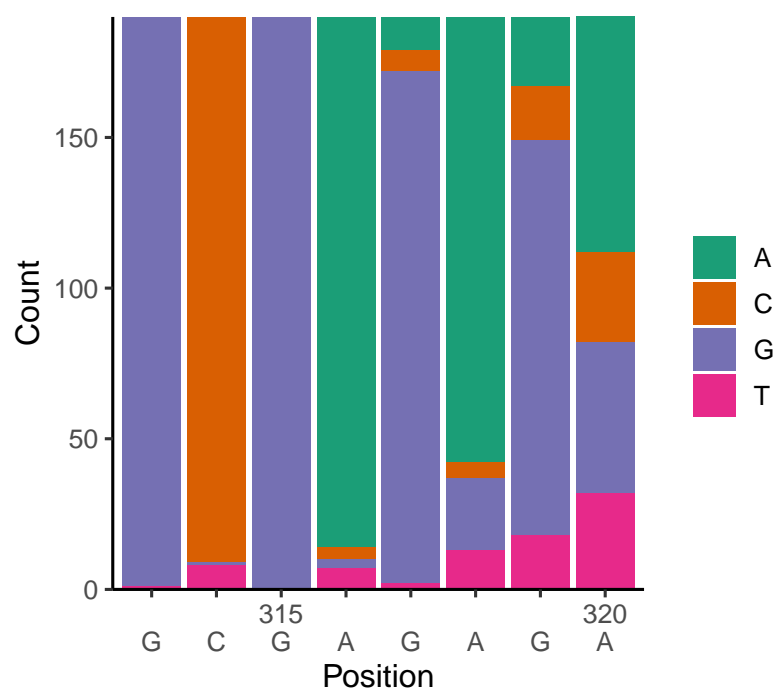
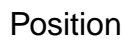


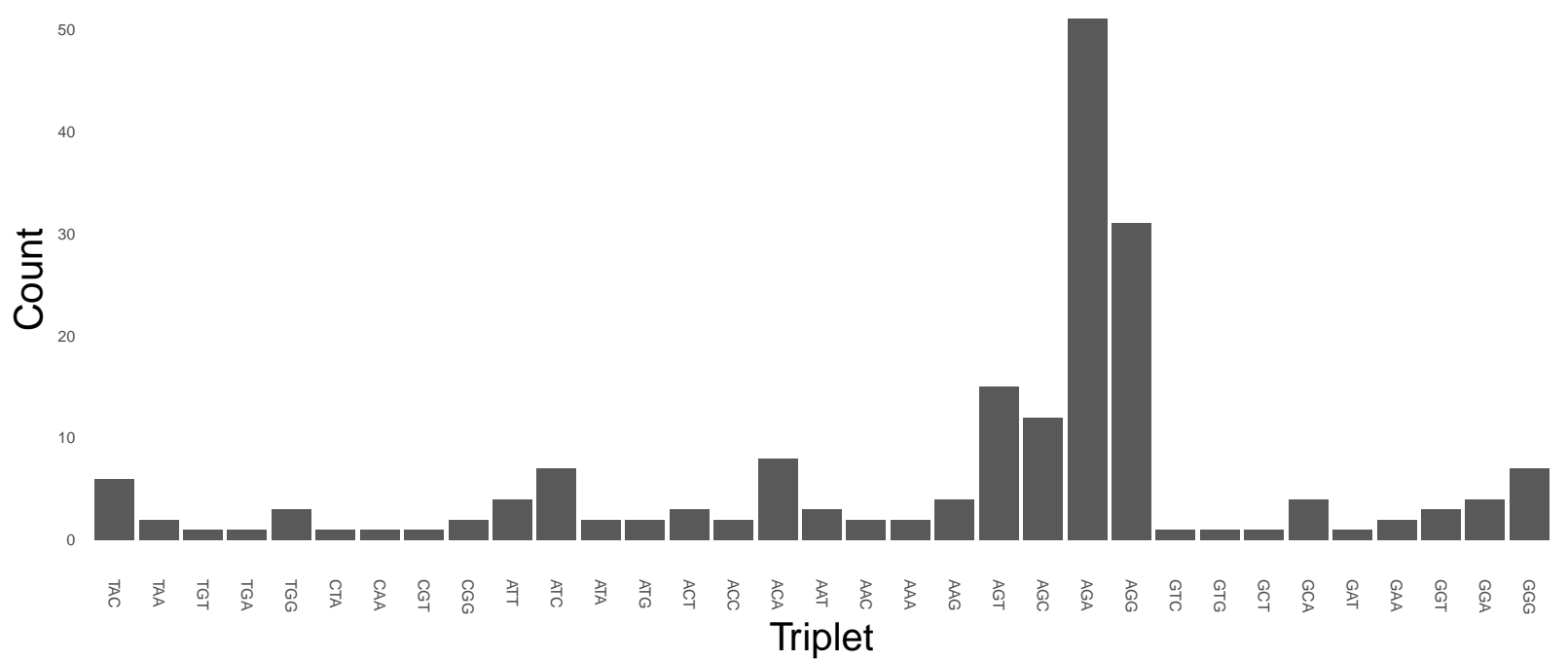
# Gene IGHV6-1\*01\_02\_A315G



Gene IGHV6-1\*01\_02\_A315G

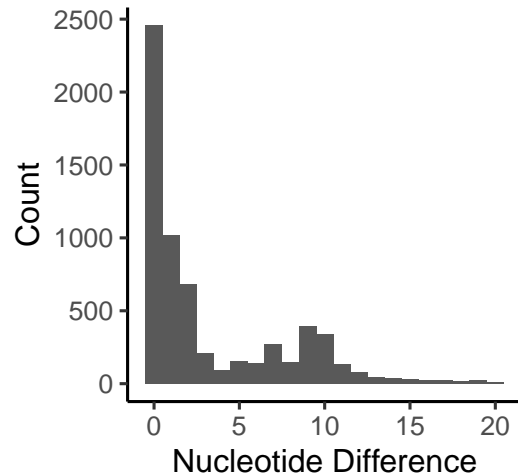


IGHV6-1\*01\_02\_A315G- Final 3 nucleotides as a triplet



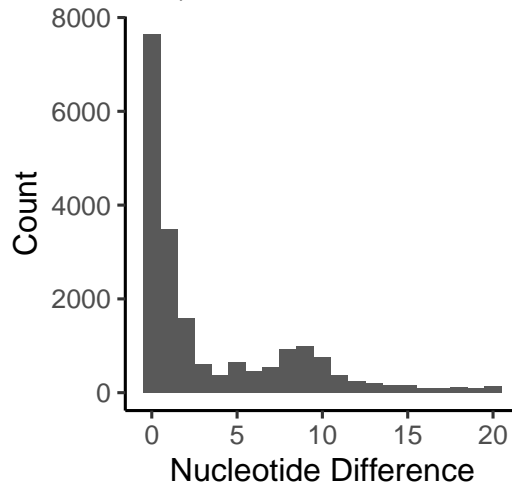
### IGHV1-2\*04

6428 sequences assigned  
2457 (38.2%) exact matches, in which:  
2341 unique CDR3  
6 unique J



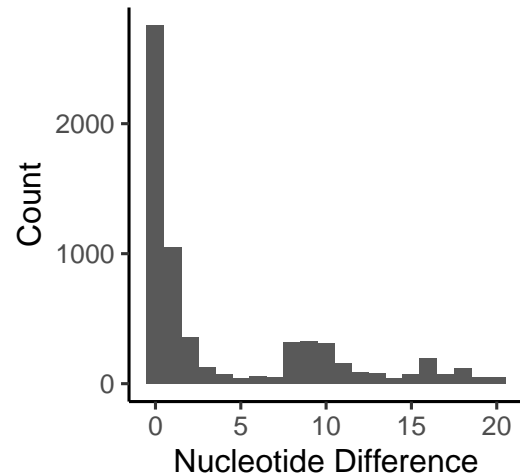
### IGHV1-8\*01

21532 sequences assigned  
7640 (35.5%) exact matches, in which:  
7233 unique CDR3  
6 unique J



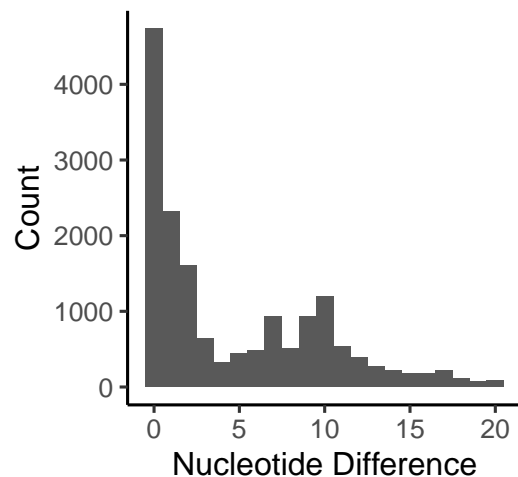
### IGHV1-24\*01

6478 sequences assigned  
2756 (42.5%) exact matches, in which:  
2618 unique CDR3  
6 unique J



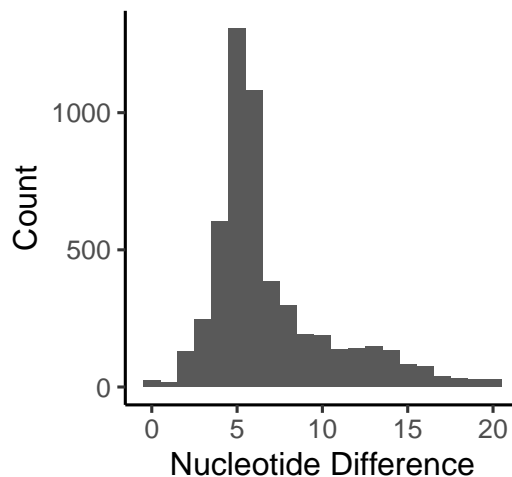
### IGHV1-2\*06

17210 sequences assigned  
4735 (27.5%) exact matches, in which:  
4472 unique CDR3  
6 unique J



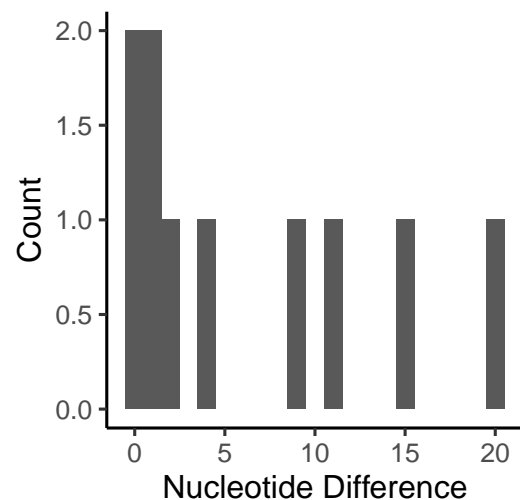
### IGHV1-8\*02

5609 sequences assigned  
24 (0.4%) exact matches, in which:  
24 unique CDR3  
4 unique J



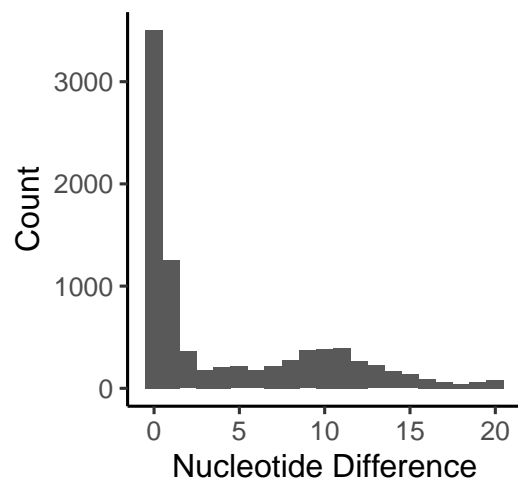
### IGHV1-45\*02

10 sequences assigned  
2 (20%) exact matches, in which:  
2 unique CDR3  
2 unique J



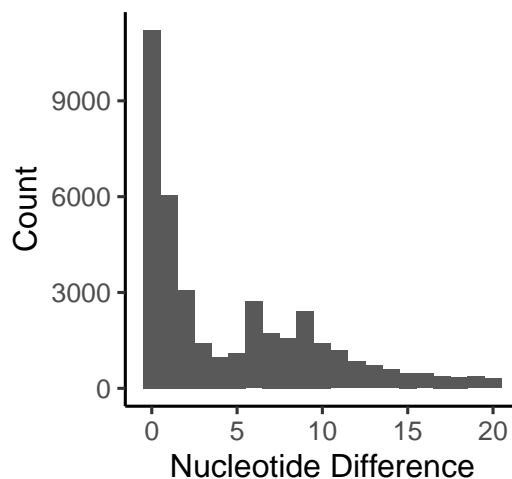
### IGHV1-3\*01\_05

9271 sequences assigned  
3505 (37.8%) exact matches, in which:  
3270 unique CDR3  
6 unique J



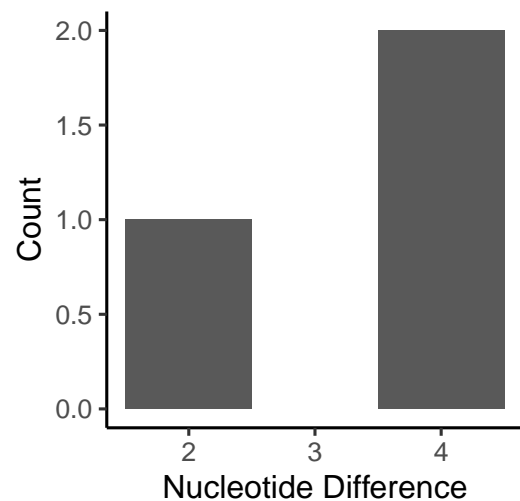
### IGHV1-18\*01

41836 sequences assigned  
11216 (26.8%) exact matches, in which:  
10381 unique CDR3  
6 unique J



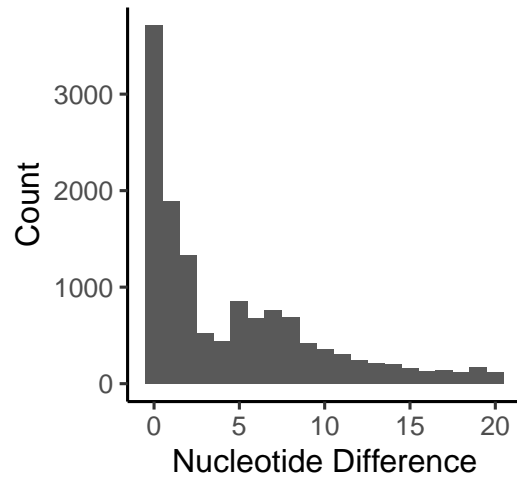
### IGHV1-45\*03

3 sequences assigned  
No exact matches.



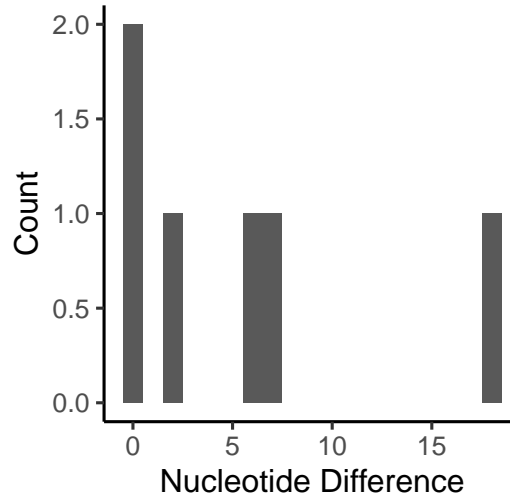
### IGHV1-46\*01

14281 sequences assigned  
3712 (26%) exact matches, in which:  
3544 unique CDR3  
6 unique J



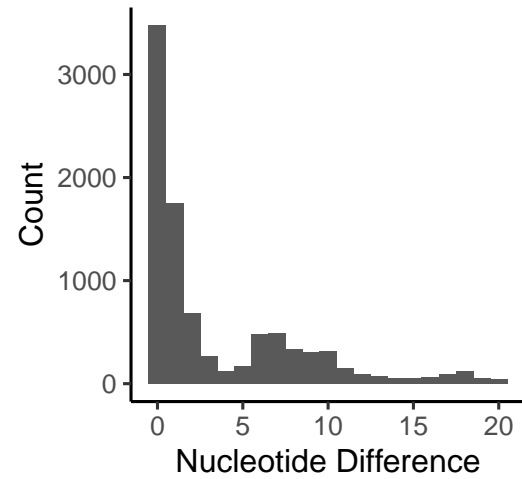
### IGHV1-68\*01

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



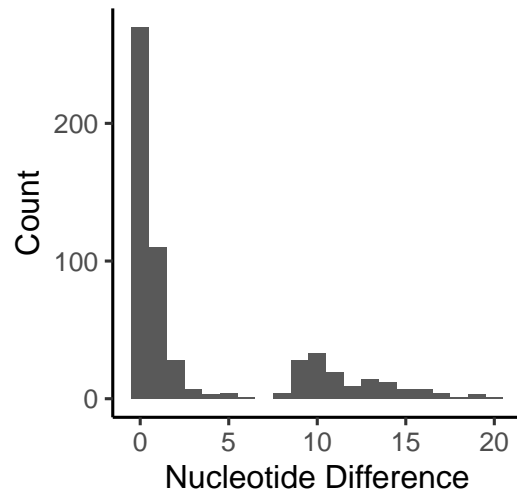
### IGHV1-69\*04\_09

10064 sequences assigned  
3476 (34.5%) exact matches, in which:  
3355 unique CDR3  
6 unique J



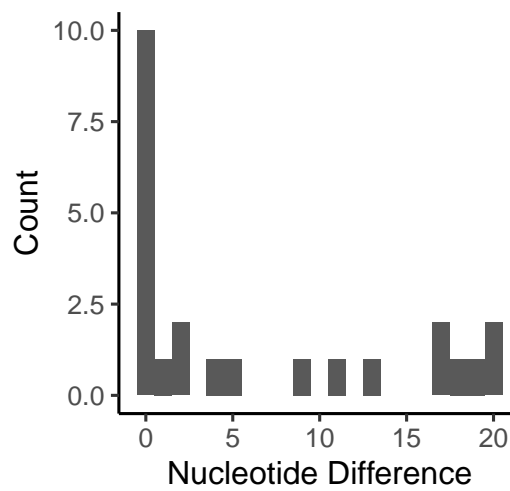
### IGHV1-58\*02

566 sequences assigned  
270 (47.7%) exact matches, in which:  
256 unique CDR3  
6 unique J



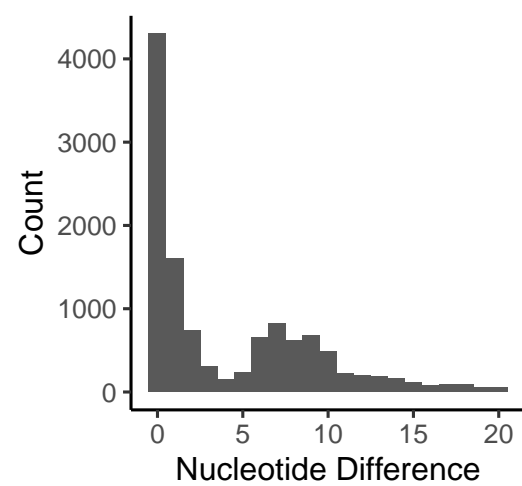
### IGHV1-69-2\*01

26 sequences assigned  
10 (38.5%) exact matches, in which:  
10 unique CDR3  
4 unique J



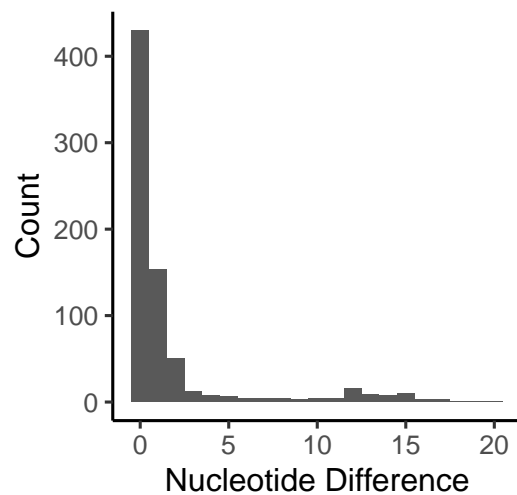
### IGHV1-69\*06\_14

12271 sequences assigned  
4302 (35.1%) exact matches, in which:  
4169 unique CDR3  
6 unique J



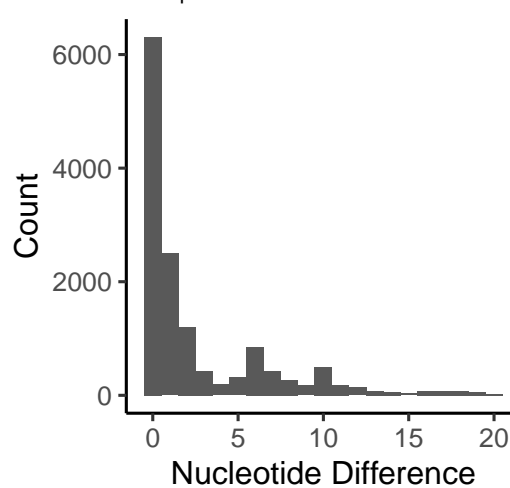
### IGHV1-58\*01\_03

759 sequences assigned  
430 (56.7%) exact matches, in which:  
408 unique CDR3  
6 unique J



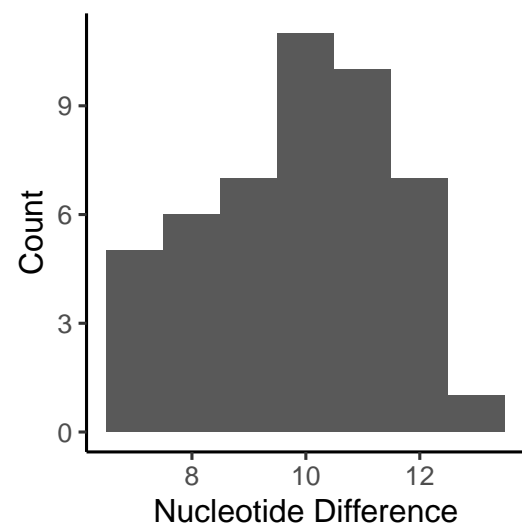
### IGHV1-69\*01\_12\_13

14359 sequences assigned  
6308 (43.9%) exact matches, in which:  
6084 unique CDR3  
6 unique J



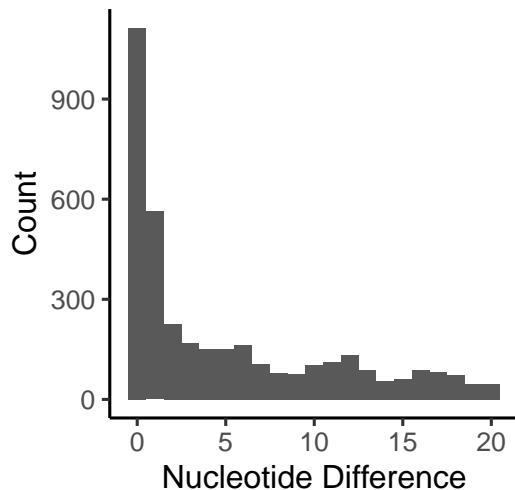
### IGHV1-NL1\*01

47 sequences assigned  
No exact matches.



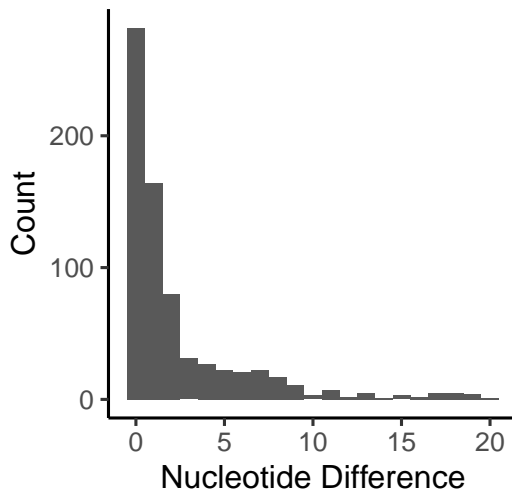
### IGHV2-5\*02

4016 sequences assigned  
1114 (27.7%) exact matches, in which:  
1050 unique CDR3  
6 unique J



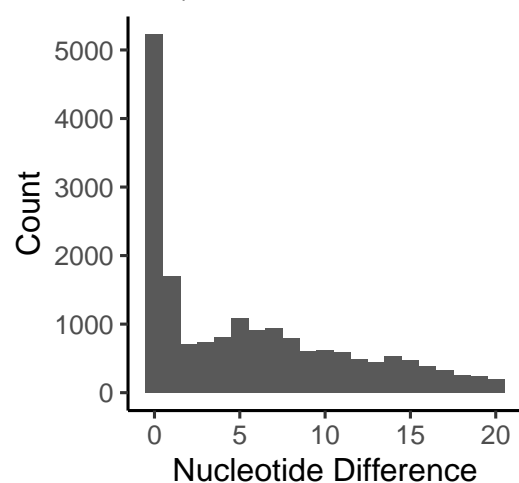
### IGHV2-70\*11\_15

727 sequences assigned  
282 (38.8%) exact matches, in which:  
263 unique CDR3  
6 unique J



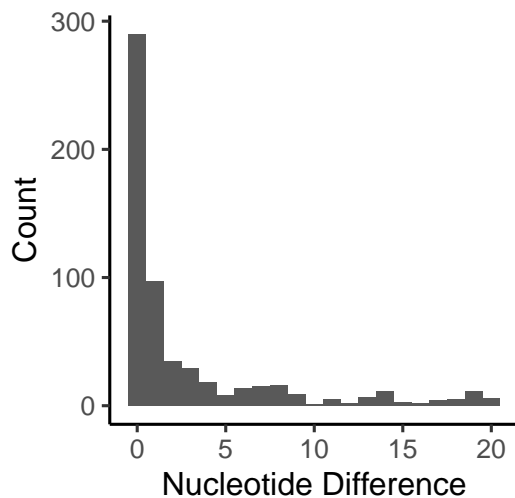
### IGHV3-9\*01

19584 sequences assigned  
5227 (26.7%) exact matches, in which:  
3982 unique CDR3  
6 unique J



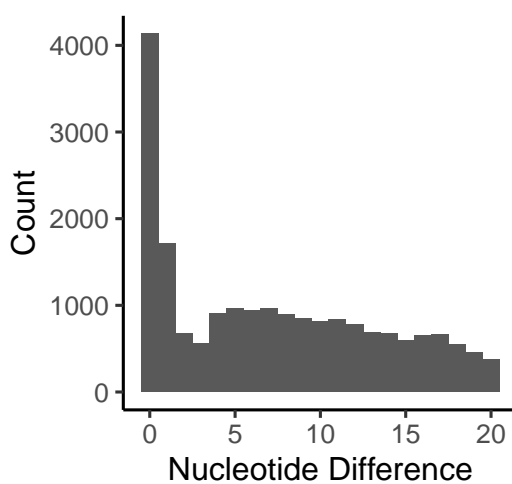
### IGHV2-26\*01

593 sequences assigned  
290 (48.9%) exact matches, in which:  
264 unique CDR3  
5 unique J



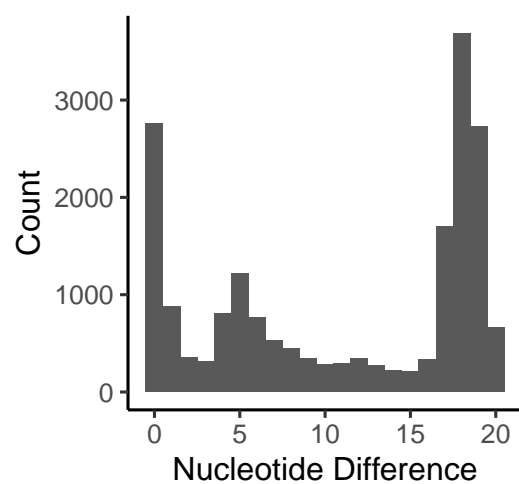
### IGHV3-7\*01

21937 sequences assigned  
4134 (18.8%) exact matches, in which:  
3364 unique CDR3  
6 unique J



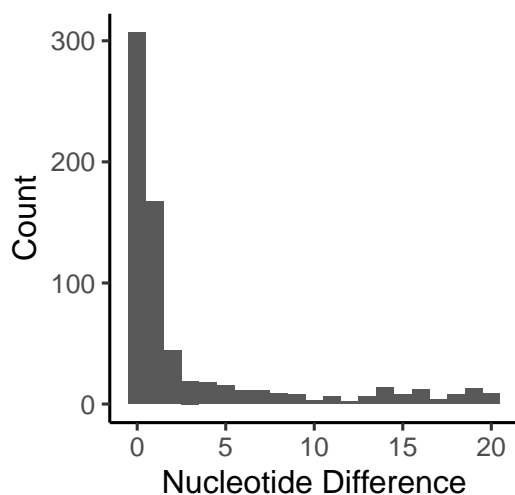
### IGHV3-11\*01

20220 sequences assigned  
2758 (13.6%) exact matches, in which:  
2238 unique CDR3  
6 unique J



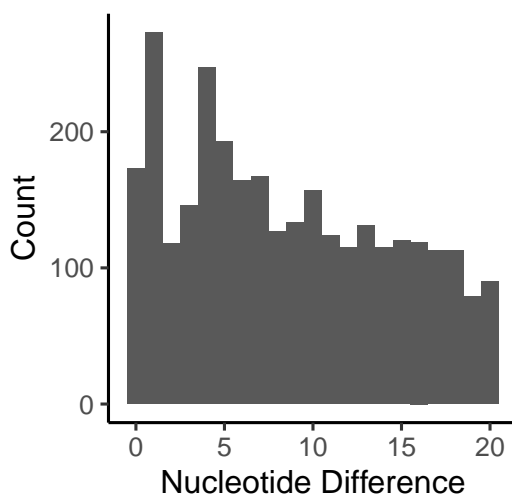
### IGHV2-70\*01

763 sequences assigned  
307 (40.2%) exact matches, in which:  
292 unique CDR3  
5 unique J



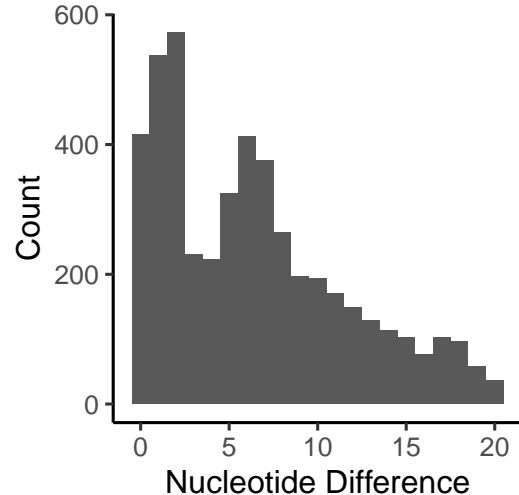
### IGHV3-7\*03

3427 sequences assigned  
173 (5%) exact matches, in which:  
170 unique CDR3  
6 unique J



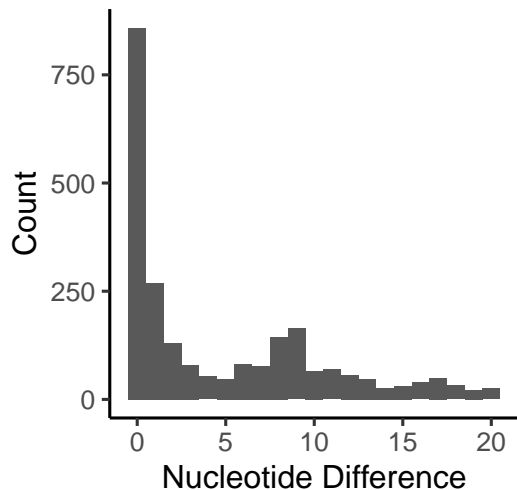
### IGHV3-11\*04

5001 sequences assigned  
416 (8.3%) exact matches, in which:  
409 unique CDR3  
6 unique J



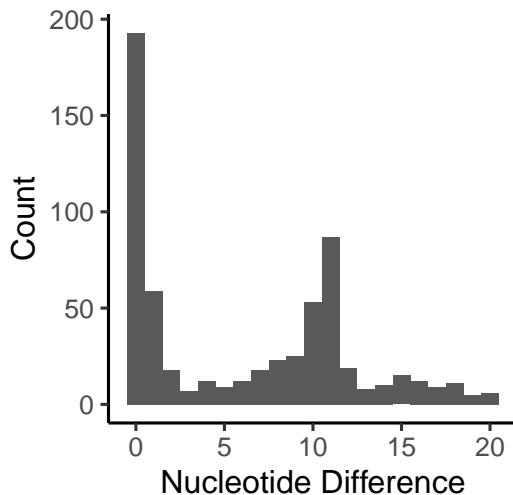
### IGHV3-13\*01

2490 sequences assigned  
859 (34.5%) exact matches, in which:  
679 unique CDR3  
6 unique J



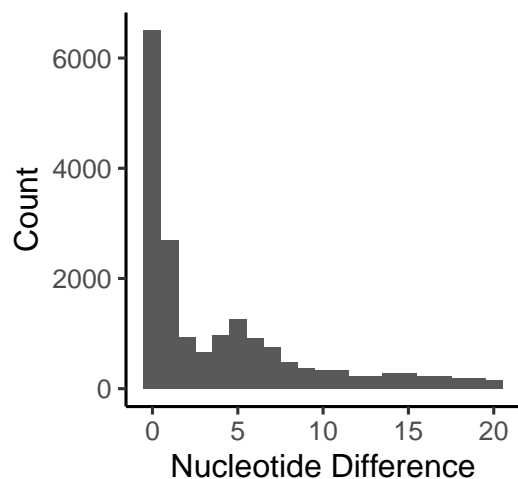
### IGHV3-20\*01\_02

624 sequences assigned  
193 (30.9%) exact matches, in which:  
151 unique CDR3  
5 unique J



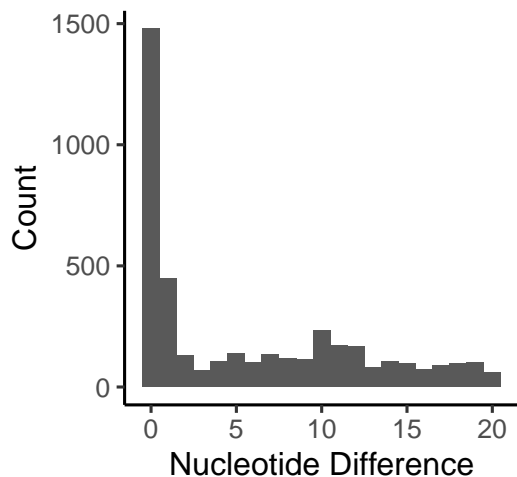
### IGHV3-21\*01\_02

19263 sequences assigned  
6502 (33.8%) exact matches, in which:  
5157 unique CDR3  
6 unique J



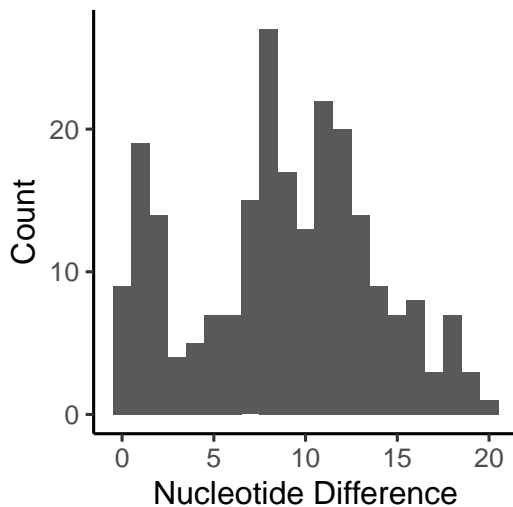
### IGHV3-15\*01\_02

4674 sequences assigned  
1479 (31.6%) exact matches, in which:  
1212 unique CDR3  
6 unique J



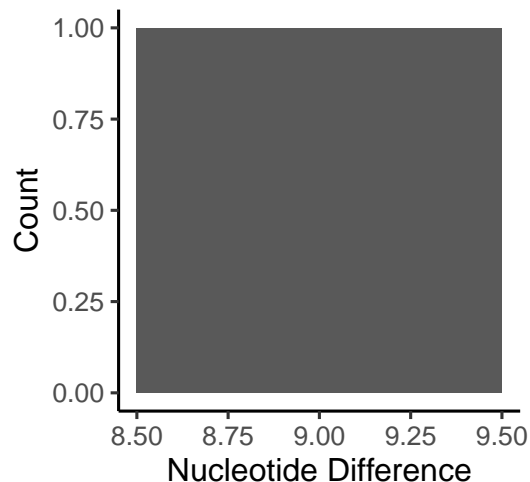
### IGHV3-20\*03\_04

245 sequences assigned  
9 (3.7%) exact matches, in which:  
8 unique CDR3  
5 unique J



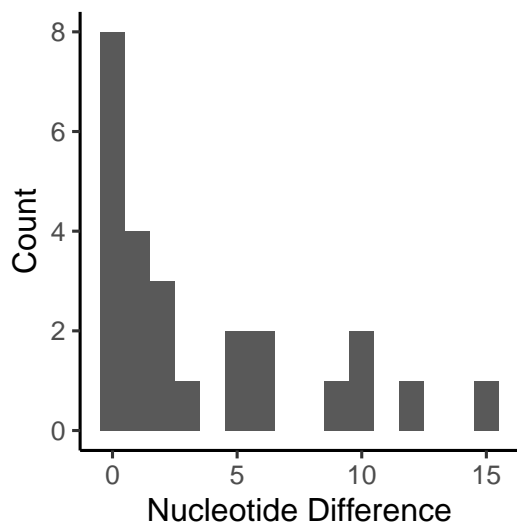
### IGHV3-22\*01\_02

1 sequences assigned  
No exact matches.



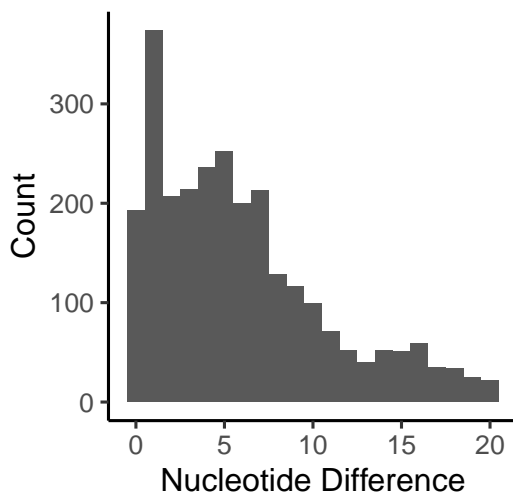
### IGHV3-19\*01

25 sequences assigned  
8 (32%) exact matches, in which:  
8 unique CDR3  
3 unique J



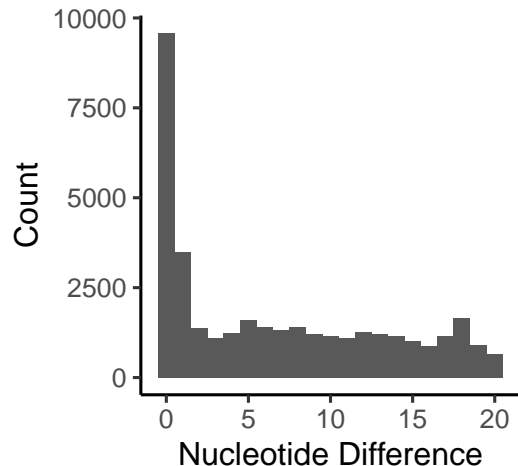
### IGHV3-21\*04

2794 sequences assigned  
193 (6.9%) exact matches, in which:  
190 unique CDR3  
6 unique J



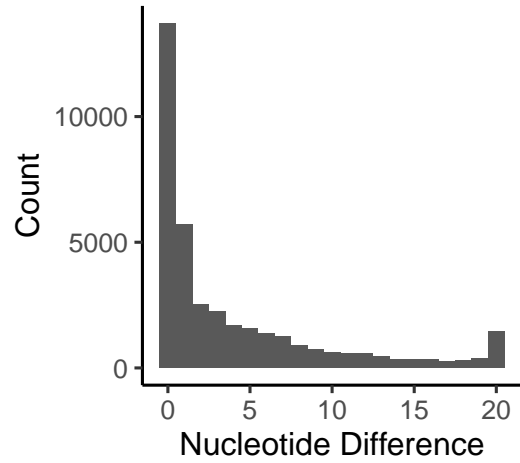
### IGHV3-23\*01\_04

40178 sequences assigned  
9587 (23.9%) exact matches, in which:  
7235 unique CDR3  
6 unique J



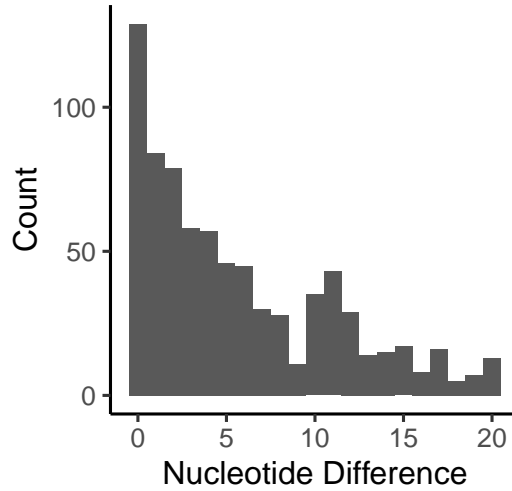
### IGHV3-30-3\*01

43185 sequences assigned  
13717 (31.8%) exact matches, in which:  
11057 unique CDR3  
6 unique J



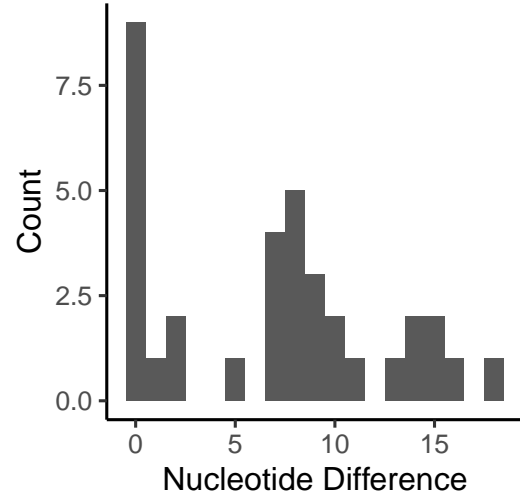
### IGHV3-33\*05

931 sequences assigned  
129 (13.9%) exact matches, in which:  
125 unique CDR3  
6 unique J



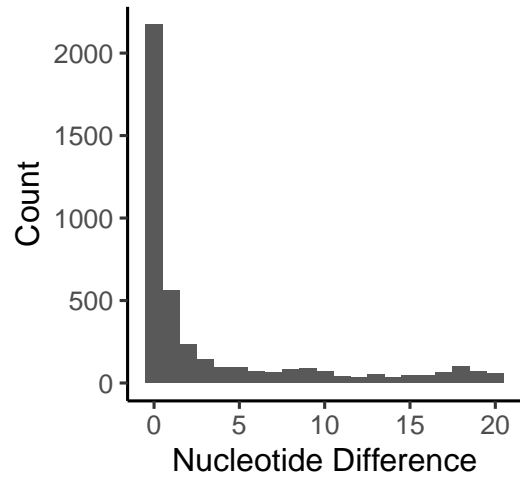
### IGHV3-35\*01

35 sequences assigned  
9 (25.7%) exact matches, in which:  
8 unique CDR3  
4 unique J



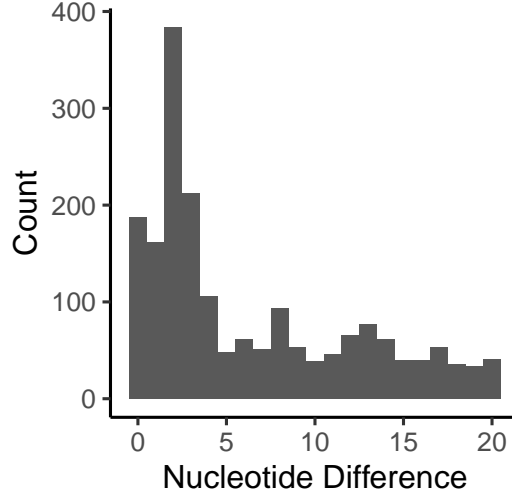
### IGHV3-30\*03

4412 sequences assigned  
2172 (49.2%) exact matches, in which:  
2056 unique CDR3  
6 unique J



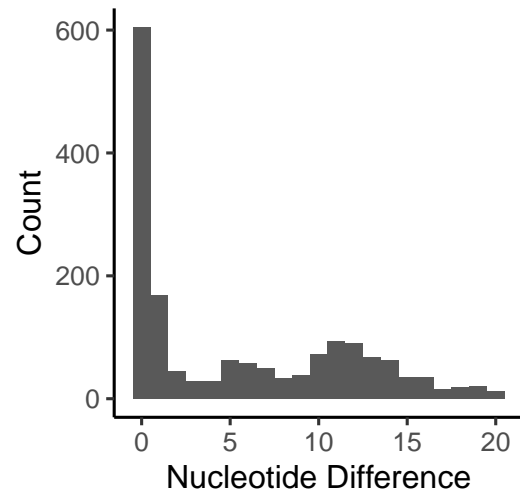
### IGHV3-33\*06

2203 sequences assigned  
188 (8.5%) exact matches, in which:  
187 unique CDR3  
6 unique J



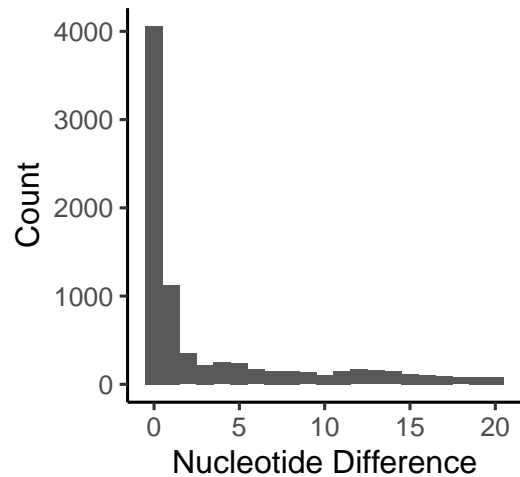
### IGHV3-43\*02

1947 sequences assigned  
605 (31.1%) exact matches, in which:  
492 unique CDR3  
6 unique J



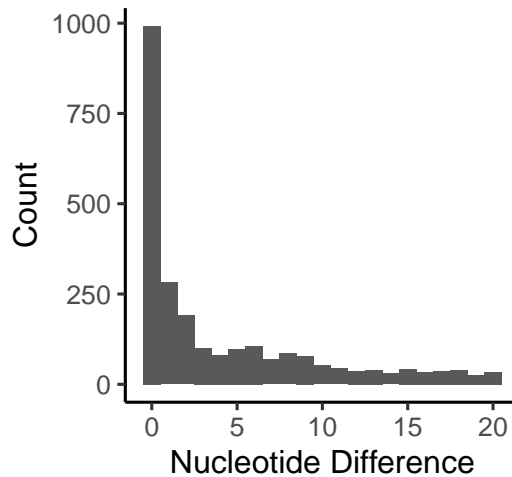
### IGHV3-33\*01

8864 sequences assigned  
4060 (45.8%) exact matches, in which:  
3397 unique CDR3  
6 unique J



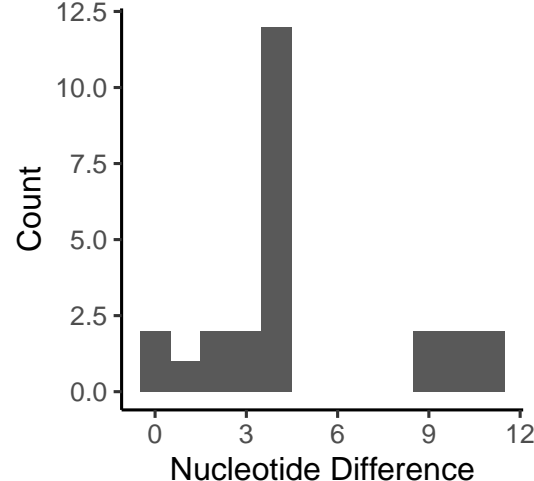
### IGHV3-33\*08

2786 sequences assigned  
992 (35.6%) exact matches, in which:  
925 unique CDR3  
6 unique J



### IGHV3-47\*01

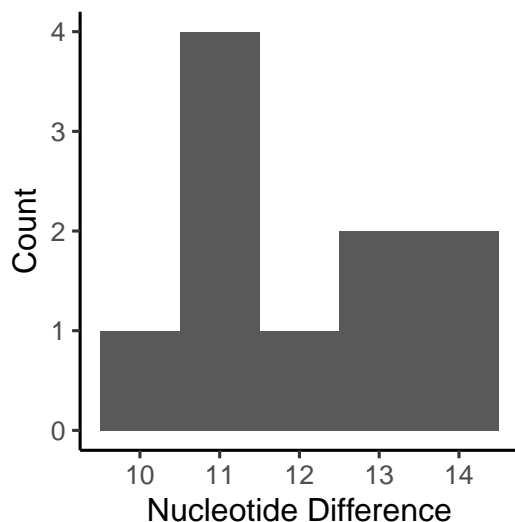
25 sequences assigned  
2 (8%) exact matches, in which:  
2 unique CDR3  
2 unique J





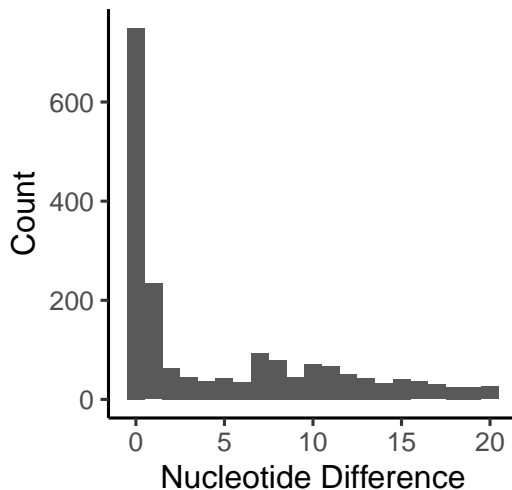
### IGHV3-47\*02

10 sequences assigned  
No exact matches.



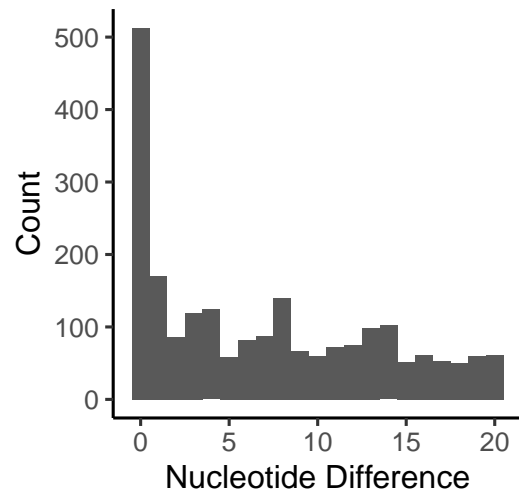
### IGHV3-49\*04

2045 sequences assigned  
750 (36.7%) exact matches, in which:  
634 unique CDR3  
6 unique J



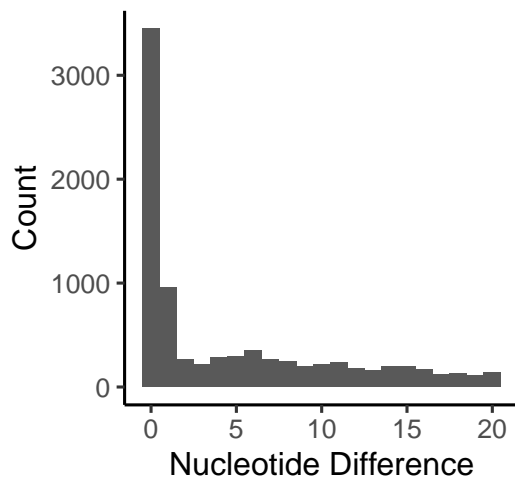
### IGHV3-53\*01\_02

2935 sequences assigned  
513 (17.5%) exact matches, in which:  
426 unique CDR3  
6 unique J



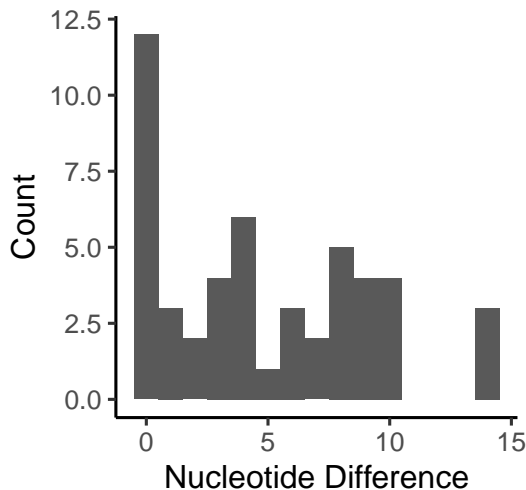
### IGHV3-48\*03

9159 sequences assigned  
3448 (37.6%) exact matches, in which:  
2803 unique CDR3  
6 unique J



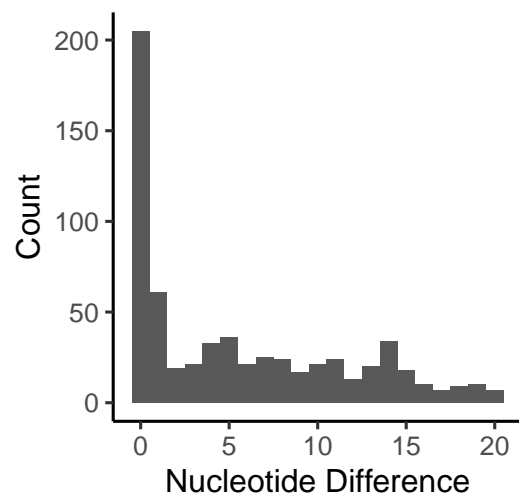
### IGHV3-52\*01\_03

50 sequences assigned  
12 (24%) exact matches, in which:  
8 unique CDR3  
4 unique J



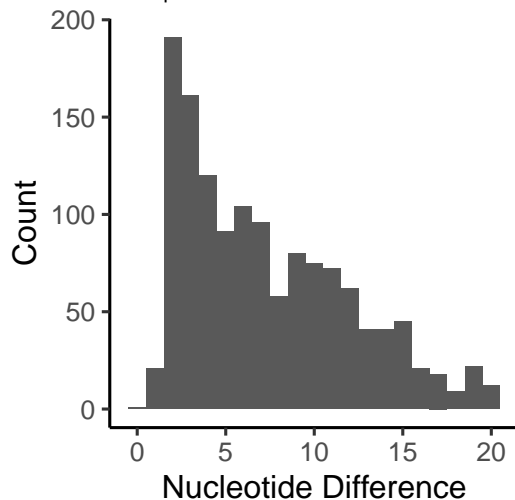
### IGHV3-64\*01

890 sequences assigned  
205 (23%) exact matches, in which:  
170 unique CDR3  
6 unique J



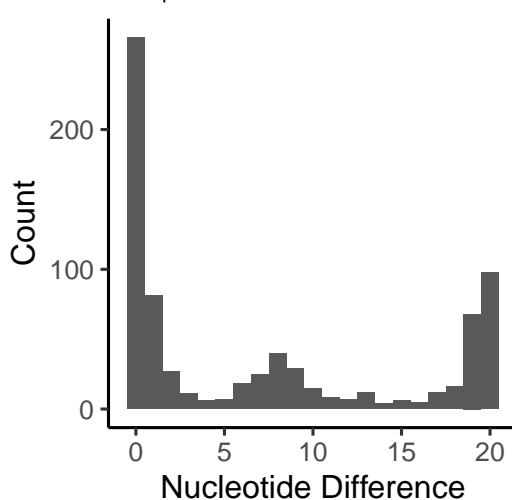
### IGHV3-48\*04

1433 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J



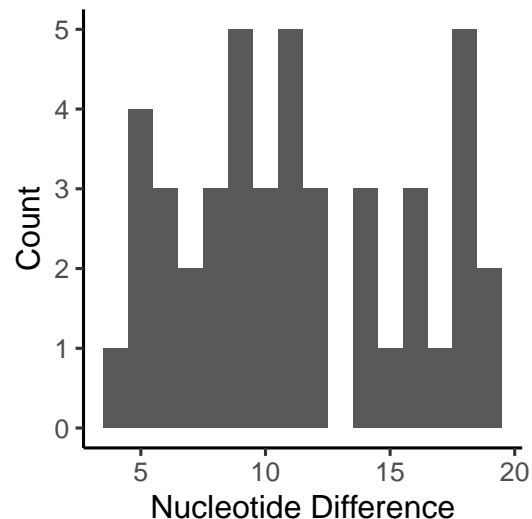
### IGHV3-53\*04

907 sequences assigned  
266 (29.3%) exact matches, in which:  
227 unique CDR3  
6 unique J



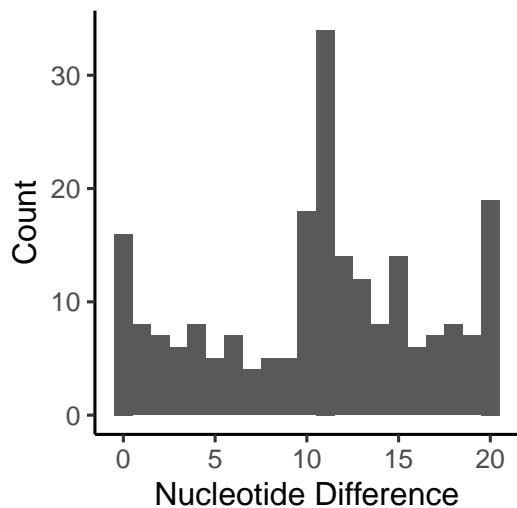
### IGHV3-64\*04

66 sequences assigned  
No exact matches.



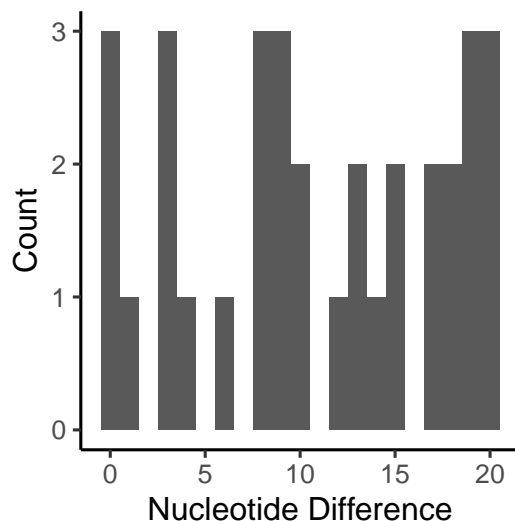
## IGHV3-64\*02\_07

323 sequences assigned  
16 (5%) exact matches, in which:  
14 unique CDR3  
3 unique J



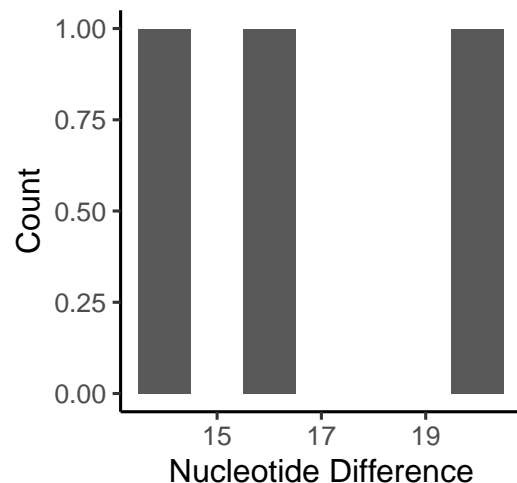
## IGHV3-69-1\*02

79 sequences assigned  
3 (3.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



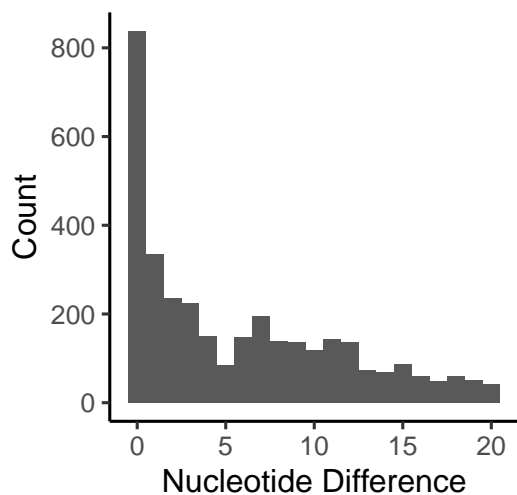
## IGHV3-71\*01\_04

5 sequences assigned  
No exact matches.



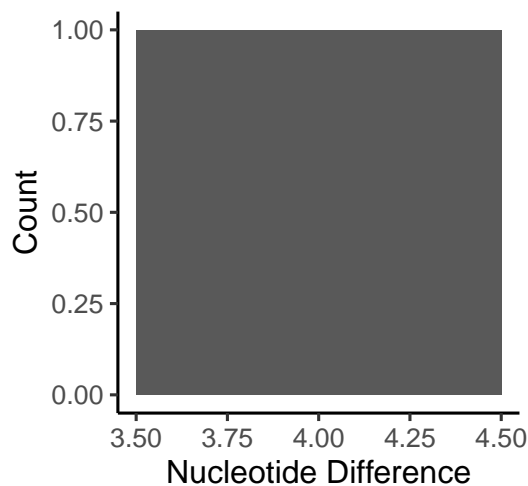
## IGHV3-66\*01

4120 sequences assigned  
838 (20.3%) exact matches, in which:  
693 unique CDR3  
6 unique J



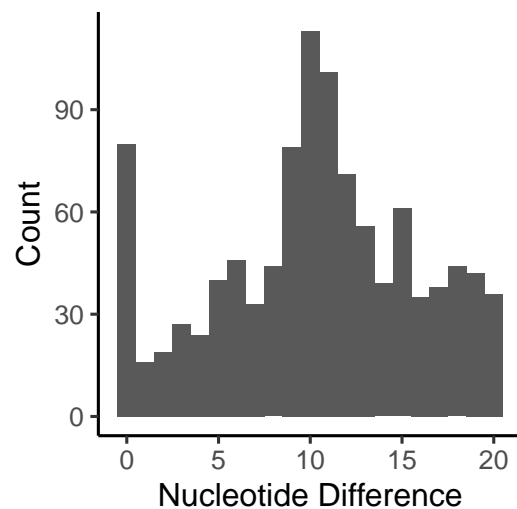
## IGHV3-71\*02

1 sequences assigned  
No exact matches.



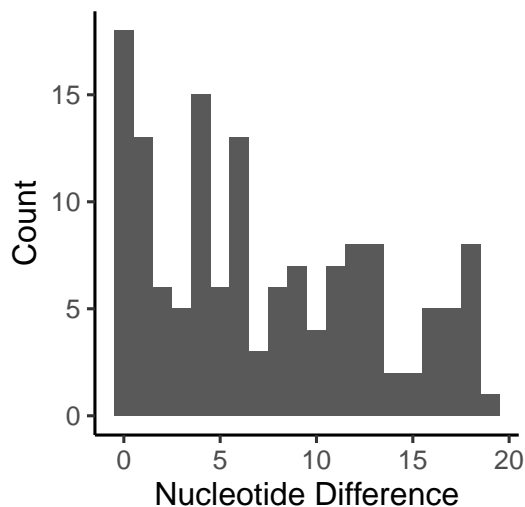
## IGHV3-72\*01

1395 sequences assigned  
80 (5.7%) exact matches, in which:  
64 unique CDR3  
4 unique J



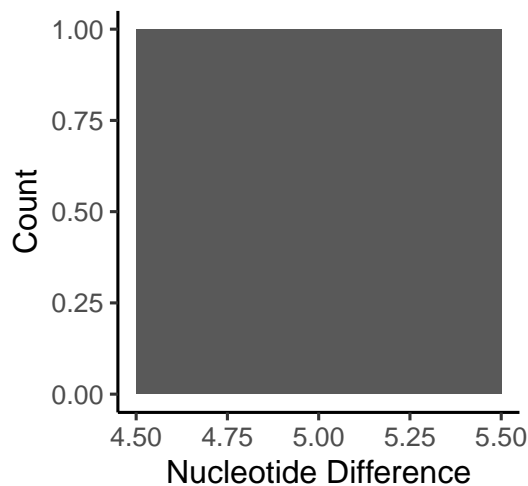
## IGHV3-69-1\*01

159 sequences assigned  
18 (11.3%) exact matches, in which:  
17 unique CDR3  
4 unique J



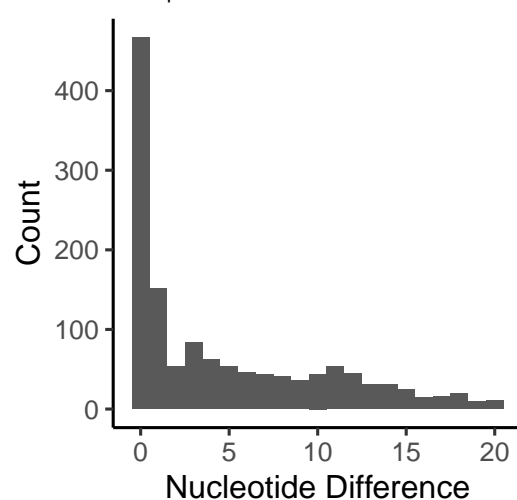
## IGHV3-71\*03

1 sequences assigned  
No exact matches.



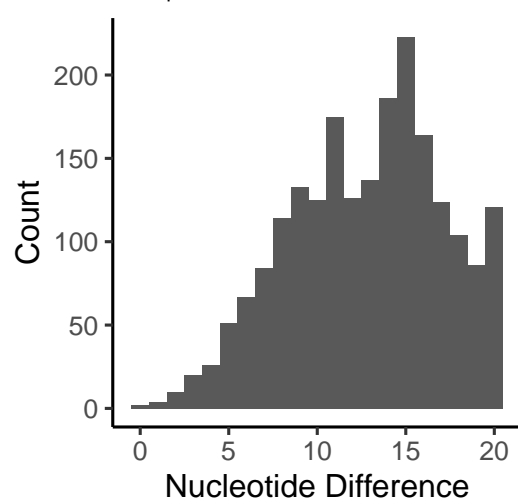
## IGHV3-73\*01\_02

1371 sequences assigned  
467 (34.1%) exact matches, in which:  
372 unique CDR3  
6 unique J



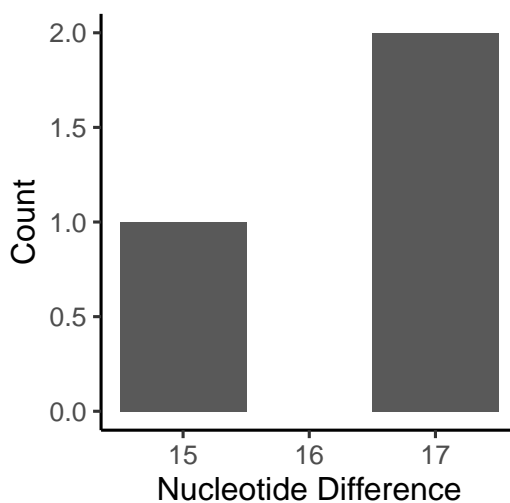
### IGHV3-74\*03

2967 sequences assigned  
2 (0.1%) exact matches, in which:  
2 unique CDR3  
1 unique J



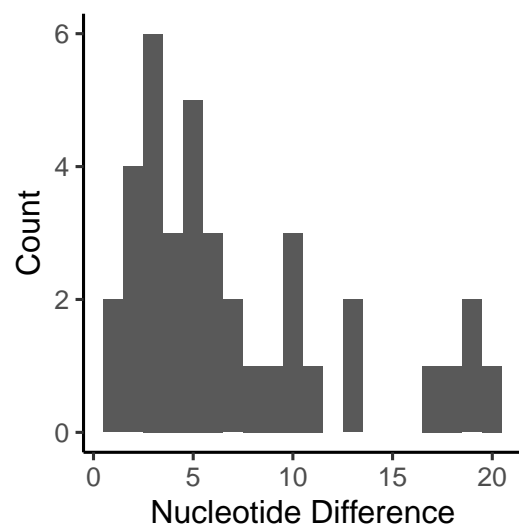
### IGHV3-64D\*08

9 sequences assigned  
No exact matches.



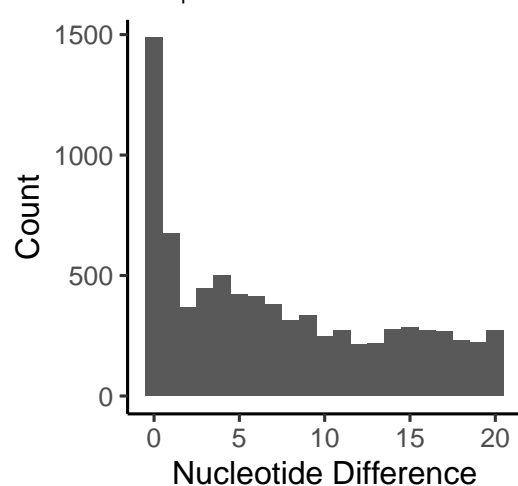
### IGHV4-28\*03

44 sequences assigned  
No exact matches.



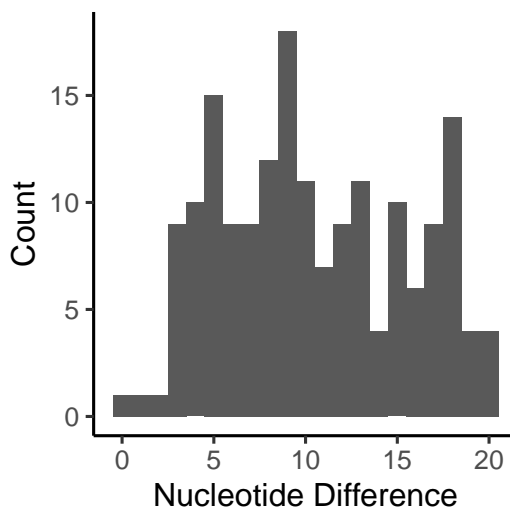
### IGHV3-74\*01\_02

8848 sequences assigned  
1487 (16.8%) exact matches, in which:  
1184 unique CDR3  
6 unique J



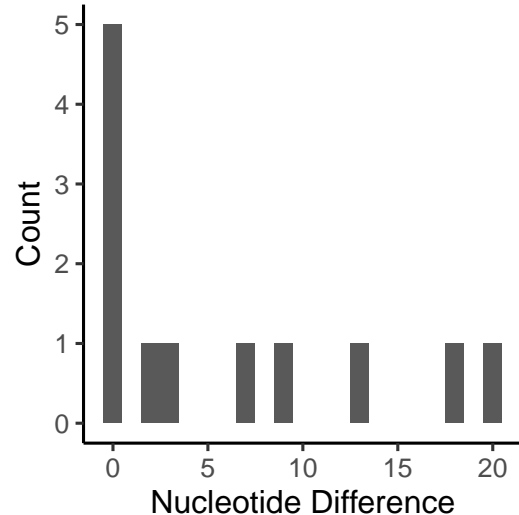
### IGHV3-NL1\*01

203 sequences assigned  
1 (0.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



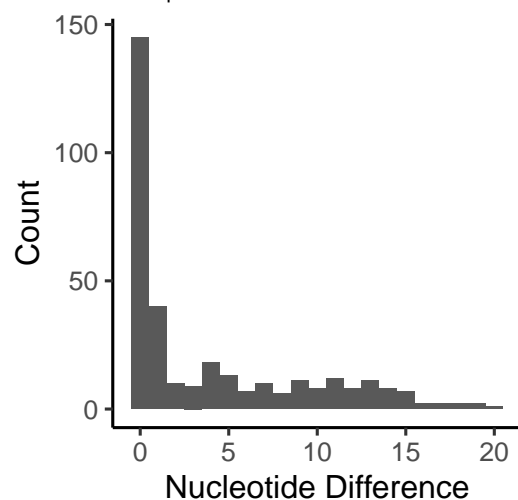
### IGHV4-28\*01\_07

15 sequences assigned  
5 (33.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



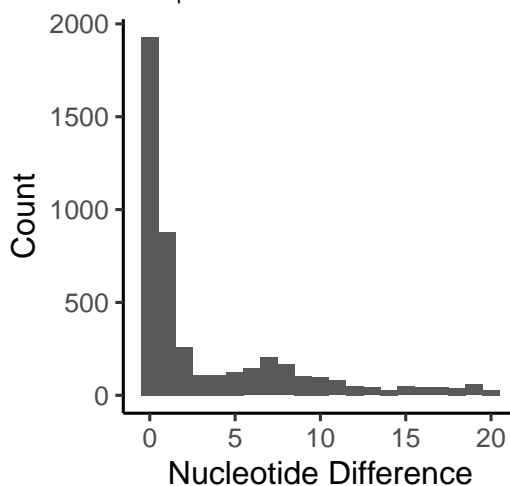
### IGHV3-43D\*04

334 sequences assigned  
145 (43.4%) exact matches, in which:  
118 unique CDR3  
5 unique J



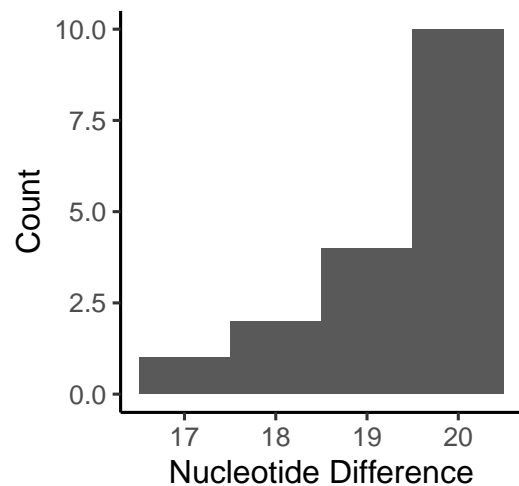
### IGHV4-4\*02\_03

4814 sequences assigned  
1929 (40.1%) exact matches, in which:  
1791 unique CDR3  
6 unique J



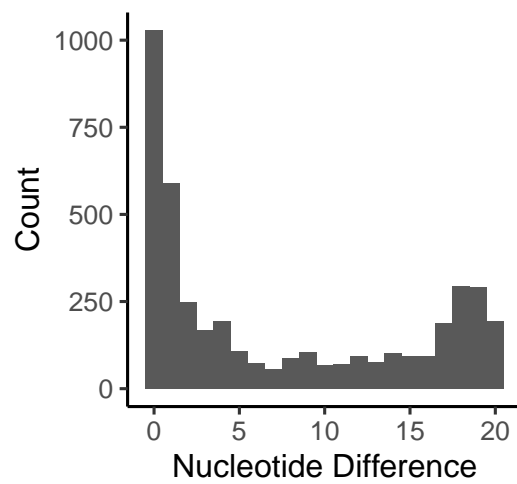
### IGHV4-28\*02\_05

45 sequences assigned  
No exact matches.



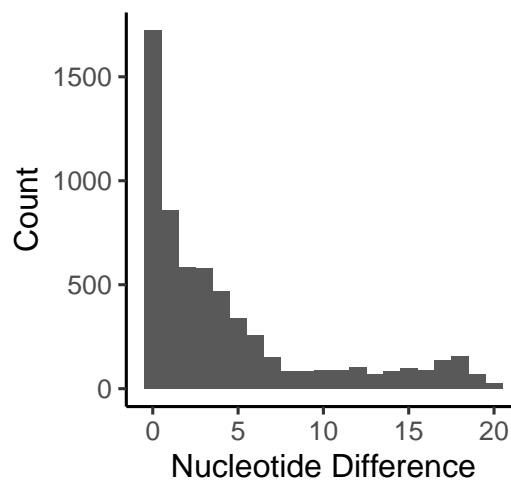
### IGHV4-30-2\*01

5197 sequences assigned  
1028 (19.8%) exact matches, in which:  
936 unique CDR3  
6 unique J



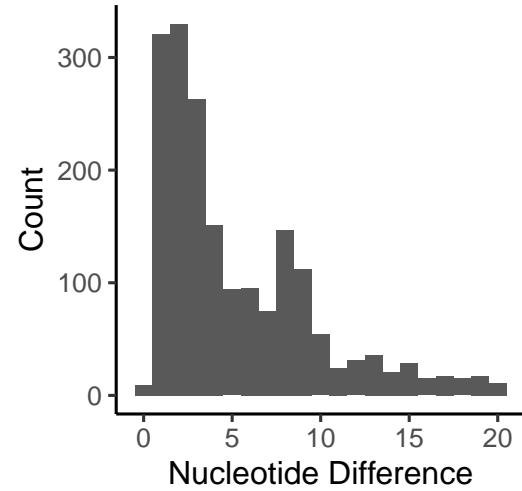
### IGHV4-31\*02

6892 sequences assigned  
1723 (25%) exact matches, in which:  
1618 unique CDR3  
6 unique J



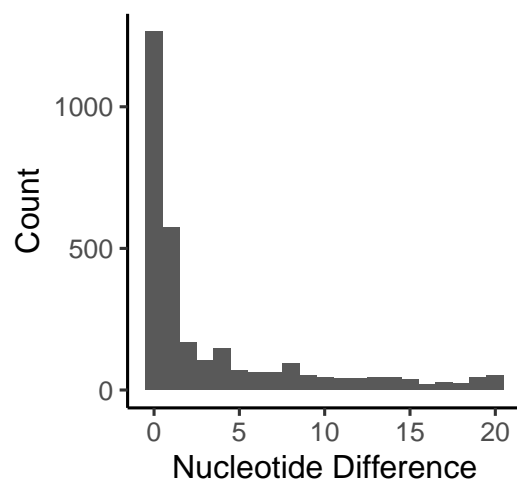
### IGHV4-39\*07

1951 sequences assigned  
9 (0.5%) exact matches, in which:  
9 unique CDR3  
3 unique J



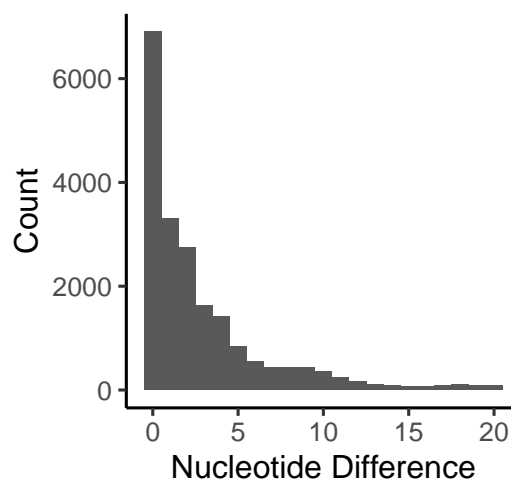
### IGHV4-30-4\*01

4532 sequences assigned  
1265 (27.9%) exact matches, in which:  
1194 unique CDR3  
6 unique J



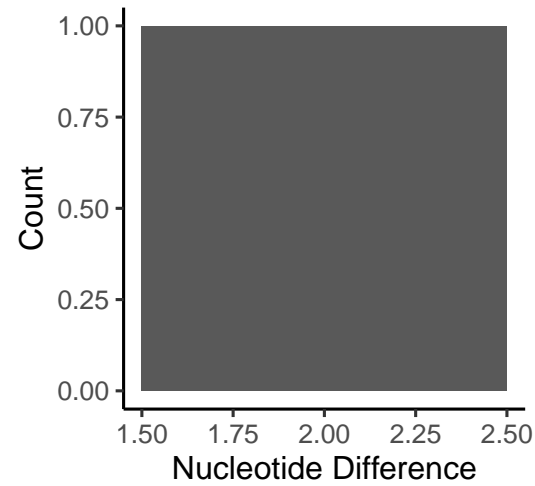
### IGHV4-34\*01\_02

20833 sequences assigned  
6904 (33.1%) exact matches, in which:  
6405 unique CDR3  
6 unique J



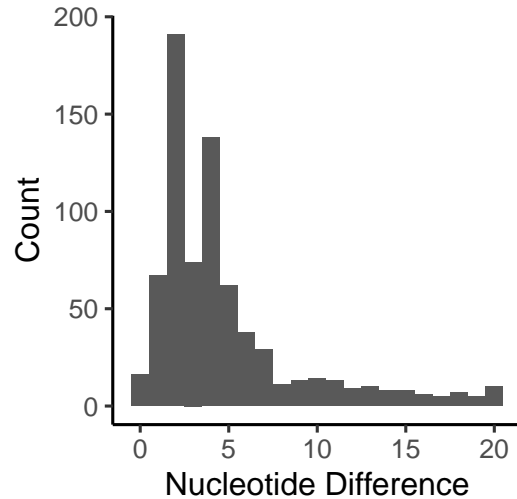
### IGHV4-55\*09

1 sequences assigned  
No exact matches.



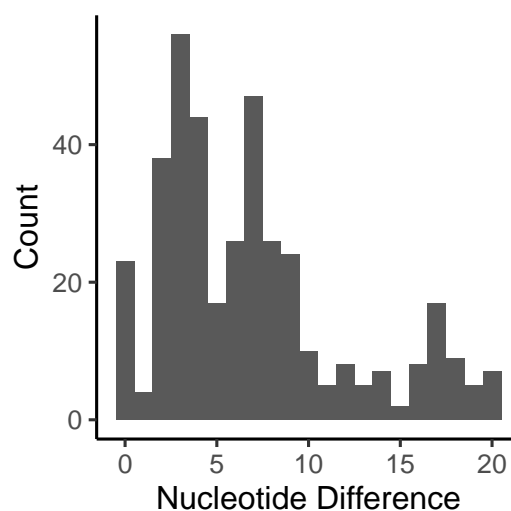
### IGHV4-30-4\*08

778 sequences assigned  
16 (2.1%) exact matches, in which:  
16 unique CDR3  
4 unique J



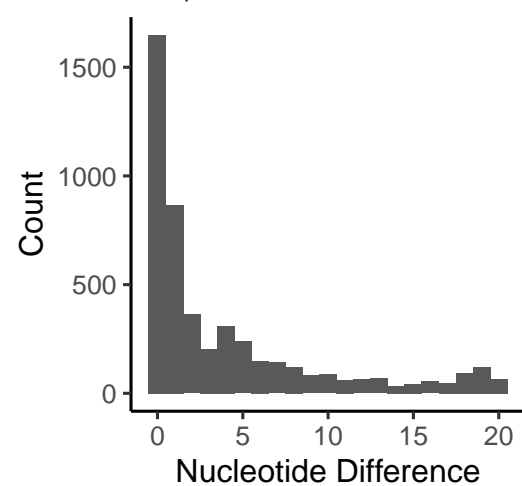
### IGHV4-38-2\*02

487 sequences assigned  
23 (4.7%) exact matches, in which:  
23 unique CDR3  
5 unique J



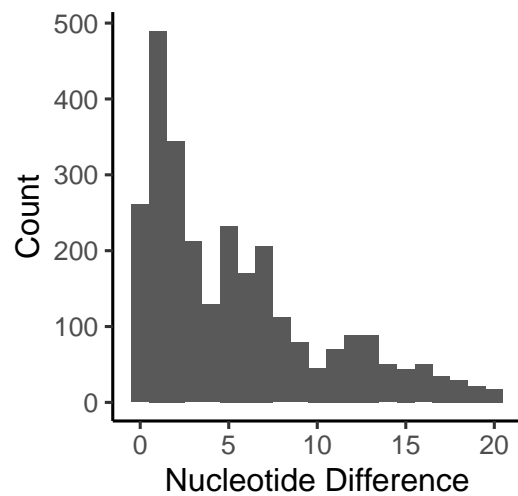
### IGHV4-59\*08

5272 sequences assigned  
1648 (31.3%) exact matches, in which:  
1556 unique CDR3  
6 unique J



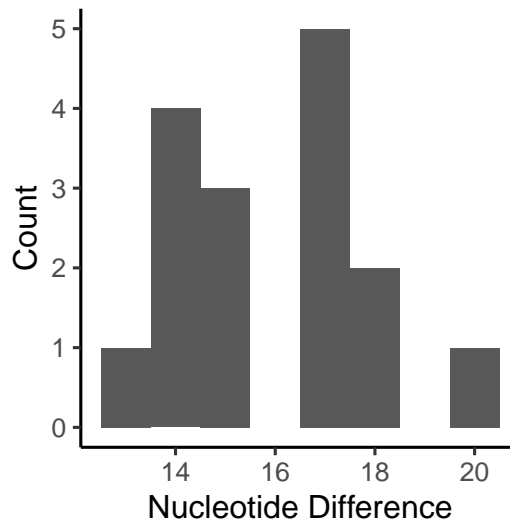
### IGHV4–59\*12

3090 sequences assigned  
261 (8.4%) exact matches, in which:  
261 unique CDR3  
6 unique J



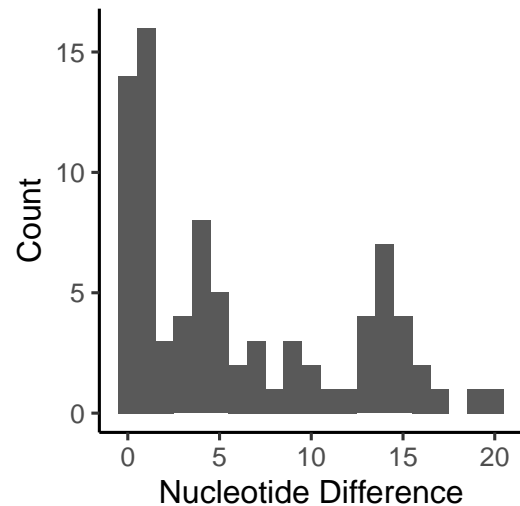
### IGHV1/OR15–2\*02\_03

37 sequences assigned  
No exact matches.



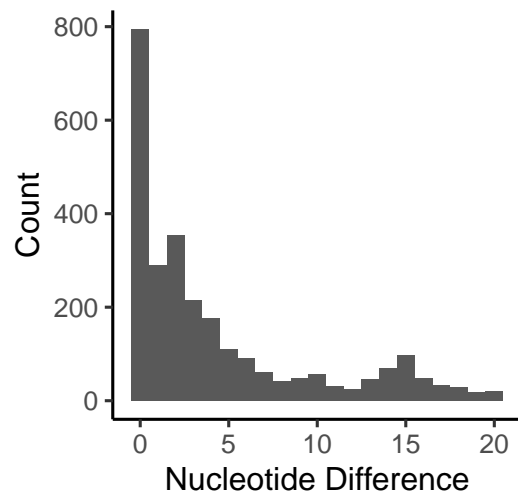
### IGHV4/OR15–8\*01

90 sequences assigned  
14 (15.6%) exact matches, in which:  
8 unique CDR3  
1 unique J



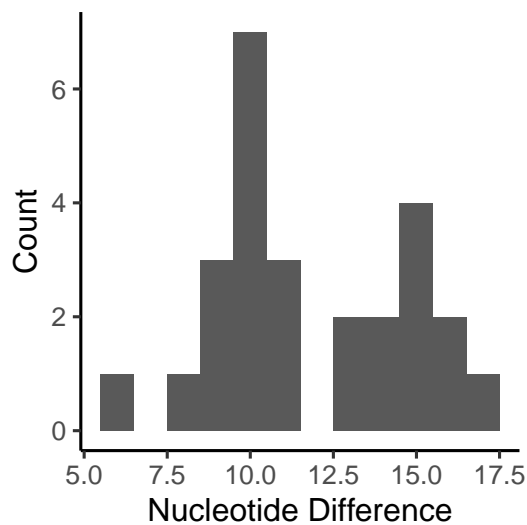
### IGHV4–61\*01

2894 sequences assigned  
795 (27.5%) exact matches, in which:  
777 unique CDR3  
6 unique J



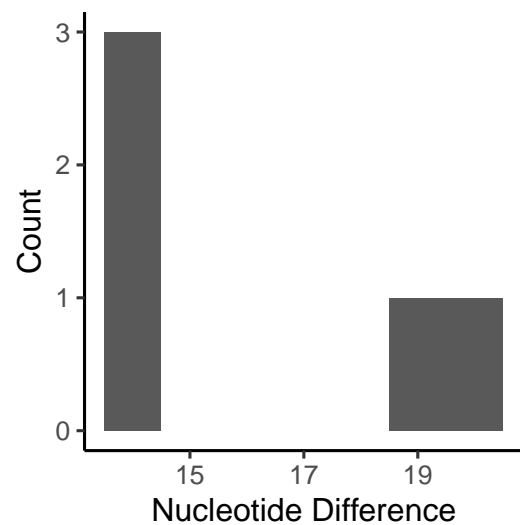
### IGHV1/OR15–3\*02

27 sequences assigned  
No exact matches.



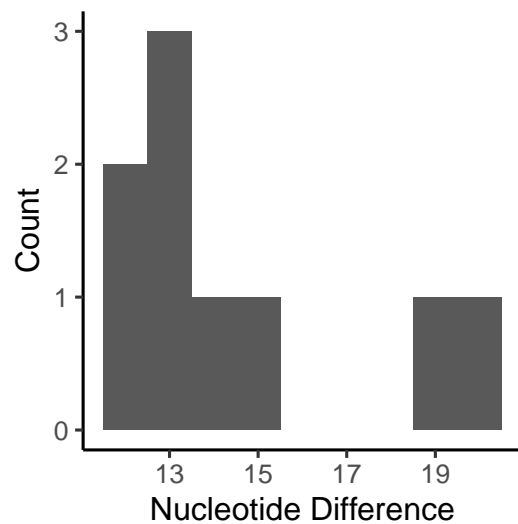
### IGHV4/OR15–8\*02

56 sequences assigned  
No exact matches.



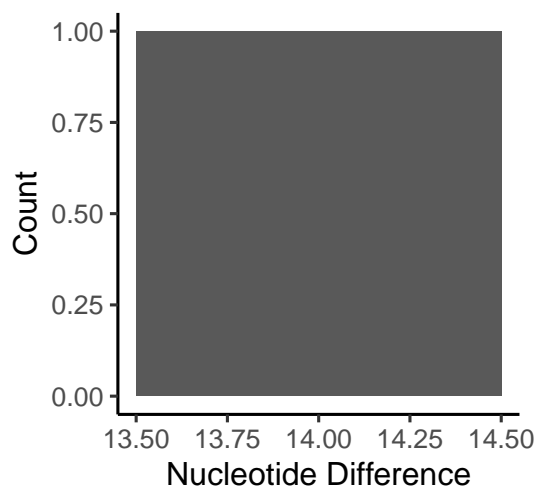
### IGHV1/OR15–1\*04

9 sequences assigned  
No exact matches.



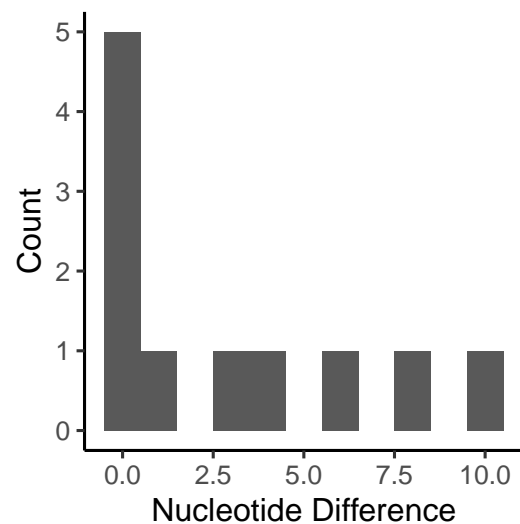
### IGHV1/OR15–4\*01

2 sequences assigned  
No exact matches.



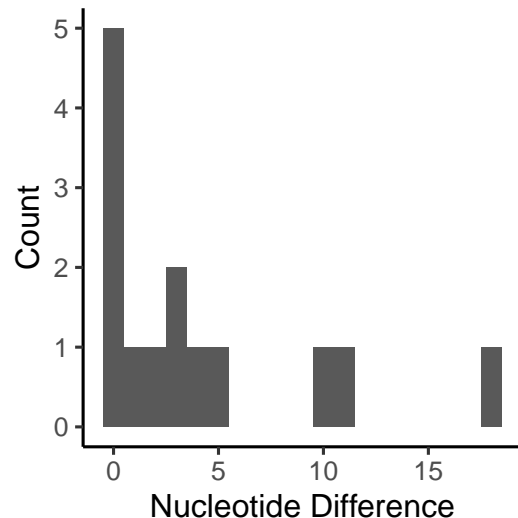
### IGHV5–10–1\*01\_03

12 sequences assigned  
5 (41.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



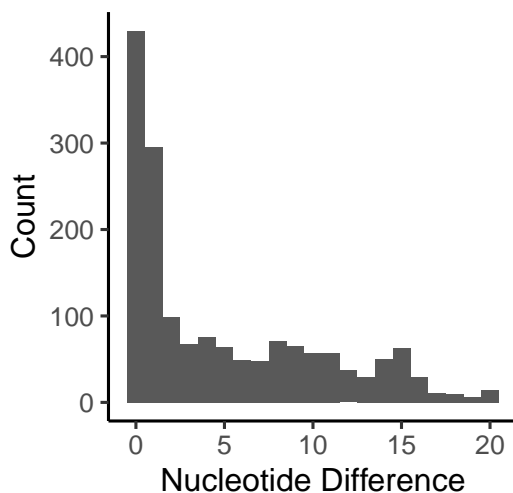
### IGHV5–51\*04

15 sequences assigned  
5 (33.3%) exact matches, in which:  
5 unique CDR3  
3 unique J



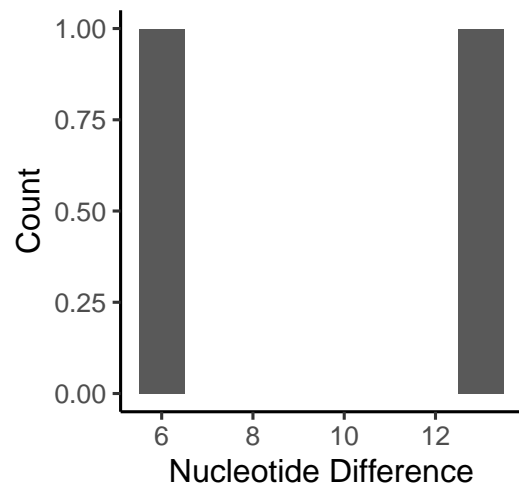
### IGHV6–1\*01\_02

1686 sequences assigned  
430 (25.5%) exact matches, in which:  
406 unique CDR3  
5 unique J



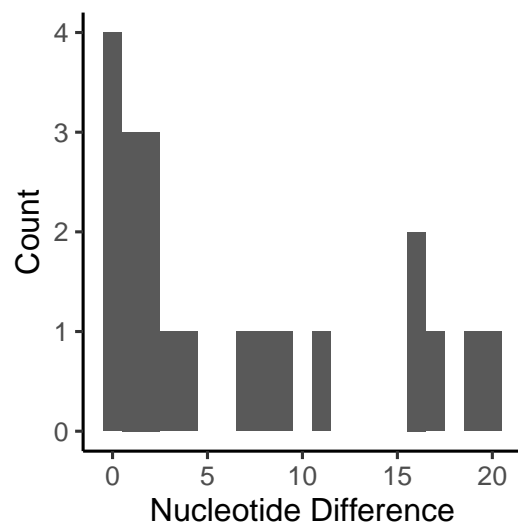
### IGHV3/OR16–13\*01

2 sequences assigned  
No exact matches.



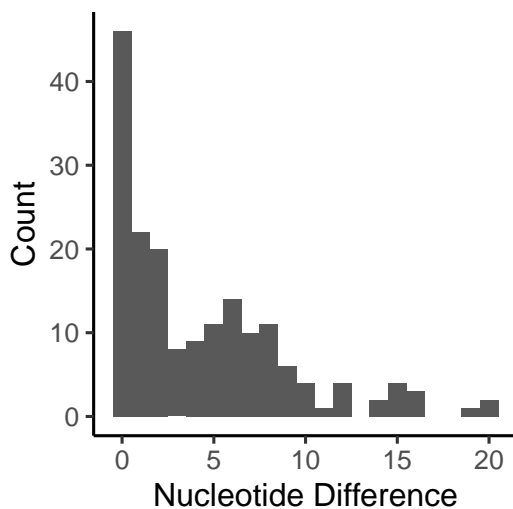
### IGHV5–51\*06

32 sequences assigned  
4 (12.5%) exact matches, in which:  
4 unique CDR3  
3 unique J



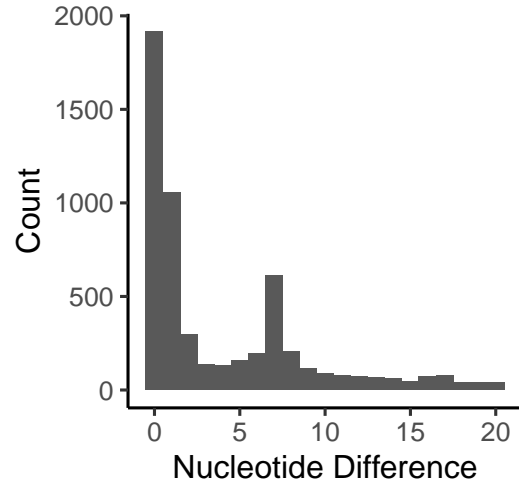
### IGHV6–1\*01\_02\_A315G

190 sequences assigned  
46 (24.2%) exact matches, in which:  
46 unique CDR3  
5 unique J



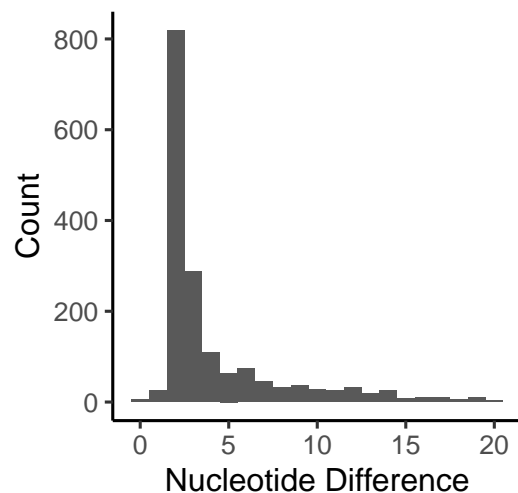
### IGHV7–4–1\*02

5840 sequences assigned  
1915 (32.8%) exact matches, in which:  
1797 unique CDR3  
6 unique J



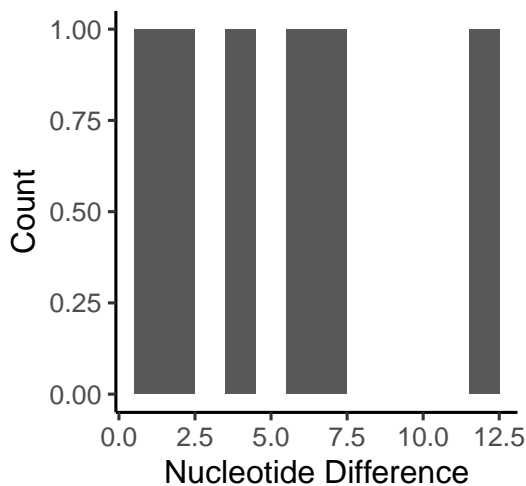
### IGHV5–51\*07

1742 sequences assigned  
6 (0.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



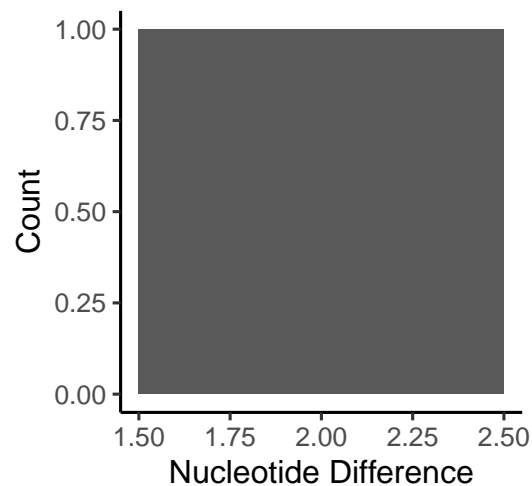
### IGHV3/OR16–9\*01

6 sequences assigned  
No exact matches.

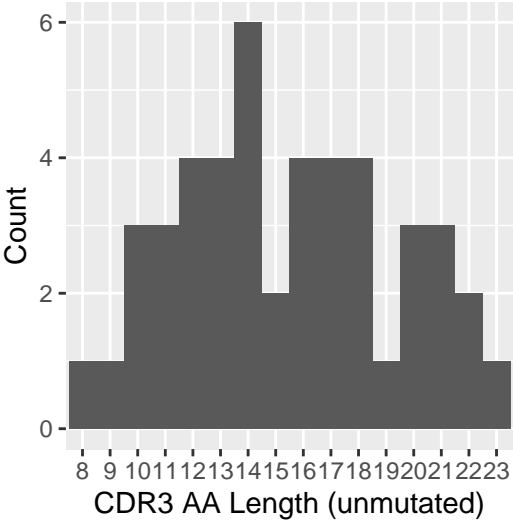


### IGHV7–81\*01

1 sequences assigned  
No exact matches.



IGHV6-1\*01\_02\_A315G







[illegible]