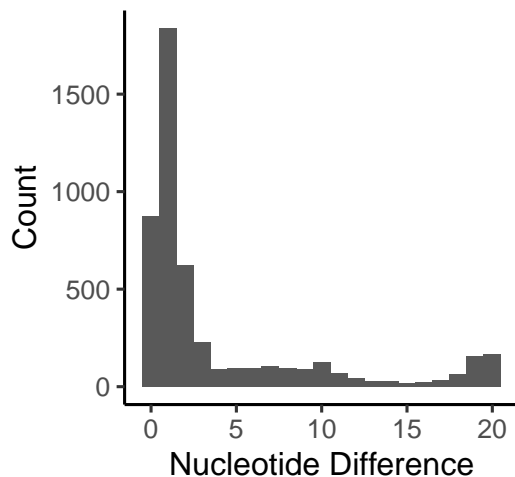


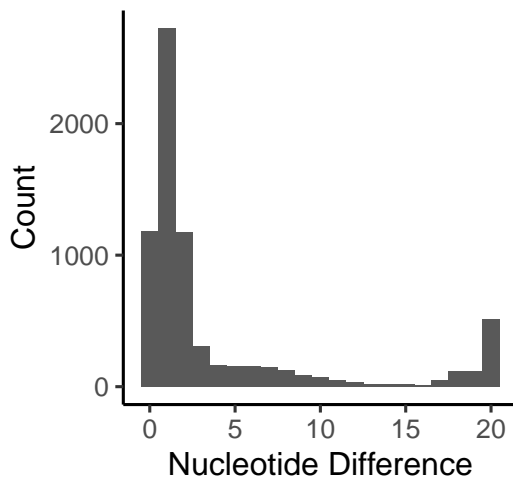
### IGHV1-2\*02

7173 sequences assigned  
874 (12.2%) exact matches, in which:  
633 unique CDR3  
6 unique J



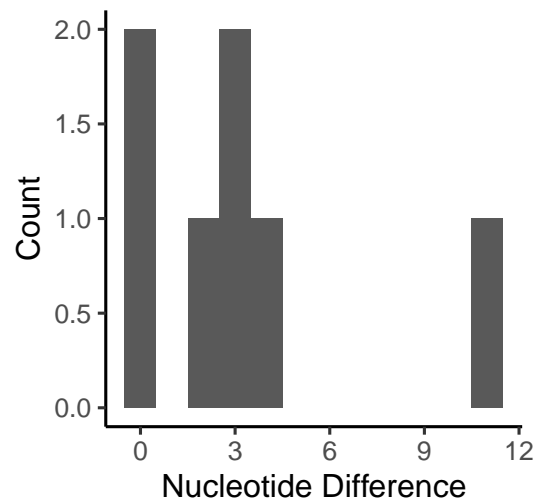
### IGHV1-8\*01

9786 sequences assigned  
1183 (12.1%) exact matches, in which:  
839 unique CDR3  
7 unique J



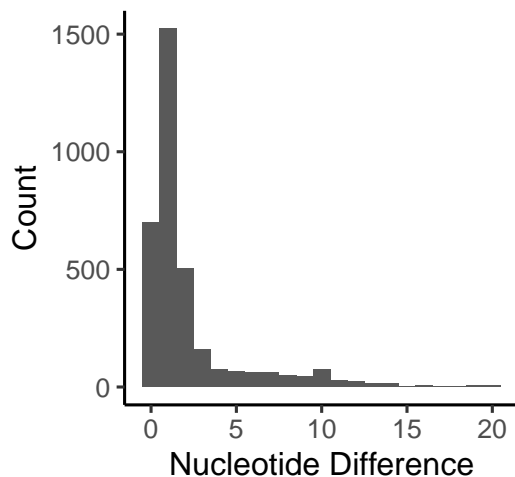
### IGHV1-45\*02

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



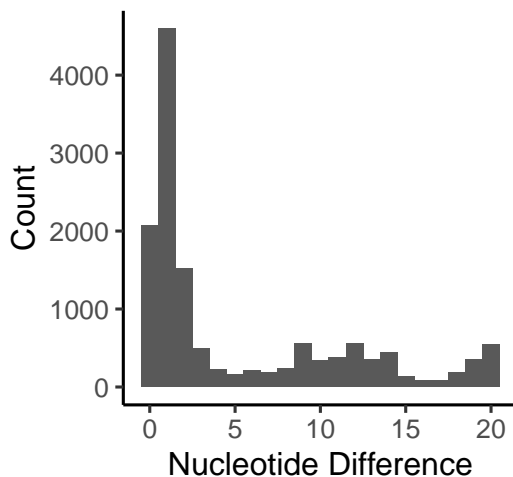
### IGHV1-2\*06

7668 sequences assigned  
698 (9.1%) exact matches, in which:  
479 unique CDR3  
6 unique J



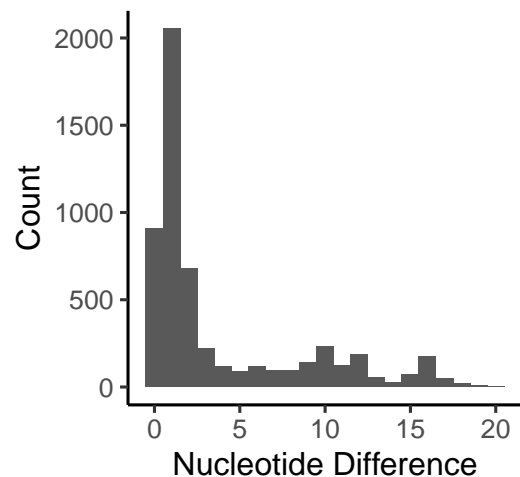
### IGHV1-18\*01

16144 sequences assigned  
2072 (12.8%) exact matches, in which:  
1418 unique CDR3  
7 unique J



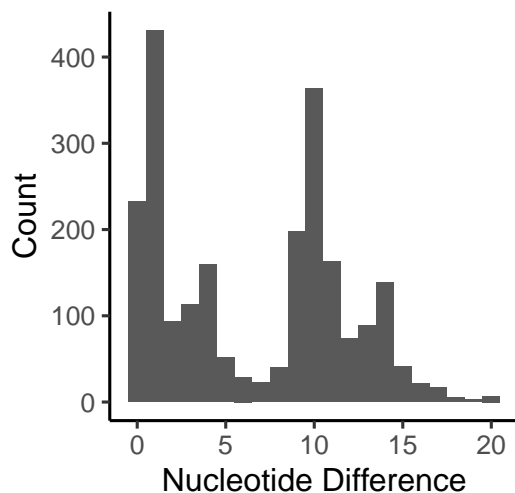
### IGHV1-46\*01

5681 sequences assigned  
908 (16%) exact matches, in which:  
637 unique CDR3  
7 unique J



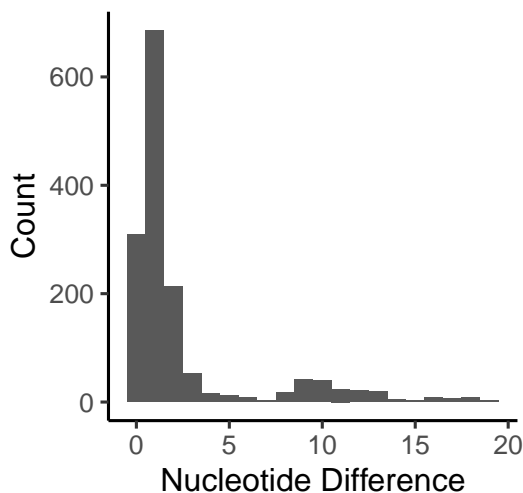
### IGHV1-3\*01\_05

2322 sequences assigned  
232 (10%) exact matches, in which:  
173 unique CDR3  
5 unique J



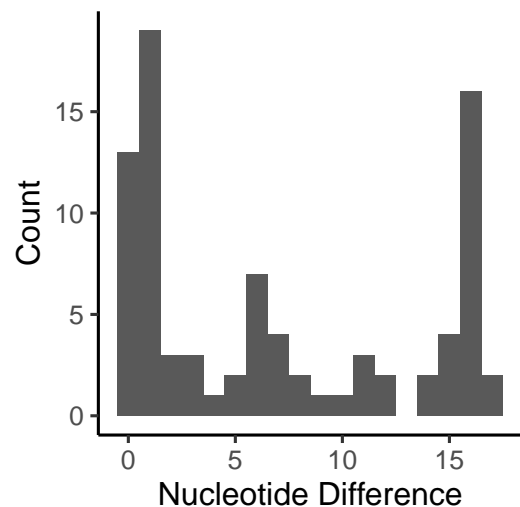
### IGHV1-24\*01

1501 sequences assigned  
310 (20.7%) exact matches, in which:  
209 unique CDR3  
6 unique J



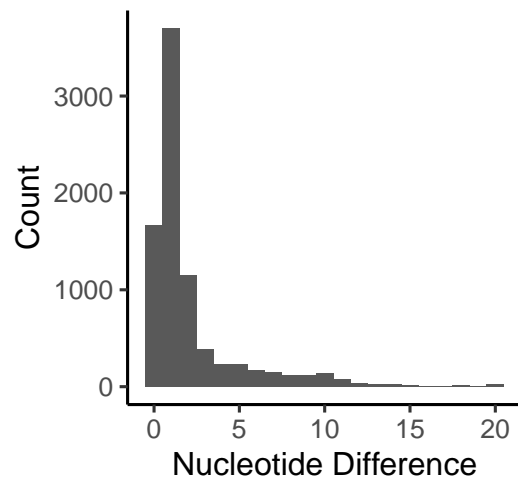
### IGHV1-58\*01\_03

92 sequences assigned  
13 (14.1%) exact matches, in which:  
12 unique CDR3  
5 unique J



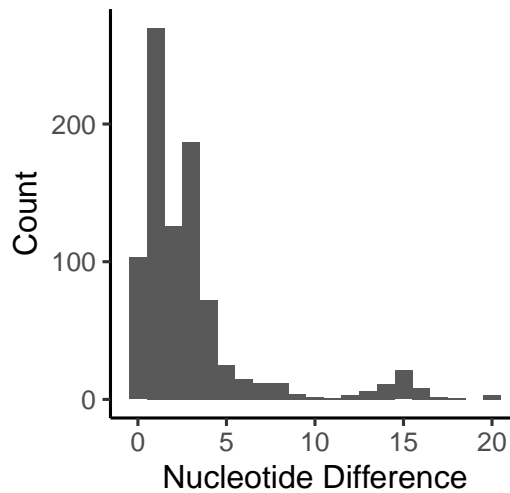
### IGHV1-69\*01\_12\_13

8448 sequences assigned  
1664 (19.7%) exact matches, in which:  
1151 unique CDR3  
7 unique J



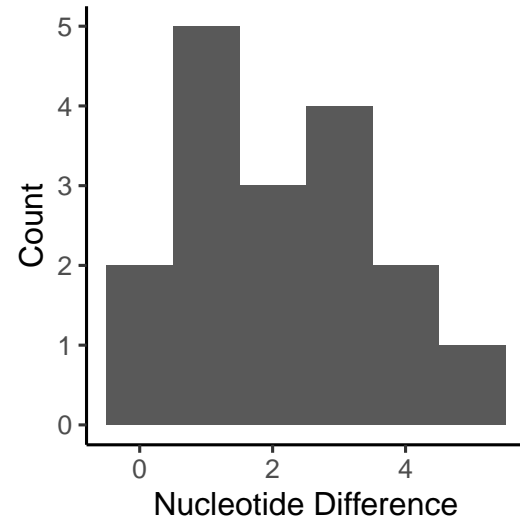
### IGHV2-5\*02

1110 sequences assigned  
103 (9.3%) exact matches, in which:  
76 unique CDR3  
5 unique J



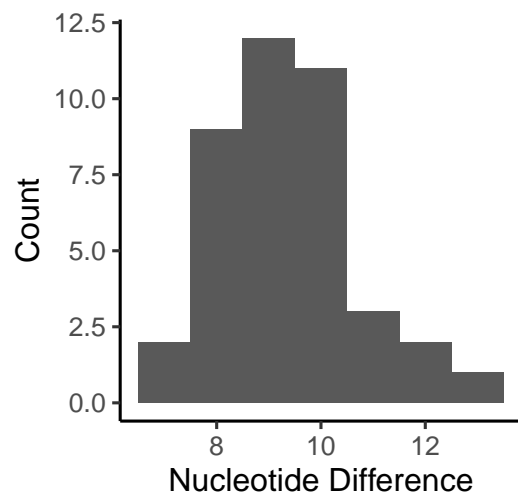
### IGHV2-70\*12

19 sequences assigned  
2 (10.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



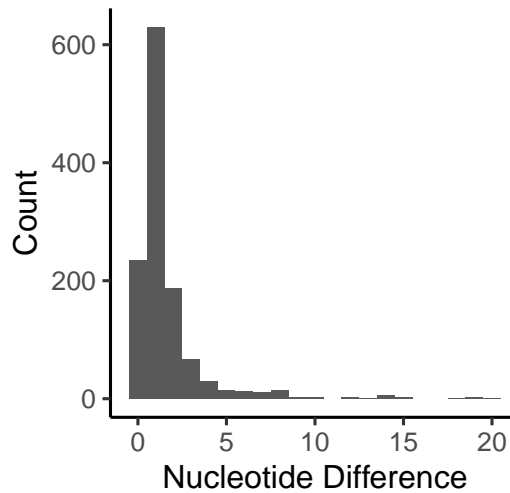
### IGHV1-NL1\*01

40 sequences assigned  
No exact matches.



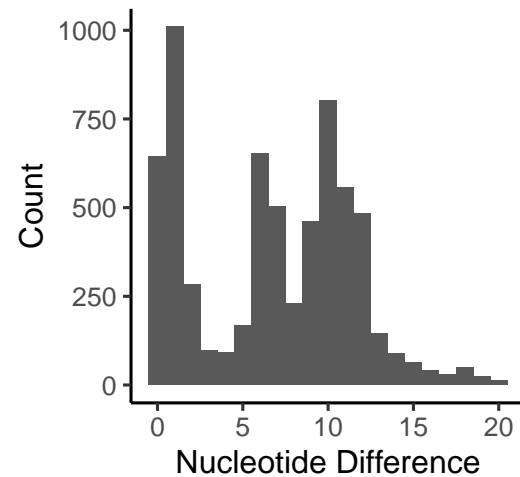
### IGHV2-26\*01

1227 sequences assigned  
235 (19.2%) exact matches, in which:  
151 unique CDR3  
6 unique J



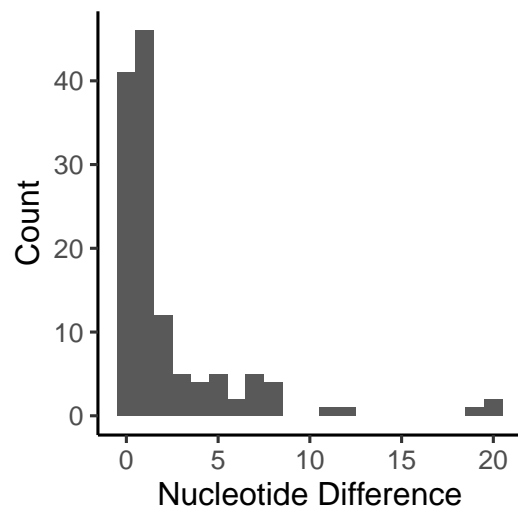
### IGHV3-7\*01

6680 sequences assigned  
643 (9.6%) exact matches, in which:  
409 unique CDR3  
7 unique J



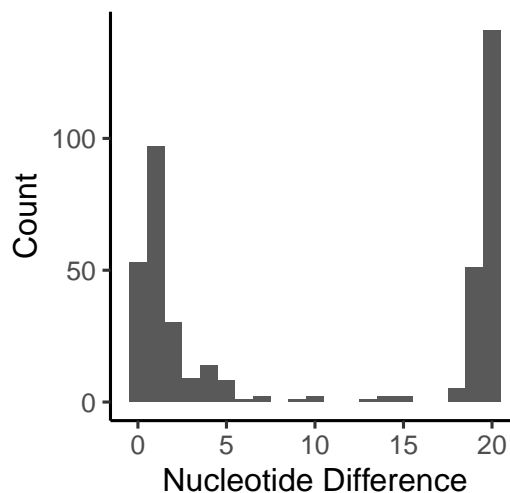
### IGHV2-5\*01

144 sequences assigned  
41 (28.5%) exact matches, in which:  
40 unique CDR3  
5 unique J



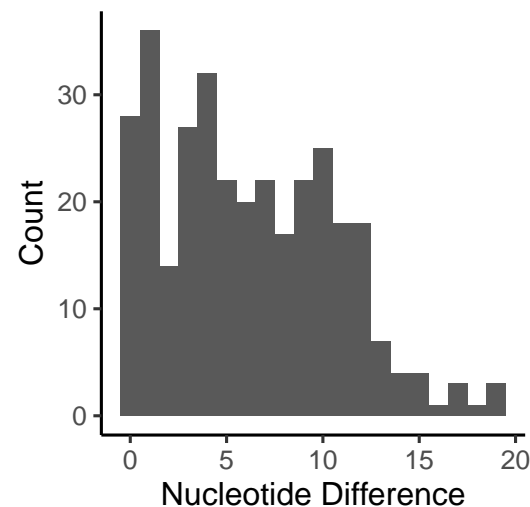
### IGHV2-70\*01

559 sequences assigned  
53 (9.5%) exact matches, in which:  
44 unique CDR3  
4 unique J



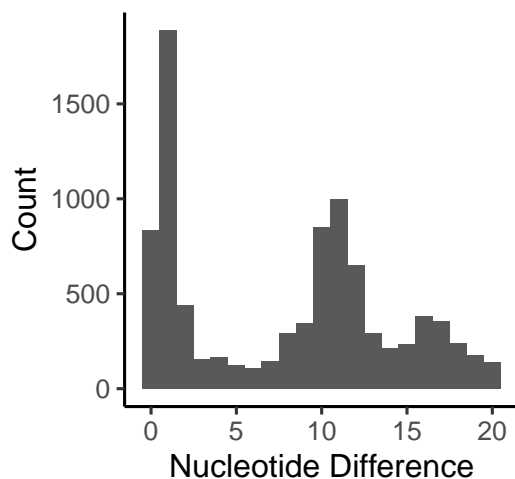
### IGHV3-7\*03

352 sequences assigned  
28 (8%) exact matches, in which:  
23 unique CDR3  
4 unique J



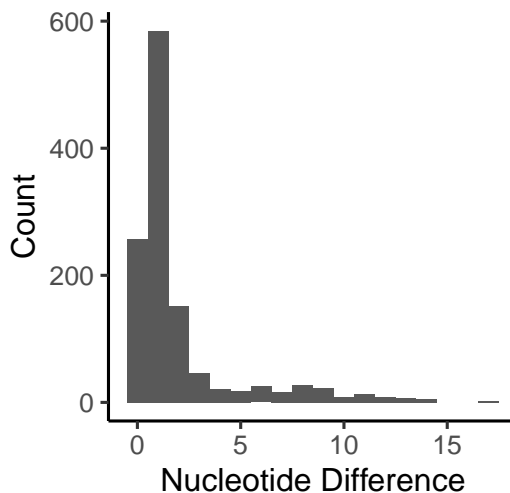
### IGHV3-9\*01

10544 sequences assigned  
833 (7.9%) exact matches, in which:  
434 unique CDR3  
7 unique J



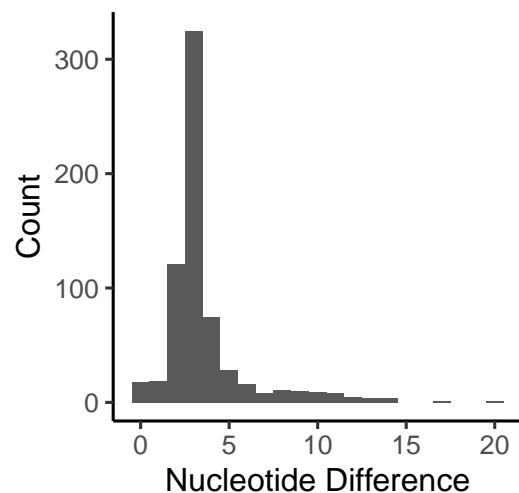
### IGHV3-13\*01

1272 sequences assigned  
257 (20.2%) exact matches, in which:  
120 unique CDR3  
5 unique J



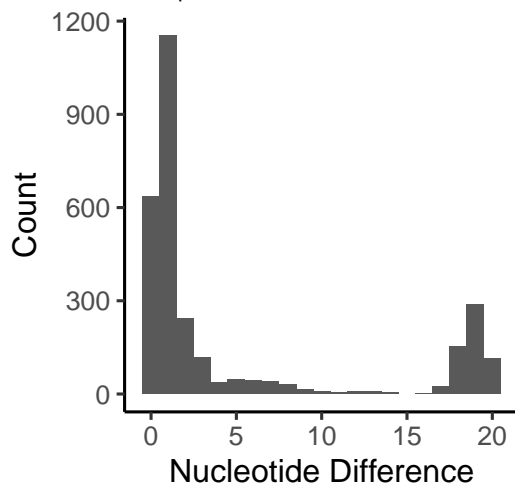
### IGHV3-20\*01\_02

663 sequences assigned  
18 (2.7%) exact matches, in which:  
10 unique CDR3  
4 unique J



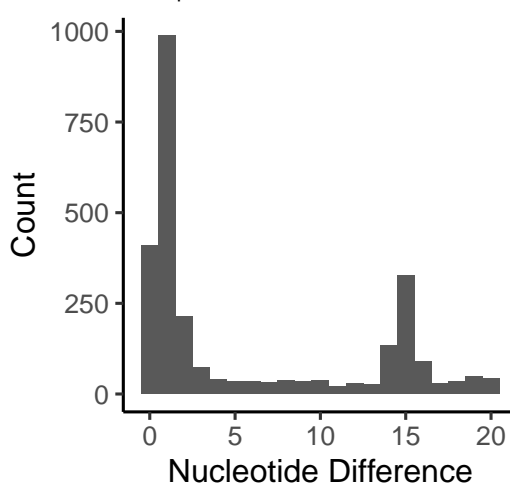
### IGHV3-11\*01

3688 sequences assigned  
636 (17.2%) exact matches, in which:  
372 unique CDR3  
7 unique J



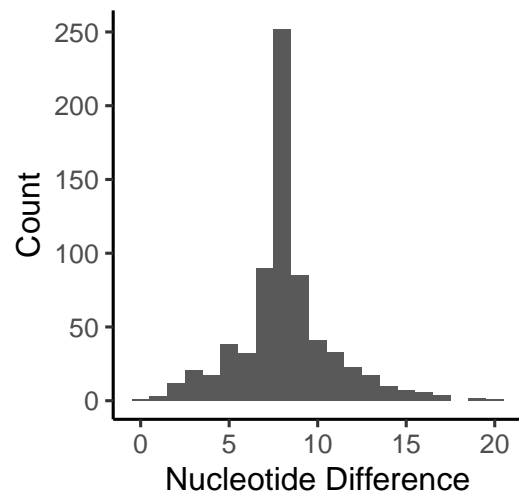
### IGHV3-15\*01\_02

2977 sequences assigned  
409 (13.7%) exact matches, in which:  
220 unique CDR3  
7 unique J



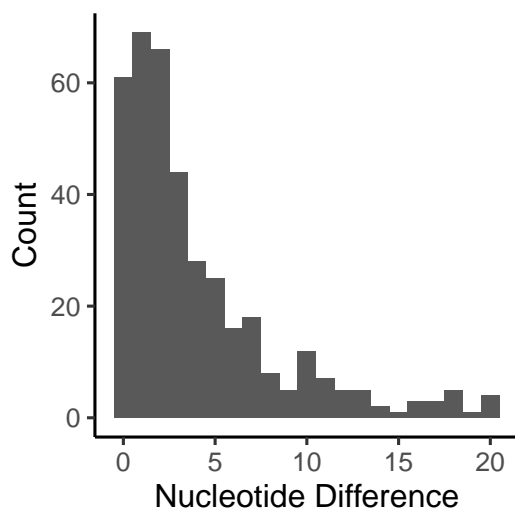
### IGHV3-20\*03\_04

700 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



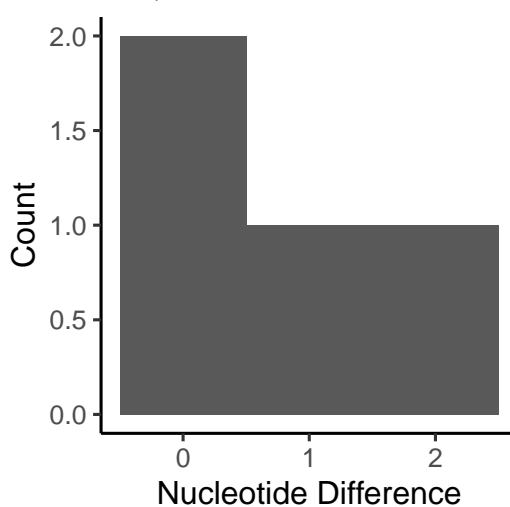
### IGHV3-11\*04

404 sequences assigned  
61 (15.1%) exact matches, in which:  
50 unique CDR3  
6 unique J



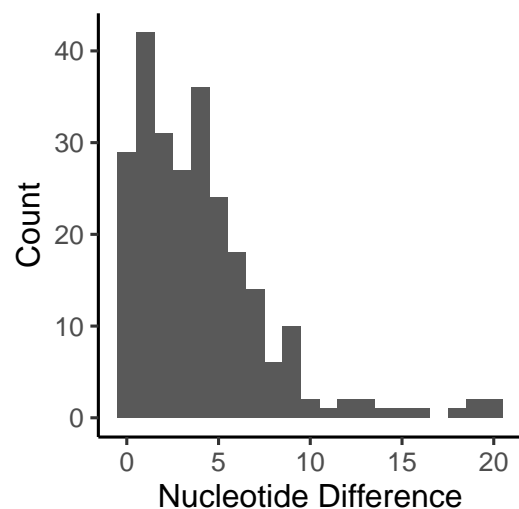
### IGHV3-19\*01

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



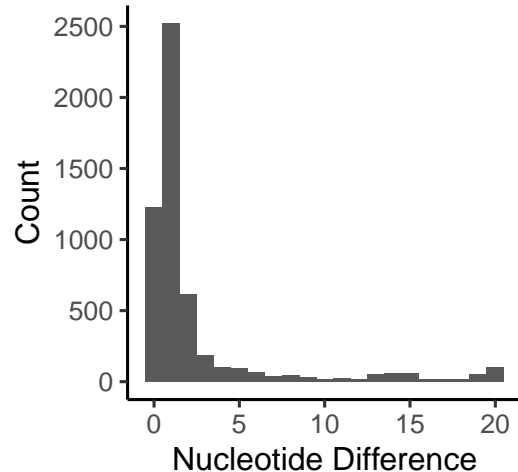
### IGHV3-21\*04

271 sequences assigned  
29 (10.7%) exact matches, in which:  
24 unique CDR3  
5 unique J



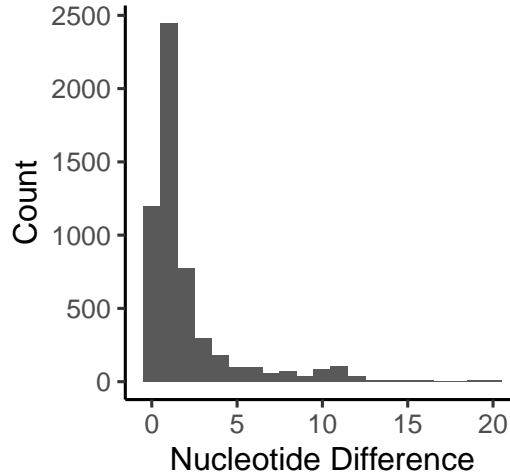
### IGHV3-21\*01\_02

5650 sequences assigned  
1227 (21.7%) exact matches, in which:  
683 unique CDR3  
7 unique J



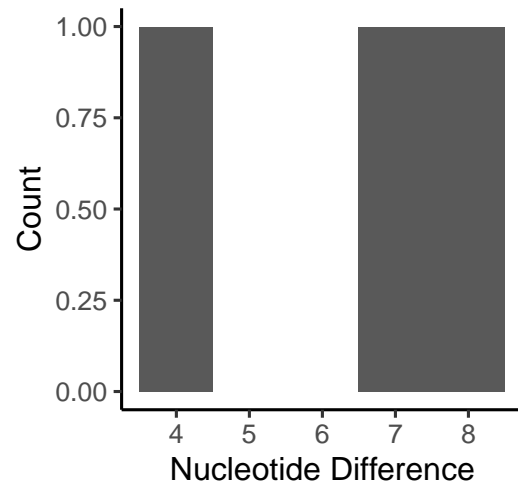
### IGHV3-33\*01

6023 sequences assigned  
1200 (19.9%) exact matches, in which:  
683 unique CDR3  
7 unique J



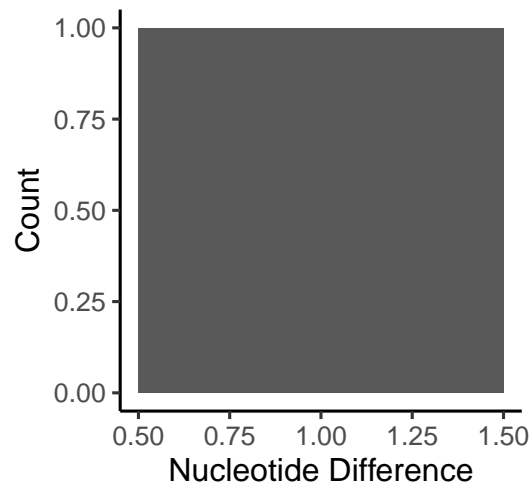
### IGHV3-47\*02

3 sequences assigned  
No exact matches.



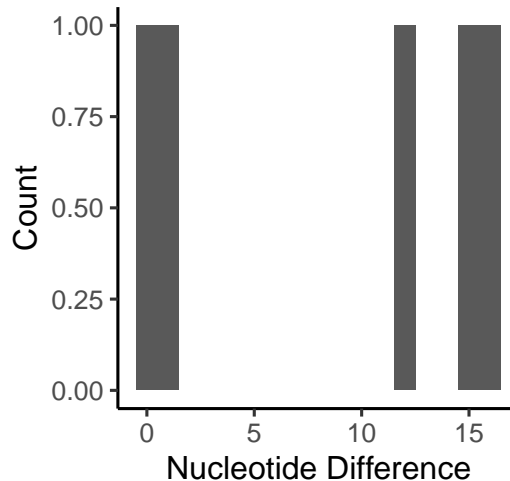
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



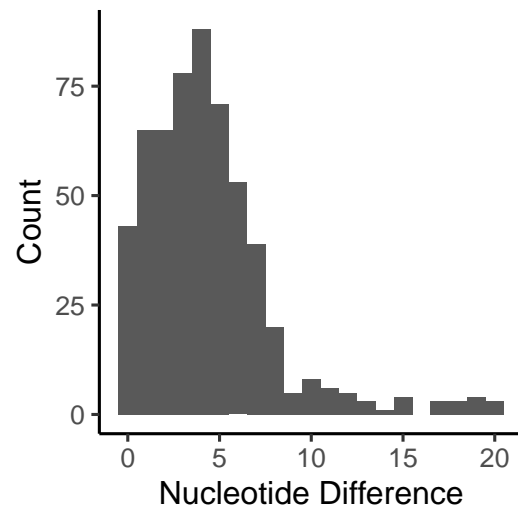
### IGHV3-35\*01

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



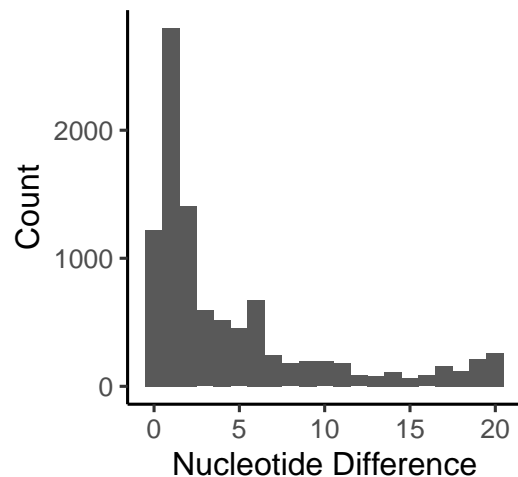
### IGHV3-48\*01

574 sequences assigned  
43 (7.5%) exact matches, in which:  
30 unique CDR3  
6 unique J



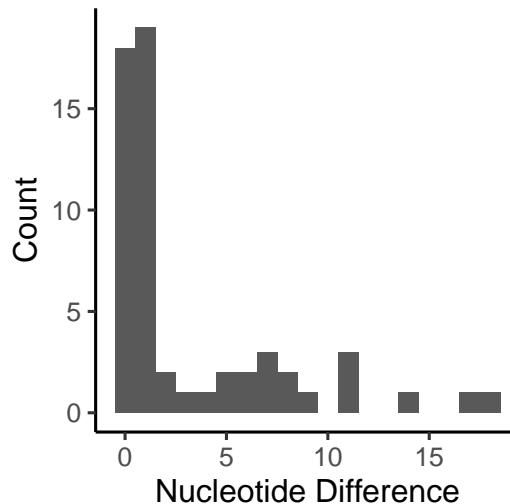
### IGHV3-23\*01\_04

20647 sequences assigned  
1222 (5.9%) exact matches, in which:  
698 unique CDR3  
7 unique J



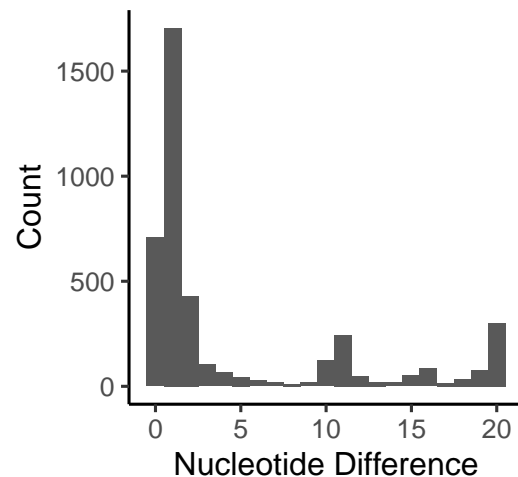
### IGHV3-43\*01

59 sequences assigned  
18 (30.5%) exact matches, in which:  
14 unique CDR3  
4 unique J



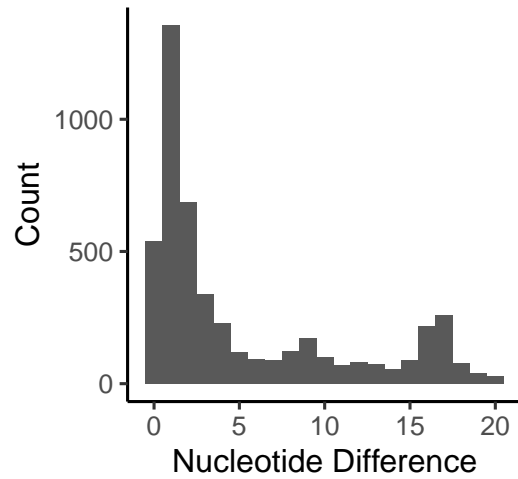
### IGHV3-48\*02

4597 sequences assigned  
709 (15.4%) exact matches, in which:  
334 unique CDR3  
7 unique J



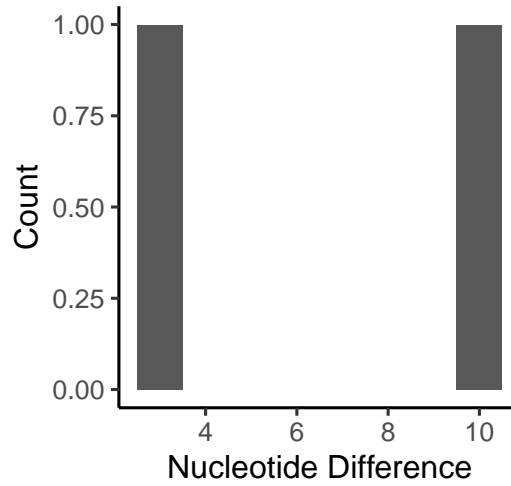
### IGHV3-48\*03

5440 sequences assigned  
538 (9.9%) exact matches, in which:  
248 unique CDR3  
5 unique J



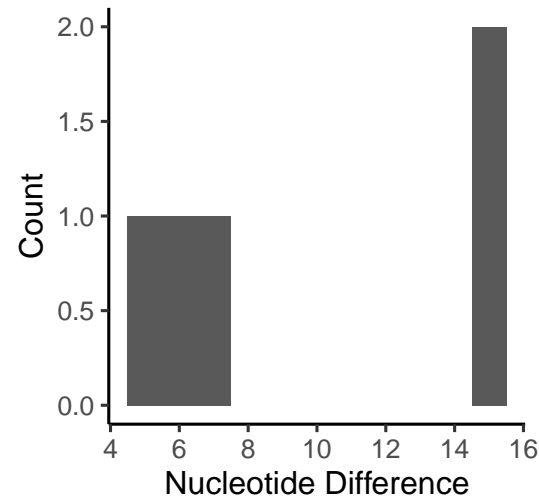
### IGHV3-52\*01\_03

2 sequences assigned  
No exact matches.



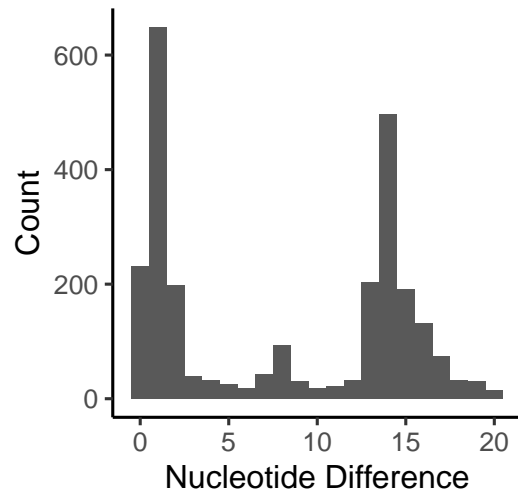
### IGHV3-64\*04

11 sequences assigned  
No exact matches.



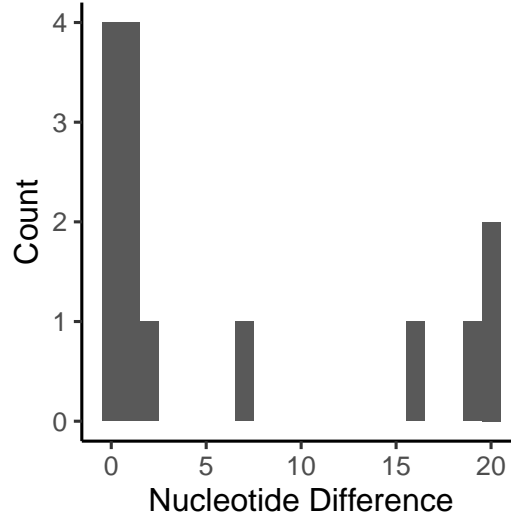
### IGHV3-49\*04

2847 sequences assigned  
232 (8.1%) exact matches, in which:  
109 unique CDR3  
6 unique J



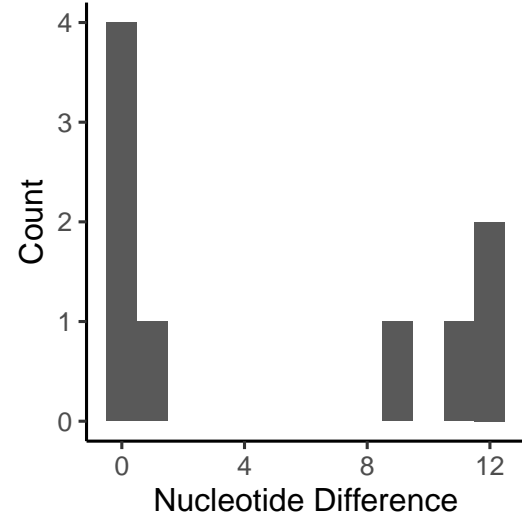
### IGHV3-53\*05

22 sequences assigned  
4 (18.2%) exact matches, in which:  
3 unique CDR3  
1 unique J



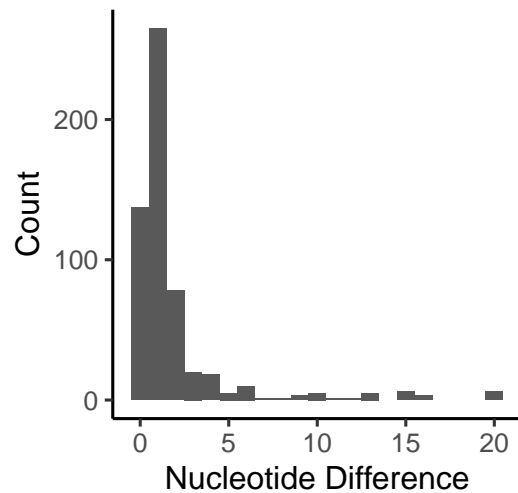
### IGHV3-64\*02\_07

15 sequences assigned  
4 (26.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



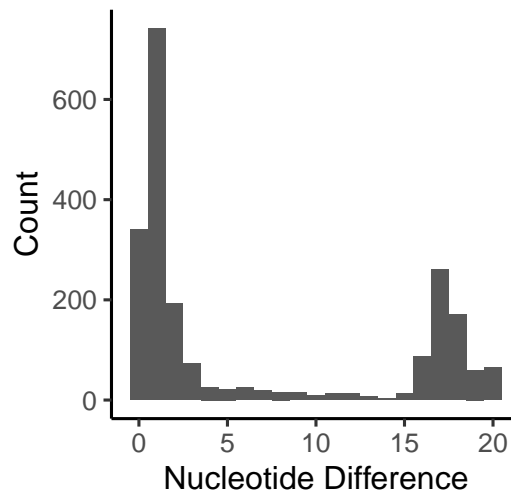
### IGHV3-49\*03\_05

802 sequences assigned  
137 (17.1%) exact matches, in which:  
77 unique CDR3  
6 unique J



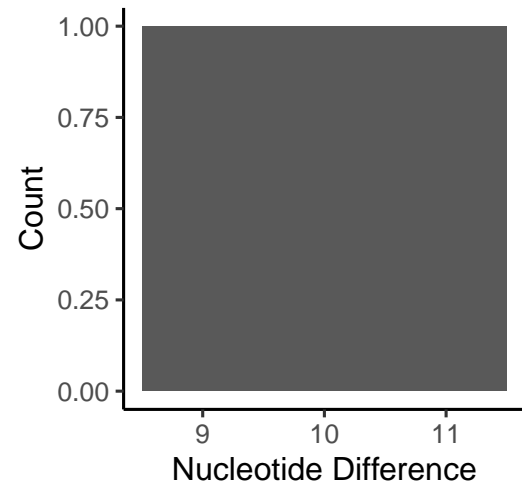
### IGHV3-53\*01\_02

2683 sequences assigned  
340 (12.7%) exact matches, in which:  
194 unique CDR3  
7 unique J



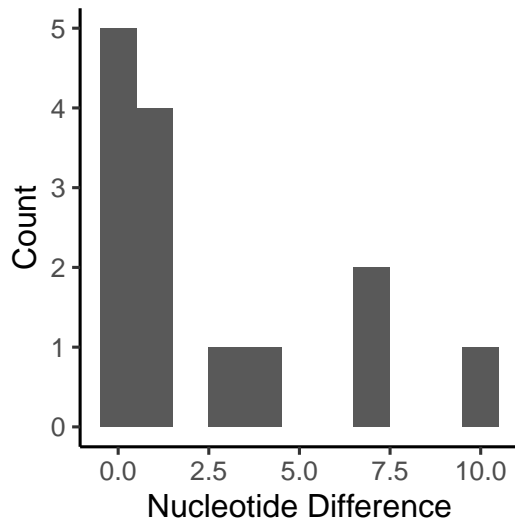
### IGHV3-66\*01

4 sequences assigned  
No exact matches.



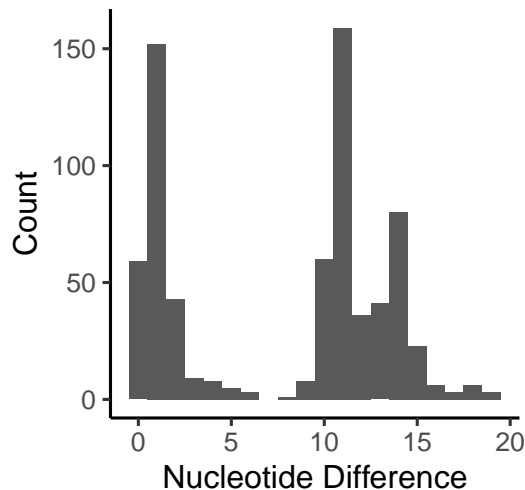
### IGHV3-66\*03

14 sequences assigned  
5 (35.7%) exact matches, in which:  
5 unique CDR3  
2 unique J



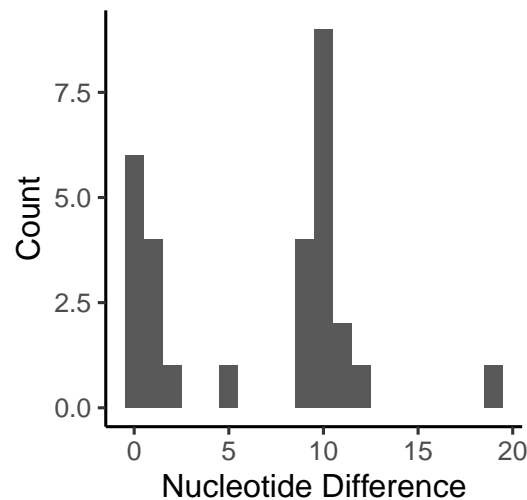
### IGHV3-73\*01\_02

1319 sequences assigned  
59 (4.5%) exact matches, in which:  
27 unique CDR3  
4 unique J



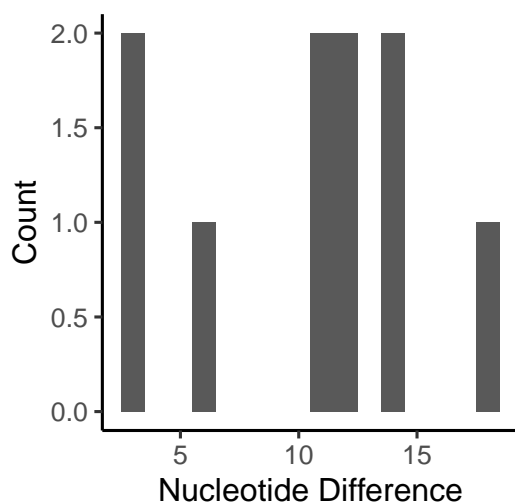
### IGHV3-43D\*04

30 sequences assigned  
6 (20%) exact matches, in which:  
5 unique CDR3  
1 unique J



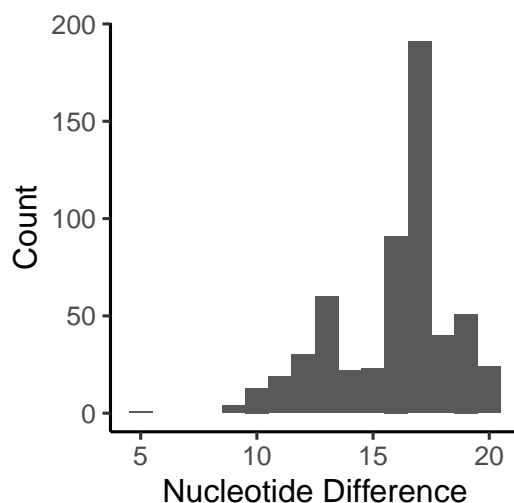
### IGHV3-69-1\*01

10 sequences assigned  
No exact matches.



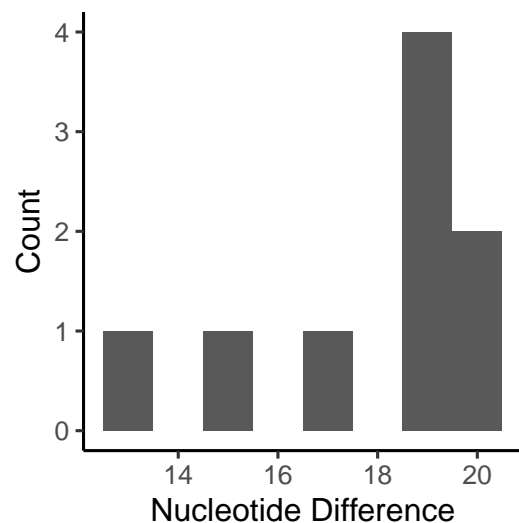
### IGHV3-74\*03

1771 sequences assigned  
No exact matches.



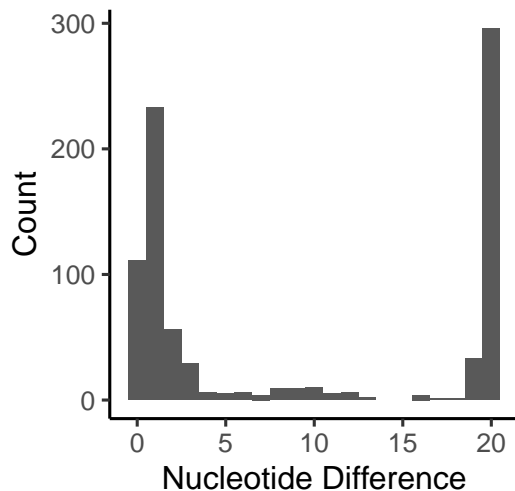
### IGHV3-NL1\*01

13 sequences assigned  
No exact matches.



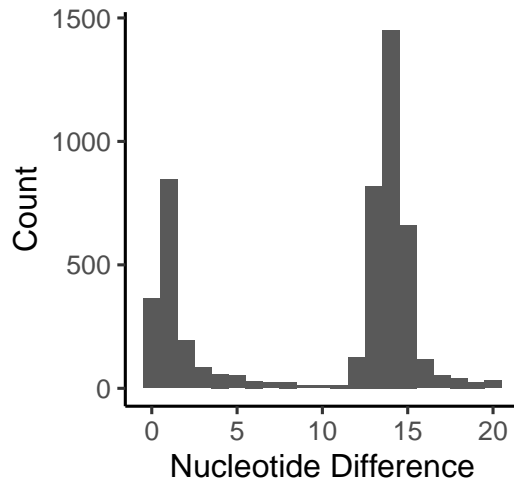
### IGHV3-72\*01

2508 sequences assigned  
111 (4.4%) exact matches, in which:  
62 unique CDR3  
5 unique J



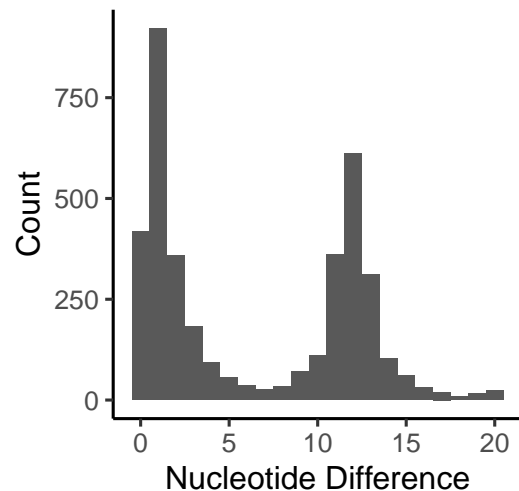
### IGHV3-74\*01\_02

5729 sequences assigned  
364 (6.4%) exact matches, in which:  
189 unique CDR3  
7 unique J



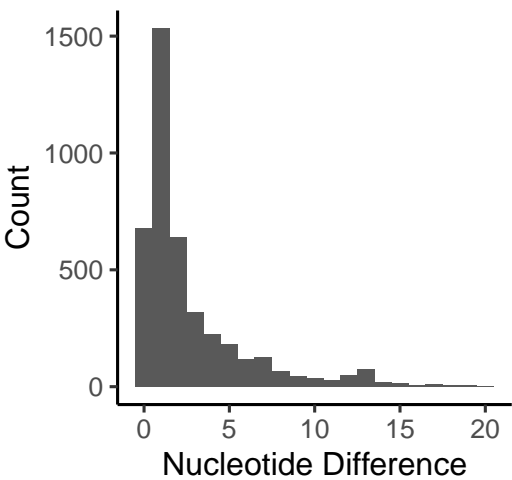
### IGHV4-4\*07

3899 sequences assigned  
418 (10.7%) exact matches, in which:  
282 unique CDR3  
6 unique J



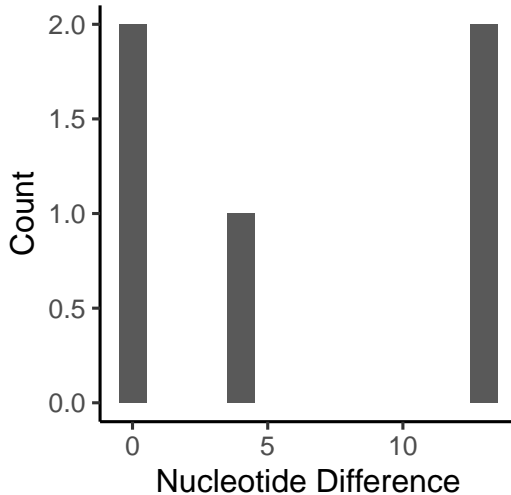
### IGHV4-4\*02\_03

4790 sequences assigned  
678 (14.2%) exact matches, in which:  
453 unique CDR3  
7 unique J



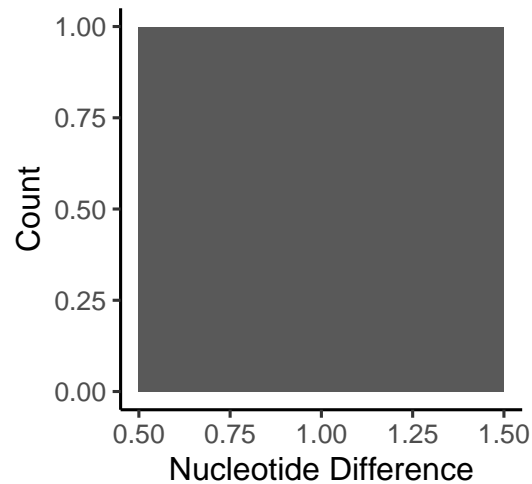
### IGHV4-30-2\*01

9 sequences assigned  
2 (22.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



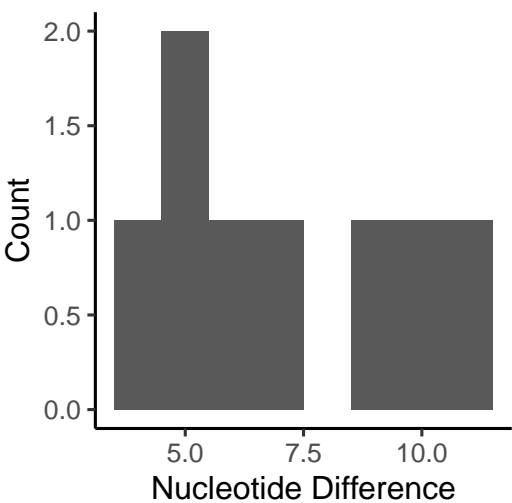
### IGHV4-30-4\*07

2 sequences assigned  
No exact matches.



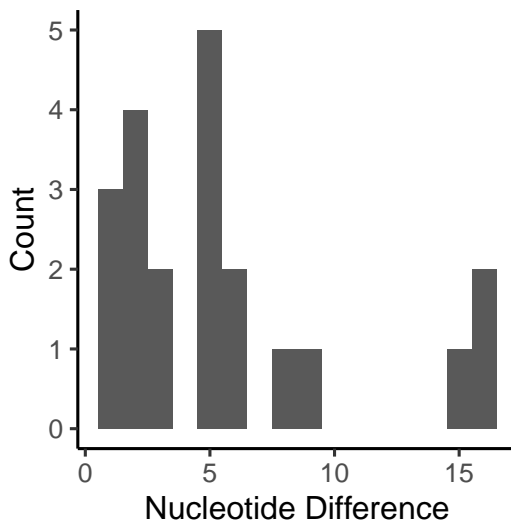
### IGHV4-28\*03

8 sequences assigned  
No exact matches.



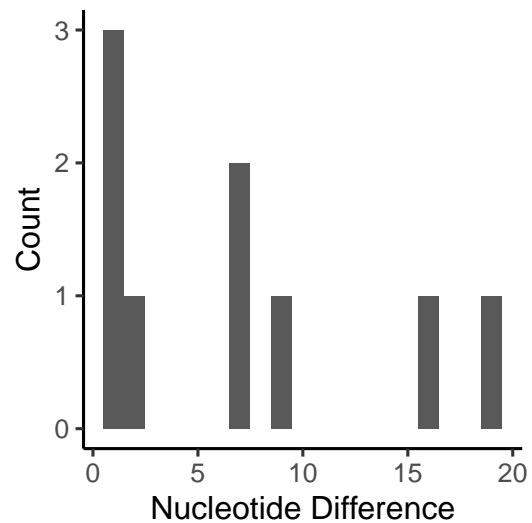
### IGHV4-30-2\*03

101 sequences assigned  
No exact matches.



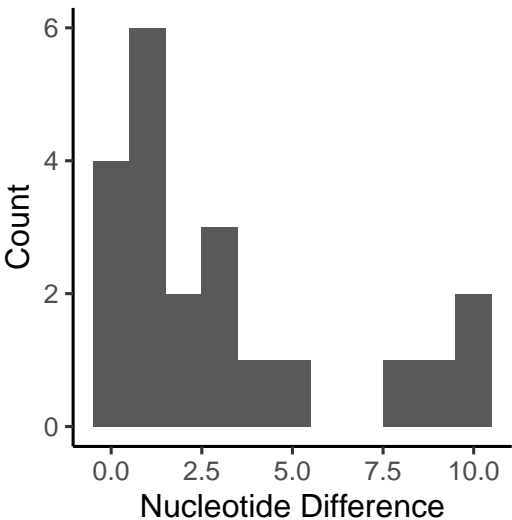
### IGHV4-30-4\*08

10 sequences assigned  
No exact matches.



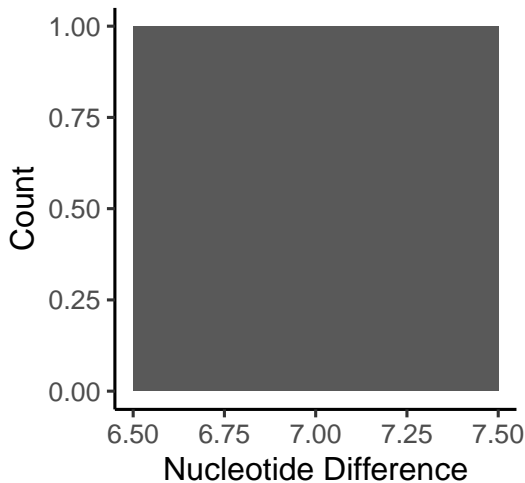
### IGHV4-28\*02\_05

21 sequences assigned  
4 (19%) exact matches, in which:  
3 unique CDR3  
3 unique J



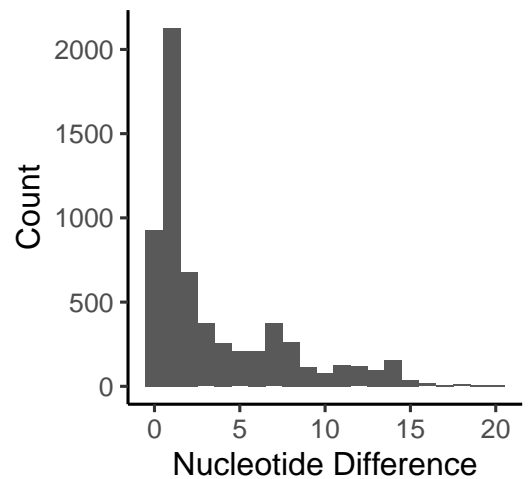
### IGHV4-30-2\*04

1 sequences assigned  
No exact matches.



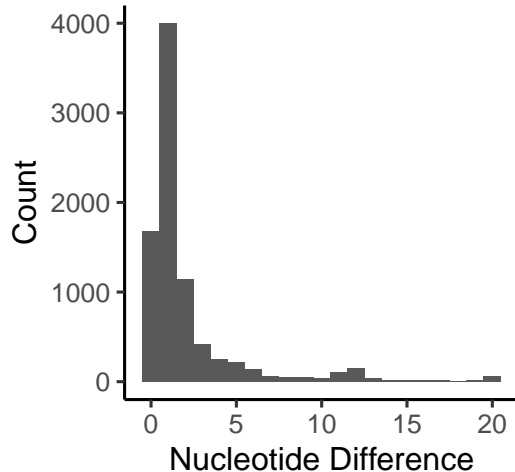
### IGHV4-31\*02

6481 sequences assigned  
929 (14.3%) exact matches, in which:  
609 unique CDR3  
7 unique J



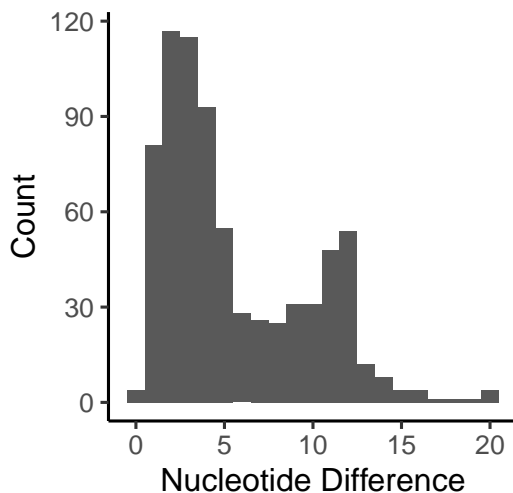
### IGHV4-34\*01\_02

9108 sequences assigned  
1679 (18.4%) exact matches, in which:  
1018 unique CDR3  
7 unique J



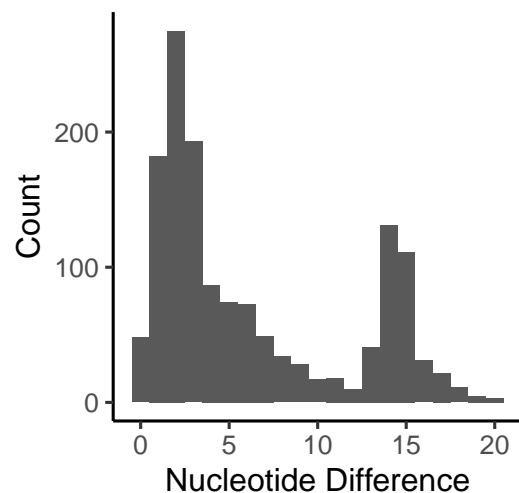
### IGHV4-39\*07

765 sequences assigned  
4 (0.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



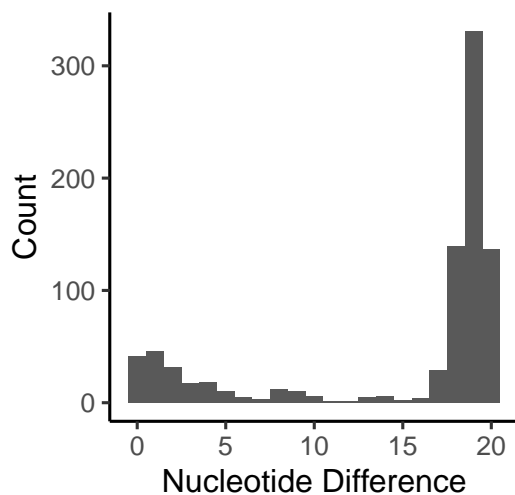
### IGHV4-59\*12

1478 sequences assigned  
48 (3.2%) exact matches, in which:  
43 unique CDR3  
7 unique J



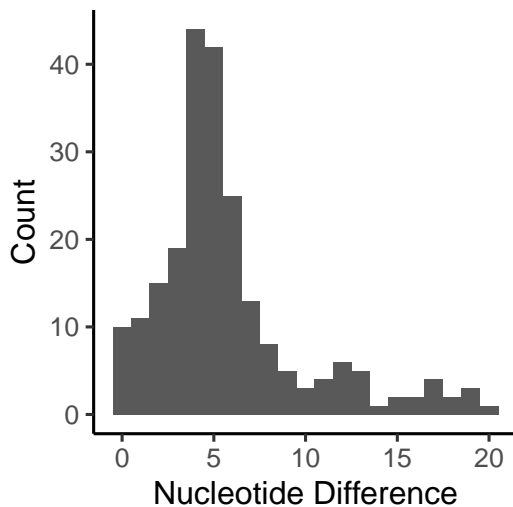
### IGHV4-38-2\*01

1782 sequences assigned  
41 (2.3%) exact matches, in which:  
39 unique CDR3  
6 unique J



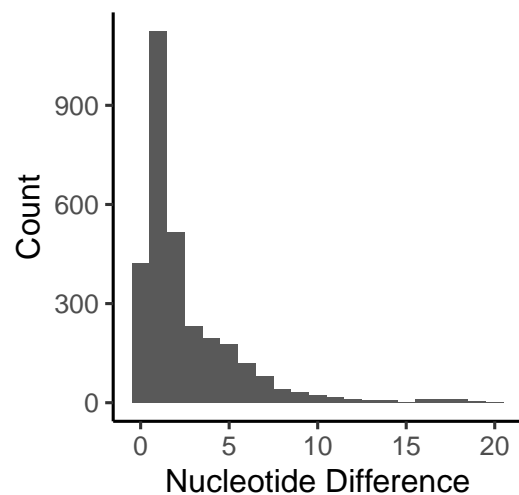
### IGHV4-59\*02

605 sequences assigned  
10 (1.7%) exact matches, in which:  
10 unique CDR3  
4 unique J



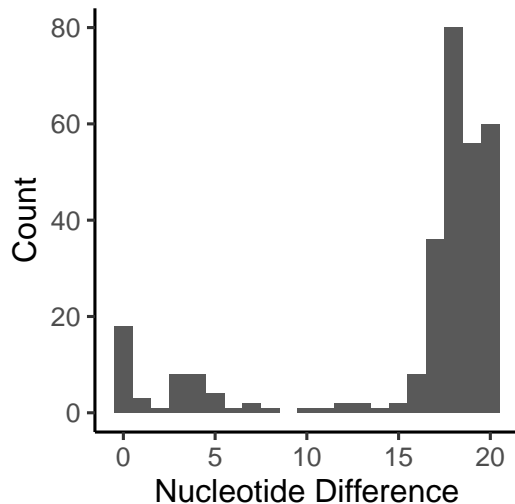
### IGHV4-61\*01

4858 sequences assigned  
421 (8.7%) exact matches, in which:  
271 unique CDR3  
6 unique J



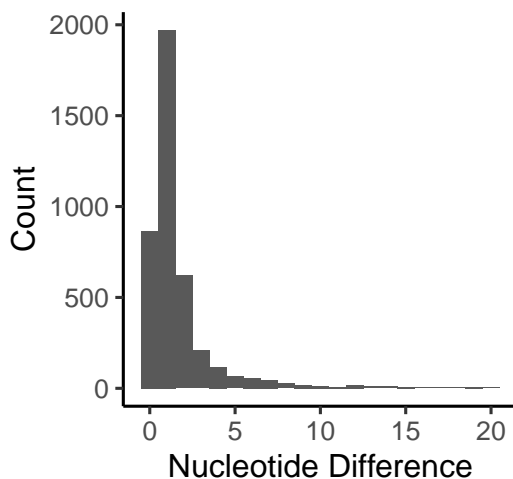
### IGHV4-38-2\*02

367 sequences assigned  
18 (4.9%) exact matches, in which:  
15 unique CDR3  
5 unique J



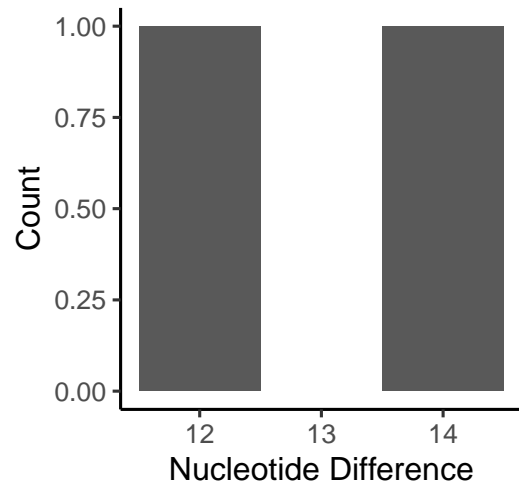
### IGHV4-59\*01\_07

4135 sequences assigned  
865 (20.9%) exact matches, in which:  
576 unique CDR3  
7 unique J



### IGHV1/OR15-2\*02\_03

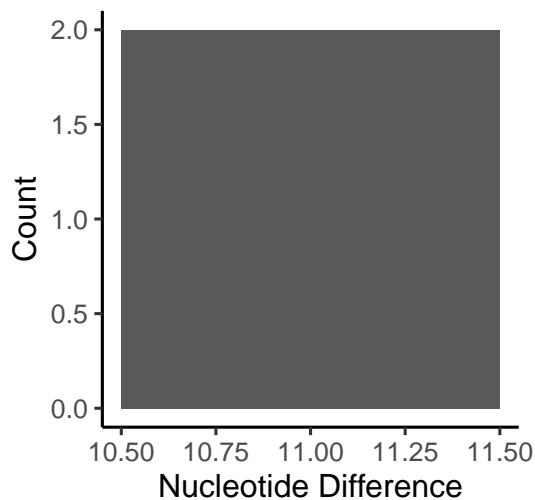
2 sequences assigned  
No exact matches.





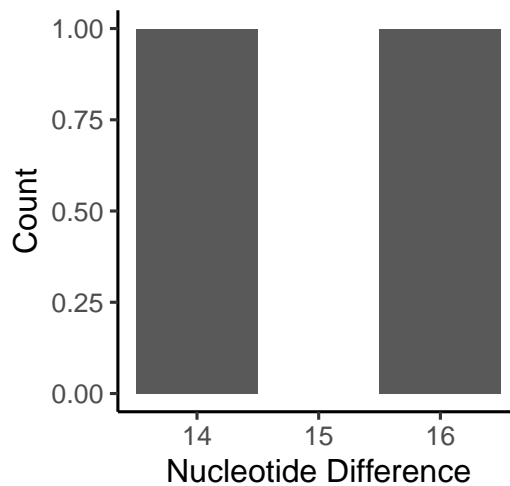
### IGHV1/OR15-3\*02

2 sequences assigned  
No exact matches.



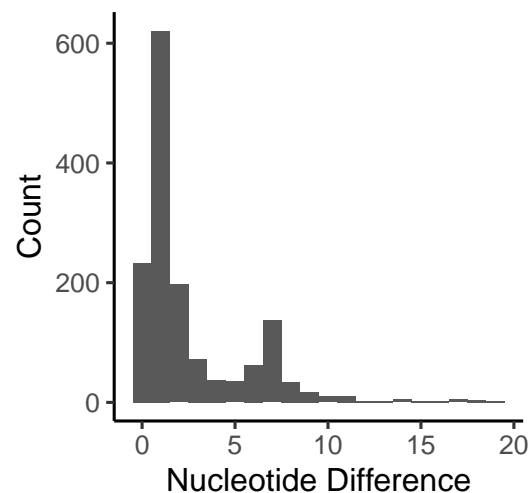
### IGHV5-10-1\*01\_03

2 sequences assigned  
No exact matches.



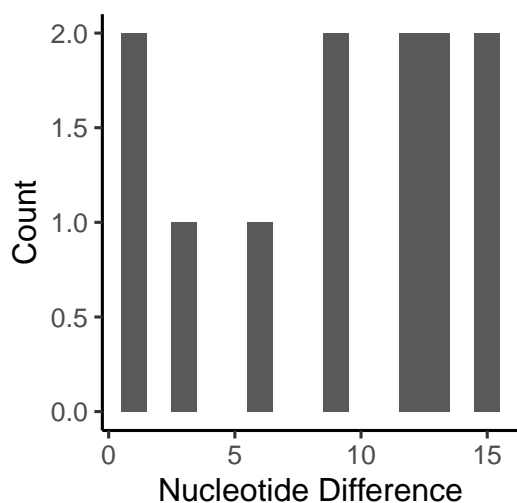
### IGHV6-1\*01\_02

1497 sequences assigned  
233 (15.6%) exact matches, in which:  
162 unique CDR3  
5 unique J



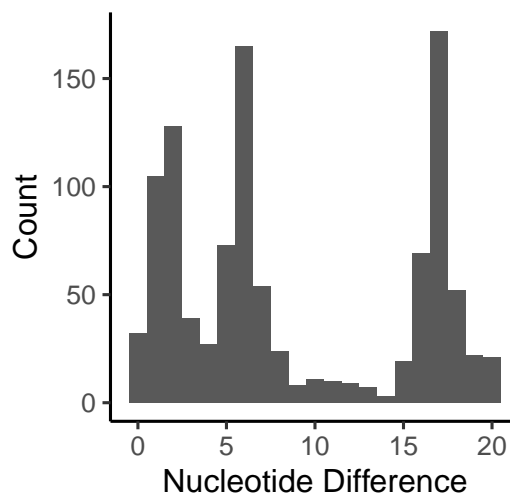
### IGHV4/OR15-8\*01

12 sequences assigned  
No exact matches.



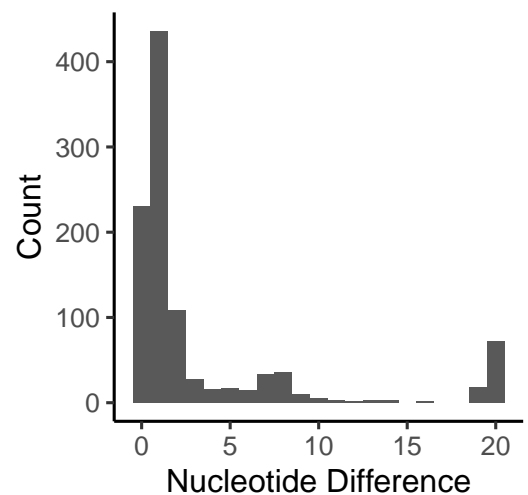
### IGHV5-51\*07

1299 sequences assigned  
32 (2.5%) exact matches, in which:  
23 unique CDR3  
5 unique J



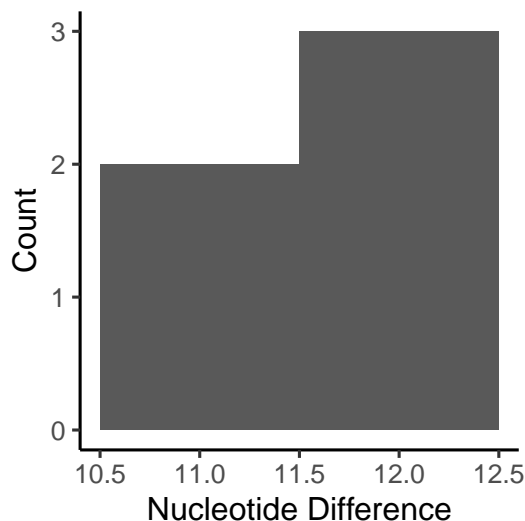
### IGHV7-4-1\*02

1337 sequences assigned  
230 (17.2%) exact matches, in which:  
161 unique CDR3  
7 unique J



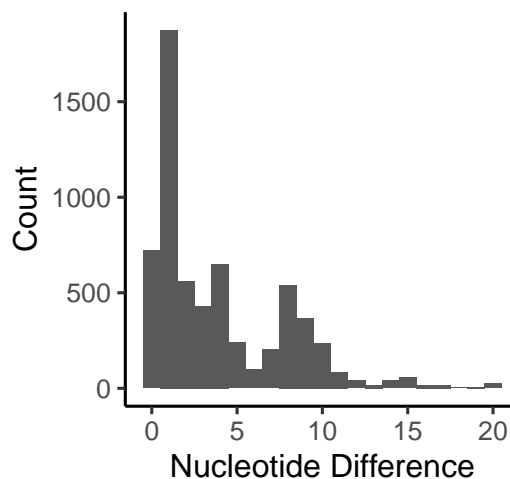
### IGHV1/OR15-9\*01

5 sequences assigned  
No exact matches.



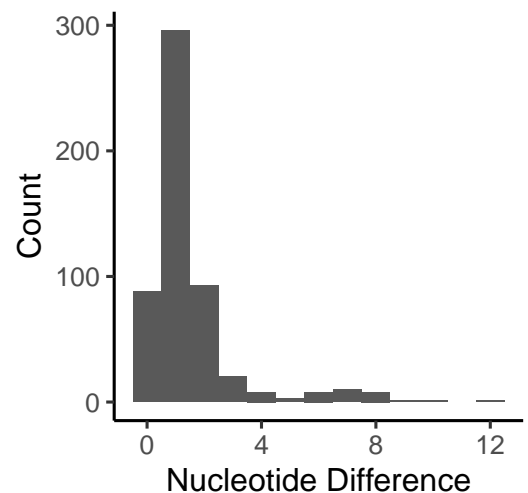
### IGHV5-51\*01\_03

6341 sequences assigned  
722 (11.4%) exact matches, in which:  
386 unique CDR3  
5 unique J

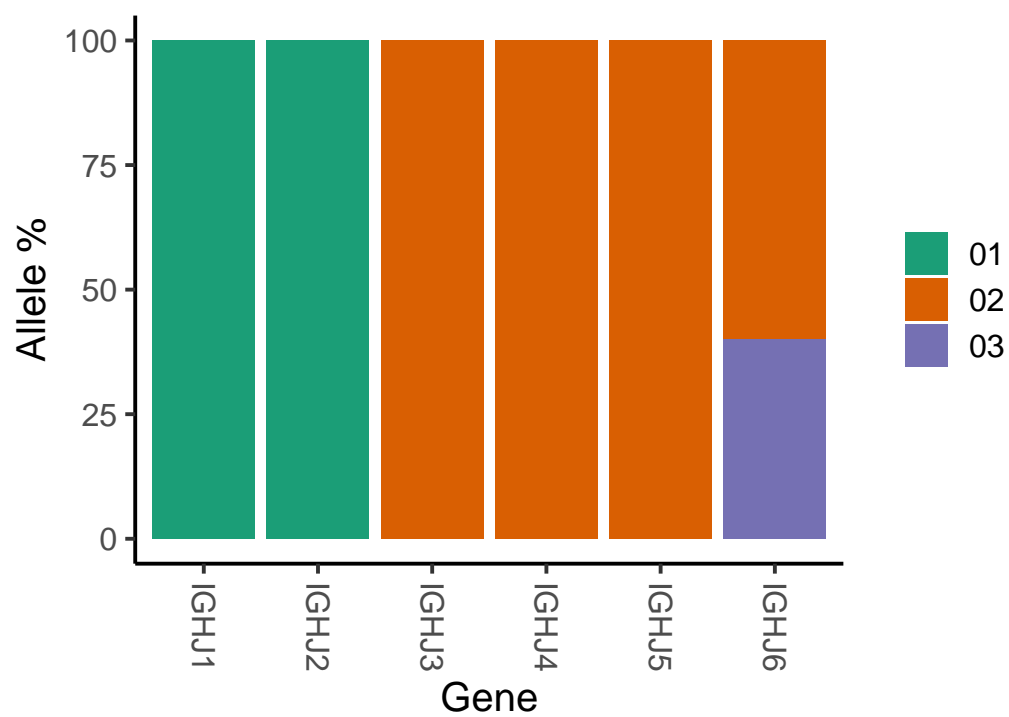


### IGHV7-4-1\*02\_G224A

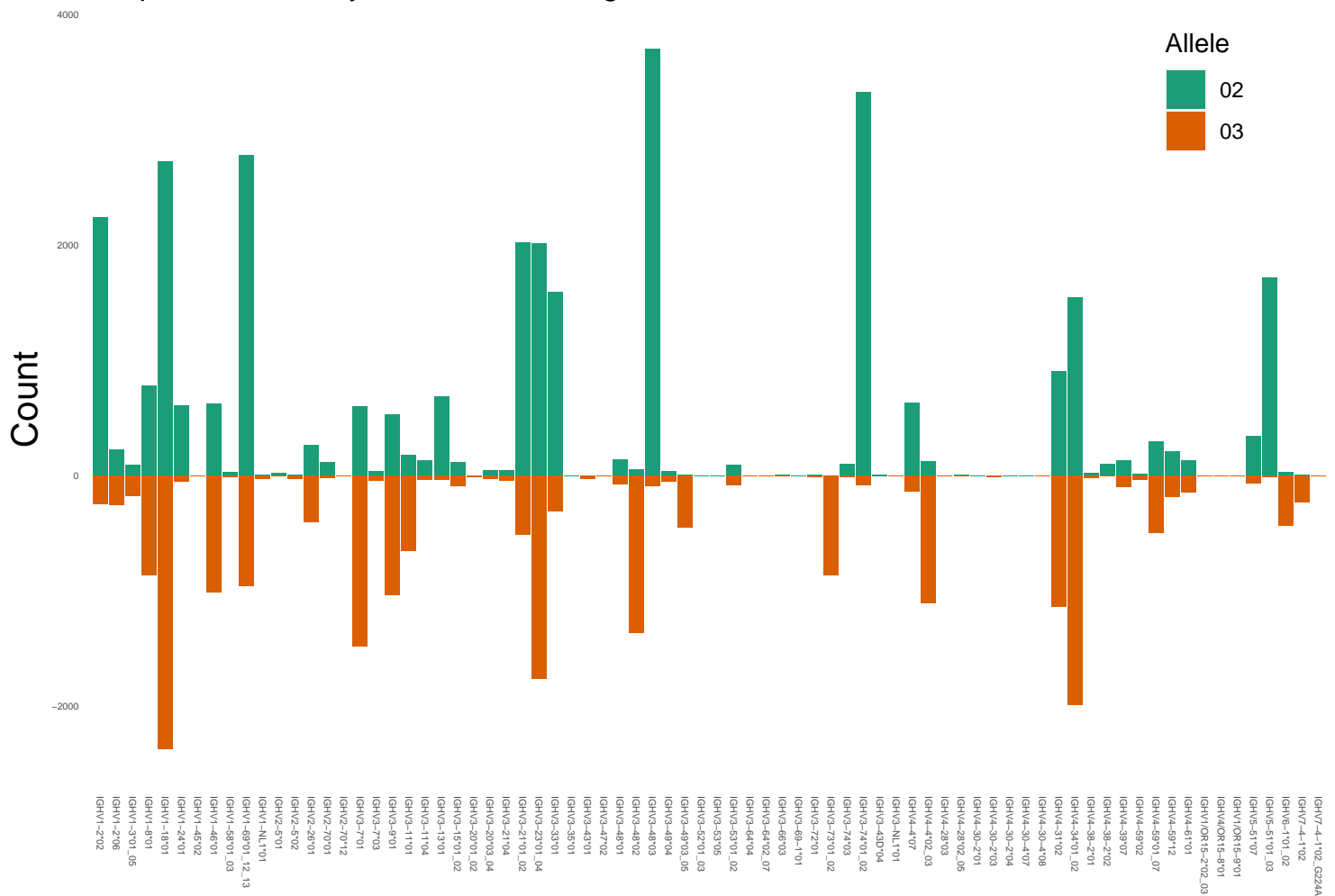
539 sequences assigned  
88 (16.3%) exact matches, in which:  
48 unique CDR3  
6 unique J



Allele Usage



## Count



Warning – no inferred sequences found.