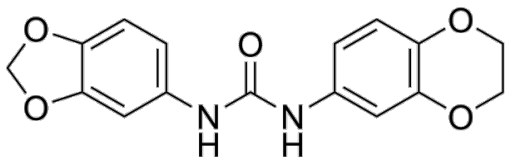
Product Data Sheet

Product Name: TRPV1 antagonist 10
Cat. No.: GC81725

Chemical Properties

Cas. No.	896584-55-7		
Formula	$C_{16}H_{14}N_2O_5$	M.Wt	314.29
Solubility	DMSO: 70 mg/mL (222.72 mM; Need ultrasonic)	Storage	Store at 4°C, sealed storage, away from moisture
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

TRPV1 antagonist 10 is an orally active and potent TRPV1 antagonist (IC_{50} = 33.06 nM), moderate to weak URAT1 (IC_{50} = 22.51 μM) and GLUT9 (60.25% at 50 μM) inhibitor. TRPV1 antagonist 10 has analgesic and urate-lowering effect. TRPV1 antagonist 10 can be studied for research in

hyperuricemia and inflammatory pain [1].

In Vivo, TRPV1 antagonist 10 (Compound 39) (3-20 mg/kg, p.o., one single dose) shows dose-dependent analgesic effect in both Formalin-induced phase I and phase II pain in male Kunming mice model[1]. TRPV1 antagonist 10 (10-20 mg/kg, p.o., 21 consecutive days) reduces the uric acid level and improves the renal function at 20 mg/kg in hyperuricemia mice model[1]. TRPV1 antagonist 10 (500 mg/kg, p.o., one single dose) leads to no obvious abnormal behaviors and difference in weight and food intake in healthy Kunming mice[1]. TRPV1 antagonist 10 (100 mg/kg, p.o., every other day for 14 consecutive days) leads to no obvious abnormal behaviors and difference in weight and food intake in healthy Kunming mice[1].

In Vitro, TRPV1 antagonist 10 (Compound 39) (50 μM, 24 h) shows 60.25% inhibition rate against GLUT9 in UA (1 mM)-treated HEK293T cells[1]. TRPV1 antagonist 10 (0-400 μM, 24-72 h) exhibits higher levels of cytotoxicity on HepG2 and HK2 cells with increasing dose and time of incubation[1]. TRPV1 antagonist 10 (0-100 μM, 3-20 min) shows high metabolic stability in human and rat liver microsomes[1].

References:
[1]. Chunxia Liu, et al., Structure Optimization of Natural Product Piperine to Obtain Novel and Potent Analogs with Anti-inflammation Pain and Urate-Lowering Effect, European Journal of Medicinal Chemistry, 2025, 117649, ISSN 0223-5234