Supplementary Figures

Supplemental Figure S 1. Examples of fitting calculations of isothermal titration calorimetry measurements

Plots of binding of $C_{14:0}$-CoA, $C_{18:2}$-CoA were reproduced from Figure 4 with the result of the MicroCal Origin fitting algorithm of the raw data. In each case, fitting was best for a model that included the presence of two categories of sites. As noted in the Result Section, in absence of the actual stoichiometry value of the binding of ligand to ACBD6, the K constant could not be calculated with certainty. The result of the injection of $C_{20:4}$-CoA in the chamber without protein is shown on the right panel.

Supplemental Figure S 2. Chemical structures

A. Two stereoisomers of oleic acid. **B.** The fluorescent molecule 16-NBD-$C_{16:0-}$CoA

Supplemental Figure S 3. Fluorescence quenching and unquenching of the 16-NBD-$C_{16:0-}$CoA ligand

A. Raw fluorescence data of the unquenching of the probe is plotted as function of the concentration of Tween-20 and BSA. **B**. Raw trace fluorescence of the quenching of 16-NBD-$C_{16:0-}$CoA in the acyl-transferase reaction of LPCAT1 in presence of increasing concentration of ACBD6 and of the mutant ACBD6 FKKY-AAAA are shown plotted as function of time. Note that at time 0, increasing the concentration of ACBD6 decreased the signal via binding to 16-NBD-$C_{16:0-}$CoA, and that in absence of ACBD6, the 16-NBD-$C_{16:0-}$CoA signal was quenched by its transfer onto lysoPC. ACBD6 prevented this transfer.

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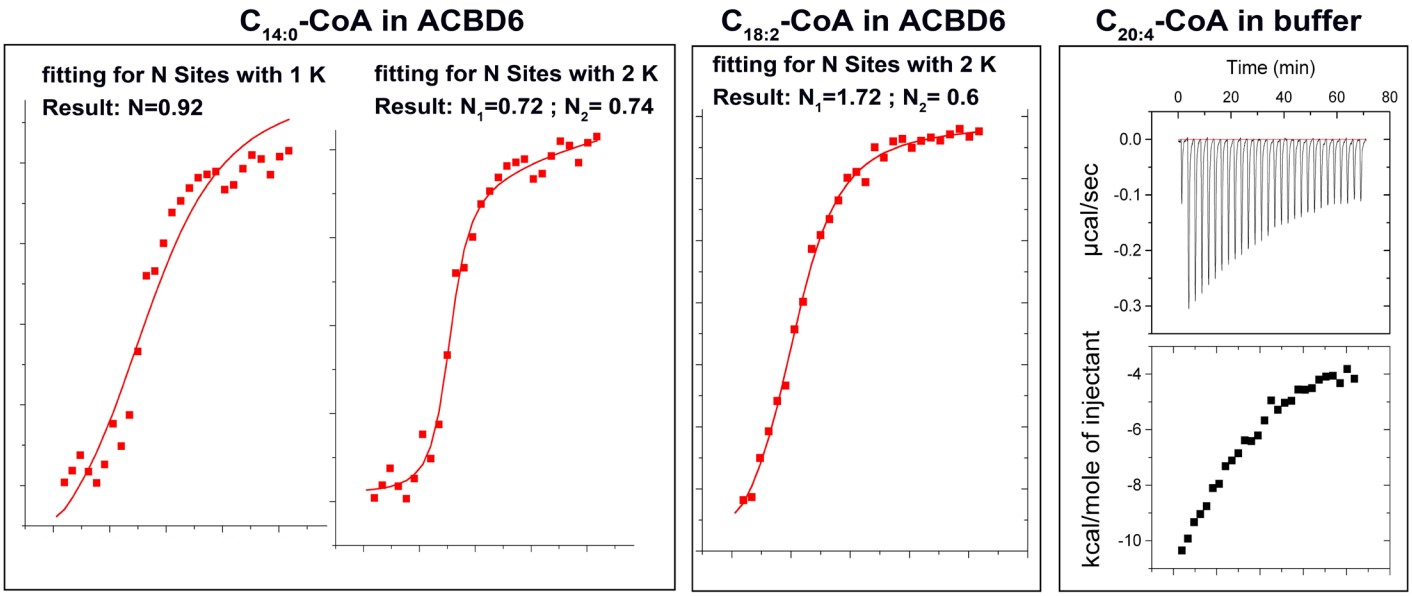

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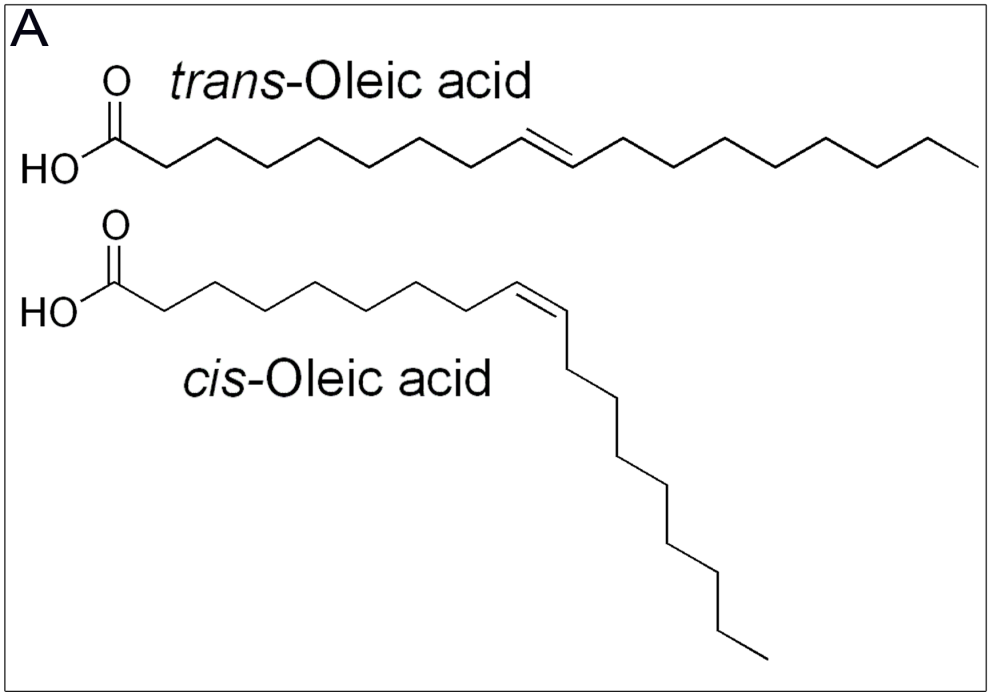

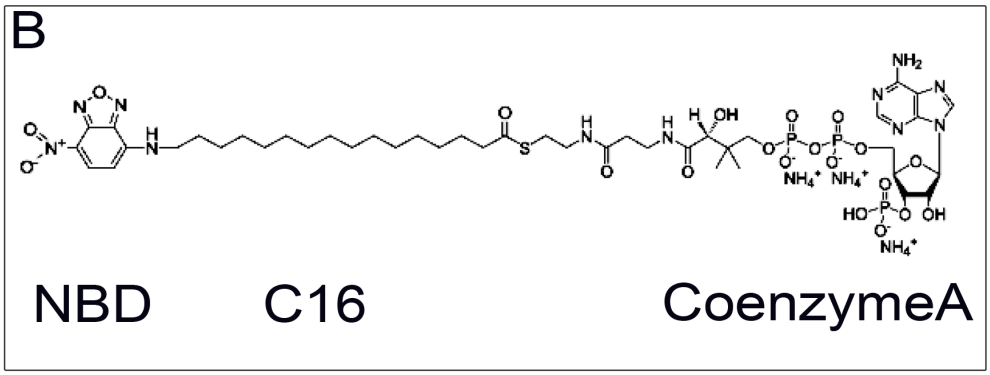

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