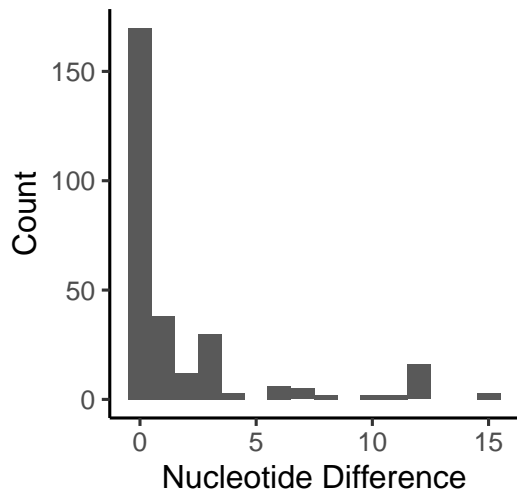


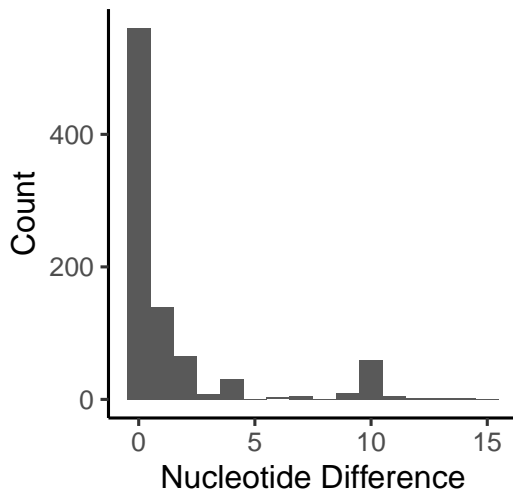
### IGHV1-2\*04

289 sequences assigned  
170 (58.8%) exact matches, in which:  
155 unique CDR3  
5 unique J



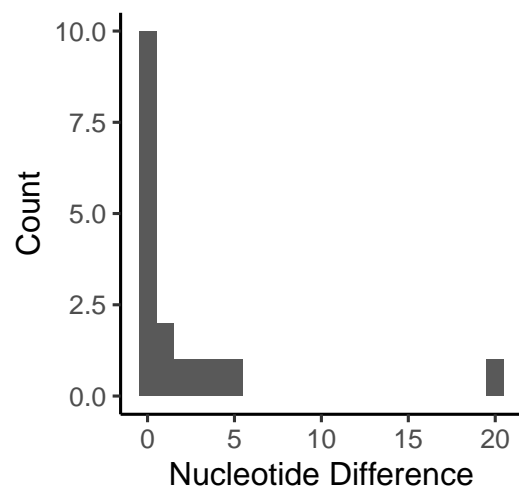
### IGHV1-18\*01

898 sequences assigned  
561 (62.5%) exact matches, in which:  
516 unique CDR3  
6 unique J



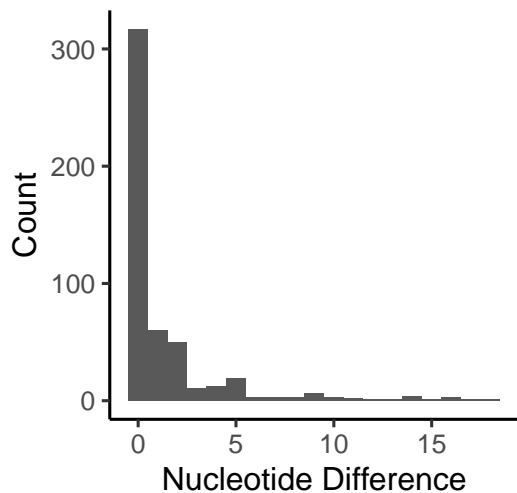
### IGHV1-45\*02

17 sequences assigned  
10 (58.8%) exact matches, in which:  
8 unique CDR3  
4 unique J



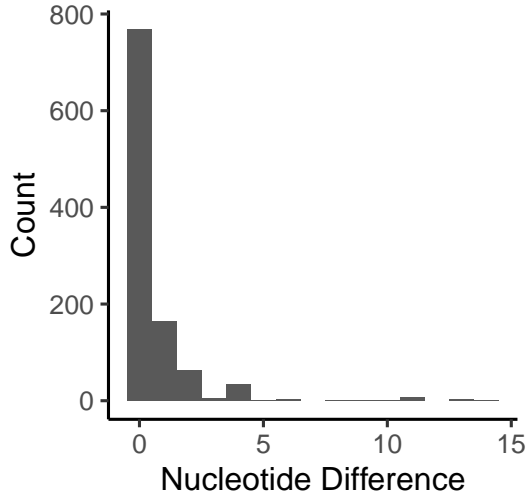
### IGHV1-3\*01

501 sequences assigned  
317 (63.3%) exact matches, in which:  
305 unique CDR3  
6 unique J



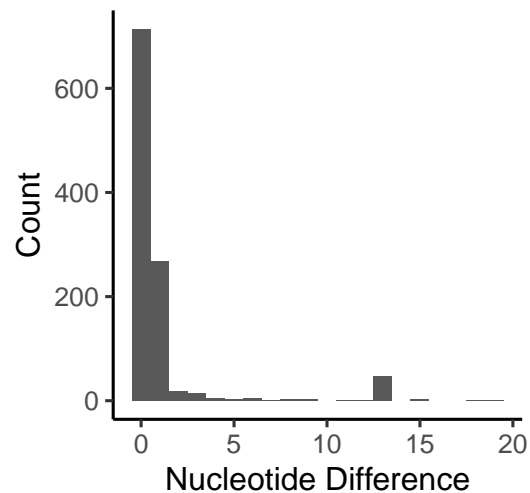
### IGHV1-18\*04

1058 sequences assigned  
769 (72.7%) exact matches, in which:  
714 unique CDR3  
6 unique J



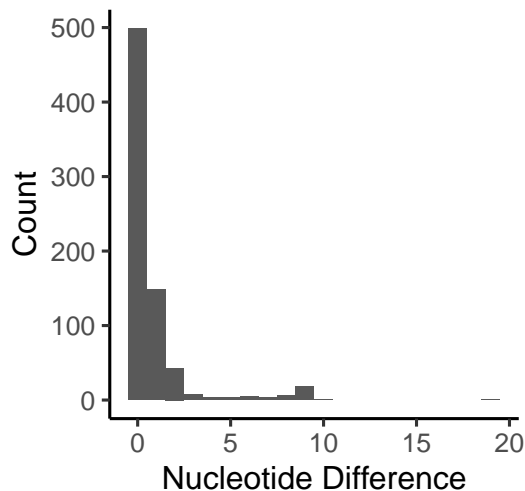
### IGHV1-46\*01

1084 sequences assigned  
714 (65.9%) exact matches, in which:  
663 unique CDR3  
6 unique J



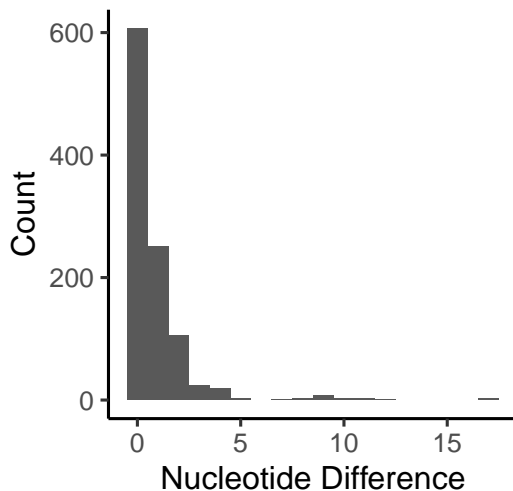
### IGHV1-8\*01

738 sequences assigned  
499 (67.6%) exact matches, in which:  
472 unique CDR3  
6 unique J



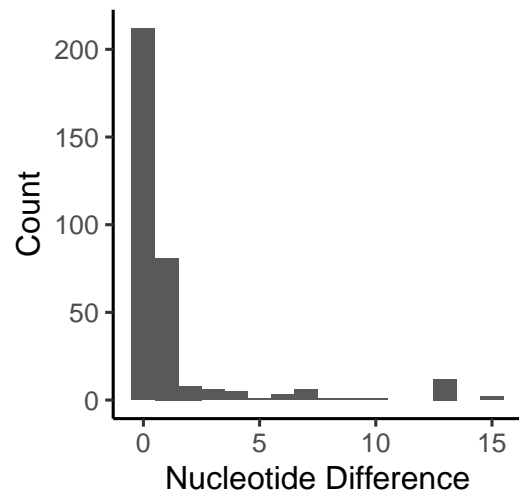
### IGHV1-24\*01

1049 sequences assigned  
607 (57.9%) exact matches, in which:  
560 unique CDR3  
6 unique J



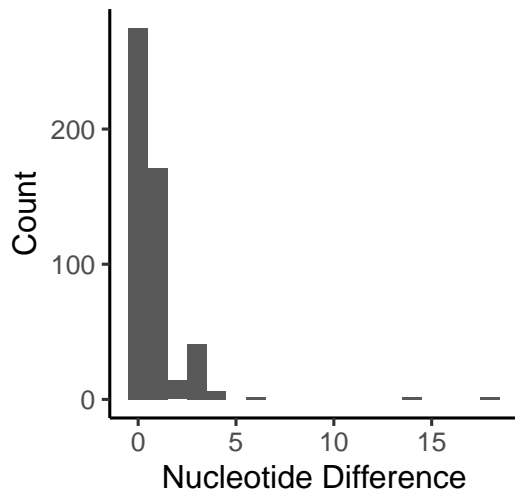
### IGHV1-46\*03

340 sequences assigned  
212 (62.4%) exact matches, in which:  
192 unique CDR3  
6 unique J



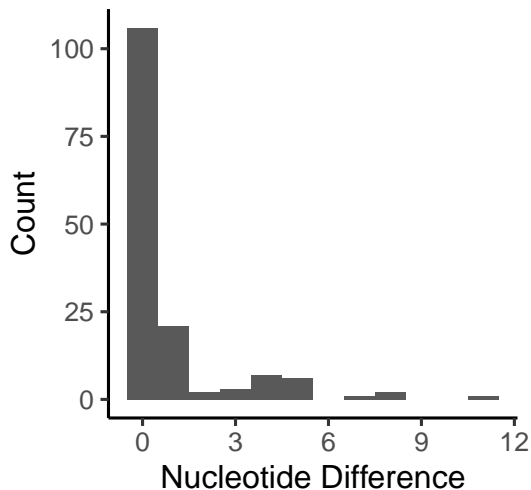
### IGHV1–58\*01

513 sequences assigned  
275 (53.6%) exact matches, in which:  
210 unique CDR3  
6 unique J



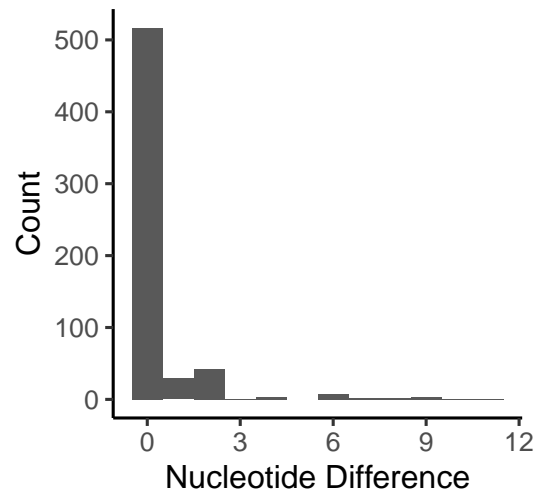
### IGHV2–5\*02

149 sequences assigned  
106 (71.1%) exact matches, in which:  
98 unique CDR3  
5 unique J



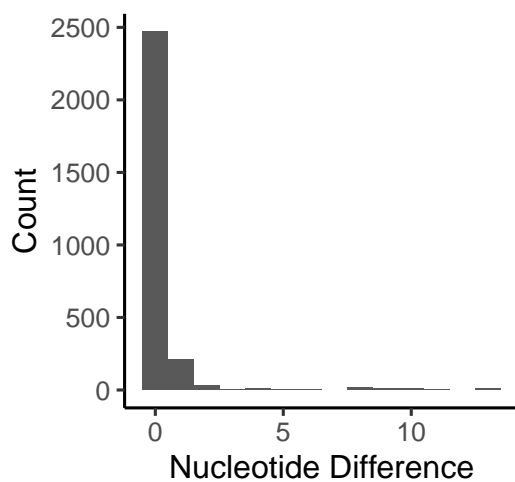
### IGHV3–7\*01

609 sequences assigned  
517 (84.9%) exact matches, in which:  
484 unique CDR3  
6 unique J



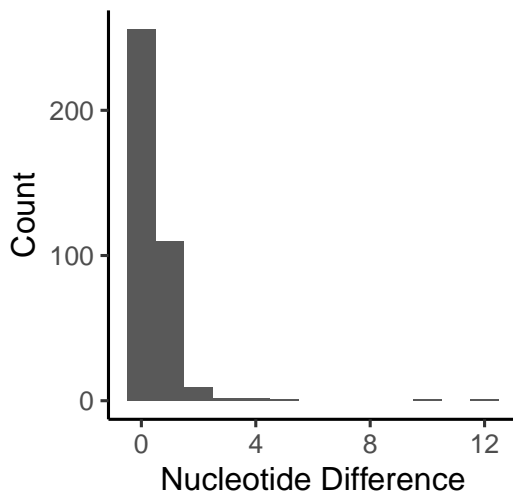
### IGHV1–69\*18

2786 sequences assigned  
2470 (88.7%) exact matches, in which:  
2324 unique CDR3  
6 unique J



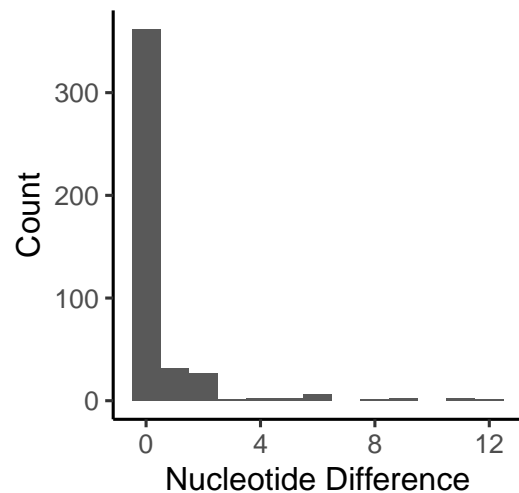
### IGHV2–26\*01

382 sequences assigned  
256 (67%) exact matches, in which:  
244 unique CDR3  
6 unique J



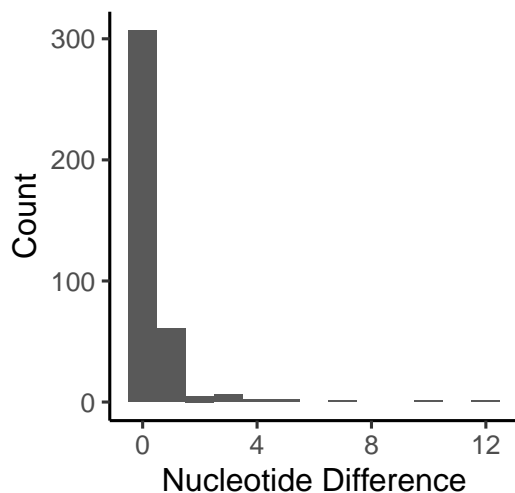
### IGHV3–7\*03

438 sequences assigned  
362 (82.6%) exact matches, in which:  
339 unique CDR3  
5 unique J



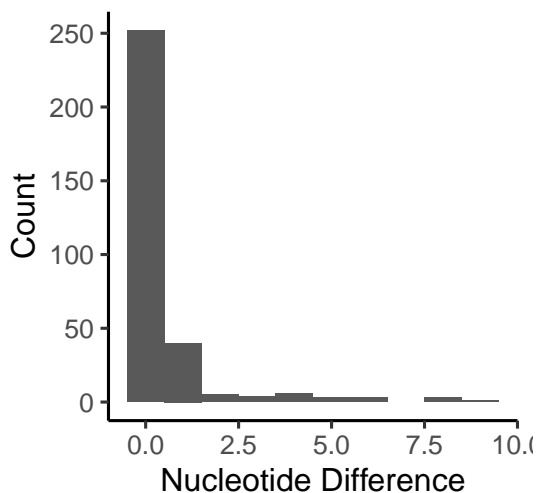
### IGHV2–5\*01

386 sequences assigned  
307 (79.5%) exact matches, in which:  
287 unique CDR3  
6 unique J



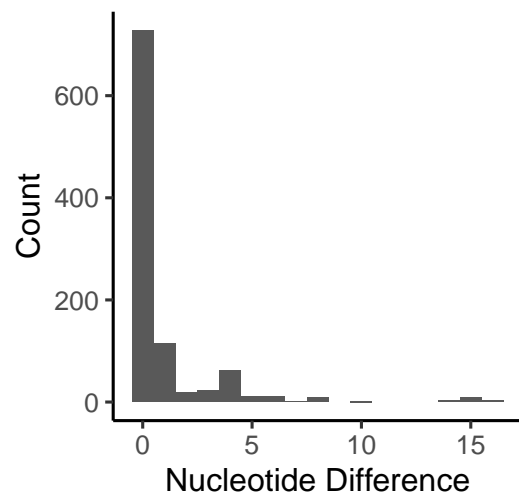
### IGHV2–70\*01

317 sequences assigned  
252 (79.5%) exact matches, in which:  
229 unique CDR3  
5 unique J



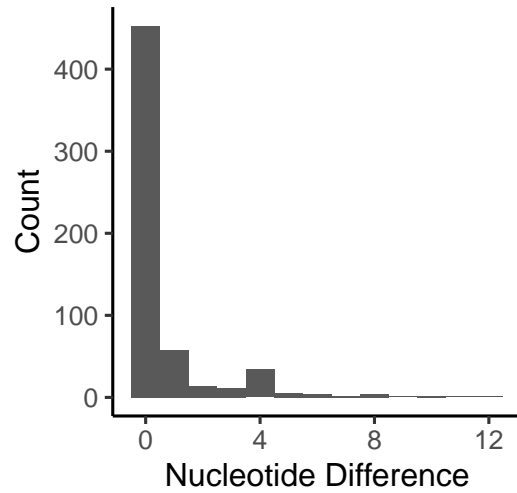
### IGHV3–9\*01

992 sequences assigned  
728 (73.4%) exact matches, in which:  
658 unique CDR3  
6 unique J



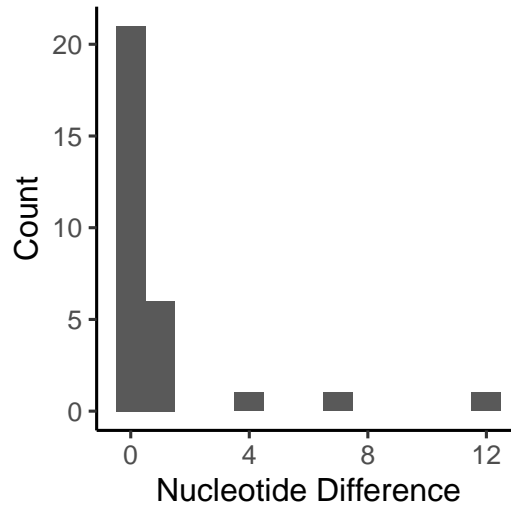
### IGHV3-11\*01

591 sequences assigned  
453 (76.6%) exact matches, in which:  
388 unique CDR3  
6 unique J



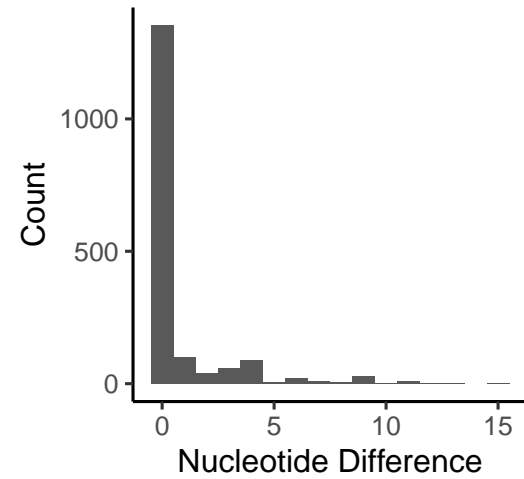
### IGHV3-13\*05

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



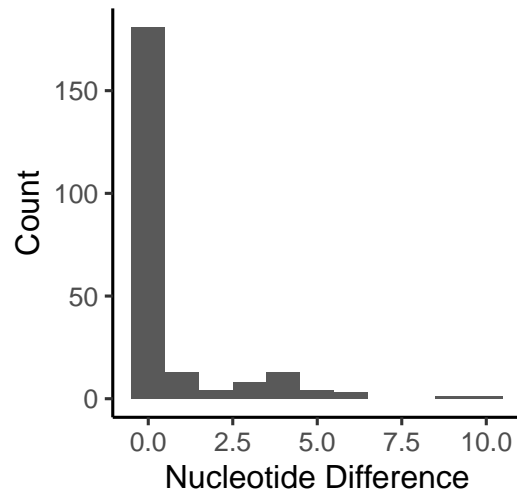
### IGHV3-21\*01

1720 sequences assigned  
1353 (78.7%) exact matches, in which:  
1254 unique CDR3  
6 unique J



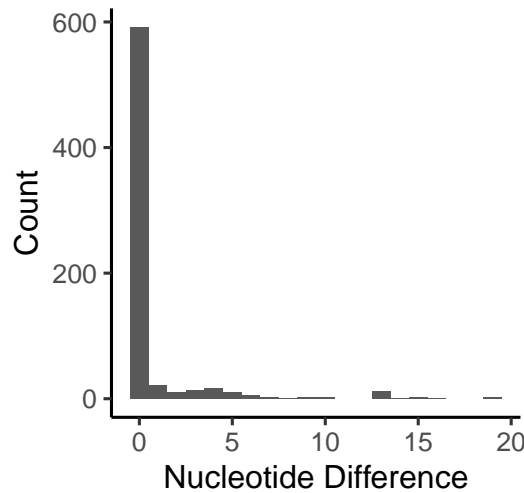
### IGHV3-11\*06

228 sequences assigned  
181 (79.4%) exact matches, in which:  
160 unique CDR3  
5 unique J



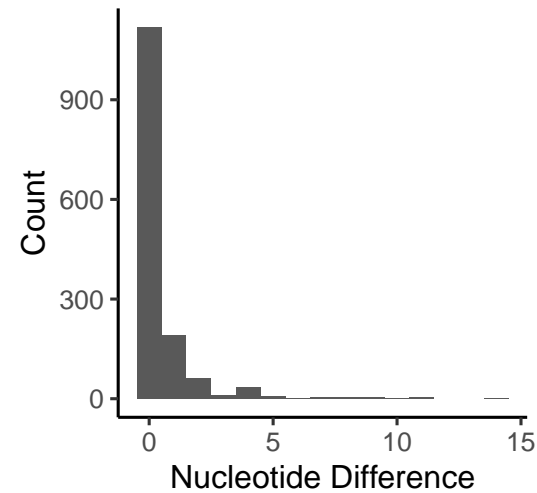
### IGHV3-15\*01

698 sequences assigned  
592 (84.8%) exact matches, in which:  
562 unique CDR3  
6 unique J



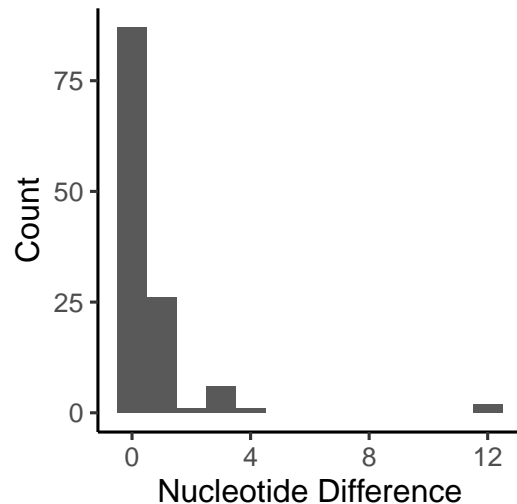
### IGHV3-33\*01

1452 sequences assigned  
1119 (77.1%) exact matches, in which:  
1004 unique CDR3  
6 unique J



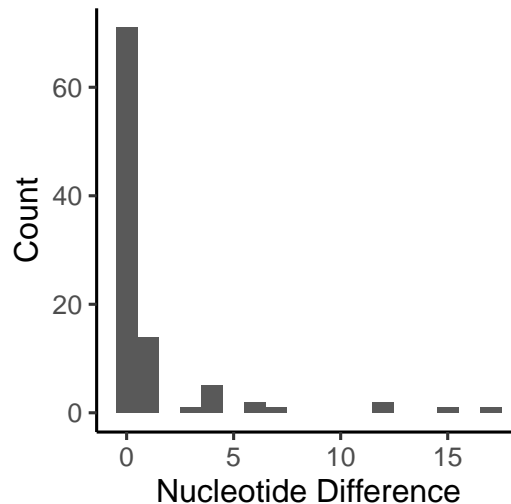
### IGHV3-13\*01

123 sequences assigned  
87 (70.7%) exact matches, in which:  
79 unique CDR3  
5 unique J



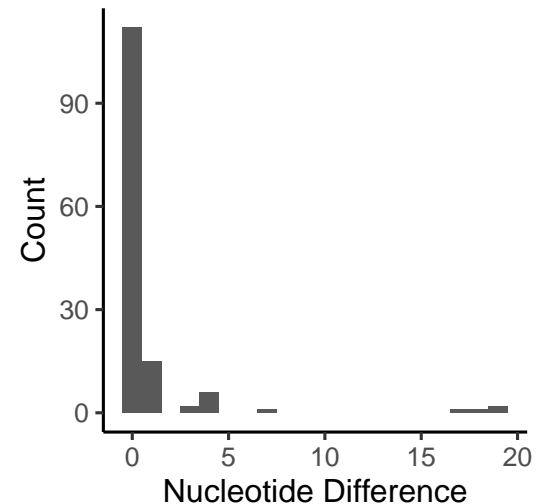
### IGHV3-20\*01

98 sequences assigned  
71 (72.4%) exact matches, in which:  
67 unique CDR3  
5 unique J



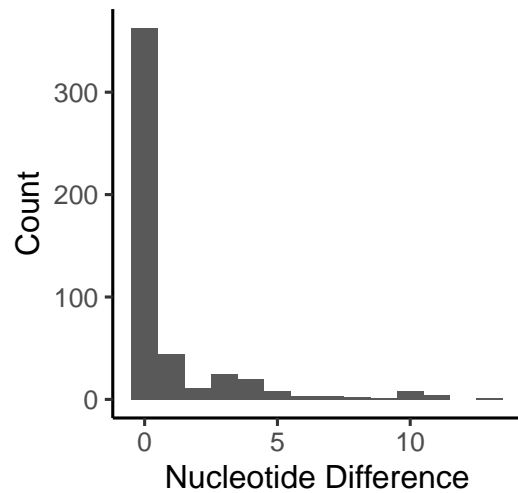
### IGHV3-43\*01

140 sequences assigned  
112 (80%) exact matches, in which:  
107 unique CDR3  
5 unique J



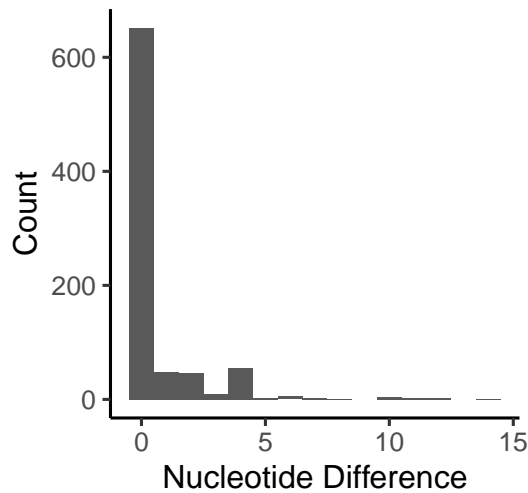
### IGHV3-48\*01

493 sequences assigned  
363 (73.6%) exact matches, in which:  
333 unique CDR3  
6 unique J



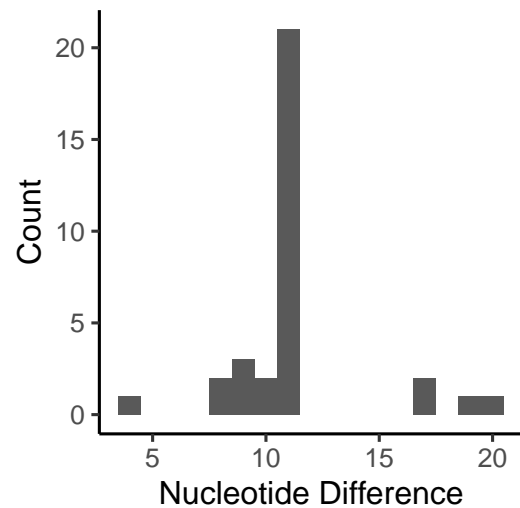
### IGHV3-53\*01

833 sequences assigned  
652 (78.3%) exact matches, in which:  
596 unique CDR3  
6 unique J



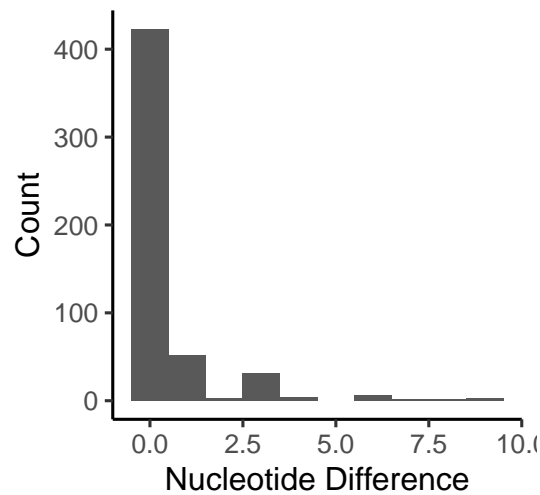
### IGHV3-66\*01

33 sequences assigned  
No exact matches.



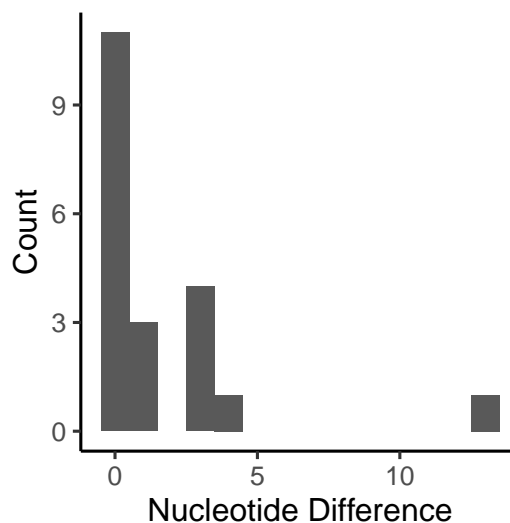
### IGHV3-48\*02

526 sequences assigned  
423 (80.4%) exact matches, in which:  
391 unique CDR3  
6 unique J



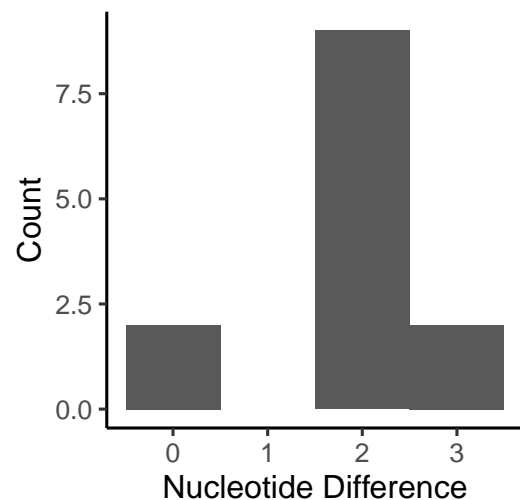
### IGHV3-64\*02

20 sequences assigned  
11 (55%) exact matches, in which:  
10 unique CDR3  
4 unique J



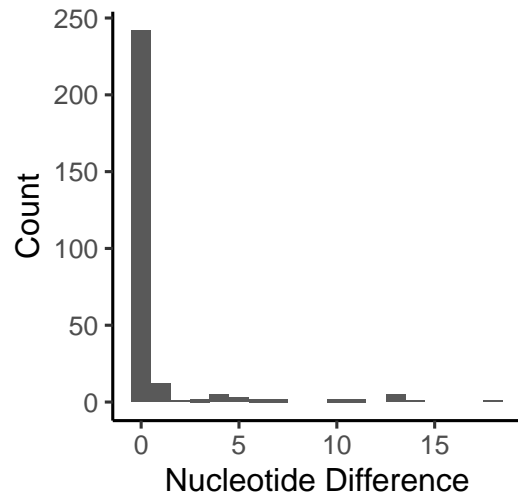
### IGHV3-66\*03

13 sequences assigned  
2 (15.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



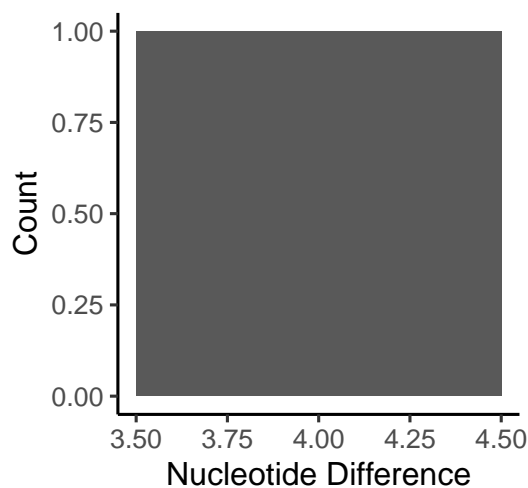
### IGHV3-49\*05

280 sequences assigned  
242 (86.4%) exact matches, in which:  
225 unique CDR3  
6 unique J



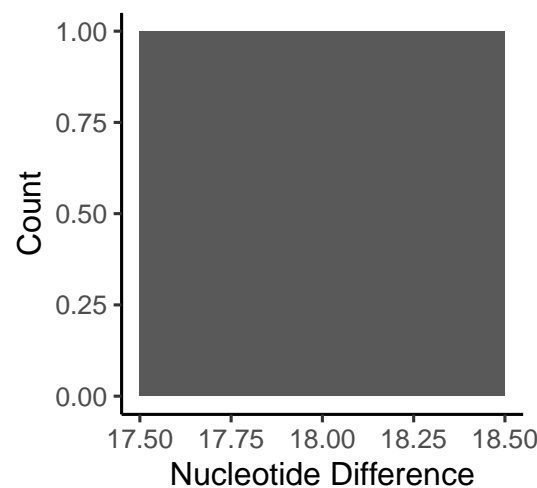
### IGHV3-64\*04

1 sequences assigned  
No exact matches.



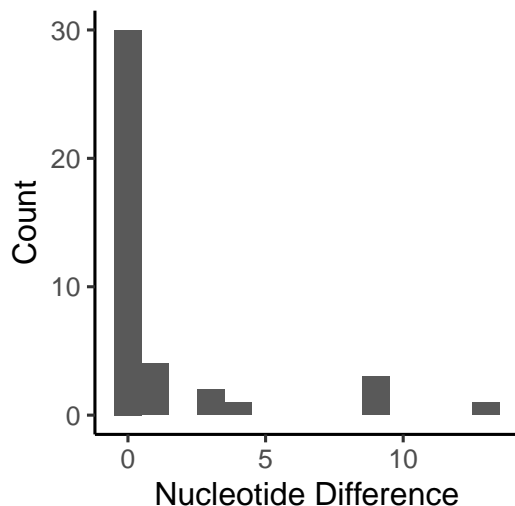
### IGHV3-71\*04

1 sequences assigned  
No exact matches.



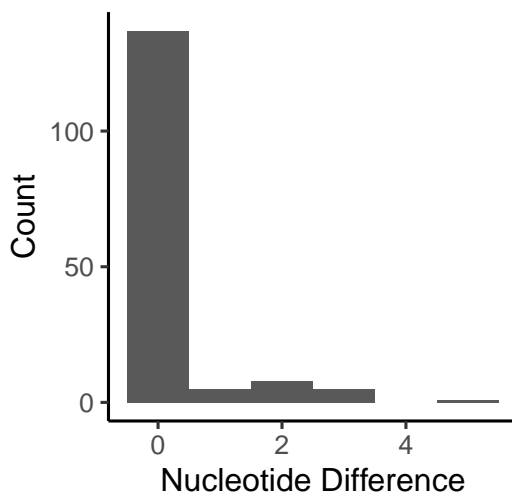
### IGHV3-72\*01

41 sequences assigned  
30 (73.2%) exact matches, in which:  
26 unique CDR3  
4 unique J



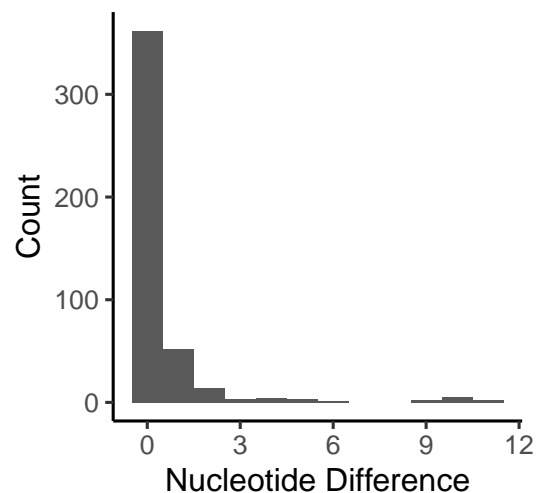
### IGHV3-64D\*06

156 sequences assigned  
137 (87.8%) exact matches, in which:  
129 unique CDR3  
6 unique J



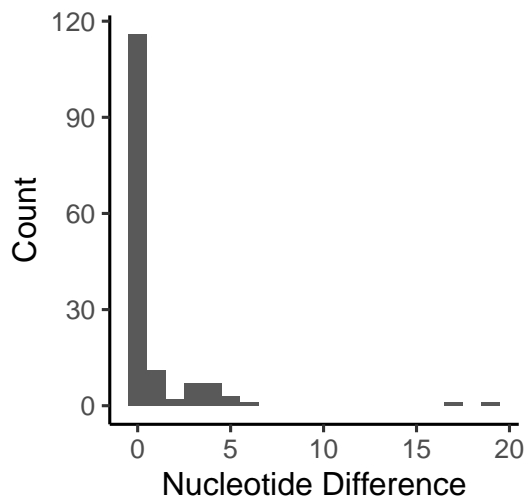
### IGHV4-4\*07

448 sequences assigned  
362 (80.8%) exact matches, in which:  
330 unique CDR3  
6 unique J



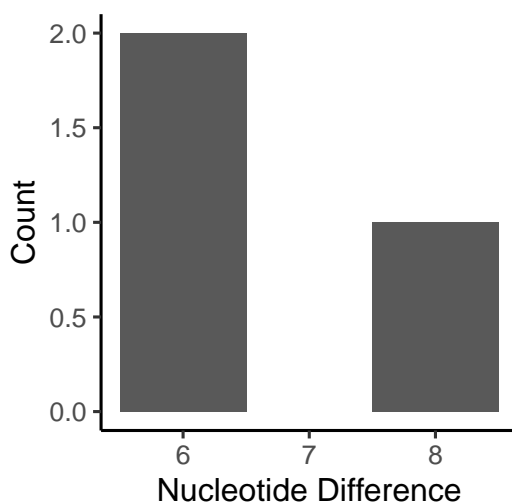
### IGHV3-73\*02

149 sequences assigned  
116 (77.9%) exact matches, in which:  
109 unique CDR3  
5 unique J



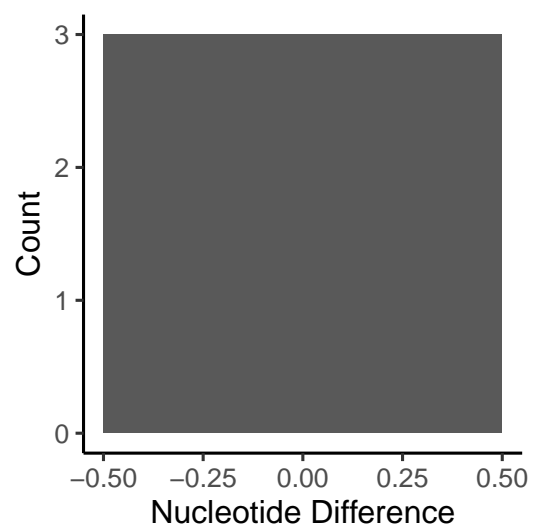
### IGHV3-NL1\*01

3 sequences assigned  
No exact matches.



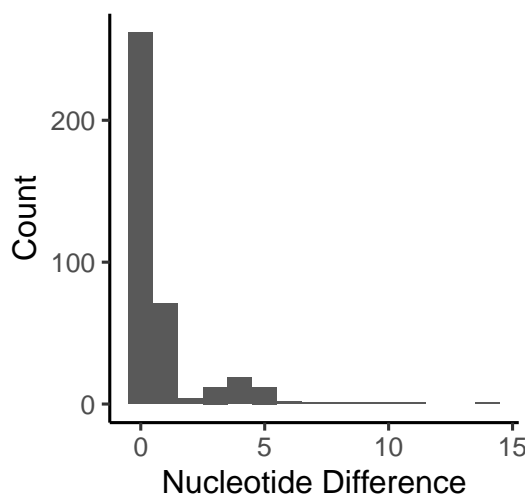
### IGHV4-28\*03

3 sequences assigned  
3 (100%) exact matches, in which:  
2 unique CDR3  
1 unique J



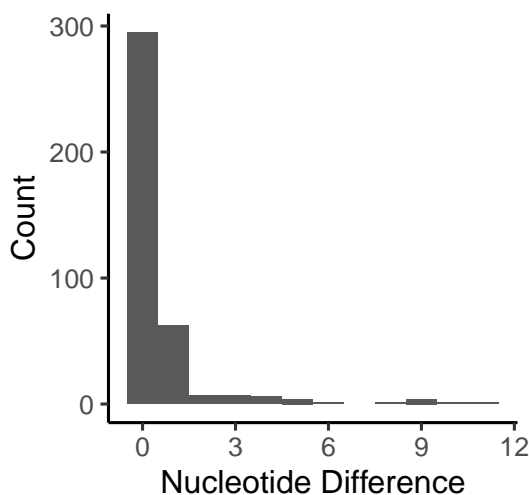
### IGHV3-74\*01

388 sequences assigned  
262 (67.5%) exact matches, in which:  
247 unique CDR3  
6 unique J



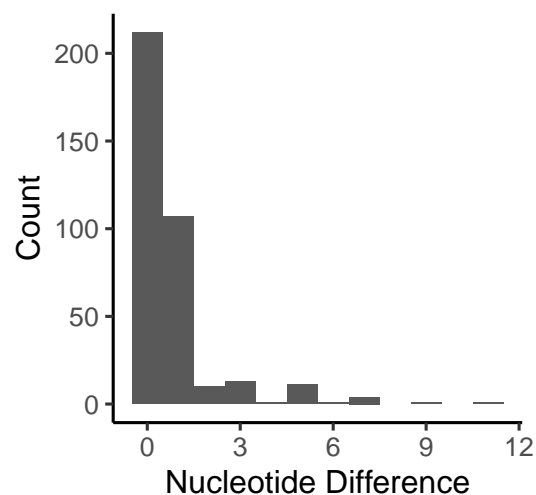
### IGHV4-4\*02

389 sequences assigned  
295 (75.8%) exact matches, in which:  
284 unique CDR3  
6 unique J



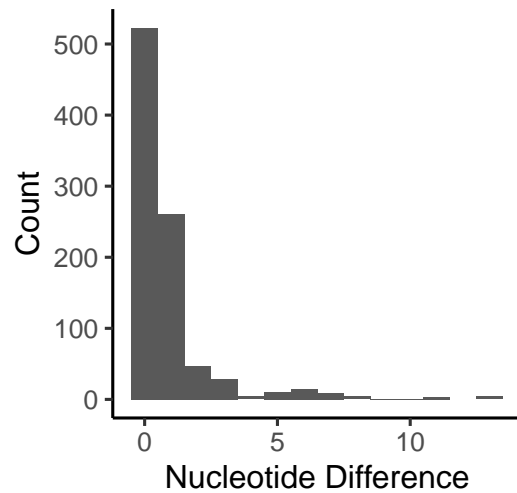
### IGHV4-30-2\*01\_C285T\_

361 sequences assigned  
212 (58.7%) exact matches, in which:  
190 unique CDR3  
5 unique J



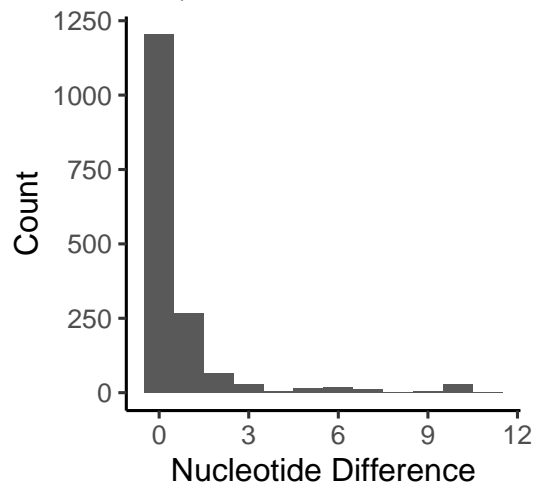
### IGHV4–31\*03

911 sequences assigned  
523 (57.4%) exact matches, in which:  
475 unique CDR3  
6 unique J



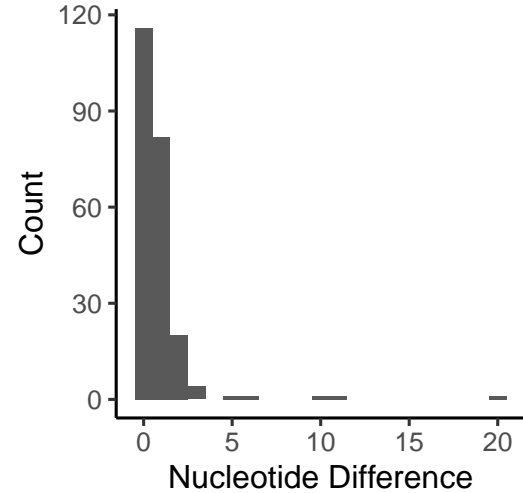
### IGHV4–59\*01

1659 sequences assigned  
1204 (72.6%) exact matches, in which:  
1094 unique CDR3  
6 unique J



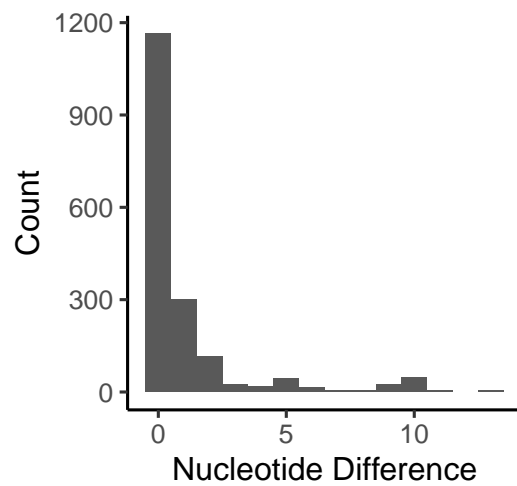
### IGHV5–10–1\*01\_A3G

228 sequences assigned  
116 (50.9%) exact matches, in which:  
116 unique CDR3  
5 unique J



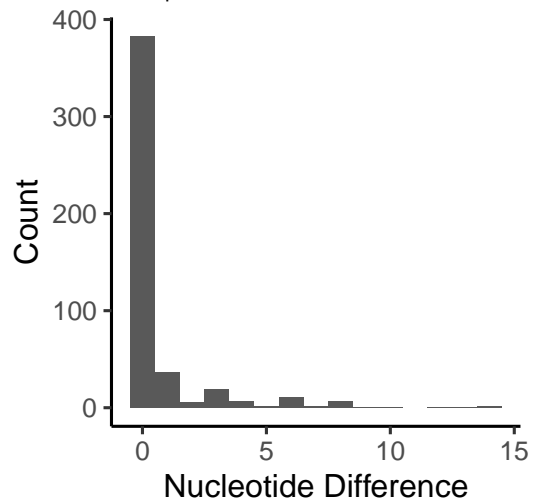
### IGHV4–34\*01

1773 sequences assigned  
1164 (65.7%) exact matches, in which:  
1085 unique CDR3  
6 unique J



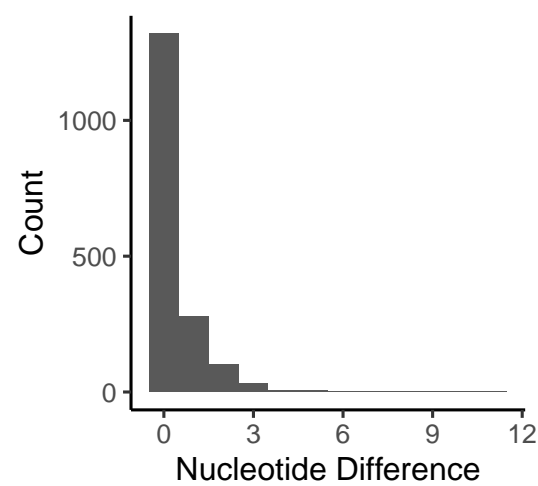
### IGHV4–61\*01

480 sequences assigned  
383 (79.8%) exact matches, in which:  
368 unique CDR3  
6 unique J



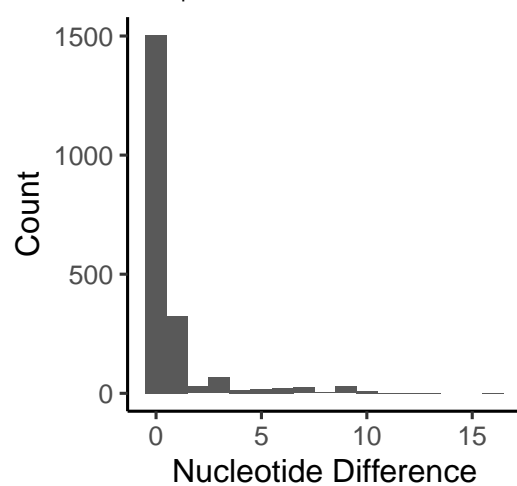
### IGHV5–51\*01

1750 sequences assigned  
1319 (75.4%) exact matches, in which:  
1168 unique CDR3  
6 unique J



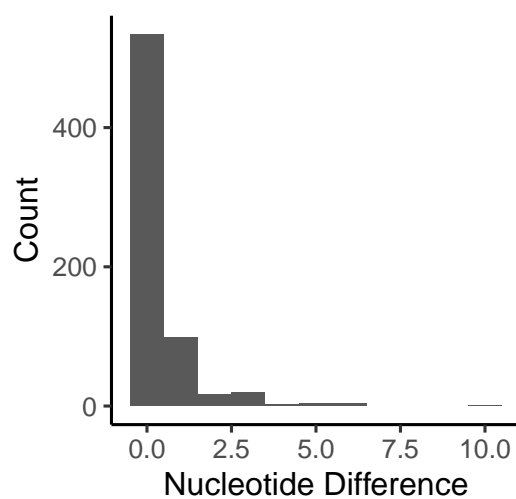
### IGHV4–39\*01

2049 sequences assigned  
1504 (73.4%) exact matches, in which:  
1402 unique CDR3  
6 unique J



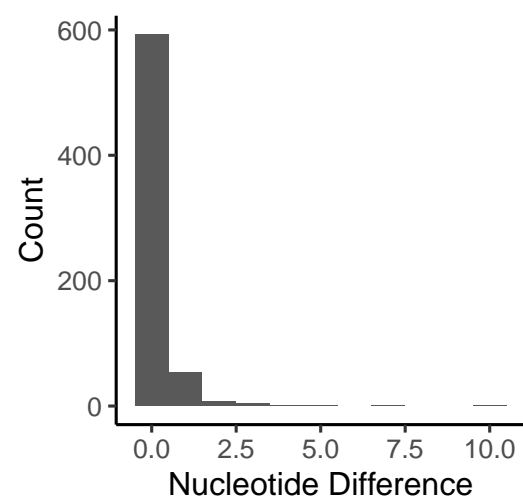
### IGHV5–10–1\*03

680 sequences assigned  
534 (78.5%) exact matches, in which:  
502 unique CDR3  
6 unique J



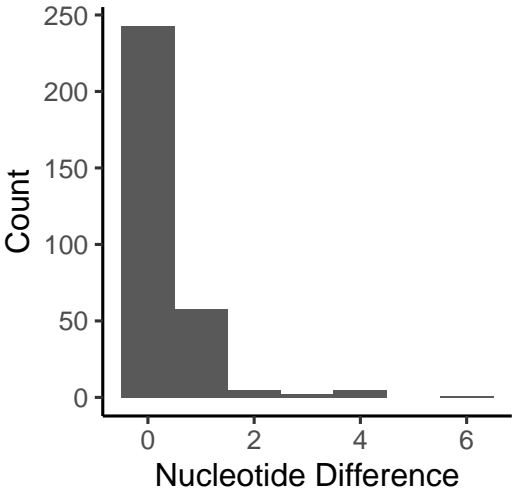
### IGHV5–51\*01\_A59C

661 sequences assigned  
593 (89.7%) exact matches, in which:  
584 unique CDR3  
6 unique J



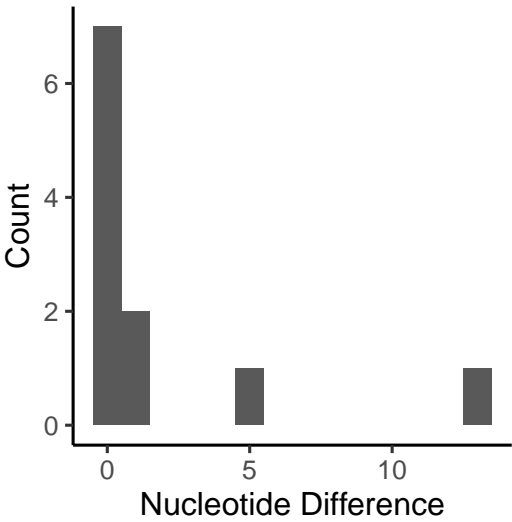
# IGHV6-1\*01

314 sequences assigned  
243 (77.4%) exact matches, in which:  
223 unique CDR3  
6 unique J



# IGHV7-4-1\*01

11 sequences assigned  
7 (63.6%) exact matches, in which:  
7 unique CDR3  
3 unique J







Warning – no inferred sequences found.