Product Data Sheet

Product Name: Thiazinamium chloride (Multergan chloride)
Cat. No.: GC31807

Chemical Properties

Cas. No.	4320-13-2		
SMILES	C[N+](C)(C)C(C)CN1C2=C(C=CC=C2)SC3=CC=CC=C13.[Cl-]		
Formula	$C_{18}H_{23}ClN_2S$	M.Wt	334.91
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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			

Protocol

Cell experiment:

Rats are anesthetized with an intraperitoneal injections of sodium pentobarbital (43mg/kg body wt) and exsanguinated by cardiac puncture; their lungs are isolated and lavaged with a total of 50mL of lavage solution. Lungs that exhibit infection or gross pathological changes are not used. The lavage fluid containing macrophages is centrifuged at 300g for 10 min, and the cell pellet is resuspended in serum free M199. Macrophage monolayers are established by incubating 1.5x106 cells in petri dishes (35x10mm) for 2 hr in an atmosphere of 95% room air and 5% carbon dioxide. After washing with I-IBSS to remove non-adherent cells, the cultures are incubated in serum-free Ml99 with or without zymosan (100μg/mL) in the absence or presence of drugs(including Thiazinamium chloride)[1].

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References:

[1]. Chang J, et al. Effects of thiazinamium chloride, promethazine and chlorpromazine on thromboxane B2 synthesis, phagocytosis and respiratory burst by rat alveolar macrophages. Biochem Pharmacol. 1983 Sep 15;32(18):2671-7.

Background

Thiazinamium chloride possesses potent anticholinergic and antiallergic activity and inhibits TxB2 synthesis with IC50 value of 0.2 μM.

TxB2 synthesis by resting macrophages is inhibited by thiazinamium chloride and promethazine in a dose-dependent manner. Thiazinamium chloride inhibits TxBz synthesis but had no effect on the ingestion of zymosan particles. In contrast, chlorpromazine inhibits phagocytosis but not TxBz synthesis except at lo-3 M. Under the condition where indomethacin, a nown cyclooxygenase inhibitor, is inhibitory, promethazine but not thiazinamium chloride inhibits TxB2 synthesis from exogenous arachidonic acid. Treatment of macrophages with promethazine and chlorpromazine but not thiazinamium chloride results in a reduction in the oxidative burst during phagocytosis. Furthermore, the ability of thiazinamium chloride to selectively inhibit arachidonic acid metabolism may contribute to its bronchodilator/antiallergic activity[1].

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