abcam

# ab238144

# Anti-WWOX antibody [EPR23109-138]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR23109-138 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.48 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/30 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 1/30 |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## ICC/IF

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/500 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## Target data

See full target information WWOX

| | |
|---|---|
| **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. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | The protein WWOX also known as WW domain-containing oxidoreductase or FOR has a molecular mass of approximately 46 kDa. Mechanically WWOX functions by interacting with several other proteins through its WW domains impacting various cellular processes. It exhibits a wide expression pattern found in numerous tissues including the brain lung and testis. Additionally WWOX localizes mainly in the cytoplasm but also migrates to the nucleus under certain conditions indicating its diverse roles in cellular regulation. |
| **Biological function summary** | The protein plays a significant role in cellular processes like apoptosis tumor suppression and steroidogenesis. WWOX participates in various cellular complexes including ones that regulate transcription and signal transduction. Its interaction with the tumor suppressor p53 and other signaling molecules supports its influence on cell cycle regulation and apoptotic pathways. This interaction aids the cell in sensing stress and damage modulating responses to these conditions. |
| **Pathways** | WWOX is intimately linked with the Wnt signaling and apoptotic pathways. In the Wnt pathway WWOX regulates cell proliferation and differentiation by interacting with proteins such as Dvl-2 and beta-catenin. In apoptotic pathways WWOX serves a regulatory role by modulating the activity of proteins like JNK and p73 which are important for inducing programmed cell death. These pathways highlight the importance of WWOX in maintaining cellular homeostasis and responding to abnormal cellular activities. |
| **Associated diseases and disorders** | Alterations in WWOX expression have strong ties to cancer and neurodegenerative diseases. Loss or mutation of WWOX associates with breast prostate and lung cancers due to its role in tumor suppression. The protein also connects to neurodegenerative disorders such as Alzheimer's disease with misregulation affecting neuronal survival. In cancer interactions with proteins like ERBB4 further influence tumorigenic progression while in neurodegeneration WWOX interaction with Tau protein highlights its role in neuron integrity. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

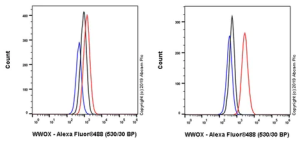
In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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## 10 product images

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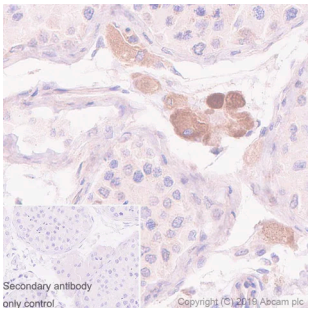


### Flow Cytometry (Intracellular) - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Flow Cytometry (Intracellular) staining using rabbit Anti-WWOX antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized MDA-MB-231 (human breast adenocarcinoma epithelial cell, Left) / MCF7 (human breast adenocarcinoma epithelial cell, Right) cells labelling WWOX with ab238144 at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
**Negative control:** MDA-MB-231(PMID: 19188760).

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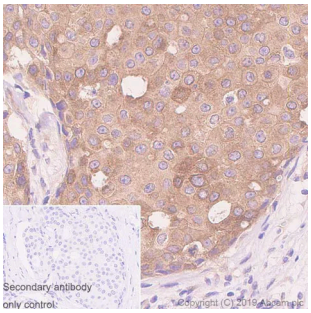

### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WWOX antibody

Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling WWOX with ab238144 at 1/1000 dilution (0.48 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Positive staining on Leydig cells in human testis (PMID: 16941225) is observed. The

section was incubated with ab238144 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

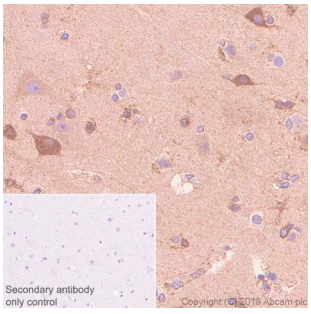



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WWOX antibody

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling WWOX with ab238144 at 1/1000 dilution (0.48 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Positive staining on human breast carcinoma (PMID: 15692750) is observed. The section was incubated with ab238144 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

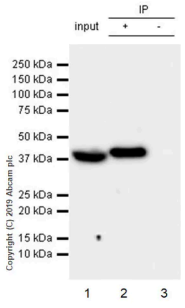



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WWOX antibody

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling WWOX with ab238144 at 1/1000 dilution (0.48 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Positive staining on human cerebrum (PMID: 15692750) is observed. The section was incubated with ab238144 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.




## Immunoprecipitation - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX was immunoprecipitated from 0.35 mg MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate with ab238144 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab238144 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate 10ug

Lane 2: ab238144 IP in MCF7 whole cell lysate

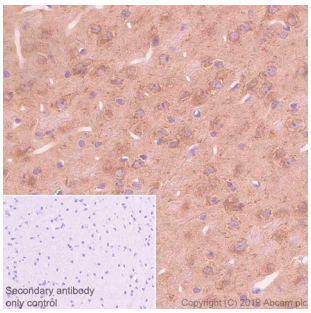
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab238144 in MCF7 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.
All lanes:
Immunoprecipitation - Anti-WWOX antibody [EPR23109-138] (ab238144)

Predicted band size: 47 kDa

Observed band size: 46 kDa

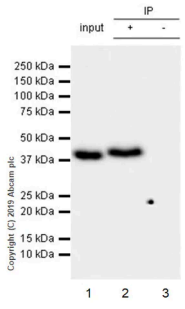



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-WWOX antibody

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling WWOX with ab238144 at 1/5000 dilution (0.10 ug/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). Positive staining on mouse cerebrum (PMID: 17360458) is observed. The section was incubated with ab238144 for 10 mins at room temperature. The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.




## Immunoprecipitation - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX was immunoprecipitated from 0.35 mg Mouse testis lysate with ab238144 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab238144 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: Mouse testis lysate 10ug

Lane 2: ab238144 IP in Mouse testis lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab238144 in Mouse testis lysate

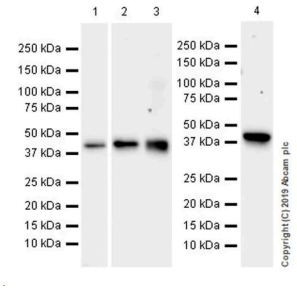
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

All lanes:
Immunoprecipitation - Anti-WWOX antibody [EPR23109-138] (ab238144)

Predicted band size: 47 kDa

Observed band size: 46 kDa




## Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144)

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure times.

Lanes 1-3:37 seconds; Lane 4:70 seconds.

All lanes:
Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144) at 1/1000 dilution

Lane 1:
Human testis lysate at 20 µg

Lane 2:
HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
Mouse ovary lysate at 20 µg

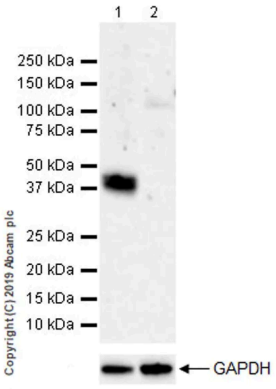
Lane 4:
Mouse testis lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 47 kDa

Observed band size: 46 kDa




## Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144)

Blocking and dilution buffer: 5% NFDM/TBST.
Exposure time: 3 minutes.

**Negative control:** MDA-MB-231 (PMID: 19188760).

All lanes:
Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144) at 1/1000 dilution

Lane 1:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

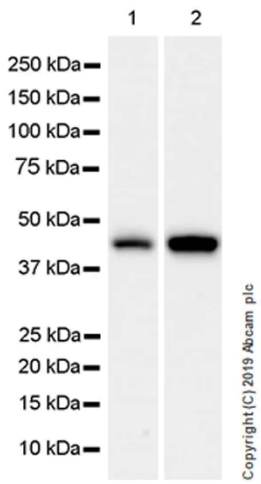
Lane 2:
MDA-MB-231 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 47 kDa

Observed band size: 46 kDa




# Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144)

WWOX Western blot staining using rabbit Anti-WWOX antibody

Blocking/diluting buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-WWOX antibody [EPR23109-138] (ab238144) at 1/1000 dilution

Lane 1:
Human brain lysate at 20 µg

Lane 2:
Mouse brain lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 47 kDa

Exposure time: 37s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.