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Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody

GAPDH Antibody
Catalog # ASR5577

Specification

Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human, Mouse**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-GAPDH Antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~36 kDa in size corresponding to GAPDH by western blotting in the appropriate cell lysate or extract. GAPDH is constitutively expressed at high levels in almost all tissues and cell lines, making it ideal for use as a loading control marker. This Anti-GAPDH Antibody product is a new product replacing p/n 600-401-A33.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**GAPDH Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the N-terminus of human Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH).**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Additional Information

Gene ID 2597

Other Names
2597

Purity
Anti-GAPDH Antibody is directed against human GAPDH protein. The product was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest that this antibody would react with GAPDH from a wide range of organisms, including most vertebrates and some yeast. Broad reactivity makes this antibody an excellent loading

control.

Storage Condition
Store Anti-GAPDH antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Protein Information

Name GAPDH {ECO:0000303|PubMed:2987855, ECO:0000312|HGNC:HGNC:4141}

Function
Catalyzes the conversion of D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate in glycolysis and the reverse reaction in gluconeogenesis (PubMed:11724794, PubMed:3170585). Also shows nitrosylase activity, thereby playing a role in nuclear functions (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-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Protocols

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

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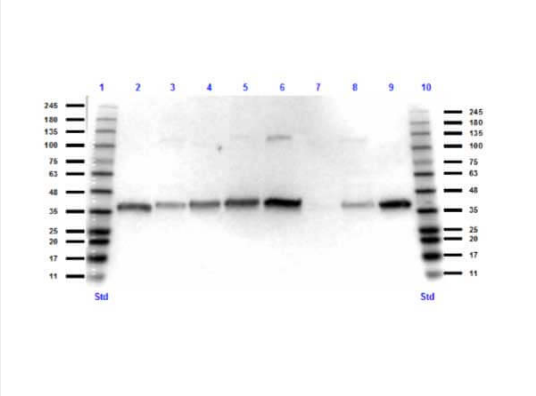
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Images



Western Blot of Rabbit anti-GAPDH antibody. Lane 1: Opal Pre-stained ladder (p/n MB-210-0500). Lane 2: NIH/3T3 Lysate (p/n W10-000-358). Lane 3: HEK293 lysate (p/n W09-000-365). Lane 4: MOLT-4 Lysate (p/n W09-001-GK2). Lane 5: A549 Lysate (p/n W09-001-372). Lane 6: HeLa Lysate (p/n W09-000-364). Lane 7: NIH 3T3 Nuclear Lysate (W10-001-A74). Lane 8: HeLa Nuclear Lysate (p/n W09-001-367). Lane 9: Jurkat Lysate (p/n W09-001-370). Lane 10: Opal Pre-stained ladder (p/n MB-210-0500). Load: 35 µg per lane. Primary antibody: GAPDH antibody at 1:1,000 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:70,000 for 30 min at RT. Blocking Buffer: MB-070 for 30 min at RT. Predicted/Observed size: 36 kDa for GAPDH.

Anti-Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) (RABBIT) Antibody - Background

GAPDH loading control antibody is ideal for Western Blotting, ELISA, IHC and IF Microscopy. GAPDH is constitutively expressed at high levels in almost all tissues and cell lines, making it ideal for use as a loading control antibody in immunoblots. A loading control antibody is critical for the correct interpretation of your western blot. Antibodies to loading controls are used to normalize the levels of protein detected by confirming that protein loading is uniform across the gel. Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) catalyzes the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD), an important energy-yielding step in carbohydrate metabolism. Recent evidence suggests that it also is involved in a number of cellular processes such as membrane fusion, phosphotransferase activity, DNA replication and repair, and nuclear RNA export. GAPDH has also been implicated in playing a role in different pathologies such as cancer progression, apoptosis, and neuronal diseases such as Alzheimer’s and Huntington’s disease. Anti-GAPDH antibody is ideal for investigators involved in apoptosis, cancer, DNA damage and repair and neuroscience.