### GAPDH Antibody

**Purified Mouse Monoclonal Antibody (Mab)**

Catalog # AM1020b

#### Specification

**GAPDH Antibody - Product Information**

<table>
<thead>
<tr>
<th>Application</th>
<th>WB, IHC-P, IF, E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Accession</td>
<td>P04406</td>
</tr>
<tr>
<td>Reactivity</td>
<td>Human, Mouse, Rat</td>
</tr>
<tr>
<td>Host</td>
<td>Mouse</td>
</tr>
<tr>
<td>Clonality</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG1</td>
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</tbody>
</table>

#### 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.

#### Protein Information

- **Name**: GAPDH
- **Synonyms**: GAPD
- **Function**: Has both glyceraldehyde-3-phosphate dehydrogenase activities.
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 ceruloplasmin) 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

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

GAPDH Antibody - Citations

- Effect of Furostanol Saponins from Allium Macrostemon Bunge Bulbs on Platelet Aggregation Rate and PI3K/Akt Pathway in the Rat Model of Coronary Heart Disease.
- Induction of mTOR-dependent autophagy by WS nanosheets from both inside and outside of human cells.
- 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 deubiquitinating enzyme USP9x induces p53 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.
- 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-kB 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-B1.
- 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 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.