

# Oxytocin-R (C-4): sc-515809



The Power to Question

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Oxytocin-R (C-4) is a mouse monoclonal antibody raised against amino acids 330-389 mapping at the C-terminus of Oxytocin-R of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Oxytocin-R (C-4) is available conjugated to agarose (sc-515809 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515809 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515809 PE), fluorescein (sc-515809 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515809 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515809 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515809 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515809 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515809 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515809 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Oxytocin-R (C-4) is recommended for detection of Oxytocin-R of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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: human Oxytocin-R transfected HEK293T whole cell lysate.

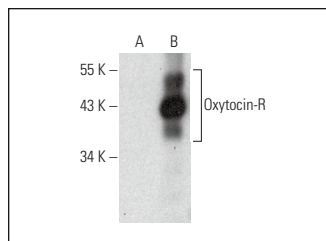
## STORAGE

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

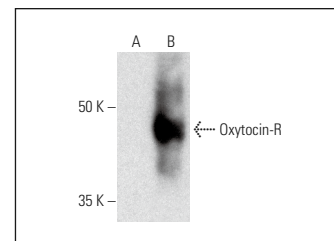
## RESEARCH USE

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

## DATA



Oxytocin-R (C-4): sc-515809. Western blot analysis of Oxytocin-R expression in non-transfected (A) and human Oxytocin-R transfected (B) HEK293T whole cell lysates.



Oxytocin-R (C-4): sc-515809. Western blot analysis of Oxytocin-R expression in non-transfected (A) and human Oxytocin-R transfected (B) HEK293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Yang, W.S., et al. 2019. Arginine vasopressin attenuates the effects of TNF- $\alpha$  in aortic endothelial cells by inducing ectodomain shedding of TNF receptor 1. *Biochem. Biophys. Res. Commun.* 511: 780-786.
- Chen, Z., et al. 2020. Toll-like receptor 4 contributes to uterine activation by upregulating pro-inflammatory cytokine and CAP expression via the NF $\kappa$ B/P38MAPK signaling pathway during pregnancy. *J. Cell. Physiol.* 235: 513-525.
- Li, X.H., et al. 2021. Oxytocin in the anterior cingulate cortex attenuates neuropathic pain and emotional anxiety by inhibiting presynaptic long-term potentiation. *Cell Rep.* 36: 109411.
- Esmailou, Y., et al. 2022. Behavioral and receptor expression studies on the primary somatosensory cortex and anterior cingulate cortex oxytocin involvement in modulation of sensory and affective dimensions of neuropathic pain induced by partial sciatic nerve ligation in rats. *Physiol. Behav.* 251: 113818.
- Nakamura, K., et al. 2022. Probing the spatiotemporal dynamics of oxytocin in the brain tissue using a simple peptide alkyne-tagging approach. *Anal. Chem.* 94: 11990-11998.
- Althammer, F., et al. 2022. Altered PVN-to-CA2 hippocampal oxytocin pathway and reduced number of oxytocin-receptor expressing astrocytes in heart failure rats. *J. Neuroendocrinol.* 34: e13166.
- Hou, W., et al. 2023. Oxytocin treatments or activation of the paraventricular nucleus-the shell of nucleus accumbens pathway reduce adverse effects of chronic social defeat stress on emotional and social behaviors in Mandarin voles. *Neuropharmacology* 230: 109482.

## PROTOCOLS

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

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