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Anti-WWOX Antibody Picoband™ (monoclonal, 3D10)

Catalog # ABO14825

Specification

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Product Information

Application	**WB, IHC, IF, ICC, FC**
Primary Accession	Q9NZC7
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Additional Information

Gene ID 51741

Other Names
WW domain-containing oxidoreductase, 1.1.1.-, Fragile site FRA16D oxidoreductase, Short chain dehydrogenase/reductase family 41C member 1, WWOX, FOR, SDR41C1, WOX1

Calculated MW
47 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml
 Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells

Subcellular Localization
Mitochondrion. Golgi apparatus. Nucleus. Cytoplasm.

Tissue Specificity
Widely expressed. Strongly expressed in testis, prostate, and ovary. Overexpressed in cancer cell lines. Isoform 5 and isoform 6 may only be expressed in tumor cell lines.

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E. coli-derived human WWOX recombinant protein (Position: M1-D245).

Cross Reactivity

No cross-reactivity with other proteins.

Storage	**Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.**

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Protein Information

Name WWOX

Synonyms FOR, SDR41C1, WOX1

Function
Putative oxidoreductase. Acts as a tumor suppressor and plays a role in apoptosis. Required for normal bone development (By similarity). May function synergistically with p53/TP53 to control genotoxic stress-induced cell death. Plays a role in TGFB1 signaling and TGFB1-mediated cell death. May also play a role in tumor necrosis factor (TNF)-mediated cell death. Inhibits Wnt signaling, probably by sequestering DVL2 in the cytoplasm.

Cellular Location
Cytoplasm. Nucleus Mitochondrion. Golgi apparatus. Lysosome Note=Partially localizes to the mitochondria (PubMed:14695174) Translocates to the nucleus upon genotoxic stress or TNF stimulation (By similarity). Translocates to the nucleus in response to TGFB1 (PubMed:19366691). Isoform 5 and isoform 6 may localize in the nucleus Localized to the lysosome probably upon binding to VOPP1 (PubMed:30285739). {ECO:0000250, ECO:0000269|PubMed:14695174, ECO:0000269|PubMed:19366691, ECO:0000269|PubMed:30285739}

Tissue Location
Widely expressed. Strongly expressed in testis, prostate, and ovary. Overexpressed in cancer cell lines. Isoform 5 and isoform 6 may only be expressed in tumor cell lines

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Images

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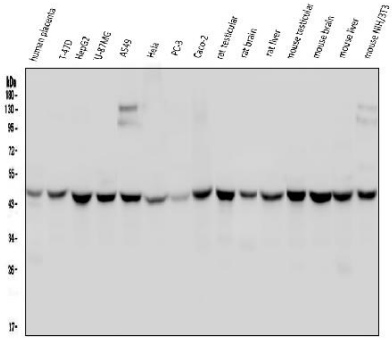

Figure 1. Western blot analysis of WWOX using anti-WWOX antibody (M01223).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human placenta tissue lysates;
Lane 2: human T-47D whole cell lysates;
Lane 3: human HepG2 whole cell lysates;
Lane 4: human U-87MG whole cell lysates;
Lane 5: human A549 whole cell lysates;
Lane 6: human Hela whole cell lysates;
Lane 7: human PC-3 whole cell lysates;
Lane 8: human Caco-2 whole cell lysates;
Lane 9: rat testicular tissue lysates;
Lane 10: rat brain tissue lysates;
Lane 11: rat liver tissue lysates;
Lane 12: mouse testicular tissue lysates;
Lane 13: mouse brain tissue lysates;
Lane 14: mouse liver tissue lysates;
Lane 15: mouse NIH/3T3 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-WWOX antigen affinity purified monoclonal antibody (Catalog # M01223) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for WWOX at approximately 47KD. The expected band size for WWOX is at 47KD.

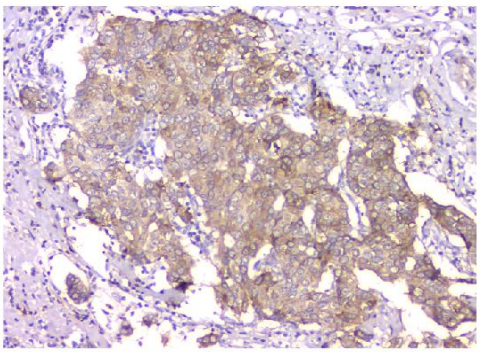

Figure 2. IHC analysis of WWOX using anti-WWOX antibody (M01223).

WWOX was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-WWOX Antibody (M01223) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

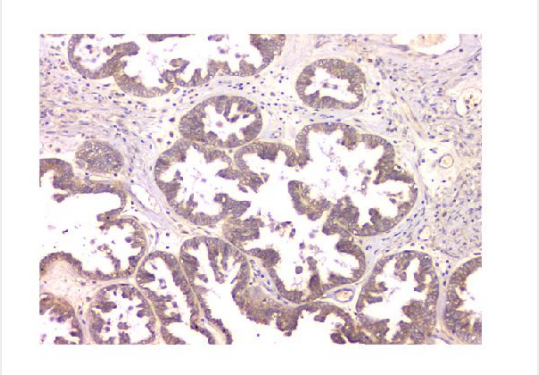

Figure 3. IHC analysis of WWOX using anti-WWOX antibody (M01223).
WWOX was detected in paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-WWOX Antibody (M01223) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

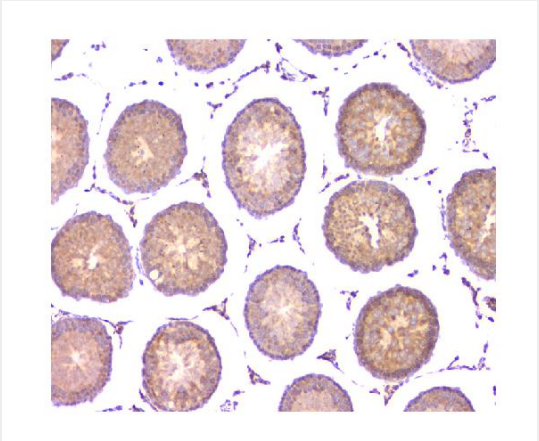

Figure 4. IHC analysis of WWOX using anti-WWOX antibody (M01223).
WWOX was detected in paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-WWOX Antibody (M01223) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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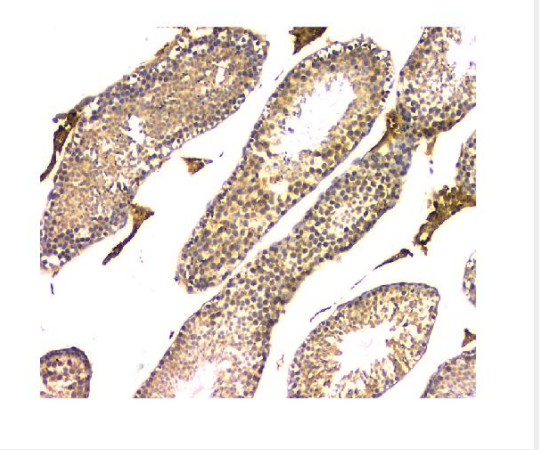

Figure 5. IHC analysis of WWOX using anti-WWOX antibody (M01223).
WWOX was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-WWOX Antibody (M01223) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

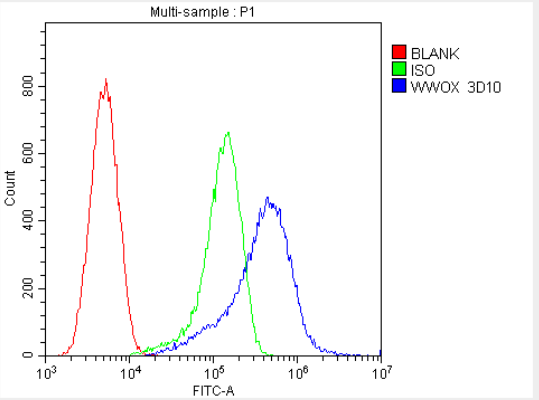

Figure 6. Flow Cytometry analysis of U20S cells using anti-WWOX antibody (M01223).
Overlay histogram showing U20S cells stained with M01223 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-WWOX Antibody (M01223, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

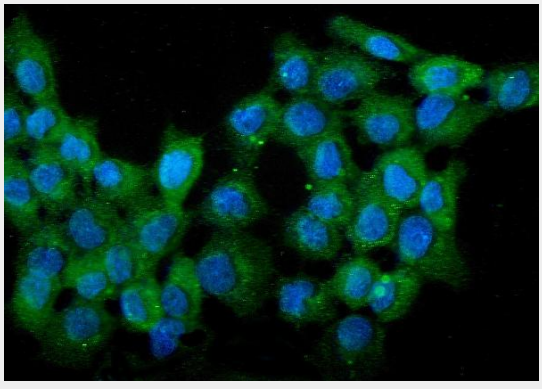

Figure 7. IF analysis of WWOX using anti-WWOX antibody (M01223).

WWOX was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-WWOX Antibody (M01223) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Anti-WWOX Antibody Picoband™ (monoclonal, 3D10) - Background

WW domain-containing oxidoreductase is an enzyme that in humans is encoded by the WWOX gene. This gene encodes a member of the short-chain dehydrogenases/reductases (SDR) protein family. It spans the FRA16D common chromosomal fragile site and appears to function as a tumor suppressor gene. Expression of the encoded protein is able to induce apoptosis, while defects in this gene are associated with multiple types of cancer. Disruption of this gene is also associated with autosomal recessive spinocerebellar ataxia 12. Disruption of a similar gene in mouse results in impaired steroidogenesis, additionally suggesting a metabolic function for the protein. Alternative splicing results in multiple transcript variants.