

DHS (H-300): sc-67161

BACKGROUND

Deoxyhypusine synthase (DHS) is crucial for the posttranslational formation of hypusine, a modification of a specific lysine residue in eukaryotic initiation factor 5A (eIF-5A). Hypusine is formed by posttranslational modifications involving two enzymatic steps catalyzed by DHS and deoxyhypusine hydroxylase (DOHH). eIF-5A is essential for eukaryotic cell proliferation. DHS, which belongs to the deoxyhypusine synthase family of proteins, is important for the first step in the hypusine biosynthesis pathway. It acts as a catalyst for the NAD-dependent oxidative cleavage of spermidine and the ensuing transfer of the butylamine moiety of spermidine to the eIF-5A protein, to create the intermediate deoxyhypusine residue.

REFERENCES

1. Sommer, M.N., et al. 2004. Screening assay for the identification of deoxyhypusine synthase inhibitors. *J. Biomol. Screen.* 9: 434-438.
2. Huang, J.K., et al. 2004. Molecular cloning of bovine eIF-5A and deoxyhypusine synthase cDNA. *DNA Seq.* 15: 26-32.
3. Huang, J.K., et al. 2004. Higher activity of recombinant bovine deoxyhypusine synthase vs. human deoxyhypusine synthase. *Protein Expr. Purif.* 35: 32-38.
4. Molitor, I.M., et al. 2004. Translation initiation factor eIF-5A from *Plasmodium falciparum*. *Mol. Biochem. Parasitol.* 137: 65-74.
5. Umland, T.C., et al. 2004. A new crystal structure of deoxyhypusine synthase reveals the configuration of the active enzyme and of an enzyme-NAD inhibitor ternary complex. *J. Biol. Chem.* 279: 28697-28705.
6. Xu, A., et al. 2004. Identification of mRNA that binds to eukaryotic initiation factor 5A by affinity co-purification and differential display. *Biochem. J.* 384: 585-590.
7. Hauber, I., et al. 2005. Identification of cellular deoxyhypusine synthase as a novel target for antiretroviral therapy. *J. Clin. Invest.* 115: 76-85.

CHROMOSOMAL LOCATION

Genetic locus: DHPS (human) mapping to 19p13.2; Dhps (mouse) mapping to 8 C3.

SOURCE

DHS (H-300) is a rabbit polyclonal antibody raised against amino acids 70-369 mapping at the C-terminus of DHS 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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

DHS (H-300) is recommended for detection of DHS of mouse, rat and 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).

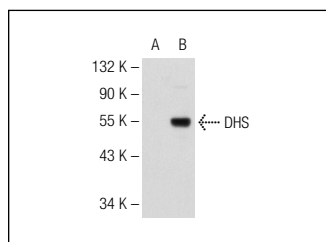
DHS (H-300) is also recommended for detection of DHS in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DHS siRNA (h): sc-60535, DHS siRNA (m): sc-60536, DHS shRNA Plasmid (h): sc-60535-SH, DHS shRNA Plasmid (m): sc-60536-SH, DHS shRNA (h) Lentiviral Particles: sc-60535-V and DHS shRNA (m) Lentiviral Particles: sc-60536-V.

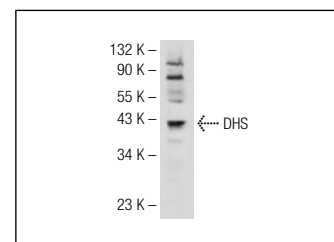
Molecular Weight of DHS: 40 kDa.

Positive Controls: DHS (h): 293T Lysate: sc-177128 or HeLa whole cell lysate: sc-2200.

DATA



DHS (H-300): sc-67161. Western blot analysis of DHS expression in non-transfected: sc-117752 (A) and human DHS transfected: sc-177128 (B) 293T whole cell lysates.



DHS (H-300): sc-67161. Western blot analysis of DHS expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Li, C.H., et al. 2010. eIF5A promotes translation elongation, polysome disassembly and stress granule assembly. *PLoS ONE* 5: e9942.

PROTOCOLS

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



Try **DHS (A-10): sc-365077** or **DHS (C-7): sc-376580**, our highly recommended monoclonal alternatives to DHS (H-300).