

ODC (D-15): sc-34181

BACKGROUND

Ornithine decarboxylase (ODC) is an enzyme that performs the first step in polyamine biosynthesis by converting ornithine to putrescine and CO₂. ODC plays an important role in diverse biological processes, including cell growth, differentiation, transformation and apoptosis. The Sp1, c-Myc and c-Fos genes function as transactivators and ZBP-89 as a transrepressor of the ODC promoter. Overexpression of ODC gene plays important roles in cell proliferation and the development of cancer. High levels of protein binding in the ODC promoter are implicated to the elevated constitutive expression of this gene. Elevated polyamine levels lead to downregulation of ODC activity by enhancing the translation of antizyme mRNA, resulting in subsequent binding of antizyme to ODC monomers to target ODC for proteolysis by the 26S Proteasome. DFMO (DL- α -difluoromethylornithine) is an irreversible inhibitor of ODC, which can induce apoptosis and inhibits cell growth. ODC is also associated with angiogenesis, and ODC-overexpressing cells exhibit suppressed expression of Type XVIII Collagen and endostatin, suggesting that overexpression of ODC facilitates endothelial proliferation by suppressing endostatin expression. The ODC gene maps to human chromosome 2p25.1.

CHROMOSOMAL LOCATION

Genetic locus: ODC1 (human) mapping to 2p25.1; Odc1 (mouse) mapping to 12 A1.1.

SOURCE

ODC (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ODC of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34181 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ODC (D-15) is recommended for detection of ODC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ODC (D-15) is also recommended for detection of ODC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ODC siRNA (h): sc-43982, ODC siRNA (m): sc-44573, ODC shRNA Plasmid (h): sc-43982-SH, ODC shRNA Plasmid (m): sc-44573-SH, ODC shRNA (h) Lentiviral Particles: sc-43982-V and ODC shRNA (m) Lentiviral Particles: sc-44573-V.

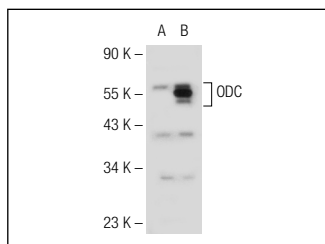
Molecular Weight of ODC: 53 kDa.

Positive Controls: ODC (h): 293T Lysate: sc-170296, HCT-116 whole cell lysate: sc-364175 or SK-MEL-28 cell lysate: sc-2236.

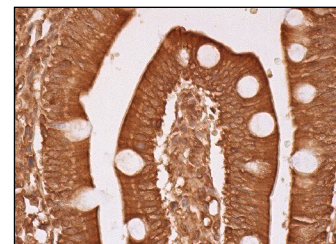
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ODC (D-15): sc-34181. Western blot analysis of ODC expression in non-transfected: sc-117752 (A) and human ODC transfected: sc-170296 (B) 293T whole cell lysates.



ODC (D-15): sc-34181. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

- Petrova, A., et al. 2011. Photoprotection by honeybush extracts, hesperidin and mangiferin against UVB-induced skin damage in SKH-1 mice. J. Photochem. Photobiol. B 103: 126-139.

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.

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **ODC (E-6): sc-398116** or **ODC (G-10): sc-390366**, our highly recommended monoclonal alternatives to ODC (D-15).