Atosiban

Cat. No.: HY-17572

CAS No.: 90779-69-4

Molecular Formula: $C_{43}H_{67}N_{11}O_{12}S_2$

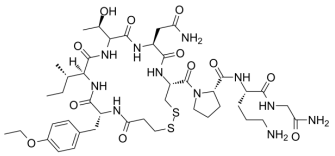
Molecular Weight: 994.19

Target: Oxytocin Receptor; Vasopressin Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 16.67 mg/mL (16.77 mM; Need ultrasonic)

DMSO : ≥ 16.67 mg/mL (16.77 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.0058 mL	5.0292 mL	10.0584 mL
5 mM	0.2012 mL	1.0058 mL	2.0117 mL
10 mM	0.1006 mL	0.5029 mL	1.0058 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.67 mg/mL (1.68 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.67 mg/mL (1.68 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.67 mg/mL (1.68 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Atosiban (RW22164; RWJ22164) 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

Atosiban inhibits the oxytocin-mediated release of IP3 from the myometrial cell membrane. There is reduced release of intracellular, stored calcium from the sacroplasmic reticulum of myometrial cells, and reduced influx of Ca^{2+} from the extracellular space through voltage gated channels. In addition, Atosiban suppresses oxytocin-mediated release of PGE and

	PGF from the decidua[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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.

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com