

### **GAPDH Antibody**

Sheep Polyclonal Antibody Catalog # ALS12650

## **Specification**

## **GAPDH Antibody - Product Information**

Application
Primary Accession
Reactivity
Host
Clonality
Calculated MW
Dilution

WB, IHC-P, E
P04406
Human, Rabbit
Sheep
Polyclonal
36kDa KDa
WB~~1:1000
IHC-P~~N/A
E~~N/A

## **GAPDH Antibody - Additional Information**

**Gene ID 2597** 

### **Other Names**

Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, 1.2.1.12, Peptidyl-cysteine S-nitrosylase GAPDH, 2.6.99.-, GAPDH, GAPD

## Target/Specificity

Recognizes human, rabbit and E. coli. Suitable applications include ELISA & WB.

### **Reconstitution & Storage**

Store at -20°C.

### **Precautions**

GAPDH Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **GAPDH Antibody - Protein Information**

Name GAPDH {ECO:0000303|PubMed:2987855, ECO:0000312|HGNC:HGNC:4141}

### **Function**

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively (PubMed:<a

href="http://www.uniprot.org/citations/11724794" target="\_blank">11724794</a>, PubMed:<a href="http://www.uniprot.org/citations/3170585" target="\_blank">3170585</a>).

Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D- glyceraldehyde 3-phosphate (G3P) into

3-phospho-D-glyceroyl phosphate (PubMed:<a href="http://www.uniprot.org/citations/11724794" target="\_blank">11724794</a>, PubMed:<a href="http://www.uniprot.org/citations/3170585" target="\_blank">3170585</a>). Modulates the organization and assembly of the cytoskeleton (By similarity). Facilitates the CHP1- dependent microtubule and membrane associations through its



ability to stimulate the binding of CHP1 to microtubules (By similarity). Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes (PubMed:<a href="http://www.uniprot.org/citations/23071094" target="\_blank">23071094</a>). Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation (PubMed:<a href="http://www.uniprot.org/citations/23071094" target="\_blank">23071094</a>). Also plays a role in innate immunity by promoting TNF-induced NF-kappa-B activation and type I interferon production, via interaction with TRAF2 and TRAF3, respectively (PubMed:<a href="http://www.uniprot.org/citations/23332158" target="\_blank">23332158</a>, PubMed:<a href="http://www.uniprot.org/citations/27387501" target="\_blank">27387501</a>). Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis (By similarity). Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC (By similarity).

#### **Cellular Location**

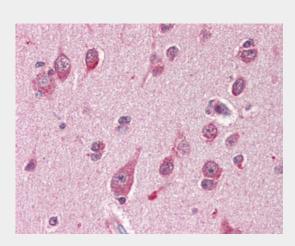
Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity). Postnuclear and Perinuclear regions (PubMed:12829261) {ECO:0000250|UniProtKB:P04797, ECO:0000269|PubMed:12829261}

## **GAPDH Antibody - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# **GAPDH Antibody - Images**



Anti-GAPDH antibody IHC of human brain, cortex.

## **GAPDH Antibody - Background**





Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC. Modulates the organization and assembly of the cytoskeleton. Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules (By similarity). Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D- glyceroyl phosphate. Component of the GAIT (gamma interferon- activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem

loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin)

## **GAPDH Antibody - References**

and suppresses their translation.

Hanauer A., et al. EMBO J. 3:2627-2633(1984). Arcari P., et al. Nucleic Acids Res. 12:9179-9189(1984). Tso J.Y., et al. Nucleic Acids Res. 13:2485-2502(1985). Tokunaga K., et al. Cancer Res. 47:5616-5619(1987). Allen R.W., et al. J. Biol. Chem. 262:649-653(1987).