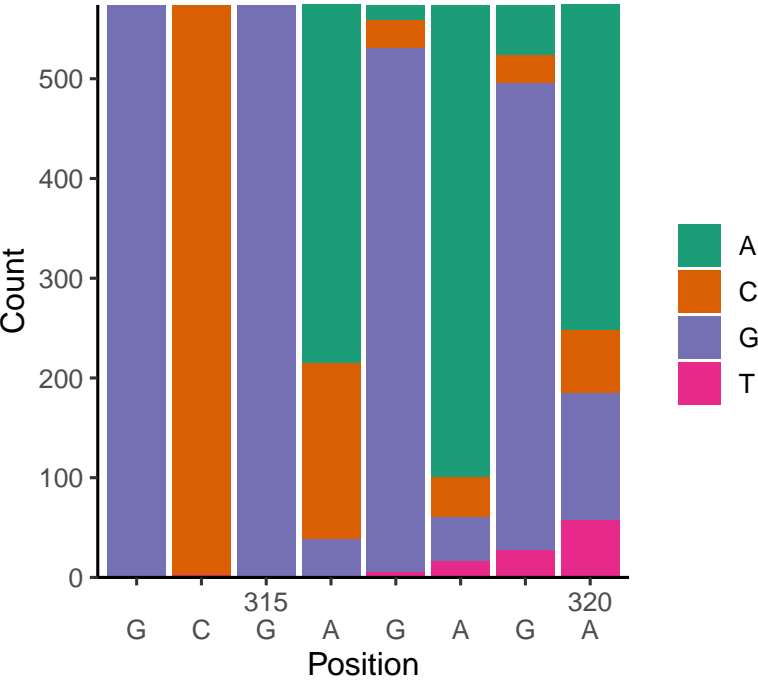
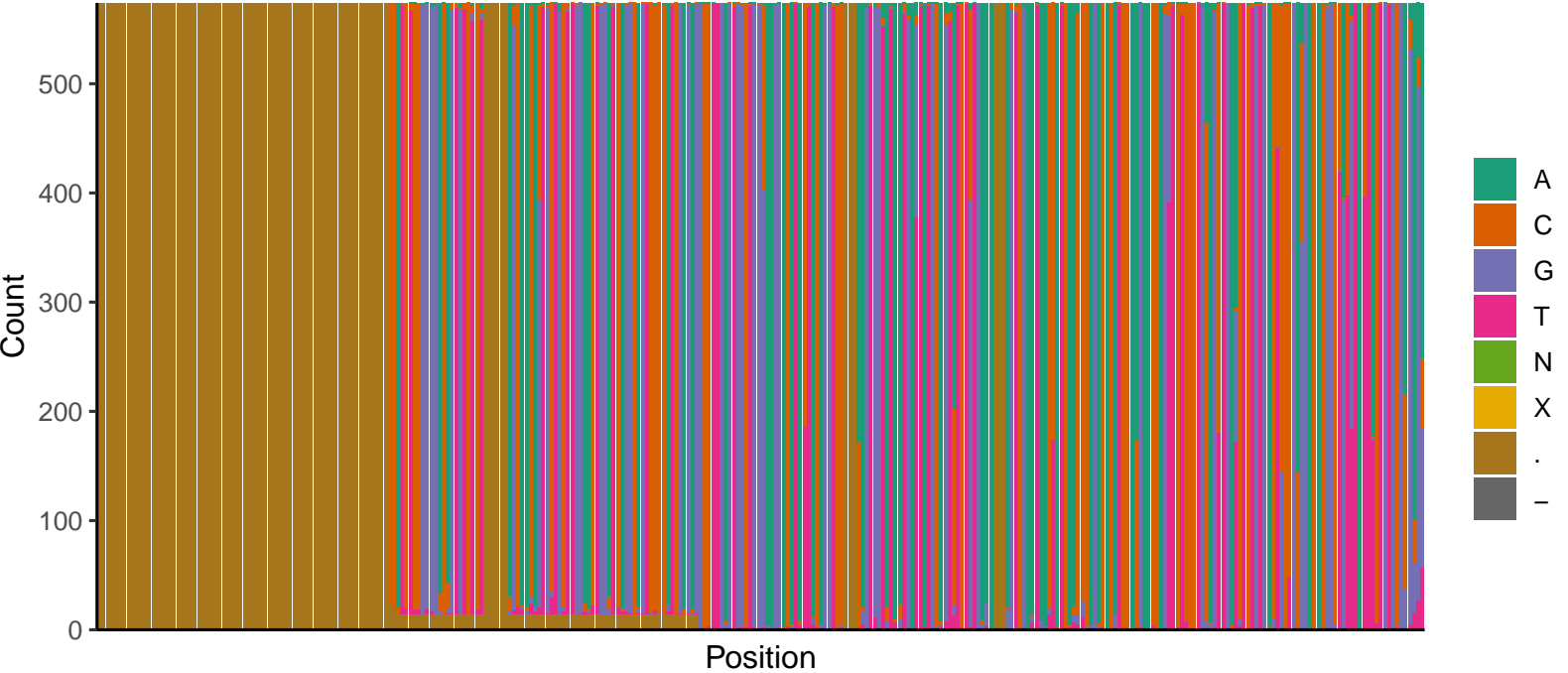


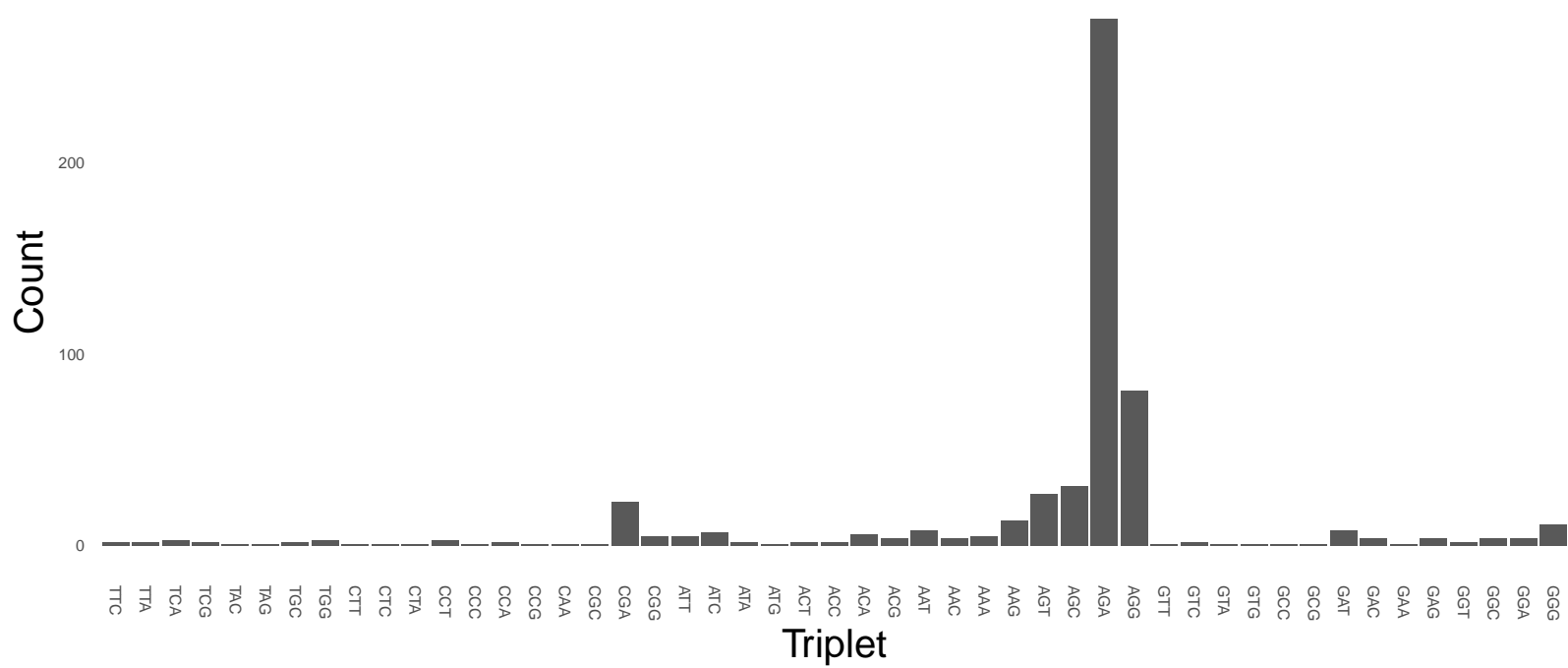
Gene IGHV6-1\*01\_02\_A315G



Gene IGHV6-1\*01\_02\_A315G

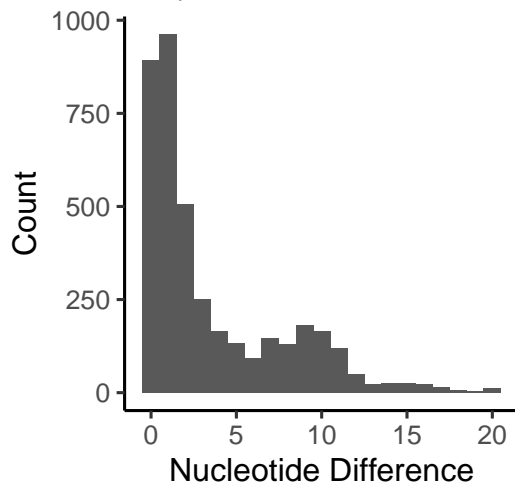


IGHV6-1\*01\_02\_A315G- Final 3 nucleotides as a triplet



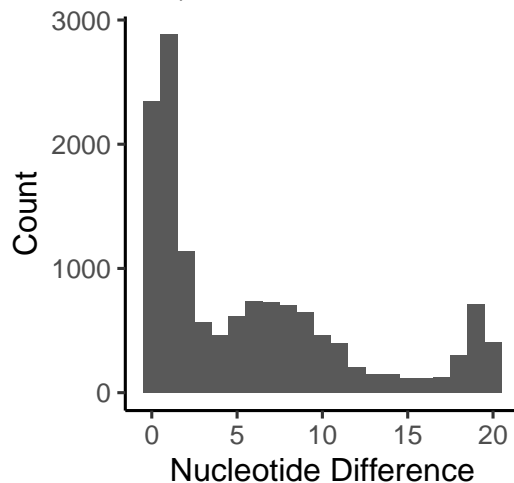
### IGHV1-2\*04

4014 sequences assigned  
893 (22.2%) exact matches, in which:  
731 unique CDR3  
6 unique J



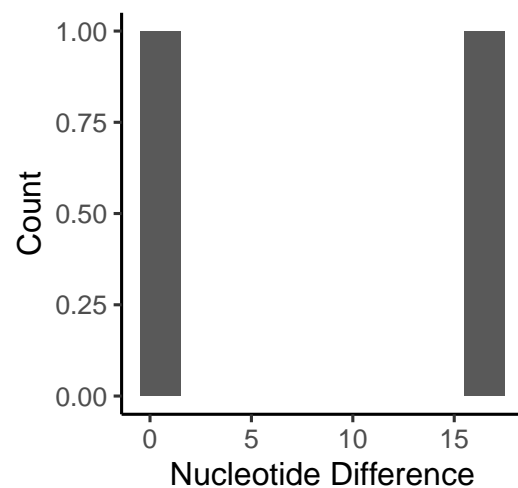
### IGHV1-8\*01

14796 sequences assigned  
2350 (15.9%) exact matches, in which:  
1888 unique CDR3  
6 unique J



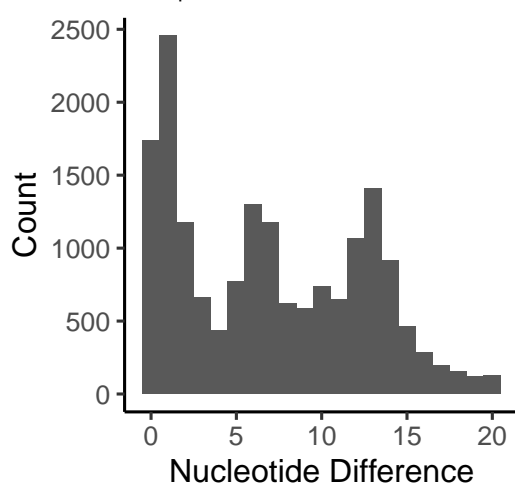
### IGHV1-45\*02

5 sequences assigned  
1 (20%) exact matches, in which:  
1 unique CDR3  
1 unique J



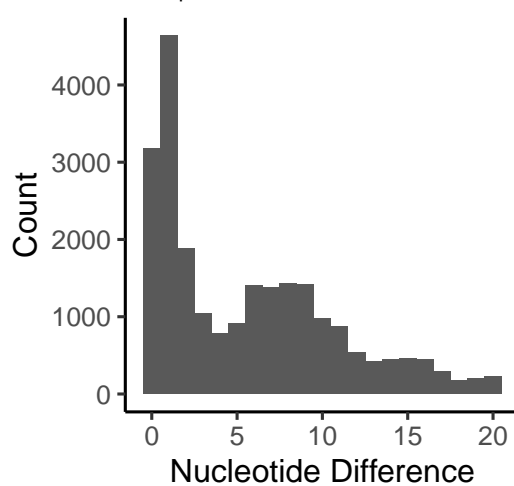
### IGHV1-2\*06

17612 sequences assigned  
1741 (9.9%) exact matches, in which:  
1388 unique CDR3  
6 unique J



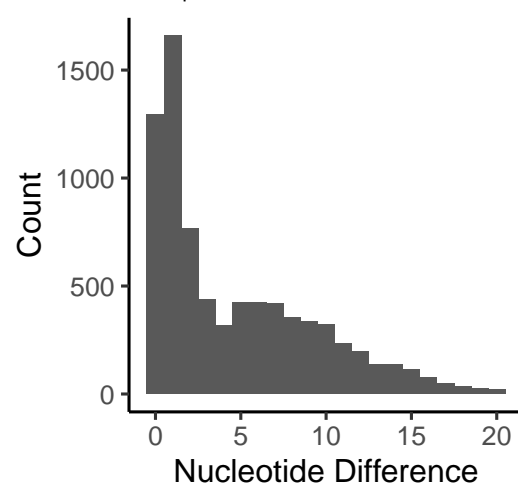
### IGHV1-18\*01

27057 sequences assigned  
3184 (11.8%) exact matches, in which:  
2443 unique CDR3  
6 unique J



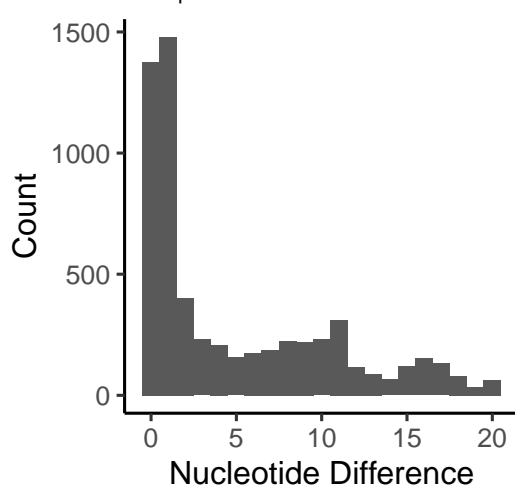
### IGHV1-46\*01

8331 sequences assigned  
1292 (15.5%) exact matches, in which:  
1086 unique CDR3  
6 unique J



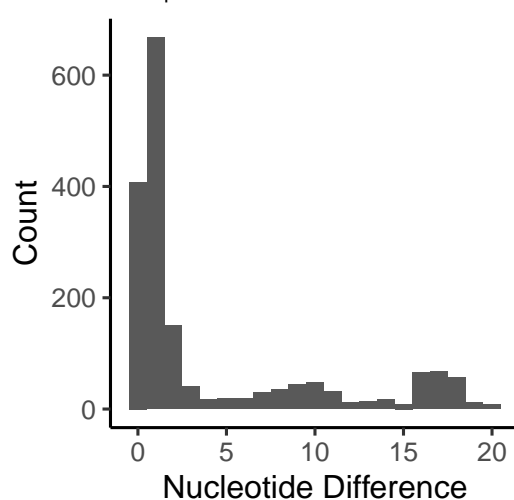
### IGHV1-3\*01\_05

6329 sequences assigned  
1377 (21.8%) exact matches, in which:  
1076 unique CDR3  
6 unique J



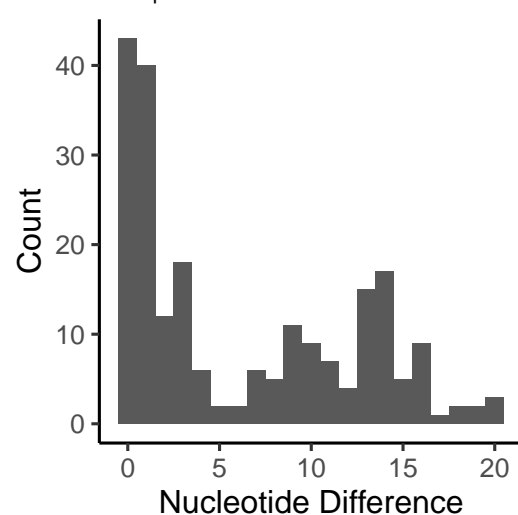
### IGHV1-24\*01

3076 sequences assigned  
408 (13.3%) exact matches, in which:  
273 unique CDR3  
6 unique J



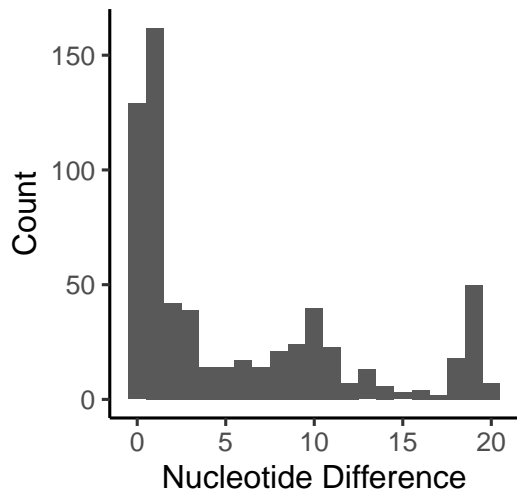
### IGHV1-58\*02

222 sequences assigned  
43 (19.4%) exact matches, in which:  
42 unique CDR3  
4 unique J



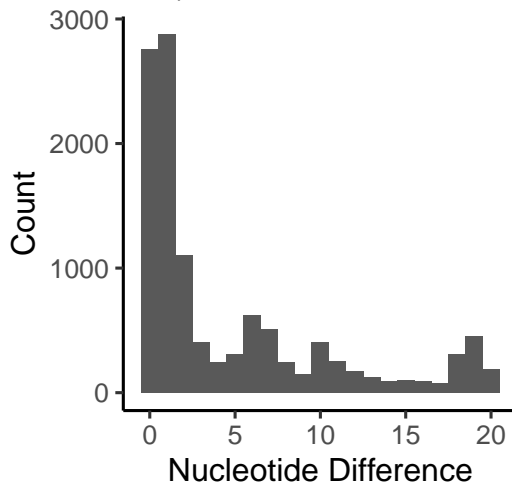
### IGHV1–58\*01\_03

675 sequences assigned  
129 (19.1%) exact matches, in which:  
105 unique CDR3  
5 unique J



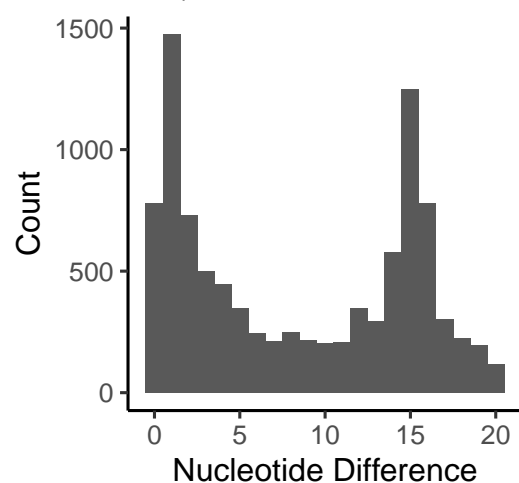
### IGHV1–69\*01\_12\_13

12109 sequences assigned  
2754 (22.7%) exact matches, in which:  
2263 unique CDR3  
6 unique J



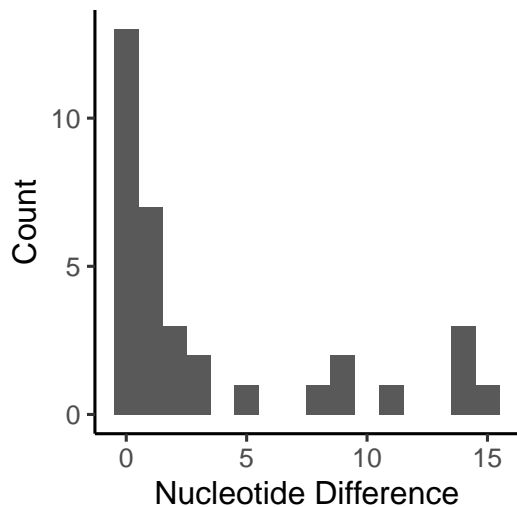
### IGHV2–5\*02

10533 sequences assigned  
779 (7.4%) exact matches, in which:  
579 unique CDR3  
6 unique J



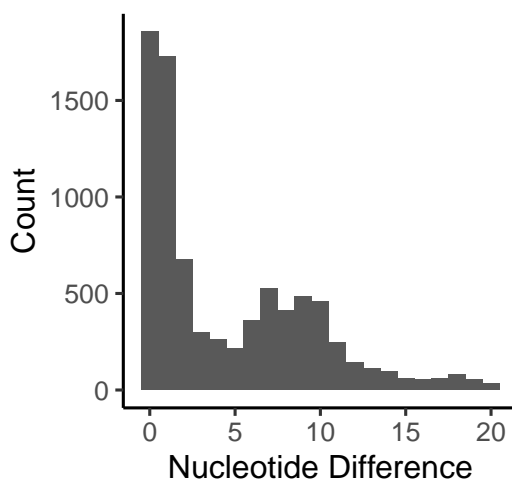
### IGHV1–68\*02\_03

34 sequences assigned  
13 (38.2%) exact matches, in which:  
10 unique CDR3  
3 unique J



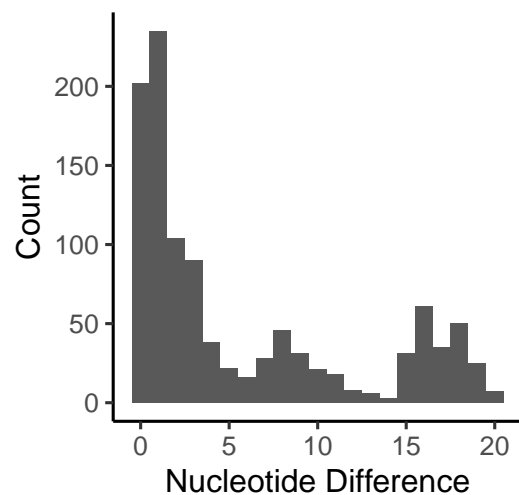
### IGHV1–69\*06\_14

8605 sequences assigned  
1856 (21.6%) exact matches, in which:  
1583 unique CDR3  
6 unique J



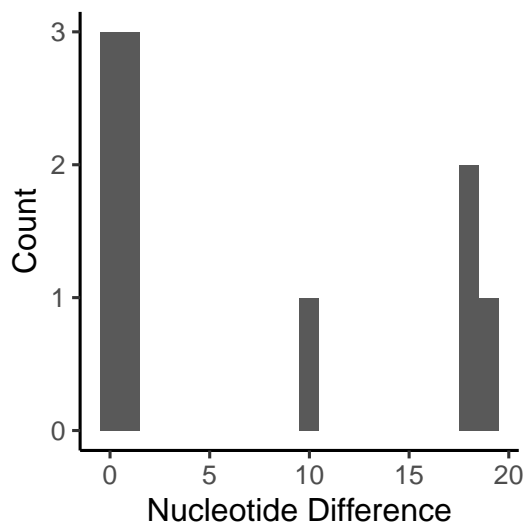
### IGHV2–26\*01

1127 sequences assigned  
202 (17.9%) exact matches, in which:  
162 unique CDR3  
5 unique J



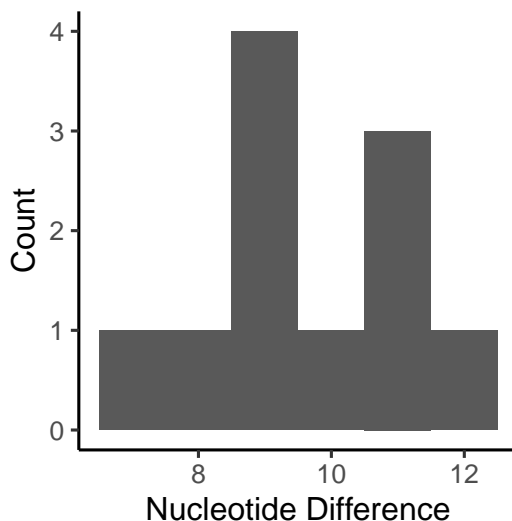
### IGHV1–69–2\*01

28 sequences assigned  
3 (10.7%) exact matches, in which:  
3 unique CDR3  
2 unique J



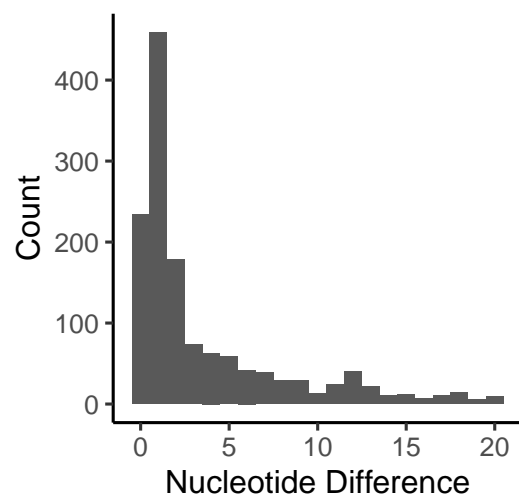
### IGHV1–NL1\*01

11 sequences assigned  
No exact matches.



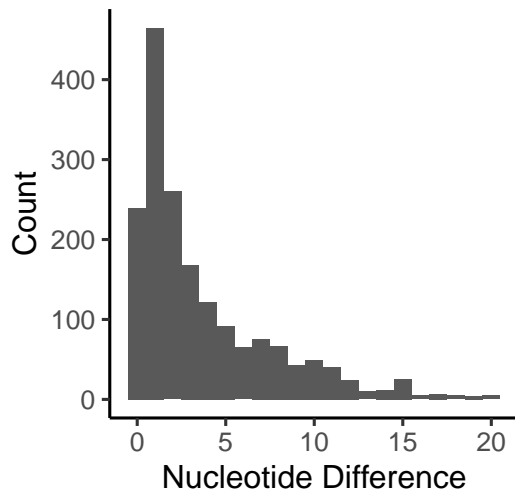
### IGHV2–70\*01

1475 sequences assigned  
234 (15.9%) exact matches, in which:  
165 unique CDR3  
5 unique J



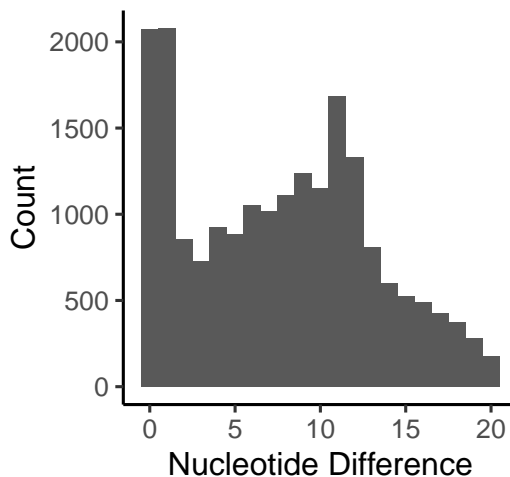
### IGHV2-70\*04

1823 sequences assigned  
239 (13.1%) exact matches, in which:  
173 unique CDR3  
5 unique J



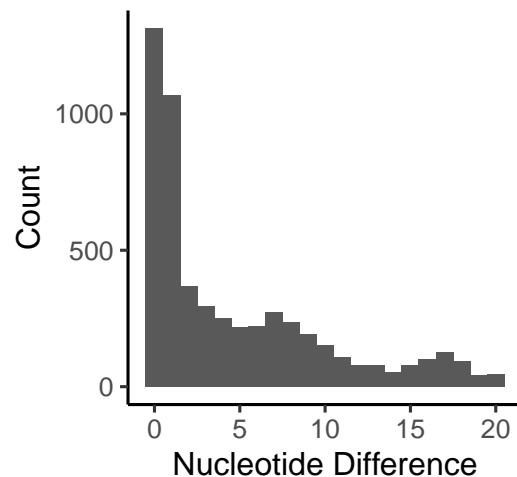
### IGHV3-7\*01

21714 sequences assigned  
2071 (9.5%) exact matches, in which:  
1357 unique CDR3  
6 unique J



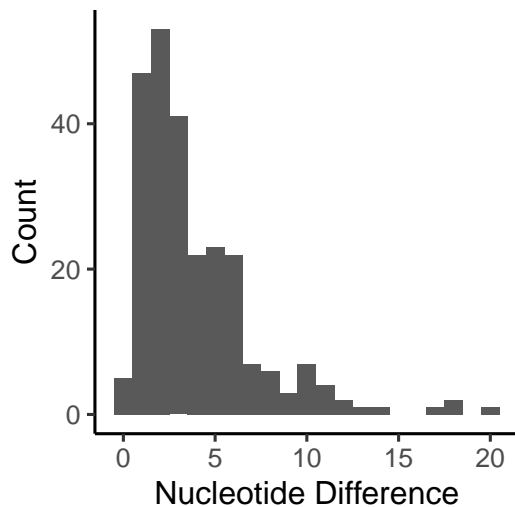
### IGHV3-11\*01

8524 sequences assigned  
1313 (15.4%) exact matches, in which:  
864 unique CDR3  
6 unique J



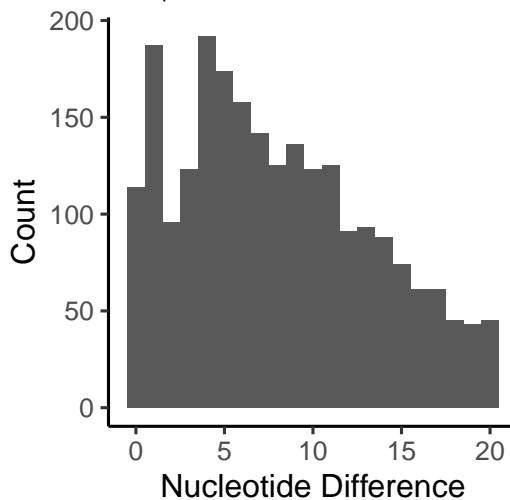
### IGHV2-70\*12

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



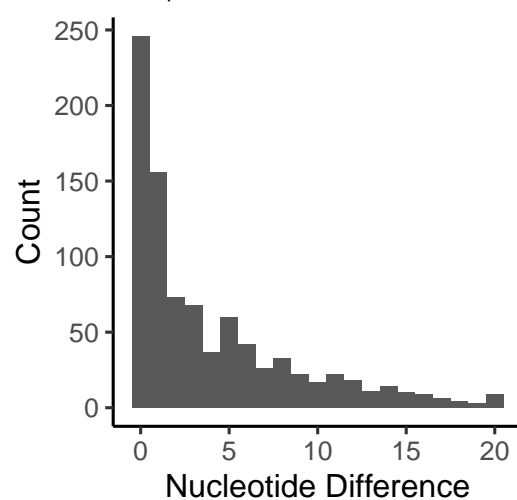
### IGHV3-7\*03

2666 sequences assigned  
114 (4.3%) exact matches, in which:  
107 unique CDR3  
5 unique J



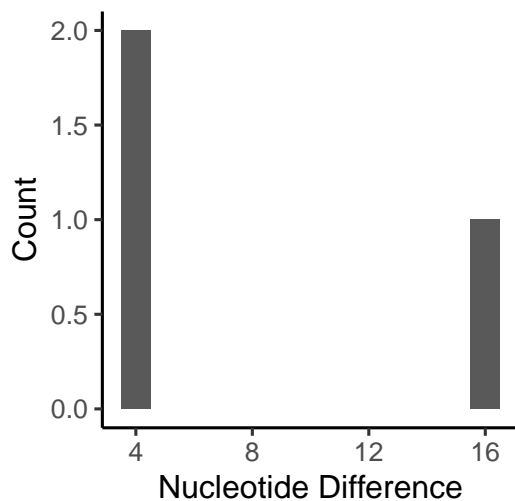
### IGHV3-11\*04

948 sequences assigned  
246 (25.9%) exact matches, in which:  
225 unique CDR3  
6 unique J



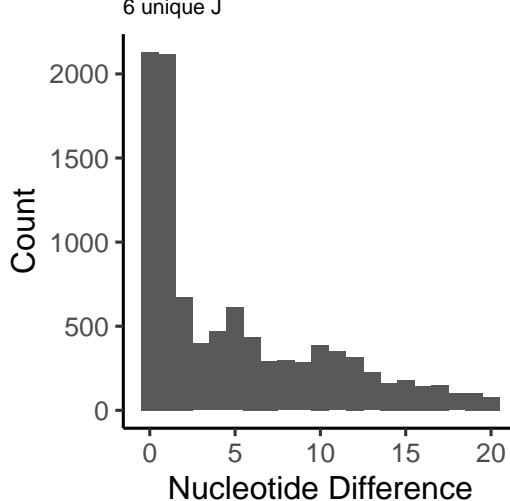
### IGHV2-70D\*14

7 sequences assigned  
No exact matches.



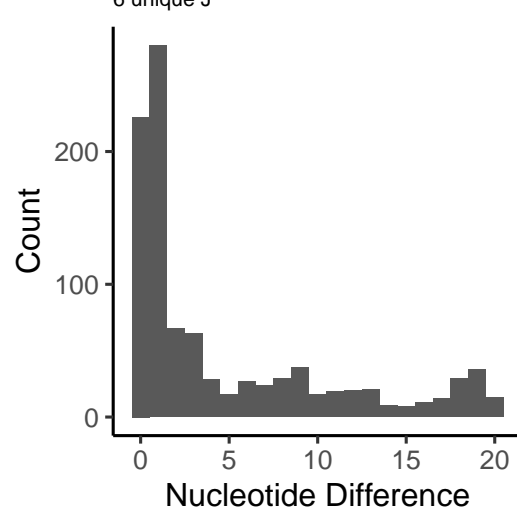
### IGHV3-9\*01

11716 sequences assigned  
2130 (18.2%) exact matches, in which:  
1198 unique CDR3  
6 unique J



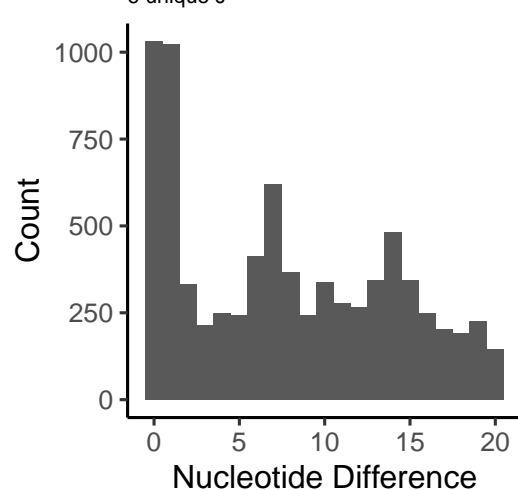
### IGHV3-13\*01

1076 sequences assigned  
226 (21%) exact matches, in which:  
126 unique CDR3  
6 unique J



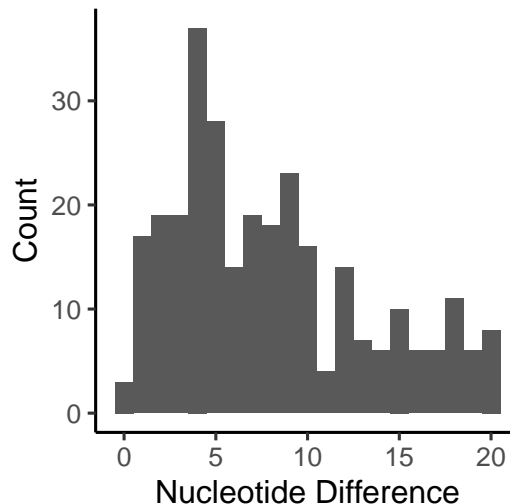
### IGHV3-15\*01\_02

8417 sequences assigned  
1031 (12.2%) exact matches, in which:  
589 unique CDR3  
6 unique J



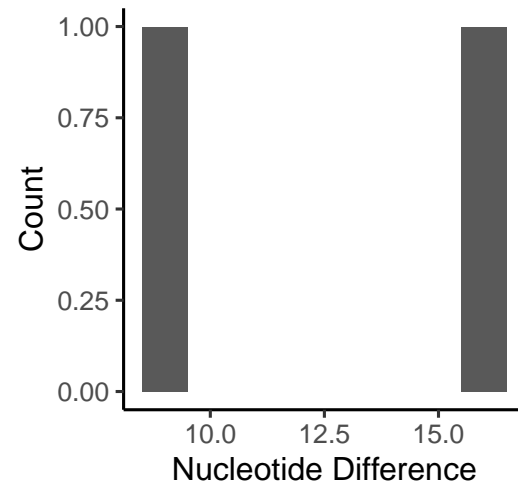
### IGHV3-20\*03\_04

639 sequences assigned  
3 (0.5%) exact matches, in which:  
3 unique CDR3  
3 unique J



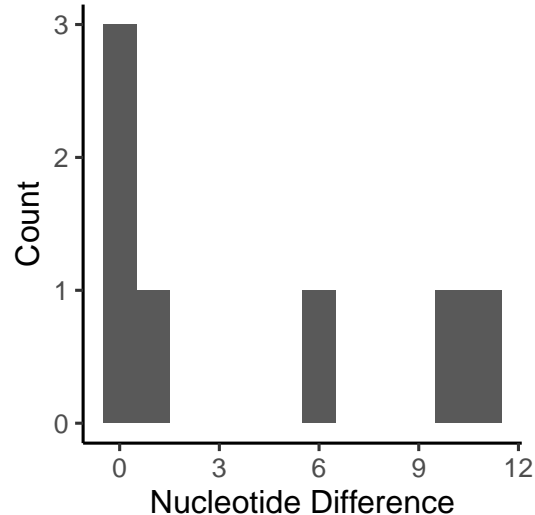
### IGHV3-22\*01\_02

2 sequences assigned  
No exact matches.



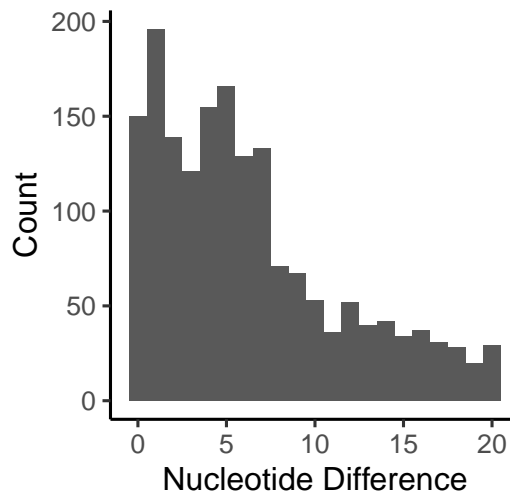
### IGHV3-19\*01

7 sequences assigned  
3 (42.9%) exact matches, in which:  
2 unique CDR3  
1 unique J



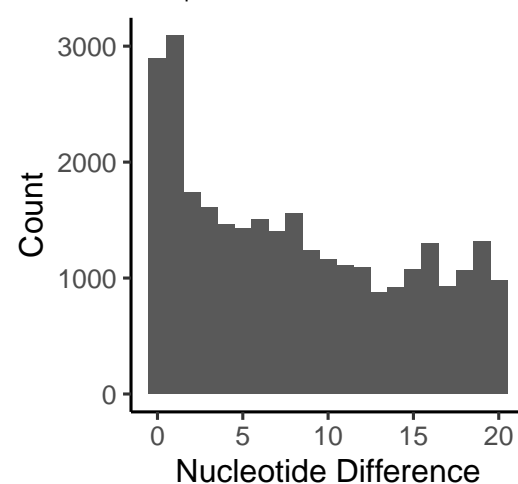
### IGHV3-21\*04

2014 sequences assigned  
150 (7.4%) exact matches, in which:  
144 unique CDR3  
5 unique J



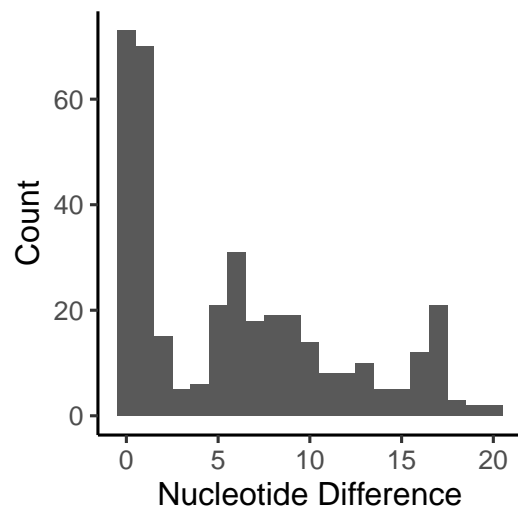
### IGHV3-23\*01\_04

42862 sequences assigned  
2890 (6.7%) exact matches, in which:  
1654 unique CDR3  
6 unique J



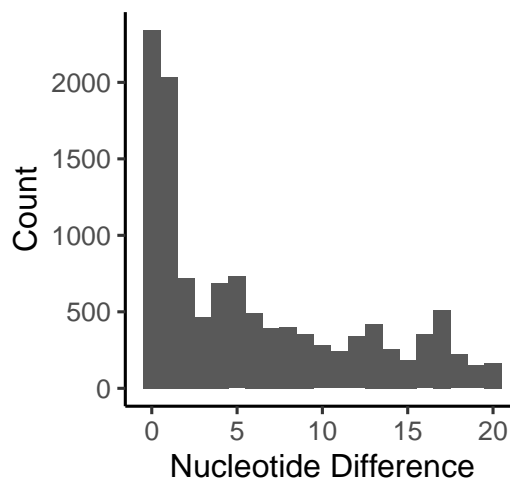
### IGHV3-20\*01\_02

517 sequences assigned  
73 (14.1%) exact matches, in which:  
38 unique CDR3  
5 unique J



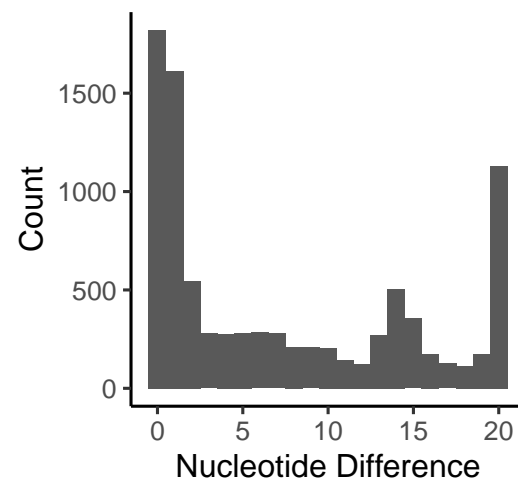
### IGHV3-21\*01\_02

15862 sequences assigned  
2342 (14.8%) exact matches, in which:  
1474 unique CDR3  
6 unique J



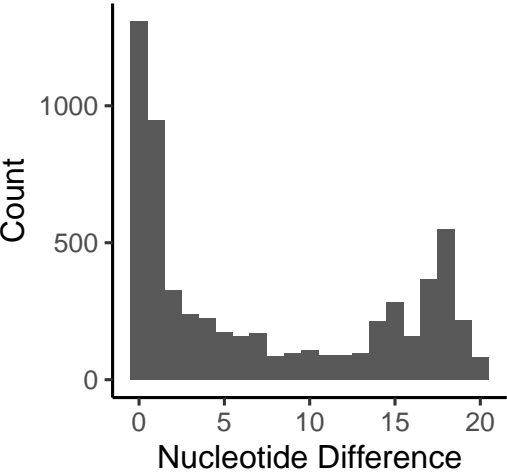
### IGHV3-30-3\*01

15433 sequences assigned  
1821 (11.8%) exact matches, in which:  
1189 unique CDR3  
6 unique J



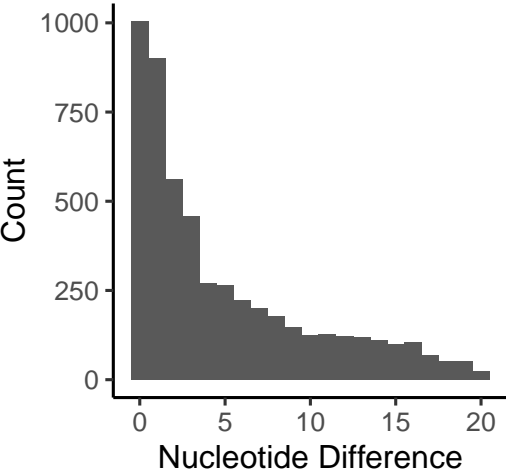
IGHV3-30\*01

6394 sequences assigned  
1308 (20.5%) exact matches, in which:  
896 unique CDR3  
6 unique J



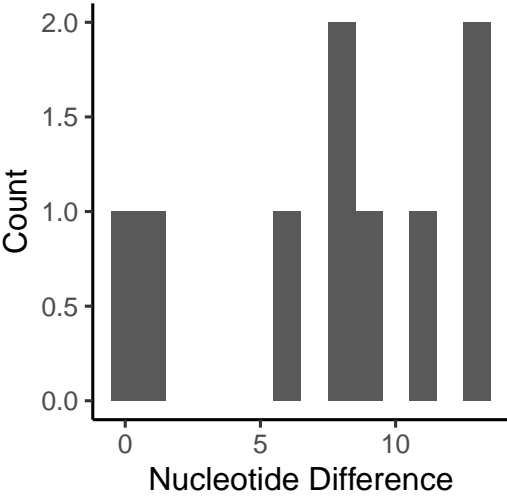
IGHV3-30\*18

6350 sequences assigned  
1004 (15.8%) exact matches, in which:  
573 unique CDR3  
6 unique J



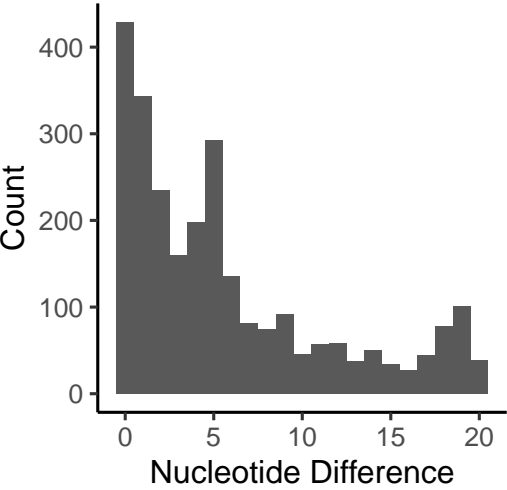
IGHV3-35\*01

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



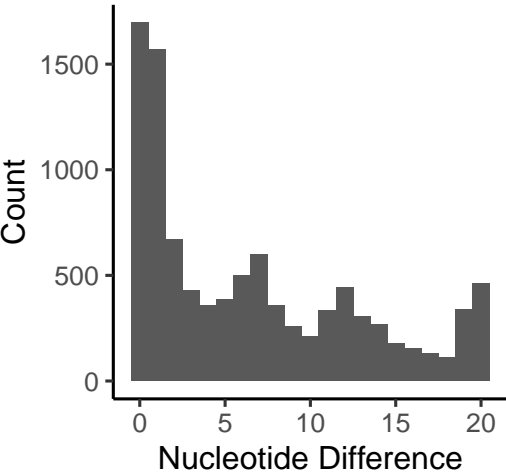
IGHV3-30\*03

2876 sequences assigned  
429 (14.9%) exact matches, in which:  
378 unique CDR3  
6 unique J



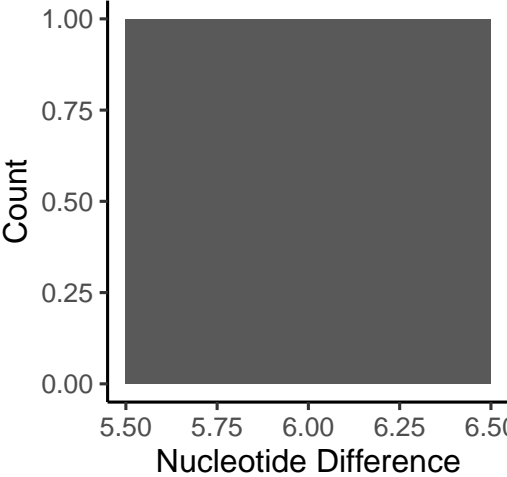
IGHV3-33\*01

10984 sequences assigned  
1696 (15.4%) exact matches, in which:  
1142 unique CDR3  
6 unique J



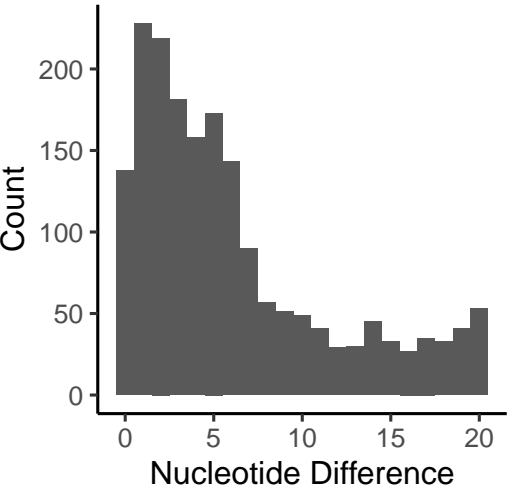
IGHV3-43\*01

1 sequences assigned  
No exact matches.



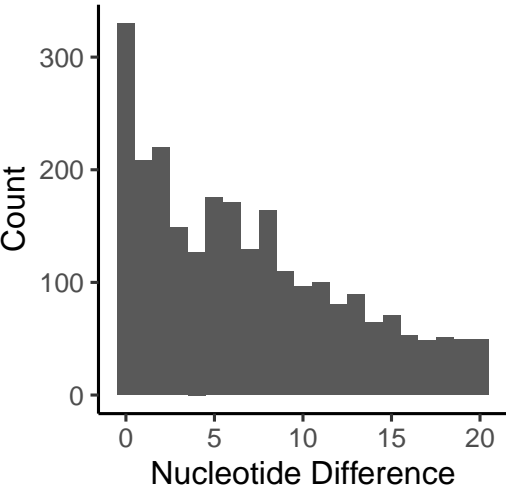
IGHV3-30\*07

2104 sequences assigned  
138 (6.6%) exact matches, in which:  
130 unique CDR3  
5 unique J



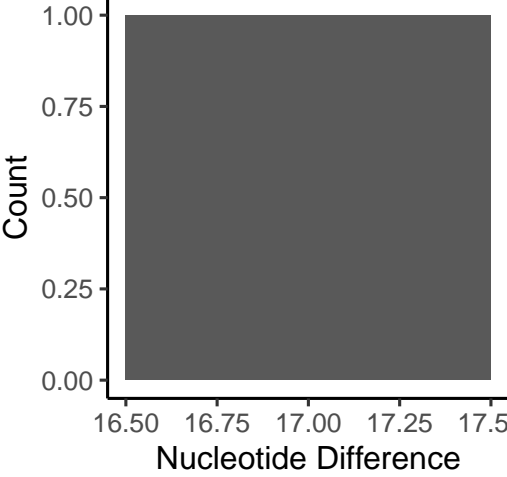
IGHV3-33\*08

2775 sequences assigned  
330 (11.9%) exact matches, in which:  
260 unique CDR3  
6 unique J



IGHV3-43\*02

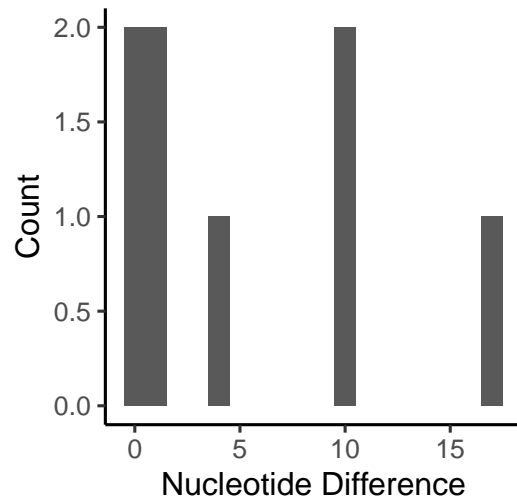
2 sequences assigned  
No exact matches.





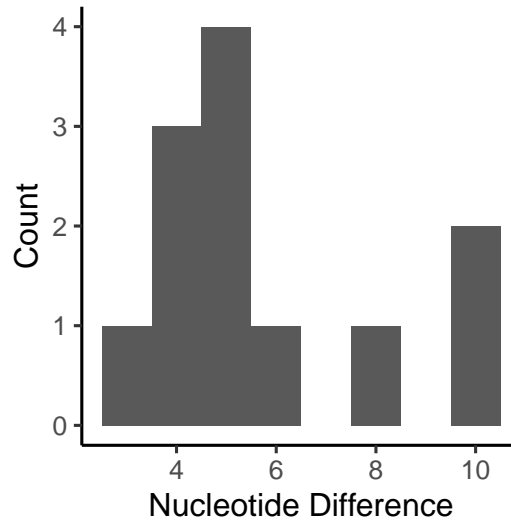
### IGHV3-47\*01

8 sequences assigned  
2 (25%) exact matches, in which:  
1 unique CDR3  
0 unique J



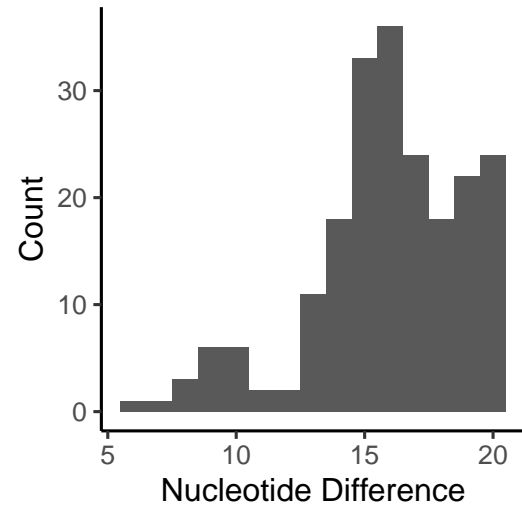
### IGHV3-52\*01\_03

12 sequences assigned  
No exact matches.



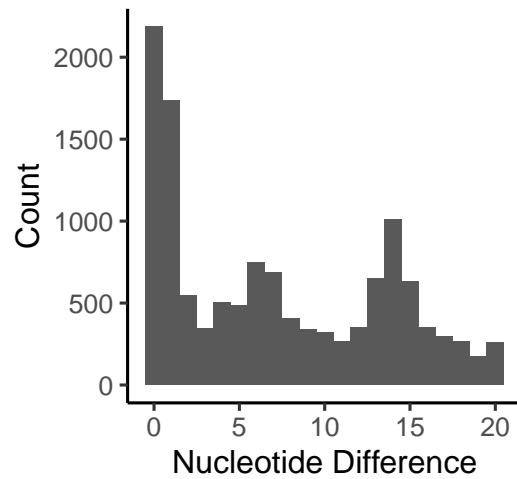
### IGHV3-66\*01

264 sequences assigned  
No exact matches.



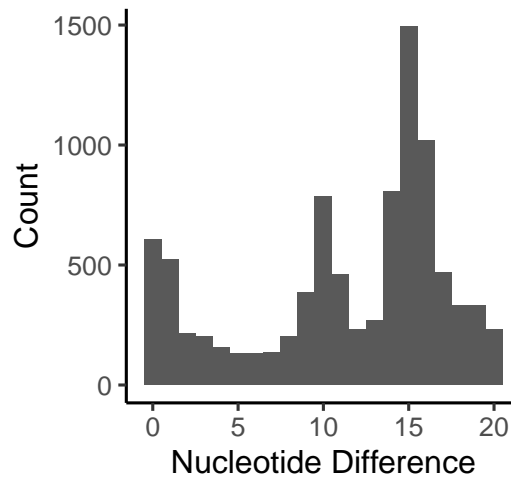
### IGHV3-48\*03

15174 sequences assigned  
2186 (14.4%) exact matches, in which:  
1295 unique CDR3  
6 unique J



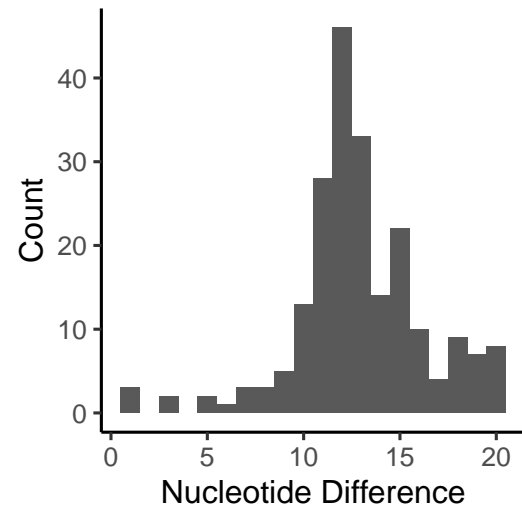
### IGHV3-53\*01\_02

9669 sequences assigned  
608 (6.3%) exact matches, in which:  
400 unique CDR3  
6 unique J



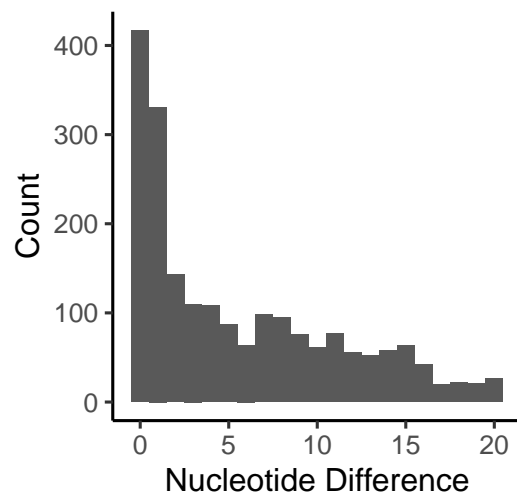
### IGHV3-66\*02

248 sequences assigned  
No exact matches.



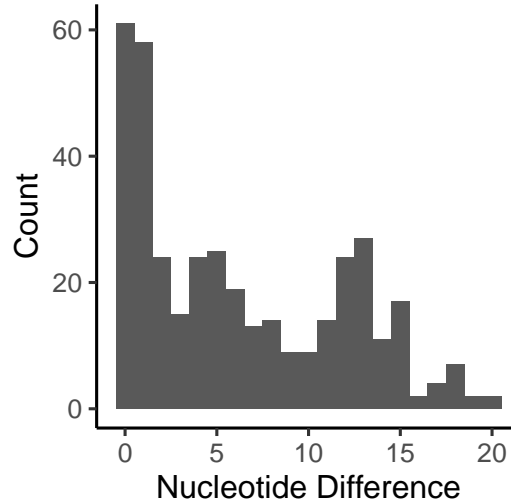
### IGHV3-49\*04

2726 sequences assigned  
417 (15.3%) exact matches, in which:  
257 unique CDR3  
6 unique J



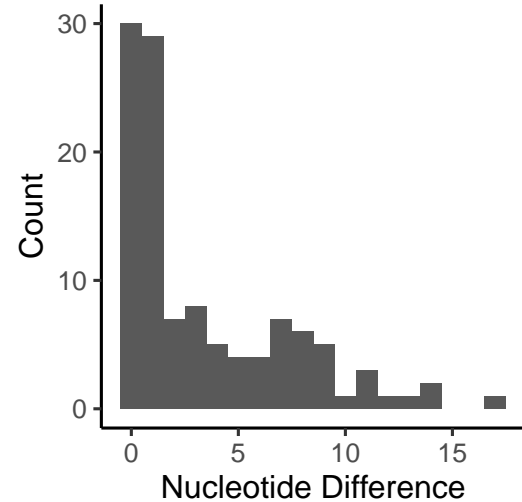
### IGHV3-64\*01

414 sequences assigned  
61 (14.7%) exact matches, in which:  
42 unique CDR3  
5 unique J



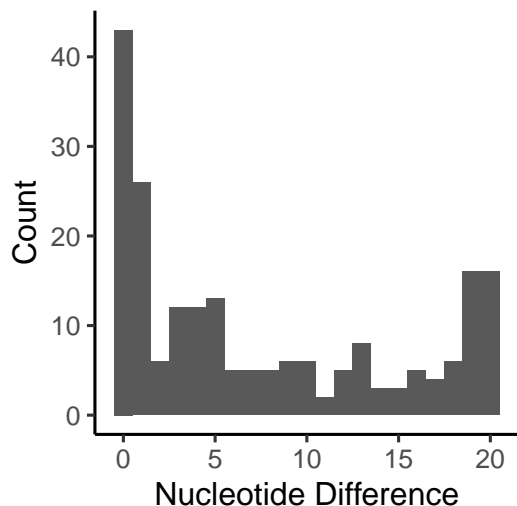
### IGHV3-66\*03

116 sequences assigned  
30 (25.9%) exact matches, in which:  
27 unique CDR3  
3 unique J



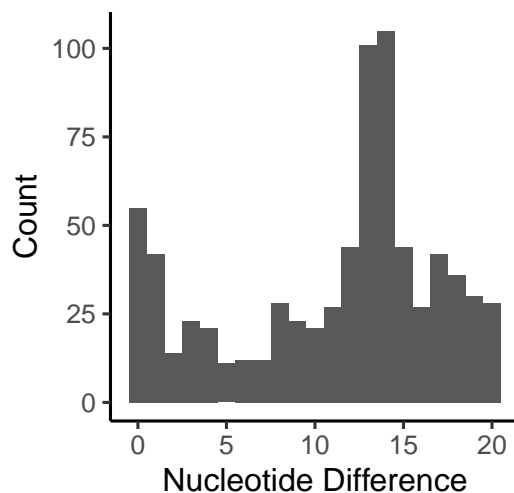
### IGHV3-69-1\*01

255 sequences assigned  
43 (16.9%) exact matches, in which:  
42 unique CDR3  
4 unique J



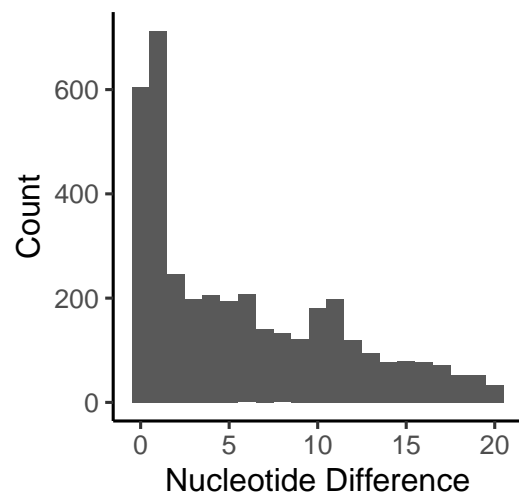
### IGHV3-72\*01

926 sequences assigned  
55 (5.9%) exact matches, in which:  
32 unique CDR3  
4 unique J



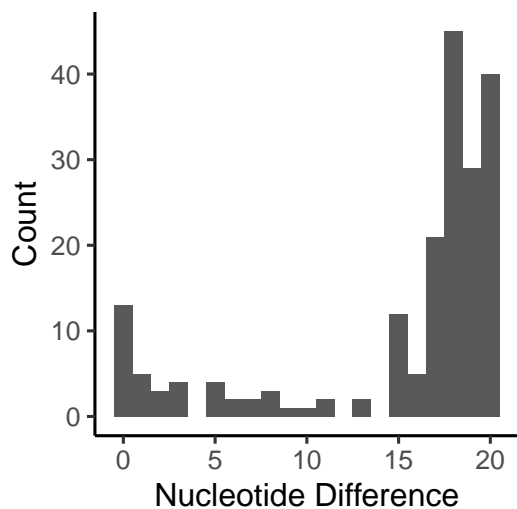
### IGHV3-74\*01\_02

4847 sequences assigned  
605 (12.5%) exact matches, in which:  
331 unique CDR3  
6 unique J



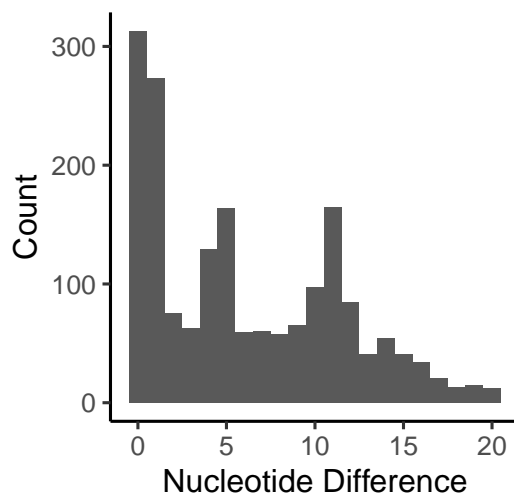
### IGHV3-69-1\*02

454 sequences assigned  
13 (2.9%) exact matches, in which:  
12 unique CDR3  
4 unique J



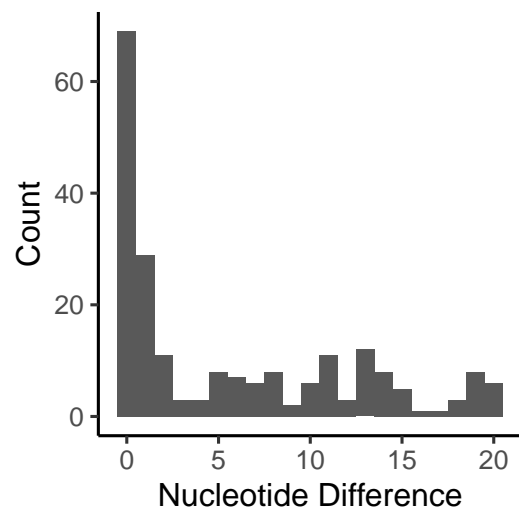
### IGHV3-73\*01\_02

1960 sequences assigned  
313 (16%) exact matches, in which:  
189 unique CDR3  
5 unique J



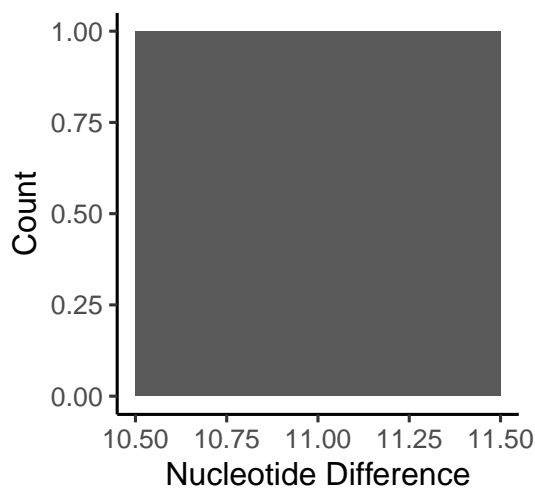
### IGHV3-43D\*04

571 sequences assigned  
69 (12.1%) exact matches, in which:  
42 unique CDR3  
5 unique J



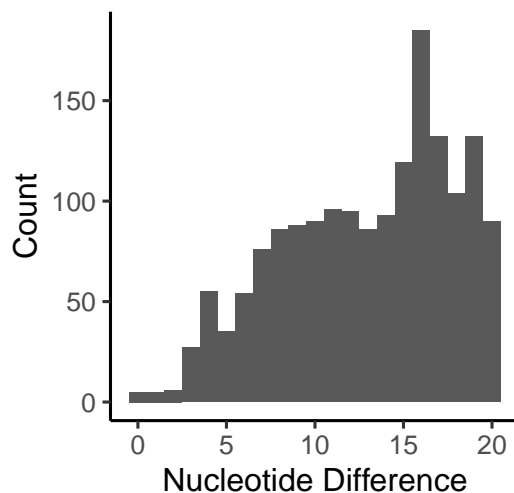
### IGHV3-71\*01\_04

1 sequences assigned  
No exact matches.



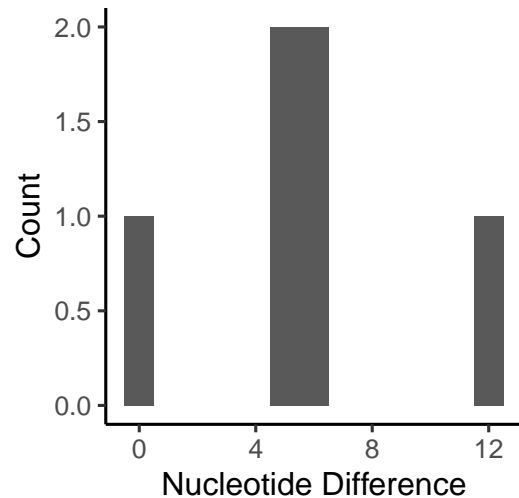
### IGHV3-74\*03

2337 sequences assigned  
5 (0.2%) exact matches, in which:  
4 unique CDR3  
4 unique J



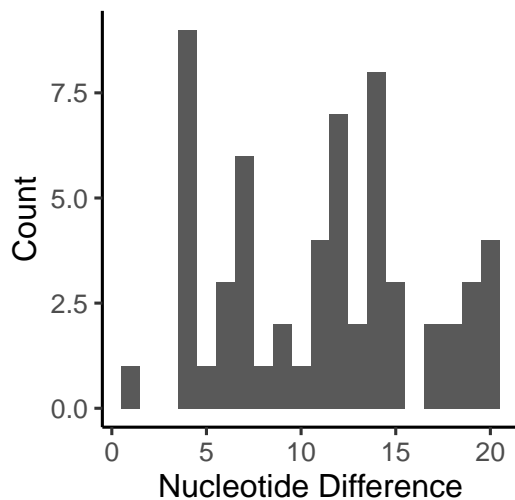
### IGHV3-64D\*06

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



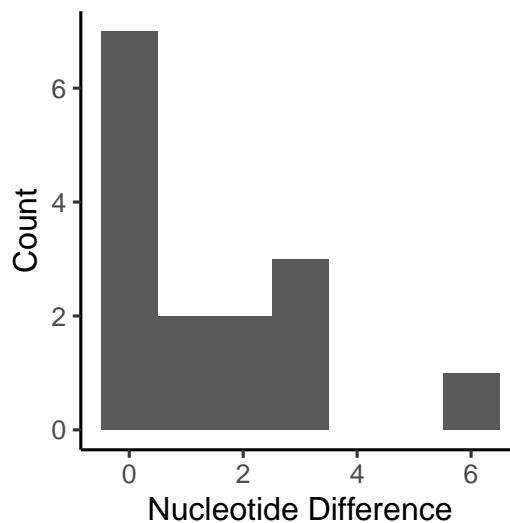
### IGHV3–NL1\*01

69 sequences assigned  
No exact matches.



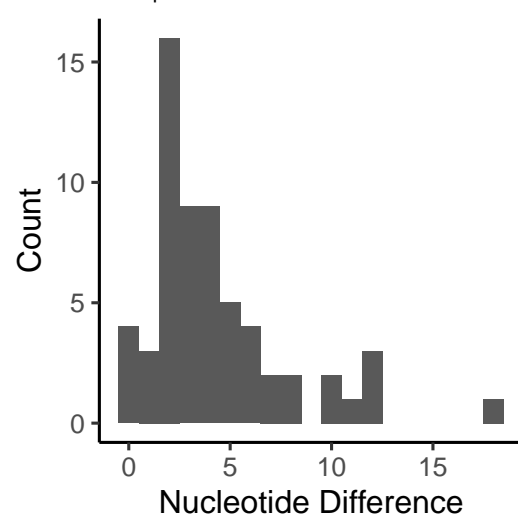
### IGHV4–28\*02\_05

15 sequences assigned  
7 (46.7%) exact matches, in which:  
5 unique CDR3  
2 unique J



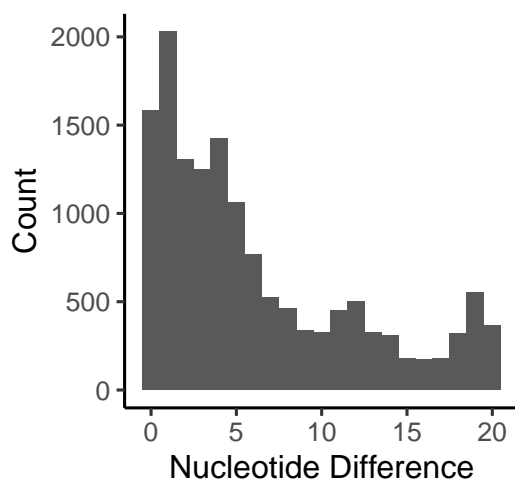
### IGHV4–30–2\*05

68 sequences assigned  
4 (5.9%) exact matches, in which:  
4 unique CDR3  
1 unique J



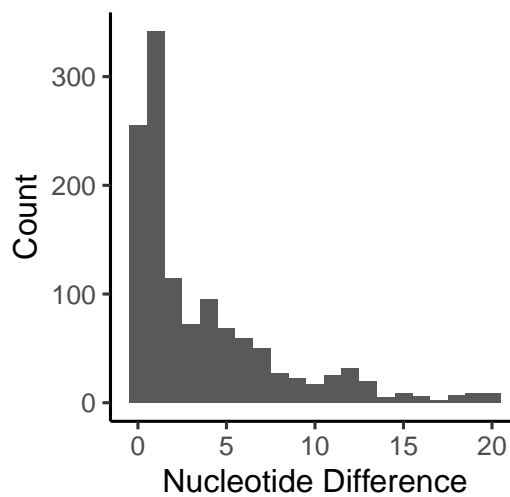
### IGHV4–4\*02\_03

15797 sequences assigned  
1585 (10%) exact matches, in which:  
1105 unique CDR3  
6 unique J



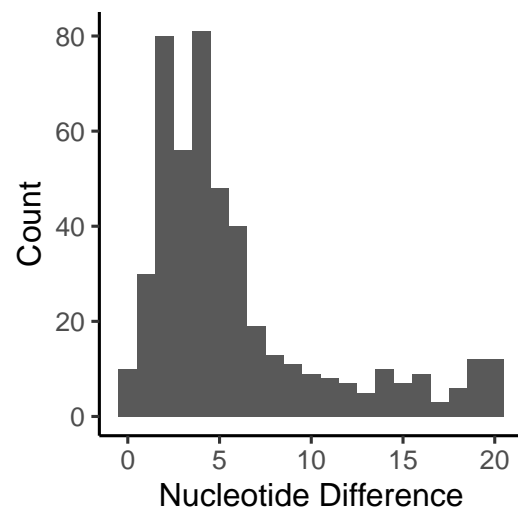
### IGHV4–30–4\*01

3624 sequences assigned  
255 (7%) exact matches, in which:  
182 unique CDR3  
5 unique J



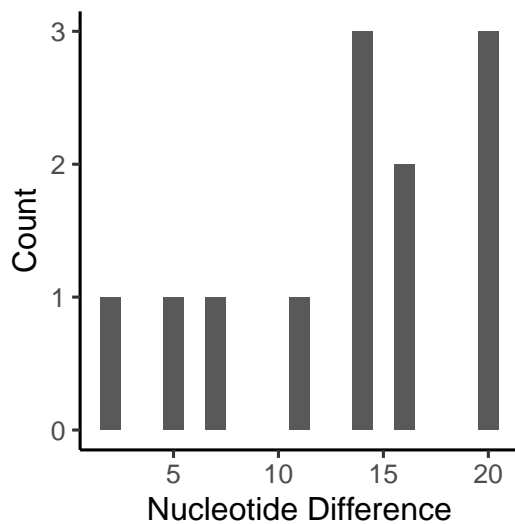
### IGHV4–30–4\*08

537 sequences assigned  
10 (1.9%) exact matches, in which:  
8 unique CDR3  
3 unique J



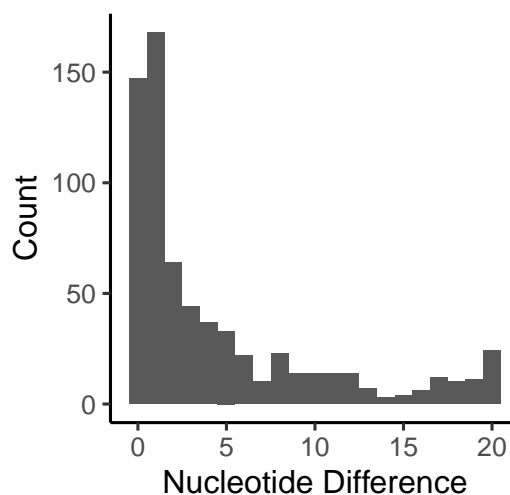
### IGHV4–28\*03

25 sequences assigned  
No exact matches.



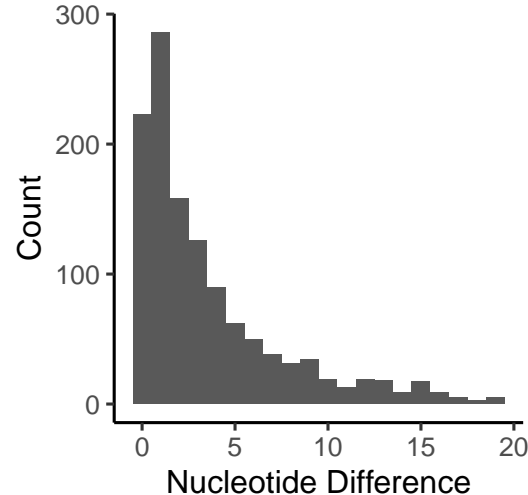
### IGHV4–30–2\*01

784 sequences assigned  
147 (18.8%) exact matches, in which:  
82 unique CDR3  
6 unique J



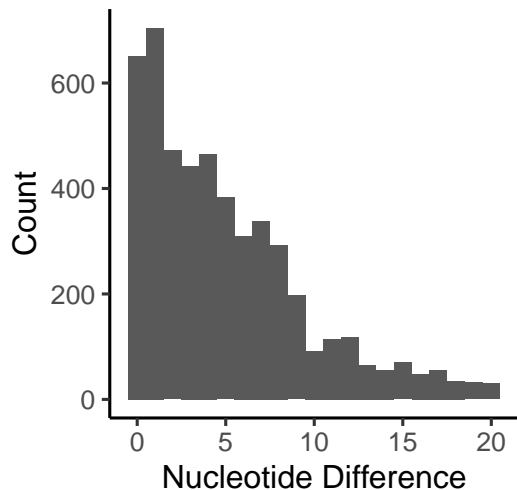
### IGHV4–31\*01

1687 sequences assigned  
223 (13.2%) exact matches, in which:  
181 unique CDR3  
5 unique J



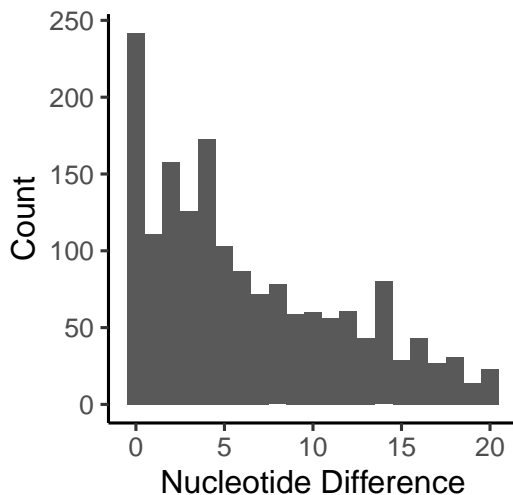
### IGHV4-31\*02

5243 sequences assigned  
651 (12.4%) exact matches, in which:  
532 unique CDR3  
6 unique J



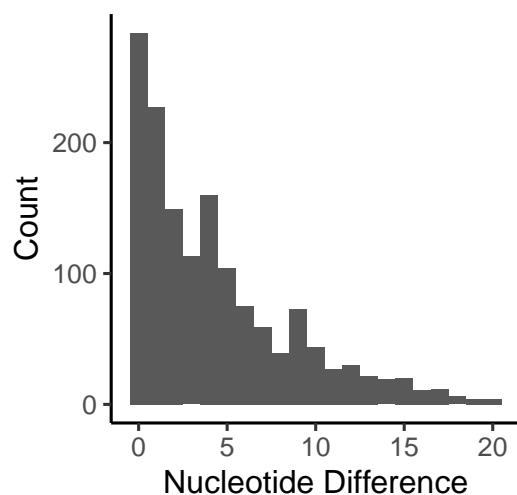
### IGHV4-38-2\*02

2032 sequences assigned  
242 (11.9%) exact matches, in which:  
200 unique CDR3  
5 unique J



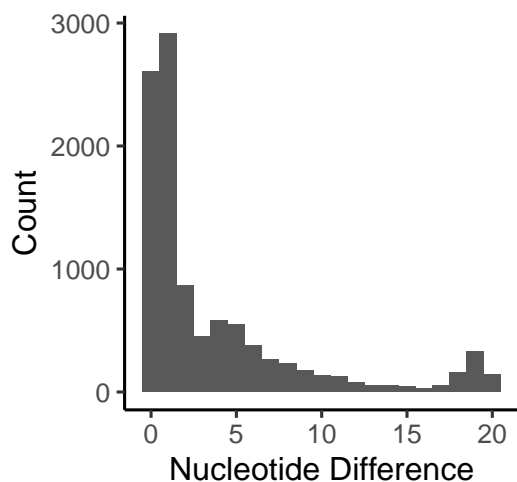
### IGHV4-59\*08

1624 sequences assigned  
284 (17.5%) exact matches, in which:  
265 unique CDR3  
6 unique J



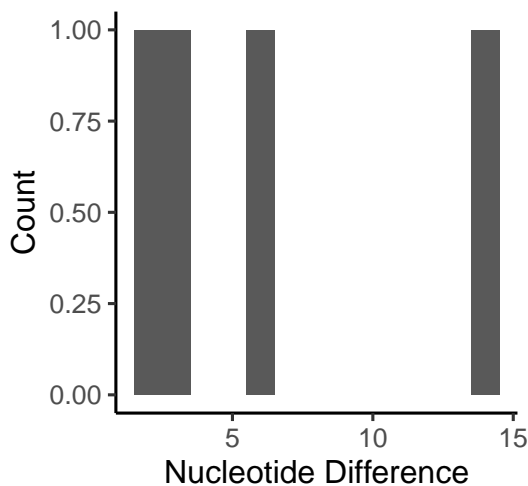
### IGHV4-34\*01\_02

11049 sequences assigned  
2608 (23.6%) exact matches, in which:  
1767 unique CDR3  
6 unique J



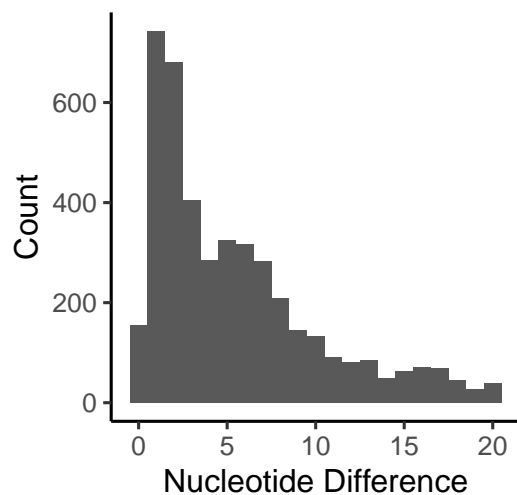
### IGHV4-39\*02

7 sequences assigned  
No exact matches.



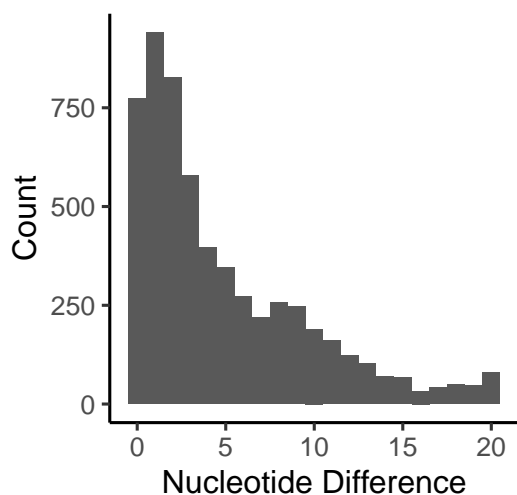
### IGHV4-59\*12

5975 sequences assigned  
155 (2.6%) exact matches, in which:  
151 unique CDR3  
6 unique J



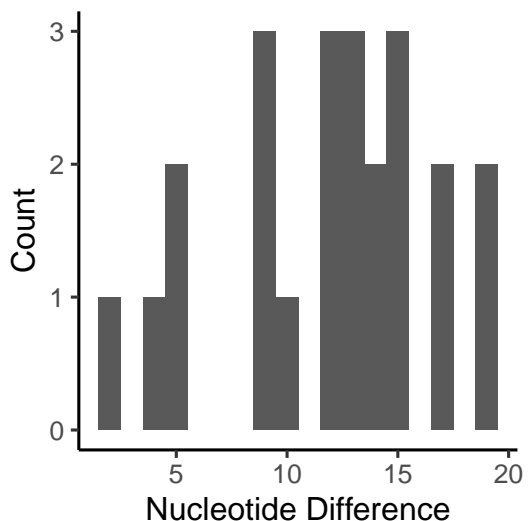
### IGHV4-38-2\*01

8767 sequences assigned  
774 (8.8%) exact matches, in which:  
648 unique CDR3  
6 unique J



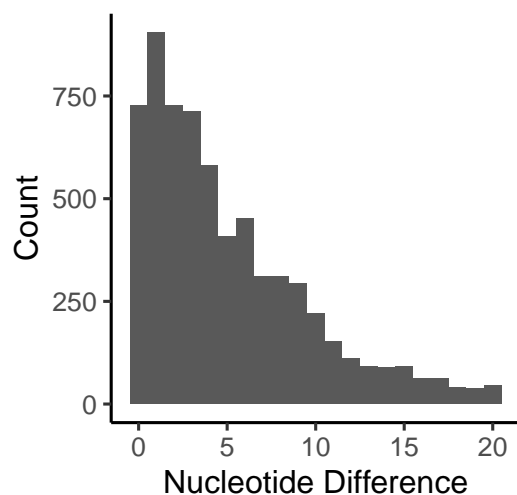
### IGHV4-39\*07

27 sequences assigned  
No exact matches.



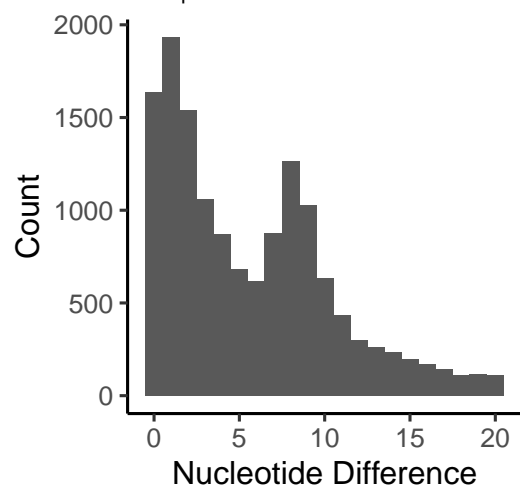
### IGHV4-61\*01

8126 sequences assigned  
727 (8.9%) exact matches, in which:  
620 unique CDR3  
6 unique J



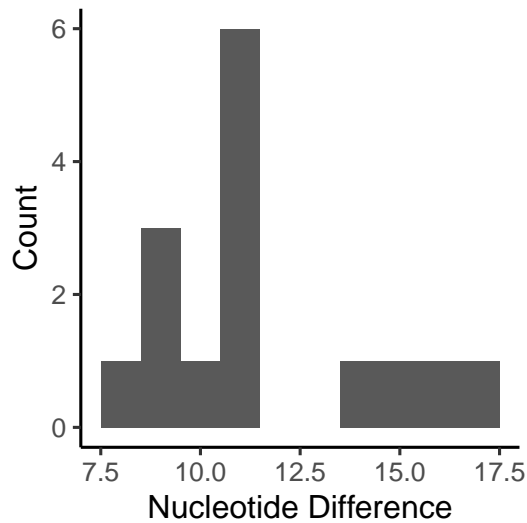
### IGHV4-61\*02

16978 sequences assigned  
1637 (9.6%) exact matches, in which:  
1195 unique CDR3  
6 unique J



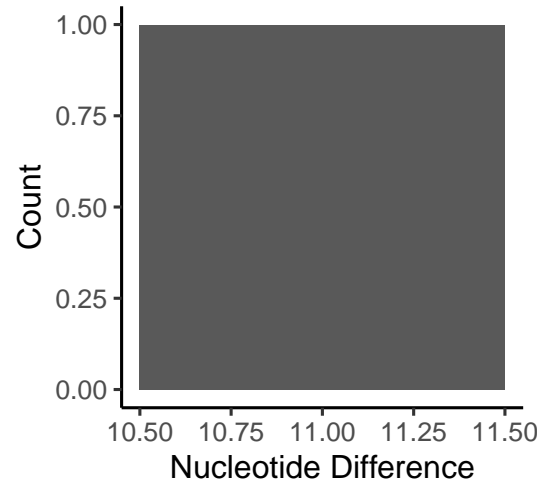
### IGHV1/OR15-3\*02

17 sequences assigned  
No exact matches.



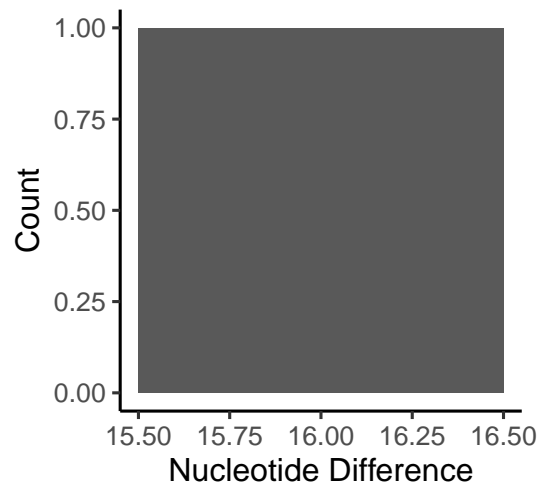
### IGHV1/OR15-9\*01

1 sequences assigned  
No exact matches.



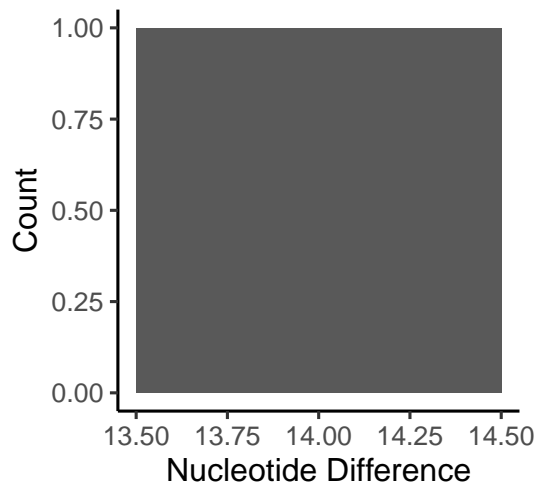
### IGHV1/OR15-2\*01

1 sequences assigned  
No exact matches.



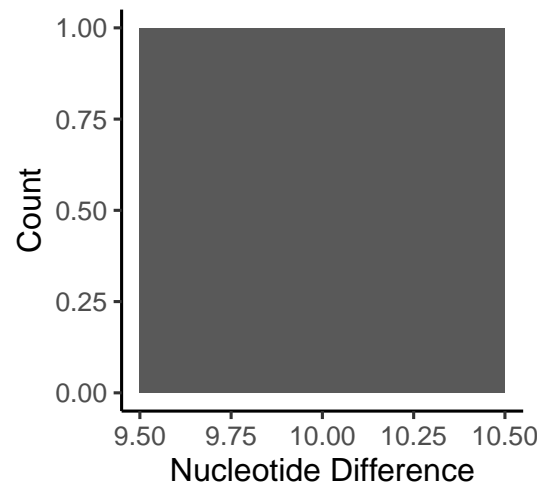
### IGHV1/OR15-4\*01

2 sequences assigned  
No exact matches.



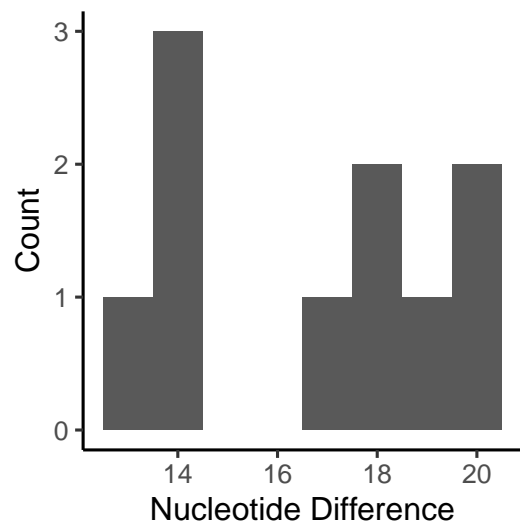
### IGHV5-10-1\*01\_03

1 sequences assigned  
No exact matches.



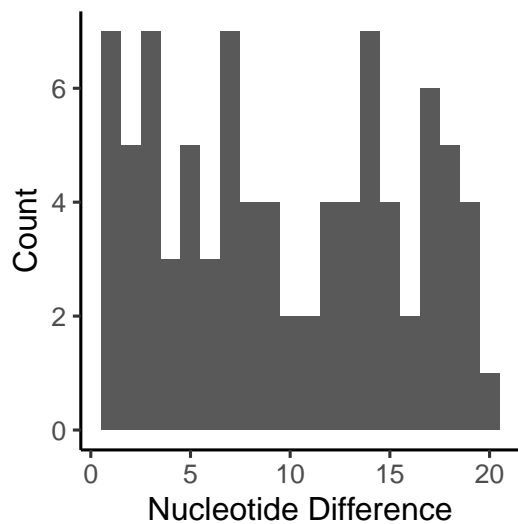
### IGHV1/OR15-2\*02\_03

11 sequences assigned  
No exact matches.



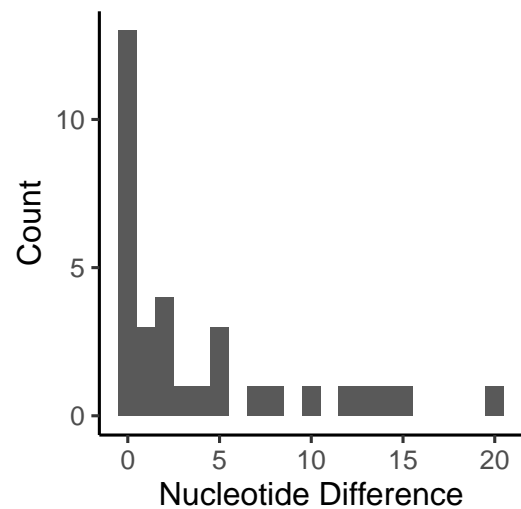
### IGHV4/OR15-8\*01

110 sequences assigned  
No exact matches.



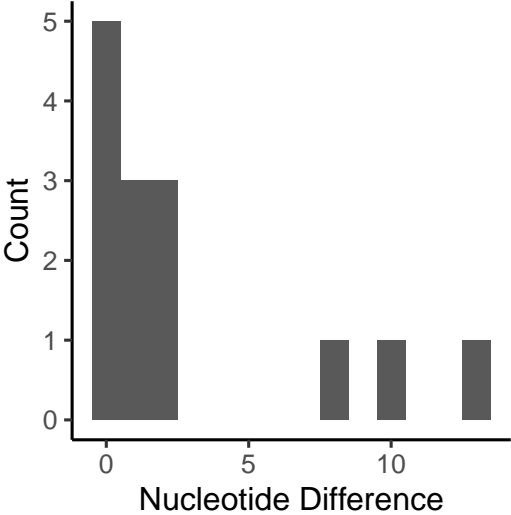
### IGHV5-51\*04

49 sequences assigned  
13 (26.5%) exact matches, in which:  
13 unique CDR3  
3 unique J



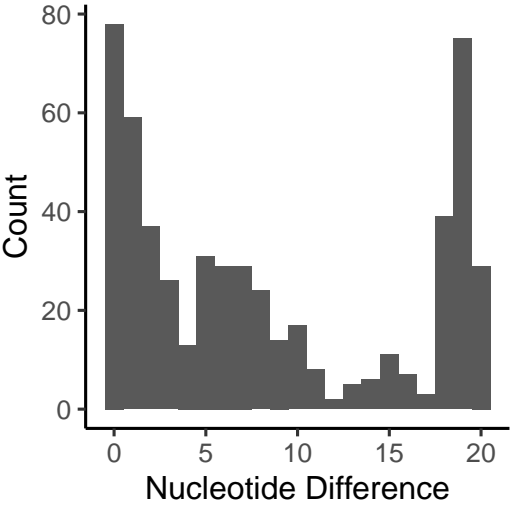
IGHV5-51\*06

19 sequences assigned  
5 (26.3%) exact matches, in which:  
4 unique CDR3  
2 unique J



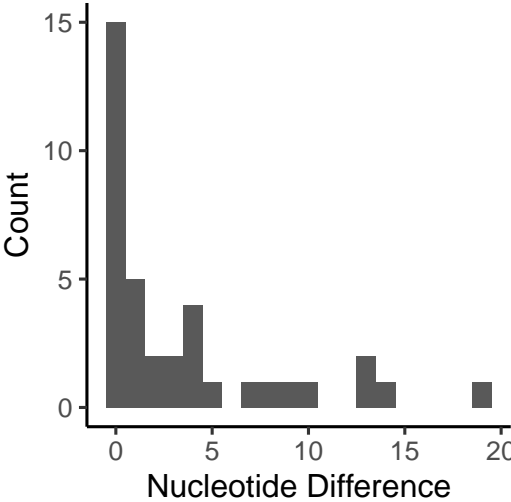
IGHV6-1\*01\_02\_A315G

574 sequences assigned  
78 (13.6%) exact matches, in which:  
76 unique CDR3  
6 unique J



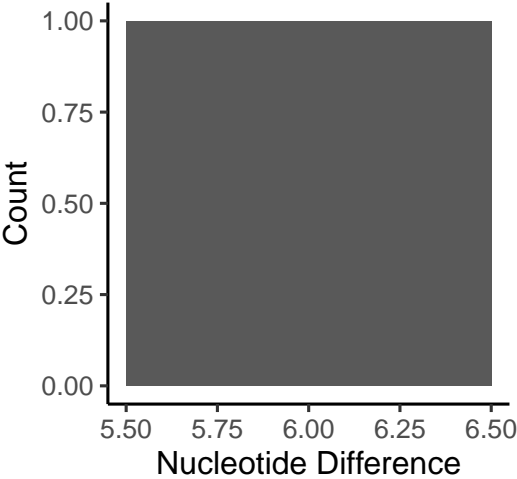
IGHV5-51\*07

45 sequences assigned  
15 (33.3%) exact matches, in which:  
15 unique CDR3  
4 unique J



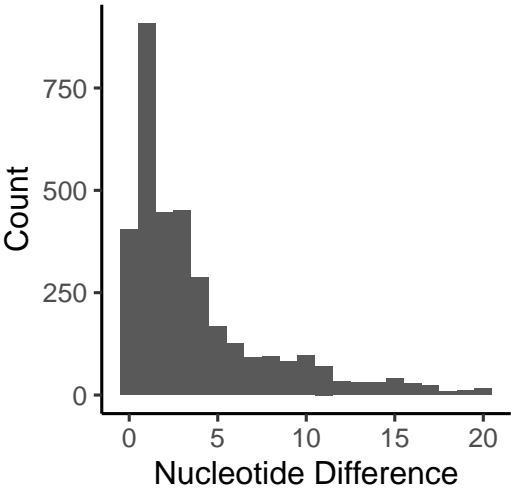
IGHV3/OR16-13\*01

1 sequences assigned  
No exact matches.



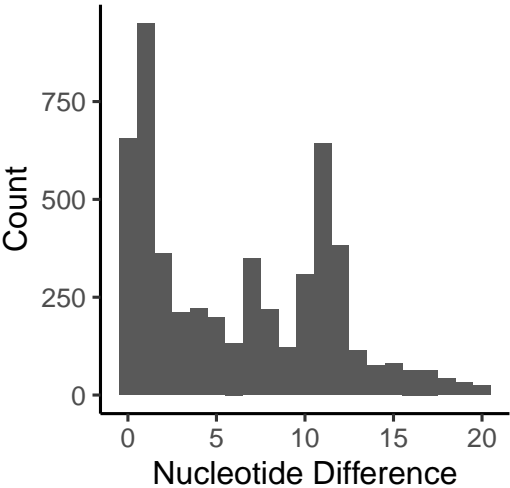
IGHV6-1\*01\_02

3642 sequences assigned  
404 (11.1%) exact matches, in which:  
268 unique CDR3  
5 unique J



IGHV7-4-1\*02

5306 sequences assigned  
655 (12.3%) exact matches, in which:  
491 unique CDR3  
6 unique J



IGHV6-1\*01\_02\_A315G

