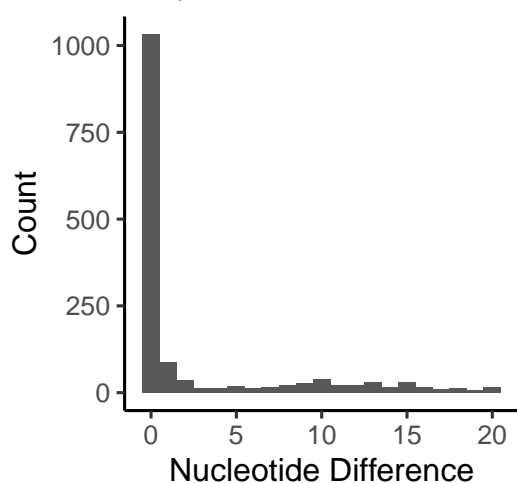


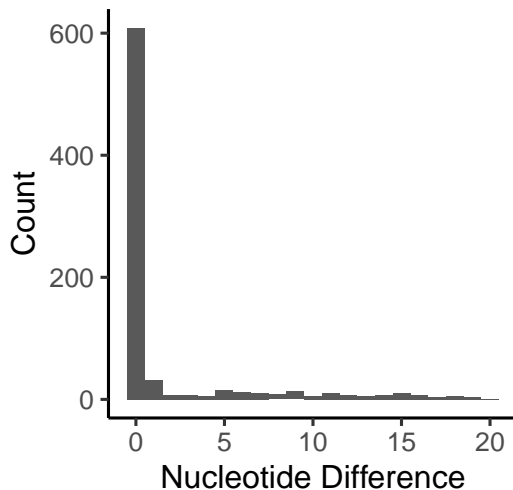
### IGHV1-2\*02

1600 sequences assigned  
1032 (64.5%) exact matches, in which:  
1019 unique CDR3  
6 unique J



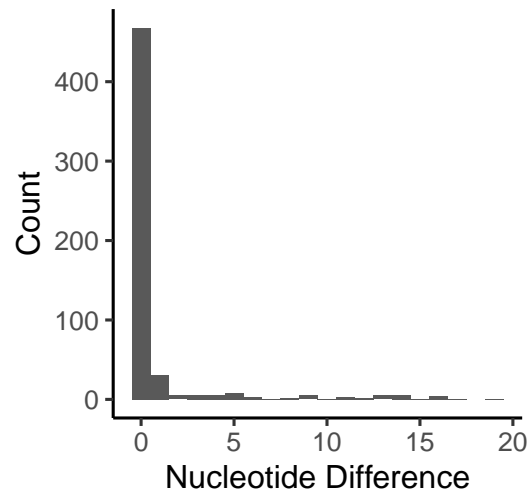
### IGHV1-8\*01

929 sequences assigned  
609 (65.6%) exact matches, in which:  
602 unique CDR3  
6 unique J



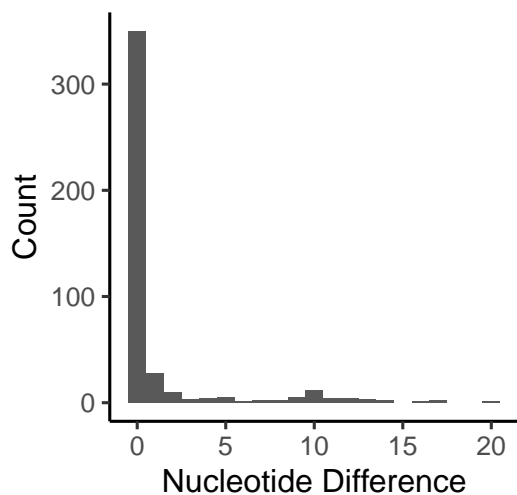
### IGHV1-24\*01

579 sequences assigned  
468 (80.8%) exact matches, in which:  
465 unique CDR3  
6 unique J



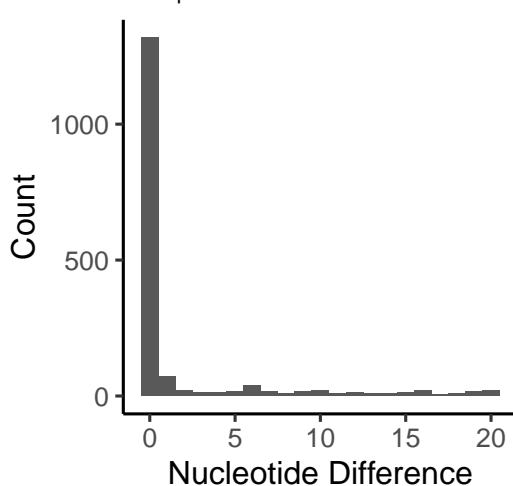
### IGHV1-2\*04

449 sequences assigned  
350 (78%) exact matches, in which:  
349 unique CDR3  
6 unique J



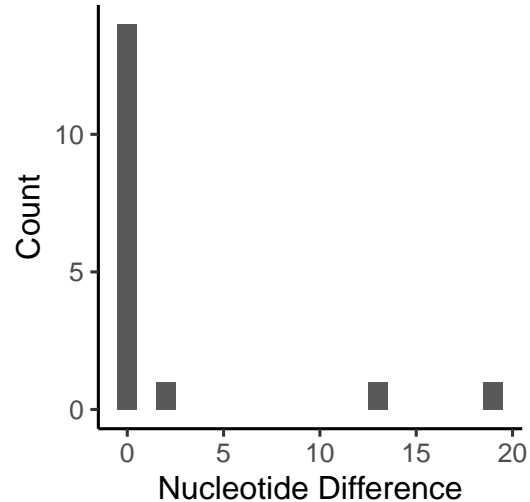
### IGHV1-18\*01

2097 sequences assigned  
1318 (62.9%) exact matches, in which:  
1304 unique CDR3  
6 unique J



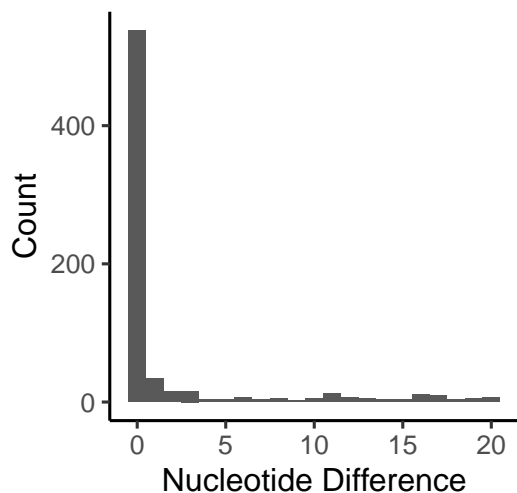
### IGHV1-45\*02

17 sequences assigned  
14 (82.4%) exact matches, in which:  
14 unique CDR3  
4 unique J



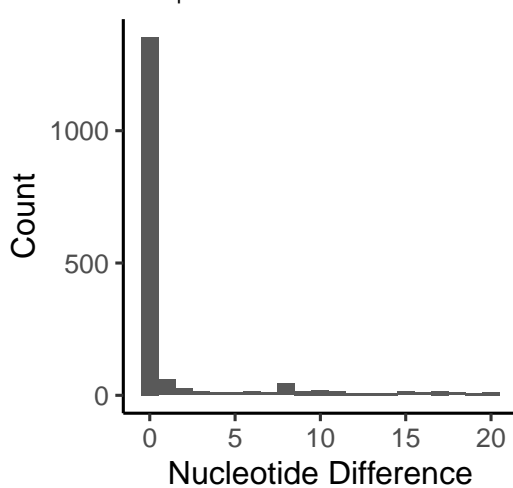
### IGHV1-3\*01\_05

833 sequences assigned  
538 (64.6%) exact matches, in which:  
529 unique CDR3  
6 unique J



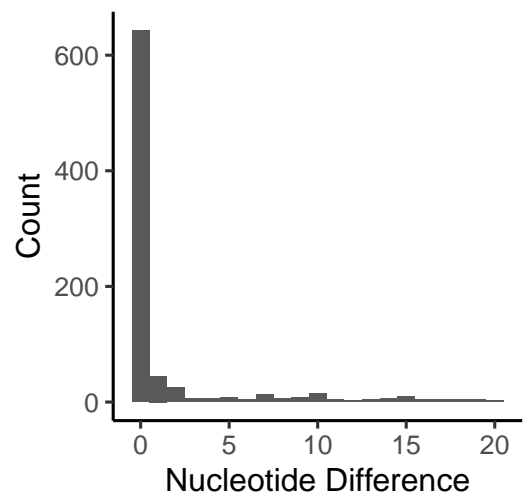
### IGHV1-18\*04

1763 sequences assigned  
1354 (76.8%) exact matches, in which:  
1339 unique CDR3  
6 unique J



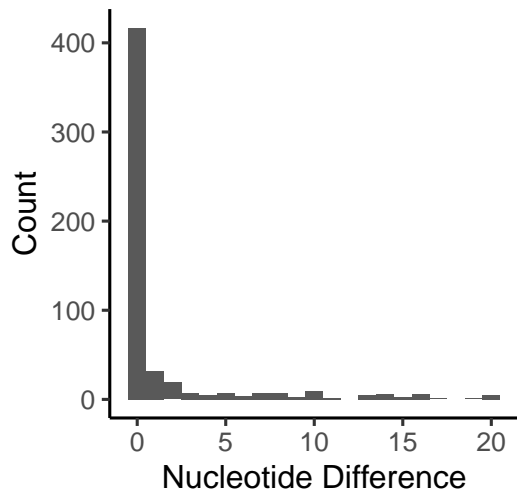
### IGHV1-46\*01

857 sequences assigned  
643 (75%) exact matches, in which:  
635 unique CDR3  
6 unique J



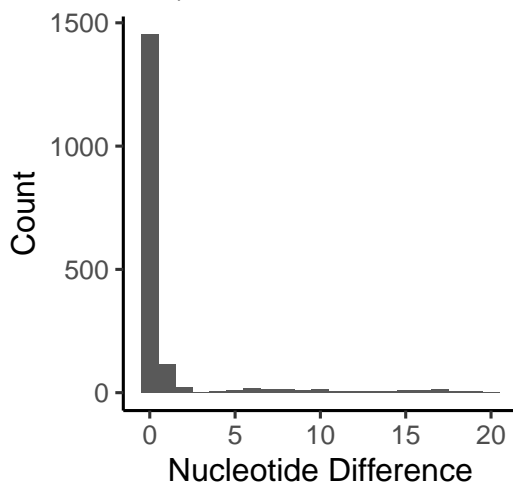
### IGHV1-46\*03

586 sequences assigned  
417 (71.2%) exact matches, in which:  
410 unique CDR3  
6 unique J



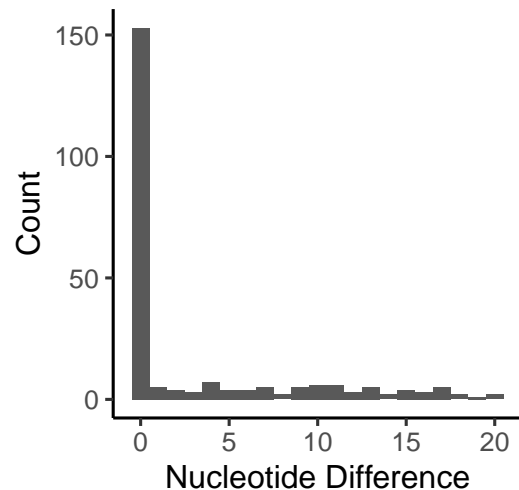
### IGHV1-69\*01\_12\_13

1833 sequences assigned  
1453 (79.3%) exact matches, in which:  
1439 unique CDR3  
6 unique J



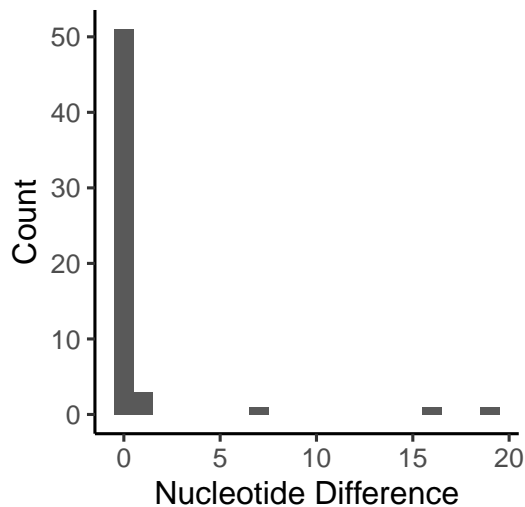
### IGHV2-5\*01

293 sequences assigned  
153 (52.2%) exact matches, in which:  
150 unique CDR3  
6 unique J



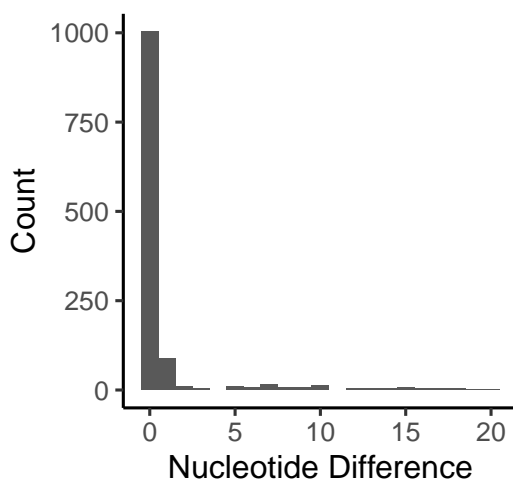
### IGHV1-58\*02

57 sequences assigned  
51 (89.5%) exact matches, in which:  
50 unique CDR3  
6 unique J



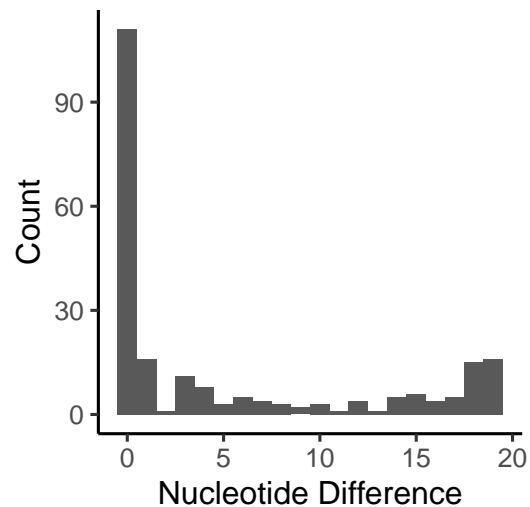
### IGHV1-69\*04\_09

1245 sequences assigned  
1003 (80.6%) exact matches, in which:  
996 unique CDR3  
6 unique J



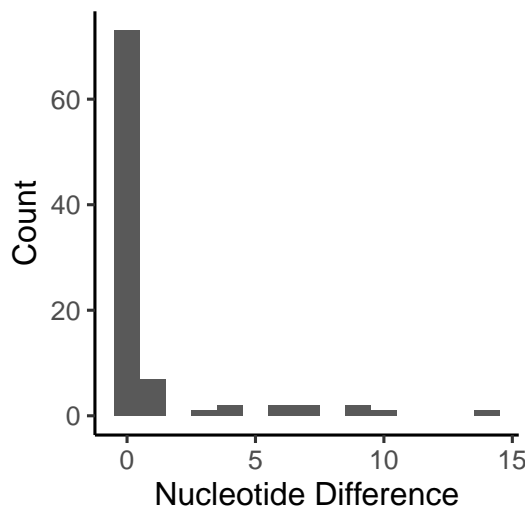
### IGHV2-5\*02

243 sequences assigned  
111 (45.7%) exact matches, in which:  
108 unique CDR3  
5 unique J



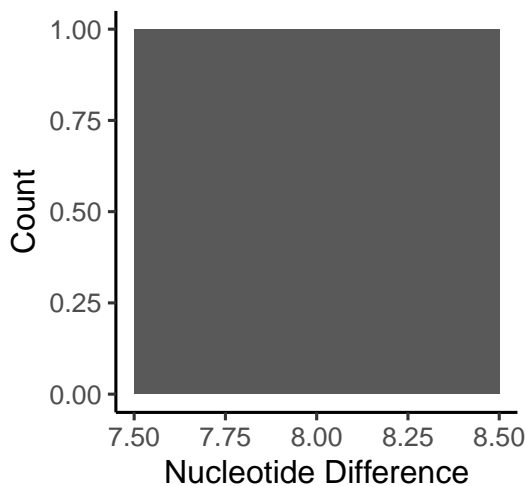
### IGHV1-58\*01\_03

94 sequences assigned  
73 (77.7%) exact matches, in which:  
71 unique CDR3  
5 unique J



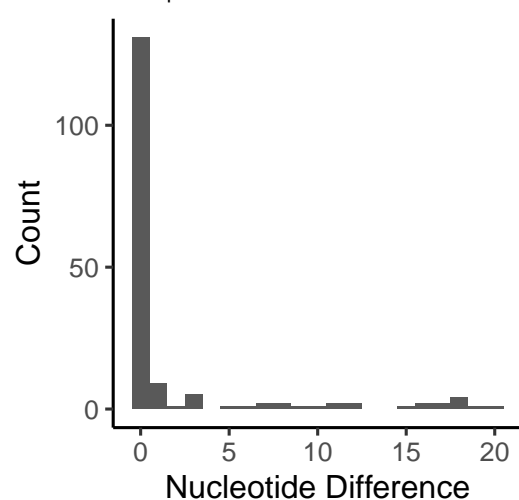
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



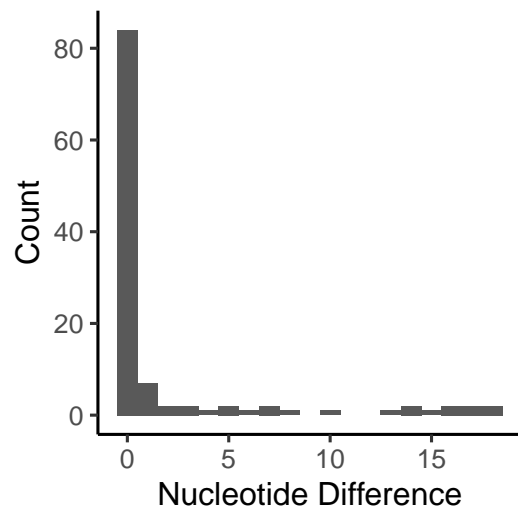
### IGHV2-26\*01

175 sequences assigned  
131 (74.9%) exact matches, in which:  
128 unique CDR3  
5 unique J



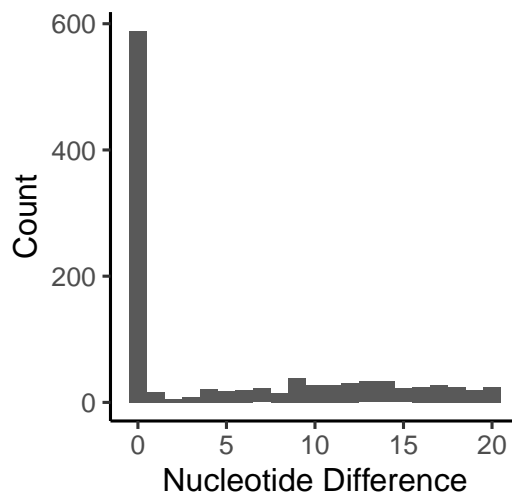
### IGHV2-70\*01

240 sequences assigned  
84 (35%) exact matches, in which:  
84 unique CDR3  
5 unique J



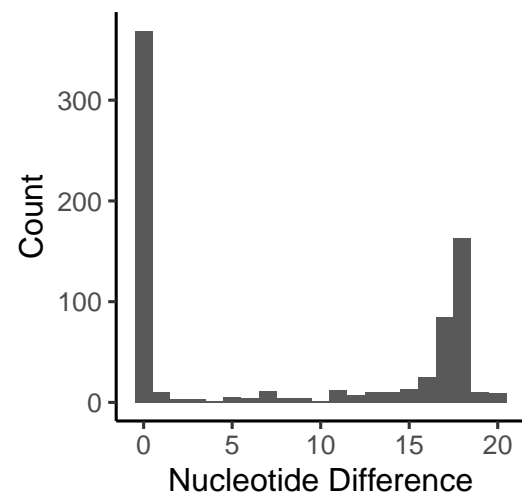
### IGHV3-7\*03

1148 sequences assigned  
589 (51.3%) exact matches, in which:  
407 unique CDR3  
6 unique J



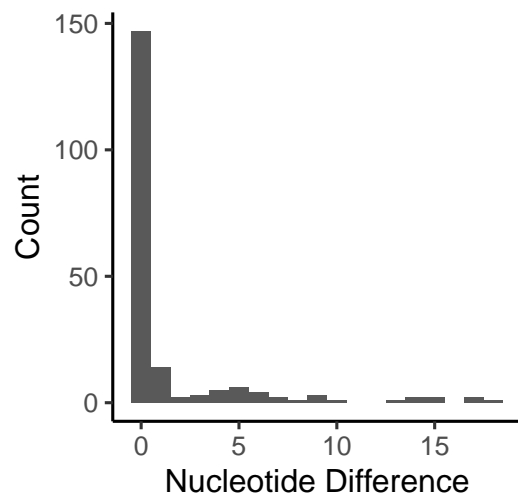
### IGHV3-11\*06

1160 sequences assigned  
369 (31.8%) exact matches, in which:  
262 unique CDR3  
6 unique J



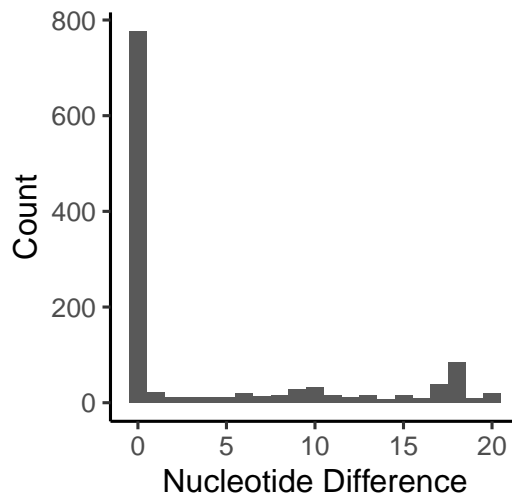
### IGHV2-70\*11\_15

203 sequences assigned  
147 (72.4%) exact matches, in which:  
142 unique CDR3  
5 unique J



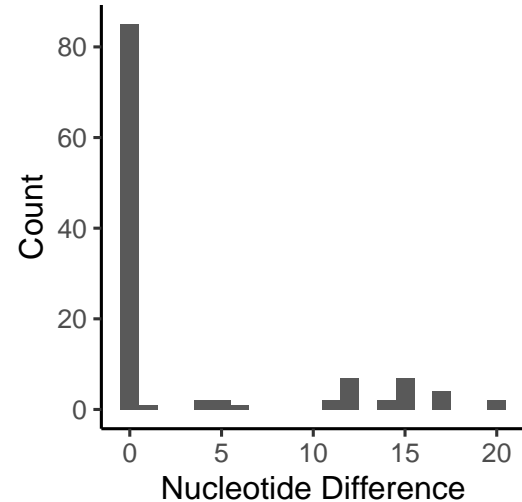
### IGHV3-9\*01

1293 sequences assigned  
777 (60.1%) exact matches, in which:  
574 unique CDR3  
6 unique J



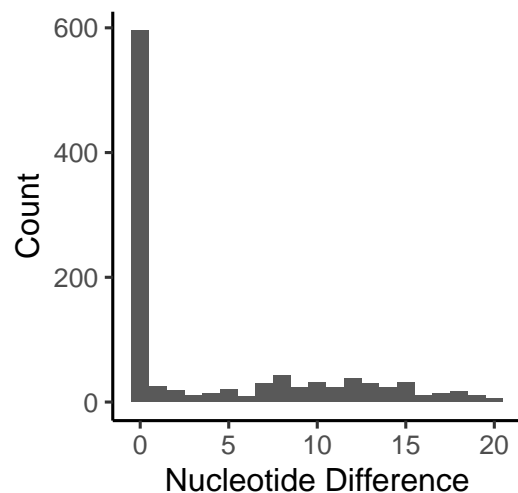
### IGHV3-13\*01

117 sequences assigned  
85 (72.6%) exact matches, in which:  
58 unique CDR3  
5 unique J



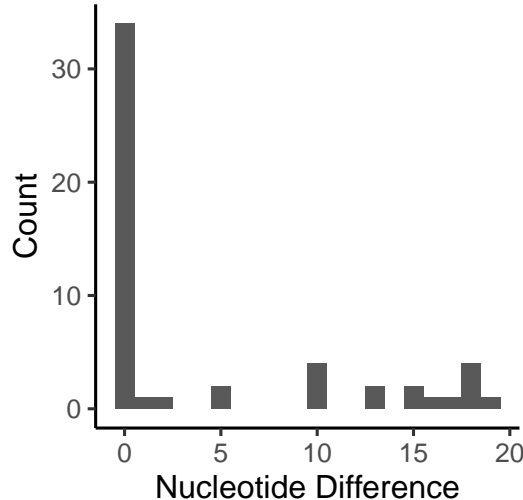
### IGHV3-7\*01

1068 sequences assigned  
596 (55.8%) exact matches, in which:  
410 unique CDR3  
6 unique J



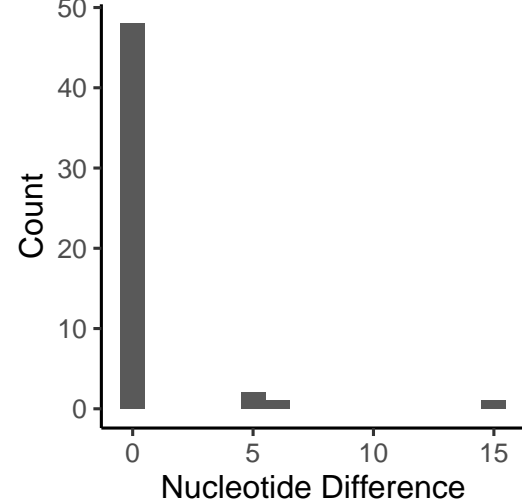
### IGHV3-11\*01

63 sequences assigned  
34 (54%) exact matches, in which:  
28 unique CDR3  
6 unique J



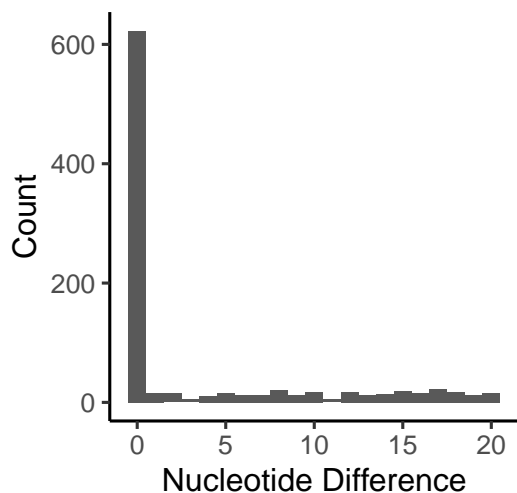
### IGHV3-13\*05

55 sequences assigned  
48 (87.3%) exact matches, in which:  
38 unique CDR3  
5 unique J



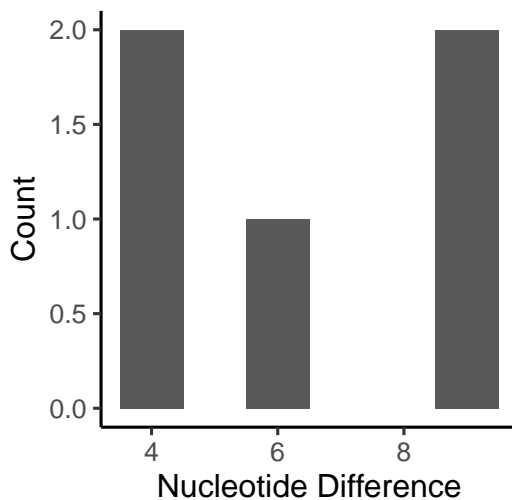
### IGHV3–15\*01\_02

988 sequences assigned  
623 (63.1%) exact matches, in which:  
462 unique CDR3  
6 unique J



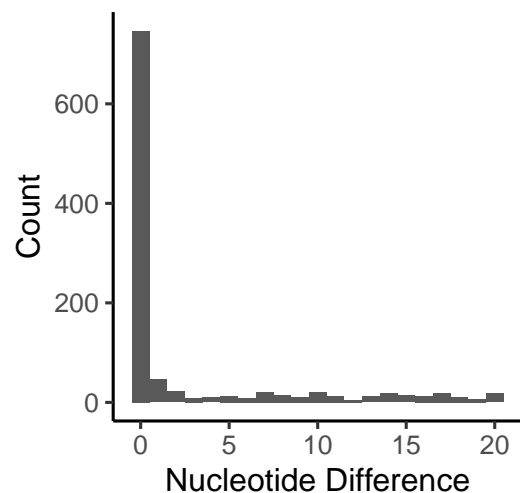
### IGHV3–20\*03\_04

41 sequences assigned  
No exact matches.



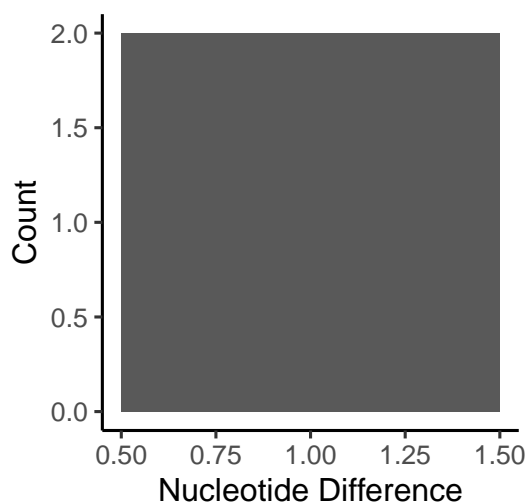
### IGHV3–33\*01

1195 sequences assigned  
747 (62.5%) exact matches, in which:  
546 unique CDR3  
6 unique J



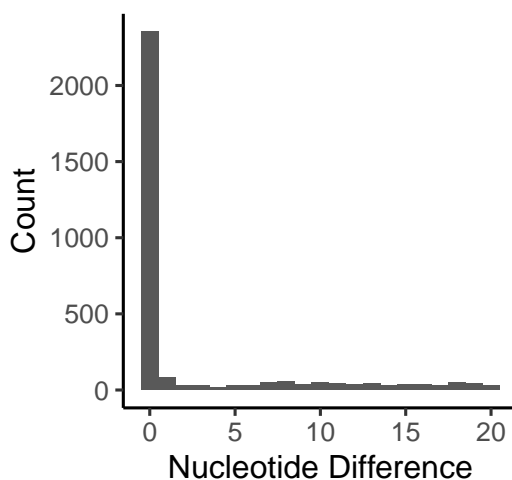
### IGHV3–19\*01

2 sequences assigned  
No exact matches.



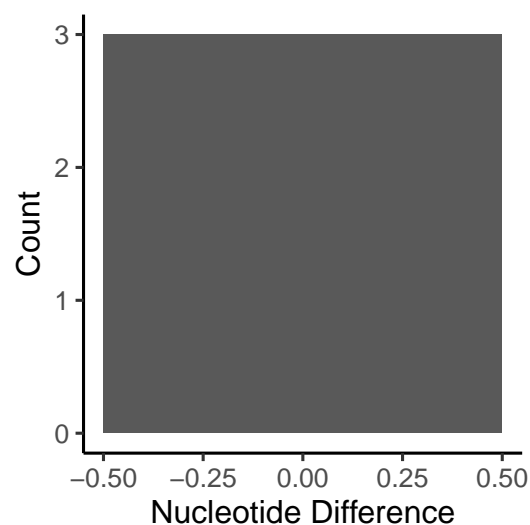
### IGHV3–21\*01\_02

3326 sequences assigned  
2353 (70.7%) exact matches, in which:  
1627 unique CDR3  
6 unique J



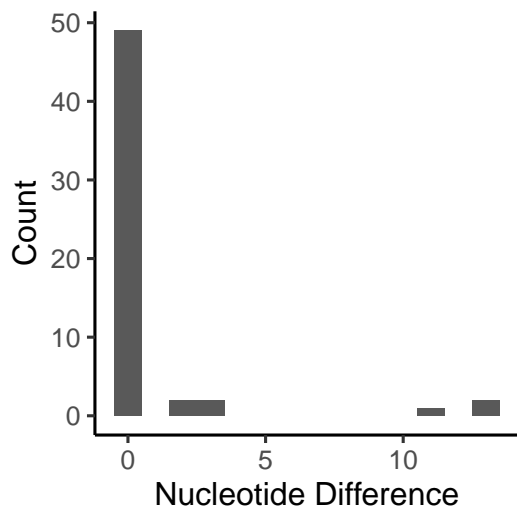
### IGHV3–35\*01

3 sequences assigned  
3 (100%) exact matches, in which:  
2 unique CDR3  
1 unique J



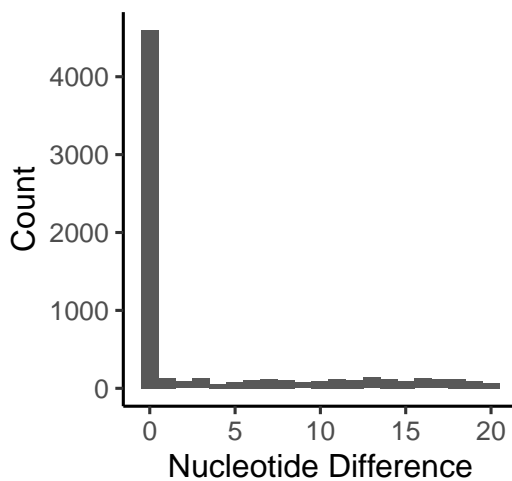
### IGHV3–20\*01\_02

60 sequences assigned  
49 (81.7%) exact matches, in which:  
37 unique CDR3  
5 unique J



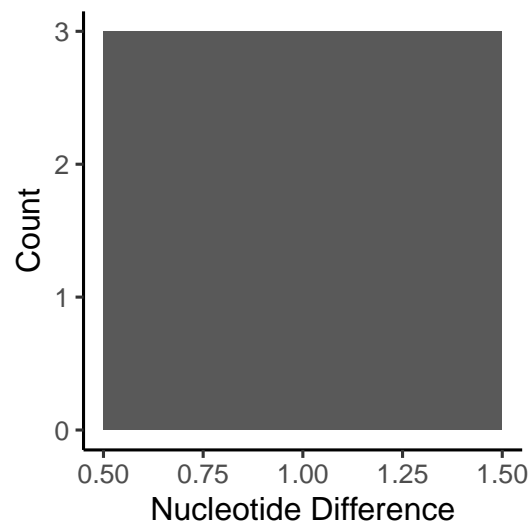
### IGHV3–23\*01\_04

7570 sequences assigned  
4599 (60.8%) exact matches, in which:  
3153 unique CDR3  
6 unique J



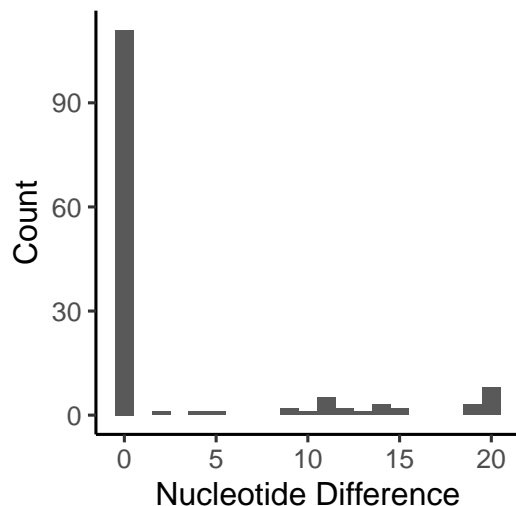
### IGHV3–38–3\*01

3 sequences assigned  
No exact matches.



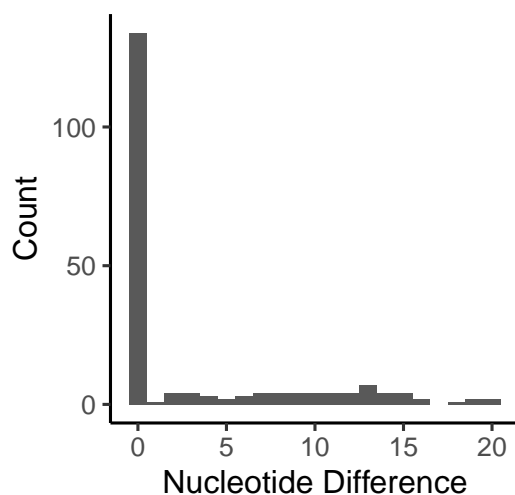
### IGHV3-43\*01

178 sequences assigned  
111 (62.4%) exact matches, in which:  
83 unique CDR3  
6 unique J



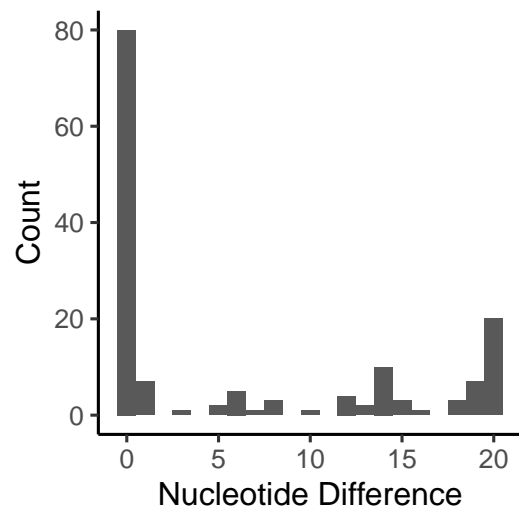
### IGHV3-49\*03\_05

212 sequences assigned  
134 (63.2%) exact matches, in which:  
109 unique CDR3  
5 unique J



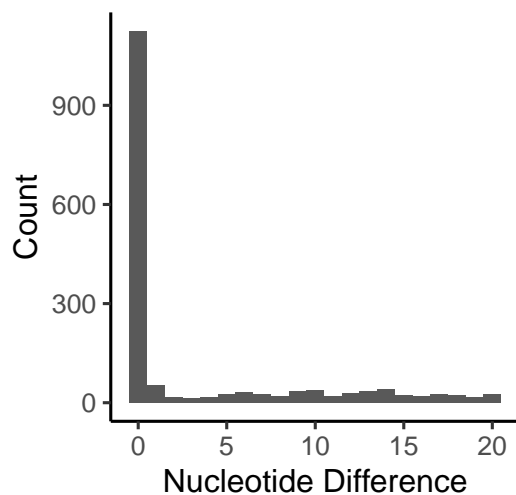
### IGHV3-64\*01

183 sequences assigned  
80 (43.7%) exact matches, in which:  
57 unique CDR3  
6 unique J



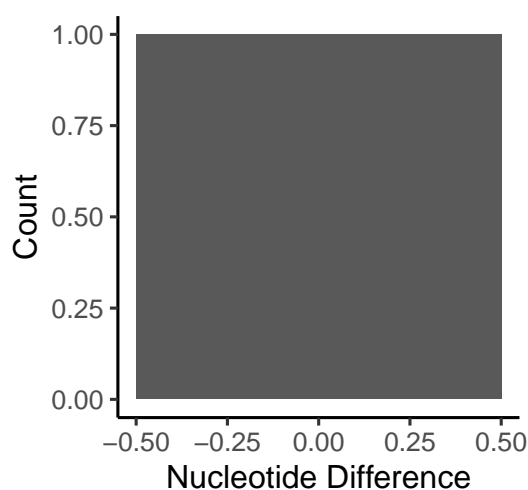
### IGHV3-48\*02

1864 sequences assigned  
1125 (60.4%) exact matches, in which:  
769 unique CDR3  
6 unique J



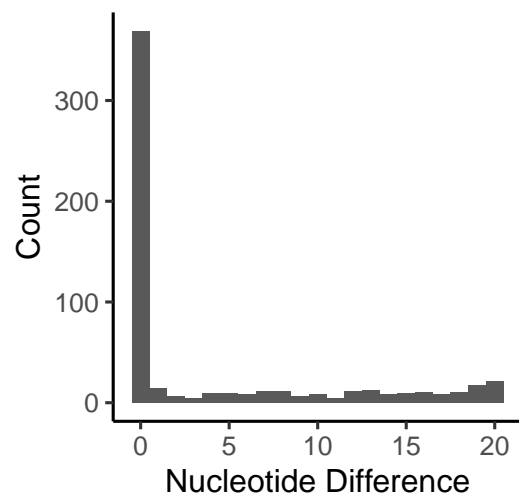
### IGHV3-52\*02

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



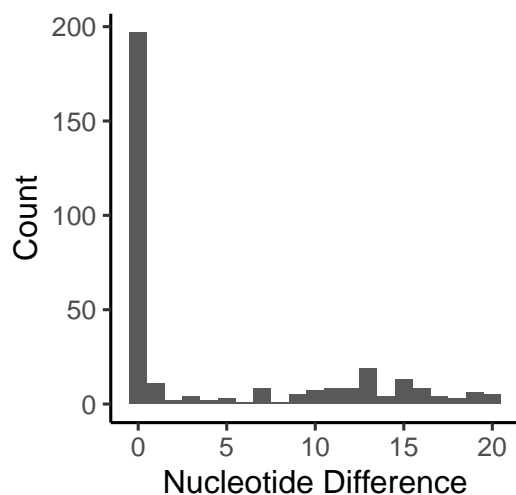
### IGHV3-66\*01

695 sequences assigned  
369 (53.1%) exact matches, in which:  
249 unique CDR3  
6 unique J



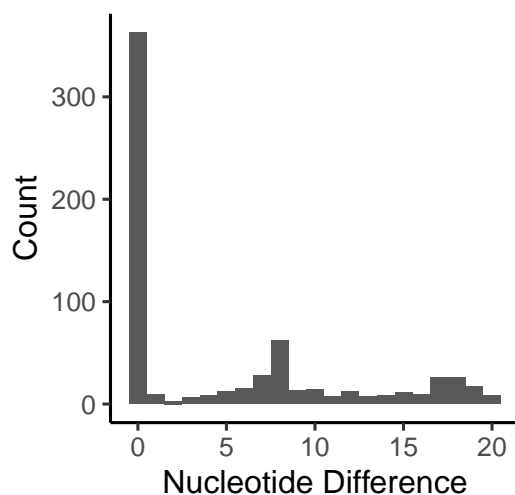
### IGHV3-49\*04

383 sequences assigned  
197 (51.4%) exact matches, in which:  
149 unique CDR3  
6 unique J



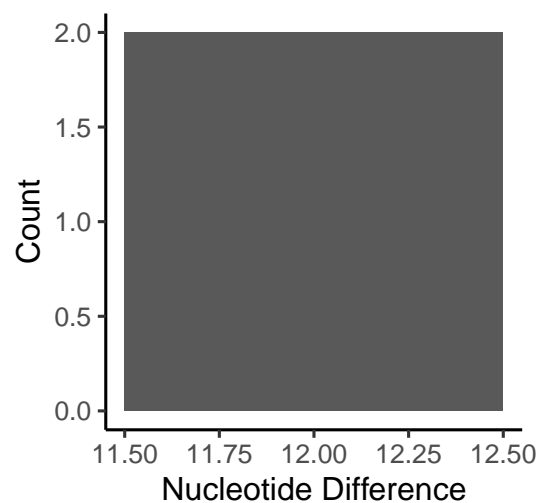
### IGHV3-53\*01\_02

715 sequences assigned  
363 (50.8%) exact matches, in which:  
253 unique CDR3  
6 unique J



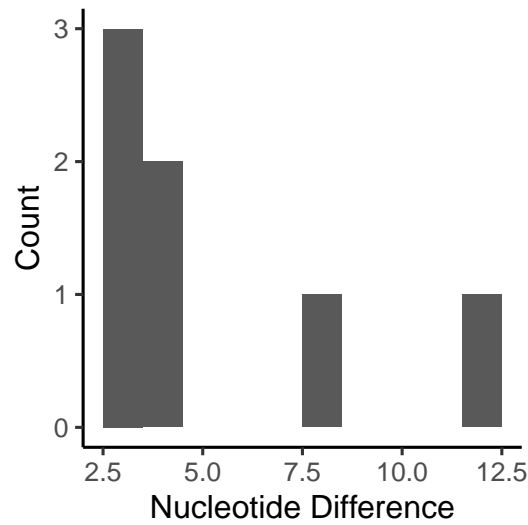
### IGHV3-69-1\*01

5 sequences assigned  
No exact matches.



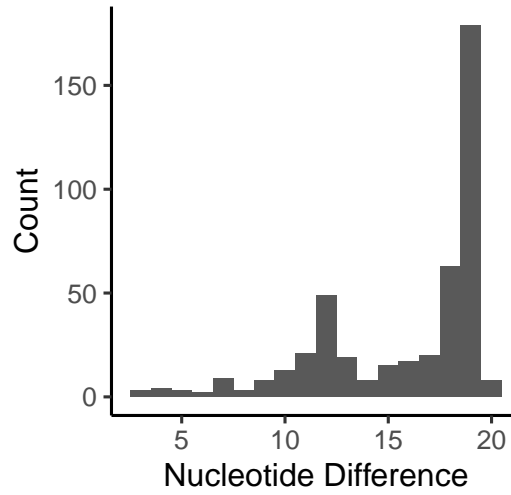
### IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



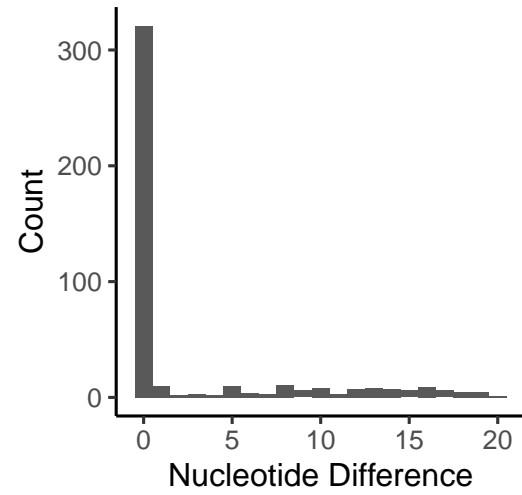
### IGHV3-74\*03

492 sequences assigned  
No exact matches.



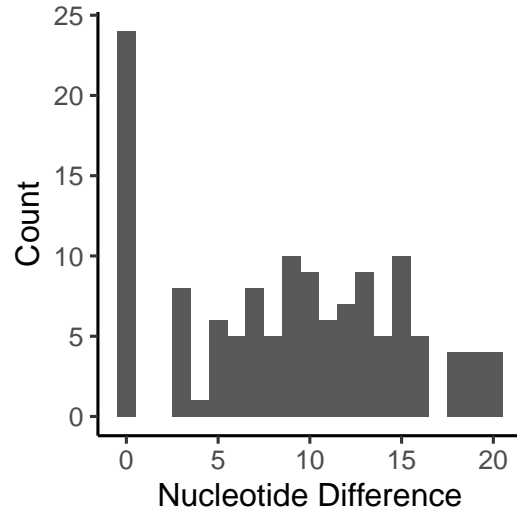
### IGHV3-64D\*06

569 sequences assigned  
321 (56.4%) exact matches, in which:  
208 unique CDR3  
6 unique J



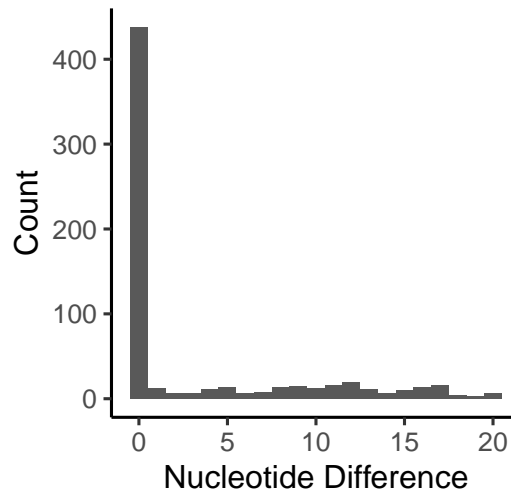
### IGHV3-72\*01

164 sequences assigned  
24 (14.6%) exact matches, in which:  
15 unique CDR3  
5 unique J



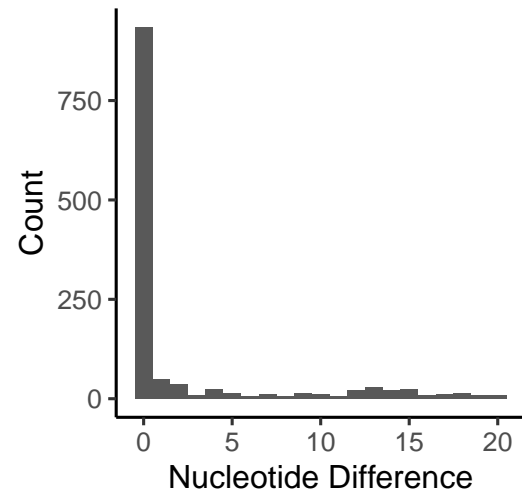
### IGHV3-74\*01\_02

662 sequences assigned  
438 (66.2%) exact matches, in which:  
280 unique CDR3  
6 unique J



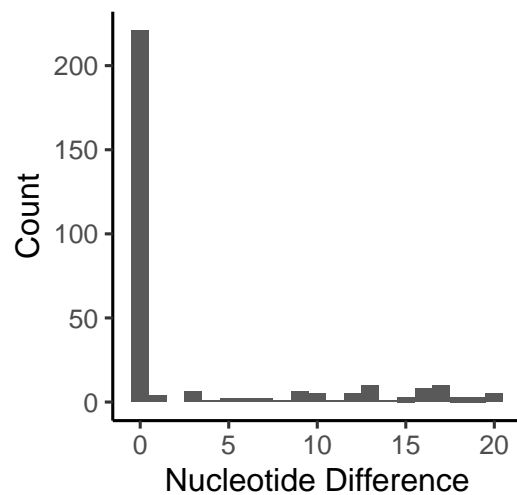
### IGHV4-4\*02\_03

1443 sequences assigned  
935 (64.8%) exact matches, in which:  
909 unique CDR3  
6 unique J



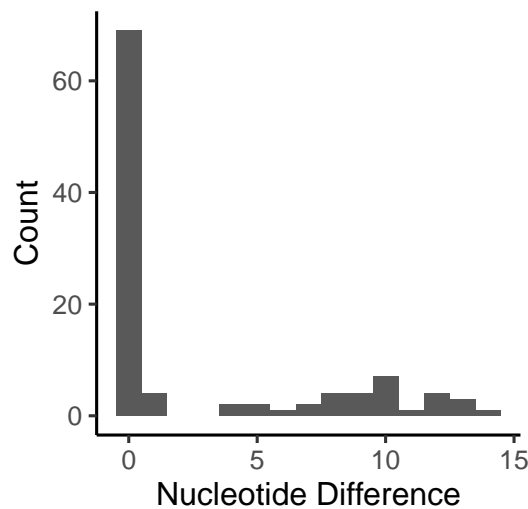
### IGHV3-73\*01\_02

352 sequences assigned  
221 (62.8%) exact matches, in which:  
153 unique CDR3  
6 unique J



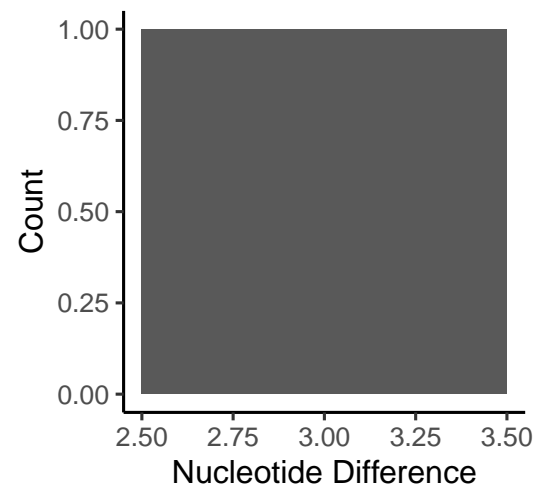
### IGHV3-43D\*03

107 sequences assigned  
69 (64.5%) exact matches, in which:  
50 unique CDR3  
5 unique J



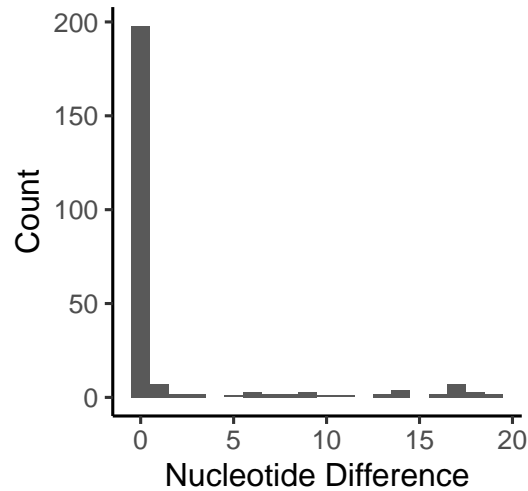
### IGHV4-28\*01\_07

1 sequences assigned  
No exact matches.



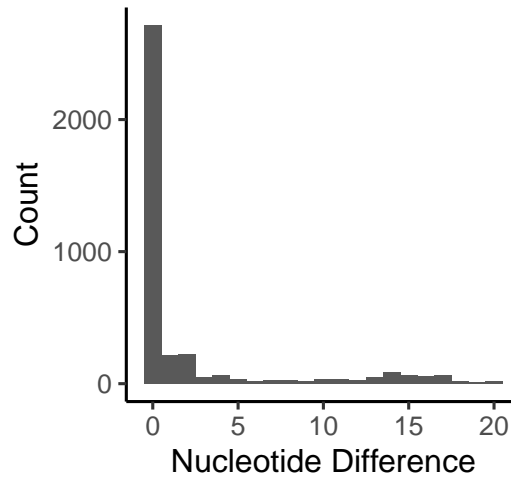
### IGHV4-30-2\*01

260 sequences assigned  
198 (76.2%) exact matches, in which:  
191 unique CDR3  
6 unique J



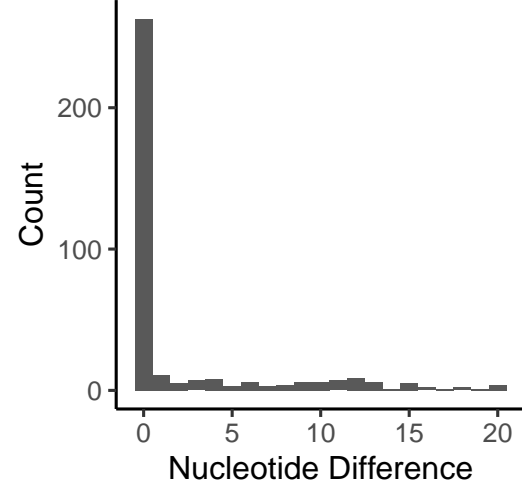
### IGHV4-34\*01\_02

4181 sequences assigned  
2713 (64.9%) exact matches, in which:  
2627 unique CDR3  
6 unique J



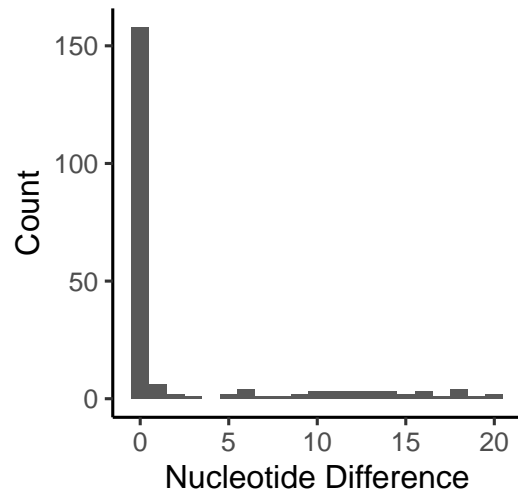
### IGHV4-39\*01\_05

386 sequences assigned  
263 (68.1%) exact matches, in which:  
254 unique CDR3  
6 unique J



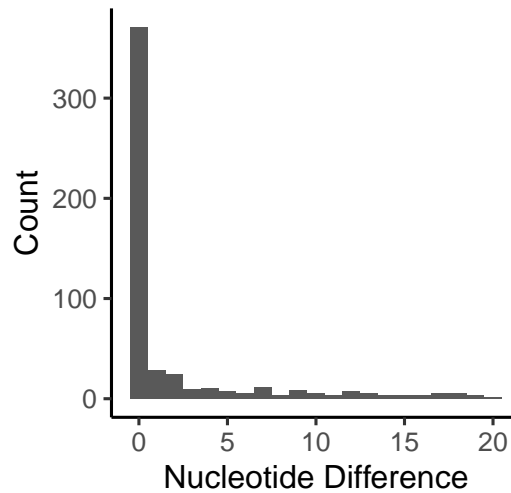
### IGHV4-30-4\*07

302 sequences assigned  
158 (52.3%) exact matches, in which:  
151 unique CDR3  
6 unique J



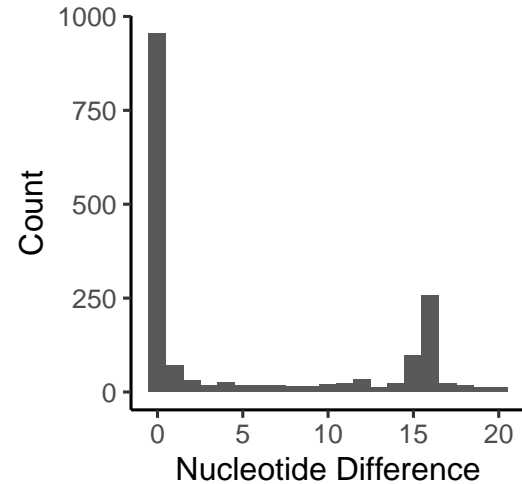
### IGHV4-38-2\*02

565 sequences assigned  
371 (65.7%) exact matches, in which:  
365 unique CDR3  
6 unique J



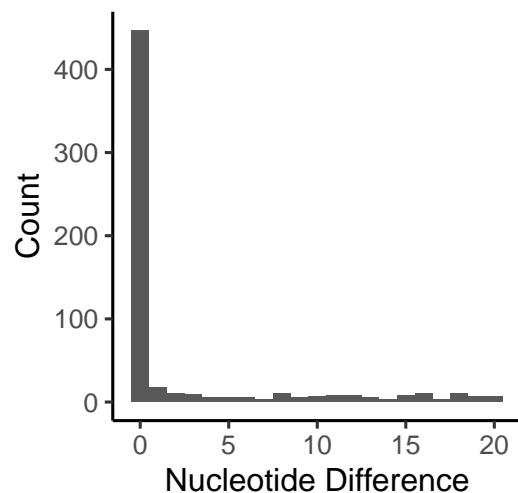
### IGHV4-59\*08

1883 sequences assigned  
954 (50.7%) exact matches, in which:  
936 unique CDR3  
6 unique J



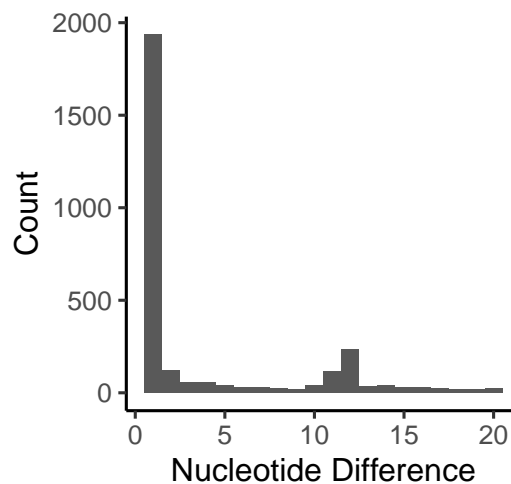
### IGHV4-31\*02

696 sequences assigned  
447 (64.2%) exact matches, in which:  
440 unique CDR3  
6 unique J



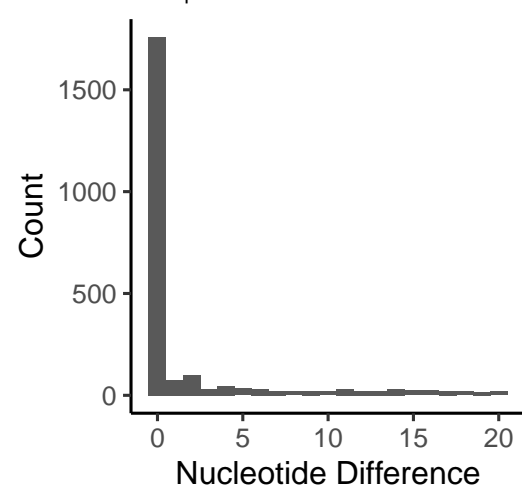
### IGHV4-39\*02

3485 sequences assigned  
No exact matches.



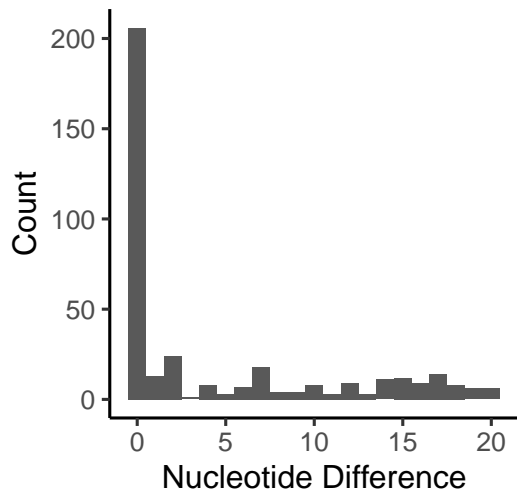
### IGHV4-59\*02\_G88A

2527 sequences assigned  
1759 (69.6%) exact matches, in which:  
1747 unique CDR3  
6 unique J



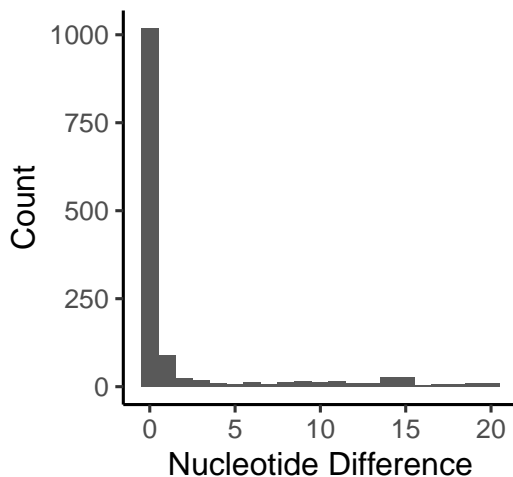
### IGHV4–61\*01

563 sequences assigned  
206 (36.6%) exact matches, in which:  
204 unique CDR3  
6 unique J



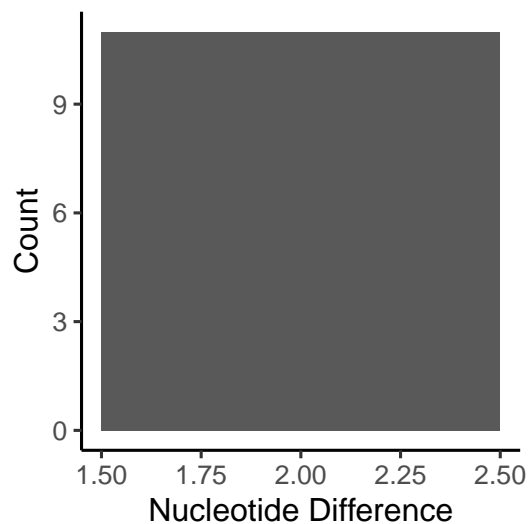
### IGHV5–10–1\*01\_03

1531 sequences assigned  
1018 (66.5%) exact matches, in which:  
965 unique CDR3  
6 unique J



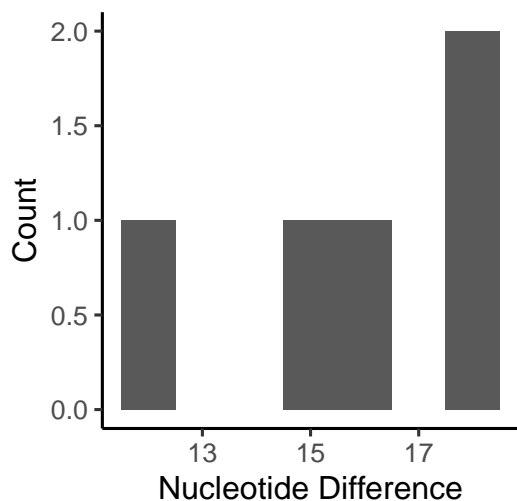
### IGHV3/OR16–9\*01

11 sequences assigned  
No exact matches.



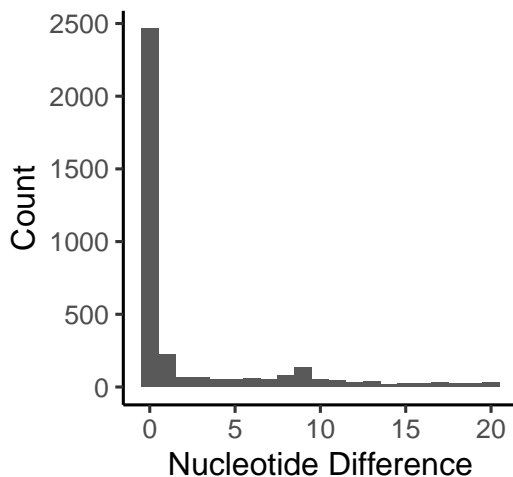
### IGHV4/OR15–8\*01

6 sequences assigned  
No exact matches.



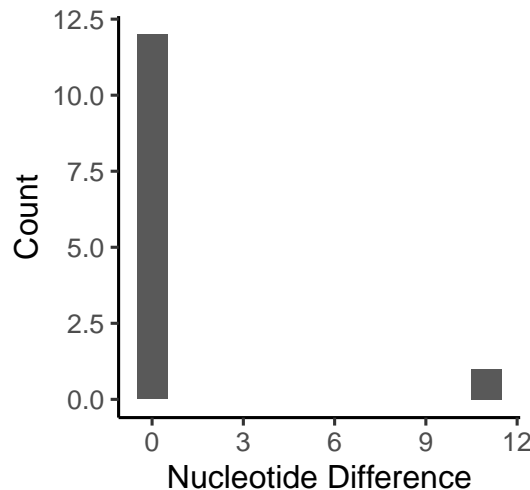
### IGHV5–51\*07\_A128G

3744 sequences assigned  
2464 (65.8%) exact matches, in which:  
2294 unique CDR3  
6 unique J



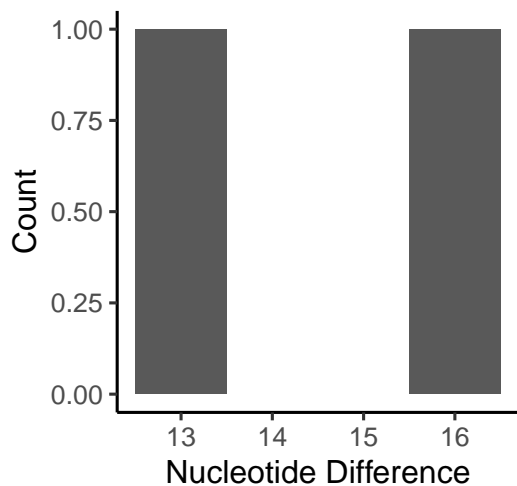
### IGHV7–4–1\*01

13 sequences assigned  
12 (92.3%) exact matches, in which:  
12 unique CDR3  
4 unique J



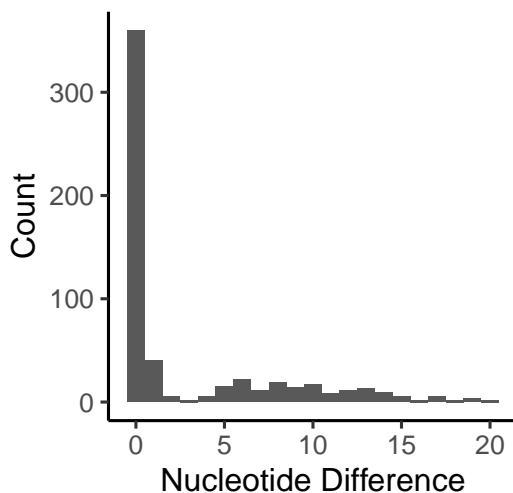
### IGHV4/OR15–8\*02

7 sequences assigned  
No exact matches.



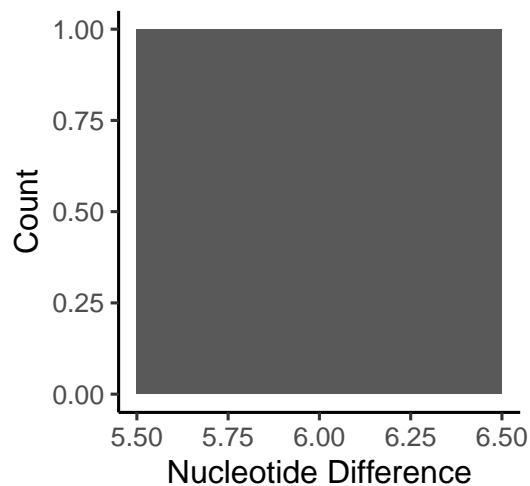
### IGHV6–1\*01\_02

597 sequences assigned  
360 (60.3%) exact matches, in which:  
357 unique CDR3  
5 unique J

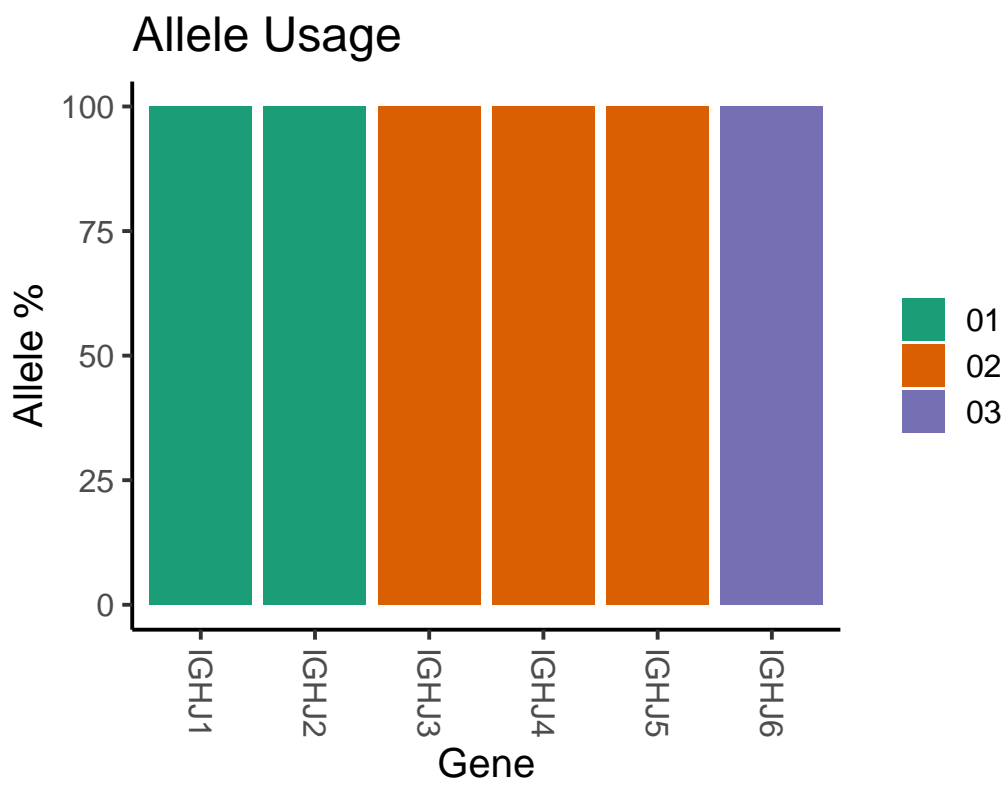


### IGHV7–40\*03

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.