



Figure S2. Acyl-CoA hydrolysis half-lives. Determination of the half-lives for spontaneous acyl-CoA hydrolysis in quenched reaction mixtures. Each solid line represents a fit of the data to the function $[A]_t = [A]_0 \exp(-kt)$. (A) Acetyl-CoA half-life is 92 h: $[A]_0 = 86 \mu\text{M}$ and $k = 0.0075 \pm 0.0001 \text{ h}^{-1}$. (B) Formyl-CoA half-life is 1.9 h: $[A]_0 = 23 \mu\text{M}$ and $k = 0.361 \pm 0.004 \text{ h}^{-1}$. (C) Oxalyl-CoA half-life is 29 h: $[A]_0 = 11.0 \mu\text{M}$ and $k = 0.0240 \pm 0.0003 \text{ h}^{-1}$. (D) Succinyl-CoA half-life is 343 h: $[A]_0 = 98 \mu\text{M}$ and $k = 0.00202 \pm 0.00003 \text{ h}^{-1}$.