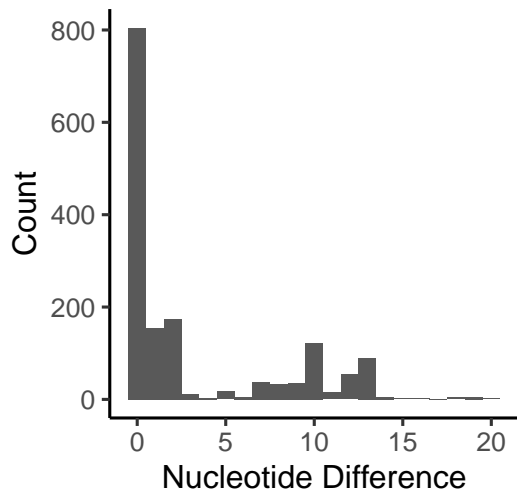


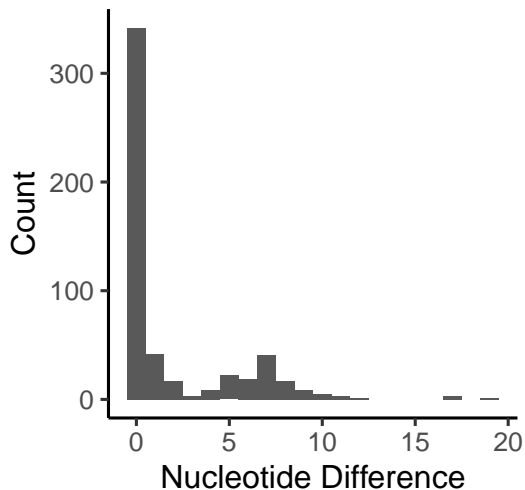
### IGHV1-2\*02

1586 sequences assigned  
805 (50.8%) exact matches, in which:  
778 unique CDR3  
7 unique J



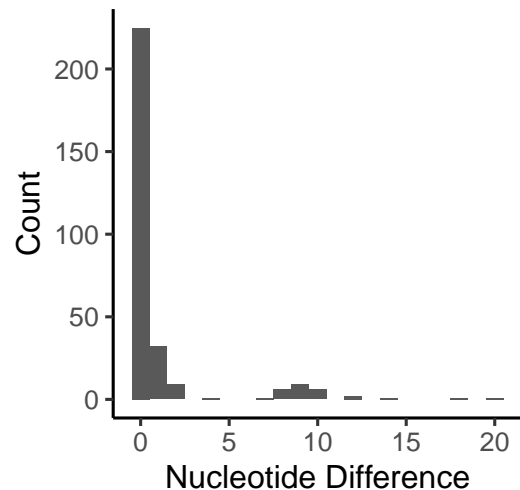
### IGHV1-8\*01

535 sequences assigned  
342 (63.9%) exact matches, in which:  
332 unique CDR3  
7 unique J



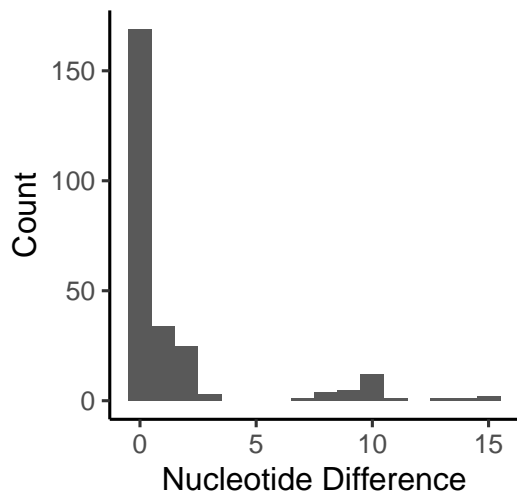
### IGHV1-24\*01

294 sequences assigned  
225 (76.5%) exact matches, in which:  
216 unique CDR3  
7 unique J



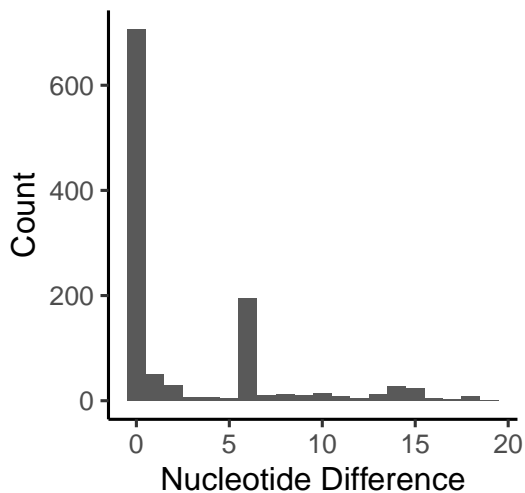
### IGHV1-2\*04

259 sequences assigned  
169 (65.3%) exact matches, in which:  
159 unique CDR3  
7 unique J



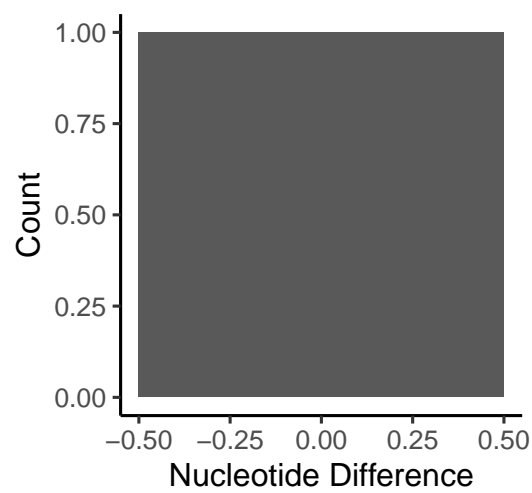
### IGHV1-18\*01

1333 sequences assigned  
707 (53%) exact matches, in which:  
690 unique CDR3  
7 unique J



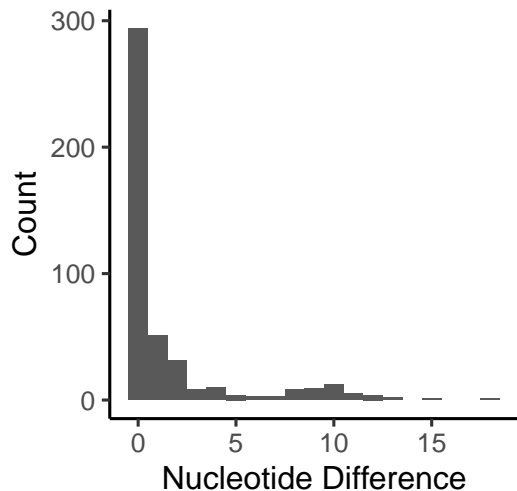
### IGHV1-38-4\*01

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



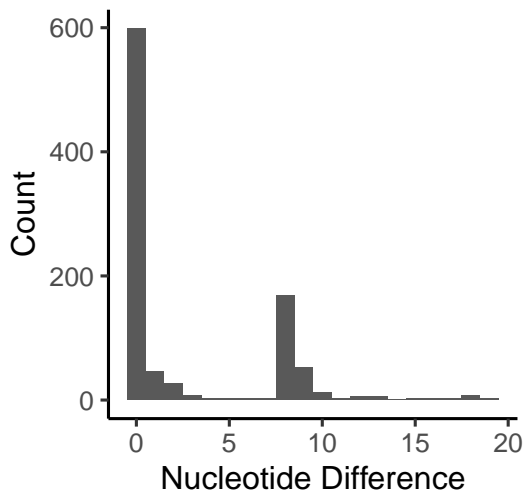
### IGHV1-3\*01\_05

688 sequences assigned  
294 (42.7%) exact matches, in which:  
278 unique CDR3  
7 unique J



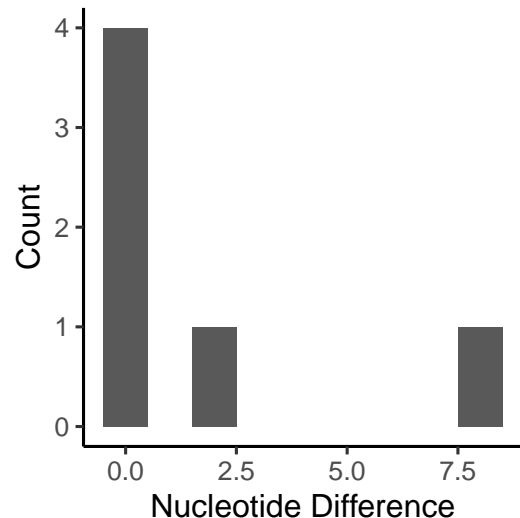
### IGHV1-18\*04

1008 sequences assigned  
599 (59.4%) exact matches, in which:  
590 unique CDR3  
7 unique J



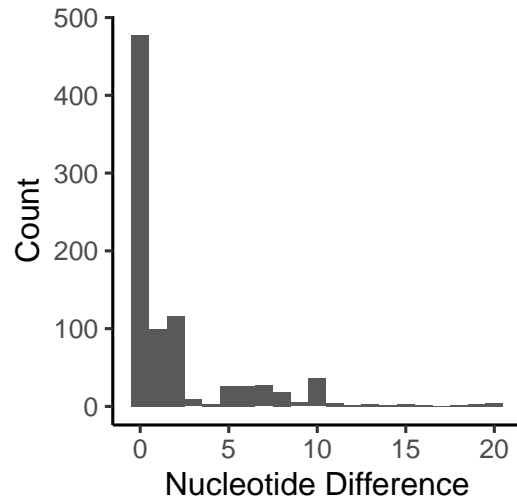
### IGHV1-45\*02

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



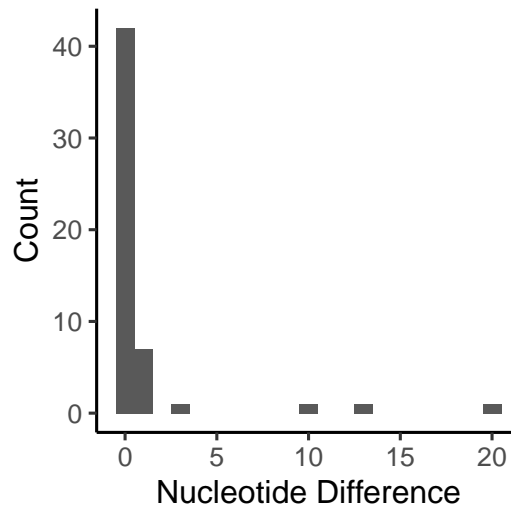
### IGHV1-46\*01

968 sequences assigned  
478 (49.4%) exact matches, in which:  
472 unique CDR3  
7 unique J



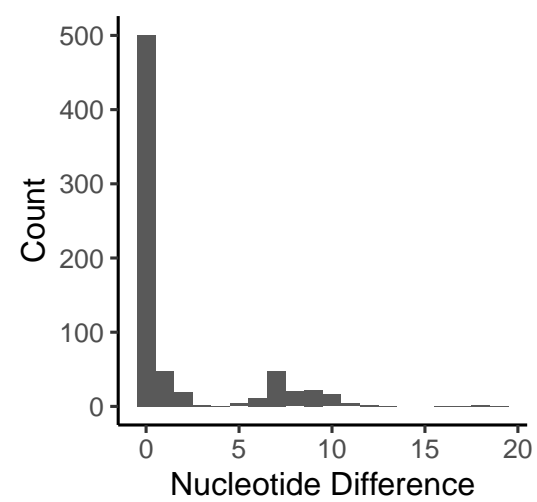
### IGHV1-58\*01\_03

53 sequences assigned  
42 (79.2%) exact matches, in which:  
42 unique CDR3  
5 unique J



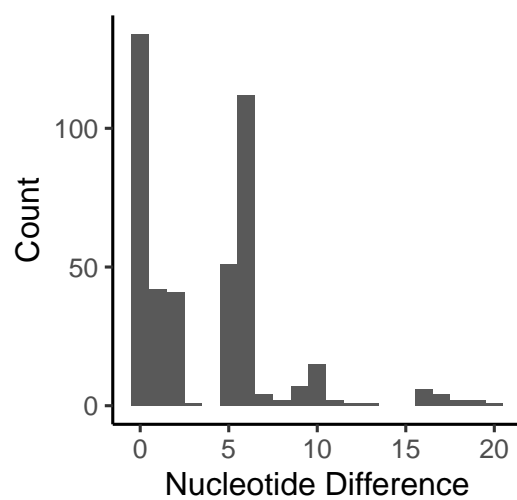
### IGHV1-69\*06\_14

708 sequences assigned  
501 (70.8%) exact matches, in which:  
493 unique CDR3  
7 unique J



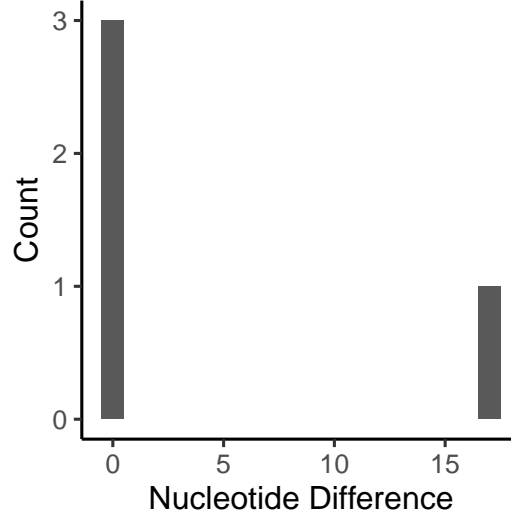
### IGHV1-46\*03

429 sequences assigned  
134 (31.2%) exact matches, in which:  
127 unique CDR3  
6 unique J



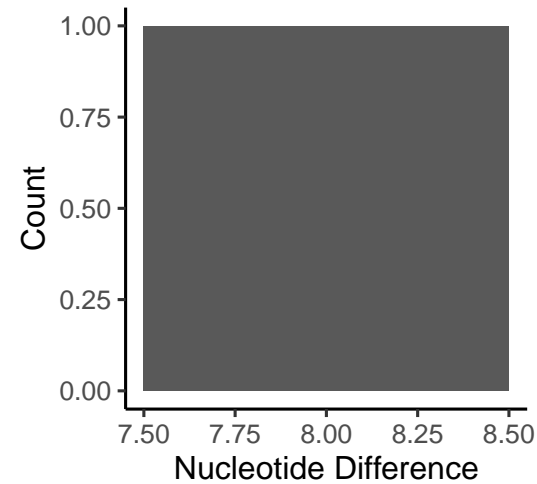
### IGHV1-69-2\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
2 unique J



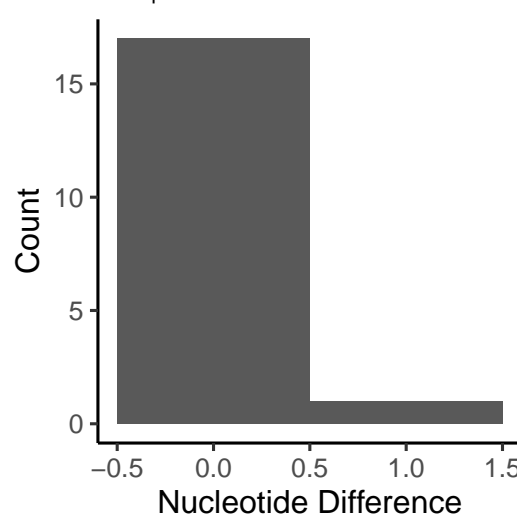
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



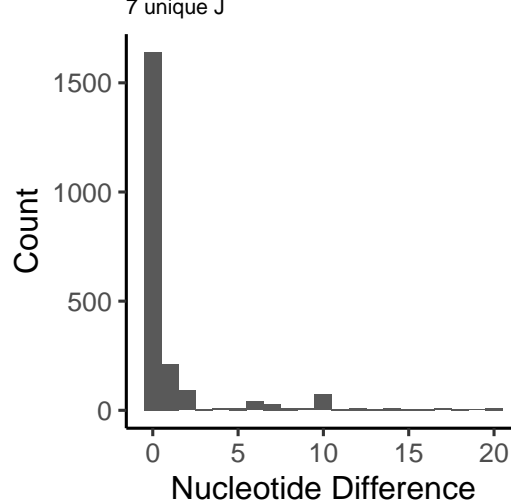
### IGHV1-58\*02

18 sequences assigned  
17 (94.4%) exact matches, in which:  
17 unique CDR3  
4 unique J



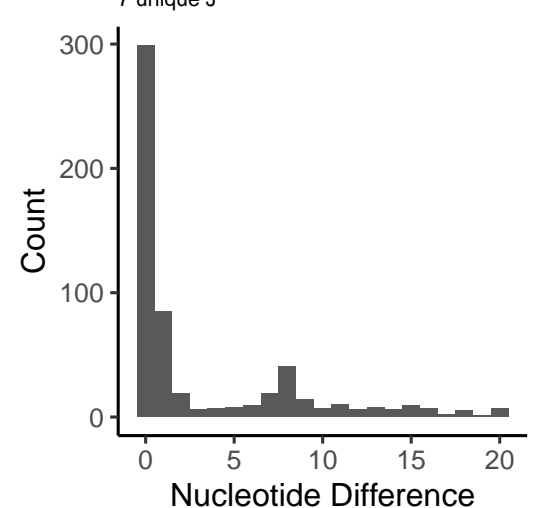
### IGHV1-69\*01\_12\_13

2264 sequences assigned  
1641 (72.5%) exact matches, in which:  
1601 unique CDR3  
7 unique J



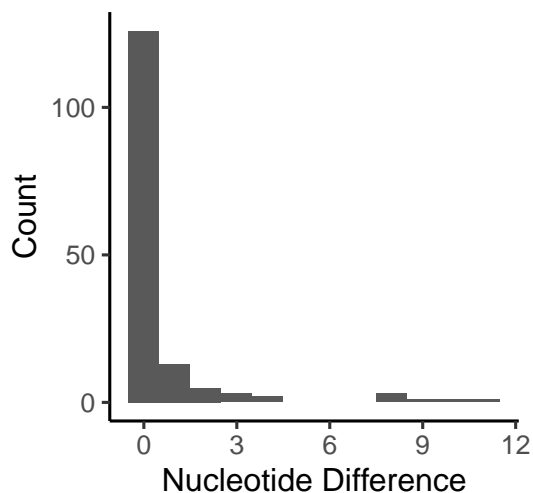
### IGHV2-5\*02

621 sequences assigned  
299 (48.1%) exact matches, in which:  
284 unique CDR3  
7 unique J



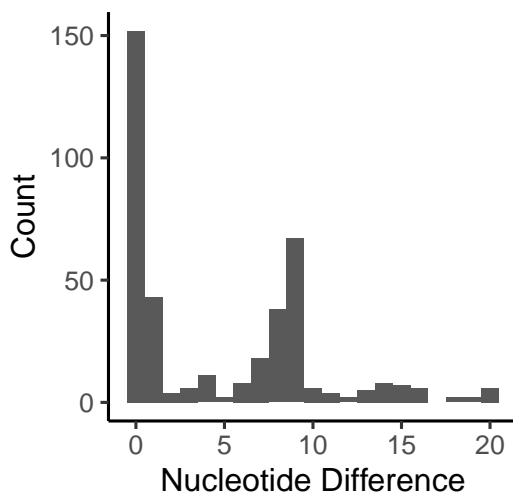
### IGHV2-26\*01

155 sequences assigned  
126 (81.3%) exact matches, in which:  
126 unique CDR3  
7 unique J



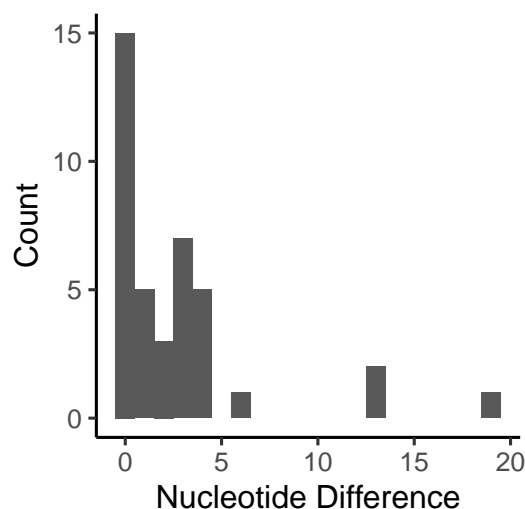
### IGHV3-7\*04

424 sequences assigned  
152 (35.8%) exact matches, in which:  
94 unique CDR3  
6 unique J



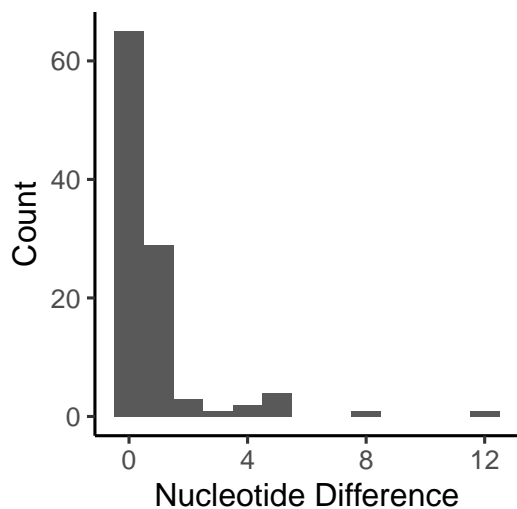
### IGHV3-11\*04

41 sequences assigned  
15 (36.6%) exact matches, in which:  
14 unique CDR3  
4 unique J



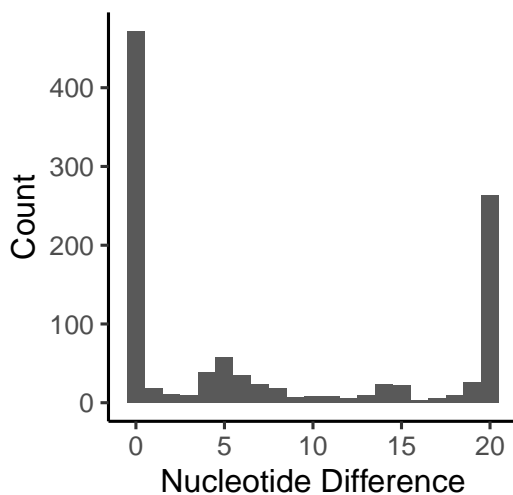
### IGHV2-70\*01

108 sequences assigned  
65 (60.2%) exact matches, in which:  
62 unique CDR3  
6 unique J



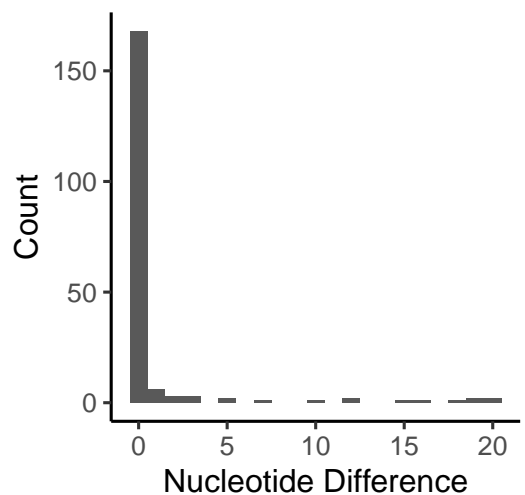
### IGHV3-9\*01

1677 sequences assigned  
472 (28.1%) exact matches, in which:  
277 unique CDR3  
7 unique J



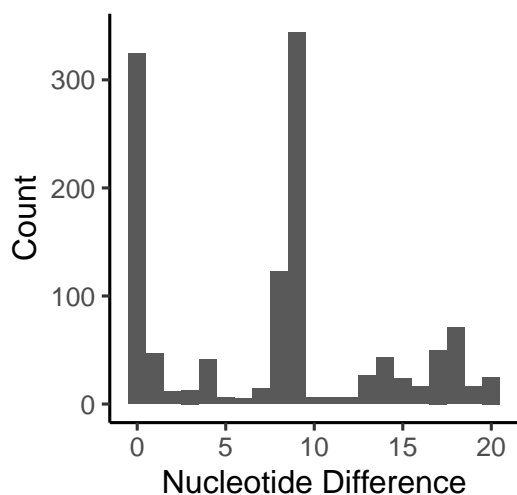
### IGHV3-11\*06

222 sequences assigned  
168 (75.7%) exact matches, in which:  
105 unique CDR3  
7 unique J



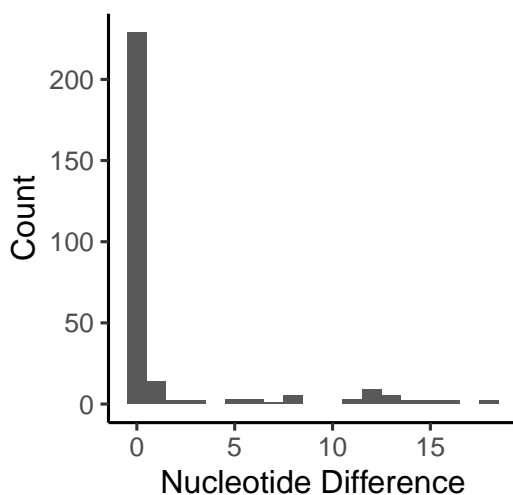
### IGHV3-7\*01

1511 sequences assigned  
324 (21.4%) exact matches, in which:  
201 unique CDR3  
7 unique J



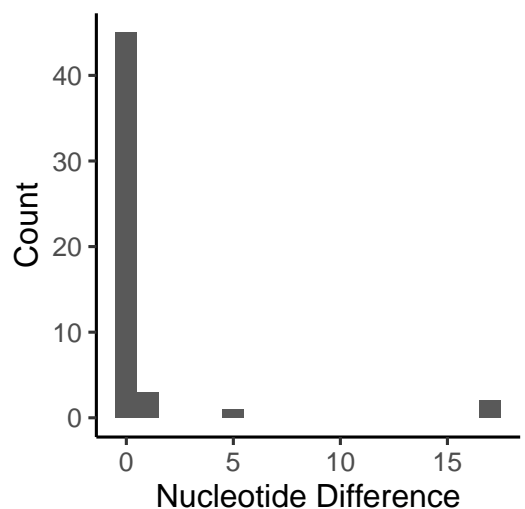
### IGHV3-11\*01

298 sequences assigned  
229 (76.8%) exact matches, in which:  
141 unique CDR3  
7 unique J



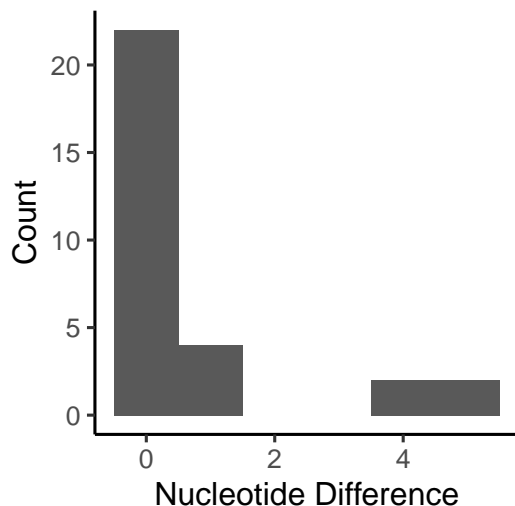
### IGHV3-13\*01

51 sequences assigned  
45 (88.2%) exact matches, in which:  
26 unique CDR3  
4 unique J



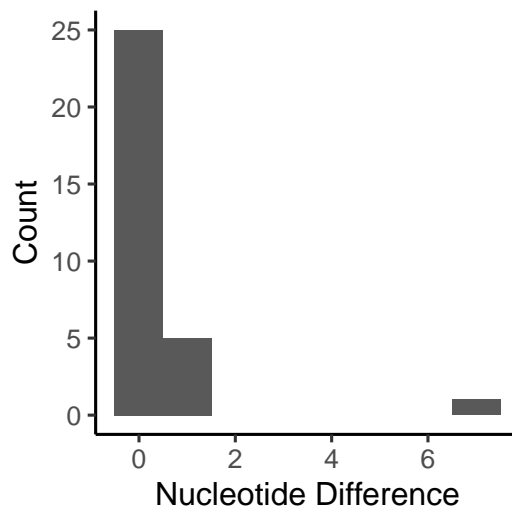
### IGHV3-13\*05

30 sequences assigned  
22 (73.3%) exact matches, in which:  
10 unique CDR3  
3 unique J



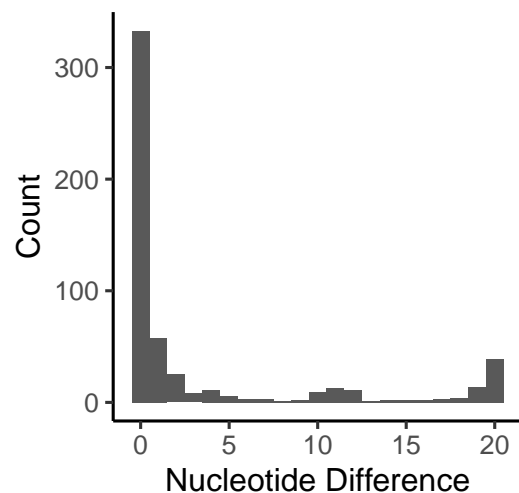
### IGHV3-20\*01\_02

32 sequences assigned  
25 (78.1%) exact matches, in which:  
13 unique CDR3  
4 unique J



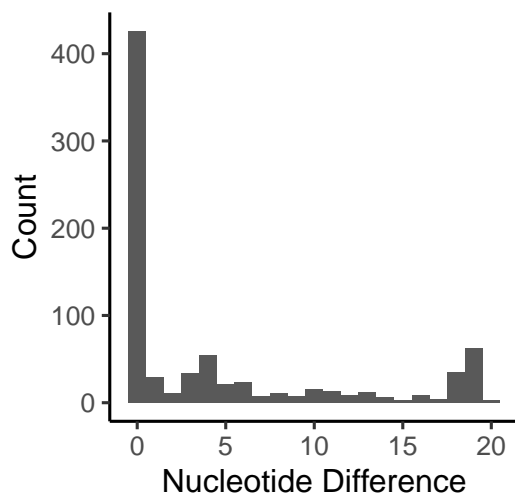
### IGHV3-33\*01

623 sequences assigned  
333 (53.5%) exact matches, in which:  
211 unique CDR3  
7 unique J



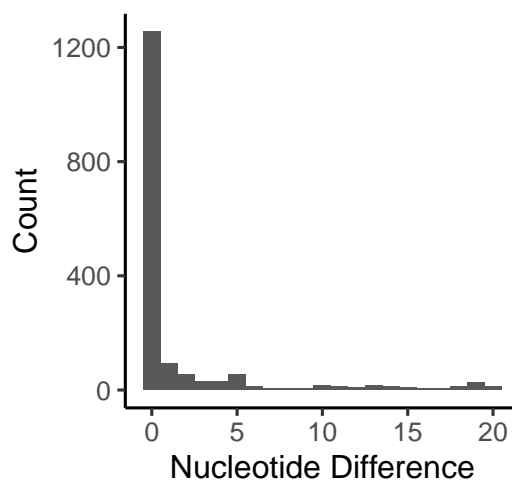
### IGHV3-15\*01\_02

826 sequences assigned  
426 (51.6%) exact matches, in which:  
272 unique CDR3  
7 unique J



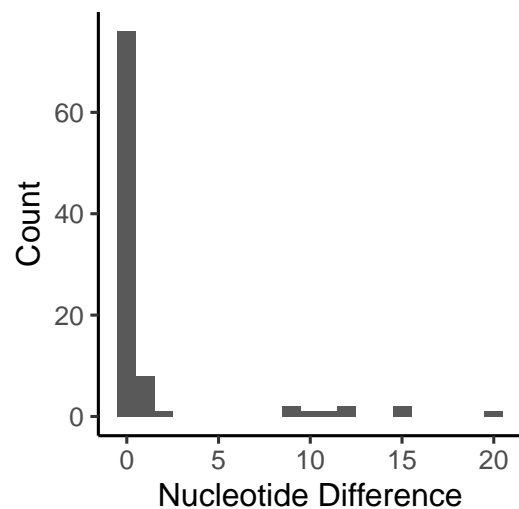
### IGHV3-21\*01\_02

1733 sequences assigned  
1255 (72.4%) exact matches, in which:  
766 unique CDR3  
7 unique J



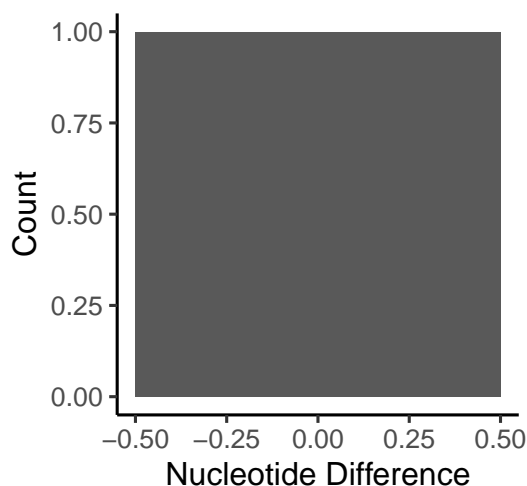
### IGHV3-43\*01

97 sequences assigned  
76 (78.4%) exact matches, in which:  
43 unique CDR3  
7 unique J



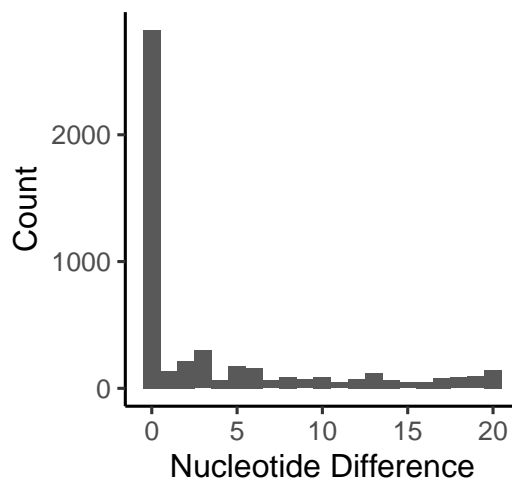
### IGHV3-19\*01

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



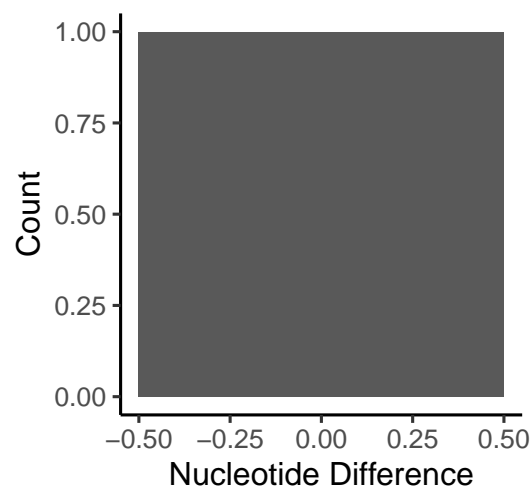
### IGHV3-23\*01\_04

5636 sequences assigned  
2826 (50.1%) exact matches, in which:  
1619 unique CDR3  
7 unique J



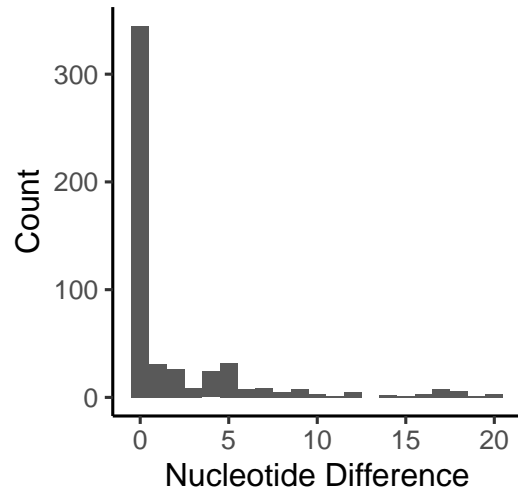
### IGHV3-47\*02

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



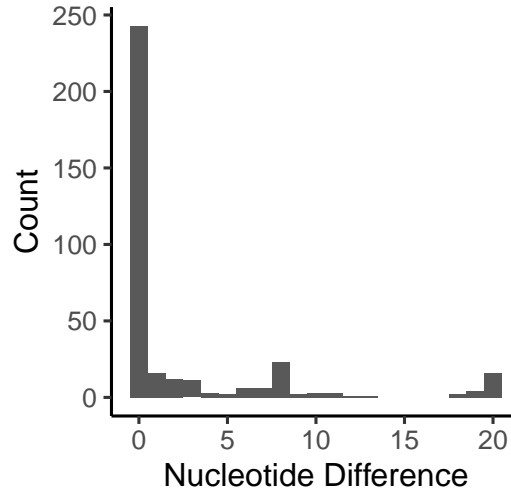
### IGHV3-48\*01

617 sequences assigned  
345 (55.9%) exact matches, in which:  
218 unique CDR3  
7 unique J



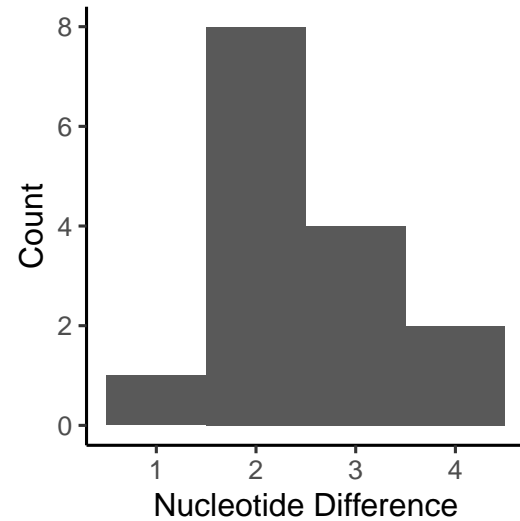
### IGHV3-53\*01\_02

504 sequences assigned  
243 (48.2%) exact matches, in which:  
147 unique CDR3  
7 unique J



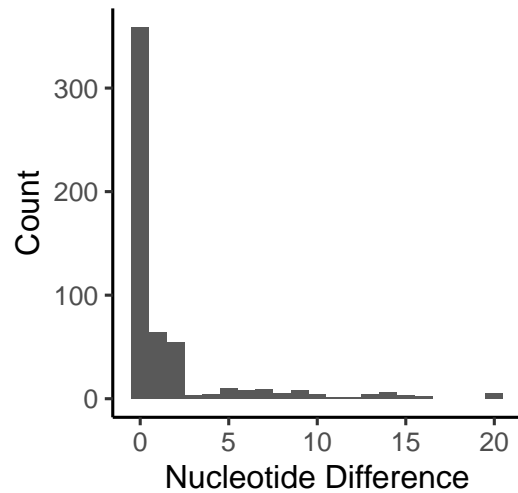
### IGHV3-66\*03

16 sequences assigned  
No exact matches.



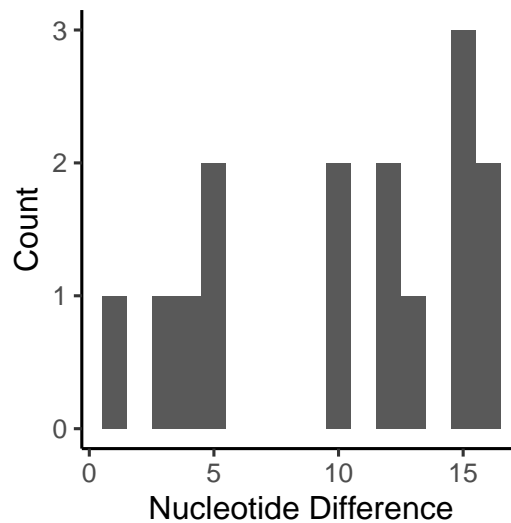
### IGHV3-48\*02

707 sequences assigned  
359 (50.8%) exact matches, in which:  
219 unique CDR3  
6 unique J



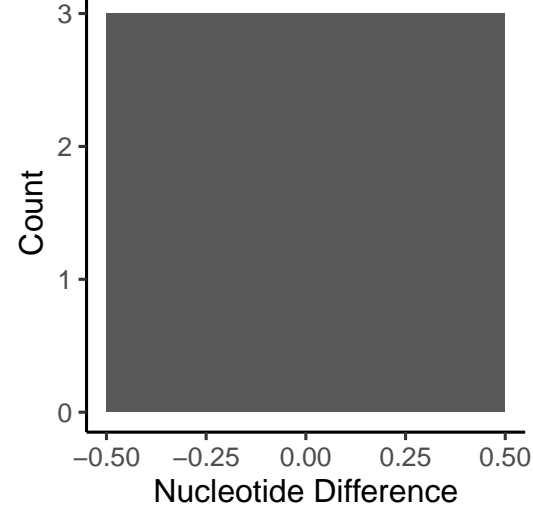
### IGHV3-64\*04

16 sequences assigned  
No exact matches.



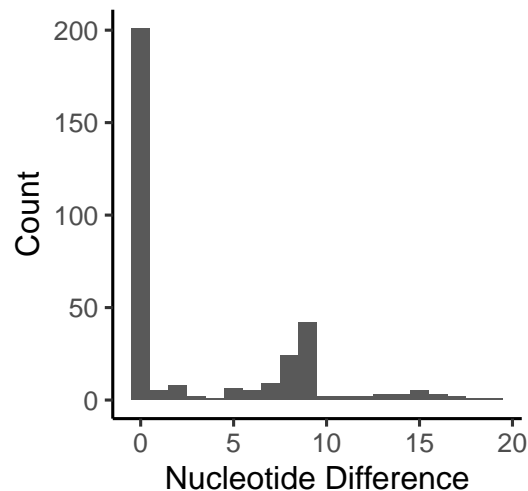
### IGHV3-69-1\*01

8 sequences assigned  
3 (37.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



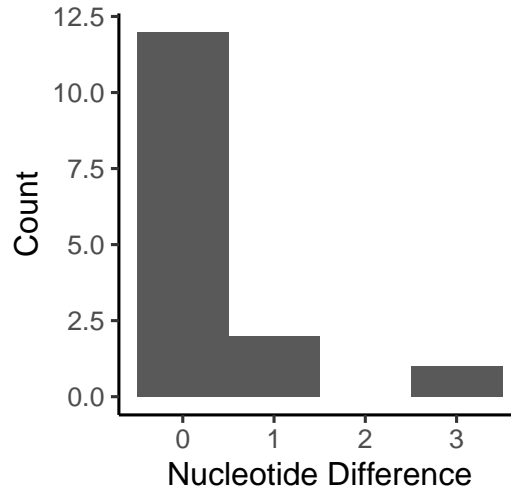
### IGHV3-49\*03\_05

329 sequences assigned  
201 (61.1%) exact matches, in which:  
122 unique CDR3  
6 unique J



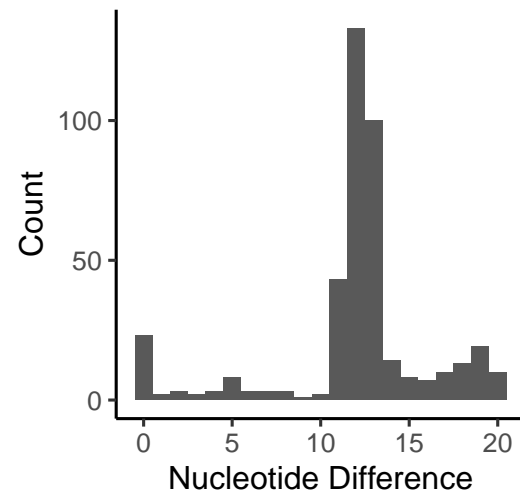
### IGHV3-64\*02\_07

15 sequences assigned  
12 (80%) exact matches, in which:  
5 unique CDR3  
3 unique J



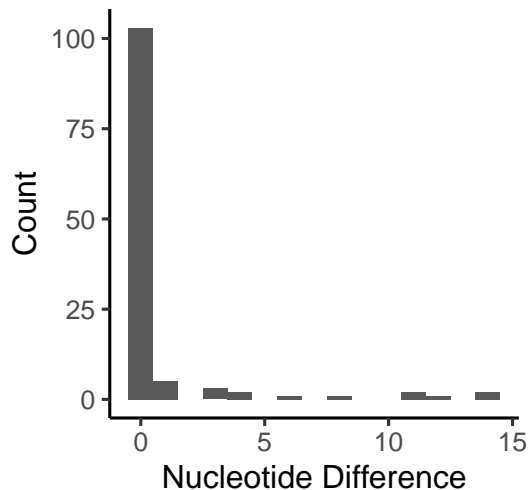
### IGHV3-72\*01

553 sequences assigned  
23 (4.2%) exact matches, in which:  
14 unique CDR3  
5 unique J



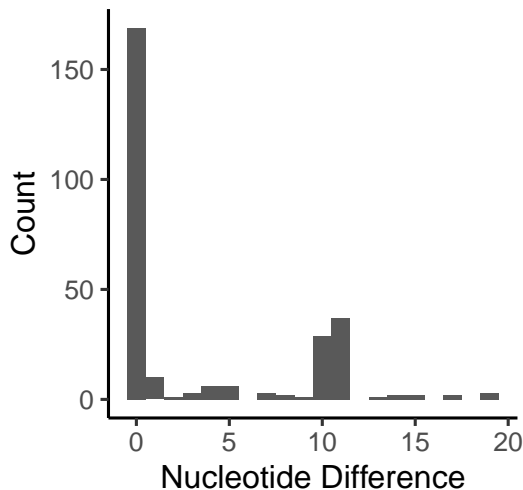
### IGHV3-73\*01\_02

123 sequences assigned  
103 (83.7%) exact matches, in which:  
60 unique CDR3  
6 unique J



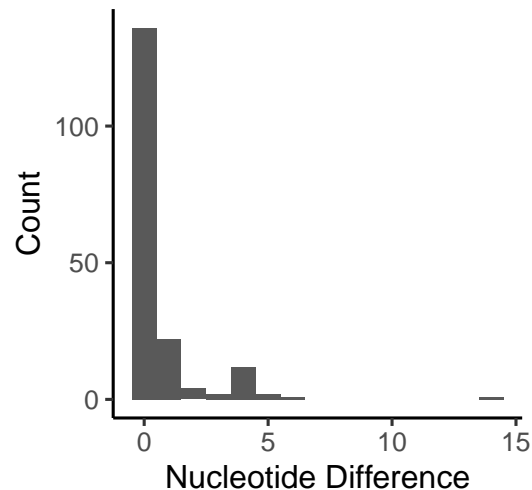
### IGHV3-64D\*06

319 sequences assigned  
169 (53%) exact matches, in which:  
85 unique CDR3  
5 unique J



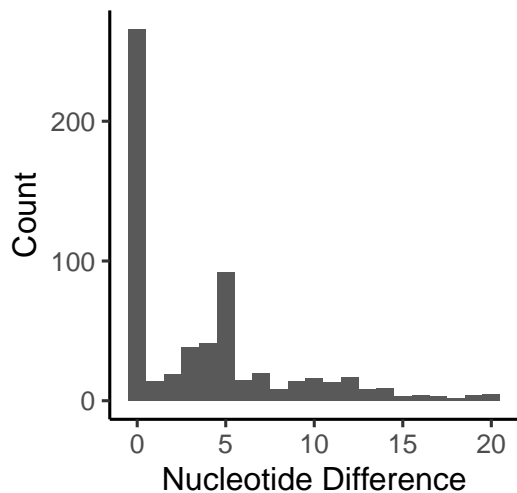
### IGHV4-4\*07\_G291A

560 sequences assigned  
136 (24.3%) exact matches, in which:  
136 unique CDR3  
6 unique J



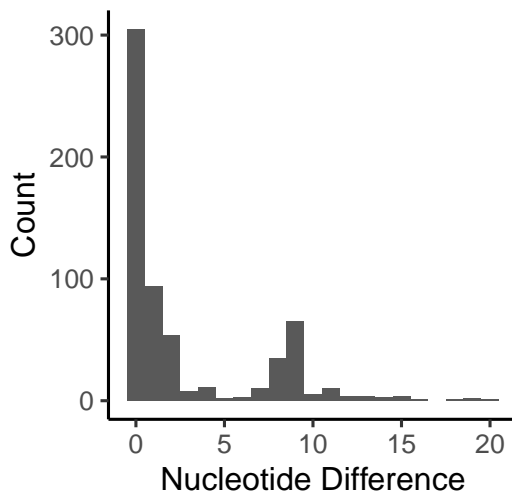
### IGHV3-74\*01\_02

669 sequences assigned  
266 (39.8%) exact matches, in which:  
150 unique CDR3  
7 unique J



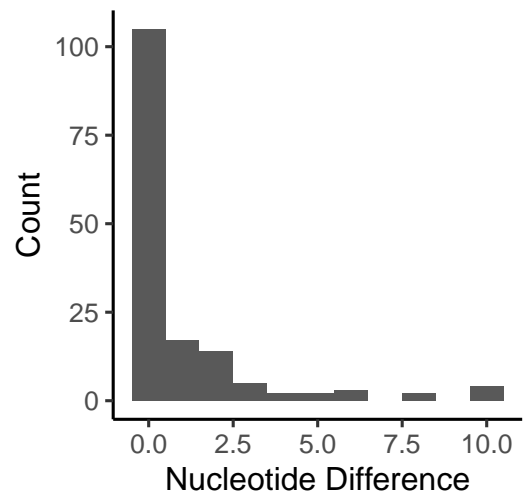
### IGHV4-4\*07

670 sequences assigned  
305 (45.5%) exact matches, in which:  
295 unique CDR3  
7 unique J



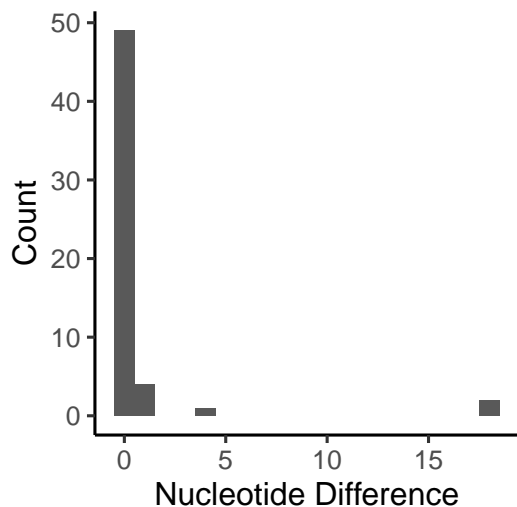
### IGHV4-30-2\*01

154 sequences assigned  
105 (68.2%) exact matches, in which:  
83 unique CDR3  
6 unique J



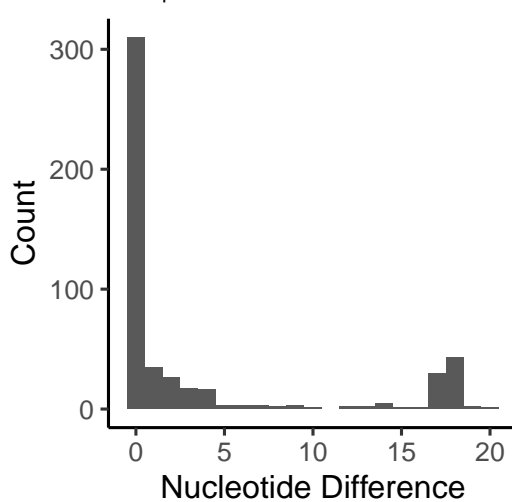
### IGHV3-43D\*03

86 sequences assigned  
49 (57%) exact matches, in which:  
29 unique CDR3  
4 unique J



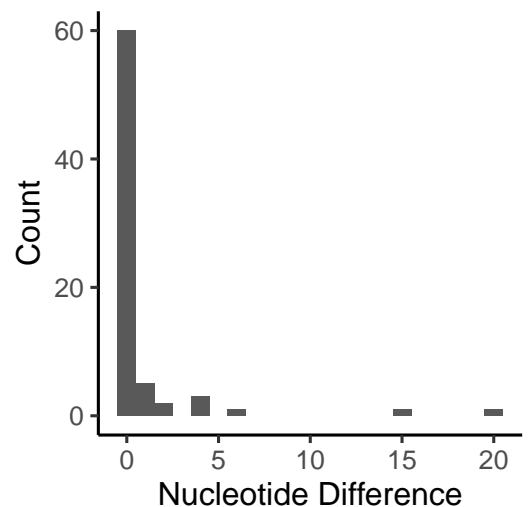
### IGHV4-4\*02\_03

510 sequences assigned  
310 (60.8%) exact matches, in which:  
269 unique CDR3  
7 unique J



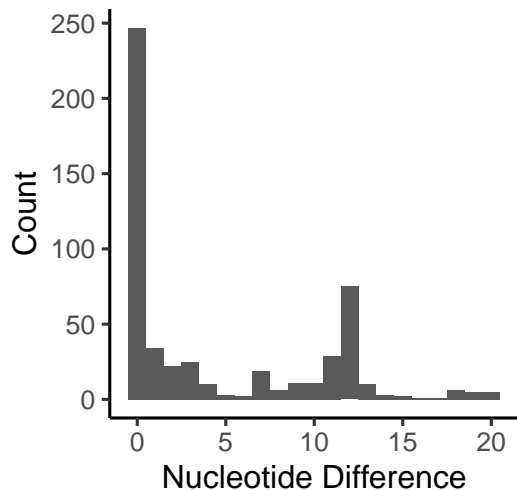
### IGHV4-30-4\*07

77 sequences assigned  
60 (77.9%) exact matches, in which:  
54 unique CDR3  
7 unique J



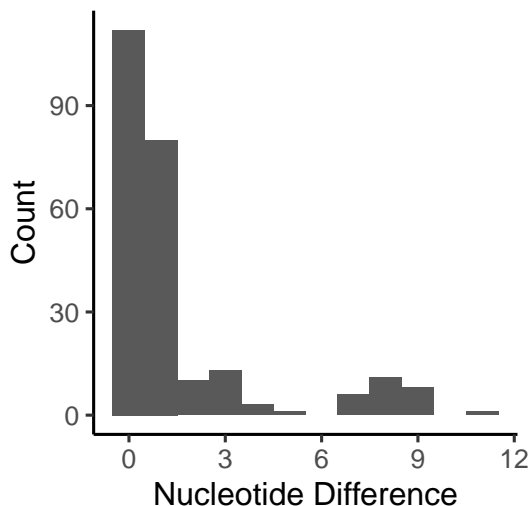
### IGHV4-31\*02

926 sequences assigned  
247 (26.7%) exact matches, in which:  
241 unique CDR3  
7 unique J



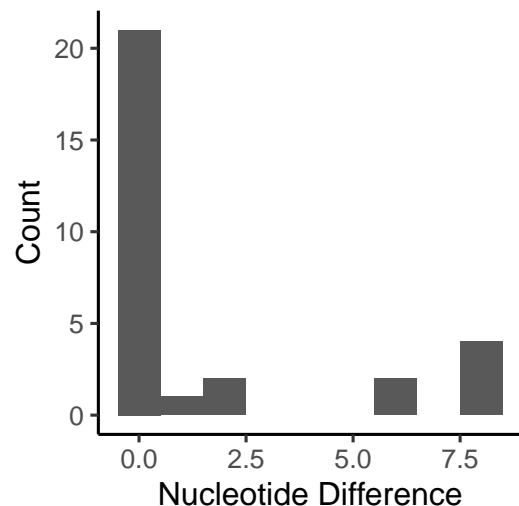
### IGHV4-34\*01\_02\_T300C

245 sequences assigned  
112 (45.7%) exact matches, in which:  
112 unique CDR3  
7 unique J



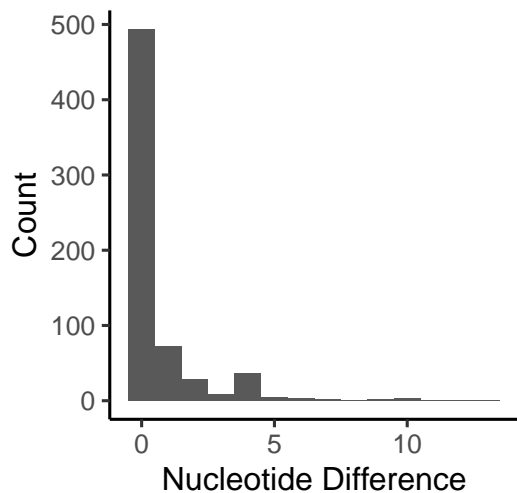
### IGHV4-38-2\*02\_A291G\_0

30 sequences assigned  
21 (70%) exact matches, in which:  
21 unique CDR3  
5 unique J



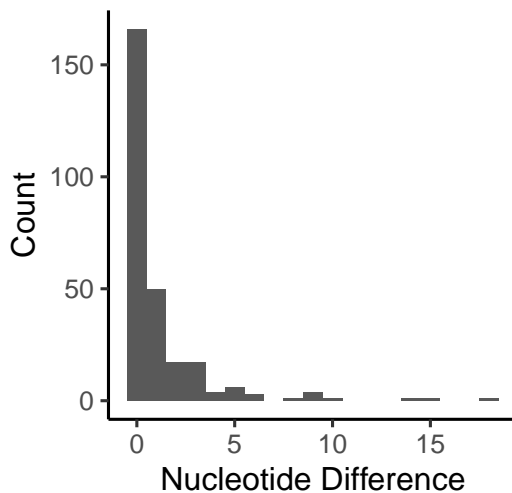
### IGHV4-34\*01\_02

660 sequences assigned  
494 (74.8%) exact matches, in which:  
422 unique CDR3  
7 unique J



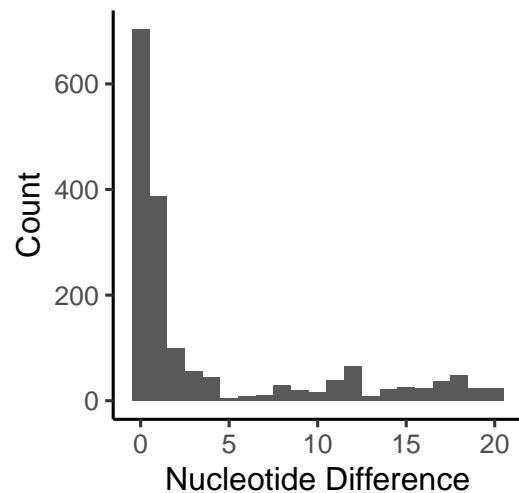
### IGHV4-38-2\*02

274 sequences assigned  
166 (60.6%) exact matches, in which:  
164 unique CDR3  
7 unique J



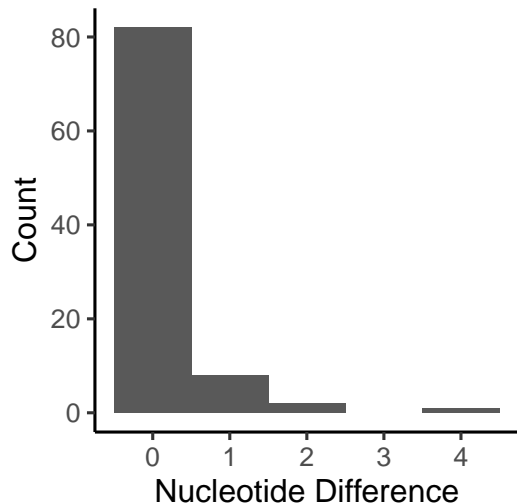
### IGHV4-39\*07

1910 sequences assigned  
704 (36.9%) exact matches, in which:  
663 unique CDR3  
7 unique J



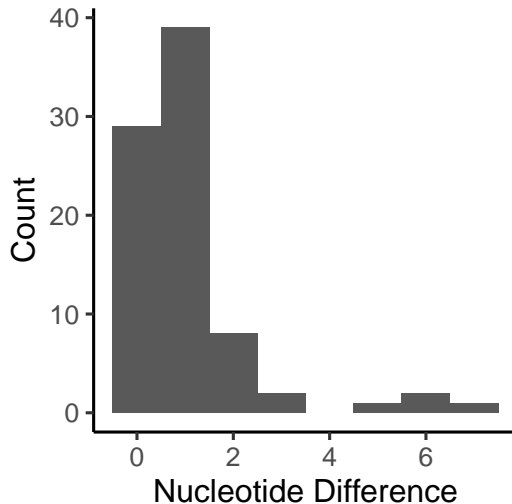
### IGHV4-34\*01\_02\_C288T\_

93 sequences assigned  
82 (88.2%) exact matches, in which:  
82 unique CDR3  
6 unique J



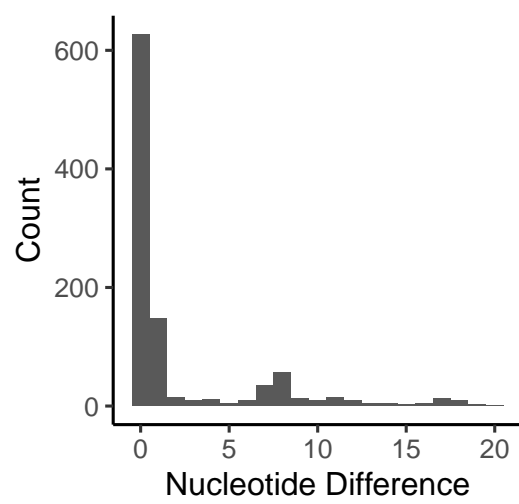
### IGHV4-38-2\*02\_A291G

83 sequences assigned  
29 (34.9%) exact matches, in which:  
29 unique CDR3  
5 unique J



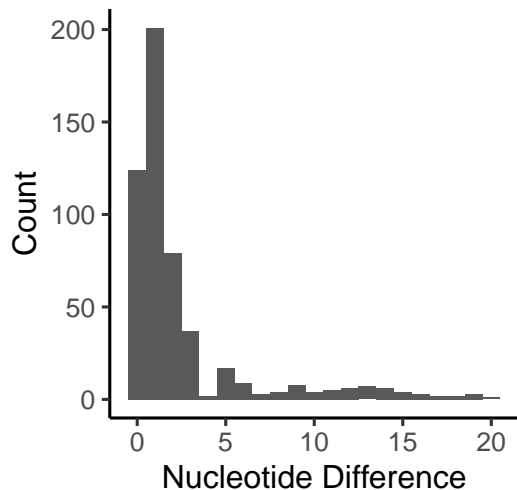
### IGHV4-39\*02\_C258G

1021 sequences assigned  
627 (61.4%) exact matches, in which:  
562 unique CDR3  
7 unique J



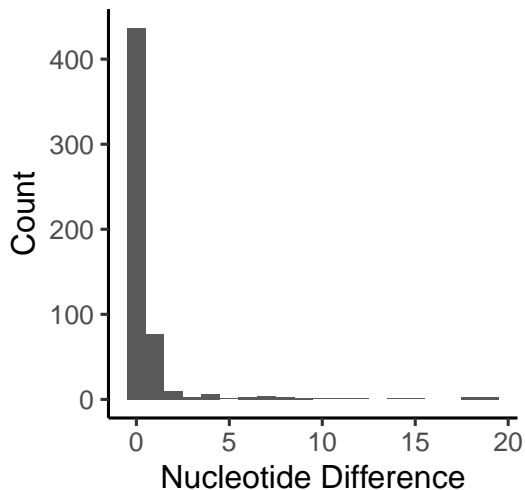
### IGHV4–59\*12

560 sequences assigned  
124 (22.1%) exact matches, in which:  
124 unique CDR3  
6 unique J



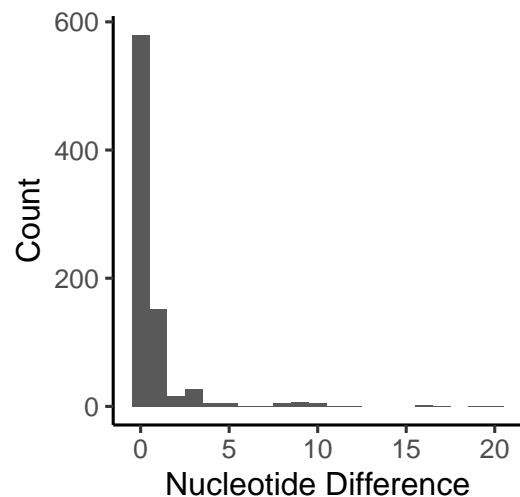
### IGHV4–61\*02\_A234G

562 sequences assigned  
437 (77.8%) exact matches, in which:  
428 unique CDR3  
6 unique J



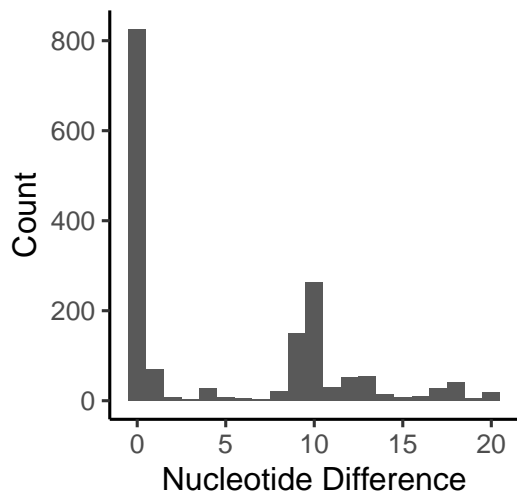
### IGHV5–10–1\*01\_03

840 sequences assigned  
580 (69%) exact matches, in which:  
407 unique CDR3  
7 unique J



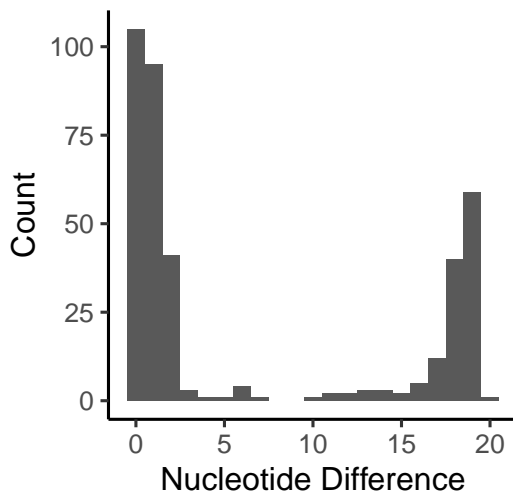
### IGHV4–59\*02\_G88A

1987 sequences assigned  
826 (41.6%) exact matches, in which:  
796 unique CDR3  
7 unique J



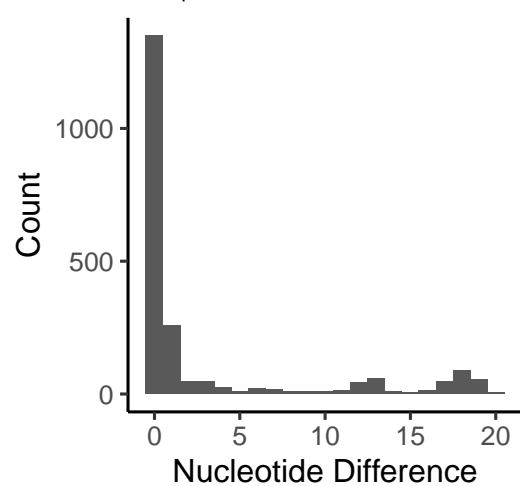
### IGHV4–61\*02\_A234G\_A2

381 sequences assigned  
105 (27.6%) exact matches, in which:  
105 unique CDR3  
7 unique J



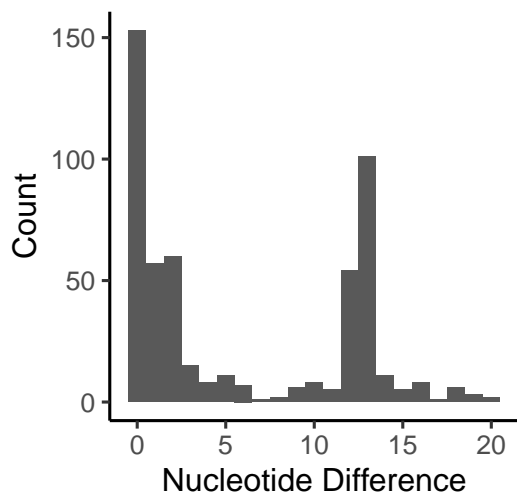
### IGHV5–51\*07\_A128G

2218 sequences assigned  
1349 (60.8%) exact matches, in which:  
831 unique CDR3  
7 unique J



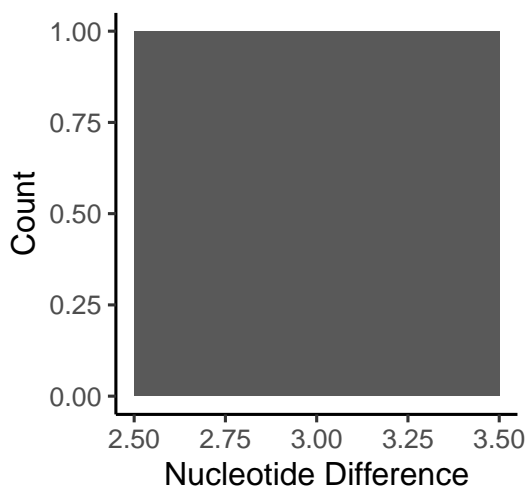
### IGHV4–61\*01

546 sequences assigned  
153 (28%) exact matches, in which:  
152 unique CDR3  
7 unique J



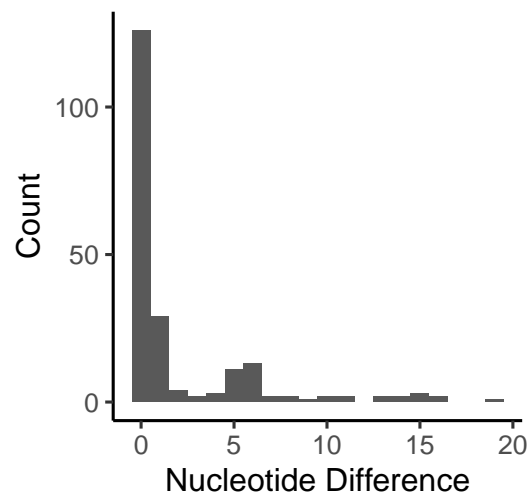
### IGHV4/OR15–8\*01

1 sequences assigned  
No exact matches.



### IGHV6–1\*01\_02

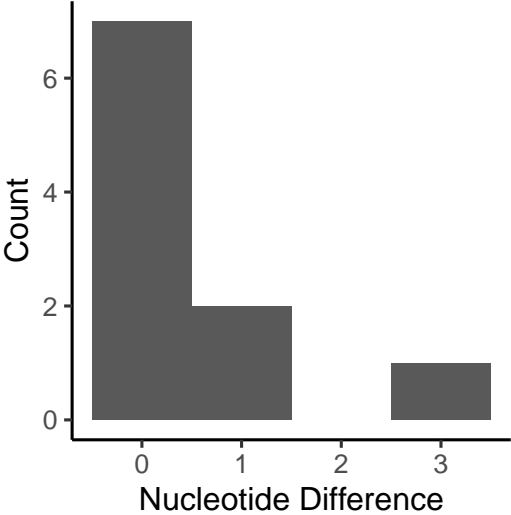
352 sequences assigned  
126 (35.8%) exact matches, in which:  
122 unique CDR3  
6 unique J



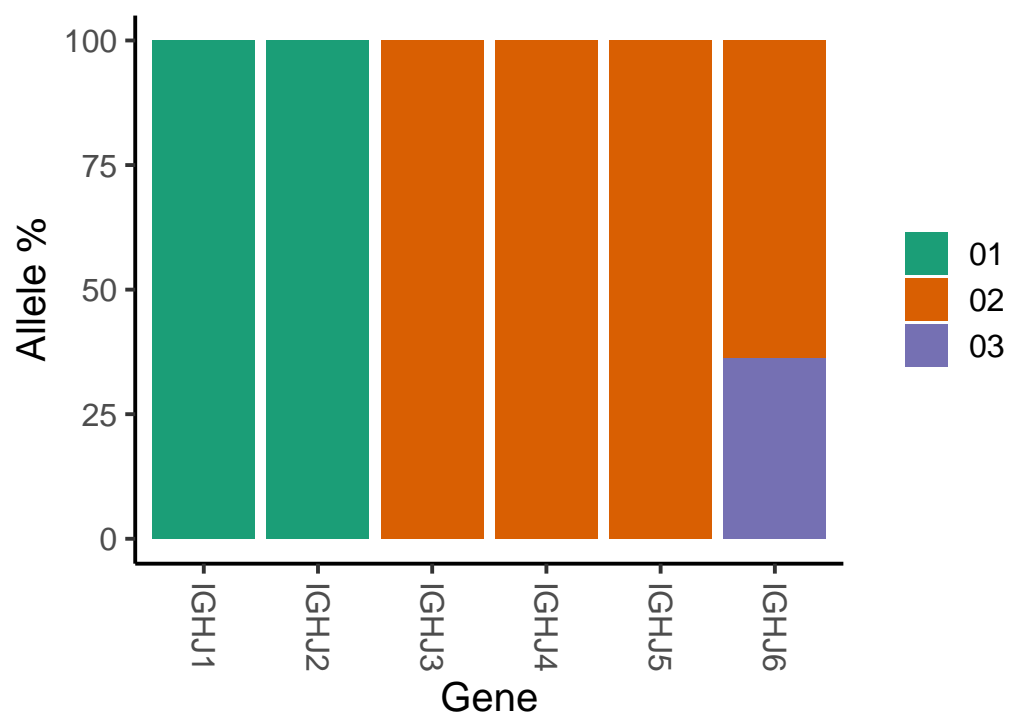


# IGHV7-4-1\*01

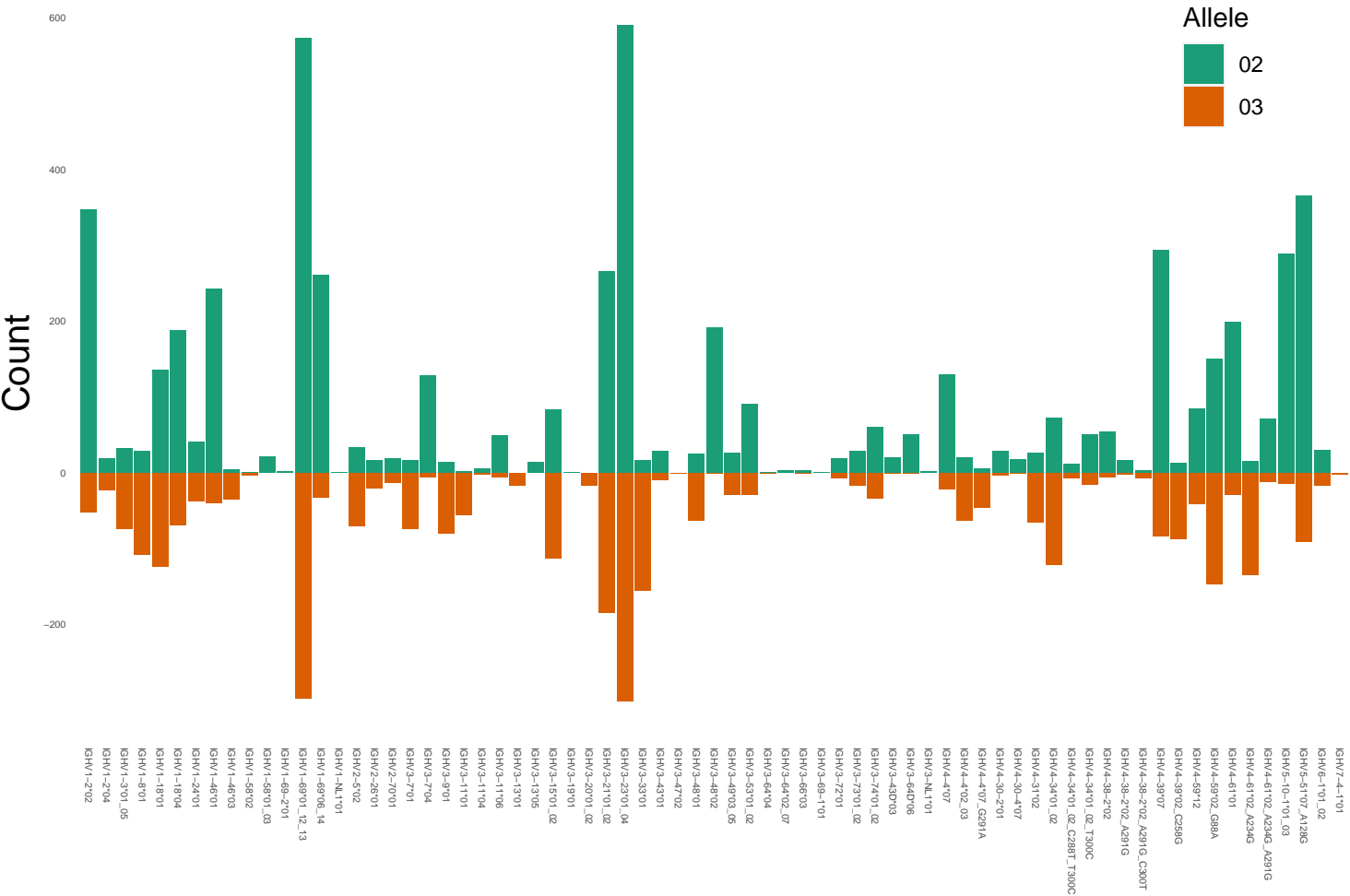
10 sequences assigned  
7 (70%) exact matches, in which:  
7 unique CDR3  
3 unique J



Allele Usage



Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.