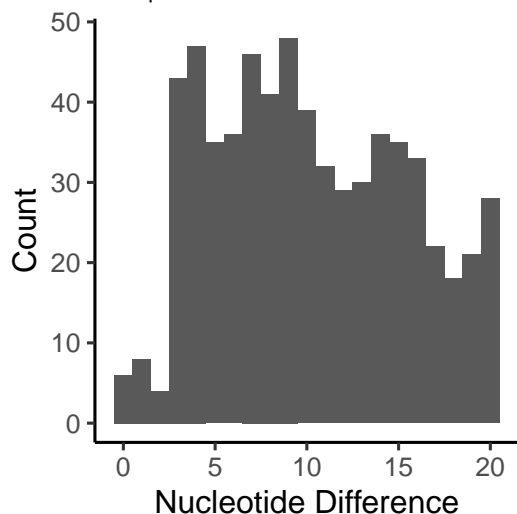


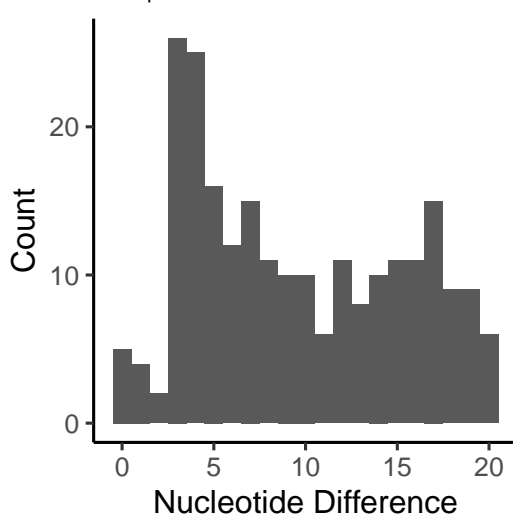
### IGHV1-2\*02

910 sequences assigned  
6 (0.7%) exact matches, in which:  
6 unique CDR3  
2 unique J



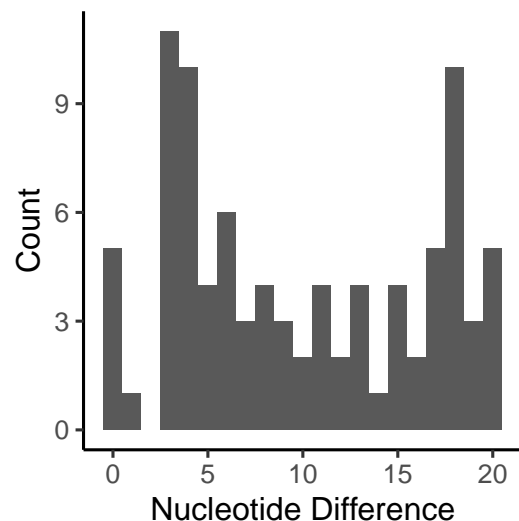
### IGHV1-8\*01

299 sequences assigned  
5 (1.7%) exact matches, in which:  
5 unique CDR3  
3 unique J



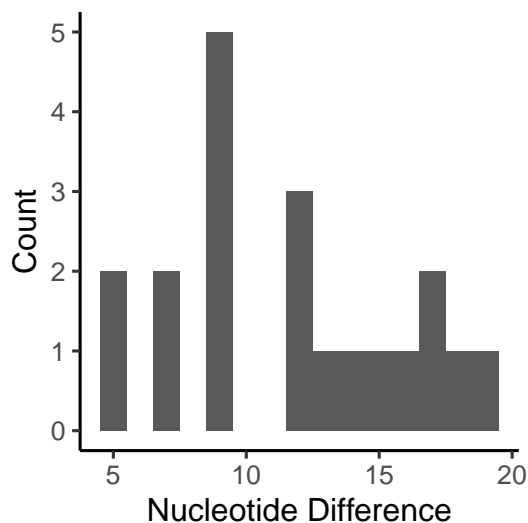
### IGHV1-24\*01

125 sequences assigned  
5 (4%) exact matches, in which:  
5 unique CDR3  
3 unique J



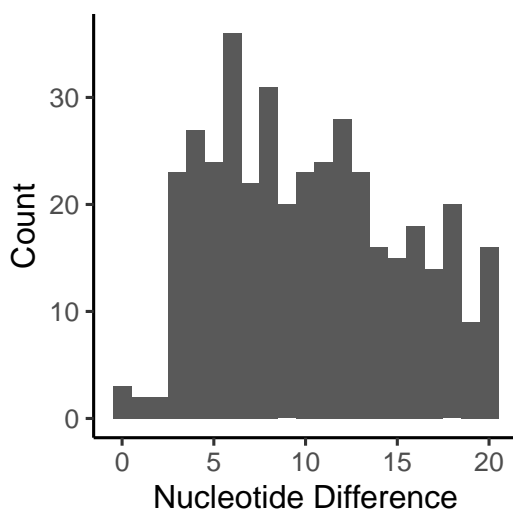
### IGHV1-3\*04

36 sequences assigned  
No exact matches.



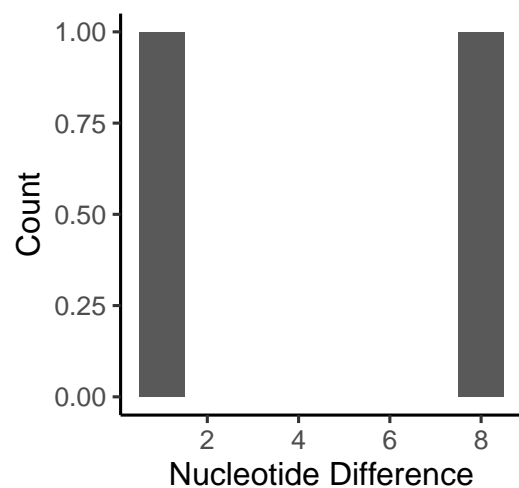
### IGHV1-18\*01

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



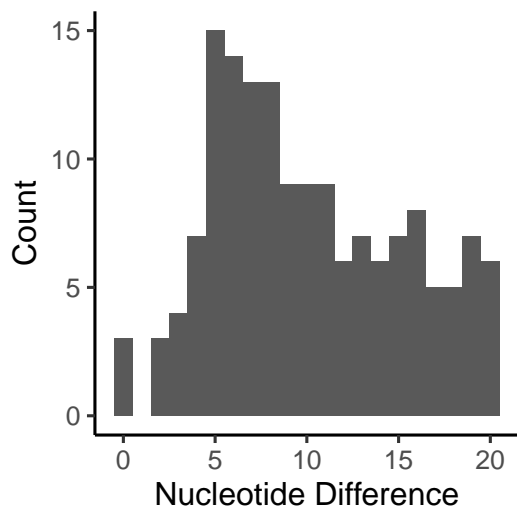
### IGHV1-45\*02

4 sequences assigned  
No exact matches.



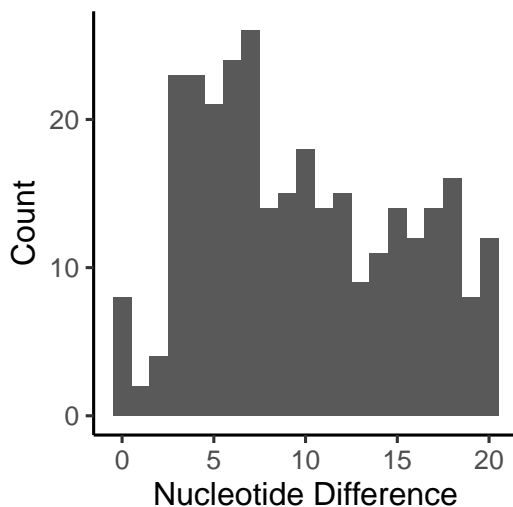
### IGHV1-3\*01\_05

192 sequences assigned  
3 (1.6%) exact matches, in which:  
3 unique CDR3  
2 unique J



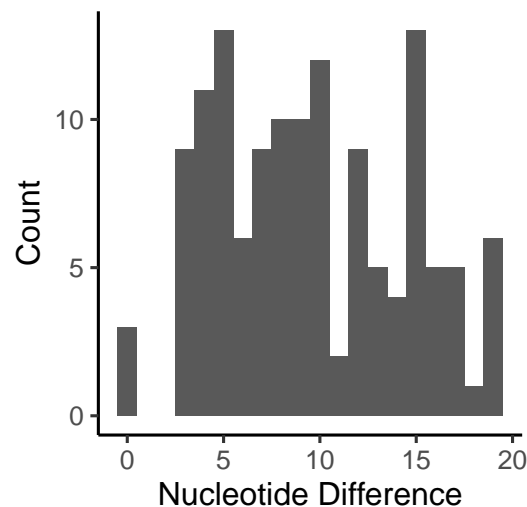
### IGHV1-18\*04

416 sequences assigned  
8 (1.9%) exact matches, in which:  
7 unique CDR3  
3 unique J



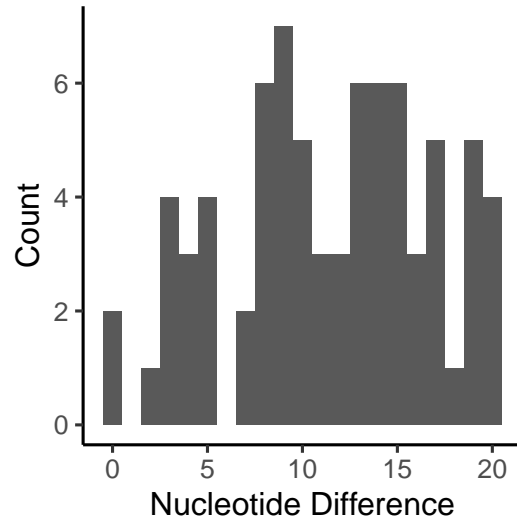
### IGHV1-46\*01

192 sequences assigned  
3 (1.6%) exact matches, in which:  
2 unique CDR3  
1 unique J



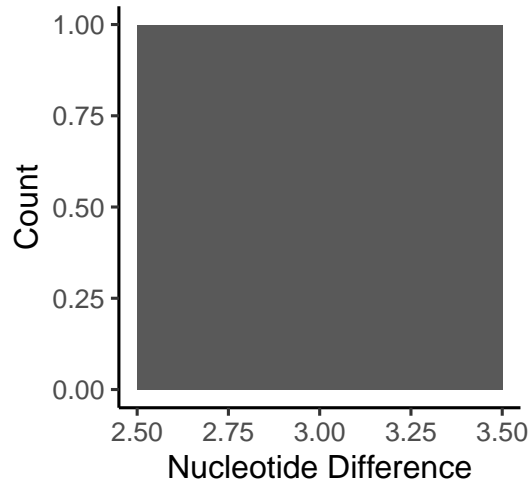
### IGHV1-46\*03

119 sequences assigned  
2 (1.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



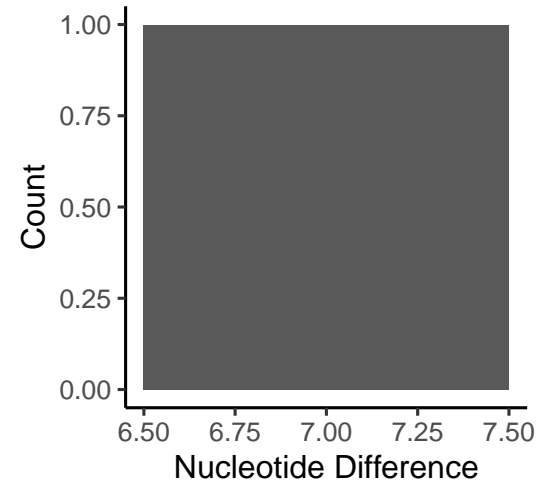
### IGHV1-68\*02

2 sequences assigned  
No exact matches.



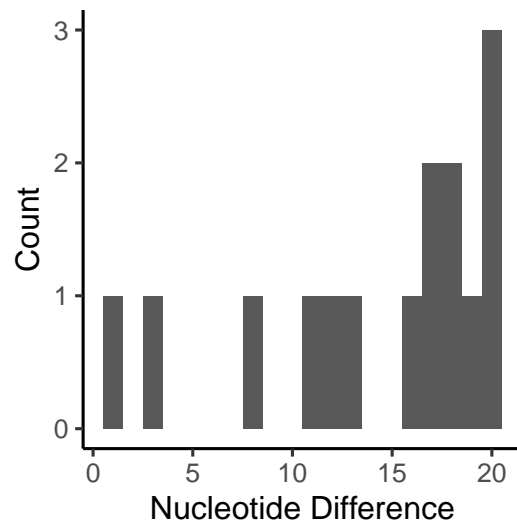
### IGHV1-NL1\*01

1 sequences assigned  
No exact matches.



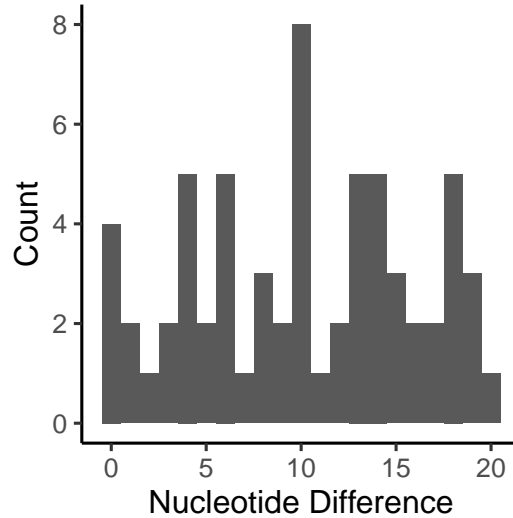
### IGHV1-58\*02

42 sequences assigned  
No exact matches.



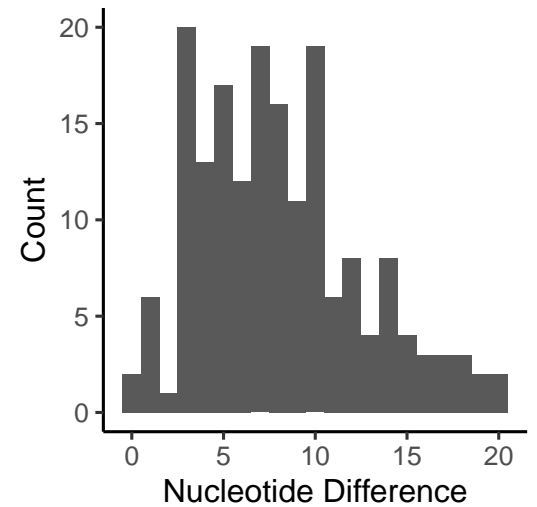
### IGHV1-69\*04\_09

120 sequences assigned  
4 (3.3%) exact matches, in which:  
3 unique CDR3  
2 unique J



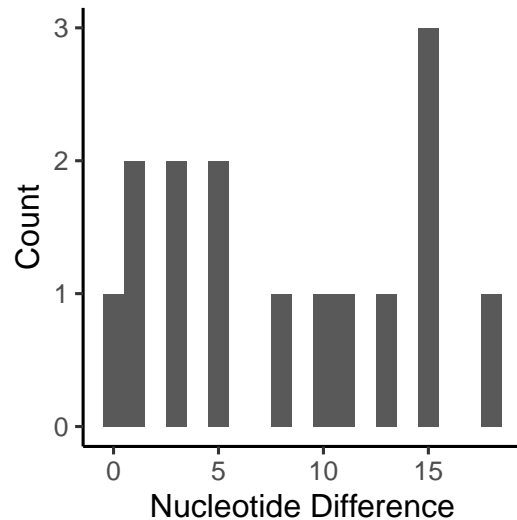
### IGHV2-5\*01

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



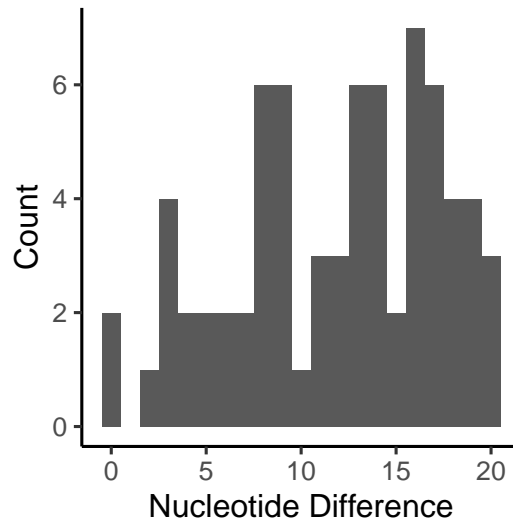
### IGHV1-58\*01\_03

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



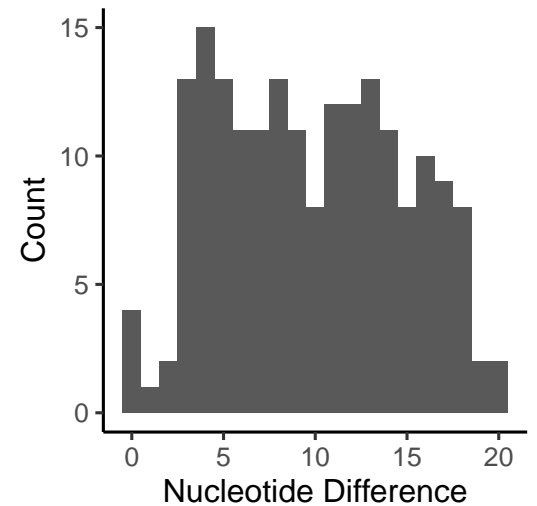
### IGHV1-69\*06\_14

144 sequences assigned  
2 (1.4%) exact matches, in which:  
2 unique CDR3  
2 unique J



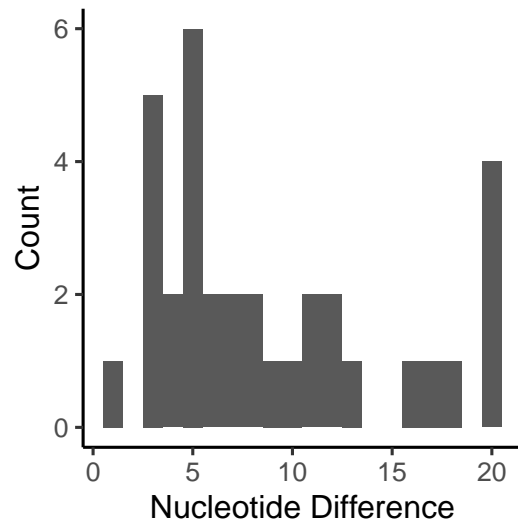
### IGHV2-5\*02

251 sequences assigned  
4 (1.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



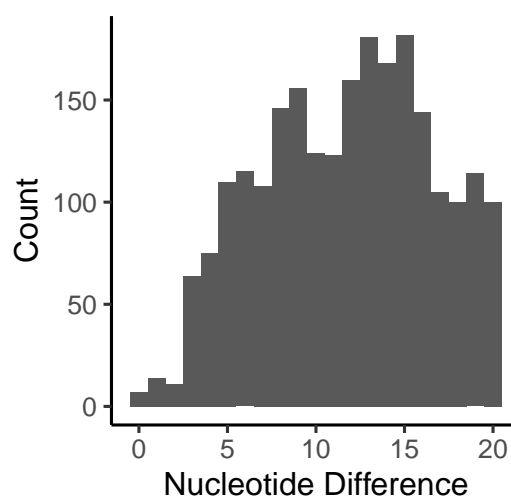
### IGHV2-26\*01

55 sequences assigned  
No exact matches.



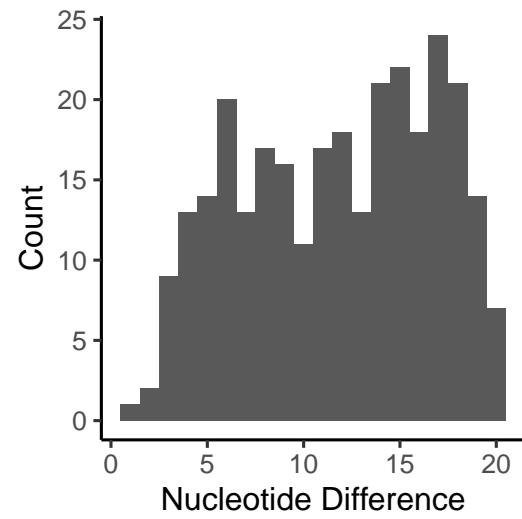
### IGHV3-7\*01

2784 sequences assigned  
7 (0.3%) exact matches, in which:  
5 unique CDR3  
2 unique J



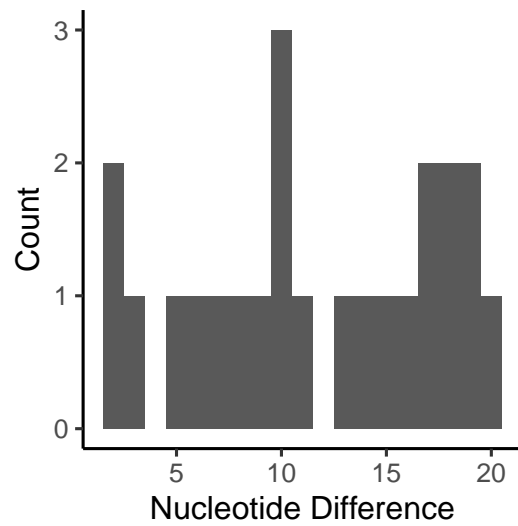
### IGHV3-11\*01

394 sequences assigned  
No exact matches.



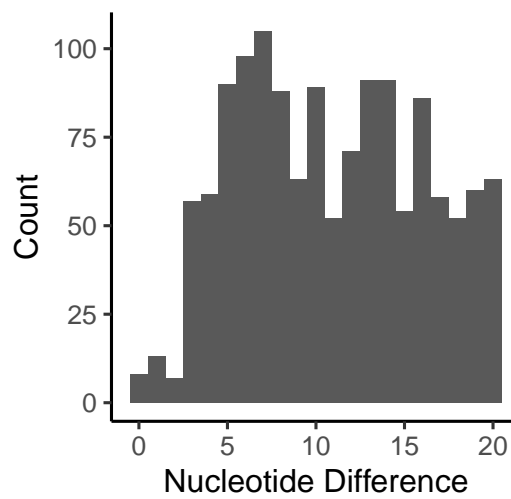
### IGHV2-70\*01

26 sequences assigned  
No exact matches.



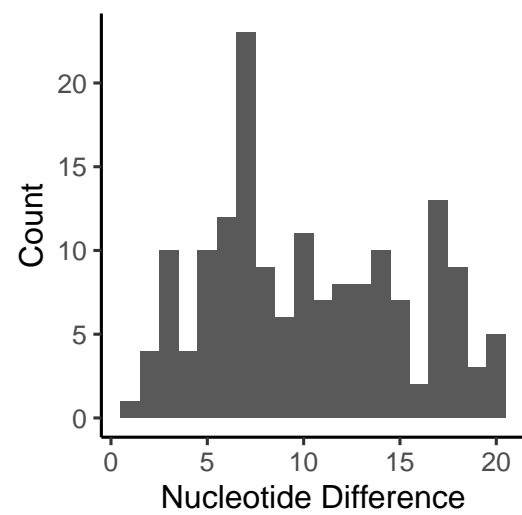
### IGHV3-7\*03

1596 sequences assigned  
8 (0.5%) exact matches, in which:  
4 unique CDR3  
2 unique J



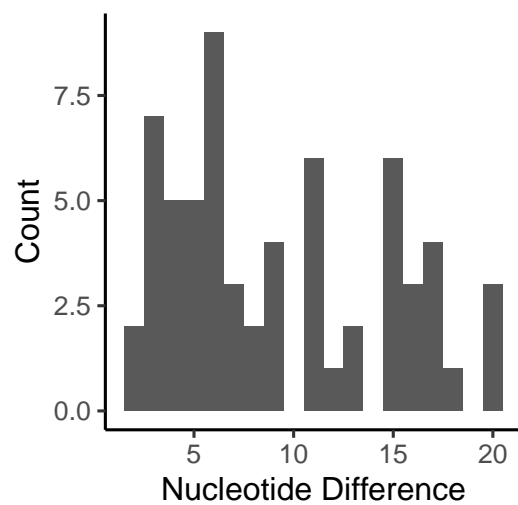
### IGHV3-11\*06

221 sequences assigned  
No exact matches.



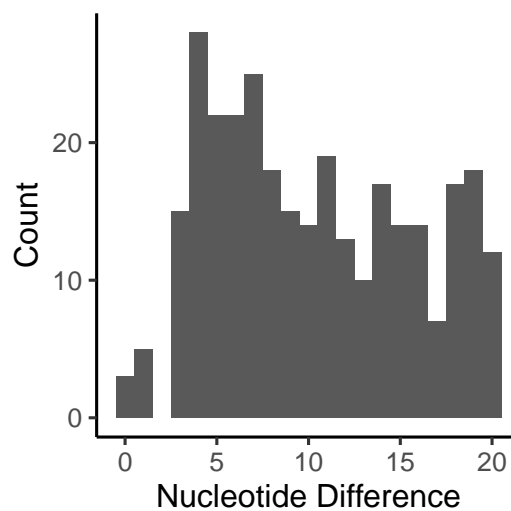
### IGHV2-70\*11\_15

70 sequences assigned  
No exact matches.



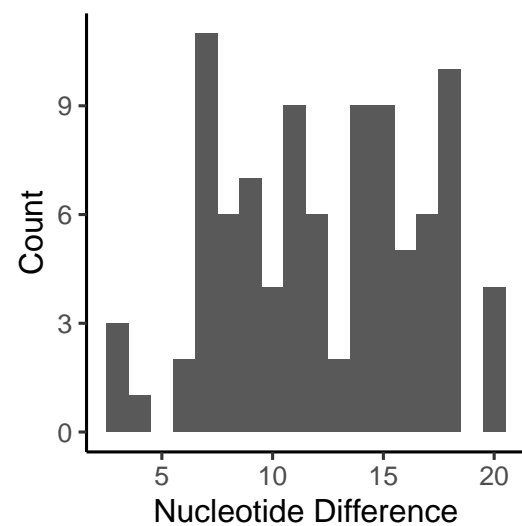
### IGHV3-9\*01

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



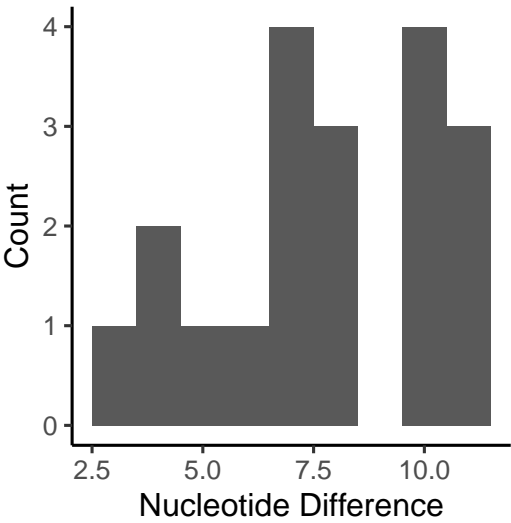
### IGHV3-13\*01

115 sequences assigned  
No exact matches.



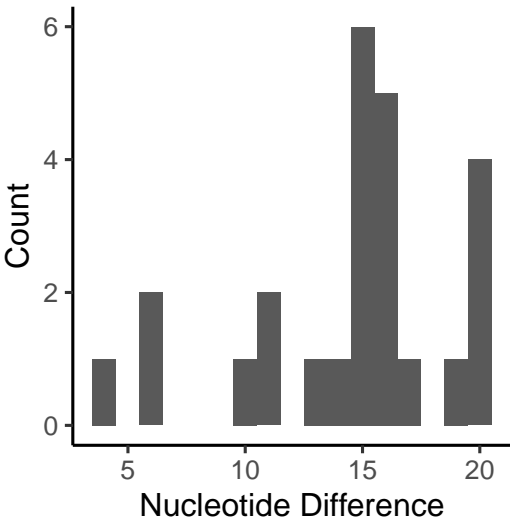
IGHV3-13\*05

21 sequences assigned  
No exact matches.



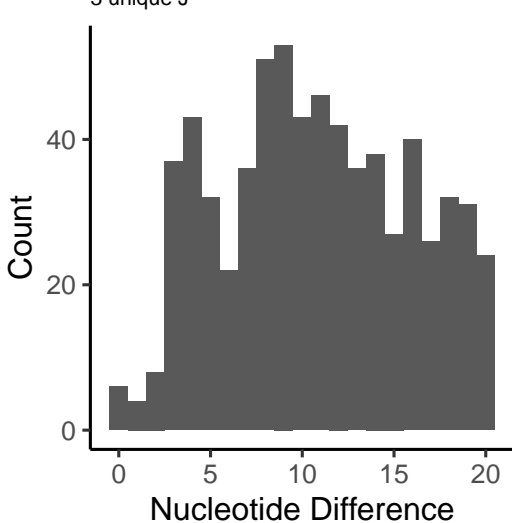
IGHV3-20\*03\_04

52 sequences assigned  
No exact matches.



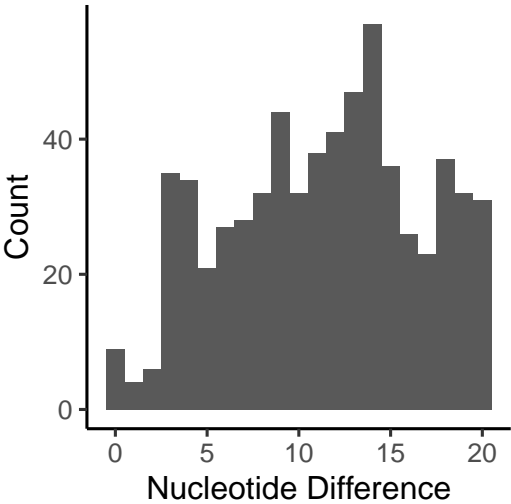
IGHV3-33\*01

978 sequences assigned  
6 (0.6%) exact matches, in which:  
4 unique CDR3  
3 unique J



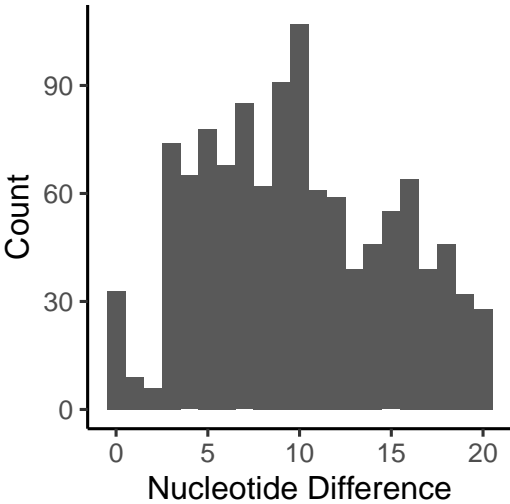
IGHV3-15\*01\_02

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



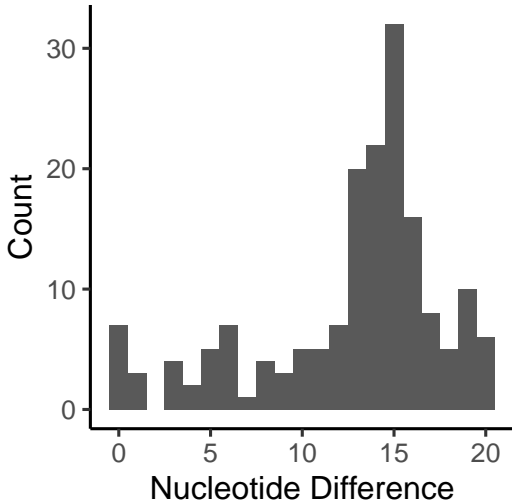
IGHV3-21\*01\_02

1548 sequences assigned  
33 (2.1%) exact matches, in which:  
14 unique CDR3  
4 unique J



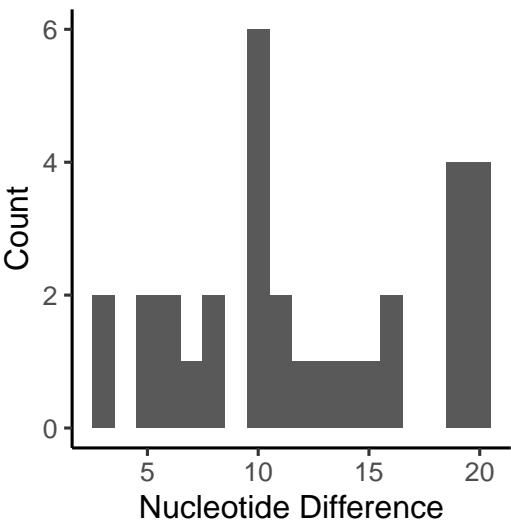
IGHV3-43\*01

241 sequences assigned  
7 (2.9%) exact matches, in which:  
3 unique CDR3  
3 unique J



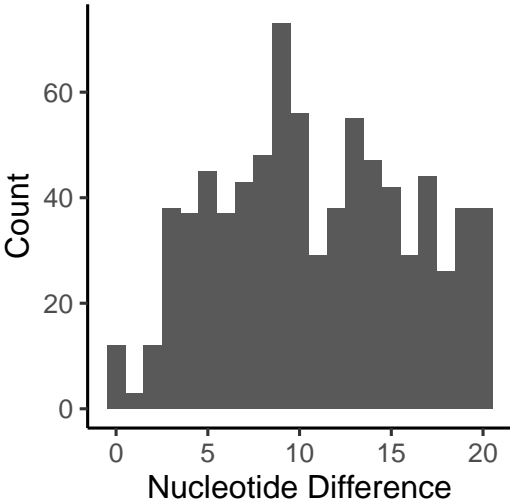
IGHV3-20\*01\_02

39 sequences assigned  
No exact matches.



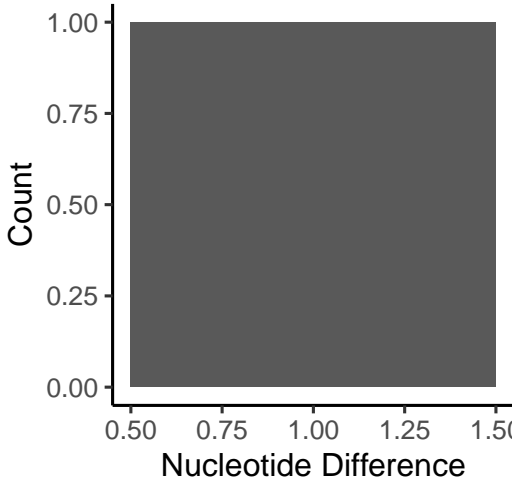
IGHV3-30-3\*01

1040 sequences assigned  
12 (1.2%) exact matches, in which:  
6 unique CDR3  
2 unique J



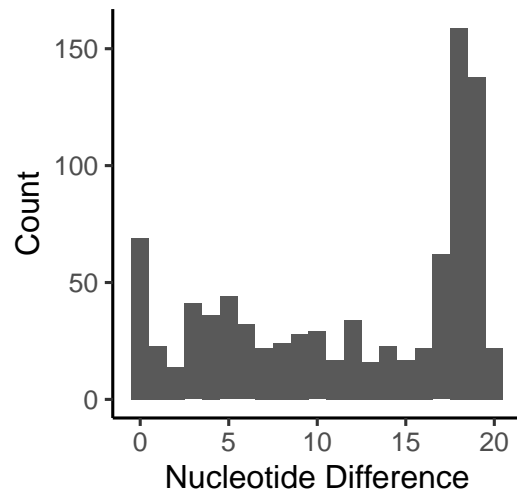
IGHV3-47\*02

1 sequences assigned  
No exact matches.



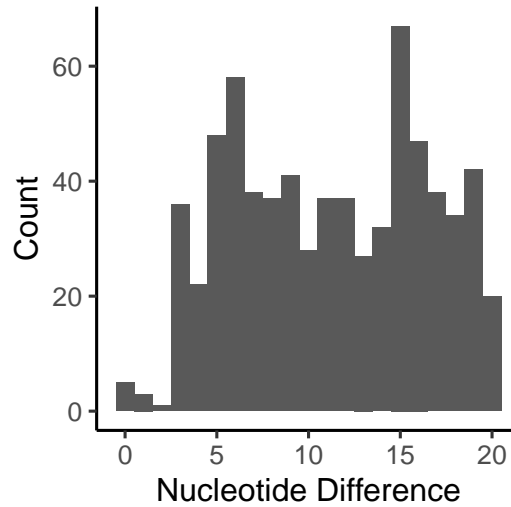
### IGHV3-48\*01

1016 sequences assigned  
69 (6.8%) exact matches, in which:  
28 unique CDR3  
4 unique J



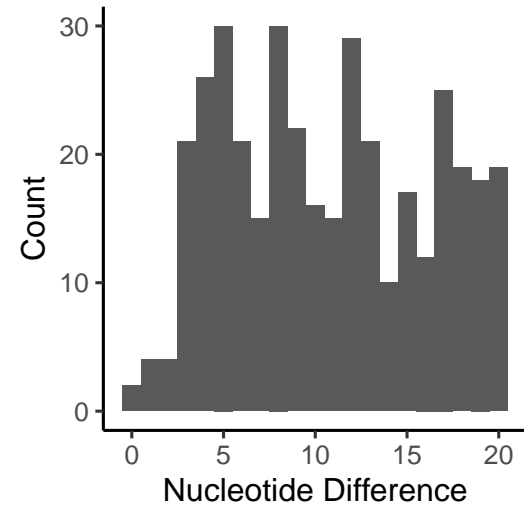
### IGHV3-53\*01\_02

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



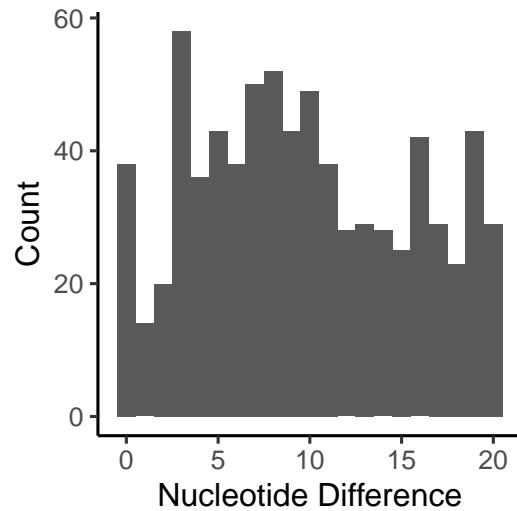
### IGHV3-66\*01

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



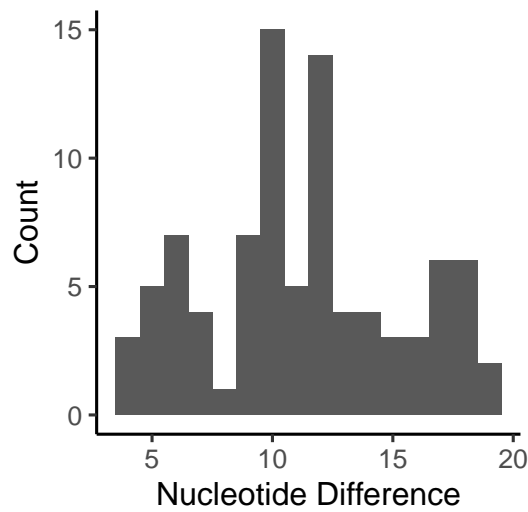
### IGHV3-48\*02

931 sequences assigned  
38 (4.1%) exact matches, in which:  
16 unique CDR3  
4 unique J



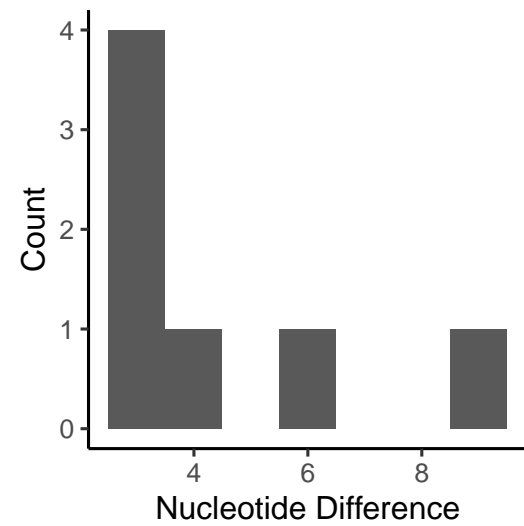
### IGHV3-64\*01

103 sequences assigned  
No exact matches.



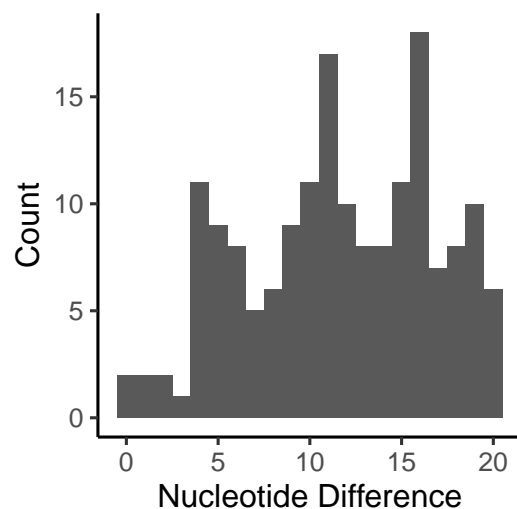
### IGHV3-69-1\*01

13 sequences assigned  
No exact matches.



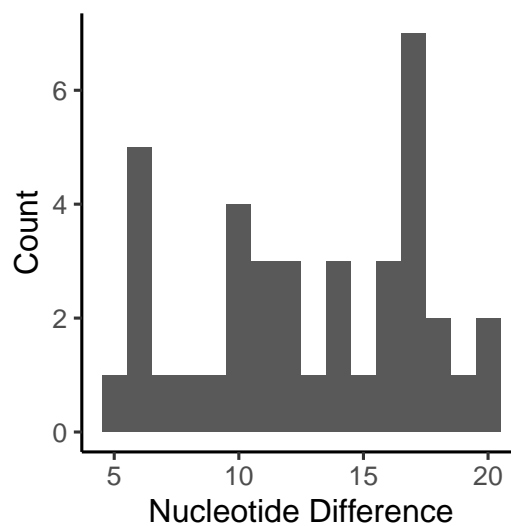
### IGHV3-49\*03\_05

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



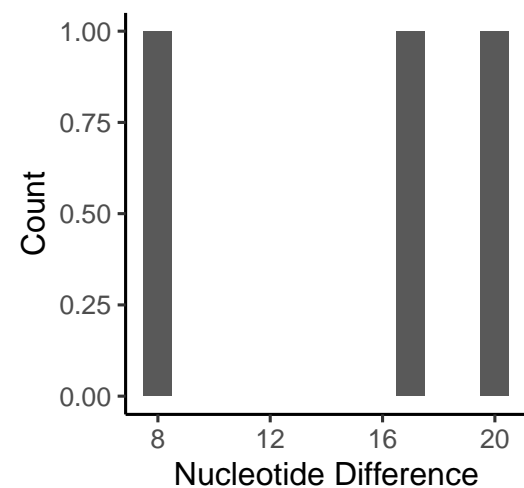
### IGHV3-64\*02\_07

55 sequences assigned  
No exact matches.



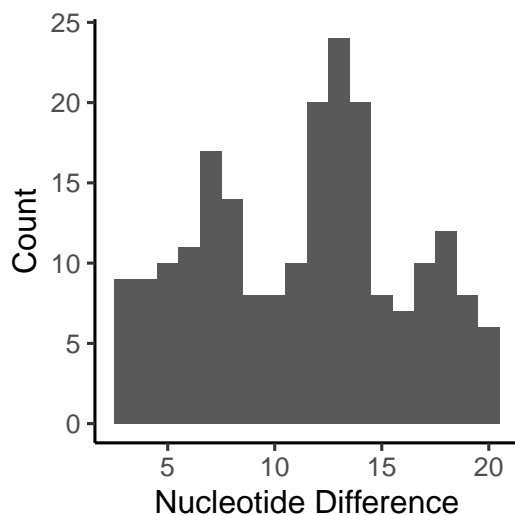
### IGHV3-69-1\*02

15 sequences assigned  
No exact matches.



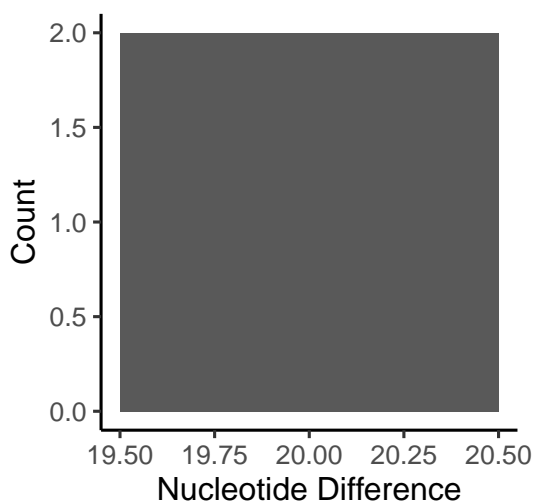
### IGHV3-72\*01

313 sequences assigned  
No exact matches.



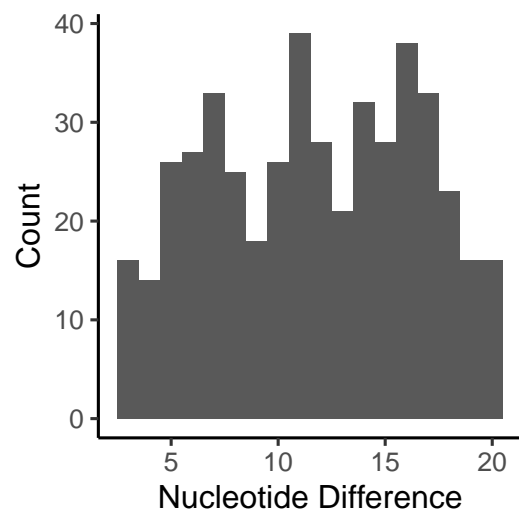
### IGHV3-43D\*04

3 sequences assigned  
No exact matches.



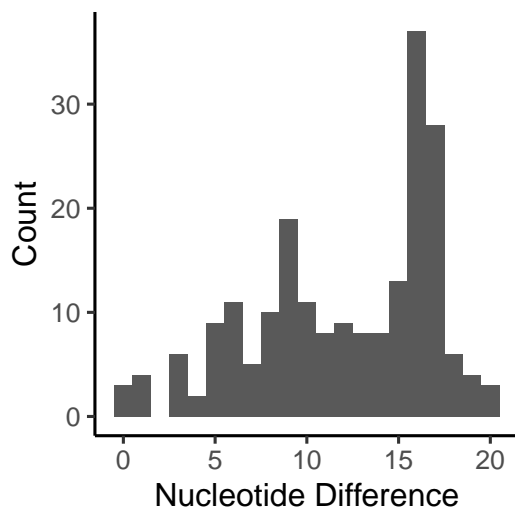
### IGHV4-4\*07

618 sequences assigned  
No exact matches.



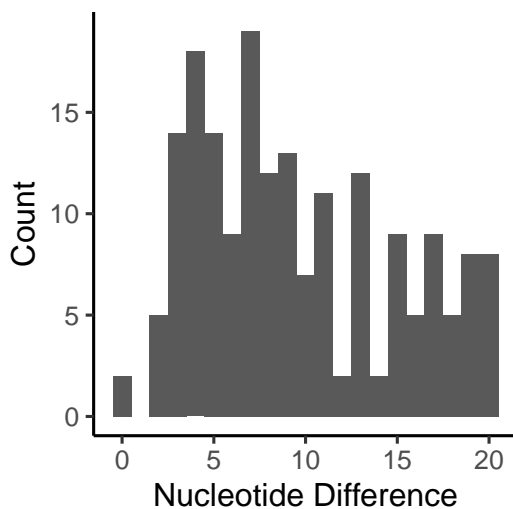
### IGHV3-73\*01\_02

251 sequences assigned  
3 (1.2%) exact matches, in which:  
3 unique CDR3  
2 unique J



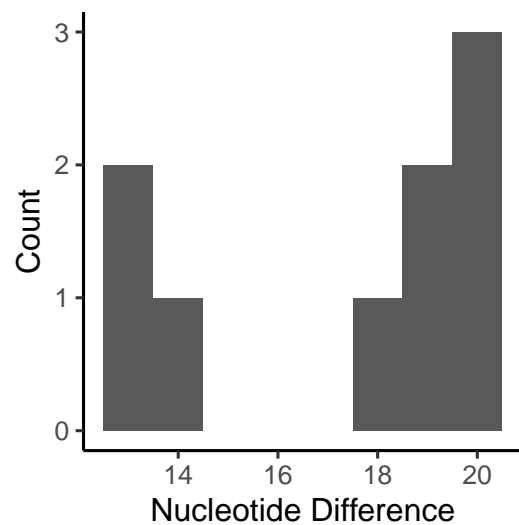
### IGHV3-64D\*06

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



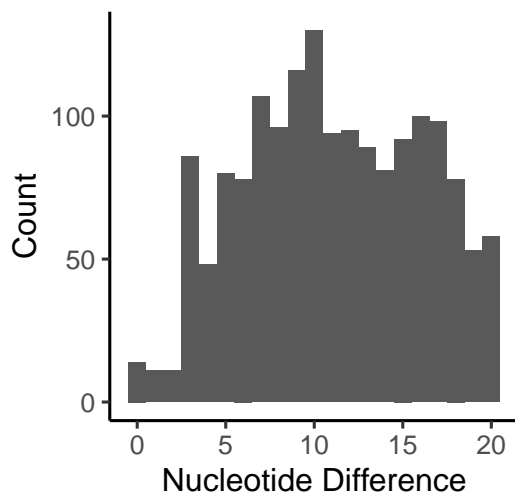
### IGHV4-28\*03

14 sequences assigned  
No exact matches.



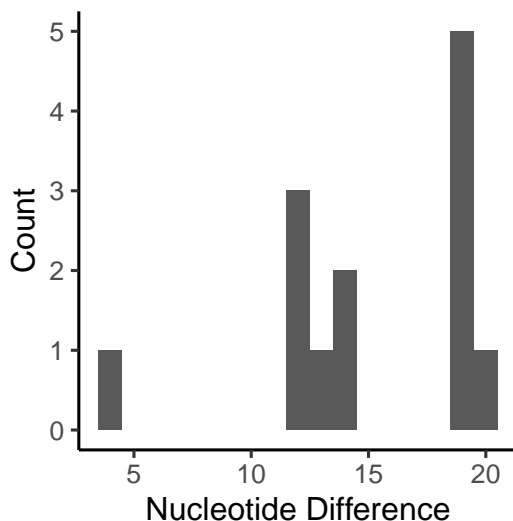
### IGHV3-74\*01\_02

2007 sequences assigned  
14 (0.7%) exact matches, in which:  
7 unique CDR3  
2 unique J



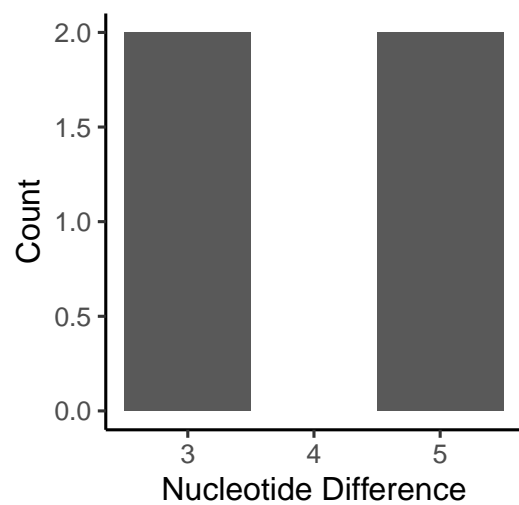
### IGHV3-64D\*08

33 sequences assigned  
No exact matches.



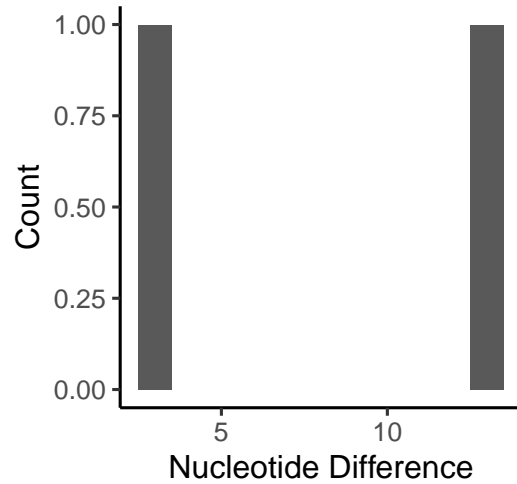
### IGHV4-28\*01\_07

6 sequences assigned  
No exact matches.



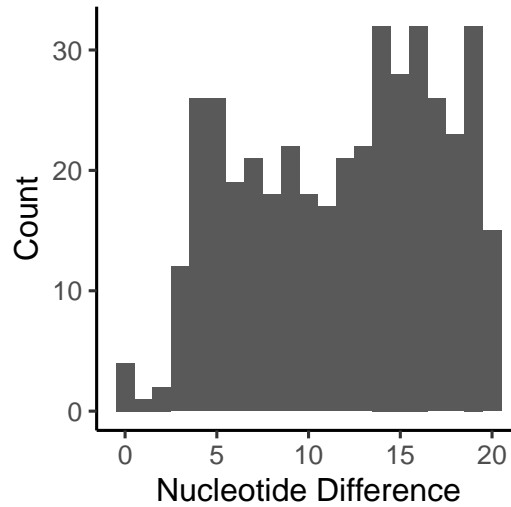
### IGHV4-28\*02\_05

2 sequences assigned  
No exact matches.



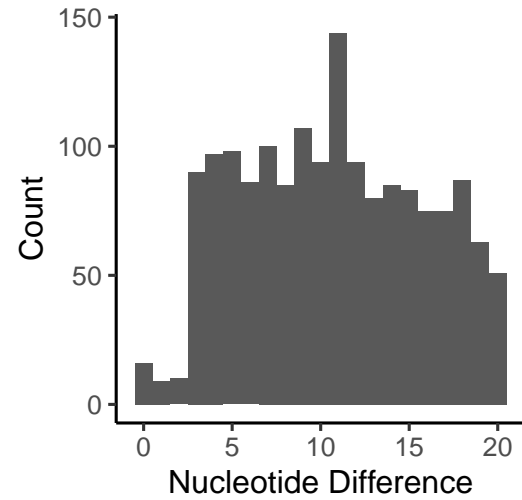
### IGHV4-31\*03\_04

657 sequences assigned  
4 (0.6%) exact matches, in which:  
4 unique CDR3  
2 unique J



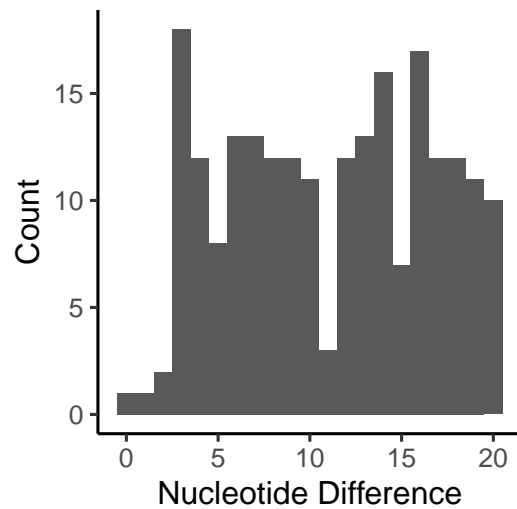
### IGHV4-39\*01\_05

2348 sequences assigned  
16 (0.7%) exact matches, in which:  
8 unique CDR3  
4 unique J



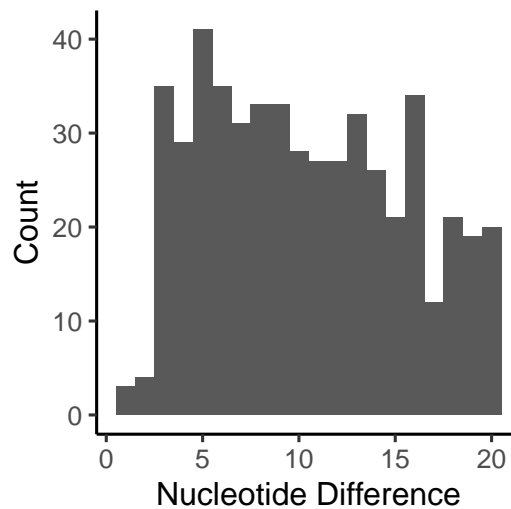
### IGHV4-30-4\*01

354 sequences assigned  
1 (0.3%) exact matches, in which:  
1 unique CDR3  
1 unique J



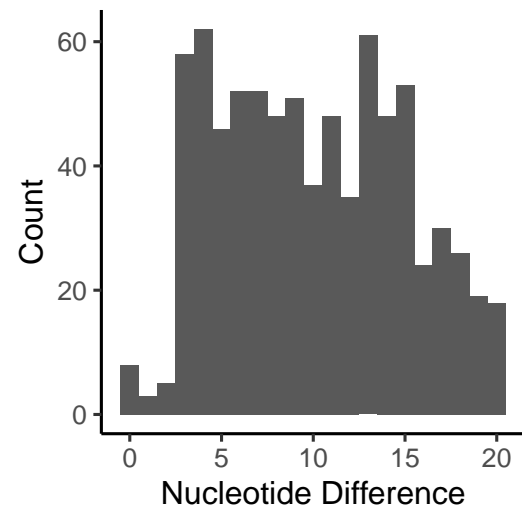
### IGHV4-34\*01\_02

718 sequences assigned  
No exact matches.



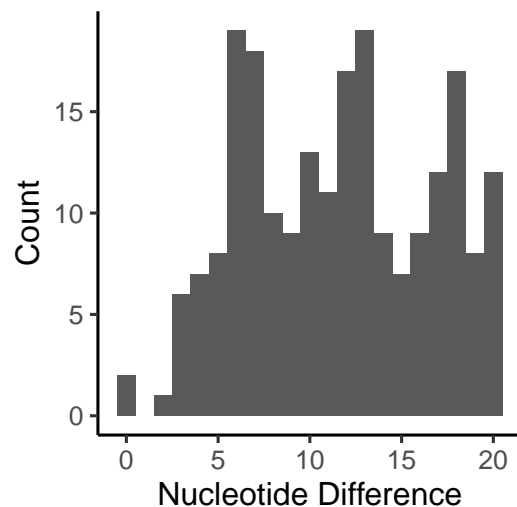
### IGHV4-59\*08

986 sequences assigned  
8 (0.8%) exact matches, in which:  
5 unique CDR3  
2 unique J



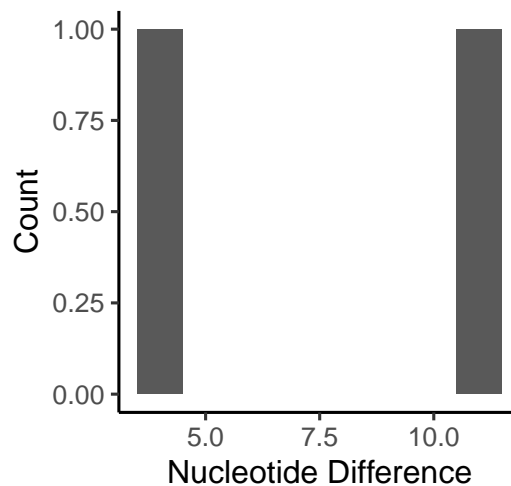
### IGHV4-30-2\*01

339 sequences assigned  
2 (0.6%) exact matches, in which:  
2 unique CDR3  
1 unique J



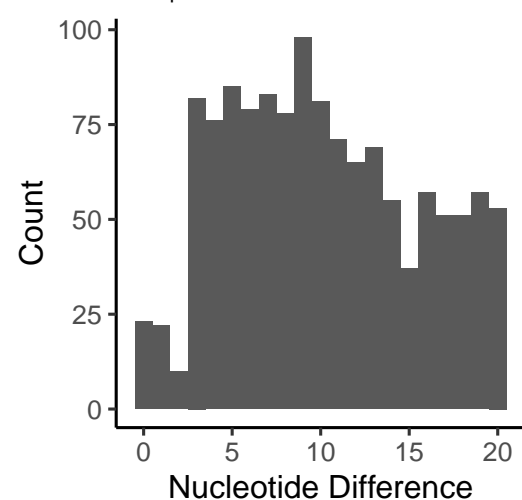
### IGHV4-38-2\*02

6 sequences assigned  
No exact matches.



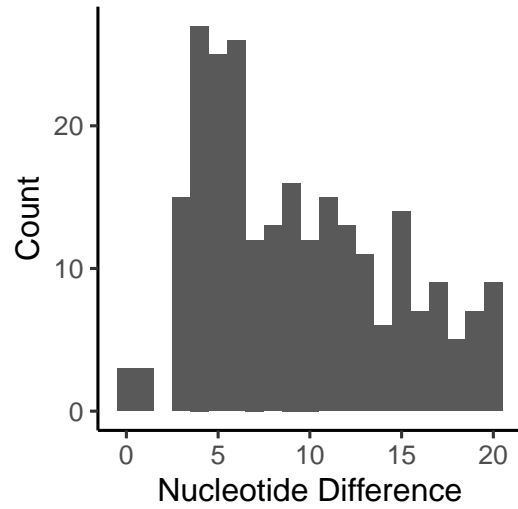
### IGHV4-59\*01\_07

1833 sequences assigned  
23 (1.3%) exact matches, in which:  
11 unique CDR3  
3 unique J



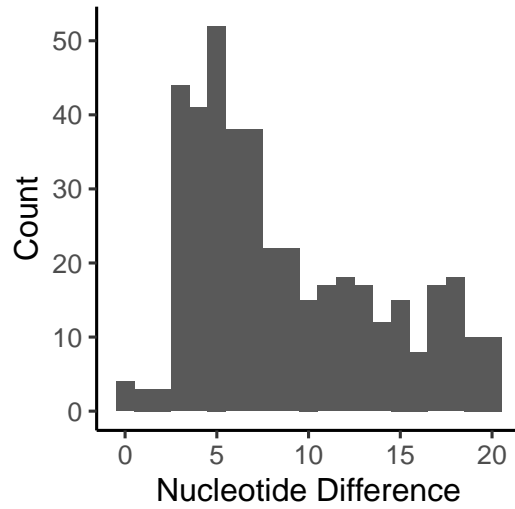
### IGHV4-61\*01

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



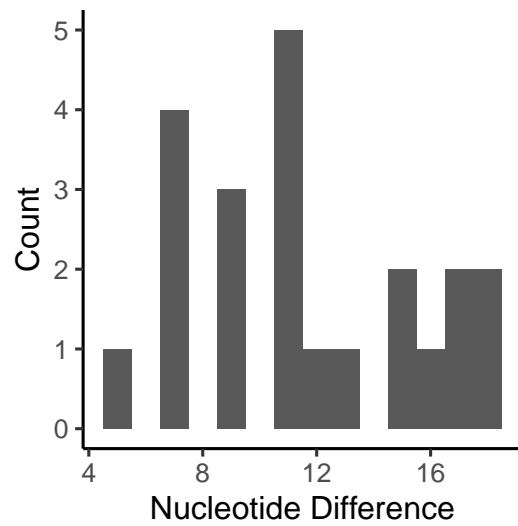
### IGHV5-51\*01\_03

494 sequences assigned  
4 (0.8%) exact matches, in which:  
4 unique CDR3  
1 unique J



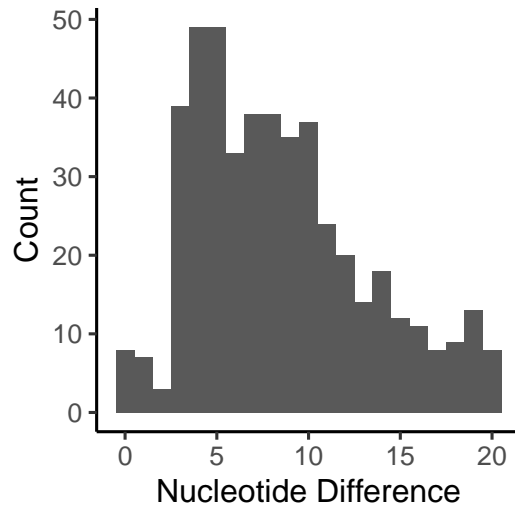
### IGHV4-61\*08

54 sequences assigned  
No exact matches.



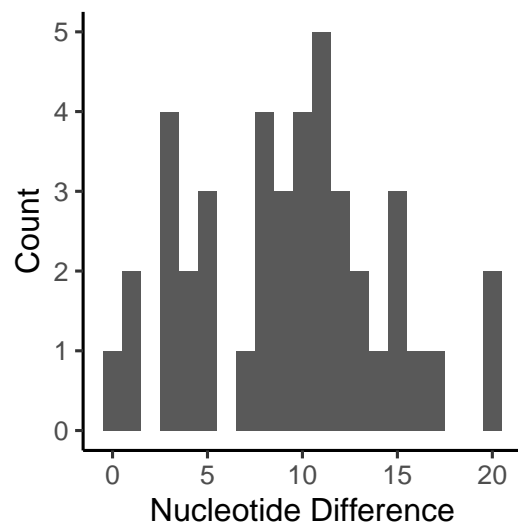
### IGHV6-1\*01\_02

513 sequences assigned  
8 (1.6%) exact matches, in which:  
8 unique CDR3  
3 unique J



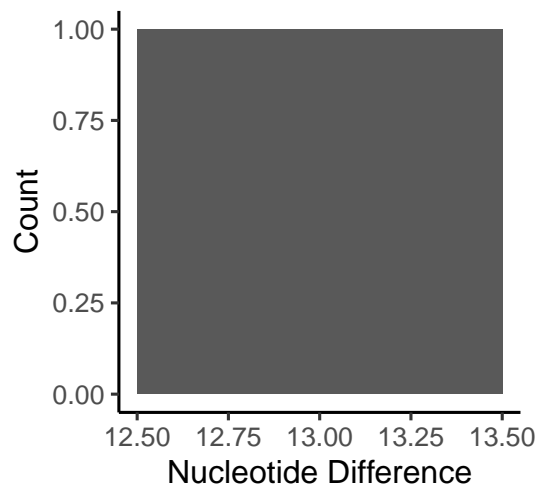
### IGHV5-10-1\*01\_03

58 sequences assigned  
1 (1.7%) exact matches, in which:  
1 unique CDR3  
1 unique J

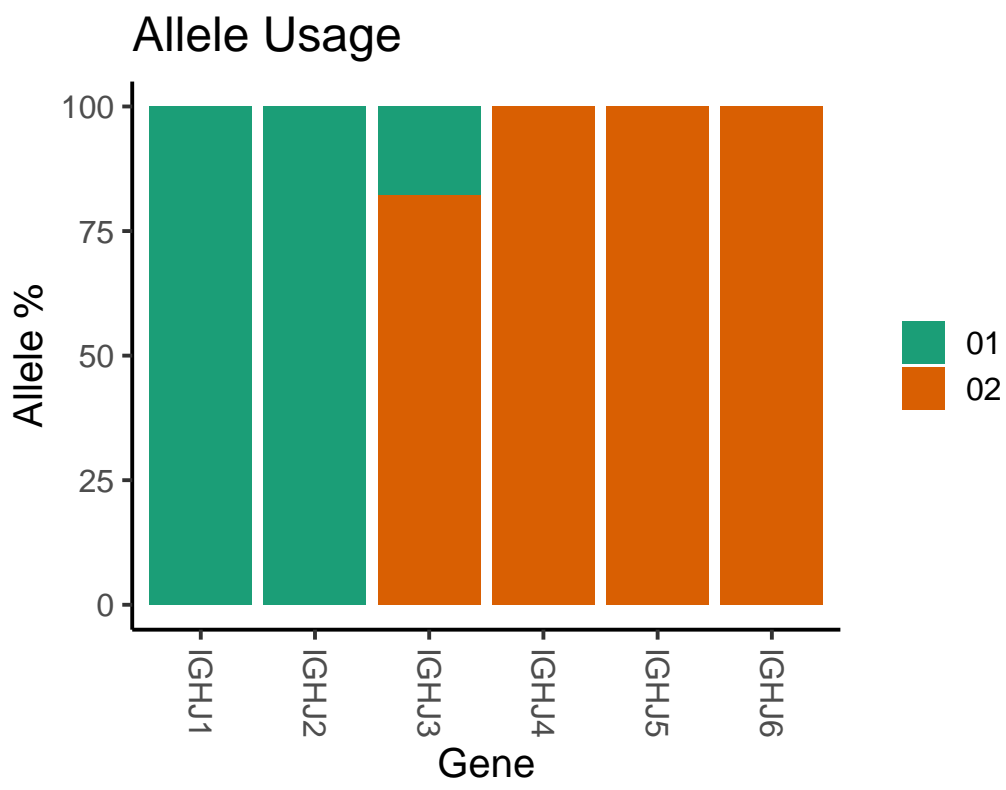


### IGHV7-4-1\*01

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88A are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV1–69\*04\_09\_G112AIGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88A are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88A are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s)IGHV4–39\*02\_C258GIGHV4–59\*02\_G88AIGHV5–51\*07\_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.