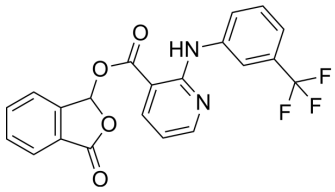
Talniflumate

Cat. No.:	HY-103370
CAS No.:	66898-62-2
Molecular Formula:	$C_{21}H_{13}F_3N_2O_4$
Molecular Weight:	414.33
Target:	Chloride Channel
Pathway:	Membrane Transporter/Ion Channel
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 : 62.5 mg/mL (150.85 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4135 mL	12.0677 mL	24.1354 mL
	5 mM	0.4827 mL	2.4135 mL	4.8271 mL
	10 mM	0.2414 mL	1.2068 mL	2.4135 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.02 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Talniflumate (BA 7602-06) is the proagent of Niflumic acid (HY-B0493), exerting its activity in the body through conversion to niflumic acid by esterase[1]. Talniflumate is an orally active Ca^{2+}-activated Cl^- channel (CaCC) blocker. Talniflumate can be used as an analgesic and anti-inflammatory agent in cystic fibrosis mouse model of distal intestinal obstructive syndrome[2].

IC_{50} & Target

IC50: Ca^{2+}-activated Cl^- channel (CaCC)[1]

In Vivo

Talniflumate (oral chow; 0.4 mg/g; 21 days) significantly increases CF mouse survival from 26 to 77%. It does not alter crypt goblet cell numbers or change intestinal expression of mCLCA3 but tends to decrease crypt mucoid impaction[1].

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

Animal Model:	CF mice with distal intestinal obstructive syndrome (DIOS)[1]

Dosage:	0.4 mg/g
Administration:	Oral chow; 21 days
Result:	Increased survival in a cystic fibrosis mouse model of distal intestinal obstructive syndrome.

REFERENCES

[1]. Hyun-Ji Kim, et al. Pharmacokinetics of talniflumate, a prodrug of niflumic acid, following oral administration to man. Archives of Pharmacal Research volume 19, Article number: 297 (1996)

[2]. Mollereau, et al. Agonist and Antagonist Activities on Human NPFF(2) Receptors of the NPY Ligands GR231118 and BIBP3226. Br J Pharmacol.2001 May;133(1):1-4.

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