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HDC siRNA (m): sc-45376

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

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2. Tanaka, S. 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.
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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.
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CHROMOSOMAL LOCATION

Genetic locus: *Hdc* (mouse) mapping to 2 F1.

PRODUCT

HDC siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HDC shRNA Plasmid (m): sc-45376-SH and HDC shRNA (m) Lentiviral Particles: sc-45376-V as alternate gene silencing products.

For independent verification of HDC (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45376A, sc-45376B and sc-45376C.

RESEARCH USE

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

HDC siRNA (m) is recommended for the inhibition of HDC expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HDC gene expression knockdown using RT-PCR Primer: HDC (m)-PR: sc-45376-PR (20 μ l, 544 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.