

**GAPDH Antibody (aa51-100)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS12300****Specification**

---

**GAPDH Antibody (aa51-100) - Product Information**

Application	<b>WB, IHC-P, IF</b>
Primary Accession	<a href="#">P04406</a>
Reactivity	<b>Human, Mouse, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>36kDa KDa</b>
Dilution	<b>WB~~1:1000</b> <b>IHC-P~~N/A</b> <b>IF~~1:50~200</b>

**GAPDH Antibody (aa51-100) - 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**

16 amino acid peptide from near the amino-terminus of human GAPDH

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

GAPDH Antibody (aa51-100) is for research use only and not for use in diagnostic or therapeutic procedures.

**GAPDH Antibody (aa51-100) - Protein Information****Name** GAPDH {ECO:0000303|PubMed:2987855, ECO:0000312|HGNC:HGNC:4141}**Function**

Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed:&lt;a href="http://www.uniprot.org/citations/11724794" target="\_blank"&gt;11724794&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/3170585" target="\_blank"&gt;3170585&lt;/a&gt;). Also shows nitrosylase activity, thereby playing a role in nuclear functions (PubMed:&lt;a href="http://www.uniprot.org/citations/11724794" target="\_blank"&gt;11724794&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/3170585" target="\_blank"&gt;3170585&lt;/a&gt;). 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

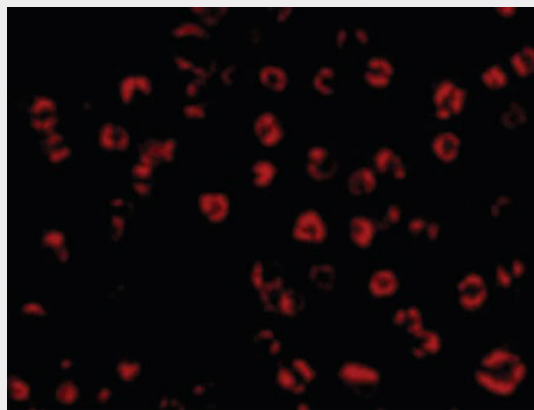
Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity).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

#### GAPDH Antibody (aa51-100) - Protocols

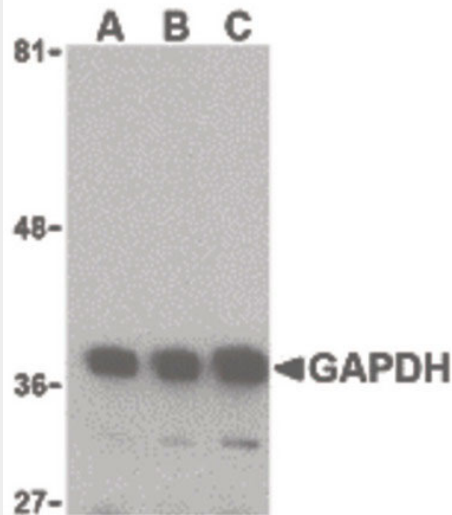
Provided below are standard protocols that you may find useful for product applications.

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

#### GAPDH Antibody (aa51-100) - Images



Immunofluorescence of GAPDH in HeLa cells with GAPDH antibody at 10 ug/ml.



Western blot of GAPDH in HeLa cell lysate with GAPDH antibody at (A) 0.125, (B) 0.25 and (C) 0.5...

#### **GAPDH Antibody (aa51-100) - 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 (aa51-100) - 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).