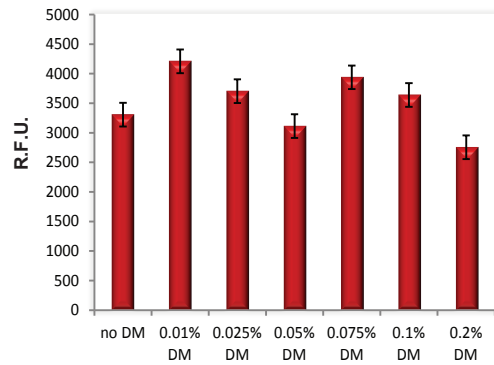
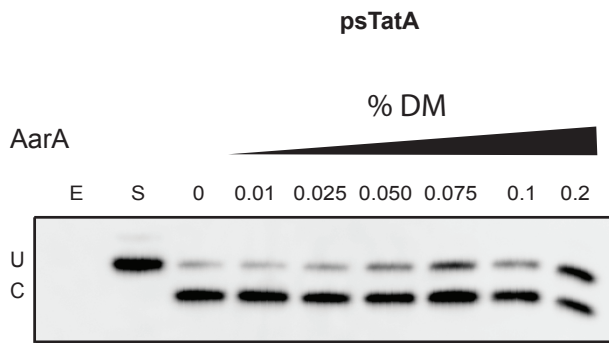


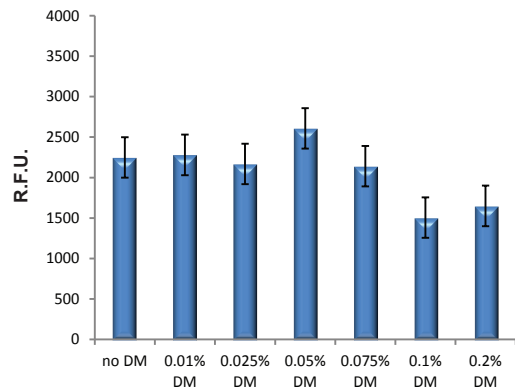
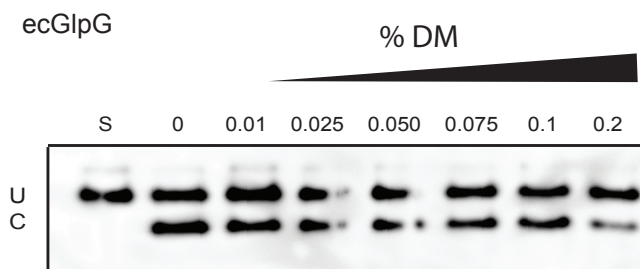
Enzyme

Substrate

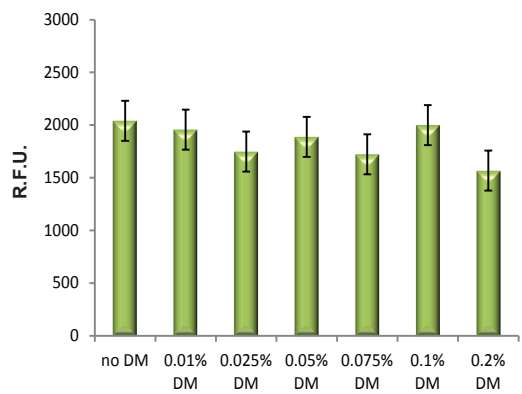
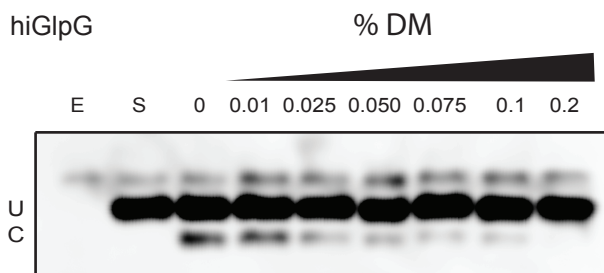
a



b



c



Supplemental Figure S4. DM influences rhomboid activity only at concentrations approaching its critical micellular concentration (CMC). The ability of the rhomboid enzymes - **(a)** AarA, **(b)** ecGlpG and **(c)** hiGlpG to cut either: Left: the transmembrane substrate psTatA or Right: FL-casein. To determine if DM itself inhibits activity, cleavage is measured with increasing DM concentrations (0-0.2%) in activity buffer containing 0.1% DDM. For AarA, we observe the decrease in activity only when DM concentration approaches the CMC value (0.08%). For hiGlpG we start to see the decrease in psTatA cleavage at 0.025% DM, suggesting possible low K_d for the dimers. For ecGlpG, 0.1 % of DM is needed to see the drop in activity. Since we do not observe inhibition of psTatA cleavage at lower DM concentrations, the DM itself is not inhibiting rhomboid enzyme. Notably, DM has little effect on the cleavage of the non-physiological substrate casein.