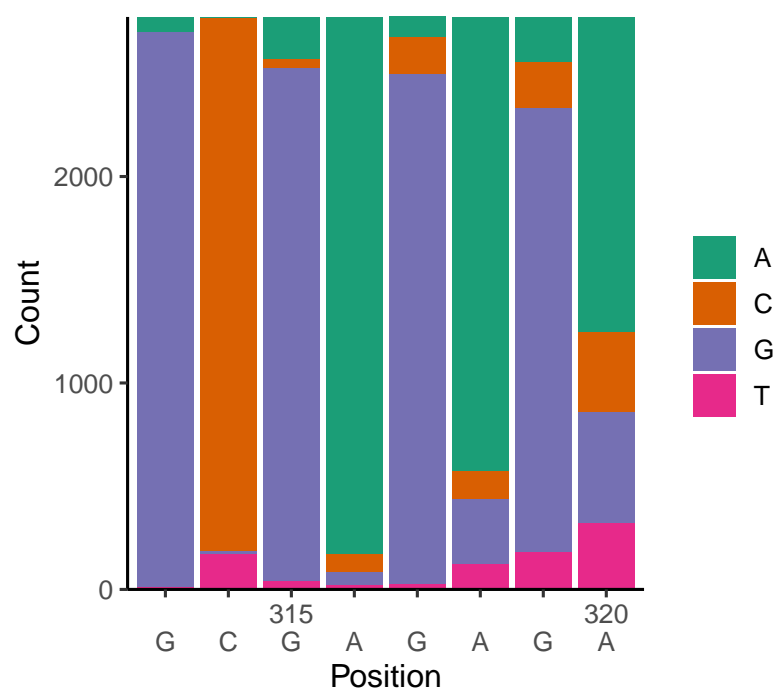
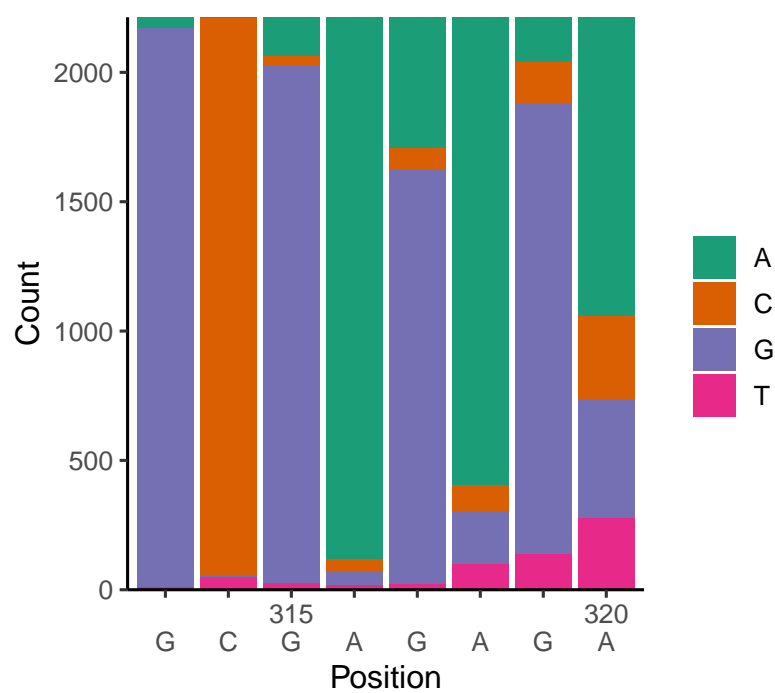


Gene IGHV3-30\*03\_T288C



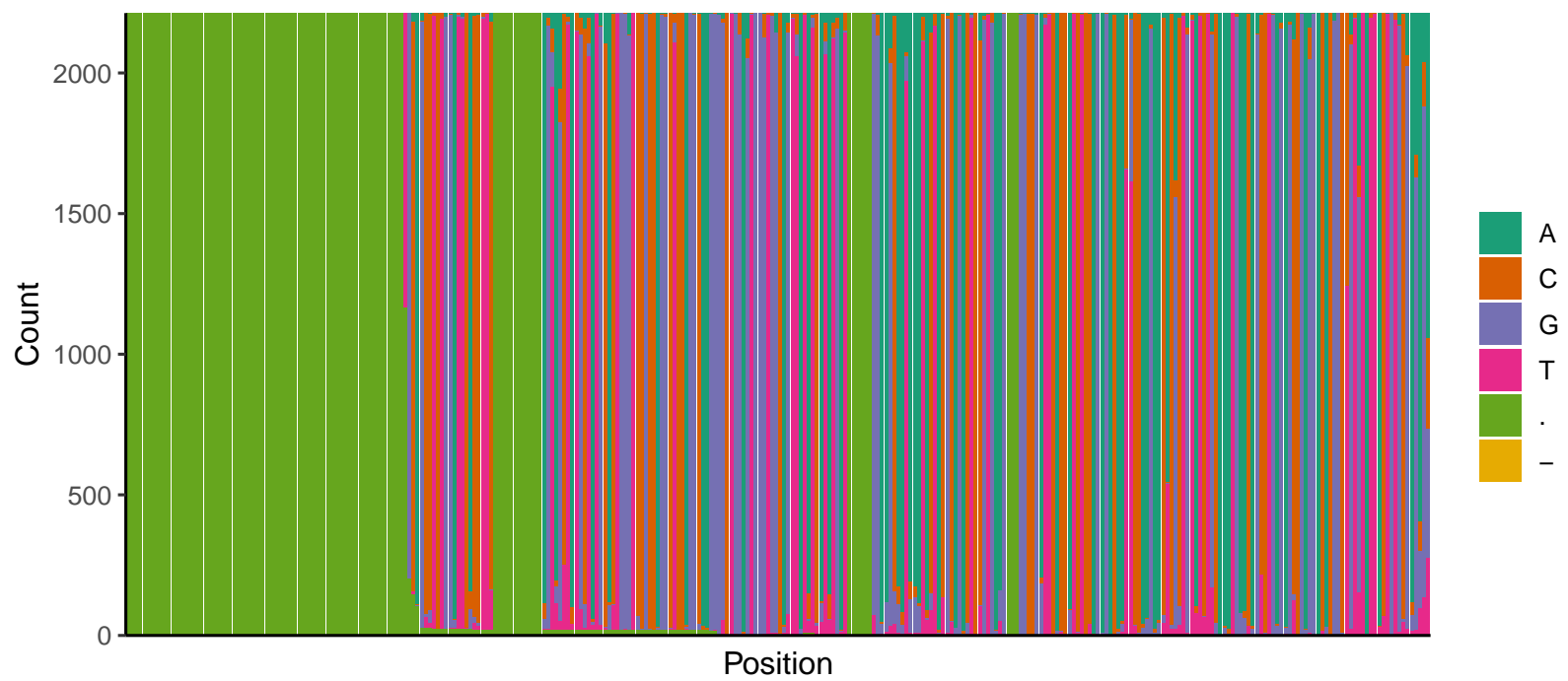
Gene IGHV3-30-3\*01\_T288C



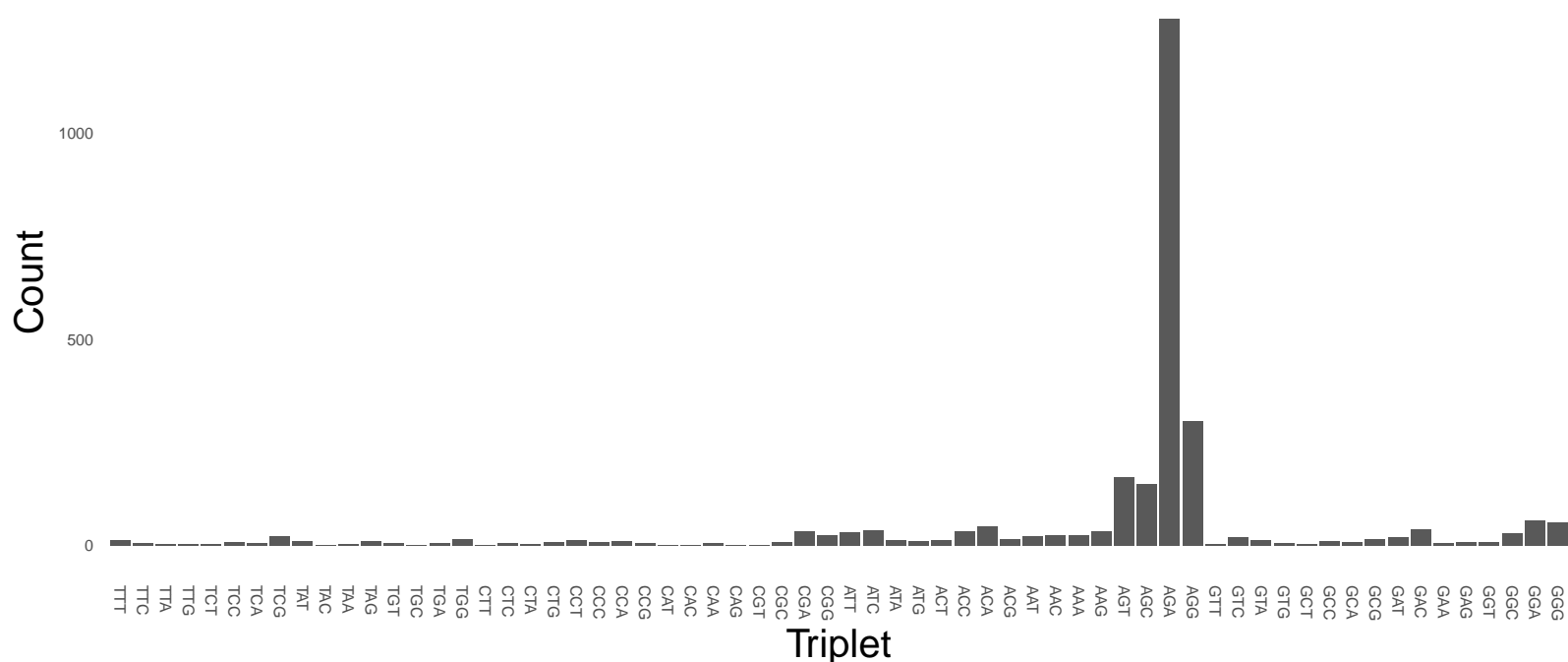
Gene IGHV3-30\*03\_T288C



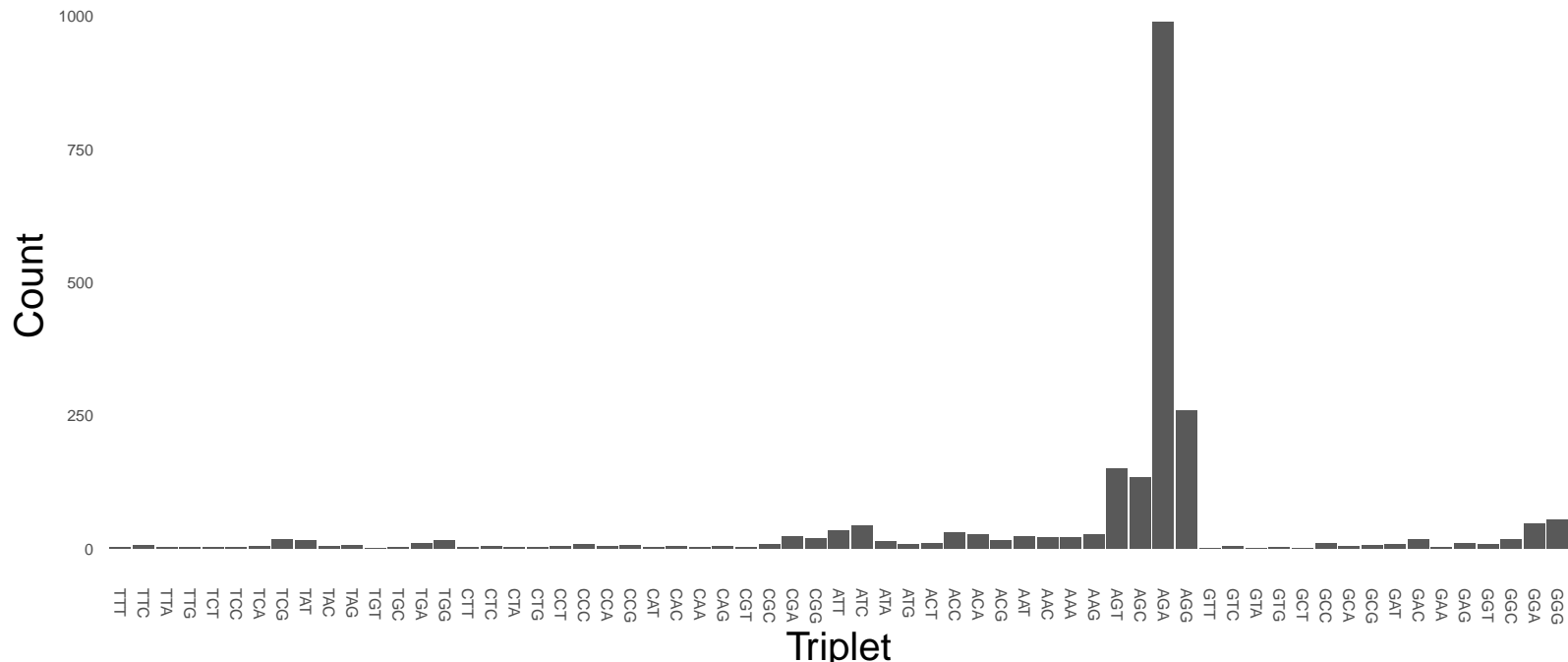
Gene IGHV3-30-3\*01\_T288C



IGHV3-30\*03\_T288C- Final 3 nucleotides as a triplet

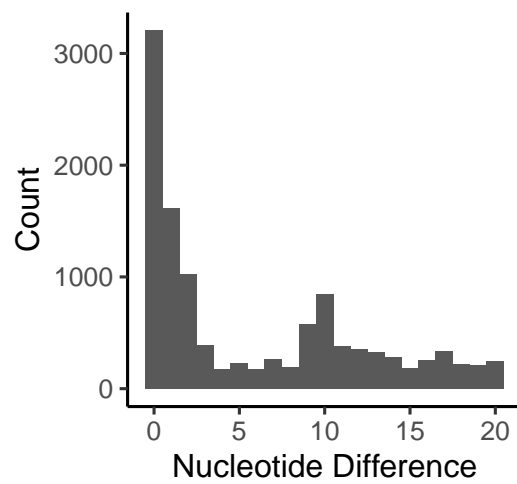


IGHV3-30-3\*01\_T288C- Final 3 nucleotides as a triplet



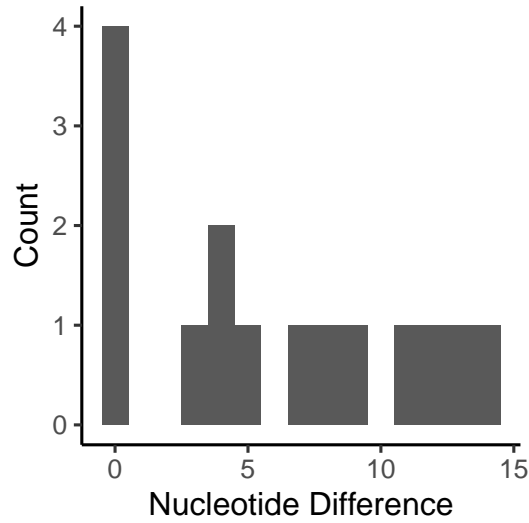
### IGHV1-2\*02

12455 sequences assigned  
3206 (25.7%) exact matches, in which:  
2975 unique CDR3  
6 unique J



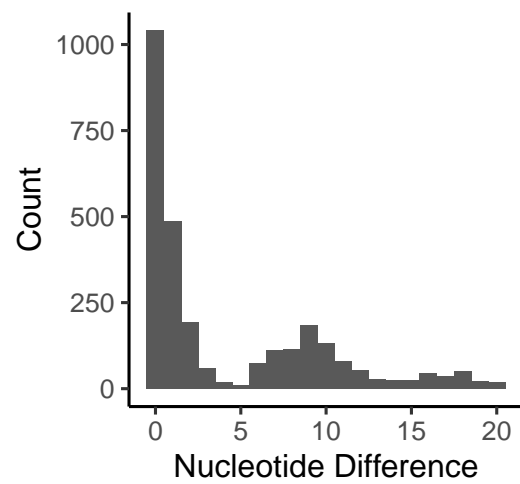
### IGHV1-8\*01

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



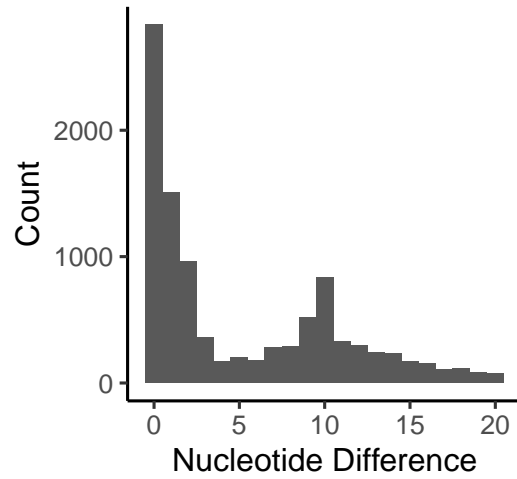
### IGHV1-24\*01

2840 sequences assigned  
1041 (36.7%) exact matches, in which:  
985 unique CDR3  
6 unique J



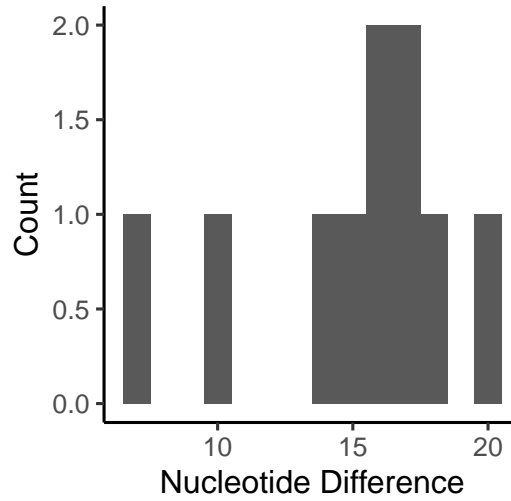
### IGHV1-2\*06

11437 sequences assigned  
2835 (24.8%) exact matches, in which:  
2616 unique CDR3  
6 unique J



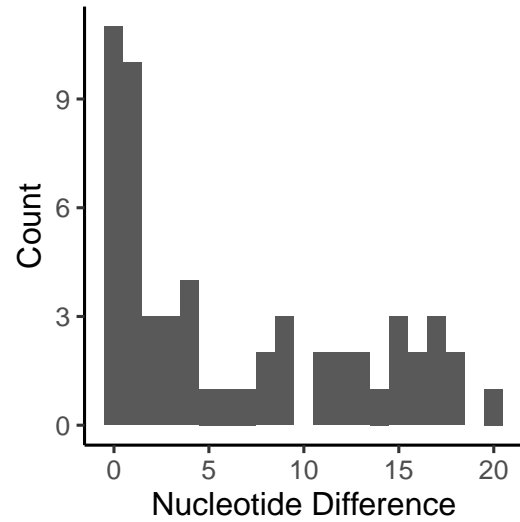
### IGHV1-8\*02

11 sequences assigned  
No exact matches.



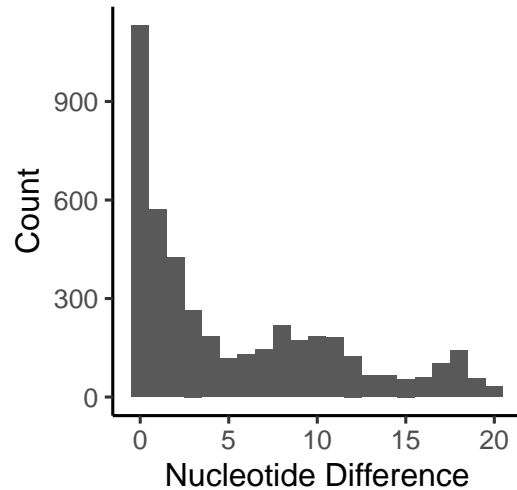
### IGHV1-45\*02

79 sequences assigned  
11 (13.9%) exact matches, in which:  
11 unique CDR3  
4 unique J



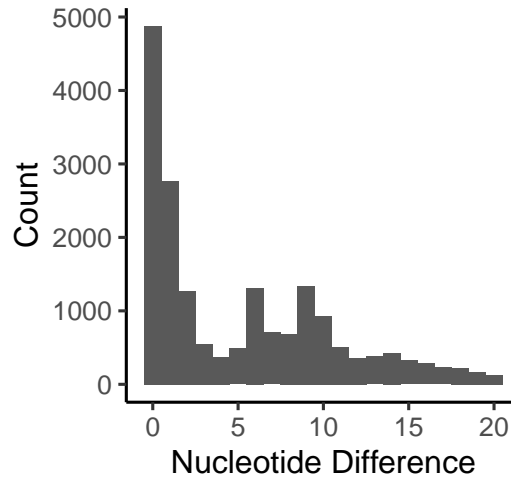
### IGHV1-3\*01\_05

5224 sequences assigned  
1132 (21.7%) exact matches, in which:  
1020 unique CDR3  
6 unique J



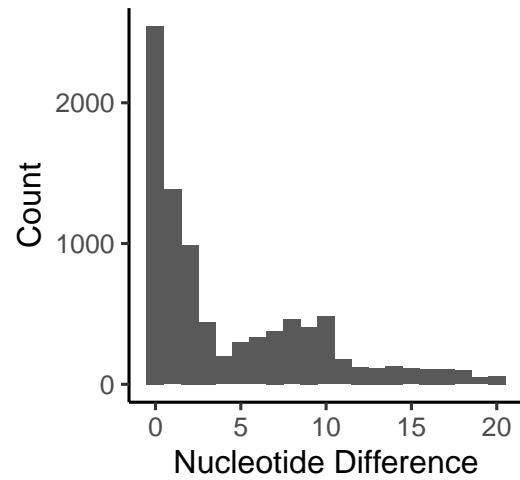
### IGHV1-18\*01

19403 sequences assigned  
4877 (25.1%) exact matches, in which:  
4446 unique CDR3  
6 unique J



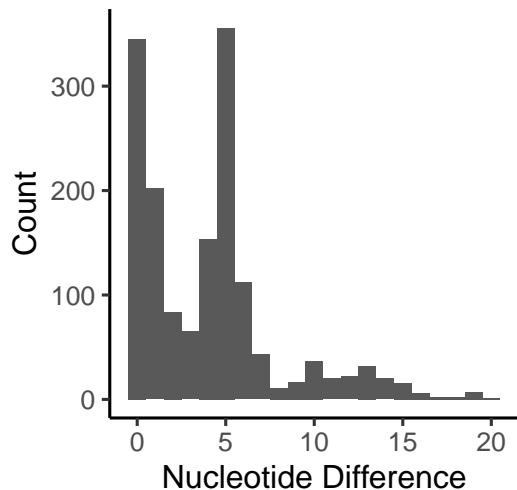
### IGHV1-46\*01

10086 sequences assigned  
2545 (25.2%) exact matches, in which:  
2385 unique CDR3  
6 unique J



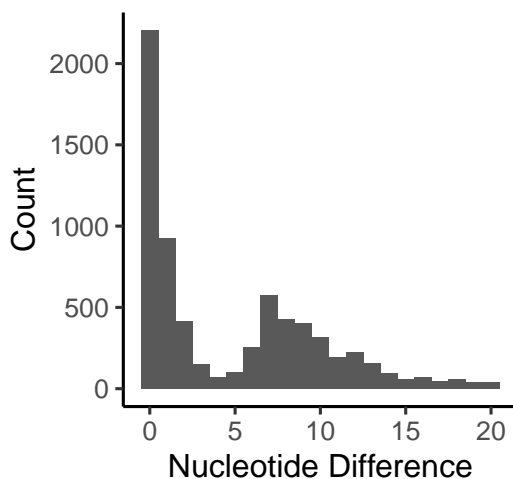
### IGHV1-58\*01\_03

1652 sequences assigned  
345 (20.9%) exact matches, in which:  
328 unique CDR3  
6 unique J



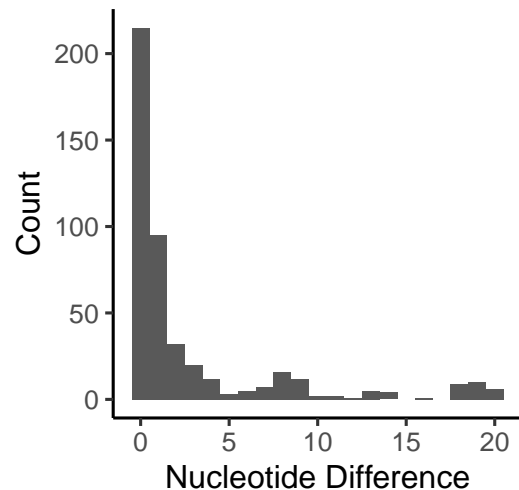
### IGHV1-69\*06\_14

7154 sequences assigned  
2204 (30.8%) exact matches, in which:  
2100 unique CDR3  
6 unique J



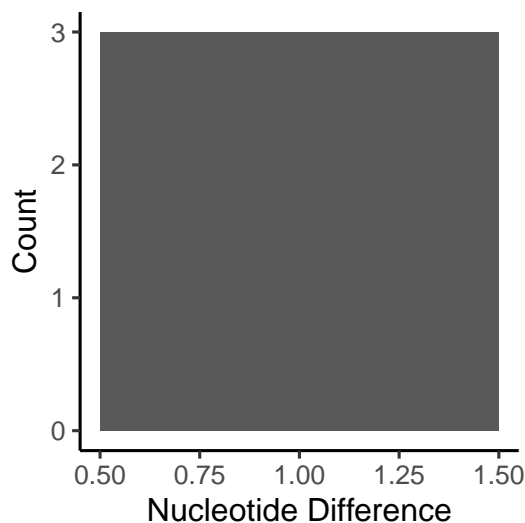
### IGHV2-26\*01

463 sequences assigned  
215 (46.4%) exact matches, in which:  
191 unique CDR3  
5 unique J



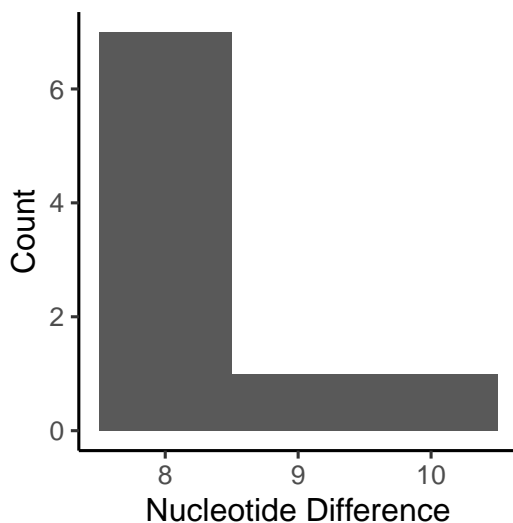
### IGHV1-68\*01

3 sequences assigned  
No exact matches.



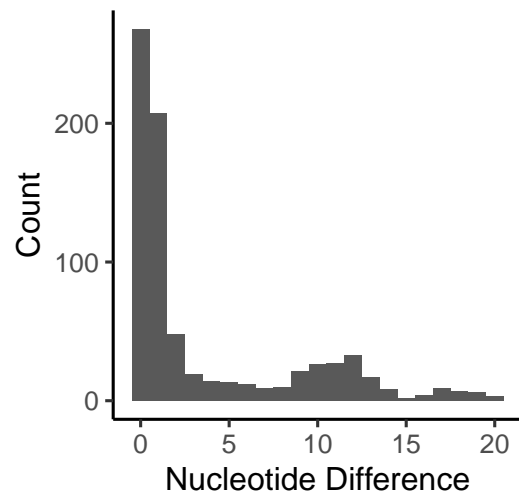
### IGHV1-NL1\*01

9 sequences assigned  
No exact matches.



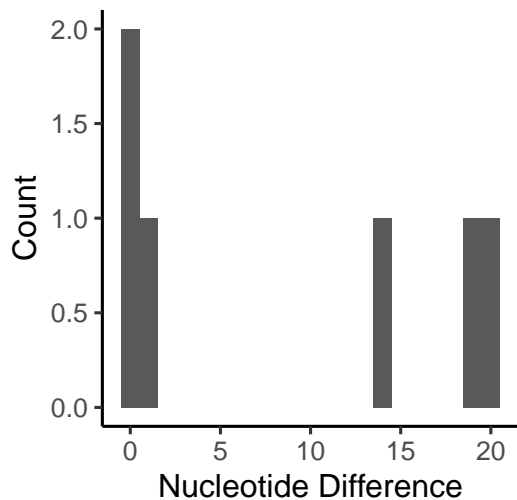
### IGHV2-70\*01

783 sequences assigned  
268 (34.2%) exact matches, in which:  
230 unique CDR3  
6 unique J



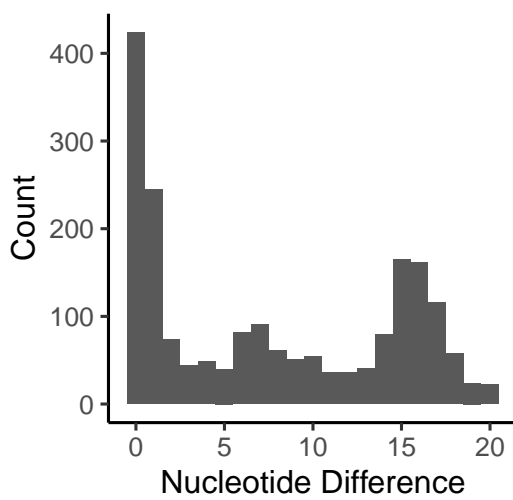
### IGHV1-69-2\*01

6 sequences assigned  
2 (33.3%) exact matches, in which:  
2 unique CDR3  
2 unique J



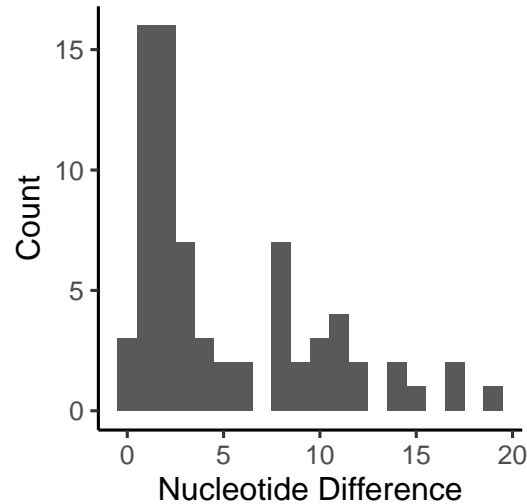
### IGHV2-5\*02

2333 sequences assigned  
424 (18.2%) exact matches, in which:  
381 unique CDR3  
6 unique J



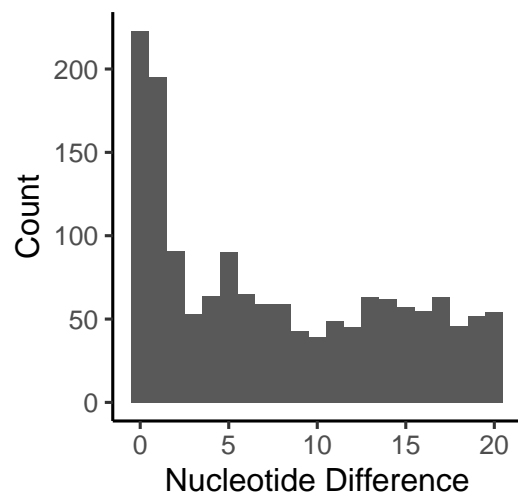
### IGHV2-70\*12

74 sequences assigned  
3 (4.1%) exact matches, in which:  
3 unique CDR3  
2 unique J



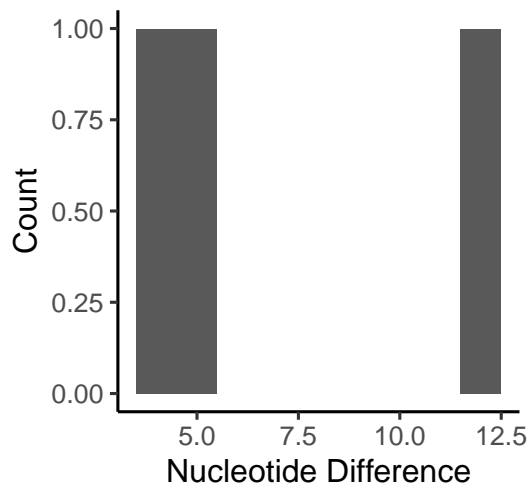
### IGHV3-7\*01

1708 sequences assigned  
223 (13.1%) exact matches, in which:  
218 unique CDR3  
6 unique J



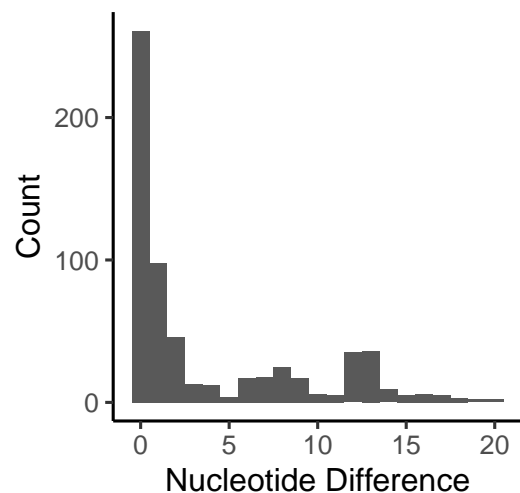
### IGHV3-9\*01

4 sequences assigned  
No exact matches.



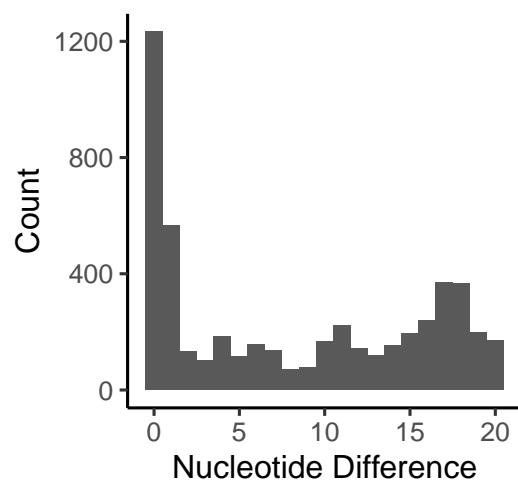
### IGHV3-13\*04

646 sequences assigned  
261 (40.4%) exact matches, in which:  
201 unique CDR3  
5 unique J



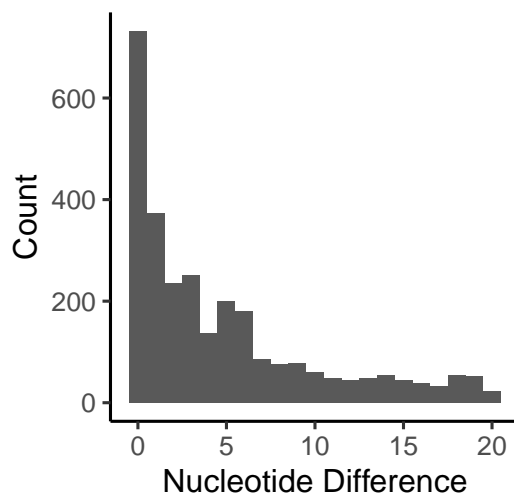
### IGHV3-7\*03

6381 sequences assigned  
1233 (19.3%) exact matches, in which:  
958 unique CDR3  
6 unique J



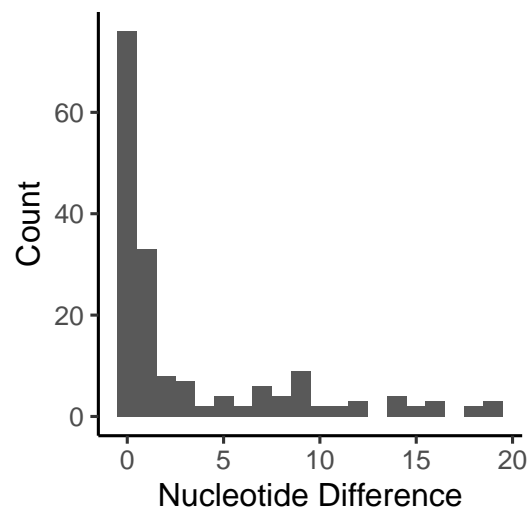
### IGHV3-11\*06

3120 sequences assigned  
732 (23.5%) exact matches, in which:  
599 unique CDR3  
6 unique J



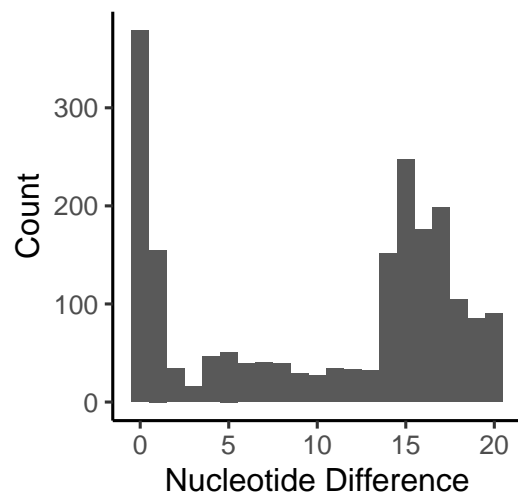
### IGHV3-13\*05

185 sequences assigned  
76 (41.1%) exact matches, in which:  
56 unique CDR3  
6 unique J



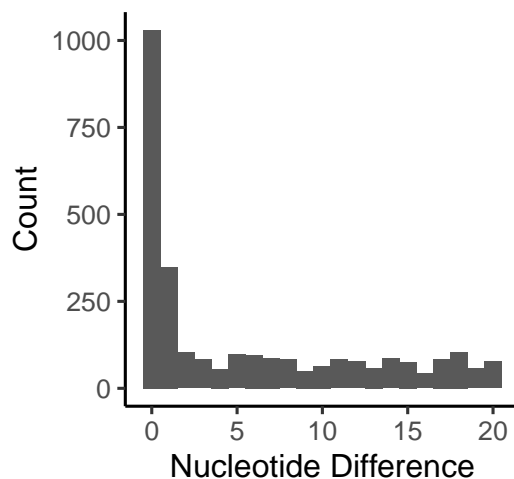
### IGHV3-7\*04

2468 sequences assigned  
379 (15.4%) exact matches, in which:  
285 unique CDR3  
6 unique J



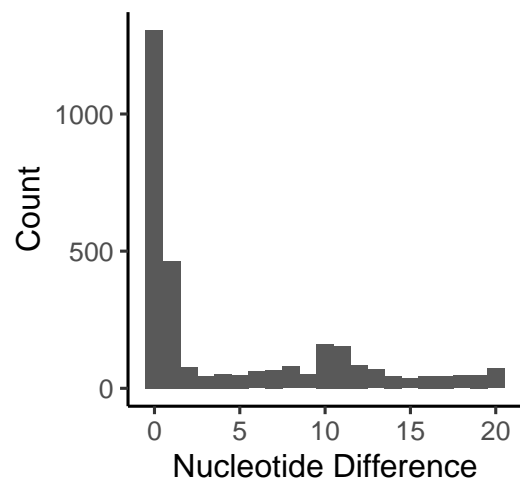
### IGHV3-11\*03\_05

3307 sequences assigned  
1030 (31.1%) exact matches, in which:  
819 unique CDR3  
6 unique J



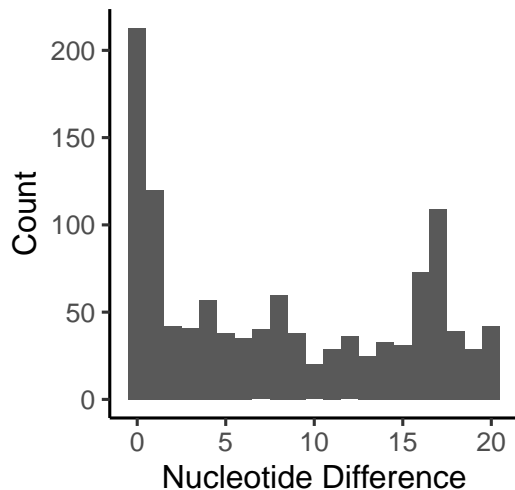
### IGHV3-15\*01\_02

3573 sequences assigned  
1306 (36.6%) exact matches, in which:  
1008 unique CDR3  
6 unique J



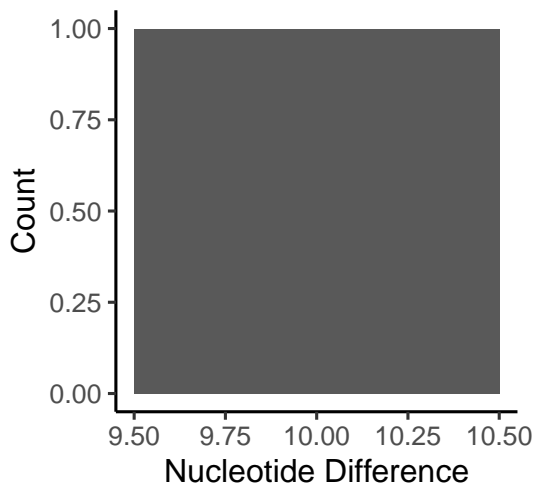
### IGHV3-20\*03\_04

1545 sequences assigned  
213 (13.8%) exact matches, in which:  
163 unique CDR3  
6 unique J



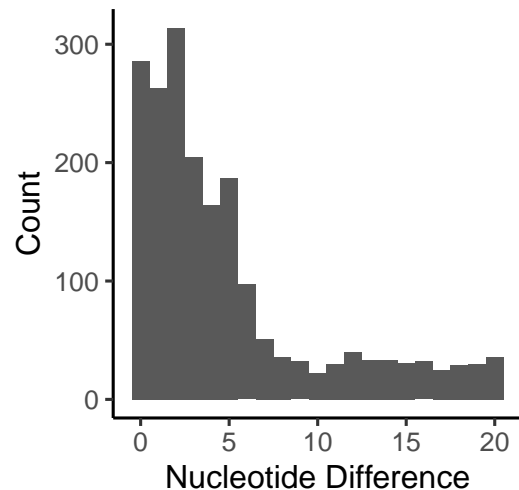
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



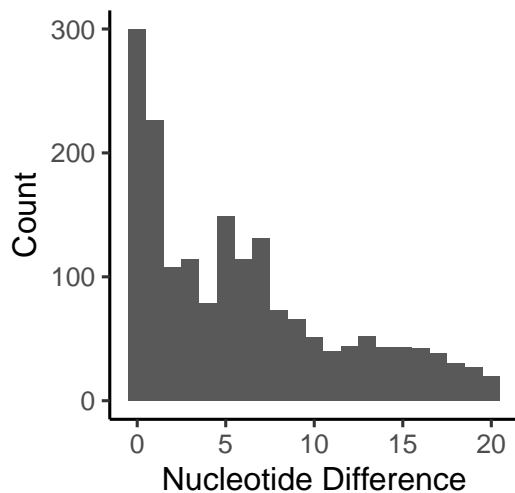
### IGHV3-30-3\*01\_T288C

2213 sequences assigned  
286 (12.9%) exact matches, in which:  
279 unique CDR3  
6 unique J



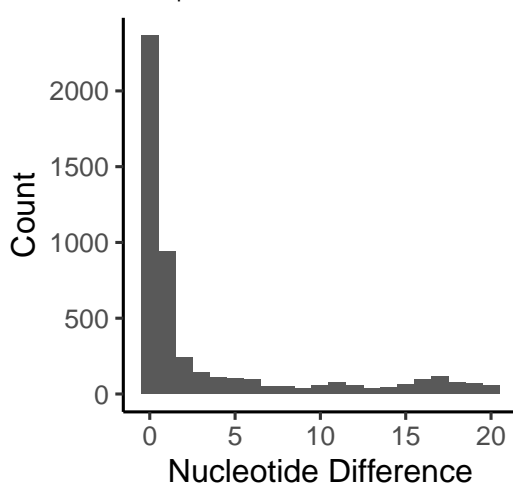
### IGHV3-21\*04

2084 sequences assigned  
300 (14.4%) exact matches, in which:  
284 unique CDR3  
6 unique J



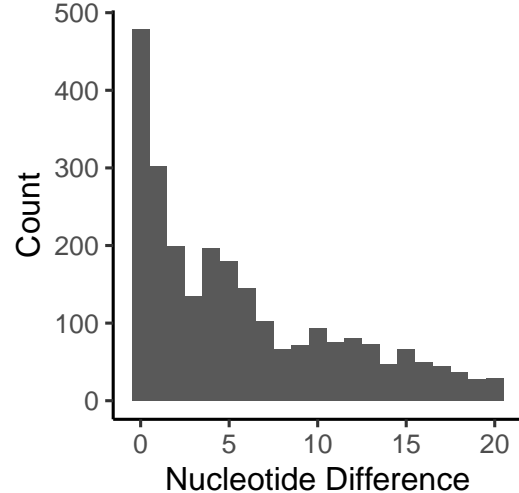
### IGHV3-30-3\*01

5649 sequences assigned  
2364 (41.8%) exact matches, in which:  
1888 unique CDR3  
6 unique J



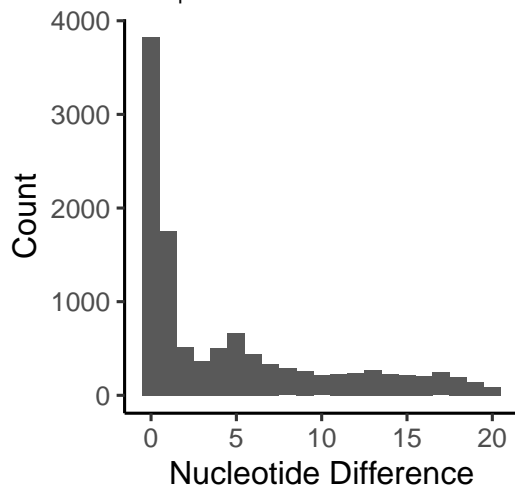
### IGHV3-30\*03\_T288C

2773 sequences assigned  
479 (17.3%) exact matches, in which:  
458 unique CDR3  
6 unique J



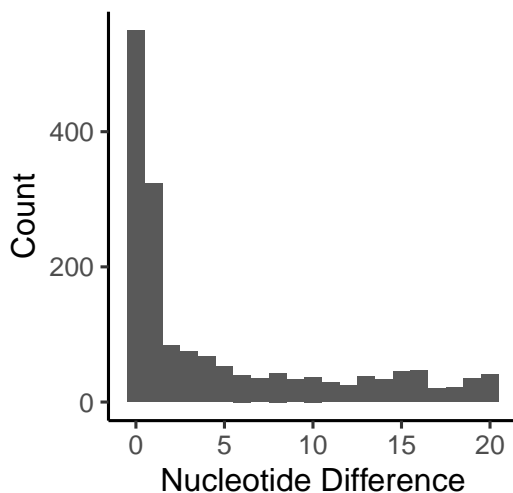
### IGHV3-21\*01\_02

11916 sequences assigned  
3826 (32.1%) exact matches, in which:  
2847 unique CDR3  
6 unique J



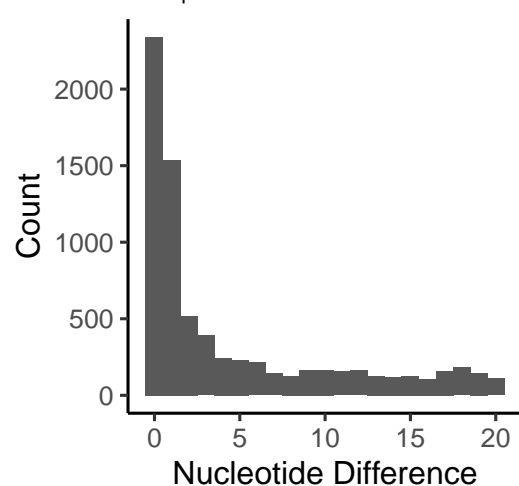
### IGHV3-30\*03

2047 sequences assigned  
550 (26.9%) exact matches, in which:  
517 unique CDR3  
6 unique J



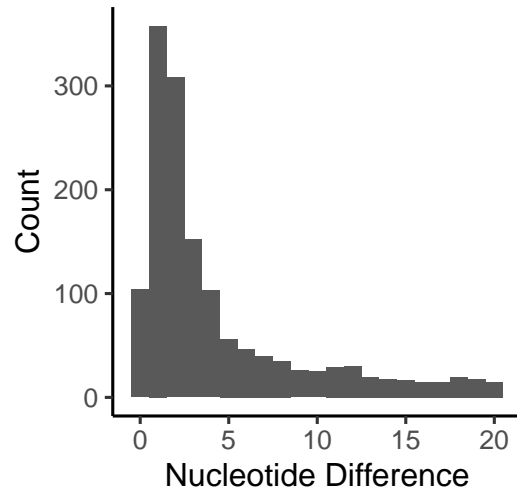
### IGHV3-33\*01

8457 sequences assigned  
2340 (27.7%) exact matches, in which:  
1870 unique CDR3  
6 unique J



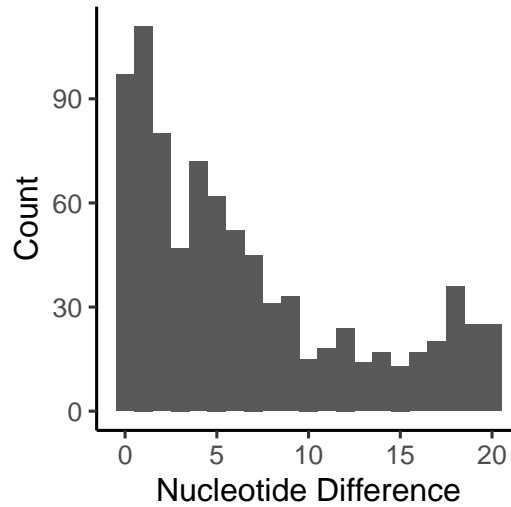
### IGHV3–33\*06

1541 sequences assigned  
104 (6.7%) exact matches, in which:  
100 unique CDR3  
5 unique J



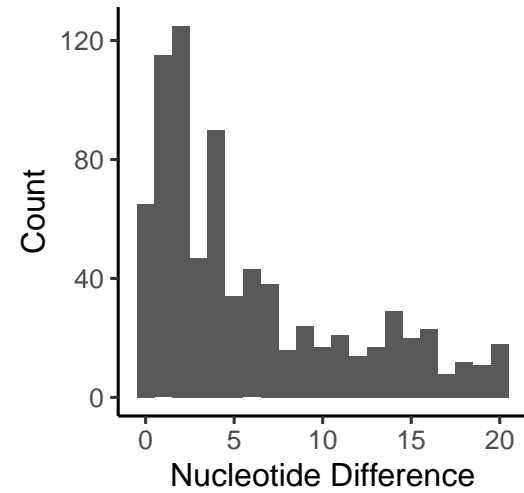
### IGHV3–48\*01

926 sequences assigned  
97 (10.5%) exact matches, in which:  
92 unique CDR3  
6 unique J



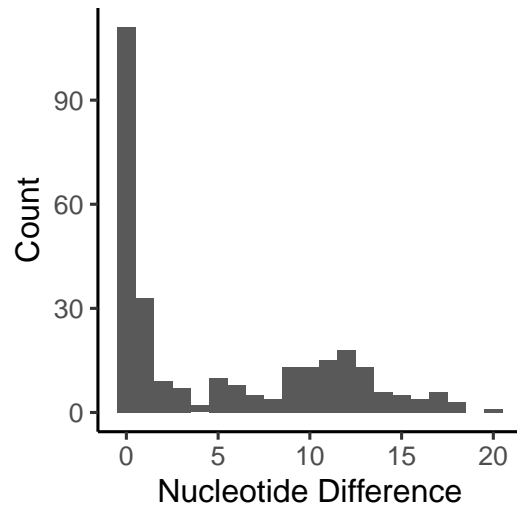
### IGHV3–48\*04

910 sequences assigned  
65 (7.1%) exact matches, in which:  
64 unique CDR3  
6 unique J



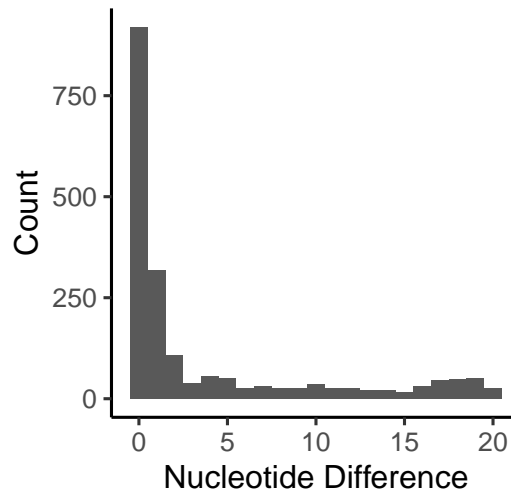
### IGHV3–43\*01

310 sequences assigned  
111 (35.8%) exact matches, in which:  
86 unique CDR3  
6 unique J



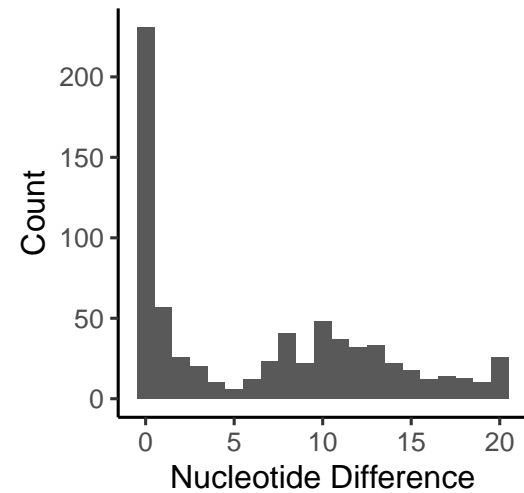
### IGHV3–48\*02

2157 sequences assigned  
920 (42.7%) exact matches, in which:  
716 unique CDR3  
6 unique J



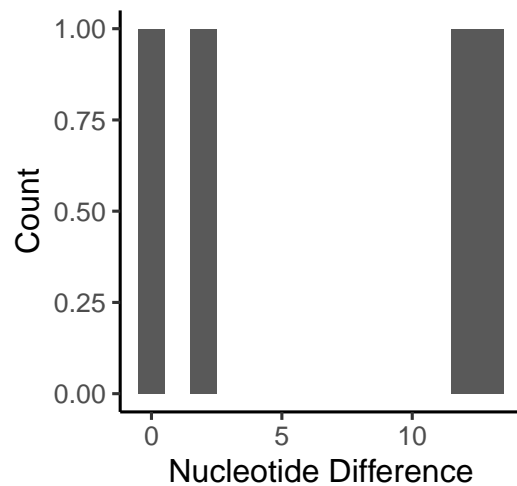
### IGHV3–49\*04

848 sequences assigned  
231 (27.2%) exact matches, in which:  
193 unique CDR3  
6 unique J



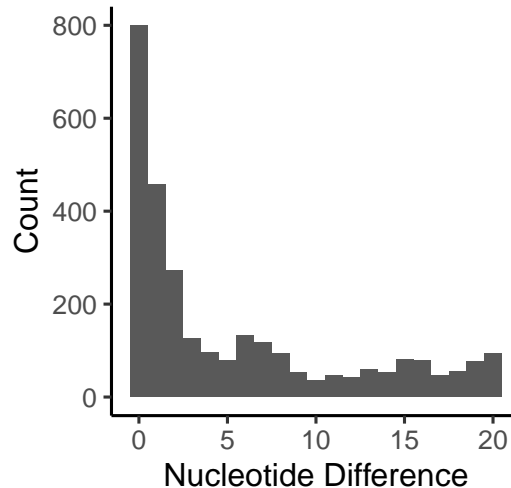
### IGHV3–47\*02

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



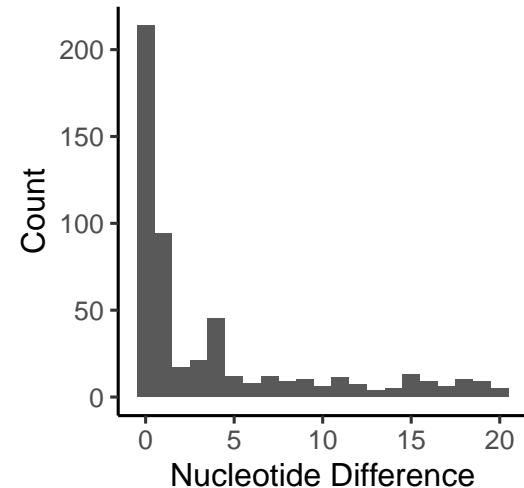
### IGHV3–48\*03

3767 sequences assigned  
800 (21.2%) exact matches, in which:  
630 unique CDR3  
6 unique J



### IGHV3–49\*03\_05

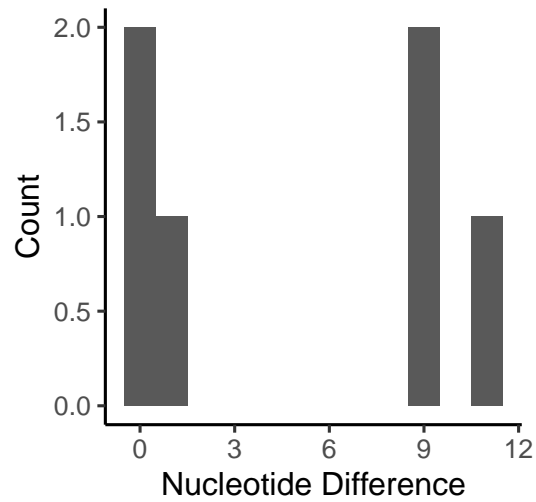
576 sequences assigned  
214 (37.2%) exact matches, in which:  
175 unique CDR3  
5 unique J





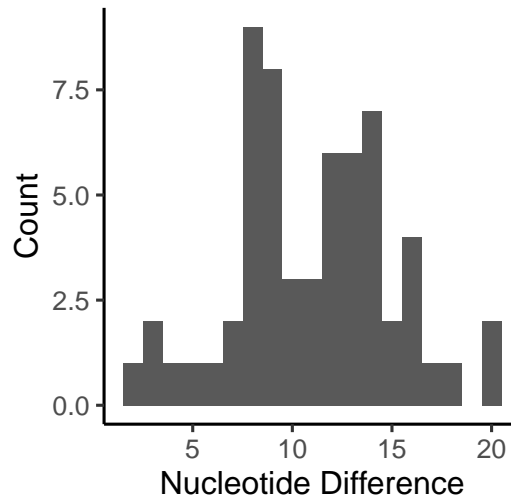
### IGHV3-52\*01\_03

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



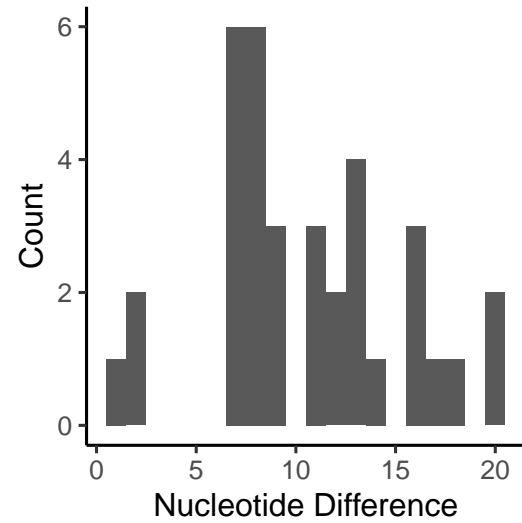
### IGHV3-66\*01

71 sequences assigned  
No exact matches.



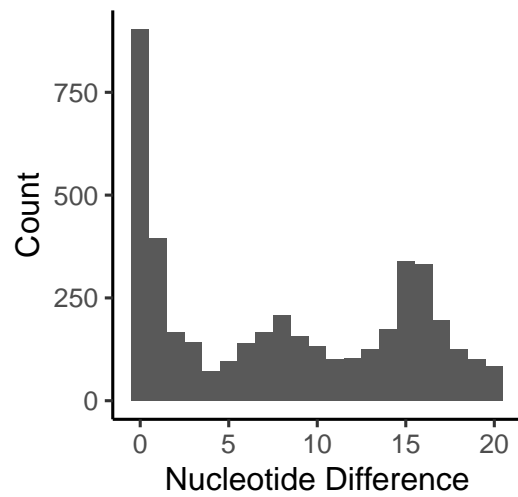
### IGHV3-66\*04

44 sequences assigned  
No exact matches.



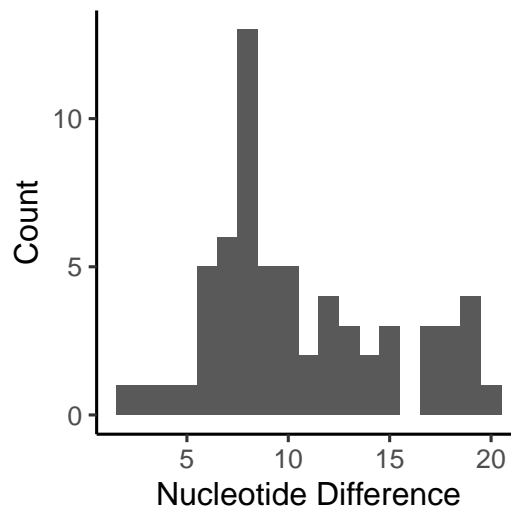
### IGHV3-53\*01\_02

5176 sequences assigned  
904 (17.5%) exact matches, in which:  
712 unique CDR3  
6 unique J



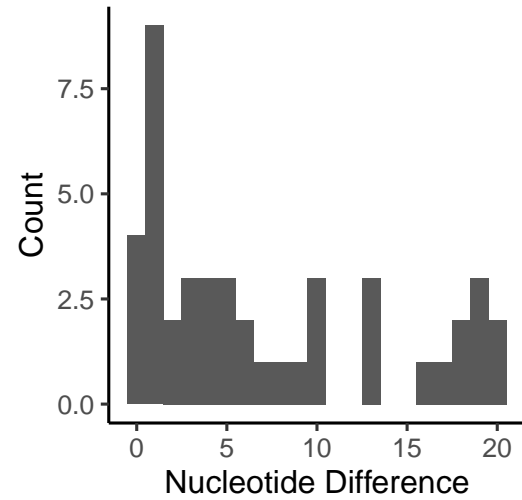
### IGHV3-66\*02

76 sequences assigned  
No exact matches.



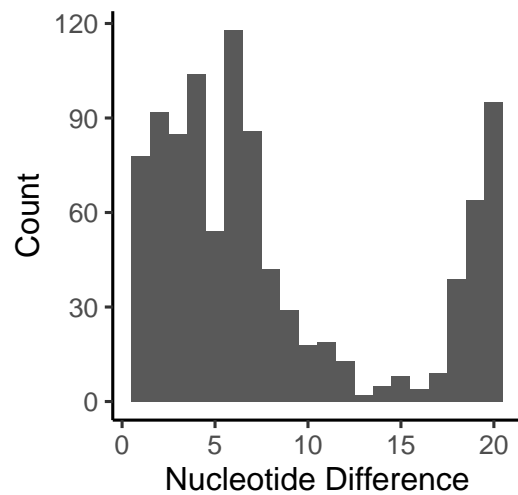
### IGHV3-69-1\*01

71 sequences assigned  
4 (5.6%) exact matches, in which:  
4 unique CDR3  
3 unique J



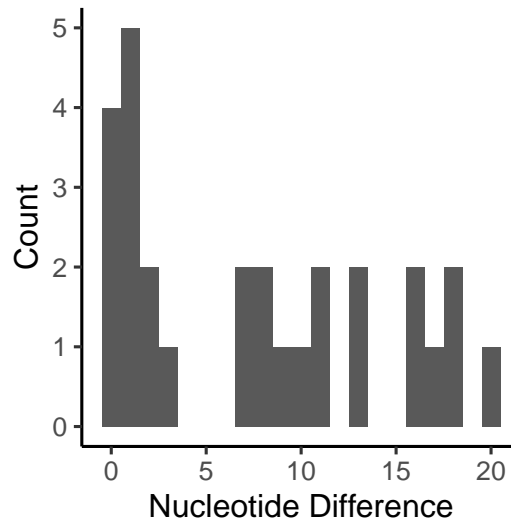
### IGHV3-64\*04

1101 sequences assigned  
No exact matches.



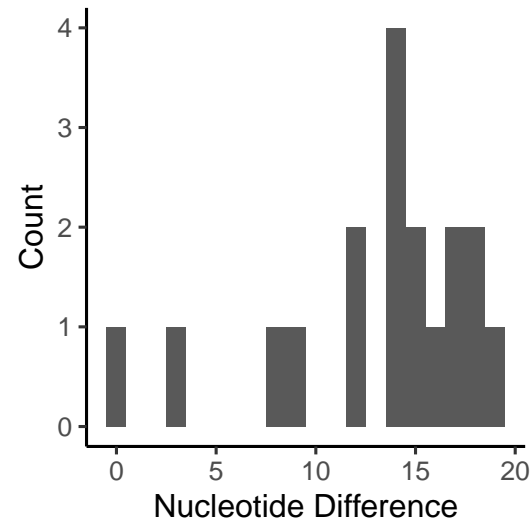
### IGHV3-66\*03

32 sequences assigned  
4 (12.5%) exact matches, in which:  
4 unique CDR3  
3 unique J



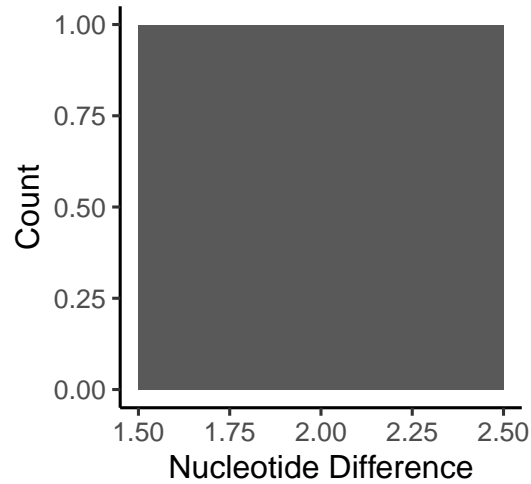
### IGHV3-69-1\*02

36 sequences assigned  
1 (2.8%) exact matches, in which:  
1 unique CDR3  
1 unique J



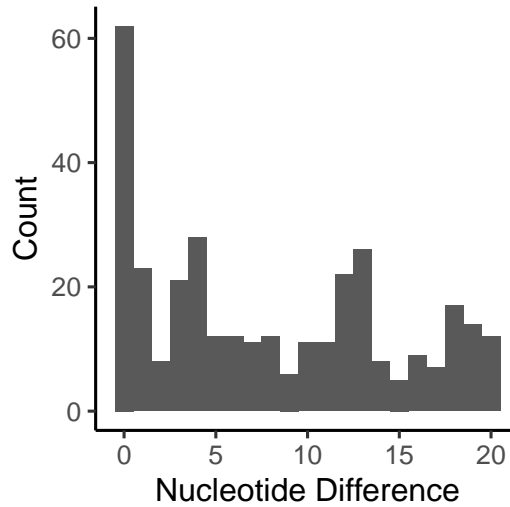
### IGHV3-71\*02

1 sequences assigned  
No exact matches.



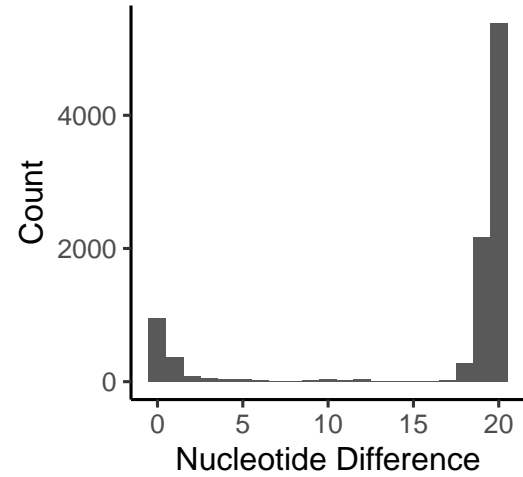
### IGHV3-72\*01

517 sequences assigned  
62 (12%) exact matches, in which:  
51 unique CDR3  
6 unique J



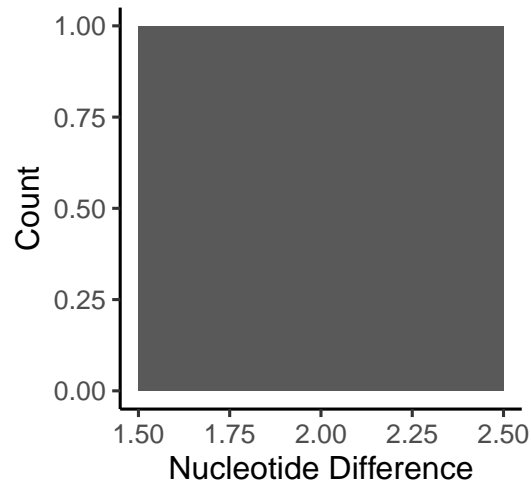
### IGHV3-64D\*06

14601 sequences assigned  
958 (6.6%) exact matches, in which:  
672 unique CDR3  
6 unique J



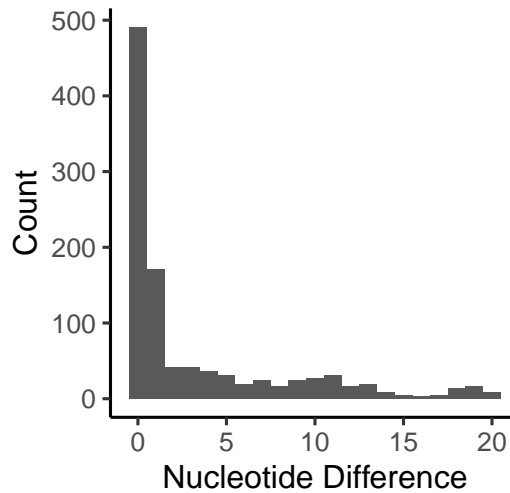
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



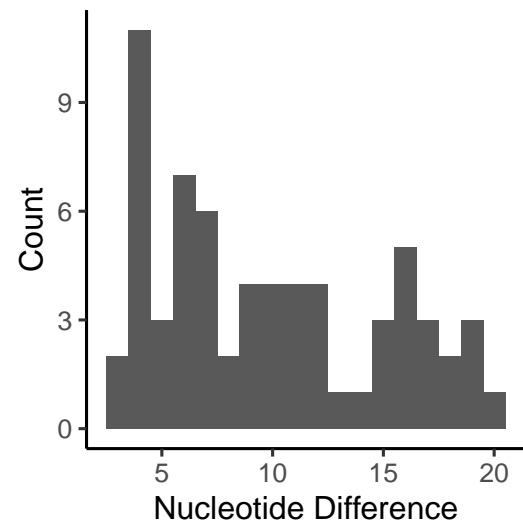
### IGHV3-73\*01\_02

1271 sequences assigned  
491 (38.6%) exact matches, in which:  
379 unique CDR3  
6 unique J



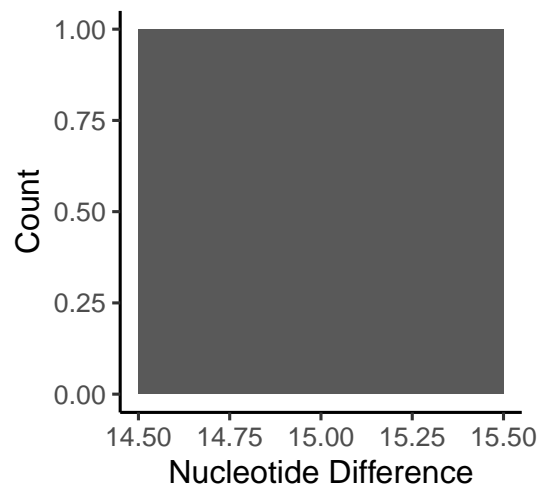
### IGHV3-NL1\*01

88 sequences assigned  
No exact matches.



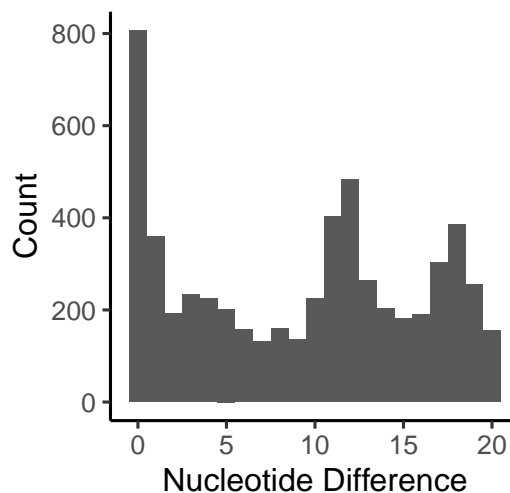
### IGHV3-71\*01\_04

3 sequences assigned  
No exact matches.



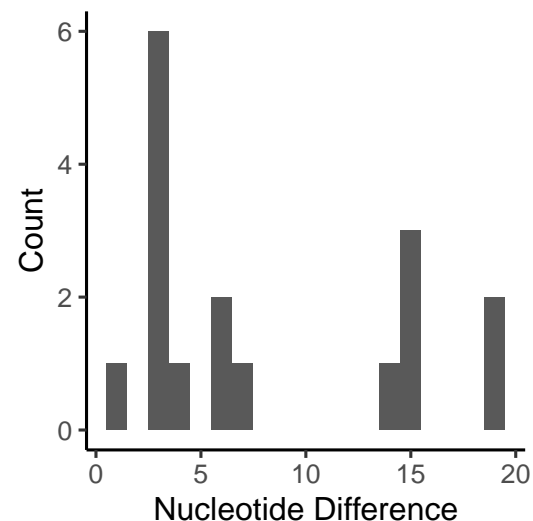
### IGHV3-74\*01\_02

7072 sequences assigned  
807 (11.4%) exact matches, in which:  
614 unique CDR3  
6 unique J



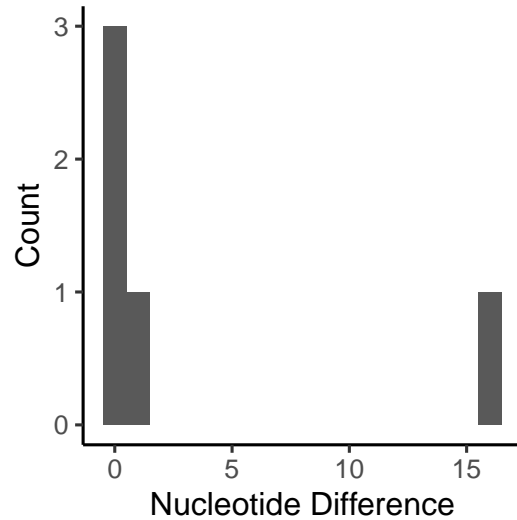
### IGHV4-28\*03

25 sequences assigned  
No exact matches.



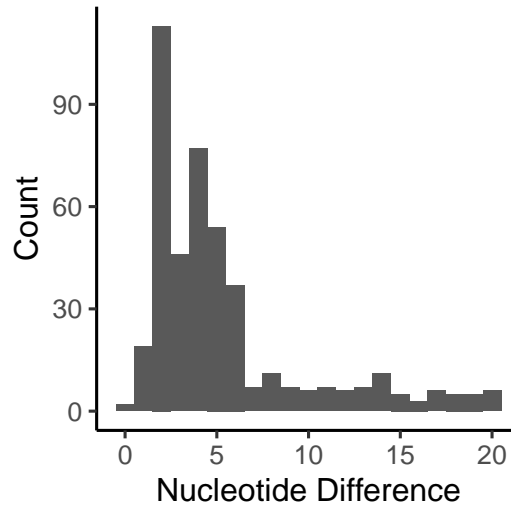
### IGHV4-28\*01\_07

5 sequences assigned  
3 (60%) exact matches, in which:  
3 unique CDR3  
1 unique J



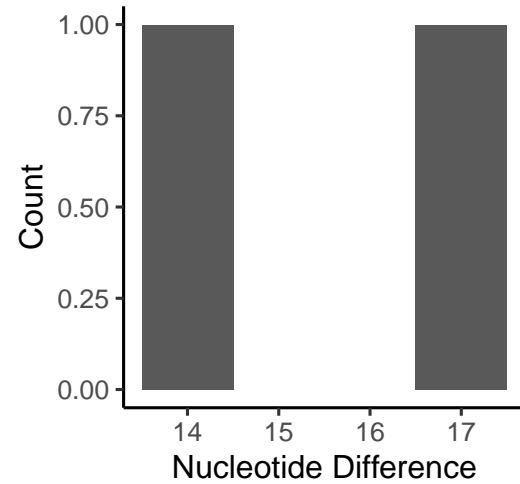
### IGHV4-30-4\*08

531 sequences assigned  
2 (0.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



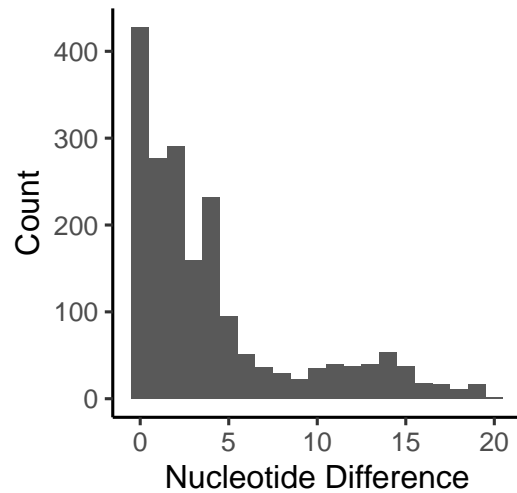
### IGHV4-38-2\*01

5 sequences assigned  
No exact matches.



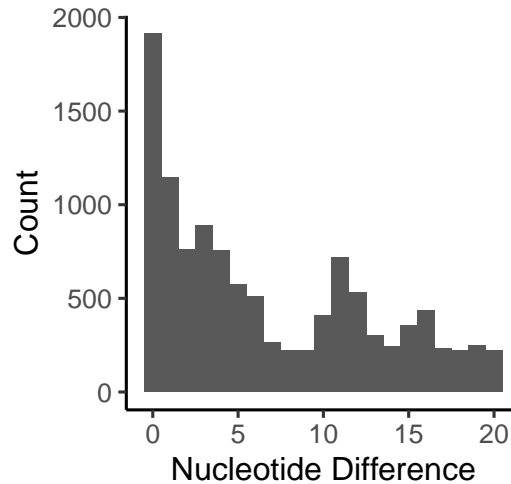
### IGHV4-30-2\*01

1983 sequences assigned  
428 (21.6%) exact matches, in which:  
362 unique CDR3  
6 unique J



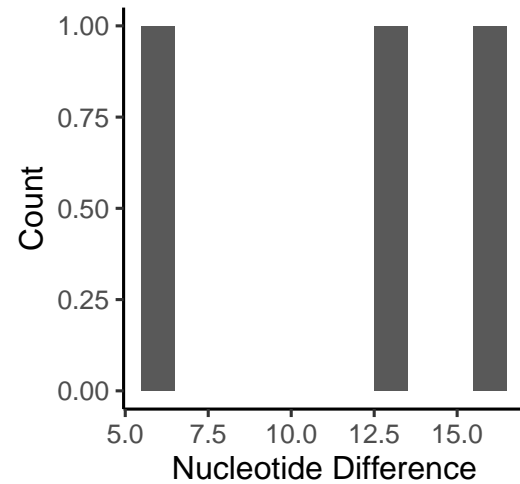
### IGHV4-31\*03\_04

12355 sequences assigned  
1913 (15.5%) exact matches, in which:  
1765 unique CDR3  
6 unique J



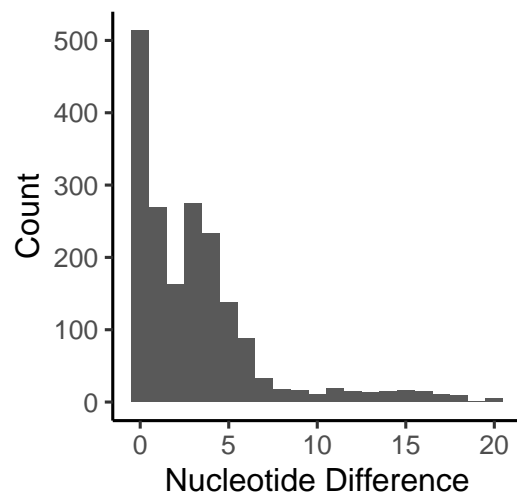
### IGHV4-38-2\*02

5 sequences assigned  
No exact matches.



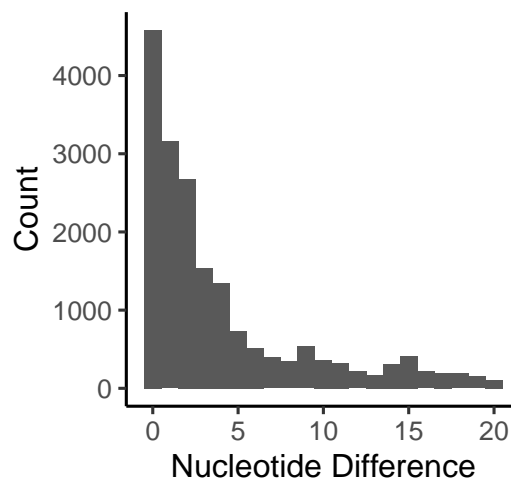
### IGHV4-30-4\*01

2188 sequences assigned  
514 (23.5%) exact matches, in which:  
481 unique CDR3  
6 unique J



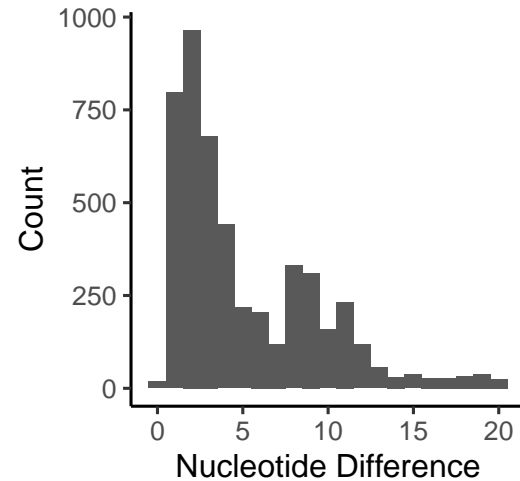
### IGHV4-34\*01\_02

19759 sequences assigned  
4582 (23.2%) exact matches, in which:  
4046 unique CDR3  
6 unique J



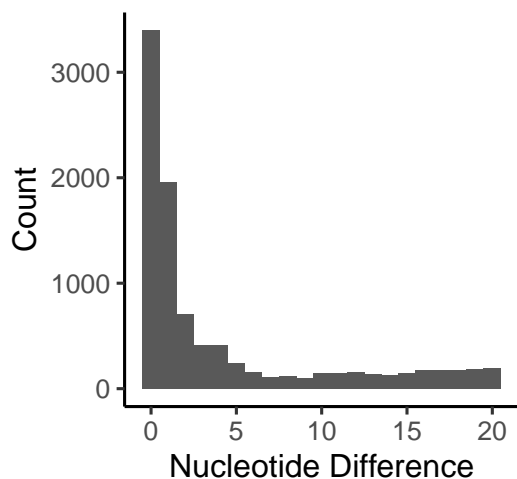
### IGHV4-39\*07

5150 sequences assigned  
18 (0.3%) exact matches, in which:  
18 unique CDR3  
4 unique J



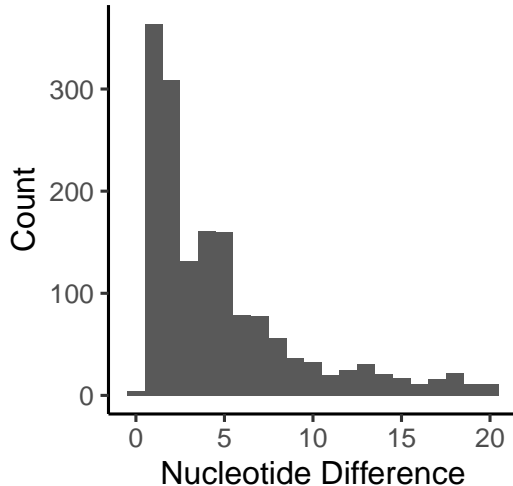
### IGHV4-39\*01\_05

11298 sequences assigned  
3397 (30.1%) exact matches, in which:  
3031 unique CDR3  
6 unique J



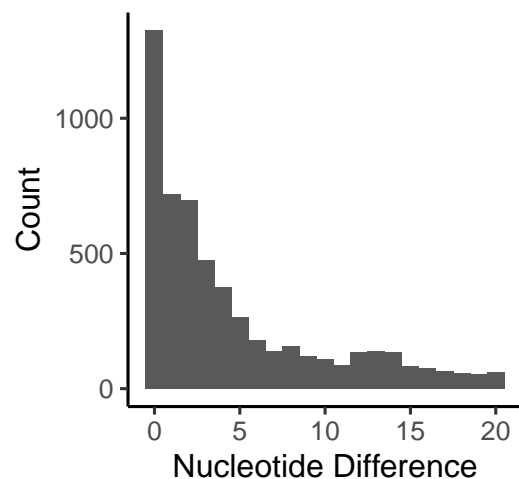
### IGHV4-59\*08

1677 sequences assigned  
4 (0.2%) exact matches, in which:  
4 unique CDR3  
1 unique J



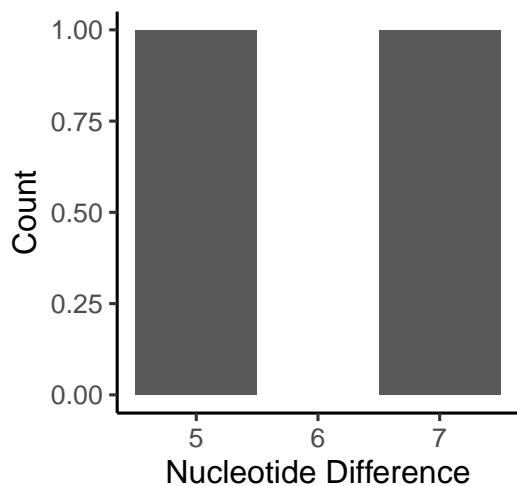
### IGHV4-61\*01

5992 sequences assigned  
1325 (22.1%) exact matches, in which:  
1272 unique CDR3  
6 unique J



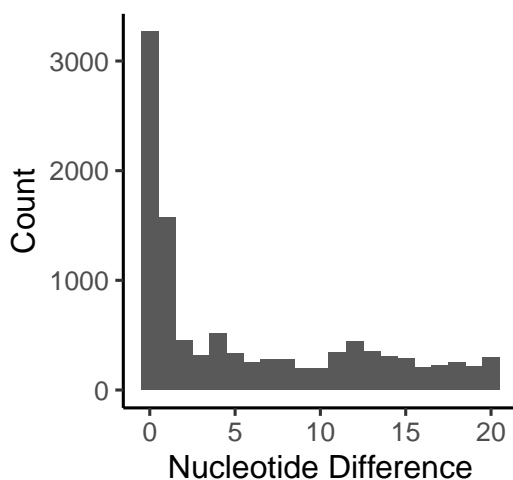
### IGHV4-55\*01\_05

4 sequences assigned  
No exact matches.



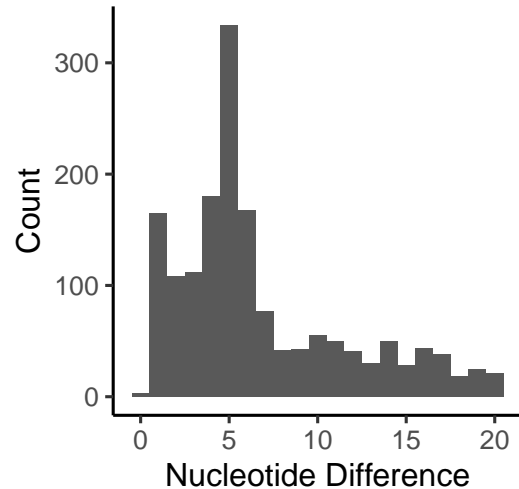
### IGHV4-59\*01\_07

12076 sequences assigned  
3267 (27.1%) exact matches, in which:  
2968 unique CDR3  
6 unique J



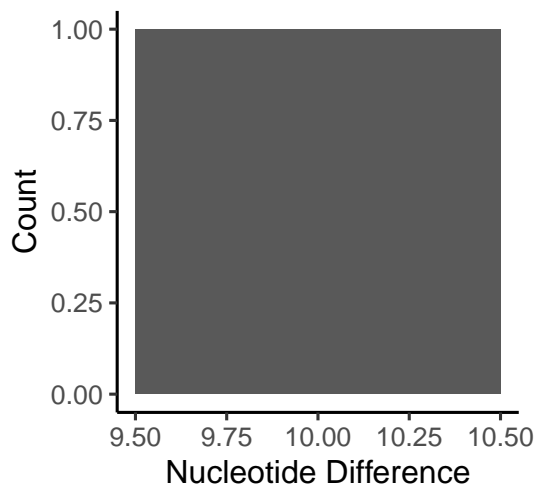
### IGHV4-61\*08

2056 sequences assigned  
3 (0.1%) exact matches, in which:  
3 unique CDR3  
3 unique J



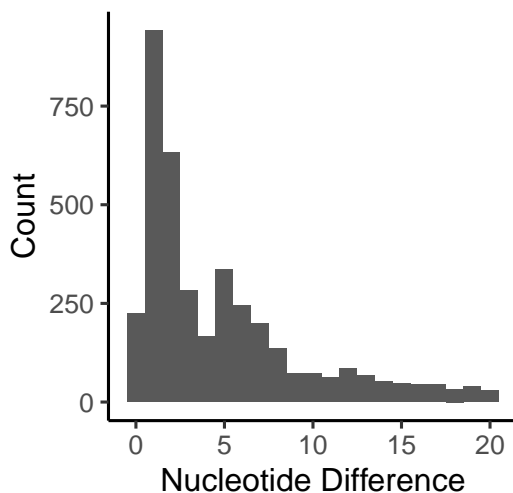
### IGHV4-55\*02\_04\_08

1 sequences assigned  
No exact matches.



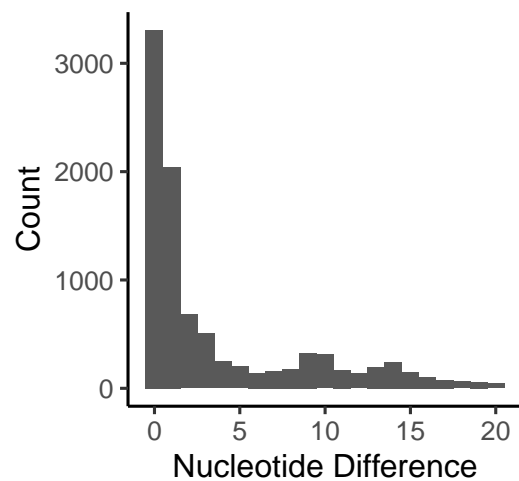
### IGHV4-59\*12

3949 sequences assigned  
225 (5.7%) exact matches, in which:  
223 unique CDR3  
6 unique J



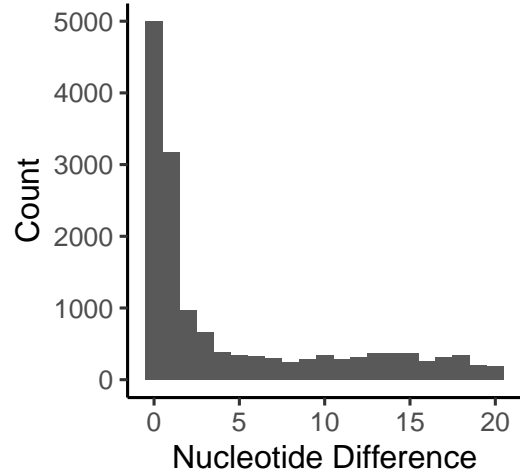
### IGHV5-10-1\*01\_03

9937 sequences assigned  
3307 (33.3%) exact matches, in which:  
2363 unique CDR3  
6 unique J



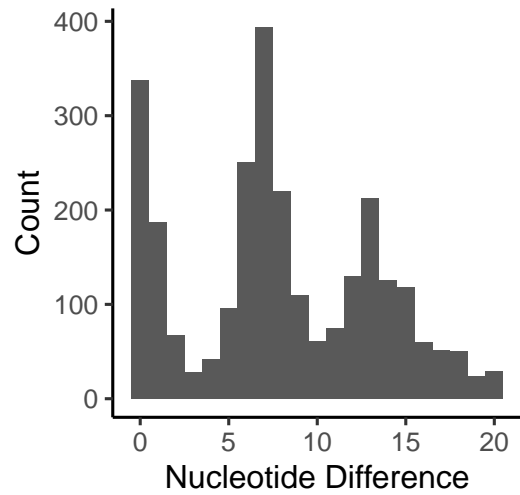
## IGHV5–51\*01\_03

15769 sequences assigned  
4997 (31.7%) exact matches, in which:  
3280 unique CDR3  
6 unique J



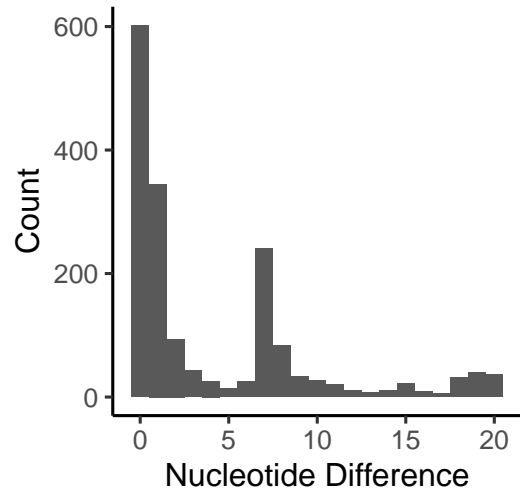
## IGHV6–1\*01\_02

2877 sequences assigned  
338 (11.7%) exact matches, in which:  
309 unique CDR3  
6 unique J



## IGHV7–4–1\*02

1826 sequences assigned  
602 (33%) exact matches, in which:  
559 unique CDR3  
6 unique J





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.

Novel sequence(s) IGHV3–48\*04\_A193T\_C198T\_A200C\_C201T\_T210A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59\*02\_G88A 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) IGHV3–33\*01\_C288T 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) IGHV3–33\*01\_T105C\_A173T\_T192G\_C288T are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–30\*04\_T288C IGHV3–33\*01\_G75C IGHV4–30–2\*03\_T288C IGHV4–59\*02\_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–11\*06\_T300C 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.