

Product Name : Nepodin

Synonyms : —

Cat No. : M22053

CAS Number : 3785-24-8

Molecular Formula : C₁₃H₁₂O₃

Formula Weight : 216.23

Chemical Name : —

Description : Nepodin has antimalarial, and anti-inflammatory activities, it shows significant cyclooxygenase (COX) inhibitory activity. Nepodin has an antidiabetic effect, which is at least partly mediated by stimulation of GLUT4 translocation via AMPK activation by nepodin. To obtain a novel modulator of glucose metabolism, we conducted screening of a small compound library in cultured L6 myotubes. We identified Nepodin that stimulated glucose uptake dose-dependently in differentiated L6 myotubes. The stimulatory effect of Nepodin on glucose uptake was abrogated by a 5'-adenosine monophosphate-activated protein kinase (AMPK) inhibitor. In addition, Nepodin stimulated the phosphorylation of AMPK. Nepodin also stimulated the translocation of GLUT4 to the plasma membrane in L6 myoblasts transfected with a Glut4 cDNA-coding vector and in differentiated L6 myotubes. In vivo study, Nepodin suppressed the increases in fasting blood glucose levels and improved the glucose intolerance of C57BL/KsJ-db/db mice, a type 2 diabetic animal model. Nepodin rescued the impaired phosphorylation of AMPK in the skeletal muscle of db/db mice.

Pathway : Chromatin/Epigenetic

Target : COX

Receptor : COX; AMPK; GLUT

Solubility : —

SMILES : CC(=O)C1=C(O)C2=C(C=CC=C2O)C=C1C

Storage : (-20°C)

Stability : ≥ 2 years

Reference :

1. Antidiabetic effect of nepodin, a component of *Rumex* roots, and its modes of action in vitro and in vivo. *Biofactors*. 2014 Jul-Aug;40(4):436-47.