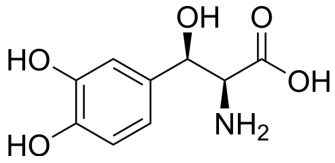
Droxidopa

Cat. No.:	HY-13458
CAS No.:	23651-95-8
Molecular Formula:	$C_9H_{11}NO_5$
Molecular Weight:	213.19
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; 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 : < 1 mg/mL (insoluble or slightly soluble)
H_2O : < 0.1 mg/mL (insoluble)

BIOLOGICAL ACTIVITY

Description

Droxidopa (L-DOPS; SM5688) is a potent, orally active norepinephrine precursor. Droxidopa increases standing blood pressure, ameliorates symptoms of orthostatic hypotension and improves standing ability. Droxidopa has the potential for the research of neurogenic orthostatic hypotension (nOH) and alternative ADHD (attention deficit hyperactivity disorder)[1][2][3][4].

In Vivo

Droxidopa (200 mg/kg;i.p.) alters dopamine neuron and prefrontal cortex activity and improves attention-deficit/hyperactivity disorder-like behaviors in rats[2].Droxidopa (10, 20 mg/kg; i.p.) significantly increases the paw withdrawal latency and inhibits mechanical hypersensitivity to thermal stimulation in 6-OHDA-lesioned rats at the 5th week after surgery[3].

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

Animal Model:	250-380g male Sprague-Dawley rats[2]
Dosage:	200 mg/kg (10 mg/kg, i.p. benserazide was given to the animals at 20 or 30 min prior to L-DOPS injection)
Administration:	I.p.
Result:	Significantly decreased hyperactivity of BZ-pretreated SHR/NCrl at 30 ($P < 0.01$) and 40 min ($P < 0.05$) post-injection, improved inattention-like behavior of SHR/NCrl, and ameliorated impulsive-like behavior of SHR/NCrl and Wistar rats.

REFERENCES

[1]. Horacio Kaufmann, et al. Droxidopa for neurogenic orthostatic hypotension. Neurology, 2014; 83(4).

[2]. Dela Peña I, et al. Droxidopa alters dopamine neuron and prefrontal cortex activity and improves attention-deficit/hyperactivity disorder-like behaviors in rats. Eur J Pharmacol. 2021 Feb 5;892:173826.

[3]. Cao LF, et al. Restoring Spinal Noradrenergic Inhibitory Tone Attenuates Pain Hypersensitivity in a Rat Model of Parkinson's Disease. Neural Plast. 2016;2016:6383240.

[4]. Kaufmann H. L-dihydroxyphenylserine (Droxidopa): a new therapy for neurogenic orthostatic hypotension: the US experience. Clin Auton Res. 2008 Mar;18 Suppl 1:19-24.

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