

Recombinant Anti-GAPDH Rabbit mAb

Catalog # AP94861

Product Information

Application	WB, IHC, FC, IP, IF/IC
Primary Accession	P04406
Reactivity	Human, Mouse, Rat, Zebrafish
Host	Rabbit
Clonality	Monoclonal
Calculated MW	36053

Additional Information

Gene ID	2597
Other Names	GAPD; Glyceraldehyde-3-phosphate dehydrogenase; GAPDH; Peptidyl-cysteine S-nitrosylase GAPDH
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human GAPDH protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IP~~N/A IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

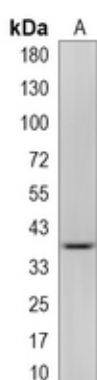
Name	GAPDH {ECO:0000303 PubMed:2987855, ECO:0000312 HGNC:HGNC:4141}
Function	Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed: 11724794 , PubMed: 3170585). Also shows nitrosylase activity, thereby playing a role in nuclear functions (PubMed: 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).

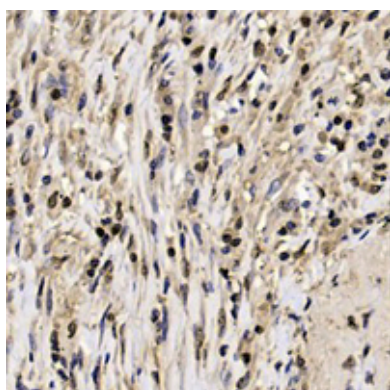
Cellular Location

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}

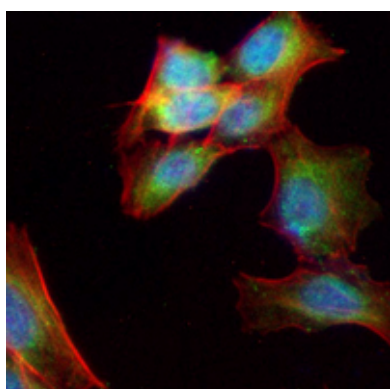
Images



Western blot analysis of GAPDH expression in Hela (A) whole cell lysates. (Predicted band size: 36 kD; Observed band size: 36 kD)



Immunohistochemical analysis of GAPDH staining in Human squamous cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of GAPDH staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).