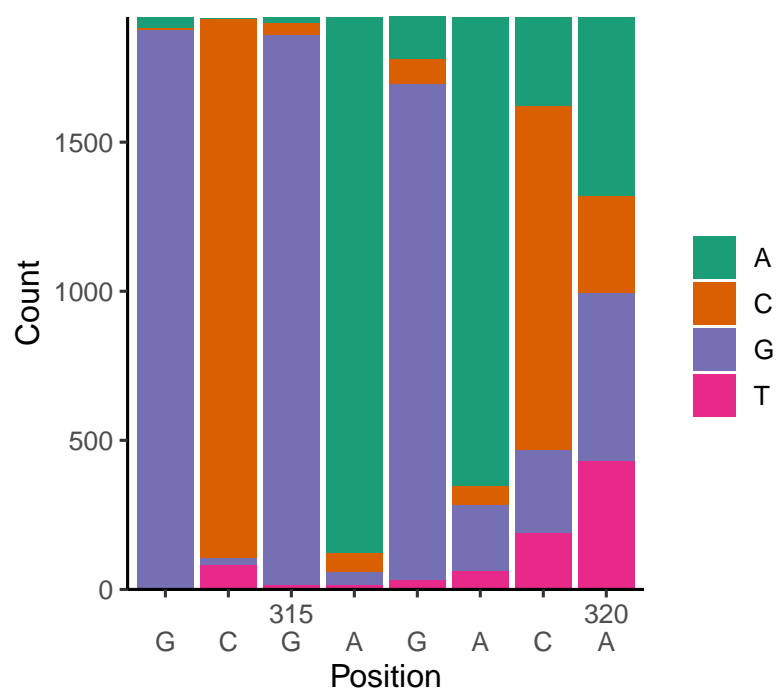
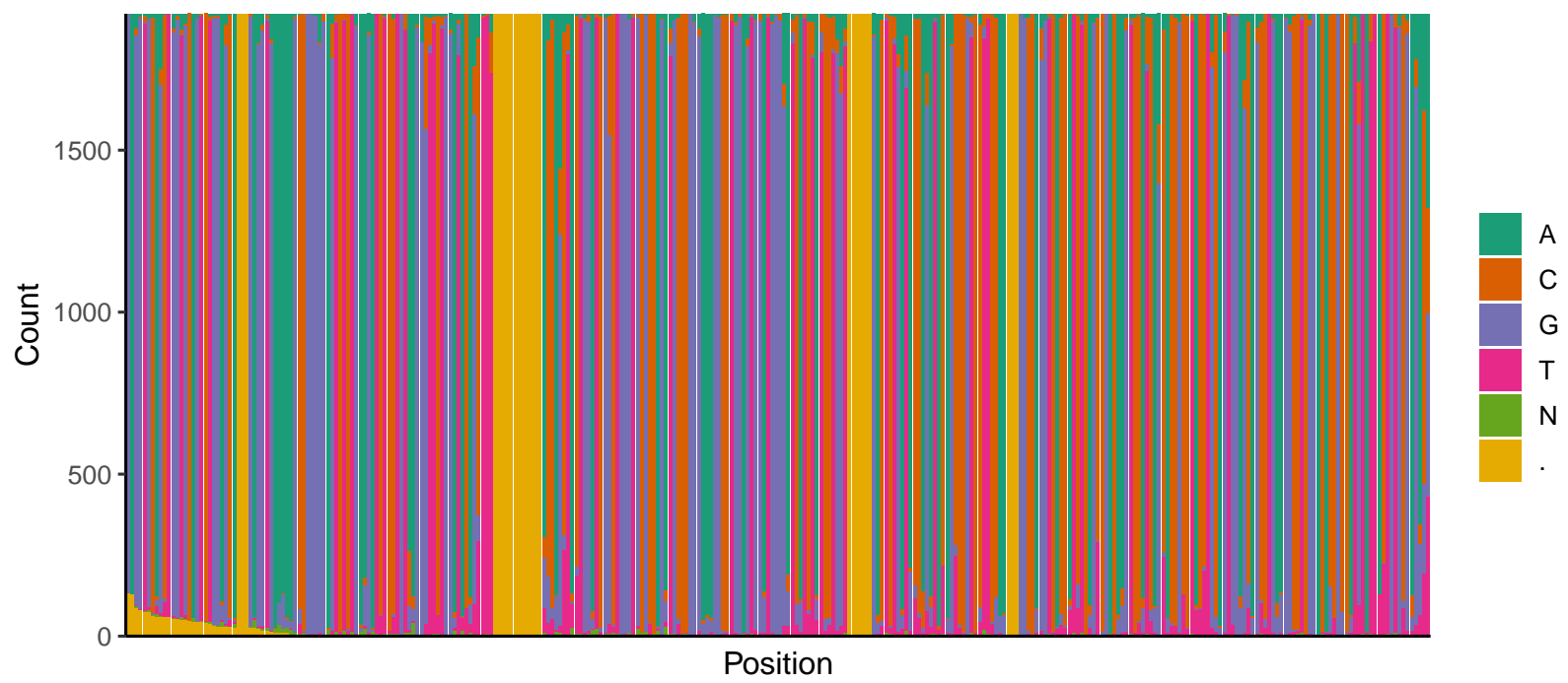


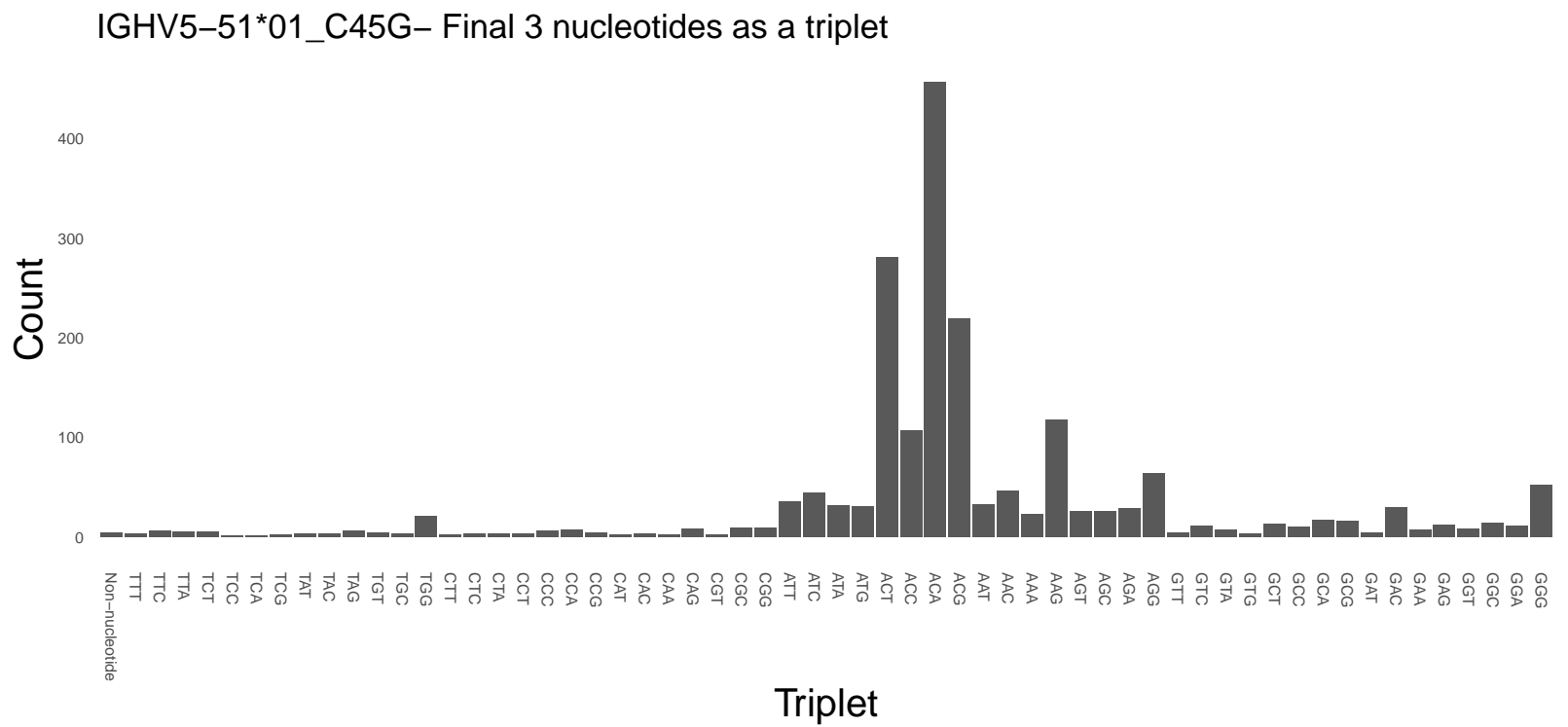
# Gene IGHV5-51\*01\_C45G



# Gene IGHV5-51\*01\_C45G

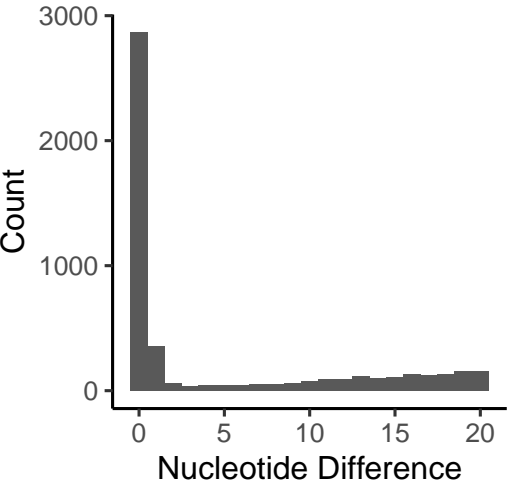


IGHV5–51\*01\_C45G– Final 3 nucleotides as a triplet



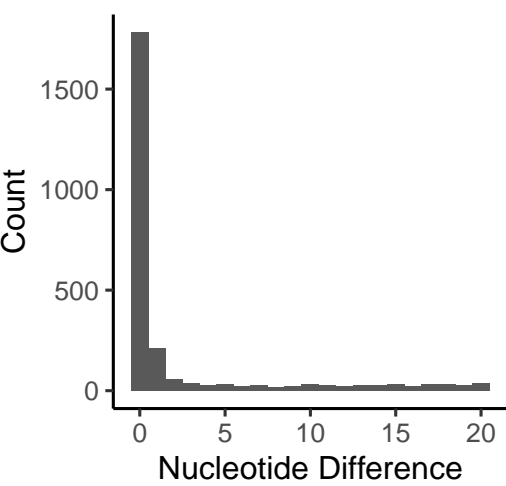
IGHV1-2\*02

6567 sequences assigned  
2866 (43.6%) exact matches, in which:  
2842 unique CDR3  
6 unique J



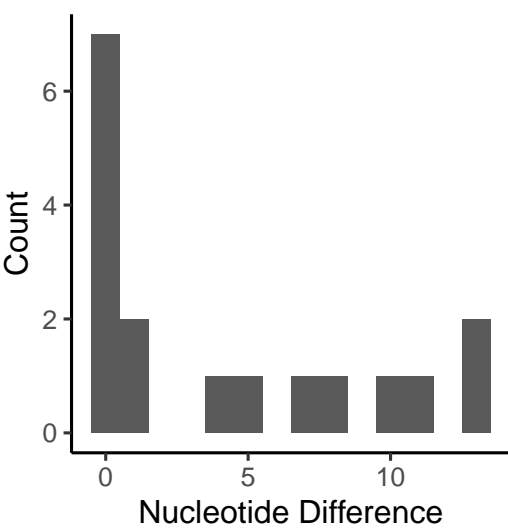
IGHV1-8\*01

3115 sequences assigned  
1782 (57.2%) exact matches, in which:  
1777 unique CDR3  
6 unique J



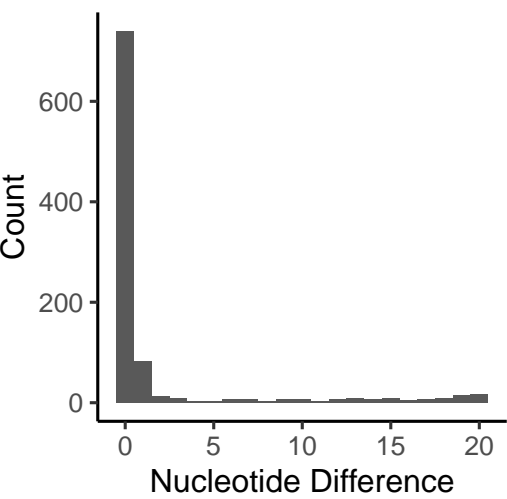
IGHV1-45\*02

90 sequences assigned  
7 (7.8%) exact matches, in which:  
7 unique CDR3  
4 unique J



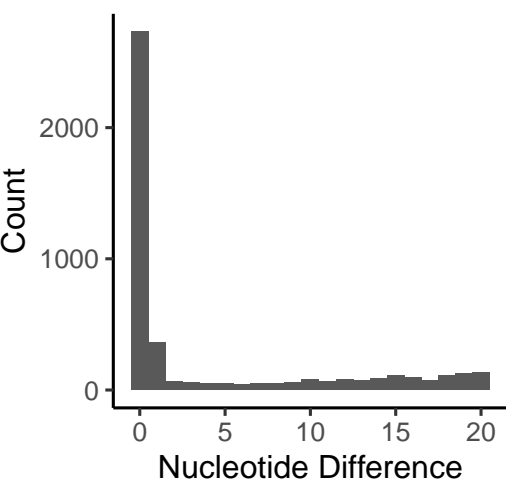
IGHV1-2\*04

1042 sequences assigned  
740 (71%) exact matches, in which:  
735 unique CDR3  
6 unique J



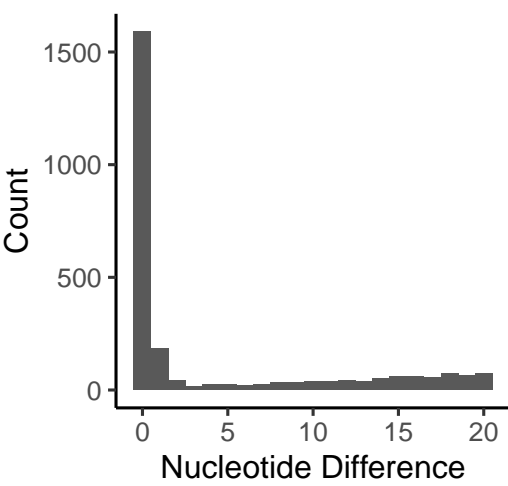
IGHV1-18\*01

6622 sequences assigned  
2731 (41.2%) exact matches, in which:  
2714 unique CDR3  
6 unique J



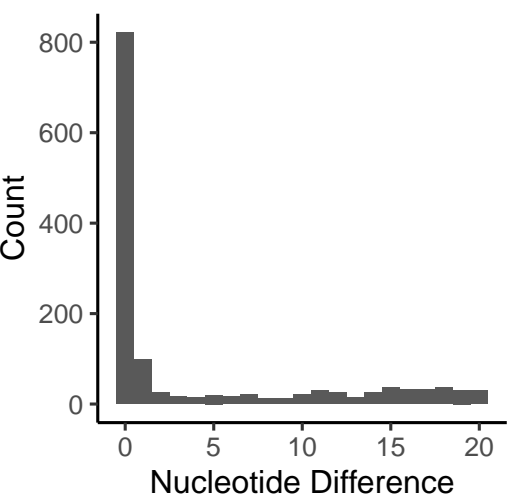
IGHV1-46\*01

4081 sequences assigned  
1590 (39%) exact matches, in which:  
1580 unique CDR3  
6 unique J



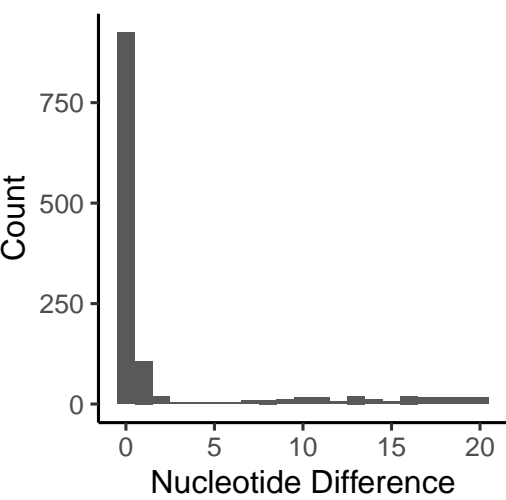
IGHV1-3\*01

2207 sequences assigned  
822 (37.2%) exact matches, in which:  
813 unique CDR3  
6 unique J



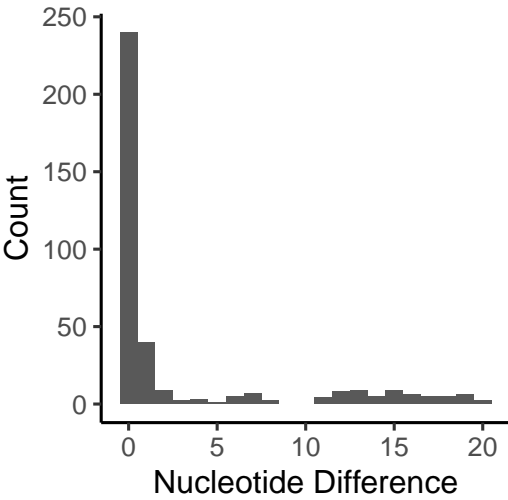
IGHV1-24\*01

1557 sequences assigned  
925 (59.4%) exact matches, in which:  
924 unique CDR3  
6 unique J



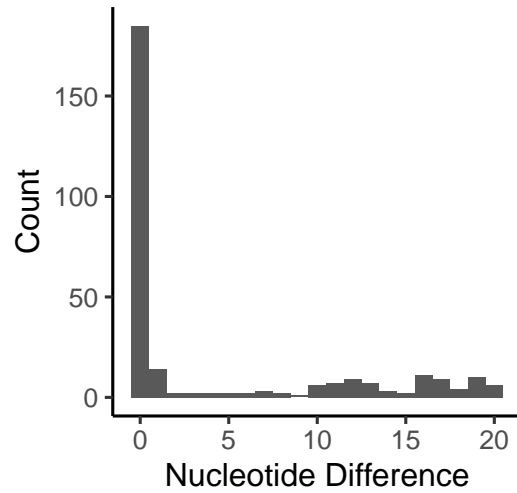
IGHV1-58\*02

424 sequences assigned  
240 (56.6%) exact matches, in which:  
240 unique CDR3  
6 unique J



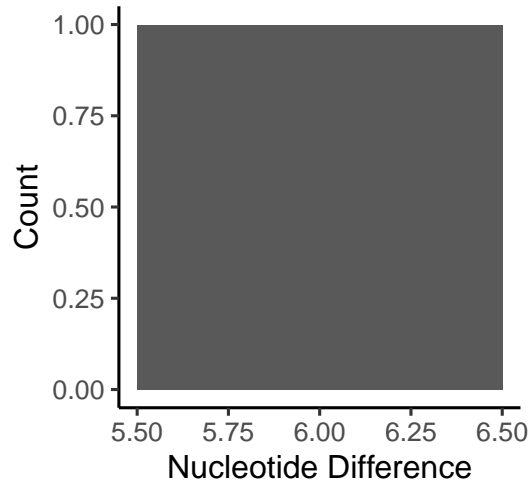
### IGHV1-69-2\*01

448 sequences assigned  
185 (41.3%) exact matches, in which:  
184 unique CDR3  
6 unique J



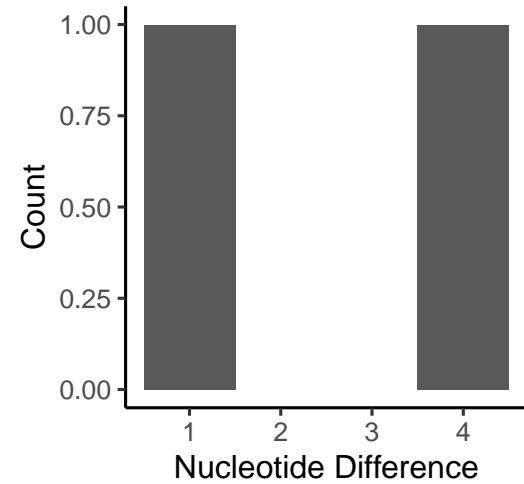
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



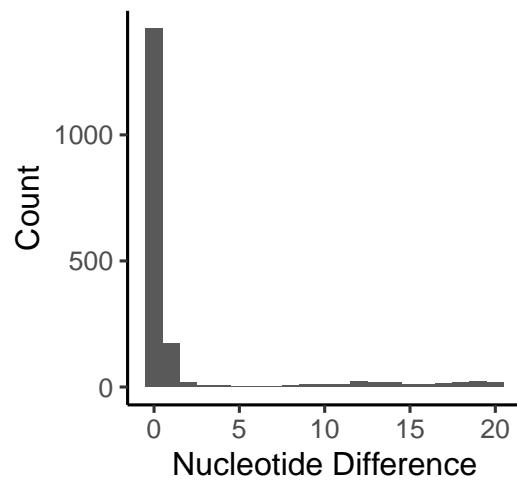
### IGHV2-10\*01

2 sequences assigned  
No exact matches.



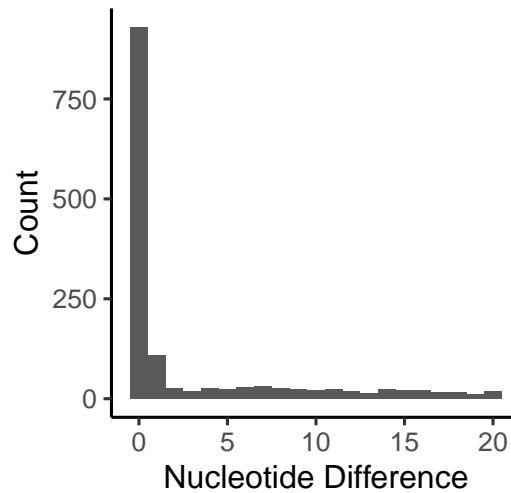
### IGHV1-69\*02

2518 sequences assigned  
1421 (56.4%) exact matches, in which:  
1416 unique CDR3  
6 unique J



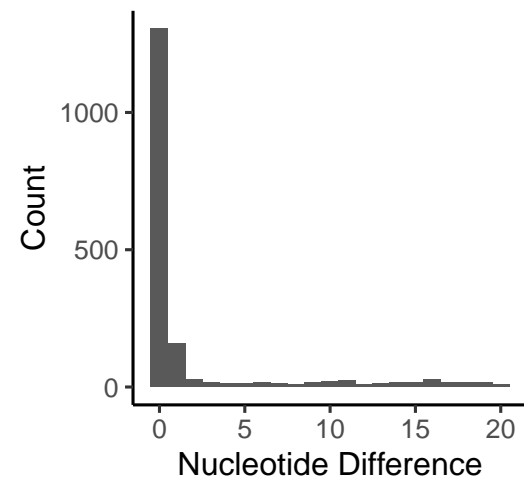
### IGHV2-5\*01

1612 sequences assigned  
930 (57.7%) exact matches, in which:  
926 unique CDR3  
6 unique J



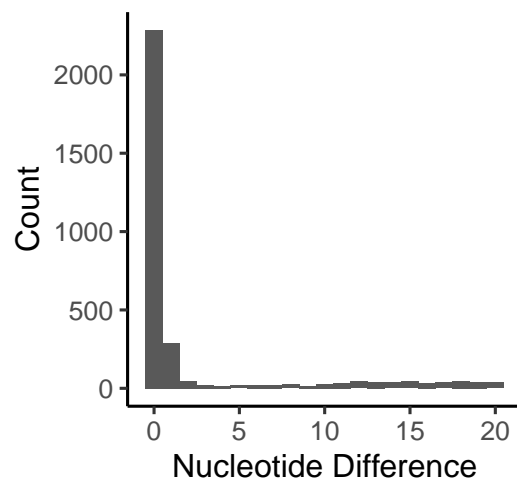
### IGHV2-26\*01

1887 sequences assigned  
1305 (69.2%) exact matches, in which:  
1296 unique CDR3  
6 unique J



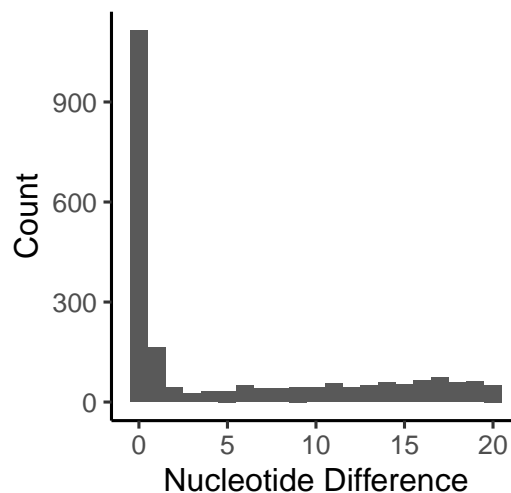
### IGHV1-69\*06

4191 sequences assigned  
2286 (54.5%) exact matches, in which:  
2276 unique CDR3  
6 unique J



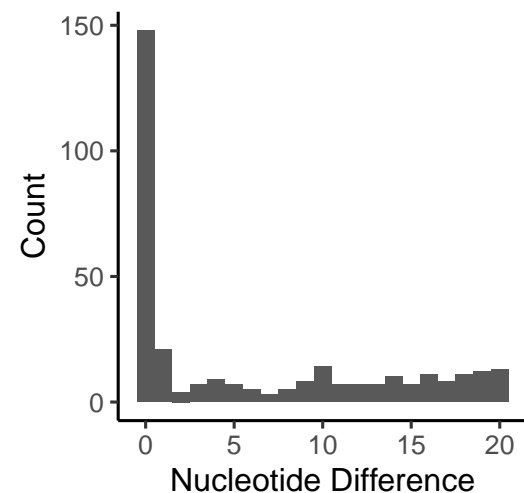
### IGHV2-5\*02

2767 sequences assigned  
1115 (40.3%) exact matches, in which:  
1109 unique CDR3  
6 unique J



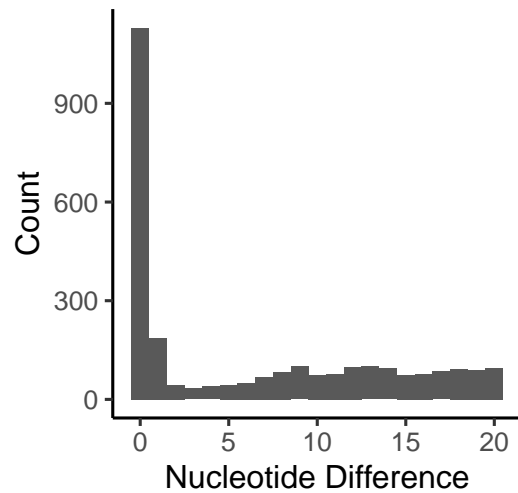
### IGHV2-70\*01

434 sequences assigned  
148 (34.1%) exact matches, in which:  
147 unique CDR3  
5 unique J



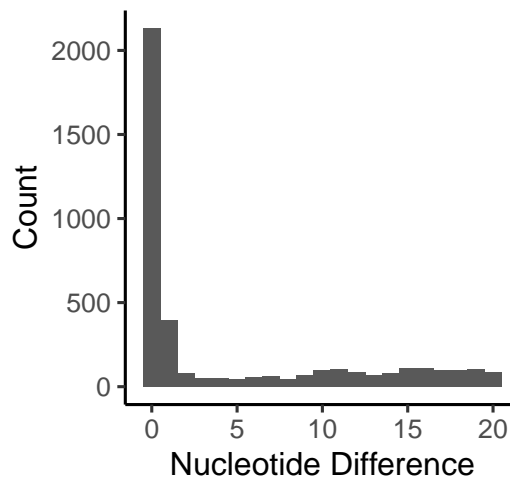
### IGHV3-7\*01

3910 sequences assigned  
1130 (28.9%) exact matches, in which:  
1119 unique CDR3  
6 unique J



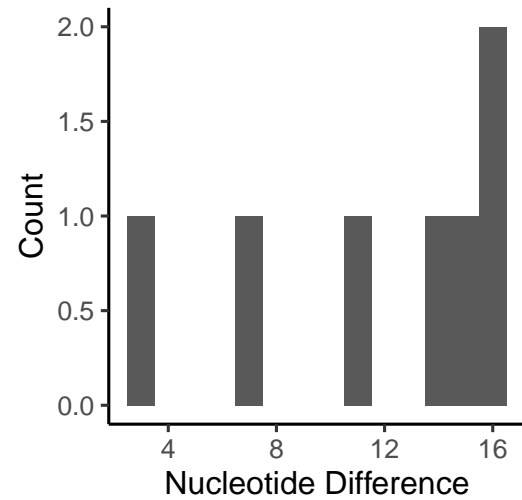
### IGHV3-9\*01

5153 sequences assigned  
2131 (41.4%) exact matches, in which:  
2103 unique CDR3  
6 unique J



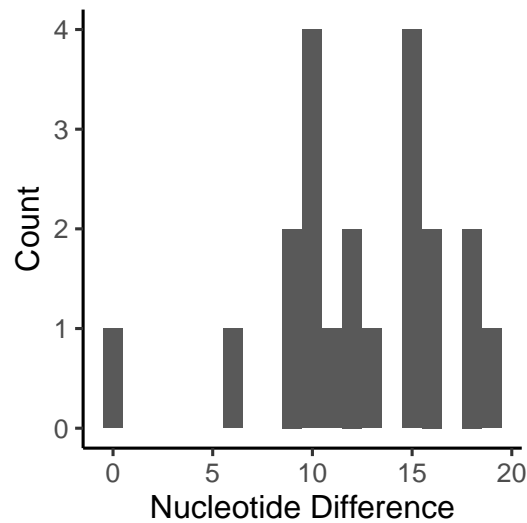
### IGHV3-11\*06

7 sequences assigned  
No exact matches.



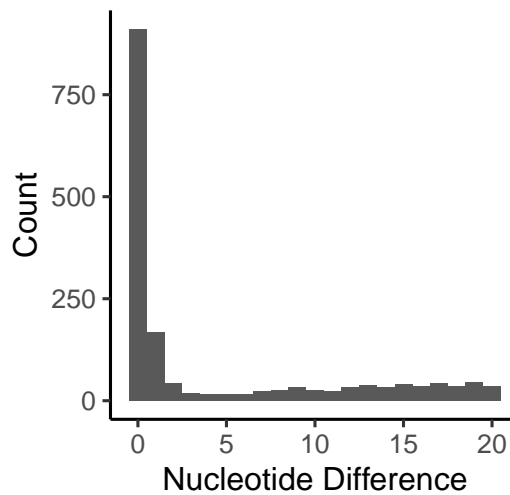
### IGHV3-7\*03

72 sequences assigned  
1 (1.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



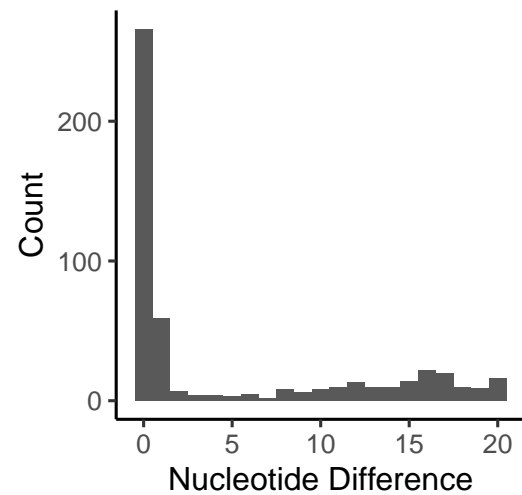
### IGHV3-11\*01

2157 sequences assigned  
911 (42.2%) exact matches, in which:  
906 unique CDR3  
6 unique J



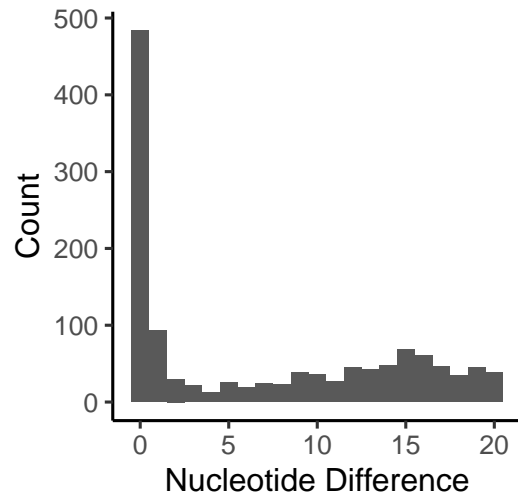
### IGHV3-13\*01

945 sequences assigned  
266 (28.1%) exact matches, in which:  
258 unique CDR3  
5 unique J



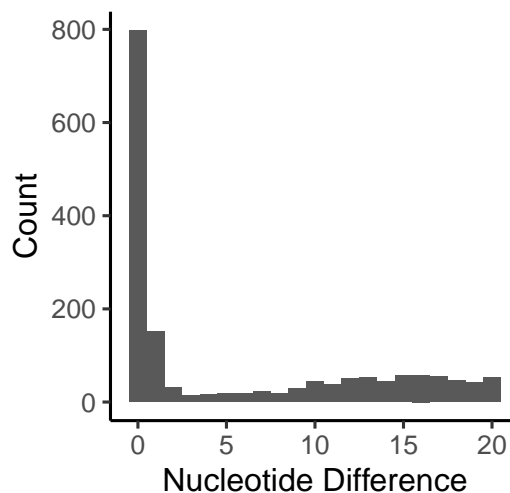
### IGHV3-7\*04

1666 sequences assigned  
484 (29.1%) exact matches, in which:  
481 unique CDR3  
6 unique J



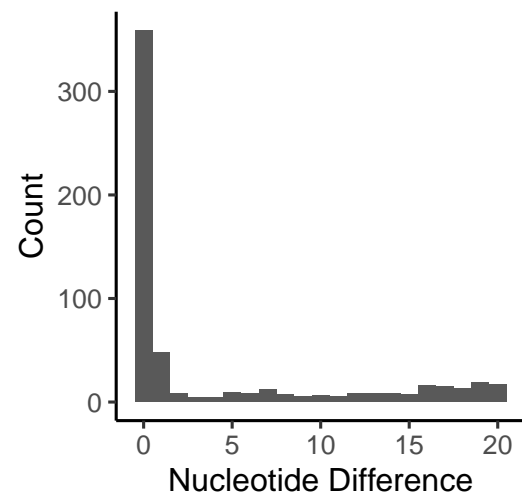
### IGHV3-11\*05

2251 sequences assigned  
798 (35.5%) exact matches, in which:  
796 unique CDR3  
6 unique J



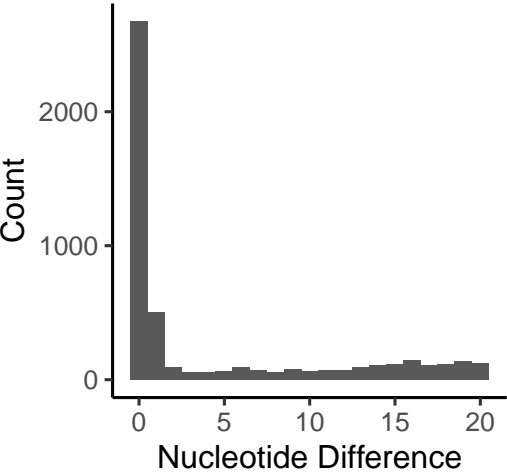
### IGHV3-13\*04

727 sequences assigned  
359 (49.4%) exact matches, in which:  
357 unique CDR3  
6 unique J



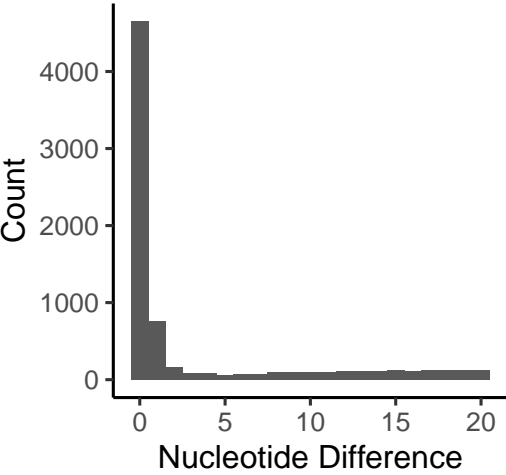
IGHV3-15\*01

6381 sequences assigned  
2674 (41.9%) exact matches, in which:  
2641 unique CDR3  
6 unique J



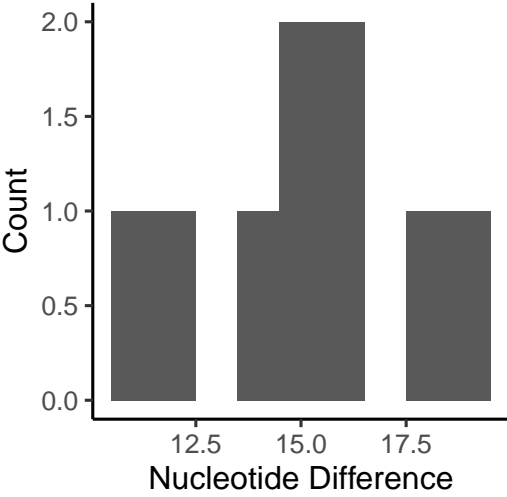
IGHV3-21\*01

9217 sequences assigned  
4650 (50.5%) exact matches, in which:  
4605 unique CDR3  
6 unique J



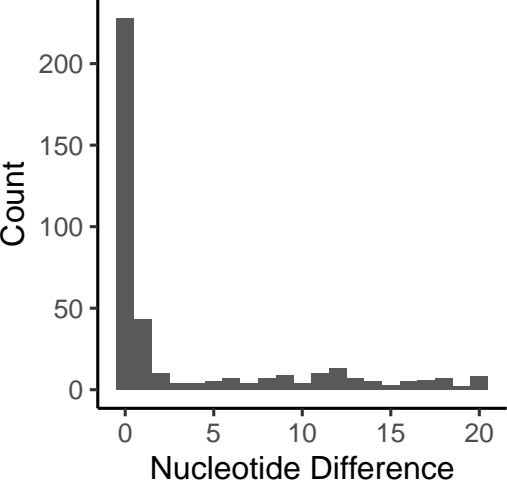
IGHV3-30-3\*03

48 sequences assigned  
No exact matches.



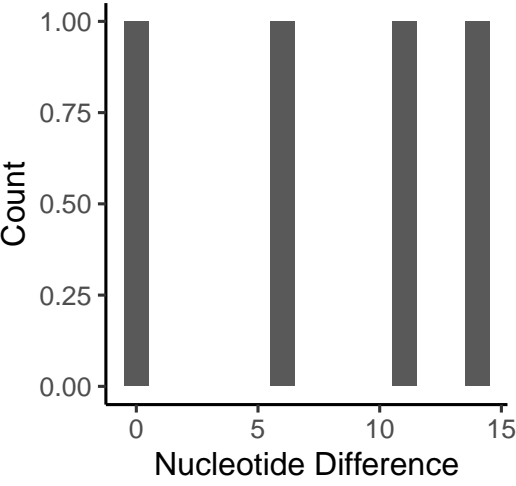
IGHV3-20\*01

417 sequences assigned  
228 (54.7%) exact matches, in which:  
224 unique CDR3  
6 unique J



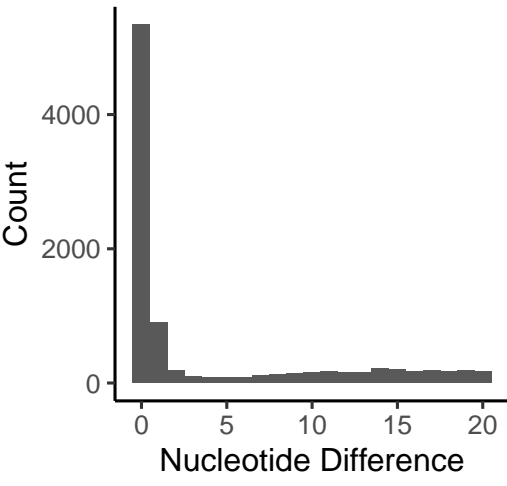
IGHV3-30-3\*01

18 sequences assigned  
1 (5.6%) exact matches, in which:  
1 unique CDR3  
1 unique J



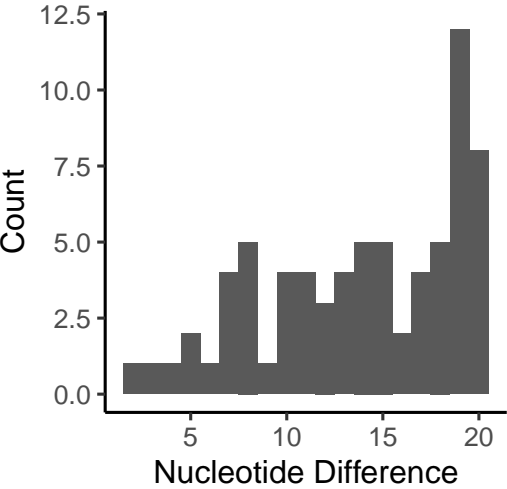
IGHV3-33\*01

11438 sequences assigned  
5339 (46.7%) exact matches, in which:  
5307 unique CDR3  
6 unique J



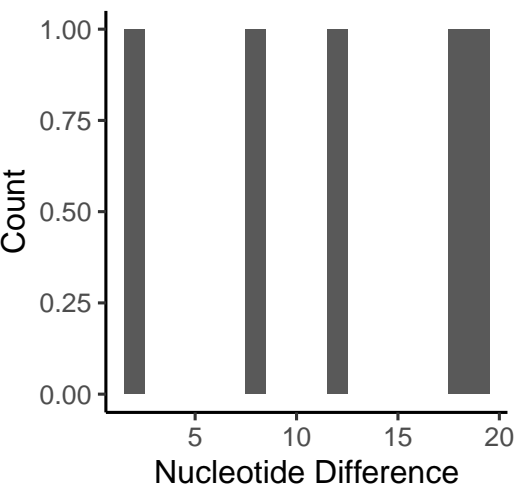
IGHV3-20\*04

180 sequences assigned  
No exact matches.



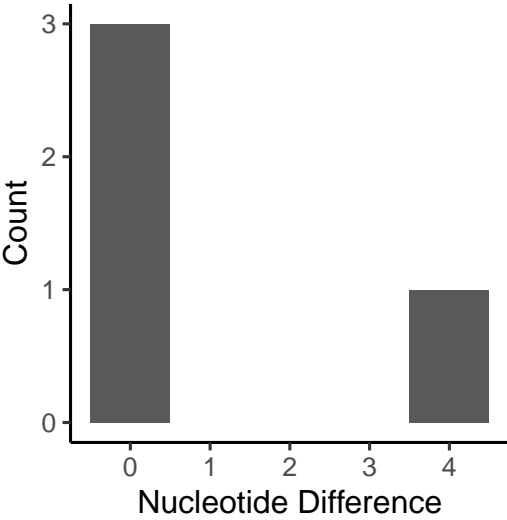
IGHV3-30-3\*02

13 sequences assigned  
No exact matches.



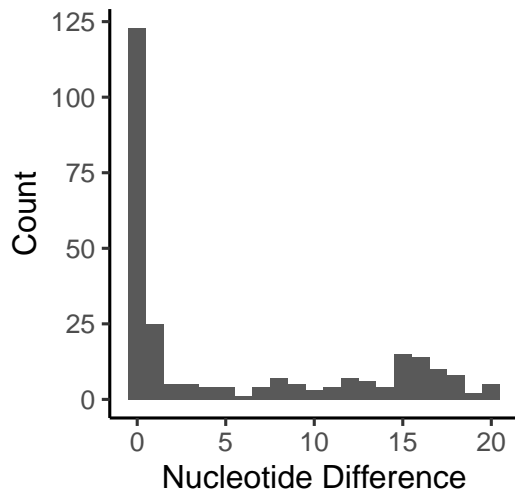
IGHV3-35\*01

4 sequences assigned  
3 (75%) exact matches, in which:  
3 unique CDR3  
3 unique J



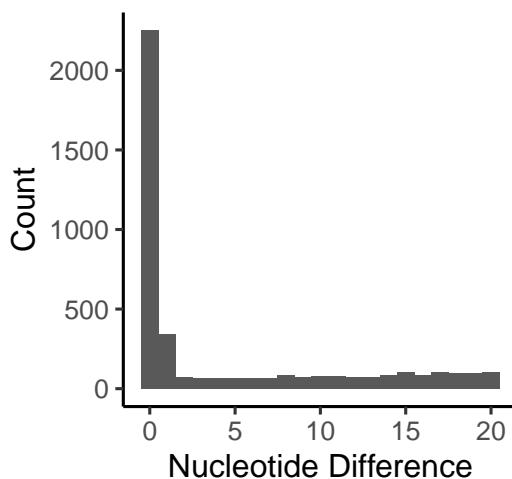
### IGHV3-43\*01

358 sequences assigned  
123 (34.4%) exact matches, in which:  
123 unique CDR3  
6 unique J



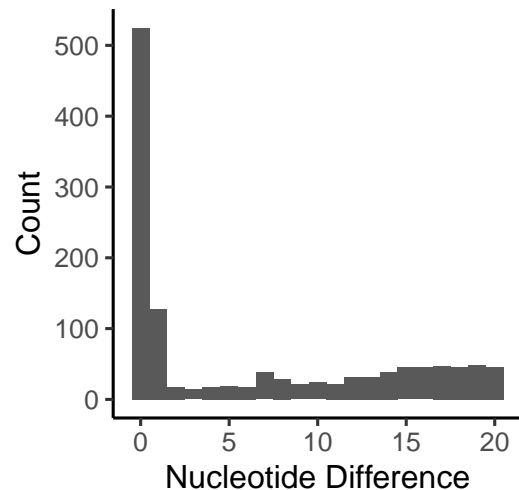
### IGHV3-48\*03

5306 sequences assigned  
2251 (42.4%) exact matches, in which:  
2233 unique CDR3  
6 unique J



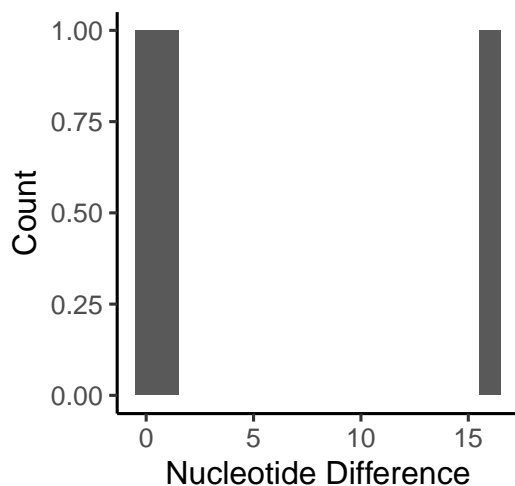
### IGHV3-49\*04

1758 sequences assigned  
525 (29.9%) exact matches, in which:  
519 unique CDR3  
6 unique J



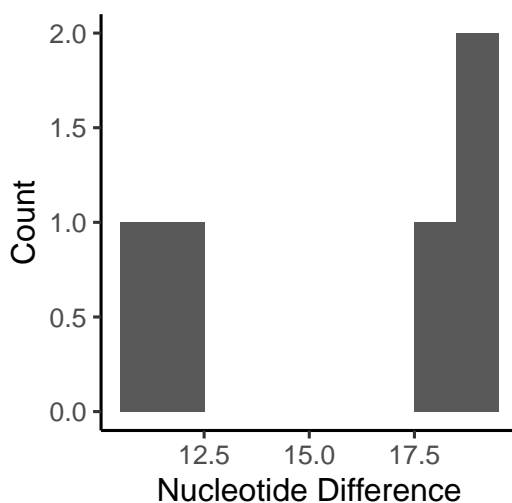
### IGHV3-47\*02

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



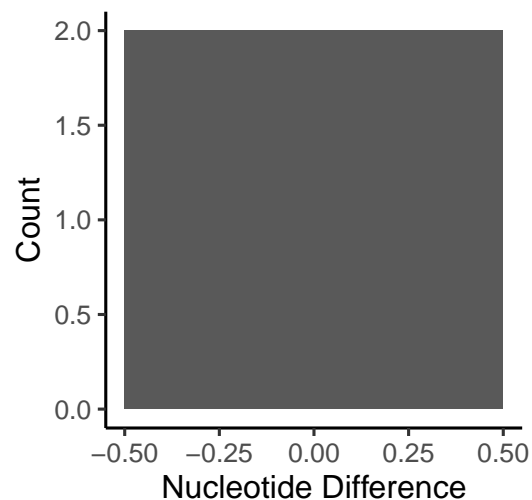
### IGHV3-48\*04

28 sequences assigned  
No exact matches.



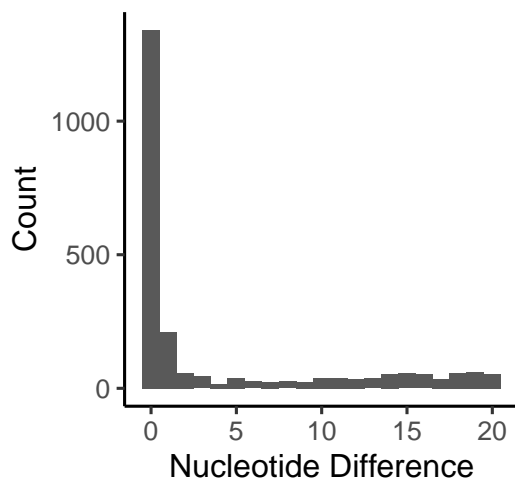
### IGHV3-52\*01

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



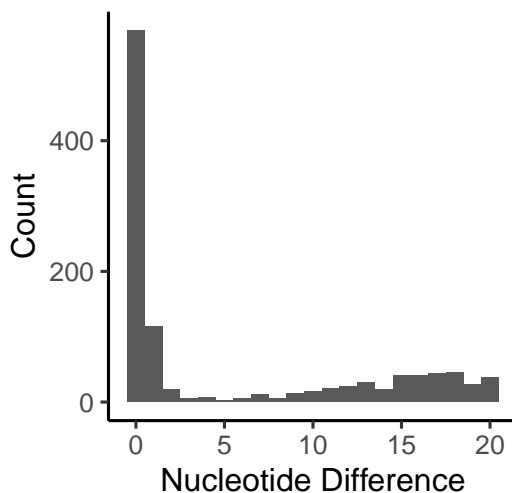
### IGHV3-48\*02

2807 sequences assigned  
1341 (47.8%) exact matches, in which:  
1328 unique CDR3  
6 unique J



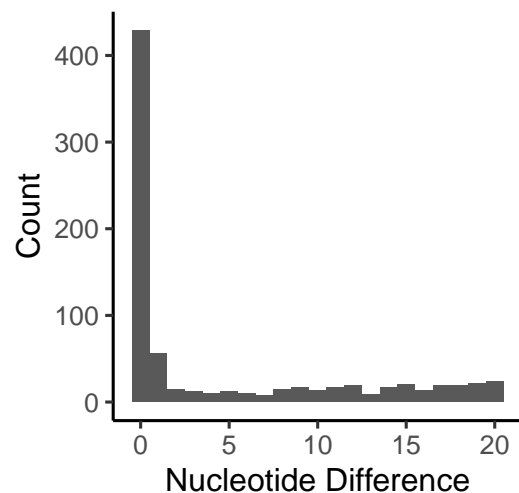
### IGHV3-49\*03

1417 sequences assigned  
569 (40.2%) exact matches, in which:  
568 unique CDR3  
6 unique J



### IGHV3-53\*02

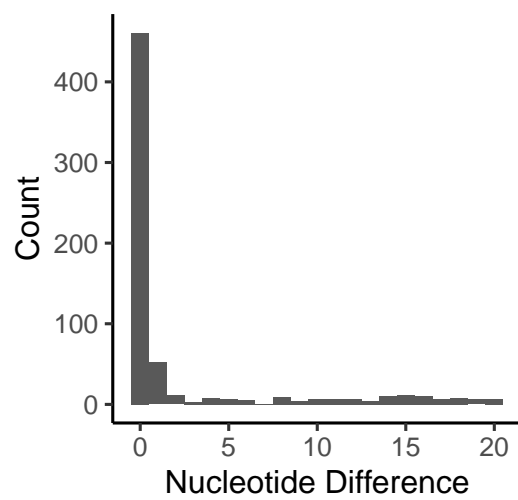
1066 sequences assigned  
429 (40.2%) exact matches, in which:  
426 unique CDR3  
6 unique J





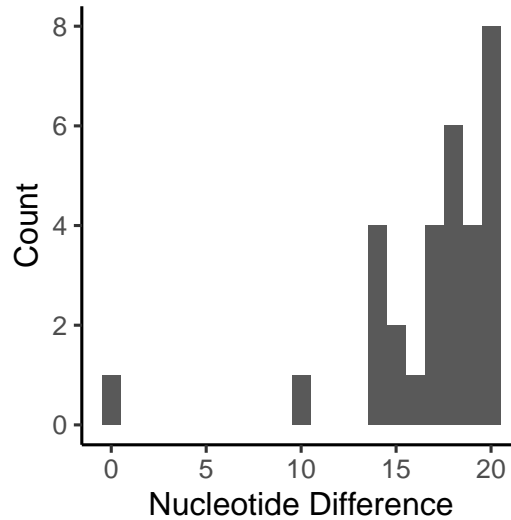
### IGHV3-53\*04

760 sequences assigned  
461 (60.7%) exact matches, in which:  
456 unique CDR3  
5 unique J



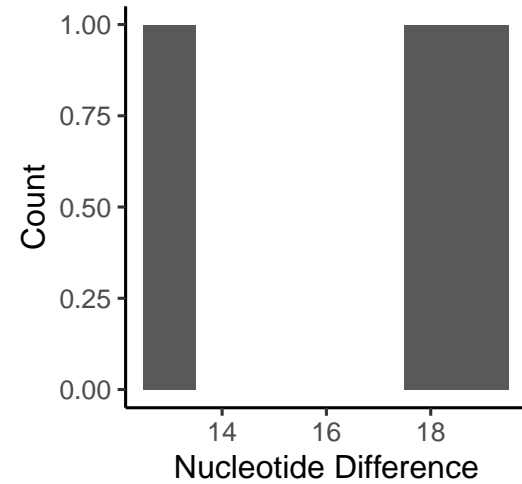
### IGHV3-64\*07

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



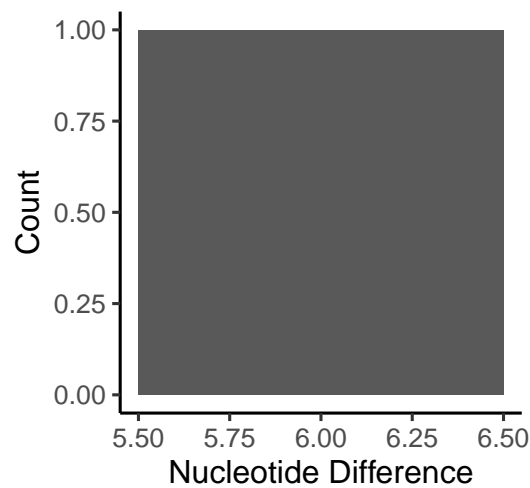
### IGHV3-69-1\*02

12 sequences assigned  
No exact matches.



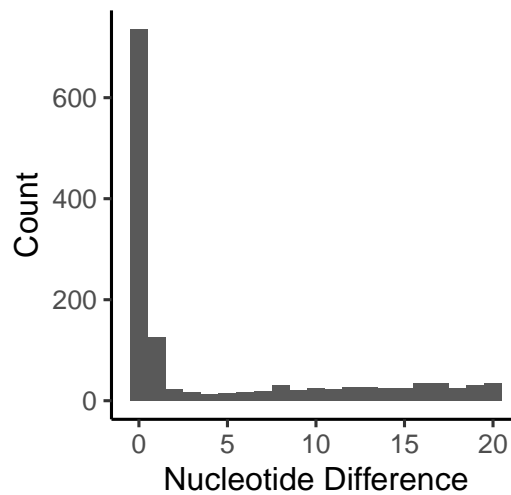
### IGHV3-62\*03

1 sequences assigned  
No exact matches.



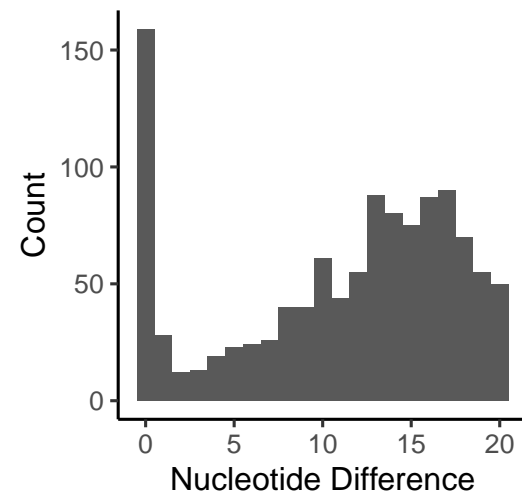
### IGHV3-66\*02

1639 sequences assigned  
736 (44.9%) exact matches, in which:  
734 unique CDR3  
6 unique J



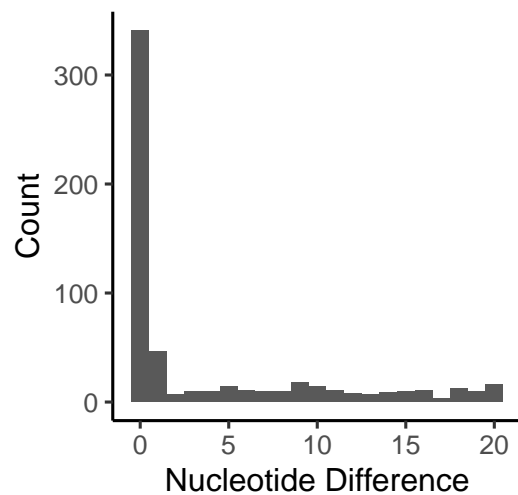
### IGHV3-72\*01

1696 sequences assigned  
159 (9.4%) exact matches, in which:  
154 unique CDR3  
5 unique J



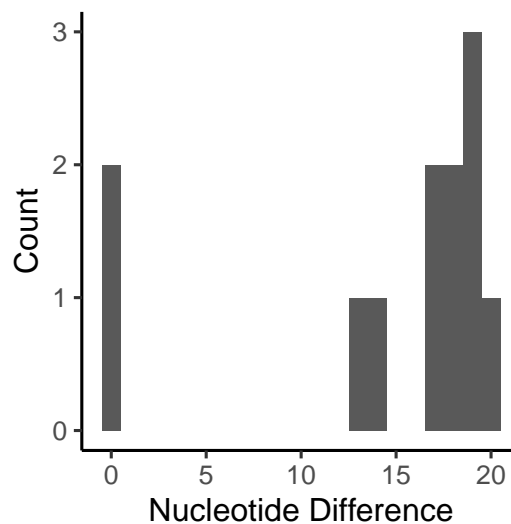
### IGHV3-64\*01

687 sequences assigned  
341 (49.6%) exact matches, in which:  
341 unique CDR3  
6 unique J



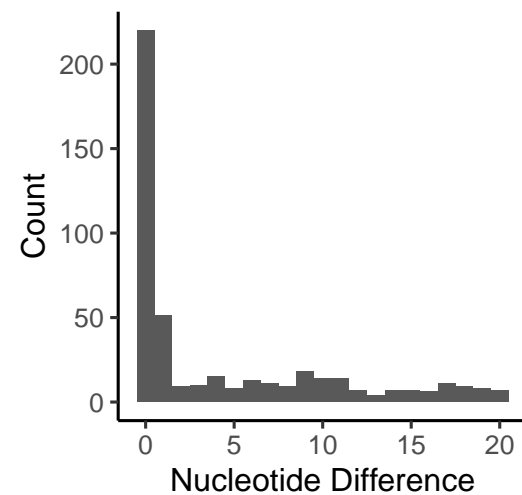
### IGHV3-69-1\*01

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



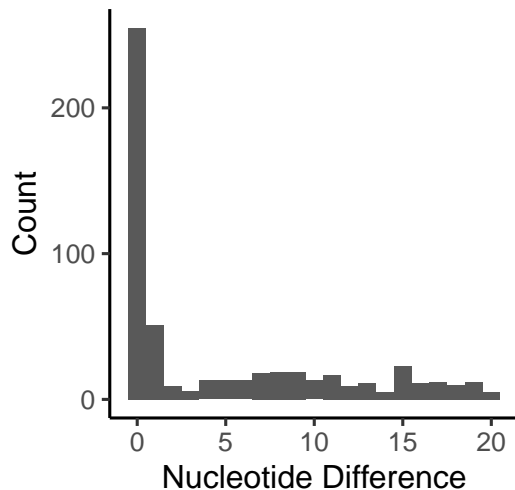
### IGHV3-73\*01

553 sequences assigned  
220 (39.8%) exact matches, in which:  
217 unique CDR3  
5 unique J



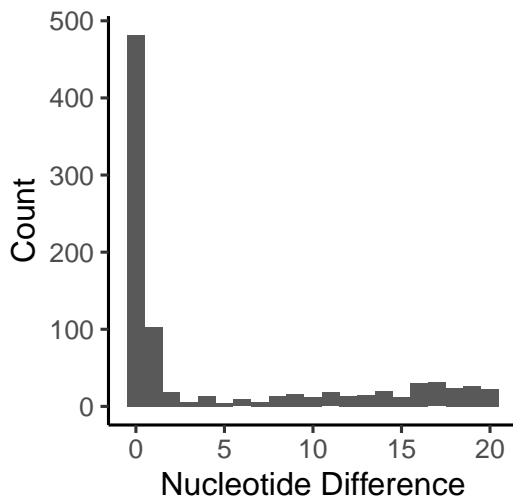
### IGHV3-73\*02

742 sequences assigned  
255 (34.4%) exact matches, in which:  
253 unique CDR3  
5 unique J



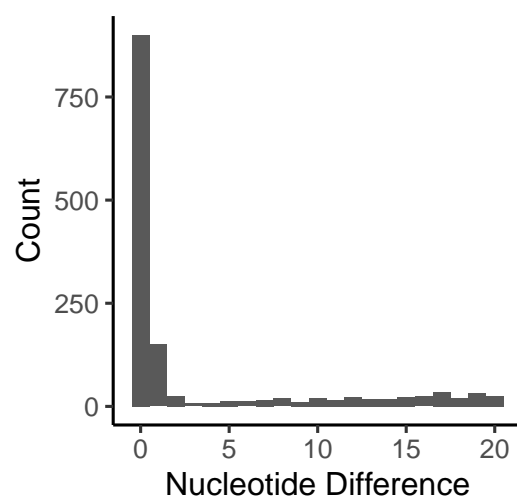
### IGHV3-64D\*06

1312 sequences assigned  
482 (36.7%) exact matches, in which:  
476 unique CDR3  
6 unique J



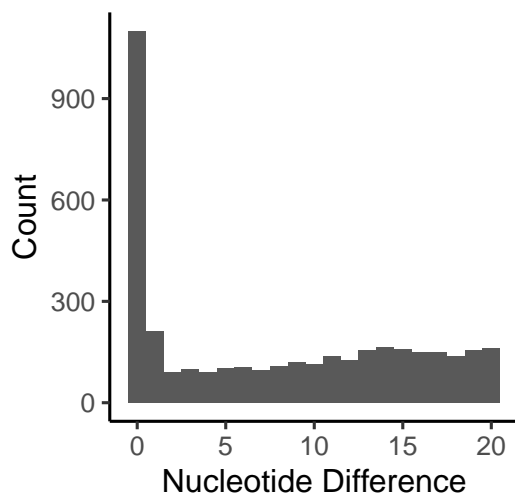
### IGHV4-4\*07

1939 sequences assigned  
901 (46.5%) exact matches, in which:  
897 unique CDR3  
6 unique J



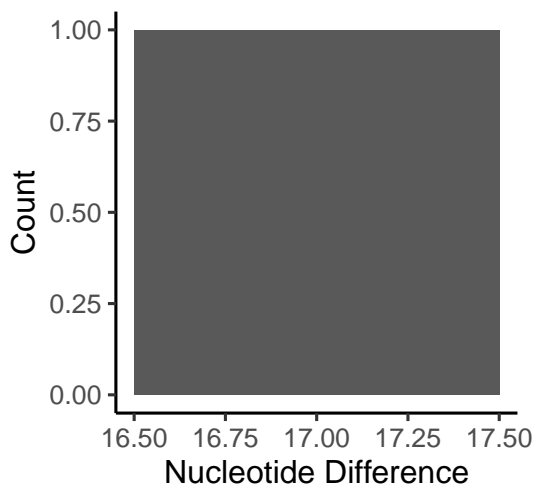
### IGHV3-74\*01

5129 sequences assigned  
1100 (21.4%) exact matches, in which:  
1079 unique CDR3  
6 unique J



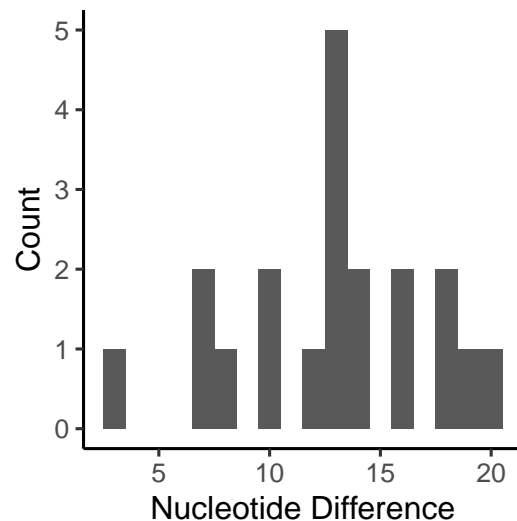
### IGHV3-NL1\*01

5 sequences assigned  
No exact matches.



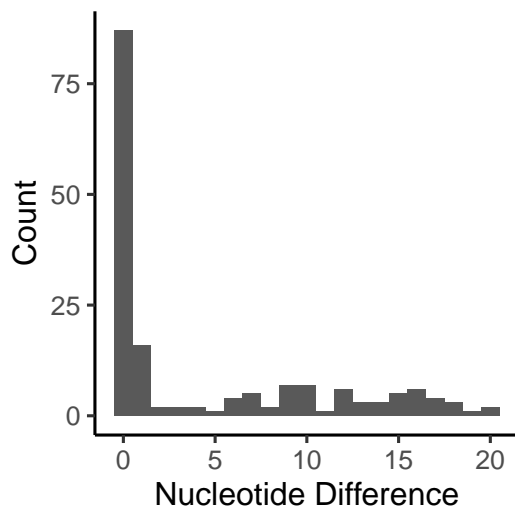
### IGHV4-4\*08

70 sequences assigned  
No exact matches.



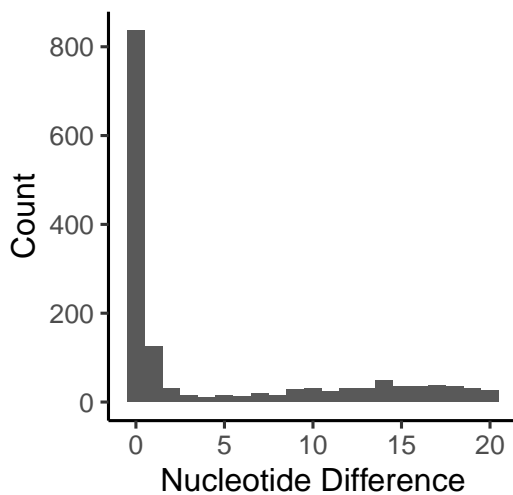
### IGHV3-43D\*04

194 sequences assigned  
87 (44.8%) exact matches, in which:  
86 unique CDR3  
6 unique J



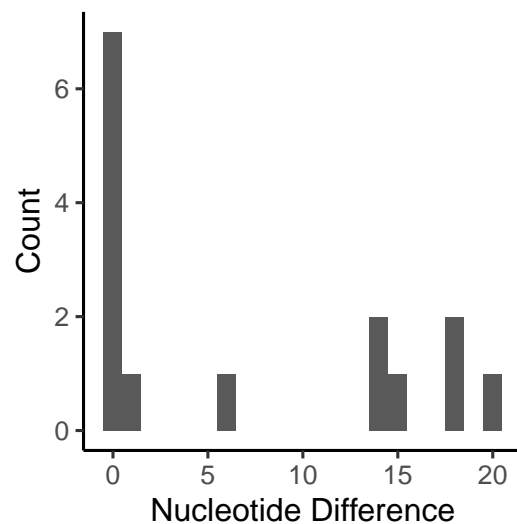
### IGHV4-4\*02

1961 sequences assigned  
837 (42.7%) exact matches, in which:  
825 unique CDR3  
6 unique J



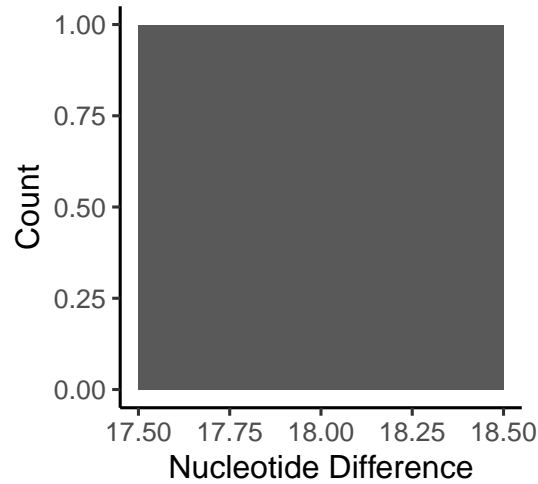
### IGHV4-28\*01

19 sequences assigned  
7 (36.8%) exact matches, in which:  
7 unique CDR3  
4 unique J



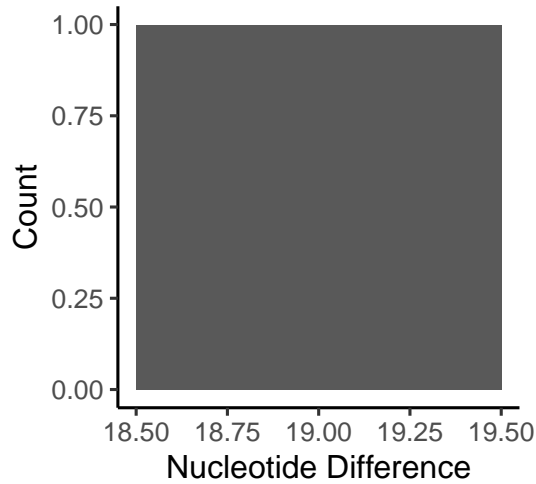
### IGHV4-28\*03

2 sequences assigned  
No exact matches.



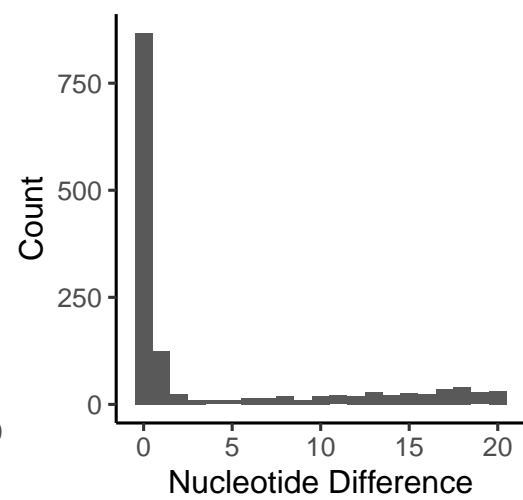
### IGHV4-30-4\*08

6 sequences assigned  
No exact matches.



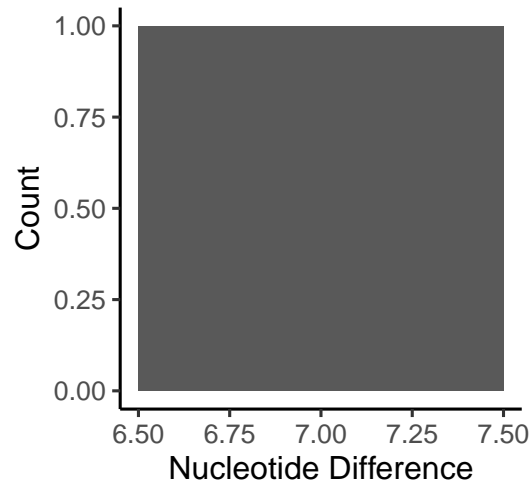
### IGHV4-38-2\*01

1906 sequences assigned  
868 (45.5%) exact matches, in which:  
866 unique CDR3  
6 unique J



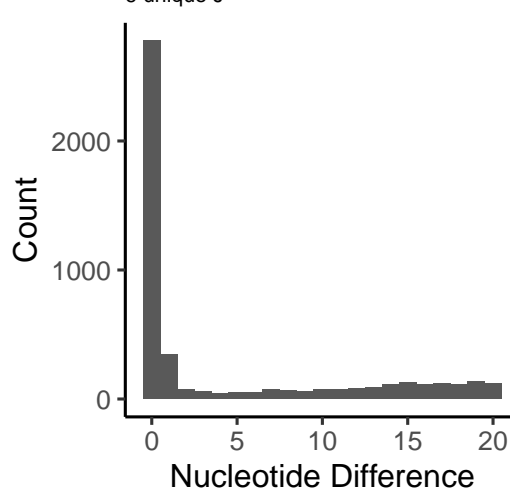
### IGHV4-30-4\*01

27 sequences assigned  
No exact matches.



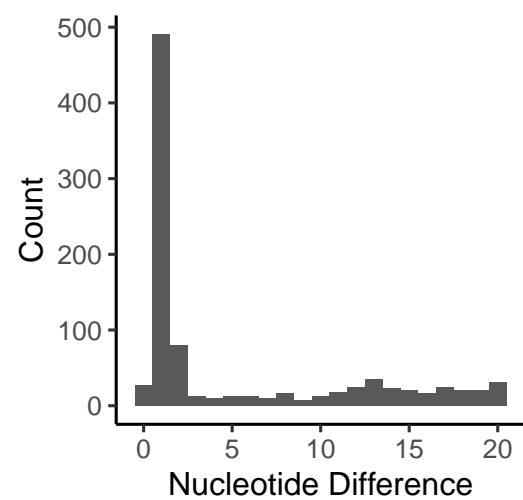
### IGHV4-31\*03

6584 sequences assigned  
2777 (42.2%) exact matches, in which:  
2755 unique CDR3  
6 unique J



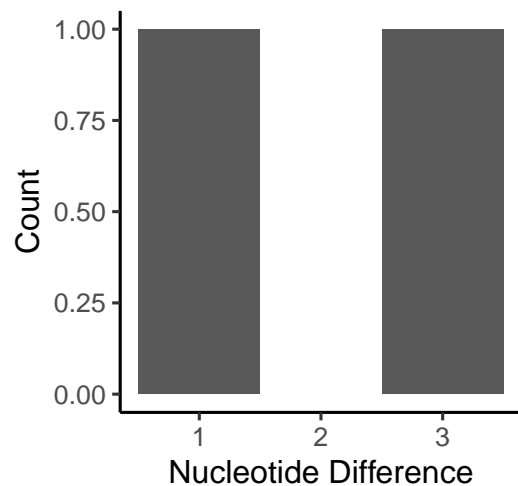
### IGHV4-38-2\*02

1325 sequences assigned  
27 (2%) exact matches, in which:  
27 unique CDR3  
5 unique J



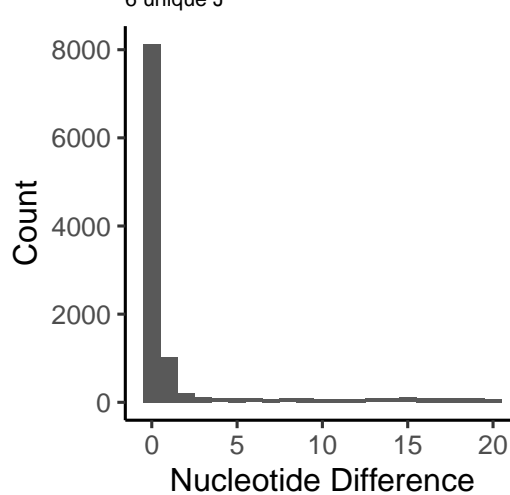
### IGHV4-30-4\*07

2 sequences assigned  
No exact matches.



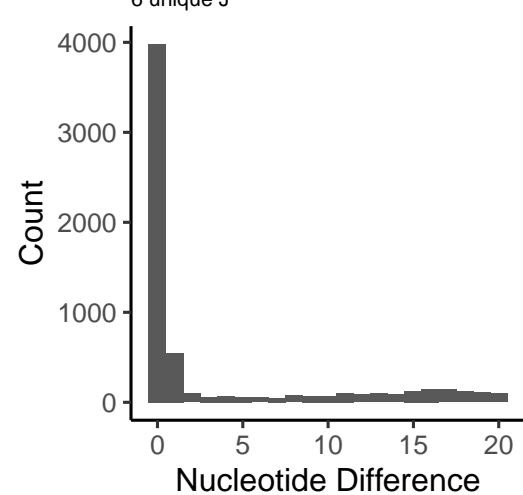
### IGHV4-34\*01

12241 sequences assigned  
8128 (66.4%) exact matches, in which:  
8096 unique CDR3  
6 unique J



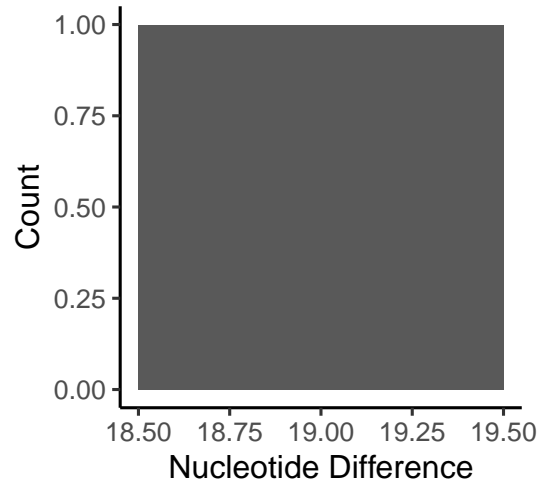
### IGHV4-39\*01

8379 sequences assigned  
3981 (47.5%) exact matches, in which:  
3945 unique CDR3  
6 unique J



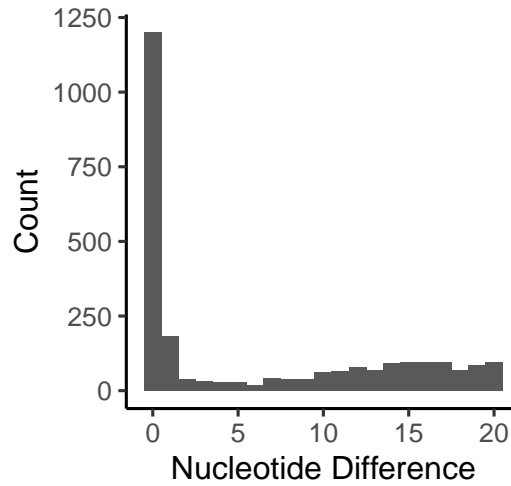
### IGHV4-55\*01

1 sequences assigned  
No exact matches.



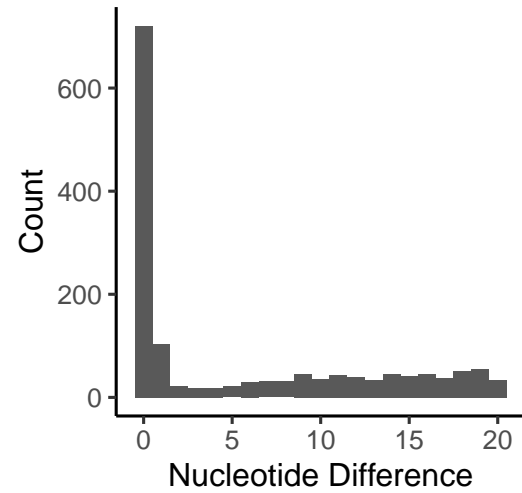
### IGHV4-59\*08

3510 sequences assigned  
1200 (34.2%) exact matches, in which:  
1191 unique CDR3  
6 unique J



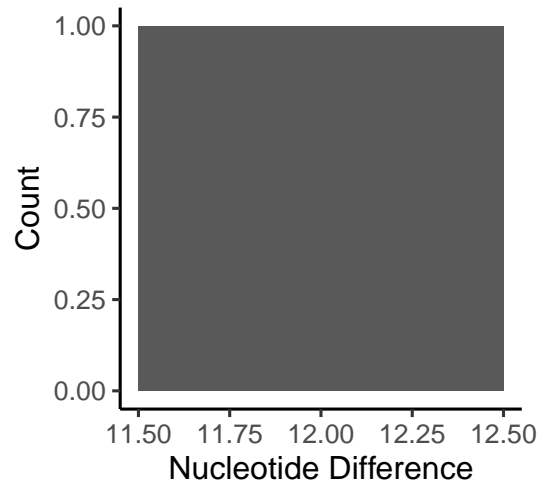
### IGHV5-51\*01

2016 sequences assigned  
721 (35.8%) exact matches, in which:  
720 unique CDR3  
6 unique J



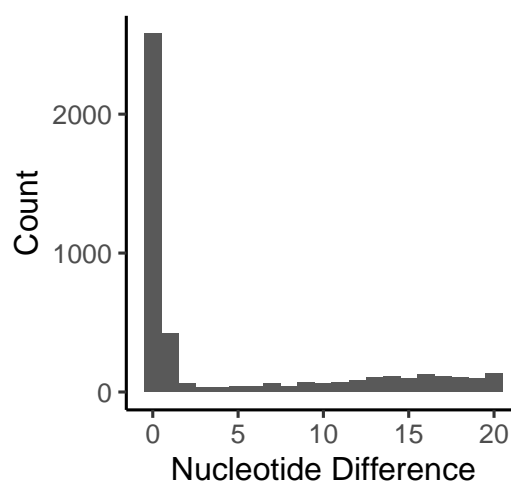
### IGHV4-55\*08

3 sequences assigned  
No exact matches.



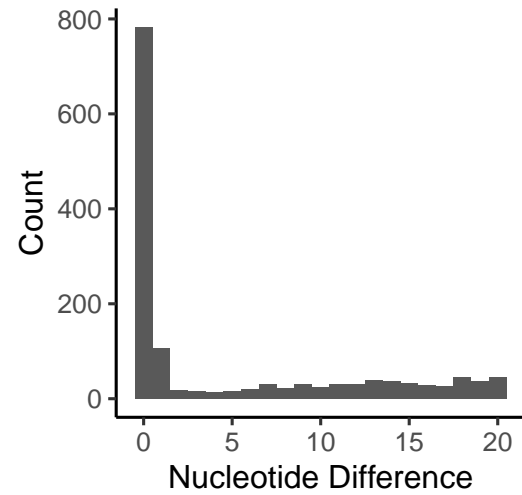
### IGHV4-61\*02

6103 sequences assigned  
2579 (42.3%) exact matches, in which:  
2569 unique CDR3  
6 unique J



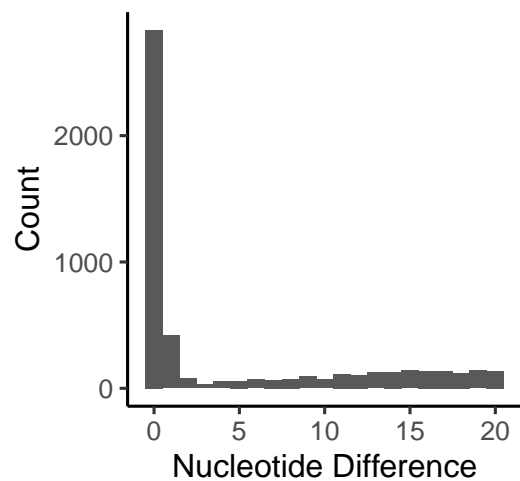
### IGHV5-51\*01\_C45G

1921 sequences assigned  
783 (40.8%) exact matches, in which:  
779 unique CDR3  
6 unique J



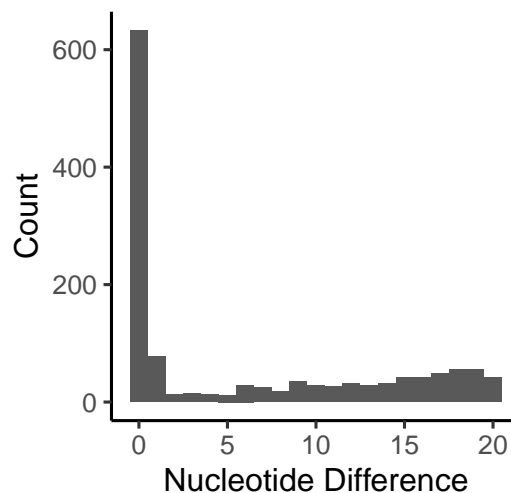
### IGHV4-59\*01

6868 sequences assigned  
2836 (41.3%) exact matches, in which:  
2805 unique CDR3  
6 unique J



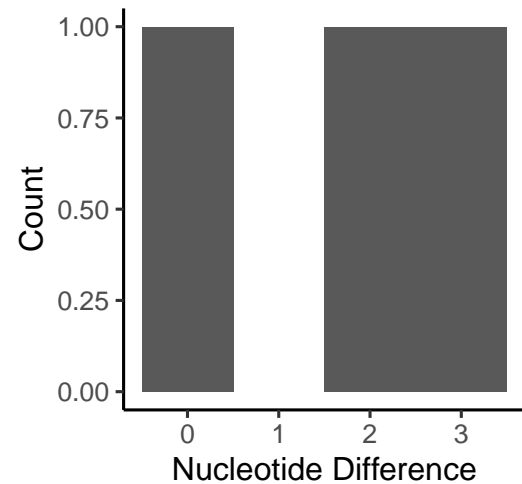
### IGHV5-10-1\*01

1761 sequences assigned  
633 (35.9%) exact matches, in which:  
621 unique CDR3  
6 unique J



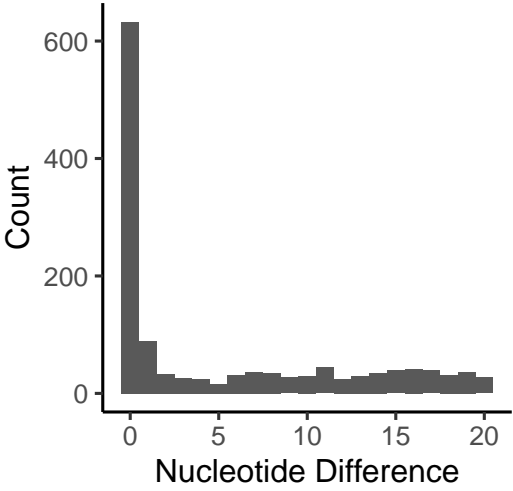
### IGHV5-78\*01

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



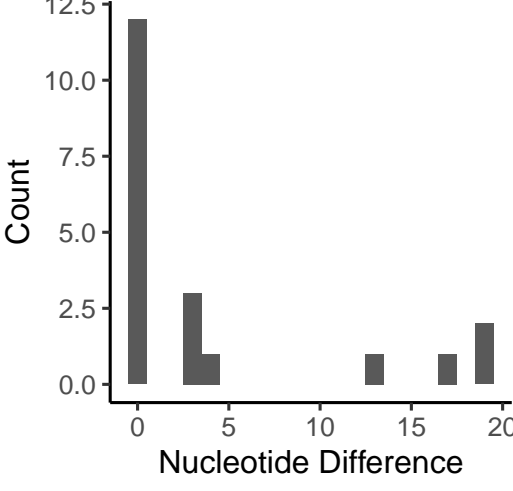
IGHV6-1\*01

1502 sequences assigned  
633 (42.1%) exact matches, in which:  
632 unique CDR3  
6 unique J



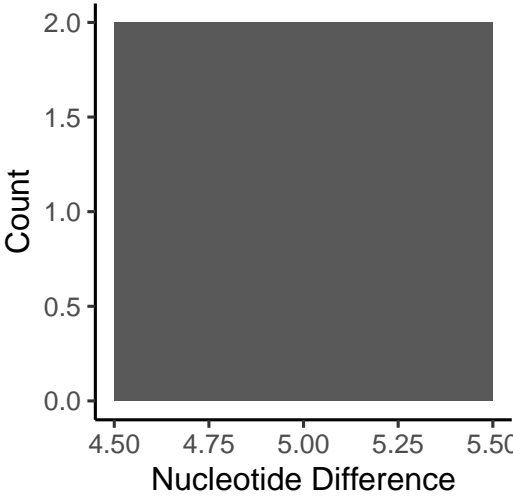
IGHV7-4-1\*01

21 sequences assigned  
12 (57.1%) exact matches, in which:  
12 unique CDR3  
3 unique J



IGHV7-81\*01

2 sequences assigned  
No exact matches.





Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.