

### OREXIN-2 Receptor (Hypocretin-2 Receptor) Antibodies

<b>Cat. OX2R22-S</b>	Rabbit Anti-Hhuman Orexin-2 Receptor Antiserum #2	<b>SIZE:</b> 100 ul
<b>Cat. OX2R22-A</b>	Rabbit Anti-Human Orexin-2 Receptor IgG #2 (aff pure)	<b>SIZE:</b> 100 ug
<b>Cat. OX2R22-P</b>	Human Orexin-2 Receptor Control peptide #2	<b>SIZE:</b> 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

<b>Antigen</b>	19-aa peptide from <b>human OX2R/hcrtr2</b> (gene accession # <b>O43614</b> , refs 1); Designation ( <b>#OX2R22-P</b> , <b>control/blocking peptide</b> ) conjugated to KLH
<b>Epitope Location</b>	~N-terminus Extracellular domain
<b>Ab Host/type</b>	Rabbit, Polyclonal unpurified antiserum ( <b>#OX2R22-S</b> ) and IgG, purified over antigen-agarose (Cat # <b>OX2R22-A</b> )
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control</b>	# 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 -200C 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). (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

Human OX2R22-P peptide is 94% in dog and pig, 84% in rat and 78% in mouse OX2R. No significant homology is seen with OX1R or other G-protein-coupled receptors. Antibody reactivity in all 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](http://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)

Beiras-Fernández A, 2004, *J Anatomy* **204**, 117-122, IHC,  
Naslun E, 2002, *AJP Gastrointest Liver Physiol* **282**: G470-G479  
Blanco, M., 2001, *J. Clin. Endocrinol. Metab.* **86**: 3444  
Blanco, M., 2001, *Regulatory Peptide* in press  
Beiras-Fernández A, 2004, *Journal of Anat.* **204**, 117  
Caillol M 2003 *Brain Res.* **960**, 48-61  
Lopez M, 1999, *Endocrinol.* **140**, 5991-5994  
Blanco M, 2001, *J Clin. Endocrinol. Metabol.* **86**, 1616  
Kirchgessner, K., 1999, *Neuron* **24**: 941-951

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

#### Related material available from ADI:

OX2R22-S-A-P 70622A