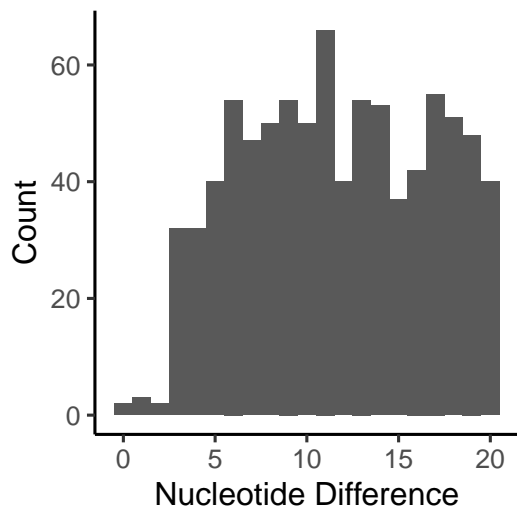


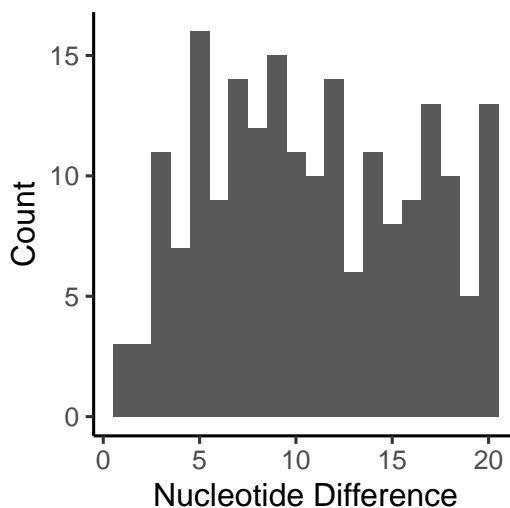
### IGHV1-2\*02

1101 sequences assigned  
2 (0.2%) exact matches, in which:  
2 unique CDR3  
1 unique J



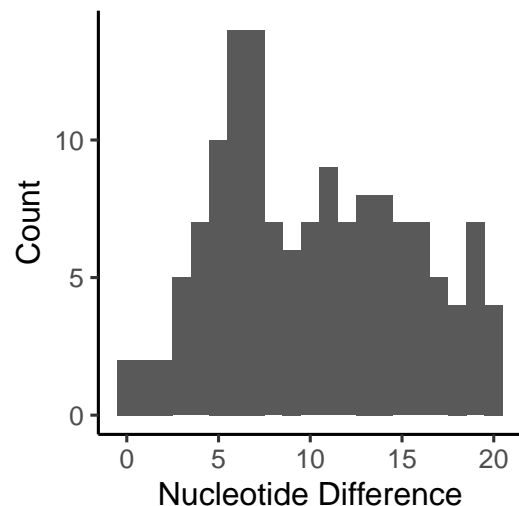
### IGHV1-3\*01\_05

238 sequences assigned  
No exact matches.



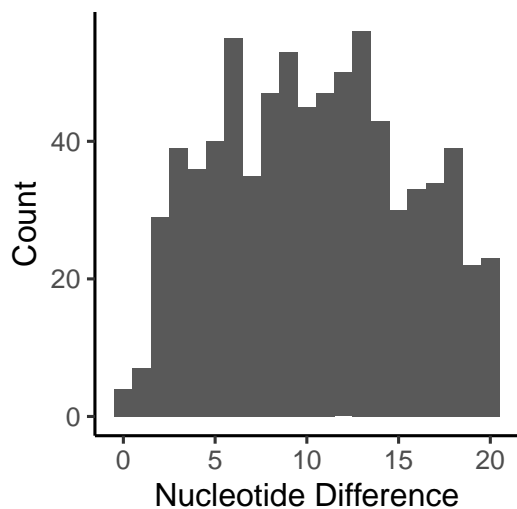
### IGHV1-24\*01

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



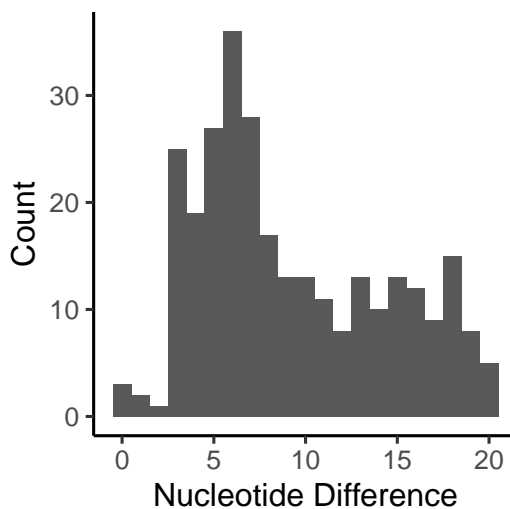
### IGHV1-2\*06

1007 sequences assigned  
4 (0.4%) exact matches, in which:  
3 unique CDR3  
2 unique J



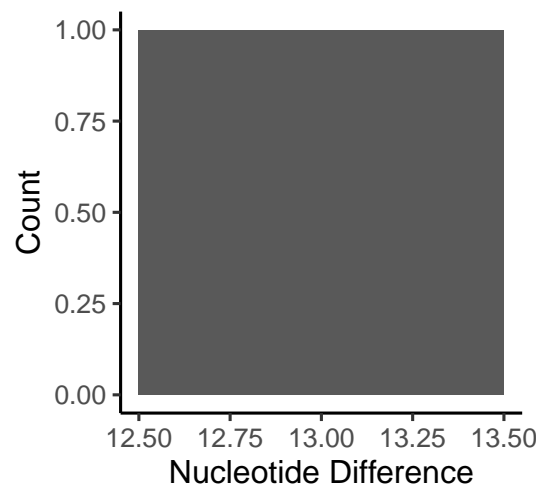
### IGHV1-8\*01

397 sequences assigned  
3 (0.8%) exact matches, in which:  
3 unique CDR3  
2 unique J



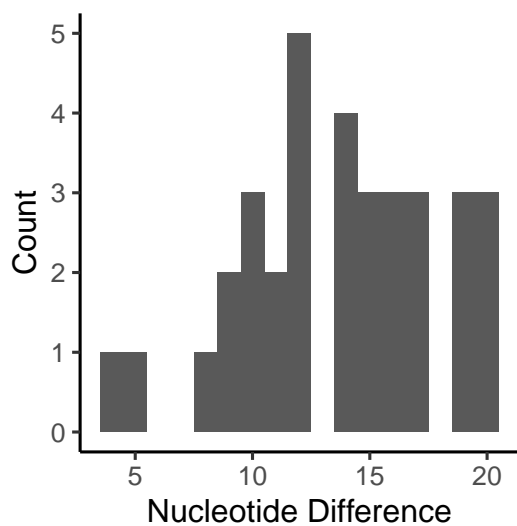
### IGHV1-45\*02

3 sequences assigned  
No exact matches.



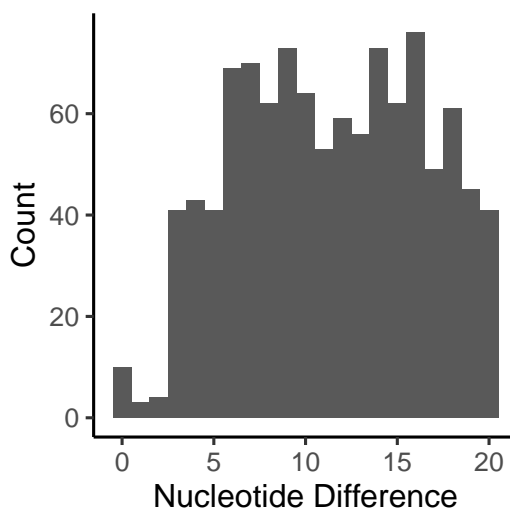
### IGHV1-3\*04

50 sequences assigned  
No exact matches.



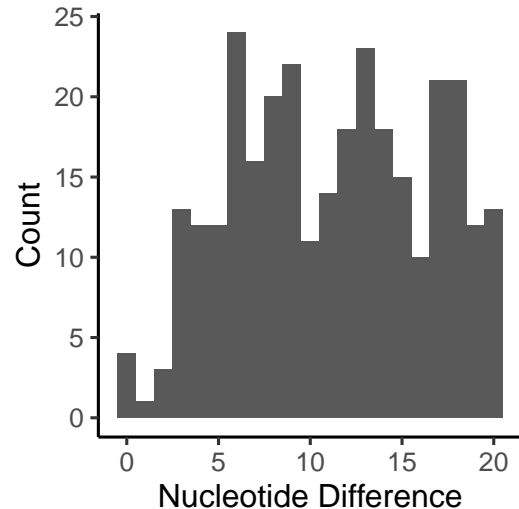
### IGHV1-18\*01

1436 sequences assigned  
10 (0.7%) exact matches, in which:  
10 unique CDR3  
3 unique J



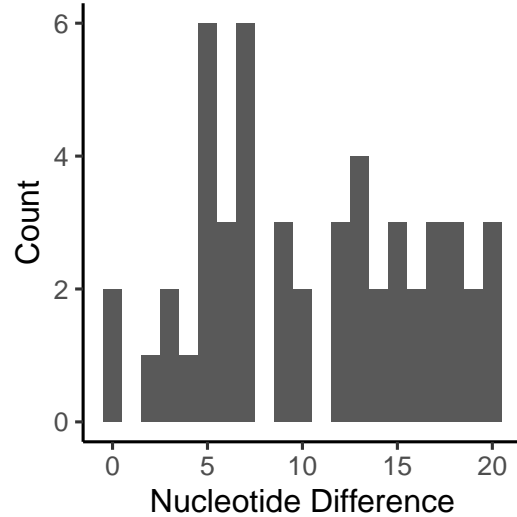
### IGHV1-46\*01

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



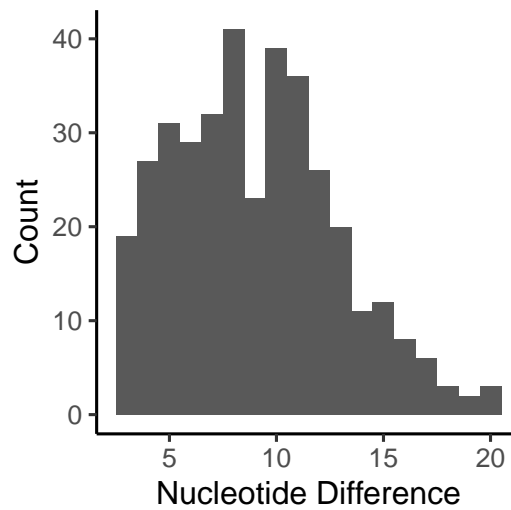
### IGHV1-58\*01\_03

71 sequences assigned  
2 (2.8%) exact matches, in which:  
2 unique CDR3  
2 unique J



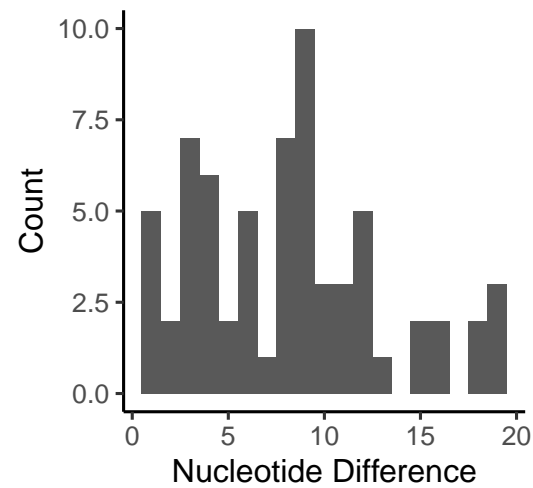
### IGHV2-5\*01

401 sequences assigned  
No exact matches.



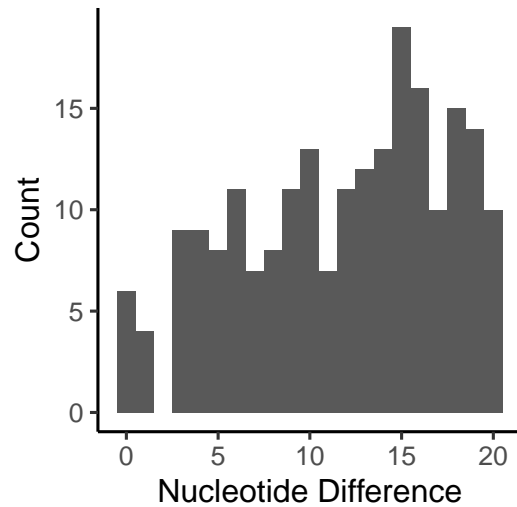
### IGHV2-70\*01

79 sequences assigned  
No exact matches.



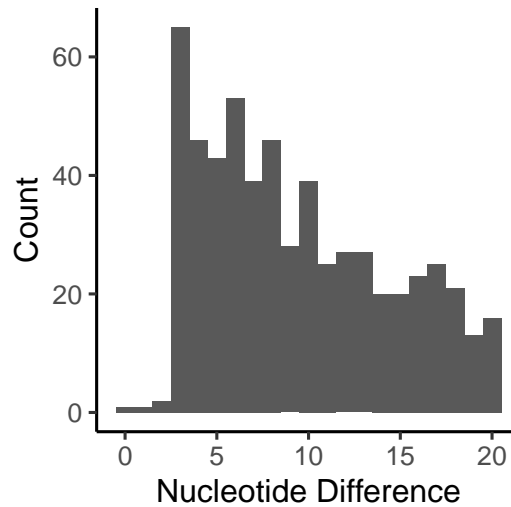
### IGHV1-69\*01\_12\_13

431 sequences assigned  
6 (1.4%) exact matches, in which:  
5 unique CDR3  
1 unique J



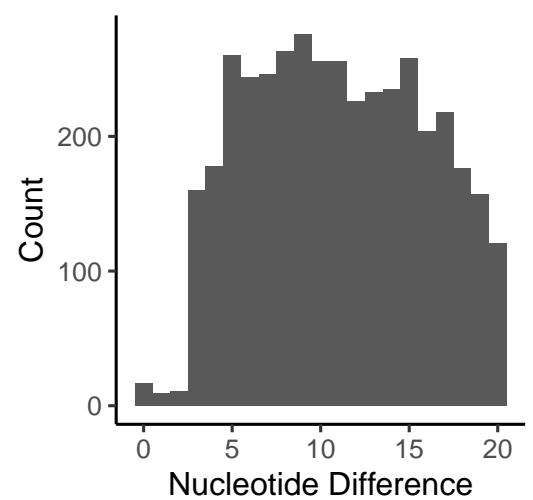
### IGHV2-5\*02

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



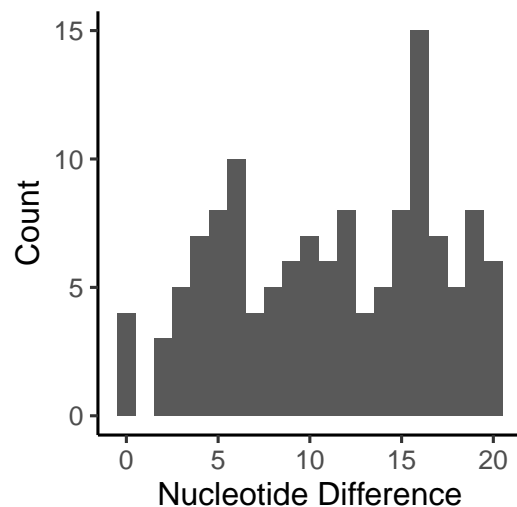
### IGHV3-7\*01

4654 sequences assigned  
17 (0.4%) exact matches, in which:  
12 unique CDR3  
4 unique J



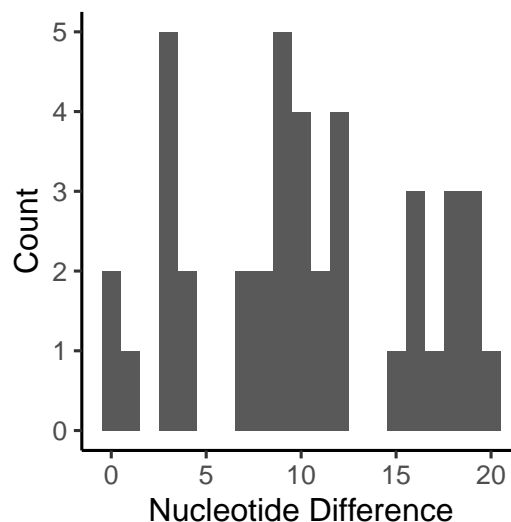
### IGHV1-69\*06\_14

262 sequences assigned  
4 (1.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



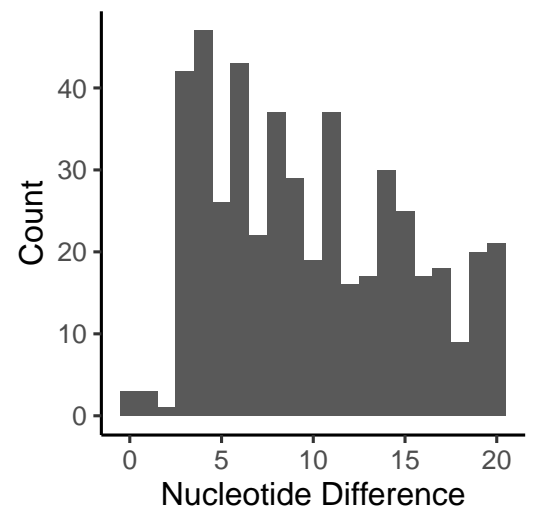
### IGHV2-26\*01

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



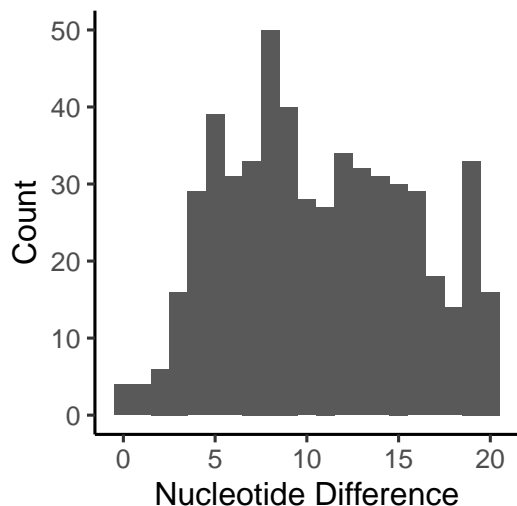
### IGHV3-9\*01

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



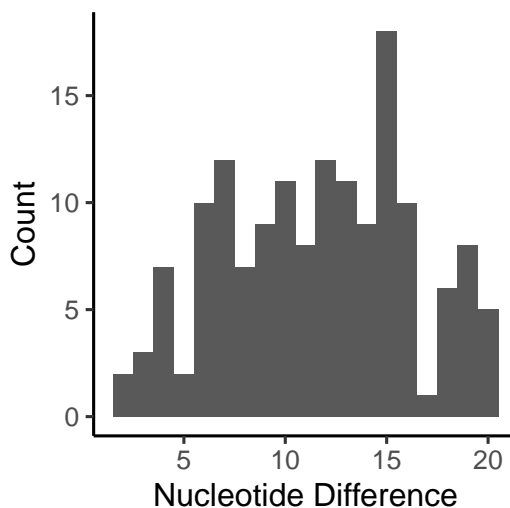
### IGHV3-11\*01

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



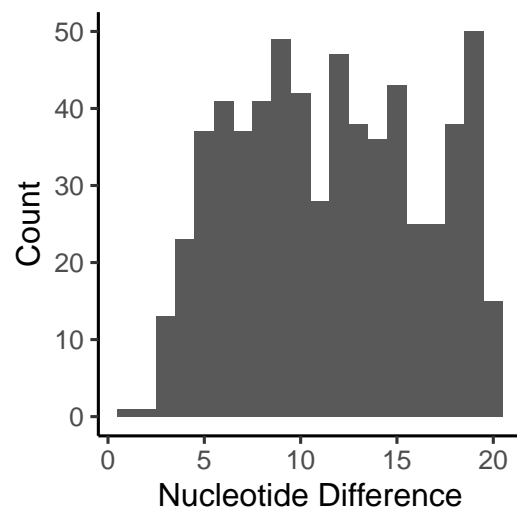
### IGHV3-13\*01

211 sequences assigned  
No exact matches.



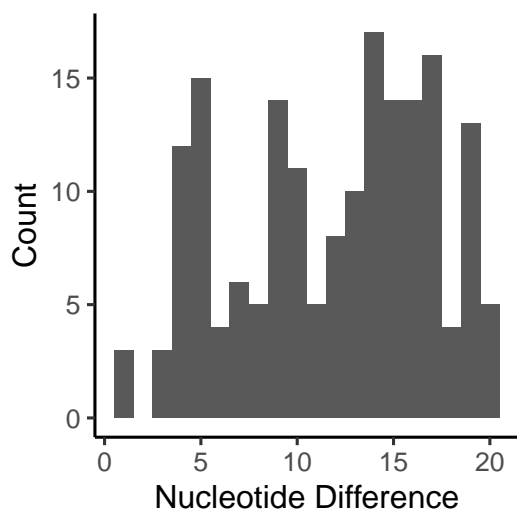
### IGHV3-15\*01\_02

745 sequences assigned  
No exact matches.



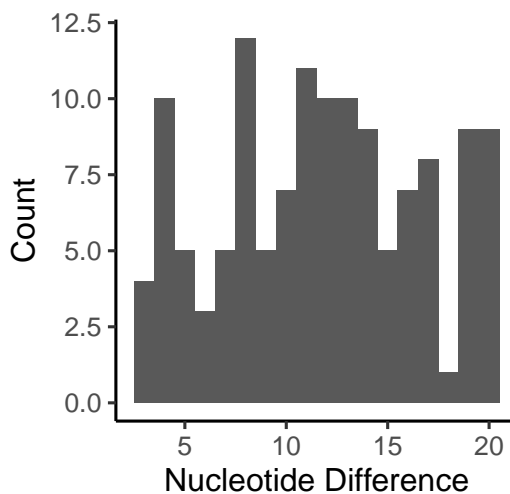
### IGHV3-11\*06

227 sequences assigned  
No exact matches.



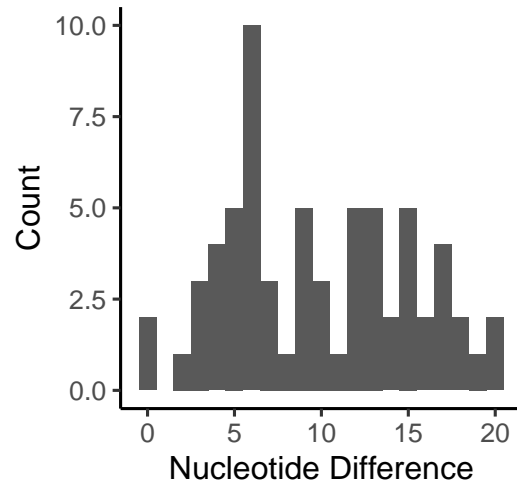
### IGHV3-13\*04

154 sequences assigned  
No exact matches.



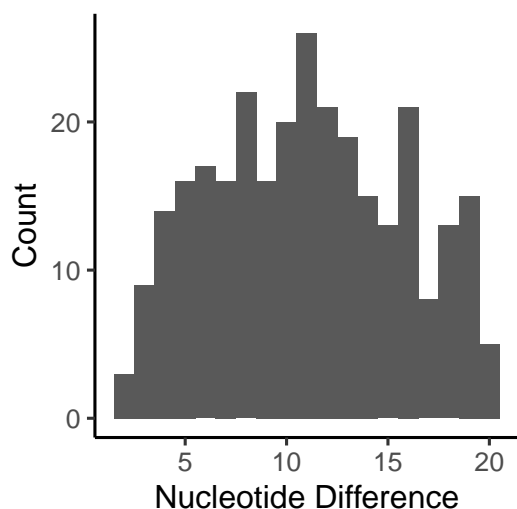
### IGHV3-20\*01\_02

74 sequences assigned  
2 (2.7%) exact matches, in which:  
2 unique CDR3  
1 unique J



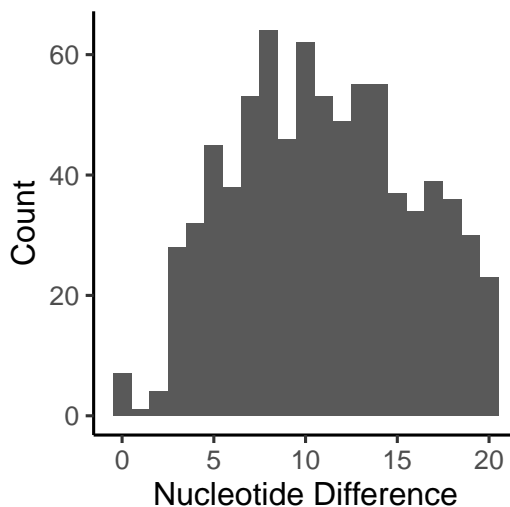
### IGHV3-11\*03\_05

400 sequences assigned  
No exact matches.



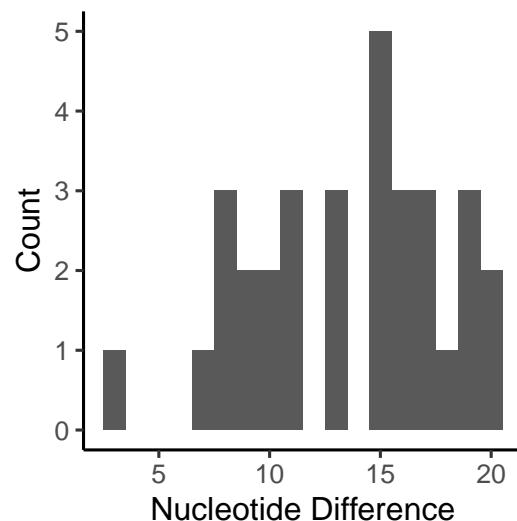
### IGHV3-15\*07

976 sequences assigned  
7 (0.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



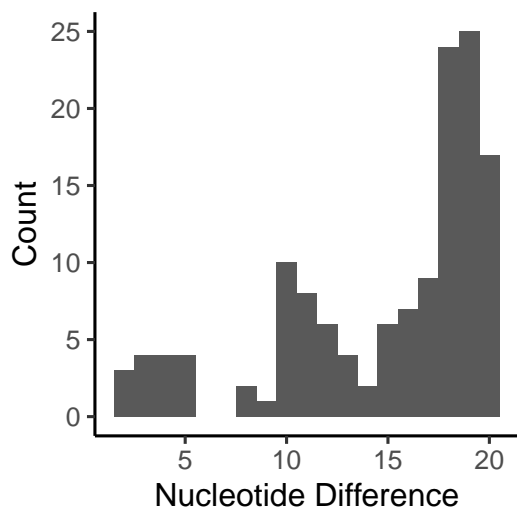
### IGHV3-20\*03\_04

51 sequences assigned  
No exact matches.



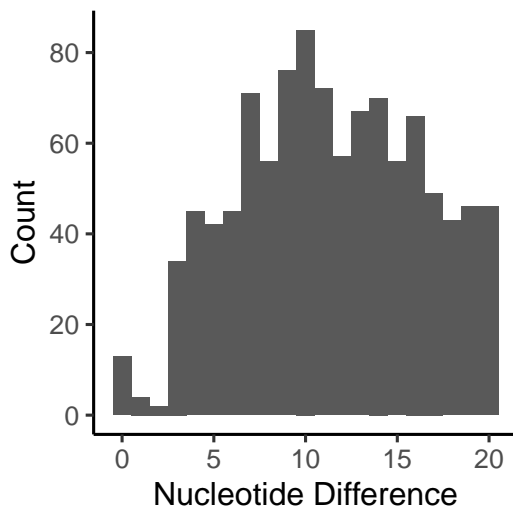
### IGHV3-21\*06

233 sequences assigned  
No exact matches.



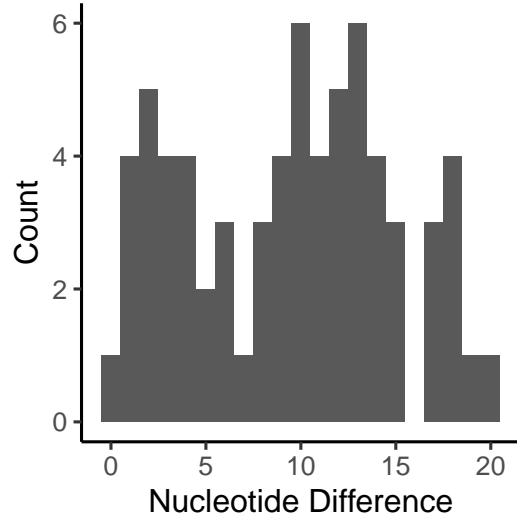
### IGHV3-30-3\*01

1363 sequences assigned  
13 (1%) exact matches, in which:  
8 unique CDR3  
3 unique J



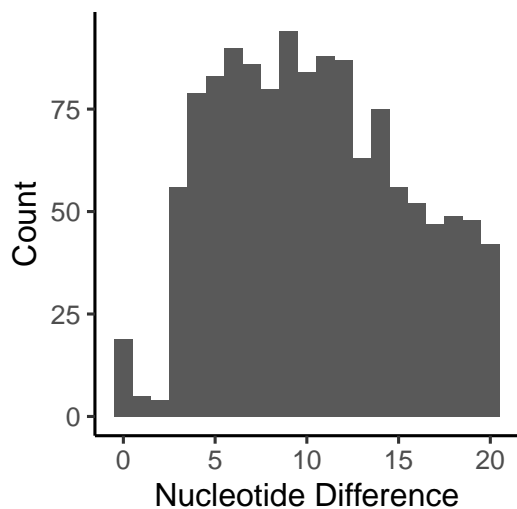
### IGHV3-43\*01

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



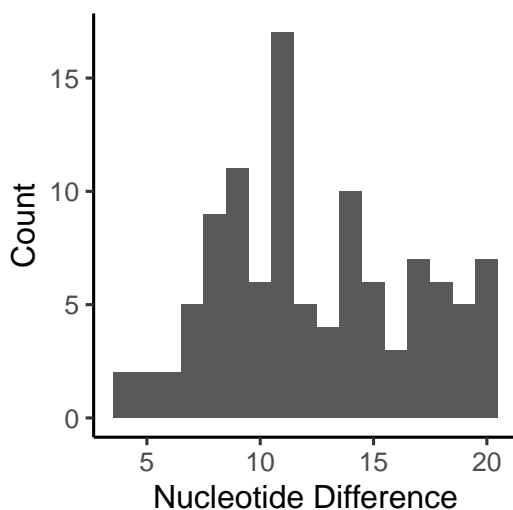
### IGHV3-21\*01\_02

1602 sequences assigned  
19 (1.2%) exact matches, in which:  
9 unique CDR3  
3 unique J



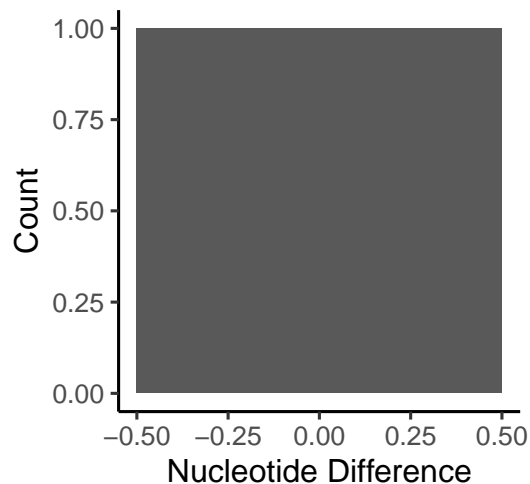
### IGHV3-30\*04

198 sequences assigned  
No exact matches.



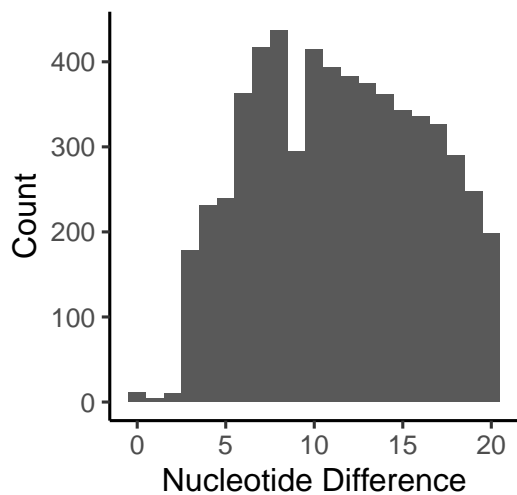
### IGHV3-47\*02

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



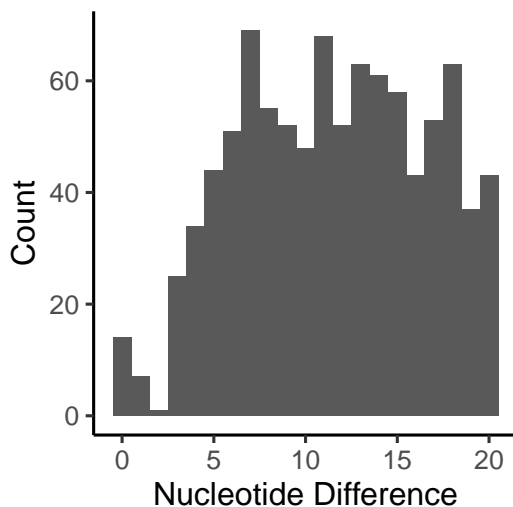
### IGHV3-23\*01\_04

7403 sequences assigned  
11 (0.1%) exact matches, in which:  
7 unique CDR3  
3 unique J



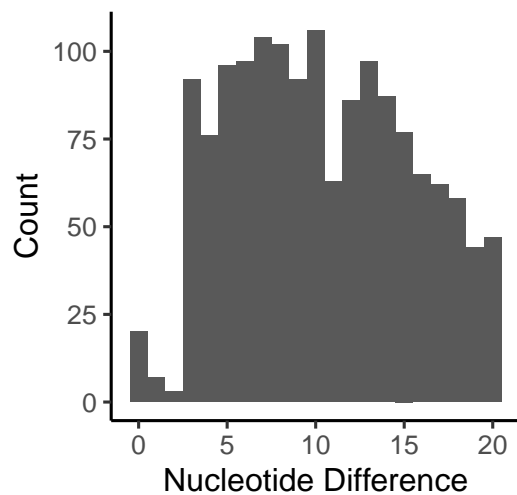
### IGHV3-33\*01

1257 sequences assigned  
14 (1.1%) exact matches, in which:  
9 unique CDR3  
2 unique J



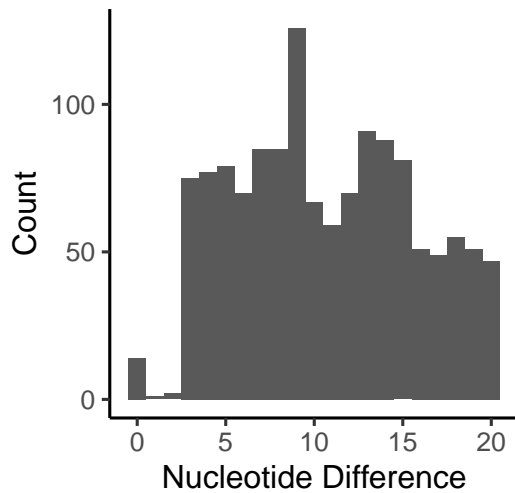
### IGHV3-48\*02

1910 sequences assigned  
20 (1%) exact matches, in which:  
9 unique CDR3  
4 unique J



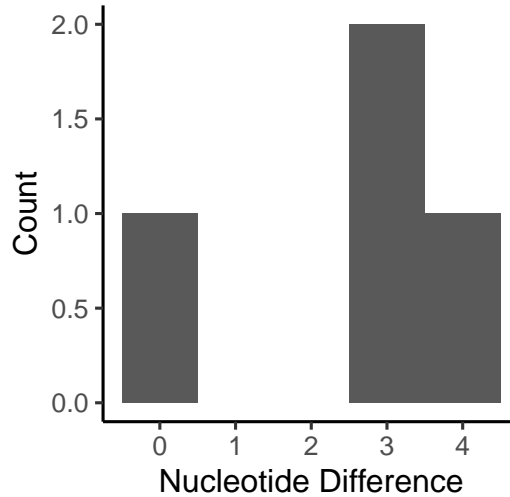
### IGHV3-48\*03

1645 sequences assigned  
14 (0.9%) exact matches, in which:  
7 unique CDR3  
3 unique J



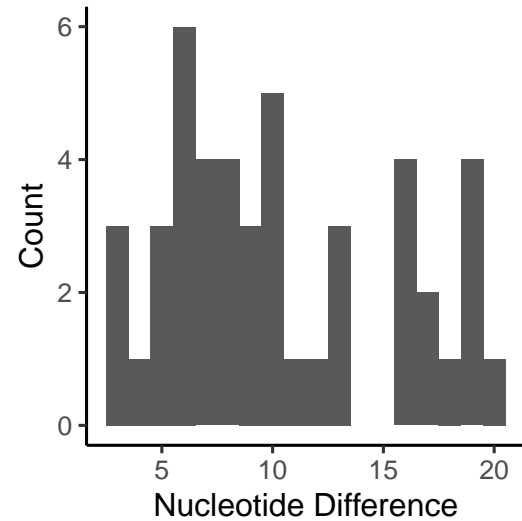
### IGHV3-52\*01\_03

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



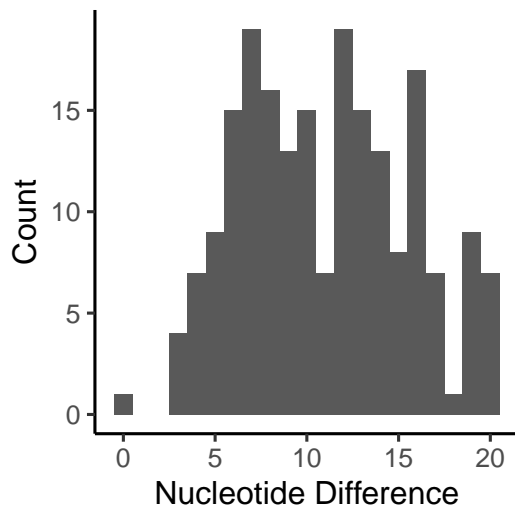
### IGHV3-64\*02\_07

51 sequences assigned  
No exact matches.



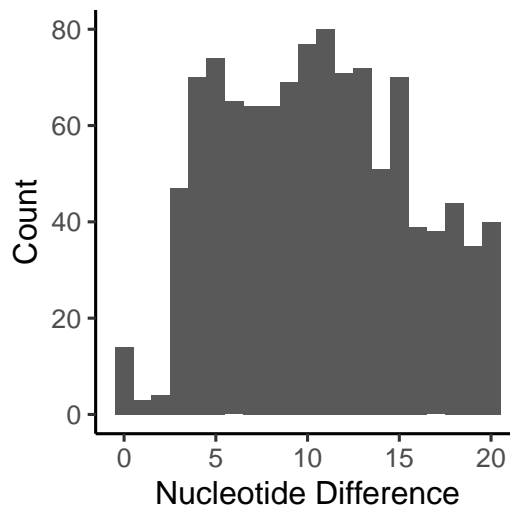
### IGHV3-49\*04

232 sequences assigned  
1 (0.4%) exact matches, in which:  
1 unique CDR3  
1 unique J



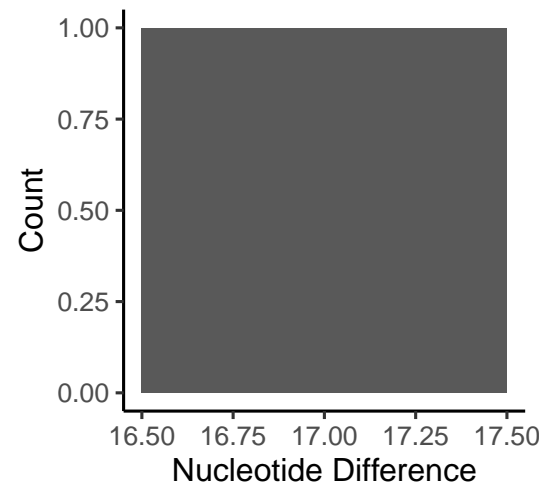
### IGHV3-53\*01\_02

1280 sequences assigned  
14 (1.1%) exact matches, in which:  
8 unique CDR3  
2 unique J



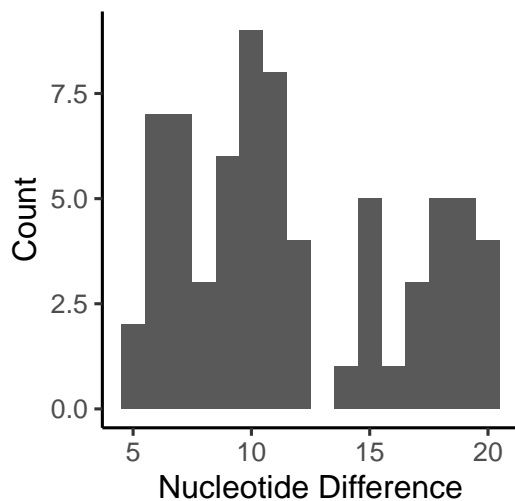
### IGHV3-66\*01

1 sequences assigned  
No exact matches.



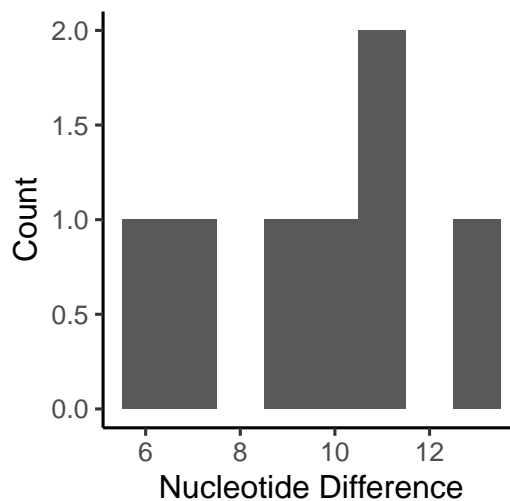
### IGHV3-49\*03\_05

85 sequences assigned  
No exact matches.



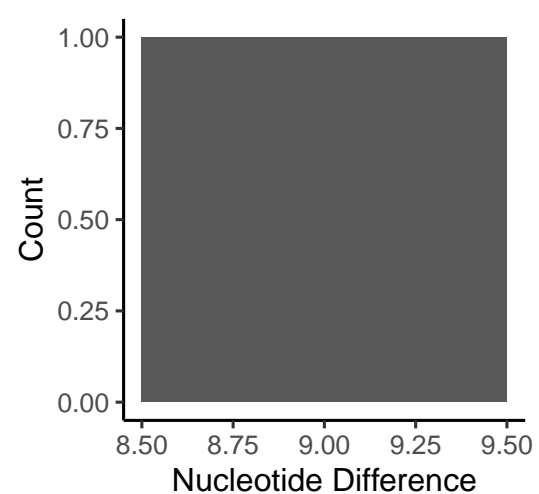
### IGHV3-64\*05

8 sequences assigned  
No exact matches.



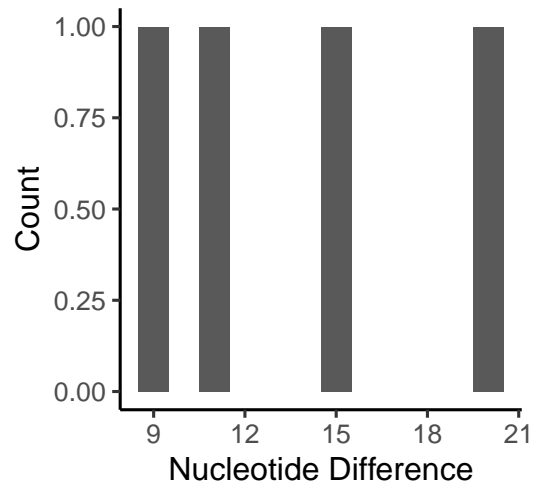
### IGHV3-66\*03

2 sequences assigned  
No exact matches.



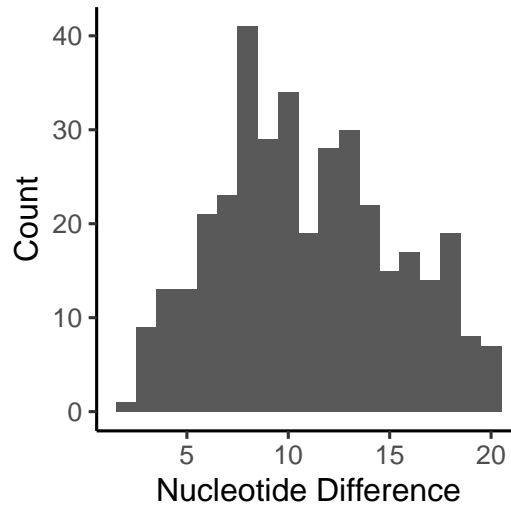
### IGHV3-66\*04

4 sequences assigned  
No exact matches.



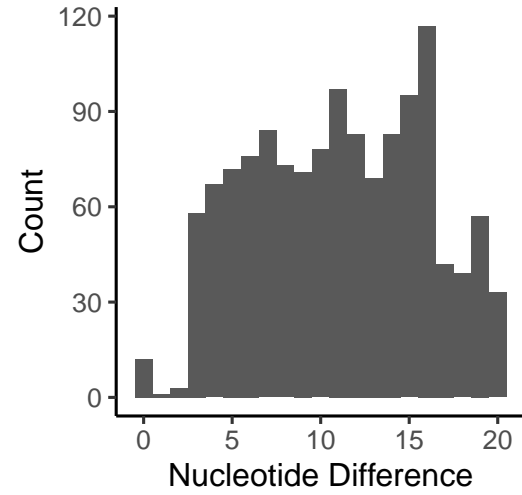
### IGHV3-72\*01

413 sequences assigned  
No exact matches.



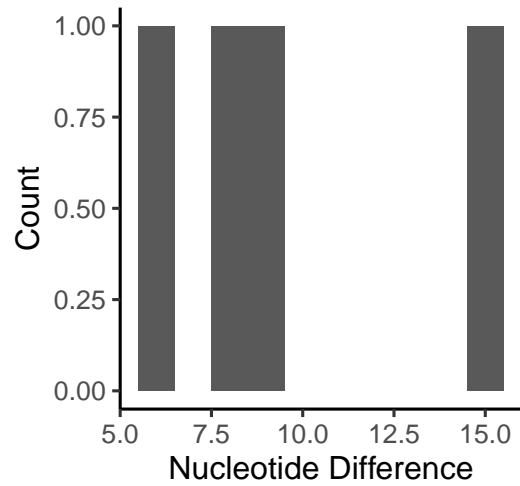
### IGHV3-74\*01\_02

1619 sequences assigned  
12 (0.7%) exact matches, in which:  
6 unique CDR3  
4 unique J



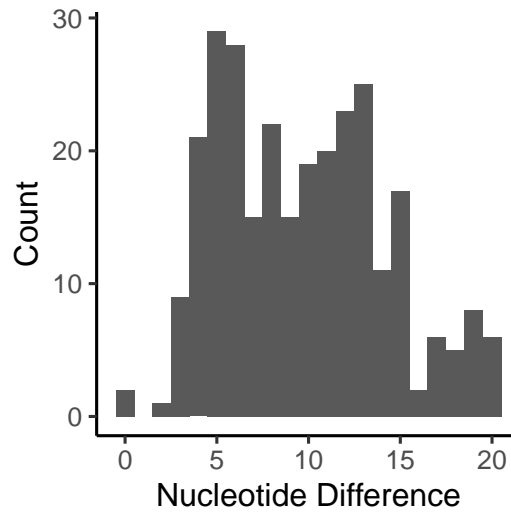
### IGHV3-69-1\*01

17 sequences assigned  
No exact matches.



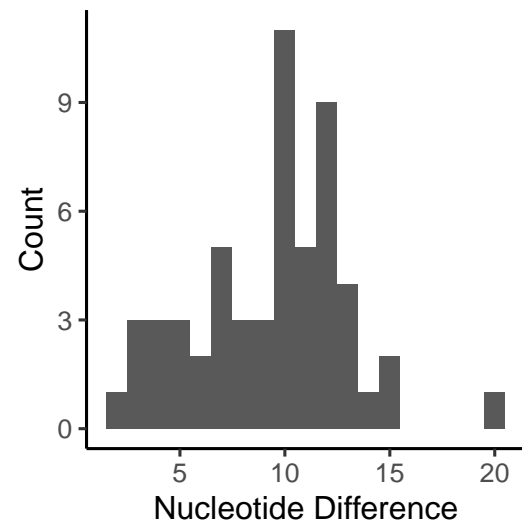
### IGHV3-73\*01\_02

368 sequences assigned  
2 (0.5%) exact matches, in which:  
1 unique CDR3  
1 unique J



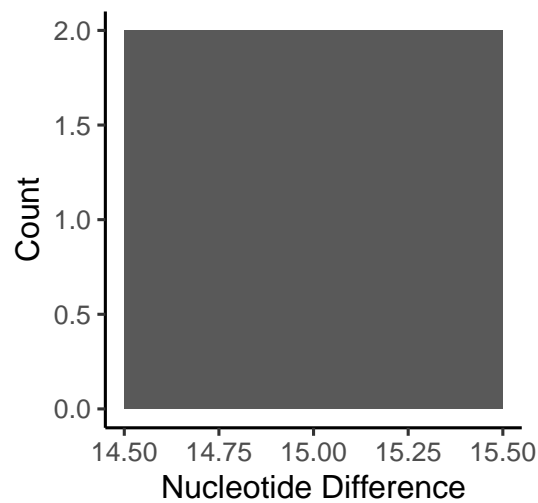
### IGHV3-43D\*04

68 sequences assigned  
No exact matches.



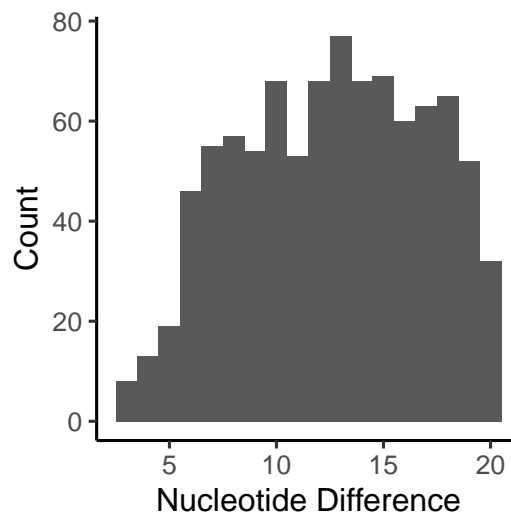
### IGHV3-69-1\*02

7 sequences assigned  
No exact matches.



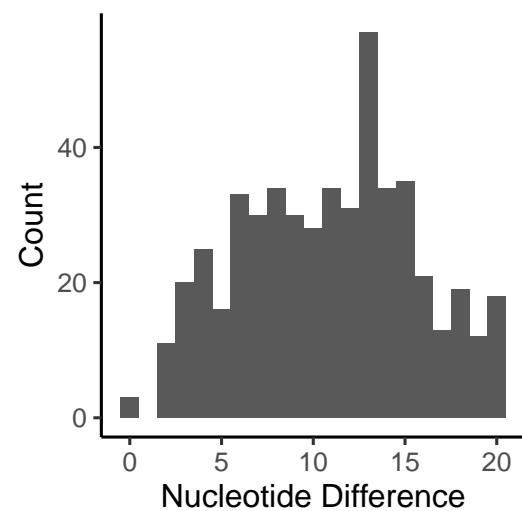
### IGHV3-74\*03

1142 sequences assigned  
No exact matches.



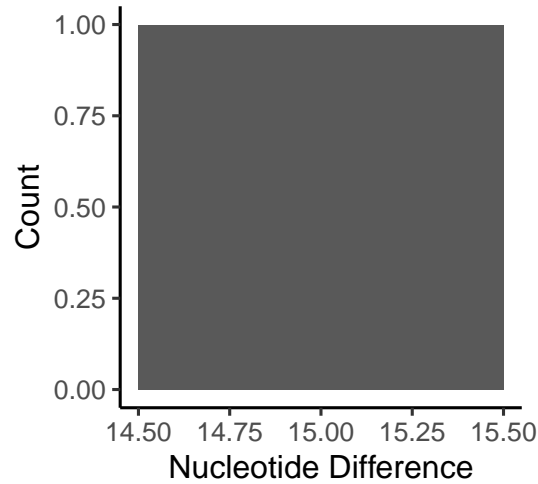
### IGHV3-64D\*09

724 sequences assigned  
3 (0.4%) exact matches, in which:  
2 unique CDR3  
1 unique J



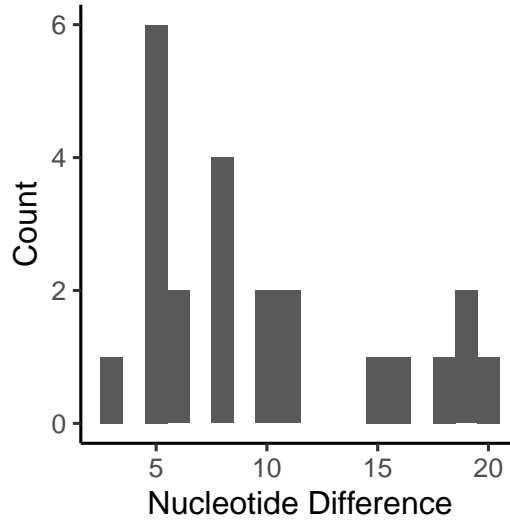
### IGHV3–NL1\*01

4 sequences assigned  
No exact matches.



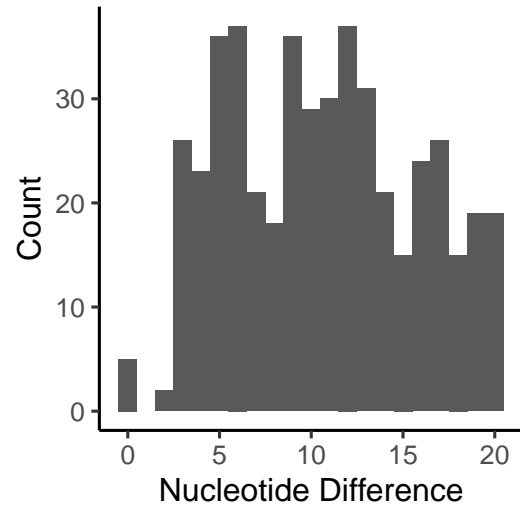
### IGHV4–28\*01\_07

26 sequences assigned  
No exact matches.



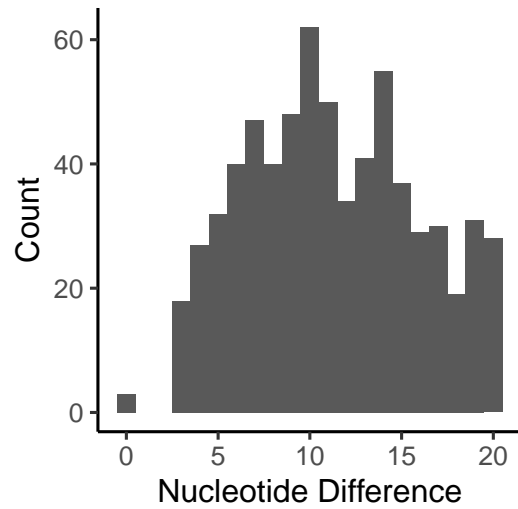
### IGHV4–31\*02

715 sequences assigned  
5 (0.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



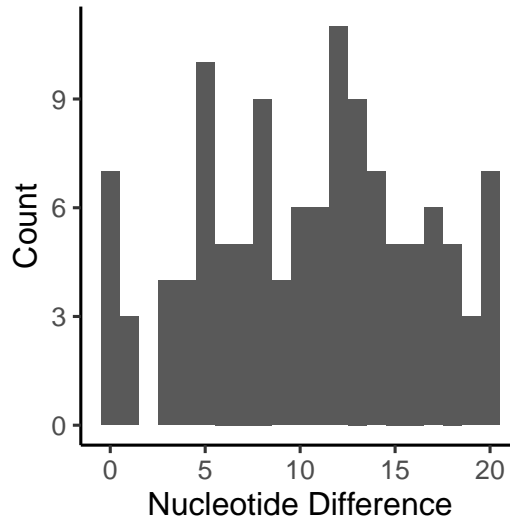
### IGHV4–4\*07

798 sequences assigned  
3 (0.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



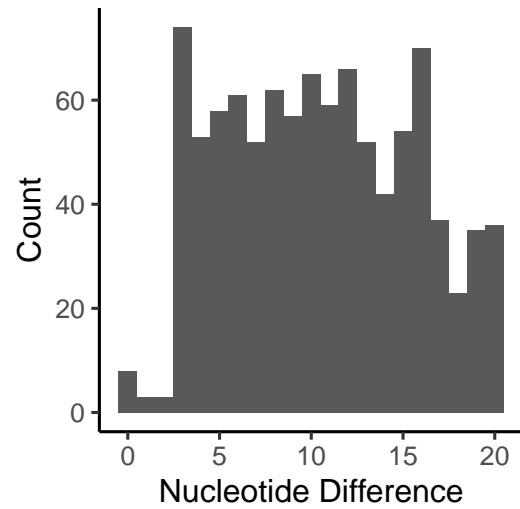
### IGHV4–30–2\*01

198 sequences assigned  
7 (3.5%) exact matches, in which:  
5 unique CDR3  
3 unique J



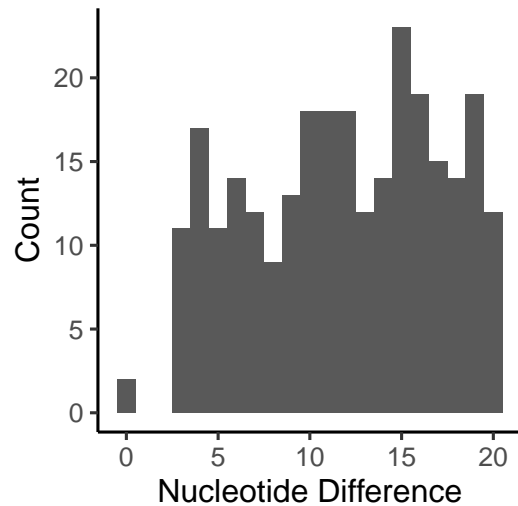
### IGHV4–34\*01\_02

1299 sequences assigned  
8 (0.6%) exact matches, in which:  
5 unique CDR3  
4 unique J



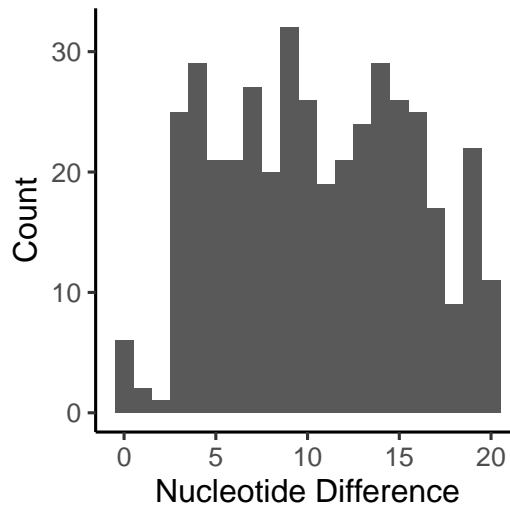
### IGHV4–4\*02\_03

410 sequences assigned  
2 (0.5%) exact matches, in which:  
2 unique CDR3  
2 unique J



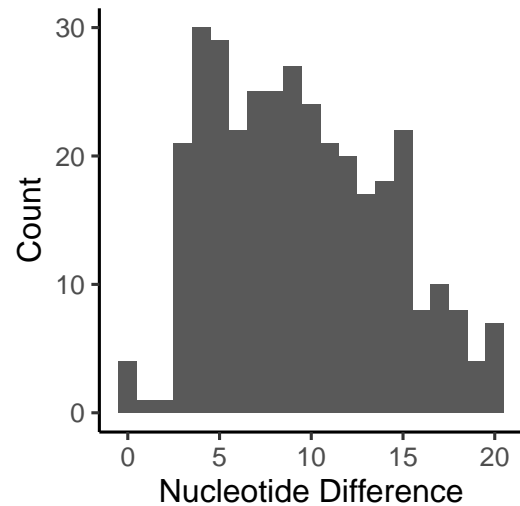
### IGHV4–30–4\*01

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



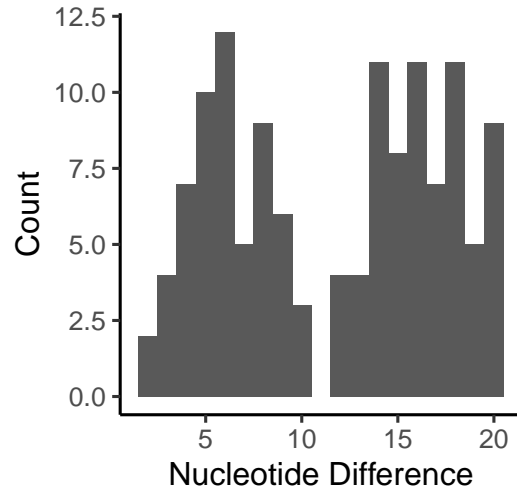
### IGHV4–38–2\*01

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



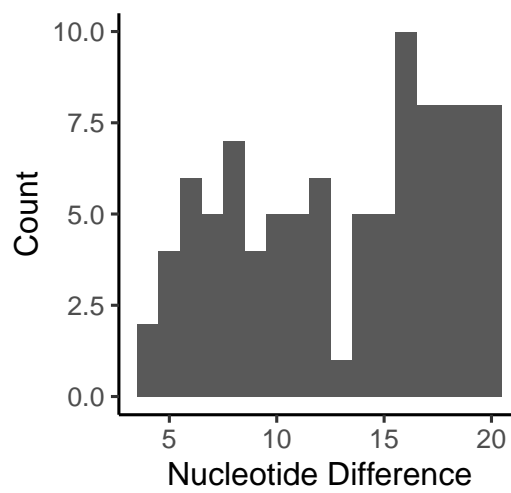
### IGHV4-38-2\*02

179 sequences assigned  
No exact matches.



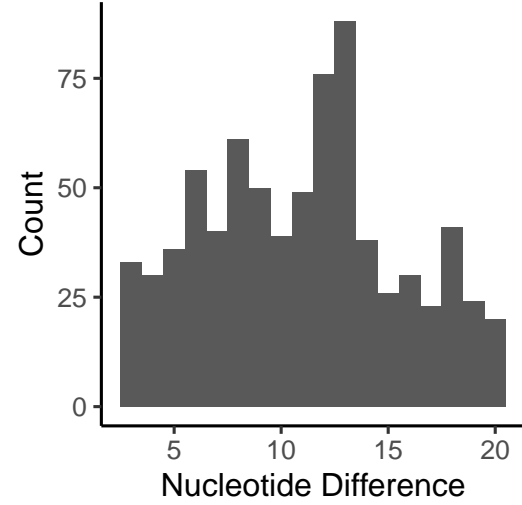
### IGHV4-59\*02

152 sequences assigned  
No exact matches.



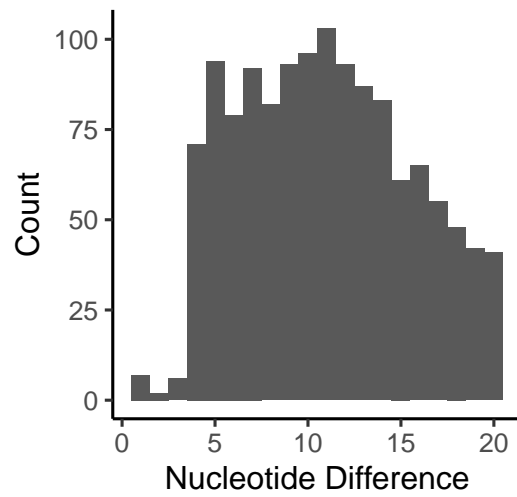
### IGHV4-61\*01

911 sequences assigned  
No exact matches.



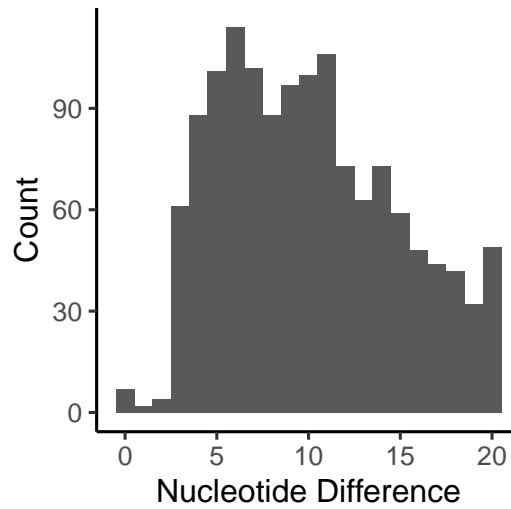
### IGHV4-39\*02

1646 sequences assigned  
No exact matches.



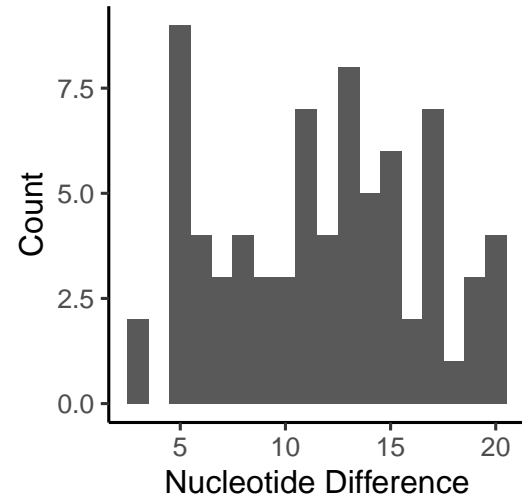
### IGHV4-59\*01\_07

1610 sequences assigned  
7 (0.4%) exact matches, in which:  
7 unique CDR3  
4 unique J



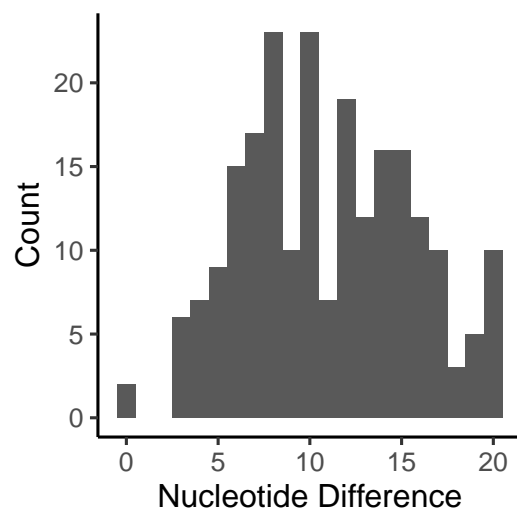
### IGHV4-61\*08

152 sequences assigned  
No exact matches.



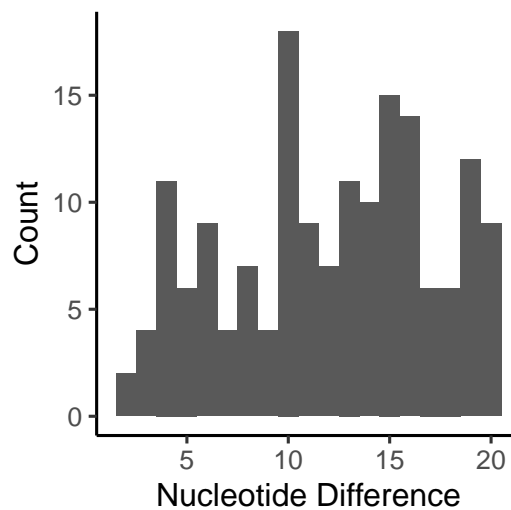
### IGHV4-39\*01\_05

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



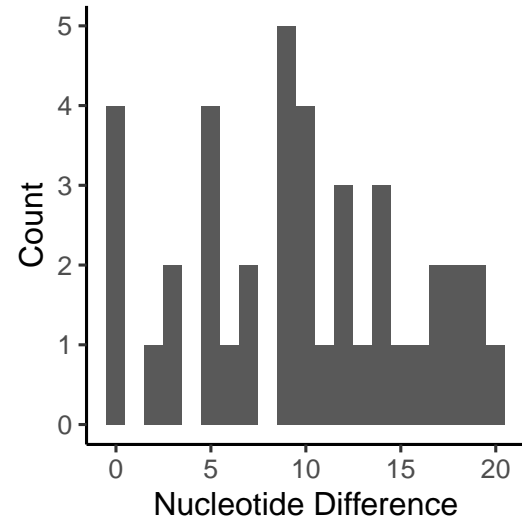
### IGHV4-59\*11

240 sequences assigned  
No exact matches.



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

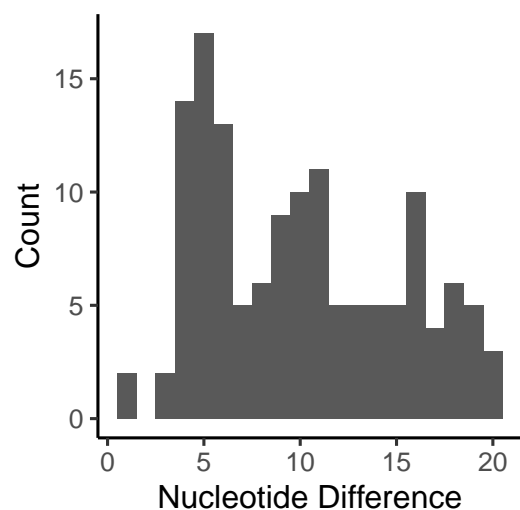
64 sequences assigned  
4 (6.2%) exact matches, in which:  
4 unique CDR3  
2 unique J





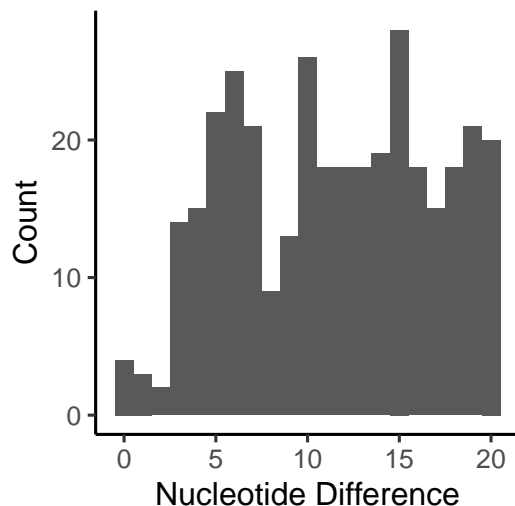
## IGHV5-51\*07

173 sequences assigned  
No exact matches.



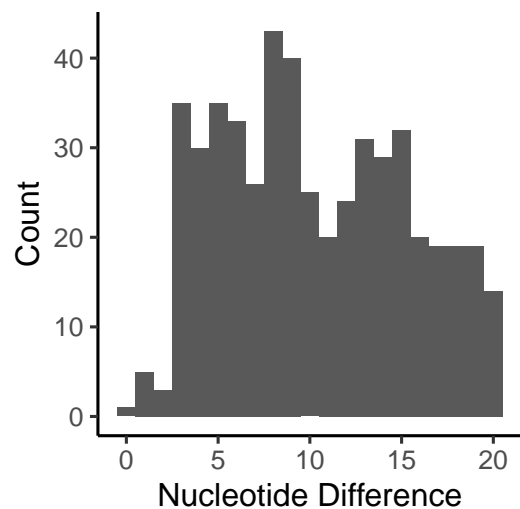
## IGHV7-4-1\*02

425 sequences assigned  
4 (0.9%) exact matches, in which:  
4 unique CDR3  
2 unique J



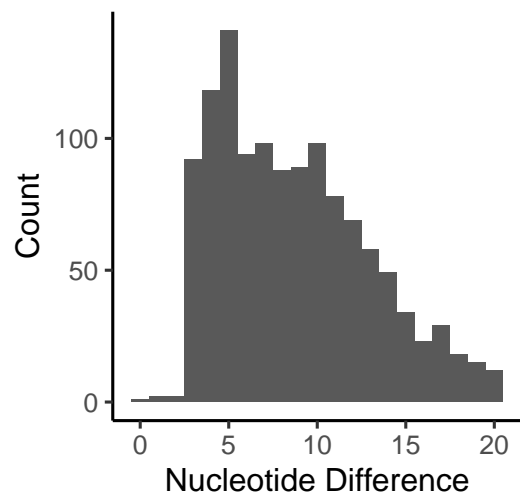
## IGHV5-51\*01\_03

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



## IGHV6-1\*01\_02

1252 sequences assigned  
1 (0.1%) exact matches, in which:  
1 unique CDR3  
1 unique J





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