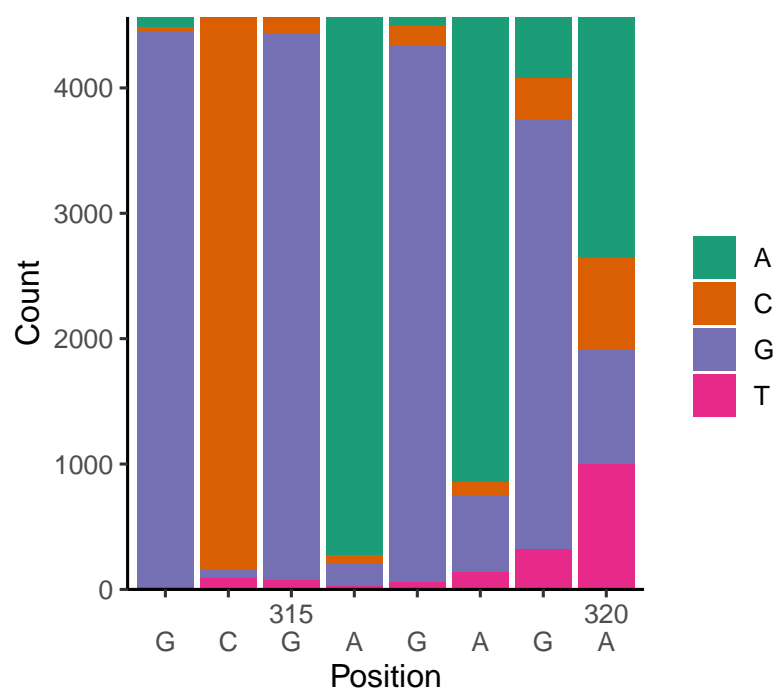


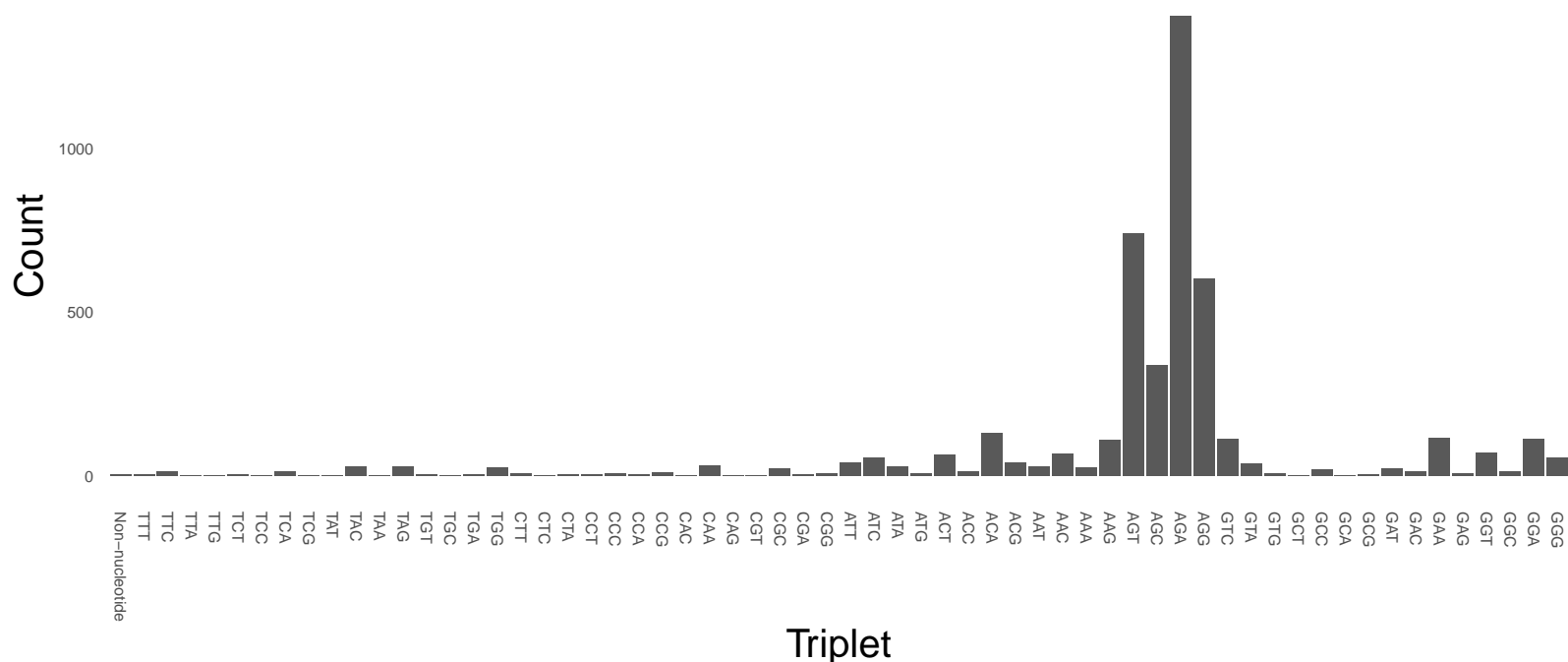
# Gene IGHV4-38-2\*02\_A70G



# Gene IGHV4-38-2\*02\_A70G

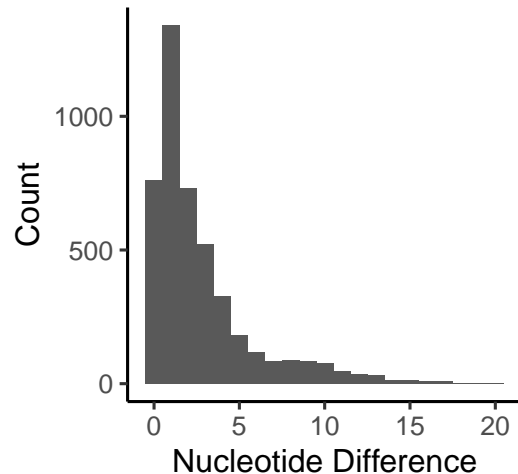


IGHV4-38-2\*02\_A70G- Final 3 nucleotides as a triplet



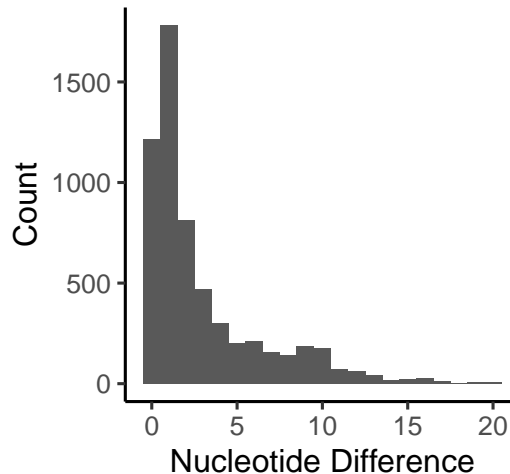
### IGHV1-2\*04

4493 sequences assigned  
762 (17%) exact matches, in which:  
596 unique CDR3  
7 unique J



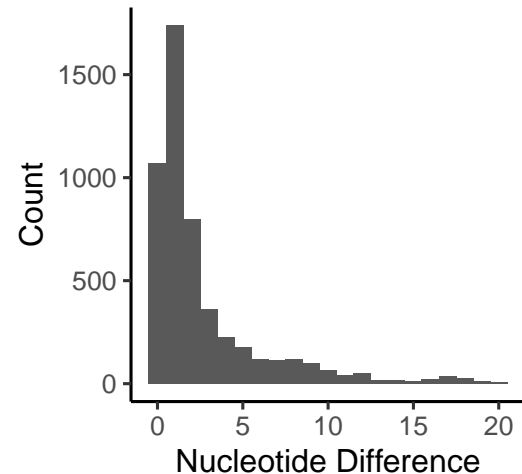
### IGHV1-8\*01

5991 sequences assigned  
1215 (20.3%) exact matches, in which:  
985 unique CDR3  
7 unique J



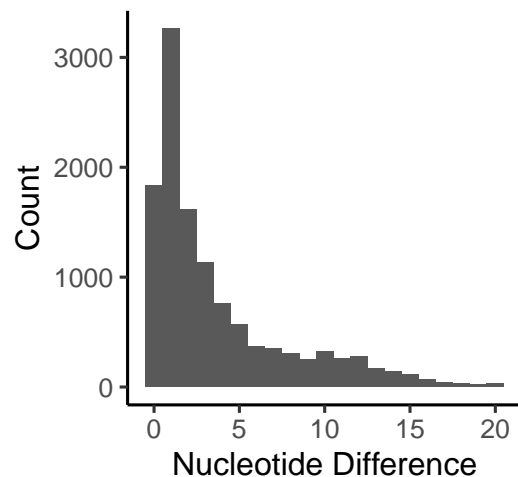
### IGHV1-24\*01

5143 sequences assigned  
1069 (20.8%) exact matches, in which:  
795 unique CDR3  
7 unique J



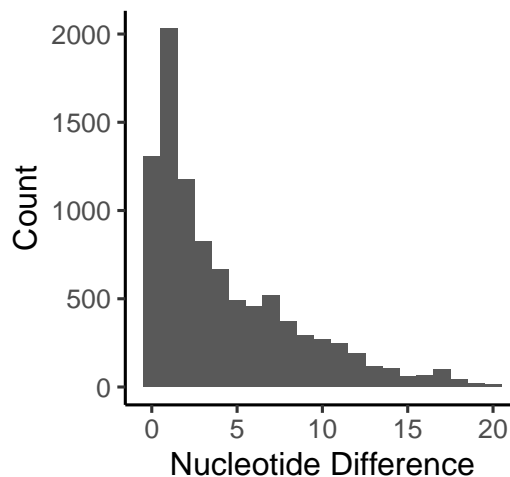
### IGHV1-2\*06

12014 sequences assigned  
1836 (15.3%) exact matches, in which:  
1386 unique CDR3  
7 unique J



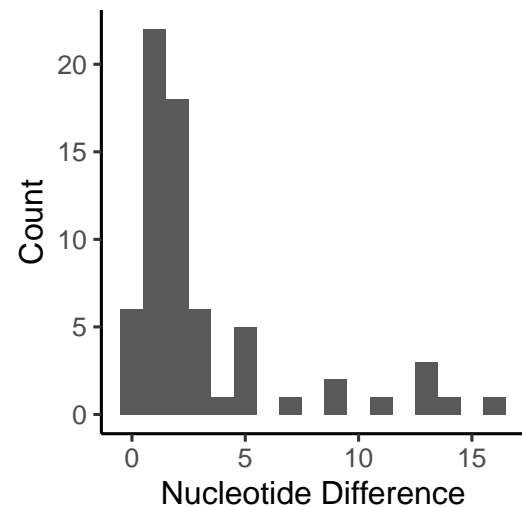
### IGHV1-18\*01

9387 sequences assigned  
1305 (13.9%) exact matches, in which:  
1016 unique CDR3  
7 unique J



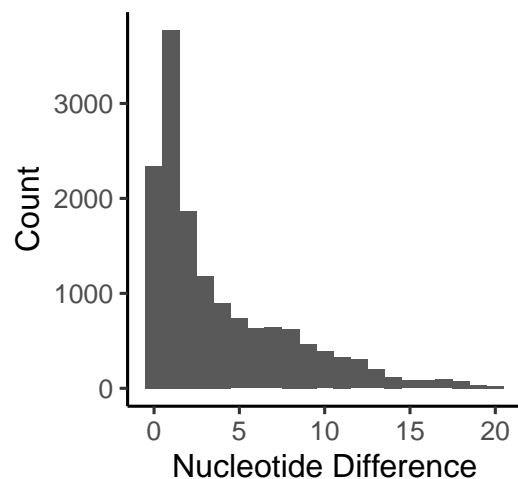
### IGHV1-38-4\*01

68 sequences assigned  
6 (8.8%) exact matches, in which:  
4 unique CDR3  
2 unique J



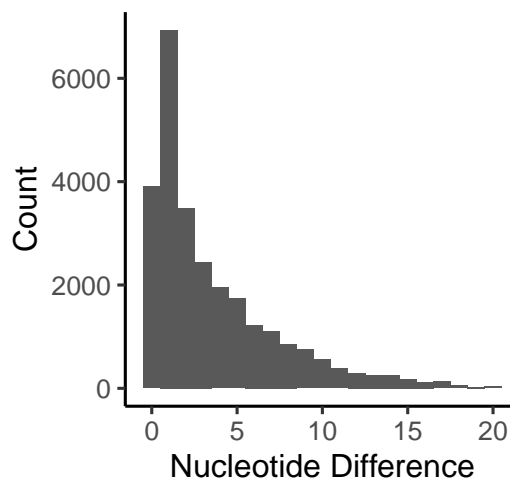
### IGHV1-3\*01\_05

14951 sequences assigned  
2338 (15.6%) exact matches, in which:  
1750 unique CDR3  
7 unique J



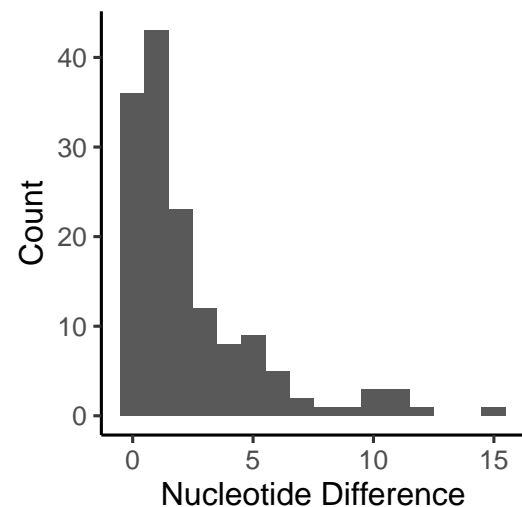
### IGHV1-18\*04

26844 sequences assigned  
3907 (14.6%) exact matches, in which:  
2936 unique CDR3  
7 unique J



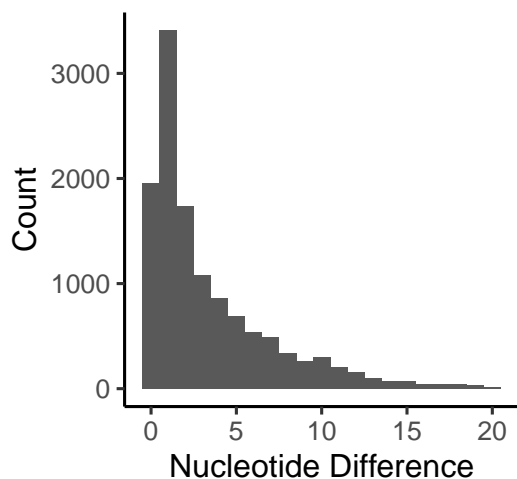
### IGHV1-45\*02

148 sequences assigned  
36 (24.3%) exact matches, in which:  
27 unique CDR3  
5 unique J



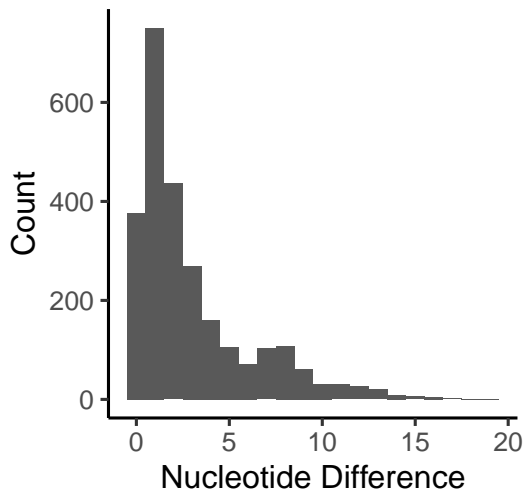
### IGHV1-46\*01

12540 sequences assigned  
1958 (15.6%) exact matches, in which:  
1464 unique CDR3  
7 unique J



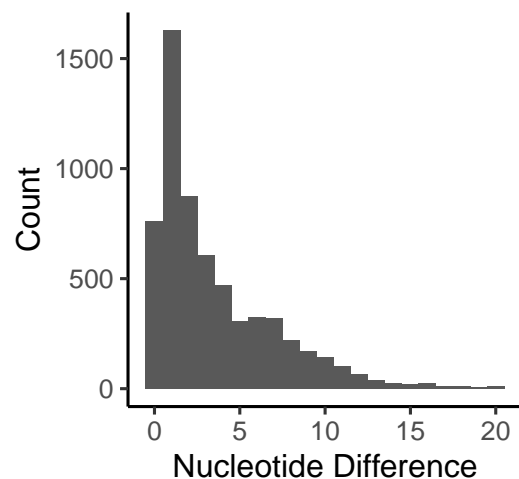
### IGHV1-58\*01\_03

2579 sequences assigned  
376 (14.6%) exact matches, in which:  
262 unique CDR3  
7 unique J



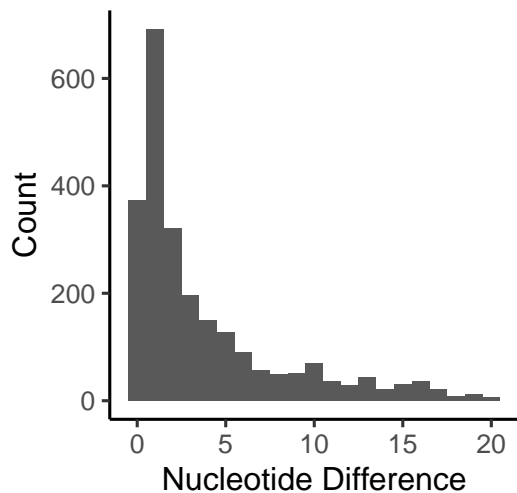
### IGHV2-5\*02

6196 sequences assigned  
763 (12.3%) exact matches, in which:  
550 unique CDR3  
7 unique J



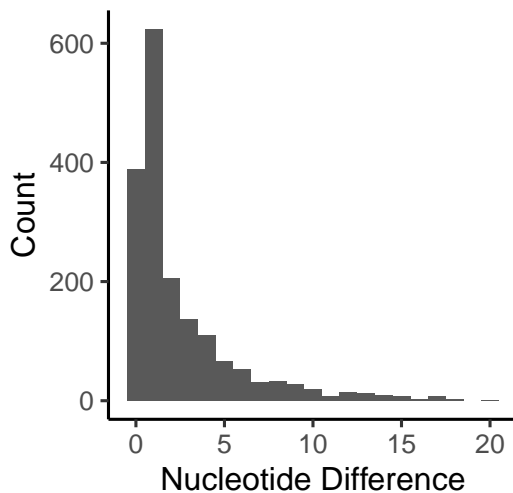
### IGHV1-46\*03

2463 sequences assigned  
373 (15.1%) exact matches, in which:  
263 unique CDR3  
7 unique J



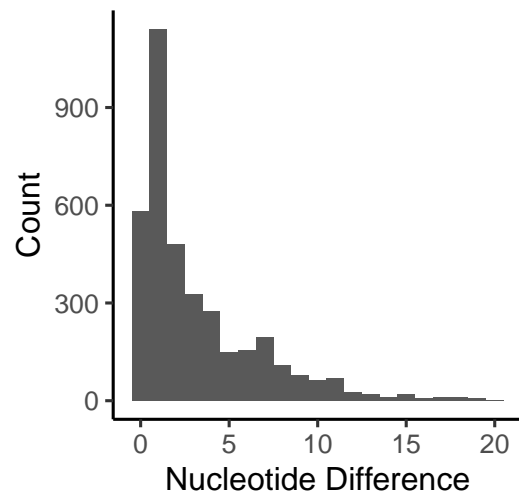
### IGHV1-69-2\*01

1767 sequences assigned  
389 (22%) exact matches, in which:  
287 unique CDR3  
7 unique J



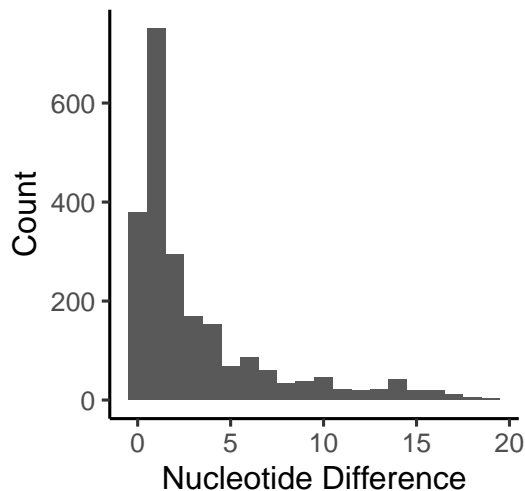
### IGHV2-26\*01

3778 sequences assigned  
581 (15.4%) exact matches, in which:  
422 unique CDR3  
7 unique J



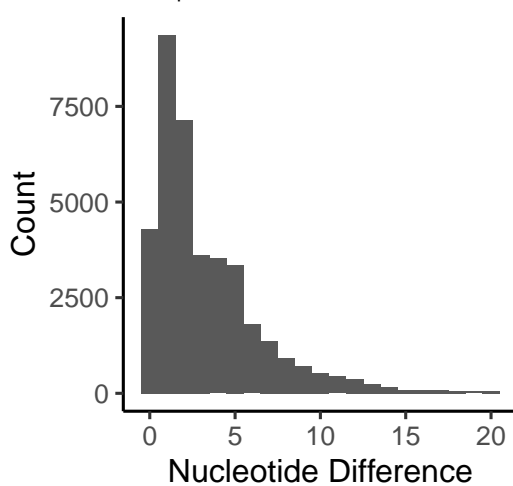
### IGHV1-58\*02

2244 sequences assigned  
378 (16.8%) exact matches, in which:  
279 unique CDR3  
7 unique J



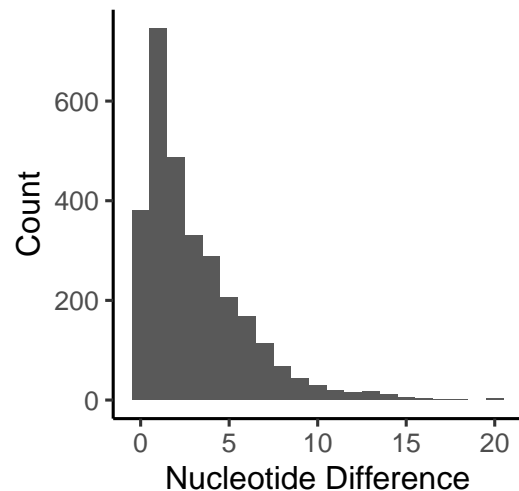
### IGHV1-69\*06\_14

38506 sequences assigned  
4287 (11.1%) exact matches, in which:  
3282 unique CDR3  
7 unique J



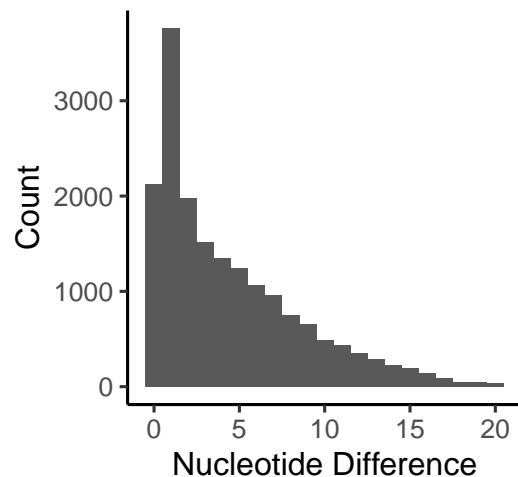
### IGHV2-70\*01

2964 sequences assigned  
381 (12.9%) exact matches, in which:  
273 unique CDR3  
5 unique J



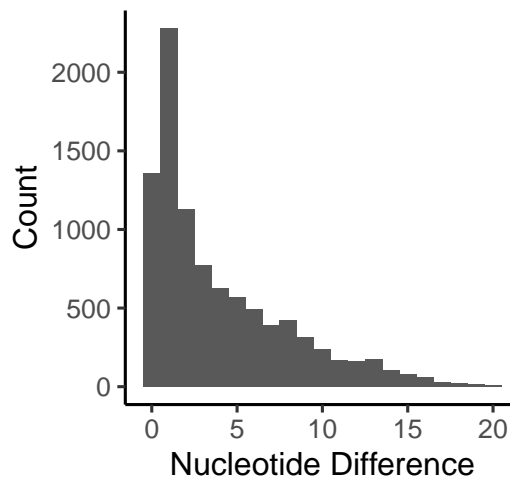
### IGHV3-7\*03

18142 sequences assigned  
2129 (11.7%) exact matches, in which:  
1687 unique CDR3  
7 unique J



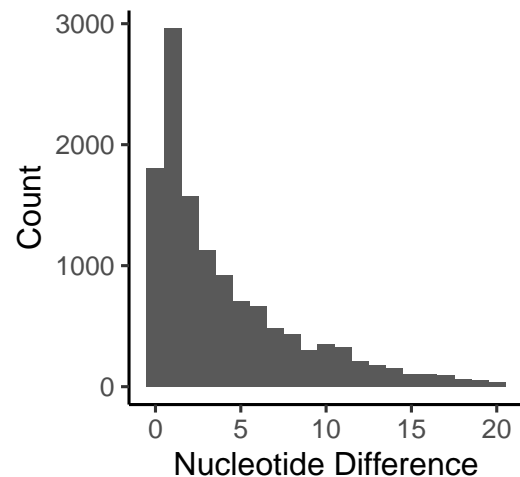
### IGHV3-11\*06

9448 sequences assigned  
1356 (14.4%) exact matches, in which:  
1042 unique CDR3  
7 unique J



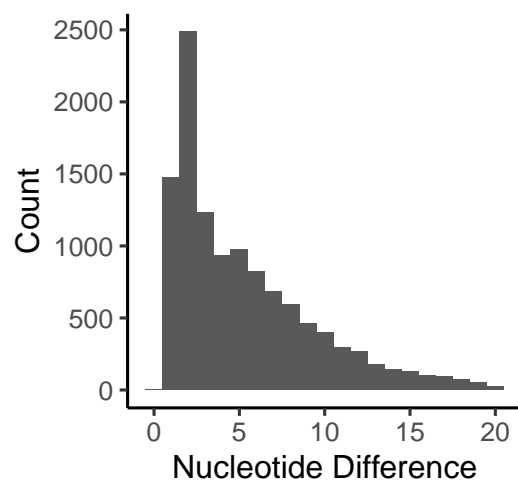
### IGHV3-15\*01\_02

12832 sequences assigned  
1805 (14.1%) exact matches, in which:  
1356 unique CDR3  
7 unique J



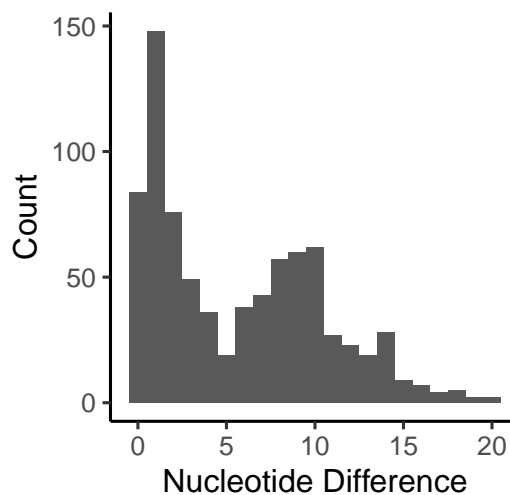
### IGHV3-9\*01

11497 sequences assigned  
3 (0%) exact matches, in which:  
3 unique CDR3  
1 unique J



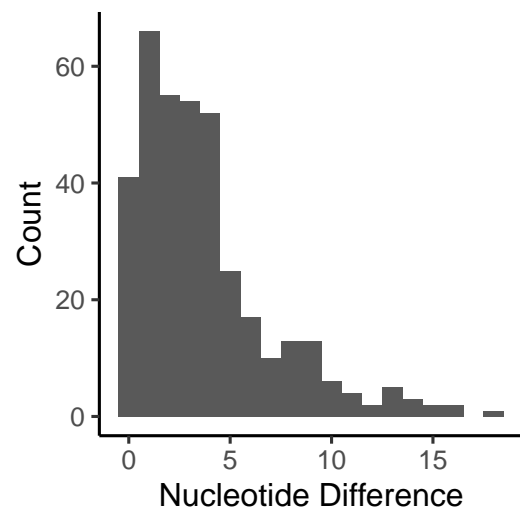
### IGHV3-13\*01

825 sequences assigned  
84 (10.2%) exact matches, in which:  
65 unique CDR3  
6 unique J



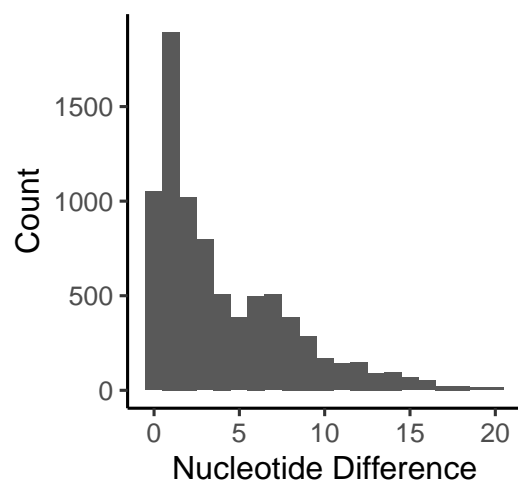
### IGHV3-20\*01\_02

372 sequences assigned  
41 (11%) exact matches, in which:  
30 unique CDR3  
5 unique J



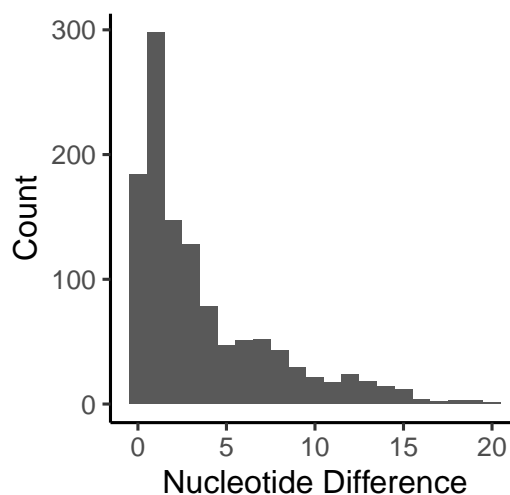
### IGHV3-11\*01

8211 sequences assigned  
1052 (12.8%) exact matches, in which:  
792 unique CDR3  
7 unique J



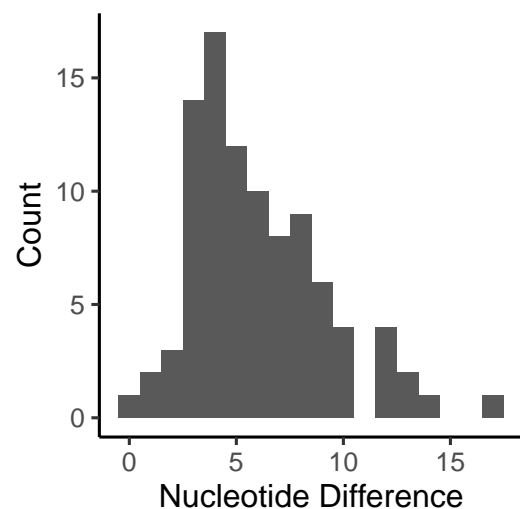
### IGHV3-13\*05

1180 sequences assigned  
184 (15.6%) exact matches, in which:  
133 unique CDR3  
6 unique J



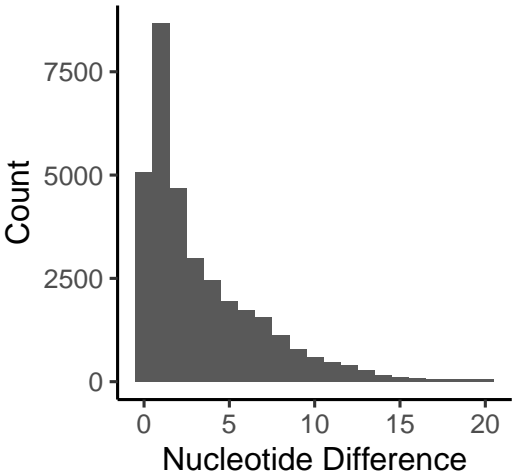
### IGHV3-20\*03\_04

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



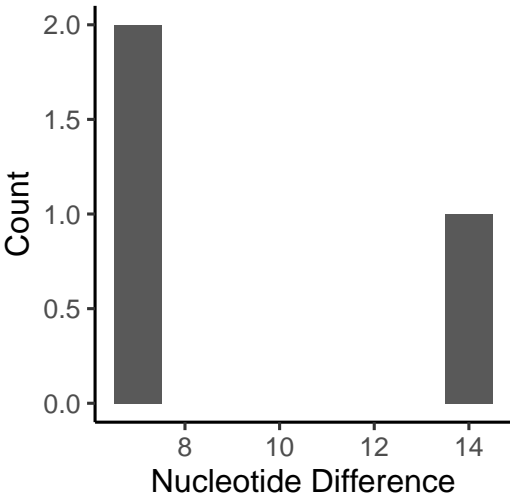
IGHV3-21\*01\_02

33483 sequences assigned  
5071 (15.1%) exact matches, in which:  
3866 unique CDR3  
7 unique J



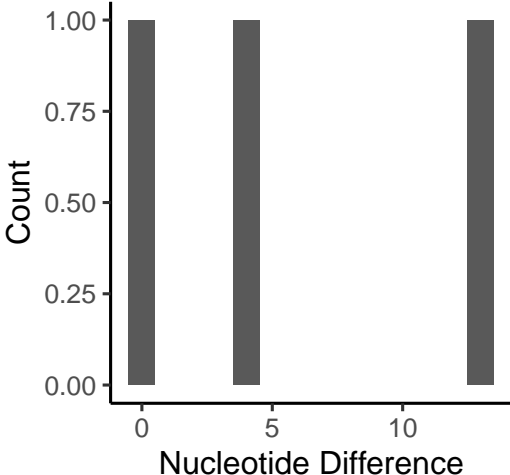
IGHV3-38\*03

3 sequences assigned  
No exact matches.



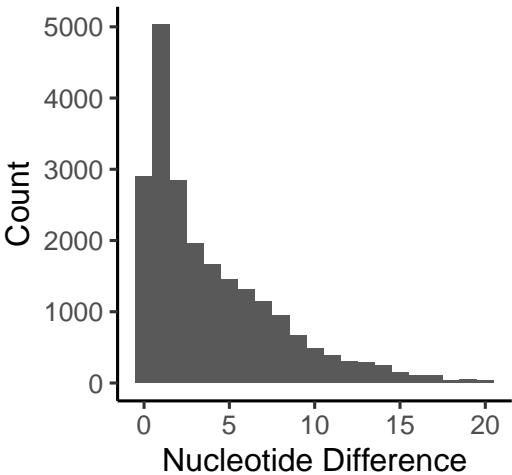
IGHV3-47\*02

3 sequences assigned  
1 (33.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



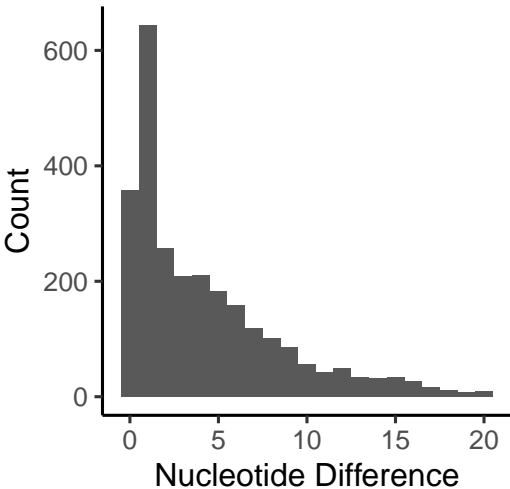
IGHV3-33\*01

22252 sequences assigned  
2894 (13%) exact matches, in which:  
2183 unique CDR3  
7 unique J



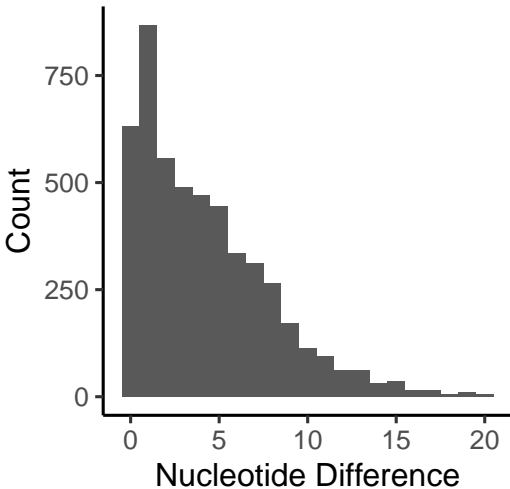
IGHV3-43\*01

2654 sequences assigned  
357 (13.5%) exact matches, in which:  
272 unique CDR3  
7 unique J



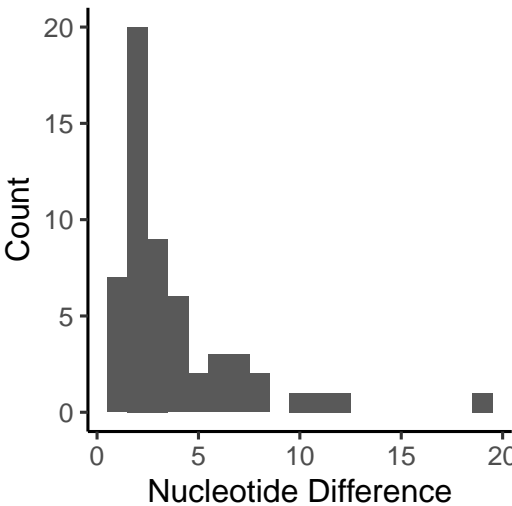
IGHV3-48\*01

5012 sequences assigned  
631 (12.6%) exact matches, in which:  
490 unique CDR3  
7 unique J



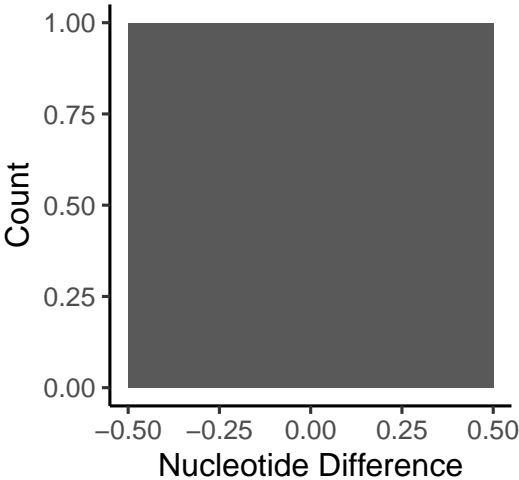
IGHV3-38-3\*01

57 sequences assigned  
No exact matches.



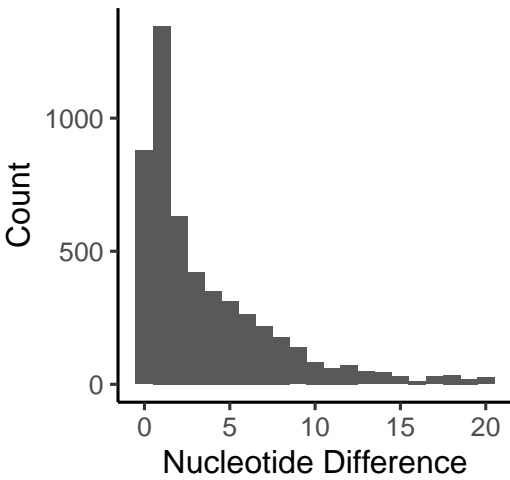
IGHV3-47\*01

1 sequences assigned  
1 (100%) exact matches, in which:  
1 unique CDR3  
1 unique J



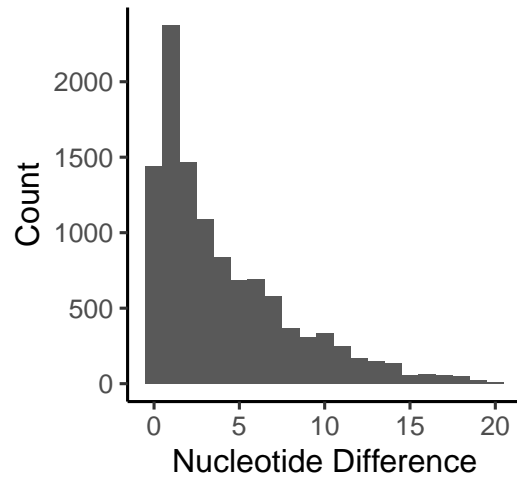
IGHV3-48\*02

5245 sequences assigned  
878 (16.7%) exact matches, in which:  
655 unique CDR3  
7 unique J



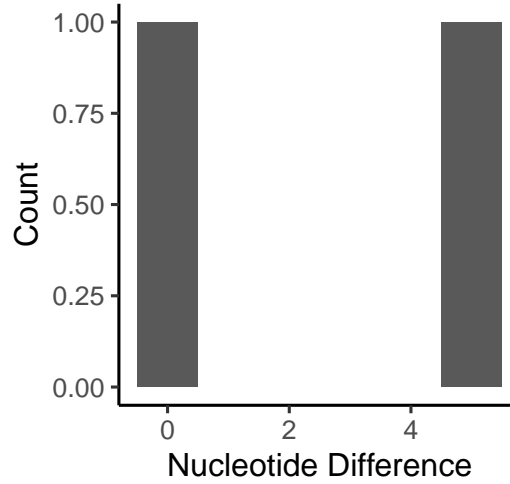
### IGHV3-48\*03

11190 sequences assigned  
1442 (12.9%) exact matches, in which:  
1090 unique CDR3  
7 unique J



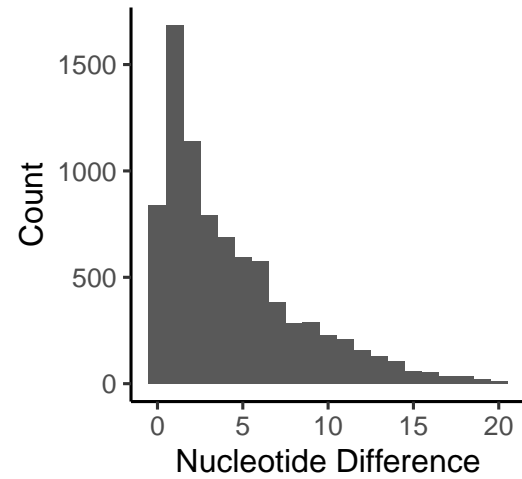
### IGHV3-52\*01\_03

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



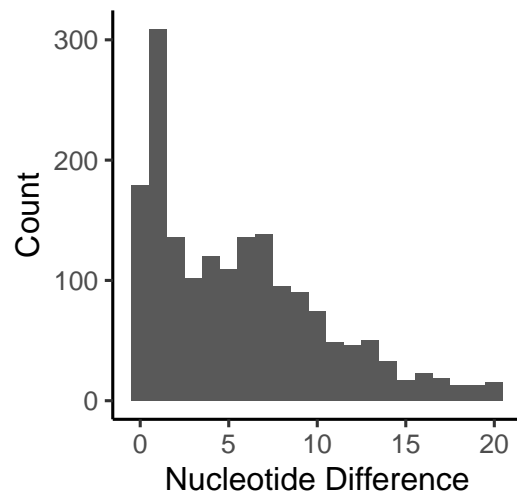
### IGHV3-53\*01\_02

8403 sequences assigned  
839 (10%) exact matches, in which:  
618 unique CDR3  
7 unique J



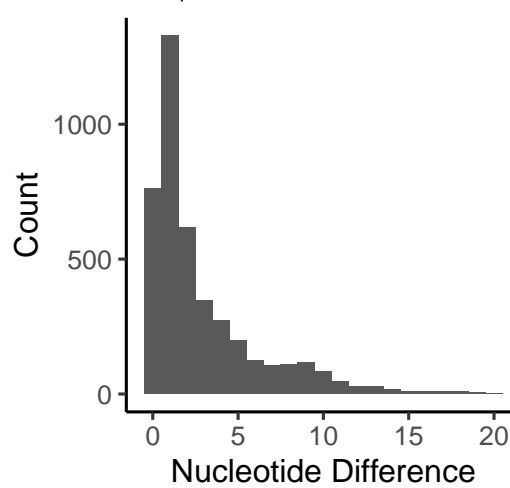
### IGHV3-49\*04

1801 sequences assigned  
179 (9.9%) exact matches, in which:  
139 unique CDR3  
7 unique J



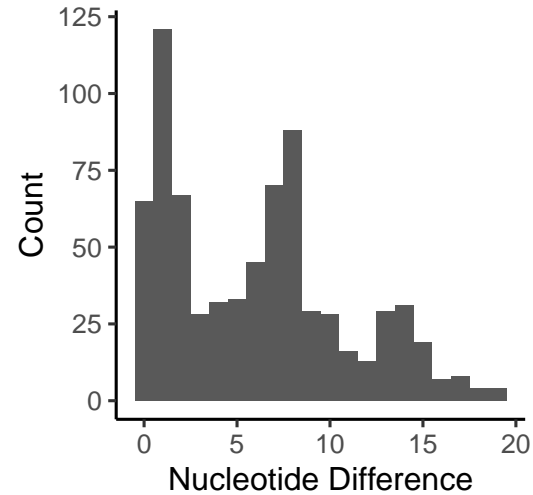
### IGHV3-53\*04

4232 sequences assigned  
761 (18%) exact matches, in which:  
602 unique CDR3  
7 unique J



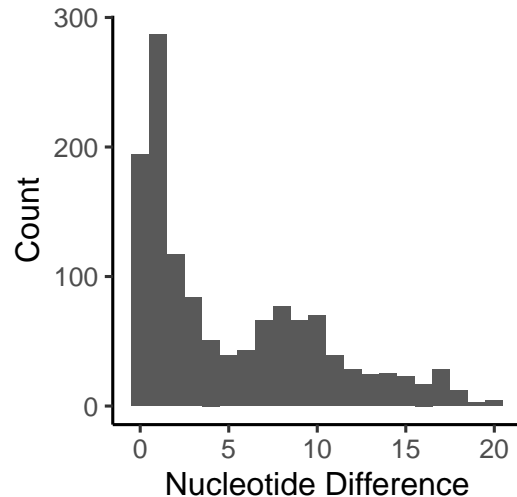
### IGHV3-64\*01

769 sequences assigned  
65 (8.5%) exact matches, in which:  
54 unique CDR3  
4 unique J



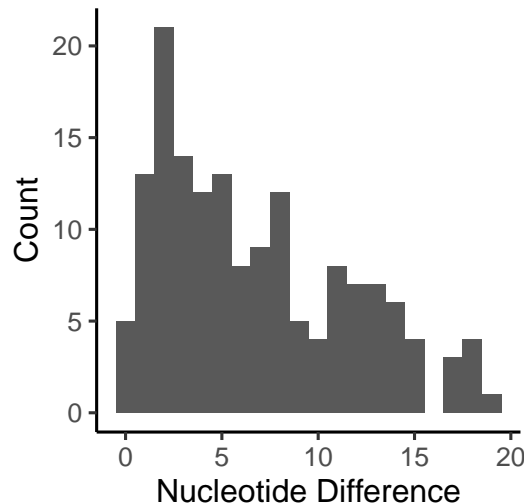
### IGHV3-49\*03\_05

1314 sequences assigned  
194 (14.8%) exact matches, in which:  
155 unique CDR3  
7 unique J



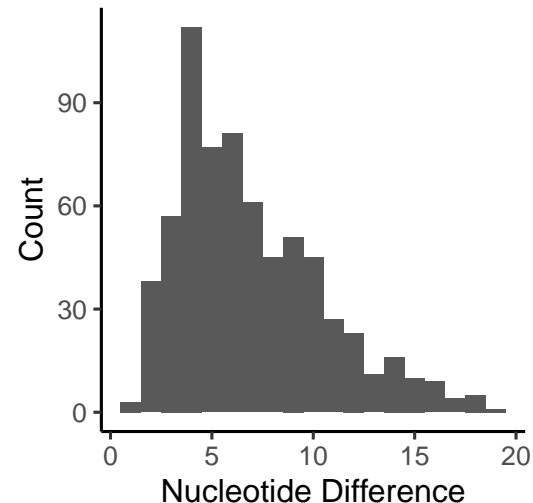
### IGHV3-53\*05

160 sequences assigned  
5 (3.1%) exact matches, in which:  
5 unique CDR3  
1 unique J



### IGHV3-64\*04

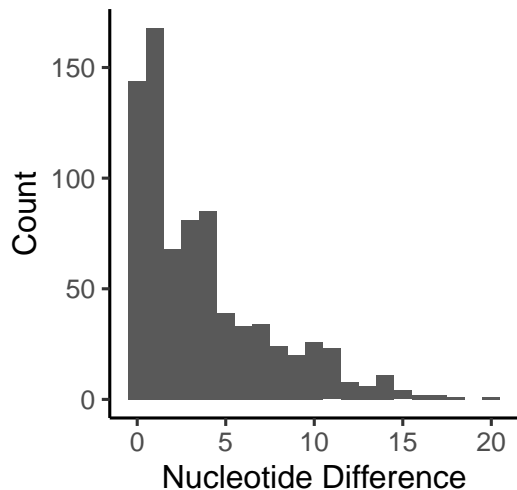
683 sequences assigned  
No exact matches.





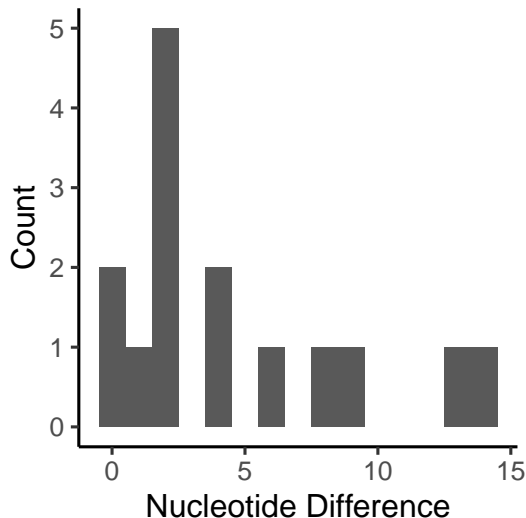
### IGHV3-64\*02\_07

784 sequences assigned  
144 (18.4%) exact matches, in which:  
112 unique CDR3  
7 unique J



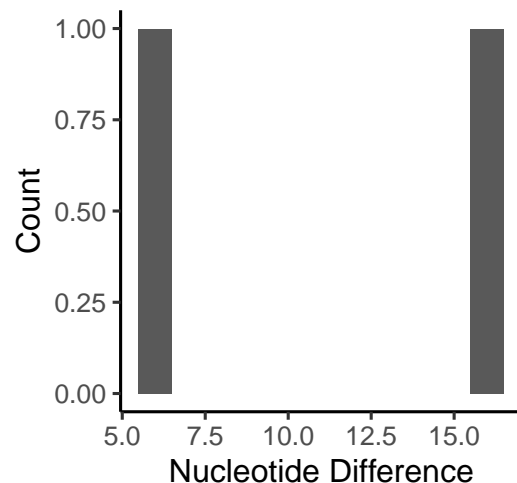
### IGHV3-66\*03

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



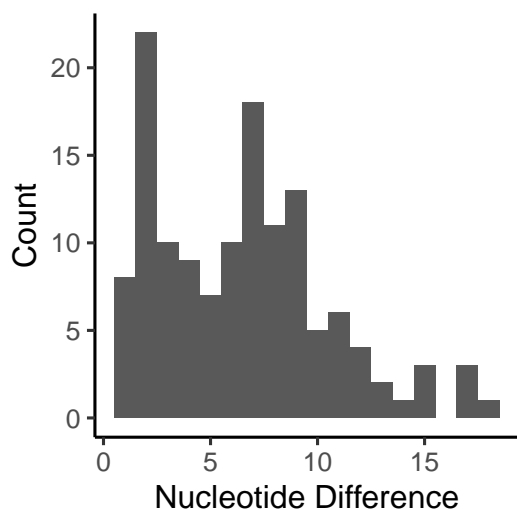
### IGHV3-71\*01\_04

3 sequences assigned  
No exact matches.



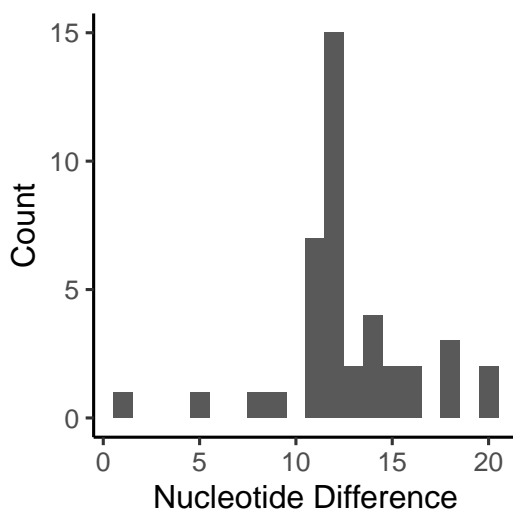
### IGHV3-66\*01

133 sequences assigned  
No exact matches.



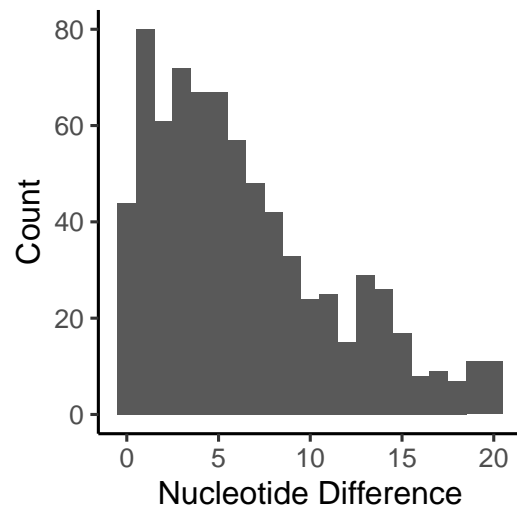
### IGHV3-69-1\*01

42 sequences assigned  
No exact matches.



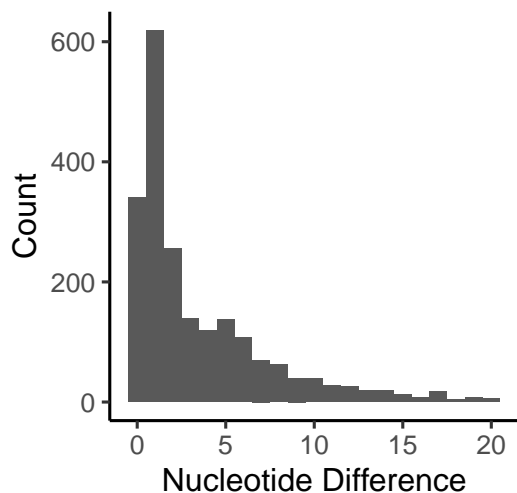
### IGHV3-72\*01

782 sequences assigned  
44 (5.6%) exact matches, in which:  
34 unique CDR3  
5 unique J



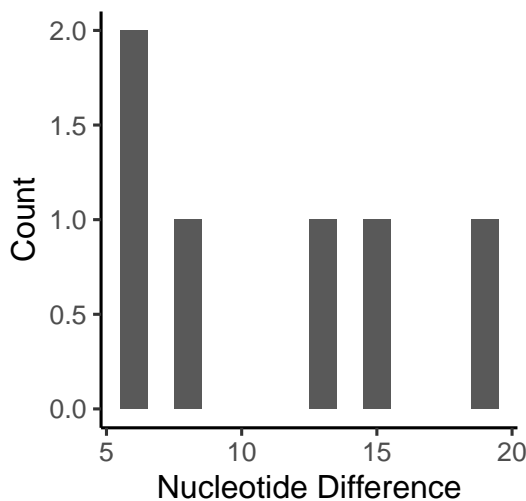
### IGHV3-66\*02

2084 sequences assigned  
340 (16.3%) exact matches, in which:  
266 unique CDR3  
7 unique J



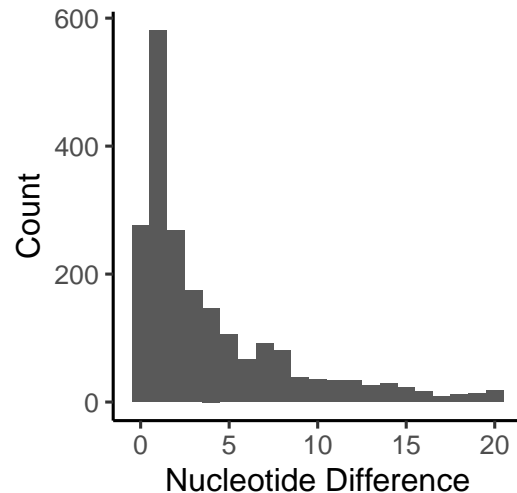
### IGHV3-69-1\*02

6 sequences assigned  
No exact matches.



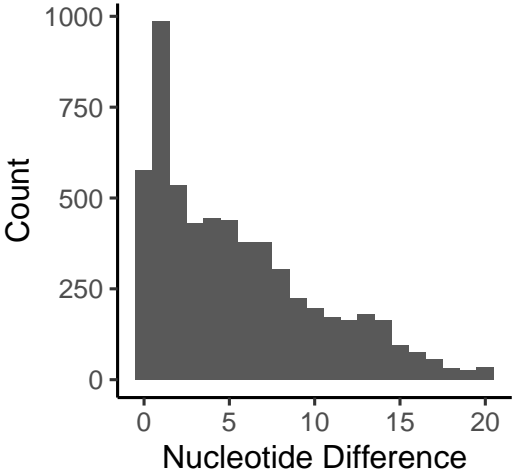
### IGHV3-73\*01\_02

2107 sequences assigned  
276 (13.1%) exact matches, in which:  
221 unique CDR3  
7 unique J



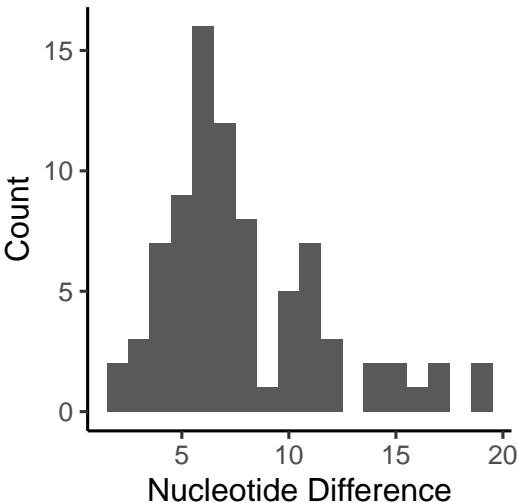
IGHV3-74\*01\_02

5960 sequences assigned  
576 (9.7%) exact matches, in which:  
461 unique CDR3  
7 unique J



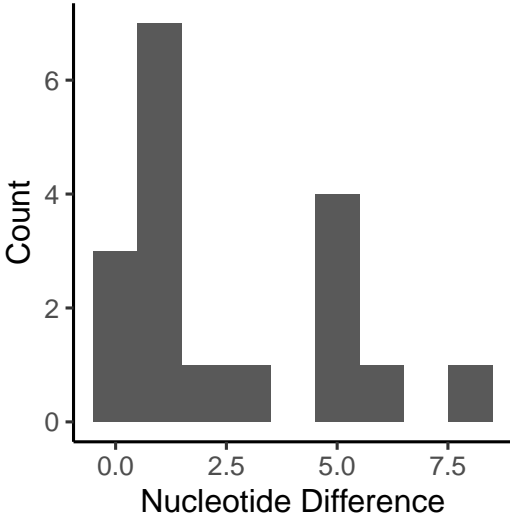
IGHV3-NL1\*01

82 sequences assigned  
No exact matches.



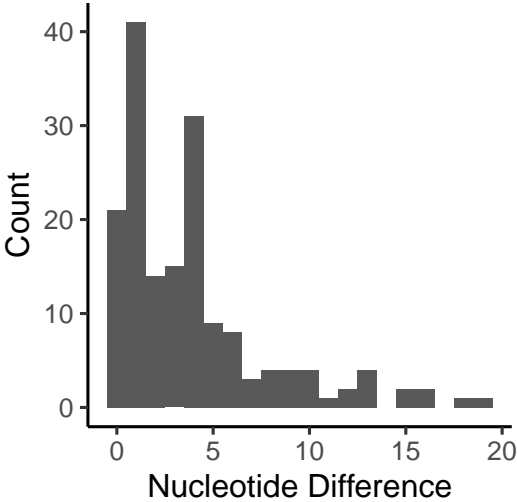
IGHV4-28\*01\_07

18 sequences assigned  
3 (16.7%) exact matches, in which:  
3 unique CDR3  
1 unique J



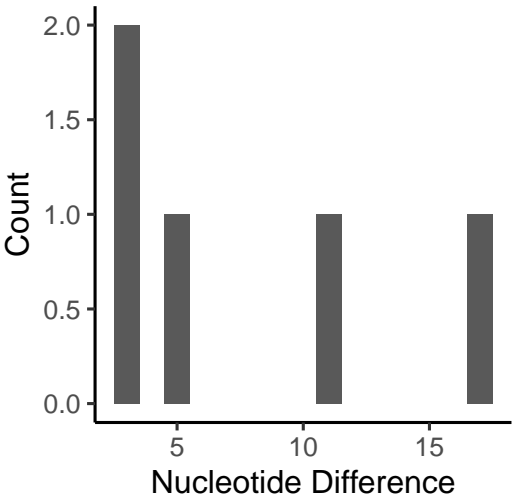
IGHV3-43D\*04

169 sequences assigned  
21 (12.4%) exact matches, in which:  
16 unique CDR3  
4 unique J



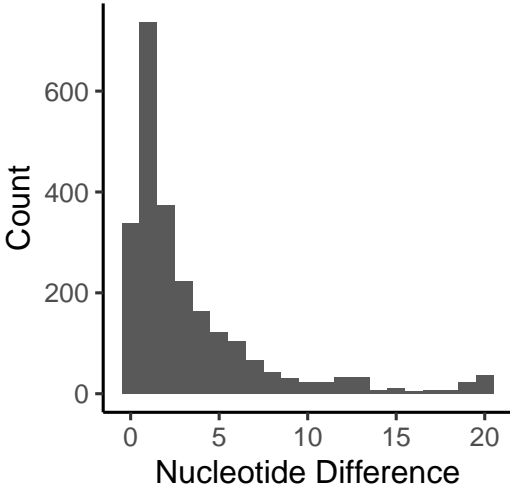
IGHV4-28\*03

5 sequences assigned  
No exact matches.



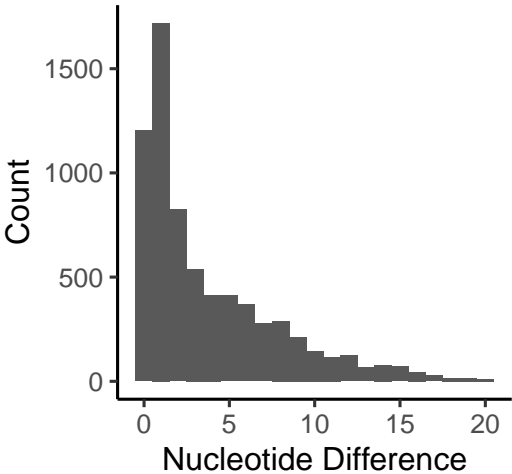
IGHV4-30-2\*01

2501 sequences assigned  
338 (13.5%) exact matches, in which:  
228 unique CDR3  
6 unique J



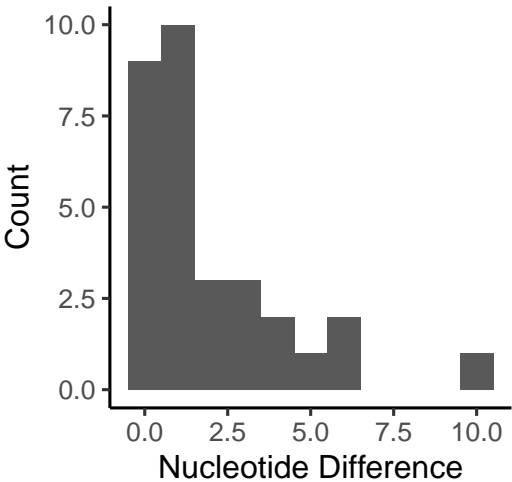
IGHV3-64D\*06

7026 sequences assigned  
1203 (17.1%) exact matches, in which:  
878 unique CDR3  
7 unique J



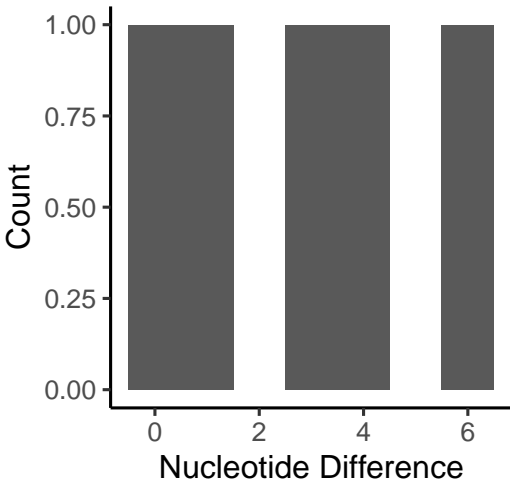
IGHV4-28\*06

31 sequences assigned  
9 (29%) exact matches, in which:  
8 unique CDR3  
4 unique J



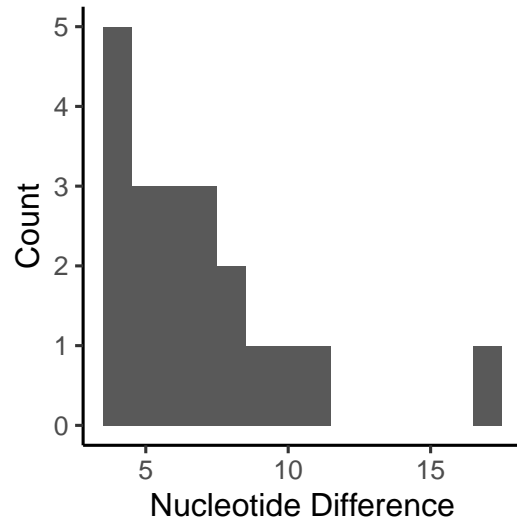
IGHV4-30-4\*01

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



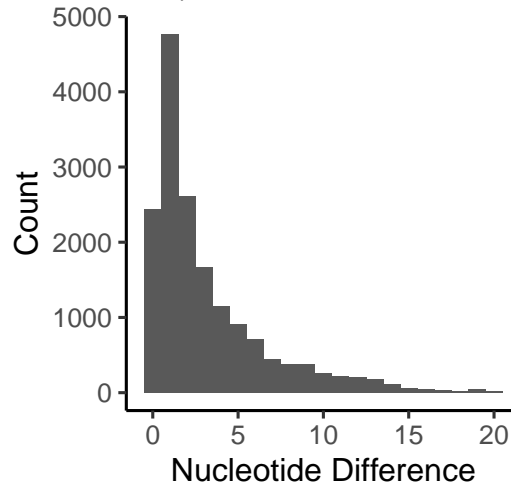
### IGHV4-30-4\*07

20 sequences assigned  
No exact matches.



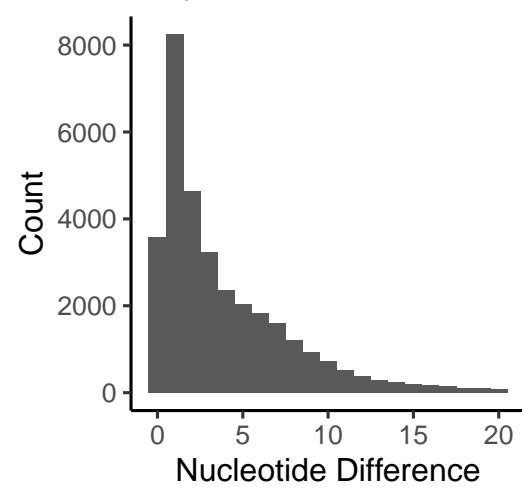
### IGHV4-34\*01\_02

16738 sequences assigned  
2440 (14.6%) exact matches, in which:  
1793 unique CDR3  
7 unique J



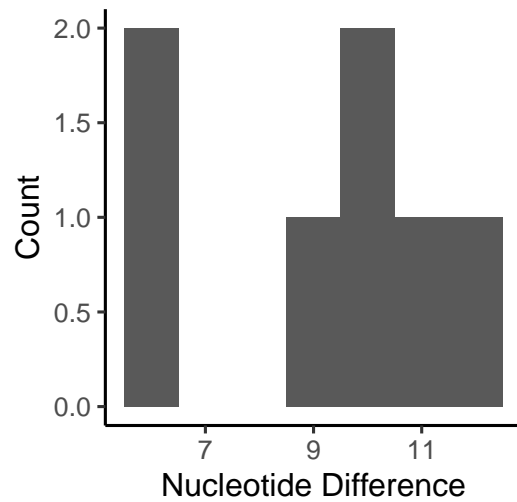
### IGHV4-39\*01\_05

32820 sequences assigned  
3572 (10.9%) exact matches, in which:  
2592 unique CDR3  
7 unique J



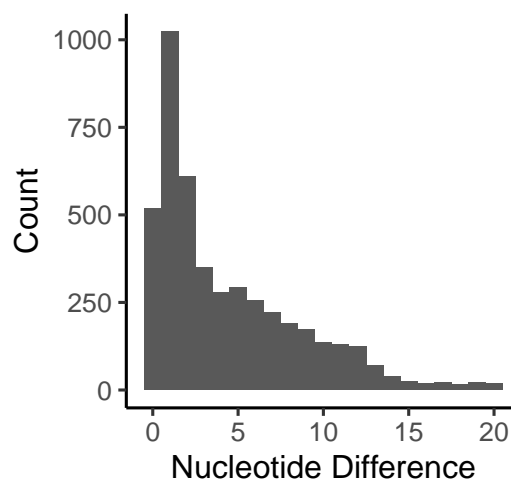
### IGHV4-30-4\*08

8 sequences assigned  
No exact matches.



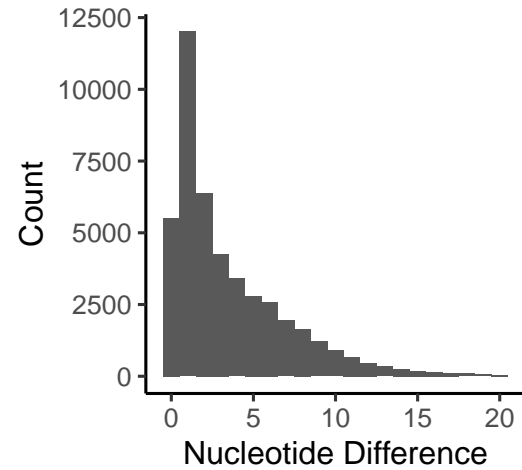
### IGHV4-38-2\*02\_A70G

4566 sequences assigned  
519 (11.4%) exact matches, in which:  
378 unique CDR3  
7 unique J



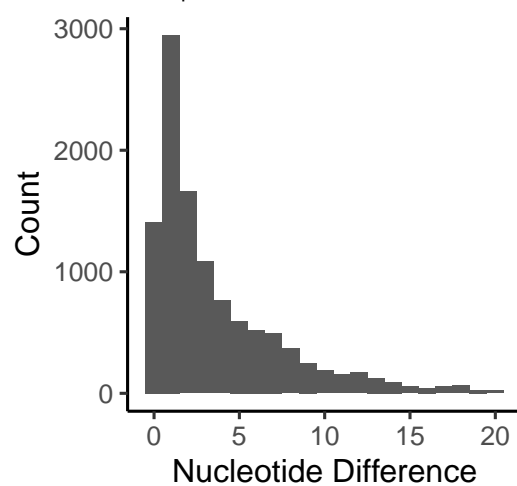
### IGHV4-59\*01\_07

45234 sequences assigned  
5518 (12.2%) exact matches, in which:  
3956 unique CDR3  
7 unique J



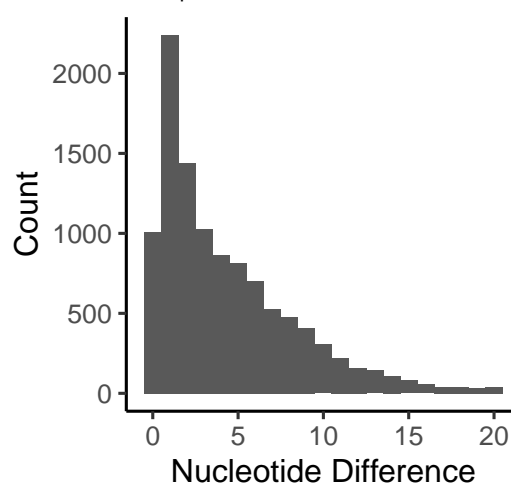
### IGHV4-31\*03\_04

11207 sequences assigned  
1410 (12.6%) exact matches, in which:  
1032 unique CDR3  
7 unique J



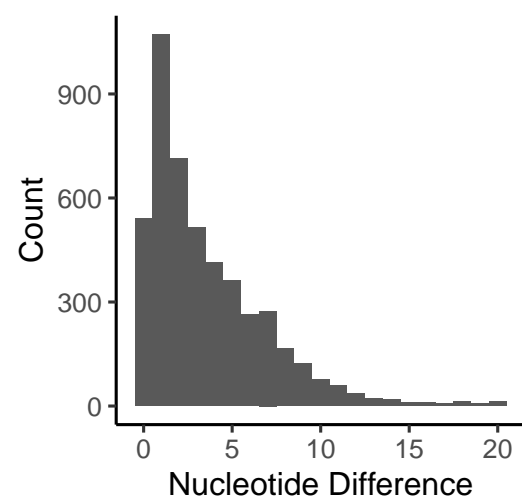
### IGHV4-39\*07

10854 sequences assigned  
1008 (9.3%) exact matches, in which:  
734 unique CDR3  
7 unique J



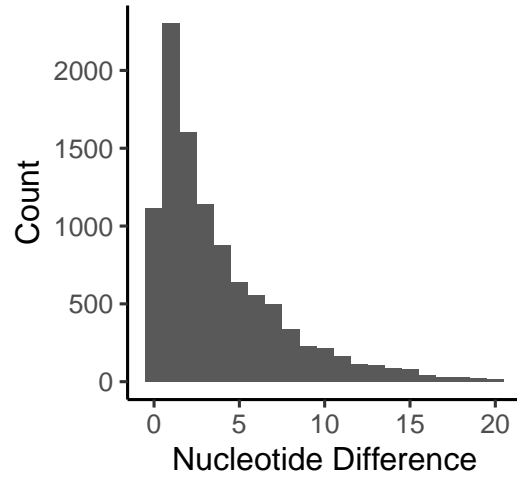
### IGHV4-61\*01

4771 sequences assigned  
540 (11.3%) exact matches, in which:  
415 unique CDR3  
7 unique J



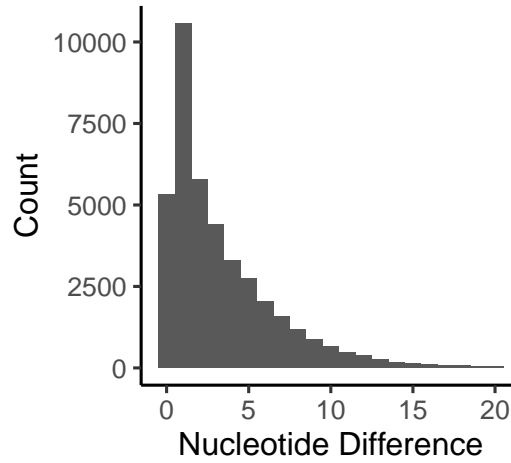
### IGHV4-61\*02

10263 sequences assigned  
1113 (10.8%) exact matches, in which:  
826 unique CDR3  
7 unique J



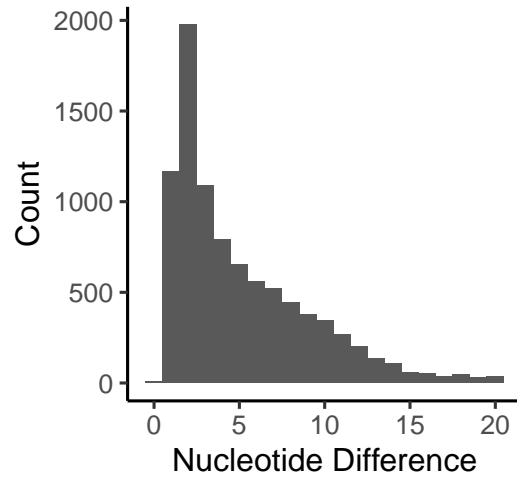
### IGHV5-51\*01\_03

40432 sequences assigned  
5315 (13.1%) exact matches, in which:  
3832 unique CDR3  
7 unique J



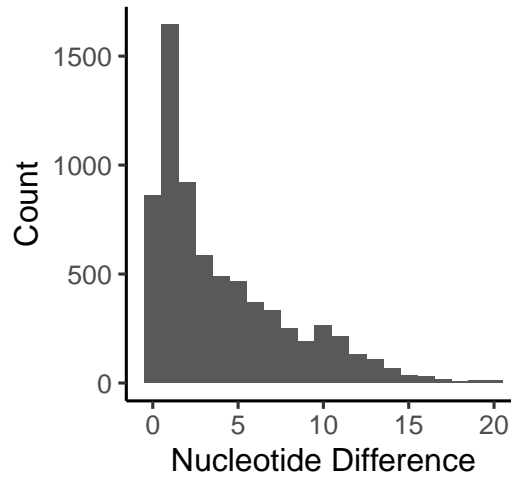
### IGHV4-61\*10

9003 sequences assigned  
7 (0.1%) exact matches, in which:  
7 unique CDR3  
4 unique J



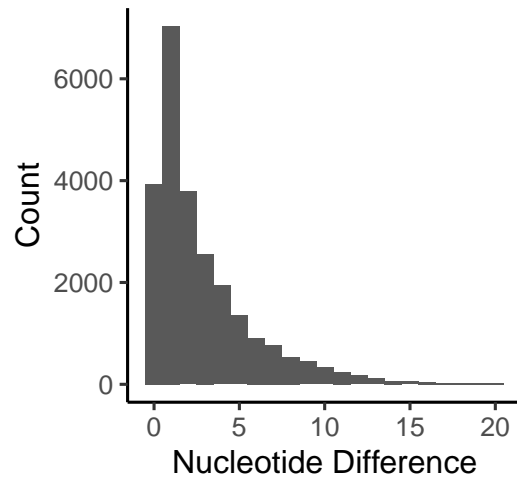
### IGHV6-1\*01\_02

7024 sequences assigned  
861 (12.3%) exact matches, in which:  
640 unique CDR3  
7 unique J



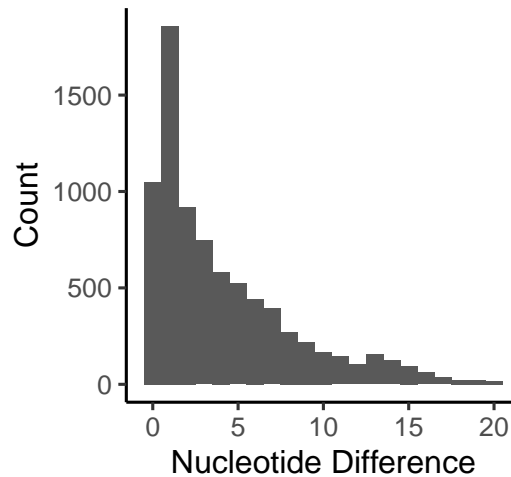
### IGHV5-10-1\*01\_03

24481 sequences assigned  
3936 (16.1%) exact matches, in which:  
2838 unique CDR3  
7 unique J

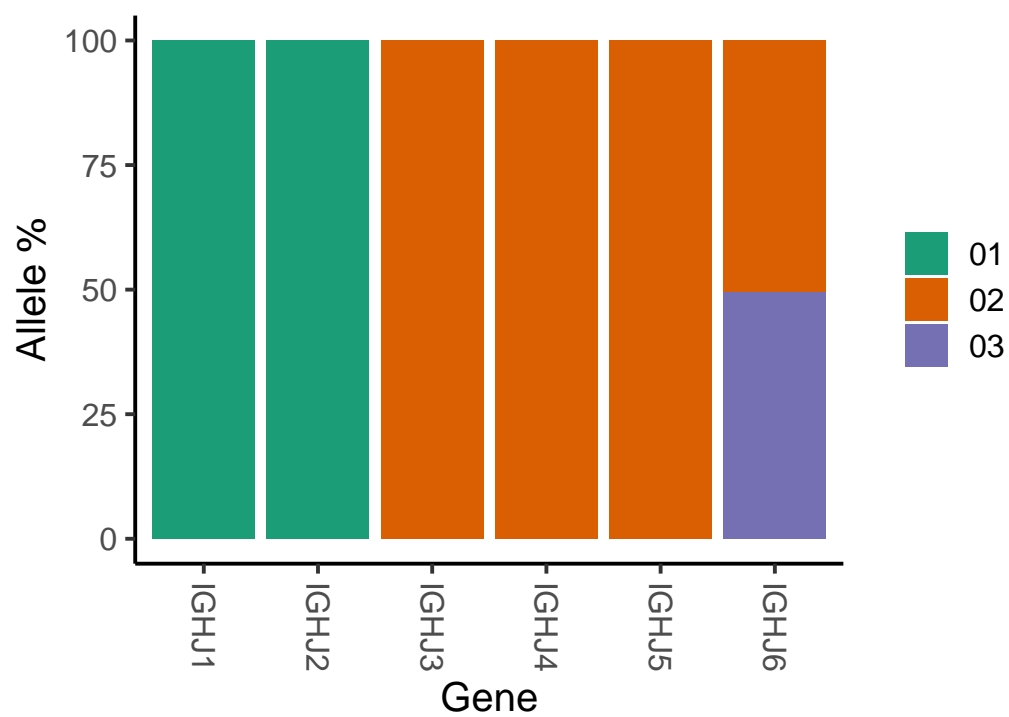


### IGHV7-4-1\*02

8047 sequences assigned  
1050 (13%) exact matches, in which:  
810 unique CDR3  
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Novel sequence(s)IGHV1-69\*08\_C191TIGHV3-11\*06\_T300CIGHV4-59\*02\_G88AIGHV5-51\*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.