

Histamine H2 Receptor (A-20): sc-19773

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 H1 receptor maps to chromosome 3p25 and is expressed in highest abundance in placenta, with lower levels in lung, skeletal muscle, kidney and brain. The murine histamine H2 receptor gene maps to chromosome 13 and is highly expressed in stomach with moderate expression in brain and heart. The gene encoding the human histamine H3 receptor is located on chromosome 20 and is expressed as six alternative splice variants in thalamus. The human histamine H4 receptor gene maps to chromosome 18q11 and is expressed most abundantly in bone marrow and spleen in addition to peripheral blood leukocytes, thymus, small intestine, and colon. The histamine receptors respond to several agonists and antagonists, which make them potential therapeutic targets for several diseases, such as asthma, epilepsy and cardiac ischemia.

REFERENCES

1. Parsons, M.E. 1991. Histamine receptors: an overview. *Scand. J. Gastroenterol. Suppl.* 180: 46-52.
2. Fukui, H., et al. 1994. Molecular cloning of the human histamine H1 receptor gene. *Biochem. Biophys. Res. Comm.* 201: 894-901.
3. Bissonnette, E.Y. 1996. Histamine inhibits tumor necrosis factor alpha release by mast cells through H2 and H3 receptors. *Am. J. Respir. Cell Mol. Biol.* 14: 620-626.
4. Kobayashi, T., et al. 1996. Cloning, RNA expression, and chromosomal location of a mouse histamine H2 receptor gene. *Genomics* 37: 390-394.
5. Nguyen, T., et al. 2001. Discovery of a novel member of the histamine receptor family. *Mol. Pharmacol.* 59: 427-433.
6. Coge, F., et al. 2001. Genomic organization and characterization of splice variants of the human histamine H3 receptor. *Biochem. J.* 355: 279-288.
7. Oda, T. and Matsumoto, S. 2001. Identification and characterization of histamine H4 receptor. *Nippon Yakurigaku Zasshi* 118: 36-42.
8. Coge, F., et al. 2001. Structure and expression of the human histamine H4-receptor gene. *Biochem. Biophys. Res. Commun.* 284: 301-309.

CHROMOSOMAL LOCATION

Genetic locus: HRH2 (human) mapping to 5q35.2; Hrh2 (mouse) mapping to 13 B1.

SOURCE

Histamine H2 Receptor (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Histamine H2 Receptor of mouse origin.

RESEARCH USE

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

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-19773 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Histamine H2 Receptor (A-20) is recommended for detection of Histamine H2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

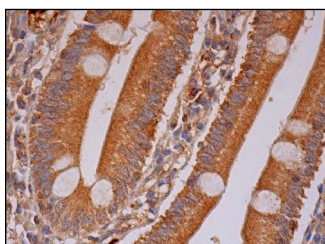
Histamine H2 Receptor (A-20) is also recommended for detection of Histamine H2 Receptor in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Histamine H2 Receptor siRNA (h): sc-43837, Histamine H2 Receptor siRNA (m): sc-60029, Histamine H2 Receptor shRNA Plasmid (h): sc-43837-SH, Histamine H2 Receptor shRNA Plasmid (m): sc-60029-SH, Histamine H2 Receptor shRNA (h) Lentiviral Particles: sc-43837-V and Histamine H2 Receptor shRNA (m) Lentiviral Particles: sc-60029-V.

Molecular Weight of Histamine H2 Receptor: 59 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226.

DATA



Histamine H2 Receptor (A-20): sc-19773. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. 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.

STORAGE

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