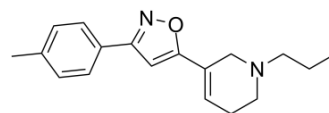


PD 144418

Cat. No.:	HY-108512
CAS No.:	154130-99-1
Molecular Formula:	C ₁₈ H ₂₂ N ₂ O
Molecular Weight:	282.38
Target:	Sigma Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	PD 144418 is a highly affinity, potent and selective sigma 1 (σ1) receptor ligand (K _i values of 0.08 nM and 1377 nM for σ1 and σ2 respectively). PD 144418 devoids of any significant affinity for other receptors, ion channels and enzymes. PD 144418 shows potential antipsychotic activity ^{[1][2]} .								
IC₅₀ & Target	Ki: 0.08 nM (σ1 receptor) and 1377 nM (σ2 receptor) ^[1]								
In Vitro	In vitro, PD 144418 reverses the N-methyl-D-aspartate (NMDA)-induced increase in cyclic GMP (cGMP) in rat cerebellar slices without affecting the basal levels, suggesting that σ1 sites may be important in the regulation of glutamine-induced actions. PD 144418 potentiates the decrease in 5-hydroxytryptophan caused by Haloperidol in the mesolimbic region, but by itself has no effect in 5-HT and dopamine (DA) synthesis ^[1] .								
In Vivo	<p>PD 144418 (10 mg/kg; intraperitoneal injection; male CD-1 mice) treatment antagonizes Mescaline-induced scratching at doses that did not alter spontaneous motor activity, with PD 144418 showing ED₅₀ values of 7.0 mg/kg i.p.^[1].</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male CD-1 mice induced with Mescaline^[1]</td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection</td> </tr> <tr> <td>Result:</td> <td>Antagonized mescaline-induced scratching at doses that did not alter spontaneous motor activity.</td> </tr> </table>	Animal Model:	Male CD-1 mice induced with Mescaline ^[1]	Dosage:	10 mg/kg	Administration:	Intraperitoneal injection	Result:	Antagonized mescaline-induced scratching at doses that did not alter spontaneous motor activity.
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Result:	Antagonized mescaline-induced scratching at doses that did not alter spontaneous motor activity.								

REFERENCES

[1]. Akunne HC, et al. The pharmacology of the novel and selective sigma ligand, PD 144418. *Neuropharmacology*. 1997 Jan;36(1):51-62.

[2]. Lever JR, et al. Relationship between cerebral sigma-1 receptor occupancy and attenuation of cocaine's motor stimulatory effects in mice by PD144418. *J Pharmacol Exp Ther*. 2014 Oct;351(1):153-63.

Caution: Product has not been fully validated for medical applications. For research use only.

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