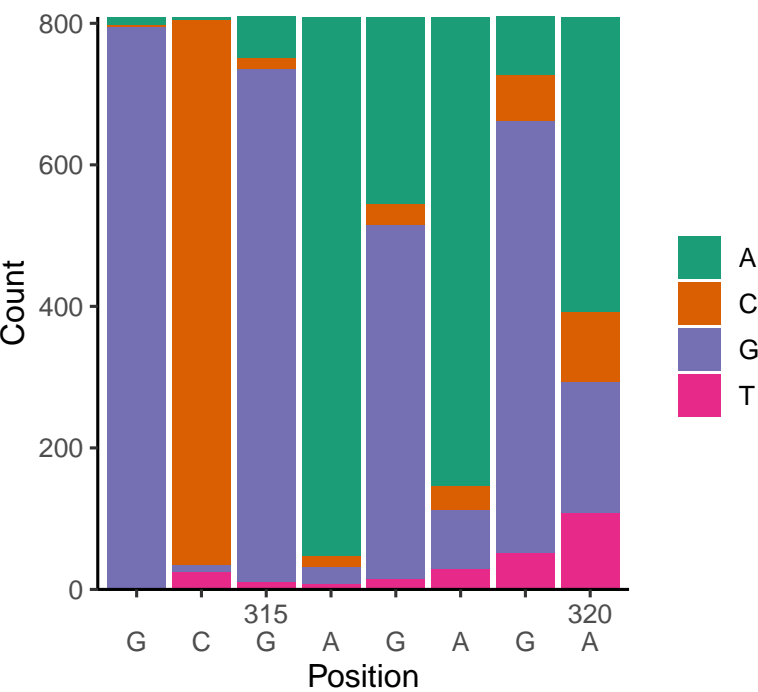
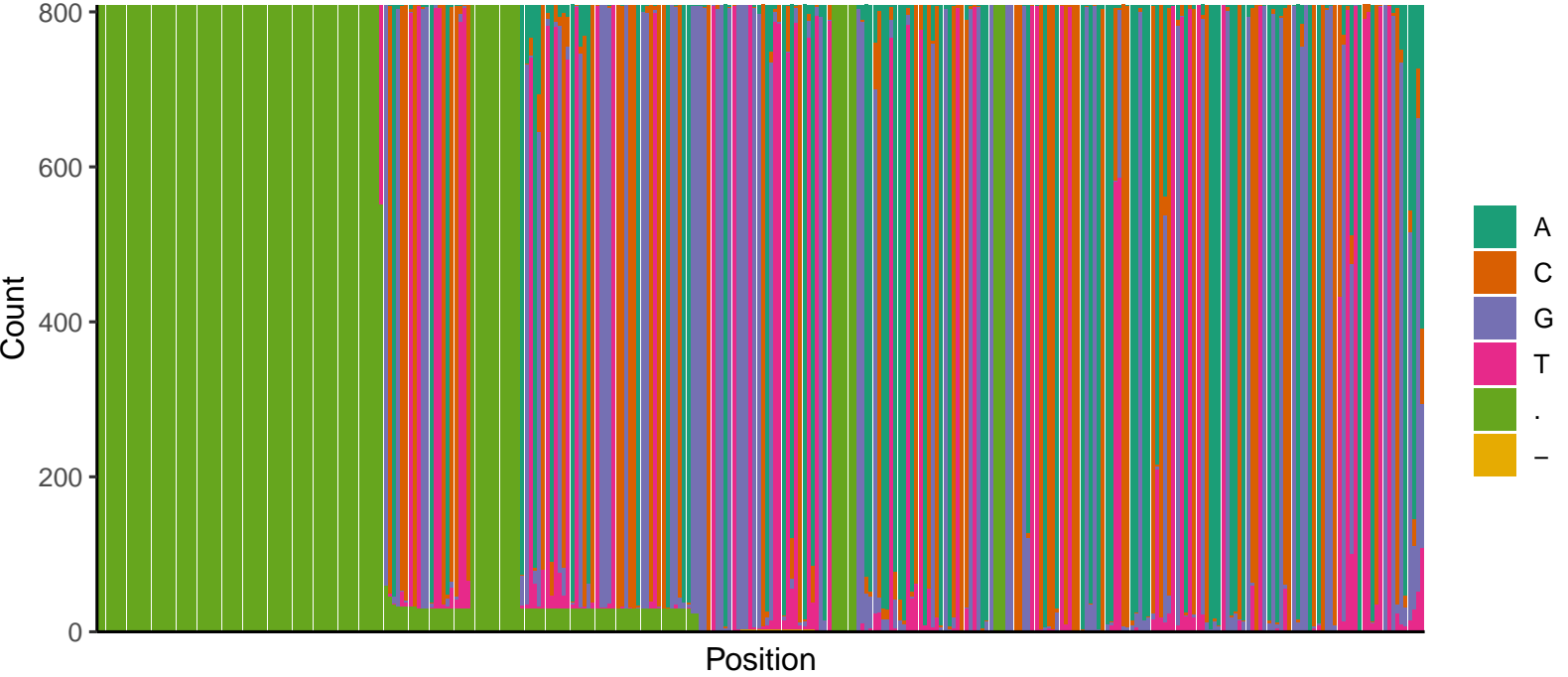


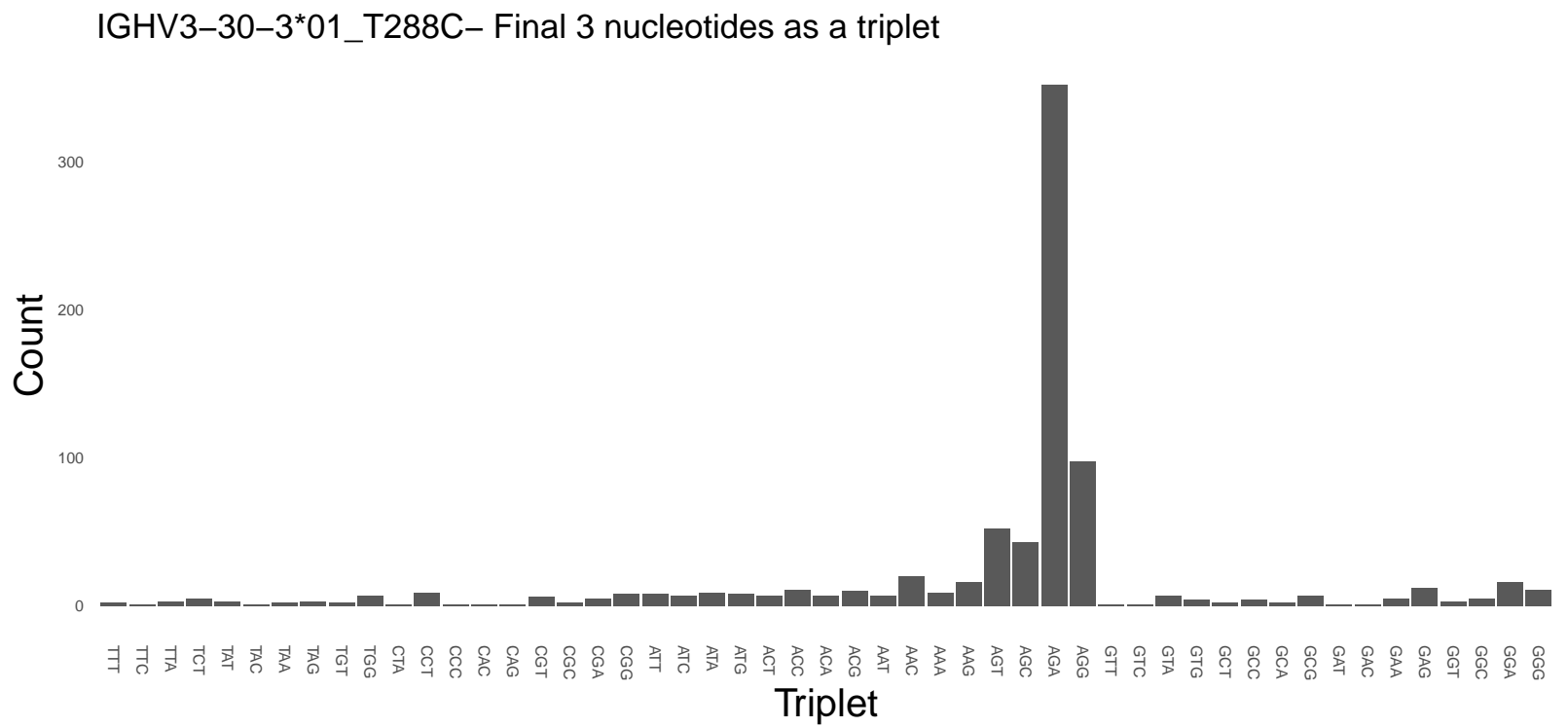
Gene IGHV3-30-3\*01\_T288C



Gene IGHV3-30-3\*01\_T288C

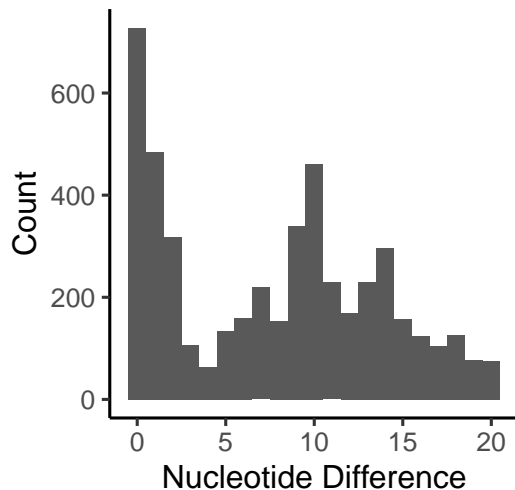


IGHV3-30-3\*01\_T288C- Final 3 nucleotides as a triplet



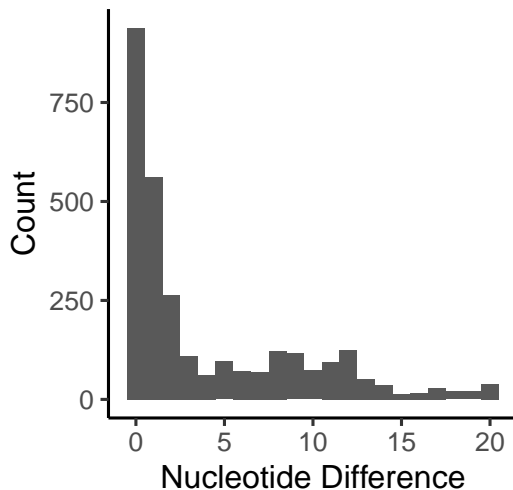
### IGHV1-2\*02

5476 sequences assigned  
728 (13.3%) exact matches, in which:  
672 unique CDR3  
6 unique J



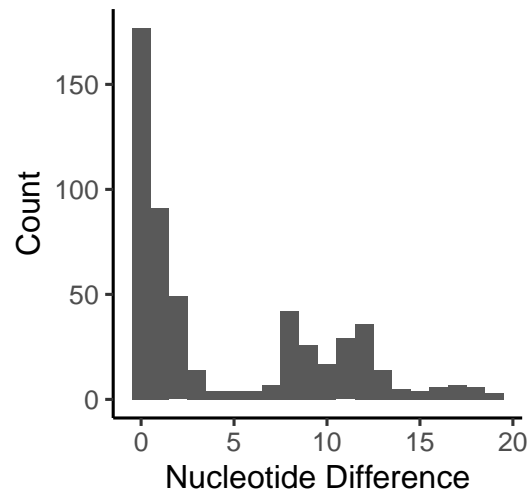
### IGHV1-8\*01

3202 sequences assigned  
939 (29.3%) exact matches, in which:  
865 unique CDR3  
6 unique J



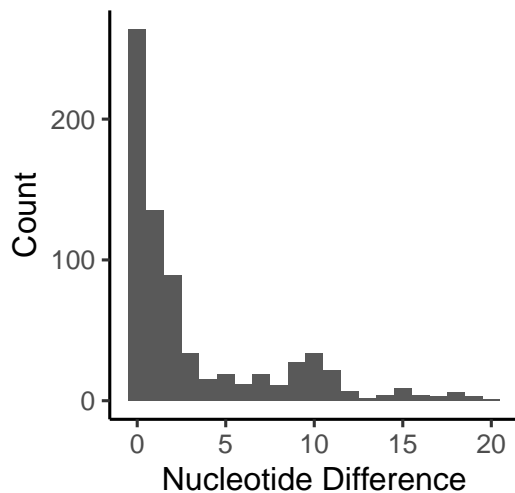
### IGHV1-24\*01

558 sequences assigned  
177 (31.7%) exact matches, in which:  
167 unique CDR3  
6 unique J



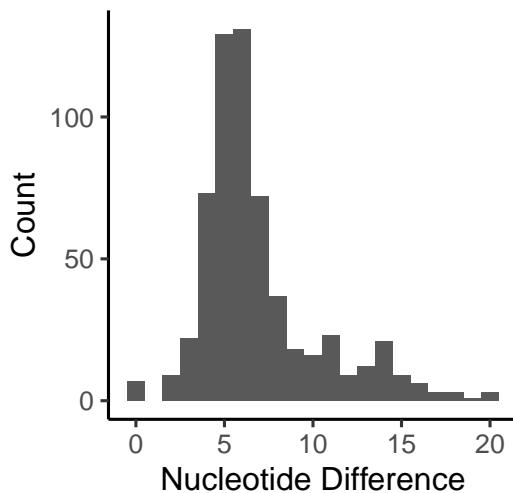
### IGHV1-2\*04

725 sequences assigned  
264 (36.4%) exact matches, in which:  
242 unique CDR3  
6 unique J



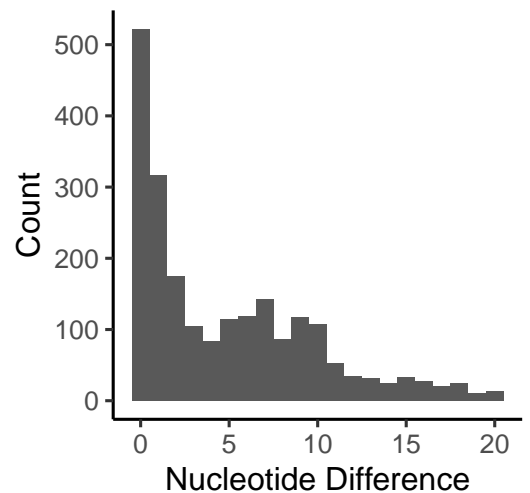
### IGHV1-8\*02

635 sequences assigned  
7 (1.1%) exact matches, in which:  
7 unique CDR3  
3 unique J



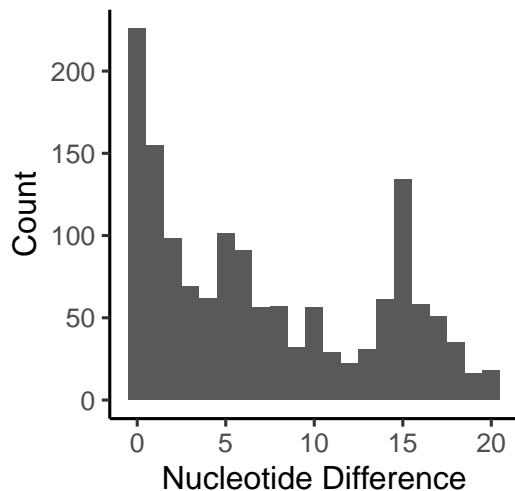
### IGHV1-46\*01

2318 sequences assigned  
522 (22.5%) exact matches, in which:  
488 unique CDR3  
6 unique J



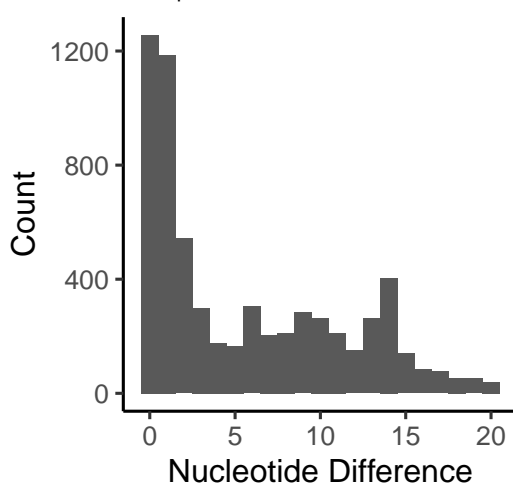
### IGHV1-3\*01\_05

1562 sequences assigned  
226 (14.5%) exact matches, in which:  
208 unique CDR3  
6 unique J



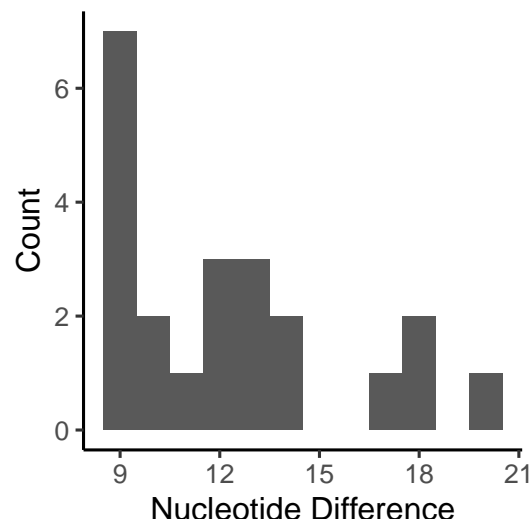
### IGHV1-18\*01

6944 sequences assigned  
1256 (18.1%) exact matches, in which:  
1102 unique CDR3  
6 unique J



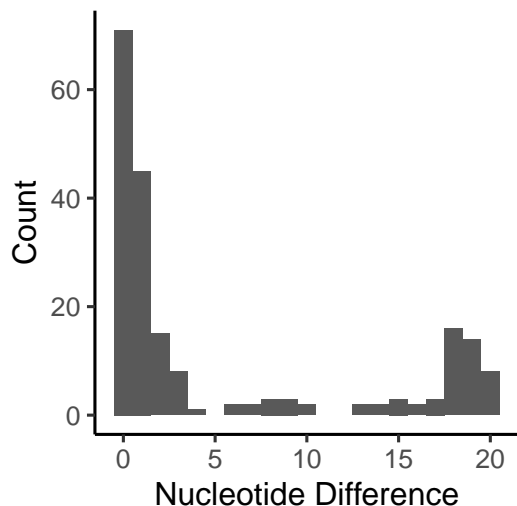
### IGHV1-58\*02

25 sequences assigned  
No exact matches.



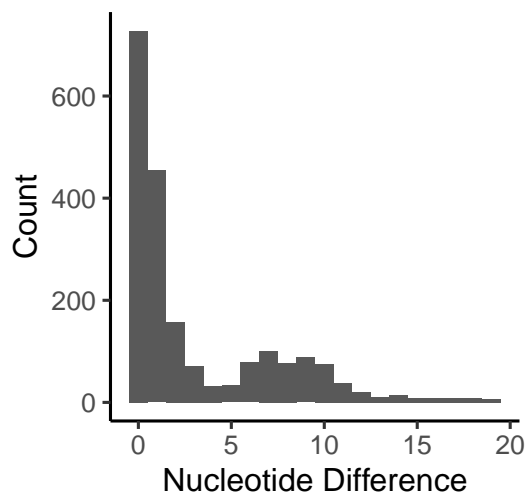
### IGHV1-58\*01\_03

248 sequences assigned  
71 (28.6%) exact matches, in which:  
58 unique CDR3  
4 unique J



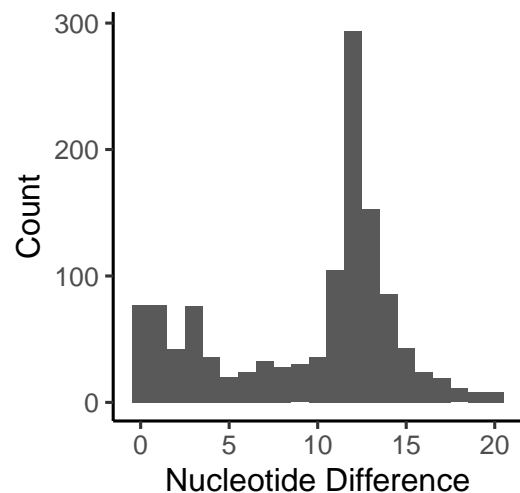
### IGHV1-69\*06\_14

2070 sequences assigned  
728 (35.2%) exact matches, in which:  
659 unique CDR3  
6 unique J



### IGHV2-5\*02

1267 sequences assigned  
77 (6.1%) exact matches, in which:  
72 unique CDR3  
5 unique J



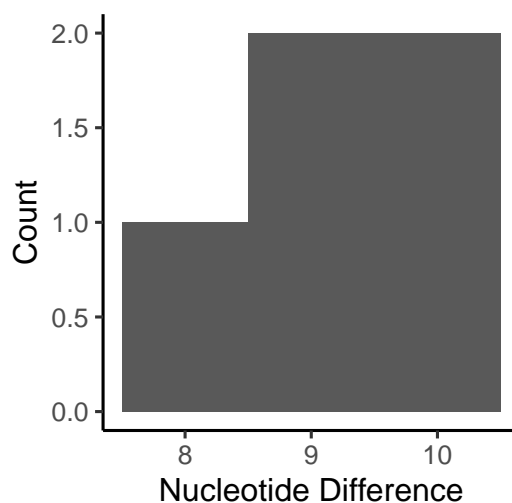
### IGHV1-69-2\*01

7 sequences assigned  
1 (14.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



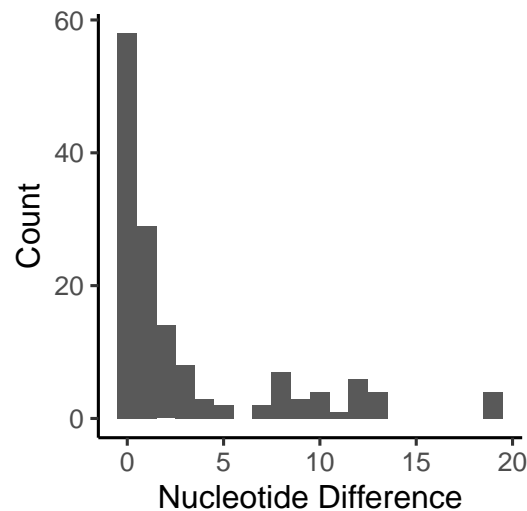
### IGHV1-NL1\*01

5 sequences assigned  
No exact matches.



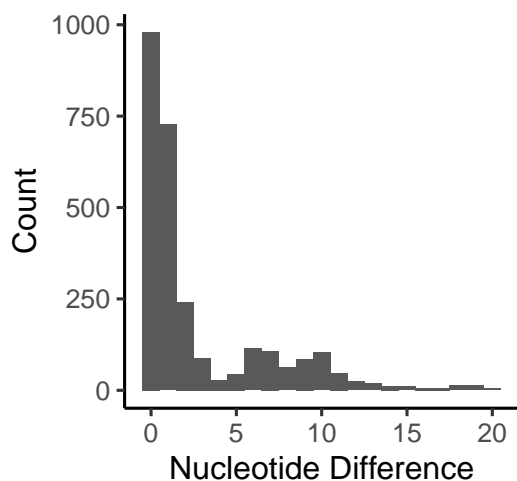
### IGHV2-26\*01

156 sequences assigned  
58 (37.2%) exact matches, in which:  
53 unique CDR3  
5 unique J



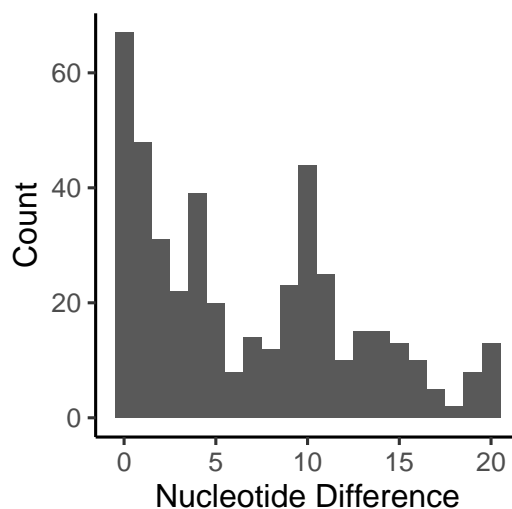
### IGHV1-69\*04\_09

2834 sequences assigned  
980 (34.6%) exact matches, in which:  
912 unique CDR3  
6 unique J



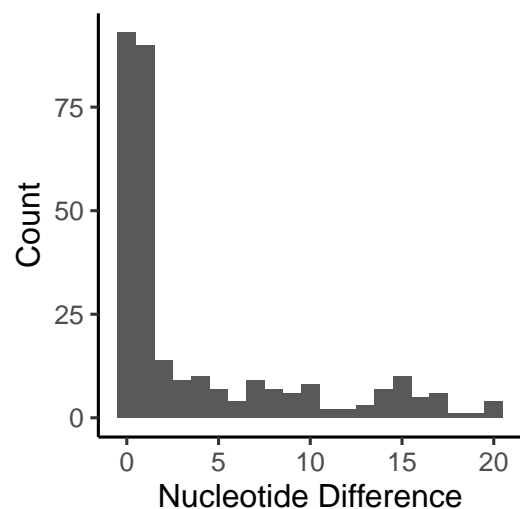
### IGHV2-5\*01

475 sequences assigned  
67 (14.1%) exact matches, in which:  
59 unique CDR3  
6 unique J



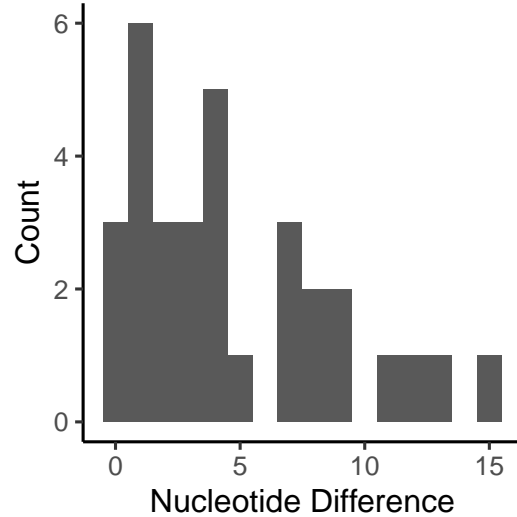
### IGHV2-70\*01

311 sequences assigned  
93 (29.9%) exact matches, in which:  
82 unique CDR3  
5 unique J



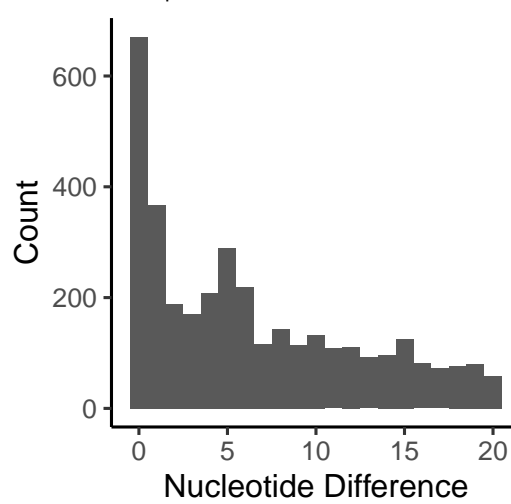
### IGHV2–70\*12

32 sequences assigned  
3 (9.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



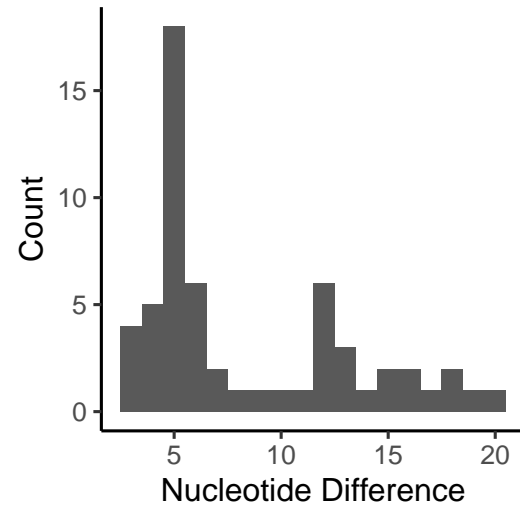
### IGHV3–9\*01

4073 sequences assigned  
671 (16.5%) exact matches, in which:  
477 unique CDR3  
6 unique J



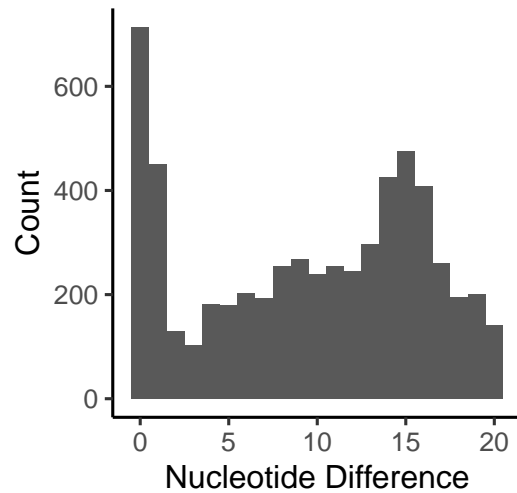
### IGHV3–11\*06

82 sequences assigned  
No exact matches.



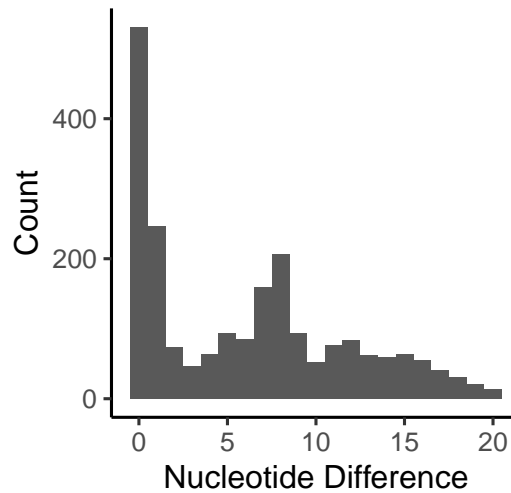
### IGHV3–7\*01

6909 sequences assigned  
714 (10.3%) exact matches, in which:  
535 unique CDR3  
6 unique J



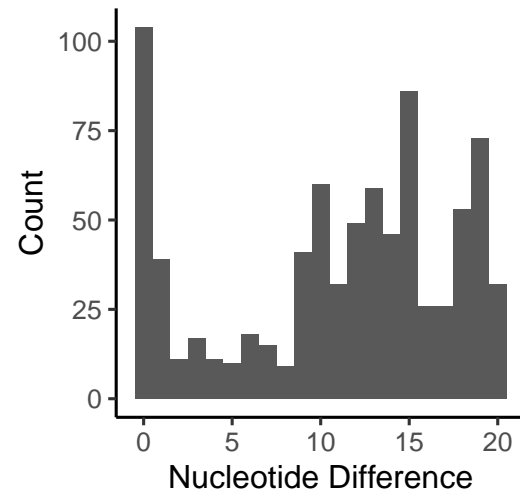
### IGHV3–11\*01

2450 sequences assigned  
531 (21.7%) exact matches, in which:  
403 unique CDR3  
6 unique J



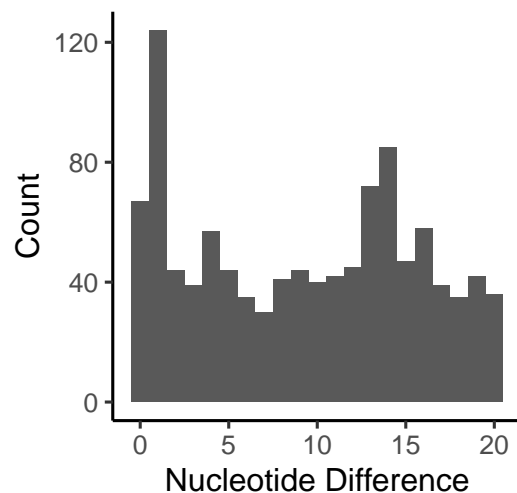
### IGHV3–13\*01

906 sequences assigned  
104 (11.5%) exact matches, in which:  
84 unique CDR3  
5 unique J



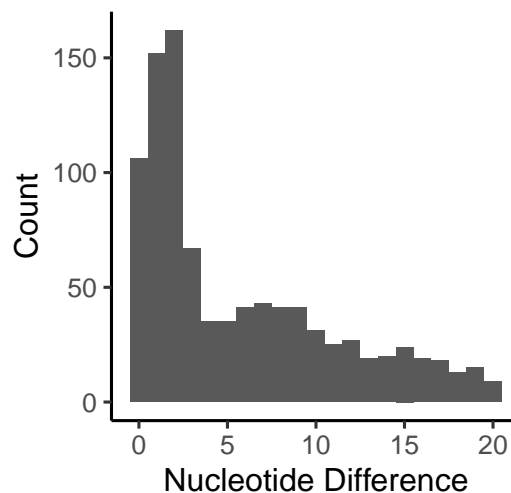
### IGHV3–7\*03

1343 sequences assigned  
67 (5%) exact matches, in which:  
54 unique CDR3  
4 unique J



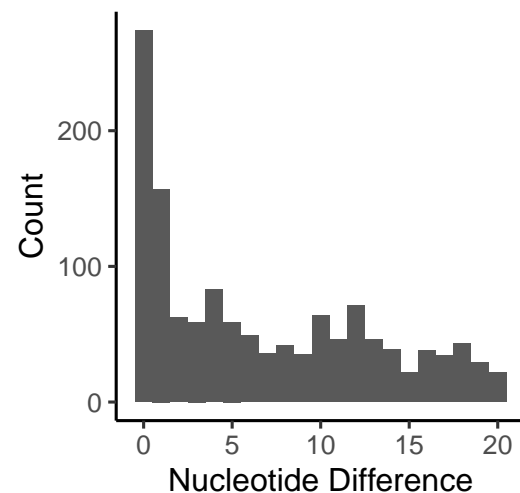
### IGHV3–11\*04

992 sequences assigned  
106 (10.7%) exact matches, in which:  
102 unique CDR3  
5 unique J



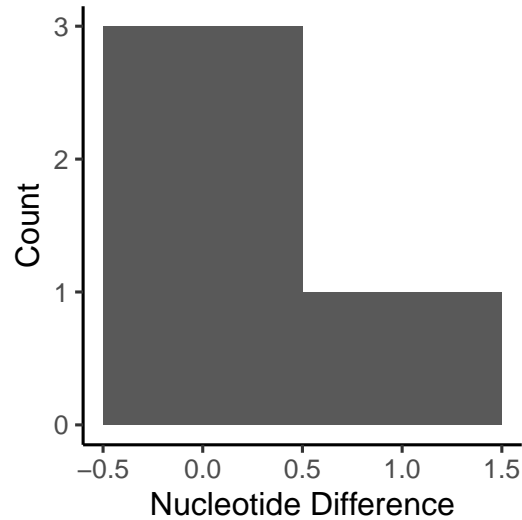
### IGHV3–15\*01\_02

1469 sequences assigned  
274 (18.7%) exact matches, in which:  
193 unique CDR3  
6 unique J



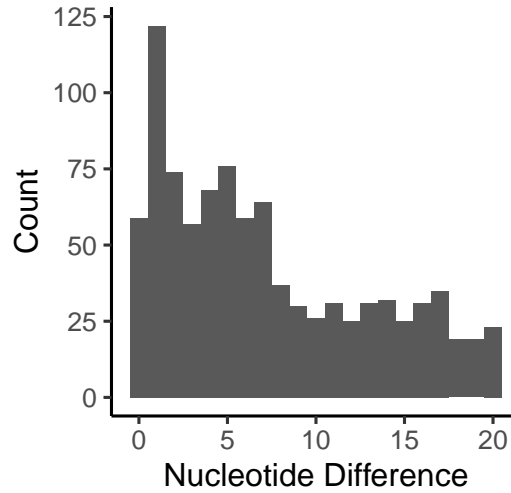
### IGHV3-19\*01

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



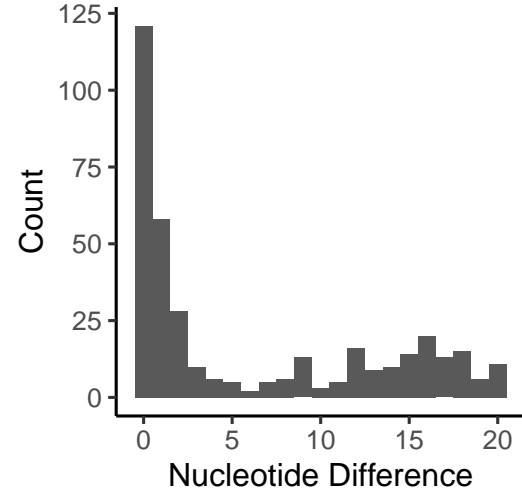
### IGHV3-21\*04

1059 sequences assigned  
59 (5.6%) exact matches, in which:  
55 unique CDR3  
4 unique J



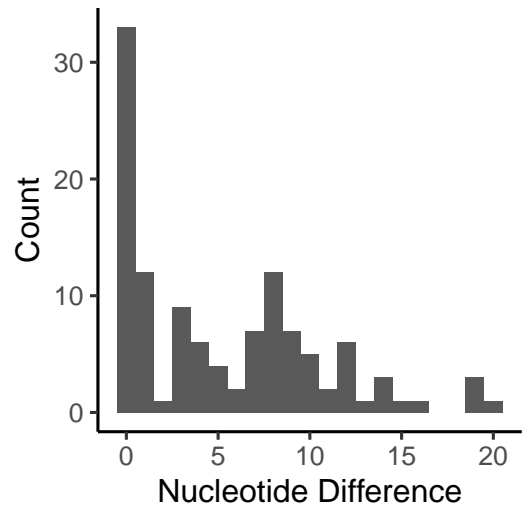
### IGHV3-30\*03

597 sequences assigned  
121 (20.3%) exact matches, in which:  
114 unique CDR3  
4 unique J



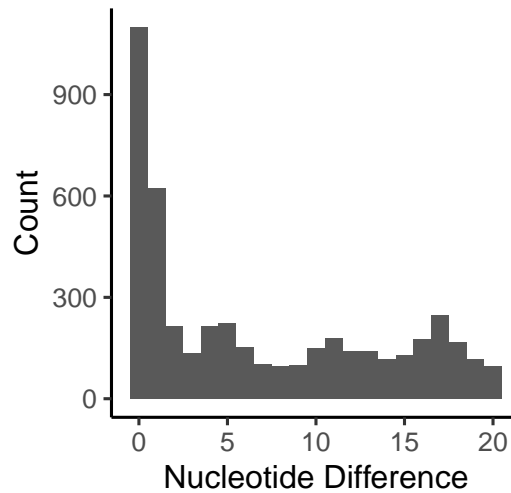
### IGHV3-20\*01\_02

124 sequences assigned  
33 (26.6%) exact matches, in which:  
27 unique CDR3  
4 unique J



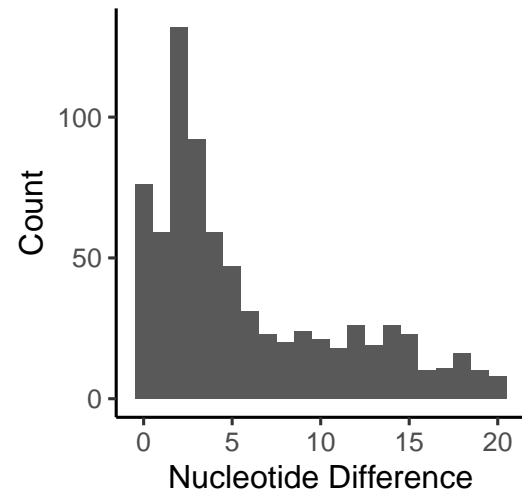
### IGHV3-21\*01\_02

5455 sequences assigned  
1100 (20.2%) exact matches, in which:  
798 unique CDR3  
6 unique J



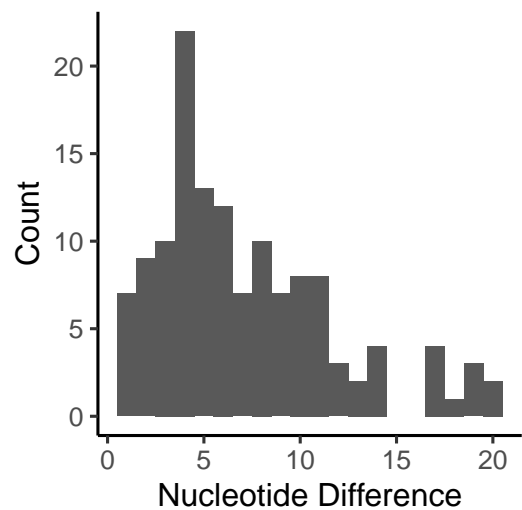
### IGHV3-30-3\*01\_T288C

809 sequences assigned  
76 (9.4%) exact matches, in which:  
71 unique CDR3  
6 unique J



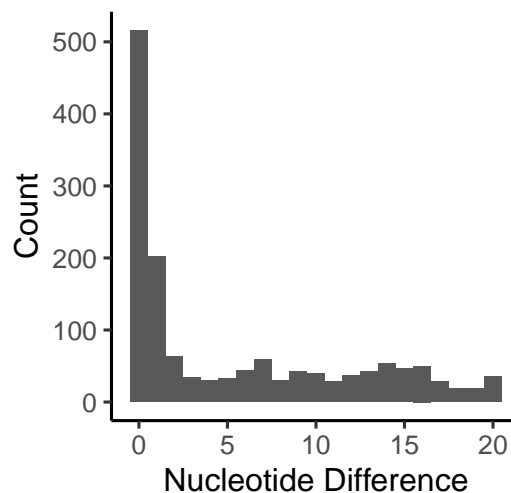
### IGHV3-20\*03\_04

154 sequences assigned  
No exact matches.



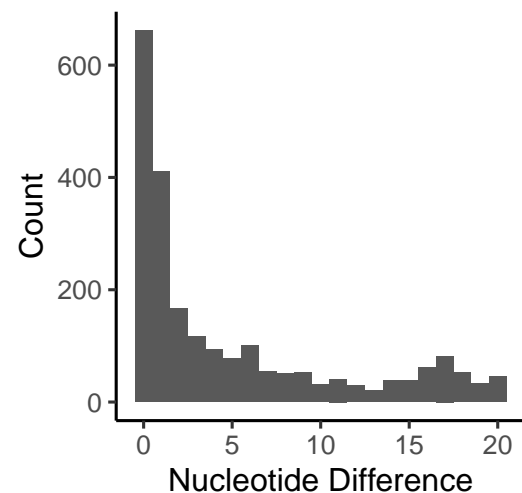
### IGHV3-30-3\*01

1644 sequences assigned  
516 (31.4%) exact matches, in which:  
390 unique CDR3  
6 unique J



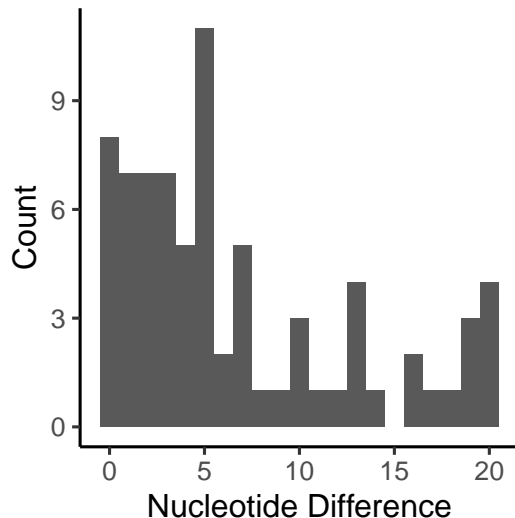
### IGHV3-33\*01

2564 sequences assigned  
662 (25.8%) exact matches, in which:  
506 unique CDR3  
6 unique J



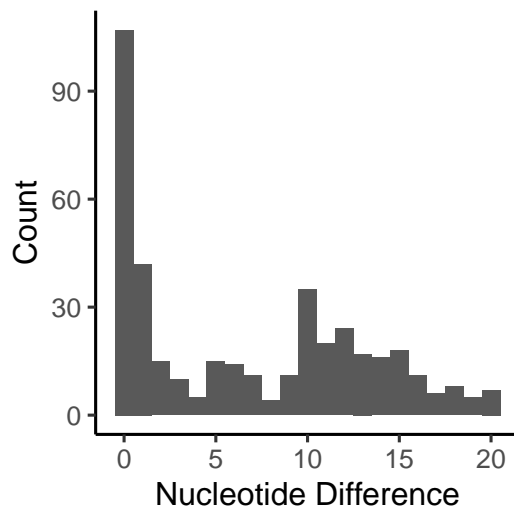
### IGHV3-33\*05

122 sequences assigned  
8 (6.6%) exact matches, in which:  
8 unique CDR3  
2 unique J



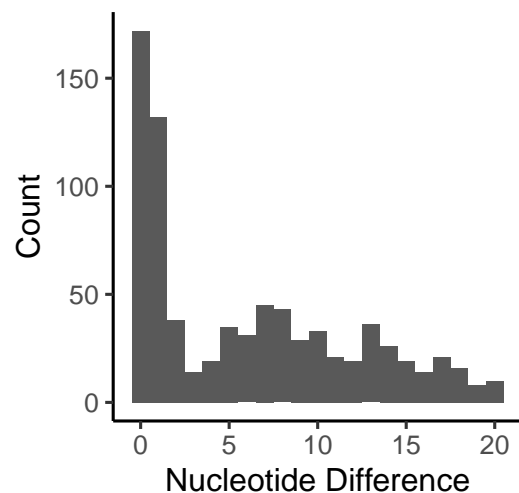
### IGHV3-43\*02

586 sequences assigned  
107 (18.3%) exact matches, in which:  
79 unique CDR3  
4 unique J



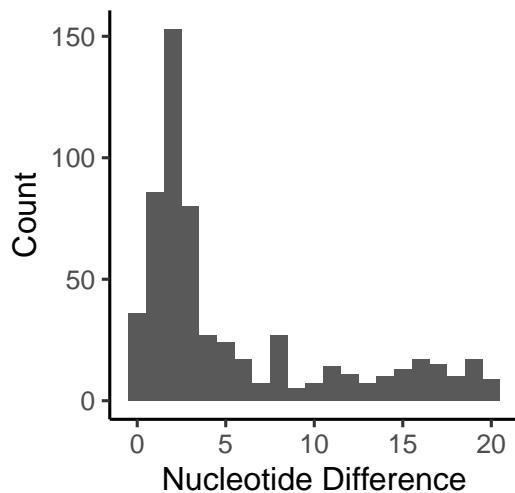
### IGHV3-49\*04

867 sequences assigned  
172 (19.8%) exact matches, in which:  
123 unique CDR3  
6 unique J



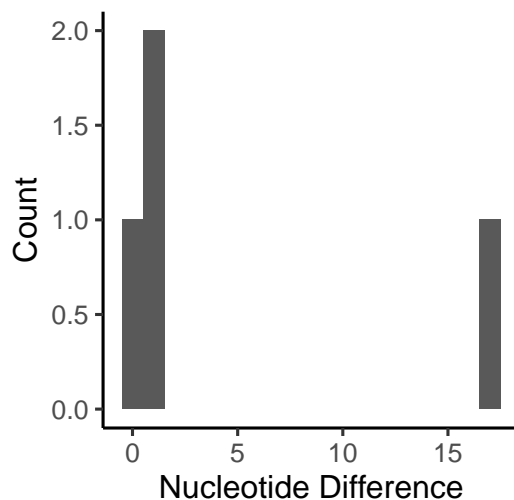
### IGHV3-33\*06

646 sequences assigned  
36 (5.6%) exact matches, in which:  
36 unique CDR3  
6 unique J



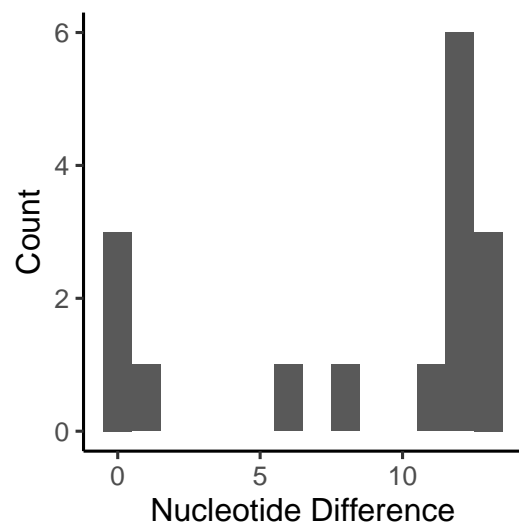
### IGHV3-47\*01

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



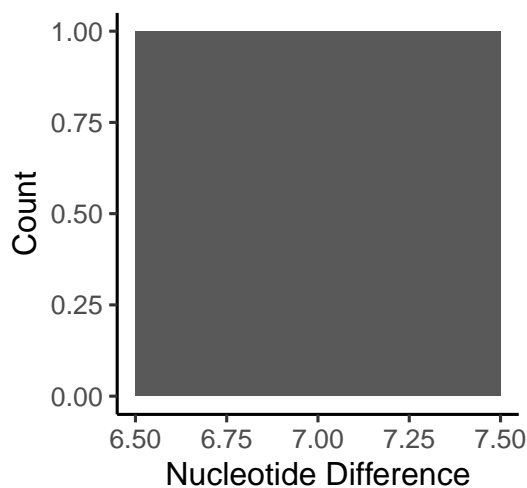
### IGHV3-52\*01\_03

16 sequences assigned  
3 (18.8%) exact matches, in which:  
2 unique CDR3  
1 unique J



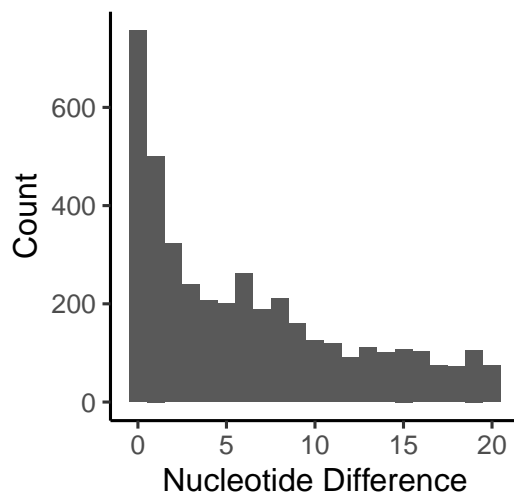
### IGHV3-35\*01

1 sequences assigned  
No exact matches.



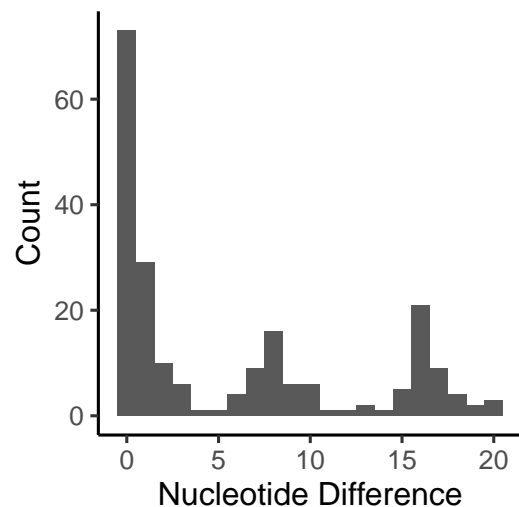
### IGHV3-48\*03

4630 sequences assigned  
757 (16.3%) exact matches, in which:  
539 unique CDR3  
6 unique J



### IGHV3-53\*04

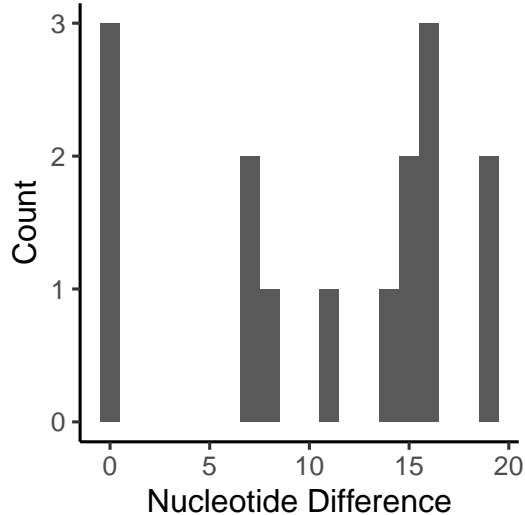
287 sequences assigned  
73 (25.4%) exact matches, in which:  
56 unique CDR3  
5 unique J





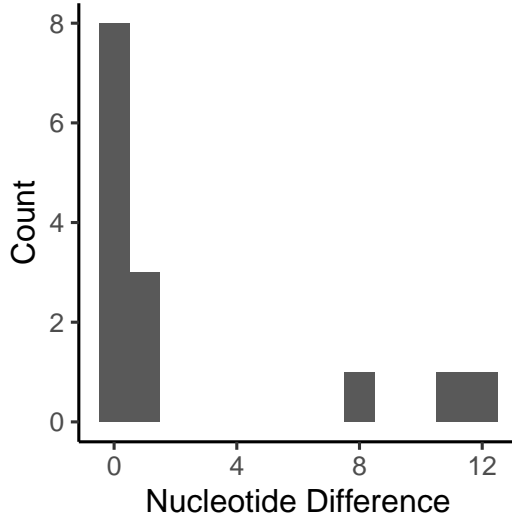
### IGHV3-53\*05

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



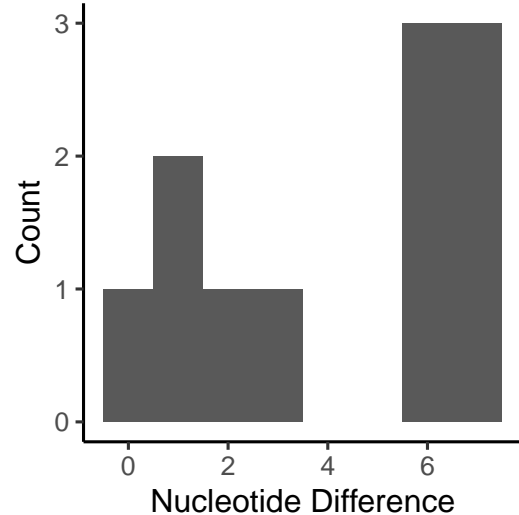
### IGHV3-64\*02\_07

42 sequences assigned  
8 (19%) exact matches, in which:  
6 unique CDR3  
3 unique J



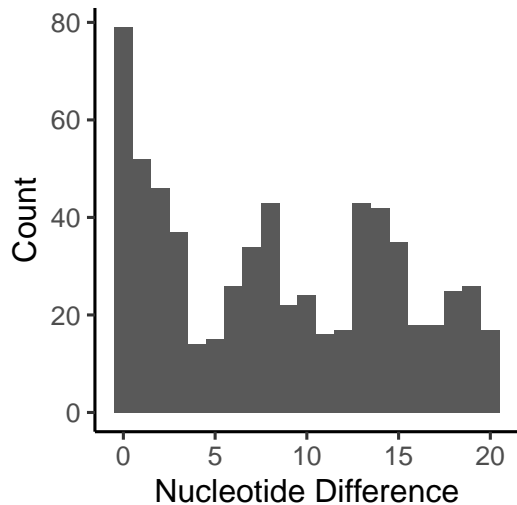
### IGHV3-66\*03

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



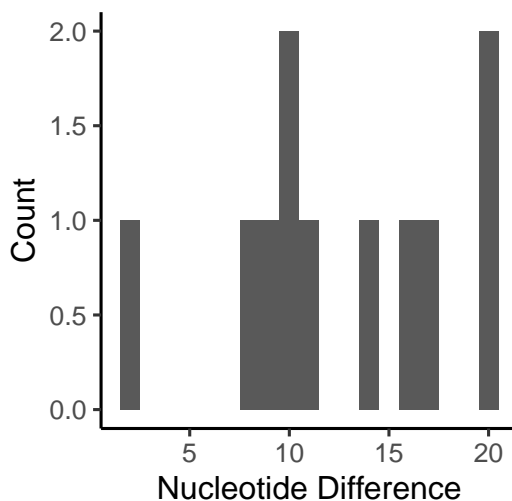
### IGHV3-53\*01\_02

975 sequences assigned  
79 (8.1%) exact matches, in which:  
65 unique CDR3  
6 unique J



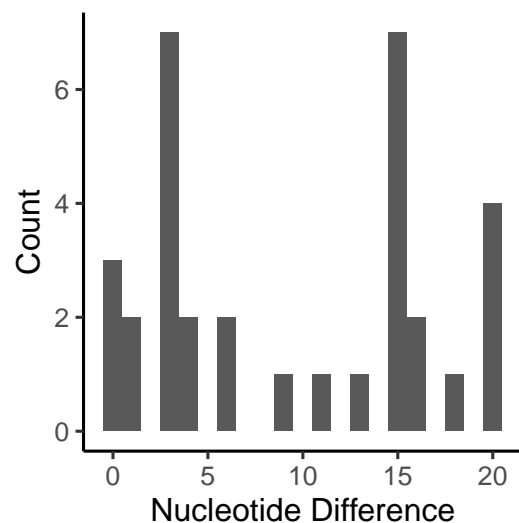
### IGHV3-66\*01

17 sequences assigned  
No exact matches.



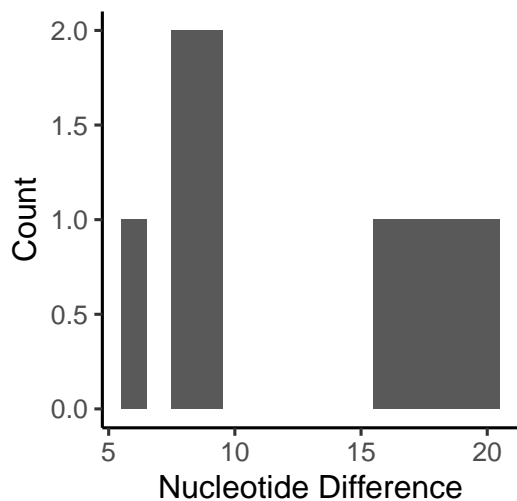
### IGHV3-69-1\*01

38 sequences assigned  
3 (7.9%) exact matches, in which:  
3 unique CDR3  
3 unique J



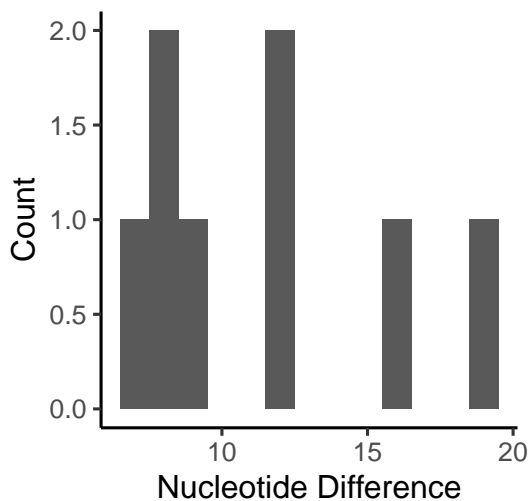
### IGHV3-64\*04

31 sequences assigned  
No exact matches.



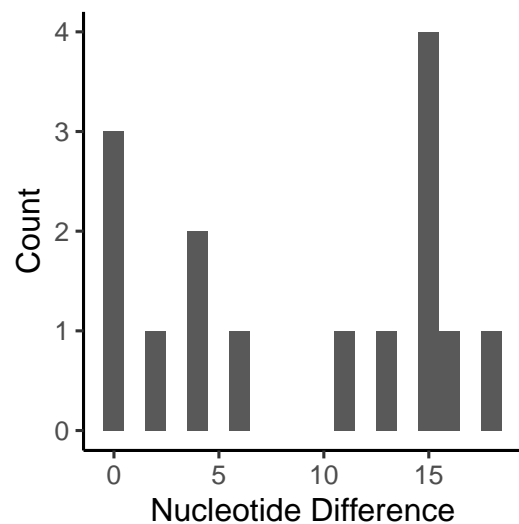
### IGHV3-66\*02

11 sequences assigned  
No exact matches.



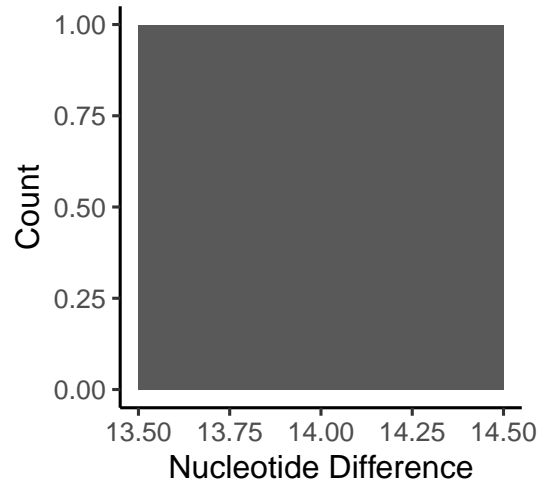
### IGHV3-69-1\*02

29 sequences assigned  
3 (10.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



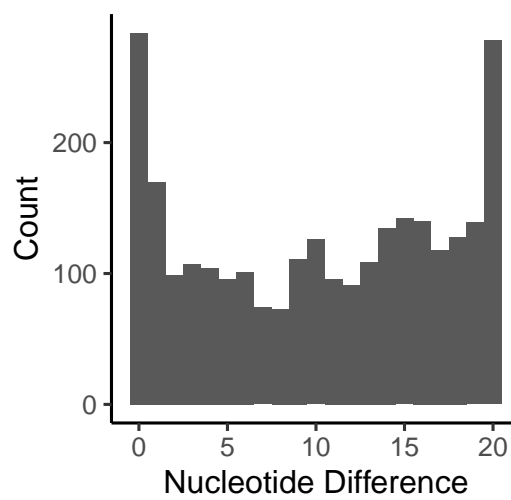
### IGHV3-71\*01\_04

2 sequences assigned  
No exact matches.



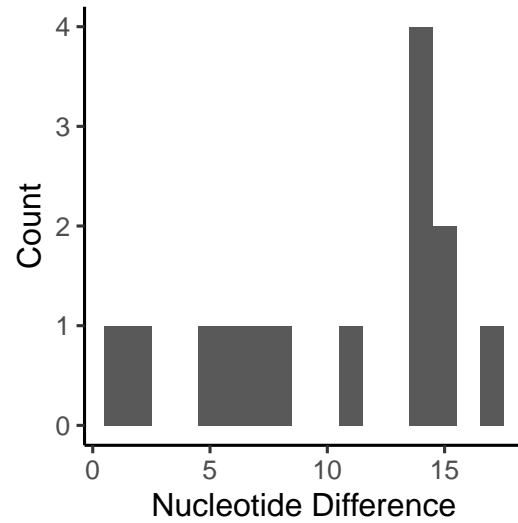
### IGHV3-74\*01\_02

3854 sequences assigned  
284 (7.4%) exact matches, in which:  
215 unique CDR3  
5 unique J



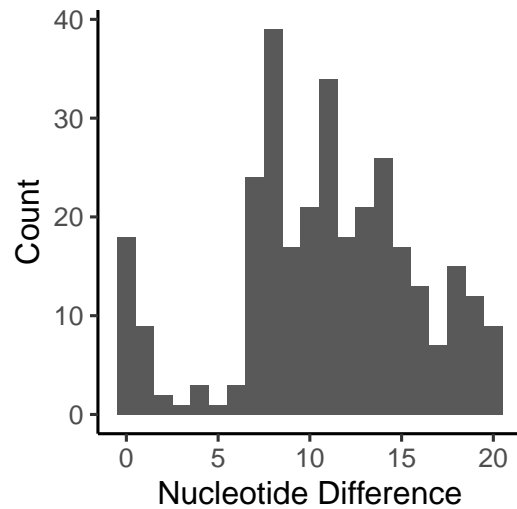
### IGHV3-NL1\*01

28 sequences assigned  
No exact matches.



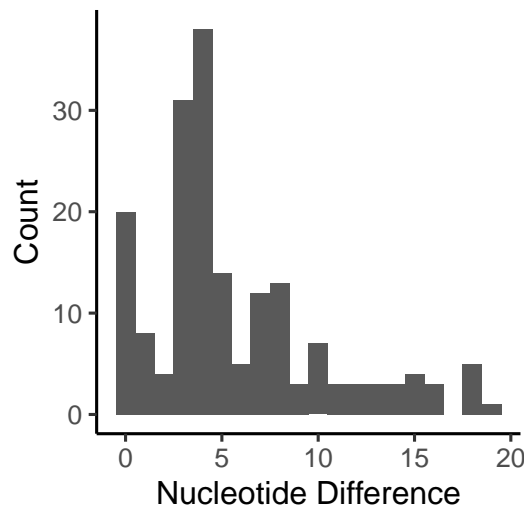
### IGHV3-72\*01

350 sequences assigned  
18 (5.1%) exact matches, in which:  
15 unique CDR3  
4 unique J



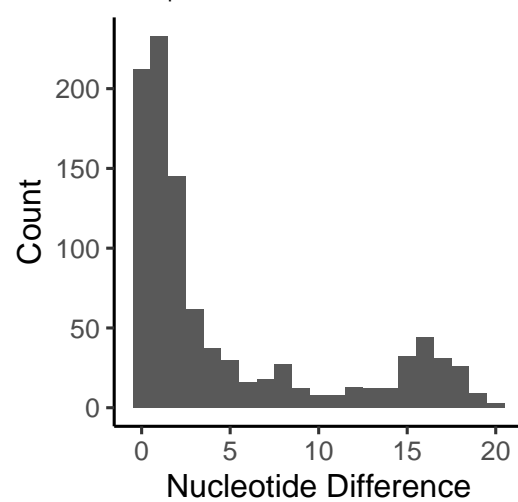
### IGHV3-43D\*04

185 sequences assigned  
20 (10.8%) exact matches, in which:  
17 unique CDR3  
2 unique J



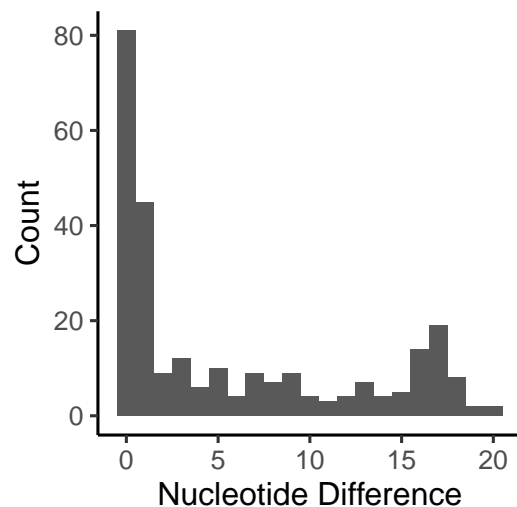
### IGHV4-4\*07

1291 sequences assigned  
212 (16.4%) exact matches, in which:  
192 unique CDR3  
5 unique J



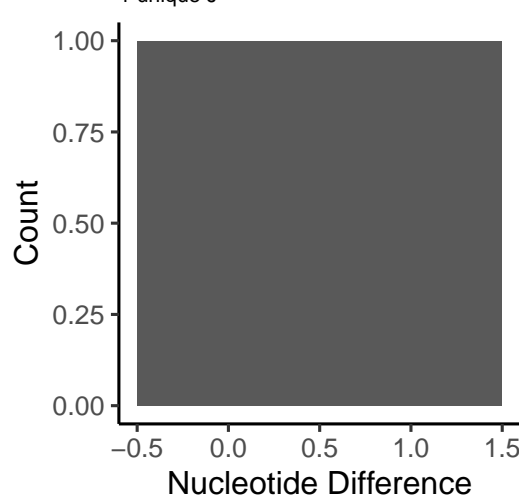
### IGHV3-73\*01\_02

295 sequences assigned  
81 (27.5%) exact matches, in which:  
51 unique CDR3  
5 unique J



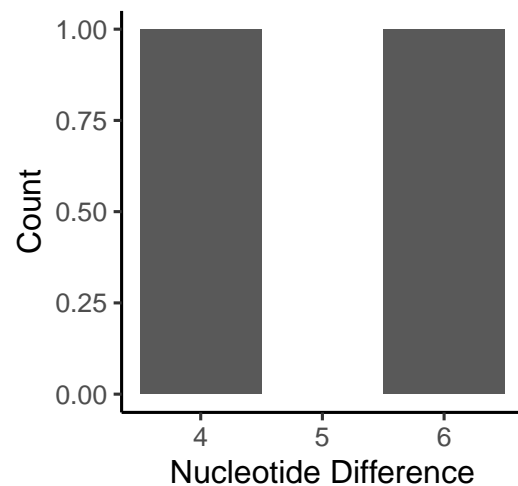
### IGHV3-64D\*06

122 sequences assigned  
1 (0.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



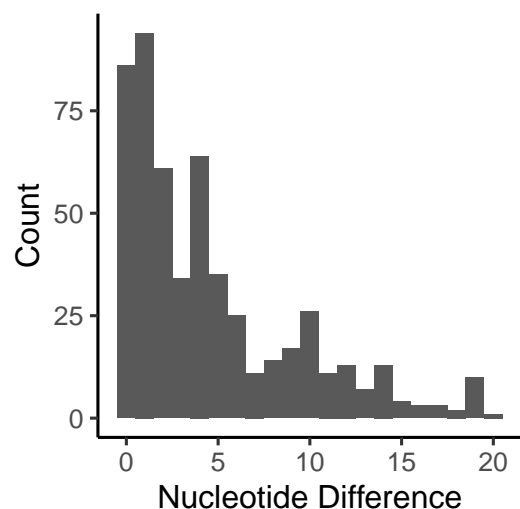
### IGHV4-28\*01\_07

4 sequences assigned  
No exact matches.



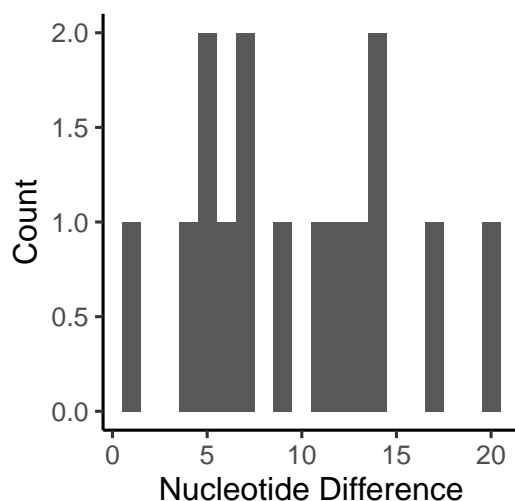
### IGHV4-30-2\*01

553 sequences assigned  
86 (15.6%) exact matches, in which:  
66 unique CDR3  
5 unique J



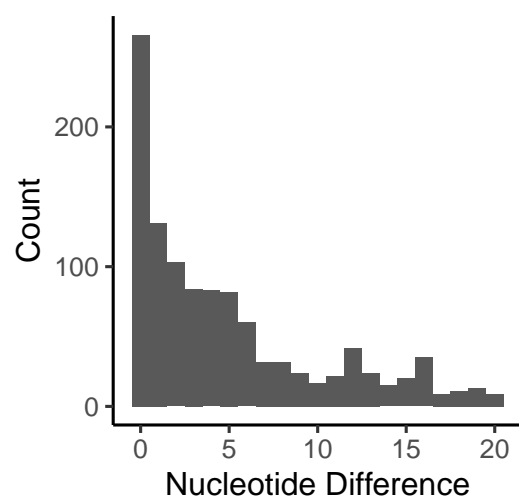
### IGHV4-30-4\*07

15 sequences assigned  
No exact matches.



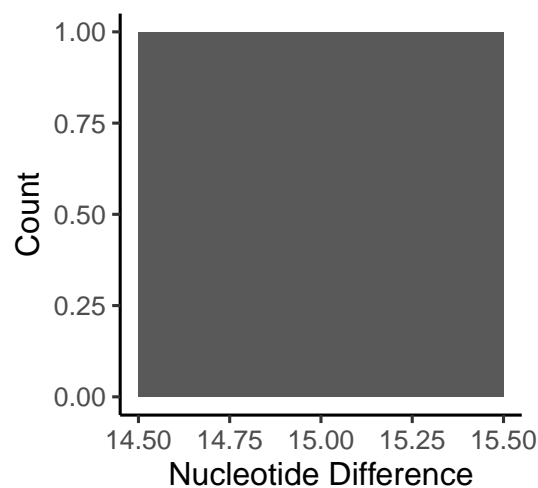
### IGHV4-31\*03\_04

1196 sequences assigned  
266 (22.2%) exact matches, in which:  
240 unique CDR3  
6 unique J



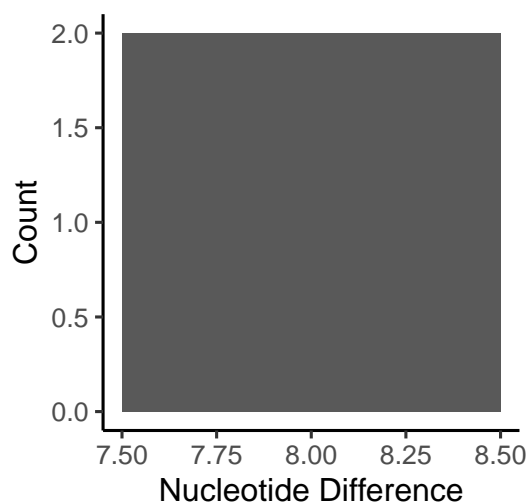
### IGHV4-30-4\*01

2 sequences assigned  
No exact matches.



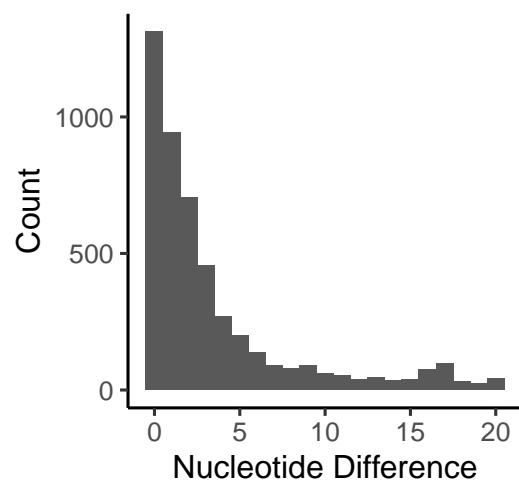
### IGHV4-30-4\*08

2 sequences assigned  
No exact matches.



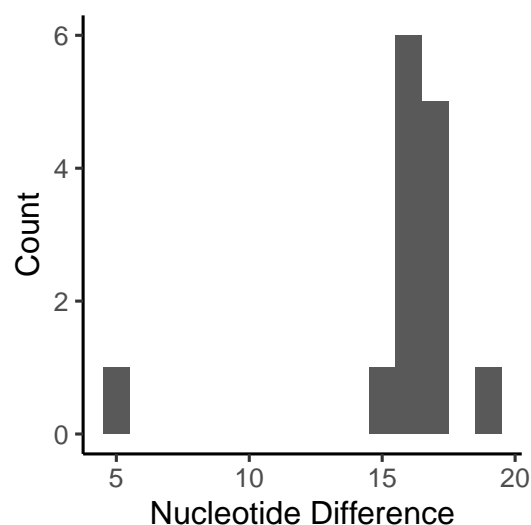
### IGHV4-34\*01\_02

5119 sequences assigned  
1312 (25.6%) exact matches, in which:  
1035 unique CDR3  
6 unique J



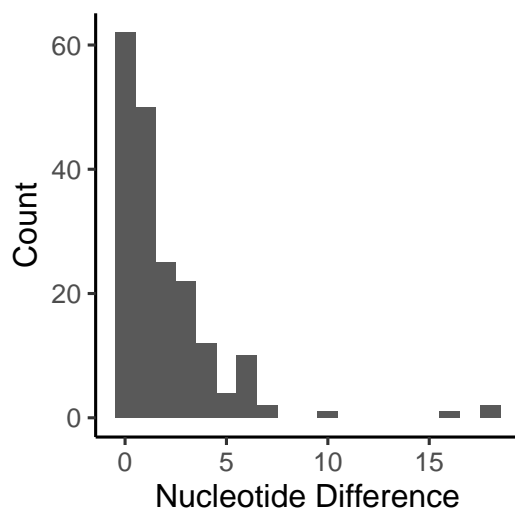
### IGHV4-30-4\*05

14 sequences assigned  
No exact matches.



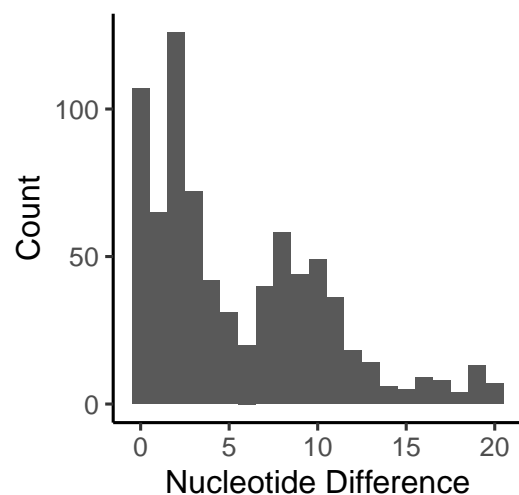
### IGHV4-31\*01

205 sequences assigned  
62 (30.2%) exact matches, in which:  
53 unique CDR3  
5 unique J



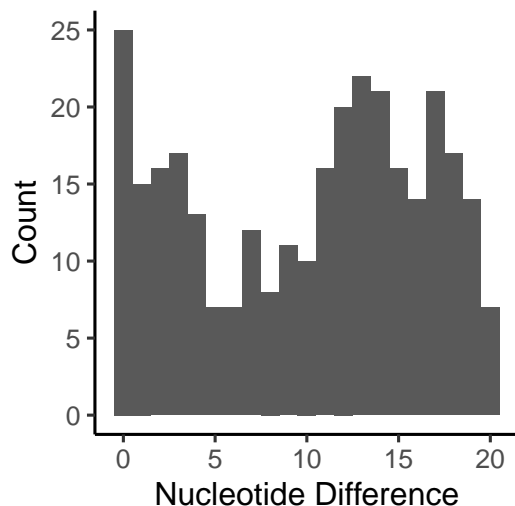
### IGHV4-38-2\*01

820 sequences assigned  
107 (13%) exact matches, in which:  
102 unique CDR3  
6 unique J



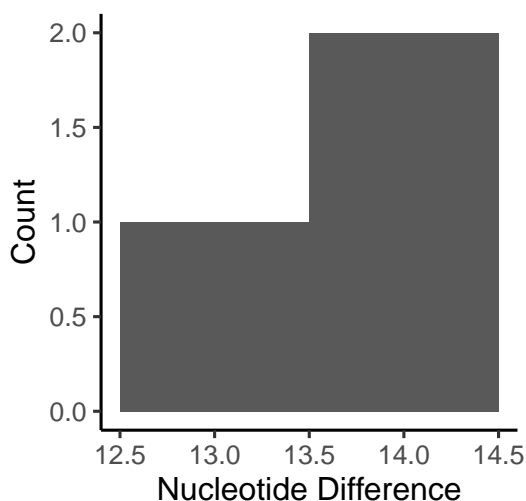
### IGHV4-38-2\*02

410 sequences assigned  
25 (6.1%) exact matches, in which:  
22 unique CDR3  
4 unique J



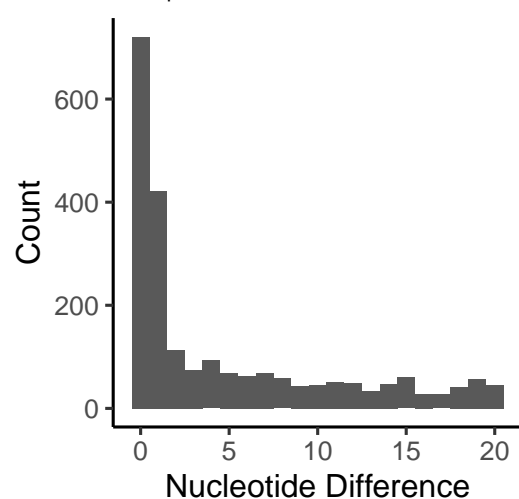
### IGHV4-55\*07

3 sequences assigned  
No exact matches.



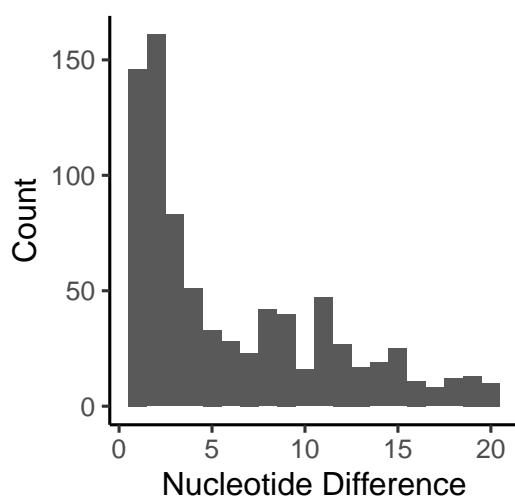
### IGHV4-59\*01\_07

2671 sequences assigned  
721 (27%) exact matches, in which:  
633 unique CDR3  
6 unique J



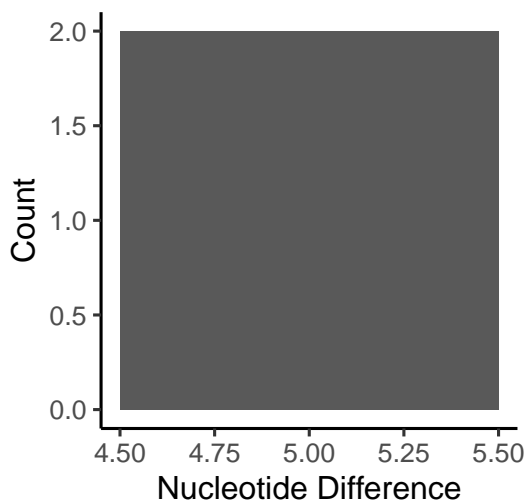
### IGHV4-39\*07

858 sequences assigned  
No exact matches.



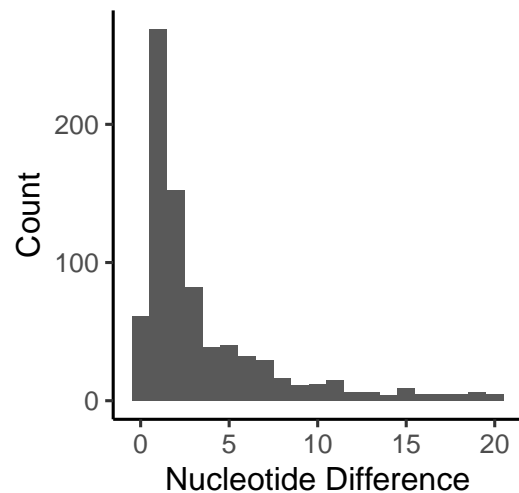
### IGHV4-55\*02\_04\_08

2 sequences assigned  
No exact matches.



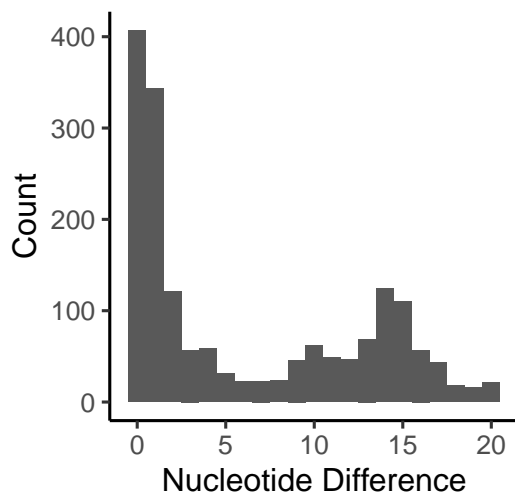
### IGHV4-59\*12

843 sequences assigned  
61 (7.2%) exact matches, in which:  
60 unique CDR3  
5 unique J



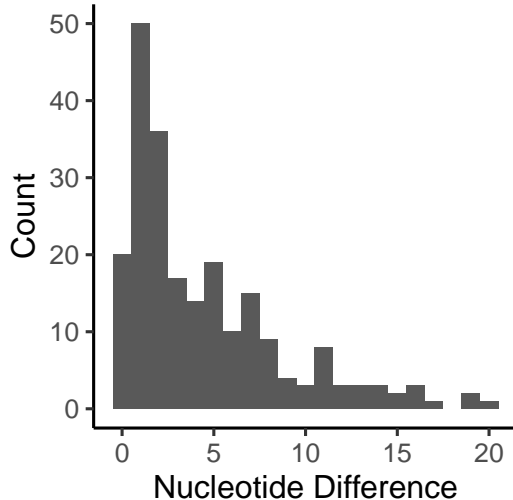
### IGHV4-39\*01\_05

2101 sequences assigned  
407 (19.4%) exact matches, in which:  
351 unique CDR3  
6 unique J



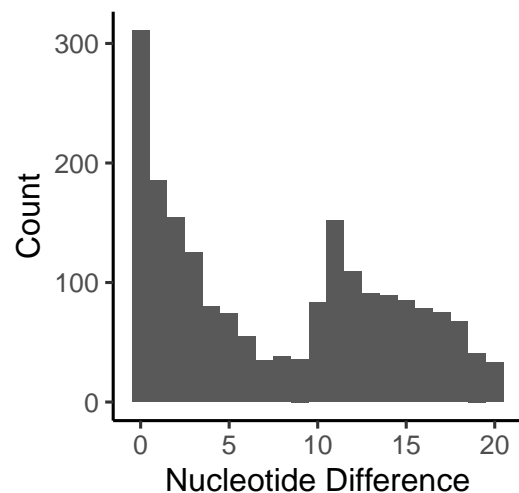
### IGHV4-59\*08

307 sequences assigned  
20 (6.5%) exact matches, in which:  
20 unique CDR3  
4 unique J



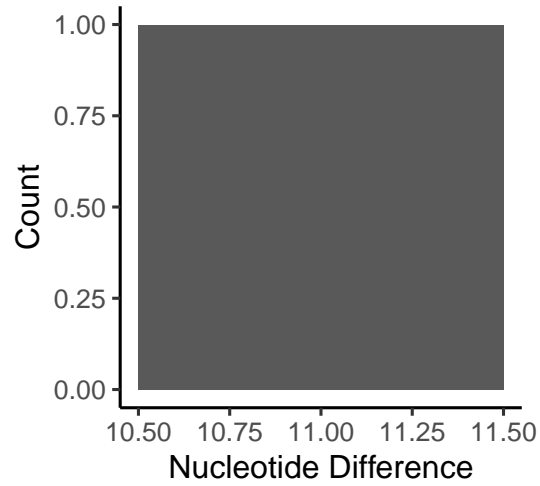
### IGHV4-61\*01

2420 sequences assigned  
311 (12.9%) exact matches, in which:  
283 unique CDR3  
6 unique J



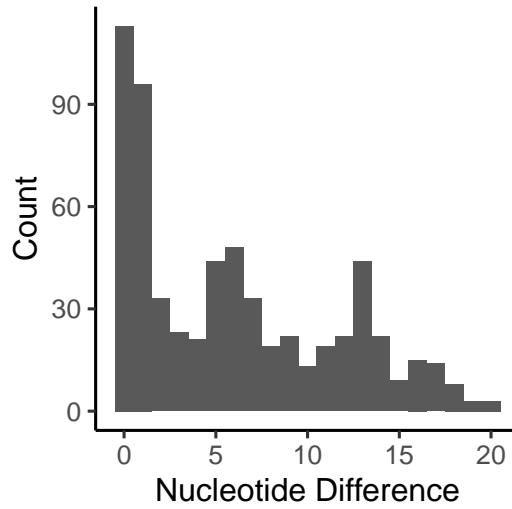
### IGHV5-10-1\*04

1 sequences assigned  
No exact matches.



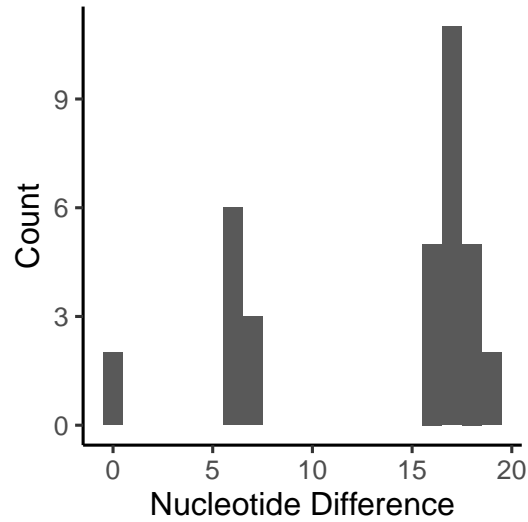
### IGHV6-1\*01\_02

675 sequences assigned  
113 (16.7%) exact matches, in which:  
105 unique CDR3  
6 unique J



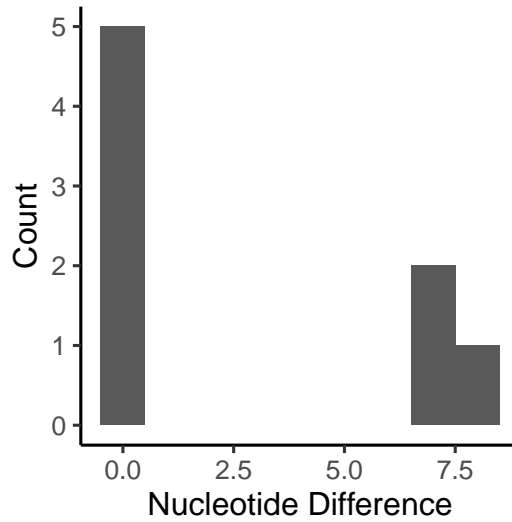
### IGHV5-10-1\*01\_03

34 sequences assigned  
2 (5.9%) exact matches, in which:  
2 unique CDR3  
1 unique J



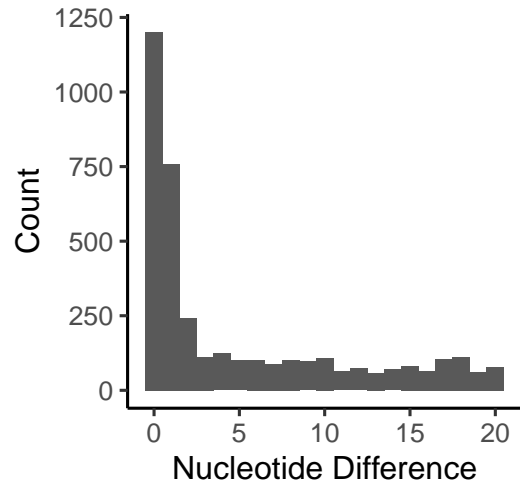
### IGHV7-4-1\*01

8 sequences assigned  
5 (62.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



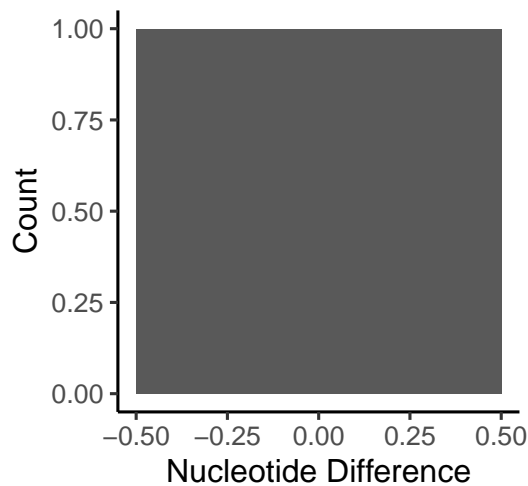
### IGHV5-51\*01\_03

4885 sequences assigned  
1201 (24.6%) exact matches, in which:  
733 unique CDR3  
6 unique J



### IGHV7-4-1\*02

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





Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69\*04\_09\_G112A IGHV4–59\*02\_G88A IGHV5–10–1\*01\_03\_T258C IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69\*08\_C191T IGHV3–48\*03\_T303G IGHV4–59\*02\_G88A IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV3–30\*03\_T288C IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning: IGHV4–31\*02, IGHV4–31\*03\_04 have identical germline sequences.

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

Novel sequence(s) IGHV1–69\*04\_09\_G112A 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.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69\*08\_C191T IGHV3–30\*03\_T288C IGHV3–30–3\*02\_G75C IGHV4–59\*02\_G88A IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59\*02\_G88A 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.

Novel sequence(s) IGHV4–4\*02\_03\_C300T 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.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59\*02\_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV1–69\*08\_C191T IGHV3–11\*06\_T300C IGHV3–30\*03\_T288C IGHV4–59\*02\_G88A IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59\*02\_G88A 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.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV3–30\*03\_T288C IGHV3–30–3\*01\_T288C IGHV4–59\*02\_G88A IGHV5–10–1\*01\_03\_T258C IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.