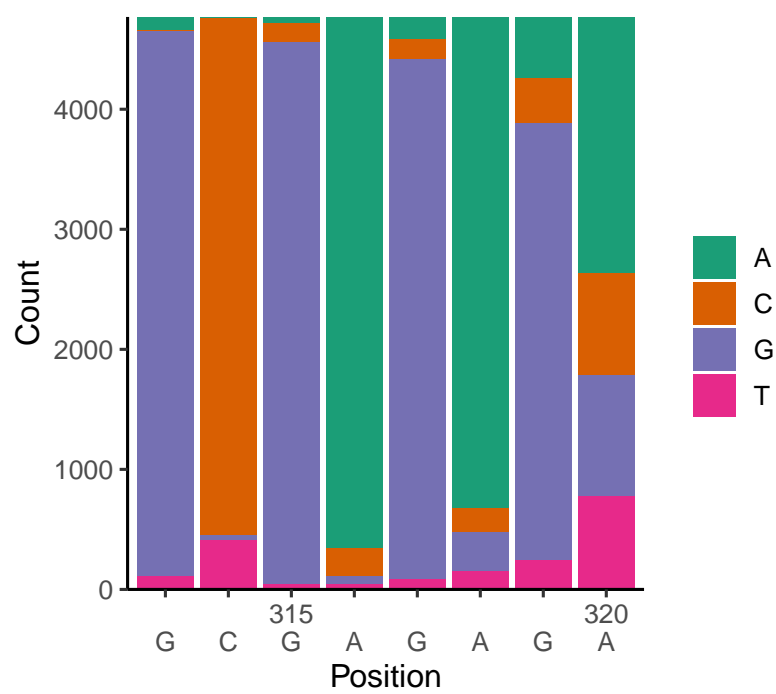
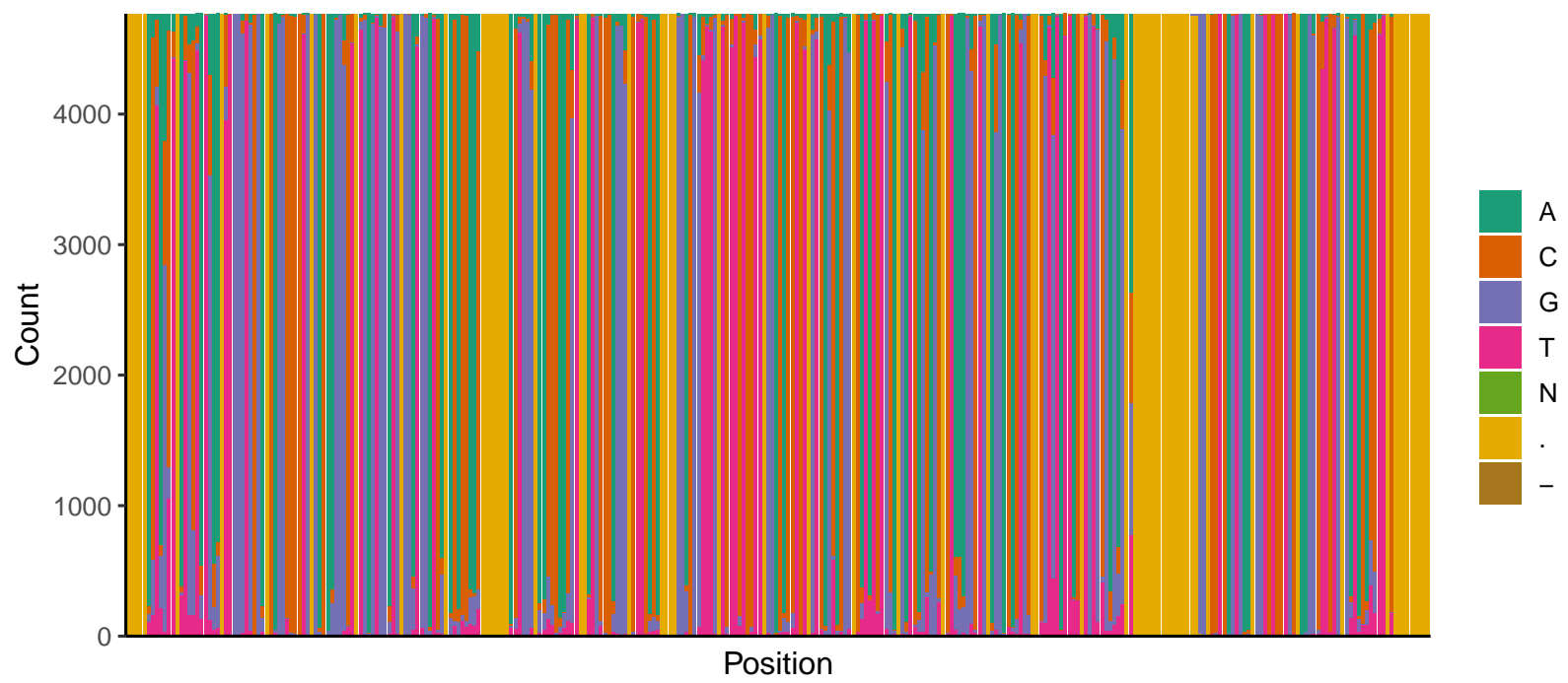


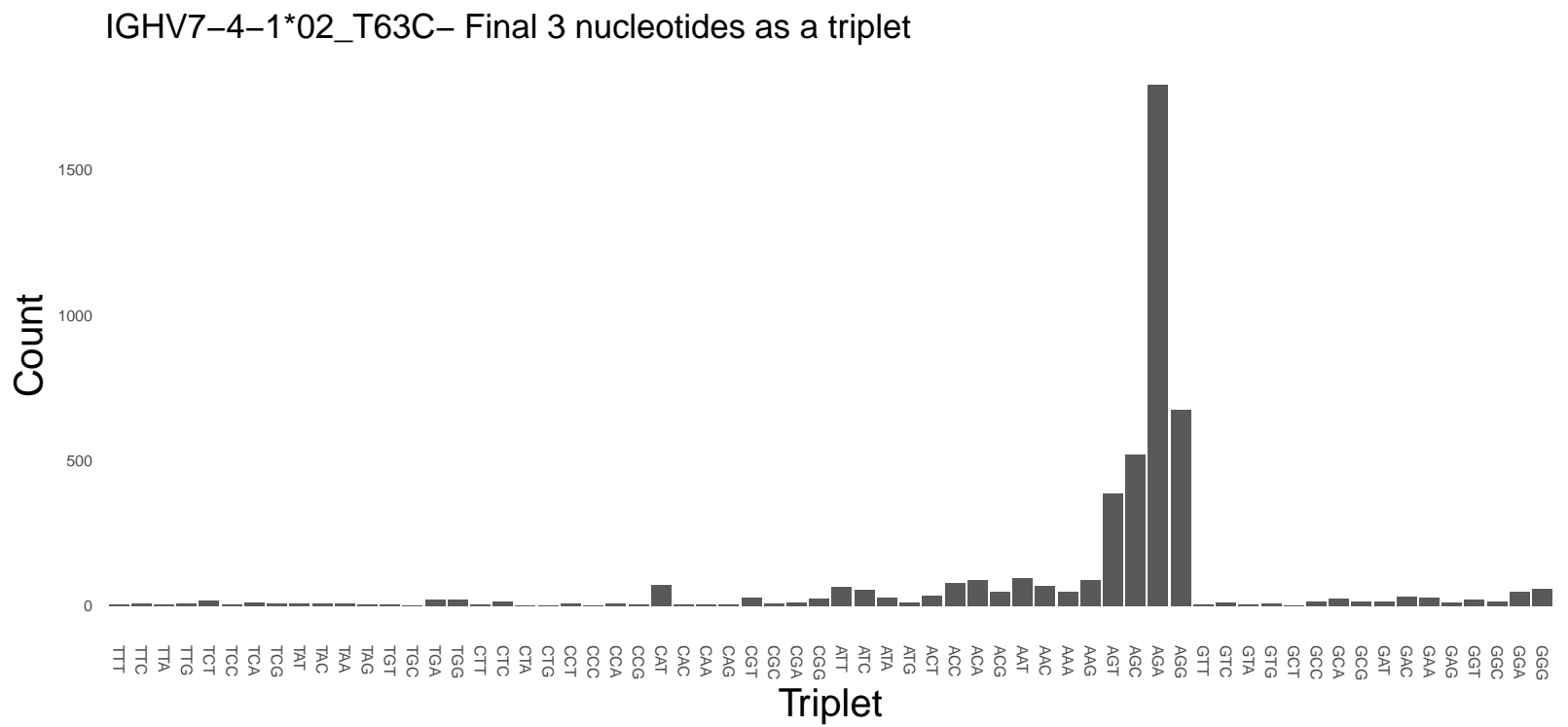
# Gene IGHV7-4-1\*02\_T63C



Gene IGHV7-4-1\*02\_T63C

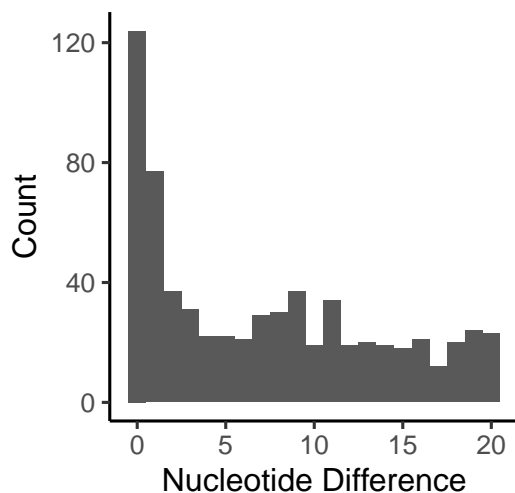


IGHV7-4-1\*02\_T63C- Final 3 nucleotides as a triplet



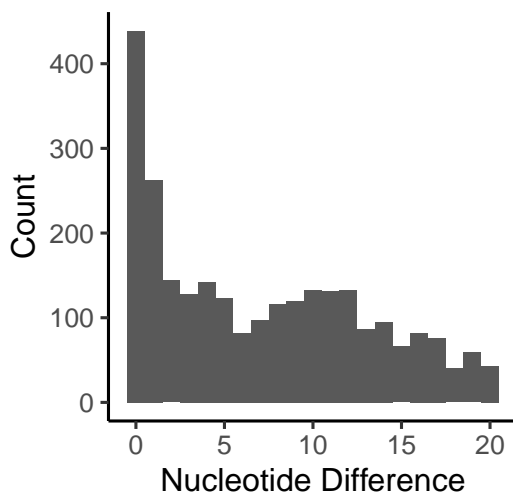
### IGHV1-2\*04

849 sequences assigned  
124 (14.6%) exact matches, in which:  
119 unique CDR3  
7 unique J



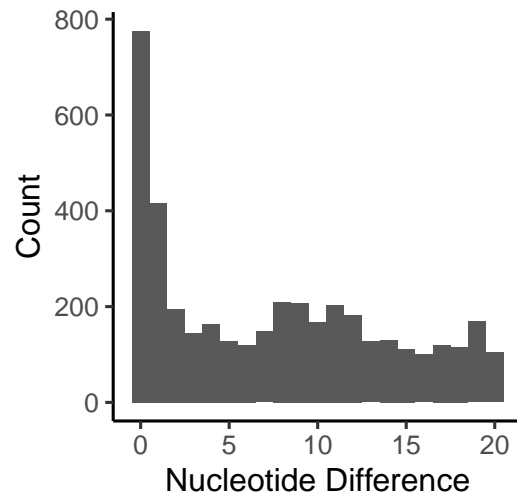
### IGHV1-8\*01

2999 sequences assigned  
439 (14.6%) exact matches, in which:  
423 unique CDR3  
7 unique J



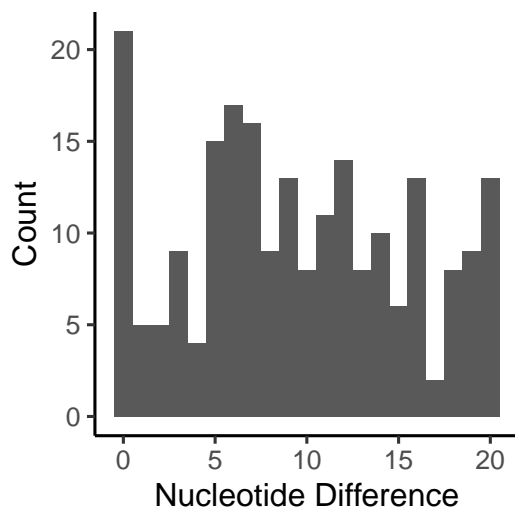
### IGHV1-18\*04

4841 sequences assigned  
776 (16%) exact matches, in which:  
749 unique CDR3  
7 unique J



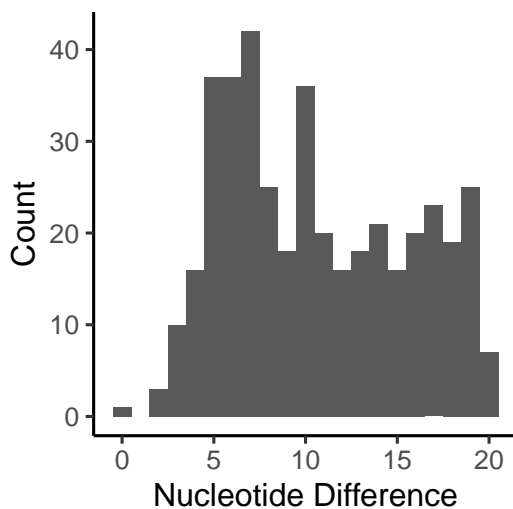
### IGHV1-2\*05

280 sequences assigned  
21 (7.5%) exact matches, in which:  
21 unique CDR3  
4 unique J



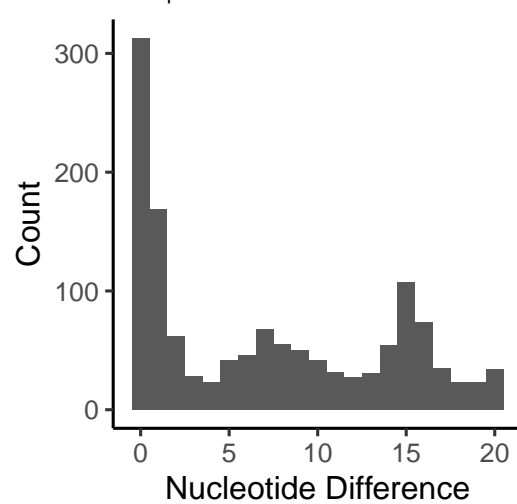
### IGHV1-8\*02

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



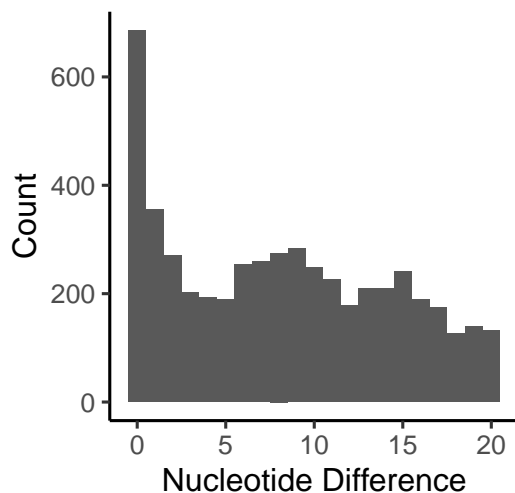
### IGHV1-24\*01

1562 sequences assigned  
313 (20%) exact matches, in which:  
307 unique CDR3  
7 unique J



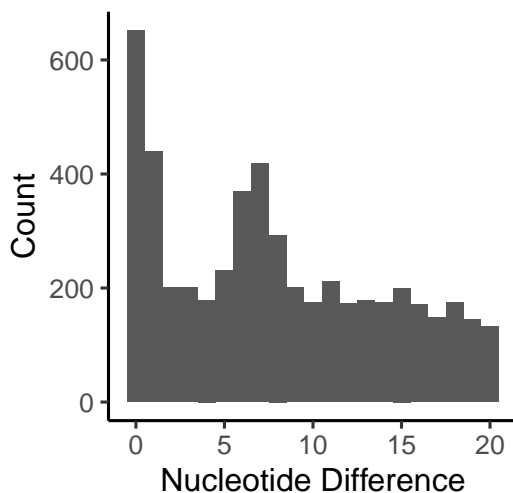
### IGHV1-3\*01\_05

6203 sequences assigned  
686 (11.1%) exact matches, in which:  
667 unique CDR3  
7 unique J



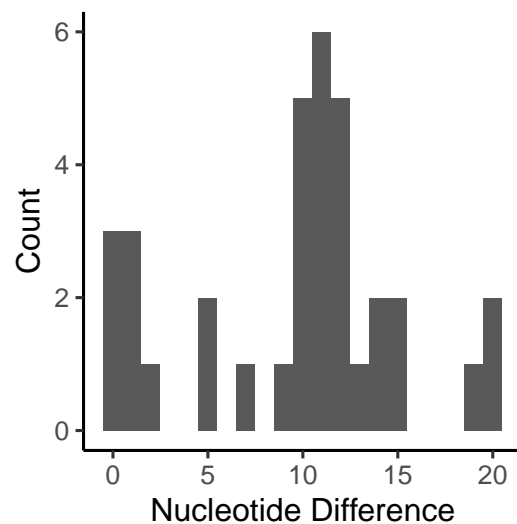
### IGHV1-18\*01

5969 sequences assigned  
652 (10.9%) exact matches, in which:  
631 unique CDR3  
7 unique J



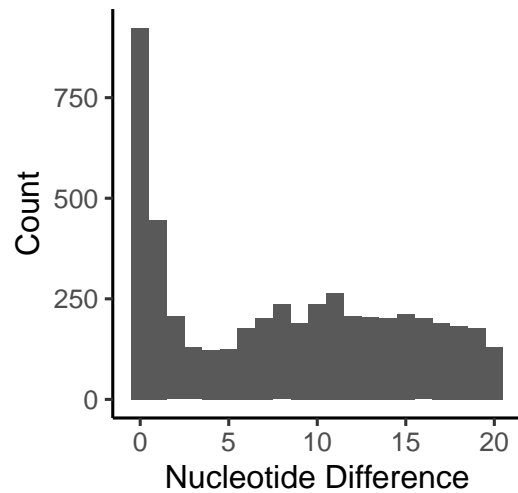
### IGHV1-45\*02

41 sequences assigned  
3 (7.3%) exact matches, in which:  
3 unique CDR3  
1 unique J



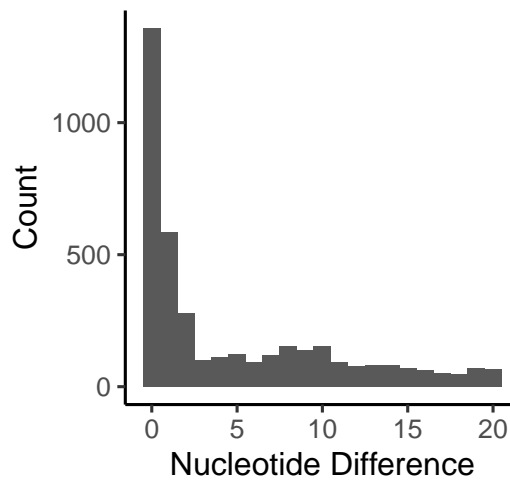
### IGHV1-46\*01

6409 sequences assigned  
924 (14.4%) exact matches, in which:  
906 unique CDR3  
7 unique J



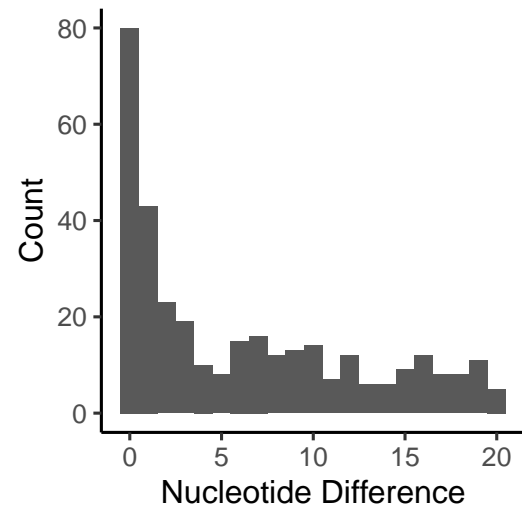
### IGHV1-69\*01\_12\_13

4465 sequences assigned  
1357 (30.4%) exact matches, in which:  
1332 unique CDR3  
7 unique J



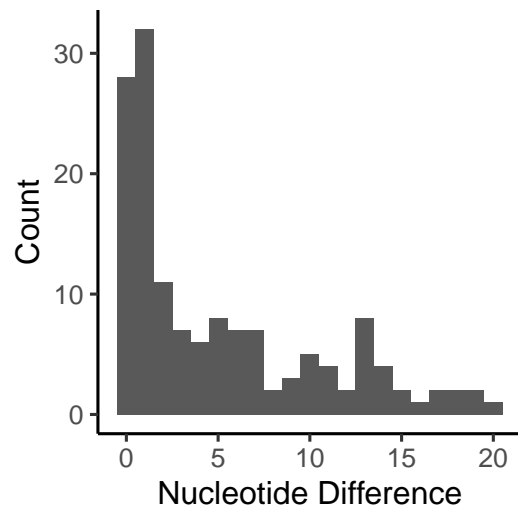
### IGHV2-26\*01

379 sequences assigned  
80 (21.1%) exact matches, in which:  
78 unique CDR3  
6 unique J



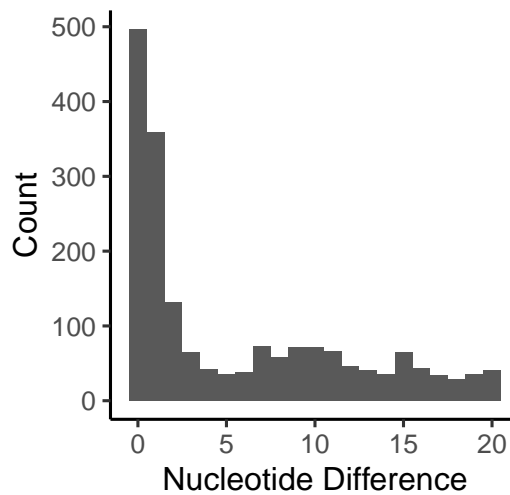
### IGHV1-58\*02

155 sequences assigned  
28 (18.1%) exact matches, in which:  
28 unique CDR3  
5 unique J



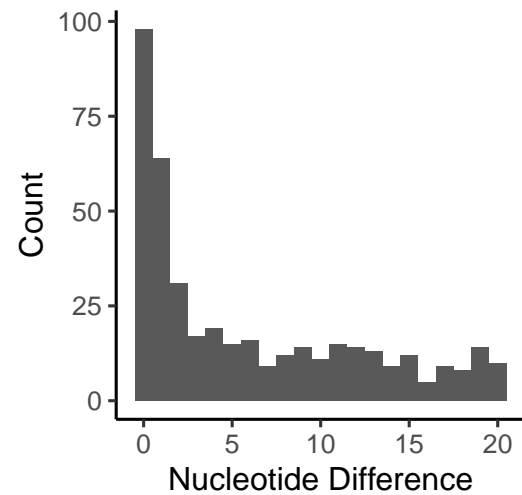
### IGHV1-69\*10

2327 sequences assigned  
497 (21.4%) exact matches, in which:  
483 unique CDR3  
7 unique J



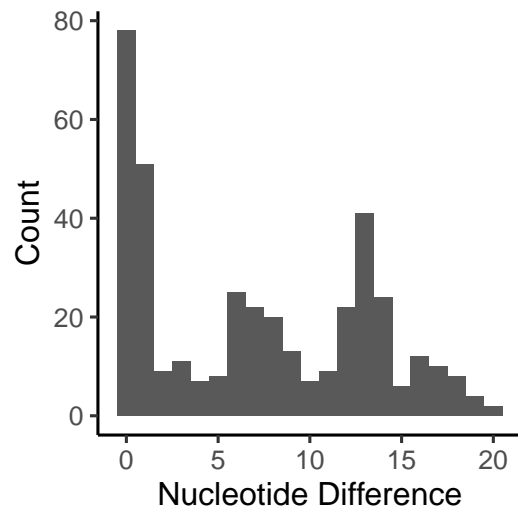
### IGHV2-70\*01

455 sequences assigned  
98 (21.5%) exact matches, in which:  
95 unique CDR3  
5 unique J



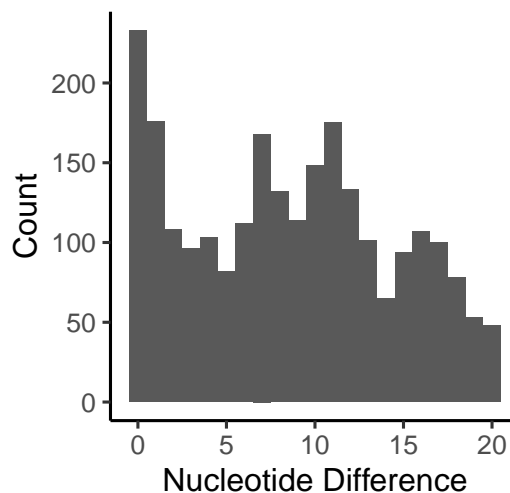
### IGHV1-58\*01\_03

429 sequences assigned  
78 (18.2%) exact matches, in which:  
77 unique CDR3  
7 unique J



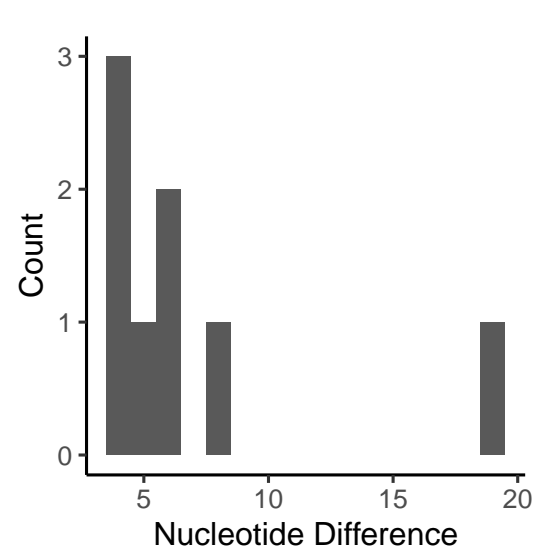
### IGHV2-5\*02

2705 sequences assigned  
233 (8.6%) exact matches, in which:  
226 unique CDR3  
7 unique J



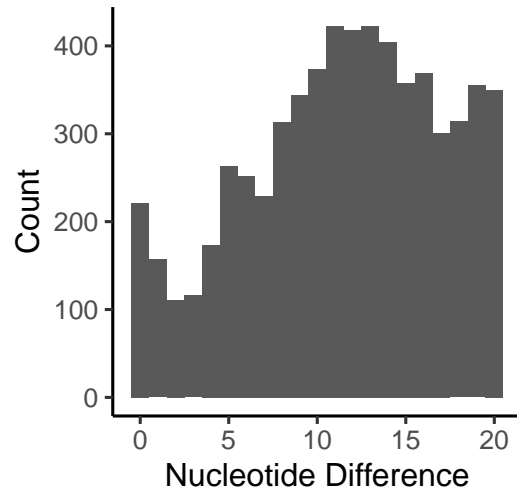
### IGHV2-70D\*04

8 sequences assigned  
No exact matches.



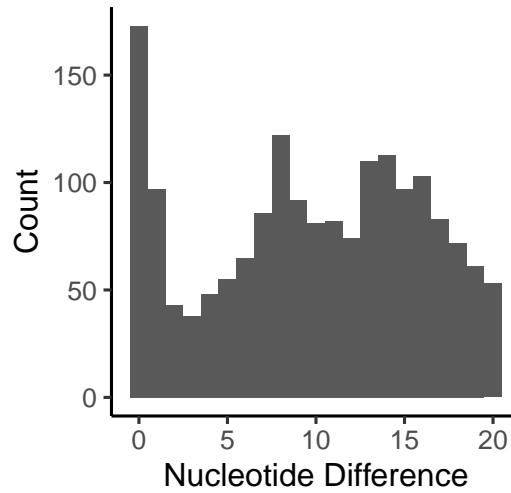
### IGHV3-7\*01

8395 sequences assigned  
221 (2.6%) exact matches, in which:  
210 unique CDR3  
7 unique J



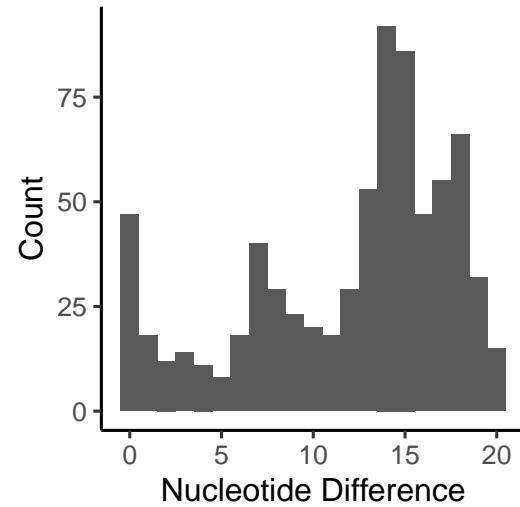
### IGHV3-11\*01

2474 sequences assigned  
173 (7%) exact matches, in which:  
170 unique CDR3  
7 unique J



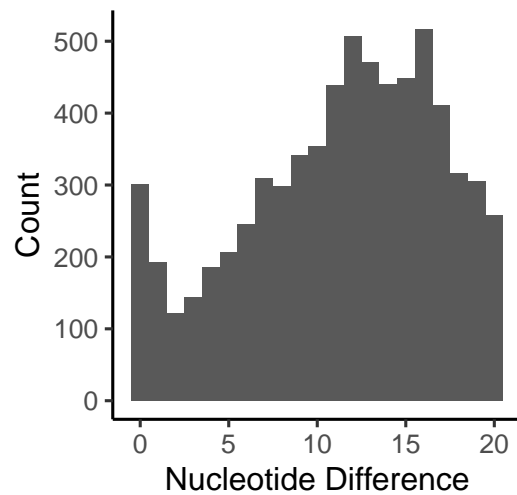
### IGHV3-13\*01

871 sequences assigned  
47 (5.4%) exact matches, in which:  
44 unique CDR3  
7 unique J



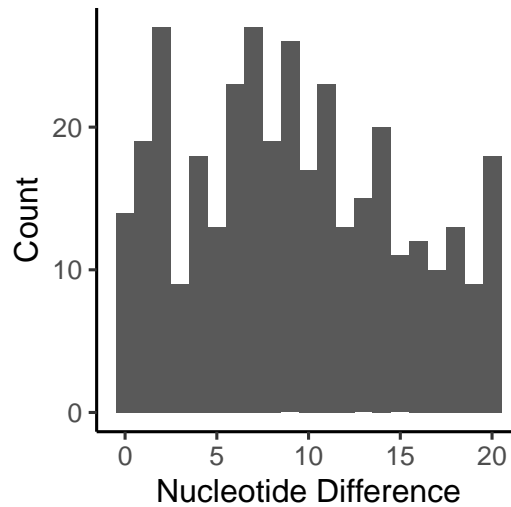
### IGHV3-7\*03

8686 sequences assigned  
301 (3.5%) exact matches, in which:  
287 unique CDR3  
7 unique J



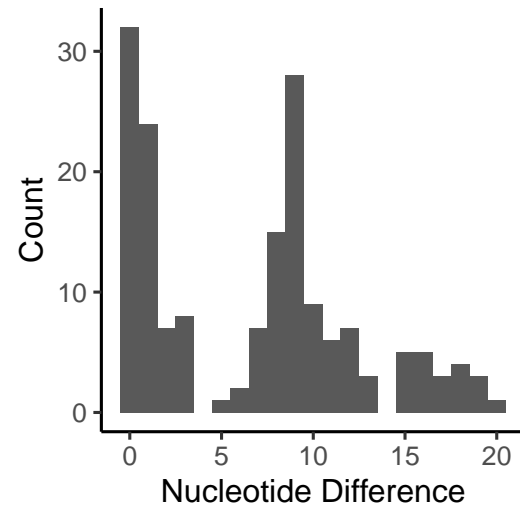
### IGHV3-11\*04

417 sequences assigned  
14 (3.4%) exact matches, in which:  
14 unique CDR3  
4 unique J



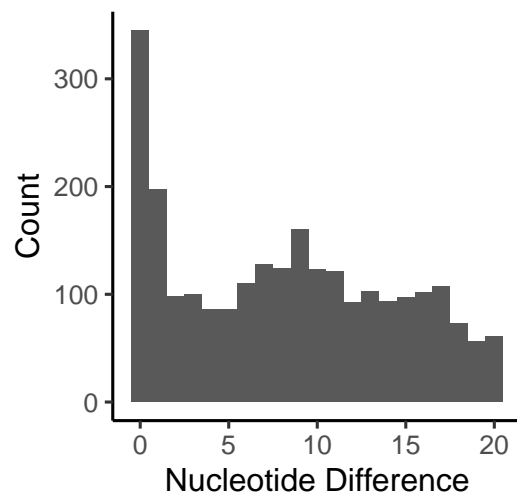
### IGHV3-13\*05

175 sequences assigned  
32 (18.3%) exact matches, in which:  
31 unique CDR3  
5 unique J



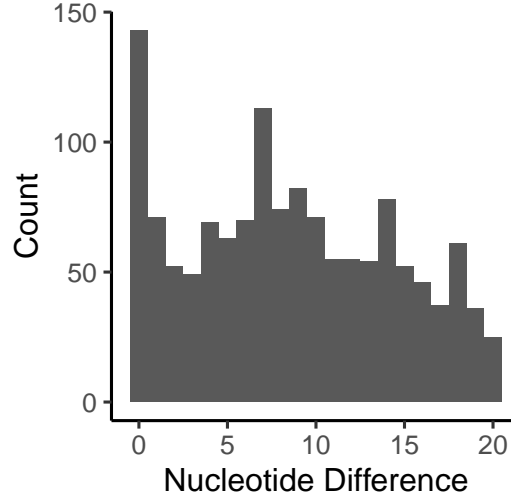
### IGHV3-9\*01

2774 sequences assigned  
345 (12.4%) exact matches, in which:  
337 unique CDR3  
7 unique J



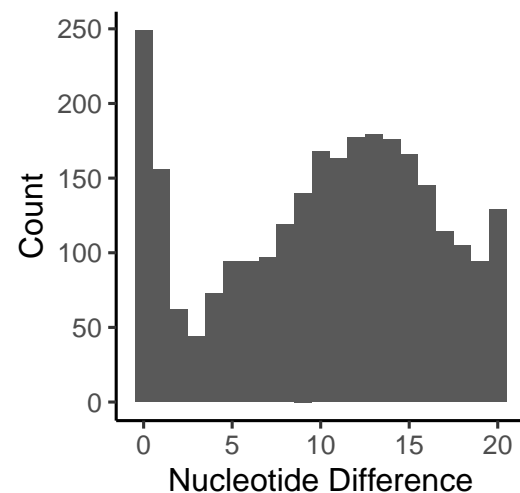
### IGHV3-11\*06

1645 sequences assigned  
143 (8.7%) exact matches, in which:  
141 unique CDR3  
6 unique J



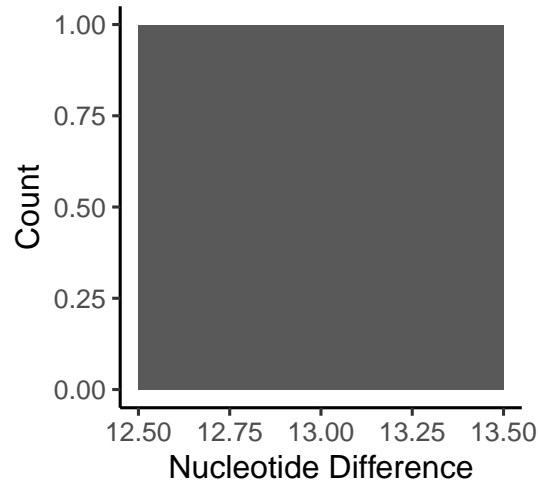
### IGHV3-15\*01\_02

3781 sequences assigned  
249 (6.6%) exact matches, in which:  
243 unique CDR3  
7 unique J



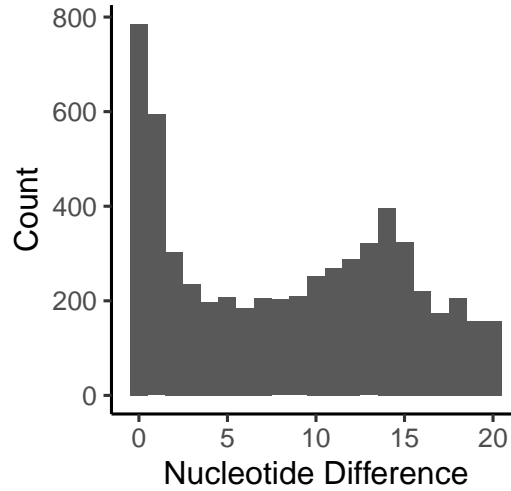
### IGHV3-19\*01

1 sequences assigned  
No exact matches.



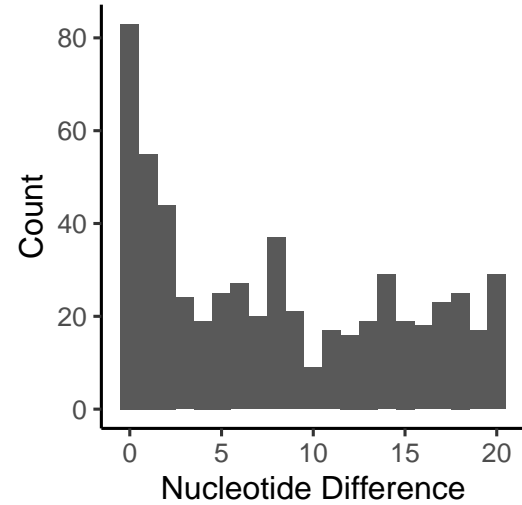
### IGHV3-21\*01\_02

7109 sequences assigned  
786 (11.1%) exact matches, in which:  
735 unique CDR3  
7 unique J



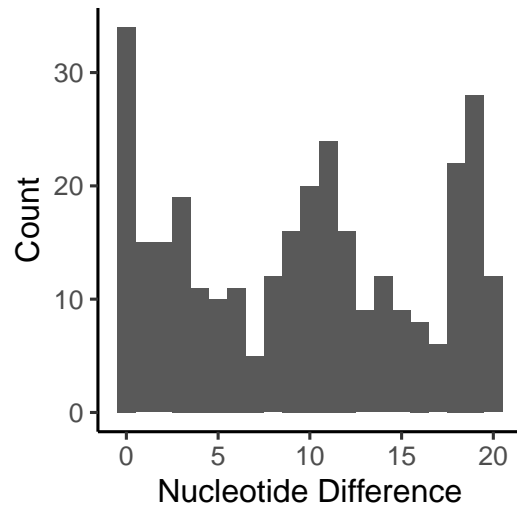
### IGHV3-30\*03

829 sequences assigned  
83 (10%) exact matches, in which:  
83 unique CDR3  
7 unique J



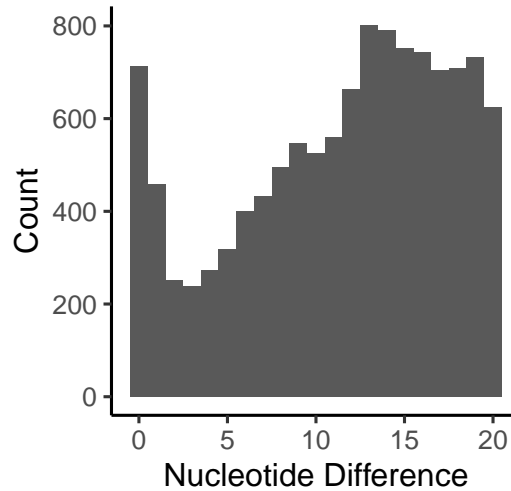
### IGHV3-20\*01\_02

430 sequences assigned  
34 (7.9%) exact matches, in which:  
32 unique CDR3  
5 unique J



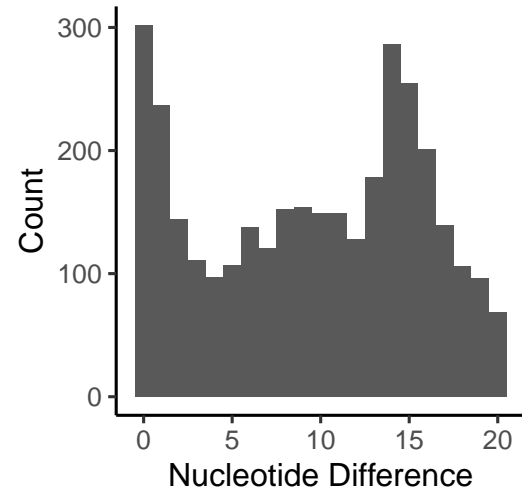
### IGHV3-23\*01\_04

16945 sequences assigned  
714 (4.2%) exact matches, in which:  
700 unique CDR3  
7 unique J



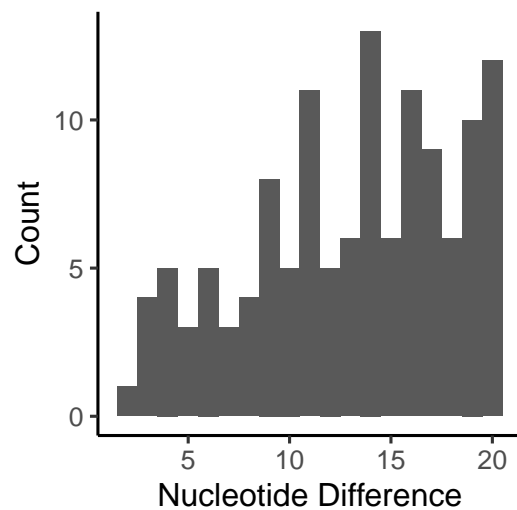
### IGHV3-33\*01

3938 sequences assigned  
302 (7.7%) exact matches, in which:  
283 unique CDR3  
6 unique J



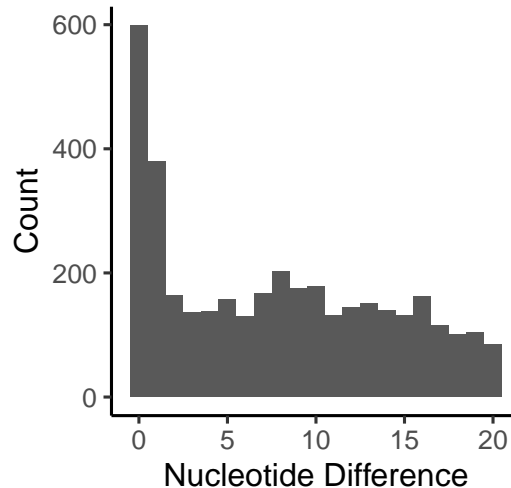
### IGHV3-20\*03\_04

201 sequences assigned  
No exact matches.



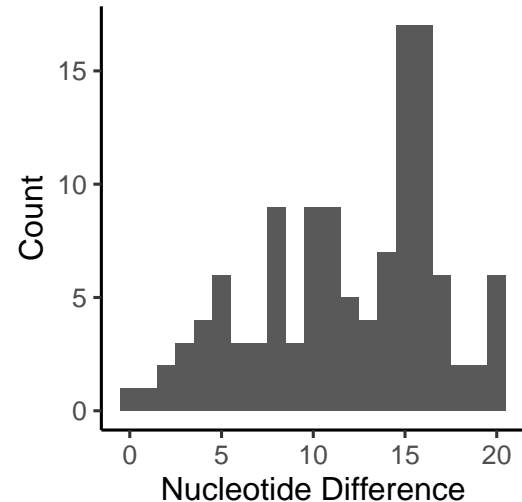
### IGHV3-30-3\*01

4556 sequences assigned  
599 (13.1%) exact matches, in which:  
579 unique CDR3  
7 unique J



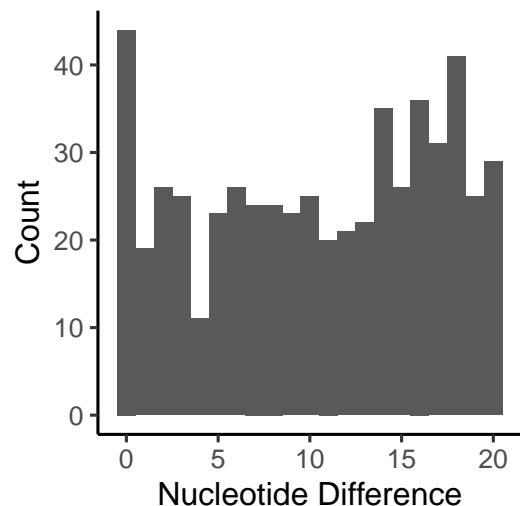
### IGHV3-33\*05

148 sequences assigned  
1 (0.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



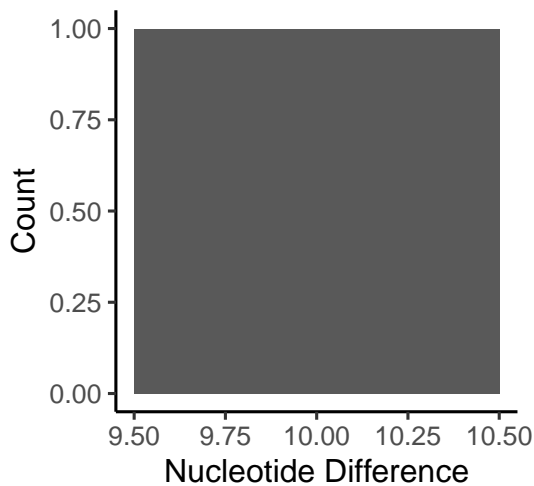
### IGHV3-33\*08

739 sequences assigned  
44 (6%) exact matches, in which:  
43 unique CDR3  
5 unique J



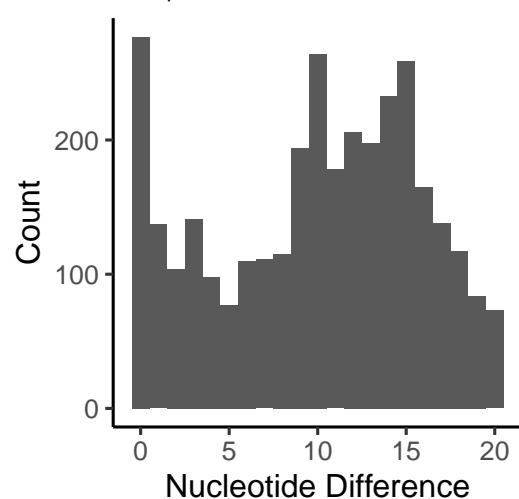
### IGHV3-38\*03

1 sequences assigned  
No exact matches.



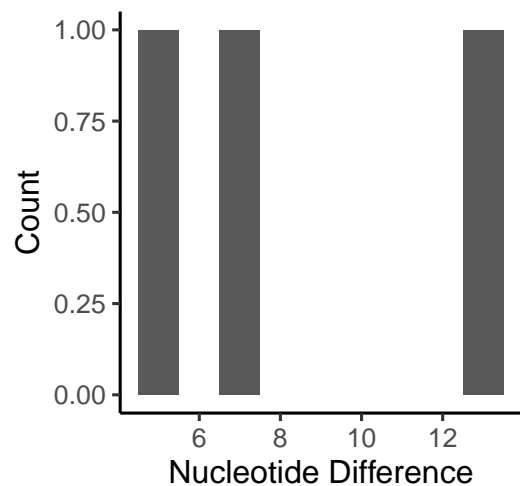
### IGHV3-48\*02

3814 sequences assigned  
277 (7.3%) exact matches, in which:  
261 unique CDR3  
6 unique J



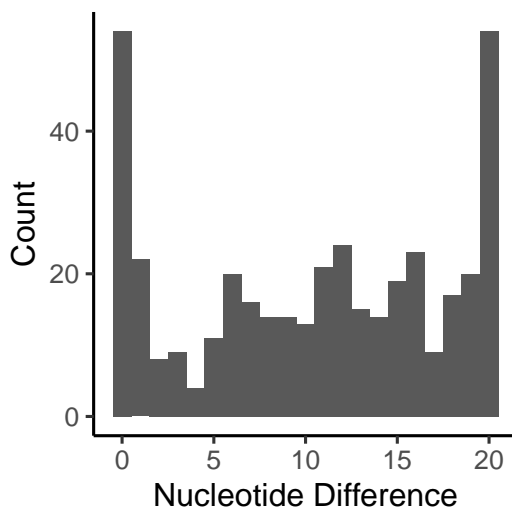
### IGHV3-35\*01

3 sequences assigned  
No exact matches.



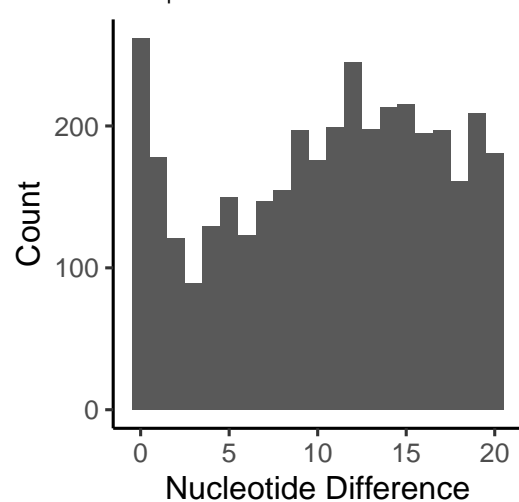
### IGHV3-43\*01

610 sequences assigned  
54 (8.9%) exact matches, in which:  
52 unique CDR3  
6 unique J



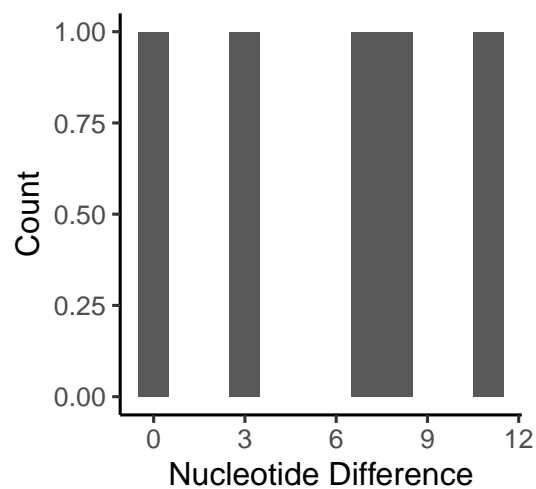
### IGHV3-48\*04

4833 sequences assigned  
262 (5.4%) exact matches, in which:  
251 unique CDR3  
7 unique J



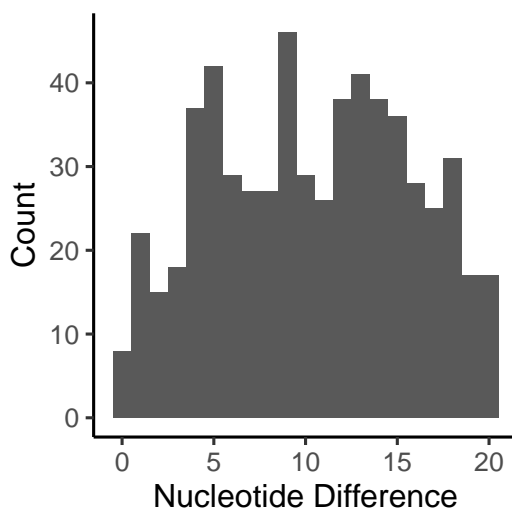
### IGHV3-38-3\*01

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



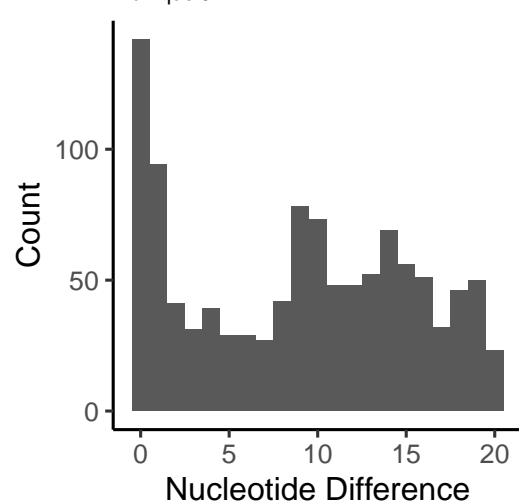
### IGHV3-48\*01

724 sequences assigned  
8 (1.1%) exact matches, in which:  
8 unique CDR3  
3 unique J



### IGHV3-49\*03\_05

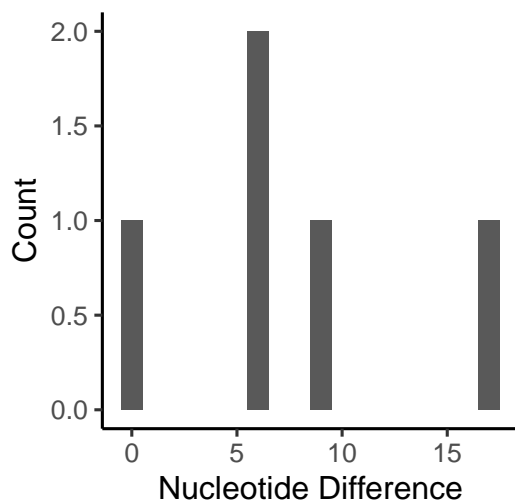
1360 sequences assigned  
142 (10.4%) exact matches, in which:  
133 unique CDR3  
7 unique J





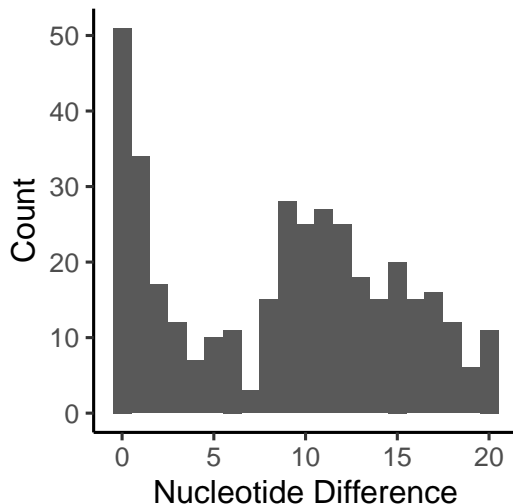
### IGHV3-52\*01\_03

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



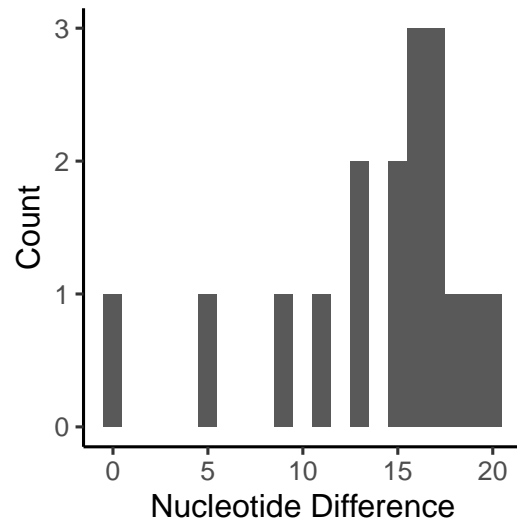
### IGHV3-64\*01

509 sequences assigned  
51 (10%) exact matches, in which:  
49 unique CDR3  
6 unique J



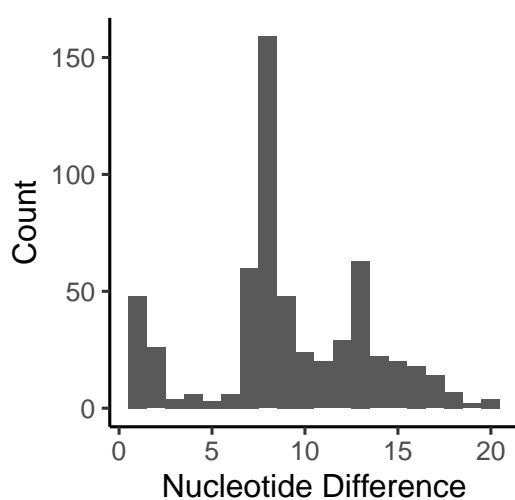
### IGHV3-66\*01

22 sequences assigned  
1 (4.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



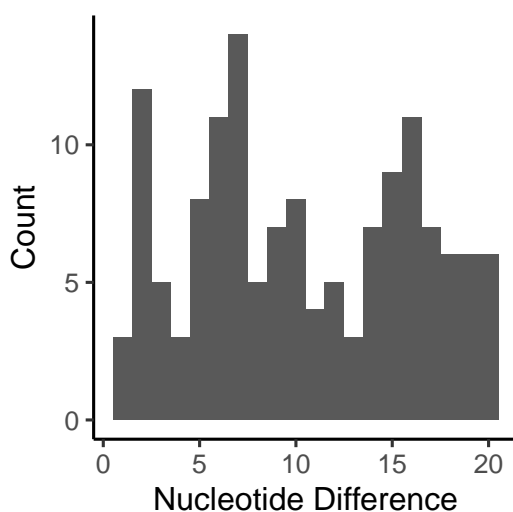
### IGHV3-53\*05

620 sequences assigned  
No exact matches.



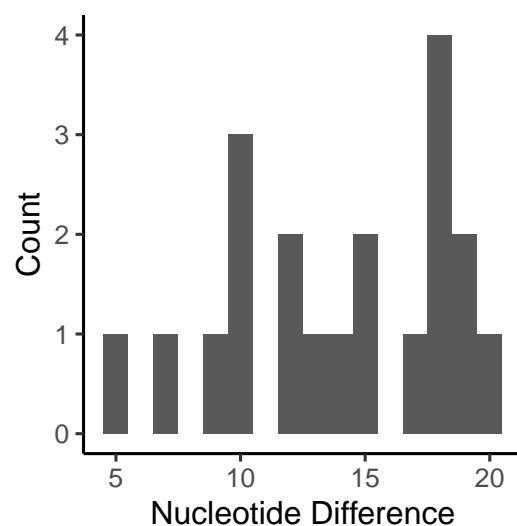
### IGHV3-64\*04

197 sequences assigned  
No exact matches.



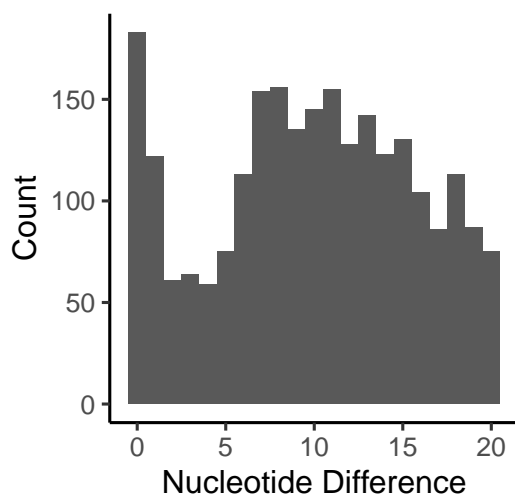
### IGHV3-66\*02

28 sequences assigned  
No exact matches.



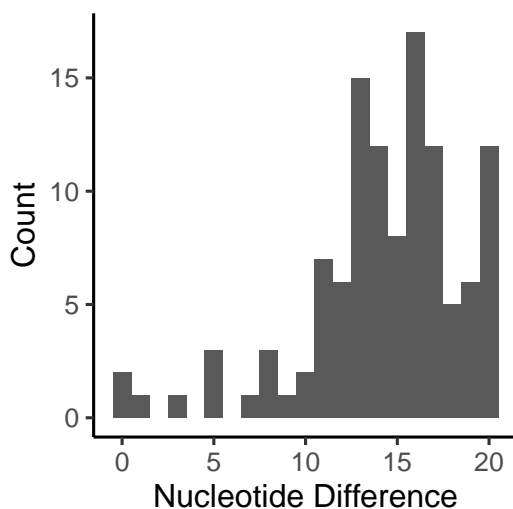
### IGHV3-53\*01\_02

3375 sequences assigned  
183 (5.4%) exact matches, in which:  
176 unique CDR3  
7 unique J



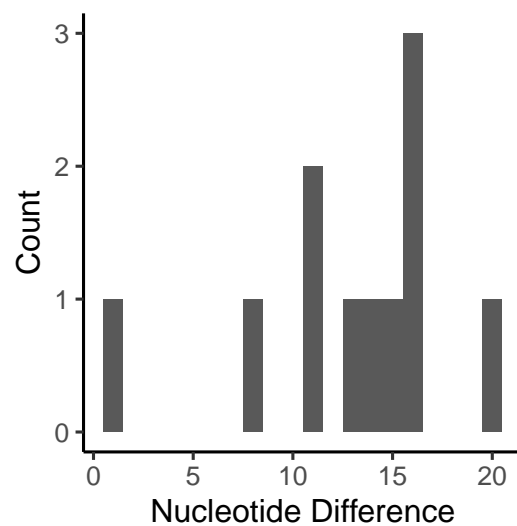
### IGHV3-64\*02\_07

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



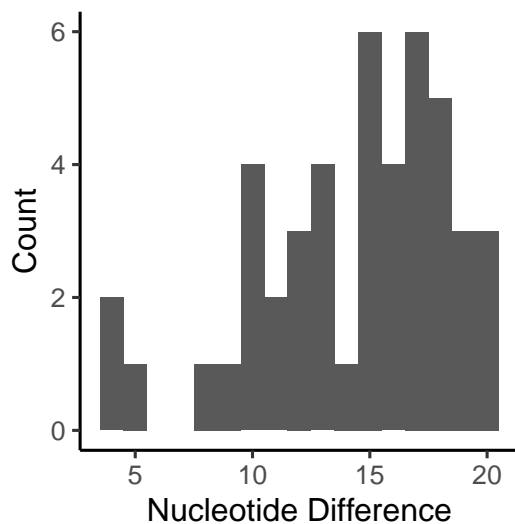
### IGHV3-66\*03

15 sequences assigned  
No exact matches.



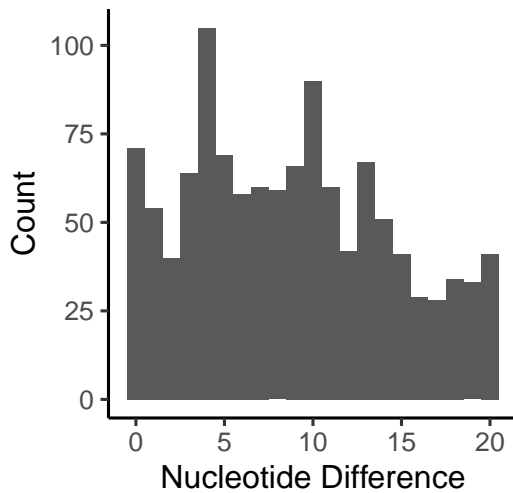
### IGHV3-69-1\*01

119 sequences assigned  
No exact matches.



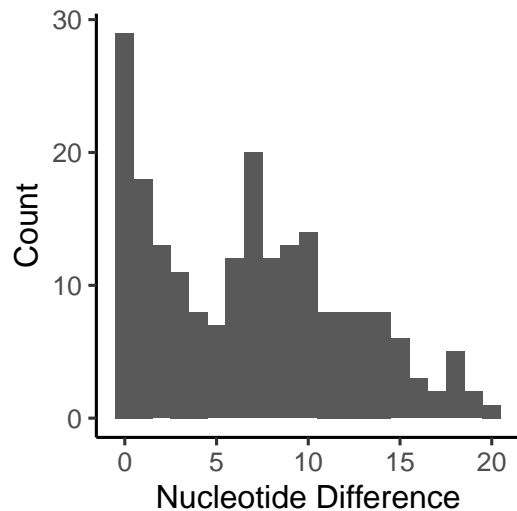
### IGHV3-73\*01\_02

1332 sequences assigned  
71 (5.3%) exact matches, in which:  
70 unique CDR3  
7 unique J



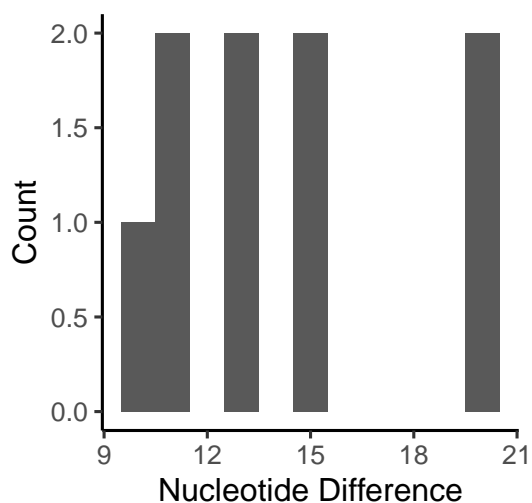
### IGHV3-43D\*03

219 sequences assigned  
29 (13.2%) exact matches, in which:  
27 unique CDR3  
4 unique J



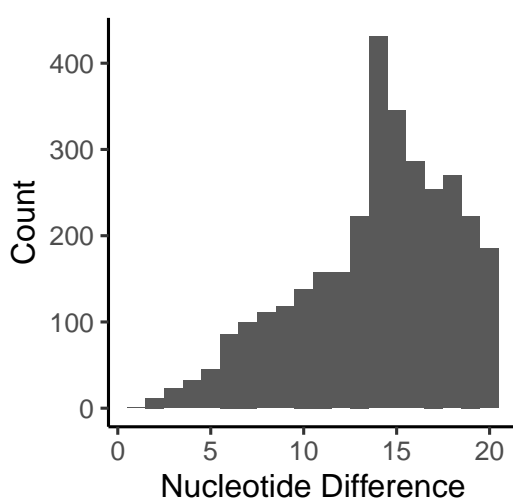
### IGHV3-69-1\*02

36 sequences assigned  
No exact matches.



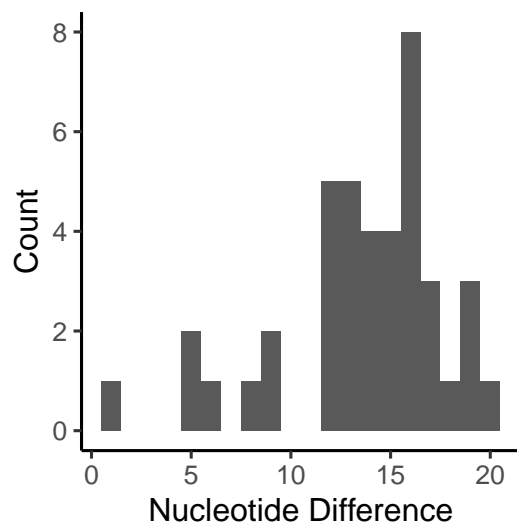
### IGHV3-74\*03

4666 sequences assigned  
No exact matches.



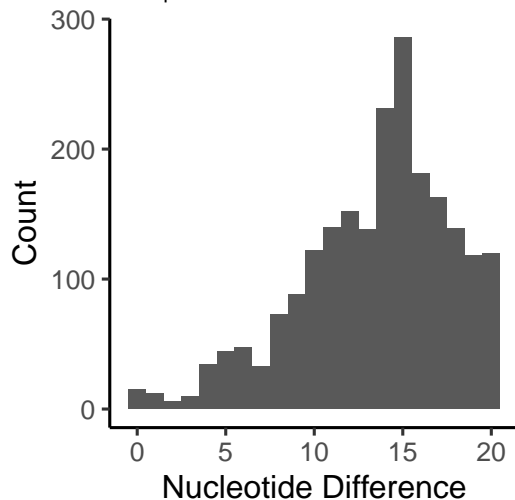
### IGHV3-43D\*04

73 sequences assigned  
No exact matches.



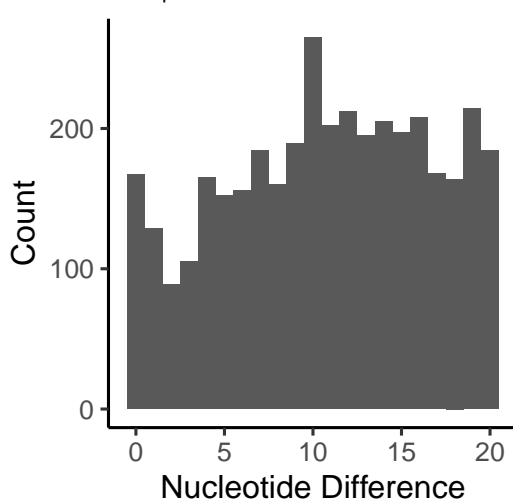
### IGHV3-72\*01

2931 sequences assigned  
15 (0.5%) exact matches, in which:  
15 unique CDR3  
4 unique J



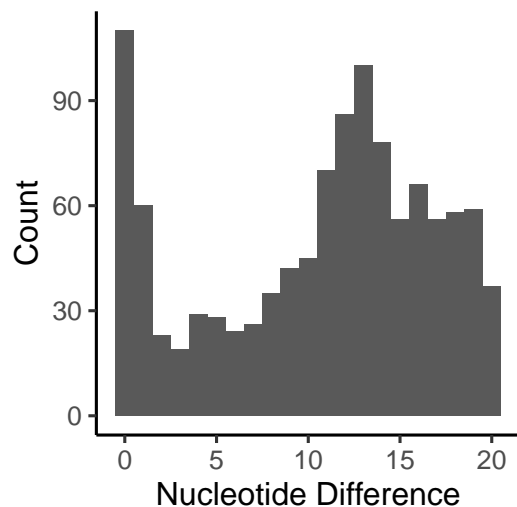
### IGHV3-74\*01\_02

4441 sequences assigned  
167 (3.8%) exact matches, in which:  
156 unique CDR3  
6 unique J



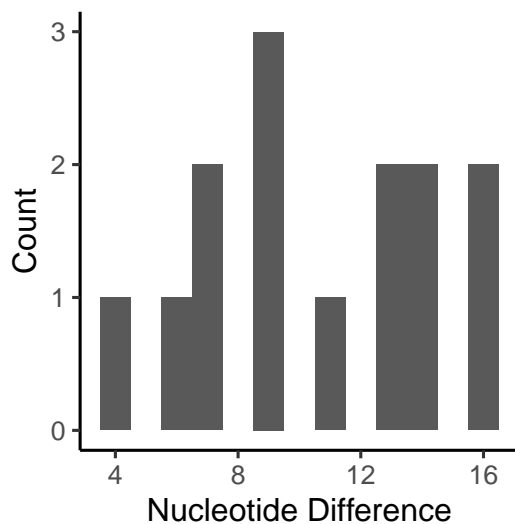
### IGHV3-64D\*06

1633 sequences assigned  
110 (6.7%) exact matches, in which:  
108 unique CDR3  
7 unique J



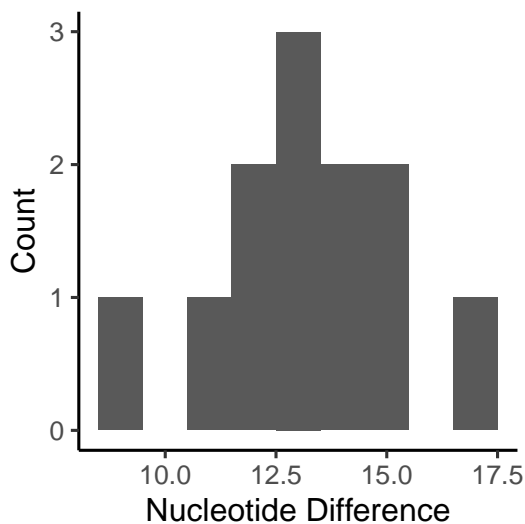
### IGHV3–NL1\*01

29 sequences assigned  
No exact matches.



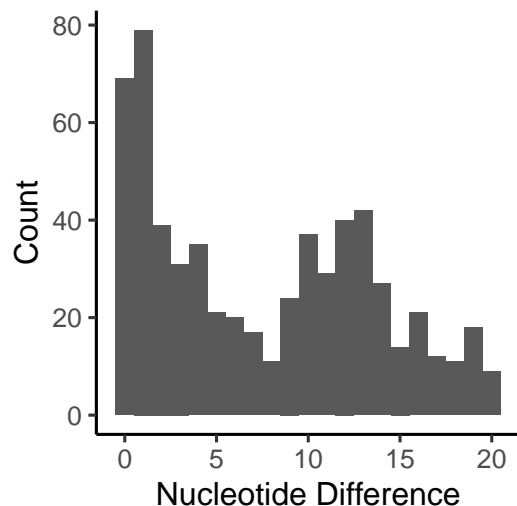
### IGHV4–28\*01\_07

13 sequences assigned  
No exact matches.



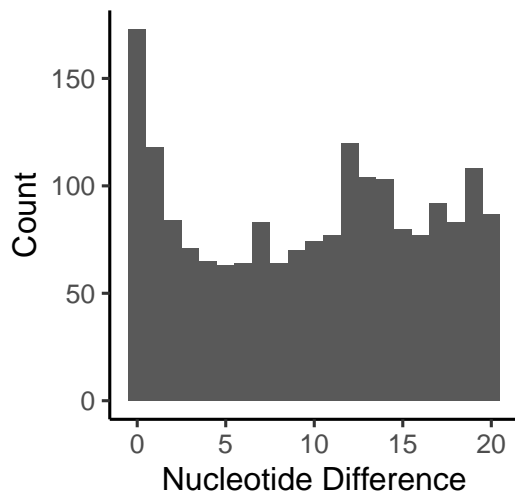
### IGHV4–30–2\*01

796 sequences assigned  
69 (8.7%) exact matches, in which:  
65 unique CDR3  
5 unique J



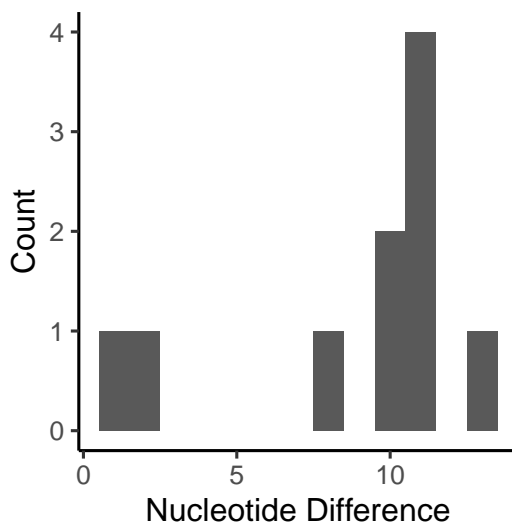
### IGHV4–4\*02\_03

2538 sequences assigned  
173 (6.8%) exact matches, in which:  
169 unique CDR3  
7 unique J



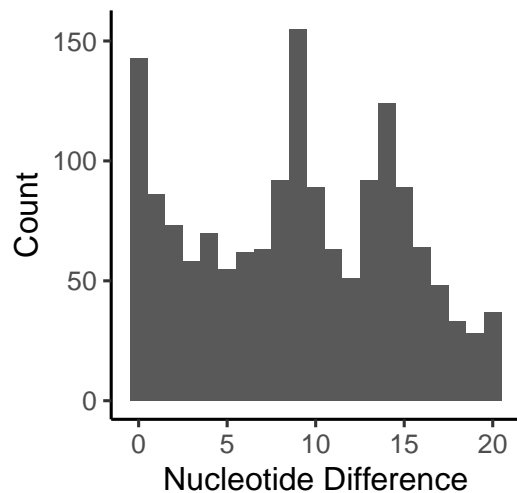
### IGHV4–28\*02\_05

10 sequences assigned  
No exact matches.



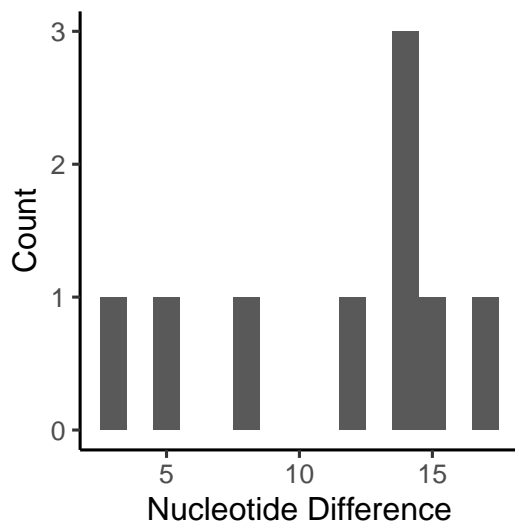
### IGHV4–31\*02

1955 sequences assigned  
143 (7.3%) exact matches, in which:  
141 unique CDR3  
6 unique J



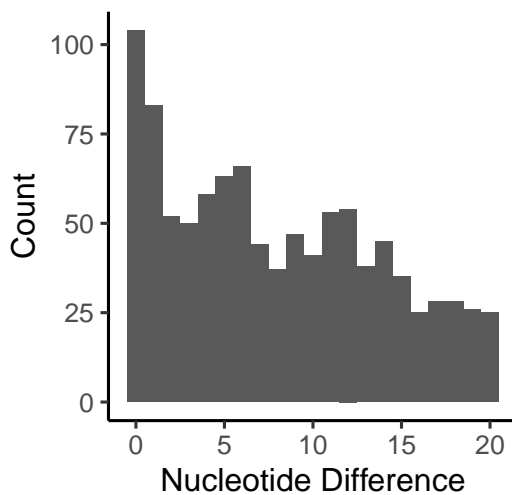
### IGHV4–28\*03

11 sequences assigned  
No exact matches.



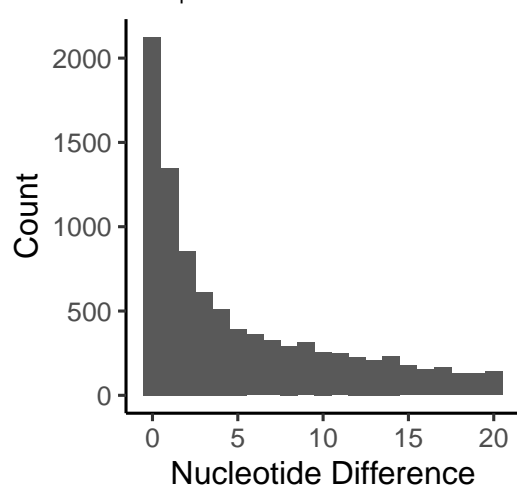
### IGHV4–30–4\*01

1322 sequences assigned  
104 (7.9%) exact matches, in which:  
101 unique CDR3  
7 unique J



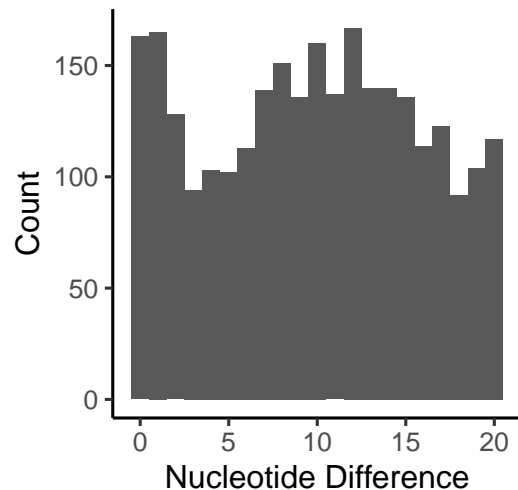
### IGHV4–34\*01\_02

10306 sequences assigned  
2125 (20.6%) exact matches, in which:  
2040 unique CDR3  
7 unique J



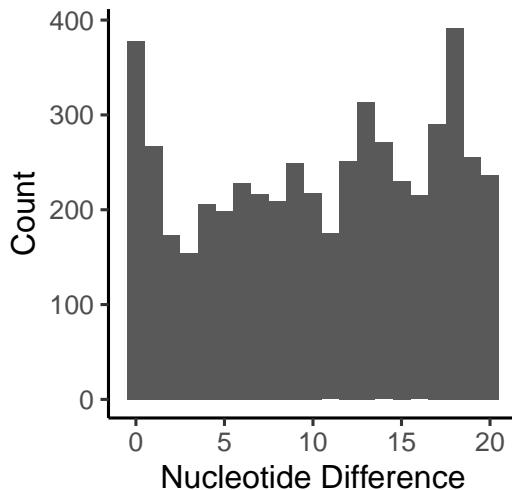
### IGHV4-38-2\*02

3761 sequences assigned  
163 (4.3%) exact matches, in which:  
157 unique CDR3  
7 unique J



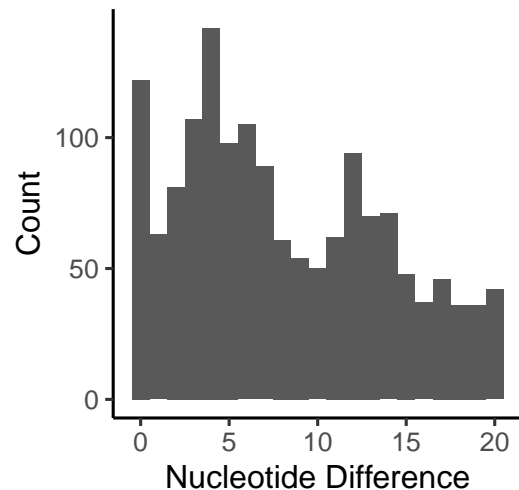
### IGHV4-59\*08

7033 sequences assigned  
378 (5.4%) exact matches, in which:  
359 unique CDR3  
7 unique J



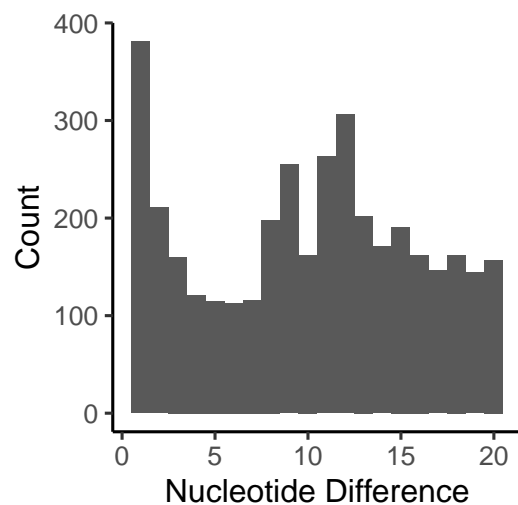
### IGHV4-61\*01

1985 sequences assigned  
122 (6.1%) exact matches, in which:  
119 unique CDR3  
7 unique J



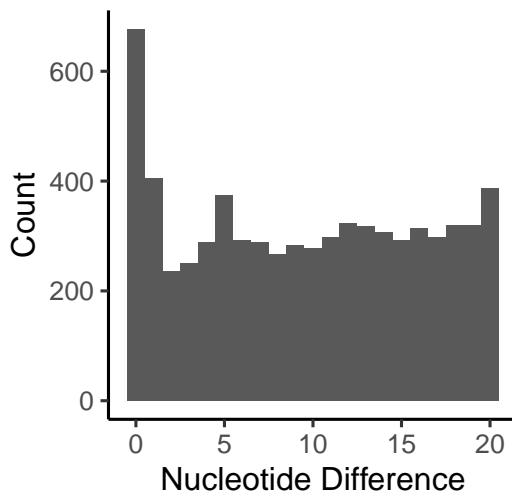
### IGHV4-39\*02

5825 sequences assigned  
No exact matches.



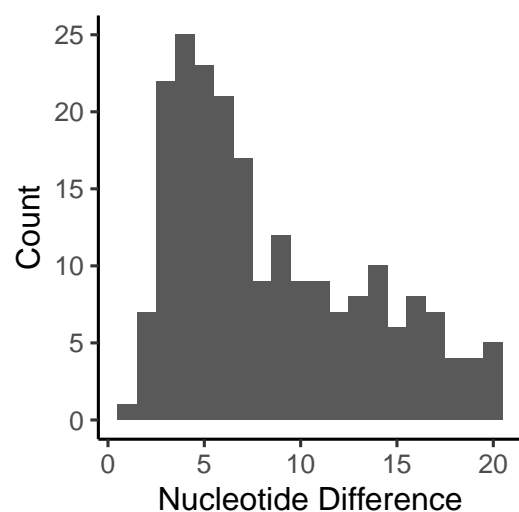
### IGHV4-59\*01\_07

8896 sequences assigned  
677 (7.6%) exact matches, in which:  
655 unique CDR3  
7 unique J



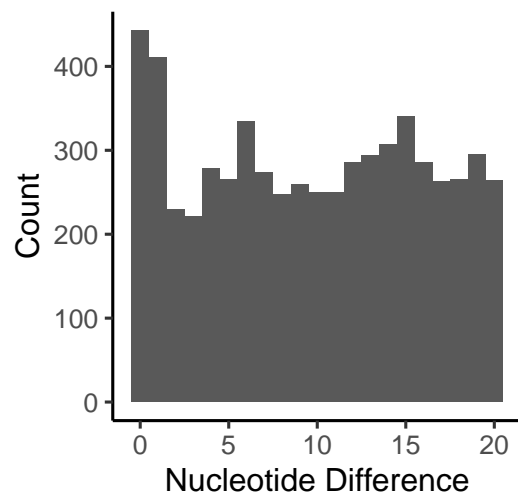
### IGHV4-61\*05

265 sequences assigned  
No exact matches.



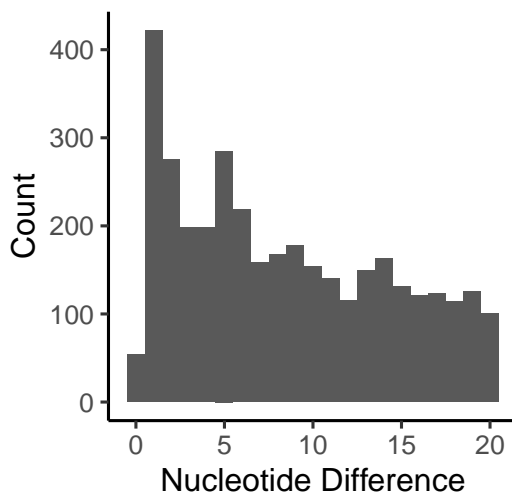
### IGHV4-39\*07

8258 sequences assigned  
443 (5.4%) exact matches, in which:  
431 unique CDR3  
7 unique J



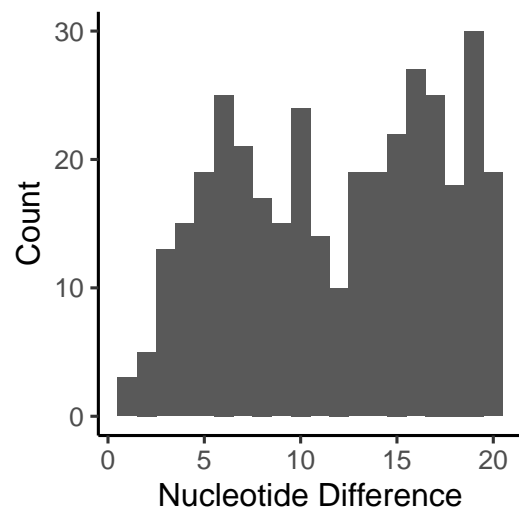
### IGHV4-59\*12

4697 sequences assigned  
54 (1.1%) exact matches, in which:  
54 unique CDR3  
6 unique J



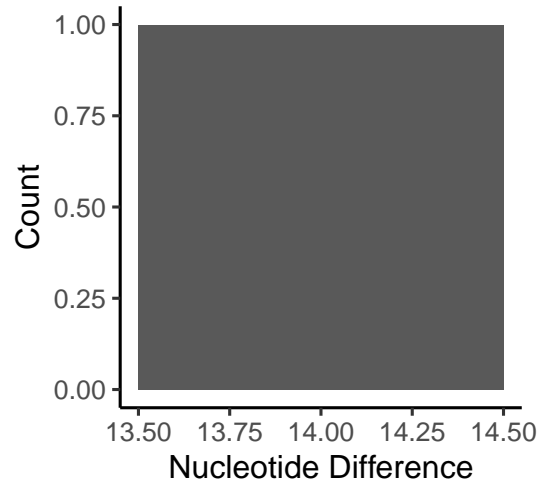
### IGHV4-61\*08

575 sequences assigned  
No exact matches.



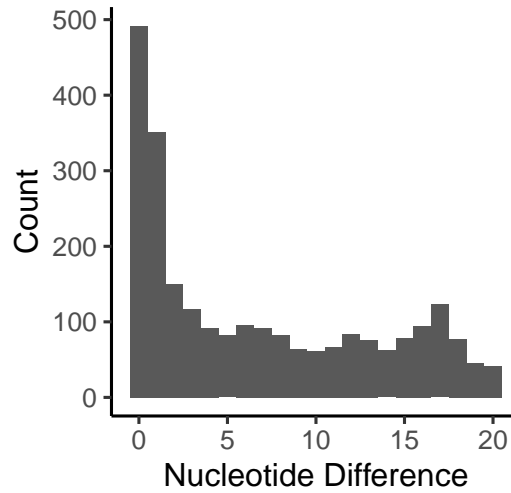
### IGHV1/OR15-1\*04

1 sequences assigned  
No exact matches.



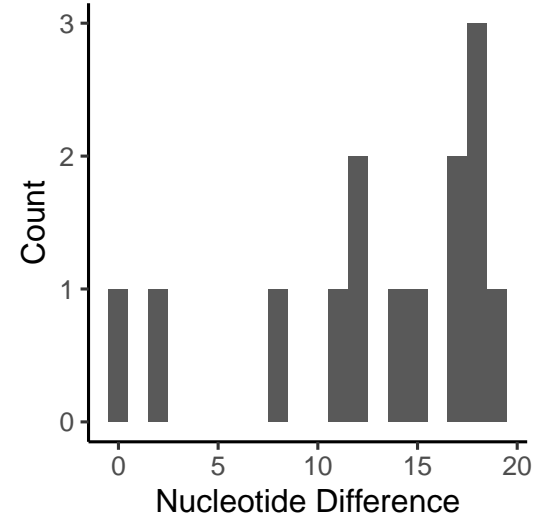
### IGHV5-10-1\*01\_03

2681 sequences assigned  
492 (18.4%) exact matches, in which:  
476 unique CDR3  
7 unique J



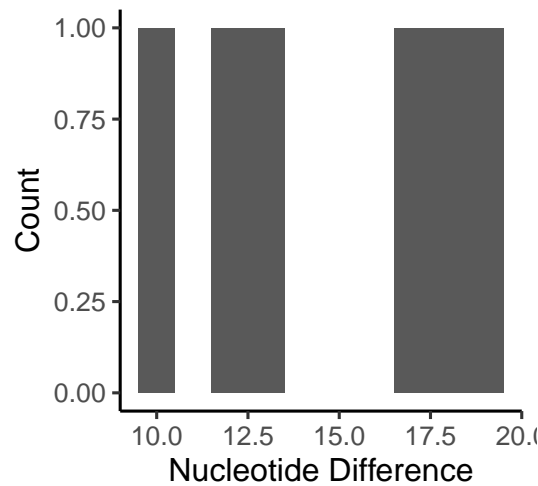
### IGHV5-51\*07

15 sequences assigned  
1 (6.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



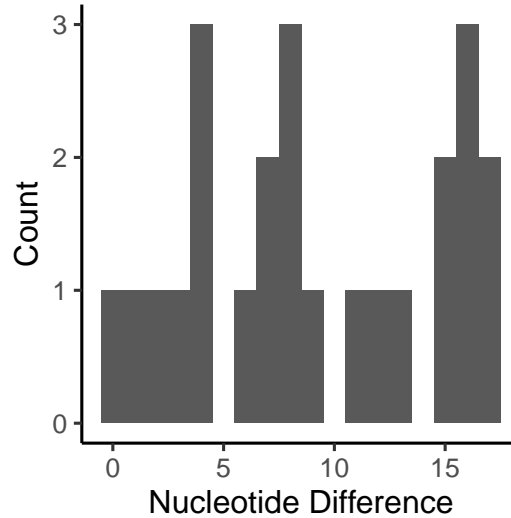
### IGHV4/OR15-8\*01

14 sequences assigned  
No exact matches.



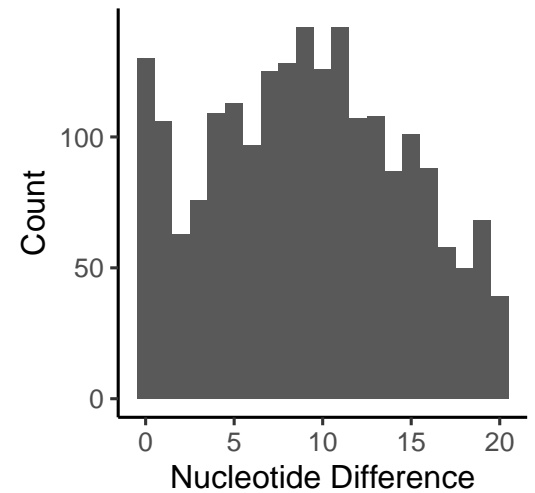
### IGHV5-51\*04

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



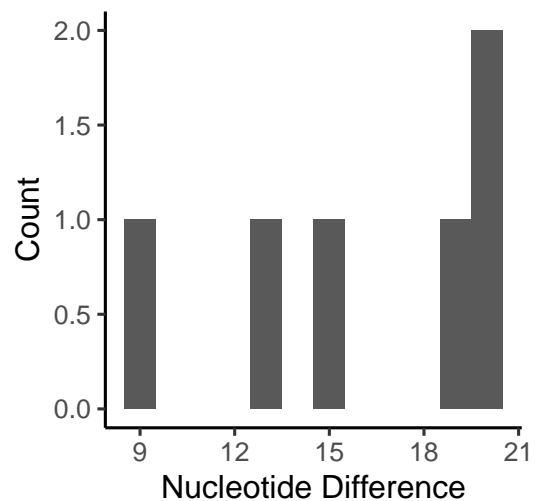
### IGHV6-1\*01\_02

2211 sequences assigned  
130 (5.9%) exact matches, in which:  
128 unique CDR3  
7 unique J



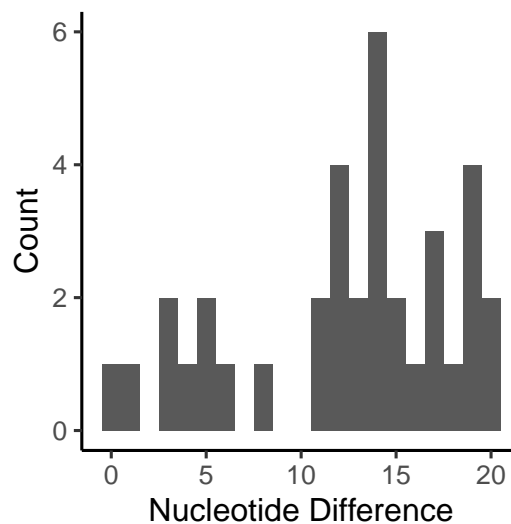
### IGHV4/OR15-8\*02

31 sequences assigned  
No exact matches.



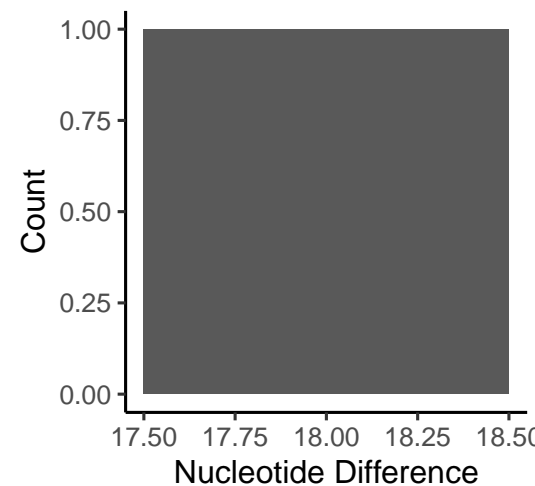
### IGHV5-51\*06

44 sequences assigned  
1 (2.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



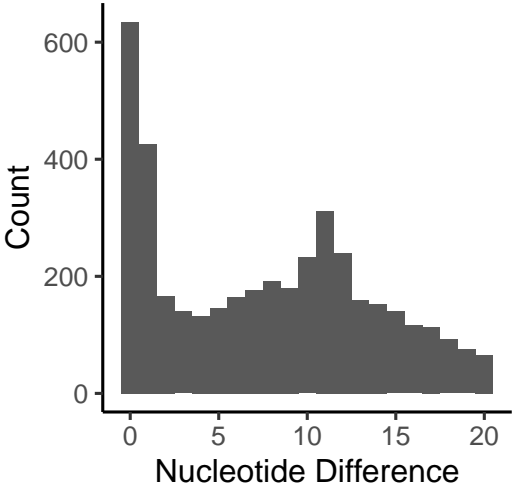
### IGHV3/OR16-6\*02

1 sequences assigned  
No exact matches.

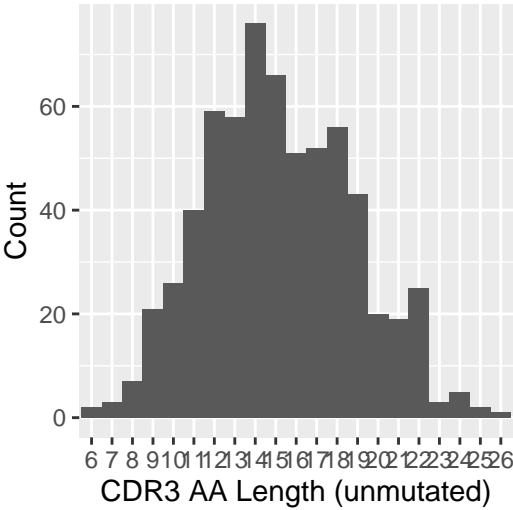


IGHV7-4-1\*02\_T63C

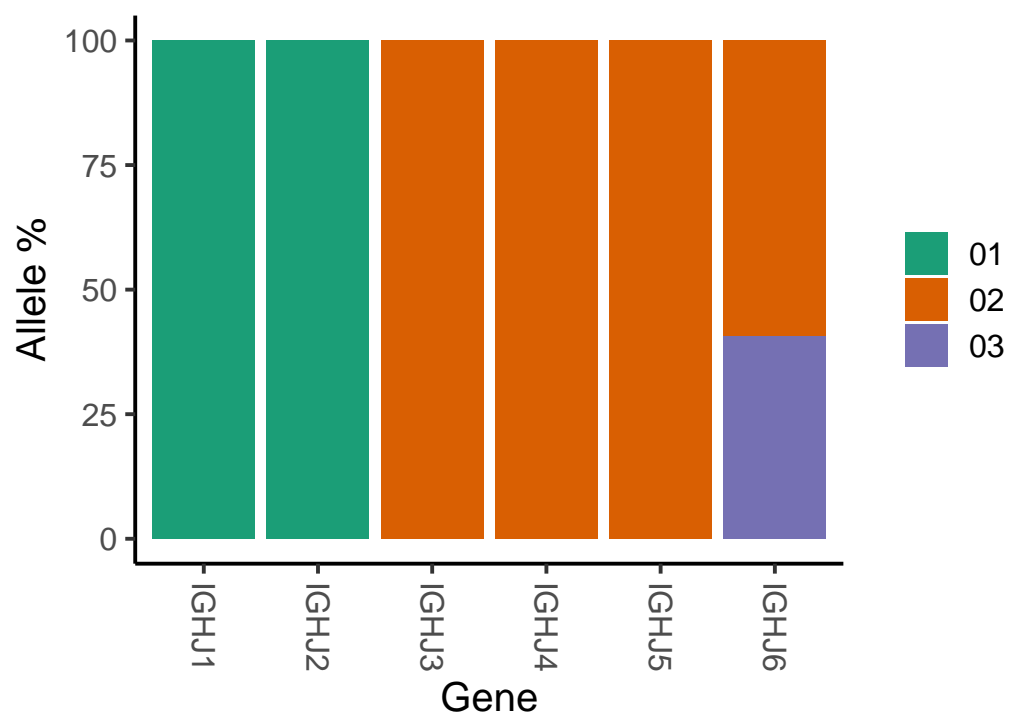
4769 sequences assigned  
635 (13.3%) exact matches, in which:  
618 unique CDR3  
7 unique J



IGHV7-4-1\*02\_T63C

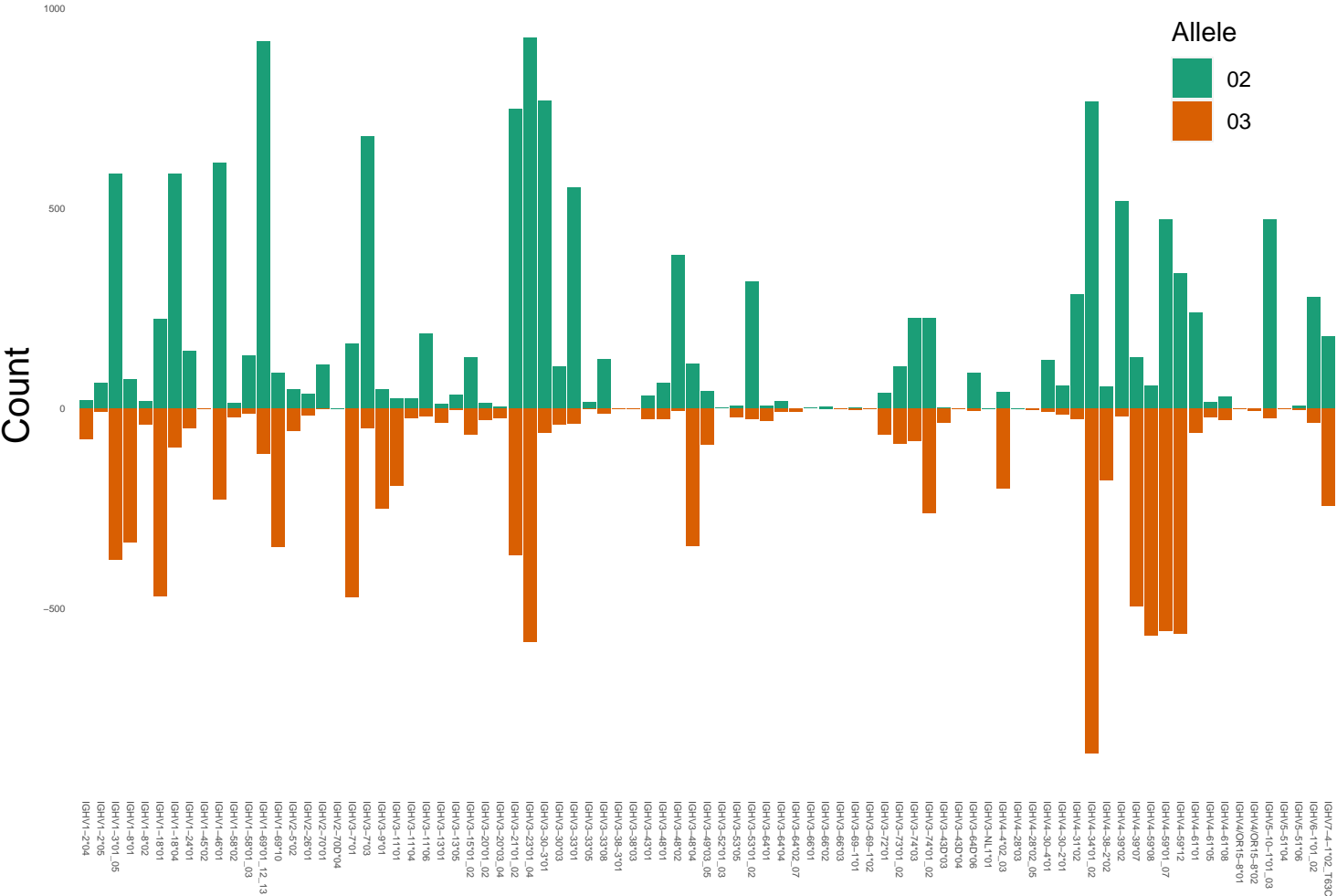


Allele Usage





Sequence Count byIGHJ6 allele usage



[illegible]