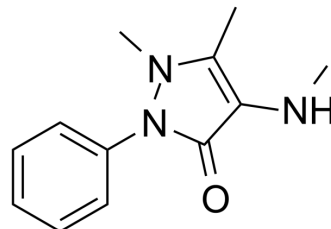


4-Methylamino antipyrine

Cat. No.:	HY-135731		
CAS No.:	519-98-2		
Molecular Formula:	C ₁₂ H ₁₅ N ₃ O		
Molecular Weight:	217.27		
Target:	COX; Drug Metabolite		
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (230.13 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	4.6026 mL	23.0128 mL	46.0257 mL
		5 mM	0.9205 mL	4.6026 mL	9.2051 mL
10 mM		0.4603 mL	2.3013 mL	4.6026 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (11.51 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (11.51 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	4-Methylamino antipyrine is an active metabolite of Metamizole. Metamizole is a pyrazolone non-steroidal anti-inflammatory drug (NSAID) and inhibits COX. Metamizole is a nonopioid analgesic drug and can be used for pain and fever [1][2][3]. 4-Methylamino antipyrine has analgesic, antipyretic, and relatively weak antiinflammatory properties[2].
IC₅₀ & Target	COX[2][3]
In Vitro	Metamizole is a prodrug which, at room temperature and in an atmosphere with oxygen, is spontaneously, nonenzymatically converted to 4-Methylamino antipyrine. Subsequently, the N-methyl side chain of 4-Methylamino antipyrine is oxidized to yield 4-formylaminoantipyrine, which is further converted to 4-aminoantipyrine. Metamizole in aqueous solution and in the presence of oxygen consists of a group of several pyrazolone derivatives of which 4-

Methylamino antipyrine is pharmacologically the most important^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The aim of this study is to assess the pharmacokinetics of its active metabolites 4-Methylamino antipyrine in male piglets after a single intramuscular injection of Metamizole. Eight healthy male piglets are administered Metamizole (100 mg/kg) intramuscularly. 4-Methylamino antipyrine plasma concentrations are quantitatively detectable from 0.25 to 48 h. The average maximum concentrations of 4-Methylamino antipyrine is of 47.59 mg/mL. The average half-lives is 8.57 h for 4-Methylamino antipyrine^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Burmańczuk A, et al. Pharmacokinetic investigations of the marker active metabolites 4-methylamino-antipyrine and 4-amino-antipyrine after intramuscular injection of metamizole in healthy piglets. *J Vet Pharmacol Ther.* 2016 Dec;39(6):616-620.

[2]. Ariza A, et al. Pyrazolones metabolites are relevant for identifying selective anaphylaxis to metamizole. *Sci Rep.* 2016 Mar 31;6:23845.

[3]. Campos C1, et al. Regulation of cyclooxygenase activity by metamizol. *Eur J Pharmacol.* 1999 Aug 13;378(3):339-47.

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

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