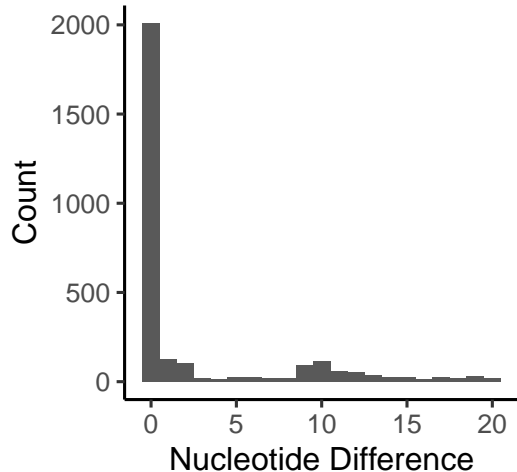


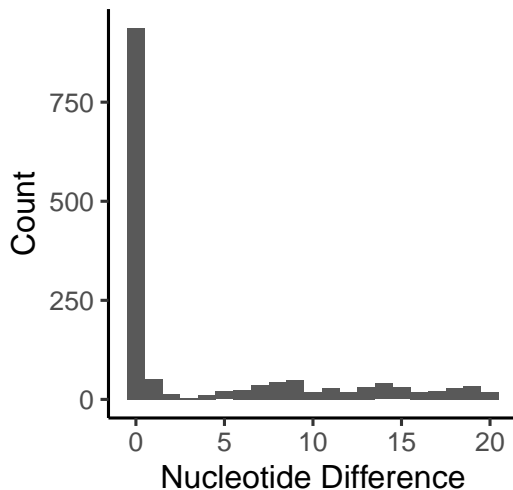
### IGHV1-2\*02

3300 sequences assigned  
2008 (60.8%) exact matches, in which:  
1998 unique CDR3  
6 unique J



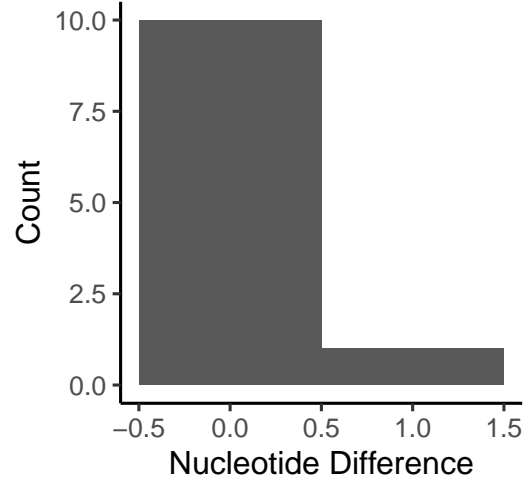
### IGHV1-8\*01

1627 sequences assigned  
938 (57.7%) exact matches, in which:  
935 unique CDR3  
6 unique J



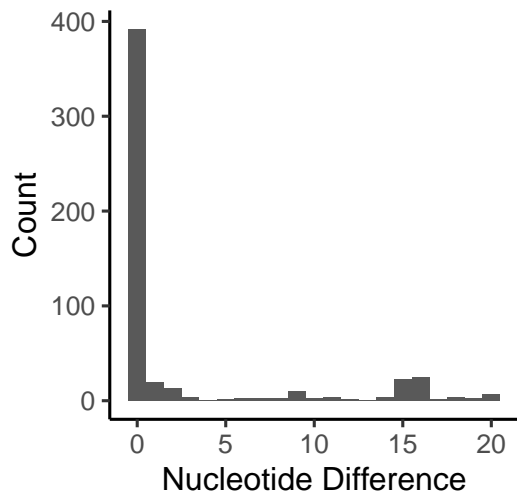
### IGHV1-45\*02

11 sequences assigned  
10 (90.9%) exact matches, in which:  
10 unique CDR3  
4 unique J



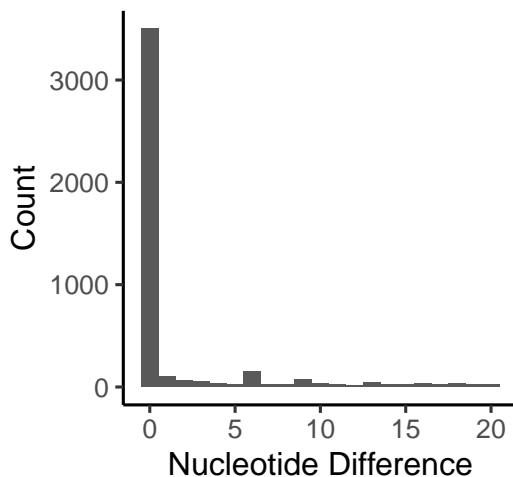
### IGHV1-2\*04

565 sequences assigned  
392 (69.4%) exact matches, in which:  
389 unique CDR3  
6 unique J



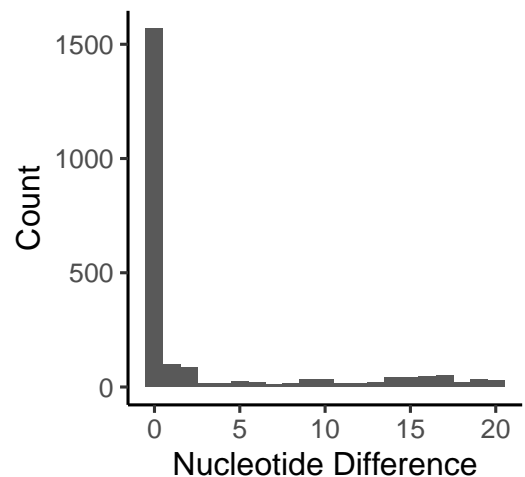
### IGHV1-18\*01

5111 sequences assigned  
3501 (68.5%) exact matches, in which:  
3465 unique CDR3  
6 unique J



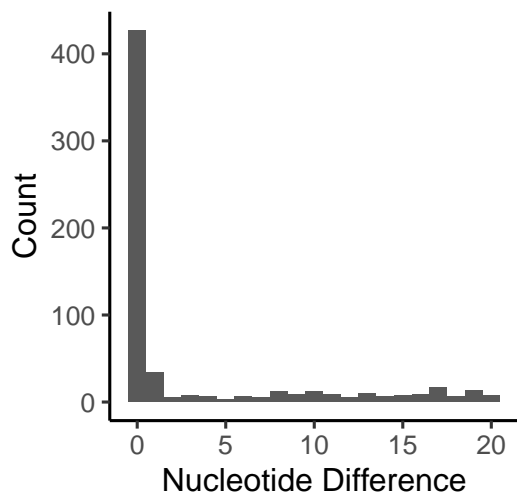
### IGHV1-46\*01

2880 sequences assigned  
1568 (54.4%) exact matches, in which:  
1556 unique CDR3  
6 unique J



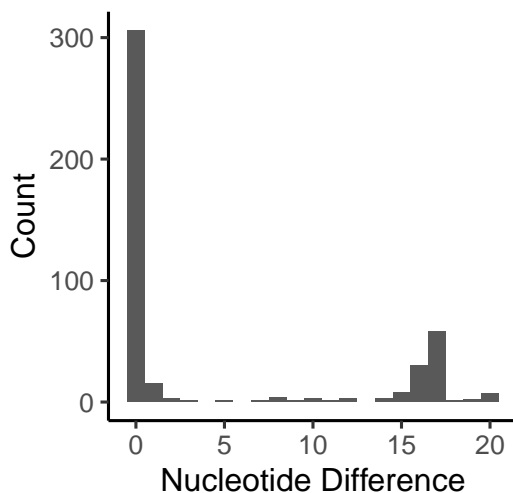
### IGHV1-3\*01\_05

787 sequences assigned  
427 (54.3%) exact matches, in which:  
422 unique CDR3  
6 unique J



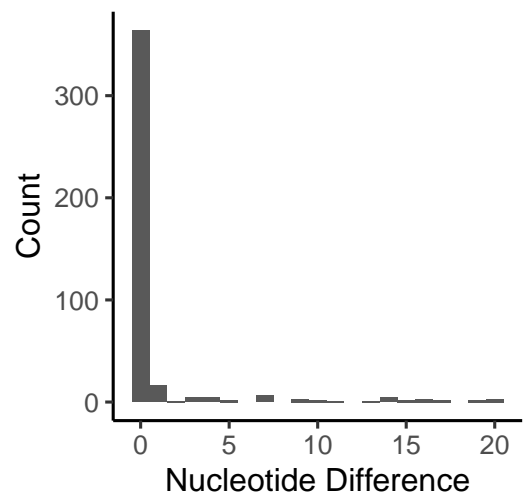
### IGHV1-24\*01

482 sequences assigned  
306 (63.5%) exact matches, in which:  
305 unique CDR3  
6 unique J



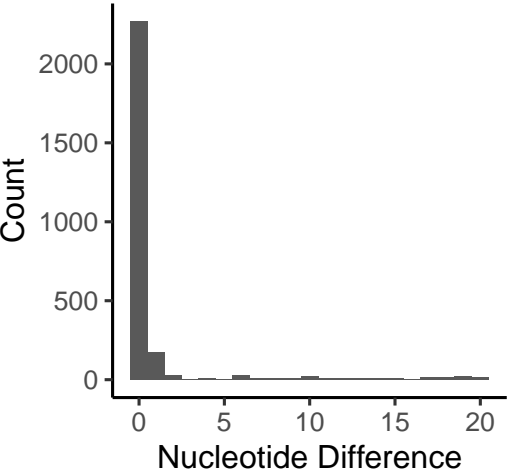
### IGHV1-58\*01\_03

475 sequences assigned  
364 (76.6%) exact matches, in which:  
362 unique CDR3  
6 unique J



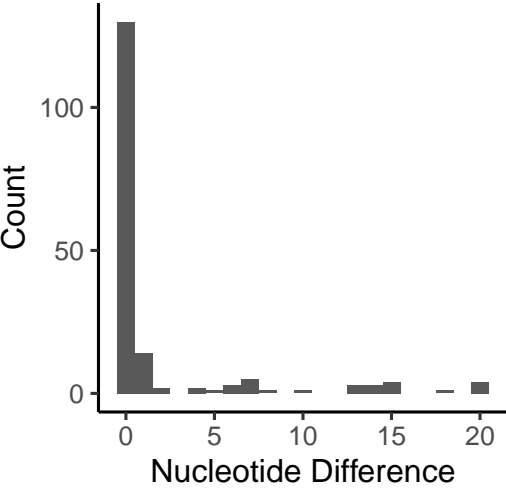
IGHV1-69\*01\_12\_13

3005 sequences assigned  
2269 (75.5%) exact matches, in which:  
2256 unique CDR3  
6 unique J



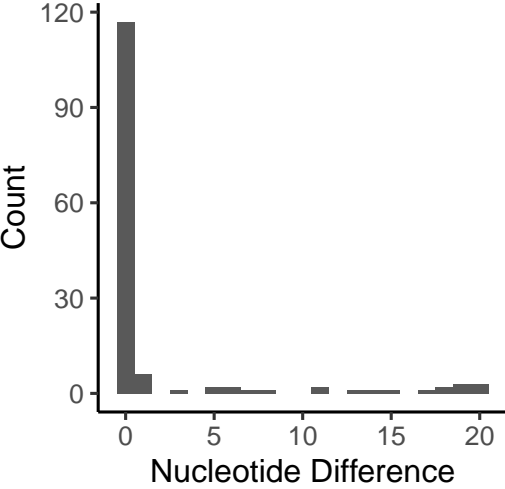
IGHV2-5\*01

184 sequences assigned  
130 (70.7%) exact matches, in which:  
127 unique CDR3  
6 unique J



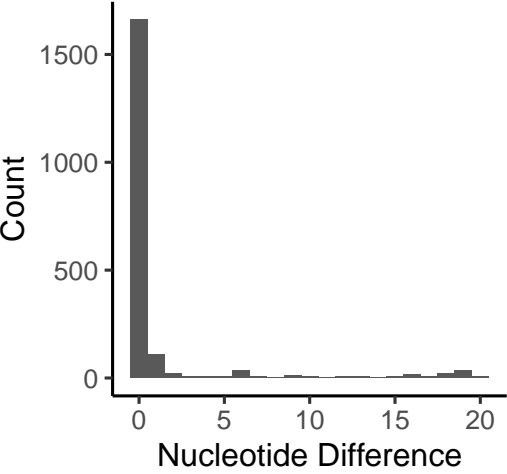
IGHV2-70\*01

174 sequences assigned  
117 (67.2%) exact matches, in which:  
117 unique CDR3  
5 unique J



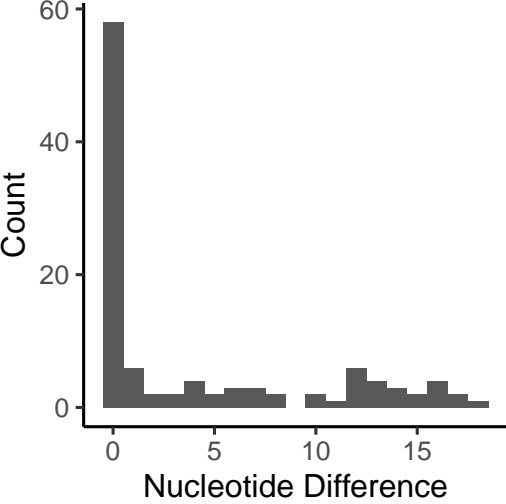
IGHV1-69\*04\_09

2054 sequences assigned  
1661 (80.9%) exact matches, in which:  
1647 unique CDR3  
6 unique J



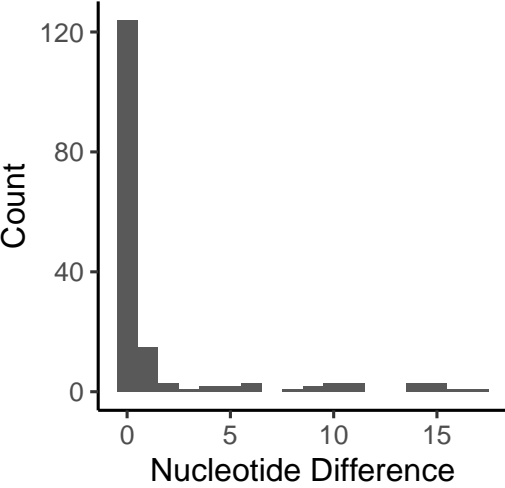
IGHV2-5\*02

132 sequences assigned  
58 (43.9%) exact matches, in which:  
58 unique CDR3  
5 unique J



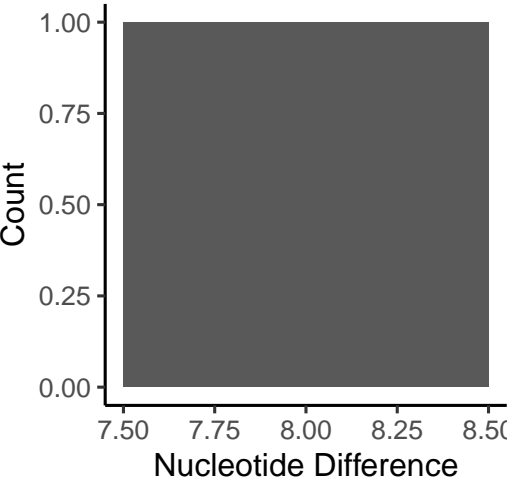
IGHV2-70\*11\_15

178 sequences assigned  
124 (69.7%) exact matches, in which:  
123 unique CDR3  
6 unique J



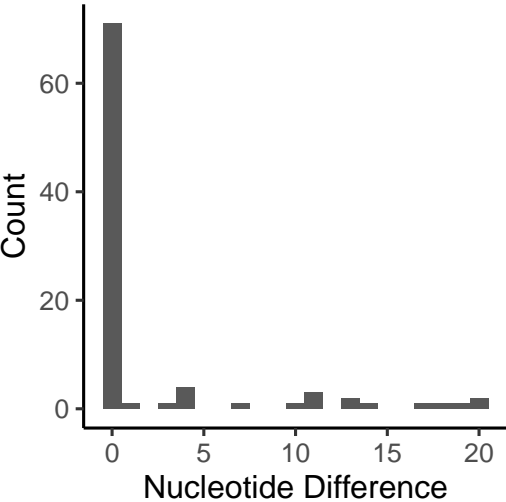
IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



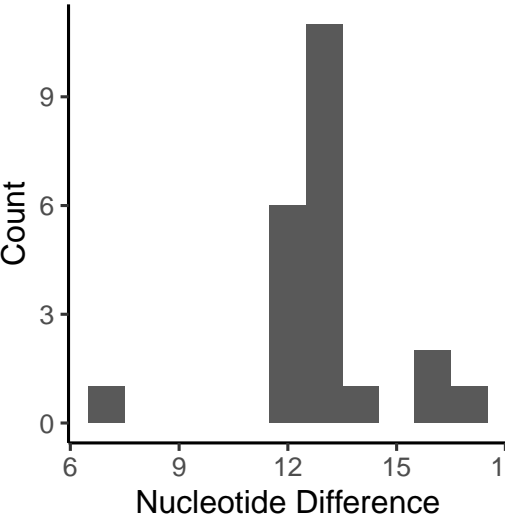
IGHV2-26\*01

104 sequences assigned  
71 (68.3%) exact matches, in which:  
69 unique CDR3  
6 unique J



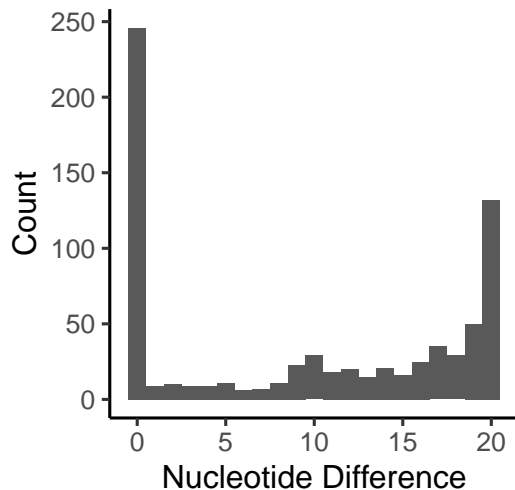
IGHV2-70D\*04

22 sequences assigned  
No exact matches.



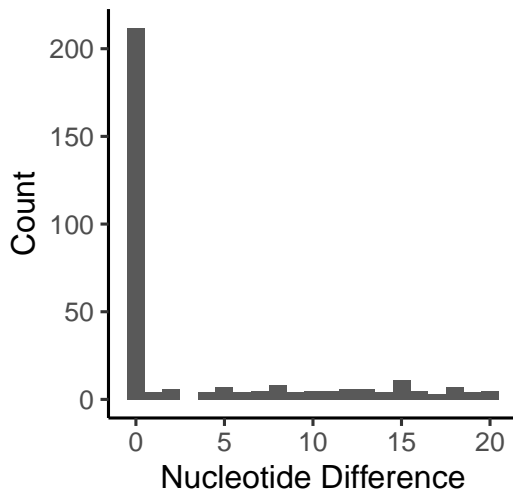
### IGHV3-7\*01

1380 sequences assigned  
246 (17.8%) exact matches, in which:  
209 unique CDR3  
6 unique J



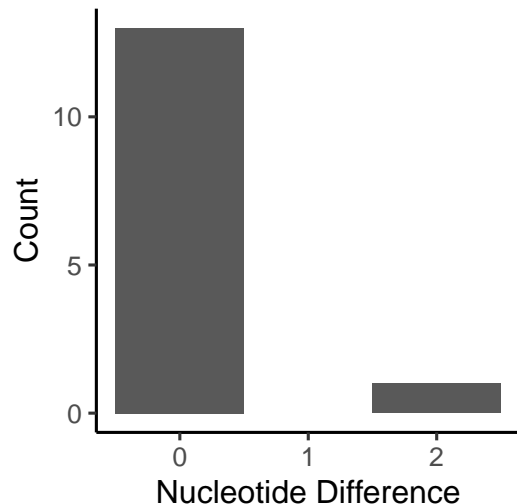
### IGHV3-11\*01

629 sequences assigned  
212 (33.7%) exact matches, in which:  
172 unique CDR3  
6 unique J



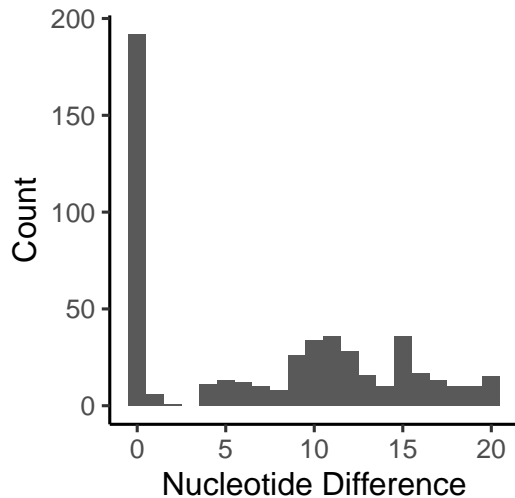
### IGHV3-13\*05

15 sequences assigned  
13 (86.7%) exact matches, in which:  
12 unique CDR3  
3 unique J



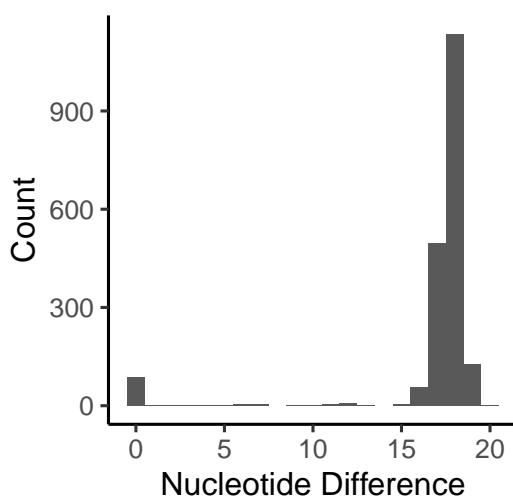
### IGHV3-7\*03

806 sequences assigned  
192 (23.8%) exact matches, in which:  
169 unique CDR3  
6 unique J



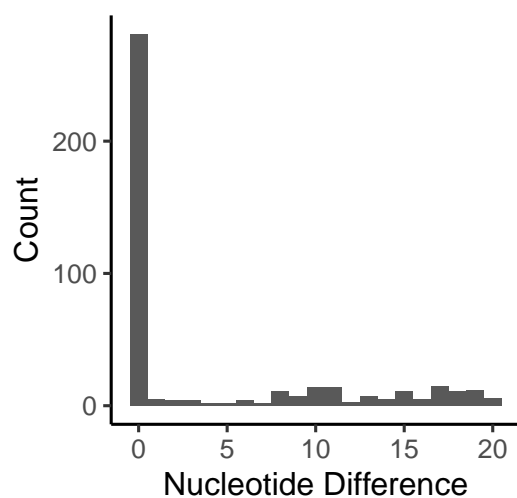
### IGHV3-11\*06

2041 sequences assigned  
86 (4.2%) exact matches, in which:  
69 unique CDR3  
6 unique J



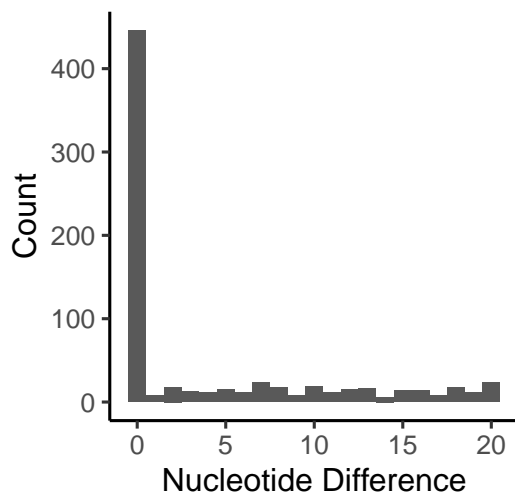
### IGHV3-15\*01\_02

641 sequences assigned  
281 (43.8%) exact matches, in which:  
236 unique CDR3  
6 unique J



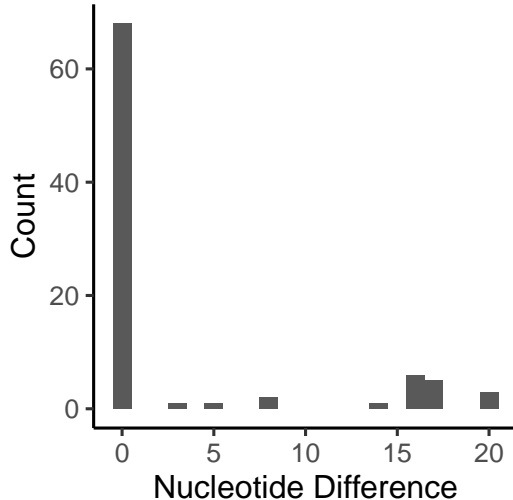
### IGHV3-9\*01

834 sequences assigned  
446 (53.5%) exact matches, in which:  
372 unique CDR3  
6 unique J



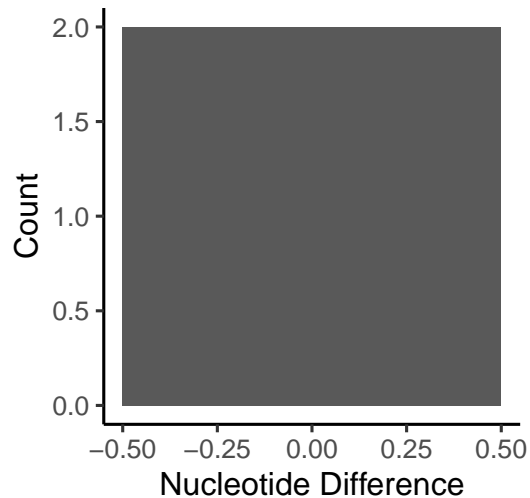
### IGHV3-13\*01

105 sequences assigned  
68 (64.8%) exact matches, in which:  
54 unique CDR3  
5 unique J



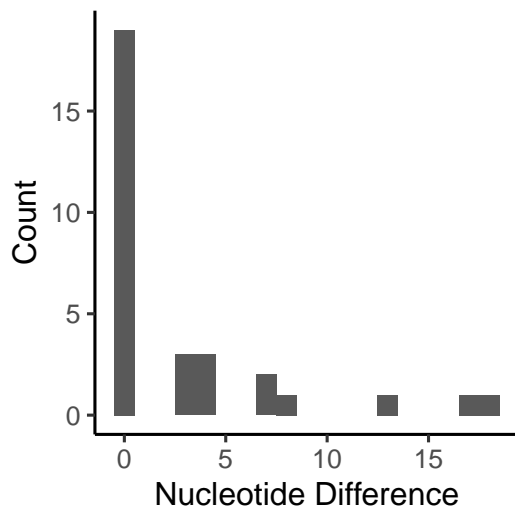
### IGHV3-19\*01

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



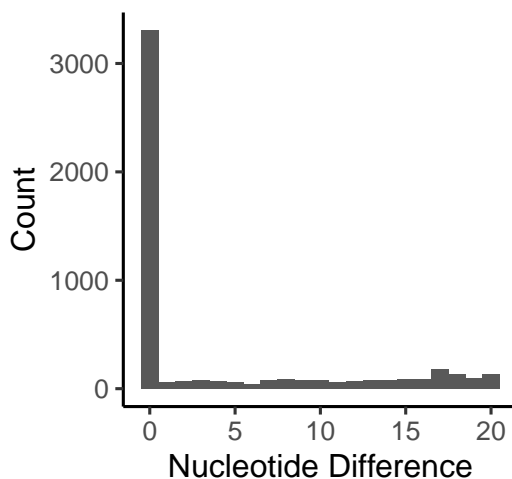
### IGHV3-20\*01\_02

62 sequences assigned  
19 (30.6%) exact matches, in which:  
15 unique CDR3  
5 unique J



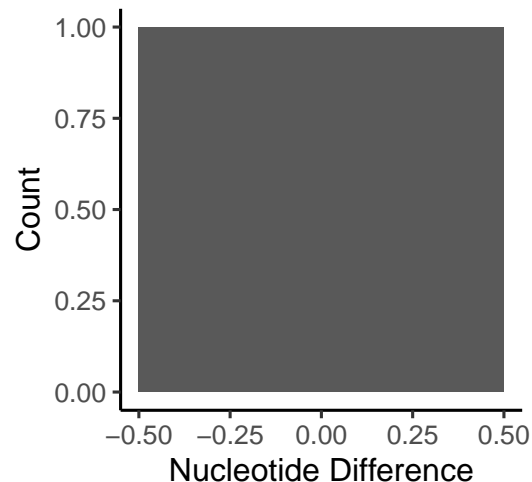
### IGHV3-23\*01\_04

8601 sequences assigned  
3305 (38.4%) exact matches, in which:  
2765 unique CDR3  
6 unique J



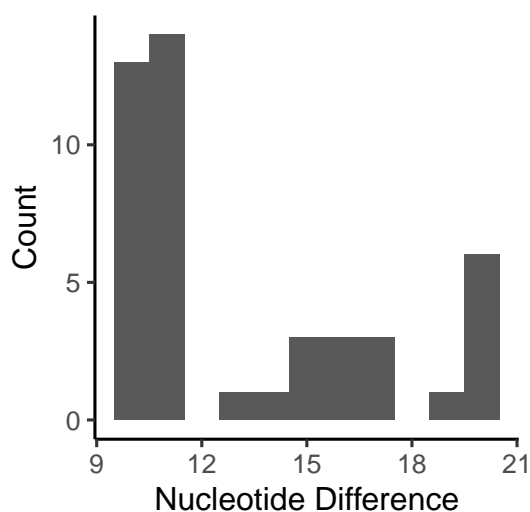
### IGHV3-35\*01

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



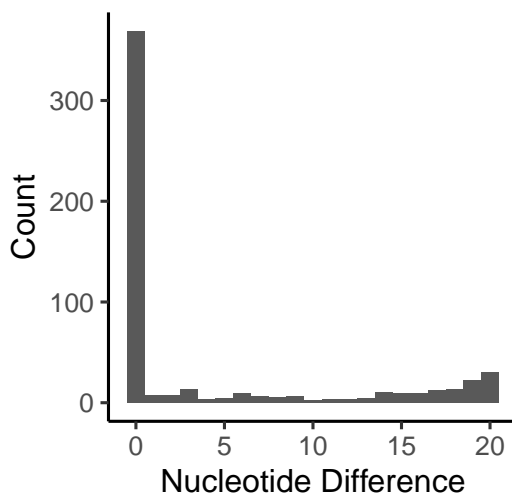
### IGHV3-20\*03\_04

60 sequences assigned  
No exact matches.



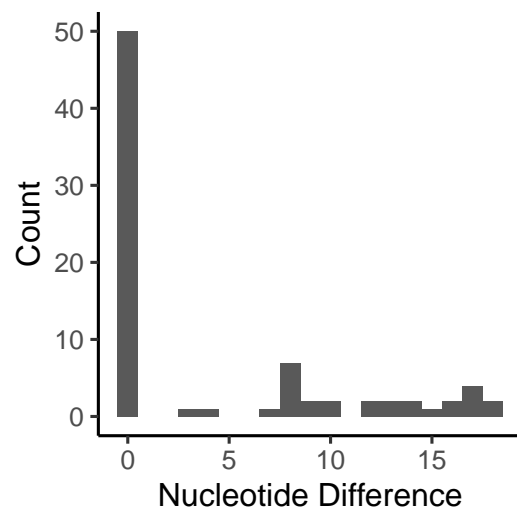
### IGHV3-30-3\*01

735 sequences assigned  
369 (50.2%) exact matches, in which:  
310 unique CDR3  
5 unique J



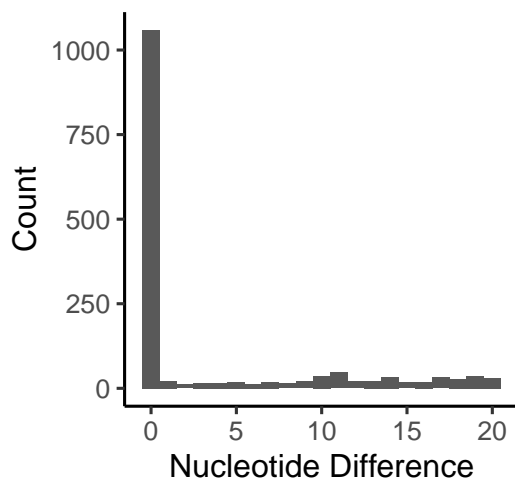
### IGHV3-43\*01

118 sequences assigned  
50 (42.4%) exact matches, in which:  
44 unique CDR3  
4 unique J



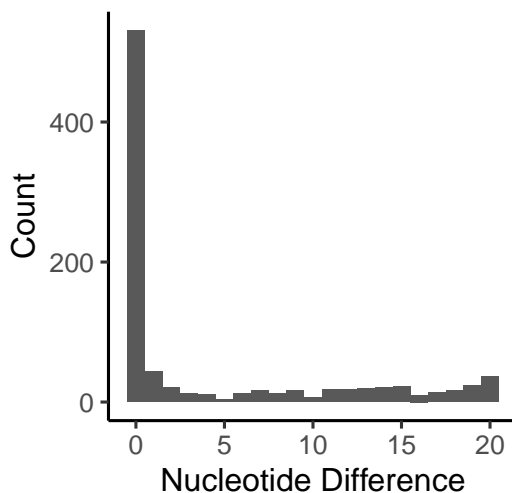
### IGHV3-21\*01\_02

1971 sequences assigned  
1059 (53.7%) exact matches, in which:  
865 unique CDR3  
6 unique J



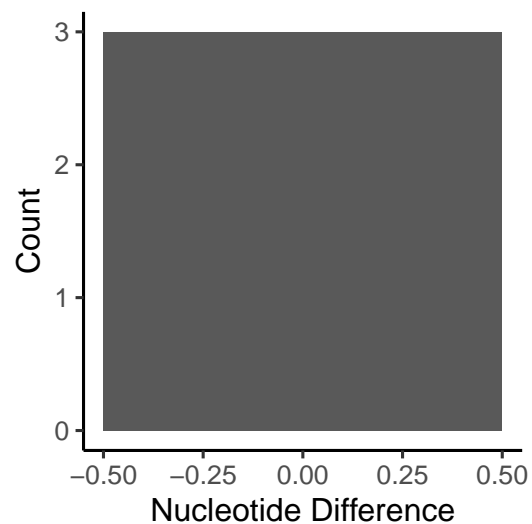
### IGHV3-33\*01

1147 sequences assigned  
531 (46.3%) exact matches, in which:  
452 unique CDR3  
6 unique J



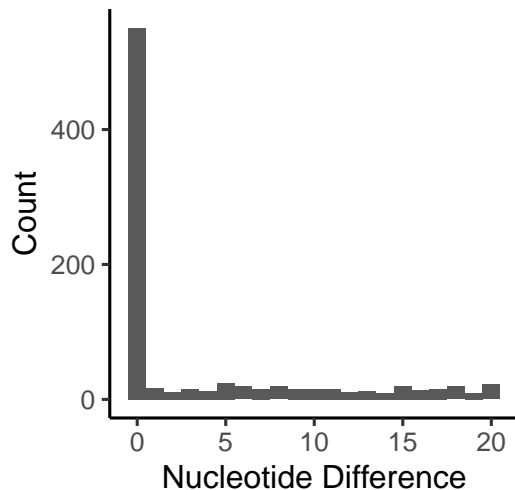
### IGHV3-47\*02

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



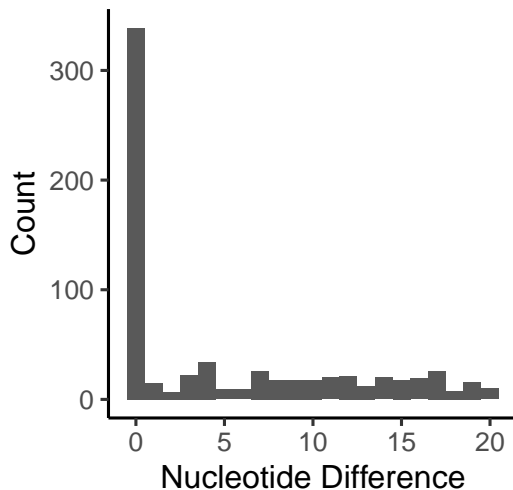
### IGHV3-48\*02

1328 sequences assigned  
551 (41.5%) exact matches, in which:  
432 unique CDR3  
6 unique J



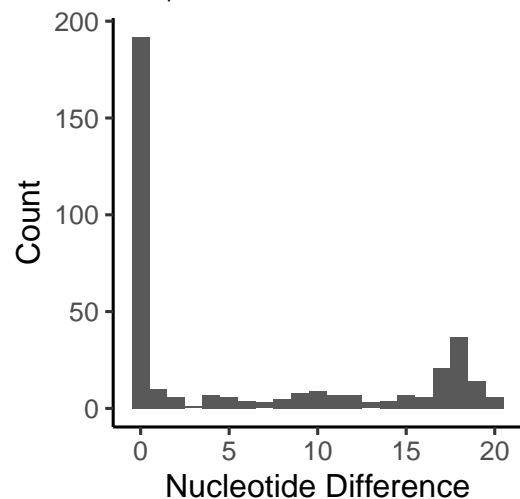
### IGHV3-53\*01\_02

1120 sequences assigned  
339 (30.3%) exact matches, in which:  
279 unique CDR3  
6 unique J



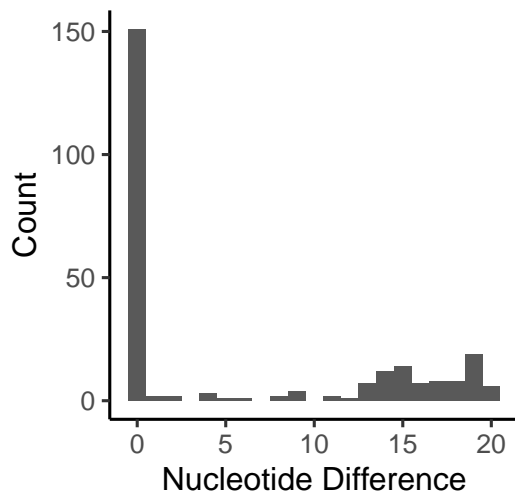
### IGHV3-66\*01

497 sequences assigned  
192 (38.6%) exact matches, in which:  
159 unique CDR3  
6 unique J



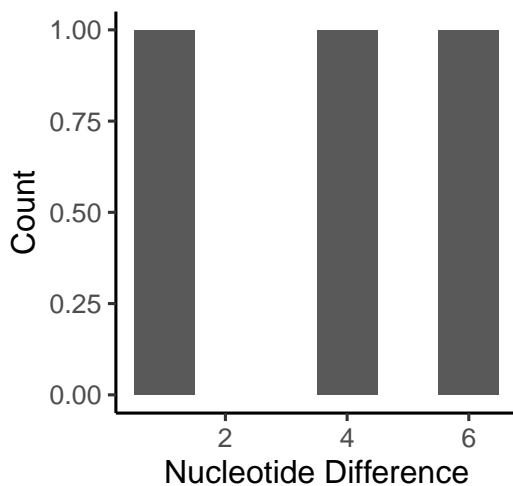
### IGHV3-49\*03\_05

310 sequences assigned  
151 (48.7%) exact matches, in which:  
123 unique CDR3  
5 unique J



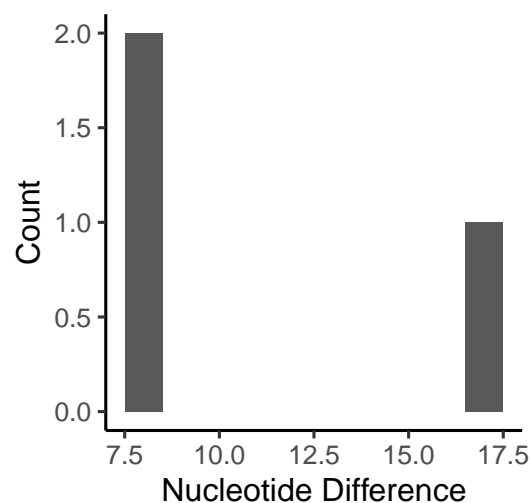
### IGHV3-64\*04

5 sequences assigned  
No exact matches.



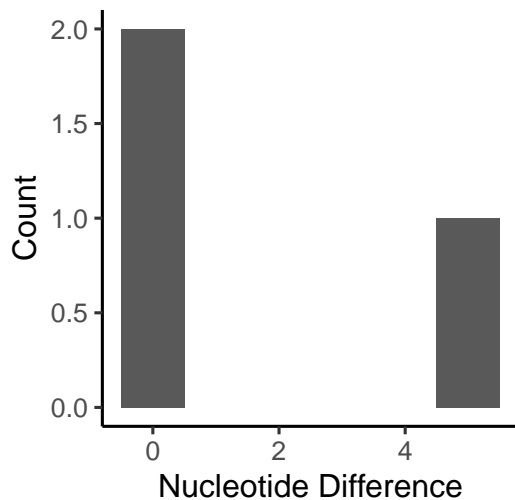
### IGHV3-69-1\*02

80 sequences assigned  
No exact matches.



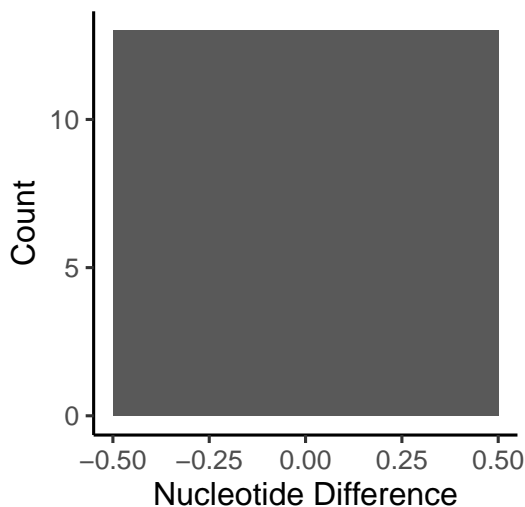
### IGHV3-52\*01\_03

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



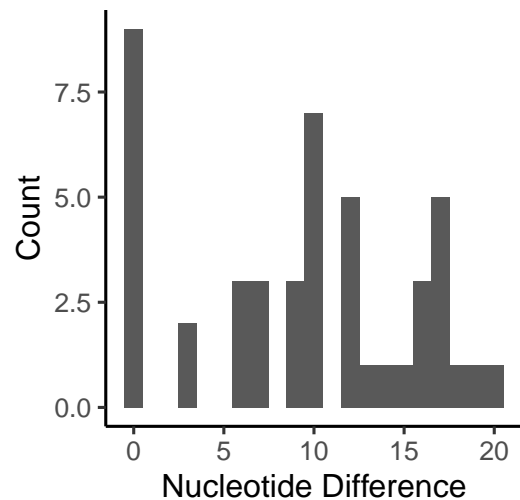
### IGHV3-64\*02\_07

15 sequences assigned  
13 (86.7%) exact matches, in which:  
9 unique CDR3  
3 unique J



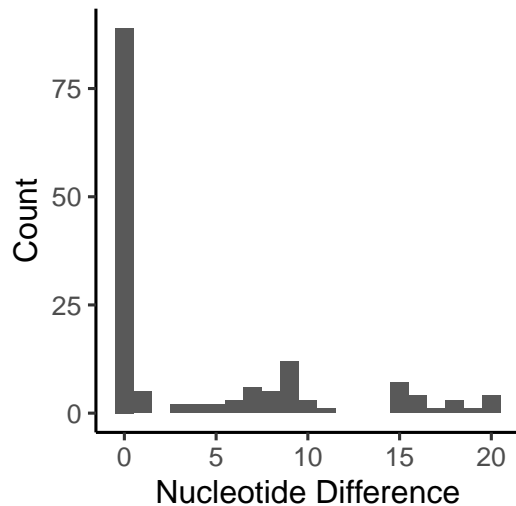
### IGHV3-72\*01

91 sequences assigned  
9 (9.9%) exact matches, in which:  
7 unique CDR3  
3 unique J



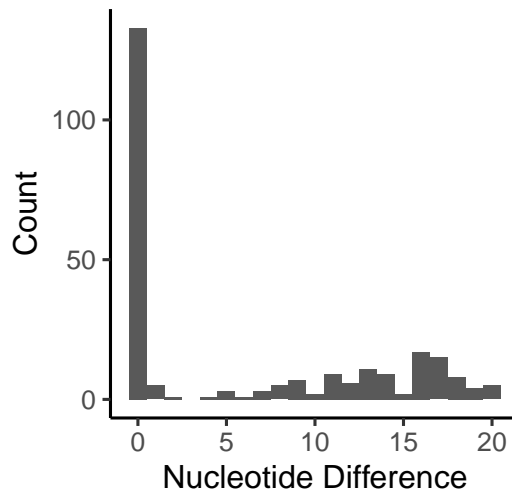
### IGHV3-73\*01\_02

169 sequences assigned  
89 (52.7%) exact matches, in which:  
72 unique CDR3  
5 unique J



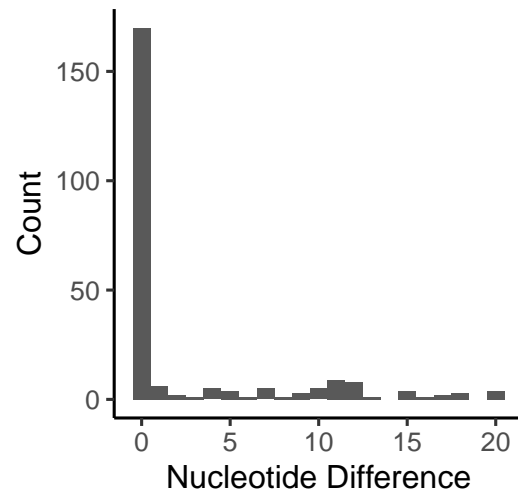
### IGHV3-64D\*06

304 sequences assigned  
133 (43.8%) exact matches, in which:  
100 unique CDR3  
4 unique J



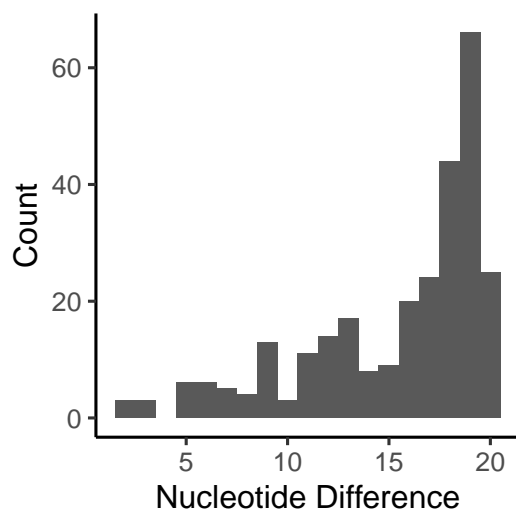
### IGHV4-4\*02\_03

310 sequences assigned  
170 (54.8%) exact matches, in which:  
163 unique CDR3  
6 unique J



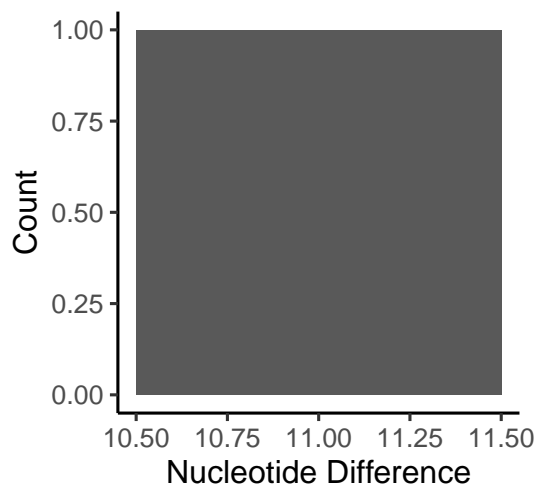
### IGHV3-74\*03

616 sequences assigned  
No exact matches.



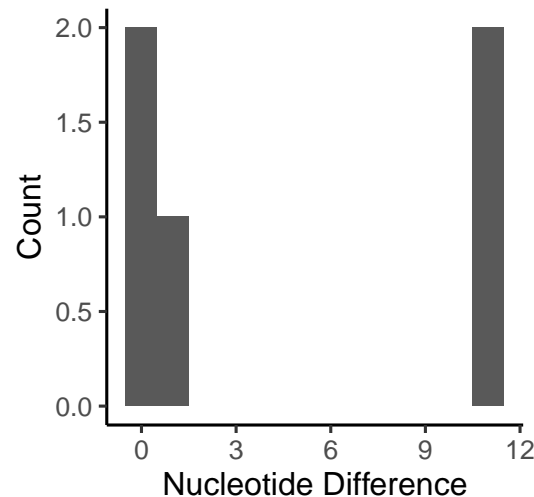
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



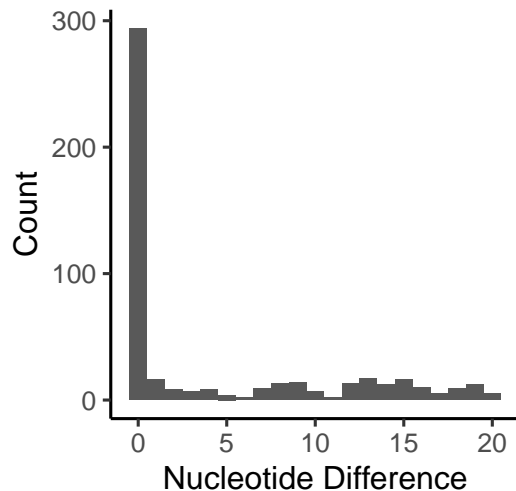
### IGHV4-28\*01\_07

10 sequences assigned  
2 (20%) exact matches, in which:  
2 unique CDR3  
2 unique J



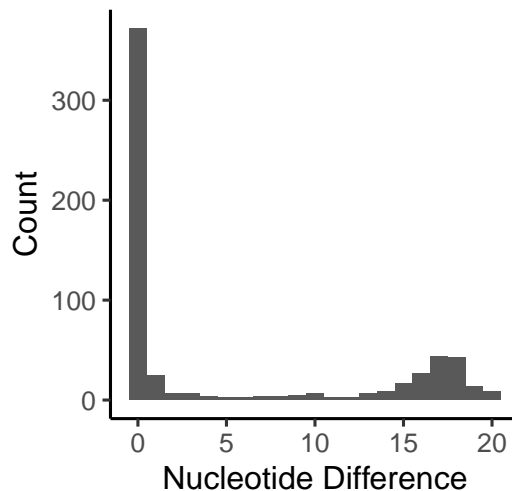
### IGHV3-74\*01\_02

555 sequences assigned  
294 (53%) exact matches, in which:  
241 unique CDR3  
6 unique J



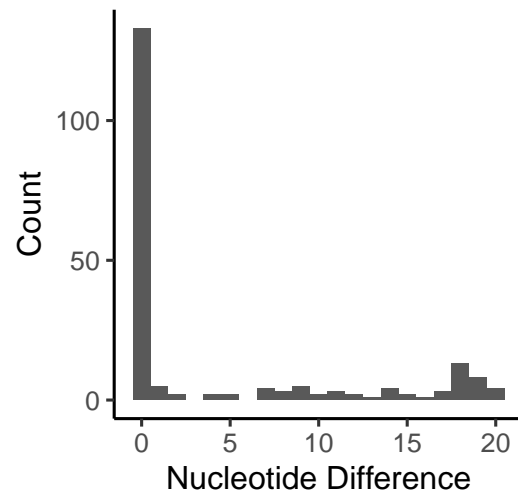
### IGHV4-4\*07

867 sequences assigned  
372 (42.9%) exact matches, in which:  
371 unique CDR3  
6 unique J



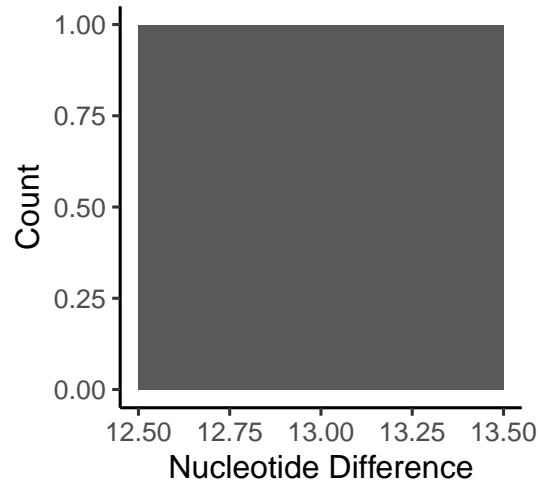
### IGHV4-30-2\*01

229 sequences assigned  
133 (58.1%) exact matches, in which:  
125 unique CDR3  
6 unique J



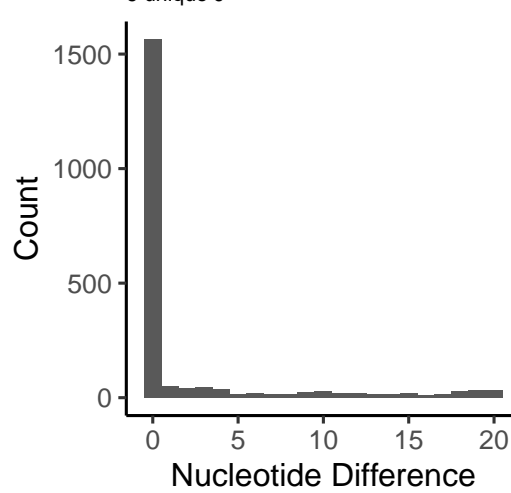
### IGHV4-30-4\*08

6 sequences assigned  
No exact matches.



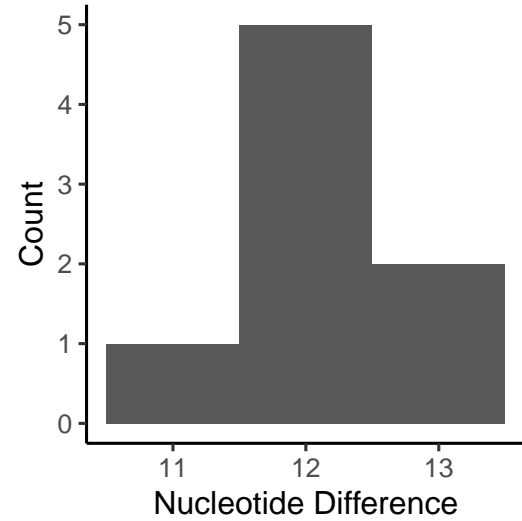
### IGHV4-39\*02\_C258G

2740 sequences assigned  
1564 (57.1%) exact matches, in which:  
1533 unique CDR3  
6 unique J



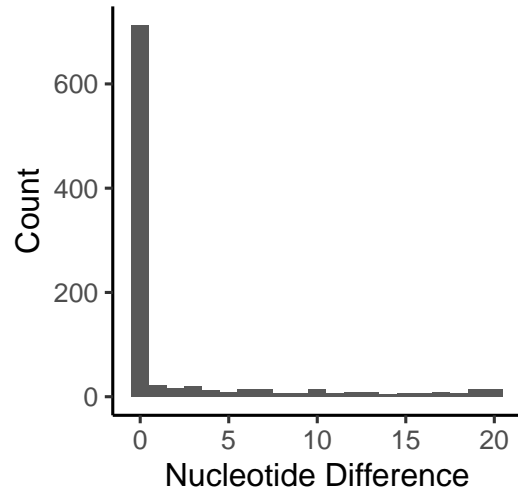
### IGHV4/OR15-8\*01

9 sequences assigned  
No exact matches.



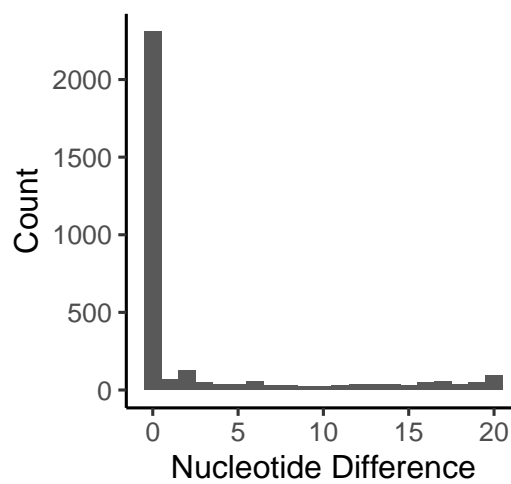
### IGHV4-31\*02

1194 sequences assigned  
713 (59.7%) exact matches, in which:  
702 unique CDR3  
6 unique J



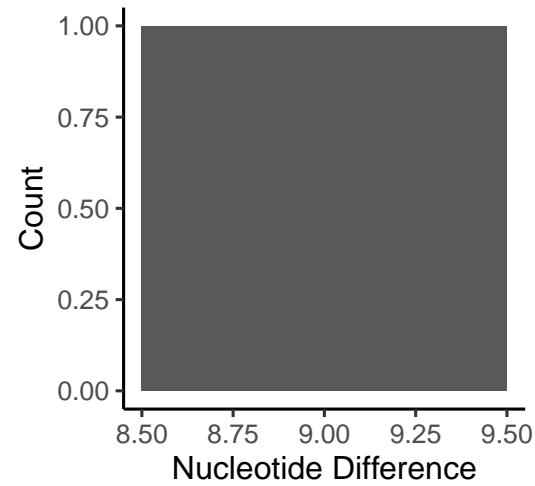
### IGHV4-59\*02\_G88A

4051 sequences assigned  
2308 (57%) exact matches, in which:  
2292 unique CDR3  
6 unique J



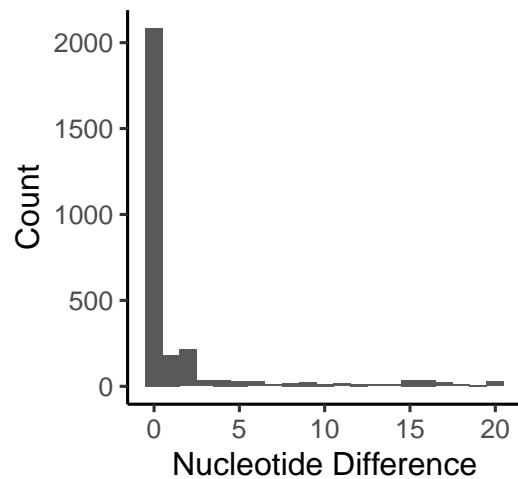
### IGHV4/OR15-8\*02

38 sequences assigned  
No exact matches.



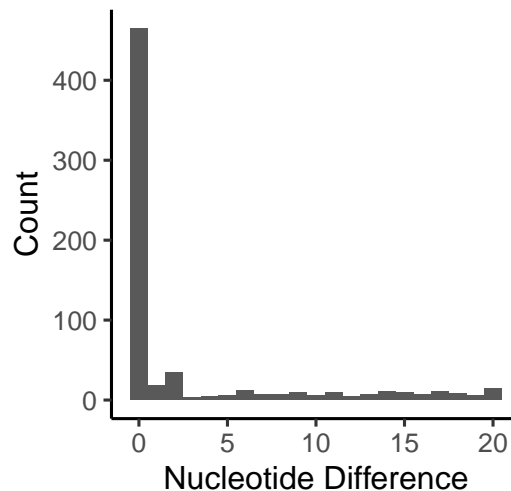
### IGHV4-34\*01\_02

3946 sequences assigned  
2085 (52.8%) exact matches, in which:  
2039 unique CDR3  
6 unique J



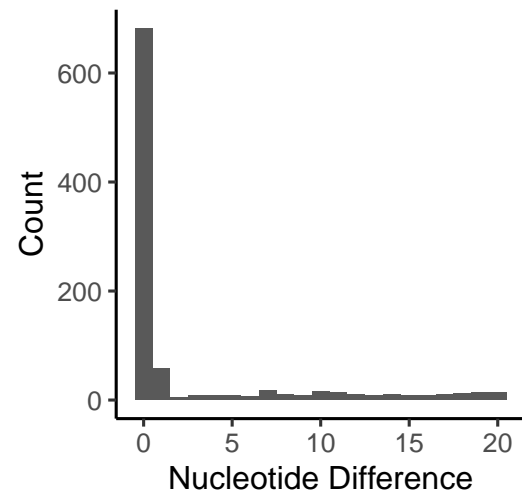
### IGHV4-61\*01

876 sequences assigned  
465 (53.1%) exact matches, in which:  
464 unique CDR3  
6 unique J



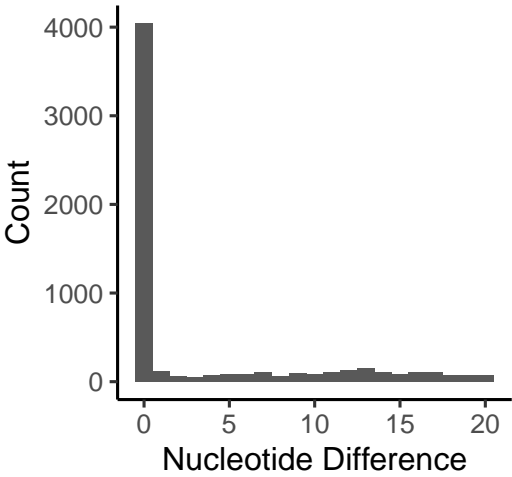
### IGHV5-10-1\*01\_03

1039 sequences assigned  
682 (65.6%) exact matches, in which:  
632 unique CDR3  
6 unique J



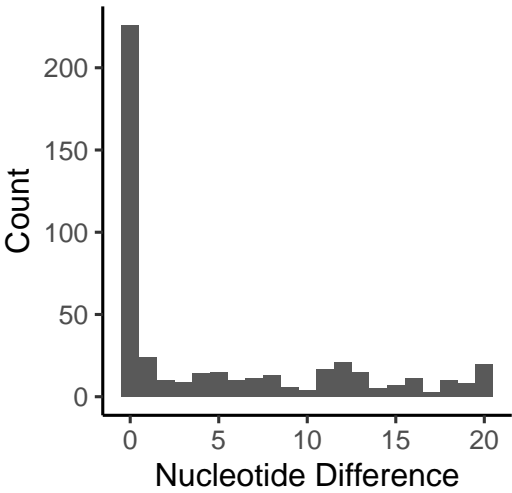
# IGHV5-51\*07\_A128G

6220 sequences assigned  
4042 (65%) exact matches, in which:  
3559 unique CDR3  
6 unique J



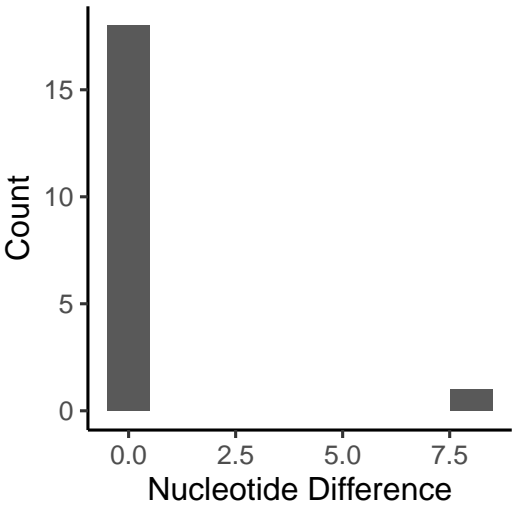
# IGHV6-1\*01\_02

712 sequences assigned  
226 (31.7%) exact matches, in which:  
222 unique CDR3  
6 unique J



# IGHV7-4-1\*01

19 sequences assigned  
18 (94.7%) exact matches, in which:  
18 unique CDR3  
5 unique J







Warning – no inferred sequences found.