

HRH3 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP1700b**Specification**

HRH3 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [Q9Y5N1](#)**HRH3 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 11255**Other Names**

Histamine H3 receptor, H3R, HH3R, G-protein coupled receptor 97, HRH3, GPCR97

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1700b](/product/products/AP1700b) was selected from the C-term region of human HRH3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

HRH3 Antibody (C-term) Blocking Peptide - Protein Information**Name** HRH3**Synonyms** GPCR97**Function**

The H3 subclass of histamine receptors could mediate the histamine signals in CNS and peripheral nervous system. Signals through the inhibition of adenylate cyclase and displays high constitutive activity (spontaneous activity in the absence of agonist). Agonist stimulation of isoform 3 neither modified adenylate cyclase activity nor induced intracellular calcium mobilization.

Cellular Location

Cell membrane; Multi-pass membrane protein.

Tissue Location

Expressed predominantly in the CNS, with the greatest expression in the thalamus and caudate

nucleus. The various isoforms are mainly coexpressed in brain, but their relative expression level varies in a region-specific manner. Isoform 3 and isoform 7 are highly expressed in the thalamus, caudate nucleus and cerebellum while isoform 5 and isoform 6 show a poor expression. Isoform 5 and isoform 6 show a high expression in the amygdala, substantia nigra, cerebral cortex and hypothalamus. Isoform 7 is not found in hypothalamus or substantia nigra

HRH3 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

HRH3 Antibody (C-term) Blocking Peptide - Images

HRH3 Antibody (C-term) Blocking Peptide - Background

The histamine receptor H3 (HRH3) is a presynaptic autoreceptor on histamine neurons in the brain and a presynaptic heteroreceptor in nonhistamine-containing neurons in both the central and peripheral nervous systems. The deduced 445-amino acid HRH3 protein contains 7 predicted transmembrane domains. HRH3 has significant sequence homology to members of the biogenic amine subfamily of GPCRs. Most notable is an aspartic acid residue in the predicted third transmembrane domain, which is a hallmark of the biogenic amine receptor subfamily; this residue is the putative binding site for the primary amine. HRH3 shares 22% and 21.4% amino acid sequence homology with the H1 and H2 receptors, respectively. Expression of recombinant HRH3 in a variety of cell lines conferred an ability to inhibit adenylate cyclase in response to histamine, but not to acetylcholine or any other biogenic amine. Northern blot analysis of human tissues showed HRH3 expression only in the brain, with highest expression in the thalamus and caudate nucleus. Whereas Northern blot analysis did not detect HRH3 expression in any peripheral tissue examined, RT-PCR showed expression in human small intestine, testis, and prostate. In situ hybridization of rat brain sections showed that *Hrh3* is abundantly expressed in brain. *Hrh3* was most notably observed throughout the thalamus, the ventromedial hypothalamus, and the caudate nucleus. Strong expression was also seen in layers II, V, and VIb of the cerebral cortex, in the pyramidal layers of the hippocampus, and in olfactory tubercle. In addition, *Hrh3* expression was found in the locus ceruleus and in the histaminergic cell bodies in the tuberomammillary nuclei.