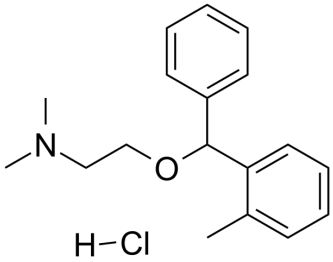
Orphenadrine hydrochloride

Cat. No.:	HY-B1126
CAS No.:	341-69-5
Molecular Formula:	$C_{18}H_{24}ClNO$
Molecular Weight:	305.84
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Orphenadrine hydrochloride is an uncompetitive N-methyl-D-aspartate (NMDA) receptor antagonist with Ki of 6.0 ±0.7 μ M.IC50 value: 6.0 ±0.7 μM (Ki)Target: NMDA ReceptorOrphenadrine has been used as an antiparkinsonian, antispastic and analgesic drug. Orphenadrine inhibits [3H]MK-801 binding to the phencyclidine (PCP) binding site of the N-methyl-D-aspartate (NMDA)-receptor in homogenates of postmortem human frontal cortex with a Ki-value of 6.0 ±0.7 μM. The NMDA receptor antagonistic effects of orphenadrine were assessed using concentration- and patch-clamp techniques on cultured superior colliculus neurones. Orphenadrine blocked open NMDA receptor channels with fast kinetics and in a strongly voltage-dependent manner. The IC50-value against steady state currents at -70 mV was 16.2 ± 1.6 μM (n = 6). [1]. Orphenadrine competitively inhibited [3H]nisoxetine binding in rat vas deferens membranes (Ki = 1.05 ±0.20 μM). It can be concluded that orphenadrine, at low micromolar concentrations, interacts with the noradrenaline reuptake system inhibiting its functionality and thus potentiating the effect of noradrenaline [2].

REFERENCES

[1]. Kornhuber, J., et al., Orphenadrine is an uncompetitive N-methyl-D-aspartate (NMDA) receptor antagonist: binding and patch clamp studies. J Neural Transm Gen Sect, 1995. 102(3): p. 237-46.

[2]. Pubill, D., et al., Assessment of the adrenergic effects of orphenadrine in rat vas deferens. J Pharm Pharmacol, 1999. 51(3): p. 307-12.

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