

M464

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

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	M464 is a potent and orally active non-steroidal anti-inflammatory compound functioning as an NLRP3 inflammasome inhibitor. It works by preventing ASC oligomerization and decreasing ROS production, thereby inhibiting pyroptosis and blocking the expression of downstream Caspase-1 and the release of IL-1 β . M464 demonstrates protective effects against acute lung and liver injury in mice and can be utilized in research on NLRP3-related inflammatory diseases.
Targets(IC50)	Caspase,NOD-like Receptor (NLR),Pyroptosis
In vitro	M464, at concentrations of 3-12 μ M, inhibits the expression of marker proteins associated with NLRP3 inflammasome activation, including IL-1 β and Caspase-1, as well as suppresses the production of intracellular ROS and the formation of ASC oligomers in J774A.1 and THP-1 cells. Additionally, M464 (3-12 μ M; 1 hour) prevents macrophage pyroptosis triggered by NLRP3 inflammasome stimuli in J774A.1 and THP-1 cells.
In vivo	Administered at doses of M464 (15, 30, 60 mg/kg; orally; 1 hour prior to LPS injection), the compound reduces LPS-induced acute lung injury in mice by inhibiting NLRP3 inflammasome activation. In the same dosage and administration manner, M464 also mitigates acute liver injury in mice triggered by LPS and D-GalN, again through the inhibition of NLRP3 inflammasome activation.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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