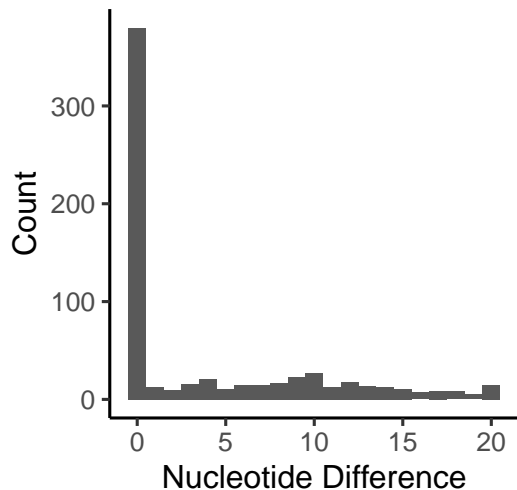


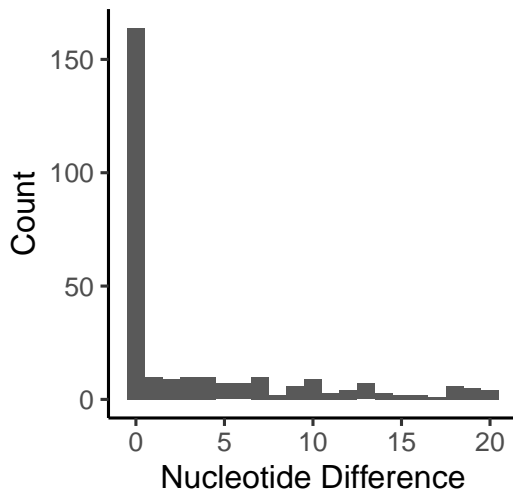
### IGHV1-2\*02

729 sequences assigned  
380 (52.1%) exact matches, in which:  
380 unique CDR3  
7 unique J



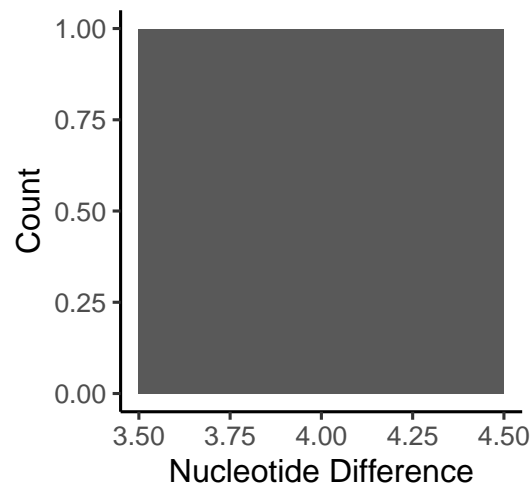
### IGHV1-8\*01

299 sequences assigned  
164 (54.8%) exact matches, in which:  
164 unique CDR3  
6 unique J



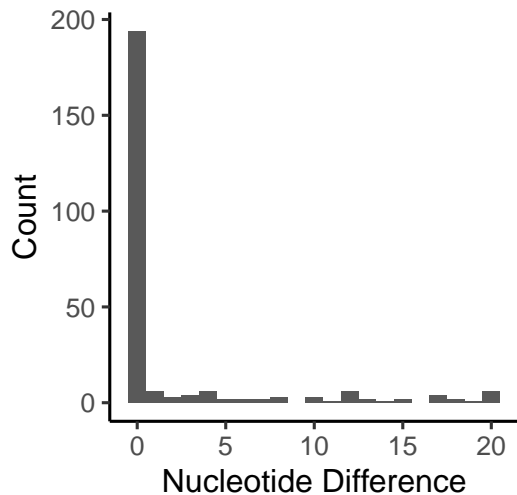
### IGHV1-45\*02

1 sequences assigned  
No exact matches.



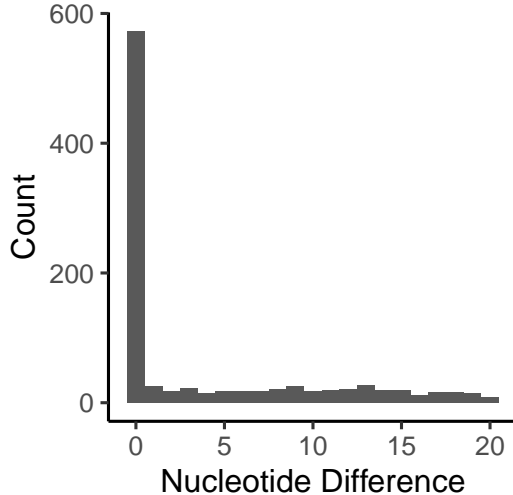
### IGHV1-2\*04

255 sequences assigned  
194 (76.1%) exact matches, in which:  
193 unique CDR3  
6 unique J



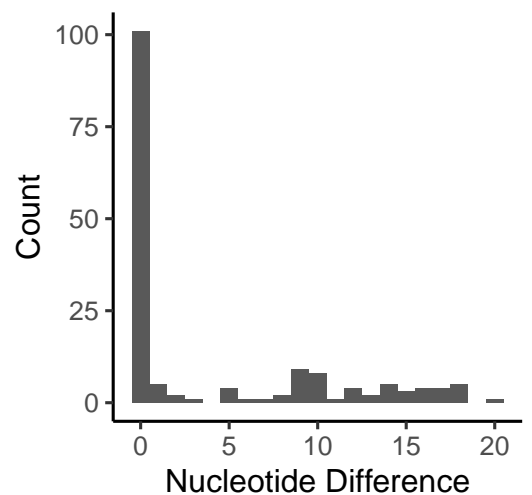
### IGHV1-18\*01

1064 sequences assigned  
573 (53.9%) exact matches, in which:  
572 unique CDR3  
7 unique J



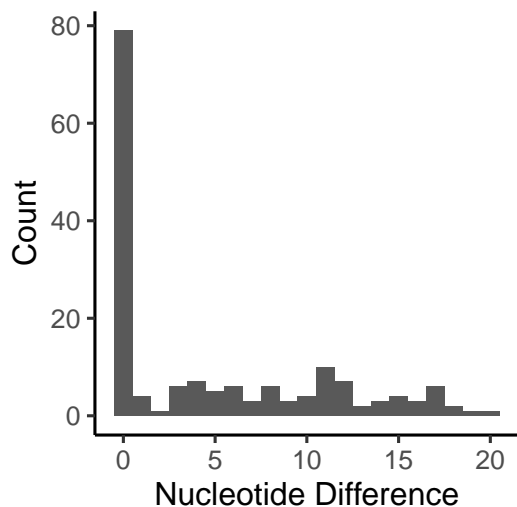
### IGHV1-46\*01

183 sequences assigned  
101 (55.2%) exact matches, in which:  
101 unique CDR3  
6 unique J



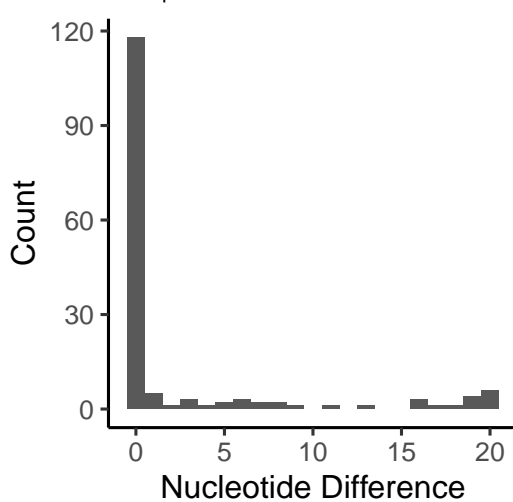
### IGHV1-3\*01\_05

180 sequences assigned  
79 (43.9%) exact matches, in which:  
79 unique CDR3  
4 unique J



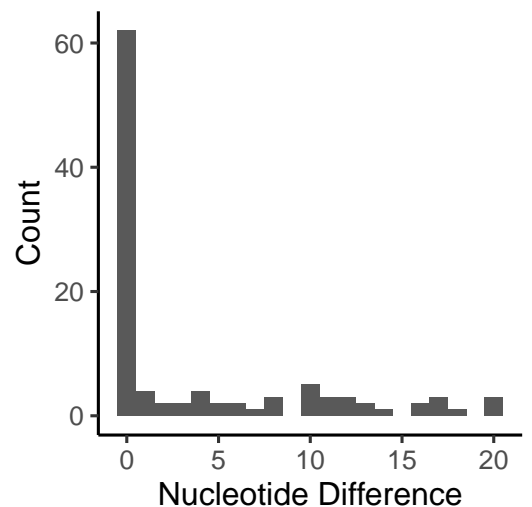
### IGHV1-24\*01

168 sequences assigned  
118 (70.2%) exact matches, in which:  
116 unique CDR3  
7 unique J



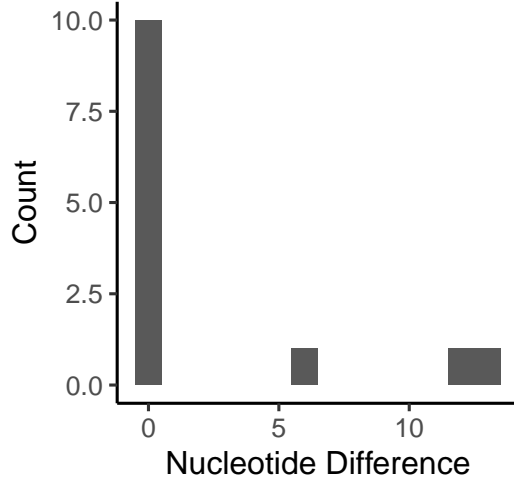
### IGHV1-46\*03

108 sequences assigned  
62 (57.4%) exact matches, in which:  
62 unique CDR3  
6 unique J



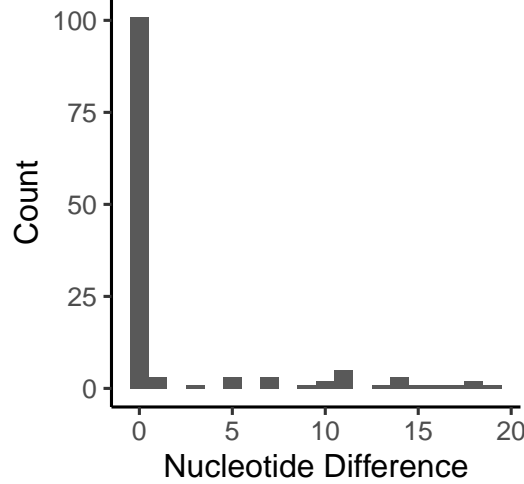
### IGHV1-58\*02

16 sequences assigned  
10 (62.5%) exact matches, in which:  
9 unique CDR3  
4 unique J



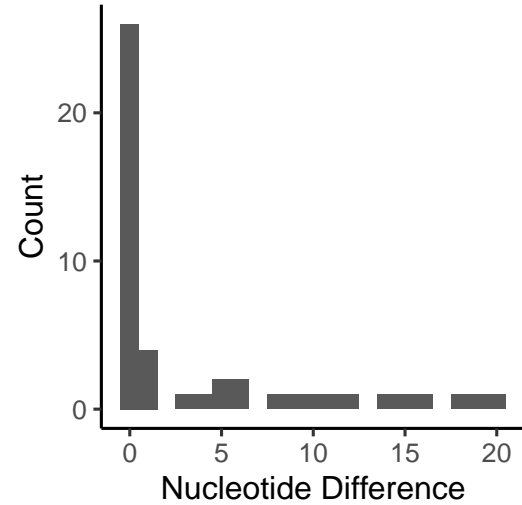
### IGHV1-69\*04\_09\_G112A

150 sequences assigned  
101 (67.3%) exact matches, in which:  
101 unique CDR3  
5 unique J



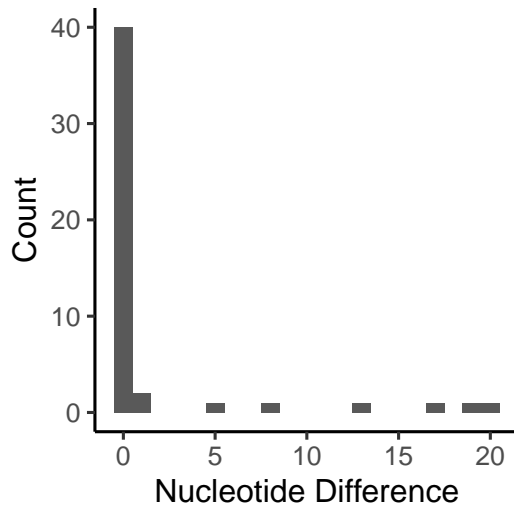
### IGHV2-26\*01

47 sequences assigned  
26 (55.3%) exact matches, in which:  
26 unique CDR3  
6 unique J



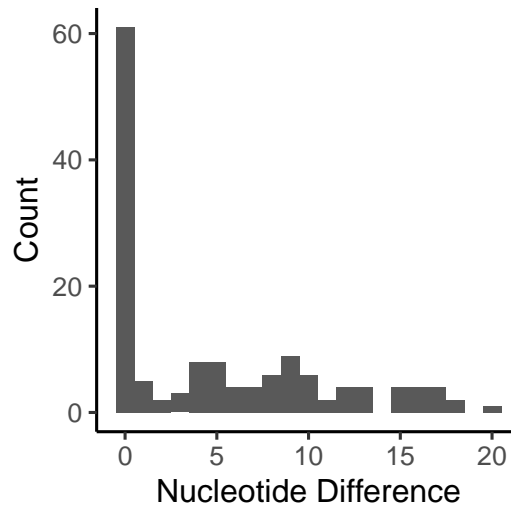
### IGHV1-58\*01\_03

52 sequences assigned  
40 (76.9%) exact matches, in which:  
40 unique CDR3  
5 unique J



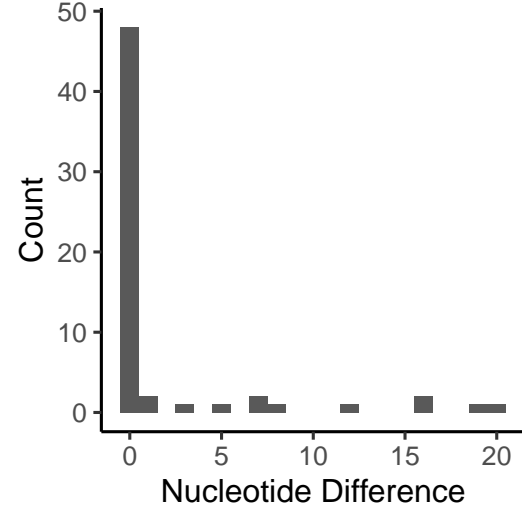
### IGHV2-5\*01

145 sequences assigned  
61 (42.1%) exact matches, in which:  
61 unique CDR3  
5 unique J



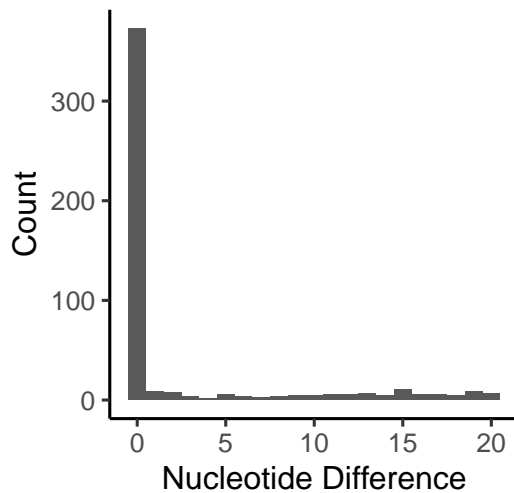
### IGHV2-70\*01

63 sequences assigned  
48 (76.2%) exact matches, in which:  
48 unique CDR3  
5 unique J



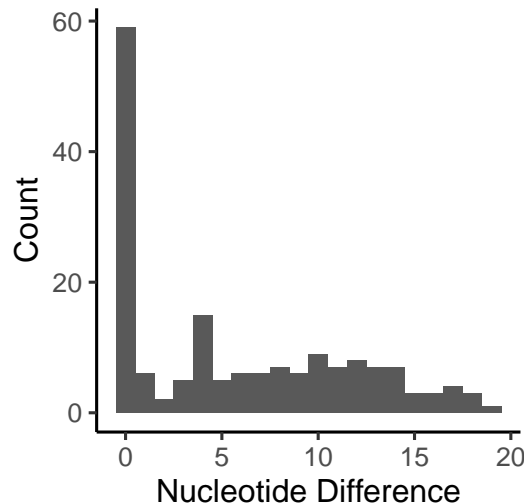
### IGHV1-69\*01\_12\_13

585 sequences assigned  
373 (63.8%) exact matches, in which:  
373 unique CDR3  
6 unique J



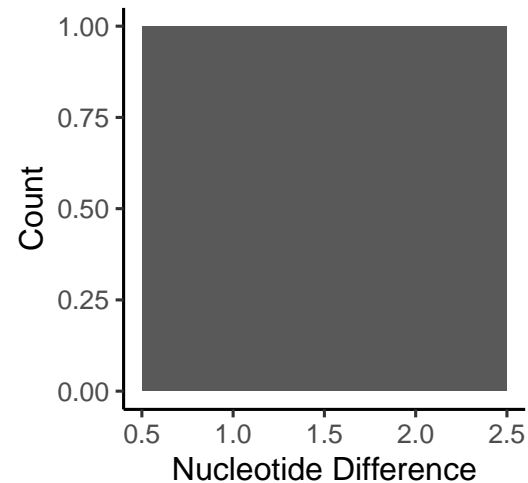
### IGHV2-5\*02

173 sequences assigned  
59 (34.1%) exact matches, in which:  
59 unique CDR3  
5 unique J



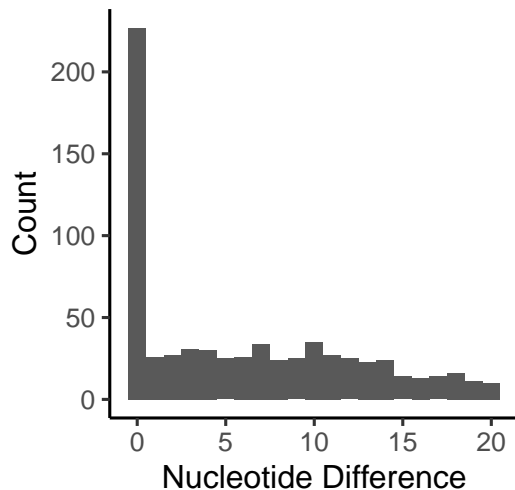
### IGHV2-70D\*04

3 sequences assigned  
No exact matches.



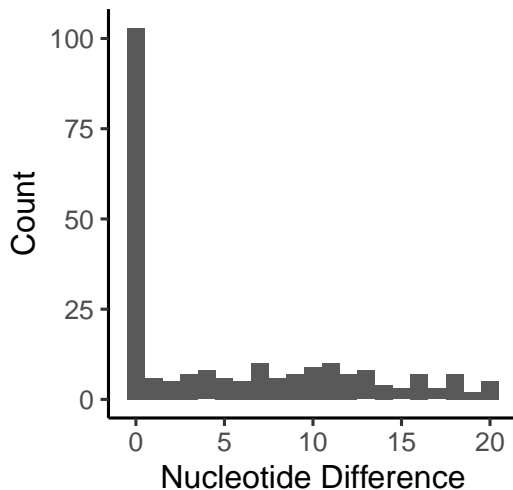
### IGHV3-7\*03

750 sequences assigned  
227 (30.3%) exact matches, in which:  
211 unique CDR3  
6 unique J



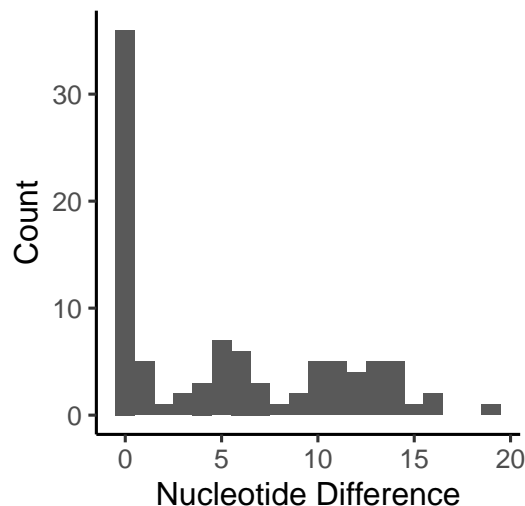
### IGHV3-11\*01

252 sequences assigned  
103 (40.9%) exact matches, in which:  
99 unique CDR3  
5 unique J



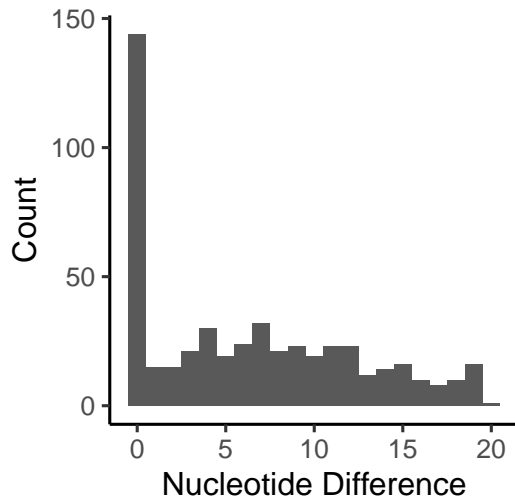
### IGHV3-13\*04

101 sequences assigned  
36 (35.6%) exact matches, in which:  
35 unique CDR3  
5 unique J



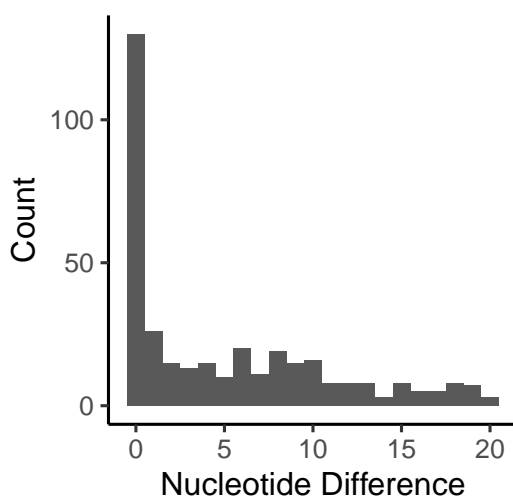
### IGHV3-7\*01\_C246T

523 sequences assigned  
144 (27.5%) exact matches, in which:  
137 unique CDR3  
7 unique J



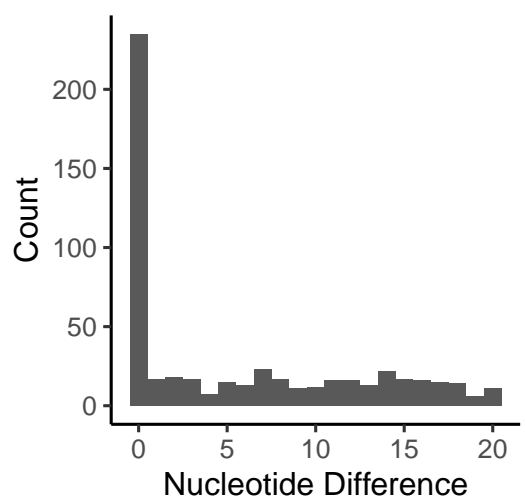
### IGHV3-11\*06\_T300C

401 sequences assigned  
130 (32.4%) exact matches, in which:  
125 unique CDR3  
6 unique J



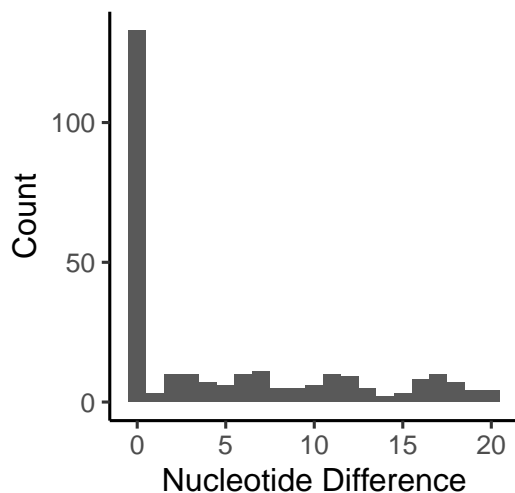
### IGHV3-15\*01\_02

591 sequences assigned  
235 (39.8%) exact matches, in which:  
229 unique CDR3  
7 unique J



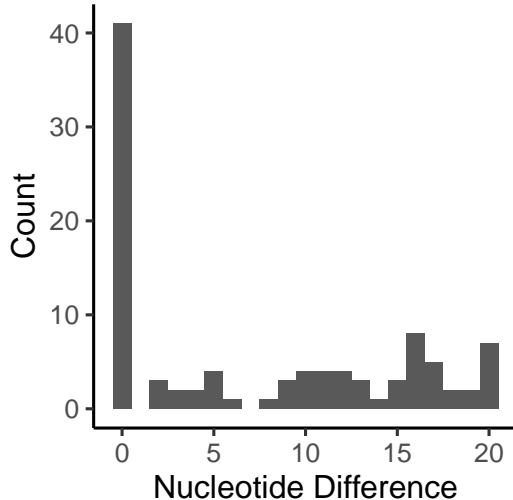
### IGHV3-9\*01

290 sequences assigned  
133 (45.9%) exact matches, in which:  
133 unique CDR3  
6 unique J



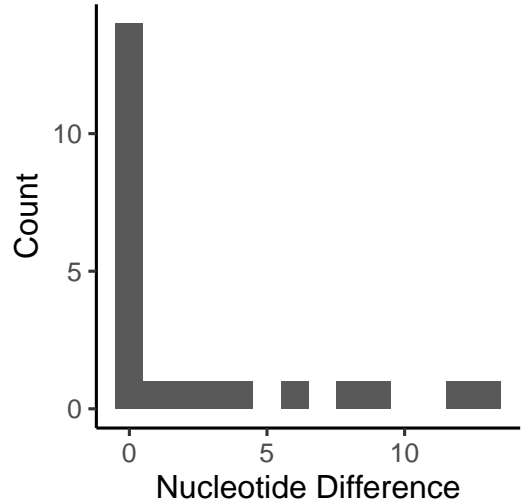
### IGHV3-13\*01

116 sequences assigned  
41 (35.3%) exact matches, in which:  
41 unique CDR3  
5 unique J



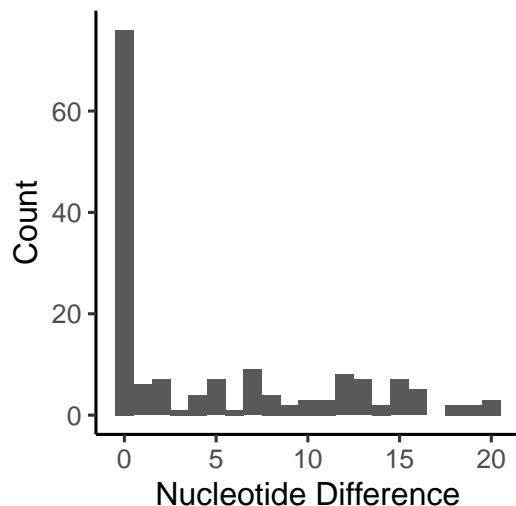
### IGHV3-20\*01\_02

25 sequences assigned  
14 (56%) exact matches, in which:  
14 unique CDR3  
5 unique J



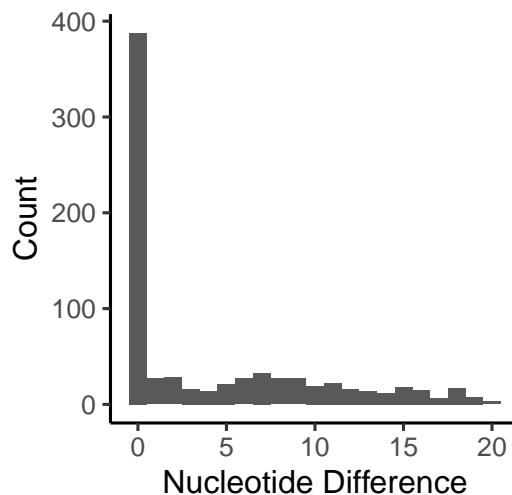
### IGHV3-20\*03\_04

171 sequences assigned  
76 (44.4%) exact matches, in which:  
75 unique CDR3  
5 unique J



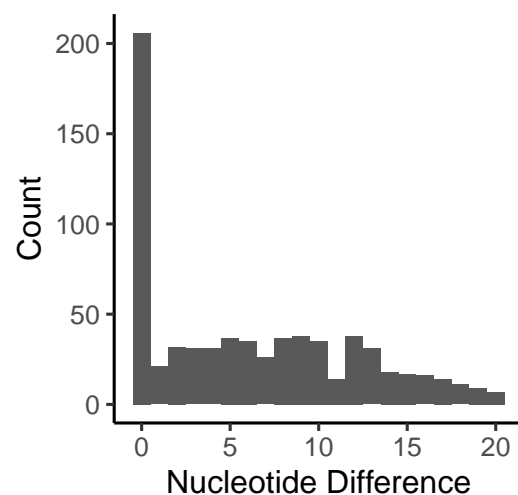
### IGHV3-33\*01

828 sequences assigned  
388 (46.9%) exact matches, in which:  
335 unique CDR3  
6 unique J



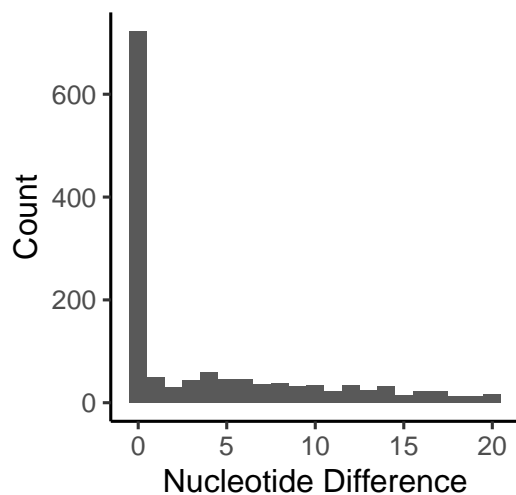
### IGHV3-48\*03

777 sequences assigned  
206 (26.5%) exact matches, in which:  
201 unique CDR3  
6 unique J



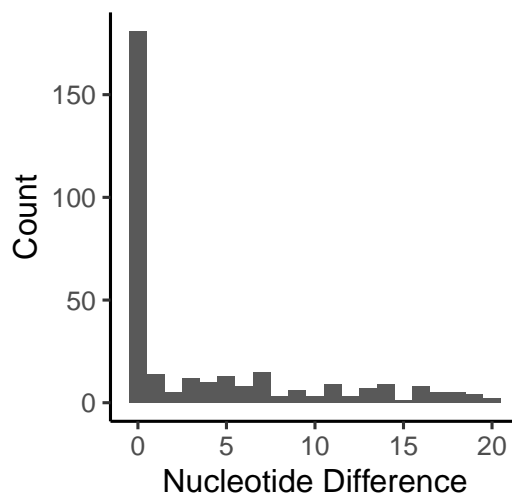
### IGHV3-21\*01\_02

1493 sequences assigned  
723 (48.4%) exact matches, in which:  
714 unique CDR3  
7 unique J



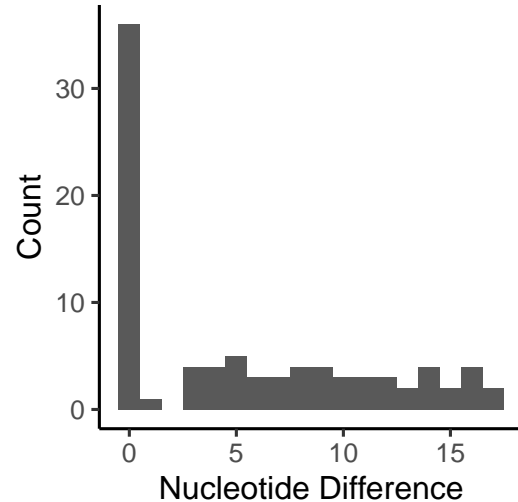
### IGHV3-43\*02

350 sequences assigned  
181 (51.7%) exact matches, in which:  
174 unique CDR3  
6 unique J



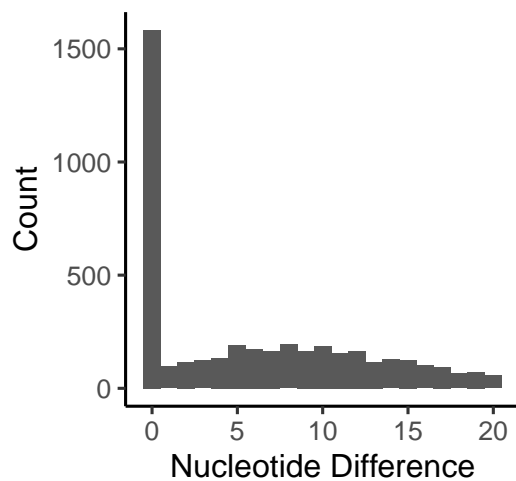
### IGHV3-49\*04

101 sequences assigned  
36 (35.6%) exact matches, in which:  
36 unique CDR3  
4 unique J



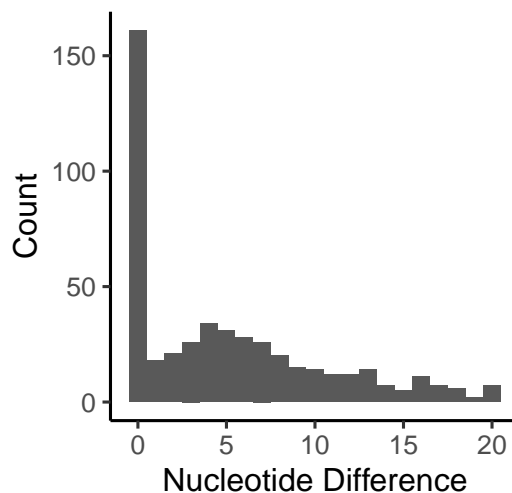
### IGHV3-23\*01\_04

4716 sequences assigned  
1583 (33.6%) exact matches, in which:  
1546 unique CDR3  
7 unique J



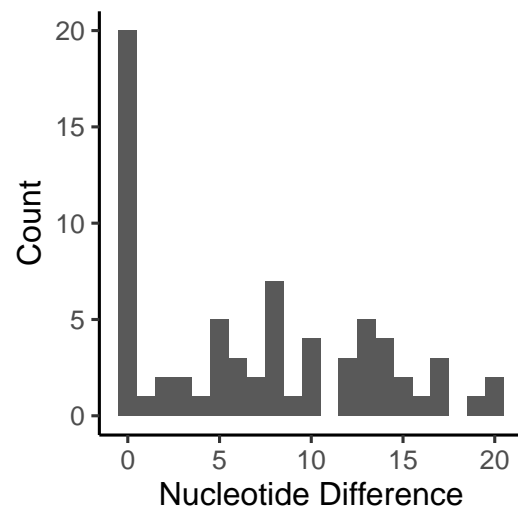
### IGHV3-48\*01

519 sequences assigned  
161 (31%) exact matches, in which:  
154 unique CDR3  
6 unique J



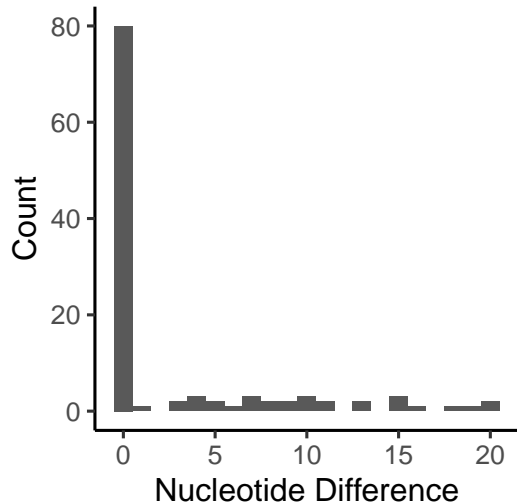
### IGHV3-49\*03\_05

77 sequences assigned  
20 (26%) exact matches, in which:  
20 unique CDR3  
4 unique J



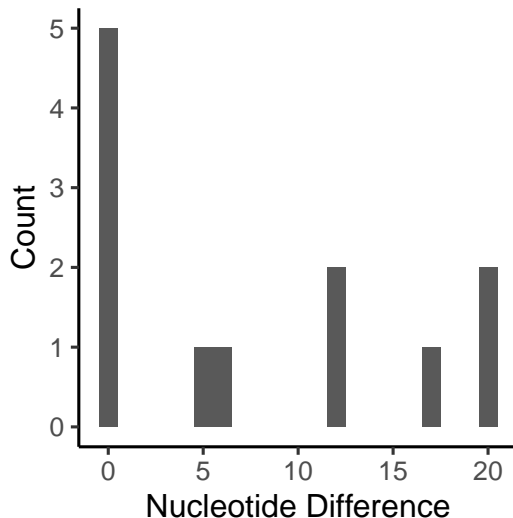
### IGHV3-53\*04

115 sequences assigned  
80 (69.6%) exact matches, in which:  
77 unique CDR3  
6 unique J



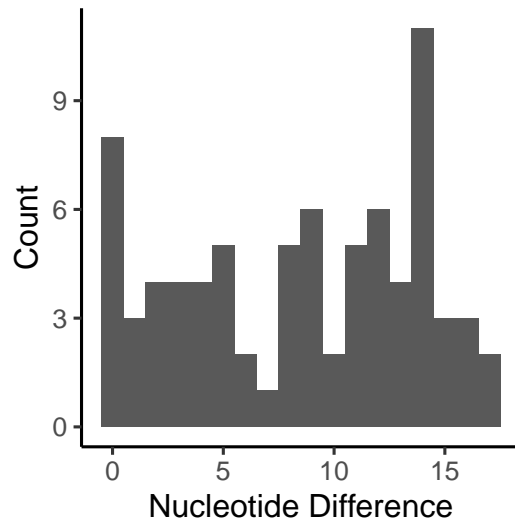
### IGHV3-64\*02\_07

13 sequences assigned  
5 (38.5%) exact matches, in which:  
5 unique CDR3  
2 unique J



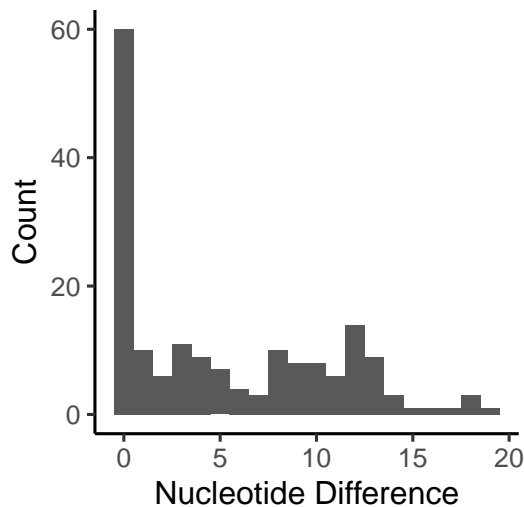
### IGHV3-72\*01

80 sequences assigned  
8 (10%) exact matches, in which:  
8 unique CDR3  
4 unique J



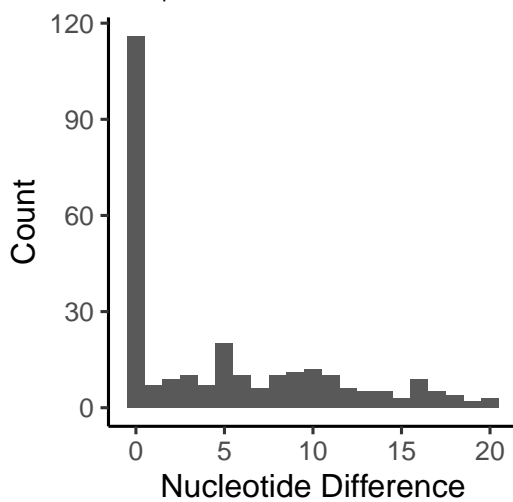
### IGHV3-53\*01\_02

191 sequences assigned  
60 (31.4%) exact matches, in which:  
59 unique CDR3  
5 unique J



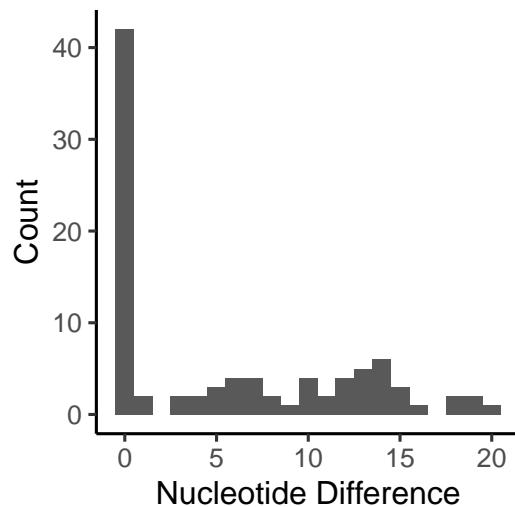
### IGHV3-66\*02

284 sequences assigned  
116 (40.8%) exact matches, in which:  
111 unique CDR3  
7 unique J



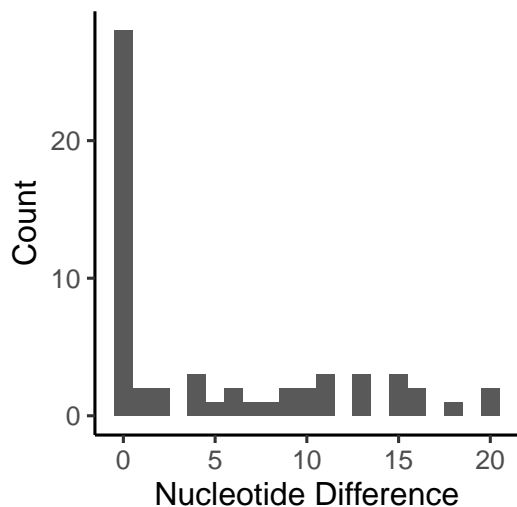
### IGHV3-73\*01\_02

100 sequences assigned  
42 (42%) exact matches, in which:  
41 unique CDR3  
6 unique J



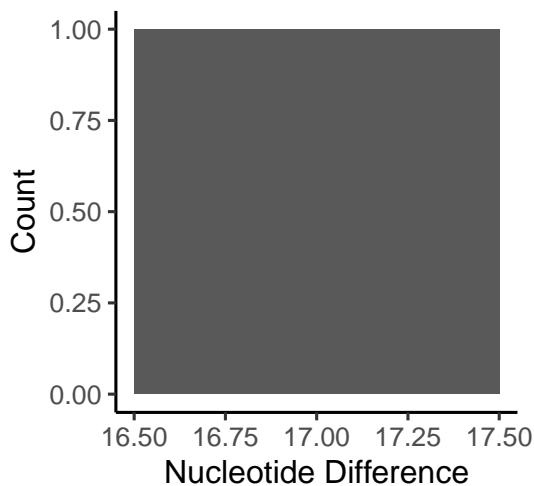
### IGHV3-64\*01

60 sequences assigned  
28 (46.7%) exact matches, in which:  
25 unique CDR3  
5 unique J



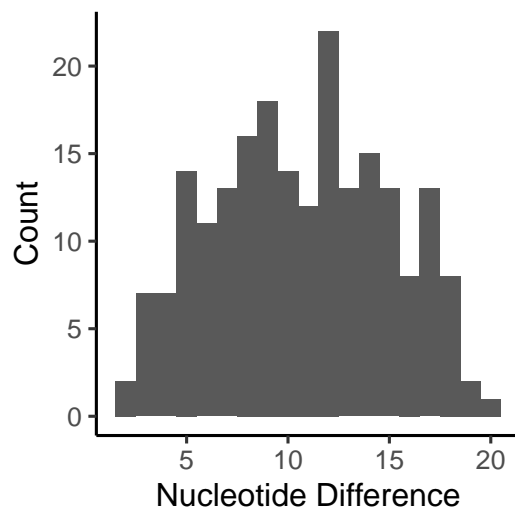
### IGHV3-69-1\*01

2 sequences assigned  
No exact matches.



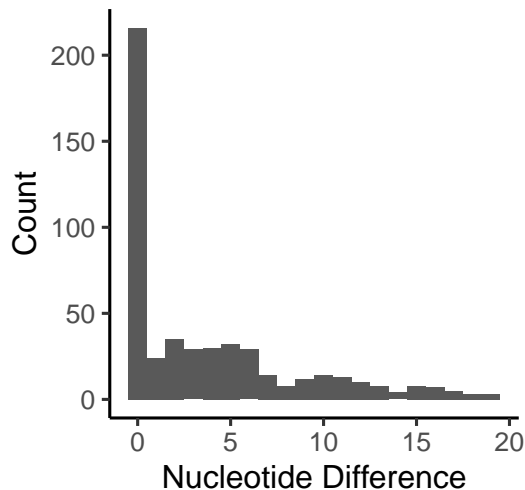
### IGHV3-74\*03

235 sequences assigned  
No exact matches.



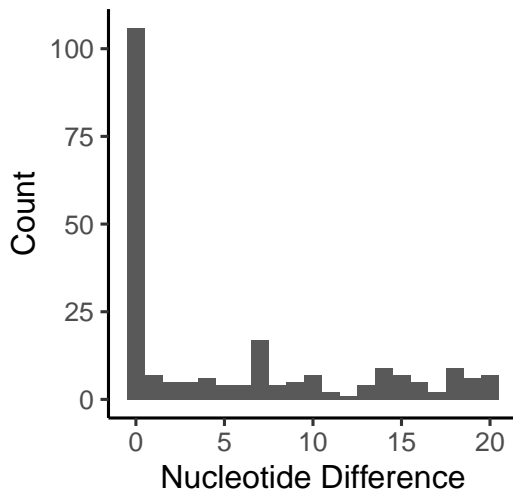
### IGHV3-74\*01\_02

526 sequences assigned  
216 (41.1%) exact matches, in which:  
207 unique CDR3  
7 unique J



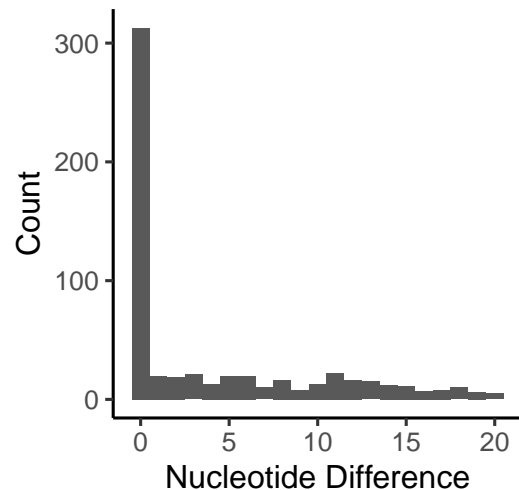
### IGHV4-4\*02\_03

252 sequences assigned  
106 (42.1%) exact matches, in which:  
104 unique CDR3  
6 unique J



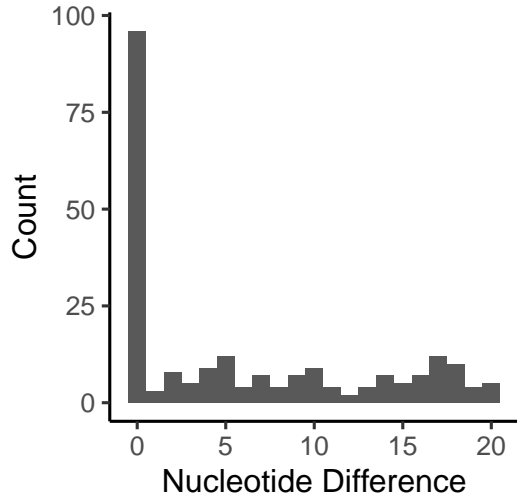
### IGHV4-31\*02

656 sequences assigned  
313 (47.7%) exact matches, in which:  
312 unique CDR3  
6 unique J



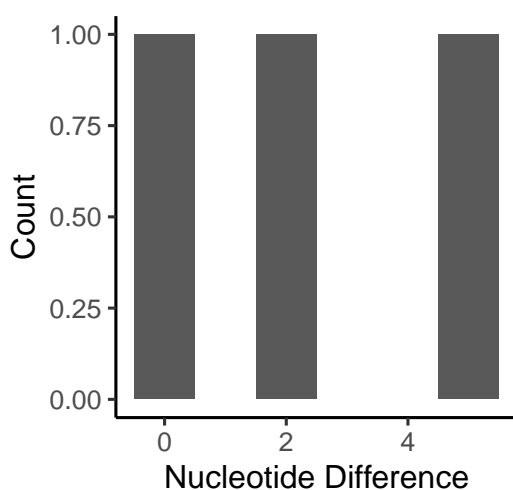
### IGHV3-64D\*06

288 sequences assigned  
96 (33.3%) exact matches, in which:  
91 unique CDR3  
5 unique J



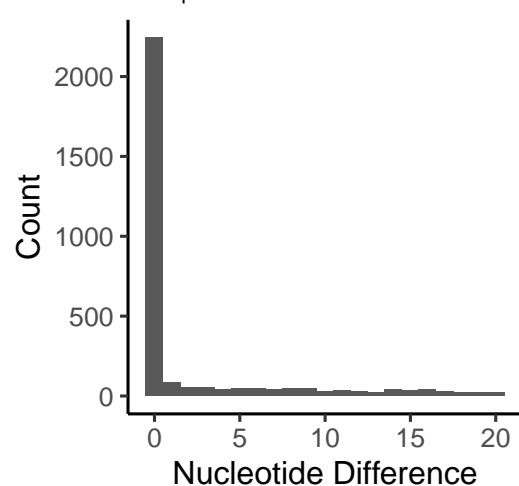
### IGHV4-28\*01\_07

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



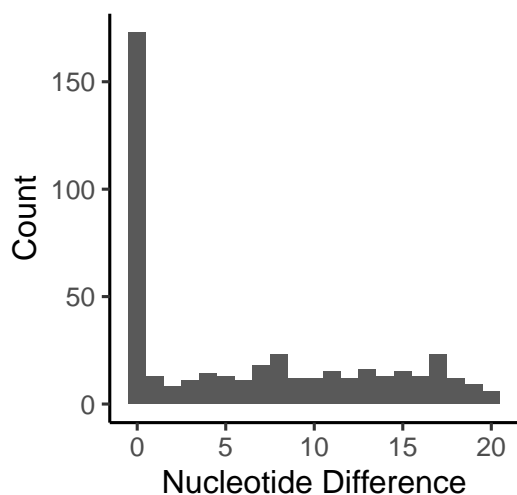
### IGHV4-34\*01\_02

3171 sequences assigned  
2243 (70.7%) exact matches, in which:  
2216 unique CDR3  
7 unique J



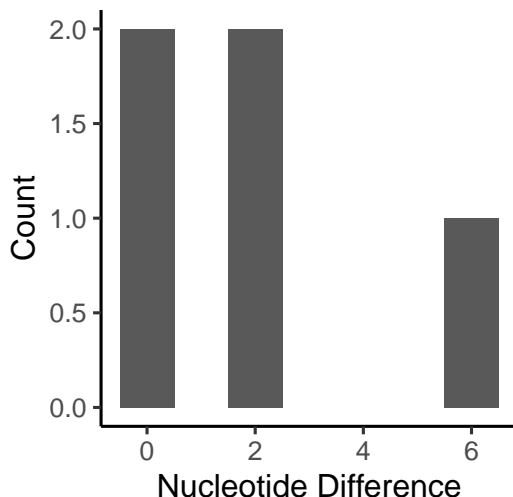
### IGHV4-4\*07

476 sequences assigned  
173 (36.3%) exact matches, in which:  
173 unique CDR3  
7 unique J



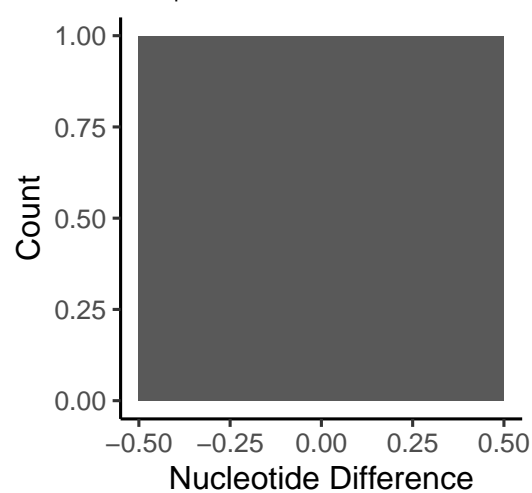
### IGHV4-28\*02\_05

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



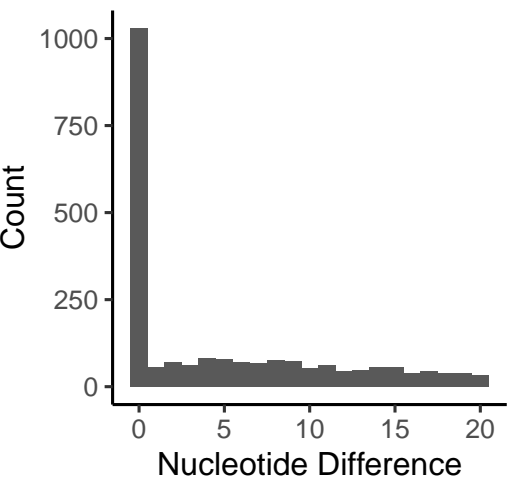
### IGHV4-38-2\*02

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



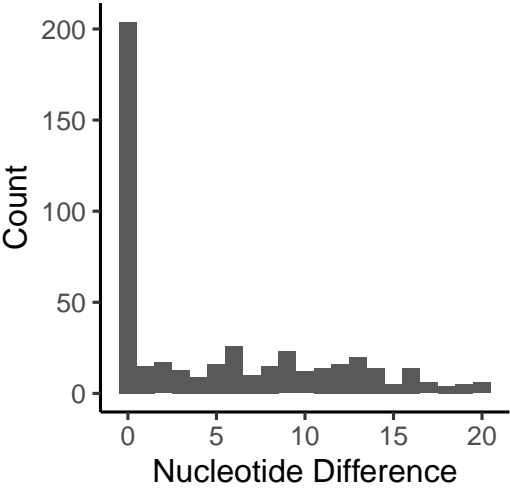
IGHV4-39\*02\_C258G

2474 sequences assigned  
1029 (41.6%) exact matches, in which:  
1014 unique CDR3  
7 unique J



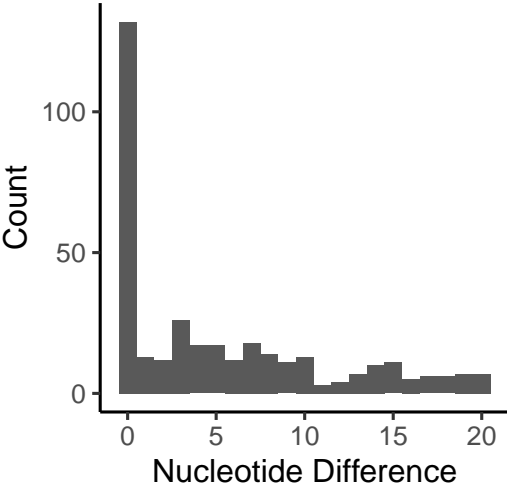
IGHV4-61\*02

514 sequences assigned  
204 (39.7%) exact matches, in which:  
200 unique CDR3  
5 unique J



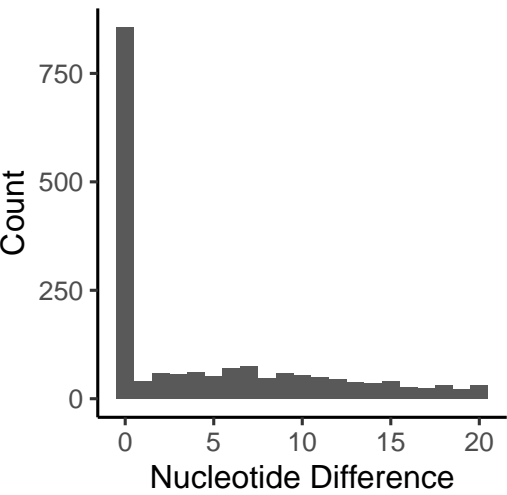
IGHV5-51\*07\_A128G

364 sequences assigned  
132 (36.3%) exact matches, in which:  
131 unique CDR3  
6 unique J



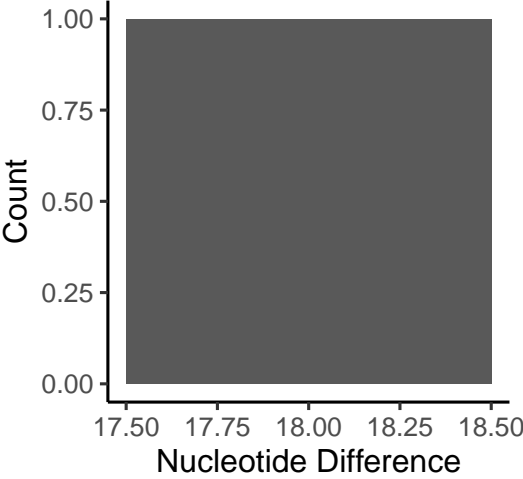
IGHV4-59\*02\_G88A

2005 sequences assigned  
857 (42.7%) exact matches, in which:  
846 unique CDR3  
7 unique J



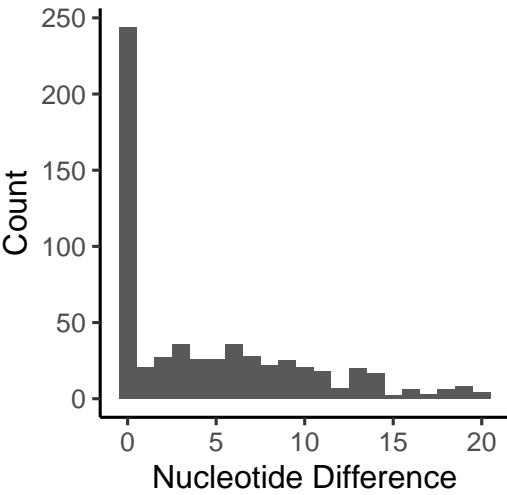
IGHV4/OR15-8\*01

2 sequences assigned  
No exact matches.



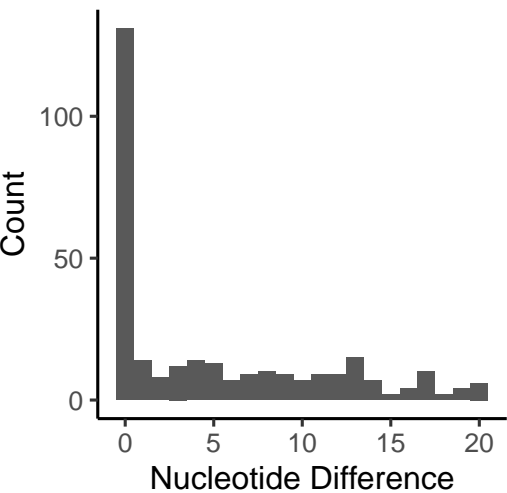
IGHV6-1\*01\_02

617 sequences assigned  
244 (39.5%) exact matches, in which:  
244 unique CDR3  
6 unique J



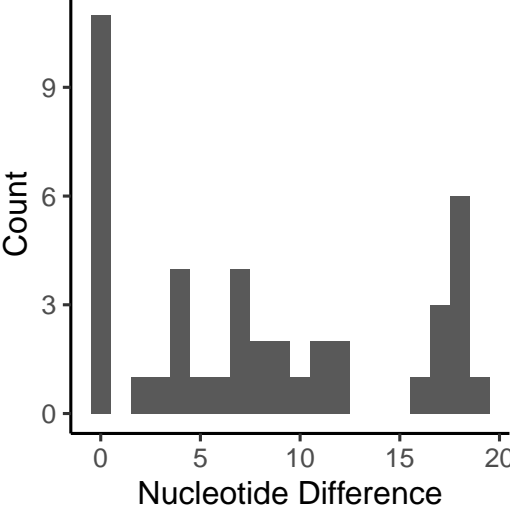
IGHV4-61\*01

356 sequences assigned  
131 (36.8%) exact matches, in which:  
129 unique CDR3  
6 unique J



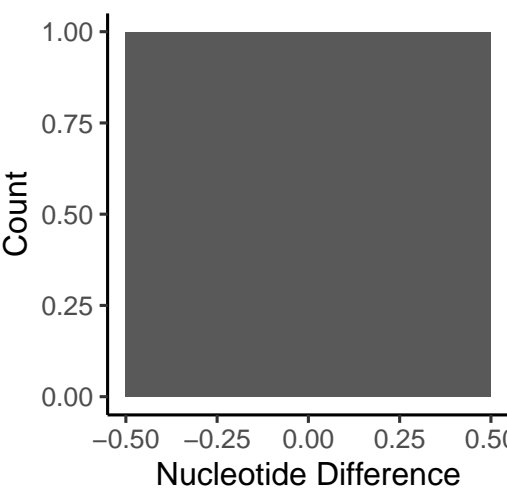
IGHV5-10-1\*01\_03

53 sequences assigned  
11 (20.8%) exact matches, in which:  
11 unique CDR3  
4 unique J

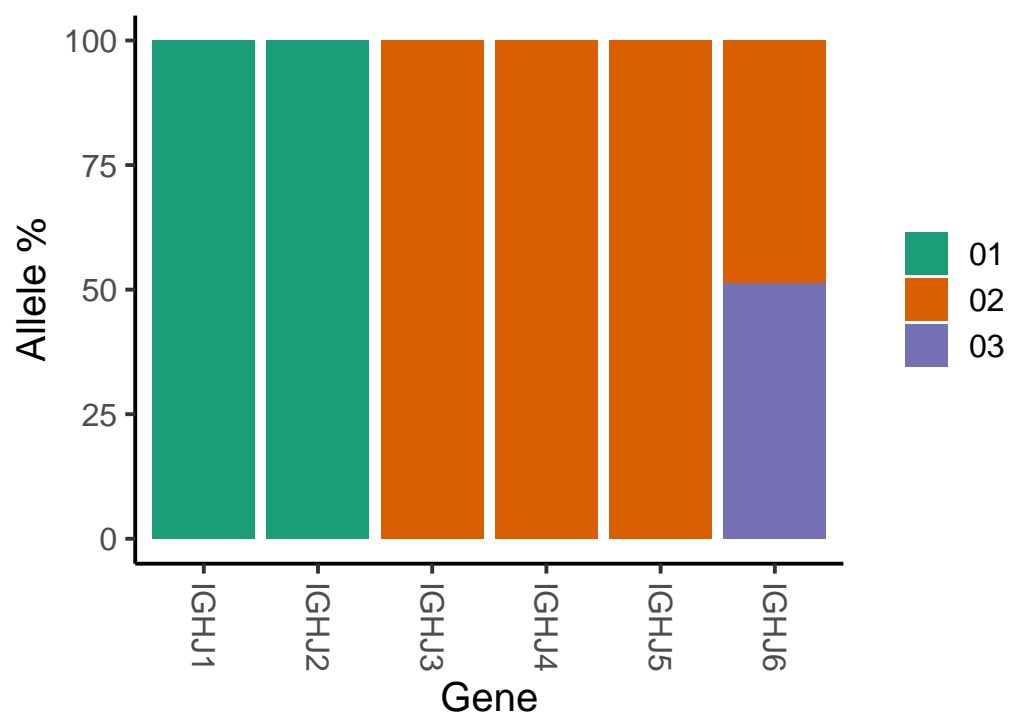


IGHV7-4-1\*01

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



Allele Usage





Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.