

GAPDH Mouse Monoclonal Antibody

Mouse mAb Catalog # AP90019

Product Information

Application WB, IHC, IF, FC, ICC, IP, IHF

Primary Accession P04406

Reactivity Rat, Human, Mouse, Zebrafish, Monkey, Chicken

Clonality Monoclonal

Other Names aging-associated gene 9 protein; G3P; G3PD; GAPDH; glyceraldehyde

3-phosphate dehydrogenase; Glyceraldehyde-3-phosphate dehydrogenase;

MGC88685;

IsotypeMouse IgGHostMouseCalculated MW36053

Additional Information

Dilution WB 1:5000~1:20000 IHC 1:100~1:500 ICC/IF 1:100~1:250 IP 1:50 FC 1:50

Purification Affinity-chromatography

ImmunogenA synthesized peptide derived from human GAPDH Mouse MonoclonalDescriptionGlyceraldehyde 3 phosphate dehydrogenase (GAPDH) is well known as one of

the key enzymes involved in glycolysis. GAPDH is constitutively abundant expressed in almost cell types at high levels, therefore antibodies against GAPDH are useful as loading controls for Western Blotting. Some pathology factors, such as hypoxia and diabetes, increased or decreased GAPDH

expression in certain cell types.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

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

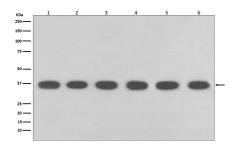
interferon-activated inhibitor of translation) complex which mediates

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}

Images



Western blot analysis of GAPDH expression in (1) Hela cell lysate; (2)Jurkat cell lysate; (3)Mouse kidney lysate; (4) Mouse spleen lysate; (5) RAW 264.7 cell lysate; (6) Rat brain lysate with GAPDH Mouse Monoclonal Antibody.

Image not found: 202311/AP90019-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human colon cancer, using GAPDH Mouse Monoclonal Antibody.

Image not found: 202311/AP90019-IF.jpg

Immunofluorescent analysis of Hela cells, using GAPDH Mouse Monoclonal Antibody .

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