Methapyrilene hydrochloride

Cat. No.: HY-B1483

CAS No.: 135-23-9

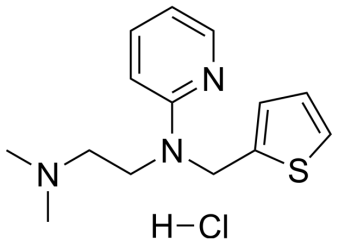
Molecular Formula: $C_{14}H_{20}ClN_3S$

Molecular Weight: 297.85

Target: Histamine Receptor

Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Methapyrilene (Thenylpyramine) hydrochloride is an orally active H1-receptor antihistamine and an anticholinergic agent of the pyridine chemical class. Methapyrilene hydrochloride has hepatotoxicity and can be used as a hepatotoxin that cause periportal hepatic necrosis in vivo[2]
IC_{50} & Target	H_1 Receptor
In Vitro	Methapyrilene hydrochloride (650 μM) results in a down-regulation of TF and up-regulation of FTL, while the level of HMOX1 is not changed. Additionally, the levels of CD44 and SOX9 proteins and the expression of PROM1 (CD133), hepatic stem cell-associated markers are increased[1]. Methapyrilene hydrochloride (650 μM) decreases CYP2E1, CYP3A4, NR1l3, ALB, mRNA expression and increases CD133 expression[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Methapyrilene hydrochloride (oral gavage; 40 or 80 mg/kg; 5 days per week; 6 weeks) results in changes in the expression of classic hepatotoxicity-related marker genes and iron homeostasis-related genes, especially a prominent, dose-dependent down-regulation of the transferrin (Tf) gene and an up-regulation of the ferritin, light chain (FTL) gene in rats[1]. Methapyrilene hydrochloride (oral gavage; 150 mg/kg; 3 days) causes periportal liver necrosis at high dosage. Methapyrilene is sufficient to induce liver necrosis, or a subtoxic dose of 50 mg/kg/day[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Iryna Kindrat, et al.Effect of methapyrilene hydrochloride on hepatic intracellular iron metabolism in vivo and in vitro. Toxicol Lett. 2017 Nov 5;281:65-73.

[2]. Andrew Craig, et al. Systems toxicology: integrated genomic, proteomic and metabonomic analysis of methapyrilene induced hepatotoxicity in the rat. J Proteome Res. 2006 Jul;5(7):1586-601.

[3]. Shawkat-Muhialdin Jangi, et al. H1 histamine receptor antagonists induce genotoxic and caspase-2-dependent apoptosis in human melanoma cells. Carcinogenesis. 2006 Sep;27(9):1787-96.

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

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