10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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; GAPD; GAPDH; glyceraldehyde 3-phosphate dehydrogenase; Glyceraldehyde-3-phosphate dehydrogenase; MGC88685;
Isotype	Mouse IgG
Host	Mouse
Calculated MW	36053

Additional Information

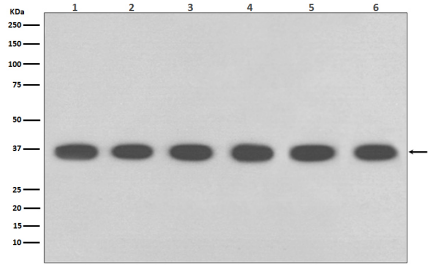
Dilution	WB 1:5000~1:20000 IHC 1:100~1:500 ICC/IF 1:100~1:250 IP 1:50 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human GAPDH Mouse Monoclonal
Description	Glyceraldehyde 3 phosphate dehydrogenase (GAPDH) is well known as one of the key enzymes involved in 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 .