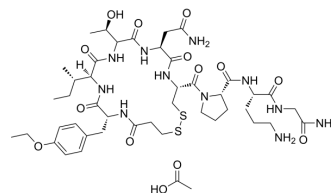


Atosiban acetate

Cat. No.:	HY-17572A
CAS No.:	914453-95-5
Molecular Formula:	C ₄₅ H ₇₁ N ₁₁ O ₁₄ S ₂
Molecular Weight:	1054.24
Target:	Oxytocin Receptor; Vasopressin Receptor
Pathway:	GPCR/G Protein
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 : 100 mg/mL (94.86 mM; Need ultrasonic)
 H₂O : 50 mg/mL (47.43 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	0.9486 mL	4.7428 mL	9.4855 mL
	5 mM	0.1897 mL	0.9486 mL	1.8971 mL
	10 mM	0.0949 mL	0.4743 mL	0.9486 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (94.86 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (2.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (2.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (2.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Atosiban acetate (RW22164 acetate; RWJ22164 acetate) is a nonapeptide competitive vasopressin/oxytocin receptor antagonist, and is a desamino-oxytocin analogue. Atosiban is the main tocolytic agent and has the potential for spontaneous preterm labor research^[1].

In Vitro	<p>Atosiban inhibits the oxytocin-mediated release of IP3 from the myometrial cell membrane. There is reduced release of intracellular, stored calcium from the sarcoplasmic reticulum of myometrial cells, and reduced influx of Ca²⁺ from the extracellular space through voltage gated channels. In addition, Atosiban suppresses oxytocin-mediated release of PGE and PGF from the decidua^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>The posterior pituitary hormones, oxytocin and arginine vasopressin, differ in structure by only two amino acids, and Atosiban influences physiological effects of arginine vasopressin on the feto-maternal cardiovascular and renal systems. In late-gestation sheep, the administration of Atosiban for 1 hour fails to induce fetomaternal cardiovascular changes^[1]. Atosiban blocks the activation of oxytocin-receptor-expressing neurons in the parabrachial nucleus of mice^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

CUSTOMER VALIDATION

- Transl Psychiatry. 2024 May 25;14(1):208.
- Front Neurosci. 2021 Sep 10;15:723064.
- J Pharm Biomed Anal. 2022: 115156.
- J Pharm Biomed Anal. 11 December 2021, 114518.

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REFERENCES

- [1]. Sanu O, et al. Critical appraisal and clinical utility of atosiban in the management of preterm labor. Ther Clin Risk Manag. 2010 Apr 26;6:191-9.
- [2]. Philip J Ryan, et al. Oxytocin-receptor-expressing Neurons in the Parabrachial Nucleus Regulate Fluid Intake. Nat Neurosci. 2017 Dec;20(12):1722-1733.

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

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