Venlafaxine

Cat. No.: HY-B0196

CAS No.: 93413-69-5

Molecular Formula: $C_{17}H_{27}NO_2$

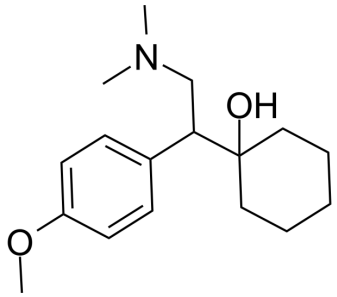
Molecular Weight: 277.4

Target: Serotonin Transporter

Pathway: Neuronal Signaling

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 : 250 mg/mL (901.23 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6049 mL	18.0245 mL	36.0490 mL
	5 mM	0.7210 mL	3.6049 mL	7.2098 mL
	10 mM	0.3605 mL	1.8025 mL	3.6049 mL

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

BIOLOGICAL ACTIVITY

Description

Venlafaxine (Wy 45030) is an orally active, potent serotonin (5-HT)/norepinephrine (NE) reuptake dual inhibitor. Venlafaxine is an antidepressant[1].

In Vitro

Venlafaxine (Wy 45030) dose-dependently inhibits binding of the serotonin transporter radioligand [^{3H}]-paroxetine to membranes from cells transfected with the human 5-HT transporter with a K_i of 2.48 μM. Venlafaxine inhibits binding of the NE transporter ligand [^{3H}]-nisoxetine to membranes from cells transfected with the human NE transporter with a K_i of 82 nM [1].

Venlafaxine inhibits ex vivo binding to rat 5-HT transporters and NE transporters with ED_{50} values of 2 and 54 mg/kg, respectively[1].

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

In Vivo

Venlafaxine (Wy 45030; 10-100 mg/kg; IP) dose-dependently blocks the depletion of norepinephrine levels in rat hypothalamus induced by 6-OHDA[1].

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

Animal Model:	Male Sprague-Dawley rats weighing 180-230 grams[1]
Dosage:	10, 30, 100 mg/kg
Administration:	IP; one hour prior to p-chloramphetamine hydrochloride (p-CA; 10 mg/kg; i.p.)
Result:	Dose-dependently blocked the depletion of norepinephrine levels in rat hypothalamus induced by 6-OHDA (intracerebroventricularly; 50 μg/rat; one hour later), with ED_{50} values of 12 and 94 mg/kg, respectively.

CUSTOMER VALIDATION

- J Agric Food Chem. 2021 Nov 4.

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REFERENCES

[1]. Bymaster FP, et al. Comparative affinity of duloxetine and venlafaxine for serotonin and norepinephrine transporters in vitro and in vivo, human serotonin receptor subtypes, and other neuronal receptors. Neuropsychopharmacology. 2001 Dec;25(6):871-80.

[2]. Goeringer KE, et al. Postmortem tissue concentrations of venlafaxine. Forensic Sci Int. 2001 Sep 15;121(1-2):70-5.

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