

# DDAH II (C-19): sc-26071

## 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-1 (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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-26071 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DDAH II (C-19) 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 (C-19) 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.

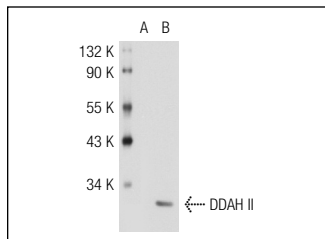
Molecular Weight of DDAH II: 30 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



DDAH II (C-19): sc-26071. Western blot analysis of DDAH II expression in non-transfected: sc-117752 (A) and mouse DDAH II transfected: sc-119697 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Tain, Y.L., et al. 2007. Vitamin E reduces glomerulosclerosis, restores renal neuronal NOS, and suppresses oxidative stress in the 5/6 nephrectomized rat. *Am. J. Physiol. Renal Physiol.* 292: F1404-F1410.
2. Park, C.K., et al. 2008. Investigation of molecular factors associated with malignant transformation of oligodendroglioma by proteomic study of a single case of rapid tumor progression. *J. Cancer Res. Clin. Oncol.* 134: 255-262.
3. Sousse, L.E., et al. 2011. Acute lung injury-induced collagen deposition is associated with elevated asymmetric dimethylarginine and arginase activity. *Shock* 35: 282-288.

## 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.



Try **DDAH II (3E3): sc-293229**, our highly recommended monoclonal alternative to DDAH II (C-19).