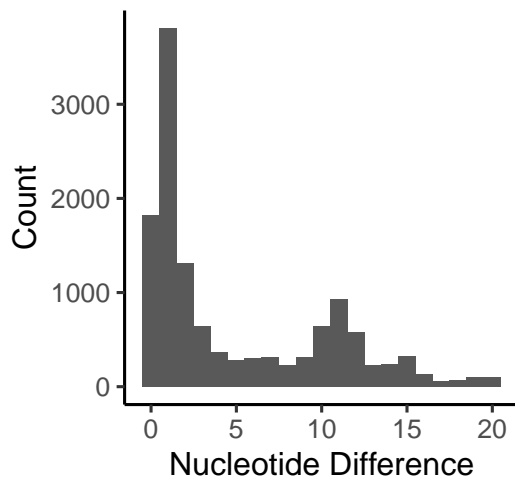


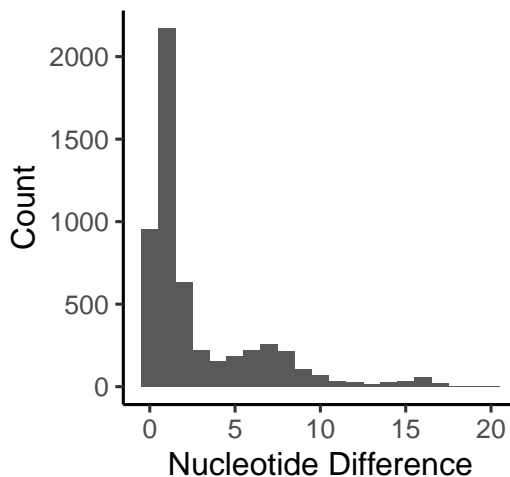
### IGHV1-2\*02

13120 sequences assigned  
1826 (13.9%) exact matches, in which:  
1255 unique CDR3  
7 unique J



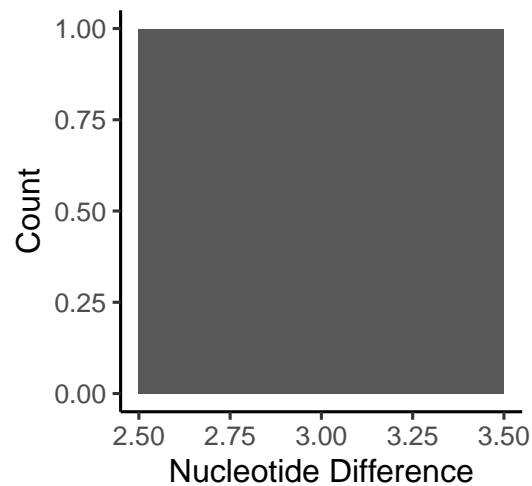
### IGHV1-8\*02

5438 sequences assigned  
954 (17.5%) exact matches, in which:  
658 unique CDR3  
6 unique J



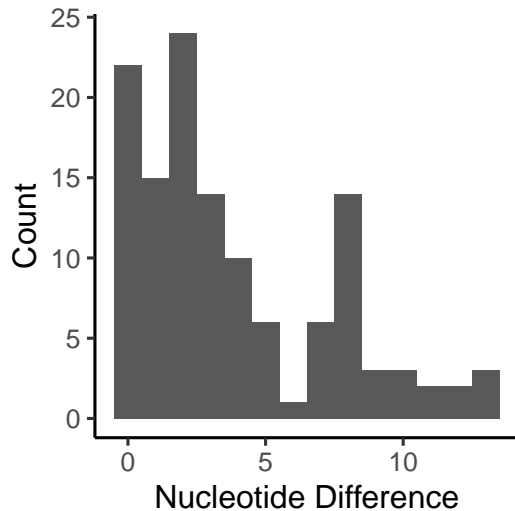
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



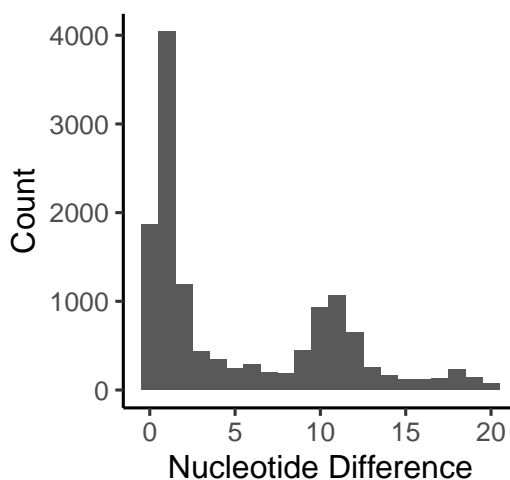
### IGHV1-3\*02

184 sequences assigned  
22 (12%) exact matches, in which:  
22 unique CDR3  
4 unique J



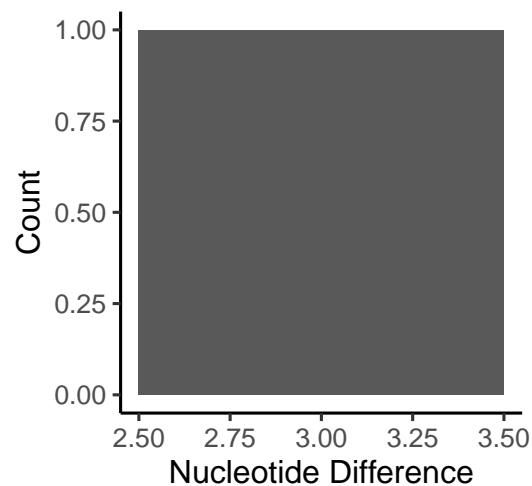
### IGHV1-18\*01

13817 sequences assigned  
1871 (13.5%) exact matches, in which:  
1291 unique CDR3  
7 unique J



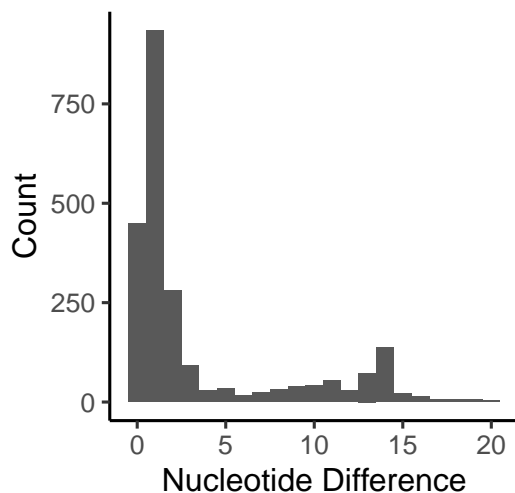
### IGHV1-45\*03

1 sequences assigned  
No exact matches.



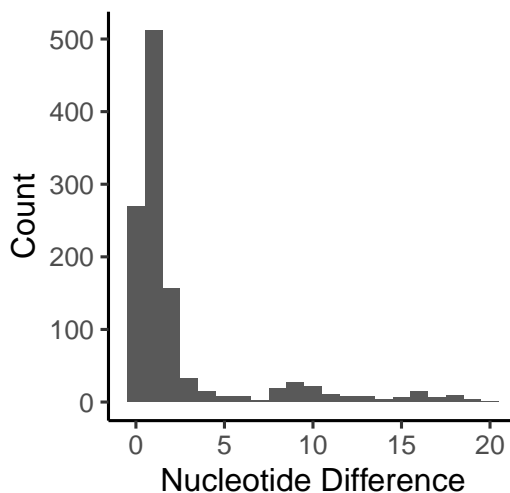
### IGHV1-8\*01

2513 sequences assigned  
450 (17.9%) exact matches, in which:  
338 unique CDR3  
7 unique J



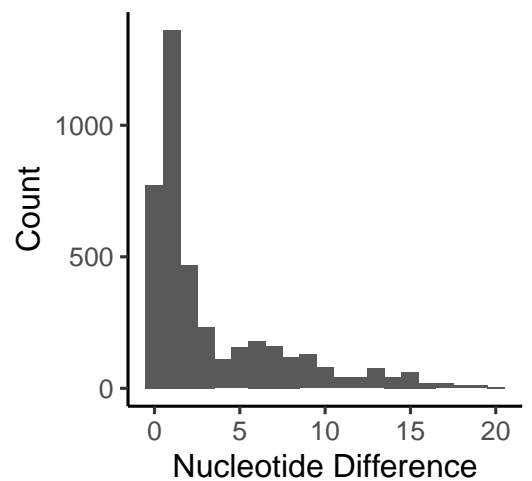
### IGHV1-24\*01

1139 sequences assigned  
269 (23.6%) exact matches, in which:  
193 unique CDR3  
5 unique J



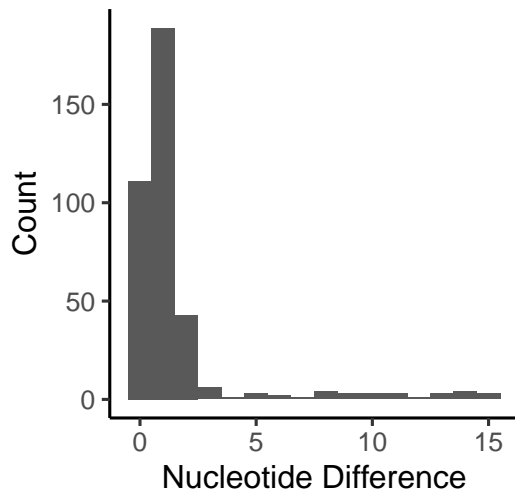
### IGHV1-46\*01

4128 sequences assigned  
774 (18.8%) exact matches, in which:  
568 unique CDR3  
7 unique J



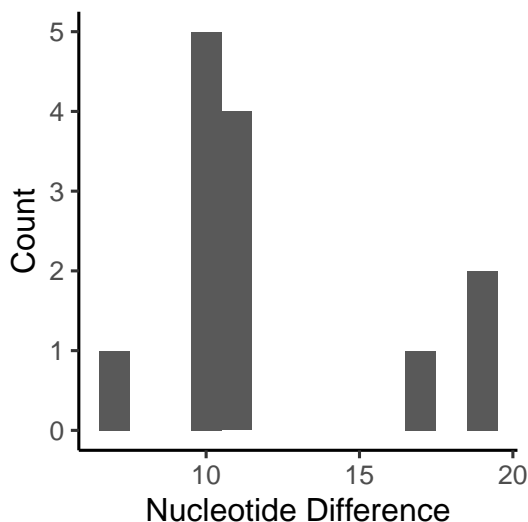
### IGHV1–58\*02

384 sequences assigned  
111 (28.9%) exact matches, in which:  
86 unique CDR3  
5 unique J



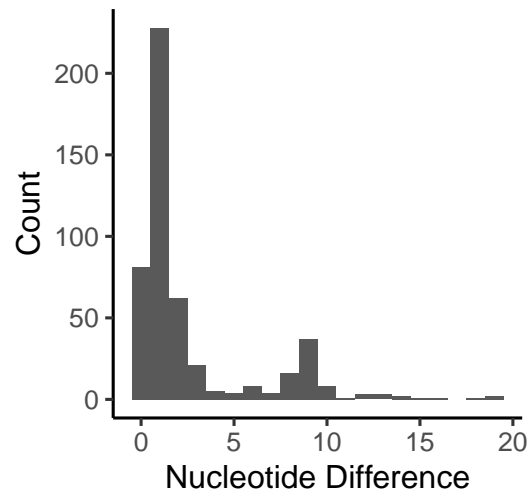
### IGHV1–NL1\*01

13 sequences assigned  
No exact matches.



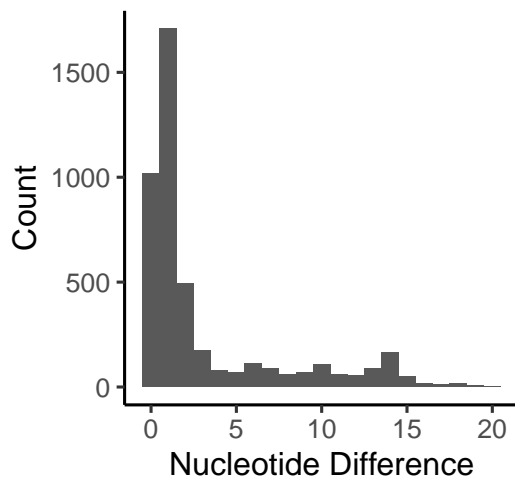
### IGHV2–26\*01

490 sequences assigned  
81 (16.5%) exact matches, in which:  
47 unique CDR3  
4 unique J



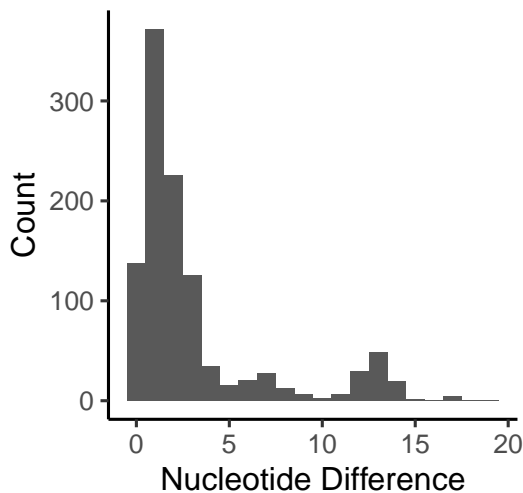
### IGHV1–69\*10

4460 sequences assigned  
1020 (22.9%) exact matches, in which:  
773 unique CDR3  
7 unique J



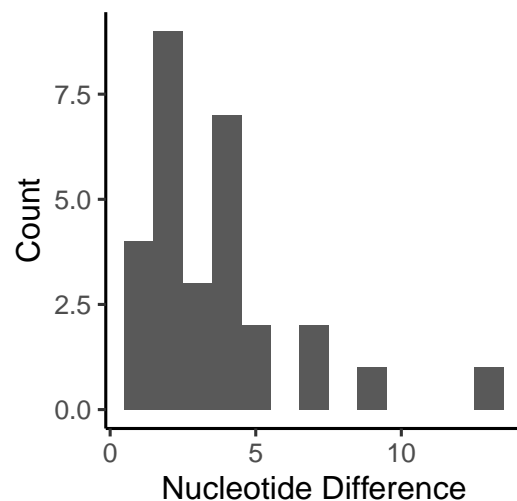
### IGHV2–5\*01

1107 sequences assigned  
138 (12.5%) exact matches, in which:  
97 unique CDR3  
7 unique J



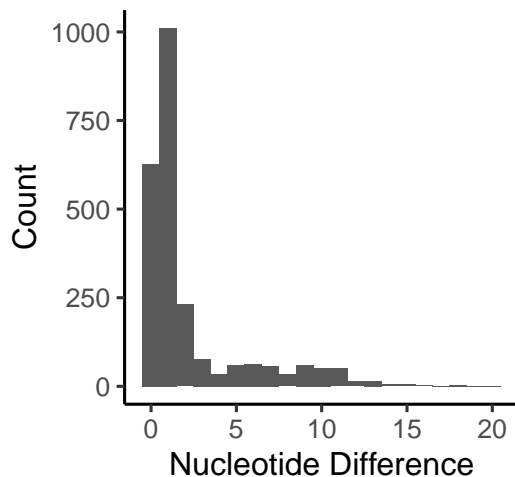
### IGHV2–70\*12

29 sequences assigned  
No exact matches.



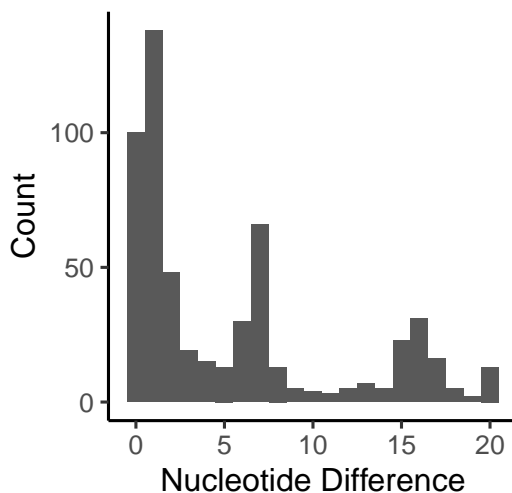
### IGHV1–69\*04\_09

2518 sequences assigned  
628 (24.9%) exact matches, in which:  
490 unique CDR3  
7 unique J



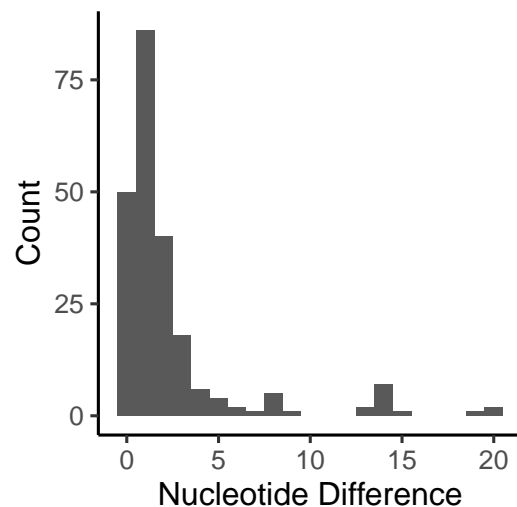
### IGHV2–5\*02

1128 sequences assigned  
100 (8.9%) exact matches, in which:  
84 unique CDR3  
6 unique J



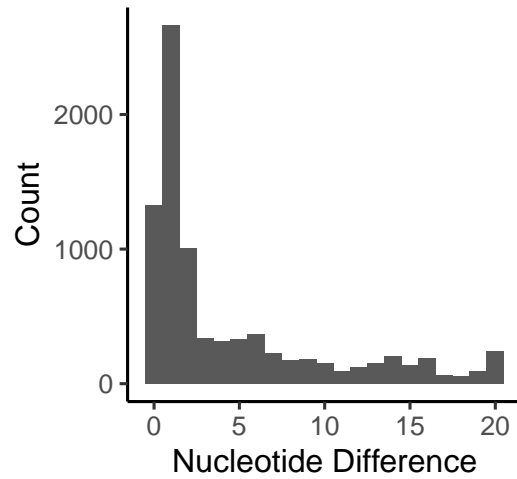
### IGHV2–70\*11\_15

4062 sequences assigned  
50 (1.2%) exact matches, in which:  
39 unique CDR3  
4 unique J



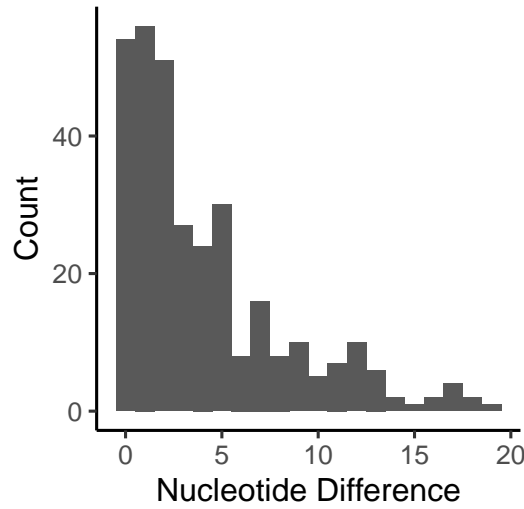
### IGHV3-7\*01

19062 sequences assigned  
1328 (7%) exact matches, in which:  
780 unique CDR3  
7 unique J



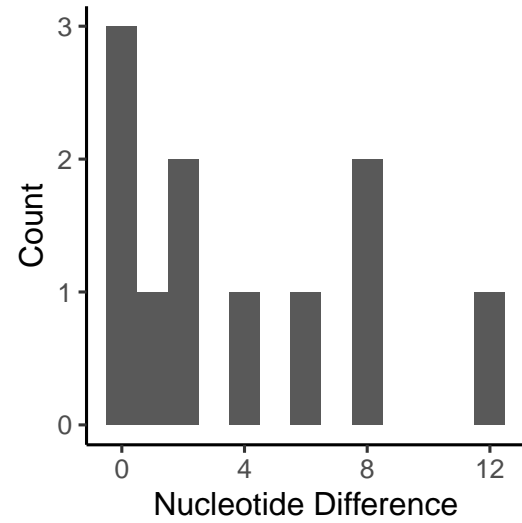
### IGHV3-11\*04

338 sequences assigned  
54 (16%) exact matches, in which:  
50 unique CDR3  
6 unique J



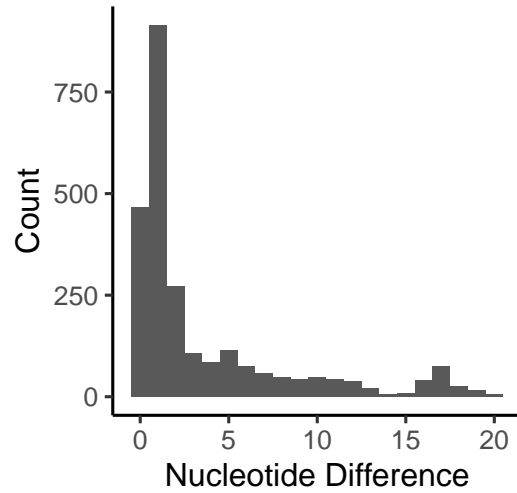
### IGHV3-19\*01

11 sequences assigned  
3 (27.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



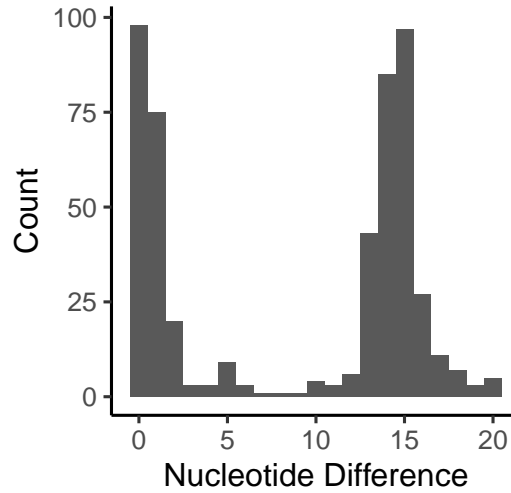
### IGHV3-9\*01

5015 sequences assigned  
467 (9.3%) exact matches, in which:  
286 unique CDR3  
7 unique J



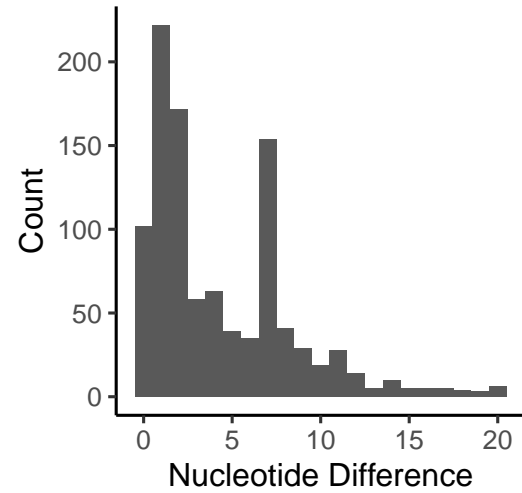
### IGHV3-13\*01

604 sequences assigned  
98 (16.2%) exact matches, in which:  
74 unique CDR3  
7 unique J



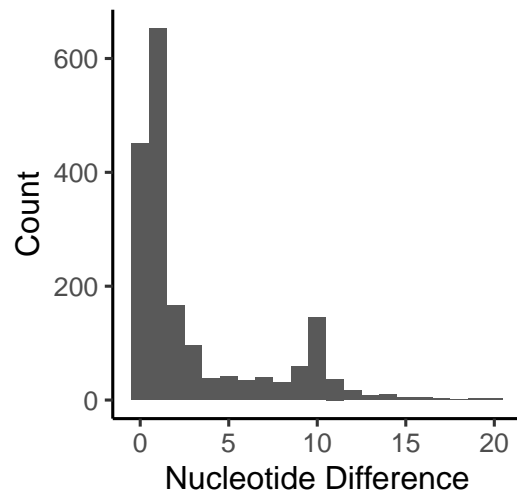
### IGHV3-20\*03\_04

6438 sequences assigned  
102 (1.6%) exact matches, in which:  
64 unique CDR3  
5 unique J



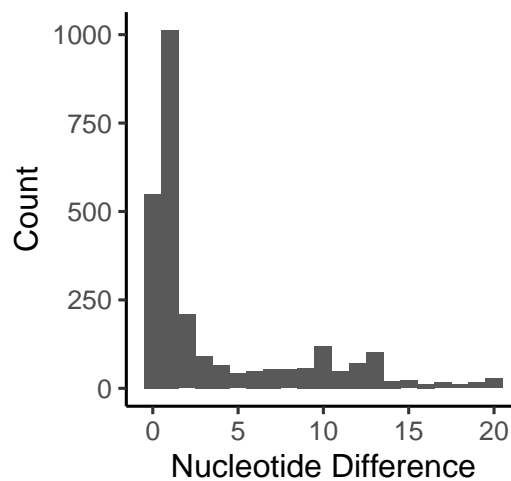
### IGHV3-11\*01

1868 sequences assigned  
451 (24.1%) exact matches, in which:  
300 unique CDR3  
7 unique J



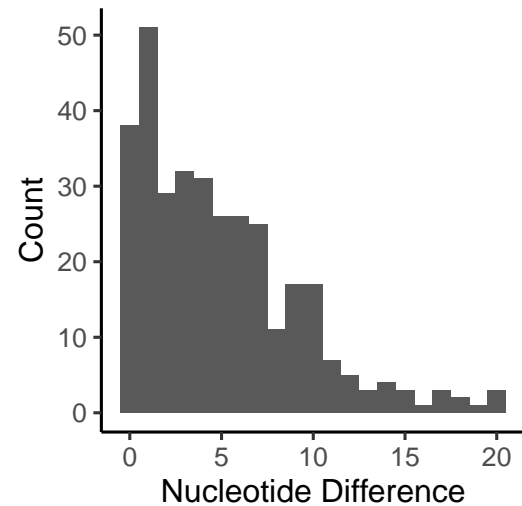
### IGHV3-15\*01\_02

3144 sequences assigned  
550 (17.5%) exact matches, in which:  
311 unique CDR3  
6 unique J



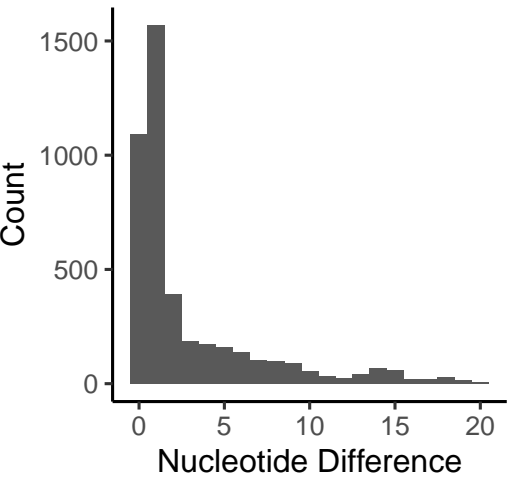
### IGHV3-21\*04

348 sequences assigned  
38 (10.9%) exact matches, in which:  
35 unique CDR3  
7 unique J



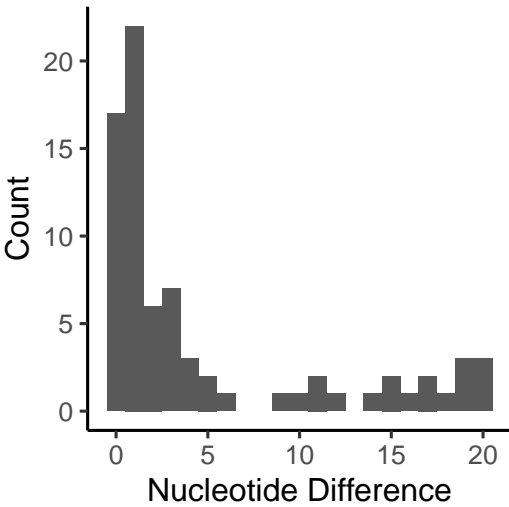
IGHV3-21\*01\_02

4519 sequences assigned  
1093 (24.2%) exact matches, in which:  
654 unique CDR3  
7 unique J



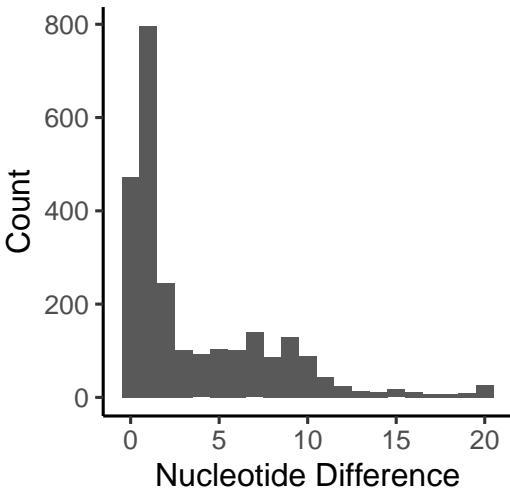
IGHV3-30-5\*01

101 sequences assigned  
17 (16.8%) exact matches, in which:  
10 unique CDR3  
2 unique J



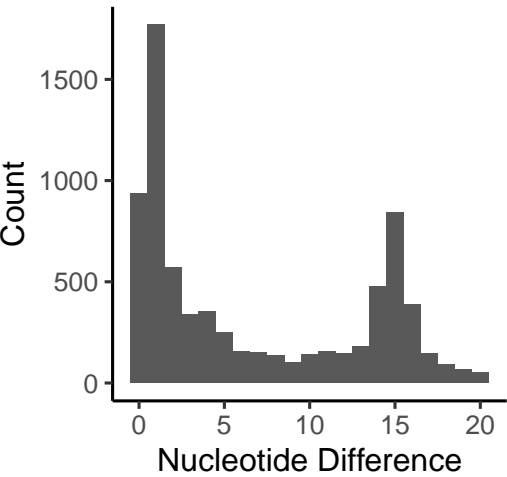
IGHV3-33\*08

4409 sequences assigned  
473 (10.7%) exact matches, in which:  
307 unique CDR3  
6 unique J



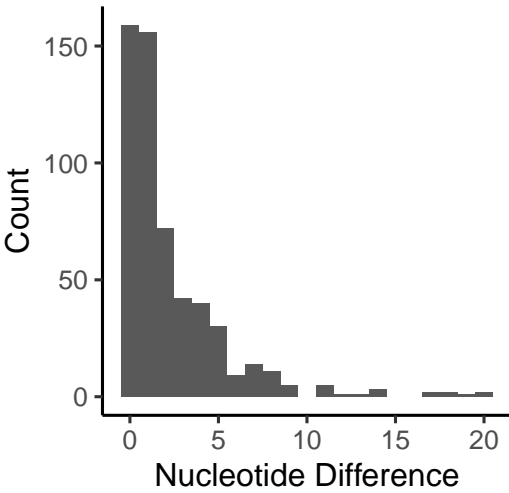
IGHV3-23\*03

11457 sequences assigned  
938 (8.2%) exact matches, in which:  
544 unique CDR3  
7 unique J



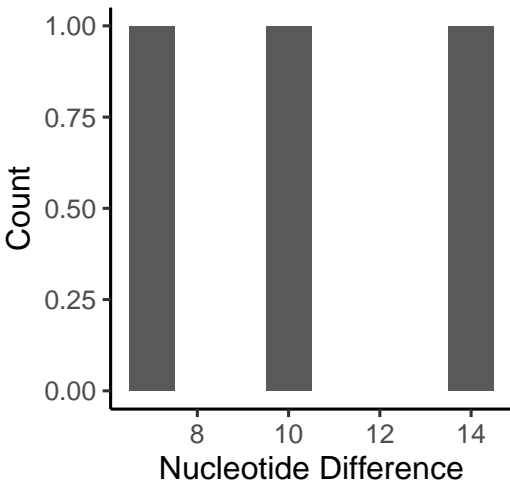
IGHV3-33\*01

564 sequences assigned  
159 (28.2%) exact matches, in which:  
122 unique CDR3  
7 unique J



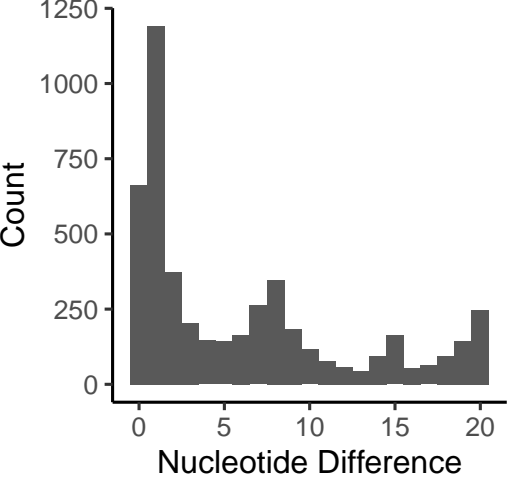
IGHV3-35\*01

3 sequences assigned  
No exact matches.



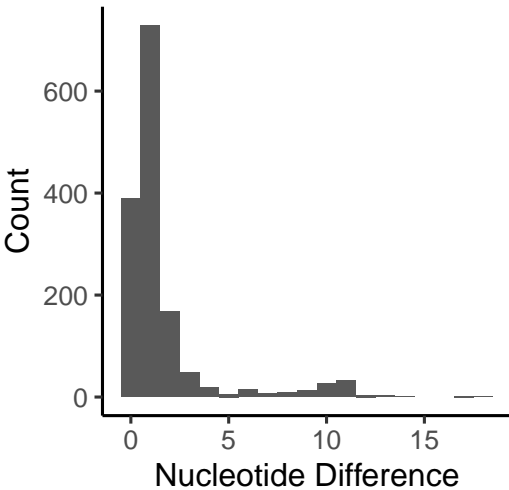
IGHV3-23\*01\_04

5850 sequences assigned  
663 (11.3%) exact matches, in which:  
395 unique CDR3  
7 unique J



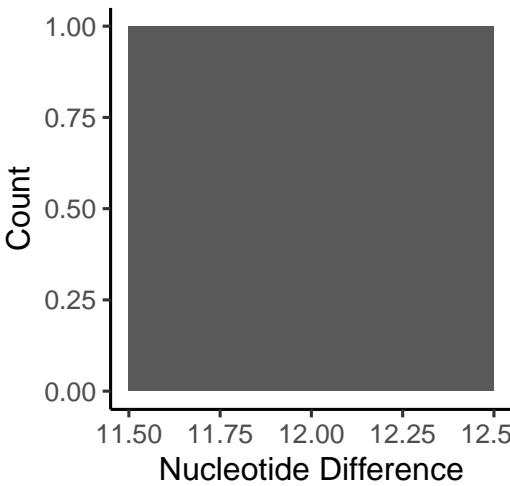
IGHV3-33\*06

1481 sequences assigned  
390 (26.3%) exact matches, in which:  
207 unique CDR3  
6 unique J



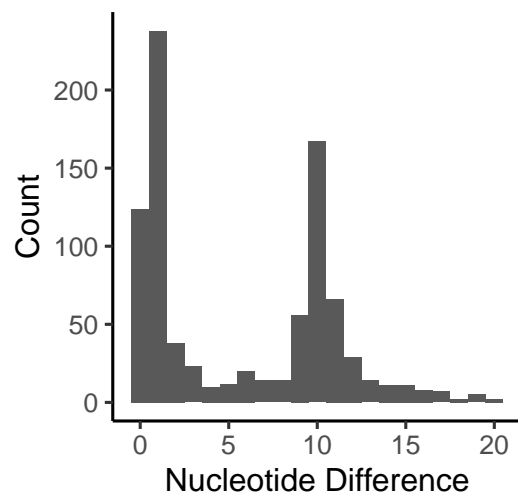
IGHV3-38-3\*01

1 sequences assigned  
No exact matches.



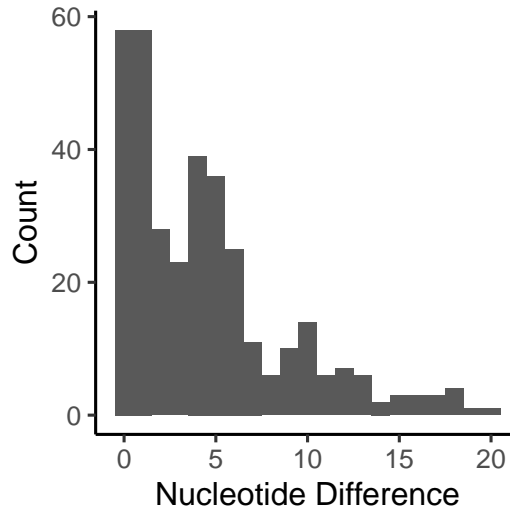
### IGHV3-43\*02

924 sequences assigned  
124 (13.4%) exact matches, in which:  
73 unique CDR3  
5 unique J



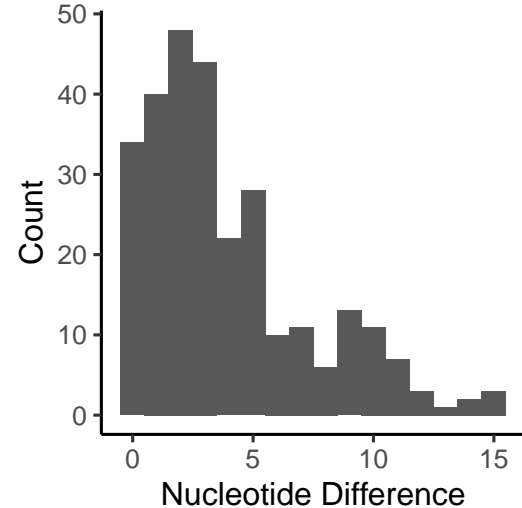
### IGHV3-48\*01

350 sequences assigned  
58 (16.6%) exact matches, in which:  
52 unique CDR3  
7 unique J



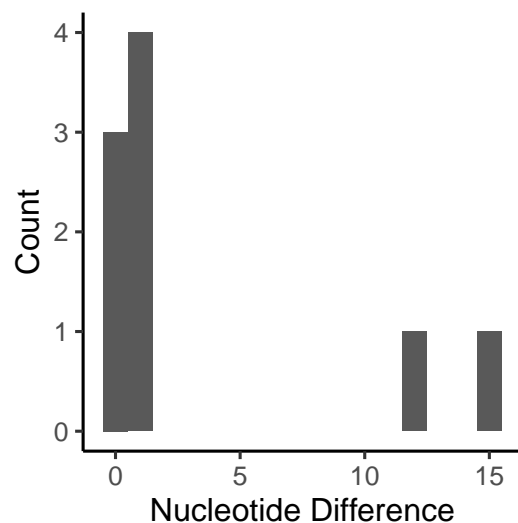
### IGHV3-48\*04

318 sequences assigned  
34 (10.7%) exact matches, in which:  
31 unique CDR3  
5 unique J



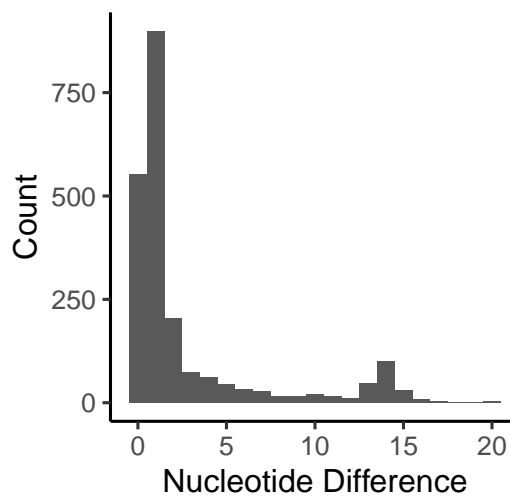
### IGHV3-47\*01

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



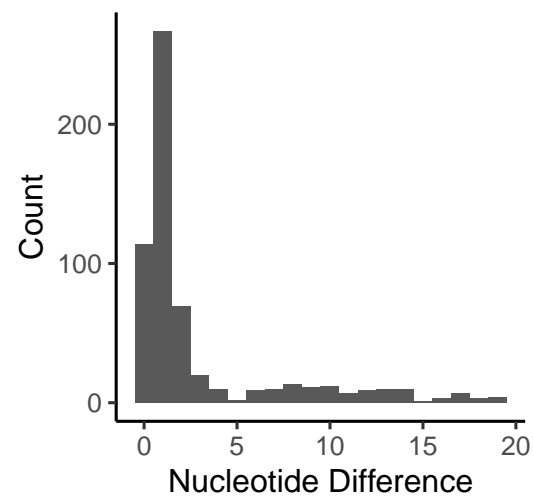
### IGHV3-48\*02

2229 sequences assigned  
552 (24.8%) exact matches, in which:  
311 unique CDR3  
6 unique J



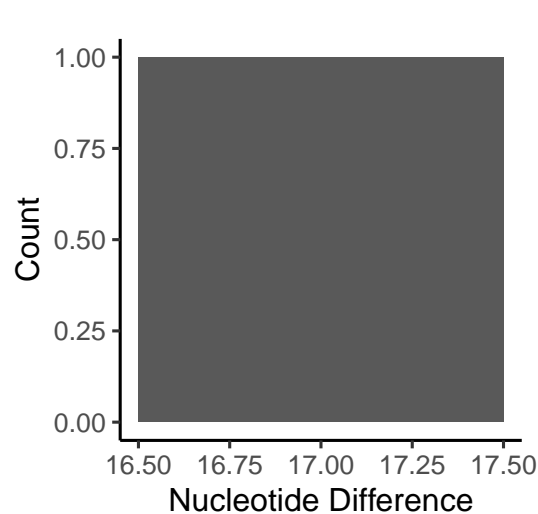
### IGHV3-49\*04

600 sequences assigned  
114 (19%) exact matches, in which:  
65 unique CDR3  
6 unique J



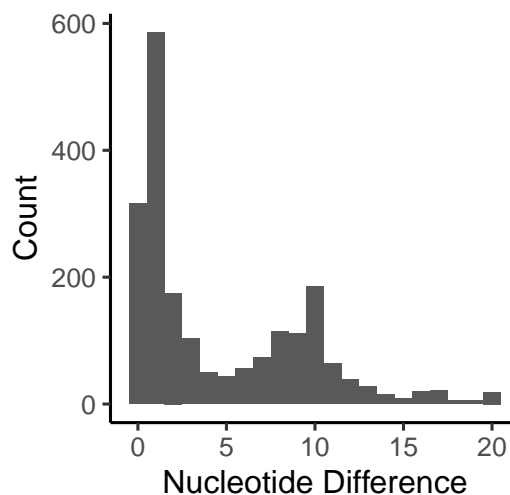
### IGHV3-47\*02

1 sequences assigned  
No exact matches.



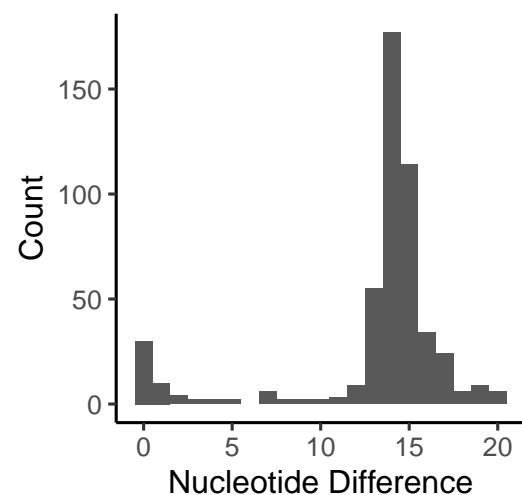
### IGHV3-48\*03

2999 sequences assigned  
316 (10.5%) exact matches, in which:  
191 unique CDR3  
5 unique J



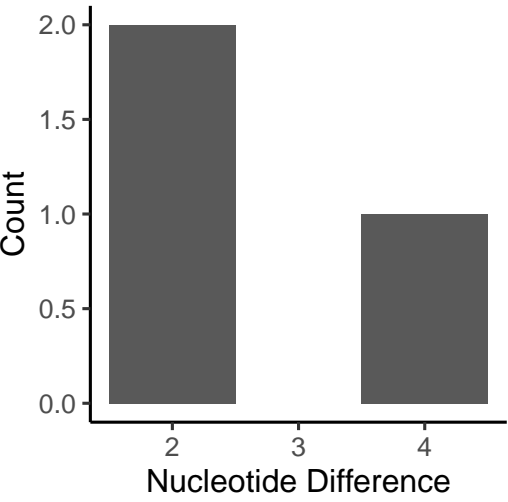
### IGHV3-49\*03\_05

511 sequences assigned  
30 (5.9%) exact matches, in which:  
23 unique CDR3  
5 unique J



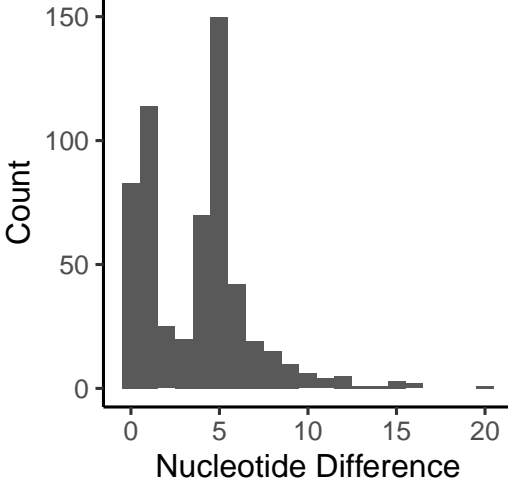
IGHV3-52\*01\_03

3 sequences assigned  
No exact matches.



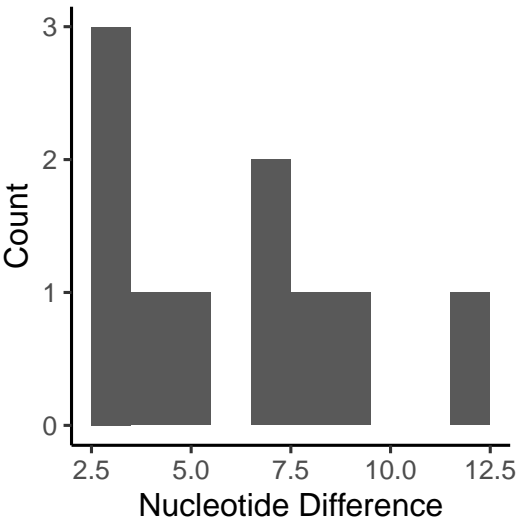
IGHV3-64\*01

579 sequences assigned  
83 (14.3%) exact matches, in which:  
51 unique CDR3  
5 unique J



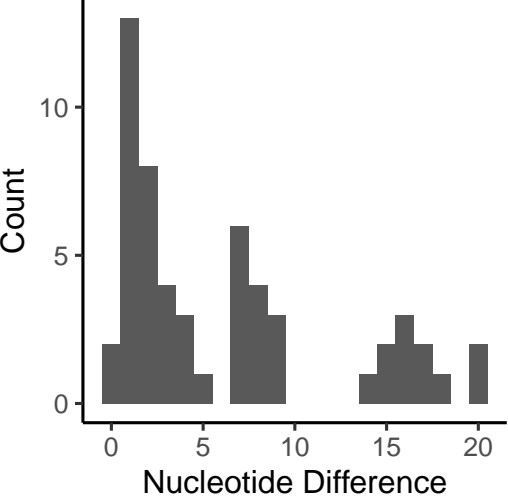
IGHV3-69-1\*01

13 sequences assigned  
No exact matches.



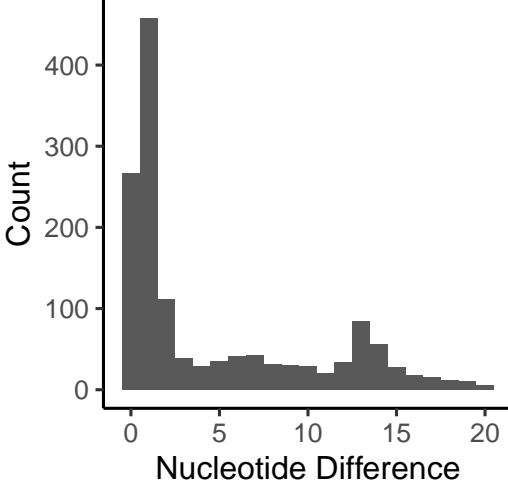
IGHV3-53\*05

58 sequences assigned  
2 (3.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



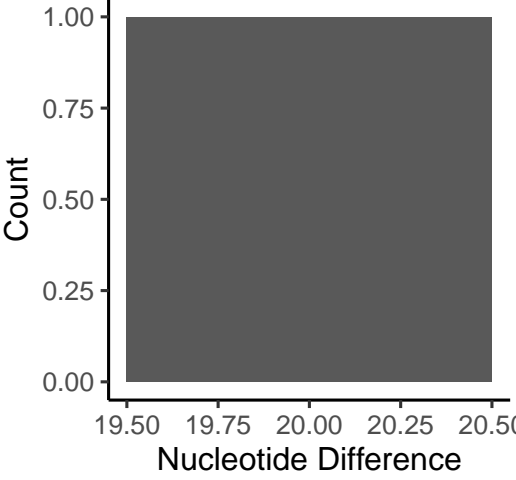
IGHV3-66\*01

1628 sequences assigned  
267 (16.4%) exact matches, in which:  
171 unique CDR3  
7 unique J



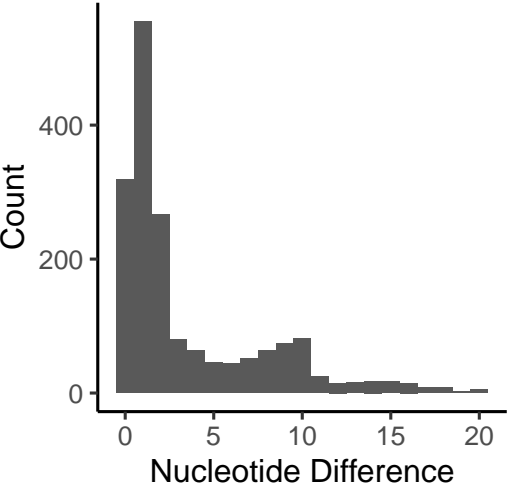
IGHV3-69-1\*02

9 sequences assigned  
No exact matches.



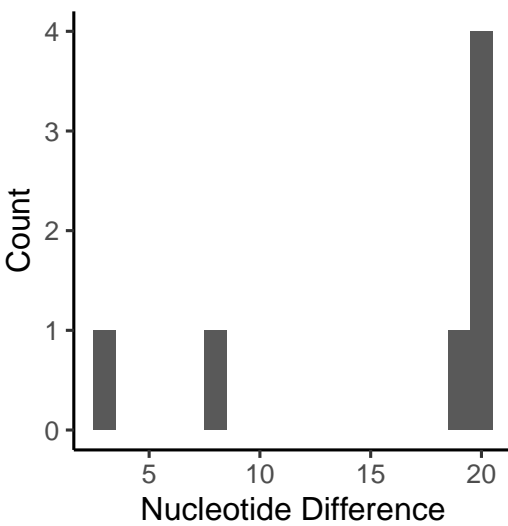
IGHV3-53\*01\_02

2095 sequences assigned  
319 (15.2%) exact matches, in which:  
207 unique CDR3  
7 unique J



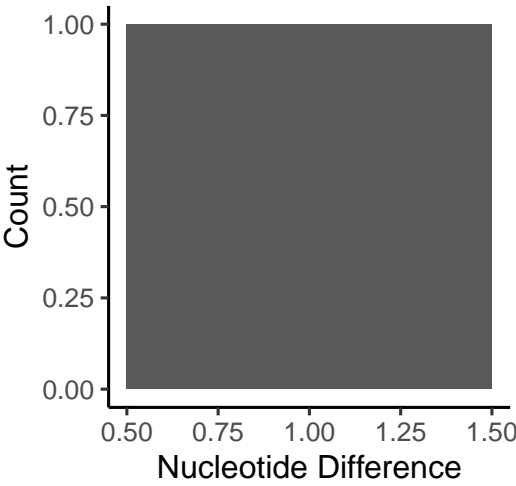
IGHV3-66\*03

10 sequences assigned  
No exact matches.



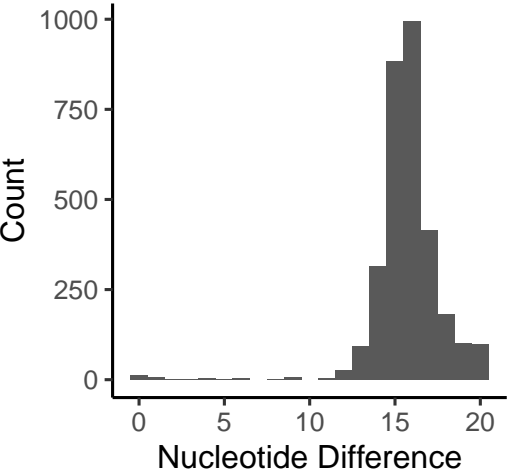
IGHV3-71\*02

1 sequences assigned  
No exact matches.



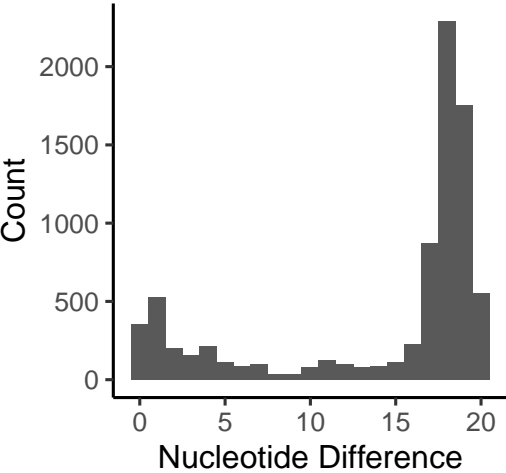
IGHV3-72\*01

3695 sequences assigned  
12 (0.3%) exact matches, in which:  
9 unique CDR3  
4 unique J



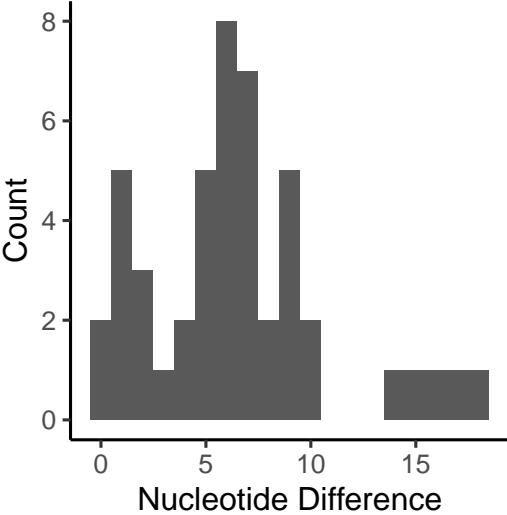
IGHV3-74\*01\_02

10347 sequences assigned  
354 (3.4%) exact matches, in which:  
228 unique CDR3  
6 unique J



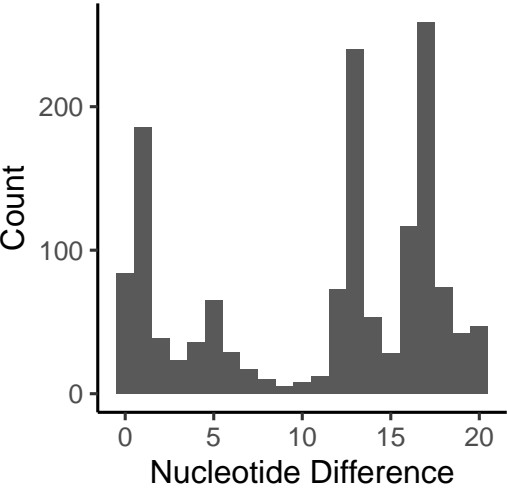
IGHV3-NL1\*01

64 sequences assigned  
2 (3.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



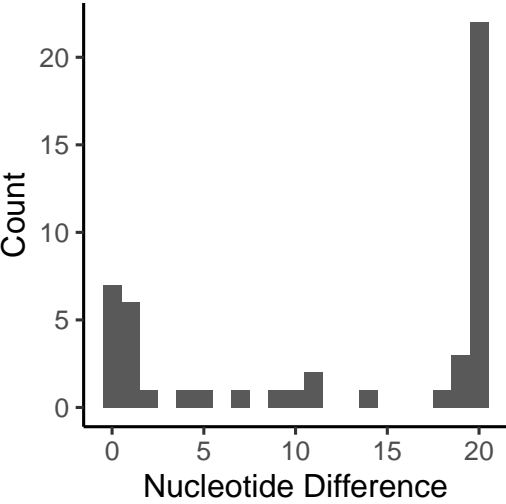
IGHV3-73\*01\_02

1959 sequences assigned  
84 (4.3%) exact matches, in which:  
45 unique CDR3  
5 unique J



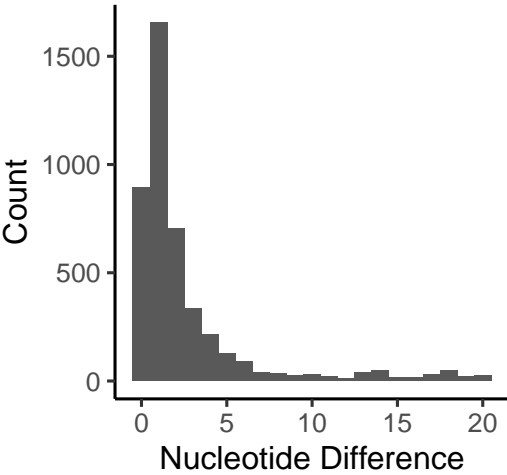
IGHV3-43D\*03

463 sequences assigned  
7 (1.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



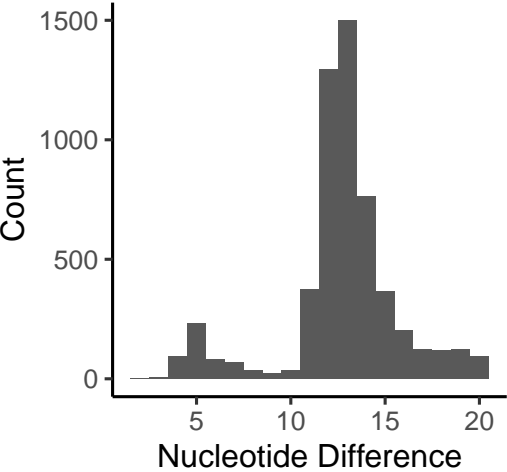
IGHV4-4\*07

9794 sequences assigned  
892 (9.1%) exact matches, in which:  
631 unique CDR3  
7 unique J



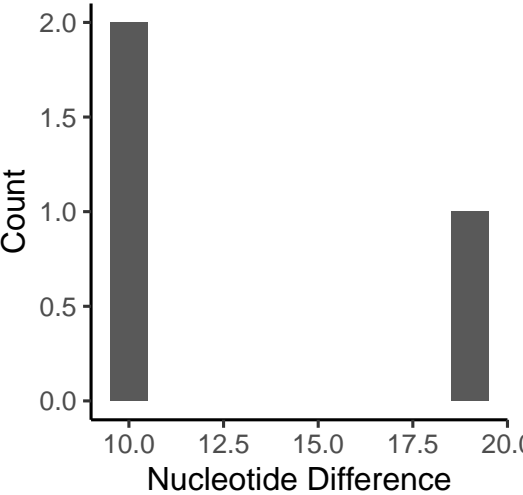
IGHV3-74\*03

5905 sequences assigned  
No exact matches.



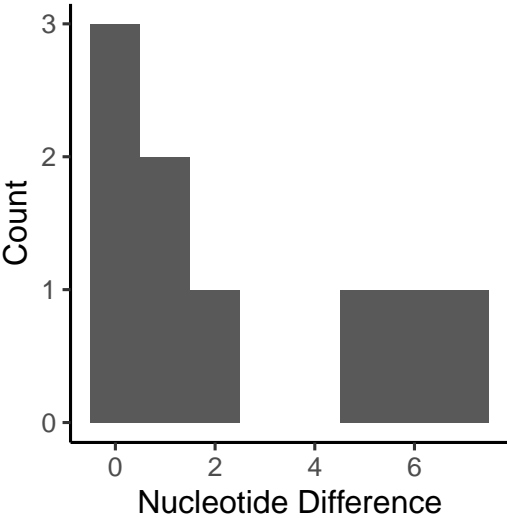
IGHV3-64D\*06

15 sequences assigned  
No exact matches.



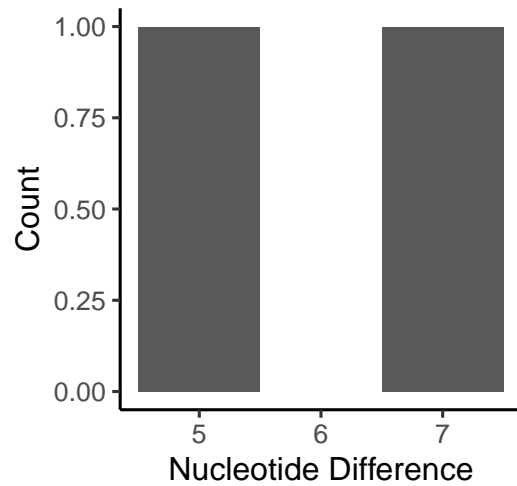
IGHV4-28\*03

10 sequences assigned  
3 (30%) exact matches, in which:  
3 unique CDR3  
3 unique J



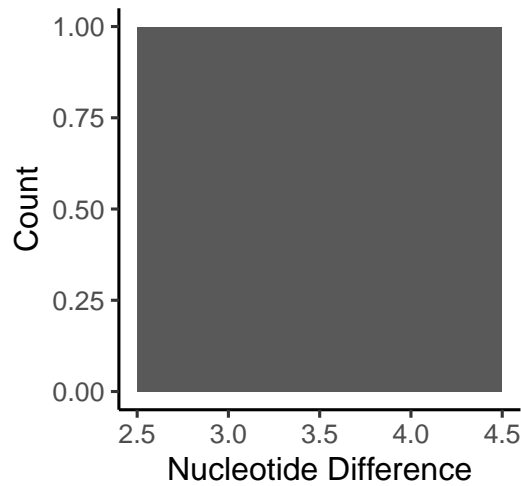
### IGHV4-28\*01\_07

3 sequences assigned  
No exact matches.



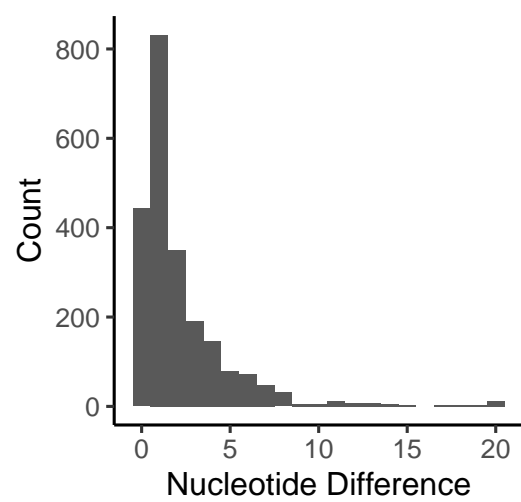
### IGHV4-30-2\*04

4 sequences assigned  
No exact matches.



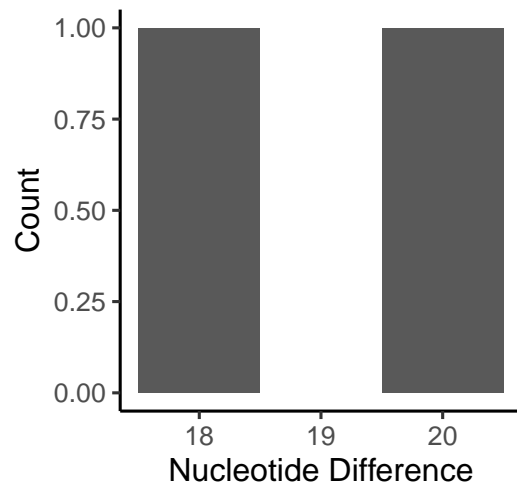
### IGHV4-31\*02

5387 sequences assigned  
443 (8.2%) exact matches, in which:  
310 unique CDR3  
7 unique J



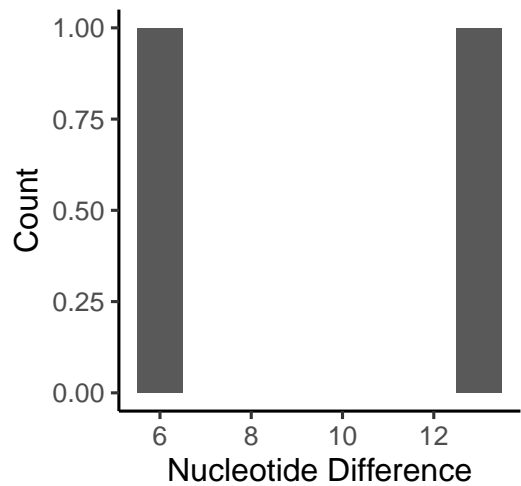
### IGHV4-30-4\*01

5 sequences assigned  
No exact matches.



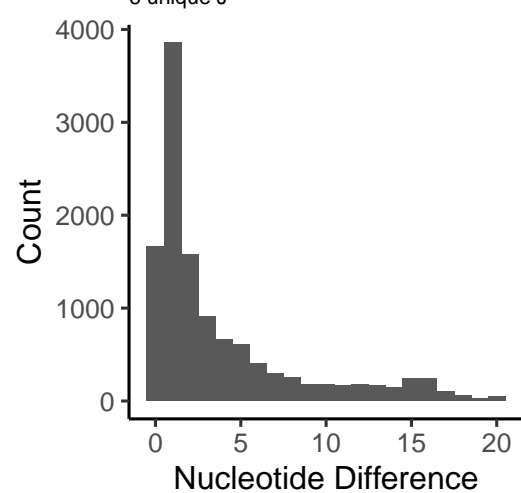
### IGHV4-30-4\*07

2 sequences assigned  
No exact matches.



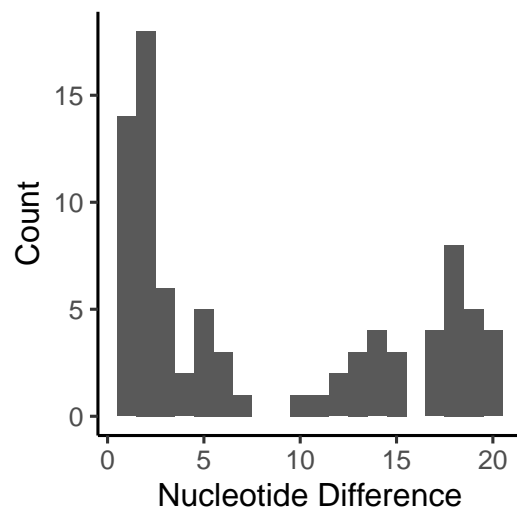
### IGHV4-34\*01\_02

14571 sequences assigned  
1665 (11.4%) exact matches, in which:  
981 unique CDR3  
6 unique J



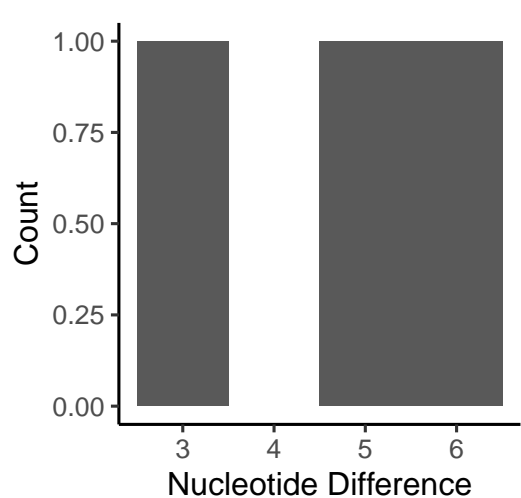
### IGHV4-30-2\*03

131 sequences assigned  
No exact matches.



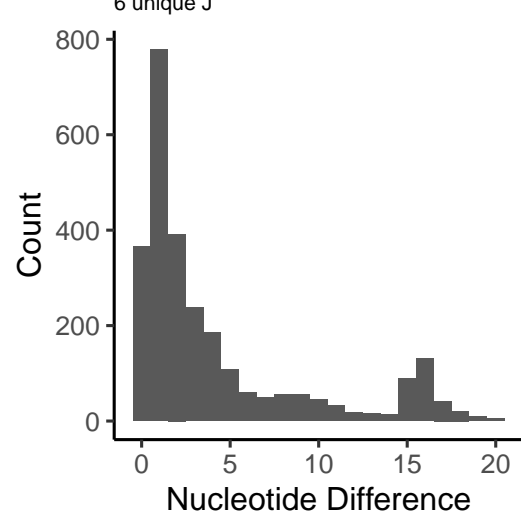
### IGHV4-30-4\*08

17 sequences assigned  
No exact matches.



### IGHV4-38-2\*02

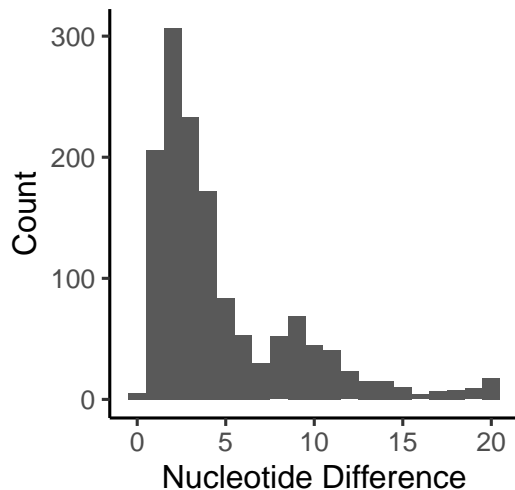
2779 sequences assigned  
365 (13.1%) exact matches, in which:  
257 unique CDR3  
6 unique J





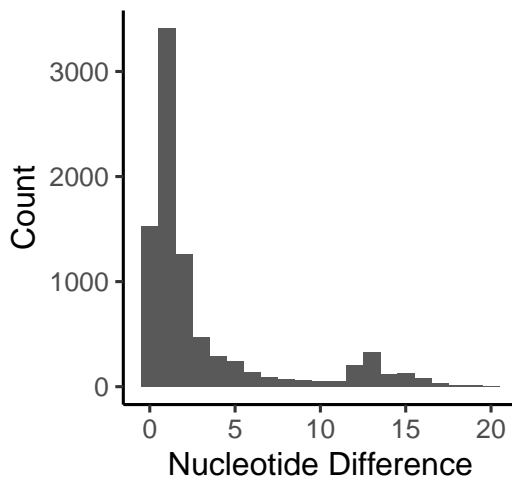
### IGHV4-39\*07

1591 sequences assigned  
5 (0.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



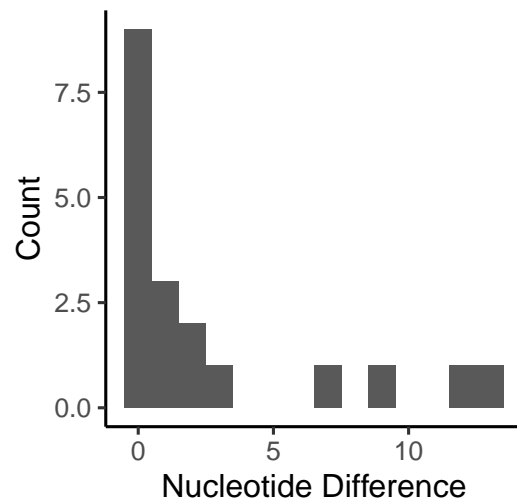
### IGHV4-59\*01\_07

9029 sequences assigned  
1531 (17%) exact matches, in which:  
994 unique CDR3  
7 unique J



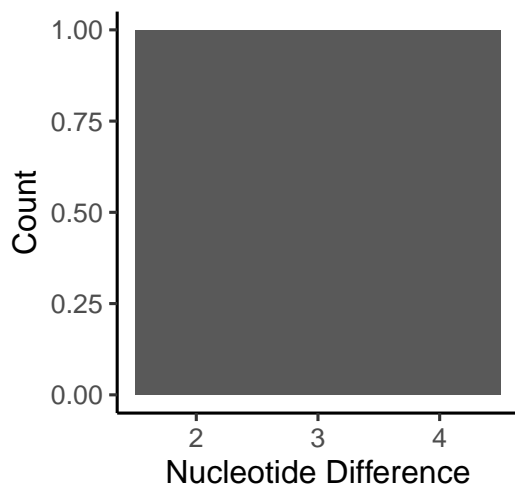
### IGHV4-61\*07

19 sequences assigned  
9 (47.4%) exact matches, in which:  
9 unique CDR3  
4 unique J



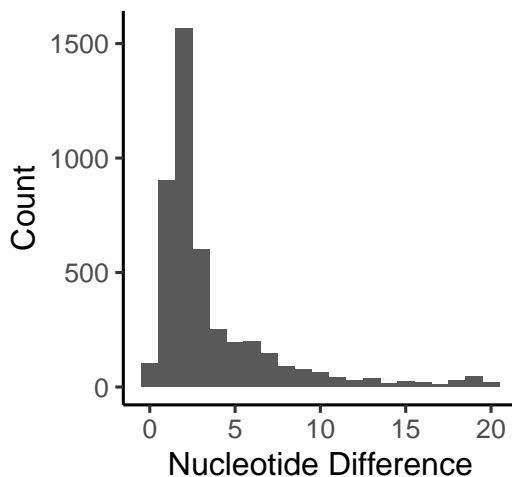
### IGHV4-55\*09

3 sequences assigned  
No exact matches.



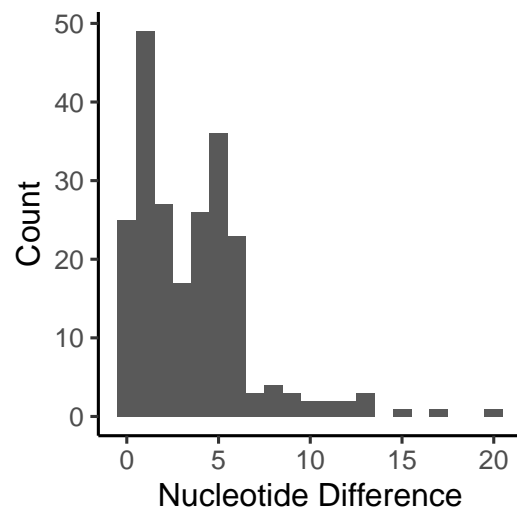
### IGHV4-59\*12

4542 sequences assigned  
103 (2.3%) exact matches, in which:  
98 unique CDR3  
6 unique J



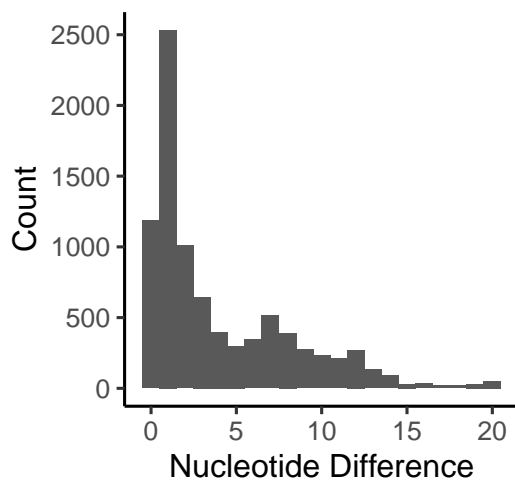
### IGHV4-61\*08

238 sequences assigned  
25 (10.5%) exact matches, in which:  
20 unique CDR3  
5 unique J



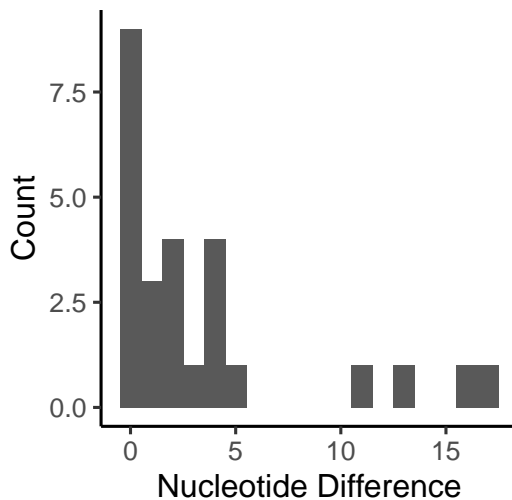
### IGHV4-59\*08

9539 sequences assigned  
1187 (12.4%) exact matches, in which:  
789 unique CDR3  
7 unique J



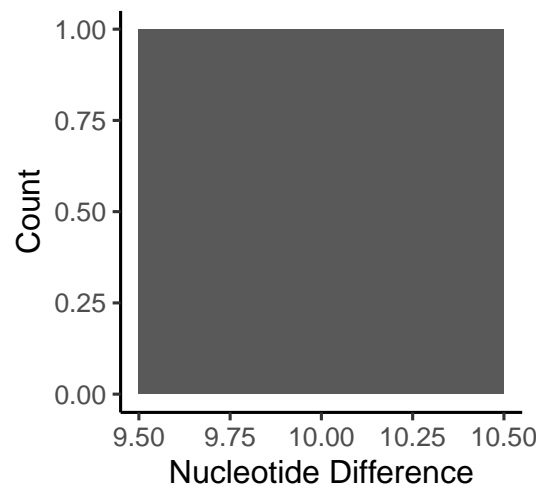
### IGHV4-61\*02

34 sequences assigned  
9 (26.5%) exact matches, in which:  
8 unique CDR3  
3 unique J



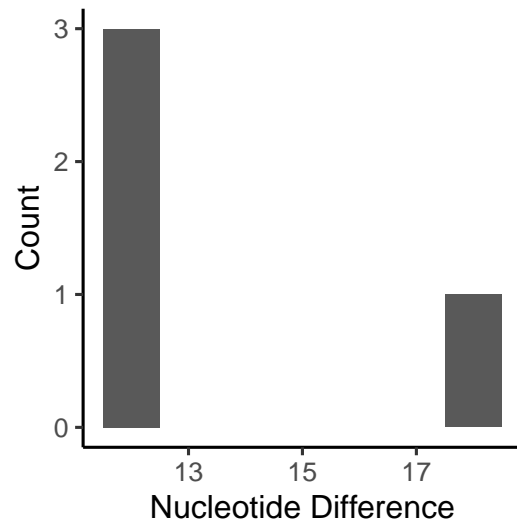
### IGHV1/OR15-2\*01

1 sequences assigned  
No exact matches.



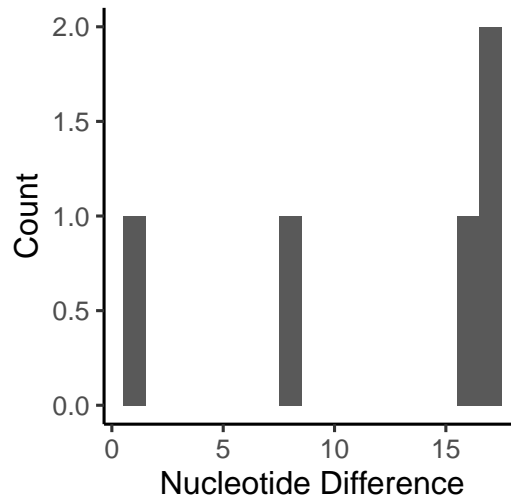
### IGHV1/OR15-2\*02\_03

14 sequences assigned  
No exact matches.



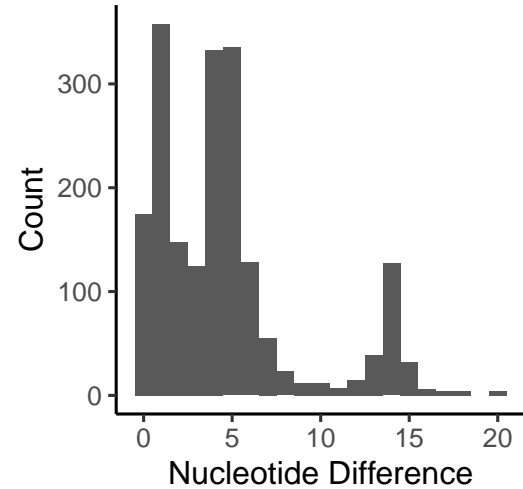
### IGHV5-10-1\*01\_03

5 sequences assigned  
No exact matches.



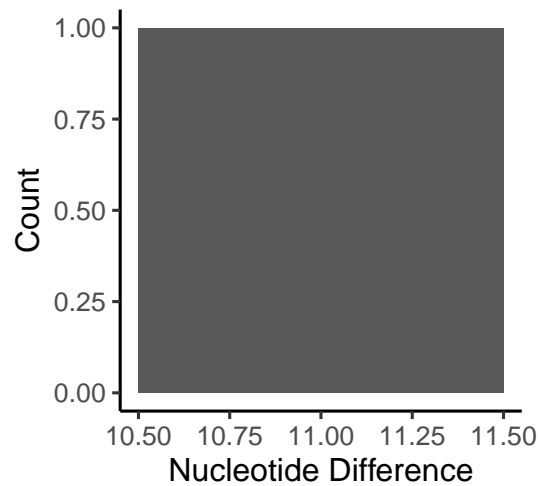
### IGHV6-1\*01\_02

1955 sequences assigned  
175 (9%) exact matches, in which:  
130 unique CDR3  
6 unique J



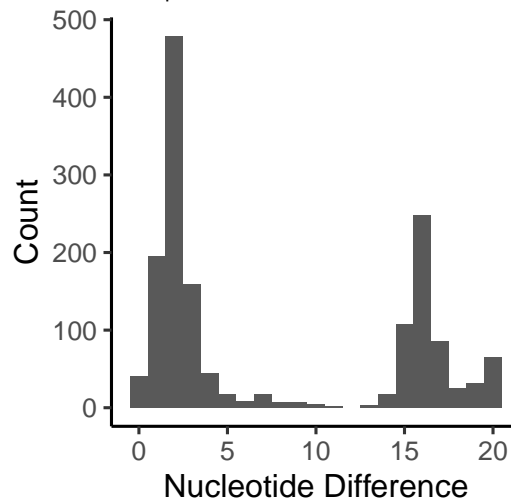
### IGHV1/OR15-3\*02

1 sequences assigned  
No exact matches.



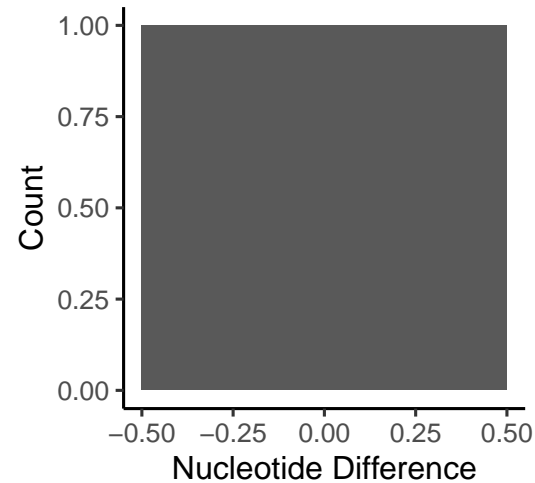
### IGHV5-51\*07

1660 sequences assigned  
41 (2.5%) exact matches, in which:  
28 unique CDR3  
6 unique J



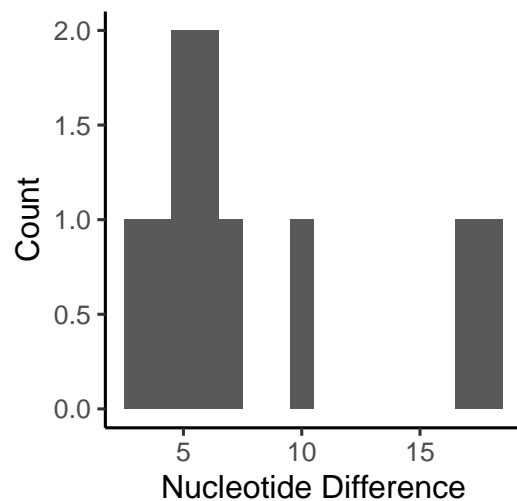
### IGHV7-4-1\*01

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



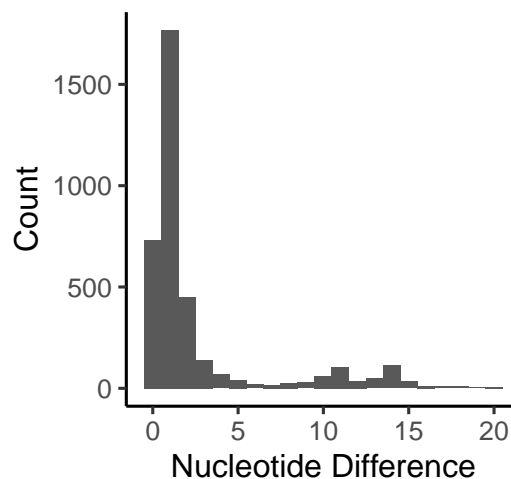
### IGHV4/OR15-8\*01

15 sequences assigned  
No exact matches.



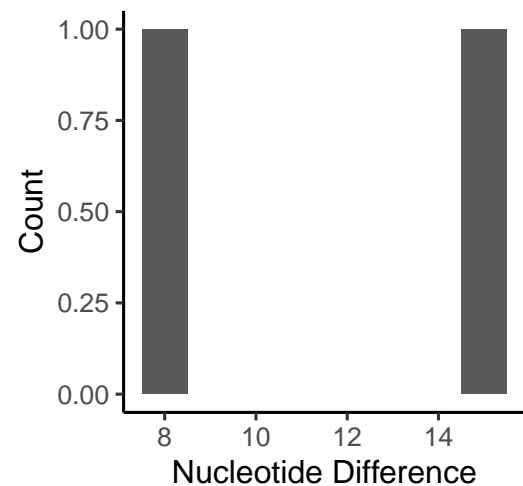
### IGHV5-51\*01\_03

3818 sequences assigned  
733 (19.2%) exact matches, in which:  
379 unique CDR3  
6 unique J

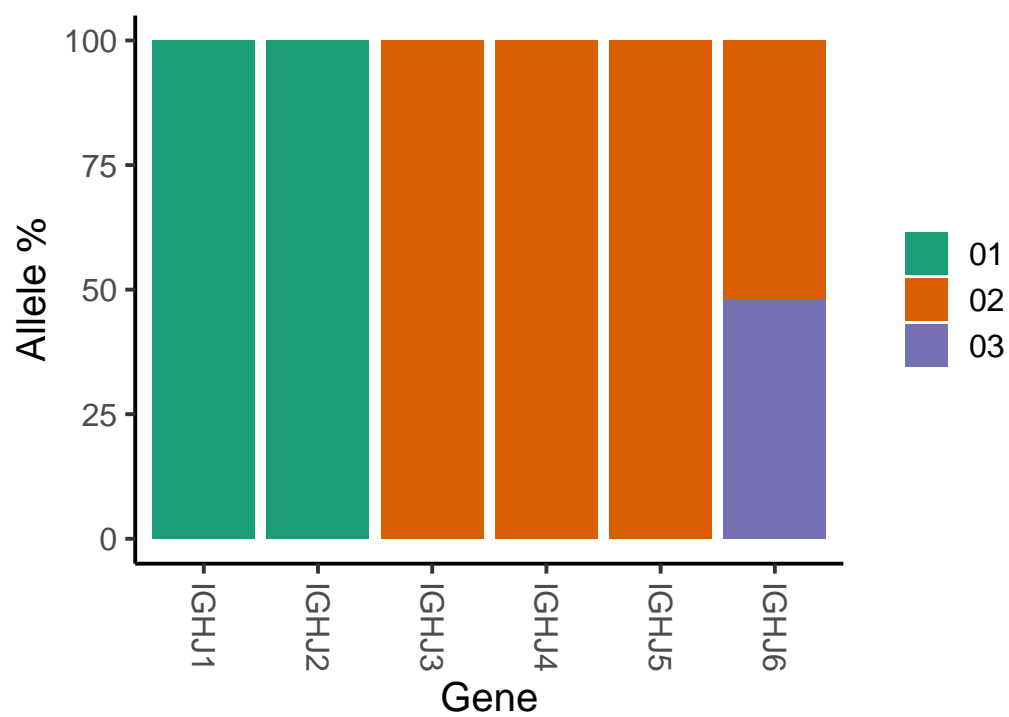


### IGHV7-4-1\*02

2 sequences assigned  
No exact matches.



Allele Usage



Sequence Count byIGHJ6 allele usage

