

GAPDH (6C5): sc-32233

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 a 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 neuro-degenerative 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 (6C5) is a mouse monoclonal antibody raised against GAPDH purified from muscle of rabbit origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GAPDH (6C5) is recommended for detection of GAPDH of mouse, rat, human, rabbit and *Xenopus laevis* 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GAPDH siRNA (h): sc-35448, GAPDH siRNA (m): sc-35449, GAPDH siRNA (r): sc-270067, GAPDH shRNA Plasmid (h): sc-35448-SH, GAPDH shRNA Plasmid (m): sc-35449-SH, GAPDH shRNA Plasmid (r): sc-270067-SH, GAPDH shRNA (h) Lentiviral Particles: sc-35448-V, GAPDH shRNA (m) Lentiviral Particles: sc-35449-V and GAPDH shRNA (r) Lentiviral Particles: sc-270067-V.

Molecular Weight of GAPDH: 37 kDa.

Positive Controls: GAPDH (h): 293T Lysate: sc-159909, Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

STORAGE

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

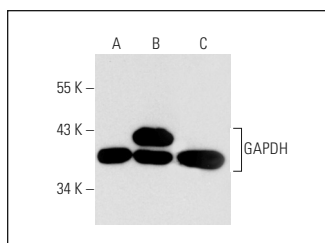
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

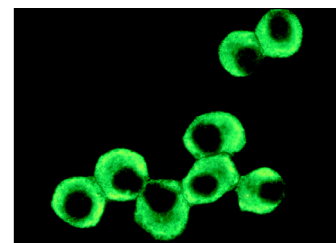
RESEARCH USE

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

DATA



GAPDH (6C5): sc-32233. Western blot analysis of GAPDH expression in non-transfected 293T: sc-117752 (A), human GAPDH transfected 293T: sc-159909 (B) and Hep G2 (C) whole cell lysates.



GAPDH (6C5): sc-32233. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Chang, M.C., et al. 2004. The induction of prostaglandin E2 production, interleukin-6 production, cell cycle arrest, and cytotoxicity in primary oral keratinocytes and KB cancer cells by areca nut ingredients is differentially regulated by MEK/ERK activation. *J. Biol. Chem.* 279: 50676-50683.
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- Lin, S., et al. 2004. Berberine inhibits HIF-1 α expression via enhanced proteolysis. *Mol. Pharmacol.* 66: 612-619.
- Martincuks, A., et al. 2017. Nuclear translocation of STAT3 and NF κ B are independent of each other but NF κ B supports expression and activation of STAT3. *Cell. Signal.* 32: 36-47.
- Arai, S., et al. 2017. Functional loss of DHRS7C induces intracellular Ca²⁺ overload and myotube enlargement in C2C12 cells via calpain activation. *Am. J. Physiol., Cell Physiol.* 312: C29-C39.
- Tahrir, F.G., et al. 2017. Evidence for the role of BAG3 in mitochondrial quality control in cardiomyocytes. *J. Cell. Physiol.* 232: 797-805.
- Ferguson, K.T., et al. 2017. The novel mTOR complex 1/2 inhibitor P529 inhibits human lung myofibroblast differentiation. *J. Cell. Biochem.* E-published.
- Márton, M., et al. 2017. A systems biological view of life-and-death decision with respect to endoplasmic reticulum stress-the role of PERK pathway. *Int. J. Mol. Sci.* E-published.
- Abdelmohsen, K., et al. 2017. Identification of HuR target circular RNAs uncovers suppression of PABPN1 translation by CircPABPN1. *RNA Biol.* E-published.



See **GAPDH (0411): sc-47724** for GAPDH antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.