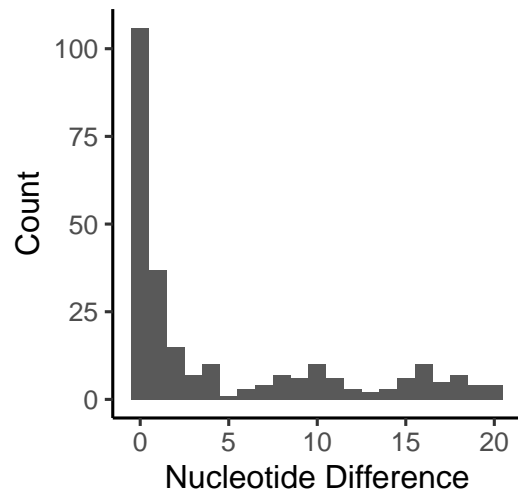


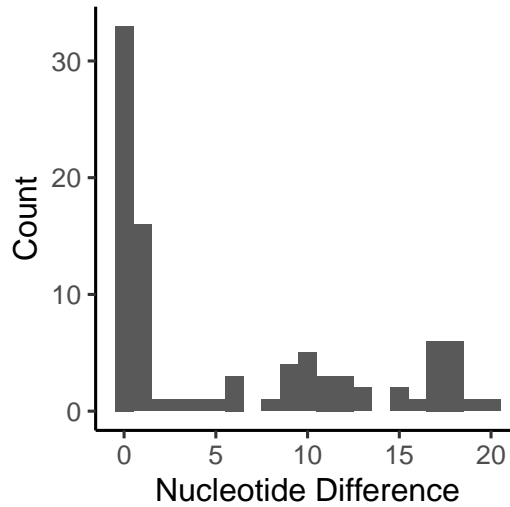
### IGHV1-2\*04

329 sequences assigned  
106 (32.2%) exact matches, in which:  
105 unique CDR3  
5 unique J



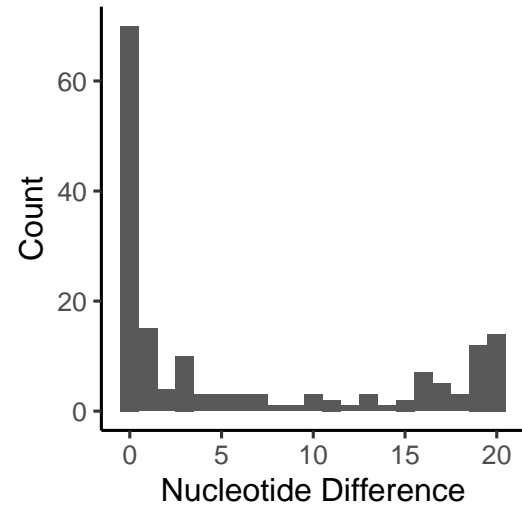
### IGHV1-24\*01

120 sequences assigned  
33 (27.5%) exact matches, in which:  
33 unique CDR3  
5 unique J



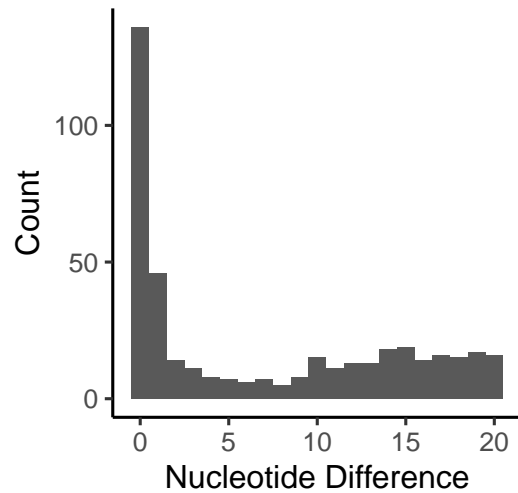
### IGHV1-46\*03

234 sequences assigned  
70 (29.9%) exact matches, in which:  
69 unique CDR3  
5 unique J



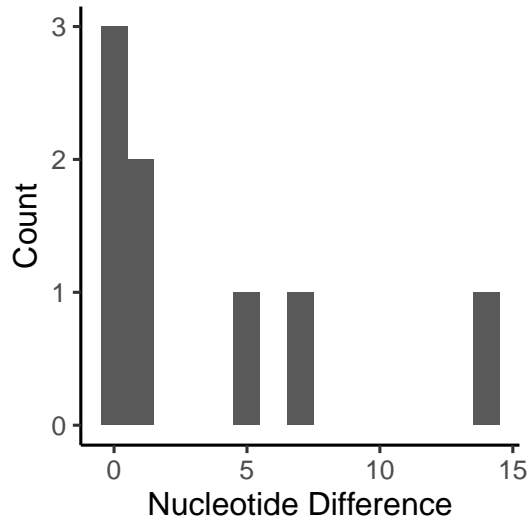
### IGHV1-3\*01

662 sequences assigned  
136 (20.5%) exact matches, in which:  
134 unique CDR3  
6 unique J



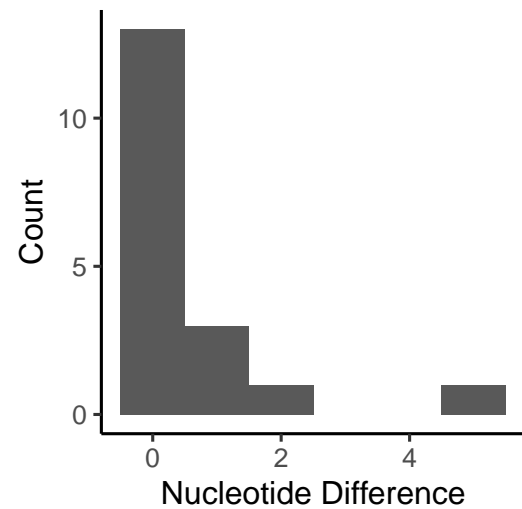
### IGHV1-45\*02

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



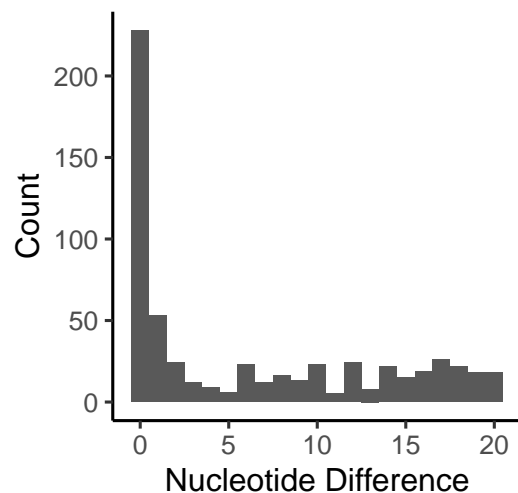
### IGHV1-58\*01

31 sequences assigned  
13 (41.9%) exact matches, in which:  
13 unique CDR3  
3 unique J



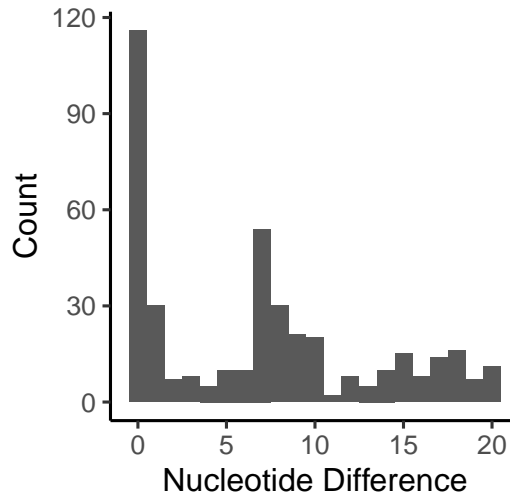
### IGHV1-18\*04

854 sequences assigned  
228 (26.7%) exact matches, in which:  
227 unique CDR3  
5 unique J



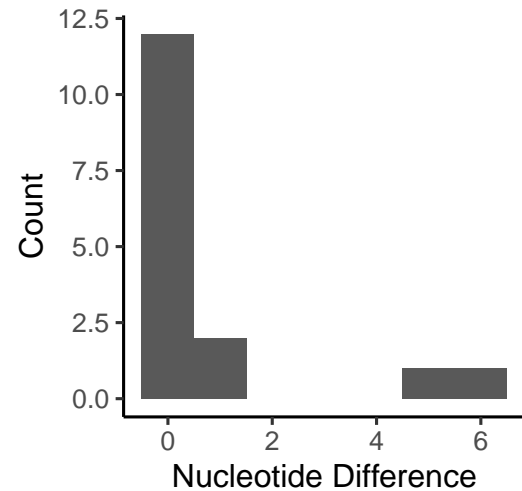
### IGHV1-46\*01

528 sequences assigned  
116 (22%) exact matches, in which:  
116 unique CDR3  
5 unique J



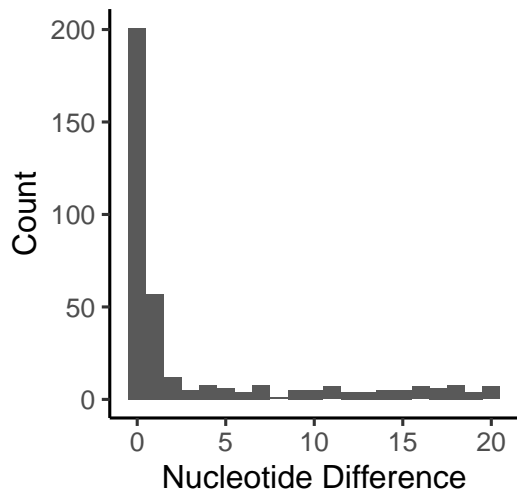
### IGHV1-58\*02

18 sequences assigned  
12 (66.7%) exact matches, in which:  
12 unique CDR3  
5 unique J



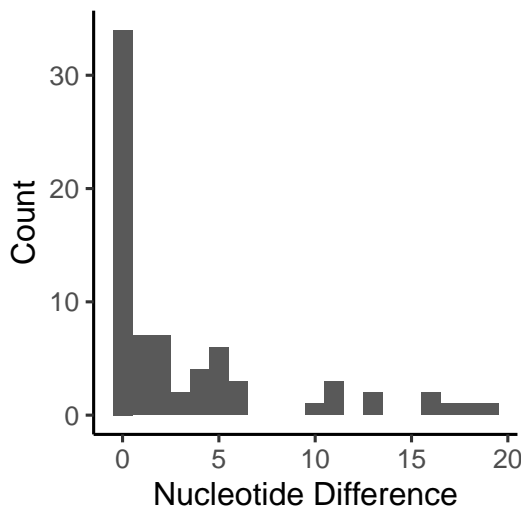
### IGHV1–69\*04

449 sequences assigned  
201 (44.8%) exact matches, in which:  
201 unique CDR3  
6 unique J



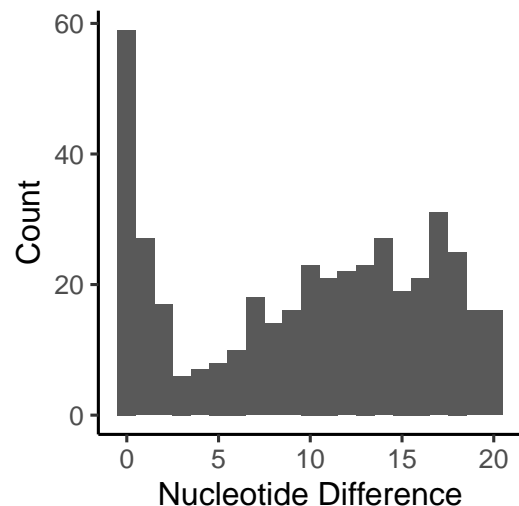
### IGHV2–70\*01

95 sequences assigned  
34 (35.8%) exact matches, in which:  
34 unique CDR3  
4 unique J



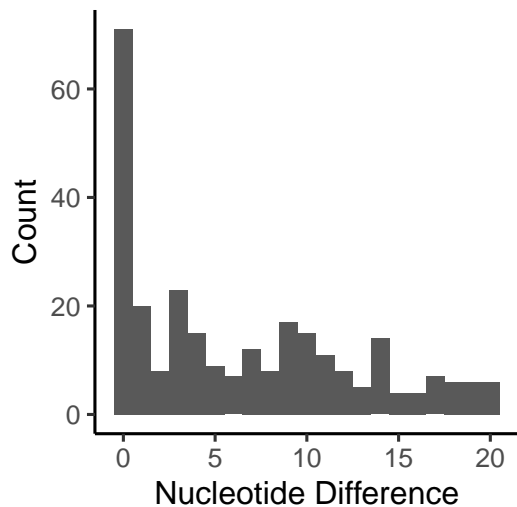
### IGHV3–7\*03

524 sequences assigned  
59 (11.3%) exact matches, in which:  
59 unique CDR3  
5 unique J



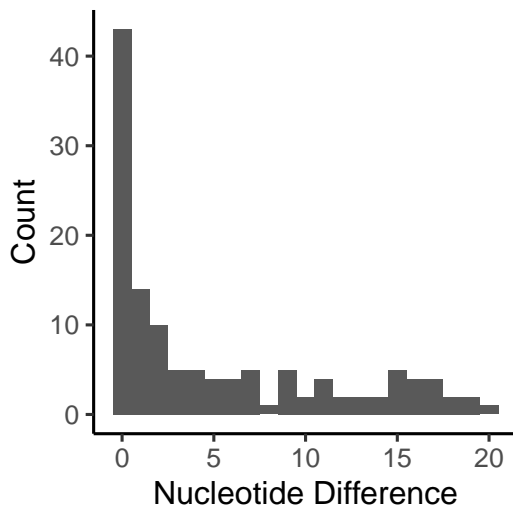
### IGHV2–5\*01

322 sequences assigned  
71 (22%) exact matches, in which:  
71 unique CDR3  
5 unique J



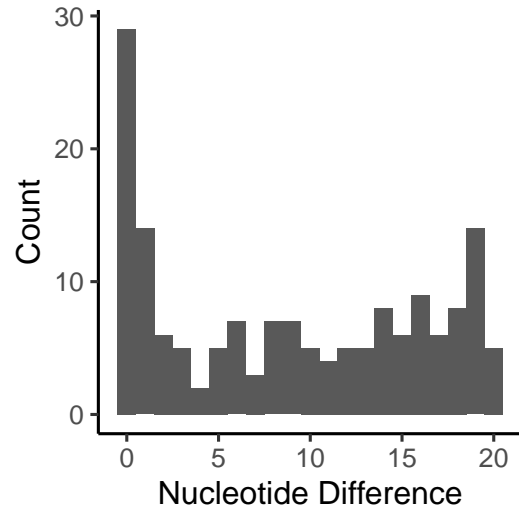
### IGHV2–70\*15

135 sequences assigned  
43 (31.9%) exact matches, in which:  
43 unique CDR3  
4 unique J



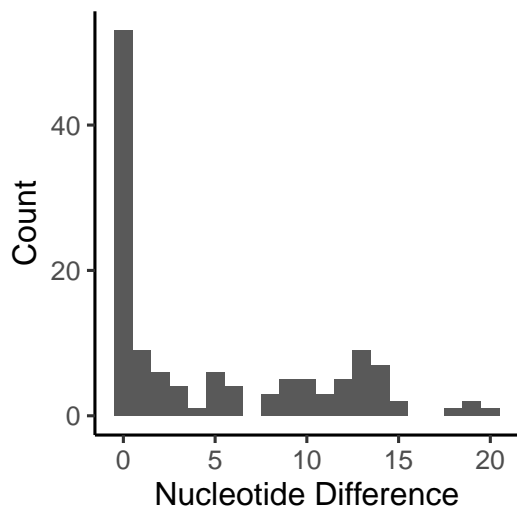
### IGHV3–7\*05

198 sequences assigned  
29 (14.6%) exact matches, in which:  
29 unique CDR3  
4 unique J



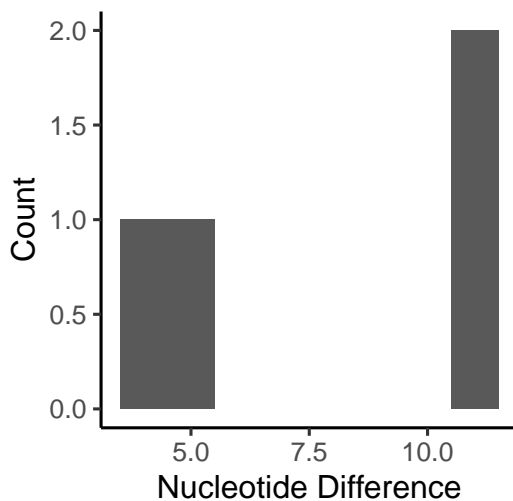
### IGHV2–26\*01

133 sequences assigned  
53 (39.8%) exact matches, in which:  
53 unique CDR3  
5 unique J



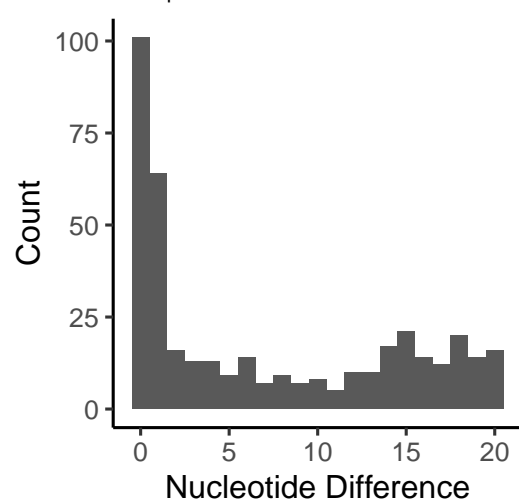
### IGHV2–70D\*04

5 sequences assigned  
No exact matches.



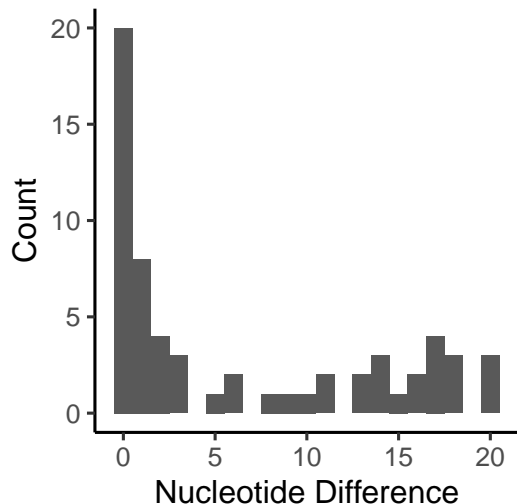
### IGHV3–11\*06

519 sequences assigned  
101 (19.5%) exact matches, in which:  
100 unique CDR3  
5 unique J



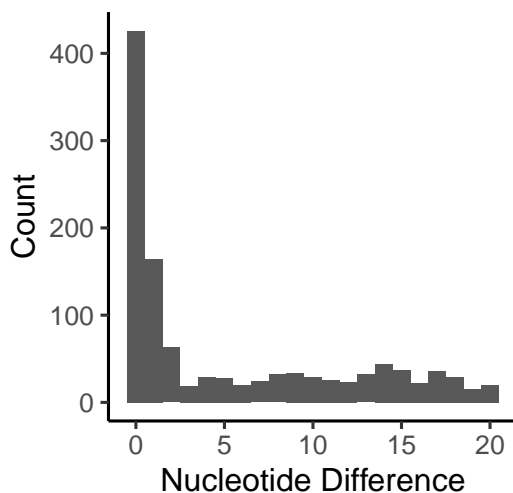
### IGHV3-13\*05

69 sequences assigned  
20 (29%) exact matches, in which:  
20 unique CDR3  
5 unique J



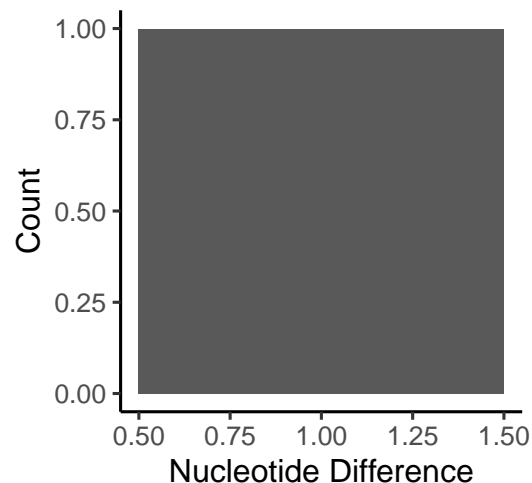
### IGHV3-21\*01

1455 sequences assigned  
426 (29.3%) exact matches, in which:  
421 unique CDR3  
6 unique J



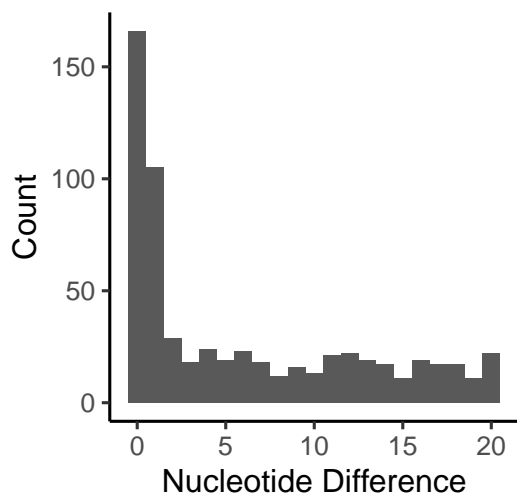
### IGHV3-35\*01

1 sequences assigned  
No exact matches.



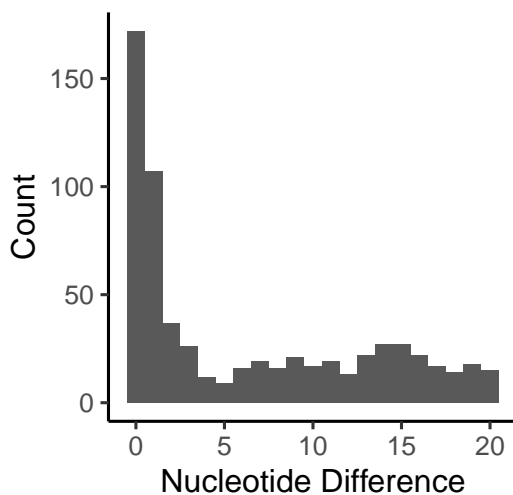
### IGHV3-15\*01

856 sequences assigned  
166 (19.4%) exact matches, in which:  
165 unique CDR3  
6 unique J



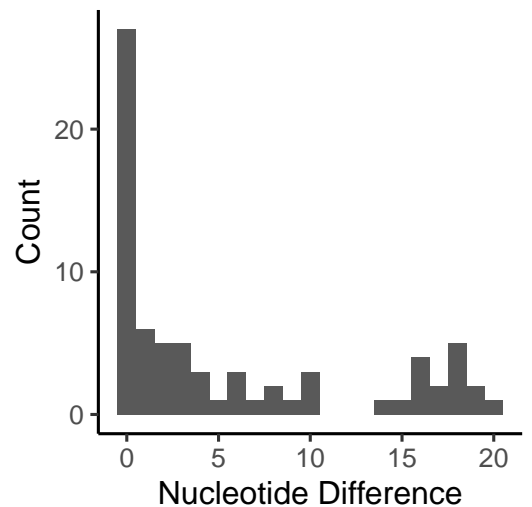
### IGHV3-30-3\*01

867 sequences assigned  
172 (19.8%) exact matches, in which:  
172 unique CDR3  
6 unique J



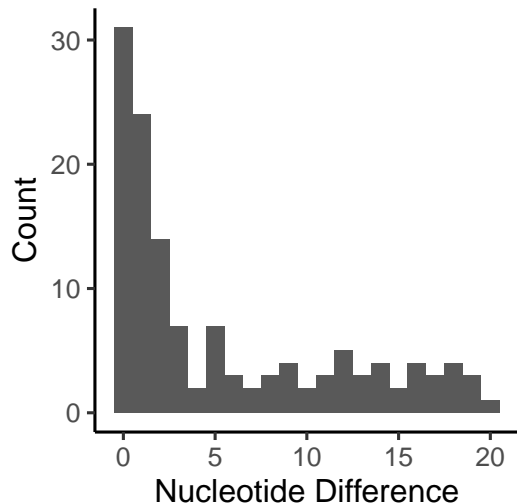
### IGHV3-43\*01

111 sequences assigned  
27 (24.3%) exact matches, in which:  
27 unique CDR3  
4 unique J



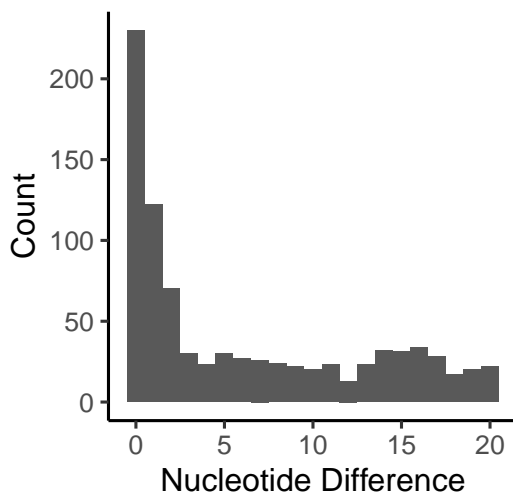
### IGHV3-20\*04

157 sequences assigned  
31 (19.7%) exact matches, in which:  
30 unique CDR3  
4 unique J



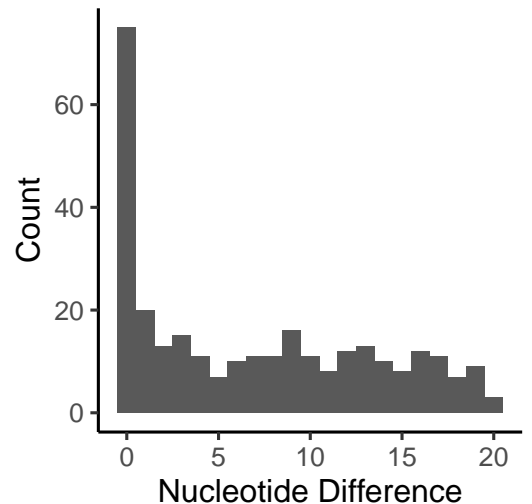
### IGHV3-33\*01

1189 sequences assigned  
230 (19.3%) exact matches, in which:  
227 unique CDR3  
6 unique J



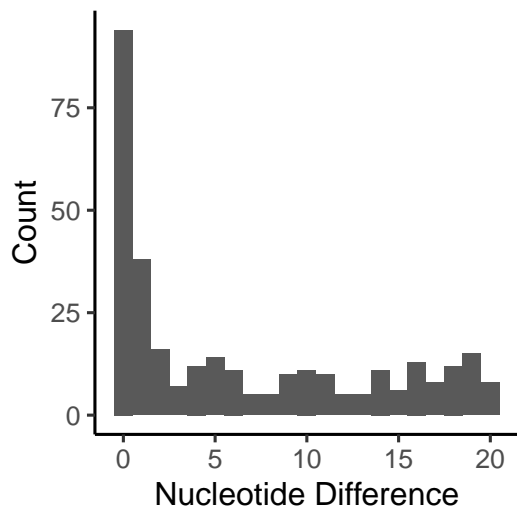
### IGHV3-48\*01

360 sequences assigned  
75 (20.8%) exact matches, in which:  
75 unique CDR3  
6 unique J



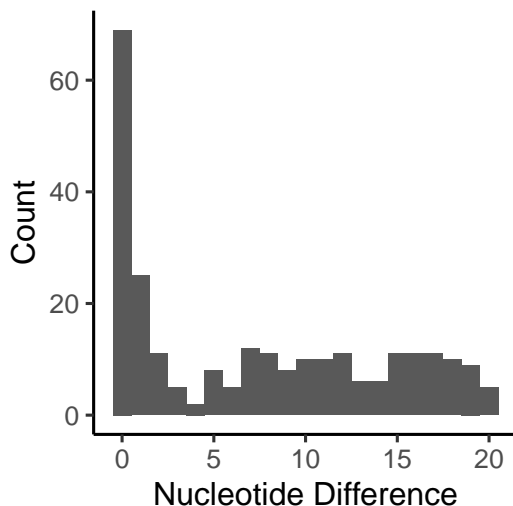
### IGHV3-48\*02

427 sequences assigned  
94 (22%) exact matches, in which:  
90 unique CDR3  
5 unique J



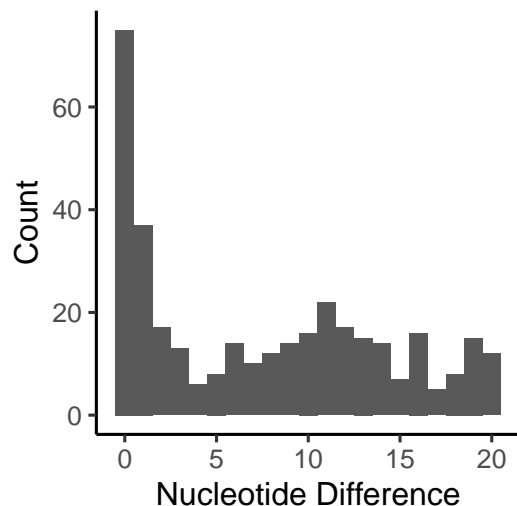
### IGHV3-53\*01

315 sequences assigned  
69 (21.9%) exact matches, in which:  
68 unique CDR3  
5 unique J



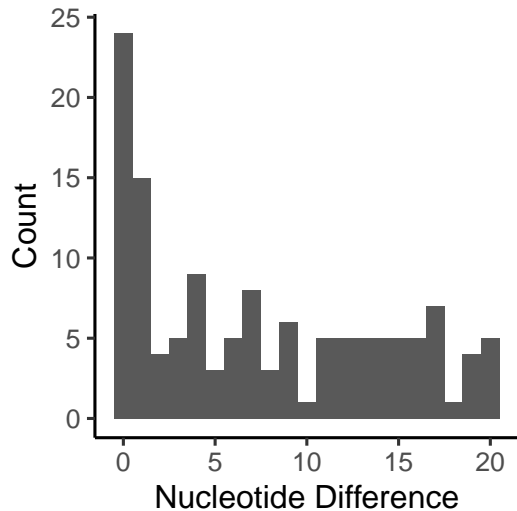
### IGHV3-66\*01

457 sequences assigned  
75 (16.4%) exact matches, in which:  
74 unique CDR3  
5 unique J



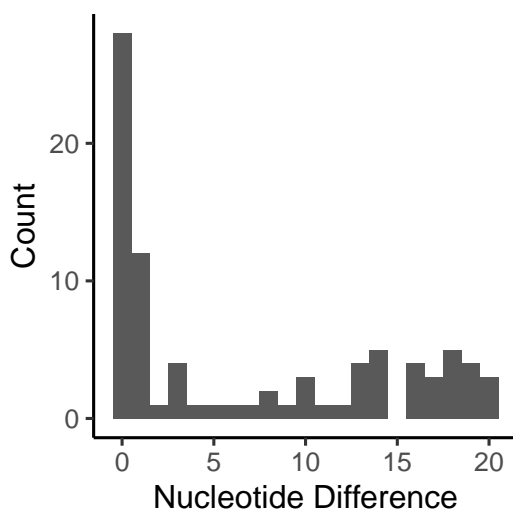
### IGHV3-49\*03

171 sequences assigned  
24 (14%) exact matches, in which:  
24 unique CDR3  
5 unique J



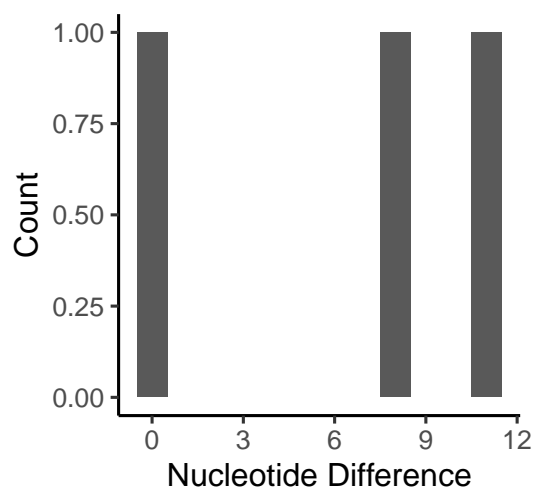
### IGHV3-53\*02

99 sequences assigned  
28 (28.3%) exact matches, in which:  
28 unique CDR3  
3 unique J



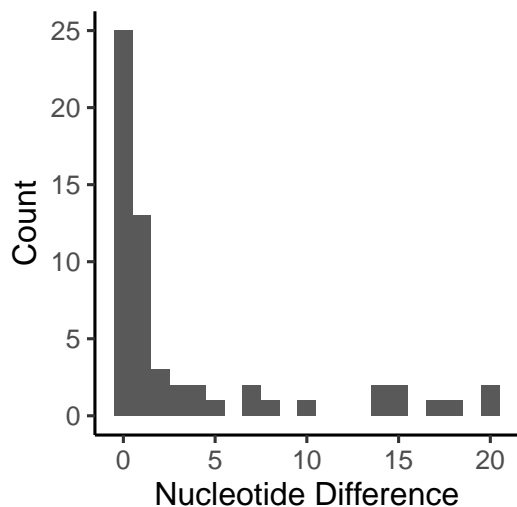
### IGHV3-69-1\*02

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



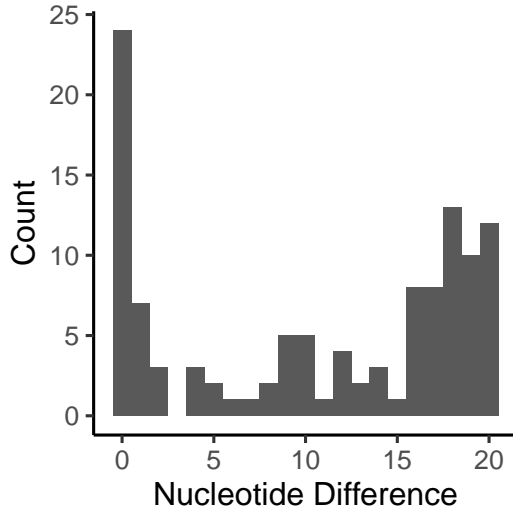
### IGHV3-49\*05

70 sequences assigned  
25 (35.7%) exact matches, in which:  
25 unique CDR3  
5 unique J



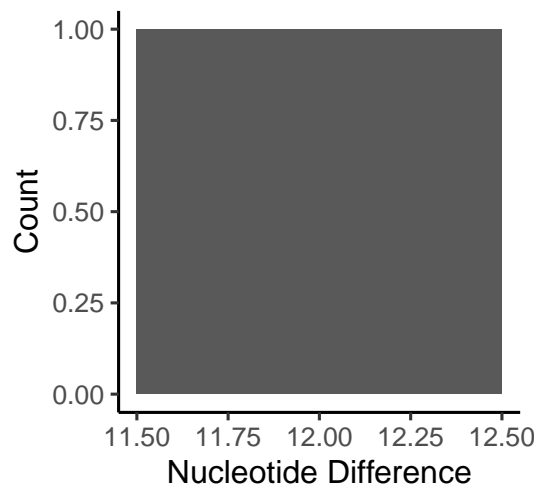
### IGHV3-64\*01

147 sequences assigned  
24 (16.3%) exact matches, in which:  
24 unique CDR3  
5 unique J



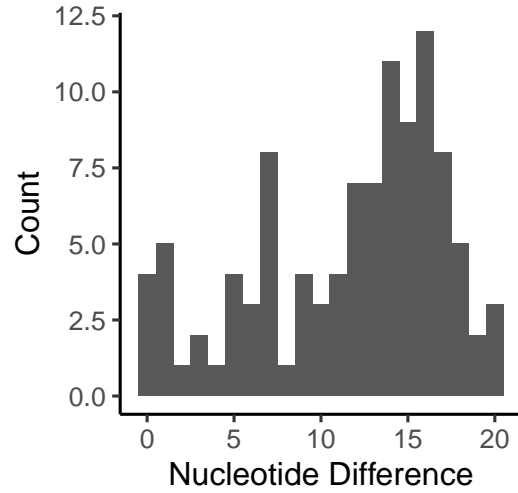
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



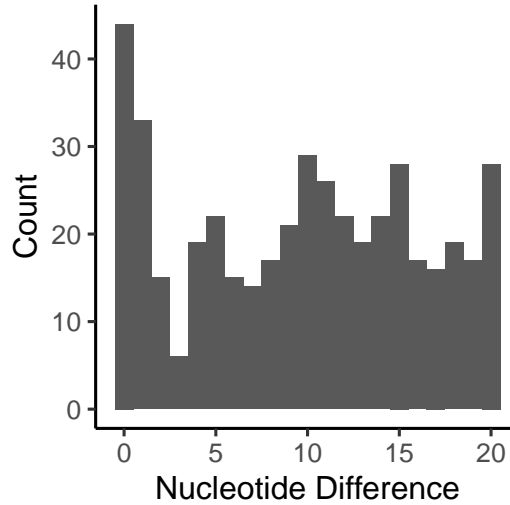
### IGHV3-72\*01

145 sequences assigned  
4 (2.8%) exact matches, in which:  
4 unique CDR3  
3 unique J



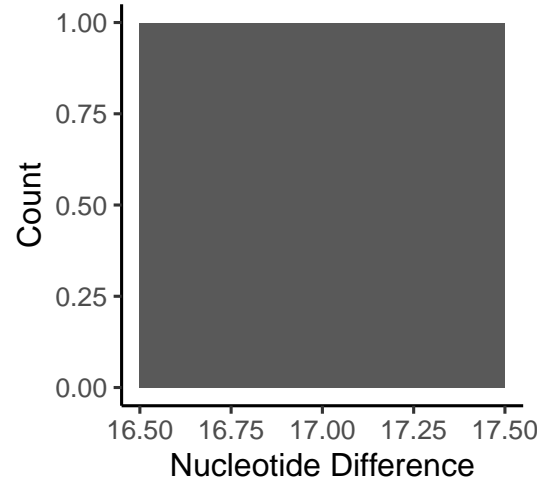
### IGHV3-74\*01

612 sequences assigned  
44 (7.2%) exact matches, in which:  
43 unique CDR3  
6 unique J



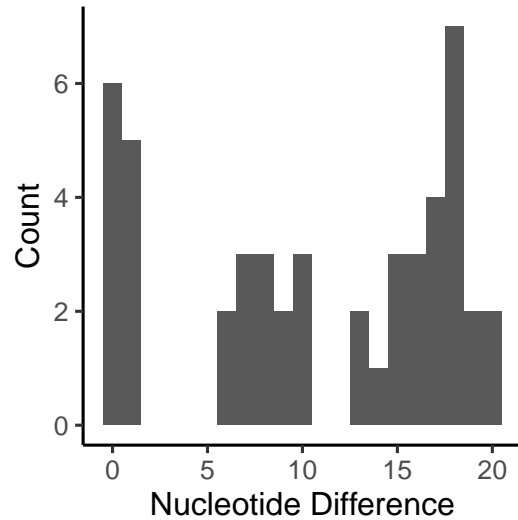
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



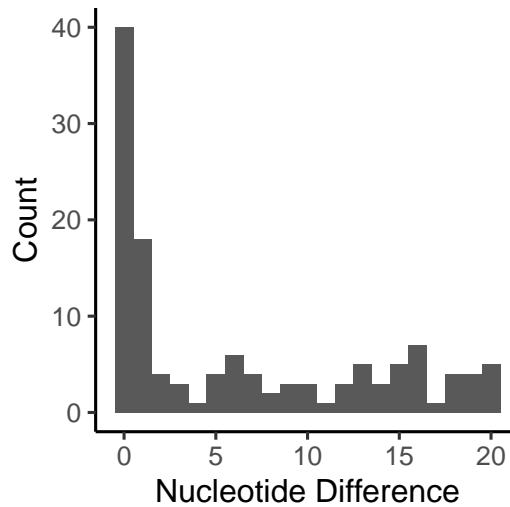
### IGHV3-73\*01

73 sequences assigned  
6 (8.2%) exact matches, in which:  
6 unique CDR3  
2 unique J



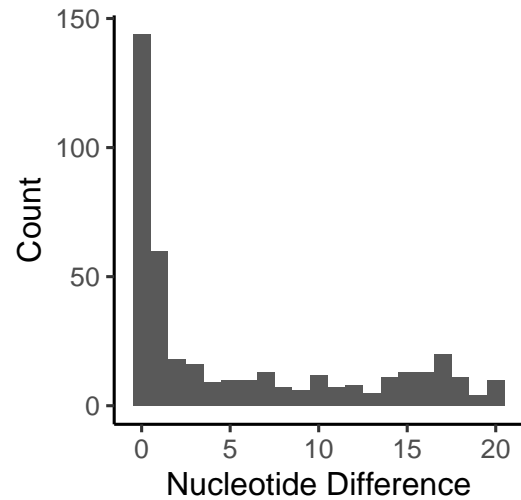
### IGHV3-64D\*08

161 sequences assigned  
40 (24.8%) exact matches, in which:  
39 unique CDR3  
5 unique J



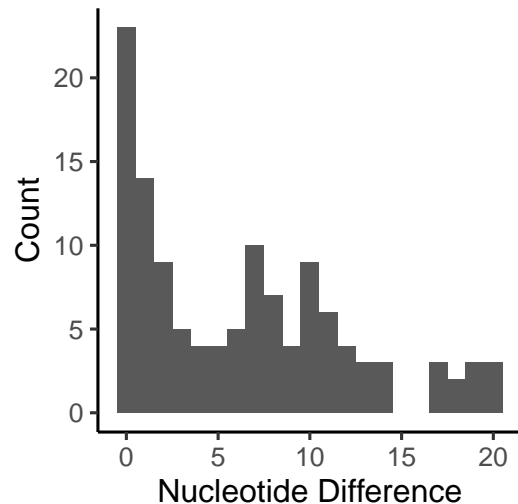
### IGHV4-4\*02

504 sequences assigned  
144 (28.6%) exact matches, in which:  
142 unique CDR3  
6 unique J



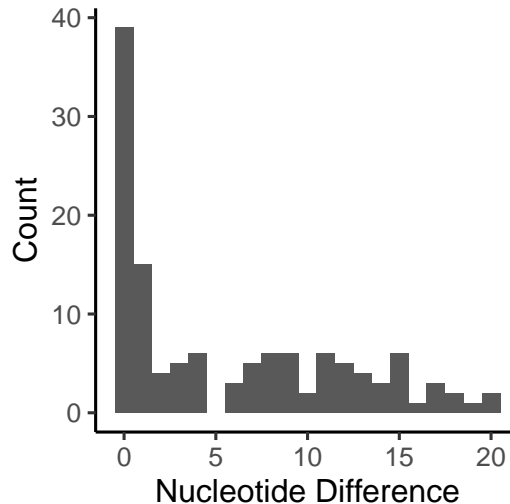
### IGHV3-73\*02

129 sequences assigned  
23 (17.8%) exact matches, in which:  
23 unique CDR3  
4 unique J



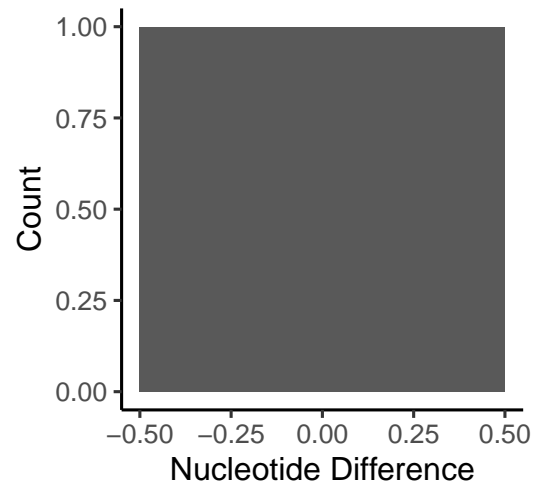
### IGHV3-64D\*09

158 sequences assigned  
39 (24.7%) exact matches, in which:  
39 unique CDR3  
5 unique J



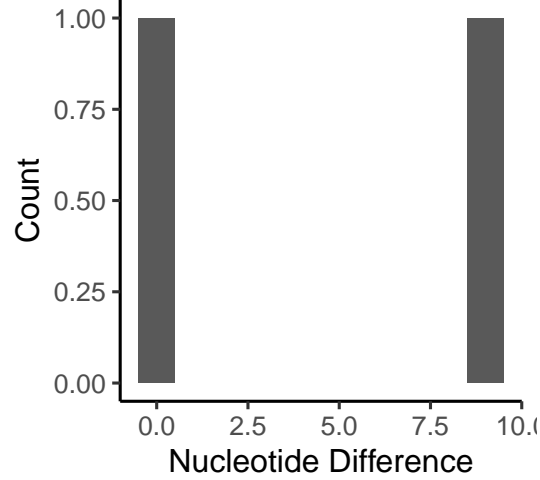
### IGHV4-28\*01

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



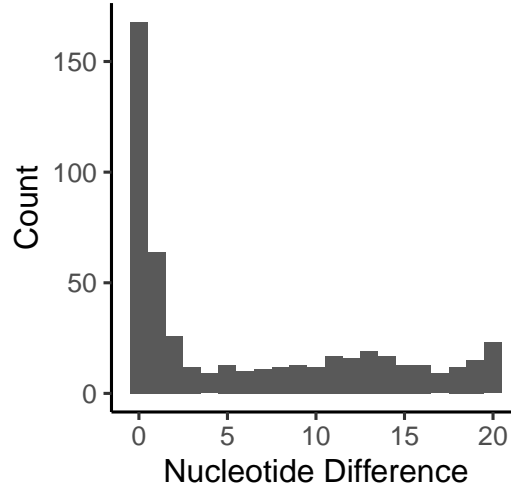
### IGHV4-28\*03

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



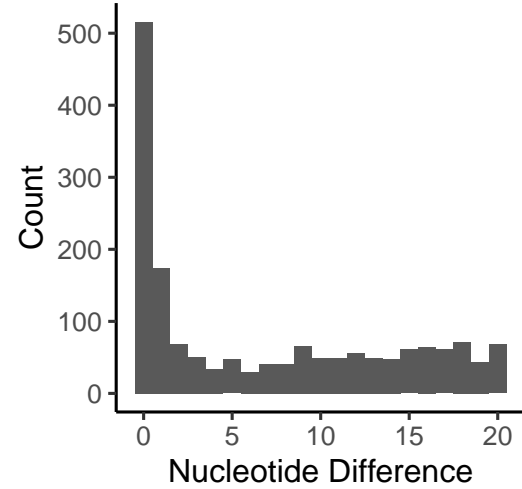
### IGHV4-31\*03

659 sequences assigned  
168 (25.5%) exact matches, in which:  
167 unique CDR3  
6 unique J



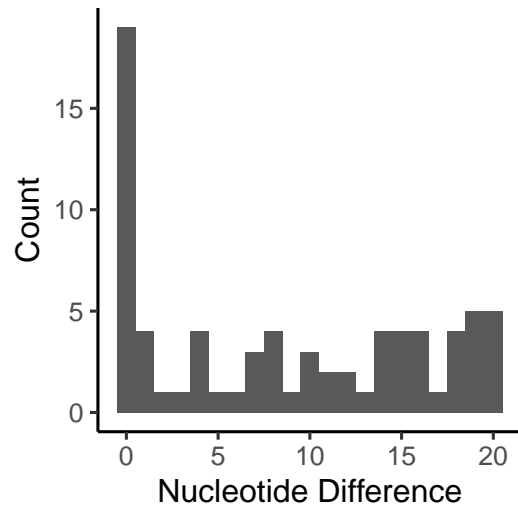
### IGHV4-39\*01

2362 sequences assigned  
516 (21.8%) exact matches, in which:  
505 unique CDR3  
6 unique J



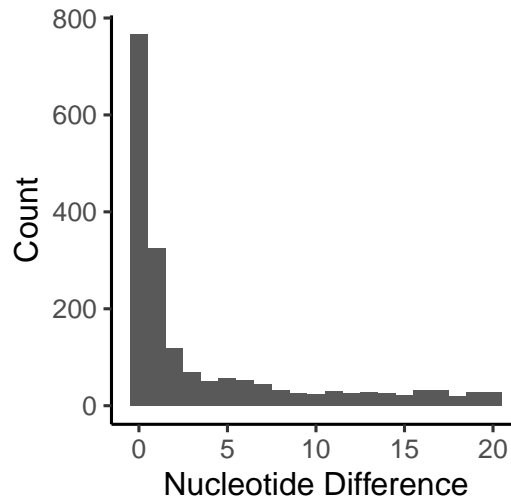
### IGHV4-30-2\*01

175 sequences assigned  
19 (10.9%) exact matches, in which:  
19 unique CDR3  
4 unique J



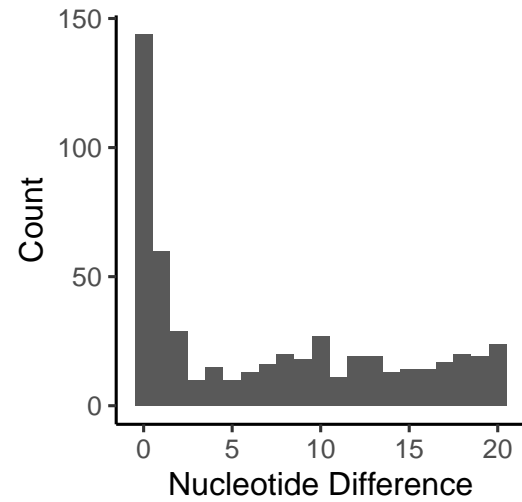
### IGHV4-34\*01

2150 sequences assigned  
767 (35.7%) exact matches, in which:  
730 unique CDR3  
6 unique J



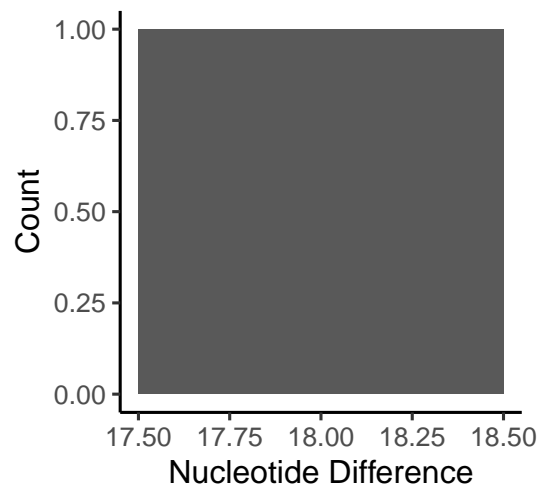
### IGHV4-59\*01

681 sequences assigned  
144 (21.1%) exact matches, in which:  
143 unique CDR3  
5 unique J



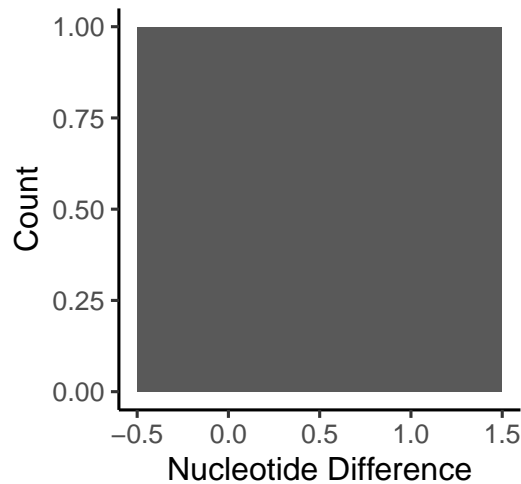
### IGHV4-30-4\*08

1 sequences assigned  
No exact matches.



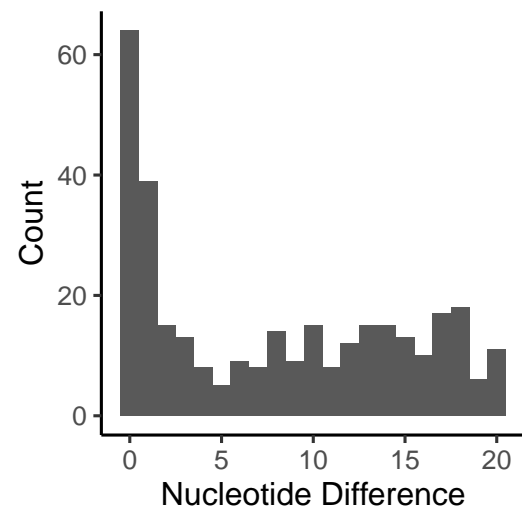
### IGHV4-38-2\*02

8 sequences assigned  
1 (12.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



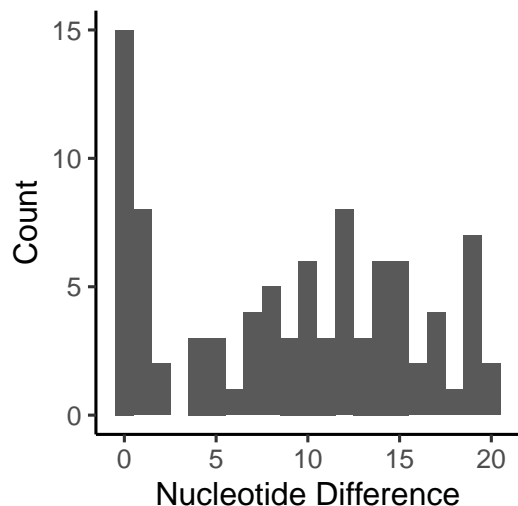
### IGHV4-59\*08

431 sequences assigned  
64 (14.8%) exact matches, in which:  
63 unique CDR3  
6 unique J



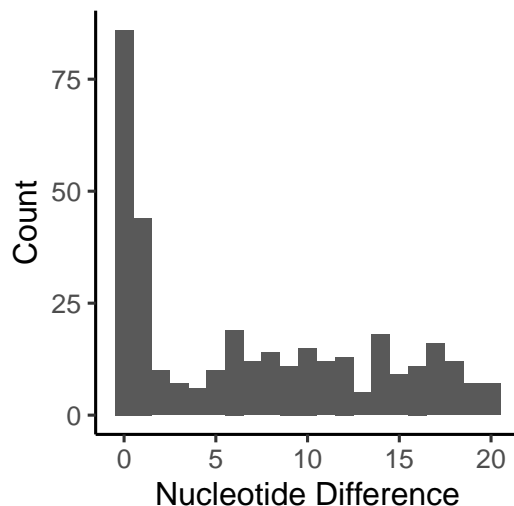
### IGHV4–61\*01

133 sequences assigned  
15 (11.3%) exact matches, in which:  
15 unique CDR3  
4 unique J



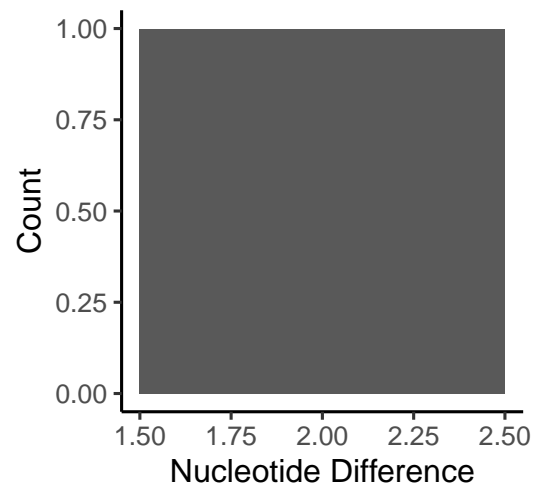
### IGHV5–51\*01

410 sequences assigned  
86 (21%) exact matches, in which:  
83 unique CDR3  
5 unique J



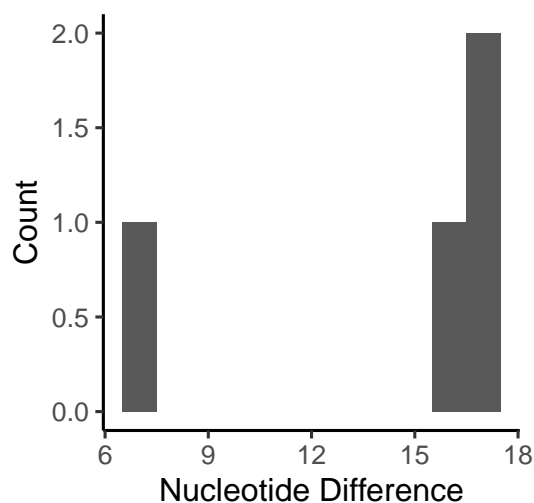
### IGHV3/OR16–8\*01

1 sequences assigned  
No exact matches.



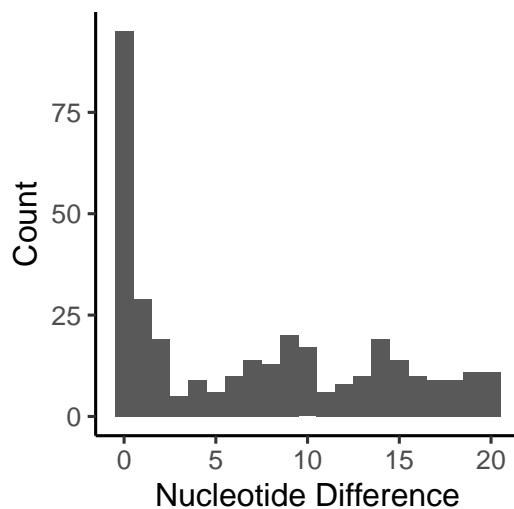
### IGHV4/OR15–8\*02

6 sequences assigned  
No exact matches.



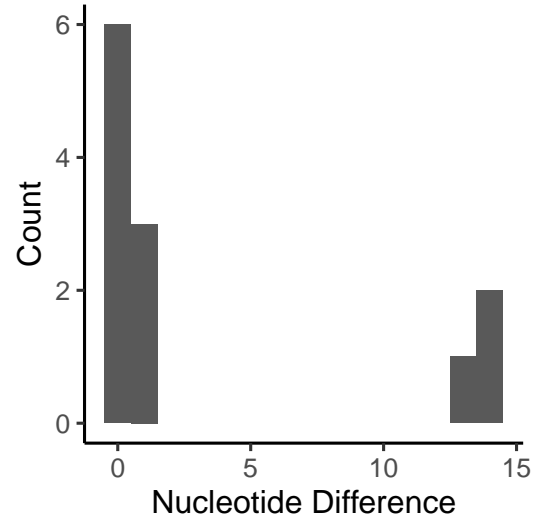
### IGHV5–51\*01\_C45G

389 sequences assigned  
95 (24.4%) exact matches, in which:  
95 unique CDR3  
6 unique J



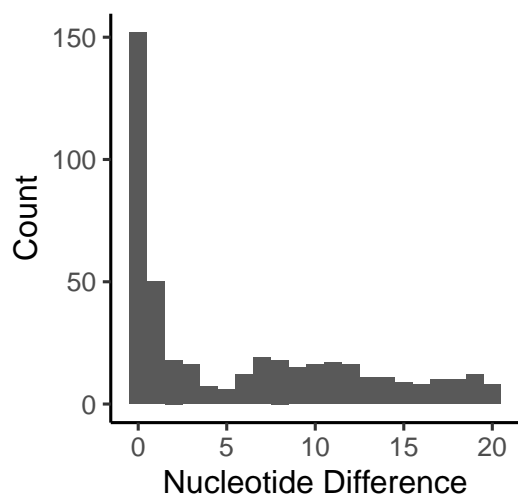
### IGHV7–4–1\*01

19 sequences assigned  
6 (31.6%) exact matches, in which:  
6 unique CDR3  
3 unique J



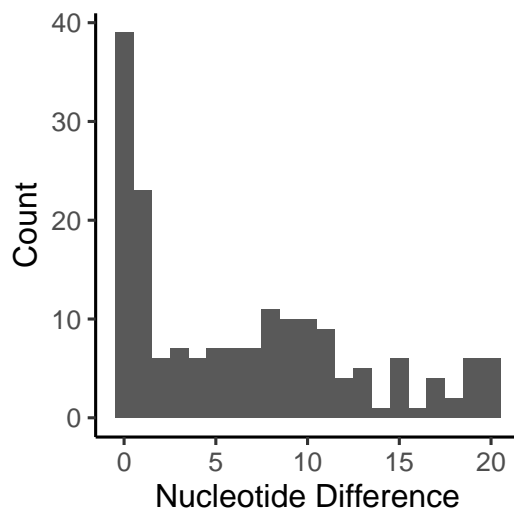
### IGHV5–10–1\*03

518 sequences assigned  
152 (29.3%) exact matches, in which:  
151 unique CDR3  
5 unique J



### IGHV6–1\*01

192 sequences assigned  
39 (20.3%) exact matches, in which:  
38 unique CDR3  
4 unique J







Warning – no inferred sequences found.