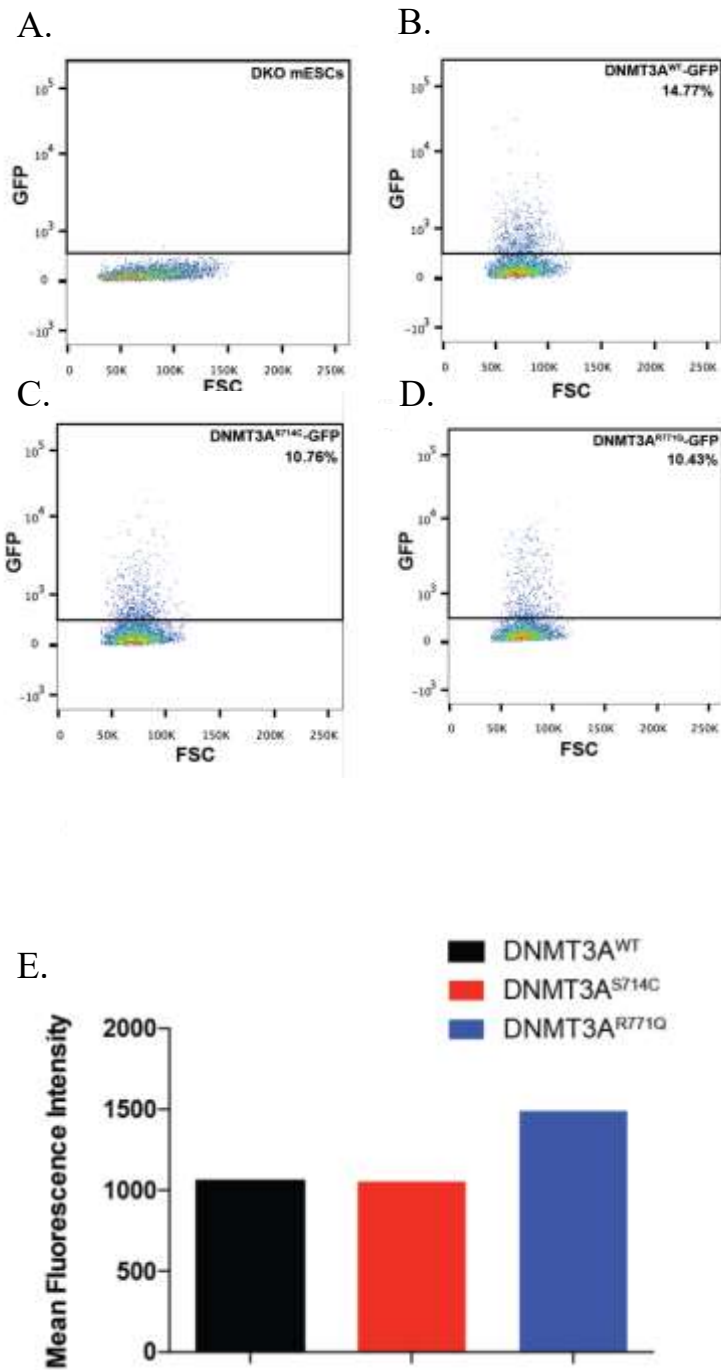


**Figure S1. Equal concentration of TDG to active DNMT3A tetramer maximally inhibits methylation by DNMT3A.** A. Wild type DNMT3A and B. R771Q at 150 nM tetramer were pre-incubated for 1 hour with increasing concentrations of TDG prior to starting the reaction by the addition of 5  $\mu$ M bp poly dI-dC. Product formation was measured after the reaction was run for 1 hour. 1:1, 1:2 and 1:3 concentrations of DNMT3A to TDG led to comparable levels of inhibition for wild type and R771Q.



**Figure S2. Cell sorting by flow cytometry following a two-week doxycycline induction.** The graphs depict the GFP expression percentage as determined by flow cytometry in DNMT3A mutant expressing DKO mESCs after doxycycline induction for two weeks (a-d). The graph depicts the mean fluorescence intensity of the DNMT3A mutant expressing DKO mESCs after induction as determined by flow cytometry (e).