

Product Specification Sheet

Histamine 1 Receptor 1 (H1R) Antibodies

Cat. # H1R11-P	Rat H1R Control Peptide # 1	SIZE: 100 ug
Cat. # H1R11-S	Rabbit Anti-Rat H1R antiserum # 1	SIZE: 100 ul
Cat. # H1R11-A	Rabbit Anti-Rat H1R IgG# 1 (aff pure)	SIZE: 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. 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.

H1R (mouse 488 aa; rat 486 aa; human 487 aa, chromosome 3p21-p14; ~75-85% interspecies homology) is distributed in the brain, most smooth muscle cells, endothelial cells, adrenal medulla, and heart. H1R plays roles in smooth muscle contraction, stimulation of nitric oxide formation, endothelial cell contraction, and increasing vascular permeability, all of which have close relationships with allergic conditions. H1R preferentially couples to the Gq/11 family of G-proteins and causes mobilization of intracellular Ca²⁺ in a pertussis toxin-insensitive fashion.

Source of Antigen and Antibodies

Antigen	17-aa peptide from (Gene Accession #P31390) rat H1R (1); Designation (H1R11-P, control/blocking peptide) conjugated to KLH
Location	~C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#H1R11-S) and IgG, purified over antigen-agarose (Cat # H1R11-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 -20°C and powder at 4°C or -20°C.

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C 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 H1R11-P peptide sequence is 100% conserved in mouse and bovine, 94% in human, fish, and monkey, and 80% in g. pig H1R. No significant sequence homology exists with other histamine receptors. 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:

Fujimoto K et al (1993) BBRC, 190, 294; Inoue I et al (1996) PNAS 93, 13316; DeBacker MD et al (1996) BBRC 197, 1601; Fukui H et al (1994) BBRC 201, 894; Moguilevsky N et al (1994) Eur. J. Biochem. 224, 489

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

Giustizieri ML, 2004, Journal of Allergy and Clinical Immunology, Volume 114, Issue 5, November 2004, Pages 1176-1182, WB, human skin cells/keratinocytes

*This product is for In vitro research use only.

Related material available from ADI

Anti-Histamine, H1R-H4R, IgE ELISA kit

H1R11-S-A-P 50201A

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