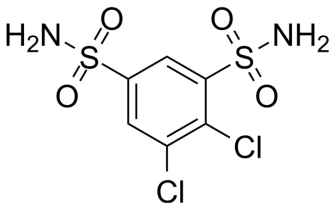
Dichlorphenamide

Cat. No.:	HY-B0397
CAS No.:	120-97-8
Molecular Formula:	$C_6H_6Cl_2N_2O_4S_2$
Molecular Weight:	305.16
Target:	Carbonic Anhydrase
Pathway:	Metabolic Enzyme/Protease
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 (327.70 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2770 mL	16.3848 mL	32.7697 mL
	5 mM	0.6554 mL	3.2770 mL	6.5539 mL
	10 mM	0.3277 mL	1.6385 mL	3.2770 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 (8.19 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dichlorphenamide (Diclofenamide) is an orally active, specific, carbonic anhydrase inhibitor. Dichlorphenamide can reduce intraocular pressure by inhibiting the secretion of water from the eye. Dichlorphenamide can be used for glaucoma research [1].

In Vivo

Dichlorphenamide can reduce IOP locally in male albino rabbits[1].

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

Animal Model:	Male albino rabbits (approximately 2.5 kg)
Dosage:	50 μL 10% aqueous solutions of dichlorphenamide sodium or 2 mg/kg, 6 mg/kg
Administration:	Eye drop of 50 μL or Oral gavage of 2 mg/kg or 6 mg/kg, 5 hours
Result:	Showed significant decrease in IOP at 30 min by instilling into eyes and decrease in IOP only at 1 h by orally after drug administration, and demonstrated that drug levels were significantly higher in the iris ciliary body and lower in the serum by instilling compared to oral administration.

CUSTOMER VALIDATION

- EMBO Rep. 2022 Apr 11;e53932.

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REFERENCES

[1]. Kanski, J.J., Carbonic anhydrase inhibitors and osmotic agents in glaucoma. Carbonic anhydrase inhibitors. Br J Ophthalmol, 1968. 52(8): p. 642-3.

[2]. Rucquoy, M. and L. Sorel, Diclofenamide in the treatment of therapy-resistant epilepsy. Acta Neurol Belg, 1978. 78(3): p. 174-82.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA