Data Sheet (Cat.No.T5047)

TargetMol

PD-168077 maleate

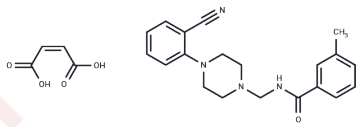
Chemical Properties

CAS No. : 630117-19-0

Formula: C24H26N4O5

Molecular Weight: 450.49

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	PD-168077 maleate is a selective agonist of the dopamine D4 receptor (Ki: 9 nM).
Targets(IC50)	Dopamine Receptor
In vivo	PD-168077, a selective D4 dopamine receptor agonist, injected into the paraventricular nucleus of the hypothalamus on penile erection was studied in male rats.?PD-168077 (1-200 ng) induced penile erection in a dose-dependent manner.?The minimal effective dose was 50 ng, while the maximal response was found with 200 ng of the compound, which increased penile erection episodes from 0.3+/-0.03 to 1.7+/-0.21.?The proerectile effect of PD-168077 was reduced almost completely by L-745,870 (3-(4-[chlorophenyl] piperazin-1-yl)-methyl-1H-pyrrolo[2,3-B]pyridine trihydrochloride), a selective D4 dopamine receptor antagonist, (1 microg) given into the paraventricular nucleus before the D4 dopamine agonist, and by other nonselective dopamine receptor antagonists, such as haloperidol (1 microg) and clozapine (1 microg), which block all dopamine receptor subtypes.?The pro-erectile effect of PD-168077 was also reduced by the NO synthase inhibitor NG-nitro-L-arginine methylester (25 microg), but not by the oxytocin receptor antagonist d(CH2)5Tyr(Me)2-Orn8-vasotocin (1 microg), when given into the paraventricular nucleus.?In spite of its inability to prevent the pro-erectile effect of PD-168077 when given in the paraventricular nucleus, d(CH2)5Tyr(Me)2-Orn8-vasotocin (1 microg) reduced almost completely PD-168077-induced penile erection when given into the lateral ventricles[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (332.97 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (8.88 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2198 mL	11.099 mL	22.1981 mL
5 mM	0.444 mL	2.2198 mL	4.4396 mL
10 mM	0.222 mL	1.1099 mL	2.2198 mL
50 mM	0.0444 mL	0.222 mL	0.444 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

Maria, Rosaria, Melis,et al. PD-168077, a selective dopamine D4 receptor agonist, induces penile erection when injected into the paraventricular nucleus of male rats[J]. Neuroscience Letters, 2005.
Clifford JJ, et al. Topographically based search for an "Ethogram" among a series of novel D(4) dopamine receptor agonists and antagonists. Neuropsychopharmacology. 2000 May;22(5):538-44.