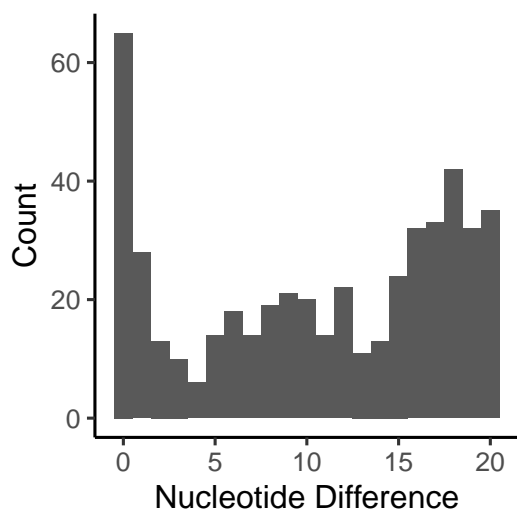


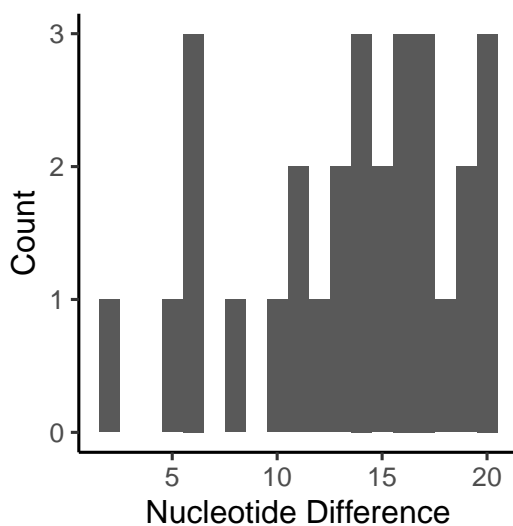
### IGHV1-2\*02

849 sequences assigned  
65 (7.7%) exact matches, in which:  
63 unique CDR3  
6 unique J



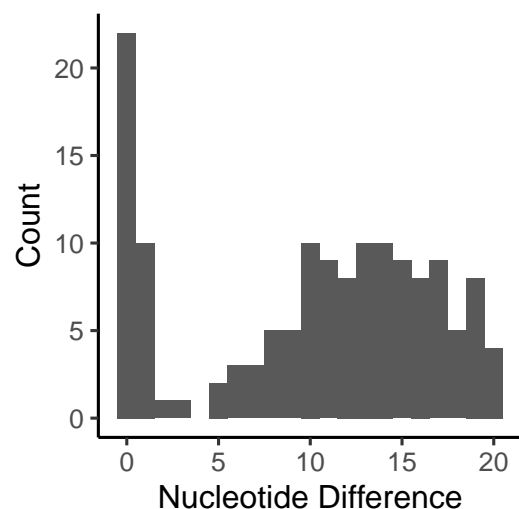
### IGHV1-3\*04

66 sequences assigned  
No exact matches.



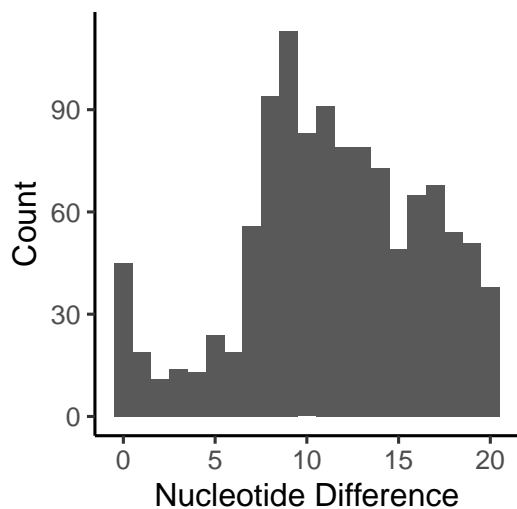
### IGHV1-24\*01

179 sequences assigned  
22 (12.3%) exact matches, in which:  
21 unique CDR3  
4 unique J



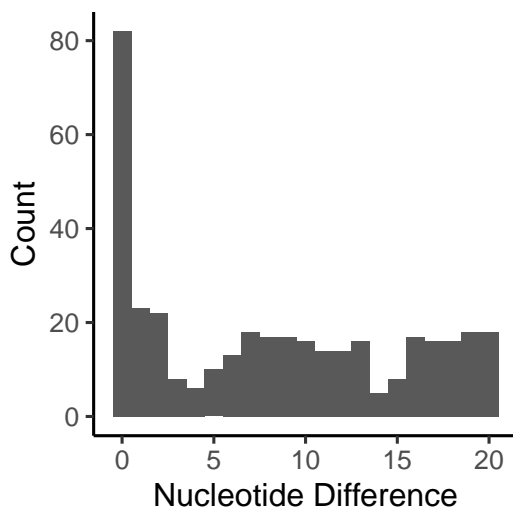
### IGHV1-2\*06

1449 sequences assigned  
45 (3.1%) exact matches, in which:  
45 unique CDR3  
5 unique J



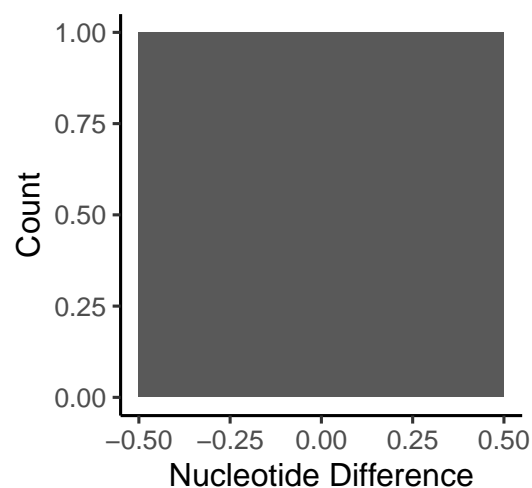
### IGHV1-8\*01

612 sequences assigned  
82 (13.4%) exact matches, in which:  
81 unique CDR3  
6 unique J



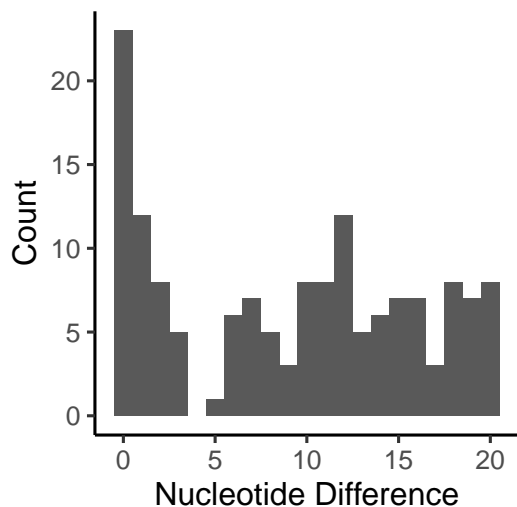
### IGHV1-45\*02

13 sequences assigned  
1 (7.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



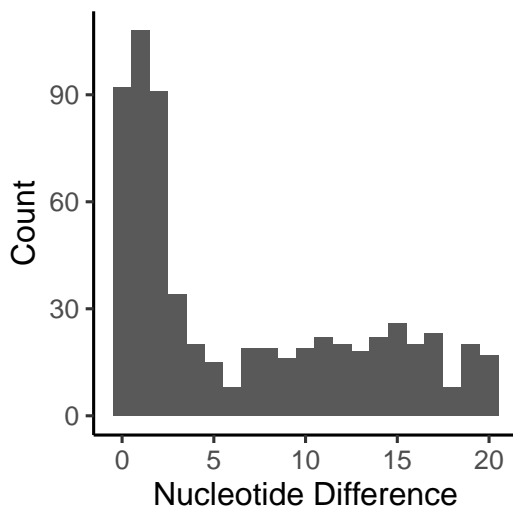
### IGHV1-3\*01

300 sequences assigned  
23 (7.7%) exact matches, in which:  
20 unique CDR3  
3 unique J



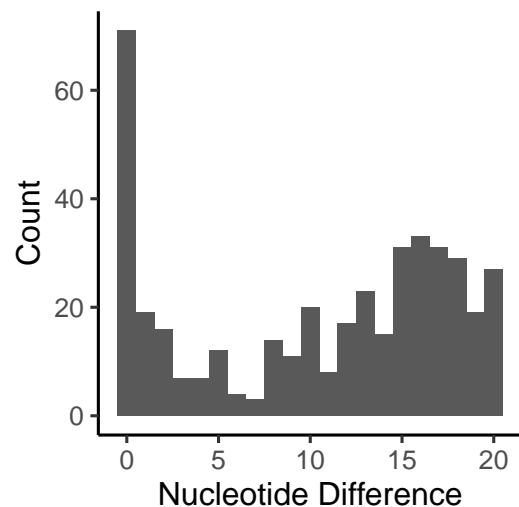
### IGHV1-18\*01

967 sequences assigned  
92 (9.5%) exact matches, in which:  
73 unique CDR3  
5 unique J



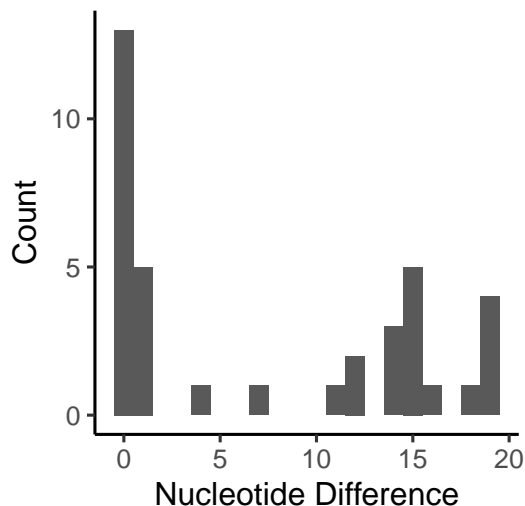
### IGHV1-46\*01

1274 sequences assigned  
71 (5.6%) exact matches, in which:  
63 unique CDR3  
4 unique J



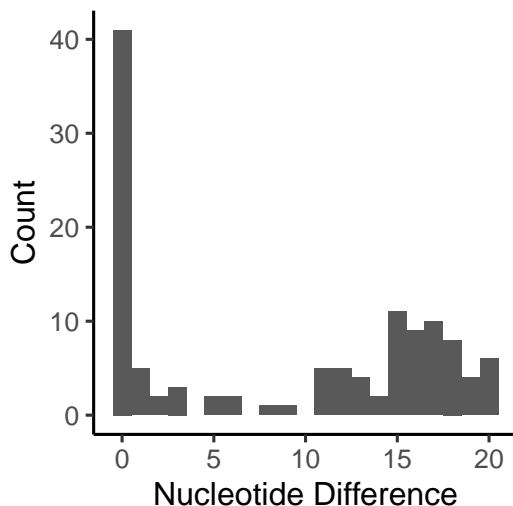
### IGHV1-58\*01

70 sequences assigned  
13 (18.6%) exact matches, in which:  
13 unique CDR3  
6 unique J



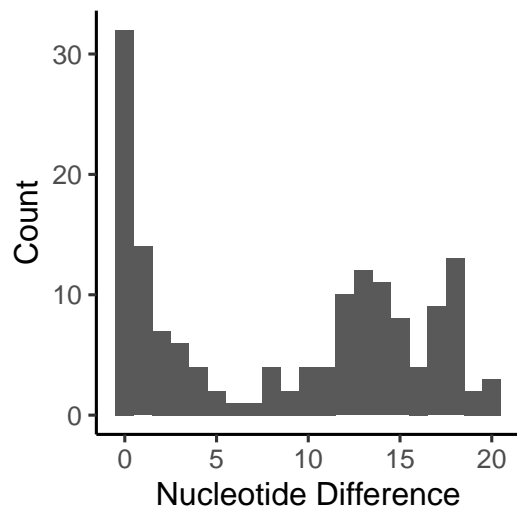
### IGHV1-69\*17

204 sequences assigned  
41 (20.1%) exact matches, in which:  
41 unique CDR3  
6 unique J



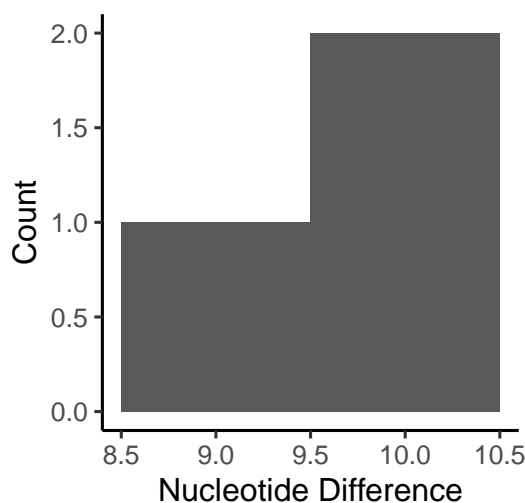
### IGHV2-26\*01

209 sequences assigned  
32 (15.3%) exact matches, in which:  
31 unique CDR3  
5 unique J



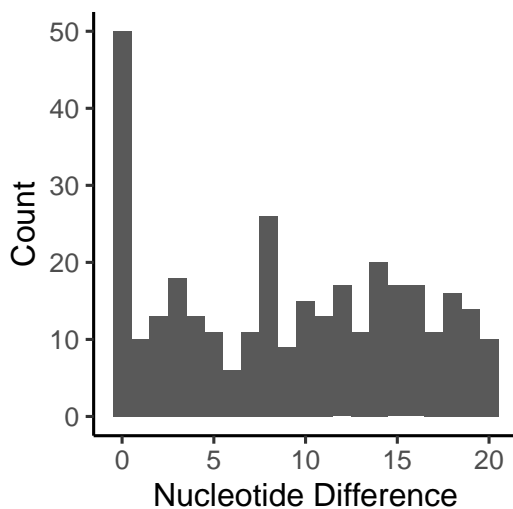
### IGHV1-58\*02

11 sequences assigned  
No exact matches.



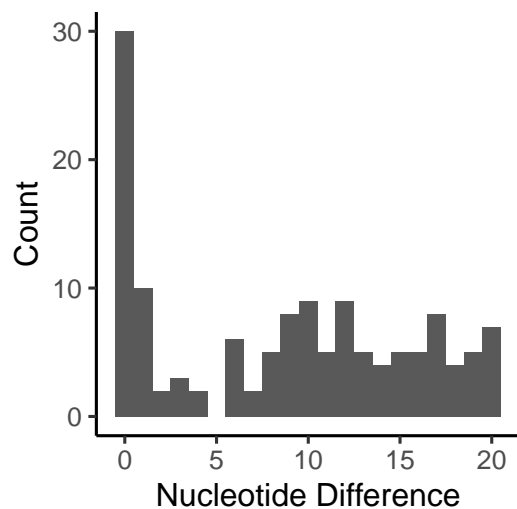
### IGHV2-5\*01

426 sequences assigned  
50 (11.7%) exact matches, in which:  
44 unique CDR3  
6 unique J



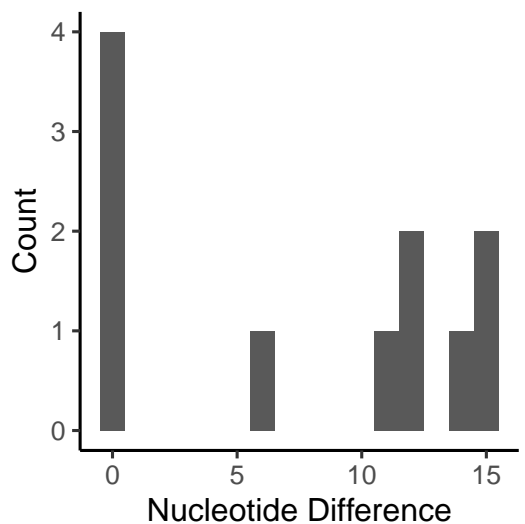
### IGHV2-70\*01

179 sequences assigned  
30 (16.8%) exact matches, in which:  
30 unique CDR3  
6 unique J



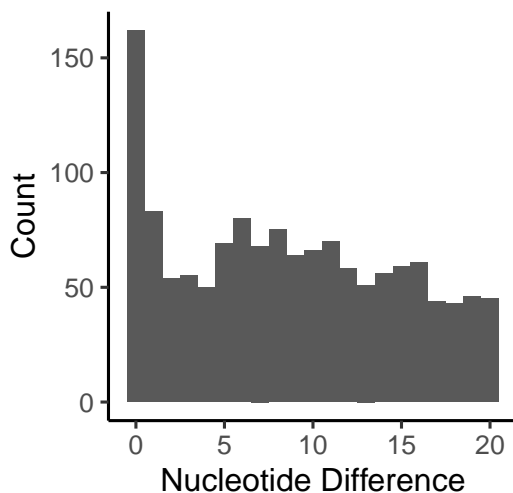
### IGHV1-69-2\*01

38 sequences assigned  
4 (10.5%) exact matches, in which:  
4 unique CDR3  
3 unique J



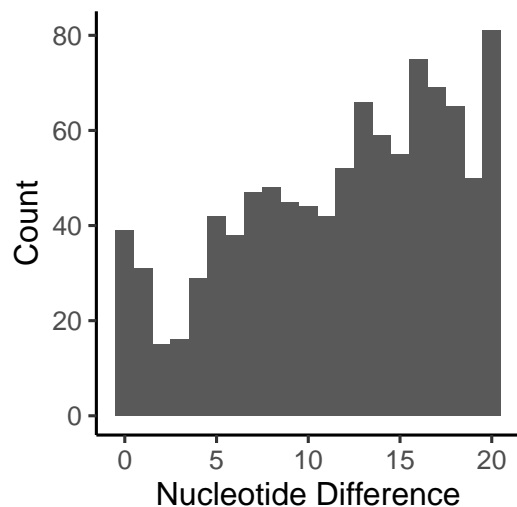
### IGHV2-5\*02

1769 sequences assigned  
162 (9.2%) exact matches, in which:  
125 unique CDR3  
6 unique J



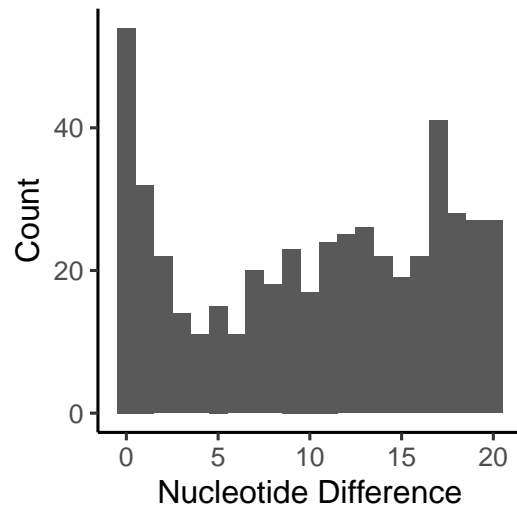
### IGHV3-7\*01

1528 sequences assigned  
39 (2.6%) exact matches, in which:  
37 unique CDR3  
5 unique J



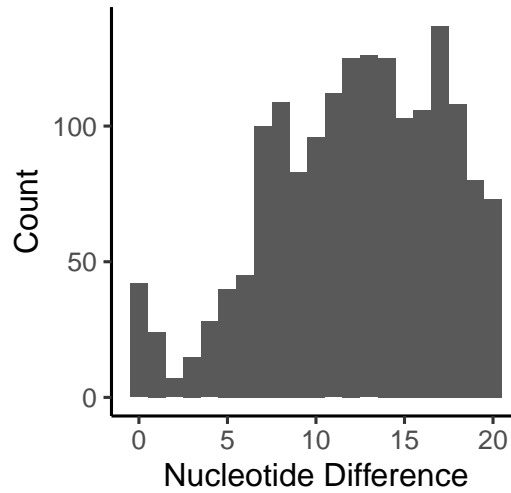
### IGHV3-9\*01

805 sequences assigned  
54 (6.7%) exact matches, in which:  
54 unique CDR3  
5 unique J



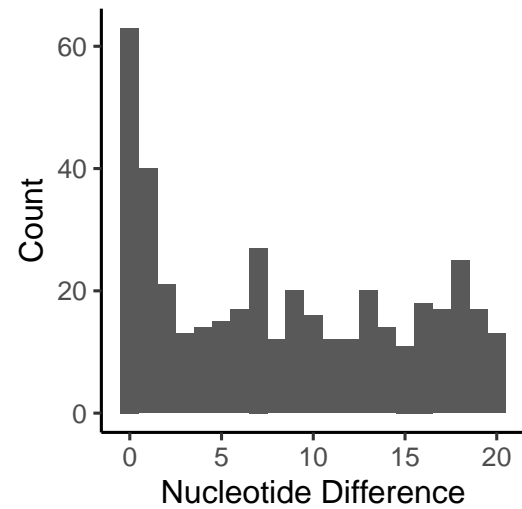
### IGHV3-15\*01

2406 sequences assigned  
42 (1.7%) exact matches, in which:  
41 unique CDR3  
5 unique J



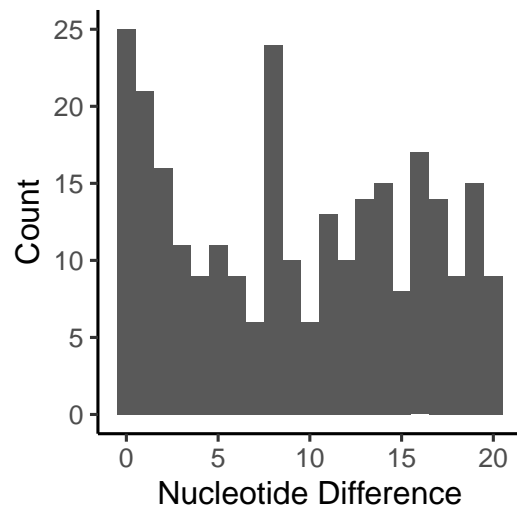
### IGHV3-21\*01

755 sequences assigned  
63 (8.3%) exact matches, in which:  
62 unique CDR3  
6 unique J



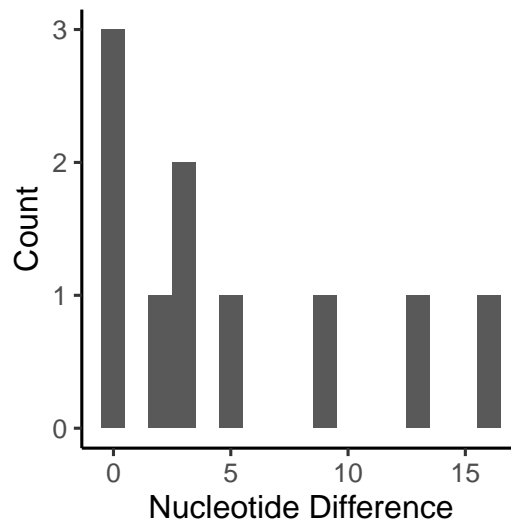
### IGHV3-11\*01

511 sequences assigned  
25 (4.9%) exact matches, in which:  
25 unique CDR3  
4 unique J



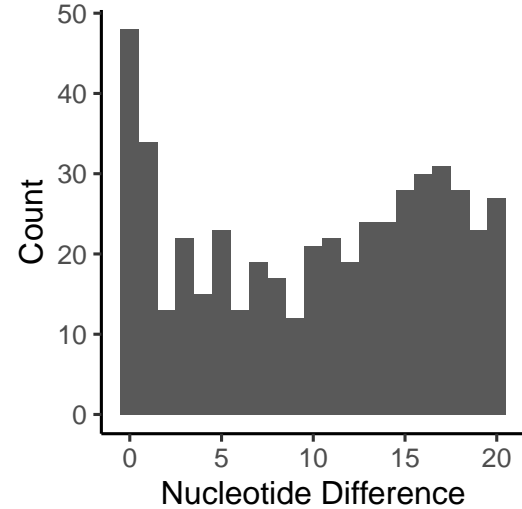
### IGHV3-20\*01

15 sequences assigned  
3 (20%) exact matches, in which:  
3 unique CDR3  
2 unique J



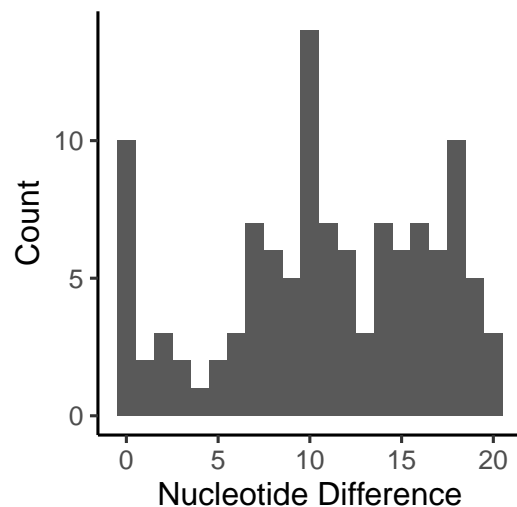
### IGHV3-33\*01

862 sequences assigned  
48 (5.6%) exact matches, in which:  
48 unique CDR3  
4 unique J



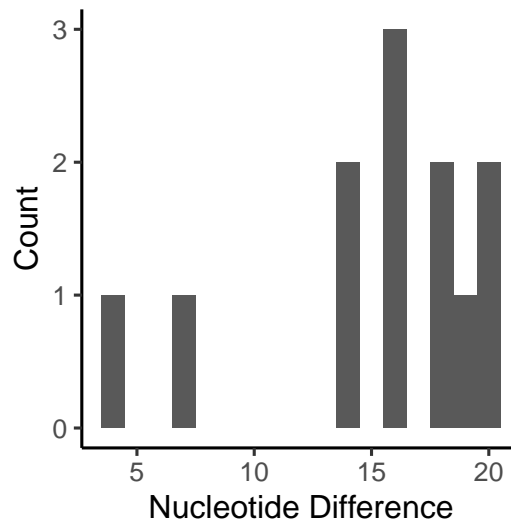
### IGHV3-13\*01

190 sequences assigned  
10 (5.3%) exact matches, in which:  
10 unique CDR3  
3 unique J



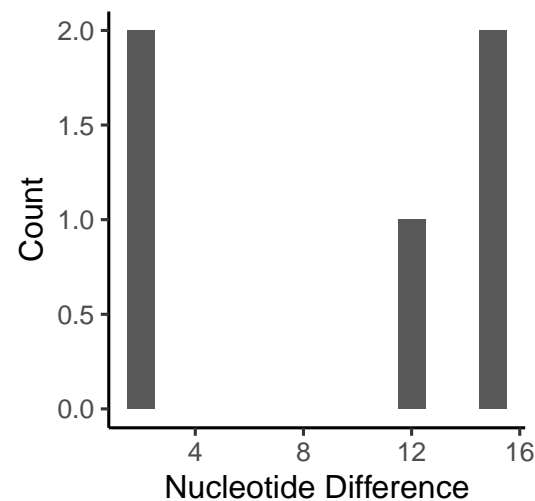
### IGHV3-20\*04

39 sequences assigned  
No exact matches.



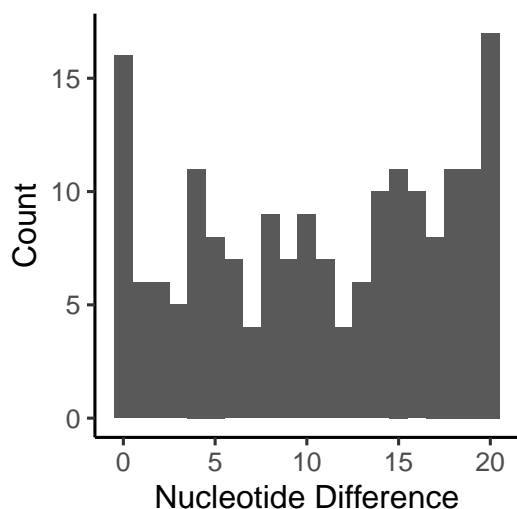
### IGHV3-43\*01

11 sequences assigned  
No exact matches.



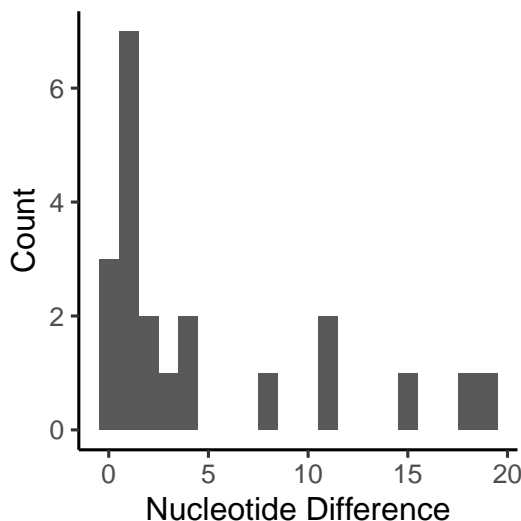
### IGHV3-48\*02

274 sequences assigned  
16 (5.8%) exact matches, in which:  
16 unique CDR3  
5 unique J



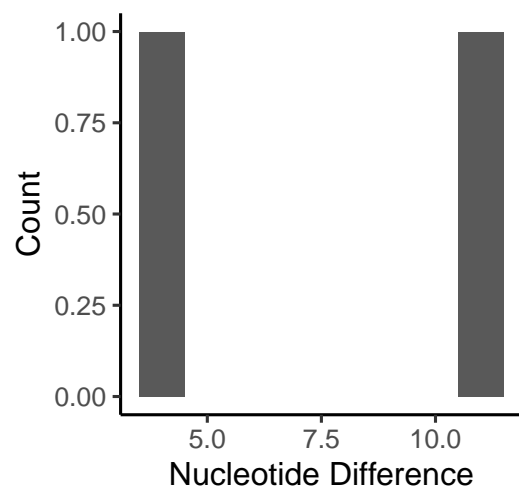
### IGHV3-49\*05

47 sequences assigned  
3 (6.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



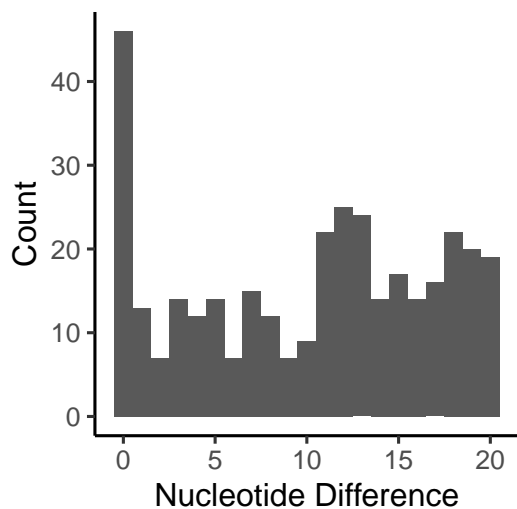
### IGHV3-64\*02

3 sequences assigned  
No exact matches.



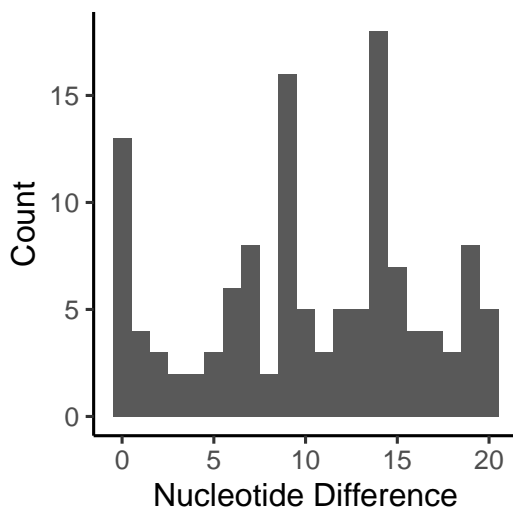
### IGHV3-48\*03

519 sequences assigned  
46 (8.9%) exact matches, in which:  
46 unique CDR3  
5 unique J



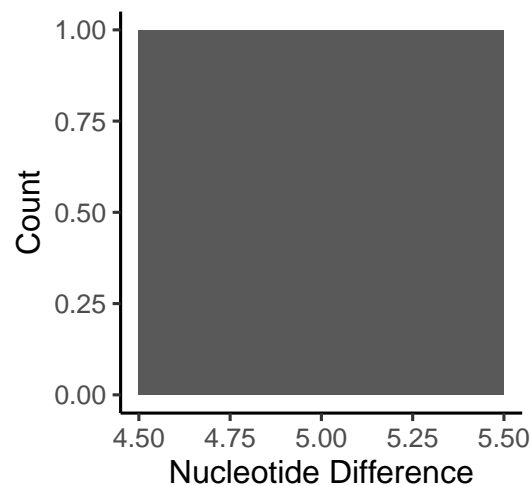
### IGHV3-53\*01

217 sequences assigned  
13 (6%) exact matches, in which:  
12 unique CDR3  
3 unique J



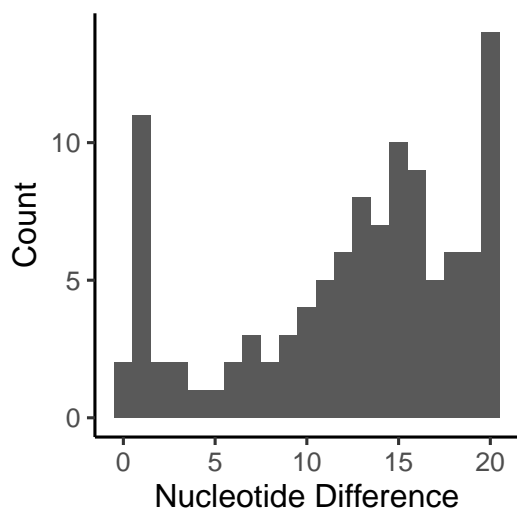
### IGHV3-64\*05

1 sequences assigned  
No exact matches.



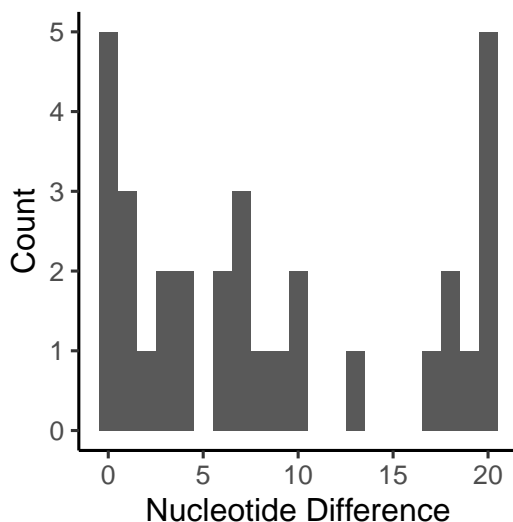
### IGHV3-49\*04

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



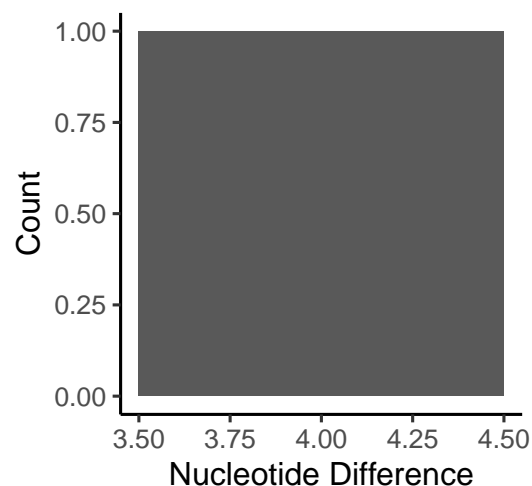
### IGHV3-53\*02

47 sequences assigned  
5 (10.6%) exact matches, in which:  
5 unique CDR3  
2 unique J



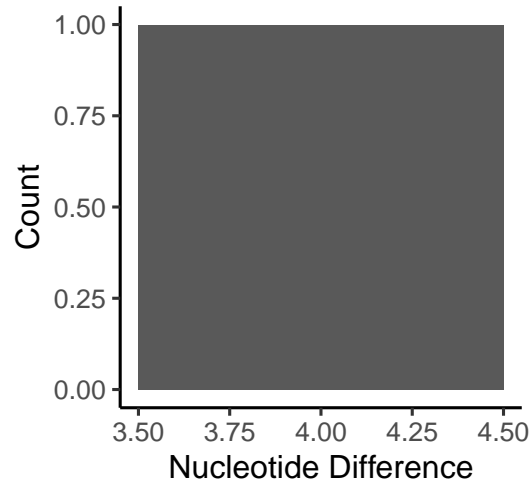
### IGHV3-66\*01

1 sequences assigned  
No exact matches.



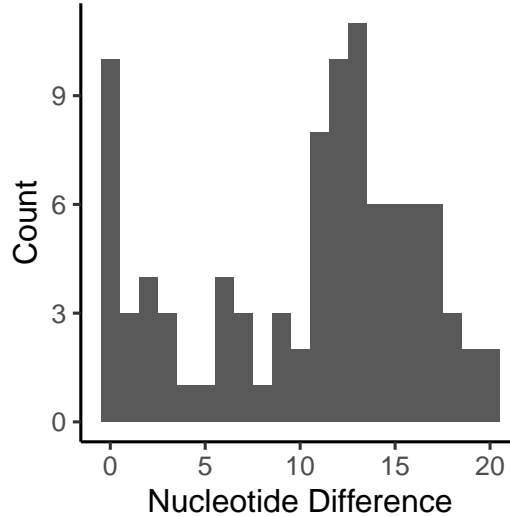
### IGHV3-66\*04

1 sequences assigned  
No exact matches.



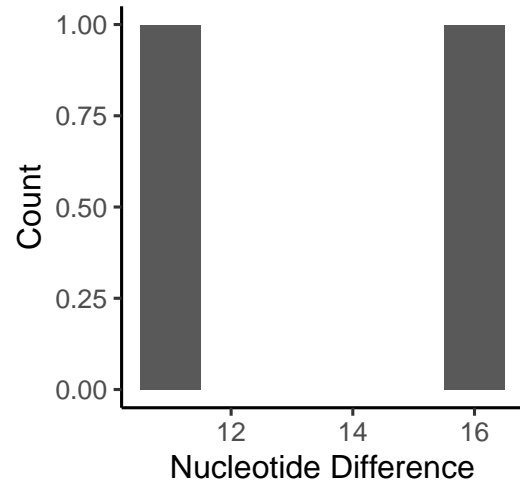
### IGHV3-73\*02

216 sequences assigned  
10 (4.6%) exact matches, in which:  
10 unique CDR3  
2 unique J



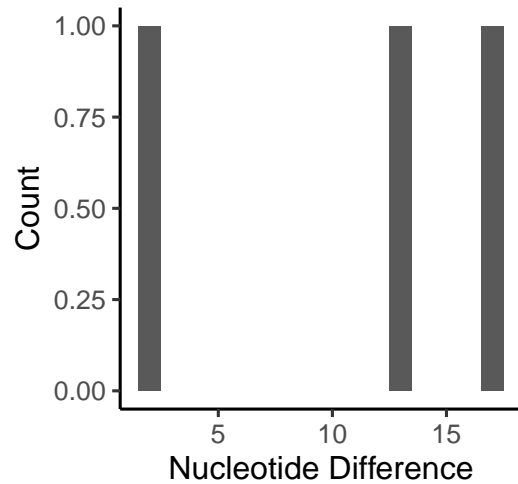
### IGHV3-43D\*04

7 sequences assigned  
No exact matches.



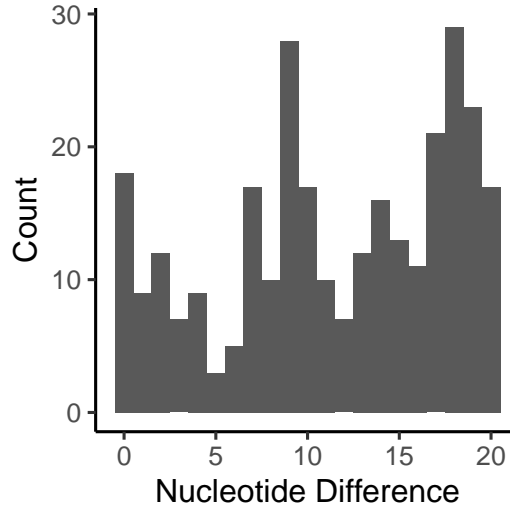
### IGHV3-69-1\*01

4 sequences assigned  
No exact matches.



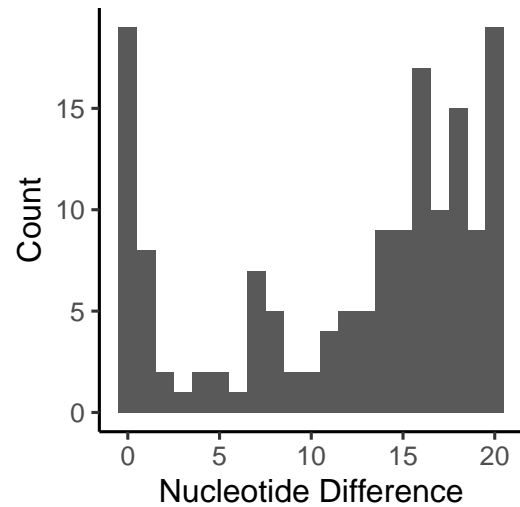
### IGHV3-74\*01

398 sequences assigned  
18 (4.5%) exact matches, in which:  
14 unique CDR3  
4 unique J



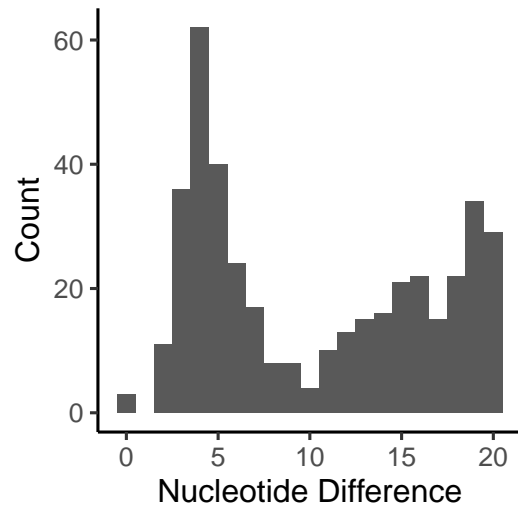
### IGHV4-4\*02

326 sequences assigned  
19 (5.8%) exact matches, in which:  
19 unique CDR3  
5 unique J



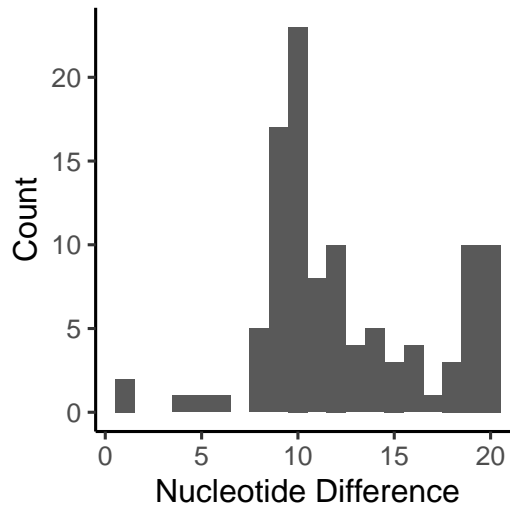
### IGHV3-72\*01

536 sequences assigned  
3 (0.6%) exact matches, in which:  
3 unique CDR3  
3 unique J



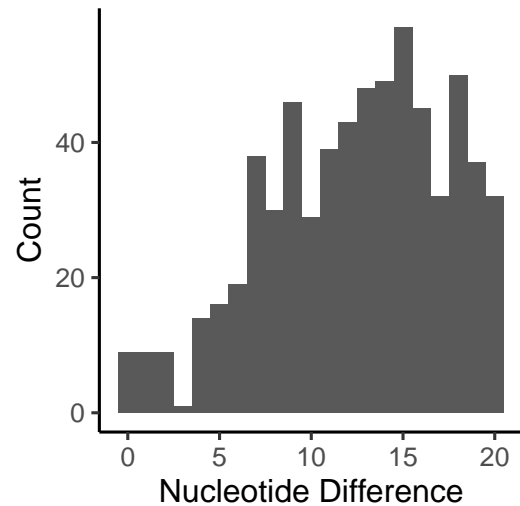
### IGHV3-74\*03

145 sequences assigned  
No exact matches.



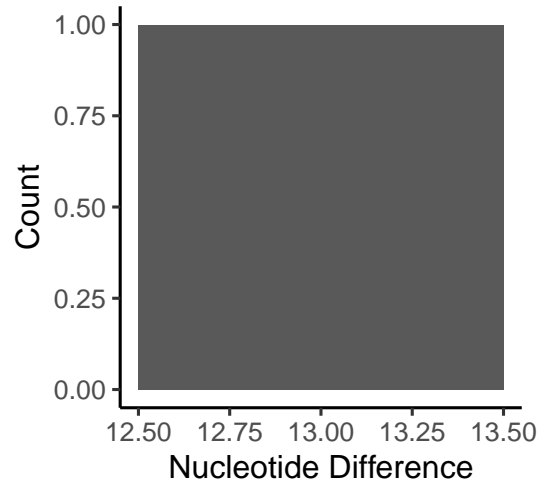
### IGHV4-4\*07

925 sequences assigned  
9 (1%) exact matches, in which:  
9 unique CDR3  
5 unique J



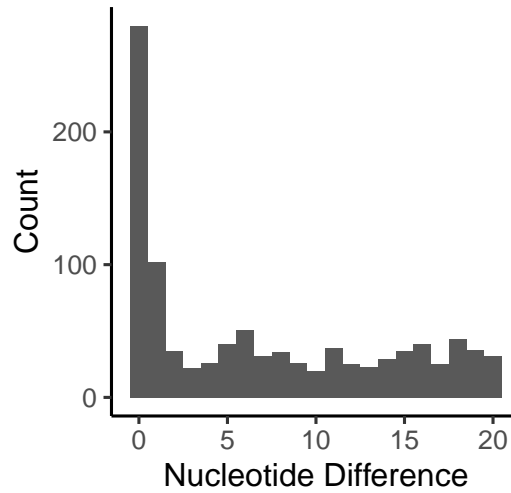
### IGHV4-28\*01

1 sequences assigned  
No exact matches.



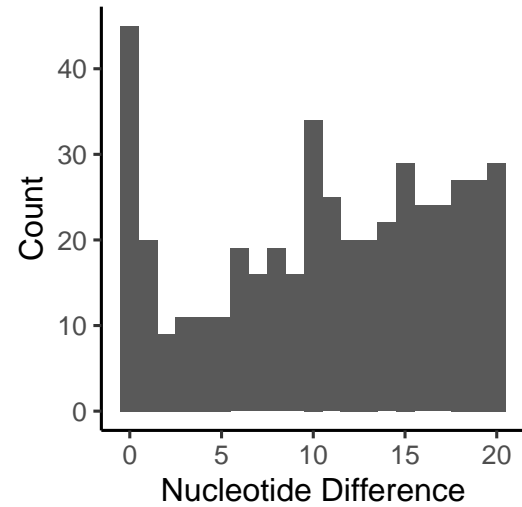
### IGHV4-34\*01

1608 sequences assigned  
280 (17.4%) exact matches, in which:  
271 unique CDR3  
7 unique J



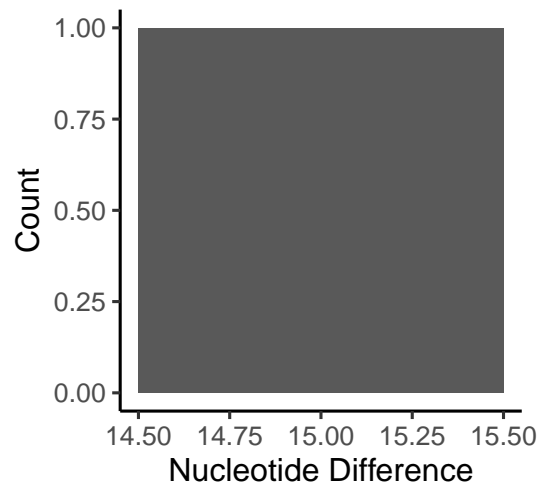
### IGHV4-39\*01

909 sequences assigned  
45 (5%) exact matches, in which:  
45 unique CDR3  
5 unique J



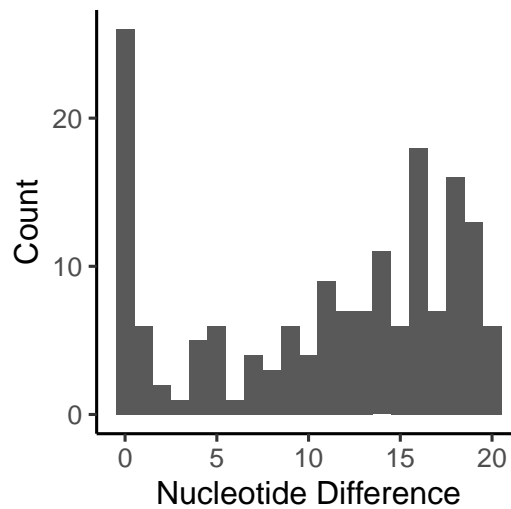
### IGHV4-28\*05

1 sequences assigned  
No exact matches.



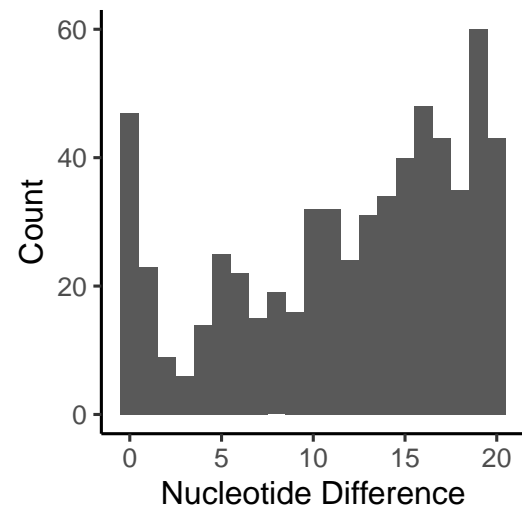
### IGHV4-38-2\*01

296 sequences assigned  
26 (8.8%) exact matches, in which:  
26 unique CDR3  
4 unique J



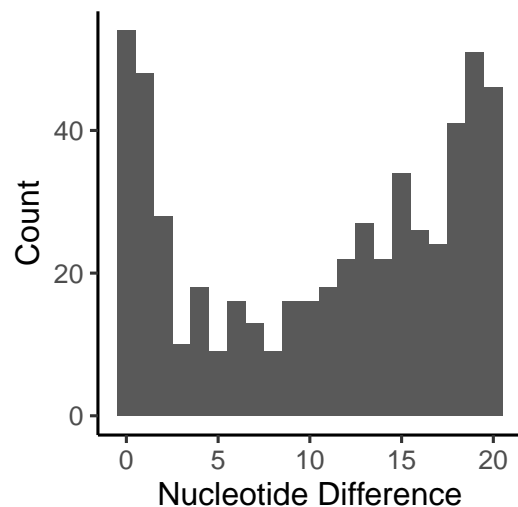
### IGHV4-59\*01

990 sequences assigned  
47 (4.7%) exact matches, in which:  
47 unique CDR3  
6 unique J



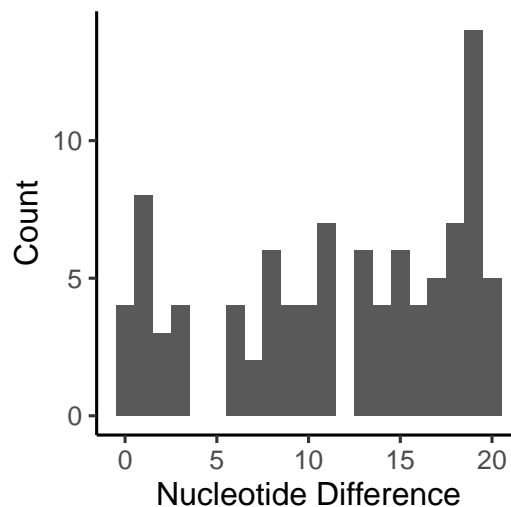
### IGHV4-31\*03

1007 sequences assigned  
54 (5.4%) exact matches, in which:  
50 unique CDR3  
6 unique J



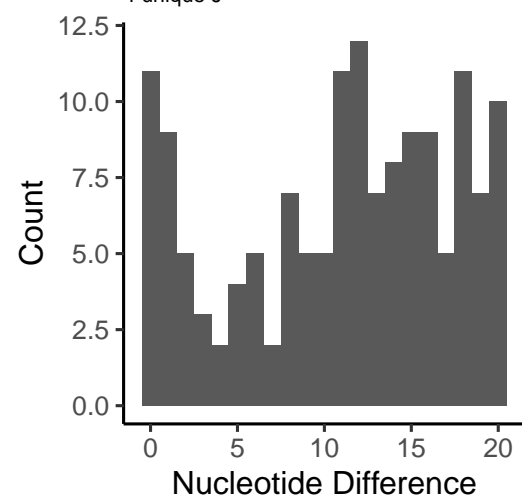
### IGHV4-38-2\*02

192 sequences assigned  
4 (2.1%) exact matches, in which:  
4 unique CDR3  
4 unique J



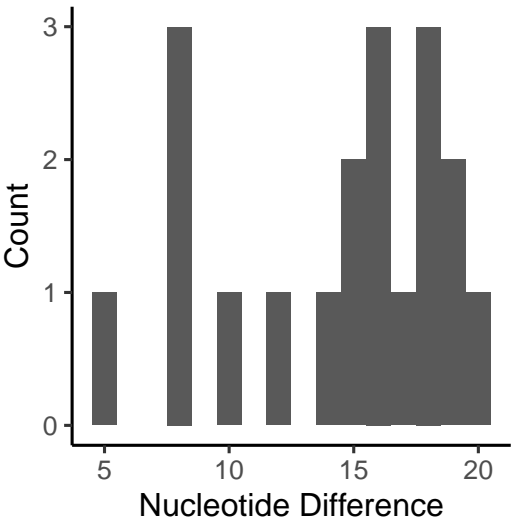
### IGHV4-61\*01

255 sequences assigned  
11 (4.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



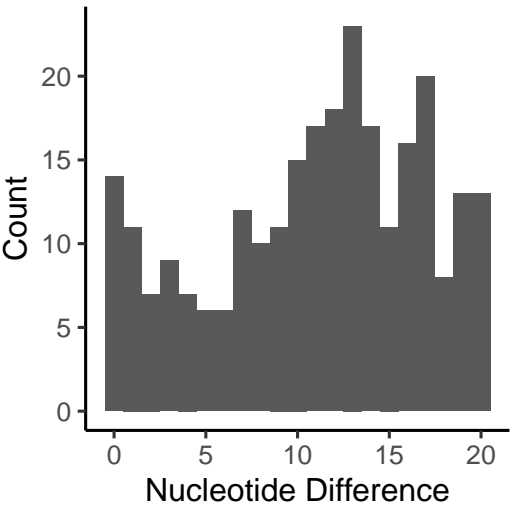
IGHV4–61\*08

47 sequences assigned  
No exact matches.



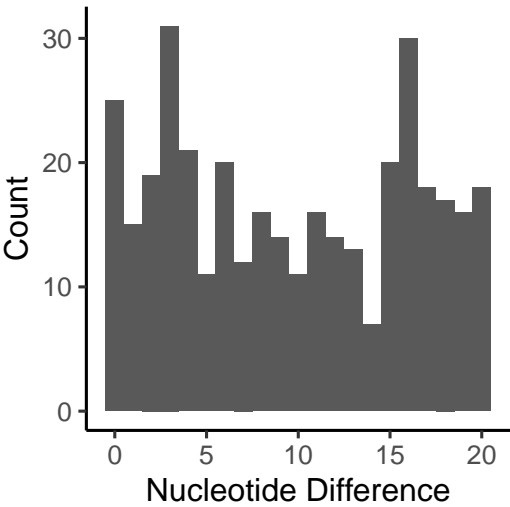
IGHV6–1\*01

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



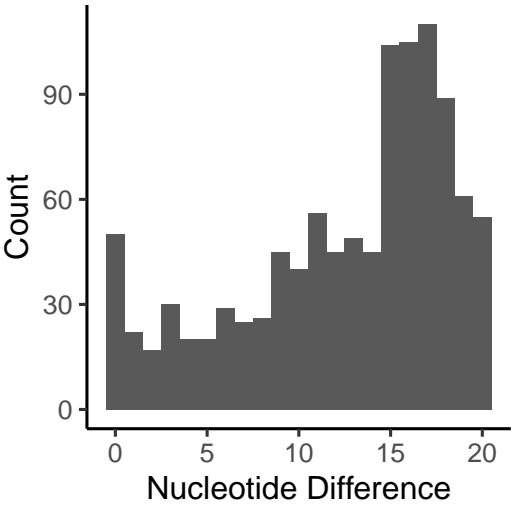
IGHV7–4–1\*02

489 sequences assigned  
25 (5.1%) exact matches, in which:  
23 unique CDR3  
3 unique J



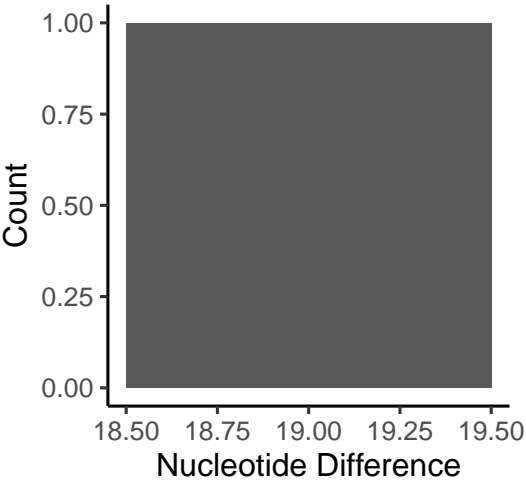
IGHV5–51\*01

1377 sequences assigned  
50 (3.6%) exact matches, in which:  
47 unique CDR3  
6 unique J



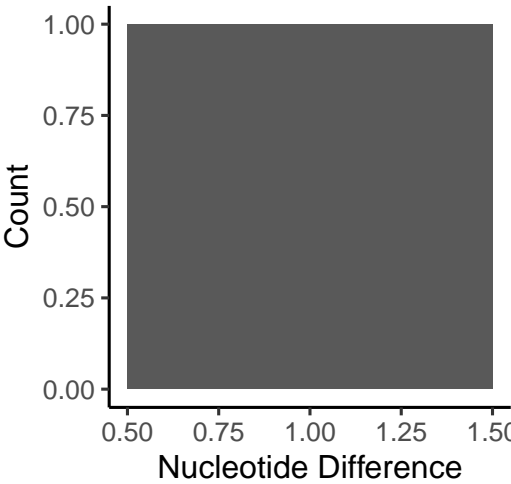
IGHV3/OR16–9\*01

1 sequences assigned  
No exact matches.



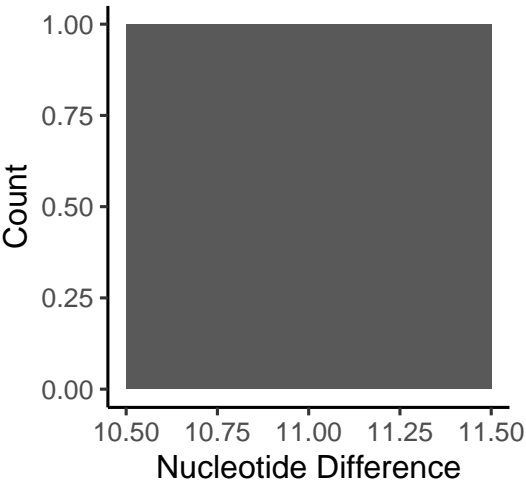
IGHV5–78\*01

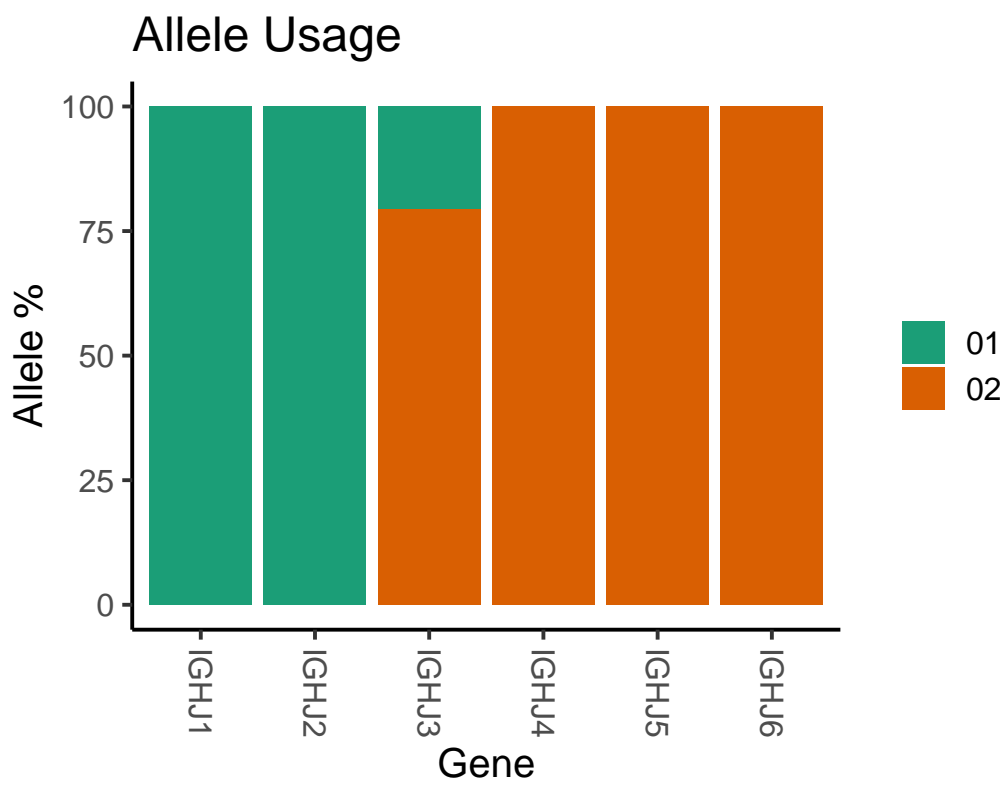
1 sequences assigned  
No exact matches.



IGHV3/OR16–12\*01

1 sequences assigned  
No exact matches.







[illegible]