Oxytocin Receptor

OXTR

The oxytocin receptor belongs to the G-protein-coupled seven-transmembrane receptor superfamily. Its main physiological role is regulating the contraction of uterine smooth muscle at parturition and the ejection of milk from the lactating breast. The oxytocin receptors are activated in response to binding oxytocin and a similar nonapeptide, vasopressin. Oxytocin receptor triggers G_i or G_q protein-mediated signaling cascades leading to the regulation of a variety of neuroendocrine and cognitive functions.

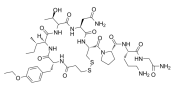
Oxytocin is a nonapeptide of the neurohypophyseal protein family that binds specifically to the oxytocin receptor to produce a multitude of central and peripheral physiological responses. In vivo, oxytocin acts as a paracrine and/or autocrine mediator of multiple biological effects. These effects are exerted primarily through interactions with G-protein-coupled oxytocin/vasopressin receptors, which, via G_q and G_i, stimulate phospholipase C-mediated hydrolysis of phosphoinositides.

Oxytocin Receptor Agonists & Antagonists

Atosiban

(RW22164; RWJ22164) Cat. No.: HY-17572

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.

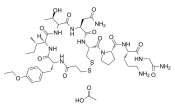


Purity: 99.09%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Atosiban acetate

(RW22164 acetate; RWJ22164 acetate) Cat. No.: HY-17572A

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.

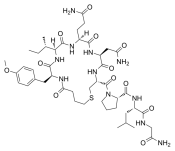


Purity: 99.92%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Carbetocin

Cat. No.: HY-17573

Carbetocin, an oxytocin (OT) analogue, is an **oxytocin receptor** agonist with a K_i of 7.1 nM. Carbetocin has high affinity to chimeric N-terminus (E1) of the oxytocin receptor (K_i=1.17 μM). Carbetocin has the potential for postpartum hemorrhage research.

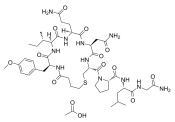


Purity: ≥95.0%
Clinical Data: Launched
Size: 5 mg, 10 mg, 50 mg, 100 mg

Carbetocin acetate

Cat. No.: HY-17573A

Carbetocin acetate, an oxytocin (OT) analogue, is an **oxytocin receptor** agonist with a K_i of 7.1 nM. Carbetocin acetate has high affinity to chimeric N-terminus (E1) of the oxytocin receptor (K_i=1.17 μM). Carbetocin acetate has the potential for postpartum hemorrhage research.

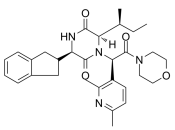


Purity: 99.81%
Clinical Data: Launched
Size: 5 mg, 10 mg, 50 mg, 100 mg

Epelsiban

(GSK 557296) Cat. No.: HY-105018

Epelsiban (GSK 557296) is a potent, selective and orally bioavailable **oxytocin receptor** antagonist, with a pK_i of 9.9 for human oxytocin receptor.

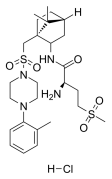


Purity: >98%
Clinical Data: Phase 2
Size: 1 mg, 5 mg

L-368,899 hydrochloride

Cat. No.: HY-108677

L-368,899 hydrochloride is a potent, selective, orally bioavailable, non-peptide **oxytocin receptor** antagonist, with IC_{50}s of 8.9 nM and 26 nM for rat uterus and human uterus oxytocin receptor, respectively. L-368,899 hydrochloride used as a tocolytic agent.

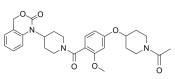


Purity: 98.61%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

L-371,257

Cat. No.: HY-15010

L-371,257 is an orally bioavailable, non-blood-brain barrier penetrant, selective and competitive antagonist of **oxytocin receptor** (pA2=8.4) with high affinity at both the oxytocin receptor (K_i=19 nM) and **vasopressin V1a receptor** (K_i=3.7 nM).

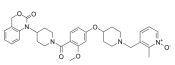


Purity: 98.83%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

L-372662

Cat. No.: HY-15011

L-372662 is a potent and orally active non-peptide **oxytocin** antagonist with a K_i value of 4.8. The K_d value of L-372662 for wild-type hOTR and [A318G]OTR is 5.8 nM and 73 nM. L-372662 shows selectivity to OTR:V_{1a}R.

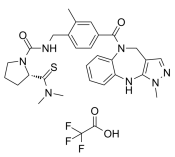


Purity: 98.70%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

LIT-001

Cat. No.: HY-124733A

LIT-001 is the first nonpeptide **oxytocin receptor (OT-R)** agonist (EC_{50}=55 nM; K_i=226 nM). LIT-001 improves social interaction in a mouse model of autism.

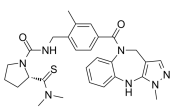


Purity: 98.52%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

LIT-001 free base

Cat. No.: HY-124733

LIT-001 free base is the first nonpeptide **oxytocin receptor (OT-R)** agonist (EC_{50}=55 nM; K_i=226 nM). LIT-001 free base improves social interaction in a mouse model of autism.

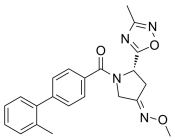


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OT antagonist 1

Cat. No.: HY-103650

OT antagonist 1 (Compound 4) is a potent, selective **Oxytocin** antagonist with a K_i of 50 nM.

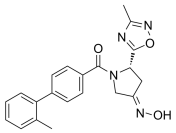


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OT antagonist 1 demethyl derivative

Cat. No.: HY-103651

OT antagonist 1 demethyl derivative is the demethyl derivative of OT antagonist 1. OT antagonist 1 (Compound 4) is a potent, selective **Oxytocin** antagonist with a K_i of 50 nM.

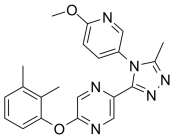


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OT antagonist 3

Cat. No.: HY-103649

OT antagonist 3 is an **oxytocin** (OT) antagonist extracted from patent WO2007017752A1.



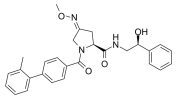
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OT-R antagonist 1

(Oxytocin receptor antagonist 1)

Cat. No.: HY-15015

OT-R antagonist 1 is a new potent and selective nonpeptide low molecular weight OT-R antagonist. OT-R antagonist 1 inhibits oxytocin-evoked intracellular Ca2+ mobilization (IC50 = 8 nM).



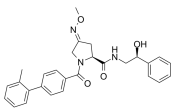
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OT-R antagonist 2

(Oxytocin receptor antagonist 2)

Cat. No.: HY-15015A

OT-R antagonist 2 is a nonpeptide low molecular weight OT-R antagonist. OT-R antagonist 2 inhibitis IP3-Synthesis, rat OT-R (IC50 = 0.33 μM). IC50 value: 0.33μM Target: oxytocin receptor.



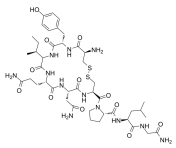
Purity: 99.74%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Oxytocin

(α-Hypophamine; Oxytocic hormone)

Cat. No.: HY-17571

Oxytocin (α-Hypophamine; Oxytocic hormone) is a pleiotropic, **hypothalamic peptide** known for facilitating parturition, lactation, and prosocial behaviors.



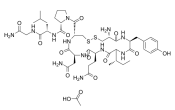
Purity: 99.79%
Clinical Data: Launched
Size: 10 mM × 1 mL, 2 mg

Oxytocin acetate

(α-Hypophamine acetate; Oxytocic hormone acetate)

Cat. No.: HY-17571A

Oxytocin acetate is a pleiotropic, **hypothalamic peptide** known for facilitating parturition, lactation, and prosocial behaviors.



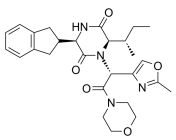
Purity: ≥99.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

Retosiban

(GSK 221149; GSK 221149A)

Cat. No.: HY-14778

Retosiban (GSK221149A) is a potent and selective oxytocin antagonist with a K_i of 0.65 nM.

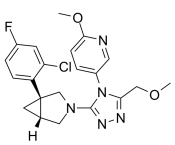


Purity: 98.97%
Clinical Data: Phase 3
Size: 5 mg, 10 mg, 50 mg, 100 mg

SHR1653

Cat. No.: HY-128351

SHR1653 is a highly potent, selective and brain penetrated **oxytocin receptor (OTR)** antagonist, with an IC_{50} of 15 nM for hOTR.

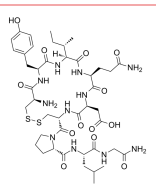


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

[Asp5]-Oxytocin

Cat. No.: HY-P3217

[Asp5]-Oxytocin is the first 5-position neurohypophyseal hormone analogue possessing significant biological activity.



Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg