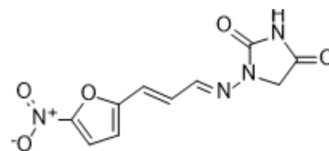


Furagin

Cat. No.:	HY-77036
CAS No.:	1672-88-4
Molecular Formula:	C ₁₀ H ₈ N ₄ O ₅
Molecular Weight:	264.19
Target:	Bacterial; Antibiotic; Carbonic Anhydrase
Pathway:	Anti-infection; Metabolic Enzyme/Protease
Storage:	<div> <div>Powder</div> <div>-20°C 3 years</div> <div>4°C 2 years</div> </div> <div> <div>In solvent</div> <div>-80°C 2 years</div> <div>-20°C 1 year</div> </div>



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (94.63 mM; Need ultrasonic)					
	H ₂ O : < 0.1 mg/mL (insoluble)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		3.7852 mL	18.9258 mL	37.8515 mL
		5 mM		0.7570 mL	3.7852 mL	7.5703 mL
		10 mM		0.3785 mL	1.8926 mL	3.7852 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 (9.46 mM); Suspended solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Furagin (Furazidine) is an analogue of Nitrofurantoin (HY-A0090) and has antibacterial activity. Furagin also inhibits human carbonic anhydrases (K _i s: 260 and 57 nM for hCA IX and XII, respectively) ^{[1][2][3]} .	
IC ₅₀ & Target	hCA IX 260 nM (K _i)	hCA XII 57 nM (K _i)

CUSTOMER VALIDATION

- Mol Microbiol. 2021 Jan;115(1):28-40.

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REFERENCES

- [1]. Pustenko A, et al. The antibiotic furagin and its derivatives are isoform-selective human carbonic anhydrase inhibitors. J Enzyme Inhib Med Chem. 2020 Dec;35(1):1011-1020.
- [2]. Mannisto P, et al. Pharmacokinetics of furagin, a new nitrofurantoin congener, on human volunteers. Int J Clin Pharmacol Biopharm. 1979 Jun;17(6):264-70.
- [3]. Slapsyte G, et al. Cytogenetic analysis of children under long-term antibacterial therapy with nitroheterocyclic compound furagin. Mutat Res. 2001 Apr 5;491(1-2):25-30.
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Caution: Product has not been fully validated for medical applications. For research use only.

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