

## Oxytocin

## Chemical Properties

CAS No. : 50-56-6

Formula: C43H66N12O12S2

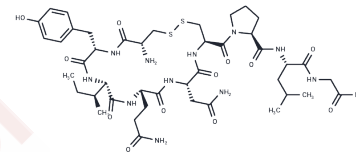
Molecular Weight: 1007.19

Storage:

Keep away from moisture, Keep away from direct sunlight, Store at low temperature

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	Oxytocin (Syntocinon) is a mammalian neurohypophyseal hormone, a pleiotropic hypothalamic peptide and ligand for the oxytocin receptor, which contributes to labor, lactation, and pro-social behavior. Oxytocin has the ability to stimulate mammary secretion of breast milk, promote contraction of uterine smooth muscle during labor, and facilitate mothering.
Targets(IC50)	Endogenous Metabolite, Oxytocin Receptor
In vitro	<b>METHODS:</b> KGN, MA-10 and C18-4 cells were treated with Tris(2,4-di-tert-butylphenyl)phosphate (0.1-100 $\mu$ M) for 48 h. Cell counts were measured by Hoechst 33342 stained. <b>RESULTS:</b> Tris(2,4-di-tert-butylphenyl)phosphate was not cytotoxic to any of the 3 cell lines. [1]
In vivo	<b>METHODS:</b> To assay acute anti-inflammatory activity in vivo, Tris(2,4-di-tert-butylphenyl)phosphate (50-70 mg/kg, 0.1% sodium carboxymethyl cellulose in 1M phosphate buffer pH 7.2) was administered to a carrageenan-induced rat foot-plantar edema model. <b>RESULTS:</b> Tris(2,4-di-tert-butylphenyl)phosphate at the doses of 50 mg/kg and 70 mg/kg showed significant anti-inflammatory activity in the carrageenan-induced foot-plantar edema model. Tris(2,4-di-tert-butylphenyl)phosphate significantly reduced the volume of raw paw edema. [2]

## Solubility Information

Solubility	DMSO: 100 mg/mL (99.29 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	0.9929 mL	4.9643 mL	9.9286 mL
5 mM	0.1986 mL	0.9929 mL	1.9857 mL
10 mM	0.0993 mL	0.4964 mL	0.9929 mL
50 mM	0.0199 mL	0.0993 mL	0.1986 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

Copland JA, et al. Oxytocin receptor regulation and action in a human granulosa-lutein cell line. *Biol Reprod.* 2002 May;66(5):1230-6.

Kaneko Y, et al. Oxytocin modulates GABAAR subunits to confer neuroprotection in stroke in vitro. *Sci Rep.* 2016 Oct 21;6:35659.

Sakamoto T, et al. Effects of intraperitoneal and intracerebroventricular injections of oxytocin on social and emotional behaviors in pubertal male mice. *Physiol Behav.* 2019 Dec 1;212:112701.

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