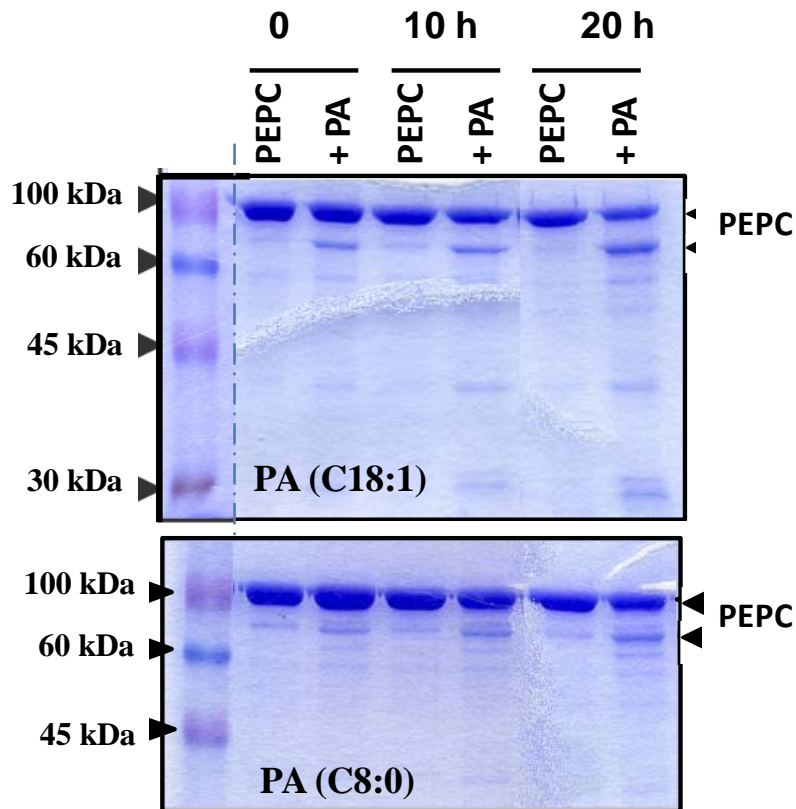
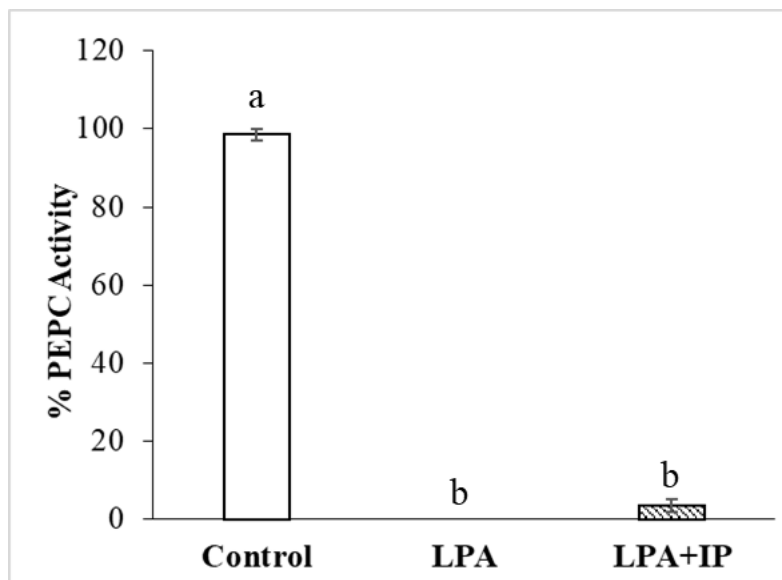
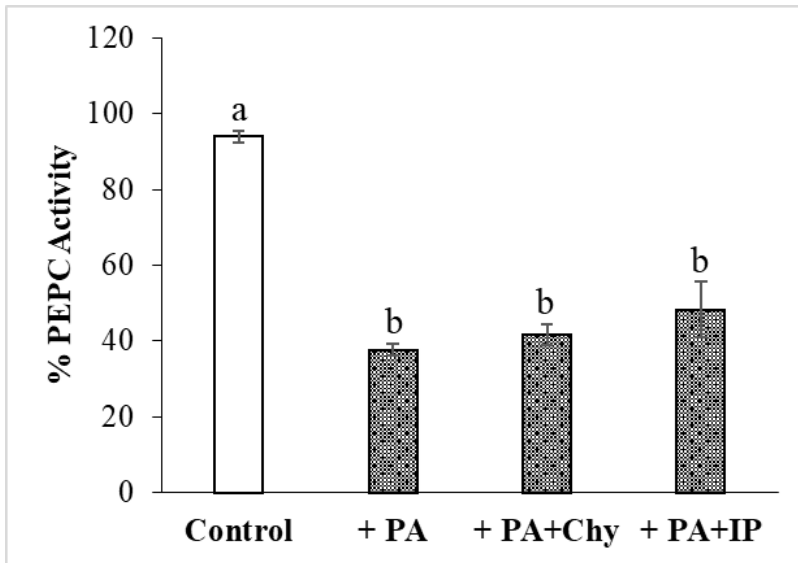


### *Supplementary Material*

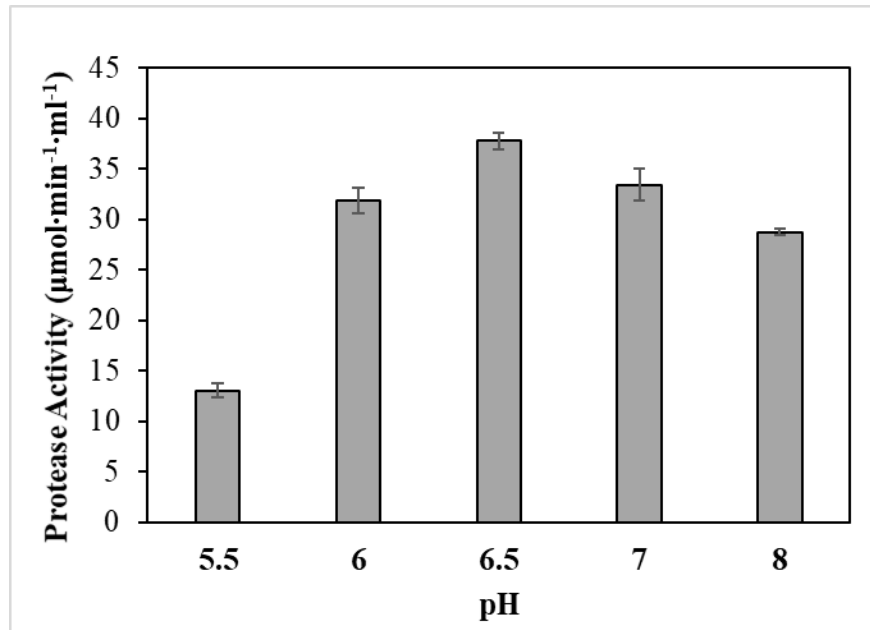
**Anionic phospholipids induce conformational changes in phosphoenolpyruvate carboxylase to increase sensitivity to cathepsin proteases.**



**Supplementary Figure S1.** PA appeared effective in degrading PEPC and comparable effects were observed for the physiological PA species, C18:1, and the water-soluble short-chain PA, C8:0. Sp-PEPC was incubated in the presence of 0.25 mM at 30 °C as is described in M&M. At the indicated times, 0.05 U PEPC aliquots were removed, subjected to SDS-PAGE and stained with Coomassie Blue.



**Supplementary Figure S2:** PEPC activity was not restored following incubation for 30 min with PA or LPA in the presence of proteases inhibitors. Chy, Chymostatin; IP, Sigma protease inhibitor cocktail containing AEBSF, 1,10-Phenanthroline, Pepstatin, Leupeptin, Bestatin and E-64. Data shown are the mean  $\pm$  SE (n=3). Different letters indicate significant differences according to Tukey B multiple range test,  $p < 0.05$ .



**Supplementary Figure S3.** Protease activity present in sp-PEPC is active over a wide pH range. Sp-PEPC was incubated with the cathepsin B-specific substrate, Z-RR-AMC, to assess the sensitivity of protease activity over the examined pH range. Series of buffers used: 0.1 M citrate (pH 5-6), 0.1 M phosphate (pH 6.5) and 0.1M Tris-HCl (pH 7-8). All buffers contained 0.15 M NaCl and 5 mM of MgCl<sub>2</sub>. Data are the mean±SE of triplicate measurement.