

# Oxytocin-R (C-20): sc-8102

## BACKGROUND

Oxytocin (OXT) is a pituitary hormone that has long been associated with uterine contraction during parturition and with milk ejection during nursing. Studies have suggested that oxytocin is also a neurotransmitter with reproductively-important effects. Oxytocin-R (OTR) is the receptor for oxytocin and is an integral membrane protein that is a member of the G protein-coupled receptor family. Uterine and cervical oxytocin receptors are significantly up-regulated during gestation, via both endocrine and mechanical signals, suggesting that Oxytocin-R may be involved in parturition. Inhibition of Oxytocin-R synthesis by IFN- $\alpha$  and IFN- $\tau$  may be a mechanism for Oxytocin-R suppression during early pregnancy.

## REFERENCES

1. Kimura, T., et al. 1992. Structure and expression of a human oxytocin receptor. *Nature* 356: 526-529.
2. Rozen, F., et al. 1995. Structure, characterization, and expression of the rat oxytocin receptor gene. *Proc. Natl Acad. Sci. USA* 92: 200-204.
3. Wathes, D.C., et al. 1995. The oxytocin receptor, luteolysis and the maintenance of pregnancy. *J. Reprod. Fertil. Suppl.* 49: 53-67.

## CHROMOSOMAL LOCATION

Genetic locus: OXTR (human) mapping to 3p25.3; Oxtr (mouse) mapping to 6 E3.

## SOURCE

Oxytocin-R (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Oxytocin-R of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8102 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Oxytocin-R (C-20) is recommended for detection of Oxytocin-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Oxytocin-R siRNA (h): sc-40154, Oxytocin-R siRNA (m): sc-40155, Oxytocin-R shRNA Plasmid (h): sc-40154-SH, Oxytocin-R shRNA Plasmid (m): sc-40155-SH, Oxytocin-R shRNA (h) Lentiviral Particles: sc-40154-V and Oxytocin-R shRNA (m) Lentiviral Particles: sc-40155-V.

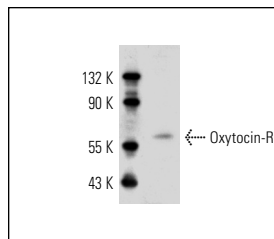
Molecular Weight of Oxytocin-R: 66 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, 3611-RF whole cell lysate: sc-2215 or HeLa whole cell lysate: sc-2200.

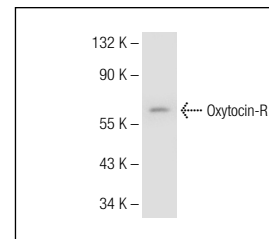
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Oxytocin-R (C-20): sc-8102. Western blot analysis of Oxytocin-R expression in A-431 whole cell lysate.



Oxytocin-R (C-20): sc-8102. Western blot analysis of Oxytocin-R expression in 3611-RF whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Paquin, J., et al. 2002. Oxytocin induces differentiation of P19 embryonic stem cells to cardiomyocytes. *Proc. Natl. Acad. Sci. USA* 99: 9550-9555.
2. Loddenkemper, C., et al. 2003. Use of oxytocin receptor expression in distinguishing between uterine smooth muscle tumors and endometrial stromal sarcoma. *Am. J. Surg. Pathol.* 27: 1458-1462.
3. Jankowski, M., et al. 2004. Oxytocin in cardiac ontogeny. *Proc. Natl. Acad. Sci. USA* 101: 13074-13079.
4. Wettschurek, N., et al. 2004. Heterotrimeric G proteins of the G<sub>q</sub>/11 family are crucial for the induction of maternal behavior in mice. *Mol. Cell. Biol.* 24: 8048-8054.
5. Gutkowska, J., et al. 2007. Effect of exercise training on cardiac oxytocin and natriuretic peptide systems in ovariectomized rats. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 293: R267-R275.
6. Qin, J., et al. 2009. Oxytocin receptor expressed on the smooth muscle mediates the excitatory effect of oxytocin on gastric motility in rats. *Neurogastroenterol. Motil.* 21: 430-438.
7. Feng, M., et al. 2009. Estradiol upregulates the expression of oxytocin receptor in colon in rats. *Am. J. Physiol. Endocrinol. Metab.* 296: E1059-E1066.
8. Broderick, T.L., et al. 2010. Downregulation of oxytocin receptors in right ventricle of rats with monocrotaline-induced pulmonary hypertension. *Acta Physiol.* 200: 147-158.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.