Tienilic acid

Cat. No.: HY-21065

CAS No.: 40180-04-9

Molecular Formula: $C_{13}H_8Cl_2O_4S$

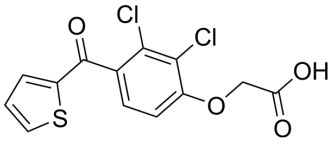
Molecular Weight: 331.17

Target: Others

Pathway: Others

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (301.96 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0196 mL	15.0980 mL	30.1960 mL
	5 mM	0.6039 mL	3.0196 mL	6.0392 mL
	10 mM	0.3020 mL	1.5098 mL	3.0196 mL

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

BIOLOGICAL ACTIVITY

Description

Tienilic acid (Ticrynafen; ANP 3624) acts as a diuretic hypotensive agent. However, Tienilic acid induces hepatotoxicity. Tienilic acid is converted into electrophilic metabolites by cytochrome P450 (CYP) in vitro[1].

In Vivo

Tienilic acid (100 mg/lg in rats and mice, 5 mg/kg in pigs and dog; PO and IV; single dosage) is only found in plasma, eliminates by the biliary and the urinary fast, and exhibits small differences in the different species[2].

Tienilic acid (0-480 mg/kg; PO; for 28 days) decreases blood pressure, serum, uric acid hemoglobin, and increased S-GPT; induces unicellular necrosis of small groups of liver cells[3].

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

Animal Model:	Rats, mice, pigs and dogs[2]
Dosage:	100 mg/lg in rats and mice, 5 mg/kg in pigs and dogs
Administration:	PO and IV; single dosage
Result:	Only found in plasma with important bindings to the plasma proteins at the blood level;

	pharmacological action for several hours; eliminated by the biliary and particularly the urinary fast, practically total in the first 48 hours after administration; only small differences were observed for the parameters measured in the different species.

Animal Model:	Female and male Sprague-Dawley rats[3]
Dosage:	0, 30, 120 and 480 mg/kg
Administration:	PO; for 28 days
Result:	Decreased blood pressure and serum uric acid at 30 mg/kg; decreased slightly hemoglobin and increased S-GPT at 120 and 480 mg/kg; significantly increase the liver weight and serum magnesium concentration in male rats, while the liver weight of female rats increased only slightly; besides, induced unicellular necrosis of small groups of liver cells.

REFERENCES

[1]. Takayoshi Nishiya, et al. Involvement of cytochrome P450-mediated metabolism in tienilic acid hepatotoxicity in rats. Toxicol Lett. 2008 Dec 15;183(1-3):81-9.

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