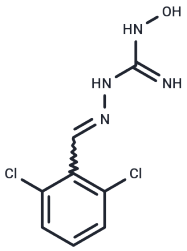
Data Sheet (Cat.No.T11512)

TargetMol

Guanoxabenz

Chemical Properties



CAS No. : 24047-25-4

Formula: C8H8Cl2N4O

Molecular Weight: 247.08

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Guanoxabenz, an α2 adrenergic receptor agonist, exhibits properties that make it significant in biochemical research and potential therapeutic applications.
Targets(IC50)	Others,Adrenergic Receptor
In vitro	The formation of high-affinity Guanoxabenz binding is inhibited in a time- and concentration-dependent manner through preincubation with the LW03 N-hydroxyguanidine analogue of Guanoxabenz, as well as various metabolic inhibitors [allopurinol, 1-chloro-2,4-dinitrobenzene, 5,5'-dithiobis-(2-nitrobenzoic acid), cibacron blue, phenyl-p-benzoquinone, didox, and trimidox]. Additionally, the spleen cytosolic fraction reduces Guanoxabenz to guanabenz, which exhibits an almost 100-fold higher affinity for rat alpha2A-adrenoceptors than Guanoxabenz, suggesting a complex interaction between Guanoxabenz, its analogues, and metabolic inhibitors regarding their binding affinities and reduction processes.
In vivo	High affinity Guanoxabenz binding is also induced in rat brain membranes after addition of NADH or NADPH cofactors. The rat cerebral cortex contains an enzymatic activity that may activate Guanoxabenz leading to formation of a metabolite showing high affinity for alpha 2-adrenoceptors.Guanoxabenz and guanabenz are both known as centrally active antihypertensive drugs.?enzymatic activity in the rat spleen can induce N-reduction of Guanoxabenz, leading to high affinity alphaα2 adrenergic receptor binding, due to the formation of theα2 adrenergic receptor active drug, guanabenz.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0473 mL	20.2364 mL	40.4727 mL
5 mM	0.8095 mL	4.0473 mL	8.0945 mL
10 mM	0.4047 mL	2.0236 mL	4.0473 mL
50 mM	0.0809 mL	0.4047 mL	0.8095 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Uhlén S, et al. Characterization of the enzymatic activity for biphasic competition by guanoxabenz (1-(2,6-dichlorobenzylidene-amino)-3-hydroxyguanidine) at alpha2-adrenoceptors. I. Description of an enzymatic activity in spleen membranes. Biochem Pharmacol. 1998 Nov 1;56(9):1111-9.
Dambrova M, et al. Characterization of the enzymatic activity for biphasic competition by guanoxabenz (1-(2,6-dichlorobenzylidene-amino)-3-hydroxyguanidine) at alpha2-adrenoceptors. II. Description of a xanthine-dependent enzymatic activity in spleen cytosol. Biochem Pharmacol. 1998 Nov 1;56(9):1121-8.
Dambrova M, et al. Characterization of Guanoxabenz reducing activity in rat brain. Pharmacol Toxicol. 1998 Oct;83(4):158-63.

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