Oxytocin Receptor

OXTR

Oxytocin, a hormone involved in numerous physiologic processes, plays a central role in the mechanisms of parturition and lactation. It acts through its receptor, which is a transmembrane receptor belonging to the rhodopsin-type class I G-protein-coupled receptor (GPCR) superfamily, while Gq/phospholipase C (PLC)/inositol 1,4,5-triphosphate (InsP3) is the main pathway via which it exerts its action in the myometrium. The main signaling pathway is the Gq/LPC/Ins3 pathway, but the MAPK and the RhoA/Rho kinase pathways are also activated, contributing to increased prostaglandin production and direct contractile effect on myometrial cells. Various peptide and nonpeptide antagonists have been developed as potential tocolytic agents or research tools for the various Oxytocin functions. Many of these oxytocin receptor antagonists are used only as pharmacological tools, while others have tocolytic action.
Oxytocin Receptor Agonists & Antagonists

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

Atosiban (RW22164; Tractocile) is a nonapeptide, desamino-oxytocin analogue, and a competitive vasopressin/oxytocin receptor antagonist (VOTra). Atosiban inhibits the oxytocin-mediated release of inositol trisphosphate from the myometrial cell membrane.
Purity: 99.09%
Clinical Data: Launched
Size: 5 mg, 10 mg, 50 mg

Carbetocin
Cat. No.: HY-17573

Carbetocin (Lonactene; Duratocin) is an obstetric drug used to control postpartum hemorrhage and bleeding after giving birth; an agonist at peripheral oxytocin receptors.
Purity: >98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Cligosiban (PF-3274167)
Cat. No.: HY-15023

Cligosiban, a high oral bioavailability and good brain-penetrant non-peptide oxytocin receptor antagonist, shows a high-affinity (K_i = 9.5 nM) and an excellent selectivity versus the vasopressin receptors with almost no affinity for the V_1a and V_1b subtypes.
Purity: 99.85%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 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_1 of 9.9 for human oxytocin receptor.
Purity: >98%
Clinical Data: No Development Reported
Size: 250 mg, 500 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_50s of 8.9 nM and 26 nM for rat uterus and human uterus oxytocin receptor, respectively, used as a tocolytic agent.
Purity: 98.00%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 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: 250 mg, 500 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: 250 mg, 500 mg

OT-R antagonists 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, 10 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 inhibits IP3-Synthesis, rat OT-R (IC50 = 0.33 μM).

Purity: 99.74%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg, 10 mg

**Oxytocin**  
(α-Hypophamine; Oxytocic hormone)  
Cat. No.: HY-17571

Oxytocin (α-Hypophamine) is a mammalian neurohypophysial hormone; its actions are mediated by specific, high-affinity oxytocin receptors, ligand of oxytocin receptor.

Purity: 98.68%  
Clinical Data: Launched  
Size: 5 mg, 10 mg

**Oxytocin acetate**  
(α-Hypophamine acetate; Oxytocic hormone acetate)  
Cat. No.: HY-17571A

Oxytocin acetate (α-Hypophamine acetate) is a mammalian neurohypophysial hormone; its actions are mediated by specific, high-affinity oxytocin receptors, ligand of oxytocin receptor.

Purity: 99.79%  
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 Ki of 0.65 nM.

Purity: >98%  
Clinical Data: No Development Reported  
Size: 250 mg, 500 mg

**SHR1653**  
Cat. No.: HY-128351

SHR1653 is a highly potent, selective and brain penetrated oxytocin receptor (OTR) antagonist, with an IC50 of 15 nM for hOTR.

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