SANTA CRUZ BIOTECHNOLOGY, INC.

DBH (A-9): sc-365710

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dopamine β-hydroxylase (DBH) catalyzes the conversion of dopamine to noradrenaline 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.

CHROMOSOMAL LOCATION

Genetic locus: DBH (human) mapping to 9q34.2.

SOURCE

DBH (A-9) is a mouse monoclonal antibody raised against amino acids 391-603 mapping near the C-terminus of DBH of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DBH (A-9) is available conjugated to agarose (sc-365710 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365710 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365710 PE), fluorescein (sc-365710 FITC), Alexa Fluor® 488 (sc-365710 AF488), Alexa Fluor® 546 (sc-365710 AF546), Alexa Fluor® 594 (sc-365710 AF594) or Alexa Fluor® 647 (sc-365710 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365710 AF680) or Alexa Fluor® 790 (sc-365710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

DBH (A-9) is recommended for detection of DBH of human origin by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of cleaved DBH form: 78 kDa.

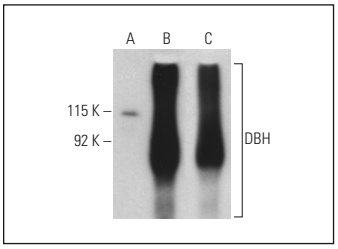
Molecular Weight of amphiphilic DBH form: 84 kDa.

Positive Controls: DBH (h): 293T Lysate: sc-159870 or human adrenal gland extract: sc-363761.

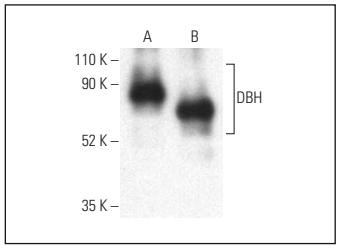
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DBH (A-9): sc-365710. Western blot analysis of DBH expression in non-transfected 293T: sc-117752 (**A**) and human DBH transfected 293T: sc-159870 (**B**) whole cell lysates and human adrenal gland tissue extract (**C**). Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



DBH (A-9): sc-365710. Western blot analysis of human recombinant DBH expressed in HEK293T (**A**) and human recombinant DBH expressed in *E. coli* (**B**).

SELECT PRODUCT CITATIONS

1. Gokozan, H.N., et al. 2016. Area postrema undergoes dynamic postnatal changes in mice and humans. J. Comp. Neurol. 524: 1259-1269.
2. Mpekoulis, G., et al. 2021. Association of hepatitis C virus replication with the catecholamine biosynthetic pathway. Viruses 13: 2139.
3. Cui, K., et al. 2021. Restoration of noradrenergic function in Parkinson's disease model mice. ASN Neuro 13: 17590914211009730.

RESEARCH USE

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

PROTOCOLS

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