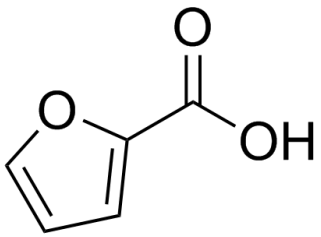
2-Furoic acid

Cat. No.:	HY-W012946
CAS No.:	88-14-2
Molecular Formula:	$C_5H_4O_3$
Molecular Weight:	112.08
Target:	ATP Citrate Lyase; Acyltransferase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (892.22 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	8.9222 mL	44.6110 mL	89.2220 mL
	5 mM	1.7844 mL	8.9222 mL	17.8444 mL
	10 mM	0.8922 mL	4.4611 mL	8.9222 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 (22.31 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.5 mg/mL (22.31 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.5 mg/mL (22.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Furoic acid (Furan-2-carboxylic acid) is an organic compound produced through furfural oxidation[1]. 2-Furoic acid exhibits hypolipidemic effet, lowers both serum cholesterol and serum triglyceride levels in rats[2].

In Vivo

2-Furoic acid significantly reduces serum cholesterol and serum triglyceride levels[2].
2-Furoic acid also lowers the liver and small intestine ATP dependent citrate lyase, acetyl CoA synthetase, acyl CoA

	cholesterol acyl transferase, sn-glycerol 3-phosphate acyl transferase, phosphatidylate phosphohydrolase and heparin induced lipoprotein lipase activities[2]. 2-Furoic acid shows the LD_{50} of 250 mg/kg i.p. in the acute toxicity studies in mice[2].

REFERENCES

[1]. Wordofa GG, et al. Tolerance and metabolic response of Pseudomonas taiwanensis VLB120 towards biomass hydrolysate-derived inhibitors. Biotechnol Biofuels. 2018 Jul 19;11:199.

[2]. Hall IH, et al. The hypolipidemic effects of 2-furoic acid in Sprague-Dawley rats. Arch Pharm (Weinheim). 1993 Jan;326(1):15-23.

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