matches, in which:  
154 unique CDR3  
6 unique J



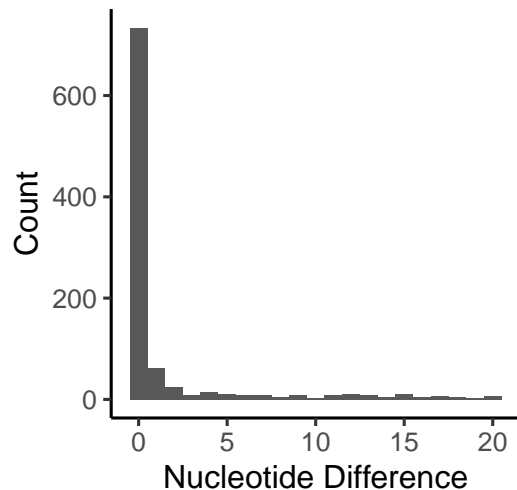
### IGHV4-31\*02

359 sequences assigned  
248 (69.1%) exact matches, in which:  
245 unique CDR3  
6 unique J



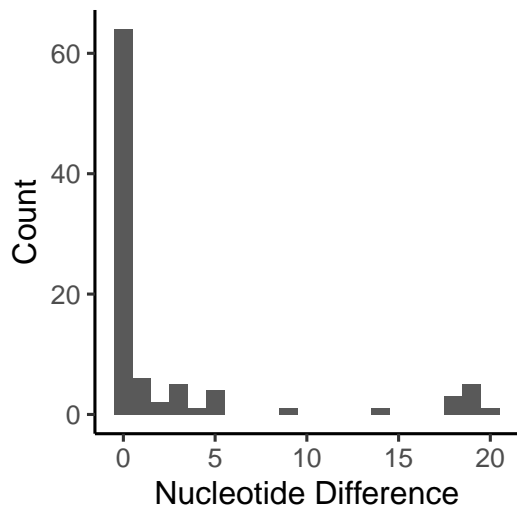
### IGHV4-59\*08

1031 sequences assigned  
734 (71.2%) exact matches, in which:  
724 unique CDR3  
6 unique J



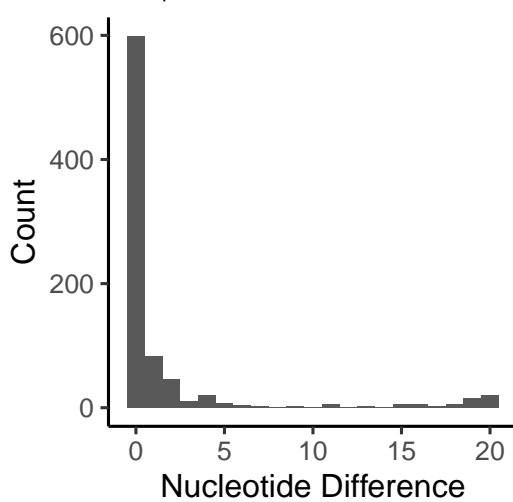
### IGHV4-30-4\*01

96 sequences assigned  
64 (66.7%) exact matches, in which:  
61 unique CDR3  
5 unique J



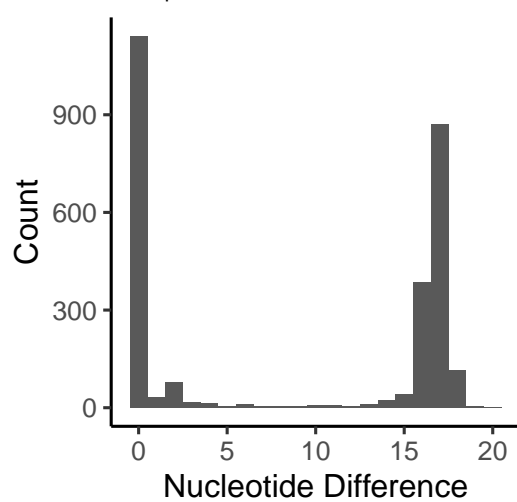
### IGHV4-34\*01\_02

923 sequences assigned  
599 (64.9%) exact matches, in which:  
577 unique CDR3  
6 unique J



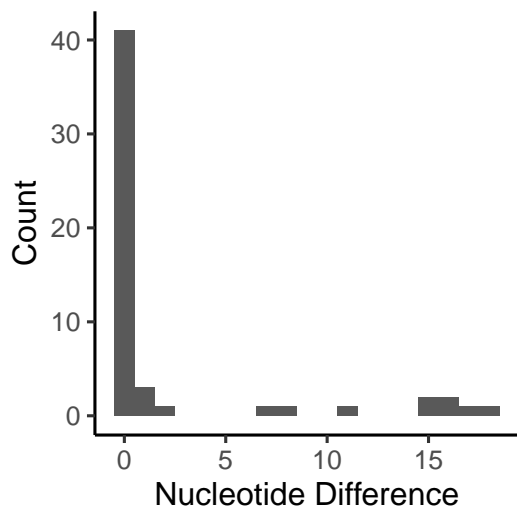
### IGHV4-59\*02\_G88A

2844 sequences assigned  
1142 (40.2%) exact matches, in which:  
1135 unique CDR3  
6 unique J



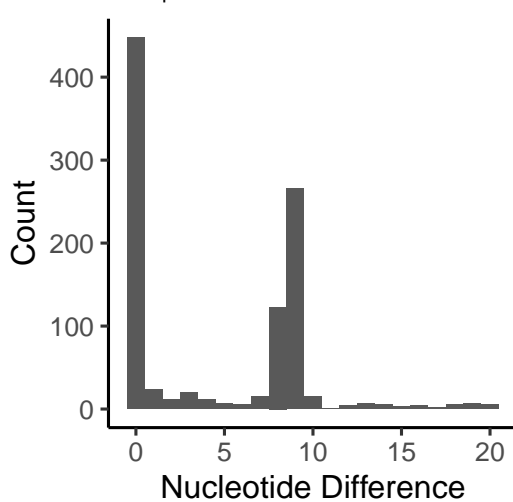
### IGHV4-30-2\*01

56 sequences assigned  
41 (73.2%) exact matches, in which:  
34 unique CDR3  
5 unique J



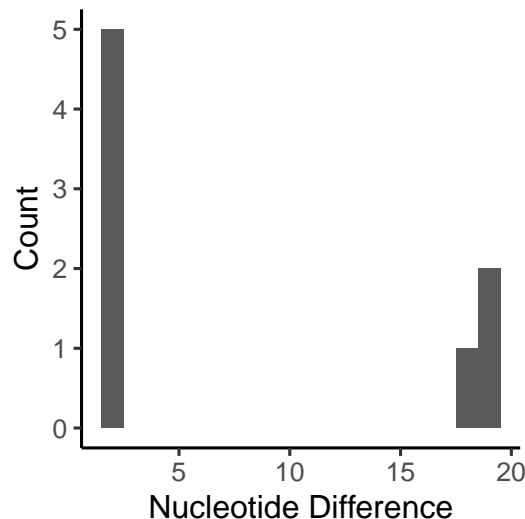
### IGHV4-39\*02\_C258G

1018 sequences assigned  
448 (44%) exact matches, in which:  
441 unique CDR3  
6 unique J



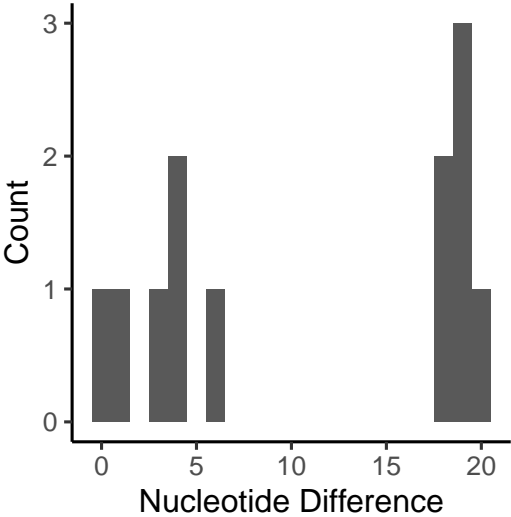
### IGHV4-61\*01

10 sequences assigned  
No exact matches.



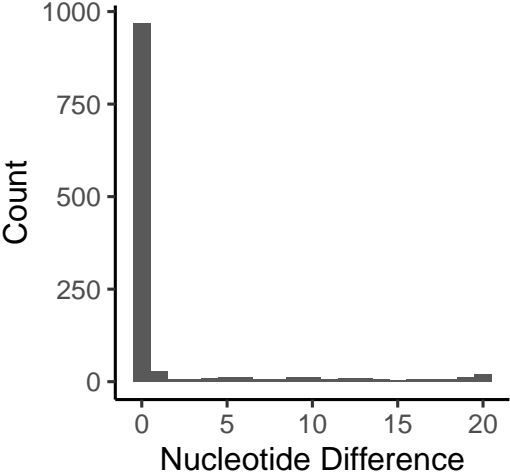
IGHV4-61\*05

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



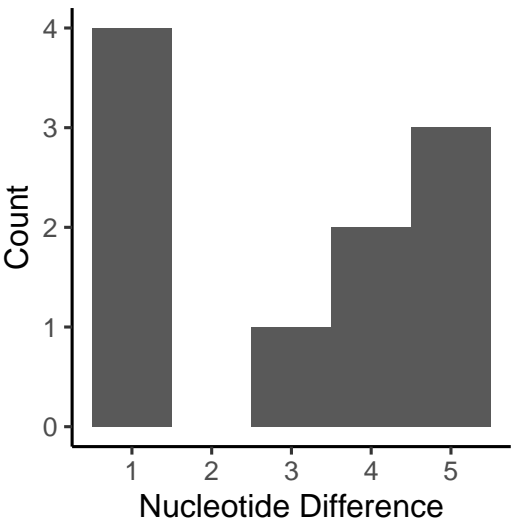
IGHV5-51\*07\_A128G

1255 sequences assigned  
968 (77.1%) exact matches, in which:  
926 unique CDR3  
6 unique J



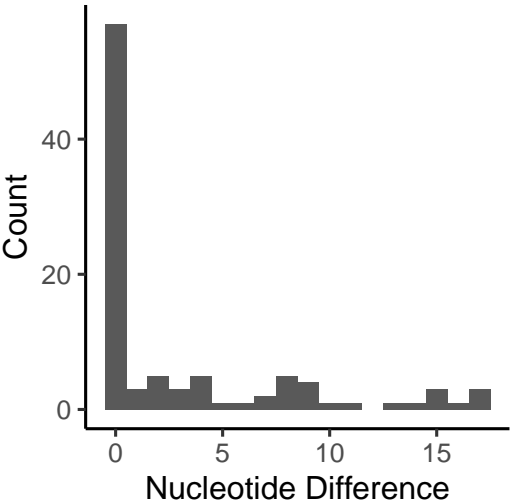
IGHV4-61\*08

10 sequences assigned  
No exact matches.



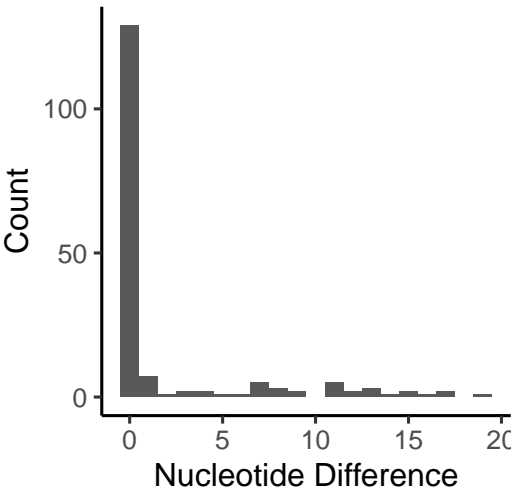
IGHV6-1\*01\_02

99 sequences assigned  
57 (57.6%) exact matches, in which:  
57 unique CDR3  
4 unique J



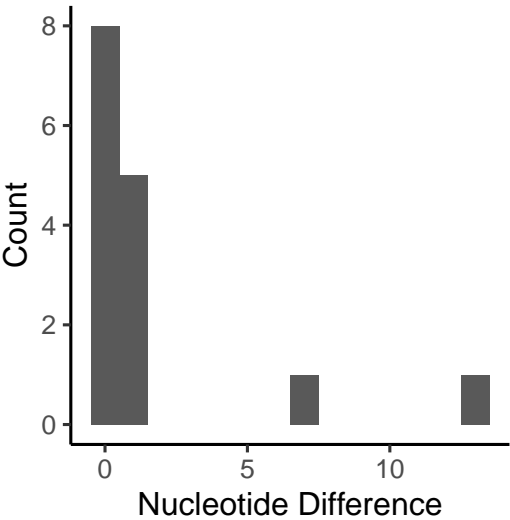
IGHV5-10-1\*01\_03

174 sequences assigned  
129 (74.1%) exact matches, in which:  
121 unique CDR3  
5 unique J



IGHV7-4-1\*01

15 sequences assigned  
8 (53.3%) exact matches, in which:  
8 unique CDR3  
4 unique J







Warning – no inferred sequences found.