



**Supplementary Figure S4. BOS catalyzes the formation of  $\beta$ -ODAP from oxalyl-CoA and L-DAPA.** Reaction mixtures containing buffered solutions of purified BOS (1 $\mu\text{M}$ ), L-DAPA (480 $\mu\text{M}$ ), and oxalyl-CoA (1.8mM), Complete mix; L-DAPA (480 $\mu\text{M}$ ) and oxalyl-CoA (1.8mM), Ctrl 1 (-); or L-DAPA (480 $\mu\text{M}$ ), Ctrl 2 (-) were incubated for 1h at 37°C. The concentrations of  $\beta$ -ODAP,  $\alpha$ -ODAP and L-DAPA were determined by LC-MS. Data represent the mean  $\pm$  SD of 5 replicate samples.