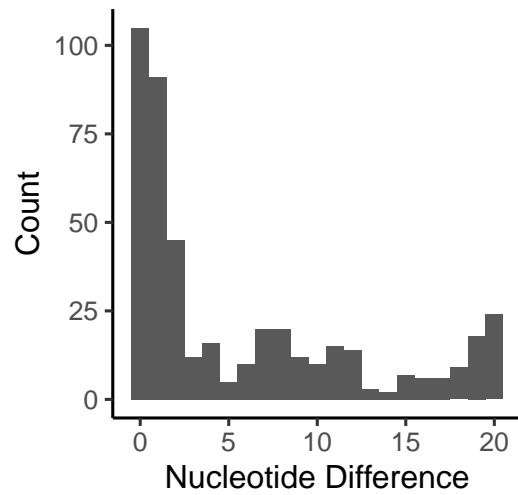


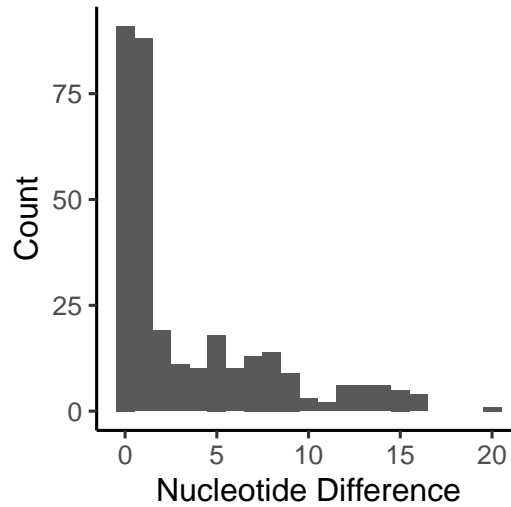
### IGHV1-2\*02

507 sequences assigned  
105 (20.7%) exact matches, in which:  
87 unique CDR3  
5 unique J



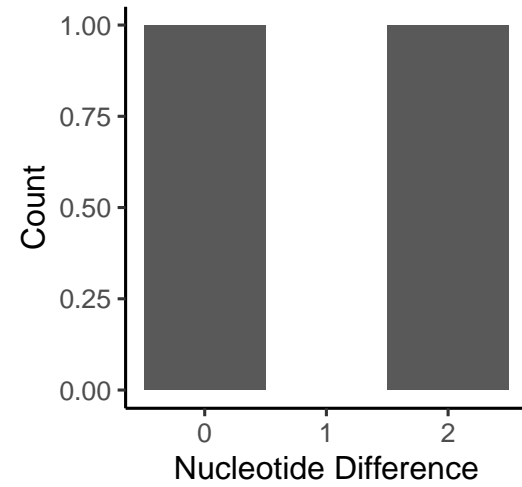
### IGHV1-18\*01

325 sequences assigned  
91 (28%) exact matches, in which:  
75 unique CDR3  
6 unique J



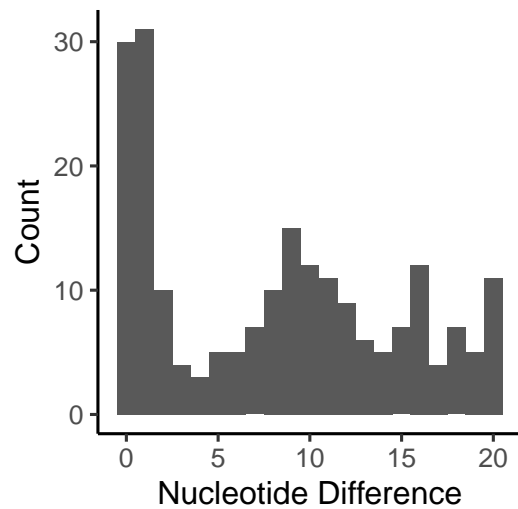
### IGHV1-45\*02

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



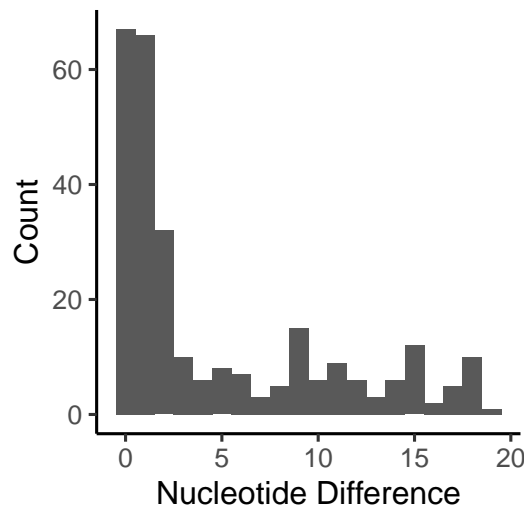
### IGHV1-3\*01

288 sequences assigned  
30 (10.4%) exact matches, in which:  
21 unique CDR3  
5 unique J



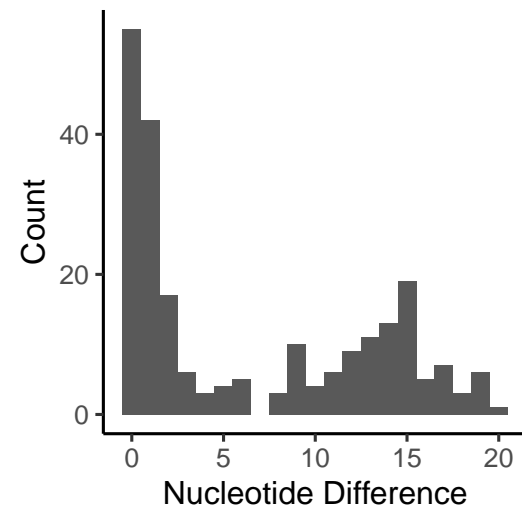
### IGHV1-18\*04

356 sequences assigned  
67 (18.8%) exact matches, in which:  
46 unique CDR3  
6 unique J



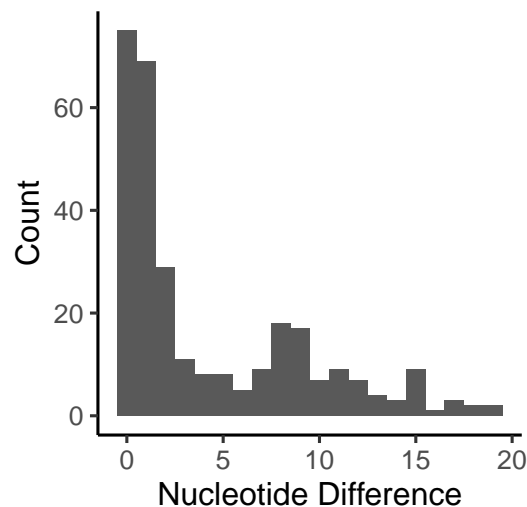
### IGHV1-46\*01

250 sequences assigned  
55 (22%) exact matches, in which:  
47 unique CDR3  
6 unique J



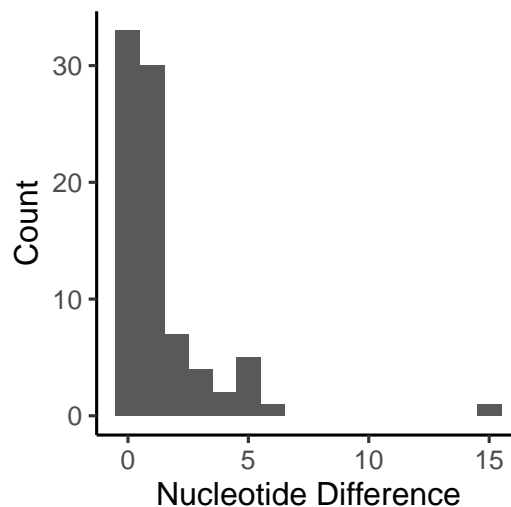
### IGHV1-8\*03

298 sequences assigned  
75 (25.2%) exact matches, in which:  
56 unique CDR3  
6 unique J



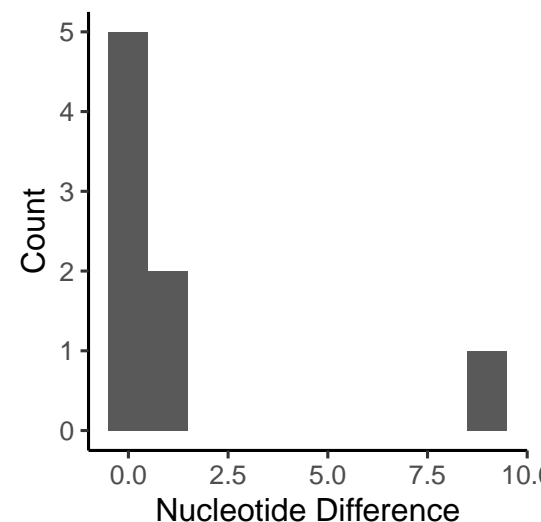
### IGHV1-24\*01

83 sequences assigned  
33 (39.8%) exact matches, in which:  
32 unique CDR3  
4 unique J



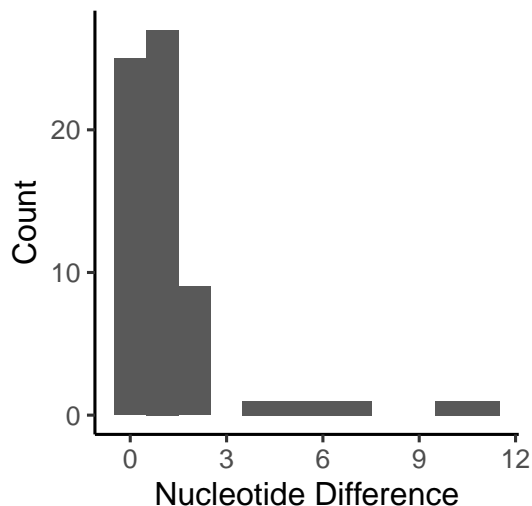
### IGHV1-58\*02

26 sequences assigned  
5 (19.2%) exact matches, in which:  
4 unique CDR3  
3 unique J



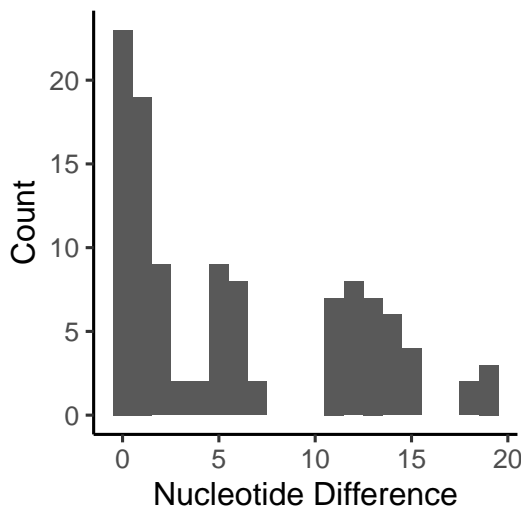
### IGHV1-69-2\*01

67 sequences assigned  
25 (37.3%) exact matches, in which:  
22 unique CDR3  
5 unique J



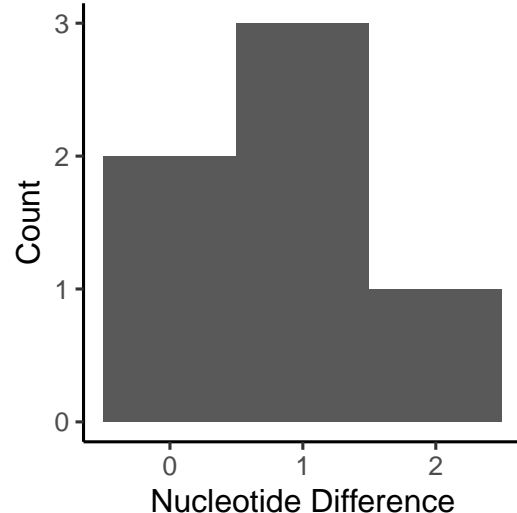
### IGHV2-5\*01

111 sequences assigned  
23 (20.7%) exact matches, in which:  
22 unique CDR3  
5 unique J



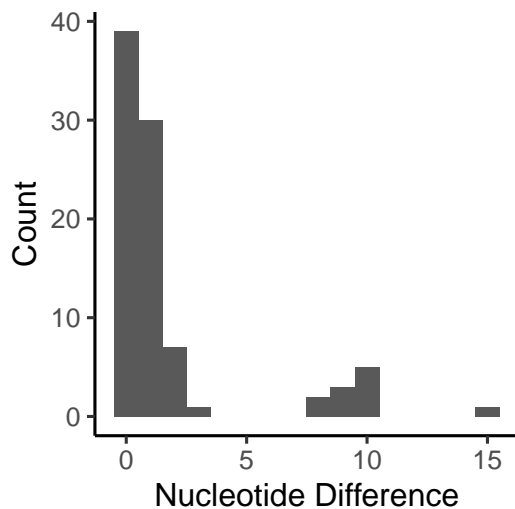
### IGHV2-26\*02

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



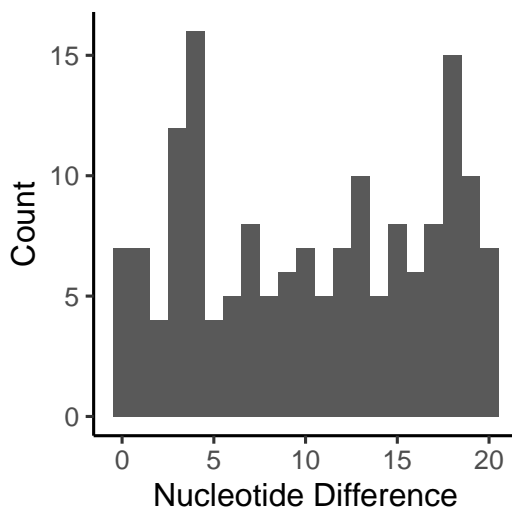
### IGHV1-69\*09

94 sequences assigned  
39 (41.5%) exact matches, in which:  
39 unique CDR3  
4 unique J



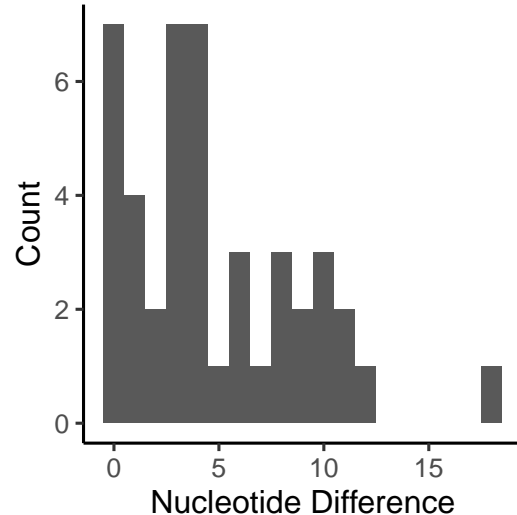
### IGHV2-5\*02

233 sequences assigned  
7 (3%) exact matches, in which:  
6 unique CDR3  
4 unique J



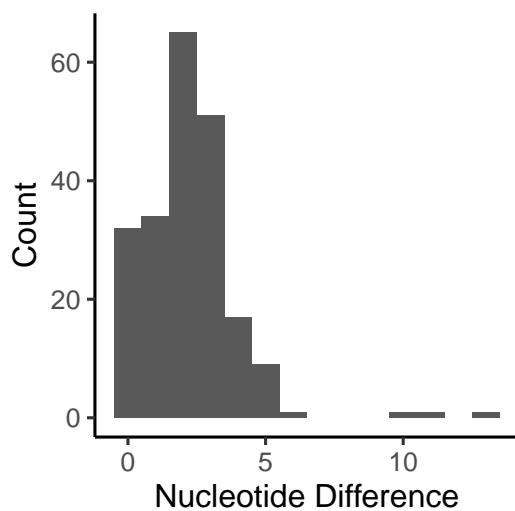
### IGHV2-70\*15

44 sequences assigned  
7 (15.9%) exact matches, in which:  
7 unique CDR3  
2 unique J



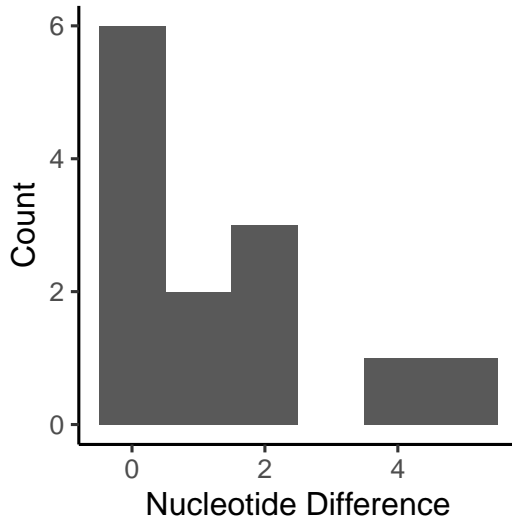
### IGHV1-69\*10

212 sequences assigned  
32 (15.1%) exact matches, in which:  
26 unique CDR3  
5 unique J



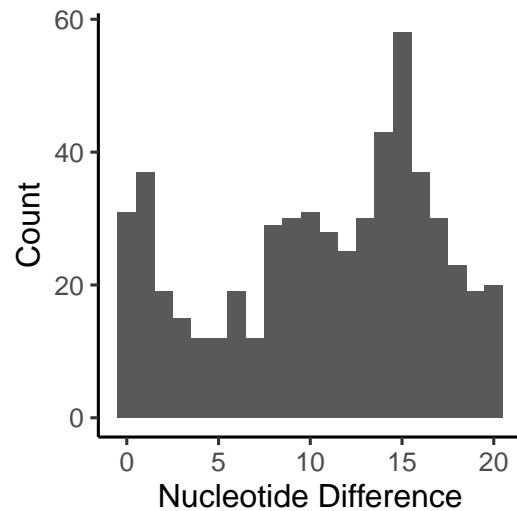
### IGHV2-26\*01

13 sequences assigned  
6 (46.2%) exact matches, in which:  
6 unique CDR3  
3 unique J



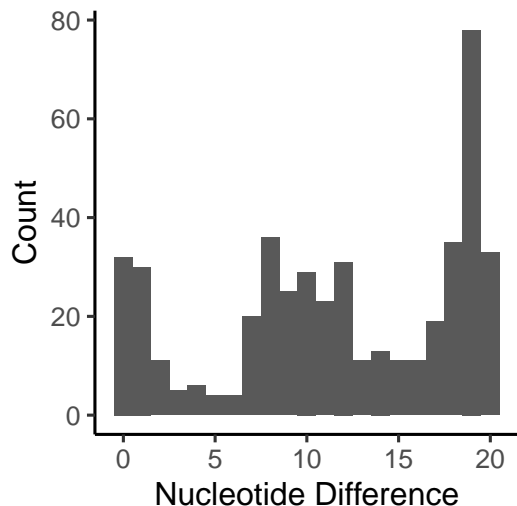
### IGHV3-7\*01

604 sequences assigned  
31 (5.1%) exact matches, in which:  
23 unique CDR3  
4 unique J



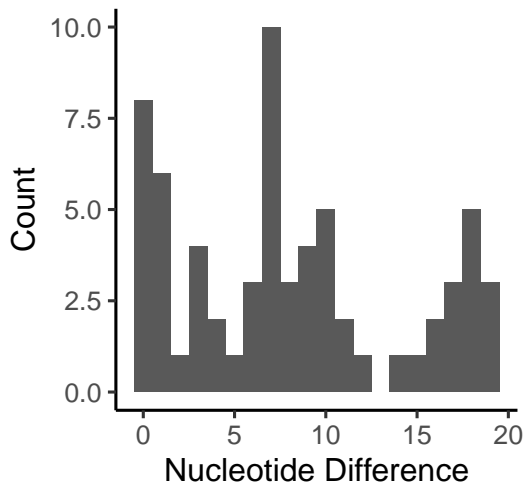
### IGHV3-7\*03

564 sequences assigned  
32 (5.7%) exact matches, in which:  
22 unique CDR3  
5 unique J



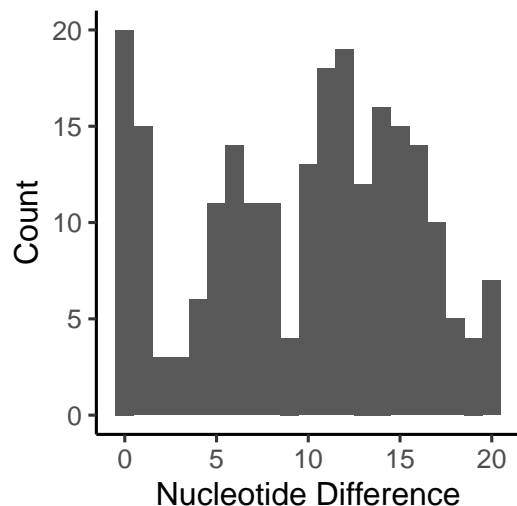
### IGHV3-11\*06

78 sequences assigned  
8 (10.3%) exact matches, in which:  
7 unique CDR3  
1 unique J



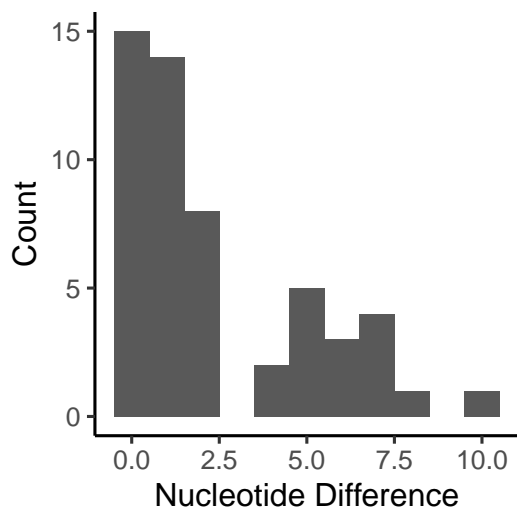
### IGHV3-15\*01

283 sequences assigned  
20 (7.1%) exact matches, in which:  
20 unique CDR3  
6 unique J



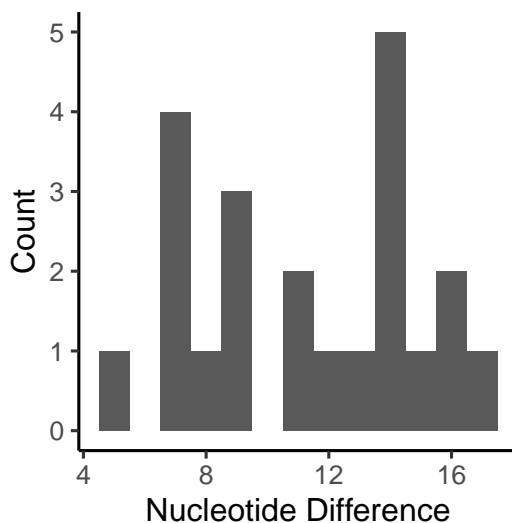
### IGHV3-9\*03

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



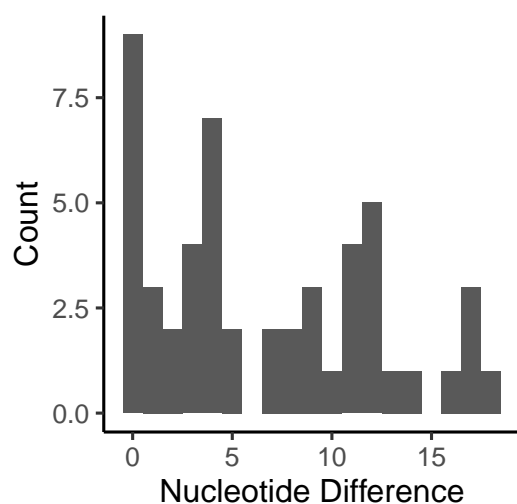
### IGHV3-13\*01

22 sequences assigned  
No exact matches.



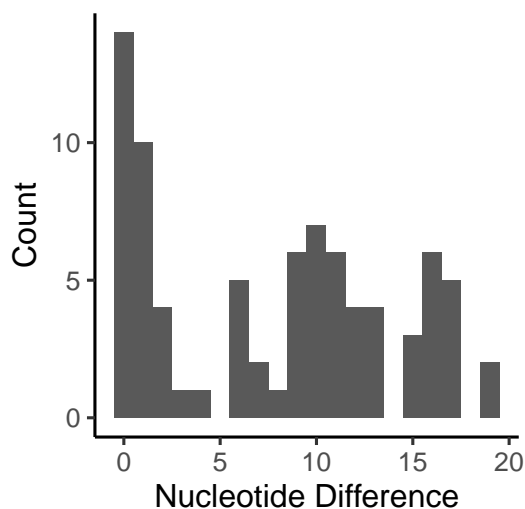
### IGHV3-20\*04

55 sequences assigned  
9 (16.4%) exact matches, in which:  
8 unique CDR3  
2 unique J



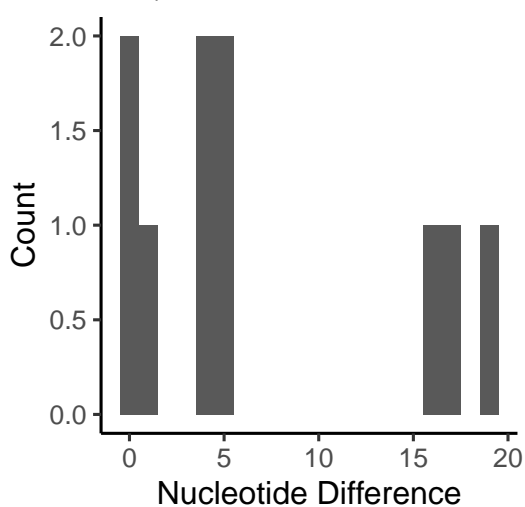
### IGHV3-11\*04

81 sequences assigned  
14 (17.3%) exact matches, in which:  
13 unique CDR3  
3 unique J



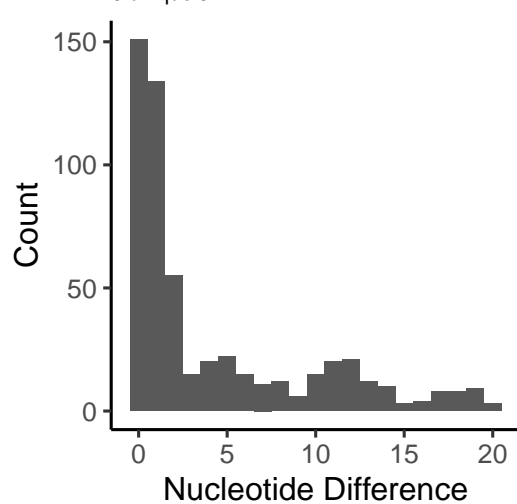
### IGHV3-13\*05

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



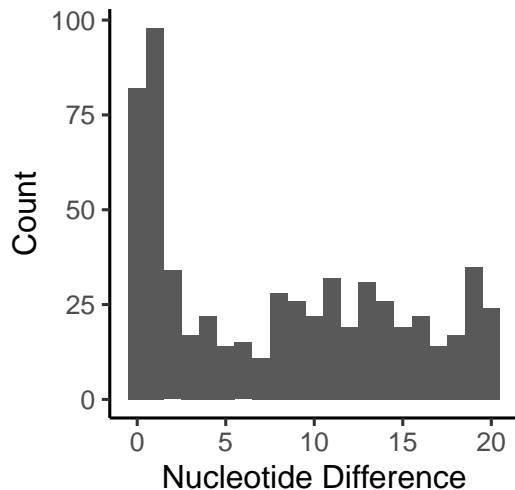
### IGHV3-21\*01

587 sequences assigned  
151 (25.7%) exact matches, in which:  
98 unique CDR3  
6 unique J



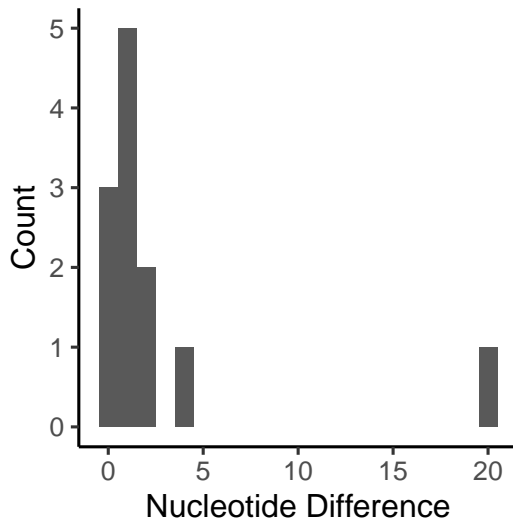
### IGHV3-23\*04

724 sequences assigned  
82 (11.3%) exact matches, in which:  
64 unique CDR3  
4 unique J



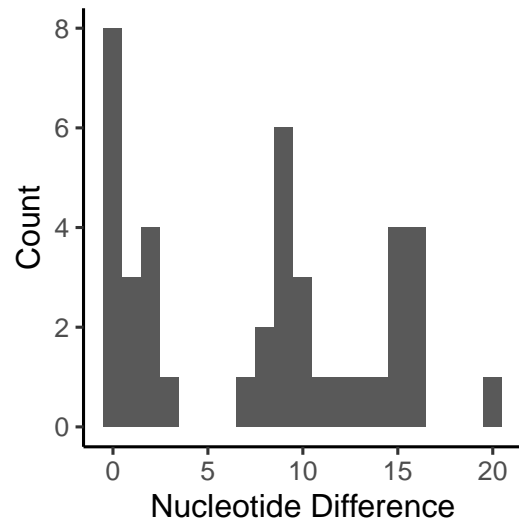
### IGHV3-43\*01

12 sequences assigned  
3 (25%) exact matches, in which:  
3 unique CDR3  
2 unique J



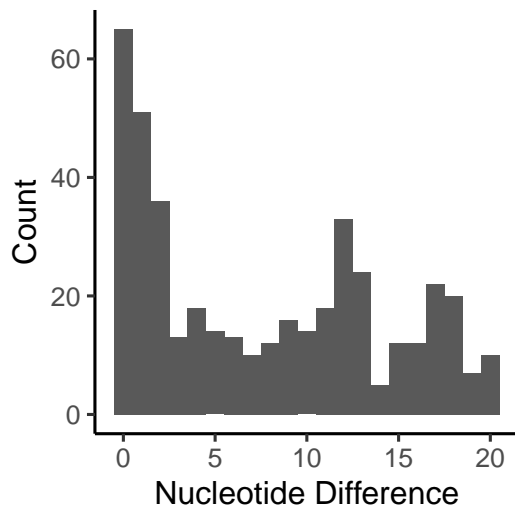
### IGHV3-49\*03

49 sequences assigned  
8 (16.3%) exact matches, in which:  
7 unique CDR3  
3 unique J



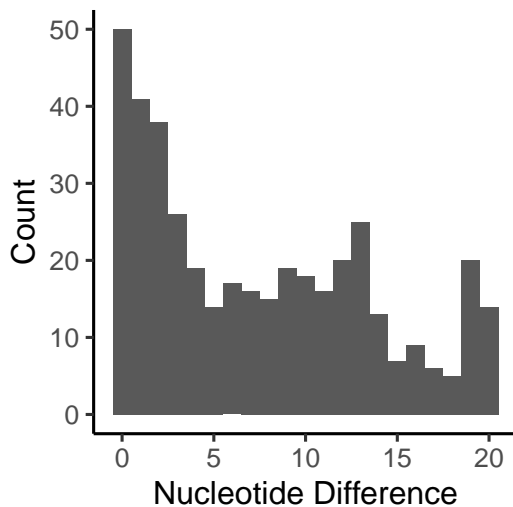
### IGHV3-30-3\*01

494 sequences assigned  
65 (13.2%) exact matches, in which:  
47 unique CDR3  
4 unique J



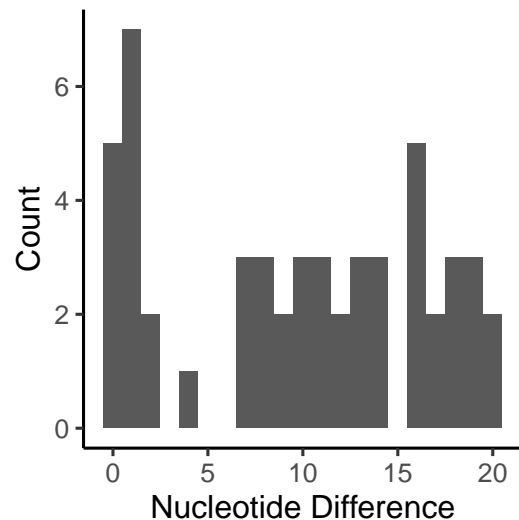
### IGHV3-48\*03

480 sequences assigned  
50 (10.4%) exact matches, in which:  
39 unique CDR3  
5 unique J



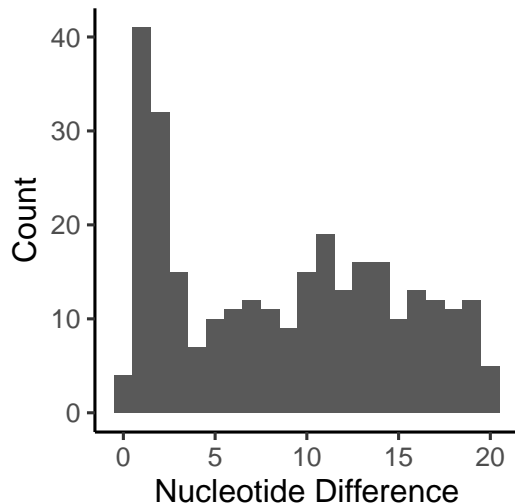
### IGHV3-49\*04

57 sequences assigned  
5 (8.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



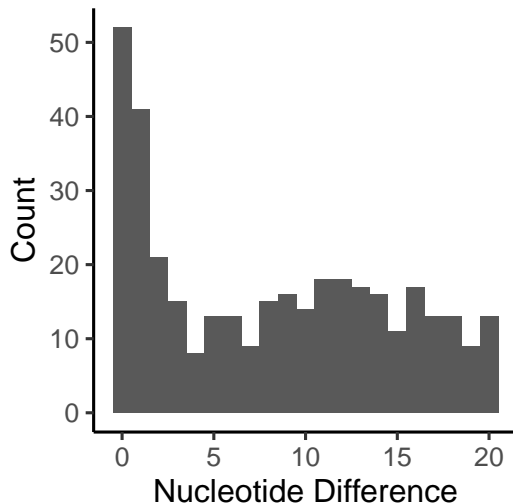
### IGHV3-33\*01

364 sequences assigned  
4 (1.1%) exact matches, in which:  
3 unique CDR3  
1 unique J



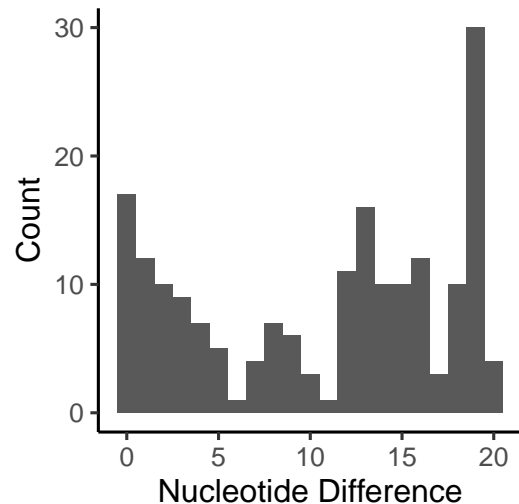
### IGHV3-48\*04

433 sequences assigned  
52 (12%) exact matches, in which:  
40 unique CDR3  
6 unique J



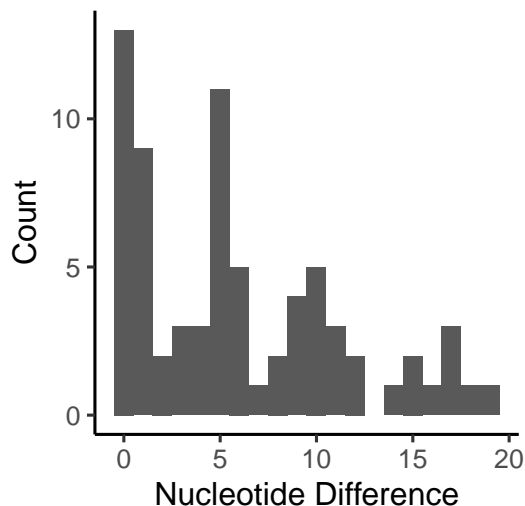
### IGHV3-53\*02

197 sequences assigned  
17 (8.6%) exact matches, in which:  
17 unique CDR3  
3 unique J



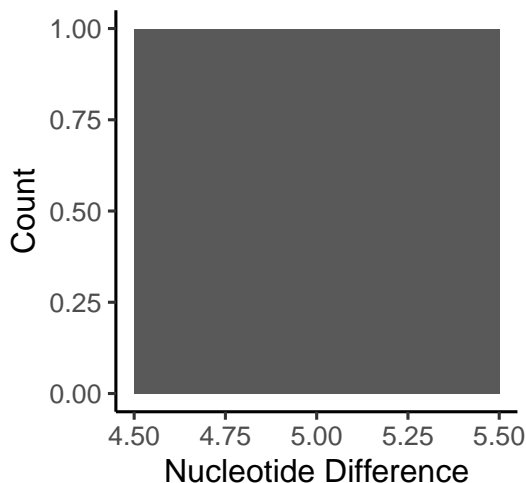
### IGHV3-53\*04

74 sequences assigned  
13 (17.6%) exact matches, in which:  
11 unique CDR3  
5 unique J



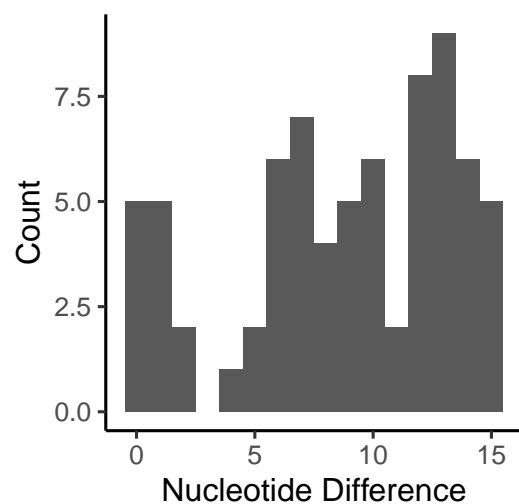
### IGHV3-69-1\*01

6 sequences assigned  
No exact matches.



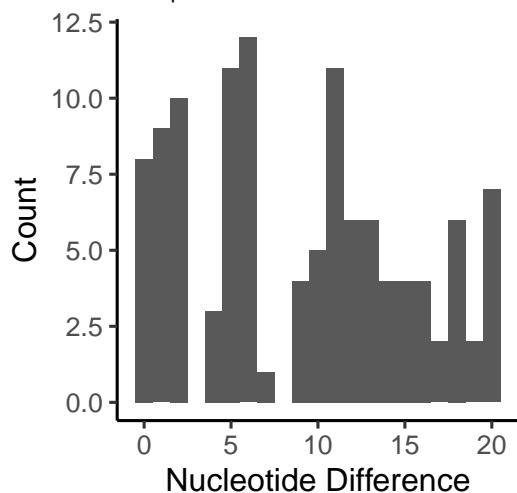
### IGHV3-73\*02

83 sequences assigned  
5 (6%) exact matches, in which:  
5 unique CDR3  
3 unique J



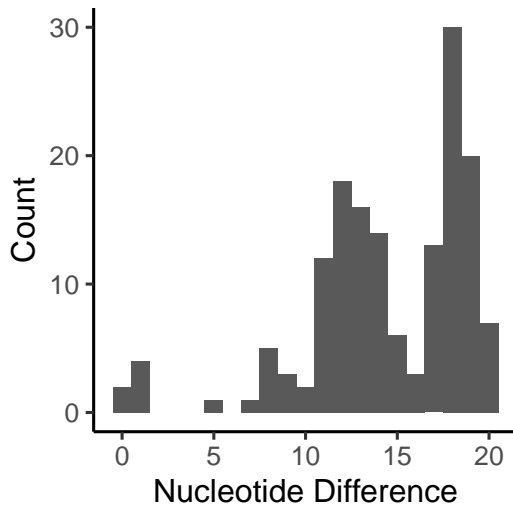
### IGHV3-64\*01

128 sequences assigned  
8 (6.2%) exact matches, in which:  
6 unique CDR3  
1 unique J



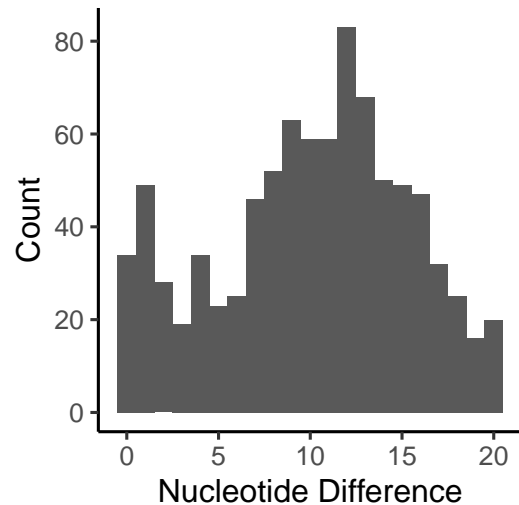
### IGHV3-72\*01

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



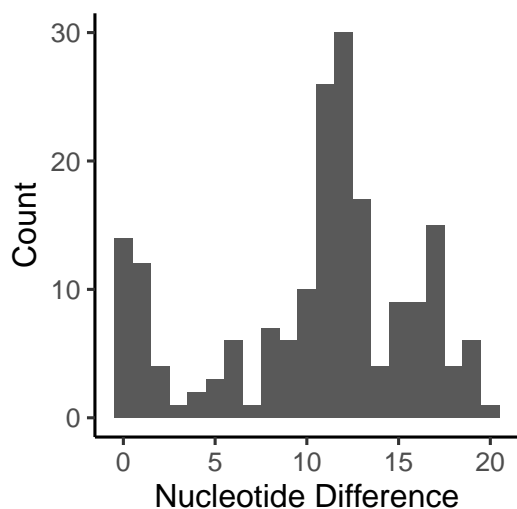
### IGHV3-74\*01

1049 sequences assigned  
34 (3.2%) exact matches, in which:  
25 unique CDR3  
3 unique J



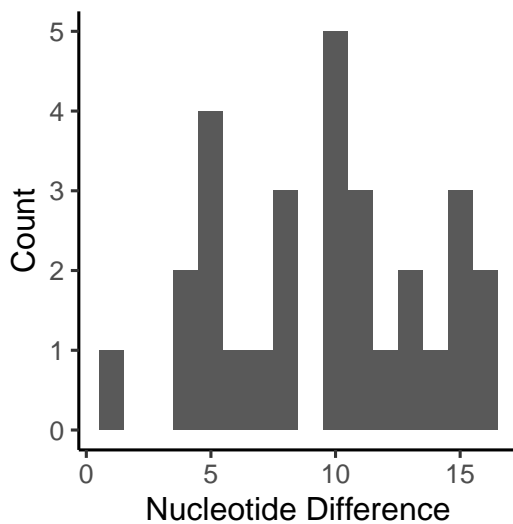
### IGHV3-66\*01

221 sequences assigned  
14 (6.3%) exact matches, in which:  
12 unique CDR3  
4 unique J



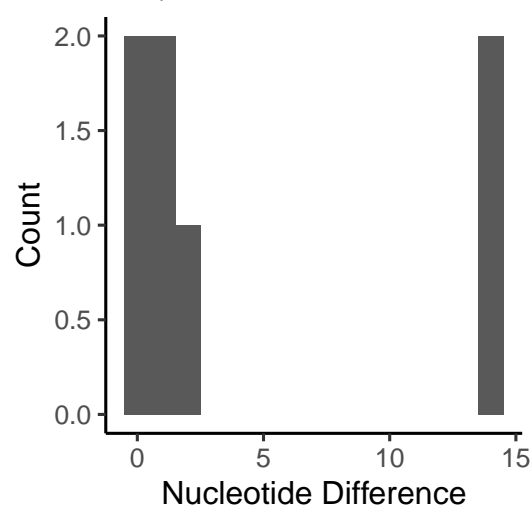
### IGHV3-73\*01

31 sequences assigned  
No exact matches.



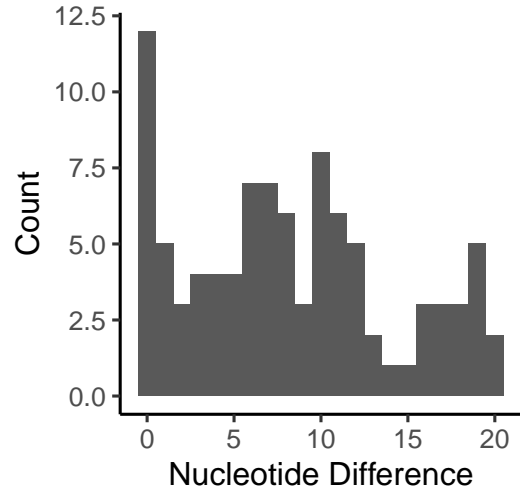
### IGHV3-43D\*04

7 sequences assigned  
2 (28.6%) exact matches, in which:  
2 unique CDR3  
2 unique J



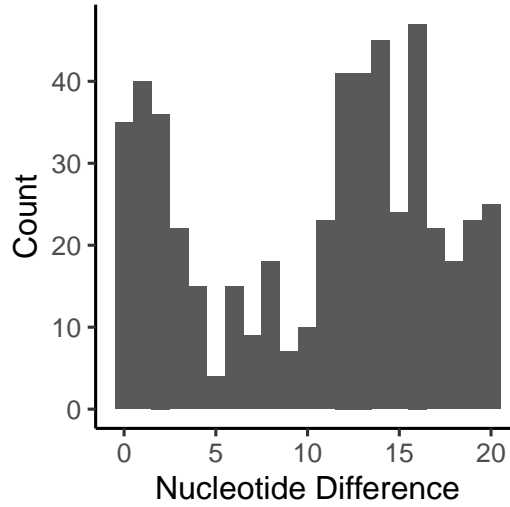
### IGHV3-64D\*06

102 sequences assigned  
12 (11.8%) exact matches, in which:  
9 unique CDR3  
2 unique J



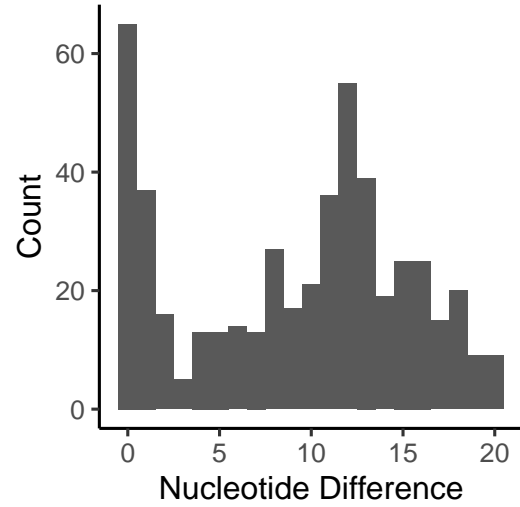
### IGHV4-4\*07

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



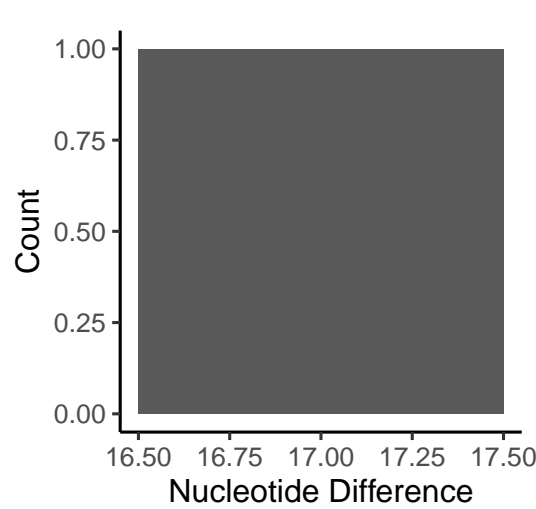
### IGHV4-34\*01

518 sequences assigned  
65 (12.5%) exact matches, in which:  
44 unique CDR3  
6 unique J



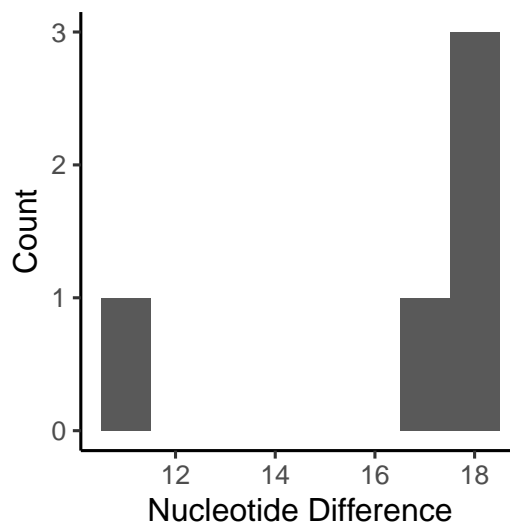
### IGHV3-NL1\*01

1 sequences assigned  
No exact matches.



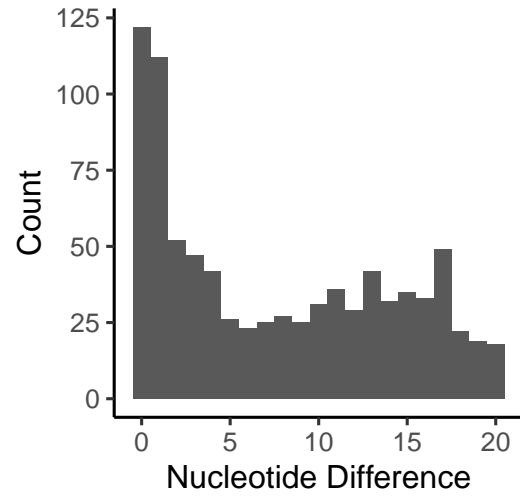
### IGHV4-28\*07

5 sequences assigned  
No exact matches.



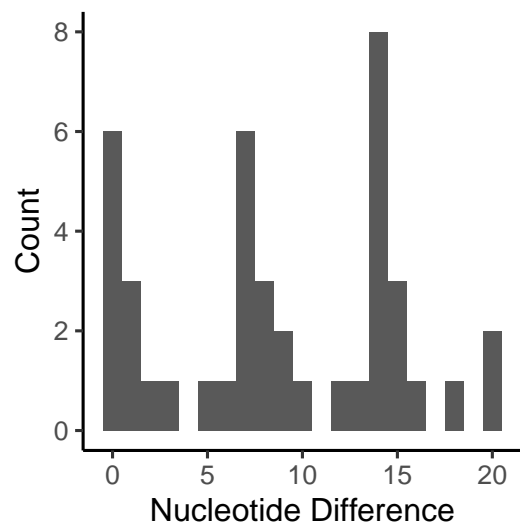
### IGHV4-38-2\*01

928 sequences assigned  
122 (13.1%) exact matches, in which:  
87 unique CDR3  
5 unique J



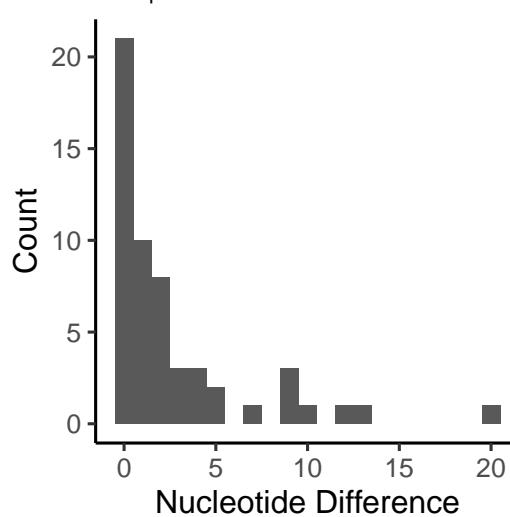
### IGHV4-4\*02

54 sequences assigned  
6 (11.1%) exact matches, in which:  
5 unique CDR3  
4 unique J



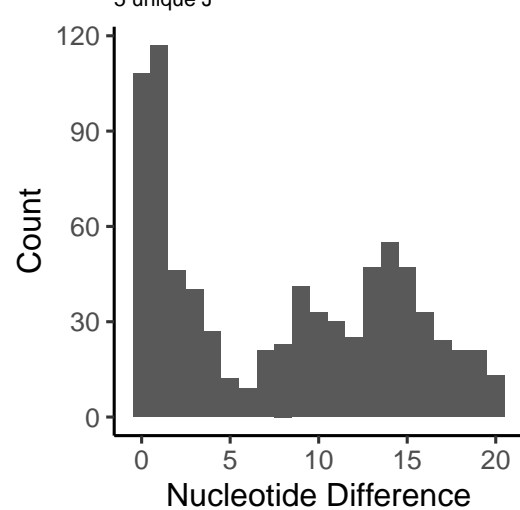
### IGHV4-30-4\*08

55 sequences assigned  
21 (38.2%) exact matches, in which:  
18 unique CDR3  
3 unique J



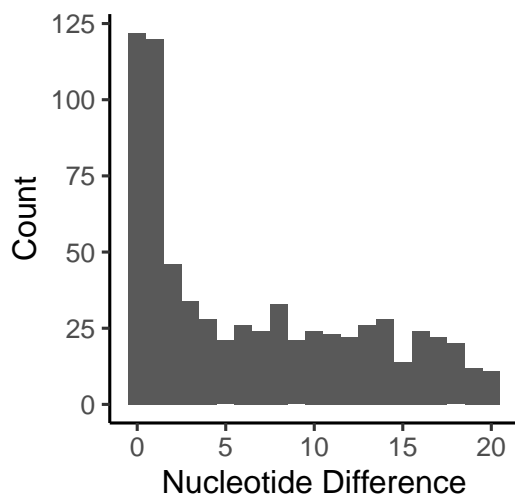
### IGHV4-39\*01

872 sequences assigned  
108 (12.4%) exact matches, in which:  
77 unique CDR3  
5 unique J



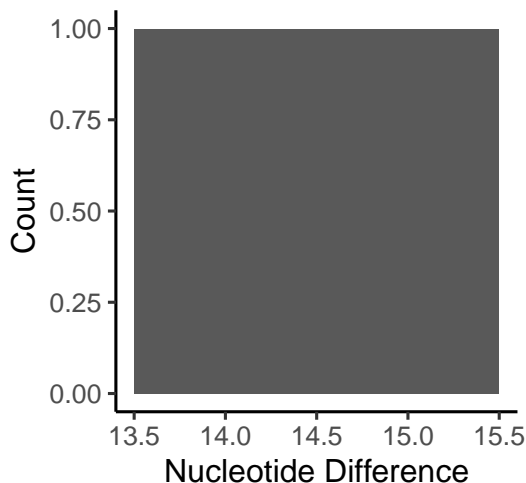
### IGHV4-39\*07

791 sequences assigned  
122 (15.4%) exact matches, in which:  
103 unique CDR3  
6 unique J



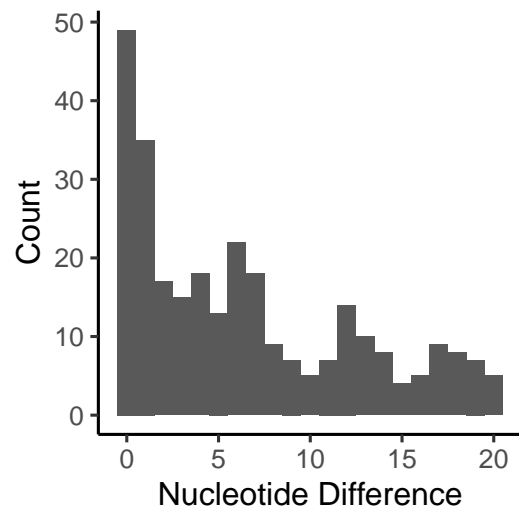
### IGHV4-61\*01

2 sequences assigned  
No exact matches.



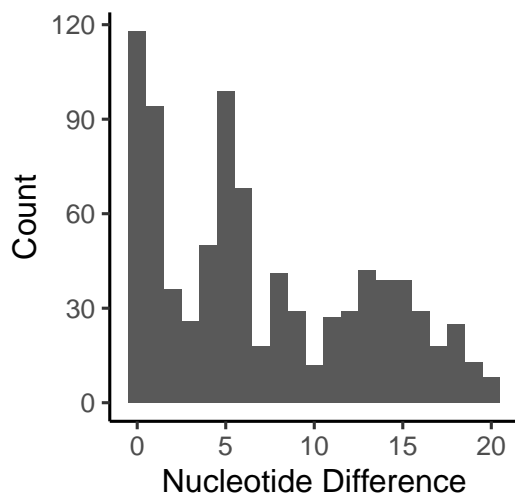
### IGHV6-1\*01

310 sequences assigned  
49 (15.8%) exact matches, in which:  
38 unique CDR3  
6 unique J



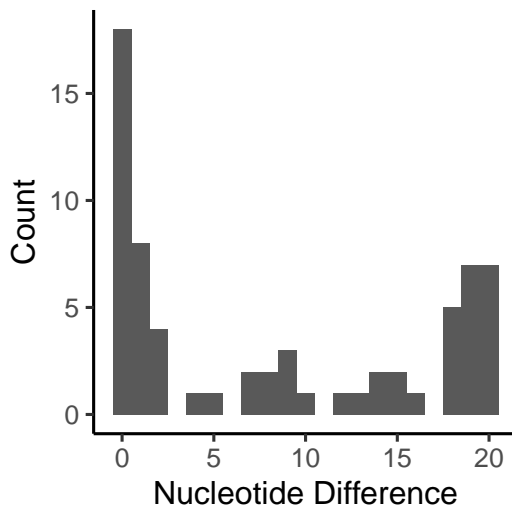
### IGHV4-59\*01

930 sequences assigned  
118 (12.7%) exact matches, in which:  
86 unique CDR3  
7 unique J



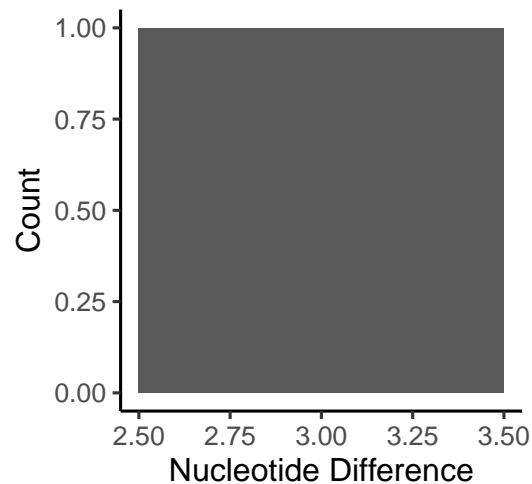
### IGHV5-10-1\*03

67 sequences assigned  
18 (26.9%) exact matches, in which:  
16 unique CDR3  
5 unique J



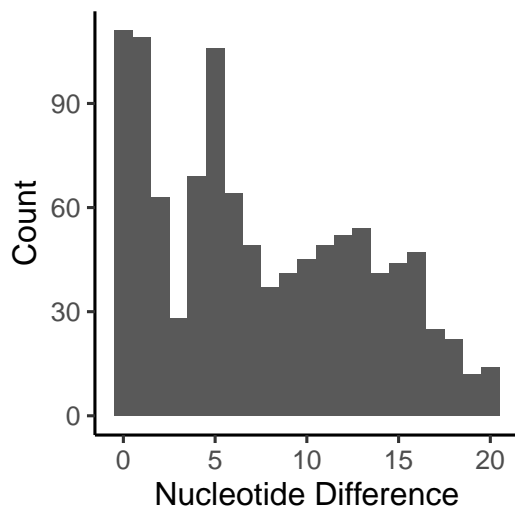
### IGHV7-4-1\*01

1 sequences assigned  
No exact matches.



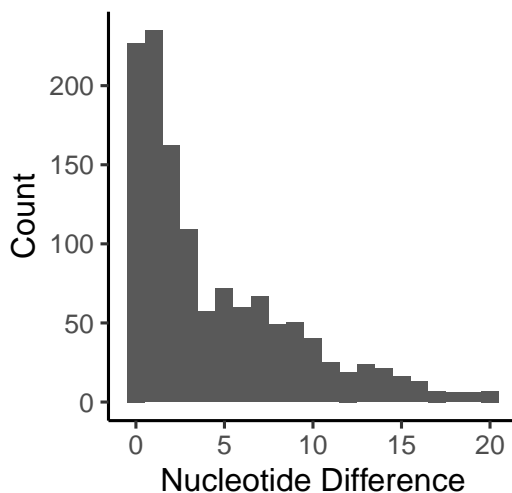
### IGHV4-59\*08

1185 sequences assigned  
111 (9.4%) exact matches, in which:  
75 unique CDR3  
7 unique J

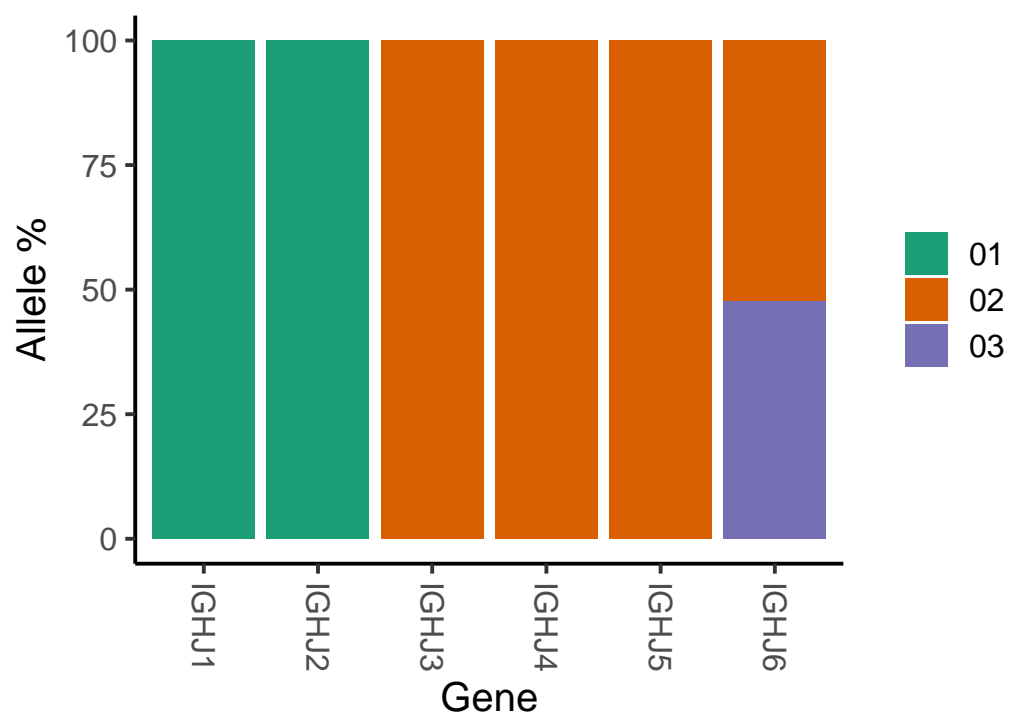


### IGHV5-51\*01

1304 sequences assigned  
227 (17.4%) exact matches, in which:  
166 unique CDR3  
7 unique J

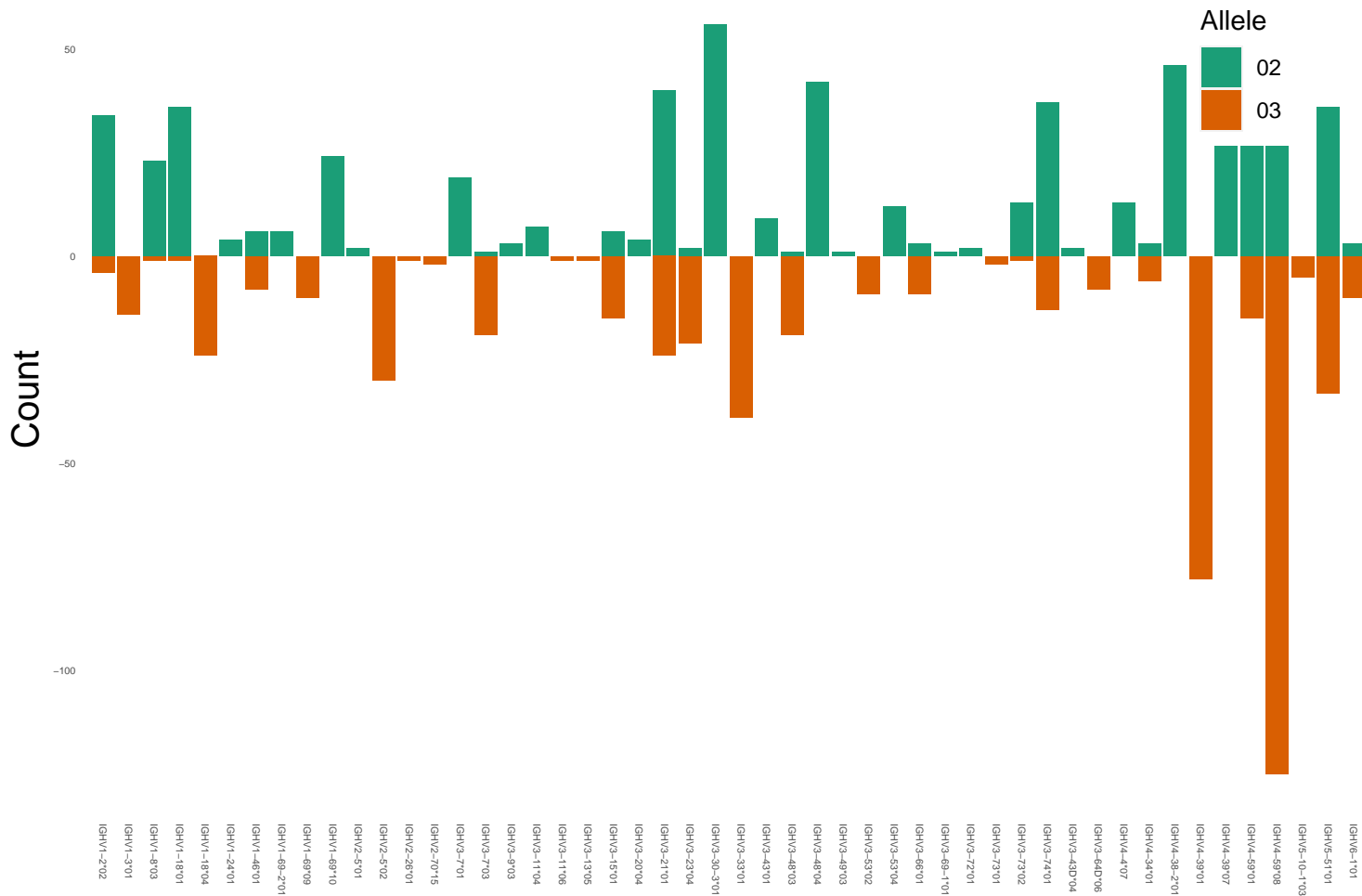


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.