

**GAPDH Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS13131**

## Specification

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### GAPDH Antibody - Product Information

Application	IF, WB, IHC
Primary Accession	<a href="#">P04406</a>
Reactivity	Human, Mouse, Rat, Drosophila
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36kDa KDa

### 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

Human GAPDH

#### Reconstitution & Storage

Aliquot and store at -20°C. Minimize freezing and thawing.

#### 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}

#### Volume

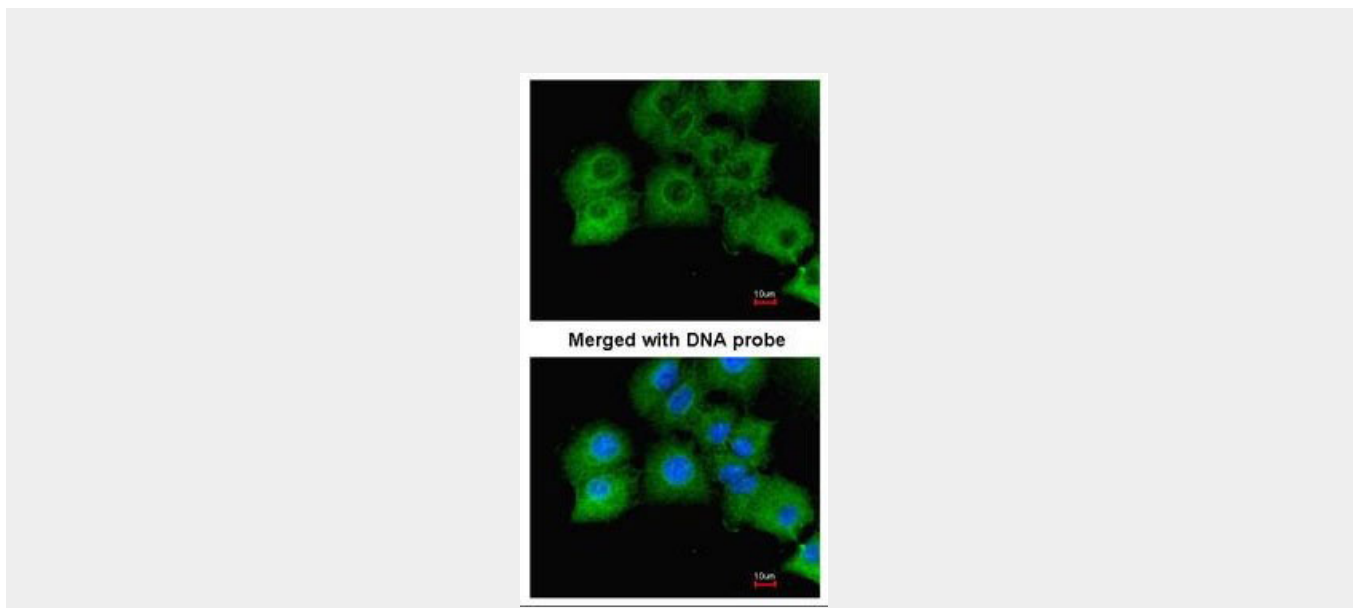
50 µl

#### GAPDH Antibody - Protocols

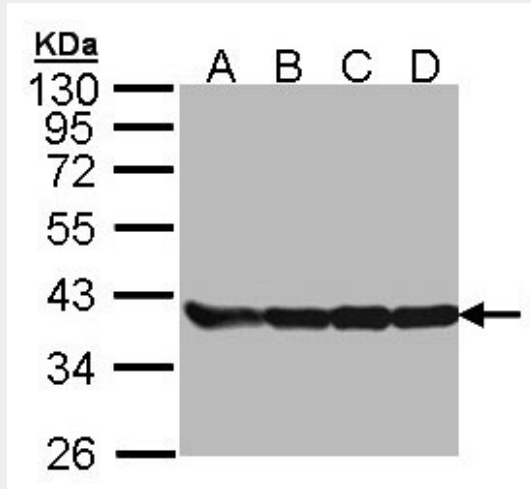
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

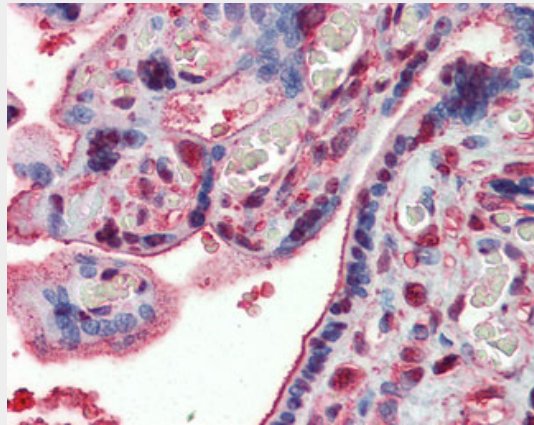
#### GAPDH Antibody - Images



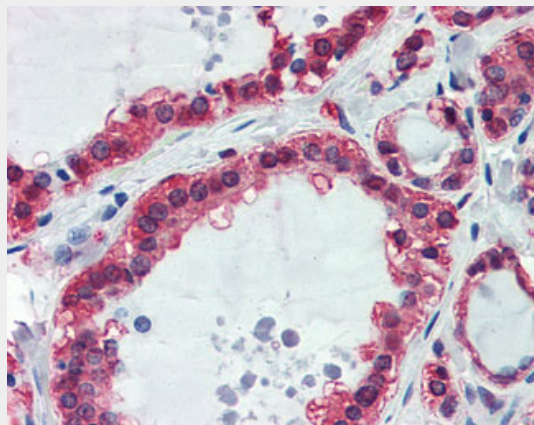
Immunofluorescence of paraformaldehyde-fixed A549, using GAPDH antibody at 1:200 dilution.



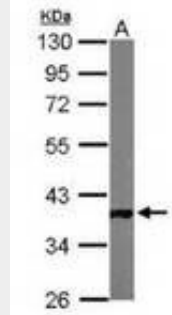
Sample (30 ug of whole cell lysate).



Anti-GAPDH antibody IHC of human placenta.



Anti-GAPDH antibody IHC of human thyroid.



Sample (50 ug of whole cell lysate) A: Mouse Brain. 10% SDS PAGE. ALS13131 diluted at 1:10000.

### **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) and suppresses their translation.

### **GAPDH Antibody - References**

- 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).