

# Hex (HHE5I261): sc-81284

## BACKGROUND

The homeobox protein Hex, also known as proline-rich homeodomain protein (Prh), is encoded by a divergent homeobox gene that is transiently expressed in many hematopoietic lineages, suggesting involvement in cellular differentiation. Hex plays a critical role in inducing differentiation of vascular endothelial cells, in the development and maintenance of several organs derived from foregut endoderm, such as the lung, liver and thyroid gland, and in thyroid cell differentiation. Specifically, Hex is expressed in the developmental phases of the thyroid, lung, liver, thymus, gallbladder and pancreas, and in the adult thyroid, lung and liver. Hex also mediates transcriptional induction of the SMemb/NMHC-B gene via its homeodomain and can function as a transcriptional modulator of CRE-dependent transcription in vascular smooth muscle cells (VSMCs). Hex, a soluble protein, is detected in both the nucleus and cytoplasm of transfected and nontransfected cultured cells.

## REFERENCES

- Bogue, C., Ganea, G., Sturm, E., Iannucci, R. and Jacobs, H. 2000. Hex expression suggest a role in the development and function of organs derived from foregut endoderm. *Dev. Dyn.* 1: 84-89.
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- Martinez, B., Clements, M., Thomas, P., Rodriguez, T., Meloy, D., Kioussis, D. and Beddington, R. 2000. The homeobox gene Hex is required in definitive endodermal tissues for normal forebrain, liver, and thyroid formation. *Development* 11: 2433-2445.
- Denson, L., Karpen, S., Bogue, C. and Jacobs, H. 2000. Divergent homeobox gene Hex regulates promoter of the Na<sup>+</sup>-dependent bile acid co-transporter. *Am. J. Physiol. Gastrointest. Liver Physiol.* 2: 347-355.
- Ghosh, B., Ganea, G., Denson, L., Iannucci, R., Jacobs, H. and Bogue, C. 2000. Immunocytochemical characterization of murine Hex, a homeobox-containing protein. *Pediatr. Res.* 5: 634-638.
- Segikuchi, K., Kurabayashi, M., Oyama, Y., Aihara, Y., Tanaka, T., Sakamoto, H., Hoshino, Y., Kanda, T., Yokoyama, T., Shimomura, Y., Iijima, H., Phyma, Y. and Nagai, R. 2001. Homeobox proteins Hex induces SMemb/nonmuscle nyosin heavy chain-B gene expression through the cAMP-responsive element. *Circ. Res.* 1: 52-58.

## CHROMOSOMAL LOCATION

Genetic locus: HHEX (human) mapping to 10q23.33.

## SOURCE

Hex (HHE5I261) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of Hex of human origin.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

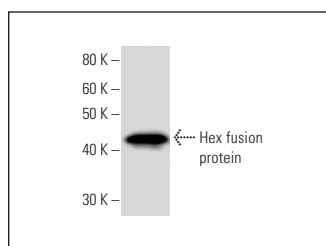
Hex (HHE5I261) is recommended for detection of Hex of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Hex siRNA (h): sc-43831, Hex shRNA Plasmid (h): sc-43831-SH and Hex shRNA (h) Lentiviral Particles: sc-43831-V.

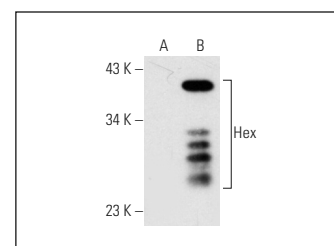
Molecular Weight of Hex: 34 kDa.

Positive Controls: Hex (h): 293T Lysate: sc-116368.

## DATA



Hex (HHE5I261): sc-81284. Western Blot analysis of human recombinant Hex fusion protein.



Hex (HHE5I261): sc-81284. Western blot analysis of Hex expression in non-transfected: sc-117752 (A) and human Hex transfected: sc-116368 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Stepanova, V., Jayaraman, P.S., Zaitsev, S.V., Lebedeva, T., Bdeir, K., Kershaw, R., Holman, K.R., Parfyonova, Y.V., Semina, E.V., Beloglazova, I.B., Tkachuk, V.A. and Cines, D.B. 2016. Urokinase-type plasminogen activator (uPA) promotes angiogenesis by attenuating proline-rich homeodomain protein (PRH) transcription factor activity and de-repressing vascular endothelial growth factor (VEGF) receptor expression. *J. Biol. Chem.* 291: 15029-15045.

## 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) for detailed protocols and support products.