



FIG S1 ^{31}P -NMR spectrum of glycerophosphoinositol (GPI) derived from the action of DIPP synthase/phosphatase present in cell extracts of *Archaeoglobus fulgidus*. The cell extract was supplied with commercial CDP-glycerol (equal parts of CDP-*sn*-1-glycerol and CDP-*sn*-3-glycerol) and L-*myo*-inositol-1-phosphate (L-ins-1P). $\text{GPI}_{(I)}$, resonance due to *sn*-glycero-3-phospho-3-L-*myo*-inositol, the sole stereoisomer of GPI present in *Aquifex* spp.; $\text{GPI}_{(II)}$, resonance due to *sn*-glycero-1-phospho-3-L-*myo*-inositol, the predominant stereoisomer of GPI present in *Archaeoglobus fulgidus*.