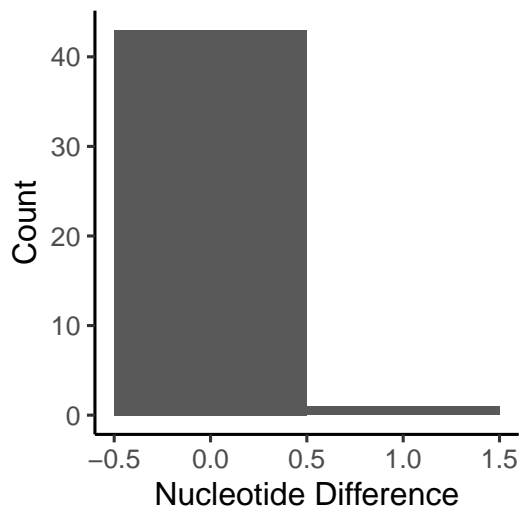


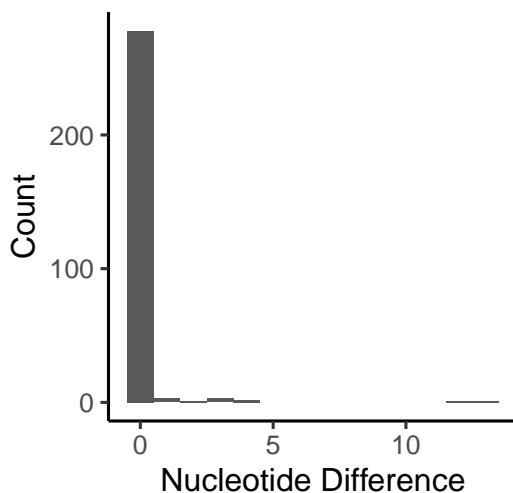
### IGHV1-2\*04

44 sequences assigned  
43 (97.7%) exact matches, in which:  
43 unique CDR3  
5 unique J



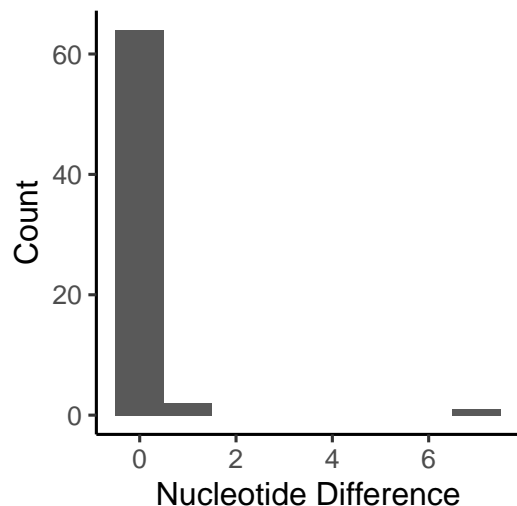
### IGHV1-18\*01

289 sequences assigned  
278 (96.2%) exact matches, in which:  
278 unique CDR3  
7 unique J



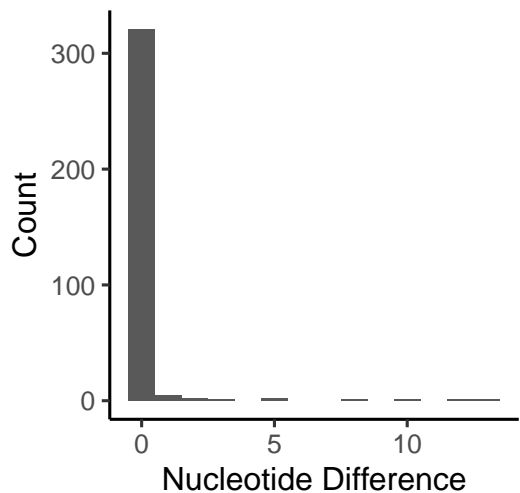
### IGHV1-46\*01

67 sequences assigned  
64 (95.5%) exact matches, in which:  
64 unique CDR3  
5 unique J



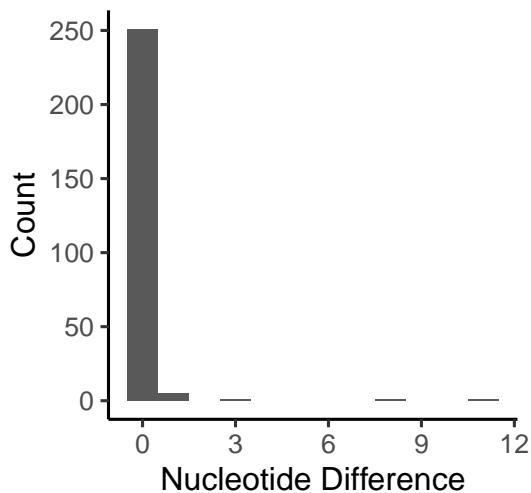
### IGHV1-2\*06

337 sequences assigned  
321 (95.3%) exact matches, in which:  
321 unique CDR3  
7 unique J



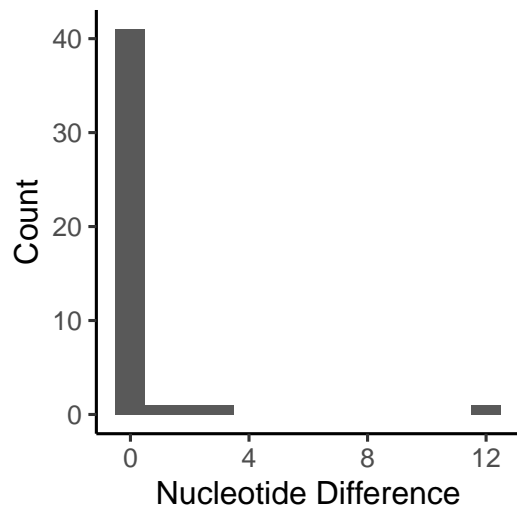
### IGHV1-18\*04

259 sequences assigned  
251 (96.9%) exact matches, in which:  
251 unique CDR3  
7 unique J



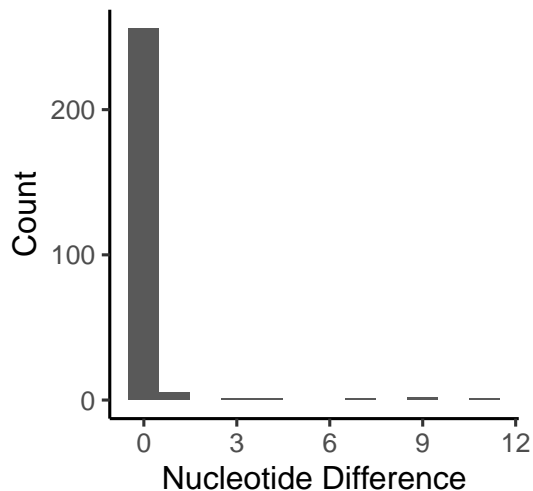
### IGHV1-46\*04

45 sequences assigned  
41 (91.1%) exact matches, in which:  
41 unique CDR3  
4 unique J



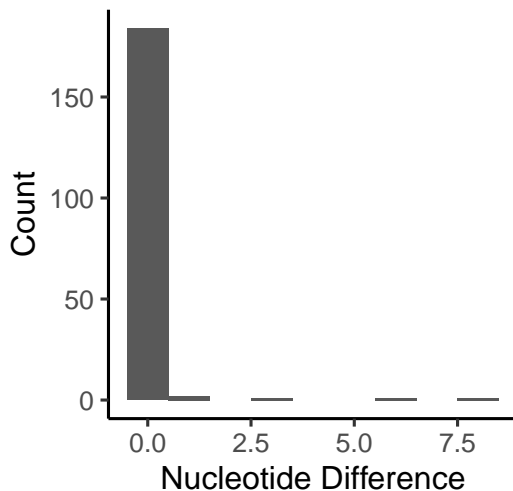
### IGHV1-3\*01

270 sequences assigned  
256 (94.8%) exact matches, in which:  
256 unique CDR3  
7 unique J



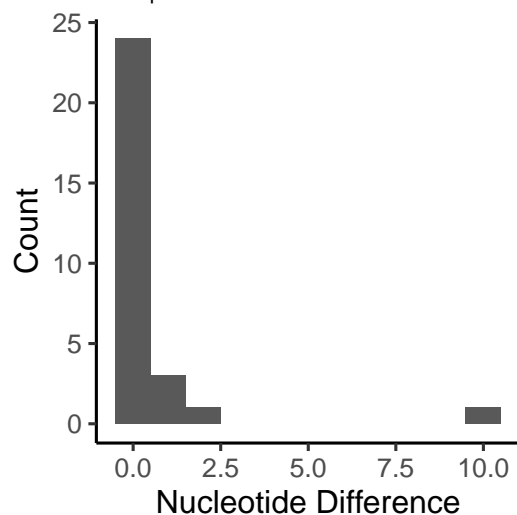
### IGHV1-24\*01

189 sequences assigned  
184 (97.4%) exact matches, in which:  
184 unique CDR3  
7 unique J



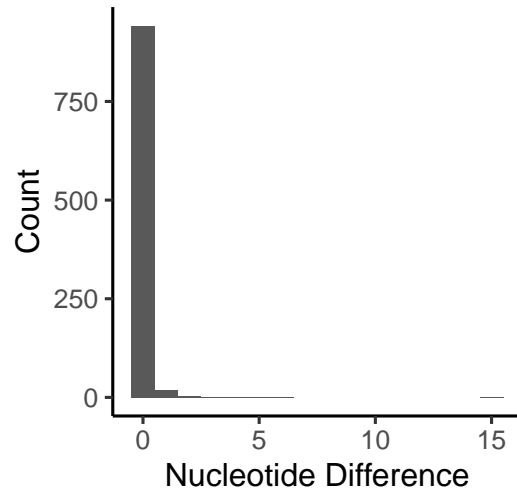
### IGHV1-58\*01

30 sequences assigned  
24 (80%) exact matches, in which:  
24 unique CDR3  
5 unique J



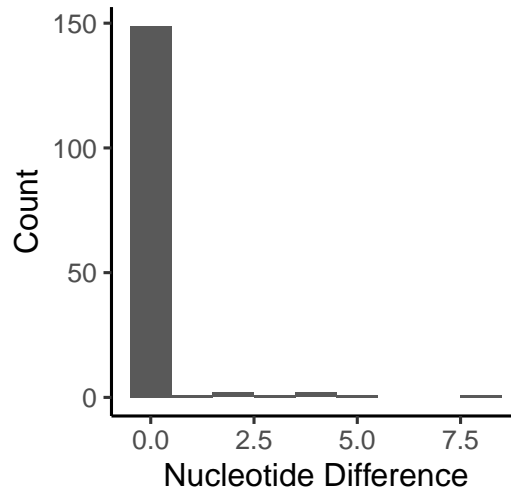
### IGHV1–69\*01

970 sequences assigned  
942 (97.1%) exact matches, in which:  
942 unique CDR3  
7 unique J



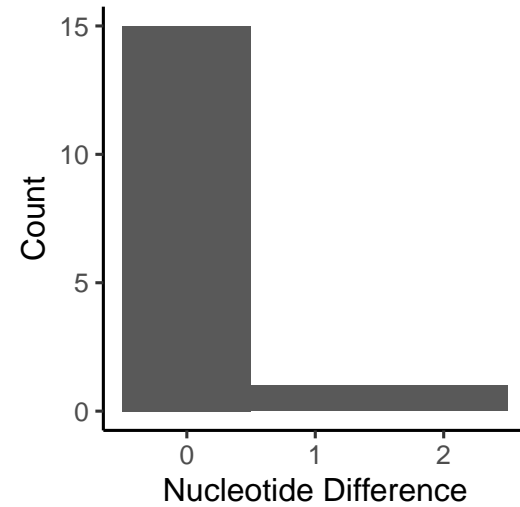
### IGHV2–5\*02

157 sequences assigned  
149 (94.9%) exact matches, in which:  
149 unique CDR3  
6 unique J



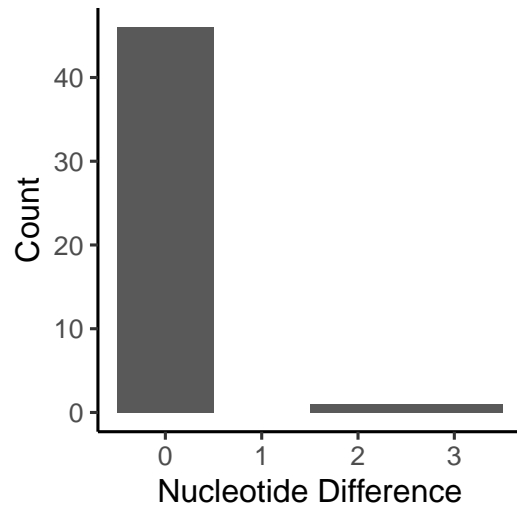
### IGHV2–70\*04

17 sequences assigned  
15 (88.2%) exact matches, in which:  
15 unique CDR3  
4 unique J



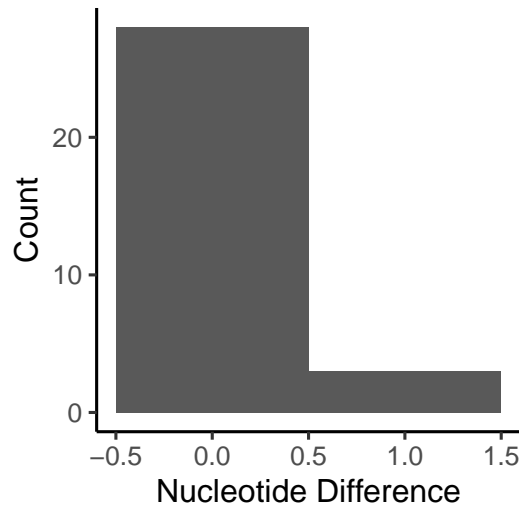
### IGHV1–69–2\*01

48 sequences assigned  
46 (95.8%) exact matches, in which:  
46 unique CDR3  
6 unique J



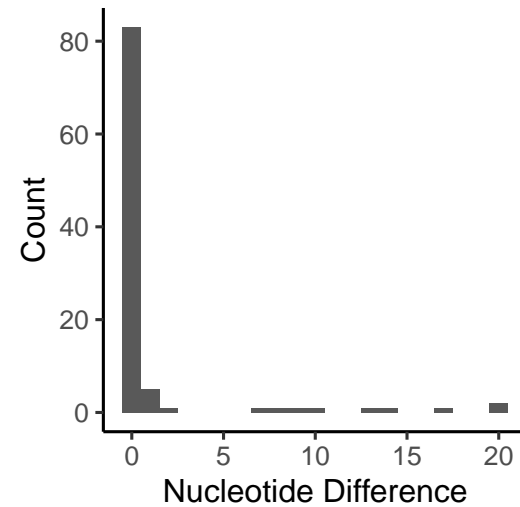
### IGHV2–26\*01

31 sequences assigned  
28 (90.3%) exact matches, in which:  
28 unique CDR3  
5 unique J



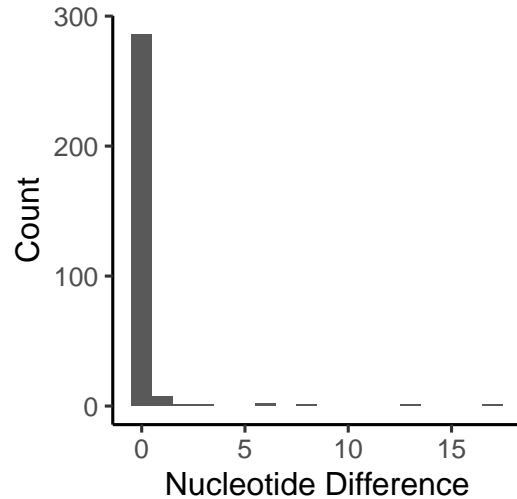
### IGHV3–7\*01

98 sequences assigned  
83 (84.7%) exact matches, in which:  
83 unique CDR3  
5 unique J



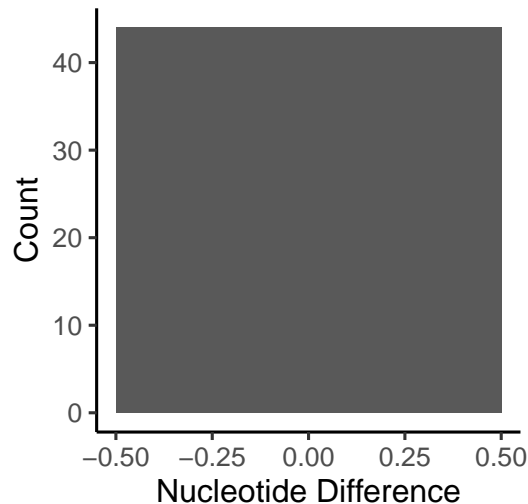
### IGHV1–69\*06

300 sequences assigned  
286 (95.3%) exact matches, in which:  
286 unique CDR3  
7 unique J



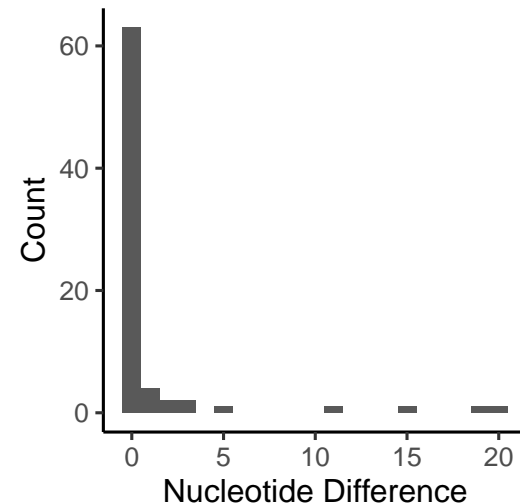
### IGHV2–70\*01

44 sequences assigned  
44 (100%) exact matches, in which:  
44 unique CDR3  
7 unique J



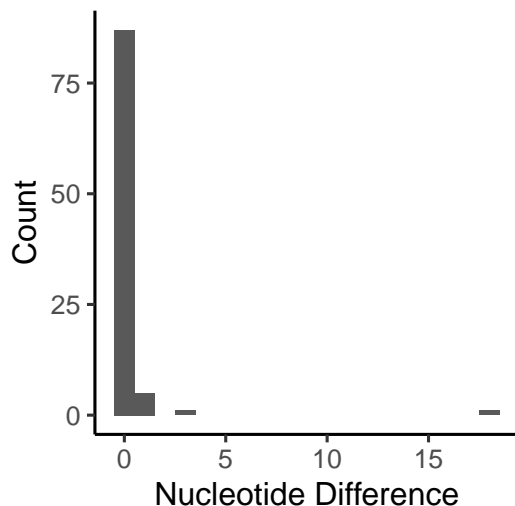
### IGHV3–7\*03

79 sequences assigned  
63 (79.7%) exact matches, in which:  
63 unique CDR3  
5 unique J



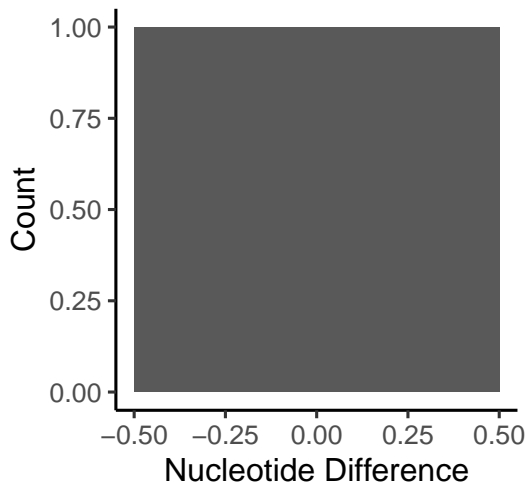
### IGHV3-11\*06

94 sequences assigned  
87 (92.6%) exact matches, in which:  
87 unique CDR3  
6 unique J



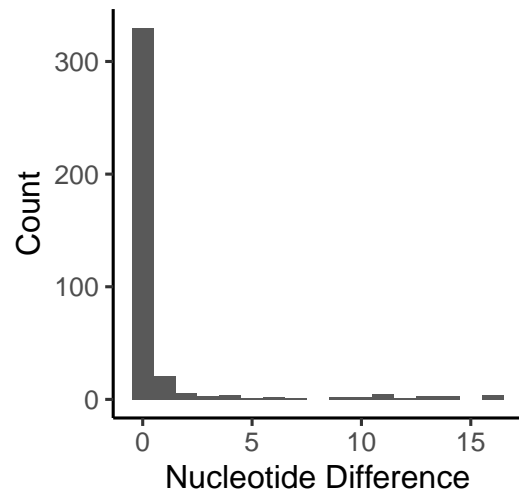
### IGHV3-20\*01

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



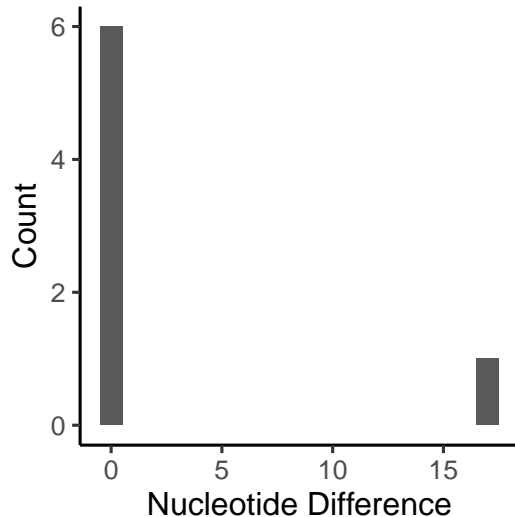
### IGHV3-23\*01

401 sequences assigned  
330 (82.3%) exact matches, in which:  
330 unique CDR3  
7 unique J



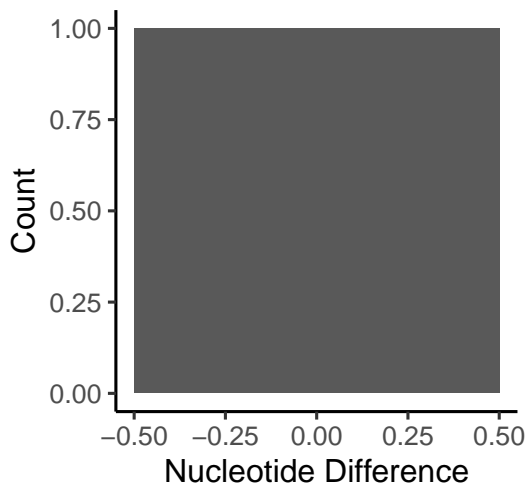
### IGHV3-13\*05

7 sequences assigned  
6 (85.7%) exact matches, in which:  
6 unique CDR3  
4 unique J



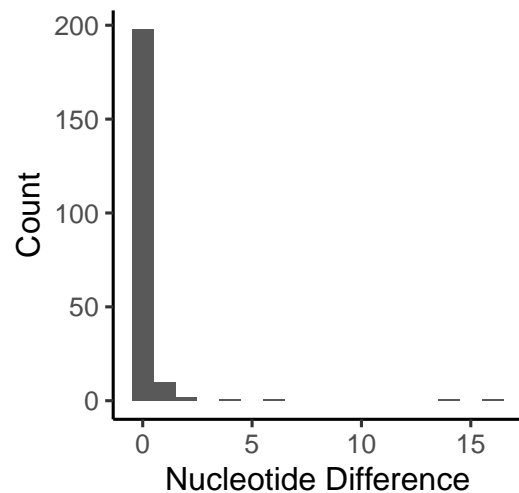
### IGHV3-20\*02

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



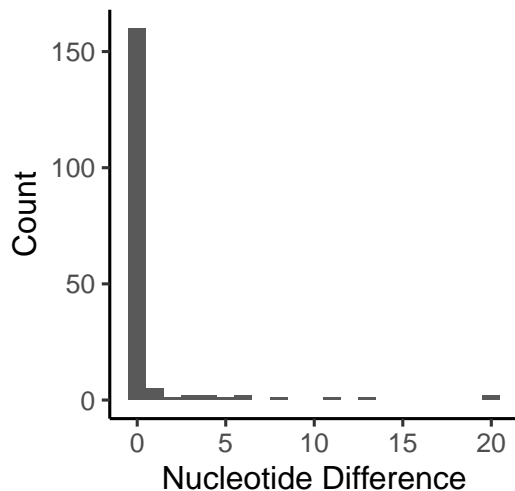
### IGHV3-30-3\*01

215 sequences assigned  
198 (92.1%) exact matches, in which:  
198 unique CDR3  
7 unique J



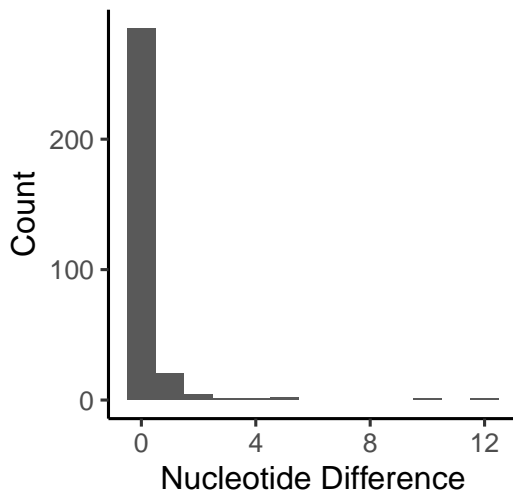
### IGHV3-15\*01

180 sequences assigned  
160 (88.9%) exact matches, in which:  
160 unique CDR3  
7 unique J



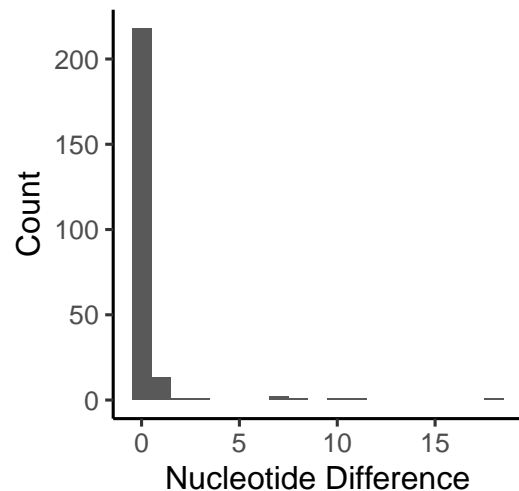
### IGHV3-21\*01

315 sequences assigned  
285 (90.5%) exact matches, in which:  
285 unique CDR3  
7 unique J



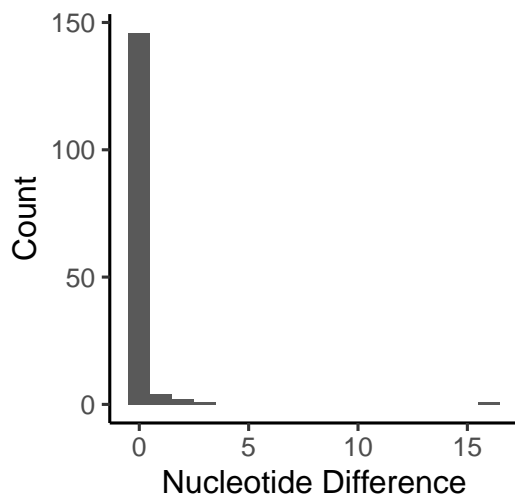
### IGHV3-30\*18

239 sequences assigned  
218 (91.2%) exact matches, in which:  
218 unique CDR3  
7 unique J



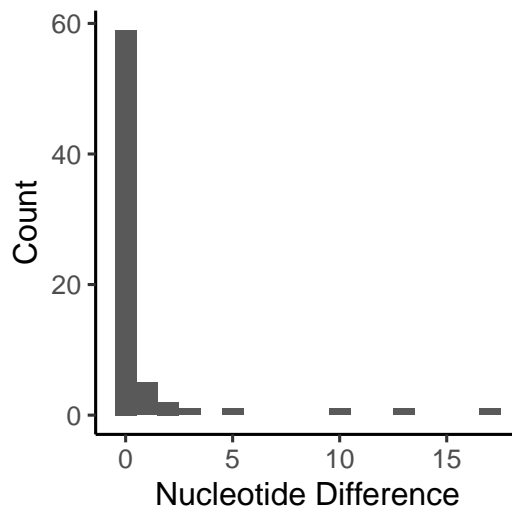
### IGHV3–33\*01

155 sequences assigned  
146 (94.2%) exact matches, in which:  
146 unique CDR3  
6 unique J



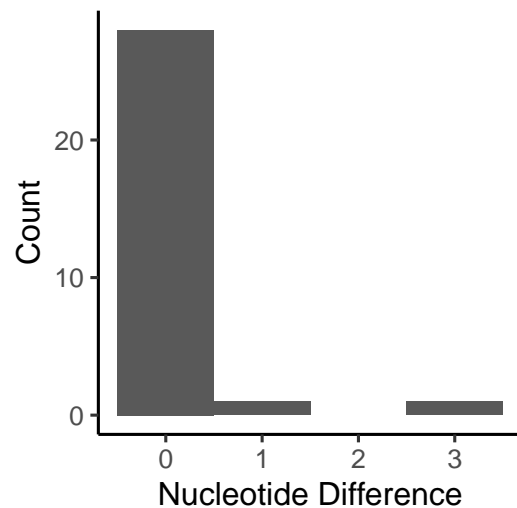
### IGHV3–48\*01

73 sequences assigned  
59 (80.8%) exact matches, in which:  
59 unique CDR3  
5 unique J



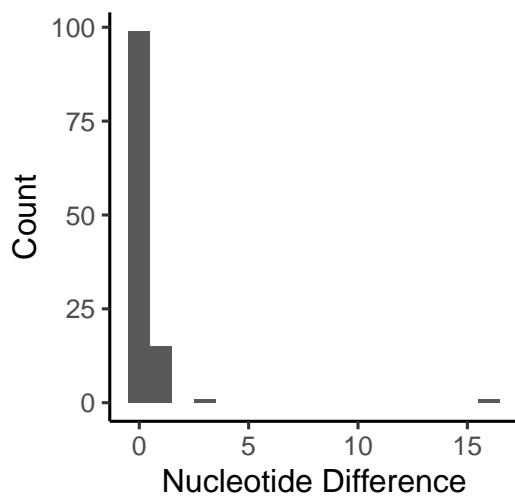
### IGHV3–49\*04

30 sequences assigned  
28 (93.3%) exact matches, in which:  
28 unique CDR3  
4 unique J



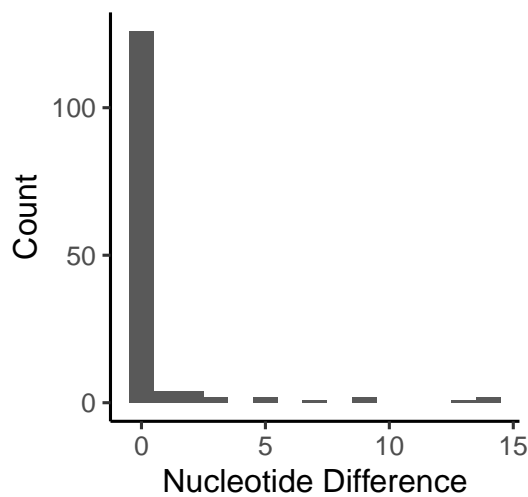
### IGHV3–33\*08

116 sequences assigned  
99 (85.3%) exact matches, in which:  
99 unique CDR3  
6 unique J



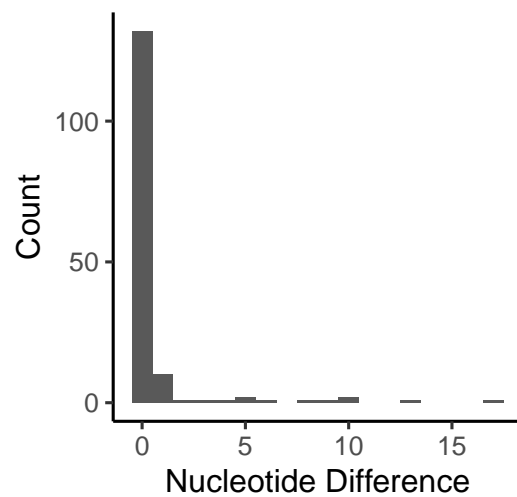
### IGHV3–48\*03

144 sequences assigned  
126 (87.5%) exact matches, in which:  
126 unique CDR3  
6 unique J



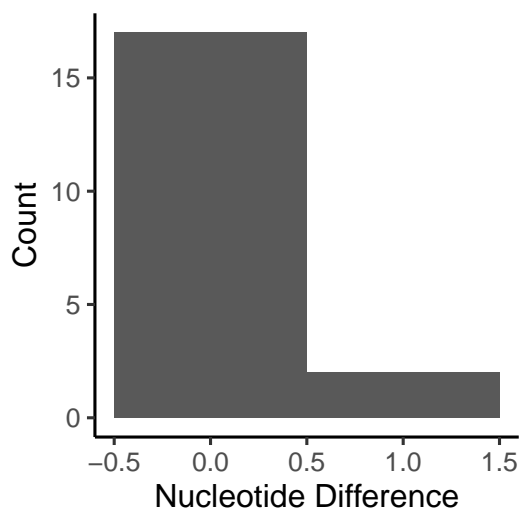
### IGHV3–53\*02

155 sequences assigned  
132 (85.2%) exact matches, in which:  
132 unique CDR3  
7 unique J



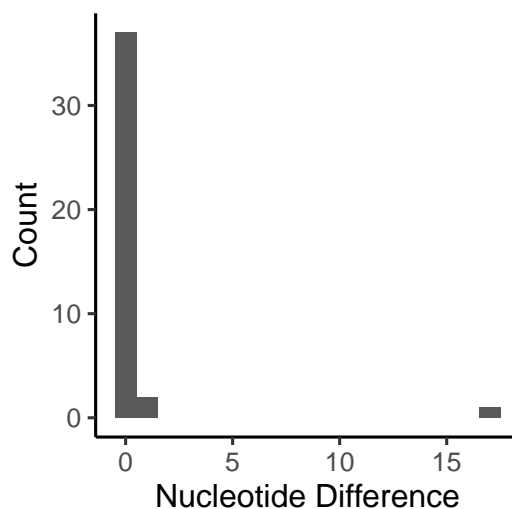
### IGHV3–43\*01

19 sequences assigned  
17 (89.5%) exact matches, in which:  
17 unique CDR3  
4 unique J



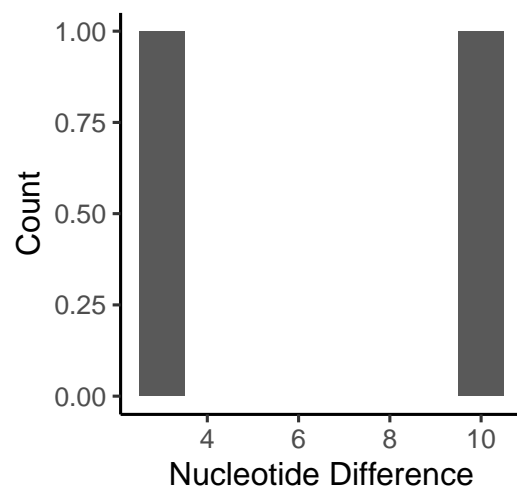
### IGHV3–49\*03

40 sequences assigned  
37 (92.5%) exact matches, in which:  
37 unique CDR3  
6 unique J



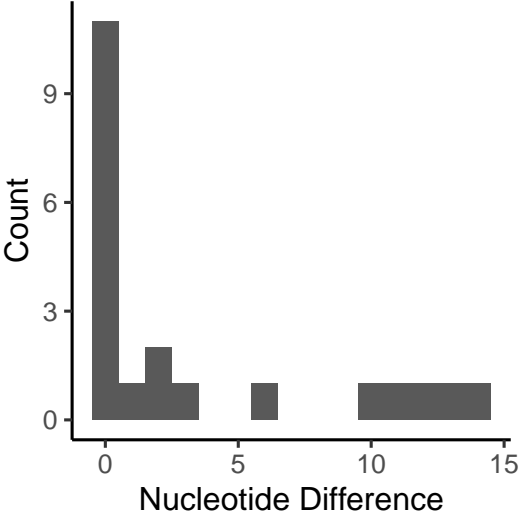
### IGHV3–64\*02

2 sequences assigned  
No exact matches.



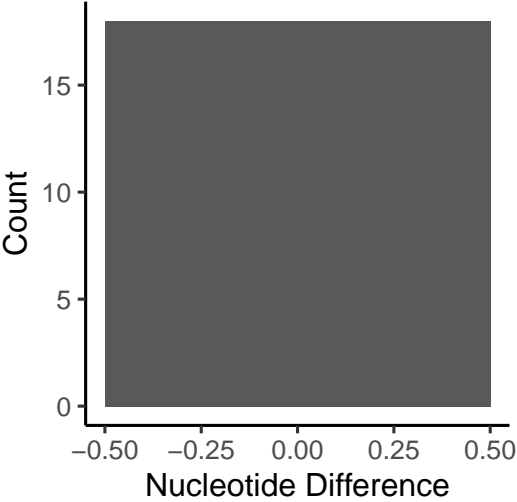
IGHV3-72\*01

21 sequences assigned  
11 (52.4%) exact matches, in which:  
11 unique CDR3  
5 unique J



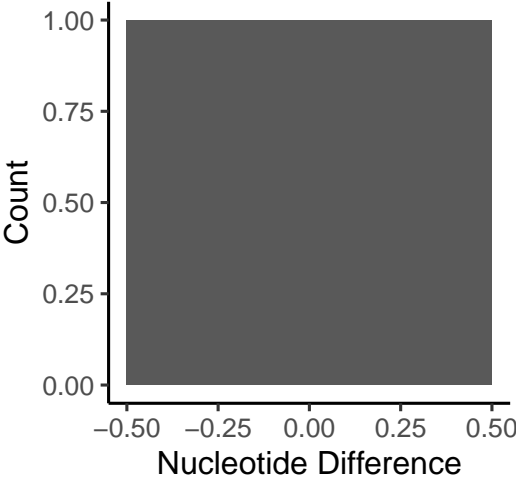
IGHV3-43D\*04

18 sequences assigned  
18 (100%) exact matches, in which:  
18 unique CDR3  
2 unique J



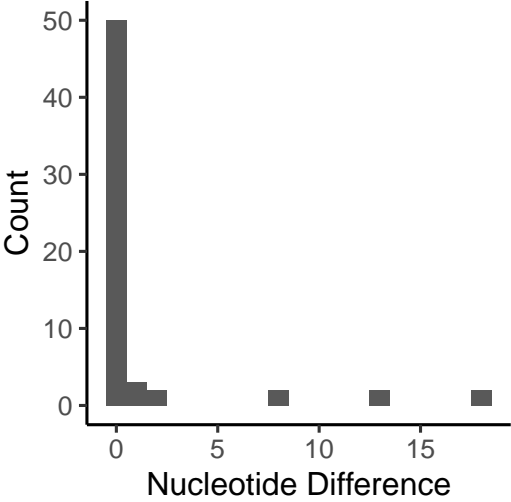
IGHV4-28\*01

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



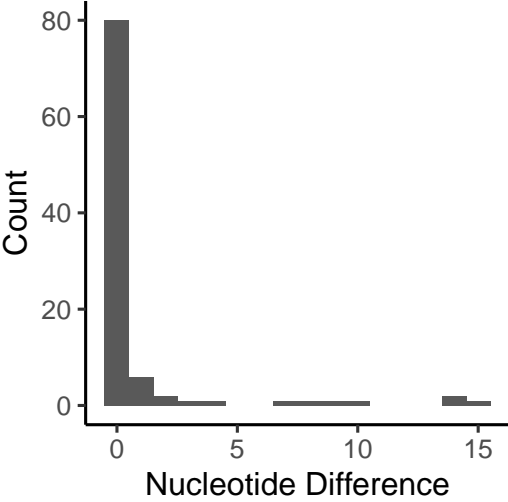
IGHV3-73\*02

65 sequences assigned  
50 (76.9%) exact matches, in which:  
50 unique CDR3  
6 unique J



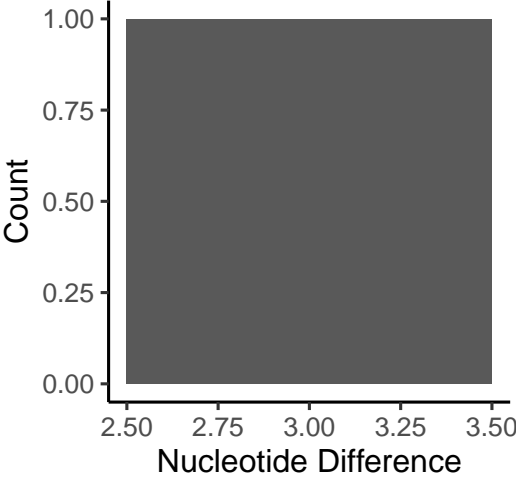
IGHV3-64D\*06

99 sequences assigned  
80 (80.8%) exact matches, in which:  
80 unique CDR3  
6 unique J



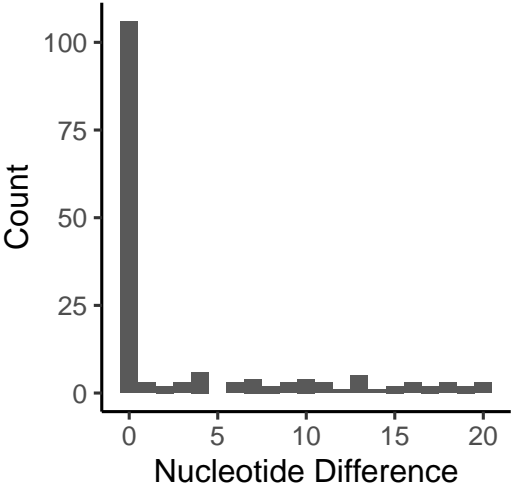
IGHV4-28\*07

1 sequences assigned  
No exact matches.



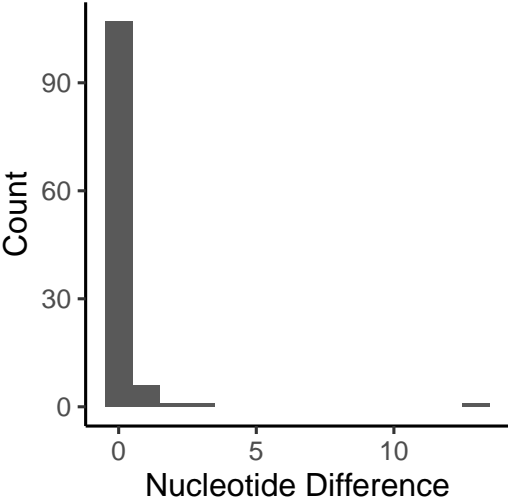
IGHV3-74\*01

168 sequences assigned  
106 (63.1%) exact matches, in which:  
106 unique CDR3  
6 unique J



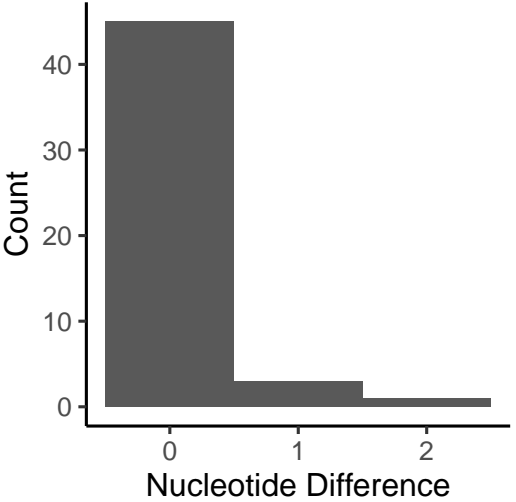
IGHV4-4\*02

116 sequences assigned  
107 (92.2%) exact matches, in which:  
107 unique CDR3  
6 unique J



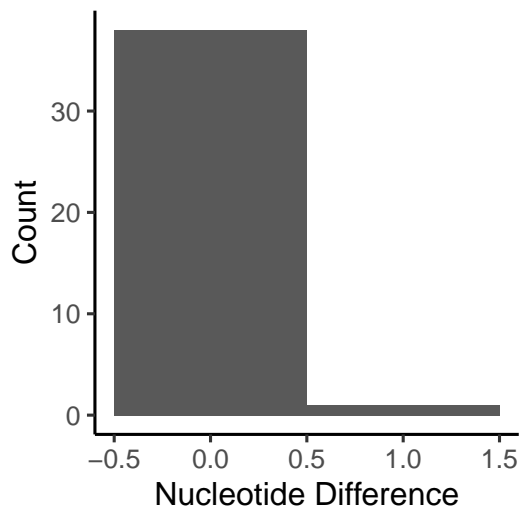
IGHV4-30-4\*01

49 sequences assigned  
45 (91.8%) exact matches, in which:  
45 unique CDR3  
6 unique J



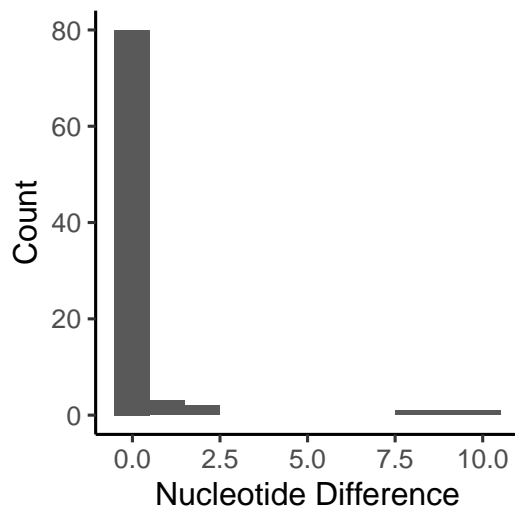
### IGHV4-30-2\*01

39 sequences assigned  
38 (97.4%) exact matches, in which:  
38 unique CDR3  
5 unique J



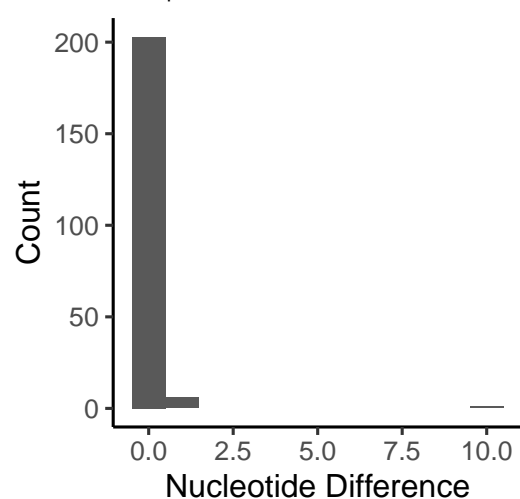
### IGHV4-38-2\*01

88 sequences assigned  
80 (90.9%) exact matches, in which:  
80 unique CDR3  
5 unique J



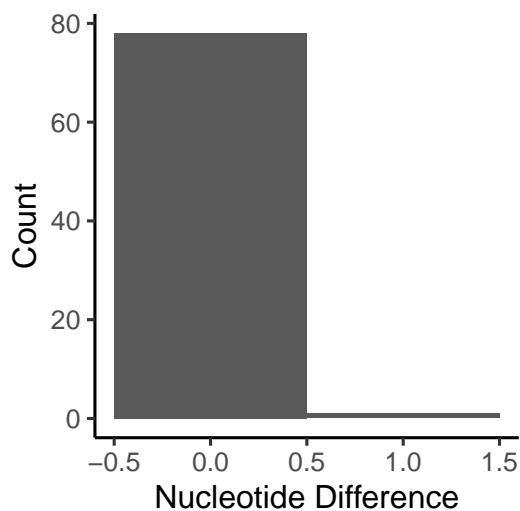
### IGHV4-59\*01

210 sequences assigned  
203 (96.7%) exact matches, in which:  
203 unique CDR3  
7 unique J



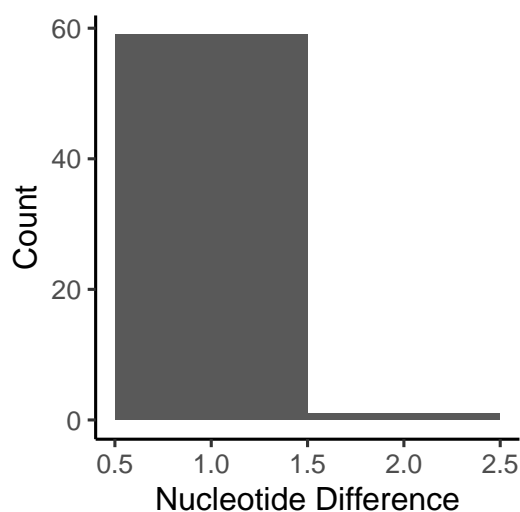
### IGHV4-31\*03

79 sequences assigned  
78 (98.7%) exact matches, in which:  
78 unique CDR3  
5 unique J



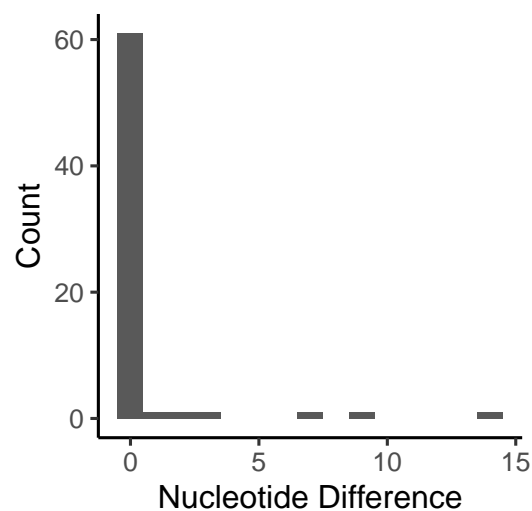
### IGHV4-38-2\*02

60 sequences assigned  
No exact matches.



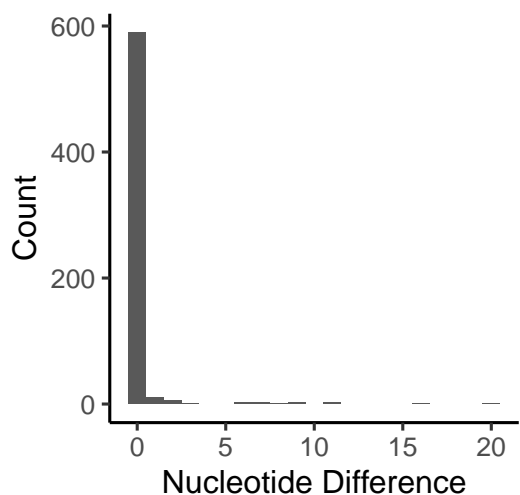
### IGHV4-61\*01

67 sequences assigned  
61 (91%) exact matches, in which:  
61 unique CDR3  
6 unique J



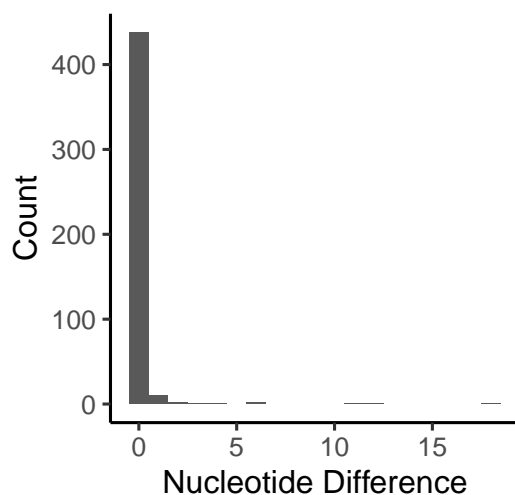
### IGHV4-34\*01

625 sequences assigned  
590 (94.4%) exact matches, in which:  
590 unique CDR3  
7 unique J



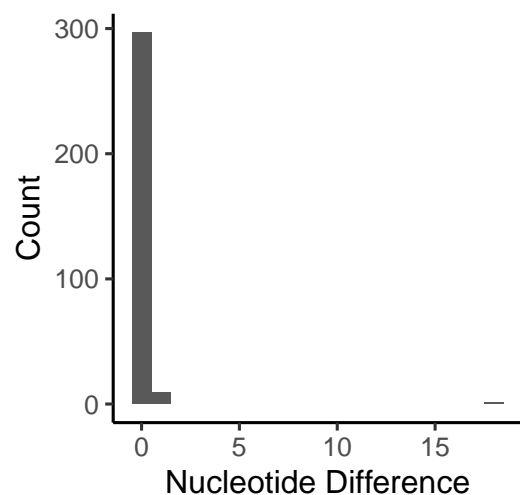
### IGHV4-39\*01

457 sequences assigned  
438 (95.8%) exact matches, in which:  
438 unique CDR3  
7 unique J



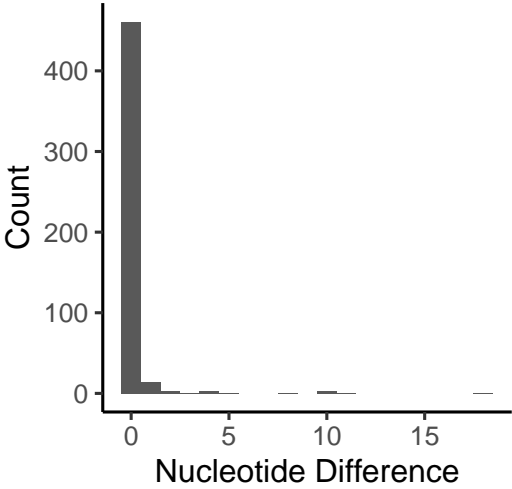
### IGHV5-10-1\*03

308 sequences assigned  
297 (96.4%) exact matches, in which:  
297 unique CDR3  
6 unique J



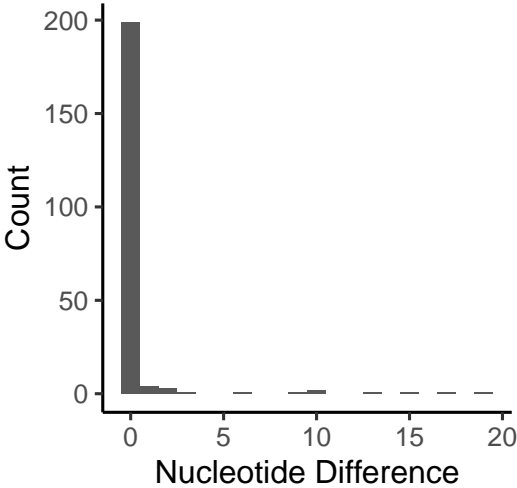
IGHV5–51\*01

491 sequences assigned  
461 (93.9%) exact matches, in which:  
461 unique CDR3  
7 unique J



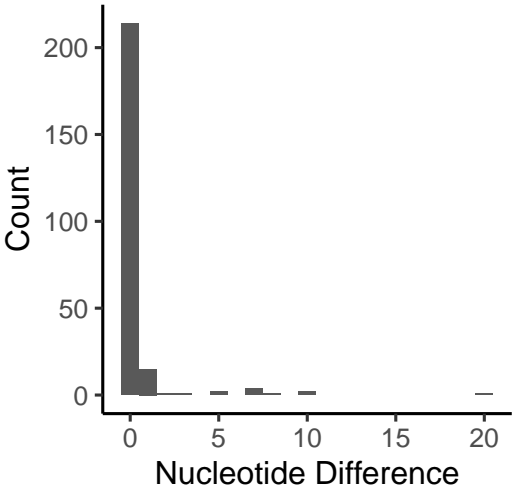
IGHV6–1\*01

215 sequences assigned  
199 (92.6%) exact matches, in which:  
199 unique CDR3  
7 unique J

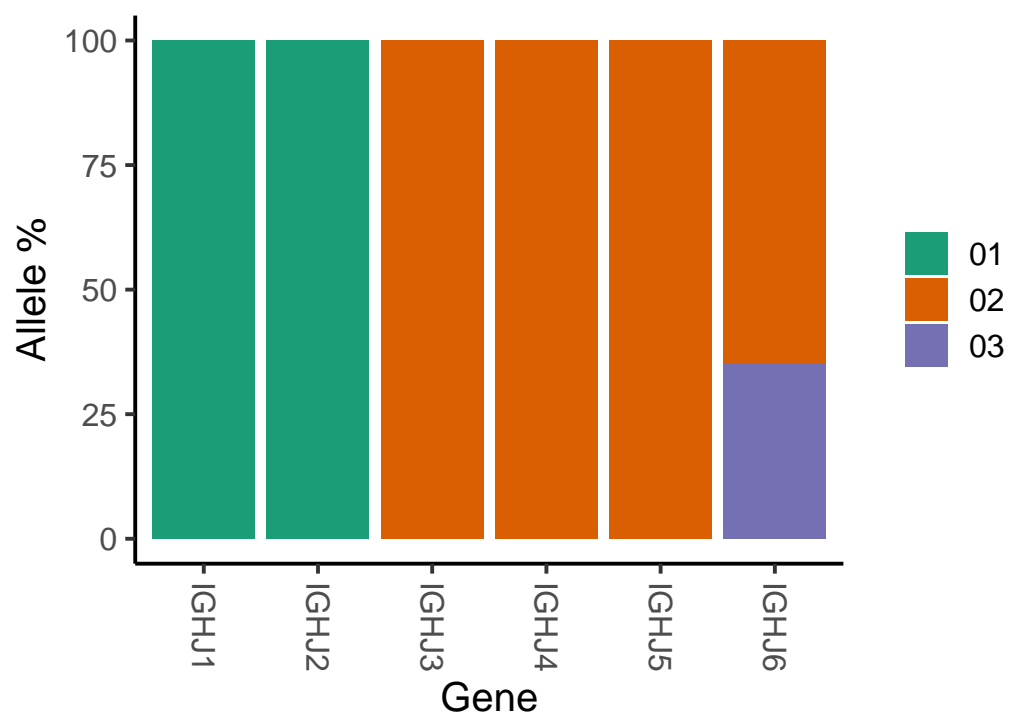


IGHV7–4–1\*02

241 sequences assigned  
214 (88.8%) exact matches, in which:  
214 unique CDR3  
6 unique J

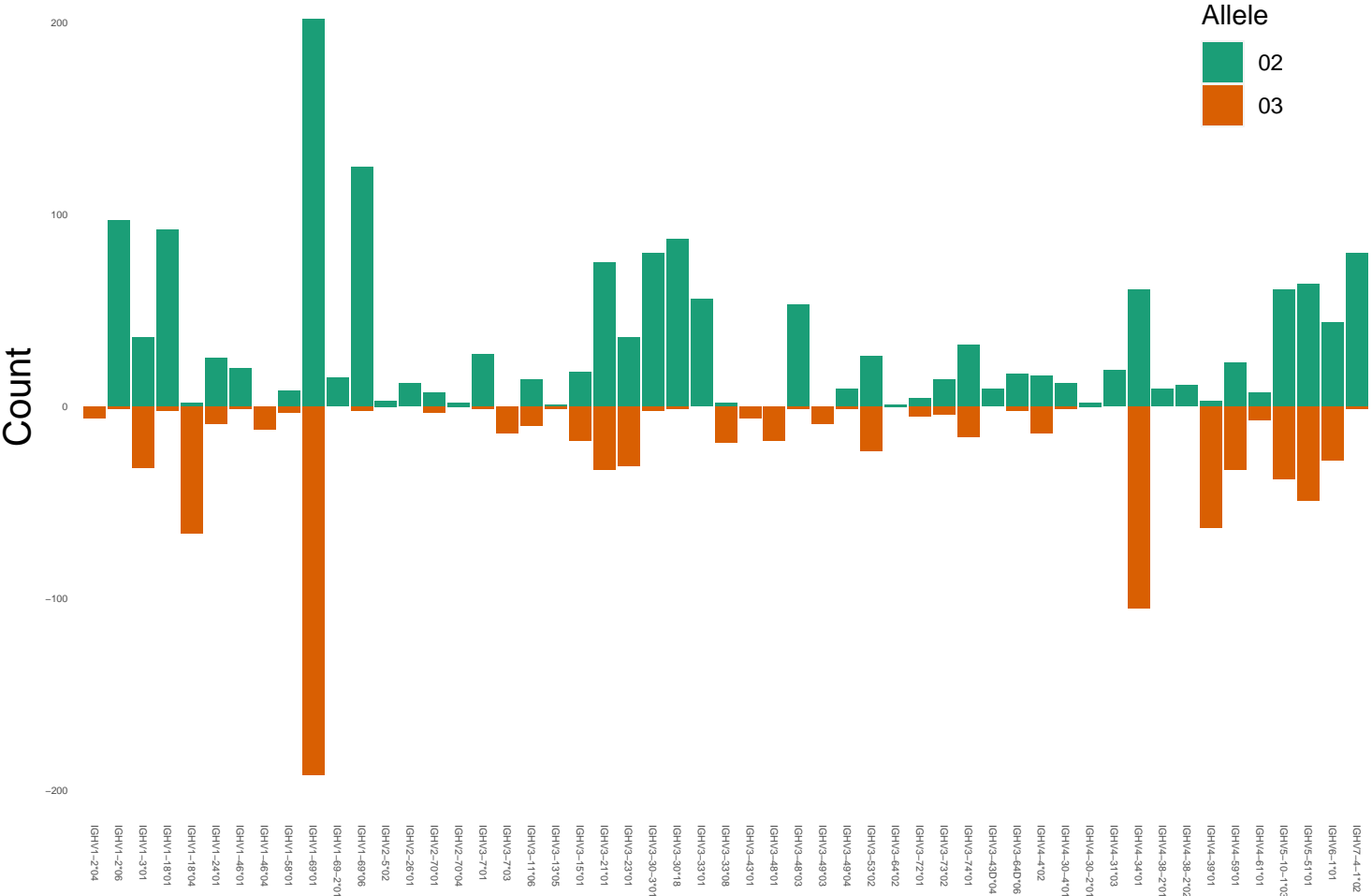


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.