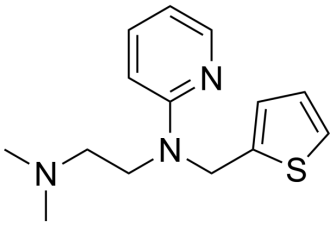
Methapyrilene

Cat. No.:	HY-111130
CAS No.:	91-80-5
Molecular Formula:	$C_{14}H_{19}N_3S$
Molecular Weight:	261.39
Target:	Histamine Receptor; mAChR
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 is a histamine antagonist, a pyridine chemical with anticholinergic activity. Methapyrilene can cause target organ-specific epigenetic alterations, such as a decrease in DNA methylation levels. Methapyrilene induces hepatocellular carcinoma in rats[1][2].
In Vitro	Methapyrilene (650 μM, 72 h) decreases the transcriptional level of transferrin and is accompanied by a decrease in transferrin protein levels in HepRG cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Methapyrilene (gavage with water (vehicle), 50 or 150 mg/kg, daily, 3 days) can induce hepatotoxicity and lead to periportal hepatic necrosis in rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar derived AlpK:APfSD (Alderley Park) rats[2]
Dosage:	50 mg/kg, 150 mg/kg
Administration:	Gavage with water (vehicle), daily, 3 days
Result:	Showed mild to moderate periportal hepatocyte degeneration and necrosis as well as acute inflammatory cells were observed in the filtering periportal vein at a dose concentration of 150 mg/kg. Decreased levels of both glucose and glycogen in the liver. Showed higher levels of succinic acid and dimethylglycine of urine obtained from the low dose group of 50 mg/kg.

REFERENCES

[1]. Volodymyr Tryndyak, et al. Effect of aflatoxin B1, benzo[a]pyrene, and methapyrilene on transcriptomic and epigenetic alterations in human liver HepaRG cells. Food Chem Toxicol. 2018 Nov;121:214-223.

[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):1586-60

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

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