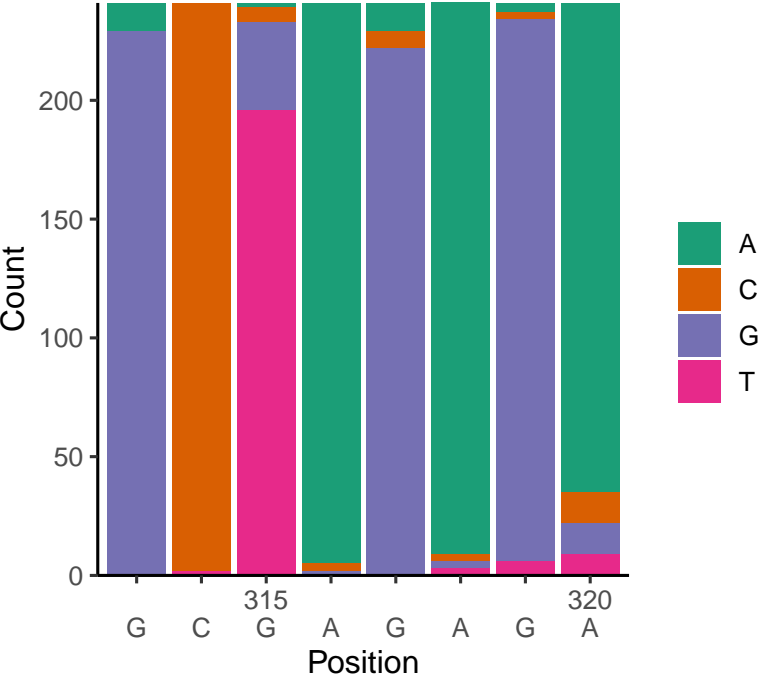
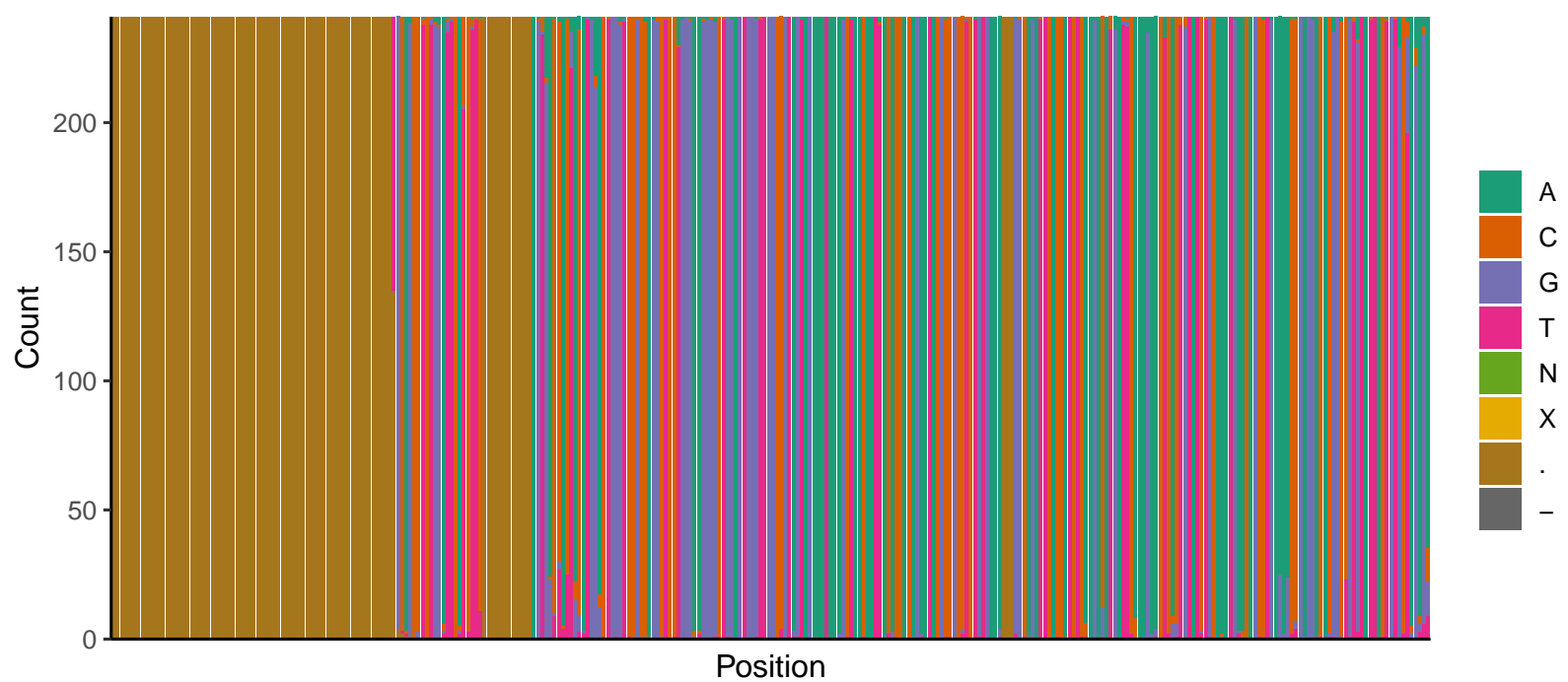
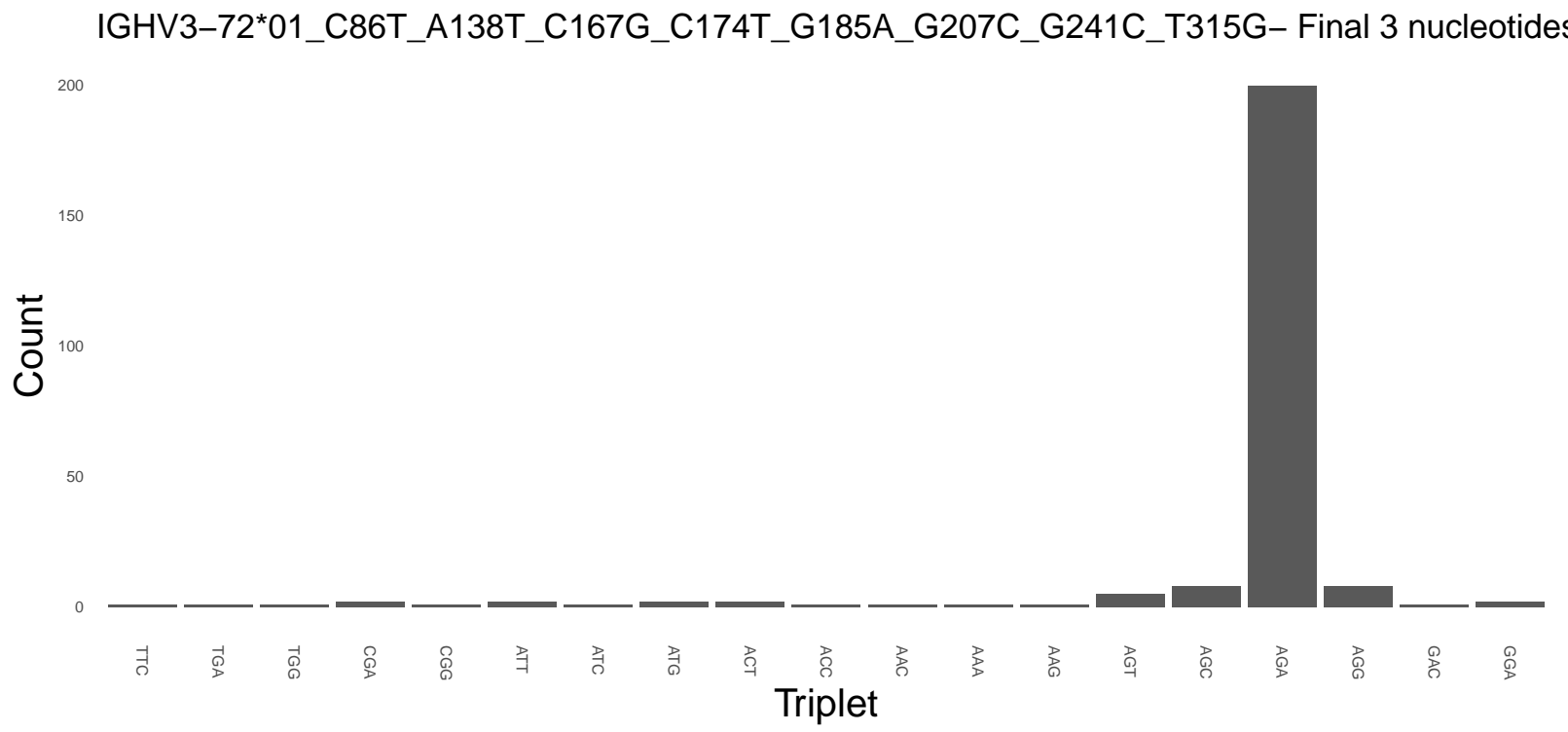


Gene IGHV3-72\*01\_C86T\_A138T\_C167G\_C174T\_G185A\_G207C\_G241C\_T315G



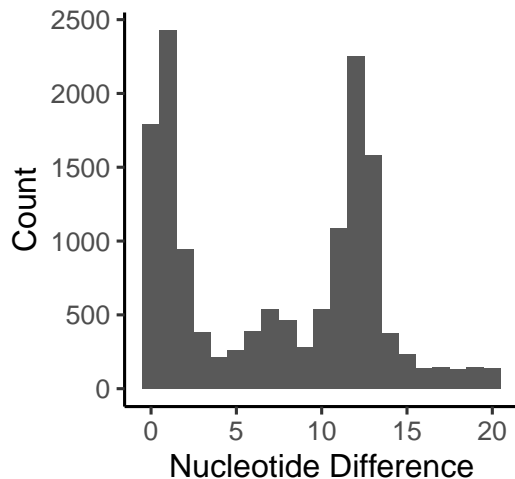
Gene IGHV3-72\*01\_C86T\_A138T\_C167G\_C174T\_G185A\_G207C\_G241C\_T315G





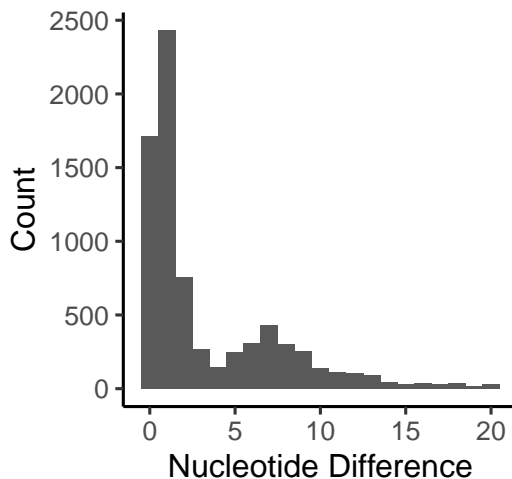
### IGHV1-2\*02

15941 sequences assigned  
1795 (11.3%) exact matches, in which:  
1392 unique CDR3  
6 unique J



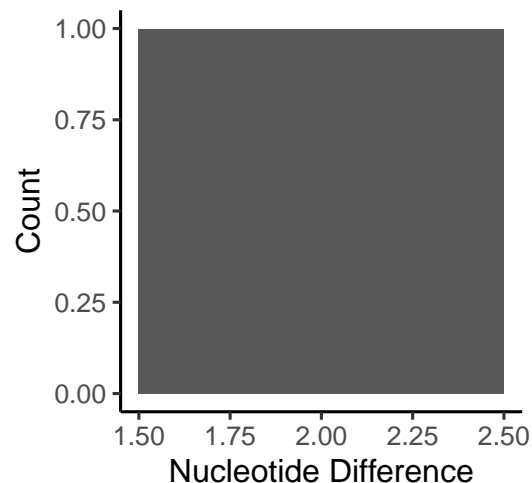
### IGHV1-8\*01

8616 sequences assigned  
1714 (19.9%) exact matches, in which:  
1351 unique CDR3  
6 unique J



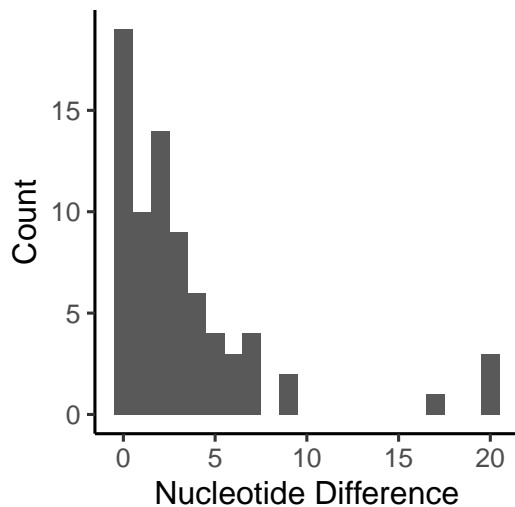
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



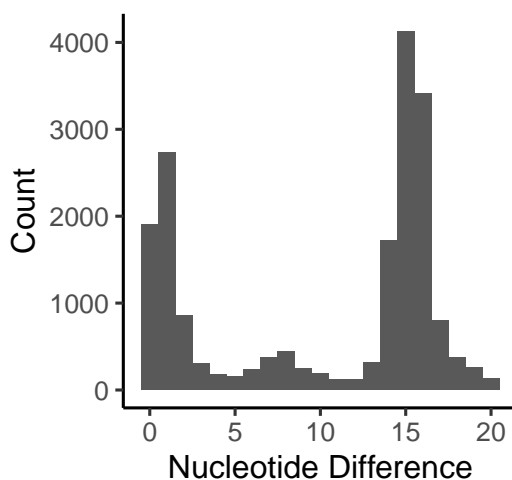
### IGHV1-3\*02

77 sequences assigned  
19 (24.7%) exact matches, in which:  
19 unique CDR3  
4 unique J



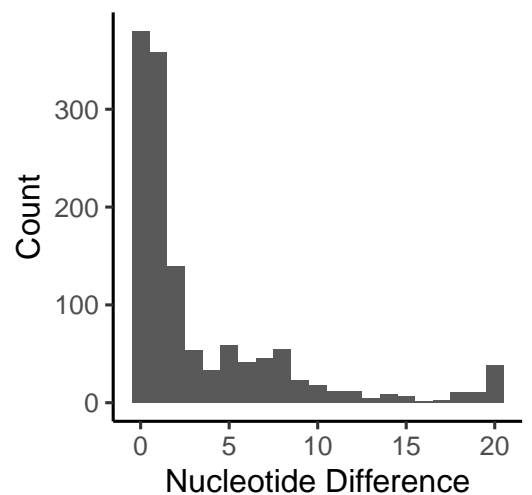
### IGHV1-18\*04

20048 sequences assigned  
1906 (9.5%) exact matches, in which:  
1485 unique CDR3  
6 unique J



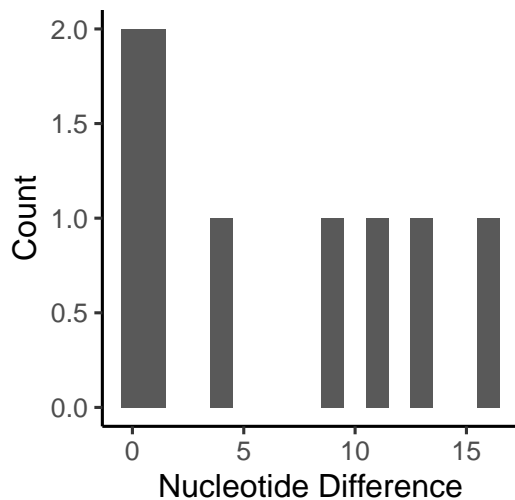
### IGHV1-46\*01

1444 sequences assigned  
380 (26.3%) exact matches, in which:  
327 unique CDR3  
6 unique J



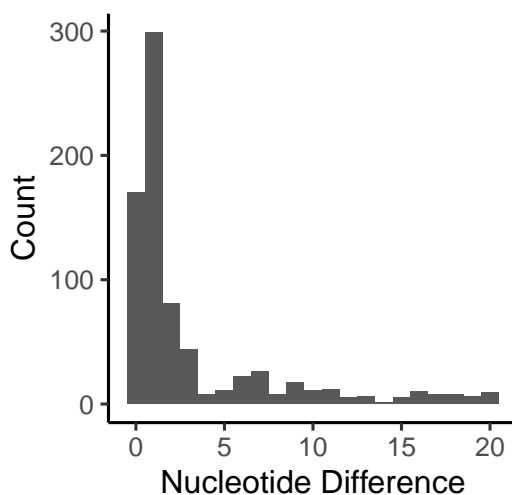
### IGHV1-3\*01\_05

11 sequences assigned  
2 (18.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



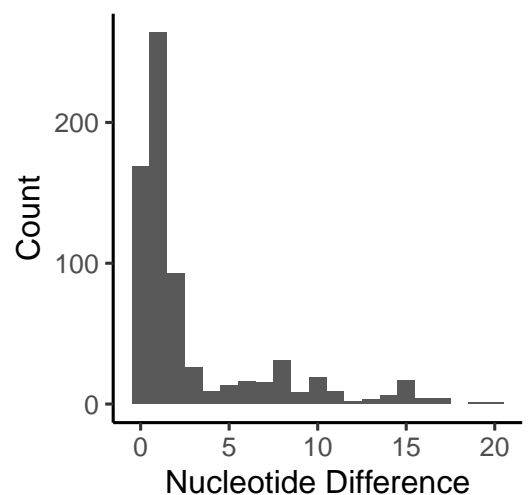
### IGHV1-24\*01

780 sequences assigned  
170 (21.8%) exact matches, in which:  
109 unique CDR3  
5 unique J



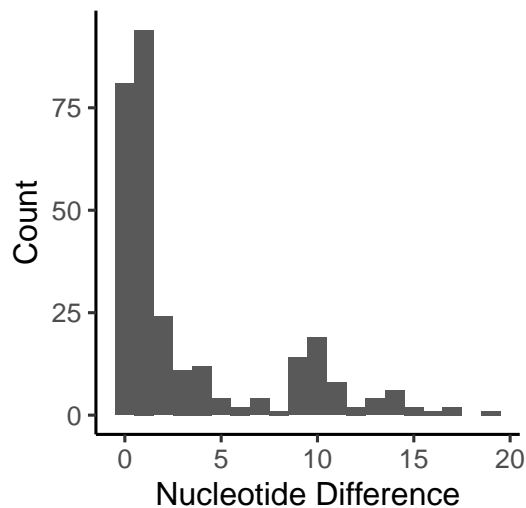
### IGHV1-46\*03

831 sequences assigned  
169 (20.3%) exact matches, in which:  
106 unique CDR3  
5 unique J



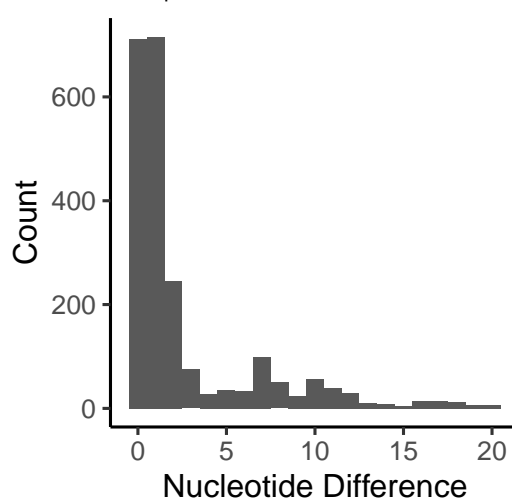
### IGHV1-58\*02

544 sequences assigned  
81 (14.9%) exact matches, in which:  
67 unique CDR3  
6 unique J



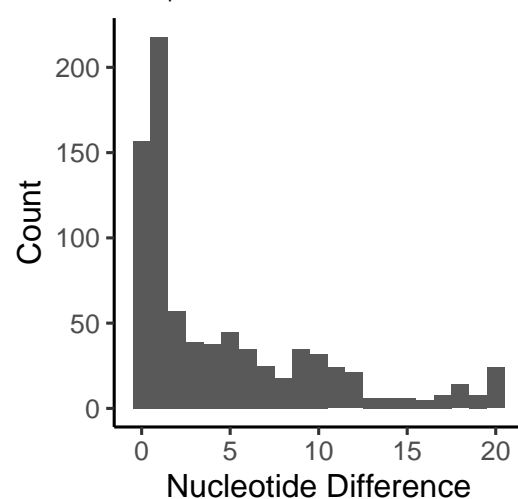
### IGHV1-69\*01\_12\_13

2291 sequences assigned  
711 (31%) exact matches, in which:  
601 unique CDR3  
6 unique J



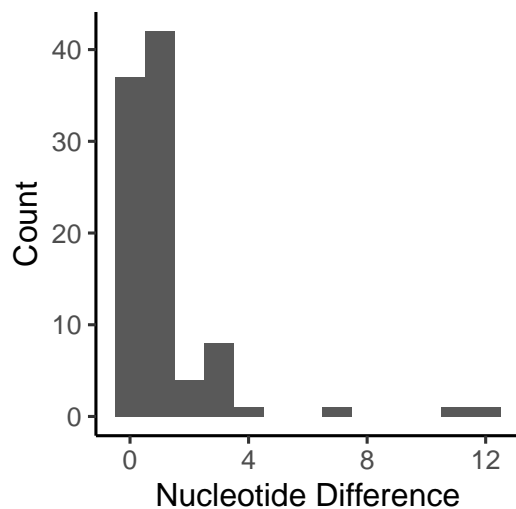
### IGHV2-5\*02

1106 sequences assigned  
157 (14.2%) exact matches, in which:  
121 unique CDR3  
5 unique J



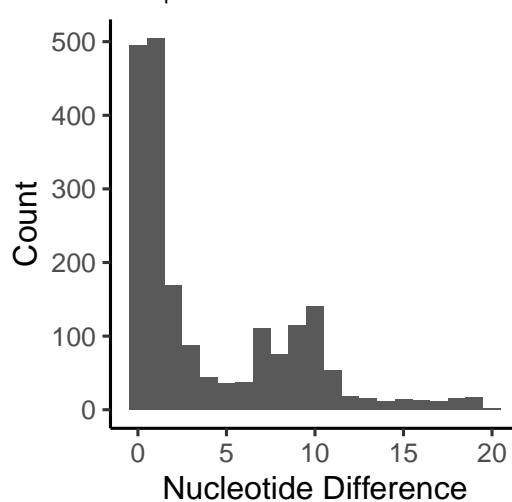
### IGHV1-58\*01\_03

96 sequences assigned  
37 (38.5%) exact matches, in which:  
31 unique CDR3  
4 unique J



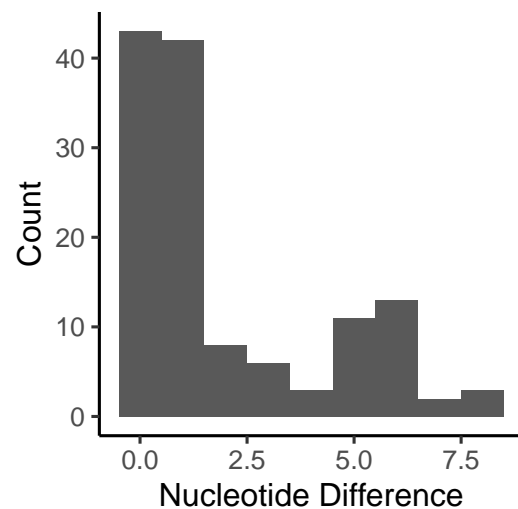
### IGHV1-69\*06\_14

2112 sequences assigned  
495 (23.4%) exact matches, in which:  
436 unique CDR3  
6 unique J



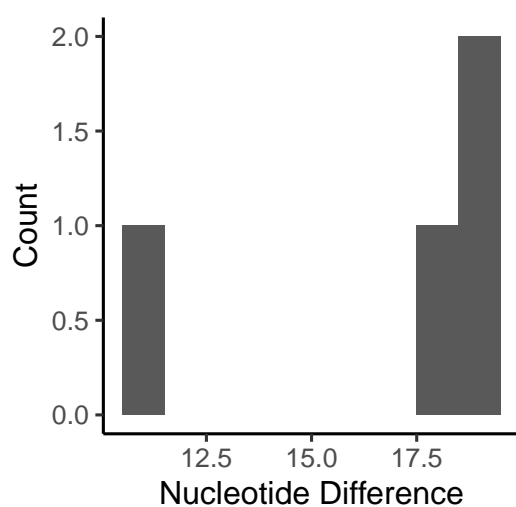
### IGHV2-26\*01

140 sequences assigned  
43 (30.7%) exact matches, in which:  
31 unique CDR3  
4 unique J



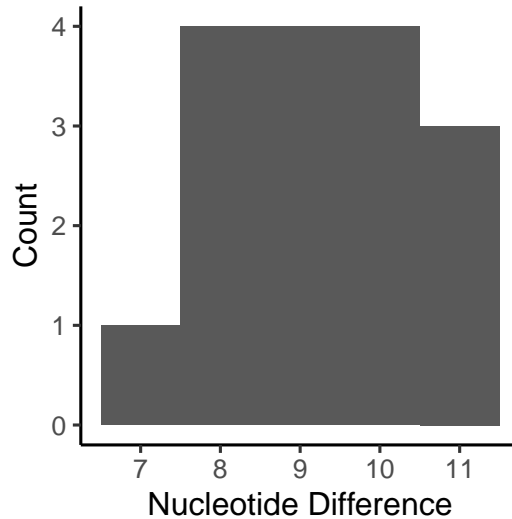
### IGHV1-69-2\*01

5 sequences assigned  
No exact matches.



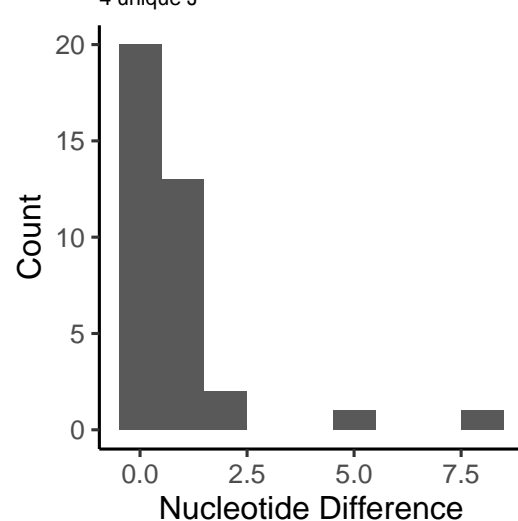
### IGHV1-NL1\*01

16 sequences assigned  
No exact matches.



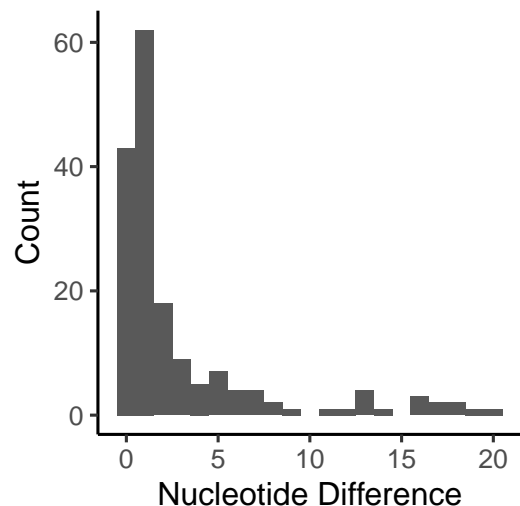
### IGHV2-26\*02

37 sequences assigned  
20 (54.1%) exact matches, in which:  
18 unique CDR3  
4 unique J



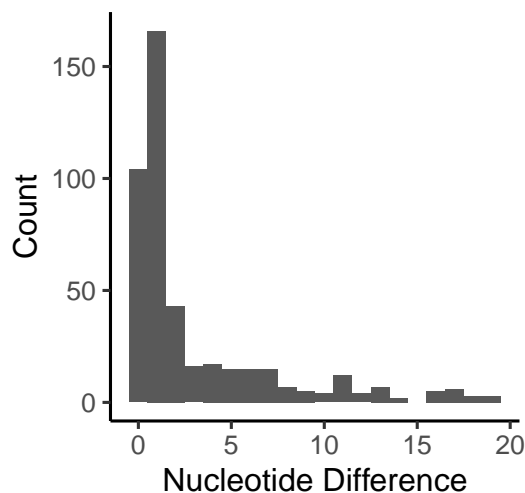
### IGHV2-70\*01

196 sequences assigned  
43 (21.9%) exact matches, in which:  
32 unique CDR3  
4 unique J



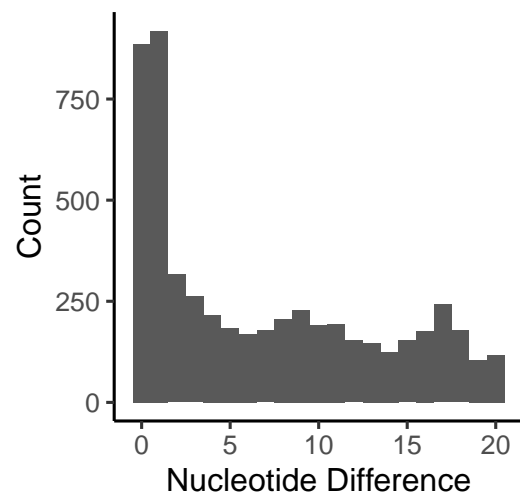
### IGHV2-70\*11\_15

460 sequences assigned  
104 (22.6%) exact matches, in which:  
76 unique CDR3  
4 unique J



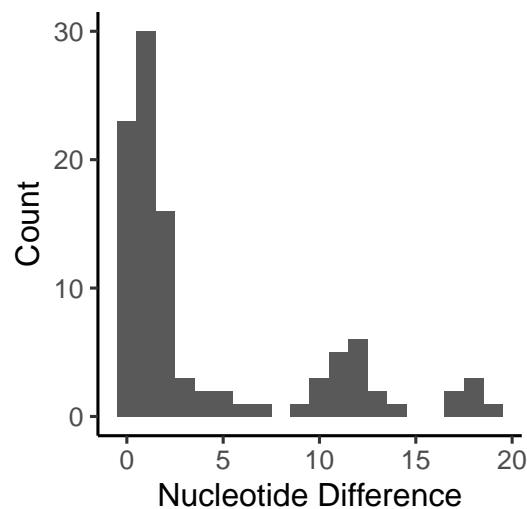
### IGHV3-9\*01

6376 sequences assigned  
886 (13.9%) exact matches, in which:  
485 unique CDR3  
6 unique J



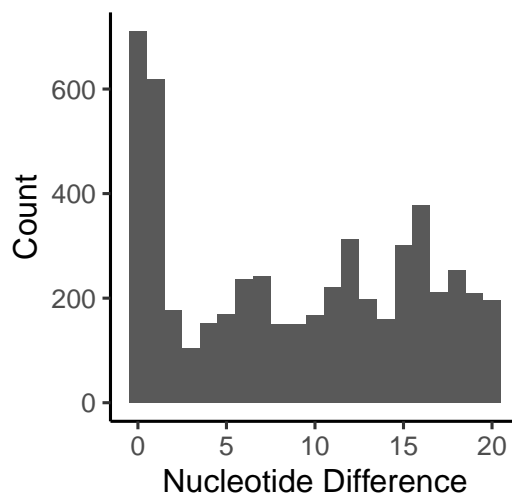
### IGHV2-70\*04

104 sequences assigned  
23 (22.1%) exact matches, in which:  
17 unique CDR3  
3 unique J



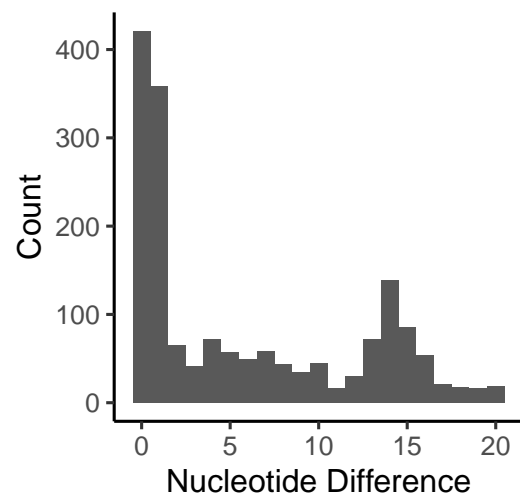
### IGHV3-7\*01

6459 sequences assigned  
711 (11%) exact matches, in which:  
499 unique CDR3  
6 unique J



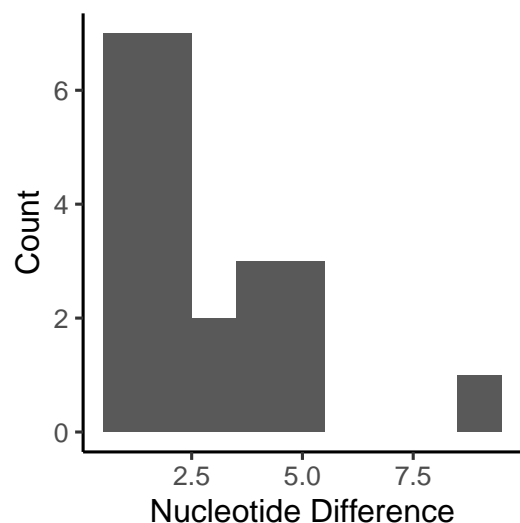
### IGHV3-11\*01

1889 sequences assigned  
421 (22.3%) exact matches, in which:  
268 unique CDR3  
6 unique J



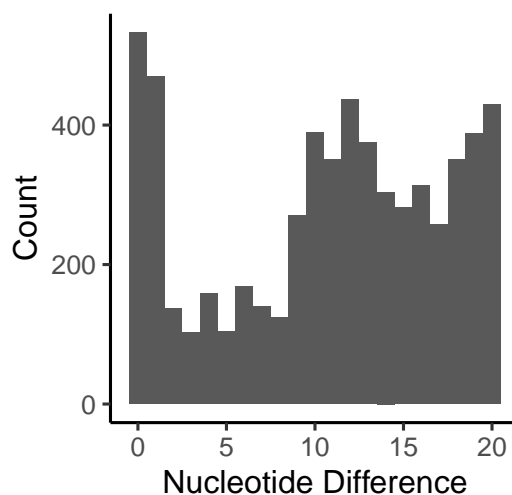
### IGHV2-70\*12

23 sequences assigned  
No exact matches.



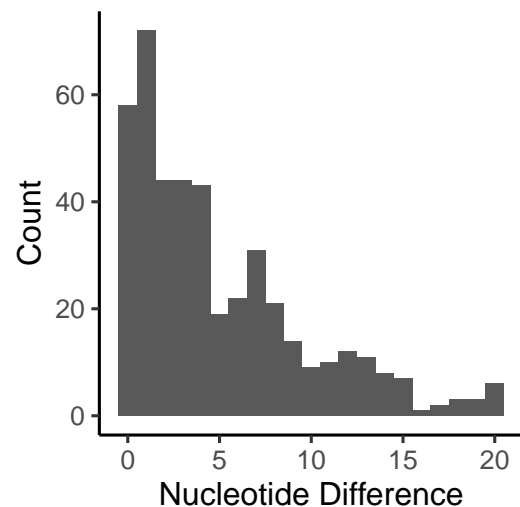
### IGHV3-7\*03

7993 sequences assigned  
533 (6.7%) exact matches, in which:  
342 unique CDR3  
5 unique J



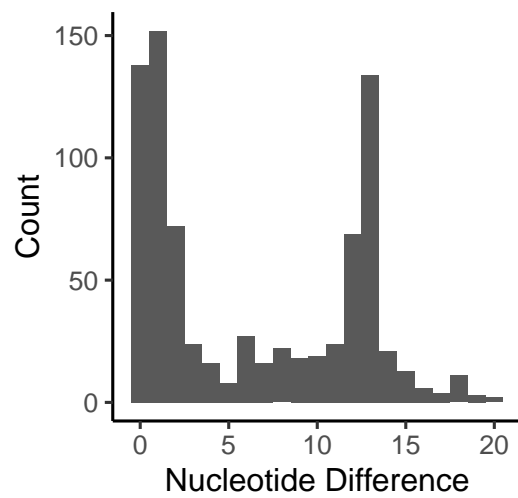
### IGHV3-11\*04

458 sequences assigned  
58 (12.7%) exact matches, in which:  
54 unique CDR3  
4 unique J



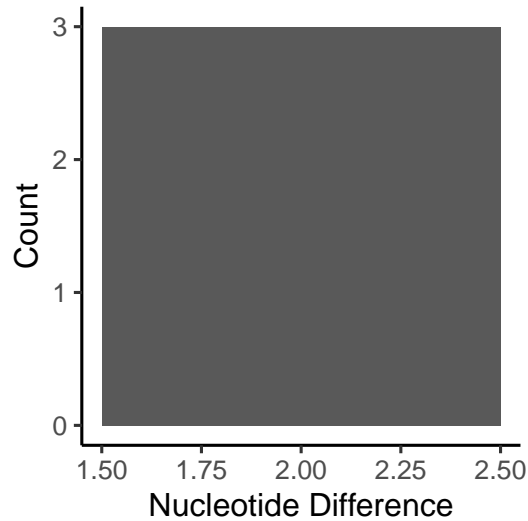
### IGHV3-13\*01

1076 sequences assigned  
138 (12.8%) exact matches, in which:  
91 unique CDR3  
5 unique J



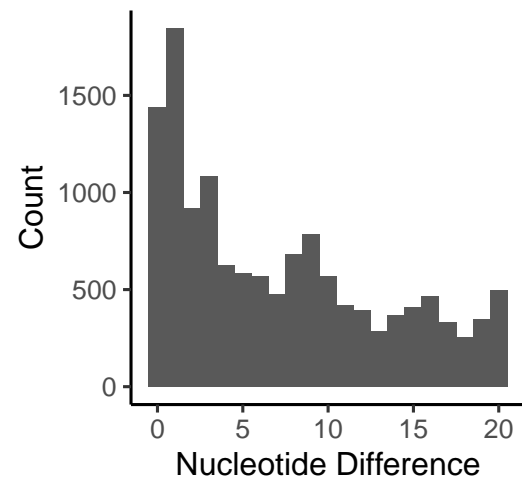
### IGHV3-20\*03\_04

7 sequences assigned  
No exact matches.



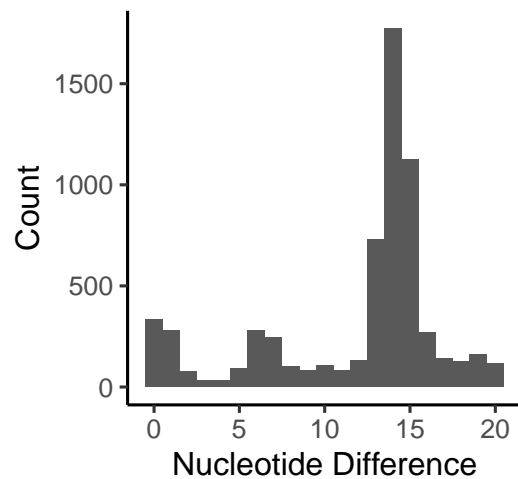
### IGHV3-23\*01\_04

18056 sequences assigned  
1441 (8%) exact matches, in which:  
834 unique CDR3  
6 unique J



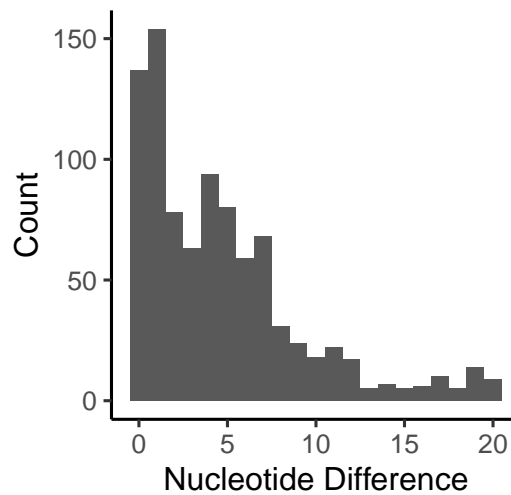
### IGHV3-15\*01\_02

6835 sequences assigned  
334 (4.9%) exact matches, in which:  
189 unique CDR3  
6 unique J



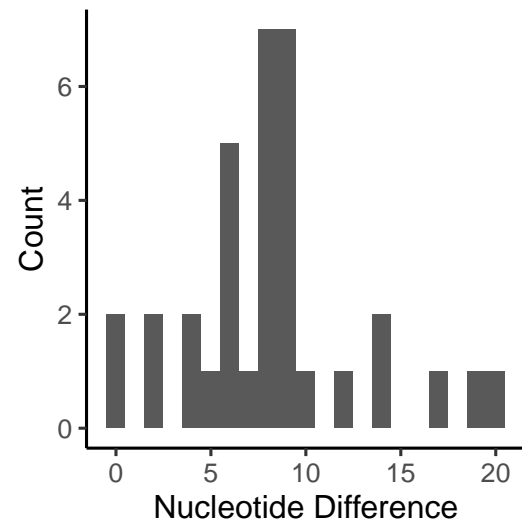
### IGHV3-21\*04

1261 sequences assigned  
137 (10.9%) exact matches, in which:  
120 unique CDR3  
5 unique J



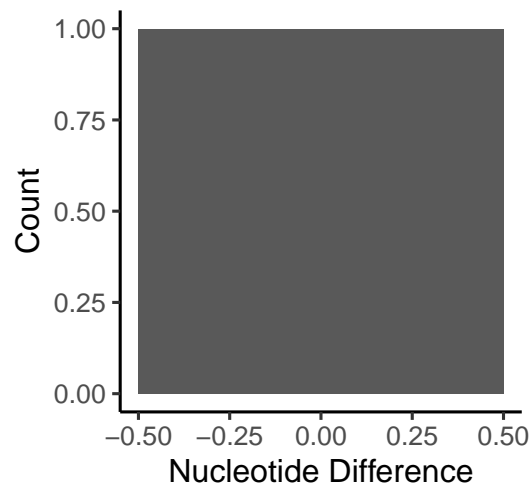
### IGHV3-30-3\*01

275 sequences assigned  
2 (0.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



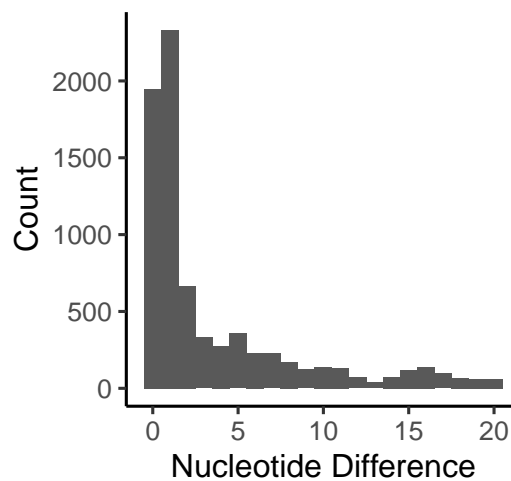
### IGHV3-20\*01\_02

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



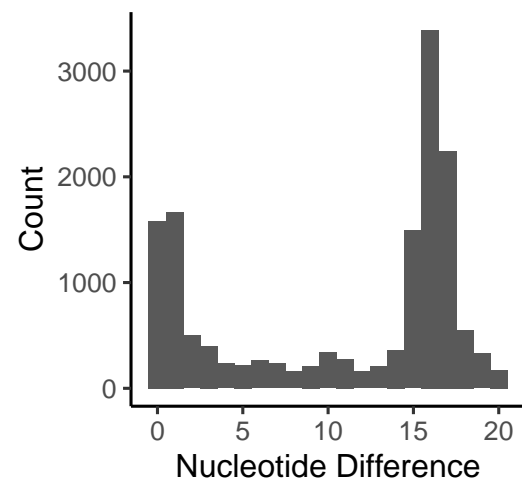
### IGHV3-21\*01\_02

9070 sequences assigned  
1947 (21.5%) exact matches, in which:  
1184 unique CDR3  
6 unique J



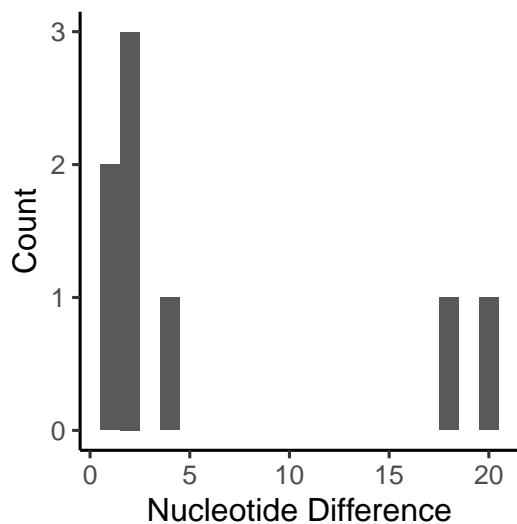
### IGHV3-30\*02

17051 sequences assigned  
1585 (9.3%) exact matches, in which:  
995 unique CDR3  
6 unique J



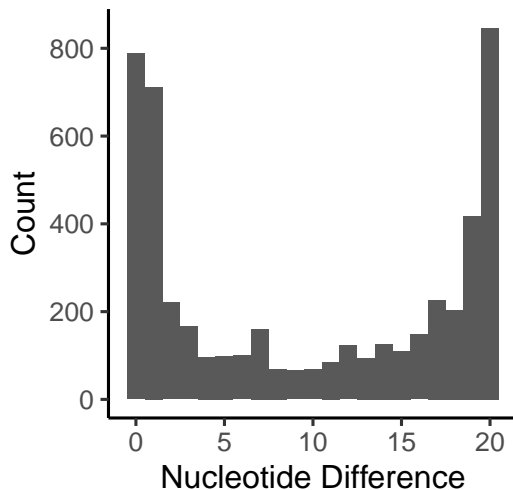
### IGHV3-30-3\*02

17 sequences assigned  
No exact matches.



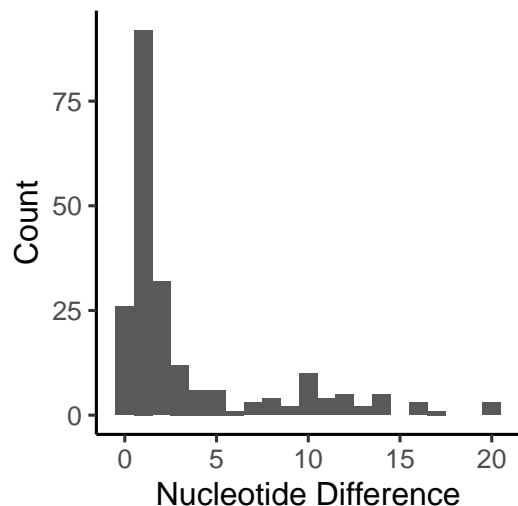
### IGHV3-30\*18

5810 sequences assigned  
788 (13.6%) exact matches, in which:  
507 unique CDR3  
5 unique J



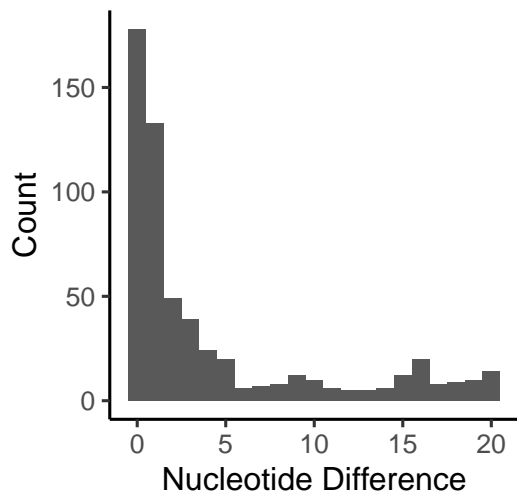
### IGHV3-33\*06

254 sequences assigned  
26 (10.2%) exact matches, in which:  
25 unique CDR3  
5 unique J



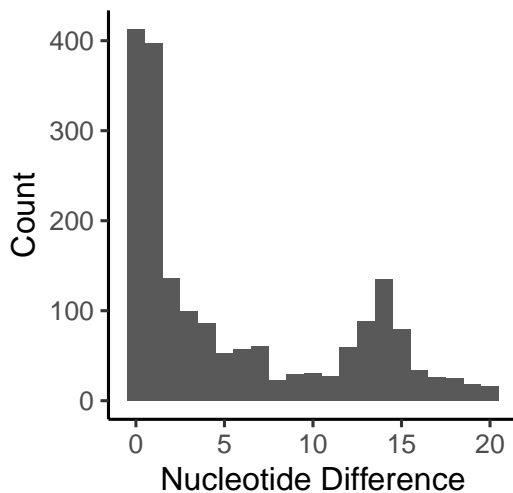
### IGHV3-30\*03

797 sequences assigned  
178 (22.3%) exact matches, in which:  
161 unique CDR3  
6 unique J



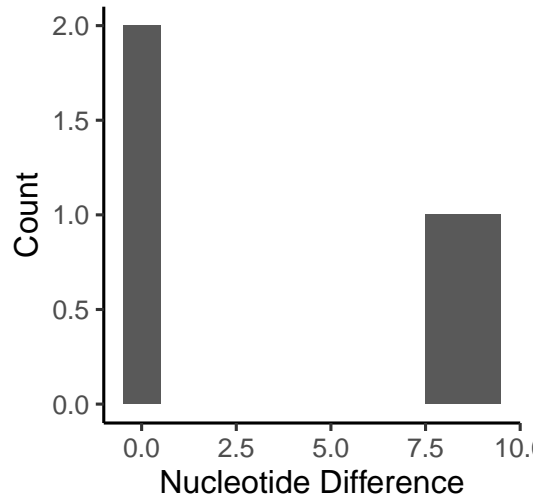
### IGHV3-33\*01

2731 sequences assigned  
413 (15.1%) exact matches, in which:  
269 unique CDR3  
5 unique J



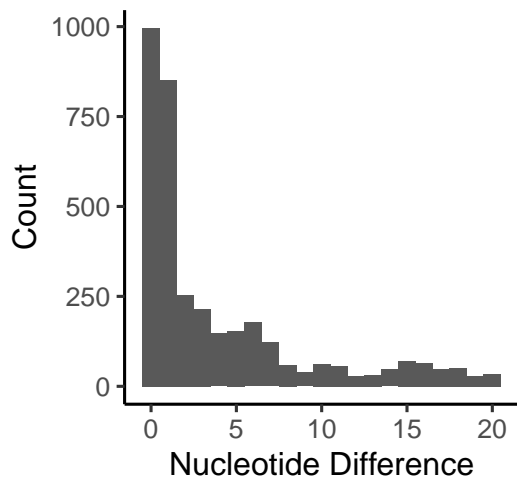
### IGHV3-35\*01

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



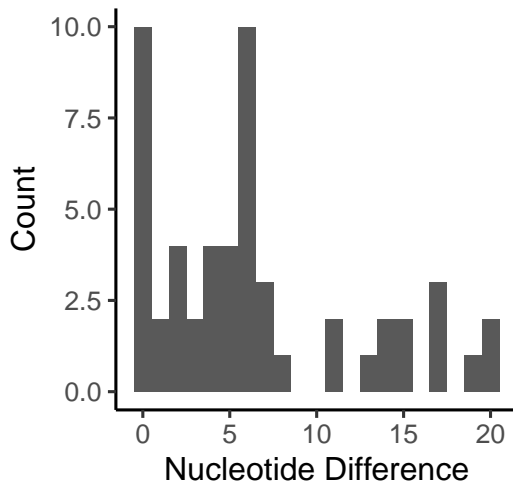
### IGHV3-30\*04

4453 sequences assigned  
996 (22.4%) exact matches, in which:  
660 unique CDR3  
6 unique J



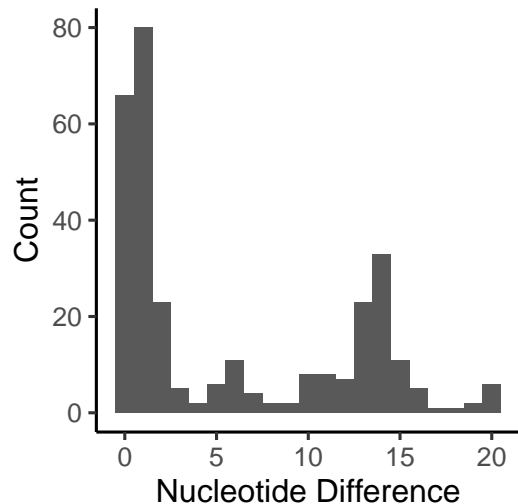
### IGHV3-33\*05

73 sequences assigned  
10 (13.7%) exact matches, in which:  
10 unique CDR3  
4 unique J



### IGHV3-43\*01

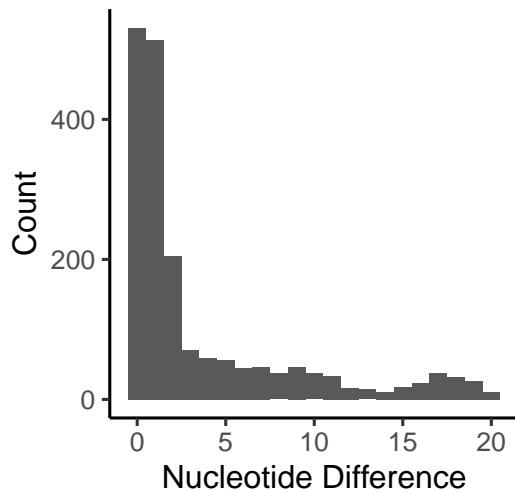
425 sequences assigned  
66 (15.5%) exact matches, in which:  
38 unique CDR3  
4 unique J





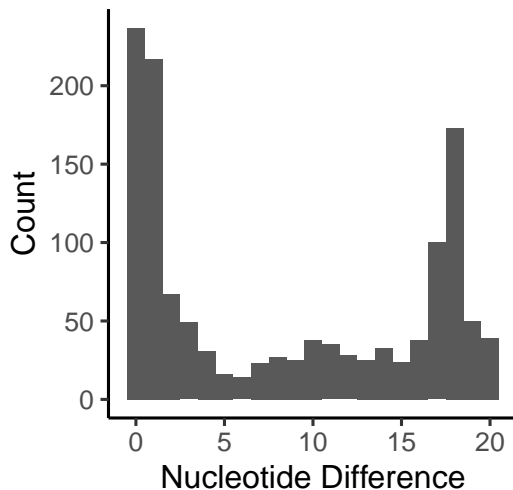
### IGHV3-48\*02

2333 sequences assigned  
531 (22.8%) exact matches, in which:  
322 unique CDR3  
6 unique J



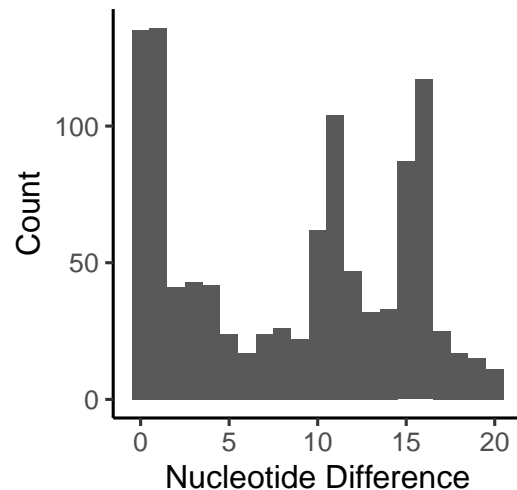
### IGHV3-49\*04

1898 sequences assigned  
237 (12.5%) exact matches, in which:  
133 unique CDR3  
6 unique J



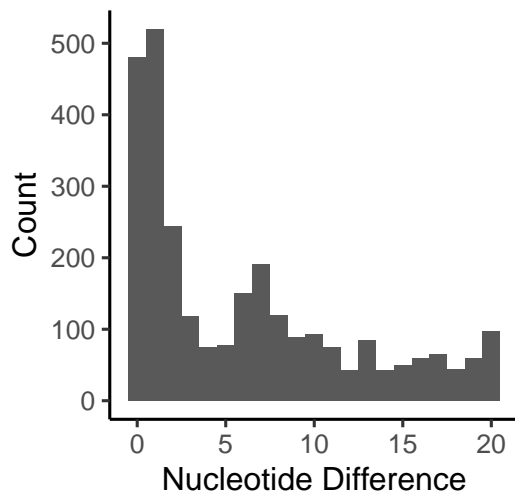
### IGHV3-53\*01\_02

1318 sequences assigned  
135 (10.2%) exact matches, in which:  
91 unique CDR3  
5 unique J



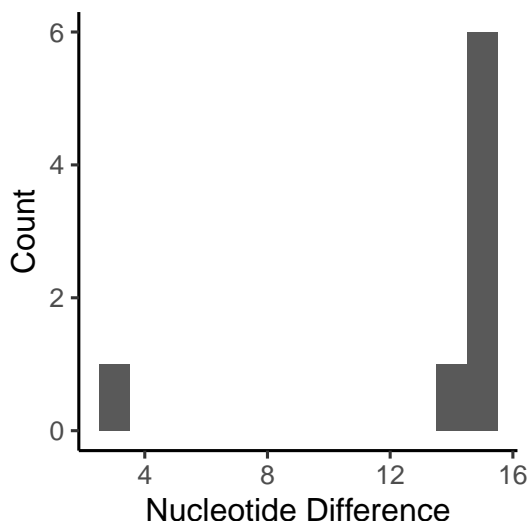
### IGHV3-48\*03

3860 sequences assigned  
481 (12.5%) exact matches, in which:  
287 unique CDR3  
6 unique J



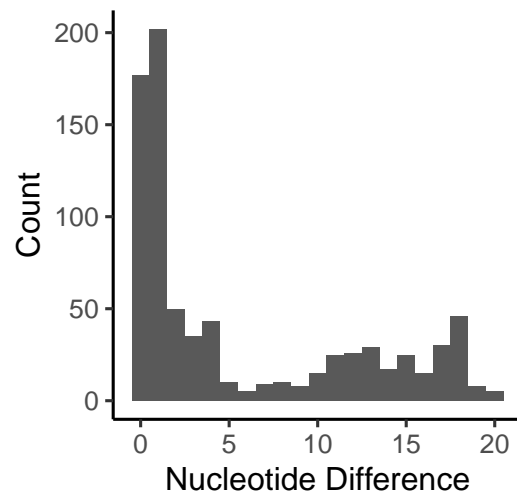
### IGHV3-52\*01\_03

8 sequences assigned  
No exact matches.



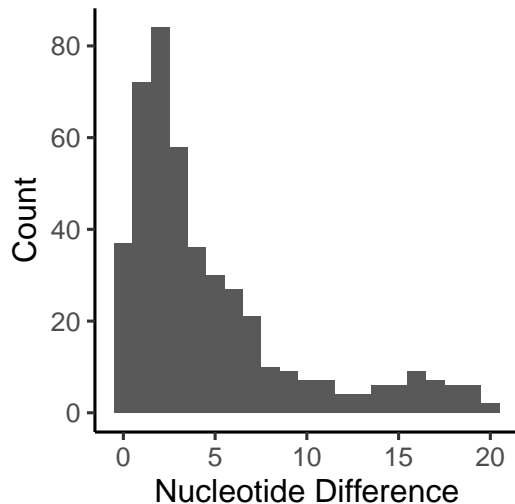
### IGHV3-64\*01

879 sequences assigned  
177 (20.1%) exact matches, in which:  
112 unique CDR3  
5 unique J



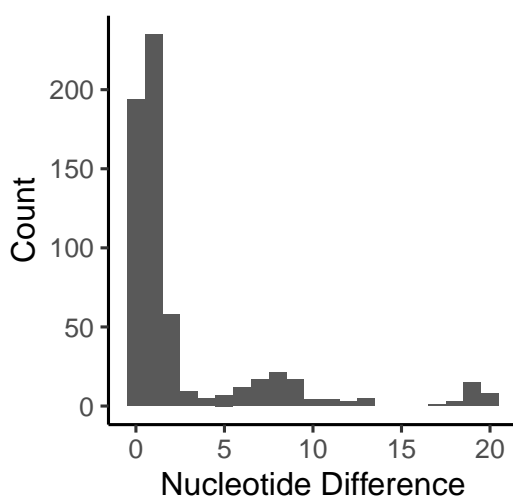
### IGHV3-48\*04

502 sequences assigned  
37 (7.4%) exact matches, in which:  
35 unique CDR3  
4 unique J



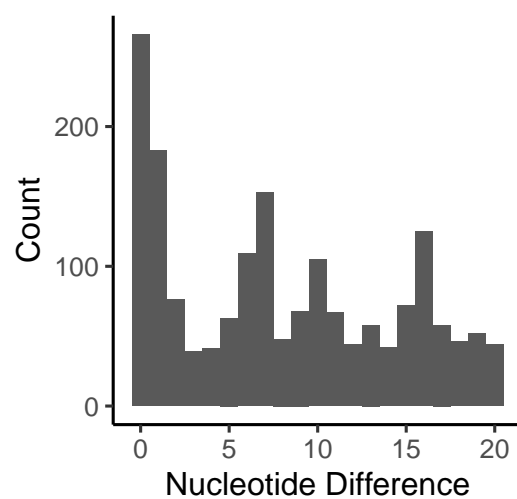
### IGHV3-53\*04

647 sequences assigned  
194 (30%) exact matches, in which:  
132 unique CDR3  
5 unique J



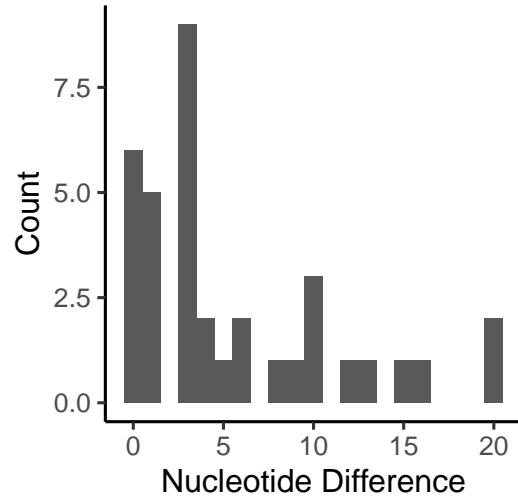
### IGHV3-66\*01

2419 sequences assigned  
266 (11%) exact matches, in which:  
184 unique CDR3  
5 unique J



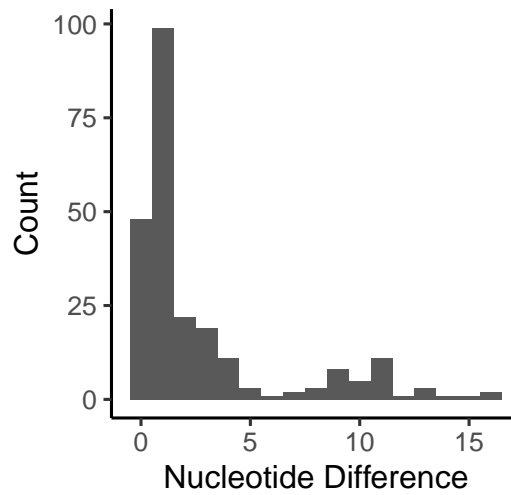
### IGHV3-69-1\*01

314 sequences assigned  
6 (1.9%) exact matches, in which:  
3 unique CDR3  
2 unique J



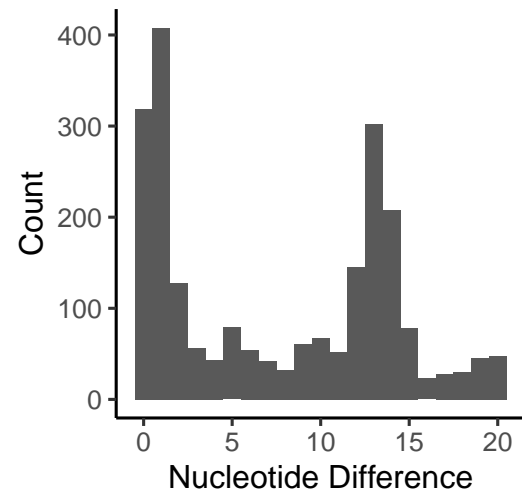
### IGHV3-72\*01\_C86T\_A13

241 sequences assigned  
48 (19.9%) exact matches, in which:  
27 unique CDR3  
4 unique J



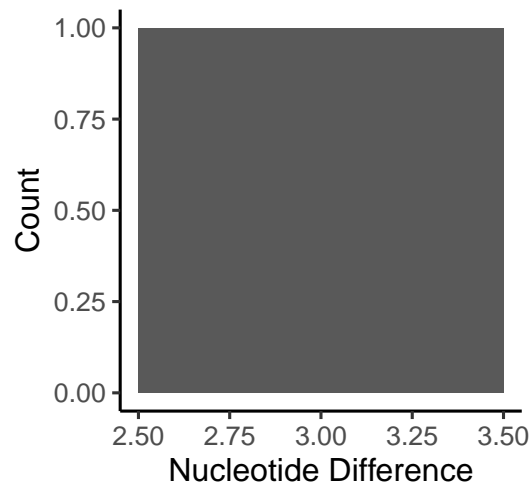
### IGHV3-74\*01\_02

2422 sequences assigned  
319 (13.2%) exact matches, in which:  
181 unique CDR3  
6 unique J



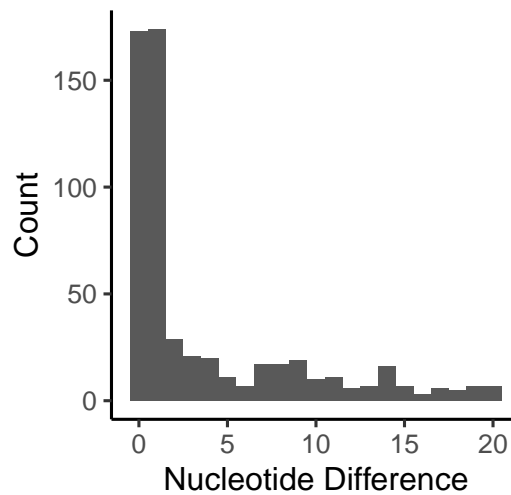
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



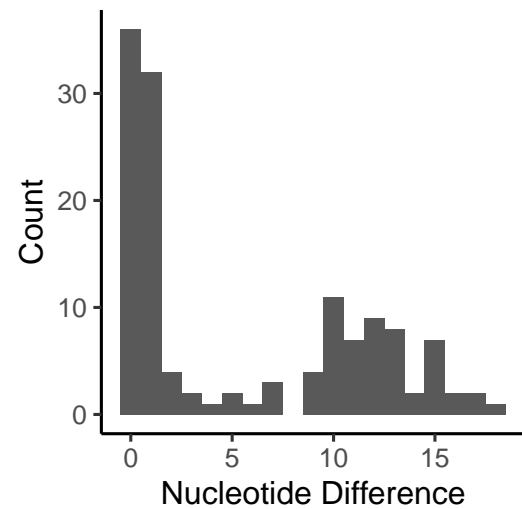
### IGHV3-73\*01\_02

734 sequences assigned  
173 (23.6%) exact matches, in which:  
96 unique CDR3  
5 unique J



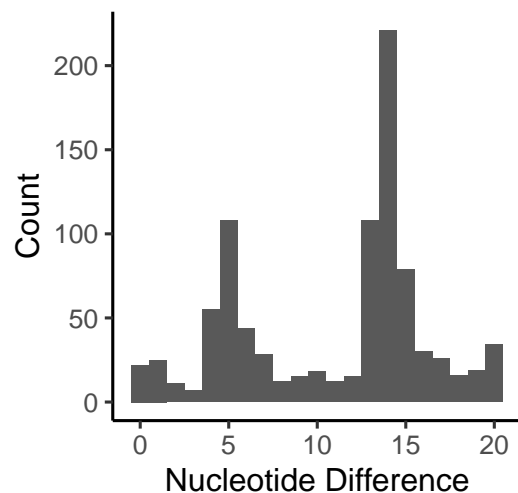
### IGHV3-43D\*04

141 sequences assigned  
36 (25.5%) exact matches, in which:  
21 unique CDR3  
2 unique J



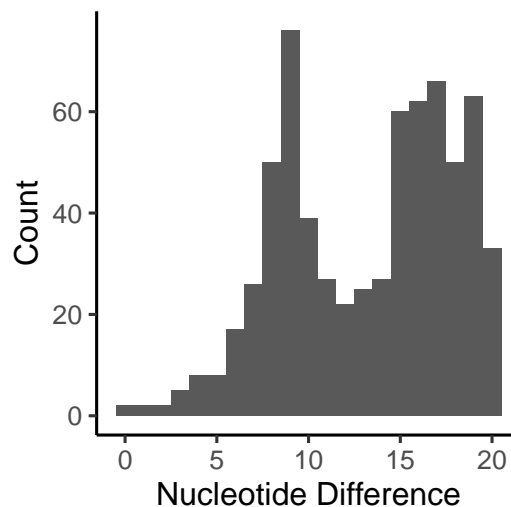
### IGHV3-72\*01

1051 sequences assigned  
22 (2.1%) exact matches, in which:  
17 unique CDR3  
4 unique J



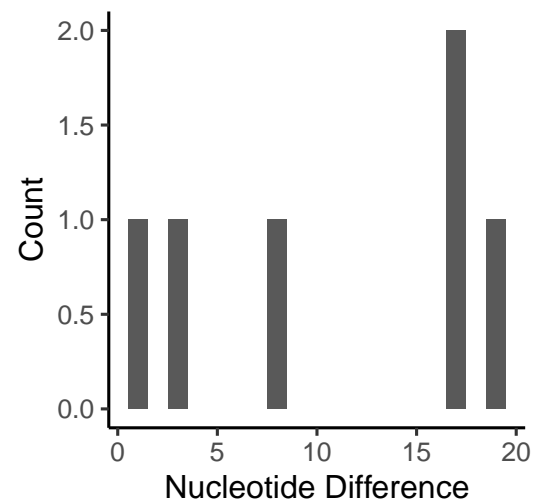
### IGHV3-74\*03

1462 sequences assigned  
2 (0.1%) exact matches, in which:  
2 unique CDR3  
2 unique J



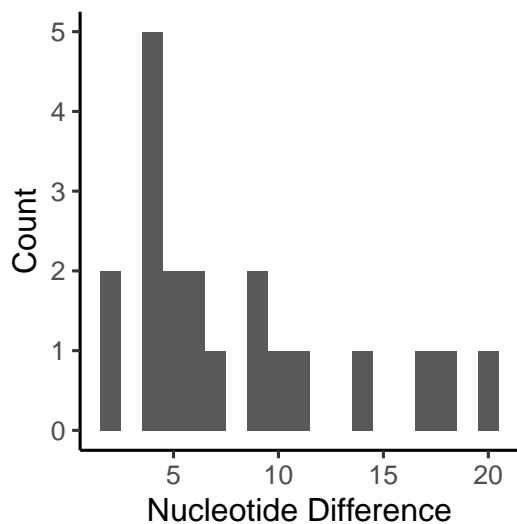
### IGHV3-64D\*06

9 sequences assigned  
No exact matches.



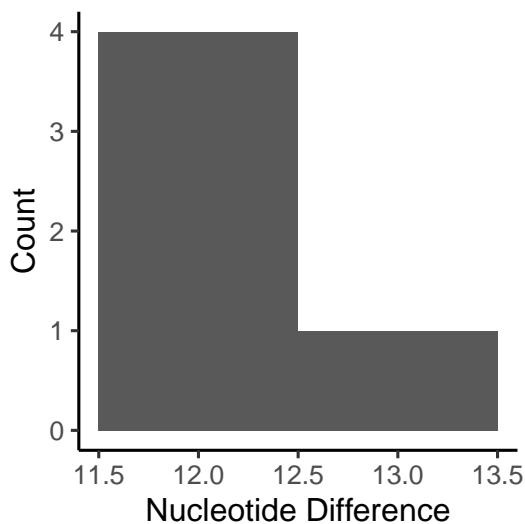
### IGHV3–NL1\*01

33 sequences assigned  
No exact matches.



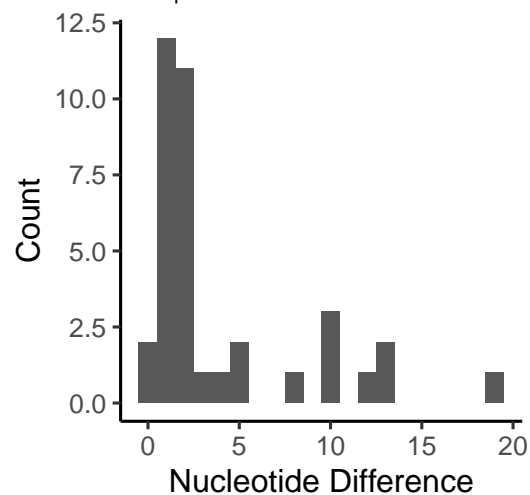
### IGHV4–28\*01\_07

5 sequences assigned  
No exact matches.



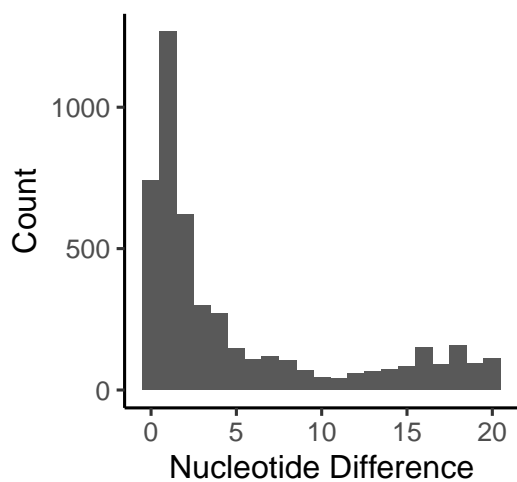
### IGHV4–30–2\*03

62 sequences assigned  
2 (3.2%) exact matches, in which:  
2 unique CDR3  
2 unique J



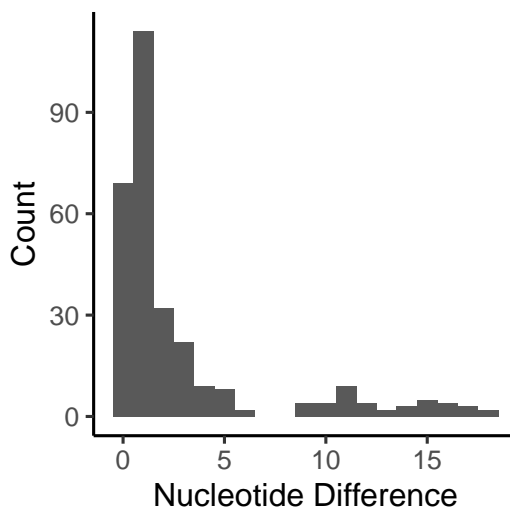
### IGHV4–4\*07

5464 sequences assigned  
740 (13.5%) exact matches, in which:  
591 unique CDR3  
6 unique J



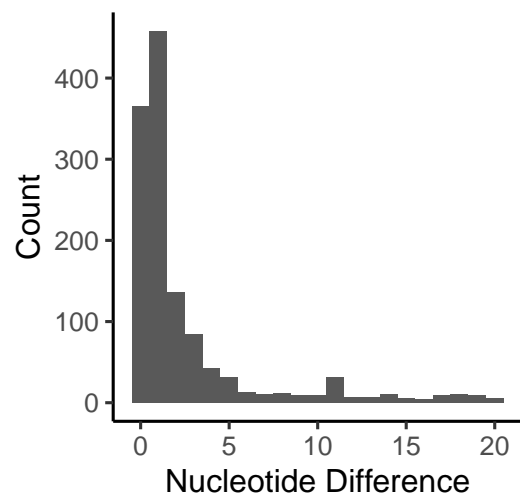
### IGHV4–30–2\*01

313 sequences assigned  
69 (22%) exact matches, in which:  
47 unique CDR3  
5 unique J



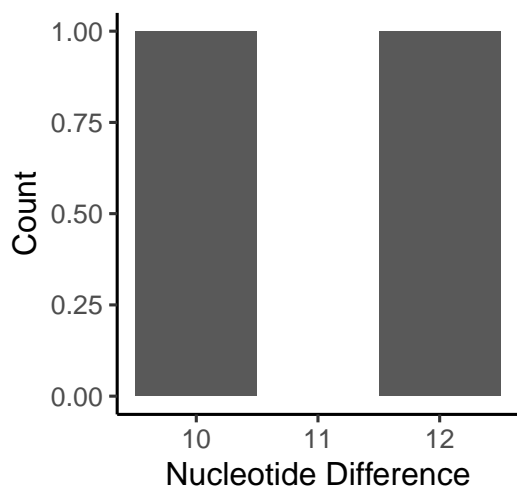
### IGHV4–31\*02

1333 sequences assigned  
365 (27.4%) exact matches, in which:  
289 unique CDR3  
6 unique J



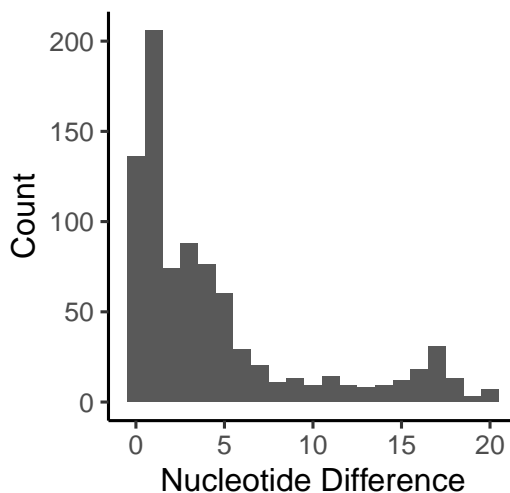
### IGHV4–28\*03

12 sequences assigned  
No exact matches.



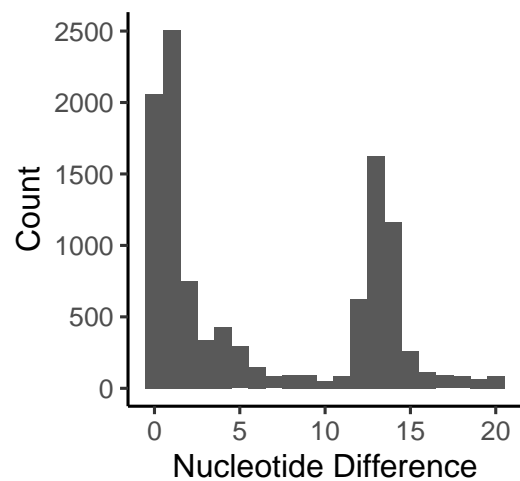
### IGHV4–30–4\*01

878 sequences assigned  
136 (15.5%) exact matches, in which:  
106 unique CDR3  
5 unique J



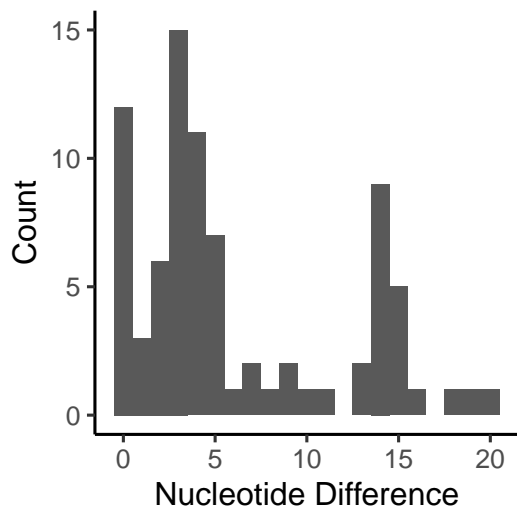
### IGHV4–34\*01\_02

11976 sequences assigned  
2059 (17.2%) exact matches, in which:  
1528 unique CDR3  
6 unique J



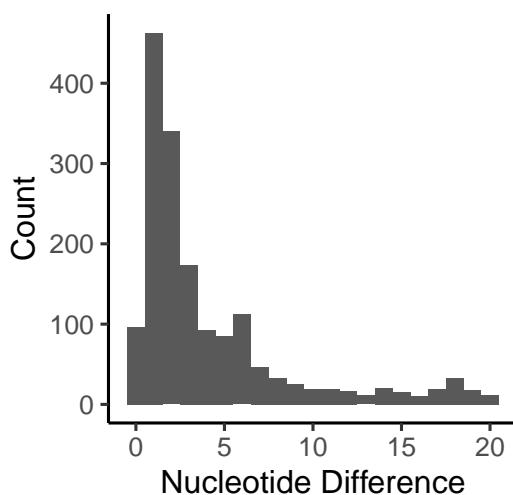
## IGHV4-38-2\*02

87 sequences assigned  
12 (13.8%) exact matches, in which:  
12 unique CDR3  
5 unique J



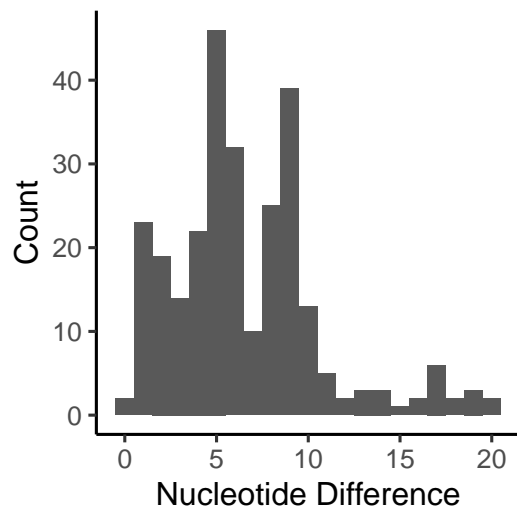
## IGHV4-59\*12

2382 sequences assigned  
96 (4%) exact matches, in which:  
93 unique CDR3  
5 unique J



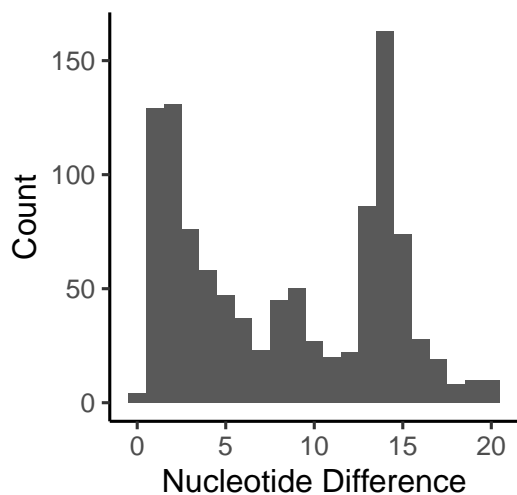
## IGHV4-61\*08

305 sequences assigned  
2 (0.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



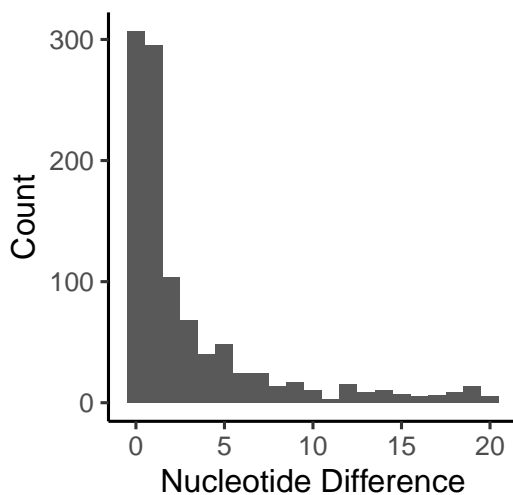
## IGHV4-39\*07

1182 sequences assigned  
4 (0.3%) exact matches, in which:  
4 unique CDR3  
2 unique J



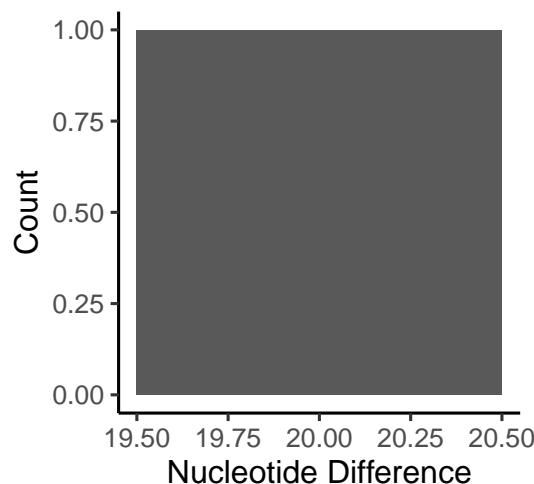
## IGHV4-61\*01

1063 sequences assigned  
307 (28.9%) exact matches, in which:  
265 unique CDR3  
5 unique J



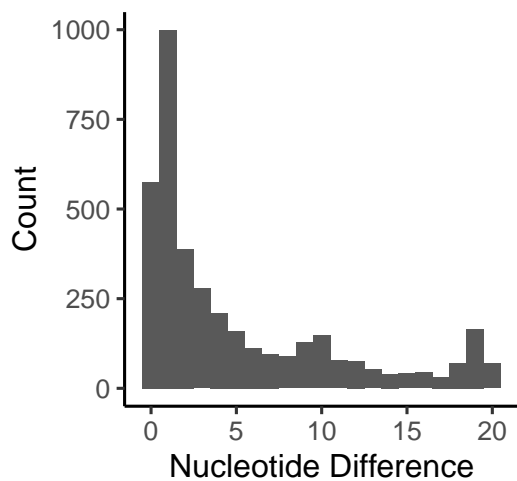
## IGHV1/OR15-2\*02\_03

1 sequences assigned  
No exact matches.



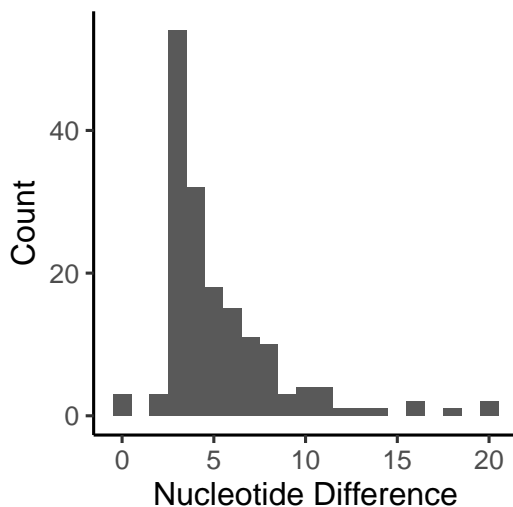
## IGHV4-59\*08

4396 sequences assigned  
575 (13.1%) exact matches, in which:  
444 unique CDR3  
6 unique J



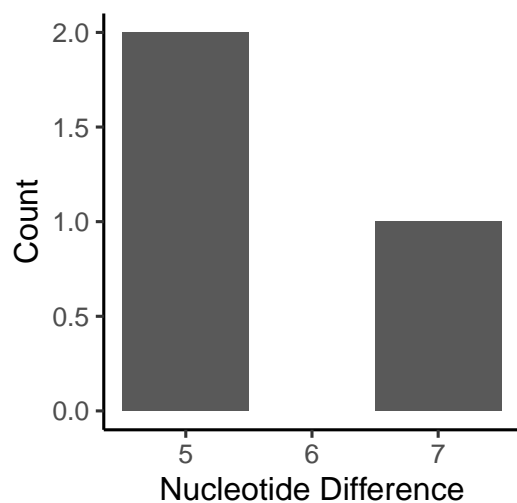
## IGHV4-61\*02

171 sequences assigned  
3 (1.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



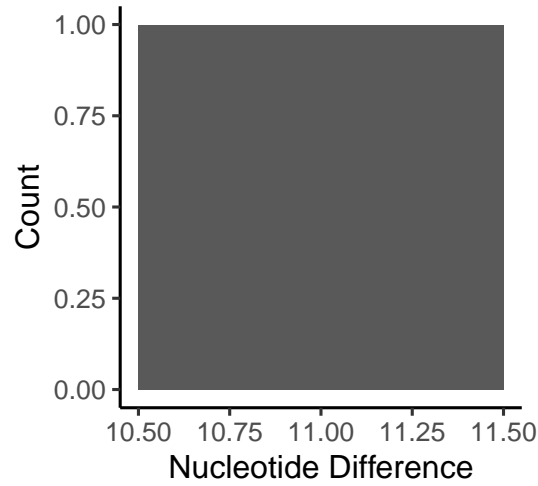
## IGHV4/OR15-8\*01

3 sequences assigned  
No exact matches.



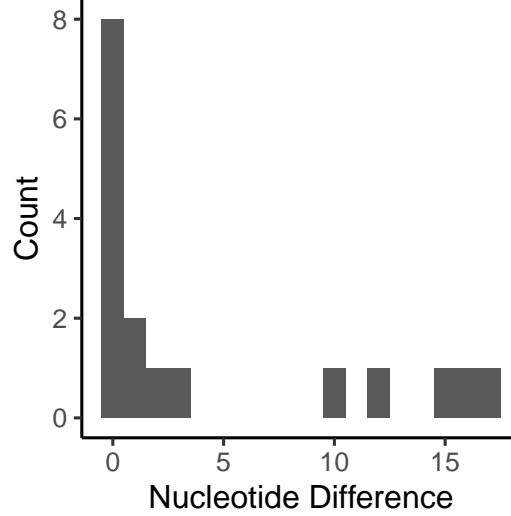
### IGHV1/OR15–9\*01

1 sequences assigned  
No exact matches.



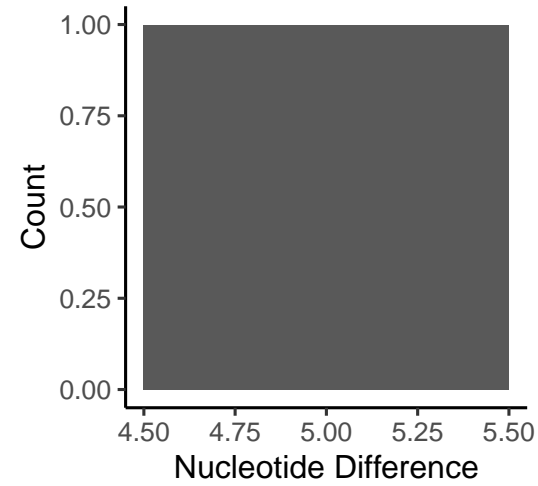
### IGHV5–51\*06

19 sequences assigned  
8 (42.1%) exact matches, in which:  
8 unique CDR3  
4 unique J



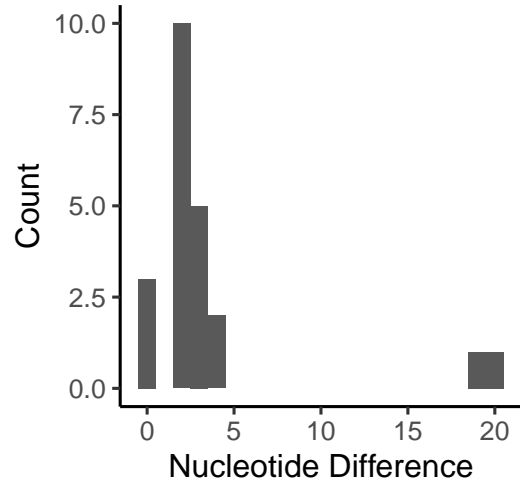
### IGHV3/OR16–9\*01

1 sequences assigned  
No exact matches.



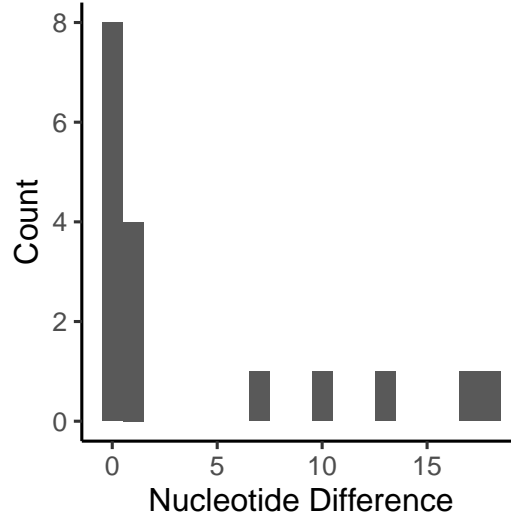
### IGHV5–10–1\*01\_03

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



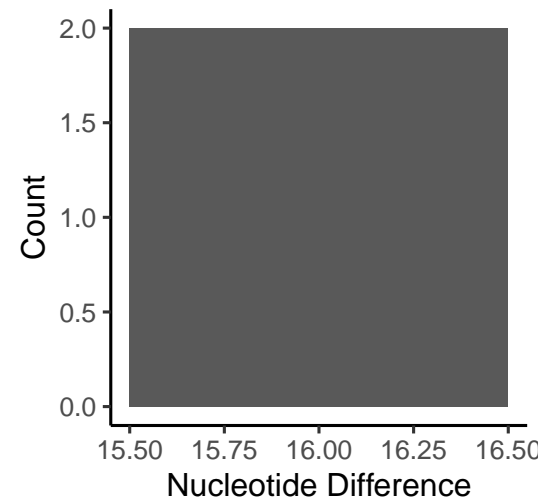
### IGHV5–51\*07

20 sequences assigned  
8 (40%) exact matches, in which:  
8 unique CDR3  
3 unique J



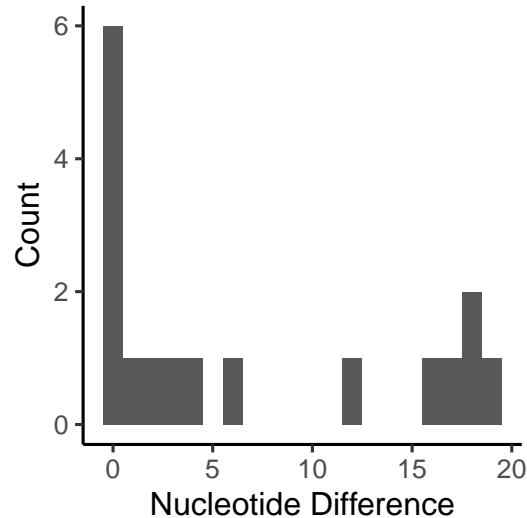
### IGHV3/OR16–10\*01\_03

2 sequences assigned  
No exact matches.



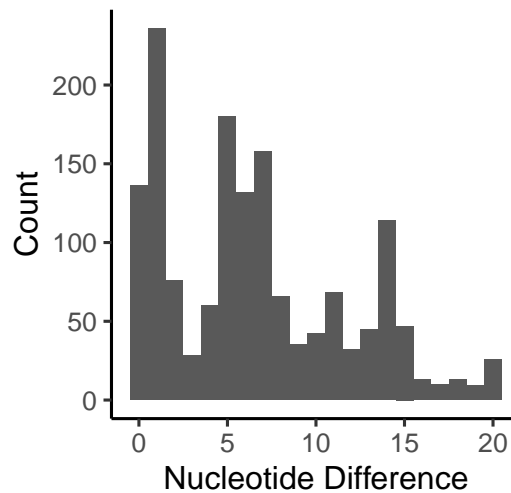
### IGHV5–51\*04

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



### IGHV6–1\*01\_02

1603 sequences assigned  
136 (8.5%) exact matches, in which:  
111 unique CDR3  
4 unique J



IGHV3-72\*01\_C86T\_A138T\_C167G\_C174T\_G185A\_G207C\_G241C\_T315G

