Amfenac Sodium Hydrate

Cat. No.: HY-17479A

CAS No.: 61618-27-7

Molecular Formula: $C_{15}H_{14}NNaO_4$

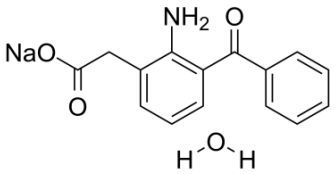
Molecular Weight: 295.27

Target: COX

Pathway: Immunology/Inflammation

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 : 150 mg/mL (508.01 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3867 mL	16.9337 mL	33.8673 mL
	5 mM	0.6773 mL	3.3867 mL	6.7735 mL
	10 mM	0.3387 mL	1.6934 mL	3.3867 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Amfenac Sodium Hydrate is a COX-2 inhibitor.

IC_{50} & Target

COX-2

In Vitro

Cells transfected to express COX-2 have a higher proliferation rate than those do not. The addition of Amfenac Sodium Hydrate significantly decreases the proliferation rate of all cell lines. Nitric oxide production by macrophages is inhibited by the addition of melanoma conditioned medium, the addition of Amfenac Sodium Hydrate partially overcomes this inhibition [1]. Results show that Amfenac Sodium Hydrate inhibits the release of B-glucuronidase: 5×10^{-4} M Amfenac Sodium Hydrate inhibits the release of the enzyme 35.3 and 16.3% in the presence of 10^{-8}, and 10^{-7} M FMLP, respectively. Addition of 10^{-4} M Amfenac Sodium Hydrate causes 28.3% inhibition of aggregation of polgmorphonuclear leukocgtes (PMNs) during incubation for 16 min with 10^{-8} M FMLP[2].

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

PROTOCOL

Cell Assay [1]

Human uveal melanoma cell lines are transfected to constitutively express COX-2 and the proliferative rate of these cells using two different methods, with and without the addition of Amfenac Sodium Hydrate, is measured. Nitric oxide production by macrophages is measured after exposure to melanoma-conditioned medium from both groups of cells as well as with and without Amfenac Sodium Hydrate[1].

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

REFERENCES

[1]. Marshall JC, et al. The effects of a cyclooxygenase-2 (COX-2) expression and inhibition on human uveal melanoma cell proliferation and macrophage nitric oxide production. J Carcinog. 2007 Nov 27;6:17.

[2]. Matsumoto T, et al. Effect of a non-steroidal anti-inflammatory drug (amfenac sodium) on polymorphonuclear leukocytes. Pharmacol Res Commun. 1982 Jun;14(6):523-32.

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