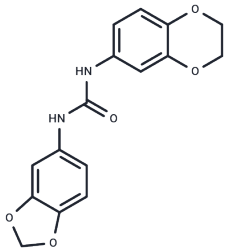
Data Sheet (Cat.No.T207037)

TargetMol

TRPV1 antagonist 10

Chemical Properties



CAS No. : 896584-55-7

Formula: C16H14N2O5

Molecular Weight: 314.293

Storage: 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	TRPV1 antagonist 10 is a potent, orally active TRPV1 antagonist with an IC50 of 33.06 nM and serves as a moderate to weak inhibitor of URAT1 (IC50 = 22.51 μM) and GLUT9 (inhibition of 60.25% at 50 μM). It exhibits analgesic and urate-lowering properties and is applicable for research in hyperuricemia and inflammatory pain.
Targets(IC50)	OAT,Cytochromes P450,transporter,TRP/TRPV Channel
In vitro	TRPV1 antagonist 10 (Compound 39) exhibits an inhibition rate of 60.25% on GLUT9 in HEK293T cells treated with UA (1 mM) at a concentration of 50 μM over 24 hours. When administered at concentrations ranging from 0 to 400 μM for 24 to 72 hours, TRPV1 antagonist 10 shows increased cytotoxicity in HepG2 and HK2 cells as both dosage and incubation time increase. Additionally, TRPV1 antagonist 10 demonstrates high metabolic stability in human and rat liver microsomes at concentrations of 0 to 100 μM over a period of 3 to 20 minutes.
In vivo	TRPV1 antagonist 10 (Compound 39) demonstrates a dose-dependent analgesic effect in male Kunming mice models of formalin-induced phase I and II pain when administered orally as a single dose (3-20 mg/kg). Additionally, this compound, when given orally at 10-20 mg/kg for 21 consecutive days, reduces uric acid levels and improves renal function in hyperuricemic mouse models, with significant effects observed at 20 mg/kg. A single oral administration at 500 mg/kg does not result in noticeable behavioral abnormalities, nor does it affect body weight or food intake in healthy Kunming mice. Furthermore, administration at 100 mg/kg every other day for 14 days also shows no adverse effects on behavior, body weight, or food intake in healthy Kunming mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1818 mL	15.9089 mL	31.8177 mL
5 mM	0.6364 mL	3.1818 mL	6.3635 mL
10 mM	0.3182 mL	1.5909 mL	3.1818 mL
50 mM	0.0636 mL	0.3182 mL	0.6364 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.