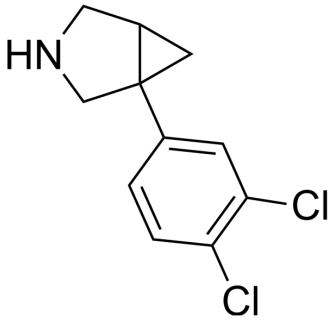
DOV-216,303 Free Base

Cat. No.:	HY-18332C
CAS No.:	66504-40-3
Molecular Formula:	$C_{11}H_{11}Cl_2N$
Molecular Weight:	228.12
Target:	Serotonin Transporter; Dopamine 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 : ≥ 125 mg/mL (547.96 mM)
Ethanol : 100 mg/mL (438.37 mM; Need ultrasonic)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.3837 mL	21.9183 mL	43.8366 mL
5 mM	0.8767 mL	4.3837 mL	8.7673 mL
10 mM	0.4384 mL	2.1918 mL	4.3837 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: ≥ 2.08 mg/mL (9.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (9.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

DOV-216,303 (Free Base) is a potent triple serotonin, norepinephrine, and dopamine reuptake inhibitor, with IC_{50} values of 14 nM, 20 nM and 78 nM for hSERT, hNET and hDAT, respectively[1]. Has antidepressant-like effects and increases monoamine release in the prefrontal cortex of olfactory bulbectomized (OBX) rats[2].

IC_{50} & Target

IC50: 14 nM (serotonin), 20 nM (norepinephrine), 78 nM (dopamine)[1].

In Vivo

Acute treatment of DOV-216,303 (20 mg/kg, i.p.) significantly increases dopamine, norepinephrine and serotonin levels in both OBX and Sham animals[2].

Chronic treatment with DOV 216,303 (20 mg/kg, i.p., for 17 days) increases extracellular concentrations of dopamine, norepinephrine and serotonin in the medial prefrontal cortex of both OBX and Sham animals and significantly increases extracellular baseline serotonin concentrations[2].

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

Animal Model:	Male Sprague Dawley rats weighing between 290 and 350 g at time of OBX or Sham surgery [2].
Dosage:	20 mg/kg.
Administration:	I.P. daily for 17days.
Result:	Increased extracellular concentrations of dopamine, norepinephrine and serotonin in the medial prefrontal cortex of both OBX and Sham animals and significantly increased extracellular baseline serotonin concentrations.

Animal Model:	Male Sprague Dawley rats weighing between 290 and 350 g at time of OBX or Sham surgery [2].
Dosage:	20 mg/kg.
Administration:	I.P. once.
Result:	Significant increases in dopamine, norepinephrine and serotonin levels were measured in both OBX and Sham animals.

REFERENCES

[1]. Shao L, et al. Discovery of N-methyl-1-(1-phenylcyclohexyl)methanamine, a novel triple serotonin, norepinephrine, and dopamine reuptake inhibitor. Bioorg Med Chem Lett. 2011 Mar 1;21(5):1438-41.

[2]. Prins J, et al. The putative antidepressant DOV 216,303, a triple reuptake inhibitor, increases monoamine release in the prefrontal cortex of olfactory bulbectomized rats. Eur J Pharmacol. 2010 May 10;633(1-3):55-61.

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