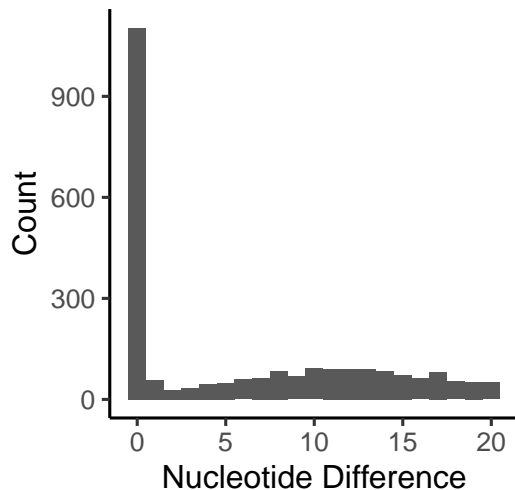


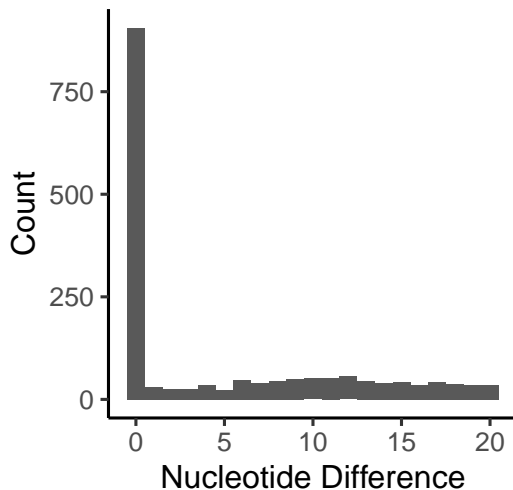
### IGHV1–2\*02

2714 sequences assigned  
1104 (40.7%) exact matches, in which:  
1101 unique CDR3  
7 unique J



### IGHV1–18\*01

1954 sequences assigned  
906 (46.4%) exact matches, in which:  
902 unique CDR3  
7 unique J



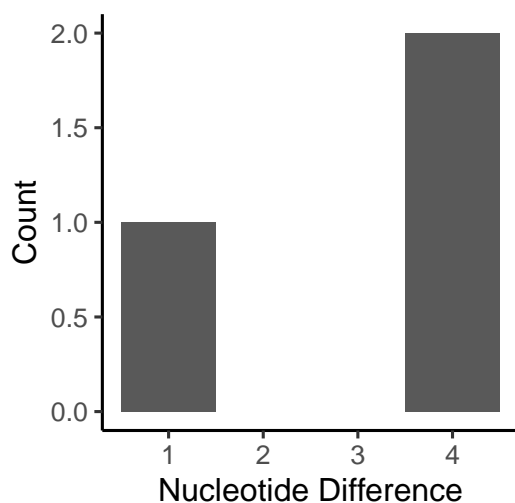
### IGHV1–45\*03

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



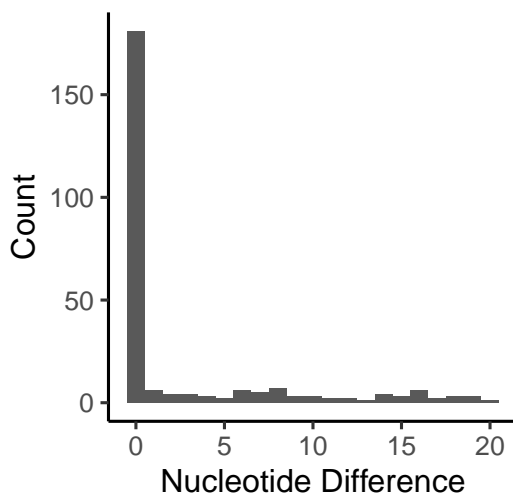
### IGHV1–3\*02

4 sequences assigned  
No exact matches.



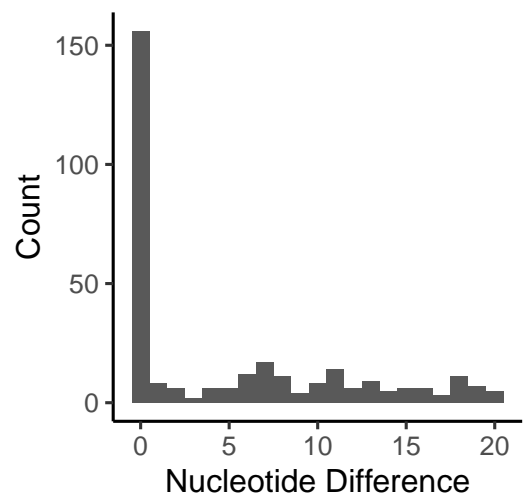
### IGHV1–24\*01

290 sequences assigned  
181 (62.4%) exact matches, in which:  
181 unique CDR3  
7 unique J



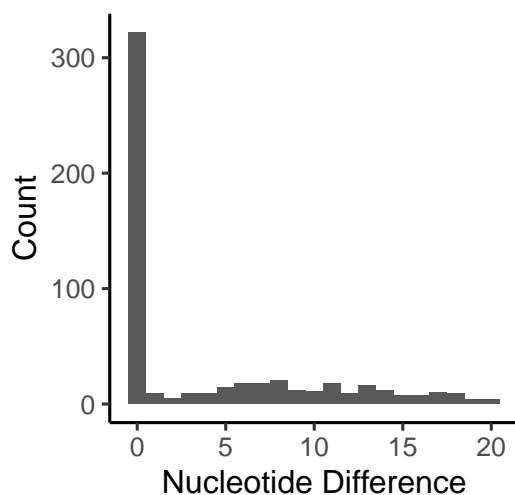
### IGHV1–46\*01

332 sequences assigned  
156 (47%) exact matches, in which:  
156 unique CDR3  
6 unique J



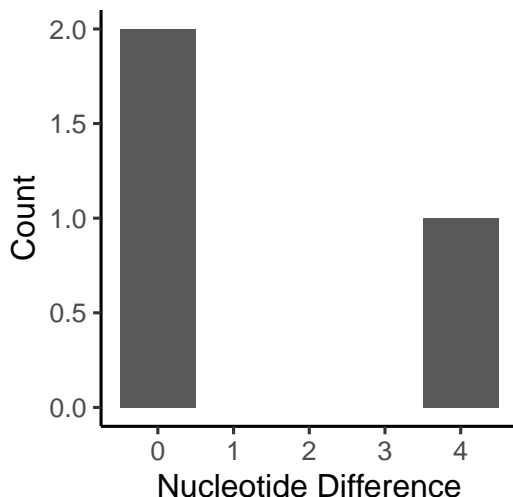
### IGHV1–8\*01

601 sequences assigned  
322 (53.6%) exact matches, in which:  
320 unique CDR3  
6 unique J



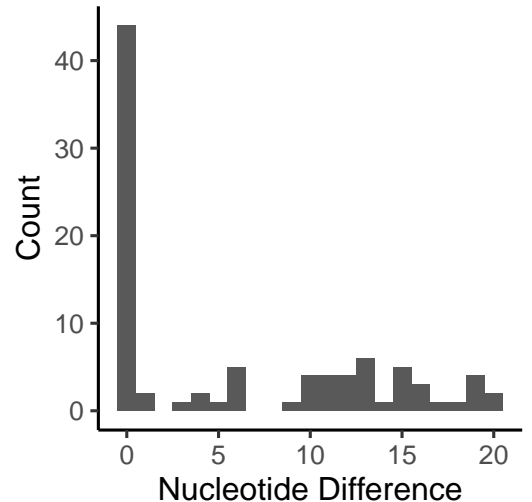
### IGHV1–45\*02

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



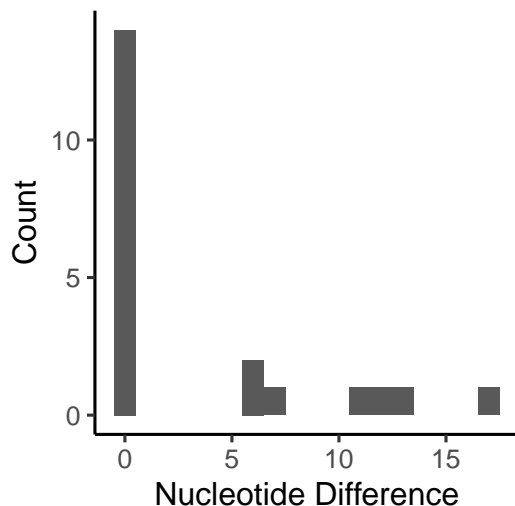
### IGHV1–46\*03

103 sequences assigned  
44 (42.7%) exact matches, in which:  
43 unique CDR3  
6 unique J



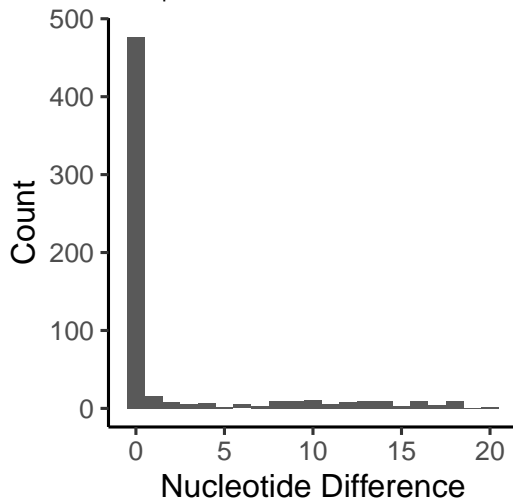
## IGHV1-58\*02

23 sequences assigned  
14 (60.9%) exact matches, in which:  
14 unique CDR3  
3 unique J



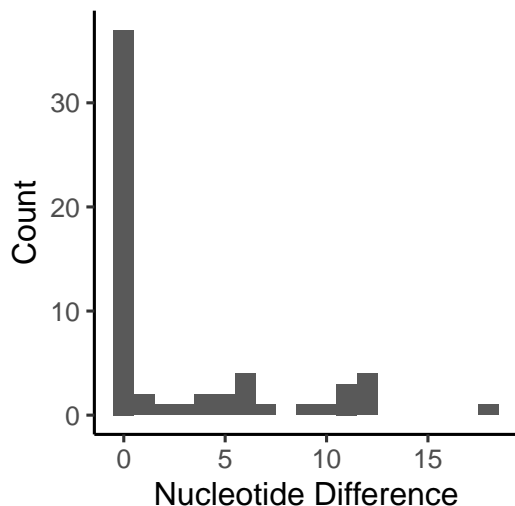
## IGHV1-69\*06\_14

690 sequences assigned  
477 (69.1%) exact matches, in which:  
477 unique CDR3  
7 unique J



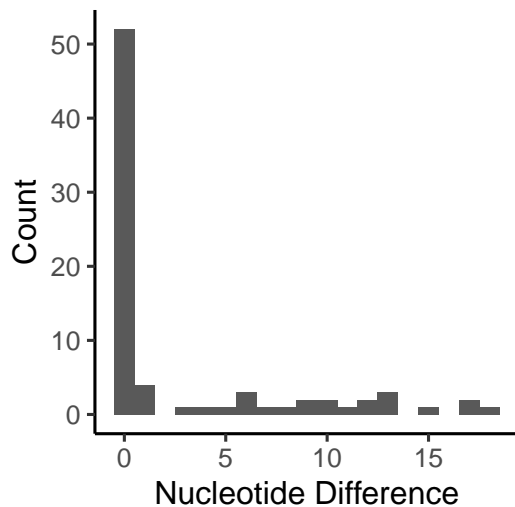
## IGHV2-26\*01

66 sequences assigned  
37 (56.1%) exact matches, in which:  
37 unique CDR3  
6 unique J



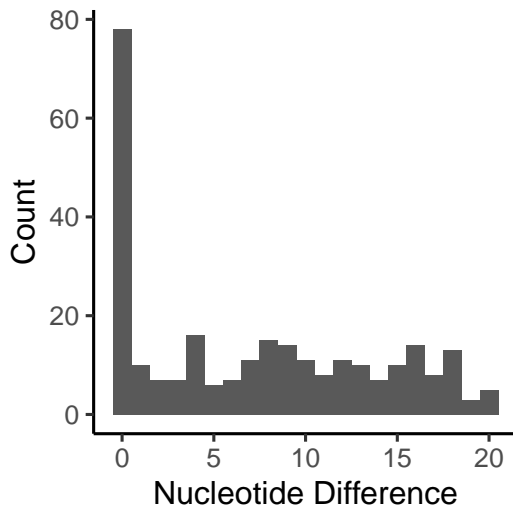
## IGHV1-58\*01\_03

86 sequences assigned  
52 (60.5%) exact matches, in which:  
52 unique CDR3  
5 unique J



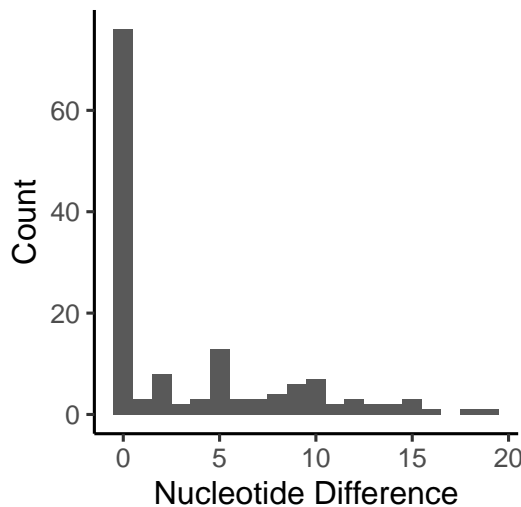
## IGHV2-5\*01

297 sequences assigned  
78 (26.3%) exact matches, in which:  
77 unique CDR3  
6 unique J



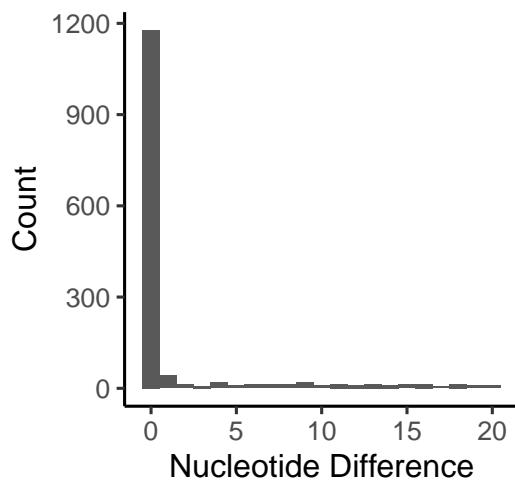
## IGHV2-70\*01

160 sequences assigned  
76 (47.5%) exact matches, in which:  
76 unique CDR3  
6 unique J



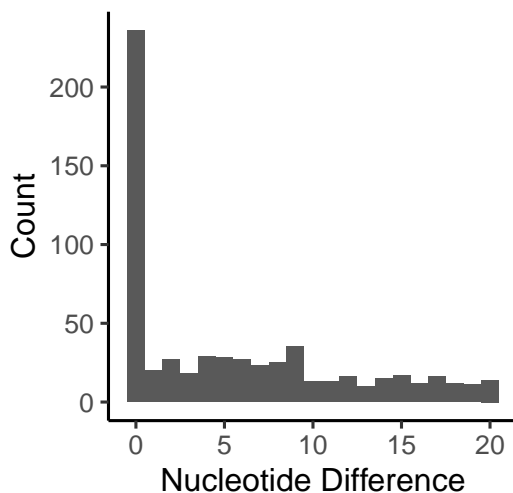
## IGHV1-69\*01\_12\_13

1608 sequences assigned  
1178 (73.3%) exact matches, in which:  
1175 unique CDR3  
7 unique J



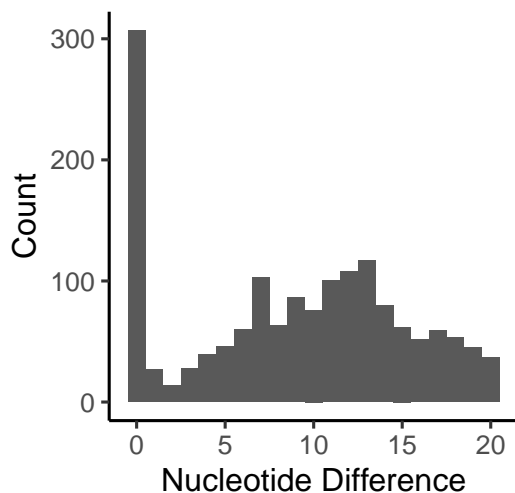
## IGHV2-5\*02

678 sequences assigned  
236 (34.8%) exact matches, in which:  
233 unique CDR3  
6 unique J



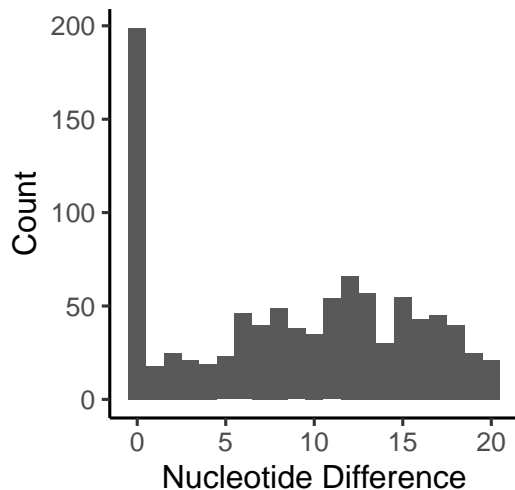
## IGHV3-7\*01

1795 sequences assigned  
307 (17.1%) exact matches, in which:  
285 unique CDR3  
6 unique J



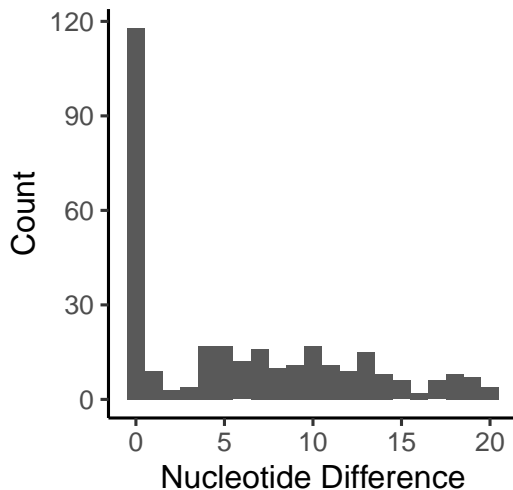
### IGHV3-7\*04

1161 sequences assigned  
199 (17.1%) exact matches, in which:  
184 unique CDR3  
6 unique J



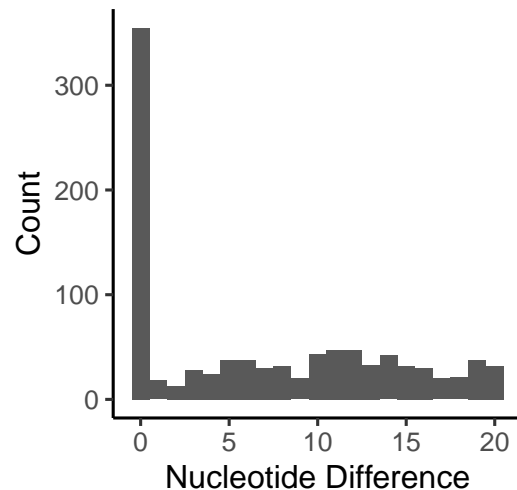
### IGHV3-11\*06

415 sequences assigned  
118 (28.4%) exact matches, in which:  
113 unique CDR3  
6 unique J



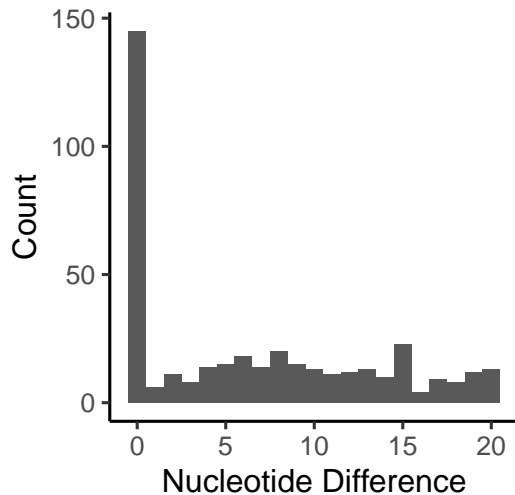
### IGHV3-15\*01\_02

1390 sequences assigned  
355 (25.5%) exact matches, in which:  
335 unique CDR3  
7 unique J



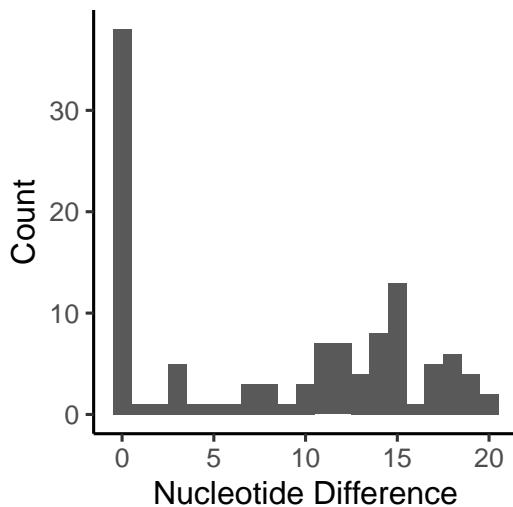
### IGHV3-9\*01

461 sequences assigned  
145 (31.5%) exact matches, in which:  
142 unique CDR3  
6 unique J



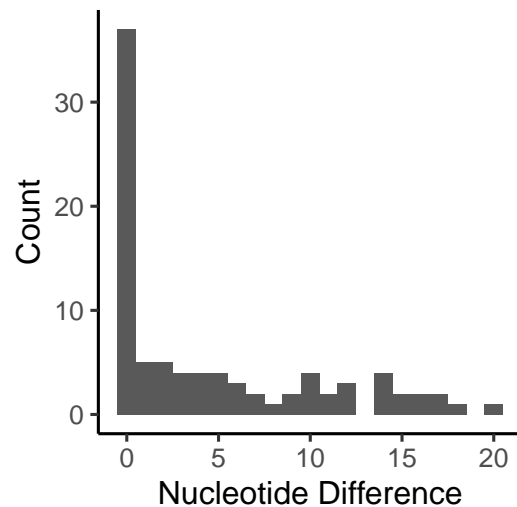
### IGHV3-13\*01

143 sequences assigned  
38 (26.6%) exact matches, in which:  
38 unique CDR3  
5 unique J



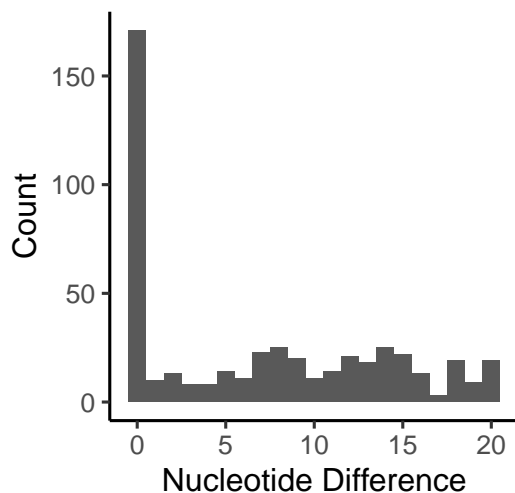
### IGHV3-20\*01\_02

101 sequences assigned  
37 (36.6%) exact matches, in which:  
36 unique CDR3  
6 unique J



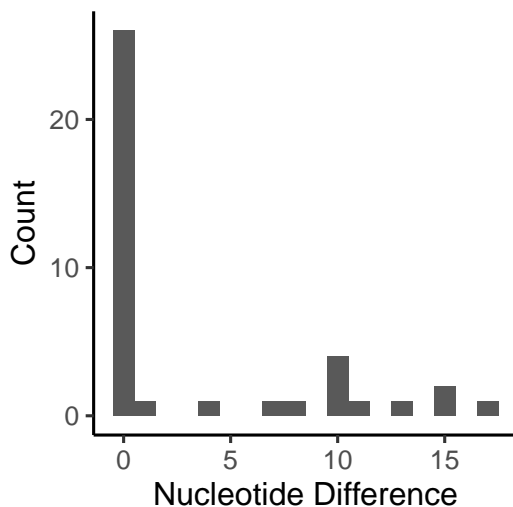
### IGHV3-11\*01

610 sequences assigned  
171 (28%) exact matches, in which:  
165 unique CDR3  
6 unique J



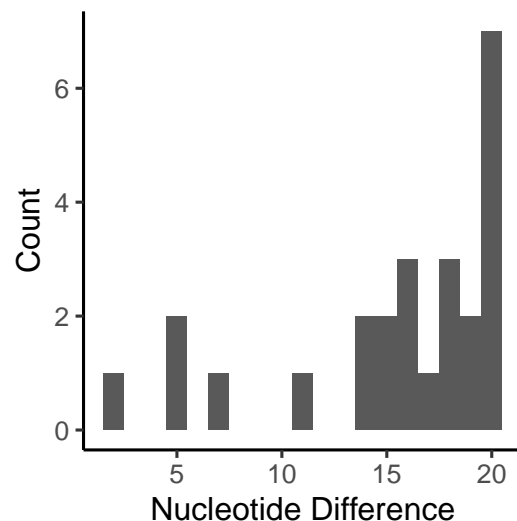
### IGHV3-13\*05

48 sequences assigned  
26 (54.2%) exact matches, in which:  
25 unique CDR3  
4 unique J



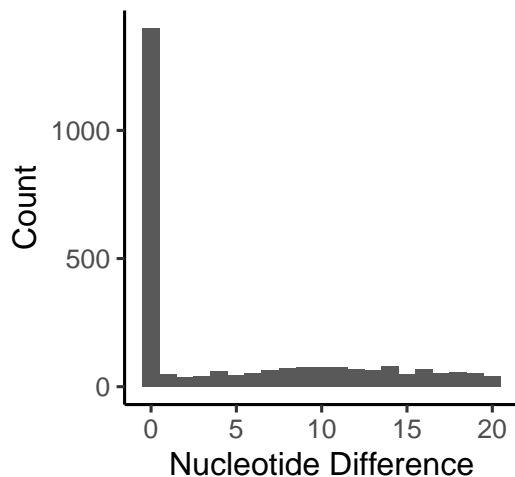
### IGHV3-20\*03\_04

112 sequences assigned  
No exact matches.



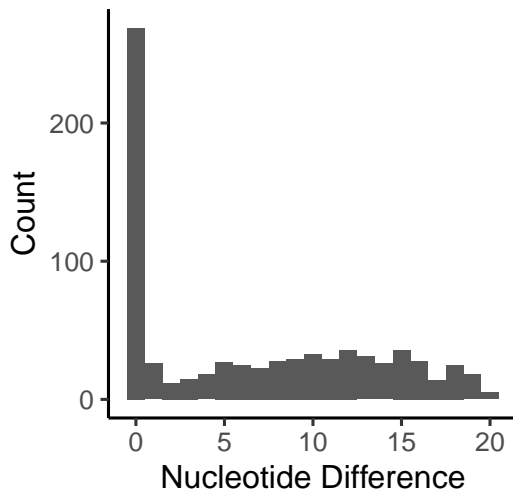
### IGHV3–21\*01\_02

2920 sequences assigned  
1398 (47.9%) exact matches, in which:  
1283 unique CDR3  
7 unique J



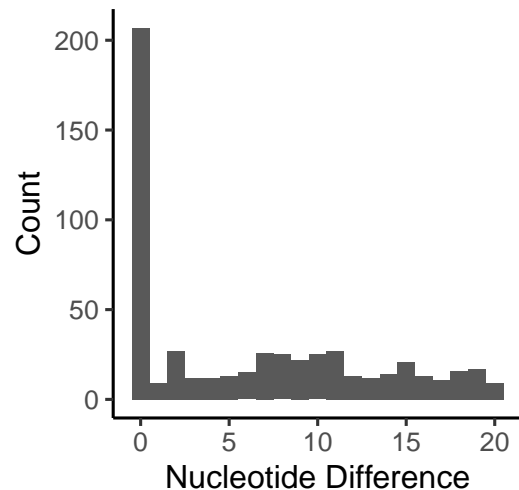
### IGHV3–33\*01

913 sequences assigned  
269 (29.5%) exact matches, in which:  
261 unique CDR3  
7 unique J



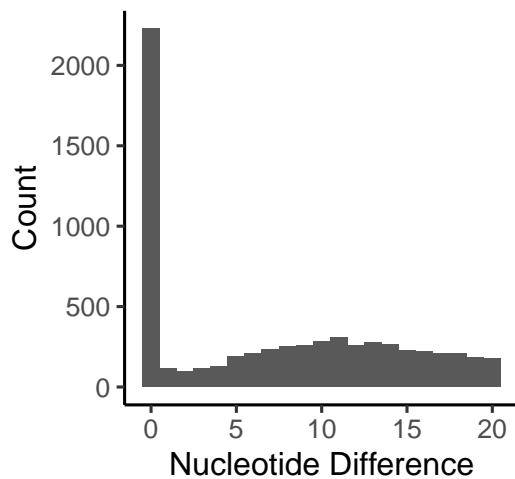
### IGHV3–48\*01

620 sequences assigned  
207 (33.4%) exact matches, in which:  
186 unique CDR3  
6 unique J



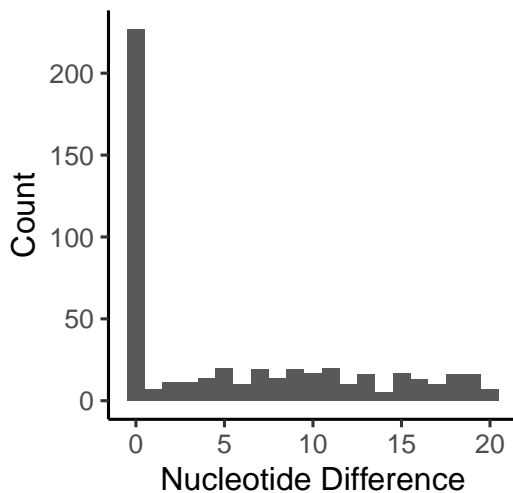
### IGHV3–23\*01\_04

7925 sequences assigned  
2228 (28.1%) exact matches, in which:  
2071 unique CDR3  
7 unique J



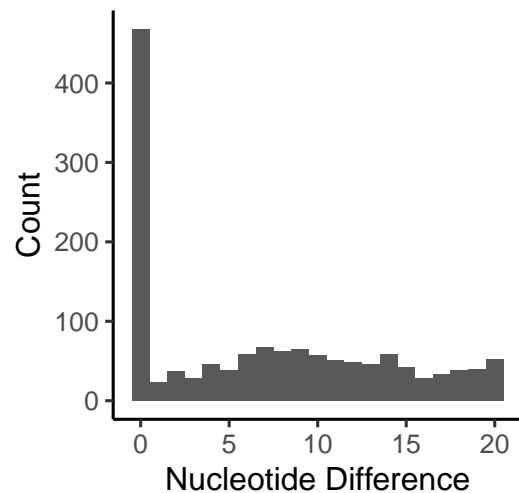
### IGHV3–43\*02

660 sequences assigned  
227 (34.4%) exact matches, in which:  
210 unique CDR3  
6 unique J



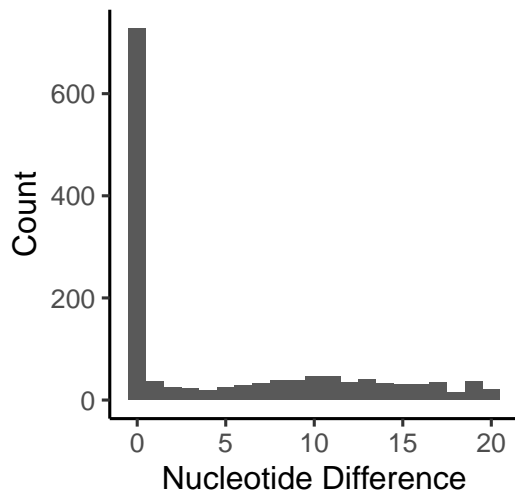
### IGHV3–48\*03

1599 sequences assigned  
468 (29.3%) exact matches, in which:  
449 unique CDR3  
6 unique J



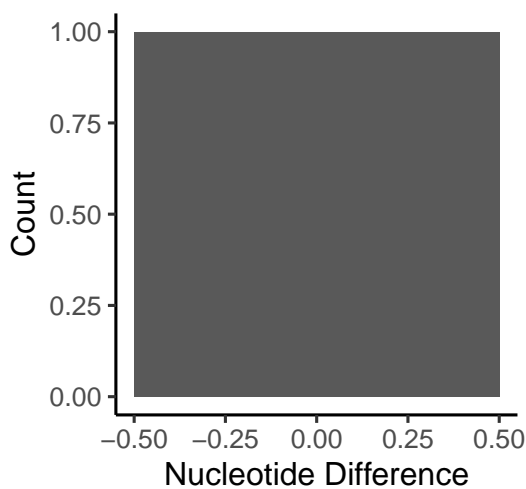
### IGHV3–30–3\*01

1566 sequences assigned  
728 (46.5%) exact matches, in which:  
706 unique CDR3  
7 unique J



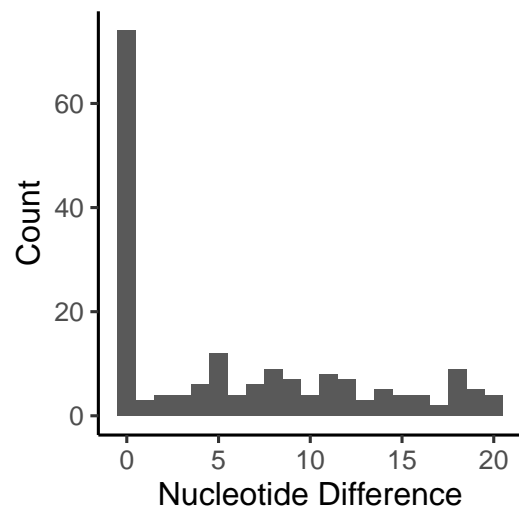
### IGHV3–47\*02

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



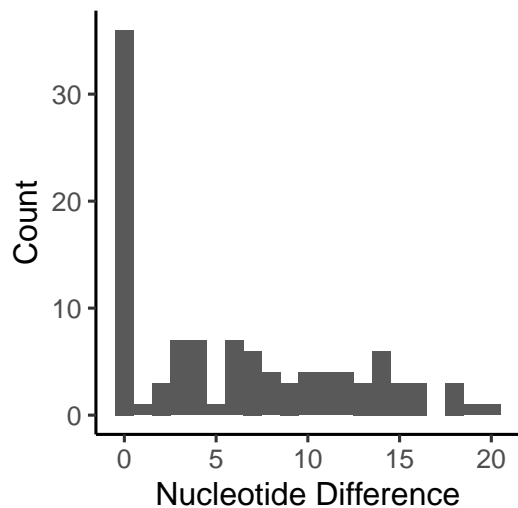
### IGHV3–49\*04

227 sequences assigned  
74 (32.6%) exact matches, in which:  
73 unique CDR3  
5 unique J



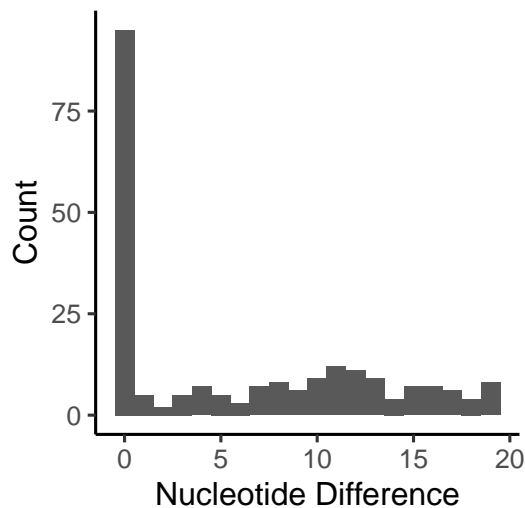
### IGHV3-49\*03\_05

125 sequences assigned  
36 (28.8%) exact matches, in which:  
34 unique CDR3  
5 unique J



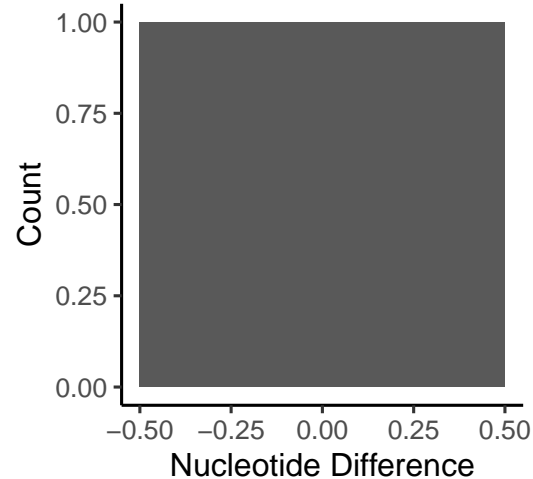
### IGHV3-53\*01\_02

242 sequences assigned  
95 (39.3%) exact matches, in which:  
86 unique CDR3  
5 unique J



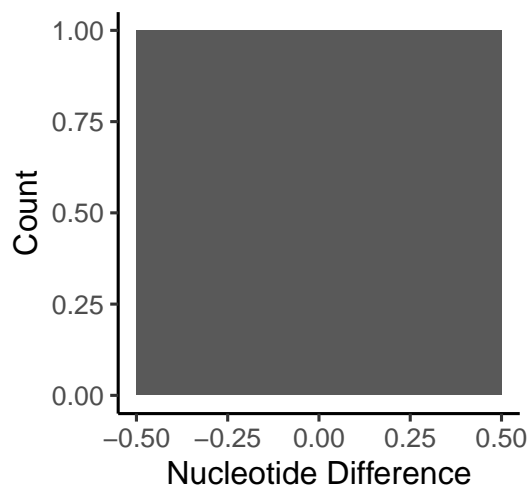
### IGHV3-66\*03

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



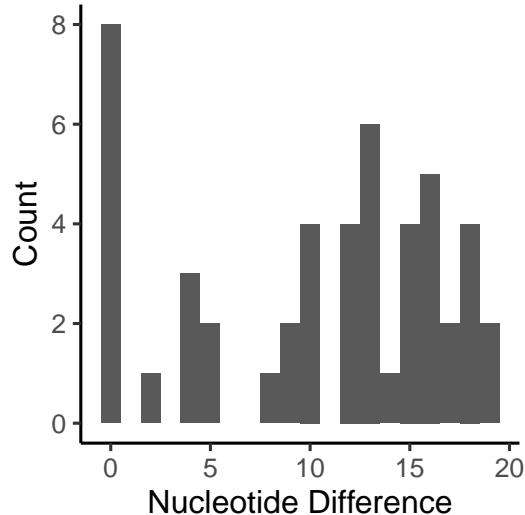
### IGHV3-52\*01\_03

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



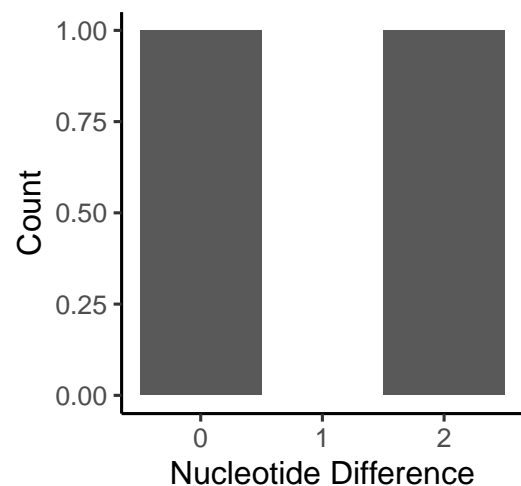
### IGHV3-64\*02\_07

53 sequences assigned  
8 (15.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



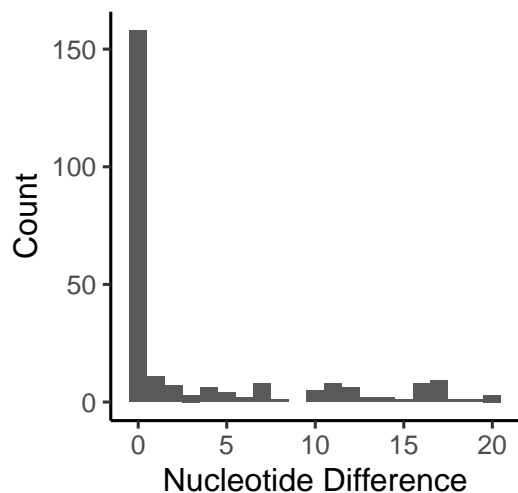
### IGHV3-66\*04

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



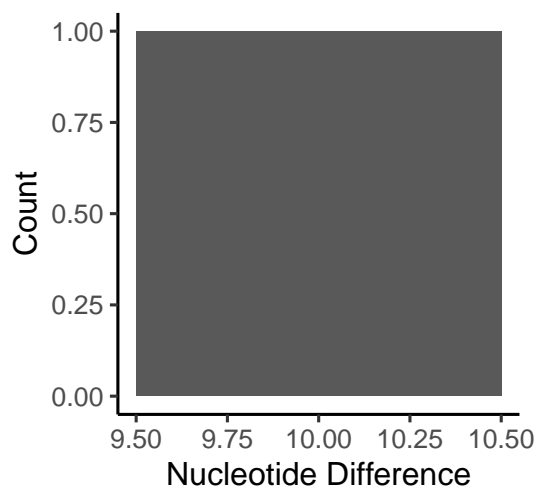
### IGHV3-53\*04

323 sequences assigned  
158 (48.9%) exact matches, in which:  
149 unique CDR3  
7 unique J



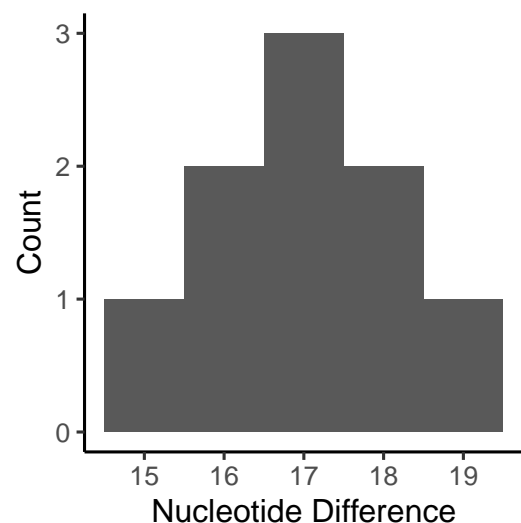
### IGHV3-66\*02

10 sequences assigned  
No exact matches.



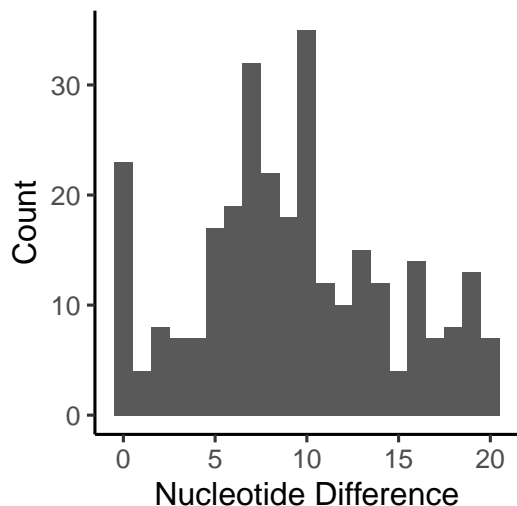
### IGHV3-69-1\*01

18 sequences assigned  
No exact matches.



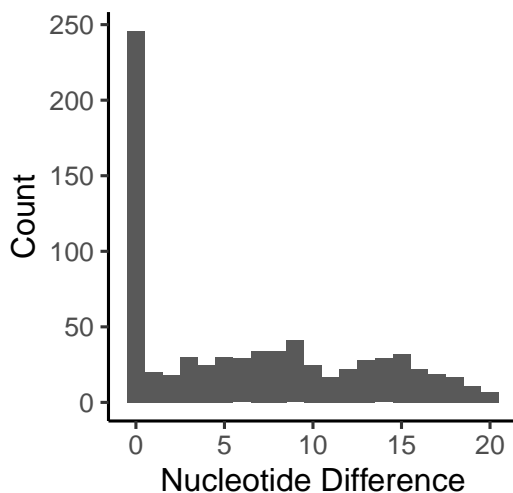
### IGHV3-72\*01

344 sequences assigned  
23 (6.7%) exact matches, in which:  
22 unique CDR3  
6 unique J



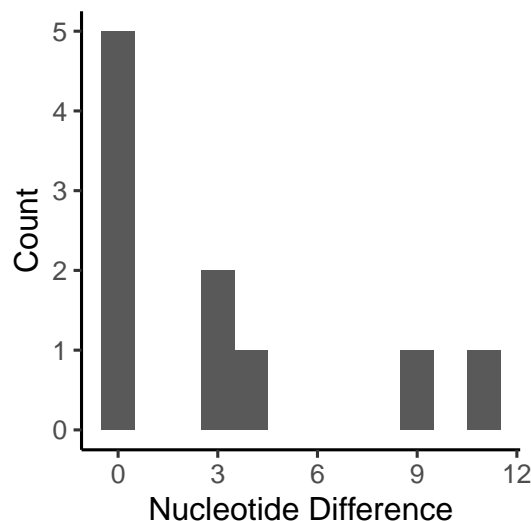
### IGHV3-74\*01\_02

870 sequences assigned  
246 (28.3%) exact matches, in which:  
219 unique CDR3  
7 unique J



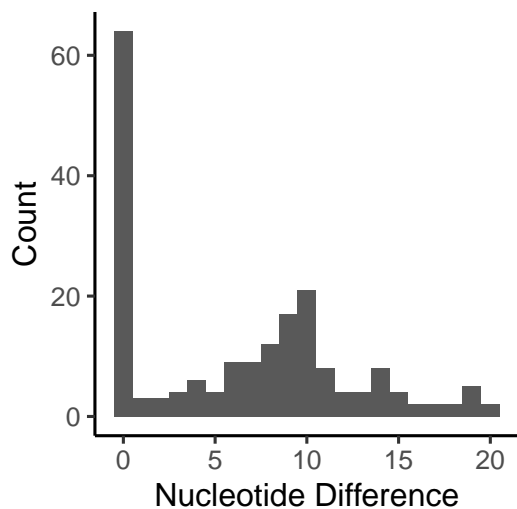
### IGHV4-28\*01\_07

11 sequences assigned  
5 (45.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



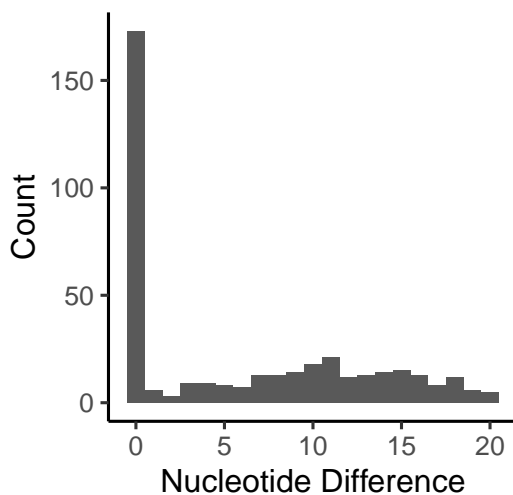
### IGHV3-73\*01\_02

222 sequences assigned  
64 (28.8%) exact matches, in which:  
62 unique CDR3  
6 unique J



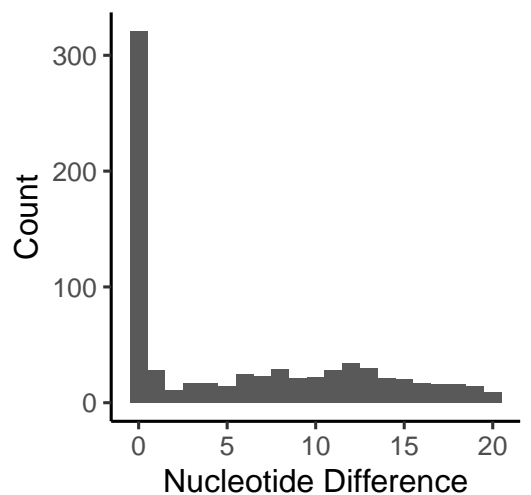
### IGHV3-64D\*06

441 sequences assigned  
173 (39.2%) exact matches, in which:  
163 unique CDR3  
6 unique J



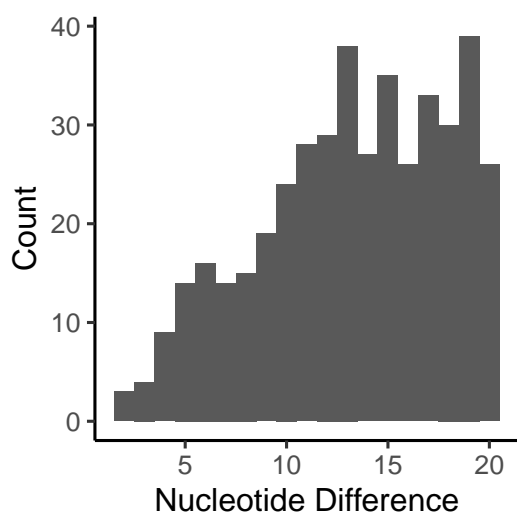
### IGHV4-30-4\*01

897 sequences assigned  
321 (35.8%) exact matches, in which:  
308 unique CDR3  
7 unique J



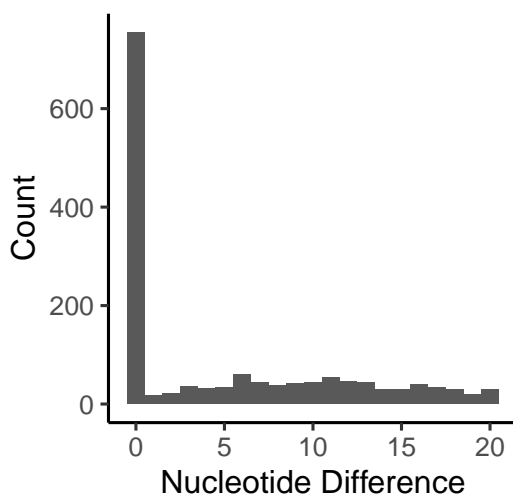
### IGHV3-74\*03

576 sequences assigned  
No exact matches.



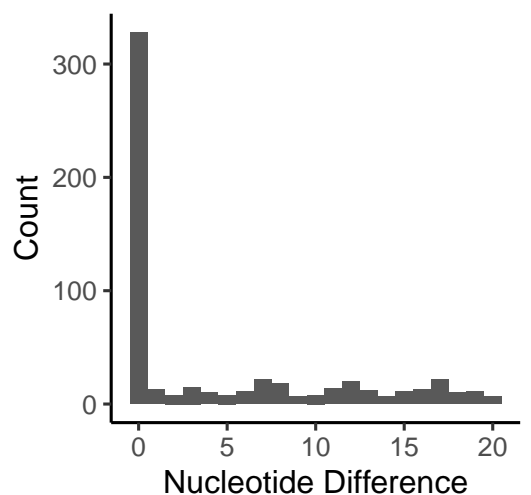
### IGHV4-4\*07

1626 sequences assigned  
755 (46.4%) exact matches, in which:  
709 unique CDR3  
7 unique J



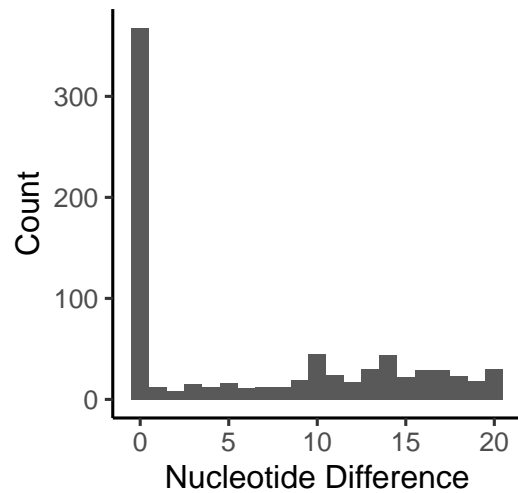
### IGHV4-30-2\*01

749 sequences assigned  
328 (43.8%) exact matches, in which:  
311 unique CDR3  
7 unique J



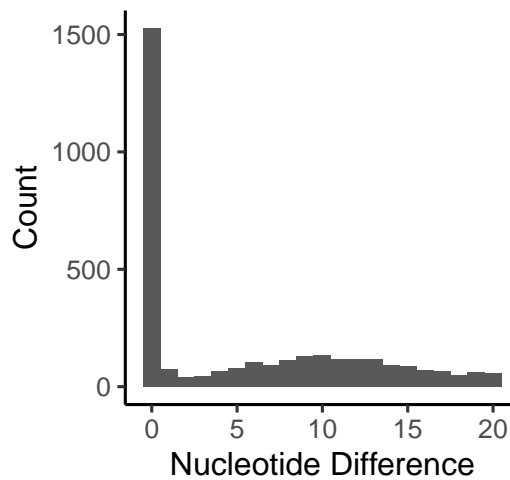
### IGHV4-31\*02

935 sequences assigned  
368 (39.4%) exact matches, in which:  
363 unique CDR3  
7 unique J



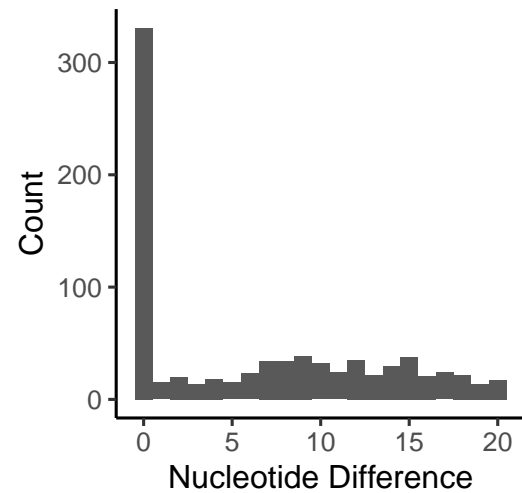
### IGHV4-39\*02\_C258G

3755 sequences assigned  
1526 (40.6%) exact matches, in which:  
1448 unique CDR3  
7 unique J



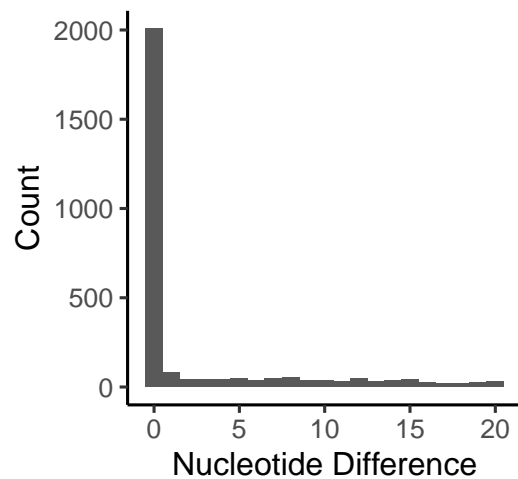
### IGHV4-61\*02\_A234G

1077 sequences assigned  
331 (30.7%) exact matches, in which:  
321 unique CDR3  
7 unique J



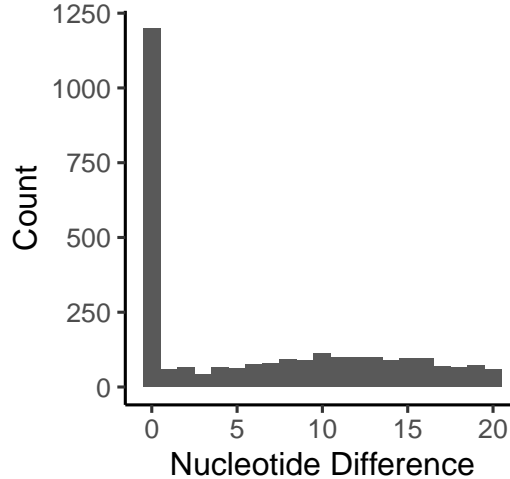
### IGHV4-34\*01\_02

2940 sequences assigned  
2007 (68.3%) exact matches, in which:  
1854 unique CDR3  
7 unique J



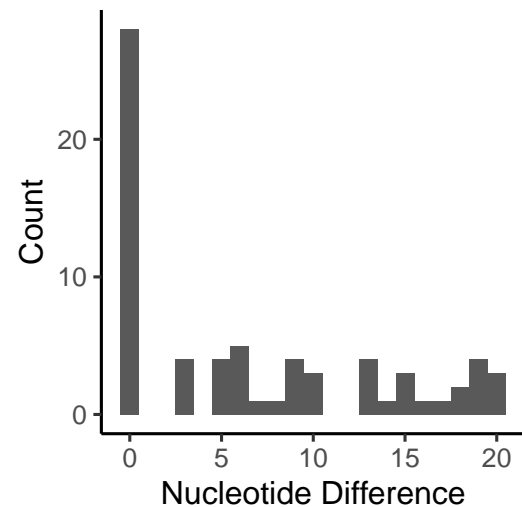
### IGHV4-59\*02\_G88A

3204 sequences assigned  
1198 (37.4%) exact matches, in which:  
1136 unique CDR3  
7 unique J



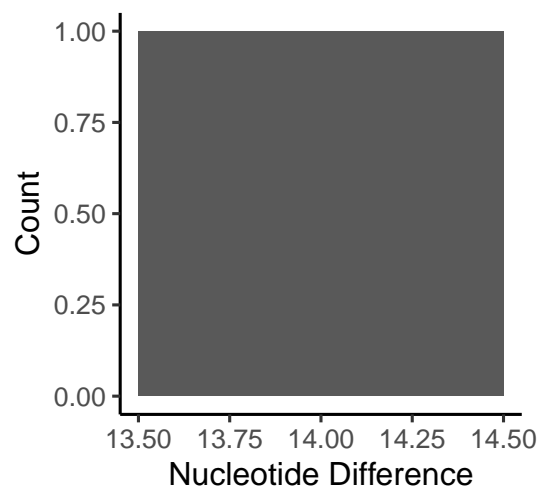
### IGHV5-10-1\*01\_03

107 sequences assigned  
28 (26.2%) exact matches, in which:  
28 unique CDR3  
4 unique J



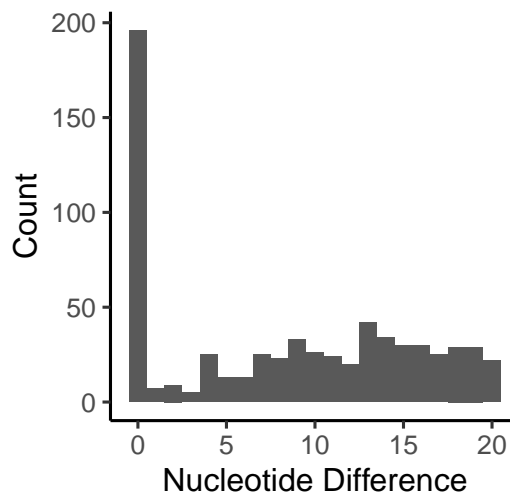
### IGHV4-38-2\*02

2 sequences assigned  
No exact matches.



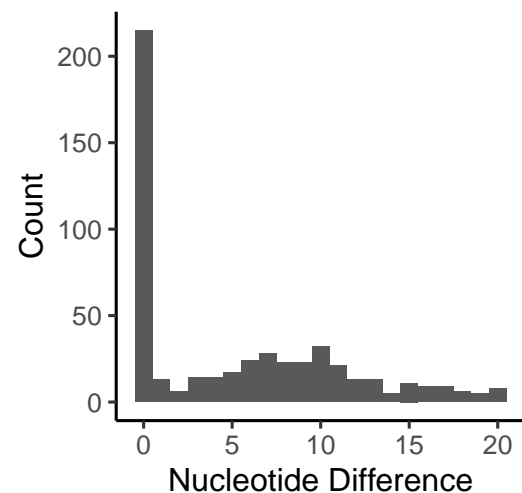
### IGHV4-61\*01

786 sequences assigned  
196 (24.9%) exact matches, in which:  
184 unique CDR3  
6 unique J



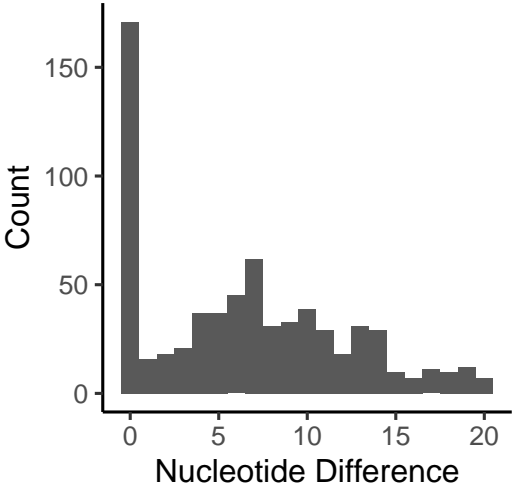
### IGHV5-51\*07\_A128G

558 sequences assigned  
215 (38.5%) exact matches, in which:  
215 unique CDR3  
7 unique J



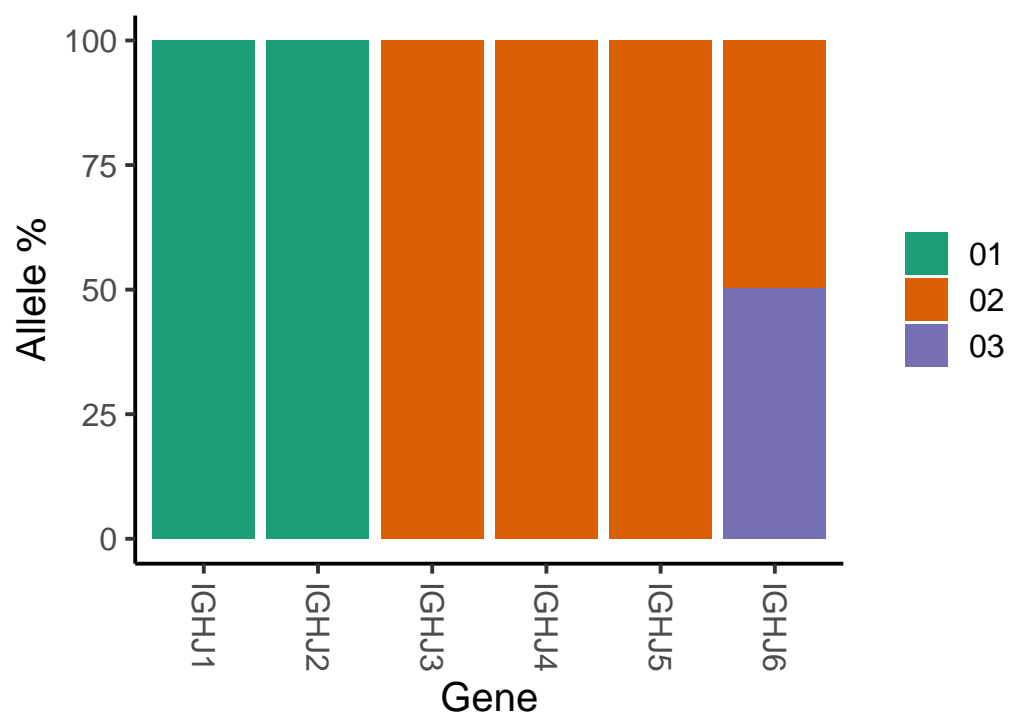
# IGHV6-1\*01\_02

702 sequences assigned  
171 (24.4%) exact matches, in which:  
171 unique CDR3  
7 unique J

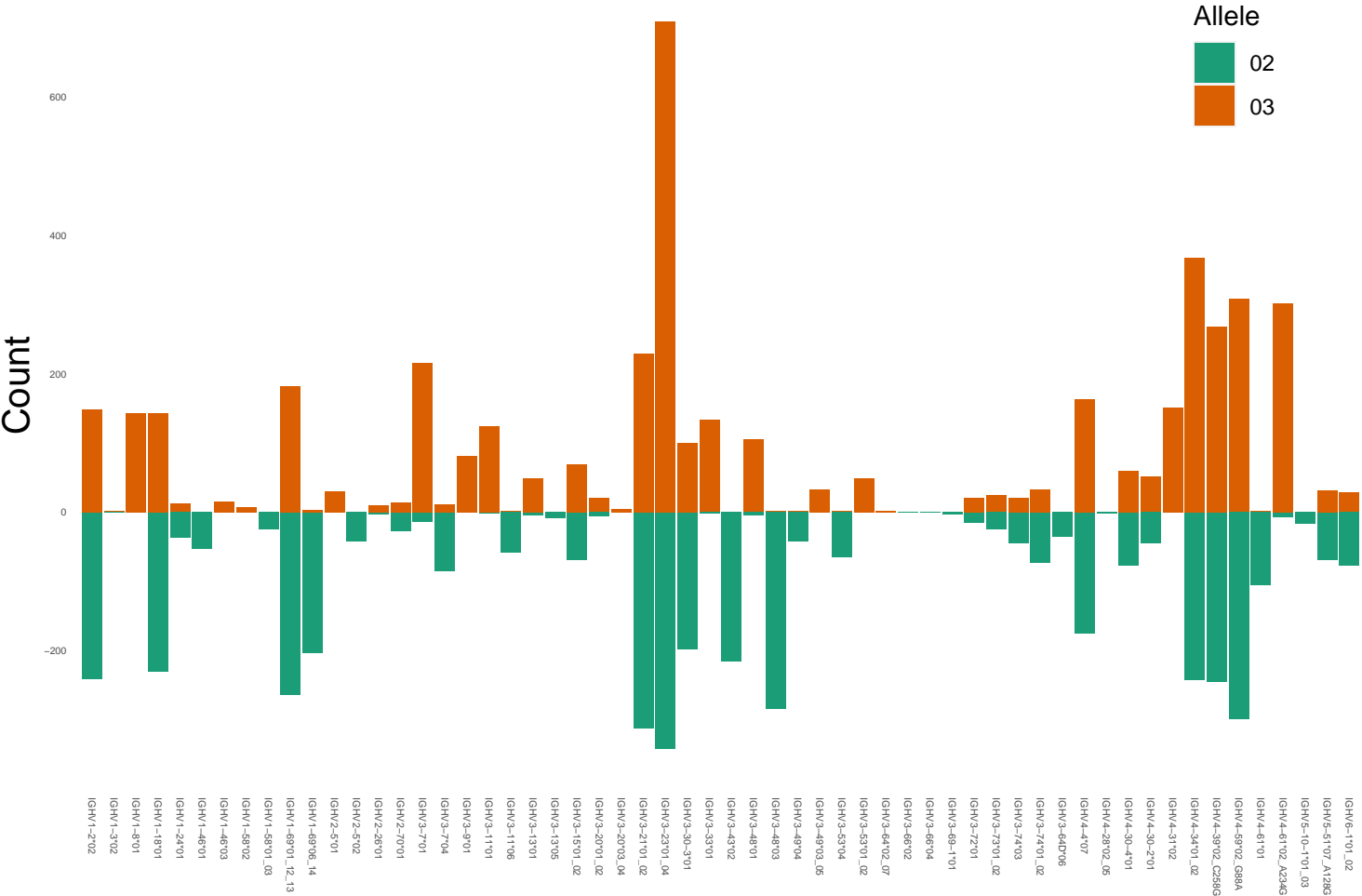




Allele Usage



Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.