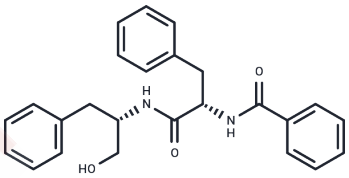
Data Sheet (Cat.No.T5814)

TargetMol

Aurantiamide

Chemical Properties



CAS No. : 58115-31-4

Formula: C25H26N2O3

Molecular Weight: 402.49

Storage: Keep away from direct sunlight
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	Aurantiamide has anti-cancer, anti-inflammatory and antinociceptive activities, it may suppress the growth of malignant gliomas by blocking autophagic flux.Aurantiamide has an anti-neuroinflammatory effect on LPS stimulation through its inhibition of the NF-κB, JNK and p38 pathways.
Targets(IC50)	MLK,NF-κB,p38 MAPK,RIP kinase
In vitro	Aurantiamide was shown to block the activation of nuclear factor-kappa B (NF-κB) in lipopolysaccharide (LPS)-induced BV2 microglial cells by inhibiting the phosphorylation of the inhibitor kappa B-α (IκB)-α. Aurantiamide decreased the phosphorylation levels of c-Jun N-terminal kinase (JNK) and p38 mitogen-activated protein kinases (MAPKs). Suggested that aurantiamide has an anti-neuroinflammatory effect on LPS stimulation through its inhibition of the NF-κB, JNK and p38 pathways[1].Aurantiamide has potent anti-viral and anti-inflammatory effects on IAV-infected cells via inhibition of the NF-κB pathway. Therefore ,Aurantiamide could be a potential therapeutic agent for the treatment of influenza[2].
Cell Research	The anti-viral activity of aurantiamide against Influenza A virus (IAV) was determined using the cytopathic effect (CPE) inhibition assay.?Viruses were titrated on Madin-Darby canine kidney (MDCK) cells by plaque assays.?Ribonucleoprotein (RNP) luciferase reporter assay was further conducted to investigate the effect of aurantiamide on the activity of the viral polymerase complex.?HEK293T cells with a stably transfected NF-κB luciferase reporter plasmid were employed to examine the activity of aurantiamide on NF-κB activation.?Activation of the host signaling pathway induced by IAV infection in the absence or presence of aurantiamide was assessed by western blotting.?The effect of aurantiamide on IAV-induced expression of pro-inflammatory cytokines was measured by real-time quantitative PCR and Luminex assays[2].

Solubility Information

Solubility	DMSO: 100 mg/mL (248.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.2 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4845 mL	12.4227 mL	24.8453 mL
5 mM	0.4969 mL	2.4845 mL	4.9691 mL
10 mM	0.2485 mL	1.2423 mL	2.4845 mL
50 mM	0.0497 mL	0.2485 mL	0.4969 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

Yoon C S , Kim D C , Lee D S , et al. Anti-neuroinflammatory effect of aurantiamide acetate from the marine fungus Aspergillus sp. SF-5921: Inhibition of NF-κB and MAPK pathways in lipopolysaccharide-induced mouse BV2 microglial cells[J]. International Immunopharmacology, 2014, 23(2):568-574.

Zhou B , Yang Z , Feng Q , et al. Aurantiamide acetate from baphicacanthus cusia root exhibits anti-inflammatory and anti-viral effects via inhibition of the NF-κB signaling pathway in Influenza A virus-infected cells[J]. Journal of Ethnopharmacology, 2017, 199:60-67.