Fluvoxamine

Cat. No.: HY-B0103

CAS No.: 54739-18-3

Molecular Formula: $C_{15}H_{21}F_3N_2O_2$

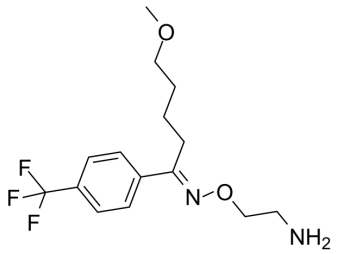
Molecular Weight: 318.33

Target: Serotonin Transporter

Pathway: Neuronal Signaling

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (785.35 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1414 mL	15.7070 mL	31.4139 mL
5 mM	0.6283 mL	3.1414 mL	6.2828 mL
10 mM	0.3141 mL	1.5707 mL	3.1414 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: ≥ 10.96 mg/mL (34.43 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (6.53 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Fluvoxamine (DU-23000) is an antidepressant which functions pharmacologically as a selective serotonin reuptake inhibitor.

IC_{50} & Target

SSRIs[1].

In Vivo

Fluvoxamine (DU-23000) is effective in inhibiting 5-ht uptake by blood platelets and brain synaptosomes. The antagonism by fluvoxamine of the reserpine-induced lowering of the pentamethylenetetrazole convulsive threshold can be regarded as due to an effect upon 5-HT uptake. In contrast to the effects of desmethylimipramine and imipramine, no stimulatory effects are

found in rats when rapidly acting reserpine-like compounds are given following a dose of fluvoxamine[1]. Fluvoxamine (DU-23000) appears to improve combat-related PTSD symptoms but not depressive symptoms. The high attrition rate and lack of a placebo group limits the conclusions of our study. Controlled studies of fluvoxamine in the treatment of PTSD are warranted[2]. Fluvoxamine (DU-23000) was less potent at decreasing ethanol self-administration when food was available concurrently versus when ethanol was available in isolation [ED50: 4.0 (2.7-5.9) and 5.1 (4.3-6.0)]. Effects on food were similar under each condition in which food was available. The results demonstrate that the potency of fluvoxamine in reducing ethanol-maintained behavior depends on whether ethanol is available in isolation or in the context of concurrently scheduled food reinforcement[3].

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

CUSTOMER VALIDATION

- Sci Transl Med. 2019 Feb 6;11(478). pii: eaau5266.
- Oxid Med Cell Longev. 2021 Jan 4;2021:8836818.
- PLoS Negl Trop Dis. 2019 Aug 20;13(8):e0007681.

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REFERENCES

[1]. Escalona, R., et al., Fluvoxamine treatment in veterans with combat-related post-traumatic stress disorder. Depress Anxiety, 2002. 15(1): p. 29-33.

[2]. Ginsburg, B.C., J.W. Pinkston, and R.J. Lamb, The potency of fluvoxamine to reduce ethanol self-administration decreases with concurrent availability of food. Behav Pharmacol, 2012. 23(2): p. 134-42.

[3]. Claassen, V., et al., Fluvoxamine, a specific 5-hydroxytryptamine uptake inhibitor. Br J Pharmacol, 1977. 60(4): p. 505-16.

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