

Product Data Sheet

Product Name: Kukoamine A

Cat. No.: GC44016

Chemical Properties

Cas. No. 75288-96-9

SMILES OC1=C(O)C=CC(CCC(NCCCNCCCCNCCCN(CCC2=CC(O)=C(O)C=C2)=O)=O)=C1

Formula C₂₈H₄₂N₄O₆

M.Wt 530.7

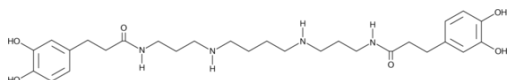
Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 30 mg/ml, PBS (pH 7.2): 10 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Kukoamine A is a spermine alkaloid originally isolated from *L. chinense* that has diverse biological activities, including anticancer, neuroprotective, and anti-inflammatory properties. Kukoamine A (5-20 µg/ml) inhibits colony formation of U251 and WJ1 glioblastoma cells in a concentration-dependent manner. It halts the cell cycle at the G₀/G₁ phase and induces apoptosis when used at concentrations of 60 and 80 µg/ml. Kukoamine A (20 and 40 µM) induces autophagy and increases cell viability in an SH-SY5Y cell model of MPP-induced injury. It increases the number of dopamine neurons in the substantia nigra and striatum, decreases α-synuclein expression, and improves motor function in an MPTP mouse model of Parkinson's disease when administered at a dose of 20 mg/kg per day. Kukoamine A (10 and 20 mg/kg) decreases IL-1β, TNF-α, and COX-2 protein levels in the hippocampus and increases hippocampal neurogenesis in a rat model of radiation injury. It also selectively inhibits trypanothione reductase (K_i = 1.8 µM), an enzyme that protects certain parasites from oxidative stress, over human glutathione reductase (K_i = >10 mM).

Caution: Product has not been fully validated for medical applications. For research use only.

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