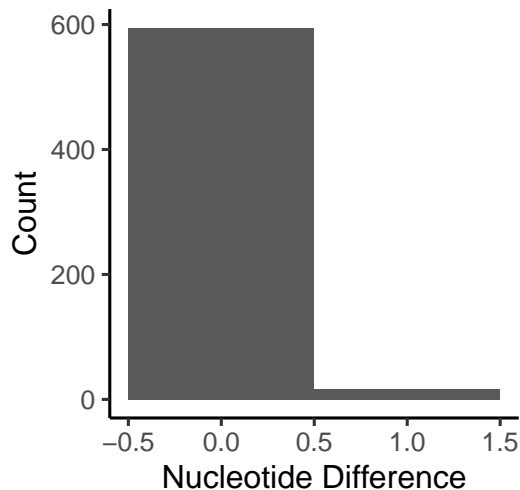


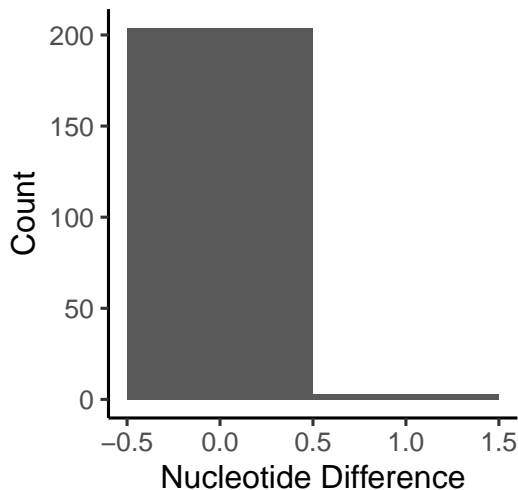
### IGHV1-2\*06

612 sequences assigned  
595 (97.2%) exact matches, in which:  
594 unique CDR3  
6 unique J



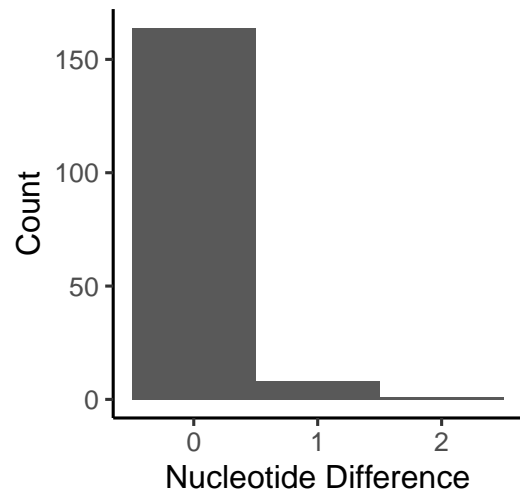
### IGHV1-24\*01

207 sequences assigned  
204 (98.6%) exact matches, in which:  
203 unique CDR3  
6 unique J



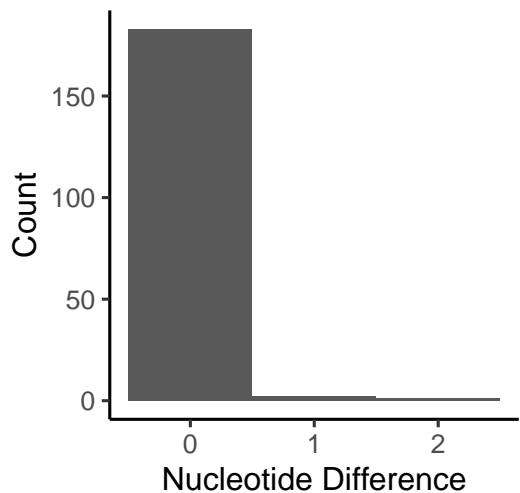
### IGHV1-46\*01

173 sequences assigned  
164 (94.8%) exact matches, in which:  
163 unique CDR3  
6 unique J



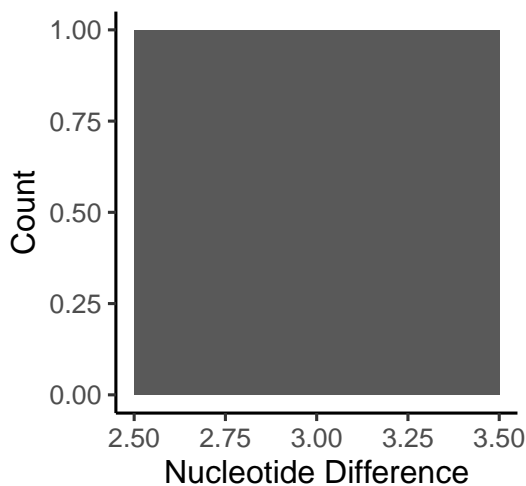
### IGHV1-8\*01

186 sequences assigned  
183 (98.4%) exact matches, in which:  
183 unique CDR3  
6 unique J



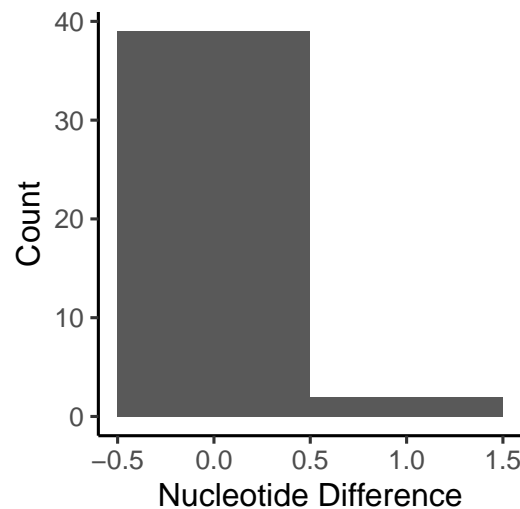
### IGHV1-38-4\*01

1 sequences assigned  
No exact matches.



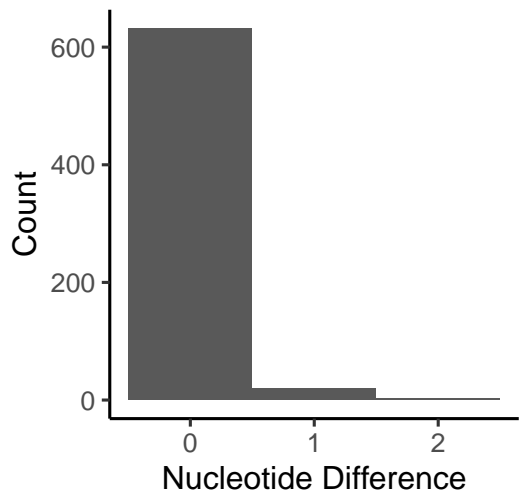
### IGHV1-58\*02

41 sequences assigned  
39 (95.1%) exact matches, in which:  
39 unique CDR3  
5 unique J



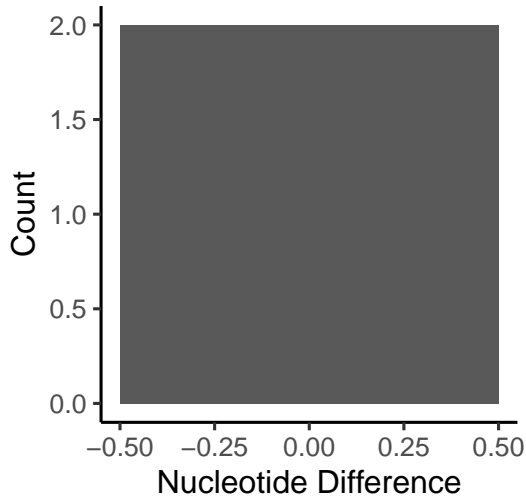
### IGHV1-18\*01

654 sequences assigned  
632 (96.6%) exact matches, in which:  
631 unique CDR3  
6 unique J



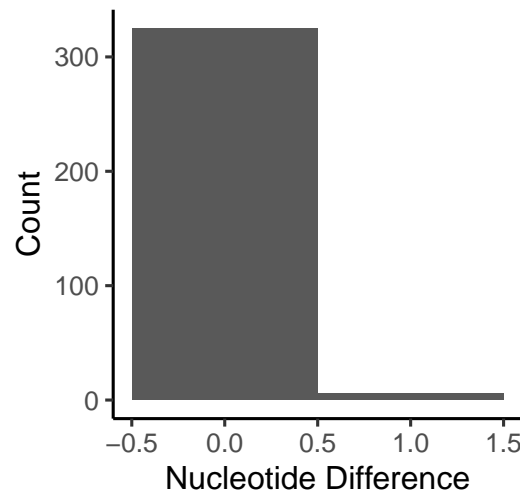
### IGHV1-45\*02

2 sequences assigned  
2 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



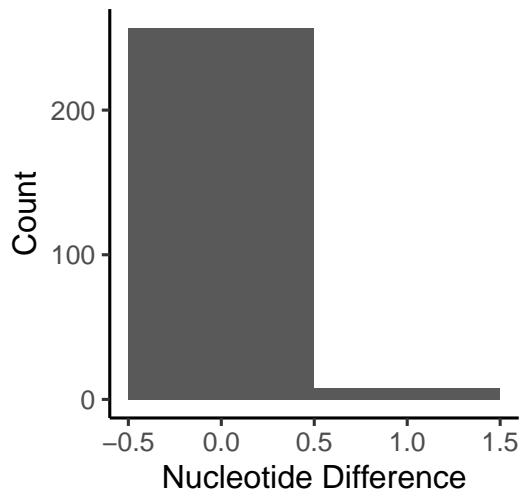
### IGHV1-69\*10

331 sequences assigned  
325 (98.2%) exact matches, in which:  
325 unique CDR3  
6 unique J



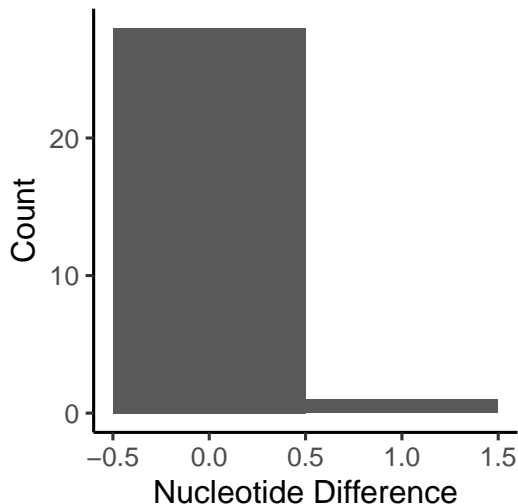
### IGHV1–69\*04\_09

265 sequences assigned  
257 (97%) exact matches, in which:  
257 unique CDR3  
6 unique J



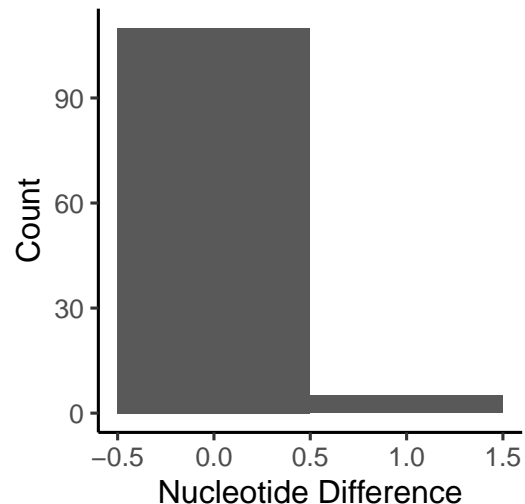
### IGHV2–26\*01

29 sequences assigned  
28 (96.6%) exact matches, in which:  
28 unique CDR3  
5 unique J



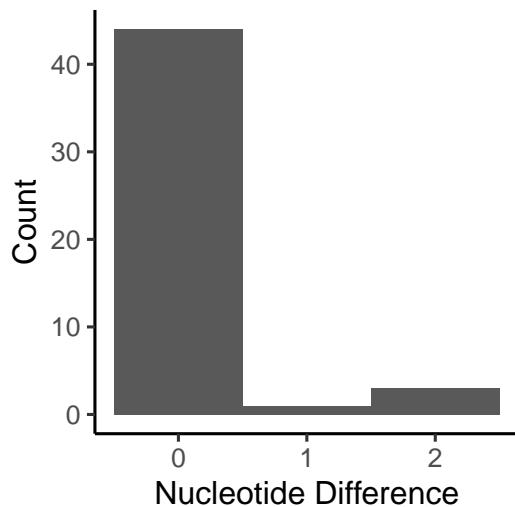
### IGHV3–7\*05

115 sequences assigned  
110 (95.7%) exact matches, in which:  
110 unique CDR3  
6 unique J



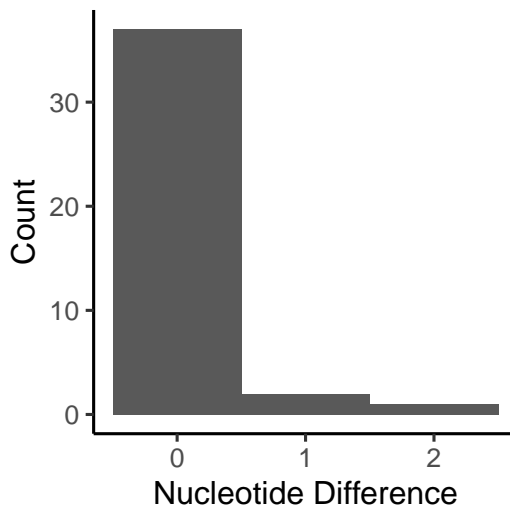
### IGHV2–5\*01

48 sequences assigned  
44 (91.7%) exact matches, in which:  
44 unique CDR3  
6 unique J



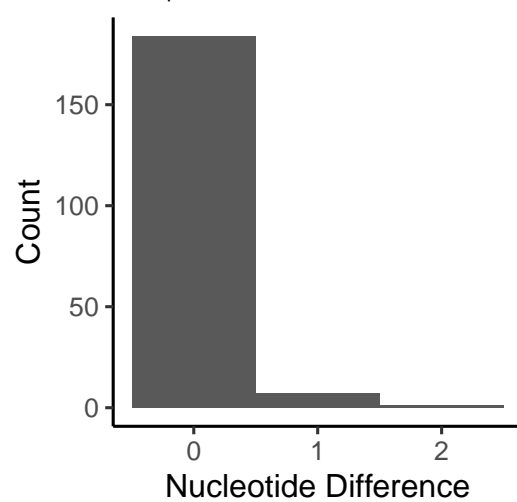
### IGHV2–70\*11\_15

40 sequences assigned  
37 (92.5%) exact matches, in which:  
37 unique CDR3  
4 unique J



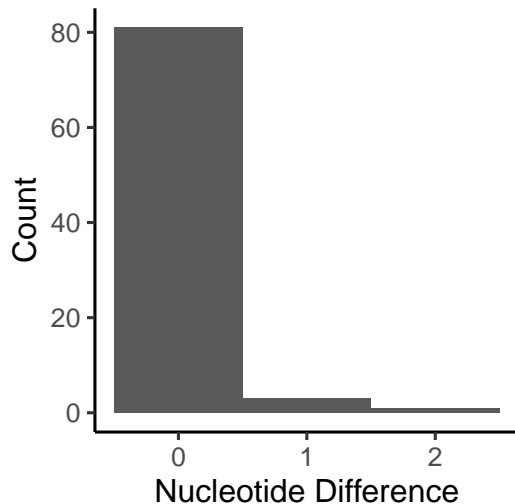
### IGHV3–9\*01

192 sequences assigned  
184 (95.8%) exact matches, in which:  
177 unique CDR3  
6 unique J



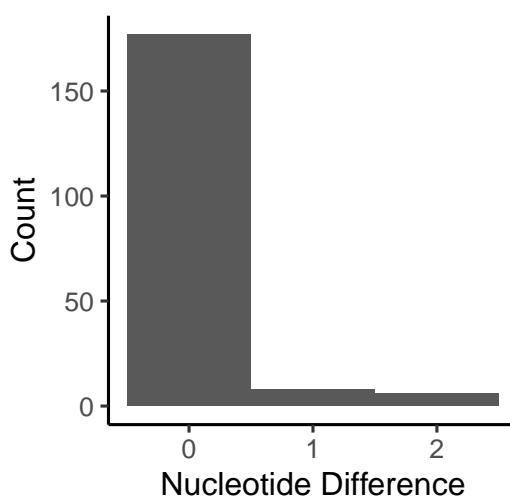
### IGHV2–5\*02

85 sequences assigned  
81 (95.3%) exact matches, in which:  
81 unique CDR3  
6 unique J



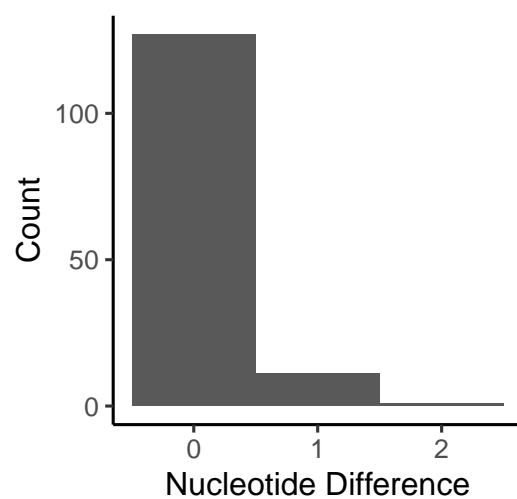
### IGHV3–7\*01

191 sequences assigned  
177 (92.7%) exact matches, in which:  
169 unique CDR3  
5 unique J



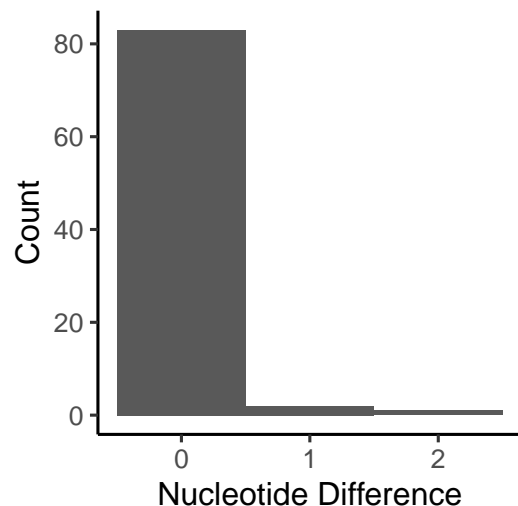
### IGHV3–11\*01

139 sequences assigned  
127 (91.4%) exact matches, in which:  
124 unique CDR3  
6 unique J



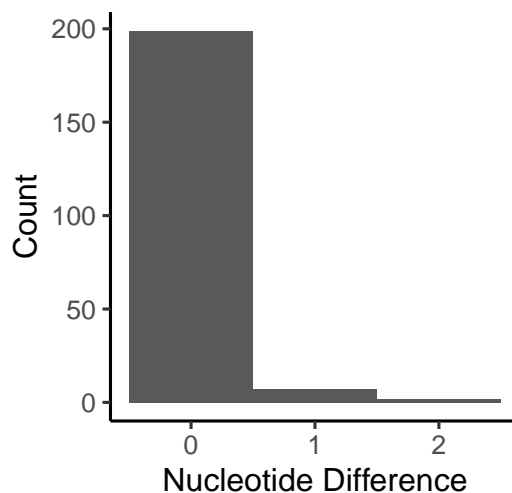
### IGHV3-11\*06

86 sequences assigned  
83 (96.5%) exact matches, in which:  
82 unique CDR3  
4 unique J



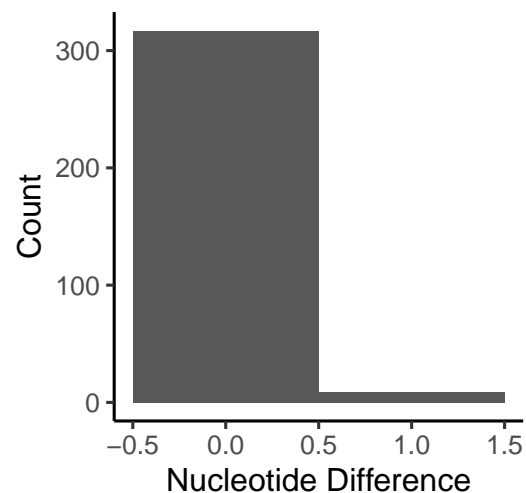
### IGHV3-15\*01\_02

208 sequences assigned  
199 (95.7%) exact matches, in which:  
197 unique CDR3  
6 unique J



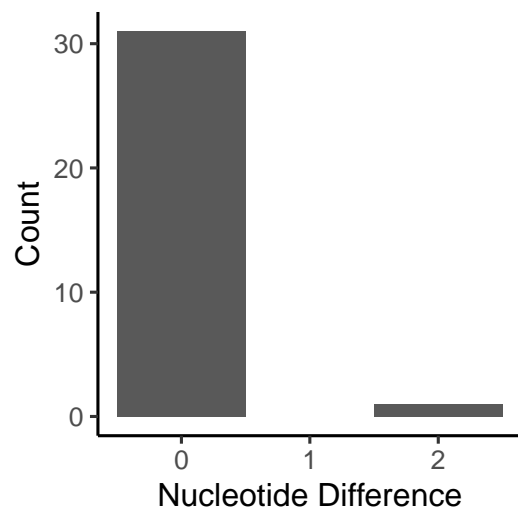
### IGHV3-30-3\*01

326 sequences assigned  
317 (97.2%) exact matches, in which:  
311 unique CDR3  
6 unique J



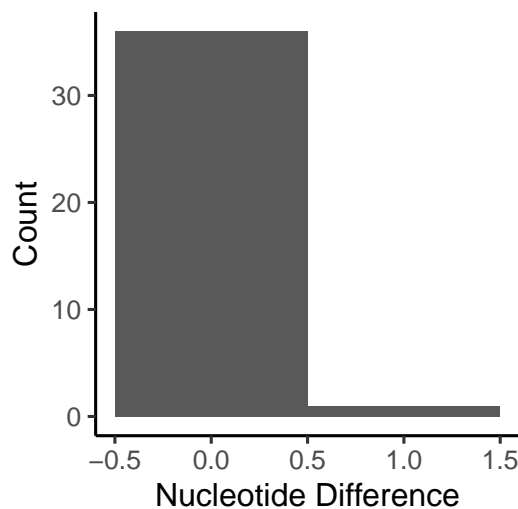
### IGHV3-13\*01

32 sequences assigned  
31 (96.9%) exact matches, in which:  
30 unique CDR3  
4 unique J



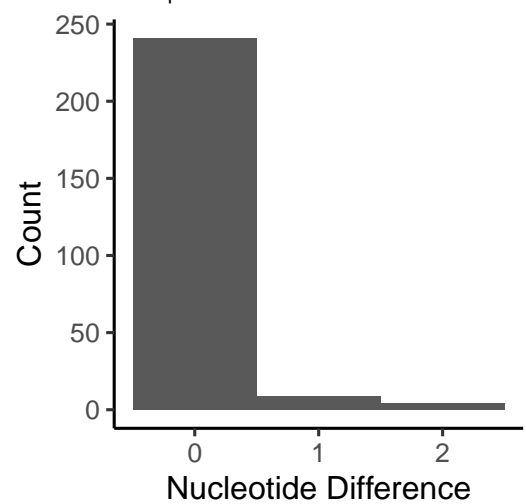
### IGHV3-20\*01\_02

37 sequences assigned  
36 (97.3%) exact matches, in which:  
35 unique CDR3  
5 unique J



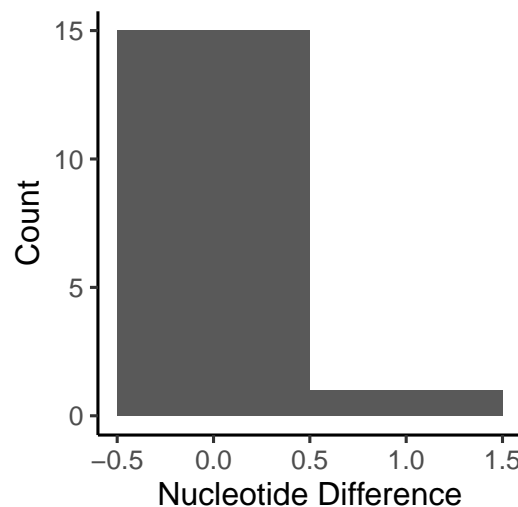
### IGHV3-33\*06

254 sequences assigned  
241 (94.9%) exact matches, in which:  
235 unique CDR3  
6 unique J



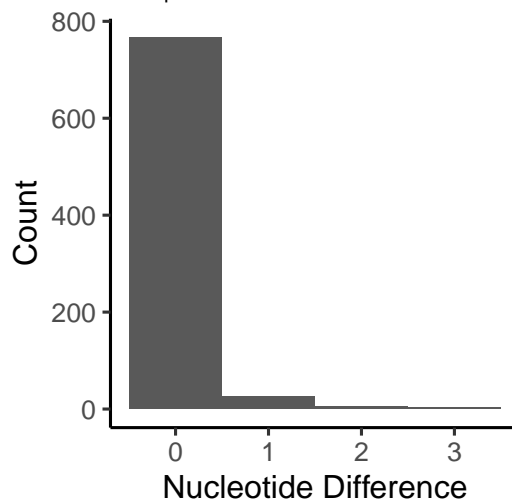
### IGHV3-13\*05

16 sequences assigned  
15 (93.8%) exact matches, in which:  
15 unique CDR3  
5 unique J



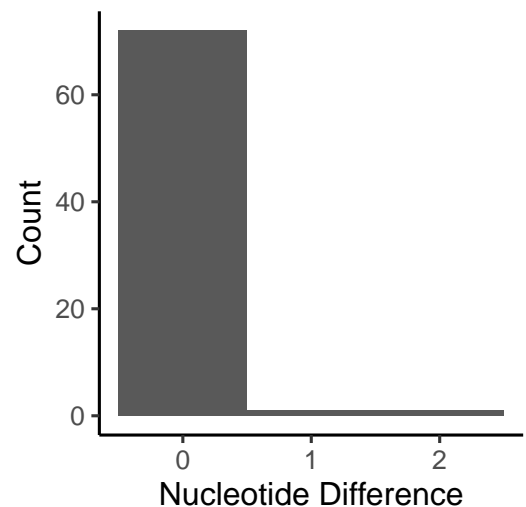
### IGHV3-21\*01\_02

801 sequences assigned  
767 (95.8%) exact matches, in which:  
747 unique CDR3  
6 unique J



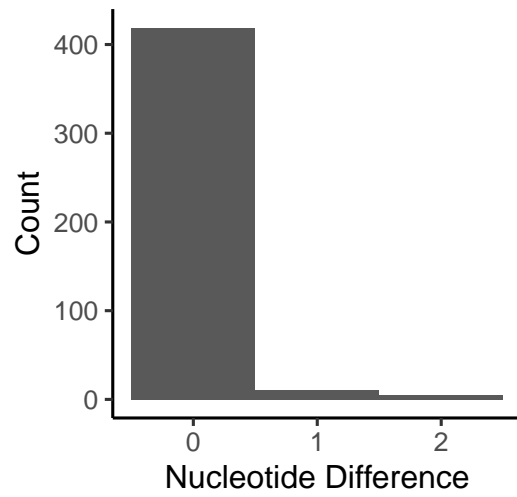
### IGHV3-43\*01

74 sequences assigned  
72 (97.3%) exact matches, in which:  
71 unique CDR3  
5 unique J



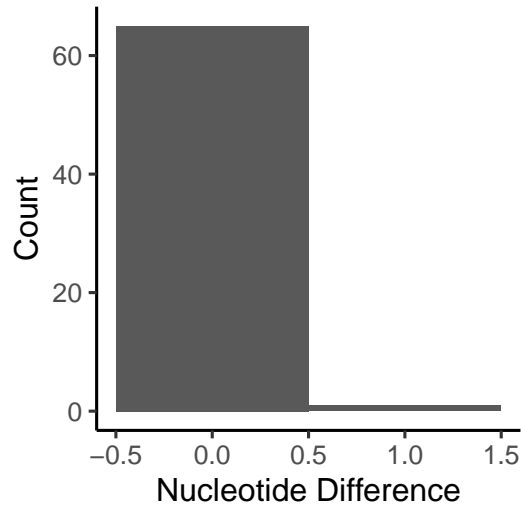
### IGHV3-48\*04

435 sequences assigned  
419 (96.3%) exact matches, in which:  
404 unique CDR3  
6 unique J



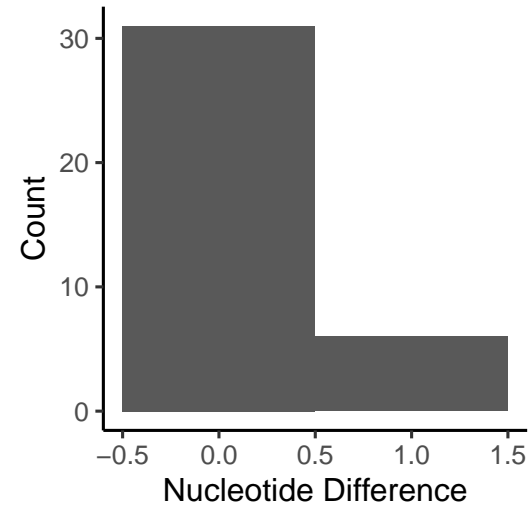
### IGHV3-64\*01

66 sequences assigned  
65 (98.5%) exact matches, in which:  
63 unique CDR3  
5 unique J



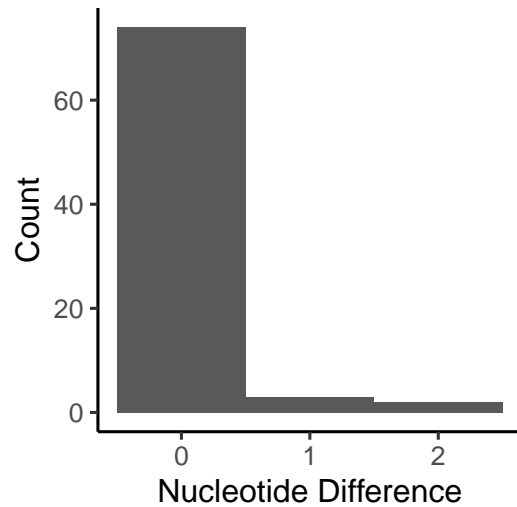
### IGHV3-73\*01\_02

37 sequences assigned  
31 (83.8%) exact matches, in which:  
30 unique CDR3  
4 unique J



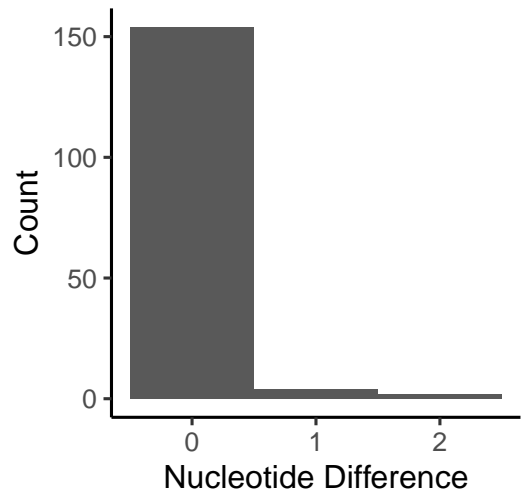
### IGHV3-49\*03\_05

79 sequences assigned  
74 (93.7%) exact matches, in which:  
72 unique CDR3  
6 unique J



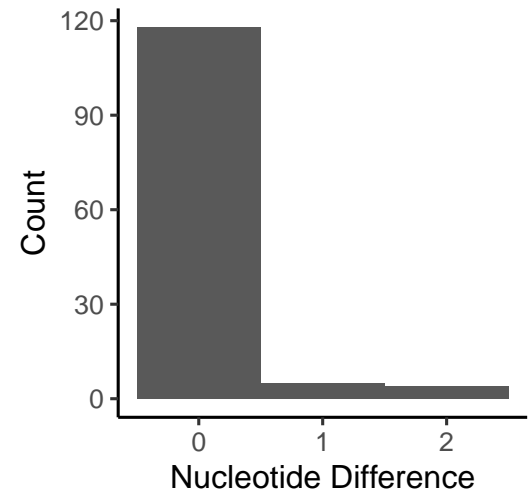
### IGHV3-66\*01

160 sequences assigned  
154 (96.2%) exact matches, in which:  
149 unique CDR3  
6 unique J



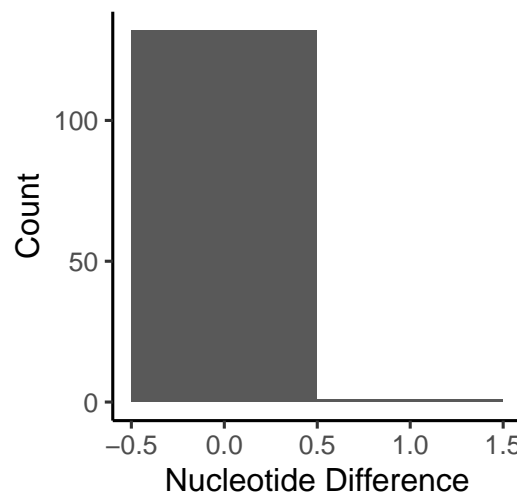
### IGHV3-74\*01\_02

127 sequences assigned  
118 (92.9%) exact matches, in which:  
112 unique CDR3  
6 unique J



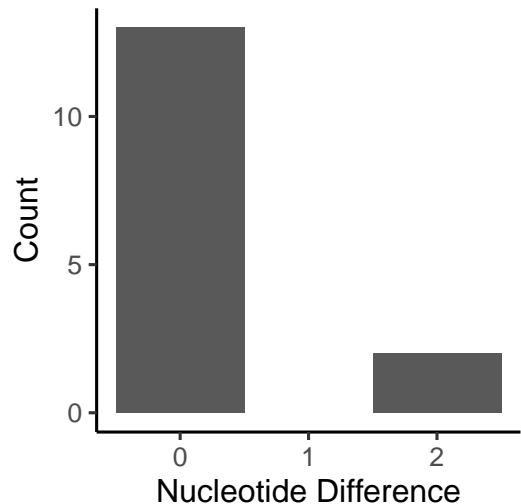
### IGHV3-53\*04

133 sequences assigned  
132 (99.2%) exact matches, in which:  
127 unique CDR3  
5 unique J



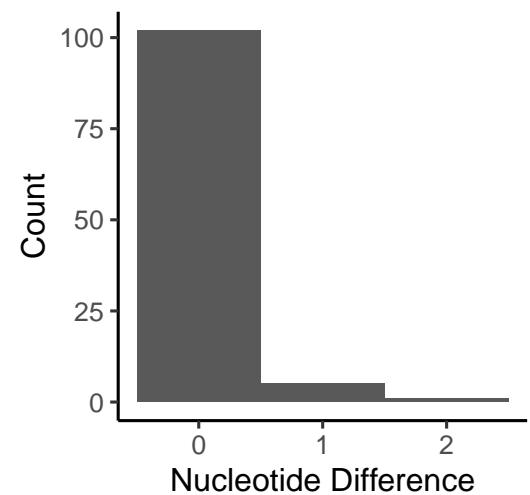
### IGHV3-72\*01

15 sequences assigned  
13 (86.7%) exact matches, in which:  
13 unique CDR3  
2 unique J



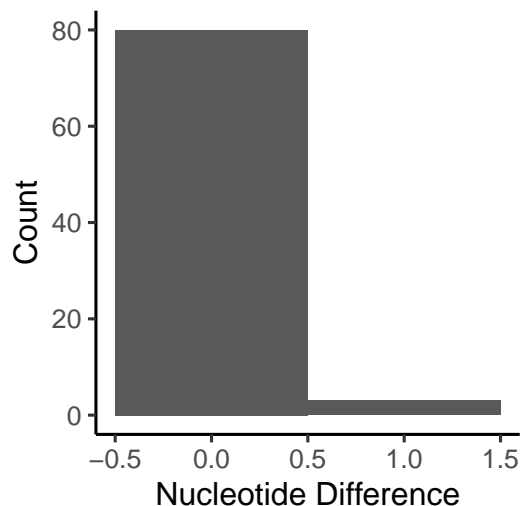
### IGHV3-43D\*03

108 sequences assigned  
102 (94.4%) exact matches, in which:  
99 unique CDR3  
6 unique J



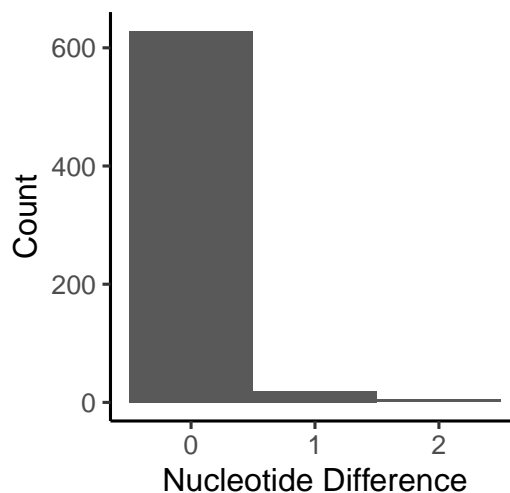
### IGHV3-64D\*06

83 sequences assigned  
80 (96.4%) exact matches, in which:  
74 unique CDR3  
5 unique J



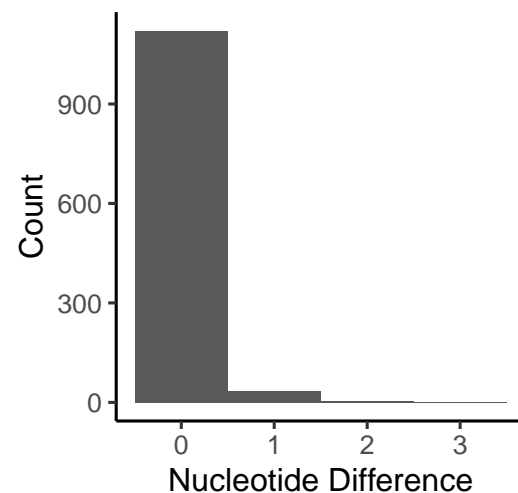
### IGHV4-31\*03\_04

653 sequences assigned  
629 (96.3%) exact matches, in which:  
619 unique CDR3  
6 unique J



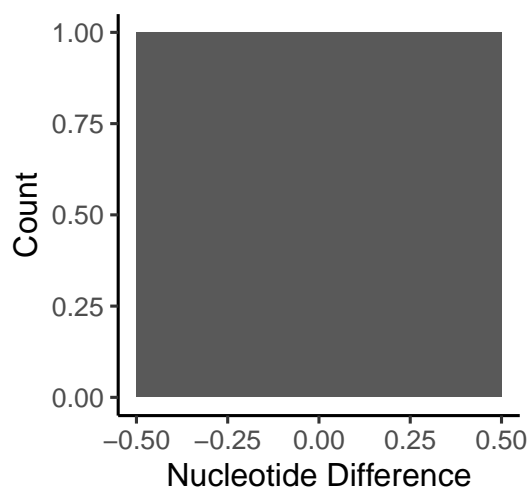
### IGHV4-39\*07

1161 sequences assigned  
1121 (96.6%) exact matches, in which:  
1075 unique CDR3  
6 unique J



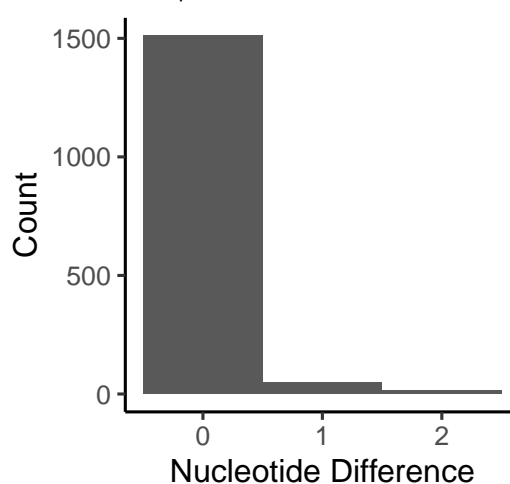
### IGHV4-28\*01\_07

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



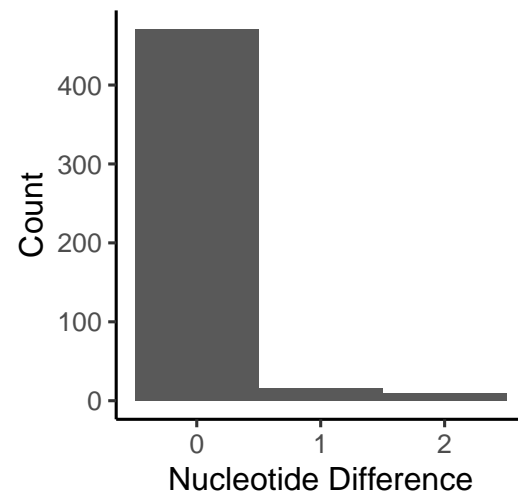
### IGHV4-34\*01\_02

1573 sequences assigned  
1511 (96.1%) exact matches, in which:  
1463 unique CDR3  
6 unique J



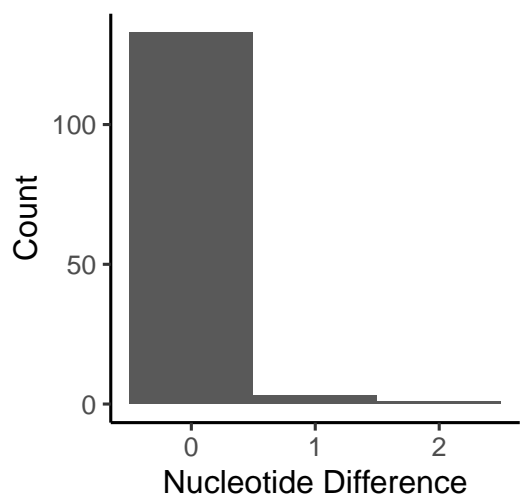
### IGHV4-59\*08

497 sequences assigned  
471 (94.8%) exact matches, in which:  
459 unique CDR3  
6 unique J



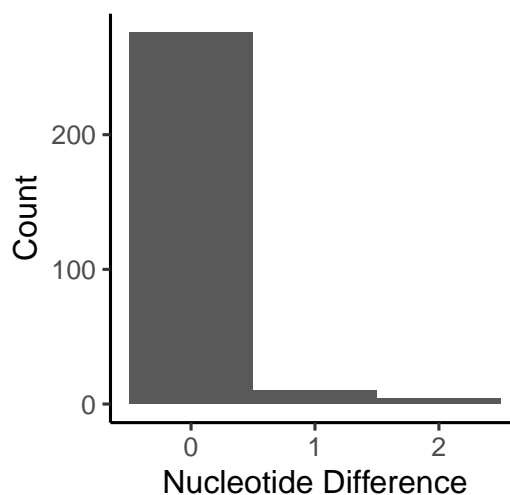
### IGHV4-30-4\*01

137 sequences assigned  
133 (97.1%) exact matches, in which:  
130 unique CDR3  
5 unique J



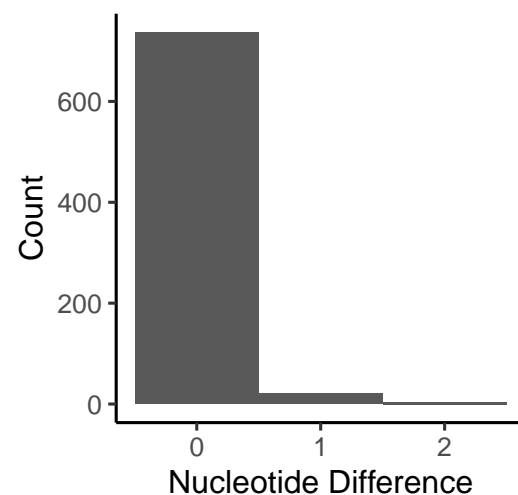
### IGHV4-38-2\*02

290 sequences assigned  
276 (95.2%) exact matches, in which:  
271 unique CDR3  
6 unique J



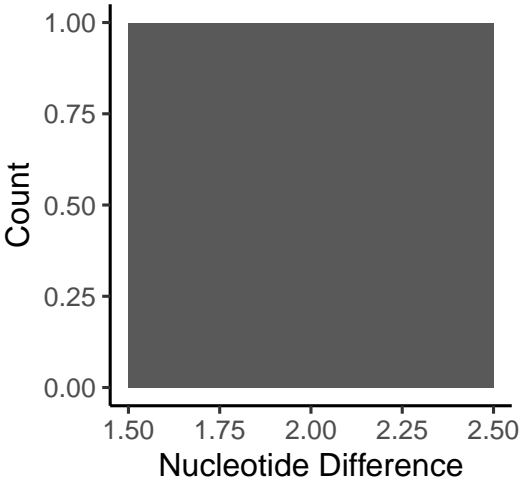
### IGHV4-59\*01\_07

761 sequences assigned  
737 (96.8%) exact matches, in which:  
721 unique CDR3  
6 unique J



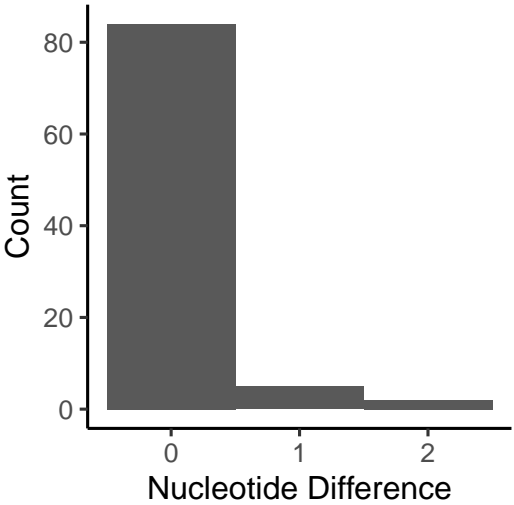
IGHV4-61\*01

1 sequences assigned  
No exact matches.



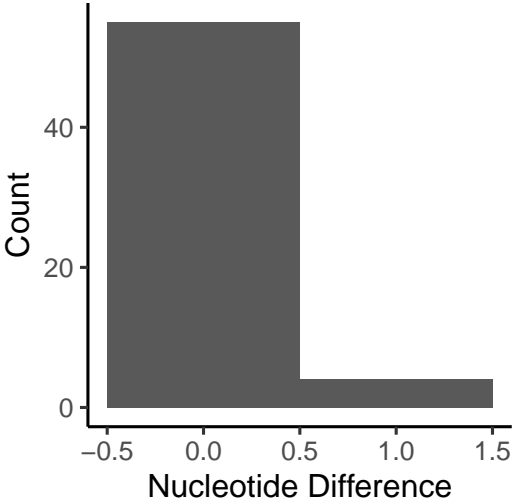
IGHV6-1\*01\_02

91 sequences assigned  
84 (92.3%) exact matches, in which:  
84 unique CDR3  
5 unique J



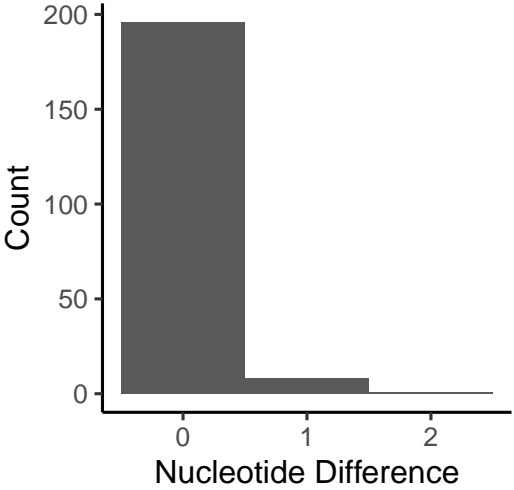
IGHV5-10-1\*01\_03

59 sequences assigned  
55 (93.2%) exact matches, in which:  
55 unique CDR3  
5 unique J



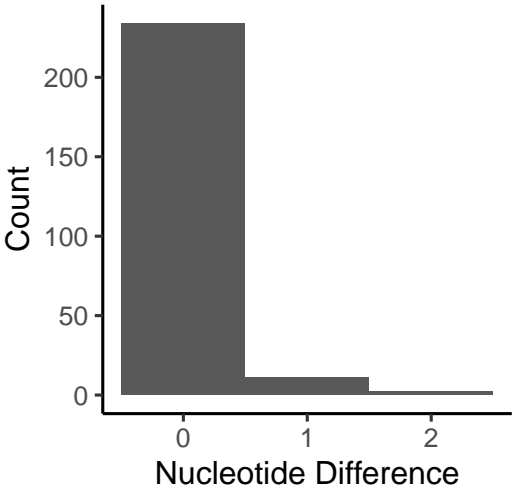
IGHV7-4-1\*02

205 sequences assigned  
196 (95.6%) exact matches, in which:  
196 unique CDR3  
5 unique J



IGHV5-51\*01\_03

247 sequences assigned  
234 (94.7%) exact matches, in which:  
233 unique CDR3  
6 unique J





[illegible]