

GAPDH(human specific) Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52679

Specification

GAPDH(human specific) Antibody - Product Information

Application	WB
Primary Accession	P04406
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	37 KDa

GAPDH(human specific) Antibody - Additional Information

Gene ID 2597

Other Names

38 kDa BFA-dependent ADP-ribosylation substrate;aging associated gene 9 protein;Aging-associated gene 9 protein;BARS-38;cb609;EC 1.2.1.12;G3P_HUMAN;G3PD;G3PDH;GAPD;GAPDH; GAPDH;Glyceraldehyde 3 phosphate dehydrogenase;Glyceraldehyde 3 phosphate dehydrogenase liver;Glyceraldehyde 3 phosphate dehydrogenase muscle;Glyceraldehyde-3-phosphate dehydrogenase;KNC-NDS6;MGC102544;MGC 102546;MGC103190;MGC103191;MGC105239;MGC127711; MGC88685;OCAS, p38 component;OCT1 coactivator in S phase, 38-KD component;peptidyl cysteine S nitrosylase GAPDH;Peptidyl-cysteine S-nitrosylase GAPDH;wu:fb33a10.

Dilution

WB~~1:5000

Format

Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine(pH 7.4,150 mM NaCl)with 0.09% (W/V) sodium azide,0.1mg/mlBSA and 50% glycerol.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

GAPDH(human specific) Antibody - Protein Information

Name GAPDH {ECO:0000303|PubMed:2987855, ECO:0000312|HGNC:HGNC:4141}

Function

Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed:11724794, PubMed:3170585). Also shows nitrosylase activity, thereby playing a role in nuclear functions (PubMed:<a

[11724794](http://www.uniprot.org/citations/11724794), PubMed: [3170585](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/23332158), PubMed: [27387501](http://www.uniprot.org/citations/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

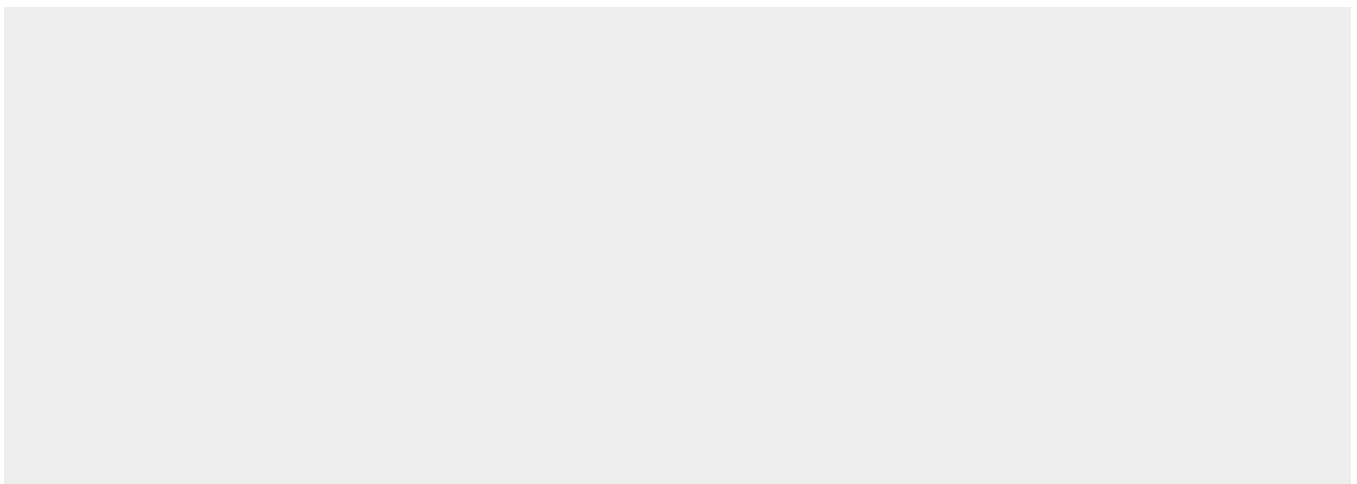
Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity).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

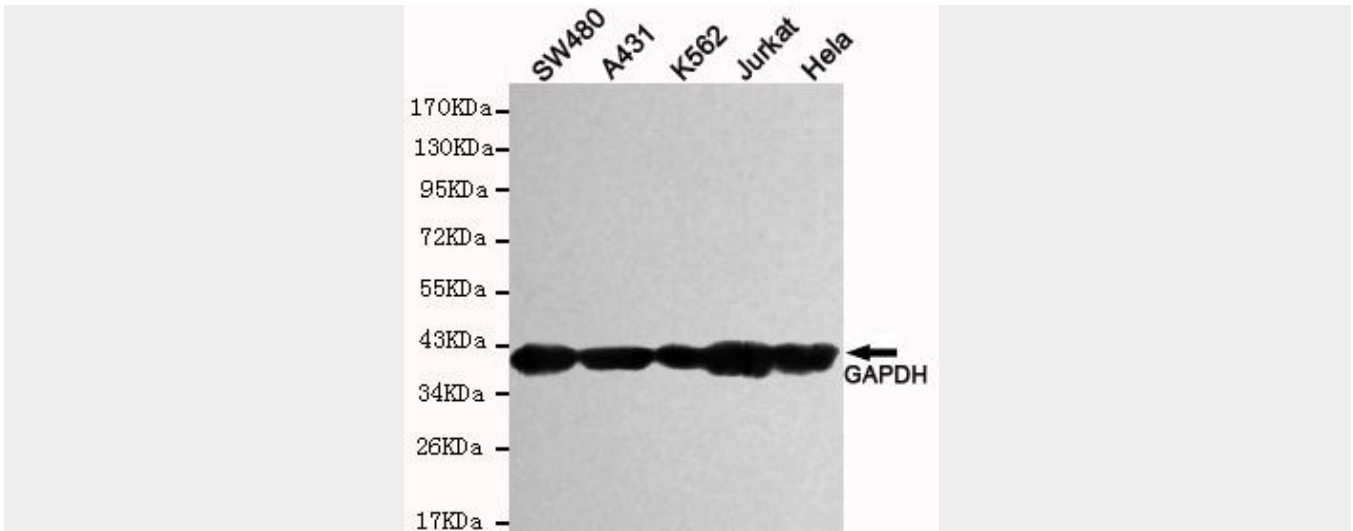
GAPDH(human specific) Antibody - Protocols

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(human specific) Antibody - Images





Western blot detection of GAPDH(human specific) in SW480,A431,K562,Jurkat and HeLa cell lysates using GAPDH(human specific) mouse mAb (1:5000 diluted). Predicted band size:37KDa.Observed band size:37KDa.

GAPDH(human specific) Antibody - Background

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.

GAPDH(human specific) Antibody - References

- Hanauer A.,et al.EMBO J. 3:2627-2633(1984).
- Arcari P.,et al.Nucleic Acids Res. 12:9179-9189(1984).
- Tso J.Y.,et al.Nucleic Acids Res. 13:2485-2502(1985).
- Tokunaga K.,et al.Cancer Res. 47:5616-5619(1987).
- Allen R.W.,et al.J. Biol. Chem. 262:649-653(1987).