SANTA CRUZ BIOTECHNOLOGY, INC.

DDAH II (N-20): sc-26069

BACKGROUND

DDAH, a dimethylarginine dimethylaminohydrolase, hydrolyzes dimethyl arginine (ADMA) and monomethyl arginine (MMA), both inhibitors of nitric oxide synthases, and may be involved in *in vivo* modulation of nitric oxide production. Impairment of DDAH causes ADMA accumulation and a reduction in cGMP generation. DDAH II, the predominant DDAH isoform in endothelial cells, facilitates the induction of nitric oxide synthesis by all-*trans*-retinoic acid (atRA). DDAH proteins are highly expressed in colon, kidney, stomach and liver tissues.

REFERENCES

1. Nakagomi, S., et al. 1999. Dimethylarginine dimethylaminohydrolase (DDAH) as a nerve-injury-associated molecule: mRNA localization in the rat brain and its coincident upregulation with neuronal NO synthase (nNOS) in axotomized motoneurons. Eur. J. Neurosci. 11: 2160-2166.
2. Knipp, M., et al. 2001. Structural and functional characterization of the Zn(II) site in dimethylargininase I (DDAH I) from bovine brain. Zn(II) release activates DDAH I. J. Biol. Chem. 276: 40449-40456.

CHROMOSOMAL LOCATION

Genetic locus: DDAH2 (human) mapping to 6p21.33; Ddah2 (mouse) mapping to 17 B1.

SOURCE

DDAH II (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DDAH II 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.

Blocking peptide available for competition studies, sc-26069 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDAH II (N-20) is recommended for detection of DDAH II 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).

DDAH II (N-20) is also recommended for detection of DDAH II in additional species, including equine, canine and bovine.

Suitable for use as control antibody for DDAH II siRNA (h): sc-40474, DDAH II siRNA (m): sc-40475, DDAH II shRNA Plasmid (h): sc-40474-SH, DDAH II shRNA Plasmid (m): sc-40475-SH, DDAH II shRNA (h) Lentiviral Particles: sc-40474-V and DDAH II shRNA (m) Lentiviral Particles: sc-40475-V.

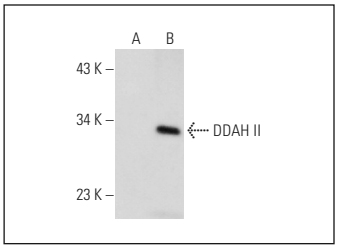
Molecular Weight of DDAH II: 30 kDa.

Positive Controls: DU 145 cell lysate: sc-2268 or DDAH II (m): 293T Lysate: sc-119697.

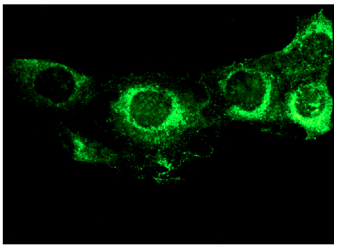
STORAGE

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

DATA



DDAH II (N-20): sc-26069. Western blot analysis of DDAH II expression in non-transfected: sc-117750 (**A**) and mouse DDAH II transfected: sc-119697 (**B**) whole cell lysates.



DDAH II (N-20): sc-26069. Immunofluorescence staining of methanol-fixed DU 145 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Rodríguez-Muñoz, M., et al. 2007. Sumoylated RGS-Rz proteins act as scaffolds for Mu-opioid receptors and G-protein complexes in mouse brain. Neuropsychopharmacology 32: 842-850.
2. Gonnet, F., et al. 2008. Proteome analysis of differentiating human myoblasts by dialysis-assisted two-dimensional gel electrophoresis (DAGE). Proteomics 8: 264-278.
3. Scalera, F., et al. 2008. Effect of telmisartan on nitric oxide—asymmetrical dimethylarginine system: role of angiotensin II type 1 receptor γ and peroxisome proliferator activated receptor γ signaling during endothelial aging. Hypertension 51: 696-703.
4. Scalera, F., et al. 2009. Red wine decreases asymmetric dimethylarginine via SIRT1 induction in human endothelial cells. Biochem. Biophys. Res. Commun. 390: 703-709.

RESEARCH USE

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

PROTOCOLS

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