

# DBH (H-213): sc-15318

## BACKGROUND

Dopamine  $\beta$ -hydroxylase (DBH) catalyzes the conversion of dopamine to nor-adrenaline in the biosynthesis of catecholamines. DBH is selectively expressed in noradrenergic and adrenergic neurons, as well as in neuroendocrine cells, and it serves as a specific protein marker for noradrenergic processes. The active form of DBH is a homotetramer, which is found in the lumen of synaptic vesicles of corresponding nerve cells, where it localizes to both the membrane and cytosol. DBH is induced by nerve growth factor and Insulin growth factor-1 and is regulated by intracellular second messengers protein kinase A, cyclic AMP, diacyl glycerol and  $Ca^{2+}$ . Expression of DBH is transcriptionally mediated by Sp1, CREB and AP-1 proteins, including c-Fos, c-Jun and JunD.

## REFERENCES

1. Lamouroux, A., et al. 1987. The primary structure of human dopamine  $\beta$ -hydroxylase: insights into the relationship between the soluble and the membrane-bound forms of the enzyme. *EMBO J.* 6: 3931-3937.
2. Kobayashi, K., et al. 1989. Human dopamine  $\beta$ -hydroxylase gene: two mRNA types having different 3'-terminal regions are produced through alternative polyadenylation. *Nucleic Acids Res.* 17: 1089-1102.

## CHROMOSOMAL LOCATION

Genetic locus: DBH (human) mapping to 9q34.2; Dbh (mouse) mapping to 2 A3.

## SOURCE

DBH (H-213) is a rabbit polyclonal antibody raised against amino acids 391-603 mapping near the C-terminus of DBH of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

DBH (H-213) is recommended for detection of DBH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2  $\mu$ g per 100-500  $\mu$ g 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).

DBH (H-213) is also recommended for detection of DBH in additional species, including equine and bovine.

Suitable for use as control antibody for DBH siRNA (h): sc-35179, DBH siRNA (m): sc-35180, DBH shRNA Plasmid (h): sc-35179-SH, DBH shRNA Plasmid (m): sc-35180-SH, DBH shRNA (h) Lentiviral Particles: sc-35179-V and DBH shRNA (m) Lentiviral Particles: sc-35180-V.

Molecular Weight of cleaved DBH: 78 kDa.

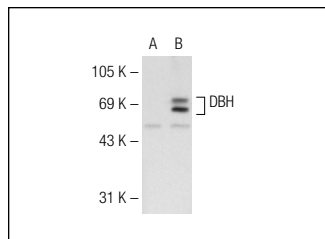
Molecular Weight of amphiphilic DBH: 84 kDa.

Positive Controls: DBH (h): 293T Lysate: sc-159870, PC-12 cell lysate: sc-2250 or rat adrenal gland tissue extract: sc-364802.

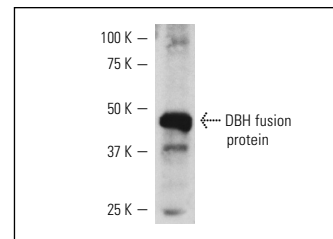
## STORAGE

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

## DATA



DBH (H-213): sc-15318. Western blot analysis of DBH expression in non-transfected: sc-117752 (A) and human DBH transfected: sc-159870 (B) 293T whole cell lysates.



DBH (H-213): sc-15318. Western blot analysis of human recombinant DBH fusion protein.

## SELECT PRODUCT CITATIONS

1. Mahapatra, N.R., et al. 2005. Hypertension from targeted ablation of chromogranin A can be rescued by the human ortholog. *J. Clin. Invest.* 116: 1711-1713.
2. Liles, J.T., et al. 2006. Pressor responses to ephedrine are mediated by a direct mechanism in the rat. *J. Pharmacol. Exp. Ther.* 316: 95-105.
3. Joshi, P.P., et al. 2007. Simultaneous downregulation of Cdk inhibitors p18<sup>Ink4c</sup> and p27<sup>Kip1</sup> is required for MEN2A-RET-mediated mitogenesis. *Oncogene* 26: 554-570.
4. Michard, Q., et al. 2008. TRP-2 expression protects HEK cells from dopamine- and hydroquinone-induced toxicity. *Free Radic. Biol. Med.* 45: 1002-1010.
5. Bourdeaut, F., et al. 2009. Cholinergic switch associated with morphological differentiation in neuroblastoma. *J. Pathol.* 219: 463-472.

## 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) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **DBH (A-9): sc-365710** or **DBH (DBH 41): sc-47707**, our highly recommended monoclonal alternatives to DBH (H-213).