

**GAPDH Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7873a**

**Specification**

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**GAPDH Antibody (N-term) - Product Information**

Application	IF, WB, IHC-P,E
Primary Accession	<a href="#">P04406</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	62-91

**GAPDH Antibody (N-term) - Additional Information**

**Gene ID** 2597

**Other Names**

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

**Target/Specificity**

This GAPDH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 62-91 amino acids from the N-terminal region of human GAPDH.

**Dilution**

IF~~1:10~50  
WB~~1:1000  
IHC-P~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

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

**GAPDH Antibody (N-term) - 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:[11724794](#), PubMed:[3170585](#)). 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:[11724794](#), PubMed:[3170585](#)). 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:[23071094](#)). 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:[23071094](#)). 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:[23332158](#), PubMed:[27387501](#)). 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

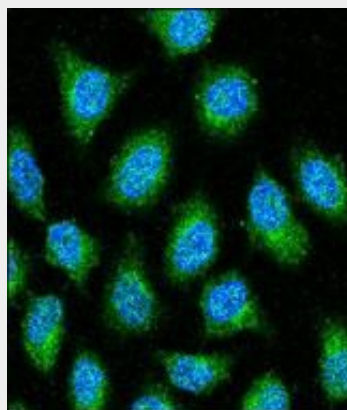
Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity).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

#### GAPDH Antibody (N-term) - Protocols

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

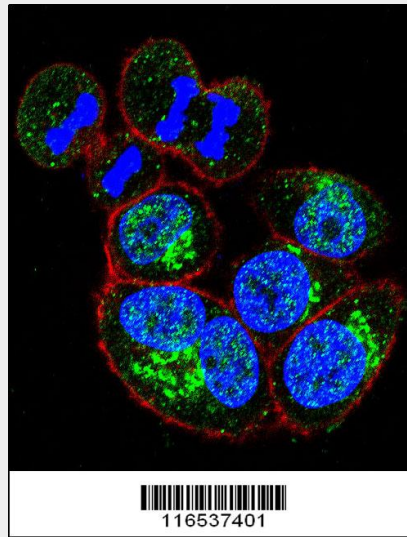
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### GAPDH Antibody (N-term) - Images

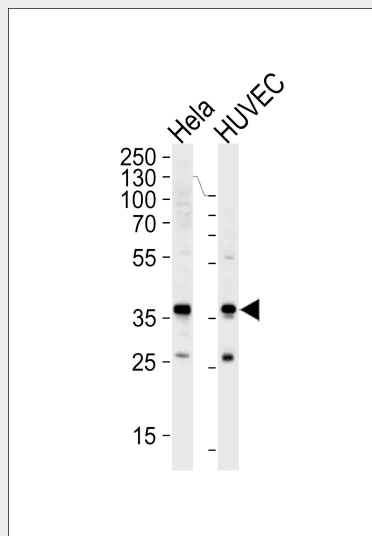


GAPDH Antibody (N-term) (Cat. # AP7873a) confocal immunofluorescent analysis with Hela cell.

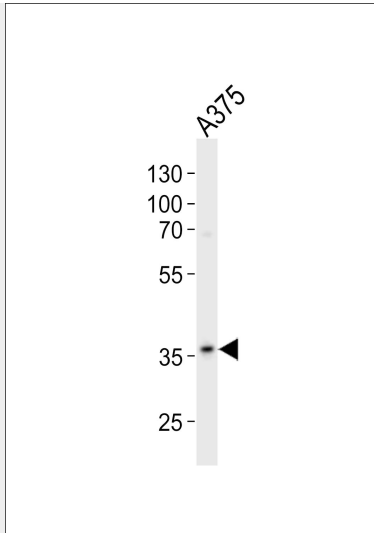
0.025 mg/ml primary antibody was followed by FITC-conjugated goat anti-rabbit IgG (whole molecule). FITC emits green fluorescence. DAPI was used to stain the cell nuclear (blue).



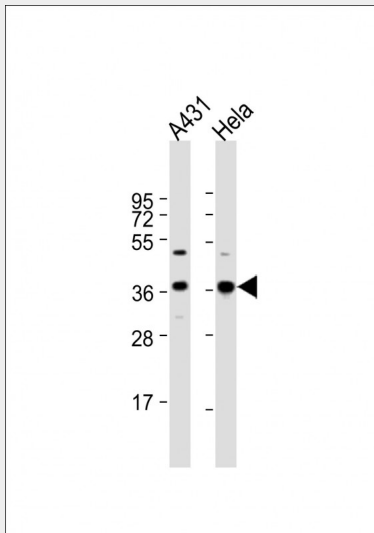
Confocal immunofluorescent analysis of GAPDH Antibody (N-term)(Cat#AP7873a) with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).



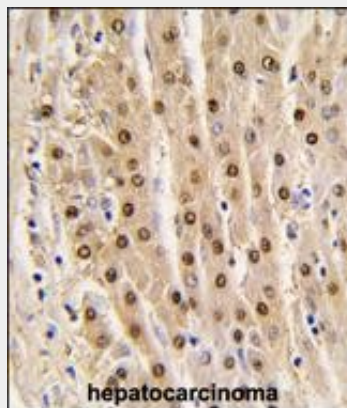
Western blot analysis of lysates from HeLa, HUVEC cell line (from left to right), using GAPDH Antibody (N-term)(Cat. #AP7873a). AP7873a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



Western blot analysis of lysate from A375 cell line, using GAPDH Antibody (N-term)(Cat. #AP7873a). AP7873a was diluted at 1:500. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



All lanes : Anti-GAPDH Antibody (N-term) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: HeLa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with GAPDH antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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

### **GAPDH Antibody (N-term) - Citations**

- [Intermittent Bolus Compared With Continuous Feeding Enhances Insulin and Amino Acid Signaling to Translation Initiation in Skeletal Muscle of Neonatal Pigs](#)
- [Downregulated ZNF132 predicts unfavorable outcomes in breast Cancer via Hypermethylation modification](#)
- [The role of miR-128-3p through MAPK14 activation in the apoptosis of GC2 spermatocyte cell line following heat stress](#)
- [SHOC2 is associated with the survival of breast cancer cells and has prognostic value for patients with breast cancer](#)
- [MiR-29b/Sp1/FUT4 axis modulates the malignancy of leukemia stem cells by regulating fucosylation via Wnt/ \$\beta\$ -catenin pathway in acute myeloid leukemia.](#)
- [LINC01296/miR-26a/GALNT3 axis contributes to colorectal cancer progression by regulating O-glycosylated MUC1 via PI3K/AKT pathway.](#)
- [Wnt pathway is involved in 5-FU drug resistance of colorectal cancer cells.](#)
- [Atorvastatin ameliorates early brain injury through inhibition of apoptosis and ER stress in a rat model of subarachnoid hemorrhage.](#)
- [PSMD7 downregulation induces apoptosis and suppresses tumorigenesis of esophageal squamous cell carcinoma the mTOR/p70S6K pathway.](#)
- [Migration ability and Toll-like receptor expression of human mesenchymal stem cells improves significantly after three-dimensional culture.](#)
- [Proteasome inhibitor MG132 induces thyroid cancer cell apoptosis by modulating the activity of transcription factor FOXO3a.](#)
- [microRNA -140-5p inhibits colorectal cancer invasion and metastasis by targeting ADAMTS5 and IGFBP5.](#)
- [Increased expression of EHF via gene amplification contributes to the activation of HER family signaling and associates with poor survival in gastric cancer.](#)
- [Transient scrotal hyperthermia affects human sperm DNA integrity, sperm apoptosis, and sperm protein expression.](#)
- [The Ring Finger Protein RNF6 Induces Leukemia Cell Proliferation as a Direct Target of Pre-B-cell Leukemia Homeobox 1.](#)
- [miR-221/222 enhance the tumorigenicity of human breast cancer stem cells via modulation of PTEN/Akt pathway.](#)
- [The effect of 3-bromopyruvate on human colorectal cancer cells is dependent on glucose concentration but not hexokinase II expression.](#)
- [Prognostic significance of FAM3C in esophageal squamous cell carcinoma.](#)
- [Angiopoietin-like 4 enhances metastasis and inhibits apoptosis via inducing bone morphogenetic protein 7 in colorectal cancer cells.](#)
- [Elevated kinesin family member 26B is a prognostic biomarker and a potential therapeutic target for colorectal cancer.](#)
- [Oxidized low-density lipoprotein is associated with advanced-stage prostate cancer.](#)

- [Cell killing and radiosensitizing effects of atorvastatin in PC3 prostate cancer cells.](#)
- [MicroRNAs are involved in erythroid differentiation control.](#)