

GAPDH Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10597**Specification**

GAPDH Antibody - Product Information

Application	WB
Primary Accession	P04406
Other Accession	XP_214281.3
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	36053

GAPDH Antibody - Additional Information**Gene ID 2597****Application & Usage**

Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. The antibody recognizes over 100 kDa band corresponding to NIF-1 in samples from human origin. Reactivity to other species has not been tested.

Other Names

Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, 1.2.1.12, Peptidyl-cysteine S-nitrosylase
GAPDH, 2.6.99.-, GAPDH, GAPD

Target/Specificity

GAPDH

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

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

GAPDH Antibody - 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:3170585, PubMed:11724794). 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:3170585, PubMed:11724794). 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 - 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 - Images**GAPDH Antibody - Background**

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH), also called uracil DNA glycosylase, catalyzes the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD), an important energy-yielding step in carbohydrate metabolism. While GAPDH has long been recognized as playing an integral role in glycolysis, additional functions of GAPDH include acting as a uracil DNA glycosylase, activating transcription, binding RNA and involvement in nuclear RNA export, DNA replication and DNA repair. Expression of GAPDH is upregulated in liver, lung and prostate cancers. GAPDH translocates to the nucleus during apoptosis. GAPDH complexes with neuronal proteins implicated in human neuro-degenerative disorders including the b-Amyloid precursor, Huntingtin and other triplet repeat neuronal disorder proteins.