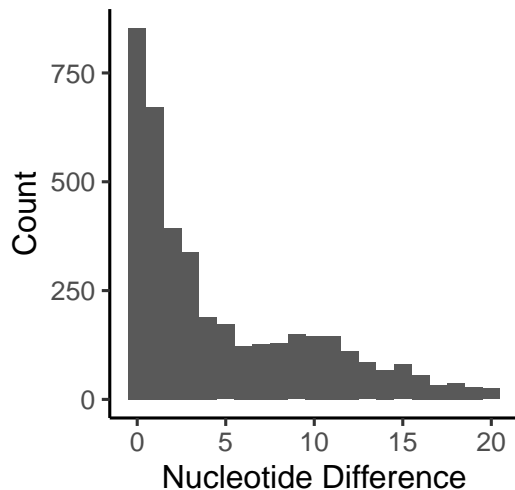


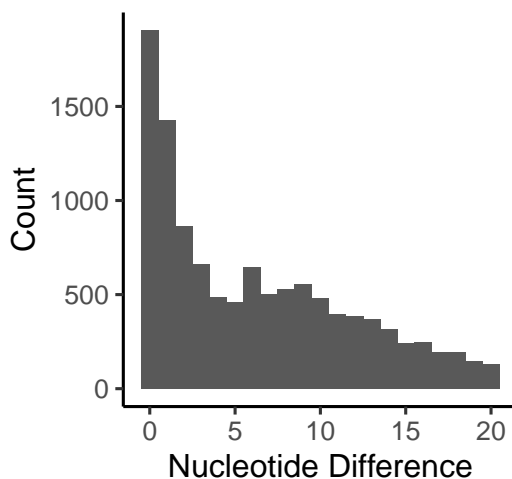
### IGHV1-2\*04

4162 sequences assigned  
854 (20.5%) exact matches, in which:  
797 unique CDR3  
6 unique J



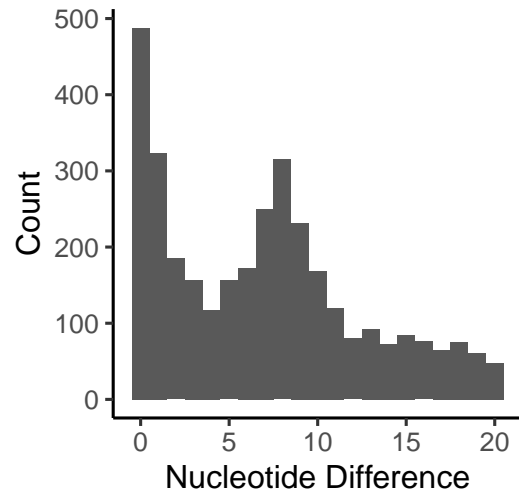
### IGHV1-18\*01

11998 sequences assigned  
1904 (15.9%) exact matches, in which:  
1776 unique CDR3  
6 unique J



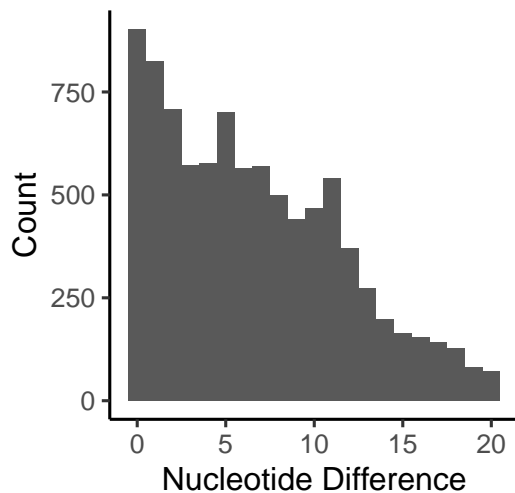
### IGHV1-46\*01

3732 sequences assigned  
488 (13.1%) exact matches, in which:  
465 unique CDR3  
6 unique J



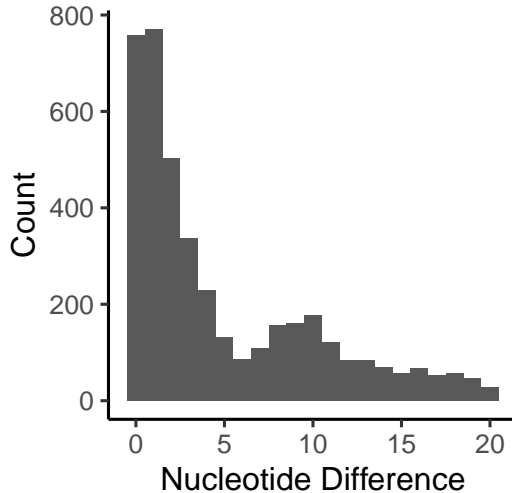
### IGHV1-3\*01\_05

9582 sequences assigned  
903 (9.4%) exact matches, in which:  
820 unique CDR3  
6 unique J



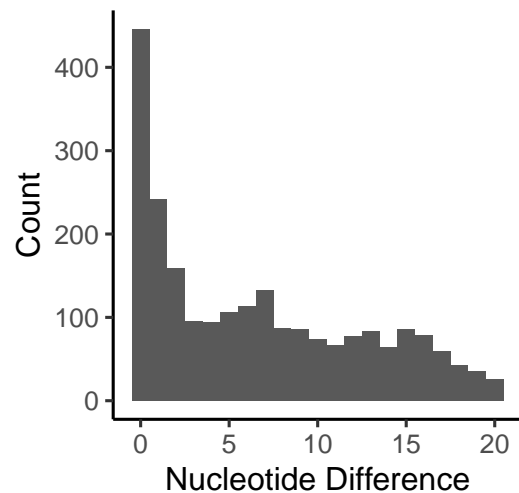
### IGHV1-24\*01

4200 sequences assigned  
759 (18.1%) exact matches, in which:  
693 unique CDR3  
6 unique J



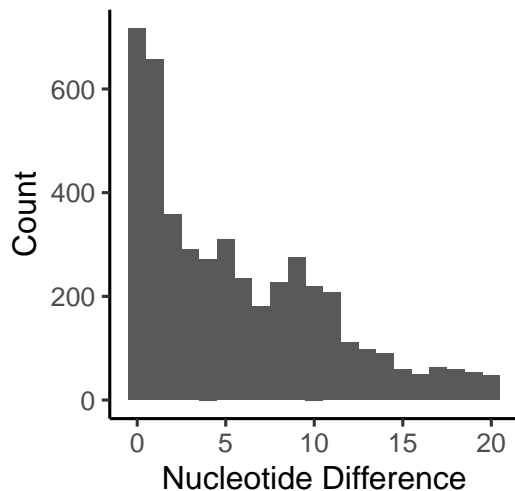
### IGHV1-46\*04

2469 sequences assigned  
446 (18.1%) exact matches, in which:  
427 unique CDR3  
6 unique J



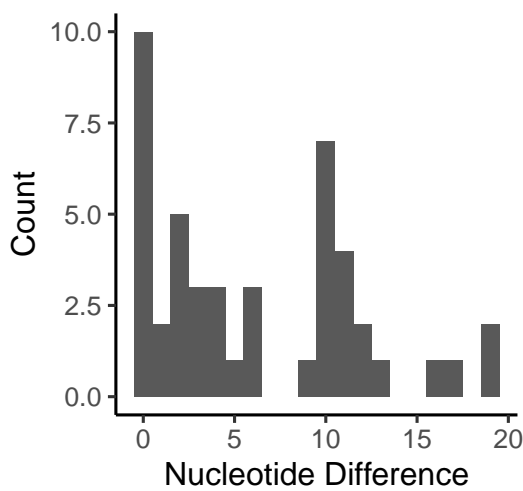
### IGHV1-8\*01

4845 sequences assigned  
717 (14.8%) exact matches, in which:  
657 unique CDR3  
6 unique J



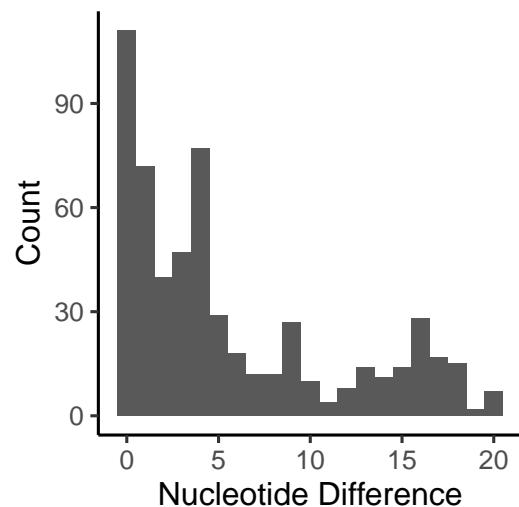
### IGHV1-45\*02

46 sequences assigned  
10 (21.7%) exact matches, in which:  
9 unique CDR3  
3 unique J



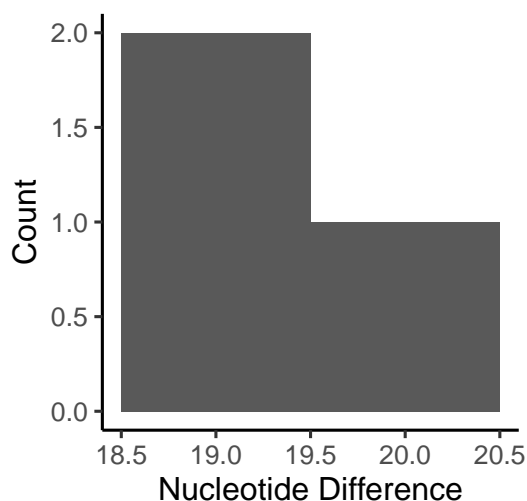
### IGHV1-58\*02

626 sequences assigned  
111 (17.7%) exact matches, in which:  
107 unique CDR3  
6 unique J



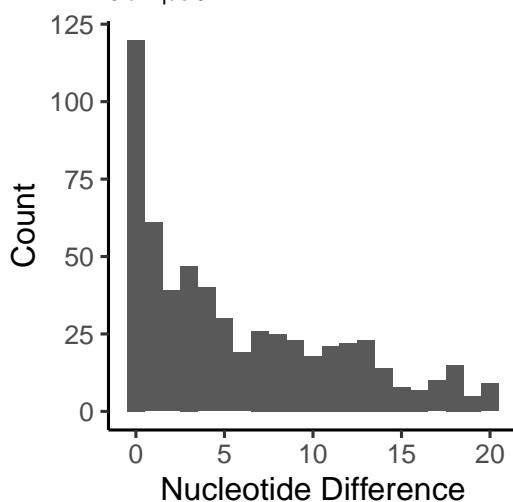
### IGHV1-69-2\*01

3 sequences assigned  
No exact matches.



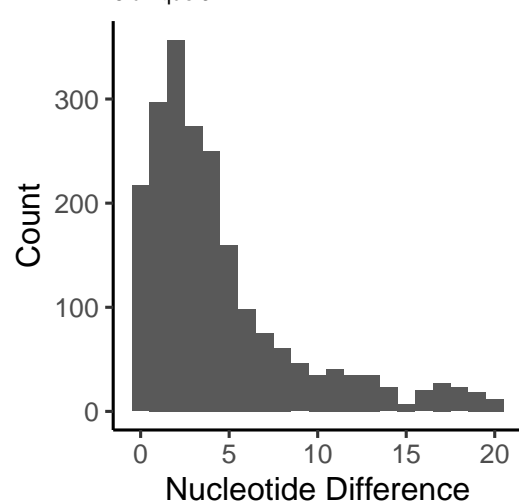
### IGHV2-5\*01

617 sequences assigned  
120 (19.4%) exact matches, in which:  
119 unique CDR3  
6 unique J



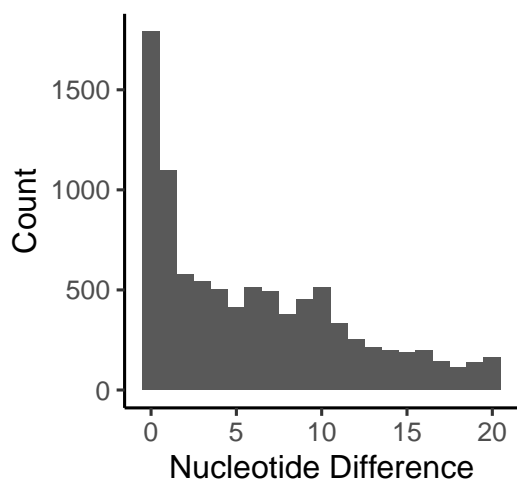
### IGHV2-70\*11\_15

2202 sequences assigned  
217 (9.9%) exact matches, in which:  
198 unique CDR3  
6 unique J



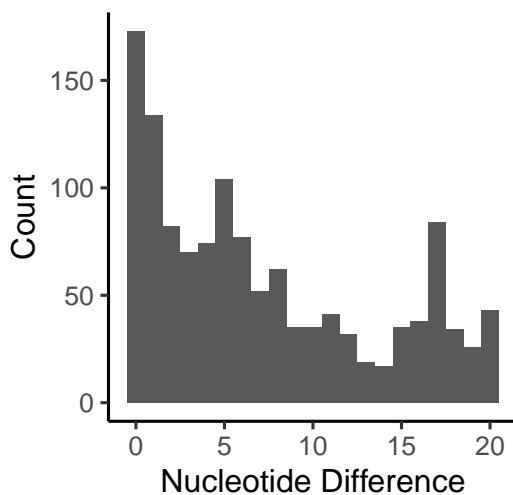
### IGHV1-69\*04\_09

10047 sequences assigned  
1790 (17.8%) exact matches, in which:  
1717 unique CDR3  
6 unique J



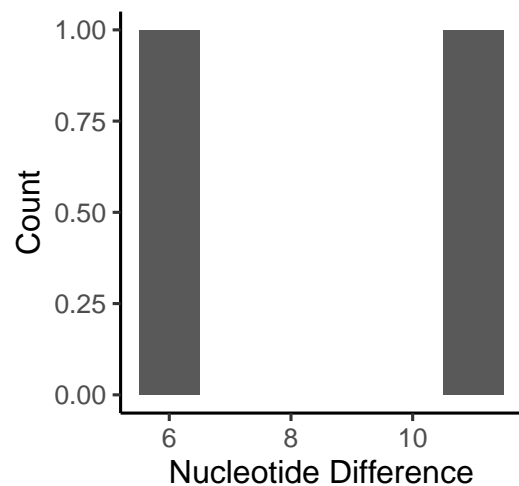
### IGHV2-5\*02

1424 sequences assigned  
173 (12.1%) exact matches, in which:  
158 unique CDR3  
6 unique J



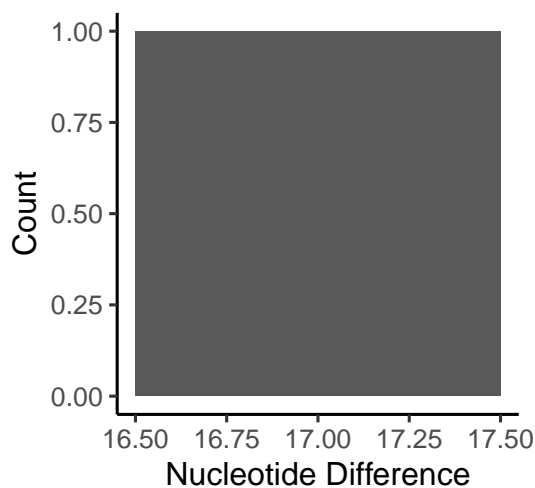
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



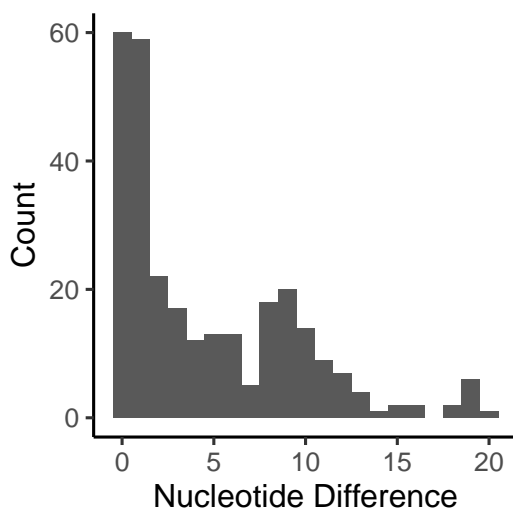
### IGHV1-69D\*01

3 sequences assigned  
No exact matches.



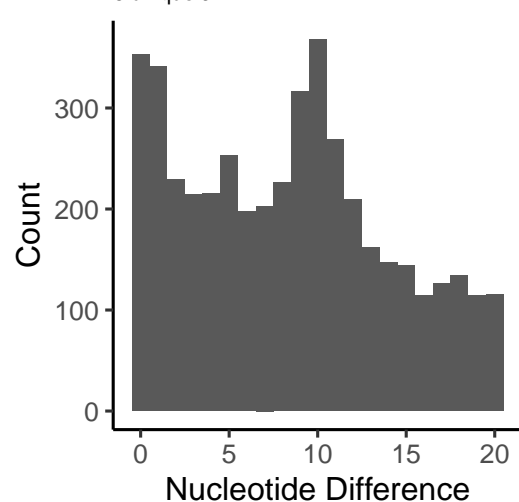
### IGHV2-26\*01

301 sequences assigned  
60 (19.9%) exact matches, in which:  
55 unique CDR3  
5 unique J



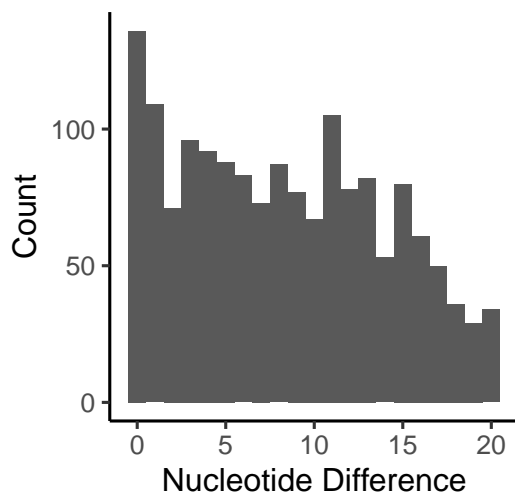
### IGHV3-7\*01

4883 sequences assigned  
353 (7.2%) exact matches, in which:  
316 unique CDR3  
6 unique J



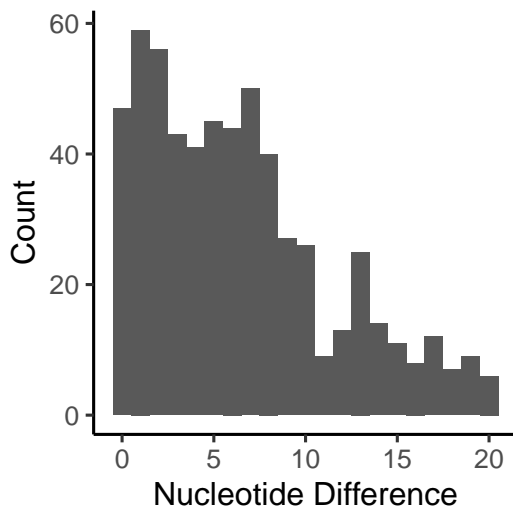
### IGHV3-7\*04

1784 sequences assigned  
136 (7.6%) exact matches, in which:  
127 unique CDR3  
6 unique J



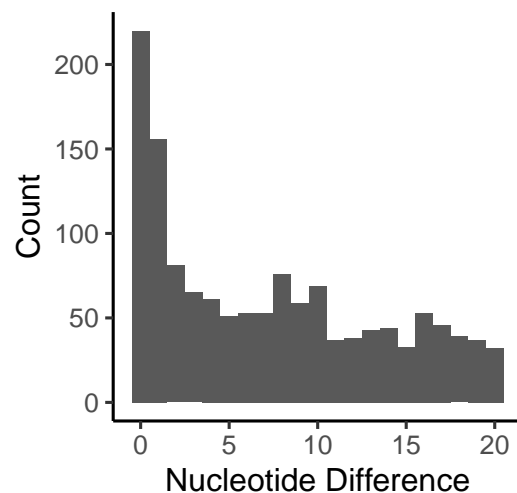
### IGHV3-11\*04

619 sequences assigned  
47 (7.6%) exact matches, in which:  
47 unique CDR3  
6 unique J



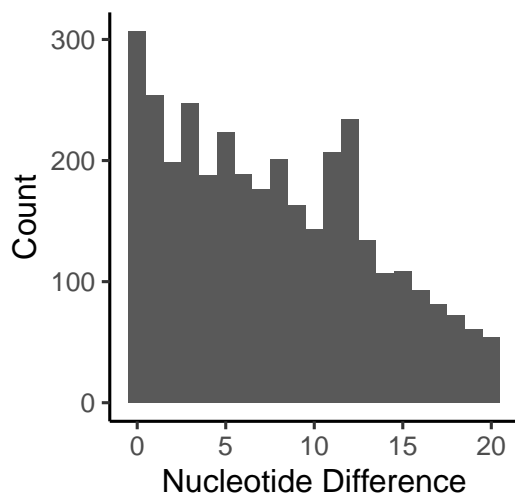
### IGHV3-15\*07

1538 sequences assigned  
220 (14.3%) exact matches, in which:  
210 unique CDR3  
6 unique J



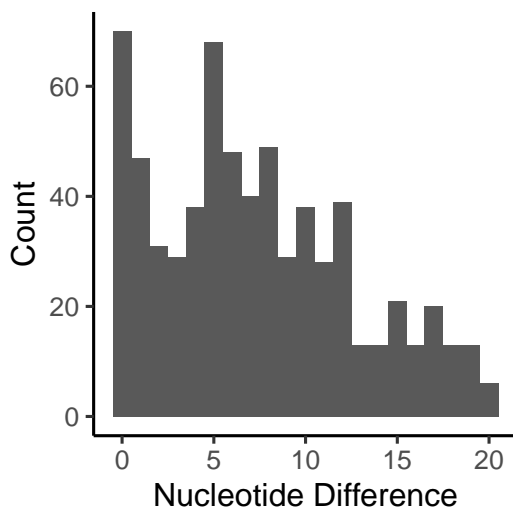
### IGHV3-9\*01

3762 sequences assigned  
307 (8.2%) exact matches, in which:  
279 unique CDR3  
6 unique J



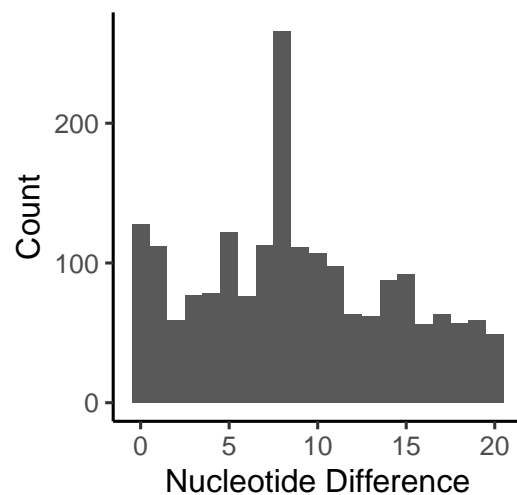
### IGHV3-11\*06

739 sequences assigned  
70 (9.5%) exact matches, in which:  
67 unique CDR3  
6 unique J



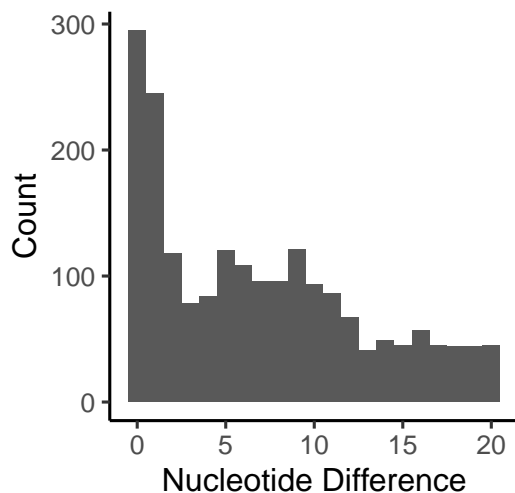
### IGHV3-15\*01\_02

2445 sequences assigned  
128 (5.2%) exact matches, in which:  
125 unique CDR3  
6 unique J



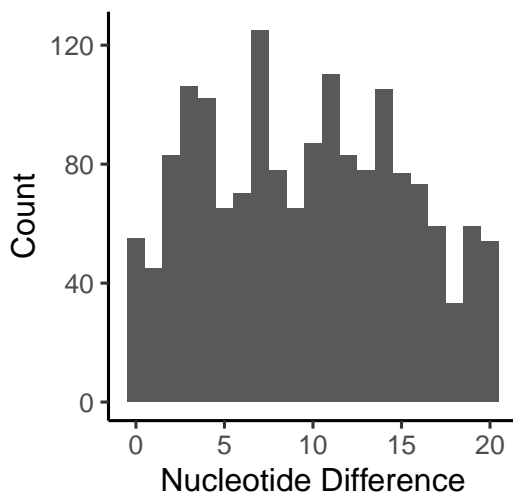
### IGHV3-11\*01

2281 sequences assigned  
295 (12.9%) exact matches, in which:  
273 unique CDR3  
6 unique J



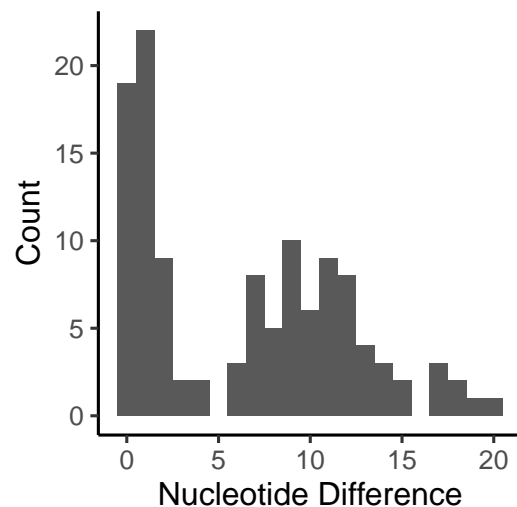
### IGHV3-13\*01

1894 sequences assigned  
55 (2.9%) exact matches, in which:  
51 unique CDR3  
5 unique J



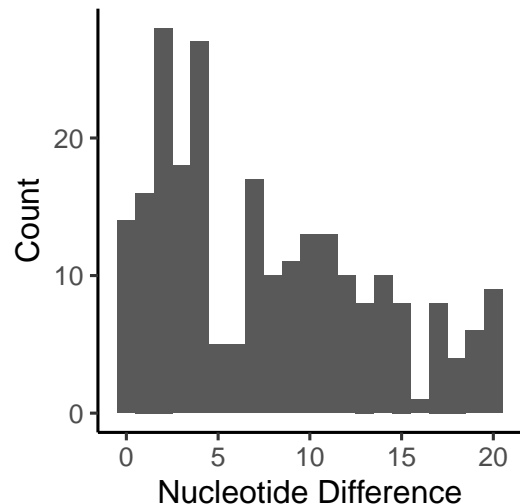
### IGHV3-20\*01\_02

120 sequences assigned  
19 (15.8%) exact matches, in which:  
19 unique CDR3  
5 unique J



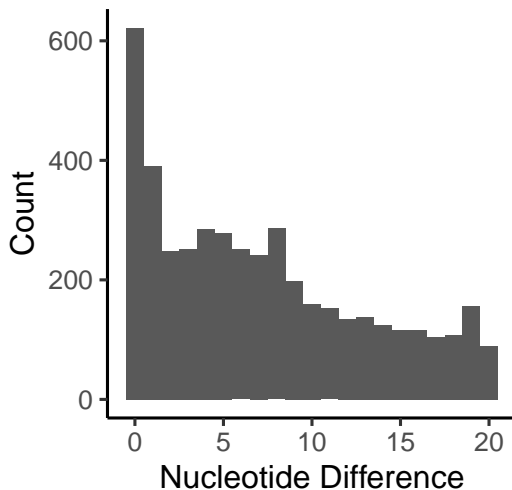
### IGHV3-20\*03\_04

314 sequences assigned  
14 (4.5%) exact matches, in which:  
13 unique CDR3  
3 unique J



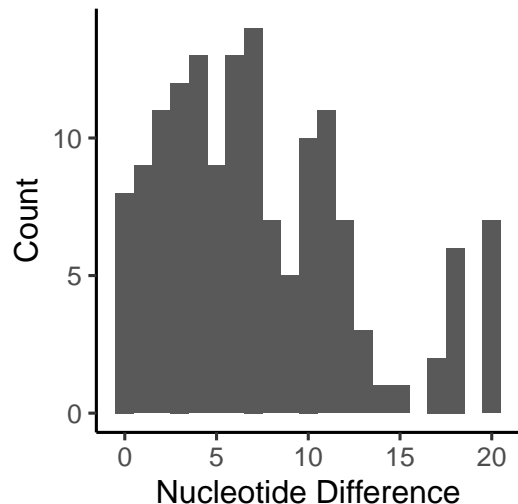
### IGHV3-30-3\*01

5092 sequences assigned  
622 (12.2%) exact matches, in which:  
594 unique CDR3  
6 unique J



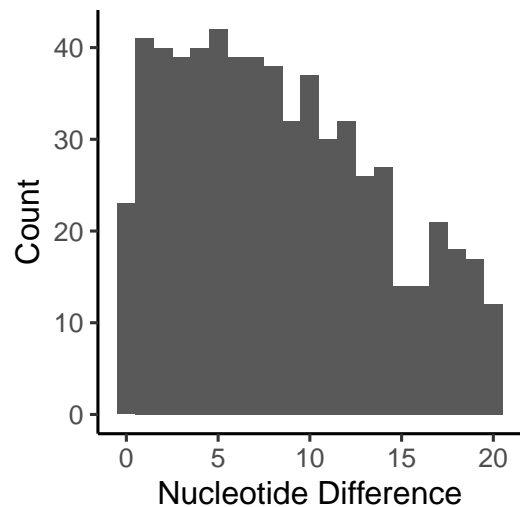
### IGHV3-33\*05

219 sequences assigned  
8 (3.7%) exact matches, in which:  
8 unique CDR3  
3 unique J



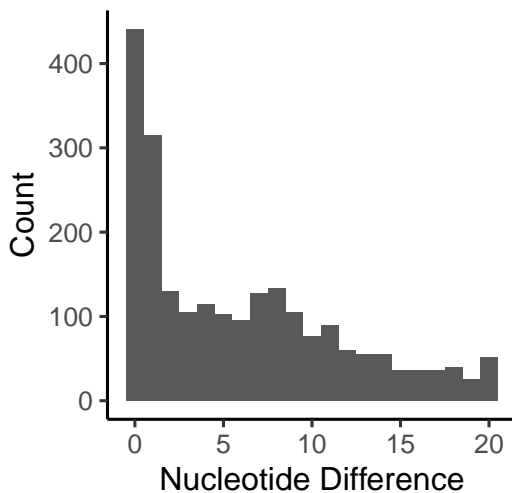
### IGHV3-21\*04

756 sequences assigned  
23 (3%) exact matches, in which:  
23 unique CDR3  
6 unique J



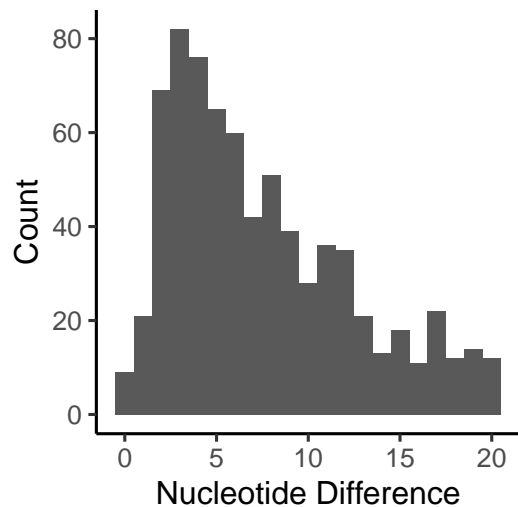
### IGHV3-30\*03

2496 sequences assigned  
441 (17.7%) exact matches, in which:  
397 unique CDR3  
6 unique J



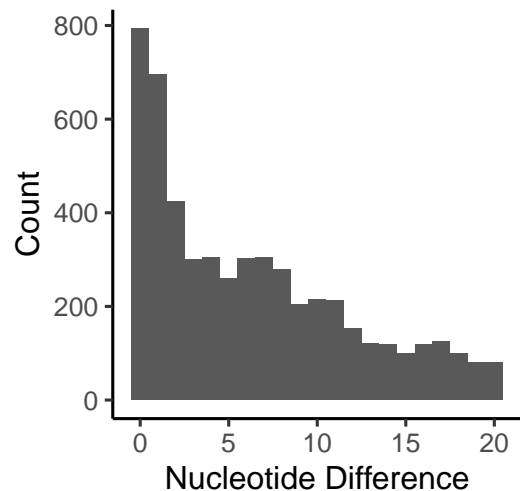
### IGHV3-33\*06

801 sequences assigned  
9 (1.1%) exact matches, in which:  
9 unique CDR3  
4 unique J



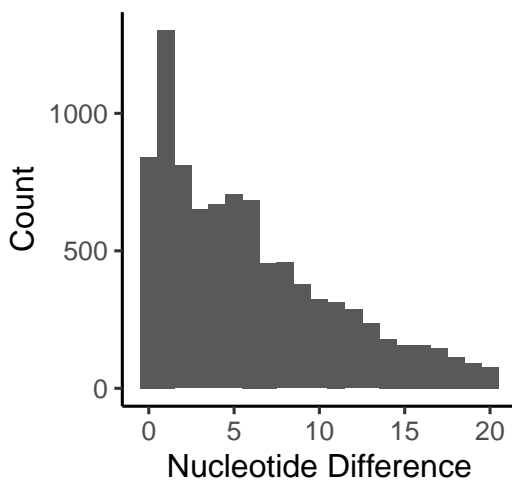
### IGHV3-21\*01\_02

6284 sequences assigned  
794 (12.6%) exact matches, in which:  
740 unique CDR3  
6 unique J



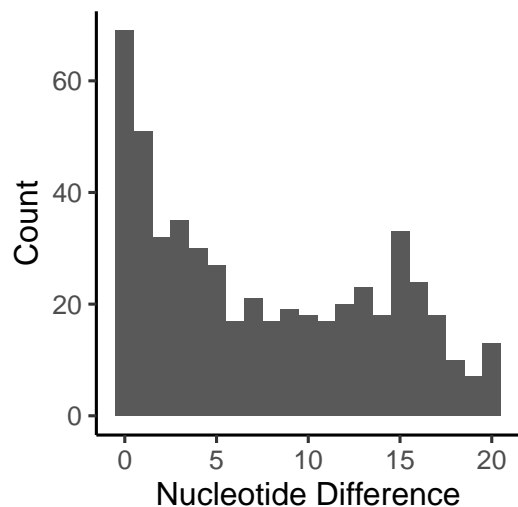
### IGHV3-33\*01

9582 sequences assigned  
842 (8.8%) exact matches, in which:  
795 unique CDR3  
6 unique J



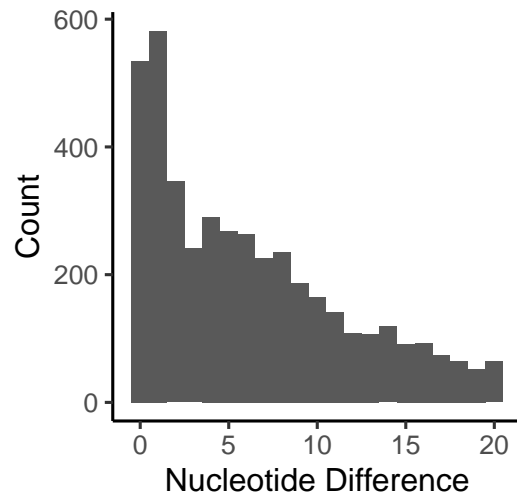
### IGHV3-43\*01

646 sequences assigned  
69 (10.7%) exact matches, in which:  
66 unique CDR3  
6 unique J



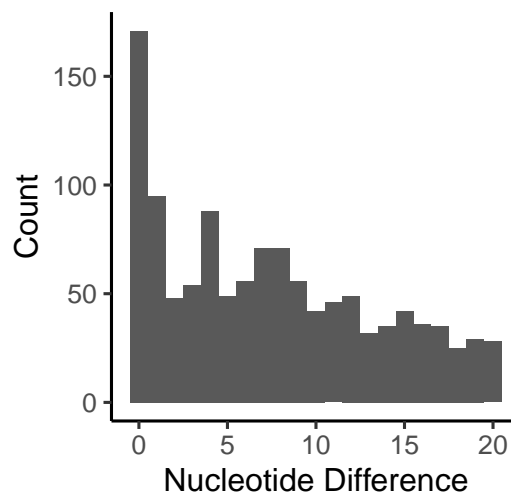
### IGHV3-48\*01

4533 sequences assigned  
534 (11.8%) exact matches, in which:  
477 unique CDR3  
6 unique J



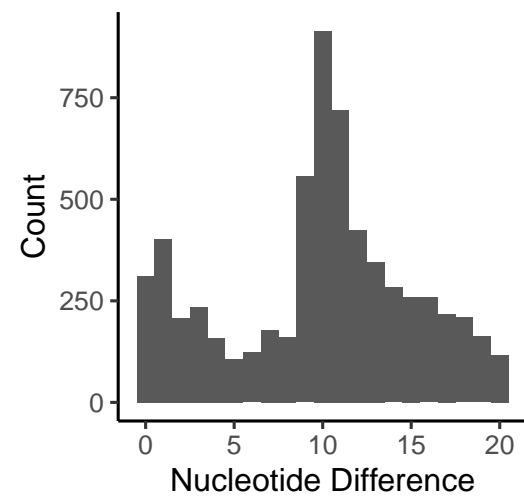
### IGHV3-49\*03\_05

1363 sequences assigned  
171 (12.5%) exact matches, in which:  
158 unique CDR3  
6 unique J



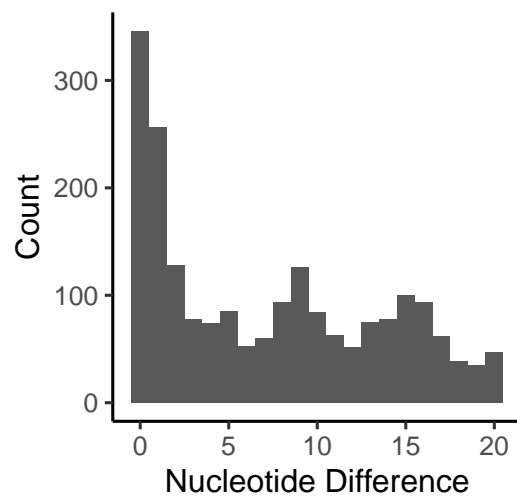
### IGHV3-53\*01\_02

7201 sequences assigned  
312 (4.3%) exact matches, in which:  
273 unique CDR3  
6 unique J



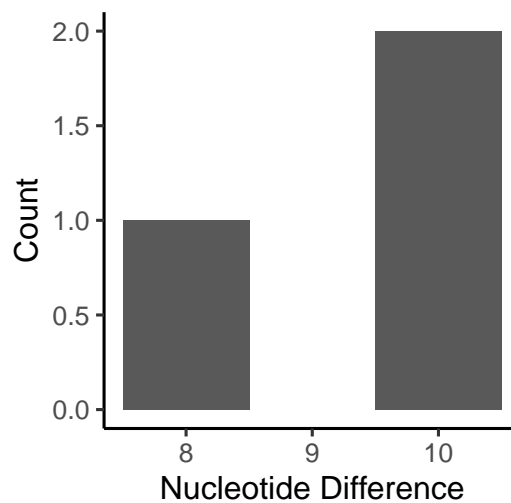
### IGHV3-48\*02

2374 sequences assigned  
346 (14.6%) exact matches, in which:  
314 unique CDR3  
6 unique J



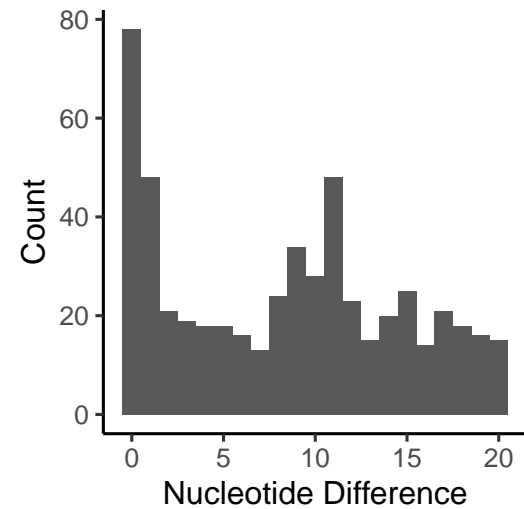
### IGHV3-52\*01\_03

3 sequences assigned  
No exact matches.



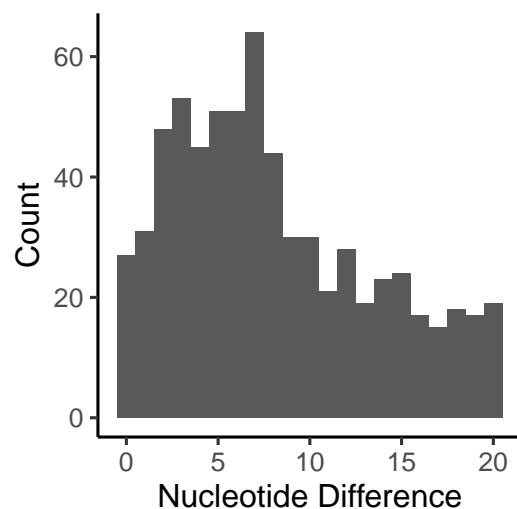
### IGHV3-64\*01

590 sequences assigned  
78 (13.2%) exact matches, in which:  
72 unique CDR3  
6 unique J



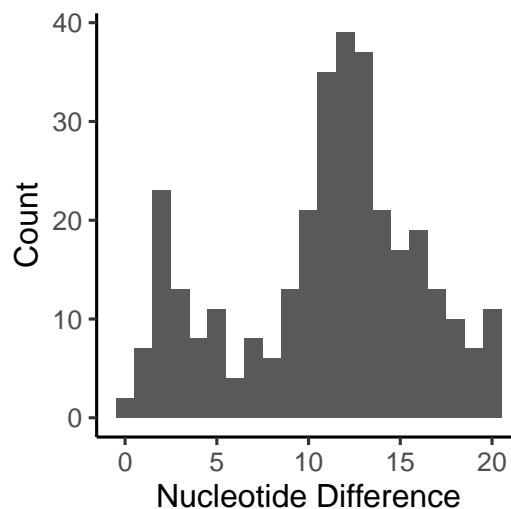
### IGHV3-48\*04

754 sequences assigned  
27 (3.6%) exact matches, in which:  
27 unique CDR3  
5 unique J



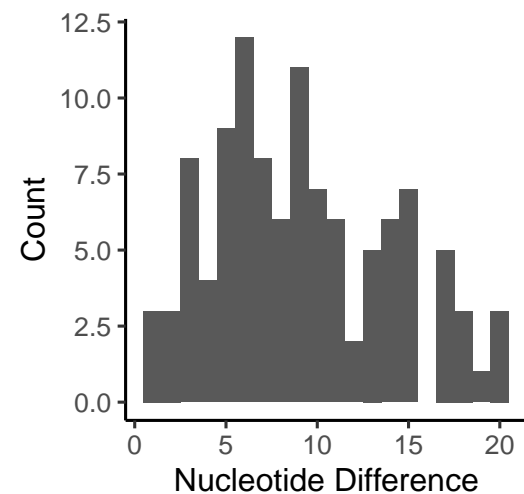
### IGHV3-53\*05

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



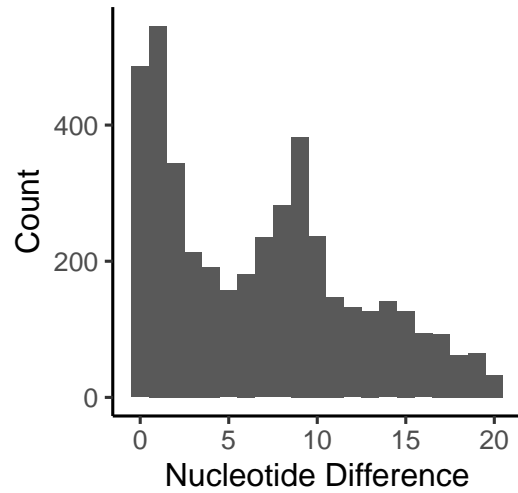
### IGHV3-64\*04

118 sequences assigned  
No exact matches.



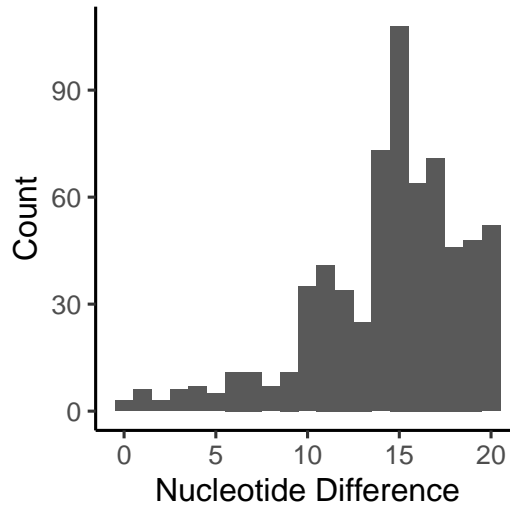
### IGHV3-66\*01

4663 sequences assigned  
486 (10.4%) exact matches, in which:  
451 unique CDR3  
6 unique J



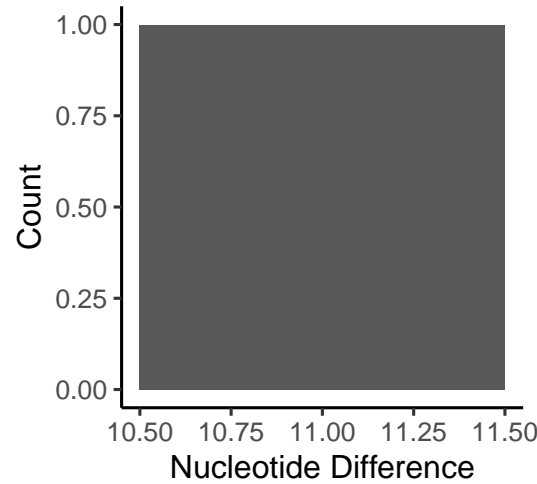
### IGHV3-72\*01

1153 sequences assigned  
3 (0.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



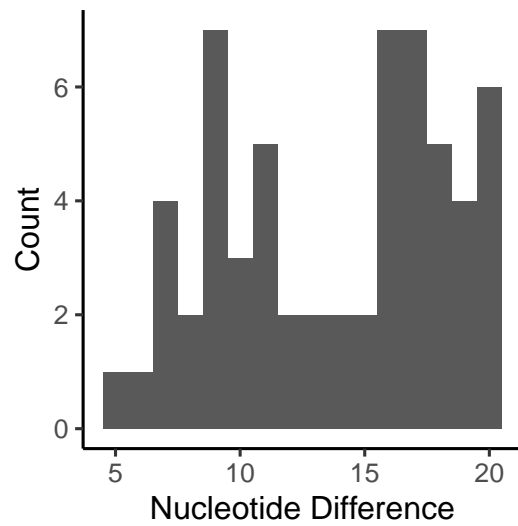
### IGHV3-43D\*04

4 sequences assigned  
No exact matches.



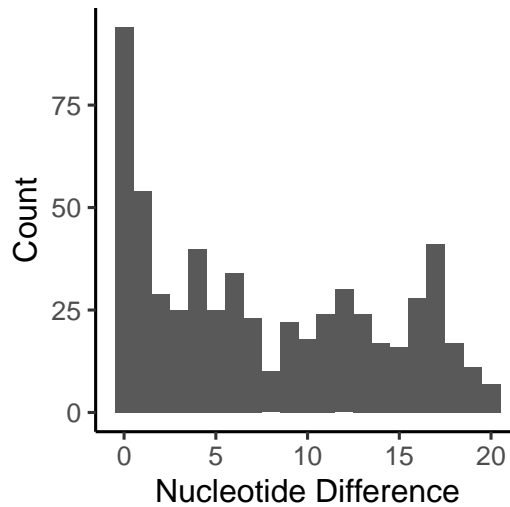
### IGHV3-69-1\*01

78 sequences assigned  
No exact matches.



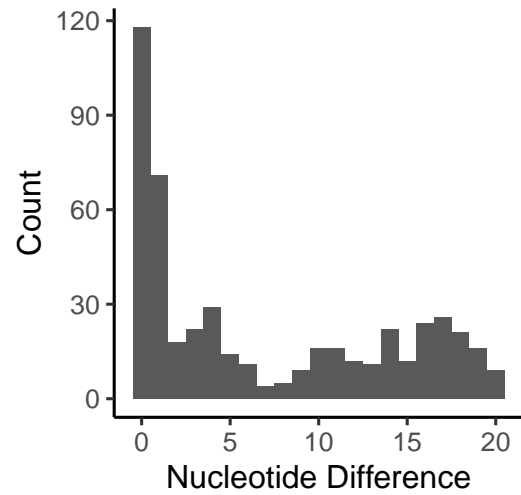
### IGHV3-73\*01\_02

666 sequences assigned  
94 (14.1%) exact matches, in which:  
88 unique CDR3  
6 unique J



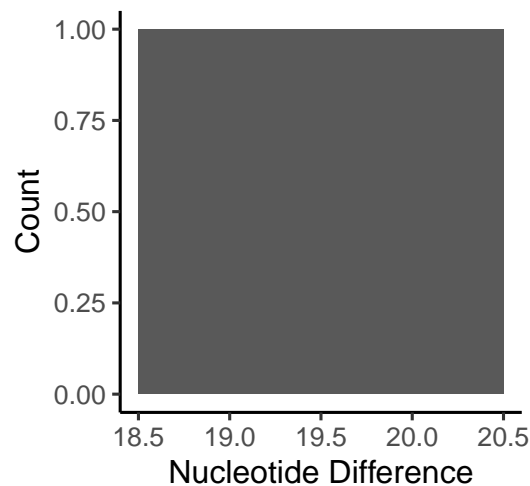
### IGHV3-64D\*06

643 sequences assigned  
118 (18.4%) exact matches, in which:  
109 unique CDR3  
6 unique J



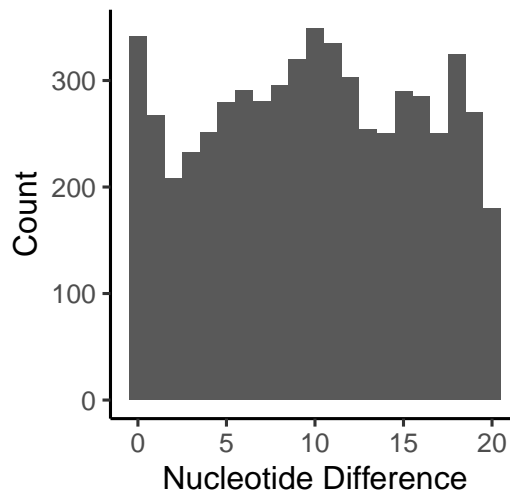
### IGHV3-71\*01\_04

26 sequences assigned  
No exact matches.



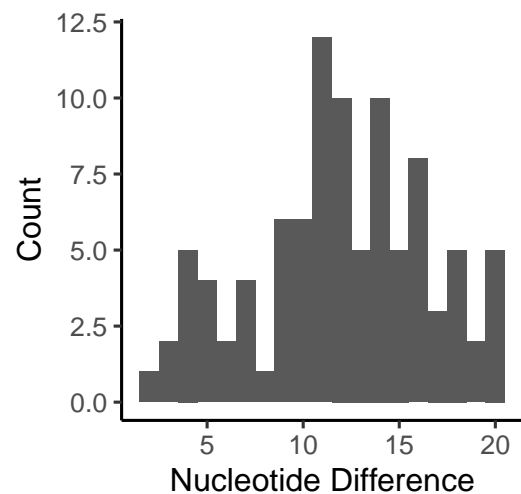
### IGHV3-74\*01\_02

6779 sequences assigned  
341 (5%) exact matches, in which:  
316 unique CDR3  
6 unique J



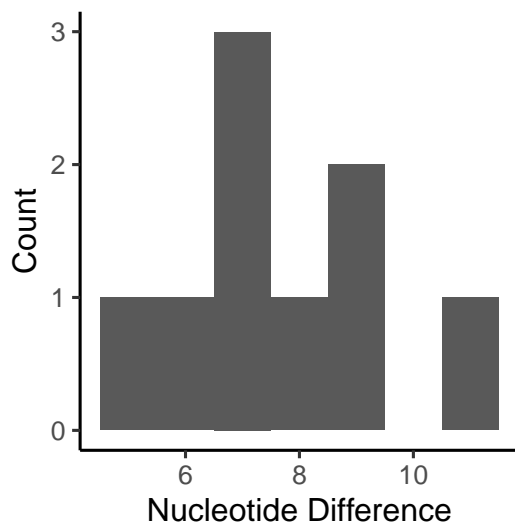
### IGHV3-NL1\*01

108 sequences assigned  
No exact matches.



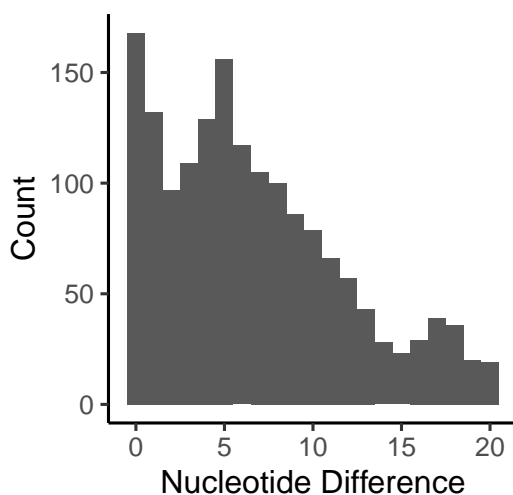
### IGHV4-28\*03

9 sequences assigned  
No exact matches.



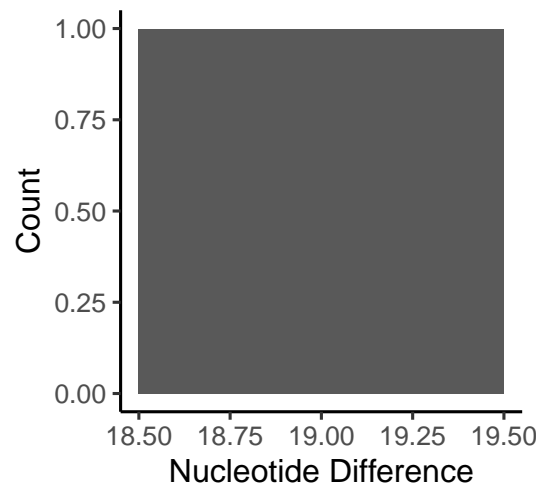
### IGHV4-30-4\*01

1795 sequences assigned  
168 (9.4%) exact matches, in which:  
160 unique CDR3  
6 unique J



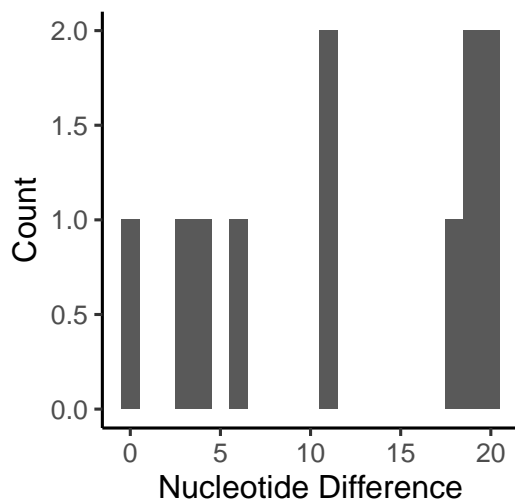
### IGHV4-38-2\*01

2 sequences assigned  
No exact matches.



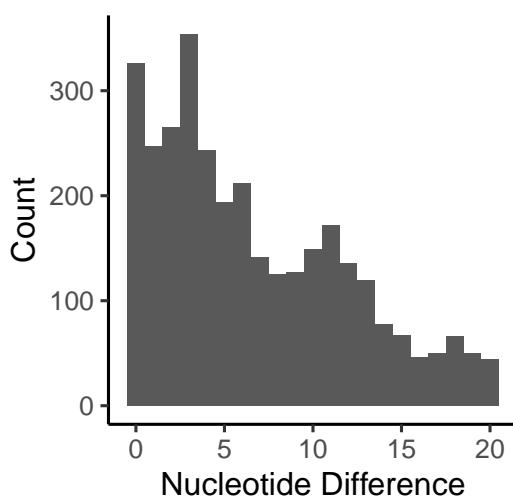
### IGHV4-28\*01\_07

11 sequences assigned  
1 (9.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



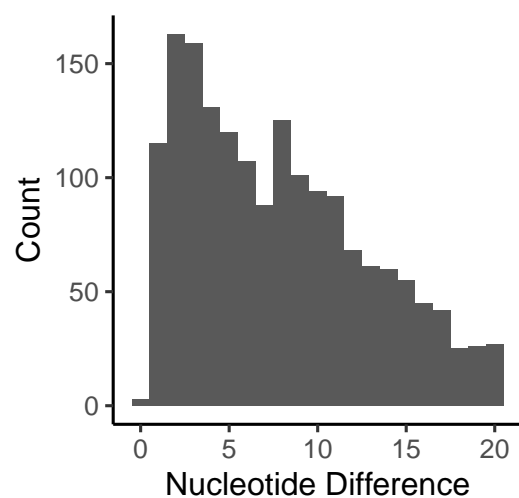
### IGHV4-31\*03\_04

3458 sequences assigned  
326 (9.4%) exact matches, in which:  
307 unique CDR3  
6 unique J



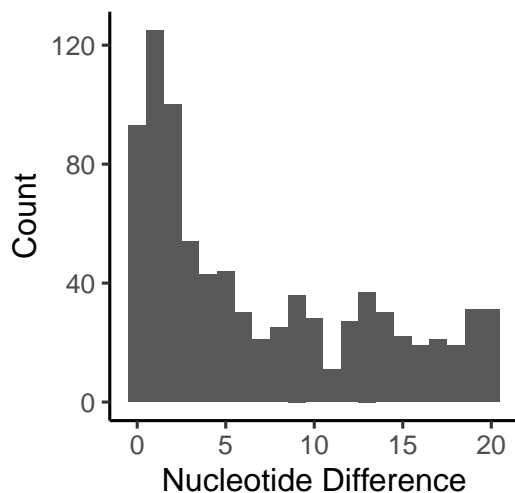
### IGHV4-39\*07

1830 sequences assigned  
3 (0.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



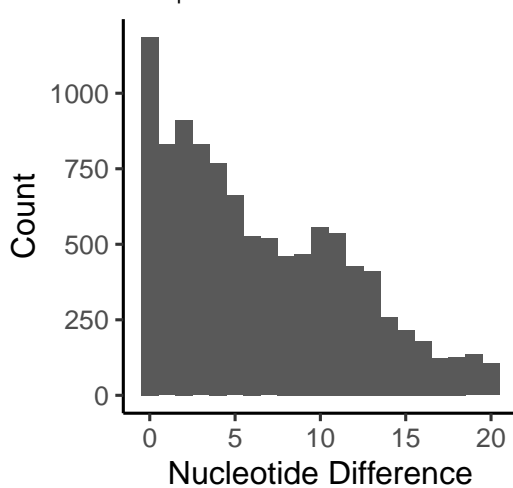
### IGHV4-30-2\*01

997 sequences assigned  
93 (9.3%) exact matches, in which:  
82 unique CDR3  
6 unique J



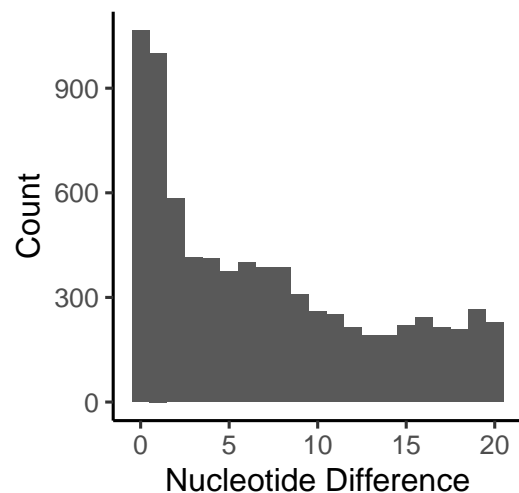
### IGHV4-34\*01\_02

10976 sequences assigned  
1186 (10.8%) exact matches, in which:  
1135 unique CDR3  
6 unique J



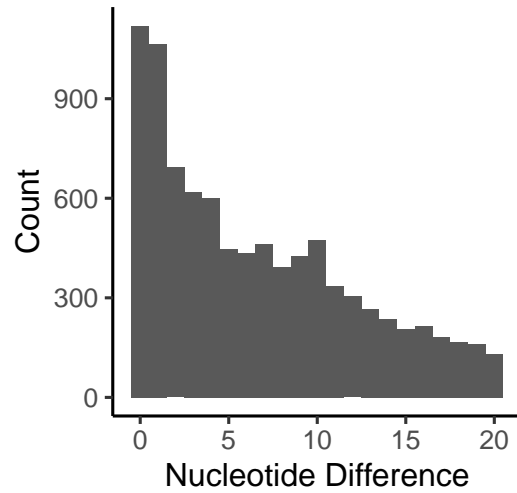
### IGHV4-39\*01\_05

9283 sequences assigned  
1066 (11.5%) exact matches, in which:  
988 unique CDR3  
6 unique J



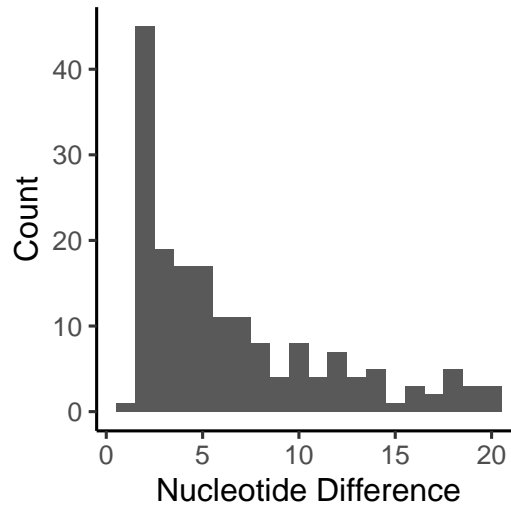
### IGHV4–59\*08

10015 sequences assigned  
1120 (11.2%) exact matches, in which:  
1040 unique CDR3  
6 unique J



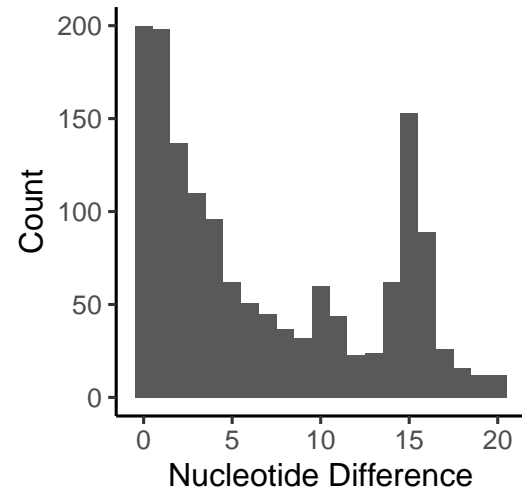
### IGHV4–61\*01

194 sequences assigned  
No exact matches.



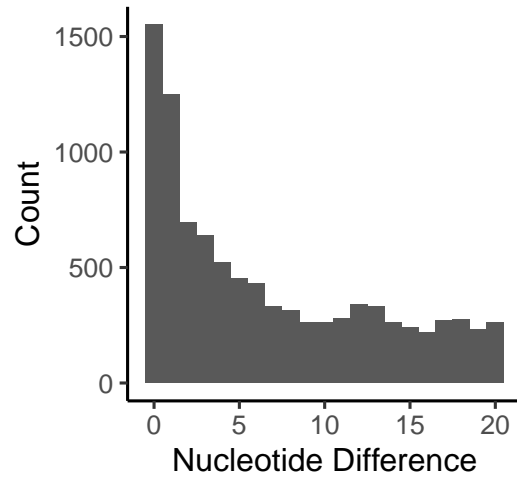
### IGHV5–10–1\*01\_03

1839 sequences assigned  
200 (10.9%) exact matches, in which:  
188 unique CDR3  
6 unique J



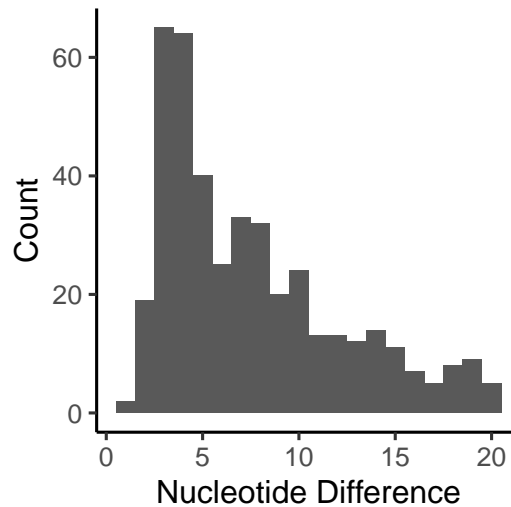
### IGHV4–59\*01\_07

10947 sequences assigned  
1551 (14.2%) exact matches, in which:  
1439 unique CDR3  
6 unique J



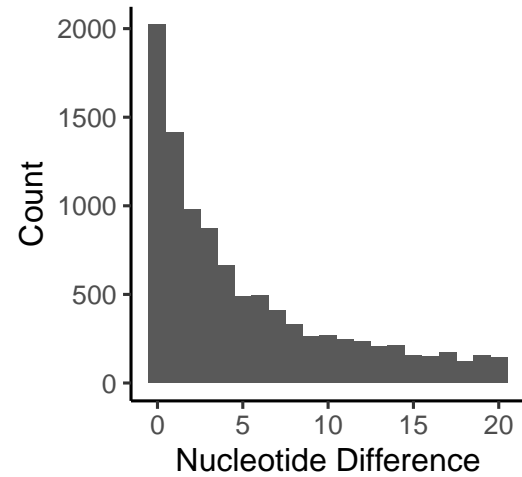
### IGHV4–61\*05

441 sequences assigned  
No exact matches.



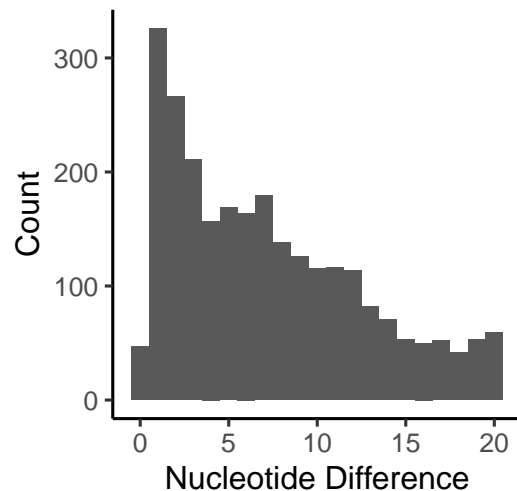
### IGHV5–51\*01\_03

10649 sequences assigned  
2022 (19%) exact matches, in which:  
1870 unique CDR3  
6 unique J



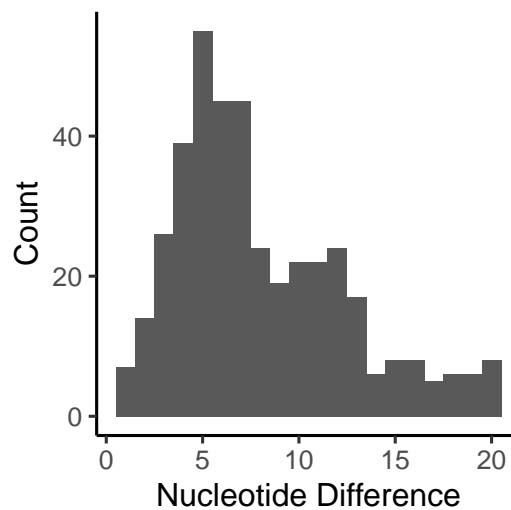
### IGHV4–59\*12

2852 sequences assigned  
47 (1.6%) exact matches, in which:  
47 unique CDR3  
6 unique J



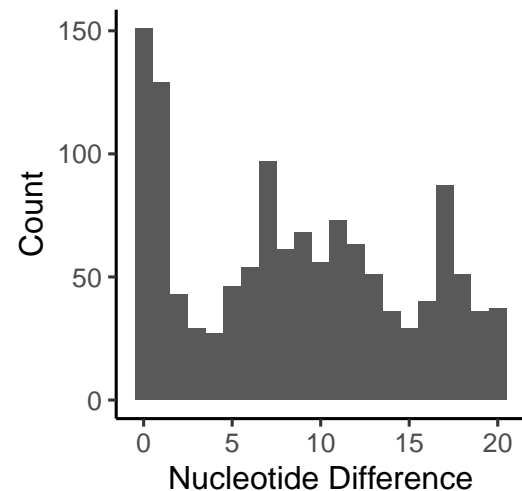
### IGHV4–61\*08

450 sequences assigned  
No exact matches.



### IGHV6–1\*01\_02

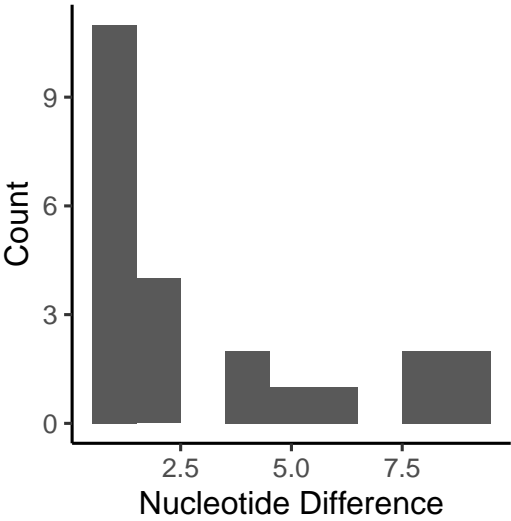
1410 sequences assigned  
151 (10.7%) exact matches, in which:  
146 unique CDR3  
5 unique J





# IGHV7-4-1\*01

23 sequences assigned  
No exact matches.





Novel sequence(s)IGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5-51\*07\_A128G are not listed in the genotype and will be ignored.