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GAPDH Antibody (clone 6C5)

Mouse Monoclonal Antibody
Catalog # ALS16944

Specification

GAPDH Antibody (clone 6C5) - Product Information

Application	**WB, IHC-P, IF, E, IP, IHC-F**
Primary Accession	P04406
Other Accession	2597
Reactivity	**Human, Mouse, Rat, Rabbit, Monkey, Pig, Chicken, Sheep, Xenopus, Fish, Dog, Cat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**36053**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **IF~~1:50~200** **E~~N/A** **IP~~N/A** **IHC-F~~N/A**

GAPDH Antibody (clone 6C5) - Additional Information

Gene ID 2597

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

Target/Specificity
Recognizes glyceraldehyde-3-phosphate dehydrogenase (GAPDH), a 36kD multifunctional protein whose main function is to catalyze the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate, in conjunction with inorganic phosphate and nicotin ...

Reconstitution & Storage
PBS, 0.09% sodium azide. +4°C or -20°C, Avoid repeated freezing and thawing.

Precautions
GAPDH Antibody (clone 6C5) is for research use only and not for use in diagnostic or therapeutic procedures.

GAPDH Antibody (clone 6C5) - 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}

Volume
50 µl

GAPDH Antibody (clone 6C5) - 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

GAPDH Antibody (clone 6C5) - Images

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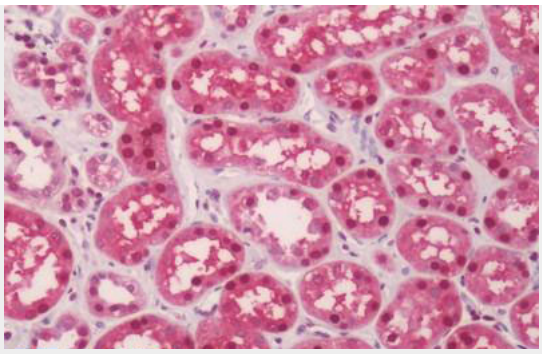

Human Kidney: Formalin Fixed, Paraffin Embedded (FFPE)

GAPDH Antibody (clone 6C5) - Background

Has both glyceraldehyde-3-phosphate dehydrogenase and nitrosylase activities, thereby playing a role in glycolysis and nuclear functions, respectively. Participates in nuclear events including transcription, RNA transport, DNA replication and apoptosis. Nuclear functions are probably due to the nitrosylase activity that mediates cysteine S-nitrosylation of nuclear target proteins such as SIRT1, HDAC2 and PRKDC. Modulates the organization and assembly of the cytoskeleton. Facilitates the CHP1-dependent microtubule and membrane associations through its ability to stimulate the binding of CHP1 to microtubules (By similarity). 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. Component of the GAIT (gamma interferon- activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. 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.

GAPDH Antibody (clone 6C5) - 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).