

GAPDH Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1020b

Specification

GAPDH Antibody - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P04406
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	1A10A10

GAPDH Antibody - Additional Information

Gene ID 2597

Other Names

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

Target/Specificity

GAPDH recombinant protein is used to produce this monoclonal antibody.

Dilution

WB~~1:2000~10000
IHC-P~~1:25
IF~~1:25

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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

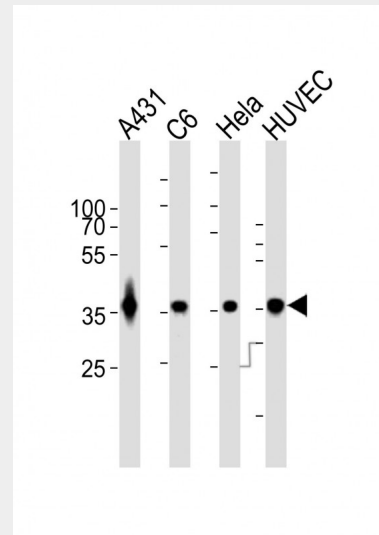
GAPDH Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GAPDH Antibody - Protein Information

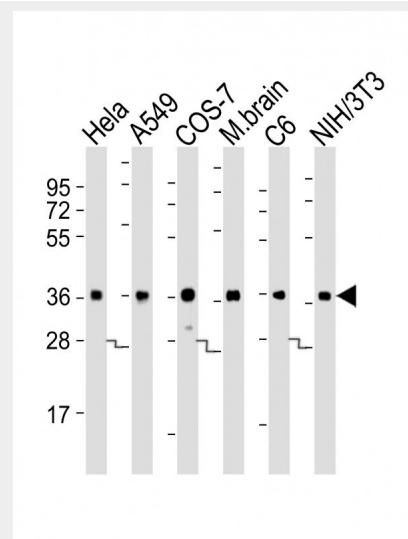
Name GAPDH

Synonyms GAPD

Function



All lanes : Anti-GAPDH Antibody at 1:1000 dilution Lane 1: A431 whole cell lysates Lane 2: C6 whole cell lysates Lane 3: HeLa whole cell lysates Lane 4: HUVEC whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDm/TBST.



All lanes : Anti-GAPDH Antibody at 1:8000 dilution Lane 1: HeLa whole cell lysates Lane 2: A549 whole cell lysates Lane 3: COS-7 whole cell lysates Lane 4: mouse brain lysates Lane 5: C6 whole cell lysates Lane 6: NIH/3T3 whole cell lysates Lysates/proteins at 20 µg per lane.

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.

Cellular Location

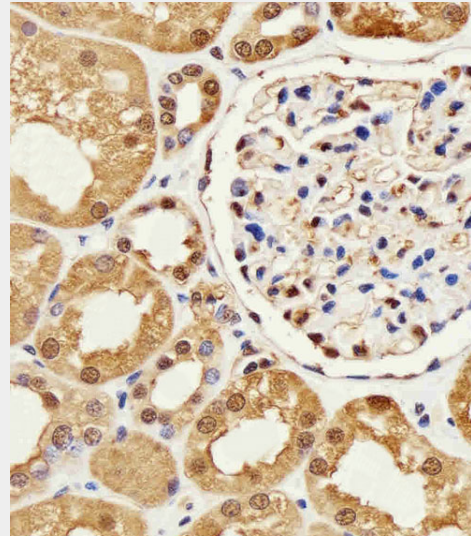
Cytoplasm, cytosol. Nucleus. Cytoplasm, perinuclear region. Membrane. Cytoplasm, cytoskeleton. Note=Translocates to the nucleus following S- nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity). Postnuclear and Perinuclear regions.

GAPDH Antibody - Protocols

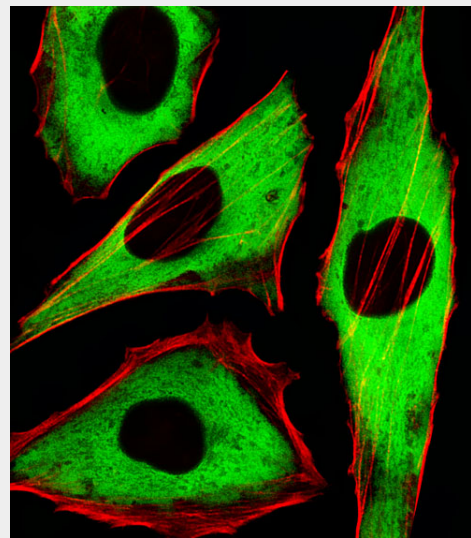
Provided below are standard protocols that you may find useful for product applications.

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

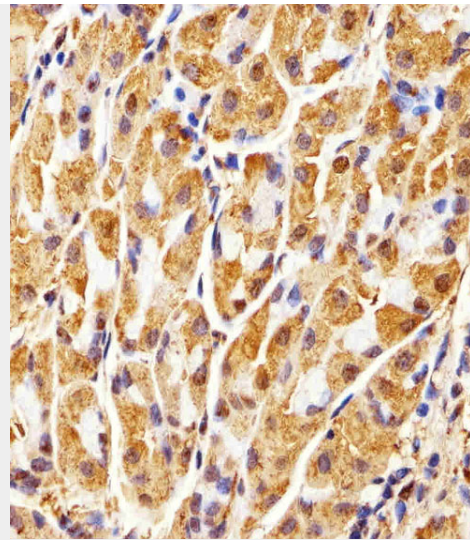
Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution
Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFD/MTBST.



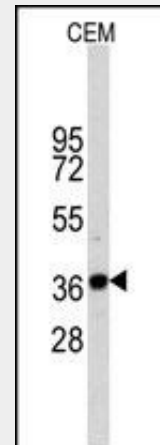
Immunohistochemical analysis of paraffin-embedded H.kidney section using GAPDH Antibody(Cat#AM1020b). AM1020b was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Fluorescent image of HeLa cells stained with XAF1 GAPDH Antibody(Cat#AM1020b). AM1020b was diluted at 1:25 dilution. An Alexa Fluor® 488-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



Immunohistochemical analysis of paraffin-embedded H. stomach section using GAPDH Antibody (Cat#AM1020b). AM1020b was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-mouse IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Western blot analysis of anti-GAPDH Monoclonal Antibody (Cat. #AM1020b) in CEM cell line lysates (35µg/lane). GAPDH (arrow) was detected using the purified Mab.

GAPDH Antibody - Background

The product of this gene 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. Many pseudogenes similar to this locus are present in the human genome.

GAPDH Antibody - References

Inhibition of glyceraldehyde-3-phosphate dehydrogenase activity by antibodies present in the cerebrospinal fluid of patients with multiple sclerosis. Kölln J, et al. J Immunol, 2010 Aug 1. PMID 20610654. Proteome analysis of the thalamus and cerebrospinal fluid reveals

glycolysis dysfunction and potential biomarkers candidates for schizophrenia. Martins-de-Souza D, et al. J Psychiatr Res, 2010 May 14. PMID 20471030. Sex-specific proteome differences in the anterior cingulate cortex of schizophrenia. Martins-de-Souza D, et al. J Psychiatr Res, 2010 Apr 8. PMID 20381070. Identification of melanoma antigens using a Serological Proteome Approach (SERPA). Suzuki A, et al. Cancer Genomics Proteomics, 2010 Jan-Feb. PMID 20181627. siah-1 Protein is necessary for high glucose-induced glyceraldehyde-3-phosphate dehydrogenase nuclear accumulation and cell death in Muller cells. Yego EC, et al. J Biol Chem, 2010 Jan 29. PMID 19940145.

GAPDH Antibody - Citations

- [An in vitro model of foam cell formation induced by a stretchable microfluidic device.](#)
- [MicroRNA-26a inhibits multiple myeloma cell growth by suppressing cyclin-dependent kinase 6 expression.](#)
- [Exosomes increased angiogenesis in papillary thyroid cancer microenvironment.](#)
- [Inhibition of the deubiquitinase USP9x induces pre-B cell homeobox 1 \(PBX1\) degradation and thereby stimulates prostate cancer cell apoptosis.](#)
- [Downregulation of endothelial transient receptor potential vanilloid type 4 channel underlines impaired endothelial nitric oxide-mediated relaxation in the mesenteric arteries of hypertensive rats.](#)
- [Selenium-Rich Diet Induces Myocardial Structural and Functional Abnormalities by Activating Caspase-9 and Caspase-3 in Gpx-1P198L-Overexpression Transgenic Mice.](#)
- [Hepatitis C Virus Entry into Macrophages/Monocytes Mainly Depends on the Phagocytosis of Macrophages.](#)
- [The natural polyphenol curcumin induces apoptosis by suppressing STAT3 signaling in esophageal squamous cell carcinoma.](#)
- [l-Rhamnosylation of wall teichoic acids promotes efficient surface association of Listeria monocytogenes virulence factors InlB and Ami through interaction with GW domains.](#)
- [DFMG attenuates the activation of macrophages induced by co-culture with LPC-injured HUVE-12 cells via the TLR4/MyD88/NF- \$\kappa\$ B signaling pathway.](#)
- [Peptide SS-31 upregulates frataxin expression and improves the quality of mitochondria: implications in the treatment of Friedreich ataxia.](#)
- [Expression and prognostic significance of MYL9 in esophageal squamous cell carcinoma.](#)
- [The Role of Annexin A4 in Triple-Negative Breast Cancer Progression and Its Clinical Application.](#)
- [Use of rhenium-188 for in vivo imaging and treatment of human cervical cancer cells transfected with lentivirus expressing sodium iodide symporter.](#)
- [Silencing DNA methyltransferase 1 \(DNMT1\) inhibits proliferation, metastasis and invasion in ESCC by suppressing methylation of RASSF1A and DAPK.](#)
- [Pulsatile delivery of a leucine supplement during long-term continuous enteral feeding enhances lean growth in term neonatal pigs.](#)
- [Hepatocellular Carcinoma Cells Induce Regulatory T Cells and Lead to Poor Prognosis via Production of Transforming Growth Factor- \$\beta\$ 1.](#)
- [Upregulation of microRNA-96 and its oncogenic functions by targeting CDKN1A in bladder cancer.](#)
- [SC06, a novel small molecule compound, displays preclinical activity against multiple myeloma by disrupting the mTOR signaling pathway.](#)
- [Molecular In Vivo Imaging Using a Noninvasive Cardiac-Specific MLC-2v Promoter Driven Dual-Gene Recombinant Lentivirus Monitoring System.](#)
- [Cyclin O regulates germinal vesicle breakdown in mouse oocytes.](#)
- [Nutrition deficiency promotes apoptosis of cartilage endplate stem cells in a caspase-independent manner partially through upregulating BNIP3.](#)