

GAPDH (N-14): sc-20356

BACKGROUND

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH), also called uracil DNA glycosylase, 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. While GAPDH has long been recognized as playing an integral role in glycolysis, additional functions of GAPDH include acting as an uracil DNA glycosylase, activating transcription, binding RNA and involvement in nuclear RNA export, DNA replication and DNA repair. Expression of GAPDH is upregulated in liver, lung and prostate cancers. GAPDH translocates to the nucleus during apoptosis. GAPDH complexes with neuronal proteins implicated in human neurodegenerative disorders including the β -amyloid precursor, Huntingtin and other triplet repeat neuronal disorder proteins.

CHROMOSOMAL LOCATION

Genetic locus: GAPDH (human) mapping to 12p13.31; Gapdh (mouse) mapping to 6 F3.

SOURCE

GAPDH (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GAPDH of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20356 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GAPDH (N-14) is recommended for detection of GAPDH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GAPDH (N-14) is also recommended for detection of GAPDH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GAPDH siRNA (h): sc-35448, GAPDH siRNA (m): sc-35449, GAPDH shRNA Plasmid (h): sc-35448-SH, GAPDH shRNA Plasmid (m): sc-35449-SH, GAPDH shRNA (h) Lentiviral Particles: sc-35448-V and GAPDH shRNA (m) Lentiviral Particles: sc-35449-V.

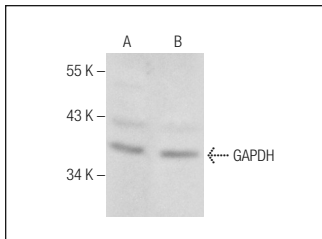
Molecular Weight of GAPDH: 37 kDa.

Positive Controls: A549 cell lysate: sc-2413, JAR Cell Lysate: sc-2276 or JEG-3 Whole Cell Lysate: sc-364255.

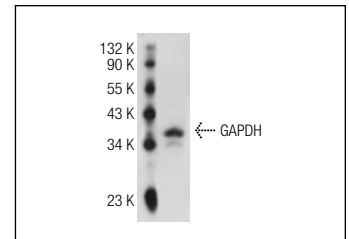
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GAPDH (N-14): sc-20356. Western blot analysis of GAPDH expression in JAR (A) and JEG-3 (B) whole cell lysates.



GAPDH (N-14): sc-20356. Western blot analysis of GAPDH expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

- Kayisli, U.A., et al. 2003. Human chorionic gonadotropin contributes to maternal immunotolerance and endometrial apoptosis by regulating Fas-Fas ligand system. *J. Immunol.* 171: 2305-2313.
- Coyne, C.B., et al. 2004. The coxsackievirus and adenovirus receptor interacts with the multi-PDZ domain protein-1 (MUPP-1) within the tight junction. *J. Biol. Chem.* 279: 48079-48084.
- Yin, W., et al. 2008. Requirement of hydrogen peroxide and Sp1 in the stimulation of Na,K-ATPase by low potassium in MDCK epithelial cells. *Int. J. Biochem. Cell Biol.* 40: 942-953.
- Havasi, A., et al. 2008. Hsp27 inhibits Bax activation and apoptosis via a phosphatidylinositol 3-kinase-dependent mechanism. *J. Biol. Chem.* 283: 12305-12313.

RESEARCH USE

For research use only, not for use in diagnostic procedures.


 MONOS
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Try **GAPDH (0411): sc-47724** or **GAPDH (G-9): sc-365062**, our highly recommended monoclonal alternatives to GAPDH (N-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **GAPDH (0411): sc-47724**.