SANTA CRUZ BIOTECHNOLOGY, INC.

GAPDH (V-18): sc-20357

SANTA CRUZ BIOTECHNOLOGY

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 uricil 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 (V-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GAPDH of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20357 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-20357 AC, 500 µg/ 0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-20357 HRP, 200 µg/1 ml.

APPLICATIONS

GAPDH (V-18) 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 µg per 100-500 µg 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).

GAPDH (V-18) is also recommended for detection of GAPDH in additional species, including equine, canine, bovine, porcine, avian and feline.

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.

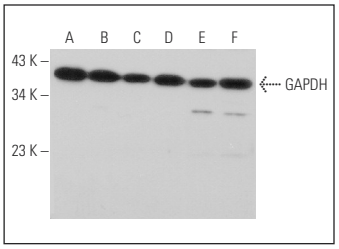
Molecular Weight of GAPDH: 37 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or SH-SY5Y Cell Lysate : sc-3812.

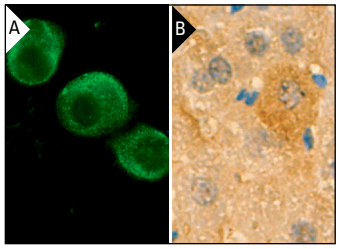
STORAGE

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

DATA



GAPDH (V-18): sc-20357. Western blot analysis of GAPDH expression in Jurkat (**A**), K-562 (**B**), SH-SY5Y (**C**), IMR-32 (**D**), Neuro-2A (**E**) and PC-12 (**F**) whole cell lysates.



GAPDH (V-18): sc-20357. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Darnell, G.A., et al. 2003. Inhibition of retinoblastoma protein degradation by interaction with the serpin plasminogen activator inhibitor 2 via a novel consensus motif. Mol. Cell. Biol. 23: 6520-6532.
2. Jacinto-Alemán, L.F., et al. 2013. erbB expression changes in ethanol and 7,12-dimethylbenz (a)anthracene-induced oral carcinogenesis. Med. Oral Patol. Oral Cir. Bucal 18: e325-e331.
3. Vromman, A.T., et al. 2013. β-amyloid context intensifies vascular smooth muscle cells induced-inflammatory response and de-differentiation. Aging Cell 12: 358-369.
4. Sasahira, T., et al. 2013. Trks are novel oncogenes involved in the induction of neovascularization, tumor progression, and nodal metastasis in oral squamous cell carcinoma. Clin. Exp. Metastasis 30: 165-176.
5. Picard, C., et al. 2013. Nuclear accumulation of prohibitin 1 in osteoarthritic chondrocytes down-regulates PITX1 expression. Arthritis Rheum. 65: 993-1003.
6. Mosbech, A., et al. 2013. The deubiquitylating enzyme USP44 counteracts the DNA double-strand break response mediated by the RNF8 and RNF168 ubiquitin ligases. J. Biol. Chem. 288: 16579-16587.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **GAPDH (0411): sc-47724** or **GAPDH (G-9): sc-365062**, our highly recommended monoclonal alternatives to GAPDH (V-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **GAPDH (0411): sc-47724**.