

PIPOX (M-250): sc-98498

BACKGROUND

PIPOX (pipecolic acid oxidase), also known as LPIPOX or PSO, is a 390 amino acid protein that localizes to the peroxisome and belongs to the MSOX/MTOX family. Existing as a monomer, PIPOX uses FAD as a cofactor to catalyze the metabolism and subsequent degradation of sarcosine, L-pipecolic acid and L-proline. The gene encoding PIPOX maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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2. IJlst, L., de Kromme, I., Oostheim, W. and Wanders, R.J. 2000. Molecular cloning and expression of human L-pipecolate oxidase. *Biochem. Biophys. Res. Commun.* 270: 1101-1105.
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4. Dodt, G., Kim, D., Reimann, S., McCabe, K., Gould, S.J. and Mihalik, S.J. 2000. The human L-pipecolic acid oxidase is similar to bacterial monomeric sarcosine oxidases rather than D-amino acid oxidases. *Cell Biochem. Biophys.* 32: 313-316.
5. Chikayama, M., Ohsumi, M. and Yokota, S. 2000. Enzyme cytochemical localization of sarcosine oxidase activity in the liver and kidney of several mammals. *Histochem. Cell Biol.* 113: 489-495.
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CHROMOSOMAL LOCATION

Genetic locus: Pipox (mouse) mapping to 11 B5.

SOURCE

PIPOX (M-250) is a rabbit polyclonal antibody raised against amino acids 141-390 mapping at the C-terminus of PIPOX of mouse origin.

PRODUCT

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

APPLICATIONS

PIPOX (M-250) is recommended for detection of PIPOX of mouse and rat 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).

Suitable for use as control antibody for PIPOX siRNA (m): sc-76145, PIPOX shRNA Plasmid (m): sc-76145-SH and PIPOX shRNA (m) Lentiviral Particles: sc-76145-V.

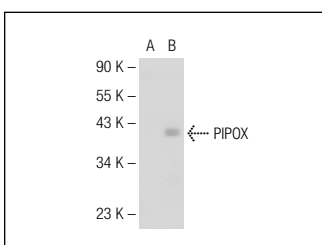
Molecular Weight of PIPOX: 44 kDa.

Positive Controls: PIPOX (m): 293T lysate: sc-125826.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PIPOX (M-250): sc-98498. Western blot analysis of PIPOX expression in non-transfected: sc-117752 (A) and mouse PIPOX transfected: sc-125826 (B) 293T whole cell lysates.

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.