#### *Peganum Harmala* enhanced GLP-1 and restored insulin signaling to alleviate AlCl<sub>3</sub>induced Alzheimer-Like pathology model

#### Authors

Rofida A Saleh<sup>1</sup>, Tarek F. Eissa<sup>2</sup>, Dalaal M. Abdallah<sup>1, \*</sup>, Muhammed A. Saad<sup>1,3</sup>, Hanan S. El-Abhar<sup>1,4</sup>

#### Affiliation

<sup>1</sup> Department of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University, Cairo, Egypt

<sup>2</sup> Faculty of Biotechnology, October University for Modern Sciences and Arts (MSA), Giza,

Egypt

<sup>3</sup> Department of Pharmacology and Toxicology, School of Pharmacy, Newgiza University,

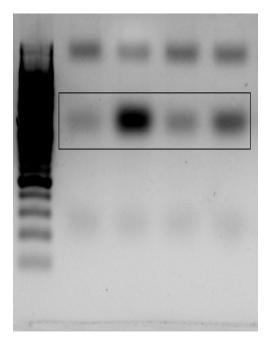
Cairo, Egypt

<sup>4</sup>Department of Pharmacology, Toxicology & Biochemistry, Faculty of Pharmaceutical Sciences and Pharmaceutical Industries, Future University in Egypt, Cairo, Egypt.

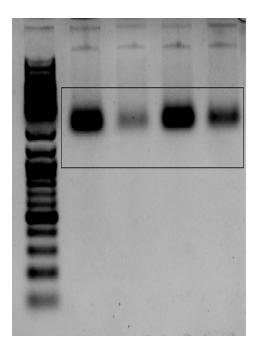
#### \* Corresponding author: dalaal.abdallah@pharma.cu.edu.eg

## Supplementary figure (S1)

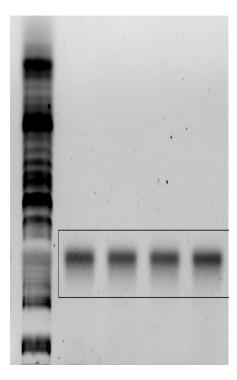
# (A)*p*S307-IRS-1



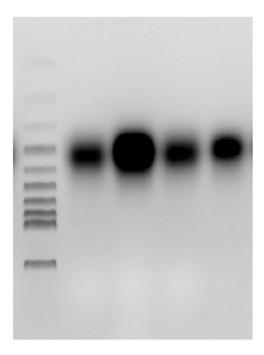
(B)*p*S473-Akt



## (C) β-actin



(D)*p*-tau



## (E) β-actin

