

# HDC (C-20): sc-34454

## 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.

## SOURCE

HDC (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-34454 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 (C-20) is recommended for detection of HDC of 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).

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

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

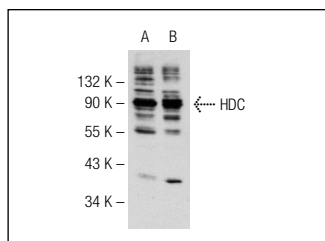
Molecular Weight of HDC: 74 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175, HEL 92.1.7 cell lysate: sc-2270 or human HDC transfected CHO whole cell lysate.

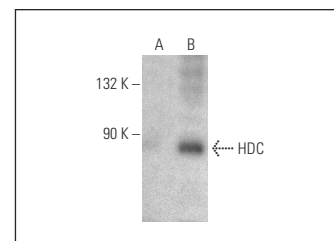
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



HDC (C-20): sc-34454. Western blot analysis of HDC expression in HEL 92.1.7 (A) and HCT 116 (B) whole cell lysates.



HDC (C-20): sc-34454. Western blot analysis of HDC expression in non-transfected CHO (A) and human HDC transfected CHO (B) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.