

Product Data Sheet

Product Name: TRPV1 antagonist 10

Cat. No.: GC81725

Chemical Properties

Cas. No. 896584-55-7

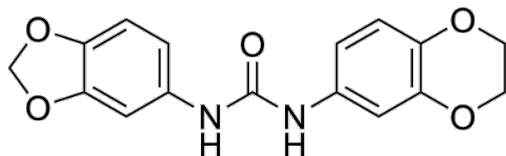
Formula $C_{16}H_{14}N_2O_5$ M.Wt 314.29

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 ($IC_{50} = 22.51$ μ M) and GLUT9 (60.25% at 50 μ M) inhibitor. TRPV1 antagonist 10 has analgesic and urate-lowering effect. TRPV1 antagonist 10 can be studied for research in

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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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 μ M, 24 h) shows 60.25% inhibition rate against GLUT9 in UA (1 mM)-treated HEK293T cells^[1]. TRPV1 antagonist 10 (0-400 μ M, 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 μ M, 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

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