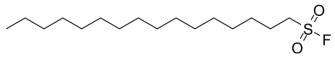
AM 374

Cat. No.:	HY-125967
CAS No.:	86855-26-7
Molecular Formula:	$C_{16}H_{33}FO_2S$
Molecular Weight:	308.5
Target:	FAAH
Pathway:	Metabolic Enzyme/Protease; Neuronal Signaling
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (324.15 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2415 mL	16.2075 mL	32.4149 mL
	5 mM	0.6483 mL	3.2415 mL	6.4830 mL
	10 mM	0.3241 mL	1.6207 mL	3.2415 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 (8.10 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (8.10 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AM 374 is an fatty acid amide hydrolase (FAAH) inhibitor. AM 374 inhibits amidase activity with an IC_{50} value of 13 nM. AM 374 can be used for the research of neurological disease[1][2].

IC_{50} & Target

IC50: 13 nM (amidase)[1]

In Vitro

AM 374 (0-9 nM) inhibits anandamide breakdown in N18TG2 cells[1].

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

In Vivo	AM 374 (20 μg; i.c.v., once) shows no effect on FR5 lever pressing but reduces lever pressing combined with IP injections of anandamide[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult male Sprague-Dawley rats with lever press training[2]
Dosage:	20 μg
Administration:	Intraventricular (ICV) injection; 20 μg, once
Result:	Significantly reduced lever pressing when combined treatment with anandamide.

REFERENCES

[1]. Deutsch DG, et al. Fatty acid sulfonyl fluorides inhibit anandamide metabolism and bind to the cannabinoid receptor. Biochem Biophys Res Commun. 1997 Feb 3;231(1):217-21.

[2]. Arizzi MN, et al. Behavioral effects of inhibition of cannabinoid metabolism: The amidase inhibitor AM374 enhances the suppression of lever pressing produced by exogenously administered anandamide. Life Sci. 2004 Jan 9;74(8):1001-11.

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