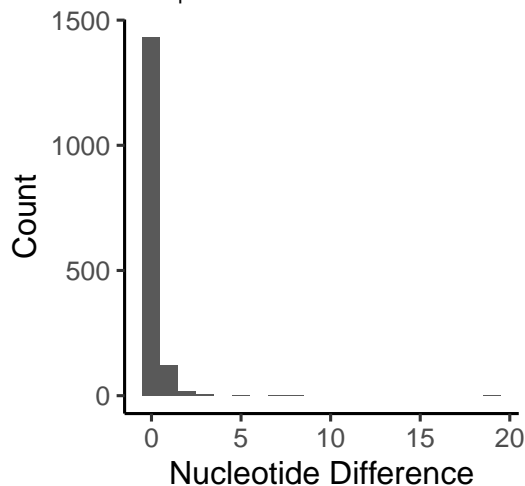


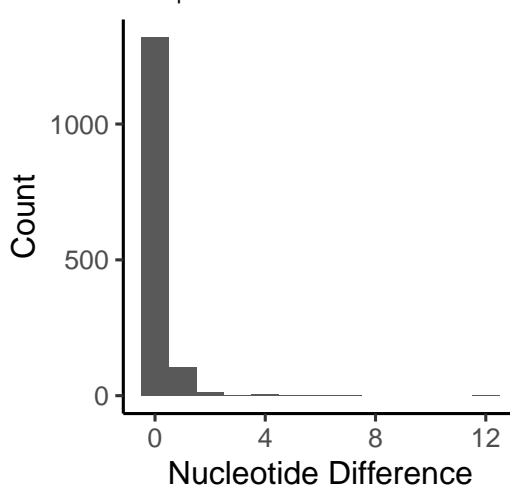
### IGHV1-2\*02

1582 sequences assigned  
1431 (90.5%) exact matches, in which:  
1382 unique CDR3  
6 unique J



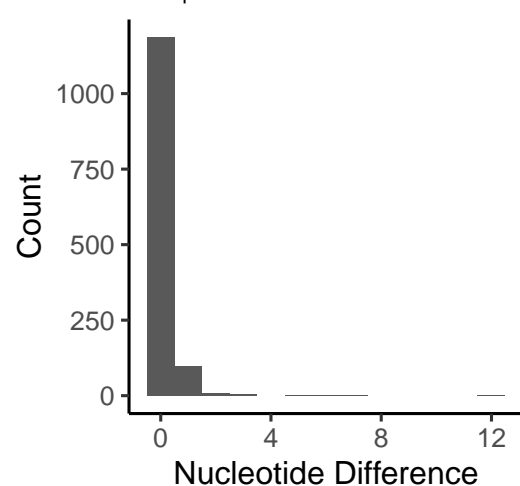
### IGHV1-18\*01

1449 sequences assigned  
1319 (91%) exact matches, in which:  
1278 unique CDR3  
6 unique J



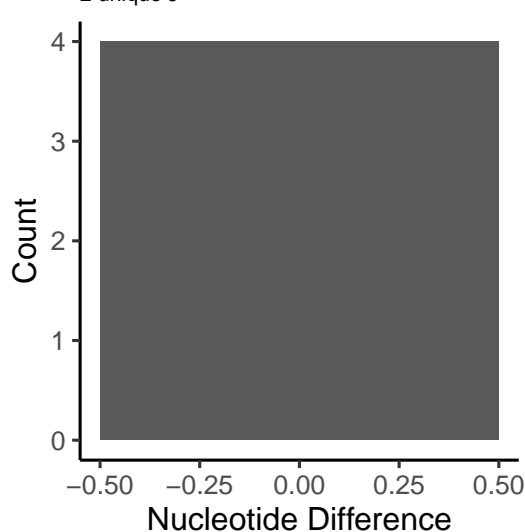
### IGHV1-46\*01

1305 sequences assigned  
1186 (90.9%) exact matches, in which:  
1143 unique CDR3  
6 unique J



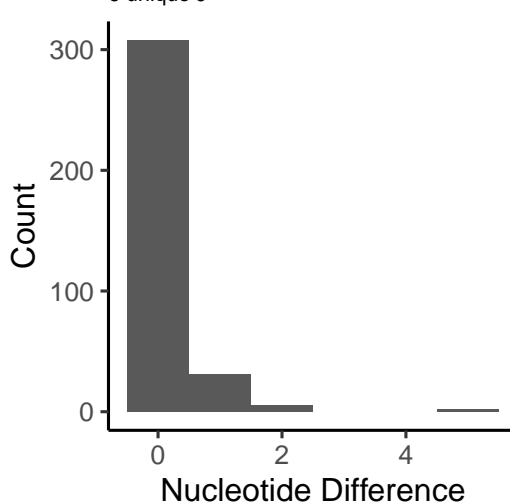
### IGHV1-3\*02

4 sequences assigned  
4 (100%) exact matches, in which:  
4 unique CDR3  
2 unique J



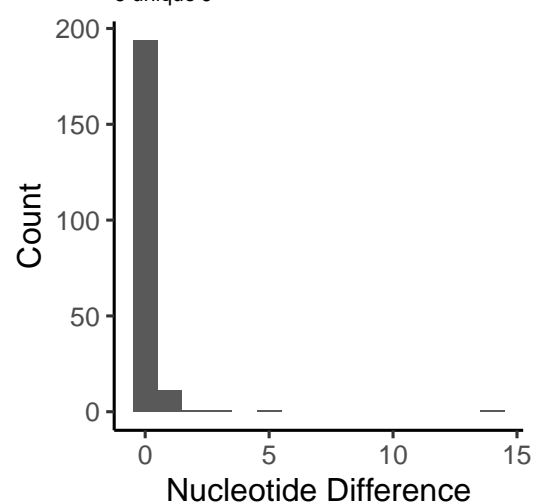
### IGHV1-24\*01

346 sequences assigned  
308 (89%) exact matches, in which:  
294 unique CDR3  
6 unique J



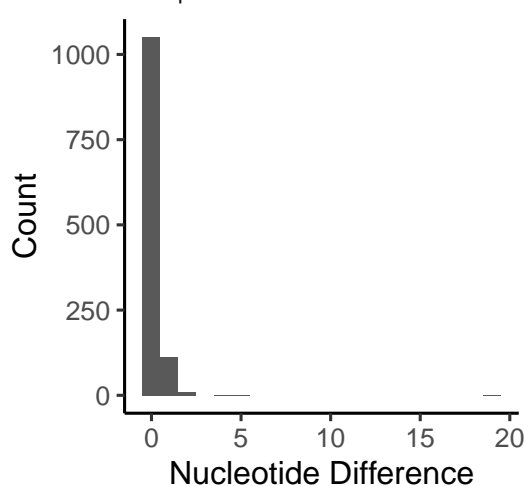
### IGHV1-58\*01

209 sequences assigned  
194 (92.8%) exact matches, in which:  
189 unique CDR3  
6 unique J



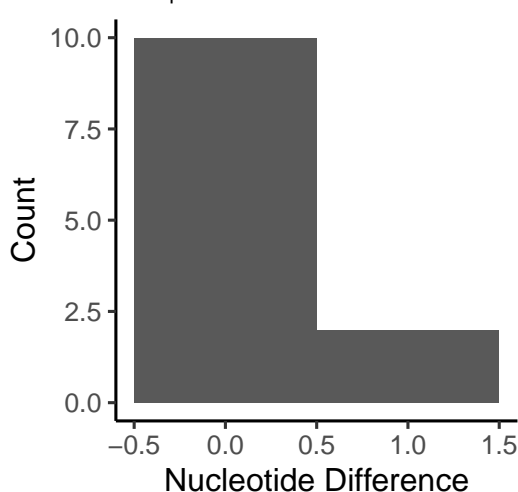
### IGHV1-8\*01

1177 sequences assigned  
1051 (89.3%) exact matches, in which:  
1010 unique CDR3  
6 unique J



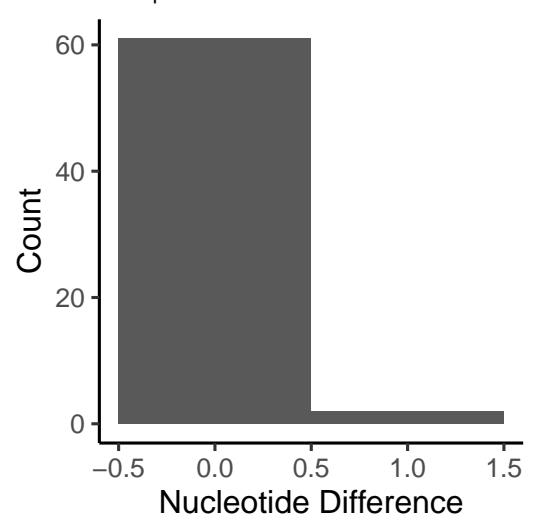
### IGHV1-45\*02

12 sequences assigned  
10 (83.3%) exact matches, in which:  
9 unique CDR3  
3 unique J



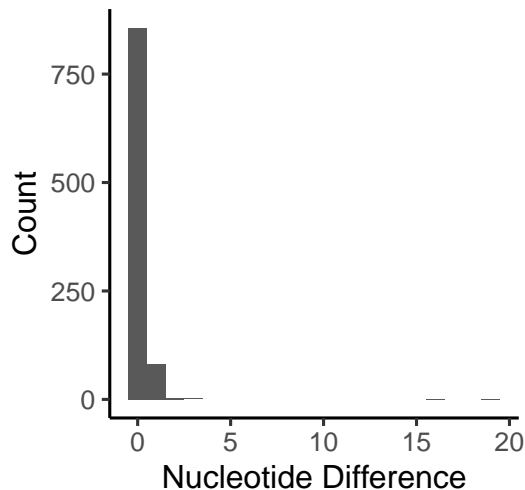
### IGHV1-69-2\*01

63 sequences assigned  
61 (96.8%) exact matches, in which:  
61 unique CDR3  
5 unique J



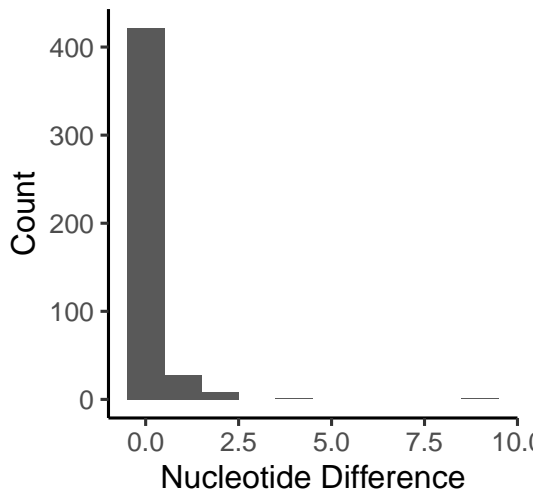
### IGHV1–69\*06

946 sequences assigned  
857 (90.6%) exact matches, in which:  
811 unique CDR3  
6 unique J



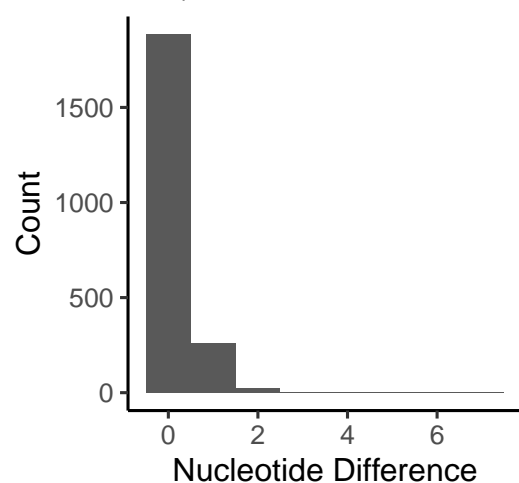
### IGHV2–26\*01

460 sequences assigned  
422 (91.7%) exact matches, in which:  
411 unique CDR3  
6 unique J



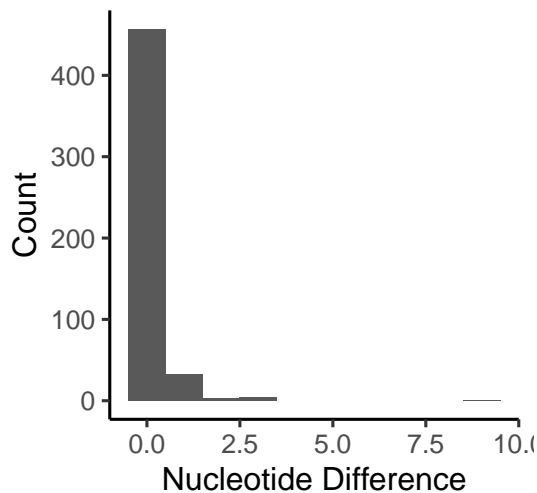
### IGHV3–9\*01

2185 sequences assigned  
1884 (86.2%) exact matches, in which:  
1786 unique CDR3  
6 unique J



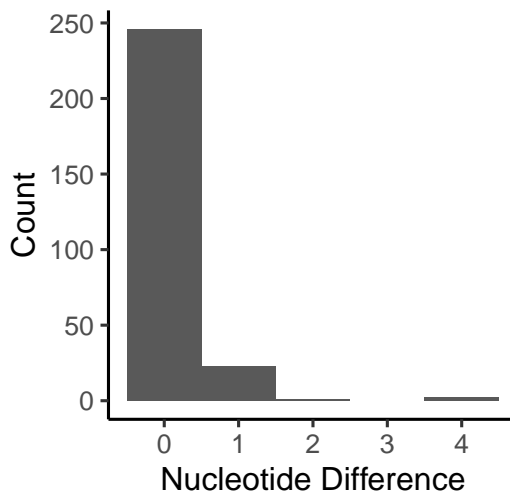
### IGHV2–5\*01

497 sequences assigned  
457 (92%) exact matches, in which:  
436 unique CDR3  
6 unique J



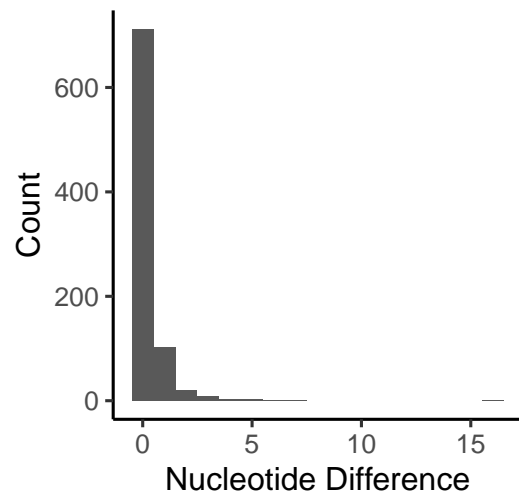
### IGHV2–70\*01

272 sequences assigned  
246 (90.4%) exact matches, in which:  
240 unique CDR3  
6 unique J



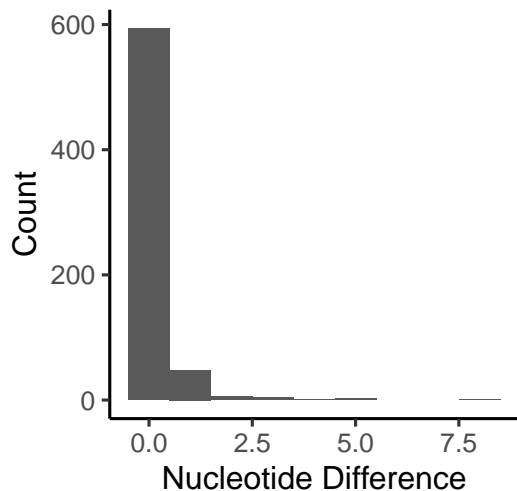
### IGHV3–11\*01

852 sequences assigned  
712 (83.6%) exact matches, in which:  
691 unique CDR3  
6 unique J



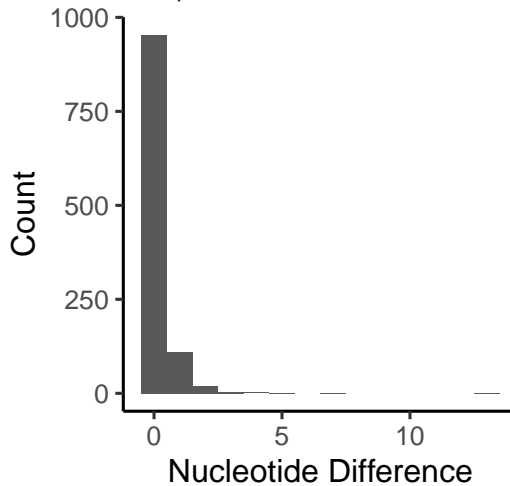
### IGHV2–5\*02

656 sequences assigned  
594 (90.5%) exact matches, in which:  
567 unique CDR3  
6 unique J



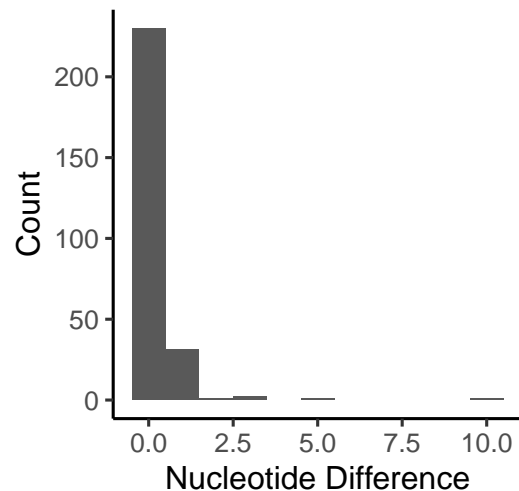
### IGHV3–7\*01

1091 sequences assigned  
953 (87.4%) exact matches, in which:  
927 unique CDR3  
6 unique J



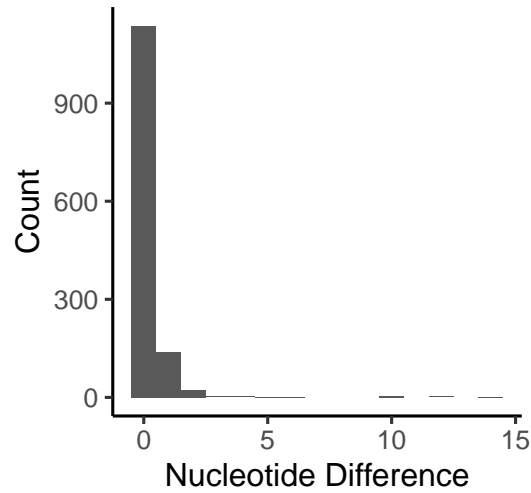
### IGHV3–13\*01

266 sequences assigned  
230 (86.5%) exact matches, in which:  
225 unique CDR3  
6 unique J



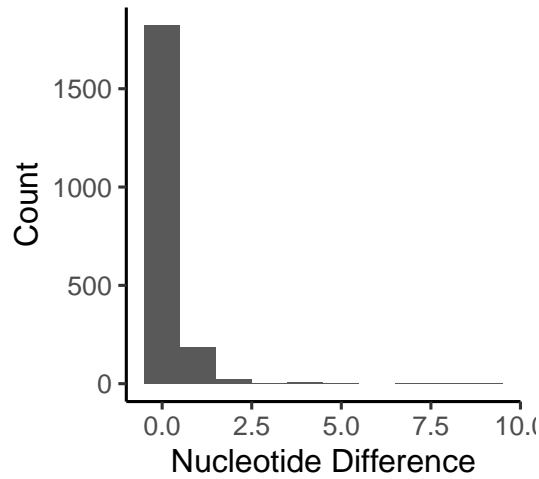
### IGHV3–15\*01

1316 sequences assigned  
1137 (86.4%) exact matches, in which:  
1098 unique CDR3  
6 unique J



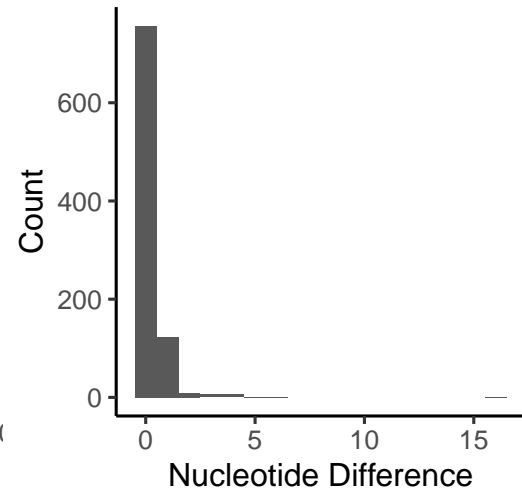
### IGHV3–21\*01

2047 sequences assigned  
1822 (89%) exact matches, in which:  
1746 unique CDR3  
6 unique J



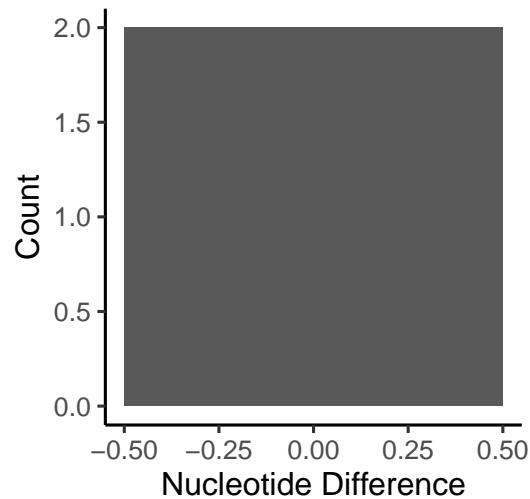
### IGHV3–33\*01

904 sequences assigned  
757 (83.7%) exact matches, in which:  
725 unique CDR3  
6 unique J



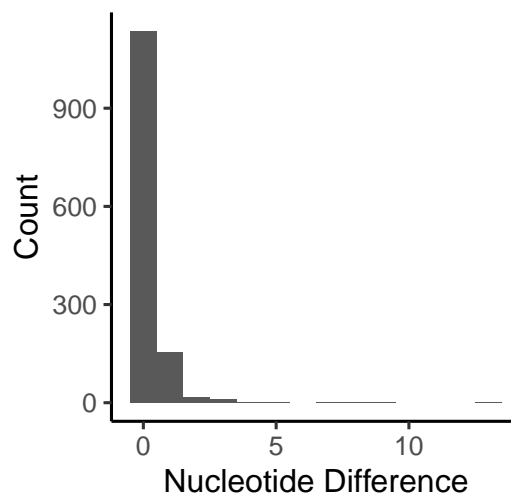
### IGHV3–19\*01

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



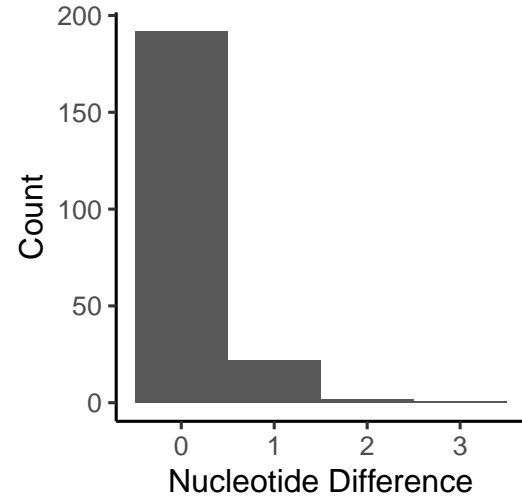
### IGHV3–23\*04

1326 sequences assigned  
1136 (85.7%) exact matches, in which:  
1098 unique CDR3  
6 unique J



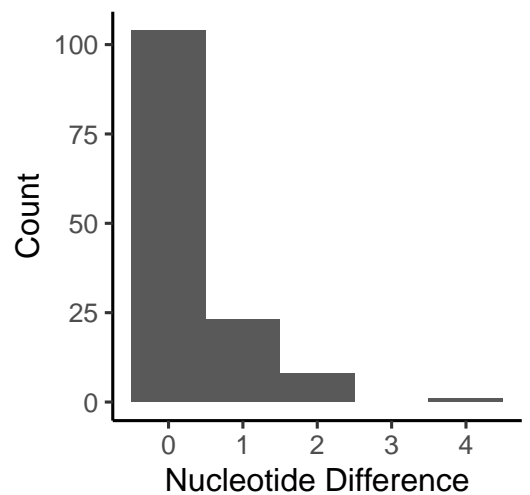
### IGHV3–43\*01

217 sequences assigned  
192 (88.5%) exact matches, in which:  
188 unique CDR3  
6 unique J



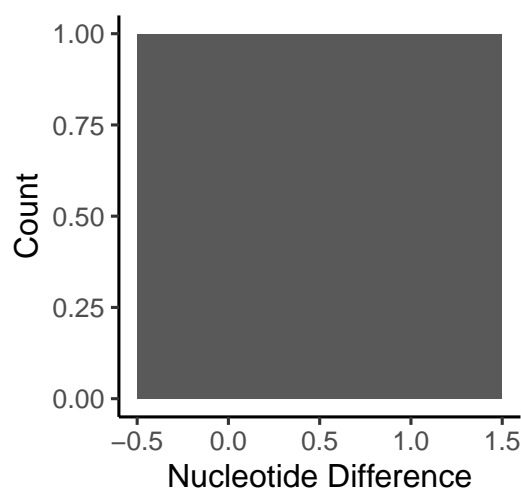
### IGHV3–20\*01

136 sequences assigned  
104 (76.5%) exact matches, in which:  
98 unique CDR3  
5 unique J



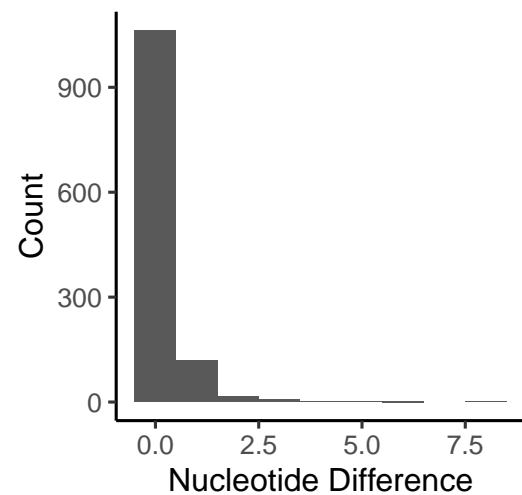
### IGHV3–30–5\*01

2 sequences assigned  
1 (50%) exact matches, in which:  
1 unique CDR3  
1 unique J



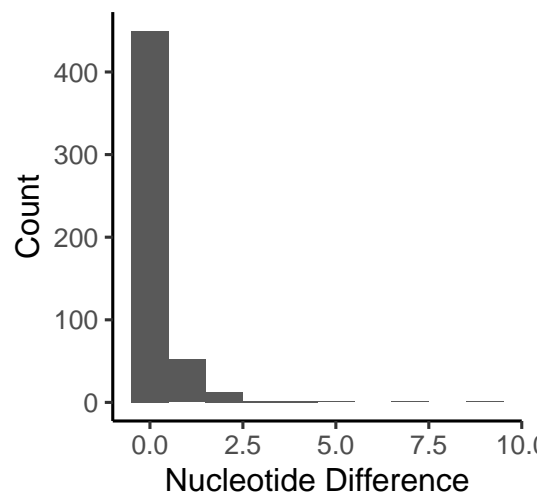
### IGHV3–48\*02

1214 sequences assigned  
1063 (87.6%) exact matches, in which:  
1033 unique CDR3  
6 unique J



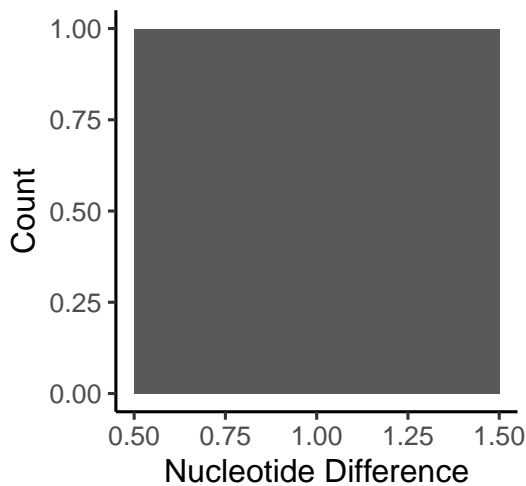
### IGHV3-49\*05

522 sequences assigned  
450 (86.2%) exact matches, in which:  
429 unique CDR3  
6 unique J



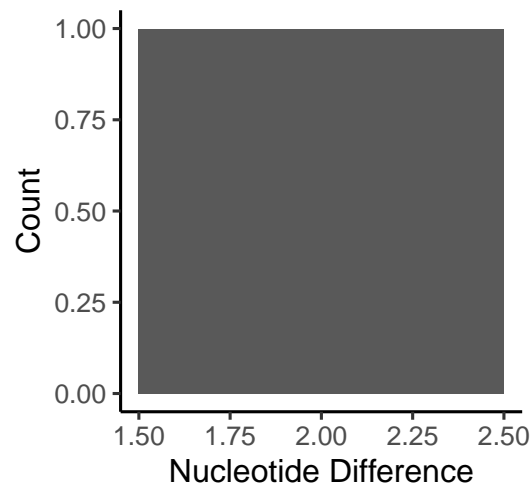
### IGHV3-64\*04

1 sequences assigned  
No exact matches.



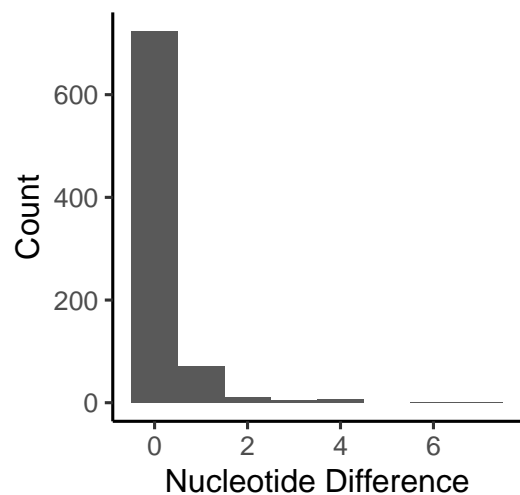
### IGHV3-69-1\*01

1 sequences assigned  
No exact matches.



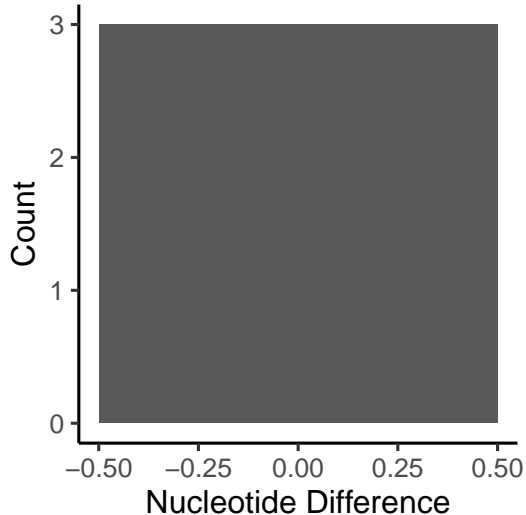
### IGHV3-53\*01

819 sequences assigned  
724 (88.4%) exact matches, in which:  
694 unique CDR3  
6 unique J



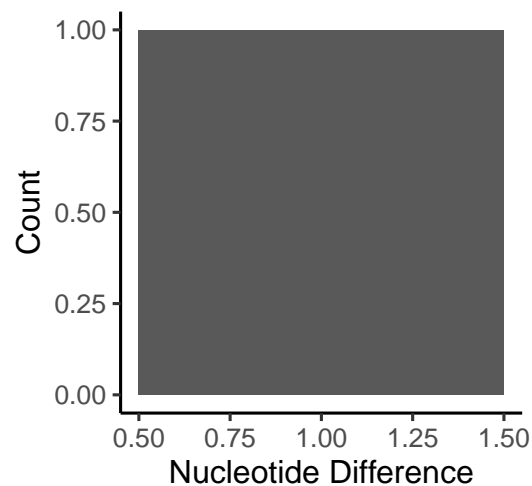
### IGHV3-66\*03

3 sequences assigned  
3 (100%) exact matches, in which:  
2 unique CDR3  
2 unique J



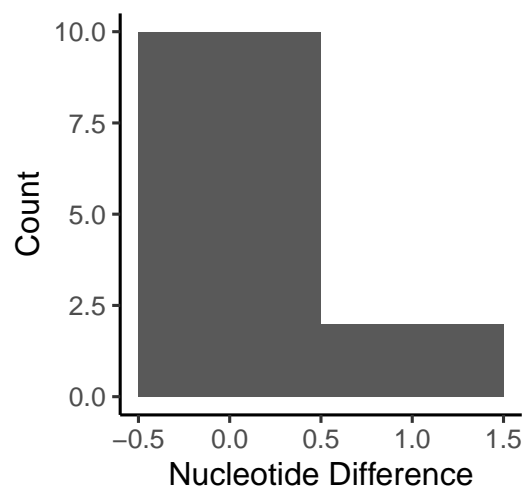
### IGHV3-71\*03

1 sequences assigned  
No exact matches.



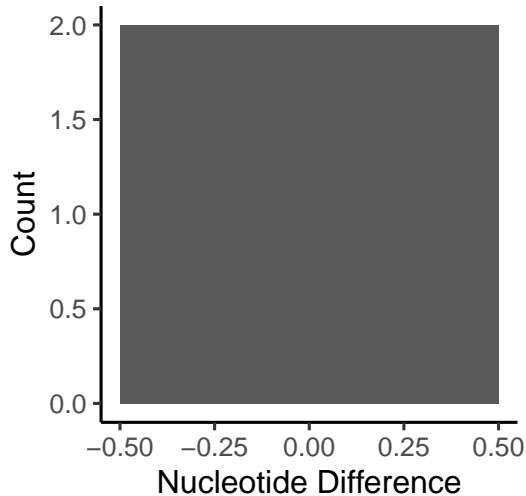
### IGHV3-64\*02

12 sequences assigned  
10 (83.3%) exact matches, in which:  
10 unique CDR3  
4 unique J



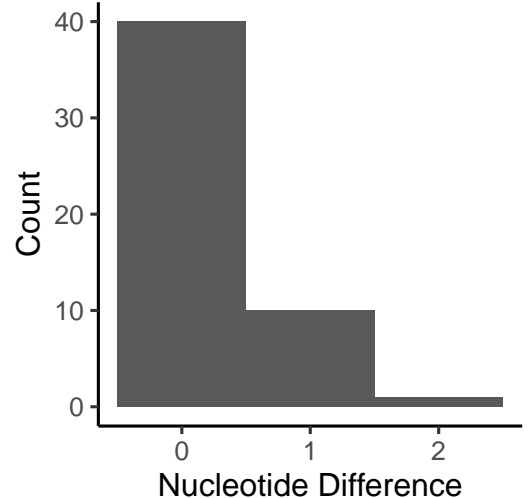
### IGHV3-66\*04

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



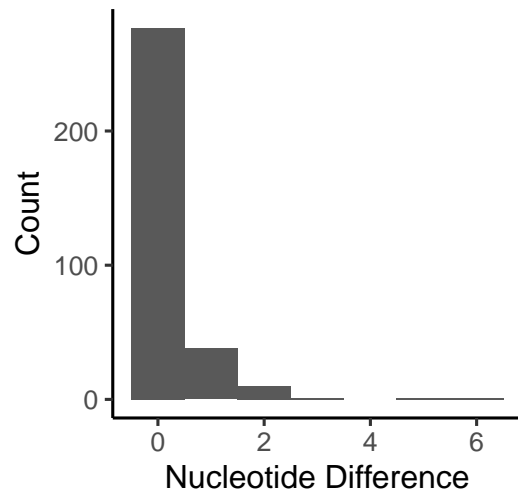
### IGHV3-72\*01

51 sequences assigned  
40 (78.4%) exact matches, in which:  
40 unique CDR3  
5 unique J



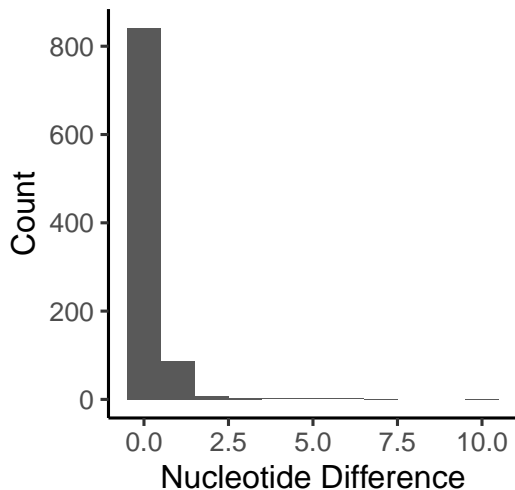
### IGHV3–73\*02

329 sequences assigned  
277 (84.2%) exact matches, in which:  
265 unique CDR3  
5 unique J



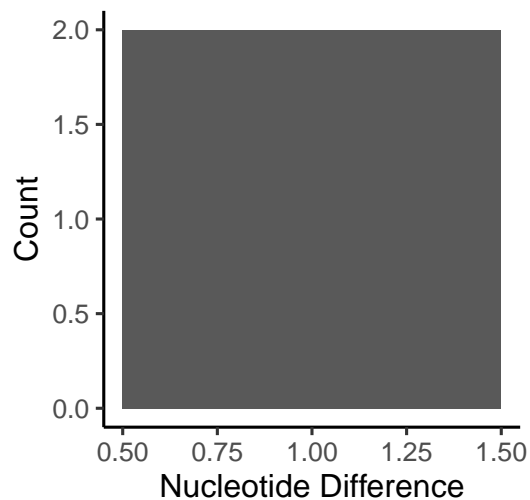
### IGHV4–4\*07

948 sequences assigned  
842 (88.8%) exact matches, in which:  
816 unique CDR3  
6 unique J



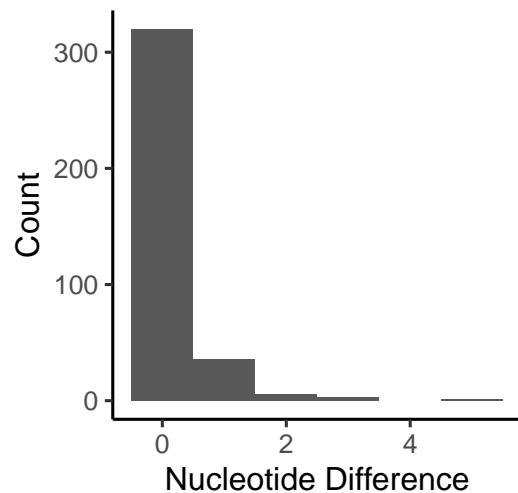
### IGHV4–28\*04

2 sequences assigned  
No exact matches.



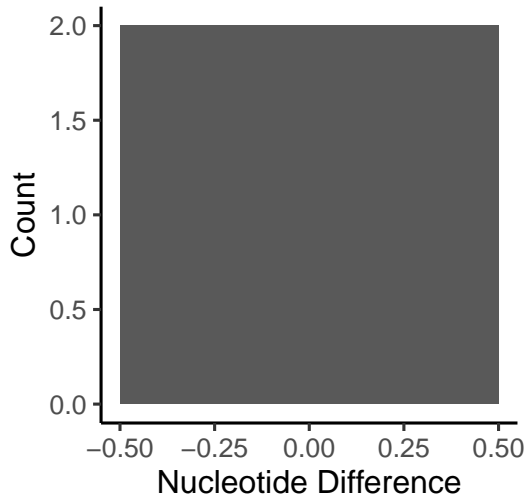
### IGHV3–74\*01

366 sequences assigned  
320 (87.4%) exact matches, in which:  
311 unique CDR3  
6 unique J



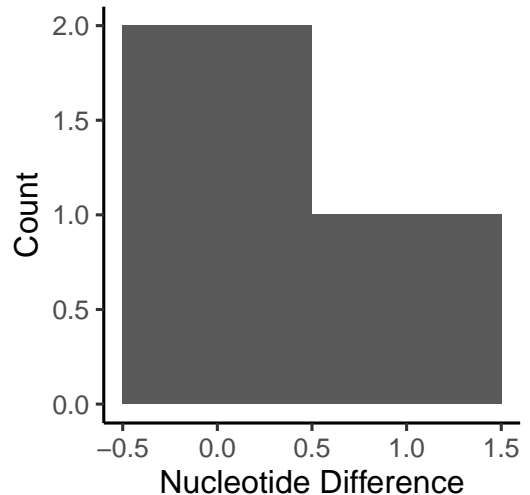
### IGHV4–28\*01

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



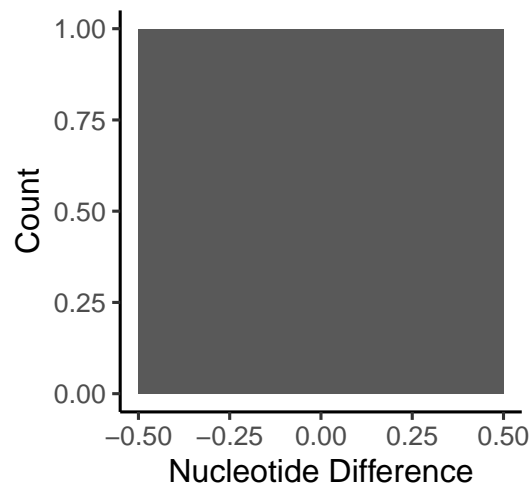
### IGHV4–28\*05

3 sequences assigned  
2 (66.7%) exact matches, in which:  
2 unique CDR3  
2 unique J



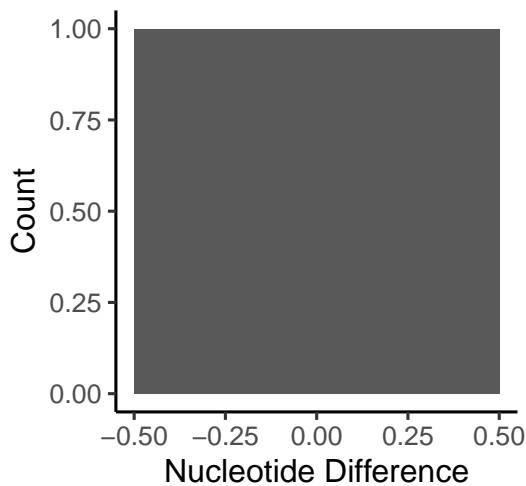
### IGHV3–64D\*06

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



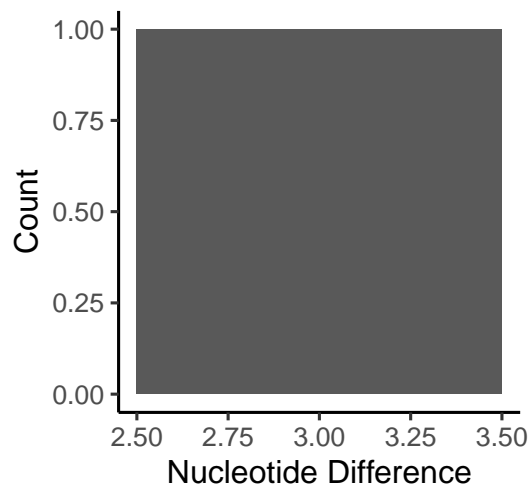
### IGHV4–28\*03

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



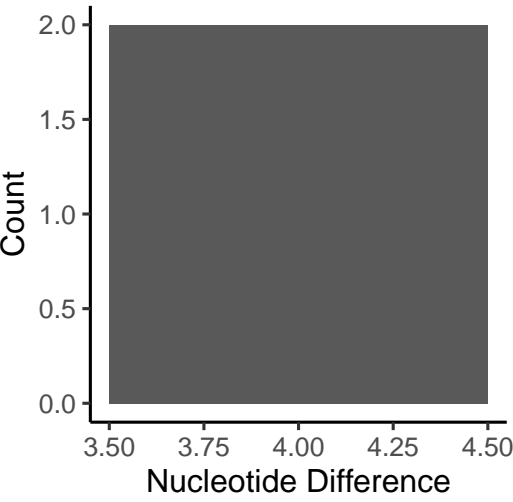
### IGHV4–30–4\*01

1 sequences assigned  
No exact matches.



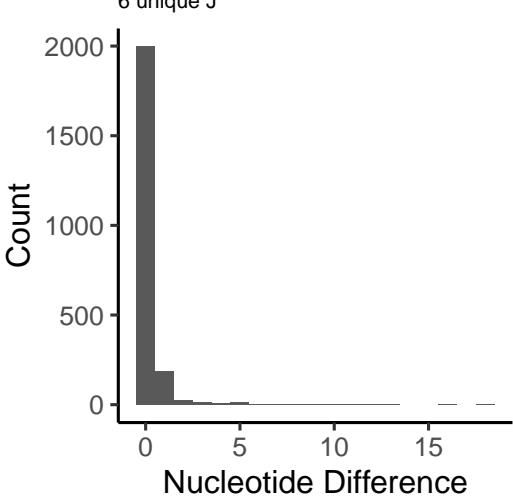
IGHV4-30-2\*03

3 sequences assigned  
No exact matches.



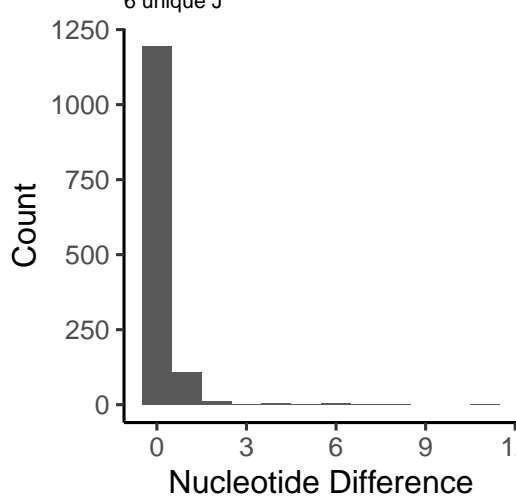
IGHV4-34\*01

2274 sequences assigned  
1998 (87.9%) exact matches, in which:  
1889 unique CDR3  
6 unique J



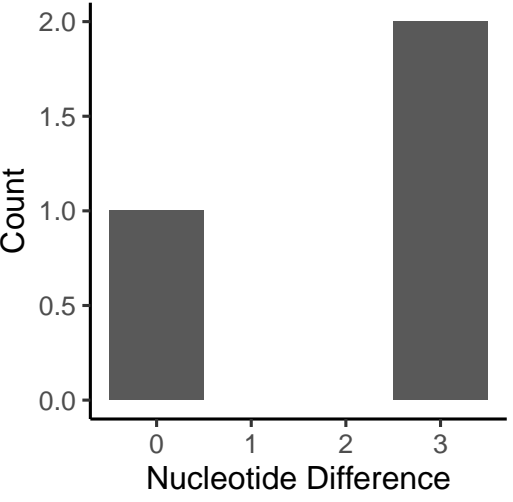
IGHV4-59\*01

1328 sequences assigned  
1194 (89.9%) exact matches, in which:  
1170 unique CDR3  
6 unique J



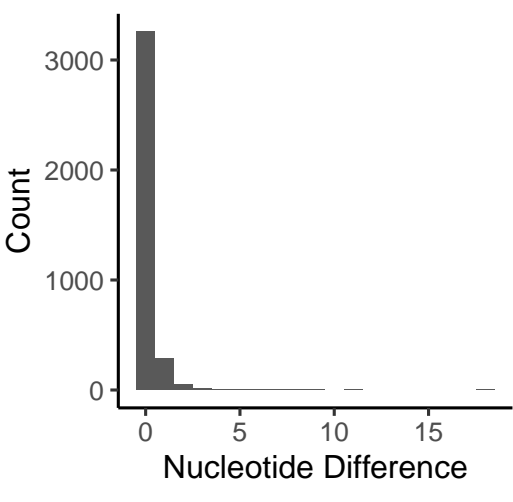
IGHV4-31\*03

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



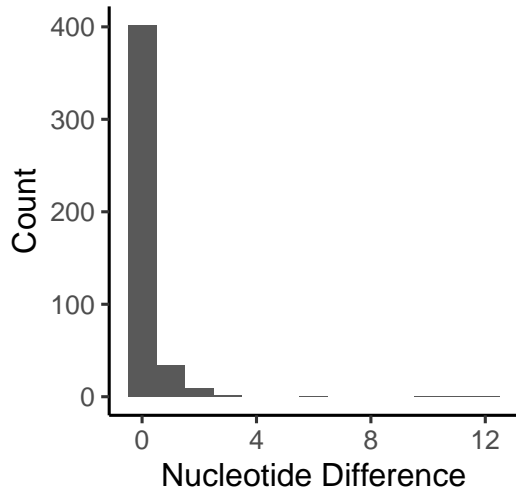
IGHV4-39\*01

3629 sequences assigned  
3257 (89.7%) exact matches, in which:  
3121 unique CDR3  
6 unique J



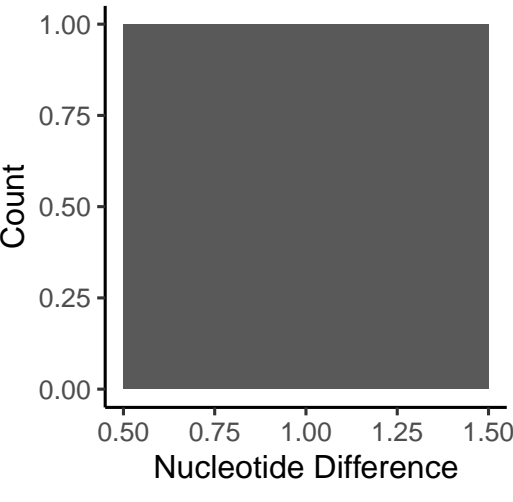
IGHV4-61\*01

452 sequences assigned  
402 (88.9%) exact matches, in which:  
395 unique CDR3  
6 unique J



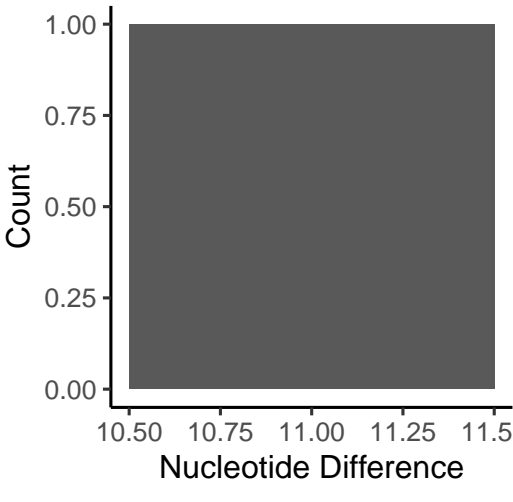
IGHV4-31\*05

1 sequences assigned  
No exact matches.



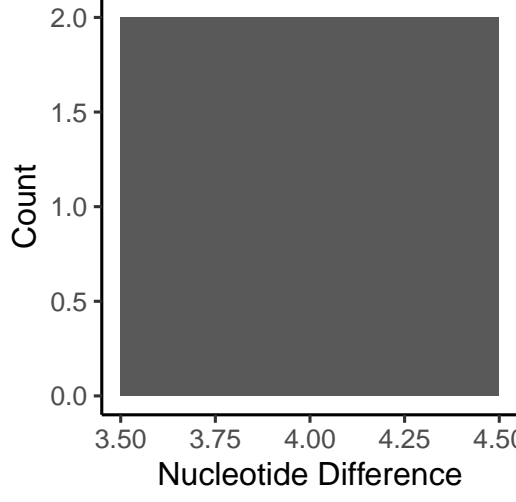
IGHV4-55\*08

1 sequences assigned  
No exact matches.



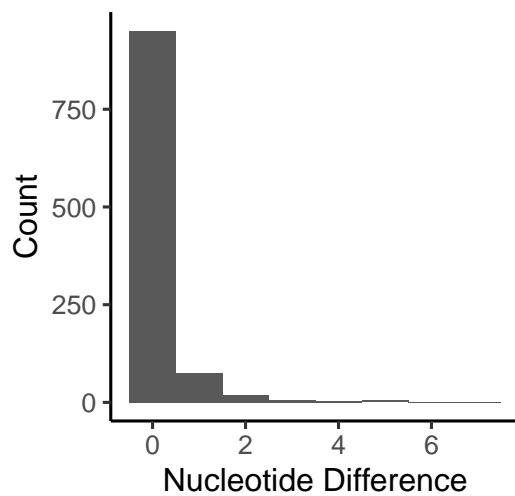
IGHV4/OR15-8\*01

2 sequences assigned  
No exact matches.



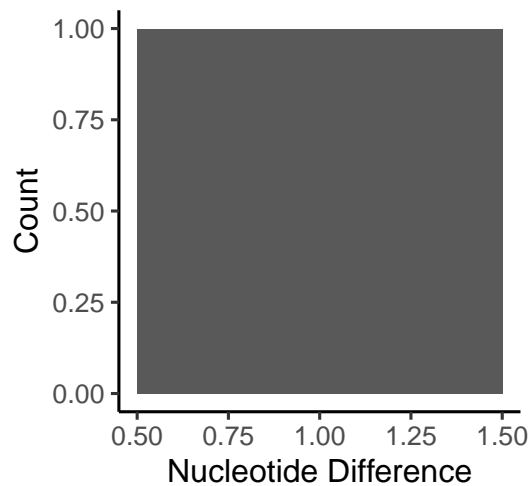
### IGHV5–51\*01

1063 sequences assigned  
951 (89.5%) exact matches, in which:  
914 unique CDR3  
6 unique J



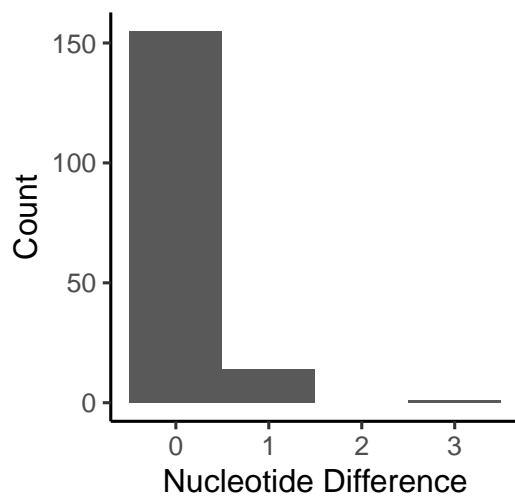
### IGHV3/OR16–9\*01

1 sequences assigned  
No exact matches.



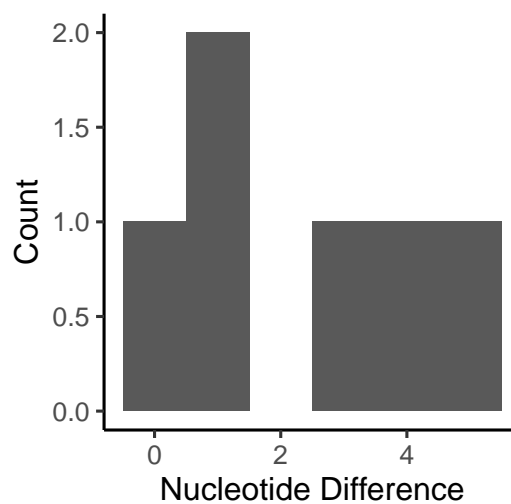
### IGHV6–1\*01

170 sequences assigned  
155 (91.2%) exact matches, in which:  
146 unique CDR3  
5 unique J



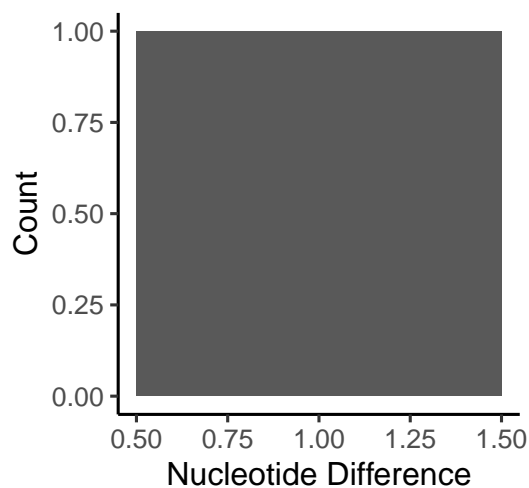
### IGHV7–4–1\*02

6 sequences assigned  
1 (16.7%) exact matches, in which:  
1 unique CDR3  
1 unique J



### IGHV3/OR16–6\*02

1 sequences assigned  
No exact matches.







Warning – no inferred sequences found.