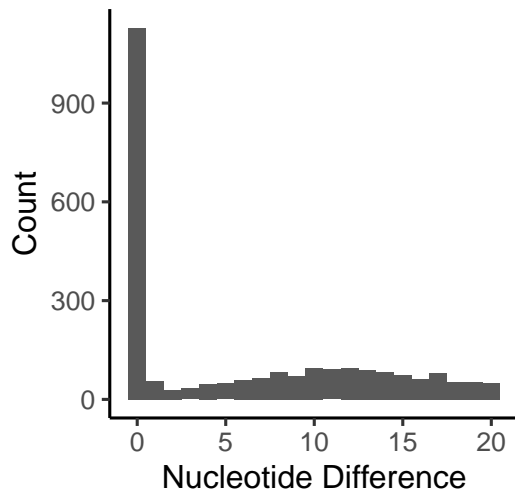


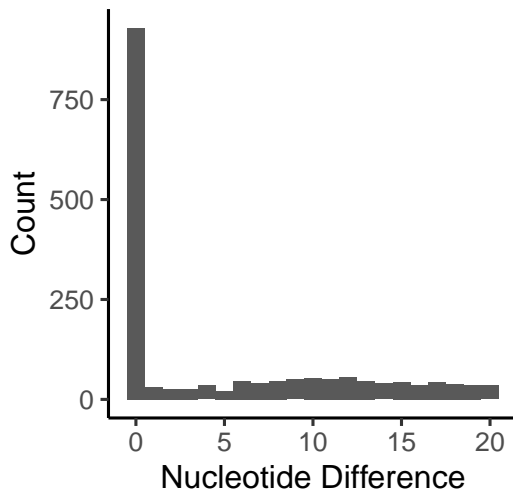
### IGHV1–2\*02

2753 sequences assigned  
1129 (41%) exact matches, in which:  
1102 unique CDR3  
7 unique J



### IGHV1–18\*01

1999 sequences assigned  
930 (46.5%) exact matches, in which:  
911 unique CDR3  
7 unique J



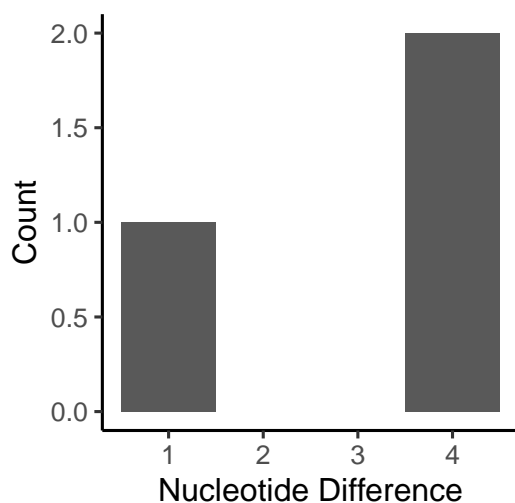
### IGHV1–45\*03

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



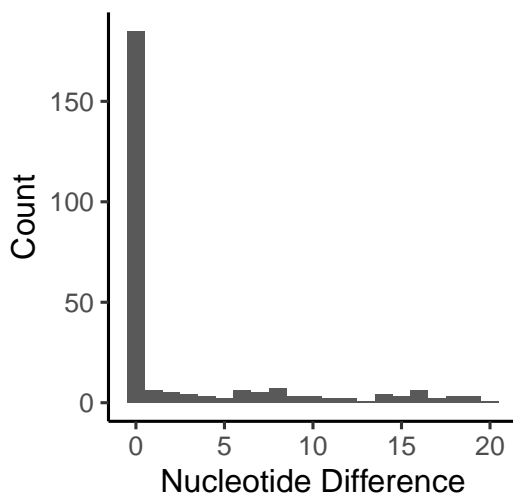
### IGHV1–3\*02

4 sequences assigned  
No exact matches.



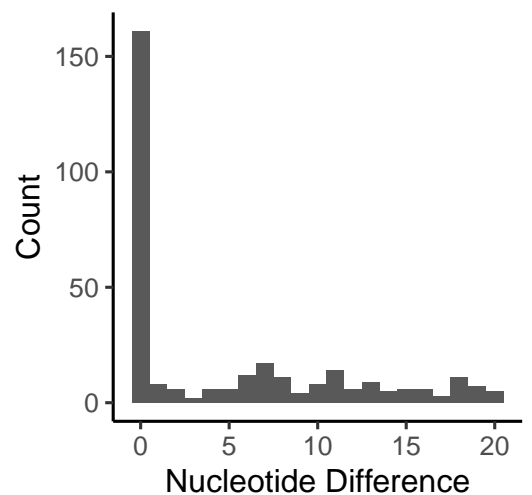
### IGHV1–24\*01

295 sequences assigned  
185 (62.7%) exact matches, in which:  
183 unique CDR3  
7 unique J



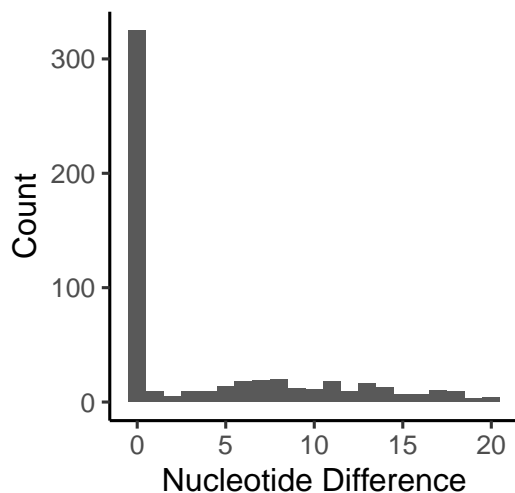
### IGHV1–46\*01

337 sequences assigned  
161 (47.8%) exact matches, in which:  
156 unique CDR3  
6 unique J



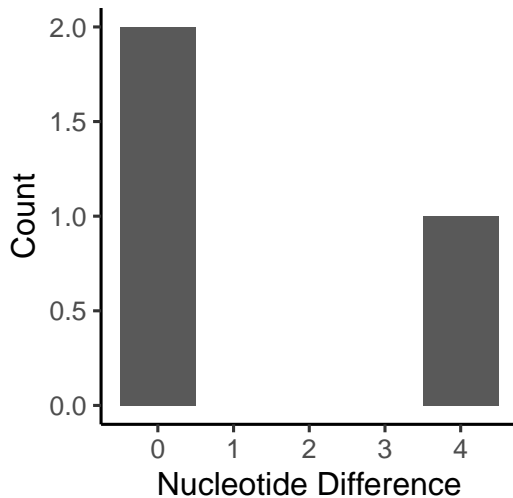
### IGHV1–8\*01

606 sequences assigned  
325 (53.6%) exact matches, in which:  
321 unique CDR3  
6 unique J



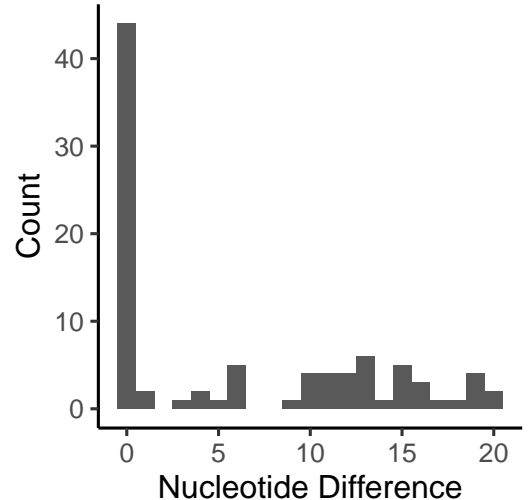
### IGHV1–45\*02

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



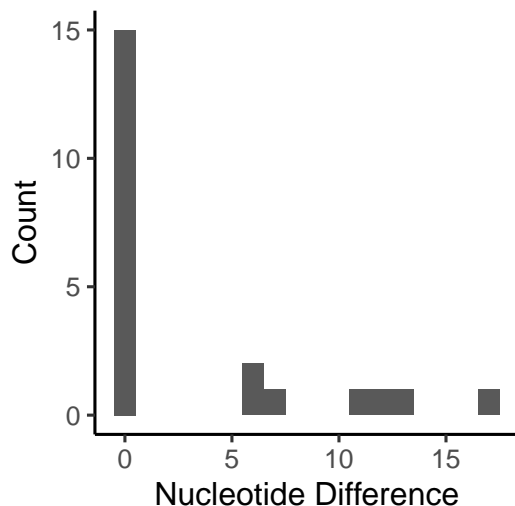
### IGHV1–46\*03

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



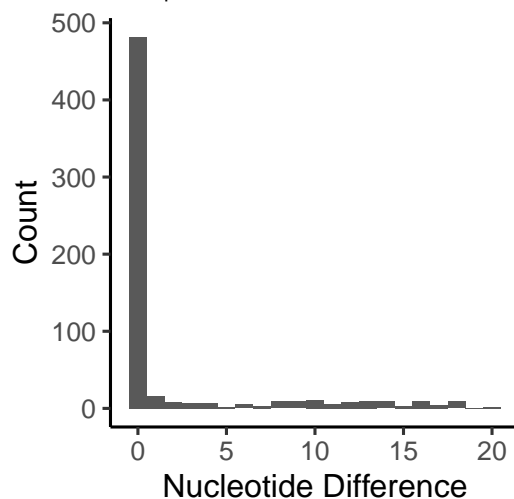
### IGHV1-58\*02

24 sequences assigned  
15 (62.5%) exact matches, in which:  
14 unique CDR3  
3 unique J



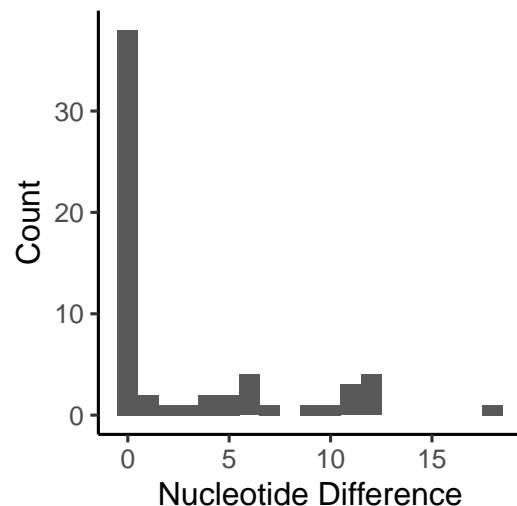
### IGHV1-69\*06\_14

696 sequences assigned  
482 (69.3%) exact matches, in which:  
477 unique CDR3  
7 unique J



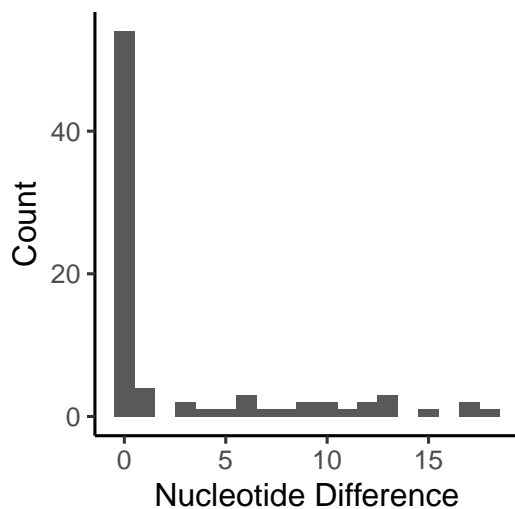
### IGHV2-26\*01

67 sequences assigned  
38 (56.7%) exact matches, in which:  
37 unique CDR3  
6 unique J



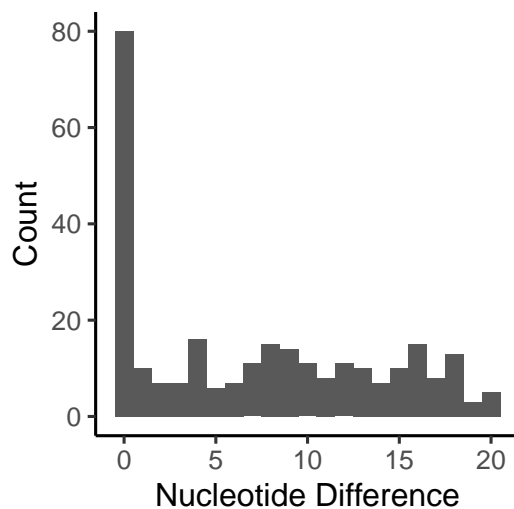
### IGHV1-58\*01\_03

89 sequences assigned  
54 (60.7%) exact matches, in which:  
52 unique CDR3  
5 unique J



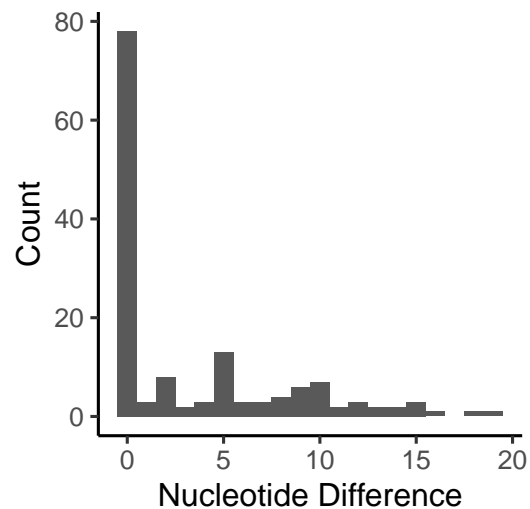
### IGHV2-5\*01

300 sequences assigned  
80 (26.7%) exact matches, in which:  
76 unique CDR3  
6 unique J



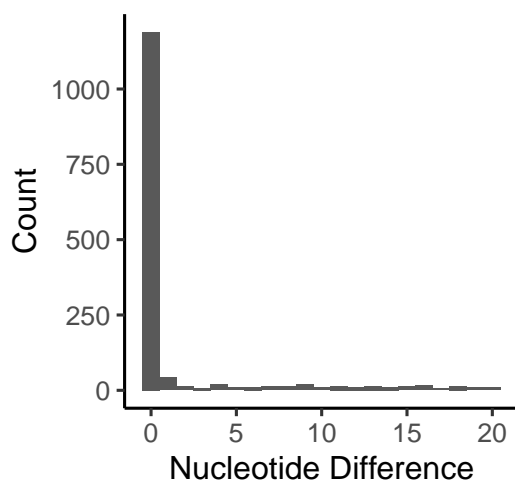
### IGHV2-70\*01

162 sequences assigned  
78 (48.1%) exact matches, in which:  
78 unique CDR3  
6 unique J



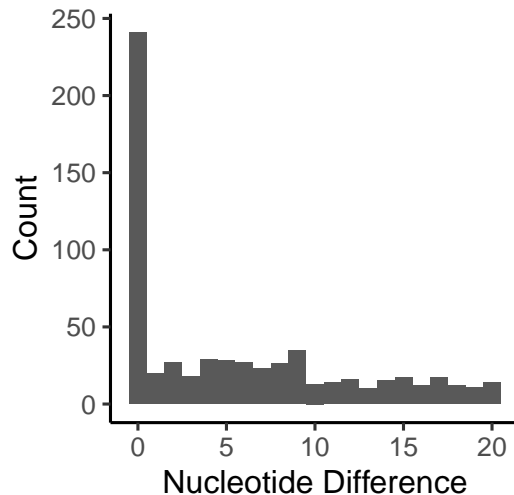
### IGHV1-69\*01\_12\_13

1622 sequences assigned  
1189 (73.3%) exact matches, in which:  
1172 unique CDR3  
7 unique J



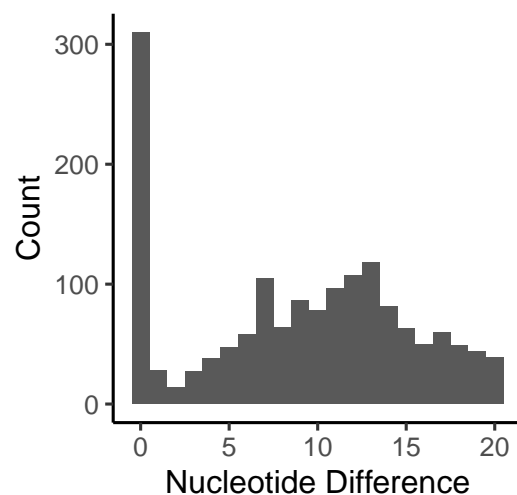
### IGHV2-5\*02

686 sequences assigned  
241 (35.1%) exact matches, in which:  
234 unique CDR3  
6 unique J



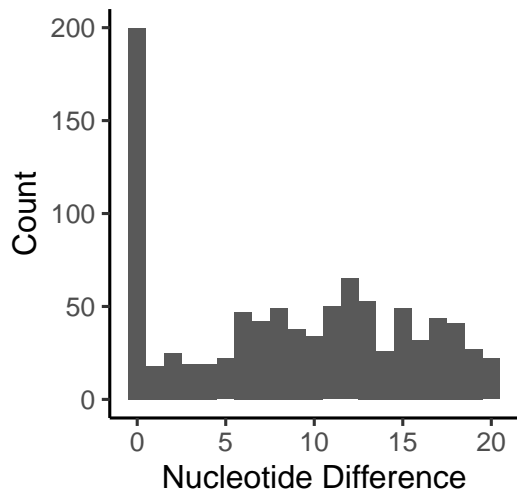
### IGHV3-7\*01

1800 sequences assigned  
310 (17.2%) exact matches, in which:  
286 unique CDR3  
6 unique J



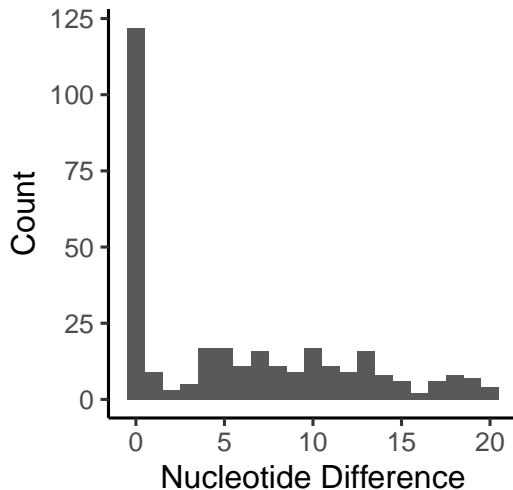
### IGHV3-7\*04

1136 sequences assigned  
200 (17.6%) exact matches, in which:  
183 unique CDR3  
6 unique J



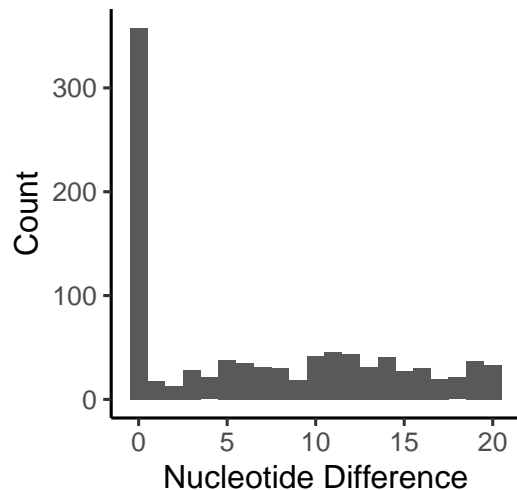
### IGHV3-11\*06

422 sequences assigned  
122 (28.9%) exact matches, in which:  
113 unique CDR3  
6 unique J



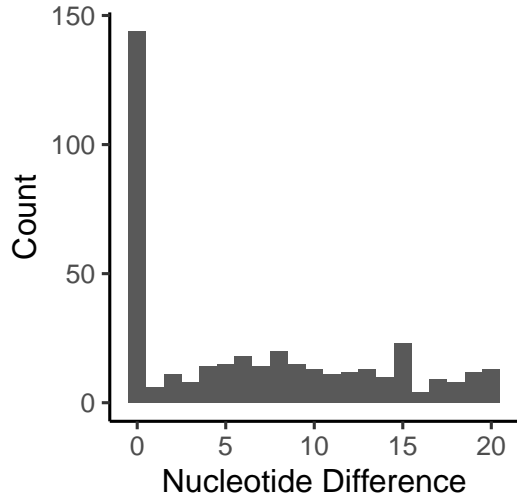
### IGHV3-15\*01\_02

1374 sequences assigned  
358 (26.1%) exact matches, in which:  
334 unique CDR3  
7 unique J



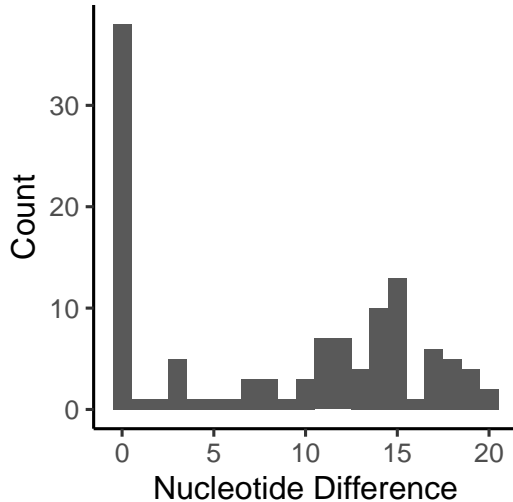
### IGHV3-9\*01

461 sequences assigned  
144 (31.2%) exact matches, in which:  
141 unique CDR3  
6 unique J



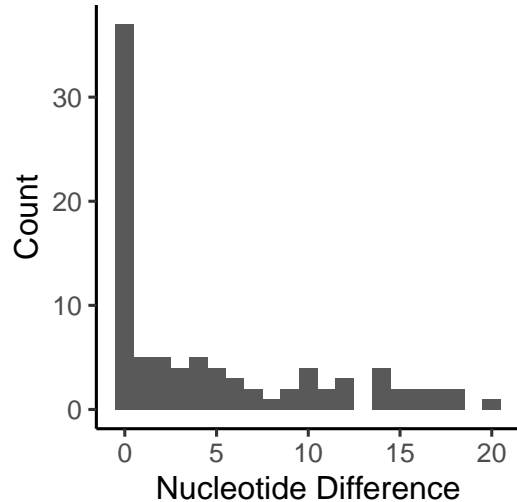
### IGHV3-13\*01

145 sequences assigned  
38 (26.2%) exact matches, in which:  
38 unique CDR3  
5 unique J



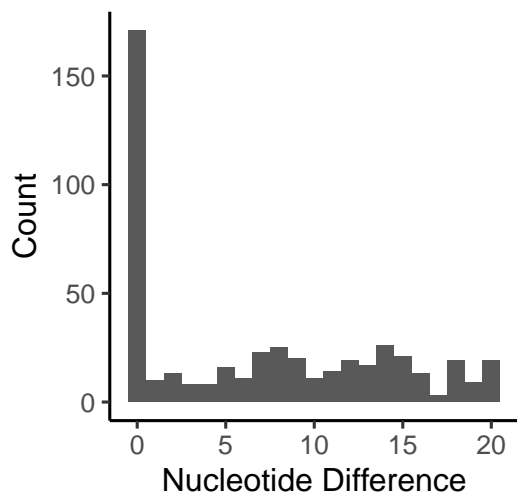
### IGHV3-20\*01\_02

103 sequences assigned  
37 (35.9%) exact matches, in which:  
36 unique CDR3  
6 unique J



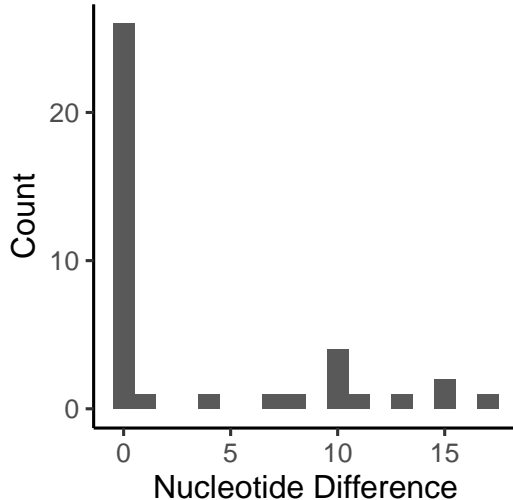
### IGHV3-11\*01

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



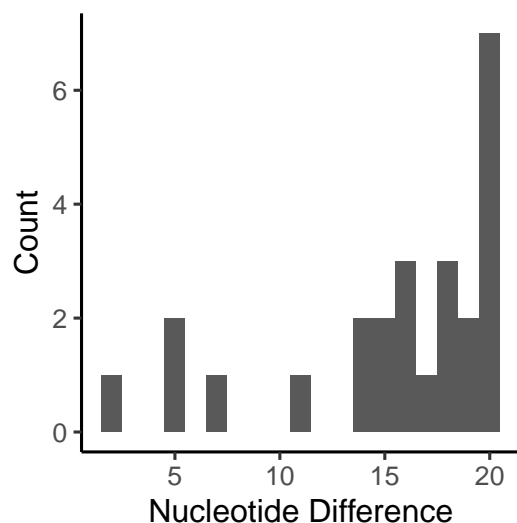
### IGHV3-13\*05

49 sequences assigned  
26 (53.1%) exact matches, in which:  
25 unique CDR3  
4 unique J



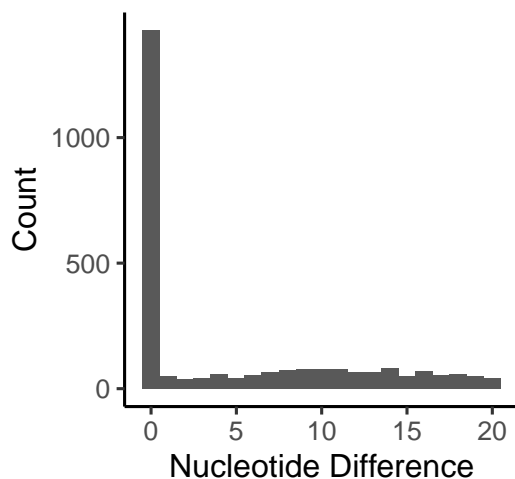
### IGHV3-20\*03\_04

112 sequences assigned  
No exact matches.



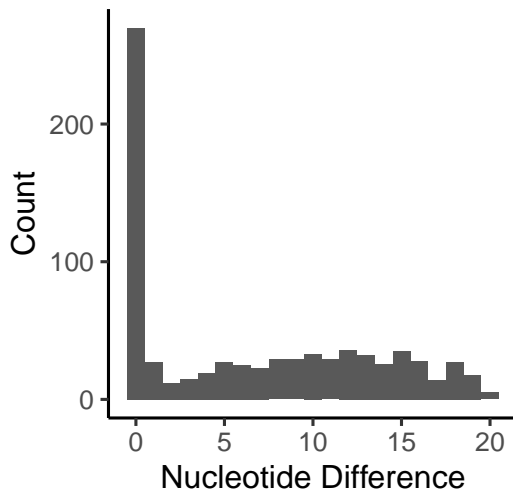
### IGHV3–21\*01\_02

2963 sequences assigned  
1427 (48.2%) exact matches, in which:  
1288 unique CDR3  
7 unique J



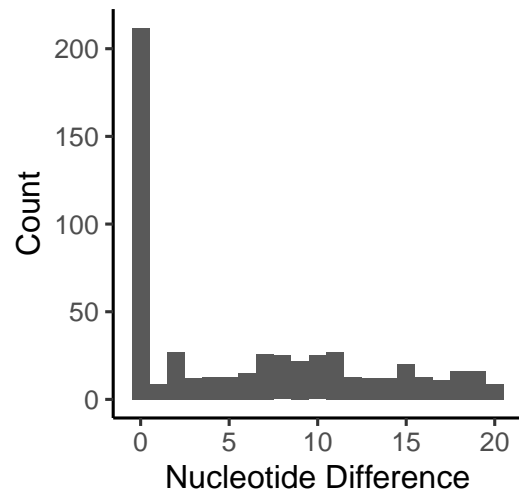
### IGHV3–33\*01

920 sequences assigned  
270 (29.3%) exact matches, in which:  
262 unique CDR3  
7 unique J



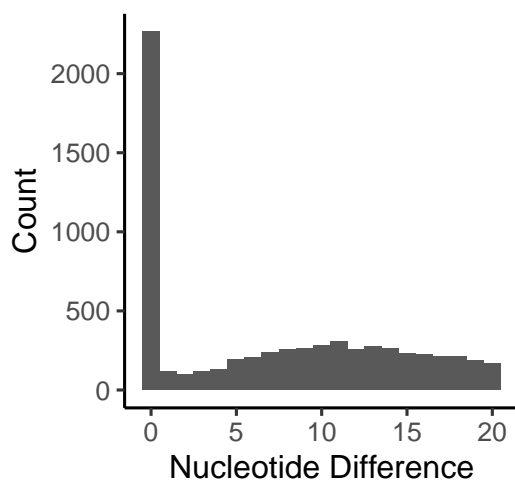
### IGHV3–48\*01

622 sequences assigned  
212 (34.1%) exact matches, in which:  
188 unique CDR3  
6 unique J



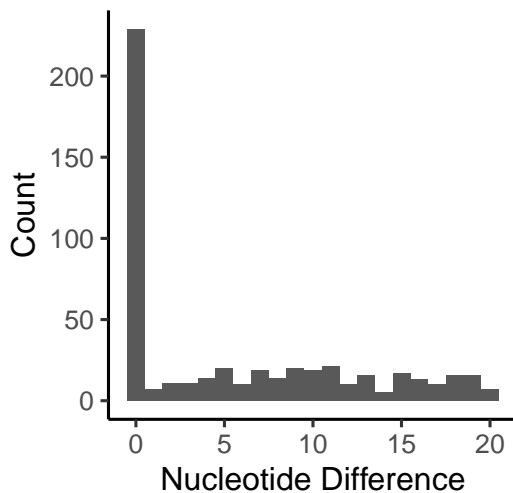
### IGHV3–23\*01\_04

7983 sequences assigned  
2265 (28.4%) exact matches, in which:  
2069 unique CDR3  
7 unique J



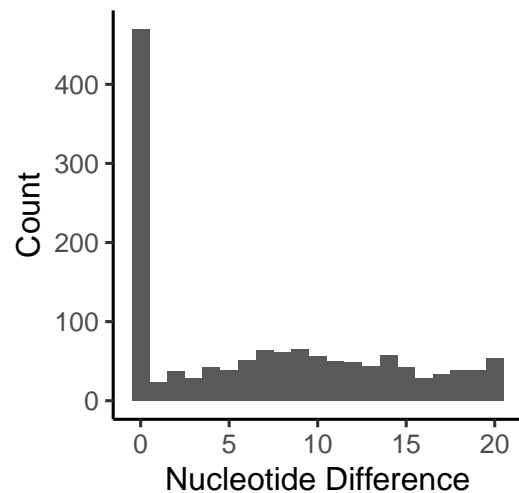
### IGHV3–43\*02

670 sequences assigned  
229 (34.2%) exact matches, in which:  
210 unique CDR3  
6 unique J



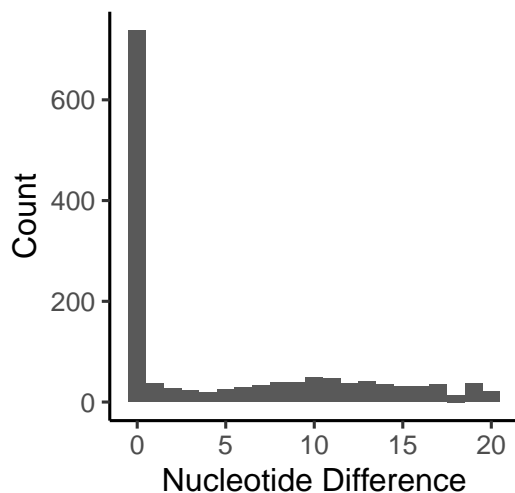
### IGHV3–48\*03

1583 sequences assigned  
470 (29.7%) exact matches, in which:  
445 unique CDR3  
6 unique J



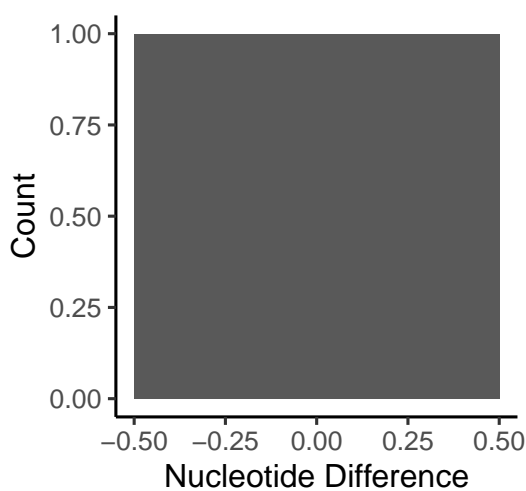
### IGHV3–30–3\*01

1579 sequences assigned  
738 (46.7%) exact matches, in which:  
706 unique CDR3  
7 unique J



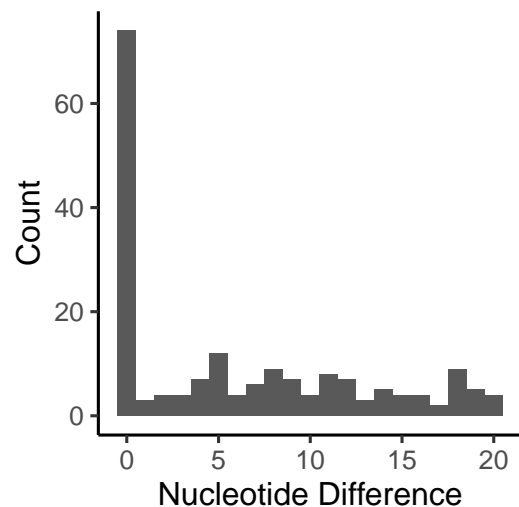
### IGHV3–47\*02

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



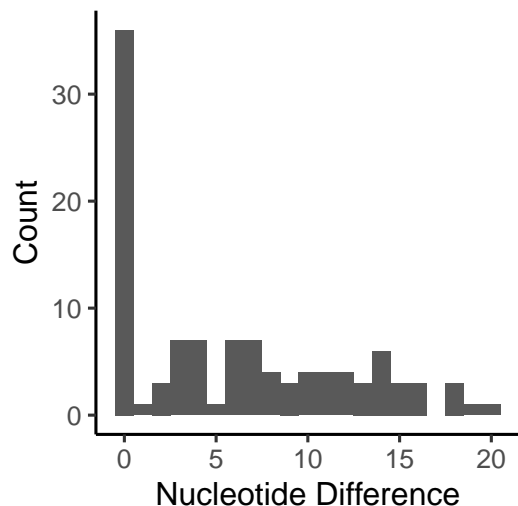
### IGHV3–49\*04

228 sequences assigned  
74 (32.5%) exact matches, in which:  
72 unique CDR3  
5 unique J



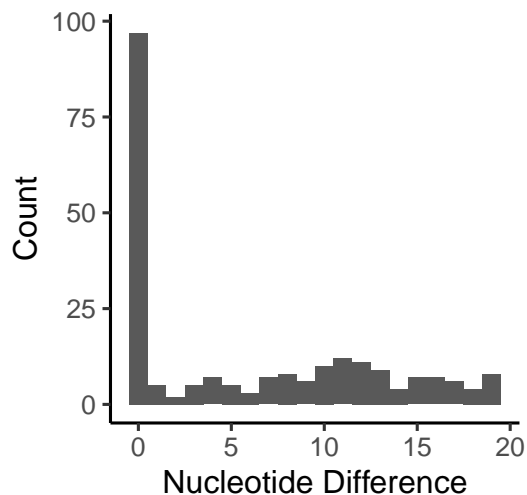
### IGHV3-49\*03\_05

126 sequences assigned  
36 (28.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



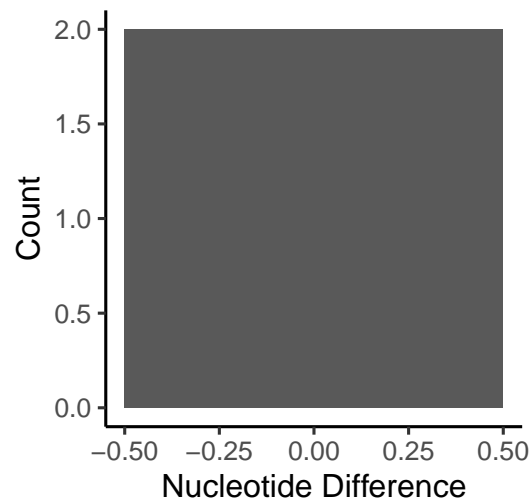
### IGHV3-53\*01\_02

245 sequences assigned  
97 (39.6%) exact matches, in which:  
87 unique CDR3  
5 unique J



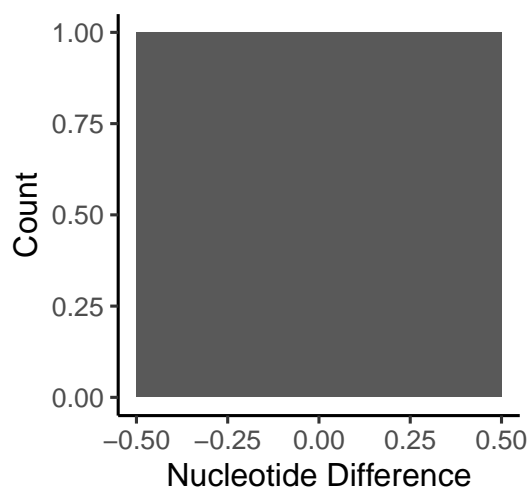
### IGHV3-66\*03

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



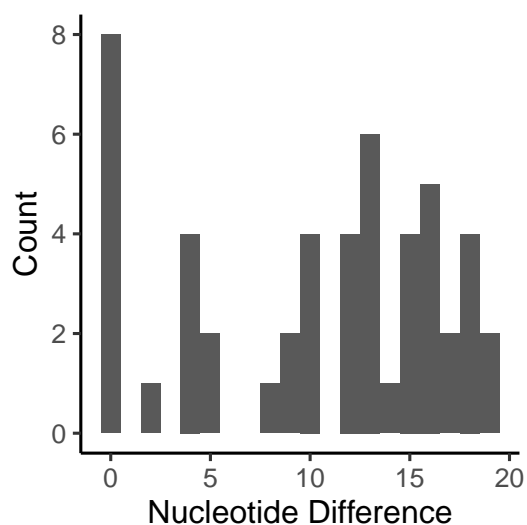
### IGHV3-52\*01\_03

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



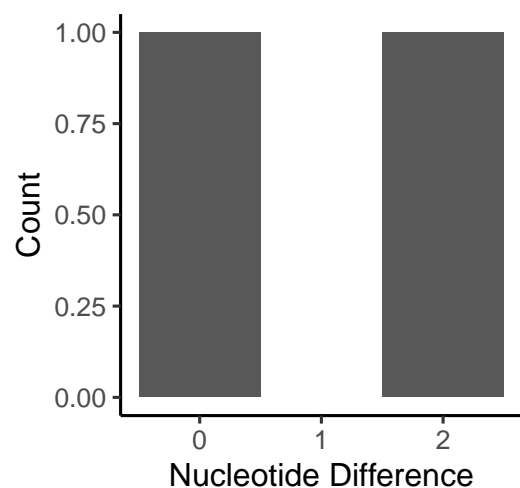
### IGHV3-64\*02\_07

54 sequences assigned  
8 (14.8%) exact matches, in which:  
8 unique CDR3  
3 unique J



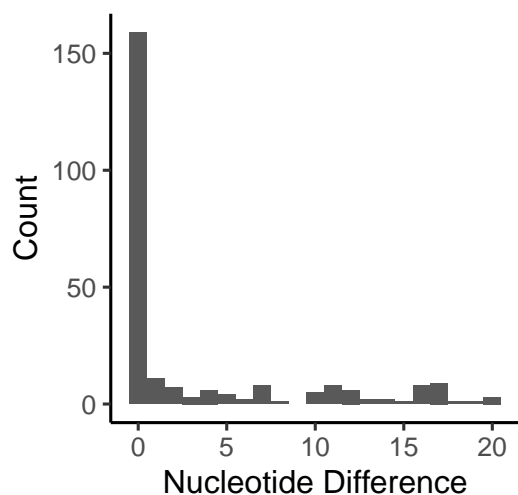
### IGHV3-66\*04

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



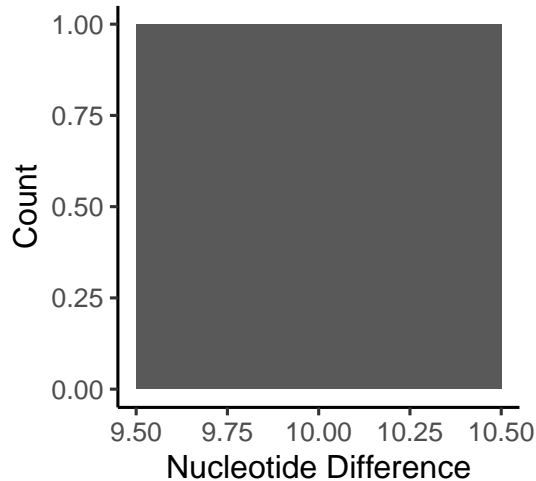
### IGHV3-53\*04

322 sequences assigned  
159 (49.4%) exact matches, in which:  
148 unique CDR3  
7 unique J



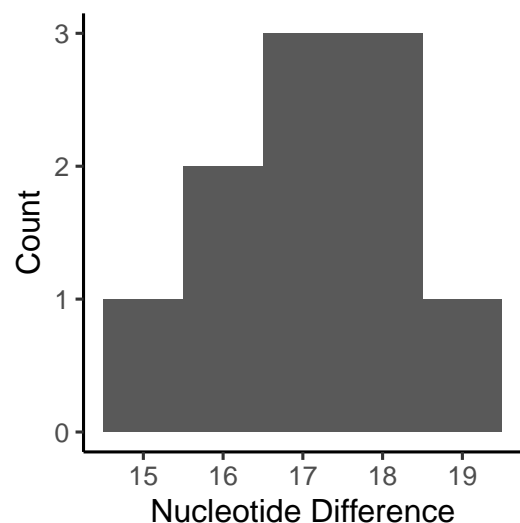
### IGHV3-66\*02

10 sequences assigned  
No exact matches.



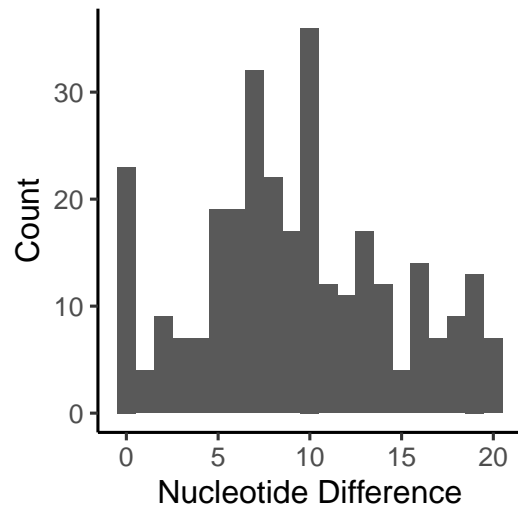
### IGHV3-69-1\*01

19 sequences assigned  
No exact matches.



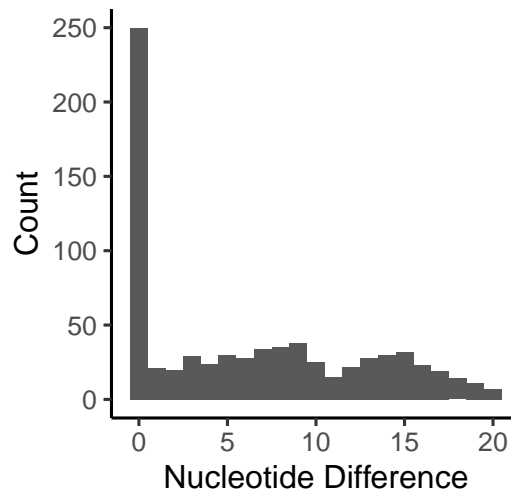
### IGHV3-72\*01

351 sequences assigned  
23 (6.6%) exact matches, in which:  
22 unique CDR3  
6 unique J



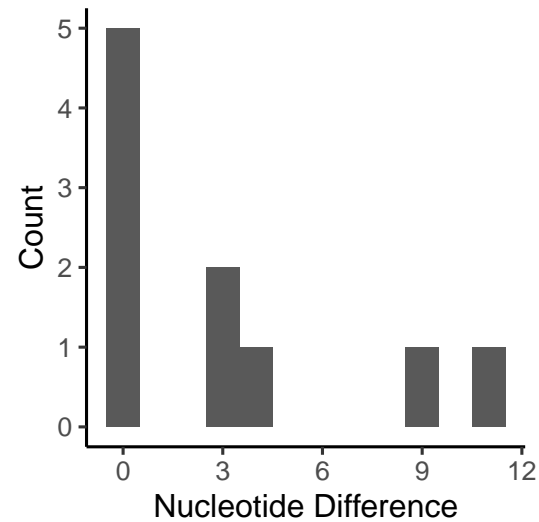
### IGHV3-74\*01\_02

873 sequences assigned  
250 (28.6%) exact matches, in which:  
218 unique CDR3  
7 unique J



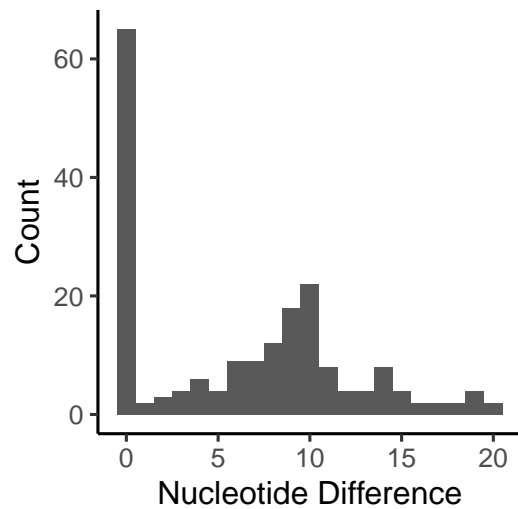
### IGHV4-28\*01\_07

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



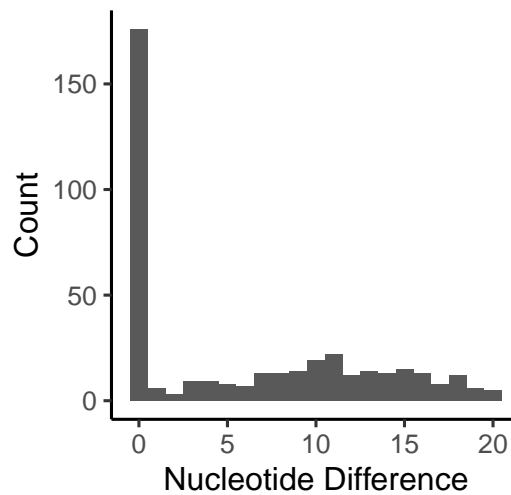
### IGHV3-73\*01\_02

223 sequences assigned  
65 (29.1%) exact matches, in which:  
63 unique CDR3  
6 unique J



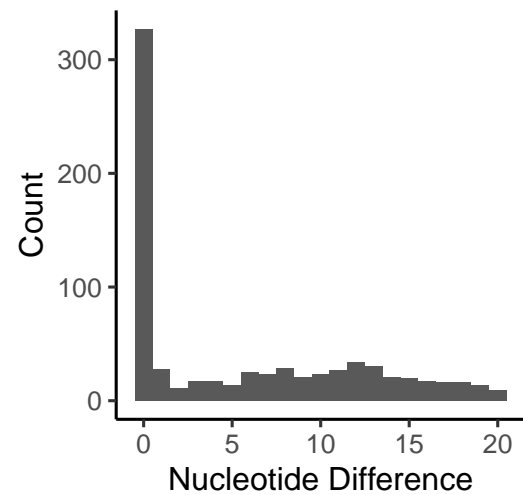
### IGHV3-64D\*06

447 sequences assigned  
176 (39.4%) exact matches, in which:  
162 unique CDR3  
6 unique J



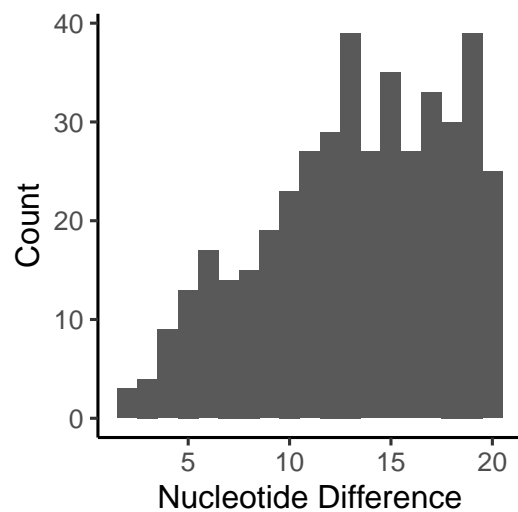
### IGHV4-30-4\*01

908 sequences assigned  
327 (36%) exact matches, in which:  
310 unique CDR3  
7 unique J



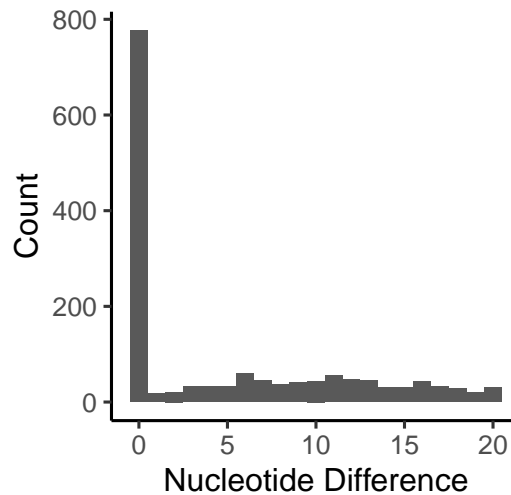
### IGHV3-74\*03

575 sequences assigned  
No exact matches.



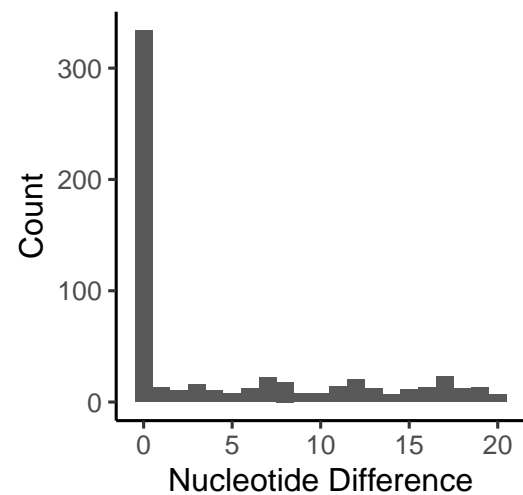
### IGHV4-4\*07

1659 sequences assigned  
777 (46.8%) exact matches, in which:  
712 unique CDR3  
7 unique J



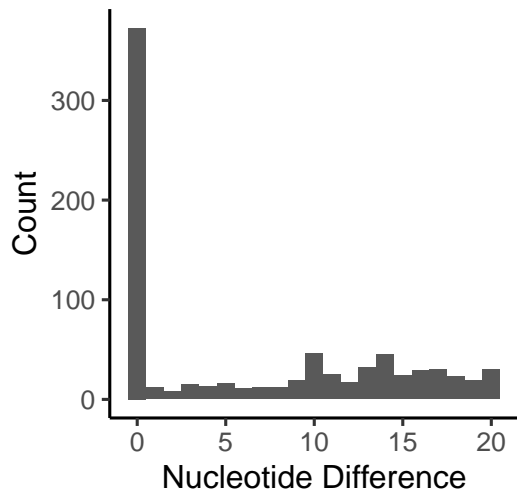
### IGHV4-30-2\*01

771 sequences assigned  
334 (43.3%) exact matches, in which:  
312 unique CDR3  
7 unique J



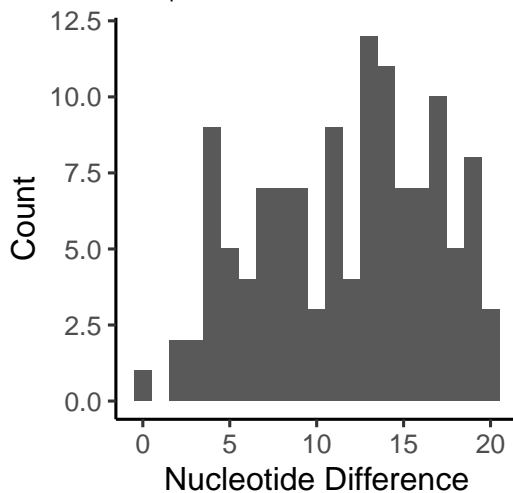
### IGHV4-31\*02

953 sequences assigned  
373 (39.1%) exact matches, in which:  
363 unique CDR3  
7 unique J



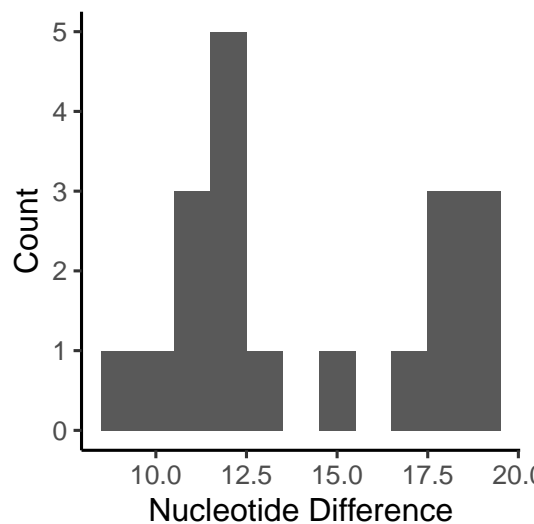
### IGHV4-39\*02

171 sequences assigned  
1 (0.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



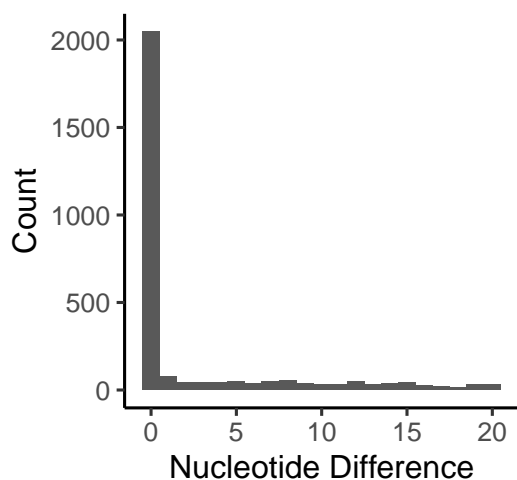
### IGHV4-59\*12

40 sequences assigned  
No exact matches.



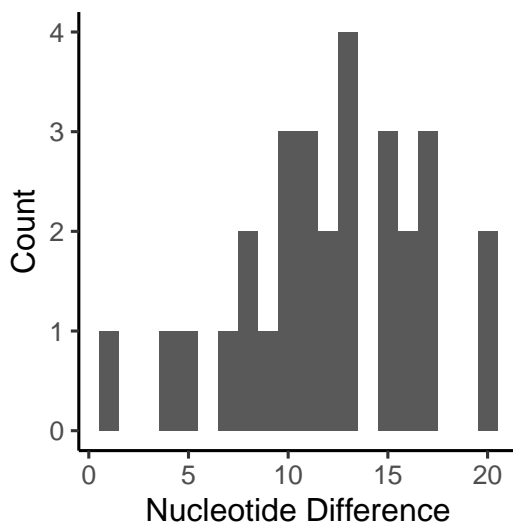
### IGHV4-34\*01\_02

2982 sequences assigned  
2047 (68.6%) exact matches, in which:  
1860 unique CDR3  
7 unique J



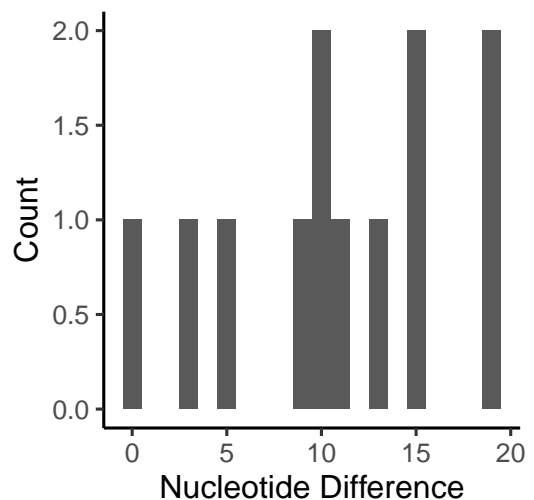
### IGHV4-59\*02

66 sequences assigned  
No exact matches.



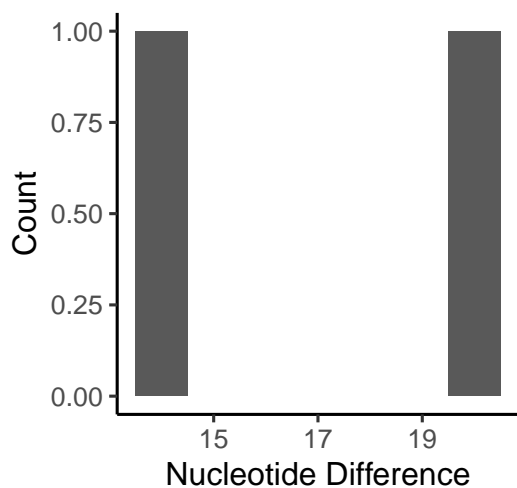
### IGHV4-59\*13

19 sequences assigned  
1 (5.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



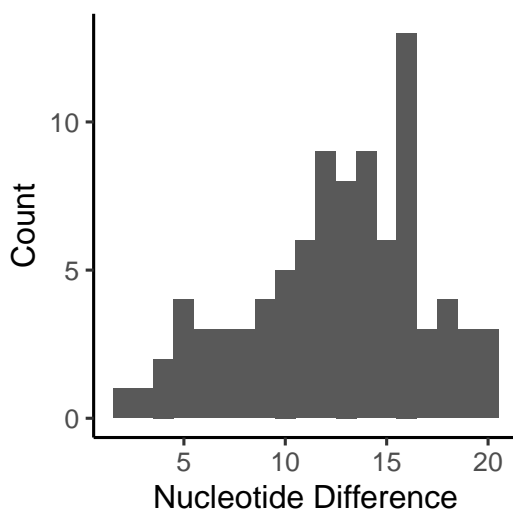
### IGHV4-38-2\*02

14 sequences assigned  
No exact matches.



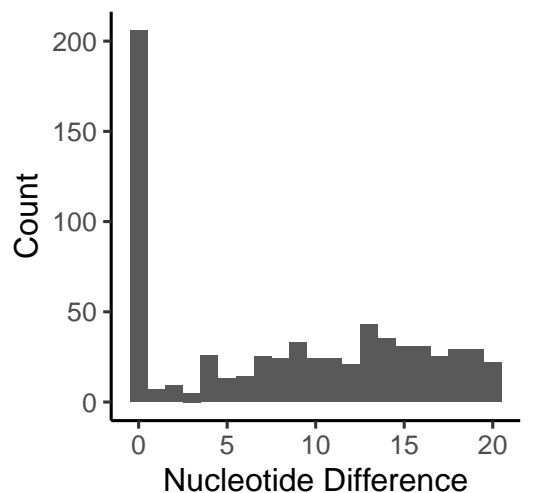
### IGHV4-59\*11

157 sequences assigned  
No exact matches.



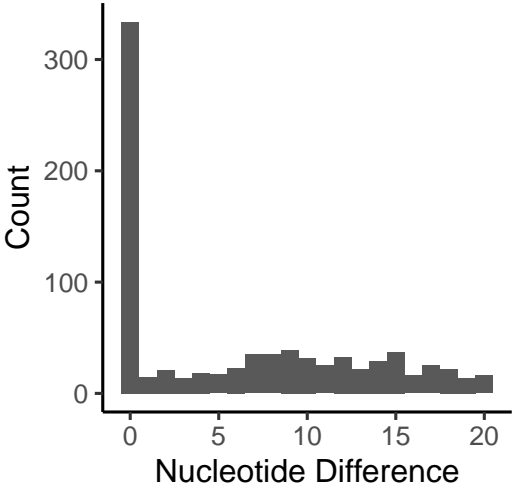
### IGHV4-61\*01

804 sequences assigned  
206 (25.6%) exact matches, in which:  
186 unique CDR3  
6 unique J



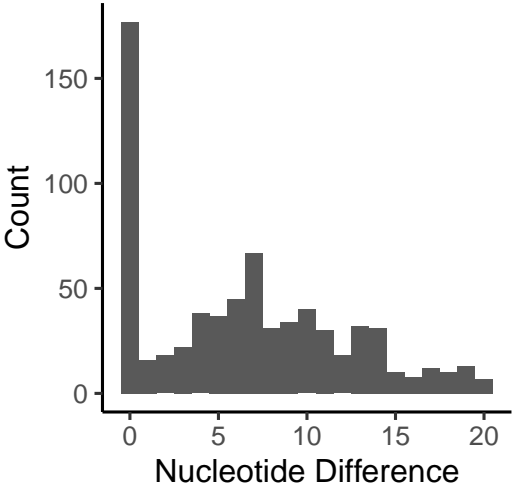
IGHV4-61\*02\_A234G

1069 sequences assigned  
334 (31.2%) exact matches, in which:  
323 unique CDR3  
7 unique J



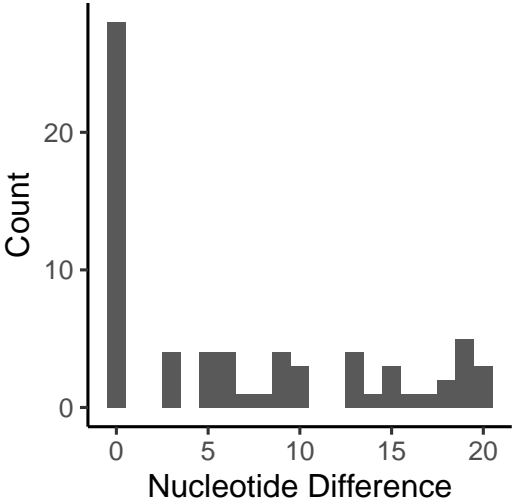
IGHV6-1\*01\_02

725 sequences assigned  
177 (24.4%) exact matches, in which:  
174 unique CDR3  
7 unique J



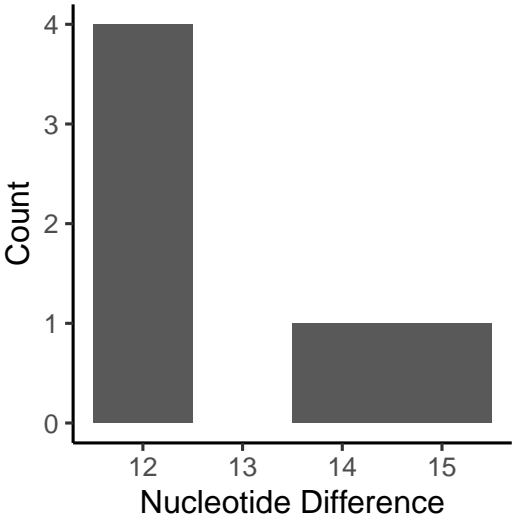
IGHV5-10-1\*01\_03

112 sequences assigned  
28 (25%) exact matches, in which:  
28 unique CDR3  
4 unique J

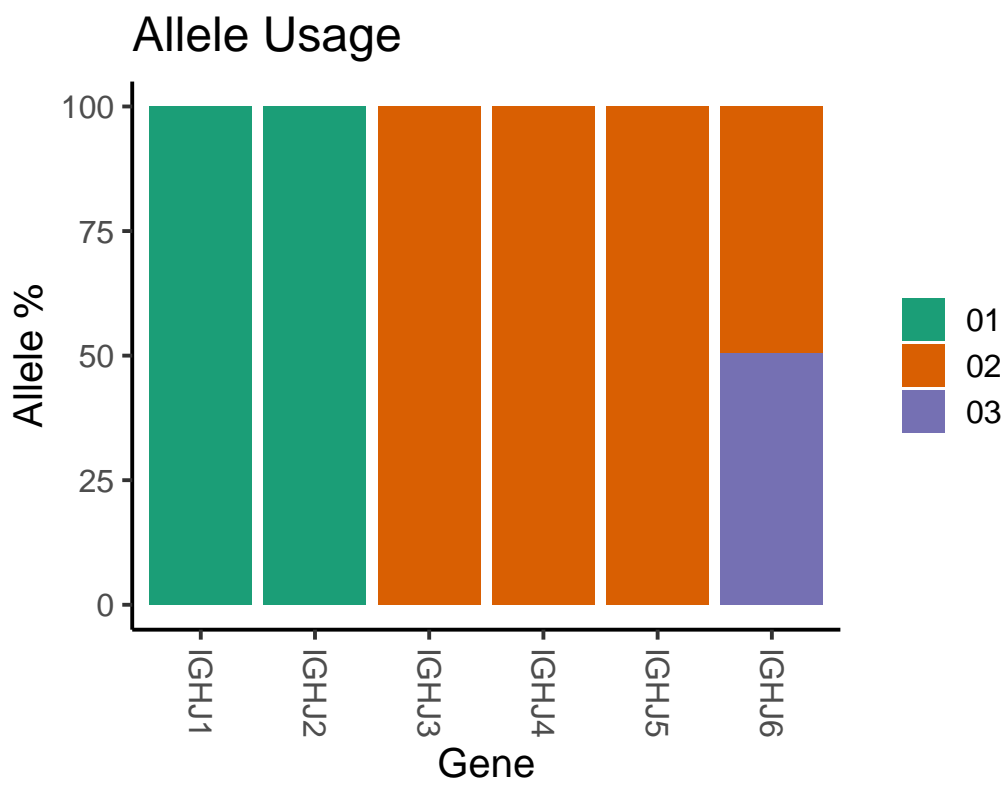


IGHV5-51\*06

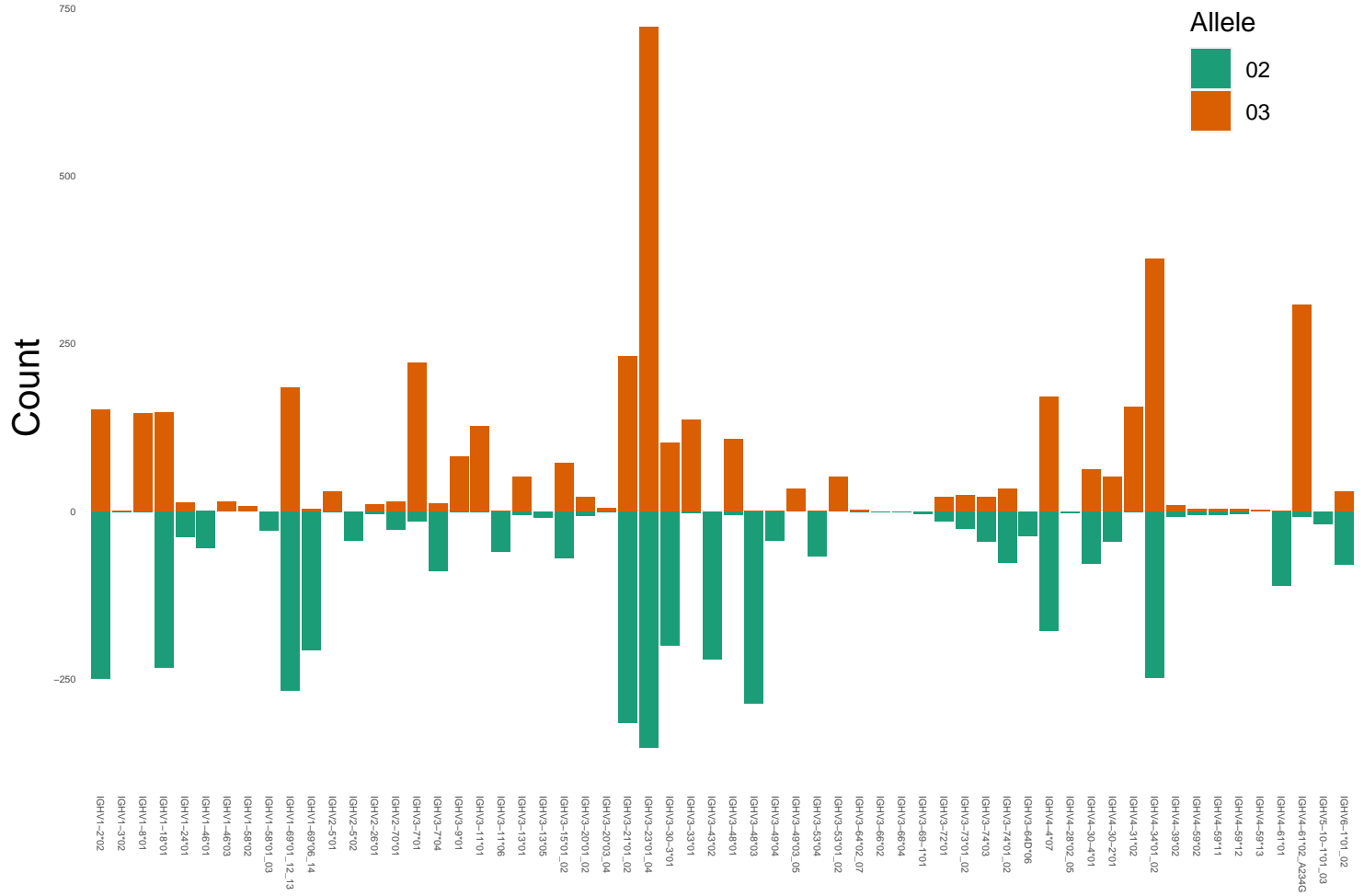
6 sequences assigned  
No exact matches.







### Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.