

GAPDH (9B3): sc-66163



The Power to Question

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 (9B3) is a mouse monoclonal antibody raised against GAPDH of rabbit origin.

PRODUCT

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

APPLICATIONS

GAPDH (9B3) 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

GAPDH (9B3) is also recommended for detection of GAPDH in additional species, including rabbit and bovine.

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 (h2): 293T Lysate: sc-sc-113612, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

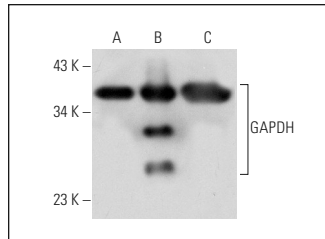
STORAGE

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

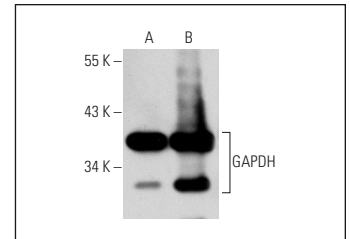
RESEARCH USE

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

DATA



GAPDH (9B3): sc-66163. Western blot analysis of GAPDH expression in non-transfected 293T: sc-117752 (A), human GAPDH transfected 293T: sc-113612 (B) and A549 (C) whole cell lysates.



GAPDH (9B3): sc-66163. Western blot analysis of GAPDH expression in non-transfected: sc-117752 (A) and human GAPDH transfected: sc-113887 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Li, F.N., et al. 2011. Regulation of soy isoflavones on weight gain and fat percentage: evaluation in a Chinese Guangxi minipig model. *Animal* 5: 1903-1908.
- Martins, C.P., et al. 2014. A reduction of viral mRNA, proteins and induction of altered morphogenesis reveals the anti-HTLV-1 activity of the labdane-diterpene myriadenolide *in vitro*. *BMC Microbiol.* 14: 331.
- Guilbert, A., et al. 2015. CaMKII-dependent myofilament Ca²⁺ desensitization contributes to the frequency-dependent acceleration of relaxation. *Cell Calcium* 58: 489-499.
- Tellios, N., et al. 2017. TGF- β induces phosphorylation of phosphatase and tensin homolog: implications for fibrosis of the trabecular meshwork tissue in glaucoma. *Sci. Rep.* 7: 812.
- Zhao, X., et al. 2018. *Ganoderma lucidum* polysaccharide inhibits prostate cancer cell migration via the protein arginine methyltransferase 6 signaling pathway. *Mol. Med. Rep.* 17: 147-157.
- Duan, Z., et al. 2018. Importin α 5 negatively regulates importin β 1-mediated nuclear import of Newcastle disease virus matrix protein and viral replication and pathogenicity in chicken fibroblasts. *Virulence* 13: 1-60.
- Titone, R., et al. 2018. Insulin mediates *de novo* nuclear accumulation of the IGF-1/insulin hybrid receptor in corneal epithelial cells. *Sci. Rep.* 8: 4378.
- Yang, F., et al. 2018. MicroRNA-543 promotes the proliferation and invasion of clear cell renal cell carcinoma cells by targeting Krüppel-like factor 6. *Biomed. Pharmacother.* 97: 616-623.

CONJUGATES

See **GAPDH (0411): sc-47724** for GAPDH antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.