

Product Specification Sheet

**Histamine Receptor 3 (H3R) Antibodies**

Cat. # H3R31-P	Rat H3R Control Peptide # 1	<b>SIZE:</b> 100 ug
Cat. # H3R31-S	Rabbit Anti-Rat H3R antiserum # 1	<b>SIZE:</b> 100 ul
Cat. # H3R31-A	Rabbit Anti-Rat H3R Ig G # 1 (affinity pure)	<b>SIZE:</b> 100 ug

**Histamine**, one of the most important mediators of allergy and inflammation, is a chemical messenger and aminergic neurotransmitters. It plays an important role in a multitude of physiological processes in central and peripheral tissues. Histamine is synthesized in a restricted population of neurons located in the tuberomammillary nucleus of the posterior hypothalamus implicated in many brain functions (e.g. sleep/wakefulness, hormonal secretion, cardiovascular control, thermoregulation, food intake, and memory formation). In peripheral tissues histamine is stored in mast cells, basophils, enterochromaffin cells. Histamine release leads to various well-known symptoms of allergic conditions in the skin and the airway system. Histamine effects are mediated by four pharmacologically distinct receptors, the **H1R, H2R, H3R and H4R receptors**, which are all members of the G-protein coupled receptor (GPCR) family. Histamine receptors display 7 TM domains, an extracellular N-terminus, and a cytoplasmic C-terminus of variable length.

Human Histamine 3 receptor, **H3R** (GPCR97), has recently been identified as a presynaptic autoreceptor on histamine neurons in the brain controlling the stimulated release of histamine. Subsequently, the H3 receptor has been shown to be a presynaptic heteroreceptor in nonhistamine-containing neurons in both the central and peripheral nervous systems. H3R (rat/human 445 aa, ~93% homology) is primarily expressed in the brain. Several studies using H3 selective agonists revealed that H3R couples to pertussis toxin-sensitive Gi/o protein.

**Source of Antigen and Antibodies**

<b>Antigen</b>	An 18 aa peptide (Gene Accession #Q9QYN8) ( <b>designated H3R31-P control peptide</b> ) within the <b>cytoplasmic, C-terminus</b> of <b>Rat H3R</b> (1) was synthesized, conjugated to KLH
<b>Ab Host/type</b>	Rabbit, Polyclonal antiserum # <b>H3R31-S</b> and IgG, purified over antigen-agarose (Cat # <b>H3R31-A</b> )
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control IgG</b>	Cat # 20009-1, Rabbit (non-immune) Serum 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 using Chemiluminescence technique).

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

**Histochemistry:** Not tested. We recommend the use of 2-10 ug/ml of affinity pure antibody.

**Specificity & Cross-reactivity**

The Rat H3R31-P peptide sequence is 100% identical in mouse, 88% conserved in g. pig, and 82% in human H3R. No significant homology exists with other histamine receptors. 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 at the web site).

**General References:** Lovenberg TW et al (2000) J. Pharmacol. Exp. Ther. 293, 771-778; Lovernberg TW et al (1999) Mol. Pharmacol. 55, 1101-1107

**Citations of for ADI Antibodies** (see updated list at the web site)

karlstedt k, 2003, Mol Cell Neurosci 24, 614-622, WB, IHC/cold methanol  
Jokuti A, 2007, Cell Biol Int. 2007 Nov;31(11):1367-70., WB,  
Sander LE, 2005, Gut 55, 498-504, WB, IF  
Lippert U, 2004, J. Invest Dermatol 123, 116-123, WB,

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

**Related material available from ADI**

Anti-Histamine, H1R-H4R, IgE ELISA kit  
H3R31-S-A-P . 712144

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