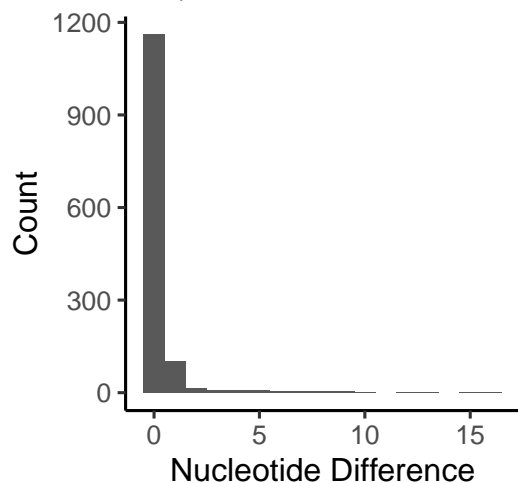


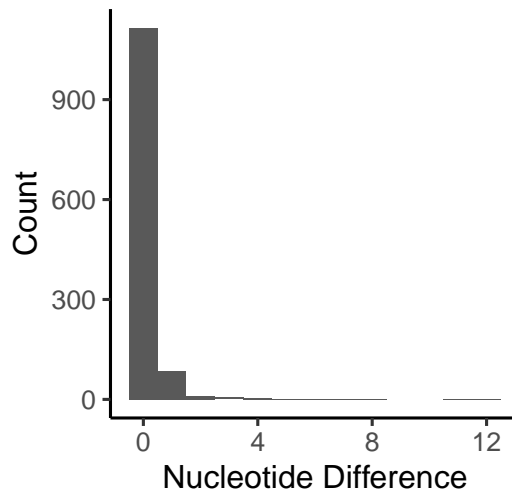
### IGHV1-2\*02

1328 sequences assigned  
1161 (87.4%) exact matches, in which:  
1111 unique CDR3  
7 unique J



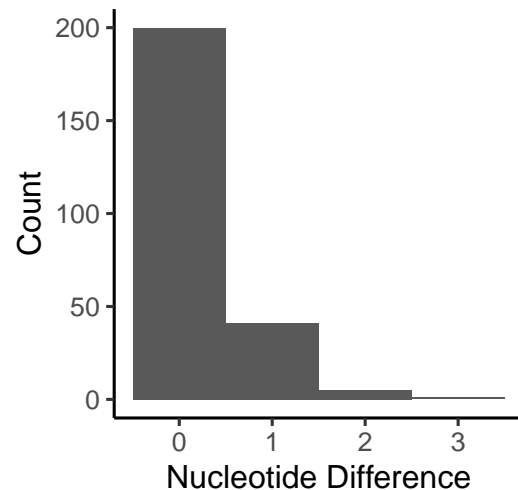
### IGHV1-8\*01

1231 sequences assigned  
1116 (90.7%) exact matches, in which:  
1065 unique CDR3  
7 unique J



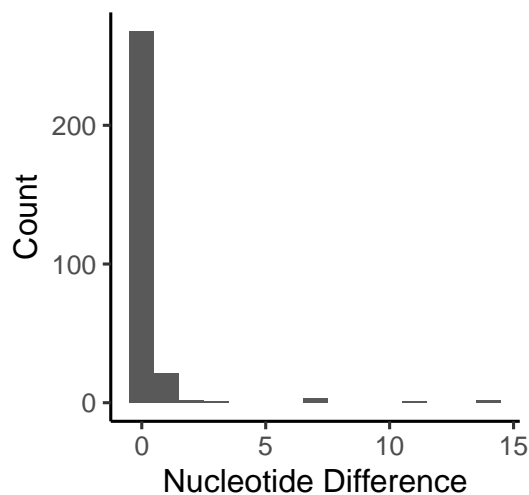
### IGHV1-24\*01

247 sequences assigned  
200 (81%) exact matches, in which:  
191 unique CDR3  
6 unique J



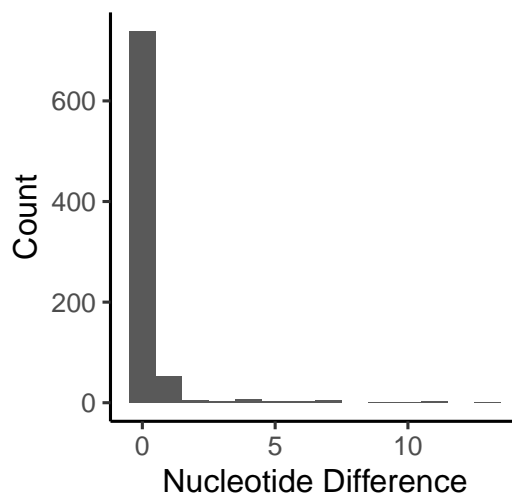
### IGHV1-2\*04

298 sequences assigned  
268 (89.9%) exact matches, in which:  
260 unique CDR3  
7 unique J



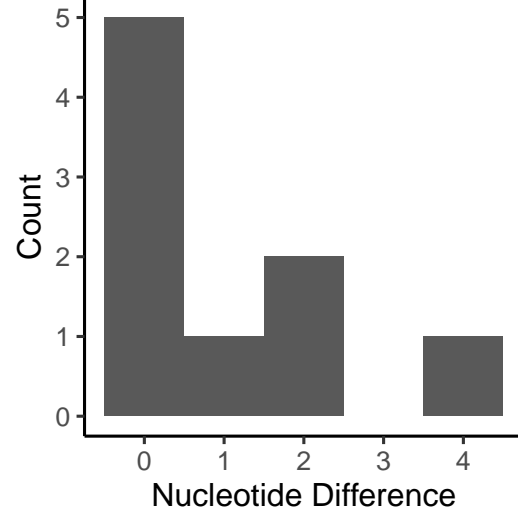
### IGHV1-18\*01

825 sequences assigned  
739 (89.6%) exact matches, in which:  
713 unique CDR3  
6 unique J



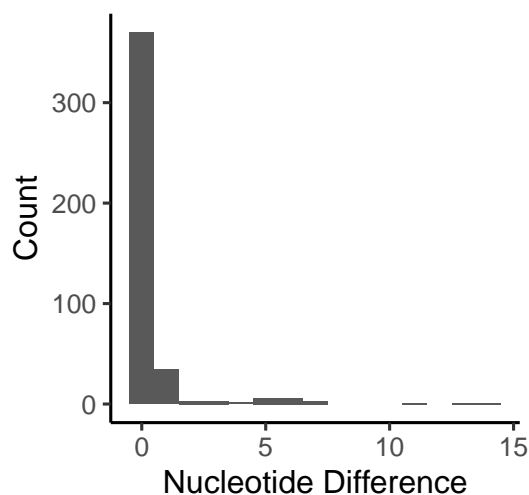
### IGHV1-45\*02

9 sequences assigned  
5 (55.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



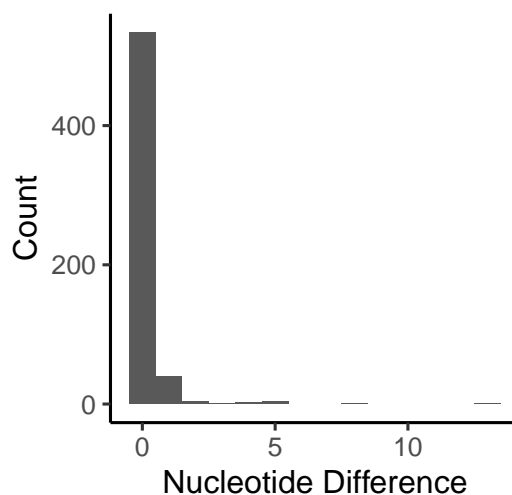
### IGHV1-3\*01

430 sequences assigned  
370 (86%) exact matches, in which:  
357 unique CDR3  
6 unique J



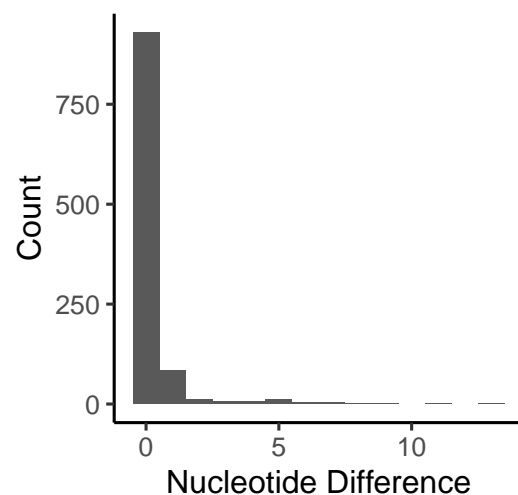
### IGHV1-18\*04

586 sequences assigned  
534 (91.1%) exact matches, in which:  
521 unique CDR3  
6 unique J



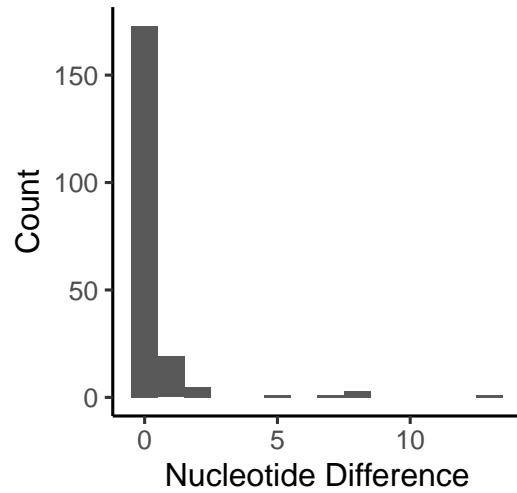
### IGHV1-46\*01

1062 sequences assigned  
930 (87.6%) exact matches, in which:  
887 unique CDR3  
7 unique J



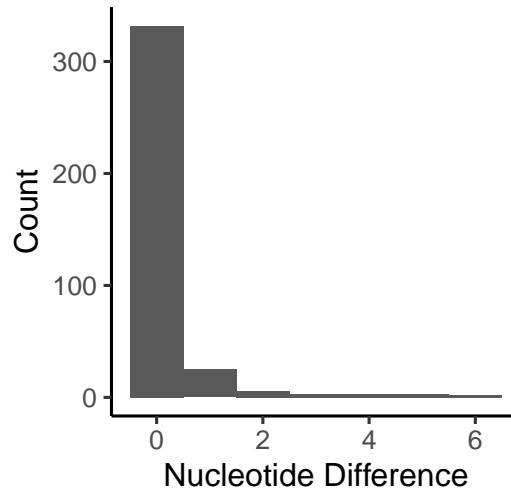
### IGHV1–58\*01

205 sequences assigned  
173 (84.4%) exact matches, in which:  
166 unique CDR3  
7 unique J



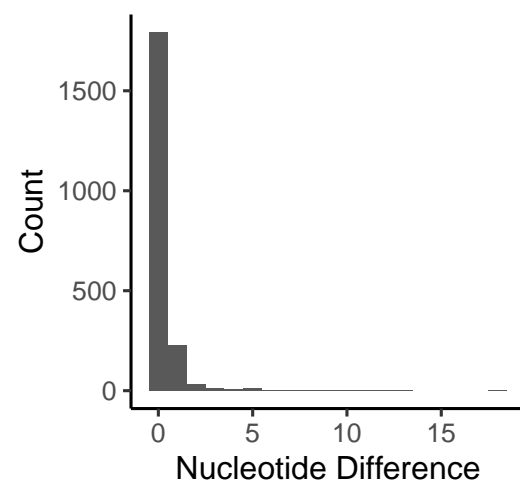
### IGHV2–26\*01

374 sequences assigned  
332 (88.8%) exact matches, in which:  
322 unique CDR3  
7 unique J



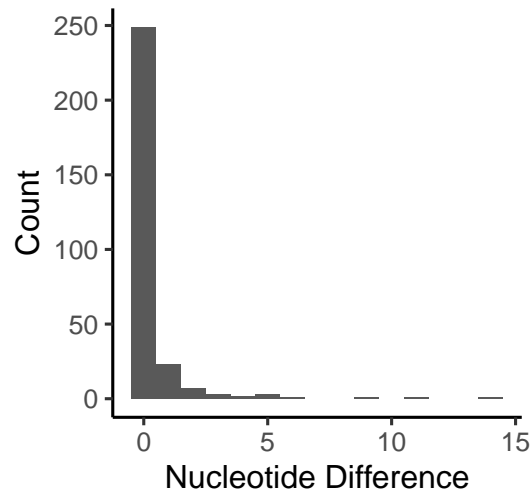
### IGHV3–9\*01

2111 sequences assigned  
1792 (84.9%) exact matches, in which:  
1690 unique CDR3  
7 unique J



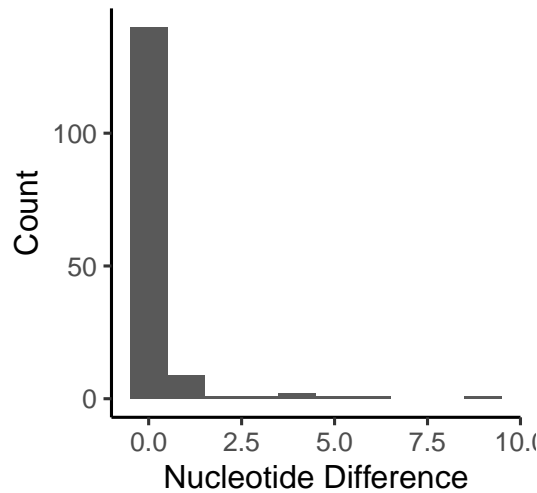
### IGHV2–5\*01

291 sequences assigned  
249 (85.6%) exact matches, in which:  
245 unique CDR3  
6 unique J



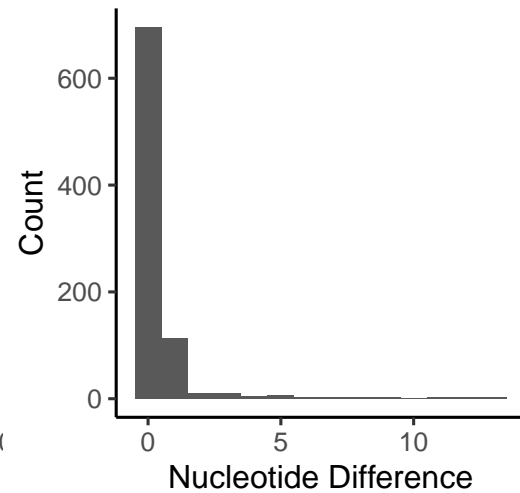
### IGHV2–70\*01

156 sequences assigned  
140 (89.7%) exact matches, in which:  
138 unique CDR3  
7 unique J



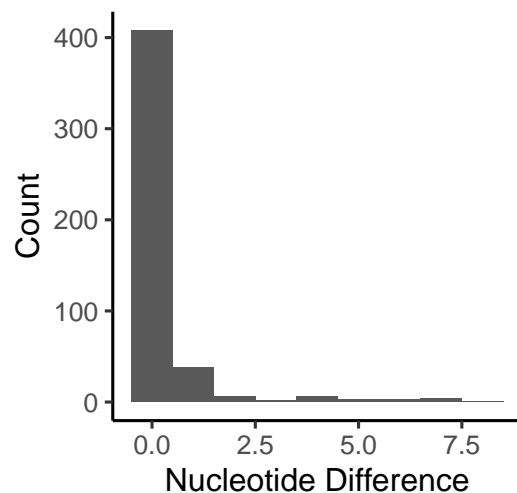
### IGHV3–11\*01

856 sequences assigned  
696 (81.3%) exact matches, in which:  
670 unique CDR3  
7 unique J



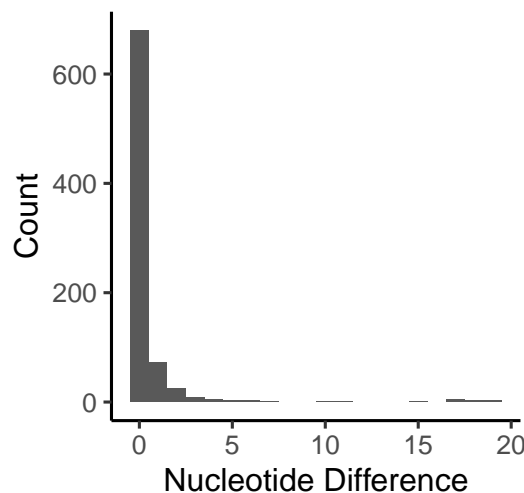
### IGHV2–5\*02

471 sequences assigned  
408 (86.6%) exact matches, in which:  
400 unique CDR3  
6 unique J



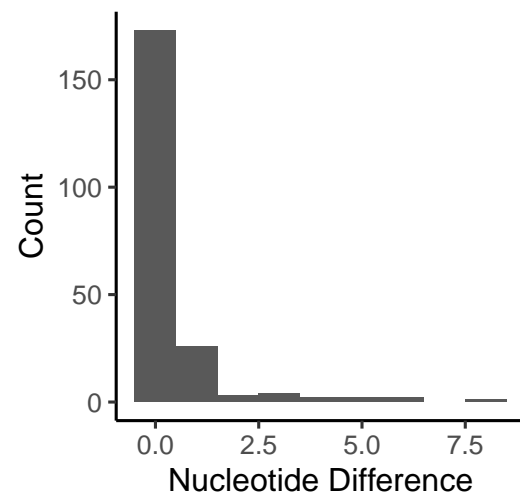
### IGHV3–7\*01

813 sequences assigned  
680 (83.6%) exact matches, in which:  
654 unique CDR3  
7 unique J



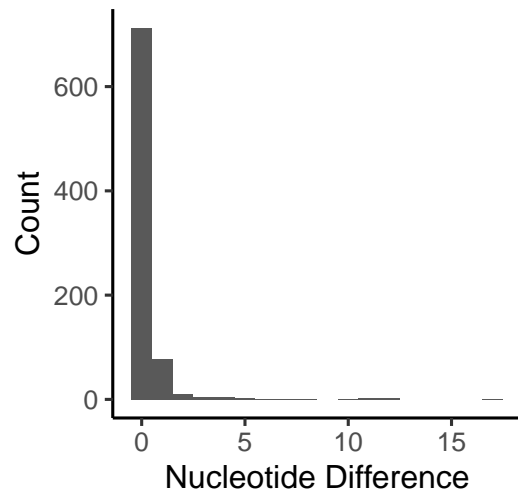
### IGHV3–13\*01

213 sequences assigned  
173 (81.2%) exact matches, in which:  
165 unique CDR3  
6 unique J



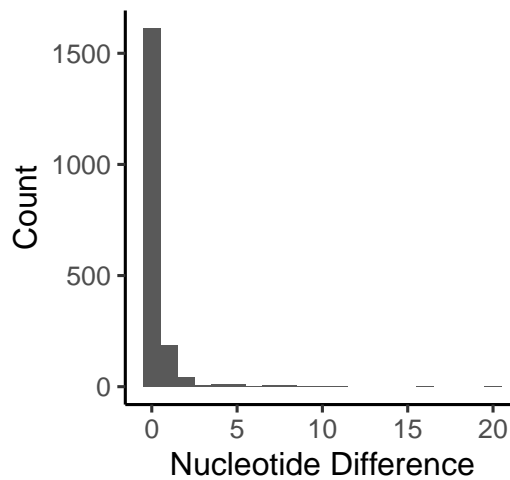
### IGHV3–15\*01

822 sequences assigned  
713 (86.7%) exact matches, in which:  
682 unique CDR3  
7 unique J



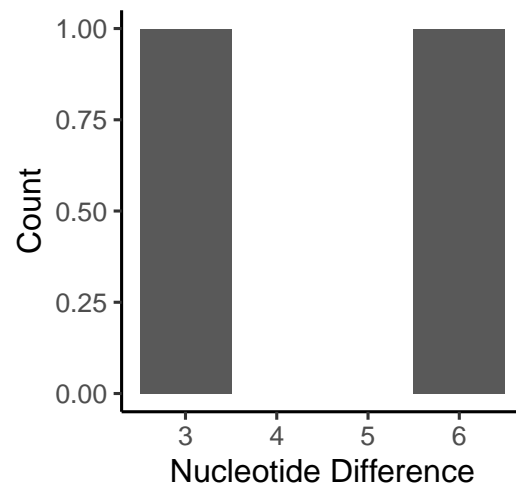
### IGHV3–21\*01

1899 sequences assigned  
1612 (84.9%) exact matches, in which:  
1532 unique CDR3  
7 unique J



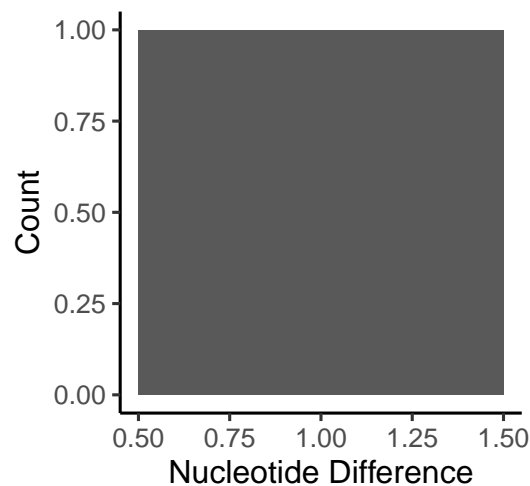
### IGHV3–41\*02

2 sequences assigned  
No exact matches.



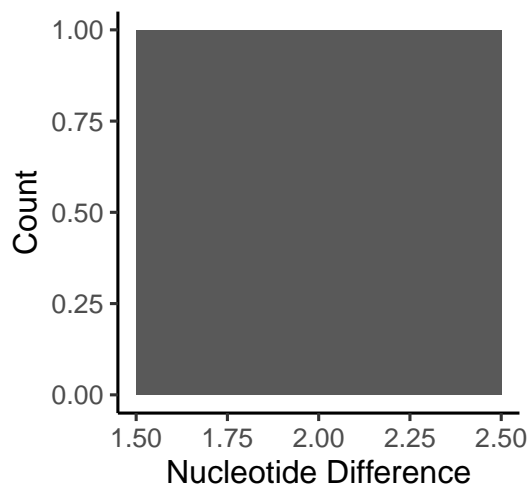
### IGHV3–19\*01

1 sequences assigned  
No exact matches.



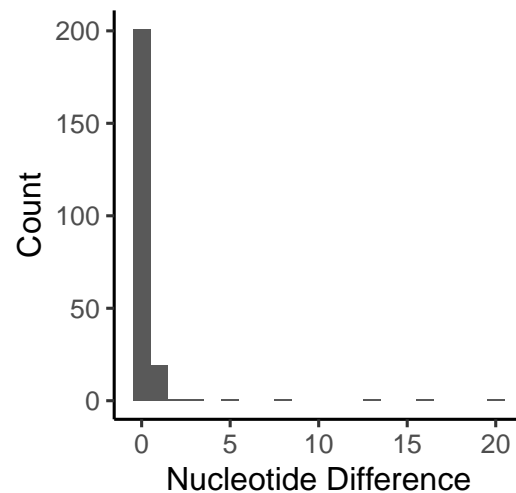
### IGHV3–30–3\*02

1 sequences assigned  
No exact matches.



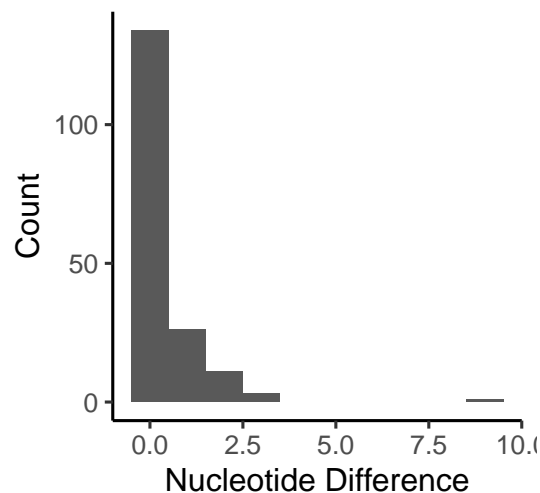
### IGHV3–43\*01

229 sequences assigned  
201 (87.8%) exact matches, in which:  
190 unique CDR3  
7 unique J



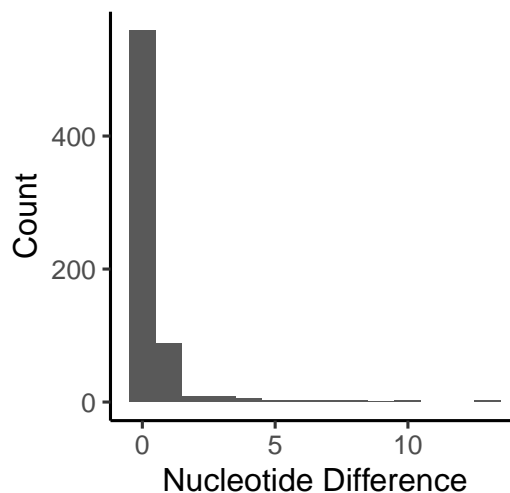
### IGHV3–20\*01

175 sequences assigned  
134 (76.6%) exact matches, in which:  
128 unique CDR3  
6 unique J



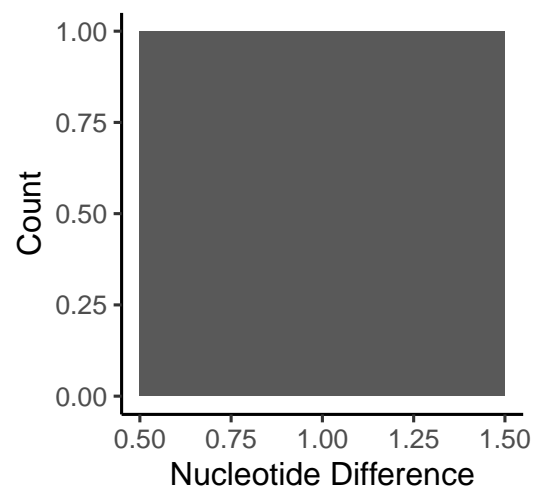
### IGHV3–33\*01

690 sequences assigned  
559 (81%) exact matches, in which:  
542 unique CDR3  
6 unique J



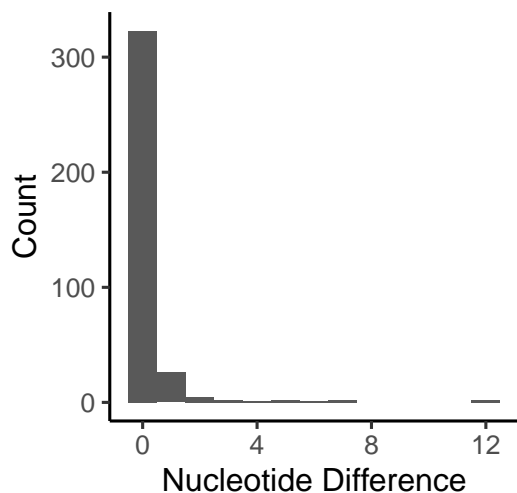
### IGHV3–47\*01

1 sequences assigned  
No exact matches.



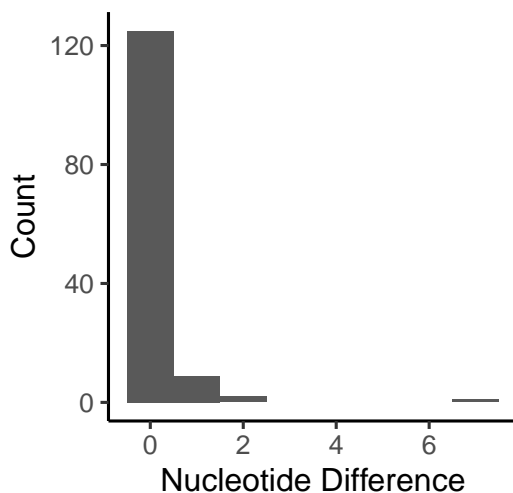
### IGHV3-48\*02

364 sequences assigned  
323 (88.7%) exact matches, in which:  
307 unique CDR3  
6 unique J



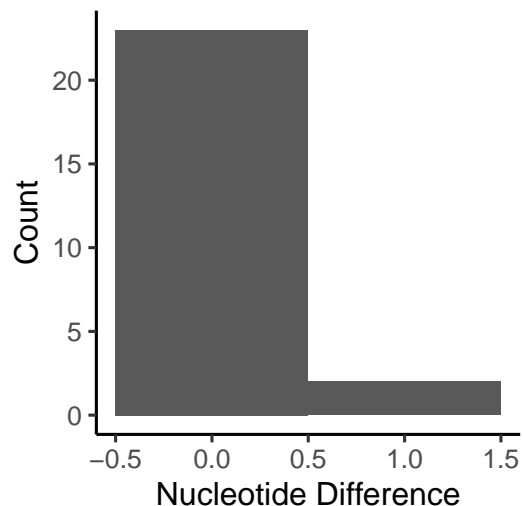
### IGHV3-49\*05

137 sequences assigned  
125 (91.2%) exact matches, in which:  
121 unique CDR3  
6 unique J



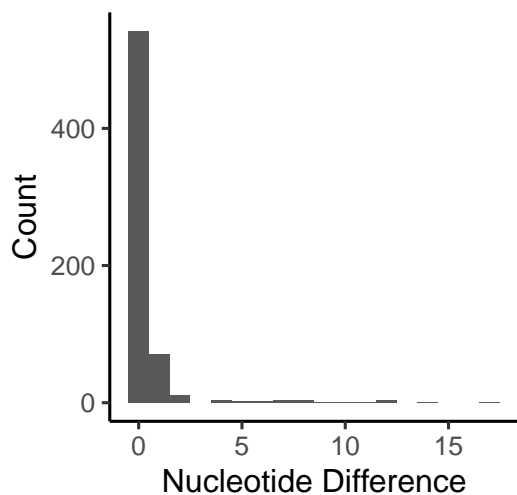
### IGHV3-64\*02

25 sequences assigned  
23 (92%) exact matches, in which:  
22 unique CDR3  
6 unique J



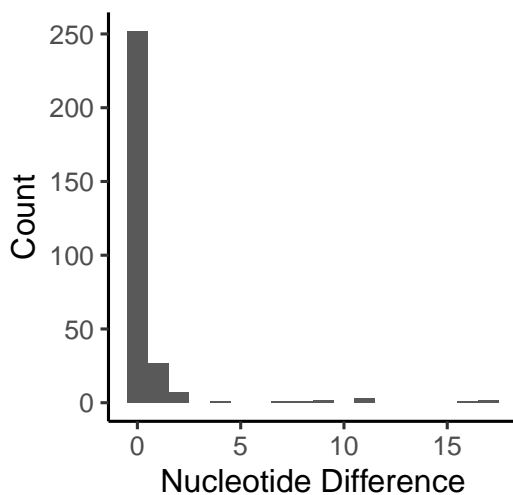
### IGHV3-48\*04

647 sequences assigned  
542 (83.8%) exact matches, in which:  
526 unique CDR3  
7 unique J



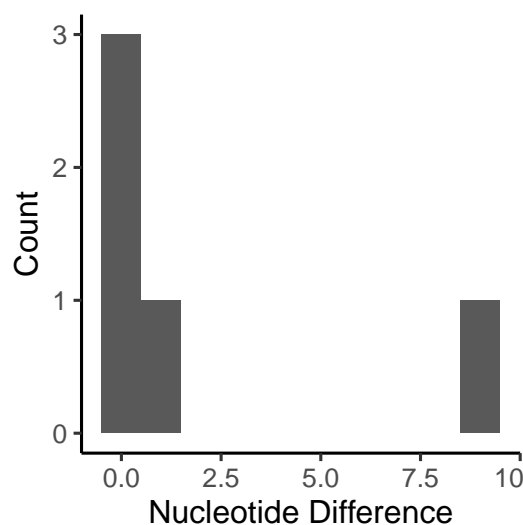
### IGHV3-53\*01

298 sequences assigned  
252 (84.6%) exact matches, in which:  
242 unique CDR3  
7 unique J



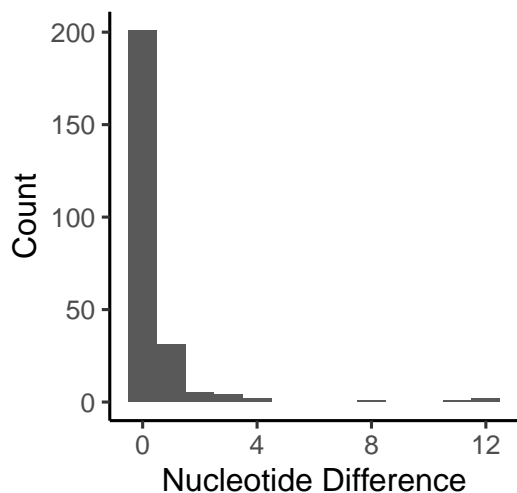
### IGHV3-66\*03

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



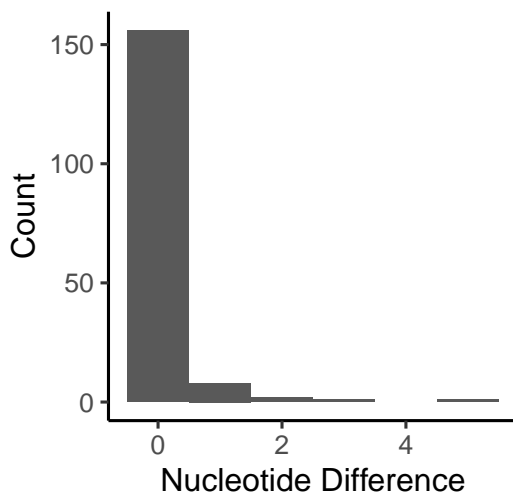
### IGHV3-49\*03

247 sequences assigned  
201 (81.4%) exact matches, in which:  
191 unique CDR3  
6 unique J



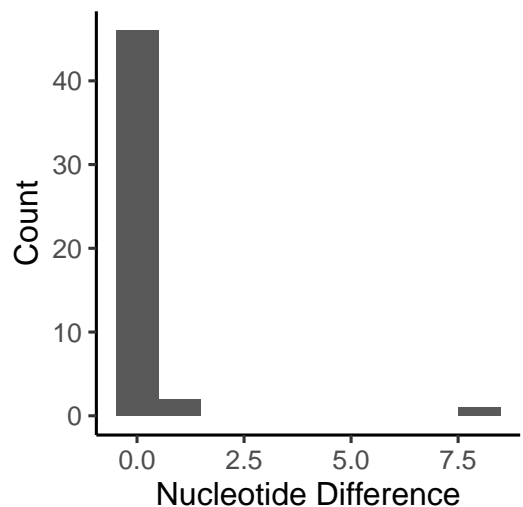
### IGHV3-53\*04

168 sequences assigned  
156 (92.9%) exact matches, in which:  
145 unique CDR3  
5 unique J



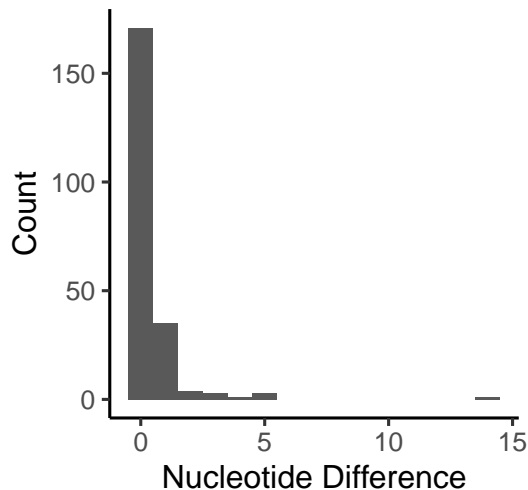
### IGHV3-72\*01

49 sequences assigned  
46 (93.9%) exact matches, in which:  
44 unique CDR3  
6 unique J



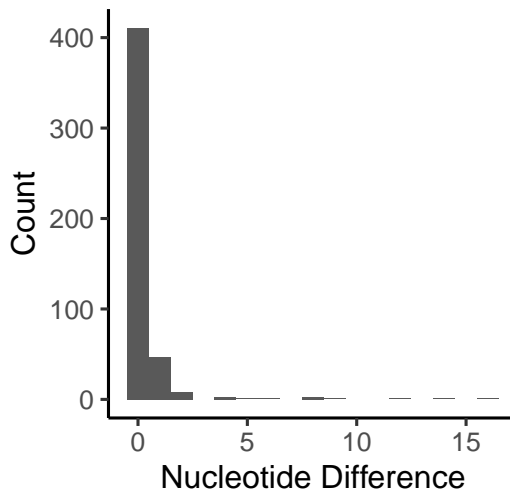
### IGHV3–73\*02

218 sequences assigned  
171 (78.4%) exact matches, in which:  
158 unique CDR3  
6 unique J



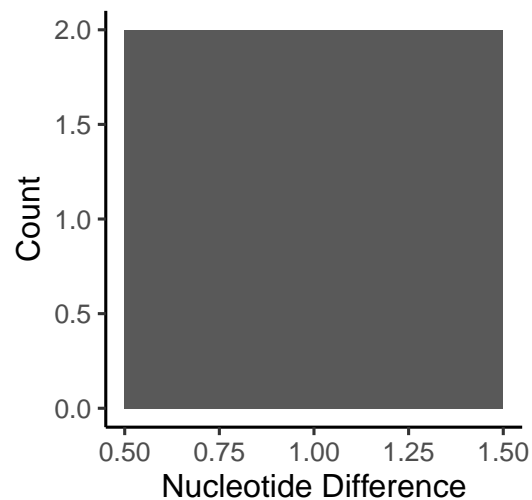
### IGHV4–4\*02

479 sequences assigned  
411 (85.8%) exact matches, in which:  
401 unique CDR3  
7 unique J



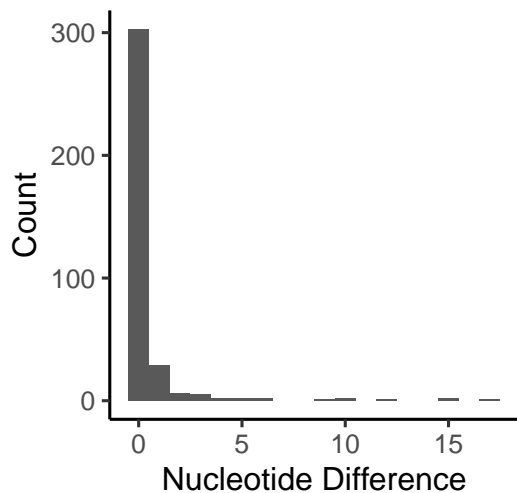
### IGHV4–28\*04

2 sequences assigned  
No exact matches.



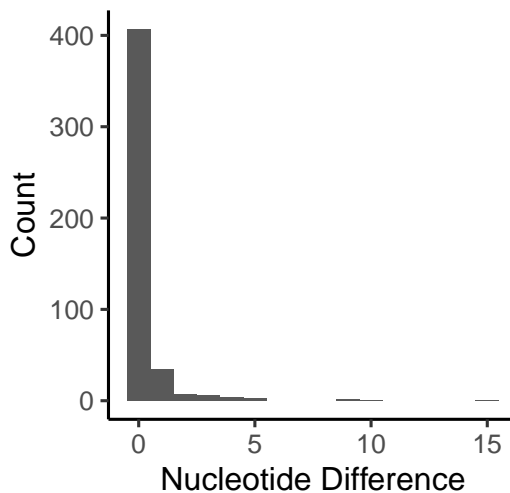
### IGHV3–74\*01

358 sequences assigned  
303 (84.6%) exact matches, in which:  
288 unique CDR3  
7 unique J



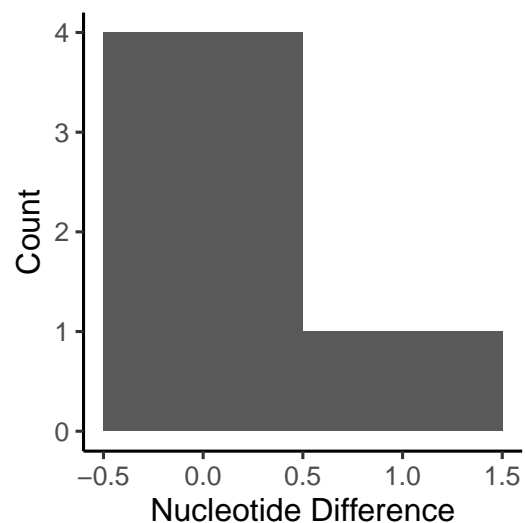
### IGHV4–4\*07

466 sequences assigned  
407 (87.3%) exact matches, in which:  
395 unique CDR3  
7 unique J



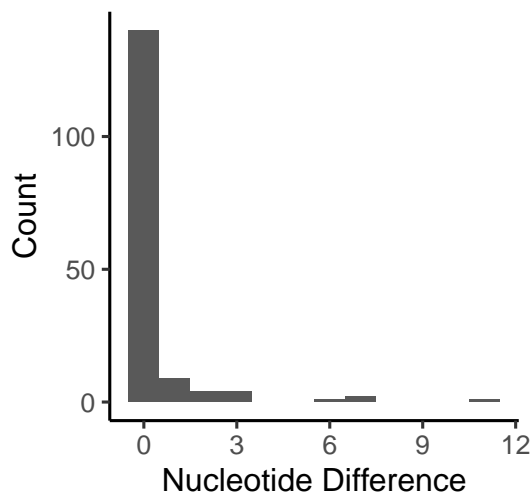
### IGHV4–28\*07

5 sequences assigned  
4 (80%) exact matches, in which:  
4 unique CDR3  
4 unique J



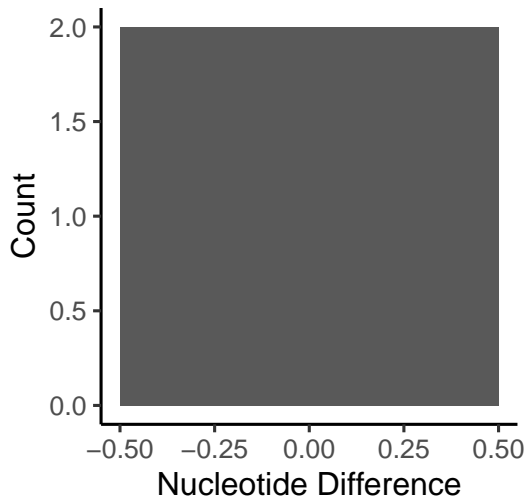
### IGHV3–43D\*03

161 sequences assigned  
140 (87%) exact matches, in which:  
134 unique CDR3  
6 unique J



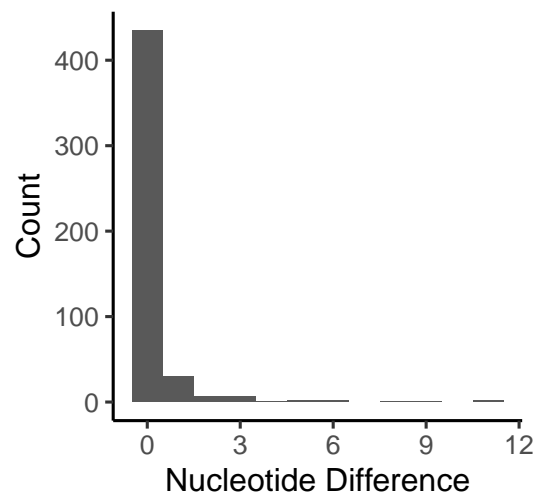
### IGHV4–28\*01

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



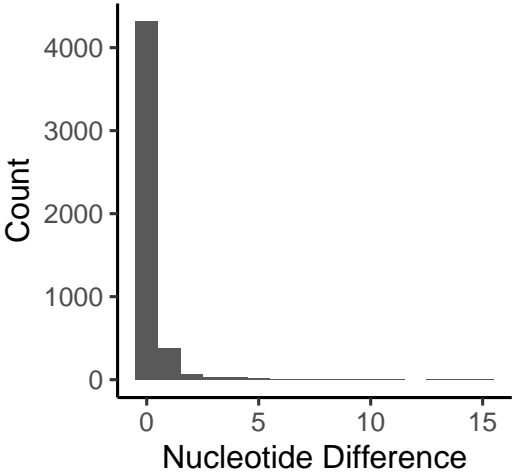
### IGHV4–31\*03

490 sequences assigned  
435 (88.8%) exact matches, in which:  
418 unique CDR3  
6 unique J



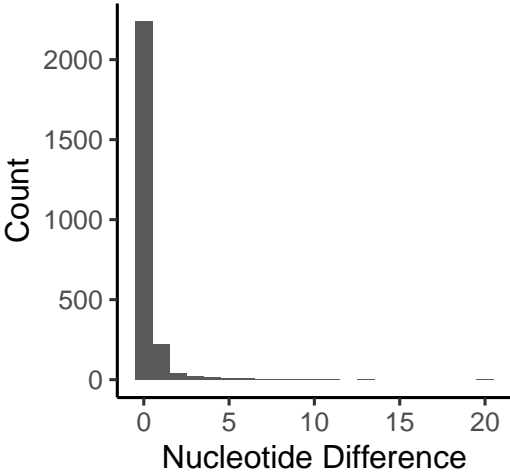
IGHV4-34\*01

4864 sequences assigned  
4316 (88.7%) exact matches, in which:  
4095 unique CDR3  
7 unique J



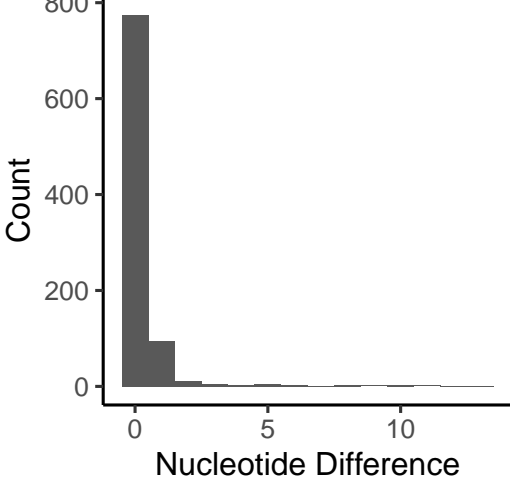
IGHV4-39\*07

2588 sequences assigned  
2239 (86.5%) exact matches, in which:  
2111 unique CDR3  
7 unique J



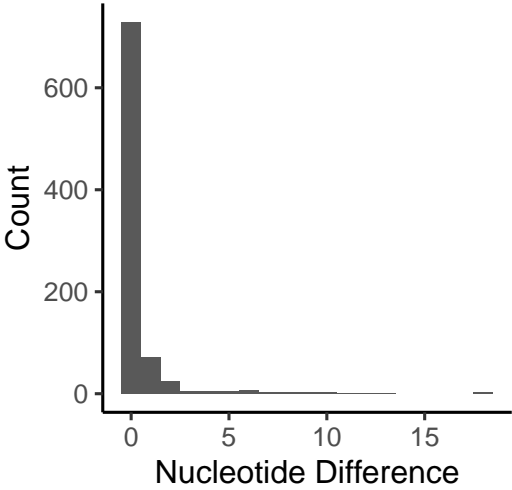
IGHV4-59\*01

911 sequences assigned  
775 (85.1%) exact matches, in which:  
756 unique CDR3  
7 unique J



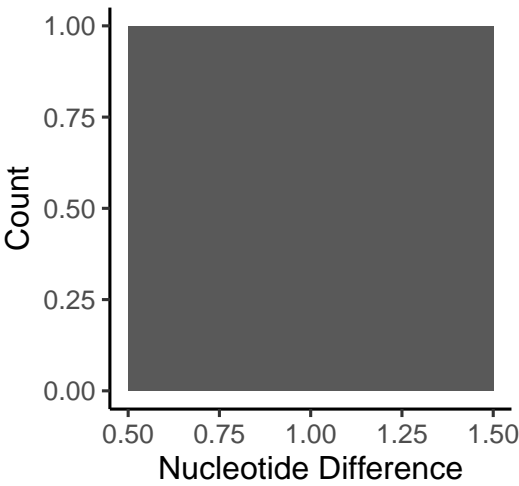
IGHV4-38-2\*02

860 sequences assigned  
729 (84.8%) exact matches, in which:  
691 unique CDR3  
6 unique J



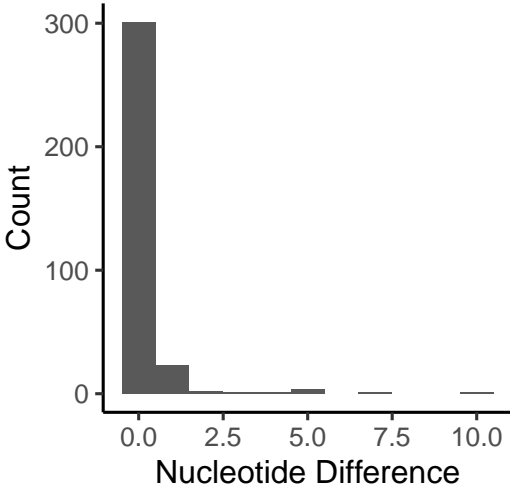
IGHV4-55\*08

1 sequences assigned  
No exact matches.



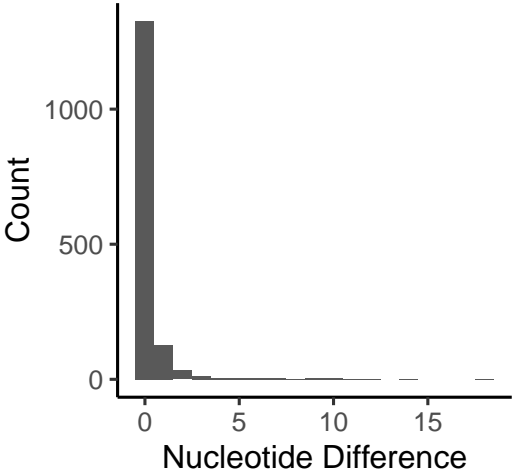
IGHV4-61\*01

334 sequences assigned  
301 (90.1%) exact matches, in which:  
293 unique CDR3  
7 unique J



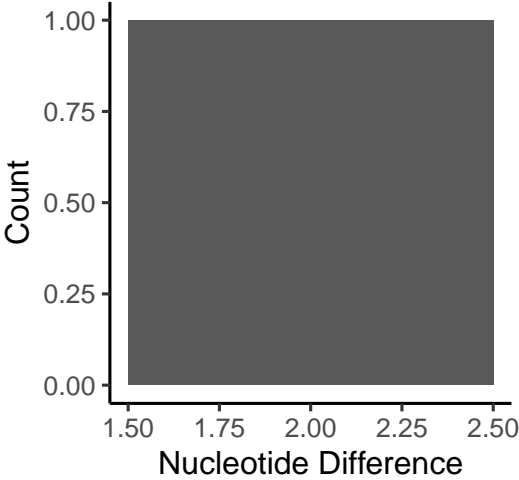
IGHV4-39\*01

1532 sequences assigned  
1326 (86.6%) exact matches, in which:  
1256 unique CDR3  
6 unique J



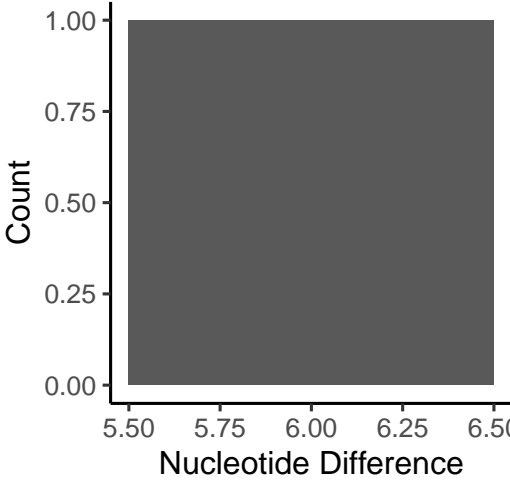
IGHV4-55\*09

1 sequences assigned  
No exact matches.



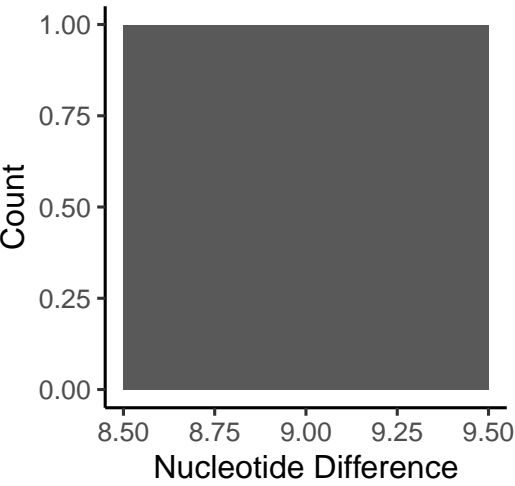
IGHV1/OR15-4\*01

1 sequences assigned  
No exact matches.



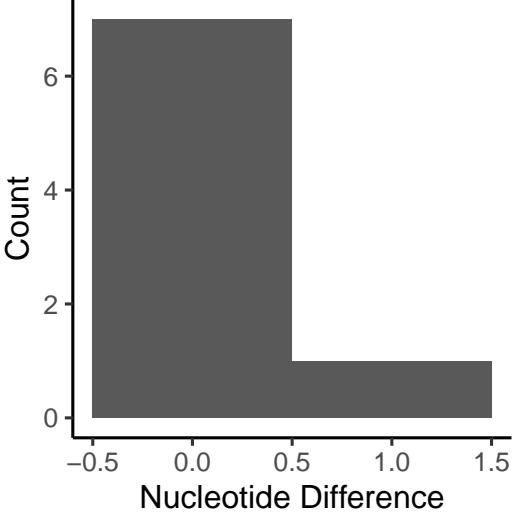
IGHV5-10-1\*02

1 sequences assigned  
No exact matches.



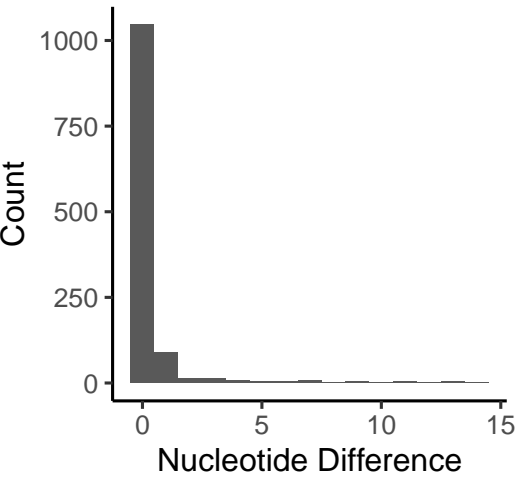
IGHV7-4-1\*01

8 sequences assigned  
7 (87.5%) exact matches, in which:  
7 unique CDR3  
4 unique J



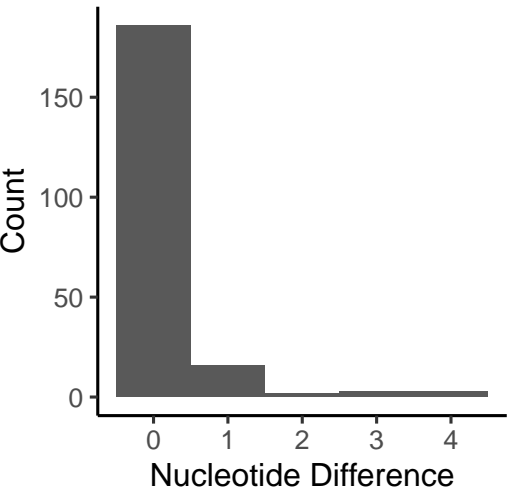
IGHV5-51\*01

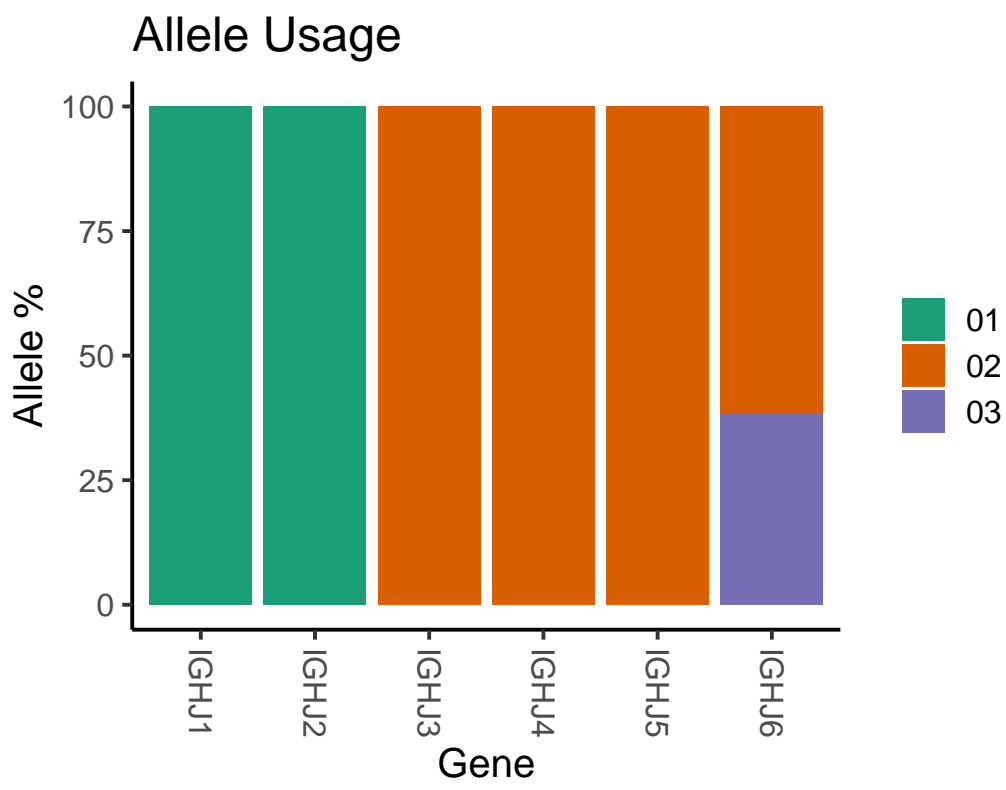
1194 sequences assigned  
1046 (87.6%) exact matches, in which:  
1002 unique CDR3  
7 unique J



IGHV6-1\*01

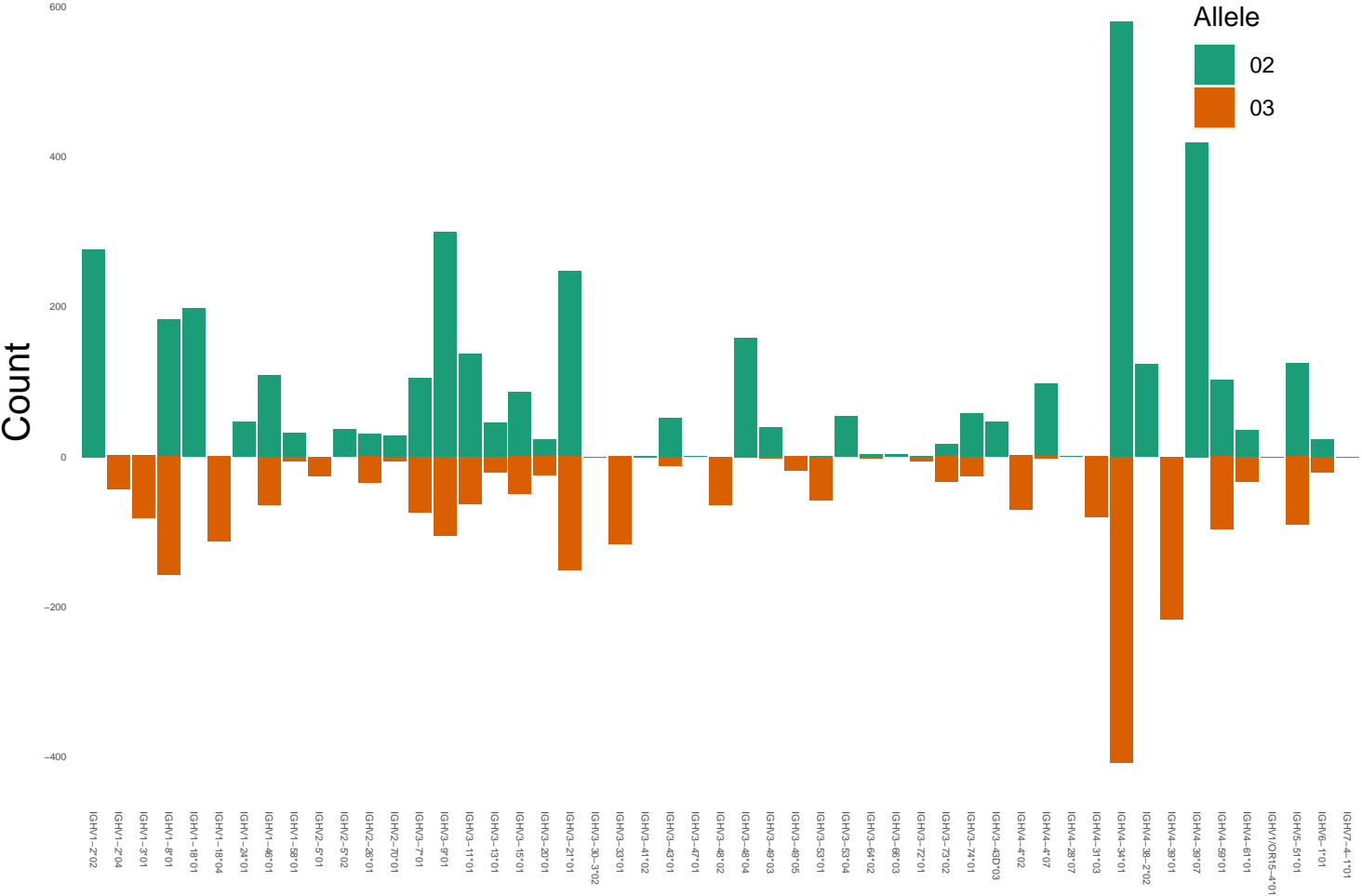
210 sequences assigned  
186 (88.6%) exact matches, in which:  
176 unique CDR3  
6 unique J







Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.