## SANTA CRUZ BIOTECHNOLOGY, INC.

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



## 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  $\mu g\, lg G_1$  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 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-α 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 NFκB/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.
- 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.
- Shi, C.N., et al. 2024. Oxytocin attenuates neuroinflammation-induced anxiety through restoration of excitation and inhibition balance in the anterior cingulate cortex in mice. J. Affect. Disord. 362: 341-355.

#### PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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