Product Data Sheet

Product Name: (+)-Igmesine hydrochloride
Cat. No.: GC18146

Chemical Properties

Cas. No.	130152-35-1		
Chemical Name	(R,E)-N-(cyclopropylmethyl)-N-methyl-3,6-diphenylhex-5-en-3-amine hydrochloride		
SMILES	CN([C@](C/C=C/C1=CC=CC=C1)(C2=CC=CC=C2)CC)CC3CC3.Cl		
Formula	$C_{23}H_{29}N.HCl$	M.Wt	355.94
Solubility	<17.8mg/ml in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	(+)-Igmesine hydrochloride		

Background

IC50: 19.1 nM

JO 1784 is a selective σ1 receptor ligand.

The CNS σ receptor ligands, as is known, modulates central neurotransmitter systems (noradrenergic-, glutaminergic-, and dopaminergic-neurons was included).

In vitro: Compared with control, data obtained displayed significant reduction in the densities of β-adrenergic, but not σ1, 5-HT1A, and GABAB receptors in fluoxetine (18%), desipramine (DMI, 32%) and JO 1784 (20%)-treated groups. Tyrosine hydroxylase (TH) activity was significantly (30–32%) decreased in all treated groups. Further, fluoxetine and DMI excluding the JO 1784 -treated groups diaplayed 85 and 40% reductions in serotonin (5-HT) and noradrenaline (NE) neuronal uptake, respectively. Following acute treatment, JO 1784 is inactive for monoamine oxidase (MAO) A or B [1].

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In vivo: In vivo studies, JO 1784 at behaviorally active doses exhibited weak effects on the NE uptake but has no activity in altering 5-HT and DA synthesis or antagonizing selective drug-stimulated depletion of monoamine neuronal uptake. NMDA-induced potentiates cGMP was inhibited by JO 1784, indicating that JO 1784 may interfere with the NMDA receptor/NOS/cGMP pathway. Although it appears that the pharmacological actions of JO 1784 partially is modulated by the monoaminergic system, there is still need to find other possible mechanisms of antidepressant action [1].

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1]. Akunne HC, Zoski KT, Whetzel SZ, Cordon JJ, Brandon RM, Roman F, Pugsley TA. Neuropharmacological profile of a selective sigma ligand, igmesine: a potential antidepressant. Neuropharmacology. 2001 Jul;41(1):138-49.

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