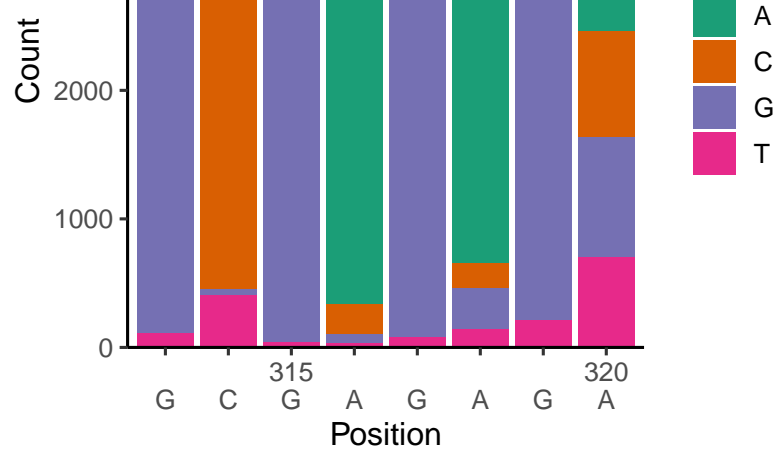
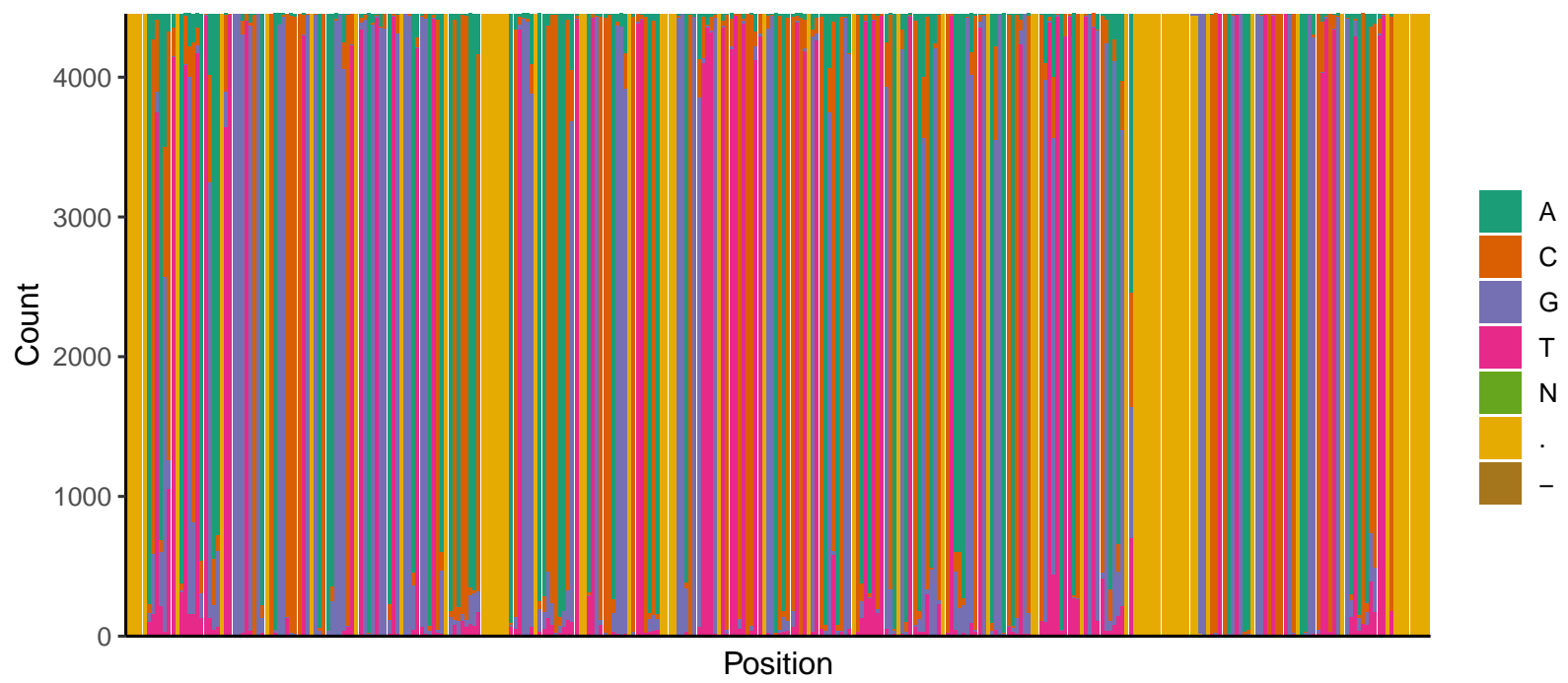


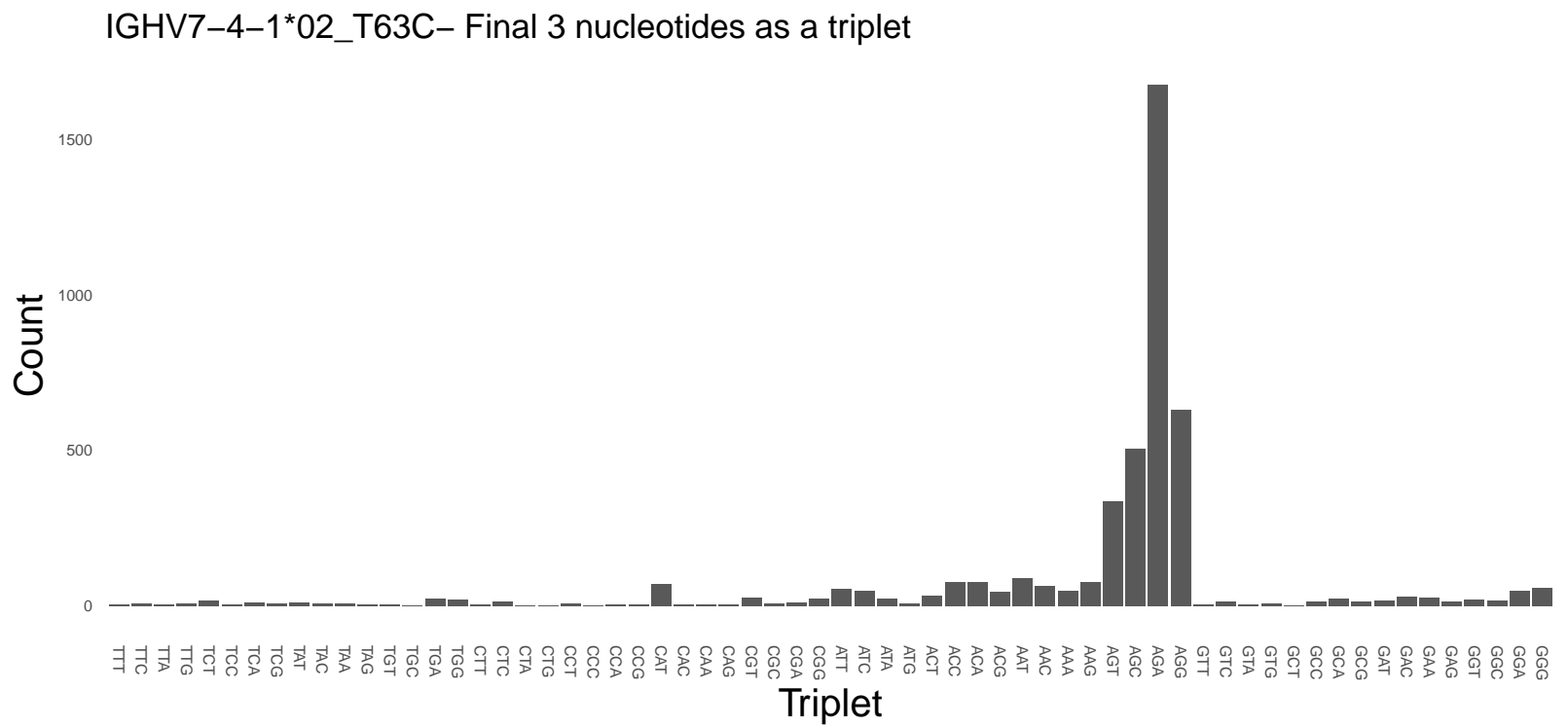
# Gene IGHV7-4-1\*02\_T63C



Gene IGHV7-4-1\*02\_T63C

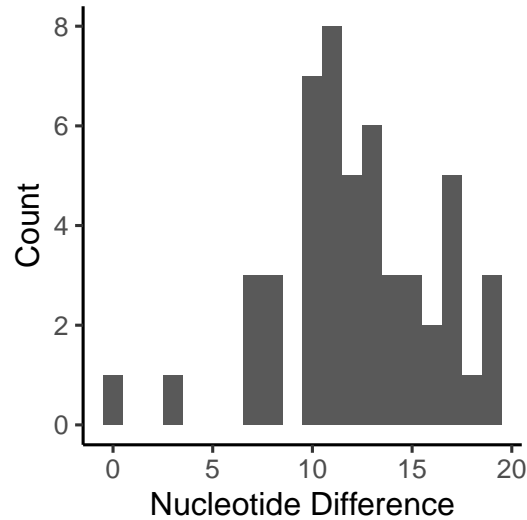


IGHV7-4-1\*02\_T63C- Final 3 nucleotides as a triplet



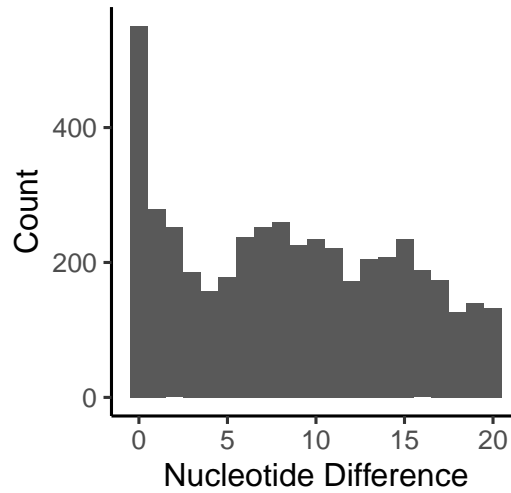
## IGHV1-2\*02

53 sequences assigned  
1 (1.9%) exact matches, in which:  
1 unique CDR3  
1 unique J



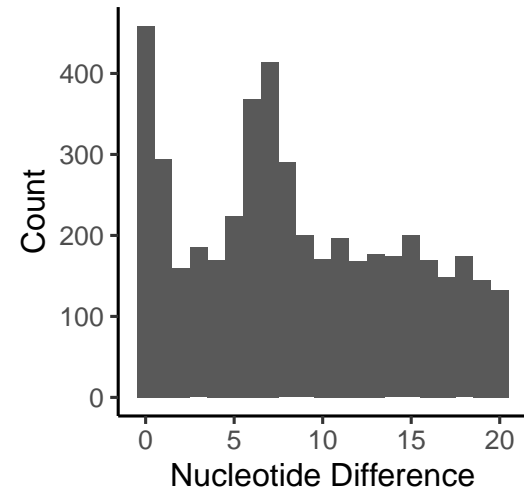
## IGHV1-3\*01\_05

5781 sequences assigned  
551 (9.5%) exact matches, in which:  
543 unique CDR3  
7 unique J



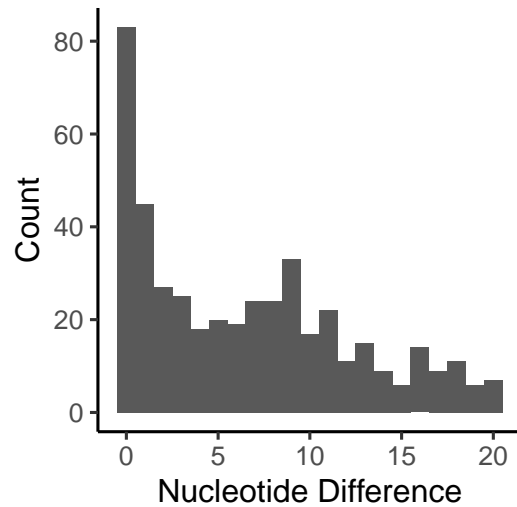
## IGHV1-18\*01

5520 sequences assigned  
459 (8.3%) exact matches, in which:  
449 unique CDR3  
7 unique J



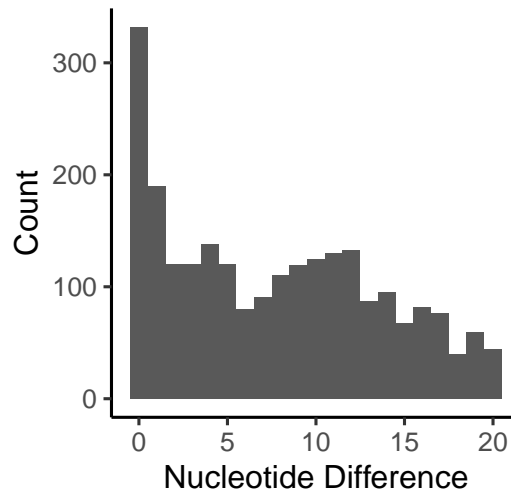
## IGHV1-2\*04

477 sequences assigned  
83 (17.4%) exact matches, in which:  
82 unique CDR3  
6 unique J



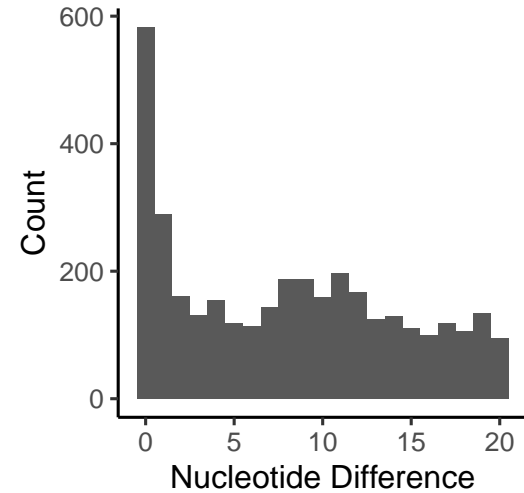
## IGHV1-8\*01

2757 sequences assigned  
332 (12%) exact matches, in which:  
321 unique CDR3  
7 unique J



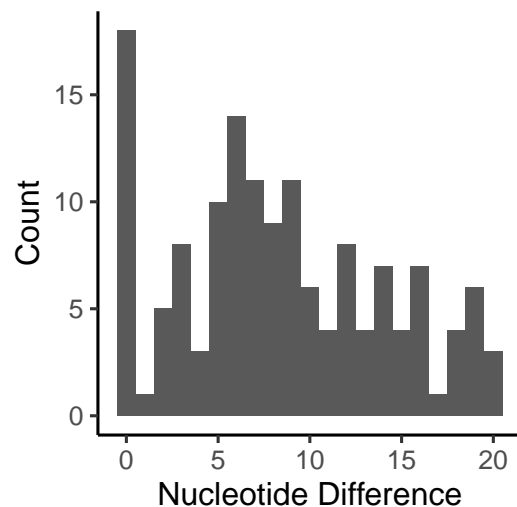
## IGHV1-18\*04

4300 sequences assigned  
583 (13.6%) exact matches, in which:  
567 unique CDR3  
7 unique J



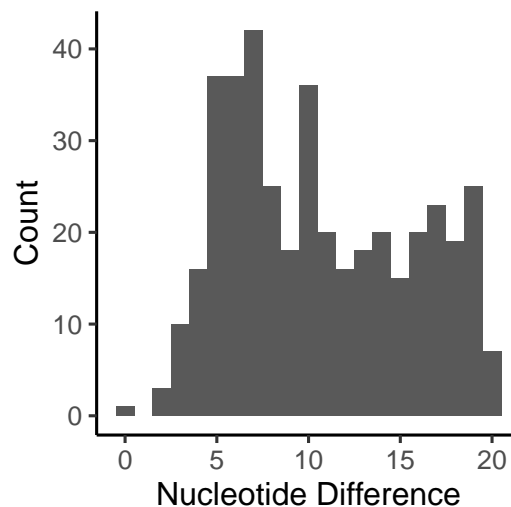
## IGHV1-2\*05

169 sequences assigned  
18 (10.7%) exact matches, in which:  
18 unique CDR3  
4 unique J



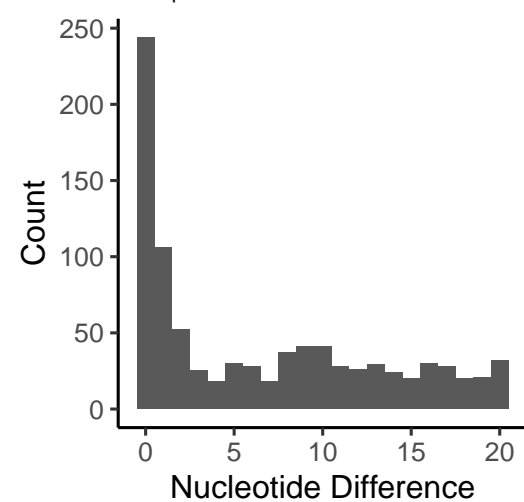
## IGHV1-8\*02

483 sequences assigned  
1 (0.2%) exact matches, in which:  
1 unique CDR3  
1 unique J



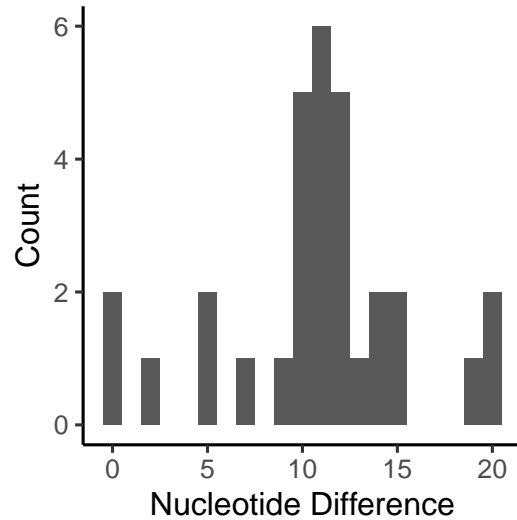
## IGHV1-24\*01

1121 sequences assigned  
244 (21.8%) exact matches, in which:  
243 unique CDR3  
7 unique J



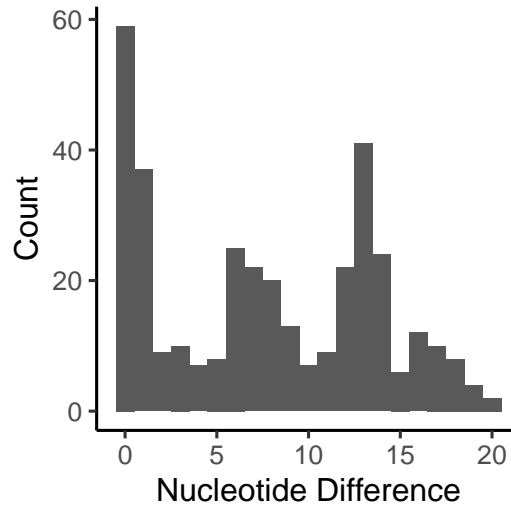
### IGHV1-45\*02

37 sequences assigned  
2 (5.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



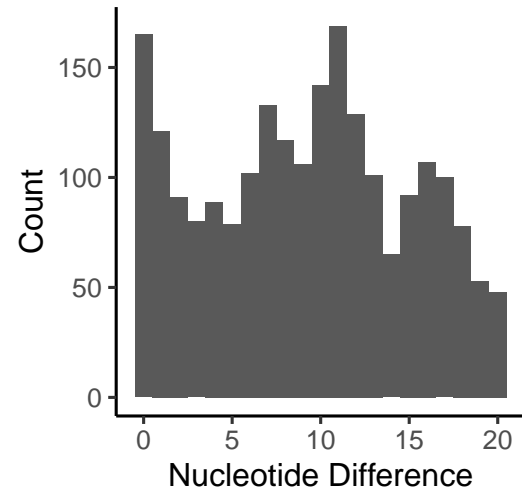
### IGHV1-58\*01\_03

395 sequences assigned  
59 (14.9%) exact matches, in which:  
59 unique CDR3  
7 unique J



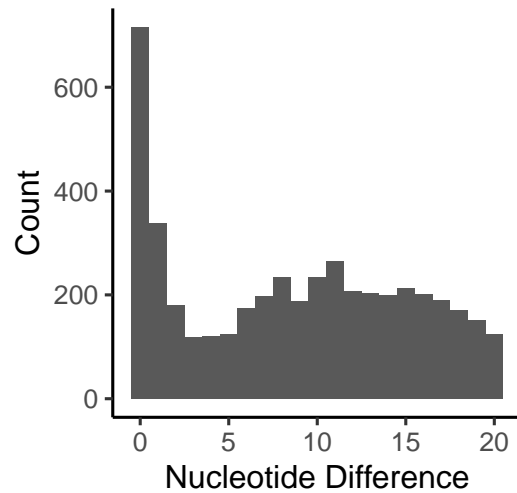
### IGHV2-5\*02

2446 sequences assigned  
165 (6.7%) exact matches, in which:  
160 unique CDR3  
6 unique J



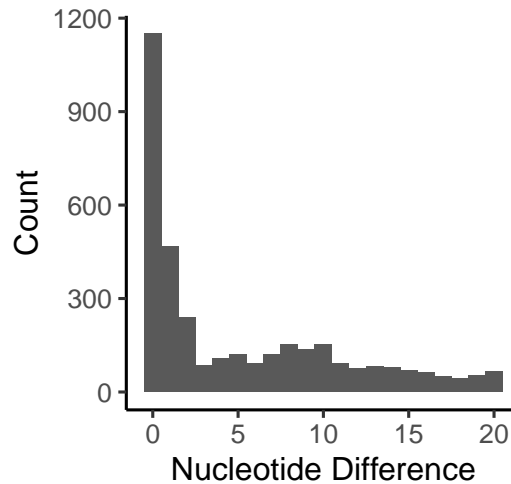
### IGHV1-46\*01

5908 sequences assigned  
716 (12.1%) exact matches, in which:  
708 unique CDR3  
7 unique J



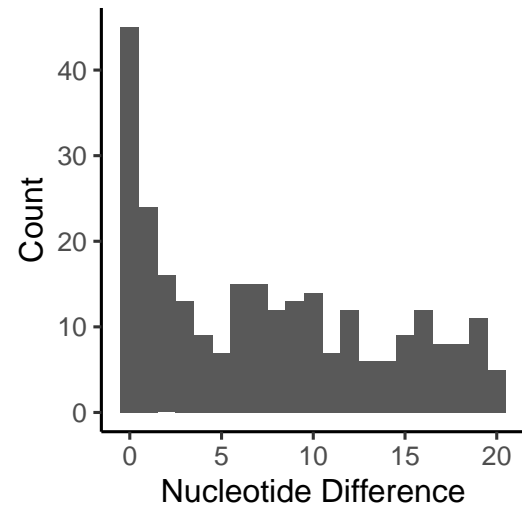
### IGHV1-69\*01\_12\_13

4023 sequences assigned  
1150 (28.6%) exact matches, in which:  
1140 unique CDR3  
7 unique J



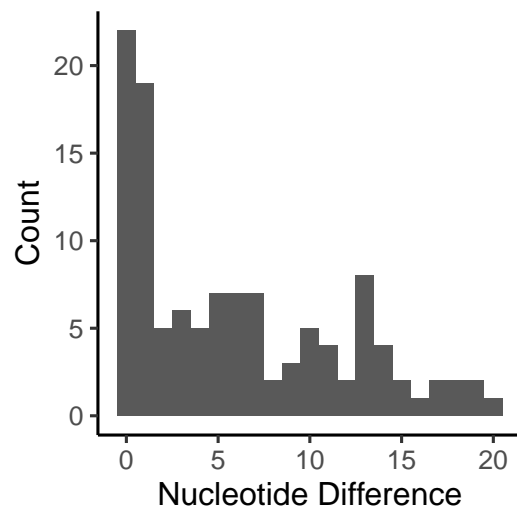
### IGHV2-26\*01

309 sequences assigned  
45 (14.6%) exact matches, in which:  
44 unique CDR3  
6 unique J



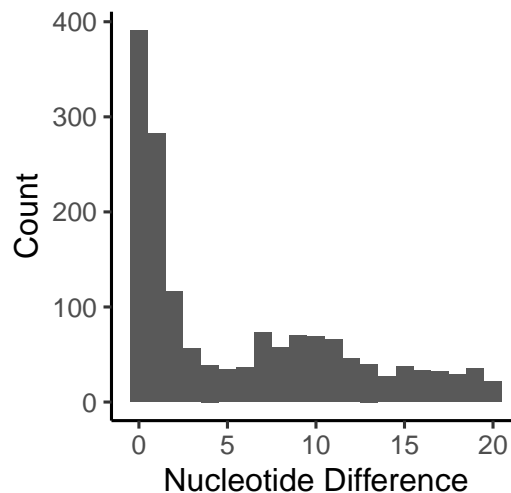
### IGHV1-58\*02

127 sequences assigned  
22 (17.3%) exact matches, in which:  
22 unique CDR3  
5 unique J



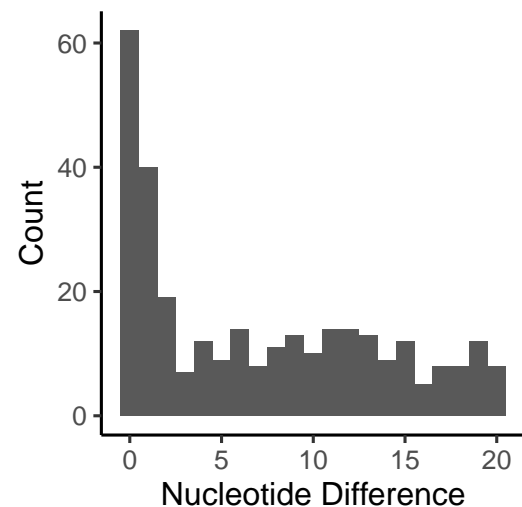
### IGHV1-69\*10

1972 sequences assigned  
391 (19.8%) exact matches, in which:  
385 unique CDR3  
7 unique J



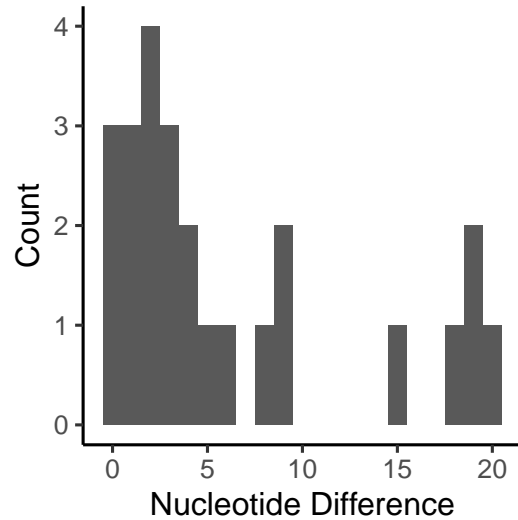
### IGHV2-70\*01

344 sequences assigned  
62 (18%) exact matches, in which:  
62 unique CDR3  
5 unique J



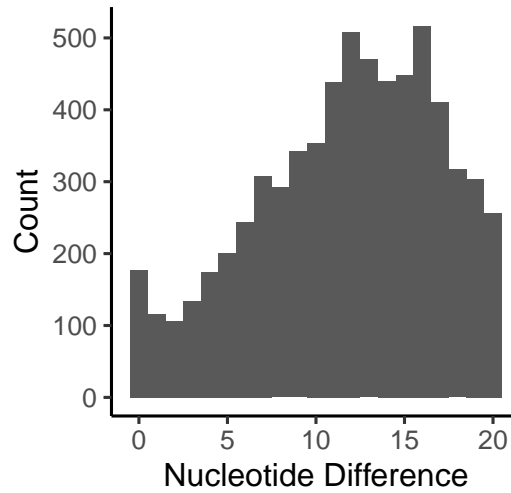
### IGHV2-70\*12

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



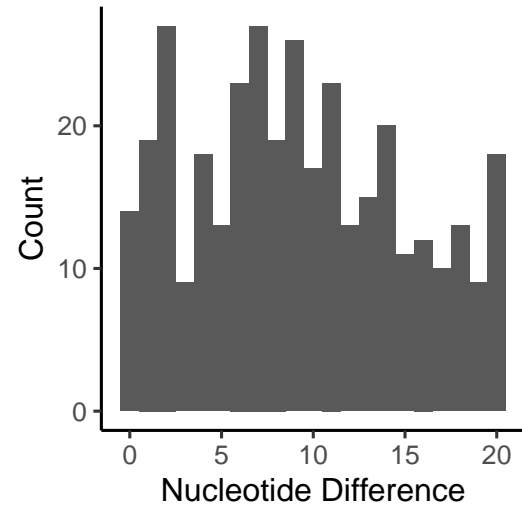
### IGHV3-7\*03

8429 sequences assigned  
177 (2.1%) exact matches, in which:  
176 unique CDR3  
7 unique J



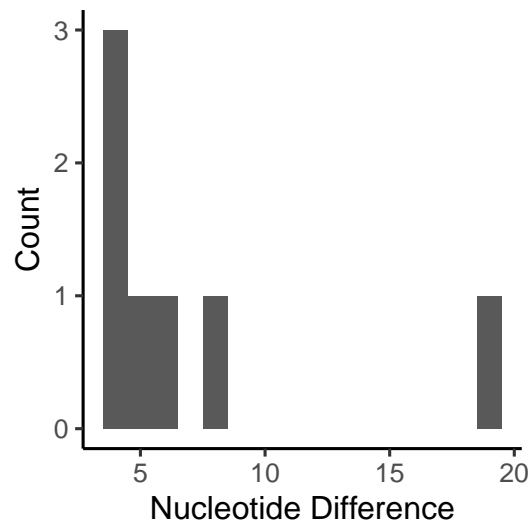
### IGHV3-11\*04

417 sequences assigned  
14 (3.4%) exact matches, in which:  
14 unique CDR3  
4 unique J



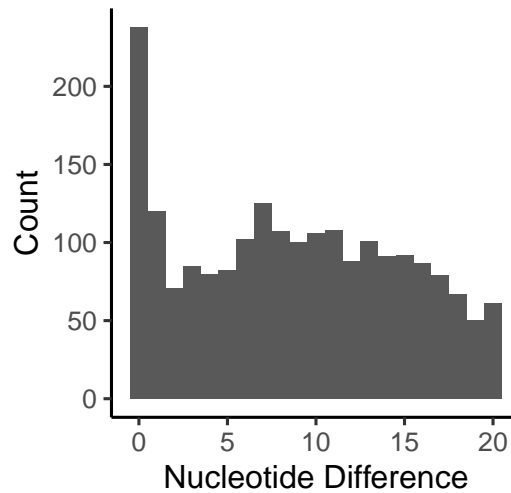
### IGHV2-70D\*04

7 sequences assigned  
No exact matches.



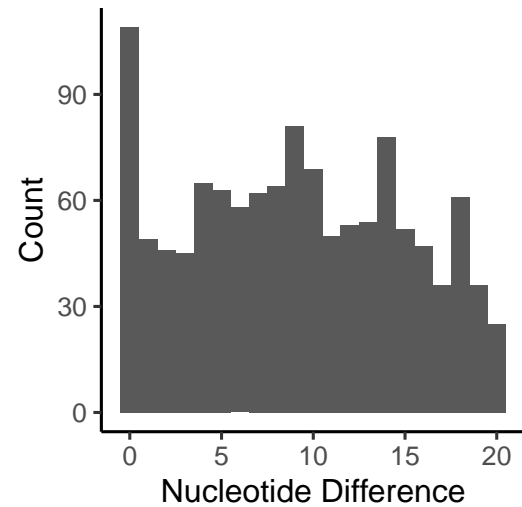
### IGHV3-9\*01

2351 sequences assigned  
238 (10.1%) exact matches, in which:  
236 unique CDR3  
7 unique J



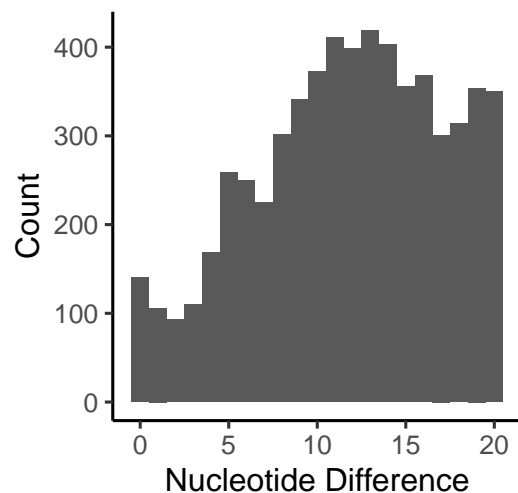
### IGHV3-11\*06

1492 sequences assigned  
109 (7.3%) exact matches, in which:  
108 unique CDR3  
6 unique J



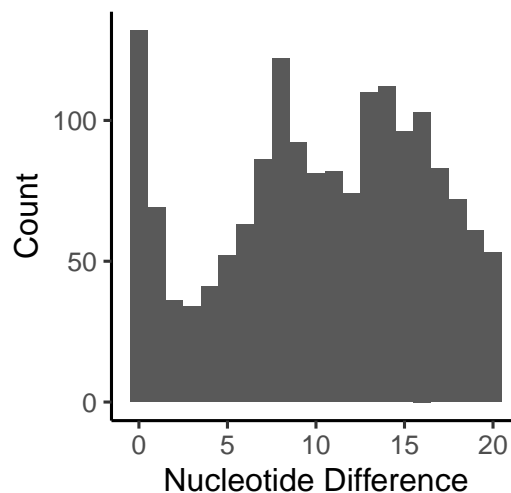
### IGHV3-7\*01

8165 sequences assigned  
140 (1.7%) exact matches, in which:  
138 unique CDR3  
7 unique J



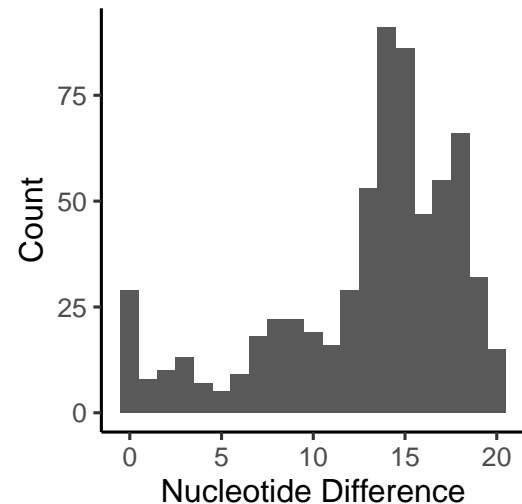
### IGHV3-11\*01

2380 sequences assigned  
132 (5.5%) exact matches, in which:  
130 unique CDR3  
7 unique J



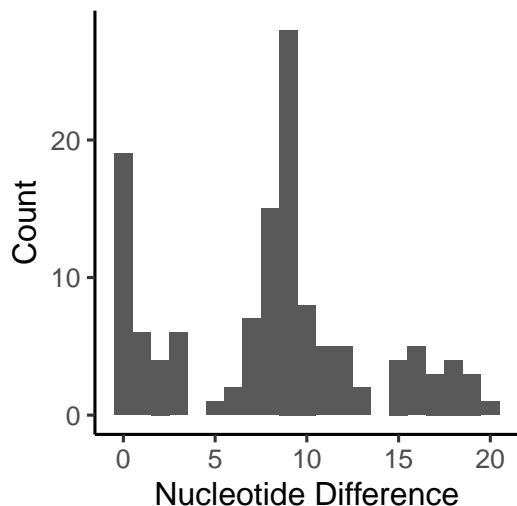
### IGHV3-13\*01

790 sequences assigned  
29 (3.7%) exact matches, in which:  
28 unique CDR3  
7 unique J



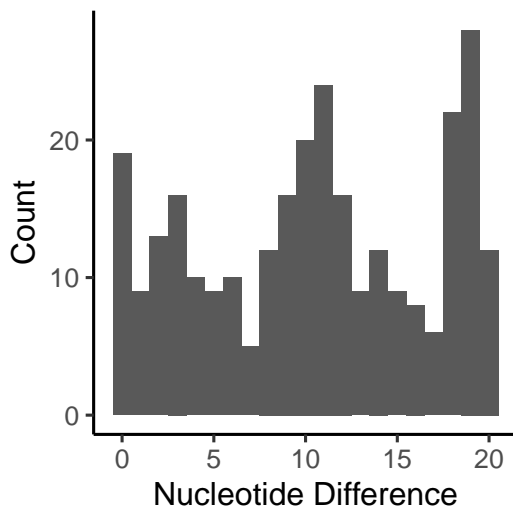
### IGHV3-13\*05

133 sequences assigned  
19 (14.3%) exact matches, in which:  
19 unique CDR3  
5 unique J



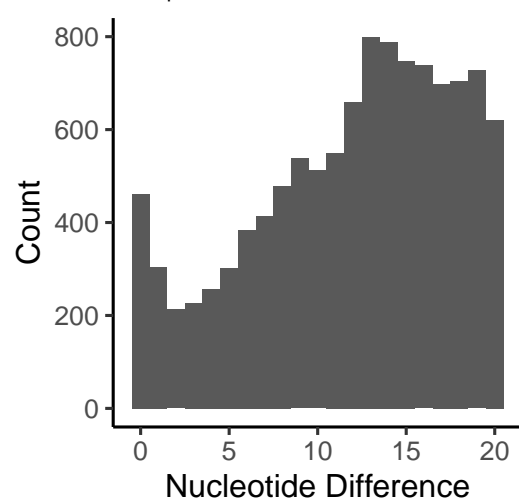
### IGHV3-20\*01\_02

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



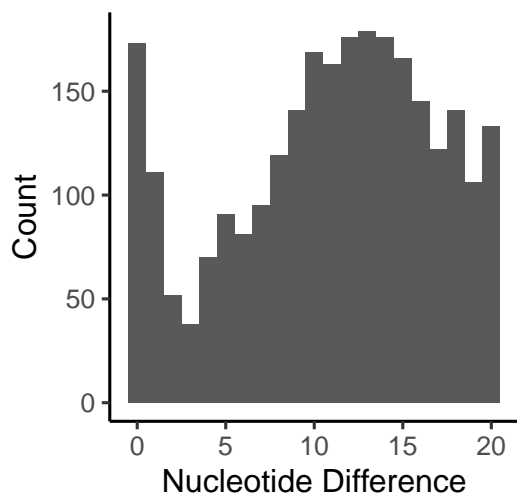
### IGHV3-23\*01\_04

16262 sequences assigned  
461 (2.8%) exact matches, in which:  
458 unique CDR3  
7 unique J



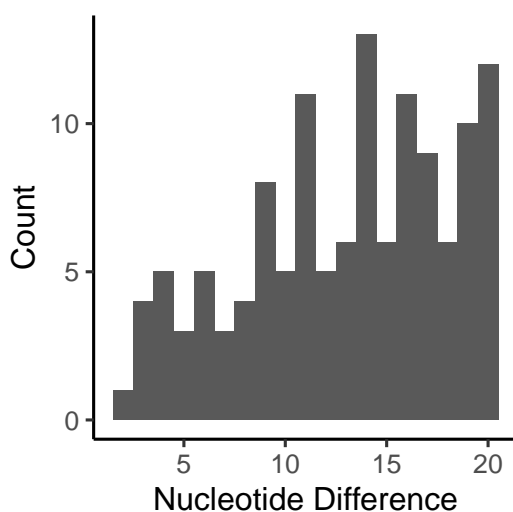
### IGHV3-15\*01\_02

3703 sequences assigned  
173 (4.7%) exact matches, in which:  
170 unique CDR3  
7 unique J



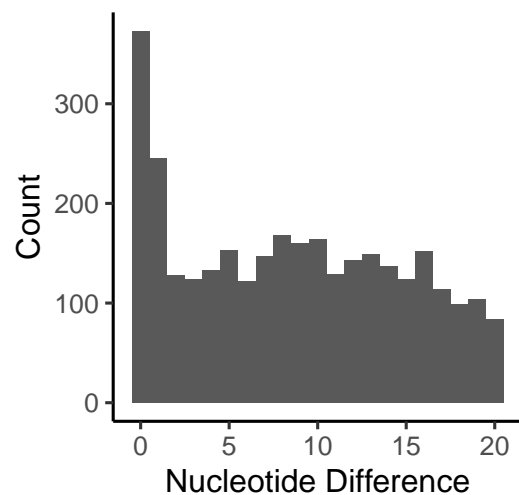
### IGHV3-20\*03\_04

201 sequences assigned  
No exact matches.



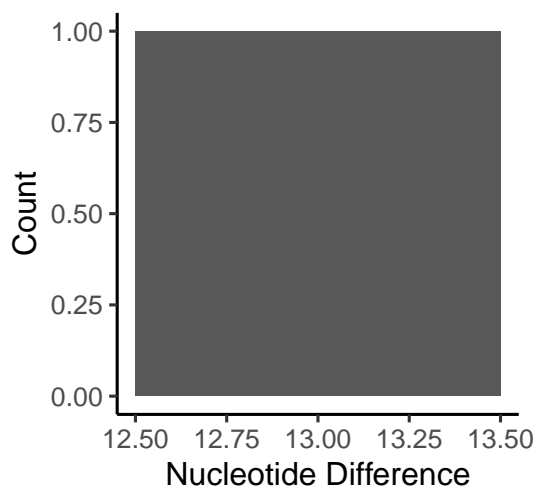
### IGHV3-30-3\*01

3998 sequences assigned  
373 (9.3%) exact matches, in which:  
368 unique CDR3  
7 unique J



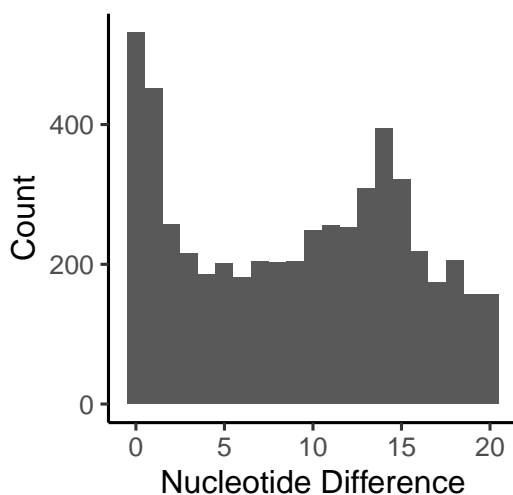
### IGHV3-19\*01

1 sequences assigned  
No exact matches.



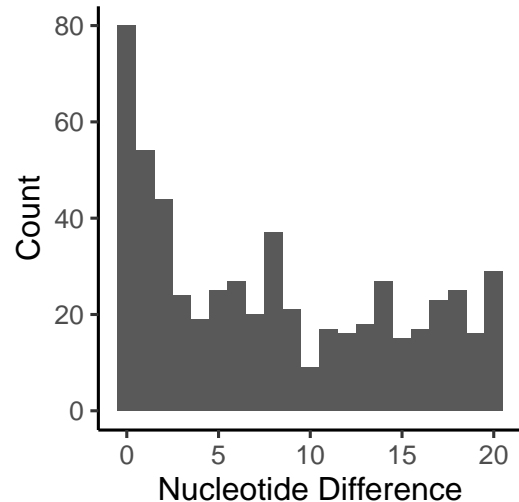
### IGHV3-21\*01\_02

6499 sequences assigned  
532 (8.2%) exact matches, in which:  
499 unique CDR3  
7 unique J



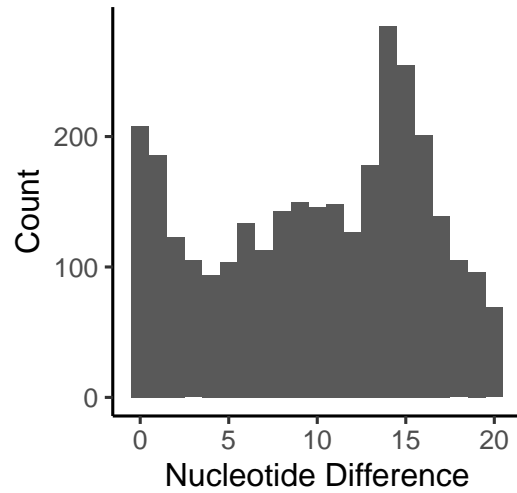
### IGHV3-30\*03

816 sequences assigned  
80 (9.8%) exact matches, in which:  
80 unique CDR3  
7 unique J



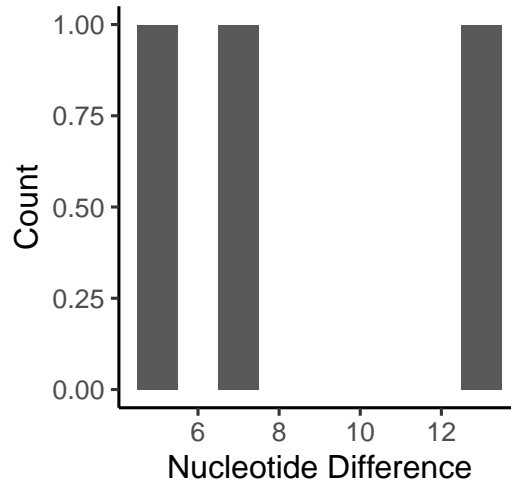
### IGHV3–33\*01

3728 sequences assigned  
208 (5.6%) exact matches, in which:  
199 unique CDR3  
6 unique J



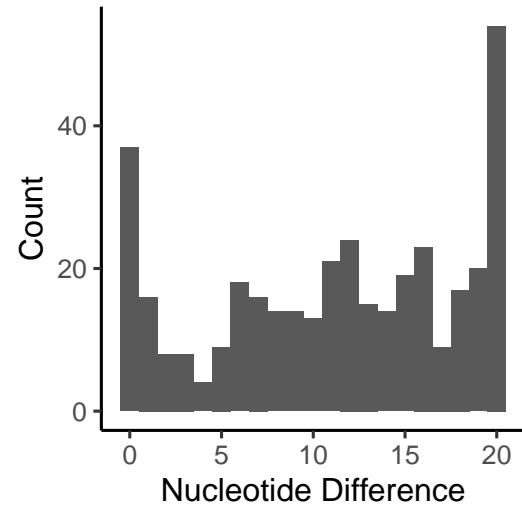
### IGHV3–35\*01

3 sequences assigned  
No exact matches.



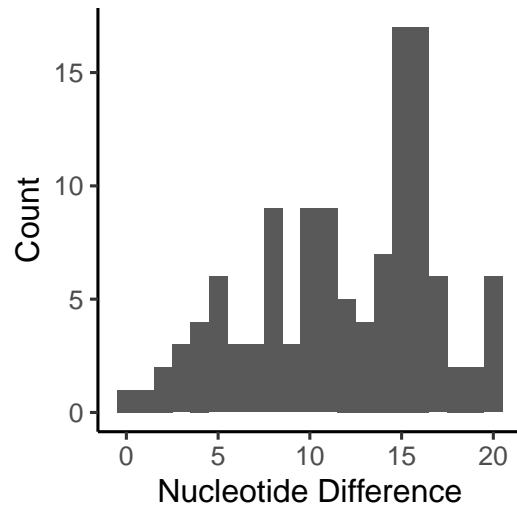
### IGHV3–43\*01

582 sequences assigned  
37 (6.4%) exact matches, in which:  
37 unique CDR3  
4 unique J



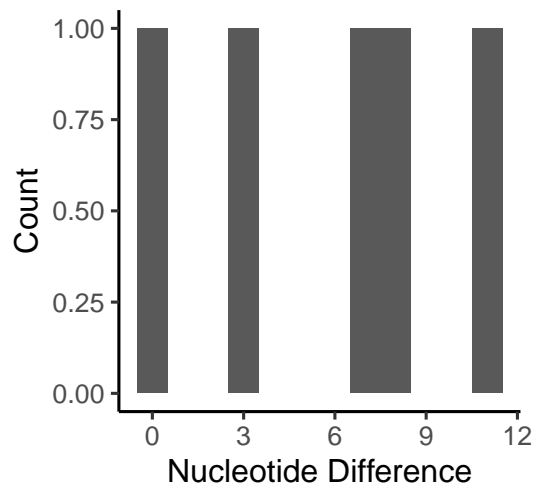
### IGHV3–33\*05

148 sequences assigned  
1 (0.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



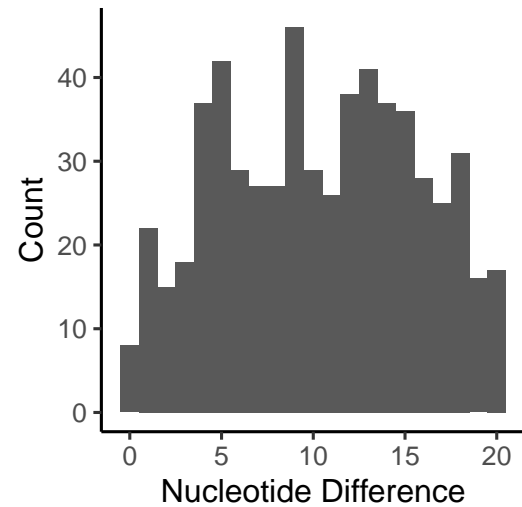
### IGHV3–38–3\*01

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



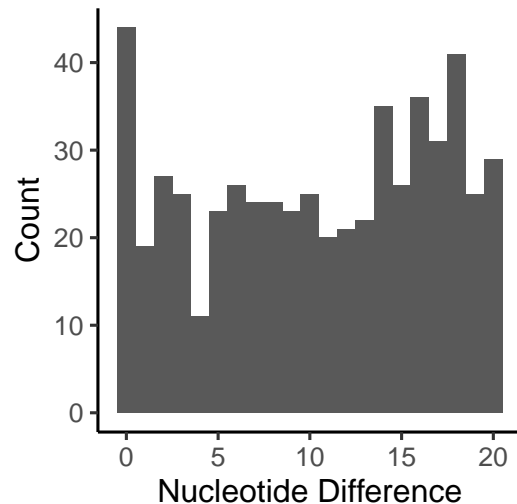
### IGHV3–48\*01

722 sequences assigned  
8 (1.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



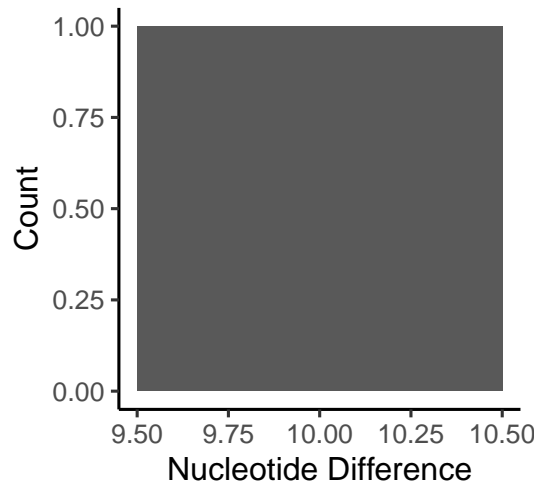
### IGHV3–33\*08

740 sequences assigned  
44 (5.9%) exact matches, in which:  
43 unique CDR3  
5 unique J



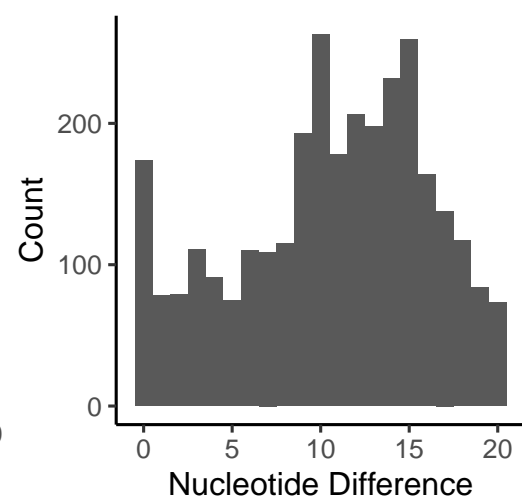
### IGHV3–38\*03

1 sequences assigned  
No exact matches.



### IGHV3–48\*02

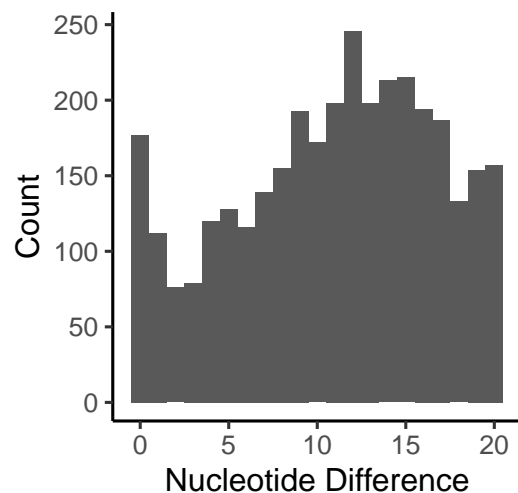
3581 sequences assigned  
174 (4.9%) exact matches, in which:  
170 unique CDR3  
6 unique J





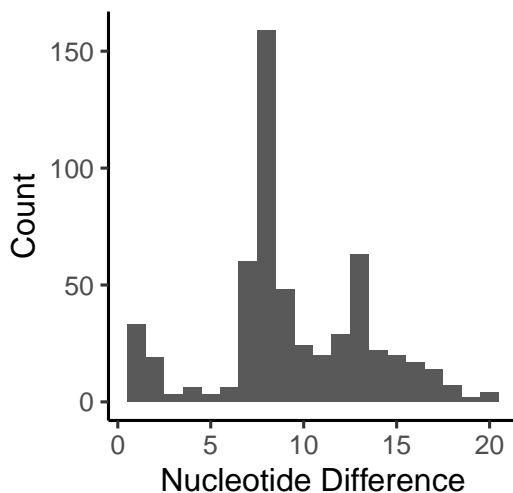
### IGHV3-48\*04

4437 sequences assigned  
177 (4%) exact matches, in which:  
173 unique CDR3  
7 unique J



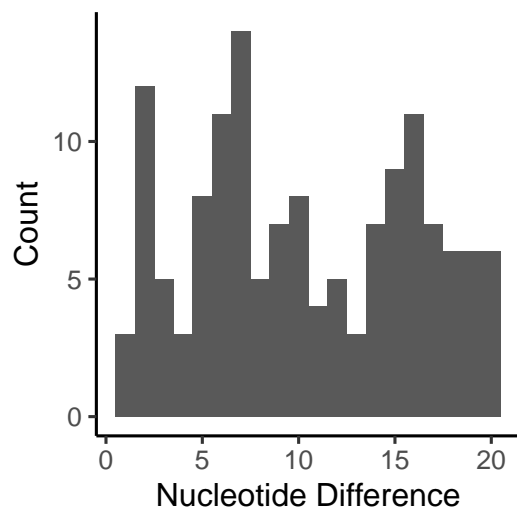
### IGHV3-53\*05

596 sequences assigned  
No exact matches.



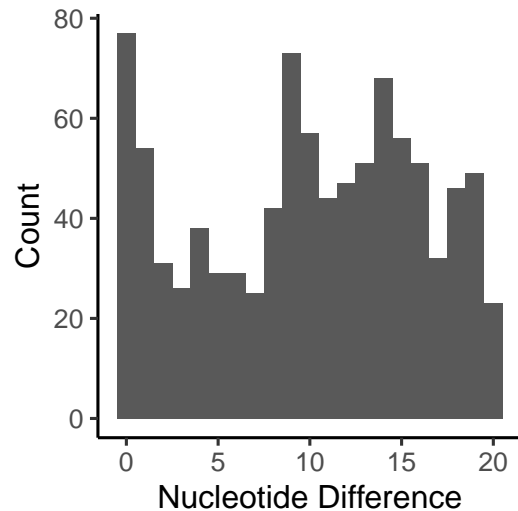
### IGHV3-64\*04

197 sequences assigned  
No exact matches.



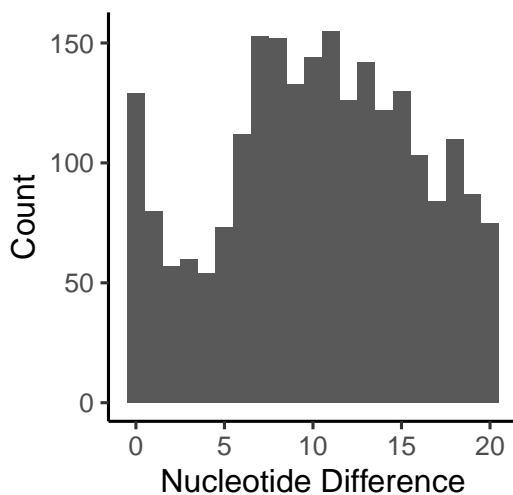
### IGHV3-49\*03\_05

1206 sequences assigned  
77 (6.4%) exact matches, in which:  
73 unique CDR3  
7 unique J



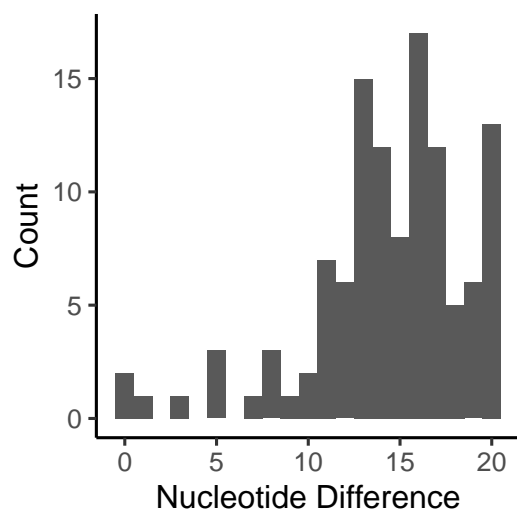
### IGHV3-53\*01\_02

3055 sequences assigned  
129 (4.2%) exact matches, in which:  
126 unique CDR3  
7 unique J



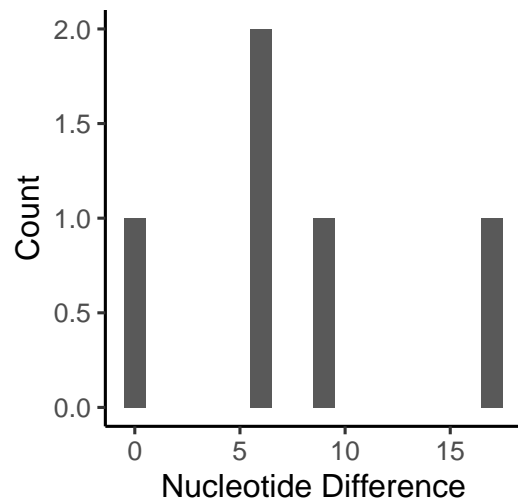
### IGHV3-64\*02\_07

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



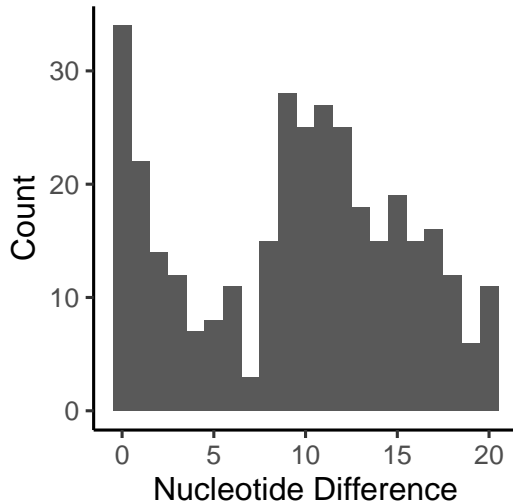
### IGHV3-52\*01\_03

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



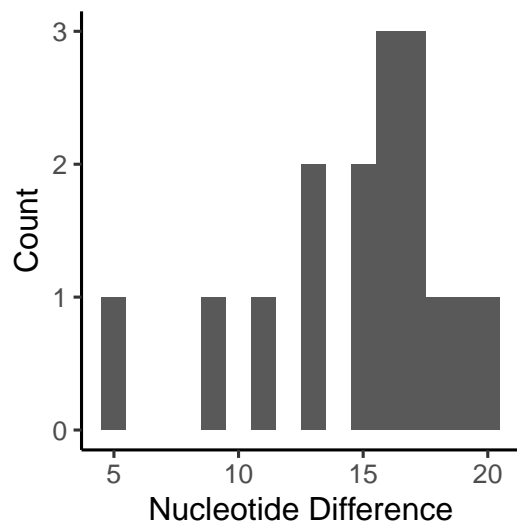
### IGHV3-64\*01

474 sequences assigned  
34 (7.2%) exact matches, in which:  
32 unique CDR3  
4 unique J



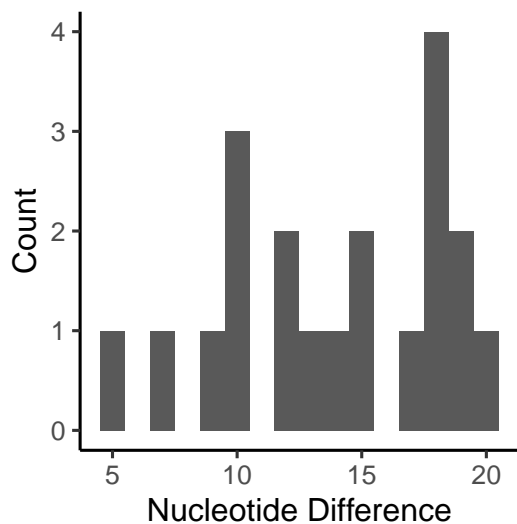
### IGHV3-66\*01

21 sequences assigned  
No exact matches.



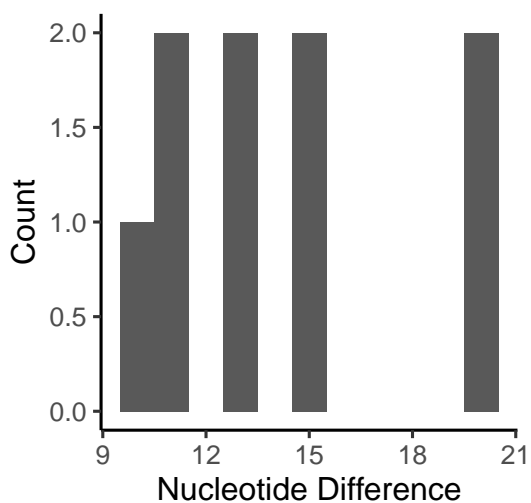
### IGHV3-66\*02

28 sequences assigned  
No exact matches.



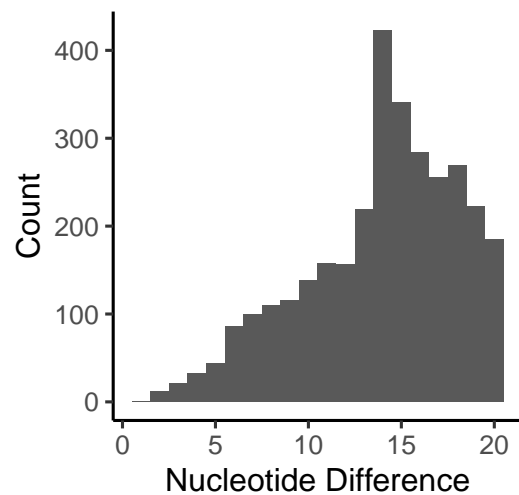
### IGHV3-69-1\*02

36 sequences assigned  
No exact matches.



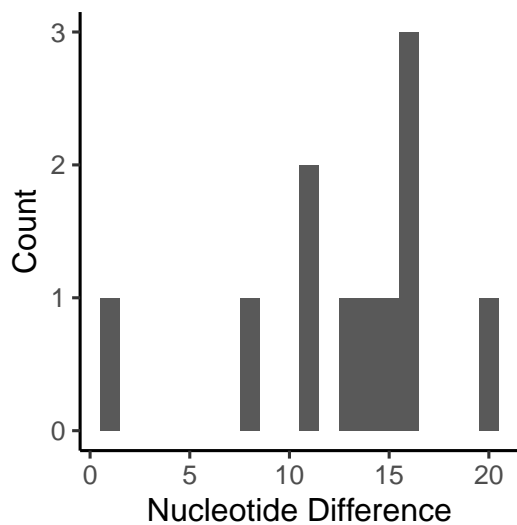
### IGHV3-74\*03

4520 sequences assigned  
No exact matches.



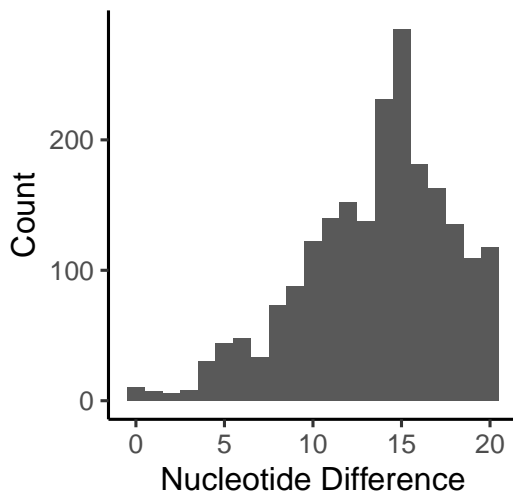
### IGHV3-66\*03

15 sequences assigned  
No exact matches.



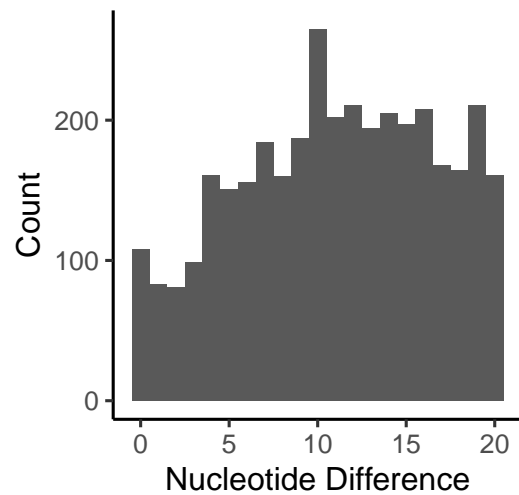
### IGHV3-72\*01

2899 sequences assigned  
10 (0.3%) exact matches, in which:  
10 unique CDR3  
4 unique J



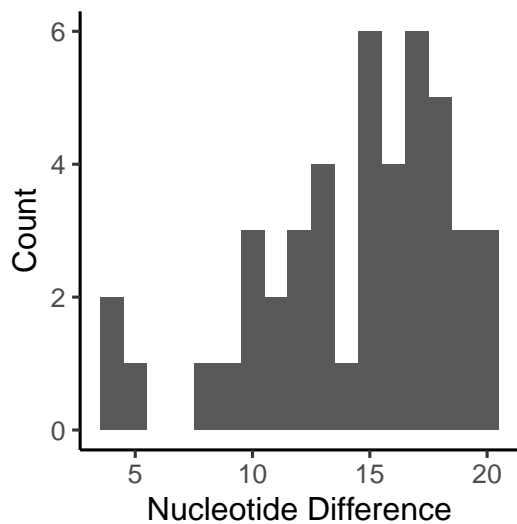
### IGHV3-74\*01\_02

4210 sequences assigned  
108 (2.6%) exact matches, in which:  
102 unique CDR3  
6 unique J



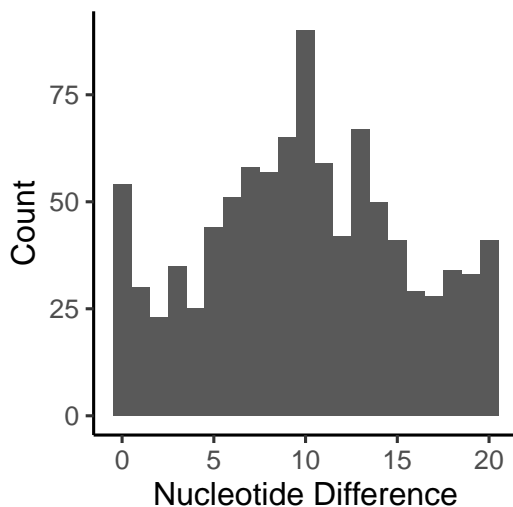
### IGHV3-69-1\*01

97 sequences assigned  
No exact matches.



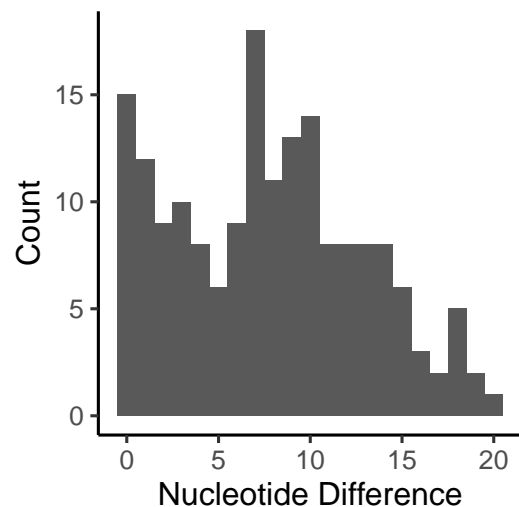
### IGHV3-73\*01\_02

1126 sequences assigned  
54 (4.8%) exact matches, in which:  
54 unique CDR3  
7 unique J



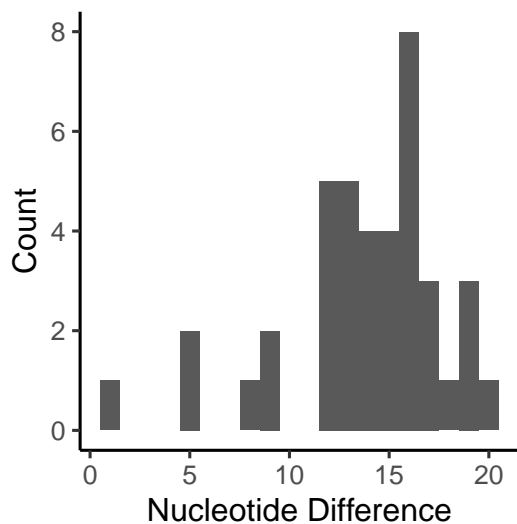
### IGHV3-43D\*03

187 sequences assigned  
15 (8%) exact matches, in which:  
14 unique CDR3  
2 unique J



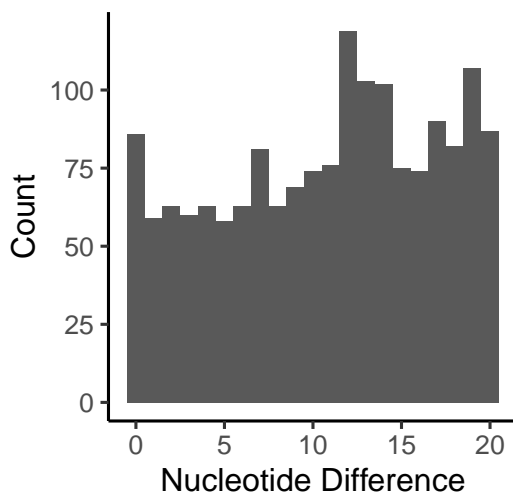
### IGHV3-43D\*04

72 sequences assigned  
No exact matches.



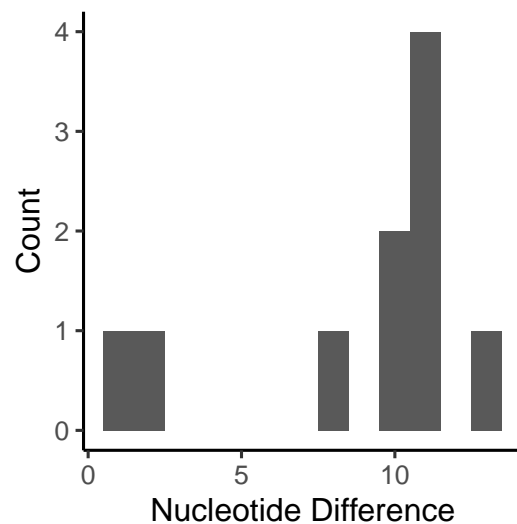
### IGHV4-4\*02\_03

2332 sequences assigned  
86 (3.7%) exact matches, in which:  
86 unique CDR3  
7 unique J



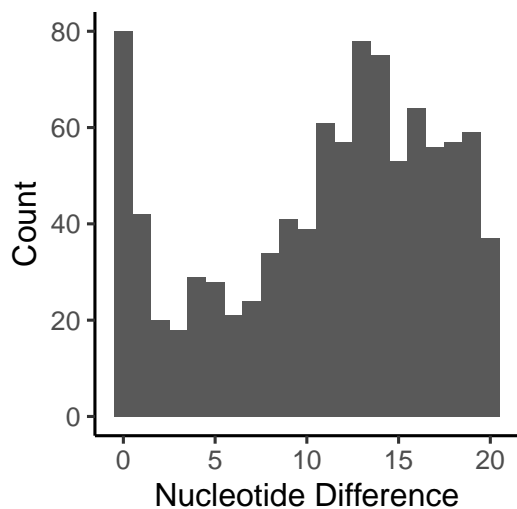
### IGHV4-28\*02\_05

10 sequences assigned  
No exact matches.



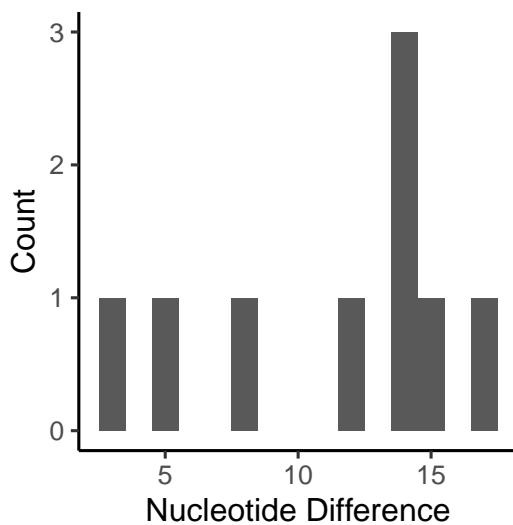
### IGHV3-64D\*06

1499 sequences assigned  
80 (5.3%) exact matches, in which:  
80 unique CDR3  
7 unique J



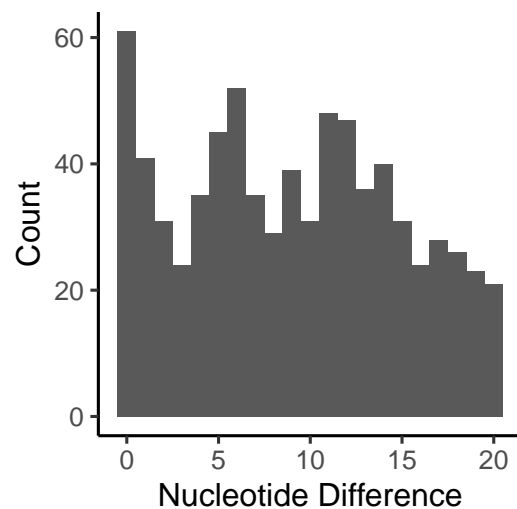
### IGHV4-28\*03

11 sequences assigned  
No exact matches.



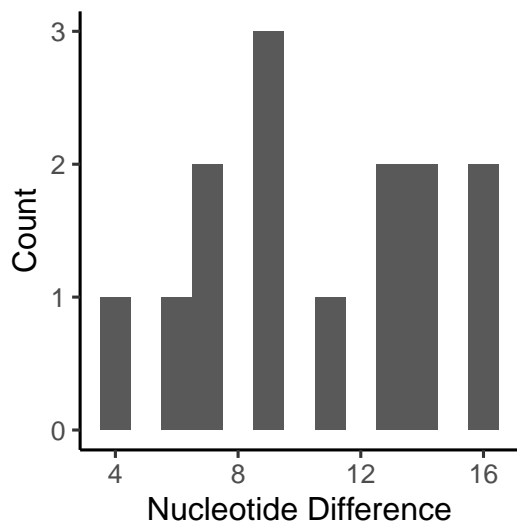
### IGHV4-30-4\*01

1042 sequences assigned  
61 (5.9%) exact matches, in which:  
60 unique CDR3  
7 unique J



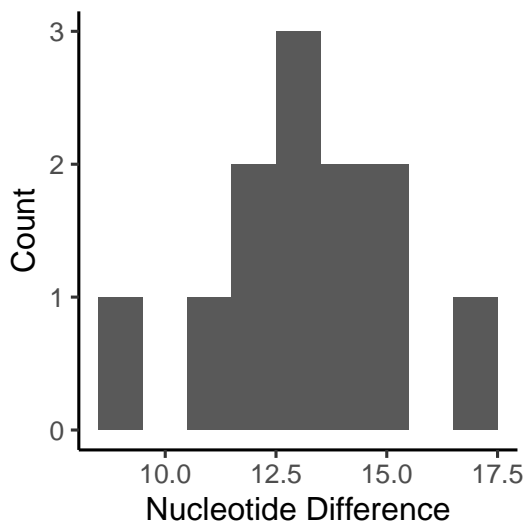
### IGHV3-NL1\*01

29 sequences assigned  
No exact matches.



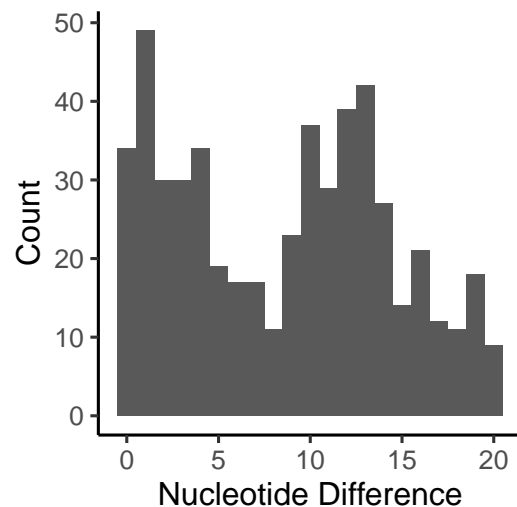
### IGHV4-28\*01\_07

13 sequences assigned  
No exact matches.



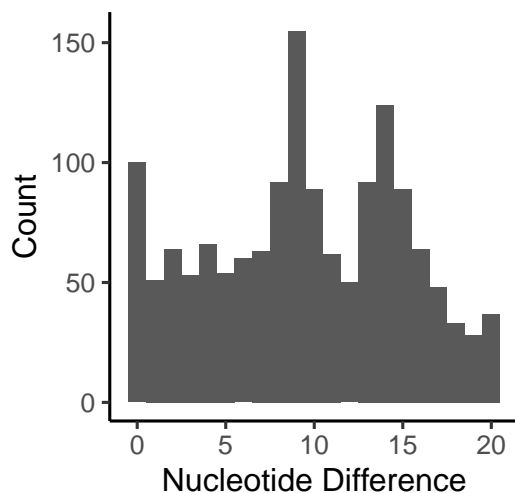
### IGHV4-30-2\*01

713 sequences assigned  
34 (4.8%) exact matches, in which:  
34 unique CDR3  
5 unique J



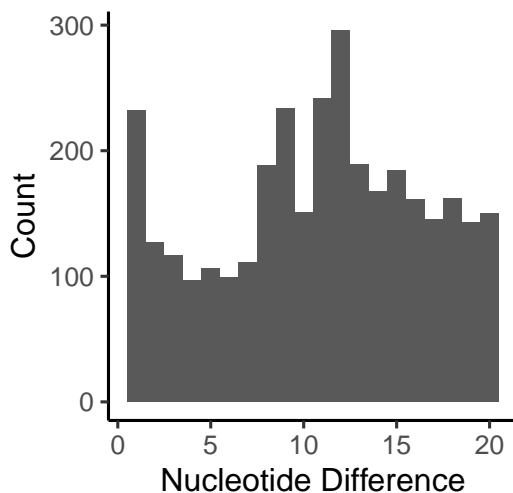
### IGHV4-31\*02

1853 sequences assigned  
100 (5.4%) exact matches, in which:  
99 unique CDR3  
6 unique J



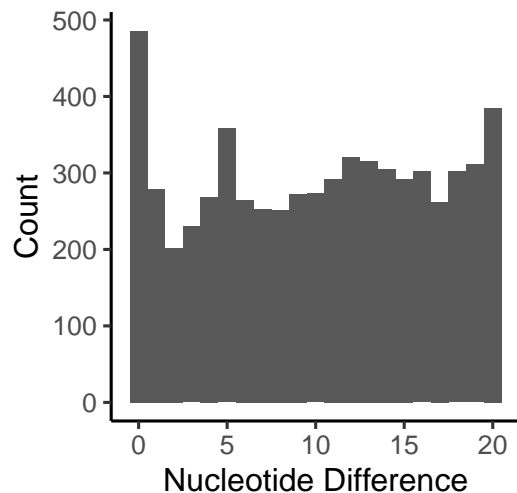
### IGHV4-39\*02

5389 sequences assigned  
No exact matches.



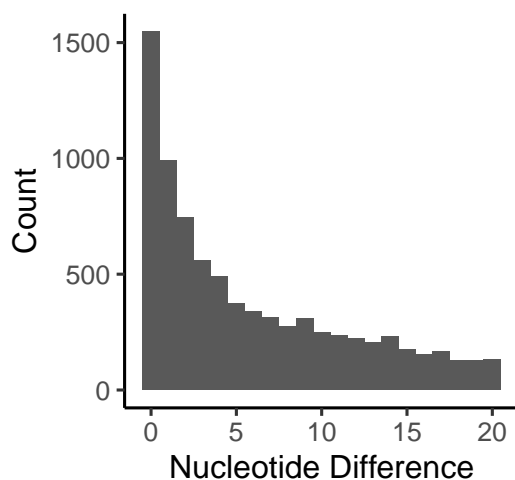
### IGHV4-59\*01\_07

8130 sequences assigned  
486 (6%) exact matches, in which:  
471 unique CDR3  
7 unique J



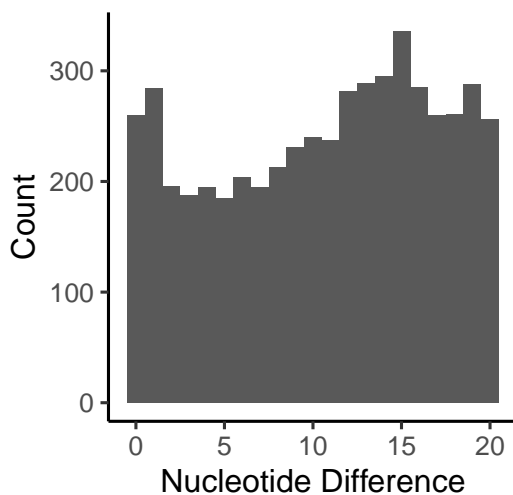
### IGHV4-34\*01\_02

9033 sequences assigned  
1547 (17.1%) exact matches, in which:  
1507 unique CDR3  
7 unique J



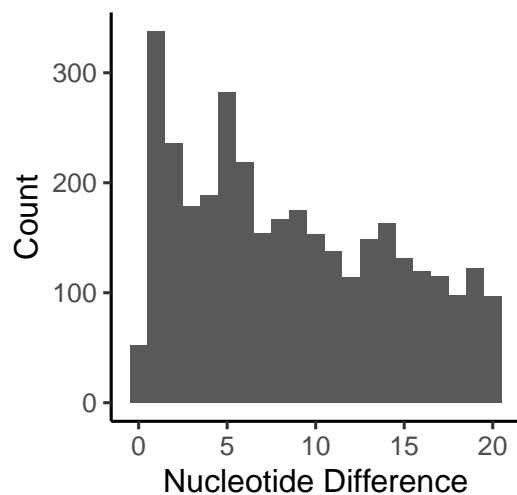
### IGHV4-39\*07

7312 sequences assigned  
260 (3.6%) exact matches, in which:  
257 unique CDR3  
7 unique J



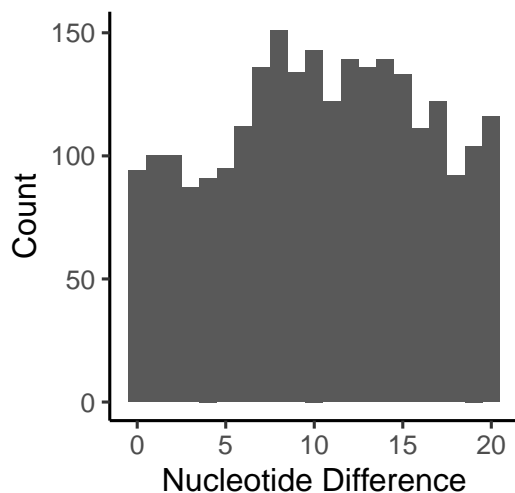
### IGHV4-59\*12

4436 sequences assigned  
52 (1.2%) exact matches, in which:  
52 unique CDR3  
6 unique J



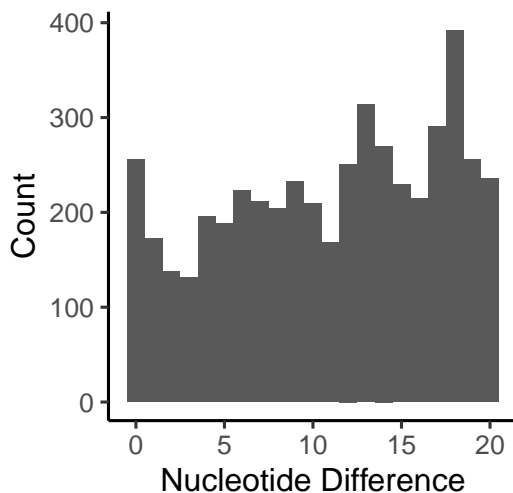
### IGHV4-38-2\*02

3493 sequences assigned  
94 (2.7%) exact matches, in which:  
92 unique CDR3  
7 unique J



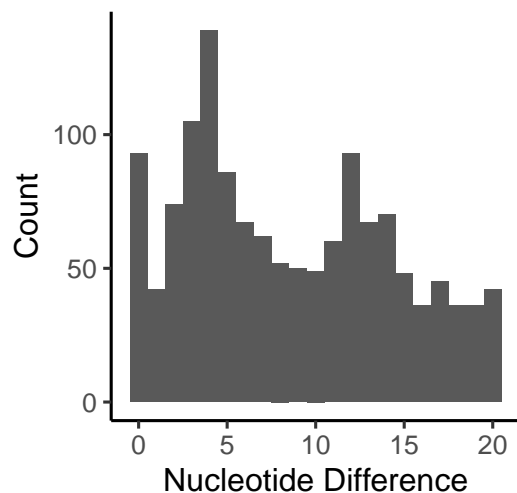
### IGHV4-59\*08

6352 sequences assigned  
256 (4%) exact matches, in which:  
251 unique CDR3  
7 unique J



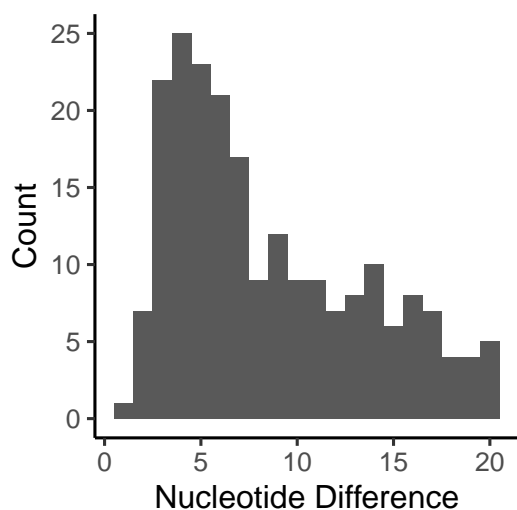
### IGHV4-61\*01

1823 sequences assigned  
93 (5.1%) exact matches, in which:  
91 unique CDR3  
7 unique J



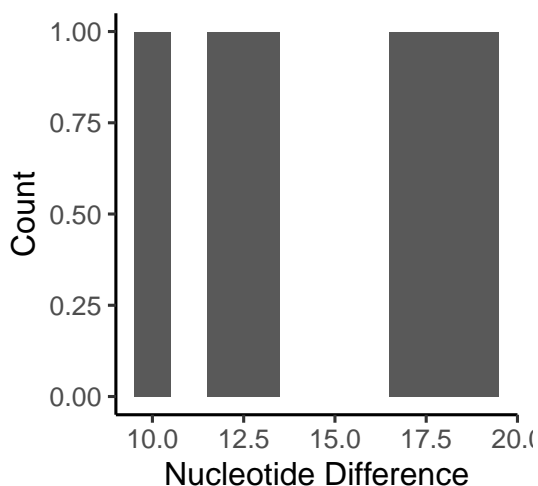
### IGHV4-61\*05

265 sequences assigned  
No exact matches.



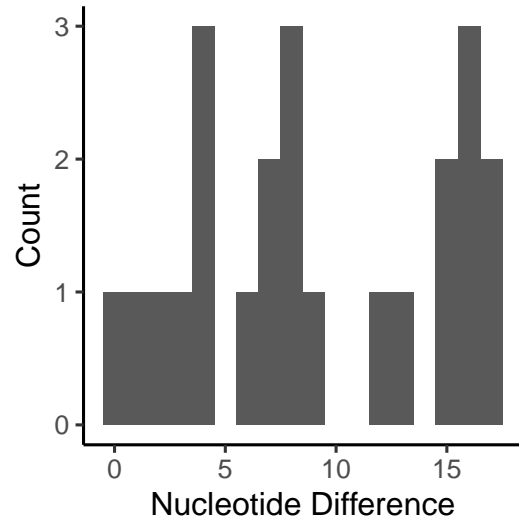
### IGHV4/OR15-8\*01

14 sequences assigned  
No exact matches.



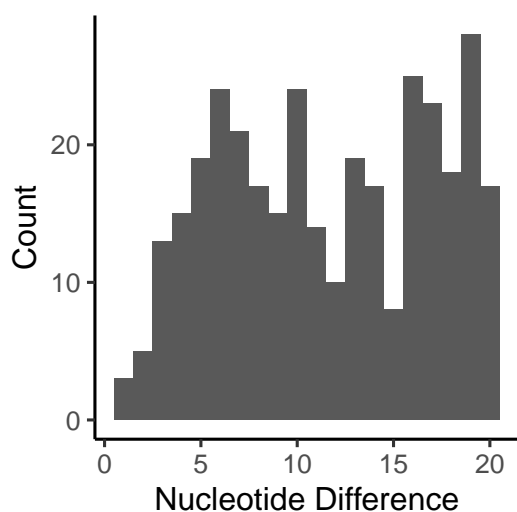
### IGHV5-51\*04

29 sequences assigned  
1 (3.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



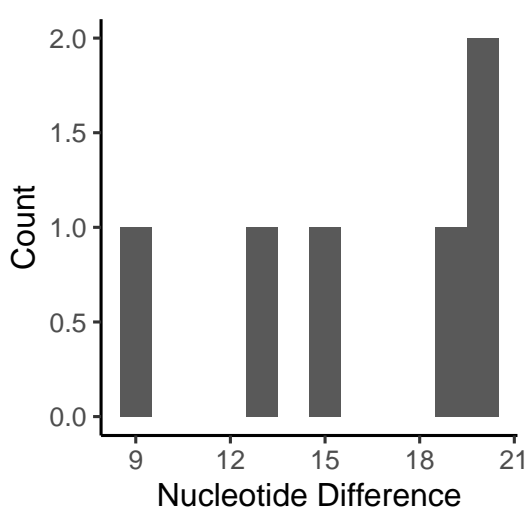
### IGHV4-61\*08

536 sequences assigned  
No exact matches.



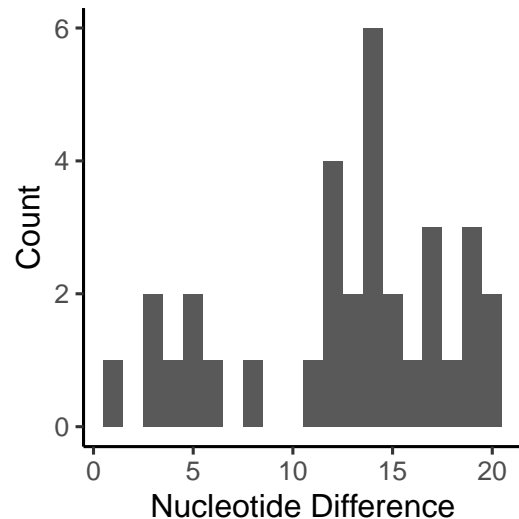
### IGHV4/OR15-8\*02

31 sequences assigned  
No exact matches.



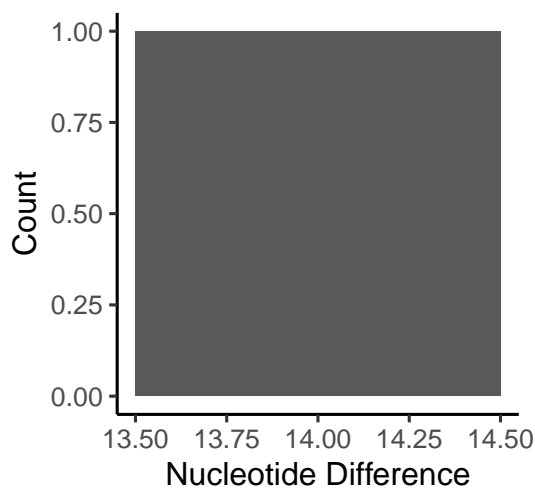
### IGHV5-51\*06

41 sequences assigned  
No exact matches.



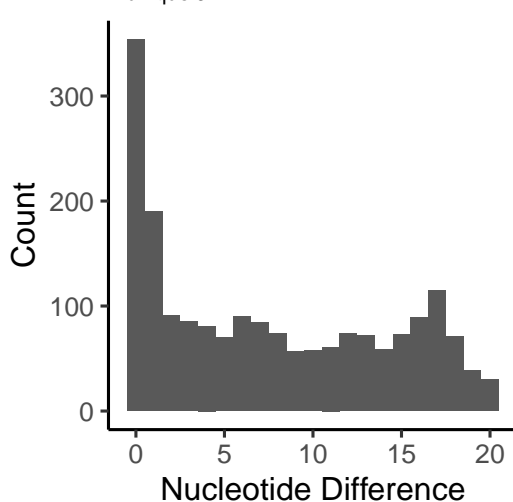
### IGHV1/OR15-1\*04

1 sequences assigned  
No exact matches.



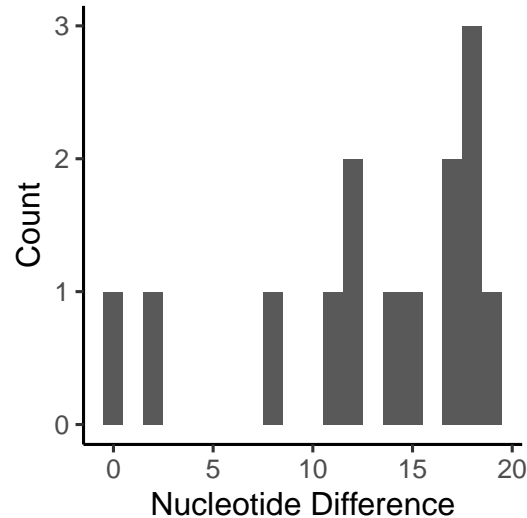
### IGHV5-10-1\*01\_03

2135 sequences assigned  
354 (16.6%) exact matches, in which:  
350 unique CDR3  
7 unique J



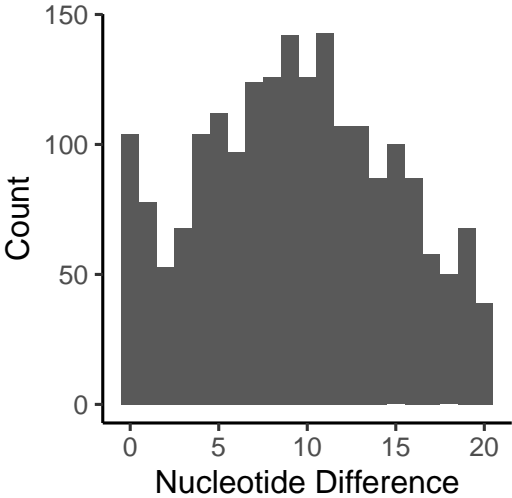
### IGHV5-51\*07

15 sequences assigned  
1 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



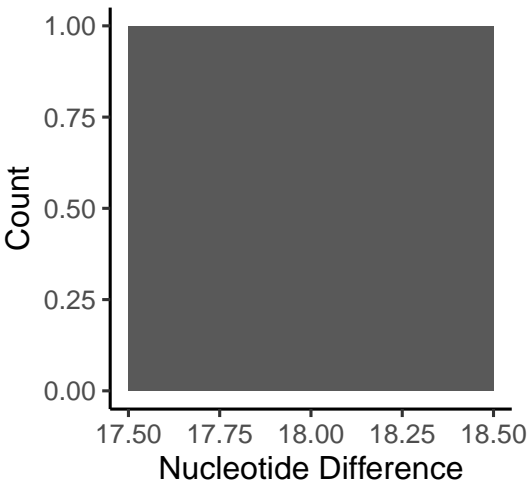
IGHV6-1\*01\_02

2115 sequences assigned  
104 (4.9%) exact matches, in which:  
104 unique CDR3  
7 unique J



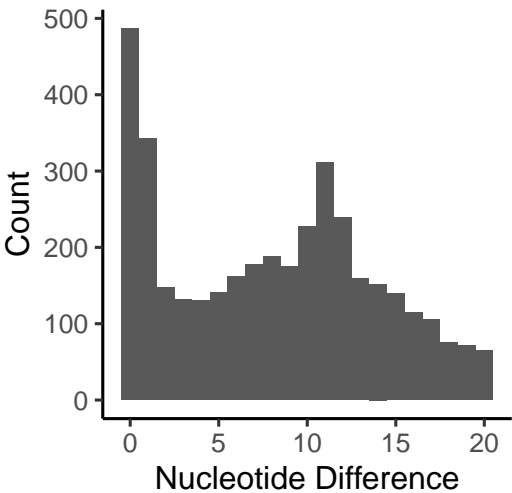
IGHV3/OR16-6\*02

1 sequences assigned  
No exact matches.

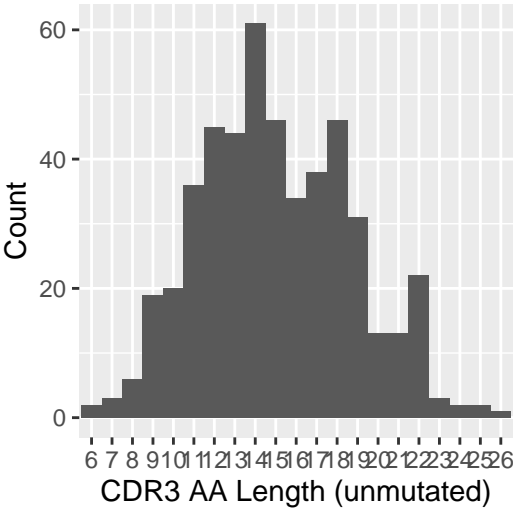


IGHV7-4-1\*02\_T63C

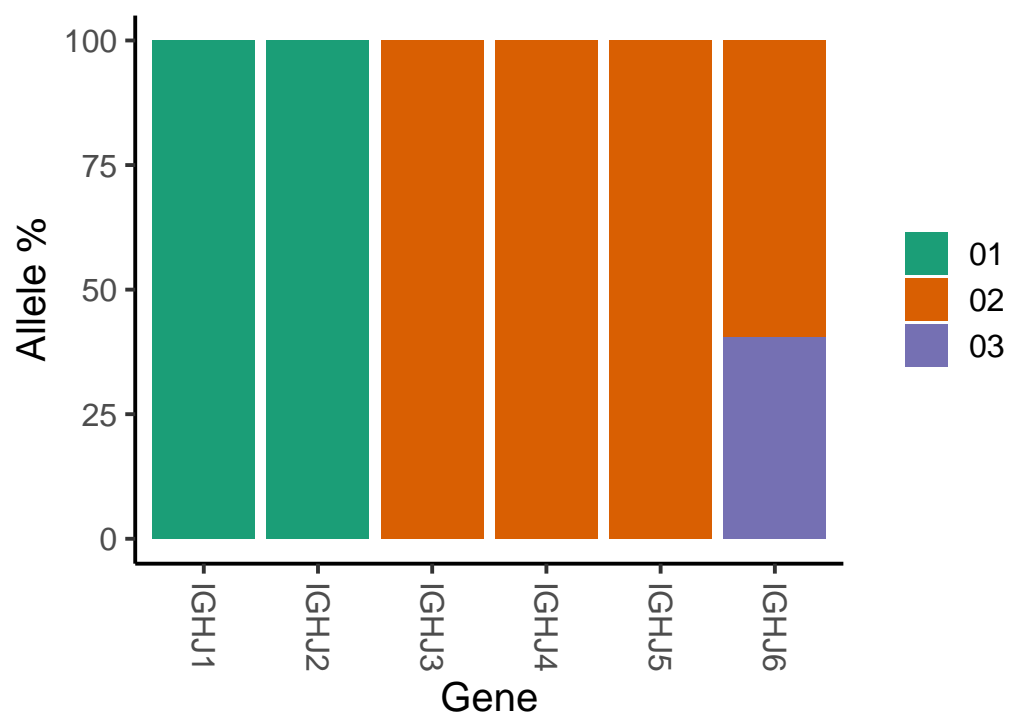
4454 sequences assigned  
487 (10.9%) exact matches, in which:  
478 unique CDR3  
7 unique J



IGHV7-4-1\*02\_T63C

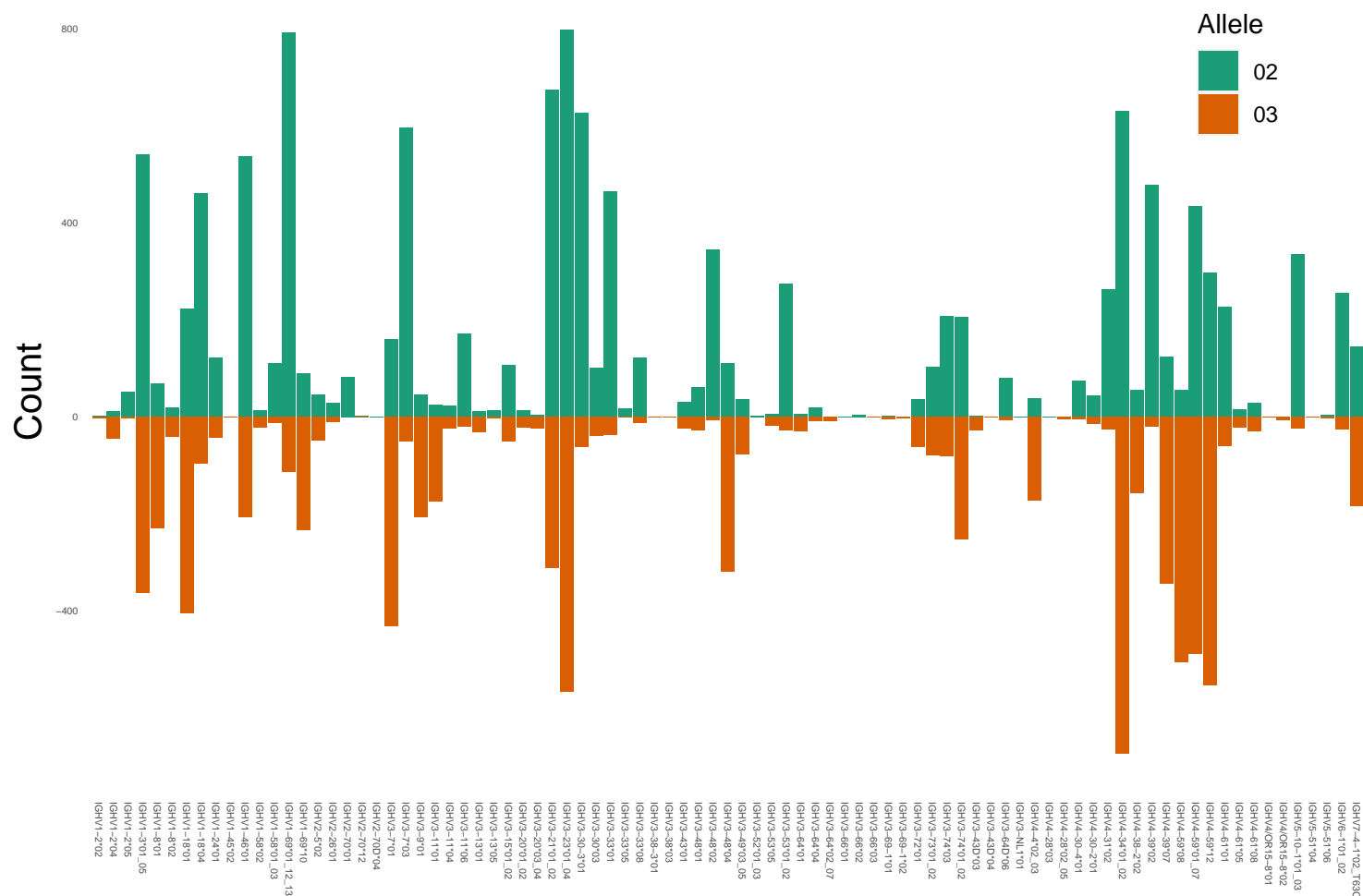


Allele Usage





### Sequence Count by IGHJ6 allele usage



[illegible]