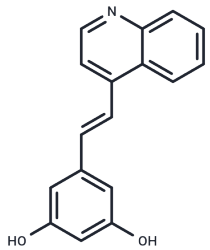
Data Sheet (Cat.No.T12781)

RV01

Chemical Properties



CAS No. : 1016897-10-1

Formula: C17H13NO2

Molecular Weight: 263.29

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	RV01 is a novel quinoline-substituted analogue of resveratrol that inhibits DNA damage, reduces ethanol-induced acetaldehyde dehydrogenase (ALDH2) mRNA expression, and has hydroxyl radical scavenging activity. rV01 reduces iNOS expression and has anti-neuroinflammatory effects. rV01 reduces tumor necrosis factor-a (TNF-a) and interleukin-6 (IL-6) mRNA levels and secretion. RV01 reduced tumor necrosis factor-a (TNF-a) and interleukin-6 (IL-6) mRNA levels and secretion, inhibited lps-induced ROS production and nicotinamide adenine dinucleotide phosphate (NADPH) oxidase activation, decreased toll-like receptor 4 (TLR4) protein expression, and inhibited lps-induced activation of mitogen-activated protein kinase (MAPK) and nuclear transcription factor-κB (NF-κB) signaling pathways.
Targets(IC50)	NF-κB,MAPK,Dehydrogenase,TLR
In vitro	The anti-neuroinflammatory effect of a novel quinolyl-substituted analogue of resveratrol (RV01) on lipopolysaccharide (LPS)-induced microglial activation is investigated, as well as the possible underlying mechanisms. Cell viability is measured using an MTT assay. Nitric oxide (NO) release is determined by nitrite assay. Free radical scavenging activity and reactive oxygen species (ROS) production are determined by DPPH reduction assay and DCFH-DA assay. Pretreatment with RV01 (1-30 μm) prior to LPS (1 μg mL-1) stimulation decreased NO release and iNOS expression without observable cytotoxicity. RV01 reduced the mRNA levels and secretion of tumor necrosis factor-α (TNF-α) and interleukin-6 (IL-6). RV01 also inhibited LPS-induced ROS production and nicotinamide adenine dinucleotide phosphate (NADPH) oxidase activation. Furthermore, RV01 decreases the protein expression of toll-like receptor 4 (TLR4) and inhibits the LPS-induced activation of the mitogen-activated protein kinase (MAPK) and nuclear transcription factor-κB (NF-κB) signaling pathways. Additionally, conditioned medium from microglia co-treated with LPS and RV01 alleviates the death of SH-SY5Y cells induced by conditioned medium from activated N9 microglial cells. Lastly, a mouse neuroinflammation model is further used to confirm the effect of RV01 in vivo. These results show that RV01 suppresses microglia-mediated neuroinflammation and protects neurons from inflammatory damage.[2]

Solubility Information

Solubility	DMSO: 45 mg/mL (170.91 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7981 mL	18.9905 mL	37.9809 mL
5 mM	0.7596 mL	3.7981 mL	7.5962 mL
10 mM	0.3798 mL	1.899 mL	3.7981 mL
50 mM	0.076 mL	0.3798 mL	0.7596 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.

Reference

Yan Y, et al. Protection of resveratrol and its analogues against ethanol-induced oxidative DNA damage in human peripheral lymphocytes. Mutat Res. 2011 Apr 3;721(2):171-7.

Hou Y, et al. A Novel Quinolyl-Substituted Analogue of Resveratrol Inhibits LPS-Induced Inflammatory Responses in Microglial Cells by Blocking the NF-κB/MAPK Signaling Pathways. Mol Nutr Food Res. 2019;63(20):1801380.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481