Data Sheet (Cat.No.T0469)

TargetMol

Octopamine hydrochloride

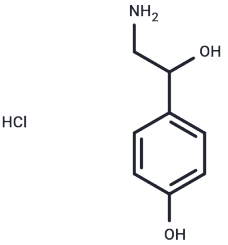
Chemical Properties

CAS No. : 770-05-8

Formula: C8H12ClNO2

Molecular Weight: 189.64

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	Octopamine hydrochloride ((±)-p-Octopamine hydrochlorid) is a biogenic monoamine structurally associated with noradrenaline. It can serve as a neurohormone, a neurotransmitter, and a neuromodulator in invertebrates.
Targets(IC50)	Endogenous Metabolite,Adrenergic Receptor,Dopamine Receptor
In vitro	Octopamine is present in relatively high concentrations in neuronal as well as in non-neuronal tissues of most invertebrate species studied, and modulates almost every physiological process. Octopamine acts as neurohormone including desensitization of sensory inputs, influence on learning and memory, or regulation of the mood of the animal in the central nervous system. Octopamine is the only neuroactive non-peptide transmitter whose physiological role is restricted to invertebrates, and all octopamine receptors belong to the family of G-protein coupled receptors. [1]
In vivo	Octopamine (10 mg/mL) is necessary for the acquisition of sugar memory in Drosophila. [2] Octopamine treatment increases responsiveness to brood pheromone and decreased responsiveness to social inhibition. Octopamine acts as an important source of variation in response thresholds and as a modulator of pheromonal communication in insect societies. [3] Octopamine (10 μM) injected into the mushroom body (MB) calyces or the antennal lobe but not the lateral protocerebral lobe produces a lasting, pairing-specific enhancement of extension of the proboscis. Octopamine (10 μM) injected into the MB calyces results in an additional pairing-specific effect, because it does not lead to an acquisition but a consolidation after conditioning. [4] Octopamine treatment significantly elevates levels of octopamine in the brain and caused a significant dose-dependent increase in the number of new foragers. Octopamine treatment is effective only when given to bees old enough to forage, i.e., older than 4 days of age. Octopamine influences division of labor in honey bee colonies. [5]

Solubility Information

Solubility	DMSO: 6.2 mg/mL (32.69 mM),Sonication is recommended. H2O: 200.4 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.2731 mL	26.3657 mL	52.7315 mL
5 mM	1.0546 mL	5.2731 mL	10.5463 mL
10 mM	0.5273 mL	2.6366 mL	5.2731 mL
50 mM	0.1055 mL	0.5273 mL	1.0546 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

Roeder T, et al. Prog Neurobiol, 1999, 59(5), 533-561.
Schwaerzel M, et al. J Neurosci, 2003, 23(33), 10495-10502.
Barron AB, et al. J Comp Physiol A Neuroethol Sens Neural Behav Physiol, 2002, 188(8), 603-10.
Hammer M, et al. Learn Mem, 1998, 5(1-2), 146-156.
Schulz DJ, et al. J Comp Physiol A, 2001, 187(1), 53-61.