



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



# HDC shRNA (h) Lentiviral Particles: sc-45375-V

## 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.

## 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-Jiménez, 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: 769-778.
5. Moya-Garcia, A.A., Medina, M.A. and Sánchez-Jiménez F. 2005. Mammalian histidine decarboxylase: from structure to function. *Bioessays* 27: 57-63.
6. Csaba, G., Kovács, P., Buzás, E., Mazán, M. and Pállinger, E. 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., Nakayama, K., Sugimoto, Y., Ichikawa, A. and Tanaka, S. 2007. Activation of histidine decarboxylase through post-translational cleavage by caspase-9 in a mouse mastocytoma P-815. *J Biol Chem.* 282: 13438-13446.
8. Wu, F., Yu, J. and Gehring, H. 2008. Inhibitory and structural studies of novel coenzyme-substrate analogs of human histidine decarboxylase. *FASEB J.* 22: 890-897.

## CHROMOSOMAL LOCATION

Genetic locus: HDC (human) mapping to 15q21.2.

## PRODUCT

HDC shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200  $\mu$ l frozen stock containing  $1.0 \times 10^6$  infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see HDC siRNA (h): sc-45375 and HDC shRNA Plasmid (h): sc-45375-SH as alternate gene silencing products.

## STORAGE

Store lentiviral particles at  $-80^\circ$  C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at  $4^\circ$  C for up to one week. Avoid repeated freeze thaw cycles.

## APPLICATIONS

HDC shRNA (h) Lentiviral Particles is recommended for the inhibition of HDC expression in human cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing  $1.0 \times 10^6$  infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

## GENE EXPRESSION MONITORING

HDC (S-19): sc-34459 is recommended as a control antibody for monitoring of HDC gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HDC gene expression knockdown using RT-PCR Primer: HDC (h)-PR: sc-45375-PR (20  $\mu$ l). Annealing temperature for the primers should be  $55-60^\circ$  C and the extension temperature should be  $68-72^\circ$  C.

## BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

## PROTOCOLS

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