

URAT1 inhibitor 3

Chemical Properties

CAS No. :

Formula: C₁₄H₈Cl₂N₂O₂

Molecular Weight: 307.13

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	URAT1 inhibitor 3 is a potent, orally active, selective inhibitor of URAT1 (IC ₅₀ = 0.8 nM) demonstrating urate-lowering efficacy, suitable for research in gout and hyperuricemia [1].
Targets(IC ₅₀)	OAT,Others
In vitro	URAT1 inhibitor 3, at concentrations ranging from 0-400 μM, demonstrated low toxicity and inhibited the viability of HepG2 and HK2 cells only at higher concentrations, over periods of 24 and 72 hours, with minimal cytotoxic effects noted at the 24-hour mark and an inhibition rate of 34.75% for HepG2 cells and 35.9% for HK2 cells. Additionally, at doses between 0.01-100 μM, this inhibitor displayed reduced effectiveness against urate excretion transporters, possessing IC ₅₀ values of 10.16 μM for OAT1 and 4.04 μM for ABCG2, indicating a lesser impact on these specific transporters compared to its overall cell viability effects.
In vivo	URAT1 inhibitor 3, administered via oral gavage to male Kunming mice in a hyperuricemia model, demonstrated urate-lowering efficacy at doses of 1-4 mg/kg in a single dose, significantly reducing serum urate levels in a dose-dependent manner without causing hepatic or renal toxicities when administered daily at 50 mg/kg over 14 days. Additionally, a single dose of 50 mg/kg resulted in a notable depletion of serum GSH levels from 42.23 μM to 20.39 μM, indicating its impact on oxidative stress markers in this model [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.256 mL	16.2798 mL	32.5595 mL
5 mM	0.6512 mL	3.256 mL	6.5119 mL
10 mM	0.3256 mL	1.628 mL	3.256 mL
50 mM	0.0651 mL	0.3256 mL	0.6512 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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