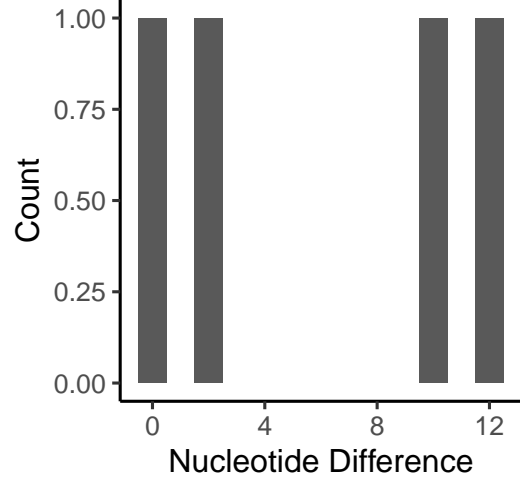


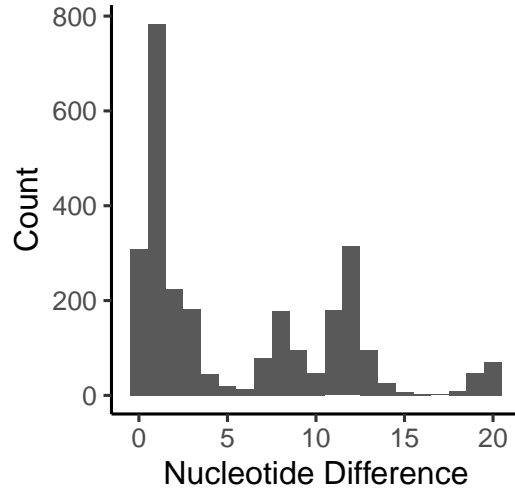
### IGHV1-2\*02

4 sequences assigned  
1 (25%) exact matches, in which:  
1 unique CDR3  
1 unique J



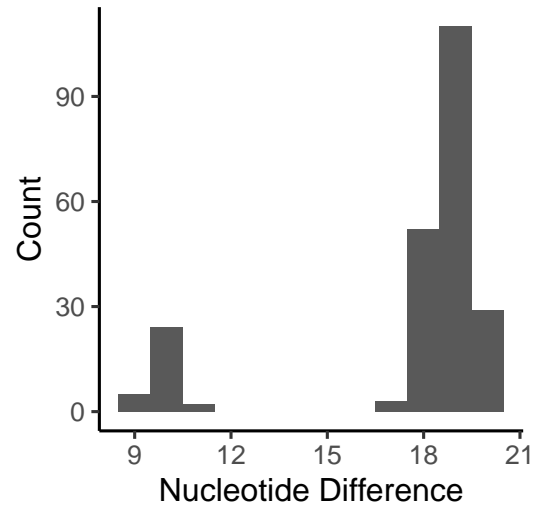
### IGHV1-3\*01\_05

4781 sequences assigned  
309 (6.5%) exact matches, in which:  
179 unique CDR3  
4 unique J



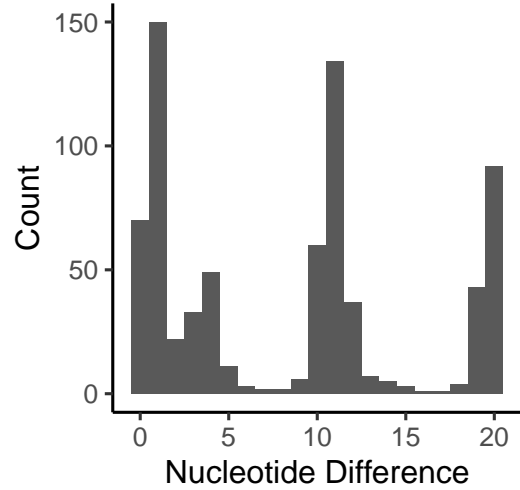
### IGHV1-24\*01

381 sequences assigned  
No exact matches.



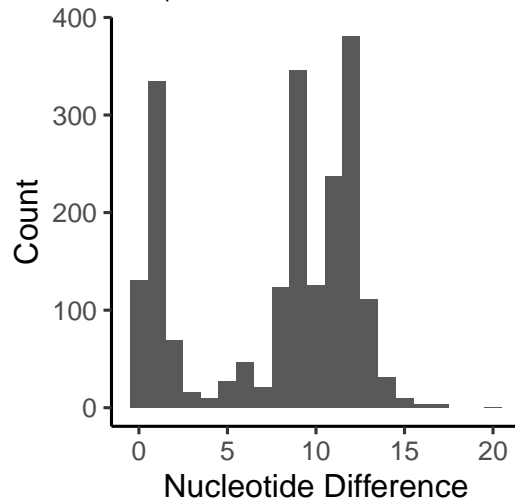
### IGHV1-2\*04

761 sequences assigned  
70 (9.2%) exact matches, in which:  
46 unique CDR3  
4 unique J



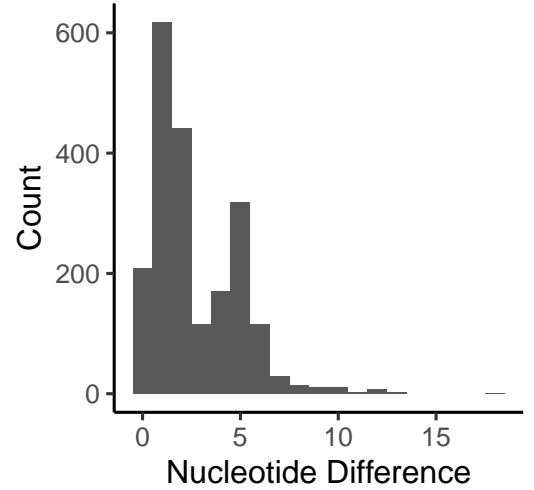
### IGHV1-8\*01

2041 sequences assigned  
131 (6.4%) exact matches, in which:  
82 unique CDR3  
4 unique J



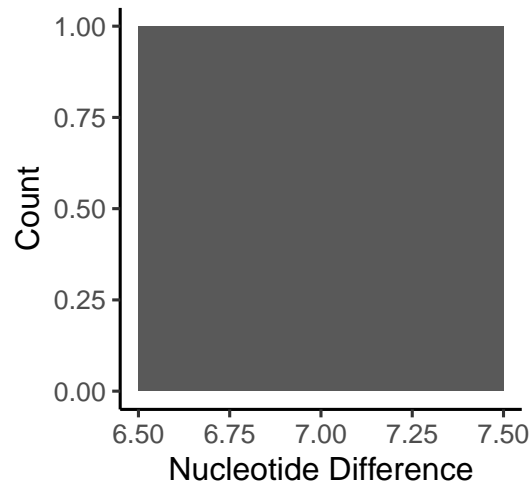
### IGHV1-46\*01

2069 sequences assigned  
208 (10.1%) exact matches, in which:  
118 unique CDR3  
5 unique J



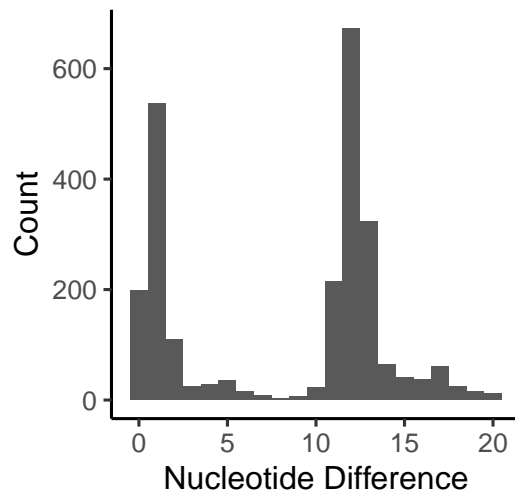
### IGHV1-2\*06

2 sequences assigned  
No exact matches.



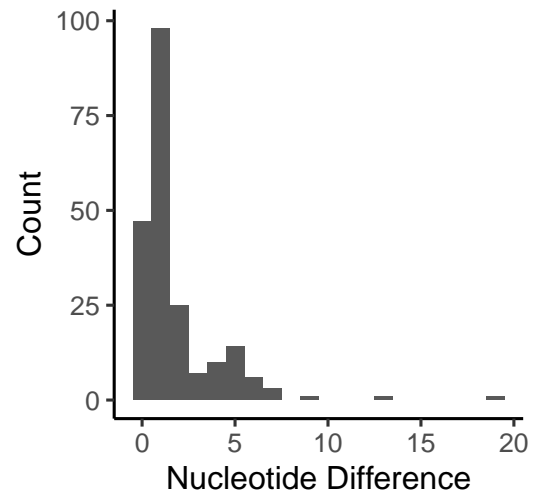
### IGHV1-18\*01

3301 sequences assigned  
199 (6%) exact matches, in which:  
120 unique CDR3  
4 unique J



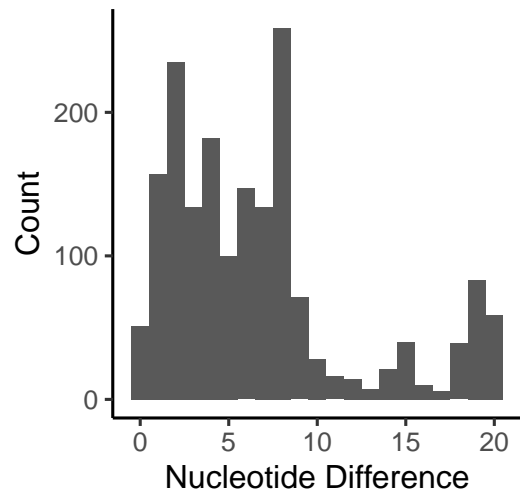
### IGHV1-58\*02

296 sequences assigned  
47 (15.9%) exact matches, in which:  
27 unique CDR3  
3 unique J



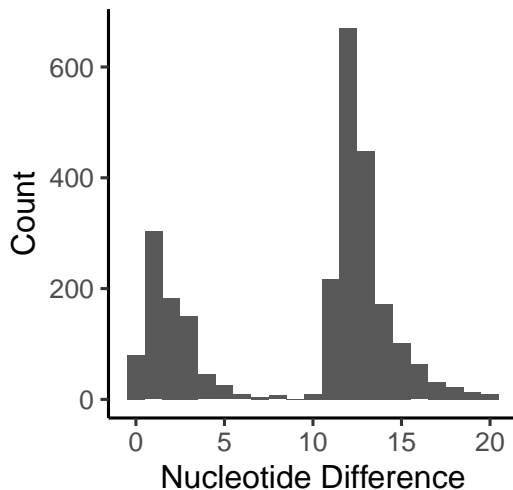
### IGHV1–69\*04\_09

2107 sequences assigned  
51 (2.4%) exact matches, in which:  
36 unique CDR3  
4 unique J



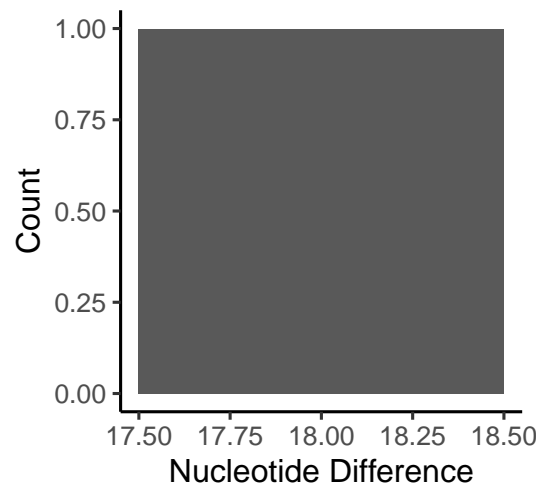
### IGHV2–70\*11\_15

2650 sequences assigned  
80 (3%) exact matches, in which:  
40 unique CDR3  
2 unique J



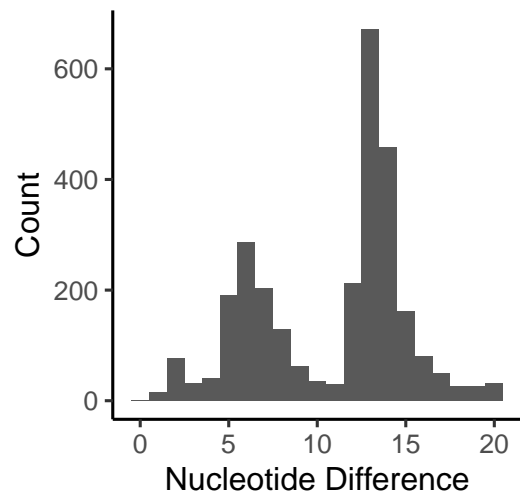
### IGHV2–70D\*14

1 sequences assigned  
No exact matches.



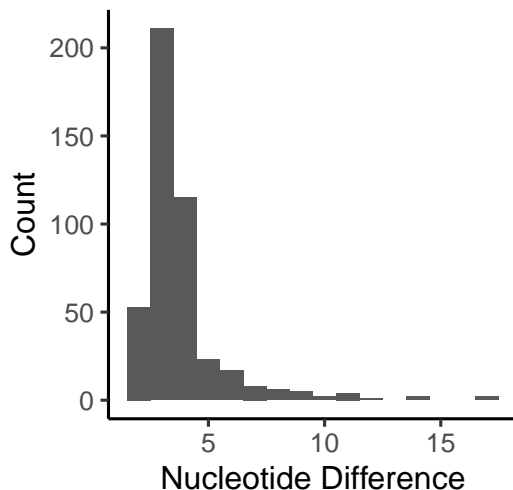
### IGHV2–5\*02

3981 sequences assigned  
1 (0%) exact matches, in which:  
1 unique CDR3  
1 unique J



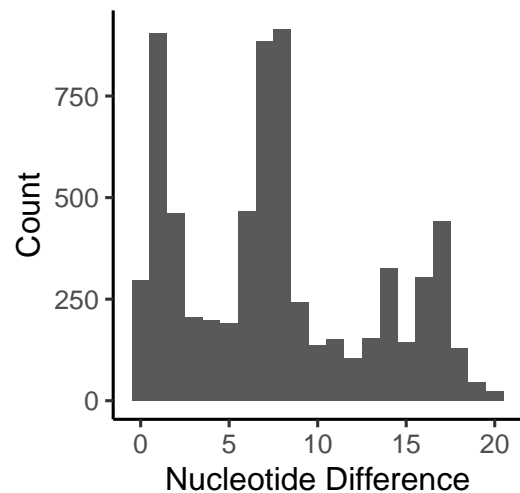
### IGHV2–70\*16\_17

449 sequences assigned  
No exact matches.



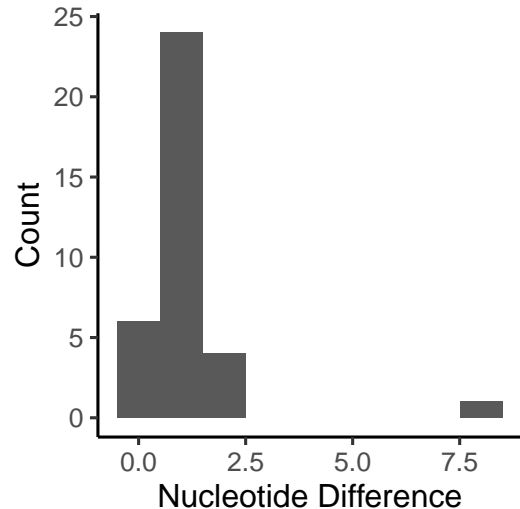
### IGHV3–7\*01

6772 sequences assigned  
297 (4.4%) exact matches, in which:  
139 unique CDR3  
6 unique J



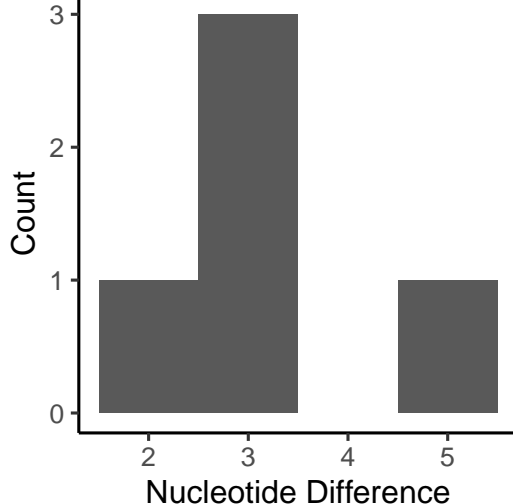
### IGHV2–26\*01

35 sequences assigned  
6 (17.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



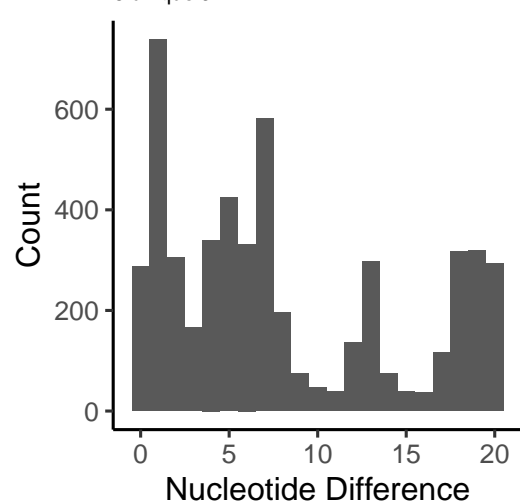
### IGHV2–70D\*04

5 sequences assigned  
No exact matches.



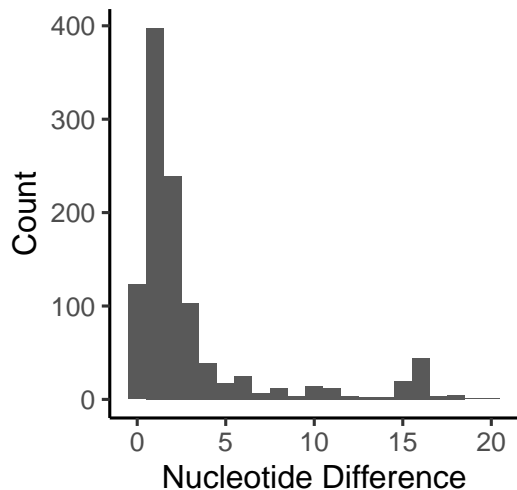
### IGHV3–7\*03

6398 sequences assigned  
288 (4.5%) exact matches, in which:  
172 unique CDR3  
6 unique J



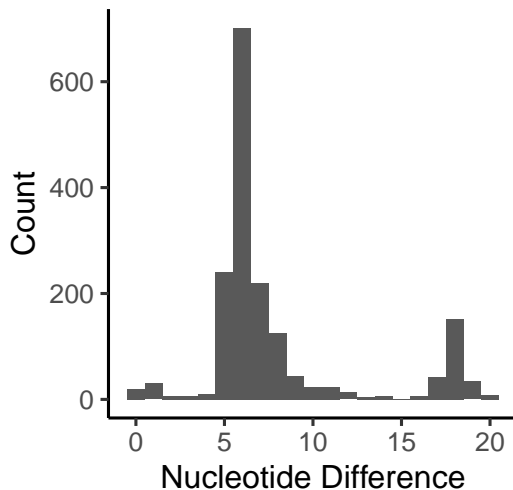
### IGHV3-9\*01

1110 sequences assigned  
123 (11.1%) exact matches, in which:  
69 unique CDR3  
3 unique J



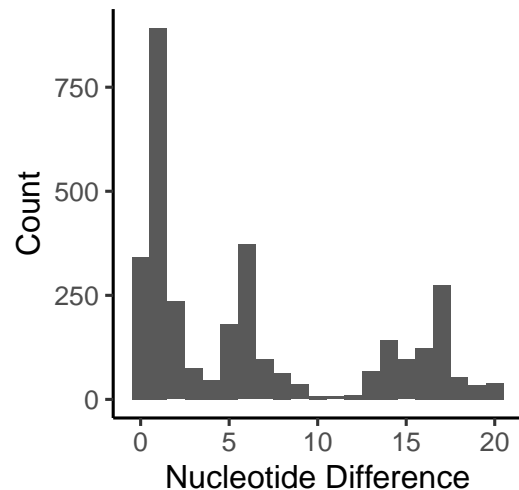
### IGHV3-13\*01

1734 sequences assigned  
19 (1.1%) exact matches, in which:  
11 unique CDR3  
2 unique J



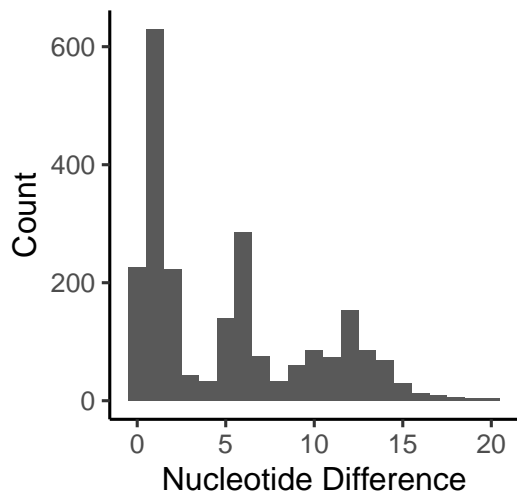
### IGHV3-21\*01\_02

4056 sequences assigned  
342 (8.4%) exact matches, in which:  
144 unique CDR3  
4 unique J



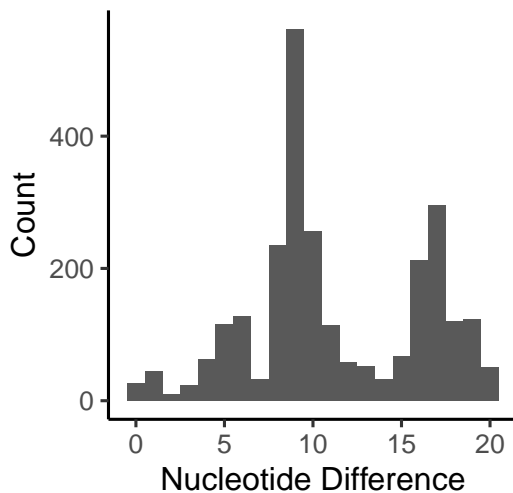
### IGHV3-11\*01

2433 sequences assigned  
227 (9.3%) exact matches, in which:  
126 unique CDR3  
6 unique J



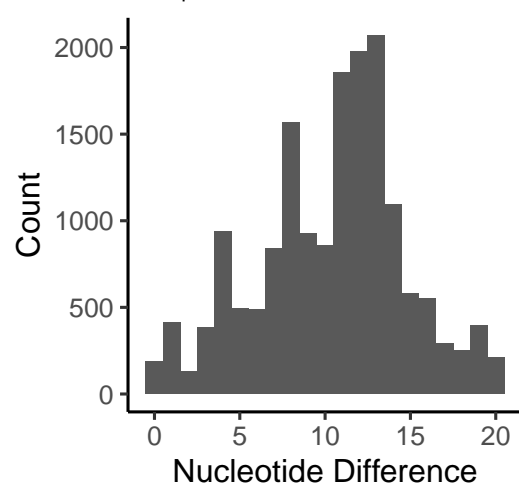
### IGHV3-15\*07

2709 sequences assigned  
26 (1%) exact matches, in which:  
15 unique CDR3  
2 unique J



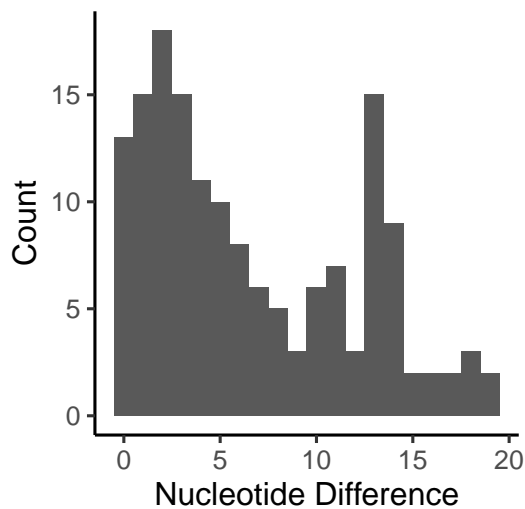
### IGHV3-23\*01\_04

23515 sequences assigned  
188 (0.8%) exact matches, in which:  
109 unique CDR3  
3 unique J



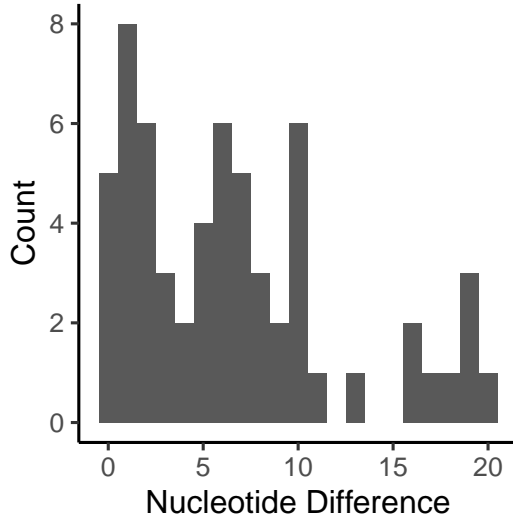
### IGHV3-11\*04

157 sequences assigned  
13 (8.3%) exact matches, in which:  
11 unique CDR3  
4 unique J



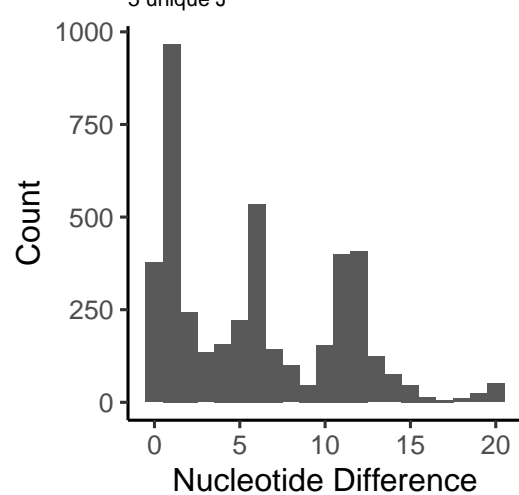
### IGHV3-21\*04

78 sequences assigned  
5 (6.4%) exact matches, in which:  
4 unique CDR3  
3 unique J



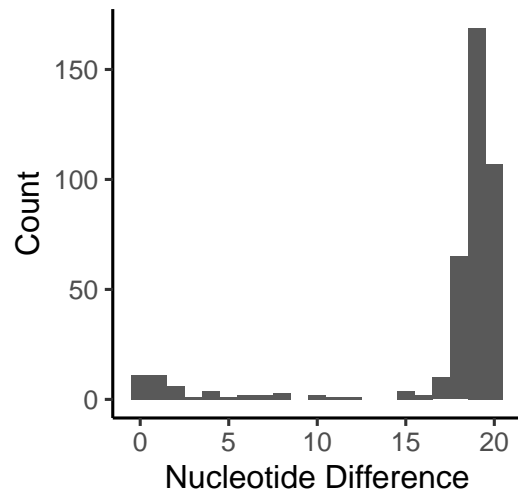
### IGHV3-30-3\*01

4416 sequences assigned  
377 (8.5%) exact matches, in which:  
195 unique CDR3  
5 unique J



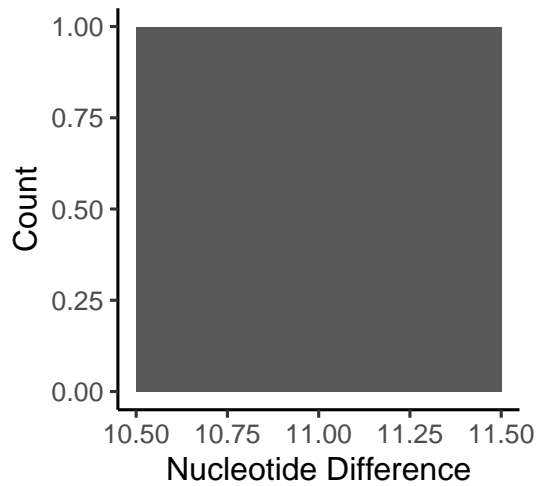
### IGHV3–30\*03

1675 sequences assigned  
11 (0.7%) exact matches, in which:  
11 unique CDR3  
3 unique J



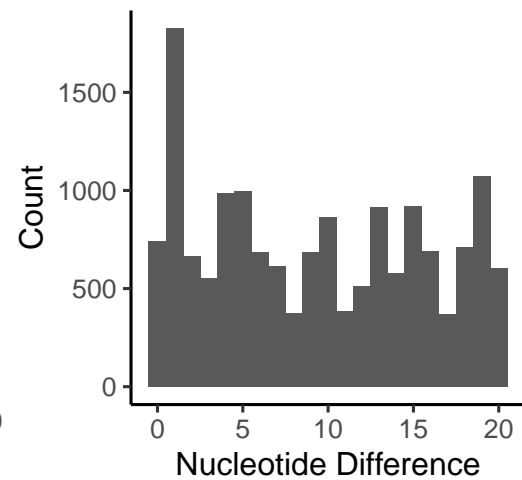
### IGHV3–33\*05

25 sequences assigned  
No exact matches.



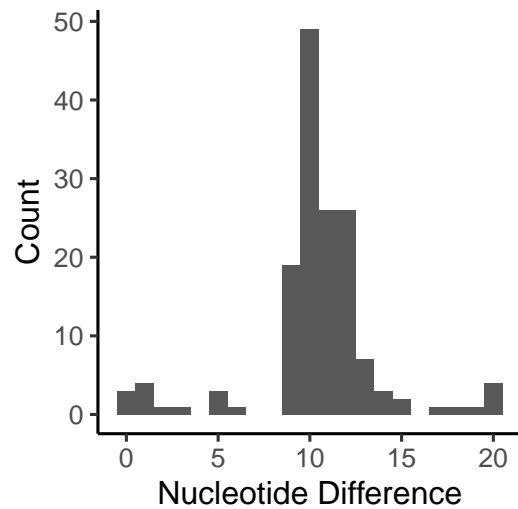
### IGHV3–48\*04

19076 sequences assigned  
741 (3.9%) exact matches, in which:  
360 unique CDR3  
6 unique J



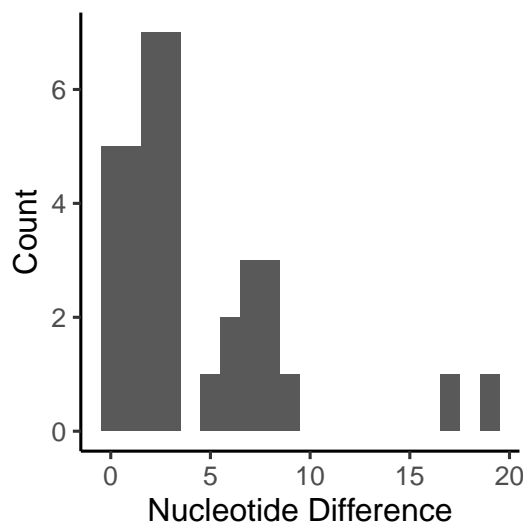
### IGHV3–30\*04

206 sequences assigned  
3 (1.5%) exact matches, in which:  
3 unique CDR3  
2 unique J



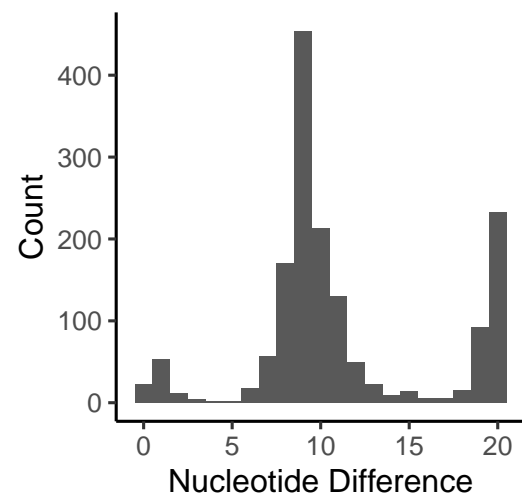
### IGHV3–33\*06

49 sequences assigned  
5 (10.2%) exact matches, in which:  
5 unique CDR3  
1 unique J



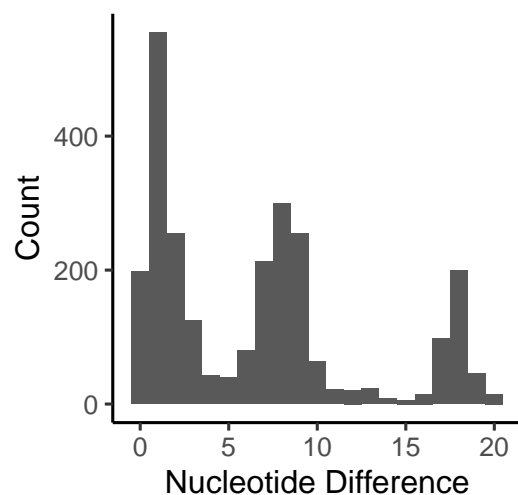
### IGHV3–49\*03\_05

1893 sequences assigned  
23 (1.2%) exact matches, in which:  
14 unique CDR3  
2 unique J



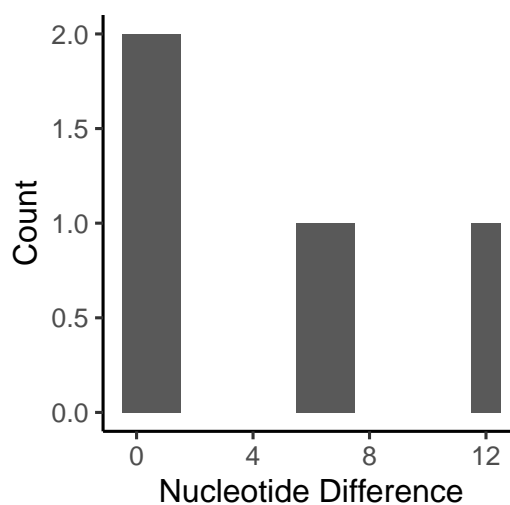
### IGHV3–33\*01

2701 sequences assigned  
198 (7.3%) exact matches, in which:  
111 unique CDR3  
5 unique J



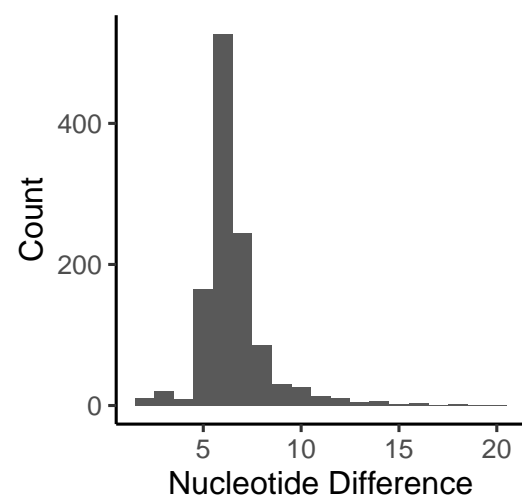
### IGHV3–38–3\*01

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



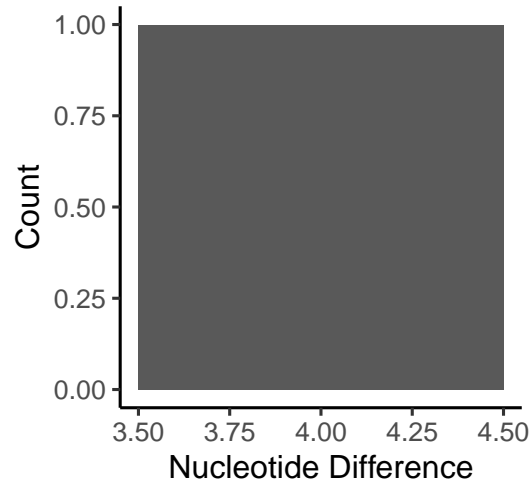
### IGHV3–53\*04

1169 sequences assigned  
No exact matches.



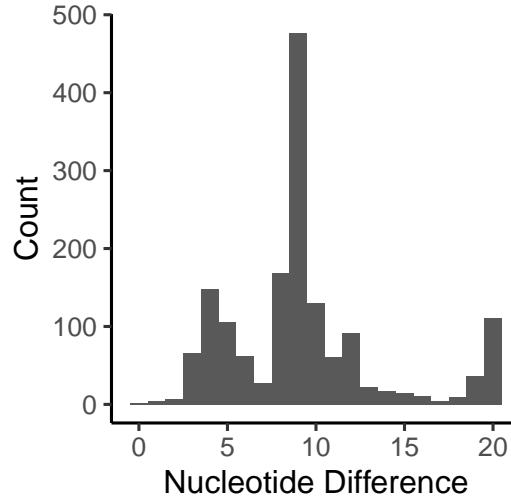
### IGHV3-53\*05

631 sequences assigned  
No exact matches.



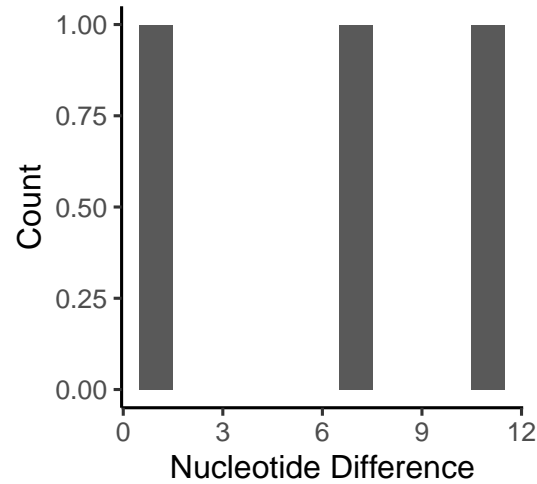
### IGHV3-66\*01

6392 sequences assigned  
2 (0%) exact matches, in which:  
2 unique CDR3  
2 unique J



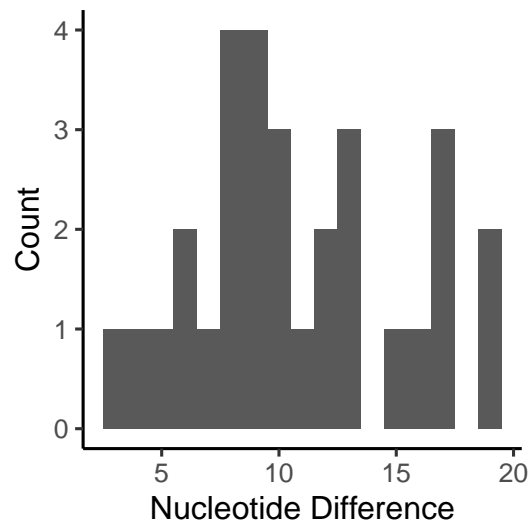
### IGHV3-69-1\*02

6 sequences assigned  
No exact matches.



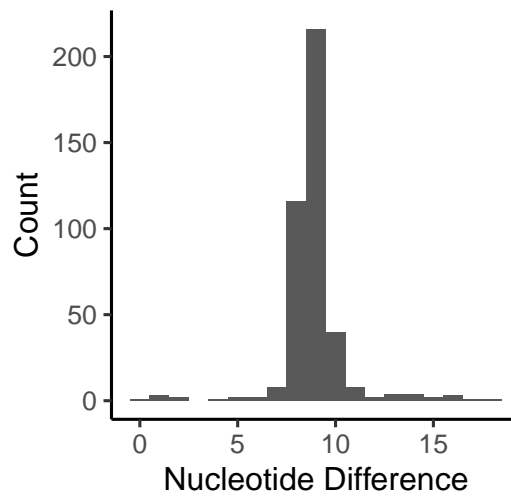
### IGHV3-53\*01\_02

41 sequences assigned  
No exact matches.



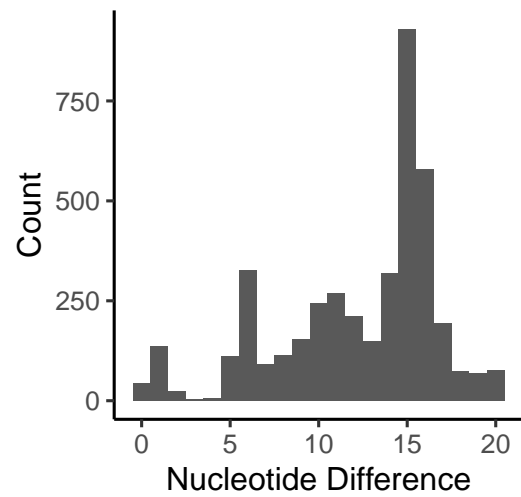
### IGHV3-66\*04

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



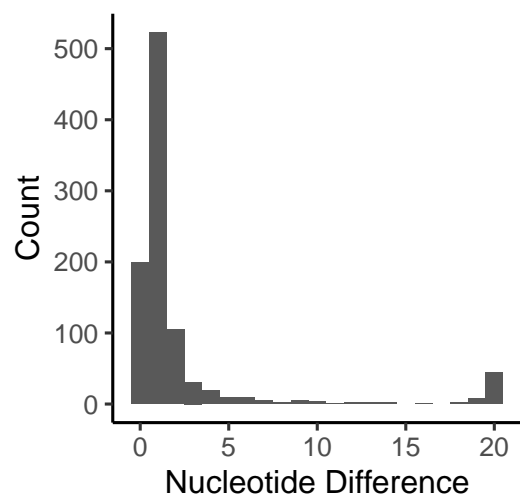
### IGHV3-72\*01

4372 sequences assigned  
45 (1%) exact matches, in which:  
23 unique CDR3  
1 unique J



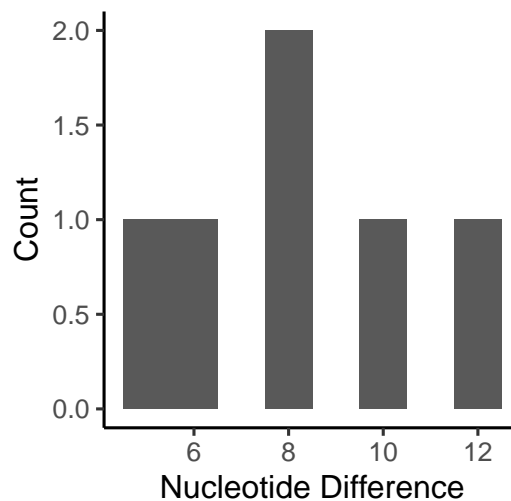
### IGHV3-64\*01

1112 sequences assigned  
199 (17.9%) exact matches, in which:  
94 unique CDR3  
5 unique J



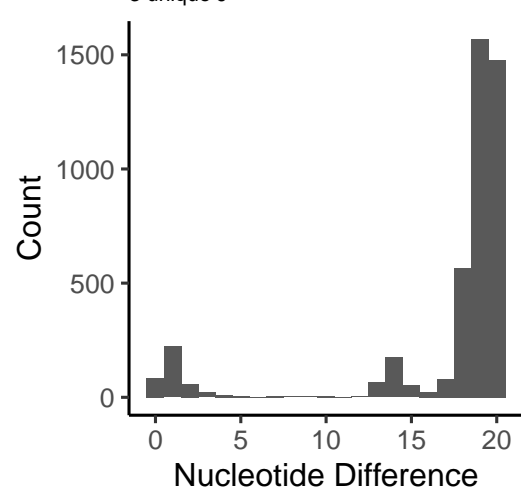
### IGHV3-69-1\*01

7 sequences assigned  
No exact matches.



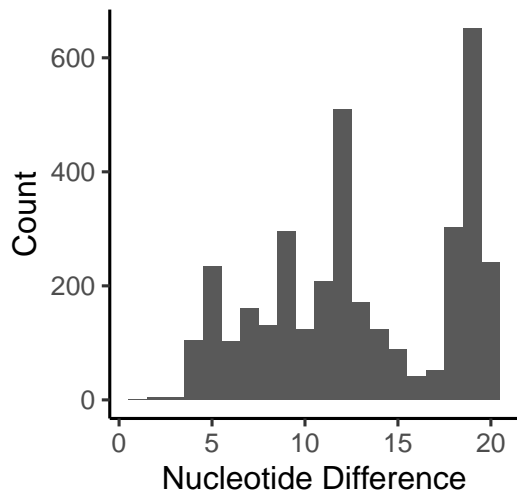
### IGHV3-73\*01\_02

5881 sequences assigned  
84 (1.4%) exact matches, in which:  
47 unique CDR3  
3 unique J



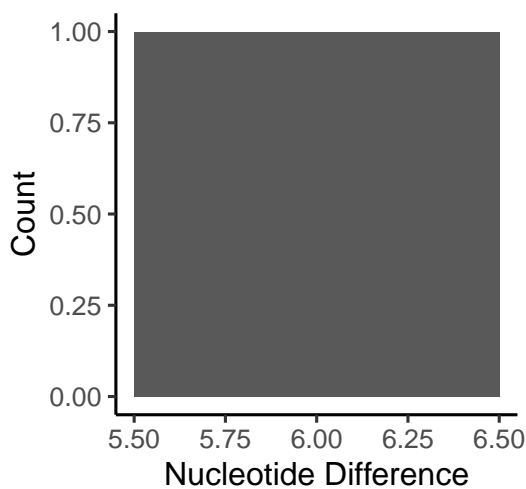
### IGHV3-74\*03

7374 sequences assigned  
No exact matches.



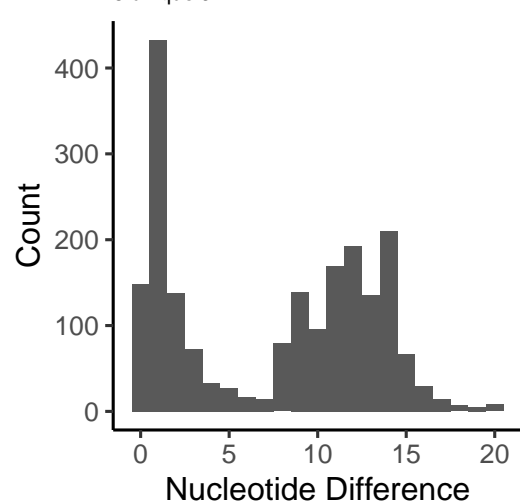
### IGHV3-64D\*06

1 sequences assigned  
No exact matches.



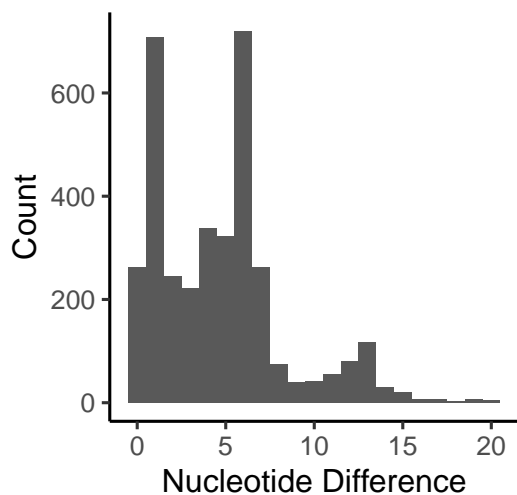
### IGHV4-30-4\*01

2152 sequences assigned  
148 (6.9%) exact matches, in which:  
90 unique CDR3  
5 unique J



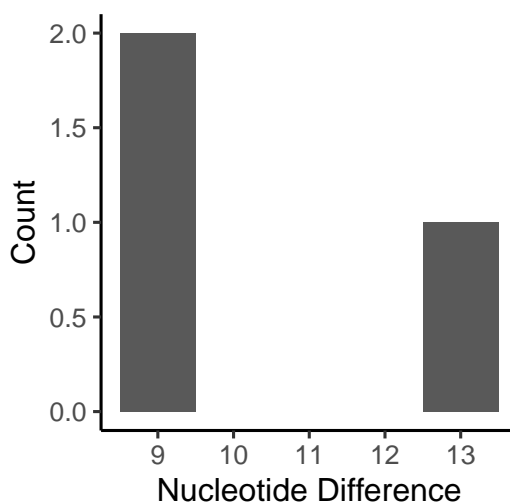
### IGHV3-74\*01\_02

3693 sequences assigned  
262 (7.1%) exact matches, in which:  
156 unique CDR3  
4 unique J



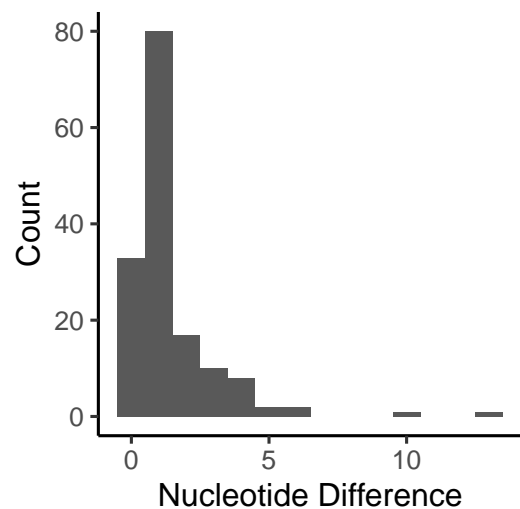
### IGHV3-NL1\*01

12 sequences assigned  
No exact matches.



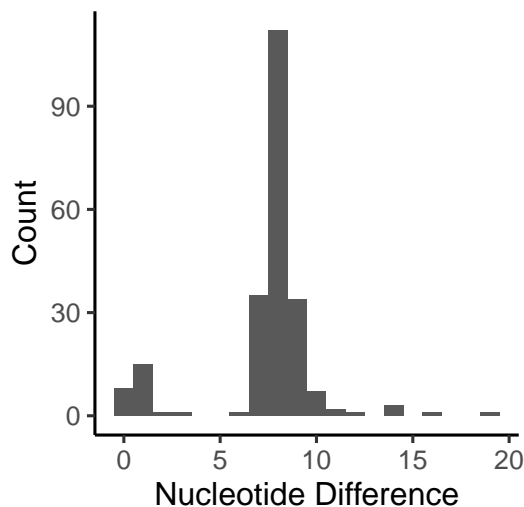
### IGHV4-30-2\*01

254 sequences assigned  
33 (13%) exact matches, in which:  
24 unique CDR3  
2 unique J



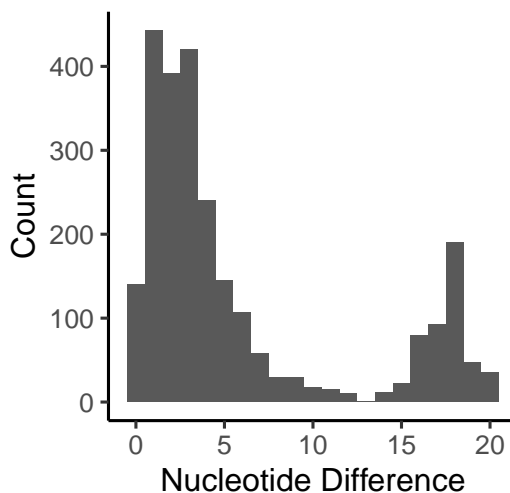
### IGHV3-43D\*03

223 sequences assigned  
8 (3.6%) exact matches, in which:  
4 unique CDR3  
1 unique J



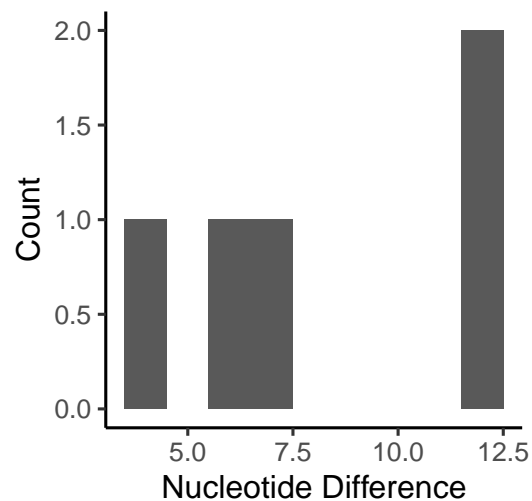
### IGHV4-4\*02\_03

5371 sequences assigned  
140 (2.6%) exact matches, in which:  
78 unique CDR3  
5 unique J



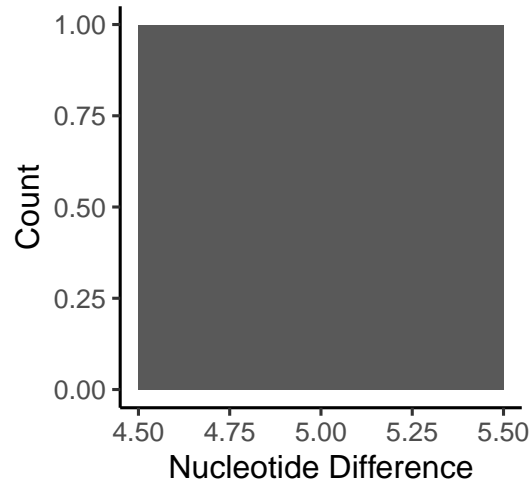
### IGHV4-30-2\*03

5 sequences assigned  
No exact matches.



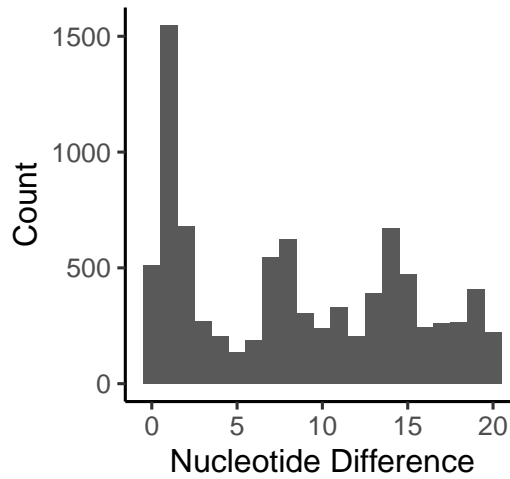
### IGHV4-31\*02

1 sequences assigned  
No exact matches.



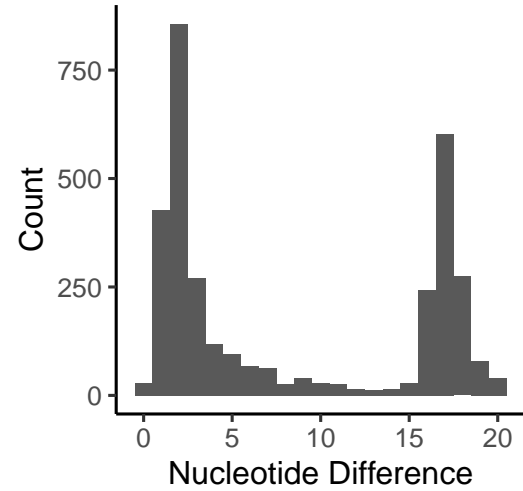
### IGHV4-39\*07

10001 sequences assigned  
513 (5.1%) exact matches, in which:  
315 unique CDR3  
6 unique J



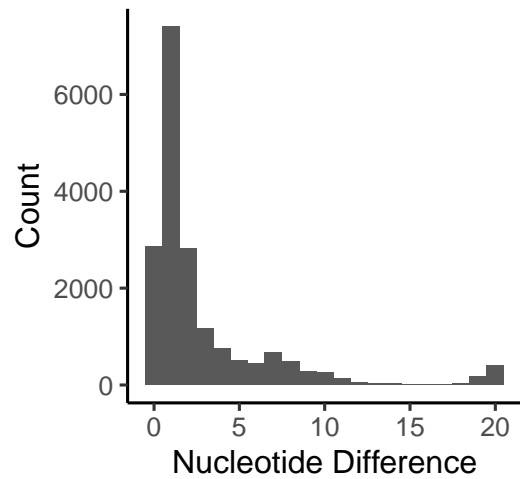
### IGHV4-59\*12

3978 sequences assigned  
29 (0.7%) exact matches, in which:  
28 unique CDR3  
4 unique J



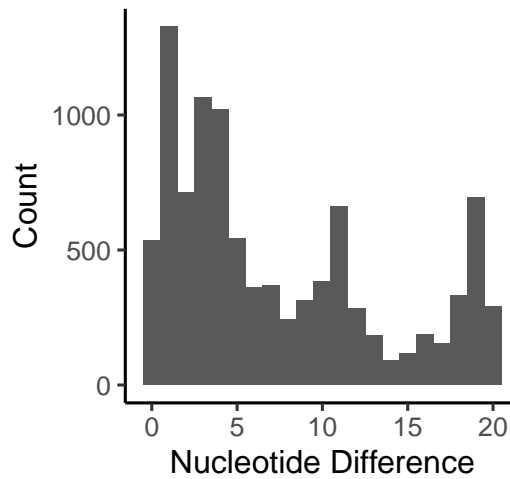
### IGHV4-34\*01\_02

19012 sequences assigned  
2852 (15%) exact matches, in which:  
1721 unique CDR3  
6 unique J



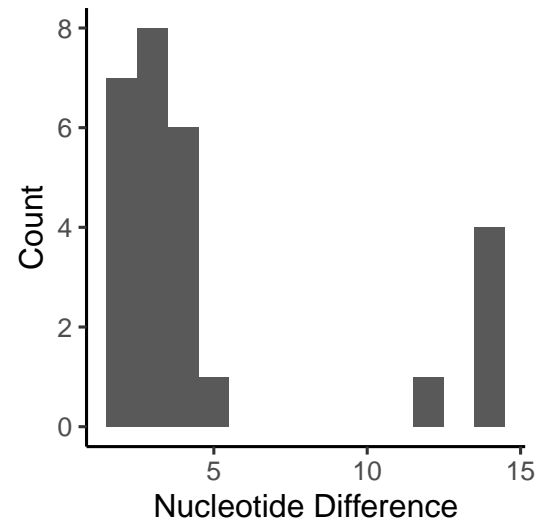
### IGHV4-59\*08

11616 sequences assigned  
537 (4.6%) exact matches, in which:  
347 unique CDR3  
5 unique J



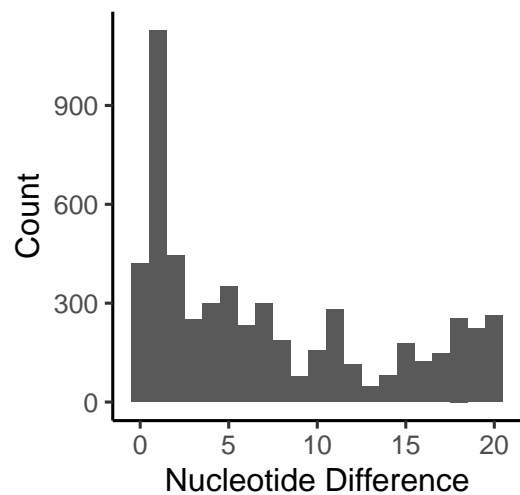
### IGHV4-61\*01

27 sequences assigned  
No exact matches.



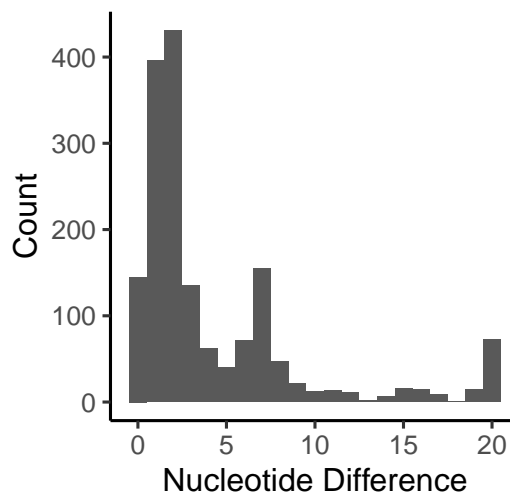
### IGHV4-38-2\*02

6501 sequences assigned  
419 (6.4%) exact matches, in which:  
252 unique CDR3  
5 unique J



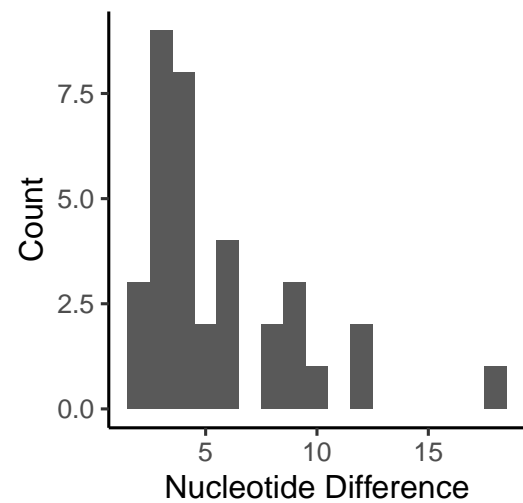
### IGHV4-59\*01\_07

1965 sequences assigned  
145 (7.4%) exact matches, in which:  
104 unique CDR3  
5 unique J



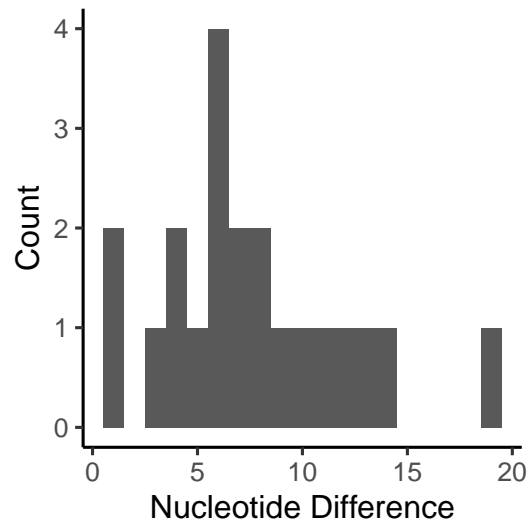
### IGHV4-61\*05

35 sequences assigned  
No exact matches.



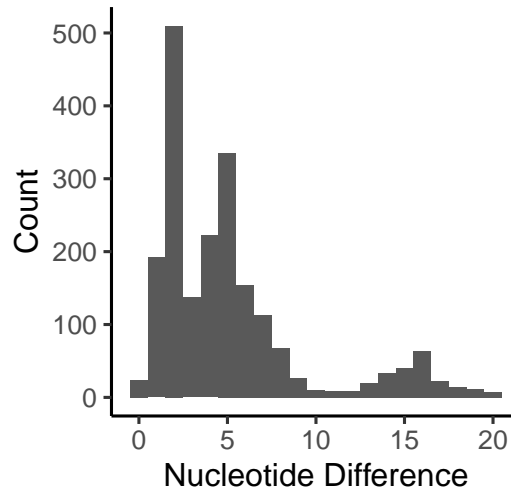
### IGHV4-61\*08

21 sequences assigned  
No exact matches.



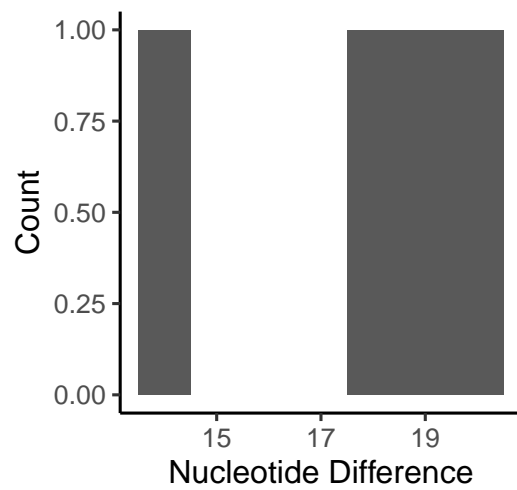
### IGHV5-51\*07

2336 sequences assigned  
24 (1%) exact matches, in which:  
16 unique CDR3  
4 unique J



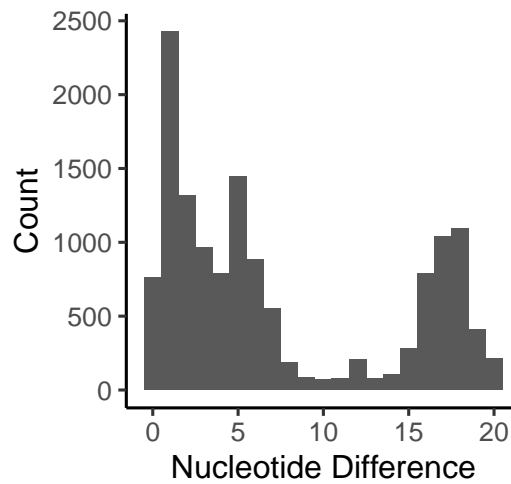
### IGHV4/OR15-8\*01

9 sequences assigned  
No exact matches.



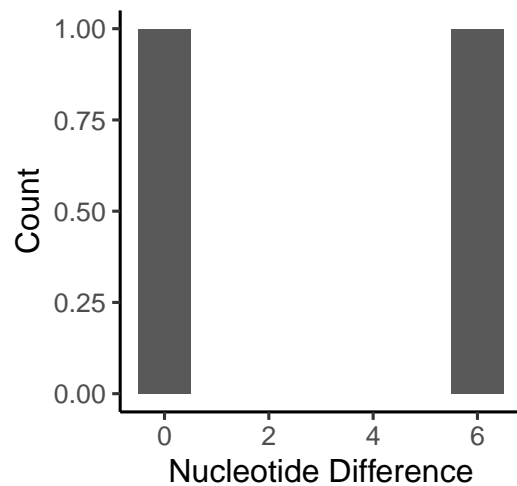
### IGHV5-51\*01\_03

14543 sequences assigned  
764 (5.3%) exact matches, in which:  
371 unique CDR3  
6 unique J



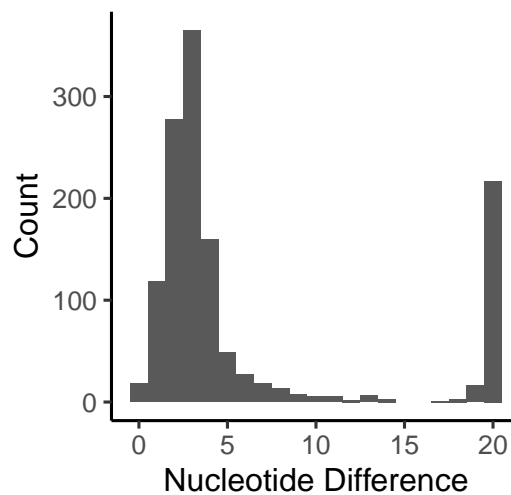
### IGHV5-10-1\*01\_03

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

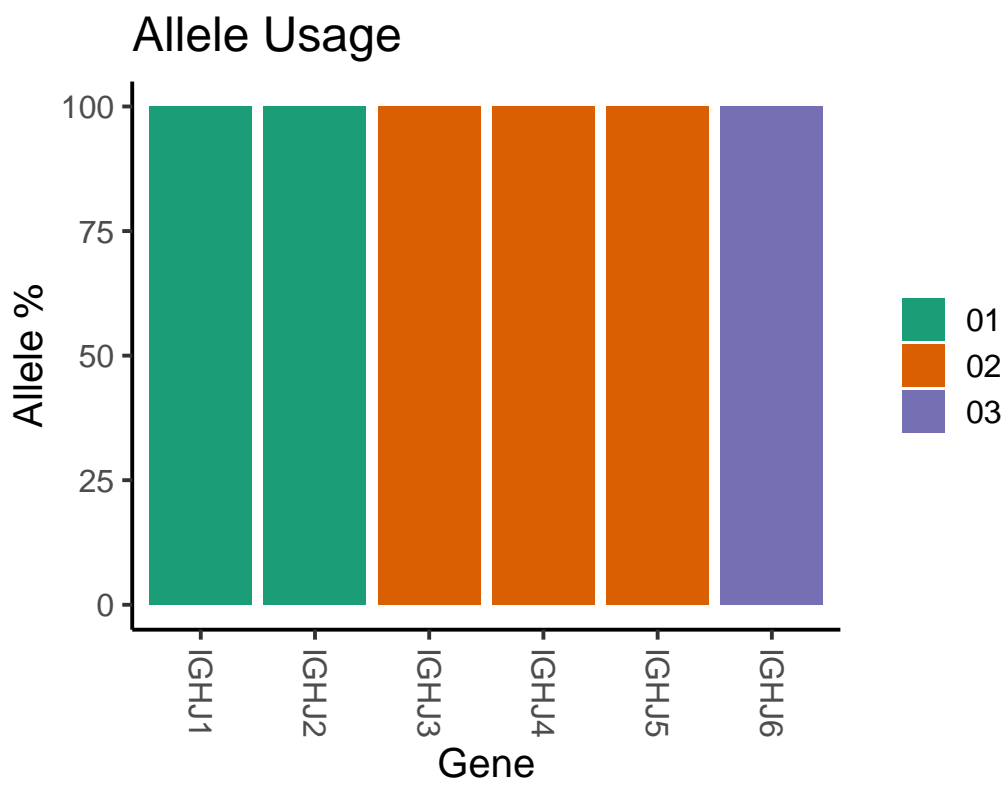


### IGHV6-1\*01\_02

3023 sequences assigned  
18 (0.6%) exact matches, in which:  
10 unique CDR3  
2 unique J







[illegible]