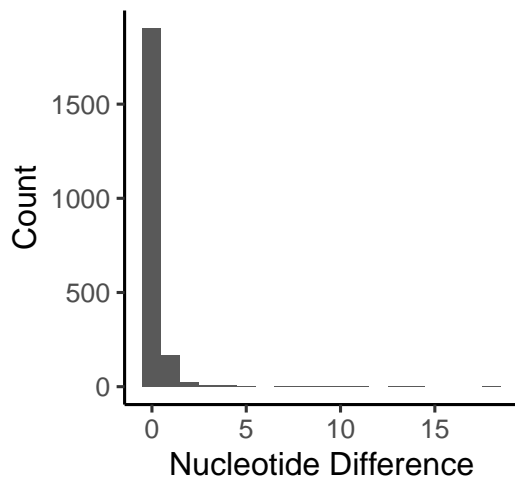


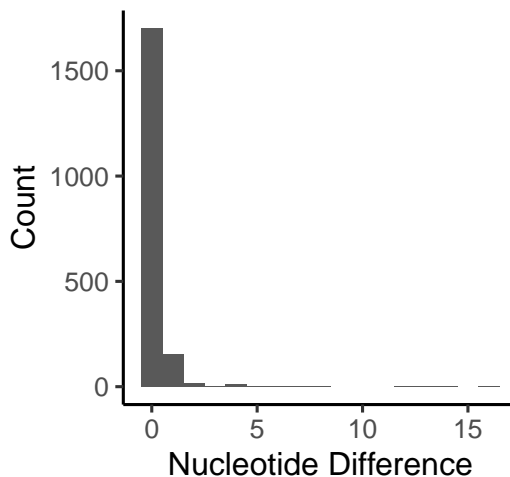
### IGHV1-2\*02

2126 sequences assigned  
1902 (89.5%) exact matches, in which:  
1799 unique CDR3  
7 unique J



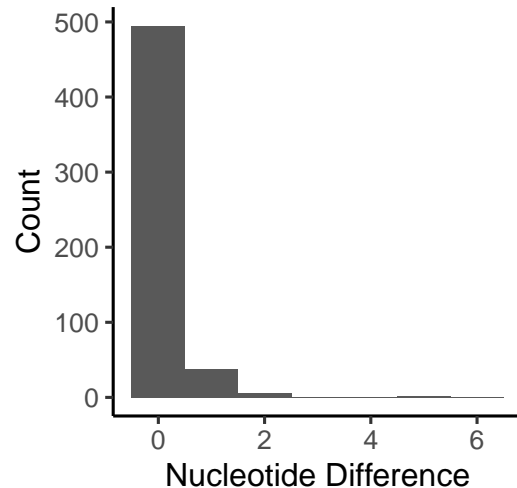
### IGHV1-18\*01

1899 sequences assigned  
1701 (89.6%) exact matches, in which:  
1626 unique CDR3  
7 unique J



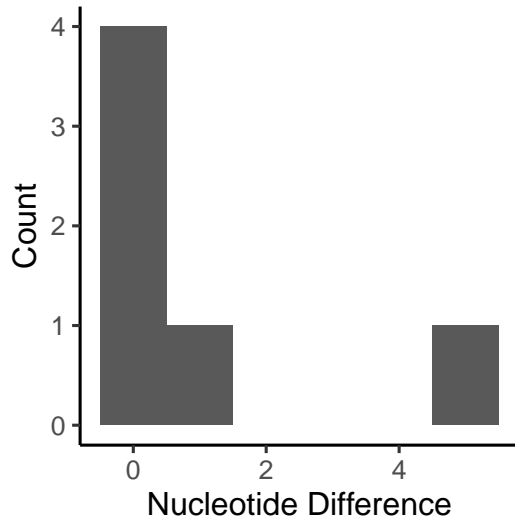
### IGHV1-46\*01

544 sequences assigned  
495 (91%) exact matches, in which:  
476 unique CDR3  
7 unique J



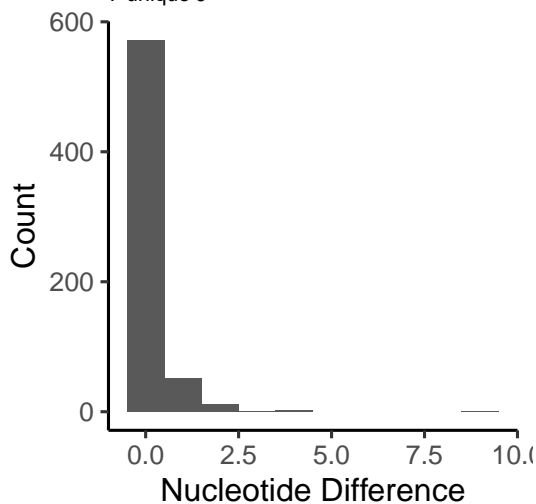
### IGHV1-3\*02

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



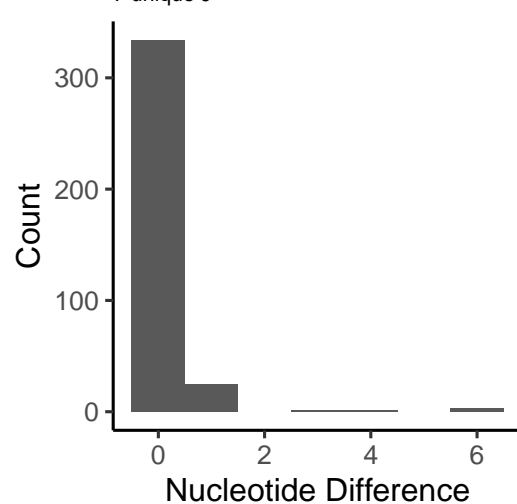
### IGHV1-24\*01

640 sequences assigned  
572 (89.4%) exact matches, in which:  
544 unique CDR3  
7 unique J



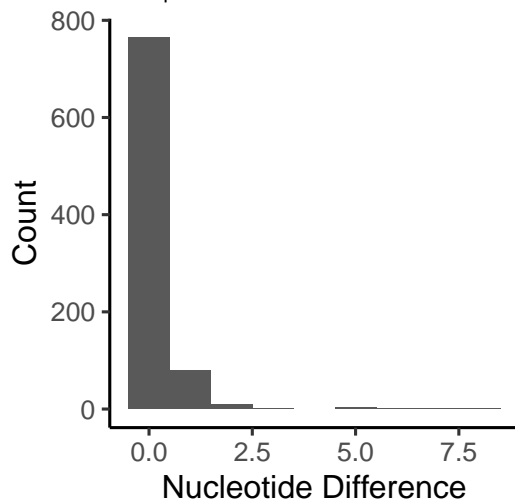
### IGHV1-46\*03

364 sequences assigned  
334 (91.8%) exact matches, in which:  
314 unique CDR3  
7 unique J



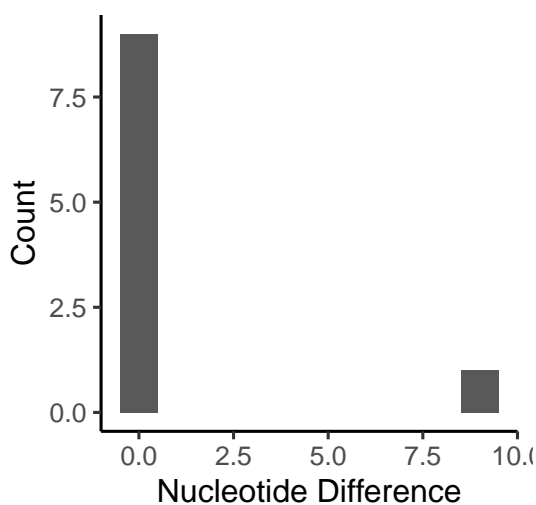
### IGHV1-8\*01

861 sequences assigned  
765 (88.9%) exact matches, in which:  
725 unique CDR3  
7 unique J



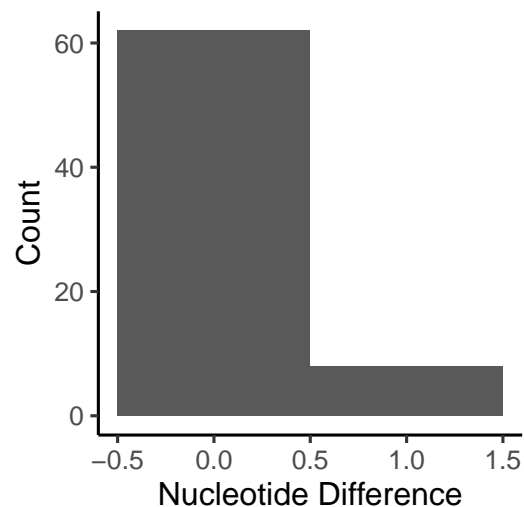
### IGHV1-45\*02

10 sequences assigned  
9 (90%) exact matches, in which:  
9 unique CDR3  
3 unique J



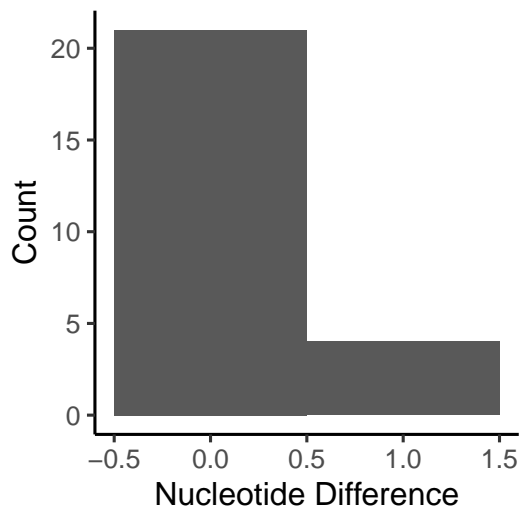
### IGHV1-58\*01

70 sequences assigned  
62 (88.6%) exact matches, in which:  
61 unique CDR3  
5 unique J



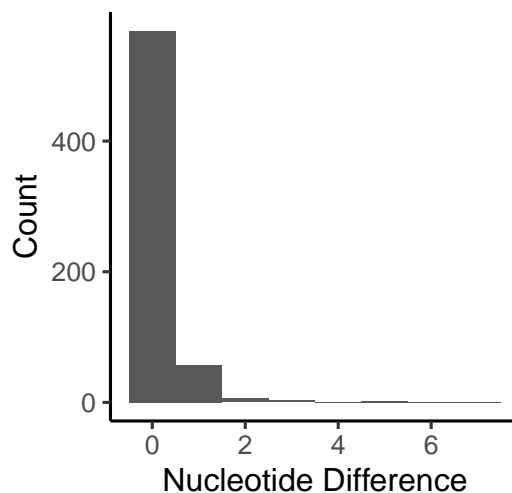
### IGHV1-58\*02

25 sequences assigned  
21 (84%) exact matches, in which:  
20 unique CDR3  
3 unique J



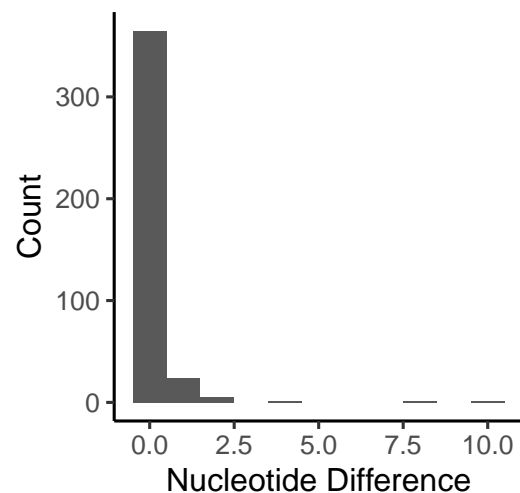
### IGHV1-69\*08\_C191T

640 sequences assigned  
569 (88.9%) exact matches, in which:  
537 unique CDR3  
6 unique J



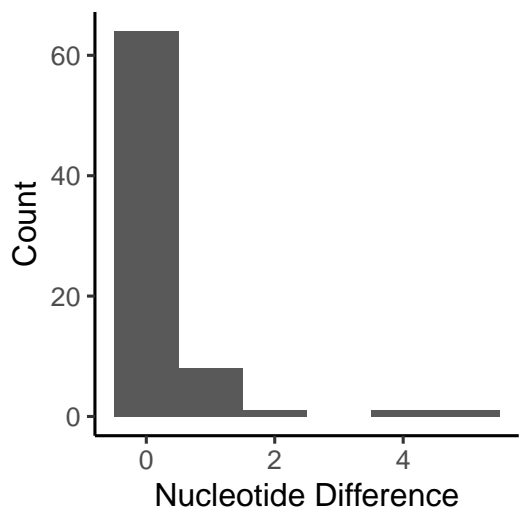
### IGHV2-26\*01

398 sequences assigned  
365 (91.7%) exact matches, in which:  
353 unique CDR3  
7 unique J



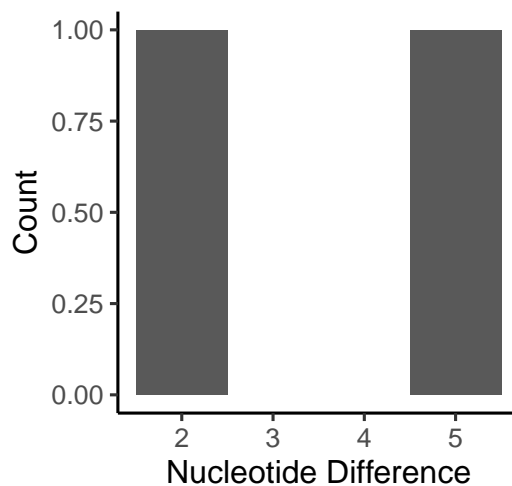
### IGHV1-69-2\*01

75 sequences assigned  
64 (85.3%) exact matches, in which:  
62 unique CDR3  
5 unique J



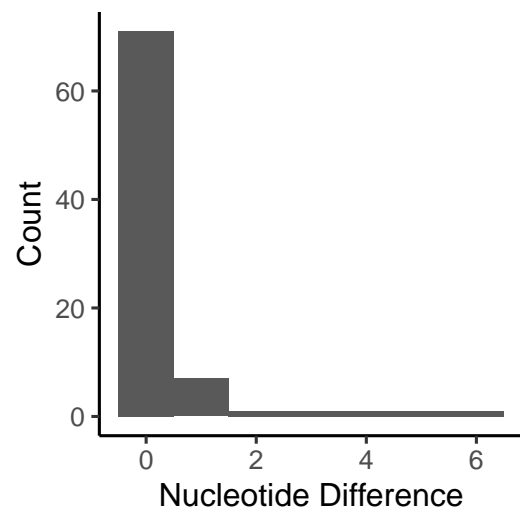
### IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



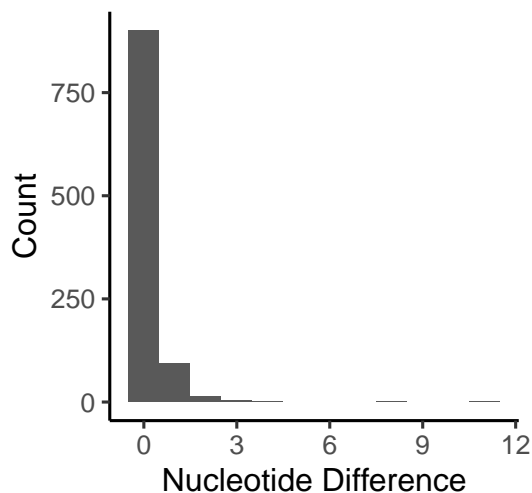
### IGHV2-70\*01

83 sequences assigned  
71 (85.5%) exact matches, in which:  
69 unique CDR3  
5 unique J



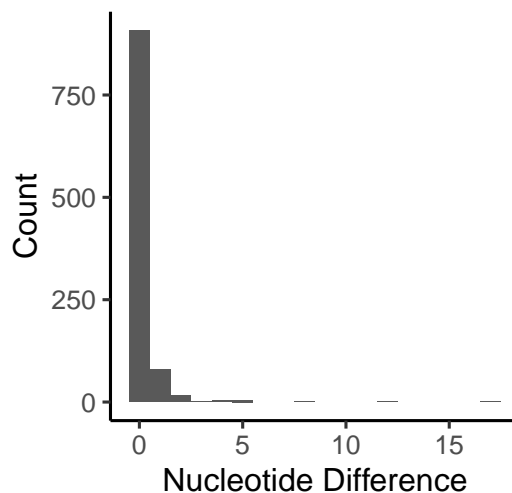
### IGHV1-69\*06

1016 sequences assigned  
901 (88.7%) exact matches, in which:  
856 unique CDR3  
7 unique J



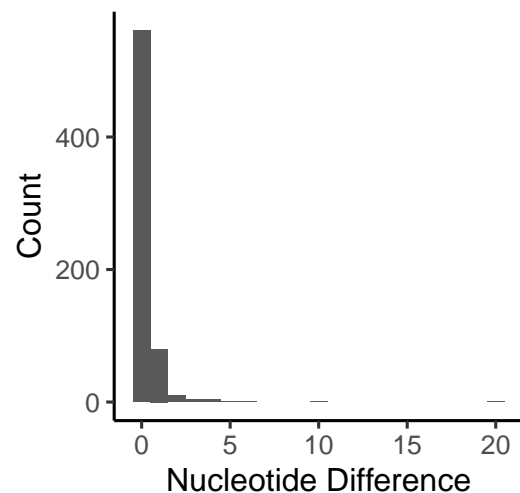
### IGHV2-5\*02

1017 sequences assigned  
908 (89.3%) exact matches, in which:  
879 unique CDR3  
7 unique J



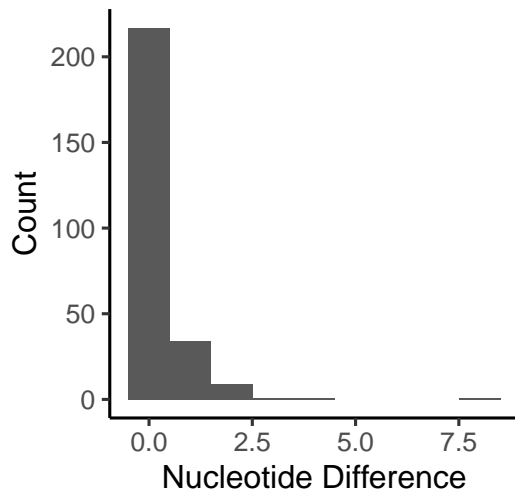
### IGHV3-7\*01

663 sequences assigned  
561 (84.6%) exact matches, in which:  
534 unique CDR3  
7 unique J



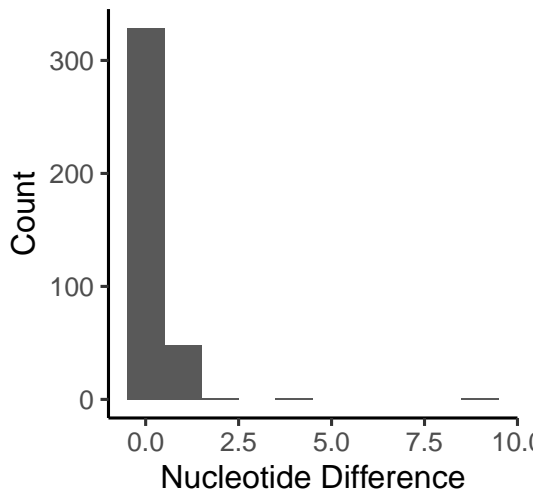
### IGHV3-7\*04

263 sequences assigned  
217 (82.5%) exact matches, in which:  
208 unique CDR3  
7 unique J



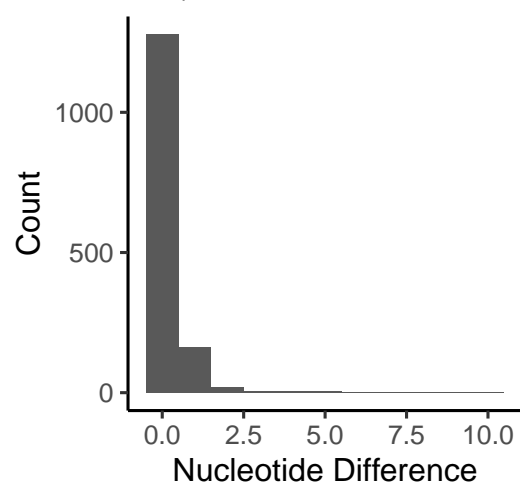
### IGHV3-11\*06

382 sequences assigned  
329 (86.1%) exact matches, in which:  
314 unique CDR3  
6 unique J



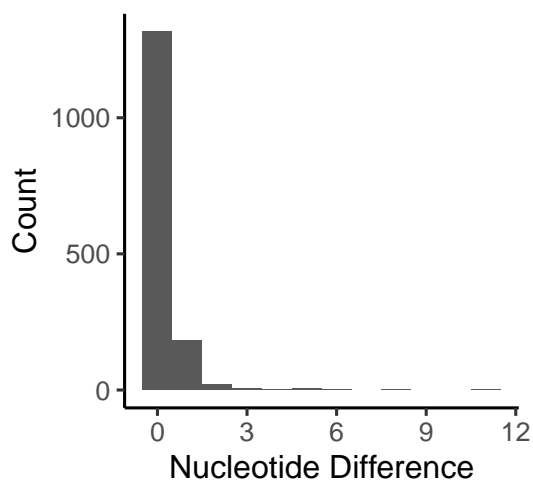
### IGHV3-15\*01

1485 sequences assigned  
1278 (86.1%) exact matches, in which:  
1206 unique CDR3  
7 unique J



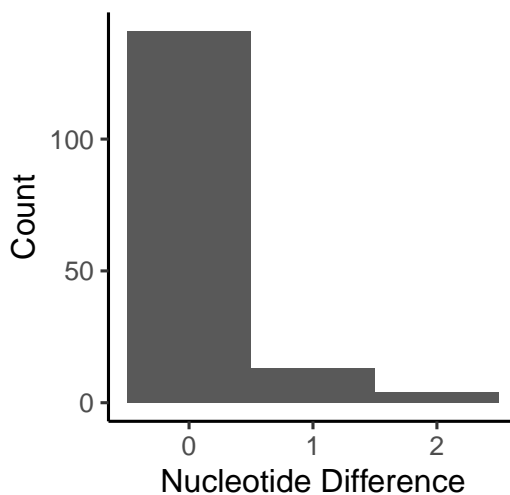
### IGHV3-9\*01

1534 sequences assigned  
1316 (85.8%) exact matches, in which:  
1186 unique CDR3  
6 unique J



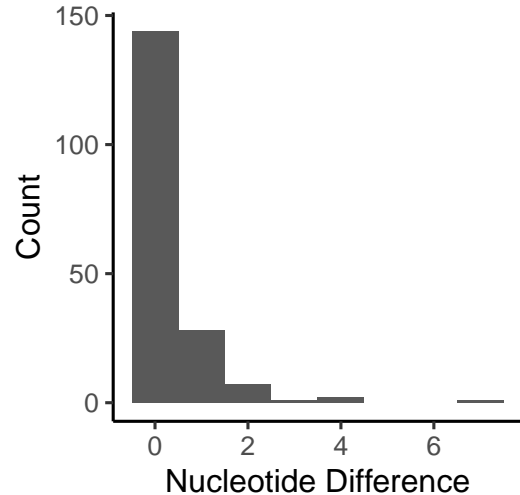
### IGHV3-13\*01

158 sequences assigned  
141 (89.2%) exact matches, in which:  
135 unique CDR3  
5 unique J



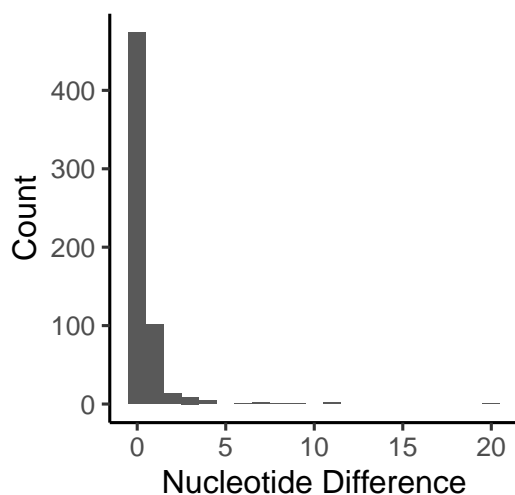
### IGHV3-20\*01

183 sequences assigned  
144 (78.7%) exact matches, in which:  
134 unique CDR3  
6 unique J



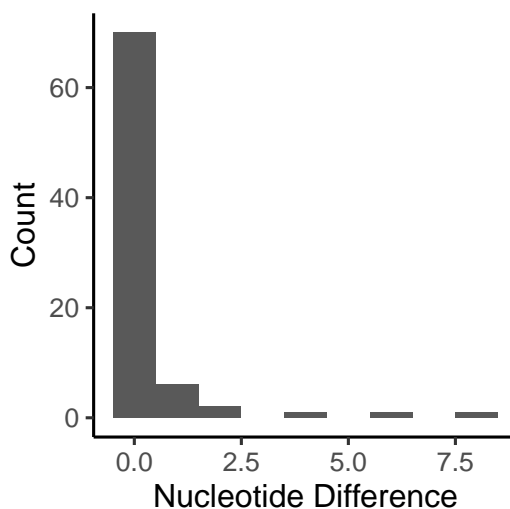
### IGHV3-11\*01

610 sequences assigned  
474 (77.7%) exact matches, in which:  
445 unique CDR3  
6 unique J



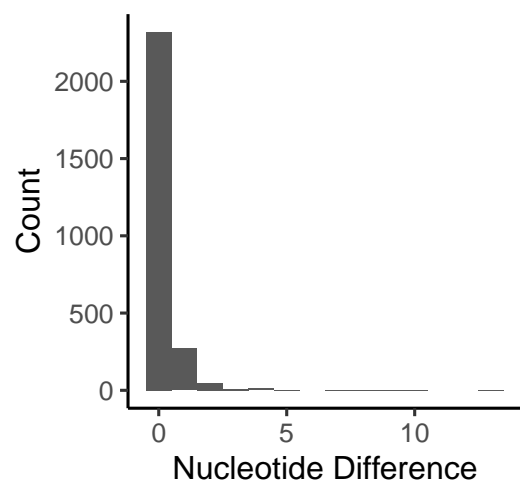
### IGHV3-13\*05

81 sequences assigned  
70 (86.4%) exact matches, in which:  
68 unique CDR3  
5 unique J



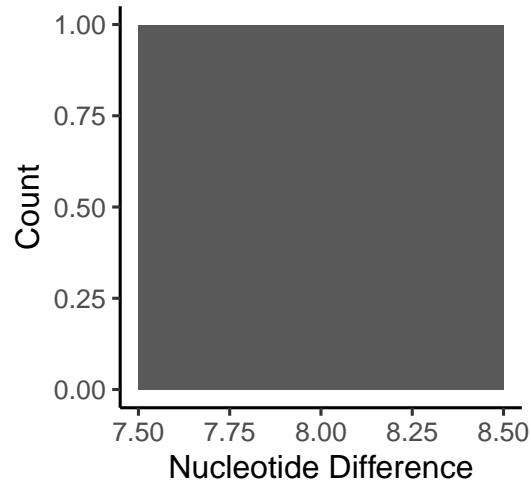
### IGHV3-21\*01

2670 sequences assigned  
2319 (86.9%) exact matches, in which:  
2193 unique CDR3  
7 unique J



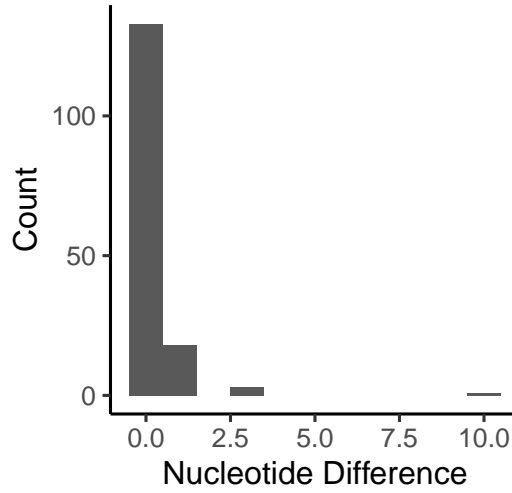
### IGHV3-25\*04

1 sequences assigned  
No exact matches.



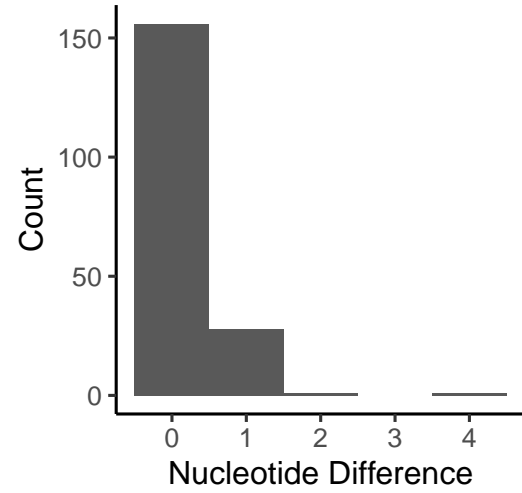
### IGHV3-43\*01

155 sequences assigned  
133 (85.8%) exact matches, in which:  
123 unique CDR3  
7 unique J



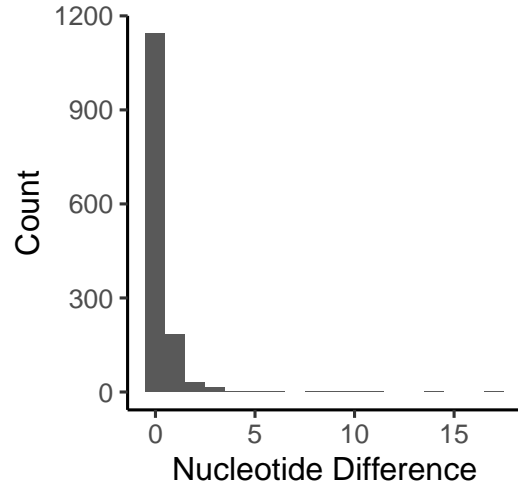
### IGHV3-49\*03

186 sequences assigned  
156 (83.9%) exact matches, in which:  
150 unique CDR3  
5 unique J



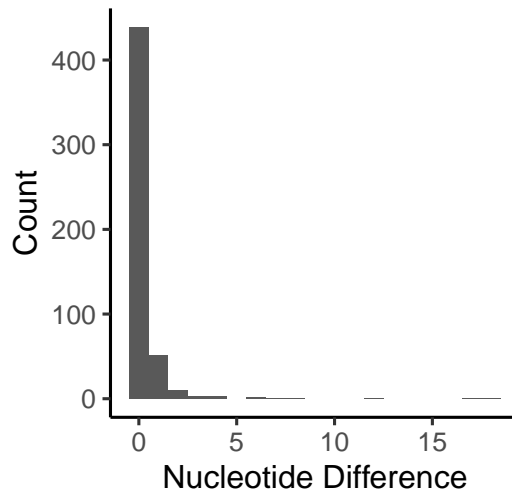
### IGHV3-30-3\*01

1390 sequences assigned  
1143 (82.2%) exact matches, in which:  
1068 unique CDR3  
7 unique J



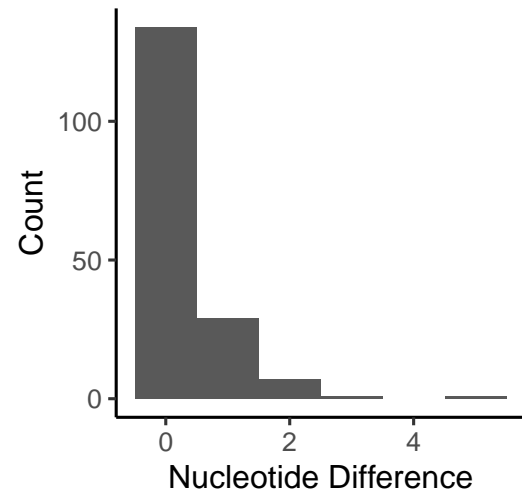
### IGHV3-48\*01

513 sequences assigned  
439 (85.6%) exact matches, in which:  
418 unique CDR3  
6 unique J



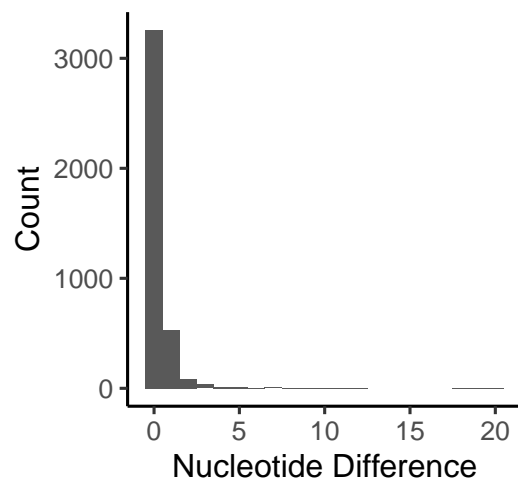
### IGHV3-49\*05

172 sequences assigned  
134 (77.9%) exact matches, in which:  
124 unique CDR3  
6 unique J



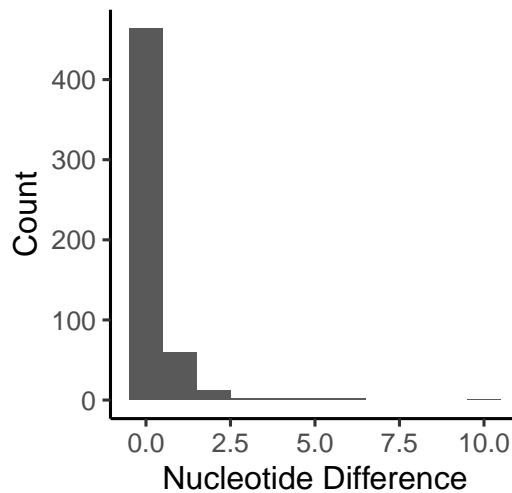
### IGHV3-33\*01

3957 sequences assigned  
3257 (82.3%) exact matches, in which:  
3067 unique CDR3  
7 unique J



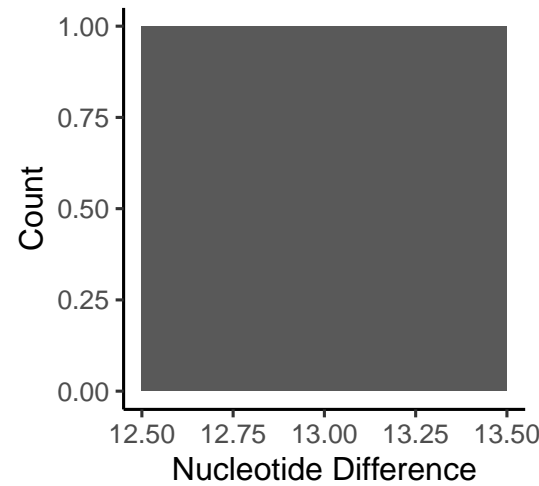
### IGHV3-48\*02

544 sequences assigned  
464 (85.3%) exact matches, in which:  
445 unique CDR3  
7 unique J



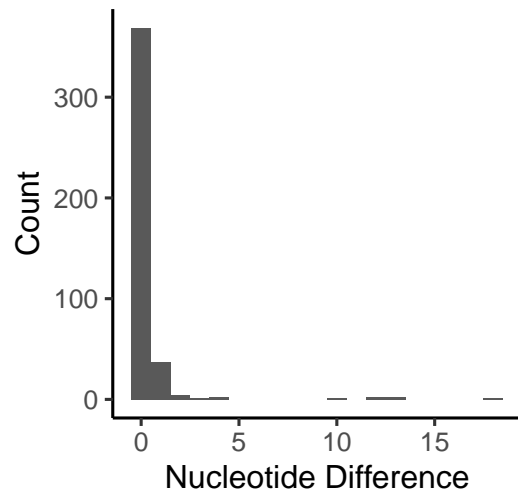
### IGHV3-52\*01

1 sequences assigned  
No exact matches.



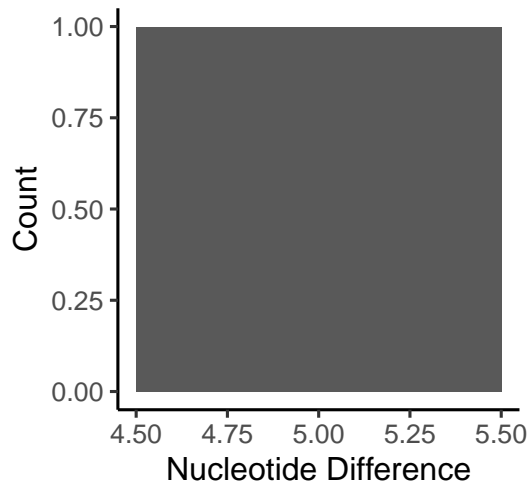
### IGHV3-53\*02

419 sequences assigned  
369 (88.1%) exact matches, in which:  
354 unique CDR3  
7 unique J



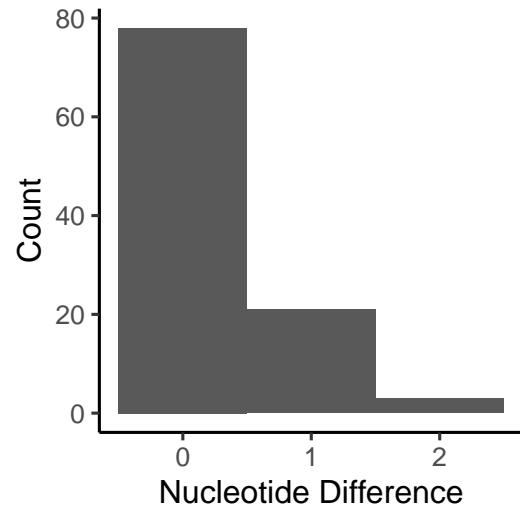
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



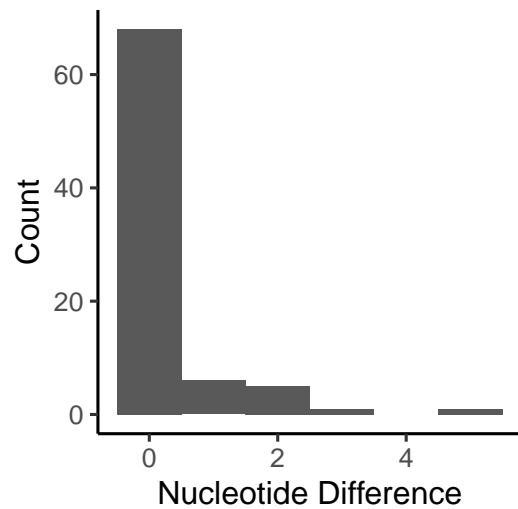
### IGHV3-73\*02

103 sequences assigned  
78 (75.7%) exact matches, in which:  
73 unique CDR3  
6 unique J



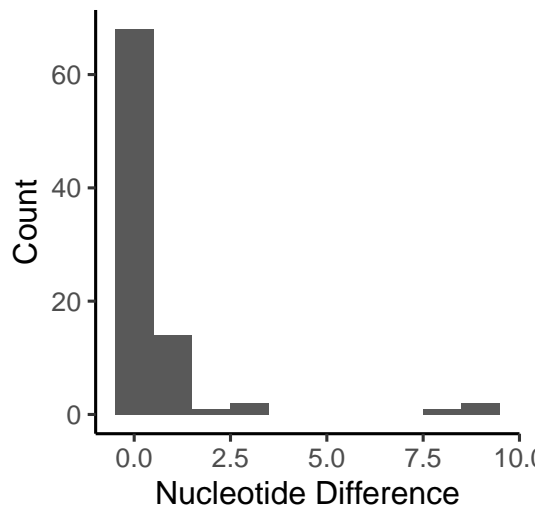
### IGHV3-64\*01

81 sequences assigned  
68 (84%) exact matches, in which:  
64 unique CDR3  
5 unique J



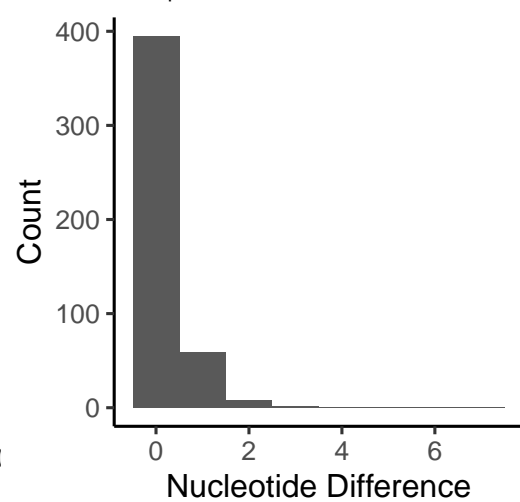
### IGHV3-72\*01

88 sequences assigned  
68 (77.3%) exact matches, in which:  
66 unique CDR3  
6 unique J



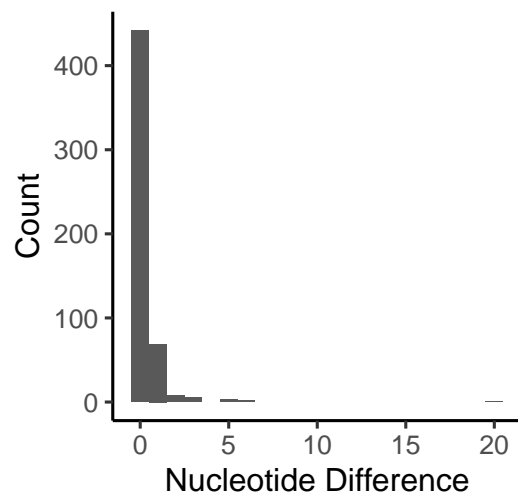
### IGHV3-74\*01

468 sequences assigned  
395 (84.4%) exact matches, in which:  
382 unique CDR3  
7 unique J



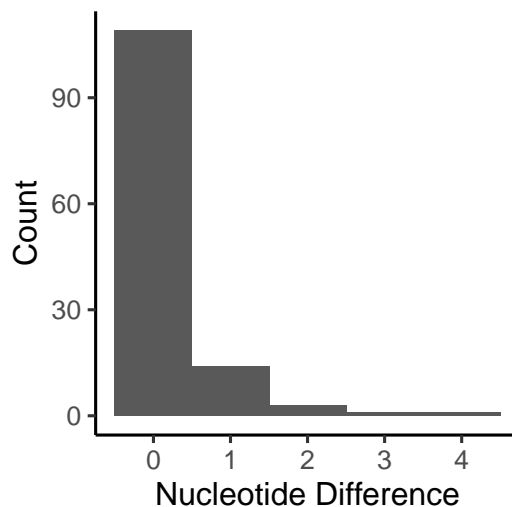
### IGHV3-66\*02

530 sequences assigned  
442 (83.4%) exact matches, in which:  
421 unique CDR3  
7 unique J



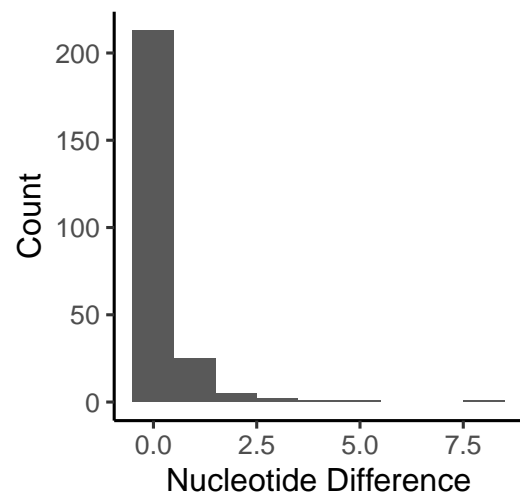
### IGHV3-73\*01

128 sequences assigned  
109 (85.2%) exact matches, in which:  
104 unique CDR3  
6 unique J



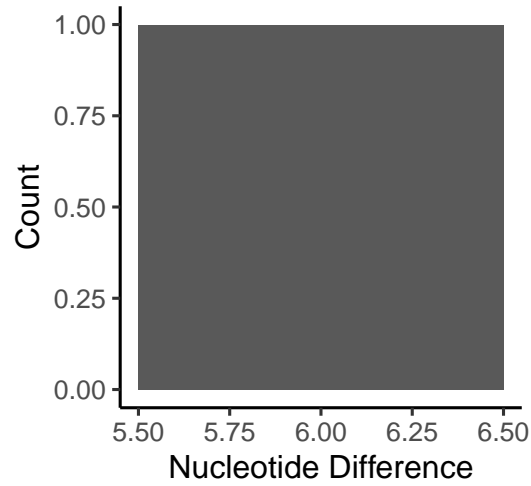
### IGHV3-64D\*06

248 sequences assigned  
213 (85.9%) exact matches, in which:  
199 unique CDR3  
6 unique J



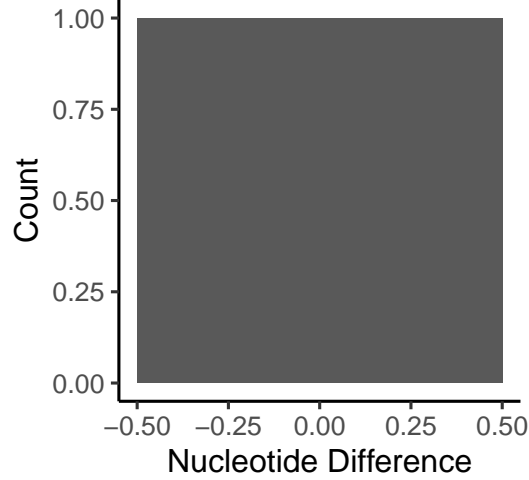
### IGHV3–NL1\*01

1 sequences assigned  
No exact matches.



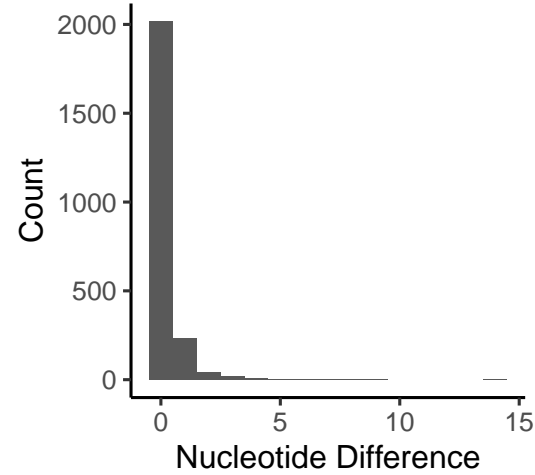
### IGHV4–28\*03

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



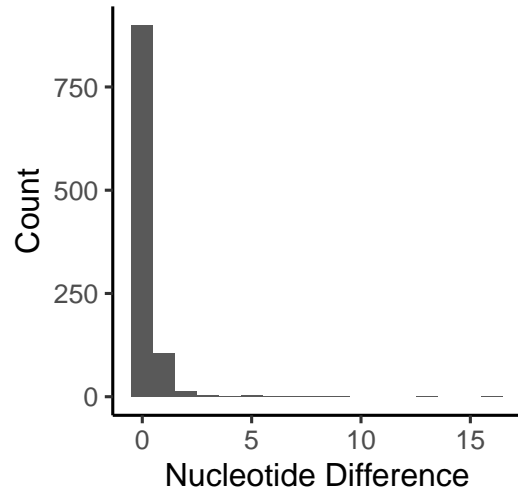
### IGHV4–31\*03

2326 sequences assigned  
2017 (86.7%) exact matches, in which:  
1930 unique CDR3  
7 unique J



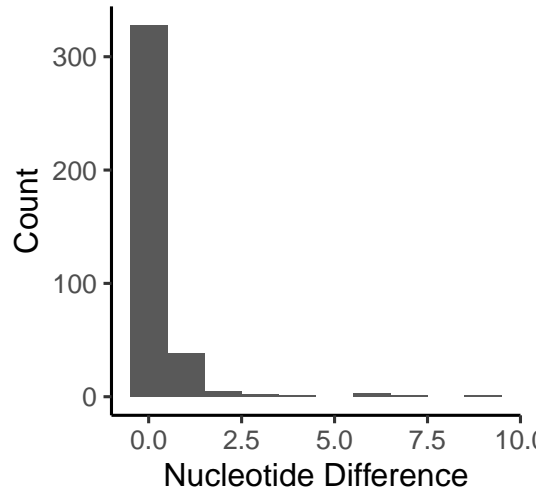
### IGHV4–4\*07

1036 sequences assigned  
900 (86.9%) exact matches, in which:  
865 unique CDR3  
7 unique J



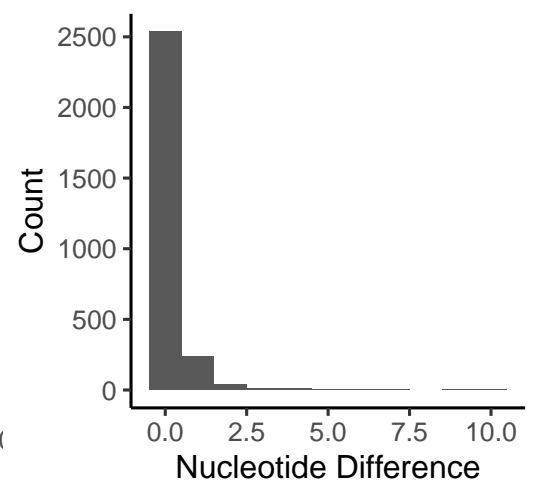
### IGHV4–30–4\*01

379 sequences assigned  
328 (86.5%) exact matches, in which:  
319 unique CDR3  
7 unique J



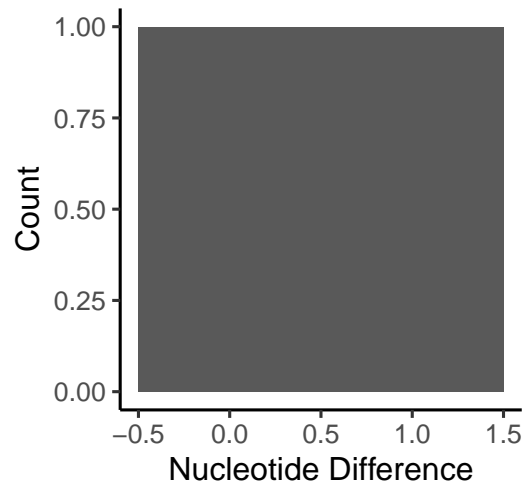
### IGHV4–34\*01

2850 sequences assigned  
2536 (89%) exact matches, in which:  
2415 unique CDR3  
7 unique J



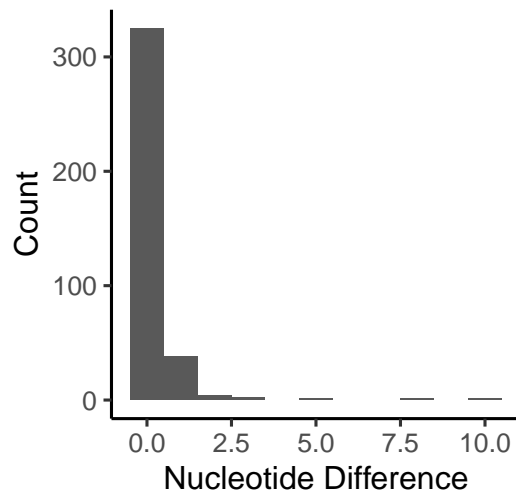
### IGHV4–28\*01

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



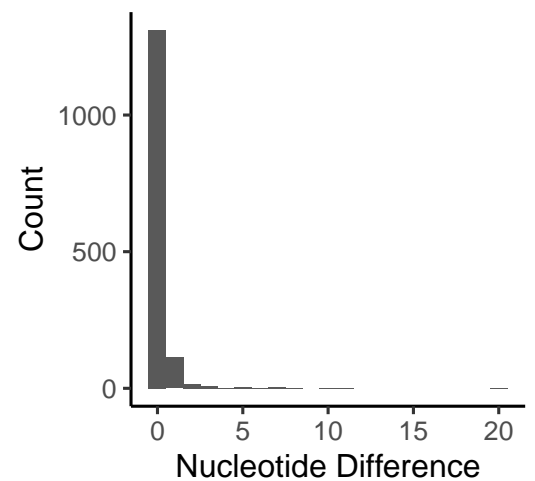
### IGHV4–30–2\*01

372 sequences assigned  
325 (87.4%) exact matches, in which:  
311 unique CDR3  
6 unique J



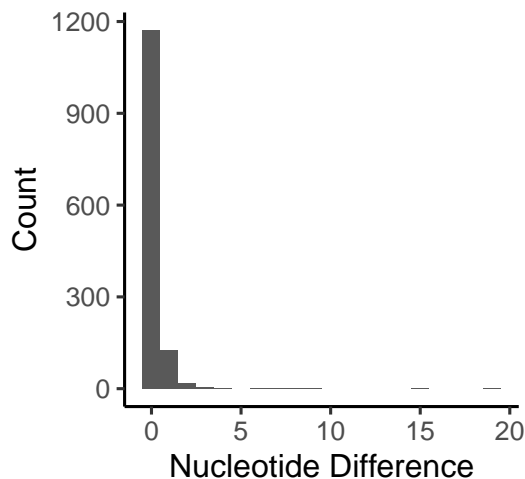
### IGHV4–39\*01

1469 sequences assigned  
1311 (89.2%) exact matches, in which:  
1264 unique CDR3  
6 unique J



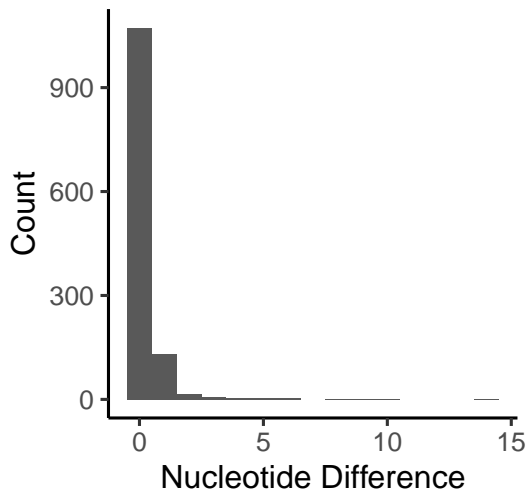
### IGHV4–39\*01\_C66G

1338 sequences assigned  
1171 (87.5%) exact matches, in which:  
1134 unique CDR3  
7 unique J



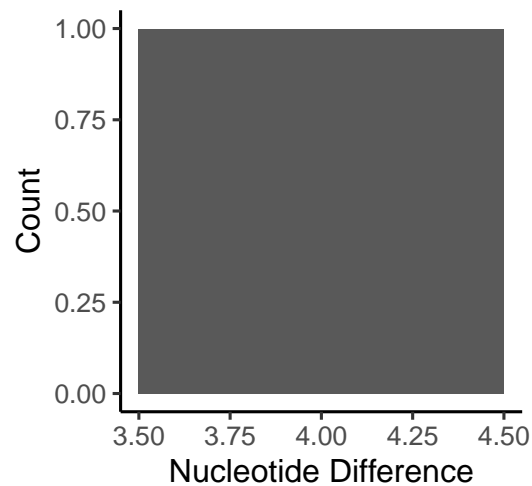
### IGHV4–59\*01

1243 sequences assigned  
1073 (86.3%) exact matches, in which:  
1049 unique CDR3  
7 unique J



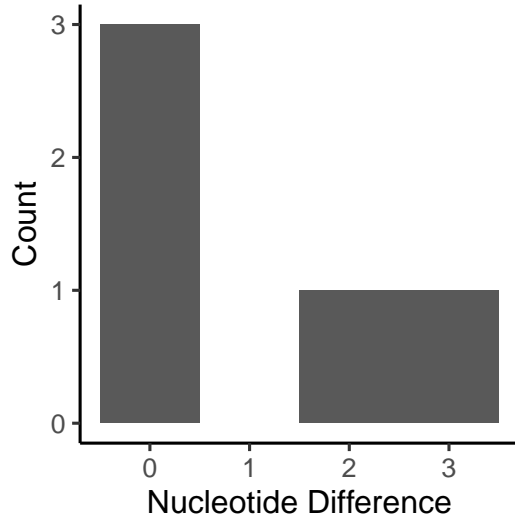
### IGHV4/OR15–8\*02

1 sequences assigned  
No exact matches.



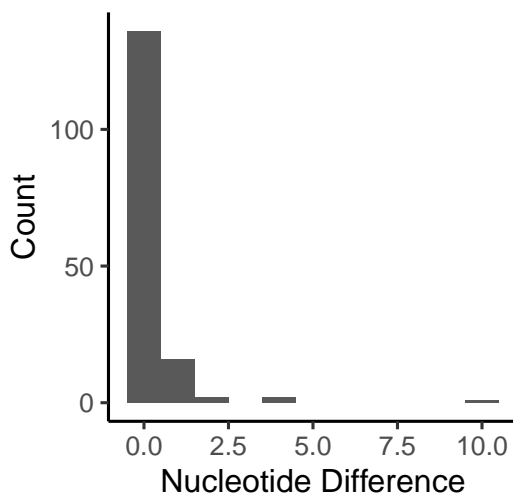
### IGHV4–55\*01

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
3 unique J



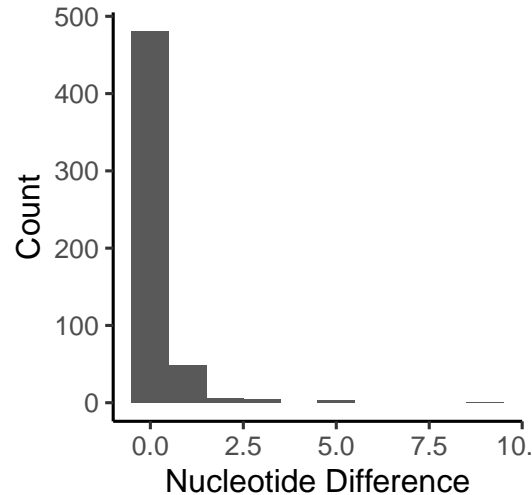
### IGHV4–61\*01

158 sequences assigned  
136 (86.1%) exact matches, in which:  
133 unique CDR3  
6 unique J



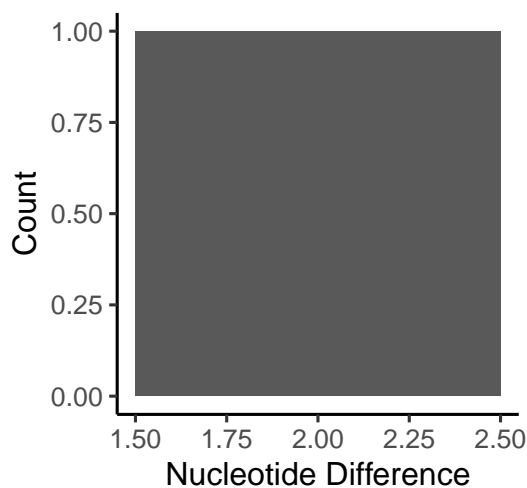
### IGHV5–10–1\*03

545 sequences assigned  
481 (88.3%) exact matches, in which:  
461 unique CDR3  
6 unique J



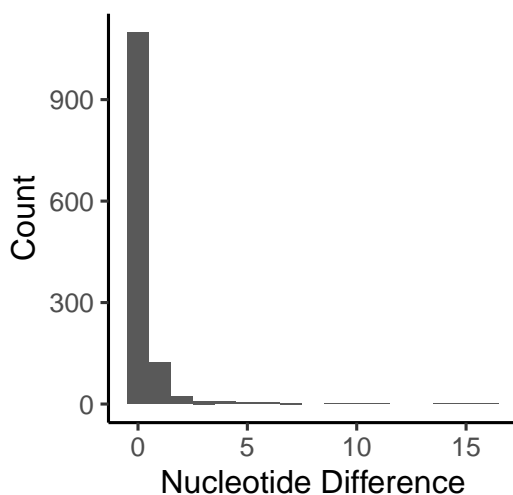
### IGHV4–55\*08

1 sequences assigned  
No exact matches.



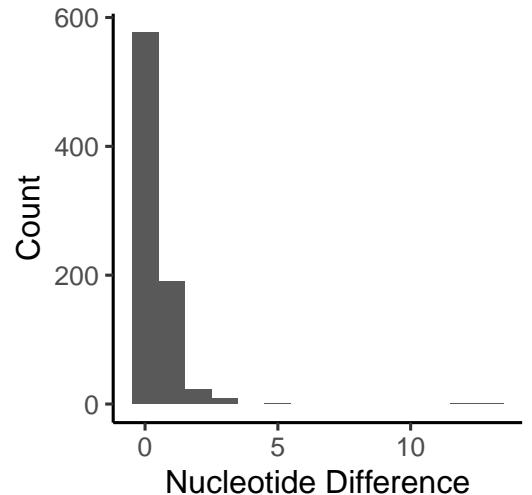
### IGHV4–61\*02

1279 sequences assigned  
1099 (85.9%) exact matches, in which:  
1062 unique CDR3  
6 unique J



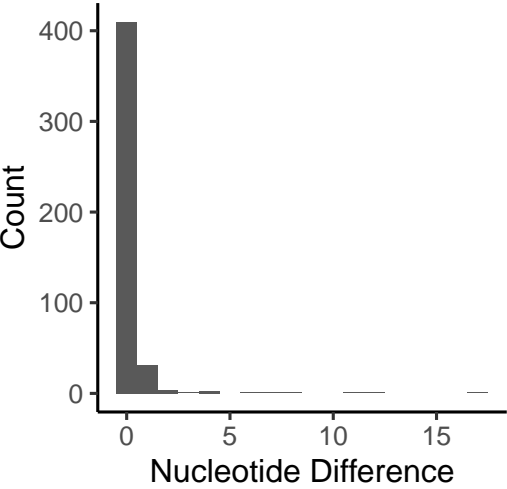
### IGHV5–51\*01

801 sequences assigned  
577 (72%) exact matches, in which:  
539 unique CDR3  
7 unique J



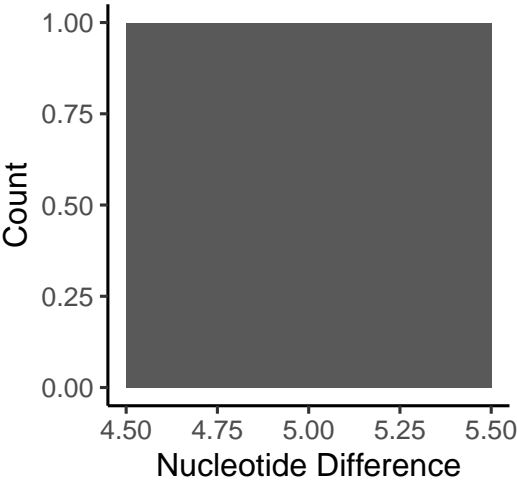
IGHV5–51\*03

455 sequences assigned  
410 (90.1%) exact matches, in which:  
395 unique CDR3  
6 unique J



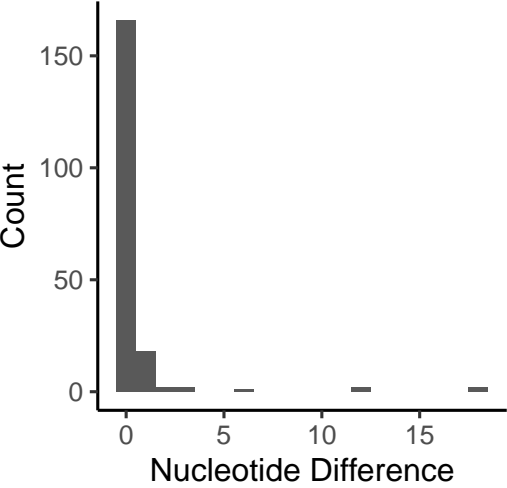
IGHV3/OR16–15\*02

1 sequences assigned  
No exact matches.



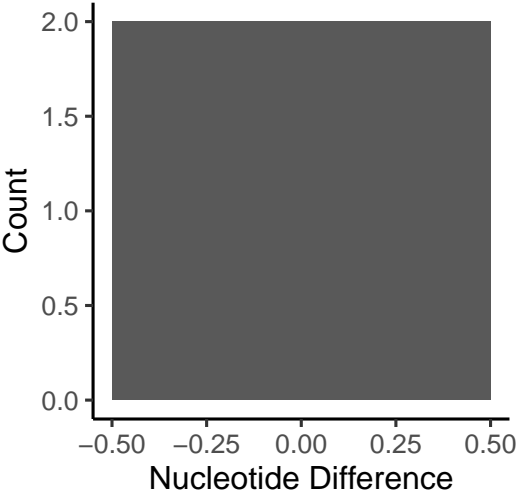
IGHV6–1\*01

193 sequences assigned  
166 (86%) exact matches, in which:  
155 unique CDR3  
7 unique J



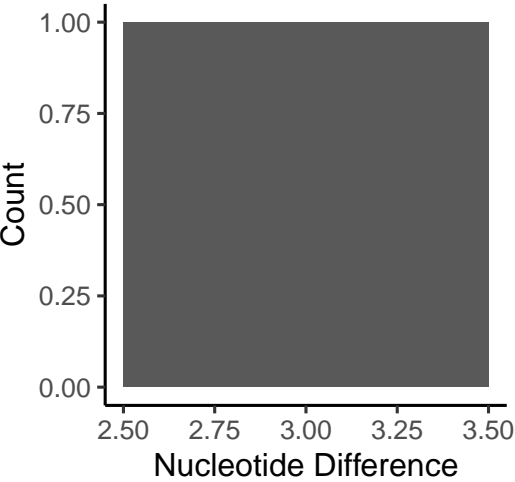
IGHV7–81\*01

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



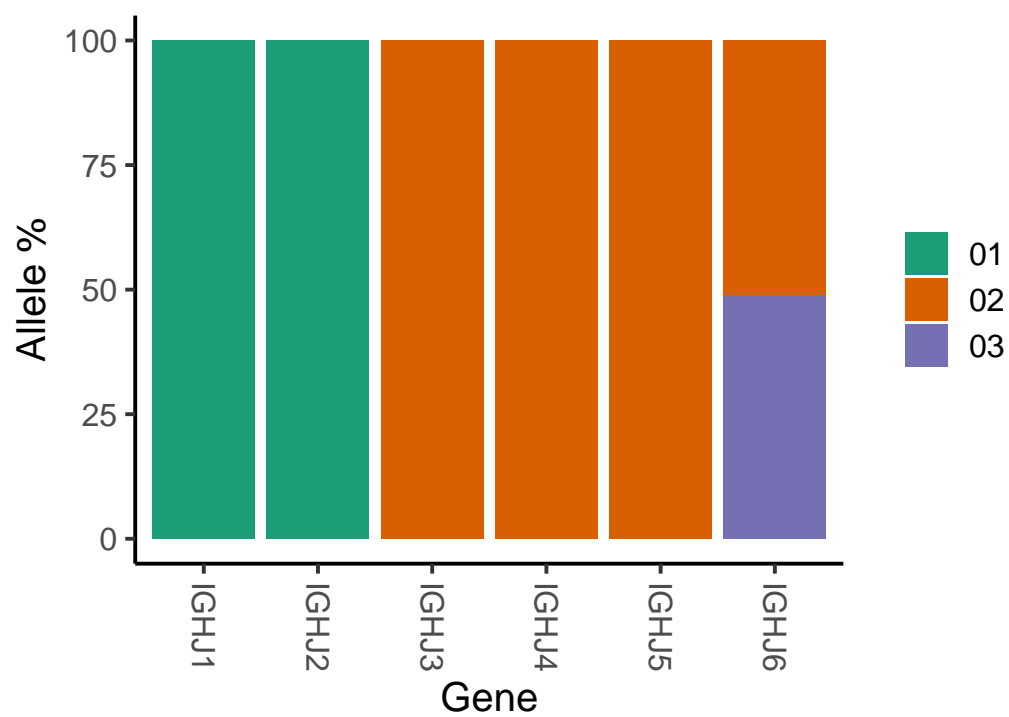
IGHV3/OR16–12\*01

1 sequences assigned  
No exact matches.





Allele Usage



## Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.