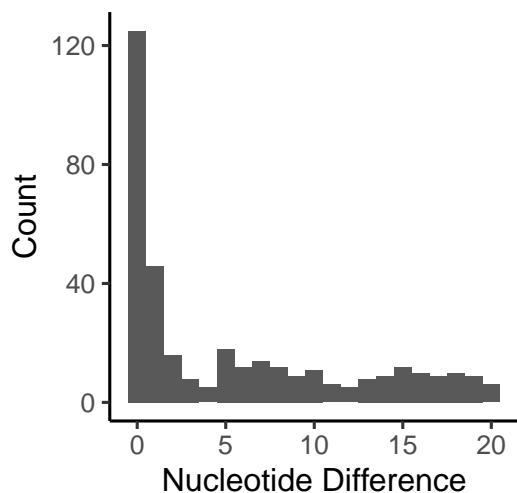


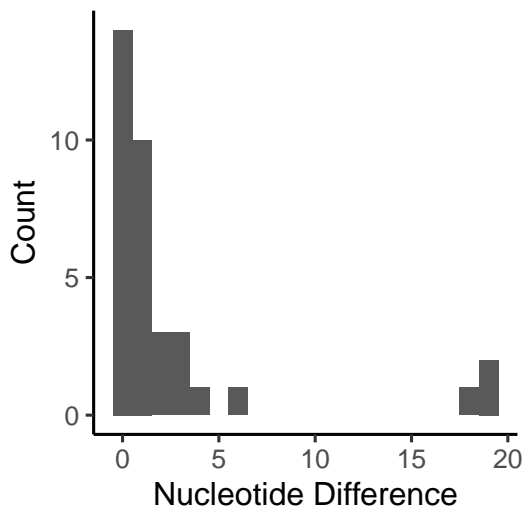
### IGHV1-2\*02

475 sequences assigned  
125 (26.3%) exact matches, in which:  
124 unique CDR3  
7 unique J



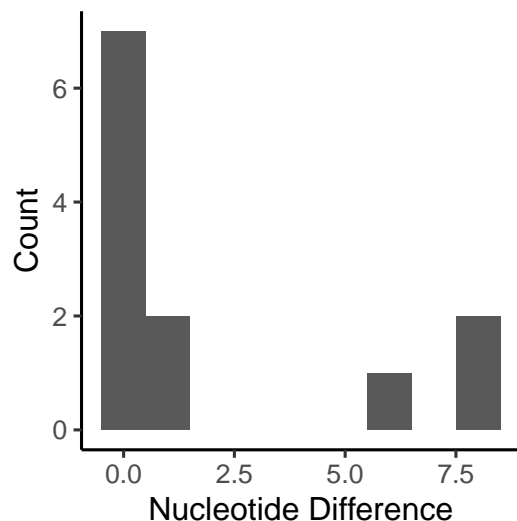
### IGHV1-24\*01

39 sequences assigned  
14 (35.9%) exact matches, in which:  
14 unique CDR3  
6 unique J



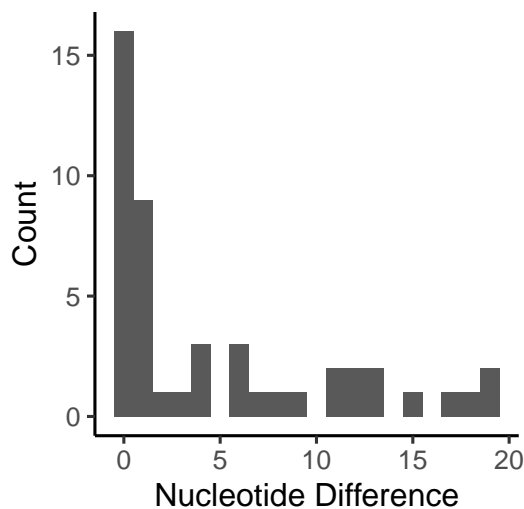
### IGHV1-58\*02

12 sequences assigned  
7 (58.3%) exact matches, in which:  
6 unique CDR3  
4 unique J



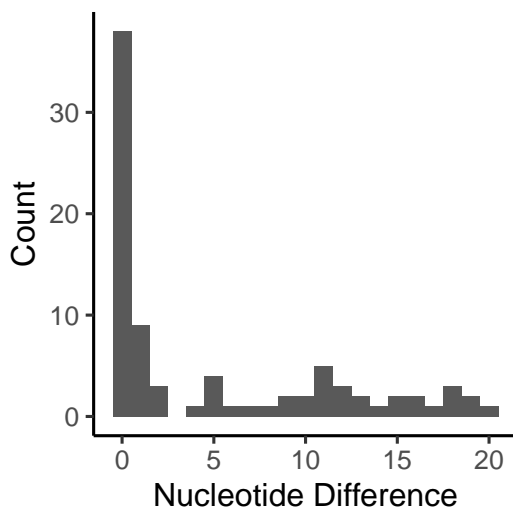
### IGHV1-8\*03

59 sequences assigned  
16 (27.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



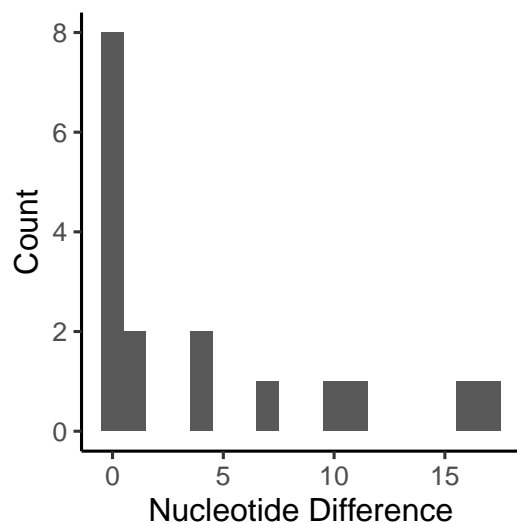
### IGHV1-46\*01

112 sequences assigned  
38 (33.9%) exact matches, in which:  
38 unique CDR3  
4 unique J



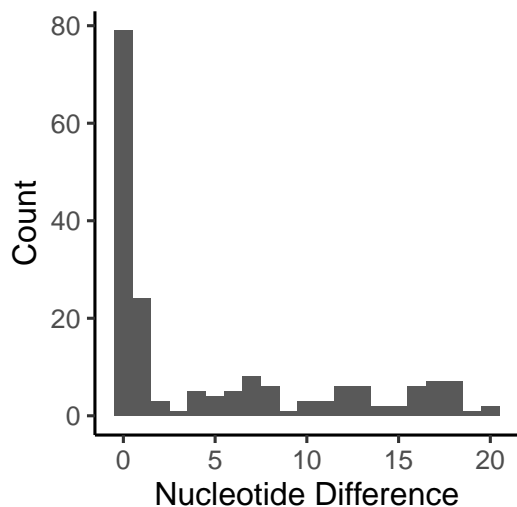
### IGHV1-69-2\*01

18 sequences assigned  
8 (44.4%) exact matches, in which:  
8 unique CDR3  
4 unique J



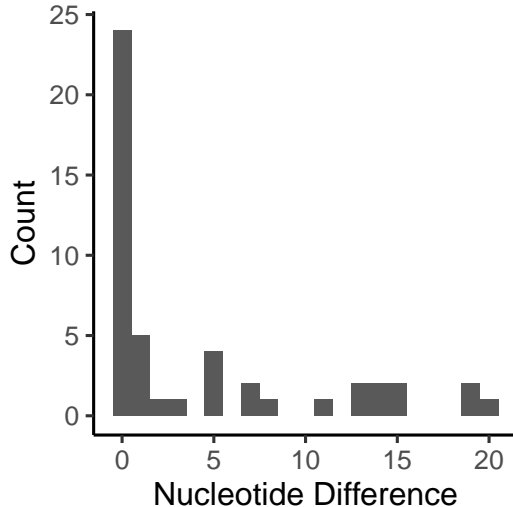
### IGHV1-18\*01

224 sequences assigned  
79 (35.3%) exact matches, in which:  
78 unique CDR3  
6 unique J



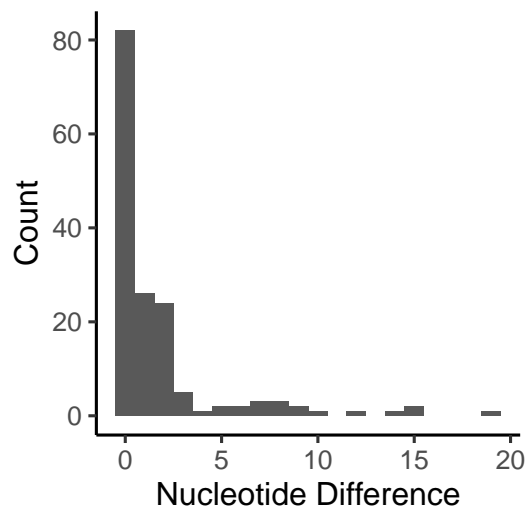
### IGHV1-46\*03

61 sequences assigned  
24 (39.3%) exact matches, in which:  
24 unique CDR3  
6 unique J



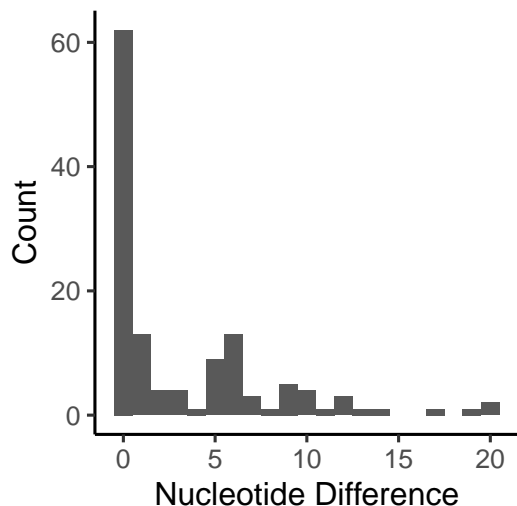
### IGHV1-69\*04

182 sequences assigned  
82 (45.1%) exact matches, in which:  
82 unique CDR3  
6 unique J



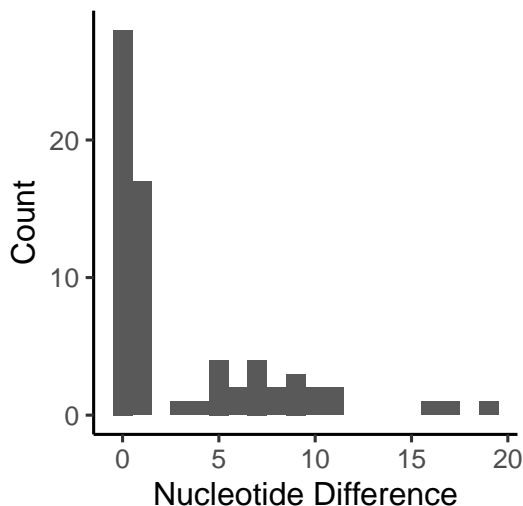
## IGHV1-69\*12

151 sequences assigned  
62 (41.1%) exact matches, in which:  
61 unique CDR3  
5 unique J



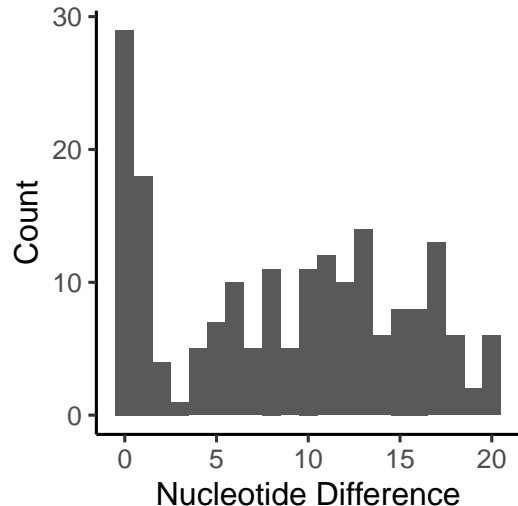
## IGHV2-26\*01

76 sequences assigned  
28 (36.8%) exact matches, in which:  
27 unique CDR3  
5 unique J



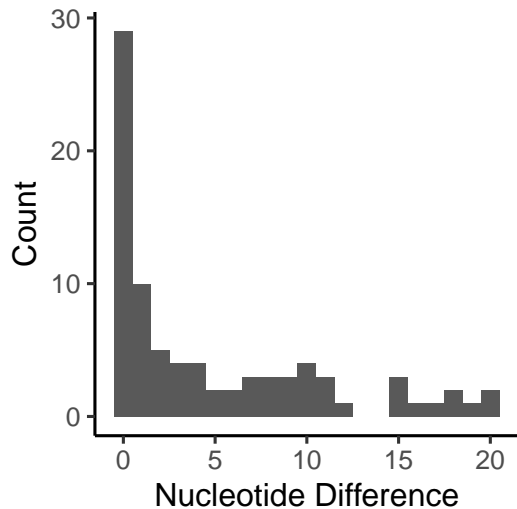
## IGHV3-7\*01

257 sequences assigned  
29 (11.3%) exact matches, in which:  
28 unique CDR3  
5 unique J



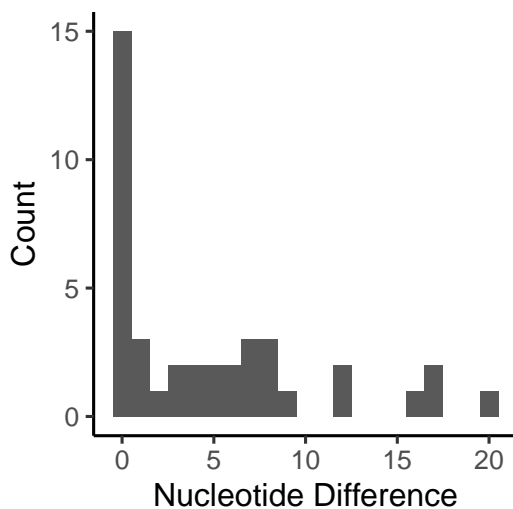
## IGHV2-5\*01

109 sequences assigned  
29 (26.6%) exact matches, in which:  
29 unique CDR3  
5 unique J



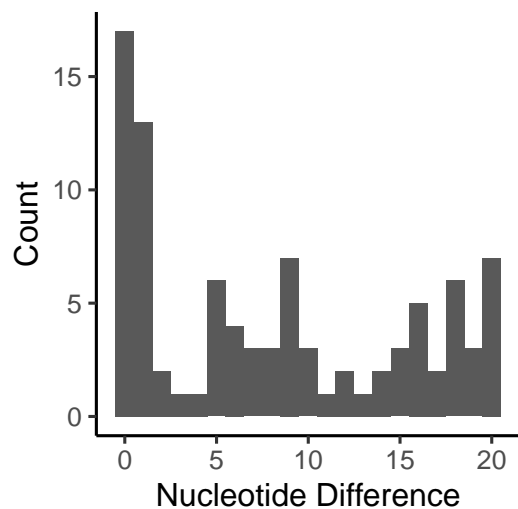
## IGHV2-70\*15

42 sequences assigned  
15 (35.7%) exact matches, in which:  
15 unique CDR3  
3 unique J



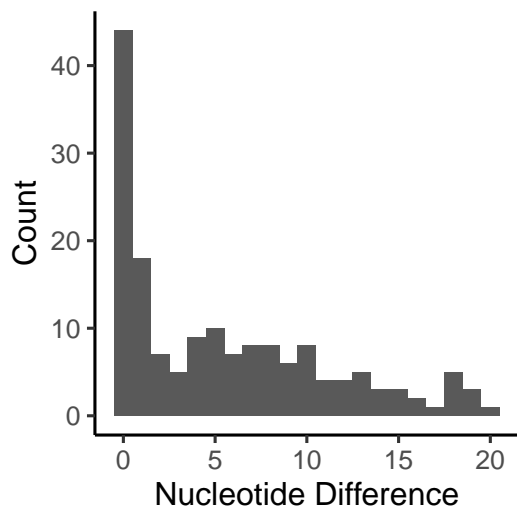
## IGHV3-7\*04

120 sequences assigned  
17 (14.2%) exact matches, in which:  
16 unique CDR3  
4 unique J



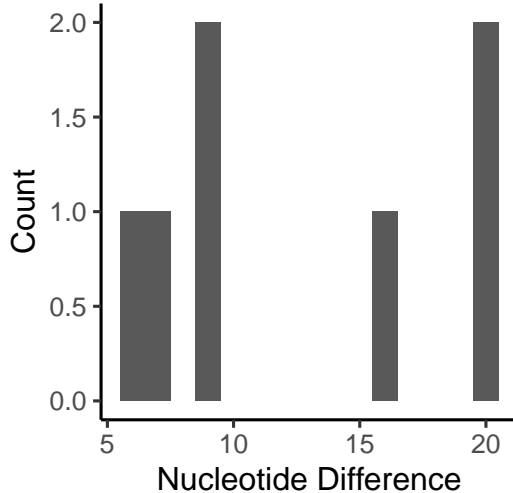
## IGHV2-5\*02

182 sequences assigned  
44 (24.2%) exact matches, in which:  
44 unique CDR3  
5 unique J



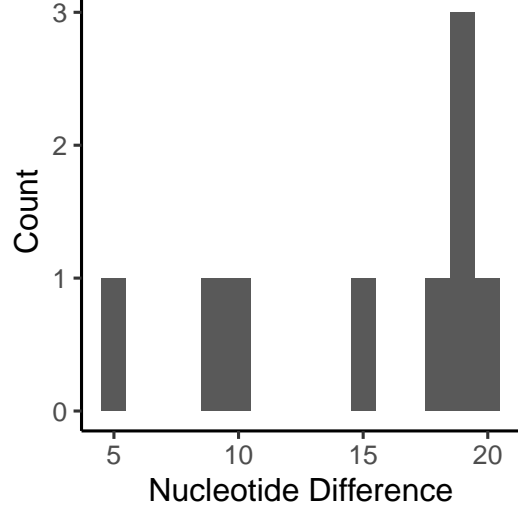
## IGHV2-70\*17

7 sequences assigned  
No exact matches.



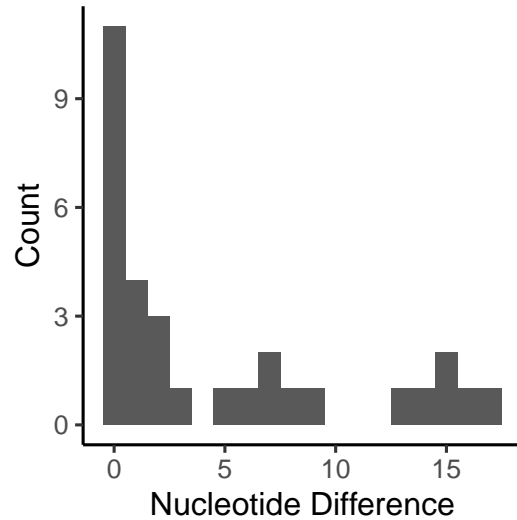
## IGHV3-9\*01

14 sequences assigned  
No exact matches.



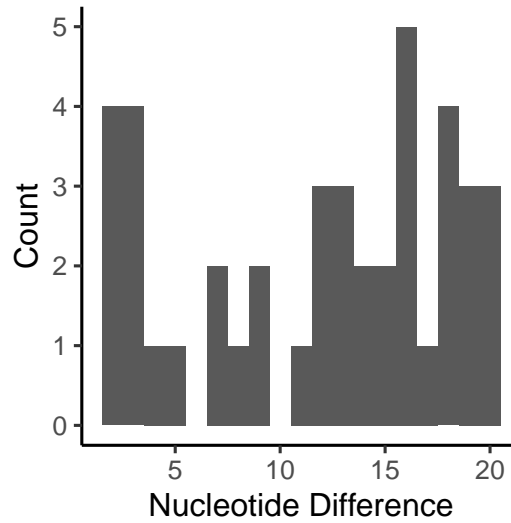
### IGHV3-9\*03

32 sequences assigned  
11 (34.4%) exact matches, in which:  
11 unique CDR3  
3 unique J



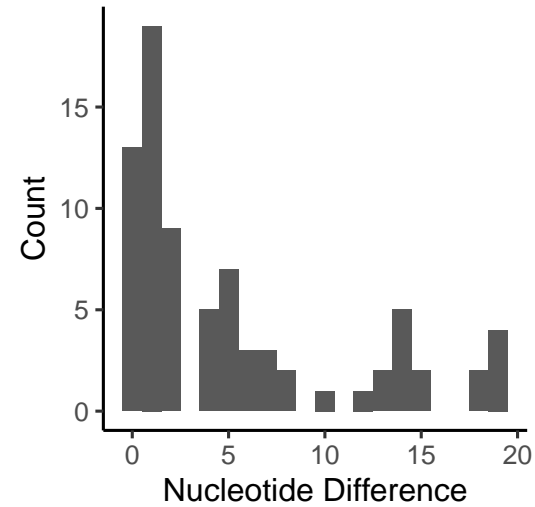
### IGHV3-13\*01

62 sequences assigned  
No exact matches.



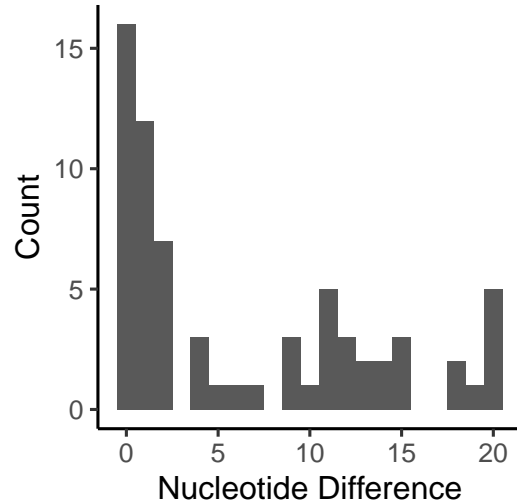
### IGHV3-20\*04

87 sequences assigned  
13 (14.9%) exact matches, in which:  
13 unique CDR3  
4 unique J



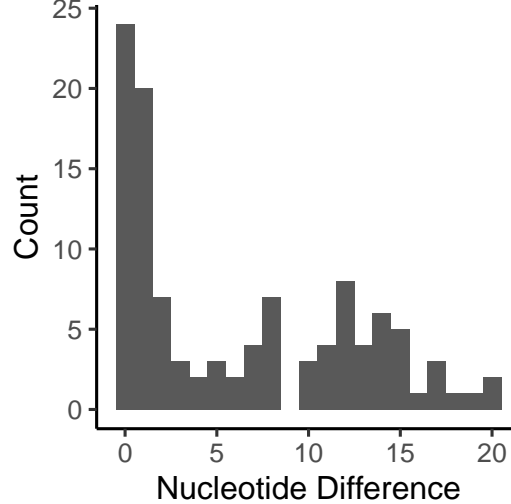
### IGHV3-11\*04

96 sequences assigned  
16 (16.7%) exact matches, in which:  
16 unique CDR3  
5 unique J



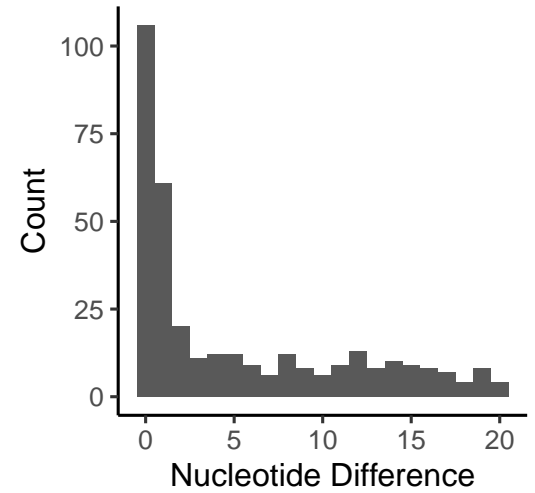
### IGHV3-15\*01

118 sequences assigned  
24 (20.3%) exact matches, in which:  
23 unique CDR3  
4 unique J



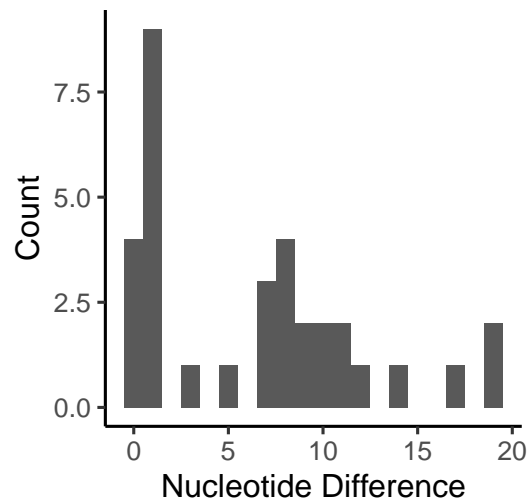
### IGHV3-21\*01

397 sequences assigned  
106 (26.7%) exact matches, in which:  
105 unique CDR3  
7 unique J



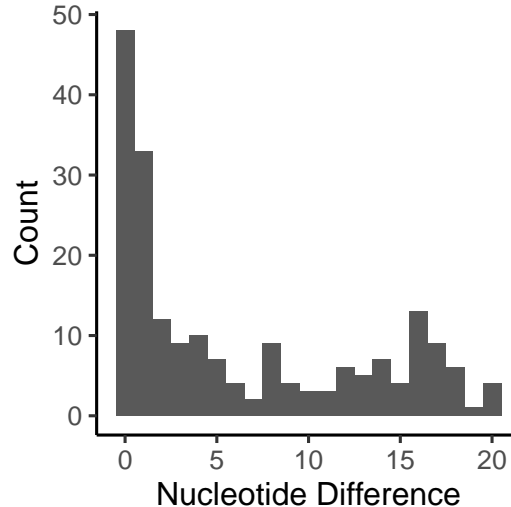
### IGHV3-11\*06

39 sequences assigned  
4 (10.3%) exact matches, in which:  
4 unique CDR3  
3 unique J



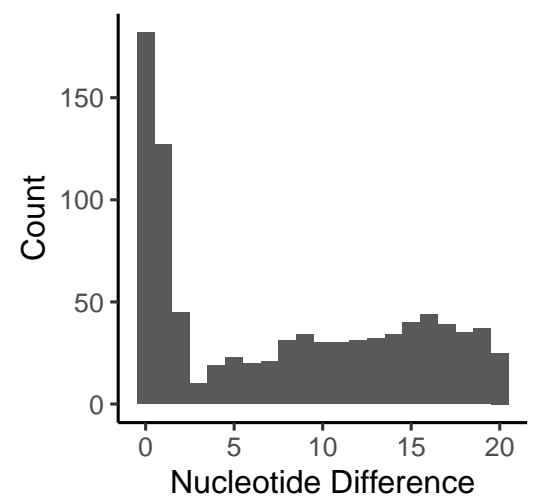
### IGHV3-15\*07

283 sequences assigned  
48 (17%) exact matches, in which:  
48 unique CDR3  
5 unique J



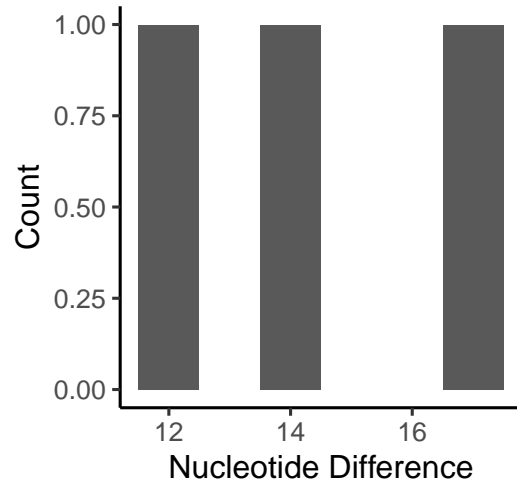
### IGHV3-23\*01

1320 sequences assigned  
182 (13.8%) exact matches, in which:  
179 unique CDR3  
7 unique J



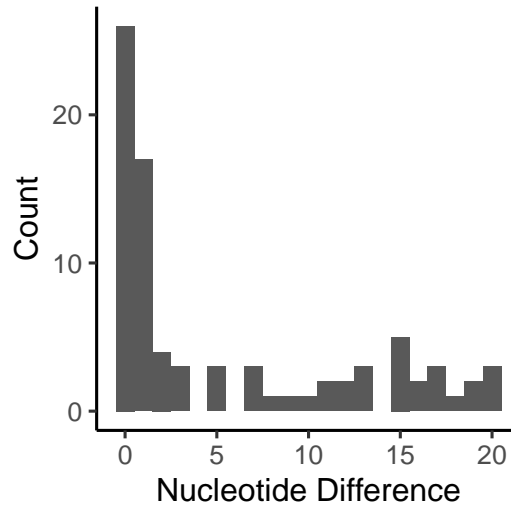
### IGHV3-30-3\*01

3 sequences assigned  
No exact matches.



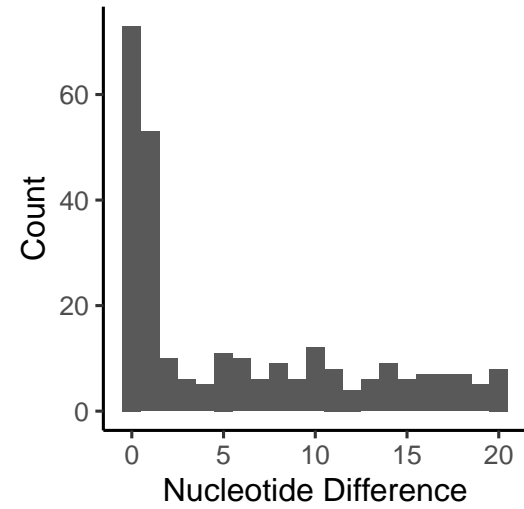
### IGHV3-43\*02

98 sequences assigned  
26 (26.5%) exact matches, in which:  
26 unique CDR3  
4 unique J



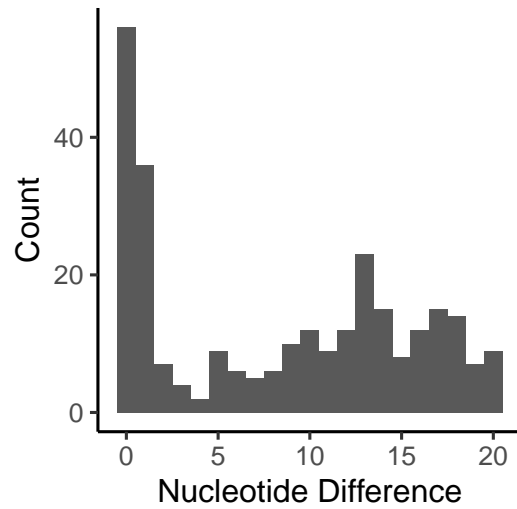
### IGHV3-48\*03

315 sequences assigned  
73 (23.2%) exact matches, in which:  
73 unique CDR3  
5 unique J



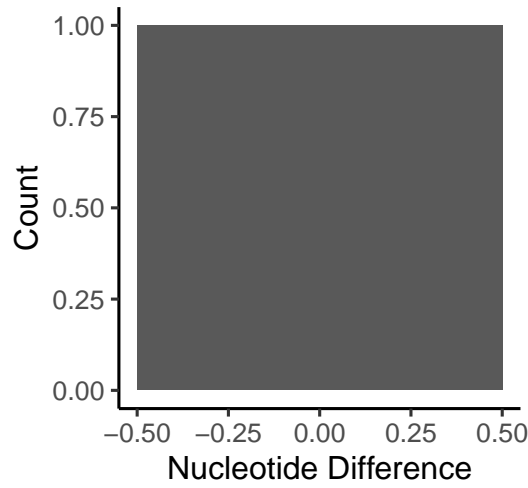
### IGHV3-30\*02

402 sequences assigned  
56 (13.9%) exact matches, in which:  
56 unique CDR3  
5 unique J



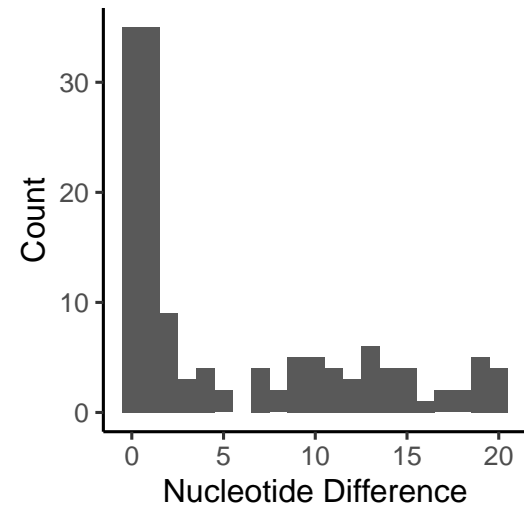
### IGHV3-47\*02

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



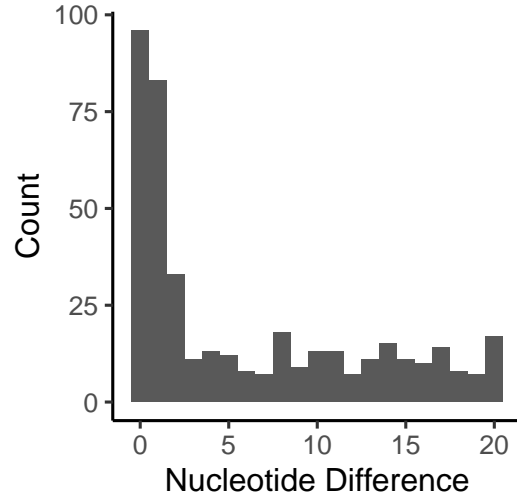
### IGHV3-49\*04

164 sequences assigned  
35 (21.3%) exact matches, in which:  
35 unique CDR3  
6 unique J



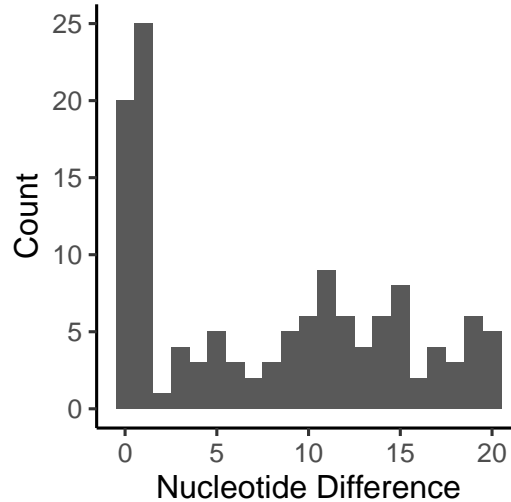
### IGHV3-33\*01

512 sequences assigned  
96 (18.8%) exact matches, in which:  
95 unique CDR3  
5 unique J



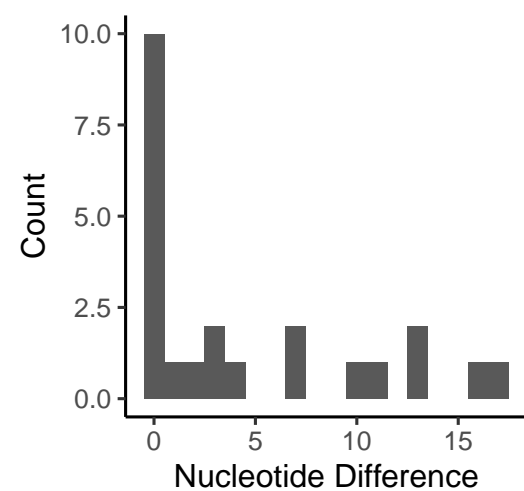
### IGHV3-48\*01

165 sequences assigned  
20 (12.1%) exact matches, in which:  
20 unique CDR3  
4 unique J



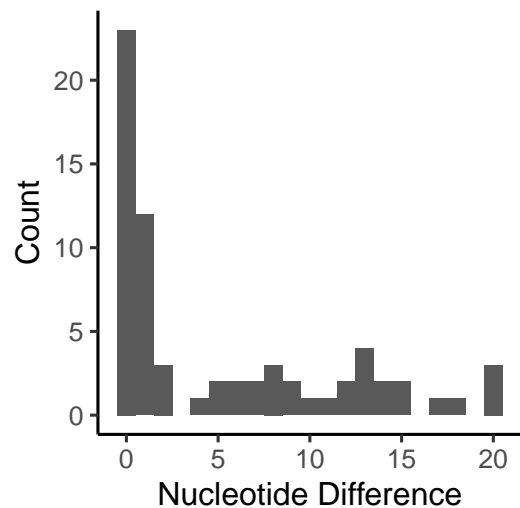
### IGHV3-53\*04

25 sequences assigned  
10 (40%) exact matches, in which:  
10 unique CDR3  
4 unique J



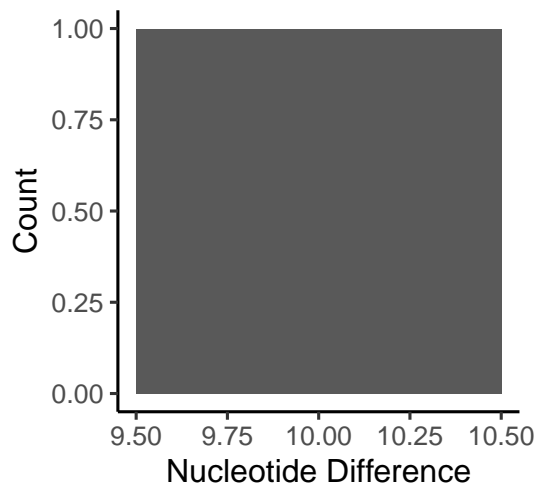
### IGHV3-64\*01

74 sequences assigned  
23 (31.1%) exact matches, in which:  
23 unique CDR3  
5 unique J



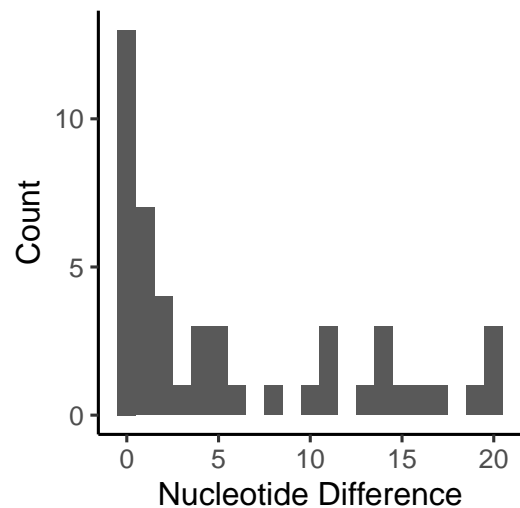
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



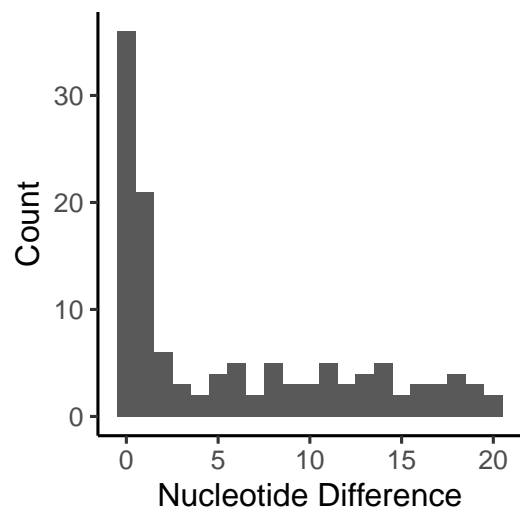
### IGHV3-73\*01

59 sequences assigned  
13 (22%) exact matches, in which:  
13 unique CDR3  
4 unique J



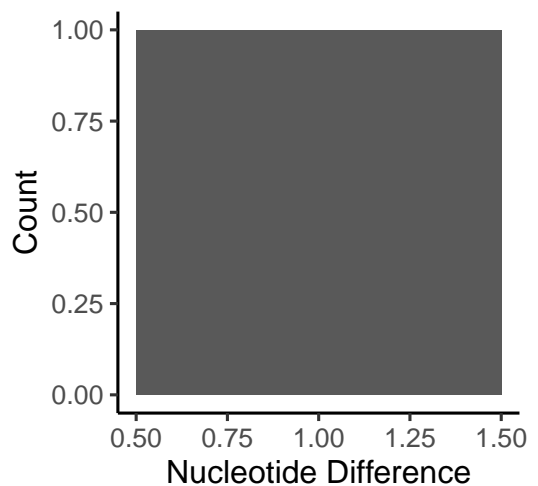
### IGHV3-66\*01

182 sequences assigned  
36 (19.8%) exact matches, in which:  
33 unique CDR3  
5 unique J



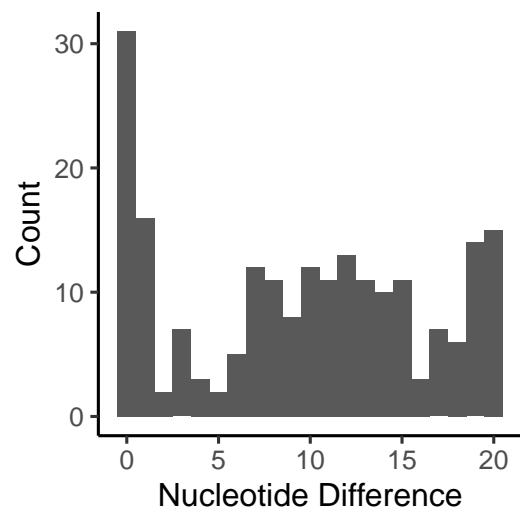
### IGHV3-71\*02

1 sequences assigned  
No exact matches.



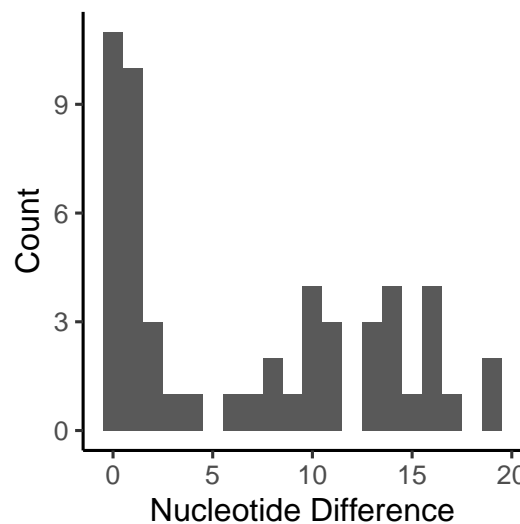
### IGHV3-74\*01

306 sequences assigned  
31 (10.1%) exact matches, in which:  
31 unique CDR3  
5 unique J



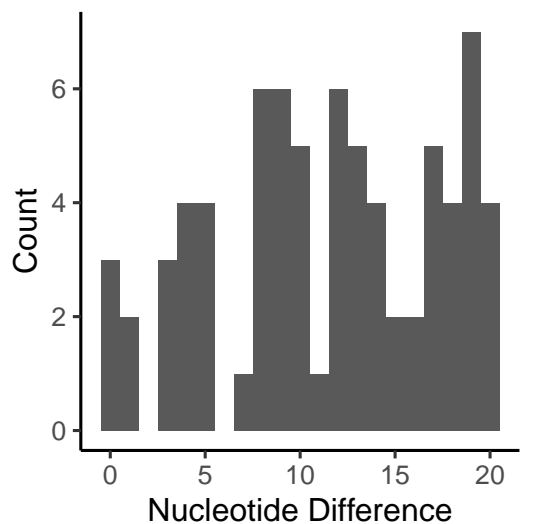
### IGHV3-66\*02

82 sequences assigned  
11 (13.4%) exact matches, in which:  
10 unique CDR3  
5 unique J



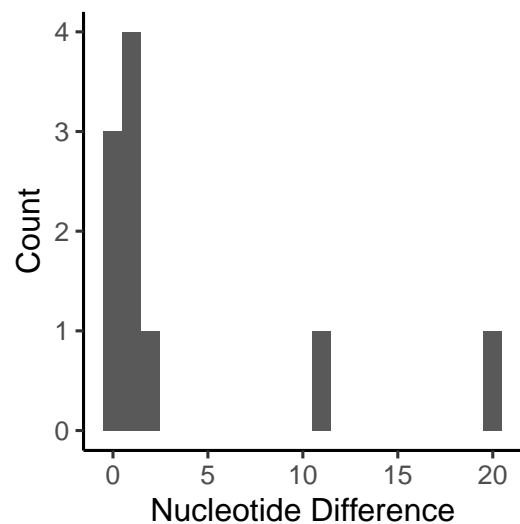
### IGHV3-72\*01

93 sequences assigned  
3 (3.2%) exact matches, in which:  
3 unique CDR3  
1 unique J



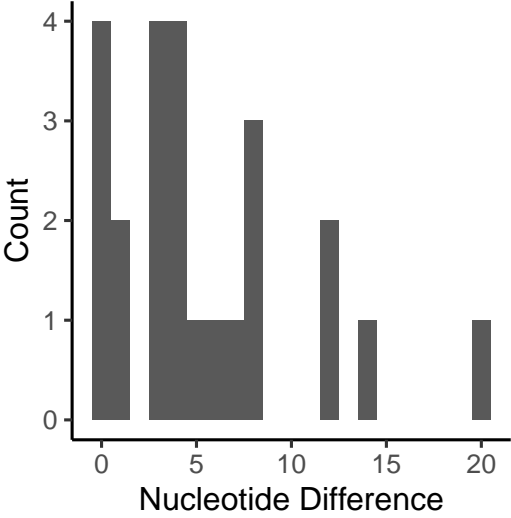
### IGHV3-43D\*03

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



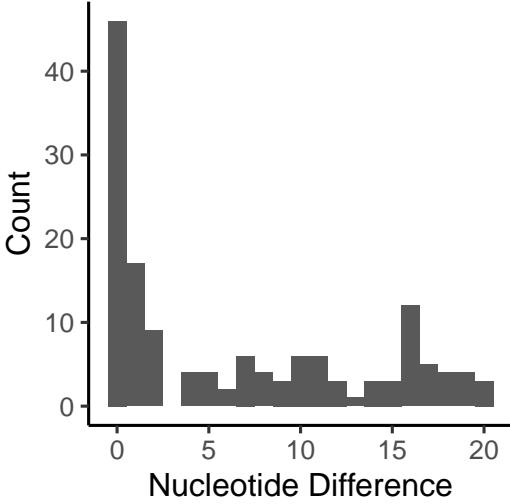
IGHV3-43D\*04

31 sequences assigned  
4 (12.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



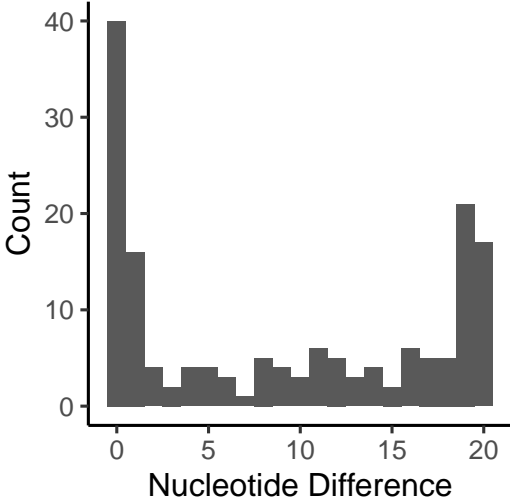
IGHV4-4\*07

452 sequences assigned  
46 (10.2%) exact matches, in which:  
46 unique CDR3  
7 unique J



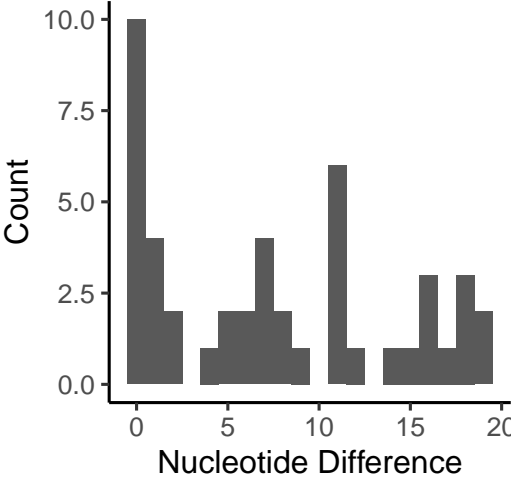
IGHV4-30-4\*08

353 sequences assigned  
40 (11.3%) exact matches, in which:  
40 unique CDR3  
4 unique J



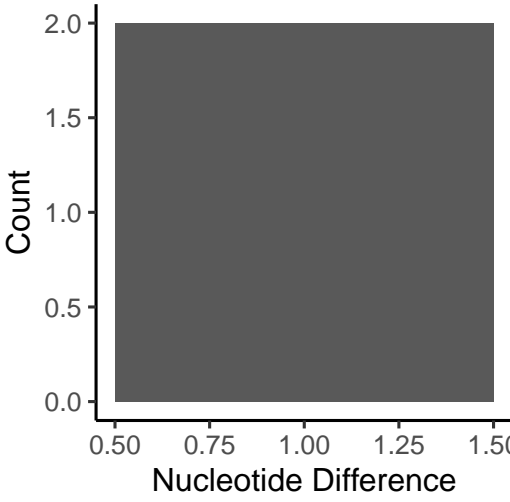
IGHV3-64D\*06

56 sequences assigned  
10 (17.9%) exact matches, in which:  
10 unique CDR3  
3 unique J



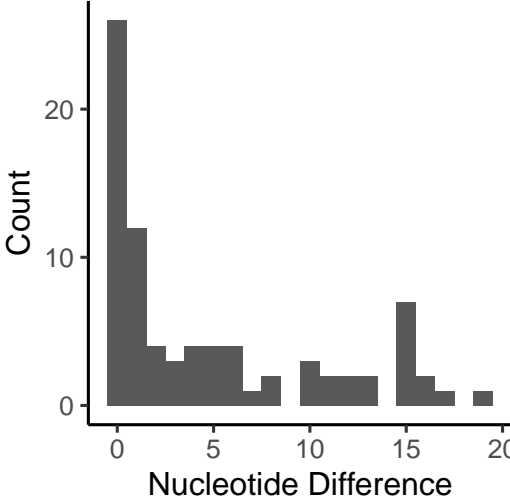
IGHV4-28\*04

2 sequences assigned  
No exact matches.



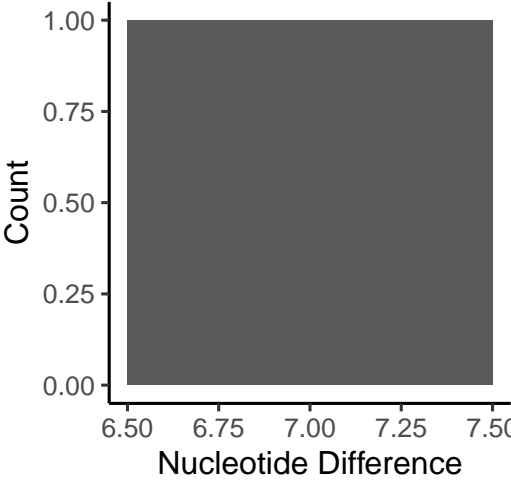
IGHV4-31\*03

100 sequences assigned  
26 (26%) exact matches, in which:  
26 unique CDR3  
6 unique J



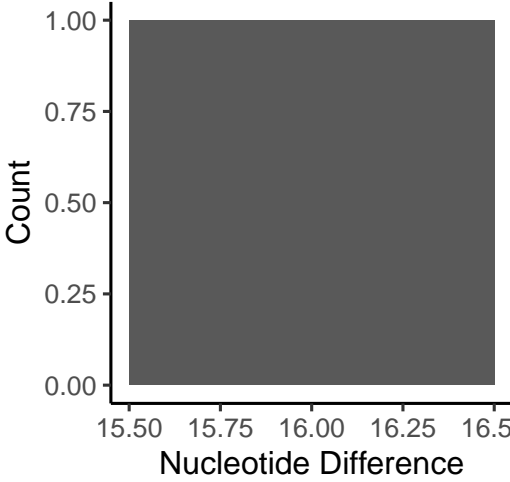
IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



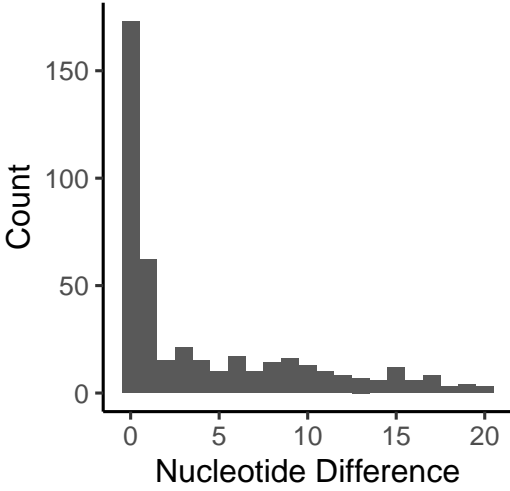
IGHV4-30-2\*05

2 sequences assigned  
No exact matches.



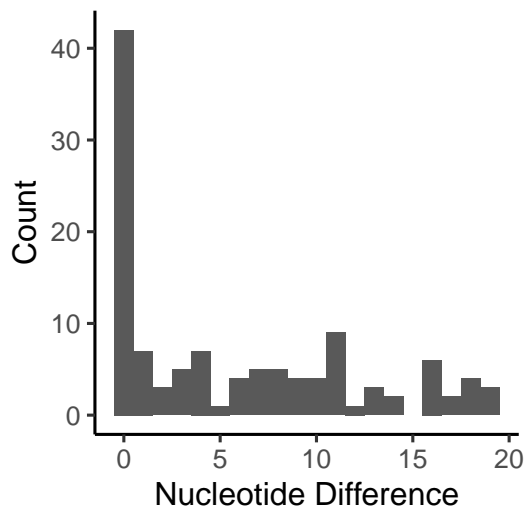
IGHV4-34\*01

518 sequences assigned  
173 (33.4%) exact matches, in which:  
172 unique CDR3  
7 unique J



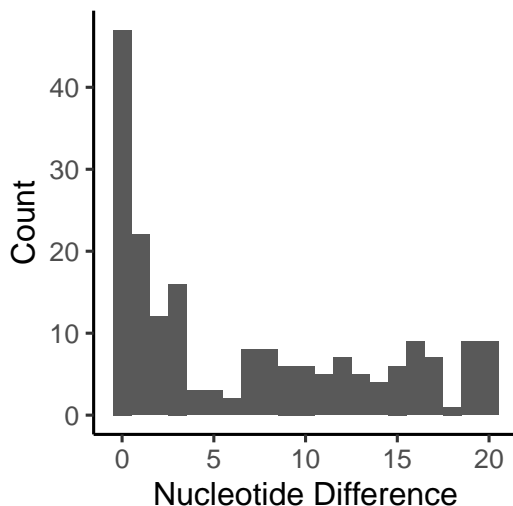
### IGHV4-38-2\*01

130 sequences assigned  
42 (32.3%) exact matches, in which:  
42 unique CDR3  
6 unique J



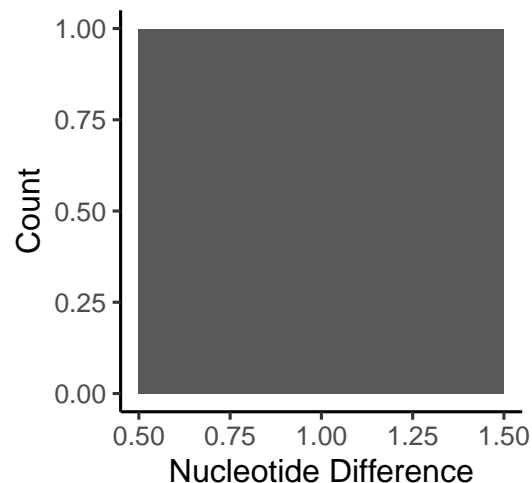
### IGHV4-59\*01

2467 sequences assigned  
47 (1.9%) exact matches, in which:  
47 unique CDR3  
7 unique J



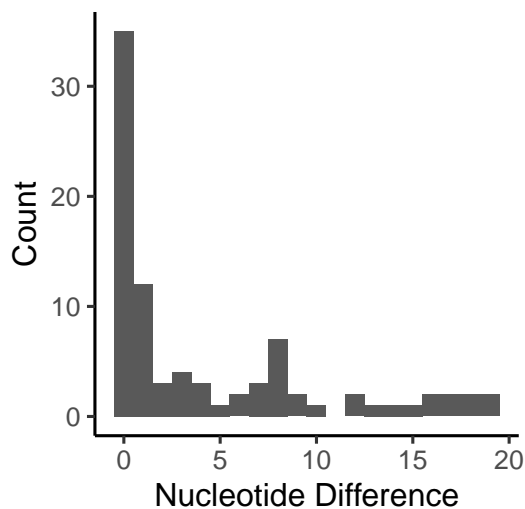
### IGHV1/OR15-2\*01

1 sequences assigned  
No exact matches.



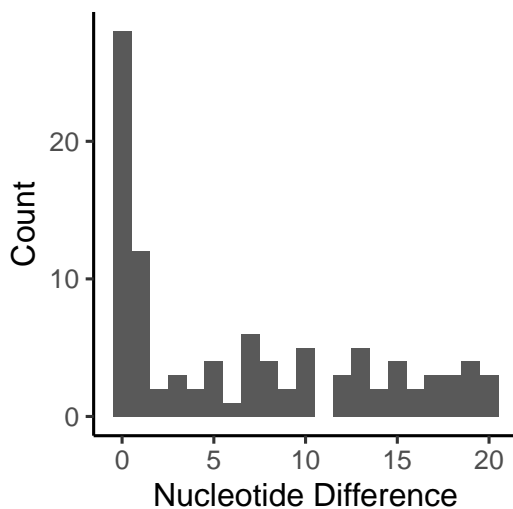
### IGHV4-38-2\*02

105 sequences assigned  
35 (33.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



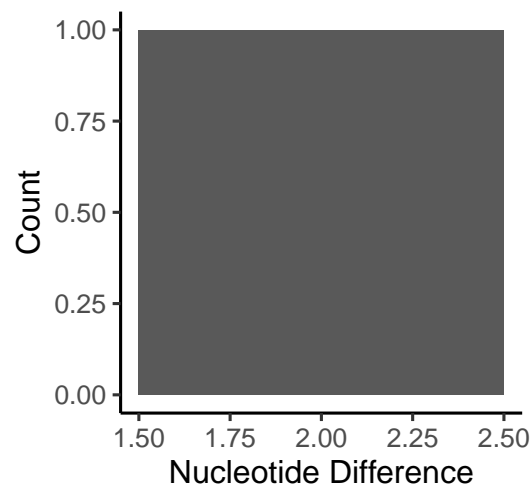
### IGHV4-59\*08

146 sequences assigned  
28 (19.2%) exact matches, in which:  
28 unique CDR3  
5 unique J



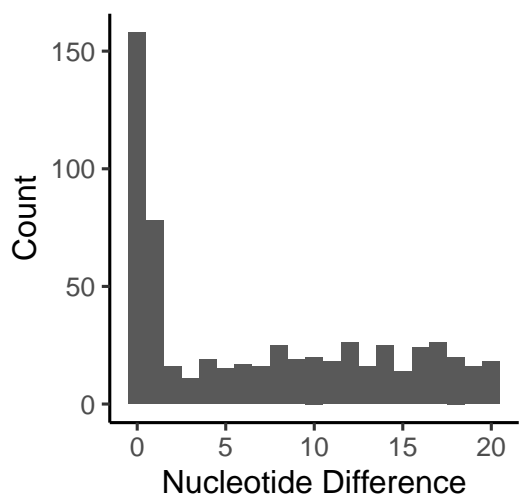
### IGHV3/OR15-7\*05

1 sequences assigned  
No exact matches.



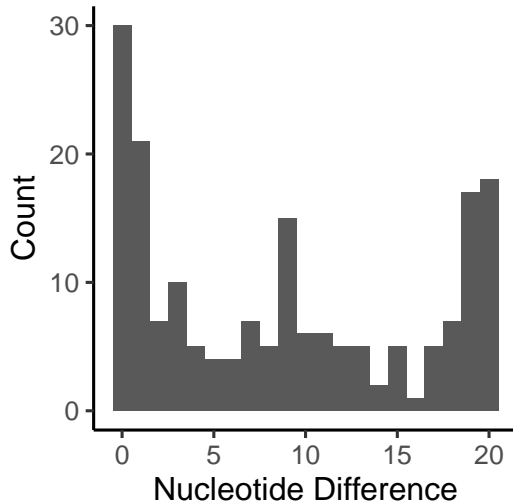
### IGHV4-39\*01

800 sequences assigned  
158 (19.8%) exact matches, in which:  
157 unique CDR3  
7 unique J



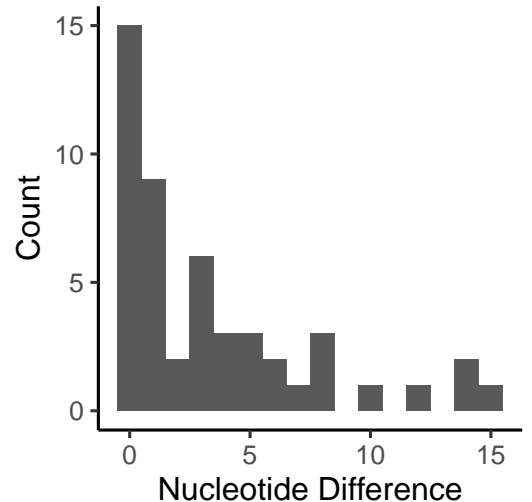
### IGHV4-61\*02

440 sequences assigned  
30 (6.8%) exact matches, in which:  
30 unique CDR3  
5 unique J



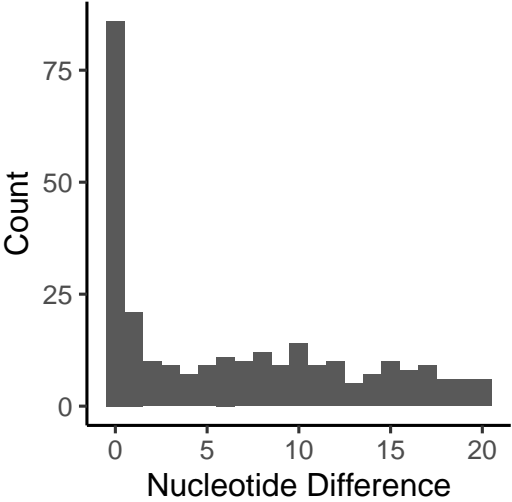
### IGHV5-10-1\*03

54 sequences assigned  
15 (27.8%) exact matches, in which:  
15 unique CDR3  
3 unique J



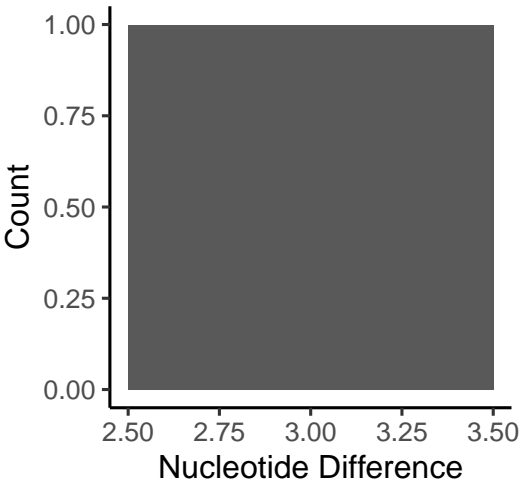
IGHV5-51\*01

323 sequences assigned  
86 (26.6%) exact matches, in which:  
85 unique CDR3  
7 unique J



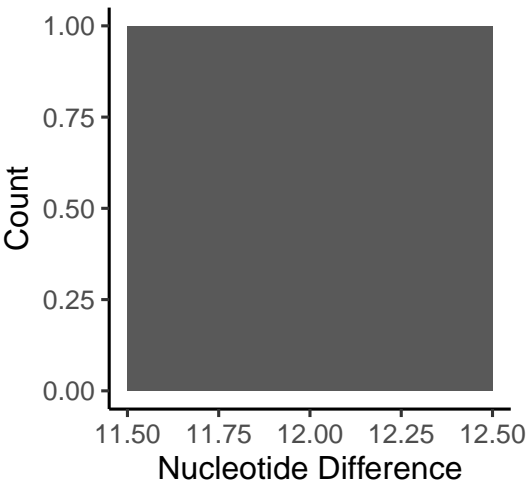
IGHV7-81\*01

1 sequences assigned  
No exact matches.



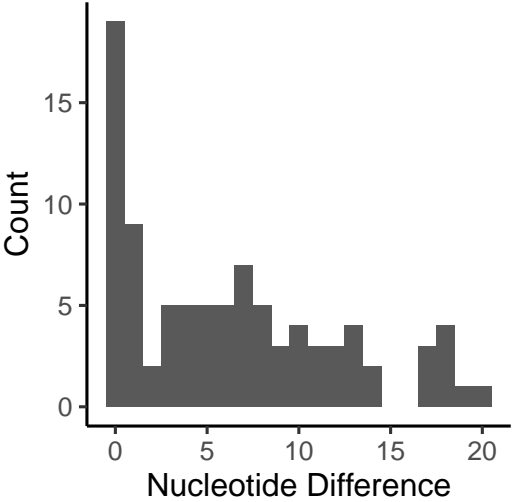
IGHV5-78\*01

1 sequences assigned  
No exact matches.

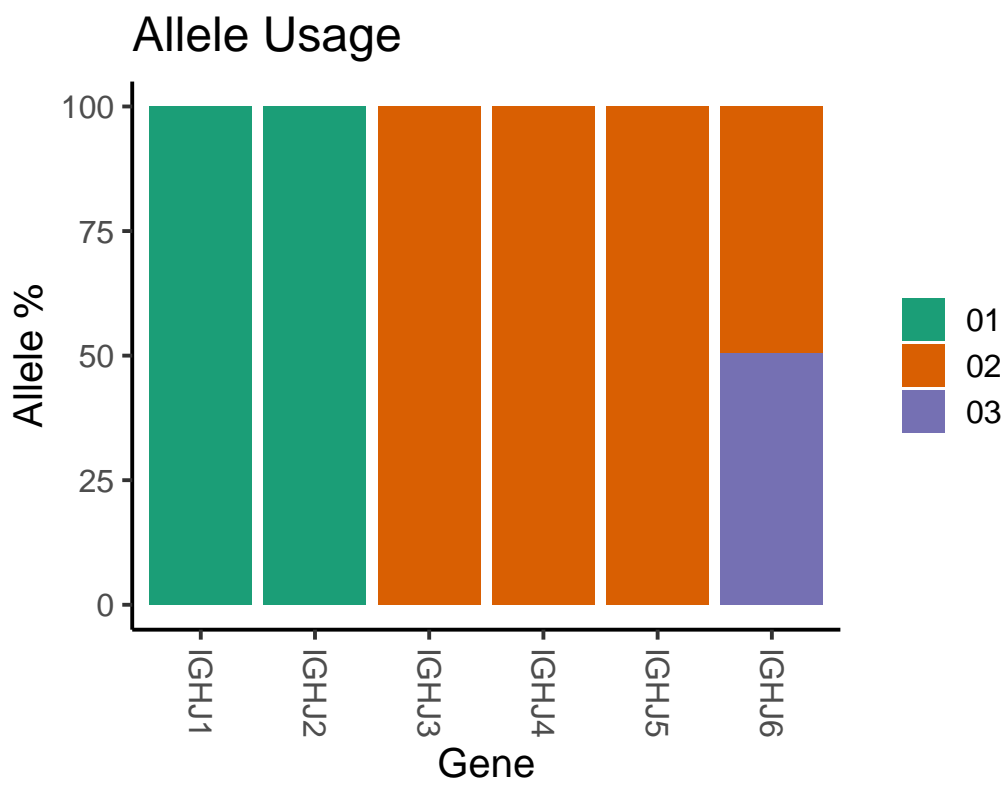


IGHV6-1\*01

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







Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.