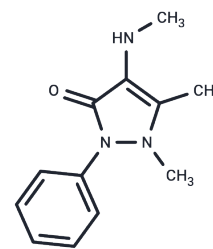


4-Methylamino antipyrine

Chemical Properties

CAS No. :	519-98-2
Formula:	C ₁₂ H ₁₅ N ₃ O
Molecular Weight:	217.27
Storage:	Keep away from direct sunlight
	Pure form: -20°C for 3 years In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	4-Methylamino antipyrine, an active metabolite of Metamizole, a pyrazolone non-steroidal anti-inflammatory drug (NSAID) that inhibits COX, possesses analgesic, antipyretic, and relatively weak anti-inflammatory properties.
Targets(IC50)	COX, Drug Metabolite
In vitro	At room temperature and in an atmosphere with oxygen, Metamizole 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 [2].
In vivo	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 concentration of 4-Methylamino antipyrine is 47.59 mg/mL. The average half-lives is 8.57 h for 4-Methylamino antipyrine [1].

Solubility Information

Solubility	DMSO: 2.78 mg/mL (12.8 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (4.6 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0921 mL	0.4603 mL	0.9205 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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.

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

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

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