

HDC (N-20): sc-34458

BACKGROUND

Histamine is a multifunctional biogenic amine with relevant roles in intercellular communication, inflammatory processes and highly prevalent pathologies. Specifically, it plays a role in the central nervous, gastrointestinal, respiratory and immune systems. Histamine biogenesis relies on the rate-limiting enzyme histidine decarboxylase (HDC), which is regulated by posttranslational processing.

REFERENCES

1. Fleming, J.V., et al. 2003. The production of 53-55 kDa isoforms is not required for rat L-histidine decarboxylase activity. *J. Biol. Chem.* 278: 686-694.
2. Tanaka, S., et al. 2003. Physiological function mediated by histamine synthesis. *Yakugaku Zasshi* 123: 547-559.
3. Zhao, C.M., et al. 2004. Histamine and histidine decarboxylase are hallmark features of ECL cells but not G cells in rat stomach. *Regul. Pept.* 118: 61-66.
4. Fleming, J.V., et al. 2004. The C-terminus of rat L-histidine decarboxylase specifically inhibits enzymic activity and disrupts pyridoxal phosphate-dependent interactions with L-histidine substrate analogues. *Biochem. J.* 381: 769-778.
5. Moya-Garcia, A.A., et al. 2005. Mammalian histidine decarboxylase: from structure to function. *Bioessays* 27: 57-63.
6. Csaba, G., et al. 2007. Serotonin content is elevated in the immune cells of histidine decarboxylase gene knock-out (HDCKO) mice. *Focus on mast cells. Inflamm. Res.* 56: 89-92.
7. Furuta, K., et al. 2007. Activation of histidine decarboxylase through post-translational cleavage by caspase-9 in a mouse mastocytoma P-815. *J. Biol. Chem.* 282: 13438-13446.

CHROMOSOMAL LOCATION

Genetic locus: HDC (human) mapping to 15q21.2; Hdc (mouse) mapping to 2 F1.

SOURCE

HDC (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HDC 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-34458 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

HDC (N-20) is recommended for detection of HDC of human, mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

HDC (N-20) is also recommended for detection of HDC in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HDC siRNA (h): sc-45375, HDC siRNA (m): sc-45376, HDC shRNA Plasmid (h): sc-45375-SH, HDC shRNA Plasmid (m): sc-45376-SH, HDC shRNA (h) Lentiviral Particles: sc-45375-V and HDC shRNA (m) Lentiviral Particles: sc-45376-V.

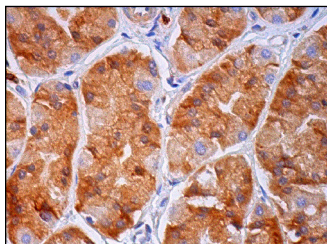
Molecular Weight of HDC: 74 kDa.

Positive Controls: A-10 cell lysate: sc-3806 or HEL 92.1.7 cell lysate: sc-2270.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



HDC (N-20): sc-34458. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

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.