Product Data Sheet

Product Name: 6-(4-Methoxyphenyl)-3-pyridazinamine
Cat. No.: GC11284

Chemical Properties

Cas. No.	4776-87-8		
Chemical Name	6-(4-methoxyphenyl)-3-pyridazinamine		
SMILES	NC1=NN=C(C2=CC=C(OC)C=C2)C=C1		
Formula	$C_{11}H_{11}N_3O$	M.Wt	201.2
Solubility	≤10mg/ml in ethanol;15mg/ml in DMSO;10mg/ml in dimethyl formamide	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			

Background

6-(4-Methoxyphenyl)-3-pyridazinamine is a GABAA receptor antagonist.

Ionotropic GABAA receptors are ligand-gated ion channels that facilitate the passing of chloride ions across the cell membrane and promote an inhibitory influence on target neurons. These receptors are the major targets for benzodiazepines and related anxiolytic drugs.

In vitro: 6-(4-Methoxyphenyl)-3-pyridazinamine is an intermediate in the synthesis of SR 95103 [2-(3-carboxypropyl)-3-amino-4-methyl-6-phenylpyridazinium chloride]. SR 95103 was identified as a selective and competitive GABA-A receptor antagonist. Moreover, SR 95103 was shown to be able to displace [3H]GABA from rat brain membranes with an apparent Ki of 2.2 μM. In addition, SR 95103 was found, on the basis of biochemical, electrophysiological, and pharmacological results, to be a selective and competitive antagonist of GABA at the GABA-A receptor site [1].

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In vivo: The behavioral effects of unilateral microinjections of SR 95103 into periventricular structures were studied. Results showed that when injected into the medial hypothalamus (MH) or into the dorsal part of the mesencephalic central gray (CG), SR 95103 produced a dose-dependent behavioral activation together with jumps. The behavioral activation was found to be attenuated by pretreatment with THIP, a GABA receptor agonist [2].

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

References:

[1] Wermuth, C. G.,Bourguignon, J.J.,Schlewer, G., et al. Synthesis and structure-activity relationships of a series of aminopyridazine derivatives of γ-aminobutyric acid acting as selective GABA-A antagonists. Journal of Medicinal Chemistry 30(2), 239-249 (1987).
[2] Schmitt P, Di Scala G, Brandao ML, Karli P. Behavioral effects of microinjections of SR 95103, a new GABA-A antagonist, into the medial hypothalamus or the mesencephalic central gray. Eur J Pharmacol. 1985 Nov 5;117(2):149-58.

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