ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

OREXIN-A (Hypocretin-A) Antibodies

Cat. OXA11-S	Rabbit Anti-Mouse/Rat Orexin-A antiserum	**SIZE:** 100 ul
Cat. OXA11-A	Rabbit Anti-Mouse/Rat Orexin-A, Ig G (aff pure)	**SIZE**: 100 ug
Cat. OXA11-P	Mouse/Rat Orexin-A Control peptide	**SIZE**: 100 ug

Several peptides associated with feeding behavior have been reported recently. Orexins (**Orexin-A** and **Orexin-B**) are a family of hypothalamic neuropeptides selectively expressed in the hypothalamus (1-2). Orexin-A and Orexin-B are derived from the same precursor (Prepro-orexin) by proteolytic cleavage. **Prepro-orexin** is 130 amino acid long peptide with a putative 33 AA secretory sequence, a hydrophobic core followed by residues with small polar side chains. The expression was detected in brain and to a small extent in testis (1-2). These neuropeptide bind and activate two closely related **Orexin receptors**--G-protein coupled receptors (GPCRs) **OX1R** and **OX2R**.

Source of Antigen and Antibodies

Antigen	18-aa peptide of mouse Orexin-A (gene accession # 055232) (**designated as OXA11-P, control peptide**) conjugated to KLH. The peptide has two disulfides (Cys 6-Cys 12 & Cys 7-Cys 14). ; epitope location ~ N-terminus
Ab Host/type	Rabbit Polyclonal, unpurified antiserum (#OXA11-S) and IgG, purified over antigen-agarose (Cat # PXA11-A) supplied in PBS+0.1% BSA+0.05% azide
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (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 in Buffer: 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
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Recommended Usage

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

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & **Immunofluorescence**: We recommend the use of affinity purified antibody at 2-20 ug/ml (see published refs 2)

Specificity & Cross-reactivity

Mouse OXA11-P control peptide is 100% identical in rat, pig, ovine, bovine, dog, human and 81% in chicken. Anti-OXA11 reacts with the full-length (1-33 aa) Orexin-A. The OXA11-P epitope is not found in Orexin-B. Since Orexin-A and Orexin–B are derived from an unprocessed pre-proorexin (130 aa), the anti-Orexin-A antibodies may also react with pre-pro orexin. Antibodies made to prepro-orexin A are also available. 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) Sakurai, T. et al. (1998) *Cell*, **92**, 573-585; DeLecca L et al (1998) PNAS 95, 322-327

(2) Citations of ADI's Antibodies (see web site for updated list)

Ciriello J, 2003, Brain Research, 967, Pages 123-131; Ouedraogo R., 2003, Diabetes, Jan 2003; 52: 111- 117; deOliveira CVR, 2003, Am J Physiol Heart Circ Physiol 284: H1369; Satoh S, 2003, Eur. J. Neuroscience 17, 1635; Davis SF, 2003, J. Neurosci., 23: 3844 – 3854; Ciriello J, 2003, Brain Research, 991, 84-95; Ehrstrom M., 2003, Am J Physiol Gastrointest Liver Physiol, 285, 688; Ciriello J, 2003, Am J Physiol Regul. Int. Comp Physiol, 284: 1611; deOliveira CVR, 2003, Brain Research 978, 14-23

*This product is for *in vitro* research use only.

OXA11-S-A-P 100811A

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