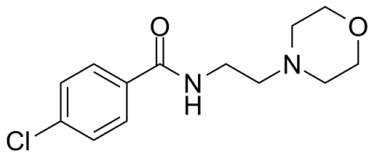
Data Sheet

Product Name:	Moclobemide
Cat. No.:	CS-2628
CAS No.:	71320-77-9
Molecular Formula:	C13H17ClN2O2
Molecular Weight:	268.74
Target:	Monoamine Oxidase
Pathway:	Neuronal Signaling
Solubility:	DMSO : 100 mg/mL (372.11 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Moclobemide(Ro111163) is a reversible monoamine oxidase inhibitor (MAOI) selective for isoform A (RIMA) used to treat major depressive disorder. Target: Monoamine Oxidase Moclobemide orally administered 2 hours before decapitation preferentially inhibits MAO-A and PEA in rat brain with ED50 of 7.6 μmol/kg and 78 μmol/kg, respectively. Moclobemide orally administered 2 hours before decapitation preferentially inhibits MAO-A and PEA in rat liver with ED50 of 8.4 μmol/kg and 6.6 μmol/kg, respectively. Moclobemide (0.1 mM), which inhibits brain MAO-A activity by over 80%, does not affect benzylamine oxidase (rat heart) and diamine oxidase (rat small intestine) activity in vitro [1]. Moclobemide (10 mM-100 mM) includes in the culture medium during anoxia or with glutamate significantly increases in a concentration-dependent manner the amount of surviving neurons compared to controls in neuronal-astroglial cultures from rat cerebral cortex [2]. Moclobemide (10 mg/kg p.o.) induces a significant decrease of all monoamine metabolites measured in rat brain [1]. Moclobemide, given via the drinking water (4.5 mg/kg/day), produces significant decreases in adrenal weight of rats after 5 (-23%) and 7 weeks (-16%) of treatment. Moclobemide upregulates hippocampal mineralocorticoid receptor (MR) levels in rats by 65%, 76% and 19% at 2 weeks, 5 weeks and 7 weeks of treatment, and upregulates Glucocorticoid receptor (GR) levels in this limbic brain structure by 10% at 5 weeks. Moclobemide treatment (5 weeks, 4.5 mg/kg/day) significantly attenuates stress (30 min novel environment)-induced plasma ACTH (-35%) and corticosterone (-29%) levels [3].

References:

[1]. Da Prada, M., et al., Neurochemical profile of moclobemide, a short-acting and reversible inhibitor of monoamine oxidase type A. J Pharmacol Exp Ther, 1989. 248(1): p. 400-14.

[2]. Verleye, M., et al., Moclobemide attenuates anoxia and glutamate-induced neuronal damage in vitro independently of interaction with glutamate receptor subtypes. Brain Res, 2007. 1138: p. 30-8.

[3]. Reul, J.M., et al., Hypothalamic-pituitary-adrenocortical axis changes in the rat after long-term treatment with the reversible monoamine oxidase-A inhibitor moclobemide. Neuroendocrinology, 1994. 60(5): p. 509-19.

CAIndexNames:

Benzamide, 4-chloro-N-[2-(4-morpholinyl)ethyl]-

SMILES:

O=C(NCCN1CCOCC1)C2=CC=C(Cl)C=C2

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA