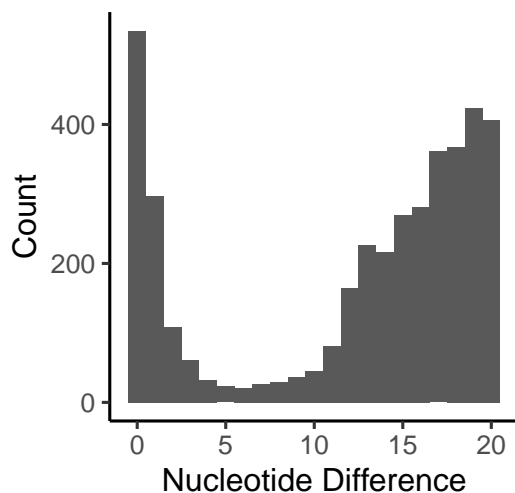


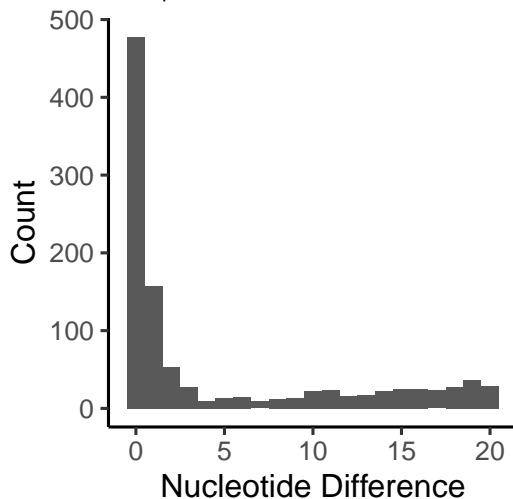
### IGHV1-2\*02

8955 sequences assigned  
535 (6%) exact matches, in which:  
532 unique CDR3  
6 unique J



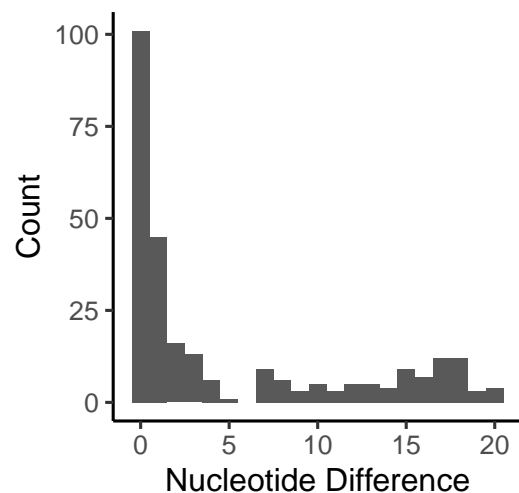
### IGHV1-18\*01

1692 sequences assigned  
478 (28.3%) exact matches, in which:  
477 unique CDR3  
6 unique J



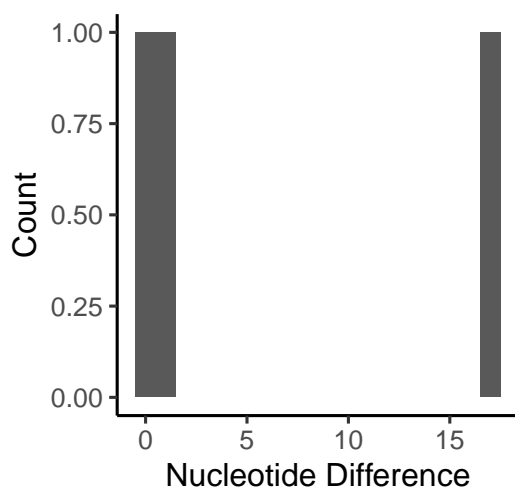
### IGHV1-46\*01

506 sequences assigned  
101 (20%) exact matches, in which:  
100 unique CDR3  
6 unique J



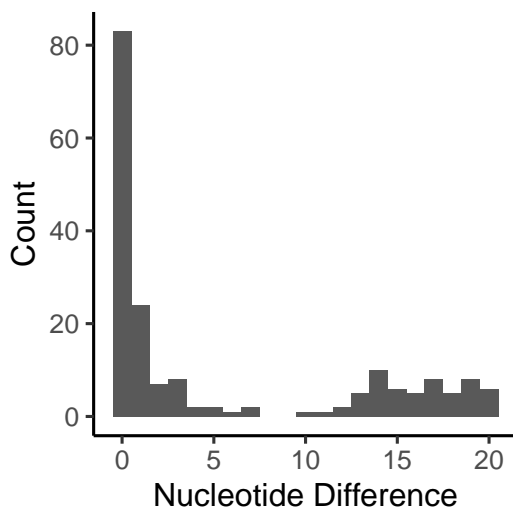
### IGHV1-3\*02

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



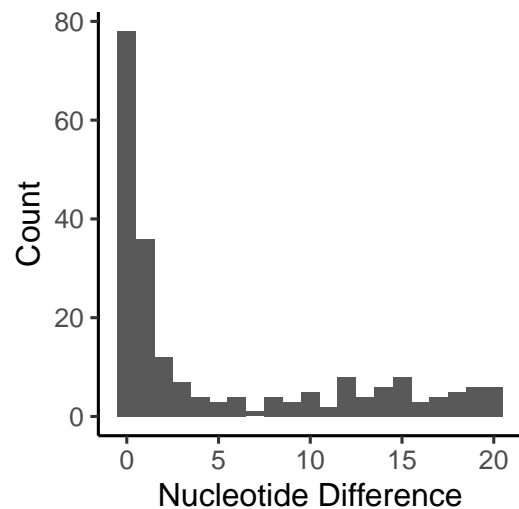
### IGHV1-24\*01

302 sequences assigned  
83 (27.5%) exact matches, in which:  
82 unique CDR3  
6 unique J



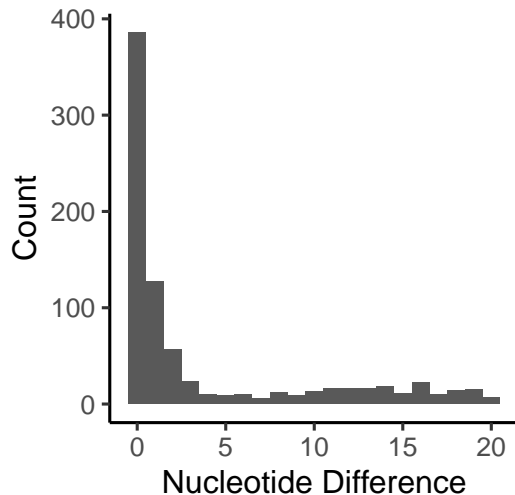
### IGHV1-46\*03

310 sequences assigned  
78 (25.2%) exact matches, in which:  
78 unique CDR3  
5 unique J



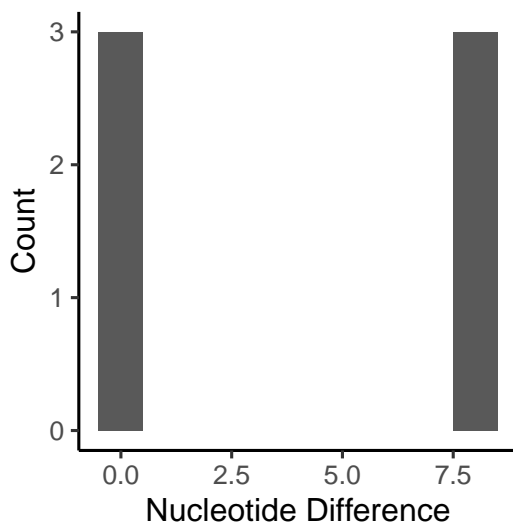
### IGHV1-8\*01

1962 sequences assigned  
386 (19.7%) exact matches, in which:  
386 unique CDR3  
6 unique J



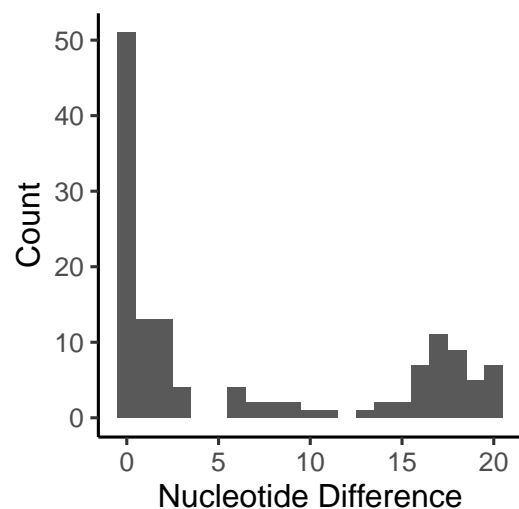
### IGHV1-45\*02

335 sequences assigned  
3 (0.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



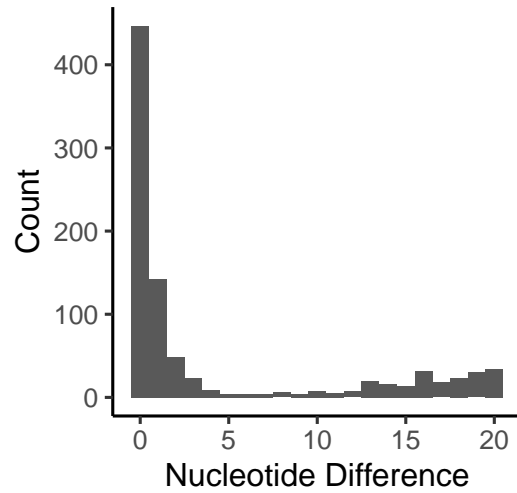
### IGHV1-58\*01

366 sequences assigned  
51 (13.9%) exact matches, in which:  
51 unique CDR3  
5 unique J



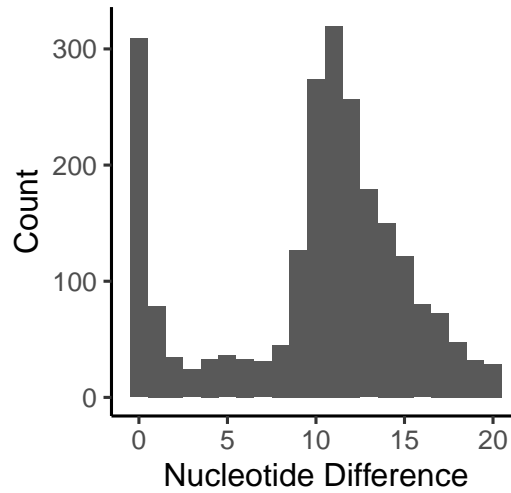
### IGHV1–69\*04

1778 sequences assigned  
447 (25.1%) exact matches, in which:  
443 unique CDR3  
6 unique J



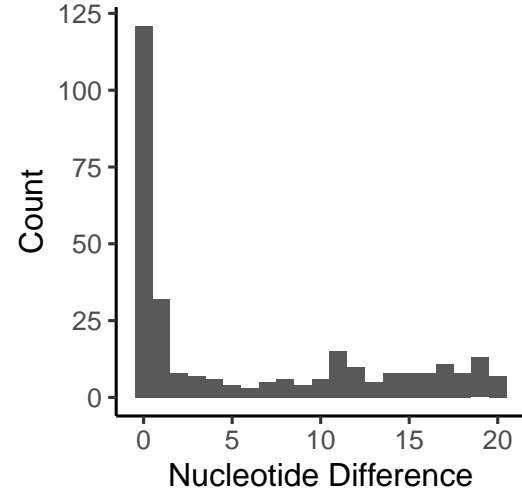
### IGHV2–5\*02

2775 sequences assigned  
309 (11.1%) exact matches, in which:  
308 unique CDR3  
6 unique J



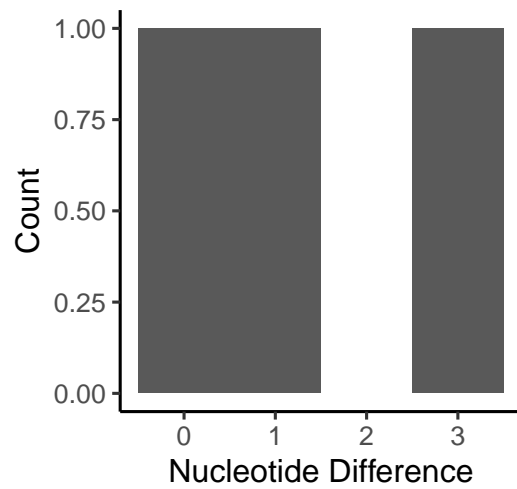
### IGHV2–70\*15

462 sequences assigned  
121 (26.2%) exact matches, in which:  
121 unique CDR3  
5 unique J



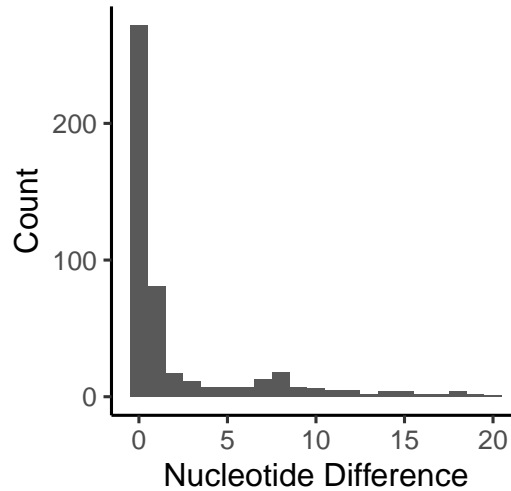
### IGHV1–NL1\*01

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



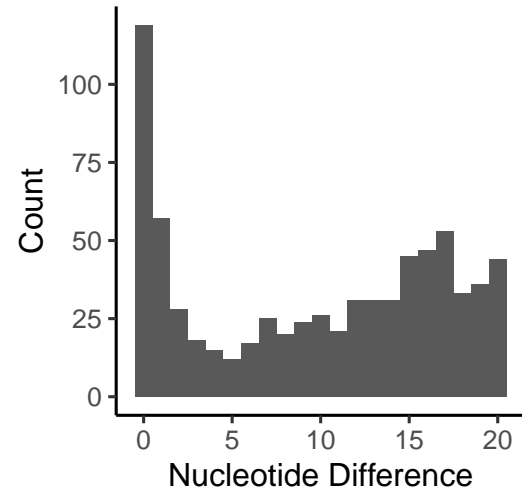
### IGHV2–26\*01

539 sequences assigned  
272 (50.5%) exact matches, in which:  
272 unique CDR3  
6 unique J



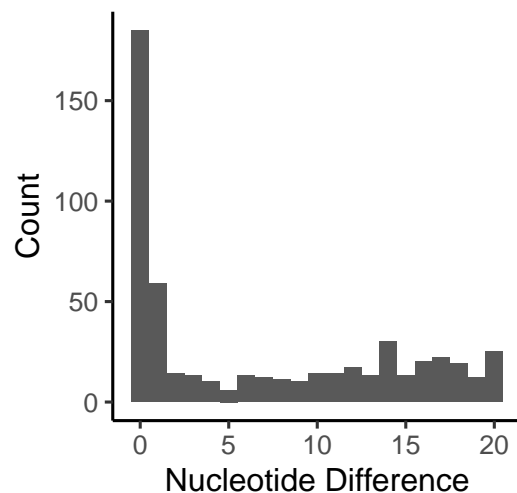
### IGHV3–7\*01

1219 sequences assigned  
119 (9.8%) exact matches, in which:  
119 unique CDR3  
6 unique J



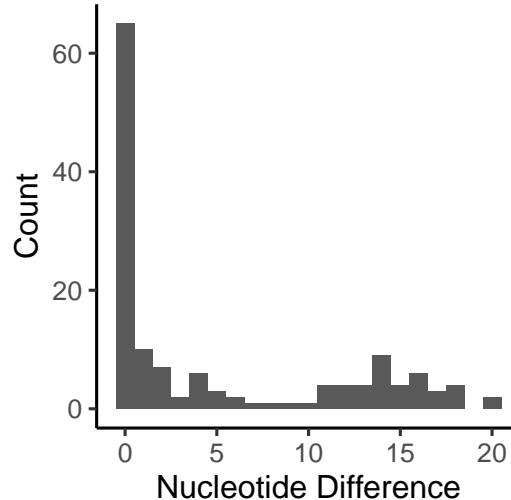
### IGHV2–5\*01

927 sequences assigned  
185 (20%) exact matches, in which:  
185 unique CDR3  
6 unique J



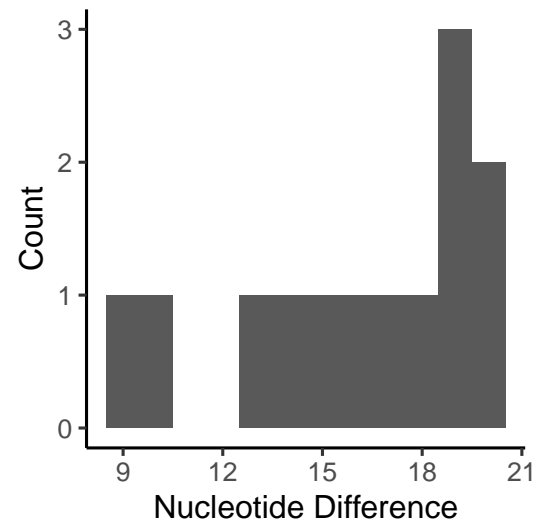
### IGHV2–70\*01

195 sequences assigned  
65 (33.3%) exact matches, in which:  
65 unique CDR3  
6 unique J



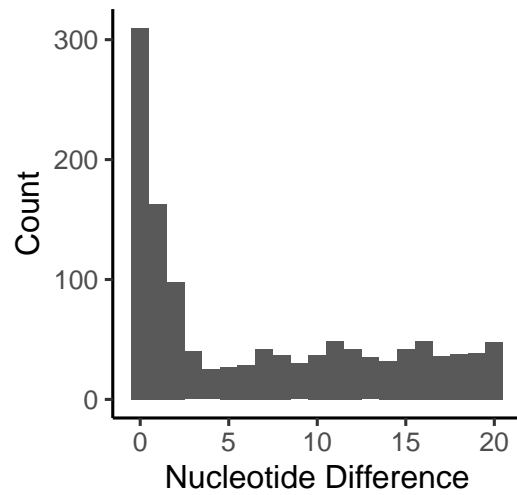
### IGHV3–7\*03

39 sequences assigned  
No exact matches.



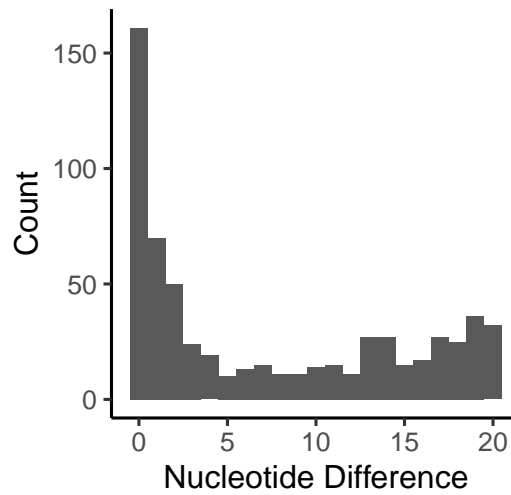
### IGHV3-9\*01

2073 sequences assigned  
310 (15%) exact matches, in which:  
309 unique CDR3  
6 unique J



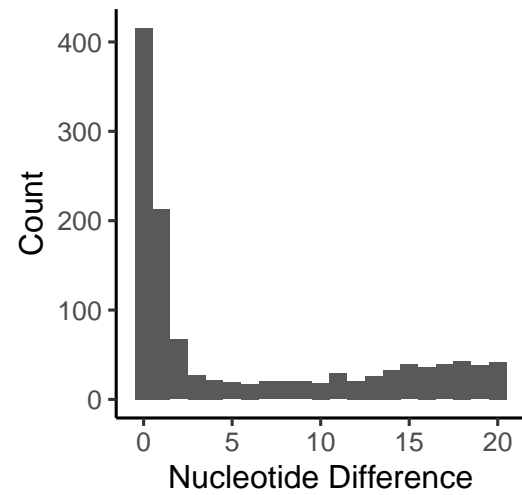
### IGHV3-15\*01

1599 sequences assigned  
161 (10.1%) exact matches, in which:  
160 unique CDR3  
6 unique J



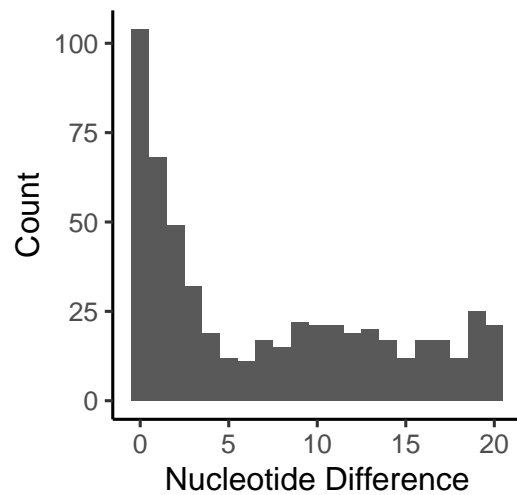
### IGHV3-21\*01

1932 sequences assigned  
416 (21.5%) exact matches, in which:  
411 unique CDR3  
6 unique J



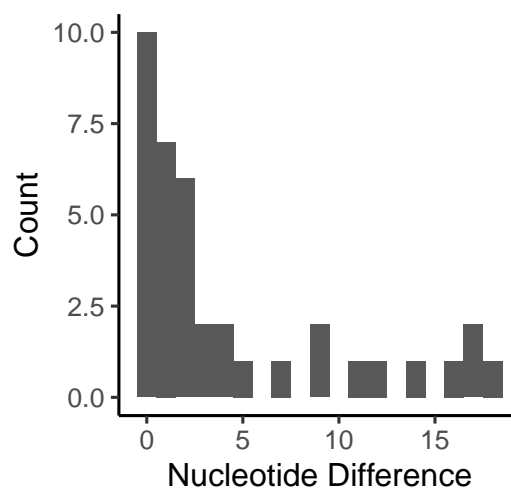
### IGHV3-11\*01

1379 sequences assigned  
104 (7.5%) exact matches, in which:  
104 unique CDR3  
4 unique J



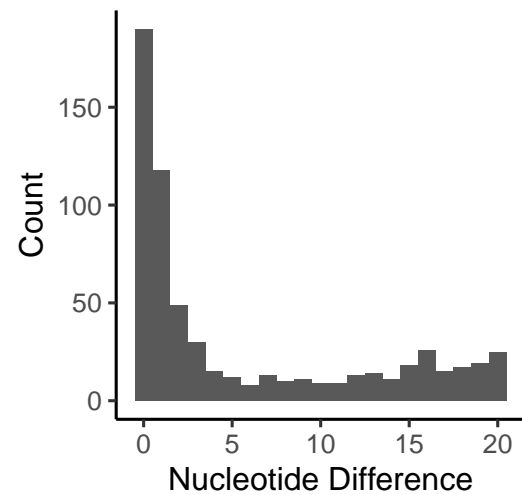
### IGHV3-20\*01

46 sequences assigned  
10 (21.7%) exact matches, in which:  
10 unique CDR3  
5 unique J



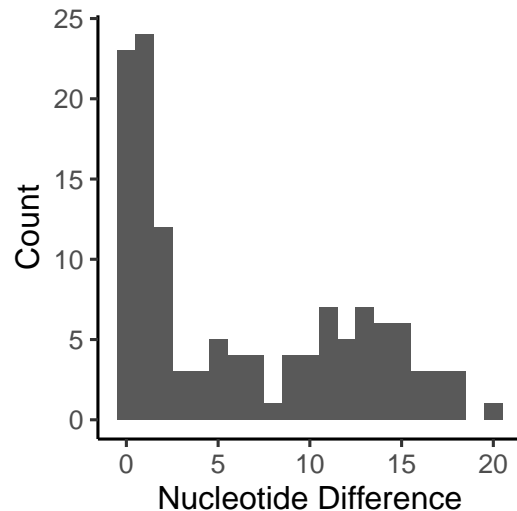
### IGHV3-23\*04

1641 sequences assigned  
190 (11.6%) exact matches, in which:  
190 unique CDR3  
6 unique J



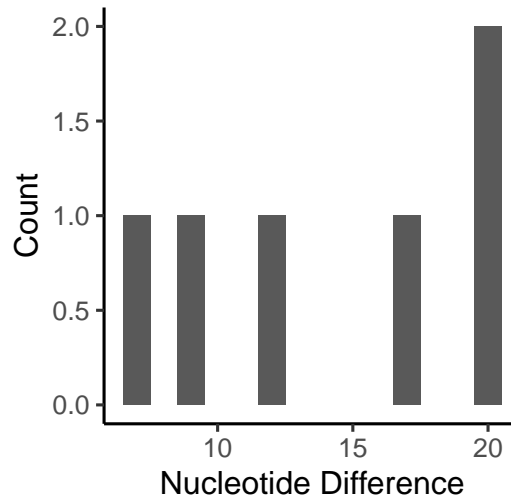
### IGHV3-13\*01

190 sequences assigned  
23 (12.1%) exact matches, in which:  
23 unique CDR3  
5 unique J



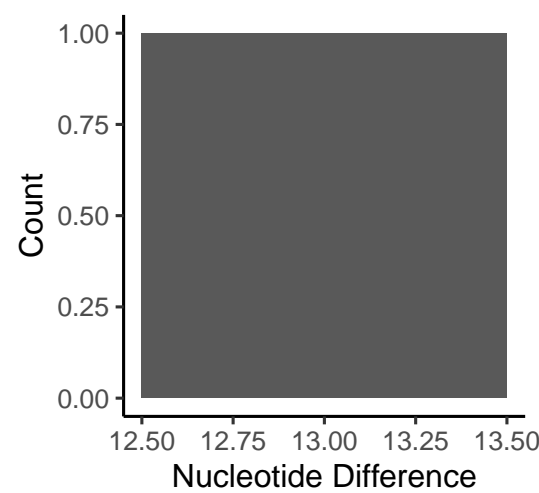
### IGHV3-20\*04

36 sequences assigned  
No exact matches.



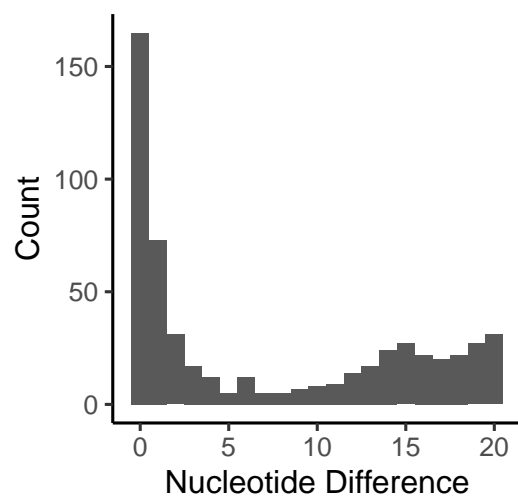
### IGHV3-25\*04

1 sequences assigned  
No exact matches.



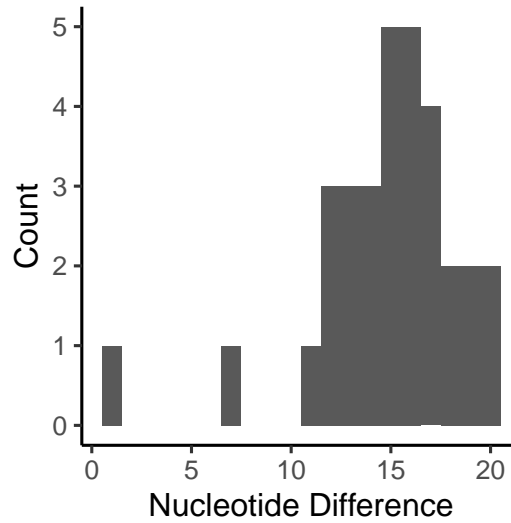
### IGHV3–30\*01

875 sequences assigned  
165 (18.9%) exact matches, in which:  
165 unique CDR3  
6 unique J



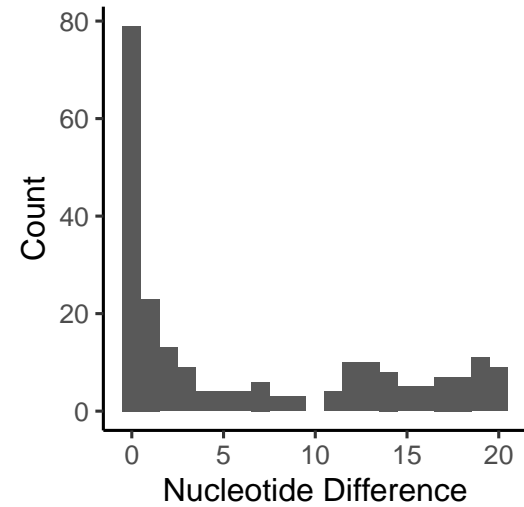
### IGHV3–30–3\*03

169 sequences assigned  
No exact matches.



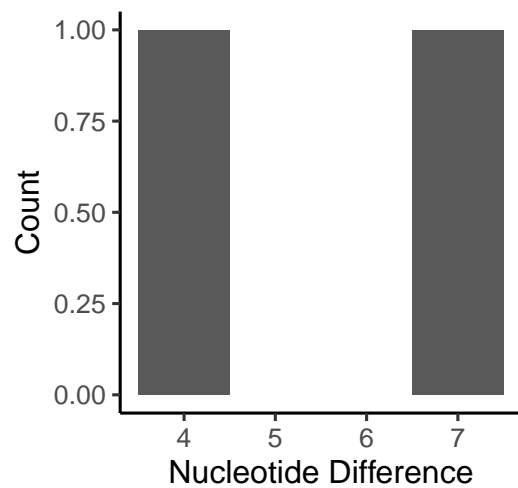
### IGHV3–48\*01

457 sequences assigned  
79 (17.3%) exact matches, in which:  
79 unique CDR3  
4 unique J



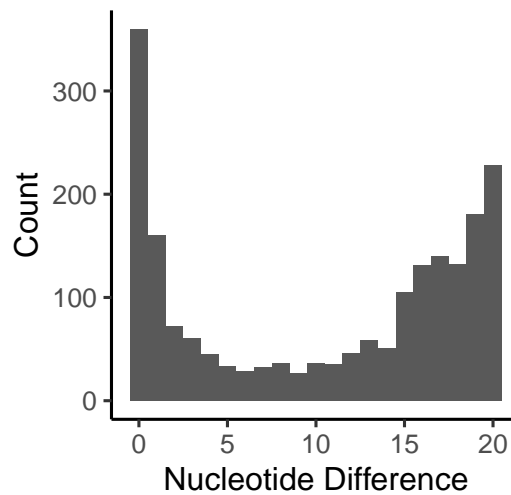
### IGHV3–30–3\*01

28 sequences assigned  
No exact matches.



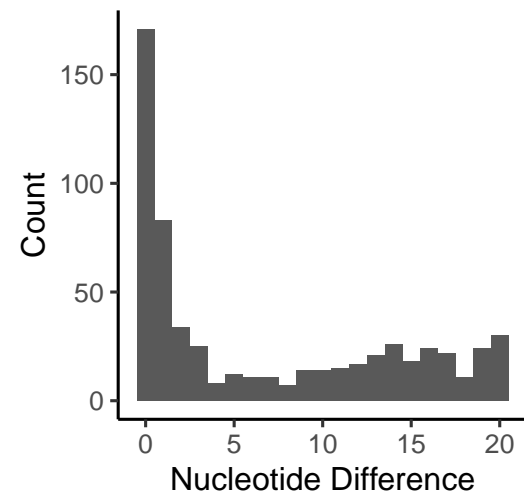
### IGHV3–33\*01

5352 sequences assigned  
360 (6.7%) exact matches, in which:  
360 unique CDR3  
6 unique J



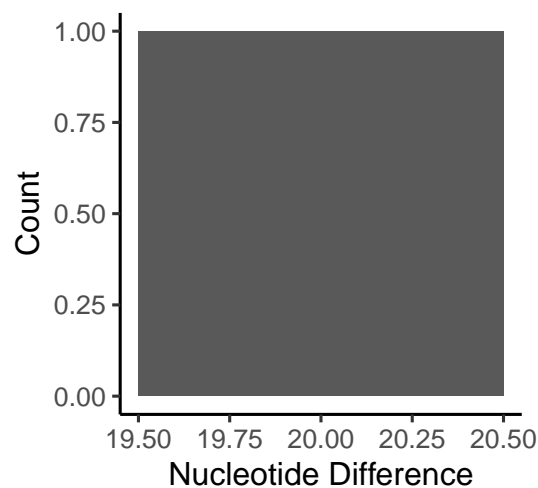
### IGHV3–48\*03

1195 sequences assigned  
171 (14.3%) exact matches, in which:  
171 unique CDR3  
6 unique J



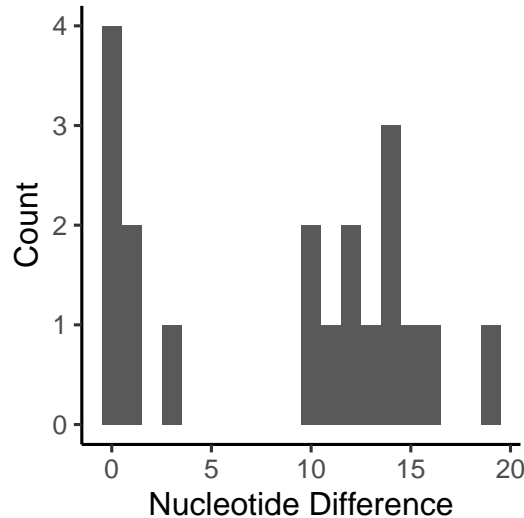
### IGHV3–30–3\*02

220 sequences assigned  
No exact matches.



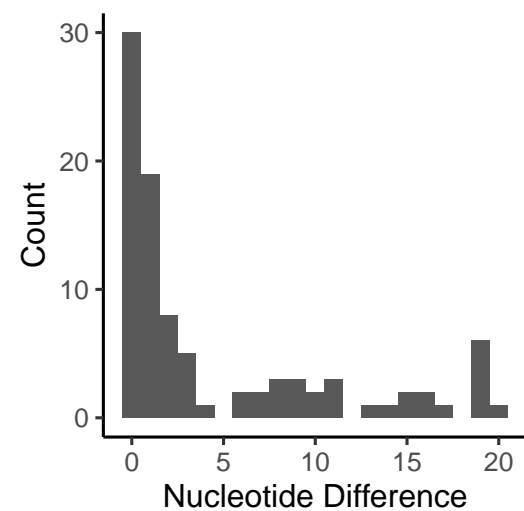
### IGHV3–43\*01

40 sequences assigned  
4 (10%) exact matches, in which:  
4 unique CDR3  
2 unique J



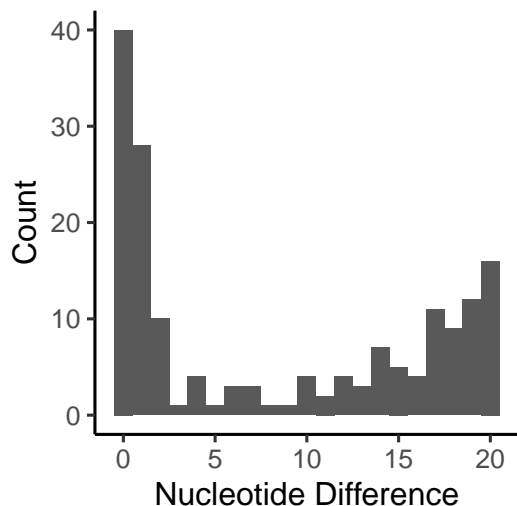
### IGHV3–49\*03

179 sequences assigned  
30 (16.8%) exact matches, in which:  
30 unique CDR3  
6 unique J



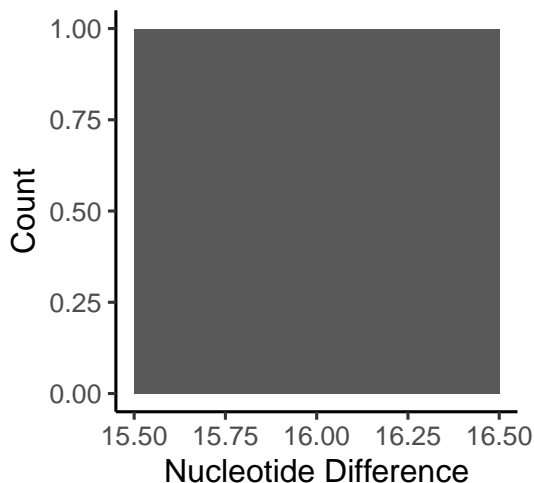
### IGHV3-49\*04

507 sequences assigned  
40 (7.9%) exact matches, in which:  
40 unique CDR3  
4 unique J



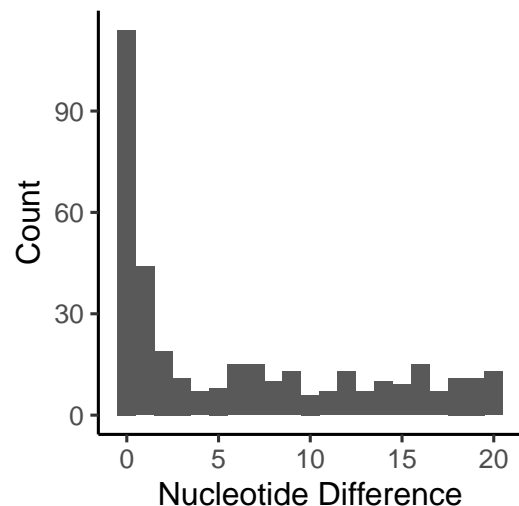
### IGHV3-62\*03

1 sequences assigned  
No exact matches.



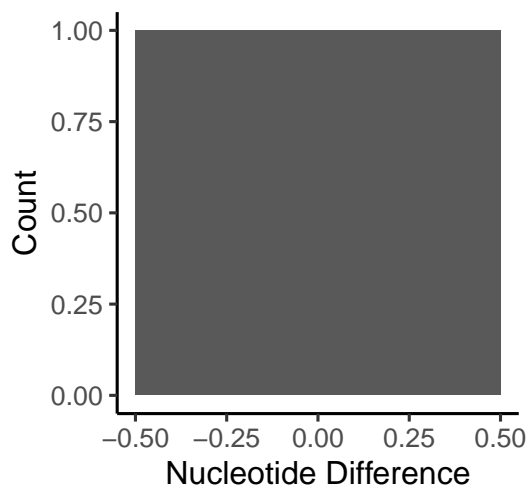
### IGHV3-66\*01

661 sequences assigned  
114 (17.2%) exact matches, in which:  
114 unique CDR3  
6 unique J



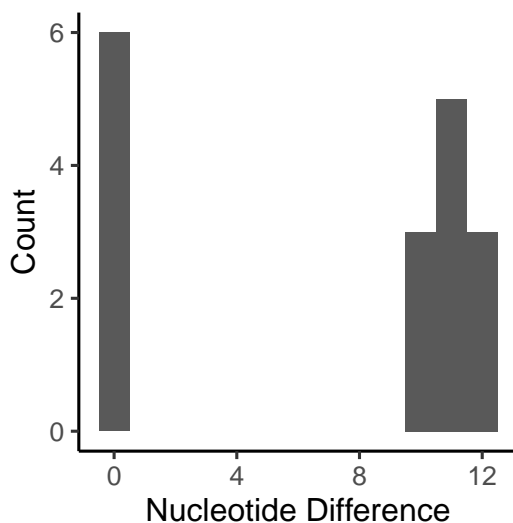
### IGHV3-52\*01

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



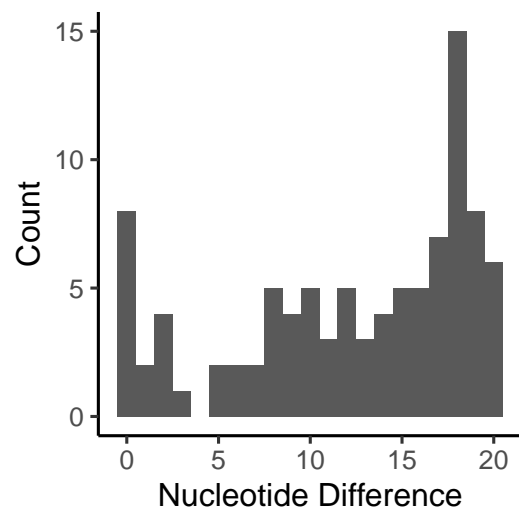
### IGHV3-64\*02

17 sequences assigned  
6 (35.3%) exact matches, in which:  
6 unique CDR3  
2 unique J



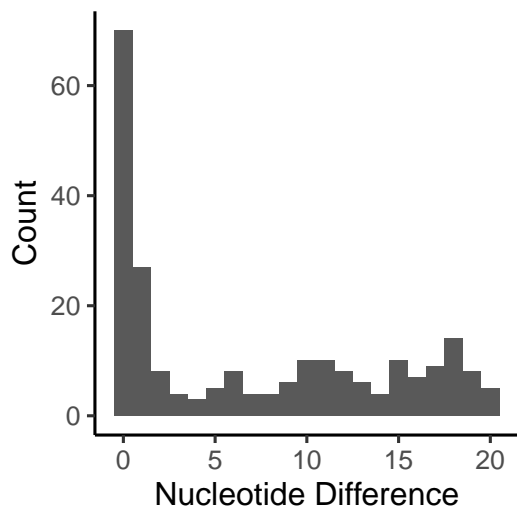
### IGHV3-72\*01

208 sequences assigned  
8 (3.8%) exact matches, in which:  
8 unique CDR3  
4 unique J



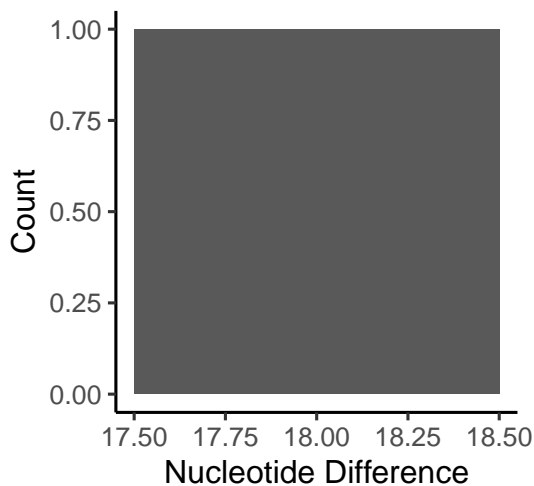
### IGHV3-53\*02

360 sequences assigned  
70 (19.4%) exact matches, in which:  
70 unique CDR3  
5 unique J



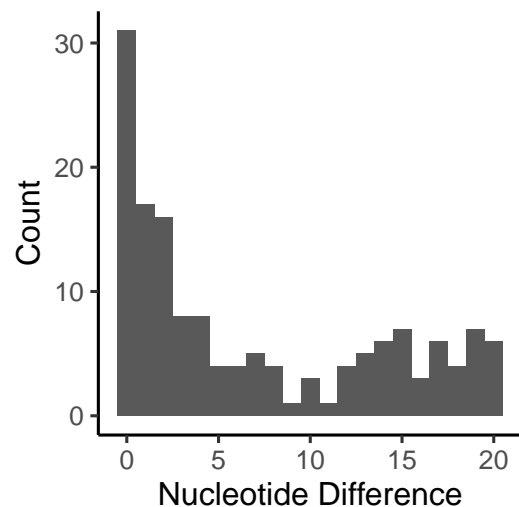
### IGHV3-64\*07

4 sequences assigned  
No exact matches.



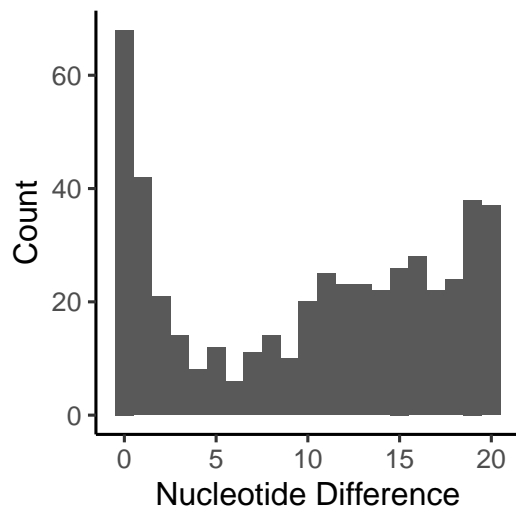
### IGHV3-73\*02

284 sequences assigned  
31 (10.9%) exact matches, in which:  
31 unique CDR3  
4 unique J



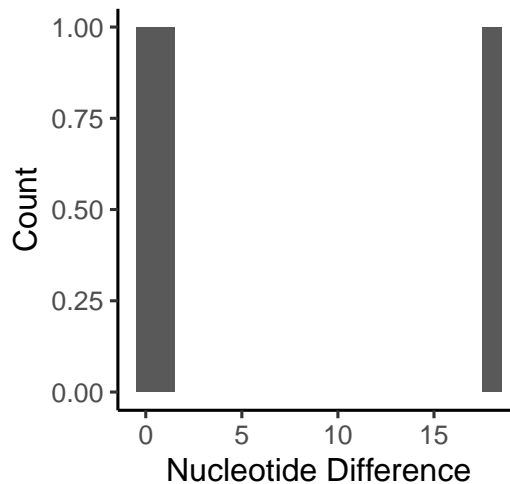
### IGHV3-74\*01

1093 sequences assigned  
68 (6.2%) exact matches, in which:  
68 unique CDR3  
6 unique J



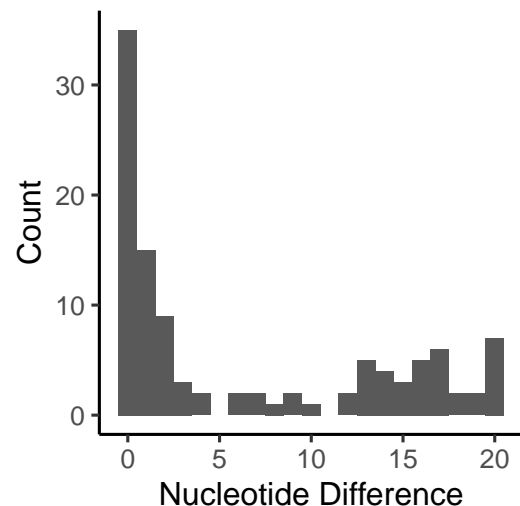
### IGHV4-28\*01

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



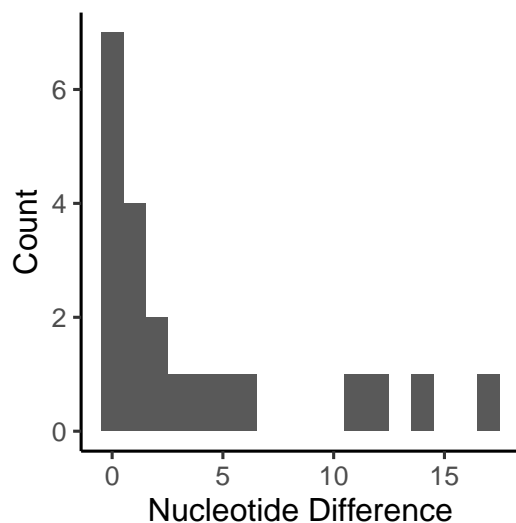
### IGHV4-30-2\*01

312 sequences assigned  
35 (11.2%) exact matches, in which:  
35 unique CDR3  
5 unique J



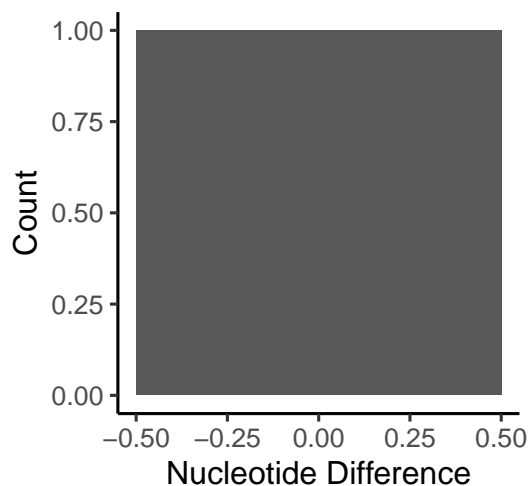
### IGHV3-43D\*04

30 sequences assigned  
7 (23.3%) exact matches, in which:  
7 unique CDR3  
2 unique J



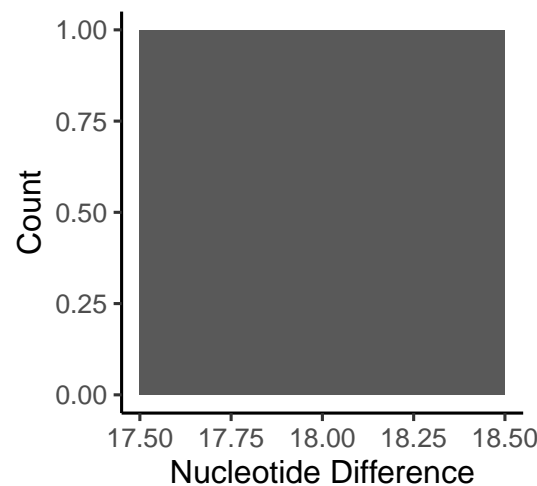
### IGHV4-28\*02

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



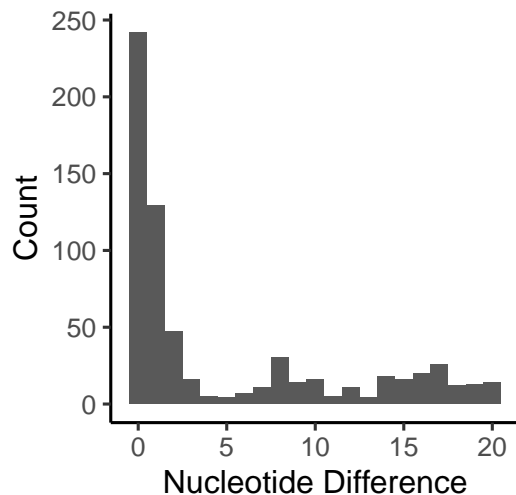
### IGHV4-30-4\*08

10 sequences assigned  
No exact matches.



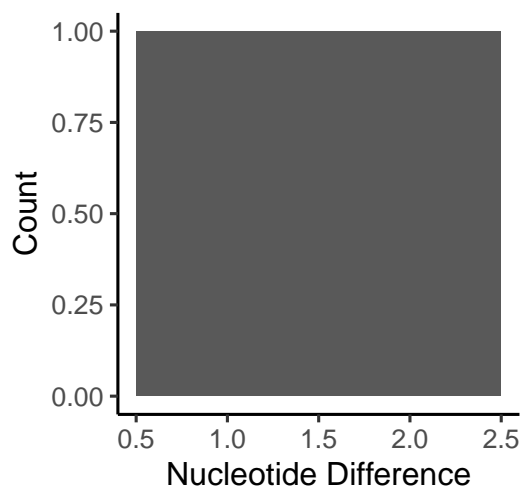
### IGHV4-4\*07

1132 sequences assigned  
242 (21.4%) exact matches, in which:  
240 unique CDR3  
6 unique J



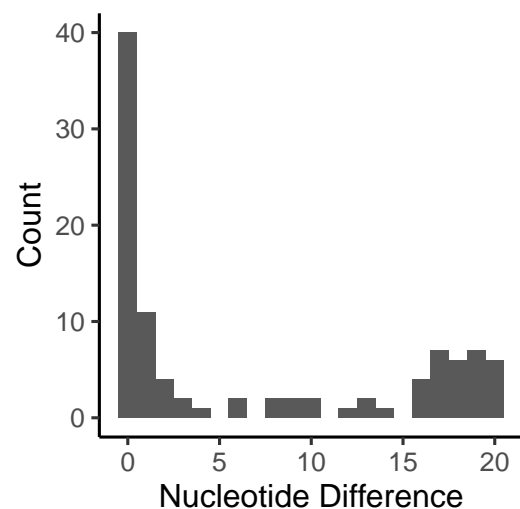
### IGHV4-28\*04

2 sequences assigned  
No exact matches.



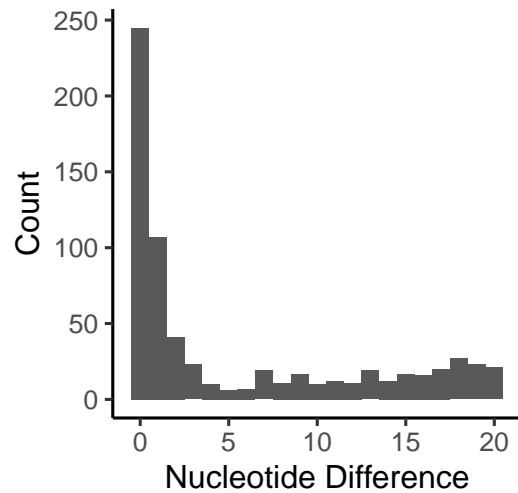
### IGHV4-31\*01

314 sequences assigned  
40 (12.7%) exact matches, in which:  
40 unique CDR3  
5 unique J



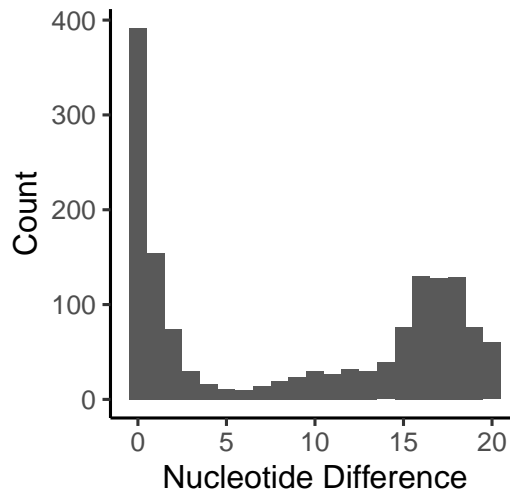
### IGHV4–31\*03

1509 sequences assigned  
245 (16.2%) exact matches, in which:  
242 unique CDR3  
6 unique J



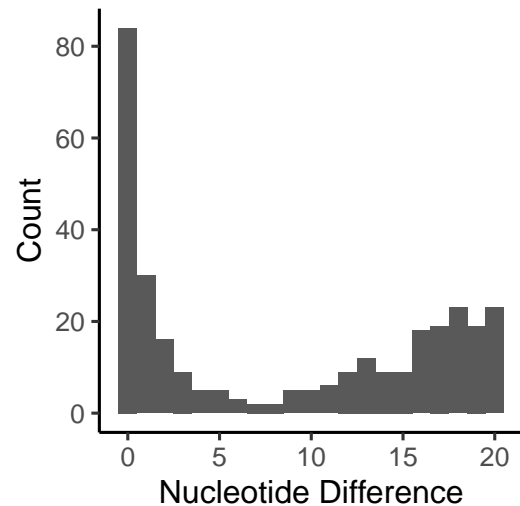
### IGHV4–39\*01

2662 sequences assigned  
392 (14.7%) exact matches, in which:  
388 unique CDR3  
6 unique J



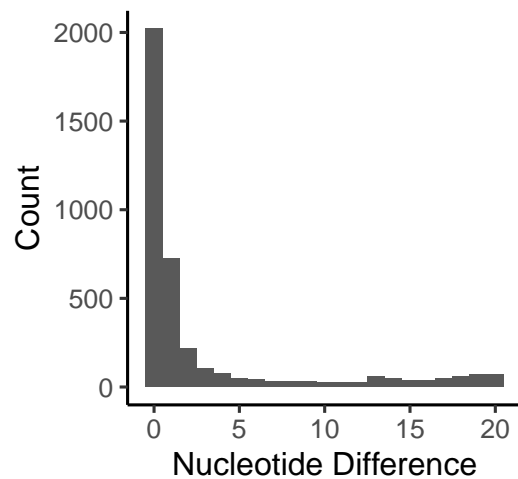
### IGHV4–61\*01

703 sequences assigned  
84 (11.9%) exact matches, in which:  
84 unique CDR3  
6 unique J



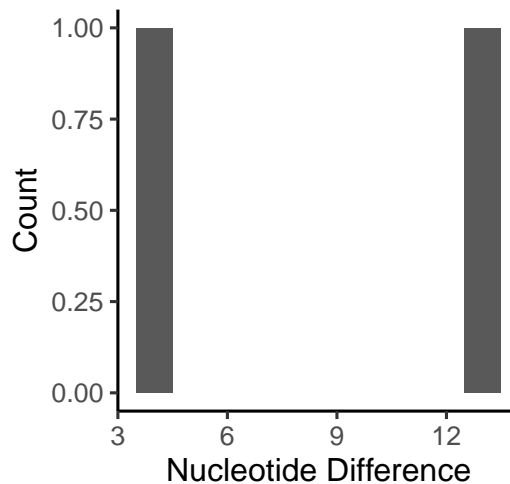
### IGHV4–34\*01

5518 sequences assigned  
2021 (36.6%) exact matches, in which:  
2012 unique CDR3  
6 unique J



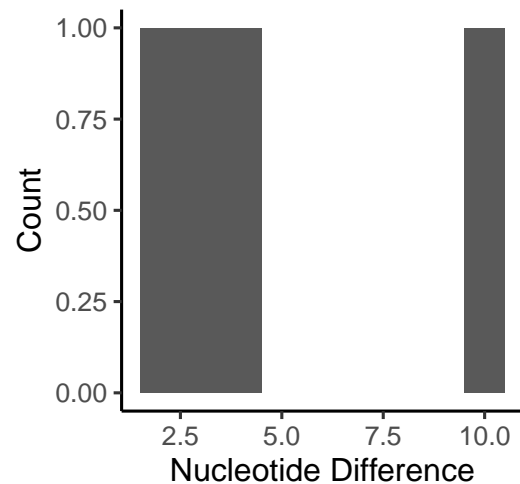
### IGHV4–55\*08

2 sequences assigned  
No exact matches.



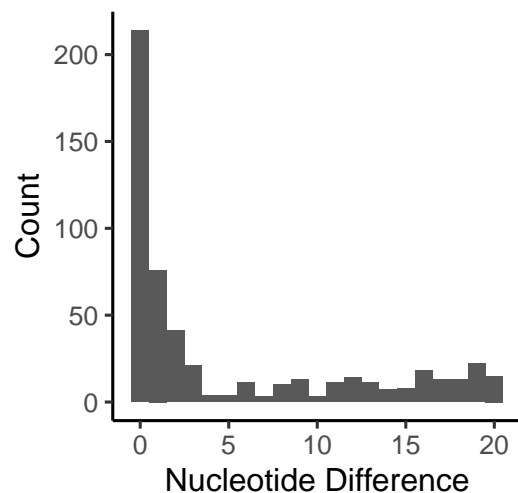
### IGHV1/OR15–1\*04

6 sequences assigned  
No exact matches.



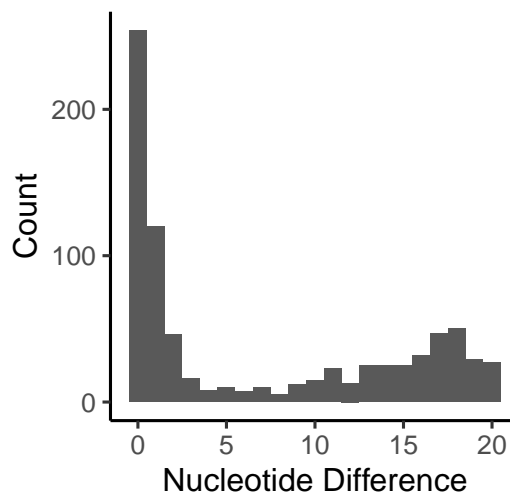
### IGHV4–38–2\*02\_A70G

1032 sequences assigned  
214 (20.7%) exact matches, in which:  
212 unique CDR3  
6 unique J



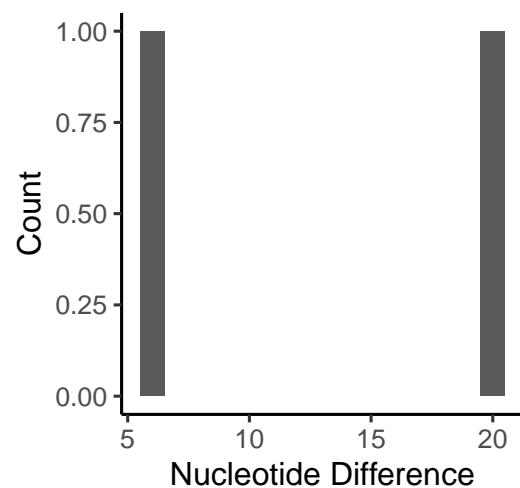
### IGHV4–59\*01

1585 sequences assigned  
254 (16%) exact matches, in which:  
254 unique CDR3  
6 unique J



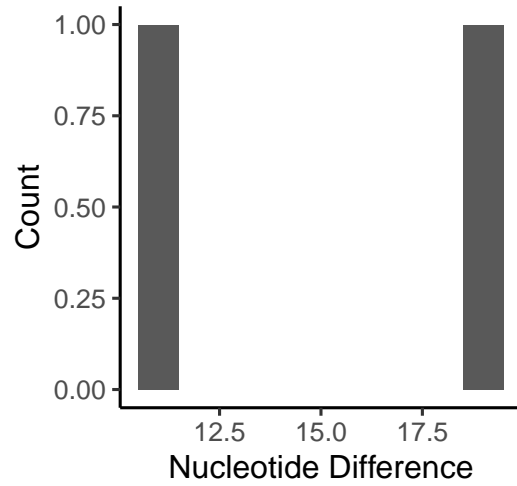
### IGHV4/OR15–8\*02

6 sequences assigned  
No exact matches.



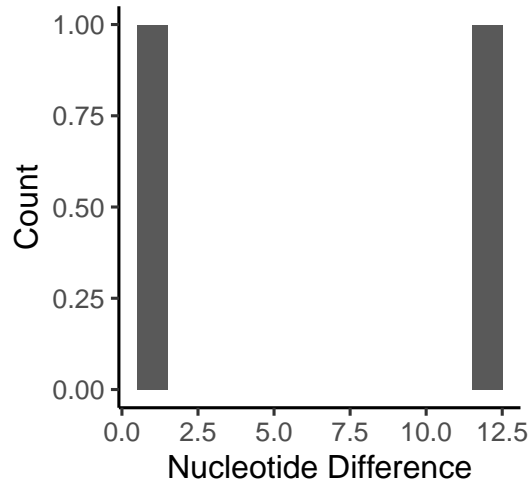
### IGHV1/OR15–9\*01

2 sequences assigned  
No exact matches.



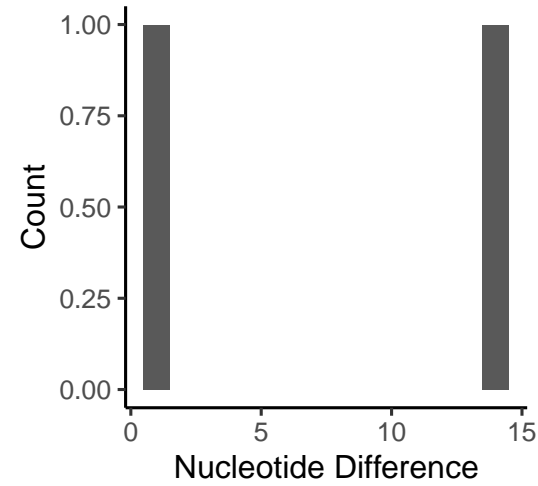
### IGHV5–78\*01

2 sequences assigned  
No exact matches.



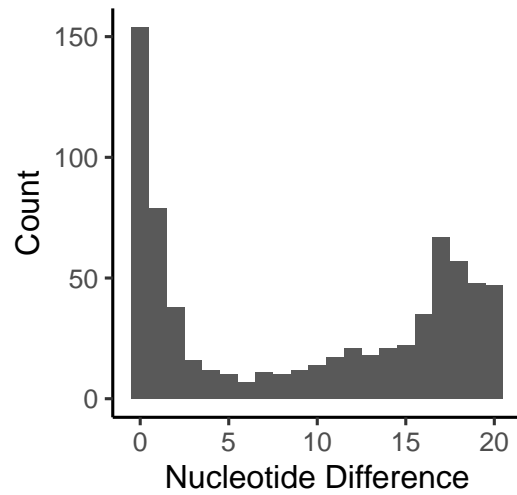
### IGHV3/OR16–12\*01

4 sequences assigned  
No exact matches.



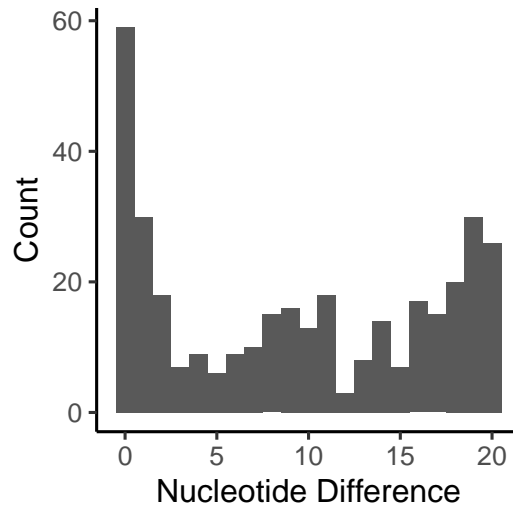
### IGHV5–51\*01

1121 sequences assigned  
154 (13.7%) exact matches, in which:  
154 unique CDR3  
6 unique J



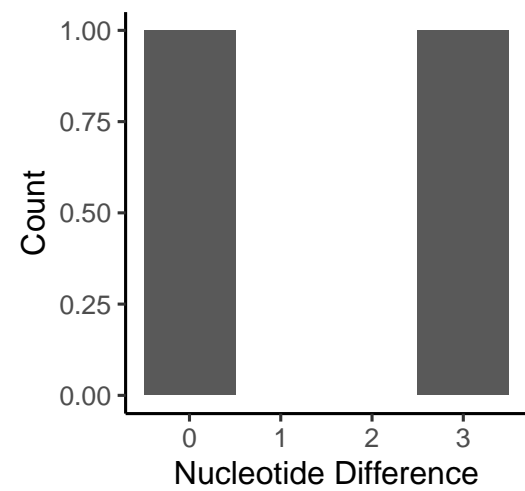
### IGHV6–1\*01

589 sequences assigned  
59 (10%) exact matches, in which:  
59 unique CDR3  
5 unique J



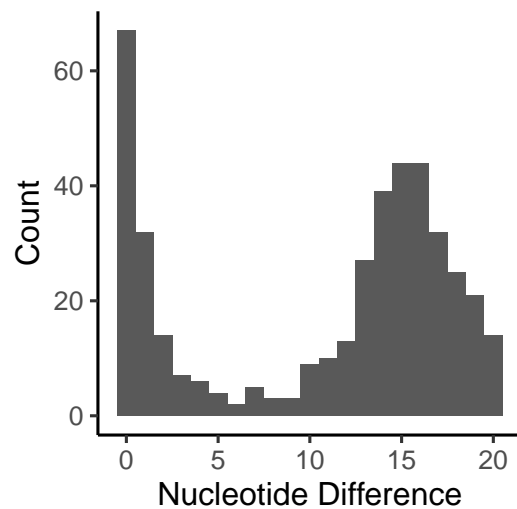
### IGHV7–4–1\*02

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



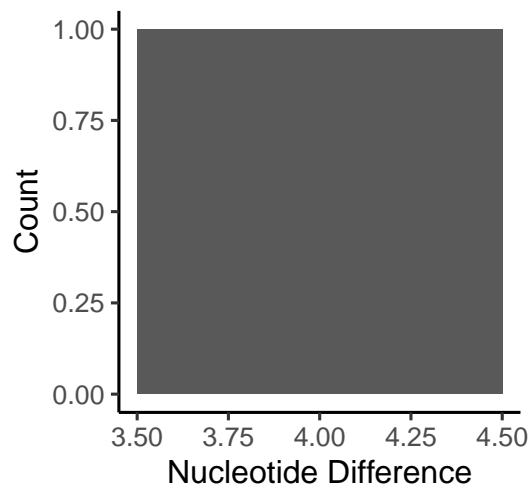
### IGHV5–51\*03

819 sequences assigned  
67 (8.2%) exact matches, in which:  
67 unique CDR3  
6 unique J



### IGHV3/OR16–8\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.