1-Aminohydantoin hydrochloride

Cat. No.: HY-Y0469

CAS No.: 2827-56-7

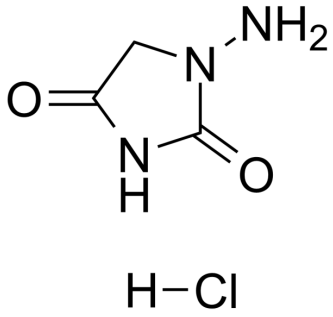
Molecular Formula: $C_3H_6ClN_3O_2$

Molecular Weight: 151.55

Target: Drug Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (164.96 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	6.5985 mL	32.9924 mL	65.9848 mL
	5 mM	1.3197 mL	6.5985 mL	13.1970 mL
	10 mM	0.6598 mL	3.2992 mL	6.5985 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 (16.50 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (16.50 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (16.50 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1-Aminohydantoin hydrochloride is a major metabolite of nitrofurantoin in animal tissues and can be used as a standard for the determination of residues of veterinary agents in meat, milk et.al. 1-Aminohydantoin hydrochloride covalently binds to tissue proteins and is released from the tissues under slightly acidic conditions and derivatized with 2-nitrobenzaldehyde to form nitrophenyl derivatives of AHD before detection[1].

REFERENCES

[1]. Tao Le, et al. A fluorescent immunochromatographic strip test using a quantum dot-antibody probe for rapid and quantitative detection of 1-aminohydantoin in edible

animal tissues. Anal Bioanal Chem. 2018 Jan;410(2):565-572.

[2]. Yong Tang, et al. Development of a lateral flow immunoassay (LFA) strip for the rapid detection of 1-aminohydantoin in meat samples. J Food Sci. 2011 Aug;76(6):T138-43.

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