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Anti-GAPDH Antibody (clone 1D4)

Mouse Anti Human Monoclonal Antibody
Catalog # ALS18146

Specification

Anti-GAPDH Antibody (clone 1D4) - Product Information

Application	**WB, IHC-P, IF, ICC**
Primary Accession	P04406
Predicted	**Human, Mouse, Rat, Pig, Bovine**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgM,k**
Calculated MW	**36053**

Anti-GAPDH Antibody (clone 1D4) - Additional Information

Gene ID 2597

Alias Symbol	**GAPDH**

Other Names
GAPDH, A1 40 kd subunit, Activator 1 40 kd subunit, G3PD, GAPD, G3pdh, Rfc40, Rf-c 40 kd subunit

Target/Specificity
Clone 1D4 recognizes GAPDH specifically both in western blots and in immunocytochemical experiments. On blots clone 1D4 reveals a prominent ~38kDa band, and on cells in tissue culture the antibody stains in a punctate cytoplasmic fashion. clone 1D4 i ...

Reconstitution & Storage
Tissue culture supernatant

Precautions
Anti-GAPDH Antibody (clone 1D4) is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-GAPDH Antibody (clone 1D4) - 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:3170585, PubMed:11724794). 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:3170585, PubMed:<a href="http://www.uniprot.org/citations/11724794"

target="_blank">11724794). 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}

Anti-GAPDH Antibody (clone 1D4) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-GAPDH Antibody (clone 1D4) - Images