

WWOX (C-7): sc-374449



The Power to Question

BACKGROUND

WWOX (WW domain containing oxidoreductase) protein is a candidate tumor suppressor consisting of two WW domains that influence protein-protein interactions, and a short chain dehydrogenase (SDR) domain, that influences sex-steroid metabolism. Modulation of the WWOX gene influences esophageal squamous cell carcinogenesis and tumorigenicity of breast cancer cell lines MDA-MB-435 and T47D. The murine homolog WOX1 localizes in the mitochondria, and contains a mitochondrial targeting sequence mapping within the SDR domain. JNK1 can physically associate with WOX1 and sequester WOX1-dependent apoptosis.

REFERENCES

1. Bednarek, A.K., et al. 2001. WWOX, the FRA16D gene, behaves as a suppressor of tumor growth. *Cancer Res.* 61: 8068-8073.
2. Chang, N.S., et al. 2001. Hyaluronidase induction of a WW domain-containing oxidoreductase that enhances tumor necrosis factor cytotoxicity. *J. Biol. Chem.* 276: 3361-3370.
3. Kuroki, T., et al. 2002. Genetic alterations of the tumor suppressor gene WWOX in esophageal squamous cell carcinoma. *Cancer Res.* 62: 2258-2260.
4. Ludes-Meyers, J.H., et al. 2003. WWOX, the common chromosomal fragile site, FRA16D, cancer gene. *Cytogenet. Genome Res.* 100: 101-110.

CHROMOSOMAL LOCATION

Genetic locus: WWOX (human) mapping to 16q23.1; Wwox (mouse) mapping to 8 E1.

SOURCE

WWOX (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-111 within an internal region of WWOX of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

WWOX (C-7) is available conjugated to agarose (sc-374449 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374449 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374449 PE), fluorescein (sc-374449 FITC), Alexa Fluor® 488 (sc-374449 AF488), Alexa Fluor® 546 (sc-374449 AF546), Alexa Fluor® 594 (sc-374449 AF594) or Alexa Fluor® 647 (sc-374449 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374449 AF680) or Alexa Fluor® 790 (sc-374449 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374449 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

WWOX (C-7) is recommended for detection of WWOX of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

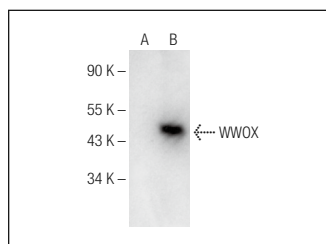
WWOX (C-7) is also recommended for detection of WWOX in additional species, including canine and bovine.

Suitable for use as control antibody for WWOX siRNA (h): sc-44193, WWOX siRNA (m): sc-155368, WWOX shRNA Plasmid (h): sc-44193-SH, WWOX shRNA Plasmid (m): sc-155368-SH, WWOX shRNA (h) Lentiviral Particles: sc-44193-V and WWOX shRNA (m) Lentiviral Particles: sc-155368-V.

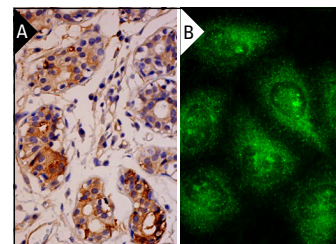
Molecular Weight of WWOX: 46 kDa.

Positive Controls: WWOX (m): 293T Lysate: sc-124659 or mouse ovary extract: sc-2404.

DATA



WWOX (C-7): sc-374449. Western blot analysis of WWOX expression in non-transfected: sc-117752 (A) and mouse WWOX transfected: sc-124659 (B) 293T whole cell lysates.



WWOX (C-7): sc-374449. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

1. Nishikawaji, T., et al. 2016. Oncogenic roles of the SETDB2 histone methyltransferase in gastric cancer. *Oncotarget* 7: 67251-67265.
2. Park, D., et al. 2021. Interaction of WWOX with Brca1 and associated complex proteins prevents premature resection at double-strand breaks and aberrant homologous recombination. *DNA Repair* 110: 103264.
3. Zhang, Y., et al. 2022. Exosomal miR-625-3p secreted by cancer-associated Fibroblasts in colorectal cancer promotes EMT and chemotherapeutic resistance by blocking the CELF2/WWOX pathway. *Pharmacol. Res.* 186: 106534.
4. Taouis, K., et al. 2023. WWOX binds MERIT40 and modulates its function in homologous recombination, implications in breast cancer. *Cancer Gene Ther.* 30: 1144-1155.

STORAGE

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