



**Supplementary Figure 1. NMR analysis of fatty acids from cell extracts.** 1D  $^1\text{H}$  NMR spectra of *S. solfataricus* cell extracts (A) and lipid standard (B). The insert in panel A corresponds to an expanded view of the 1.5 to 2.5 ppm spectral region of the 1D  $^1\text{H}$  NMR spectrum. The insert in panel B displays the generic chemical formula of a saturated fatty acid, with four distinct  $^1\text{H}$  chemical environments labelled as a, b, c, and d. The characteristic chemical shifts of these  $^1\text{H}$  are labeled correspondingly in both the 1D  $^1\text{H}$  NMR spectra of the *S. solfataricus* cell extract shown in panel A and the lipid standard sample shown in panel B.