Phenylbutazone

Cat. No.: HY-B0230

CAS No.: 50-33-9

Molecular Formula: $C_{19}H_{20}N_2O_2$

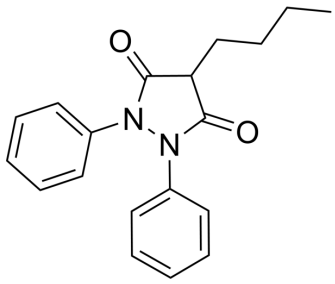
Molecular Weight: 308.37

Target: COX

Pathway: Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (324.28 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2428 mL	16.2141 mL	32.4281 mL
5 mM	0.6486 mL	3.2428 mL	6.4856 mL
10 mM	0.3243 mL	1.6214 mL	3.2428 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 (8.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Phenylbutazone is an efficient reducing cofactor for the peroxidase activity of prostaglandin H synthase (PHS). Phenylbutazone, a hepatotoxin, is a nonsteroidal anti-inflammatory agent (NSAID). Phenylbutazone induces muscle blind-like protein 1 (MBNL1) expression and has the potential for ankylosing spondylitis research[1][2].

In Vitro

Phenylbutazone has low inhibition of COX-1 and COX-2[3].

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

REFERENCES

[1]. Beretta C, et al. COX-1 and COX-2 inhibition in horse blood by phenylbutazone, flunixin, carprofen and meloxicam: an in vitro analysis. Pharmacol Res. 2005 Oct;52(4):302-6.

[2]. G A Reed, et al. Inactivation of prostaglandin H synthase and prostacyclin synthase by phenylbutazone. Requirement for peroxidative metabolism. Mol Pharmacol. 1985 Jan;27(1):109-14.

[3]. Guiying Chen, et al. Phenylbutazone induces expression of MBNL1 and suppresses formation of MBNL1-CUG RNA foci in a mouse model of myotonic dystrophy. Sci Rep. 2016 Apr 29;6:25317.

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