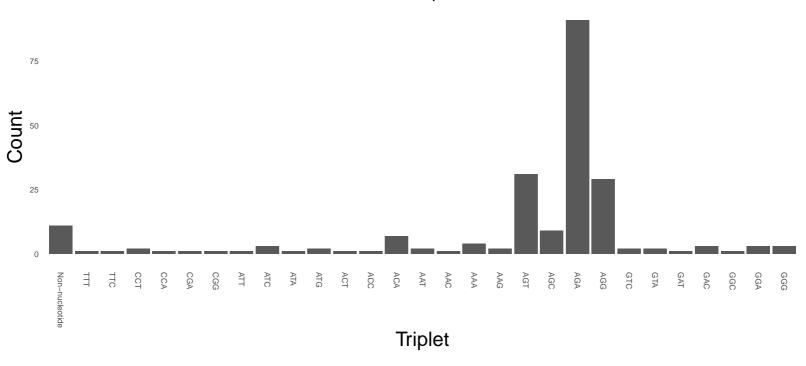
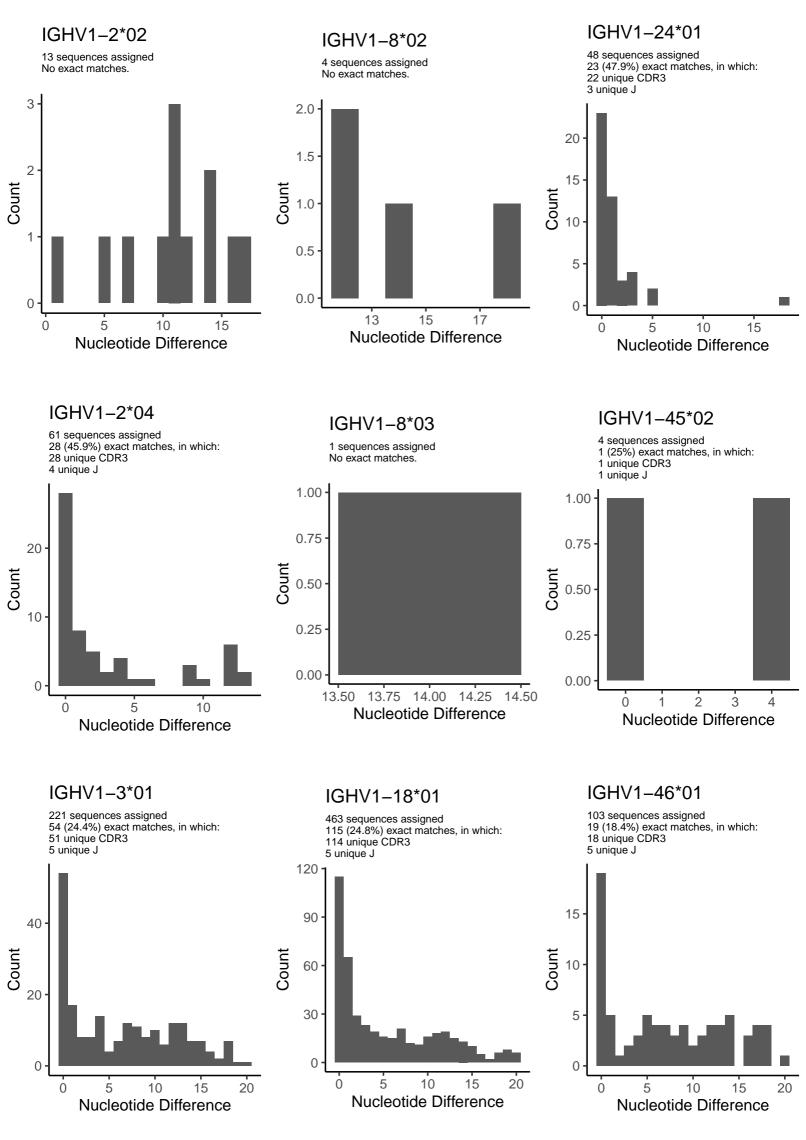
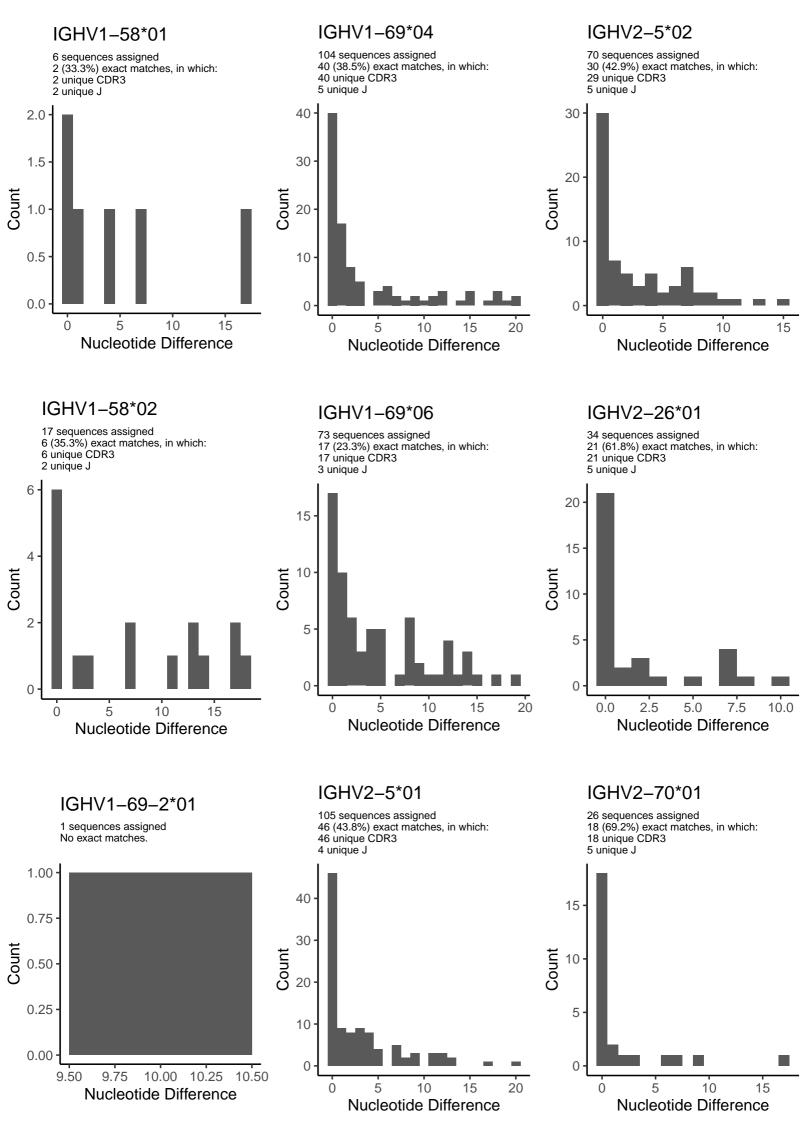
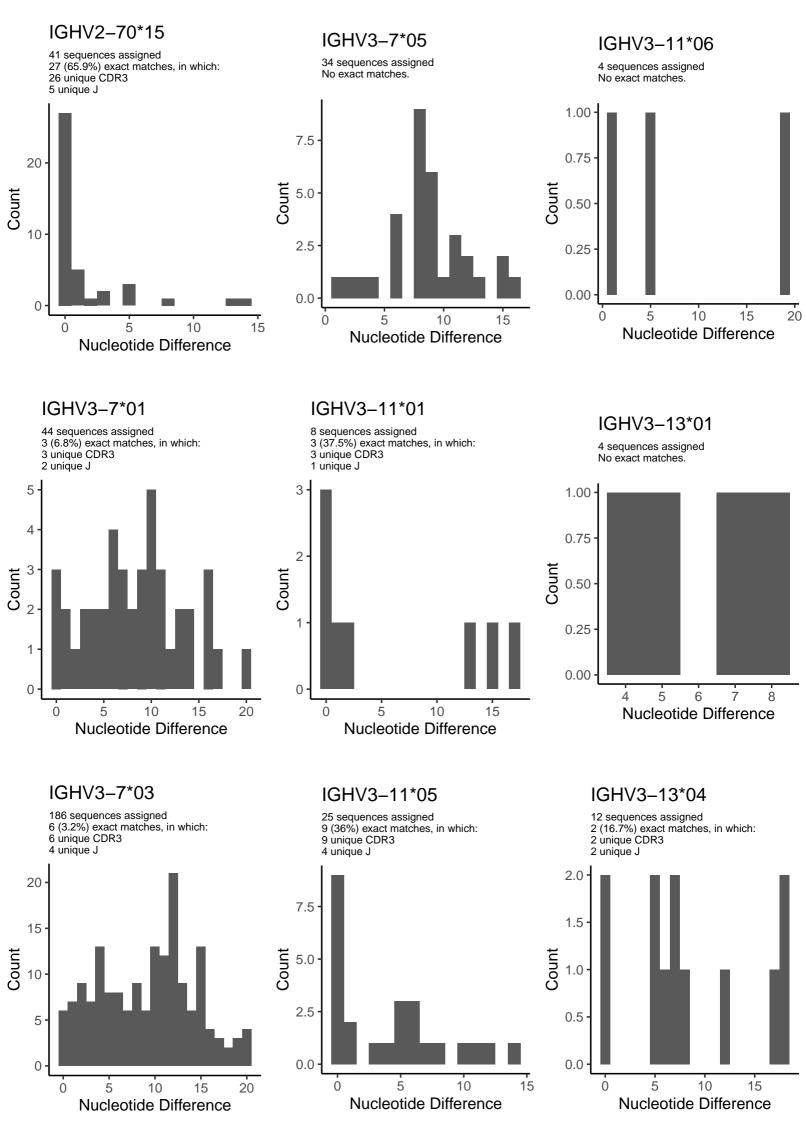


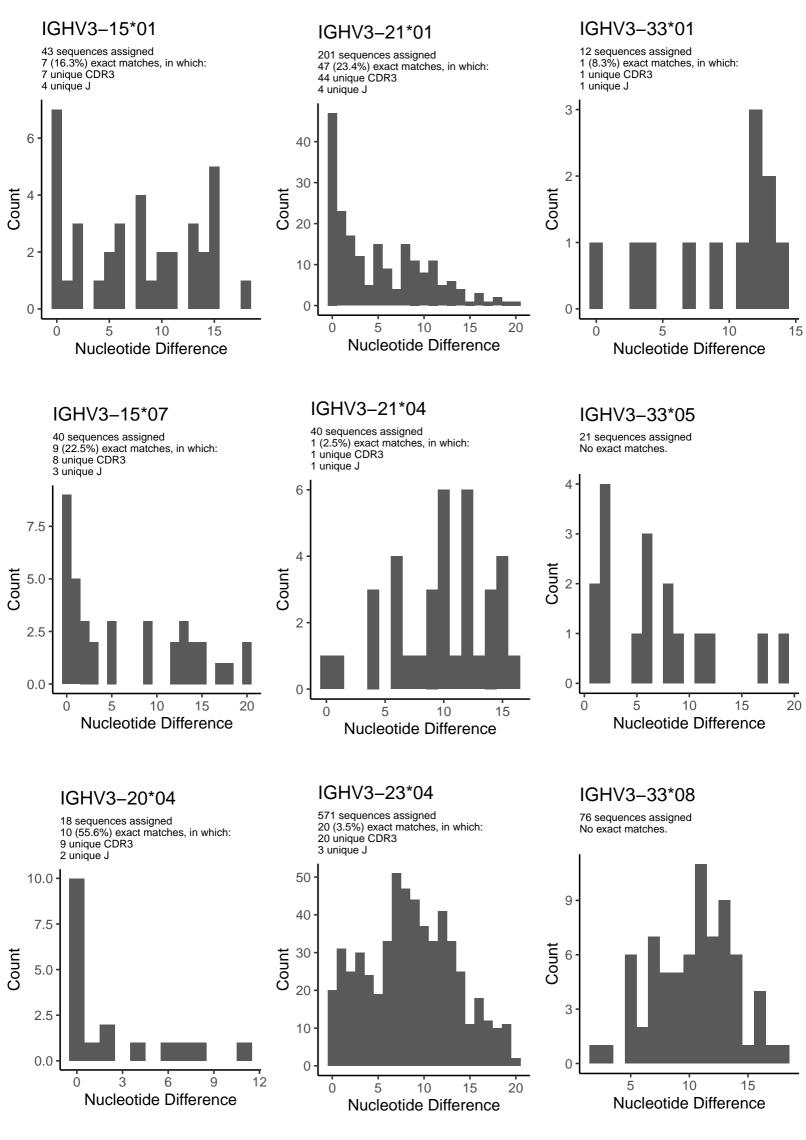
IGHV4-39*07_C288A- Final 3 nucleotides as a triplet

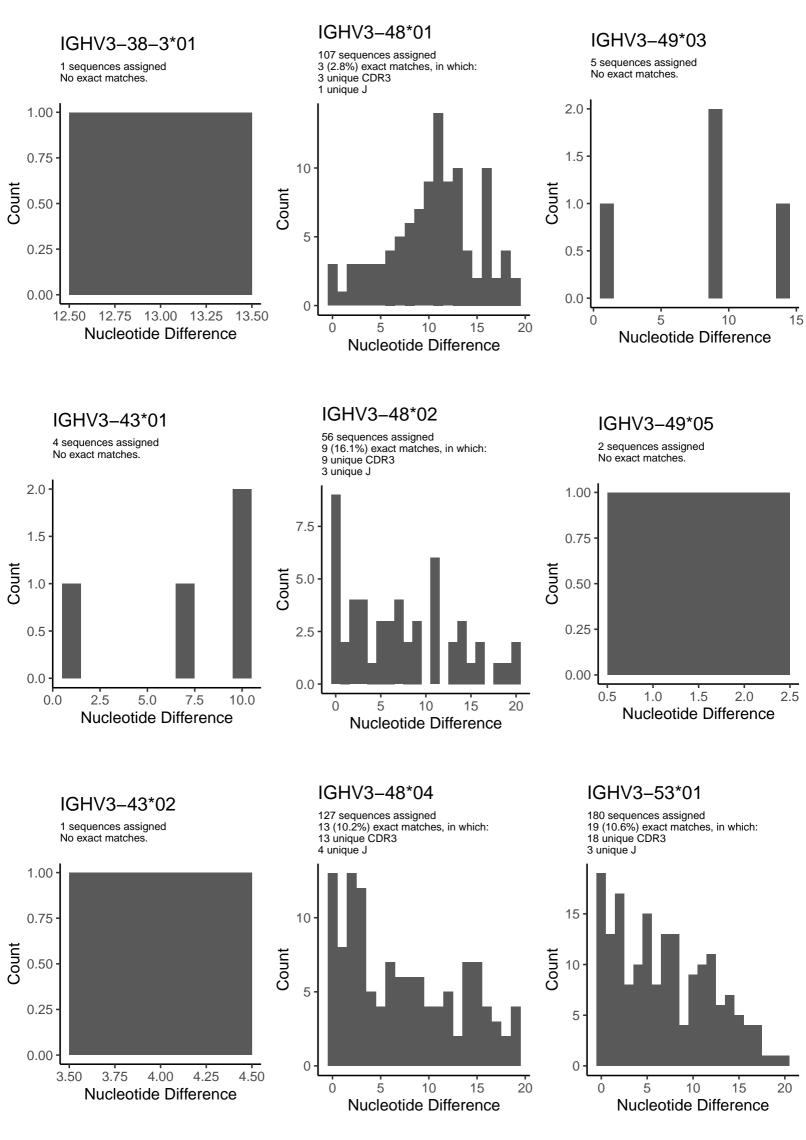


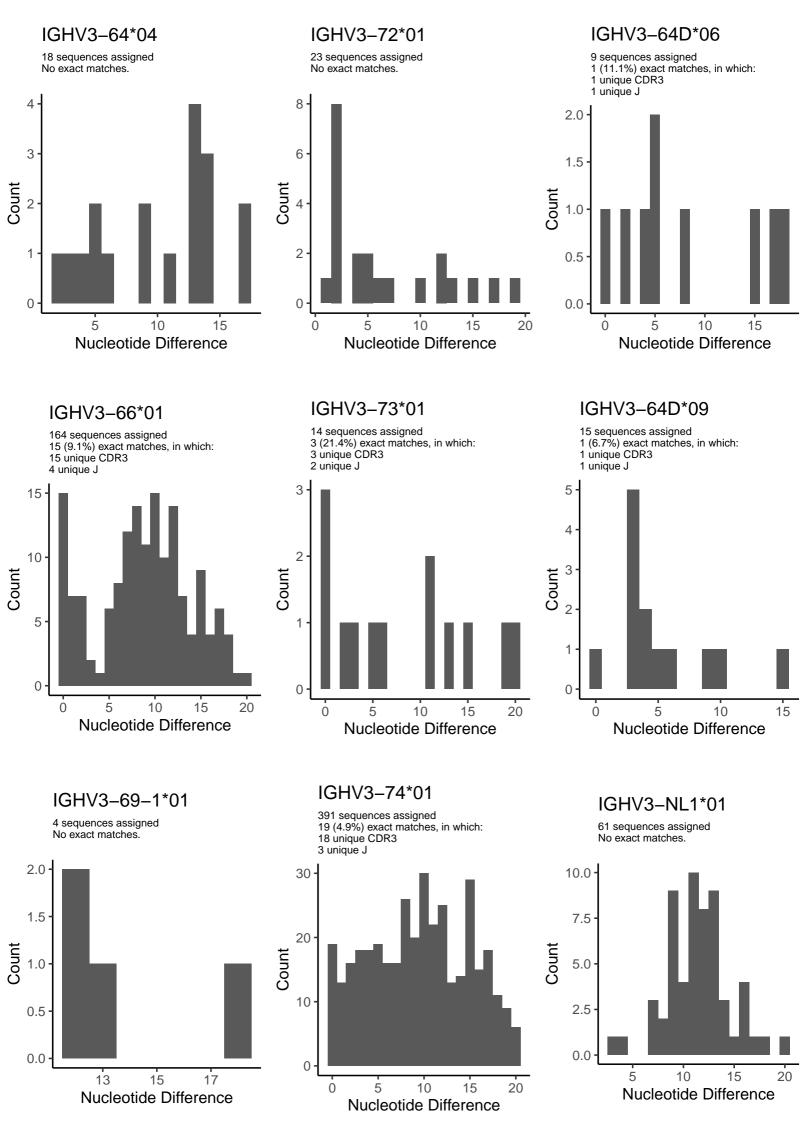


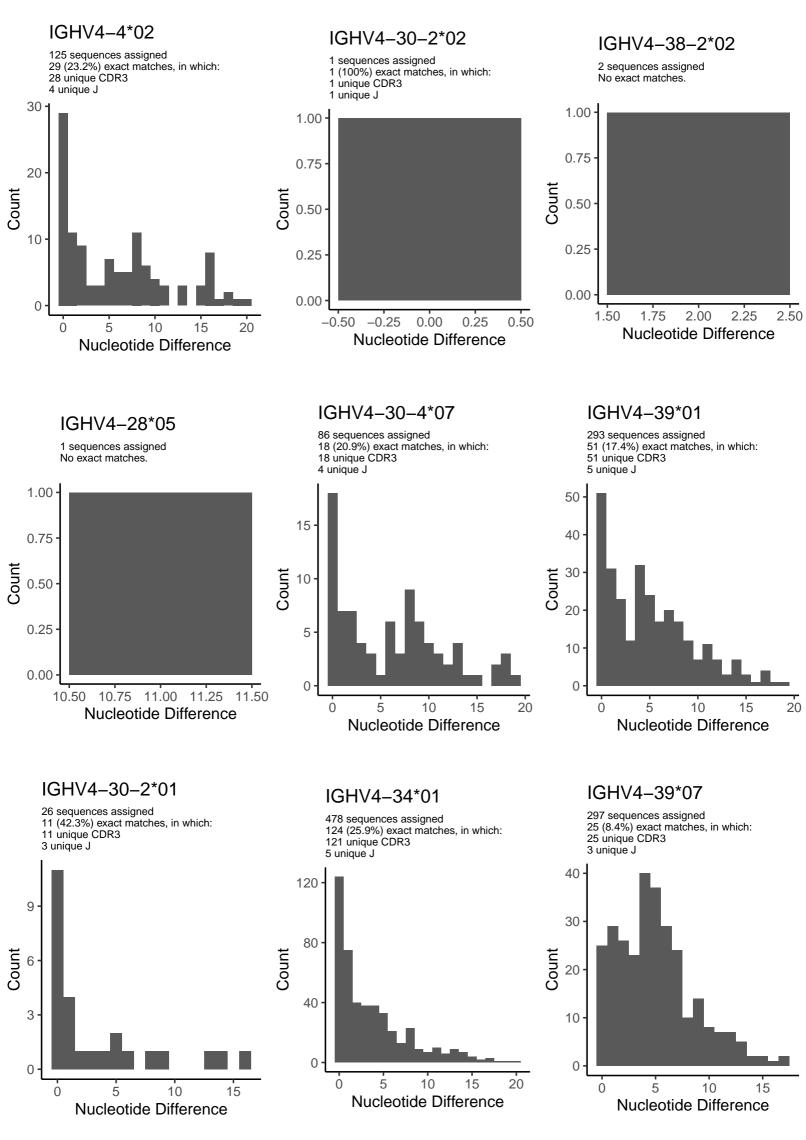








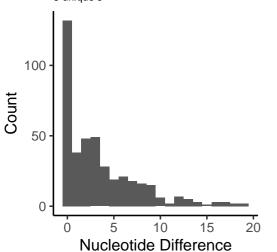




IGHV4-39*07_C288A IGHV4-59*12 IGHV4/OR15-8*02 218 sequences assigned 52 (23.9%) exact matches, in which: 196 sequences assigned 25 (12.8%) exact matches, in which: 1 sequences assigned 25 unique CDR3 52 unique CDR3 No exact matches. 5 unique J 4 unique J 1.00 25 50 20 40 0.75 15 Count 30 0.50 10 20 0.25 5 10 0.00 0 0 18.75 19.00 19.25 19.50 18.50 10 10 0 15 5 15 Nucleotide Difference **Nucleotide Difference** Nucleotide Difference IGHV4-59*01 IGHV4-61*01 IGHV5-10-1*01 117 sequences assigned 11 (9.4%) exact matches, in which: 264 sequences assigned 35 sequences assigned 15 (42.9%) exact matches, in which: 63 (23.9%) exact matches, in which: 62 unique CDR3 9 unique CDR3 13 unique CDR3 5 unique J 6 unique J 3 unique J 15 60 15 10 Count Count 10 5 20 5 0 0 0 0 10 15 20 10 15 20 10 15 0 5 0 Nucleotide Difference Nucleotide Difference Nucleotide Difference IGHV5-10-1*03 IGHV4-59*08 IGHV1/OR15-2*02 13 sequences assigned 5 (38.5%) exact matches, in which: 5 unique c DR3 179 sequences assigned 1 sequences assigned 27 (15.1%) exact matches, in which: 25 unique CDR3 No exact matches. 3 unique J 4 unique J 1.00 0.75 20 3 Count Count 0.50 2 10 0.25 0.00 0 0 14.00 14.25 13.50 13.75 0 5 10 15 20 2.5 5.0 7.5 10. 0.0 **Nucleotide Difference** Nucleotide Difference Nucleotide Difference

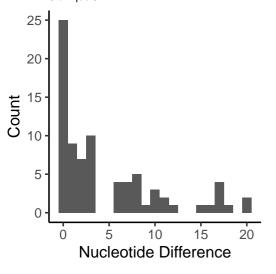
IGHV5-51*01

431 sequences assigned 132 (30.6%) exact matches, in which: 115 unique CDR3 5 unique J



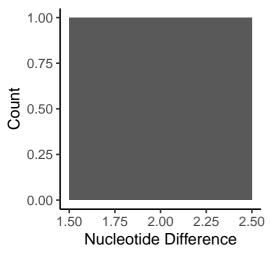
IGHV6-1*01

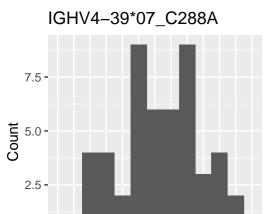
81 sequences assigned 25 (30.9%) exact matches, in which: 18 unique CDR3 6 unique J



IGHV3/OR16-6*02

1 sequences assigned No exact matches.





9 10 11 12 13 14 15 16 17 18 19 20 22 CDR3 AA Length (unmutated)

0.0



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