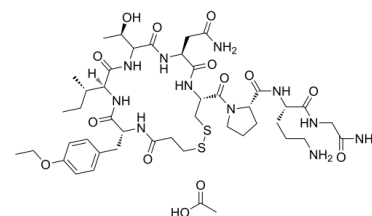


Data Sheet

Product Name:	Atosiban (acetate)
Cat. No.:	CS-0086333
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
Solubility:	DMSO : 100 mg/mL (ultrasonic); H ₂ O : 50 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

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 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]. *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].

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.

CAIndexNames:

Glycinamide, O-ethyl-N-(3-mercapto-1-oxopropyl)-D-tyrosyl-L-isoleucyl-L-threonyl-L-asparaginy-L-cysteinyl-L-prolyl-L-ornithyl-, cyclic (1→5)-disulfide, acetate (1:1)

SMILES:

O=C([C@H](CSCCCC(N[C@@H](C1=O)CC2=CC=C(OCC)C=C2)=O)NC([C@@H](NC(C(NC([C@H](N1)([H])[C@@H](C)CC)=O)[C@H](O)C)=O)CC(N)=O)=O)N(CCC3)[C@@H]3C(N[C@@H](CCCN)C(NCC(N)=O)=O)=O.O.C(=O)C

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

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