3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

ANTI-HISTAMINE
Developed in Rabbit
Affinity Isolated Antibody

Product Number **H 7403**

Product Description

Anti-Histamine is developed in rabbit using histamine conjugated to succinylated KLH as immunogen. The antibody is isolated from antiserum by immunospecific methods of purification. Antigen specific affinity isolation removes essentially all rabbit serum proteins, including immunoglobulins, which do not specifically bind to histamine.

Anti-Histamine specifically stains histamine-containing cells in 4% paraformaldehyde/4% carbodiimide-fixed or 4% paraformaldehyde-fixed, paraffin-embedded sections of rat stomach (endocrine and mast cells). The antibody specifically stains histamine-containing endocrine cells and mast cells in rat gastric mucosa. The antibody reacts in dot blot immunoassay with histamine conjugated to BSA. Weak cross reactivity is observed with L-histidine (L-His), and 1-methyl-histidine, (1-Me-His) conjugated to BSA. No cross reactivity is seen with imidazole acetic acid, serotonin, and L-glutamate conjugated to BSA.

Histamine, [2-(4-Imidazolyl)ethylamine], is a widely distributed substance in peripheral tissues, where it mediates a variety of physiological activities including inflammation, gastric acid secretion, and smooth muscle contraction.[1,2] It is also implicated in modulation of cell growth and differentiation, during embryogenesis, and tumor growth and in the suppression of mitogen-induced lymphocyte proliferation.[3-7] Histamine is localized in mast cells, neuronal cells and neuroendocrine cells of the gastric tract, lung and kidney, in cerebrovascular endothelial cells,[8-10] and throughout the peripheral nervous system.[11] It has potent vasodilatory and plasma extravasation effects on capillaries when secreted from mast cells in allergic hypersensitivity responses or inflammation. In the central nervous system (CNS), histamine acts as a neurotransmitter/ neuromodulator of various brain activities.[1] In the rat brain, the highest histamine concentrations are found in neurons of the posterior hypothalamus (tuberomammilary nucleus), in certain areas of the mesencephalon, and in mast cells in the thalamus.[12-14] Histamine is formed by decarboxylation of its precursor, L-histidine, by the enzyme L-histidine decarboxylase (HDC). The physiological actions of histamine in the CNS and periphery are mediated by three receptor subtypes: H_1-, H_2-, and H_3- receptors, which differ in their molecular, ligand binding properties, and use of different signal transduction pathways.[15] Antibodies that react specifically with histamine are useful for the study of the mode of action, differential tissue expression and intracellular and subcellular localization of histamine in the CNS and periphery as well as in neuroendocrine cells of the digestive and respiratory systems.

Reagents

The product is provided as a solution containing 1% BSA and 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

1. Immunohistology
   A minimum dilution of 1:100 was determined by indirect immunohistology using paraffin-embedded tissue sections of 4% paraformaldehyde/ 4% carbodiimide-fixed rat stomach or 4% paraformaldehyde-fixed rat stomach in 0.1 M phosphate buffer, pH 7.4.
2. Dot Blot
   A minimum dilution of 1:14,000 was determined by indirect dot blot using histamine conjugated to BSA (20 ng/dot).

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay. The visualization of histamine in neuronal cell bodies in the CNS may require pretreatment of the animals with inhibitors of axonal transport such as colchicine.

References

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JWM/KMR 04/02