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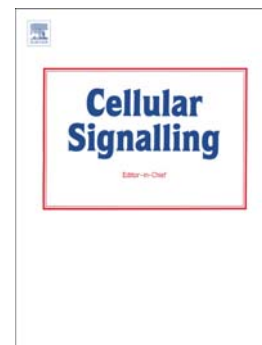
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Alpha-lipoic acid attenuates endoplasmic reticulum stress-induced insulin resistance by improving mitochondrial function in HepG2 cells

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KEY WORDS:

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; **IRE1 α** , inositol-requiring enzyme 1 α ; **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; **XPB1**, 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; **PPAR α** , proliferator-activated receptor α ; **CPT1 α** , carnitine palmitoyltransferase 1 α ; **MAMs**, mitochondria-associated ER membranes; **OCR**, oxygen consumption rates

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