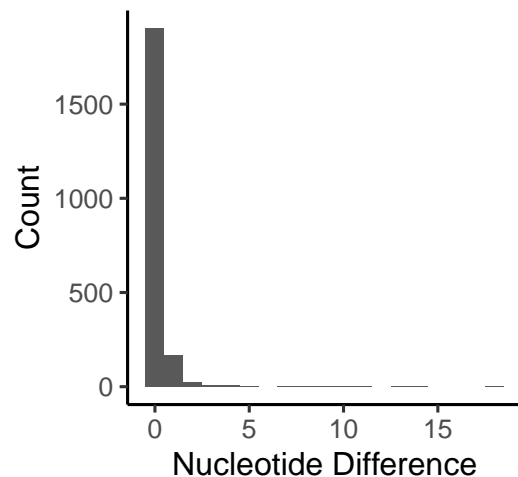


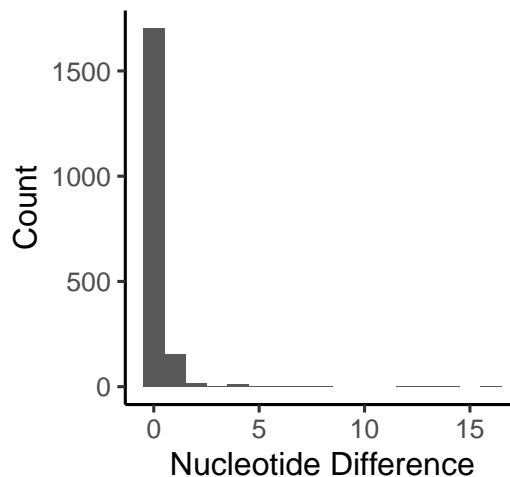
### IGHV1-2\*02

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



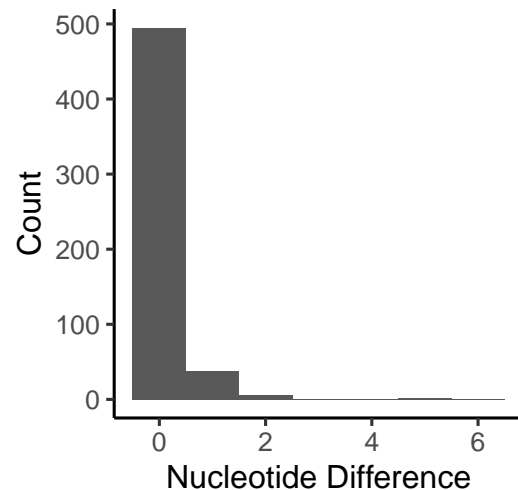
### IGHV1-18\*01

1900 sequences assigned  
1702 (89.6%) exact matches, in which:  
1627 unique CDR3  
7 unique J



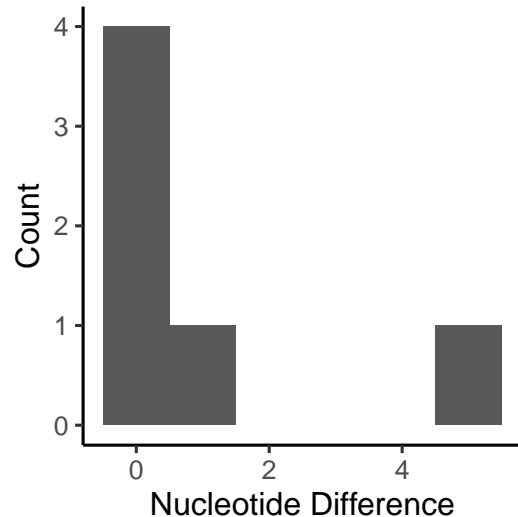
### IGHV1-46\*01

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



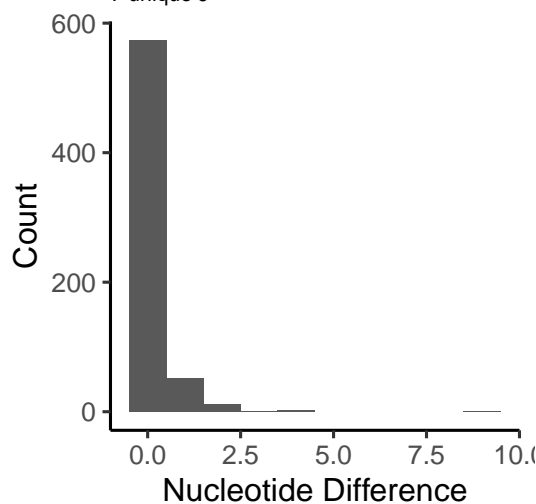
### IGHV1-3\*02

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



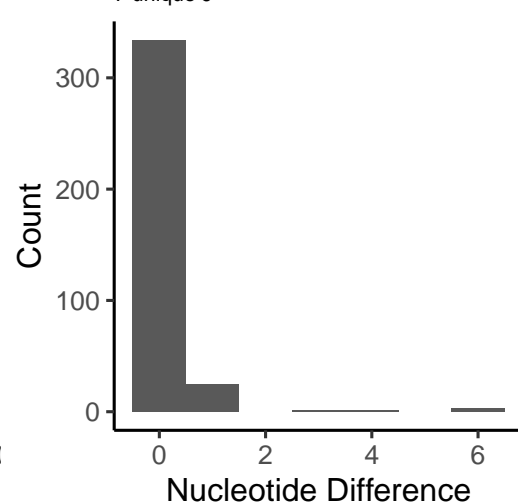
### IGHV1-24\*01

642 sequences assigned  
574 (89.4%) exact matches, in which:  
545 unique CDR3  
7 unique J



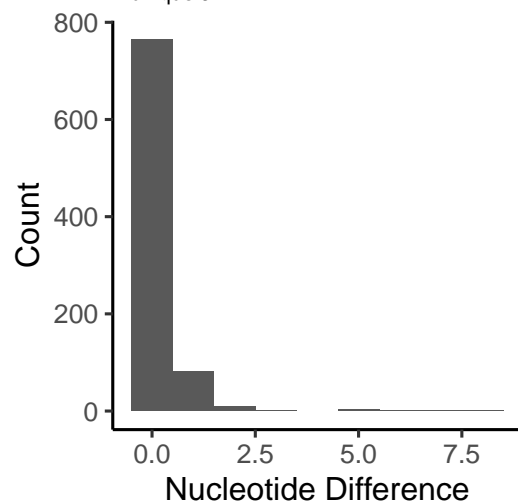
### IGHV1-46\*03

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



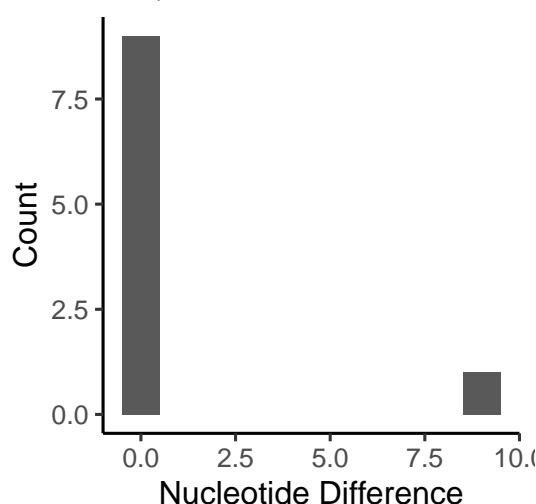
### IGHV1-8\*01

863 sequences assigned  
765 (88.6%) exact matches, in which:  
725 unique CDR3  
7 unique J



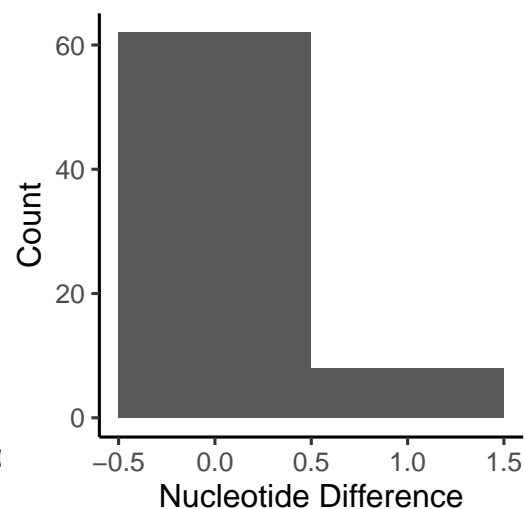
### IGHV1-45\*02

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



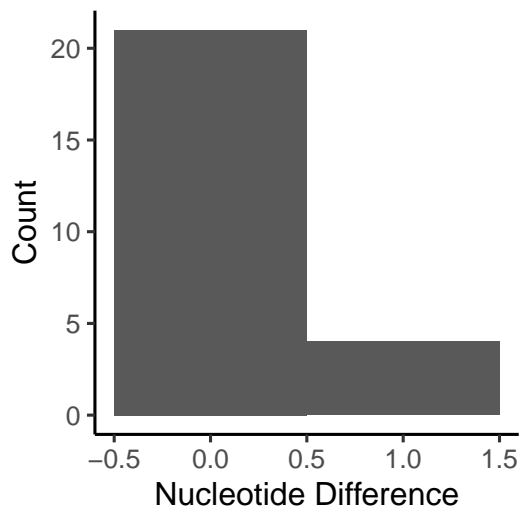
### IGHV1-58\*01

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



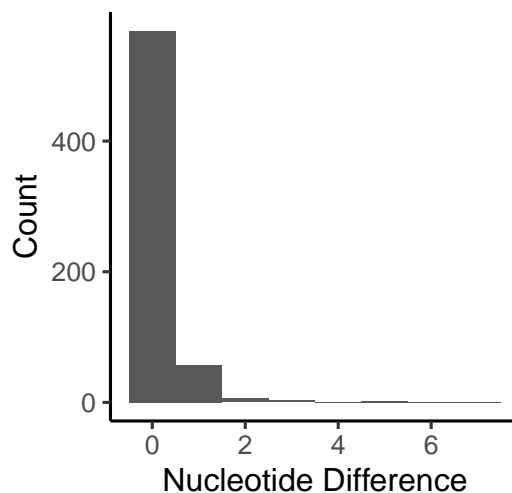
### IGHV1-58\*02

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



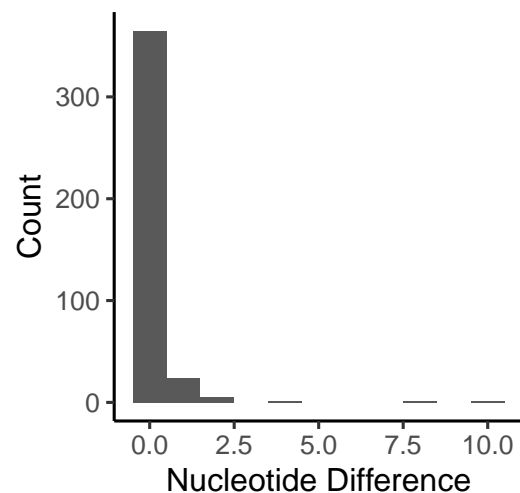
### IGHV1-69\*08\_C191T

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



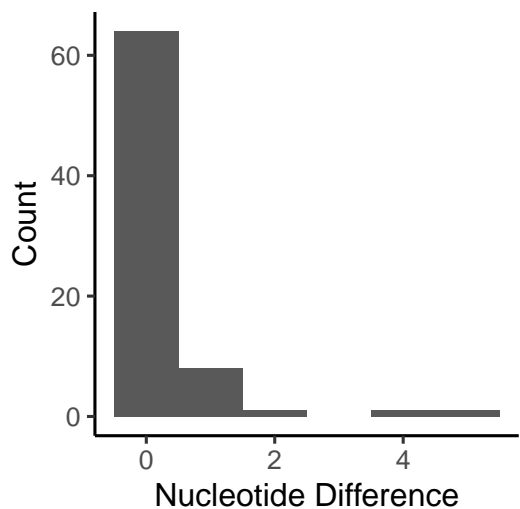
### IGHV2-26\*01

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



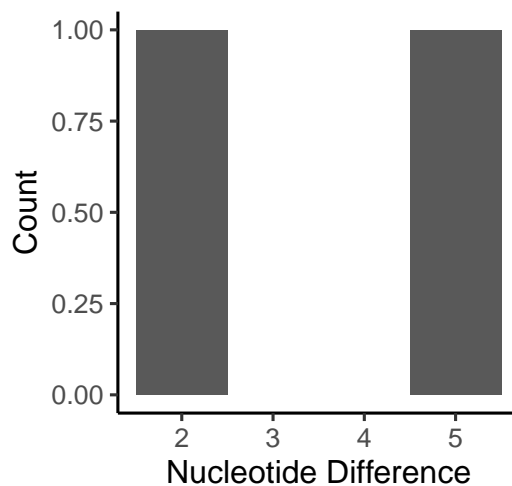
### IGHV1-69-2\*01

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



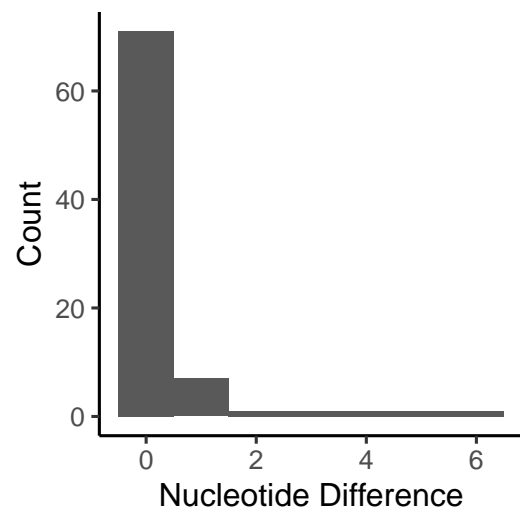
### IGHV1-NL1\*01

2 sequences assigned  
No exact matches.



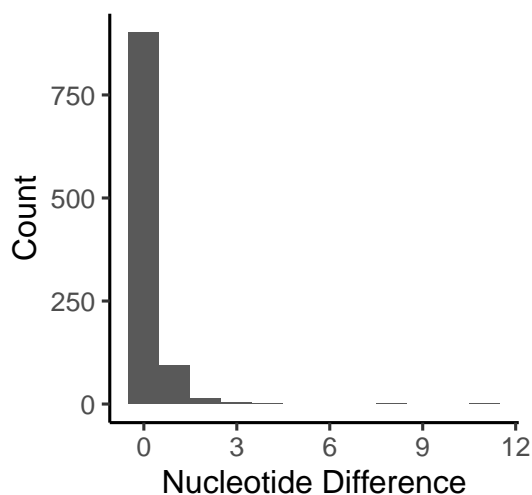
### IGHV2-70\*01

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



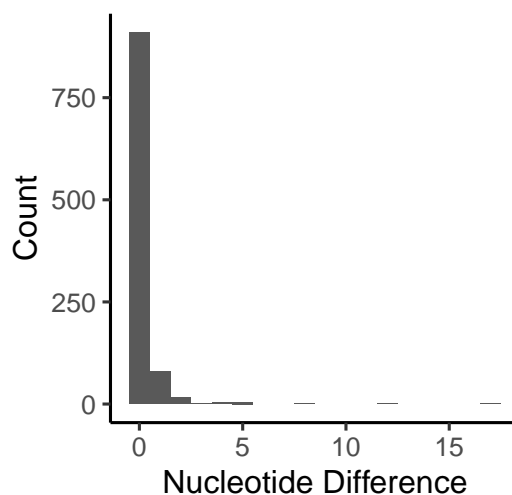
### IGHV1-69\*06

1017 sequences assigned  
902 (88.7%) exact matches, in which:  
857 unique CDR3  
7 unique J



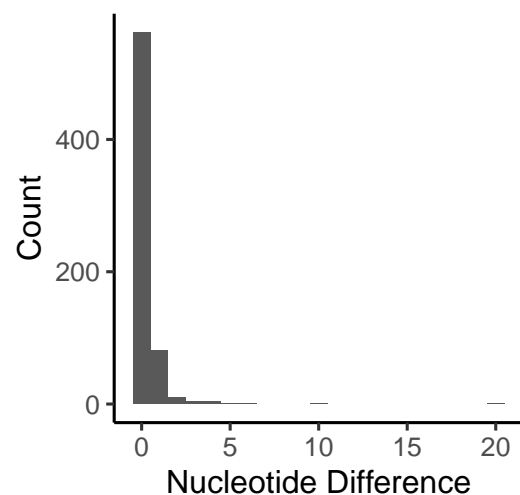
### IGHV2-5\*02

1020 sequences assigned  
910 (89.2%) exact matches, in which:  
881 unique CDR3  
7 unique J



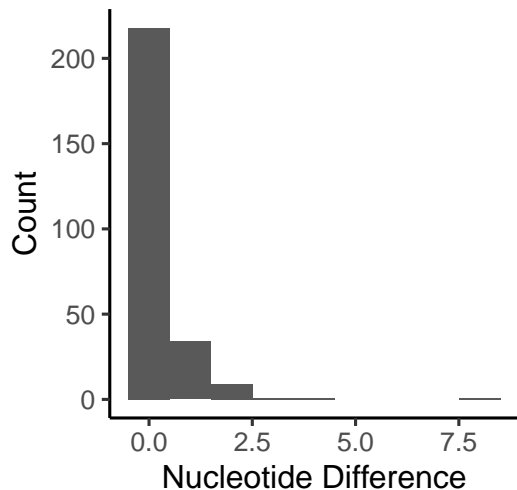
### IGHV3-7\*01

665 sequences assigned  
562 (84.5%) exact matches, in which:  
535 unique CDR3  
7 unique J



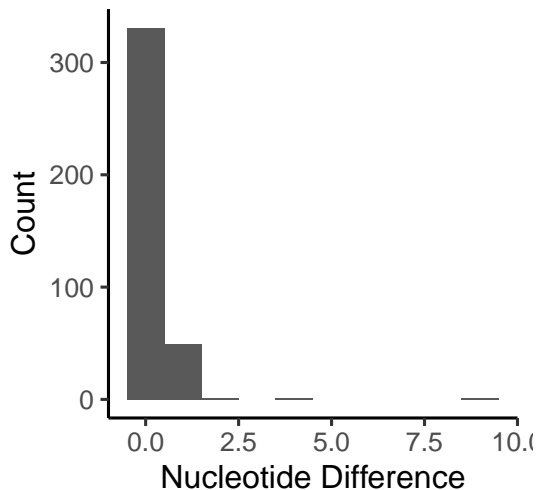
### IGHV3-7\*04

264 sequences assigned  
218 (82.6%) exact matches, in which:  
209 unique CDR3  
7 unique J



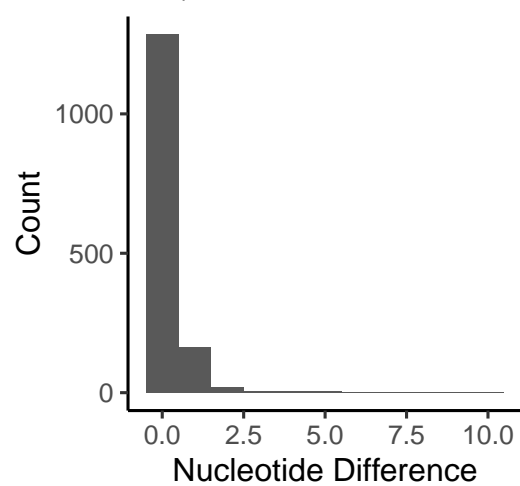
### IGHV3-11\*06

385 sequences assigned  
331 (86%) exact matches, in which:  
316 unique CDR3  
6 unique J



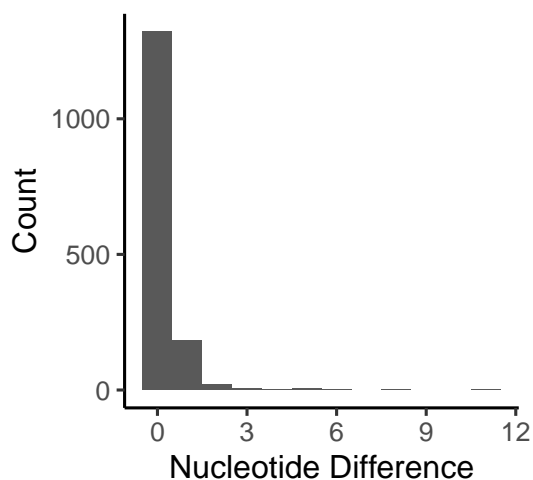
### IGHV3-15\*01

1496 sequences assigned  
1285 (85.9%) exact matches, in which:  
1213 unique CDR3  
7 unique J



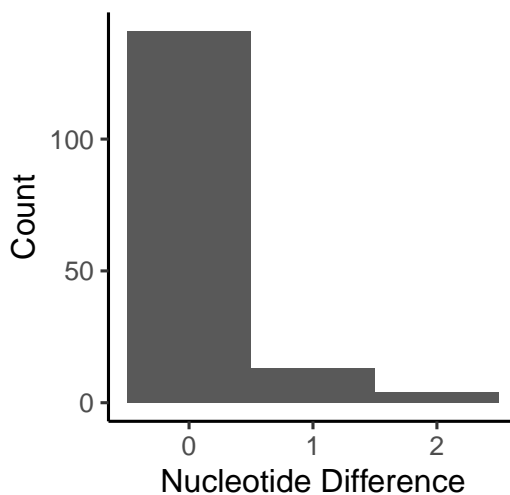
### IGHV3-9\*01

1540 sequences assigned  
1321 (85.8%) exact matches, in which:  
1191 unique CDR3  
6 unique J



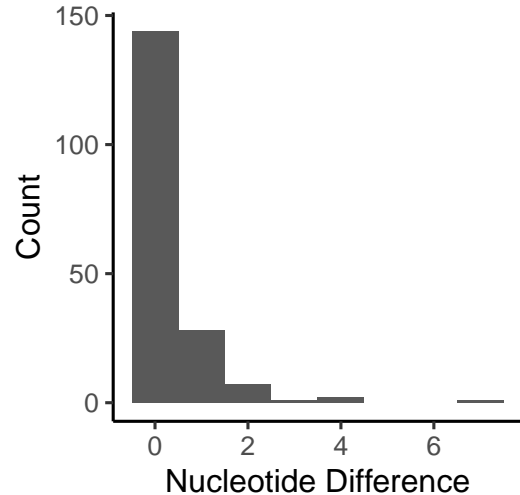
### IGHV3-13\*01

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



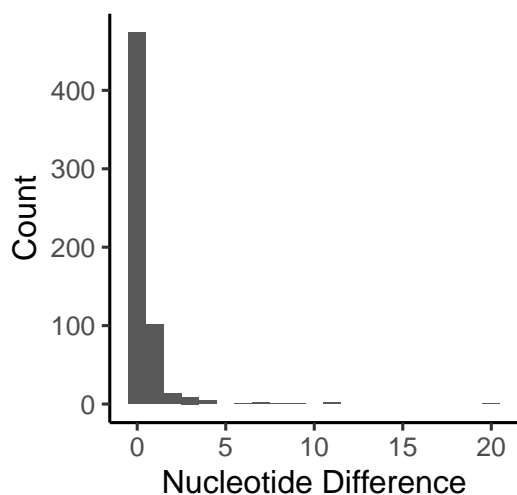
### IGHV3-20\*01

184 sequences assigned  
144 (78.3%) exact matches, in which:  
134 unique CDR3  
6 unique J



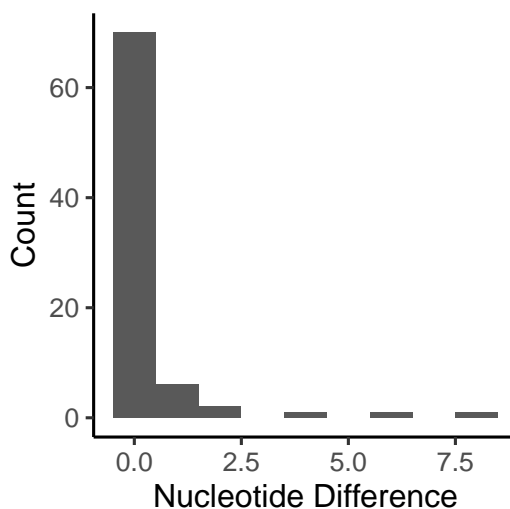
### IGHV3-11\*01

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



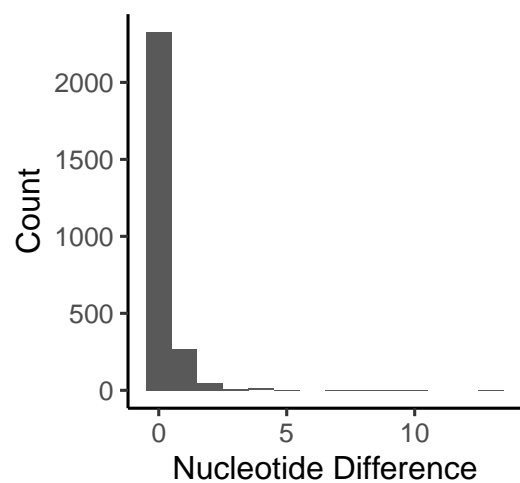
### IGHV3-13\*05

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



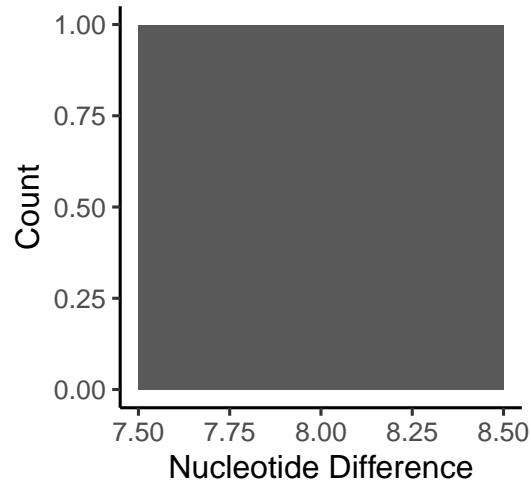
### IGHV3-21\*01

2679 sequences assigned  
2327 (86.9%) exact matches, in which:  
2200 unique CDR3  
7 unique J



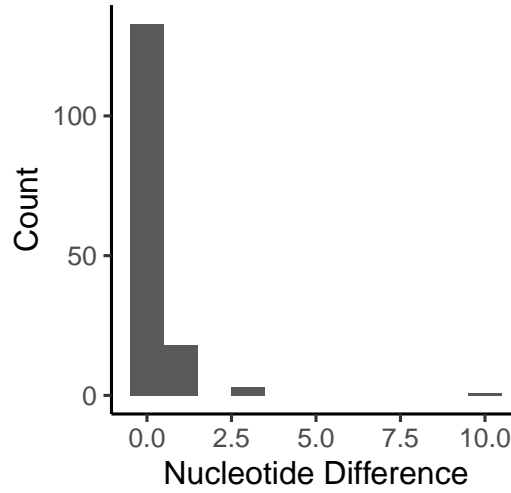
### IGHV3-25\*04

1 sequences assigned  
No exact matches.



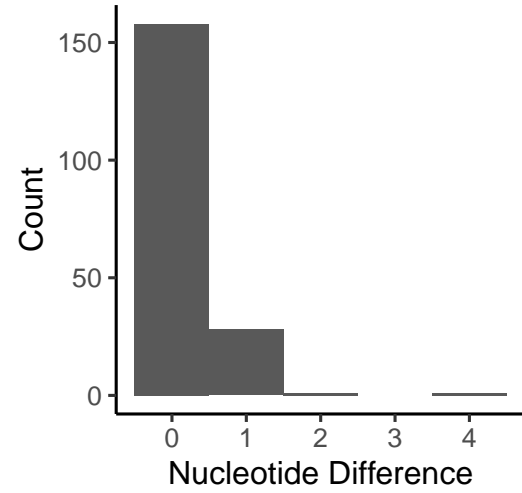
### IGHV3-43\*01

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



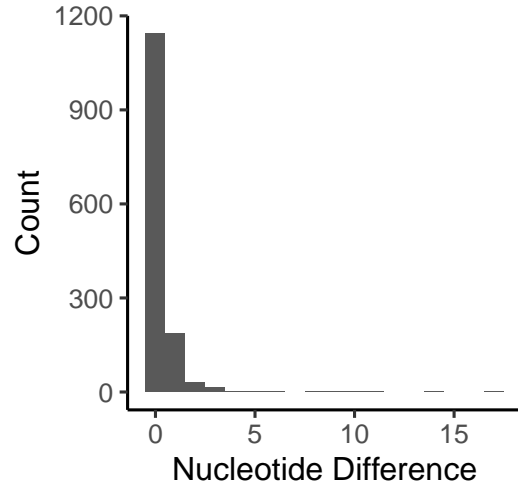
### IGHV3-49\*03

188 sequences assigned  
158 (84%) exact matches, in which:  
151 unique CDR3  
5 unique J



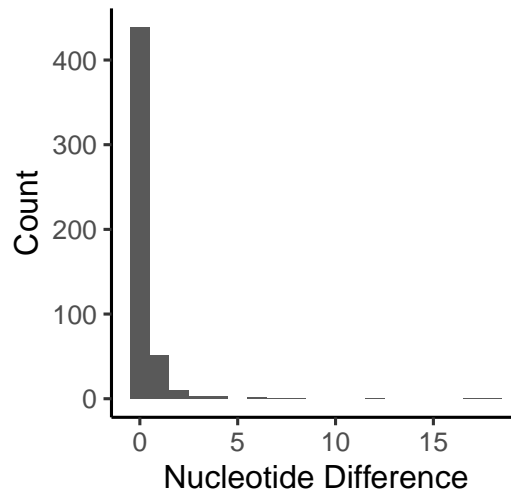
### IGHV3-30-3\*01

1391 sequences assigned  
1143 (82.2%) exact matches, in which:  
1068 unique CDR3  
7 unique J



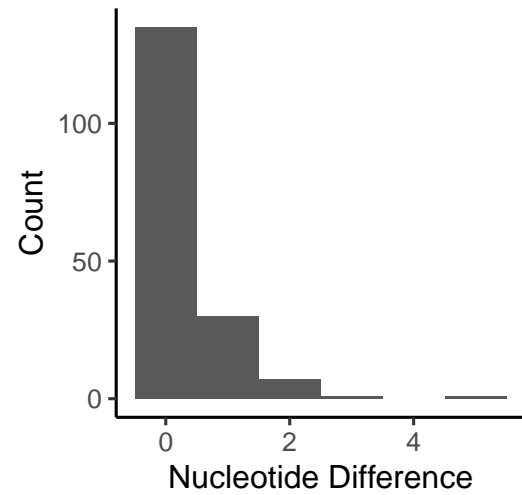
### IGHV3-48\*01

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



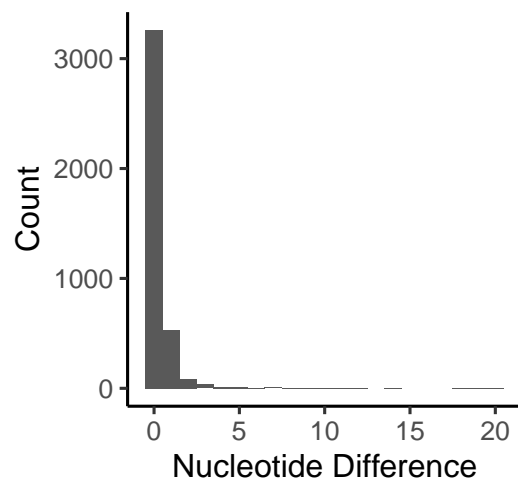
### IGHV3-49\*05

174 sequences assigned  
135 (77.6%) exact matches, in which:  
125 unique CDR3  
6 unique J



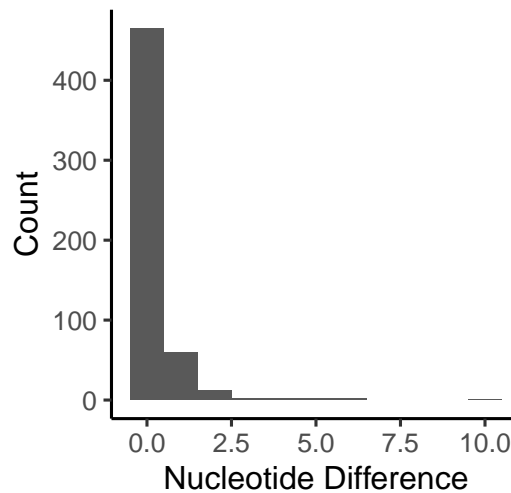
### IGHV3-33\*01

3962 sequences assigned  
3260 (82.3%) exact matches, in which:  
3069 unique CDR3  
7 unique J



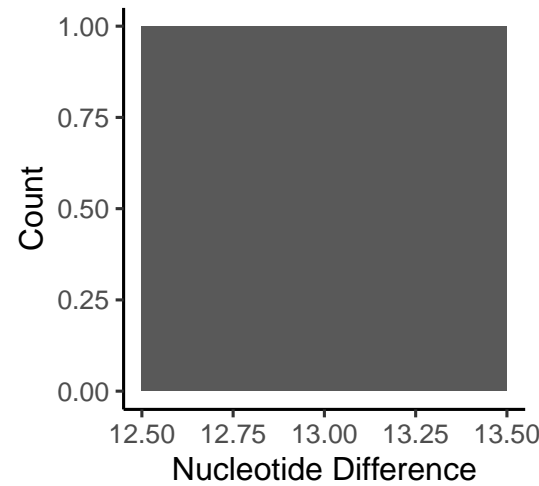
### IGHV3-48\*02

545 sequences assigned  
465 (85.3%) exact matches, in which:  
446 unique CDR3  
7 unique J



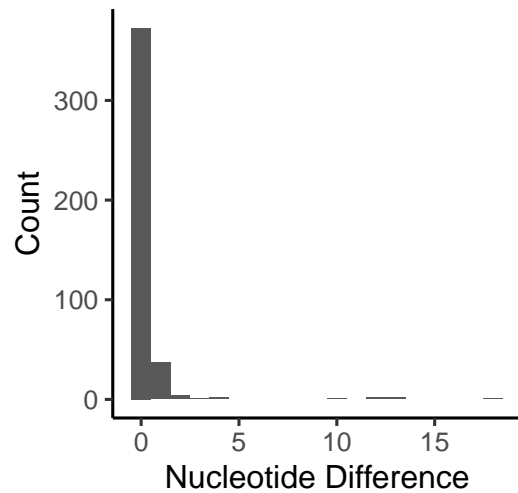
### IGHV3-52\*01

2 sequences assigned  
No exact matches.



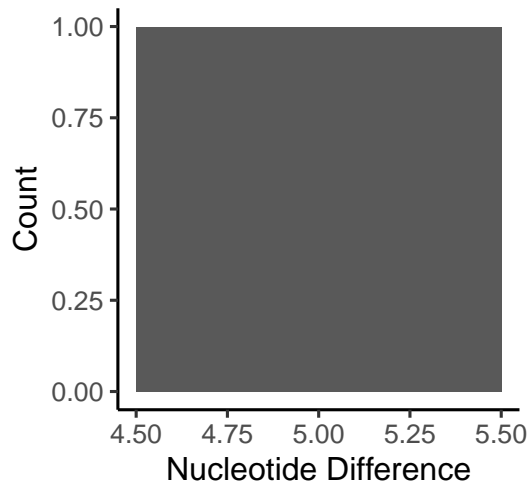
### IGHV3-53\*02

423 sequences assigned  
373 (88.2%) exact matches, in which:  
358 unique CDR3  
7 unique J



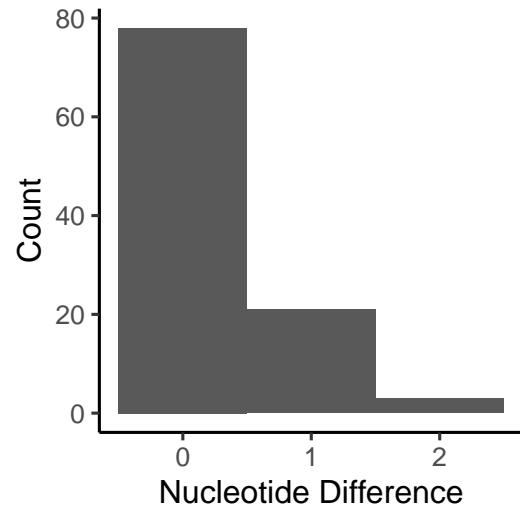
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



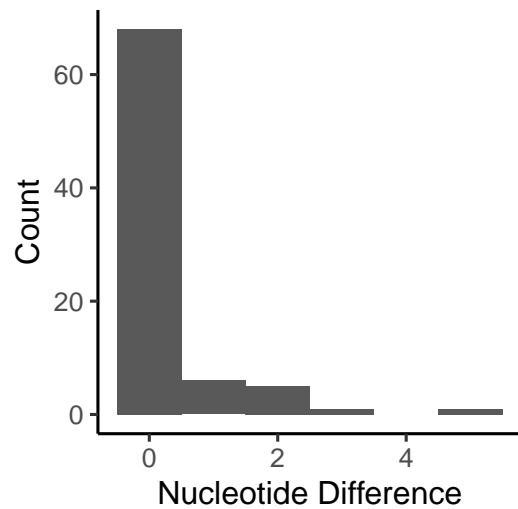
### IGHV3-73\*02

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



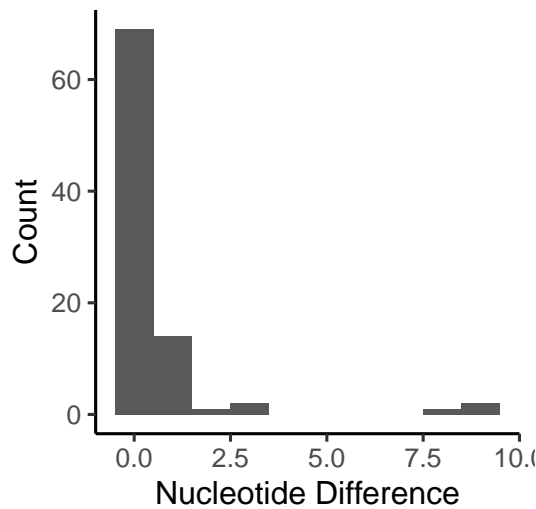
### IGHV3-64\*01

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



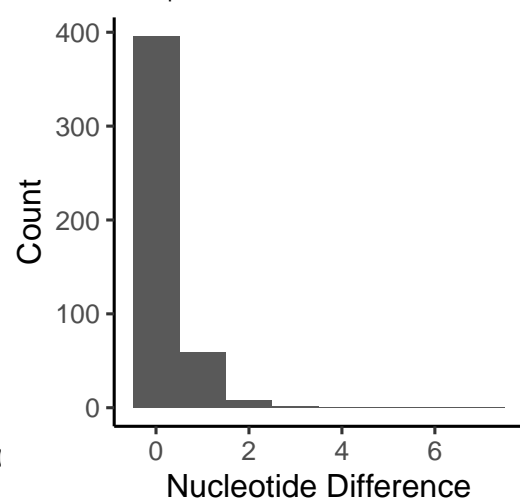
### IGHV3-72\*01

89 sequences assigned  
69 (77.5%) exact matches, in which:  
67 unique CDR3  
6 unique J



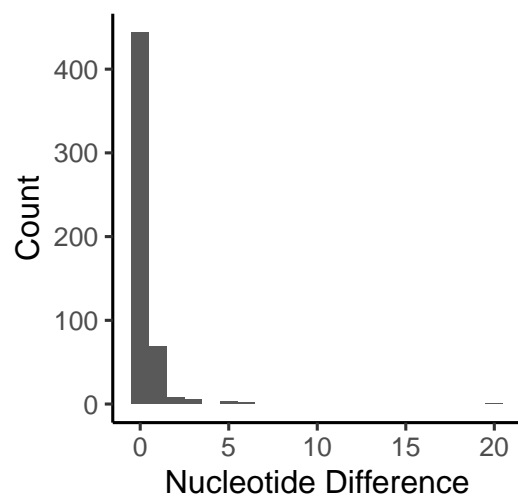
### IGHV3-74\*01

469 sequences assigned  
396 (84.4%) exact matches, in which:  
383 unique CDR3  
7 unique J



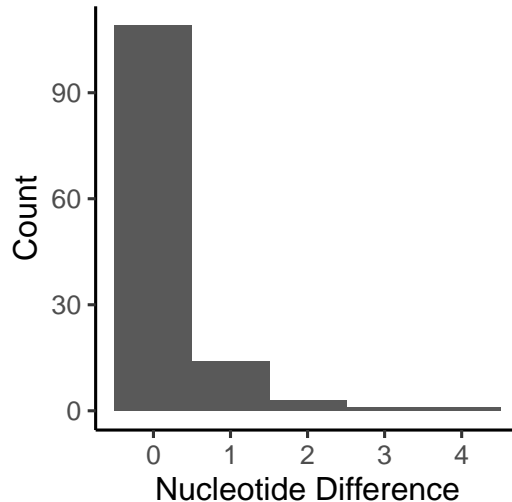
### IGHV3-66\*02

532 sequences assigned  
444 (83.5%) exact matches, in which:  
423 unique CDR3  
7 unique J



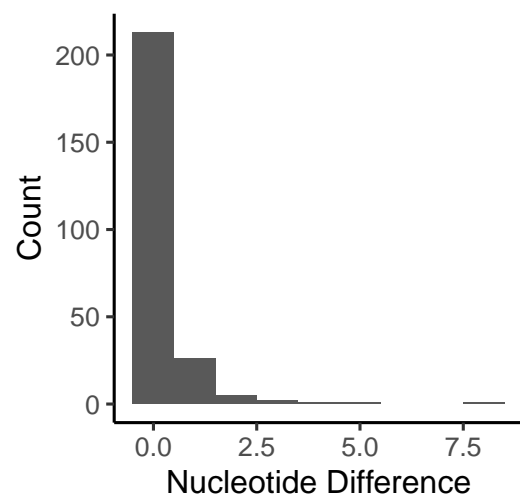
### IGHV3-73\*01

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



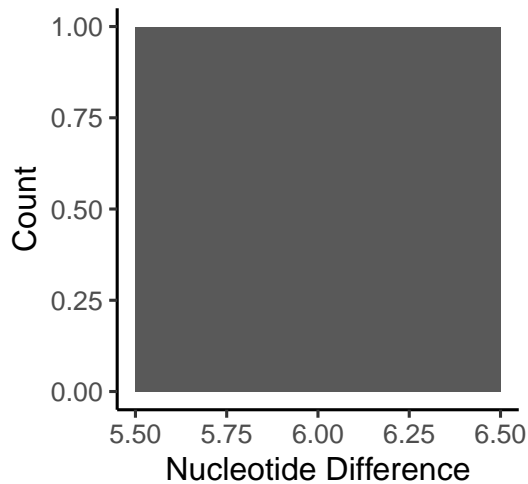
### IGHV3-64D\*06

249 sequences assigned  
213 (85.5%) exact matches, in which:  
199 unique CDR3  
6 unique J



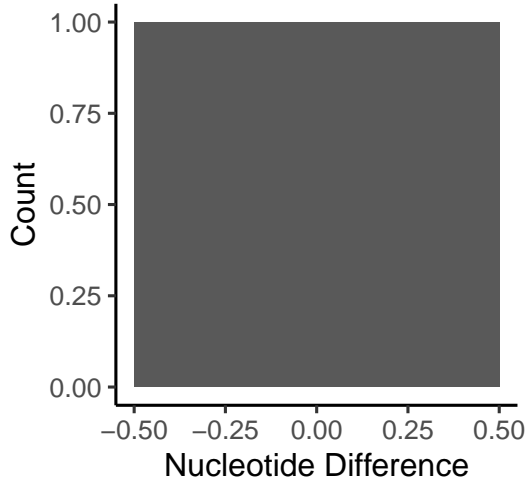
### IGHV3–NL1\*01

1 sequences assigned  
No exact matches.



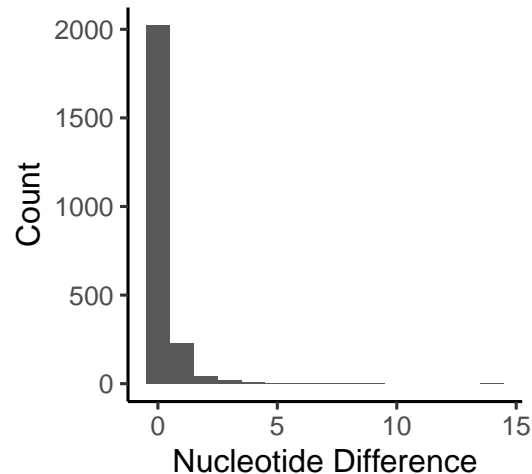
### IGHV4–28\*03

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



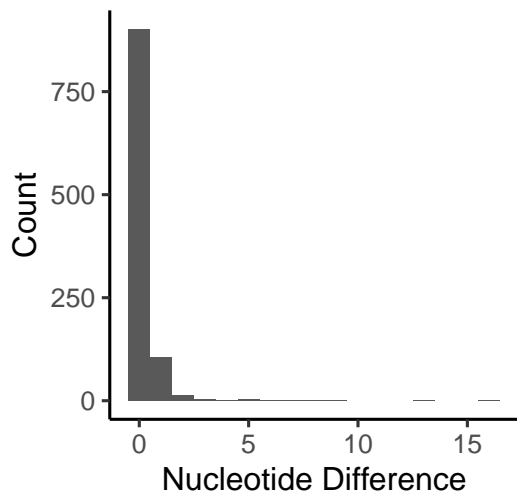
### IGHV4–31\*03

2331 sequences assigned  
2022 (86.7%) exact matches, in which:  
1935 unique CDR3  
7 unique J



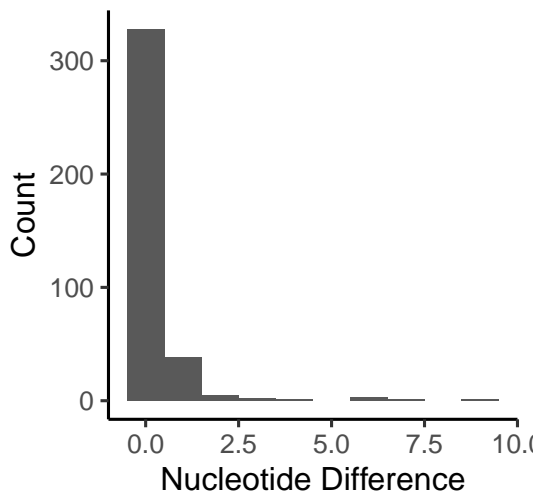
### IGHV4–4\*07

1039 sequences assigned  
902 (86.8%) exact matches, in which:  
867 unique CDR3  
7 unique J



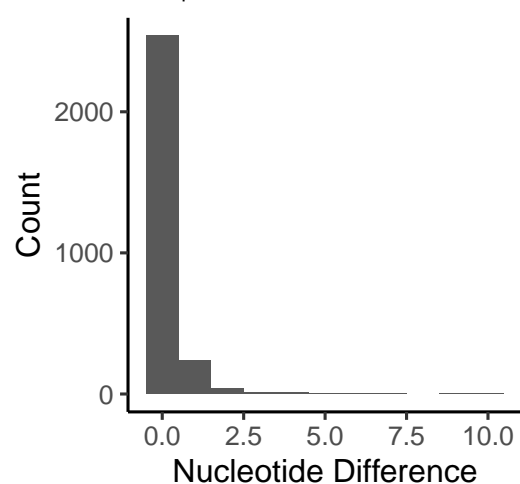
### IGHV4–30–4\*01

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



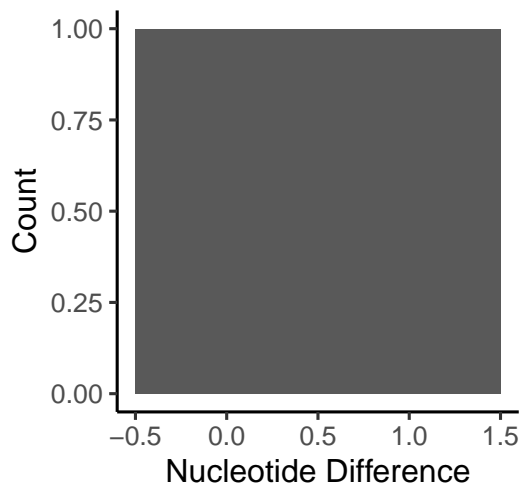
### IGHV4–34\*01

2853 sequences assigned  
2539 (89%) exact matches, in which:  
2418 unique CDR3  
7 unique J



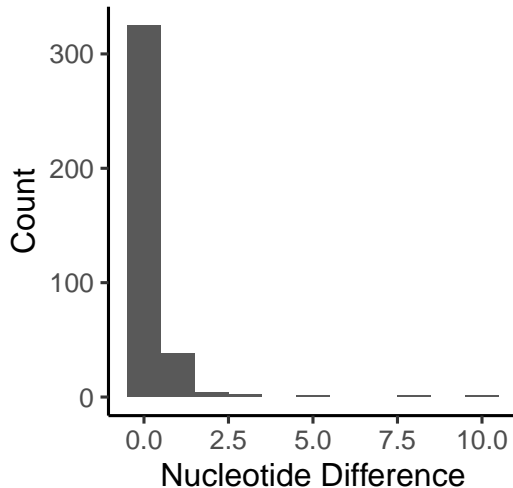
### IGHV4–28\*01

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



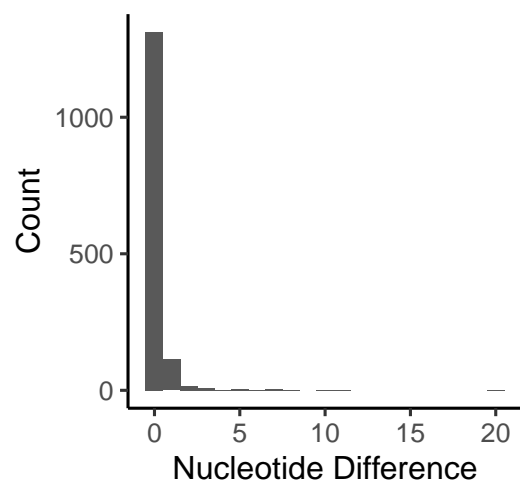
### IGHV4–30–2\*01

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



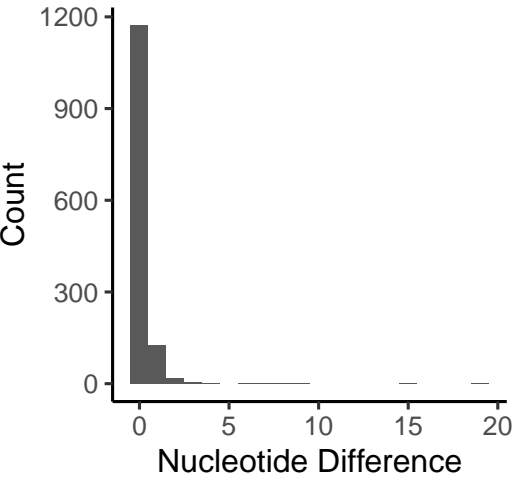
### IGHV4–39\*01

1470 sequences assigned  
1312 (89.3%) exact matches, in which:  
1265 unique CDR3  
6 unique J



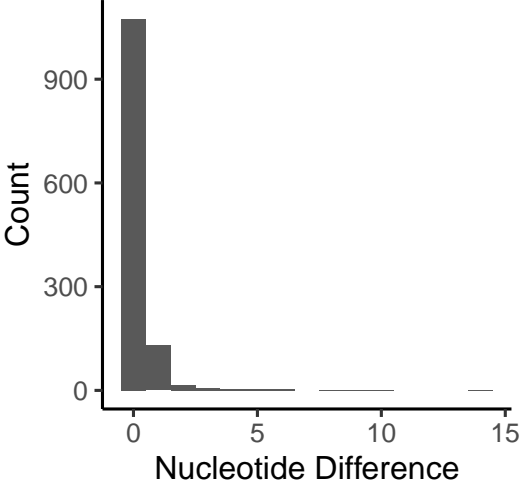
IGHV4–39\*01\_C66G

1339 sequences assigned  
1172 (87.5%) exact matches, in which:  
1135 unique CDR3  
7 unique J



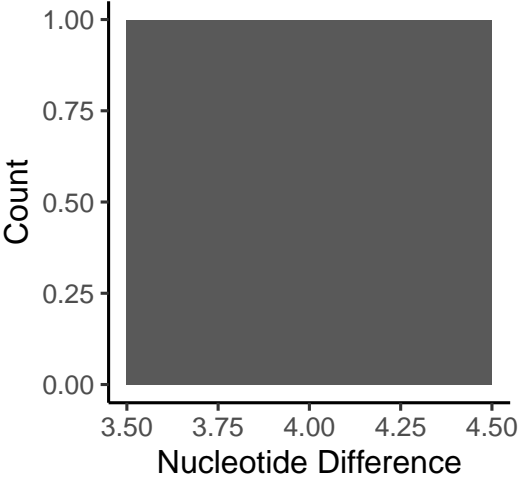
IGHV4–59\*01

1245 sequences assigned  
1075 (86.3%) exact matches, in which:  
1051 unique CDR3  
7 unique J



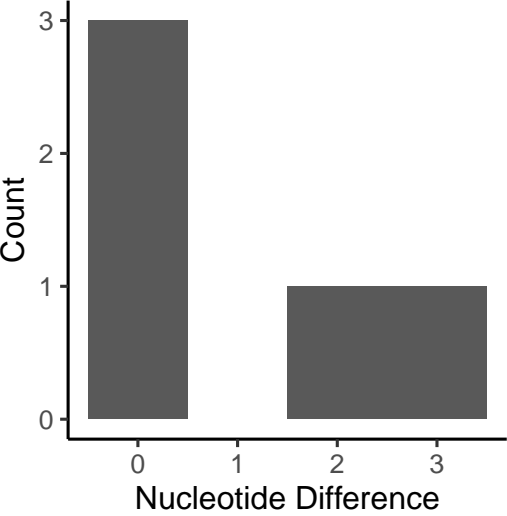
IGHV4/OR15–8\*02

1 sequences assigned  
No exact matches.



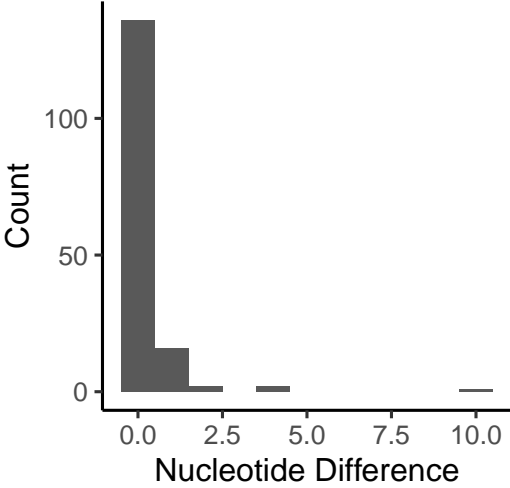
IGHV4–55\*01

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



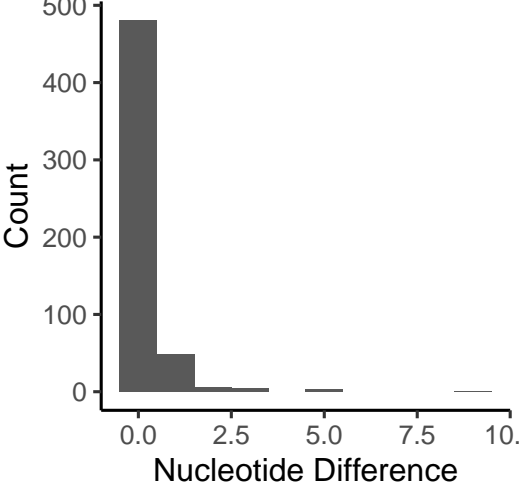
IGHV4–61\*01

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



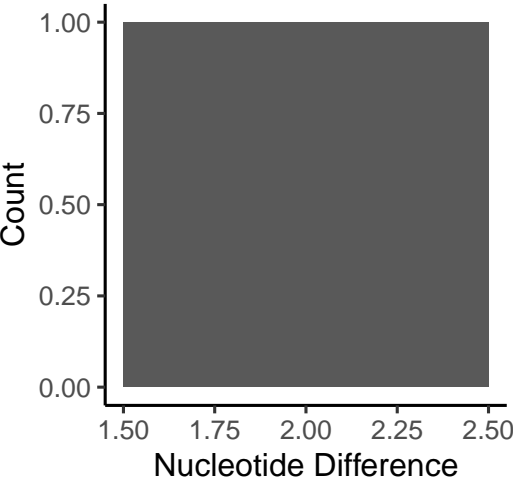
IGHV5–10–1\*03

546 sequences assigned  
481 (88.1%) exact matches, in which:  
461 unique CDR3  
6 unique J



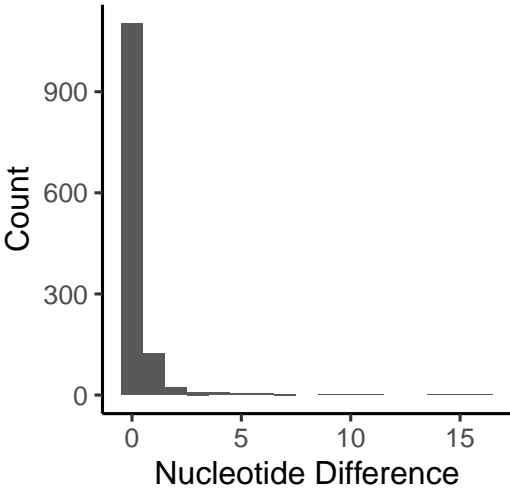
IGHV4–55\*08

1 sequences assigned  
No exact matches.



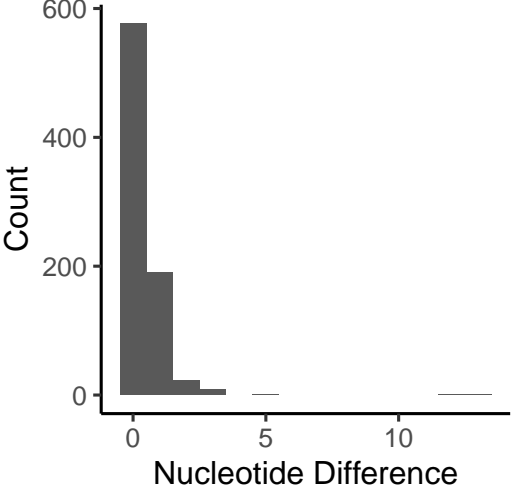
IGHV4–61\*02

1283 sequences assigned  
1103 (86%) exact matches, in which:  
1066 unique CDR3  
6 unique J



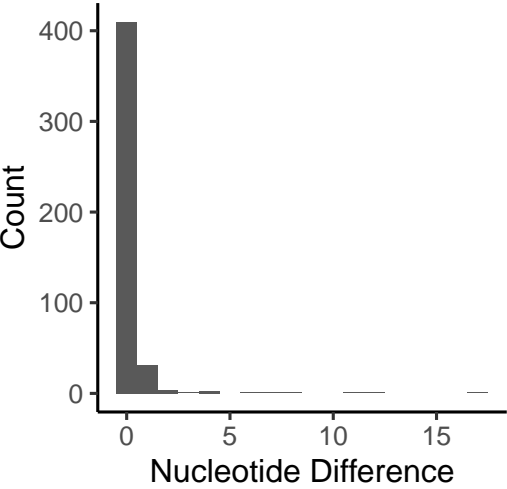
IGHV5–51\*01

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



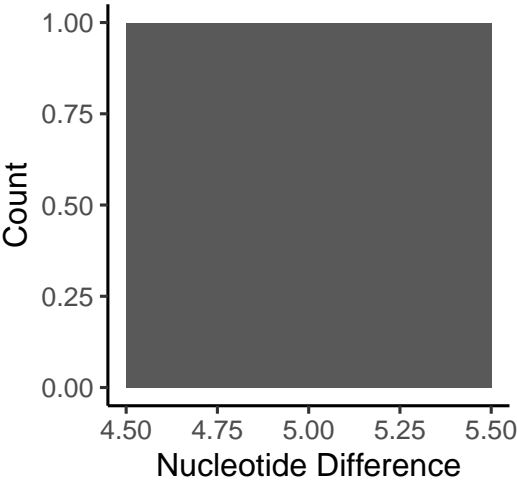
IGHV5–51\*03

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



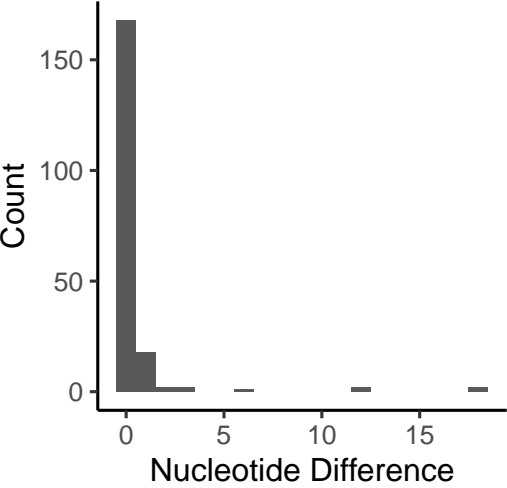
IGHV3/OR16–15\*02

1 sequences assigned  
No exact matches.



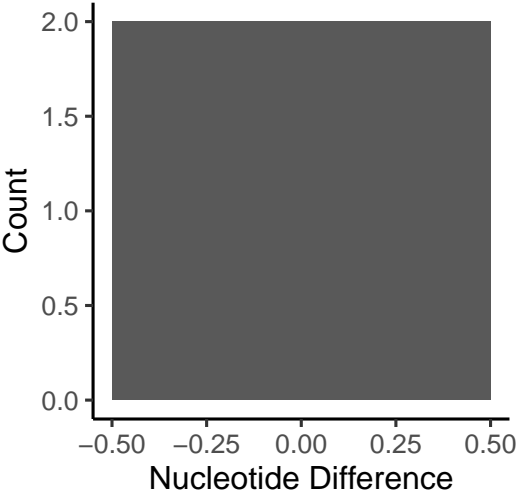
IGHV6–1\*01

195 sequences assigned  
168 (86.2%) exact matches, in which:  
156 unique CDR3  
7 unique J



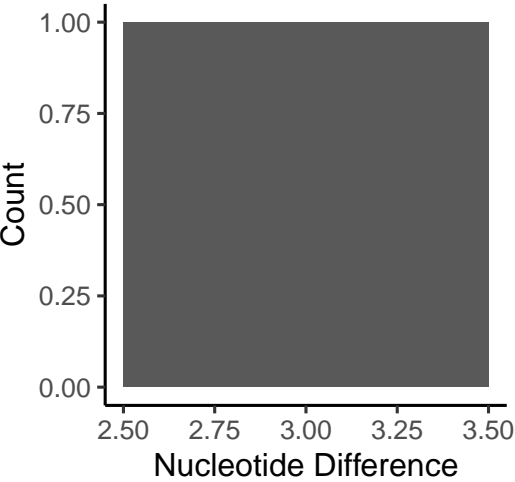
IGHV7–81\*01

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



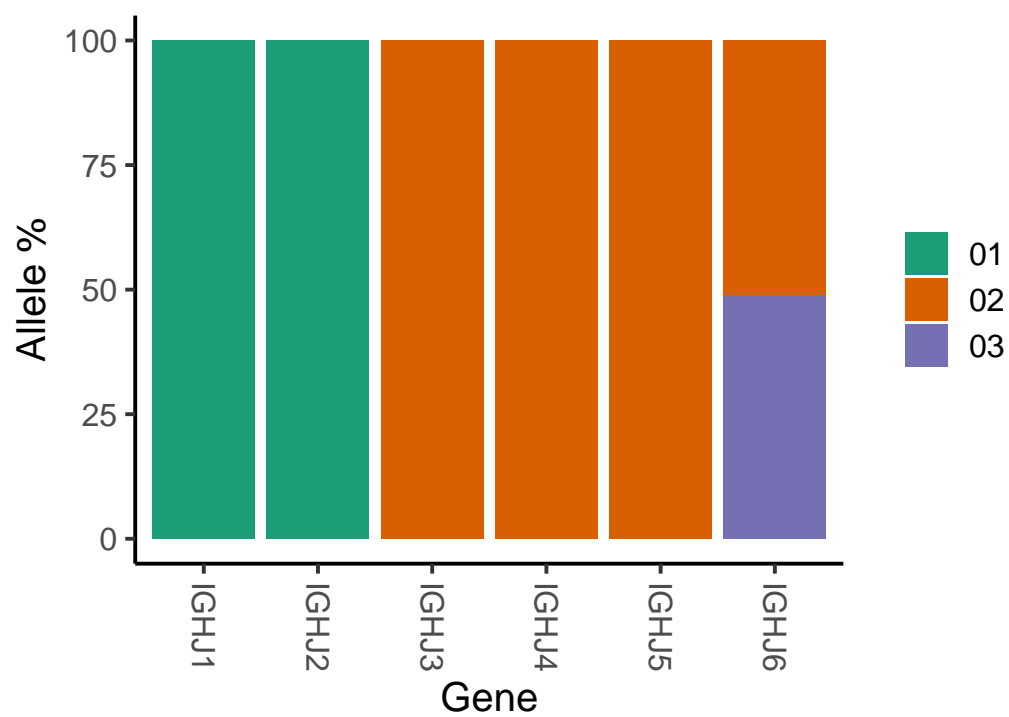
IGHV3/OR16–12\*01

1 sequences assigned  
No exact matches.

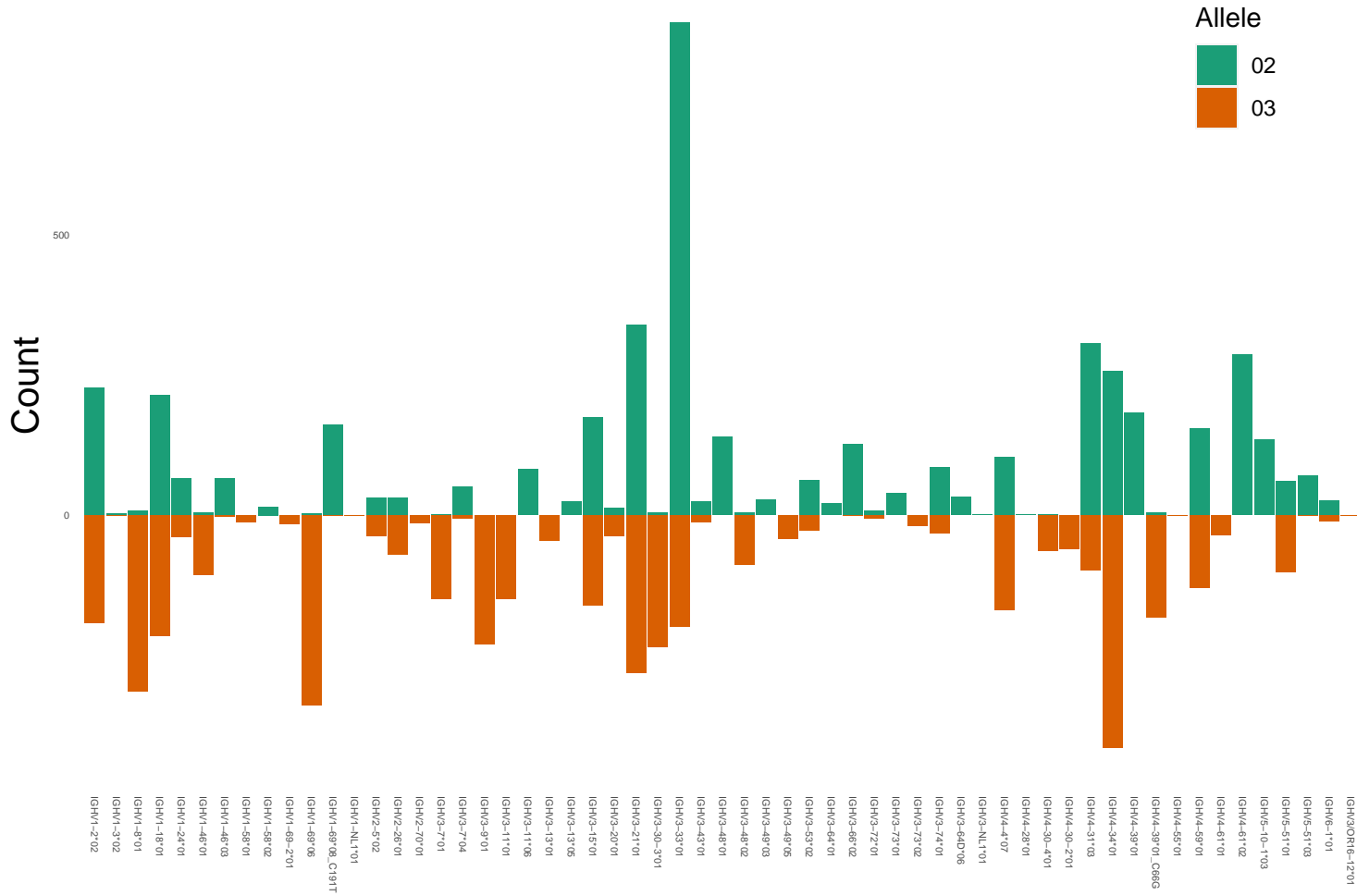




Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.