

# GAPDH (FL-335): sc-25778

## 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  $\beta$ -Amyloid precursor, Huntingtin and other triplet repeat neuronal disorder proteins.

## CHROMOSOMAL LOCATION

Genetic locus: GAPDH (human) mapping to 12p13.31, GAPDHS (human) mapping to 19q13.12; Gapdh (mouse) mapping to 6 F3, Gapdhs (mouse) mapping to 7 B1.

## SOURCE

GAPDH (FL-335) is a rabbit polyclonal antibody raised against amino acids 1-335 representing full length GAPDH of human origin.

## PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-25778 AC, 500  $\mu$ g/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-25778 HRP, 200  $\mu$ g/1 ml.

## APPLICATIONS

GAPDH (FL-335) is recommended for detection of GAPDH and GAPDH-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of GAPDH: 37 kDa.

Positive Controls: GAPDH (h): 293T Lysate: sc-159909, Hep G2 cell lysate: sc-2227 or KNRK whole cell lysate: sc-2214.

## STORAGE

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

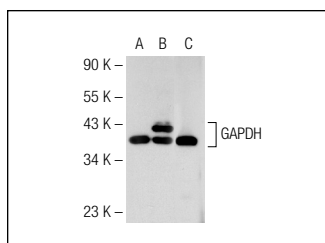
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

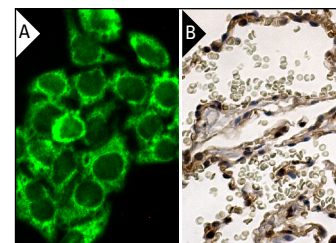
## RESEARCH USE

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

## DATA



GAPDH (FL-335): sc-25778. 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 (FL-335): sc-25778. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages and pneumocytes (B).

## SELECT PRODUCT CITATIONS

- Liu, M., et al. 2005. Efficient human interferon- $\alpha$  gene transfer to neuroendocrine tumor cells with long-term and stable expression. *Neuroendocrinology* 82: 264-273.
- Inomata, M., et al. 2012. Regulation of Toll-like receptor signaling by NDP52-mediated selective autophagy is normally inactivated by A20. *Cell. Mol. Life Sci.* 69: 963-979.
- Holm, R., et al. 2012. Rectal absorption of vigabatrin, a substrate of the proton coupled amino acid transporter (PAT1, Slc36a1), in rats. *Pharm. Res.* 29: 1134-1142.
- Rödel, J., et al. 2012. Persistent *Chlamydia trachomatis* infection of HeLa cells mediates apoptosis resistance through a *Chlamydia* protease-like activity factor-independent mechanism and induces high mobility group box 1 release. *Infect. Immun.* 80: 195-205.
- Grise, F., et al. 2012. Rnd3/RhoE is down-regulated in hepatocellular carcinoma and controls cellular invasion. *Hepatology* 55: 1766-1775.
- Bonfili, L., et al. 2012. Arene-Ru(II) complexes of curcumin exert antitumor activity via proteasome inhibition and apoptosis induction. *ChemMedChem* 7: 2010-2020.
- Ye, L., et al. 2012. Livin expression may be regulated by miR-198 in human prostate cancer cell lines. *Eur. J. Cancer* 49: 734-740.
- García-Corzo, L., et al. 2013. Dysfunctional Coq9 protein causes predominant encephalomyopathy associated with CoQ deficiency. *Hum. Mol. Genet.* 22: 1233-1248.



Try **GAPDH (0411): sc-47724** or **GAPDH (G-9): sc-365062**, our highly recommended monoclonal alternatives to GAPDH (FL-335). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **GAPDH (0411): sc-47724**.