



## HDC (I-19): sc-34455

### BACKGROUND

Histamine is a multifunctional biogenic amine with relevant roles in inter-cellular 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 post-translational processing. Full length HDC exists as a 74 kDa protein with mature forms ranging from 52 kDa to 70 kDa.

### REFERENCES

1. Fleming, J.V. and Wang, T.C. 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. 2003. [Physiological function mediated by histamine synthesis]. *Yakugaku Zasshi* 123: 547-559.
3. Zhao, C.M., Chen, D., Dornonville de la Cour, C., Lindqvist, A., Persson, L. and Hakanson, R. 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., Fajardo, I., Langlois, M.R., Sanchez-Jimenez, F. and Wang, T.C. 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: 769-78.
5. Moya-Garcia, A.A., Medina, M.A. and Sanchez-Jimenez, F. 2005. Mammalian histidine decarboxylase: from structure to function. *Bioessays* 27: 57-63.

### CHROMOSOMAL LOCATION

Genetic locus: HDC (human) mapping to 15q21-q22; Hdc (mouse) mapping to 10 A3.

### SOURCE

HDC (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HDC of rat 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-34455 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.

### PROTOCOLS

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

### APPLICATIONS

HDC (I-19) is recommended for detection of histidine decarboxylase of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000)

Molecular Weight of full length HDC: 74 kDa.

Molecular Weight of mature HDC: 52-70 kDa.

### 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.

### RESEARCH USE

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