Glyceraldehyde-3-phosphate dehydrogenase (GAPDH): Antibody (Rabbit Polyclonal) Affinity Pure

Catalog Number:	1000-A1-GAPDH
Product Specification:	Mouse GAPDH (Glyceraldehyde-3-phosphate Dehydrogenase) Polyclonal Antibody raised in rabbits.
Size:	100 µl
Type:	Polyclonal
Specificity:	Detects mouse GAPDH protein on western blot.
Host Species:	Rabbit
Species Cross-reactivity:	Mouse
Immunogen:	Synthetic peptide near N-terminus of mouse GAPDH, KLH-conjugated
Isotype:	IgG
Clone Number:	NA
Western Blot:	1-4 ug/ml antibody
Immuno-fluorescence:	Not Determined
Immuno-precipitation:	Not Determined
ELISA:	1:1000
Storage:	-20°C in aliquots. Freeze-thaw cycles must be avoided once the stock aliquot is diluted.
Form:	PBS
Secondary Antibody: (Recommended)	Use anti-rabbit IgG raised in goat (Cat # 1010-GR-HR)

Product Background:

Glyceraldehyde-3-phosphatedehydrogenase (GAPDH) catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD). The enzyme is present in such widely separated forms as man, lobster, and E. coli. Its rate of evolutionary change is one of the slowest known (1). Recent evidence demonstrates that mammalian GAPDH displays a number of diverse activities unrelated to its glycolytic

function. These include its role in membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication and DNA repair. These new activities may be related to the subcellular localization and oligomeric structure of GAPDH in vivo. Furthermore, other investigations suggest that GAPDH is involved in apoptosis, age-related neurodegenerative disease, prostate cancer and viral pathogenesis. Intriguingly, GAPDH is also a unique target of nitric oxide. Recently GAPDH has been shown to be a common target of a number of compounds with potent antiproliferative activities and thus a potential target for chemotherapeutic intervention.

Glyceraldehyde-3-phosphate dehydrogenase (EC 1.2.1.12) is also known as GAPDH, G3PDH, OCT1 co-activator in S-phase and p38 component. GAPDH is cytoplasmic, tetrameric (~144 kDa) protein of four identical subunits. Each subunit consists of 333 amino acids (~36 kDa) in mouse and rat and 335 aa in human. The aa seq of the subunit is ~93% identical in human, mouse and rat. The gene encoding GAPDH has been mapped on chromosomes 12 (human) and 6 (mouse). Being a “house-keeping” protein, GAPDH is expressed in almost all the tissues at high levels.

References: (1) Michael Sirover, MA (1999) BBA 1432, 159; Xing, C et al (2004) PNAS 101, 5862; Waingeh, VF et al (2004) Biopolymers 73, 533

Related Products:

1000-D-GAPDH	GAP (Glyceraldehyde-3-Phosphare: Substrate for GAPDH enzyme
1000-E-GAPDH	Glyceraldehyde-3-phosphatedehydrogenase (GAPDH): Enzyme
1000-E1-GAPDH	Glyceraldehyde-3-phosphatedehydrogenase (GAPDH): Enzyme
1000-M1-GAPDH	GAPDH: Antibody (Mouse Monoclonal)
1000-W-GAPDH	Glyceraldehyde-3-phosphatedehydrogenase (GAPDH): Protein (WB +ve Control)