



# **GAPDH Antibody (N-term) Blocking Peptide**

Synthetic peptide Catalog # BP7873a

# **Specification**

GAPDH Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P04406

GAPDH Antibody (N-term) Blocking Peptide - Additional Information

**Gene ID 2597** 

#### **Other Names**

Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, Peptidyl-cysteine S-nitrosylase GAPDH, 2699-, GAPDH, GAPD

#### Target/Specificity

The synthetic peptide sequence used to generate the antibody <a href=/products/AP7873a>AP7873a</a> was selected from the N-term region of human GAPDH. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

### **Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

## Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

## **Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**GAPDH Antibody (N-term) Blocking Peptide - Protein Information** 

Name GAPDH {ECO:0000303|PubMed:2987855,

# GAPDH Antibody (N-term) Blocking Peptide - Background

GAPDH catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD). The enzyme exists as a tetramer of identical chains.

# **GAPDH Antibody (N-term) Blocking Peptide - References**

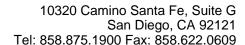
Azam,S., J. Biol. Chem. 283 (45), 30632-30641 (2008)Lu,J., Biosci. Biotechnol. Biochem. 72 (9), 2432-2435 (2008)Zhou,Y., Mol. Cancer Res. 6 (8), 1375-1384 (2008)



## 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/3170 585" target=" blank">3170585</a>, PubMed:<a href="http://www.uniprot.org/ci tations/11724794" target=" blank">11724794</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/c itations/3170585" target=" blank">3170585</a>, PubMed:<a href="http://www.uniprot.org/ci tations/11724794" target=" blank">11724794</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.u niprot.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/ci tations/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 (N-term) Blocking Peptide - Protocols**

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

• Blocking Peptides