**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.

**REFERENCES**


**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 (G-9) is a mouse monoclonal antibody raised against amino acids 1-335 representing full length GAPDH of human origin.

**PRODUCT**

Each vial contains 200 µg IgG kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

GAPDH (G-9) is recommended for detection of GAPDH and GAPDH-2 of mouse, rat, and human origin by Western Blotting (starting dilution 1:100, 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 1:100-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of GAPDH: 37 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, F9 cell lysate: sc-2245 or rat liver extract: sc-2395.

**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**

[Western blot analysis of GAPDH expression in c4 (A) and F9 (B) whole cell lysates and rat testis (C) and rat liver (D) tissue extracts.]

[Immunofluorescence staining of formalin fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of exocrine glandular cells and cytoplasmic and nuclear staining of islets of Langerhans (B).]

**SELECT PRODUCT CITATIONS**


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