DATA SHEET

Oxytocin Receptor (OTR) Antibodies

Cat # OTR11-P	Rat OTR Control/blocking Peptide	SIZE: 100 ug
Cat # OTR11-S	Rabbit Anti-Rat OTR antiserum	SIZE: 100 ul
Cat # OTR11-A	Rabbit Anti-Rat OTR IgG, Aff pure	SIZE: 100 ug

The hypothalamic **Oxytocin** (OT) is a nine-amino acid peptide, which exerts multiple biological actions as a hormone and as neurotransmitter. OT stimulates uterine smooth muscle and mammary myoepithelial cell contraction, prostaglandin production by uterine endometrial and amnion cells, milk ejaculation from the mammary gland, and induction of specific mating behavior and maternal behaviors. Just before the onset of labor, uterine myometrium becomes extremely sensitive to oxytocin, for which it is a primary target tissue, because of a dramatic increase in the number of oxytocin receptors. OT initiates its physiological activity by interacting with the G protein-coupled **receptor** (GPCR) known as **oxytocin receptor (OTR).** The encoded receptor is a 388-amino-acid polypeptide with 7 transmembrane domains typical of G protein-coupled receptors. Messenger RNAs for the receptor are of two sizes, 3.6 kilobases in breast, and 4.4 kilobases in ovary, uterine endometrium and myometrium. The mRNA level in the myometrium is very high at term.

Source of Antigen and Antibodies

Antigen	20-aa peptide of Rat OTR; **Designated (OTR11-P or control peptide).** conjugated to KLH; Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat #OTR11-S) Aff pure IgG (**cat #OTR11-A**) purified over antigen-agarose column
2-ab	Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using Chemiluminescence technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Specificity & Cross-reactivity

The OTR11-P peptide sequence is 95% conserved in mouse, 89% in sheep, 85% in human/monkey, 78% with bovine, and 80% with pig OTR. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol see detailed protocol at the web site).

General References: 1. Rozen F et al (1995) PNAS 92, 200-204; Kumura T et al (1992) Nature 356, 526-529.

*This product is for In vitro research use only.

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