

GAPDH Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8539b

Specification

GAPDH Antibody - Product Information

Application	IF, WB, IHC-P,E
Primary Accession	P04406
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Calculated MW	36053

GAPDH Antibody - Additional Information

Gene ID 2597

Other Names

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

Target/Specificity

This GAPDH antibody is generated from a mouse immunized with a recombinant protein between 43-335 amino acids from human GAPDH.

Dilution

IF~~1:25
WB~~1:8000
IHC-P~~1:25

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 {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

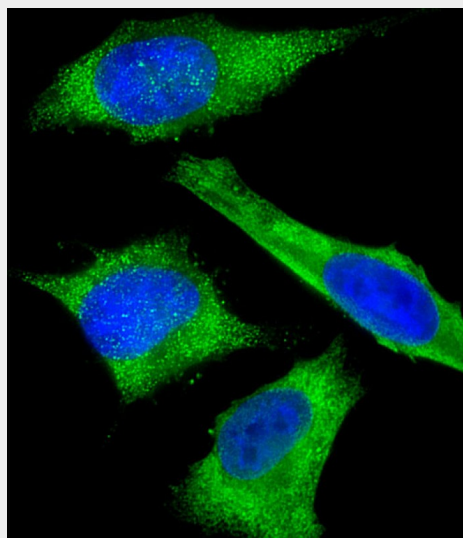
Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:P04797}. Cytoplasm, perinuclear region. Membrane Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P04797} Note=Translocates to the nucleus following S-nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity).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

GAPDH Antibody - Protocols

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

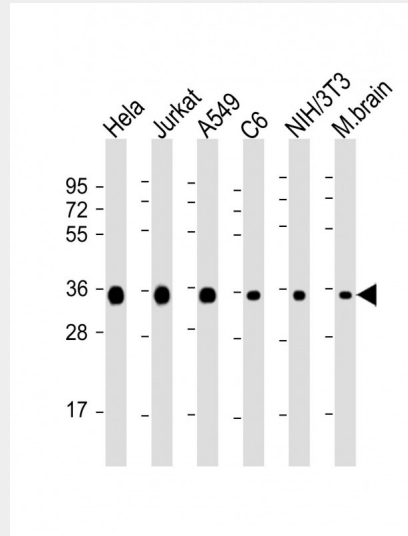
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GAPDH Antibody - Images

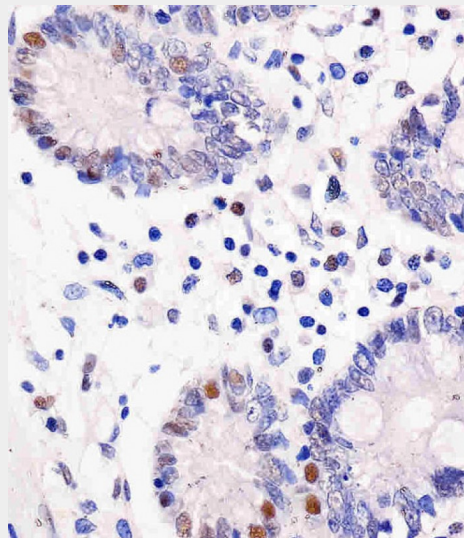


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling GAPDH with AM8539b at

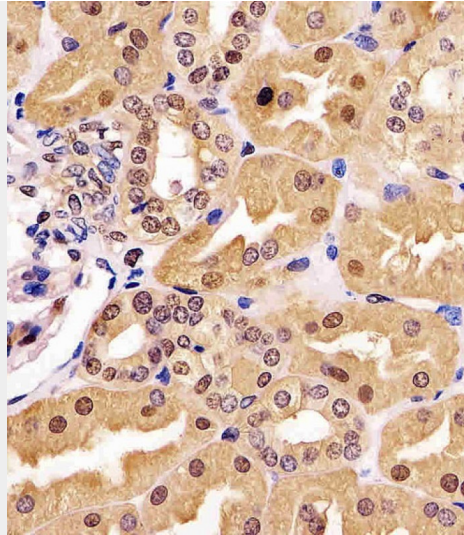
1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm and nucleus staining on HeLa cell line. The nuclear counter stain is DAPI (blue).



All lanes : Anti-GAPDH Antibody at 1:8000 dilution Lane 1: HeLa whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: A549 whole cell lysate Lane 4: C6 whole cell lysate Lane 5: NIH/3T3 whole cell lysate Lane 6: mouse brain lysate 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% NFDN/TBST.



AM8539b staining GAPDH in human colon tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



AM8539b staining GAPDH in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

GAPDH Antibody - Background

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GAPDH 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).