

## Proxyfan

## Chemical Properties

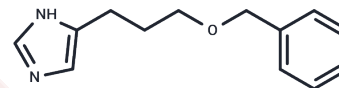
CAS No. : 177708-09-7

Formula: C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>O

Molecular Weight: 216.28

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	Proxyfan (Proxifan) is a high-affinity protean antagonist/agonist of histamine H <sub>3</sub> receptors with a full spectrum of pharmacological activity ranging from full agonist to full inverse agonist(antagonist), depending on the competition between constitutively active and resting H <sub>3</sub> receptors within a given tissue or brain region.Proxyfan acts as a neutral antagonist in the feeding-associated ventral medial nucleus of the hypothalamus, and as a agonist in the basolateral amygdala of the rat (BLA).
Targets(IC50)	Histamine Receptor
In vitro	Proxyfan is the neutral antagonist of histamine H <sub>3</sub> receptors, with K <sub>i</sub> values of 2.9 nM for rat and 2.7 nM for human H <sub>3</sub> receptors. [1]
In vivo	The H <sub>3</sub> receptor neutral antagonist Proxyfan was used in rats using intraperitoneal injection. Proxyfan (0.2-5.0 mg/kg) did not affect food intake in freely feeding rats during either the light or dark phase. At night, proxyfan antagonized the orexigenic effect of the H <sub>3</sub> agonist imetit (10 mg/kg) and the anorectic effect of the inverse agonist thioperamide (2 mg/kg).[2]

## Solubility Information

Solubility	DMSO: 4 mg/mL (18.49 mM),Sonication is recommended. H <sub>2</sub> O: 4 mg/mL (18.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	4.6236 mL	23.1182 mL	46.2364 mL
5 mM	0.9247 mL	4.6236 mL	9.2473 mL
10 mM	0.4624 mL	2.3118 mL	4.6236 mL
50 mM	0.0925 mL	0.4624 mL	0.9247 mL

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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

Ligneau X, Morisset S, Tardivel-Lacombe J, Gbahou F, Ganellin CR, Stark H, Schunack W, Schwartz JC, Arrang JM. Distinct pharmacology of rat and human histamine H(3) receptors: role of two amino acids in the third transmembrane domain. *Br J Pharmacol.* 2000 Dec;131(7):1247-50.

Clapp RH, Luckman SM. Proxyfan acts as a neutral antagonist of histamine H3 receptors in the feeding-related hypothalamic ventromedial nucleus. *Br J Pharmacol.* 2012 Nov;167(5):1099-110.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481