

ODCp (E-14): sc-104492

BACKGROUND

ODCp (ornithine decarboxylase-paralog), also known as arginine decarboxylase (ADC), AZI2 or ODC1L, is a 460 amino acid protein that is expressed in brain and testes. ODCp is a member of the Orn/Lys/Arg decarboxylase class-II family that catalyzes the creation of CO₂ and agmatine from L-arginine. Mammalian ODCp differs from the forms expressed in bacteria and plants and shares less than 50% homology with Ornithine decarboxylase (ODC). ODCp is associated with the mitochondrial membrane where excess agmatine can be degraded by the enzyme Agmatinase or bound by the imidazoline recepto. In the brain, the highest levels of ODCp are found in the hypothalamus. Mammalian ODCp is thermally unstable and can be inhibited by Ca²⁺, Co²⁺ and polyamines.

REFERENCES

- McCann, P.P., et al. 1989. Inhibition of ornithine or arginine decarboxylase as an experimental approach to African or American trypanosomiasis. *Adv. Exp. Med. Biol.* 250: 727-735.
- Regunathan, S., et al. 1996. Agmatine (decarboxylated arginine) is synthesized and stored in astrocytes. *Neuroreport* 6: 1897-1900.
- Regunathan, S. and Reis, D.J. 2000. Characterization of arginine decarboxylase in rat brain and liver: distinction from ornithine decarboxylase. *J. Neurochem.* 74: 2201-2208.
- Zhu, M.Y., et al. 2004. Expression of human arginine decarboxylase, the biosynthetic enzyme for agmatine. *Biochim. Biophys. Acta* 1670: 156-164.
- Iyo, A.H., et al. 2006. Expression of arginine decarboxylase in brain regions and neuronal cells. *J. Neurochem.* 96: 1042-1050.

CHROMOSOMAL LOCATION

Genetic locus: ADC (human) mapping to 1p35.1; Adc (mouse) mapping to 4 D2.2.

SOURCE

ODCp (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ODCp 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-104492 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ODCp (E-14) is recommended for detection of ODCp 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).

ODCp (E-14) is also recommended for detection of ODCp in additional species, including equine and canine.

Suitable for use as control antibody for ODCp siRNA (h): sc-61896, ODCp siRNA (m): sc-61897, ODCp shRNA Plasmid (h): sc-61896-SH, ODCp shRNA Plasmid (m): sc-61897-SH, ODCp shRNA (h) Lentiviral Particles: sc-61896-V and ODCp shRNA (m) Lentiviral Particles: sc-61897-V.

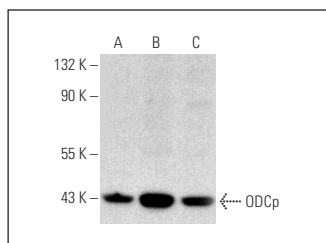
Molecular Weight of ODCp: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse brain extract: sc-2253 or F9 cell lysate: sc-2245.

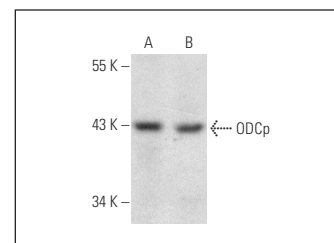
RECOMMENDED SECONDARY REAGENTS

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



ODCp (E-14): sc-104492. Western blot analysis of ODCp expression in Hep G2 (A), COLO 320DM (B) and F9 (C) whole cell lysates.



ODCp (E-14): sc-104492. Western blot analysis of ODCp expression in mouse brain tissue extract (A) and LADMAC whole cell lysate (B).

RESEARCH USE

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