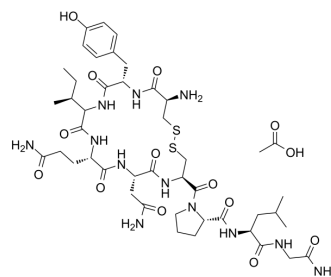


Oxytocin acetate

Cat. No.:	HY-17571A
CAS No.:	6233-83-6
Molecular Formula:	C ₄₅ H ₇₀ N ₁₂ O ₁₄ S ₂
Molecular Weight:	1067.24
Sequence:	Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Leu-Gly-NH ₂ (Disulfide bridge:Cys1-Cys6)
Sequence Shortening:	CYIQNCPLG-NH ₂ (Disulfide bridge:Cys1-Cys6)
Target:	Oxytocin Receptor; Endogenous Metabolite
Pathway:	GPCR/G Protein; Metabolic Enzyme/Protease
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (117.12 mM; Need ultrasonic)				
	H ₂ O : 50 mg/mL (46.85 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions	1 mM	1 mg	5 mg	10 mg
		5 mM	0.9370 mL	4.6850 mL	9.3700 mL
10 mM		0.1874 mL	0.9370 mL	1.8740 mL	
	10 mM	0.0937 mL	0.4685 mL	0.9370 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 25 mg/mL (23.42 mM); Clear solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	Oxytocin (α -Hypophamine) acetate is a pleiotropic, hypothalamic peptide known for facilitating parturition, lactation, and prosocial behaviors. Oxytocin acetate can function as a stress-coping molecule with anti-inflammatory, antioxidant, and protective effects especially in the face of adversity or trauma ^{[1][2]} .
IC₅₀ & Target	Human Endogenous Metabolite
In Vivo	During the LMA task, rat core body temperature are modestly decreased. Oxytocin acetate (subcutaneous injection; 0.1 mg/kg-0.3 mg/kg; single dose) produces significantly greater hypothermia (at 0.3 mg/kg) than either saline or the two lower

doses of oxytocin. Oxytocin at 0.3 mg/kg produces a significantly greater decrease in temperature than vehicle between 15-60 min post injection, whereas 0.1 mg/kg slightly decreases temperature at the 30 min time point only^[1]. Oxytocin acetate (0.1 mg/kg) engages in significantly more body sniffing and ano-genital sniffing compared with saline controls. It also increases the total time spent in social interaction (71.6±4.3 s), compared to those receiving vehicle (56.9±4.1 s)^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Fifty-six male Lister-hooded rats (150–200 g) ^[1]
Dosage:	0.1 mg/kg-0.3 mg/kg
Administration:	Subcutaneous injection; 0.1 mg/kg-0.3 mg/kg; single dose
Result:	Produced significantly greater hypothermia (at 0.3 mg/kg) than the saline group.

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2023 Jan 2;8(1):3.
- Nat Struct Mol Biol. 2022 Mar 3.
- ACS Appl Mater Interfaces. 2022 May 18;14(19):21822-21835.
- J Headache Pain. 2021 Jul 27;22(1):84.
- Front Pharmacol. 2019 Nov 15;10:1380.

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REFERENCES

[1]. Shivali Kohli, et al. Oxytocin attenuates phencyclidine hyperactivity and increases social interaction and nucleus accumbens dopamine release in rats. *Neuropsychopharmacology*. 2019 Jan;44(2):295-305.

[2]. C Sue Carter, et al. Is Oxytocin "Nature's Medicine"? *Pharmacol Rev*. 2020 Oct;72(4):829-861.

Caution: Product has not been fully validated for medical applications. For research use only.

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