

ODC (h): 293T Lysate: sc-170296

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 the 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ODC1 (human) mapping to 2p25.1.

PRODUCT

ODC (h): 293T Lysate represents a lysate of human ODC transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ODC (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ODC antibodies. Recommended use: 10-20 μ l per lane.

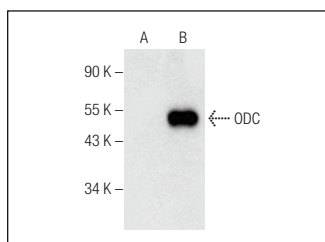
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ODC (G-10): sc-390366 is recommended as a positive control antibody for Western Blot analysis of enhanced human ODC expression in ODC transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



ODC (G-10): sc-390366. Western blot analysis of ODC expression in non-transfected: sc-117752 (A) and human ODC transfected: sc-170296 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.