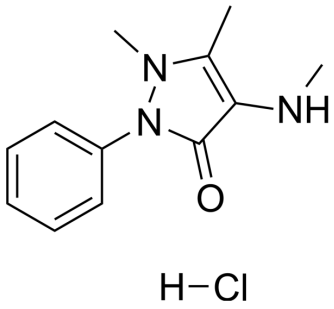
4-Methylamino antipyrine hydrochloride

Cat. No.:	HY-135731A
CAS No.:	856307-27-2
Molecular Formula:	$C_{12}H_{16}ClN_3O$
Molecular Weight:	253.73
Target:	COX; Drug Metabolite
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	4-Methylamino antipyrine hydrochloride is an active metabolite of Metamizole. Metamizole is a pyrazolone non-steroidal anti-inflammatory drug (NSAID) and inhibits COX. Metamizole is an nonopioid analgesic agent and can be used for pain and fever[1][2][3]. 4-Methylamino antipyrine hydrochloride has analgesic, antipyretic, and relatively weak antiinflammatory properties[2].
IC_{50} & 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 concentration 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]. Campos C1, et al. Regulation of cyclooxygenase activity by metamizol. Eur J Pharmacol. 1999 Aug 13;378(3):339-47.

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

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

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