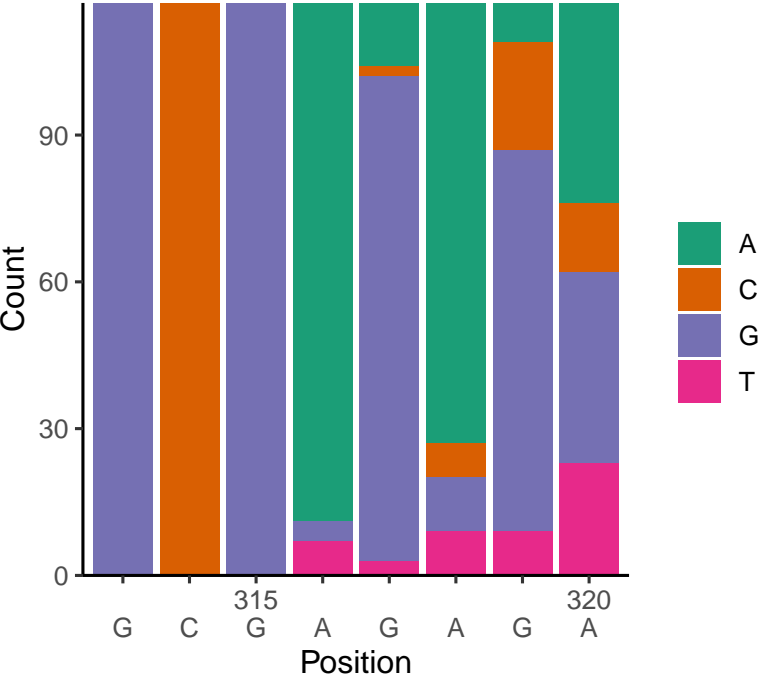
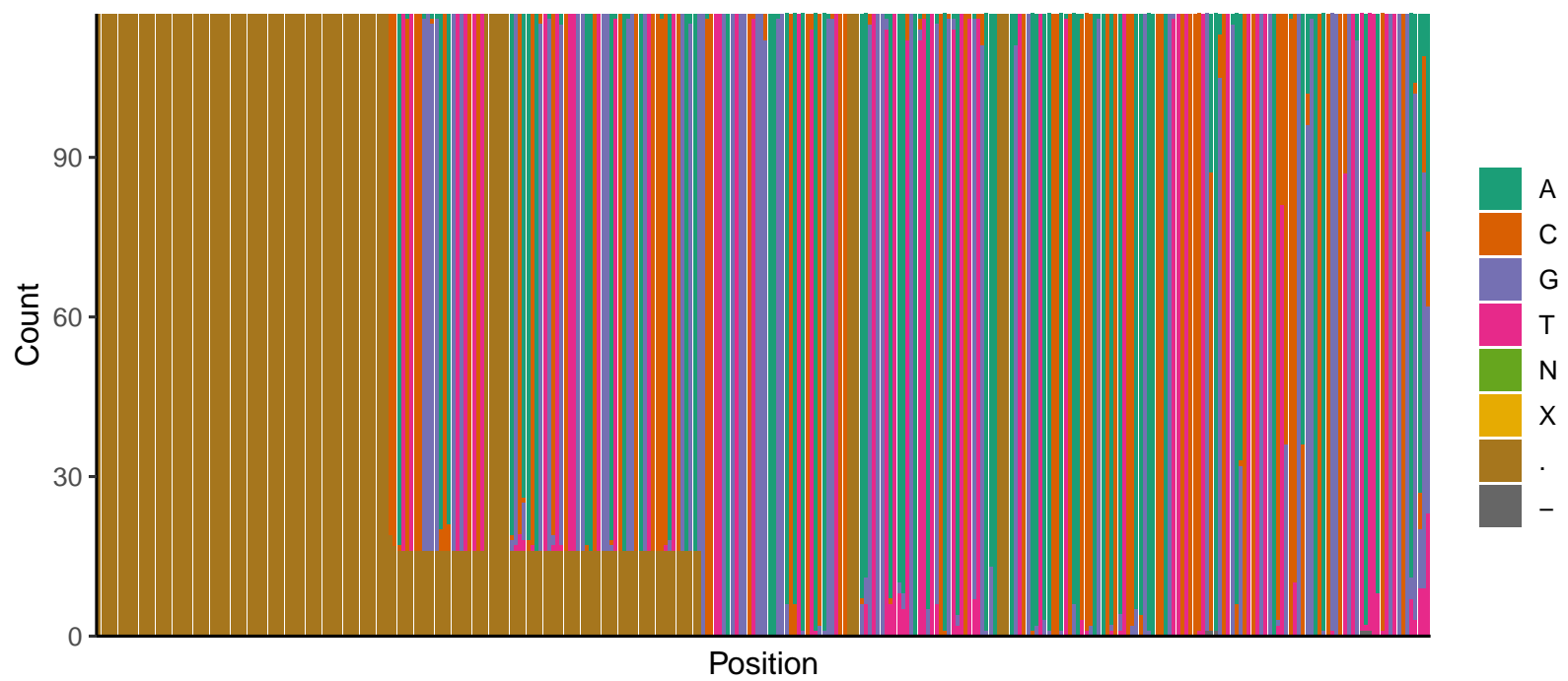


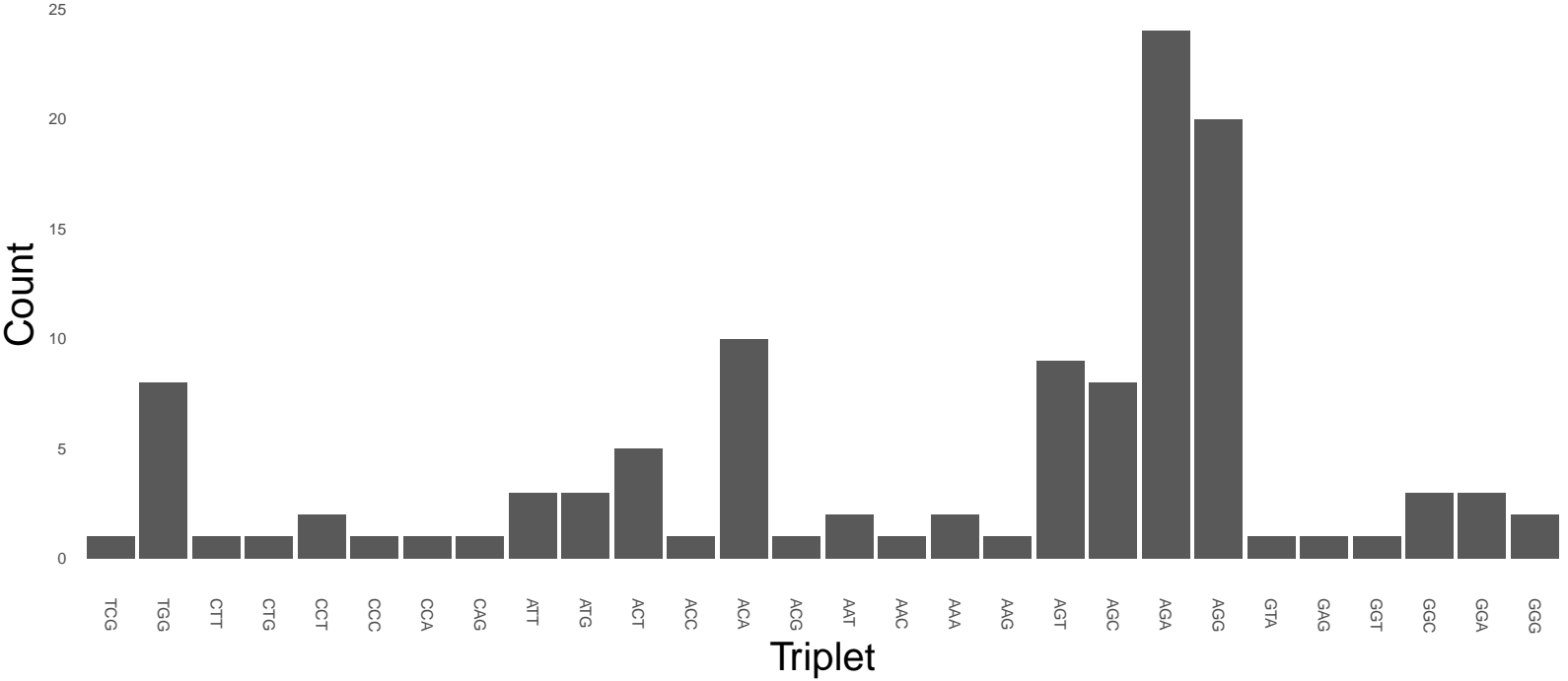
Gene IGHV6-1\*01\_02\_A315G



Gene IGHV6-1\*01\_02\_A315G

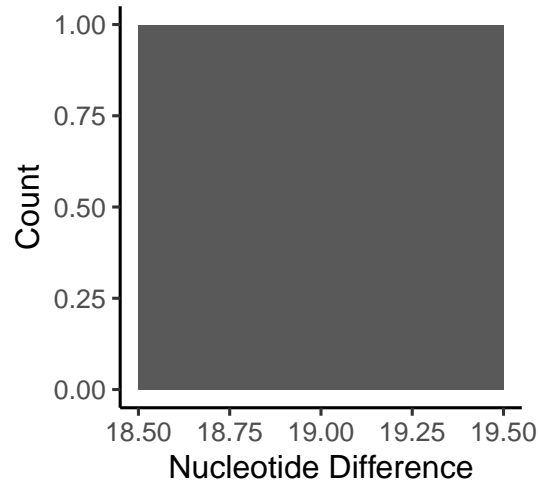


IGHV6-1\*01\_02\_A315G- Final 3 nucleotides as a triplet



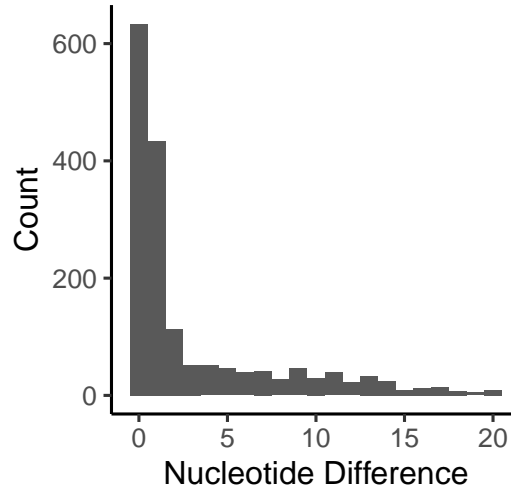
### IGHV1/OR21-1\*01

1 sequences assigned  
No exact matches.



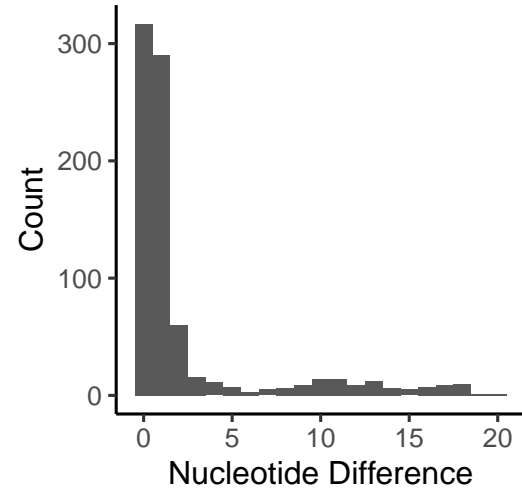
### IGHV1-3\*01\_05

1765 sequences assigned  
634 (35.9%) exact matches, in which:  
562 unique CDR3  
7 unique J



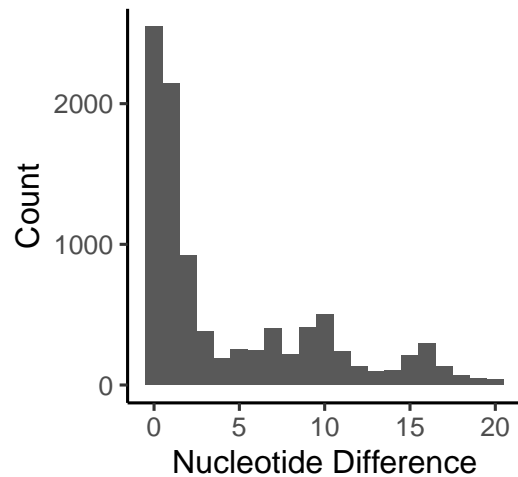
### IGHV1-24\*01

935 sequences assigned  
317 (33.9%) exact matches, in which:  
264 unique CDR3  
7 unique J



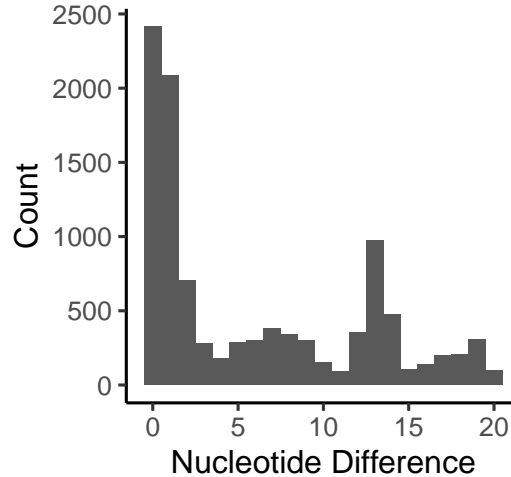
### IGHV1-2\*02

10524 sequences assigned  
2547 (24.2%) exact matches, in which:  
2236 unique CDR3  
7 unique J



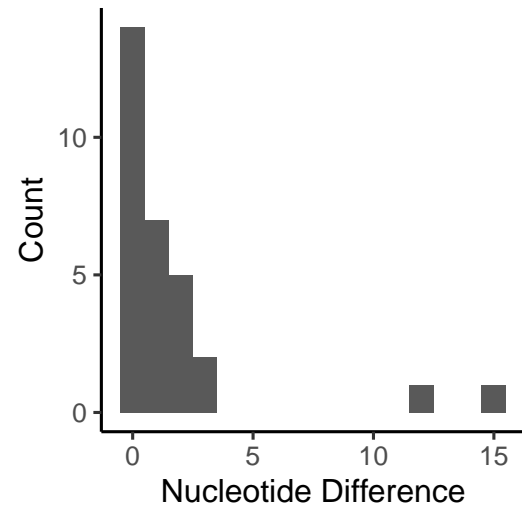
### IGHV1-8\*01

10549 sequences assigned  
2414 (22.9%) exact matches, in which:  
2129 unique CDR3  
7 unique J



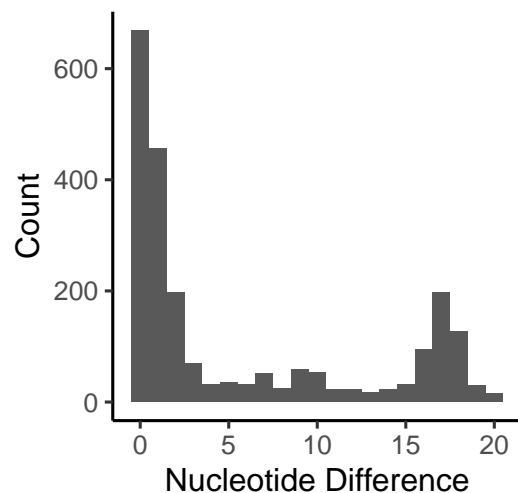
### IGHV1-45\*02

32 sequences assigned  
14 (43.8%) exact matches, in which:  
13 unique CDR3  
4 unique J



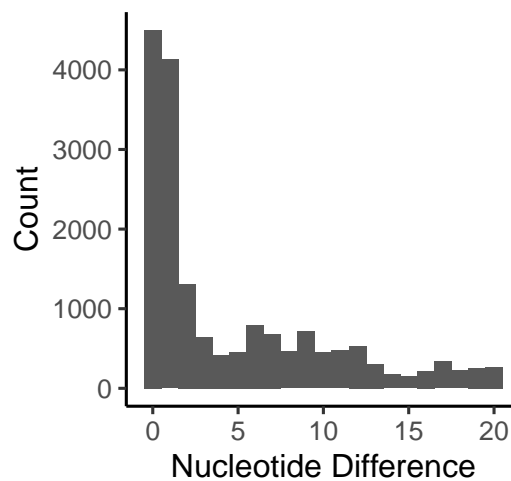
### IGHV1-2\*04

2306 sequences assigned  
669 (29%) exact matches, in which:  
591 unique CDR3  
7 unique J



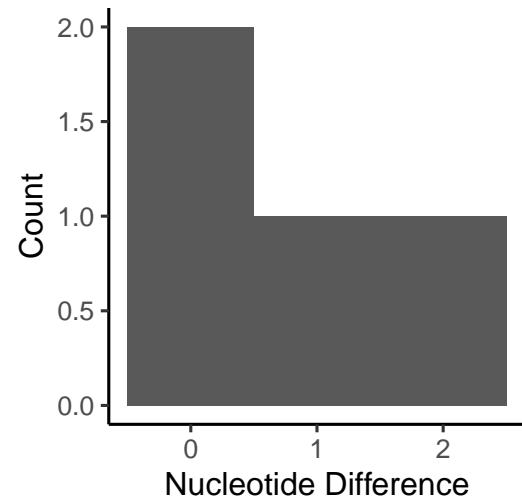
### IGHV1-18\*01

18939 sequences assigned  
4500 (23.8%) exact matches, in which:  
3825 unique CDR3  
7 unique J



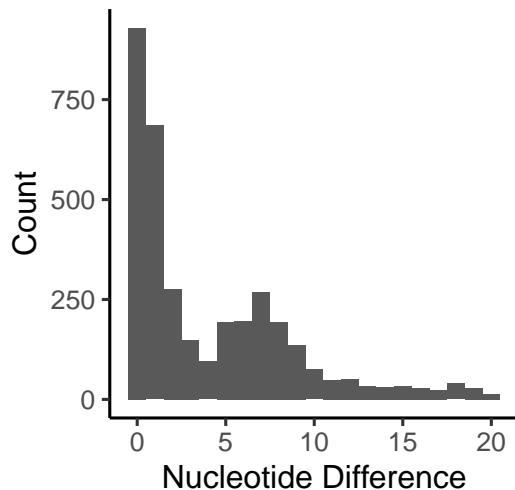
### IGHV1-45\*03

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



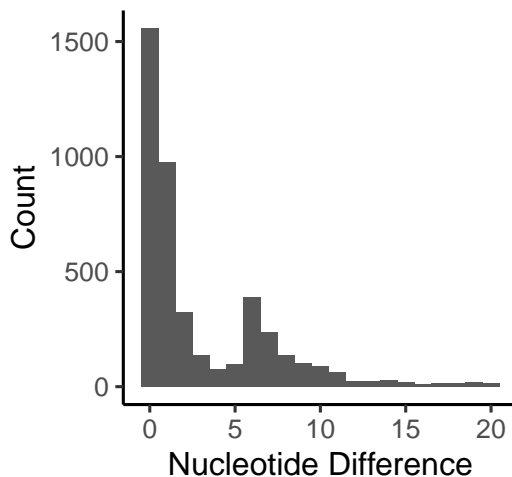
### IGHV1-46\*01

3853 sequences assigned  
930 (24.1%) exact matches, in which:  
841 unique CDR3  
7 unique J



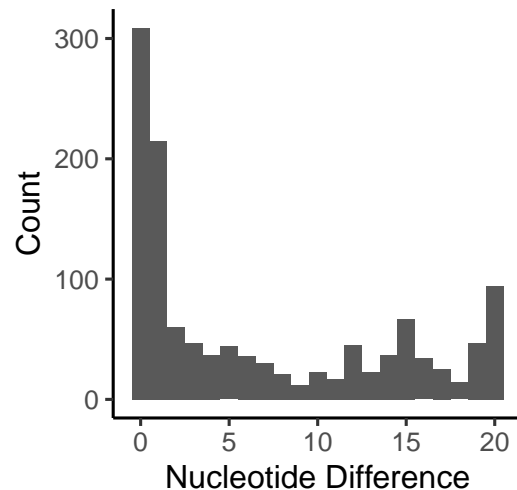
### IGHV1-69\*04\_09

4665 sequences assigned  
1557 (33.4%) exact matches, in which:  
1417 unique CDR3  
7 unique J



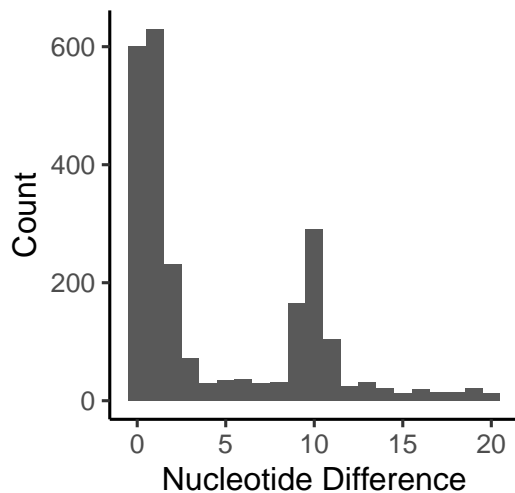
### IGHV2-5\*02

1466 sequences assigned  
309 (21.1%) exact matches, in which:  
277 unique CDR3  
7 unique J



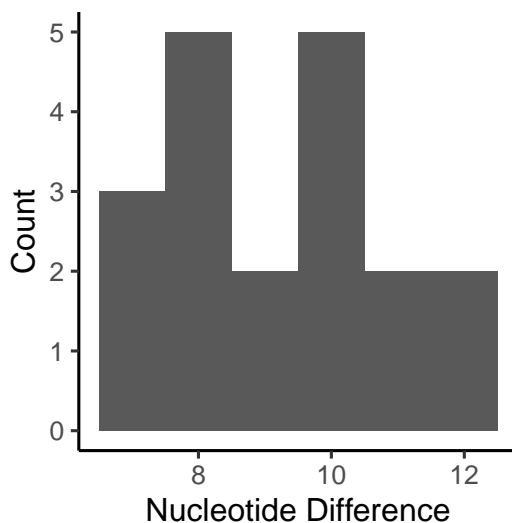
### IGHV1-46\*03

2516 sequences assigned  
601 (23.9%) exact matches, in which:  
499 unique CDR3  
7 unique J



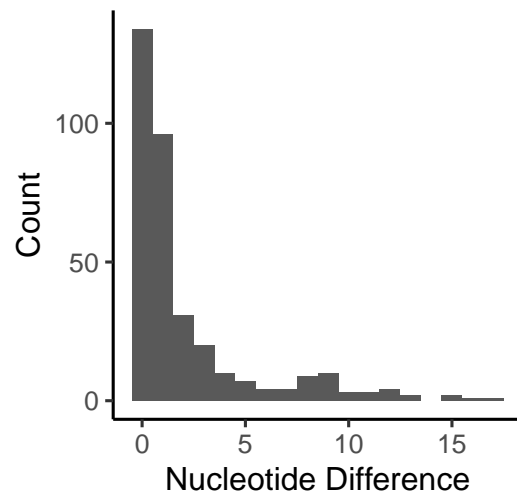
### IGHV1-NL1\*01

19 sequences assigned  
No exact matches.



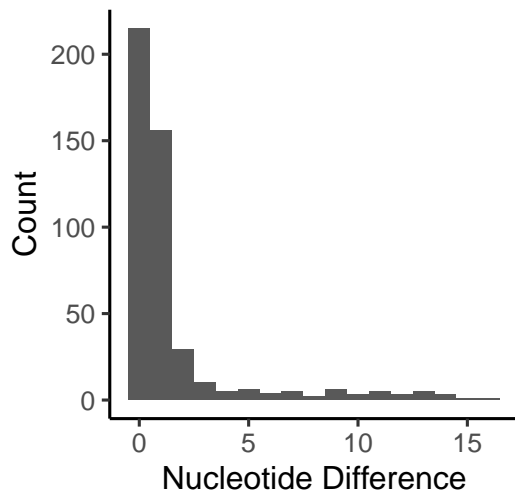
### IGHV2-26\*01

341 sequences assigned  
134 (39.3%) exact matches, in which:  
122 unique CDR3  
5 unique J



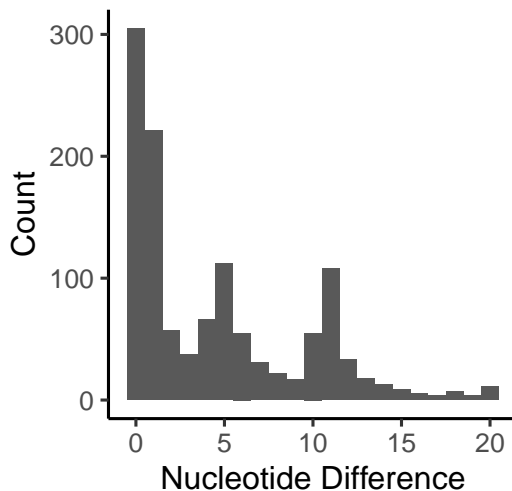
### IGHV1-58\*02

460 sequences assigned  
215 (46.7%) exact matches, in which:  
179 unique CDR3  
7 unique J



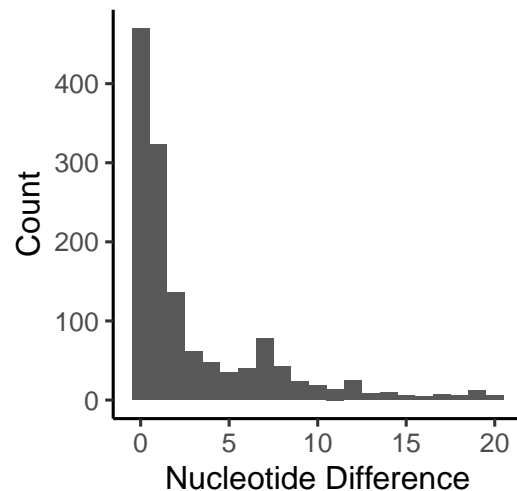
### IGHV2-5\*01

1612 sequences assigned  
305 (18.9%) exact matches, in which:  
268 unique CDR3  
7 unique J



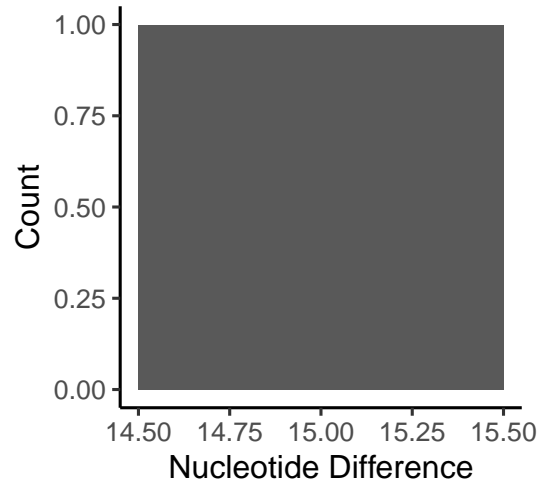
### IGHV2-70\*11\_15

1742 sequences assigned  
470 (27%) exact matches, in which:  
415 unique CDR3  
6 unique J



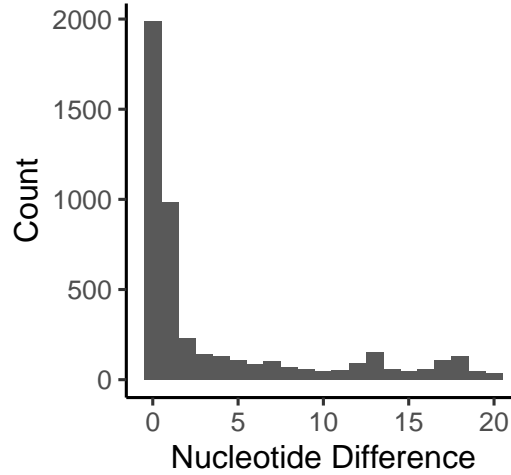
### IGHV2-70D\*14

1 sequences assigned  
No exact matches.



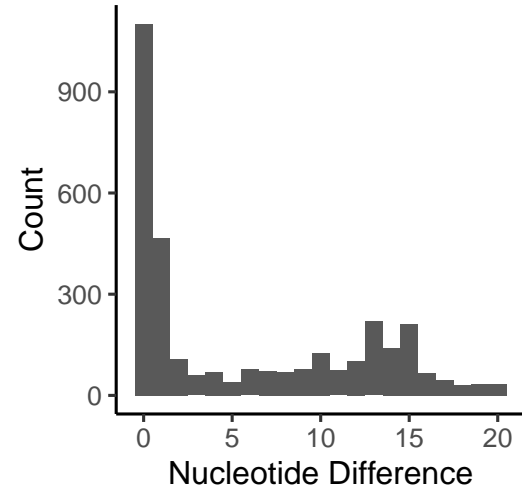
### IGHV3-11\*01

7190 sequences assigned  
1987 (27.6%) exact matches, in which:  
1339 unique CDR3  
7 unique J



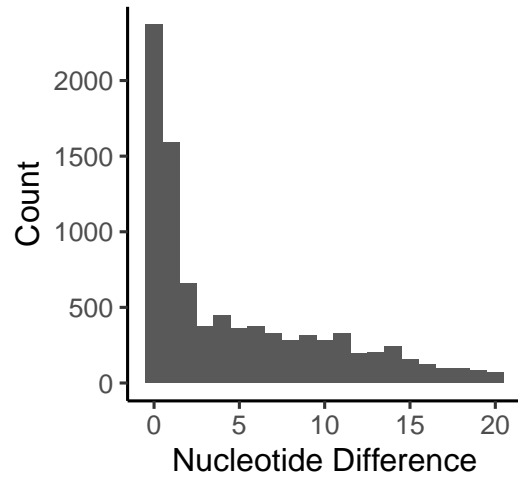
### IGHV3-15\*01\_02

3565 sequences assigned  
1102 (30.9%) exact matches, in which:  
726 unique CDR3  
7 unique J



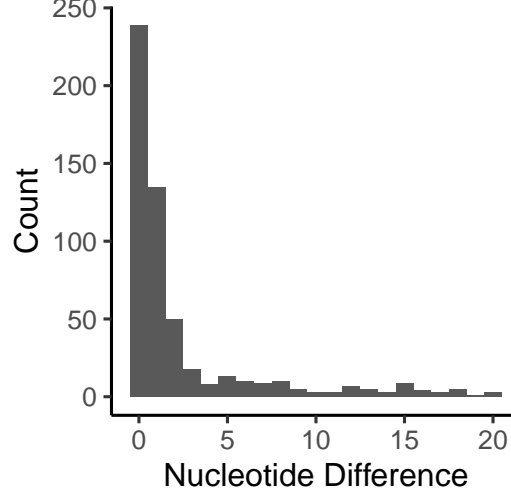
### IGHV3-7\*01

10115 sequences assigned  
2369 (23.4%) exact matches, in which:  
1626 unique CDR3  
7 unique J



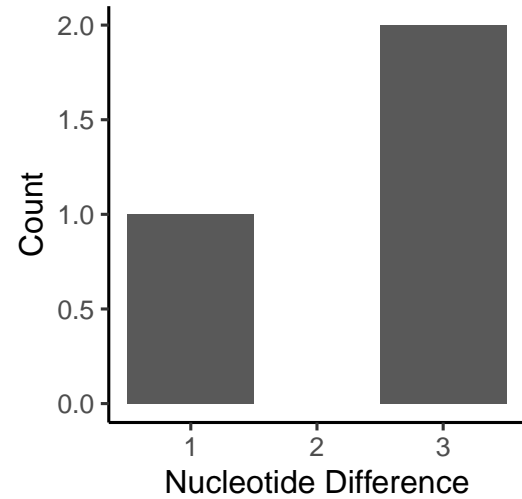
### IGHV3-11\*04

570 sequences assigned  
239 (41.9%) exact matches, in which:  
233 unique CDR3  
7 unique J



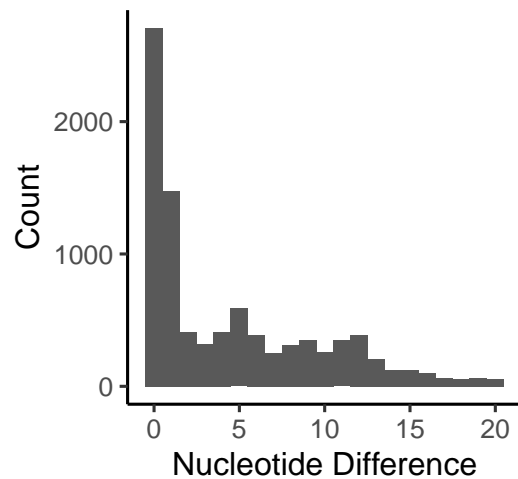
### IGHV3-19\*01

3 sequences assigned  
No exact matches.



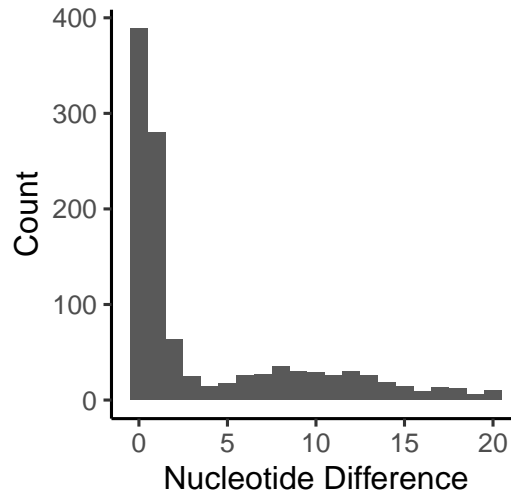
### IGHV3-9\*01

9734 sequences assigned  
2707 (27.8%) exact matches, in which:  
1697 unique CDR3  
7 unique J



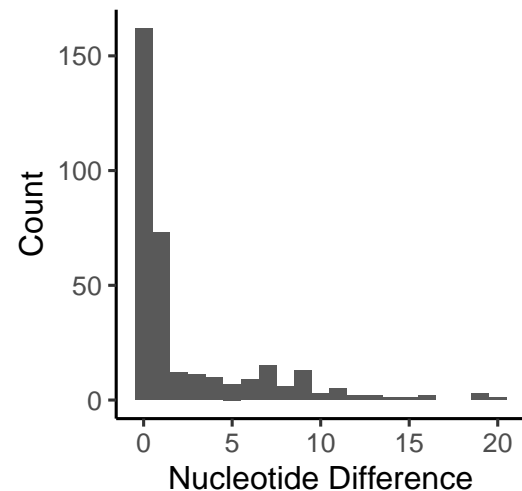
### IGHV3-13\*01

2244 sequences assigned  
389 (17.3%) exact matches, in which:  
243 unique CDR3  
7 unique J



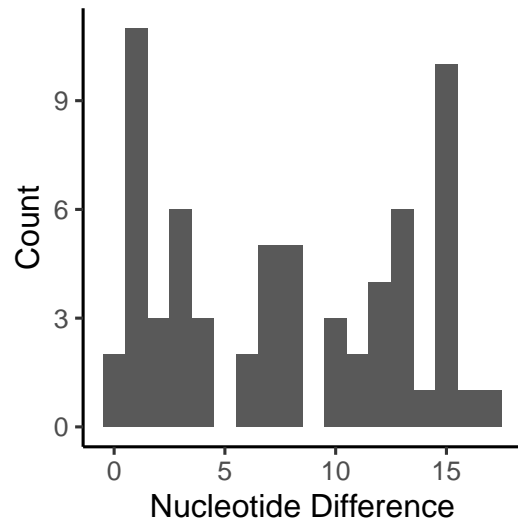
### IGHV3-20\*01\_02

338 sequences assigned  
162 (47.9%) exact matches, in which:  
96 unique CDR3  
6 unique J



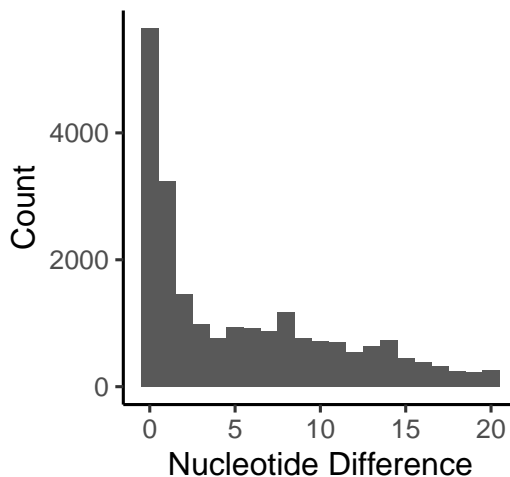
### IGHV3-20\*03\_04

69 sequences assigned  
2 (2.9%) exact matches, in which:  
2 unique CDR3  
2 unique J



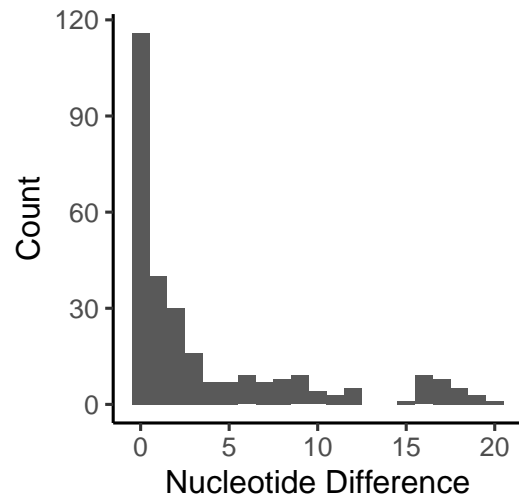
### IGHV3-23\*01\_04

24982 sequences assigned  
5647 (22.6%) exact matches, in which:  
3560 unique CDR3  
7 unique J



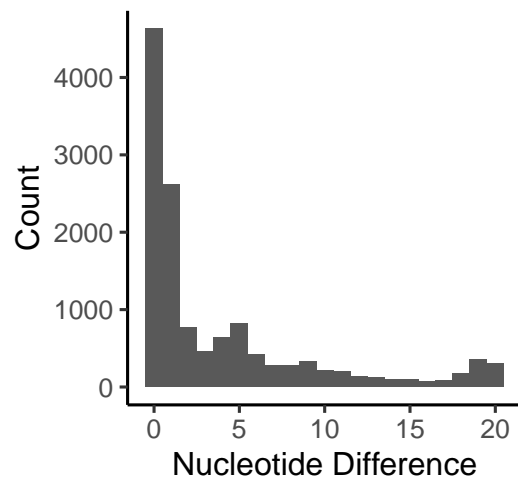
### IGHV3-30\*03

331 sequences assigned  
116 (35%) exact matches, in which:  
113 unique CDR3  
6 unique J



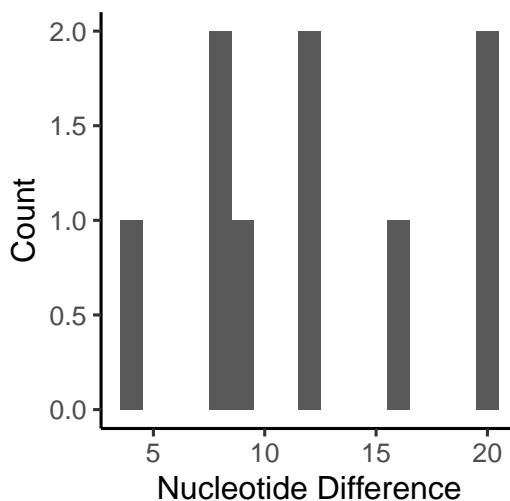
### IGHV3-21\*01\_02

13620 sequences assigned  
4630 (34%) exact matches, in which:  
2993 unique CDR3  
7 unique J



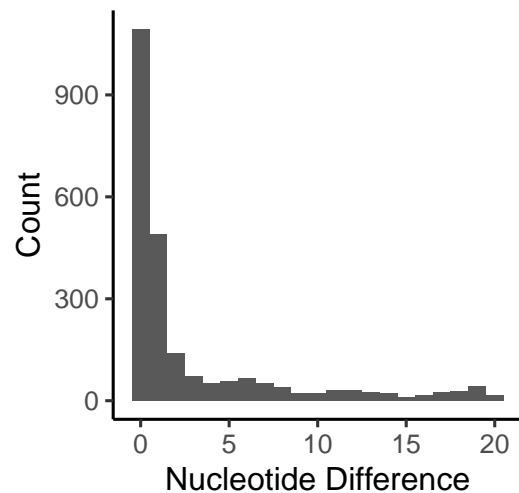
### IGHV3-30-3\*01

32 sequences assigned  
No exact matches.



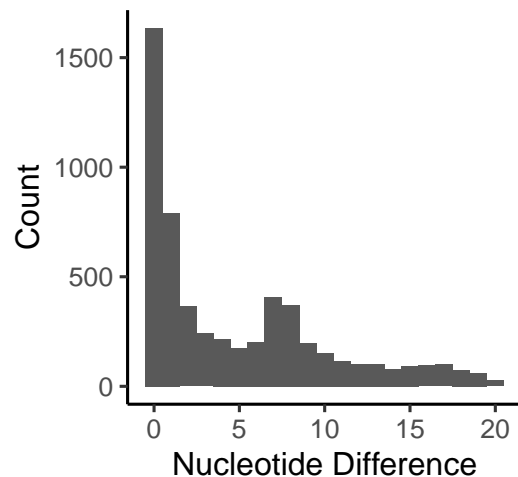
### IGHV3-30\*18

2663 sequences assigned  
1094 (41.1%) exact matches, in which:  
716 unique CDR3  
7 unique J



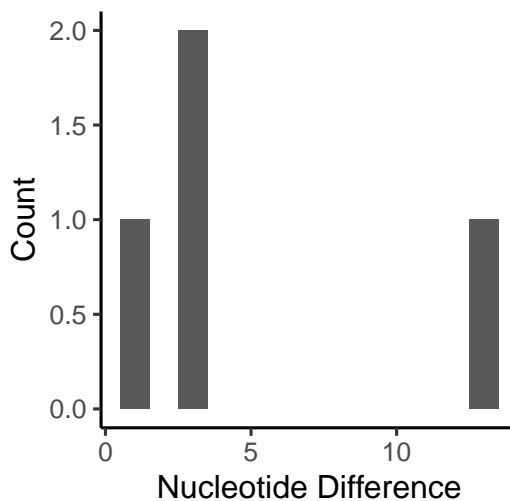
### IGHV3-23\*03

6148 sequences assigned  
1635 (26.6%) exact matches, in which:  
1133 unique CDR3  
7 unique J



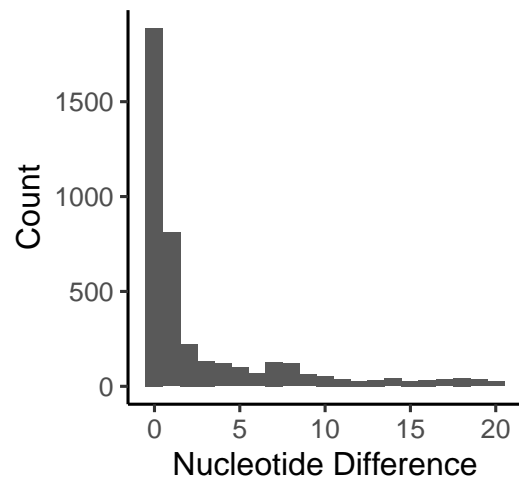
### IGHV3-30-3\*02

6 sequences assigned  
No exact matches.



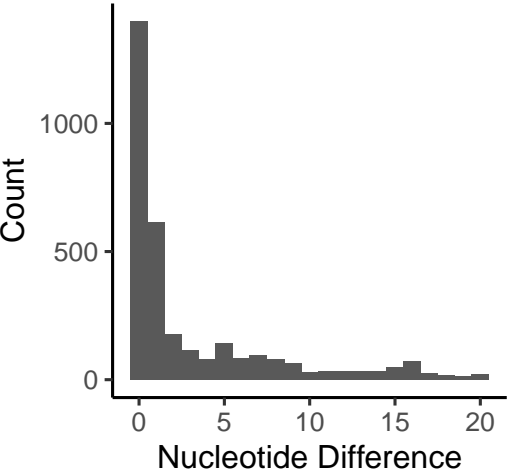
### IGHV3-33\*01

4178 sequences assigned  
1888 (45.2%) exact matches, in which:  
1339 unique CDR3  
7 unique J



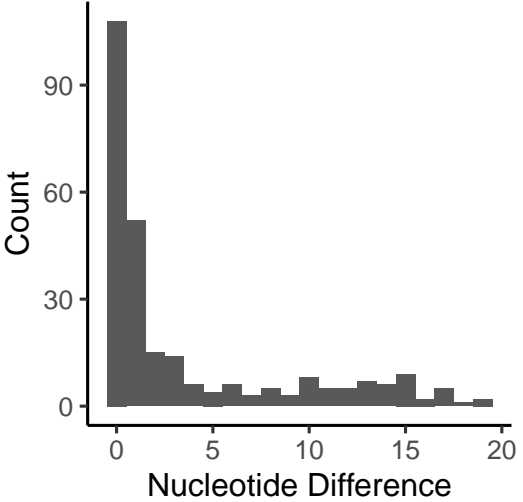
IGHV3-33\*08

3583 sequences assigned  
1398 (39%) exact matches, in which:  
1009 unique CDR3  
7 unique J



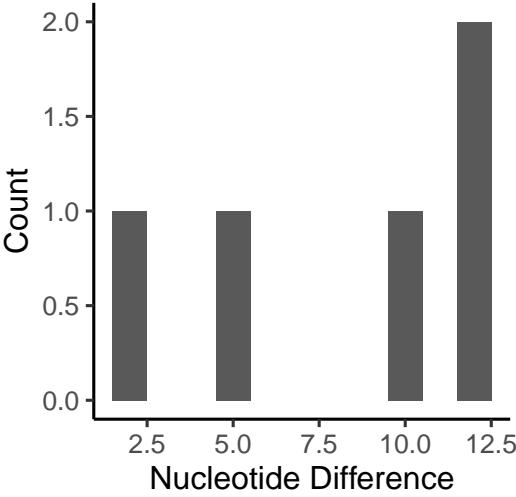
IGHV3-43\*01

301 sequences assigned  
108 (35.9%) exact matches, in which:  
72 unique CDR3  
6 unique J



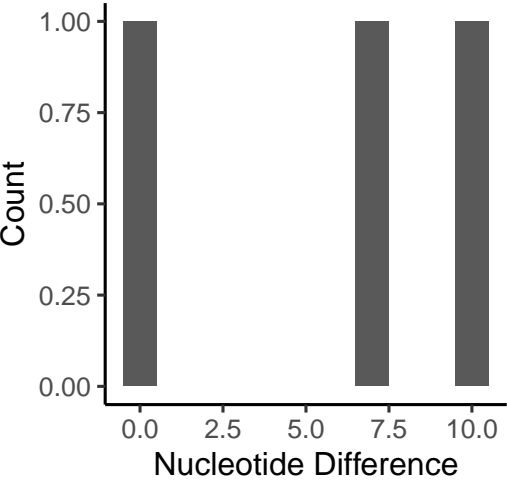
IGHV3-47\*02

5 sequences assigned  
No exact matches.



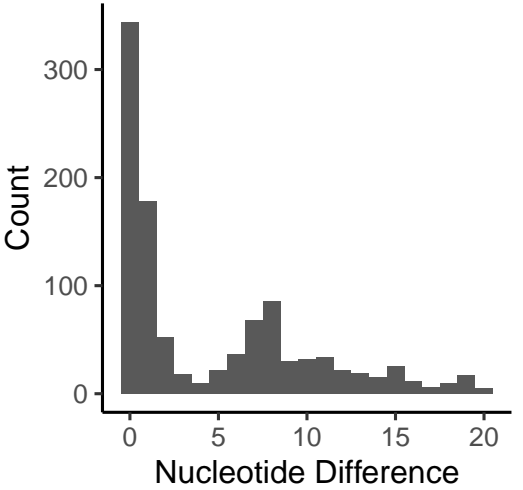
IGHV3-35\*01

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



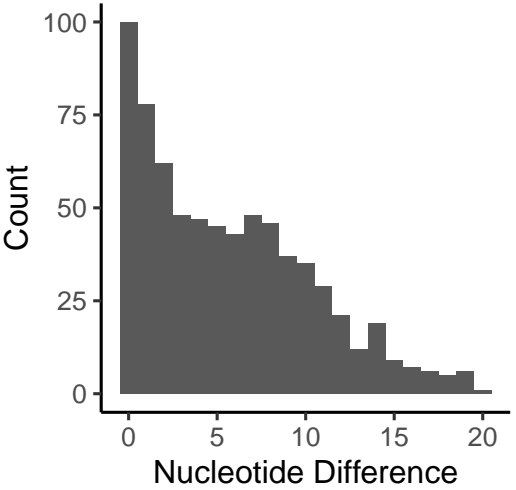
IGHV3-43\*02

1113 sequences assigned  
344 (30.9%) exact matches, in which:  
212 unique CDR3  
7 unique J



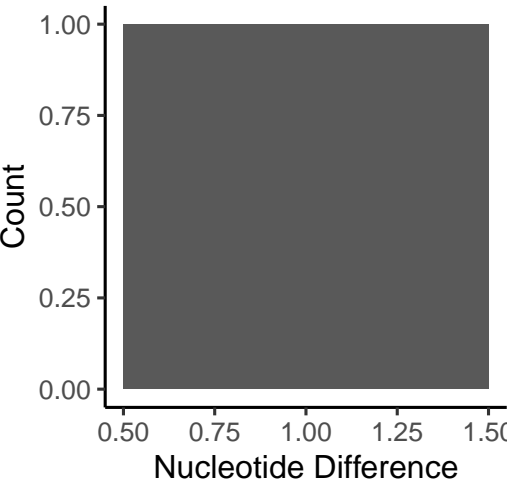
IGHV3-48\*01

720 sequences assigned  
100 (13.9%) exact matches, in which:  
99 unique CDR3  
7 unique J



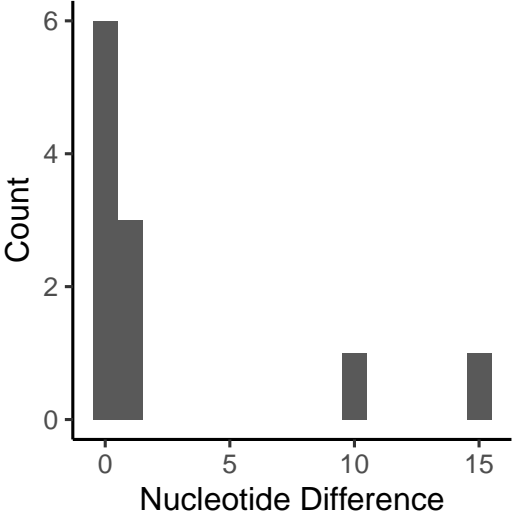
IGHV3-41\*02

1 sequences assigned  
No exact matches.



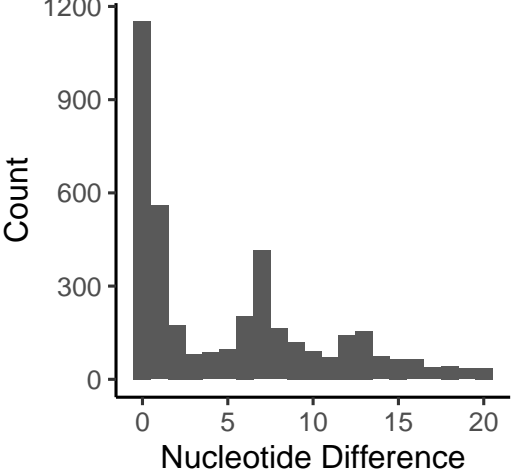
IGHV3-47\*01

11 sequences assigned  
6 (54.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



IGHV3-48\*02

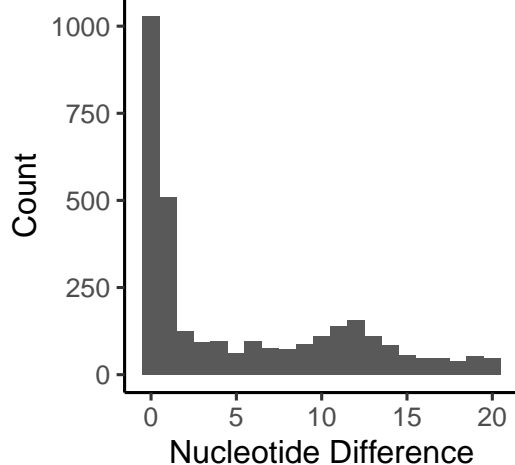
4532 sequences assigned  
1153 (25.4%) exact matches, in which:  
755 unique CDR3  
7 unique J





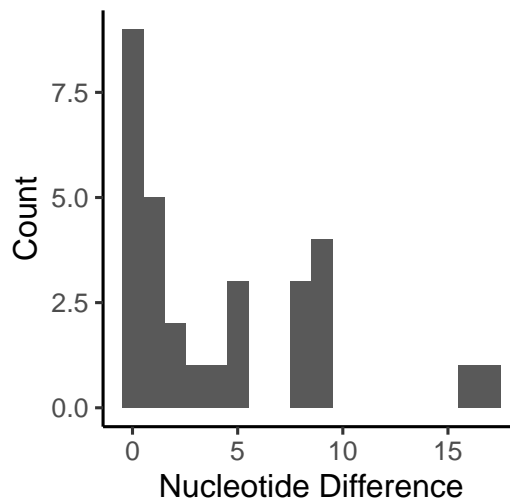
### IGHV3-48\*03

3351 sequences assigned  
1028 (30.7%) exact matches, in which:  
671 unique CDR3  
7 unique J



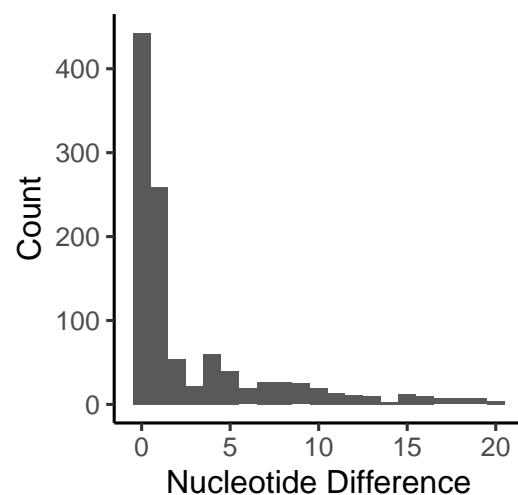
### IGHV3-52\*01\_03

30 sequences assigned  
9 (30%) exact matches, in which:  
7 unique CDR3  
4 unique J



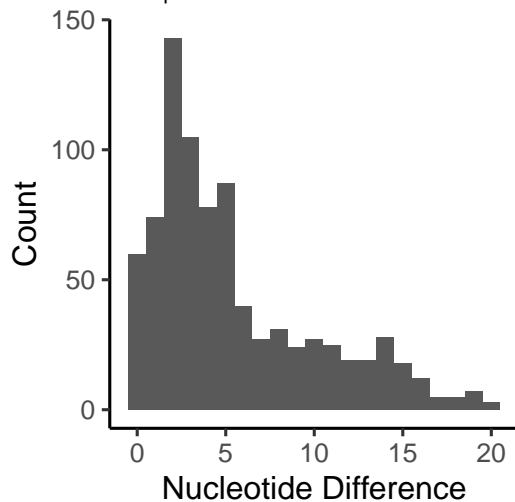
### IGHV3-64\*01

1116 sequences assigned  
443 (39.7%) exact matches, in which:  
290 unique CDR3  
6 unique J



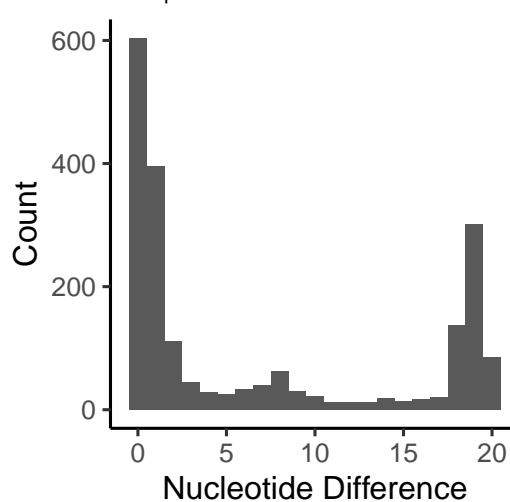
### IGHV3-48\*04

864 sequences assigned  
60 (6.9%) exact matches, in which:  
60 unique CDR3  
7 unique J



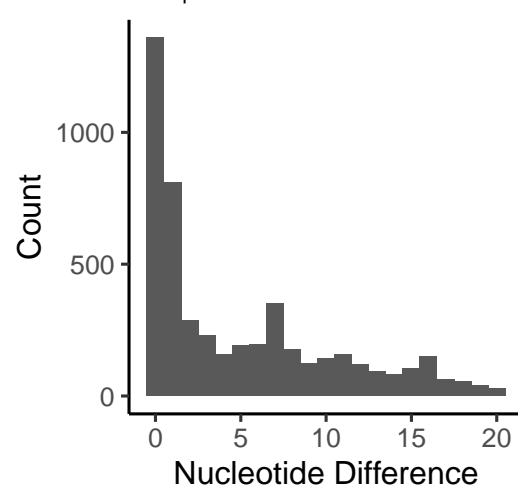
### IGHV3-53\*04

2157 sequences assigned  
604 (28%) exact matches, in which:  
411 unique CDR3  
7 unique J



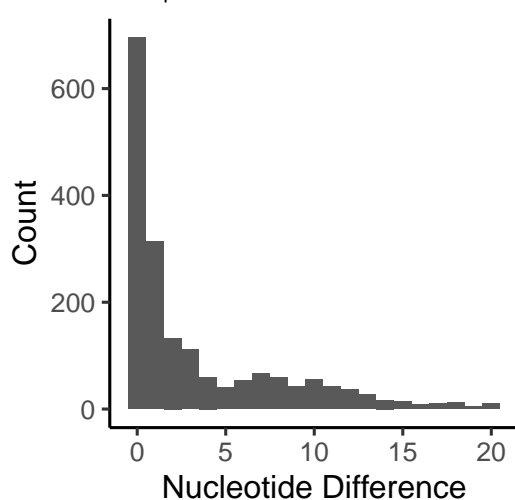
### IGHV3-66\*01

5511 sequences assigned  
1359 (24.7%) exact matches, in which:  
910 unique CDR3  
7 unique J



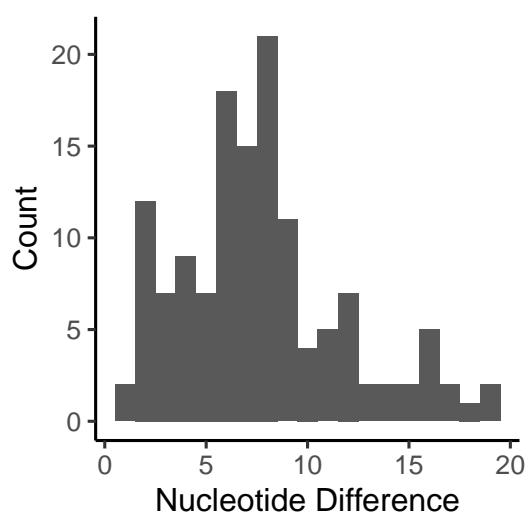
### IGHV3-49\*04

2070 sequences assigned  
696 (33.6%) exact matches, in which:  
444 unique CDR3  
7 unique J



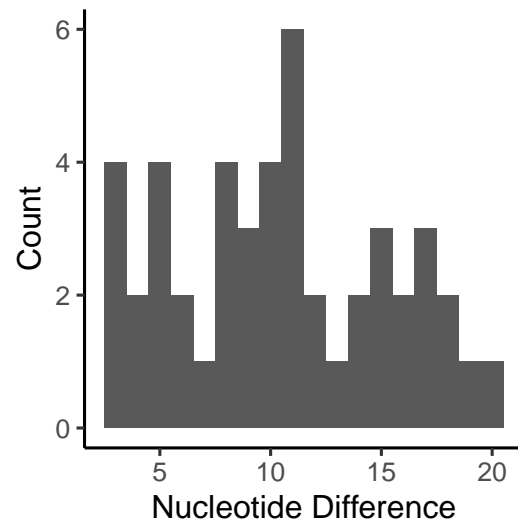
### IGHV3-53\*01\_02

140 sequences assigned  
No exact matches.



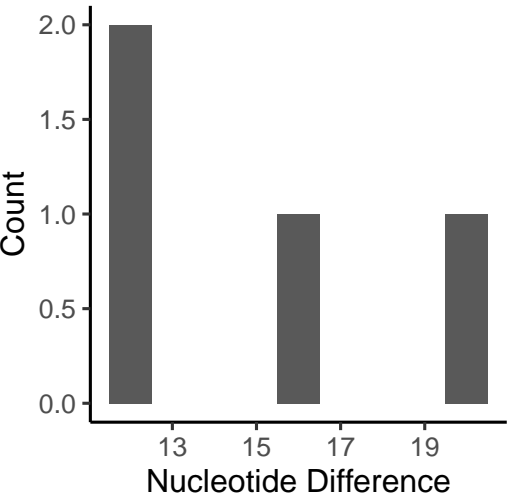
### IGHV3-69-1\*01

66 sequences assigned  
No exact matches.



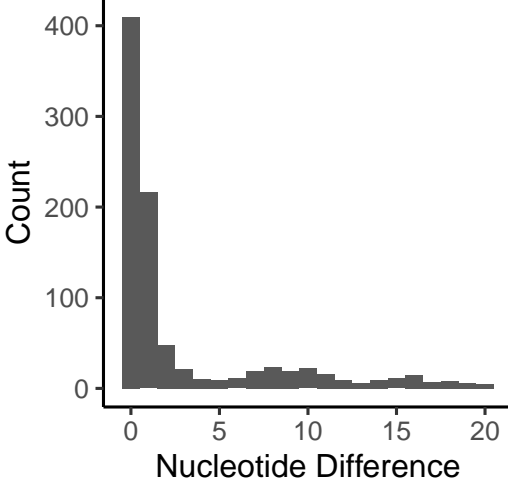
IGHV3-69-1\*02

19 sequences assigned  
No exact matches.



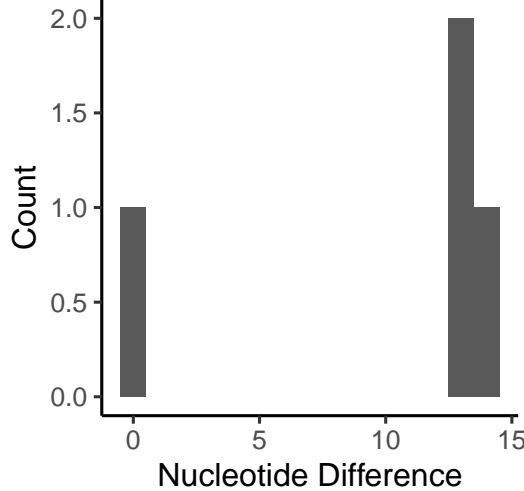
IGHV3-73\*01\_02

929 sequences assigned  
410 (44.1%) exact matches, in which:  
269 unique CDR3  
7 unique J



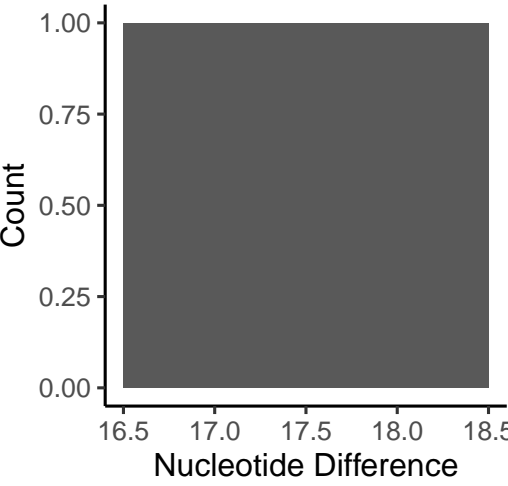
IGHV3-43D\*04

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



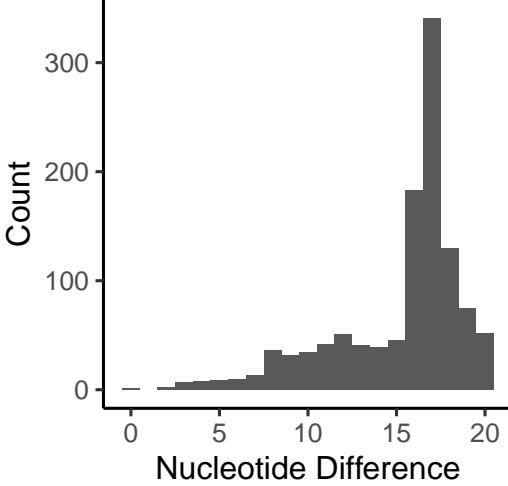
IGHV3-71\*01\_04

2 sequences assigned  
No exact matches.



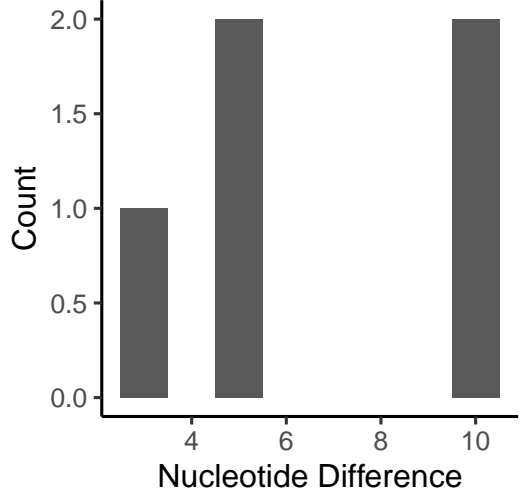
IGHV3-74\*03

1360 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



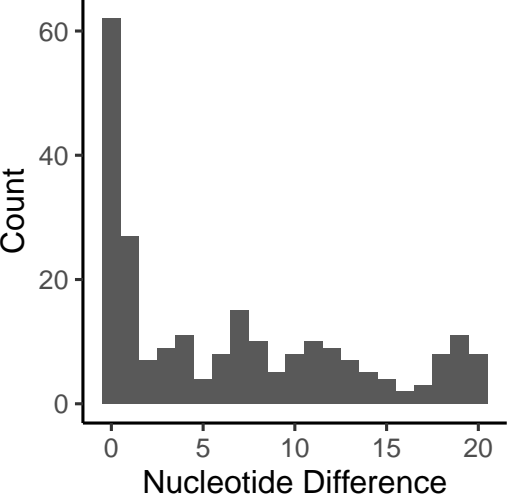
IGHV3-64D\*06

20 sequences assigned  
No exact matches.



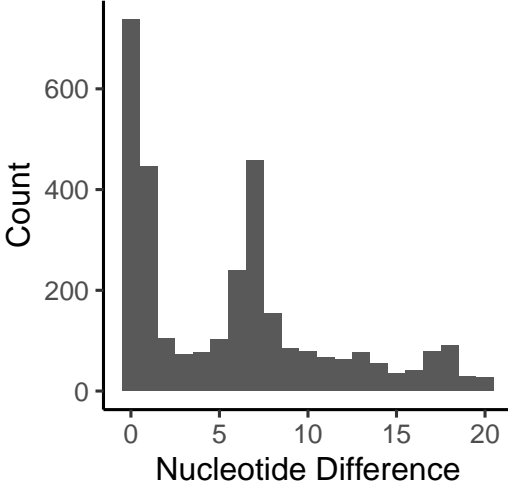
IGHV3-72\*01

331 sequences assigned  
62 (18.7%) exact matches, in which:  
41 unique CDR3  
7 unique J



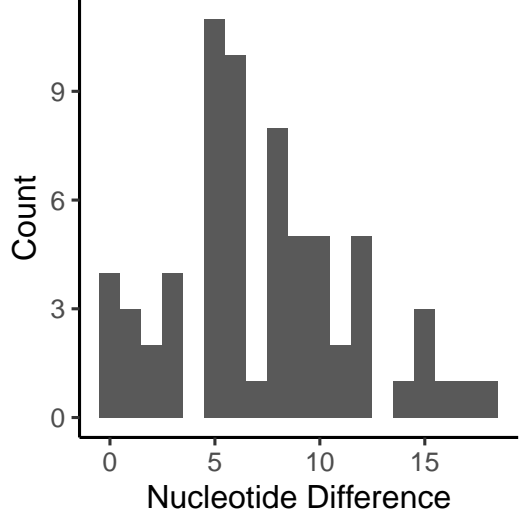
IGHV3-74\*01\_02

3261 sequences assigned  
738 (22.6%) exact matches, in which:  
436 unique CDR3  
7 unique J



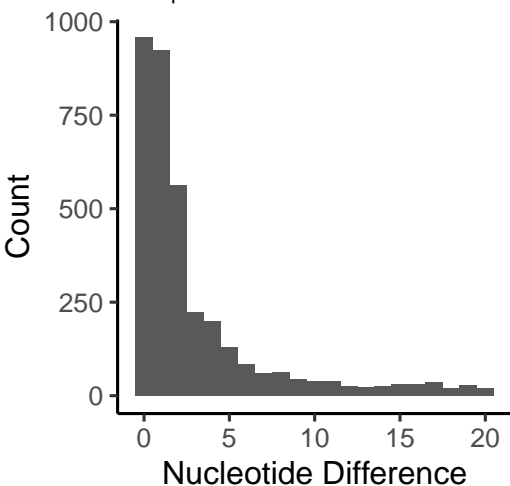
IGHV3-NL1\*01

70 sequences assigned  
4 (5.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



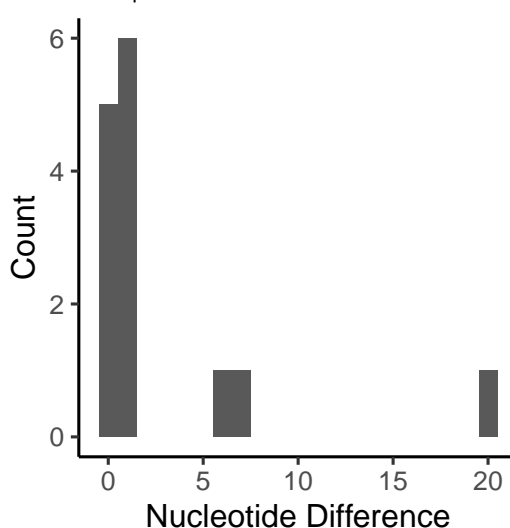
### IGHV4-4\*07

4758 sequences assigned  
958 (20.1%) exact matches, in which:  
847 unique CDR3  
7 unique J



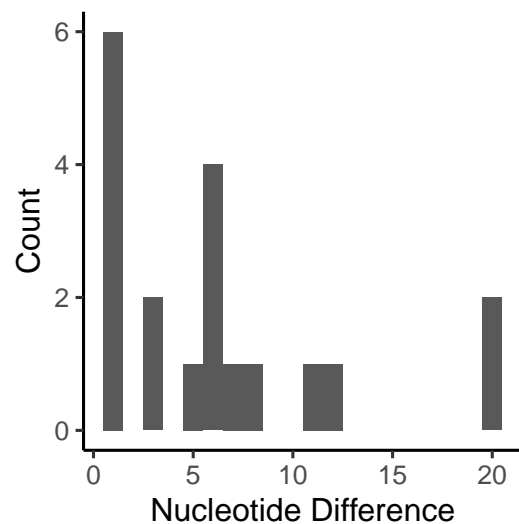
### IGHV4-28\*01\_07

14 sequences assigned  
5 (35.7%) exact matches, in which:  
3 unique CDR3  
3 unique J



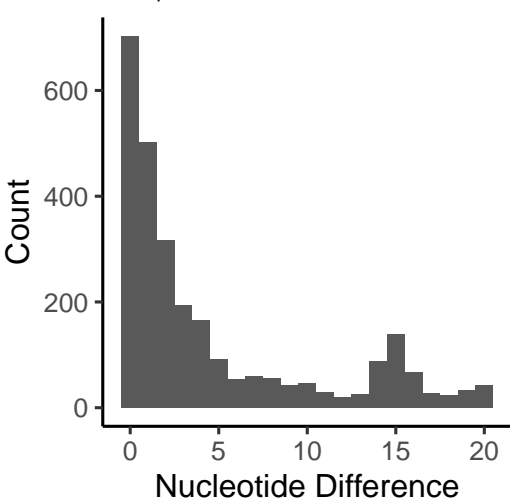
### IGHV4-30-4\*08

21 sequences assigned  
No exact matches.



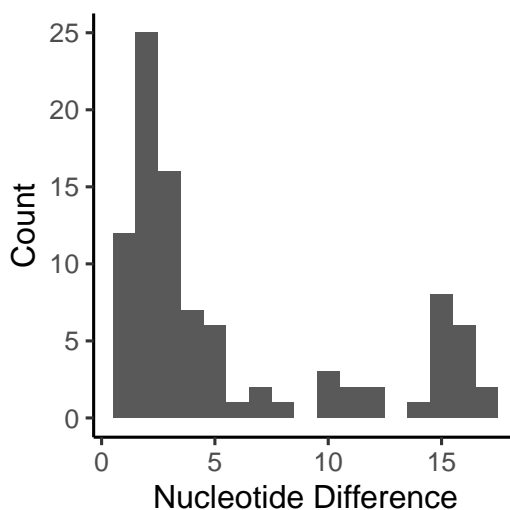
### IGHV4-4\*02\_03

3077 sequences assigned  
703 (22.8%) exact matches, in which:  
597 unique CDR3  
7 unique J



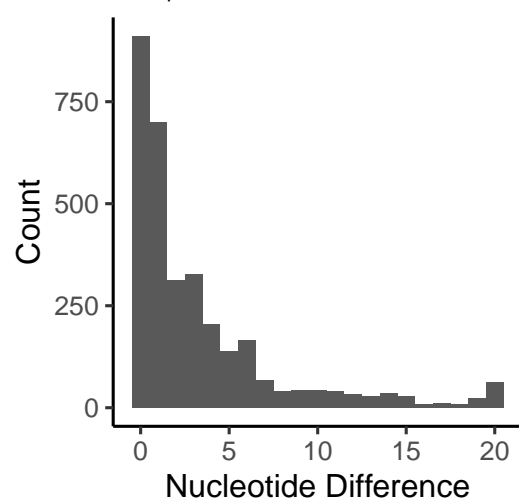
### IGHV4-30-2\*03

101 sequences assigned  
No exact matches.



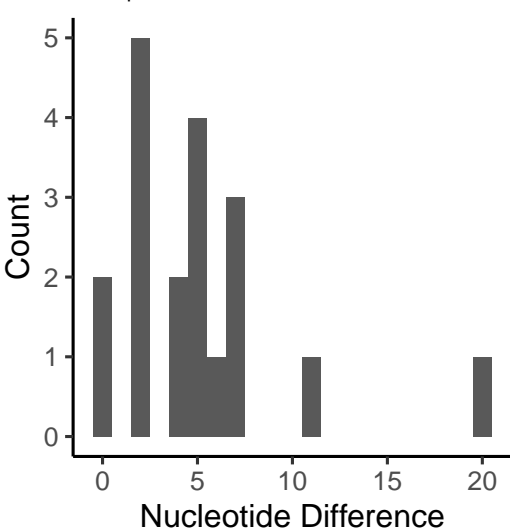
### IGHV4-31\*02

3775 sequences assigned  
911 (24.1%) exact matches, in which:  
835 unique CDR3  
7 unique J



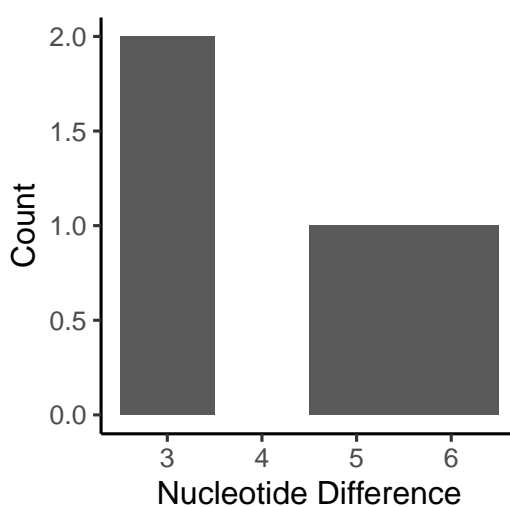
### IGHV4-28\*03

21 sequences assigned  
2 (9.5%) exact matches, in which:  
2 unique CDR3  
1 unique J



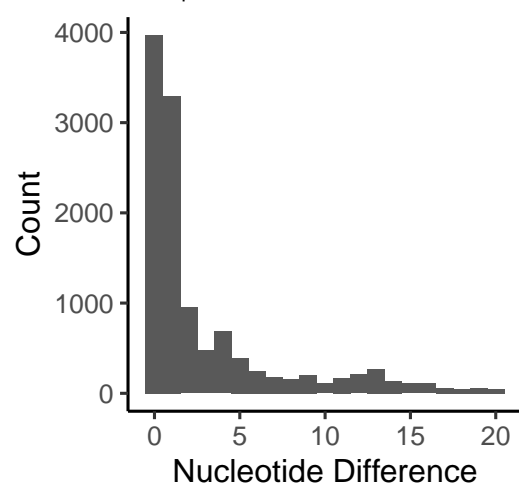
### IGHV4-30-2\*04

4 sequences assigned  
No exact matches.



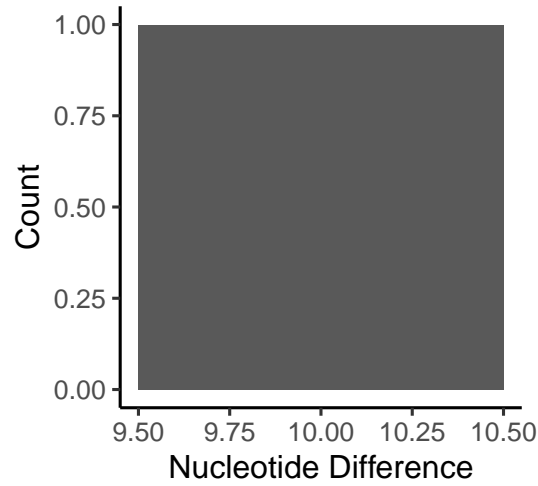
### IGHV4-34\*01\_02

12280 sequences assigned  
3971 (32.3%) exact matches, in which:  
3266 unique CDR3  
7 unique J



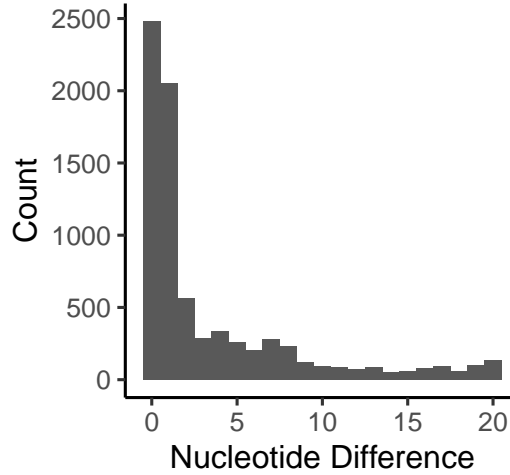
### IGHV4-38-2\*02

5 sequences assigned  
No exact matches.



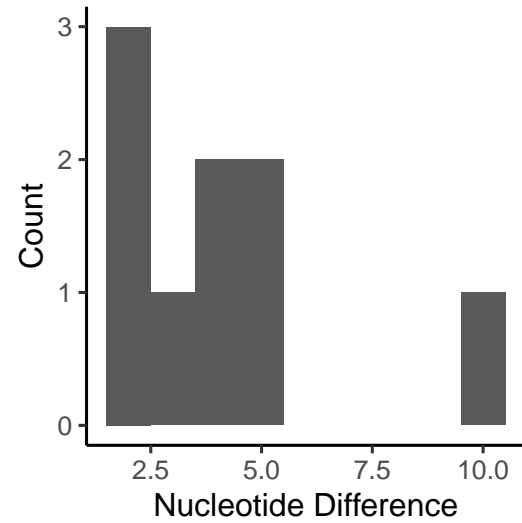
### IGHV4-59\*08

9664 sequences assigned  
2480 (25.7%) exact matches, in which:  
2117 unique CDR3  
7 unique J



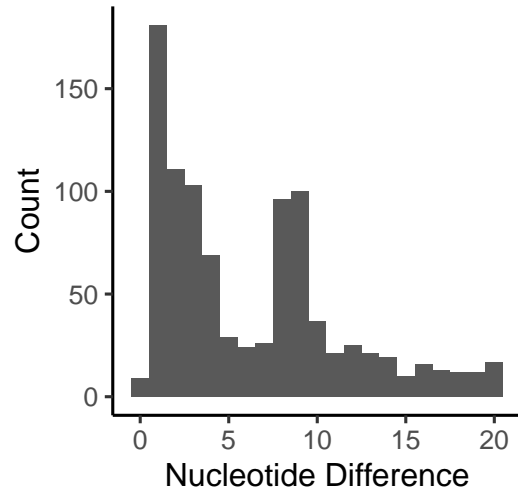
### IGHV4-61\*02

10 sequences assigned  
No exact matches.



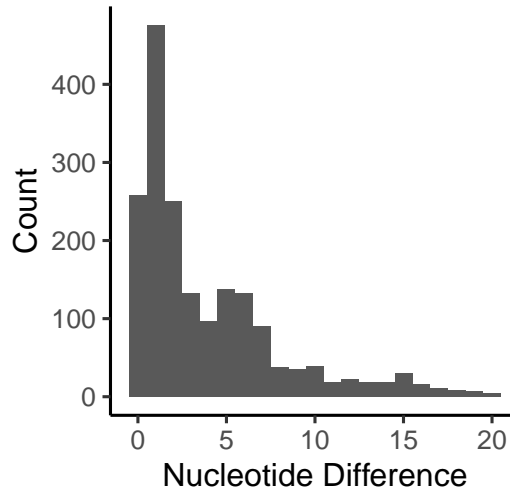
### IGHV4-39\*07

1266 sequences assigned  
9 (0.7%) exact matches, in which:  
9 unique CDR3  
4 unique J



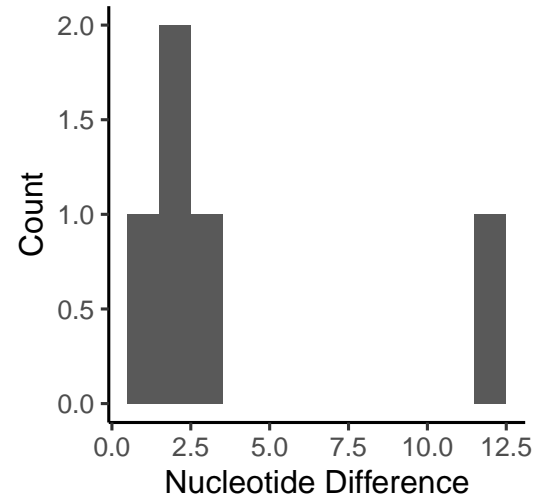
### IGHV4-59\*12

1983 sequences assigned  
258 (13%) exact matches, in which:  
250 unique CDR3  
7 unique J



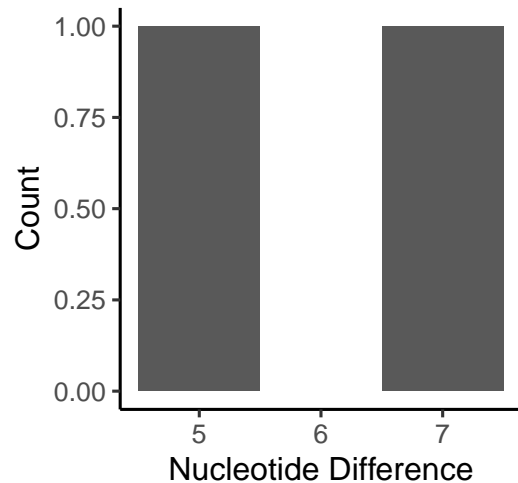
### IGHV4-61\*05

6 sequences assigned  
No exact matches.



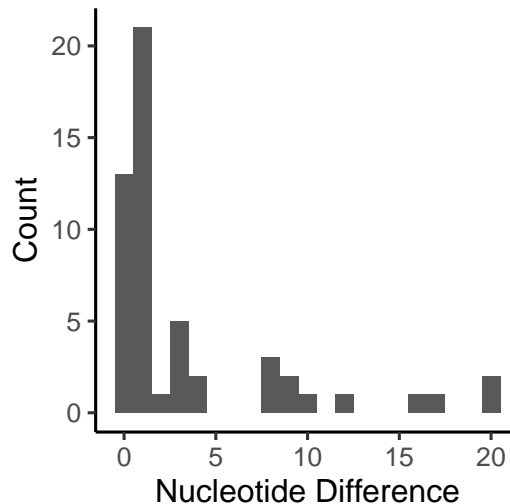
### IGHV4-55\*09

2 sequences assigned  
No exact matches.



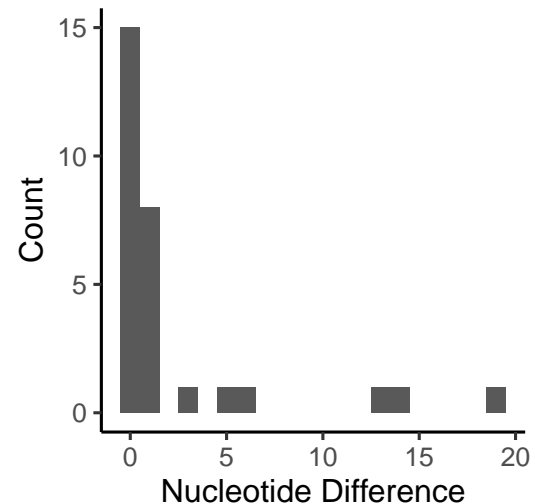
### IGHV4-61\*01

73 sequences assigned  
13 (17.8%) exact matches, in which:  
8 unique CDR3  
3 unique J



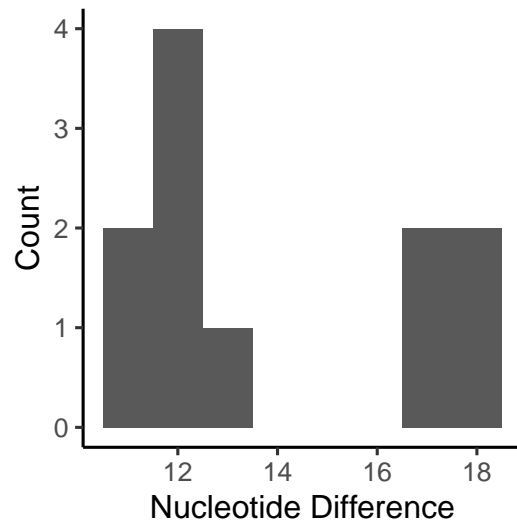
### IGHV4-61\*07

29 sequences assigned  
15 (51.7%) exact matches, in which:  
12 unique CDR3  
5 unique J



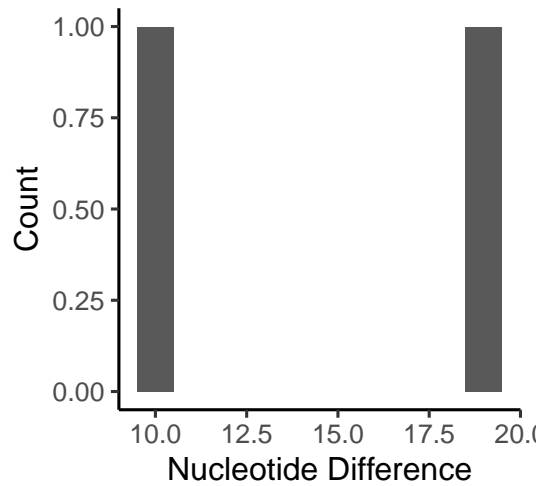
### IGHV1/OR15-2\*02\_03

14 sequences assigned  
No exact matches.



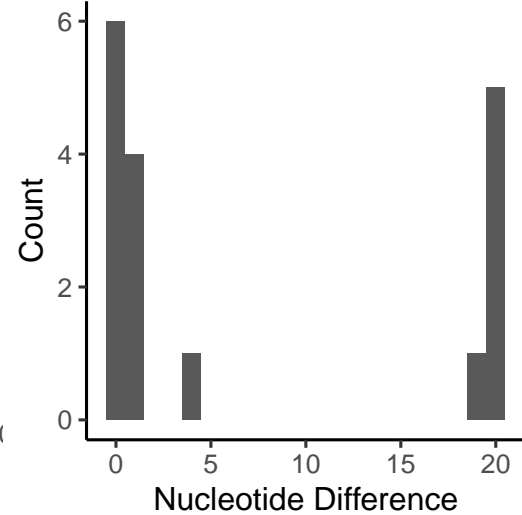
### IGHV4/OR15-8\*02

7 sequences assigned  
No exact matches.



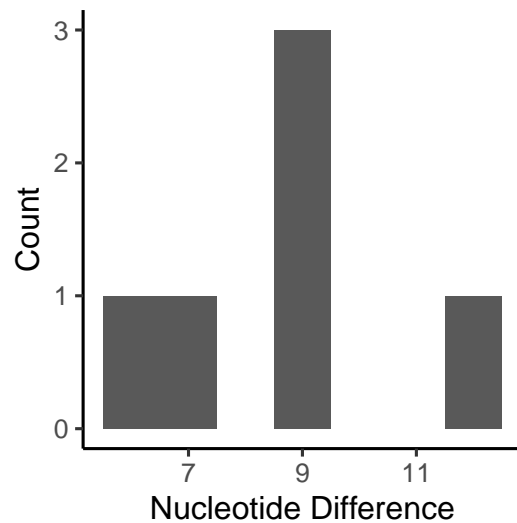
### IGHV5-51\*06

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



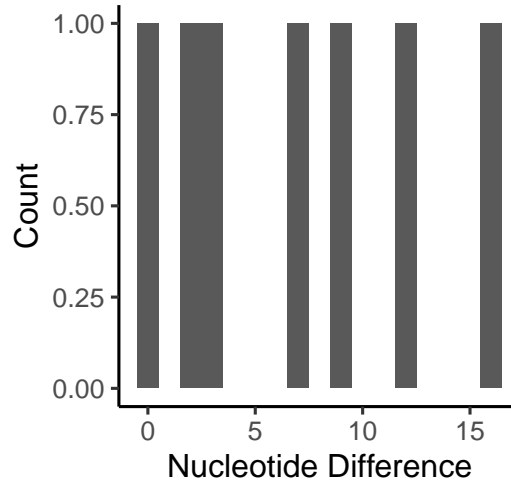
### IGHV1/OR15-3\*02

6 sequences assigned  
No exact matches.



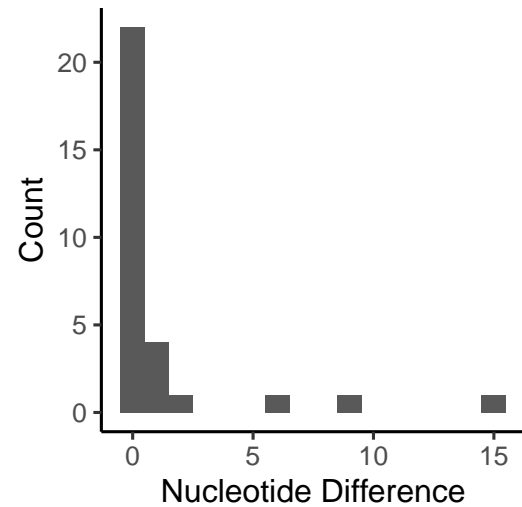
### IGHV5-10-1\*01\_03

9 sequences assigned  
1 (11.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



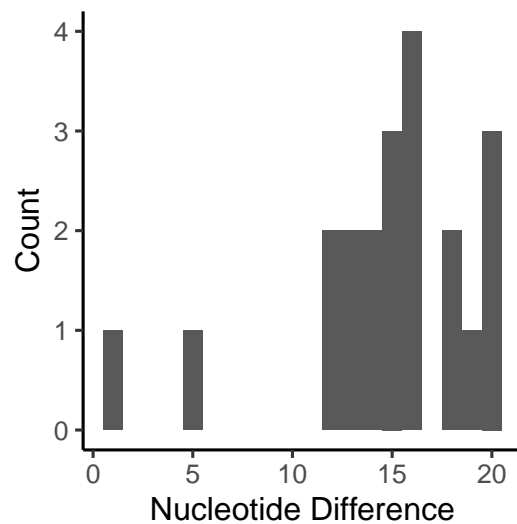
### IGHV5-51\*07

35 sequences assigned  
22 (62.9%) exact matches, in which:  
21 unique CDR3  
5 unique J



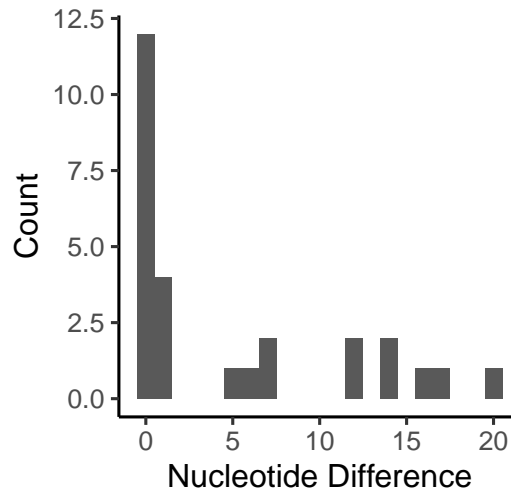
### IGHV4/OR15-8\*01

27 sequences assigned  
No exact matches.



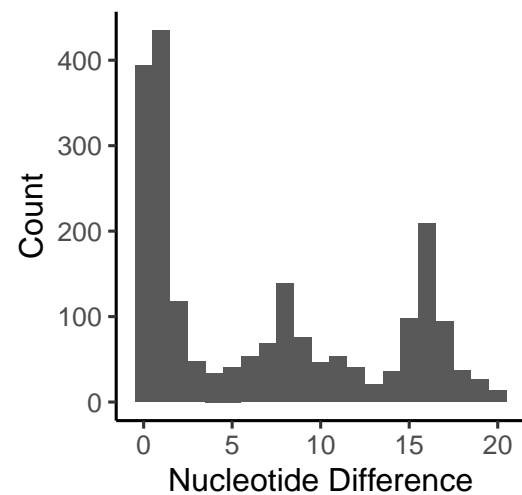
### IGHV5-51\*04

135 sequences assigned  
12 (8.9%) exact matches, in which:  
12 unique CDR3  
4 unique J



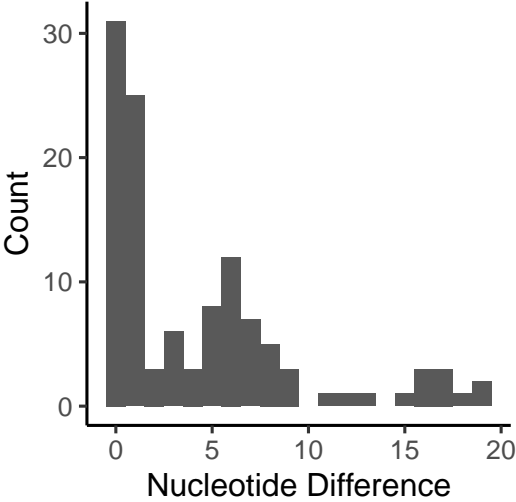
### IGHV6-1\*01\_02

2325 sequences assigned  
394 (16.9%) exact matches, in which:  
333 unique CDR3  
6 unique J



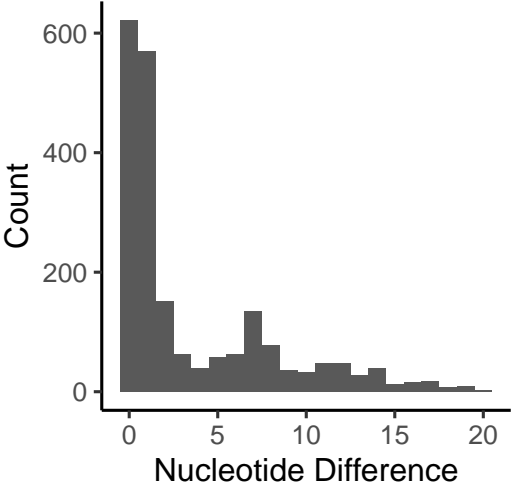
# IGHV6-1\*01\_02\_A315G

117 sequences assigned  
31 (26.5%) exact matches, in which:  
31 unique CDR3  
5 unique J

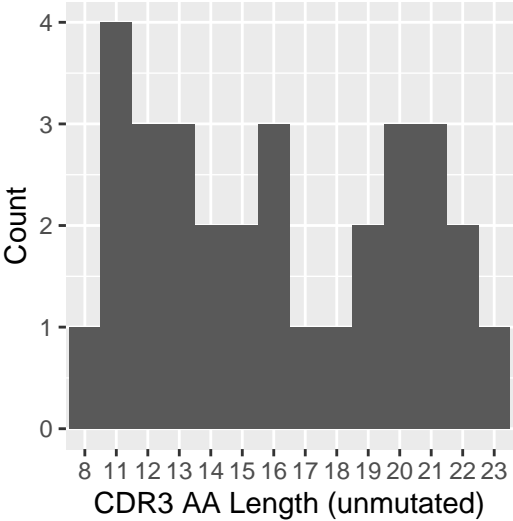


# IGHV7-4-1\*02

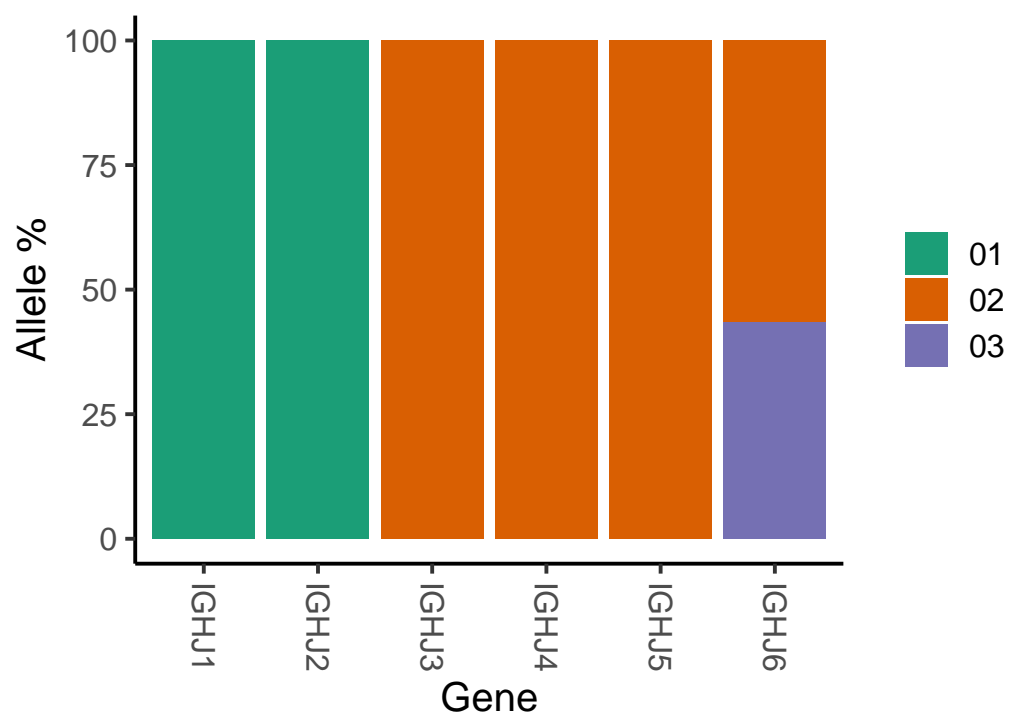
2233 sequences assigned  
622 (27.9%) exact matches, in which:  
531 unique CDR3  
7 unique J



IGHV6-1\*01\_02\_A315G



Allele Usage





Sequence Count by IGHJ6 allele usage

