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Anti-GAPDH Picoband Antibody

Catalog # ABO10041

Specification

Anti-GAPDH Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P04406
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Glyceraldehyde-3-phosphate dehydrogenase(GAPDH) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GAPDH Picoband Antibody - Additional Information

Gene ID 2597

Other Names
Glyceraldehyde-3-phosphate dehydrogenase, GAPDH, 1.2.1.12, Peptidyl-cysteine S-nitrosylase GAPDH, 2.6.99.-, GAPDH, GAPD

Calculated MW
36053 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cytoplasm, cytosol . Nucleus . Cytoplasm, perinuclear region . Membrane . Cytoplasm, cytoskeleton . Translocates to the nucleus following S- nitrosylation and interaction with SIAH1, which contains a nuclear localization signal (By similarity). Postnuclear and Perinuclear regions. .

Protein Name
Glyceraldehyde-3-phosphate dehydrogenase

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human GAPDH recombinant protein (Position: N136-E335). Human GAPDH shares 95% and 94.5% amino acid (aa) sequence identity with mouse and rat GAPDH, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-GAPDH Picoband Antibody - 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}

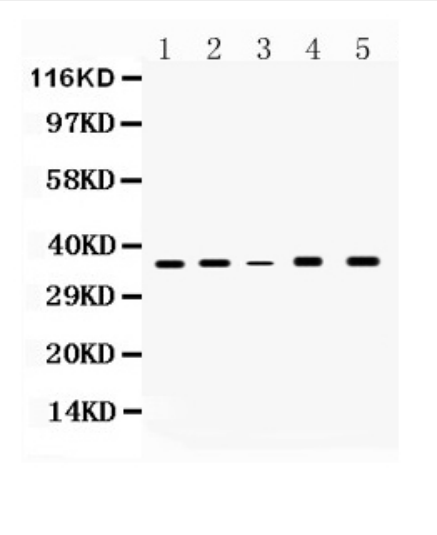
Anti-GAPDH Picoband Antibody - Protocols

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

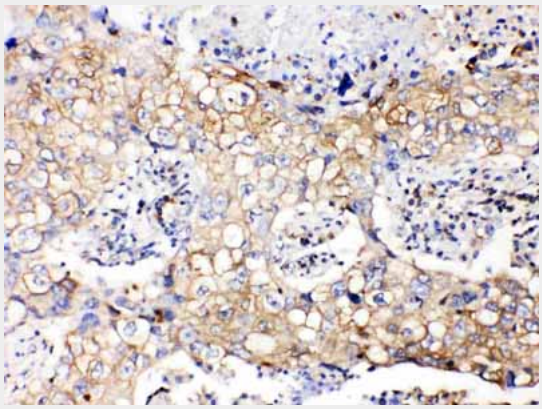
- Western Blot

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

Anti-GAPDH Picoband Antibody - Images



Western blot analysis of GAPDH expression in rat brain extract (lane 1), rat kidney extract (lane 2), mouse kidney extract (lane 3), HELA whole cell lysates (lane 4) and MCF-7 whole cell lysates(lane 5). GAPDH at 36KD was detected using rabbit anti- GAPDH Antigen Affinity purified polyclonal antibody (Catalog #ABO10041) at 0.5 Î¼g/mL. The blot was developed using chemiluminescence (ECL) method .



GAPDH was detected in paraffin-embedded sections of human lung cancer tissues using rabbit anti- GAPDH Antigen Affinity purified polyclonal antibody (Catalog # ABO10041) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .

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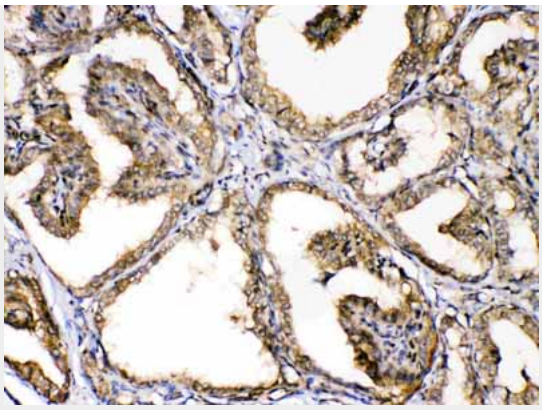

GAPDH was detected in paraffin-embedded sections of human thyroid cancer tissues using rabbit anti- GAPDH Antigen Affinity purified polyclonal antibody (Catalog # ABO10041) at 1 Î¼g/mL. The immunohistochemical section was developed using SABC method .

Anti-GAPDH Picoband Antibody - Background

Glyceraldehyde 3-phosphate dehydrogenase (abbreviated as GAPDH or less commonly as G3PDH) is an enzyme of ~37kDa that catalyzes the sixth step of glycolysis and thus serves to break down glucose for energy and carbon molecules. This gene encodes a member of the glyceraldehyde-3-phosphate dehydrogenase protein family. GAPDH is mapped to 12p13.31. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. The product of this gene catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD). The encoded protein has additionally been identified to have uracil DNA glycosylase activity in the nucleus.