Atosiban acetate

Cat. No.: HY-17572A

CAS No.: 914453-95-5

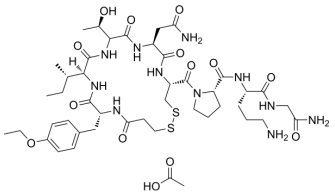
Molecular Formula: $C_{45}H_{71}N_{11}O_{14}S_2$

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)
H_2O : 50 mg/mL (47.43 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (94.86 mM); Clear solution; Need ultrasonic
2. 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
3. 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
4. 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	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.

CUSTOMER VALIDATION

- Front Neurosci. 2021 Sep 10;15:723064.
- J Pharm Biomed Anal. 2022: 115156.
- J Pharm Biomed Anal. 11 December 2021, 114518.

See more customer validations on www.MedChemExpress.com

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA