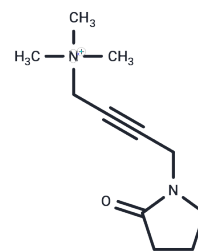


## Oxotremorine M iodide

## Chemical Properties

CAS No. :	3854-04-4
Formula:	C <sub>11</sub> H <sub>19</sub> IN <sub>2</sub> O
Molecular Weight:	322.19
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	Oxotremorine M iodide (Oxotremorine methiodide) is an agonist of mAChR and potentiates NMDA receptors.
Targets(IC50)	AChR
In vitro	Oxotremorine M iodide robustly elicits a phosphoinositide response (EC <sub>50</sub> = 0.22 μM). Oxotremorine M iodide shows EC <sub>50</sub> s of 0.36, 0.52, 1.62, and 1.48 μM for wild-type, M2, M3, and M2/M3 knockout mice, respectively[1]. Oxotremorine M iodide (0.1-30 μM) dose-dependently inhibits KCNQ2/3 currents[2].
In vivo	In male Sprague-Dawley albino rats, Oxotremorine M iodide (0.5 mg/kg; s.c.) increases DA release in the medial prefrontal cortex without affecting the nucleus accumbens[4].

## Solubility Information

Solubility	DMSO: 100 mg/mL (310.38 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 (12.42 mM),Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1038 mL	15.5188 mL	31.0376 mL
5 mM	0.6208 mL	3.1038 mL	6.2075 mL
10 mM	0.3104 mL	1.5519 mL	3.1038 mL
50 mM	0.0621 mL	0.3104 mL	0.6208 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

Tran JA, et al. Differential coupling of muscarinic M1, M2, and M3 receptors to phosphoinositide hydrolysis in urinary bladder and longitudinal muscle of the ileum of the mouse. *J Pharmacol Exp Ther*. 2006 Aug;318(2):649-56. Epub 2006 May 4.

Zwart R, et al. A novel muscarinic receptor-independent mechanism of KCNQ2/3 potassium channel blockade by Oxotremorine-M. *Eur J Pharmacol*. 2016 Nov 15;791:221-228.

Zwart R, et al. Oxotremorine-M potentiates NMDA receptors by muscarinic receptor dependent and independent mechanisms. *Biochem Biophys Res Commun*. 2018 Jan 1;495(1):481-486.

Ichikawa J, et al. Cholinergic modulation of basal and amphetamine-induced dopamine release in rat medial prefrontal cortex and nucleus accumbens. *Brain Res*. 2002 Dec 20;958(1):176-84.

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