SANTA CRUZ BIOTECHNOLOGY, INC.

Histamine H3 Receptor (C-20): sc-17921

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Histamine is an inflammatory mediator that is ubiquitously expressed and has a broad range of pharmacologic effects. Specifically, it plays a role in the central nervous, gastrointestinal, respiratory and immune systems. The effects of histamine are mediated by a family of G protein-coupled receptors, the Histamine H1, H2, H3 and H4 Receptors. The gene encoding the human Histamine H3 Receptor is located on chromosome 20 and is expressed as six alternative splice variants in thalamus. These isoforms contain either a deletion in the second transmembrane domain or a variable deletion in the third intracellular loop. The existence of multiple H3 Receptor isoforms suggests that H3-mediated effects may be regulated through alternative splicing mechanisms. The H3 Receptor acts as an autoreceptor in the central nervous system (CNS) and modulates histamine synthesis and release. It also acts as a heteroreceptor in the CNS and cardiovascular, gastrointestinal and respiratory systems to regulate the release of a variety of neurotransmitters. The Histamine H3 Receptor responds to several agonists and antagonists, which make it a potential therapeutic target for several diseases, such as asthma, epilepsy and cardiac ischemia.

CHROMOSOMAL LOCATION

Genetic locus: HRH3 (human) mapping to 20q13.33; Hrh3 (mouse) mapping to 2 H4.

SOURCE

Histamine H3 Receptor (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Histamine H3 Receptor of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17921 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Histamine H3 Receptor (C-20) is recommended for detection of Histamine H3 Receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Histamine H3 Receptor (C-20) is also recommended for detection of Histamine H3 Receptor in additional species, including equine and bovine.

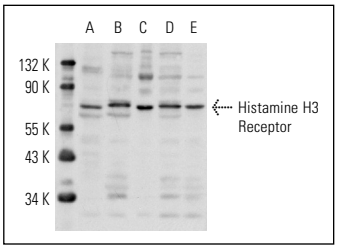
Suitable for use as control antibody for Histamine H3 Receptor siRNA (h): sc-40023, Histamine H3 Receptor siRNA (m): sc-40024, Histamine H3 Receptor shRNA Plasmid (h): sc-40023-SH, Histamine H3 Receptor shRNA Plasmid (m): sc-40024-SH, Histamine H3 Receptor shRNA (h) Lentiviral Particles: sc-40023-V and Histamine H3 Receptor shRNA (m) Lentiviral Particles: sc-40024-V.

Molecular Weight of Histamine H3 Receptor: 70 kDa.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Histamine H3 Receptor (C-20): sc-17921. Western blot analysis of Histamine H3 Receptor expression in C6 (**A**), A549 (**B**), CHO-K1 (**C**), untreated SK-N-MC (**D**) and forskolin-induced SK-N-MC (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Uehara, A., et al. 2003. Neutrophil serine proteinases activate human nonepithelial cells to produce inflammatory cytokines through protease-activated receptor 2. J. Immunol. 170: 5690-5696.
2. Francis, H., et al. 2007. H3 histamine receptor agonist inhibits biliary growth of BDL rats by downregulation of the cAMP-dependent PKA/ERK1/2/ELK-1 pathway. Lab. Invest. 87: 473-487.
3. Francis, H., et al. 2008. Small mouse cholangiocytes proliferate in response to H1 histamine receptor stimulation by activation of the IP3/CaMK I/CREB pathway. Am. J. Physiol., Cell Physiol. 295: C499-C513.
4. Leonardi, A., et al. 2011. Histamine H4 receptors in normal conjunctiva and in vernal keratoconjunctivitis. Allergy 66: 1360-1366.
5. Francis, H.L., et al. 2012. Histamine stimulates the proliferation of small and large cholangiocytes by activation of both IP3/Ca^{2+} and cAMP-dependent signaling mechanisms. Lab. Invest. 92: 282-294.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.