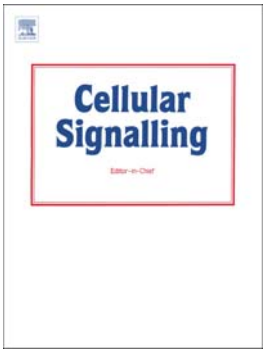

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Alpha-lipoic acid (PubChem CID: 864) / Endoplasmic reticulum stress / Mitochondrial dysfunction / Insulin resistance / HepG2 cells

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Abbreviations: ALA, alpha-lipoic acid; **ER stress,** endoplasmic reticulum (ER) stress; **HepG2,** hepatoblastoma cell line; **Tun,** tunicamycin; **OXPHOS,** oxidative phosphorylation; **Olig,** oligomycin; **T2DM,** type 2 diabetes mellitus; **IRS,** insulin receptor substrate; **PI3K,** phosphatidylinositol 3-kinase; **PKB/AKT,** protein kinase B; **IRE1α,** inositol-requiring enzyme 1α; **JNK,** c-Jun N-terminal kinase; **IKK,** inhibitor of κ kinase; **UPR,** unfolded protein response; **RC,** respiratory chain; **NAFLD,** non-alcoholic fatty liver disease; **DMEM,** Dulbecco's modified Eagle medium; **qRT-PCR,** quantitative polymerase chain reaction; **XBP1,** X-box-binding protein 1; **RLU,** relative luminescence units; **GPR78,** glucose-regulated protein 78; **CHOP,** C/EBP homologous protein; **IP3R1,** 1,4,5-trisphosphate receptor, type 1; **PACS-2,** phosphofurin acidic cluster sorting protein 2; **PPARα,** proliferator-activated receptor α; **CPT1α,** carnitine palmitoyltransferase 1α; **MAMs**, mitochondria-associated ER membranes; **OCR,** oxygen consumption rates