ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

OREXIN-2 Receptor (Hypocretin-2 Receptor) Antibodies

Cat. OX2R21-S	Rabbit Anti-Rat Orexin-2 Receptor Antiserum #1	**SIZE:** 100 ul
Cat. OX2R21-A	Rabbit Anti-Rat Orexin-2 Receptor IgG #1 (aff pure)	**SIZE**: 100 ug
Cat. OX2R21-P	Rat Orexin-2 Receptor Control/blocking peptide #1	**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 neuropeptides bind and activate two closely related **Orexin receptors**--G-protein coupled receptors (GPCRs) **OX1R** and **OX2R**. Rat and human OX2R are 460 aa, and 444 aa, respectively (1-2)

Source of Antigen and Antibodies

Antigen	19-aa peptide from **rat OX2R/ Hcrtr2 (**gene accession **# P56719, refs 1)**; **Designation (#OX2R21-P, control/blocking peptide**) conjugated to KLH
Epitope Location	~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (**#OX2R21**-S) and IgG, purified over antigen-agarose (Cat # **OX2R21**-A)
2-Ab	Cat # 20320, **goat anti-rabbit IgG-HRP** (AP, biotin, FITC conjugates also available).
-ve control	# 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

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using ECL technique). (see published refs using this antibody in 2).

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

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

Specificity & Cross-reactivity

Rat OX2R21-P is 94% homologous with mouse, and 84% with dog and human OX2R. No significant homology is seen with OX1R or other G-protein-coupled receptors. Antibody reactivity 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 at: www.4adi.com\data\abblock.html).

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)

Naslun E et al, 2002, Am J Physiol Gastrointest Liver Physiol 282: G470-G479
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Beiras-Fernández A, 2004 Journal of Anatomy 204, 117-122,
Caillol M 2003 Brain Res. 960, 48-61
Lopez M et al 1999 Endocrinol. 140, 5991-5994
Blanco M et al, 2001, J Clin. Endocrinol. Metabol. 86, 1616-1619
Kirchgessner, Kirchgessner 1999 Neuron 24: 941-951

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

Ox2R21-S-A-P 70622A

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