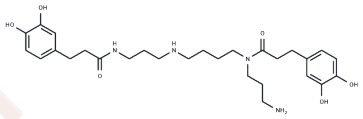
Data Sheet (Cat.No.T7026)

TargetMol

KukoaMine B

Chemical Properties



CAS No. : 164991-67-7

Formula: C28H42N4O6

Molecular Weight: 530.66

Storage: Store at low temperature,Keep away from direct sunlight,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Kukoamine B, as a constituent of Lycii Cortex, exhibits anti-acute inflammatory, anti-oxidant, and anti-diabetic characteristics.
Targets(IC50)	Apoptosis,MMP,Antioxidant,MAPK,Akt,DNA/RNA Synthesis,p38 MAPK,PI3K,ROS
In vitro	Kukoamine B is a spermine alkaloid first isolated from a traditional Chinese herb?L. chinense?that inhibits both lipopolysaccharides (LPS) and oligodeoxynucleotides containing CpG motifs (CpG DNA).It is reported to inhibit proinflammatory signal transduction and cytokine expression induced by LPS and CpG DNA (Kds = 1.24 and 0.66 μM).1LPS and CpG DNA are two well-recognized pathogen-associated molecular patterns (PAMPs) that play a role in triggering sepsis, thus sepsis may be attenuated by simultaneously neutralizing LPS and CpG DNA.Kukoamine B inhibit proinflammatory signal transduction and cytokine expression induced by LPS and CpG DNA (Kds = 1.24 and 0.66 μM). LPS and CpG DNA are two well-recognized pathogen-associated molecular patterns (PAMPs) that play a role in triggering sepsis, thus sepsis may be attenuated by simultaneously neutralizing LPS and CpG DNA.
In vivo	Kukoamine B(KB) had high affinities for LPS and CpG DNA. It neutralized LPS and CpG DNA and prevented them from interacting with mouse macrophages. KB selectively inhibited LPS- and CpG DNA-induced signal transduction and expression of pro-inflammatory mediators without interfering with signal pathways or cell viability in macrophages. KB protected mice challenged with heat-killed Escherichia coli, and reduced the circulatory levels of LPS and TNF-α[1].
Cell Research	The affinities of Kukoamine B for LPS and CpG DNA were assessed using biosensor technology.?Direct interaction of Kukoamine B with LPS and CpG DNA were evaluated using neutralization assays.?Selective inhibitory activities of Kukoamine B on pro-inflammatory signal transduction and cytokine expression induced by LPS and CpG DNA were analysed by cellular assays.?Protective effects of KB in a sepsis model in mice were elucidated by determining survival and circulatory LPS and tumour necrosis factor-alpha (TNF-α) concentrations.

Solubility Information

Solubility	DMSO: 150 mg/mL (282.67 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8844 mL	9.4222 mL	18.8445 mL
5 mM	0.3769 mL	1.8844 mL	3.7689 mL
10 mM	0.1884 mL	0.9422 mL	1.8844 mL
50 mM	0.0377 mL	0.1884 mL	0.3769 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kukoamine B, a novel dual inhibitor of LPS and CpG DNA, is a potential candidate for sepsis treatment