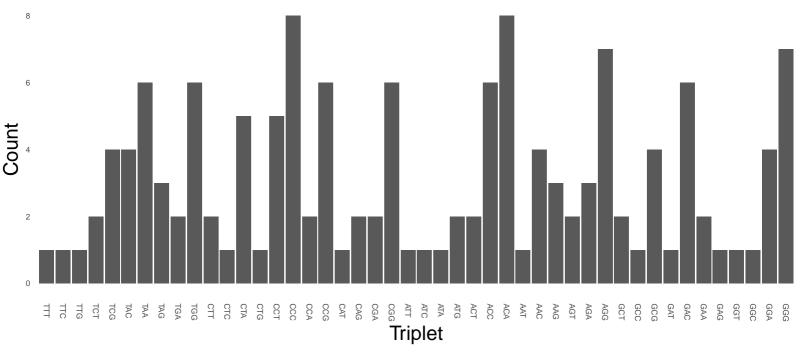
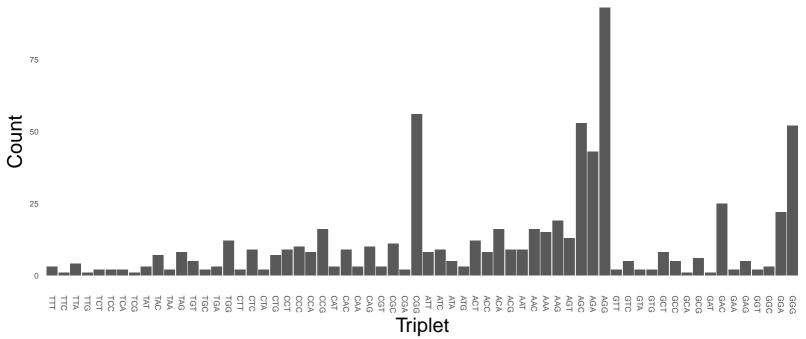


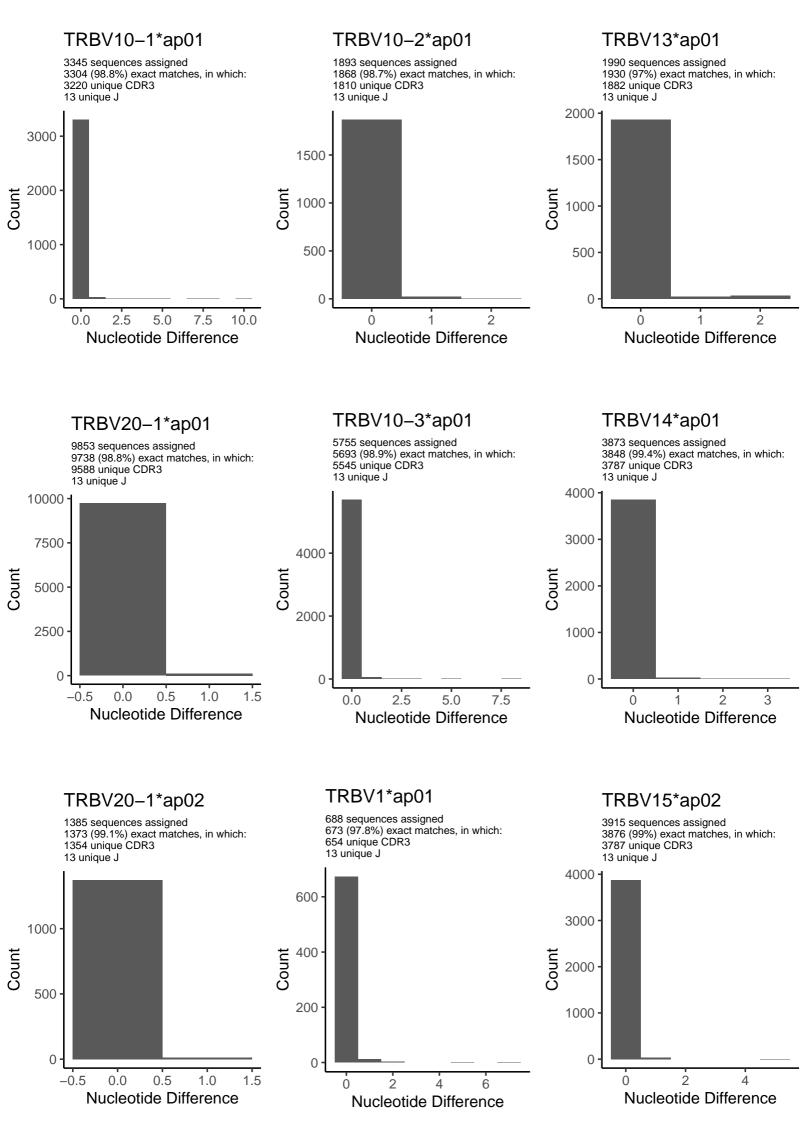
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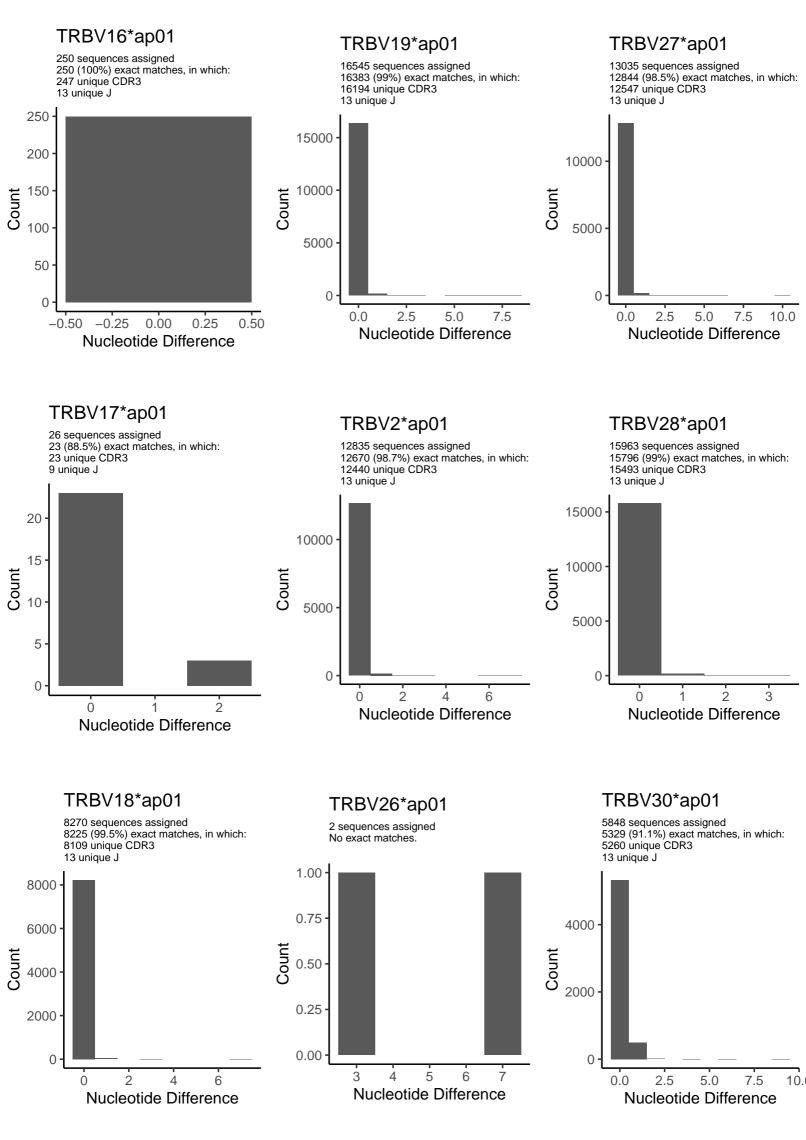
TRBV7-1\*ap01\_T296C- Final 3 nucleotides as a triplet

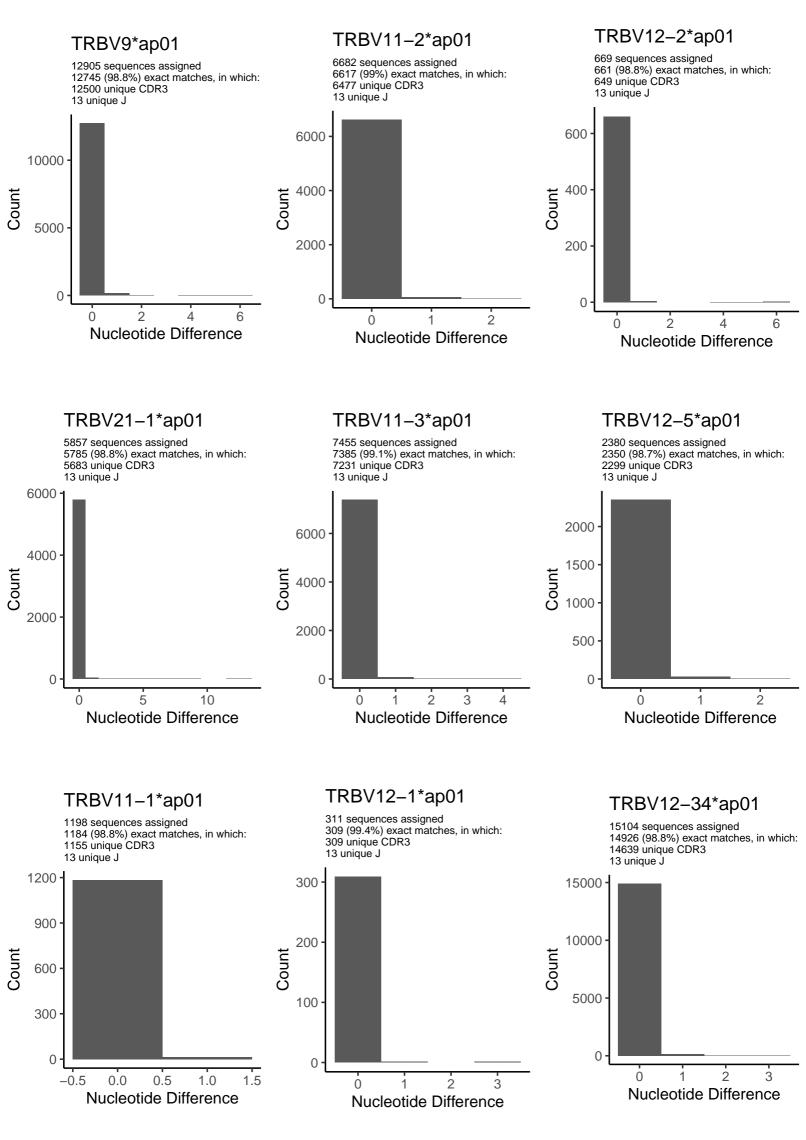


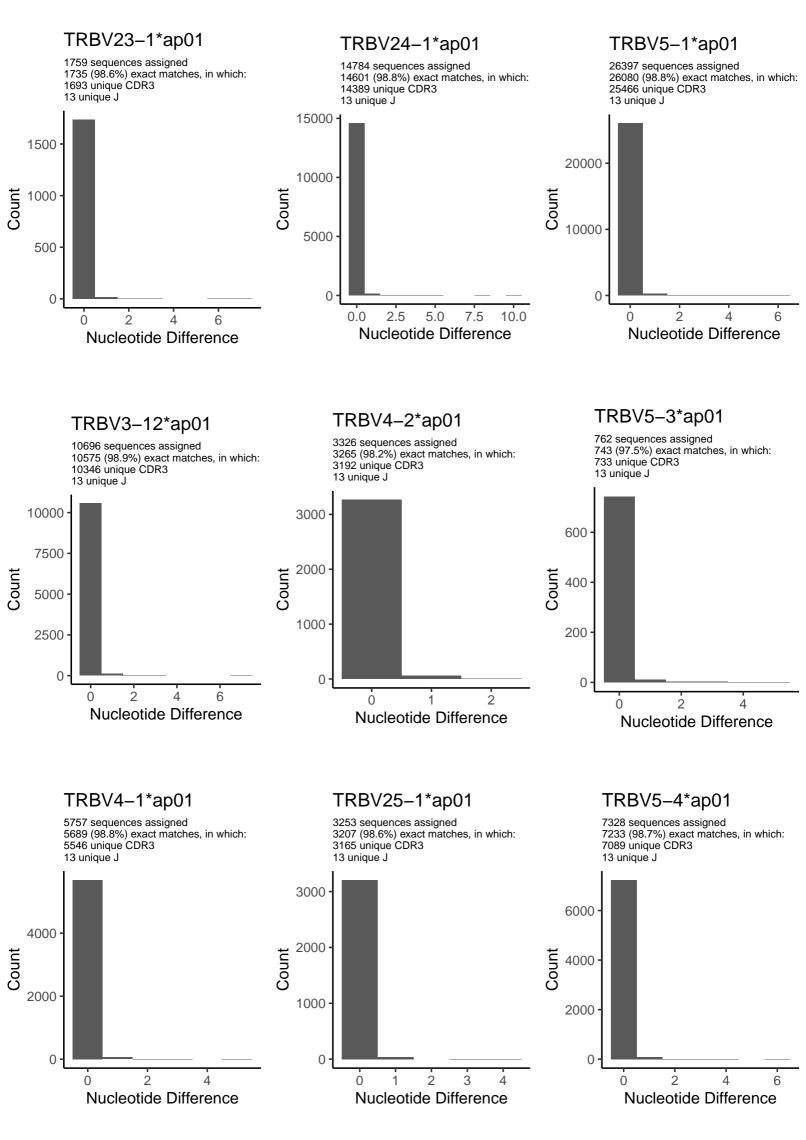
TRBV7-7\*ap01\_C315T- Final 3 nucleotides as a triplet

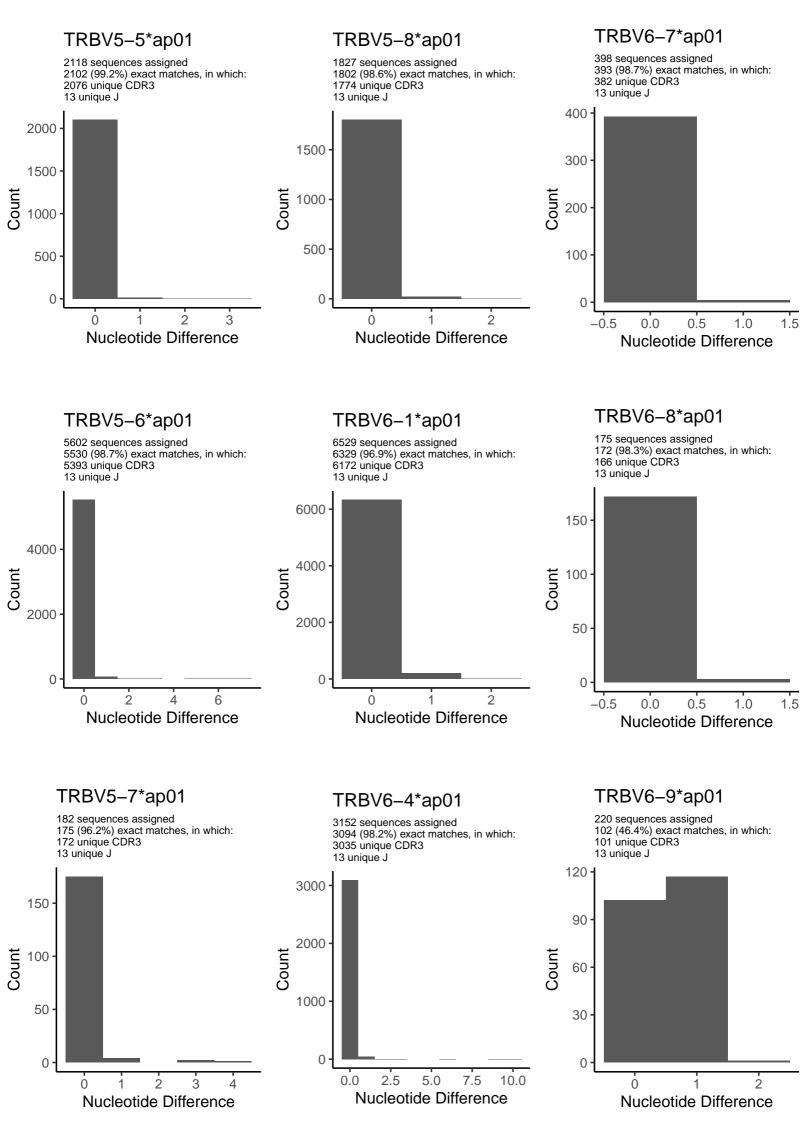


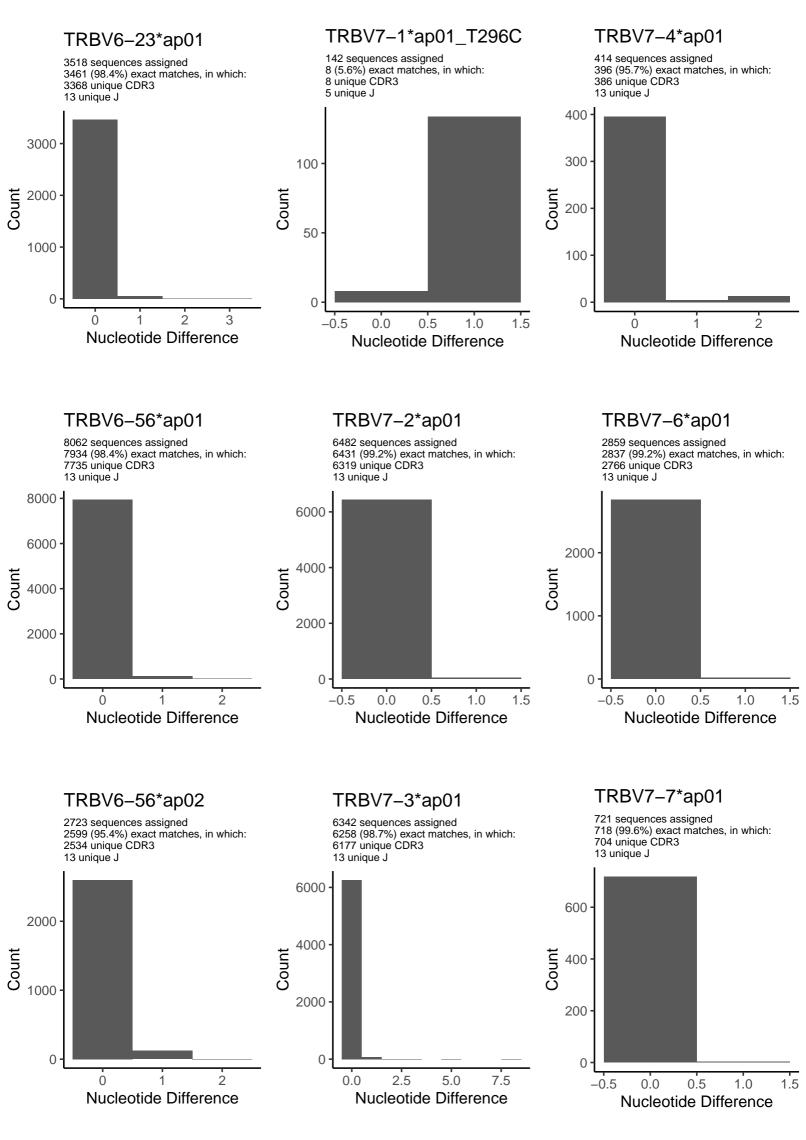








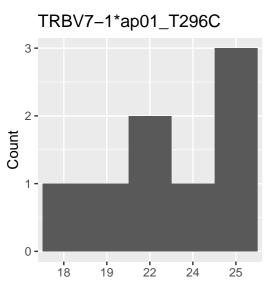




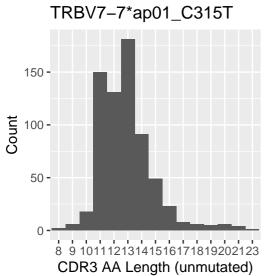
## TRBV7-7\*ap01\_C315T TRBV7-9\*ap01 692 sequences assigned 681 (98.4%) exact matches, in which: 665 unique CDR3 12331 sequences assigned 12209 (99%) exact matches, in which: 11994 unique CDR3 13 unique J 13 unique J 12500 600 10000 7500 Count 400 5000 200 2500 0 0 2 0 -0.50.0 0.5 1.0 1.5 **Nucleotide Difference Nucleotide Difference** TRBV7-8\*ap01 TRBV29-1\*ap01 2738 sequences assigned 2695 (98.4%) exact matches, in which: 6386 sequences assigned 6302 (98.7%) exact matches, in which: 2644 unique CDR3 6190 unique CDR3 13 unique J 13 unique J 6000 2000 4000 Count 1000 2000 0 0.5 -0.50.0 1.0 Nucleotide Difference Nucleotide Difference TRBV7-8\*ap03 TRBV29-1\*ap02 1221 sequences assigned 960 (78.6%) exact matches, in which: 1312 sequences assigned 1298 (98.9%) exact matches, in which: 1268 unique CDR3 942 unique CDR3 13 unique J 13 unique J 1000 750 1000 Count 500 500 250 0 0 -0.50.5 0.0 1.0 1.5

**Nucleotide Difference** 

**Nucleotide Difference** 



CDR3 AA Length (unmutated)





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