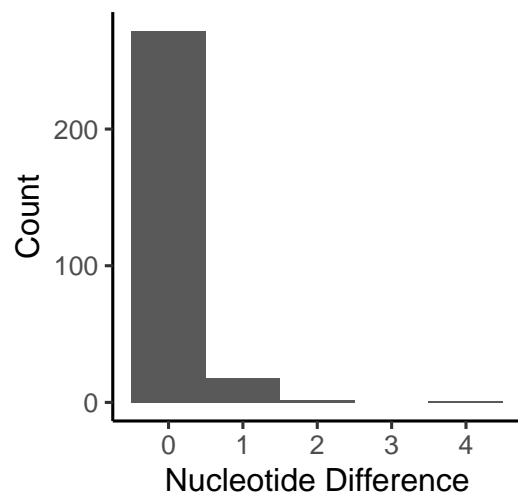


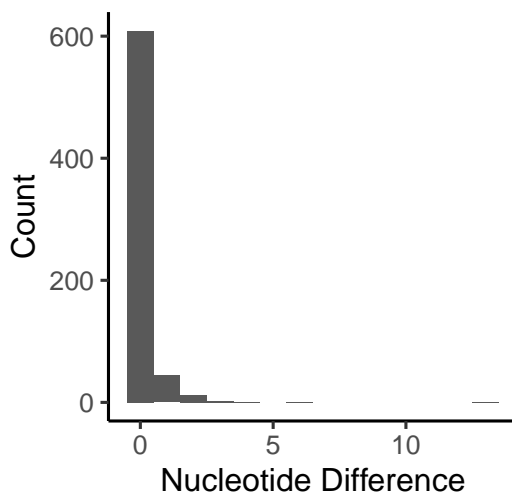
### IGHV1-2\*04

293 sequences assigned  
272 (92.8%) exact matches, in which:  
259 unique CDR3  
7 unique J



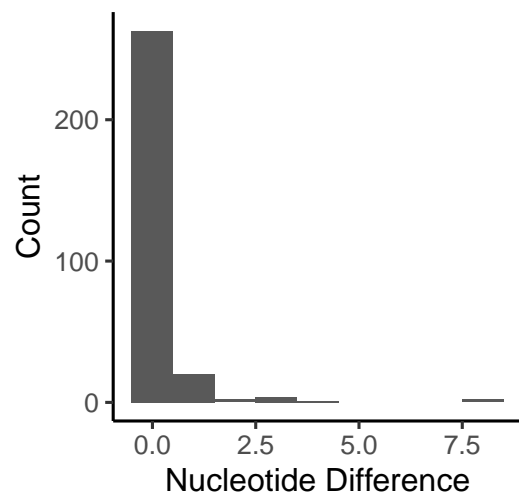
### IGHV1-18\*04

670 sequences assigned  
609 (90.9%) exact matches, in which:  
587 unique CDR3  
6 unique J



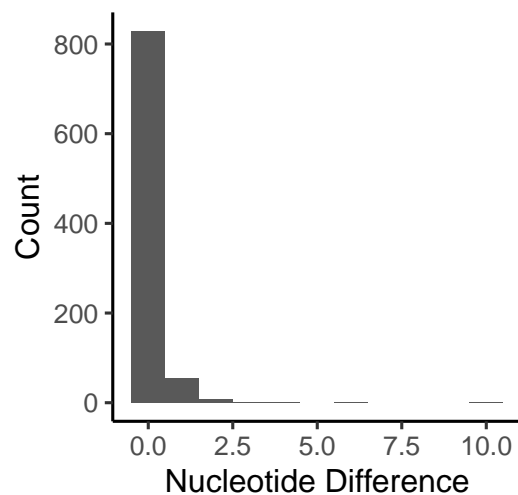
### IGHV1-46\*01

292 sequences assigned  
263 (90.1%) exact matches, in which:  
249 unique CDR3  
7 unique J



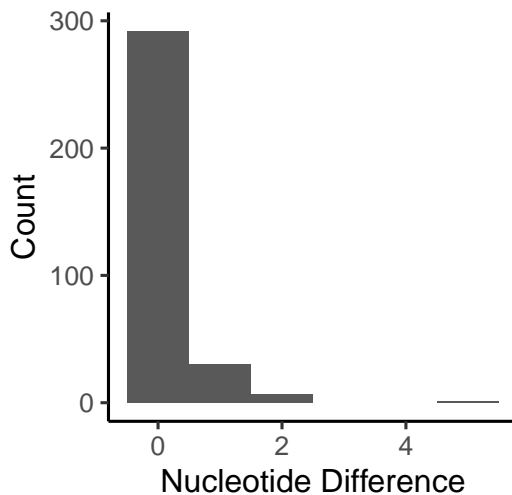
### IGHV1-3\*01

899 sequences assigned  
829 (92.2%) exact matches, in which:  
796 unique CDR3  
7 unique J



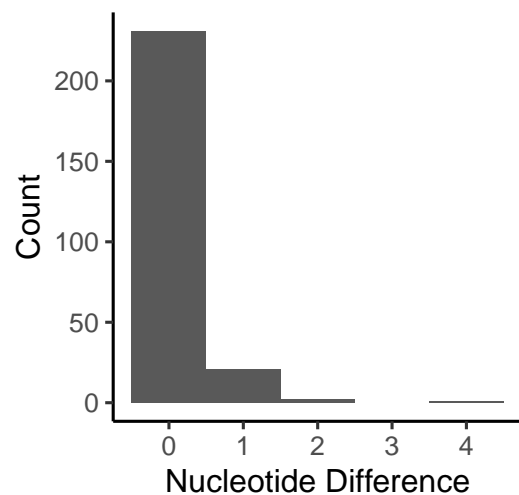
### IGHV1-24\*01

330 sequences assigned  
292 (88.5%) exact matches, in which:  
278 unique CDR3  
7 unique J



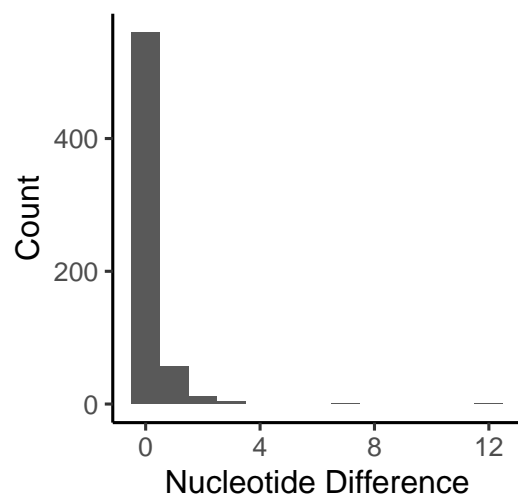
### IGHV1-46\*03

255 sequences assigned  
231 (90.6%) exact matches, in which:  
220 unique CDR3  
6 unique J



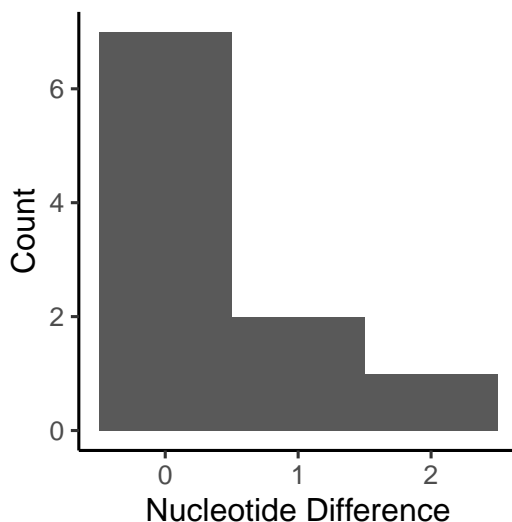
### IGHV1-18\*01

634 sequences assigned  
560 (88.3%) exact matches, in which:  
539 unique CDR3  
6 unique J



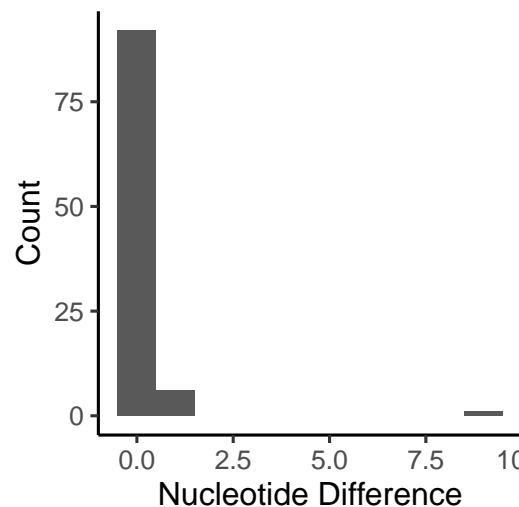
### IGHV1-45\*02

10 sequences assigned  
7 (70%) exact matches, in which:  
7 unique CDR3  
4 unique J



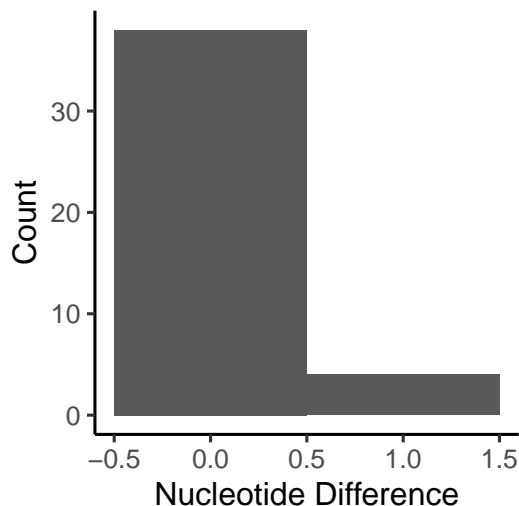
### IGHV1-58\*01

99 sequences assigned  
92 (92.9%) exact matches, in which:  
86 unique CDR3  
6 unique J



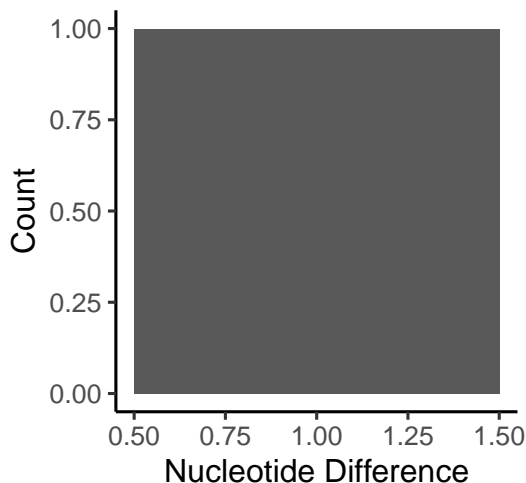
### IGHV1–58\*02

42 sequences assigned  
38 (90.5%) exact matches, in which:  
36 unique CDR3  
5 unique J



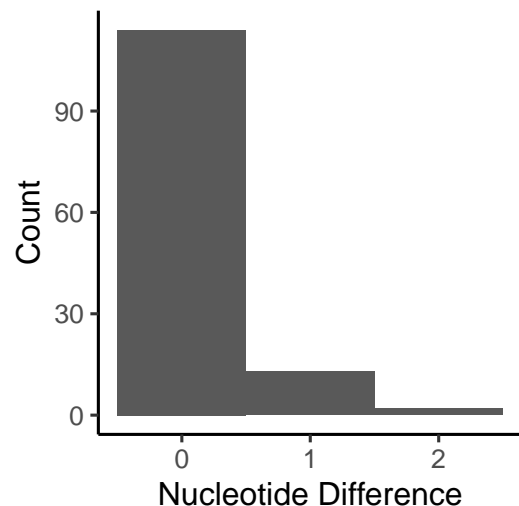
### IGHV1–NL1\*01

1 sequences assigned  
No exact matches.



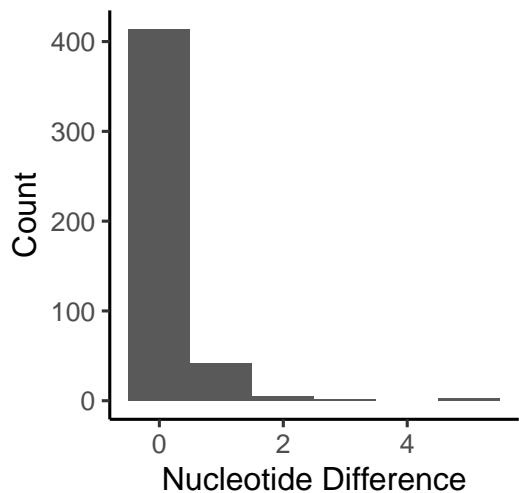
### IGHV2–70\*01

129 sequences assigned  
114 (88.4%) exact matches, in which:  
112 unique CDR3  
5 unique J



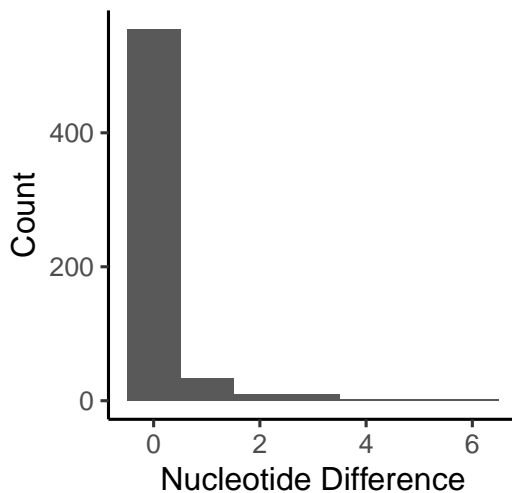
### IGHV1–69\*02

466 sequences assigned  
414 (88.8%) exact matches, in which:  
387 unique CDR3  
6 unique J



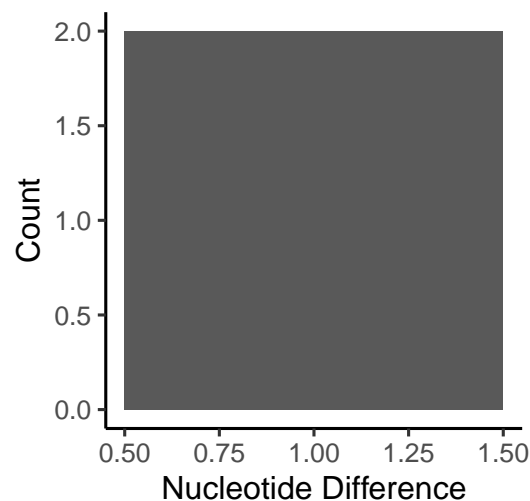
### IGHV2–5\*02

614 sequences assigned  
555 (90.4%) exact matches, in which:  
501 unique CDR3  
7 unique J



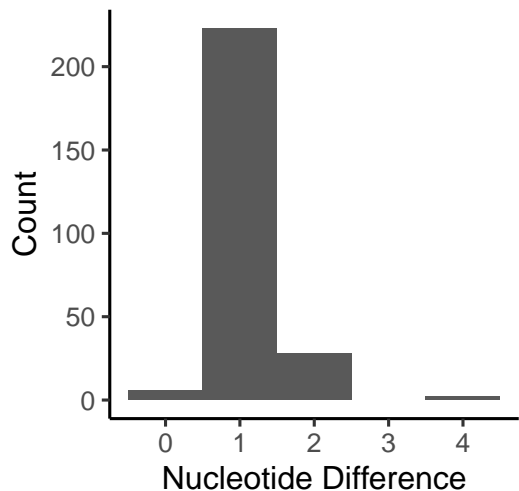
### IGHV2–70D\*04

2 sequences assigned  
No exact matches.



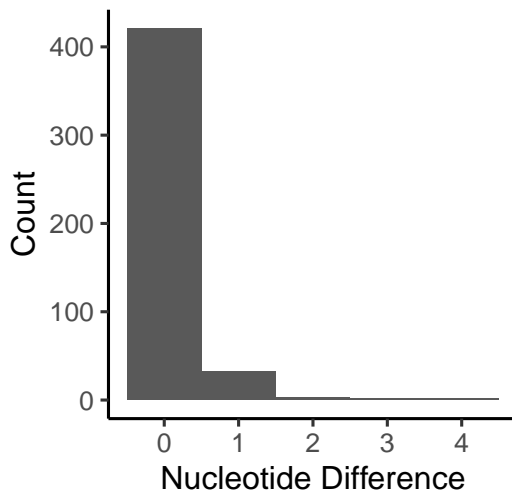
### IGHV1–69\*08

259 sequences assigned  
6 (2.3%) exact matches, in which:  
6 unique CDR3  
3 unique J



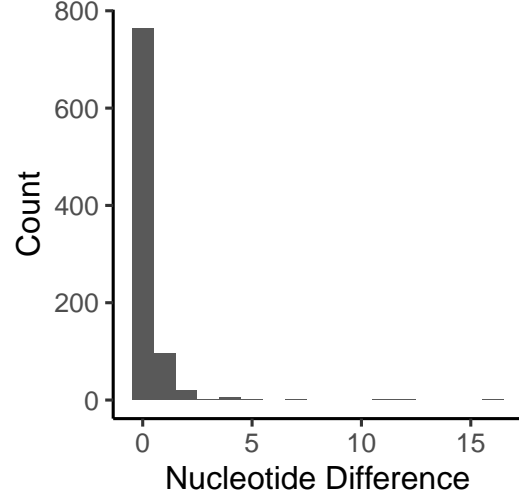
### IGHV2–26\*01

460 sequences assigned  
421 (91.5%) exact matches, in which:  
397 unique CDR3  
7 unique J



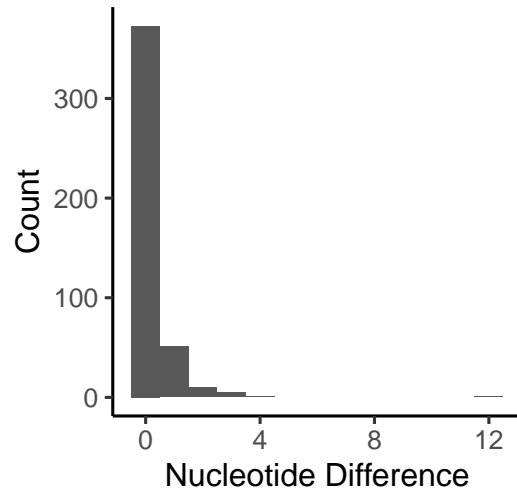
### IGHV3–7\*03

893 sequences assigned  
764 (85.6%) exact matches, in which:  
726 unique CDR3  
7 unique J



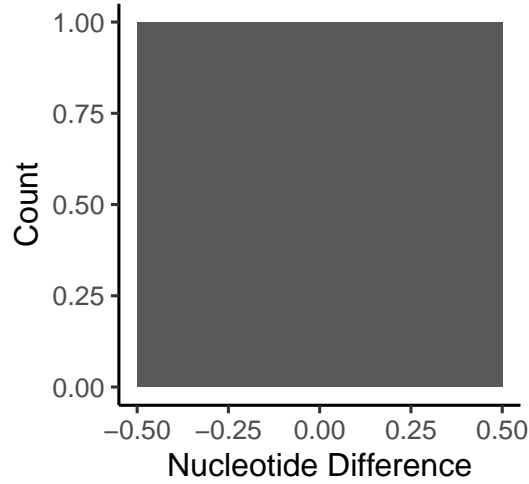
### IGHV3-11\*06

441 sequences assigned  
373 (84.6%) exact matches, in which:  
357 unique CDR3  
7 unique J



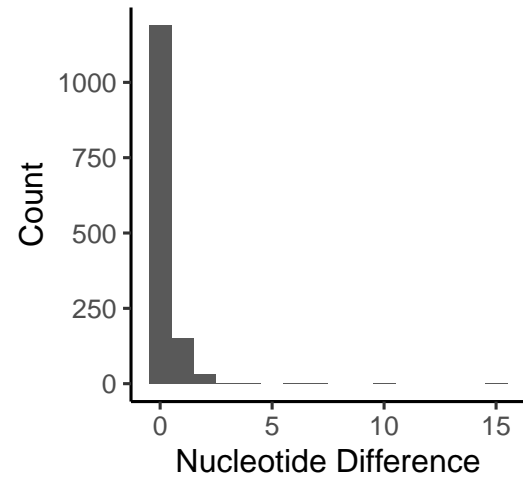
### IGHV3-19\*01

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



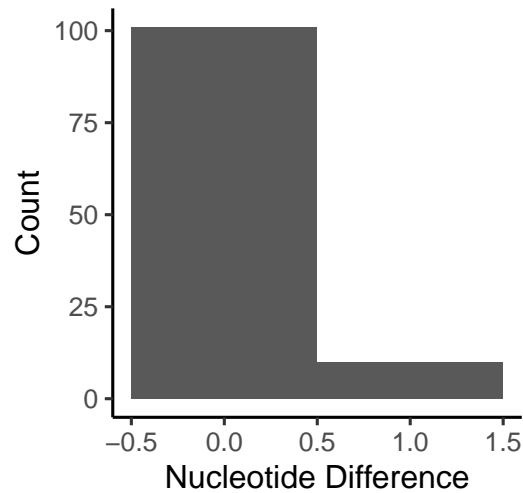
### IGHV3-23\*04

1379 sequences assigned  
1189 (86.2%) exact matches, in which:  
1143 unique CDR3  
6 unique J



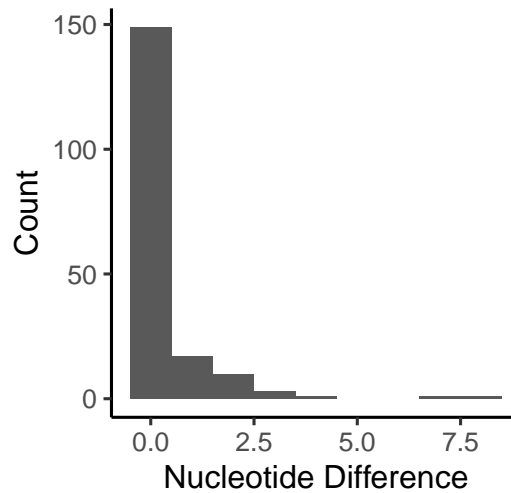
### IGHV3-13\*05

111 sequences assigned  
101 (91%) exact matches, in which:  
91 unique CDR3  
5 unique J



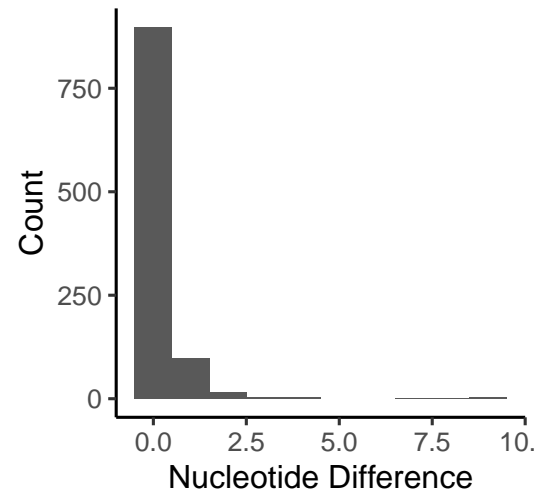
### IGHV3-20\*04

182 sequences assigned  
149 (81.9%) exact matches, in which:  
140 unique CDR3  
6 unique J



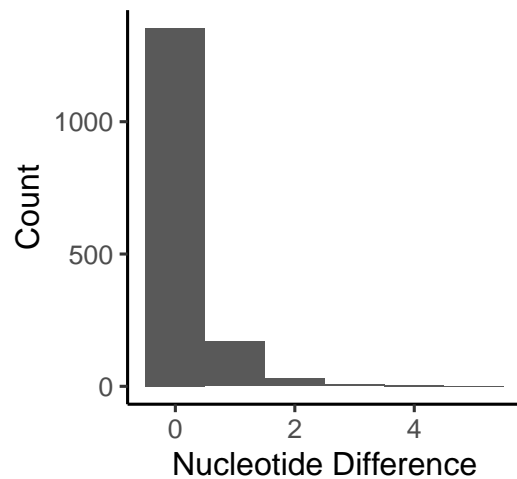
### IGHV3-30\*01

1025 sequences assigned  
898 (87.6%) exact matches, in which:  
855 unique CDR3  
6 unique J



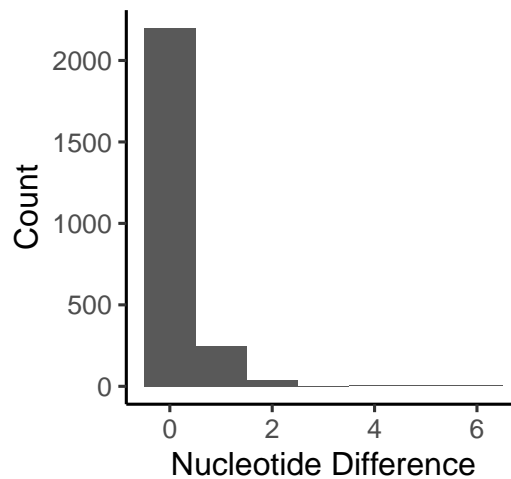
### IGHV3-15\*01

1567 sequences assigned  
1354 (86.4%) exact matches, in which:  
1289 unique CDR3  
7 unique J



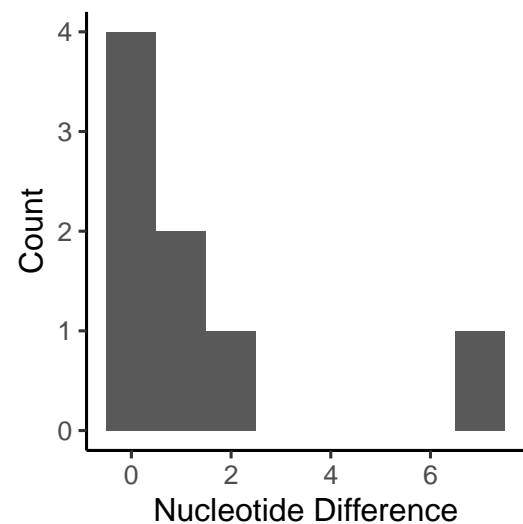
### IGHV3-21\*01

2502 sequences assigned  
2199 (87.9%) exact matches, in which:  
2081 unique CDR3  
7 unique J



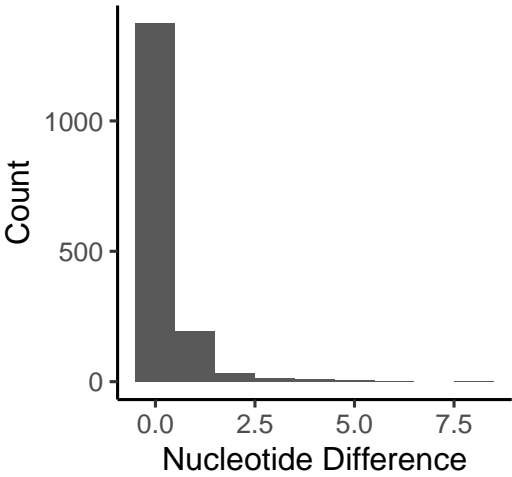
### IGHV3-30-3\*03

8 sequences assigned  
4 (50%) exact matches, in which:  
4 unique CDR3  
2 unique J



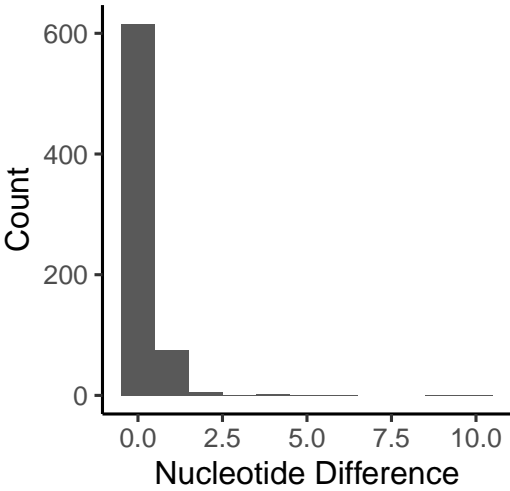
IGHV3-33\*01

1628 sequences assigned  
1374 (84.4%) exact matches, in which:  
1298 unique CDR3  
7 unique J



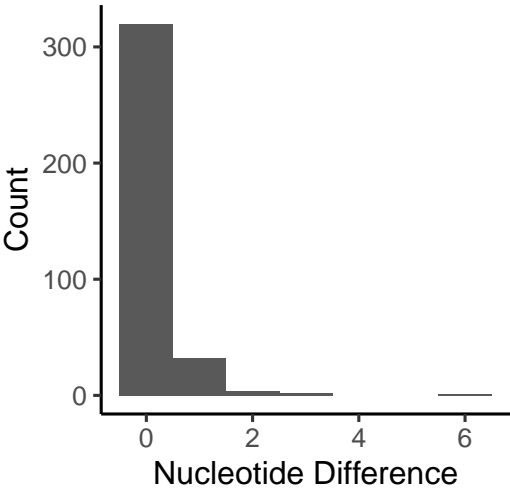
IGHV3-48\*01

704 sequences assigned  
616 (87.5%) exact matches, in which:  
592 unique CDR3  
6 unique J



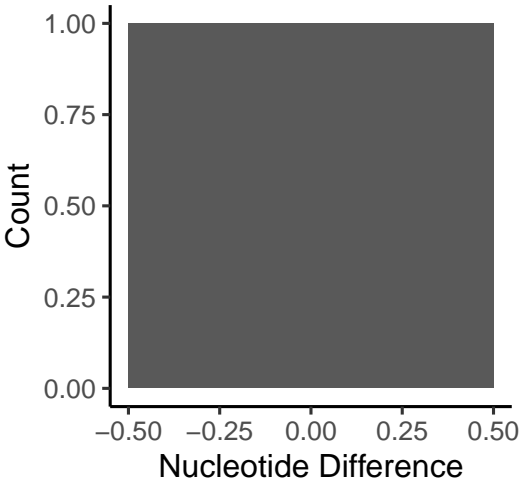
IGHV3-49\*04

359 sequences assigned  
320 (89.1%) exact matches, in which:  
307 unique CDR3  
6 unique J



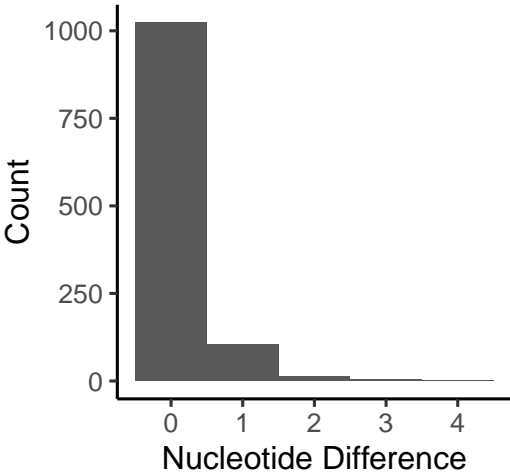
IGHV3-35\*02

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



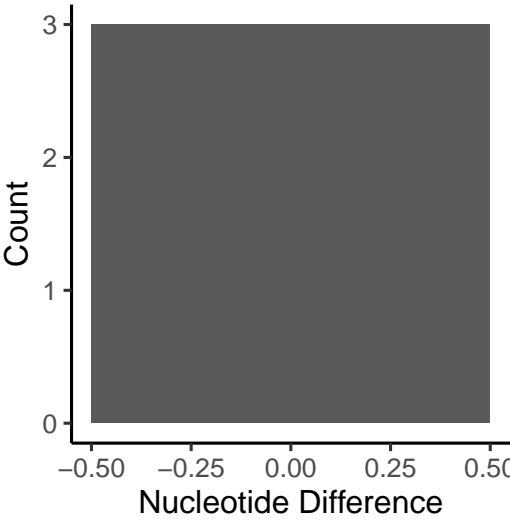
IGHV3-48\*03

1145 sequences assigned  
1023 (89.3%) exact matches, in which:  
986 unique CDR3  
6 unique J



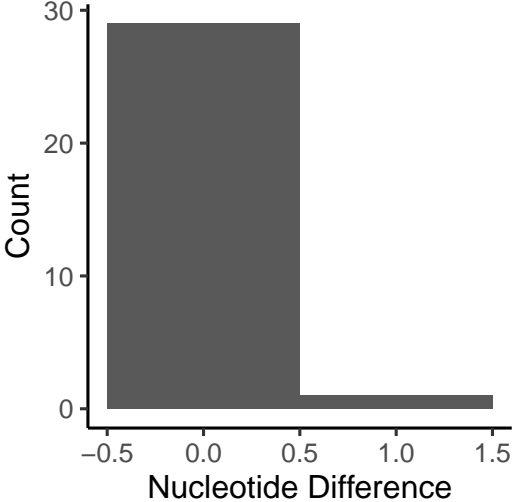
IGHV3-52\*01

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



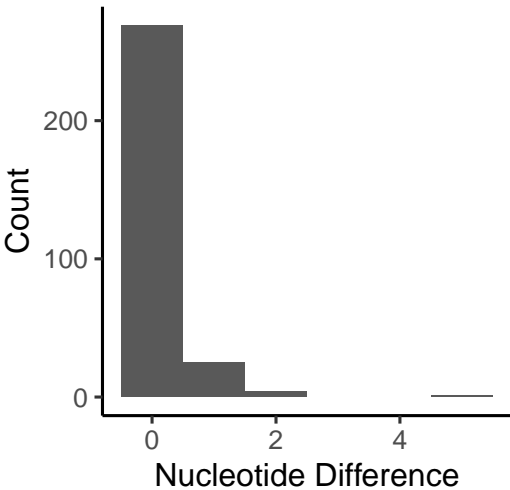
IGHV3-43\*01

30 sequences assigned  
29 (96.7%) exact matches, in which:  
29 unique CDR3  
6 unique J



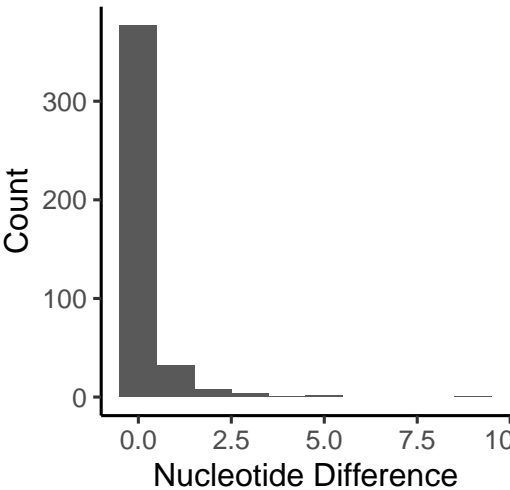
IGHV3-49\*03

299 sequences assigned  
269 (90%) exact matches, in which:  
261 unique CDR3  
6 unique J



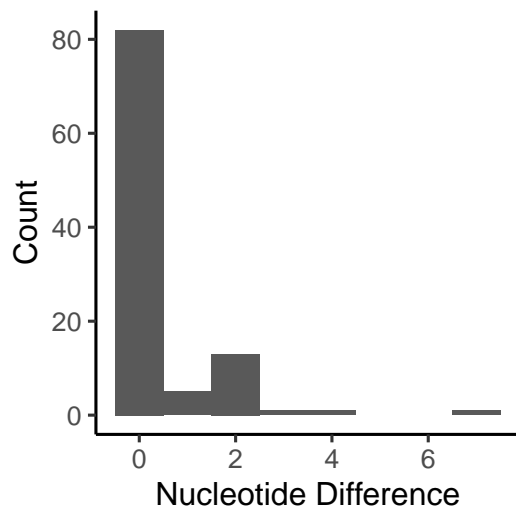
IGHV3-53\*02

425 sequences assigned  
377 (88.7%) exact matches, in which:  
361 unique CDR3  
7 unique J



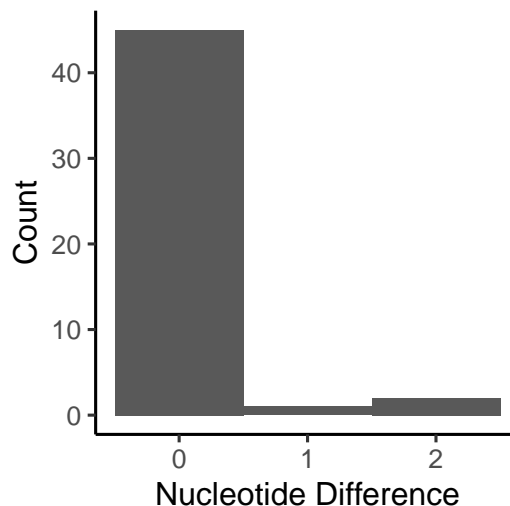
### IGHV3-64\*01

103 sequences assigned  
82 (79.6%) exact matches, in which:  
80 unique CDR3  
6 unique J



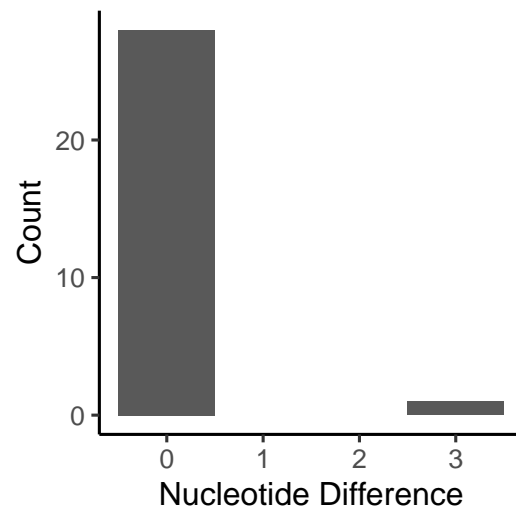
### IGHV3-73\*01

49 sequences assigned  
45 (91.8%) exact matches, in which:  
43 unique CDR3  
5 unique J



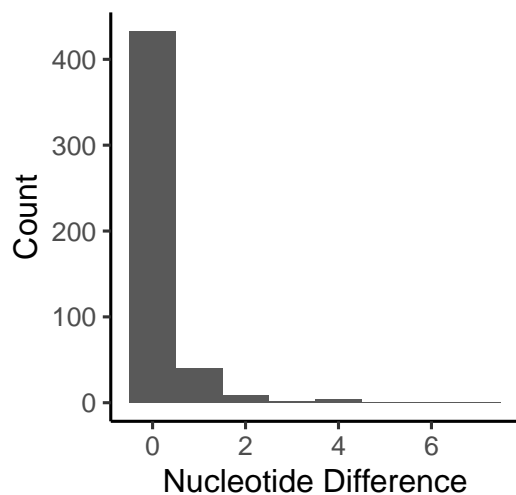
### IGHV3-43D\*04

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



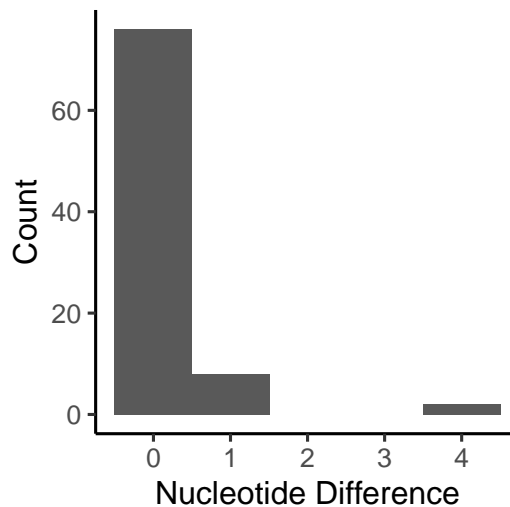
### IGHV3-66\*02

491 sequences assigned  
433 (88.2%) exact matches, in which:  
402 unique CDR3  
7 unique J



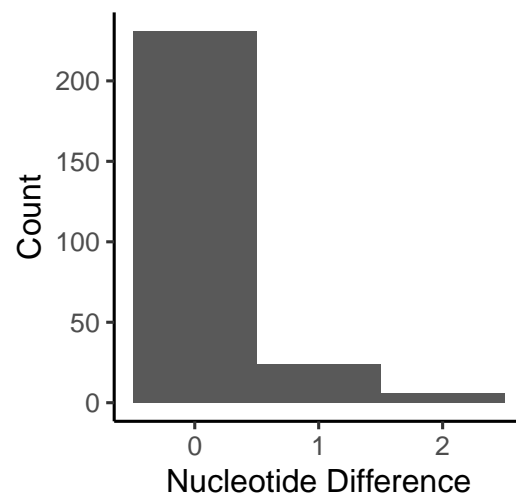
### IGHV3-73\*02

86 sequences assigned  
76 (88.4%) exact matches, in which:  
72 unique CDR3  
6 unique J



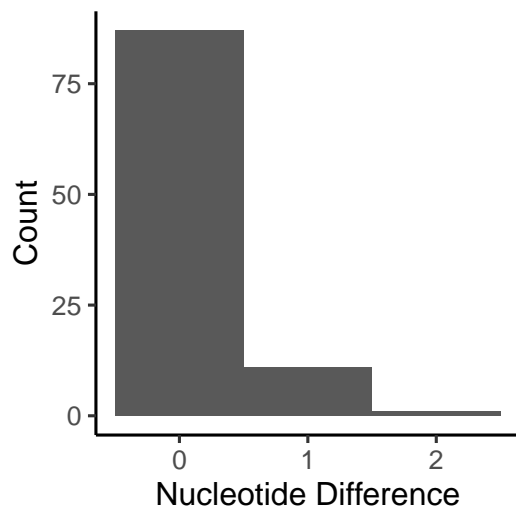
### IGHV3-64D\*06

261 sequences assigned  
231 (88.5%) exact matches, in which:  
219 unique CDR3  
6 unique J



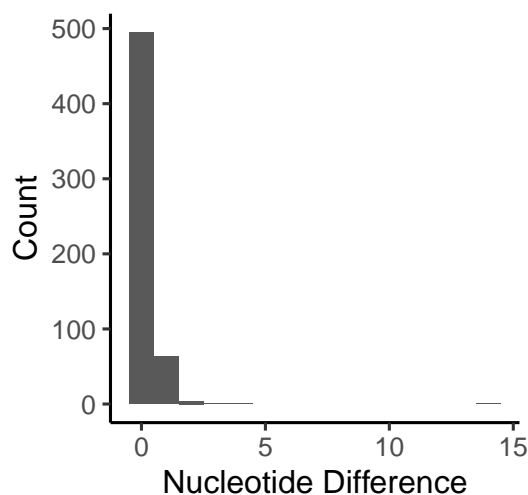
### IGHV3-72\*01

99 sequences assigned  
87 (87.9%) exact matches, in which:  
80 unique CDR3  
7 unique J



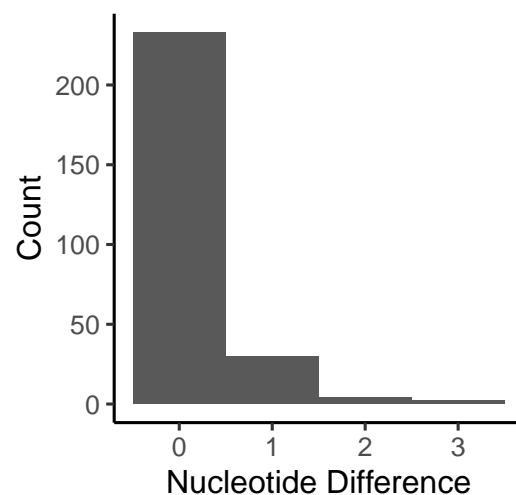
### IGHV3-74\*01

565 sequences assigned  
495 (87.6%) exact matches, in which:  
470 unique CDR3  
7 unique J



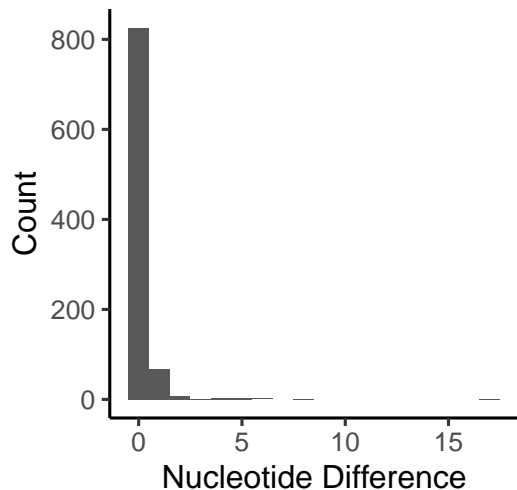
### IGHV3-64D\*09

269 sequences assigned  
233 (86.6%) exact matches, in which:  
217 unique CDR3  
6 unique J



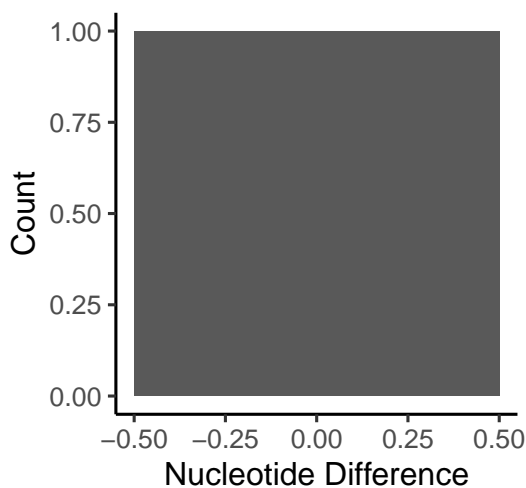
### IGHV4-4\*02

912 sequences assigned  
826 (90.6%) exact matches, in which:  
795 unique CDR3  
7 unique J



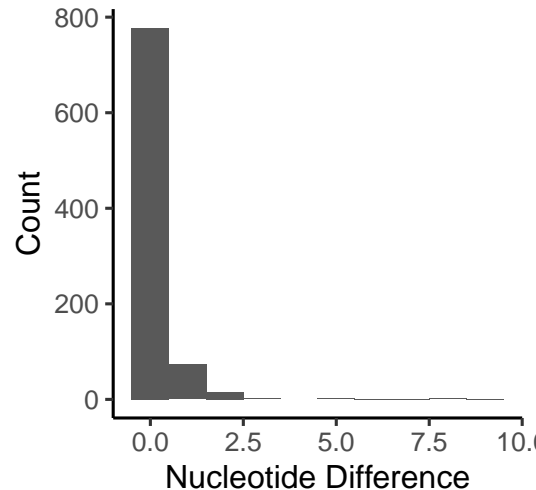
### IGHV4-30-4\*01

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



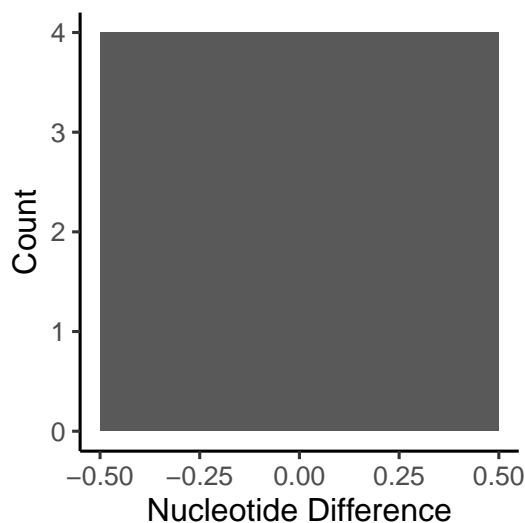
### IGHV4-38-2\*02\_A70G

875 sequences assigned  
778 (88.9%) exact matches, in which:  
723 unique CDR3  
7 unique J



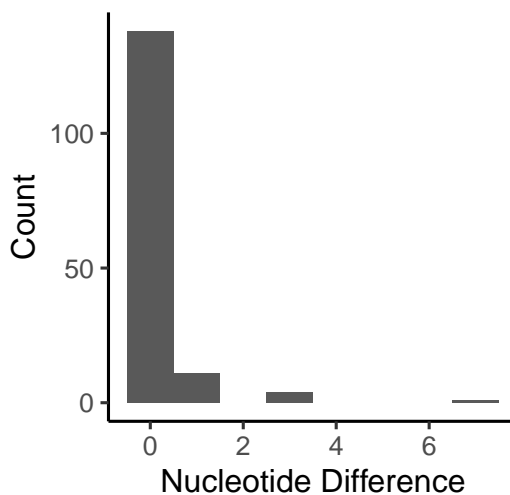
### IGHV4-28\*01

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



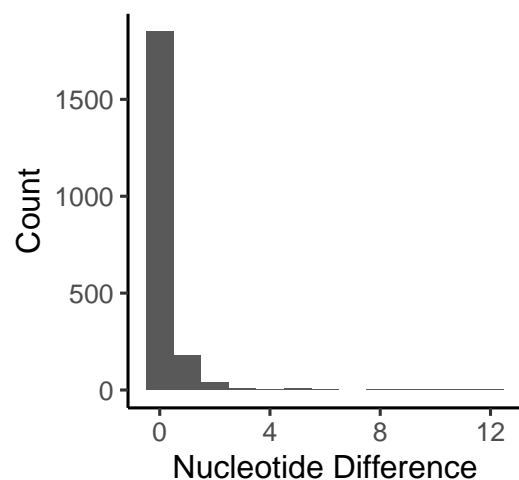
### IGHV4-31\*01

154 sequences assigned  
138 (89.6%) exact matches, in which:  
134 unique CDR3  
5 unique J



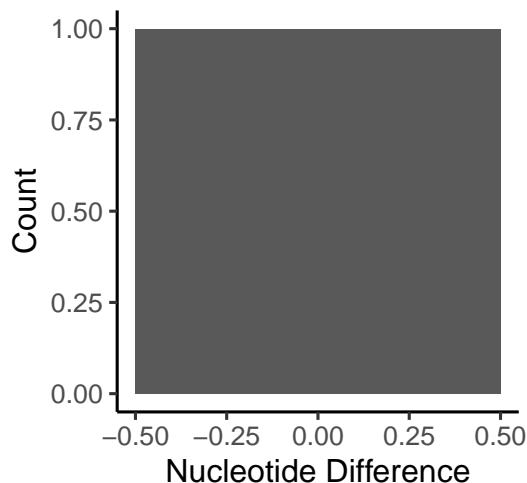
### IGHV4-39\*01

2091 sequences assigned  
1849 (88.4%) exact matches, in which:  
1709 unique CDR3  
7 unique J



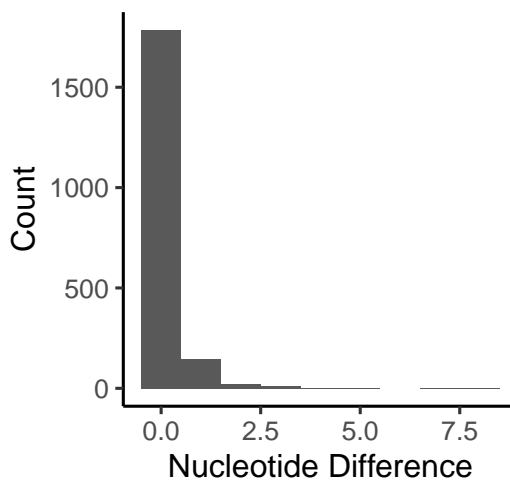
### IGHV4-28\*02

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



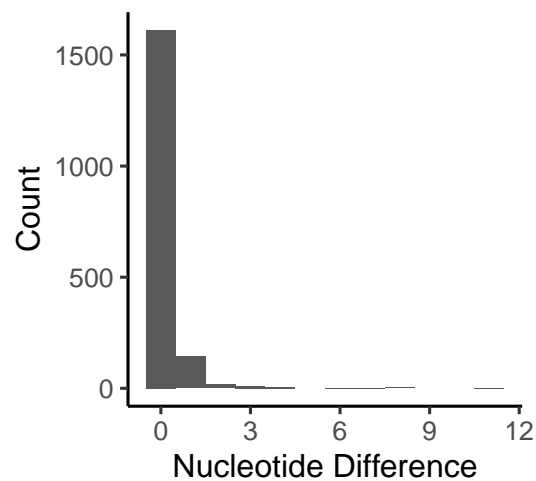
### IGHV4-34\*01

1972 sequences assigned  
1785 (90.5%) exact matches, in which:  
1655 unique CDR3  
7 unique J



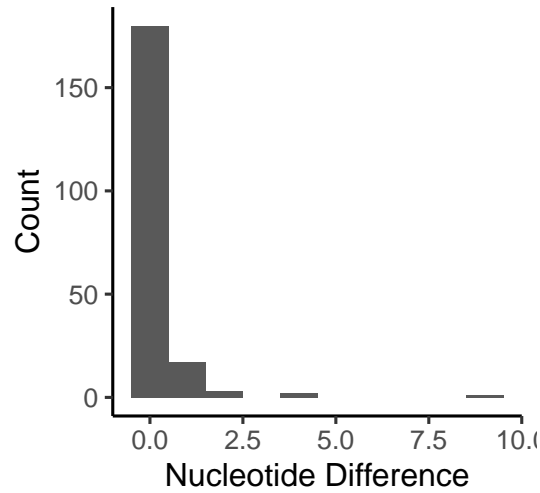
### IGHV4-59\*01

1796 sequences assigned  
1612 (89.8%) exact matches, in which:  
1550 unique CDR3  
7 unique J



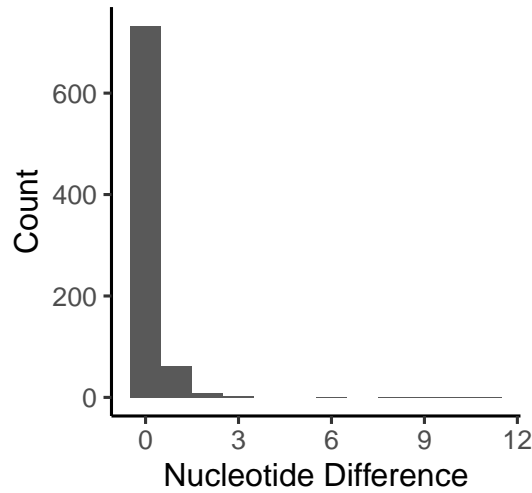
### IGHV4–61\*01

203 sequences assigned  
180 (88.7%) exact matches, in which:  
171 unique CDR3  
6 unique J



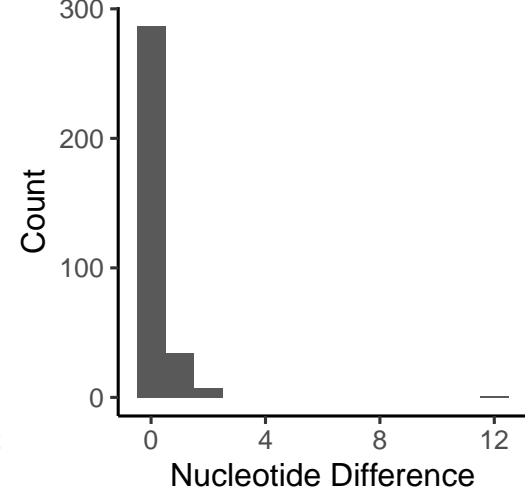
### IGHV5–10–1\*03

812 sequences assigned  
733 (90.3%) exact matches, in which:  
695 unique CDR3  
7 unique J



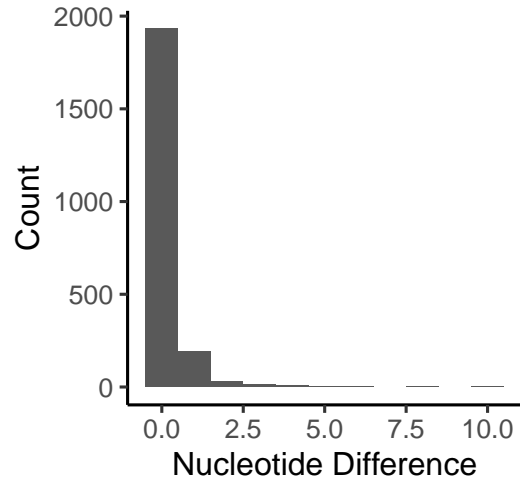
### IGHV6–1\*01

329 sequences assigned  
287 (87.2%) exact matches, in which:  
270 unique CDR3  
7 unique J



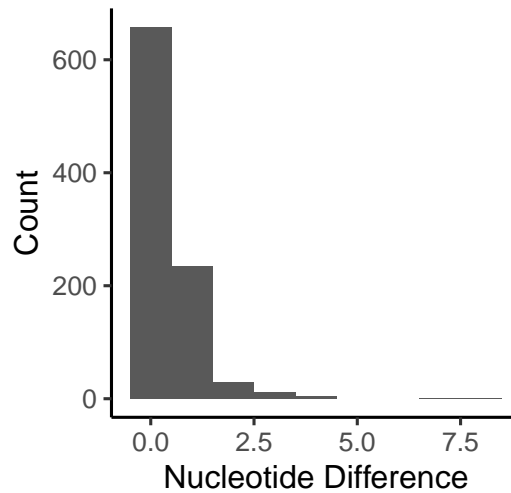
### IGHV4–61\*02

2187 sequences assigned  
1932 (88.3%) exact matches, in which:  
1820 unique CDR3  
7 unique J



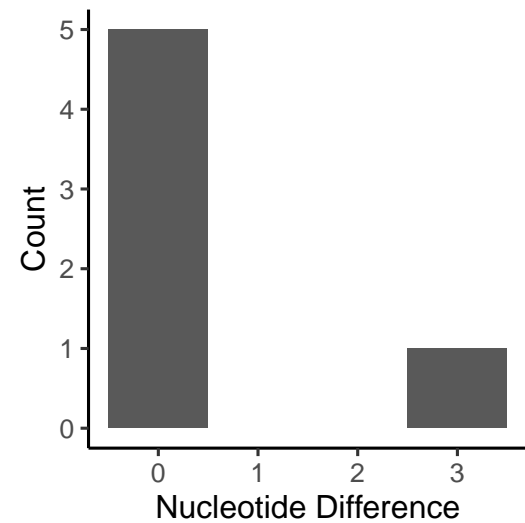
### IGHV5–51\*01

940 sequences assigned  
658 (70%) exact matches, in which:  
632 unique CDR3  
7 unique J



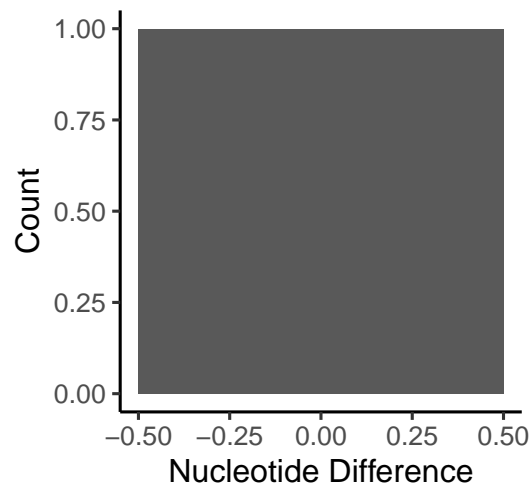
### IGHV7–4–1\*01

6 sequences assigned  
5 (83.3%) exact matches, in which:  
4 unique CDR3  
4 unique J



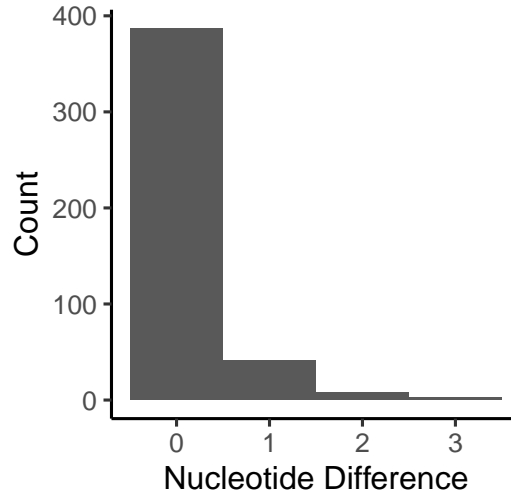
### IGHV1/OR15–4\*01

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

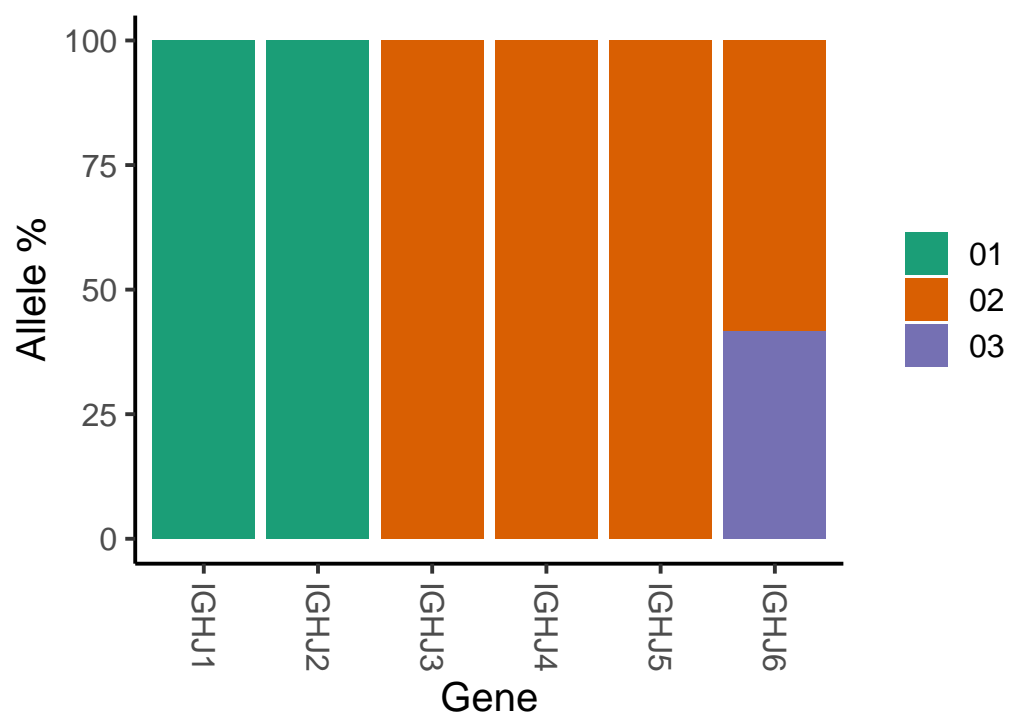


### IGHV5–51\*03

439 sequences assigned  
387 (88.2%) exact matches, in which:  
365 unique CDR3  
6 unique J

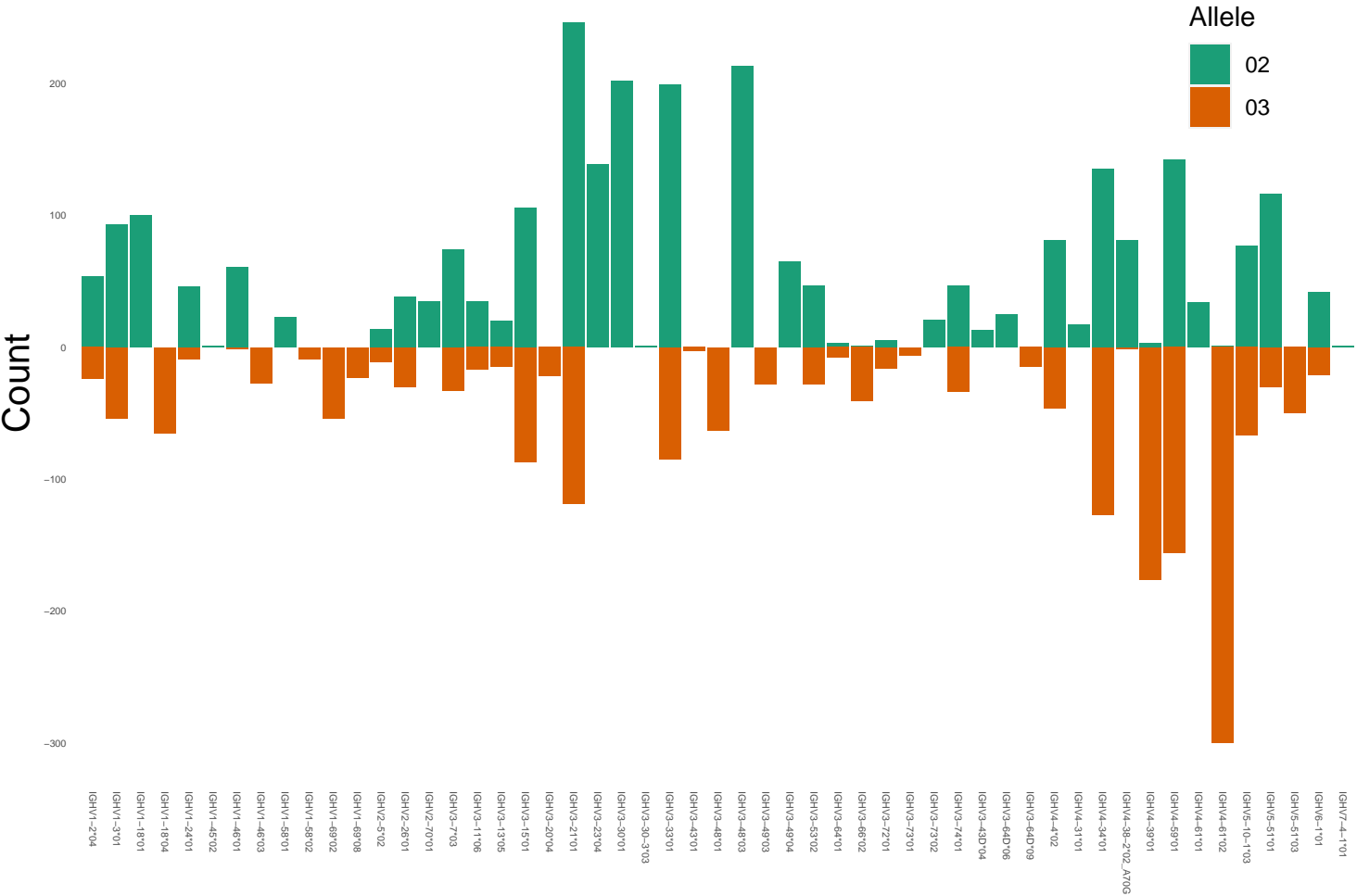


Allele Usage





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.